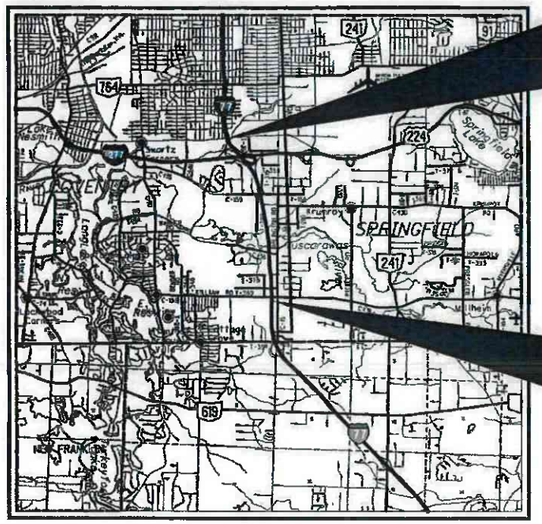

LOCATION MAP

LATITUDE: 41° 0' 22.3" N LONGITUDE: 81° 29' 39.1" W

SCALE IN MILES
0 1 2 3 4

N

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

DESIGN DESIGNATION

FOR DESIGN DESIGNATIONS, SEE SHEET 2

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

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

SUM-77/277/224-VARIOUS

SUMMIT COUNTY

INDEX OF SHEETS:

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DESIGN EXCEPTIONS

DESIGN FEATURE	APPROVAL DATES	SHEET NUMBERS
SHOULDER WIDTH (I.R. 77)	12/23/19	36
SHOULDER WIDTH (I.R. 77)	1/31/20	36
SHOULDER WIDTH (SB I.R. 77)	12/23/19	36
STOPPING SIGHT DISTANCE (RAMP B HORIZ.)	1/31/20	23
SHOULDER WIDTH (RAMP B-2)	3/3/20	41
HORIZONTAL CURVE RADIUS (RAMP B-2)	3/3/20	24
STOPPING SIGHT DISTANCE (RAMP B-2 HORIZ.)	3/3/20	24
STOPPING SIGHT DISTANCE (RAMP C HORIZ.)	12/23/19	24
HORIZONTAL CURVE RADIUS (RAMP C-2)	12/23/19	25
STOPPING SIGHT DISTANCE (RAMP C-2 HORIZ.)	12/23/19	25
SHOULDER WIDTH (WARNER RD.)	1/31/20	51
DESIGN LOADING STRUCTURAL CAPACITY (SUM-077-0802L/R)	12/2/20	1157

PROJECT DESCRIPTION

PROJECT CONSISTS OF THE FULL DEPTH RECONSTRUCTION OF 2.7 MILES OF I-77, INCLUDING AN ADDITIONAL THROUGH LANE, AND RECONSTRUCTION OF THE I-77/I-277/US-224 INTERCHANGE IN SUMMIT COUNTY. PROJECT ALSO INCLUDES THE RECONSTRUCTION OF THE RAMP C-2 BRIDGE OVER NORTHBOUND I-77, WIDENING OF THE I-77 BRIDGES OVER WARNER ROAD AND WIDENING AND REDECKING OF THE I-77 BRIDGES OVER THE TUSCARAWAS RIVER.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 120.12 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 1.00 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 121.12 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 SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT FOR THE SIDE ROADS AND RAMPS AS DESCRIBED ON SHEETS 115-122 AND THAT THE PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

CONFORMED SET

ENGINEERS SEAL:
FOR SHEETS 74-401, 908-916, 1037-1064
STATE OF OHIO SEAN S. ROPPLE E-72781 REGISTERED PROFESSIONAL ENGINEER
SIGNED:
DATE: 1/8/2021

PLAN PREPARED BY:
GPD GROUP
520 South Main Street
Akron, OH 44311
330.572.2100 Fax: 330.572.2101

ENGINEERS SEAL:
FOR SHEETS 1065-1261
STATE OF OHIO DAVEN GM NG 36972 REGISTERED PROFESSIONAL ENGINEER
SIGNED:
DATE: 01/29/21

ENGINEERS SEAL:
FOR ENTIRE PLAN EXCEPT SHEETS OTHERWISE NOTED
STATE OF OHIO MARK R. GROSSMAN E-61120 REGISTERED PROFESSIONAL ENGINEER
SIGNED:
DATE: 01/29/21

STANDARD CONSTRUCTION DRAWINGS														SUPPLEMENTAL SPECIFICATIONS			
BP-2.1	7/17/15	MGS-1.1	1/19/18	RM-4.5	7/21/17	HL-30.21	4/17/20	MT-95.30	7/19/19	MT-104.10	10/16/15	800-2019	1/15/21	905	4/17/20
BP-2.2	1/15/21	MGS-2.1	1/19/18	RM-4.6	7/19/13	HL-30.22	1/15/21	MT-95.32	4/19/19	MT-105.10	1/17/20	807	7/17/20	908	10/20/17
BP-2.3	7/18/14	MGS-2.3	7/18/14			HL-40.10	7/17/20	MT-95.40	1/17/20	MT-120.00	1/19/18	808	1/18/19	909	1/15/21
BP-3.1	1/17/20	MGS-3.1	1/19/18			HL-50.11	1/16/15	MT-95.45	1/17/20			809	1/15/21	913	4/21/17
BP-5.1	1/18/19	MGS-3.2	1/18/13			HL-50.21	1/15/21	MT-95.70	1/17/20	TC-12.31	1/15/21	813	10/19/18	921	4/20/12
BP-6.1	7/19/13	MGS-4.2	7/19/13	AS-1-15	7/17/15	HL-60.12	1/15/21	MT-97.11	1/20/17	TC-15.116	1/15/21	821	4/20/12	992	4/18/14
BP-9.1	1/18/19	MGS-4.3	1/18/13	AS-2-15	1/18/19	HL-60.21	7/20/18	MT-97.12	1/20/17	TC-21.11	4/17/20	825	1/17/20		
		MGS-5.2	7/15/16	CPP-1-08	7/21/17	HL-60.31	1/17/20	MT-98.10	1/17/20	TC-21.21	1/15/21	832	10/19/18		
CB-1.1	7/19/19	MGS-5.3	7/15/16	CS-1-08	1/15/21			MT-98.11	1/17/20	TC-21.50	4/17/20	836	1/19/18		
CB-2.1	1/15/21	MGS-6.1	1/19/18	EXJ-4-87	1/19/18			MT-98.20	4/19/19	TC-22.20	1/17/14	840	1/15/21		
CB-2.2	1/15/21			CSD-1-19	1/15/21			MT-98.21	1/17/20	TC-41.10	7/19/13	846	4/17/15		
CB-2.3	1/15/16	HW-2.1	7/20/18	NBS-1-09	1/15/21	ITS-10.10	1/15/21	MT-98.28	1/17/20	TC-41.20	10/18/13	850	1/15/21		
CB-3.3	1/15/16	HW-2.2	7/20/18	PCB-91	7/17/20	ITS-10.11	1/15/21	MT-98.29	1/17/20	TC-41.30	10/18/13	855	4/20/18		
				SBR-1-20	7/17/20	ITS-12.10	7/19/19	MT-99.20	4/19/19	TC-41.40	10/18/13	869	10/17/14		
DM-1.1	7/17/20	I-2.1	1/15/16	SBR-2-20	1/15/21	ITS-14.10	1/15/21	MT-99.30	1/17/20	TC-42.10	10/18/13	878	1/17/20		
DM-2.1	1/18/13	I-2.2	7/19/19	SCID-1-96	7/18/14	ITS-14.11	1/15/21	MT-99.50	1/17/20	TC-42.20	10/18/13				
DM-4.1	7/17/20	I-2.3	1/15/16	SCID-2-14	1/15/21	ITS-14.50	1/15/21	MT-99.60	7/15/16	TC-51.11	1/15/16	SPECIAL PROVISIONS			
DM-4.2	7/20/12					ITS-15.10	1/15/21	MT-100.00	1/15/16	TC-51.12	1/15/16				
		MH-1.2	1/15/16			ITS-18.00	1/15/21	MT-101.60	1/17/20	TC-52.10	10/18/13				
F-1.1	7/19/13			HL-10.11	1/15/21	ITS-35.11	4/17/20	MT-101.70	1/17/20	TC-52.20	1/15/21				
F-3.1	7/19/13	RM-1.1	1/15/21	HL-10.12	1/20/17	ITS-35.12	1/15/21	MT-101.75	1/17/20	TC-65.10	1/17/14	WPC	4/22/21		
F-3.3	7/19/13	RM-4.1	1/17/20	HL-10.31	4/17/20	ITS-35.13	1/15/21	MT-101.90	7/17/20	TC-65.11	7/21/17				
F-3.4	7/19/13	RM-4.2	4/17/20	HL-20.11	1/15/21	ITS-36.12	1/15/21	MT-102.10	1/17/20	TC-71.10	1/19/18				
		RM-4.3	7/18/14	HL-20.21	1/15/21	ITS-50.10	1/15/21	MT-102.20	4/19/19	TC-72.20	7/20/18				
		RM-4.4	7/19/19	HL-30.11	1/15/21			MT-103.10	1/19/18	TC-83.20	7/21/17				

UNDERGROUND UTILITIES
OHIO811.org Before You Dig

APPROVED
DATE 12.15.20 SUMMIT COUNTY ENGINEER

APPROVED
DATE 2/1/21 DISTRICT DEPUTY DIRECTOR

APPROVED Jack Marchbanks DKS
DATE 3/10/2021 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E171 (457)
PID NO. 106002
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
SUM-77/277/224 VARIOUS
1 / 1288

SUM - IR IR 77/277/US 224 Various
210258 PID - 106002
Dist 4 5/13/2021

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

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* SHEETS INCLUDED BUT NOT NEEDED

DESIGN DESIGNATIONS

	I-77	I-77/US-224	WARNER ROAD
CURRENT YEAR ADT (2020)	118,630	26,910	2,500
DESIGN YEAR ADT (2040)	141,010	34,280	2,500
DESIGN HOURLY VOLUME (2040)	14,260	3,580	-----
DIRECTIONAL DISTRIBUTION	57%	57%	50%
TRUCKS (24 HOUR B & C)	9%	8%	2%
TD	5%	4%	-%
DESIGN SPEED	70 MPH	65 MPH	45 MPH
LEGAL SPEED	65 MPH	60 MPH	40 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	01 URBAN INTERSTATES	01 URBAN INTERSTATES	07 URBAN LOCAL ROADS
NHS PROJECT	YES	YES	YES

BALLOON LEGEND

- (AB-#) ABANDON
- (B-#) CONCRETE BARRIER
- (BR-#) CONCRETE BARRIER REMOVED
- (D-#) CATCH BASINS, MANHOLES AND INLETS
- (DJ-#) CATCH BASINS, MANHOLES AND INLETS ADJUSTED/RECONSTRUCTED TO GRADE
- (DR-#) CATCH BASINS, MANHOLES AND INLETS REMOVED
- (DV-#) DRIVEWAYS
- (E-#) EROSION CONTROL
- (EX-#) EXISTING CATCH BASINS, MANHOLES AND INLETS
- (F-#) FENCE
- (FP-#) FILL & PLUG
- (FR-#) FENCE REMOVED
- (G-#) GUARDRAIL
- (GR-#) GUARDRAIL REMOVED
- (HR-#) HEADWALL REMOVED
- (HW-#) HEADWALL
- (LS-#) LANDSCAPING
- (P-#) DRAINAGE PIPES
- (PR-#) PIPES REMOVED
- (R-#) MISCELLANEOUS REMOVALS
- (SA-#) SANITARY MANHOLE
- (SJ-#) SANITARY STRUCTURE ADJUSTED/RECONSTRUCTED TO GRADE
- (SL-#) SANITARY LATERAL
- (SM-#) SEEDING AND MULCHING
- (SP-#) SANITARY PIPE
- (SR-#) SANITARY REMOVAL
- (U-#) UNDERDRAINS
- (W-#) WATER WORK
- (WJ-#) WATER WORK ADJUSTED TO GRADE
- (WR-#) WATER WORK REMOVALS

EXISTING UTILITY SYMBOL LEGEND

- = Guy Pole
- = Flag Pole
- = Utility Pole
- = Power Pole
- = Yard Light
- = Parking Meters
- = Parking Meter
- = Air Condition Unit
- = Guy Wire w/Anchor
- = Light Pole
- = Light Pedestal
- = Electric Marker Post
- = Electric Meter
- = Electric Transformer
- = Electric Pedestal
- = Electric Tower
- = Electric Outlet
- = Electric Pull Box
- = Electric Manhole
- = Gas Valve
- = Gas Service
- = Gas Marker Post
- = Gas Meter/ Regulator
- = Tank (Gas, Propane)
- = Fire Hydrant
- = Water Valve
- = Water Manhole
- = Water Well
- = Water Meter
- = Water Spigot / Tap
- = Cistern
- = Sprinkler
- = Sprinkler Control Box
- = Monitoring Well
- = Cable TV Pole
- = Cable TV Marker Post
- = Cable TV Pedestal
- = Telephone Pole
- = Telephone Marker Post
- = Telephone Pedestal
- = Telephone Booth/or Drive-Up
- = Traffic Lighting Control Box
- = Traffic Lighting Pull Box
- = Sign
- = Curb Inlet
- = Catch Basin
- = Cleanout
- = Sanitary Manhole
- = Storm Manhole
- = Telephone Manhole

PROPOSED UTILITY SYMBOL LEGEND

- = Proposed Catch Basins
- = Proposed Manhole
- = Manhole Adjusted To Grade
- = Proposed Exfiltration Trench
- = Proposed Water Valve
- = Proposed Fire Hydrant
- = Sanitary Manhole Adjusted To Grade
- = Proposed Traffic Pullbox
- = Proposed Conventional Luminaire
- = Proposed Lighting Pullbox
- = Proposed Decorative Luminaire
- = Proposed Signal Pole Pedestal
- = Proposed Signal Pole
- = Test Hole location

UTILITY LINE LEGEND

- W = Water Line
- G = Gas Line
- SAN = Sanitary Line
- E = Underground Electric
- P = Propane Line
- T = Underground Telephone
- D = Diesel
- CATV = Cable TV.
- TR = Signal Wiring

CALCULATED ATR
CHECKED PJF

PLAN LEGEND AND DESIGN DESIGNATIONS

SUM-77/277/224
VARIOUS

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BEGIN PROJECT
BEGIN WORK (SB)
℄ R/W & CONST. I.R. 77
STA. 391+37.36
S.L.M. 7.39

E171 (457)

MEET EXISTING (SOUTHBOUND)

PROP. NOISE WALL C1

KILLIAN ROAD

O.H. ELEC. LINES AND TELCOM LINES (TO REMAIN)

BEGIN WORK (NB)
℄ R/W & CONST. I.R. 77
STA. 371+50.00

MEET EXISTING (NORTHBOUND)

℄ R/W & CONST. I.R. 77

370 375 380 385 390 395

70 75 80 85

BEGIN WORK
℄ CONST. ARLINGTON ROAD RAMP D
STA. 71+69.06

℄ CONST. ARLINGTON ROAD RAMP D

END ℄ CONST.
ARLINGTON
ROAD RAMP D
STA. 88+18.25

STRUCTURE NO.
SUM-77-0744
(NO WORK)

MATCHLINE - STA. 396+00 ℄ I.R. 77, SEE SHEET 4

ARLINGTON ROAD

℄ EX. ARLINGTON ROAD RAMP D

FOR GEOMETRIC PLAN, SEE SHEETS 13 - 22
FOR CURVE DATA, SEE SHEETS 23 - 26

N

0 50 100 200
HORIZONTAL SCALE IN FEET

CALCULATED ZJP
CHECKED PJF

SCHEMATIC PLAN
BEGIN TO STA. 396+00 I.R. 77

SUM-77 / 277 / 224
VARIOUS

3
1288

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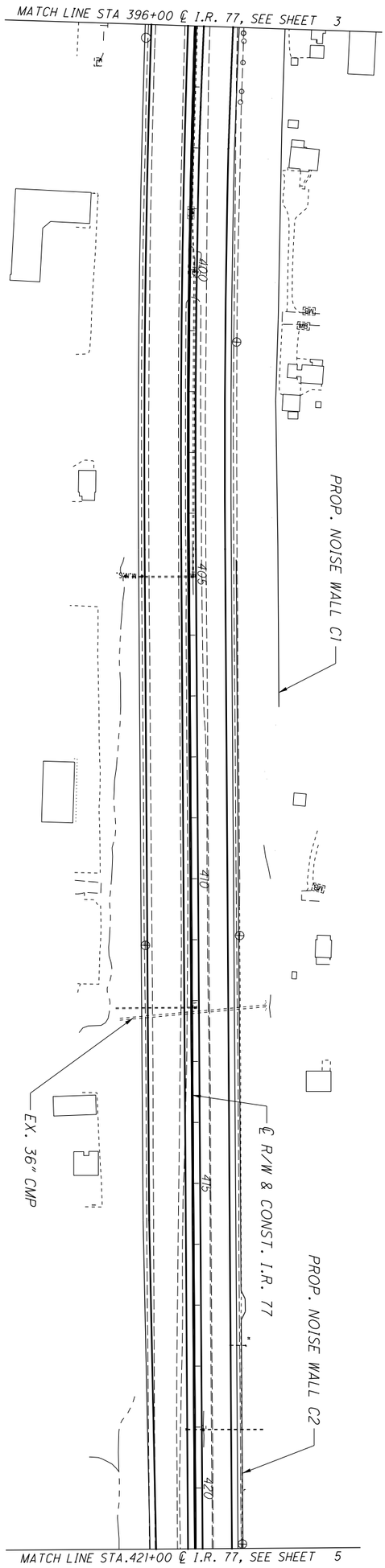
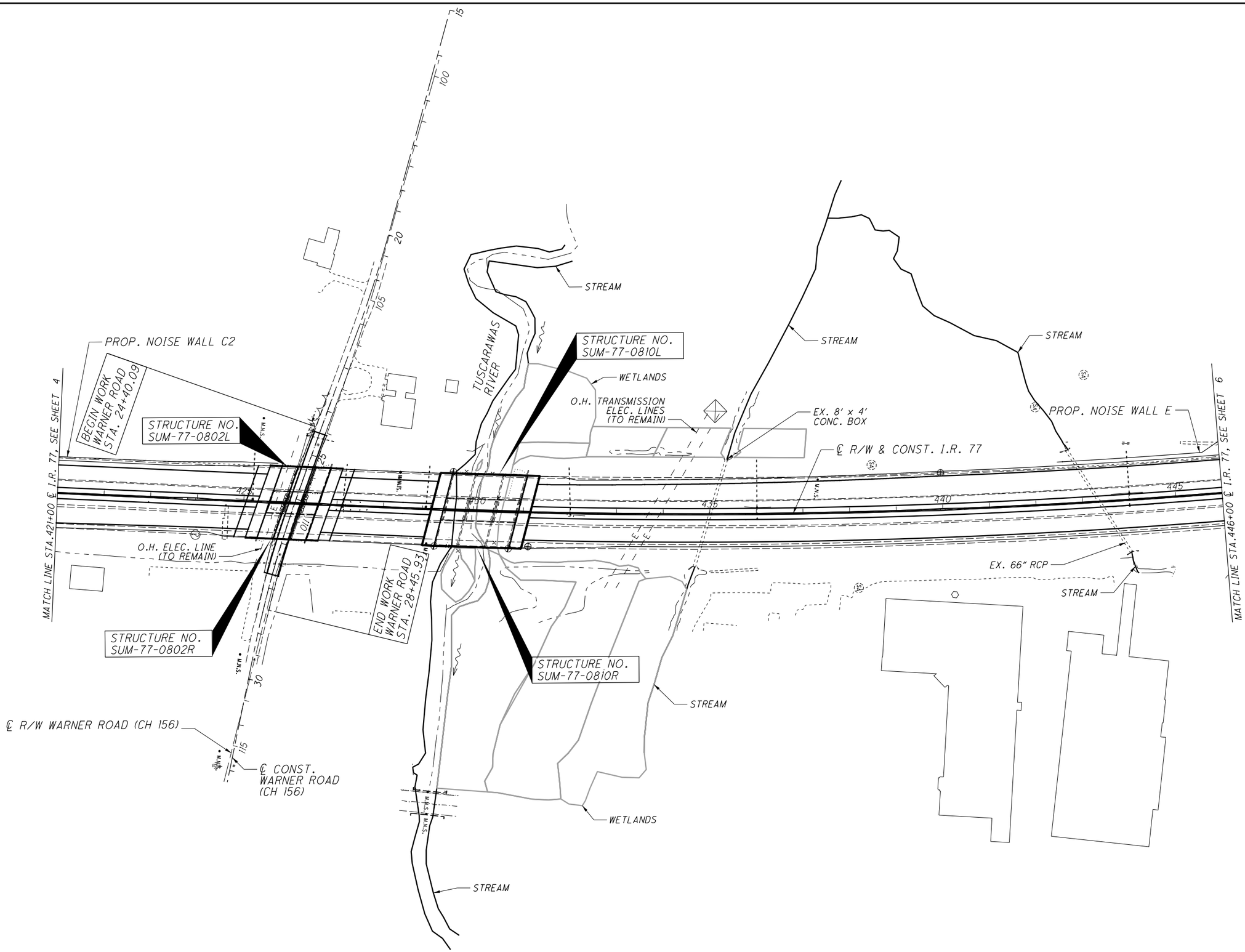


FOR GEOMETRIC PLAN, SEE SHEETS 13 - 22
FOR CURVE DATA, SEE SHEETS 23 - 26

4 / 1288	SUM-77/277/224 VARIOUS	SCHEMATIC PLAN STA. 396+00 TO STA. 421+00 I.R. 77	CALCULATED ZJP CHECKED PJF	0 100 50 200 HORIZONTAL SCALE IN FEET



FOR GEOMETRIC PLAN, SEE SHEETS 13 - 22
FOR CURVE DATA, SEE SHEETS 23 - 26

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED ZJP
CHECKED PJF

SCHEMATIC PLAN
STA. 421+00 TO STA. 446+00 I.R. 77

SUM-77/277/224
VARIOUS

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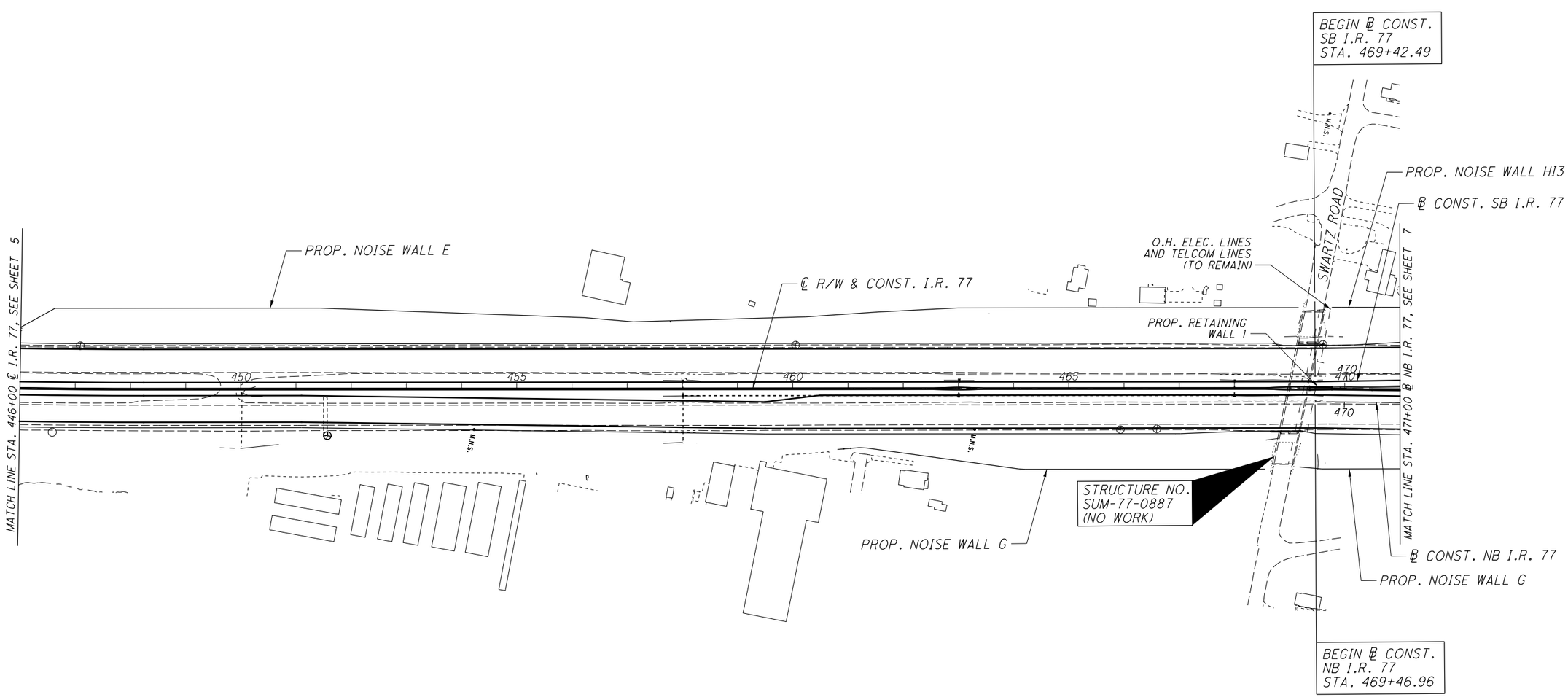

FOR GEOMETRIC PLAN, SEE SHEETS 13 - 22
FOR CURVE DATA, SEE SHEETS 23 - 26

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED ZJP
CHECKED PJF

SCHEMATIC PLAN
STA. 446+00 I.R. 77 TO STA. 471+00 NB I.R. 77

SUM-77/277/224
VARIOUS

6
1288

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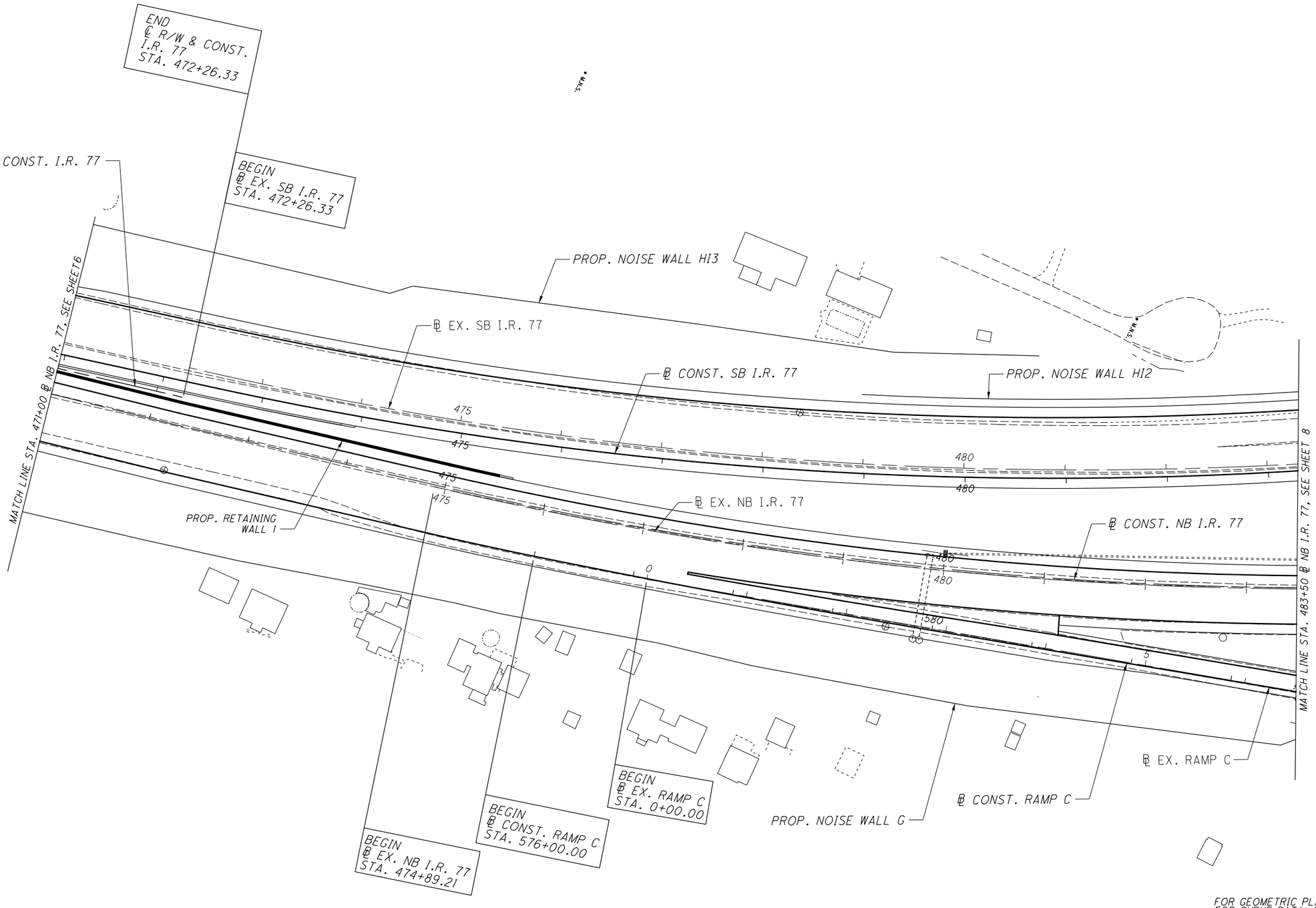

FOR GEOMETRIC PLAN, SEE SHEETS 13 - 22
FOR CURVE DATA, SEE SHEETS 23 - 26

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED ZJP
CHECKED PJF

SCHEMATIC PLAN
STA. 471+00 NB I.R. 77 TO STA. 483+50 NB I.R. 77

SUM-77 / 277 / 224
VARIOUS

7
1288

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SCHEMATIC PLAN
I.R. 77 TO STA. 496+00 NB I.R. 77
STA. 483+50 NB I.R. 77

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED ZJP
CHECKED PJF

SUM-77/277/224
VARIOUS

BEGIN ℄ EX. RAMP A STA. 17+90.67

BEGIN ℄ CONST. RAMP A STA. 86+63.69

BEGIN ℄ CONST. RAMP B-2 STA. 285+64.96

℄ EX. RAMP A

℄ CONST. RAMP A

℄ EX. SB I.R. 77

℄ CONST. SB I.R. 77

℄ CONST. NB I.R. 77

℄ EX. NB I.R. 77

℄ CONST. RAMP B-2

℄ CONST. RAMP C

℄ EX. RAMP C

℄ EX. RAMP C-2

℄ CONST. RAMP C-2

℄ EX. RAMP C-1

℄ CONST. RAMP C-1

STRUCTURE NO. SUM-77-0927R

PROP. NOISE WALL HI2

PROP. NOISE WALL G

PROP. RETAINING WALL 2

STREAM 3

EX. 60" RCP

WETLAND I

MATCH LINE STA. 496+00 ℄ NB I.R. 77, SEE SHEET 9

MATCH LINE STA. 483+50 ℄ NB I.R. 77, SEE SHEET 7

MATCH LINE STA. 590+00 ℄ CONST. RAMP C SEE SHEET 12

MATCH LINE STA. 690+00 ℄ CONST. RAMP C-1 SEE SHEET 12

FOR GEOMETRIC PLAN, SEE SHEETS 13 - 22
FOR CURVE DATA, SEE SHEETS 23 - 26

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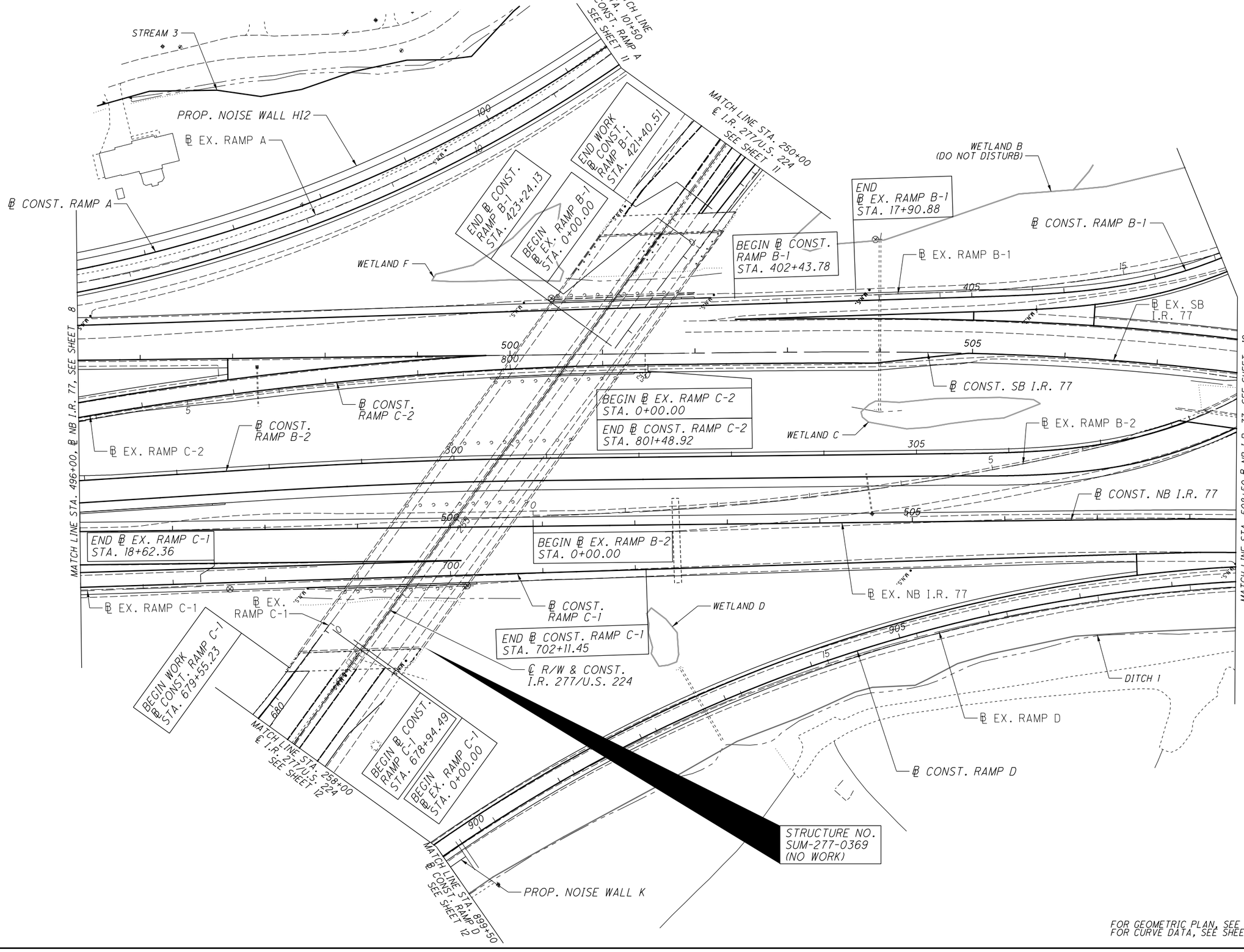

FOR GEOMETRIC PLAN, SEE SHEETS 13 - 22
FOR CURVE DATA, SEE SHEETS 23 - 26

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED ZJP
CHECKED PJF

SCHEMATIC PLAN
STA. 496+00 NB I.R. 77 TO STA. 508+50 NB I.R. 77

SUM-77 / 277 / 224
VARIOUS

9
1288

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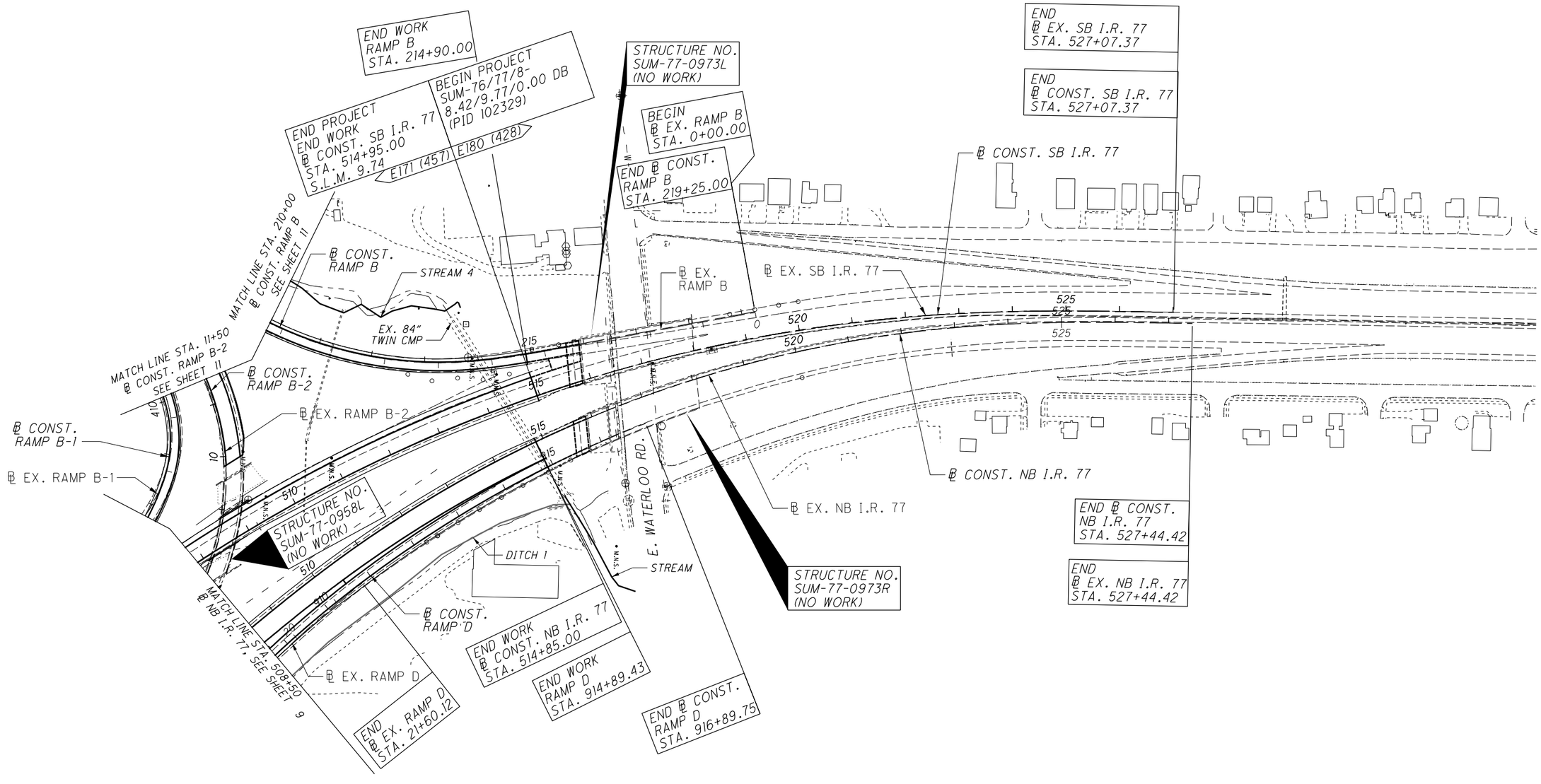

FOR GEOMETRIC PLAN, SEE SHEETS 13 - 22
FOR CURVE DATA, SEE SHEETS 23 - 26

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED ZJP
CHECKED PJF

SCHEMATIC PLAN
STA. 508+50 NB I.R. 77 TO END

SUM-77 / 277 / 224
VARIOUS

10
1288

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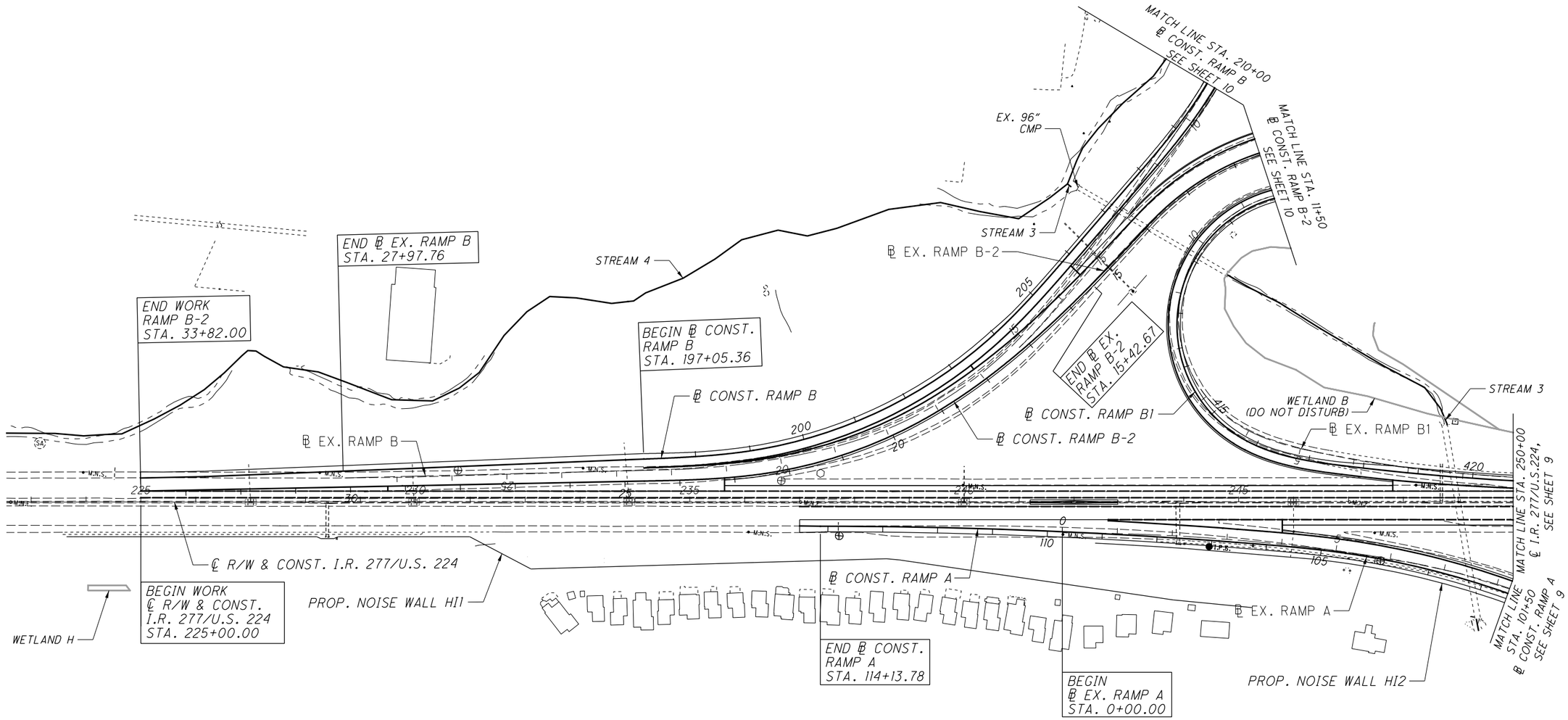

FOR GEOMETRIC PLAN, SEE SHEETS 13 - 22
FOR CURVE DATA, SEE SHEETS 23 - 26

N

0 50 100 200
HORIZONTAL
SCALE IN FEET

CALCULATED ZJP
CHECKED PJF

SCHEMATIC PLAN
BEGIN TO STA. 250+00 I.R. 277/U.S. 224

SUM-77/277/224
VARIOUS

11
1288

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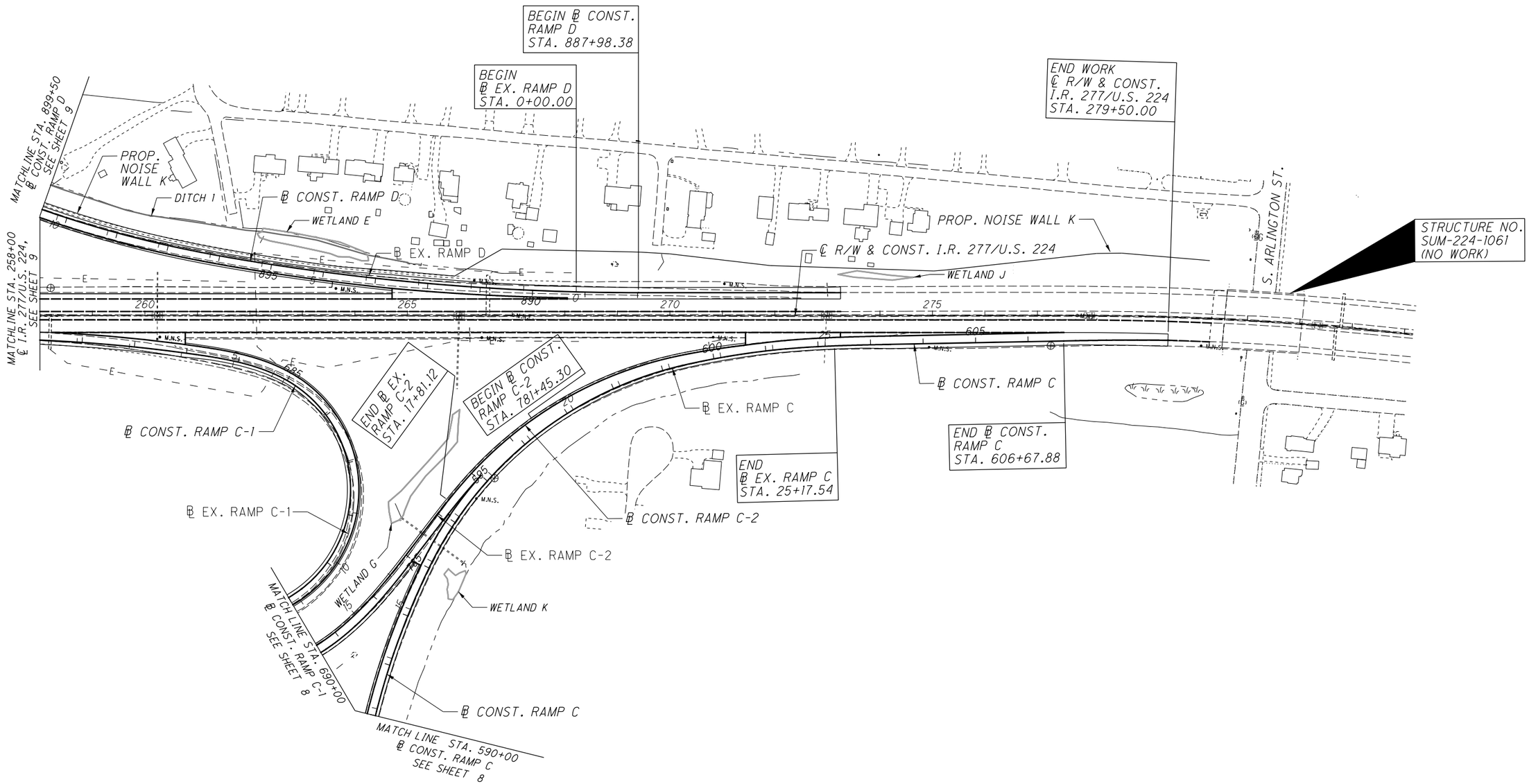

FOR GEOMETRIC PLAN, SEE SHEETS 13 - 22
FOR CURVE DATA, SEE SHEETS 23 - 26

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED ZJP
CHECKED PJF

SCHEMATIC PLAN
STA. 258+00 TO END

SUM-77 / 277 / 224
VARIOUS

12
1288

G:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_GB009.dgn Design 1/13/2021 1:51:19 PM pfry

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BEGIN WORK (NB)
℄ R/W & CONST. I.R. 77
STA. 371+50.00

BEGIN PROJECT
BEGIN WORK (SB)
℄ R/W & CONST. I.R. 77
STA. 391+37.36
S.L.M. 7.39

E171 (457)

℄ R/W & CONST. I.R. 77

370 375 380 385 390 395

PT Sta. 374+77.72
PT NO. 4

N 0° 17' 46" E

PC Sta. 391+37.36
PT NO. 5

MATCHLINE - STA. 396+00 I.R. 77, SEE SHEET 14

POT Sta. 78+53.92

N 0° 53' 51" W

75 80 85

PT Sta. 75+16.71
PT NO. 2

N 0° 50' 59" W

POT Sta. 88+18.25
PT NO. 3

70

91 92 93 88 90 89

PT NO. 1
PC Sta. 70+99.52

CS Sta. 68+99.52
PCC Sta. 68+59.95
PCC Sta. 66+90.21
PC Sta. 65+72.42

PT Sta. 75+13.53

BEGIN WORK
ARLINGTON ROAD
RAMP D
STA. 71+69.06

BEGIN ℄ CONST.
ARLINGTON ROAD
RAMP D
STA. 70+99.52

END ℄ CONST.
ARLINGTON
ROAD RAMP D
STA. 88+18.25

℄ CONST. ARLINGTON ROAD RAMP D

℄ EX. ARLINGTON ROAD RAMP D

FOR CURVE DATA, SEE SHEETS 23 - 26
FOR REFERENCE POINT TABLE, SEE SHEET 27

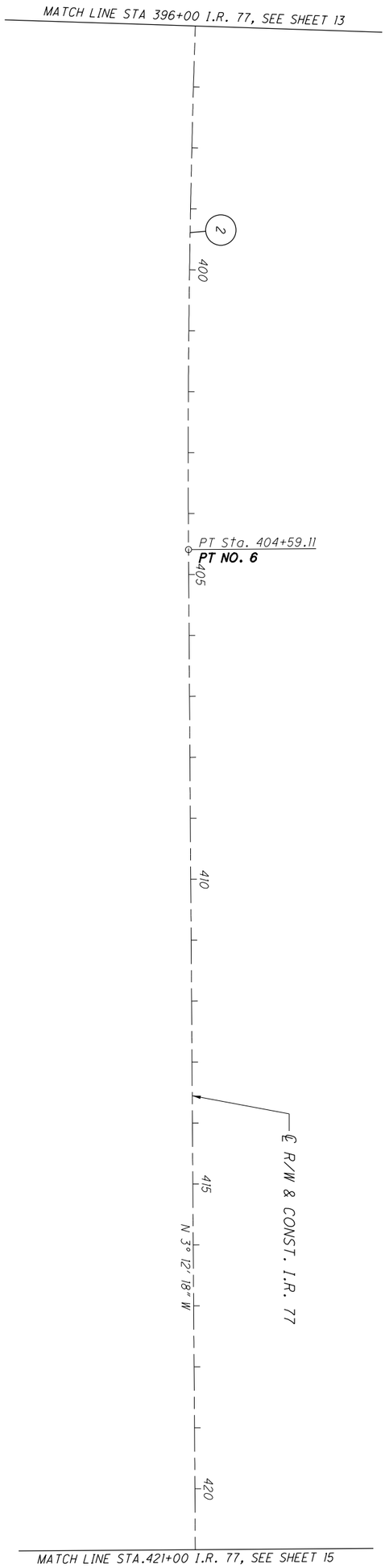
N

0 50 100 200
HORIZONTAL SCALE IN FEET

CALCULATED ZJP
CHECKED PJF

GEOMETRIC PLAN
BEGIN TO STA. 396+00 I.R. 77

SUM-77/277/224
VARIOUS



FOR CURVE DATA, SEE SHEETS 23 - 26
FOR REFERENCE POINT TABLE, SEE SHEET 27

14 / 1288	**SUM-77/277/224** **VARIOUS**	**GEOMETRIC PLAN** **STA. 396+00 TO STA. 421+00**	CALCULATED ZJP CHECKED PJF	0 100 50 200 HORIZONTAL SCALE IN FEET

POT Sta. 15+00.00
PT NO. 8

POT Sta. 99+63.27
PT NO. 99

S 80° 24' 12" E
S 79° 52' 16" E
100

PC Sta. 19+80.72
PT NO. 9

PC Sta. 104+19.89
PT NO. 100

20

℄ CONST. WARNER ROAD (CH 156)

94

105

PT Sta. 22+54.01
PT NO. 10

℄ R/W WARNER ROAD (CH 156)

97

S 74° 56' 15" E

PI Sta. 24+00.00
PT NO. 11

BEGIN WORK
WARNER ROAD
STA. 24+40.09

PT Sta. 108+48.22
PT NO. 101

S 76° 16' 11" E
23

PC Sta. 428+41.24
PT NO. 7

MATCH LINE STA.421+00 I.R. 77, SEE SHEET 14

N 3° 12' 18" W

425

430

435

3

℄ R/W & CONST. I.R. 77

440

445

MATCH LINE STA.446+00 I.R. 77, SEE SHEET 16

PC Sta. 26+07.65
PT NO. 12

S 75° 36' 31" E
110

PI Sta. 111+17.90
PT NO. 102

95

S 81° 38' 30" E

END WORK
WARNER ROAD
STA. 28+45.93

PT Sta. 29+31.09
PT NO. 13

S 84° 06' 55" E
30

115

POT Sta. 115+80.18
PT NO. 103

POT Sta. 32+25.61
PT NO. 14

FOR CURVE DATA, SEE SHEETS 23 - 26
FOR REFERENCE POINT TABLE, SEE SHEET 27

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED ZJP
CHECKED PJF

GEOMETRIC PLAN
STA. 421+00 TO STA. 446+00

SUM-77 / 277 / 224
VARIOUS

15
1288

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FOR CURVE DATA, SEE SHEETS 23 - 26
FOR REFERENCE POINT TABLE, SEE SHEET 27

N

0 50 100 200
HORIZONTAL
SCALE IN FEET

CALCULATED ZJP
CHECKED PJF

GEOMETRIC PLAN
STA. 446+00 I.R. 77 TO STA. 471+00 NB I.R. 77

SUM-77 / 277 / 224
VARIOUS

16
1288

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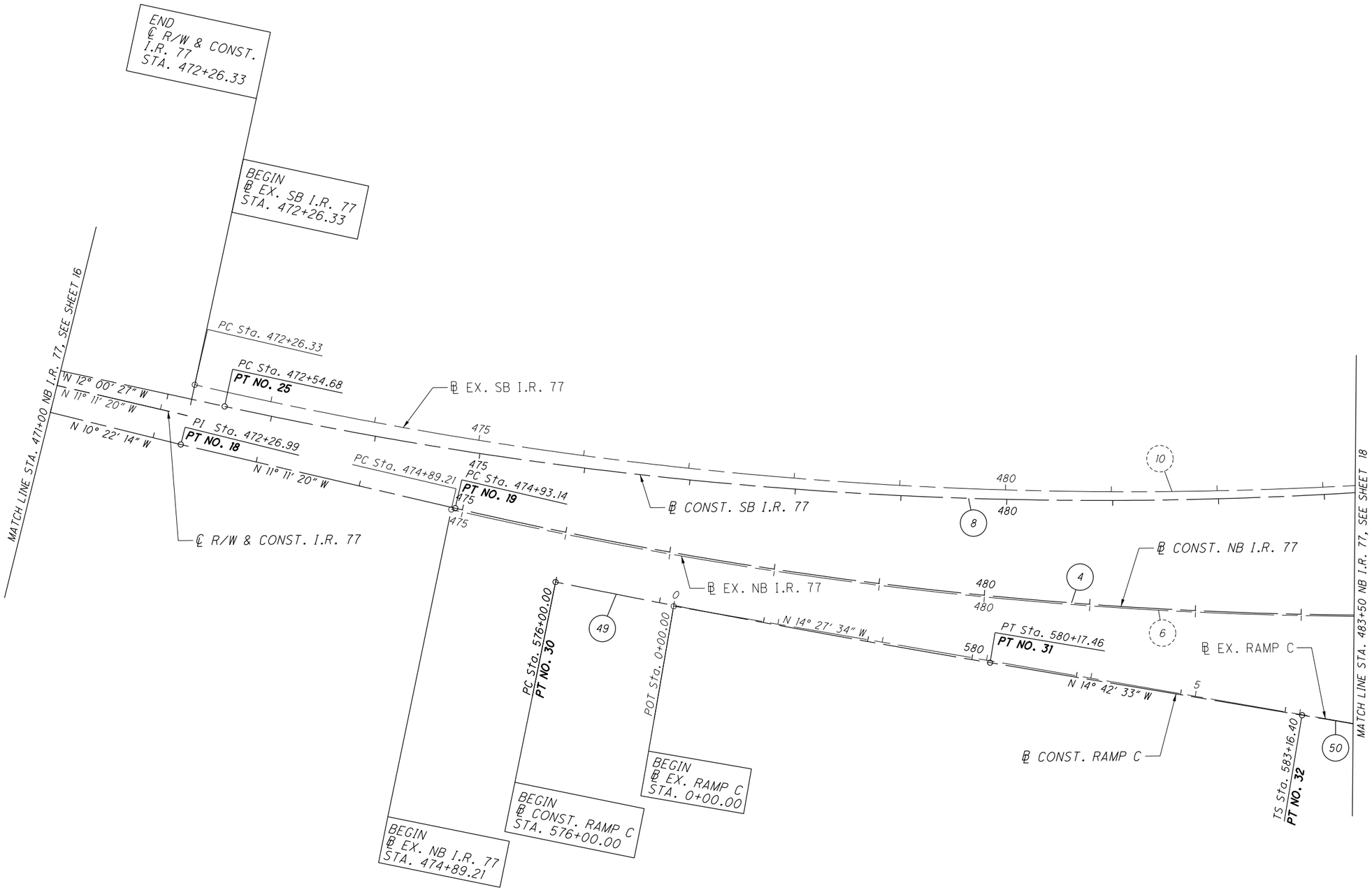

FOR CURVE DATA, SEE SHEETS 23 - 26
FOR REFERENCE POINT TABLE, SEE SHEET 27

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED ZJP
CHECKED PJF

GEOMETRIC PLAN
STA. 471+00 NB I.R. 77 TO STA. 483+50 NB I.R. 77

SUM-77 / 277 / 224
VARIOUS

17
1288

G:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_GB024.dgn Design 1/13/2021 5:13:33 PM pfry

BEGIN ℄ EX. RAMP A
STA. 17+90.67

ST Sta. 17+90.67

SC Sta. 93+70.00
PT NO. 41
CS Sta. 16+40.67

℄ EX. RAMP A

MATCH LINE STA. 496+00 NB I.R. 77, SEE SHEET 19

BEGIN ℄ CONST. RAMP A
STA. 86+63.69

PC Sta. 86+63.69
PT NO. 39

CS Sta. 90+70.00
PT NO. 40

℄ CONST. RAMP A

PT Sta. 493+08.78

PT Sta. 492+81.37
PT NO. 26

PT Sta. 294+71.25
PT NO. 46
N 44° 45′ 03″ W
PT Sta. 495+75.59
PT NO. 20
PT Sta. 495+71.66
N 41° 45′ 03″ W

PT NO. 63
SC Sta. 792+71.33
CS Sta. 8+51.59

CS Sta. 10+01.59
PT NO. 62
SC Sta. 791+47.33

ST Sta. 15+62.36

ST Sta. 694+94.95
PT NO. 69
N 42° 53′ 47″ W
N 43° 08′ 41″ W

℄ EX. RAMP C-1

CS Sta. 13+62.36
PT NO. 68
CS Sta. 691+94.95

℄ EX. SB I.R. 77

℄ CONST. SB I.R. 77

℄ CONST. NB I.R. 77

℄ EX. NB I.R. 77

BEGIN ℄ CONST.
RAMP B-2
STA. 285+64.96

PC Sta. 285+64.96
PT NO. 45

℄ CONST.
RAMP B-2

MATCH LINE STA. 483+50 NB I.R. 77, SEE SHEET 17

℄ EX. RAMP C

PC Sta. 7+06.86

SC Sta. 585+16.40
PT NO. 33

℄ CONST. RAMP C

℄ CONST.
RAMP C-2

℄ EX. RAMP C-2

℄ CONST.
RAMP C-1

MATCH LINE STA. 590+00
℄ CONST. RAMP C
SEE SHEET 22

MATCH LINE STA. 690+00
℄ CONST. RAMP C-1
SEE SHEET 22

FOR CURVE DATA, SEE SHEETS 23 - 26
FOR REFERENCE POINT TABLE, SEE SHEET 27

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED ZJP
CHECKED PJF

GEOMETRIC PLAN
STA. 483+50 NB I.R. 77 TO STA. 496+00 NB I.R. 77

SUM-77 / 277 / 224
VARIOUS

18
1288

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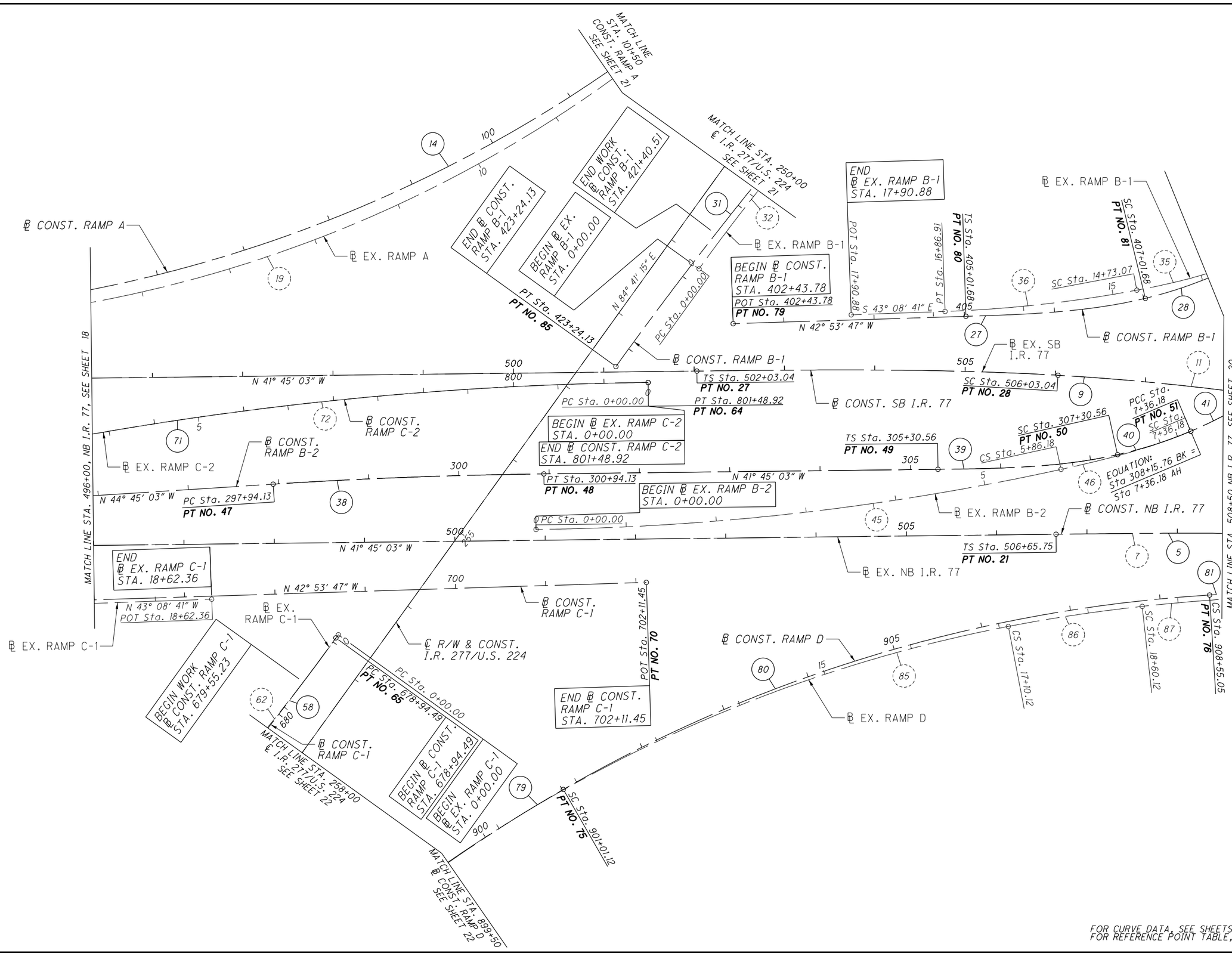
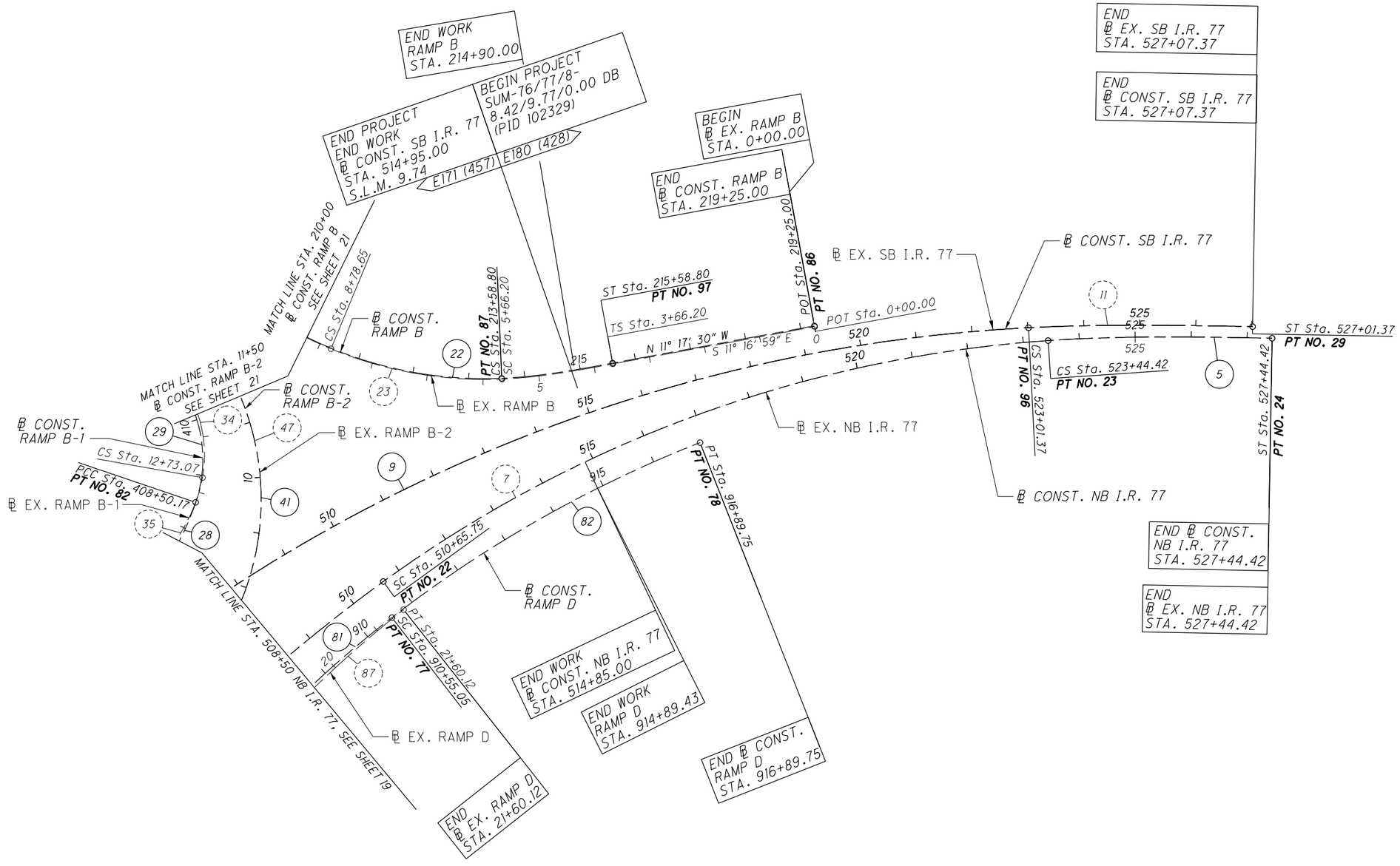

MATCH LINE STA. 101+50 CONST. RAMP A SEE SHEET 21
MATCH LINE STA. 250+00 ℄ I.R. 277/U.S. 224 SEE SHEET 21
℄ CONST. RAMP A
℄ EX. RAMP A
END ℄ CONST. RAMP B-1 STA. 423+24.13
BEGIN ℄ EX. RAMP B-1 STA. 0+00.00
END WORK ℄ CONST. RAMP B-1 STA. 421+40.51
PT Sta. 423+24.13 PT NO. 85
N 84° 41' 15" E
PC Sta. 0+00.00
℄ CONST. RAMP B-1
℄ EX. RAMP B-1
BEGIN ℄ CONST. RAMP B-1 STA. 402+43.78
POT Sta. 402+43.78 PT NO. 79
N 42° 53' 47" W
END ℄ EX. RAMP B-1 STA. 17+90.88
POT Sta. 17+90.88
S 43° 08' 41" E
PT Sta. 16+86.91
TS Sta. 405+01.68 PT NO. 80
SC Sta. 407+01.68 PT NO. 81
SC Sta. 14+73.07
℄ CONST. RAMP B-1
℄ EX. SB I.R. 77
SC Sta. 506+03.04 PT NO. 28
TS Sta. 502+03.04 PT NO. 27
PT Sta. 801+48.92 PT NO. 64
℄ CONST. SB I.R. 77
N 41° 45' 03" W
℄ CONST. RAMP C-2
℄ EX. RAMP C-2
℄ CONST. RAMP B-2
BEGIN ℄ EX. RAMP C-2 STA. 0+00.00
END ℄ CONST. RAMP C-2 STA. 801+48.92
PC Sta. 0+00.00
PT Sta. 300+94.13 PT NO. 48
BEGIN ℄ EX. RAMP B-2 STA. 0+00.00
PC Sta. 297+94.13 PT NO. 47
N 44° 45' 03" W
TS Sta. 305+30.56 PT NO. 49
SC Sta. 307+30.56 PT NO. 50
CS Sta. 5+86.18
PCC Sta. 7+36.18 PT NO. 51
SC Sta. 7+36.18
EQUATION: Sta 308+15.76 BK = Sta 7+36.18 AH
℄ EX. RAMP B-2
℄ CONST. NB I.R. 77
TS Sta. 506+65.75 PT NO. 21
℄ EX. NB I.R. 77
MATCH LINE STA. 496+00, NB I.R. 77, SEE SHEET 18
MATCH LINE STA. 508+50 NB I.R. 77, SEE SHEET 20
END ℄ EX. RAMP C-1 STA. 18+62.36
N 43° 08' 41" W
POT Sta. 18+62.36
℄ EX. RAMP C-1
℄ EX. RAMP C-1
℄ CONST. RAMP C-1
℄ R/W & CONST. I.R. 277/U.S. 224
POT Sta. 702+11.45 PT NO. 70
END ℄ CONST. RAMP C-1 STA. 702+11.45
BEGIN WORK ℄ CONST. RAMP C-1 STA. 679+55.23
PC Sta. 0+00.00 PT NO. 65
PC Sta. 678+94.49
BEGIN ℄ CONST. RAMP C-1 STA. 678+94.49
BEGIN ℄ EX. RAMP C-1 STA. 0+00.00
℄ CONST. RAMP C-1
MATCH LINE STA. 258+00 ℄ I.R. 277/U.S. 224 SEE SHEET 22
MATCH LINE STA. 899+50 ℄ CONST. RAMP D SEE SHEET 22
℄ CONST. RAMP D
℄ EX. RAMP D
SC Sta. 901+01.12 PT NO. 75
CS Sta. 17+10.12
SC Sta. 18+60.12
CS Sta. 808+55.05 PT NO. 78
N 41° 45' 03" W
N 42° 53' 47" W
N 41° 45' 03" W



FOR CURVE DATA, SEE SHEETS 23 - 26
FOR REFERENCE POINT TABLE, SEE SHEET 27

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED ZJP
CHECKED PJF

GEOMETRIC PLAN
℄ NB I.R. 77 TO END
STA. 508+50

SUM-77 / 277 / 224
VARIOUS

20
1288

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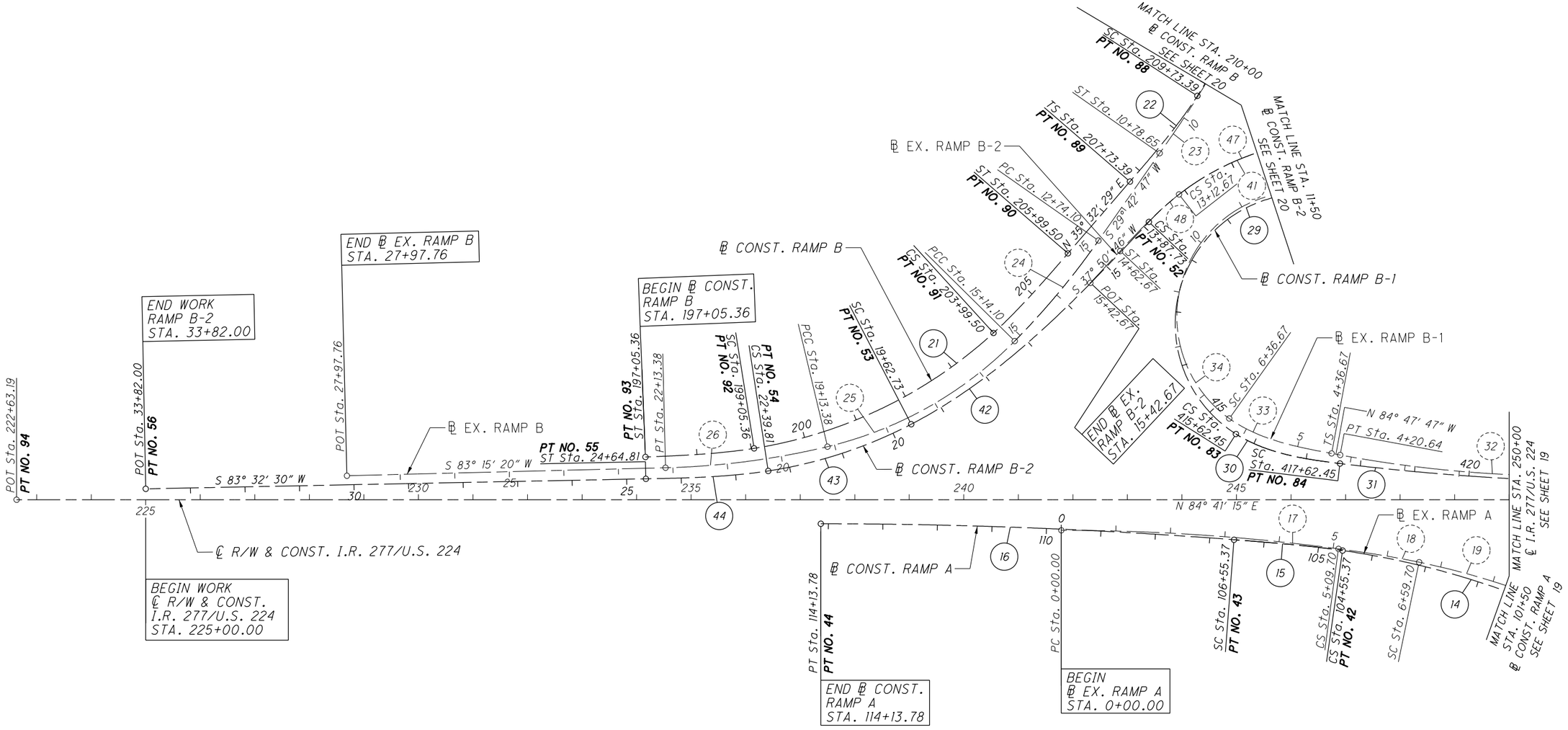

FOR CURVE DATA, SEE SHEETS 23 - 26
FOR REFERENCE POINT TABLE, SEE SHEET 27

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED ZJP
CHECKED PJF

GEOMETRIC PLAN
BEGIN TO STA. 250+00 I.R. 277/U.S. 224

SUM-77/277/224
VARIOUS

21
1288

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HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED ZJP
CHECKED PJF

GEOMETRIC PLAN
STA. 258+00 TO END

SUM-77 / 277 / 224
VARIOUS

22
1288

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CALCULATED ZJP
CHECKED PJF

CURVE DATA

1 ℄ R/W & CONST. I.R. 77
P.I. Sta. 360+81.72
Δ = 43° 10′ 45″ (RT)
Dc = 1° 28′ 08″
R = 3,900.50′
T = 1,543.50′
L = 2,939.50′
E = 294.29′
C = 2,870.43′
C.B. = N 21° 17′ 37″ W
D.S. = 70 MPH
e_{max} = 0.052
P.C. STA. 345+38.22
P.T. STA. 374+77.72

2 ℄ R/W & CONST. I.R. 77
P.I. Sta. 397+98.44
Δ = 3° 30′ 04″ (LT)
Dc = 0° 15′ 54″
R = 21,630.91′
T = 661.08′
L = 1,321.75′
E = 10.10′
C = 1,321.55′
C.B. = N 1° 27′ 16″ W
D.S. = 70 MPH
e_{max} = NC
P.C. STA. 391+37.36
P.T. STA. 404+59.11

3 ℄ R/W & CONST. I.R. 77
P.I. Sta. 438+34.18
Δ = 7° 59′ 02″ (LT)
Dc = 0° 24′ 10″
R = 14,228.56′
T = 992.94′
L = 1,982.67′
E = 34.60′
C = 1,981.07′
C.B. = N 7° 11′ 49″ W
D.S. = 70 MPH
e_{max} = NC
P.C. STA. 428+41.24
P.T. STA. 448+23.91

4 ℄ CONST. NB I.R. 77
P.I. Sta. 485+59.78
Δ = 30° 33′ 43″ (LT)
Dc = 1° 28′ 03″
R = 3,904.07′
T = 1,066.64′
L = 2,082.45′
E = 143.09′
C = 2,057.85′
C.B. = N 26° 28′ 11″ W
D.S. = 70 MPH
e_{max} = 0.0452
P.C. STA. 474+93.14
P.T. STA. 495+75.59

5 ℄ CONST. NB I.R. 77
P.I. Sta. 517+45.80
Δ = 41° 58′ 00″ (RT)
Dc = 2° 30′ 00″
R = 2,291.83′
Ls = 400.00′
θs = 5° 00′ 00″
LT = 266.77′
ST = 133.43′
x = 399.70′
y = 11.63′
k = 199.95′
p = 2.91′
Δc = 31° 58′ 00″ (RT)
Lc = 1,278.67′
Ts = 1,080.05′
Es = 165.89′
C = 1,262.15′
C1 = C2 = 399.86′
C.B.1 = N 40° 05′ 03″ W
C.B. = N 20° 46′ 03″ W
C.B.2 = S 1° 27′ 02″ E
D.S. = 60 MPH
e_{max} = 0.051
T.S. STA. 506+65.75
S.C. STA. 510+65.75
C.S. STA. 523+44.42
S.T. STA. 527+44.42

6 ℄ EX. NB I.R. 77
P.I. Sta. 485+55.84
Δ = 30° 33′ 43″ (LT)
Dc = 1° 28′ 03″
R = 3,904.07′
T = 1,066.64′
L = 2,082.45′
E = 143.09′
C = 2,057.85′
C.B. = N 26° 28′ 11″ W
P.C. STA. 474+89.21
P.T. STA. 495+71.66

7 ℄ EX. NB I.R. 77
P.I. Sta. 517+45.80
Δ = 41° 58′ 00″ (RT)
Dc = 2° 30′ 00″
R = 2,291.83′
Ls = 400.00′
θs = 5° 00′ 00″
LT = 266.77′
ST = 133.43′
x = 399.70′
y = 11.63′
k = 199.95′
p = 2.91′
Δc = 31° 58′ 00″ (RT)
Lc = 1,278.67′
Ts = 1,080.05′
Es = 165.89′
C = 1,262.15′
C1 = C2 = 399.86′
C.B.1 = N 40° 05′ 03″ W
C.B. = N 20° 46′ 03″ W
C.B.2 = S 1° 27′ 02″ E
T.S. STA. 506+65.75
S.C. STA. 510+65.75
C.S. STA. 523+44.42
S.T. STA. 527+44.42

8 ℄ CONST. SB I.R. 77
P.I. Sta. 482+91.41
Δ = 29° 44′ 36″ (LT)
Dc = 1° 28′ 03″
R = 3,904.07′
T = 1,036.73′
L = 2,026.68′
E = 135.31′
C = 2,004.00′
C.B. = N 26° 52′ 45″ W
D.S. = 70 MPH
e_{max} = 0.0452
P.C. STA. 472+54.68
P.T. STA. 492+81.37

9 ℄ CONST. SB I.R. 77
P.I. Sta. 515+02.63
Δ = 41° 58′ 00″ (RT)
Dc = 2° 00′ 00″
R = 2,864.79′
Ls = 400.00′
θs = 4° 00′ 00″
LT = 266.73′
ST = 133.40′
x = 399.81′
y = 9.31′
k = 199.97′
p = 2.33′
Δc = 33° 58′ 00″ (RT)
Lc = 1,698.33′
Ts = 1,299.59′
Es = 205.96′
C = 1,673.57′
C1 = C2 = 399.91′
C.B.1 = N 40° 25′ 03″ W
C.B. = N 20° 46′ 03″ W
C.B.2 = N 1° 07′ 03″ W
D.S. = 60 MPH
e_{max} = 0.045
T.S. STA. 502+03.04
S.C. STA. 506+03.04
C.S. STA. 523+01.37
S.T. STA. 527+01.37

10 ℄ EX. SB I.R. 77
P.I. Sta. 482+92.97
Δ = 30° 33′ 43″ (LT)
Dc = 1° 28′ 03″
R = 3,904.07′
T = 1,066.64′
L = 2,082.45′
E = 143.09′
C = 2,057.85′
C.B. = N 26° 28′ 11″ W
P.C. STA. 472+26.33
P.T. STA. 493+08.78

11 ℄ EX. SB I.R. 77
P.I. Sta. 515+02.63
Δ = 41° 58′ 00″ (RT)
Dc = 2° 00′ 00″
R = 2,864.79′
Ls = 400.00′
θs = 4° 00′ 00″
LT = 266.73′
ST = 133.40′
x = 399.81′
y = 9.31′
k = 199.97′
p = 2.33′
Δc = 33° 58′ 00″ (RT)
Lc = 1,698.33′
Ts = 1,299.59′
Es = 205.96′
C = 1,673.57′
C1 = C2 = 399.91′
C.B.1 = N 40° 25′ 03″ W
C.B. = N 20° 46′ 03″ W
C.B.2 = N 1° 07′ 03″ W
T.S. STA. 502+03.04
S.C. STA. 506+03.04
C.S. STA. 523+01.37
S.T. STA. 527+01.37

12 ℄ CONST. RAMP A
P.I. Sta. 88+67.18
Δ = 8° 07′ 34″ (LT)
Dc = 2° 00′ 00″
R = 2,864.79′
T = 203.49′
L = 406.31′
E = 7.22′
C = 405.96′
C.B. = N 36° 44′ 56″ W
D.S. = 60 MPH
e_{max} = 0.045
P.C. STA. 86+63.69
C.S. STA. 90+70.00

13 ℄ CONST. RAMP A
P.I. STA. 92+70.10
Ls = 300.00′
f s = 5° 37′ 30″
LT = 200.10′
ST = 100.09′
x = 299.71′
y = 9.81′
k = 149.95′
p = 2.45′
C.S. STA. 90+70.00
S.C. STA. 93+70.00

14 ℄ CONST. RAMP A
P.I. Sta. 99+36.72
Δ = 40° 42′ 05″ (LT)
Dc = 3° 45′ 00″
R = 1,527.89′
T = 566.72′
L = 1,085.37′
E = 101.72′
C = 1,062.69′
C.B. = N 66° 47′ 16″ W
D.S = 55 MPH (SSD = 50 MPH)
e_{max} = 0.0555
S.C. STA. 93+70.00
C.S. STA. 104+55.37

15 ℄ CONST. RAMP A
P.I. STA. 105+22.06
Ls = 200.00′
f s = 3° 45′ 00″
LT = 133.36′
ST = 66.69′
x = 199.91′
y = 4.36′
k = 99.99′
p = 1.09′
C.S. STA. 104+55.37
S.C. STA. 106+55.37

16 ℄ CONST. RAMP A
P.I. Sta. 110+34.76
Δ = 4° 25′ 27″ (LT)
Dc = 0° 35′ 00″
R = 9,822.13′
T = 379.40′
L = 758.42′
E = 7.32′
C = 758.23′
C.B. = S 86° 53′ 59″ W
D.S. = 65 MPH
e_{max} = 0.0187
S.C. STA. 106+55.37
P.T. STA. 114+13.78

17 ℄ EX. RAMP A
P.I. Sta. 2+55.23
Δ = 7° 38′ 44″ (RT)
Dc = 1° 30′ 00″
R = 3,819.72′
T = 255.23′
L = 509.70′
E = 8.52′
C = 509.33′
C.B. = N 88° 30′ 37″ E
P.C. STA. 0+00.00
P.T. STA. 5+09.70

18 ℄ EX. RAMP A
P.I. STA. 5+96.10
Ls = 150.00′
f s = 4° 07′ 30″
LT = 86.40′
ST = 43.67′
x = 149.90′
y = 4.58′
k = 74.99′
p = 0.41′
C.S. STA. 5+09.70
S.C. STA. 6+59.70

19 ℄ EX. RAMP A
P.I. Sta. 11+70.30
Δ = 39° 14′ 19″ (RT)
Dc = 4° 00′ 00″
R = 1,432.39′
T = 510.60′
L = 980.96′
E = 88.28′
C = 961.90′
C.B. = S 63° 55′ 21″ E
S.C. STA. 6+59.70
C.S. STA. 16+40.67

20 ℄ EX. RAMP A
P.I. STA. 16+90.68
Ls = 150.00′
f s = 3° 00′ 00″
LT = 100.01′
ST = 50.01′
x = 149.96′
y = 2.62′
k = 74.99′
p = 0.65′
C.S. STA. 16+40.67
S.T. STA. 17+90.67

21 ℄ CONST. RAMP B
P.I. Sta. 201+73.97
Δ = 46° 51′ 17″ (LT)
Dc = 6° 45′ 00″
R = 848.83′
Ls = 200.00′
θs = 6° 45′ 00″
LT = 133.43′
ST = 66.75′
x = 199.72′
y = 7.85′
k = 99.95′
p = 1.96′
Δc = 33° 21′ 17″ (LT)
Lc = 494.14′
Ts = 468.61′
Es = 78.40′
C = 487.20′
C1 = C2 = 199.88′
C.B.1 = N 80° 08′ 47″ E
C.B. = N 58° 58′ 07″ E
C.B.2 = S 37° 47′ 28″ W
D.S. = 50 MPH (SSD = 45 MPH)
e_{max} = 0.060
T.S. STA. 197+05.36
S.C. STA. 199+05.36
C.S. STA. 203+99.50
S.T. STA. 205+99.50

22 ℄ CONST. RAMP B
P.I. Sta. 211+84.50
Δ = 46° 49′ 58″ (LT)
Dc = 8° 00′ 00″
R = 716.20′
Ls = 200.00′
θs = 8° 00′ 00″
LT = 133.47′
ST = 66.79′
x = 199.61′
y = 9.30′
k = 99.94′
p = 2.33′
Δc = 30° 49′ 58″ (LT)
Lc = 385.41′
Ts = 411.11′
Es = 66.81′
C = 380.78′
C1 = C2 = 199.83′
C.B.1 = N 32° 52′ 30″ E
C.B. = N 12° 07′ 30″ E
C.B.2 = S 8° 37′ 31″ E
D.S. = 45 MPH
SSD = 305′ (360′ MIN.)
ACTUAL D.S. = 40 MPH
e_{max} = 0.060
T.S. STA. 207+73.39
S.C. STA. 209+73.39
C.S. STA. 213+58.80
S.T. STA. 215+58.80

23 ℄ EX. RAMP B
P.I. Sta. 7+34.75
Δ = 40° 59′ 46″ (RT)
Dc = 8° 00′ 00″
R = 716.20′
Ls = 200.00′
θs = 8° 00′ 00″
LT = 133.47′
ST = 66.79′
x = 199.61′
y = 9.30′
k = 99.94′
p = 2.33′
Δc = 24° 59′ 46″ (RT)
Lc = 312.45′
Ts = 368.55′
Es = 50.89′
C = 309.98′
C1 = C2 = 199.83′
C.B.1 = S 8° 37′ 01″ E
C.B. = S 9° 12′ 54″ W
C.B.2 = N 27° 02′ 48″ E
T.S. STA. 3+66.20
S.C. STA. 5+66.20
C.S. STA. 8+78.65
S.T. STA. 10+78.65

24 ℄ EX. RAMP B
P.I. Sta. 13+94.38
Δ = 9° 36′ 00″ (RT)
Dc = 4° 00′ 00″
R = 1,432.39′
T = 120.28′
L = 240.00′
E = 5.04′
C = 239.72′
C.B. = S 34° 30′ 47″ W
P.C. STA. 12+74.10
P.C.C. STA. 15+14.10

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VARIOUS

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25 — ℄ EX. RAMP B
P.I. Sta. 17+19.07
Δ = 31° 56′ 33″ (RT)
Dc = 8° 00′ 00″
R = 716.19′
T = 204.98′
L = 399.28′
E = 28.76′
C = 394.13′
C.B. = S 55° 17′ 03″ W
P.C.C. STA. 15+14.10
P.C.C. STA. 19+13.38

26 — ℄ EX. RAMP B
P.I. Sta. 20+63.93
Δ = 12° 00′ 00″ (RT)
Dc = 4° 00′ 00″
R = 1,432.43′
T = 150.55′
L = 300.01′
E = 7.89′
C = 299.46′
C.B. = S 77° 15′ 20″ W
P.C.C. STA. 19+13.38
P.T. STA. 22+13.38

27 — ℄ CONST. RAMP B-1
P.I. STA. 406+35.31
Ls = 200.00′
f s = 11° 45′ 00″
LT = 133.63′
ST = 66.93′
x = 199.16′
y = 13.63′
k = 99.86′
p = 3.41′
T.S. STA. 405+01.68
S.C. STA. 407+01.68

28 — ℄ CONST. RAMP B-1
P.I. Sta. 407+76.50
Δ = 17° 26′ 53″ (LT)
Dc = 11° 45′ 00″
R = 487.62′
T = 74.83′
L = 148.49′
E = 5.71′
C = 147.92′
C.B. = N 63° 22′ 14″ W
D.S. = 40 MPH (SSD = 35 MPH)
e_{max} = 0.060
S.C. STA. 407+01.68
P.C.C. STA. 408+50.17

29 — ℄ CONST. RAMP B-1
P.I. Sta. 438+65.75
Δ = 170° 56′ 49″ (LT)
Dc = 24° 00′ 00″
R = 238.73′
T = 3,015.57′
L = 712.28′
E = 2,786.28′
C = 475.98′
C.B. = S 22° 25′ 55″ W
D.S. = 30 MPH (SSD = 25 MPH)
e_{max} = 0.060
P.C.C. STA. 408+50.17
C.S. STA. 415+62.45

30 — ℄ CONST. RAMP B-1
P.I. STA. 416+33.74
Ls = 200.00′
f s = 25° 15′ 00″
LT = 131.48′
ST = 71.29′
x = 195.95′
y = 30.41′
k = 99.36′
p = 6.58′
C.S. STA. 415+62.45
S.C. STA. 417+62.45

31 — ℄ CONST. RAMP B-1
P.I. Sta. 420+43.64
Δ = 7° 01′ 15″ (LT)
Dc = 1° 15′ 00″
R = 4,583.66′
T = 281.19′
L = 561.67′
E = 8.62′
C = 561.32′
C.B. = N 88° 11′ 53″ E
D.S. = 65 MPH
e_{max} = 0.036
S.C. STA. 417+62.45
P.T. STA. 423+24.13

32 — ℄ EX. RAMP B-1
P.I. Sta. 2+10.91
Δ = 10° 30′ 58″ (RT)
Dc = 2° 30′ 00″
R = 2,291.83′
T = 210.91′
L = 420.64′
E = 9.68′
C = 420.05′
C.B. = S 89° 56′ 44″ W
P.C. STA. 0+00.00
P.T. STA. 4+20.64

33 — ℄ EX. RAMP B-1
P.I. STA. 5+71.36
Ls = 200.00′
f s = 25° 00′ 00″
LT = 134.69′
ST = 67.90′
x = 196.23′
y = 28.70′
k = 99.37′
p = 7.22′
T.S. STA. 4+36.67
S.C. STA. 6+36.67

34 — ℄ EX. RAMP B-1
P.I. Sta. 18+79.17
Δ = 159° 05′ 53″ (RT)
Dc = 25° 00′ 00″
R = 229.18′
T = 1,242.49′
L = 636.39′
E = 1,034.27′
C = 450.76′
C.B. = N 19° 45′ 10″ E
S.C. STA. 6+36.67
C.S. STA. 12+73.07

35 — ℄ EX. RAMP B-1
P.I. STA. 13+50.81
Ls = 200.00′
f s = 29° 00′ 00″
LT = 126.18′
ST = 77.74′
x = 194.17′
y = 37.69′
k = 99.15′
p = 6.07′
C.S. STA. 12+73.07
S.C. STA. 14+73.07

36 — ℄ EX. RAMP B-1
P.I. Sta. 15+80.19
Δ = 8° 33′ 13″ (RT)
Dc = 4° 00′ 00″
R = 1,432.39′
T = 107.12′
L = 213.84′
E = 4.00′
C = 213.64′
C.B. = S 47° 25′ 17″ E
S.C. STA. 14+73.07
P.T. STA. 16+86.91

37 — ℄ CONST. RAMP B-2
P.I. Sta. 290+21.80
Δ = 17° 49′ 55″ (LT)
Dc = 1° 58′ 03″
R = 2,911.98′
T = 456.84′
L = 906.29′
E = 35.62′
C = 902.63′
C.B. = N 35° 50′ 05″ W
D.S. = 70 MPH (SSD = 60 MPH)
e_{max} = 0.0545
P.C. STA. 285+64.96
P.T. STA. 294+71.25

38 — ℄ CONST. RAMP B-2
P.I. Sta. 299+44.16
Δ = 3° 00′ 00″ (RT)
Dc = 1° 00′ 00″
R = 5,729.58′
T = 150.03′
L = 300.00′
E = 1.96′
C = 299.97′
C.B. = N 43° 15′ 03″ W
D.S. = 60 MPH
e_{max} = 0.027
P.C. STA. 297+94.13
P.T. STA. 300+94.13

39 — ℄ CONST. RAMP B-2
P.I. STA. 306+64.20
Ls = 200.00′
f s = 12° 00′ 01″
LT = 133.64′
ST = 66.95′
x = 199.12′
y = 13.92′
k = 99.85′
p = 3.49′
T.S. STA. 305+30.56
S.C. STA. 307+30.56

40 — ℄ CONST. RAMP B-2
P.I. Sta. 307+73.27
Δ = 10° 13′ 25″ (LT)
Dc = 12° 00′ 01″
(NDC Dc = 9° 00′ MAX.)
R = 477.46′
T = 42.71′
L = 85.19′
E = 1.91′
C = 85.08′
C.B. = N 58° 51′ 46″ W
D.S. = 35 MPH (45 MPH MIN.)
SSD = 205′ (360′ MIN.)
ACTUAL D.S. = 30 MPH
e_{max} = 0.057
S.C. STA. 307+30.56
P.C.C. STA. 308+15.76 BK/
STA. 7+36.18 AH

41 — ℄ CONST. RAMP B-2
P.I. Sta. 11+24.11
Δ = 78° 11′ 12″ (LT)
Dc = 12° 00′ 01″
(NDC Dc = 9° 00′ MAX.)
R = 477.46′
T = 387.93′
L = 651.55′
E = 137.73′
C = 602.16′
C.B. = S 76° 55′ 56″ W
D.S. = 35 MPH (45 MPH MIN.)
SSD = 205′ (360′ MIN.)
ACTUAL D.S. = 30 MPH
e_{max} = 0.057
P.C.C. STA. 7+36.18 AH/
STA. 308+15.76 BK
C.S. STA. 13+87.73

42 — ℄ CONST. RAMP B-2
P.I. STA. 17+73.39
Ls = 575.00′
f s = 19° 24′ 22″
LT = 385.66′
ST = 193.79′
x = 568.44′
y = 64.39′
k = 286.40′
p = 16.16′
C.S. STA. 13+87.73
S.C. STA. 19+62.73

43 — ℄ CONST. RAMP B-2
P.I. Sta. 21+02.51
Δ = 18° 42′ 10″ (RT)
Dc = 6° 45′ 00″
R = 848.83′
T = 139.78′
L = 277.08′
E = 11.43′
C = 275.85′
C.B. = S 66° 35′ 48″ W
D.S. = 50 MPH
e_{max} = 0.060
S.C. STA. 19+62.73
C.S. STA. 22+39.81

44 — ℄ CONST. RAMP B-2
P.I. STA. 23+14.93
Ls = 225.00′
f s = 7° 35′ 37″
LT = 150.14′
ST = 75.13′
x = 224.61′
y = 9.93′
k = 112.43′
p = 2.48′
C.S. STA. 22+39.81
S.T. STA. 24+64.81

45 — ℄ EX. RAMP B-2
P.I. Sta. 2+94.12
Δ = 11° 43′ 25″ (LT)
Dc = 2° 00′ 00″
R = 2,864.79′
T = 294.12′
L = 586.18′
E = 15.06′
C = 585.16′
C.B. = N 47° 36′ 45″ W
P.C. STA. 0+00.00
C.S. STA. 5+86.18

46 — ℄ EX. RAMP B-2
P.I. STA. 6+79.23
Ls = 150.00′
f s = 10° 30′ 00″
LT = 93.05′
ST = 57.32′
x = 149.42′
y = 10.45′
k = 74.92′
p = 1.63′
C.S. STA. 5+86.18
S.C. STA. 7+36.18

47 — ℄ EX. RAMP B-2
P.I. Sta. 10+65.43
Δ = 69° 10′ 46″ (LT)
Dc = 12° 00′ 01″
R = 477.46′
T = 329.25′
L = 576.49′
E = 102.52′
C = 542.10′
C.B. = S 81° 26′ 09″ W
S.C. STA. 7+36.18
C.S. STA. 13+12.67

48 — ℄ EX. RAMP B-2
P.I. STA. 13+62.79
Ls = 150.00′
f s = 9° 00′ 00″
LT = 100.13′
ST = 50.12′
x = 149.63′
y = 7.84′
k = 74.94′
p = 1.96′
C.S. STA. 13+12.67
S.T. STA. 14+62.67

49 — ℄ CONST. RAMP C
P.I. Sta. 578+08.75
Δ = 1° 57′ 07″ (LT)
Dc = 0° 28′ 03″
R = 12,253.42′
T = 208.75′
L = 417.46′
E = 1.78′
C = 417.44′
C.B. = N 13° 43′ 59″ W
D.S. = 70 MPH
e_{max} = 0.0177
P.C. STA. 576+00.00
P.T. STA. 580+17.46

50 — ℄ CONST. RAMP C
P.I. STA. 584+49.77
Ls = 200.00′
f s = 4° 00′ 00″
LT = 133.37′
ST = 66.70′
x = 199.90′
y = 4.65′
k = 99.98′
p = 1.16′
T.S. STA. 583+16.40
S.C. STA. 585+16.40

51 — ℄ CONST. RAMP C
P.I. Sta. 589+20.09
Δ = 31° 28′ 43″ (RT)
Dc = 4° 00′ 00″
R = 1,432.39′
T = 403.69′
L = 786.96′
E = 55.80′
C = 777.10′
C.B. = N 5° 01′ 48″ E
D.S. = 60 MPH (SSD = 50 MPH)
e_{max} = 0.060
S.C. STA. 585+16.40
P.C.C. STA. 593+03.36

52 — ℄ CONST. RAMP C
P.I. Sta. 596+43.35
Δ = 50° 47′ 20″ (RT)
Dc = 8° 00′ 00″
R = 716.20′
T = 339.99′
L = 634.86′
E = 76.60′
C = 614.28′
C.B. = N 46° 09′ 50″ E
D.S. = 45 MPH
SSD = 305′ (360′ MIN.)
ACTUAL D.S. = 40 MPH
e_{max} = 0.060
P.C.C. STA. 593+03.36
P.C.C. STA. 599+38.22

53 — ℄ CONST. RAMP C
P.I. Sta. 600+38.18
Δ = 7° 59′ 01″ (RT)
Dc = 4° 00′ 00″
R = 1,432.39′
T = 99.96′
L = 199.59′
E = 3.48′
C = 199.43′
C.B. = N 75° 33′ 00″ E
D.S. = 60 MPH (SSD = 50 MPH)
e_{max} = 0.060
P.C.C. STA. 599+38.22
C.S. STA. 601+37.81

54 — ℄ CONST. RAMP C
P.I. STA. 602+04.51
Ls = 200.00′
f s = 4° 00′ 00″
LT = 133.37′
ST = 66.70′
x = 199.90′
y = 4.65′
k = 99.98′
p = 1.16′
C.S. STA. 601+37.81
S.T. STA. 603+37.81

55 — ℄ EX. RAMP C
P.I. Sta. 11+49.44
Δ = 34° 20′ 24″ (RT)
Dc = 4° 00′ 00″
R = 1,432.39′
T = 442.58′
L = 858.50′
E = 66.82′
C = 845.71′
C.B. = N 2° 42′ 38″ E
P.C. STA. 7+06.86
P.T. STA. 15+65.36

56 — ℄ EX. RAMP C
P.I. Sta. 19+24.77
Δ = 51° 35′ 29″ (RT)
Dc = 8° 00′ 00″
R = 716.20′
T = 346.16′
L = 644.89′
E = 79.27′
C = 623.33′
C.B. = N 45° 40′ 34″ E
P.C. STA. 15+78.61
P.C.C. STA. 22+23.50

CALCULATED ZJP
CHECKED PJF

CURVE DATA

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VARIOUS

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57 — ℄ EX. RAMP C
P.I. Sta. 23+71.04
Δ = 11° 45′ 41″ (RT)
Dc = 4° 00′ 00″
R = 1,432.39′
T = 147.54′
L = 294.03′
E = 7.58′
C = 293.52′
C.B. = N 77° 21′ 09″ E
P.C.C. STA. 22+23.50
P.T. STA. 25+17.54

58 — ℄ CONST. RAMP C-1
P.I. Sta. 681+06.79
Δ = 8° 07′ 29″ (RT)
Dc = 1° 55′ 00″
R = 2,989.35′
T = 212.30′
L = 423.90′
E = 7.53′
C = 423.54′
C.B. = N 88° 45′ 00″ E
D.S. = 55 MPH
e_{max} = 0.0387
P.C. STA. 678+94.49
C.S. STA. 683+18.39

59 — ℄ CONST. RAMP C-1
P.I. STA. 684+48.34
Ls = 200.00′
f s = 25° 55′ 00″
LT = 129.96′
ST = 73.02′
x = 195.63′
y = 31.91′
k = 99.32′
p = 6.39′
C.S. STA. 683+18.39
S.C. STA. 685+18.39

60 — ℄ CONST. RAMP C-1
P.I. Sta. 700+58.25
Δ = 162° 22′ 29″ (RT)
Dc = 24° 00′ 00″
R = 238.73′
T = 1,539.86′
L = 676.56′
E = 1,319.52′
C = 471.83′
C.B. = S 19° 54′ 58″ W
D.S. = 30 MPH (SSD = 25 MPH)
e_{max} = 0.060
S.C. STA. 685+18.39
C.S. STA. 691+94.95

61 — ℄ CONST. RAMP C-1
P.I. STA. 692+98.87
Ls = 300.00′
f s = 36° 00′ 00″
LT = 204.30′
ST = 103.92′
x = 288.37′
y = 61.08′
k = 148.05′
p = 15.49′
C.S. STA. 691+94.95
S.T. STA. 694+94.95

62 — ℄ EX. RAMP C-1
P.I. Sta. 2+12.14
Δ = 10° 34′ 37″ (RT)
Dc = 2° 30′ 00″
R = 2,291.83′
T = 212.14′
L = 423.08′
E = 9.80′
C = 422.48′
C.B. = N 89° 58′ 34″ E
P.C. STA. 0+00.00
P.T. STA. 4+23.08

63 — ℄ EX. RAMP C-1
P.I. STA. 5+73.65
Ls = 200.00′
f s = 24° 00′ 00″
LT = 134.58′
ST = 67.80′
x = 196.52′
y = 27.58′
k = 99.42′
p = 6.94′
T.S. STA. 4+39.07
S.C. STA. 6+39.07

64 — ℄ EX. RAMP C-1
P.I. Sta. 9+86.54
Δ = 221° 35′ 27″ (RT)
Dc = 24° 00′ 00″
R = 238.73′
Ls = 200.00′
θs = 24° 00′ 00″
LT = 134.58′
ST = 67.80′
x = 196.52′
y = 27.58′
k = 99.42′
p = 6.94′
Δc = 173° 35′ 27″ (RT)
Lc = 723.30′
Ts = 547.47′
Es = 272.25′
C = 476.72′
C1 = C2 = 198.44′
C.B.1 = S 76° 44′ 51″ E
C.B. = S 26° 03′ 36″ W
C.B.2 = S 51° 07′ 58″ E
S.C. STA. 6+39.07
C.S. STA. 13+62.36

65 — ℄ EX. RAMP C-1
P.I. STA. 14+30.16
Ls = 200.00′
f s = 24° 00′ 00″
LT = 134.58′
ST = 67.80′
x = 196.52′
y = 27.58′
k = 99.42′
p = 6.94′
C.S. STA. 13+62.36
S.T. STA. 15+62.36

66 — ℄ CONST. RAMP C-2
P.I. Sta. 782+19.82
Δ = 11° 22′ 45″ (LT)
Dc = 7° 39′ 38″
R = 747.92′
T = 74.52′
L = 148.54′
E = 3.70′
C = 148.30′
C.B. = S 43° 33′ 57″ W
D.S. = 45 MPH
e_{max} = 0.060
P.C. STA. 781+45.30
C.S. STA. 782+93.84

67 — ℄ CONST. RAMP C-2
P.I. STA. 783+43.89
Ls = 150.00′
f s = 5° 44′ 44″
LT = 100.05′
ST = 50.05′
x = 149.85′
y = 5.01′
k = 74.97′
p = 1.25′
C.S. STA. 782+93.84
S.T. STA. 784+43.84

68 — ℄ CONST. RAMP C-2
P.I. STA. 786+50.14
Ls = 250.00′
f s = 18° 45′ 00″
LT = 167.61′
ST = 84.19′
x = 247.34′
y = 27.06′
k = 124.56′
p = 6.79′
T.S. STA. 784+82.53
S.C. STA. 787+32.53

69 — ℄ CONST. RAMP C-2
P.I. Sta. 789+63.04
Δ = 62° 13′ 11″ (RT)
Dc = 15° 00′ 00″
(NDC Dc = 9° 00′ MAX.)
R = 381.97′
T = 230.51′
L = 414.80′
E = 64.16′
C = 394.72′
C.B. = S 81° 59′ 26″ W
D.S. = 35 MPH (45 MPH MIN.)
SSD = 194′ (360′ MIN.)
ACTUAL D.S. = 29 MPH
e_{max} = 0.060
S.C. STA. 787+32.53
C.S. STA. 791+47.33

70 — ℄ CONST. RAMP C-2
P.I. STA. 792+02.11
Ls = 150.00′
f s = 12° 22′ 30″
LT = 95.72′
ST = 54.79′
x = 149.23′
y = 11.74′
k = 74.88′
p = 2.21′
C.S. STA. 791+47.33
S.C. STA. 792+97.33

71 — ℄ CONST. RAMP C-2
P.I. Sta. 797+24.90
Δ = 12° 46′ 26″ (RT)
Dc = 1° 30′ 00″
R = 3,819.72′
T = 427.57′
L = 851.59′
E = 23.86′
C = 849.83′
C.B. = N 48° 08′ 16″ W
D.S. = 60 MPH (SSD = 55 MPH)
e_{max} = 0.037
S.C. STA. 792+97.33
P.T. STA. 801+48.92

72 — ℄ EX. RAMP C-2
P.I. Sta. 4+27.57
Δ = 12° 46′ 26″ (LT)
Dc = 1° 30′ 00″
R = 3,819.72′
T = 427.57′
L = 851.59′
E = 23.86′
C = 849.83′
C.B. = S 48° 08′ 16″ E
P.C. STA. 0+00.00
C.S. STA. 8+51.59

73 — ℄ EX. RAMP C-2
P.I. STA. 9+47.31
Ls = 150.00′
f s = 12° 22′ 30″
LT = 95.72′
ST = 54.79′
x = 149.23′
y = 11.74′
k = 74.88′
p = 2.21′
C.S. STA. 8+51.59
S.C. STA. 10+01.59

74 — ℄ EX. RAMP C-2
P.I. Sta. 12+59.38
Δ = 68° 01′ 46″ (LT)
Dc = 15° 00′ 00″
R = 381.97′
T = 257.79′
L = 453.53′
E = 78.85′
C = 427.35′
C.B. = N 79° 05′ 08″ E
S.C. STA. 10+01.59
P.C.C. STA. 14+55.12

75 — ℄ EX. RAMP C-2
P.I. Sta. 15+58.98
Δ = 14° 27′ 48″ (LT)
Dc = 7° 00′ 00″
R = 818.51′
T = 103.86′
L = 206.62′
E = 6.56′
C = 206.07′
C.B. = N 37° 50′ 21″ E
P.C.C. STA. 14+55.12
P.T. STA. 16+61.74

76 — ℄ CONST. RAMP D
P.I. Sta. 891+58.50
Δ = 8° 59′ 04″ (RT)
Dc = 1° 15′ 00″
R = 4,583.66′
T = 360.12′
L = 718.75′
E = 14.12′
C = 718.02′
C.B. = S 89° 10′ 47″ W
D.S. = 65 MPH
e_{max} = 0.036
P.C. STA. 887+98.38
C.S. STA. 895+17.13

77 — ℄ CONST. RAMP D
P.I. STA. 896+29.68
Ls = 200.00′
f s = 4° 00′ 00″
LT = 112.54′
ST = 87.54′
x = 199.87′
y = 6.11′
k = 99.98′
p = 0.44′
C.S. STA. 895+17.13
S.C. STA. 897+17.13

78 — ℄ CONST. RAMP D
P.I. Sta. 898+09.19
Δ = 5° 03′ 35″ (RT)
Dc = 2° 45′ 00″
R = 2,083.48′
T = 92.05′
L = 183.99′
E = 2.03′
C = 183.93′
C.B. = N 79° 47′ 54″ W
D.S. = 55 MPH
e_{max} = 0.048
S.C. STA. 897+17.13
C.S. STA. 899+01.12

79 — ℄ CONST. RAMP D
P.I. STA. 900+05.22
Ls = 200.00′
f s = 6° 15′ 00″
LT = 104.10′
ST = 96.10′
x = 199.63′
y = 10.46′
k = 99.96′
p = 0.22′
C.S. STA. 899+01.12
S.C. STA. 901+01.12

80 — ℄ CONST. RAMP D
P.I. Sta. 904+84.89
Δ = 26° 23′ 16″ (RT)
Dc = 3° 30′ 00″
R = 1,637.02′
T = 383.77′
L = 753.93′
E = 44.38′
C = 747.29′
C.B. = N 57° 49′ 29″ W
D.S. = 50 MPH
e_{max} = 0.048
S.C. STA. 901+01.12
C.S. STA. 908+55.05

81 — ℄ CONST. RAMP D
P.I. STA. 909+49.98
Ls = 200.00′
f s = 6° 03′ 40″
LT = 105.26′
ST = 94.93′
x = 199.66′
y = 10.02′
k = 99.96′
p = 0.27′
C.S. STA. 908+55.05
S.C. STA. 910+55.05

82 — ℄ CONST. RAMP D
P.I. Sta. 913+74.55
Δ = 16° 15′ 22″ (RT)
Dc = 2° 33′ 40″
R = 2,237.04′
T = 319.50′
L = 634.70′
E = 22.70′
C = 632.57′
C.B. = N 30° 26′ 29″ W
D.S. = 60 MPH
e_{max} = 0.051
S.C. STA. 910+55.05
P.T. STA. 916+89.75

83 — ℄ EX. RAMP D
P.I. Sta. 3+78.12
Δ = 11° 18′ 24″ (RT)
Dc = 1° 30′ 00″
R = 3,819.72′
T = 378.12′
L = 753.78′
E = 18.67′
C = 752.56′
C.B. = N 89° 39′ 33″ W
P.C. STA. 0+00.00
C.S. STA. 7+53.78

84 — ℄ EX. RAMP D
P.I. STA. 8+38.80
Ls = 150.00′
f s = 3° 45′ 00″
LT = 85.03′
ST = 65.03′
x = 149.91′
y = 4.25′
k = 74.99′
p = 0.33′
C.S. STA. 7+53.78
S.C. STA. 9+03.78

85 — ℄ EX. RAMP D
P.I. Sta. 13+15.30
Δ = 28° 13′ 19″ (RT)
Dc = 3° 30′ 00″
R = 1,637.02′
T = 411.52′
L = 806.34′
E = 50.93′
C = 798.21′
C.B. = N 66° 08′ 41″ W
S.C. STA. 9+03.78
C.S. STA. 17+10.12

86 — ℄ EX. RAMP D
P.I. STA. 17+82.16
Ls = 150.00′
f s = 4° 41′ 15″
LT = 78.04′
ST = 72.04′
x = 149.84′
y = 5.89′
k = 74.98′
p = 0.12′
C.S. STA. 17+10.12
S.C. STA. 18+60.12

CALCULATED ZJP
CHECKED PJF

CURVE DATA

SUM-77 / 277 / 224
VARIOUS

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87 — ℄ EX. RAMP D
P.I. Sta. 20+10.38
Δ = 8° 15′ 00″ (RT)
Dc = 2° 45′ 00″
R = 2,083.48′
T = 150.26′
L = 300.00′
E = 5.41′
C = 299.74′
C.B. = N 43° 13′ 17″ W
S.C. STA. 18+60.12
P.T. STA. 21+60.12

88 — ℄ CONST. ARLINGTON RAMP D
P.I. Sta. 73+08.33
Δ = 6° 15′ 29″ (RT)
Dc = 1° 30′ 00″
R = 3,819.72′
T = 208.81′
L = 417.19′
E = 5.70′
C = 416.99′
C.B. = N 3° 58′ 43″ W
D.S. = 50 MPH
e_{max} = 0.028
P.C. STA. 70+99.52
P.T. STA. 75+16.71

89 — ℄ EX. ARLINGTON RAMP D
P.I. Sta. 66+33.08
Δ = 33° 44′ 40″ (RT)
Dc = 28° 38′ 52″
R = 200.00′
T = 60.66′
L = 117.79′
E = 9.00′
C = 116.10′
C.B. = S 18° 46′ 55″ W
P.C. STA. 65+72.42
P.C.C. STA. 66+90.21

90 — ℄ EX. ARLINGTON RAMP D
P.I. Sta. 68+03.74
Δ = 97° 15′ 08″ (RT)
Dc = 57° 17′ 45″
R = 100.00′
T = 113.53′
L = 169.74′
E = 51.29′
C = 150.08′
C.B. = S 84° 16′ 49″ W
P.C.C. STA. 66+90.21
P.C.C. STA. 68+59.95

91 — ℄ EX. ARLINGTON RAMP D
P.I. Sta. 68+79.80
Δ = 11° 20′ 17″ (RT)
Dc = 28° 38′ 52″
R = 200.00′
T = 19.85′
L = 39.58′
E = 0.98′
C = 39.51′
C.B. = N 41° 25′ 29″ W
P.C.C. STA. 68+59.95
C.S. STA. 68+99.52

92 — ℄ EX. ARLINGTON RAMP D
P.I. STA. 69+67.82
Ls = 200.00′
f s = 28° 38′ 52″
LT = 135.12′
ST = 68.30′
x = 195.06′
y = 32.74′
k = 99.17′
p = 8.26′
C.S. STA. 68+99.52
S.C. STA. 70+99.52

93 — ℄ EX. ARLINGTON RAMP D
P.I. Sta. 73+06.73
Δ = 6° 12′ 36″ (RT)
Dc = 1° 30′ 00″
R = 3,819.72′
T = 207.21′
L = 414.00′
E = 5.62′
C = 413.80′
C.B. = N 4° 00′ 10″ W
S.C. STA. 70+99.52
P.T. STA. 75+13.53

94 — ℄ CONST. WARNER ROAD (CH 156)
P.I. Sta. 21+17.47
Δ = 5° 27′ 57″ (RT)
Dc = 2° 00′ 00″
R = 2,864.79′
T = 136.75′
L = 273.29′
E = 3.26′
C = 273.18′
C.B. = S 77° 40′ 14″ E
D.S. = 45 MPH
e_{max} = NC
P.C. STA. 19+80.72
P.T. STA. 22+54.01

95 — ℄ CONST. WARNER ROAD (CH 156)
P.I. Sta. 27+69.62
Δ = 7° 50′ 44″ (LT)
Dc = 2° 25′ 32″
R = 2,362.12′
T = 161.98′
L = 323.44′
E = 5.55′
C = 323.19′
C.B. = S 80° 11′ 33″ E
D.S. = 45 MPH
e_{max} = NC
P.C. STA. 26+07.65
P.T. STA. 29+31.09

96 — ℄ R/W & CONST. I.R. 277/U.S. 224
P.I. Sta. 280+91.67
Δ = 6° 22′ 18″ (RT)
Dc = 1° 00′ 00″
R = 5,729.58′
T = 318.91′
L = 637.17′
E = 8.87′
C = 636.84′
C.B. = N 87° 52′ 24″ E
P.C. STA. 277+72.76
P.T. STA. 284+09.93

97 — ℄ R/W WARNER ROAD (CH 156)
P.I. Sta. 106+34.16
Δ = 4° 15′ 45″ (RT)
Dc = 0° 59′ 42″
R = 5,757.59′
T = 214.27′
L = 428.33′
E = 3.99′
C = 428.24′
C.B. = S 77° 44′ 24″ E
P.C. Sta. 104+19.89
P.T. Sta. 108+48.22

CALCULATED ZJP
CHECKED PJF

CURVE DATA

SUM-77 / 277 / 224
VARIOUS

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REFERENCE POINT TABLE

POINT NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	484175.1336	2246592.4640		P.C. STA. 70+99.52, ℄ CONST. ARLINGTON RD RAMP D
2	484591.1161	2246563.5315		P.T. STA. 75+16.71, ℄ CONST. ARLINGTON RD RAMP D
3	485892.5095	2246544.2290		POT. STA. 88+18.25, ℄ CONST. ARLINGTON RD RAMP D
4	484545.7197	2246465.2701		P.T. STA. 374+77.72, ℄ R/W & CONST. I.R. 77
5	486205.3353	2246473.8442		P.C. STA. 391+37.36, ℄ R/W & CONST. I.R. 77
6	487526.4588	2246440.2986		P.T. STA. 404+59.11, ℄ R/W & CONST. I.R. 77
7	489904.8574	2246307.1152		P.C. STA. 428+41.24, ℄ R/W & CONST. I.R. 77
8	489899.6607	2245234.6758		POT STA. 15+00.00, ℄ CONST. WARNER ROAD
9	489819.5188	2245708.6708		P.C. STA. 19+80.72, ℄ CONST. WARNER ROAD
10	489761.1853	2245975.5517		P.T. STA. 22+54.01, ℄ CONST. WARNER ROAD
11	489723.2462	2246116.5283		P.I. STA. 24+00.00, ℄ CONST. WARNER ROAD
12	489673.9605	2246318.2437		P.C. STA. 26+07.65, ℄ CONST. WARNER ROAD
13	489618.9086	2246636.7127		P.T. STA. 29+31.09, ℄ CONST. WARNER ROAD
14	489588.7123	2246929.6804		POT. STA. 32+25.61, ℄ CONST. WARNER ROAD
15	491870.3195	2246058.9248		P.T. STA. 448+23.91, ℄ R/W & CONST. I.R. 77
16	493950.0697	2245635.3091		POT. STA. 469+42.49, ℄ CONST. SB I.R. 77
17	493957.0543	2245670.6249		POT. STA. 469+46.96, ℄ CONST. NB I.R. 77
18	494232.5084	2245620.2164		P.I. STA. 472+26.99, ℄ CONST. NB I.R. 77
19	494493.5993	2245568.5715		P.C. STA. 474+93.14, ℄ CONST. NB I.R. 77
20	496335.7241	2244651.3327		P.T. STA. 495+75.59, ℄ CONST. NB I.R. 77
21	497149.0356	2243925.4052		T.S. STA. 506+65.75, ℄ CONST. NB I.R. 77
22	497454.9717	2243667.9273		S.C. STA. 510+65.75, ℄ CONST. NB I.R. 77
23	498635.1129	2243220.4015		C.S. STA. 523+44.42, ℄ CONST. NB I.R. 77
24	499034.8494	2243210.2786		S.T. STA. 527+44.42, ℄ CONST. NB I.R. 77
25	494255.4316	2245570.3612		P.C. STA. 472+54.68, ℄ CONST. SB I.R. 77
26	496042.6269	2244664.3344		P.T. STA. 492+81.37, ℄ CONST. SB I.R. 77
27	496730.5401	2244050.5999		T.S. STA. 502+03.04, ℄ CONST. SB I.R. 77
28	497035.0104	2243791.3152		S.C. STA. 506+03.04, ℄ CONST. SB I.R. 77
29	498999.6848	2243190.1089		S.T. STA. 527+01.37, ℄ CONST. SB I.R. 77
30	494608.7304	2245593.2191		P.C. STA. 576+00.00, ℄ CONST. RAMP C
31	495014.2364	2245494.1186		P.T. STA. 580+17.46, ℄ CONST. RAMP C
32	495303.3781	2245419.2142		T.S. STA. 583+16.40, ℄ CONST. RAMP C
33	495497.9106	2245371.9565		S.C. STA. 585+16.40, ℄ CONST. RAMP C
34	496272.0202	2245440.0918		P.C.C. STA.593+03.36, ℄ CONST. RAMP C
35	496697.4694	2245883.1851		P.C.C. STA. 599+38.22, ℄ CONST. RAMP C
36	496747.2335	2246076.3039		C.S. STA. 601+37.81, ℄ CONST. RAMP C
37	496774.3413	2246274.4146		S.T. STA. 603+37.81, ℄ CONST. RAMP C
38	496811.4667	2246602.3860		POT. STA. 606+67.88, ℄ CONST. RAMP C
39	495519.1619	2244987.0480		P.C. STA. 86+63.69, ℄ CONST. RAMP A
40	495844.4475	2244744.1555		C.S. STA. 90+70.00, ℄ CONST. RAMP A
41	496064.8743	2244540.8455		S.C. STA. 93+70.00, ℄ CONST. RAMP A
42	496463.7241	2243564.1774		C.S. STA. 104+55.37, ℄ CONST. RAMP A
43	496484.9861	2243364.2194		S.C. STA. 106+55.37, ℄ CONST. RAMP A
44	496443.9767	2242607.0991		P.T. STA. 114+13.78, ℄ CONST. RAMP A
45	495498.0807	2245209.0686		P.C. STA. 285+64.96, ℄ CONST. RAMP B-2
46	496229.8529	2244680.6227		P.T. STA. 294+71.25, ℄ CONST. RAMP B-2
47	496459.1548	2244453.3072		P.C. STA. 297+94.13, ℄ CONST. RAMP B-2
48	496677.6384	2244247.7729		P.T. STA. 300+94.13, ℄ CONST. RAMP B-2
49	497003.2398	2243957.1549		T.S. STA. 305+30.56, ℄ CONST. RAMP B-2
50	497142.5277	2243814.1752		S.C. STA. 307+30.56, ℄ CONST. RAMP B-2
51	497186.5228	2243741.3509		P.C.C. STA. 7+36.18 AH/STA. 308+15.67 BK, ℄ CONST. RAMP B-2
52	497050.3734	2243154.7886		C.S. STA. 13+87.73, ℄ CONST. RAMP B-2
53	496640.9541	2242755.2338		S.C. STA. 19+62.73, ℄ CONST. RAMP B-2
54	496531.3856	2242502.0769		C.S. STA. 22+39.81, ℄ CONST. RAMP B-2
55	496496.2576	2242280.0138		S.T. STA. 24+64.81, ℄ CONST. RAMP B-2
56	496393.0930	2241368.6410		POT. STA. 33+82.00, ℄ CONST. RAMP B-2
57	496568.4870	2245608.8974		P.C. STA. 781+45.30, ℄ CONST. RAMP C-2
58	496461.0336	2245506.6932		C.S. STA. 782+93.84, ℄ CONST. RAMP C-2
59	496336.8003	2245422.7528		S.T. STA. 784+43.84, ℄ CONST. RAMP C-2
60	496304.0380	2245402.1766		T.S. STA. 784+82.53, ℄ CONST. RAMP C-2
61	496108.9780	2245247.7128		S.C. STA. 787+32.53, ℄ CONST. RAMP C-2
62	496053.9794	2244856.8482		C.S. STA. 791+47.33, ℄ CONST. RAMP C-2
63	496131.0262	2244728.5027		S.C. STA. 792+97.33, ℄ CONST. RAMP C-2
64	496698.1540	2244095.5911		P.T. STA. 801+48.92, ℄ CONST. RAMP C-2
65	496623.3315	2244535.9286		P.C. STA. 678+94.49, ℄ CONST. RAMP C-1
66	496632.5719	2244959.3679		C.S. STA. 683+18.39, ℄ CONST. RAMP C-1
67	496591.0988	2245153.1986		S.C. STA. 685+18.39, ℄ CONST. RAMP C-1
68	496147.4898	2244992.4727		C.S. STA. 691+94.95, ℄ CONST. RAMP C-1
69	496317.1687	2244751.4376		S.T. STA. 694+94.95, ℄ CONST. RAMP C-1
70	496842.0676	2244263.7309		POT. STA. 702+11.45, ℄ CONST. RAMP C-1

REFERENCE POINT TABLE

POINT NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
71	496828.0761	2245787.3473		P.C. STA. 887+98.38, ℄ CONST. RAMP D
72	496817.7974	2245069.4023		C.S. STA. 895+17.13, ℄ CONST. RAMP D
73	496836.6915	2244870.3379		S.C. STA. 897+17.13, ℄ CONST. RAMP D
74	496869.2675	2244689.3204		C.S. STA. 899+01.12, ℄ CONST. RAMP D
75	496923.4667	2244496.9074		S.C. STA. 901+01.12, ℄ CONST. RAMP D
76	497321.4073	2243864.3866		C.S. STA. 908+55.05, ℄ CONST. RAMP D
77	497471.2587	2243732.0718		S.C. STA. 910+55.05, ℄ CONST. RAMP D
78	498016.6287	2243411.5740		P.T. STA. 916+89.75, ℄ CONST. RAMP D
79	496726.3451	2243984.6614		POT. STA. 402+43.78, ℄ CONST. RAMP B-1
80	496915.2771	2243809.1164		T.S. STA. 405+01.68, ℄ CONST. RAMP B-1
81	497051.9009	2243663.5669		S.C. STA. 407+01.68, ℄ CONST. RAMP B-1
82	497118.2015	2243531.3378		P.C.C. STA. 408+50.17, ℄ CONST. RAMP B-1
83	496678.2415	2243349.7117		C.S. STA. 415+62.45, ℄ CONST. RAMP B-1
84	496642.0046	2243544.6717		S.C. STA. 417+62.45, ℄ CONST. RAMP B-1
85	496659.6556	2244105.7176		P.T. STA. 423+24.13, ℄ CONST. RAMP B-1
86	498217.5877	2243200.2424		POT. STA. 219+25.00, ℄ CONST. RAMP B
87	497660.9093	2243301.9133		C.S. STA. 213+58.80, ℄ CONST. RAMP B
88	497288.6263	2243221.9336		S.C. STA. 209+73.39, ℄ CONST. RAMP B
89	497120.8007	2243113.4657		T.S. STA. 207+73.39, ℄ CONST. RAMP B
90	496979.3139	2243012.3901		S.T. STA. 205+99.50, ℄ CONST. RAMP B
91	496821.3612	2242889.9089		C.S. STA. 203+99.50, ℄ CONST. RAMP B
92	496570.2088	2242472.4382		S.C. STA. 199+05.36, ℄ CONST. RAMP B
93	496536.0032	2242275.5101		S.T. STA. 197+05.36, ℄ CONST. RAMP B
94	496351.2535	2241134.7009		POT. STA. 222+63.19, ℄ R/W & CONST. I.R. 277/U.S. 224
95	496861.3677	2246620.6030		P.C. STA. 277+72.76, ℄ R/W & CONST. I.R. 277/U.S. 224
96	498599.8475	2243197.9074		C.S. STA. 523+01.37, ℄ CONST. SB I.R. 77
97	497858.4760	2243271.9494		S.T. STA. 215+58.80, ℄ CONST. RAMP B
98	496884.9995	2247257.0030		P.T. STA. 284+09.93, ℄ R/W & CONST. I.R. 277/U.S. 224
99	489887.0313	2245342.9437		POT. STA. 99+63.27, ℄ R/W WARNER ROAD (CH 156)
100	489806.7298	2245792.4473		P.C. STA. 104+19.89, ℄ R/W WARNER ROAD (CH 156)
101	489715.7948	2246210.9162		P.T. STA. 108+48.22, ℄ R/W WARNER ROAD (CH 156)
102	489648.7680	2246472.1339		P.I. STA. 111+17.90, ℄ R/W WARNER ROAD (CH 156)
103	489581.5704	2246929.5039		POT. STA. 115+80.18, ℄ R/W WARNER ROAD (CH 156)

CALCULATED ATR
CHECKED PJF

CENTERLINE REFERENCE TIES

SUM-77 / 277 / 224
VARIOUS

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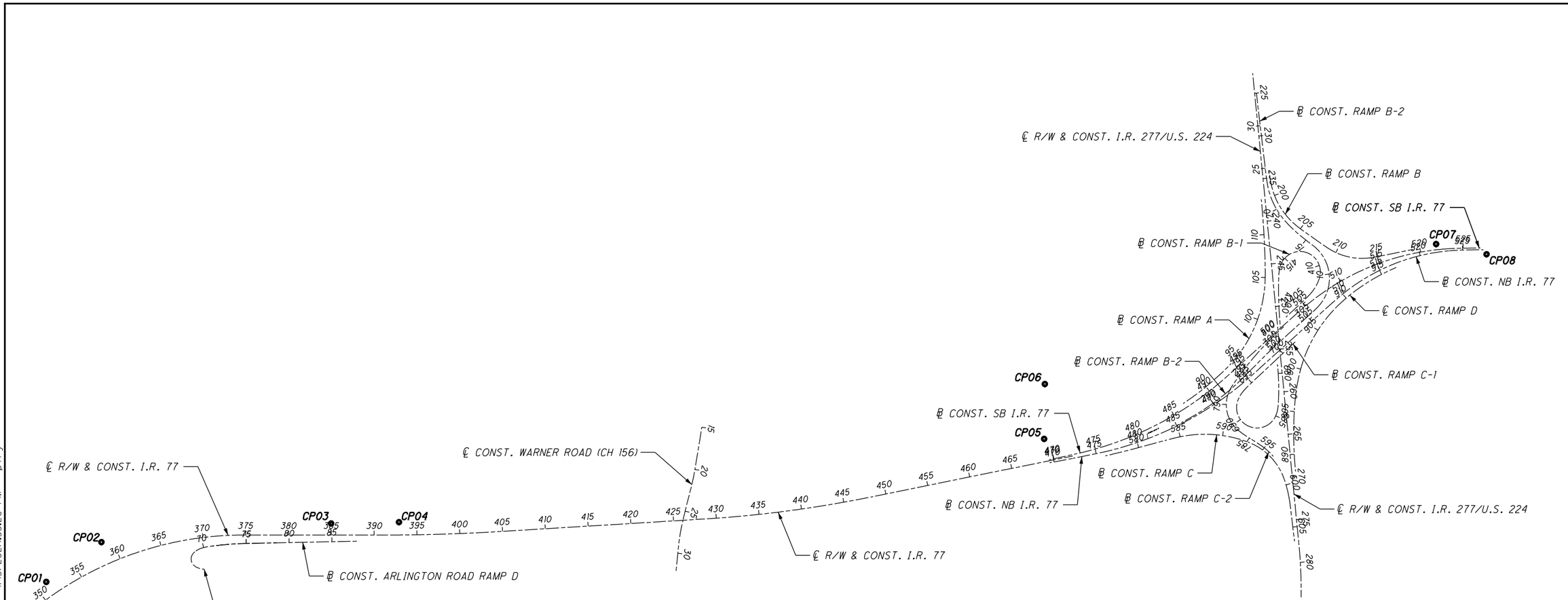

CONTROL POINT TABLE

POINT NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP01	482237.3791	2247000.8985	1065.99	CONCRETE MONUMENT
CP02	482883.6931	2246539.4389	1072.64	CONCRETE MONUMENT
CP03	485566.6495	2246336.2535	1117.76	CONCRETE MONUMENT
CP04	486357.9587	2246323.9152	1121.63	CONCRETE MONUMENT
CP05	493895.1420	2245390.8980	1073.53	CONCRETE MONUMENT
CP06	493906.9643	2244750.3816	1090.46	CONCRETE MONUMENT
CP07	498481.9448	2243140.4162	1064.39	CONCRETE MONUMENT
CP08	499070.7218	2243262.6440	1076.40	CONCRETE MONUMENT

NOTE: NORTHING AND EASTING COORDINATES SHOWN IN THE TABLE ABOVE ARE LISTED IN GROUND COORDINATES.

FOR GEOMETRIC PLANS, SEE SHEETS 13 - 22

HORIZONTAL SCALE IN FEET
0 300 600 1200

CALCULATED ATR
CHECKED PJF

CONTROL POINT KEY PLAN

SUM-77 / 277 / 224
VARIOUS

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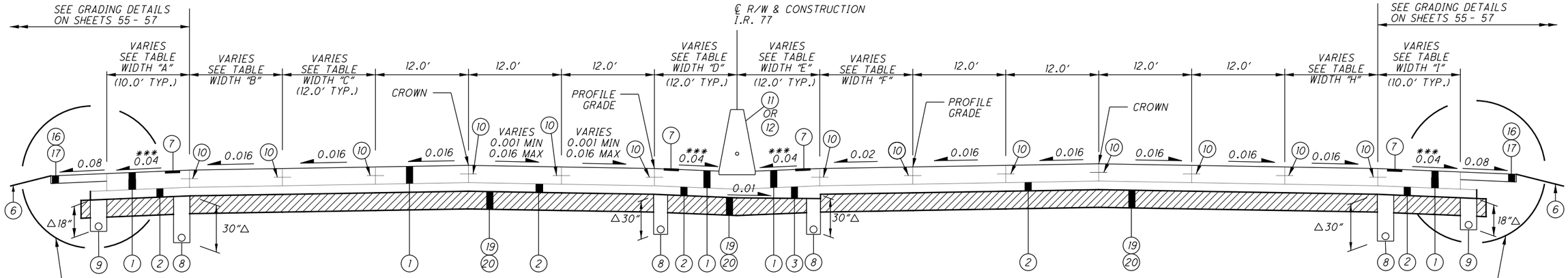

SEE EDGE DETAILS ON SHEET 54
SEE GUARDRAIL INSTALLATION DETAIL ON SHEET 52
SEE CURB DETAIL "A" ON SHEET 54
SEE BARRIER DETAIL "A" ON SHEET 54
SEE NOISE BARRIER C PLANS ON SHEETS 1082 - 1091
SEE NOISE BARRIER E PLANS ON SHEETS 1092 - 1100

I.R. 77 NORMAL SECTION

LIMITING STATIONS

STA. 391+37.36 TO STA. 425+05.16
STA. 427+10.73 TO STA. 429+01.43
STA. 431+16.15 TO STA. 469+46.33

SEE EDGE DETAILS ON SHEET 54
SEE GUARDRAIL INSTALLATION DETAIL ON SHEET 52
SEE CURB DETAIL "A" ON SHEET 54
SEE BARRIER DETAIL "A" ON SHEET 54
SEE NOISE BARRIER G PLANS ON SHEETS 1101 - 1109

FOR EXISTING LEGEND, SEE SHEET 59
FOR SUPERELEVATION TABLES, SEE SHEETS 805 - 806
FOR WIDTH TABLE, SEE SHEET 36

△ - OR AS SHOWN IN UNDERDRAIN PLANS, SHEETS 922 - 925

⬡ - PROJECT WAS ORIGINALLY DESIGNED AS DUAL PAVEMENT, HOWEVER THE RIGID PAVEMENT OPTION HAS NOW BEEN REMOVED FROM THE PROJECT. ANY AND ALL REFERENCE THROUGHOUT THE PLANS TO RIGID PAVEMENT OPTION ARE NOW CONSIDERED NULL AND VOID.

NOTE 'A'
TACK COAT SHALL BE APPLIED BETWEEN THE MULTIPLE LIFTS OF ITEM 302.

* 0.04 OR RATE OF PAVEMENT SLOPE IF GREATER.

** FOR HIGH SIDE SHOULDER SLOPES, SEE SHOULDER DETAIL "A" ON SHEET 52 .

*** FOR SHOULDER SLOPES APPROACHING WARNER ROAD BRIDGE AND THE TUSCARAWAS RIVER BRIDGE SEE SUPERELEVATION TABLES ON SHEETS 805 - 806 .

PROPOSED LEGEND

(1) ~~RIGID PAVEMENT OPTION USING:~~
~~ITEM 452 - 12" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P WITH QC/QA~~ ⬡
-OR-
FLEXIBLE PAVEMENT OPTION USING:
ITEM 442 - 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (447), AS PER PLAN
ITEM 442 - ANTI-SEGREGATION EQUIPMENT
ITEM 407 - NON-TRACKING TACK COAT (SEE NOTE 'A' ON THIS SHEET)
ITEM 442 - 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446), AS PER PLAN
ITEM 442 - ANTI-SEGREGATION EQUIPMENT
ITEM 407 - NON-TRACKING TACK COAT (SEE NOTE 'A' ON THIS SHEET)
ITEM 302 - 8" ASPHALT CONCRETE BASE, PG64-22

(2) ITEM 304 - 6" AGGREGATE BASE

(3) ITEM 304 - VARIABLE DEPTH AGGREGATE BASE (6" MINIMUM)

(4) ITEM 204 - SUBGRADE COMPACTION

(5) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE B1

(6) ITEM 659 - SEEDING AND MULCHING

(7) ~~RIGID OPTION:~~
~~ITEM 618 - RUMBLE STRIPS, SHOULDER (CONCRETE)~~ ⬡
-OR-
FLEXIBLE OPTION:
ITEM 618 - RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)

(8) ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC

(9) ITEM 605 - 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC

(10) ~~LONGITUDINAL JOINT AS PER BP-2.1 (FOR RIGID PAVEMENT OPTION)~~ ⬡

(11) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE B1 (4" ITS MULTICELL CONDUIT PER SCD RM-4.3)

(12) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE C1 (4" ITS MULTICELL CONDUIT PER SCD RM-4.3)

(13) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D

(14) ITEM 441 - 2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), AS PER PLAN

(15) ITEM 209 - LINEAR GRADING, AS PER PLAN

(16) ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN
ITEM 617 - SHOULDER PREPARATION
ITEM 617 - WATER

(17) ITEM 408 - PRIME COAT, AS PER PLAN

(18) ITEM 606 - GUARDRAIL, TYPE MGS

(19) ITEM 206 - CEMENT
ITEM 206 - CURING COAT
ITEM 206 - CEMENT STABILIZED SUBGRADE, 12" DEEP (SEE SHEET 69)

(20) ITEM 204 - PROOF ROLLING

(21) ITEM 601 - CONCRETE SLOPE PROTECTION

(22) ITEM 601 - PAVED GUTTER, TYPE 1-2, AS PER PLAN

(23) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN

(24) ITEM 526 - REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN

(25) ITEM 526 - REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17")

(26) ITEM 609 - CURB, TYPE 4-C, AS PER PLAN

(27) ITEM 202 - PAVEMENT REMOVED

(28) ITEM 441 - 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22

(29) ITEM 441 - 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)

(30) ITEM 302 - 4" ASPHALT CONCRETE BASE, PG64-22

(31) ITEM 407 - NON-TRACKING TACK COAT (SEE NOTE 'A' ON THIS SHEET)

(32) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE

(33) ITEM 442 - 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (447), AS PER PLAN
ITEM 442 - ANTI-SEGREGATION EQUIPMENT

(34) ITEM 442 - 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446), AS PER PLAN
ITEM 442 - ANTI-SEGREGATION EQUIPMENT

(35) ITEM 302 - 8" ASPHALT CONCRETE BASE, PG64-22

(36) ITEM 601 - 12" ROCK CHANNEL PROTECTION, TYPE D WITH AGGREGATE FILTER, AS PER PLAN

(37) ITEM 671 - EROSION CONTROL MAT, TYPE G

(38) ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1

(39) ITEM 601 - 18" ROCK CHANNEL PROTECTION, TYPE C WITH AGGREGATE FILTER, AS PER PLAN

(40) ITEM 618 - RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)

REVISIONS		
NO.	DATE	DESCRIPTION
5	04/22/21	REVISED ITEM 601 DESCRIPTION
6	04/26/21	REVISED ITEM 601 DESCRIPTION

TYPICAL SECTIONS

SUM-77/277/224
VARIOUS

29
1288

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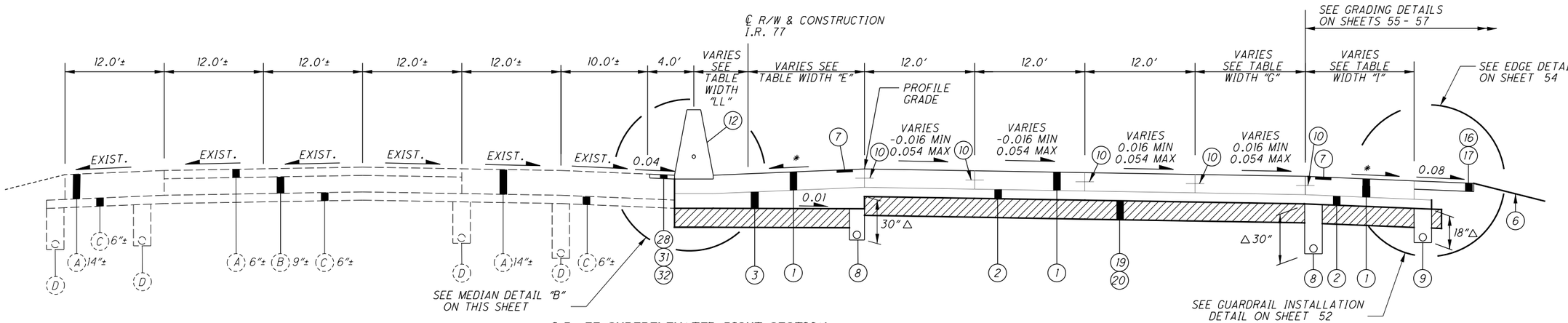
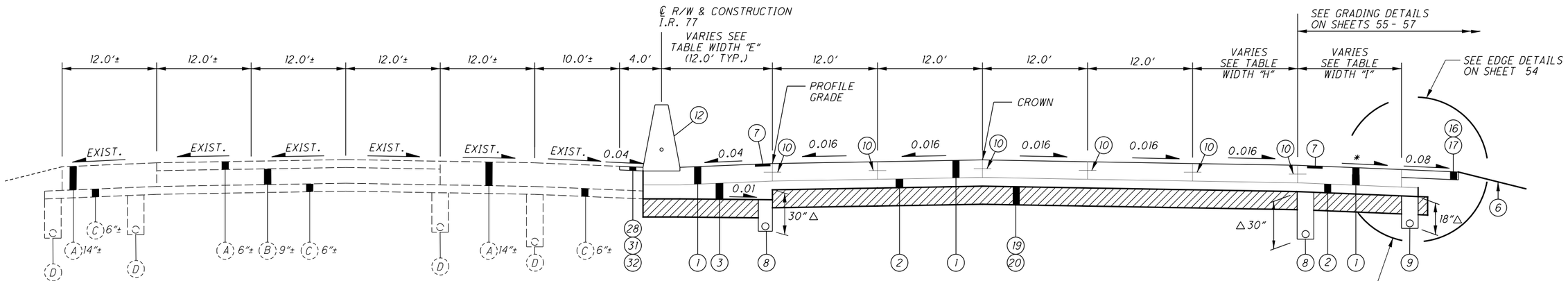


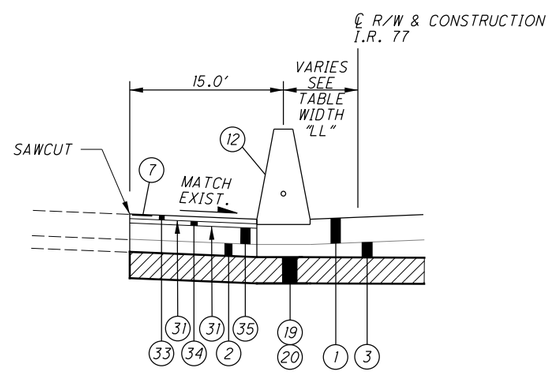
I.R. 77 SUPERELEVATED RIGHT SECTION

LIMITING STATIONS
STA. 371+50.00 TO STA. 378+94.12



I.R. 77 NORMAL CROWN SECTION

LIMITING STATIONS
STA. 378+94.12 TO STA. 391+37.36



MEDIAN DETAIL "B"

N.T.S.
LIMITING STATIONS

STA 375+92.94 TO STA. 376+20.24

* 0.04 OR RATE OF PAVEMENT SLOPE IF GREATER.

** FOR HIGH SIDE SHOULDER SLOPES, SEE SHOULDER DETAIL "A" ON SHEET 52 .

*** SLOPE VARIES TO MEET THE TOE OF THE EXISTING MEDIAN BARRIER.

FOR PROPOSED LEGEND, SEE SHEET 29
FOR EXISTING LEGEND, SEE SHEET 59
FOR SUPERELEVATION TABLES, SEE SHEET 804
FOR GORE DETAILS, SEE SHEETS 865 - 868
FOR WIDTH TABLE, SEE SHEET 36

△ - OR AS SHOWN IN UNDERDRAIN PLANS, SHEET 922

TYPICAL SECTIONS

SUM-77/277/224
VARIOUS

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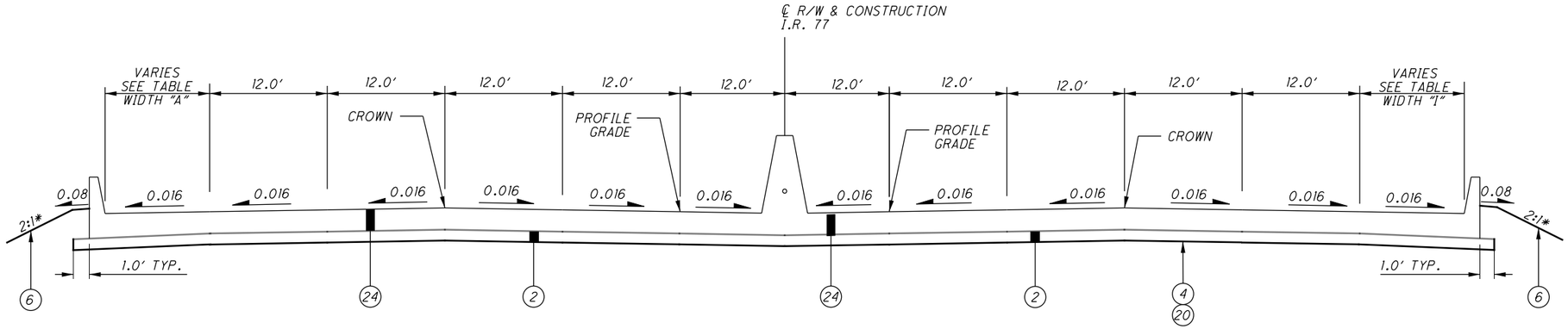
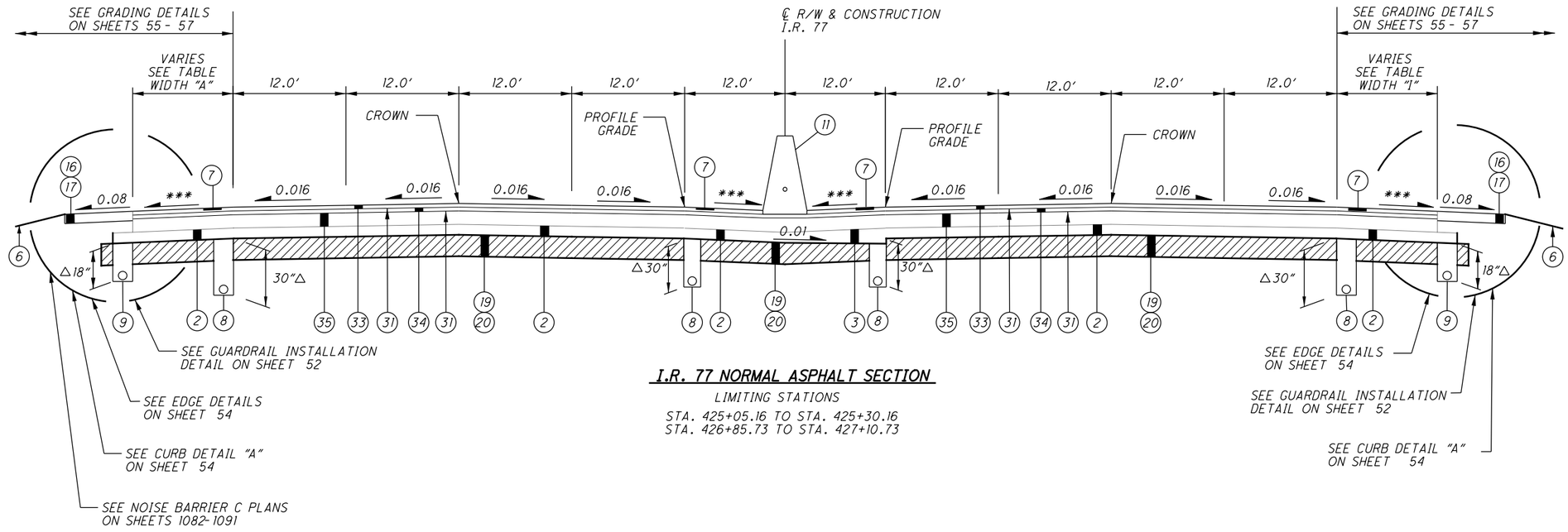


PROPOSED APPROACH SLAB NORMAL SECTION - I.R. 77 ♦

LIMITING STATIONS

STA. 425+30.16 TO STA. 425+55.16
STA. 426+60.73 TO STA. 426+85.73
STA. 429+01.43 TO STA. 429+28.48
STA. 430+89.09 TO STA. 431+16.15

♦ STRUCTURE LIMITS
SUM-77-0802L/R
STA. 425+55.16 TO STA. 426+60.73
SUM-77-0810L/R
STA. 429+28.48 TO STA. 430+89.09



I.R. 77 NORMAL ASPHALT SECTION

LIMITING STATIONS

STA. 425+05.16 TO STA. 425+30.16
STA. 426+85.73 TO STA. 427+10.73

△ - OR AS SHOWN IN UNDERDRAIN PLANS, SHEET 924

*** FOR SHOULDER SLOPES APPROACHING WARNER ROAD BRIDGE SEE SUPERELEVATION TABLES ON SHEETS 805 - 806

FOR PROPOSED LEGEND, SEE SHEET 29
FOR SUPERELEVATION TABLES, SEE SHEETS 805 - 806
FOR WIDTH TABLE, SEE SHEET 36
FOR STRUCTURE 0802 PLANS, SEE SHEETS 1155 - 1180
FOR STRUCTURE 0810 PLANS, SEE SHEETS 1181 - 1224

TYPICAL SECTIONS

SUM-77 / 277 / 224
VARIOUS

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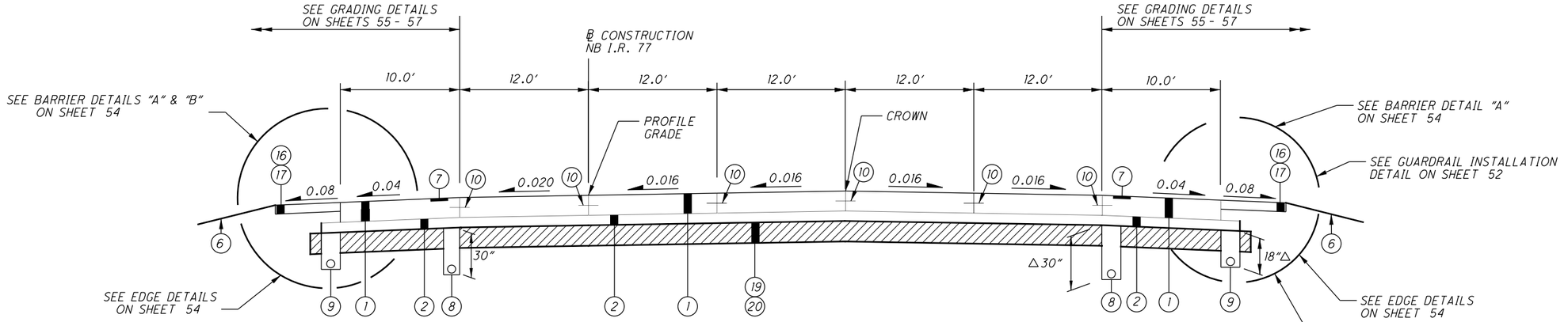
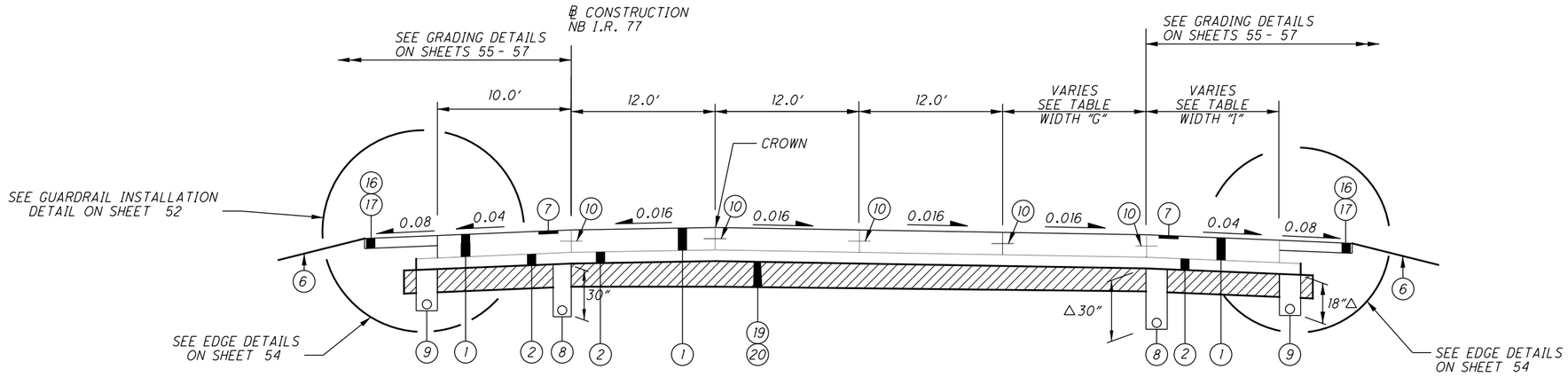


NB I.R. 77 NORMAL SECTION

LIMITING STATIONS

STA. 469+46.96 TO STA. 471+31.58



NB I.R. 77 NORMAL SECTION

LIMITING STATIONS

STA. 498+26.99 TO STA. 506+12.86

FOR PROPOSED LEGEND, SEE SHEET 29
FOR GORE DETAILS, SEE SHEET 859
FOR WIDTH TABLE, SEE SHEET 36

* 0.04 OR RATE OF PAVEMENT SLOPE IF GREATER.

** FOR HIGH SIDE SHOULDER SLOPES, SEE SHOULDER DETAIL "A" ON SHEET 52.

△ - OR AS SHOWN IN UNDERDRAIN PLANS, SHEETS 925 - 926, 928

TYPICAL SECTIONS

SUM-77/277/224
VARIOUS

32
1288

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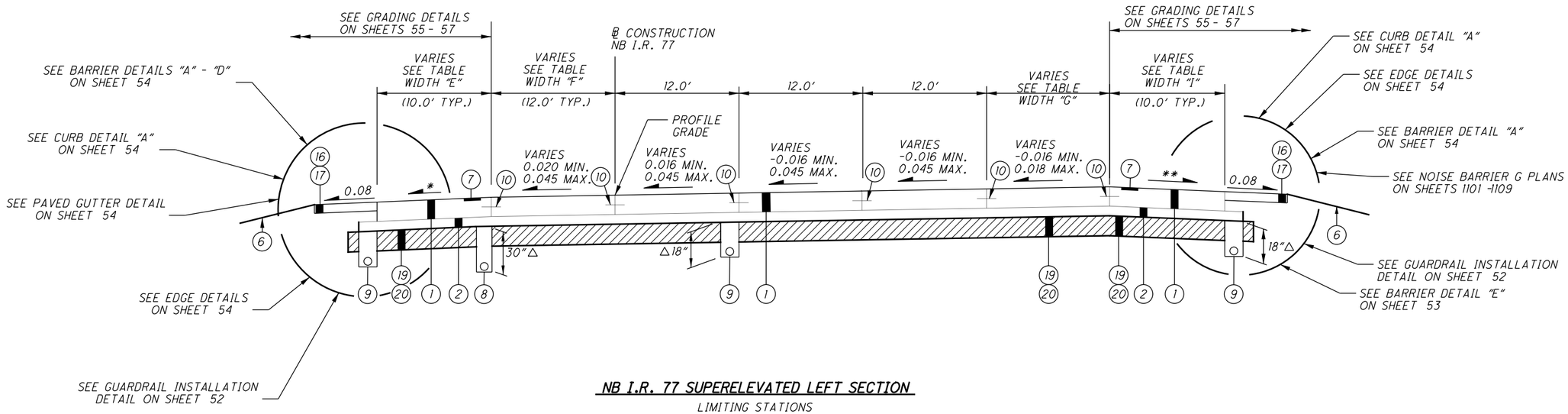
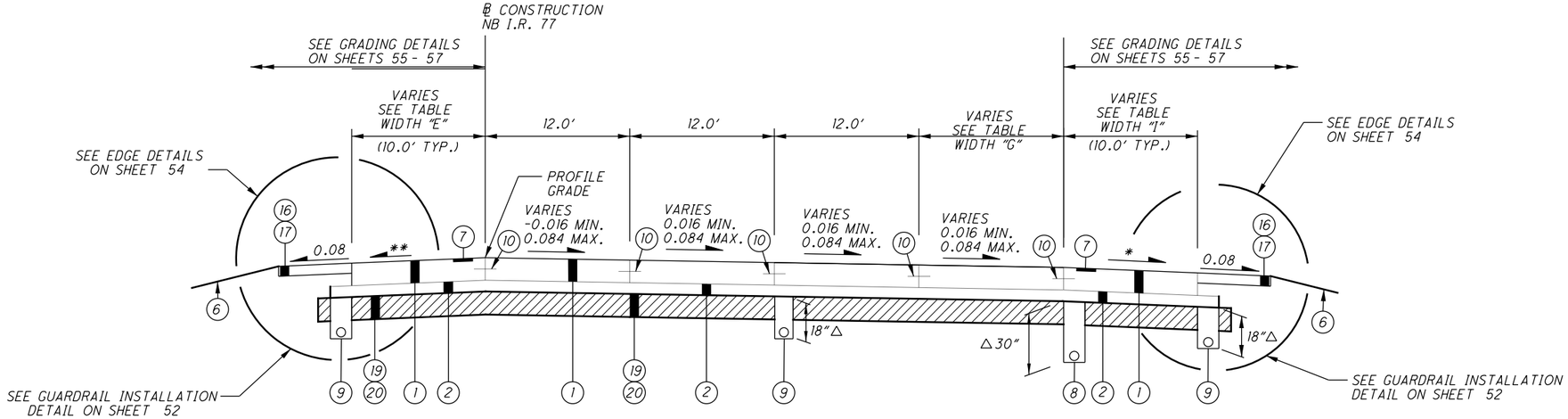


NB I.R. 77 SUPERELEVATED LEFT SECTION

LIMITING STATIONS

STA. 471+31.58 TO STA. 498+26.99



NB I.R. 77 SUPERELEVATED RIGHT SECTION

LIMITING STATIONS

STA. 506+12.86 TO STA. 514+85.00 ***

FOR PROPOSED LEGEND, SEE SHEET 29
FOR SUPERELEVATION TABLES, SEE SHEETS 807 - 810
FOR GORE DETAILS, SEE SHEETS 848 - 849 , 854 , 858 - 859 , 863 - 864
FOR WIDTH TABLE, SEE SHEET 36

* 0.04 OR RATE OF PAVEMENT SLOPE IF GREATER.

** FOR HIGH SIDE SHOULDER SLOPES, SEE SHEET "A" ON SHEET 52.

*** END WORK AT STA. 514+85.00 (I.R. 77 NB), WORK PAST THAT STATION IS TO BE CONSTRUCTED BY OTHERS AS PART OF THE SUM-76/77/8-8.42/9.77/0.00 DB (PID 102329) PROJECT.

△- OR AS SHOWN IN UNDERDRAIN PLANS, SHEETS 926 -929

TYPICAL SECTIONS

SUM-77/277/224
VARIOUS

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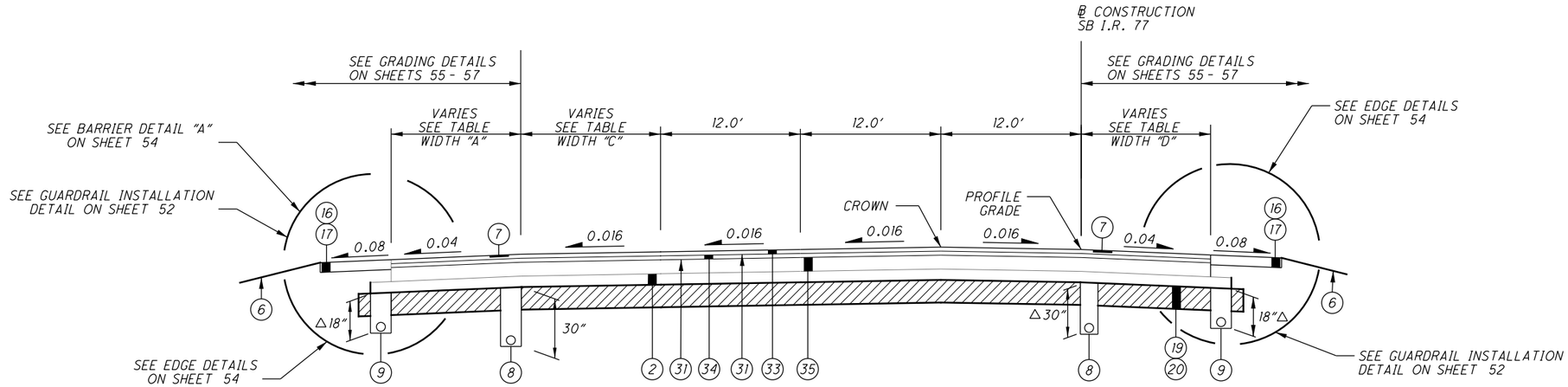
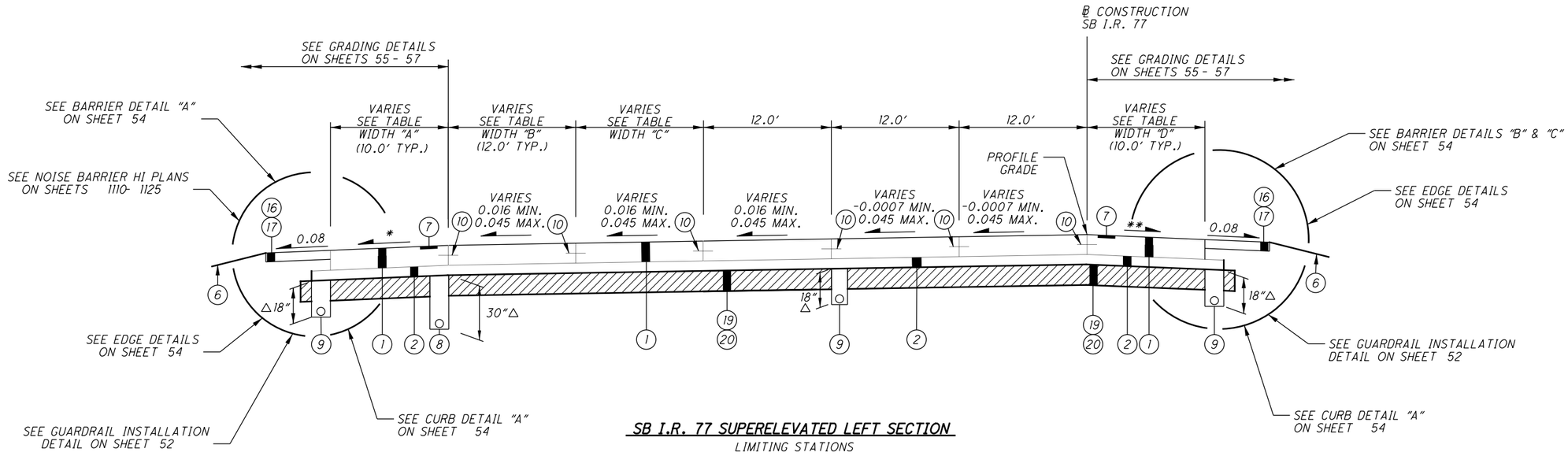


SB I.R. 77 NORMAL ASPHALT SECTION

LIMITING STATIONS

STA. 495+04.54 TO STA. 500+95.48



SB I.R. 77 SUPERELEVATED LEFT SECTION

LIMITING STATIONS

STA. 469+42.49 TO STA. 494+44.48

FOR PROPOSED LEGEND, SEE SHEET 29
FOR SUPERELEVATION TABLES, SEE SHEETS 811 - 813
FOR GORE DETAILS, SEE SHEETS 841 - 842 , 861
FOR WIDTH TABLE, SEE SHEET 36

* 0.04 OR RATE OF PAVEMENT SLOPE IF GREATER.

** FOR HIGH SIDE SHOULDER SLOPES, SEE SHOULDER DETAIL "A" ON SHEET 52.

△- OR AS SHOWN IN UNDERDRAIN PLANS, SHEETS 925 - 928

TYPICAL SECTIONS

SUM-77/277/224
VARIOUS

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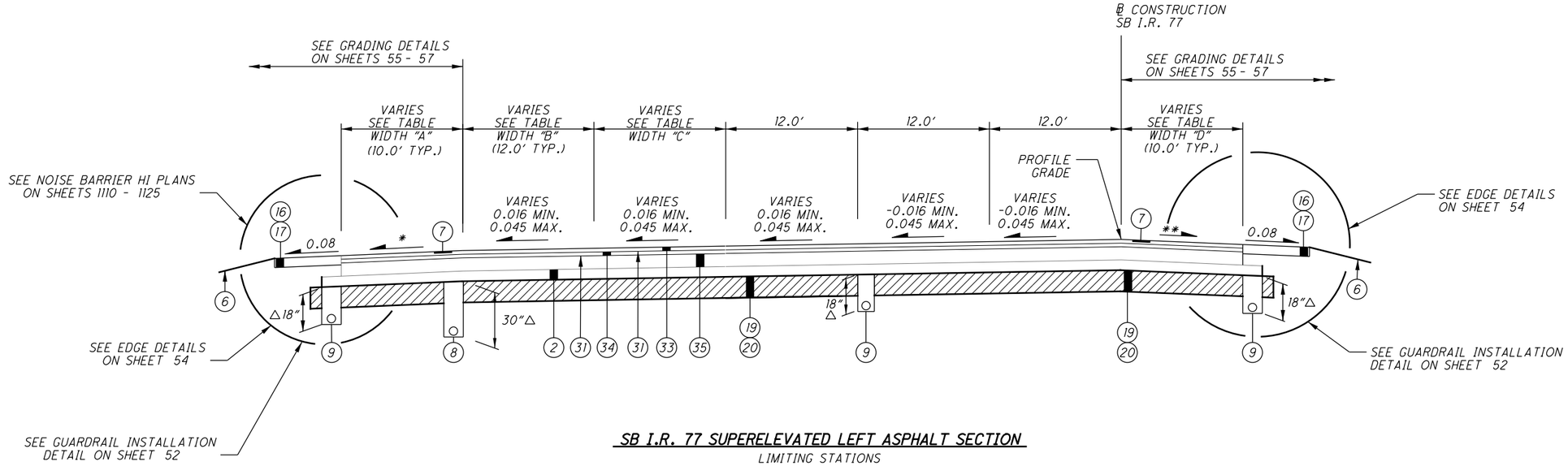
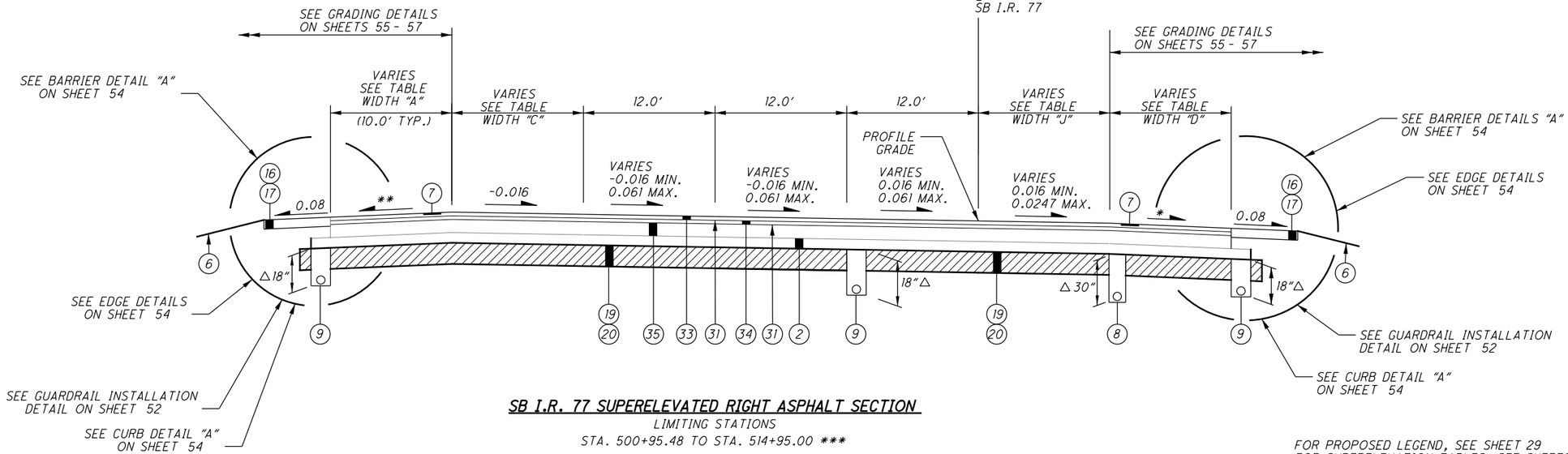


SB I.R. 77 SUPERELEVATED LEFT ASPHALT SECTION

LIMITING STATIONS

STA. 494+44.48 TO STA. 495+04.54



SB I.R. 77 SUPERELEVATED RIGHT ASPHALT SECTION

LIMITING STATIONS

STA. 500+95.48 TO STA. 514+95.00 ***

FOR PROPOSED LEGEND, SEE SHEET 29
FOR SUPERELEVATION TABLES, SEE SHEETS 813 - 815
FOR GORE DETAILS, SEE SHEETS 842 , 845 - 846
FOR WIDTH TABLE, SEE SHEET 36

* 0.04 OR RATE OF PAVEMENT SLOPE IF GREATER.

** FOR HIGH SIDE SHOULDER SLOPES, SEE SHOULDER DETAIL "A" ON SHEET 52.

*** END WORK AT STA. 514+95.00 (I.R. 77 SB), WORK PAST THAT STATION IS TO BE CONSTRUCTED BY OTHERS AS PART OF THE SUM-76/77/8-8.42/9.77/0.00 DB (PID 102329) PROJECT.

△- OR AS SHOWN IN UNDERDRAIN PLANS, SHEETS 927-929

TYPICAL SECTIONS

SUM-77/277/224
VARIOUS

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_GY007.dgn Sheet 1/15/2021 4:50:07 PM lkirkland

I.R. 77 WIDTH TABLE

ROAD	WIDTH "A"				WIDTH "B"				WIDTH "C"				WIDTH "D"				WIDTH "J"			
	STATION		WIDTH (FT.)		STATION		WIDTH (FT.)		STATION		WIDTH (FT.)		STATION		WIDTH (FT.)		STATION		WIDTH (FT.)	
	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO
																	500+95.48	501+48.92	0.0	0.0
SB I.R. 77	391+37.36	392+00.00	12.3	10.0	391+37.36	425+05.16	0.0	0.0	391+37.36	392+00.00	12.6	12.0	391+37.36	392+00.00	17.6	18.0	501+48.92	503+95.44	12.0	12.0
	392+00.00	423+55.00	10.0	10.0					392+00.00	425+05.16	12.0	12.0	392+00.00	398+00.00	18.0	12.0	503+95.44	504+95.44	12.0	0.0
	423+55.00	425+49.49	10.0	17.8	427+10.73	429+01.43	0.0	0.0					398+00.00	425+05.16	12.0	12.0	504+95.44	514+95.00	0.0	0.0
	425+49.49	425+55.17	17.8	17.8					427+10.73	429+01.43	12.0	12.0								
					431+16.15	431+50.00	0.0	0.0					427+10.73	429+01.43	12.0	12.0				
	426+60.73	427+60.00	17.8	17.8	431+50.00	439+90.00	0.0	12.0	431+16.15	469+46.33	12.0	12.0								
	427+60.00	427+67.00	17.8	17.5	439+90.00	469+46.33	12.0	12.0	469+42.49	486+63.69	12.0	12.0	431+16.15	469+46.33	12.0	12.0				
	427+67.00	429+28.48	17.5	17.5	469+42.49	486+63.69	12.0	12.0	486+63.69	494+44.48	0.0	0.0								
					486+63.69	495+04.54	0.0	0.0	494+44.48	502+43.78	0.0	16.0	469+42.49	469+72.42	9.1	10.0				
	430+89.09	431+50.00	17.5	17.5					502+43.78	514+95.00	0.0	0.0	469+72.42	495+04.54	10.0	10.0				
	431+50.00	431+80.00	17.5	17.1									495+04.54	496+94.61	10.0	10.0				
	431+80.00	432+13.00	17.1	10.0									496+94.61	501+48.92	SEE GORE DETAIL					
	432+13.00	468+67.50	10.0	10.0									501+48.92	503+95.44	8.0	8.0				
	468+67.50	468+90.00	10.0	5.5 (NDC 10')									503+95.44	504+95.44	8.0	10.0				
	468+90.00	469+46.33	5.5 (NDC 10')	5.5 (NDC 10')									504+95.44	507+75.00	10.0	10.0				
	469+42.49	470+12.50	5.5 (NDC 10')	5.5 (NDC 10')									507+75.00	507+94.00	10.0	7.0 (NDC 10')				
	471+12.50	471+25.00	5.5 (NDC 10')	10.0									507+94.00	509+25.00	7.0 (NDC 10')	7.0 (NDC 10')				
	471+25.00	486+63.69	10.0	10.0									509+25.00	510+00.00	7.0 (NDC 10')	10.0				
	486+63.69	494+44.48	SEE GORE DETAIL										510+00.00	514+95.00	10.0	10.0				
	494+44.48	495+44.48	10.0	8.0																
	495+44.48	502+43.78	8.0	8.0																
	502+43.78	506+28.88	SEE GORE DETAIL																	
	506+28.88	514+95.00	10.0	10.0																

NB I.R. 77	WIDTH "E"				WIDTH "F"				WIDTH "G"				WIDTH "H"				WIDTH "I"			
	STATION		WIDTH (FT.)		STATION		WIDTH (FT.)		STATION		WIDTH (FT.)		STATION		WIDTH (FT.)		STATION		WIDTH (FT.)	
	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO
	371+50.00	380+50.00	20.3	12.0	391+37.36	425+05.16	0.0	0.0	371+50.00	374+77.72	12.7	12.0	378+94.12	388+24.90	0.0	0.0	371+50.00	371+67.11	11.9	12.0
	380+50.00	425+05.16	12.0	12.0					374+77.72	378+94.12	12.0	12.0	388+24.90	415+60.00	12.0	12.0	371+67.11	388+24.90	SEE GORE DETAILS	
					427+10.73	429+01.43	0.0	0.0					415+60.00	424+00.00	12.0	0.0	388+24.90	392+12.50	10.0	10.0
	427+10.73	429+01.43	12.0	12.0					471+31.58	476+00.00	12.0	12.0	424+00.00	425+05.16	0.0	0.0	392+12.50	393+25.00	10.0	5.5 (NDC 10')
					431+16.15	459+50.00	0.0	0.0	476+00.00	502+11.45	0.0	0.0					393+25.00	394+40.00	5.5 (NDC 10')	5.5 (NDC 10')
	431+16.15	451+10.00	12.0	12.0	459+50.00	460+50.00	0.0	12.0	502+11.45	508+11.45	12.0	0.0	427+10.73	429+01.43	0.0	0.0	394+40.00	394+62.50	5.5 (NDC 10')	10.0
	451+10.00	459+50.00	12.0	24.0	460+50.00	469+46.33	12.0	12.0	508+11.45	514+85.00	0.0	0.0					394+62.50	424+25.00	10.0	10.0
	459+50.00	460+50.00	24.0	12.0									431+16.15	469+46.33	0.0	0.0	424+25.00	424+61.65	10.0	17.3
	460+50.00	469+46.33	12.0	12.0	471+31.58	485+64.96	12.0	12.0									424+61.65	425+55.17	17.3	17.3
					485+64.96	498+26.99	0.0	0.0												
	471+31.58	485+64.96	10.0	10.0													426+60.73	426+65.00	17.3	17.3
	485+64.96	494+84.83	SEE GORE DETAIL														426+65.00	426+69.25	17.3	17.5
	494+84.83	498+26.99	10.0	10.0													426+69.25	429+28.48	17.5	17.5
	506+12.86	514+12.50	10.0	10.0													430+89.09	431+22.50	17.5	17.5
	514+12.50	514+85.00	10.0	7.1													431+22.50	433+10.00	17.5	10.0
																	433+10.00	467+02.50	10.0	10.0
	WIDTH "LL"																467+02.50	468+15.00	10.0	5.5 (NDC 10')
	STATION		WIDTH (FT.)														468+15.00	469+23.83	5.5 (NDC 10')	5.5 (NDC 10')
	FROM	TO	FROM	TO													469+23.83	469+46.33	5.5 (NDC 10')	10.0
	371+50.00	377+02.12	4.9	0.0																
	377+02.12	380+50.00	0.0	0.0													471+31.58	476+00.00	10.0	10.0
																	476+00.00	481+17.43	SEE GORE DETAILS	
																	481+17.43	493+70.87	10.0	10.0
																	493+70.87	502+11.45	SEE GORE DETAILS	
																	502+11.45	507+11.53	8.0	8.0
																	507+11.53	507+42.24	8.0	8.6
																	507+42.24	514+85.00	SEE GORE DETAILS	

TYPICAL SECTIONS

SUM-77/277/224
VARIOUS

36
1288

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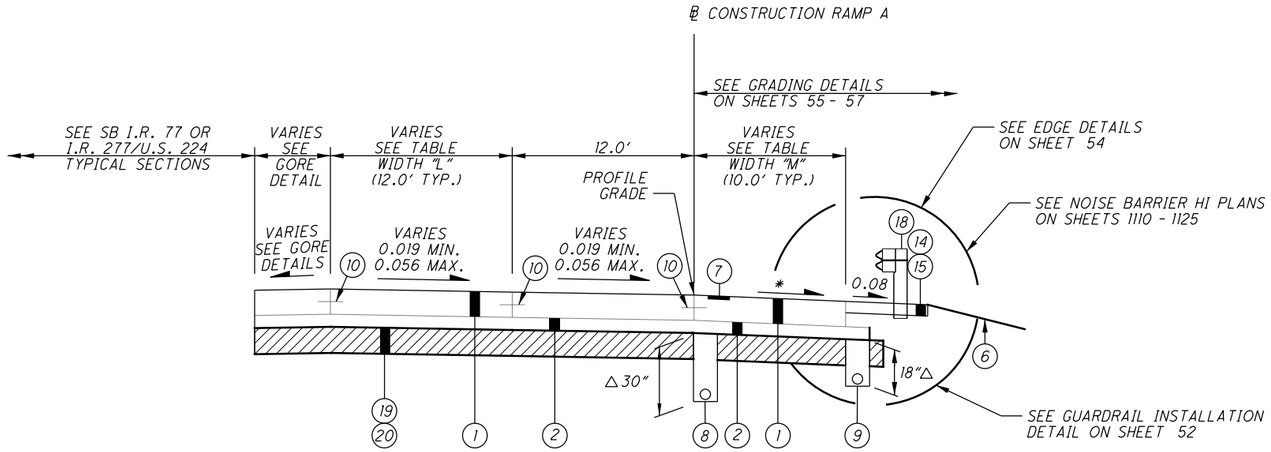
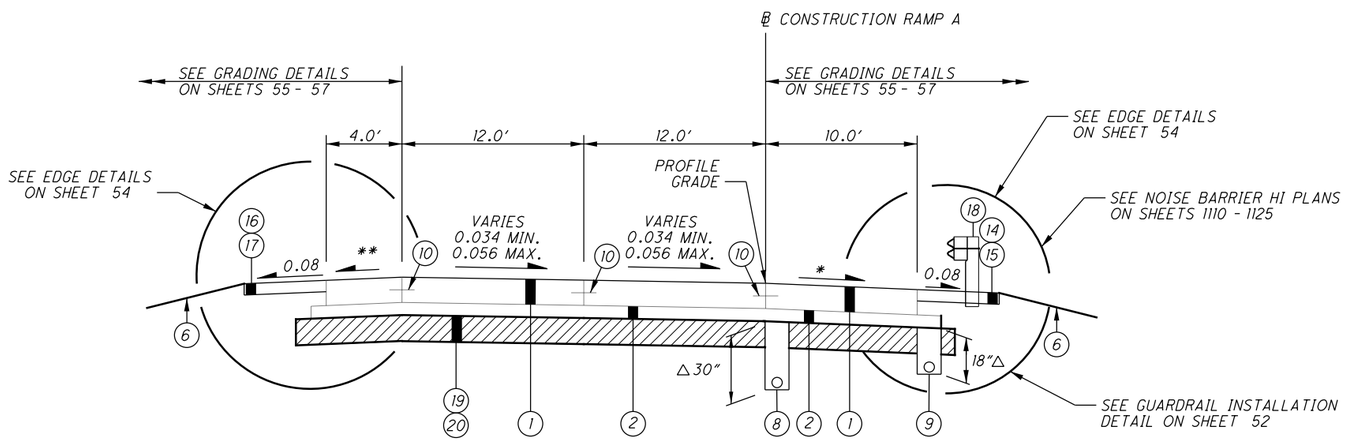


RAMP A SUPERELEVATED RIGHT SECTION □

LIMITING STATIONS
STA. 86+63.69 TO STA. 94+31.91
STA. 105+73.19 TO STA. 114+13.78



RAMP A SUPERELEVATED RIGHT SECTION □

LIMITING STATIONS
STA. 94+31.91 TO STA. 105+73.19

RAMP A WIDTH TABLE

	WIDTH "L"				WIDTH "M"			
	STATION		WIDTH (FT.)		STATION		WIDTH (FT.)	
	FROM	TO	FROM	TO	FROM	TO	FROM	TO
RAMP A	86+63.69	94+31.91	12.0	12.0	86+63.69	94+31.91	10.0	10.0
	105+73.19	108+89.94	12.0	12.0	105+73.19	114+03.67	10.0	10.0
	108+89.94	114+13.78	SEE GORE DETAIL		114+03.67	114+13.78	10.0	10.4

FOR PROPOSED LEGEND, SEE SHEET 29
FOR SUPERELEVATION TABLES, SEE SHEETS 816 - 818
FOR GORE DETAILS, SEE SHEETS 841 - 844

* 0.04 OR RATE OF PAVEMENT SLOPE IF GREATER.

** FOR HIGH SIDE SHOULDER SLOPES, SEE SHOULDER DETAIL "A" ON SHEET 52.

△- OR AS SHOWN IN UNDERDRAIN PLANS, SHEETS 927 - 928 , 930

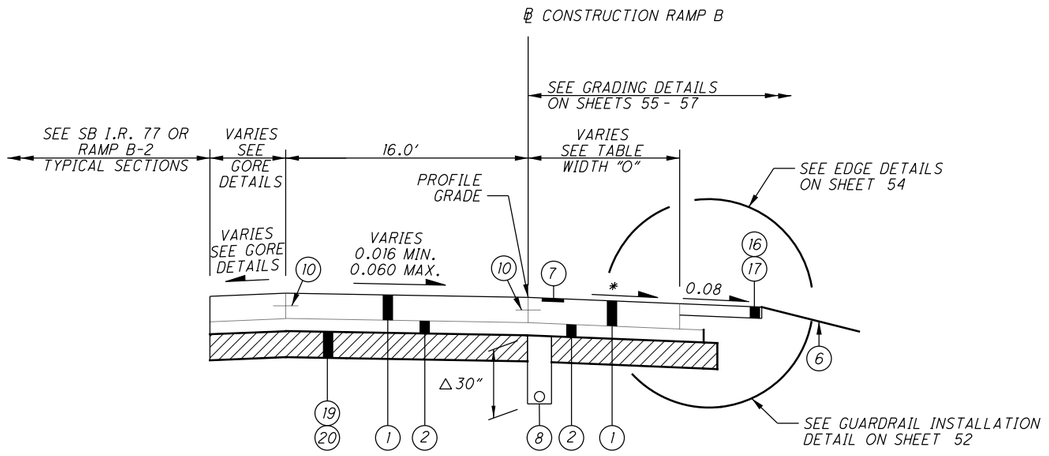
□ RAMP A IS SHOWN IN THE DIRECTION OF TRAVEL, NOT THE DIRECTION OF INCREASING STATIONING

TYPICAL SECTIONS

SUM-77/277/224
VARIOUS

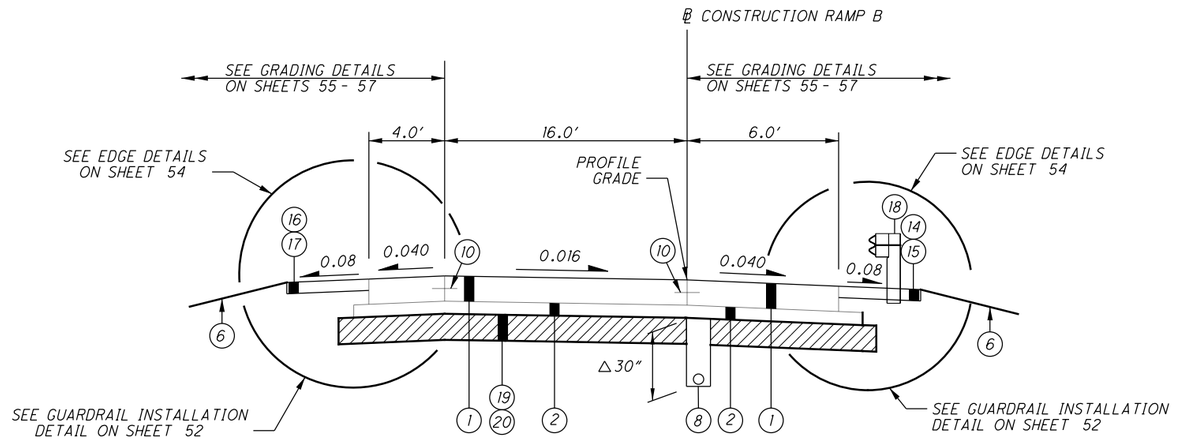
37
1288

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_GY009.dgn Sheet 1/15/2021 4:50:09 PM lkirkland



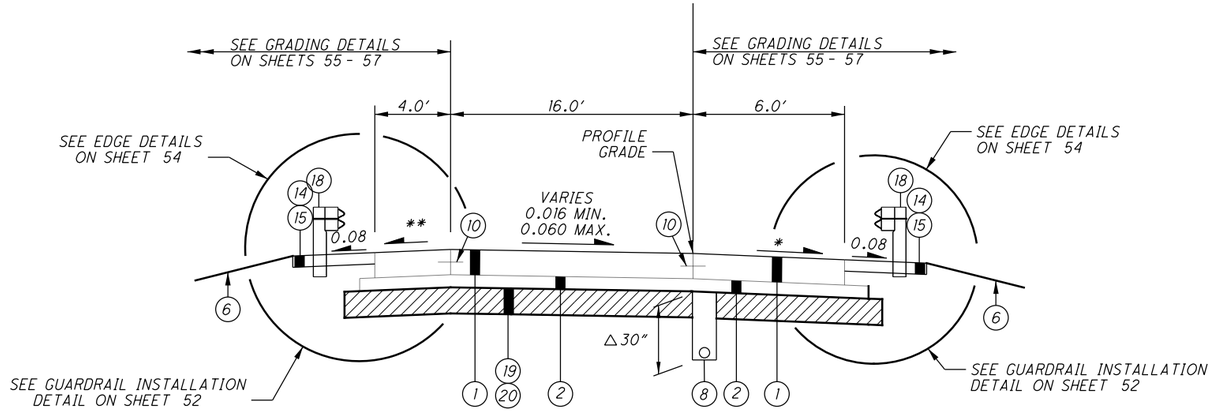
RAMP B SUPERELEVATED RIGHT SECTION □

LIMITING STATIONS
STA. 197+05.36 TO STA. 205+85.71



RAMP B NORMAL SECTION □

LIMITING STATIONS
STA. 205+99.50 TO STA. 207+73.39



RAMP B SUPERELEVATED RIGHT SECTION □

LIMITING STATIONS
STA. 205+85.71 TO STA. 205+99.50
STA. 207+73.39 TO STA. 214+90.00 ***

RAMP B WIDTH TABLE

	WIDTH "O"			
	STATION		WIDTH (FT.)	
	FROM	TO	FROM	TO
RAMP B	197+05.36	198+05.36	10.0	8.0
	198+05.36	203+99.50	8.0	8.0
	203+99.50	204+49.50	8.0	6.0
	204+49.50	205+85.71	6.0	6.0

FOR PROPOSED LEGEND, SEE SHEET 29
FOR SUPERELEVATION TABLES, SEE SHEET 819
FOR GORE DETAILS, SEE SHEETS 845 , 850 - 851

* 0.04 OR RATE OF PAVEMENT SLOPE IF GREATER.

** FOR HIGH SIDE SHOULDER SLOPES, SEE SHOULDER DETAIL ON SHEET 52.

*** END WORK AT STA. 214+90.00, WORK PAST THAT STATION IS TO BE CONSTRUCTED BY OTHERS AS PART OF THE SUM-76/77/8-8.42/9.77/0.00 DB (PID 102329) PROJECT.

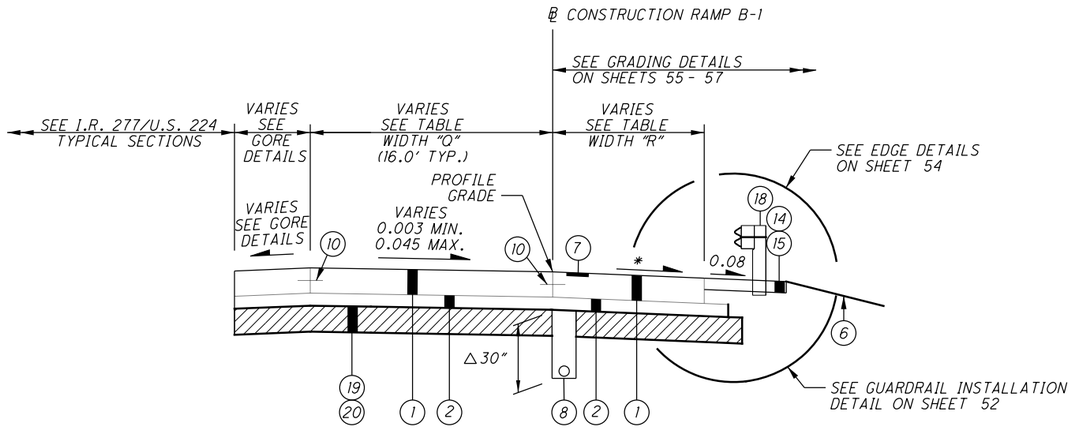
△- OR AS SHOWN IN UNDERDRAIN PLANS, SHEETS 929 - 930

□ RAMP B IS SHOWN IN THE DIRECTION OF TRAVEL, NOT THE DIRECTION OF INCREASING STATIONING

TYPICAL SECTIONS

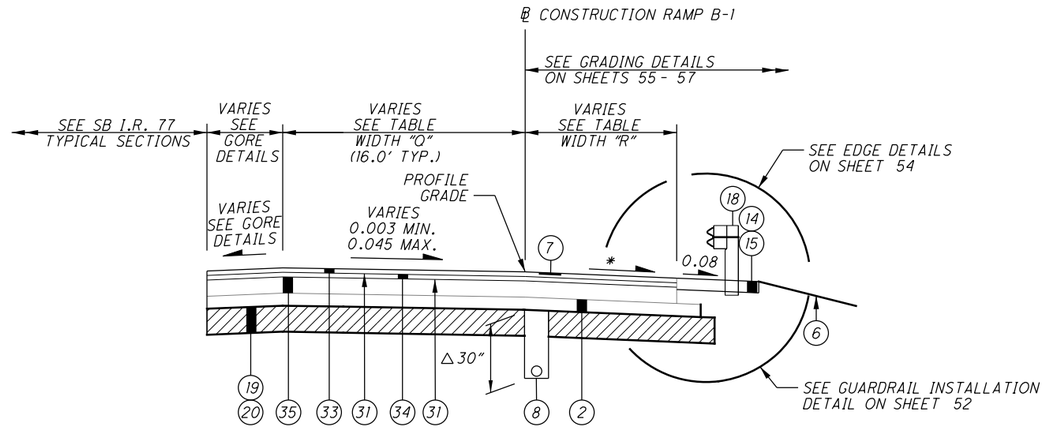
SUM-77/277/224
VARIOUS

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_GY010.dgn Sheet 1/15/2021 4:50:10 PM lkirkland



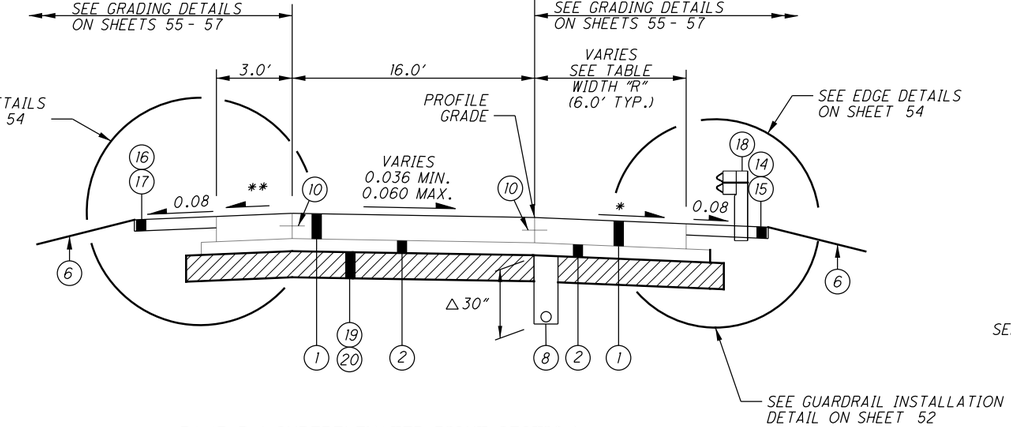
RAMP B-1 SUPERELEVATED RIGHT SECTION □

LIMITING STATIONS
STA. 418+55.68 TO STA. 421+51.12



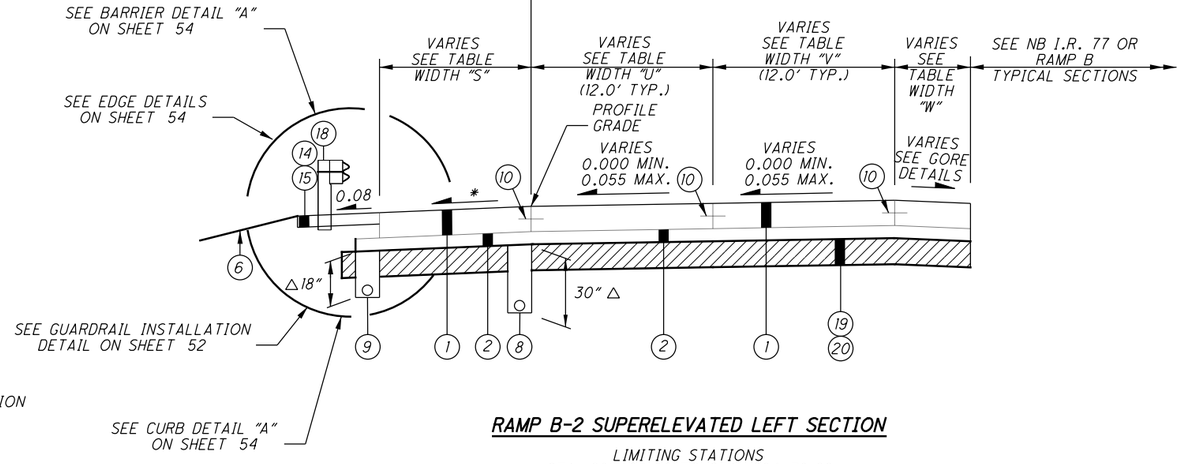
RAMP B-1 SUPERELEVATED RIGHT ASPHALT SECTION □

LIMITING STATIONS
STA. 402+43.78 TO STA. 406+31.76



RAMP B-1 SUPERELEVATED RIGHT SECTION □

LIMITING STATIONS
STA. 406+31.76 TO STA. 418+55.68



RAMP B-2 SUPERELEVATED LEFT SECTION

LIMITING STATIONS
STA. 285+64.96 TO STA. 294+78.29
STA. 15+45.66 TO STA. 16+67.86

RAMP B-1 WIDTH TABLE

	WIDTH "Q"				WIDTH "R"			
	STATION		WIDTH (FT.)		STATION		WIDTH (FT.)	
	FROM	TO	FROM	TO	FROM	TO	FROM	TO
RAMP B-1	402+43.78	406+31.76	16.0	16.0	402+43.78	405+01.68	8.0	8.0
					405+01.68	405+51.68	8.0	6.0
	418+55.68	421+51.12	16.0	12.5	405+51.68	417+55.68	6.0	6.0
					417+55.68	418+55.68	6.0	10.0
					418+55.68	421+40.51	10.0	10.0

FOR PROPOSED LEGEND, SEE SHEET 29
FOR SUPERELEVATION TABLES, SEE SHEETS 820 - 823, 825
FOR GORE DETAILS, SEE SHEETS 846 - 850
FOR RAMP B-2 WIDTH TABLE, SEE SHEET 41

* 0.04 OR RATE OF PAVEMENT SLOPE IF GREATER.

** FOR HIGH SIDE SHOULDER SLOPES, SEE SHOULDER DETAIL ON SHEET 52.

△- OR AS SHOWN IN UNDERDRAIN PLANS, SHEETS 927 - 930

□ RAMP B-1 IS SHOWN IN THE DIRECTION OF TRAVEL, NOT THE DIRECTION OF INCREASING STATIONING

TYPICAL SECTIONS

SUM-77/277/224
VARIOUS

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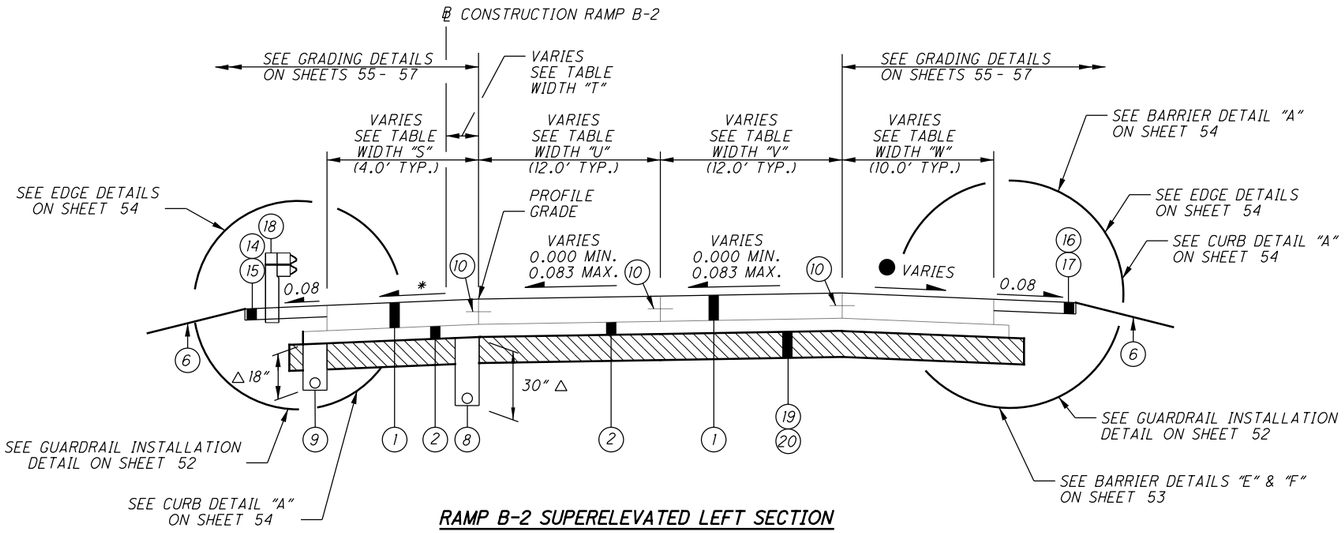
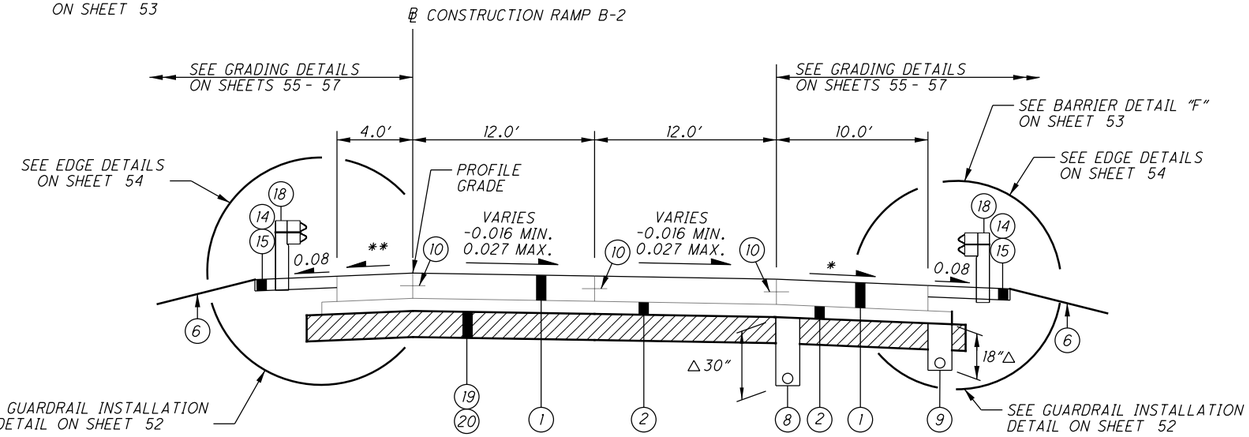


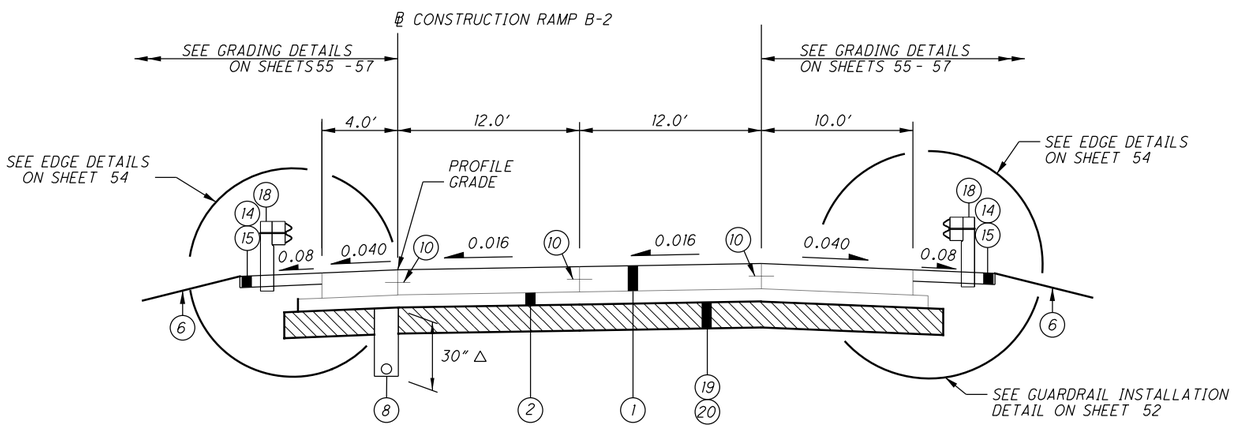
RAMP B-2 SUPERELEVATED LEFT SECTION

LIMITING STATIONS
STA. 294+78.29 TO STA. 296+87.10
STA. 305+30.56 TO STA. 307+95.29
STA. 9+83.20 TO STA. 15+45.66



RAMP B-2 SUPERELEVATED RIGHT SECTION

LIMITING STATIONS
STA. 296+87.10 TO STA. 302+75.29



RAMP B-2 NORMAL SECTION

LIMITING STATIONS
STA. 302+75.29 TO STA. 305+30.56

NOTE

BRIDGE/APPROACH SLAB LIMITS
STA. 307+95.29 TO STA. 9+83.20
(SKEW/NO WORK)

FOR PROPOSED LEGEND, SEE SHEET 29
FOR SUPERELEVATION TABLES, SEE SHEETS 823 - 825
FOR GORE DETAILS, SEE SHEETS 849 - 850
FOR WIDTH TABLE, SEE SHEET 41

* 0.04 OR RATE OF PAVEMENT SLOPE IF GREATER.

** FOR HIGH SIDE SHOULDER SLOPES, SEE SHOULDER DETAIL "A" ON SHEET 52.

△- OR AS SHOWN IN UNDERDRAIN PLANS, SHEETS 927 - 930

● SEE SHOULDER DETAILS "A" AND "B" ON SHEET 52

TYPICAL SECTIONS

SUM-77/277/224
VARIOUS

40
1288

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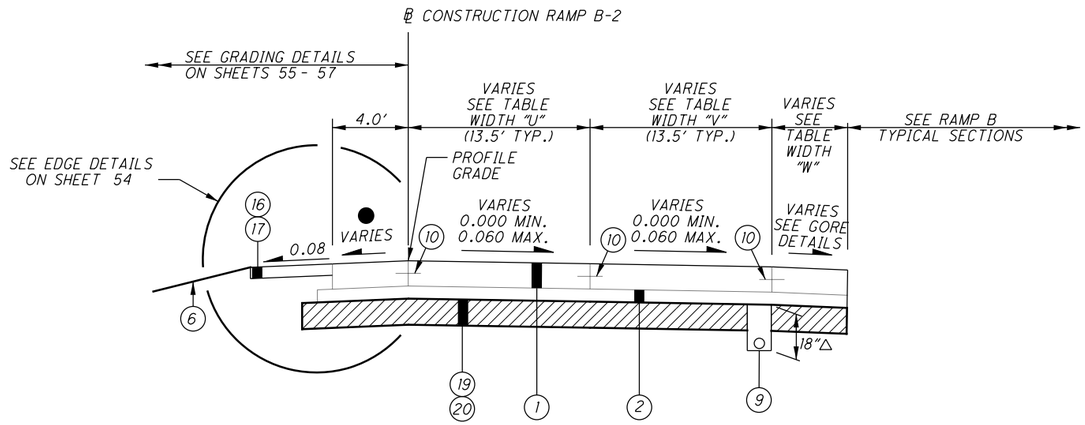
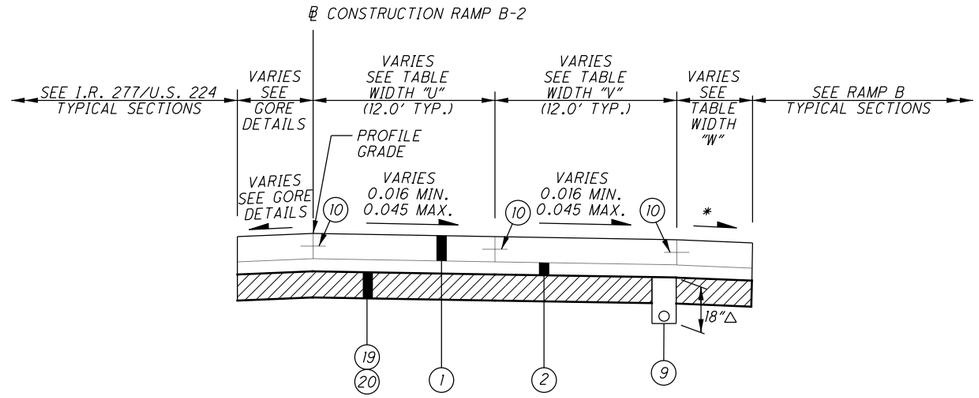


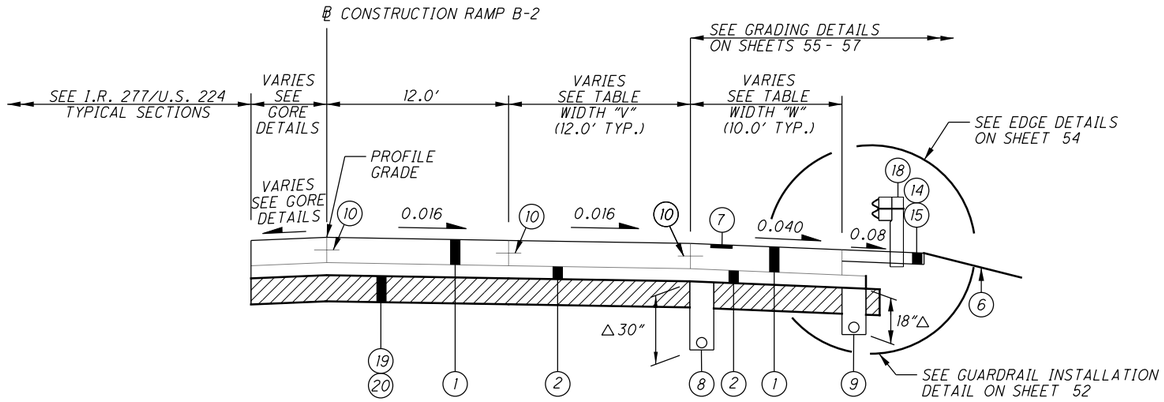
RAMP B-2 SUPERELEVATED RIGHT SECTION

LIMITING STATIONS
STA. 16+67.86 TO STA. 23+18.45



RAMP B-2 SUPERELEVATED RIGHT SECTION

LIMITING STATIONS
STA. 23+18.45 TO STA. 24+64.81



RAMP B-2 NORMAL SECTION

LIMITING STATIONS
STA. 24+64.81 TO STA. 33+82.00

FOR PROPOSED LEGEND, SEE SHEET 29
FOR SUPERELEVATION TABLES, SEE SHEETS 825- 826
FOR GORE DETAILS, SEE SHEETS 850 - 853

* 0.04 OR RATE OF PAVEMENT SLOPE IF GREATER.

△- OR AS SHOWN IN UNDERDRAIN PLANS, SHEET 930

● SEE SHOULDER DETAILS "A" AND "C" ON SHEET 52

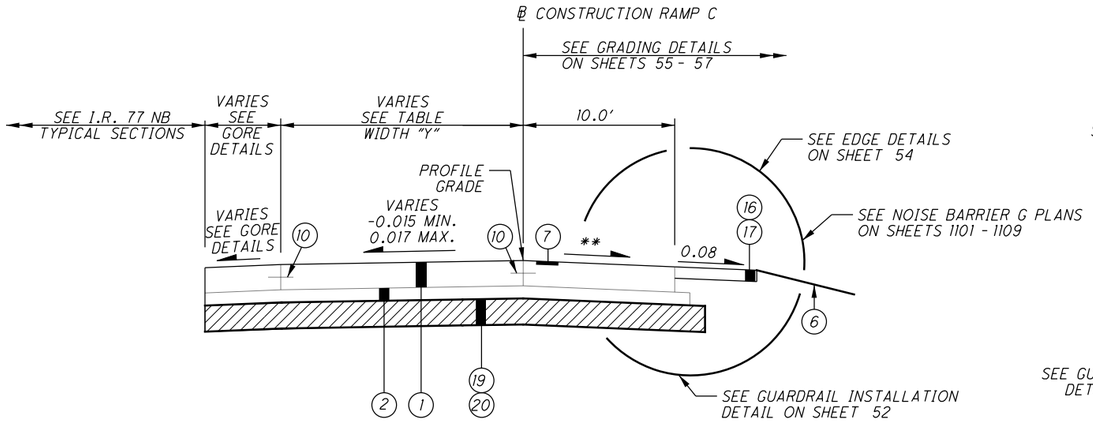
RAMP B-2 WIDTH TABLE

	WIDTH "S"				WIDTH "T"				WIDTH "U"				WIDTH "V"				WIDTH "W"			
	STATION		WIDTH (FT.)		STATION		WIDTH (FT.)		STATION		WIDTH (FT.)		STATION		WIDTH (FT.)		STATION		WIDTH (FT.)	
	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO	FROM	TO
	285+64.96	292+80.00	10.0	10.0	294+78.29	296+87.10	0.0	0.0	285+64.96	296+87.10	12.0	12.0	285+64.96	290+91.54	SEE GORE DETAIL		285+64.96	294+78.29	SEE GORE DETAIL	
	292+80.00	292+90.00	10.0	12.0									290+91.54	296+87.10	12.0	12.0	294+78.29	296+87.10	10.0	10.0
	292+90.00	294+28.29	12.0	12.0	305+30.56	307+30.56	0.0	0.5	305+30.56	307+30.56	12.0	13.5								
	294+28.29	296+28.29	12.0	4.0	307+30.56	307+95.29	0.5	0.5	307+30.56	307+95.29	13.5	13.5	305+30.56	307+30.56	12.0	13.5	305+30.56	306+50.00	10.0	10.0
RAMP B-2	296+28.29	296+87.10	4.0	4.0									307+30.56	307+95.29	13.5	13.5	306+50.00	308+00.00	10.0	4.0 (NDC 10')
					9+83.20	10+00.00	0.5	0.5	9+83.20	15+45.66	13.5	13.5								
	305+30.56	307+95.29	4.0	4.0	10+00.00	11+00.00	0.5	0.0					9+83.20	22+39.81	13.5	13.5	9+83.20	10+00.00	4.0 (NDC 10')	4.0 (NDC 10')
					11+00.00	15+45.66	0.0	0.0	16+67.86	22+39.81	13.5	13.5	22+39.81	24+64.81	13.5	12.0	10+00.00	10+30.00	4.0 (NDC 10')	10.0
	9+83.20	16+67.86	4.0	4.0					22+39.81	24+64.81	13.5	12.0	24+64.81	32+64.81	28.0	12.0	10+30.00	15+45.66	10.0	10.0
													32+64.81	33+82.00	12.0	12.0	15+45.66	24+64.81	SEE GORE DETAIL	
																	24+64.81	33+39.75	10.0	10.0
																	33+39.75	33+82.00	10.0	10.9

TYPICAL SECTIONS

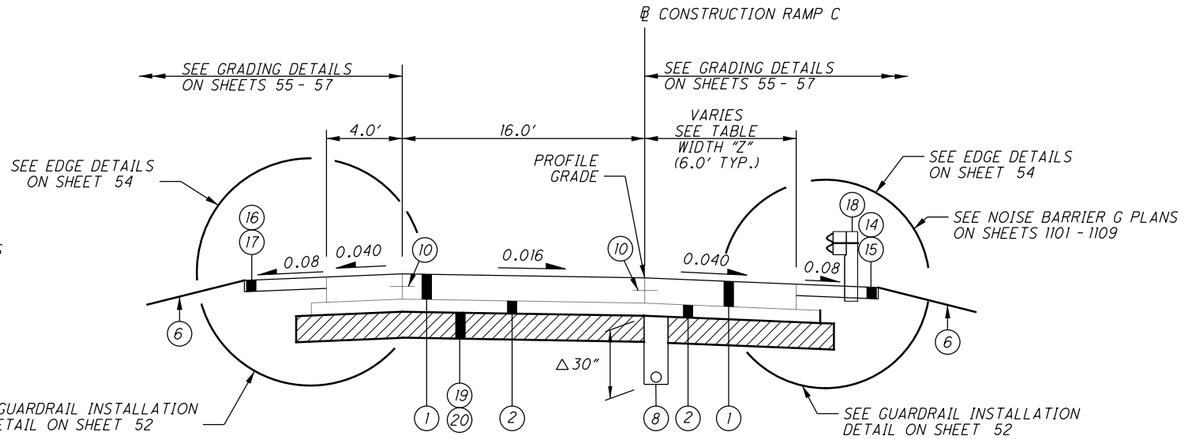
SUM-77/277/224
VARIOUS

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_GY013.dgn Sheet 1/15/2021 4:50:12 PM lkirkland



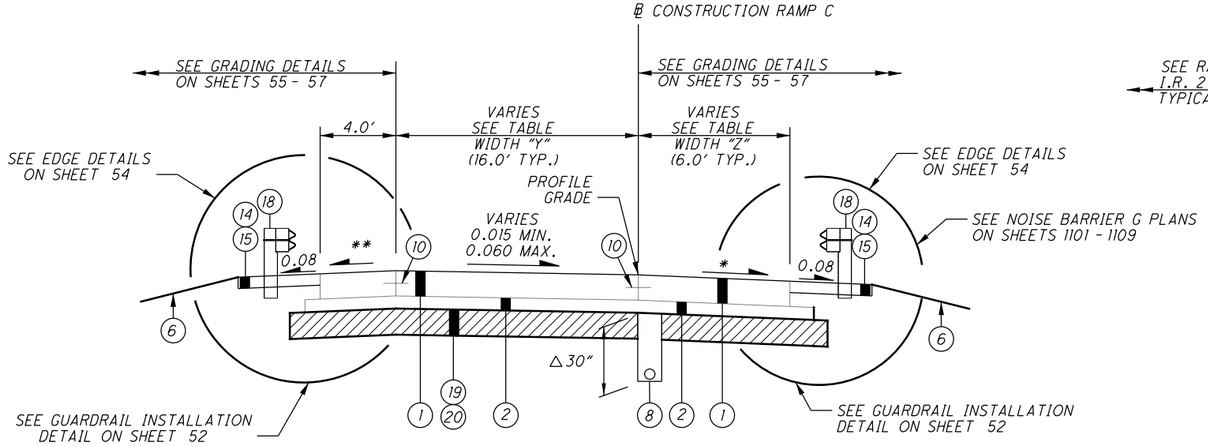
RAMP C SUPERELEVATED LEFT/RIGHT SECTION

LIMITING STATIONS
STA. 576+00.00 TO STA. 581+24.01



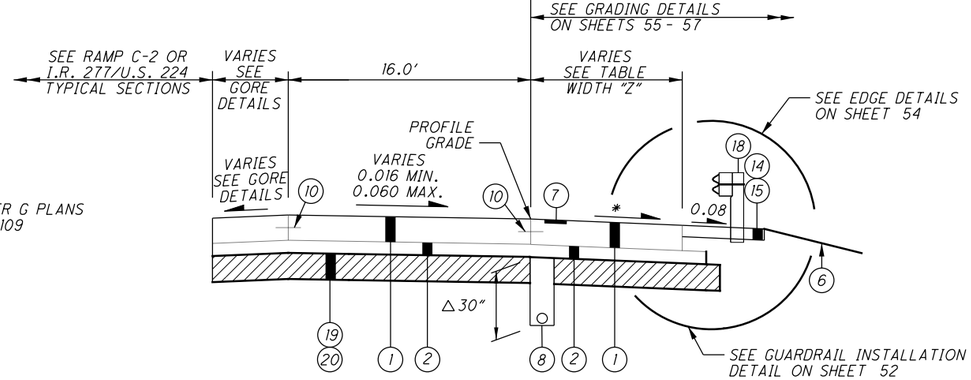
RAMP C NORMAL SECTION

LIMITING STATIONS
STA. 581+28.66 TO STA. 583+16.40



RAMP C SUPERELEVATED RIGHT SECTION

LIMITING STATIONS
STA. 581+24.01 TO STA. 581+28.66
STA. 583+16.40 TO STA. 592+97.65
STA. 596+40.00 TO STA. 600+63.43



RAMP C SUPERELEVATED RIGHT/NORMAL SECTION

LIMITING STATIONS
STA. 592+97.65 TO STA. 596+40.00
STA. 600+63.43 TO STA. 606+67.88

RAMP C WIDTH TABLE

	WIDTH "Y"				WIDTH "Z"			
	STATION		WIDTH (FT.)		STATION		WIDTH (FT.)	
RAMP C	576+00.00	577+52.62	12.0	14.0	581+24.01	582+24.01	10.0	6.0
	577+52.62	581+24.01	12.0	16.0	582+24.01	602+87.81	6.0	6.0
	581+24.01	581+28.66	16.0	16.0	602+87.81	603+37.81	6.0	8.0
					603+37.81	606+67.88	8.0	8.0
	583+16.40	592+97.65	16.0	16.0				
	596+40.00	600+60.00	28.0	16.0				
	600+60.00	600+63.43	16.0	16.0				

FOR PROPOSED LEGEND, SEE SHEET 29
FOR SUPERELEVATION TABLES, SEE SHEETS 827 - 829
FOR GORE DETAILS, SEE SHEETS 854 - 856, 860

* 0.04 OR RATE OF PAVEMENT SLOPE IF GREATER.

** FOR HIGH SIDE SHOULDER SLOPES, SEE SHOULDER DETAIL "A" ON SHEET 52.

△- OR AS SHOWN IN UNDERDRAIN PLANS, SHEETS 926 - 927, 931

TYPICAL SECTIONS

SUM-77/277/224
VARIOUS

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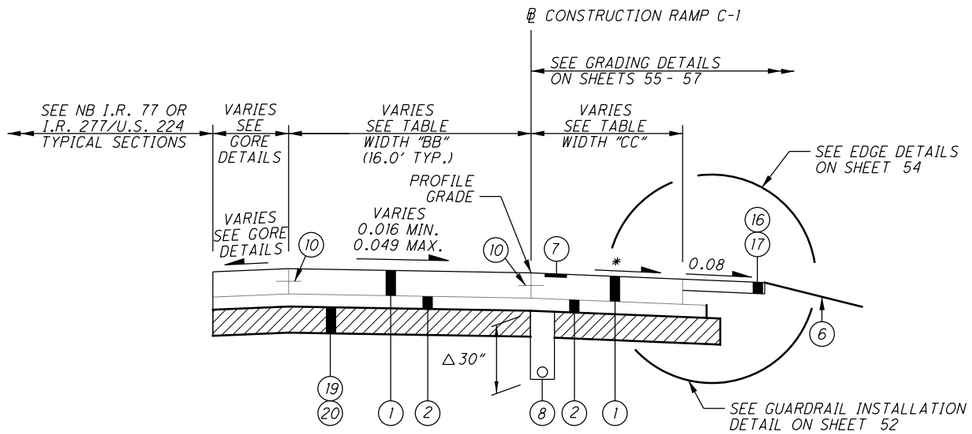
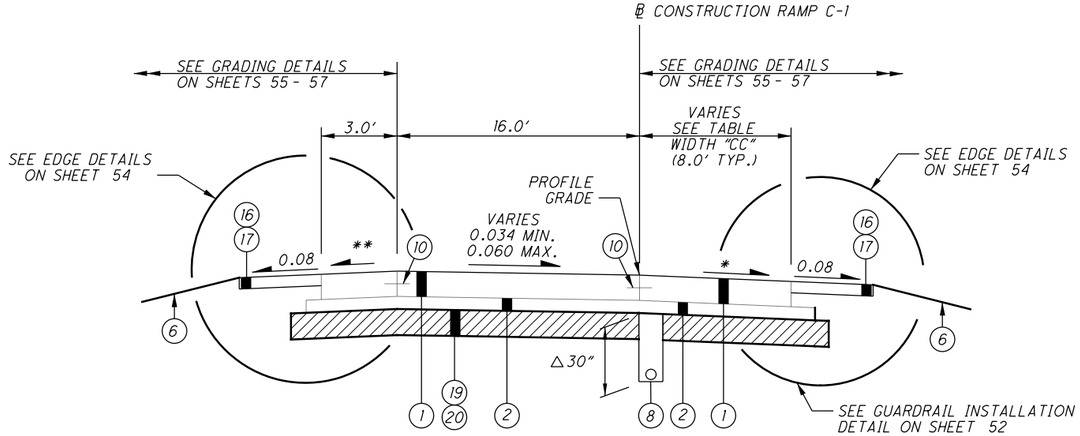


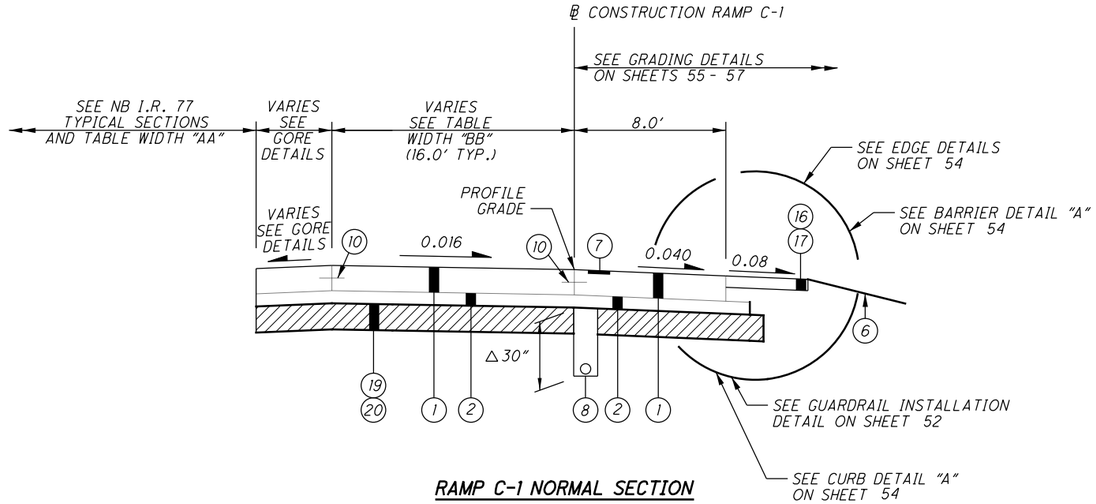
RAMP C-1 SUPERELEVATED RIGHT SECTION

LIMITING STATIONS
STA. 679+55.23 TO STA. 682+95.50
STA. 693+69.53 TO STA. 694+94.95



RAMP C-1 SUPERELEVATED RIGHT SECTION

LIMITING STATIONS
STA. 682+95.50 TO STA. 693+69.53



RAMP C-1 NORMAL SECTION

LIMITING STATIONS
STA. 694+94.95 TO STA. 702+11.45

RAMP C-1 WIDTH TABLE

	WIDTH "BB"				WIDTH "CC"			
	STATION		WIDTH (FT.)		STATION		WIDTH (FT.)	
	679+55.23	680+48.74	SEE GORE DETAILS		679+55.23	680+00.00	6.8	6.8
	680+48.74	682+95.50	16.0	16.0	680+00.00	680+32.00	6.8	8.0
RAMP C-1					680+32.00	682+95.50	8.0	8.0
	693+69.53	700+11.57	16.0	16.0	682+95.50	683+45.50	8.0	6.0
	700+11.57	702+11.45	SEE GORE DETAILS		683+45.50	694+44.95	6.0	6.0
					694+44.95	694+94.95	6.0	8.0

FOR PROPOSED LEGEND, SEE SHEET 29
FOR SUPERELEVATION TABLES, SEE SHEETS 830 - 831
FOR GORE DETAILS, SEE SHEETS 857 - 859

* 0.04 OR RATE OF PAVEMENT SLOPE IF GREATER.

** FOR HIGH SIDE SHOULDER SLOPES, SEE SHOULDER DETAIL "A" ON SHEET 52.

△- OR AS SHOWN IN UNDERDRAIN PLANS, SHEETS 927 - 928 , 931

TYPICAL SECTIONS

SUM-77/277/224
VARIOUS

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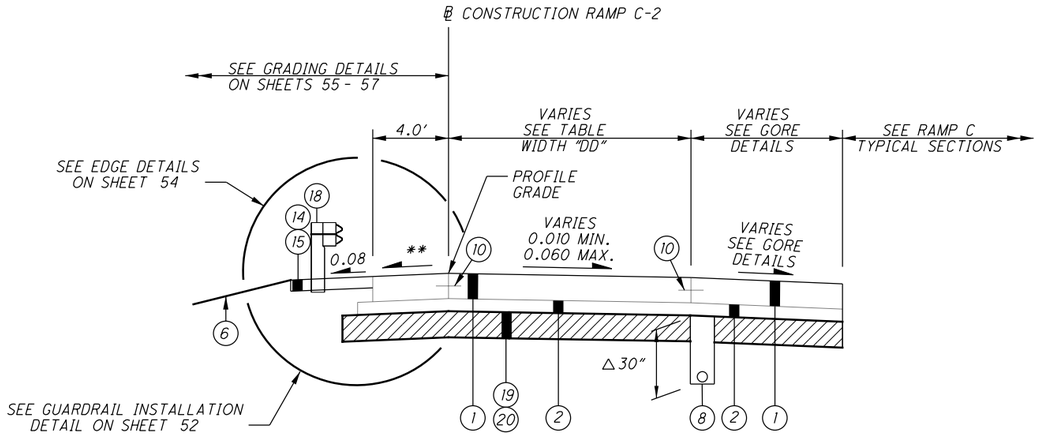
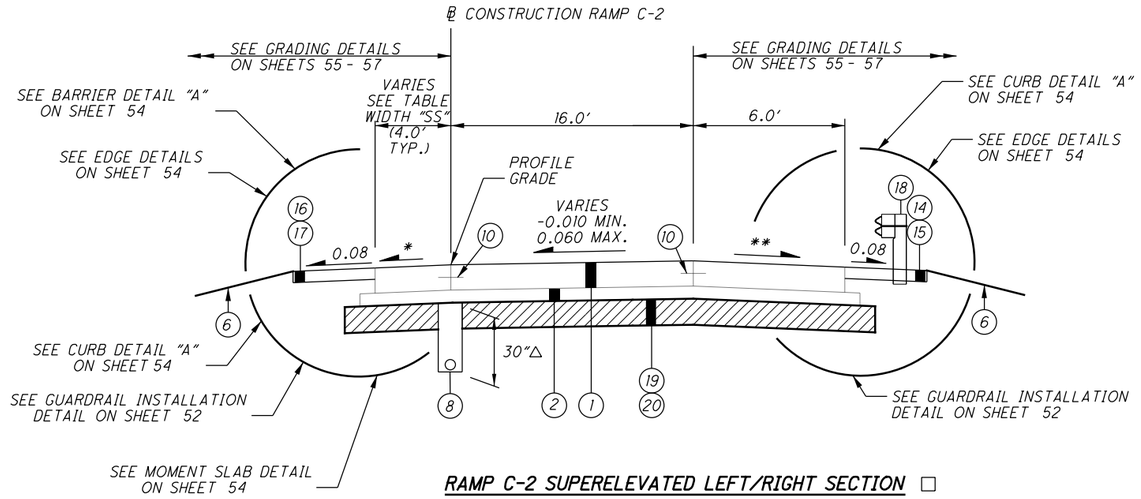


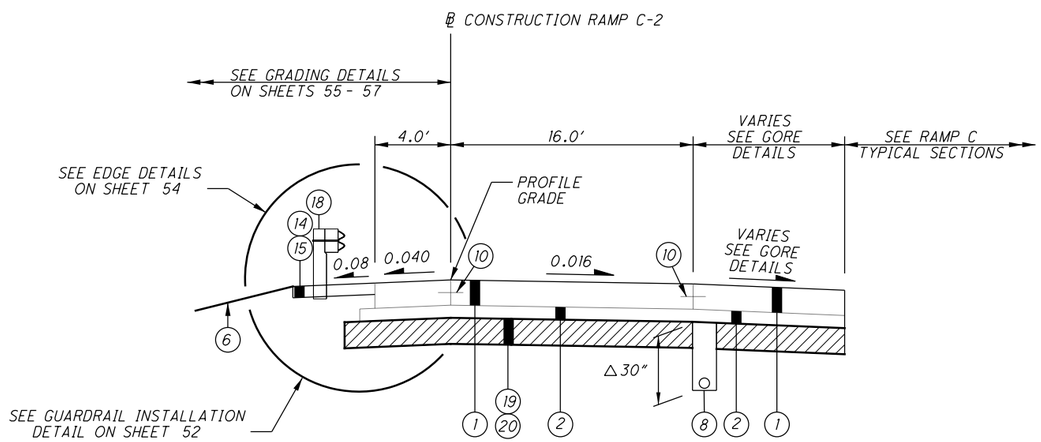
RAMP C-2 SUPERELEVATED RIGHT SECTION □

LIMITING STATIONS
STA. 781+45.30 TO STA. 784+43.84
STA. 784+82.53 TO STA. 785+02.08



RAMP C-2 SUPERELEVATED LEFT/RIGHT SECTION □

LIMITING STATIONS
STA. 785+02.08 TO STA. 788+82.95
STA. 793+17.70 TO STA. 796+95.44



RAMP C-2 NORMAL SECTION □

LIMITING STATIONS
STA. 784+43.84 TO STA. 784+82.53

FOR PROPOSED LEGEND, SEE SHEET 29
FOR SUPERELEVATION TABLES, SEE SHEETS 832 - 834
FOR GORE DETAILS, SEE SHEETS 860 - 861
FOR WIDTH TABLE, SEE SHEET 45

* 0.04 OR RATE OF PAVEMENT SLOPE IF GREATER.

** FOR HIGH SIDE SHOULDER SLOPES, SEE SHOULDER DETAIL "A" ON SHEET 52.

△- OR AS SHOWN IN UNDERDRAIN PLANS, SHEETS 927 - 928 , 931

□ RAMP C-2 IS SHOWN IN THE DIRECTION OF TRAVEL, NOT THE DIRECTION OF INCREASING STATIONING

TYPICAL SECTIONS

SUM-77/277/224
VARIOUS

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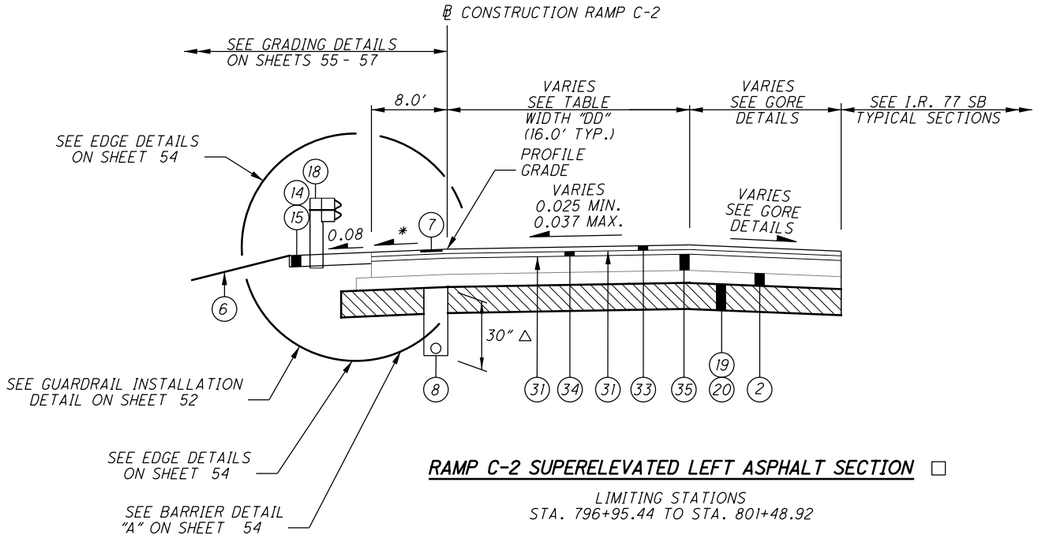
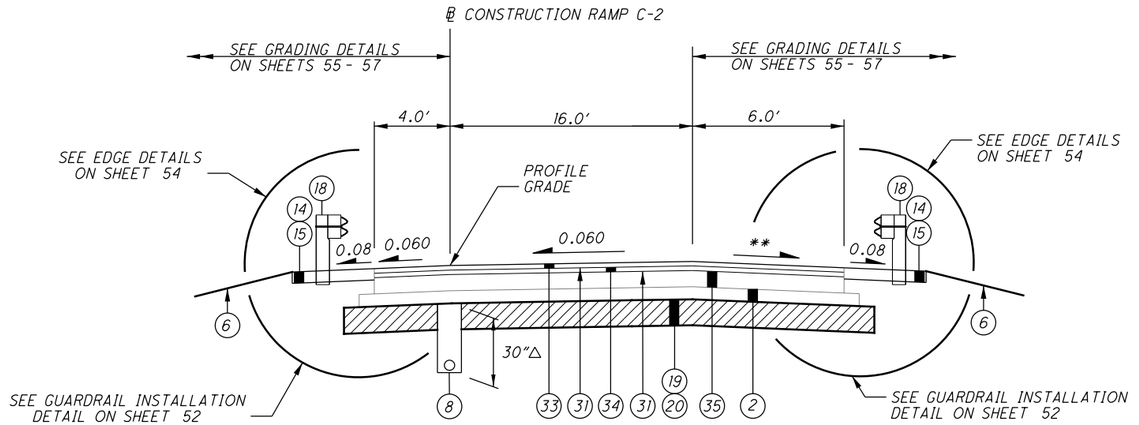


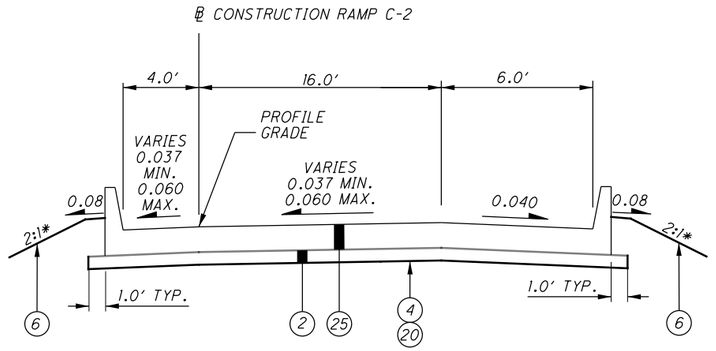
RAMP C-2 SUPERELEVATED LEFT ASPHALT SECTION □

LIMITING STATIONS
STA. 796+95.44 TO STA. 801+48.92



RAMP C-2 SUPERELEVATED LEFT ASPHALT SECTION □

LIMITING STATIONS
STA. 788+82.95 TO STA. 789+07.95



STRUCTURE LIMITS
SUM-77-0927R
STA. 789+37.95 TO STA. 792+85.70

PROPOSED APPROACH SLAB SUPERELEVATED LEFT SECTION - RAMP C-2 □ ♦

LIMITING STATIONS
STA 789+07.95 TO STA. 789+37.95
STA 792+85.70 TO STA. 793+17.70

RAMP C-2 WIDTH TABLE

	WIDTH "DD"				WIDTH "SS"			
	STATION		WIDTH (FT.)		STATION		WIDTH (FT.)	
	781+45.30	782+90.99	SEE GORE DETAIL		785+02.08	788+82.95	4.0	4.0
	782+90.99	784+43.84	16.0	16.0				
					793+17.70	795+95.44	4.0	4.0
RAMP C-2	784+82.53	785+02.08	16.0	16.0	795+95.44	796+95.44	4.0	8.0
	796+95.44	799+74.46	16.0	16.0				
	799+74.46	801+48.92	SEE GORE DETAIL					

FOR PROPOSED LEGEND, SEE SHEET 29
FOR SUPERELEVATION TABLES, SEE SHEETS 833 - 834
FOR GORE DETAILS, SEE SHEET 861

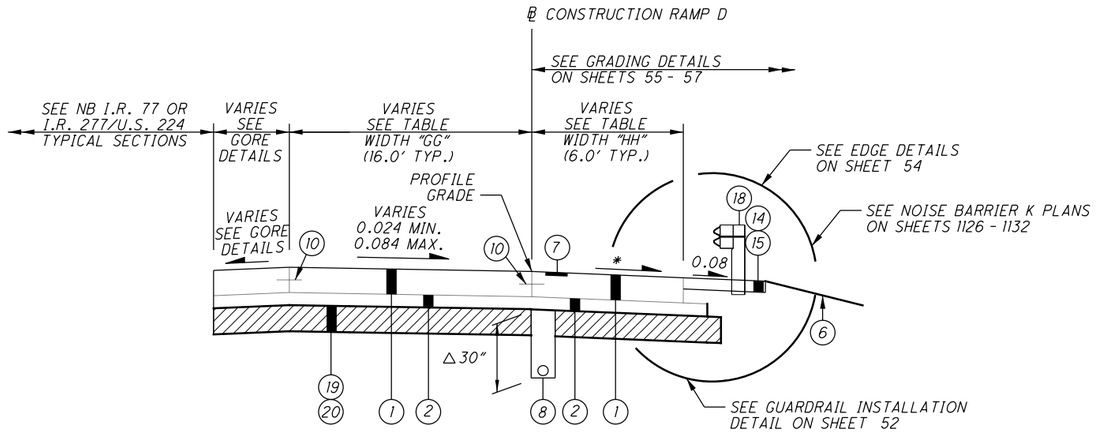
* 0.04 OR RATE OF PAVEMENT SLOPE IF GREATER.

** FOR HIGH SIDE SHOULDER SLOPES, SEE SHOULDER DETAIL "A" ON SHEET 52.

△ - OR AS SHOWN IN UNDERDRAIN PLANS, SHEETS 927 - 928

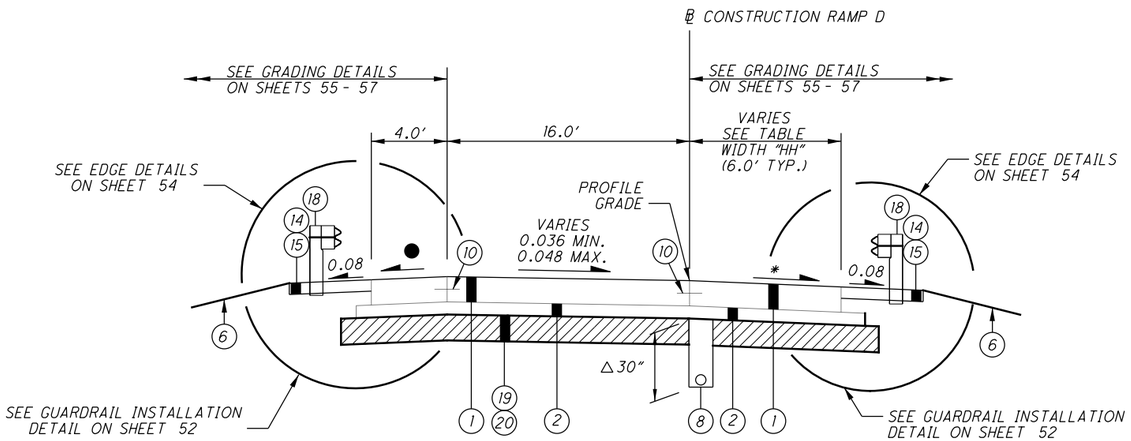
□ RAMP C-2 IS SHOWN IN THE DIRECTION OF TRAVEL, NOT THE DIRECTION OF INCREASING STATIONING

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_GY017.dgn Sheet 1/15/2021 4:50:16 PM lkirkland



RAMP D SUPERELEVATED RIGHT SECTION

LIMITING STATIONS
STA. 887+98.38 TO STA. 892+66.83
STA. 907+63.81 TO STA. 914+89.43 ***



RAMP D SUPERELEVATED RIGHT SECTION

LIMITING STATIONS
STA. 892+66.83 TO STA. 907+63.81

RAMP D WIDTH TABLE

	WIDTH "GG"				WIDTH "HH"			
	STATION		WIDTH (FT.)		STATION		WIDTH (FT.)	
RAMP D	887+98.38	889+33.61	12.0	14.0	887+98.38	892+66.83	10.0	10.0
	889+33.61	892+66.83	12.0	16.0	892+66.83	893+66.83	10.0	6.0
					893+66.83	910+05.05	6.0	6.0
	907+63.81	914+89.43	16.0	16.0	910+05.05	910+55.05	6.0	8.0
					910+55.05	914+75.00	8.0	8.0
					914+75.00	914+89.43	8.0	7.4

FOR PROPOSED LEGEND, SEE SHEET 29
FOR SUPERELEVATION TABLES, SEE SHEETS 835 - 838
FOR GORE DETAILS, SEE SHEETS 862 - 864

* 0.04 OR RATE OF PAVEMENT SLOPE IF GREATER.

*** END WORK AT STA. 914+89.43 , WORK PAST THAT STATION IS TO BE CONSTRUCTED BY OTHERS AS PART OF THE SUM-76/77/8-8.42/9.77/0.00 DB (PID 102329) PROJECT.

△- OR AS SHOWN IN UNDERDRAIN PLANS, SHEETS 928 - 929 , 931

● SEE SHOULDER DETAILS "A" AND "D" ON SHEET 52

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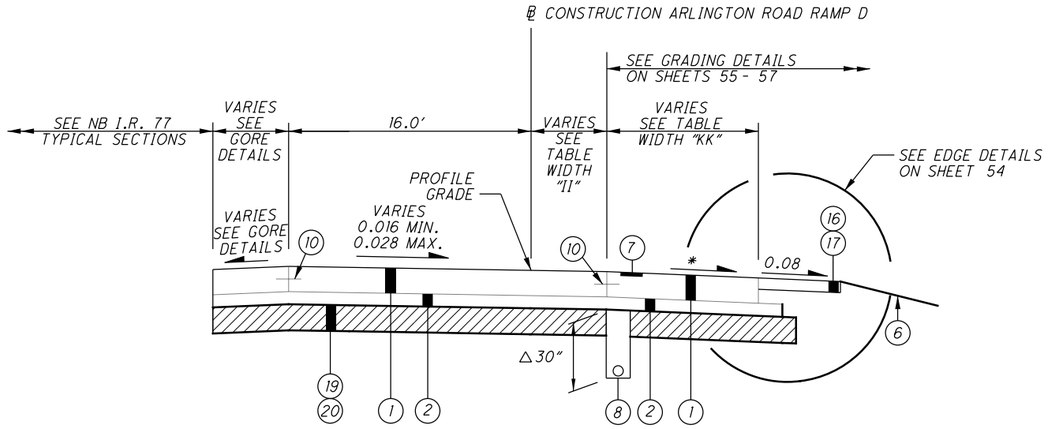
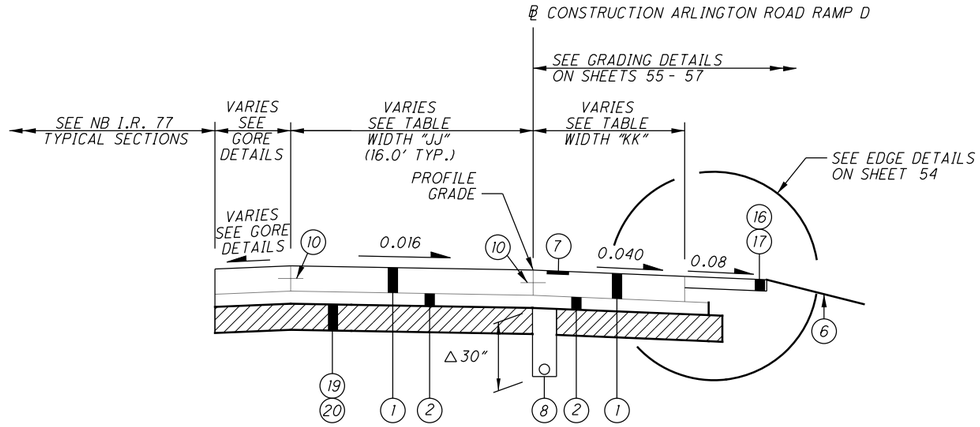


ARLINGTON ROAD RAMP D SUPERELEVATED RIGHT SECTION

LIMITING STATIONS
STA. 71+69.06 TO STA. 75+25.24



ARLINGTON ROAD RAMP D SUPERELEVATED RIGHT SECTION

LIMITING STATIONS
STA. 75+25.24 TO STA. 88+18.25

FOR PROPOSED LEGEND, SEE SHEET 29
FOR SUPERELEVATION TABLES, SEE SHEET 839
FOR GORE DETAILS, SEE SHEETS 865 - 868

* 0.04 OR RATE OF PAVEMENT SLOPE IF GREATER.

** FOR HIGH SIDE SHOULDER SLOPES, SEE SHOULDER DETAIL "A" ON SHEET 52.

△- OR AS SHOWN IN UNDERDRAIN PLANS, SHEET 922

ARLINGTON ROAD RAMP D WIDTH TABLE

	WIDTH "II"				WIDTH "JJ"				WIDTH "KK"			
	STATION		WIDTH (FT.)		STATION		WIDTH (FT.)		STATION		WIDTH (FT.)	
ARLINGTON ROAD RAMP D	71+69.06	74+47.06	5.6	0.0	75+25.24	86+18.37	16.0	16.0	71+69.06	72+67.31	9.9	6.0
	74+47.06	75+25.24	0.0	0.0	86+18.37	88+18.25	16.0	12.0	72+67.31	81+17.83	6.0	6.0
									81+17.83	81+67.80	6.0	8.0
									81+67.80	87+18.15	8.0	8.0
									87+18.15	88+18.25	8.0	10.0

TYPICAL SECTIONS

SUM-77/277/224
VARIOUS

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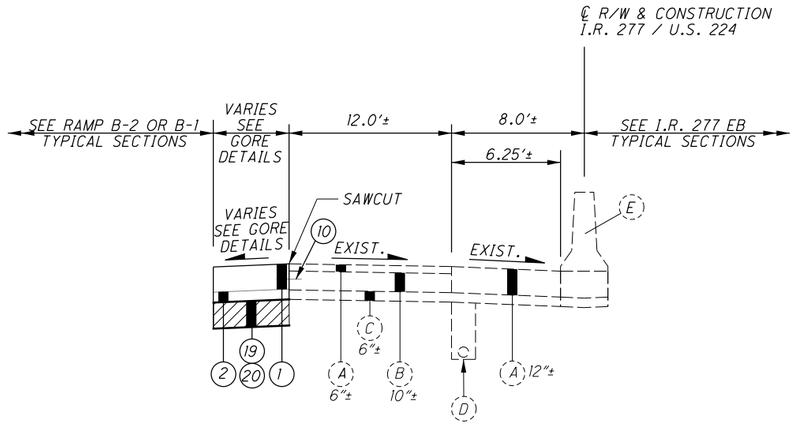
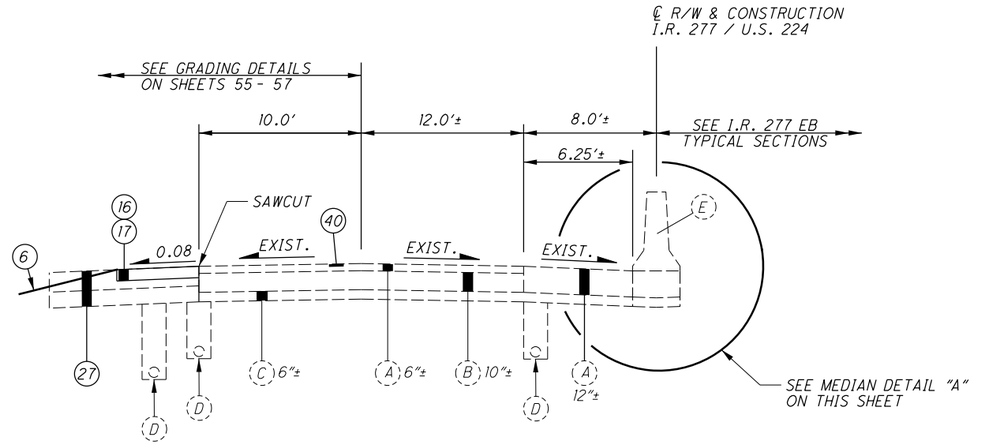


I.R. 277/U.S. 224 WB NORMAL SECTION

LIMITING STATIONS

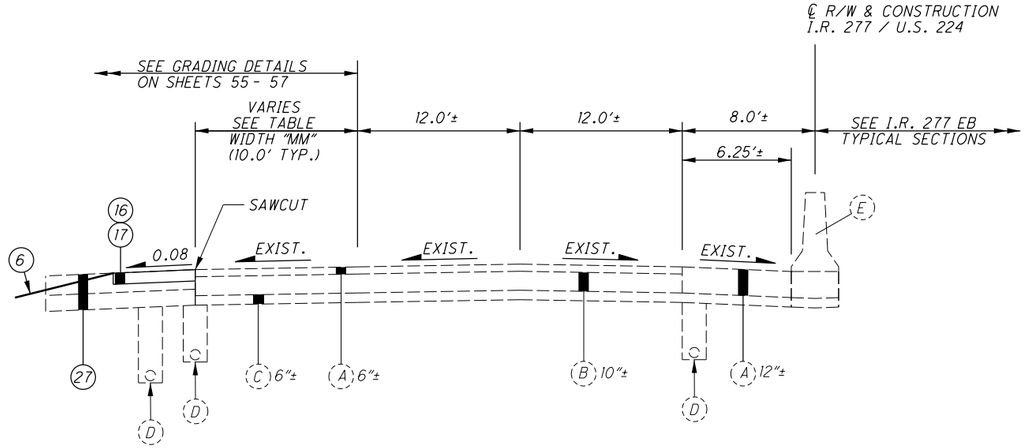
STA. 225+00.00 TO STA. 235+63.23
STA. 247+80.74 TO STA. 250+78.79



I.R. 277/U.S. 224 WB NORMAL SECTION

LIMITING STATIONS

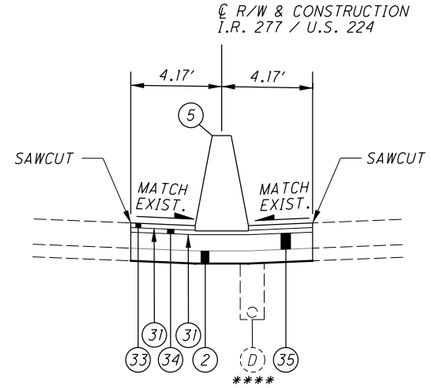
STA. 235+63.23 TO STA. 247+80.74



I.R. 277/U.S. 224 WB NORMAL SECTION

LIMITING STATIONS

STA. 257+05.96 TO STA. 264+70.74



MEDIAN DETAIL "A"

N.T.S.

LIMITING STATIONS

STA. 241+20.00 TO STA. 242+80.00

NOTE

BRIDGE/APPROACH SLAB LIMITS
STA. 250+94.27 TO STA. 257+01.49 (SKEW)

FOR PROPOSED LEGEND, SEE SHEET 29
FOR EXISTING LEGEND, SEE SHEET 59
FOR GORE DETAILS, SEE SHEETS 847 , 851 -853 ,862
FOR WIDTH TABLE, SEE SHEET 49

**** EXISTING UNDERDRAIN TO REMAIN

TYPICAL SECTIONS

SUM-77/277/224
VARIOUS

48
1288

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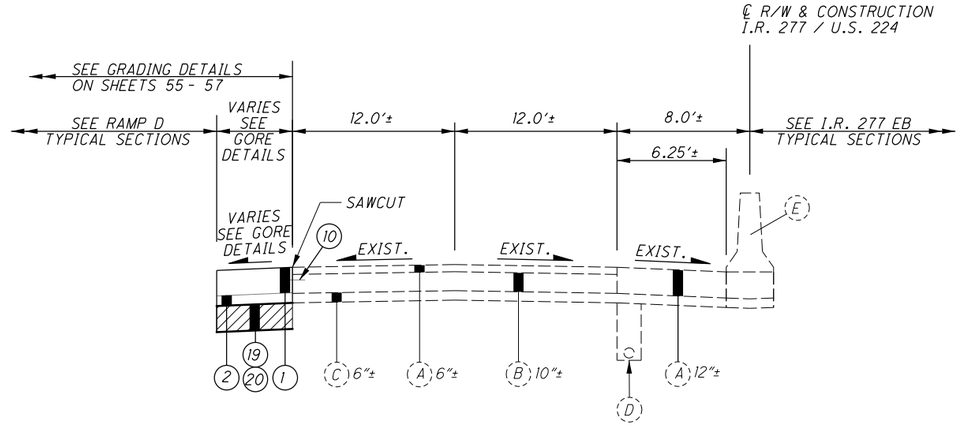
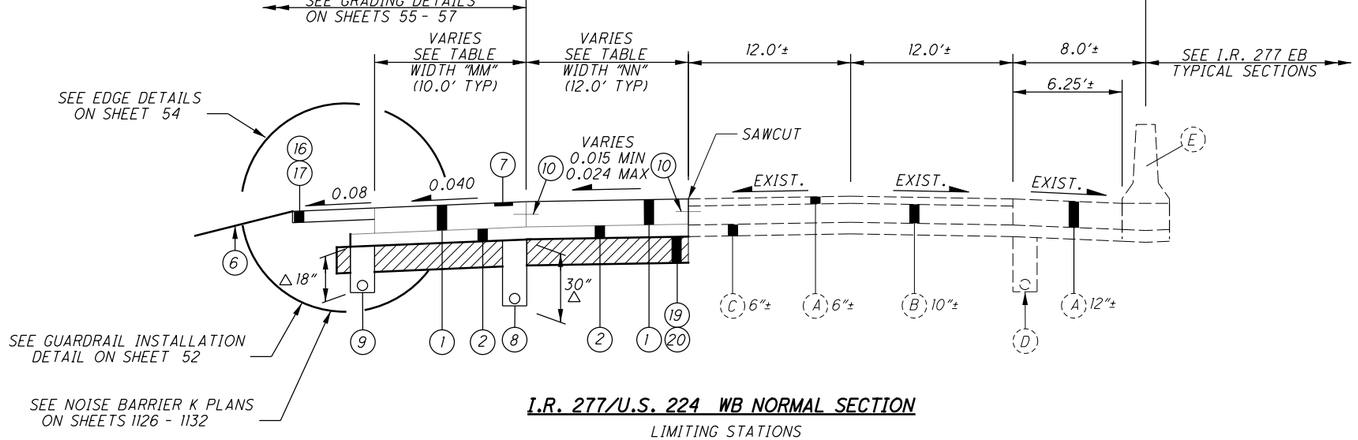


I.R. 277/U.S. 224 WB NORMAL SECTION

LIMITING STATIONS
STA. 264+70.74 TO STA. 269+40.00



I.R. 277/U.S. 224 WB NORMAL SECTION

LIMITING STATIONS
STA. 269+40.00 TO STA. 273+25.00

I.R. 277 WESTBOUND WIDTH TABLE

	WIDTH "MM"				WIDTH "NN"			
	STATION		WIDTH (FT.)		STATION		WIDTH (FT.)	
I.R. 277 WB	257+05.96	257+55.96	20.0	10.0	269+40.00	272+95.00	12.0	12.0
	257+55.96	264+70.74	10.0	10.0	272+95.00	273+25.00	12.0	11.9
	269+40.00	272+95.00	10.0	10.0				
	272+95.00	273+25.00	10.0	11.2				

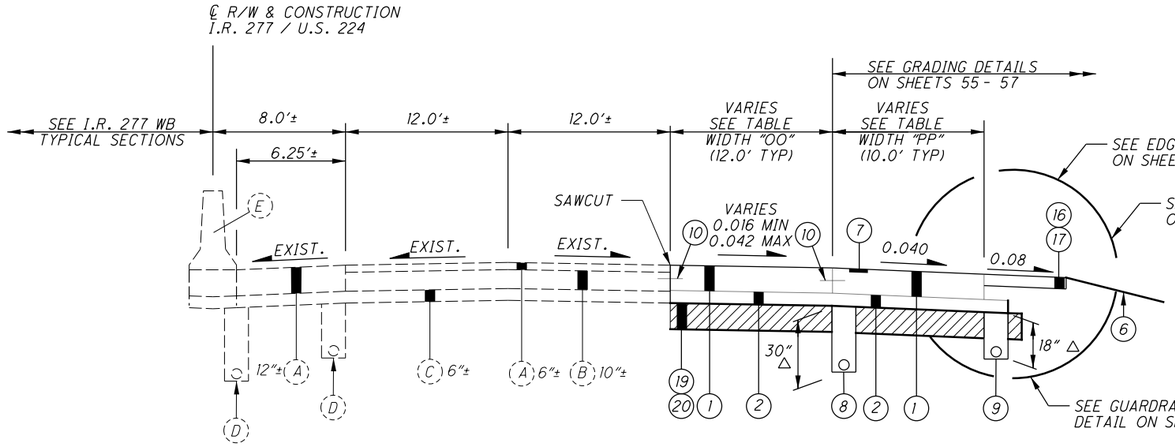
FOR PROPOSED LEGEND, SEE SHEET 29
FOR EXISTING LEGEND, SEE SHEET 59
FOR SUPERELEVATION TABLES, SEE SHEET 835
FOR GORE DETAILS, SEE SHEET 862

△- OR AS SHOWN IN UNDERDRAIN PLANS, SHEET 931

TYPICAL SECTIONS

SUM-77/277/224
VARIOUS

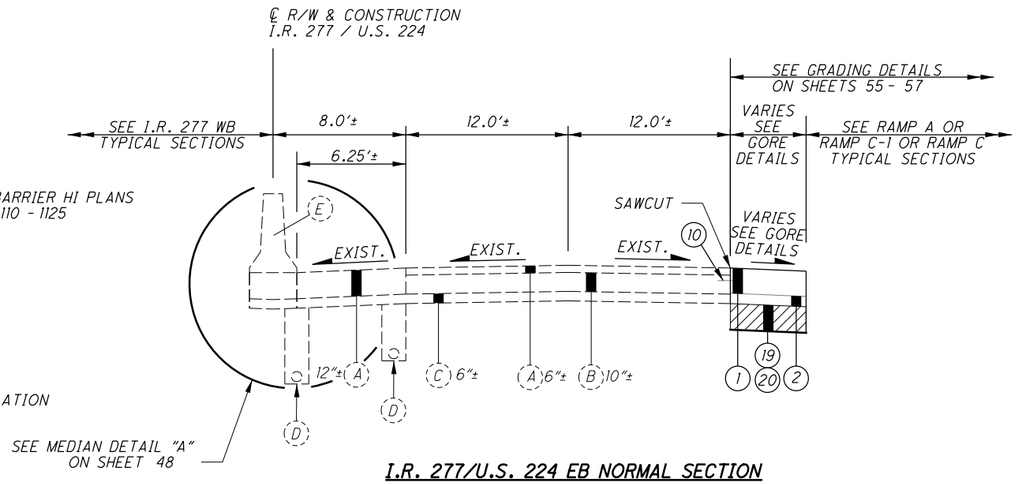
O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_GY021.dgn Sheet 1/15/2021 4:50:19 PM lkirkland



I.R. 277/U.S. 224 EB NORMAL SECTION

LIMITING STATIONS

STA. 237+00.00 TO STA. 237+37.85
STA. 277+50.00 TO 279+50.00

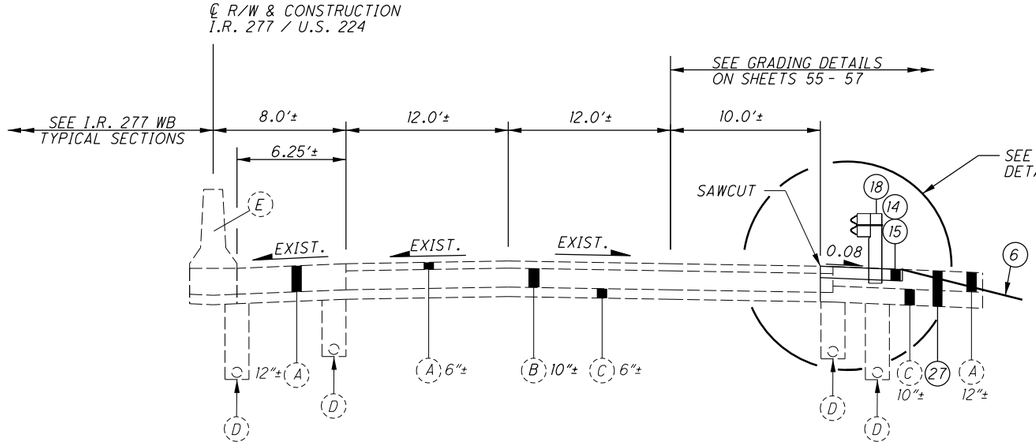


I.R. 277/U.S. 224 EB NORMAL SECTION

LIMITING STATIONS

STA. 237+37.85 TO STA. 245+79.53
STA. 257+26.04 TO STA. 260+76.94
STA. 271+44.10 TO STA. 277+50.00

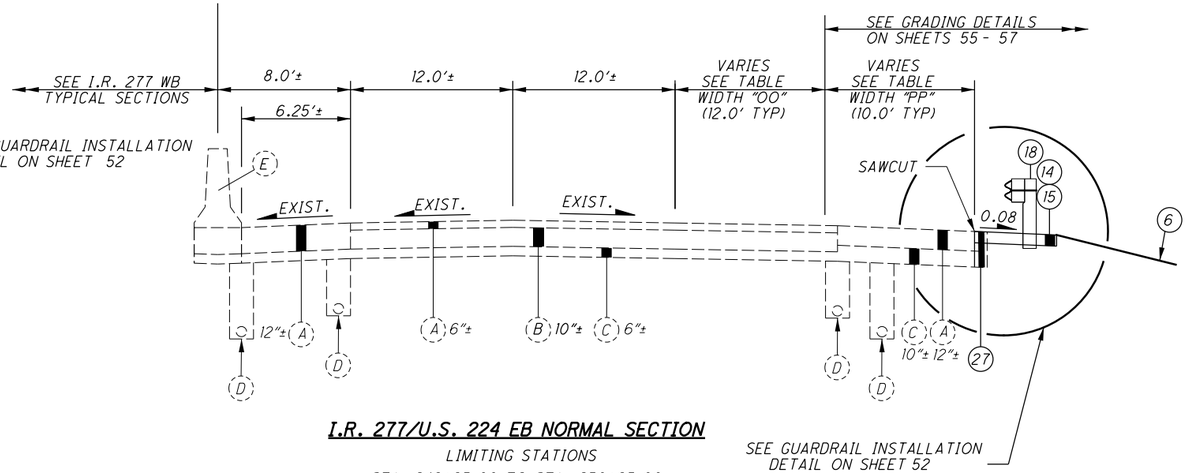
NO WORK
STA. 260+76.94 TO STA. 271+44.10



I.R. 277/U.S. 224 EB NORMAL SECTION

LIMITING STATIONS

STA. 245+79.53 TO STA. 249+95.00



I.R. 277/U.S. 224 EB NORMAL SECTION

LIMITING STATIONS

STA. 249+95.00 TO STA. 250+95.00

I.R. 277 EASTBOUND WIDTH TABLE

	WIDTH "OO"				WIDTH "PP"			
	STATION		WIDTH (FT.)		STATION		WIDTH (FT.)	
I.R. 277 EB	237+00.00	237+37.85	11.4	12.0	237+00.00	237+37.85	11.9	10.4
	249+95.00	250+95.00	0.0	12.0	249+95.00	250+95.00	10.0	8.0
	277+50.00	279+50.00	16.0	12.0	277+50.00	277+80.00	8.0	8.0
					277+80.00	279+50.00	8.0	11.4

NOTE

BRIDGE/APPROACH SLAB LIMITS
STA. 250+94.27 TO STA. 257+01.49 (SKEW)

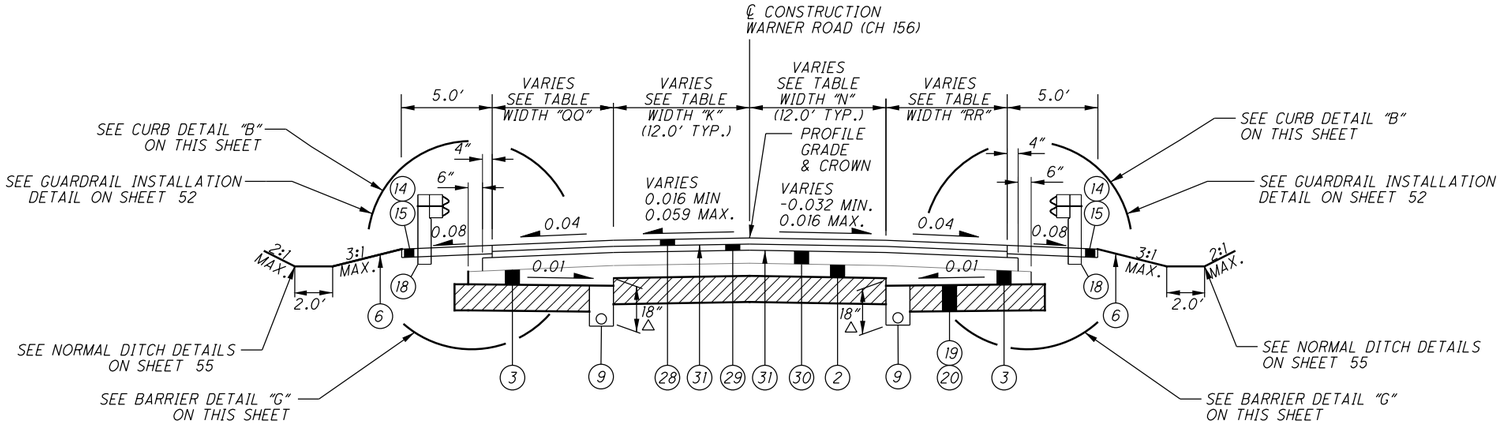
FOR PROPOSED LEGEND, SEE SHEET 29
FOR EXISTING LEGEND, SEE SHEET 59
FOR SUPERELEVATION TABLES, SEE SHEETS 818 , 829
FOR GORE DETAILS, SEE SHEETS 843 - 844 , 855 - 857

△ - OR AS SHOWN IN UNDERDRAIN PLANS, SHEETS 928 , 930 - 931

TYPICAL SECTIONS

SUM-77/277/224
VARIOUS

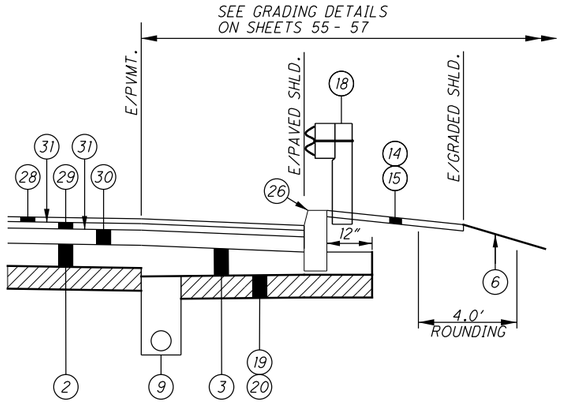
O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_GY022.dgn Sheet 1/15/2021 4:50:19 PM lkirkland



WARNER ROAD NORMAL SECTION

LIMITING STATIONS

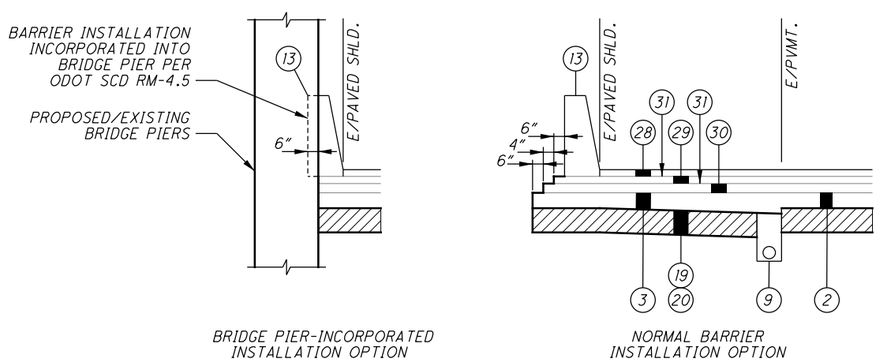
STA. 24+50.00 TO STA. 27+70.00



CURB DETAIL "B"

N.T.S.
LIMITING STATIONS

WARNER RD.
STA. 25+01.85 LT. TO STA. 25+20.00 LT.
STA. 25+13.44 RT. TO STA. 25+31.58 RT.
STA. 26+88.48 LT. TO STA. 27+06.73 LT.
STA. 26+98.84 RT. TO STA. 27+16.82 RT.



BRIDGE PIER-INCORPORATED
INSTALLATION OPTION

NORMAL BARRIER
INSTALLATION OPTION

FOR LOCATIONS, SEE BRIDGE PLANS
ON SHEETS 1155 - 1180

BARRIER DETAIL "G"

N.T.S.
LIMITING STATIONS

WARNER RD.
STA. 25+20.00 LT. TO STA. 26+88.48 LT.
STA. 25+31.58 RT. TO STA. 26+98.84 RT.

WARNER ROAD WIDTH TABLE

	WIDTH "K"				WIDTH "N"				WIDTH "OO"				WIDTH "RR"			
	STATION		WIDTH (FT.)		STATION		WIDTH (FT.)		STATION		WIDTH (FT.)		STATION		WIDTH (FT.)	
WARNER ROAD	24+50.00	24+66.00	12.5	12.0	24+50.00	24+89.00	10.9	12.0	24+50.00	24+63.23	4.0	4.0	24+50.00	25+03.51	4.0	4.0
	24+66.00	27+53.50	12.0	12.0	24+89.00	27+53.50	12.0	12.0	24+63.23	24+70.60	4.0	3.0 (NDC 4')	25+03.51	25+13.44	4.0	6.0
	27+53.50	27+70.00	12.0	11.7	27+53.50	27+70.00	12.0	11.5	24+70.60	26+07.65	3.0 (NDC 4')	3.0 (NDC 4')	25+13.44	26+07.65	6.0	6.0
									26+07.65	26+88.48	3.0 (NDC 4')	1.6 (NDC 4')	26+07.65	27+16.82	6.0	8.5
									26+88.48	27+38.16	1.6 (NDC 4')	1.6 (NDC 4')	27+16.82	27+70.00	8.5	6.4
									27+38.16	27+48.86	1.6 (NDC 4')	2.0 (NDC 4')				
									27+48.86	27+70.00	2.0 (NDC 4')	2.0 (NDC 4')				

FOR SUPERELEVATION TABLES, SEE SHEET 840

FOR PROPOSED LEGEND, SEE SHEET 29

△ - OR AS SHOWN IN UNDERDRAIN PLANS, SHEET 932

TYPICAL SECTIONS

SUM-77/277/224
VARIOUS

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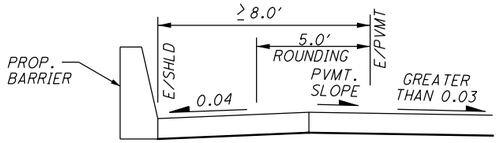
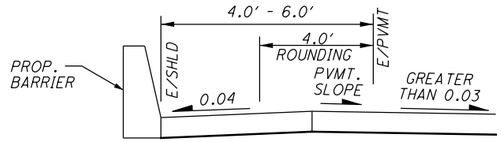
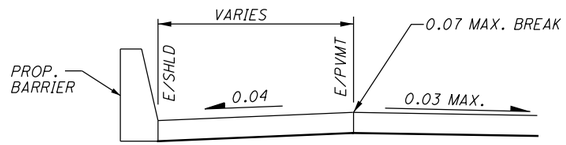


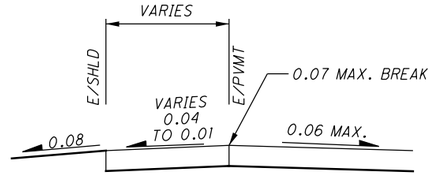
LANE SUPERELEVATION >0.03 (WITH BARRIER)



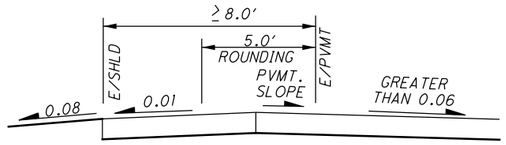
LANE SUPERELEVATION >0.03 (WITH BARRIER)



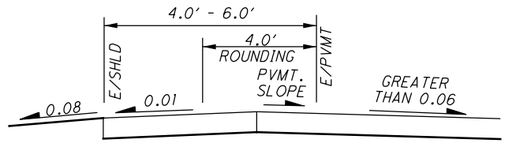
LANE SUPERELEVATION 0.03 MAX (WITH BARRIER)



LANE SUPERELEVATION 0.06 MAX (W/O BARRIER)



LANE SUPERELEVATION >0.06 (W/O BARRIER)



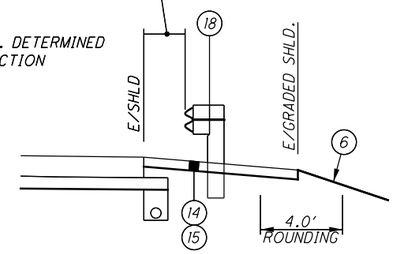
LANE SUPERELEVATION >0.06 (W/O BARRIER)

SHOULDER DETAIL "A"

N.T.S.

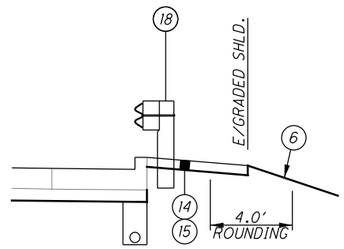
2.0′ LT./RT. S.R. 77, I.R. 277
2.0′ RAMP B, B-2, C, C-2, D LT. SIDE
2.0′ SINGLE LANE RAMP RT. SIDE
2.0′ MIN. LT./RT. WARNER RD.

NOTE: LT./RT. DETERMINED LOOKING DIRECTION OF TRAVEL



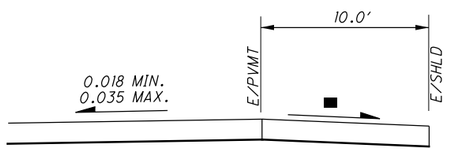
UNCURBED ROADWAY GUARDRAIL INSTALLATION DETAIL

SEE PLANS FOR LOCATIONS



CURBED ROADWAY GUARDRAIL INSTALLATION DETAIL

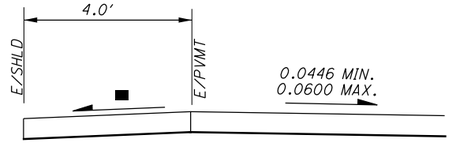
SEE PLANS FOR LOCATIONS



SHOULDER DETAIL "B"

N.T.S.
STA. 294+78.29 TO STA. 295+78.29 (RAMP B-2 RT)

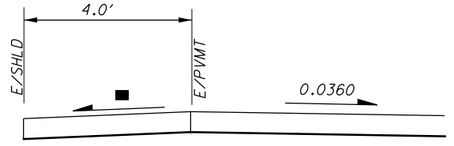
STA. 294+78.29 @ -0.0499 ■
STA. 295+78.29 @ 0.0400



SHOULDER DETAIL "C"

N.T.S.
STA. 22+39.81 TO STA. 23+18.45 (RAMP B-2 LT)

STA. 22+39.81 @ 0.0100 ■
STA. 23+18.45 @ -0.0038



SHOULDER DETAIL "D"

N.T.S.
STA. 892+66.83 TO STA. 893+31.83 (RAMP D LT)

STA. 892+66.83 @ -0.0305 ■
STA. 893+31.83 @ 0.0340

FOR PROPOSED LEGEND, SEE SHEET 29

TYPICAL SECTIONS

SUM-77/277/224
VARIOUS

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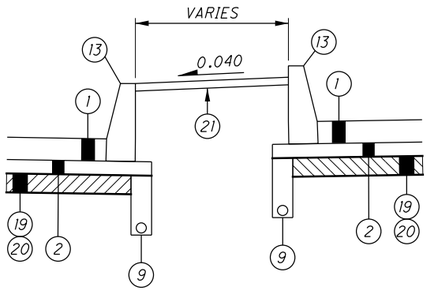
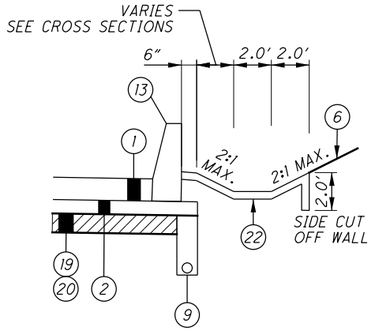


BARRIER DETAIL "E"

FOR PAVEMENT EDGE EXTENSIONS,
SEE BARRIER DETAIL "A" ON SHEET 54
N.T.S.
LIMITING STATIONS

℄ CONST. NB I.R. 77
STA. 494+84.83 LT. TO STA. 496+00.00 LT.

℄ CONST. RAMP B-2
STA. 294+77.53 RT. TO STA. 295+92.53 RT.



BARRIER DETAIL "F"

FOR PAVEMENT EDGE EXTENSIONS,
SEE BARRIER DETAIL "A" ON SHEET 54
N.T.S.
LIMITING STATIONS

℄ CONST. RAMP B-2
STA. 295+92.53 RT. TO STA. 297+50.00 RT.

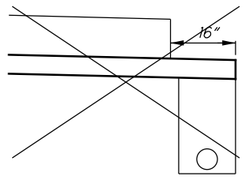
FOR PROPOSED LEGEND, SEE SHEET 29

TYPICAL SECTIONS

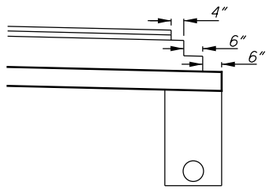
SUM-77/277/224
VARIOUS

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_GY034.dgn Sheet 1/15/2021 4:50:22 PM Ikirkland

⬡ - PROJECT WAS ORIGINALLY DESIGNED AS DUAL PAVEMENT, HOWEVER THE RIGID PAVEMENT OPTION HAS NOW BEEN REMOVED FROM THE PROJECT. ANY AND ALL REFERENCE THROUGHOUT THE PLANS TO RIGID PAVEMENT OPTION ARE NOW CONSIDERED NULL AND VOID.



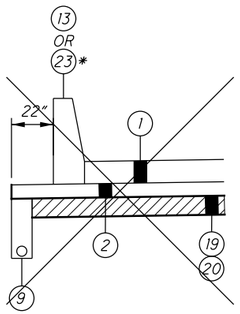
⬡ ~~(RIGID PAVEMENT OPTION)~~



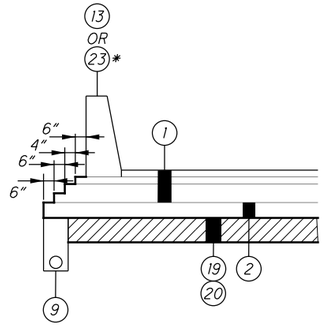
(FLEXIBLE PAVEMENT OPTION)

EDGE DETAILS

N.T.S.



⬡ ~~(RIGID PAVEMENT OPTION)~~

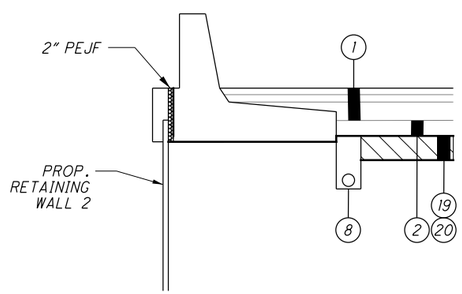


(FLEXIBLE PAVEMENT OPTION)

BARRIER DETAIL "A" (FLEXIBLE & ~~RIGID~~ PAVEMENT) ⬡

N.T.S.
LIMITING STATIONS

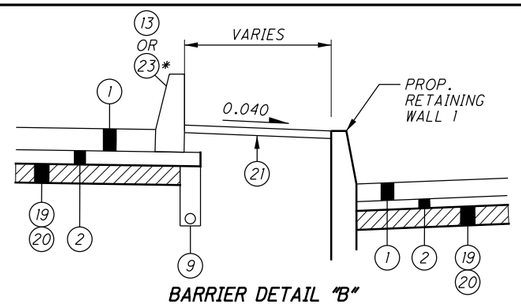
STA. 393+75.00 RT. TO STA. 394+40.00 RT. (℄ R/W & CONST. I.R. 77)
STA. 393+85.00 LT. TO STA. 394+54.30 LT. (℄ R/W & CONST. I.R. 77)
STA. 468+65.00 RT. TO STA. 469+23.83 RT. (℄ R/W & CONST. I.R. 77)
STA. 469+15.00 LT. TO STA. 469+65.40 LT. (℄ R/W & CONST. I.R. 77)
STA. 491+00.00 RT. TO STA. 491+59.27 RT. (℄ NB CONST. I.R. 77) *
STA. 469+72.74 RT. TO STA. 470+07.74 RT. (℄ SB CONST. I.R. 77) *
STA. 470+07.74 RT. TO STA. 473+95.11 RT. (℄ SB CONST. I.R. 77) *
STA. 500+45.03 LT. TO STA. 502+00.00 LT. (℄ SB CONST. I.R. 77)
STA. 508+04.86 RT. TO STA. 508+73.02 RT. (℄ SB CONST. I.R. 77)
STA. 508+63.78 LT. TO STA. 509+30.71 LT. (℄ SB CONST. I.R. 77)
STA. 292+31.83 LT. TO STA. 292+80.00 LT. (RAMP B-2) *
STA. 9+99.70 RT. TO STA. 14+00.00 RT. (RAMP B-2)
STA. 698+64.18 RT. TO STA. 700+28.18 RT. (RAMP C-1)
STA. 793+17.70 LT. TO STA. 793+51.56 LT. (RAMP C-2)
STA. 794+85.00 RT. TO STA. 795+19.05 RT. (RAMP C-2)
STA. 799+78.00 RT. TO STA. 801+34.00 RT. (RAMP C-2)



MOMENT SLAB DETAIL

N.T.S.
LIMITING STATIONS

RAMP C-2
STA. 793+17.70 RT. TO STA. 794+85.02 RT.

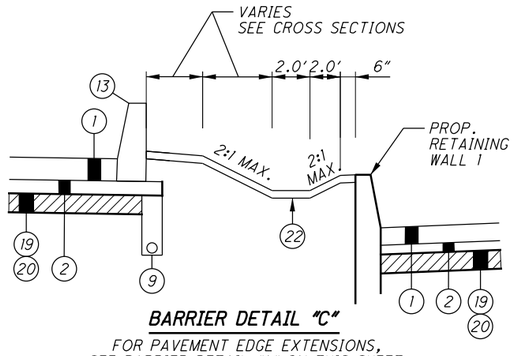


BARRIER DETAIL "B"

FOR PAVEMENT EDGE EXTENSIONS,
SEE BARRIER DETAIL "A" ON THIS SHEET
N.T.S.
LIMITING STATIONS

℄ CONST. NB I.R. 77:
STA. 469+77.00 LT. TO STA. 473+00.00 LT.

℄ CONST. SB I.R. 77:
STA. 469+72.74 RT. TO STA. 470+07.74 RT. *
STA. 470+07.74 TO STA. 472+95.25 RT.

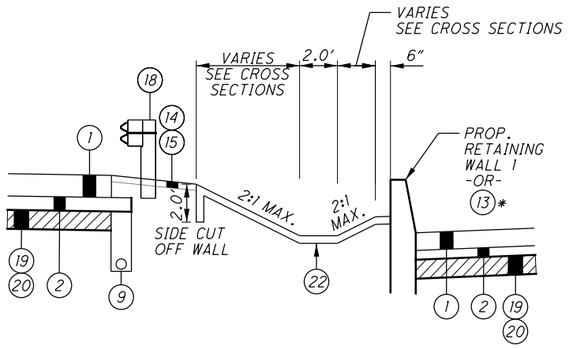


BARRIER DETAIL "C"

FOR PAVEMENT EDGE EXTENSIONS,
SEE BARRIER DETAIL "A" ON THIS SHEET
N.T.S.
LIMITING STATIONS

℄ CONST. NB I.R. 77
STA. 473+00.00 LT. TO STA. 474+00.00 LT.

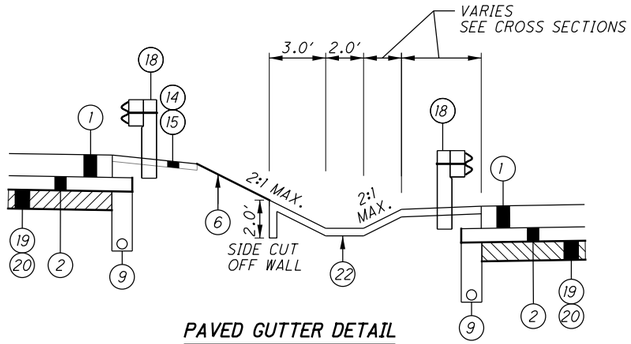
℄ CONST. SB I.R. 77
STA. 472+95.25 RT. TO STA. 473+95.11 RT.



BARRIER DETAIL "D"

FOR PAVEMENT EDGE EXTENSIONS,
SEE BARRIER DETAIL "A" ON THIS SHEET
N.T.S.
LIMITING STATIONS

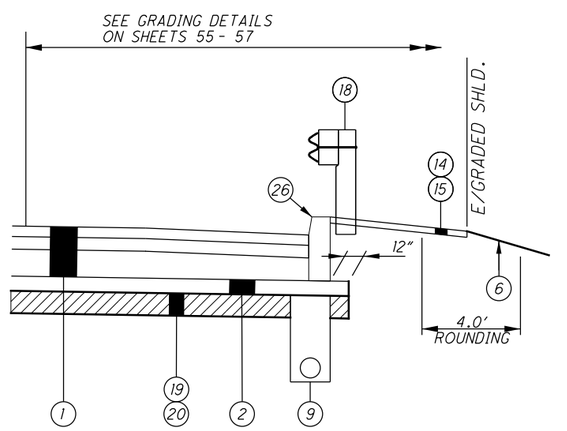
℄ CONST. NB I.R. 77
STA. 474+00.00 LT. TO STA. 475+50.00 LT.
STA. 475+50.00 LT. TO STA. 475+64.00 LT. *



PAVED GUTTER DETAIL

N.T.S.
LIMITING STATIONS

℄ CONST. NB I.R. 77
STA. 475+64.00 LT. TO STA. 476+50.00 LT.



CURB DETAIL "A"

N.T.S.
LIMITING STATIONS

NORTHBOUND I.R. 77
STA. 475+64.00 LT. TO STA. 476+05.00 LT.
STA. 490+82.07 RT. TO STA. 491+00.00 RT.
STA. 515+46.36 LT. TO STA. 515+64.47 LT.

℄ R/W & CONST. I.R. 77
STA. 393+56.92 RT. TO STA. 393+75.00 RT.
STA. 394+54.30 LT. TO STA. 394+72.51 LT.
STA. 424+88.47 RT. TO STA. 425+06.61 RT.
STA. 426+62.18 RT. TO STA. 426+84.43 RT.
STA. 427+09.41 LT. TO STA. 427+52.06 LT.
STA. 428+68.64 RT. TO STA. 428+84.65 RT.
STA. 430+98.14 RT. TO STA. 431+22.50 RT.
STA. 431+34.35 LT. TO STA. 431+80.00 LT.
STA. 468+46.85 RT. TO STA. 468+65.00 RT.

SOUTHBOUND I.R. 77
STA. 469+62.50 LT. TO STA. 469+80.65 LT.
STA. 473+95.11 RT. TO STA. 474+13.21 RT.
STA. 501+34.03 RT. TO STA. 501+52.18 RT.
STA. 502+00.00 LT. TO STA. 502+18.14 LT.
STA. 508+73.02 RT. TO STA. 508+91.21 RT.
STA. 509+30.71 LT. TO STA. 509+48.56 LT.

RAMP B-2
STA 292+13.63 LT. TO STA. 292+31.83 LT.
STA. 292+80.00 LT. TO STA. 294+28.29 LT.
STA. 307+49.11 LT. TO STA. 307+88.67 LT.
STA. 7+48.73 RT. TO STA. 7+65.76 RT.

RAMP C-1
STA. 698+46.04 RT. TO STA. 698+64.18 RT.

RAMP C-2
STA. 793+51.56 LT. TO STA. 793+69.60 LT.
STA. 795+19.05 RT. TO STA. 795+37.22 RT.

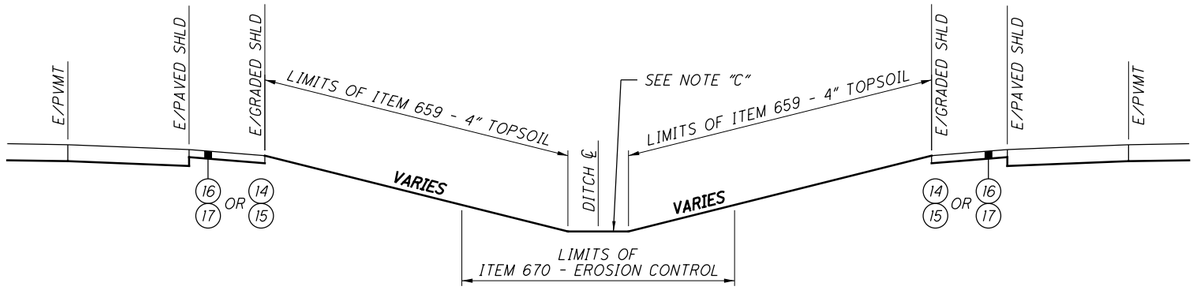
RAMP D
STA. 915+28.63 RT. TO STA. 915+46.83 RT.

FOR PROPOSED LEGEND, SEE SHEET 29

TYPICAL SECTIONS

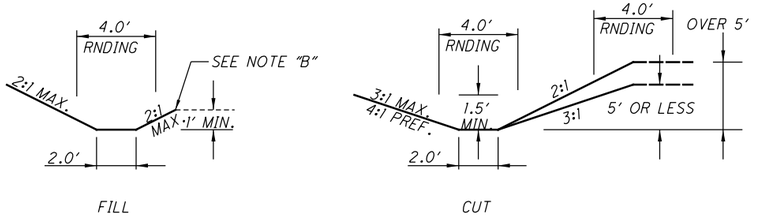
SUM-77/277/224
VARIOUS

0:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_GY024.dgn Sheet 1/15/2021 4:50:23 PM Ikirkland



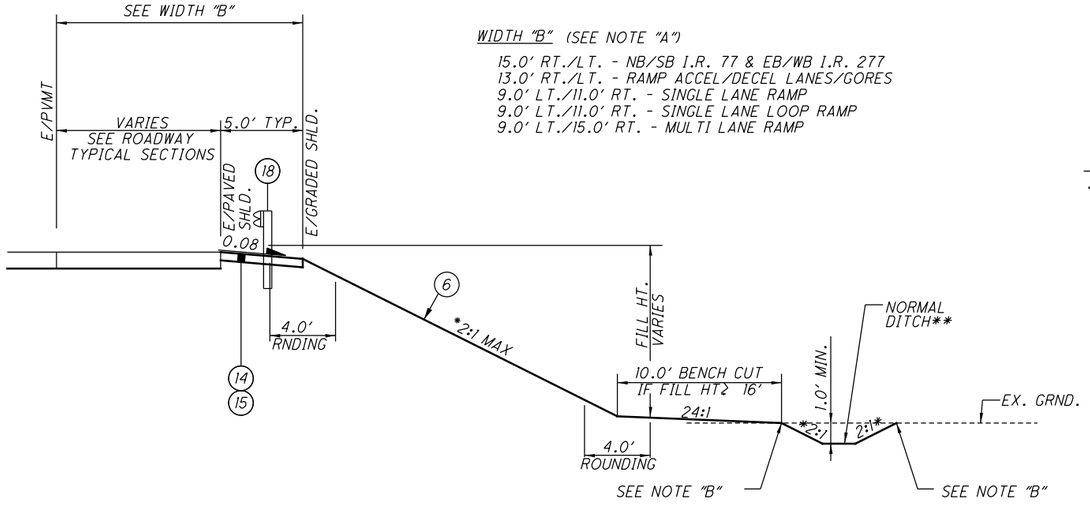
VEGETATED BIOFILTER DETAIL A

FOR LOCATIONS, SEE PROJECT SITE PLANS ON SHEETS 444 - 452



NORMAL DITCH DETAILS

N.T.S.



WIDTH "B" (SEE NOTE "A")

15.0' RT./LT. - NB/SB I.R. 77 & EB/WB I.R. 277
13.0' RT./LT. - RAMP ACCEL/DECEL LANES/GORES
9.0' LT./11.0' RT. - SINGLE LANE RAMP
9.0' LT./11.0' RT. - SINGLE LANE LOOP RAMP
9.0' LT./15.0' RT. - MULTI LANE RAMP

FILL SECTION - CASE 1 (BARRIER GRADING)

NOTE "A"

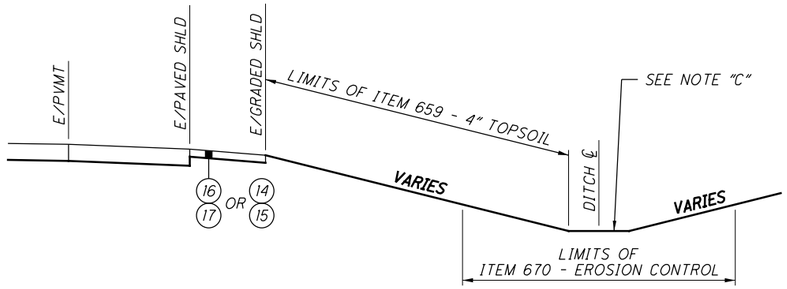
ALL DIMENSIONS ARE DEFINED LOOKING IN DIRECTION OF TRAVEL

NOTE "B"

4.0' ROUNDING

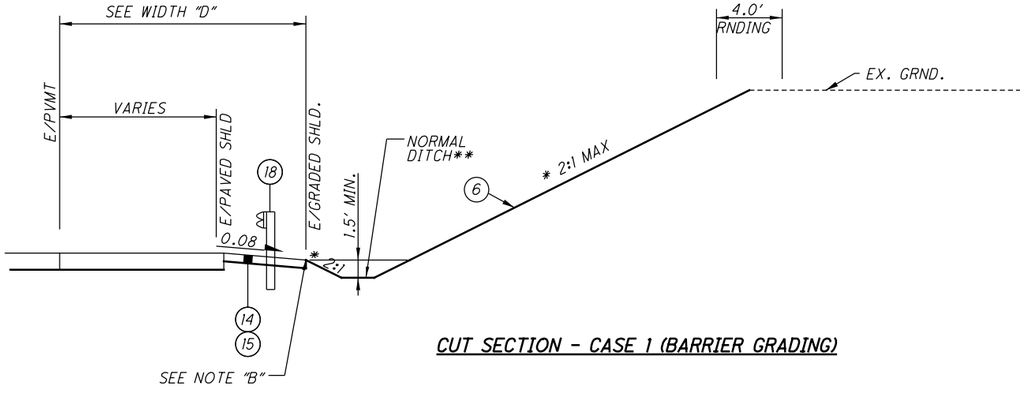
NOTE "C"

ALL DITCHES LOCATED WITHIN LIMITS OF VBF SHALL BE TRAPEZOIDAL AND NOT HAVE ROUNDING



VEGETATED BIOFILTER DETAIL B

FOR LOCATIONS, SEE PROJECT SITE PLANS ON SHEETS 444 - 452



CUT SECTION - CASE 1 (BARRIER GRADING)

WIDTH "D" (SEE NOTE "A")

15.0' RT./LT. - NB/SB I.R. 77 & EB/WB I.R. 277
13.0' RT./LT. - RAMP ACCEL/DECEL LANES/GORES
9.0' LT./11.0' RT. - SINGLE LANE RAMP
9.0' LT./11.0' RT. - SINGLE LANE LOOP RAMP
9.0' LT./15.0' RT. - MULTI LANE RAMP

** SEE NORMAL DITCH DETAIL ON THIS SHEET.
* OR AS SHOWN ON CROSS SECTIONS

FOR PROPOSED LEGEND, SEE SHEET 29

TYPICAL SECTIONS - GRADING DETAILS

SUM-77/277/224
VARIOUS

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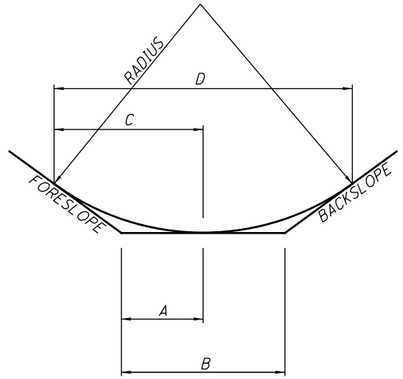


FORESLOPE	20' RADIUS		BACKSLOPE 6:1		4:1		3:1	
	A	C	B*	D	B*	D	B*	D
8:1	1'3"	2'6"	2'11"	5'9"	3'8"	7'4"	4'6"	8'10"
6:1	1'8"	3'3"	3'4"	6'7"	4'1"	8'2"	4'11"	9'7"
4:1	2'6"	4'10"	4'1"	8'2"	4'11"	9'8'		
3:1	3'3"	6'4"	4'11"	9'7"				

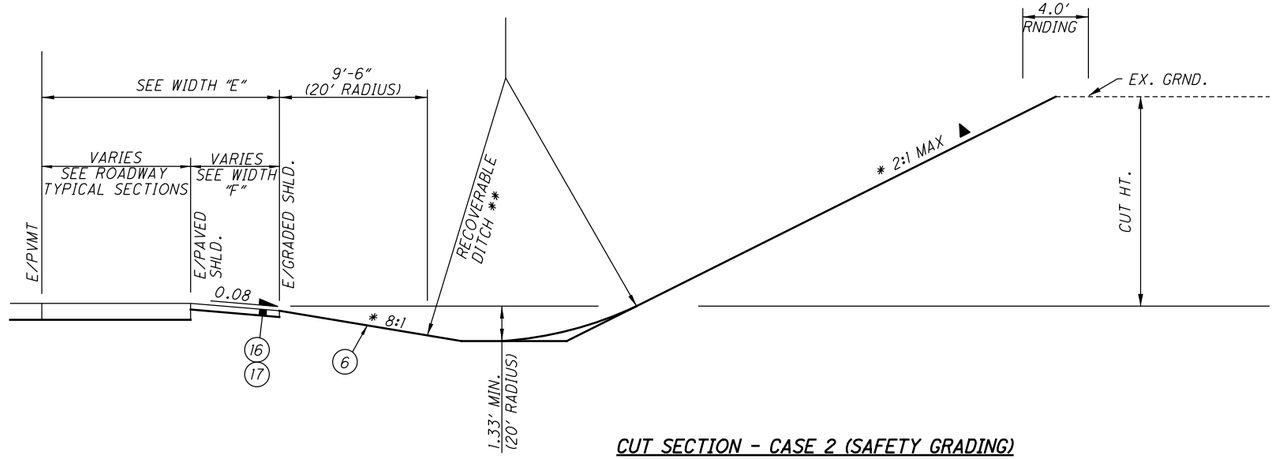
RECOVERABLE DITCH DETAIL

NOTE "A"

ALL DIMENSIONS ARE DEFINED LOOKING IN DIRECTION OF TRAVEL

NOTE "B"

SEE CROSS SECTIONS FOR GRADING TRANSITIONS FROM MAINLINE TO RAMP WIDTHS



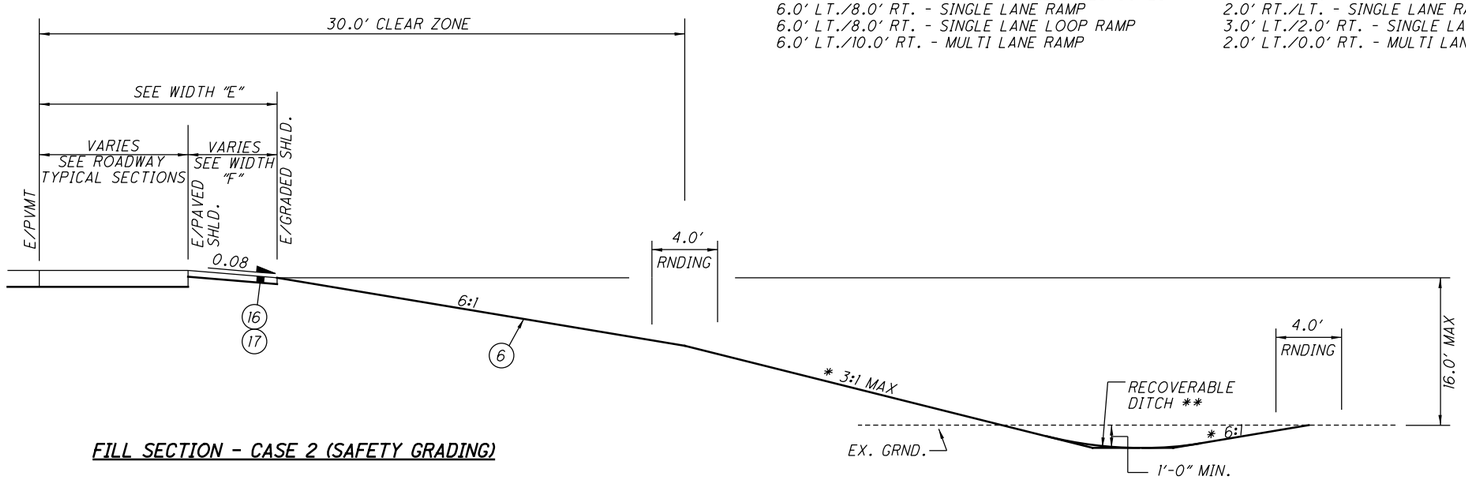
CUT SECTION - CASE 2 (SAFETY GRADING)

WIDTH "E" (SEE NOTE "A")

10.0' RT./LT. - NB/SB I.R. 77 & EB/WB I.R. 277
8.0' RT./LT. - RAMP ACCEL/DECEL LANES/GORES
6.0' LT./8.0' RT. - SINGLE LANE RAMP
6.0' LT./8.0' RT. - SINGLE LANE LOOP RAMP
6.0' LT./10.0' RT. - MULTI LANE RAMP

WIDTH "F" (SEE NOTE "A")

0.0' RT./LT. - NB/SB I.R. 77 & EB/WB I.R. 277
0.0' RT./LT. - RAMP ACCEL/DECEL LANES/GORES
2.0' RT./LT. - SINGLE LANE RAMP
3.0' LT./2.0' RT. - SINGLE LANE LOOP RAMP
2.0' LT./0.0' RT. - MULTI LANE RAMP



FILL SECTION - CASE 2 (SAFETY GRADING)

** SEE RECOVERABLE DITCH DETAIL ON THIS SHEET
* OR AS SHOWN ON CROSS SECTIONS

▲

APPROXIMATE CUT BACKSLOPE (SEE CROSS SECTIONS FOR ACTUAL SLOPES)	
BACKSLOPE	CUT HEIGHT
2:1	> 15'
3:1	12' TO 15'
4:1	8' TO 11'
6:1	< 8'

NOTE: IF BACKSLOPE IS GREATER THAN 3:1, USE 40' RADIUS.

FOR PROPOSED LEGEND, SEE SHEET 29

TYPICAL SECTIONS - GRADING DETAILS

SUM-77/277/224
VARIOUS

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_GY026.dgn Sheet 1/15/2021 4:50:24 PM Ikirkland

WIDTH "G" (SEE NOTE "A")

NB/SB I.R. 77 & EB/WB I.R. 277
15.0' LT./RT. (>6:1)
10.0' LT./RT. (≤6:1)

RAMP ACCEL/DECEL LANES/GORES
13.0' RT. (>6:1)
8.0' RT. (≤6:1)

SINGLE LANE RAMPS
9.0' LT./ 11.0' RT. (>6:1)
6.0' LT./ 8.0' RT. (≤6:1)

SINGLE LANE LOOP RAMPS
9.0' LT./ 11.0' RT. (>6:1)
6.0' LT./ 8.0' RT (≤6:1)

MULTILANE RAMPS
9.0' LT./ 15.0' RT. (>6:1)
6.0' LT./ 10.0' RT (≤6:1)

WIDTH "H" (SEE NOTE "A")

NB/SB I.R. 77 & EB/WB I.R. 277
5.0' LT./RT. (>6:1)
0.0' LT./RT. (≤6:1)

RAMP ACCEL/DECEL LANES/GORES
5.0' RT. (>6:1)
0.0' RT. (≤6:1)

SINGLE LANE RAMPS
5.0' LT./RT. (>6:1)
2.0' LT./RT. (≤6:1)

SINGLE LANE LOOP RAMPS
5.0' LT./RT. (>6:1)
3.0' LT. (≤6:1)
2.0' RT. (≤6:1)

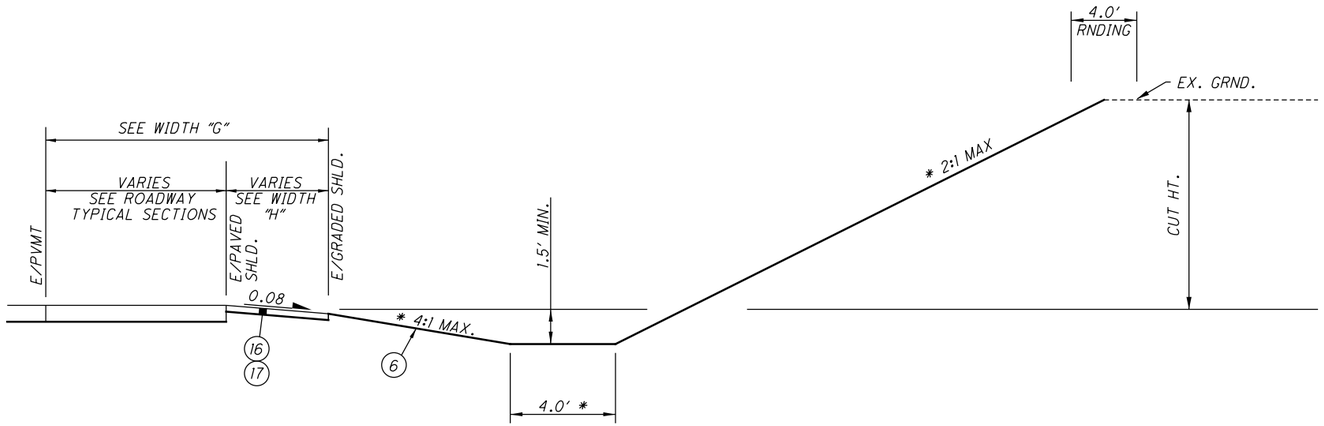
MULTILANE RAMPS
5.0' LT./RT. (>6:1)
2.0' LT. (≤6:1)
0.0' RT. (≤6:1)

NOTE "A"

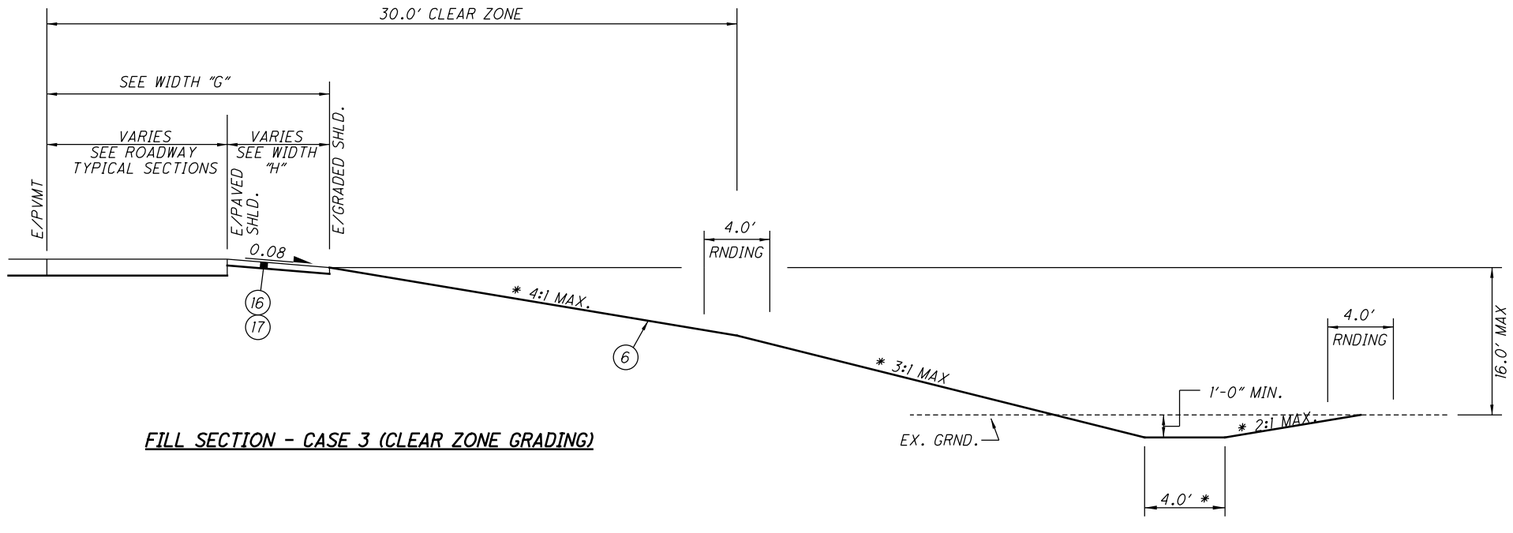
ALL DIMENSIONS ARE DEFINED LOOKING IN DIRECTION OF TRAVEL

NOTE "B"

SEE CROSS SECTIONS FOR GRADING TRANSITIONS FROM MAINLINE TO RAMP WIDTHS



CUT SECTION - CASE 3 (CLEAR ZONE GRADING)



FILL SECTION - CASE 3 (CLEAR ZONE GRADING)

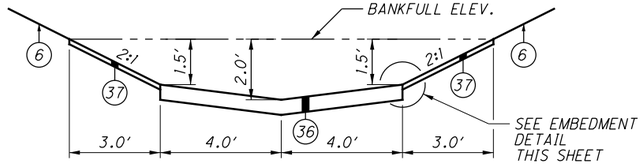
* OR AS SHOWN ON CROSS SECTIONS

FOR PROPOSED LEGEND, SEE SHEET 29

TYPICAL SECTIONS - GRADING DETAILS

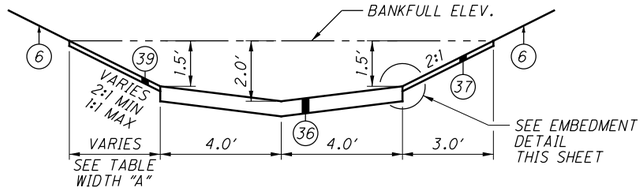
SUM-77/277/224
VARIOUS

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_GY038.dgn Sheet 1/15/2021 4:50:25 PM Ikirkland



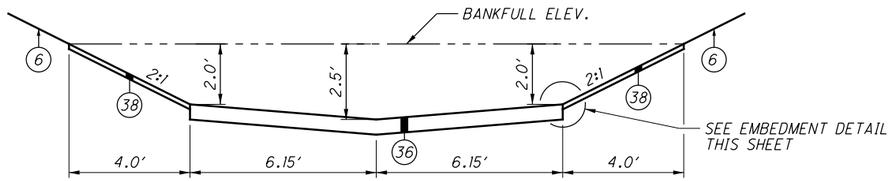
STREAM DETAIL #1 - RAMP A

LIMITING STATIONS
STA. 87+50.00 TO STA. 90+50.00
STA. 91+50.00 TO STA. 91+90.00



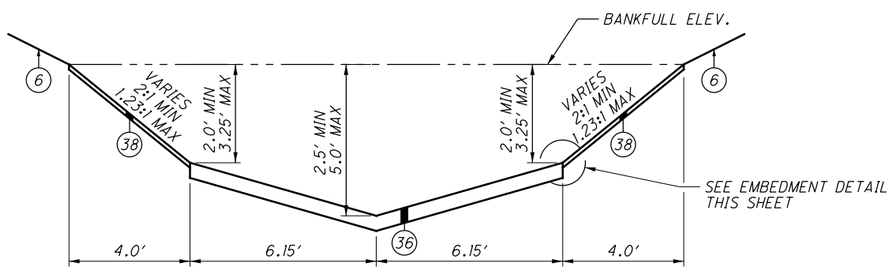
STREAM DETAIL #2 - RAMP A

LIMITING STATIONS
STA. 90+50.00 TO STA. 91+50.00



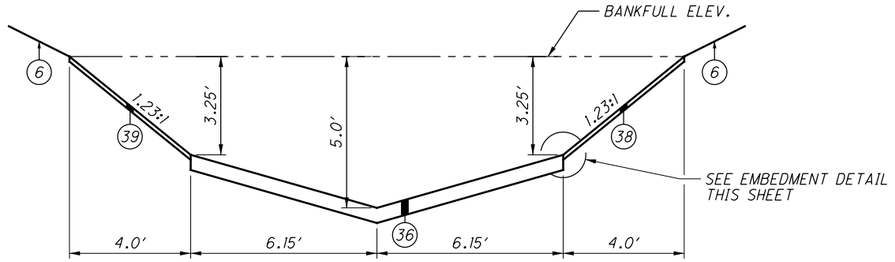
STREAM DETAIL #3 - RAMP B

LIMITING STATIONS
STA. 209+50.00 TO STA. 210+00.00



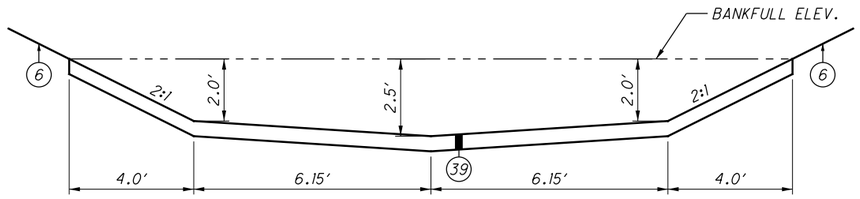
STREAM DETAIL #4 - RAMP B

LIMITING STATIONS
STA. 208+50.00 TO STA. 209+50.00
STA. 207+50.00 TO STA. 208+00.00



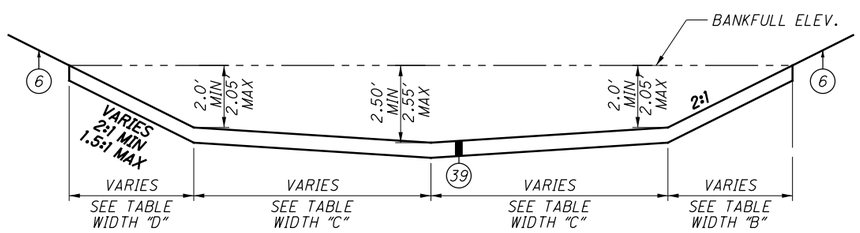
STREAM DETAIL #5 - RAMP B

LIMITING STATIONS
STA. 208+00.00 TO STA. 208+50.00



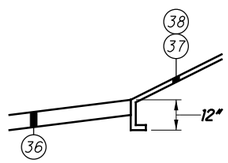
STREAM DETAIL #6 - RAMP B

LIMITING STATIONS
STA. 207+00.00 TO STA. 207+50.00



STREAM DETAIL #7 - RAMP B

LIMITING STATIONS
STA. 206+25.00 TO STA. 207+00.00



EMBEDMENT DETAIL

RAMP A STREAM WIDTH TABLE

	WIDTH "A"			
	STATION		WIDTH (FT.)	
	FROM	TO	FROM	TO
RAMP A	87+00.00	90+50.00	3.0	3.0
	90+50.00	91+00.00	3.0	1.5
	91+00.00	91+50.00	1.5	3.0
	91+50.00	91+90.00	3.0	3.0

RAMP B STREAM WIDTH TABLE

	WIDTH "B"			
	STATION		WIDTH (FT.)	
	FROM	TO	FROM	TO
	206+50.00	207+00.00	4.10	4.00
	207+00.00	210+00.00	4.00	4.00
	WIDTH "C"			
	STATION		WIDTH (FT.)	
RAMP B	FROM	TO	FROM	TO
	206+50.00	207+00.00	4.56	6.15
	207+00.00	210+00.00	6.15	6.15
	WIDTH "D"			
	STATION		WIDTH (FT.)	
	FROM	TO	FROM	TO
	206+50.00	207+00.00	3.08	4.00
	207+00.00	210+00.00	4.00	4.00

FOR PROPOSED LEGEND, SEE SHEET 29

TYPICAL SECTIONS - STREAM DETAILS

SUM-77/277/224
VARIOUS

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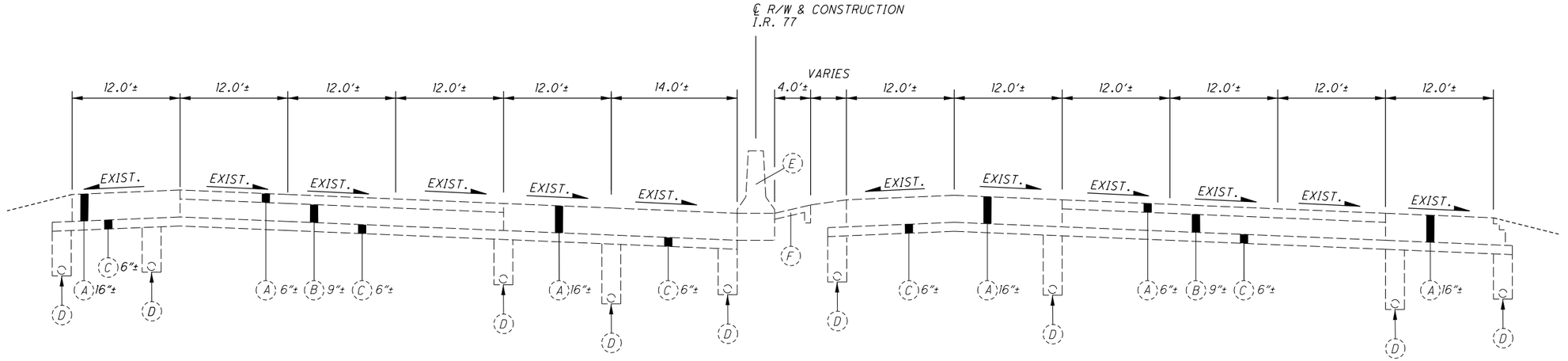
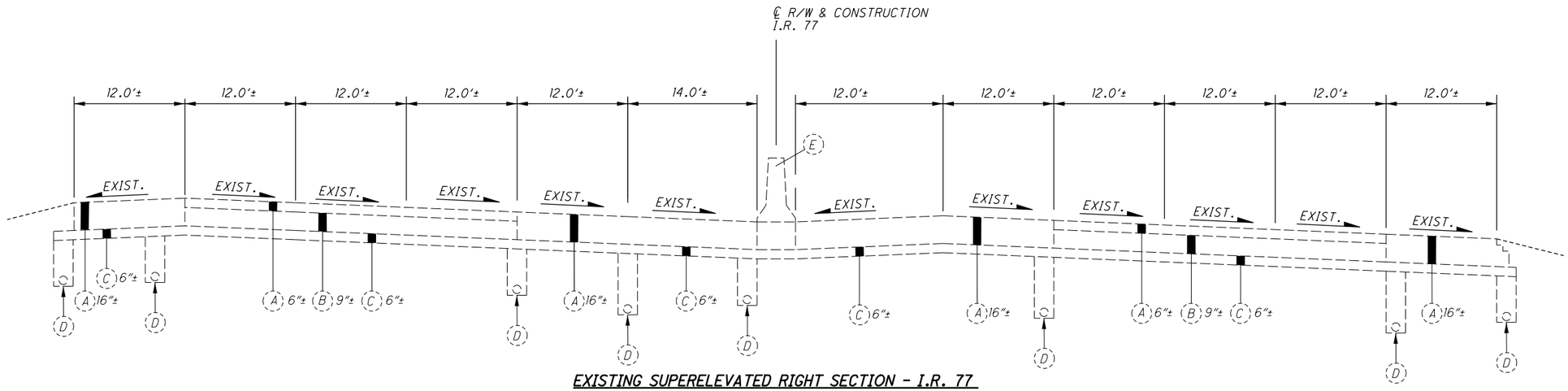


EXISTING SUPERELEVATED RIGHT SECTION - I.R. 77

LIMITING STATIONS

STA. 371+50.00TO STA. 372.58.00



EXISTING SUPERELEVATED RIGHT SECTION - I.R. 77

LIMITING STATIONS

STA. 372+58.00 TO STA. 377+58.00

(A) EXISTING ASPHALT
(B) EXISTING CONCRETE
(C) EXISTING AGGREGATE BASE
(D) EXISTING UNDERDRAIN
(E) EXISTING B-50 BARRIER
(F) EXISTING RIPRAP USING 6" REINFORCED CONCRETE
(G) EXISTING WING-WALL

TYPICAL SECTIONS

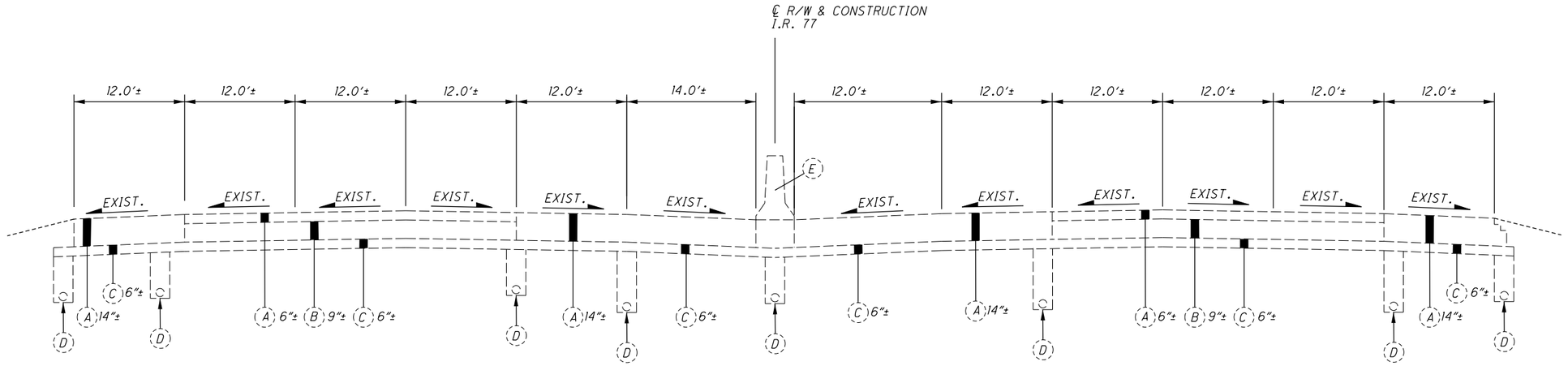
SUM-77/277/224
VARIOUS

59
1288

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_GY027.dgn Sheet 1/15/2021 4:50:26 PM lkirkland

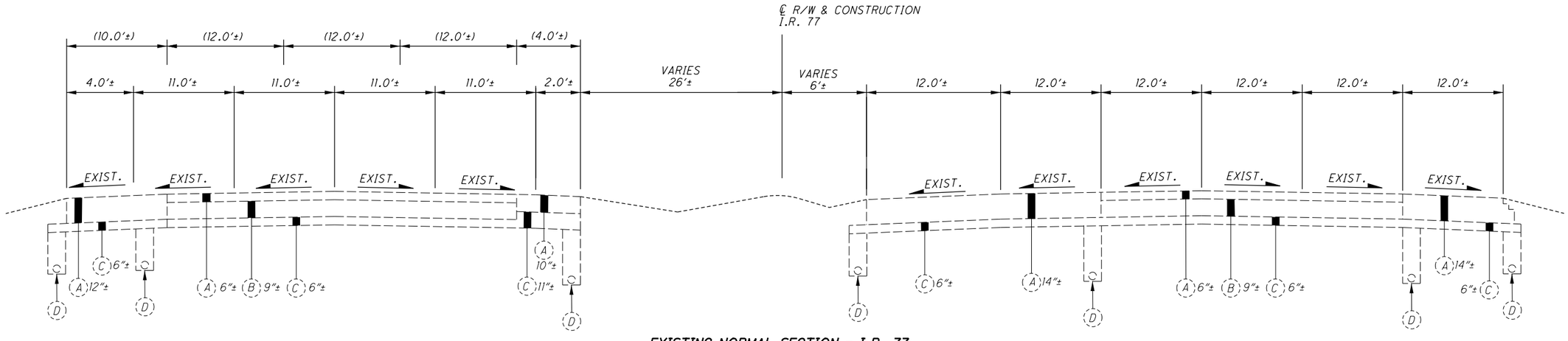
FOR EXISTING LEGEND, SEE SHEET 59

(##.##) = DIMENSIONS OF ORIGINAL LANE CONFIGURATION/PAVEMENT COMPOSITION WHEN DIFFERS FROM CURRENT STRIPING CONFIGURATION



EXISTING NORMAL SECTION - I.R. 77

LIMITING STATIONS
STA. 377+58.00 TO STA. 399+50.00



EXISTING NORMAL SECTION - I.R. 77

LIMITING STATIONS
STA. 399+50.00 TO STA. 418+00.00

TYPICAL SECTIONS

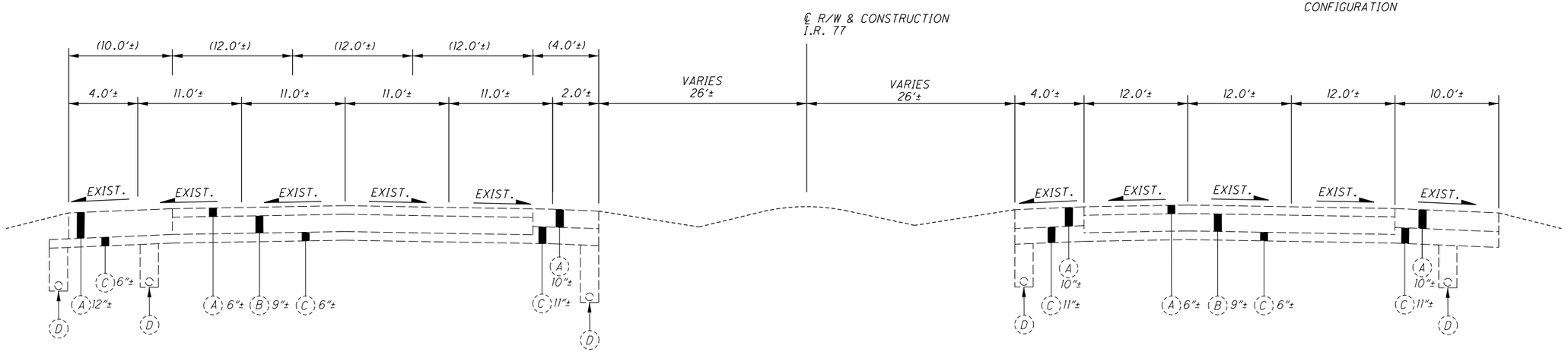
SUM-77/277/224
VARIOUS

60
1288

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_GY028.dgn Sheet 1/15/2021 4:50:27 PM lkirkland

FOR EXISTING LEGEND, SEE SHEET 59

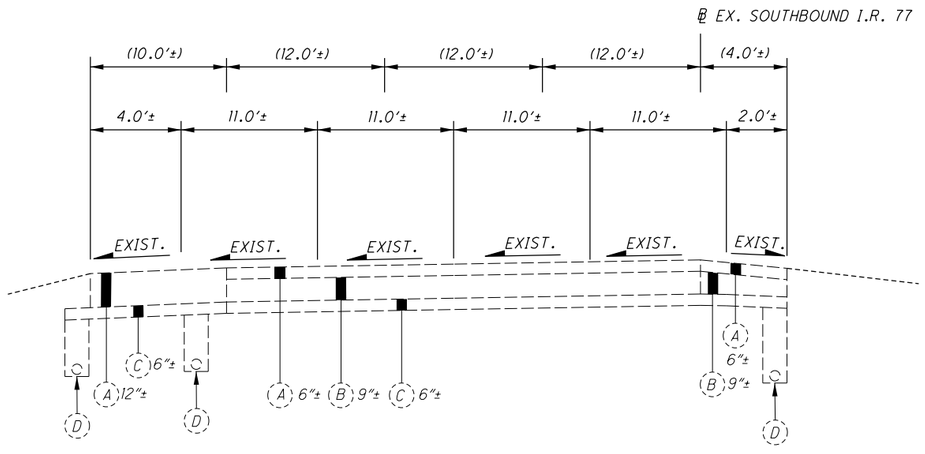
(##.##) = DIMENSIONS OF ORIGINAL LANE CONFIGURATION/PAVEMENT COMPOSITION WHEN DIFFERS FROM CURRENT STRIPING CONFIGURATION



EXISTING NORMAL SECTION - I.R. 77

LIMITING STATIONS

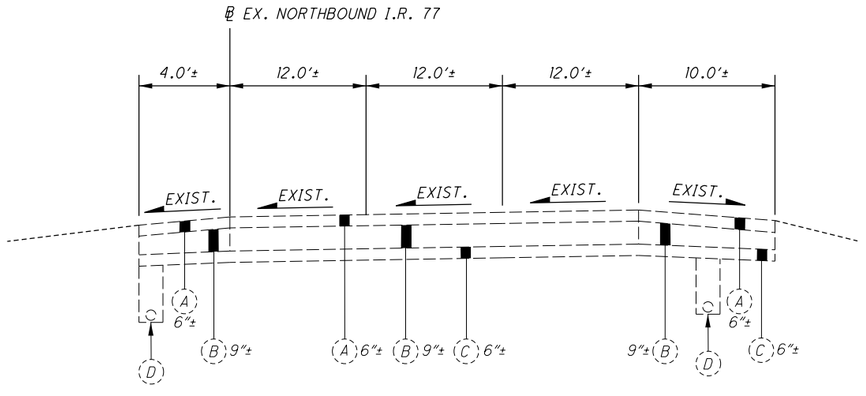
STA. 418+00.00 TO STA. 472+00.00 (I.R. 77 SB)
STA. 418+00.00 TO STA. 475+00.00 (I.R. 77 NB)



EXISTING SUPERELEVATED LEFT SECTION - SOUTHBOUND I.R. 77

LIMITING STATIONS

STA. 472+00.00 TO STA. 495+50.00



EXISTING SUPERELEVATED LEFT SECTION - NORTHBOUND I.R. 77

LIMITING STATIONS

STA. 475+00.00 TO STA. 498+50.00

TYPICAL SECTIONS

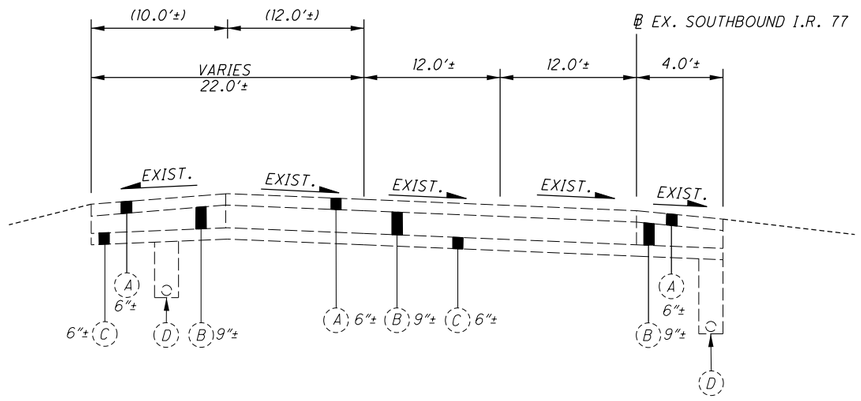
SUM-77/277/224
VARIOUS

61
1288

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_GY029.dgn Sheet 1/15/2021 4:50:28 PM Ikirkland

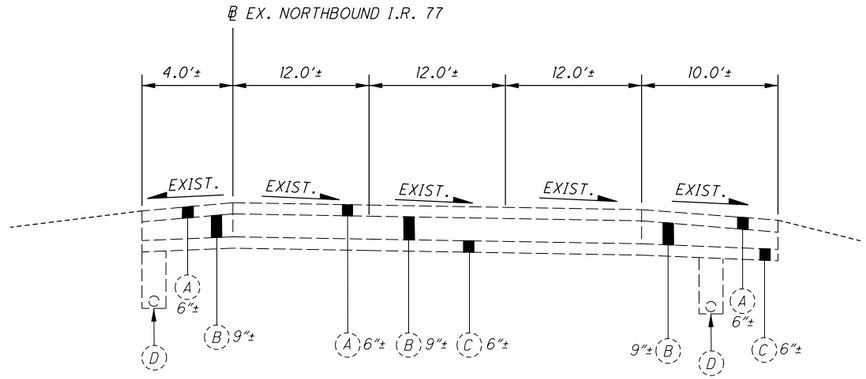
FOR EXISTING LEGEND, SEE SHEET 59

(##.##) = DIMENSIONS OF ORIGINAL LANE CONFIGURATION/PAVEMENT COMPOSITION WHEN DIFFERS FROM CURRENT STRIPING CONFIGURATION



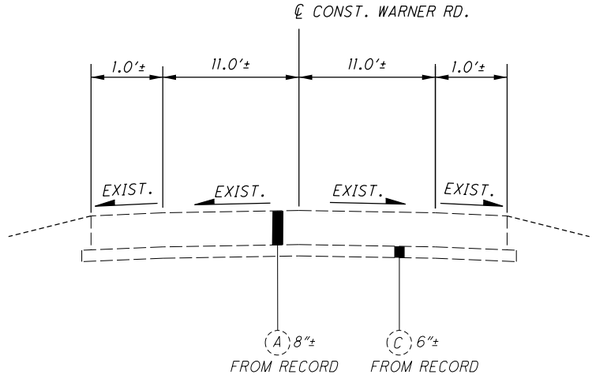
EXISTING SUPERELEVATED RIGHT SECTION - SOUTHBOUND I.R. 77

LIMITING STATIONS
STA. 495+50.00 TO STA. 515+59.18



EXISTING SUPERELEVATED RIGHT SECTION - NORTHBOUND I.R. 77

LIMITING STATIONS
STA. 498+50.00 TO STA. 515+62.72



EXISTING WARNER ROAD NORMAL SECTION

LIMITING STATIONS
STA. 24+50.00 TO STA. 27+70.00

TYPICAL SECTIONS

SUM-77/277/224
VARIOUS

62
1288

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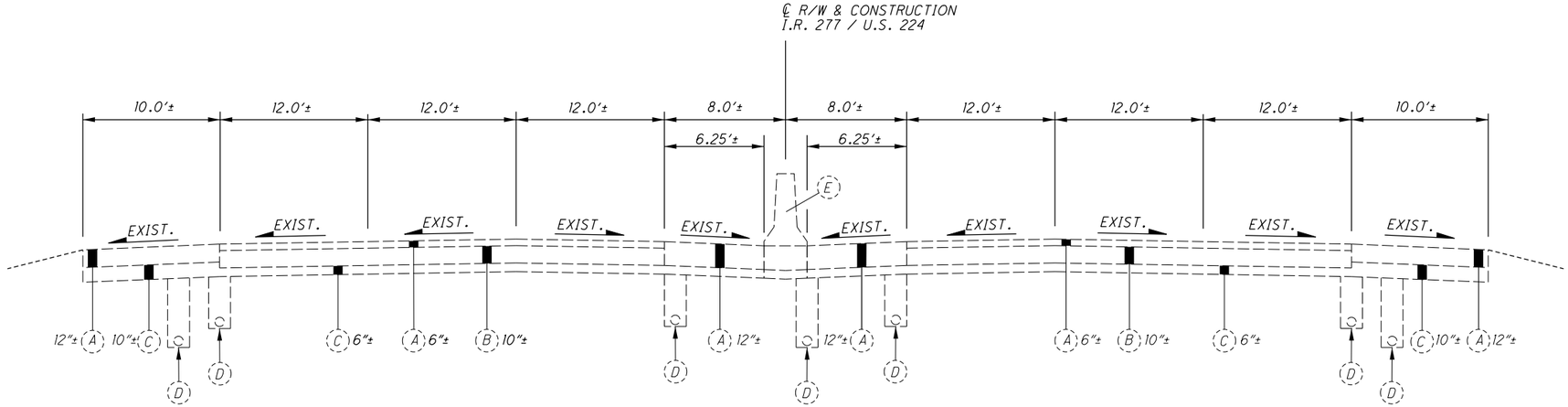
FOR EXISTING LEGEND, SEE SHEET 59

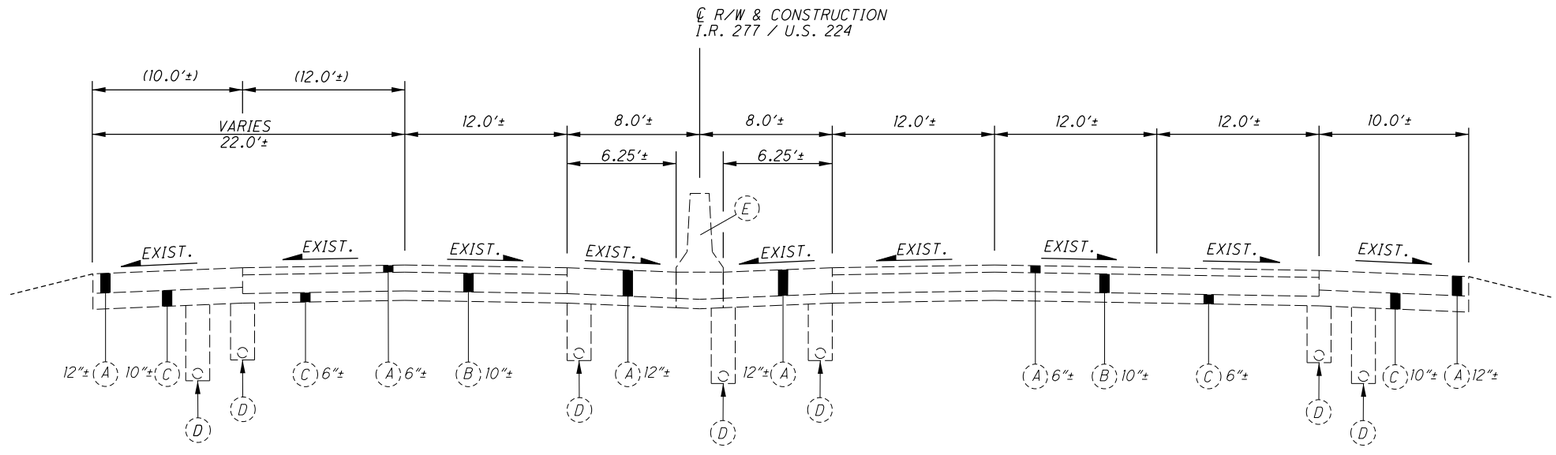
(##.##) = DIMENSIONS OF ORIGINAL LANE CONFIGURATION/PAVEMENT COMPOSITION WHEN DIFFERS FROM CURRENT STRIPING CONFIGURATION



EXISTING NORMAL SECTION - I.R. 277/U.S. 224

LIMITING STATIONS

STA. 225+00.00 TO STA. 229+00.00
STA. 271+00.00 TO STA 281+00.00



EXISTING NORMAL SECTION - I.R. 277/U.S. 224

LIMITING STATIONS

STA. 229+00.00 TO STA. 250+91.71

TYPICAL SECTIONS

SUM-77/277/224
VARIOUS

63
1288

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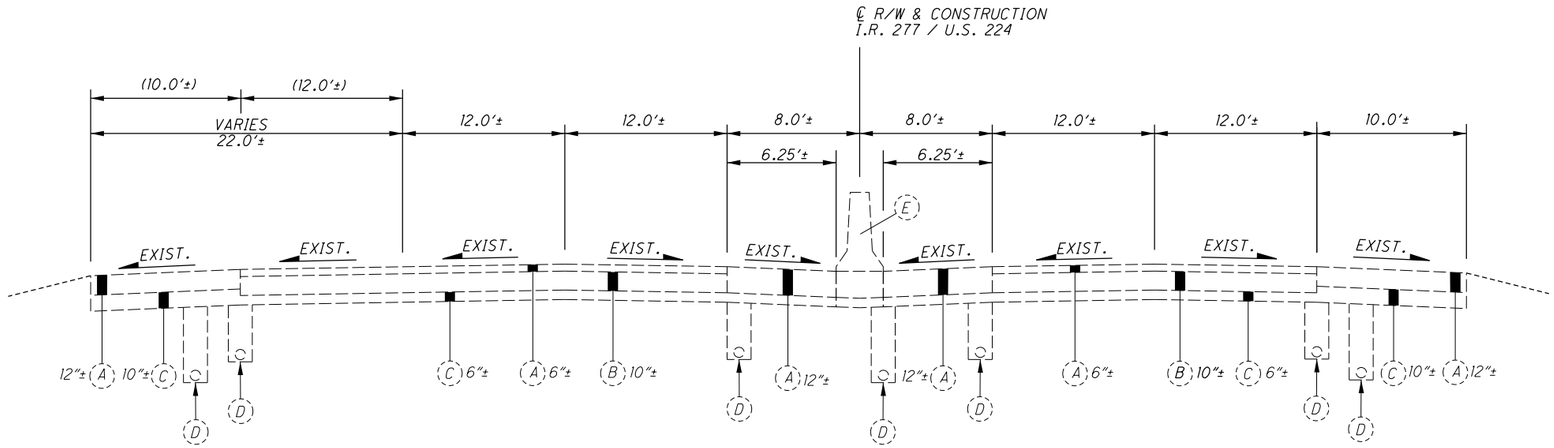
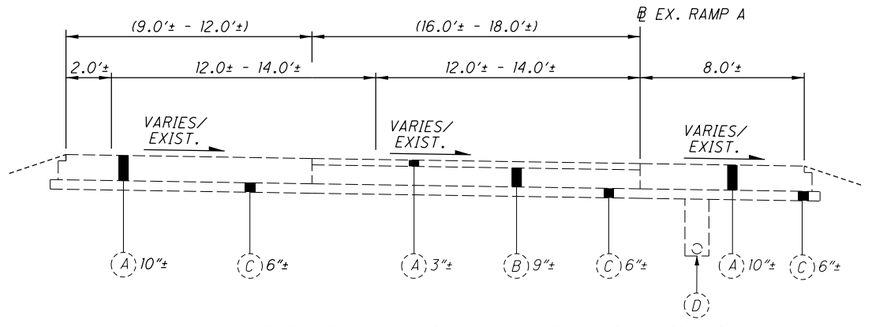
FOR EXISTING LEGEND, SEE SHEET 59

(##.##) = DIMENSIONS OF ORIGINAL LANE CONFIGURATION/PAVEMENT COMPOSITION WHEN DIFFERS FROM CURRENT STRIPING CONFIGURATION



EXISTING NORMAL SECTION - I.R. 277/U.S. 224

LIMITING STATIONS
STA. 257+02.91 TO STA. 271+00.00



EXISTING SUPERELEVATED RIGHT SECTION - RAMP A

LIMITING STATIONS
STA. 0+00.00 TO STA. 16+50.00

TYPICAL SECTIONS

SUM-77/277/224
VARIOUS

64
1288

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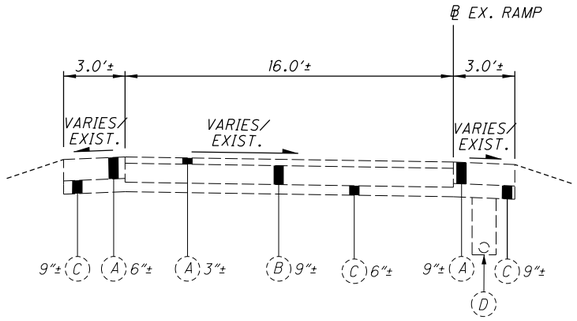
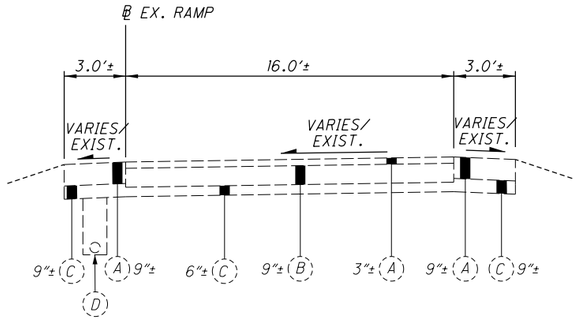
FOR EXISTING LEGEND, SEE SHEET 59

(##.##) = DIMENSIONS OF ORIGINAL LANE CONFIGURATION/PAVEMENT COMPOSITION WHEN DIFFERS FROM CURRENT STRIPING CONFIGURATION



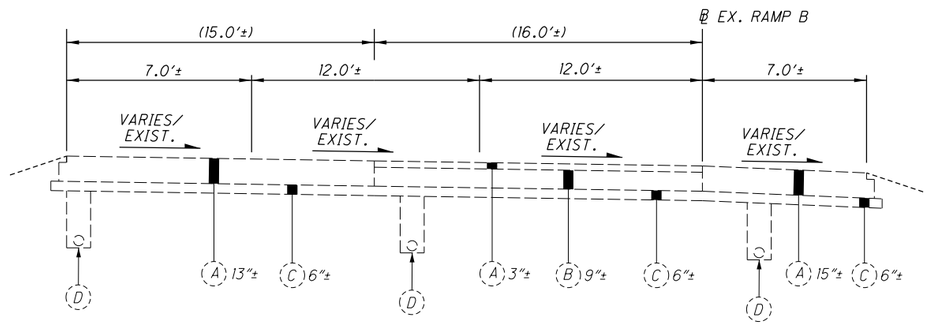
EXISTING SUPERELEVATED RIGHT SECTION - RAMPS

LIMITING STATIONS
STA. 0+00.00 TO STA. 13+50.00 (RAMP B)
STA. 0+00.00 TO STA. 17+90.00 (RAMP B1)
STA. 0+00.00 TO STA. 25+17.54 (RAMP C)
STA. 0+00.00 TO STA. 18+62.36 (RAMP C1)
STA. 0+00.00 TO STA. 21+60.12 (RAMP D)



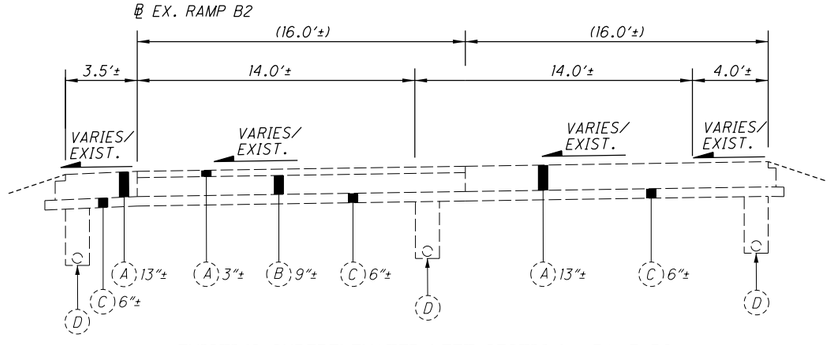
EXISTING SUPERELEVATED LEFT SECTION - RAMPS

LIMITING STATIONS
STA. 0+00.00 TO STA. 17+81.12 (RAMP C2)



EXISTING SUPERELEVATED RIGHT SECTION - RAMP B

LIMITING STATIONS
STA. 13+50.00 TO STA. 27+95.00



EXISTING SUPERELEVATED LEFT SECTION - RAMP B2

LIMITING STATIONS
STA. 0+00.00 TO STA. 7+15.59
STA. 9+83.29 TO STA. 15+42.67

TYPICAL SECTIONS

SUM-77/277/224
VARIOUS

65
1288

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GENERAL

UTILITIES

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

AKRON SEWER MAINTENANCE
ATTN: ROB SCARLATELLI/
SCOTT DAVENPORT
2460 AKRON PENINSULA RD.
AKRON, OH 44313
(330) 375-2666

CITY OF AKRON TRAFFIC
1420 TRIPLETT BLVD, BUILDING 2
AKRON, OH 44306
(330) 375-2851
traffic@akronohio.gov

AKRON WATER DISTRIBUTION
ATTN: TONY PUGLIA
1460 TRIPLETT BLVD.
AKRON, OH 44306
(330) 375-2420
tpuglia@akronohio.gov

AT&T OHIO
ATTN: LUCIE HINSHAW
50 WEST BOWERY STREET, 6TH FLOOR
AKRON, OH 44308
(330) 384-3048
lb2785@att.com

CHARTER COMMUNICATION
(SPECTRUM/TIME WARNER)
ATTN: JIM LONG
1200 BROWNSTONE AVE.
AKRON, OH 44310
(330) 622-4106

CROWN CASTLE (LIGHTOWER)
ATTN: ED DALY/BILL DARDEN
15565 NEO PARKWAY
GARFIELD HEIGHTS, OH 44128
(585) 397-5988
Ed.Daly@crowncastle.com
Bill.Darden@crowncastle.com

EVERFLOW EASTERN PARTNERS LP
ATTN: GEORGE STRAWN II
29093 S.R. 62
SALEM, OH 44460
(330) 537-3863
gstrawn59@gmail.com

DOMINION EAST OHIO
ATTN: 2nd Floor Relocation Design
320 SPRINGSIDE DRIVE, SUITE 320
AKRON, OH 44333
(330) 664-2409
Relocation@dominionenergy.com

EVERSTREAM
ATTN: ROB WOOD
1228 EUCLID AVE., SUITE 250
CLEVELAND, OH 44115
(216) 923-2209 (OFFICE)
(440) 728-0542 (CELL)
rwood@everstream.net

FIRST ENERGY (OHIO EDISON)
ATTN: AMANDA TURNER
1910 WEST MARKET STREET, BLDG. 1
AKRON, OH 44313
(330) 436-4093
turnera@firstenergycorp.com

ODOT ITS
(NON-OUPS MEMBER)
(614) 387-4113
FAX: (614) 887-4134
cen.its.lab@dot.ohio.gov
NOTE: CONTRACTOR SHALL CONTACT IF MARKING OF ITS INFRASTRUCTURE IS NEEDED. CONTRACTOR SHALL THEN MARK THROUGHOUT PROJECT DURATION IN ACCORDANCE WITH SS 809.

ODOT DISTRICT 4
ATTN: DAVID KONEVAL
2088 SOUTH ARLINGTON ROAD
AKRON, OH 44306
(330) 786-3146
dave.koneval@dot.ohio.gov

OHIO EDISON (TRANSMISSION)
ATTN: MARY WALTON
76 SOUTH MAIN STREET
AKRON, OH 44308-1890
(330) 384-4928
(321) 626-1079 (CELL)
mwalton@firstenergycorp.com

THE UNDERGROUND UTILITIES ON THIS PLAN HAVE BEEN LOCATED BY USING A SUBSURFACE UTILITY ENGINEERING COMPANY [SUE]. IF THERE ARE ANY DISCREPANCIES BETWEEN FIELD MARKINGS AND WHAT THE PLAN INDICATES, PLEASE CONTACT MATTHEW STEELE OF ODOT DISTRICT 4, PROJECT UTILITY COORDINATOR 330-786-4832, PRIOR TO ANY SUBSURFACE WORK BEING INITIATED.

WORK AROUND DOMINION ENERGY FACILITIES

IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE LATERAL AND SUBJACENT SUPPORT OF DOMINION ENERGY'S PIPELINE(S), IN COMPLIANCE TO 29 CFR, PART 1926, SUBPART P, (SAFE EXCAVATION & SHORING). ONE-FOOT MINIMUM VERTICAL AND HORIZONTAL CLEARANCE MUST BE MAINTAINED BETWEEN DOMINION ENERGY OHIO'S (DEO) EXISTING PIPELINE(S) AND ALL OTHER IMPROVEMENTS. EXTREME CARE SHOULD BE TAKEN NOT TO HARM ANY DEO FACILITY (PIPELINES, ETC.) OR APPURTENANCE (PIPE COATING, TRACER WIRE, CATHODIC PROTECTION TEST STATION WIRES & DEVICES, VALVE BOXES, ETC.). DEO FACILITIES MUST BE PROTECTED WITH A TARP DURING BRIDGE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE AND LIABLE FOR ENSURING THAT ALL DEO EXISTING FACILITIES, ABOVE AND BELOW GROUND, REMAIN UNDAMAGED, ACCESSIBLE AND IN WORKING ORDER. THE CROSSING OF DEO'S PIPELINE WITH ANOTHER STEEL FACILITY MAY CREATE A POTENTIAL CORROSION ISSUE FOR THE PROPOSED FACILITY AND THE EXISTING DEO FACILITY. PLEASE CONTACT DOMINION ENERGY OHIO'S CORROSION DEPARTMENT: DAVE CUTLIP (330-266-2121), RICK MCDONALD (330-266-2122), OR AL HUMRICHOUSER (330-478-3757).

ROUNDING

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

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

BENCHING OF FOUNDATION SLOPES

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS, 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

MONUMENT ASSEMBLIES

CONSTRUCT MONUMENT ASSEMBLIES IN ACCORDANCE WITH THE DETAILS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET NO. 1283 .

THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED:

ITEM 623 - MONUMENT ASSEMBLY	12 EACH
ITEM 623 - MONUMENT BOX ADJUSTED TO GRADE	2 EACH

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.

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.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEETS 27 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: GPS
MONUMENT TYPE: TYPE A & TYPE B

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: 2012B

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD 83 (2011) (EPOCH: 2010.0000)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO NORTH ZONE (3401)
COMBINED SCALE FACTOR: 0.99989474882
ORIGIN OF COORDINATE
SYSTEM: EASTING (X): 0, NORTHING (Y): 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 CMS 623.

UNITS ARE IN U.S. SURVEY FEET.

AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS

THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT OR HELIPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT SHALL EXCEED A HEIGHT OF 100 FT OR LESS FOR STRUCTURES AND 100-88 FT FOR LIGHT TOWERS, HEIGHT OF TEMPORARY EQUIPMENT USED TO INSTALL LIGHT TOWERS IS NOT TO EXCEED THE ERECTED PLAN SPECIFIED HEIGHT OF THE LIGHT TOWER. IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, FURTHER COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA), AND THE ODOT OFFICE OF AVIATION, WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO FILE A NEW FAA FORM 7460-1, ADVISING THE FAA THAT AERONAUTICAL STUDY NUMBERS VARYING FROM 2021-AGL-1137 TO 2021-AGL-5443-OE IS BEING RESUBMITTED AND THAT AN ALTERATION TO THE ORIGINAL SUBMISSION IS REQUESTED.

NOTIFY THE ODOT OFFICE OF AVIATION WHEN RESUBMITTING FAA FORM 7460-1. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL A COPY OF THE FAA APPROVAL AND THE ODOT OFFICE OF AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

FAA APPROVAL MAY TAKE UP TO 45 DAYS. ALL SUBMISSIONS SHALL BE DIRECTED TO THESE OFFICES:

FEDERAL AVIATION ADMINISTRATION
SOUTHWEST REGIONAL OFFICE
OBSTRUCTION EVALUATION GROUP
10101 HILLWOOD PARKWAY
FORT WORTH, TX 76177
FAX: (817) 222-5920
http://ceaaa.faa.gov

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF AVIATION
2829 WEST DUBLIN-GRANVILLE ROAD
COLUMBUS, OHIO 43235

FAA COORDINATION

CRANES FOR ERECTION OF LIGHT TOWER WORK:

NOTIFY THE AKRON FULTON INTERNATIONAL AIRPORT MANAGER AT (330) 733-4760 AT LEAST 3 BUSINESS DAYS PRIOR TO ERECTION OF CRANE(S) AND AGAIN WHEN CRANE(S) IS NO LONGER ON SITE.

CRANES FOR ERECTION OF LIGHT TOWER WORK:

CRANES ARE TO BE MARKED/LIGHTED IN ACCORDANCE WITH FAA ADVISORY CIRCULAR 70/7460-1 M, OBSTRUCTION MARKING AND LIGHTING, FLAGS/RED LIGHTS-CHAPTERS 3 (MARKED) 4, 5 (RED), 14 (TEMPORARY), AND 15.

CRANES FOR STRUCTURE WORK:

NOTIFY THE AKRON FULTON INTERNATIONAL AIRPORT MANAGER AT (330) 733-4760 AT LEAST 3 BUSINESS DAYS PRIOR TO ERECTION OF CRANE(S) AND AGAIN WHEN CRANE(S) IS NO LONGER ON SITE. NOTIFY THE AKRON FULTON INTERNATIONAL AIR TRAFFIC CONTROL TOWER AT (330) 492-3801 AT LEAST 3 BUSINESS DAYS PRIOR TO ERECTION OF CRANE(S) AND AGAIN WHEN CRANE(S) IS NO LONGER ON SITE. IN THE CASE AIR TRAFFIC CONTROL OF THE AKRON FULTON INTERNATIONAL AIRPORT WOULD REQUEST THE IMMEDIATE LOWERING OF CRANE, PROVIDE AIR TRAFFIC CONTROL TOWER THE CONTACT INFORMATION FOR ONSITE OPERATOR.

CRANES FOR STRUCTURE WORK:

CRANES ARE TO BE MARKED/LIGHTED IN ACCORDANCE WITH FAA ADVISORY CIRCULAR 70/7460-1 M, OBSTRUCTION MARKING AND LIGHTING, FLAGS/RED LIGHTS-CHAPTERS 3 (MARKED) 4, 5 (RED), 14 (TEMPORARY), AND 15.

LIGHTING:

FAA ADVISORY CIRCULAR 70/7460-1 M OBSTRUCTION LIGHTING REPORT ANY FAILURE OR MALFUNCTION THAT LASTS MORE THAN THIRTY MINUTES AND AFFECTS THE TOP LIGHT OR FLASHING OBSTRUCTION LIGHT TO (877) 487-6867 AND WHEN RESTORED NOTIFY THE SAME NUMBER.

QUANTITIES CARRIED TO GENERAL NOTES SUBSUMMARY ON SHEET 73

REVISIONS		
NO.	DATE	DESCRIPTION
2	04/28/21	FAA COORDINATION NOTE ADDED & AIRWAY CLEARANCE NOTE REVISED

CALCULATED ATR
CHECKED PJF

GENERAL NOTES

SUM-77/277/224
VARIOUS

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GENERAL (CONTINUED)

ITEM 619 - FIELD OFFICE TYPE C, AS PER PLAN

619.01 DESCRIPTION:

THIS WORK CONSISTS OF PROVIDING, MAINTAINING, AND SUBSEQUENTLY REMOVING A FIELD OFFICE FOR THE EXCLUSIVE USE OF THE DEPARTMENT FOR THE DURATION OF THE CONTRACT AT A LOCATION APPROVED BY THE ENGINEER.

619.02 GENERAL

FURNISH A COMPLETELY FUNCTIONAL FIELD OFFICE OF THE TYPE SPECIFIED IN THE CONTRACT PRIOR TO BEGINNING WORK.

THE FIELD OFFICE WILL BE A SUITE TYPE OFFICE (NO TRAILER OR MODULAR OFFICE) WITH A MINIMUM OF 3,000 SQUARE FEET AND AT GROUND LEVEL WITH A MINIMUM CEILING HEIGHT OF EIGHT (8) FEET. PROVIDE TWO (2) OUTSIDE DOORS, LOCKABLE VANDAL PROOF CYLINDER TYPE DEAD BOLTS AND LOCKABLE WINDOWS. THE FLOOR SPACE WILL BE DIVIDED INTO A RESTROOM, ONE GENERAL OFFICE AREA (MINIMUM 400 SQUARE FEET), NOT LESS THAN THREE INDIVIDUAL OFFICES (MINIMUM 300 SQUARE FEET EACH), AND ONE CONFERENCE ROOM (MINIMUM 500 SQUARE FEET), AS DEEMED NECESSARY BY THE ENGINEER.

FURNISH EACH FIELD OFFICE WITH A MEANS FOR MAINTAINING ROOM TEMPERATURE BETWEEN 68°F AND 80°F.

FURNISH ELECTRIC SERVICE FOR EACH FIELD OFFICE.

FURNISH NEAT, SANITARY, ENCLOSED TOILET ACCOMMODATIONS CONNECTED TO AN EXISTING SANITARY SEWER LINE FOR THE USE OF THE OCCUPANTS OF THE FIELD OFFICE, MEETING APPLICABLE STATE AND LOCAL CODES AND ORDINANCES. FURNISH ASSOCIATED LAVATORY AND SANITARY SUPPLIES. POTABLE HOT AND COLD RUNNING WATER WILL BE PROVIDED IN THE RESTROOM FOR SANITARY PURPOSES.

FURNISH TRASH COLLECTION SERVICE / DUMPSTER.

FURNISH PROFESSIONAL, BONDED AND INSURED JANITORIAL SERVICE WITH A WEEKLY CLEANING OF THE ENTIRE OFFICE TO INCLUDE THE RESTROOM FACILITIES FOR THE DURATION OF THE PROJECT.

FURNISH BOTTLED DRINKING WATER SERVICE WITH A HOT AND COLD DISPENSER AND ASSOCIATED SUPPLIES.

PROVIDE A LOCKABLE WOOD OR METAL STORAGE BOX OF SUFFICIENT SIZE TO STORE A NUCLEAR DENSITY GAUGE AND AN ELECTRICAL CONNECTION FOR THE GAUGE.

TELEPHONE SERVICE AND TELEPHONES, INCLUDING ALL NECESSARY WIRING, WILL BE SUPPLIED AT EACH DESK, THE CONFERENCE ROOM, AND THE GENERAL OFFICE AREA INTERCONNECTED BETWEEN TELEPHONES. ALL TELEPHONES WILL BE EQUIPPED WITH SPEAKER PHONE AND TWO (2) LINE CAPABILITIES WITH TWO (2) LINE SERVICE AT EACH LOCATION. A TOTAL OF THREE (3) OUTSIDE LINES WILL BE PROVIDED, ONE OF WHICH WILL BE DEDICATED FOR THE USE OF THE FACSIMILE MACHINE. THE TWO (2) LINES FOR THE TELEPHONE WILL HAVE THE ABILITY TO AUTOMATICALLY TRANSFER TO THE NEXT LINE IF ANOTHER LINE IS IN USE.

PROVIDE A BROADBAND INTERNET CONNECTION CAPABLE OF MINIMUM DOWNLOAD SPEEDS GREATER THAN 10 MBPS, UPLOAD SPEEDS GREATER THAN 2 MBPS, AND NETWORK LATENCY LESS THAN 50 MILLISECONDS. WHEN MULTIPLE BROADBAND SERVICES ARE AVAILABLE, THE FOLLOWING IS THE PREFERRED ORDER: CABLE, DSL, CELLULAR, AND WIRELESS RADIO. SATELLITE COMMUNICATION IS NOT COMPATIBLE WITH ODOT VPN CONNECTION AND WILL NOT BE ACCEPTED. SUPPLY ALL WIRING, ROUTERS, MODEMS (CAPABLE TO BE CONFIGURED IN BRIDGE MODE), SOFTWARE, AND INCIDENTALS NECESSARY TO CONNECT FIVE (5) PERSONAL COMPUTERS AT SEPARATE LOCATIONS, DESIGNATED BY THE PROJECT ENGINEER, THROUGHOUT THE OFFICE TO THE SYSTEM.

PROVIDE THE FOLLOWING OFFICE FURNITURE AND EQUIPMENT:

1. SIX (6) TELEPHONES WITH SPEAKER PHONE AND TWO (2) LINE CONNECTION.

2. ONE (1) DIGITAL ANSWERING MACHINE WITH TIME / DATE STAMP.

3. ONE (1) MULTI-FUNCTION COLOR COPIER THAT IS SET UP FOR SCANNING, PRINTING, FAXING, AND COPYING WITH THE FOLLOWING SPECIFICATIONS:
   - A. COLOR PRINT/COPY/SCAN
   - B. COPY/PRINT SPEED: 30 PPM (LETTER), 15 PPM (LEGAL), 15 PPM (LEDGER), OR HIGHER.
   - C. DUPLEX PRINTING SUPPORT
   - D. AUTOMATIC DOCUMENT FEEDER WITH 50 SHEET DUPLEXING DOCUMENT FEEDER
   - E. COPIER MEMORY: 1 GB
   - F. INSTALLED HDD: 40 GB
   - G. DATA ENCRYPTION AND HDD ERASE SUPPORT INCLUDED WITH MACHINE
   - H. INTERNAL STAPLER SUPPORT
   - I. PAPER CAPACITY: 250 SHEET X 2 TRAYS, 50 SHEET BYPASS TRAY
   - J. NETWORK INTERFACE: 10/100 BASE-TX, 1000 BASE-TX
   - K. ANALOG FAX SUPPORT INCLUDED WITH MACHINE
   - L. COLOR SCANNING WITH THE FOLLOWING REQUIREMENTS:
     - I. RESOLUTION: 600 X 600 DPI
     - II. SCAN AREA UP TO 11" X 17"
     - III. SCANNING PROTOCOL SUPPORT - TCP/IP, SMTP, SMB, FTP, POP3, NCP
     - IV. FILE SCAN TYPES SUPPORTED: SINGLE PAGE TIFF, JPEG, PDF, MULTI-PAGE TIFF, PDF, AND OCR PDF
     - V. SCANNING SUPPORT FOR SCAN-TO-EMAIL, HDD, SMB (FOLDER), URL, AND TWAIN
   - M. NETWORK PROTOCOL SUPPORT FOR TCP/IP
   - N. CLIENT AND SERVER PRINT DRIVER SUPPORT FOR PCL PRINT DRIVERS
   - O. SERVER OPERATING SYSTEM SUPPORT FOR WINDOWS SERVER 2008 AND WINDOWS SERVER 2008 R2 (32 BIT/64 BIT)
   - P. CLIENT PRINT DRIVER SUPPORT FOR WINDOWS XP/WINDOWS 7 (BOTH PCL 32 BIT/64 BIT)
   - Q. MINIMUM PRINT/COPY RESOLUTION OF 600 X 600 DPI
   - R. SECURE PRINTING WITH PASSWORD OR PIN FROM CLIENT TO COPIER
   - S. PROVIDE THE COPIER WITH ALL NECESSARY TONER, PAPER SUPPLIES, AND A SERVICE CONTRACT WITH A RESPONSE TIME OF 24 HOURS OR LESS FOR MAINTENANCE AND SUPPLIES OF THE COPY MACHINE.

4. EIGHT (8) PRINTING DESK CALCULATORS WITH TAPE.

5. EIGHT (8) DESK AND CHAIR SETS.

6. TEN (10) STACKABLE CHAIRS.

7. EIGHT (8) WORK TABLES, 30" X 72"

8. ONE (1) DRAFTING/PLAN TABLE WITH A MINIMUM 36" X 60" WORKING SURFACE WITH AN APPROPRIATE ADJUSTABLE HEIGHT DRAFTING CHAIR.

9. THREE (3), 4-DRAWER, LOCKABLE, LEGAL SIZE METAL FILING CABINETS.

10. FOUR (4), 2-DRAWER, LOCKABLE, LEGAL SIZE METAL FILING CABINETS.

11. THREE (3) PORTABLE, TYPE 2-A:10-BC, FIVE POUND SIZE FIRE EXTINGUISHERS.

12. THREE (3) PLAN RACKS, EACH CAPABLE OF HANDLING THE BREAKDOWN OF 22 X 34 INCH SIZED PLANS INTO TEN SECTIONS.

13. TWENTY (20) ALL-WEATHER PARKING SPACES.

14. EIGHT (8) 24-QUART WASTE BASKETS WITH APPROPRIATE SIZED TRASH BAGS.

15. ONE NEW PROJECTOR TO BE USED BY THE PROJECT WITH THE FOLLOWING SPECIFICATIONS:
   - A. NATIVE RESOLUTION - 1920 X 1080
   - B. ENGINE TYPE - LCD
   - C. ASPECT RATION - 16:9
   - D. RATED CONTRAST RATIO - 70,000:1
   - E. RATED BRIGHTNESS - 2500 ANSI LUMENS
   - F. ZOOM - OPTICAL
   - G. COMPUTER INTERFACES - ANALOG VGA, HDMI, MHL
   - H. VIDEO INTERFACES - COMPONENT, COMPOSITE, HDMI, MHL
   - I. SUPPORTED VIDEO FORMATS - 480P, 720P, 1080I, 576I, 576P, 480I, 1080P
   - J. USB PORTS
   - K. WIRELESS REMOTE CONTROL
   - L. BUILT IN SPEAKERS
   - M. ALL ACCESSORIES NECESSARY TO OPERATE

16. ONE NEW TELEVISION WITH THE FOLLOWING SPECIFICATIONS:
   - A. DIAGONAL SCREEN SIZE - 55"
   - B. NATIVE RESOLUTION - 1920 X 1080
   - C. HDMI PORTS - 3
   - D. VIDEO INTERFACES - COMPOSITE, HDMI, USB
   - E. ALL ACCESSORIES NECESSARY TO OPERATE
   - F. ALL HARDWARE NECESSARY TO HANG THE TELEVISION ON THE WALL

EXPENSES FOR THE OPERATION OF THE FIELD OFFICE TO INCLUDE BUT NOT BE LIMITED TO ELECTRICAL SERVICE, HEATING/COOLING, RUNNING WATER SERVICE, SEWER SERVICE, TELEPHONE SERVICE, JANITORIAL SERVICE, BOTTLED WATER SERVICE, HIGH SPEED ONLINE SERVICE, ETC. WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL ALSO PROVIDE ALL NECESSARY SUPPLIES AND MAINTENANCE FOR ALL EQUIPMENT THAT THE CONTRACTOR IS REQUIRED TO FURNISH.

FURNISH A CONCRETE CYLINDER CURING BOX CAPABLE OF HOLDING AT LEAST EIGHT 6X12 INCH (150X300MM) CYLINDERS AT 73 DEGREES F (23 DEGREES C) +/- 3 DEGREES NO MATTER WHAT THE AMBIENT TEMPERATURE IS WHEN CONSTRUCTING EITHER PORTLAND CEMENT CONCRETE PAVEMENT OVER 10,000 SQUARE YARDS (8,000 SQUARE METERS) OR OVER 50 CUBIC YARDS (38 CUBIC METERS) OF BRIDGE STRUCTURE REPAIR OR REPLACEMENT CONCRETE. THE BOX WILL HAVE A SEALED LID.

THE CONTRACTOR WILL RETAIN RESPONSIBILITY FOR RISK OF LOSS OR DAMAGE TO SAID FIELD OFFICE, FURNISHINGS, AND EQUIPMENT WHILE THE OFFICE IS IN USE FOR THIS CONTRACT.

THE FIELD OFFICE WILL BE APPROVED IN ADVANCE BY THE ENGINEER AND FULLY OPERATIONAL WITHIN 30 DAYS AFTER THE SIGNING AND EXECUTION OF THE CONTRACT OR PRIOR TO THE START OF ANY CONSTRUCTION WORK, WHICHEVER COMES FIRST.

619.03 METHOD OF MEASUREMENT

THE DEPARTMENT WILL MEASURE FIELD OFFICE, TYPE C, AS PER PLAN BY THE NUMBER OF MONTHS THE OFFICE IS MAINTAINED. A PARTIAL MONTH AT THE END OF THE PROJECT WILL BE PAID AS A FULL MONTH.

619.04 BASIS OF PAYMENT

THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE AS FOLLOWS:

ITEM	UNIT	DESCRIPTION
619	MONTH	FIELD OFFICE, TYPE C, AS PER PLAN

ROADWAY

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.

PAVING UNDER GUARDRAIL

THIS OPERATION SHALL INCLUDE PREPARATION OF THE GRADED SHOULDER USING 209, LINEAR GRADING AS PER PLAN, AND PAVING UNDER THE GUARDRAIL USING 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), AS PER PLAN.

ITEM 209, LINEAR GRADING AS PER PLAN, SHALL CONSIST OF EXCAVATING TOPSOIL, AND PLACING GRANULAR MATERIAL.

ALL COLLECTED DEBRIS AND TOPSOIL, INCLUDING RHIZOMES, ROOTS AND OTHER VEGETATIVE PLANT MATERIAL SHALL BE REMOVED AND DISPOSED OF AS SPECIFIED IN 105.17.

THE REMOVED MATERIAL SHALL BE REPLACED WITH COMPACTABLE GRANULAR MATERIAL CONFORMING TO 703.16 PLACED TO GRADE AS DETAILED ON THE TYPICAL SECTION OR AS APPROVED BY THE ENGINEER.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 209, LINEAR GRADING, AS PER PLAN.

PAVING UNDER GUARDRAIL SHALL CONSIST OF PLACING ITEM 441 TO THE DEPTH SPECIFIED USING ONE OF THE FOLLOWING METHODS:

METHOD A:
1. SET GUARDRAIL POSTS
2. PLACE ITEM 441

METHOD B:
1. PLACE ITEM 441
2. BORE ASPHALT AT POST LOCATIONS (MAY BE OMITTED IF STEEL POSTS ARE USED)
3. SET GUARDRAIL POSTS
4. PATCH AROUND POSTS. THE MATERIALS USED FOR PATCHING SHALL BE AN ASPHALT CONCRETE APPROVED BY THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN AWAY FROM THE POSTS.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH THE EXCEPTION OF SETTING GUARDRAIL POSTS, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 441, ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), AS PER PLAN.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E

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.

CALCULATED ATR
CHECKED PJF

GENERAL NOTES

SUM-77/277/224
VARIOUS

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ROADWAY (CONTINUED)

ITEM 606 - IMPACT ATTENUATOR, TYPE 1 (UNIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY ONE OF THE TYPE 1 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 1 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 1, UNIDIRECTIONAL, 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 - IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE TYPE 3 IMPACT ATTENUATORS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE (REFER TO THE POSTED SHOP DRAWINGS FOR THE MOST CURRENT APPROVED PRODUCT MODELS). WHEN BI-DIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS. THE FACE OF THE IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

TYPE 3 IMPACT ATTENUATORS ARE NECESSARY AT THE FOLLOWING LOCATIONS:

1. SB I.R. 77/RAMP C-2 GORE

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR THE ITEM 606, IMPACT ATTENUATOR, TYPE 3 [60 MPH, TEST LEVEL 3 (TL-3), 90" HAZARD WIDTH, ASPHALT FOUNDATION, ATTENUATOR MANUFACTURER'S GUARDRAIL TRANSITION AND BACKUP SUPPORT, UNIDIRECTIONAL] EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT, AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS/BACKSTOPS, TRANSITIONS, HARDWARE, AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

ITEM 606 - IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE TYPE 3 IMPACT ATTENUATORS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE (REFER TO THE POSTED SHOP DRAWINGS FOR THE MOST CURRENT APPROVED PRODUCT MODELS). WHEN BI-DIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS. THE FACE OF THE IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

TYPE 3 IMPACT ATTENUATORS ARE NECESSARY AT THE FOLLOWING LOCATIONS:

1. WB I.R. 277/U.S. 224/RAMP D GORE

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR THE ITEM 606, IMPACT ATTENUATOR, TYPE 3 [65 MPH, TEST LEVEL 3 (TL-3), 69" HAZARD WIDTH, ASPHALT FOUNDATION, ATTENUATOR MANUFACTURER'S GUARDRAIL TRANSITION AND BACKUP SUPPORT, UNIDIRECTIONAL] EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT, AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS/BACKSTOPS, TRANSITIONS, HARDWARE, AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

ITEM 606 - IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE TYPE 3 IMPACT ATTENUATORS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE (REFER TO THE POSTED SHOP DRAWINGS FOR THE MOST CURRENT APPROVED PRODUCT MODELS). WHEN BI-DIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS. THE FACE OF THE IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

TYPE 3 IMPACT ATTENUATORS ARE NECESSARY AT THE FOLLOWING LOCATIONS:

1. NB I.R. 77/RAMP B-2 GORE

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR THE ITEM 606, IMPACT ATTENUATOR, TYPE 3 [70 MPH, TEST LEVEL 3 (TL-3), 48" HAZARD WIDTH, ASPHALT FOUNDATION, ATTENUATOR MANUFACTURER'S CONCRETE BARRIER TRANSITION AND BACKUP SUPPORT, UNIDIRECTIONAL] EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT, AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS/BACKSTOPS, TRANSITIONS, HARDWARE, AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

ITEM 607 - FENCE, MISC.: TEMPORARY FENCE

THIS ITEM SHALL CONSIST OF INSTALLATION AND REMOVAL OF TEMPORARY FENCE AS PER ODOT SCD NBS-1-09. ALL FURNISHING, ERECTING, MAINTAINING, AND REMOVING OF TEMPORARY FENCE SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 607 - FENCE, MISC.: TEMPORARY FENCE (FT).

QUANTITIES CARRIED TO GENERAL NOTES SUBSUMMARY ON SHEET 73

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

THIS ITEMS SHALL CONSIST OF CONSTRUCTING SINGLE SLOPE TYPE D BARRIER AS PER STD. DWG. RM-4.5 EXCEPT THAT THE HEIGHT OF THE BARRIER SHALL BE 57" INSTEAD OF 42". THE 12" BARRIER TOP WIDTH AND 5.25:1 FACE SLOPE SHALL BE MAINTAINED THEREBY WIDENING THE OVERALL BASE TO 22-7/8"INSTEAD OF 20". THIS ITEM SHALL ALSO INCLUDE ANY TRANSITION FROM 57" TO 42" CONCRETE BARRIER, SINGLE SLOPE, TYPE D.

ITEM 622 - CONCRETE BARRIER END SECTION, TYPE D, AS PER PLAN

THIS ITEMS SHALL CONSIST OF CONSTRUCTING SINGLE SLOPE TYPE D BARRIER AS PER STD. DWG. RM-4.6 EXCEPT THAT THE HEIGHT OF THE BARRIER SHALL BE 57" INSTEAD OF 42". THE 12" BARRIER TOP WIDTH AND 5.25:1 FACE SLOPE SHALL BE MAINTAINED THEREBY WIDENING THE OVERALL BASE TO 22-7/8"INSTEAD OF 20".

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

THIS ITEMS SHALL CONSIST OF CONSTRUCTING SINGLE SLOPE TYPE D BARRIER AS PER STD. DWG. RM-4.5 EXCEPT THAT THE HEIGHT OF THE BARRIER SHALL BE 57" INSTEAD OF 42". THE 12" BARRIER TOP WIDTH AND 5.25:1 FACE SLOPE SHALL BE MAINTAINED THEREBY WIDENING THE OVERALL BASE TO 22-7/8"INSTEAD OF 20".

ITEM SPECIAL - VERTICAL CLEARANCE

AFTER ALL CONSTRUCTION HAS BEEN COMPLETED, A REGISTERED SURVEYOR WILL TAKE VERTICAL CLEARANCE MEASUREMENTS AT LOCATIONS INDICATED ON THE APPROVED ODOT FORM (AVAILABLE IN THE DISTRICT 4 STRUCTURES AND PAVEMENT OFFICE). THE FINAL MEASUREMENTS SHALL BE RECORDED ON THE FORM AND SUBMITTED TO THE PROJECT ENGINEER AND THE DISTRICT 4 STRUCTURES AND PAVEMENT ENGINEER. THE RECORD SHALL BEAR THE SEAL OF THE LICENSED SURVEYOR WHO HAS TAKEN THE MEASUREMENTS. THIS WORK SHALL BE PERFORMED AT THE FOLLOWING STRUCTURE:

SUM-077-0744
SUM-077-0802L/R
SUM-077-0887
SUM-077-0927R
SUM-077-0958L
SUM-277-0369

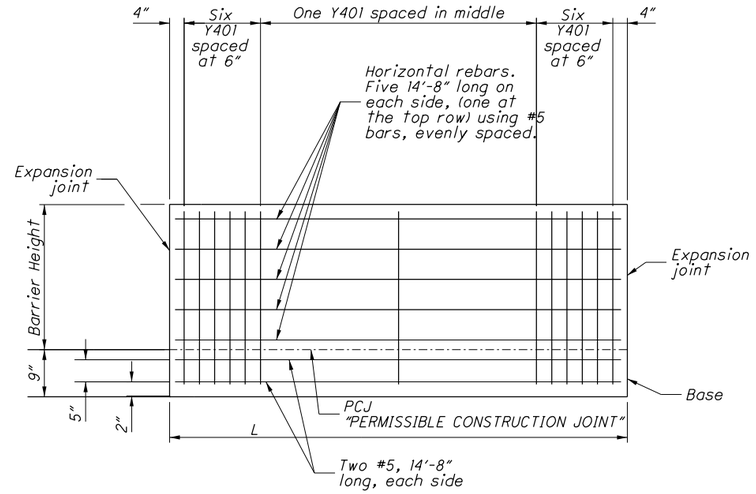
THE FOLLOWING QUANTITY HAS BEEN PROVIDED:

SPECIAL - VERTICAL CLEARANCE 6 EACH

REVISIONS		
NO.	DATE	DESCRIPTION
8	04/30/21	ADDED TEMPORARY FENCE QUANTITY

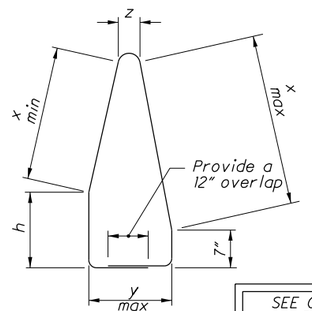
ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN

THIS ITEM SHALL CONSIST OF CONSTRUCTING REINFORCED END ANCHORAGES AS PER ODOT SCD RM-4.3 AND THE BARRIER DETAIL BELOW. THE Y401 REINFORCEMENT BARS SHALL BE SPACED AS SHOWN IN THE DETAIL. ALL MATERIALS, LABOR AND OTHER INCIDENTALS NECESSARY TO CONSTRUCT THIS ANCHOR SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN (EACH).



ELEVATION

TYPE C1			
STATION	L	h	y
394+81.04 (℄ R/W & CONST. I.R. 77)	8.96'	8.75"	30.00"
423+28.00 (℄ R/W & CONST. I.R. 77)	11.14'	8.00"	30.00"
425+10.00 (℄ R/W & CONST. I.R. 77)	20.16'	7.81"	29.75"
431+16.15 (℄ R/W & CONST. I.R. 77)	23.85'	8.44"	30.00"



Y401 #4

SEE OFFICE CALCULATIONS FOR DIMENSION OF THE Y401 REINFORCEMENT BARS ON ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1.

CALCULATED ATR
CHECKED PJF

GENERAL NOTES

SUM-77/277/224
VARIOUS

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ROADWAY (CONTINUED)

ITEM 204 - EXCAVATION OF SUBGRADE AND PROOF ROLLING

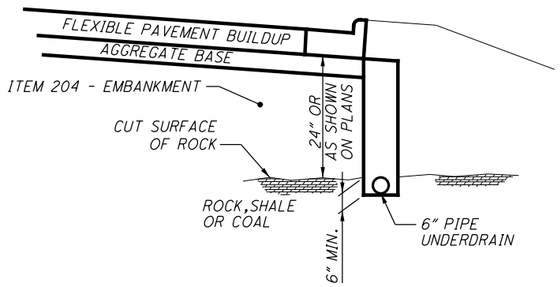
CONSTRUCT THE SUBGRADE AS FOLLOWS AND IN THE FOLLOWING SEQUENCE:

1. SHAPE THE SUBGRADE TO WITHIN 0.2 FEET OF THE PLAN SUBGRADE ELEVATION.
2. EXCAVATE AND REPLACE UNSUITABLE SUBGRADE ACCORDING TO SECTION 204.05 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS). THE EXCAVATION LIMITS ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSUITABLE SUBGRADE. REPLACE WITH ITEM 204 EMBANKMENT.
3. CHEMICALLY STABILIZE THE SUBGRADE ACCORDING TO SECTION 206 OF THE C&MS USING CEMENT.
4. PROOF ROLL THE STABILIZED AREAS ACCORDING TO SECTION 204.06 OF THE C&MS TO VERIFY STABILITY.
5. FINE GRADE THE SUBGRADE TO THE SPECIFIED GRADE.

ITEM 204 - PROOF ROLLING

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING. SEE TYPICAL PLAN SHEETS 29 - 54 FOR ADDITIONAL INFORMATION.

ITEM 204 - PROOF ROLLING 156 HOURS.



DETAIL - ROCK UNDERCUT/ROCK CUT UNDERDRAIN

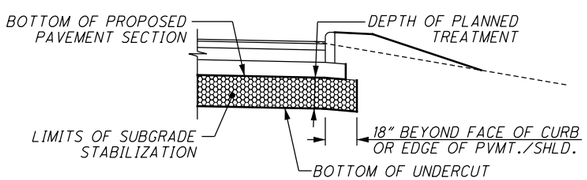
NOT TO SCALE

NOTE:

SOIL BORINGS WITHIN THE PROJECT LIMITS REVEAL THE PRESENCE OF ROCK. WHEN ROCK IS ENCOUNTERED WITHIN 24 INCHES OF THE BOTTOM OF THE PROPOSED PAVEMENT, CONTRACTOR SHALL EXCAVATE THE ROCK ACCORDING TO 204.05 AND REPLACE WITH ITEM 204 EMBANKMENT.

ROCK UNDERCUT IS ANTICIPATED AT THE FOLLOWING LOCATIONS:

NB IR-77	STA. 477+00.00 TO STA. 478+00.00
RAMP C	STA. 577+00.00 TO STA. 578+00.00



TYPICAL PAVEMENT SUBGRADE CROSS SECTION

PAVEMENT SUBGRADE IMPROVEMENT SCHEDULE

ALIGNMENT	BEGIN STATION	END STATION	SUBGRADE METHOD	DEPTH OF TREATMENT	SIDE	UNDERCUT REASON
IR-77	371+50.00	391+37.36	CEMENT	12"	R	
	391+37.36	425+30.16	CEMENT	12"	L/R	
	426+85.73	429+01.43	CEMENT	12"	L/R	
	431+16.15	469+46.33	CEMENT	12"	L/R	
NB IR-77	469+46.96	514+85.00	CEMENT	12"	L/R	
SB IR-77	469+42.49	514+95.00	CEMENT	12"	L/R	
WB IR-277/US-224	225+00.00	235+63.23	CEMENT	12"	L	
	247+80.74	250+78.79	CEMENT	12"	L	
	264+70.74	273+25.00	CEMENT	12"	L	
EB IR-277/US-224	237+00.00	245+79.53	CEMENT	12"	R	
	257+26.04	260+76.94	CEMENT	12"	R	
	271+44.10	279+50.00	CEMENT	12"	R	
RAMP A	86+63.69	114+13.78	CEMENT	12"	L/R	
RAMP B	197+05.36	214+90.00	CEMENT	12"	L/R	
RAMP B-1	402+43.78	421+51.12	CEMENT	12"	L/R	
RAMP B-2	285+64.96	307+95.29	CEMENT	12"	L/R	
	9+83.20	33+82.00	CEMENT	12"	L/R	
RAMP C	576+00.00	606+67.88	CEMENT	12"	L/R	
RAMP C-1	679+55.23	702+11.45	CEMENT	12"	L/R	
RAMP C-2	781+45.30	789+07.95	CEMENT	12"	L/R	
	793+17.70	801+48.92	CEMENT	12"	L/R	
RAMP D	887+98.38	914+89.43	CEMENT	12"	L/R	
ARLINGTON ROAD RAMP D	71+69.06	88+18.25	CEMENT	12"	L/R	
WARNER ROAD	24+50.00	27+70.00	CEMENT	12"	L/R	

WETLAND AREA UNDERCUT

NEW EMBANKMENT CONSTRUCTION OVER EXISTING WETLANDS ARE TO BE EXCAVATED TO REMOVE SILT AND ORGANIC MATERIAL. THE EXCAVATION SHOULD BE 2 FEET DEEP FOR A WIDTH OF THE EXISTING WETLAND WITH A 1:1 SLOPE. THE ESTIMATED LENGTHS AND WIDTHS OF THIS WORK WERE USED TO DETERMINE THE CONTINGENCY QUANTITIES BELOW FOR USE AS DIRECTED BY THE ENGINEER. THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN INCLUDED FOR THIS WORK:

ITEM 203 - EXCAVATION	100 CY
ITEM 204 - GRANULAR MATERIAL, TYPE C	100 CY

ROADSIDE DITCH UNDERCUT

NEW EMBANKMENT CONSTRUCTION OVER EXISTING DITCHES ARE TO BE EXCAVATED TO REMOVE SILT AND ORGANIC MATERIAL. THE EXCAVATION SHOULD BE 2 FEET DEEP FOR A WIDTH OF THE EXISTING DITCH WITH A 1:1 SLOPE. THE ESTIMATED LENGTHS AND WIDTHS OF THIS WORK WERE USED TO DETERMINE THE CONTINGENCY QUANTITIES BELOW FOR USE AS DIRECTED BY THE ENGINEER. THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN INCLUDED FOR THIS WORK:

ITEM 203 - EXCAVATION	16,300 CY
ITEM 203 - EMBANKMENT	16,300 CY

PAVEMENT

ELIMINATION OF RIGID PAVEMENT OPTION

PROJECT WAS ORIGINALLY DESIGNED AS DUAL PAVEMENT, HOWEVER THE RIGID PAVEMENT OPTION HAS NOW BEEN REMOVED FROM THE PROJECT. ANY AND ALL REFERENCE THROUGHOUT THE PLANS TO RIGID PAVEMENT OPTION ARE NOW CONSIDERED NULL AND VOID.

ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446), AS PER PLAN

ON THIS PROJECT SUPPLY A 19MM INTERMEDIATE COURSE MEETING THE REQUIREMENTS OF 442 EXCEPT AS MODIFIED BELOW.

MODIFY TABLE 442.02-2 AS FOLLOWS:

Sieve Size		9.5 mm mix	12.5 mm mix	19 mm mix
		Total Percent Passing		
1 1/2 inch	(38 mm)	-	-	100
3/4 inch	(19 mm)	-	100	95 to 100
1/2 inch	(12.5 mm)	100	95 to 100	90 to 100
3/8 inch	(9.5 mm)	90 to 100	96 max	96 max
No. 4	(4.75 mm)	70 max	52 to 65	60 max
No. 8	(2.36 mm)	34 to 52	34 to 45	34 to 45
No. 200	(75 µm)	2 to 8	2 to 8	2 to 8

MODIFY TABLE 442.02-3 AS FOLLOWS:

APPLY 14.0 FOR A VMA (PERCENT MINIMUM) FOR A 19MM MIX.

APPLY 5.3 PERCENT FOR THE MINIMUM TOTAL ASPHALT BINDER CONTENT FOR A 19MM MIX.

MODIFY THE 442 INTERMEDIATE COURSE REQUIREMENTS OF TABLES 401.04-1 AND 401.04-2 AS FOLLOWS:

APPLY 3.5 PERCENT FOR THE TOTAL VIRGIN ASPHALT BINDER CONTENT, MINIMUM.

USE A PG64-22 IF USING 25 PERCENT OR LESS RAP.
USE PG64-28 IF USING GREATER THAN 25 PERCENT RAP.

QUANTITIES CARRIED TO GENERAL NOTES SUBSUMMARY ON SHEET 73

CALCULATED ATR
CHECKED PJF

GENERAL NOTES

SUM-77/277/224
VARIOUS

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PAVEMENT (CONTINUED)

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.

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.

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.

PAVING IN THE VICINITY OF SUM-77-0887

CONTRACTOR WILL NEED TO VARY THE THICKNESS OF THE ITEM 304 - AGGREGATE BASE, AS PER PLAN LAYER IN THE VICINITY OF THE EXISTING FOOTER FOR THE EXISTING SUM-77-0887 BRIDGE PIER IN THE MEDIAN OF I.R. 77.

ITEM 408 - PRIME COAT, AS PER PLAN

APPLY "MC-70" AT A RATE OF 0.4 GALLONS PER SQUARE YARD, OR AS DETERMINED BY THE ENGINEER, TO THE COMPLETED COMPACTED AGGREGATE SHOULDER.

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN

703.05 DO NOT USE COARSE AGGREGATE FROM A SOURCE DESIGNATED 'SR' OR 'SRH' ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

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

THE REQUIREMENTS OF CMS 609 AND SCD BP-5.1 WILL APPLY WITH THE EXCEPTION THAT JOINT SEALER WILL BE REQUIRED WHEN ADJACENT TO FLEXIBLE PAVEMENT.

ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN

IN LOW SHOULDER AREAS EXCEEDING 1", AND ADJACENT TO THE SAFETY EDGE, OR AS DIRECTED BY THE ENGINEER, RECYCLED ASPHALT PAVEMENT (RAP) SHALL BE USED IN AREAS ADJACENT TO THE PAVED BERM. THE RAP SHALL HAVE A MINIMUM PG CONTENT OF 4.5% AND MEET THE FOLLOWING GRADATION. ONCE THE STOCKPILE MEETS THE GRADATION, THE PG CONTENT OF THE RAP SHALL BE DETERMINED PER 441.03. THE RAP ANALYSIS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO USE. METHOD OF MEASUREMENT SHALL BE AS PER 617.06. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF ITEM 617. ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 617 COMPACTED AGGREGATE, AS PER PLAN.

MODIFIED GRADATION SHALL APPLY:

SIEVE	TOTAL PERCENT PASSING
1- 1/2 "	100
3/4 "	50-100
NO. 4	35-70
NO. 30	9-33
NO. 200	0-13

DRAINAGE

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.

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.

EXISTING SUBSURFACE DRAINAGE

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS OR AGGREGATE DRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE. UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDERDRAINS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN PROVIDED FOR THE WORK NOTED ABOVE:

601,	TIED CONCRETE BLOCK MAT WITH TYPE I UNDERLAYMENT	8 SQ. YD.
611,	6" CONDUIT, TYPE F	40 FT.
611,	PRECAST REINFORCED CONCRETE OUTLET	4 EACH
605,	6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	40 FT.

TEMPORARY DRAINAGE ITEMS

TEMPORARY DRAINAGE ITEMS LABELED ON THE MAINTENANCE OF TRAFFIC PLAN ARE ITEMIZED ON THE MOT PLANS. PAYMENT FOR THE TEMPORARY DRAINAGE ITEMS ARE ITEMIZED AND CARRIED TO THE MAINTENANCE OF TRAFFIC GENERAL SUMMARY.

PROPOSED MEDIAN STORM SEWER

STORM SEWERS NOTED AS "OFFSET" SHALL BE LOCATED WITHIN THE PROPOSED INLETS TO AVOID CONFLICT WITH ANY LIGHT POLE FOUNDATIONS OR SIGN TRUSS FOUNDATIONS.

ITEM SPECIAL - FILL AND PLUG EXISTING CONDUIT

THIS ITEM SHALL CONSIST OF THE CONSTRUCTION OF BULKHEADS IN AN EXISTING 15", 18", 24", AND 30" DIAMETER CONDUIT 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 CRUSHED AND BACKFILLED IN ACCORDANCE WITH THE PROVISIONS OF 203, OR IT 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.

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 10 FEET TO THE EDGE OF PAVEMENT. PROVIDE A STEEL CASING PIPE CONFORMING TO 748.06. JOINTS WITH A CIRCUMFERENCIAL FULLY PENETRATING B-U4B WELD THAT IS PERFORMED BY AN ODOT APPROVED FIELD WELDER OR MACHINED INTERLOCKING JOINTS ARE PERMITTED. 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 611 - INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1, AS PER PLAN

INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1, AS PER PLAN SHALL BE CONSTRUCTED IN CONFORMANCE WITH ITEM 611 AND ACCORDING TO STANDARD CONSTRUCTION DRAWING I-2.2, EXCEPT THAT SECTION C-C OF THE AFOREMENTIONED STANDARD DRAWING THE MINIMUM DEPTH IS 24" VERSUS 32".

ITEM 611 - MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN

MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN SHALL BE CONSTRUCTED IN CONFORMANCE WITH ITEM 611 EXCEPT THAT A NEW MANHOLE CASTING SHALL BE PROVIDED.

ITEM 611 - CONDUIT, MISC.: 18" TYPE B, 748.06, OPEN CUT

748.06 CONDUIT TO BE INSTALLED WITH AN OPEN CUT ON EITHER SIDE OF ITEM 611 - 18" CONDUIT, TYPE B, 748.06, BORED OR JACKED. STORM SEWER PIPE P-54.

ITEM 611 - CONDUIT, MISC.: 30" TYPE A, 748.06, OPEN CUT

748.06 CONDUIT TO BE INSTALLED WITH AN OPEN CUT ON EITHER SIDE OF ITEM 611 - 30" CONDUIT, TYPE A, 748.06, BORED OR JACKED. CULVERTS RAMP B STA. 211+13.00 AND RAMP C-2 STA. 784+60.00

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 CONNECTING 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 PROVIDED FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

611, 6" CONDUIT, TYPE B, FOR DRAINAGE CONNECTION	200 FT.
611, 6" CONDUIT, TYPE C, FOR DRAINAGE CONNECTION	200 FT.
611, 6" CONDUIT, TYPE E, FOR DRAINAGE CONNECTION	200 FT.
611, 6" CONDUIT, TYPE F, FOR DRAINAGE CONNECTION	200 FT.

ITEM SPECIAL - MISCELLANEOUS METAL

EXISTING CASTINGS MAY PROVE TO BE UNSUITABLE FOR REUSE, AS DETERMINED BY THE ENGINEER. IT SHALL BE THE CONRACTOR'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 PROVIDED FOR USE AS DIRECTED BY THE ENGINEER.

SPECIAL, MISCELLANEOUS METAL 10,000 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.

QUANTITIES CARRIED TO GENERAL NOTES SUBSUMMARY ON SHEET 73

CALCULATED ATR
CHECKED PJF

GENERAL NOTES

SUM-77 / 277 / 224
VARIOUS

REVISIONS		
NO.	DATE	DESCRIPTION
1	04/28/21	DELETED PRESSURE RELIEF JOINT NOTE

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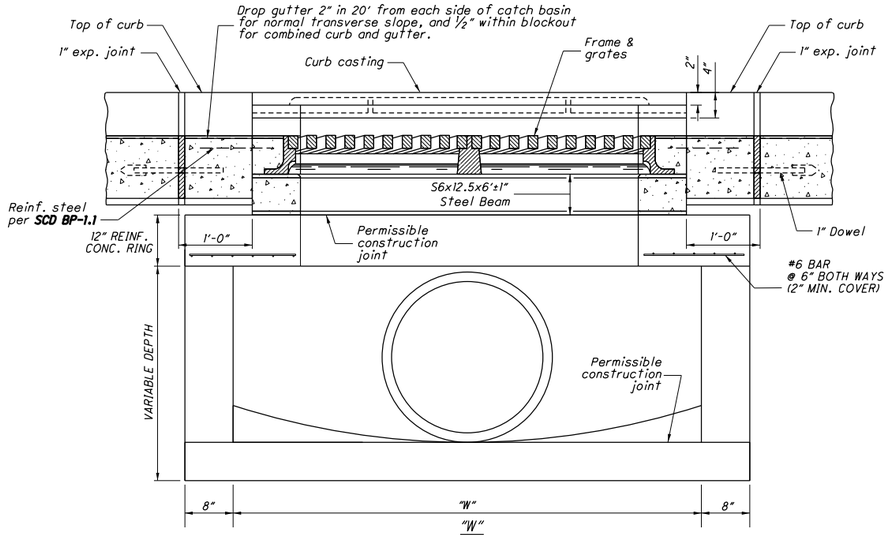
DRAINAGE (CONTINUED)

ITEM 611 - CATCH BASIN NO. 3, AS PER PLAN

CATCH BASIN NO. 3, AS PER PLAN SHALL BE CONSTRUCTED IN CONFORMANCE WITH ITEM 611 AND ACCORDING TO STANDARD CONSTRUCTION DRAWING CB-2.1, EXCEPT THAT SECTION A-A OF THE AFOREMENTIONED STANDARD DRAWING SHALL BE MODIFIED AS SHOWN AND THAT NO BRICK OR CONCRETE BLOCK CONSTRUCTION SHALL BE PERMITTED.



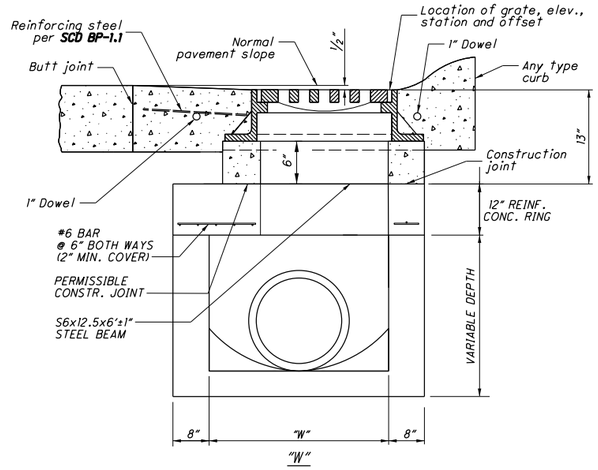
36" DIAMETER CONDUIT = 64"

CATCH BASIN NO. 3, AS PER PLAN

N.T.S.

ITEM 611 - CATCH BASIN NO. 6, AS PER PLAN

CATCH BASIN NO. 6, AS PER PLAN SHALL BE CONSTRUCTED IN CONFORMANCE WITH ITEM 611 AND ACCORDING TO STANDARD CONSTRUCTION DRAWING CB-2.3, EXCEPT THAT SECTION B-B OF THE AFOREMENTIONED STANDARD DRAWING SHALL BE MODIFIED AS SHOWN AND THAT NO BRICK OR CONCRETE BLOCK CONSTRUCTION SHALL BE PERMITTED.



30" DIAMETER CONDUIT = 42"

CATCH BASIN NO. 6, AS PER PLAN

N.T.S.

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GENERAL NOTES

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EROSION CONTROL

SEEDING AND MULCHING

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

FOR SEEDING AND MULCHING QUANTITIES, SEE SHEETS 1GS00345GS00091

ITEM 601 - PAVED GUTTER, TYPE 1-2, AS PER PLAN

THIS ITEM SHALL CONSIST OF CONSTRUCTING CONCRETE PAVED GUTTER AS PER STANDARD CONSTRUCTION DRAWING DM-2.1 AND THE DETAILS AS SHOWN ON SHEETS 1GY345GY245 THE LOCATIONS SHOWN IN THE PLANS. THE GUTTER SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN IN THE DETAIL. A SIDE CUTOFF WALL SHALL BE CONSTRUCTED AS SHOWN PER THE DETAIL FOR THE ENTIRE LENGTH OF THE GUTTER. END CUTOFF WALLS SHALL BE AS PER STANDARD DRAWING DM-2.1. PEJF (PREFORMED EXPANSION JOINT FILLER) SHALL BE PER CMS 516 AND IS INCLUDED IN THE COST OF THE PAVED GUTTER.

ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THE ABOVE-DESCRIBED WORK SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 601 - PAVED GUTTER, TYPE 1-2, AS PER PLAN.

ITEM 601 - ROCK CHANNEL PROTECTION, TYPE D WITH AGGREGATE FILTER, AS PER PLAN

THIS ITEM SHALL CONSIST OF PLACING ROCK CHANNEL PROTECTION WITH AGGREGATE FILTER PER CMS ITEM 601.09 AND ITEM 703.19 EXCEPT THAT ALL MATERIALS SHALL BE NATURAL STONE.

ITEM 601 - ROCK CHANNEL PROTECTION, TYPE C WITH AGGREGATE FILTER, AS PER PLAN

THIS ITEM SHALL CONSIST OF PLACING ROCK CHANNEL PROTECTION WITH AGGREGATE FILTER PER CMS ITEM 601.09 AND ITEM 703.19 EXCEPT THAT ALL MATERIALS SHALL BE NATURAL STONE.

WATER QUALITY

POST CONSTRUCTION STORM WATER TREATMENT

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

VEGETATED FILTER STRIP

THIS PLAN UTILIZES VEGETATED FILTER STRIP(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 SODDING OR ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AND ITEM 670, SLOPE EROSION PROTECTION TO ALL DISTURBED AREAS DESIGNATED AS VEGETATED FILTER STRIPS, THE EDGE OF SHOULDER, AND THE FORESLOPE AS SPECIFIED IN THE PLANS.

VEGETATED BIOFILTER

THIS PLAN UTILIZES VEGETATED BIOFILTER(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 SODDING OR ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AS SHOWN IN THE PLANS TO ANY DISTURBED AREA ON THE SHOULDER AND FORESLOPE DRAINING TO A VEGETATED BIOFILTER. THE DITCH FOR EACH VEGETATED BIOFILTER SHALL BE TRAPEZOIDAL, AS SHOWN IN THE PLAN CROSS SECTIONS. PROVIDE ITEM 670 AS SPECIFIED IN THE PLANS. ALL DITCHES LOCATED WITHIN LIMITS OF VEGETATED BIOFILTER SHALL BE TRAPEZOIDAL AND NOT HAVE ROUNDING.

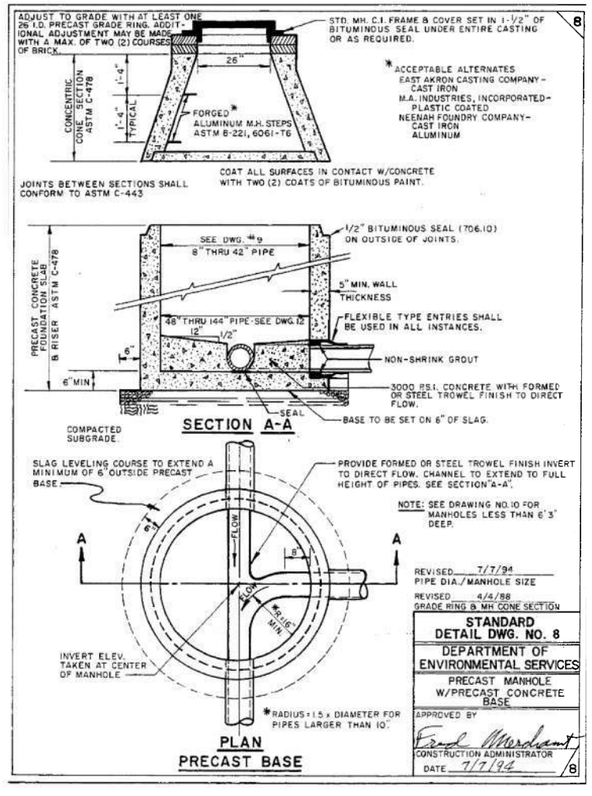
SANITARY SEWER

SUMMIT COUNTY D.O.E.S. SANITARY SEWER NOTES

ALL SEWER WORK ITEMS AND CONSTRUCTION SHALL CONFORM TO ODOT ITEM 611 AND THE SUMMIT COUNTY D.O.E.S. CONSTRUCTION AND MATERIAL SPECIFICATIONS AND APPLICABLE DETAILS. WHERE THERE IS CONTRADICTION, THE SUMMIT COUNTY D.O.E.S. SPECIFICATIONS WILL TAKE PRECEDENCE.

ITEM 611 - MANHOLE ADJUSTED TO GRADE, AS PER PLAN (SANITARY)

THIS ITEM SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY FOR ADJUSTMENT OF THE SANITARY MANHOLES IN ACCORDANCE WITH ODOT ITEM 611 AND THE SUMMIT COUNTY DEPARTMENT OF ENVIRONMENT SERVICES (D.O.E.S.) DETAIL ON THIS SHEET.



CITY OF AKRON SANITARY SEWER NOTES

ALL SEWER WORK ITEMS AND CONSTRUCTION SHALL CONFORM TO ODOT ITEM 611 AND THE CITY OF AKRON CONSTRUCTION AND MATERIAL SPECIFICATIONS AND APPLICABLE DETAILS. WHERE THERE IS CONTRADICTION, THE CITY OF AKRON SPECIFICATIONS WILL TAKE PRECEDENCE.

ITEM 611 - MANHOLE NO. 3, AS PER PLAN (SANITARY)

THIS ITEM SHALL CONSIST OF CONSTRUCTING A SANITARY SEWER MANHOLE IN ACCORDANCE WITH ODOT ITEM 611 AND ODOT STANDARD CONSTRUCTION DRAWING MH-1.2 EXCEPT THAT A SEALED AND WATER-TIGHT LID MUST BE PROVIDED DUE TO THE PROXIMITY OF THE ADJACENT STREAM. THIS ITEM SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY FOR CONSTRUCTION OF THE SANITARY MANHOLES.

ENVIRONMENTAL

WETLAND IMPACTS/AVOIDANCE

FOR WETLAND IMPACTS, PLEASE REFER TO THE NOTE SHOWN ON SHEET 1DE15

TEMPORARY WETLAND IMPACT

TEMPORARY ACCESS FILLS IN WETLAND A MUST BE REMOVED ENTIRELY AND WETLAND A MUST BE RETURNED TO PRE-CONSTRUCTION CONTOURS. ANY TOPSOIL REMOVED FROM THE WETLAND WILL BE STOCKPILED AND REPLACED POST-CONSTRUCTION. THE AREAS SURROUNDING THE STOCKPILES ARE TO BE PROTECTED FROM SEDIMENT WITH THE USE OF PERIMETER CONTROL DEVICES SUCH AS EARTH, STRAW BALES OR SILT FENCES. THESE PERIMETER CONTROL DEVICES SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT. RESTORE ALL STOCKPILE AND PLACEMENT AREAS UPON COMPLETION OF THE PROJECT. ANY BARE AREAS WITHIN THE TEMPORARY WETLAND IMPACT BOUNDARIES WILL NEED TO BE RESEEDED WITH A NATIVE, NON-INVASIVE SPECIES SEED MIX. ERNMX-128 SEASONALLY FLOODED WILDLIFE FOOD MIX OR EQUIVALENT AT A SEEDING RATE OF 20 LB PER ACRE OR 1/2 LB PER 1,000 SQ FT.

BEST MANAGEMENT PRACTICES/SOIL EROSION AND SEDIMENTATION CONTROL

ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS SPECIFIED IN THE STORM WATER POLLUTION PREVENTION PLAN SHALL BE IN PLACE PRIOR TO ANY EXCAVATION, GRADING OR FILLING OPERATIONS AND INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES. THEY SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE AND THE AREA IS STABILIZED AS ACCEPTED BY THE ENGINEER.

ENDANGERED BAT HABITAT REMOVAL

THIS 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 (ESA). 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.

CALCULATED ATR
CHECKED PJF

GENERAL NOTES

SUM-77 / 277 / 224
VARIOUS

REVISIONS		
NO.	DATE	DESCRIPTION
4	04/20/21	WETLAND NOTE REVISED
5	04/22/21	ROCK CHANNEL PROT. NOTE ADDED
6	04/26/21	ROCK CHANNEL PROT. NOTE ADDED

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SHEET NO.	201 CLEARING AND GRUBBING		203 EXCAVATION	203 EMBANKMENT	204 GRANULAR MATERIAL, TYPE C	204 PROOF ROLLING		601 TIED CONCRETE BLOCK MAT WITH TYPE I UNDERLAYMENT		605 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC		611 6" CONDUIT, TYPE B	611 6" CONDUIT, TYPE C	611 6" CONDUIT, TYPE E	611 6" CONDUIT, TYPE F	611 PRECAST REINFORCED CONCRETE OUTLET	SPECIAL MISCELLANEOUS METAL		623 MONUMENT ASSEMBLY	623 MONUMENT BOX ADJUSTED TO GRADE		SPECIAL VERTICAL CLEARANCE
	LS		CY	CY	CY	HR		SY		FT		FT	FT	FT	FT	EACH	LB		EACH	EACH		EACH
66	LS																		12	2		
68																						6
69			16400	16300	100	156																
70								8		40		200	200	200	240	4	10000					
TOTALS CARRIED TO GENERAL SUMMARY	LS		16400	16300	100	156		8		40		200	200	200	240	4	10000		12	2		6

SHEET NO.
TOTALS CARRIED TO GENERAL SUMMARY

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GENERAL NOTES SUBSUMMARY

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MAINTENANCE OF TRAFFIC

THIS ITEM SHALL CONSIST OF MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS AND RAMPS IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS AND THE FOLLOWING:

1. A MINIMUM OF ONE ELEVEN FOOT LANE IN EACH DIRECTION SHALL BE MAINTAINED ON THE EXISTING, TEMPORARY OR COMPLETED PAVEMENT DURING CONSTRUCTION OF THE WORK.

2. THE CONTRACTOR SHALL INFORM THE DISTRICT OFFICE (330) 786-2208, EIGHTEEN (18) DAYS PRIOR TO THE BEGINNING OF WORK.

3. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR BE PERMITTED TO HAVE SUCCESSIVE WORK ZONES UNLESS THE DISTANCE BETWEEN THE DRUMS, BARRICADES OR CONES EXCEEDS TWO (2) MILES RURAL OR ONE (1) MILE URBAN.

4. FOR ROUTES NOT ON THE PERMITTED LANE CLOSURE CHART, ONLY DURING OFF-PEAK PERIODS (ie ANY PERIOD OTHER THAN 6-8AM AND 3-6PM) SHALL THE CONTRACTOR INSTALL AND SUBSEQUENTLY RESET ALL TRAFFIC CONTROL NECESSARY FOR THE WORK ZONE FOR EACH CONSTRUCTION PHASE.

5. A QUANTITY OF 100 CU. YDS. OF ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC SHALL BE PROVIDED FOR USE IN MAINTAINING PAVEMENT, SHOULDERS AND OTHER LOCATIONS AS DIRECTED BY THE ENGINEER.

6. PRIOR TO OPENING TO TRAFFIC EACH LANE SHALL BE IN A SAFE, PASSABLE CONDITION. ALL TRANSVERSE JOINTS SHALL EXTEND ACROSS THE FULL LANE AND SHOULDER WIDTH AND EACH LANE SHALL BE FREE FROM UNEVEN LONGITUDINAL JOINTS. THE CONTRACTOR SHALL PROVIDE ASPHALT WEDGES FOR TRANSVERSE JOINTS WHEREVER THERE ARE PAVEMENT ELEVATION DIFFERENCES.

7. THE CONTRACTOR SHALL PLACE THE SIGNS: W8-1 [BUMP] PER OMUTCD 2C.28; W8-11 [UNEVEN LANES] PER OMUCTD 6F.45; AND W6-3 [TWO-WAY TRAFFIC] PER OMUTCD 6F.32. PAYMENT FOR THESE SIGNS SHALL BE INCIDENTAL TO THE LUMP SUM ITEM 614- MAINTAINING TRAFFIC. AN ESTIMATED QUANTITY OF FIFTEEN (15) ITEM 614 WORK ZONE MARKING SIGNS HAS BEEN INCLUDED IN THE PLANS PER CMS 614.04.

8. THE CONTRACTOR SHALL SET A WORK ZONE AT THE REQUEST OF THE ENGINEER TO ALLOW THE LAYOUT OF THE PARTIAL/FULL DEPTH PAVEMENT REPAIR AREAS. THIS WORK IS INCIDENTAL TO ITEM 614 MAINTAINING TRAFFIC.

ADVANCED NOTICE TO PAVE

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL TO THE DISTRICT CONSTRUCTION ENGINEER A DETAILED SCHEDULE 15 DAYS PRIOR TO THE PLACEMENT OF THE OVERLAY COURSES, ON HOW THEY PROPOSE TO PROSECUTE THE PAVING OPERATIONS. THE DETAILS SHALL SHOW THE ORDER OF PERFORMANCE OF EACH STAGE (START TO FINISH) OF THE WORK INCLUDING THE MAINTENANCE OF TRAFFIC THAT WILL BE USED.

WINTER TIME LIMITATIONS

ALL RAMPS SHALL BE OPEN AND TRAFFIC SHALL BE MAINTAINED AS DESCRIBED IN THE SEQUENCE OF CONSTRUCTION AND AS DETAILED IN THE PLANS BETWEEN OCTOBER 15 AND APRIL 1. SHOULD THE CONTRACTOR FAIL TO MEET THESE REQUIREMENTS, A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF $325 PER MINUTE PER LANE.

TIME LIMITATION ON A DETOUR

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, EXCEPT AS FOLLOWS:

ROAD OR RAMP CLOSURE	DURATION OF CLOSURE (CALENDAR DAYS)	DISCINCENTIVE ($ PER CALENDAR DAY)
WARNER RD.	1x - 30 DAYS*	$2,250
WARNER RD.	3x - 45 DAYS EACH*	$2,250
RAMP B	45 DAYS	$16,250
RAMP B-1	45 DAYS	$3,250
RAMP B-2	45 DAYS	$16,500
RAMP C-1	45 DAYS	$7,000
RAMP C-2	270 DAYS	$5,250
RAMP D	45 DAYS	$8,250
PHASE 2	270 DAYS**	$16,500
PHASE 1B	30 DAYS	$7,000
RAMP C	45 DAYS	&4,000

* - WARNER ROAD IS PERMITTED TO CLOSE AS FOLLOWS:
-PHASE 1 - 45 DAYS FOR MEDIAN BRIDGE WORK.
-PHASE 1 - 30 DAYS FOR WARNER RD. LOWERING.
-PHASE 2 - 45 DAYS FOR NB OUTSIDE BRIDGE WORK.
-PHASE 3 - 45 DAYS FOR SB OUTSIDE BRIDGE WORK.

THE WARNER RD DETOUR SHALL NOT TAKE PLACE IN AUGUST OF ANY YEAR. THE CONTRACTOR SHALL COORDINATE THE WARNER RD CLOSURE WITH THE FIRESTONE COUNTRY CLUB. WARNER RD SHALL NOT BE CLOSED DURING ANY MAJOR GOLF EVENTS. EXPECTED DATES:
2021 - 6/18 THRU 6/28
2022 - 7/1 THRU 7/20
2023+ - TO BE DETERMINED
BRIDGESTONE GOLF CONTACT:
DON PADGETT III
EXECUTIVE DIRECTOR
BRIDGESTONE SENIOR PLAYERS
ADDRESS: 440. E WARNER ROAD
AKRON, OH 44319
PHONE: 330 245 2305
EMAIL: DPADGETT@PGATOURHO.COM

** - THIS DETOUR SHALL BE IN EFFECT FOR PHASE 2 WHEN RAMP B-2 IS INACESSIBLE TO NON-CONTRAFLOW NB 77 TRAFFIC.

DETOUR NOTIFICATION

THE CONTRACTOR SHALL ADVISE THE ODOT DISTRICT OFFICE (330-786-3148) EIGHTEEN (18) DAYS IN ADVANCE OF WHEN THE DETOUR ROUTE SHOULD BE IN EFFECT. ALL WORK ZONE DEVICES REQUIRED SHALL BE FURNISHED, ERECTED, MAINTAINED, AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. PAYMENT FOR ALL WORK ASSOCIATED WITH THE DETOUR SHALL BE INCLUDED UNDER THE LUMP SUM BID FOR ITEM 614, DETOUR SIGNING.

LANE CLOSURES

DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AS PER THE PERMITTED LANE CLOSURE CHART. THE PERMITTED LANE CLOSURE CHART USED FOR THIS PROJECT SHALL BE THE MOST CURRENT CHART AVAILABLE ON THE DATE THIS PROJECT SELLS.

THE CHART CAN BE FOUND AT: http://plcm.dot.state.oh.us

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THE REQUIREMENTS IN THE CHART, THE CONTRACTOR SHALL BE ASSESSED DISINCENTIVES IN THE AMOUNT OF $10,000 PER HOUR OR PORTION THEREOF THAT THE LANE REDUCTION REMAINS BEYOND THE SPECIFIED LIMIT.

NOTICE OF CLOSURE SIGN

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.

NOTICE OF CLOSURE SIGN TIME TABLE		
ITEM	DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
RAMP & ROAD CLOSURES	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	7 CALENDAR DAYS PRIOR TO CLOSURE
	< 12 HOURS	2 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.

SEQUENCE OF CONSTRUCTION

SEE TABLE ON SHEET 74A FOR REVISED SEQUENCE OF CONSTRUCTION.

PRE-PHASE 1 (NO SHEETS PROVIDED)

1. UTILIZE ALLOWABLE LANE CLOSURES IN ACCORDANCE WITH THE PERMITTED LANE CLOSURE CHART TO INSTALL THE FOLLOWING STORM CROSSINGS:

PIPE REFERENCE	SIZE	ALIGNMENT	STATION	SIDE
P-11	15"	CL I-77	425+00.00	LT
P-63	15"	CL I-77	427+40.00	LT
P-12	15"	CL I-77	428+50.00	LT
P-14	15"	CL I-77	432+50.00	LT
P-18	15"	CL I-77	444+10.00	LT
P-22	24"	CL I-77	458+10.00	RT
P-28	42"	BL I-77 SB	492+00.00	RT/LT
P-42	15"	BL I-77 SB	494+00.00	RT/LT

2. INSTALL ALL PROPOSED OVERHEAD SIGN STRUCTURES, FOUNDATIONS AND TEMPORARY GUIDE SIGNS. PROVIDE POSITIVE PROTECTION WHEN WORKING WITHIN THE CLEAR ZONE.

3. INSTALL TEMPORARY PAVEMENT ON I-77 NORTHBOUND BETWEEN STATIONS 504+32 AND 508+49 AND ON I-77 SOUTHBOUND BETWEEN STATIONS 505+70 AND 513+15 FOR USE IN PHASE 1.

PHASE 1 (SHEETS 128 TO 156)

1. SHIFT NB AND SB I-77 LANES ONTO THE OUTSIDE SHOULDERS.

2. CONSTRUCT THE NB I-77 CROSSOVER PAVEMENT, AND RECONSTRUCT THE MEDIAN AND INSIDE LANES OF I-77 NB AND SB INCLUDING INSIDE CONSTRUCTION OF STRUCTURES SUM-77-0802L (SB I-77 OVER WARNER RD.), SUM-77-0802R (NB I-77 OVER WARNER RD.), SUM-77-0810L (SB I-77 OVER TUSCARAWAS RIVER), AND SUM-77-810R (NB I-77 OVER TUSCARAWAS RIVER).

3. CLOSE THE OUTSIDE LANE OF RAMP A.

4. BEGIN CONSTRUCTION OF RAMP B-2 WHILE MAINTAINING ACCESS TO EXISTING RAMP B-2.

5. SHIFT RAMP C TRAFFIC ONTO THE OUTSIDE SHOULDER. CONSTRUCT THE INSIDE HALF OF THE RAMP, INCLUDING TEMPORARY PAVEMENT FOR MAINTAINING TRAFFIC IN THE NEXT PHASE.

6. CLOSE AND DETOUR RAMP C-2 TRAFFIC. CONSTRUCT RAMP C-2 INCLUDING STRUCTURE SUM-77-0927R (RAMP C-2 OVER I-77 NB). WHEN REMOVING OR SETTING BEAMS THE CONTRACTOR MAY CLOSE I-77 AND DETOUR TRAFFIC UTILIZING RAMP C, US 224, KELLY AVE. AND RAMP D NIGHTLY BETWEEN 12:00 AM AND 4:00 AM. THE DETOUR WILL UTILIZE 3 PCMS. PAYMENT SHALL BE INCLUDED IN ITEM 614 - MAINTAINING TRAFFIC. NIGHTLY SINGLE LANE CLOSURES SHALL BE PERMISSIBLE ON I-77 NB, CONTRACTOR SHALL FOLLOW ODOT PLCM REGARDING CLOSURE TIMES AND DURATIONS.

7. MAINTAIN TRAFFIC ON ALL OTHER RAMPS.

8. CLOSE AND DETOUR WARNER RD. TRAFFIC. CONSTRUCT WARNER RD. UNDER I-77.

REVISIONS		
NO.	DATE	DESCRIPTION
2	04/05/21	REVISED NOTE TO ALLOW DETOUR
4	04/20/21	REVISED SEQUENCE OF CONSTRUCTION
8	04/30/21	REVISED WARNER RD CLOSURES

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MOT PLAN NOTES

SUM-77/277/224
VARIOUS

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COOPERATION BETWEEN CONTRACTORS

THE CONTRACTOR SHALL BE ADVISED THAT PROJECT SUM-76/77/8-08.42/09.77/00.00 (PID 102329) MAY BE ONGOING IN AN AREA IMMEDIATELY ADJACENT TO AND WITHIN THE PROJECT LIMITS OF THIS PROJECT AND SHALL HAVE PRIORITY TO THIS PROJECT. THE CONTRACTOR SHALL SCHEDULE HIS WORK SO AS TO CAUSE A MINIMUM OF DELAY OR CONFLICT WITH THE OTHER PROJECTS.

TO AVOID CONFLICTING WORK ZONES WITH THE ADJACENT PROJECT (PID 102329), THE SEQUENCE OF CONSTRUCTION WILL BE REVISED PER THE TABLE BELOW. A 24 FOOT LATERAL TRAFFIC SHIFT WILL BE REQUIRED TO PERFORM PHASES 2B AND 2D WHILE NORTHBOUND TRAFFIC IS IN THE PHASE 3 PATTERN. THE SHIFT WILL BE PER MT-102.10. THE ESTIMATED QUANTITIES BELOW ARE FOR THE TRAFFIC SHIFT:

ITEM 614 WORK ZONE EDGE LINE, CLASS I, 6" AS PER PLAN	1.5 MILE
ITEM 614 WORK ZONE LANE LINE, CLASS I, 6"AS PER PLAN	0.7 MILE
ITEM 614 WORK ZONE CHANNELZING LINE, CLASS I, 12" AS PER PLAN	4224 FT
ITEM 614 PORTABLE BARRIER, UNANCHORED	1800 FT
ITEM 614 OBJECT MARKER, ONE WAY	36 EACH
ITEM 614 BARRIER REFLECTOR, TYPE 1, 1 WAY	36 EACH

SEQUENCE OF CONSTRUCTION

PRECEDING PHASE	PHASE	DESCRIPTION	SUCCEDING PHASE	ANTICIPATED CONSTRUCTION YEAR
BEGIN WORK	PRE-PHASE 1	STORM DRAINAGE CROSSINGS, TEMPORARY PAVEMENT, GUIDE SIGNS, OVERHEAD SIGN STRUCTURES, PROCUREMENT (I.E. STUCTURAL STEEL, NOISE BARRIER, ETC.)	1	2021
PRE-PHASE 1	1	CONSTRUCT CROSSOVER PAVEMENT, RECONSTRUCT THE MEDIAN AND INSIDE LANES OF I-77 NB & SB INCLUDING STRUCTURES.	PRE-PHASE 2	2021-2022
1	PRE-PHASE 2	INSTALL DMS SIGN ON I-77 AND REPLACE SIGN TRUSS ON I-277.	3	2022
PRE-PHASE 2	3*	CONSTRUCT OUTSIDE PORTION OF I-77 SB FOR THE ENTIRE LENGTH OF THE PROJECT. CONSTRUCT PHASE 3 CROSSOVERS.	1A	2022-2023
3	1A	RAMP B-2	1B	2023
1A	1B	LEFT SIDE OF I-77 NB BETWEEN STA. 469+50 AND 783+00.	1C	2023
1B	1C	INSIDE HALF OF THE I-77 NB PAVEMENT THROUGH THE I-277 INTERCHANGE.	2	2023
1B	2E	INSIDE PORTION OF MAINLINE I-77 NB FROM STA. 513+50 TO THE WATERLOO ROAD BRIDGE.	2	2023
1C/2E	2*	I-77 NB OUTSIDE PAVEMENT RECONSTRUCTION SOUTH OF THE I-277 INTERCHANGE.	4	2023-2024
2	4	SURFACE COURSE AND FINAL PAVMEENT MARKINGS.	COMPLETION	2024

* SHALL INCLUDE SUB-PHASES EXCEPT AS NOTED IN THE TABLE BELOW

PHASE	DESCRIPTION	CONSTRAINTS	ANTICIPATED CONSTRUCTION YEAR
2B	RAMP C-1, THE OUTSIDE PORTION OF I-77 NB IN THE AREA OF THE ACCELERATION LANE, OUTSIDE PORTIION OF I-277 EB IN THE AREA OF THE DECELERATION AREA	CONSTRUCTED WHILE THE RAMP IS CLOSED FOR PID 102329	2022
2C	OPENING RAMP C-1	DUE TO PID 102329, PHASE MAY NOT BE NEEDED	2022
2D	RAMP D, THE OUTSIDE PORTION OF I-77 NB IN THE AREA OF THE ACCELERATION LANE, OUTSIDE PORTION OF I-277 EB IN THE AREA OF THE DECELERATION AREA	CONSTRUCTED WHILE THE RAMP IS CLOSED FOR PID 102329	2022
2F	OPENING RAMP D	DUE TO PID 102329, PHASE MAY NOT BE NEEDED	2022
3	RAMP B	CONSTRUCTED WHILE THE RAMP IS CLOSED FOR PID 102329	2023

REVISIONS

NO.	DATE	DESCRIPTION
4	04/20/21	REVISED SEQUENCE OF CONSTRUCTION

MOT PLAN NOTES

SUM-77 / 277 / 224
VARIOUS

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PHASE 1A (SHEETS 171 TO 174)

1. MAINTAIN THE NB MOT FROM PHASE 1 EXCEPT AS INDICATED BELOW.

2. CONSTRUCT THE TEMPORARY SIGNAL AT THE KELLY AVE. AND US-224 WB RAMPS INTERSECTION FOR USE WHILE RAMP B-2 IS CLOSED AND TRAFFIC IS DETOURED.

3. CLOSE RAMP B-2 AND DETOUR TRAFFIC. CONSTRUCT RAMP B-2 FROM I-77 NB TO THE RAMP B GORE.

PHASE 1B (SHEETS 175 TO 180)

1. OPEN THE NEW RAMP B-2. CONTINUE CONSTRUCTION OF INSIDE NB-77 PAVEMENT.

PHASE 1C (SHEETS 181 TO 185)

1. SHIFT THE TEMPORARY EXIT TO RAMP B-2 TO THE SOUTH. CONSTRUCT THE REMAINDER OF THE RAMP B-2 GORE.

WINTER SHUTDOWN SEASON 1 (SHEETS 186 TO 190)

~~1. OPEN RAMP C-2.~~

2. AT THE END OF THE FIRST CONSTRUCTION SEASON, REOPEN WARNER RD. WITH THE FINAL PERMANENT PAVEMENT MARKINGS PLACED PER THE TRAFFIC CONTROL PLAN. MAINTAIN THE I-77 NB AND SB TRAFFIC IN THEIR PHASE 1 MOT LANE ARRANGEMENT.

PRE-PHASE 2 (NO SHEETS PROVIDED)

1. THE CONTRACTOR SHALL PRIORITIZE INSTALLING THE DMS TRUSS SIGN AT STATION 424+07 EARLY IN THE PHASE 2 CONSTRUCTION. THE INTENT IS TO UTILIZE THE DMS TRUSS TO ASSIST IN INFORMING THE TRAVELING PUBLIC OF CHANGES DUE TO MOT PATTERNS. THE CONTRACTOR SHALL UTILIZE A PCMS ASSEMBLY AT STATION 424+07 DURING PHASE 1 AND OVER WINTER BETWEEN PHASES 1 AND 2. THE PCMS ASSEMBLY SHALL BE EQUIPPED WITH A MODEM THAT SHALL BE PROVIDED BY CENTRAL OFFICE. ONCE THE DMS TRUSS HAS BEEN CONSTRUCTED AND THE ITS EQUIPMENT HAS BEEN RELOCATED AND IS COMPLETELY FUNCTIONAL, THE CONTRACTOR MAY REMOVE THE PCMS ASSEMBLY. ALL EQUIPMENT, LABOR, AND MATERIALS REQUIRED TO FURNISH, INSTALL, AND SUBSEQUENTLY REMOVE THE PCMS ASSEMBLY AND MODEM SHALL BE INCIDENTAL TO ITEM 614 - MAINTAINING TRAFFIC.

PRE-PHASE 2 (SHEETS 200 TO 202)

1. CLOSE THE INSIDE LANE OF EB I-277/US-224. SHIFT THE SINGLE WB US-224 THRU LANE ONTO THE OUTSIDE EXISTING PAVEMENT. REMOVE AND REPLACE THE EXISTING MEDIAN BARRIER, MEDIAN PAVEMENT, AND OVER HEAD SIGN TRUSS.

PHASE 2 (SHEETS 203 TO 230)

1. MAINTAIN I-77 SB TRAFFIC IN THE PHASE 1 MOT LANE ARRANGEMENT. SHIFT THE INSIDE LANE OF I-77 NB INTO A CONTRAFLOW LANE ON THE SB SIDE OF I-77 USING THE NB CROSSOVERS CONSTRUCTED IN THE PREVIOUS PHASE. SHIFT THE RIGHT TWO LANES OF I-77 NB TO THE INSIDE SHOULDER AND LANES COMPLETED IN PHASE 1. CONSTRUCT THE I-77 NB OUTSIDE SHOULDER AND LANES FROM THE SOUTHERN PROJECT LIMITS TO THE RAMP C-1 GORE.

2. CLOSE AND DETOUR RAMP B TRAFFIC. CONSTRUCT RAMP B.

PHASE 2 CONT'D

3. SHIFT RAMP C TRAFFIC ONTO THE INSIDE SHOULDER AND TEMPORARY PAVEMENT CONSTRUCTED IN THE PREVIOUS PHASE. CONSTRUCT THE OUTSIDE HALF OF THE RAMP.

4. MAINTAIN TRAFFIC ON ALL OTHER RAMPS.

PHASE 2A (SHEETS 231 TO 237)

1. MAINTAIN PHASE 2 MOT TRAFFIC PATTERNS EXCEPT AS INDICATED BELOW.

2. REOPEN RAMP B.

3. SHIFT RAMP B-2 TRAFFIC ONTO THE INSIDE SHOULDER. CONSTRUCT THE OUTSIDE HALF OF RAMP B-2 FROM THE RAMP B GORE TO US-224/I-227 WB.

4. SHIFT US-224/I-227 WB TRAFFIC ONTO THE INSIDE SHOULDER.

5. CONSTRUCT THE OUTSIDE SHOULDER AND LANES OF US-224/I-227 WB FROM THE RAMP B-1 GORE TO THE WESTERN LIMITS OF CONSTRUCTION.

PHASE 2B (SHEETS 238 TO 242)

1. MAINTAIN PHASE 2A MOT TRAFFIC PATTERNS EXCEPT AS INDICATED BELOW.

2. SHIFT RAMP B-2 BACK TO ITS NORMAL ALIGNMENT.

3. SHIFT US-224/I-227 WB BACK TO ITS NORMAL ALIGNMENT.

4. CLOSE AND DETOUR RAMP C-1 TRAFFIC. CONSTRUCT RAMP C-1 AND THE I-77 NB OUTSIDE SHOULDER AND LANES FROM RAMP C-1 TO THE RAMP D GORE.

PHASE 2C (SHEETS 243 TO 246)

1. MAINTAIN PHASE 2B MOT TRAFFIC PATTERNS EXCEPT AS INDICATED BELOW.

2. REOPEN RAMP C-1.

PHASE 2D (SHEETS 247 TO 251)

1. MAINTAIN PHASE 2C MOT TRAFFIC PATTERNS EXCEPT AS INDICATED BELOW.

2. MODIFY THE SIGNAL TIMINGS OF THE EXISTING SIGNAL AT THE INTERSECTION OF S. MAIN ST. AND US-224 WB RAMPS WHEN RAMP D IS CLOSED AND TRAFFIC IS DETOURED.

3. CLOSE AND DETOUR RAMP D TRAFFIC. CONSTRUCT RAMP D AND OUTSIDE HALF OF THE APPROACH SLAB OF I-77 NB OVER E. WATERLOO RD.

PHASE 2E (SHEETS 252 TO 254)

1. MAINTAIN PHASE 2D MOT TRAFFIC PATTERNS EXCEPT AS INDICATED BELOW.

2. SHIFT I-77 NB TRAFFIC TO THE OUTSIDE SHOULDER AND LANES BETWEEN THE RAMP D GORE AND I-77 NB OVER E. WATERLOO RD. AND CONSTRUCT THE INSIDE HALF OF THE APPROACH SLAB OF I-77 NB OVER E. WATERLOO RD.

PHASE 2F (SHEETS 255 TO 260)

1. MAINTAIN PHASE 2E MOT TRAFFIC PATTERNS EXCEPT AS INDICATED BELOW.

2. RESTORE I-77 NB TRAFFIC TO THE PHASE 2 LANE ARRANGEMENT NORTH OF THE RAMP D GORE AND REOPEN RAMP D.

PHASE 2G (SHEETS 261 TO 266)

1. MAINTAIN PHASE 2F MOT TRAFFIC PATTERNS EXCEPT AS INDICATED BELOW.

2. CLOSE THE RIGHT LANE OF US-224 EB APPROACHING THE RAMP C GORE AND SHIFT RAMP C INTO THE CLOSED LANE. CONSTRUCT THE OUTSIDE SHOULDER AND LANES OF US-224 EB FROM RAMP C TO S. ARLINGTON ST.

PHASE 2H (SHEETS 267 TO 276)

1. MAINTAIN PHASE 2G MOT TRAFFIC PATTERNS EXCEPT AS INDICATED BELOW.

2. PLACE THE RIGHT LANE OF US-224 EB AND RAMP C-2 TO THEIR FINAL LANE ARRANGEMENT. REMOVE THE RAMP C TEMPORARY PAVEMENT.

3. SHIFT RAMP C TRAFFIC AT THE I-77 NB/RAMP C GORE ONTO THE OUTSIDE PAVEMENT. CONSTRUCT THE REMAINDER OF THE I-77 NB/RAMP C GORE.

PHASE 2I (SHEETS 277 TO 279)

1. THIS PHASE MAY OCCUR AT ANY POINT AFTER PHASE 2 WHEN THE S. ARLINGTON RD. TO I-77 NB RAMPS TEMPORARY PAVEMENT IS COMPLETE.

2. MAINTAIN PHASE 2 MOT TRAFFIC PATTERNS EXCEPT AS INDICATED BELOW.

3. USING TEMPORARY PAVEMENT, SHIFT THE S. ARLINGTON RD. TO I-77 NB RAMPS ONTO I-77 NB. CONSTRUCT THE S. ARLINGTON RD. TO I-77 NB RAMP, GORE, AND PORTIONS OF I-77 NB OUTSIDE LANES.

PHASE 2J (SHEETS 280 TO 284)

1. MAINTAIN PHASE 2I MOT TRAFFIC PATTERNS EXCEPT AS INDICATED BELOW.

2. SHIFT THE S. ARLINGTON RD. TO I-77 NB RAMP TRAFFIC ONTO THE COMPLETED PAVEMENT AND REMOVE THE TEMPORARY PAVEMENT.

WINTER SHUTDOWN SEASON 2 (NOT SHEETS PROVIDED)

1. AT THE END OF THE SECOND CONSTRUCTION SEASON, MAINTAIN THE I-77 SB LANES IN THE PHASE 2 LANE ARRANGEMENT. PLACE THE NB LANES IN THE PHASE 3 LANE ARRANGEMENT. REOPEN ALL RAMPS.

2. REMOVE THE NB CROSSOVERS AND RECONSTRUCT THE NB INSIDE SHOULDER FROM APPROXIMATELY STA. 371+50 TO STA. 372+57.

3. PRIOR TO PHASE 3, CONSTRUCT THE SB CROSSOVERS.

PHASE 3 (SHEETS 318 TO 346)

1. SHIFT I-77 NB TRAFFIC ONTO THE OUTSIDE NEWLY CONSTRUCTED PAVEMENT COMPLETED IN THE PREVIOUS PHASE. SHIFT THE INSIDE THIRD LANE OF I-77 SB INTO A CONTRAFLOW LANE ON THE NB SIDE OF I-77 USING THE SB CROSSOVERS CONSTRUCTED PRIOR TO THIS PHASE. SHIFT THE RIGHT TWO LANES OF I-77 SB TO THE INSIDE NEWLY CONSTRUCTED PAVEMENT COMPLETED IN PHASE 2. CONSTRUCT THE I-77 SB OUTSIDE SHOULDER AND LANES. RECONSTRUCT THE I-77 NB SHOULDER FROM APPROXIMATELY STA. 368+00 TO STA. 370+00.

2. CLOSE AND DETOUR RAMP B-1 TRAFFIC. CONSTRUCT RAMP B-1.

3. CLOSE THE OUTSIDE THIRD LANE OF US-224/I-277 EB. UTILIZE A DROP LANE AT THE US-224/I-277 EB AND RAMP A GORE. SHIFT RAMP A TRAFFIC TO THE INSIDE OF RAMP A. CONSTRUCT THE OUTSIDE HALF OF RAMP A AND INSTALL TEMPORARY PAVEMENT TO BE UTILIZED WITH PHASE 3B.

PHASE 3A (SHEETS 352 TO 358)

1. MAINTAIN PHASE 3 MOT TRAFFIC PATTERNS EXCEPT AS INDICATED BELOW.

2. REOPEN RAMP B-1.

PHASE 3B (SHEETS 359 TO 364)

1. MAINTAIN PHASE 3A MOT TRAFFIC PATTERNS EXCEPT AS INDICATED BELOW.

2. SHIFT RAMP A TRAFFIC ONTO THE OUTSIDE NEWLY CONSTRUCTED PAVEMENT AND TEMPORARY PAVEMENT COMPLETED IN PHASE 3. CONSTRUCT THE INSIDE OF RAMP A, THE RAMP A/US-224 EB/I-77 EB GORE, AND THE RAMP A/I-77 SB GORE.

POST PHASE 3B (NO SHEETS PROVIDED)

AT ANY POINT AFTER PHASE 3B HAS BEEN COMPLETED UTILIZE A SHOULDER CLOSURE PER ODOT STANDARD CONSTRUCTION DRAWING MT-95.45 TO CLOSE THE OUTSIDE SHOULDER OF RAMP A FROM APPROXIMATE STATION 107+50 TO STATION 112+00. REMOVE THE TEMPORARY PAVEMENT USED IN A PREVIOUS PHASE, PREFORM FINAL GRADING, AND INSTALL THE REMAINDER OF THE MISSING GUARDRAIL.

PHASE 4 (SHEETS 393 TO 401)

1. CONSTRUCT FINAL PAVEMENT WEARING COURSE AND INSTALL ALL FINAL PAVEMENT MARKINGS AND TRAFFIC CONTROL DEVICES UTILIZING ALLOWABLE LANE CLOSURES IN ACCORDANCE WITH THE PERMITTED LANE CLOSURE CHART.

2. PLACE ALL LANES AND RAMPS INTO THEIR FINAL LANE CONFIGURATION.

3. CLOSE THE I-77 SB INSIDE LANE FROM STA. 368+00 TO STA. 373+00 IN ORDER TO REMOVE THE SOUTHERN SB CROSSOVER, RECONSTRUCT THE I-77 SB INSIDE SHOULDER, AND CONSTRUCT THE MEDIAN BARRIER. UPON COMPLETION, REOPEN ALL I-77 SB LANES.

4. REMOVE THE NORTHERN I-77 SB CROSSOVER UTILIZING SHOULDER CLOSURES IN ACCORDANCE WITH MT-95.45 AND PLACE FINAL GUARD RAIL.

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MOT PLAN NOTES

SUM-77 / 277 / 224
VARIOUS

REVISIONS		
NO.	DATE	DESCRIPTION
4	04/20/21	REVISED SEQUENCE OF CONSTRUCTION

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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.

METHOD OF PAYMENT

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.

ITEM 614 - MAINTAINING TRAFFIC LS

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 1,400 M. GAL.

PRIOR TO FINAL PAVEMENT MARKINGS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE WHILE INSTALLING THE FINAL WEARING COURSE PRIOR TO INSTALLING THE FINAL PAVEMENT MARKINGS PER THE TRAFFIC CONTROL PLAN:

ITEM 614 - WORK ZONE LANE LINE, CLASS II, 6"
24 MI.
ITEM 614 - WORK ZONE GORE MARKING, CLASS II
25,500 FT.

ITEM 622, PORTABLE BARRIER, 50", AS PER PLAN

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 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 SHUTDOWNS.

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 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
13 EACH

APPROVED MAINTENANCE OF TRAFFIC (MOT) POLICY EXCEPTION(S)

PORTIONS OF THE MOT PLANS AS DESCRIBED BELOW HAVE BEEN APPROVED BY THE MOT EXCEPTION COMMITTEE (MOTEC) OR THE PROJECT IMPACT ADVISORY COUNCIL (PIAC) PER TRAFFIC MANAGEMENT IN WORK ZONES POLICY (21-008(P)) AND STANDARD PROCEDURE (123-001(SP)).

APPROVED MOT EXCEPTION(S) INCLUDE:

1. LESS THAN 2' OFFSET BETWEEN LANE AND BARRIER, AND BARRIER AND WORK ZONE ON I-77 SOUTHBOUND BENEATH THE RAMP B-2 BRIDGE IN PHASES 1 AND 3. 1' OFFSETS MUST BE UTILIZED IN ORDER TO CONSTRUCT THIS AREA IN TWO HALVES.

2. LESS THAN 2' OFFSETS BETWEEN LANE AND BARRIER, AND BARRIER AND WORK ZONE ON I-77 NORTHBOUND AND SOUTHBOUND ON THE TUSCARAWAS RIVER BRIDGE. LESS THAN 2' OFFSET MUST BE UTILIZED IN ORDER TO ACCOMODATE CONSTRUCTION OF THE BRIDGE.

3. ASPHALT CONSTRUCTION SHALL BE REQUIRED ON I-77 SOUTHBOUND FROM THE I-77 SOUTHBOUND/RAMP A GORE TO THE WATERLOO APPROACH SLAB. LANE ARRANGEMENTS AND PAVEMENT WIDTHS WILL NOT ALLOW FOR JOINTS TO BE LOCATED ON FUTURE LANE LINES.

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 REPRESENTATIVES FROM THE CITY OF AKRON, 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 106002 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 APPLICABLE ODOT CENTRAL OFFICE COMMITTEE (MOTEC OR PIAC). 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 APPLICABLE ODOT CENTRAL OFFICE COMMITEE. IN THE EVENT THE PROPOSED CHANGES ARE APPROVED IN WRITING, THE CLOSURES ARE STILL SUBJECT TO NOTIFICATION REQUIREMENTS WITHIN THIS NOTE PRIOR TO IMPLEMENTATION.

CALCULATED JAR CHECKED JML

MOT PLAN NOTES

SUM-77 / 277 / 224
VARIOUS

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WORK ZONE SPEED ZONES (WZSZS)

THE FOLLOWING WORK ZONE SPEED ZONE (WZSZ) SPEED LIMIT REVISION(S) HAVE BEEN APPROVED FOR USE ON THIS PROJECT WHEN WORK ZONE CONDITIONS AND FACTORS ARE MET AS DESCRIBED BELOW:

WZSZ REVISION NUMBER(S)	CTE-RTE-SEC	DIRECTION
--	SUM-77-VAR	NORTHBOUND
--	SUM-77-VAR	SOUTHBOUND

POTENTIAL WZSZ LOCATIONS SHALL HAVE AN ORIGINAL (PRECONSTRUCTION) POSTED SPEED LIMIT OF 55 MPH OR GREATER, A QUALIFYING WORK ZONE CONDITION OF AT LEAST 0.5 MILE IN LENGTH, AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS, AND A WORK ZONE CONDITION IN PLACE THAT REDUCES THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS (I.E., LANE CLOSURE, LANE SHIFT, CROSSOVER, CONTRAFLOW AND/OR SHOULDER CLOSURE). THE LENGTH OF THE WORK ZONE CONDITION IS MEASURED FROM THE BEGINNING OF THE TAPER FOR THE SUBJECT WORK ZONE CONDITION IMPACTING THE TRAVEL LANES AND/OR SHOULDER TO THE END OF THE DOWNSTREAM TAPER, WHERE DRIVERS ARE RETURNED TO TYPICAL ALIGNMENT. AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS IS REQUIRED TO BALANCE THE ADDITIONAL EXPOSURE CREATED BY INSTALLING AND REMOVING WZSZ SIGNING WITH THE TIME NEEDED TO COMPLETE THE WORK.

IF THE WORK ZONE MEETS THESE MINIMUM CRITERIA, IT SHALL BE ANALYZED FURTHER USING TABLE 1 BELOW TO DETERMINE IF AND WHEN IT QUALIFIES FOR A SPEED LIMIT REDUCTION. DEPENDING ON THE ORIGINAL POSTED SPEED LIMIT, THE TYPE OF TEMPORARY TRAFFIC CONTROL USED, AND WHETHER OR NOT WORKERS ARE PRESENT, A WARRANTED WZSZ WILL VARY IN THE APPROVED SPEED LIMIT TO BE POSTED OVER TIME.

C&MS ITEM 614, PARAGRAPH 614.02(B), INDICATES THAT 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 LIMIT REDUCTION IN THE DIRECTION OF THE WORK DOES NOT AUTOMATICALLY CONSTITUTE A SPEED LIMIT REDUCTION IN THE OPPOSITE DIRECTION. EACH DIRECTION SHALL BE ANALYZED INDEPENDENTLY FROM EACH OTHER.

ALL WZSZS FLUCTUATE BETWEEN TWO APPROVED REDUCED SPEED LIMITS OR BETWEEN AN APPROVED REDUCED SPEED LIMIT AND THE ORIGINAL POSTED SPEED LIMIT. ONLY ONE OF TWO SIGNING STRATEGIES SHALL BE USED TO IMPLEMENT A WZSZ.

WZSZS USING DSL SIGN ASSEMBLIES SHALL BE IN ACCORDANCE WITH THE NOTE, APPROVED LIST, SUPPLEMENTAL SPECIFICATIONS (SS) 808 AND 908, AND TRAFFIC SCD MT-104.10.

ONLY ONE WARRANTED SPEED LIMIT APPLIES AT ANY ONE TIME; SPEED LIMIT REDUCTIONS ARE NOT CUMULATIVE. WZSZS SHALL NOT BE USED FOR MOVING/MOBILE ACTIVITIES, AS DEFINED IN OMUTCD PART 6.

WHEN LOOKING UP THE WARRANTED WORK ZONE SPEED LIMITS, ALWAYS USE THE ORIGINAL, PRECONSTRUCTION, POSTED SPEED LIMIT. DO NOT USE A PRIOR OR CURRENT WORK ZONE SPEED LIMIT AS A LOOK UP VALUE IN THE TABLE. POSITIVE PROTECTION IS GENERALLY REGARDED AS PORTABLE BARRIER OR OTHER RIGID BARRIER IN USE ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WITHOUT POSITIVE PROTECTION IS GENERALLY REGARDED AS USING DRUMS, CONES, SHADOW VEHICLE, ETC., ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WORKERS ARE CONSIDERED AS BEING PRESENT WHEN ON-SITE, WORKING WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WHEN THE WORK ZONE CONDITION REDUCING THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS IS REMOVED, THE SPEED LIMIT DISPLAYED SHALL RETURN TO THE ORIGINAL POSTED SPEED LIMIT.

TABLE 1: WARRANTED WORK ZONE SPEED LIMITS (MPH) FOR WORK ZONES ON HIGH-SPEED (55 MPH OR GREATER) MULTI-LANE HIGHWAYS

ORIGINAL POSTED SPEED LIMIT	WITH POSITIVE PROTECTION		WITHOUT POSITIVE PROTECTION	
	WORKERS PRESENT	WORKERS NOT PRESENT	WORKERS PRESENT	WORKERS NOT PRESENT
70	60	65	55	65
65	55	60	50	60
60	55	60	50	60
55	50	55	45	55

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 808 - DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY
288 SIGN MNTH
ASSUMING 8 DSL SIGN ASSEMBLY(IES) FOR 36 MONTH(S)

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.

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 - WORK ZONE CROSSOVER LIGHTING SYSTEM
2 EACH

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL), AS PER PLAN

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NONGATING 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 MANUFACTURER'S 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.

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MOT PLAN NOTES

SUM-77 / 277 / 224
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ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A PORTABLE CHANGEABLE MESSAGE SIGN, THE SIGN 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 DISTANCE 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. PCMS TRAILERS SHOULD BE DELINEATED.

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 PCMS SHOULD NOT BE LOCATED IN THE MEDIAN OF THE HIGHWAY UNLESS IT IS PROTECTED FROM BOTH DIRECTIONS OF TRAFFIC. 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 THE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS WILL BE OFF. ADDITIONALLY WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED, FACING AWAY FROM ALL TRAFFIC AND SHALL DISPLAY ONE OR MORE TYPE G YELLOW REFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE 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 CONTRACTOR. A LIST OF ALL PROPOSED PREPROGRAMMED MESSAGES WILL BE GIVEN TO THE ENGINEER PRIOR TO CONSTRUCTION. 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 OF 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, DE-ACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL [IN ACTIVE CELLULAR AREAS] ALLOW REMOTE SIGN ACTIVATION, DEACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF 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 WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24 HOURS PER DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THEIR USE. THE REQUIREMENT TO FURNISH, INSTALL, MAINTAIN AND REMOVE A PCMS UNIT ON THIS PROJECT SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES AS OUTLINED IN 614.02.

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 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 144 SIGN MONTH(S)
ASSUMING 4 PCM SIGN ASSEMBLY(IES) FOR 36 MONTH(S)

MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL/FLASHER INSTALLATIONS WITHIN THE PROJECT UNDER THE FOLLOWING CONDITIONS:

1. EXISTING SIGNAL/FLASHER 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/FLASHER 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 STATE OR THE CITY OF AKRON FOR POLICE SERVICES AND MAINTENANCE SERVICES BY CITY 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 6AM-9AM AND 3PM-6PM. 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 OFF-DUTY CITY OF AKRON POLICE, HIRED BY THE CONTRACTOR:

1. W. 224/277 EXIT RAMP AT S. MAIN ST. (THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF AKRON REGARDING MAINTENANCE OF THIS SIGNAL).

2. W. 224 ENTRANCE RAMP AT KELLY AVE.

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 MALFUNCTIONS INCLUDING:

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 REOCCURRENCE;

5. TIME OF COMPLETION OF THE REPAIR AND SYSTEM RESTORED TO FULL SERVICE.

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.

CALCULATED JAR CHECKED JML

MOT PLAN NOTES

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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 TCC 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 TCC 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 TCC 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 TCC 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 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 TCC 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 WORK DAY. THESE REPORTS SHALL INCLUDE A CHECKLIST OF ALL TTC MAINTENANCE ITEMS TO BE REVIEWED. A COPY OF THE FORM WILL BE PROVIDED AT THE PRECONSTRUCTION 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.

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.

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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.

ITEM 614, WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN

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.

THE FOLLOWING BID ITEMS HAVE BEEN QUANTIFIED IN THE MOT SUBSUMMARY:

ITEM 614 - WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN

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, MAINTAINING TRAFFIC, MISC.: 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.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE ON CONCRETE SURFACES:

ITEM 614 - MAINTAINING TRAFFIC, MISC.: WORK ZONE RAISED PAVEMENT MARKERS ON PERMANENT CONCRETE SURFACES	150 EACH

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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 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 PERMANENT CONCRETE BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE UNDER EITHER OF THE FOLLOWING CONDITIONS: ALONG TAPERS AND TRANSITION AREAS; OR 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 TRIPLESTACKED 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 CARRIED TO THE GENERAL SUMMARY FOR USE ON PERMANENT BARRIER:

ITEM 614 - BARRIER REFLECTOR, TYPE 1, ONE WAY	619 EACH
ITEM 614 - OBJECT MARKER, ONE-WAY	619 EACH
ITEM 614 - INCREASED BARRIER DELINEATION	30,950 FT

THE FOLLOWING BID ITEMS HAVE BEEN INCLUDED WITH THE MOT SUBSUMARRY FOR USE ON TEMPORARY BARRIER:

ITEM 614 - BARRIER REFLECTOR, TYPE 1, ONE WAY
ITEM 614 - OBJECT MARKER, ONE-WAY
ITEM 614 - INCREASED BARRIER DELINEATION

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.

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 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET.

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 WITH A 25 FOOT OFFSET FROM THE BARRIER REFLECTORS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE ON PERMANENT GUARDRAIL:

ITEM 614 - BARRIER REFLECTOR, TYPE 2, ONE WAY	240 EACH
ITEM 614 - OBJECT MARKER, ONE-WAY	240 EACH
ITEM 614 - INCREASED BARRIER DELINEATION	12,000 FT

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING THE ABOVE ITEM(S).

PORTABLE BARRIER PLACEMENT

DURING THE PLACEMENT OF THE PORTABLE BARRIER, TRAFFIC WILL BE PROHIBITED FROM OCCUPYING THE TRAVEL LANE ADJACENT TO THE BARRIER. THE BARRIER WILL BE PLACED AT NIGHT PER THE WORK HOUR RESTRICTION NOTE AND IN ACCORDANCE WITH THE PERMITTED LANE CLOSURE MAP. THE CLOSURE OF THE ADJACENT LANE WILL BE PER THE STANDARD DRAWING MT-95.30.

THE CONTRACTOR WILL SUBMIT A PLAN TO THE ENGINEER FOR APPROVAL SEVEN (7) DAYS IN ADVANCE OF THE PLANNED LANE CLOSURE. WORK WILL NOT BEGIN UNTIL APPROVAL OF THE PLANS HAS BEEN GRANTED.

ALL COSTS INVOLVED IN PLACING THE PORTABLE CONCRETE BARRIER WILL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 622 PORTABLE CONCRETE BARRIER.

ITEM 615, 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 CMS 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).
- 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).

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.

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 ZONE.

THE LEOS WORK AT THE DIRECTION OF THE ENGINEER. 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.

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. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. 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 WHICH 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	850 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.

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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 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 TABLE

ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS AND PIO
RAMP & ROAD CLOSURES	>= 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 12 HOURS	4 CALENDAR 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 UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

ITEM 614 - WORK ZONE LANE LINE, CLASS I, 6", AS PER PLAN
ITEM 614 - WORK ZONE EDGE LINE, CLASS I, 6", AS PER PLAN
ITEM 614 - WORK ZONE CHANNELIZING LINE, CLASS I, 12", AS PER PLAN
ITEM 614 - WORK ZONE DOTTED LINE, CLASS I, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 614.11:

1. ALL CLASS I EDGE LINES, LANE LINES, AND DOTTED LINES SHALL BE 6 INCHES WIDE AND CHANNELIZING MARKINGS SHALL BE 12 INCHES WIDE.

2. ALL CLASS I PAVEMENT MARKINGS SHALL BE SPRAY THERMOPLASTIC PER ODOT SPECIFICATION 648.

3. ALL CLASS I PAVEMENT MARKINGS SHALL CONTAIN WET REFLECTIVE BEADS AT AN APPLICATION RATE PER ODOT SPECIFICATION TABLE 614.11-1.

4. ALL CLASS I PAVEMENT MARKINGS SHALL NOT BE RECESSED.

PAYMENT FOR ALL MATERIAL, LABOR, EQUIPMENT, AND INCIDENTALS NECESSARY TO ACCOMPLISH THE ABOVE REQUIREMENTS SHALL BE INCLUDED WITH ITEM 614 - WORK ZONE PAVEMENT MARKING, CLASS I, AS PER PLAN.

COOPERATION BETWEEN CONTRACTORS

THE CONTRACTOR SHALL BE ADVISED THAT PROJECT SUM-76/77/8-08.42/09.77/00.00 (PID 102329) MAY BE ONGOING IN AN AREA IMMEDIATELY ADJACENT TO AND WITHIN THE PROJECT LIMITS OF THIS PROJECT AND SHALL HAVE PRIORITY TO THIS PROJECT. THE CONTRACTOR SHALL SCHEDULE HIS WORK SO AS TO CAUSE A MINIMUM OF DELAY OR CONFLICT WITH THE OTHER PROJECTS (IT MAY BE NECESSARY TO REVERSE PHASES 2 AND 3 IN ORDER TO BETTER ALIGN WITH PID 102329). IN ACCORDANCE WITH 105.08, THE CONTRACTOR SHALL ARRANGE WITH THE OTHER CONTRACTORS APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL RECEIVE DAILY APPROVALS FROM THE ENGINEER PRIOR TO COMMENCING ANY OPERATIONS. ANY CONFLICT BETWEEN CONTRACTORS INVOLVING WORK SCHEDULES, WORK AREA, OR COOPERATION SHALL BE RESOLVED BY THE ENGINEER. COMPENSATION FOR THE ABOVE COOPERATION SHALL BE INCIDENTAL TO THE VARIOUS PAY ITEMS INCLUDED WITHIN THIS PROJECT.

ITS MESSAGE BOARDS

THE EXISTING ITS MESSAGE BOARDS IN THE VICINITY OF THE PROJECT WILL BE UTILIZED TO PROVIDE SUPPLEMENTAL INFORMATION TO THE TRAVELING PUBLIC. THE CONTRACTOR WILL NOTIFY THE PROJECT ENGINEER ONE (1) WEEK IN ADVANCE OF ANY PHASE CHANGE ON I-77. THE PROJECT ENGINEER WILL COORDINATE WITH THE DISTRICT PUBLIC INFORMATION OFFICE TO GET THE ITS MESSAGE BOARDS ADJUSTED.

ITEM 614, MAINTAINING TRAFFIC, MISC.: RUMBLE STRIPS

THE RUMBLE STRIPS WILL BE PLACED AS SHOWN IN THE PLAN OR AS DIRECTED BY THE ENGINEER. RUMBLE STRIPS WILL BE INSTALLED EITHER ON TOP OF THE PAVEMENT USING HEAT-FUSED PREFORMED PLASTIC MATERIAL OR MILLED INTO THE PAVEMENT.

HEAT-FUSED PREFORMED PLASTIC RUMBLE STRIPS WILL BE FOUR [4] INCHES WIDE AND ONE HALF [0.5] INCH THICK IN PLACE. MILLED RUMBLE STRIPS WILL BE FOUR [4] INCHES WIDE AND ONE HALF [0.5] INCH INTO THE PAVEMENT. THE RUMBLE STRIPS WILL TRAVERSE THE TOTAL LANE WIDTH. THERE WILL BE TWO SECTIONS OF RUMBLE STRIPS. THE RUMBLE STRIPS MAY HAVE TO GO ACROSS TWO OR THREE LANES OF TRAFFIC.

THE FIRST RUMBLE STRIP SECTION SHOULD BE PLACED BEFORE THE ADVANCE WARNING DEVICES, THERE WILL BE TEN [10] TRANSVERSE STRIPS SIX [6] FEET APART. THE SECOND SECTION SHOULD BE PLACED A MINIMUM OF 250 FEET IN ADVANCE OF THE TRAFFIC CONDITION, THERE WILL BE TEN [10] TRANSVERSE STRIPS FIVE [5] FEET APART.

MATERIAL USED FOR THE RUMBLE STRIPS WILL BE 740.08 HEAT-FUSED PREFORMED PLASTIC MATERIAL, 125 MILS MINIMUM THICKNESS, ON THE ODOT APPROVED LIST. THE MANUFACTURERS RECOMMENDATIONS MUST BE FOLLOWED FOR INSTALLATION.

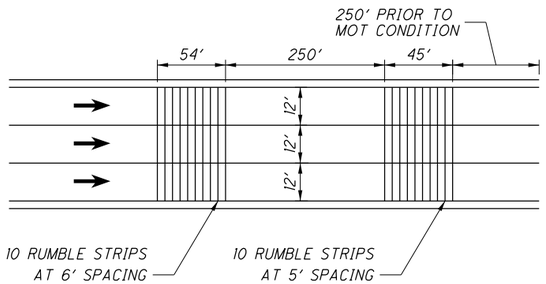
MILLED RUMBLE STRIPS, ALTHOUGH SELF-CLEANING TO A LIMITED EXTENT, SHOULD BE INSPECTED PERIODICALLY TO DETERMINE IF DEBRIS NEEDS TO BE REMOVED OR IF THEY NEED TO BE RE-MILLED.

RUMBLE STRIPS WILL BE REMOVED WHEN THEY ARE NO LONGER NEEDED AS DETERMINED BY THE ENGINEER. WHEN THE MILLED RUMBLE STRIPS ARE NO LONGER NEEDED, THE ENTIRE WIDTH OF THE LANE CONTAINING THE STRIPS WILL BE MILLED TO A DEPTH OF 1 1/4" AND RESURFACED WITH ITEM 448 ASPHALT CONCRETE SURFACE COURSE TYPE 1, PG 64-22.

A W8-H16-48 SIGN [RUMBLE STRIPS] WILL BE DUAL MOUNTED APPROXIMATELY 500 FEET IN ADVANCE OF THE RUMBLE STRIP INSTALLATION. THE PROVISION, ERECTION, MAINTENANCE AND REMOVAL OF THE SIGNS AND SUPPORTS WILL BE INCLUDED IN THE COST OF THE RUMBLE STRIPS.

THIS ITEM WILL BE PAID FOR BY THE FOOT AT ONE HALF [0.5] INCH THICKNESS FOR 740.08 HEAT-FUSED PREFORMED PLASTIC OR ONE HALF [0.5] INCHES OF MILLED THICKNESS. THIS WILL INCLUDE ALL LABOR MATERIALS AND EQUIPMENT FOR THE INSTALLATION, MAINTENANCE AND REMOVAL OF THE RUMBLE STRIPS.

ITEM SPECIAL - RUMBLE STRIPS 2,880 FOOT



RUMBLE STRIP PLACEMENT DETAIL
(NOT TO SCALE)

ITEM 614, MAINTAINING TRAFFIC, MISC.: "SNAP" MILL AND FILL

MAINTENANCE OF TRAFFIC ON THE SHOULDERS WILL REQUIRE THE EXISTING "SNAPS" TO BE MILLED AND FILLED. PAYMENT FOR THIS ITEM SHALL INCLUDE ALL OF THE FOLLOWING: REMOVAL OF THE EXISTING "SNAPS" BY MILLING 1 1/2" DEEP AND 2' WIDE; TACK COATING ALL EXPOSED MILLED SURFACES; AND PAVING THE MILLED AREA WITH 1 1/2" OF ITEM 422 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM TYPE A, (488). ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NEEDED TO COMPLETE THE ABOVE MENTIONED WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC, MISC.: "SNAP" MILL AND FILL. THIS WILL OCCUR IN THE FOLLOWING PHASES AND LOCATIONS:

PHASE 1
- I-77 NB OUTSIDE STA. 353+00 TO STA. 395+00

PHASE 2 AND SUBPHASES
- I-277 EB INSIDE STA. 249+00 TO STA. 284+00
- I-277 EB OUTSIDE STA. 271+00 TO STA. 281+00
- I-277 WB INSIDE STA. 221+00 TO STA. 278+50
- I-277 WB OUTSIDE STA. 221+00 TO 278+50

ITEM 614 - MAINTAINING TRAFFIC, MISC.: "SNAP" MILL AND FILL 20,000 FT

ITEM 614, MAINTAINING TRAFFIC, MISC.: BRIDGE DECK AND PAVEMENT PATCHING

THIS WORK WILL BE AS DIRECTED BY THE ENGINEER AND WILL INCLUDE ALL ASSOCIATED MOT COSTS WITH THE ACTIVITY. THE COST FOR EACH ITEM SHALL BE $1.00. THE FIXED AMOUNT SHOWN IN THE PROPOSAL IS INCLUDED (AS ANY OTHER BID ITEMS) IN THE TOTAL BID AMOUNT. THIS FIXED AMOUNT IS THE DEPARTMENT'S ESTIMATE OF THE TOTAL COST OF BRIDGE DECK AND PAVEMENT PATCHING WORK REQUIRED TO BE PERFORMED WITHIN THE WORK LIMITS AS DIRECTED BY THE ENGINEER. C&MS TABLE 104.02-2 DOES NOT APPLY TO REDUCTIONS IN THIS CONTRACT ITEM. FORCE ACCOUNT RECORDS SHALL BE KEPT TO TRACK AND ULTIMATELY DETERMINE THE AMOUNT OF THE PAY ITEM USED. THE WORK ITEM SHALL INCLUDE ALL WORK, AS DIRECTED BY THE ENGINEER, NEEDED TO RE-ESTABLISH A REASONABLY SAFE AND PASSABLE CONDITION OF THE DECK AND/OR PAVEMENT FOR THE DURATION OF THE REQUIRED UPCOMING MOT PHASES. THE CONTRACTOR SHALL MEET WITH THE ENGINEER TO ESTABLISH THE WORK AFTER EXECUTION OF THE CONTRACT. THE CONTRACTOR'S PROPOSED PHASING AND PHASING DURATIONS WILL ASSIST THE ENGINEER IN DETERMINING THE EXTENT OF THE WORK. THIS WORK IS ONLY INTENDED TO ESTABLISH A SAFE AND DRIVABLE CONDITION FOR THE DURATION OF THE PROJECT. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITIES OF 614.02B.

ITEM 614 - MAINTAINING TRAFFIC, MISC: BRIDGE DECK AND PAVEMENT PATCHING 100,000 EACH

CALCULATED JAR CHECKED JML

MOT PLAN NOTES

SUM-77 / 277 / 224
VARIOUS

REVISIONS		
NO.	DATE	DESCRIPTION
4	04/20/21	REVISED SEQUENCE OF CONSTRUCTION
9	05/04/21	REVISED ITEM 614 NOTE

82
1288

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ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 1:
ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 2:
ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 3:
ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 4:

THIS ITEM SHALL BE UTILIZED FOR THE PAVEMENT REPAIRS NEEDED DURING THIS CONSTRUCTION PROCESS. ALL AREAS TO BE REPAIRED SHALL BE LOCATED BY THE ENGINEER. IT IS LIKELY THAT REPAIRS WILL BE NEEDED PRIOR TO EACH PHASE SWITCH. GREAT CARE SHALL BE TAKEN TO MAINTAIN THE EXISTING PAVEMENT CROSS SLOPE AS WELL AS ALL LONGITUDINAL SLOPES. THE TYPE OF REPAIR SHALL BE DETERMINED BY THE PROJECT ENGINEER. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS, UNLESS SEPARATELY ITEMIZED, REQUIRED FOR MAINTENANCE OF TRAFFIC FOR PAVEMENT REPAIRS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

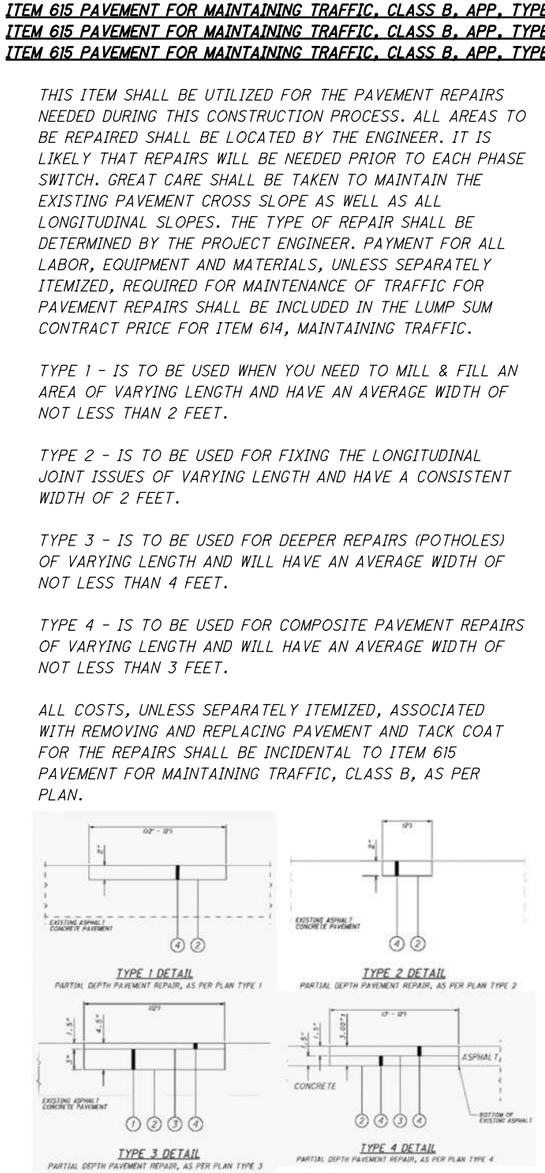
TYPE 1 - IS TO BE USED WHEN YOU NEED TO MILL & FILL AN AREA OF VARYING LENGTH AND HAVE AN AVERAGE WIDTH OF NOT LESS THAN 2 FEET.

TYPE 2 - IS TO BE USED FOR FIXING THE LONGITUDINAL JOINT ISSUES OF VARYING LENGTH AND HAVE A CONSISTENT WIDTH OF 2 FEET.

TYPE 3 - IS TO BE USED FOR DEEPER REPAIRS (POTHOLES) OF VARYING LENGTH AND WILL HAVE AN AVERAGE WIDTH OF NOT LESS THAN 4 FEET.

TYPE 4 - IS TO BE USED FOR COMPOSITE PAVEMENT REPAIRS OF VARYING LENGTH AND WILL HAVE AN AVERAGE WIDTH OF NOT LESS THAN 3 FEET.

ALL COSTS, UNLESS SEPARATELY ITEMIZED, ASSOCIATED WITH REMOVING AND REPLACING PAVEMENT AND TACK COAT FOR THE REPAIRS SHALL BE INCIDENTAL TO ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN.



LEGEND:

(1) ITEM 301 - ASPHALT CONCRETE BASE, PG64-22 (3) ITEM 407- TACK COAT FOR INTERMEDIATE @ 0.05 PER SY.YD.
(2) ITEM 407 - TACK COAT @0.075 PER SY. YD. (4) ITEM 441 -TYPE 1 (AS DESCRIBED IN CMS 615.05)

ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 1: 1,000 SY
ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 2: 1,000 SY
ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 3: 1,000 SY

EARTHWORK FOR MAINTAINING TRAFFIC

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE PLAN FOR INFORMATION ONLY:

EXCAVATION FOR MAINTAINING TRAFFIC 7,200 CU. YD.
EMBANKMENT FOR MAINTAINING TRAFFIC 4,900 CU. YD.

WHEN UNDERCUTS ARE NECESSARY FOR MAINLINE PAVEMENT OR EMBANKMENT CONSTRUCTION, EVALUATE THE NEED FOR TEMPORARY ROAD UNDERCUTS IF WITHIN A CLOSE PROXIMITY TO THE MAINLINE UNDERCUTS. A GEOTECHNICAL EVALUATION SHOULD BE CONSIDERED TO DETERMINE IF THE EXISTING SOIL CONDITIONS ARE ADEQUATE TO SUPPORT THE TEMPORARY ROAD. ADDITIONAL SOIL BORINGS ALONG THE TEMPORARY ROAD ARE NOT NORMALLY REQUIRED.

THE ABOVE ESTIMATED QUANTITIES ARE OUTSIDE OF THE PERMANENT EXCAVATION OR EMBANKMENT LIMITS INCLUDED IN THE ROADWAY PLANS.

ITEM SPECIAL - FILL AND PLUG EXISTING CONDUIT

THIS ITEM SHALL CONSIST OF THE CONSTRUCTION OF BULKHEADS IN AN EXISTING 15-18 IN DIAMETER CONDUIT 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 CRUSHED AND BACKFILLED IN ACCORDANCE WITH THE PROVISIONS OF 203, OR IT 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.

ITEM 411 - STABILIZED CRUSHED AGGREGATE

THE CONTRACTOR SHALL FURNISH STABILIZED CRUSHED AGGREGATE ADJACENT TO TEMPORARY PAVEMENT IN ACCORDANCE WITH CMS 411 AND AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE MAINTENANCE OF TRAFFIC GENERAL SUMMARY:

ITEM 411 - STABILIZED CRUSHED AGGREGATE 650 CY

CROSSOVER CONSTRUCTION AND REMOVAL

IN ADDITION TO THE REQUIREMENTS OF 615:

ON THIS PROJECT THE CLASS A PAVEMENT FOR MAINTAINING TRAFFIC SHALL BE CONSTRUCTED AS CALLED OUT IN THE DETAILED CROSSOVER PLANS. THE EXISTING PAVEMENT/SHOULDER SHALL BE SAWCUT AS PER 203.04(E).

UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL REMOVE THE PAVEMENT FOR MAINTAINING TRAFFIC INCLUDING ANY TEMPORARY DRAINAGE FACILITIES. THE AFFECTED EXISTING EARTH MEDIAN AND PAVED SHOULDERS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AS DIRECTED BY THE ENGINEER AND AS PER 615.08.

PAVEMENT FOR MAINTAINING TRAFFIC SHALL NOT BE OPENED TO TRAFFIC UNTIL ALL WORK ZONE TRAFFIC CONTROL DEVICES, SIGNS, PAVEMENT MARKINGS AND PORTABLE CONCRETE BARRIERS HAVE BEEN ERECTED AND APPROVED BY THE ENGINEER.

ALTHOUGH ESTIMATES FOR TEMPORARY EXCAVATION AND EMBANKMENT MAY BE SHOWN ON THE PLAN DETAILS, THESE ITEMS SHALL BE CONSIDERED INCIDENTAL TO, AND INCLUDED WITH PAYMENT FOR ITEM 615 ROADS FOR MAINTAINING TRAFFIC.

TEMPORARY DRAINAGE ITEMS LABELED ON THE DETAILED CROSSOVER PLANS ARE ITEMIZED ON THE MOT PLANS. PAYMENT FOR THE TEMPORARY DRAINAGE ITEMS AND THE SUBSEQUENT REMOVALS/ABANDONMENT'S ARE ITEMIZED AND CARRIED TO THE MAINTENANCE OF TRAFFIC GENERAL SUMMARY.

THE FOLLOWING ITEMS ARE INCLUDED IN THE MAINTENANCE OF TRAFFIC GENERAL SUMMARY TO PREPARE THE EXISTING I-77 SB INSIDE SHOULDER FOR THE NB CROSSOVER IN PHASE 1 FROM I-77 STA. 369+02 TO STA. 372+57.

ITEM 254 - 1.5" PAVEMENT PLANING, ASPHALT CONCRETE 505 SY
ITEM 441 - 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22 21 CY

ANY ADDITIONAL ITEMS OF WORK NOT SPECIFICALLY LISTED WHICH ARE REQUIRED TO CONSTRUCT OR REMOVE THE CROSSOVERS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 615 - ROADS FOR MAINTAINING TRAFFIC.

CONCRETE MEDIAN BARRIER REMOVAL AND REPLACEMENT

A PORTION OF THE EXISTING CONCRETE MEDIAN BARRIER SHALL BE REMOVED IN ORDER TO CONSTRUCT THE CROSS-OVERS, AND SUBSEQUENTLY REPLACED. THE LOCATIONS OF THE CROSSOVERS ARE SHOWN ON THE DETAILED MAINTENANCE OF TRAFFIC PLANS. IMMEDIATELY FOLLOWING THE REMOVAL OF THE CROSSOVERS, THE CONTRACTOR SHALL RECONSTRUCT THE CONCRETE MEDIAN. THE FOLLOWING ITEMS ARE INCLUDED IN THE MAINTENANCE OF TRAFFIC GENERAL SUMMARY FOR THE REMOVAL AND REPLACEMENT OF THE CONCRETE MEDIAN BARRIER:

ITEM 202 - CONCRETE BARRIER REMOVED 450 FT
ITEM 611 - INLET NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN 1 EACH
ITEM 611 - 15" CONDUIT, TYPE B, AS PER PLAN, 706.02 10 FT
ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE B1 450 FT
ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1 2 EACH

RECONSTRUCT THE MEDIAN BARRIER INLET ABANDONED IN PHASE 1 AT THE SAME STATION AND OFFSET AS THE EXISTING INLET AS INDICATED IN THE PLANS. FULLY REMOVE ANY REMAINING PORTIONS OF THE EXISTING INLET STRCUTURE WHICH WERE NOT REMOVED DURING THE ABANDONMENT. RECONSTRUCT THE ENTIRE INLET STRUCTURE ACCORDING TO SCD I-2.1. ALL LABOR AND MATERIALS FOR THIS WORK SHALL BE INCLUDED IN THE BID PRICE FOR:
INLET NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN

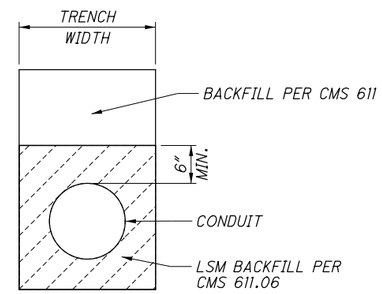
RECONNECT THE EXISTING 15" RCP STORM SEWER PIPE TO THE WEST AND PROVIDE A MASONRY COLLAR PER SCD DM-1.1 WHERE THE NEW CONDIUT CONNECTS TO THE EXISTING CONDUIT. ALL LABOR AND MATERIALS FOR THIS WORK SHALL BE INCLUDED IN THE BID PRICE FOR:
15" CONDUIT, TYPE B, AS PER PLAN, 706.02

PAVEMENT RESTORATION FOR PIPE INSTALLATIONS DURING MOT

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED IN THE MOT GENERAL SUMMARY FOR PAVEMENT RESTORATION FOLLOWING THE INSTALLTION OF ITEM 611 DRAINAGE CONDUIT DURING MOT OPERATIONS.

ITEM 302 - ASPHALT CONCRETE BASE, PG64-22 110 CY

THE ABOVE QUANTITY IS BASED ON A 301 THICKNESS OF 7.75 INCHES AND A PAVEMENT RESTORATION WIDTH THAT INCLUDES THE TRENCH WIDTH PLUS TWO FEET ON EACH SIDE OF THE TRENCH. BACKFILL THE TRENCH WITH ITEM 613 - LOW STRENGTH MORTAR BACKFILL ACCORDING TO THE DETAIL BELOW. PROVIDE LSM BACKFILL AND ANY MATERIALS USED OUTSIDE THE LIMITS STATED ABOVE AT NO ADDITIONAL COST.



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MOT PLAN NOTES

SUM-77 / 277 / 224
VARIOUS

83
1288

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ITEM 614, SPECIAL - WORK ZONE TRAFFIC SIGNAL

THE CONTRACTOR SHALL INSTALL A TEMPORARY TRAFFIC SIGNAL AT THE INTERSECTION OF KELLY AVE. AND US-224 WESTBOUND RAMPS DURING PHASE 1B WHEN RAMP B2 IS CLOSED AND TRAFFIC IS DETOURED. THE LAYOUT AND MATERIALS USED FOR THE TEMPORARY SIGNAL SHALL BE DETERMINED BY THE CONTRACTOR'S MEANS AND METHODS. AT A MINIMUM, THE FOLLOWING REQUIREMENTS SHALL BE MET:

- THE PAVEMENT MARKINGS OF NORTHBOUND KELLY AVE. SHALL BE RESTRIPED TO A NORTHBOUND LEFT TURN LANE AND NORTHBOUND THROUGH LANE FROM THE US-224 EASTBOUND OFF-RAMP/STARLIGHT DR. INTERSECTION TO THE US-224 WESTBOUND RAMP INTERSECTION AS DETAILED ON THIS SHEET. STOP LINES SHALL BE PROVIDED ON KELLY AVE. FOR THE NORTHBOUND AND SOUTHBOUND APPROACHES AT THE TEMPORARY SIGNAL.

- THE TEMPORARY SIGNAL SHALL BE COMPLAINT WITH REQUIREMENTS IN THE OMUTCD, LATEST EDITION.

- STOP LINE VEHICLE DETECTION SHALL BE PROVIDED FOR THE FOLLOWING APPROACH LANES:
  - NORTHBOUND KELLY AVE: LEFT TURN LANE.
  - WESTBOUND US-224 OFF RAMP: ALL APPROACH LANES. PROVIDE 10 SEC. DELAY FOR RIGHT LANE.

- A MINIMUM OF TWO SIGNAL HEADS WITH 12 INCH INDICATIONS SHALL BE PROVIDED PER APPROACH AS DETAILED ON THIS SHEET.

- SIGNAL HEADS SHALL BE PLACED NO CLOSER THAN 40 FEET AND NO FARTHER THAN 180 FEET FROM THE STOP LINE OF THE APPROACH, AND THE PRIMARY SIGNAL HEADS SHALL BE CENTERED ON THE APPROACH LANES.

- PHASING AND TIMINGS SHALL BE PROVIDED AS DETAILED IN THE TIMING CHART PROVIDED ON THIS SHEET.

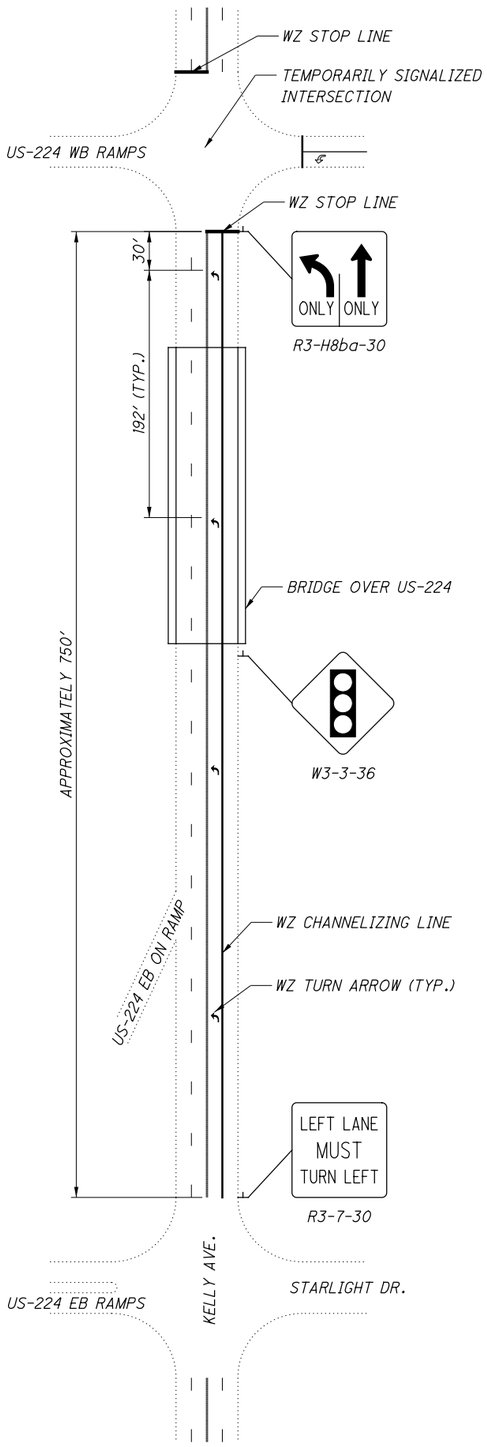
PEDESTRIAN ACCOMMODATIONS ARE NOT REQUIRED FOR THIS TEMPORARY SIGNAL. THE CONTRACTOR SHALL SUBMIT THE TEMPORARY TRAFFIC SIGNAL DESIGN TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLING ANY TEMPORARY TRAFFIC SIGNAL COMPONENTS.

ADDITIONALLY, THE CONTRACTOR SHALL MODIFY THE SIGNAL TIMINGS OF THE EXISTING TRAFFIC SIGNAL AT S. MAIN ST. AND US-224 WESTBOUND RAMPS DURING PHASE 2 WHEN RAMP D IS CLOSED AND TRAFFIC IS DETOURED. THE SOUTHBOUND (PHASE 2) MAXIMUM GREEN TIME SHALL BE REDUCED TO 30 SECONDS AND THE EASTBOUND (PHASE 4) MAXIMUM GREEN TIME SHALL BE INCREASED TO 30 SECONDS.

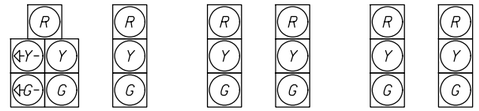
PAYMENT FOR ITEM 614 - SPECIAL - WORK ZONE TRAFFIC SIGNAL SHALL BE PAID PER EACH AND SHALL INCLUDE ALL MATERIAL AND LABOR NECESSARY TO PROVIDE A FULLY FUNCTIONING AND ACCEPTED TEMPORARY TRAFFIC SIGNAL, AND TO PROVIDE TIMING MODIFICATIONS TO THE EXISTING SIGNAL, AS INDICATED ABOVE. PAYMENT SHALL INCLUDE THE COST OF PERMITS, POWER SERVICE, MAINTENANCE, COORDINATION, AND ADDITIONAL SIGNAL TIMING ADJUSTMENTS TO THE TEMPORARY SIGNAL OR PERMANENT SIGNAL INDICATED ABOVE, AS DIRECTED BY THE ENGINEER DURING CONSTRUCTION. PAVEMENT MARKINGS, AS SHOWN IN THE DETAIL ON THIS SHEET, SHALL BE QUANTIFIED SEPARATELY IN THE MOT SUBSUMMARY AND PAID FOR UNDER THE APPLICABLE WORK ZONE PAVEMENT MARKING ITEMS. WORK ZONE SIGNS, AS SHOWN IN THE DETAIL ON THIS SHEET, SHALL BE INCLUDED WITH THE LUMP SUM PAY ITEM FOR MAINTAINING TRAFFIC.

ITEM 614 - SPECIAL - WORK ZONE TRAFFIC SIGNAL 1 EA

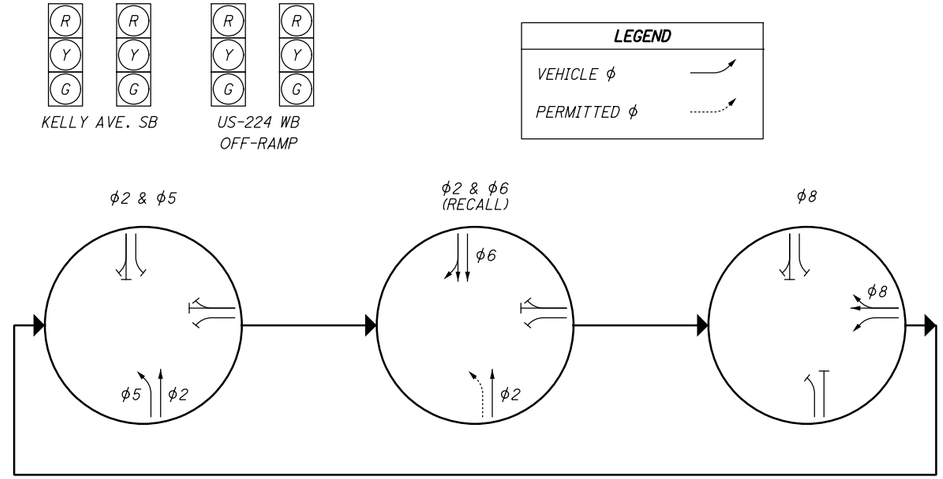
KELLY AVE. SIGNING AND PAVEMENT MARKING MODIFICATION DETAIL
(NOT TO SCALE)



MINIMUM REQUIRED SIGNAL HEADS DETAIL



PHASING DIAGRAM



TEMPORARY SIGNAL TIMING CHART

INTERSECTION: Kelly Avenue & US 224 Westbound Ramps
MAINTAINING AGENCY: ODOT District 4

START UP

START IN: -
TIME FOR: FLASH , ALL RED (SEC.): 9, 6
FIRST PHASE(S): -
COLOR DISPLAYED: -

DUAL ENTRY: YES | PHASES: 2 + 6
REST IN RED: RING 1 - | RING 2 -

OVERLAP	A	B	C	D
PHASES	-	-	-	-

INTERVAL OR FEATURE			CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)			1	2	3	4	5	6	7	8
DIRECTION			-	NB	-	-	NBLT	SB	-	WB
MINIMUM GREEN (INITIAL)		(SEC.)	-	20	-	-	7	20	-	10
ADDED INITIAL		*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL		(SEC.)	-	20	-	-	7	20	-	10
PASSAGE TIME (PRESET GAP)		(SEC.)	-	1	-	-	3	1	-	3
TIME BEFORE REDUCTION		*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP		*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE		*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I		(SEC.)	-	35	-	-	35	35	-	16
MAXIMUM GREEN II		(SEC.)	-	27	-	-	27	27	-	15
YELLOW CHANGE		(SEC.)	-	4	-	-	3.5	4	-	4
ALL RED CLEARANCE		(SEC.)	-	1	-	-	1.5	1	-	2
DELAYED GREEN (LPI) #		(SEC.)	-	-	-	-	-	-	-	-
WALK		(SEC.)	-	-	-	-	-	-	-	-
PEDESTRIAN CLEARANCE		(SEC.)	-	-	-	-	-	-	-	-
RECALL	MAXIMUM	(ON/OFF)	-	OFF	-	-	OFF	OFF	-	OFF
	MINIMUM	(ON/OFF)	-	ON	-	-	OFF	ON	-	OFF
	PEDESTRIAN	(ON/OFF)	-	-	-	-	-	-	-	-
MEMORY		(ON/OFF)	-	OFF	-	-	OFF	OFF	-	OFF

*VOLUME DENSITY CONTROLS

TIMING CHART NOTES:
1. MAXIUMUM GREEN I SHALL OPERATE FROM 06:00 - 09:30 AND 14:30 - 18:00 MONDAY THROUGH FRIDAY.
2. MAXIUMUM GREEN II SHALL OPERATE FROM 09:30 - 14:30 AND 18:00 - 20:00 MONDAY THROUGH FRIDAY, 10:00 - 19:00 SATURDAY, AND 11:00 - 18:30 SUNDAY.

CALCULATED JAR CHECKED JML

MOT PLAN NOTES

SUM-77/277/224
VARIOUS

N:\03\60\06744-08\06002_SUM-76-10.95\Design\MOT\Sheets\06002_MN01.dgn Sheet 2/2/2021 11:05:35 AM jrettig

SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
74	76	77	78	80	81	82	83	84	113	114	74A	01/IMS/PV	02/IMS/PV						
																		MAINTENANCE OF TRAFFIC	
							450					405	45	202	30700	450	FT	CONCRETE BARRIER REMOVED	
										1,674		1,507	167	202	35100	1,674	FT	PIPE REMOVED, 24" AND UNDER	
										1		1		202	58000	1	EACH	MANHOLE REMOVED	
										13		12	1	202	58100	13	EACH	CATCH BASIN REMOVED	
										1		1		202	58400	1	EACH	INLET ABANDONED	
										3		3		202	58500	3	EACH	CATCH BASIN ABANDONED	
										8		7	1	SPECIAL	20270000	8	FT	FILL AND PLUG EXISTING CONDUIT, 15"	83
										135		122	13	SPECIAL	20270000	135	FT	FILL AND PLUG EXISTING CONDUIT, 18"	83
							505					455	50	254	01000	505	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.5"	
							110					99	11	302	46000	110	CY	ASPHALT CONCRETE BASE, PG64-22	
							650					585	65	411	10000	650	CY	STABILIZED CRUSHED AGGREGATE	
							21					19	2	441	50000	21	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
										584		526	58	611	04400	584	FT	12" CONDUIT, TYPE B	
										741		667	74	611	04600	741	FT	12" CONDUIT, TYPE C	
										28		25	3	611	05900	28	FT	15" CONDUIT, TYPE B	
							10					9	1	611	05901	10	FT	15" CONDUIT, TYPE B, AS PER PLAN, 706.02	83
										74		67	7	611	06100	74	FT	15" CONDUIT, TYPE C	
										10		9	1	611	06100	10	FT	15" CONDUIT, TYPE C, 706.02	
										162		146	16	611	07400	162	FT	18" CONDUIT, TYPE B	
										218		196	22	611	07600	218	FT	18" CONDUIT, TYPE C	
										1		1		611	98370	1	EACH	CATCH BASIN, NO. 6	
										1		1		611	98410	1	EACH	CATCH BASIN, NO. 8	
										14		13	1	611	98470	14	EACH	CATCH BASIN, NO. 2-2B	
							1					1		611	99101	1	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN	83
										1		1		611	99574	1	EACH	MANHOLE, NO. 3	
					850							765	85	614	11110	850	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
								1				1		SPECIAL	61411300	1	EACH	WORK ZONE TRAFFIC SIGNAL	84
					42,950				135,265			160,394	17,821	614	11630	178,215	FT	INCREASED BARRIER DELINEATION	
									50			45	5	614	12381	50	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN	77
LS														614	12420	LS		DETOUR SIGNING	
									18			16	2	614	12470	18	EACH	WORK ZONE SPEED LIMIT SIGN	
	13											12	1	614	12484	13	EACH	WORK ZONE INCREASED PENALTIES SIGN	
		2										2		614	12756	2	EACH	WORK ZONE CROSSOVER LIGHTING SYSTEM	
									6,416			5,774	642	614	12801	6,416	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	80
100												90	10	614	13001	100	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC, AS PER PLAN	74
					619				2,478		36	2,820	313	614	13310	3,133	EACH	BARRIER REFLECTOR, TYPE 1, 1 WAY	
									233			210	23	614	13310	233	EACH	BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL	
					240							216	24	614	13312	240	EACH	BARRIER REFLECTOR, TYPE 2, 1 WAY	
					859				2,711		36	3,245	361	614	13350	3,606	EACH	OBJECT MARKER, ONE WAY	
				150								135	15	614	18000	150	EACH	MAINTAINING TRAFFIC, MISC.: WORK ZONE RAISED PAVEMENT MARKERS ON PERMANENT CONCRETE SURFACES	80
						100,000						90,000	10,000	614	18000	100,000	EACH	MAINTAINING TRAFFIC, MISC.: BRIDGE DECK AND PAVEMENT PATCHING	82
						2,880						2,592	288	614	18030	2,880	FT	MAINTAINING TRAFFIC, MISC.: RUMBLE STRIPS	82
						20,000						18,000	2,000	614	18030	20,000	FT	MAINTAINING TRAFFIC, MISC.: "SNAP" MILL AND FILL	82
			144									130	14	614	18601	144	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	78
									27.7		0.7	25.6	2.8	614	20011	28.4	MILE	WORK ZONE LANE LINE, CLASS I, 6", AS PER PLAN	82
	24											22	2	614	20410	24	MILE	WORK ZONE LANE LINE, CLASS II, 6"	
									78.9		1.5	72.4	8	614	22011	80.4	MILE	WORK ZONE EDGE LINE, CLASS I, 6", AS PER PLAN	82
									108,460		4,224	101,415	11,269	614	23011	112,684	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", AS PER PLAN	82
									43,361			39,025	4,336	614	24001	43,361	FT	WORK ZONE DOTTED LINE, CLASS I, AS PER PLAN	82
	25,500											22,950	2,550	614	28000	25,500	FT	WORK ZONE GORE MARKING, CLASS II	

CALCULATED JJAR
CHECKED SSR

MAINTENANCE OF TRAFFIC GENERAL SUMMARY

SUM-77 / 277 / 224
VARIOUS

REVISIONS		
NO.	DATE	DESCRIPTION
4	04/20/21	REVISED SEQUENCE OF CONSTRUCTION

N:\03\60\06744-08\106002-SUM-76-10.95\Design\MOT\Sheets\106002_MG001.dgn Sheet 4/20/2021 11:23 PM jlacher

SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
74	76	77	78	80	81	82	83	84	113	114	74A	01/IMS/PV	02/IMS/PV						
																		MAINTENANCE OF TRAFFIC	
														615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
									12,728			11,455	1,273	615	20000	12,728	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
							1,000					900	100	615	25001	1,000	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 1	83
							1,000					900	100	615	25001	1,000	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 2	83
							1,000					900	100	615	25001	1,000	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 3	83
	1,400											1,260	140	616	10000	1,400	MGAL	WATER	
							450					405	45	622	10100	450	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE B1	
							2					2		622	25006	2	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1	
									11,670			10,503	1,167	622	41011	11,670	FT	PORTABLE BARRIER, 50", AS PER PLAN	76
									6			5	1	622	41050	6	EACH	PORTABLE BARRIER, "Y" CONNECTOR	
									122,995		1,800	112,315	12,480	622	41100	124,795	FT	PORTABLE BARRIER, UNANCHORED	
									600			540	60	622	41110	600	FT	PORTABLE BARRIER, ANCHORED	
									1,443			1,299	144	630	80200	1,443	SF	SIGN, GROUND MOUNTED EXTRUSHEET	
									2,344			2,110	234	630	80224	2,344	SF	SIGN, OVERHEAD EXTRUSHEET	
		288										259	29	808	18700	288	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	

CALCULATED JAR CHECKED SSR

MAINTENANCE OF TRAFFIC GENERAL SUMMARY

SUM-77/277/224
VARIOUS

REVISIONS		
NO.	DATE	DESCRIPTION
4	04/20/21	REVISED SEQUENCE OF CONSTRUCTION

86
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MG002.dgn Sheet 4/20/2021 2:12:49 PM jlacher

SHEET NO.	STATION TO STATION					614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN EACH	614 WORK ZONE SPEED LIMIT SIGN EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	614 BARRIER REFLECTOR, TYPE 1, 1-WAY EACH	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL EACH	614 OBJECT MARKER, ONE WAY EACH	614 WORK ZONE LANE LINE, CLASS 1, 6", AS PER PLAN MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, WHITE MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, YELLOW MILE	614 WORK ZONE CHANNELIZING LINE, CLASS 1, 12", AS PER PLAN FT	614 WORK ZONE DOTTED LINE, CLASS 1, AS PER PLAN FT			622 PORTABLE BARRIER, UNANCHORED, 32" FT	622 PORTABLE BARRIER, 50", AS PER PLAN FT	622 PORTABLE BARRIER, ANCHORED, 32" FT		622 PORTABLE BARRIER, "Y" CONNECTOR EACH	630 SIGN, GROUND MOUNTED EXTRUSHEET SF	630 SIGN, OVERHEAD EXTRUSHEET SF
	PRE-PHASE 1																													
130-131	366+77	RT		372+95	RT					94																				
132	389+08	LT		393+75	LT					35																				
134	412+50	RT		418+21	RT					42																				
135-136	435+53	RT		441+24	RT					58																				
136-137	446+09	RT		449+71	RT					27																				
137-138	451+79	RT		467+74	RT					315																				
138	469+23	RT		474+21	RT					86																				
138-140	470+70	LT		488+62	LT					383																				
139-140	485+57	RT		489+68	RT					46																				
140	492+00	RT		493+94	RT					34																				
140	495+48	LT		499+22	LT					82																				
141	502+72	RT		508+50	RT					154																				
	PHASE 1																													
128	I-77 NB																													
	340+00	RT						2																						
129	I-77 NB																													
	350+50	RT		358+00	RT				75								1500													
	353+50	RT		358+00	RT				23							450														
	353+50	RT		356+81	RT				17								331													
	354+80	RT		356+81	RT				10								201													
	355+82	RT		358+00	RT				11						218															
	356+81	RT		358+00	RT				6									119												
	357+40	RT		358+00	RT	60	1				1		1								60									
130	I-77 NB																													
	358+00	RT		371+00	RT	1300			260		26		26		1300	1300	2600				1300									
	358+00	RT		366+71	RT				44									871												
	359+85	RT		366+09	RT					209																				
	I-77 SB																													
	366+00	LT		371+00	LT	500			8		10		10	1000		500					500									
	366+09	RT		371+00	L/R					891																				
	366+32	LT		371+00	LT													468												
	366+50	LT																												96
131	I-77 NB																													
	371+00	RT		384+00	RT	1300			2		26		26			1300					1300									
	371+00	RT		371+50	RT				5	32							100													
	371+00	RT		375+27	RT				2						427															
	371+50	RT		384+00	RT				21					2500																
	375+27	RT		384+00	RT													873												
	I-77 SB																													
	371+00	LT		374+78	LT													378												
	371+00	LT		375+65	LT				8					930																
	371+00	LT		384+00	LT	1300			42		26		26			1300					1300									
	374+78	LT		384+00	LT				42						922															
	375+65	LT		384+00	LT				84								1670													
	380+00	LT																											82.5	
	TOTALS CARRIED TO SHEET 113					4460	1	2	660	2488	89		89	4430	2867	4850	6402	2709			4460						83	96		

CALCULATED JAR
CHECKED SSR

MAINTENANCE OF TRAFFIC SUBSUMMARY

SUM-77 / 277 / 224

87
1288

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SHEET NO.	STATION TO STATION	614 INCREASED BARRIER DELINEATION	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN	614 WORK ZONE SPEED LIMIT SIGN	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	614 BARRIER REFLECTOR, TYPE 1, 1-WAY	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL	614 OBJECT MARKER, ONE WAY	614 WORK ZONE LANE LINE, CLASS 1, 6", AS PER PLAN	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, WHITE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, YELLOW	614 WORK ZONE CHANNELIZING LINE, CLASS 1, 12", AS PER PLAN	614 WORK ZONE DOTTED LINE, CLASS 1, AS PER PLAN			622 PORTABLE BARRIER, UNANCHORED, 32"	622 PORTABLE BARRIER, 50", AS PER PLAN	622 PORTABLE BARRIER, ANCHORED, 32"		622 PORTABLE BARRIER, "Y" CONNECTOR	630 SIGN, GROUND MOUNTED EXTRUSHEET	630 SIGN, OVERHEAD EXTRUSHEET
		FT	EACH	EACH	EACH	SY	EACH	EACH	EACH	MILE	MILE	MILE	FT	FT			FT	FT	FT		EACH	SF	SF
	PHASE 1 CONT'D																						
132	I-77 NB																						
	384+00 RT – 397+00 RT	1300			22		26		26	2600		1300					1300						
	384+00 RT – 386+80 RT													280									
	386+80 RT – 397+00 RT										1020												
	393+00 RT			2																			
	I-77 SB																						
	384+00 LT – 397+00 LT	1300			125		26		26		1300	1300					1300						
	384+00 LT – 394+00 LT				100								2000										
	390+00 LT																						48
	393+00 LT			2																			
	394+00 LT – 397+00 LT				6					600													
133	I-77 NB																						
	397+00 RT – 410+00 RT	1300			22		26		26	2600	1300	1300					1300						
	I-77 SB																						
	397+00 LT – 410+00 LT	1300	1		22		26		26	2600	1300	1300					1300						
134	I-77 NB																						
	410+00 RT – 423+00 RT	1300	1		22		26		26	2600	1300	1300					1300						
	419+00 RT																					90	
	419+00 RT																					90	
	I-77 SB																						
	410+00 LT – 423+00 LT	1300			22		26		26	2600	1300	1300					1300						
	417+65 LT																						48
135	I-77 NB																						
	423+00 RT – 436+00 RT				22					2600	1300	1300											
	423+00 RT – 429+20 RT	620					13		13								620						
	429+20 RT – 430+80 RT	160					3		3										160				
	430+80 RT – 436+00 RT	520					10		10								520						
	I-77 SB																						
	423+00 LT – 436+00 LT				22					2600	1300	1300											
	423+00 LT – 429+40 LT	640					13		13								640						
	429+40 LT – 431+00 LT	160					3		3										160				
	431+00 LT – 436+00 LT	500					10		10								500						
136	I-77 NB																						
	436+00 RT – 449+00 RT	1300			22		26		26	2600	1300	1300					1300						
	437+00 RT			2																			
	I-77 SB																						
	436+00 LT – 449+00 LT	1300			22		26		26	2600	1300	1300					1300						
	437+00 LT			2																			
137	I-77 NB																						
	449+00 RT – 462+00 RT	1300	1		22		26		26	2600	1300	1300					1300						
	451+00 RT																					90	
	451+00 RT																					98	
	I-77 SB																						
	449+00 LT – 462+00 LT	1300	1		22		26		26	2600	1300	1300					1300						
138	I-77 NB																						
	462+00 RT – 475+00 RT	1300			22		26		26	2600	1300	1300					1300						
	474+00 RT																					72	
	474+00 RT – 475+00 RT													100									
	474+21 RT – 475+00 RT					35																	
	I-77 SB																						
	462+00 LT – 475+00 LT	1300			22		26		26	2600	1300	1300					1300						
	470+70 LT – 475+00 LT	430					9		9								430						
	TOTALS CARRIED TO SHEET 113	18630	4	8	517	35	373		373	34400	17920	18200	2000	380			18310		320			440	96

CALCULATED JAR
CHECKED SSR

SUMMARY OF TRAFFIC MAINTENANCE

SUM-77 / 277 / 224

N:\03\60\06744-08\06002_SUM-76-10.95\Design\MOT\Sheets\06002_MS101.dgn Sheet 1/31/2021 5:26:27 PM jrettig

SHEET NO.	STATION TO STATION					614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN EACH	614 WORK ZONE SPEED LIMIT SIGN EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	614 BARRIER REFLECTOR, TYPE 1, 1-WAY EACH	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL EACH	614 OBJECT MARKER, ONE WAY EACH	614 WORK ZONE LANE LINE, CLASS 1, 6", AS PER PLAN MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, WHITE MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, YELLOW MILE	614 WORK ZONE CHANNELIZING LINE, CLASS 1, 12", AS PER PLAN FT	614 WORK ZONE DOTTED LINE, CLASS 1, AS PER PLAN FT			622 PORTABLE BARRIER, UNANCHORED, 32" FT	622 PORTABLE BARRIER, 50", AS PER PLAN FT	622 PORTABLE BARRIER, ANCHORED, 32" FT		622 PORTABLE BARRIER, "Y" CONNECTOR EACH	630 SIGN, GROUND MOUNTED EXTRUSHEET SF	630 SIGN, OVERHEAD EXTRUSHEET SF
	PHASE 1 CONT'D																												
139	I-77 NB																												
	475+00	LT		488+00	LT					2810																			
	475+00	RT		488+00	RT	1300			22		26		26	2600		1300					1300								
	475+00	RT		477+51	RT													251											
	477+51	RT		480+00	RT				6								249												
	480+00	RT		488+00	RT										800														
	480+50	RT		484+00	RT	350	1				7		7								350				1				
	RAMP C																												
	575+00	RT		588+00	RT										1300														
	577+63	LT		580+05	LT				6								242												
	580+05	LT		588+00	LT				10							795													
	580+50	LT		588+00	LT	750					15		15								750								
	581+23	LT		588+00	LT					1032																			
	I-77 SB																												
	475+00	LT		488+00	LT	2600			22		52		52	2600	1300	1300					2600								
	475+00	RT		486+09	RT					469																			
	447+50	LT						2																					
140	I-77 NB																												
	488+00	LT		492+02	LT					440																			
	488+00	RT		501+00	RT	1300			22		26		26	2600		1300					1300								
	488+00	RT		495+06	RT										706														
	488+05	RT						2																					
	495+06	RT		500+53	RT													547											
	496+00	RT																										99	
	496+00	RT		499+00	RT													300											
	499+00	RT		501+00	RT												200												
	500+53	RT		501+00	RT										47														
	I-77 SB																												
	488+00	LT		493+95	LT				5					595															
	488+00	LT		501+00	LT	1300			11		26		26	1300		1300					1300								
	492+00	LT		496+95	LT					59																			
	493+95	LT		496+95	LT				8								300												
	496+95	LT		501+00	LT										405														
	RAMP A																												
	88+00	RT		97+00	RT										900														
	93+83	RT		96+30	RT				6								247												
	US-244/I-277 EB																												
	258+00	RT		258+50	RT				3								50												
141	I-77 NB																												
	501+00	RT		503+60	RT	260					5		5								260								
	501+00	RT		505+00	RT											400													
	501+00	RT		503+50	RT				6								250												
	501+00	RT		514+00	RT				22					2600															
	501+00	RT		508+50	RT										750														
	501+05	RT		503+50	RT				6								245												
	502+50	RT																											105
	503+50	RT		514+00	RT											1050													
	503+50	RT		505+00	RT										150														
	507+81	RT		511+81	RT				10								400												
	508+50	RT		511+81	RT				8								331												
	511+81	RT		514+00	RT										219			219											
	TOTALS CARRIED TO SHEET 113					7860	1	4	173	4810	157		157	12295	6577	7445	2514	1317			7860				1	99	105		

CALCULATED JAR
CHECKED SSR

SUMMARY OF TRAFFIC MAINTENANCE

SUM-77/277/224

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SHEET NO.	STATION TO STATION	614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN EACH	614 WORK ZONE SPEED LIMIT SIGN EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	614 BARRIER REFLECTOR, TYPE 1, 1-WAY EACH	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL EACH	614 OBJECT MARKER, ONE WAY EACH	614 WORK ZONE LANE LINE, CLASS 1, 6", AS PER PLAN MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, WHITE MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, YELLOW MILE	614 WORK ZONE CHANNELIZING LINE, CLASS 1, 12", AS PER PLAN FT	614 WORK ZONE DOTTED LINE, CLASS 1, AS PER PLAN FT			622 PORTABLE BARRIER, UNANCHORED, 32" FT	622 PORTABLE BARRIER, 50", AS PER PLAN FT	622 PORTABLE BARRIER, ANCHORED, 32" FT		622 PORTABLE BARRIER, "Y" CONNECTOR EACH	630 SIGN, GROUND MOUNTED EXTRUSHEET SF	630 SIGN, OVERHEAD EXTRUSHEET SF
	PHASE 1 CONT'D																							
141	I-77 SB																							
	501+00 LT 504+58 LT										358			358										
	501+00 LT 514+00 LT	1300			11		26		26	1300		1300						1300						
	504+58 LT 505+67 LT				3								109											
	505+67 LT 514+00 LT										833													
	509+30 LT 514+00 LT	470					10		10									470						
	RAMP B																							
	213+24 RT 213+42 RT											18												
142	I-77 NB																							
	514+00 527+00				76						1300	1300												
	514+00 520+40				10					1280														
	514+00 516+11													211										
	520+40 527+00				66								1320											
	I-77 SB																							
	514+00 514+70	70	1				2		2									70						
	514+00 514+39										39													
	514+00 524+00				8					1000														
	514+00 527+00				15							1300												
	514+00 518+60	460	1				9		9									460						
	514+39 517+56				8								317											
	517+56 526+19				11						863													
	517+56 524+00													644										
	524+00 527+00				30								600											
	526+19 527+00				4								81											
	RAMP B																							
	213+42 217+56										414													
	213+42 214+27				1							85												
	214+27 217+56				8								329											
143	I-77 NB																							
	324+56 324+90				33						34	34												
	324+56 327+90				33								668											
	I-77 SB																							
	324+56 334+80				154								3072											
	324+56 331+80				51							724												
	324+66 327+25				7								259											
	326+37 330+95				42						458													
144	I-77 SB																							
	342+00			2																				
145	I-77 SB																							56
	TOTALS CARRIED TO SHEET 113	2300	2	2	571		47		47	3580	4299	4761	6755	1213			2300							56

CALCULATED JAR
CHECKED SSR

SUMMARY OF TRAFFIC MAINTENANCE

SUM-77 / 277 / 224

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SHEET NO.	STATION TO STATION	614 INCREASED BARRIER DELINEATION	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN	614 WORK ZONE SPEED LIMIT SIGN	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	614 BARRIER REFLECTOR, TYPE 1, 1-WAY	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL	614 OBJECT MARKER, ONE WAY	614 WORK ZONE LANE LINE, CLASS 1, 6", AS PER PLAN	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, WHITE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, YELLOW	614 WORK ZONE CHANNELIZING LINE, CLASS 1, 12", AS PER PLAN	614 WORK ZONE DOTTED LINE, CLASS 1, AS PER PLAN			622 PORTABLE BARRIER, UNANCHORED, 32"	622 PORTABLE BARRIER, 50", AS PER PLAN	622 PORTABLE BARRIER, ANCHORED, 32"		622 PORTABLE BARRIER, "Y" CONNECTOR	630 SIGN, GROUND MOUNTED EXTRUSHEET	630 SIGN, OVERHEAD EXTRUSHEET
		FT	EACH	EACH	EACH	SY	EACH	EACH	EACH	MILE	MILE	MILE	FT	FT			FT	FT	FT		EACH	SF	SF
	PHASE 1 CONT'D																						
149	US-224/I-277 EB																						
	233+00 RT — 242+00 RT													900									
	237+75 RT																						48
	241+25 RT — 242+00 RT										75												
150	US-224/I-277 EB																						
	242+00 RT — 243+00 RT										100			100									
	243+00 RT — 244+65 RT				4								165										
	243+90 RT																						9
	RAMP A																						
	108+52 RT — 106+90 RT				4								162										
	108+52 RT — 97+00 RT										1152												
151	US-224/I-277 EB																						
	258+50 RT — 267+90 RT				47								940										
	261+00 RT — 270+00 RT				94						900	900											
	267+90 RT — 270+00 RT				2					210													
	269+50 RT — 270+00 RT	50	1				1		1								50						
	RAMP C																						
	597+00 R/L — 599+14 R/L	214			3		4		4		214	214					214						
	597+00 LT — 599+14 LT					289																	
152	US-224/I-277 EB																						
	270+00 RT — 283+00 RT				28							1300											
	270+00 RT — 277+50 RT				6					750													
	270+00 RT — 274+24 RT										424												
	270+00 RT — 273+30 RT	330					7		7								330						
	274+24 RT — 283+00 RT				22								876										
	277+50 RT — 283+00 RT				83						550		1100										
	RAMP C																						
	599+14 LT — 602+50 LT	336					7		7								336						
	599+14 LT — 600+65 LT					242																	
	599+14 LT — 603+42 LT				5							428											
	599+14 RT — 606+68 RT										754												
	603+42 LT — 606+68 LT				16							326											
153	US-224/I-277 EB																						
	283+00 RT — 285+05 RT				55						205	205	205										
	283+00 RT — 288+05 RT				51								1010										
156	RAMP C																						
	588+00 LT — 592+98 LT					836																	
	588+00 L/R — 597+00 L/R	900			11		18		18		900	900					900						
	596+40 LT — 597+00 LT					16																	
	RAMP C-2																						
	781+45 RT — 784+60 RT					149																	
	TOTALS CARRIED TO SHEET 113	1830	1		431	1532	37		37	960	5274	4273	4458	1000			1830						57

CALCULATED JAR
CHECKED SSR

SUMMARY OF TRAFFIC MAINTENANCE

SUM-77 / 277 / 224

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SHEET NO.	STATION TO STATION					614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN EACH	614 WORK ZONE SPEED LIMIT SIGN EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	614 BARRIER REFLECTOR, TYPE 1, 1-WAY EACH	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL EACH	614 OBJECT MARKER, ONE WAY EACH	614 WORK ZONE LANE LINE, CLASS 1, 6", AS PER PLAN MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, WHITE MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, YELLOW MILE	614 WORK ZONE CHANNELIZING LINE, CLASS 1, 12", AS PER PLAN FT	614 WORK ZONE DOTTED LINE, CLASS 1, AS PER PLAN FT			622 PORTABLE BARRIER, UNANCHORED, 32" FT	622 PORTABLE BARRIER, 50", AS PER PLAN FT	622 PORTABLE BARRIER, ANCHORED, 32" FT		622 PORTABLE BARRIER, "Y" CONNECTOR EACH	630 SIGN, GROUND MOUNTED EXTRUSHEET SF	630 SIGN, OVERHEAD EXTRUSHEET SF
	PHASE 1A																												
171	I-77 NB																												
	496+00	RT		501+00	RT	500					10		10			500					500								
172	I-77 NB																												
	501+00	RT		509+00	RT	800					16		16								800								
	501+00	RT		503+50	RT											250													
	RAMP B																												
	211+50	RT		213+34	RT				1							184													
173	RAMP B																												
	213+34	RT		213+63	RT											29													
174	RAMP B																												
	206+29	RT		211+50	RT				4							521													
	207+00	RT		208+50	RT	150					3		3								150								
	PHASE 1B																												
175	I-77 NB																												
	451+10	RT		462+00	RT														1090										
176	I-77 NB																												
	462+00	RT		475+00	RT														1300										
	463+00	RT																										88	
	469+50	RT		475+00	RT	550			5		11		11	550	550	550					550								
177	I-77 NB																												
	475+00	RT		488+00	RT											1300													
	475+00	RT		483+50	RT	850					17		17								850								
	475+00	RT		476+65	RT				1					165					165										
	475+00	RT		476+00	RT										100														
	483+00	RT		487+00	RT														400										
	487+00	RT		488+00	RT				5								200												
178	I-77 NB																												
	488+00	L/R		501+00	L/R											1300													
	488+00	RT		488+50	RT				3								100												
	488+50	L/R		501+00	L/R										1250	1250													
	488+60	L/R		497+70	L/R	890	1				18		18								890								
	488+60	RT		501+00	RT	1240					25		25								1240								
179	I-77 NB																												
	501+00	RT		513+50	RT	1250					25		25								1250								
	501+00	RT		514+00	RT											1300													
	RAMP B-2																												
	301+00	RT		308+80	RT				6						780	780													
	8+00	RT		10+00	RT				2						200	200													
180	RAMP B-2																												
	10+00	RT		14+10	RT				3						410	410													
TOTALS CARRIED TO SHEET 113						6230	1		30		125		125	715	3290	8574	300	2955			6230					88			

CALCULATED JAR
CHECKED SSR

SUMMARY OF TRAFFIC MAINTENANCE

SUM-77 / 277 / 224

92
1288

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SHEET NO.	STATION TO STATION	614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN EACH	614 WORK ZONE SPEED LIMIT SIGN EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	614 BARRIER REFLECTOR, TYPE 1, 1-WAY EACH	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL EACH	614 OBJECT MARKER, ONE WAY EACH	614 WORK ZONE LANE LINE, CLASS 1, 6", AS PER PLAN MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, WHITE MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, YELLOW MILE	614 WORK ZONE CHANNELIZING LINE, CLASS 1, 12", AS PER PLAN FT	614 WORK ZONE DOTTED LINE, CLASS 1, AS PER PLAN FT			622 PORTABLE BARRIER, UNANCHORED, 32" FT	622 PORTABLE BARRIER, 50", AS PER PLAN FT	622 PORTABLE BARRIER, ANCHORED, 32" FT		622 PORTABLE BARRIER, "Y" CONNECTOR EACH	630 SIGN, GROUND MOUNTED EXTRUSHEET SF	630 SIGN, OVERHEAD EXTRUSHEET SF
	PHASE 1C																							
181	I-77 NB																							
	451+10 RT – 462+00 RT				9					1090				1090										
182	I-77 NB																							
	462+00 RT – 475+00 RT				11					1300				1300										
	463+00 RT																						30	
	463+00 RT																						102	
	469+50 RT – 475+00 RT										550	550												
	474+00 RT																						102	
	474+00 RT – 475+00 RT													100										
183	I-77 NB																							
	475+00 L/R – 488+00 L/R											1300												
	475+00 RT – 479+00 RT				3					400				400										
	475+00 RT – 477+50 RT										250			250										
	479+00 RT – 481+00 RT				10								400											
	481+00 L/R – 488+00 L/R	1400	1				28		28		700	700					1400				1			
184	I-77 NB																							
	488+00 LT – 491+76 LT											376												
	488+00 LT – 491+90 LT	390					8		8		390						390							
	488+00 RT – 488+50 RT											50												
	PHASE 1 OVER WINTER																							
186	RAMP C-2																							
	789+00 LT – 800+32 LT				14							1132												
	789+00 LT – 800+24 LT										1124													
	I-77 SB																							
	499+65 LT – 500+35 LT	70	1				2		2								70							
	500+20 LT – 501+00 LT				4								160											
187	I-77 SB																							
	501+00 LT – 502+79 LT				9								358											
	501+00 LT – 506+96 LT				2							179												
	502+79 LT – 506+96 LT													417										
188	RAMP C																							
	597+00 LT – 599+14 LT				3							214		214										
189	RAMP C																							
	599+14 LT – 602+00 LT				4							286		286										
190	RAMP C / C-2																							
	789+00 LT – 782+49 LT				8						651	651												
	595+40 LT – 597+00 LT				2							160		160										
	TOTALS CARRIED TO SHEET 113	1860	2		79		38		38	2790	3665	5598	918	4217			1860				1	234		

CALCULATED JAR
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MAINTENANCE OF TRAFFIC SUBSUMMARY

SUM-77 / 277 / 224

93
1288

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SHEET NO.	STATION TO STATION	614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN EACH	614 WORK ZONE SPEED LIMIT SIGN EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	614 BARRIER REFLECTOR, TYPE 1, 1-WAY EACH	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL EACH	614 OBJECT MARKER, ONE WAY EACH	614 WORK ZONE LANE LINE, CLASS 1, 6", AS PER PLAN MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, WHITE MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, YELLOW MILE	614 WORK ZONE CHANNELIZING LINE, CLASS 1, 12", AS PER PLAN FT	614 WORK ZONE DOTTED LINE, CLASS 1, AS PER PLAN FT			622 PORTABLE BARRIER, UNANCHORED, 32" FT	622 PORTABLE BARRIER, 50", AS PER PLAN FT	622 PORTABLE BARRIER, ANCHORED, 32" FT		622 PORTABLE BARRIER, "Y" CONNECTOR EACH	630 SIGN, GROUND MOUNTED EXTRUSHEET SF	630 SIGN, OVERHEAD EXTRUSHEET SF
	PRE-PHASE 2																							
200	US-224/I-277 EB																							
	229+90 RT – 242+00 RT												1210											
	229+90 RT – 237+70 RT														780									
	239+70 RT – 242+00 RT	230	1				5		5									230						
	US-224/I-277 WB																							
	231+85 LT – 234+85 LT				15									300										
	231+85 LT – 242+00 LT				51								1015											
	234+85 LT – 242+00 LT				36						715													
	240+70 LT – 242+00 LT	130					3		3									130						
201	US-224/I-277 EB																							
	242+00 RT – 244+50 RT	250					5		5				250					250						
	US-224/I-277 WB																							
	242+00 LT – 247+50 LT				24						550													
	242+00 LT – 250+75 LT				53								875											
	242+00 LT – 245+20 LT	320	1				7		7									320						
	247+50 LT – 250+75 LT				16									325										
202	US-224/I-277 WB																							
	250+75 LT – 256+35 LT				56								560	560										
	PHASE 2																							
203	I-77 NB																							
	324+00 RT																						180	
	334+00 RT																						84	
	341+00 RT			2																				
	344+25 RT																							48
204	I-77 NB																							
	345+20 RT – 358+00 RT				128									2560										
	348+20 RT – 358+00 RT				49								980											
	348+20 RT – 356+00 RT				39						780													
	354+37 RT – 356+00 RT													163										
	354+47 RT – 358+00 RT										353													
	356+00 RT – 358+00 RT														200									
205	I-77 NB																							
	358+00 RT – 371+00 RT												1300											
	358+00 RT – 364+65 RT				22									865										
	358+00 RT – 359+00 RT				3									100										
	358+00 RT – 366+80 RT														880									
	358+00 RT – 371+00 RT										1300													
	359+00 RT – 369+00 RT				8					1000														
	364+50 RT – 371+00 RT	650	1				13		13									650						
	364+65 RT – 368+50 RT				20									770										
	367+30 RT – 371+00 RT	370	1				8		8									370						
	368+32 RT – 371+00 RT				4								268											
	368+50 RT – 371+00 RT										250		250											
	368+80 RT – 371+00 RT	220	1				5		5									220						
	369+00 RT – 371+00 RT				10									200										
	369+14 RT – 371+00 RT										186													
206	I-77 NB																							
	371+00 R/L – 384+00 R/L	2600			135		52		52		3900	3900						2600						
	371+00 RT – 375+00 RT	400					8		8									400						
	371+00 RT – 380+85 RT				50									985										
	372+40 CL		1																					
	380+85 RT – 384+00 RT				3					315														
	I-77 SB																							
	378+50 LT																							190.5
	TOTALS CARRIED TO SHEET 113	5170	6	2	722		106		106	1315	8034	10608	6828	1860				5170					264	239

CALCULATED JAR
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MAINTENANCE OF TRAFFIC SUBSUMMARY

SUM-77 / 277 / 224

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SUMMARY OF TRAFFIC SUBSUMMARY

MAINTENANCE

SUM-77 / 277 / 224

CALCULATED JAR
CHECKED SSR

SHEET NO.	STATION TO STATION	614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN EACH	614 WORK ZONE SPEED LIMIT SIGN EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	614 BARRIER REFLECTOR, TYPE 1, 1-WAY EACH	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL EACH	614 OBJECT MARKER, ONE WAY EACH	614 WORK ZONE LANE LINE, CLASS 1, 6", AS PER PLAN MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, WHITE MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, YELLOW MILE	614 WORK ZONE CHANNELIZING LINE, CLASS 1, 12", AS PER PLAN FT	614 WORK ZONE DOTTED LINE, CLASS 1, AS PER PLAN FT			622 PORTABLE BARRIER, UNANCHORED, 32" FT	622 PORTABLE BARRIER, 50", AS PER PLAN FT	622 PORTABLE BARRIER, ANCHORED, 32" FT		622 PORTABLE BARRIER, "Y" CONNECTOR EACH	630 SIGN, GROUND MOUNTED EXTRUSHEET SF	630 SIGN, OVERHEAD EXTRUSHEET SF
	PHASE 2 CONT'D																							
207	I-77 NB																							
	384+00 RT 397+00 RT				11					1300	2600	2600												
	384+00 RT 387+06 RT				4						306	306												
	384+00 RT 387+60 RT	720					15		15								720							
	387+06 RT 397+00 RT				25								1988											
208	I-77 NB																							
	397+00 RT 410+00 RT				44					1300	2600	2600	2600											
	402+50 RT 410+00 RT	750	1				15		15								750							
	I-77 SB																							
	404+60 LT 410+00 LT	540					11		11								540							
209	I-77 NB																							
	410+00 RT 423+00 RT	1300			11		26		26	1300	2600	2600					1300							
	410+00 RT 415+00 RT				13								1000											
	415+00 RT 423+00 RT													800										
	I-77 SB																							
	410+00 LT 415+30 LT	530					11		11								530							
210	I-77 NB																							
	423+00 RT 436+00 RT	1300			11		26		26	1300	2600	2600					1300							
	424+40 LT 431+60 LT	720	1				15		15								440		280					
211	I-77 NB																							
	436+00 RT 449+00 RT	1300			11		26		26	1300	2600	2600					1300							
	440+00 RT																							173
212	I-77 NB																							
	449+00 RT 462+00 RT	1300	1		11		26		26	1300	2600	2600					1300							
	I-77 SB																							
	453+75 LT 462+00 LT	825					17		17								825							
213	I-77 NB																							
	462+00 RT 475+00 RT	1300			11		26		26	1300	2600	2600					1300							
	463+00 RT																							80
	463+00 RT																							150
	469+40 RT 475+00 RT	560					11		11								560							
	473+30 RT 475+00 RT													170										
	I-77 SB																							
	462+00 LT 464+25 LT	225					5		5								225							
214	I-77 NB																							
	475+00 RT 477+50 RT	250					5		5		250			250			250							
	475+00 L/R 488+00 L/R	1300			11		26		26	1300	1300	2600					1300							
	476+00 RT																							88
	476+00 RT																							117
	477+50 RT 480+30 RT				7								280											
	480+30 RT 488+00 RT	770	1				15		15		770						770					1		
	RAMP C																							
	577+50 LT 588+00 LT	1050					21		21		1050						1050							
	577+50 LT 580+35 LT				7								285											
	580+35 LT 588+00 LT				10							765												
	580+40 LT 588+00 LT	760					15		15								760							
	TOTALS CARRIED TO SHEET 113	15500	4		187		312		312	10400	21876	21871	6153	1220			15220		280			1		608

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SHEET NO.	STATION TO STATION	614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN EACH	614 WORK ZONE SPEED LIMIT SIGN EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	614 BARRIER REFLECTOR, TYPE 1, 1-WAY EACH	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL EACH	614 OBJECT MARKER, ONE WAY EACH	614 WORK ZONE LANE LINE, CLASS 1, 6", AS PER PLAN MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, WHITE MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, YELLOW MILE	614 WORK ZONE CHANNELIZING LINE, CLASS 1, 12", AS PER PLAN FT	614 WORK ZONE DOTTED LINE, CLASS 1, AS PER PLAN FT			622 PORTABLE BARRIER, UNANCHORED, 32" FT	622 PORTABLE BARRIER, 50", AS PER PLAN FT	622 PORTABLE BARRIER, ANCHORED, 32" FT		622 PORTABLE BARRIER, "Y" CONNECTOR EACH	630 SIGN, GROUND MOUNTED EXTRUSHEET SF	630 SIGN, OVERHEAD EXTRUSHEET SF
	PHASE 2 CONT'D																							
215	RAMP B-2																							
	488+00 LT 501+00 LT									1300	1300													
	489+65 LT 490+25 LT	60	1				2		2								60							
	I-77 NB																							
	488+00 L/R 501+00 L/R				11					1300		1300												
	488+00 LT 494+60 LT	660					13		13								660							
	488+00 RT 493+90 RT	590					12		12		590						590							
	493+90 RT 496+65 RT												275											
	496+65 RT 501+00 RT										435			435										
	RAMP C-1																							
	693+13 LT 696+65 LT				9						352		352											
	US-224/I-277 WB																							
	254+00 LT 258+50 LT										450	450												
	254+00 LT 256+00 LT													200										
	256+00 LT 258+50 LT				2					250														
216	RAMP B-2																							
	301+00 RT 308+00 RT										700	700												
	7+20 RT 10+00 RT										280	280												
	I-77 NB																							
	501+00 L/R 514+00 L/R										1300	1300												
	501+00 RT 512+00 RT				9					1100														
	501+00 RT 507+50 RT													650										
	512+00 RT 514+00 RT												200											
	RAMP D																							
	904+32 LT 914+05 LT				12							973												
	US-224/I-277 WB																							
	250+75 LT 254+00 LT										325	325												
	250+75 LT 251+15 LT				2								80											
	251+15 LT 254+00 LT													285										
	I-77 SB																							
	510+00 LT 514+00 LT	800			3		16		16	400	400	400					800							
217	I-77 NB																							
	514+00 RT 520+55 RT											655												
	514+00 RT 523+55 RT												955											
	514+00 RT 517+35 RT				4						335	335												
	517+35 RT 520+40 RT				8								610											
	520+40 RT 523+55 RT												315											
	I-77 SB																							
	514+00 LT 522+60 LT	860	1				17		17								860							
	514+00 LT 527+00 LT				11					1300	1300	1300												
	514+00 LT 518+00 LT												400											
	514+00 LT 514+60 LT	60	1				1		1								60							
	TOTALS CARRIED TO SHEET 113	3030	3		71		61		61	5650	7767	8018	3187	1570			3030							

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MAINTENANCE OF TRAFFIC SUBSUMMARY

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SHEET NO.	STATION TO STATION					614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN EACH	614 WORK ZONE SPEED LIMIT SIGN EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	614 BARRIER REFLECTOR, TYPE 1, 1-WAY EACH	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL EACH	614 OBJECT MARKER, ONE WAY EACH	614 WORK ZONE LANE LINE, CLASS 1, 6", AS PER PLAN MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, WHITE MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, YELLOW MILE	614 WORK ZONE CHANNELIZING LINE, CLASS 1, 12", AS PER PLAN FT	614 WORK ZONE DOTTED LINE, CLASS 1, AS PER PLAN FT			622 PORTABLE BARRIER, UNANCHORED, 32" FT	622 PORTABLE BARRIER, 50", AS PER PLAN FT	622 PORTABLE BARRIER, ANCHORED, 32" FT		622 PORTABLE BARRIER, "Y" CONNECTOR EACH	630 SIGN, GROUND MOUNTED EXTRUSHEET SF	630 SIGN, OVERHEAD EXTRUSHEET SF
	PHASE 2 CONT'D																												
218	I-77 SB																												
	324+50	LT		324+55	LT									5	5														
	324+50	LT		328+95	LT				22							445													
	324+55	LT		329+75	LT				26								520												
	324+55	LT		328+95	LT				22								440												
	325+85	LT		338+00	LT										1215														
	326+45	LT		329+75	LT				8								330												
	328+95	LT		331+95	LT				15								300												
	329+75	LT		338+00	LT													825											
219	I-77 SB																												
	338+00	LT		346+50	LT										850														
	338+00	LT		340+35	LT													235											
	340+35	LT		346+50	LT				15								615												
	340+35	LT		M.L. A-A	LT										1065														
	349+55	LT		M.L. A-A	LT													145											
220	I-77 SB																												
	M.L. A-A	LT		EXIST.	LT										635			635											
223	US-224/I-277 WB																												
	218+00	LT		229+00	LT				96						1100		1100												
	221+00	LT		227+40	LT				32							640													
	224+90	LT		229+00	LT	410					8		8								410								
	227+40	LT		229+00	LT												160												
224	RAMP B-2																												
	18+60	L/R		29+80	L/R	1120					22		22		1120						1120								
	18+60	L/R		24+65	LT				8							605													
	24+65	L/R		29+80	LT				13								515												
	US-224/I-277 WB																												
	235+65	LT		242+00	LT				62						635	635													
	US-224/I-277 EB																												
	237+70	RT																											42
	242+00	RT																											80
	242+00	RT																											148
	242+00	RT																											98
225	US-224/I-277 WB																												
	242+00	LT		249+55	LT										755														
	242+00	LT		250+75	LT											875													
	248+30	LT		250+75	LT										245														
	249+55	LT		250+75	LT				6								240												
	TOTALS CARRIED TO SHEET 113					1530			325		30		30	5	7625	3200	4220	1840			1530								368

CALCULATED JAR
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MAINTENANCE OF TRAFFIC SUBSUMMARY

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SHEET NO.	STATION TO STATION	614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN EACH	614 WORK ZONE SPEED LIMIT SIGN EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	614 BARRIER REFLECTOR, TYPE 1, 1-WAY EACH	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL EACH	614 OBJECT MARKER, ONE WAY EACH	614 WORK ZONE LANE LINE, CLASS 1, 6", AS PER PLAN MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, WHITE MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, YELLOW MILE	614 WORK ZONE CHANNELIZING LINE, CLASS 1, 12", AS PER PLAN FT	614 WORK ZONE DOTTED LINE, CLASS 1, AS PER PLAN FT			622 PORTABLE BARRIER, UNANCHORED, 32" FT	622 PORTABLE BARRIER, 50", AS PER PLAN FT	622 PORTABLE BARRIER, ANCHORED, 32" FT		622 PORTABLE BARRIER, "Y" CONNECTOR EACH	630 SIGN, GROUND MOUNTED EXTRUSHEET SF	630 SIGN, OVERHEAD EXTRUSHEET SF
	PHASE 2 CONT'D																							
226	US-224 WB																							
	258+50 LT 268+00 LT											950												
	258+50 LT 270+00 LT				10					1150		1150												
	268+00 LT 270+00 LT				5								200											
	RAMP D																							
	268+00 LT 270+00 LT				5								200											
	RAMP C																							
	597+00 LT 599+10 LT	420			3		8		8		210	210					420							
227	US-224 WB																							
	270+00 LT 281+90 LT				55								1190											
	270+00 LT 278+90 LT				40								890											
	270+00 LT 272+00 LT				2					200														
	270+00 LT 278+90 LT				35							890												
	272+00 LT 281+90 LT				50								990											
	RAMP C																							
	599+10 LT 600+30 LT	120			2		2		2			120					120							
	599+10 LT 603+40 LT	430					9		9		430						430							
	600+30 LT 603+40 LT				8								310											
	US-224 EB																							
	271+45 RT 274+25 RT												280											
	274+25 RT 283+00 RT										875													
	274+25 RT 279+95 RT	570					11		11								570							
228	US-224 EB																							
	283+00 RT 284+10 RT										110													
229	RAMP B-2																							
	10+00 L/R 18+40 L/R				9						840	840												
	11+50 RT 18+40 RT	690	1				14		14								690							
230	RAMP C-2																							
	784+55 LT 786+05 LT				2							150												
	784+55 LT 786+10 LT				4								155											
	RAMP C																							
	588+00 LT 592+40 LT	440			6		9		9			440					440							
	588+00 LT 597+00 LT	900					18		18		900						900							
	592+40 LT 593+45 LT				3								105											
	593+45 LT 597+00 LT				5							355												
	593+45 LT 596+40 LT													295										
	593+50 LT 597+00 LT	350					7		7								350							
	TOTALS CARRIED TO SHEET 113	3920	1		244		78		78	1350	4315	4155	4320	295			3920							

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SHEET NO.	STATION TO STATION	614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN EACH	614 WORK ZONE SPEED LIMIT SIGN EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	614 BARRIER REFLECTOR, TYPE 1, 1-WAY EACH	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL EACH	614 OBJECT MARKER, ONE WAY EACH	614 WORK ZONE LANE LINE, CLASS 1, 6", AS PER PLAN MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, WHITE MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, YELLOW MILE	614 WORK ZONE CHANNELIZING LINE, CLASS 1, 12", AS PER PLAN FT	614 WORK ZONE DOTTED LINE, CLASS 1, AS PER PLAN FT			622 PORTABLE BARRIER, UNANCHORED, 32" FT	622 PORTABLE BARRIER, 50", AS PER PLAN FT	622 PORTABLE BARRIER, ANCHORED, 32" FT		622 PORTABLE BARRIER, "Y" CONNECTOR EACH	630 SIGN, GROUND MOUNTED EXTRUSHEET SF	630 SIGN, OVERHEAD EXTRUSHEET SF
	PHASE 2A																							
231	US-224/I-277 WB																							
	220+80 LT 229+00 LT										820	820												
	220+80 LT 225+00 LT				11								840											
	225+00 LT 229+00 LT	800					16		16		400	400				800								
	226+20 LT 229+00 LT													280										
	US-224/I-277 EB																							
	228+50 RT																							51
232	RAMP B / RAMP B-2																							
	229+00 LT 234+20 LT	520			7		10		10		520	520		520		520								
	197+00 L/R 203+00 L/R	600			8		12		12		600	600	600			600								
	199+70 RT 203+00 RT				8								330											
	US-224/I-277 WB																							
	229+00 LT 242+00 LT	1300					26		26							1300								
	229+00 LT 238+90 LT										990	990												
233	US-224/I-277 WB																							
	242+00 LT 248+90 LT	690	1				14		14							690						1		
	RAMP B-1																							
	418+00 RT 419+70 RT	170					3		3							170								
234	RAMP B																							
	203+00 RT 211+50 RT										850													
	203+00 RT 205+90 RT	290			11		6		6			290	580			290								
	205+90 RT 211+50 RT				7							560												
	RAMP B-2																							
	10+00 RT 15+50 RT				7						550	550												
	12+90 RT 15+50 RT	260	1				5		5							260								
235	RAMP B-2																							
	305+80 RT 308+00 RT				3						220	220												
	7+20 RT 10+00 RT				4						280	280												
	RAMP B																							
	211+50 L/R 213+20 L/R				2						170	170												
	I-77 SB																							
	513+30 LT 513+90 LT	70	1				2		2							70								
236	I-77 SB																							
	518+30 LT 527+00 LT												870											
	RAMP B																							
	213+20 RT 218+30 RT										510													
	213+20 RT 215+90 RT				3							270												
	215+90 RT 218+30 RT												240											
237	I-77 SB																							
	324+65 LT 326+75 LT												210											
	326+45 LT 329+70 LT													325										
	326+75 LT 329+70 LT													295										
	TOTALS CARRIED TO SHEET 113	4700	3		71		94		94		5910	5670	3670	1420			4700				1		51	

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SHEET NO.	STATION TO STATION	614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN EACH	614 WORK ZONE SPEED LIMIT SIGN EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	614 BARRIER REFLECTOR, TYPE 1, 1-WAY EACH	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL EACH	614 OBJECT MARKER, ONE WAY EACH	614 WORK ZONE LANE LINE, CLASS I, 6", AS PER PLAN MILE	614 WORK ZONE EDGE LINE, CLASS I, 6", AS PER PLAN, WHITE MILE	614 WORK ZONE EDGE LINE, CLASS I, 6", AS PER PLAN, YELLOW MILE	614 WORK ZONE CHANNELIZING LINE, CLASS I, 12", AS PER PLAN FT	614 WORK ZONE DOTTED LINE, CLASS I, AS PER PLAN FT			622 PORTABLE BARRIER, UNANCHORED, 32" FT	622 PORTABLE BARRIER, 50", AS PER PLAN FT	622 PORTABLE BARRIER, ANCHORED, 32" FT		622 PORTABLE BARRIER, "Y" CONNECTOR EACH	630 SIGN, GROUND MOUNTED EXTRUSHEET SF	630 SIGN, OVERHEAD EXTRUSHEET SF
	PHASE 2B																							
238	I-77 NB																							
	493+90 RT 501+00 RT	710					14		14		710						710							
	US-224 EB																							
	253+50 RT 258+50 RT										500	500												
	253+50 RT 254+75 RT												125											
	254+70 RT 258+50 RT	380	1				8		8								380							
	254+75 RT 258+50 RT				3					375														
239	I-77 NB																							
	501+00 RT 510+65 RT										965													
	501+00 RT 508+40 RT	740					15		15								740							
	RAMP D																							
	904+70 LT 908+70 LT	400					8		8								400							
	US-224 EB																							
	250+75 RT 253+50 RT				2					275	275	275												
240	US-224 EB																							
	245+60 RT 250+75 RT				26								515											
	248+65 RT 250+75 RT				20						210	210												
241	US-224 EB																							
	258+50 RT 267+90 RT				8					940	940	940												
	258+50 RT 262+90 RT	440					9		9								440							
	PHASE 2C																							
243	RAMP C-1																							
	691+00 LT 693+95 LT				4							295												
	691+00 LT 696+70 LT										570													
	691+95 LT 693+95 LT	200	1				4		4								200							
	693+95 LT 696+70 LT				7								275											
	I-77 NB																							
	493+90 RT 496+70 RT												470											
	496+70 RT 501+00 RT										430			430										
	US-224 EB																							
	253+75 RT 258+50 RT										475													
	253+75 RT 256+40 RT													265										
	256+40 RT 258+50 RT				10								420											
244	I=77 NB																							
	501+00 RT 506+65 RT													565										
	501+00 RT 510+65 RT										965													
	US-224 EB																							
	250+75 RT 253+75 RT										300			300										
245	US-224 EB																							
	256+40 RT 260+40 RT				10								400											
	RAMP C-1																							
	678+20 LT 686+00 LT										780													
	678+20 LT 678+60 LT													40										
	678+60 LT 682+95 LT				11								435											
	682+95 LT 686+00 LT				4							305												
246	RAMP C-1																							
	686+00 LT 691+00 LT				6						500	500												
	TOTALS CARRIED TO SHEET 113	2870	2		111		58		58	1590	7620	3025	2640	1600			2870							

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SHEET NO.	STATION TO STATION	614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN EACH	614 WORK ZONE SPEED LIMIT SIGN EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	614 BARRIER REFLECTOR, TYPE 1, 1-WAY EACH	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL EACH	614 OBJECT MARKER, ONE WAY EACH	614 WORK ZONE LANE LINE, CLASS I, 6", AS PER PLAN MILE	614 WORK ZONE EDGE LINE, CLASS I, 6", AS PER PLAN, WHITE MILE	614 WORK ZONE EDGE LINE, CLASS I, 6", AS PER PLAN, YELLOW MILE	614 WORK ZONE CHANNELIZING LINE, CLASS I, 12", AS PER PLAN FT	614 WORK ZONE DOTTED LINE, CLASS I, AS PER PLAN FT			622 PORTABLE BARRIER, UNANCHORED, 32" FT	622 PORTABLE BARRIER, 50", AS PER PLAN FT	622 PORTABLE BARRIER, ANCHORED, 32" FT		622 PORTABLE BARRIER, "Y" CONNECTOR EACH	630 SIGN, GROUND MOUNTED EXTRUSHEET SF	630 SIGN, OVERHEAD EXTRUSHEET SF
	PHASE 2D																							
247	I-77 NB																							
	505+00 RT 514+00 RT	900	1				18		18								900							
248	I-77 NB																							
	514+00 RT 515+90 RT	190					4		4								190							
249	US-224 WB																							
	256+00 LT 270+00 LT	500					10		10								500							
250	US-224 WB																							
	270+00 LT 281+00 LT	1400	1				28		28								1400							
	275+00 LT 281+60 LT										660			660										
	PHASE 2E																							
252	I-77 NB																							
	492+85 RT 501+00 RT				41								815											
	494+85 RT 501+00 RT				31							615												
	494+85 RT 496+45 RT				10								200											
	496+45 RT 501+00 RT													455										
253	I-77 NB																							
	501+00 RT 514+00 RT				195						1300	1300	1300											
	501+00 RT 506+70 RT													570										
	510+50 RT 514+00 RT	350	1				7		7								350							
254	I-77 NB																							
	514+00 RT 516+05 RT	205					4		4								205							
	514+00 RT 522+10 RT				40							810												
	514+00 RT 523+60 RT				48								960											
	514+00 RT 518+70 RT				23						470													
	PHASE 2F																							
255	I-77 NB																							
	494+85 RT 501+00 RT				5					615		615												
	494+85 RT 496+65 RT												180											
	496+45 RT 501+00 RT										455													
	496+65 RT 501+00 RT													435										
256	I-77 NB																							
	501+00 RT 514+00 RT										1300	1300												
	501+00 RT 512+90 RT				10					1190														
	501+00 RT 507+40 RT													640										
	512+90 RT 514+00 RT				6								110											
	RAMP D																							
	900+40 RT 914+05 RT										1365													
	900+40 LT 910+55 LT				13							1015												
	910+55 LT 914+05 LT				9								350											
	TOTALS CARRIED TO SHEET 113	3545	3		431		71		71	1805	5550	5655	3915	2760			3545							

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SUMMARY OF TRAFFIC MAINTENANCE

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SHEET NO.	STATION TO STATION	614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN EACH	614 WORK ZONE SPEED LIMIT SIGN EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	614 BARRIER REFLECTOR, TYPE 1, 1-WAY EACH	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL EACH	614 OBJECT MARKER, ONE WAY EACH	614 WORK ZONE LANE LINE, CLASS I, 6", AS PER PLAN MILE	614 WORK ZONE EDGE LINE, CLASS I, 6", AS PER PLAN, WHITE MILE	614 WORK ZONE EDGE LINE, CLASS I, 6", AS PER PLAN, YELLOW MILE	614 WORK ZONE CHANNELIZING LINE, CLASS I, 12", AS PER PLAN FT	614 WORK ZONE DOTTED LINE, CLASS I, AS PER PLAN FT			622 PORTABLE BARRIER, UNANCHORED, 32" FT	622 PORTABLE BARRIER, 50", AS PER PLAN FT	622 PORTABLE BARRIER, ANCHORED, 32" FT		622 PORTABLE BARRIER, "Y" CONNECTOR EACH	630 SIGN, GROUND MOUNTED EXTRUSHEET SF	630 SIGN, OVERHEAD EXTRUSHEET SF
	PHASE 2F CONT'D																							
257	I-77 NB																							
	514+00 LT – 520+60 LT				33								660											
	514+00 RT – 523+60 RT				96									1920										
	514+00 RT – 515+90 RT				10						190													
	514+00 RT – 515+80 RT										180													
	515+90 RT – 523+60 RT				39									770										
258	US-224 WB																							
	264+70 LT – 270+00 LT				13									530										
	RAMP D																							
	887+40 LT – 900+40 LT										1300													
	887+40 LT – 892+70 LT				13									530										
	892+70 LT – 900+40 LT				10								770											
259	US-224 WB																							
	270+00 LT – 273+25 LT										325													
	270+00 LT – 271+30 LT				6									260										
	271+30 LT – 283+00 LT														1170									
260	US-224 WB																							
	283+00 LT – 283+50 LT														50									
	PHASE 2G																							
264	US-224 EB																							
	248+60 RT – 255+20 RT														660									
	248+60 RT – 256+40 RT										780													
	255+20 RT – 256+40 RT				6									240										
265	US-224 EB																							
	256+40 RT – 257+20 RT				4									160										
	256+40 RT – 256+50 RT										10													
	257+20 RT – 270+00 RT										1280													
266	US-224 EB																							
	270+00 RT – 271+45 RT										145													
	271+45 RT – 280+50 RT													905										
	273+10 RT – 280+50 RT										740													
	273+10 RT – 281+20 RT	810					16		16									810						
	RAMP C																							
	599+90 LT – 602+30 LT	240			6		5		5		240			240				240						
	TOTALS CARRIED TO SHEET 113	1050			236		21		21		5190	1430	5555	1880				1050						

CALCULATED JAR
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MAINTENANCE OF TRAFFIC SUBSUMMARY

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1288

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SHEET NO.	STATION TO STATION	614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN EACH	614 WORK ZONE SPEED LIMIT SIGN EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	614 BARRIER REFLECTOR, TYPE 1, 1-WAY EACH	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL EACH	614 OBJECT MARKER, ONE WAY EACH	614 WORK ZONE LANE LINE, CLASS I, 6", AS PER PLAN MILE	614 WORK ZONE EDGE LINE, CLASS I, 6", AS PER PLAN, WHITE MILE	614 WORK ZONE EDGE LINE, CLASS I, 6", AS PER PLAN, YELLOW MILE	614 WORK ZONE CHANNELIZING LINE, CLASS I, 12", AS PER PLAN FT	614 WORK ZONE DOTTED LINE, CLASS I, AS PER PLAN FT			622 PORTABLE BARRIER, UNANCHORED, 32" FT	622 PORTABLE BARRIER, 50", AS PER PLAN FT	622 PORTABLE BARRIER, ANCHORED, 32" FT		622 PORTABLE BARRIER, "Y" CONNECTOR EACH	630 SIGN, GROUND MOUNTED EXTRUSHEET SF	630 SIGN, OVERHEAD EXTRUSHEET SF
	PHASE 2H																							
267	I-77 NB																							
	466+75 RT – 469+75 RT														300									
	466+75 RT – 475+00 RT										825													
	469+75 RT – 471+20 RT				8								290											
	471+20 RT – 475+00 RT	760	1		5		15		15		380	380					760				1			
268	I-77 NB																							
	475+00 RT – 481+50 RT	650					13		13		650						650							
	476+00 RT																							33
	RAMP C																							
	575+00 L/R – 582+00 L/R	700					14		14								700							
	575+00 L/R – 588+00 L/R				16						1300	1300												
269	RAMP C																							
	588+00 LT – 592+95 LT				6							495												
	588+00 LT – 597+00 LT										900													
	592+95 LT – 595+00 LT				10								410											
	592+95 LT – 597+00 LT				5							405												
	595+00 LT – 597+00 LT														200									
	RAMP C-2																							
	785+00 RT – 786+10 RT				2						110	110												
274	RAMP C																							
	597+00 LT – 599+20 LT				3						220	220			220									
275	RAMP C																							
	599+20 LT – 606+70 LT				10						750	750												
	599+20 LT – 601+40 LT														220									
	US-224 EB																							
	277+50 RT – 283+00 RT				14						550		550											
276	US-224 EB																							
	283+00 RT – 284+85 RT				5						185		185											
	PHASE 2I																							
277	I-71 NB																							
	366+35 RT – 370+20 RT				5							385												
	366+35 RT – 371+00 RT										465													
	367+90 RT – 371+00 RT	310	1				6		6								310							
	370+20 RT – 371+00 RT				2								80											
278	I-71 NB																							
	371+00 RT – 375+30 RT				5								430											
	371+00 RT – 384+00 RT	1300					26		26		1300						1300							
	375+30 RT – 384+00 RT														870									
279	I-71 NB																							
	384+00 RT – 384+90 RT	90					2		2		90				90		90							
	TOTALS CARRIED TO SHEET 113	3810	2		96		76		76		7725	4045	1945		1900		3810				1			33

CALCULATED JAR
CHECKED SSR

MAINTENANCE OF TRAFFIC SUBSUMMARY

SUM-77 / 277 / 224

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SHEET NO.	STATION TO STATION	614 INCREASED BARRIER DELINEATION	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN	614 WORK ZONE SPEED LIMIT SIGN	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	614 BARRIER REFLECTOR, TYPE 1, 1-WAY	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL	614 OBJECT MARKER, ONE WAY	614 WORK ZONE LANE LINE, CLASS 1, 6", AS PER PLAN	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, WHITE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, YELLOW	614 WORK ZONE CHANNELIZING LINE, CLASS 1, 12", AS PER PLAN	614 WORK ZONE DOTTED LINE, CLASS 1, AS PER PLAN			622 PORTABLE BARRIER, UNANCHORED, 32"	622 PORTABLE BARRIER, 50", AS PER PLAN	622 PORTABLE BARRIER, ANCHORED, 32"		622 PORTABLE BARRIER, "Y" CONNECTOR	630 SIGN, GROUND MOUNTED EXTRUSHEET	630 SIGN, OVERHEAD EXTRUSHEET
		FT	EACH	EACH	EACH	SY	EACH	EACH	EACH	MILE	MILE	MILE	FT	FT			FT	FT	FT		EACH	SF	SF
	PHASE 2J																						
280	I-77 NB																						
	368+35 RT – 369+75 RT				7								420										
	369+75 RT – 371+00 RT				2							125											
281	I-77 NB																						
	371+00 RT – 384+00 RT				16						1300	1300											
	375+30 RT – 384+00 RT										870												
282	I-77 NB																						
	384+00 RT – 384+80 RT										80												
	384+00 RT – 387+00 RT				4							300											
	384+00 RT – 397+00 RT										1300												
	387+00 RT – 397+00 RT				25								1000										
	391+35 RT – 397+00 RT												565										
283	I-77 NB																						
	397+00 RT – 411+00 RT				35						1400		2800										
	402+50 RT – 411+00 RT	850	1				17		17								850						
284	I-77 NB																						
	411+00 – 415+00				10								800										
	411+00 – 423+00	1200					24		24		1200						1200						
	415+00 – 423+00													800									
	TOTALS CARRIED TO SHEET 113	2050	1		99		41		41		6150	1725	5585	800			2050						

CALCULATED JAR
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SUMMARY OF TRAFFIC MAINTENANCE

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SHEET NO.	STATION TO STATION					614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN EACH	614 WORK ZONE SPEED LIMIT SIGN EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	614 BARRIER REFLECTOR, TYPE 1, 1-WAY EACH	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL EACH	614 OBJECT MARKER, ONE WAY EACH	614 WORK ZONE LANE LINE, CLASS I, 6", AS PER PLAN MILE	614 WORK ZONE EDGE LINE, CLASS I, 6", AS PER PLAN, WHITE MILE	614 WORK ZONE EDGE LINE, CLASS I, 6", AS PER PLAN, YELLOW MILE	614 WORK ZONE CHANNELIZING LINE, CLASS I, 12", AS PER PLAN FT	614 WORK ZONE DOTTED LINE, CLASS I, AS PER PLAN FT			622 PORTABLE BARRIER, UNANCHORED, 32" FT	622 PORTABLE BARRIER, 50", AS PER PLAN FT	622 PORTABLE BARRIER, ANCHORED, 32" FT		622 PORTABLE BARRIER, "Y" CONNECTOR EACH	630 SIGN, GROUND MOUNTED EXTRUSHEET SF	630 SIGN, OVERHEAD EXTRUSHEET SF
	PRE-PHASE 3																												
	I-77																												
320	368+23	L/R		371+00	L/R					480																			
321	371+00	L/R		371+92	L/R					102																			
	I-77 NB																												
329	477+00	LT		488+00	LT					2071																			
330	488+00	LT		496+95 (77 SB)	RT					1004																			
	PHASE 3																												
319	I-77 NB																												
	356+35	RT		358+00	RT				4					320	160	160		160											
	I-77 SB																												
	356+05	LT		358+00	LT				5								195												
320	I-77 NB																												
	358+00	RT		371+00	RT				22					2600	1300	1300													
	358+00	RT		366+10	RT													810											
	I-77 SB																												
	358+50	LT		363+45	LT										495														
	359+05	LT		371+00	LT				10					1195		1195													
	359+05	LT		370+60	LT				29								2310												
	363+45	LT		368+80	LT				26								1070												
	363+45	LT		371+00	LT										755														
	366+80	LT		371+00	LT													420											
	368+30	LT		371+00	LT	270						5	5												270				
	370+60	LT		371+00	LT										40	40													
	366+50	LT		371+00	LT	450					9		9											450						
321	I-77 NB																												
	371+00	RT		384+00	RT				22					2600		1300													
	371+00	RT		378+00	RT										700														
	371+55	RT		384+00	RT				31						1245		1245												
	378+00	RT		384+00	RT				15								600												
	I-77 SB																												
	371+00	LT		371+80	LT													80											
	371+00	L/R		384+00	L/R	1300						26	26		2600	2600									1300				
	371+00	LT		371+80	LT				1					80															
	371+00	LT		372+90	LT	190					4		4											190						
	371+80	LT		384+00	LT				61								1220												
322	I-77 NB																												
	384+00	RT		397+00	RT				22					2600	1300	1300													
	384+00	RT		391+40	RT												740												
	384+00	RT		387+20	RT				8								320												
	391+40	RT		397+00	RT				4					560															
	I-77 SB																												
	384+00	L/R		397+00	L/R	1300						26	26		2600	2600									1300				
	384+00	LT		394+00	LT				50								1000												
	391+00	LT		397+00	LT	600					12		12											600						
	394+00	LT		397+00	LT				2					300															
	TOTALS CARRIED TO SHEET 113					4110			312	3657	25	57	82	10255	11195	10495	8700	1470				1240	2870						

CALCULATED JAR
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MAINTENANCE OF TRAFFIC SUBSUMMARY

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SHEET NO.	STATION TO STATION	614 INCREASED BARRIER DELINEATION	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN	614 WORK ZONE SPEED LIMIT SIGN	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	614 BARRIER REFLECTOR, TYPE 1, 1-WAY	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL	614 OBJECT MARKER, ONE WAY	614 WORK ZONE LANE LINE, CLASS 1, 6", AS PER PLAN	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, WHITE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, YELLOW	614 WORK ZONE CHANNELIZING LINE, CLASS 1, 12", AS PER PLAN	614 WORK ZONE DOTTED LINE, CLASS 1, AS PER PLAN			622 PORTABLE BARRIER, UNANCHORED, 32"	622 PORTABLE BARRIER, 50", AS PER PLAN	622 PORTABLE BARRIER, ANCHORED, 32"		622 PORTABLE BARRIER, "Y" CONNECTOR	630 SIGN, GROUND MOUNTED EXTRUSHEET	630 SIGN, OVERHEAD EXTRUSHEET
		FT	EACH	EACH	EACH	SY	EACH	EACH	EACH	MILE	MILE	MILE	FT	FT			FT	FT	FT		EACH	SF	SF
	PHASE 3 CONT'D																						
323	I-77 NB																						
	397+00 RT 410+00 RT				33					3900	1300	1300											
	I-77 SB																						
	397+00 L/R 410+00 L/R	2600	1		11		26	26	52	1300	2600	2600					1300	1300					
324	I-77 NB																						
	410+00 RT 423+00 RT				22					2600	1300	1300											
	410+00 RT 415+60 RT				5					560													
	415+60 RT 423+00 RT													740									
	I-77 SB																						
	410+00 L/R 423+00 L/R	2600			11		26	26	52	1300	2600	2600					1300	1300					
325	I-77 NB																						
	423+00 RT 436+00 RT				22					2600	1300	1300											
	423+00 RT 424+00 RT													100									
	I-77 SB																						
	423+00 L/R 436+00 L/R	2600			11		26	26	52	1300	2600	2600					1300	1300					
326	I-77 NB																						
	436+00 RT 449+00 RT				22					2600	1300	1300											
	I-77 SB																						
	436+00 L/R 449+00 L/R	2600			11		26	26	52	1300	2600	2600					1300	1300					
327	I-77 NB																						
	449+00 RT 462+00 RT				22					2600	1300	1300											
	I-77 SB																						
	449+00 L/R 462+00 L/R	2600	1		11		26	26	52	1300	2600	2600					1300	1300					
328	I-77 NB																						
	462+00 RT 475+00 RT				22					2600	1300	1300											
	463+00 RT																						242
	472+30 RT 475+00 RT													270									
	I-77 SB																						
	462+00 L/R 475+00 L/R	2600			11		26	26	52	1300	2600	2600					1300	1300					
	474+30 RT 475+00 RT	70					1		1								70						
329	I-77 NB																						
	475+00 RT 488+00 RT				22					2600		1300											
	475+00 RT 476+95 RT													195									
	476+00 RT																						275
	476+95 RT 481+20 RT				11								425										
	480+00 RT 486+50 RT													650									
	481+20 RT 488+00 RT										780												
	486+50 RT 488+00 RT				4								150										
	RAMP C																						
	576+95 LT 581+25 LT				11								430										
	576+95 LT 588+00 LT										1105												
	581+25 LT 588+00 LT				8							675											
	TOTALS CARRIED TO SHEET 113	15670	2		270		157	156	313	27860	25285	25375	1005	1955			7870	7800					517

CALCULATED JAR
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MAINTENANCE OF TRAFFIC SUBSUMMARY

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SHEET NO.	STATION TO STATION					614 INCREASED BARRIER DELINEATION	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN	614 WORK ZONE SPEED LIMIT SIGN	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	614 BARRIER REFLECTOR, TYPE 1, 1-WAY	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL	614 OBJECT MARKER, ONE WAY	614 WORK ZONE LANE LINE, CLASS 1, 6", AS PER PLAN	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, WHITE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, YELLOW	614 WORK ZONE CHANNELIZING LINE, CLASS 1, 12", AS PER PLAN	614 WORK ZONE DOTTED LINE, CLASS 1, AS PER PLAN			622 PORTABLE BARRIER, UNANCHORED, 32"	622 PORTABLE BARRIER, 50", AS PER PLAN	622 PORTABLE BARRIER, ANCHORED, 32"		622 PORTABLE BARRIER, "Y" CONNECTOR	630 SIGN, GROUND MOUNTED EXTRUSHEET	630 SIGN, OVERHEAD EXTRUSHEET
						FT	EACH	EACH	EACH	SY	EACH	EACH	EACH	MILE	MILE	MILE	FT	FT			FT	FT	FT		EACH	SF	SF
	PHASE 3 CONT'D																												
329	I-77 SB																												
	475+00	L/R		488+00	L/R	1300					26		26		2600	2600					1300								
	475+00	LT		485+15	LT				11					1015															
	475+00	RT		485+90	RT	1090	1				22		22								1090								
	475+00	RT		485+00	RT	1000						20	20									1000							
	475+60	RT		486+70	RT	1110	1				22		22								1110								
	485+00	RT		488+00	RT	300					6		6								300								
	485+15	LT		488+00	LT				14								285												
330	I-77 NB																												
	488+00			501+00					22					2600															
	488+00			494+70												670	670												
	488+00			493+70											570														
	490+95			494+70					9								375												
	490+95			494+85					10								390												
	493+70			501+00											730		730												
	493+70			500+10					16								640												
	494+85			501+00												615													
	RAMP B-2																												
	294+70	RT		301+00	RT				5					630	630	630													
	RAMP C-1																												
	691+00	LT		693+70	LT				3						270	270													
	RAMP C-2																												
	789+00	LT		796+95	LT				10						795	795													
	I-77 SB																												
	488+00	LT		497+00	LT	900					18		18		900						900								
	488+00	LT		494+45	LT				16								645												
	488+00	RT		489+35	RT										135	135													
	488+00	RT		489+60	RT	160	1				3		3								160								
	488+00	RT		496+95	RT				11							895													
	489+35	RT		491+10	RT				4								175												
	489+35	RT		501+00	RT												1165												
	491+00	LT		494+45	LT				9								345												
	494+30	LT		501+00	LT	670					13		13								670								
	494+45	LT		496+95	LT				3							250													
	494+45	LT		501+00	LT										655														
	496+95	RT		498+65	RT				9								740												
	496+95	RT		501+00	RT				5							405													
	497+10	LT																										25	
	498+65	RT		501+00	RT													235											
	US-224 WB																												
	253+50	LT		258+50	LT										500	500		500											
	253+50	LT		256+10	LT	260					5		5								260								
	US-224 EB																												
	253+50	RT		258+50	RT				4					500	500	500													
	253+50	RT		255+20	RT													170											
	255+20	RT		258+50	RT				16								660												
	TOTALS CARRIED TO SHEET 113					6790	3		177		115	20	135	4745	8285	8265	6820	905			5790	1000				25			

CALCULATED JAR
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MAINTENANCE OF TRAFFIC SUBSUMMARY

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N:\03\60\06744-08\06002_SUM-76-10.95\Design\MOT\Sheets\06002_MS302.dgn Sheet 1/31/2021 5:27:02 PM jrettig

SHEET NO.	STATION TO STATION					614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN EACH	614 WORK ZONE SPEED LIMIT SIGN EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	614 BARRIER REFLECTOR, TYPE 1, 1-WAY EACH	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL EACH	614 OBJECT MARKER, ONE WAY EACH	614 WORK ZONE LANE LINE, CLASS 1, 6", AS PER PLAN MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, WHITE MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, YELLOW MILE	614 WORK ZONE CHANNELIZING LINE, CLASS 1, 12", AS PER PLAN FT	614 WORK ZONE DOTTED LINE, CLASS 1, AS PER PLAN FT			622 PORTABLE BARRIER, UNANCHORED, 32" FT	622 PORTABLE BARRIER, 50", AS PER PLAN FT	622 PORTABLE BARRIER, ANCHORED, 32" FT		622 PORTABLE BARRIER, "Y" CONNECTOR EACH	630 SIGN, GROUND MOUNTED EXTRUSHEET SF	630 SIGN, OVERHEAD EXTRUSHEET SF
	PHASE 3 CONT'D																												
331	RAMP B-2																												
	301+00	RT		308+00	RT				15					700	700	700													
	7+20	RT		10+00	RT				5					280	280	280													
	RAMP D																												
	900+50	LT		907+65	LT				9						715	715													
	I-77 NB																												
	501+00	RT		514+00	RT				22					2600		1300													
	501+00	RT		502+10	RT												110												
	501+00	RT		507+40	RT										640														
	502+10	RT		508+10	RT													600											
	507+40	RT		514+00	RT				17						660		1320												
	RAMP B																												
	211+50	RT		213+50	RT				2						200	200													
	I-77 SB																												
	501+00	L/R		514+00	L/R	1300					26		26		1300	1300								1300					
	501+00	LT		504+50	LT												350												
	502+00	LT																										30	
	504+50	LT		514+00	LT				8					950															
	507+00	LT																										25	
	512+00	LT																										30	
	US-224 WB																												
	250+70	LT		253+50	LT	280					5		5		280	280								280					
	252+00	LT		253+50	LT													150											
	US-224 EB																												
	250+70	RT		253+50	RT				2					280	280	280		280											
332	I-77 NB																												
	514+00	RT		526+15	RT				20					2430	1215	1215													
	514+00	RT		514+70	RT												70												
	514+70	RT		523+50	RT													880											
	I-77 SB																												
	514+00	LT		526+15	LT										1215														
	514+00	LT		515+30	LT				2							130													
	514+00	LT		518+00	LT	400	1				8		8											400					
	514+00	LT		515+85	LT				2					185	185														
	514+00	RT		527+00	RT											1300													
	515+30	LT		523+90	LT				22								860												
	515+85	LT		526+15	LT				26								2060												
	517+00	LT																										25	
	526+15	LT		527+00	LT				4					170			85												
333	I-77 SB																												
	324+60	LT		329+45	LT				5								485												
	324+60	LT		333+25	LT				14					1730		865													
	328+40	LT		333+25	LT										385														
	329+45	LT		333+25	LT				3					380															
	TOTALS CARRIED TO SHEET 113					1980	1		178		39		39	9705	8055	8565	5340	1910			1980					110			

CALCULATED JAR
CHECKED SSR

MAINTENANCE OF TRAFFIC SUBSUMMARY

SUM-77 / 277 / 224

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N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MS303.dgn Sheet 1/31/2021 5:27:05 PM jrettig

SHEET NO.	STATION TO STATION	614 INCREASED BARRIER DELINEATION	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN	614 WORK ZONE SPEED LIMIT SIGN	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	614 BARRIER REFLECTOR, TYPE 1, 1-WAY	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL	614 OBJECT MARKER, ONE WAY	614 WORK ZONE LANE LINE, CLASS 1, 6", AS PER PLAN	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, WHITE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, YELLOW	614 WORK ZONE CHANNELIZING LINE, CLASS 1, 12", AS PER PLAN	614 WORK ZONE DOTTED LINE, CLASS 1, AS PER PLAN			622 PORTABLE BARRIER, UNANCHORED, 32"	622 PORTABLE BARRIER, 50", AS PER PLAN	622 PORTABLE BARRIER, ANCHORED, 32"		622 PORTABLE BARRIER, "Y" CONNECTOR	630 SIGN, GROUND MOUNTED EXTRUSHEET	630 SIGN, OVERHEAD EXTRUSHEET
		FT	EACH	EACH	EACH	SY	EACH	EACH	EACH	MILE	MILE	MILE	FT	FT			FT	FT	FT		EACH	SF	SF
	PHASE 3 CONT'D																						
337	US-224/I-277 EB																						
	212+35 RT 216+00 RT				3					365	365	365		365									
338	US-224/I-277 EB																						
	216+00 RT 229+00 RT										1300	1300											
	216+00 RT 224+90 RT				7					890													
	216+00 RT 220+15 RT													415									
	221+40 RT 229+00 RT	760	1				15		15								760						
	224+90 RT 229+00 RT												410										
	228+50 RT																						118
	US-224/I-277 WB																						
	225+00 LT 229+00 LT				13					400	400	400	800										
	226+15 LT 229+00 LT													285									
339	US-224/I-277 EB																						
	229+00 RT 242+00 RT	1300					26		26		1300	1300					1300						
	229+00 RT 233+50 RT												450										
	233+50 RT 242+00 RT				7					850													
	240+10 RT 242+00 RT													190									
	US-224/I-277 WB																						
	229+00 LT 232+15 LT				11					315	315		315	315									
	229+00 LT 235+65 LT												665										
	229+00 LT 242+00 LT											1300											
	235+65 LT 242+00 LT										835												
	RAMP A																						
	109+50 LT 114+04 LT					168																	
	RAMP B																						
	23+20 RT 26+65 RT				12					345	345	345	345										
	23+20 RT 24+65 RT												145										
	RAMP B-2																						
	198+50 RT 203+00 RT				21					450	450	450	900										
340	US-224 EB																						
	242+00 RT 250+75 RT				7					875		875											
	242+00 RT 244+35 RT	235					5		5		235			235			235						
	244+35 RT 245+80 RT				4								145										
	245+80 RT 250+75 RT										495												
	249+60 RT 250+75 RT													115									
	RAMP A																						
	97+00 RT 103+70 RT				8							670											
	97+00 RT 107+20 RT	1020					20		20		1020						1020						
	103+70 RT 107+20 RT				9								350										
	107+89 LT 109+50 LT					38																	
	US-224 WB																						
	242+00 LT 250+75 LT										875	875											
	244+50 LT 250+75 LT	625					13		13								625						
341	US-224 EB																						
	258+50 RT 270+00 RT											1150											
	258+50 RT 266+90 RT												840										
	258+50 RT 260+75 RT				6								225										
	260+75 RT 270+00 RT										925												
	266+90 RT 270+00 RT				3					310													
	RAMP C-1																						
	680+70 LT 682+95 LT				6								225										
	680+70 LT 686+00 LT										530												
	682+95 LT 686+00 LT				4							305											
	TOTALS CARRIED TO SHEET 113	3940	1		121	206	79		79	4800	9390	9335	5815	1920			3940						118

CALCULATED JAR
CHECKED SSR

MAINTENANCE OF TRAFFIC SUBSUMMARY

SUM-77 / 277 / 224

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SHEET NO.	STATION TO STATION					614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN EACH	614 WORK ZONE SPEED LIMIT SIGN EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	614 BARRIER REFLECTOR, TYPE 1, 1-WAY EACH	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL EACH	614 OBJECT MARKER, ONE WAY EACH	614 WORK ZONE LANE LINE, CLASS 1, 6", AS PER PLAN MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, WHITE MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, YELLOW MILE	614 WORK ZONE CHANNELIZING LINE, CLASS 1, 12", AS PER PLAN FT	614 WORK ZONE DOTTED LINE, CLASS 1, AS PER PLAN FT			622 PORTABLE BARRIER, UNANCHORED, 32" FT	622 PORTABLE BARRIER, 50", AS PER PLAN FT	622 PORTABLE BARRIER, ANCHORED, 32" FT		622 PORTABLE BARRIER, "Y" CONNECTOR EACH	630 SIGN, GROUND MOUNTED EXTRUSHEET SF	630 SIGN, OVERHEAD EXTRUSHEET SF
	PHASE 3 CONT'D																												
341	RAMP C																												
	597+00	L/R		599+10	L/R				3						210	210		210											
	US-224 WB																												
	258+50	LT		264+70	LT										620														
	258+50	LT		270+00	LT											1150													
	258+50	LT		263+45	LT													495											
	263+45	LT		270+00	LT				5					655															
	264+70	LT		270+00	LT				13								530												
	268+85	LT		270+00	LT										115														
	RAMP D																												
	888+55	LT		900+50	LT										1195														
	888+55	LT		892+65	LT				10								410												
	892+65	LT		900+50	LT				10							785													
342	US-224 EB																												
	270+00	RT		283+00	RT				11					1300		1300													
	270+00	RT		271+45	RT										145														
	271+45	RT		280+60	RT												915												
	271+45	RT		277+50	RT				15								605												
	271+45	RT		283+00	RT										1155														
	280+60	RT		283+00	RT				2					240															
	RAMP C																												
	599+10	LT		600+60	LT				2						150	150		150											
	US-224 WB																												
	270+00	LT		283+00	LT				11					1300	1300	1300													
	270+00	LT		271+85	LT												185												
	271+85	LT		283+00	LT													1115											
343	US-224 EB																												
	283+00	RT		288+05	RT				8					1010	505	505													
	US-224 WB																												
	283+00	LT		286+00	LT				3					300	300	300		300											
345	RAMP B																												
	203+00	RT		211+50	RT										850														
	203+00	RT		205+85	RT				7								285												
	205+85	RT		211+50	RT				7							565													
	RAMP B-2																												
	10+00			15+50											550														
	10+00			18+40					18					840		840													
	15+50			18+40													290												
346	RAMP C																												
	588+00	LT		593+00	LT				6							500													
	588+00	LT		597+00	LT										900														
	593+00	LT		596+40	LT				9								340												
	595+00	LT		597+00	LT				3							200													
	596+40	LT		597+00	LT													60											
	RAMP C-2																												
	782+90	LT		789+00	LT				8							610													
	782+90	LT		785+00	LT												210												
	785+00	LT		789+00	LT										400														
	RAMP C-1																												
	686+00	LT		691+00	LT				6						500	500													
	TOTALS CARRIED TO SHEET 113								157					5645	8895	8915	3770	2330											

CALCULATED JAR
CHECKED SSR

MAINTENANCE OF TRAFFIC SUBSUMMARY

SUM-77 / 277 / 224

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SUMMARY OF TRAFFIC MAINTENANCE

SHEET NO.	STATION TO STATION	614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN EACH	614 WORK ZONE SPEED LIMIT SIGN EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	614 BARRIER REFLECTOR, TYPE 1, 1-WAY EACH	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL EACH	614 OBJECT MARKER, ONE WAY EACH	614 WORK ZONE LANE LINE, CLASS I, 6", AS PER PLAN MILE	614 WORK ZONE EDGE LINE, CLASS I, 6", AS PER PLAN, WHITE MILE	614 WORK ZONE EDGE LINE, CLASS I, 6", AS PER PLAN, YELLOW MILE	614 WORK ZONE CHANNELIZING LINE, CLASS I, 12", AS PER PLAN FT	614 WORK ZONE DOTTED LINE, CLASS I, AS PER PLAN FT			622 PORTABLE BARRIER, UNANCHORED, 32" FT	622 PORTABLE BARRIER, 50", AS PER PLAN FT	622 PORTABLE BARRIER, ANCHORED, 32" FT		622 PORTABLE BARRIER, "Y" CONNECTOR EACH	630 SIGN, GROUND MOUNTED EXTRUSHEET SF	630 SIGN, OVERHEAD EXTRUSHEET SF
	PHASE 3A																							
352	I-77 SB																							
	494+40 LT – 501+00 LT	660					13		13		660						660							
	494+40 LT – 497+45 LT													305										
	497+45 LT – 501+00 LT												355											
	497+30 LT																						25	
	US-224 WB																							
	253+50 LT – 258+50 LT										500	500		500										
353	I-77 SB																							
	501+00 LT – 506+30 LT												530											
	501+00 LT – 506+65 LT										565													
	501+00 LT – 506+50 LT	550	1				11		11								550							
	503+20 LT – 506+65 LT				9								345											
	502+10 LT																						25	
	507+15 LT																						25	
	512+15 LT																						25	
	RAMP B-1																							
	406+65 RT – 408+75 RT				3						210	210												
	US-224 WB																							
	250+75 LT – 253+50 LT										275	275	275											
354	US-224 WB																							
	242+00 LT – 247+80 LT										580													
	242+00 LT – 250+75 LT											875												
	247+80 LT – 250+75 LT				7								295											
	RAMP B-1																							
	414+50 RT – 421+50 RT										700													
	414+50 RT – 418+55 RT				5							405												
	418+55 RT – 421+50 RT				7								295											
355	US-224 WB																							
	258+50 LT – 264+70 LT										620													
	258+50 LT – 259+55 LT													105										
	258+50 LT – 263+45 LT											495												
	259+55 LT – 263+45 LT				3					390														
358	RAMP B-1																							
	408+75 RT – 414+50 RT				7						575	575												
	PHASE 3B																							
359	I-77 SB																							
	470+00 LT – 475+00 LT	500			4		10		10	500	500						500							
360	I-77 SB																							
	475+00 LT – 488+00 LT	1300					26		26		1300						1300							
	475+00 LT – 483+00 LT				7					800														
	483+00 LT – 488+00 LT												500											
	485+40 LT – 488+00 LT				7								260											
	TOTALS CARRIED TO SHEET 113	3010	1		59		60		60	1690	6485	3335	2855	910			3010						100	

CALCULATED JAR
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SUM-77 / 277 / 224

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SUMMARY OF TRAFFIC SUBSUMMARY

MAINTENANCE

SUM-77 / 277 / 224

CALCULATED JAR
CHECKED SSR

SHEET NO.	STATION TO STATION	614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN EACH	614 WORK ZONE SPEED LIMIT SIGN EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	614 BARRIER REFLECTOR, TYPE 1, 1-WAY EACH	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL EACH	614 OBJECT MARKER, ONE WAY EACH	614 WORK ZONE LANE LINE, CLASS 1, 6", AS PER PLAN MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, WHITE MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, YELLOW MILE	614 WORK ZONE CHANNELIZING LINE, CLASS 1, 12", AS PER PLAN FT	614 WORK ZONE DOTTED LINE, CLASS 1, AS PER PLAN FT			622 PORTABLE BARRIER, UNANCHORED, 32" FT	622 PORTABLE BARRIER, 50", AS PER PLAN FT	622 PORTABLE BARRIER, ANCHORED, 32" FT		622 PORTABLE BARRIER, "Y" CONNECTOR EACH	630 SIGN, GROUND MOUNTED EXTRUSHEET SF	630 SIGN, OVERHEAD EXTRUSHEET SF
	PHASE 3B CONT'D																							
361	I-77 SB																							
	488+00 LT 489+30 LT												130											
	489+30 LT 490+10 LT	80					2		2		80						80							
	RAMP A																							
	87+30 RT 90+90 RT	360	1				7		7								360							
	87+30 RT 97+00 RT										970													
	87+30 RT 89+30 RT				5								200											
	89+30 RT 97+00 RT				10							770												
362	US-224 EB																							
	224+90 RT 229+00 RT				3								410											
	227+90 RT 229+00 RT				3						110		110											
363	US-224 EB																							
	229+00 RT 238+70 RT				48								1940											
	229+00 RT 242+00 RT										1300													
	238+70 RT 242+00 RT				4						330	330												
	239+10 RT 242+00 RT	580	1				12		12								580						1	
364	US-224 EB																							
	242+00 RT 250+90 RT	890					18		18		890						890							
	250+00 RT 251+90 RT													190										
	RAMP A																							
	97+00 L/R 109+50 L/R	1250			15		25		25		1250	1250					1250							
	PHASE 4																							
395	I-77 NB / I-77 SB																							
	366+00 L/R 371+00 L/R	1000	1				20		20			500					1000							
396	I-77 NB																							
	371+00 RT 375+00 RT	400					8		8								400							
	I-77 SB																							
	371+00 LT 376+60 LT	560	1				11		11								560							
	371+00 LT 384+00 LT											1300												
	383+45 LT 384+00 LT													55										
397	I-77 SB																							
	384+00 LT 391+80 LT											780		780										
399	I 77 NB / I-77 SB																							
	472+50 R/L 475+00 R/L	500	1				10		10								500							
400	I 77 NB / I-77 SB																							
	475+00 R/L 488+00 R/L	2600					52		52								2600							
401	I-77 NB																							
	488+00 RT 492+50 RT	450					9		9								450							
	I-77 SB																							
	488+00 LT 495+70 LT	750					15		15								750							
	TOTALS CARRIED TO SHEET 113	9420	5		88		189		189		4930	4930	2790	1025			9420					1		

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SHEET NO.	STATION TO STATION	614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL), AS PER PLAN EACH	614 WORK ZONE SPEED LIMIT SIGN EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	614 BARRIER REFLECTOR, TYPE 1, 1-WAY EACH	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL EACH	614 OBJECT MARKER, ONE WAY EACH	614 WORK ZONE LANE LINE, CLASS 1, 6", AS PER PLAN MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, WHITE MILE	614 WORK ZONE EDGE LINE, CLASS 1, 6", AS PER PLAN, YELLOW MILE	614 WORK ZONE CHANNELIZING LINE, CLASS 1, 12", AS PER PLAN FT	614 WORK ZONE DOTTED LINE, CLASS 1, AS PER PLAN FT			622 PORTABLE BARRIER, UNANCHORED, 32" FT	622 PORTABLE BARRIER, 50", AS PER PLAN FT	622 PORTABLE BARRIER, ANCHORED, 32" FT		622 PORTABLE BARRIER, "Y" CONNECTOR EACH	630 SIGN, GROUND MOUNTED EXTRUSHEET SF	630 SIGN, OVERHEAD EXTRUSHEET SF
	TOTALS 87	4460	1	2	660	2488	89		89	4430	2867	4850	6402	2709			4460					83	96
	TOTALS 88	18630	4	8	517	35	373		373	34400	17920	18200	2000	380			18310		320			440	96
	TOTALS 89	7860	1	4	173	4810	157		157	12295	6577	7445	2514	1317			7860				1	99	105
	TOTALS 90	2300	2	2	571		47		47	3580	4299	4761	6755	1213			2300						56
	TOTALS 91	1830	1		431	1532	37		37	960	5274	4273	4458	1000			1830						57
	TOTALS 92	6230	1		30		125		125	715	3290	8574	300	2955			6230					88	
	TOTALS 93	1860	2		79		38		38	2790	3665	5598	918	4217			1860				1	234	
	TOTALS 94	5170	6	2	722		106		106	1315	8034	10608	6828	1860			5170					264	239
	TOTALS 95	15500	4		187		312		312	10400	21876	21871	6153	1220			15220		280		1		608
	TOTALS 96	3030	3		71		61		61	5650	7767	8018	3187	1570			3030						
	TOTALS 97	1530			325		30		30	5	7625	3200	4220	1840			1530						368
	TOTALS 98	3920	1		244		78		78	1350	4315	4155	4320	295			3920						
	TOTALS 99	4700	3		71		94		94		5910	5670	3670	1420			4700				1		51
	TOTALS 100	2870	2		111		58		58	1590	7620	3025	2640	1600			2870						
	TOTALS 101	3545	3		431		71		71	1805	5550	5655	3915	2760			3545						
	TOTALS 102	1050			236		21		21		5190	1430	5555	1880			1050						
	TOTALS 103	3810	2		96		76		76		7725	4045	1945	1900			3810				1		33
	TOTALS 104	2050	1		99		41		41		6150	1725	5585	800			2050						
	TOTALS 105	4110			312	3657	25	57	82	10255	11195	10495	8700	1470			1240	2870					
	TOTALS 106	15670	2		270		157	156	313	27860	25285	25375	1005	1955			7870	7800					517
	TOTALS 107	6790	3		177		115	20	135	4745	8285	8265	6820	905			5790	1000				25	
	TOTALS 108	1980	1		178		39		39	9705	8055	8565	5340	1910			1980					110	
	TOTALS 109	3940	1		121	206	79		79	4800	9390	9335	5815	1920			3940						118
	TOTALS 110				157					5645	8895	8915	3770	2330									
	TOTALS 111	3010	1		59		60		60	1690	6485	3335	2855	910			3010					100	
	TOTALS 112	9420	5		88		189		189		4930	4930	2790	1025			9420				1		
	GRAND TOTALS	135265	50	18	6416	12728	2478	233	2711	145985	214174	202318	108460	43361			122995	11670	600		6	1443	2344
	TOTAL (FT)									145985	214174	202318											
	TOTAL (MI)									27.65	40.57	38.32											
	TOTALS CARRIED TO GENERAL SUMMARY	135265	50	18	6416	12728	2478	233	2711	27.65	40.57	38.32	108460	43361			122995	11670	600		6	1443	2344

CALCULATED JAR
CHECKED SSR

MAINTENANCE OF TRAFFIC SUBSUMMARY

SUM-77 / 277 / 224

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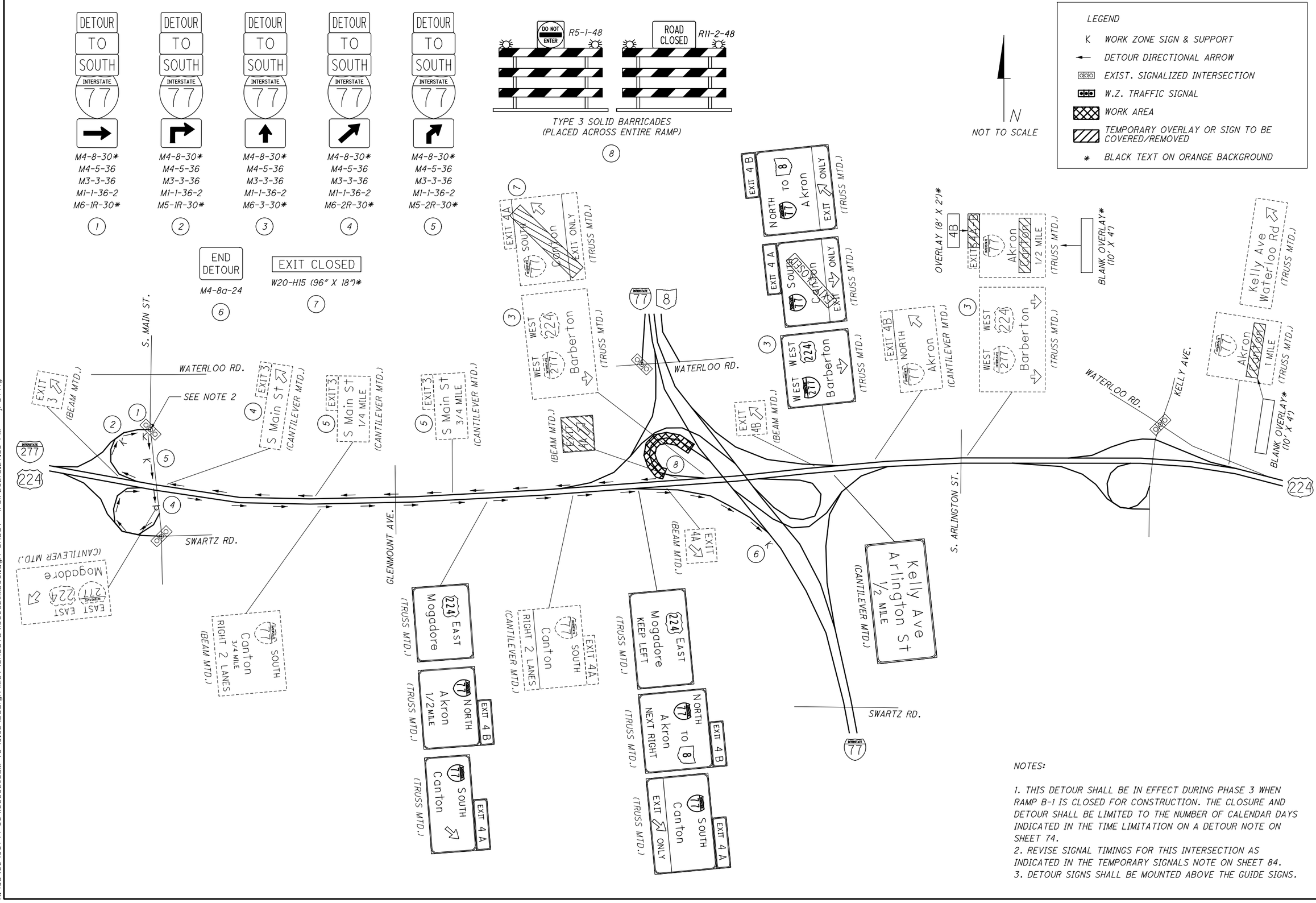
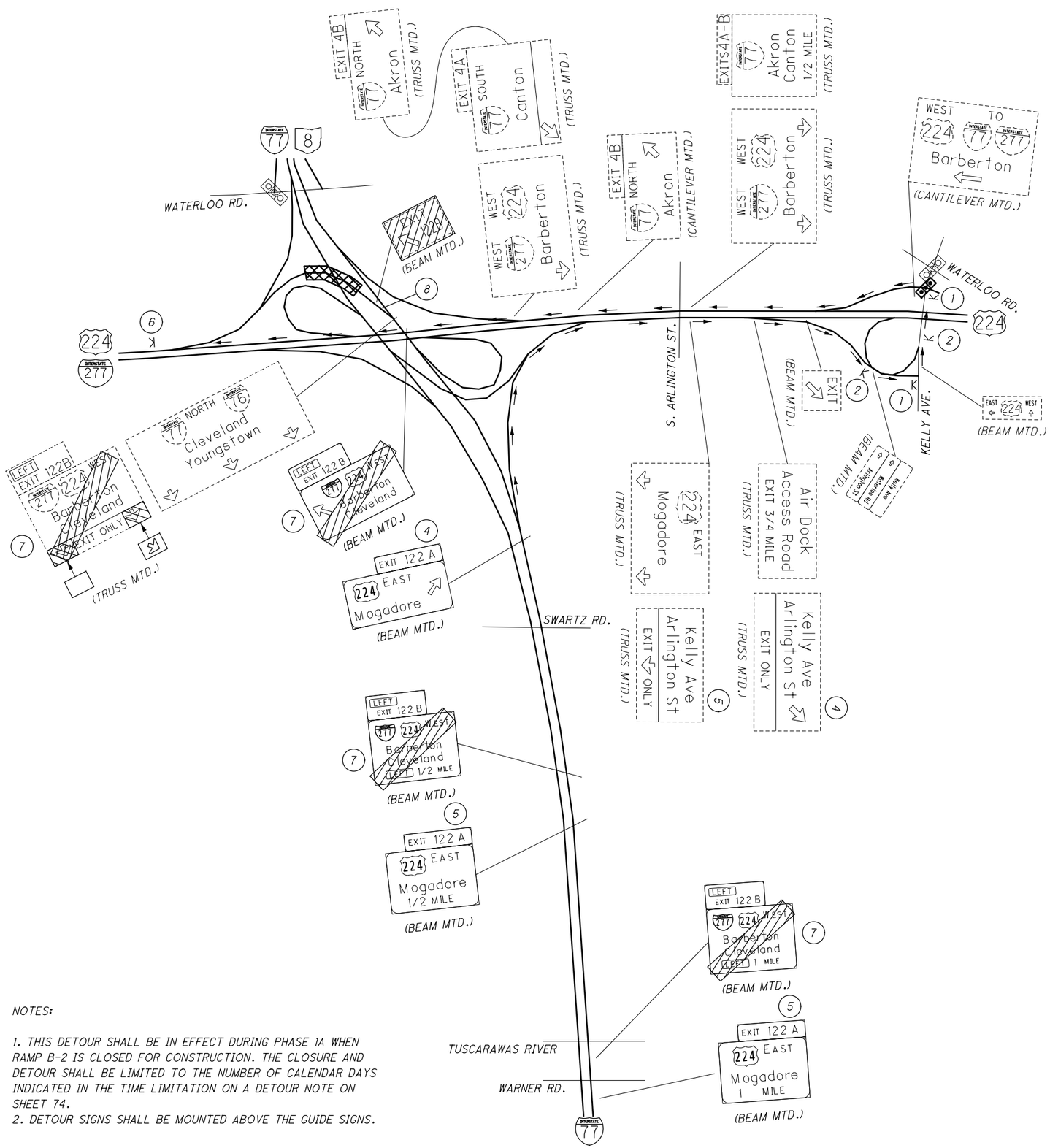
SHEET NO.	STATION TO STATION					611 12" CONDUIT, TYPE B FT	611 12" CONDUIT, TYPE C FT	611 15" CONDUIT, TYPE B FT	611 15" CONDUIT, TYPE C FT	611 15" CONDUIT, TYPE C, 706.02 FT	611 18" CONDUIT, TYPE B FT	611 18" CONDUIT, TYPE C FT		611 CATCH BASIN, NO. 6 EACH	611 CATCH BASIN, NO. 8 EACH	611 CATCH BASIN, NO. 2-2B EACH	611 MANHOLE, NO. 3 EACH		202 PIPE REMOVED, 24" AND UNDER FT	SPECIAL FILL AND PLUG EXISTING CONDUIT FT		202 MANHOLE REMOVED EACH	202 CATCH BASIN REMOVED EACH	202 INLET ABANDONED EACH	202 CATCH BASIN ABANDONED EACH		
	PHASE 2																										
	SOUTHERN CROSSOVER (NB)																										
286	11+98.44	LT																						1			
	11+98.44	LT		12+24.50	RT	36										1			36				1				
	12+24.50	RT		14+00.00	RT		174									1			174				1				
287	14+00.00	RT		16+00.00	RT		198								1				198				1				
	NORTHERN CROSSOVER (NB)																										
294-295	22+51.76	RT		27+19.44	RT	470										1			470				1				
	27+19.44	RT		27+24.44	RT					5						1			5							1	
295-296	28+59.57	RT		30+76.76	RT					5		218					1		223			1					
296	30+76.76	RT		32+10.76	RT						135					1				135						1	
	32+10.43	LT		32+10.43	RT			28								1			28				1				
	32+10.43	RT		32+10.76	RT				8							1				8						1	
	PHASE 3																										
	SOUTHERN CROSSOVER (SB)																										
366	368+06.19	LT		200+00.00	RT		18									1			18				1				
	200+00.00	RT		201+87.26	RT		185									1			185				1				
	201+87.26	RT		202+60.00	LT	78								1					78				1				
366-367	202+60.00	LT		203+50.00	LT		90									1			90				1				
	NORTHERN CROSSOVER (SB)																										
374-375	476+53.44	LT		476+53.74	LT		8									1			8				1				
375	105+00.00	LT		105+66.24	LT				66							1			66				1				
	105+66.24	LT		105+64.27	RT						27					1			27				1				
	105+66.24	LT		106+34.00	LT		68									1			68				1				


DETOUR TO SOUTH INTERSTATE 77
M4-8-30* M4-5-36 M3-3-36 M1-1-36-2 M6-1R-30*
M4-8-30* M4-5-36 M3-3-36 M1-1-36-2 M5-1R-30*
M4-8-30* M4-5-36 M3-3-36 M1-1-36-2 M6-3-30*
M4-8-30* M4-5-36 M3-3-36 M1-1-36-2 M6-2R-30*
M4-8-30* M4-5-36 M3-3-36 M1-1-36-2 M5-2R-30*
1 2 3 4 5
END DETOUR
M4-8a-24
6
EXIT CLOSED
W20-H15 (96" X 18")*
7
DO NOT ENTER R5-1-48
ROAD CLOSED R11-2-48
TYPE 3 SOLID BARRICADES (PLACED across ENTIRE RAMP)
8
N
NOT TO SCALE
LEGEND
K WORK ZONE SIGN & SUPPORT
DETOUR DIRECTIONAL ARROW
EXIST. SIGNALIZED INTERSECTION
W.Z. TRAFFIC SIGNAL
WORK AREA
TEMPORARY OVERLAY OR SIGN TO BE COVERED/REMOVED
* BLACK TEXT ON ORANGE BACKGROUND
S. MAIN ST.
WATERLOO RD.
SEE NOTE 2
SWARTZ RD.
GLENMOUNT AVE.
S. ARLINGTON ST.
KELLY AVE.
EXIT 3 (BEAM MTD.)
S Main St 1/4 MILE (CANTILEVER MTD.)
S Main St 3/4 MILE (CANTILEVER MTD.)
EXIT 4A (BEAM MTD.)
EXIT 4B (BEAM MTD.)
WEST 224 Barberton (TRUSS MTD.)
EXIT 4A SOUTH 77 Canton (TRUSS MTD.)
EXIT 4B NORTH 77 Akron (TRUSS MTD.)
OVERLAY (8' X 21')*
BLANK OVERLAY* (10' X 41')
EXIT 4B NORTH 77 Akron 1/2 MILE (TRUSS MTD.)
WEST 224 WEST 277 Barberton (TRUSS MTD.)
EXIT 4B NORTH 77 Akron (CANTILEVER MTD.)
Kelly Ave Waterloo Rd (TRUSS MTD.)
77 Akron Canton 1 MILE (TRUSS MTD.)
Kelly Ave Arlington St 1/2 MILE (CANTILEVER MTD.)
224 EAST Mogadore KEEP LEFT (TRUSS MTD.)
NORTH 77 TO 8 Akron NEXT RIGHT (TRUSS MTD.)
EXIT 4B
SOUTH 77 Canton EXIT ONLY
EXIT 4A
224 EAST Mogadore (TRUSS MTD.)
NORTH 77 Akron 1/2 MILE (TRUSS MTD.)
EXIT 4B
SOUTH 77 Canton 3/4 MILE RIGHT 2 LANES (BEAM MTD.)
SOUTH 77 Canton RIGHT 2 LANES (CANTILEVER MTD.)
EXIT 4A
SOUTH 77 Canton EXIT ONLY
EXIT 4A
WEST EAST 277 224 Mogadore (CANTILEVER MTD.)
NOTES:
1. THIS DETOUR SHALL BE IN EFFECT DURING PHASE 3 WHEN RAMP B-1 IS CLOSED FOR CONSTRUCTION. THE CLOSURE AND DETOUR SHALL BE LIMITED TO THE NUMBER OF CALENDAR DAYS INDICATED IN THE TIME LIMITATION ON A DETOUR NOTE ON SHEET 74.
2. REVISE SIGNAL TIMINGS FOR THIS INTERSECTION AS INDICATED IN THE TEMPORARY SIGNALS NOTE ON SHEET 84.
3. DETOUR SIGNS SHALL BE MOUNTED ABOVE THE GUIDE SIGNS.
CALCULATED JAR
CHECKED DRB
MOT DETOUR PLAN - RAMP B-1
SUM-77 / 277 / 224
VARIOUS
115
1288
N:\03\60\06744-08\06002_SUM-76-10.95\Design\MOT\Sheets\06002_MD001.dgn Sheet 1/31/2021 5:27:38 PM jrettig

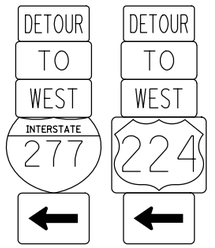


N

NOT TO SCALE

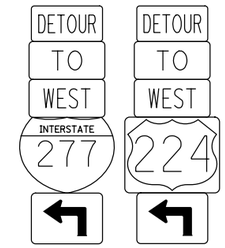
LEGEND

- K WORK ZONE SIGN & SUPPORT
- DETOUR DIRECTIONAL ARROW
- EXIST. SIGNALIZED INTERSECTION
- W.Z. TRAFFIC SIGNAL
- WORK AREA
- TEMPORARY OVERLAY OR SIGN TO BE COVERED/REMOVED
- * BLACK TEXT ON ORANGE BACKGROUND



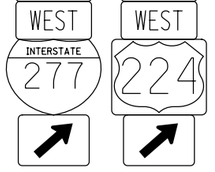
M4-8-30* M4-5-36 M3-4-36 M1-1-36-3 M6-IL-30*

1



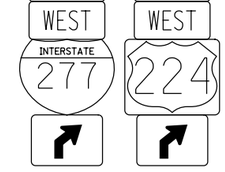
M4-8-30* M4-5-36 M3-4-36 M1-1-36-3 M5-IL-30*

2



M4-8-30* M4-5-36 M3-4-36 M1-1-36-3 M6-2R-30*

4



M4-8-30* M4-5-36 M3-4-36 M1-1-36-3 M5-2R-30*

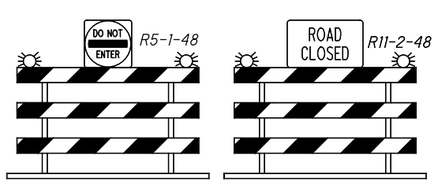
5

M4-8a-24

6

W20-H15 (96" X 18")*

7



TYPE 3 SOLID BARRICADES (PLACED ACROSS ENTIRE RAMP)

8

NOTES:

1. THIS DETOUR SHALL BE IN EFFECT DURING PHASE 1A WHEN RAMP B-2 IS CLOSED FOR CONSTRUCTION. THE CLOSURE AND DETOUR SHALL BE LIMITED TO THE NUMBER OF CALENDAR DAYS INDICATED IN THE TIME LIMITATION ON A DETOUR NOTE ON SHEET 74.
2. DETOUR SIGNS SHALL BE MOUNTED ABOVE THE GUIDE SIGNS.

MOT DETOUR PLAN - RAMP B-2

SUM-77 / 277 / 224
VARIOUS

CALCULATED JAR
CHECKED DRB

116
1288

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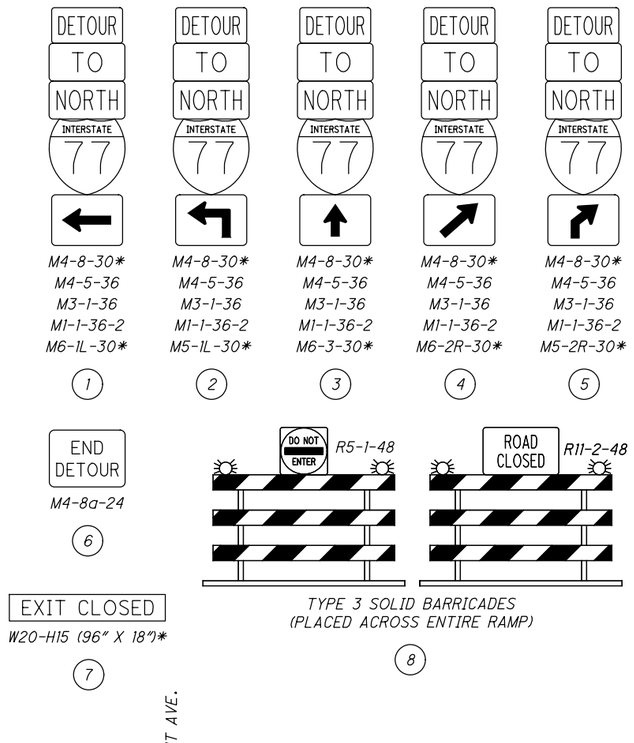

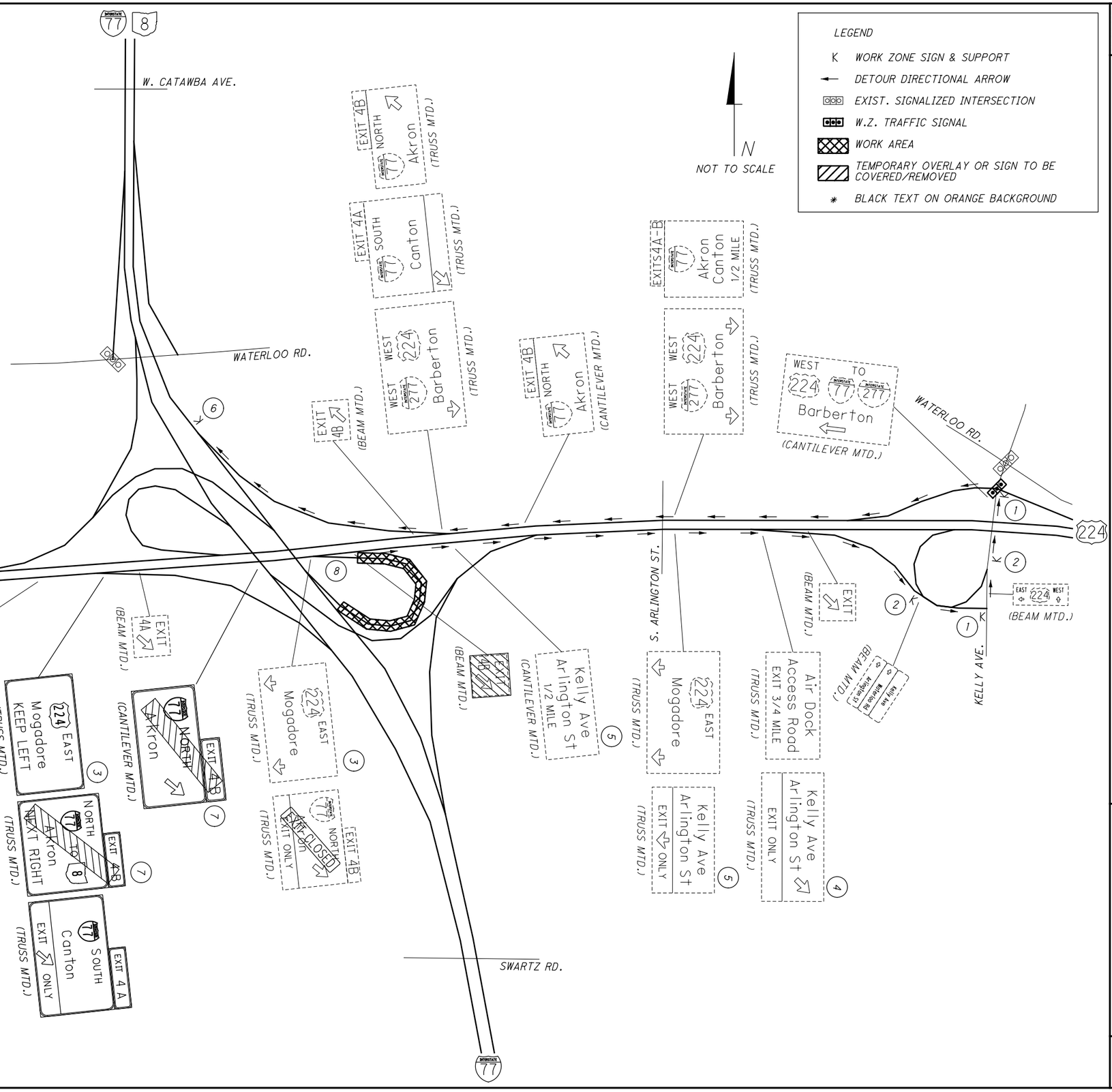

NOTES:

1. THIS DETOUR SHALL BE IN EFFECT DURING PHASE 2B WHEN RAMP C-1 IS CLOSED FOR CONSTRUCTION. THE CLOSURE AND DETOUR SHALL BE LIMITED TO THE NUMBER OF CALENDAR DAYS INDICATED IN THE TIME LIMITATION ON A DETOUR NOTE ON SHEET 74.
2. DETOUR SIGNS SHALL BE MOUNTED ABOVE THE GUIDE SIGNS.

CALCULATED JAR CHECKED DRB

MOT DETOUR PLAN - RAMP C-1

SUM-77 / 277 / 224
VARIOUS

117
1288

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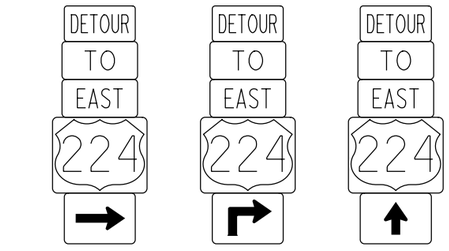


M4-8-30*
M4-5-36
M3-2-36
M1-4-36-3
M6-1R-30*

(1)

M4-8-30*
M4-5-36
M3-2-36
M1-4-36-3
M5-1R-30*

(2)

M4-8-30*
M4-5-36
M3-2-36
M1-4-36-3
M6-3-30*

(3)

M4-8-30*
M4-5-36
M3-2-36
M1-4-36-3
M6-2R-30*

(4)

M4-8-30*
M4-5-36
M3-2-36
M1-4-36-3
M5-2R-30*

(5)

M4-8a-24

(6)

W20-H15 (96" X 18")*

(7)

TYPE 3 SOLID BARRICADES
(PLACED ACROSS ENTIRE RAMP)

(8)

LEGEND

K WORK ZONE SIGN & SUPPORT

DETOUR DIRECTIONAL ARROW

EXIST. SIGNALIZED INTERSECTION

W.Z. TRAFFIC SIGNAL

WORK AREA

TEMPORARY OVERLAY OR SIGN TO BE COVERED/REMOVED

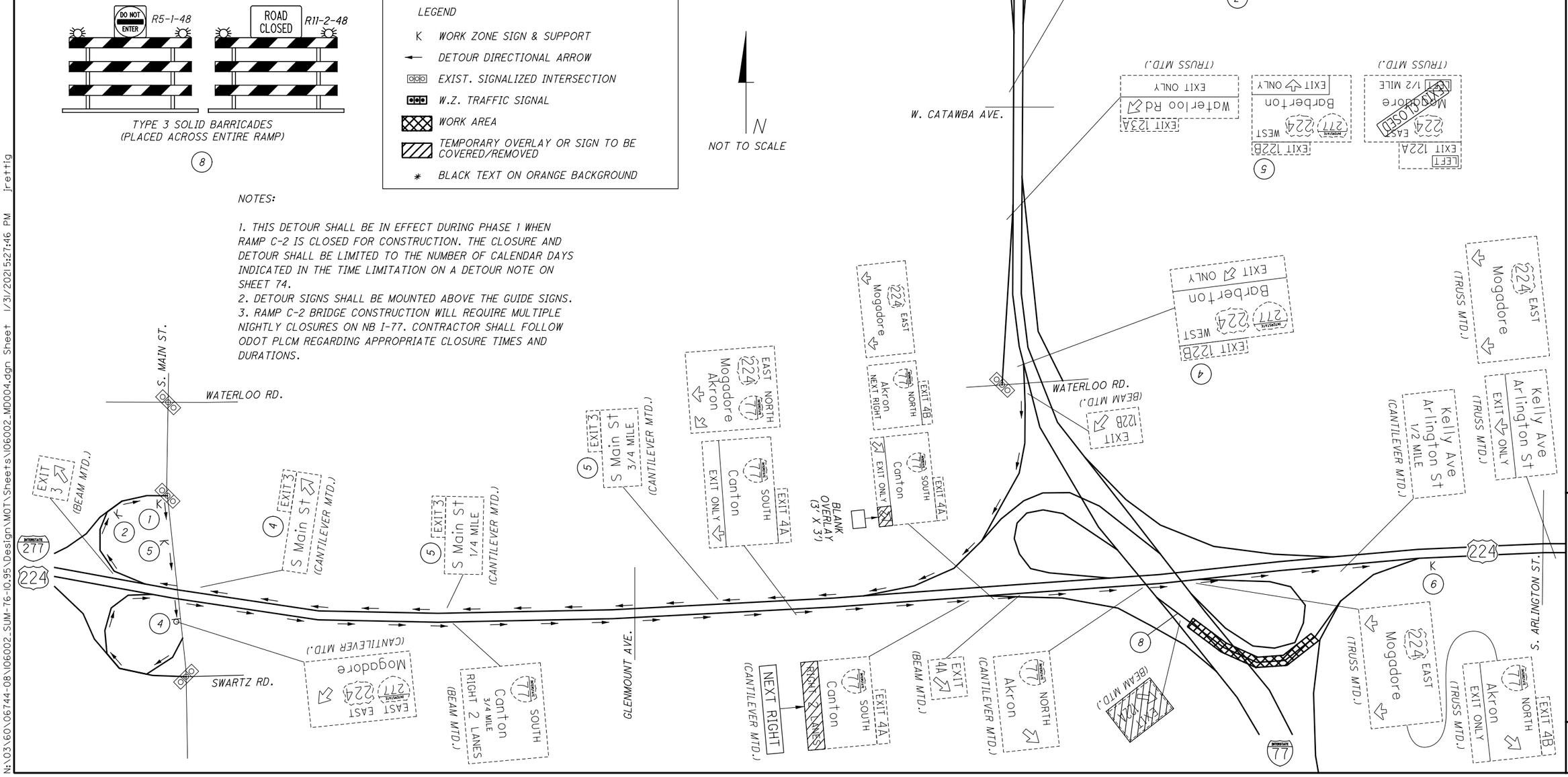
* BLACK TEXT ON ORANGE BACKGROUND

N

NOT TO SCALE

NOTES:

1. THIS DETOUR SHALL BE IN EFFECT DURING PHASE 1 WHEN RAMP C-2 IS CLOSED FOR CONSTRUCTION. THE CLOSURE AND DETOUR SHALL BE LIMITED TO THE NUMBER OF CALENDAR DAYS INDICATED IN THE TIME LIMITATION ON A DETOUR NOTE ON SHEET 74.
2. DETOUR SIGNS SHALL BE MOUNTED ABOVE THE GUIDE SIGNS.
3. RAMP C-2 BRIDGE CONSTRUCTION WILL REQUIRE MULTIPLE NIGHTLY CLOSURES ON NB I-77. CONTRACTOR SHALL FOLLOW ODOT PLCM REGARDING APPROPRIATE CLOSURE TIMES AND DURATIONS.



CALCULATED JAR CHECKED DRB

MOT DETOUR PLAN - RAMP C-2

SUM-77 / 277 / 224
VARIOUS

118
1288

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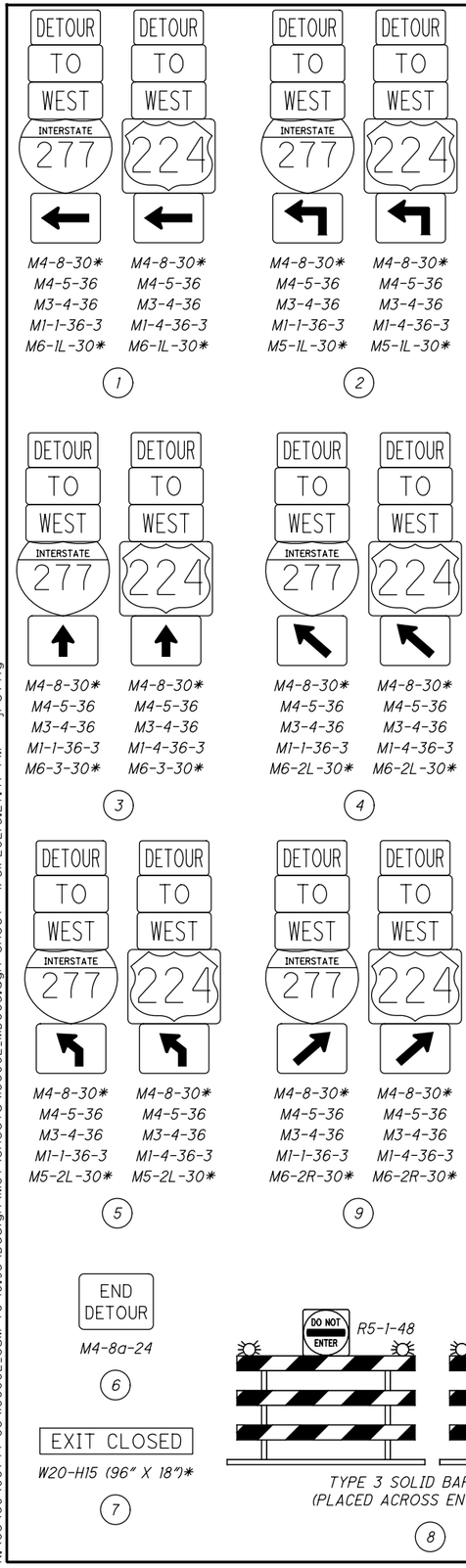

LEGEND

- K — WORK ZONE SIGN & SUPPORT
- ← — DETOUR DIRECTIONAL ARROW
- EXIST. SIGNALIZED INTERSECTION
- W.Z. TRAFFIC SIGNAL
- WORK AREA
- TEMPORARY OVERLAY OR SIGN TO BE COVERED/REMOVED
- * — BLACK TEXT ON ORANGE BACKGROUND

N

NOT TO SCALE

NOTES:

1. THIS DETOUR SHALL BE IN EFFECT DURING PHASE 2 WHEN RAMP B IS CLOSED FOR CONSTRUCTION. THE CLOSURE AND DETOUR SHALL BE LIMITED TO THE NUMBER OF CALENDAR DAYS INDICATED IN THE TIME LIMITATION ON A DETOUR NOTE ON SHEET 74.
2. DETOUR SIGNS SHALL BE MOUNTED ABOVE THE GUIDE SIGNS.

CALCULATED EMB
CHECKED JAR

MOT DETOUR PLAN - RAMP B

SUM-77 / 277 / 224
VARIOUS

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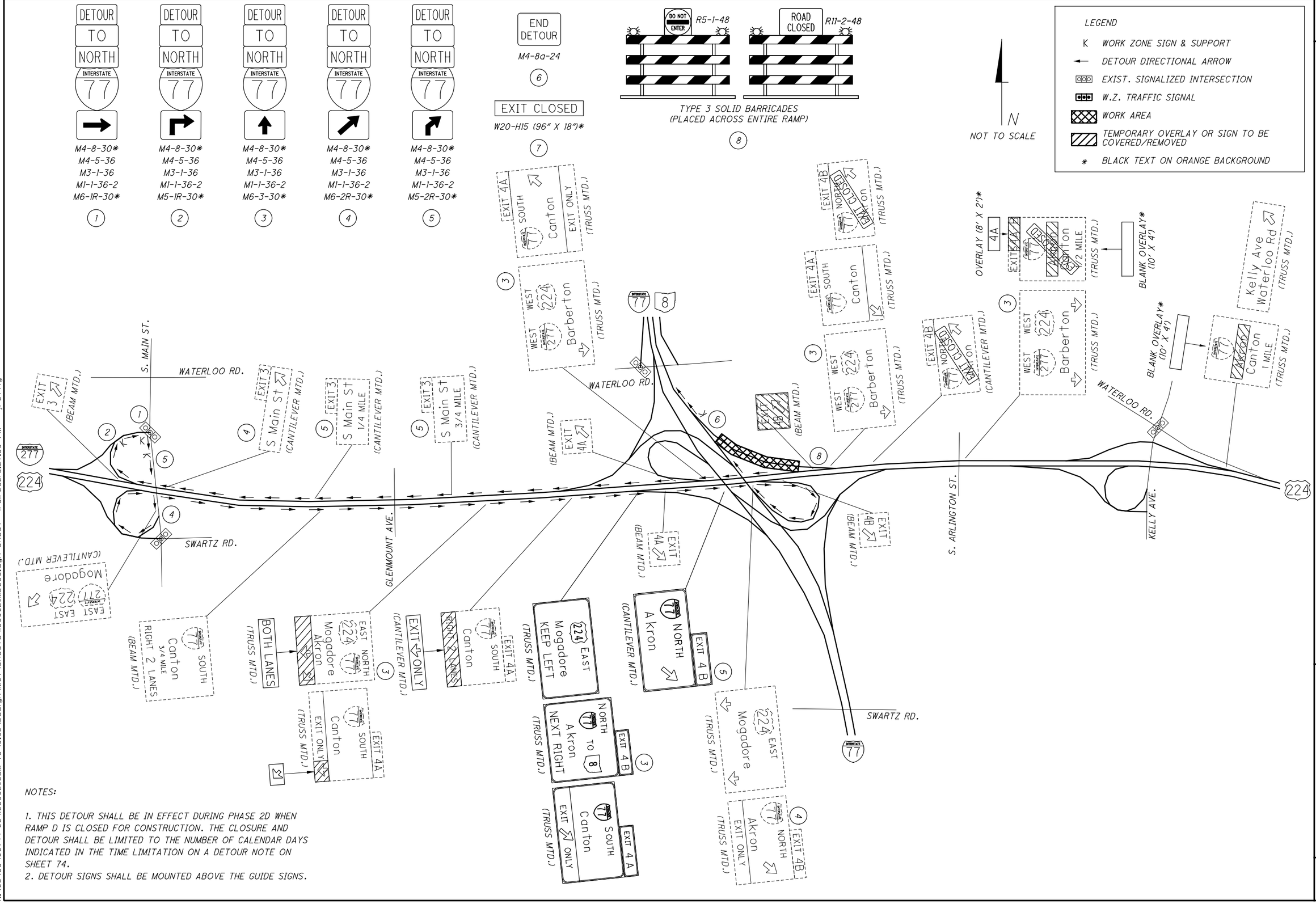

CALCULATED EMB
CHECKED JAR

DETOUR PLAN - RAMP D

MOT DE

SUM-77 / 277 / 224
VARIOUS

120
1288

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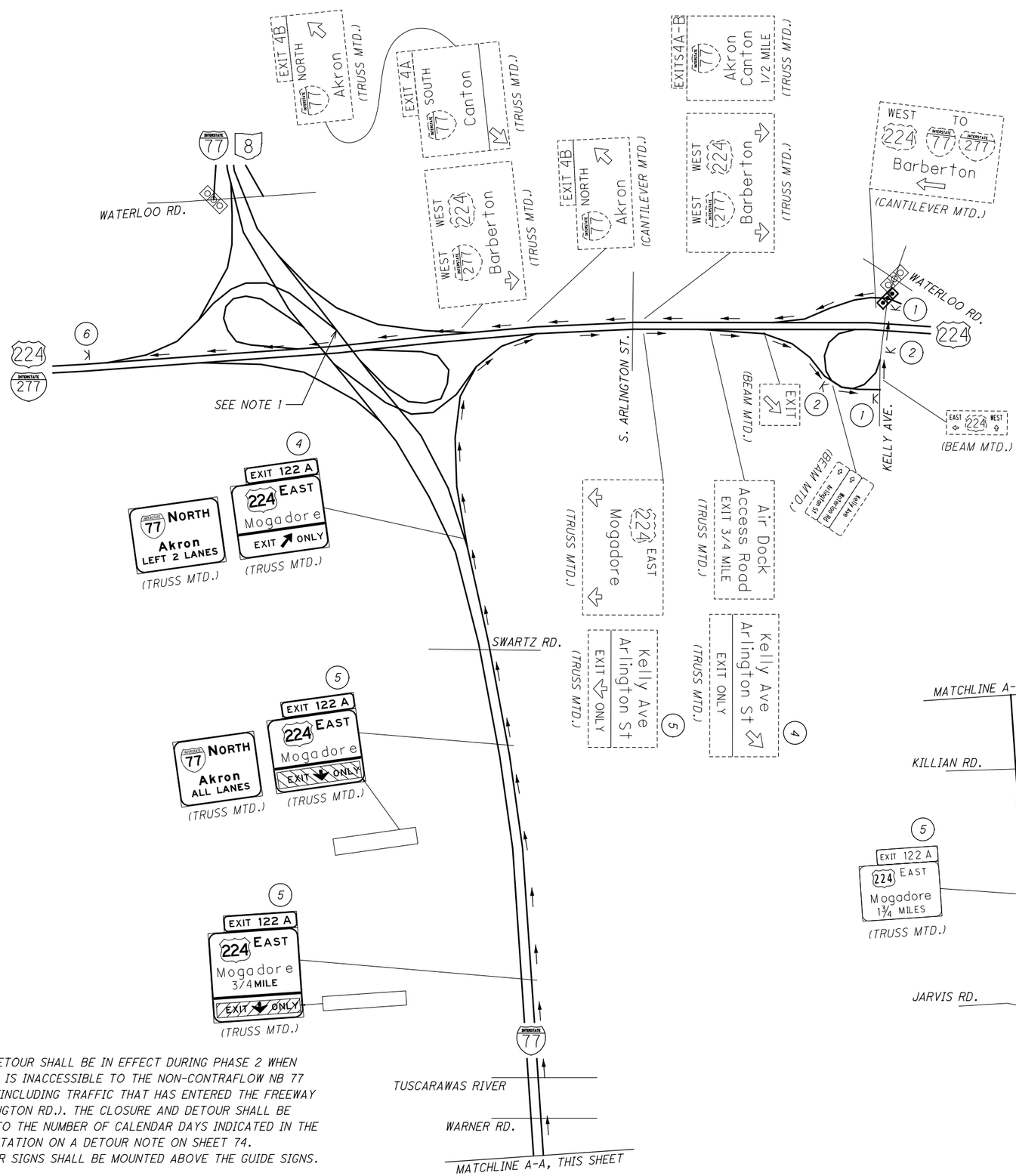

NOT TO SCALE

LEGEND

- K WORK ZONE SIGN & SUPPORT
- DETOUR DIRECTIONAL ARROW
- EXIST. SIGNALIZED INTERSECTION
- W.Z. TRAFFIC SIGNAL
- WORK AREA
- TEMPORARY OVERLAY OR SIGN TO BE COVERED/REMOVED
- * BLACK TEXT ON ORANGE BACKGROUND

DETOUR TO WEST INTERSTATE 277 — M4-8-30* M4-5-36 M3-4-36 M1-1-36-3 M6-IL-30*

DETOUR TO WEST 224 — M4-8-30* M4-5-36 M3-4-36 M1-4-36-3 M6-IL-30*

(1)

DETOUR TO WEST INTERSTATE 277 — M4-8-30* M4-5-36 M3-4-36 M1-1-36-3 M5-IL-30*

DETOUR TO WEST 224 — M4-8-30* M4-5-36 M3-4-36 M1-4-36-3 M5-IL-30*

(2)

DETOUR TO WEST INTERSTATE 277 — M4-8-30* M4-5-36 M3-4-36 M1-1-36-3 M6-2R-30*

DETOUR TO WEST 224 — M4-8-30* M4-5-36 M3-4-36 M1-4-36-3 M6-2R-30*

(4)

DETOUR TO WEST INTERSTATE 277 — M4-8-30* M4-5-36 M3-4-36 M1-1-36-3 M5-2R-30*

DETOUR TO WEST 224 — M4-8-30* M4-5-36 M3-4-36 M1-4-36-3 M5-2R-30*

(5)

END DETOUR — M4-8a-24

(6)

NOTES:

1. THIS DETOUR SHALL BE IN EFFECT DURING PHASE 2 WHEN RAMP B-2 IS INACCESSIBLE TO THE NON-CONTRAFLOW NB 77 TRAFFIC (INCLUDING TRAFFIC THAT HAS ENTERED THE FREEWAY VIA ARLINGTON RD.). THE CLOSURE AND DETOUR SHALL BE LIMITED TO THE NUMBER OF CALENDAR DAYS INDICATED IN THE TIME LIMITATION ON A DETOUR NOTE ON SHEET 74.
2. DETOUR SIGNS SHALL BE MOUNTED ABOVE THE GUIDE SIGNS.

CALCULATED JAR CHECKED DRB

MOT DETOUR PLAN - NB 77 TO WB 277/224

SUM-77/277/224
VARIOUS

120A
1288

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N

NOT TO SCALE

NOTES:

1. THIS DETOUR SHALL BE IN EFFECT DURING PHASE 2 WHEN RAMP B IS CLOSED FOR CONSTRUCTION. THE CLOSURE AND DETOUR SHALL BE LIMITED TO THE NUMBER OF CALENDAR DAYS INDICATED IN THE TIME LIMITATION ON A DETOUR NOTE ON SHEET 74.
2. DETOUR SIGNS SHALL BE MOUNTED ABOVE THE GUIDE SIGNS.

PERKINS ST.
FORGE ST.
MARKET ST.
BUCHTEL AVE.
CARROLL ST.
EXCHANGE ST.
BEACON ST.
JOHNSTON ST.
INMAN ST.
HOLY CROSS BLVD.
BROWN ST.
BOULEVARD ST.
PRINCETON ST.
S. MAIN ST.
SWEITZER AVE
WOLF LEDGES PKWY
GRANT ST.
LAKE SHORE BLVD.
MANCHESTER RD.
EAST AVE.
MORSE ST.
JASON AVE.
BATTLES AVE.
KENMORE BLVD.
WILBETH RD.
WATERLOO RD.
MANCHESTER RD.
MAIN ST.
GLENMOUNT AVE.
ARLINGTON ST.
KELLY AVE.
EMMITT RD.

INTERSTATE 77
INTERSTATE 76
INTERSTATE 277
8
224

DETOUR TO WEST INTERSTATE 277 / 224

1	2	3
M4-8-30*	M4-8-30*	M4-8-30*
M4-5-36	M4-5-36	M4-5-36
M3-4-36	M3-4-36	M3-4-36
M1-1-36-3	M1-4-36-3	M1-1-36-3
M6-3-30*	M6-3-30*	M5-2R-30*
		M6-2R-30*

DO NOT ENTER R5-1-48
ROAD CLOSED R11-2-48

TYPE 3 SOLID BARRICADES
(PLACED ACROSS ENTIRE RAMP)

LEGEND

- K WORK ZONE SIGN & SUPPORT
- DETOUR DIRECTIONAL ARROW
- EXIST. SIGNALIZED INTERSECTION
- W.Z. TRAFFIC SIGNAL
- WORK AREA
- TEMPORARY OVERLAY OR SIGN TO BE COVERED/REMOVED
- * BLACK TEXT ON ORANGE BACKGROUND
- (4) EXISTING SIGN

CALCULATED EMB
CHECKED JAR

MOT DETOUR PLAN - RAMP B DIVERSION

SUM-77 / 277 / 224
VARIOUS

121
1288

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D3-1-48 (BLACK/ORANGE)
WARNER RD
DETOUR
M4-9L-30
1

D3-1-48 (BLACK/ORANGE)
WARNER RD
DETOUR
M4-H9BL-30
2

D3-1-48 (BLACK/ORANGE)
WARNER RD
DETOUR
M4-H9T-30
3

D3-1-48 (BLACK/ORANGE)
WARNER RD
DETOUR
M4-H9BR-30
4

D3-1-48 (BLACK/ORANGE)
WARNER RD
DETOUR
M4-9R-30
5

TYPE A WARNING LIGHT
ROAD WORK AHEAD
W20-1-36
6

TYPE A WARNING LIGHT
ROAD CLOSED AHEAD
1000 FEET
W20-3-36
W16-2P-24
7

ROAD CLOSED AHEAD
500 FEET
W20-3-36
W16-2P-24
8

R11-3A-60
TYPE "B"
ROAD CLOSED
1.5 MILE AHEAD
LOCAL TRAFFIC ONLY
DETOUR
M4-10R-48
10' TYPE 3 SOLID BARRICADE
(PLACED ON SHOULDER)
9

R11-3A-60
TYPE "B"
ROAD CLOSED
0.1 MILE AHEAD
LOCAL TRAFFIC ONLY
DETOUR
M4-10L-48
10' TYPE 3 SOLID BARRICADE
(PLACED ON SHOULDER)
10

R11-2-48
TYPE "B"
ROAD CLOSED
10' TYPE 3 SOLID BARRICADE
(PLACED ACROSS ENTIRE ROAD)
11

D3-1-48 (BLACK/ORANGE)
WARNER RD
END DETOUR
M4-8a-24
12

N
NOT TO SCALE

LEGEND

- K WORK ZONE SIGN & SUPPORT
- DETOUR DIRECTIONAL ARROW
- EXIST. SIGNALIZED INTERSECTION
- W.Z. TRAFFIC SIGNAL
- WORK AREA
- TEMPORARY OVERLAY OR SIGN TO BE COVERED/REMOVED
- * BLACK TEXT ON ORANGE BACKGROUND

NOTES:

1. THIS DETOUR SHALL BE IN EFFECT DURING PHASE 1 WHEN WARNER RD IS CLOSED FOR CONSTRUCTION. THE CLOSURE AND DETOUR SHALL BE LIMITED TO THE NUMBER OF CALENDAR DAYS INDICATED IN THE TIME LIMITATION ON A DETOUR NOTE ON SHEET 74.

WARNER RD CLOSED WEST OF ARLINGTON RD FOLLOW DETOUR
SPECIAL (48" X 48") (BLACK/ORANGE)
13

WARNER RD OPEN TO FIRESTONE CC AND METRO PARK
SPECIAL (48" X 48") (BLACK/ORANGE)
14

R11-3A-60
TYPE "B"
ROAD CLOSED
0.5 MILE AHEAD
LOCAL TRAFFIC ONLY
DETOUR
M4-10R-48
10' TYPE 3 SOLID BARRICADE
(PLACED ON SHOULDER)
15

S. MAIN ST.
HARRINGTON RD.
ARLINGTON RD.
E. WARNER RD.
PLEASANT VALLEY DR.
JOPLIN DR.
BENDER AVE.
OTTER DR.
BALTON DR.
DENMAN DR.
DELORA DR.
KIRBY DR.
INGLESIDE DR.
WELLOCK DR.
FLOWERDALE DR.
FALCON AVE.
LAKOTA AVE.
RADNOR AVE.
PORTAGE LAKES DR.
LEICESTER DR.
WYMORE AVE.
WEIL AVE.
ORGAN AVE.
OSTEND AVE.
RAMP AVE.
MUSKOKA DR.
MOUND DR.
CHAMPIONS WAY
FIRESTONE GOLF COURSE DR.
LAFORCE DR.
SHERATON CIR.
SHERATON DR.
ARCHMERE DR.
BUENA VISTA DR.
ELDORADO DR.
CHENOWETH DR.
KILLIAN RD.
CONLIN DR.
N. BENDER AVE.
S. BENDER AVE.
WILLOWEDGE DR.
DERLING RD.
LAKEWAY ST.
LINDA ST.
ELMO ST.
COTTAGE GROVE RD.
COLOPY ST.
BUTTERCUP AVE.
COSMOS AVE.
DAISY AVE.
ELDERBERRY AVE.
FORGET ME NOT ST.
N. JASMINE AVE.
INTERSTATE 77
1500'
500'
,005'

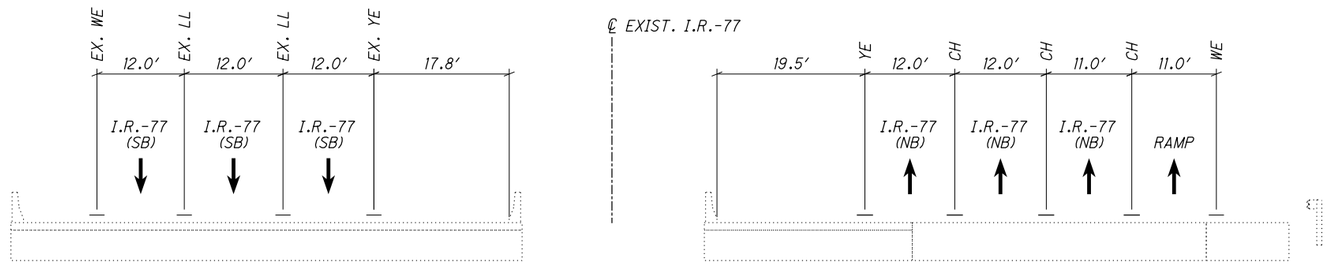
CALCULATED EMB
CHECKED JAR

MOT DETOUR PLAN - WARNER ROAD

SUM-77 / 277 / 224
VARIOUS

122
1288

N:\03\60\06744-08\06002_SUM-76-10.95\Design\MOT\Sheets\06002_MD008.dgn Sheet 1/31/2021 5:27:57 PM jrettig



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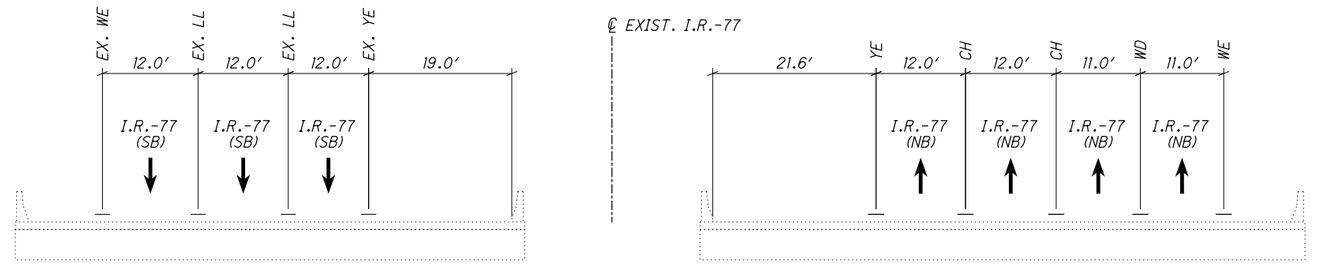

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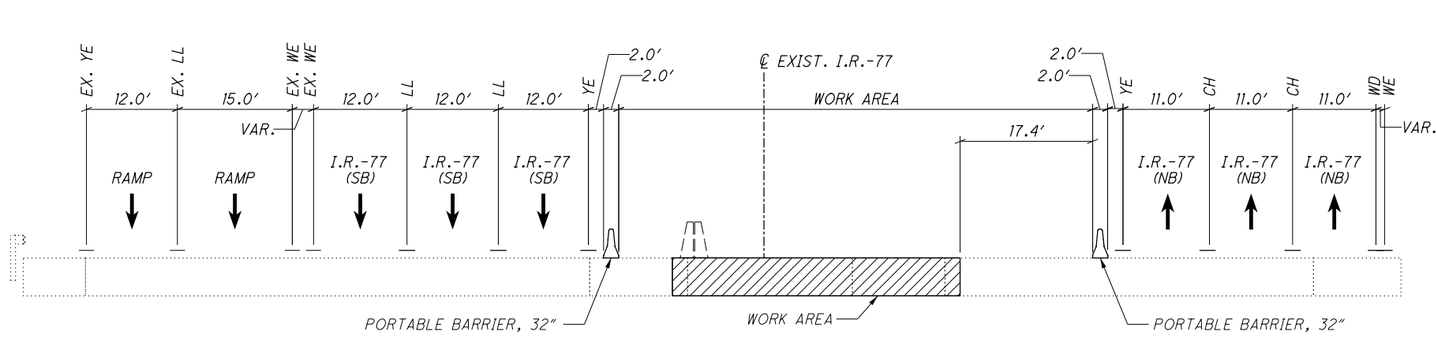

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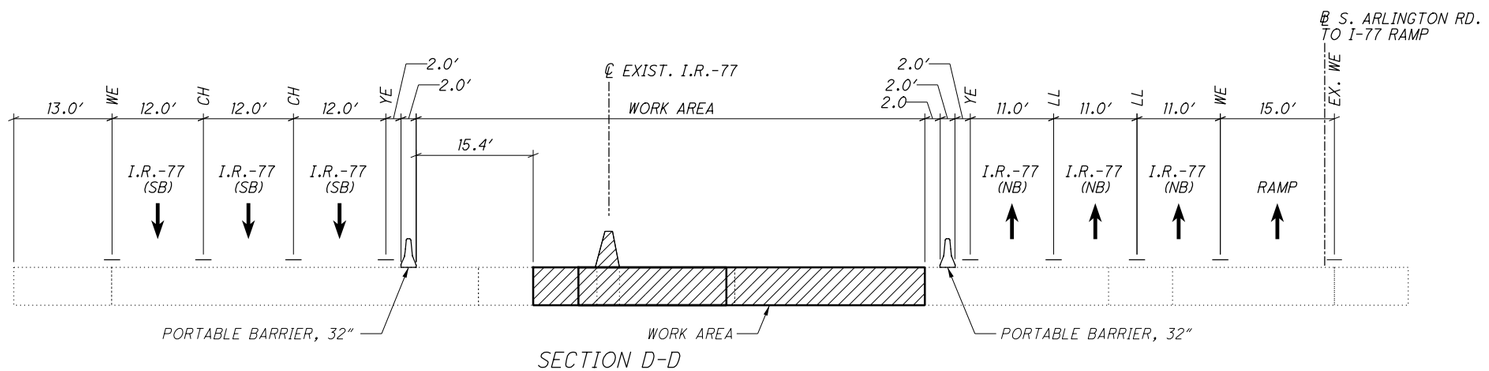


SECTION D-D
(NOT TO SCALE)

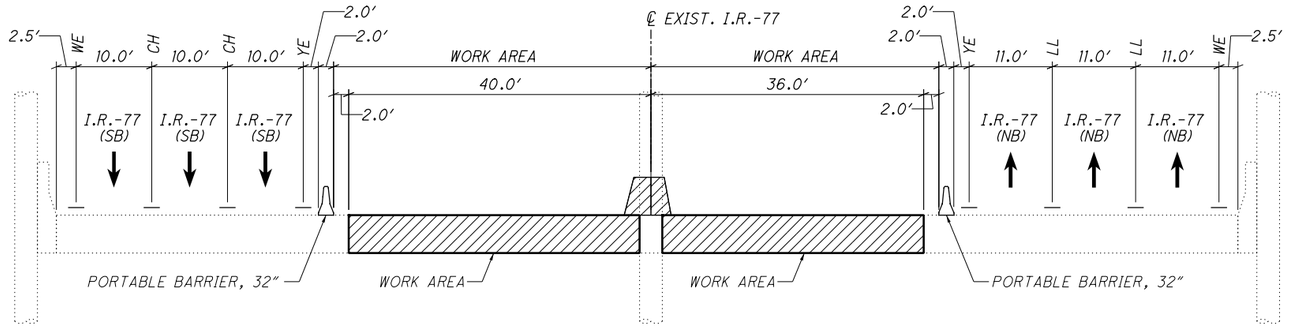
CALCULATED EMB
CHECKED JML

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS - PHASE 1

SUM-77 / 277 / 224
VARIOUS

123
1288

N:\03\60\066744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MY100.dgn Sheet 1/31/2021 5:27:58 PM jrettig



SECTION E-E
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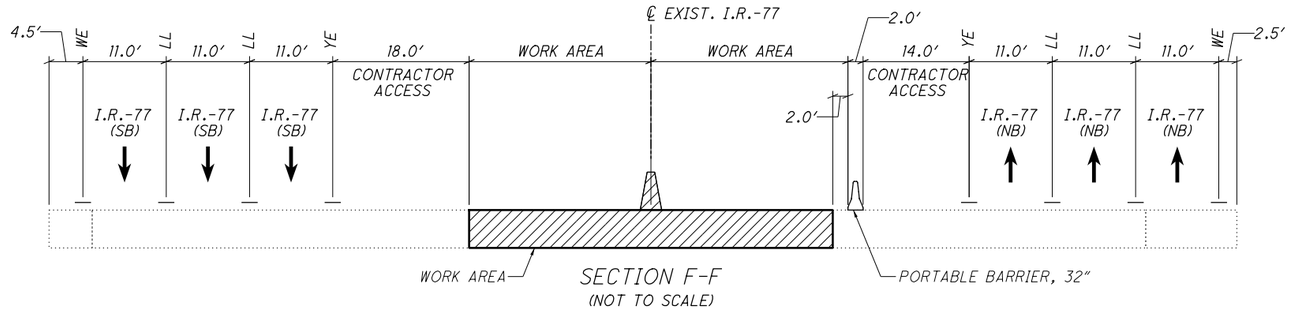

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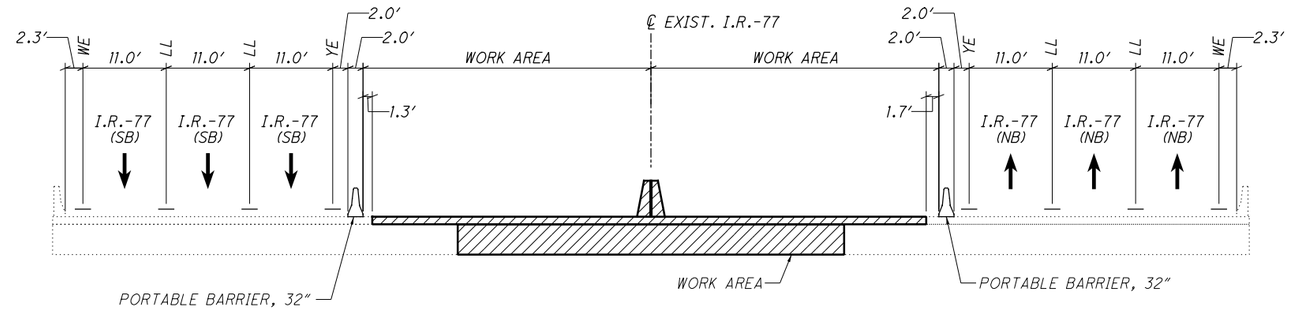

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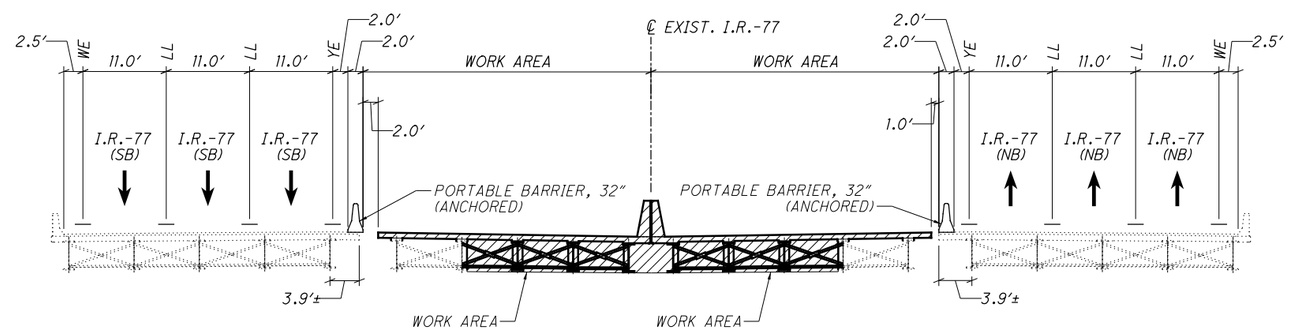

SECTION H-H
(NOT TO SCALE)

CALCULATED EMB
CHECKED JML

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS - PHASE 1

SUM-77 / 277 / 224
VARIOUS

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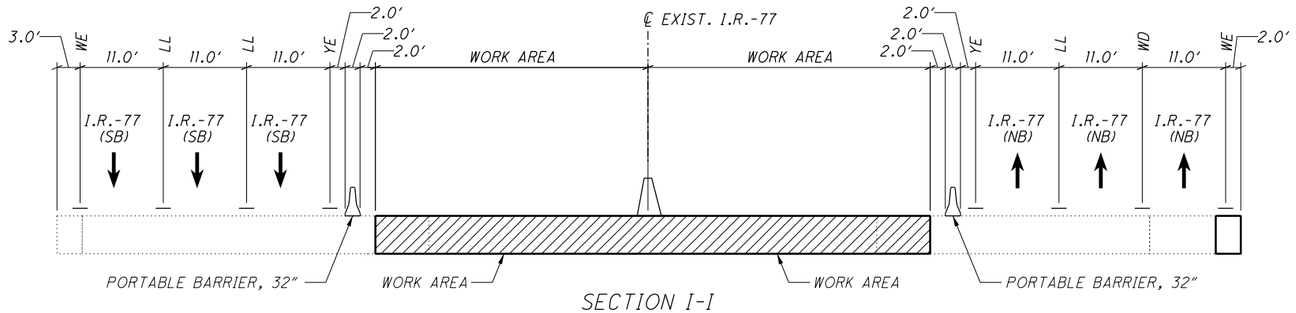
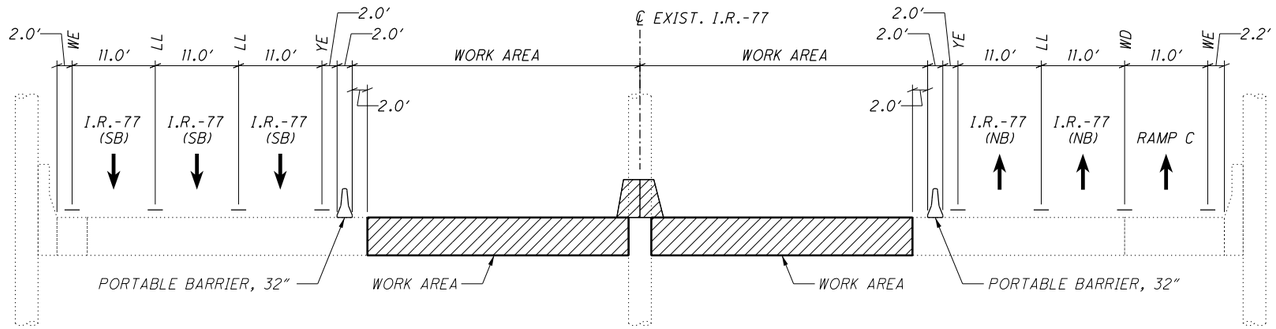


SECTION I-I
(NOT TO SCALE)



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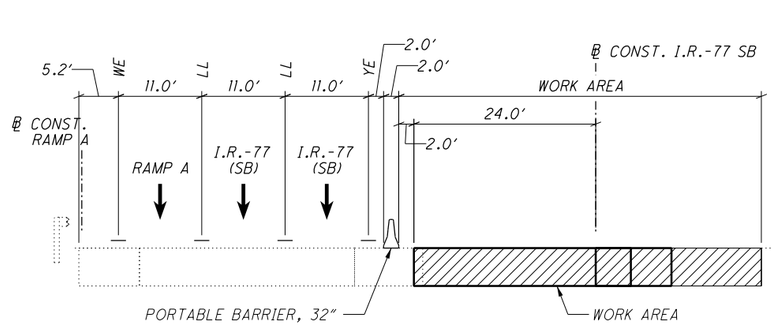

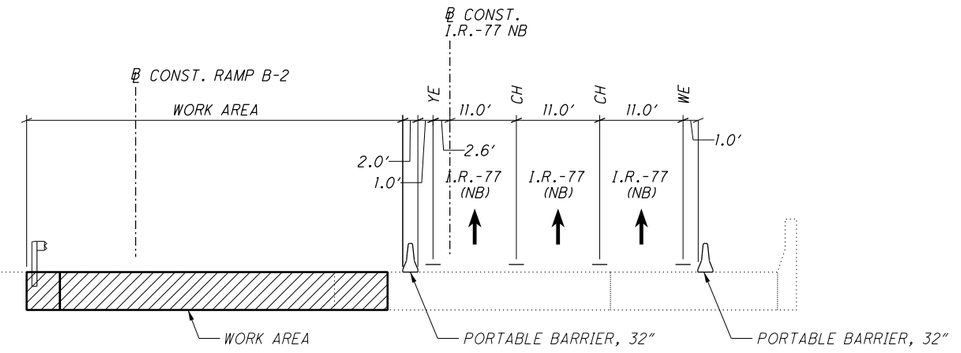

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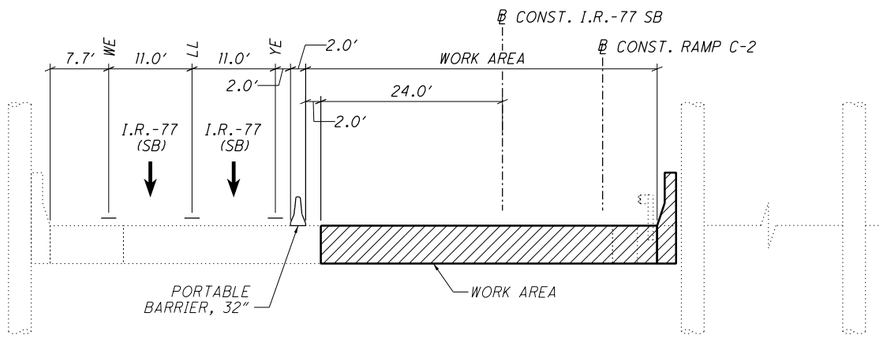
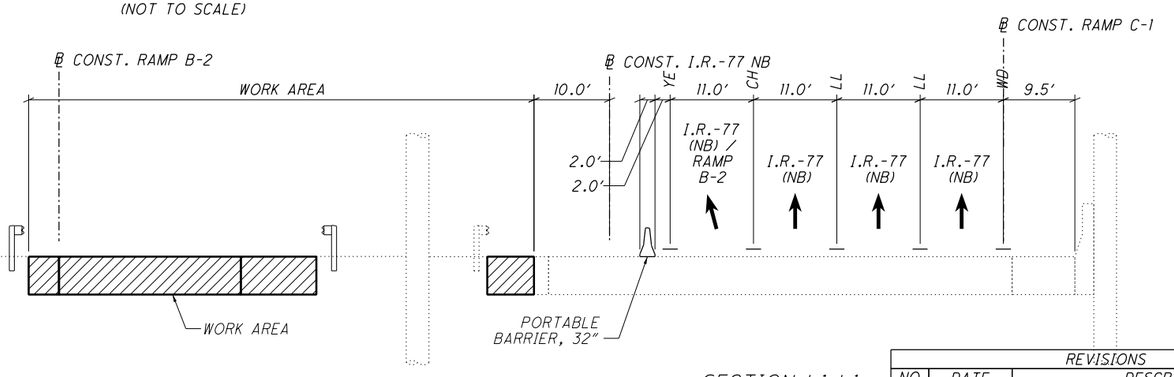


SECTION L2-L2
(NOT TO SCALE)



SECTION L1-L1
(NOT TO SCALE)

REVISIONS		
NO.	DATE	DESCRIPTION
8	04/30/21	I-77 NB LANE SHIFT/SIGNING CHANGES

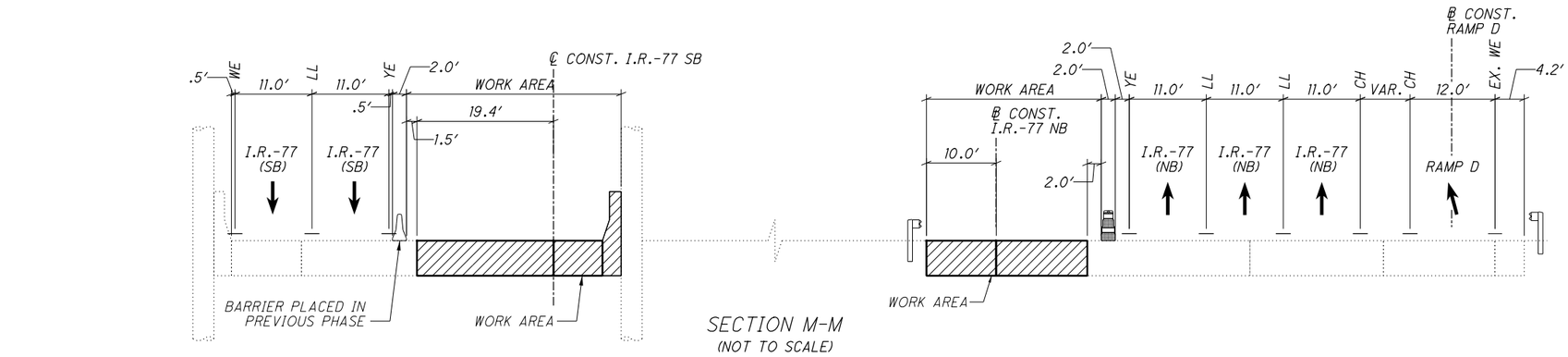
CALCULATED EMB
CHECKED JML

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS - PHASE 1

SUM-77 / 277 / 224
VARIOUS

125
1288

N:\03\60\06744-08\06002_SUM-76-10.95\Design\MOT\Sheets\06002_MY102.dgn Sheet 4/30/2021 11:47:41 AM gwhite



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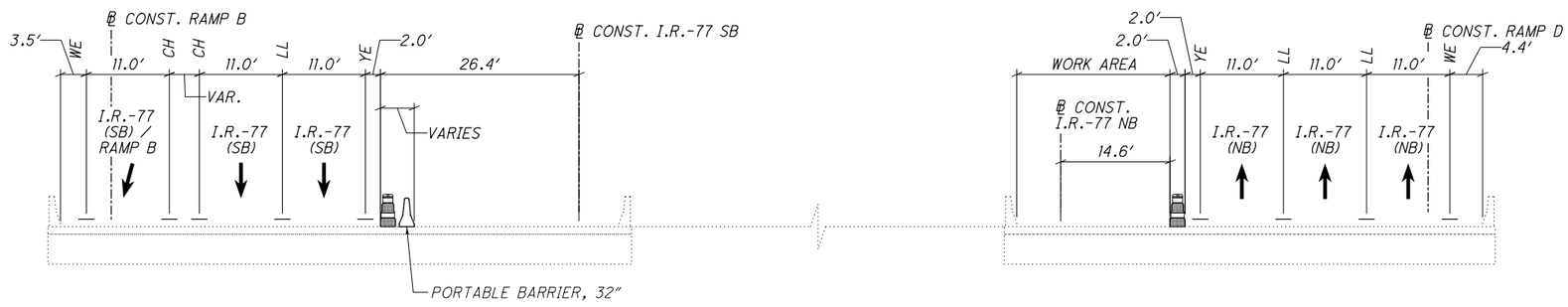

SECTION N-N
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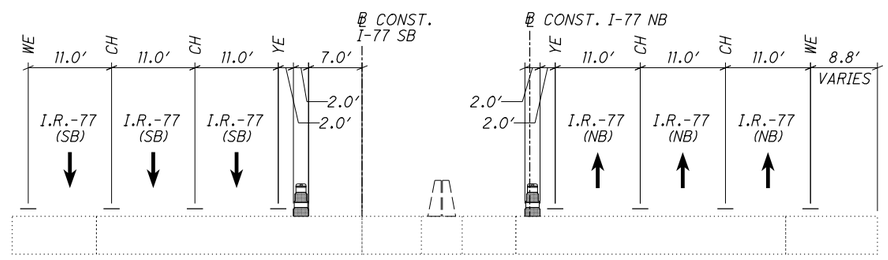

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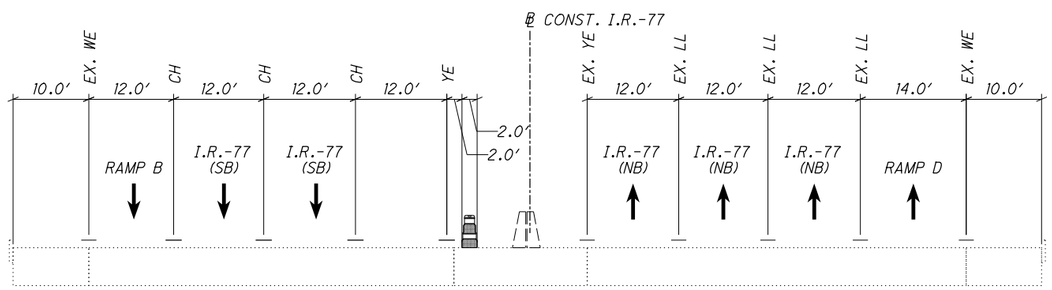

SECTION P-P
(NOT TO SCALE)

CALCULATED EMB
CHECKED JML

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS - PHASE 1

SUM-77 / 277 / 224
VARIOUS

126
1288

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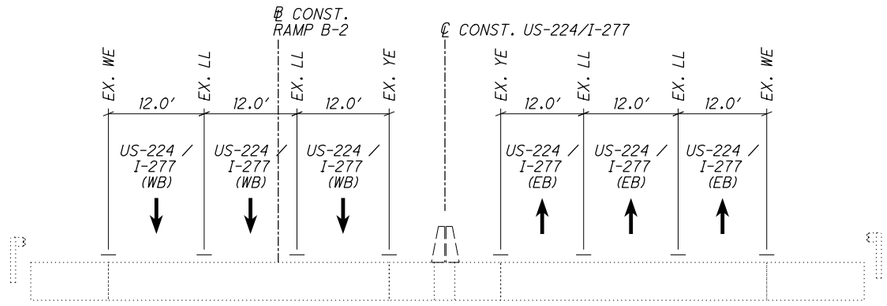
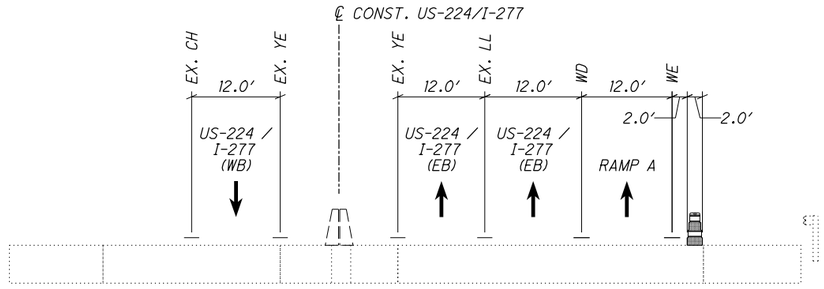
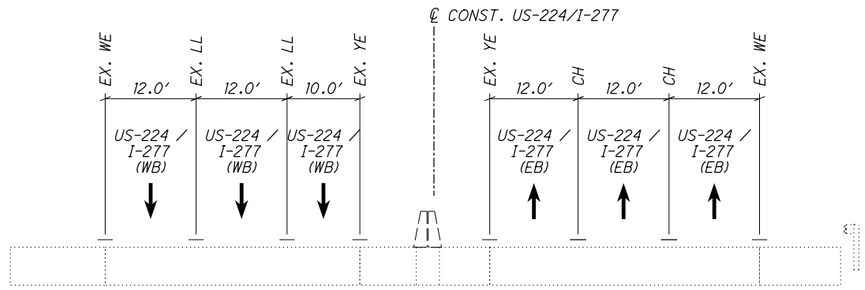


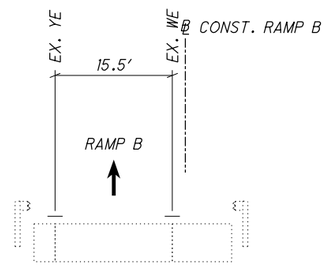
SECTION Q-Q
(NOT TO SCALE)



SECTION R-R
(NOT TO SCALE)



SECTION S-S
(NOT TO SCALE)



SECTION T-T
(NOT TO SCALE)

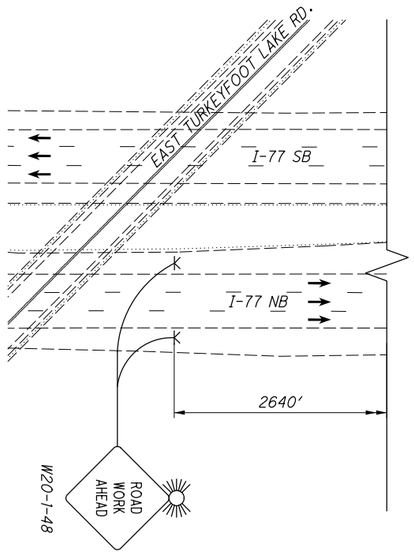
CALCULATED EMB
CHECKED JML

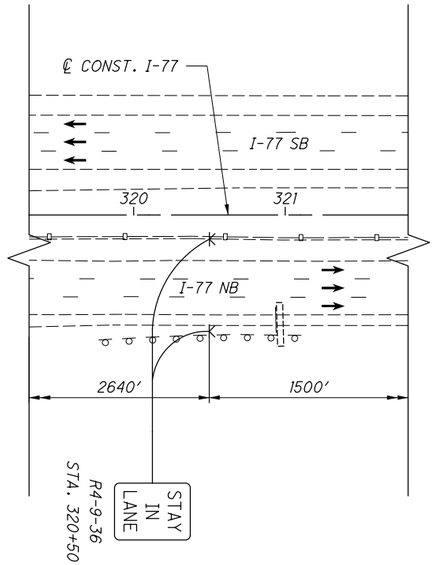
MAINTENANCE OF TRAFFIC TYPICAL SECTIONS - PHASE 1

SUM-77 / 277 / 224
VARIOUS

127
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MY104.dgn Sheet 1/31/2021 5:28:06 PM jrettig

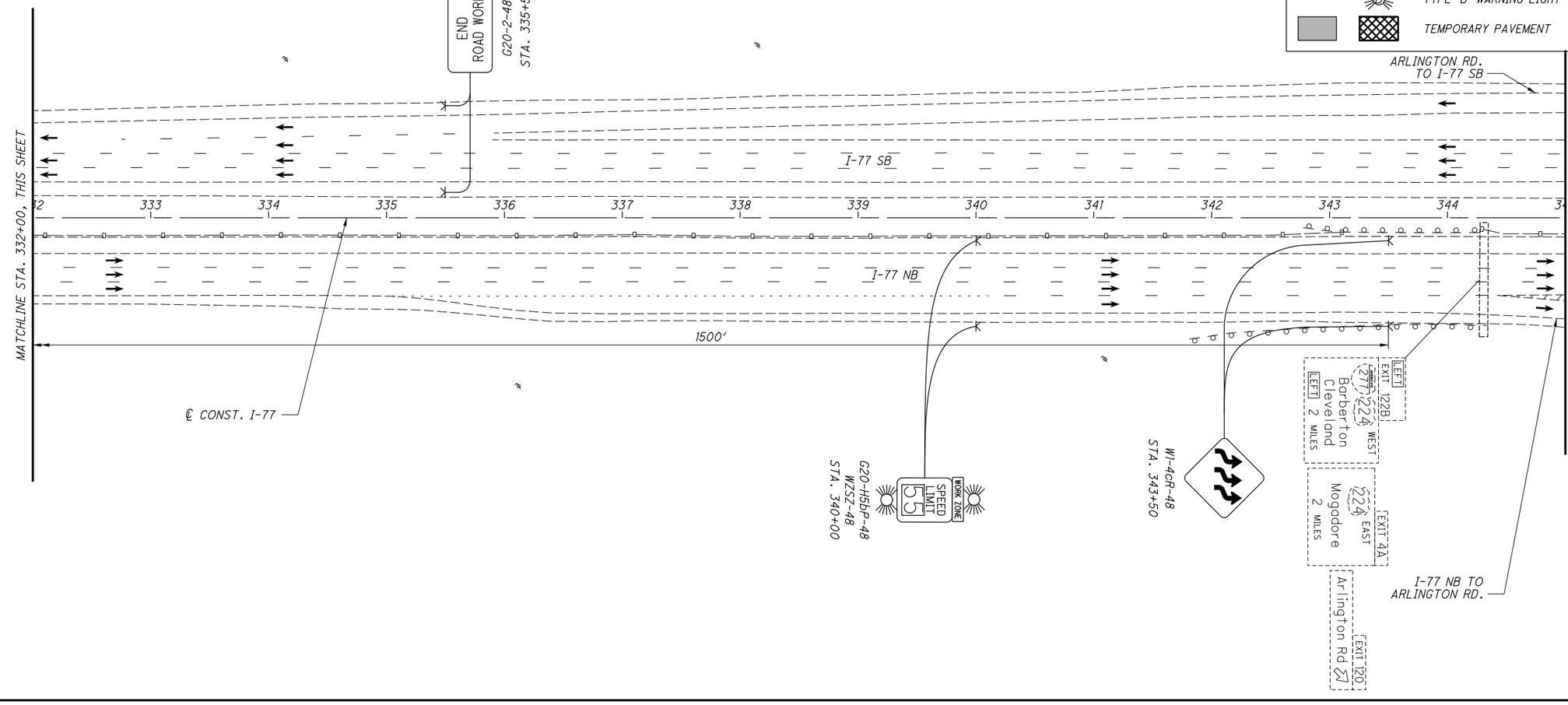




DRUM SPACING CHART (MAX SPACING)		
SPEED (MPH)	55	65
TAPER (FT)	55	65
TANGENT (FT)	80	120

MOT LEGEND

EXIST.	PROP.	
		W.Z. Y CONNECTOR
		W.Z. PORTABLE BARRIER
		W.Z. IMPACT ATTENUATOR
	K	W.Z. SIGN
		W.Z. TYPE 3 BARRICADE
	→	W.Z. FLOW ARROW
	•••	W.Z. DRUM
		WORK AREA
	WD	W.Z. DOTTED LINE, WHITE
	WE	W.Z. EDGE LINE, WHITE
	YE	W.Z. EDGE LINE, YELLOW
	LL	W.Z. LANE LINE
	CH	W.Z. CHANNELIZING LINE
	M#	MOT TEMP. DRAINAGE STRUCTURE
		TYPE 'A' WARNING LIGHT
		TYPE 'B' WARNING LIGHT
		TEMPORARY PAVEMENT



HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED . CHECKED .

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I-77 - STA. 332+00 TO STA. 345+00

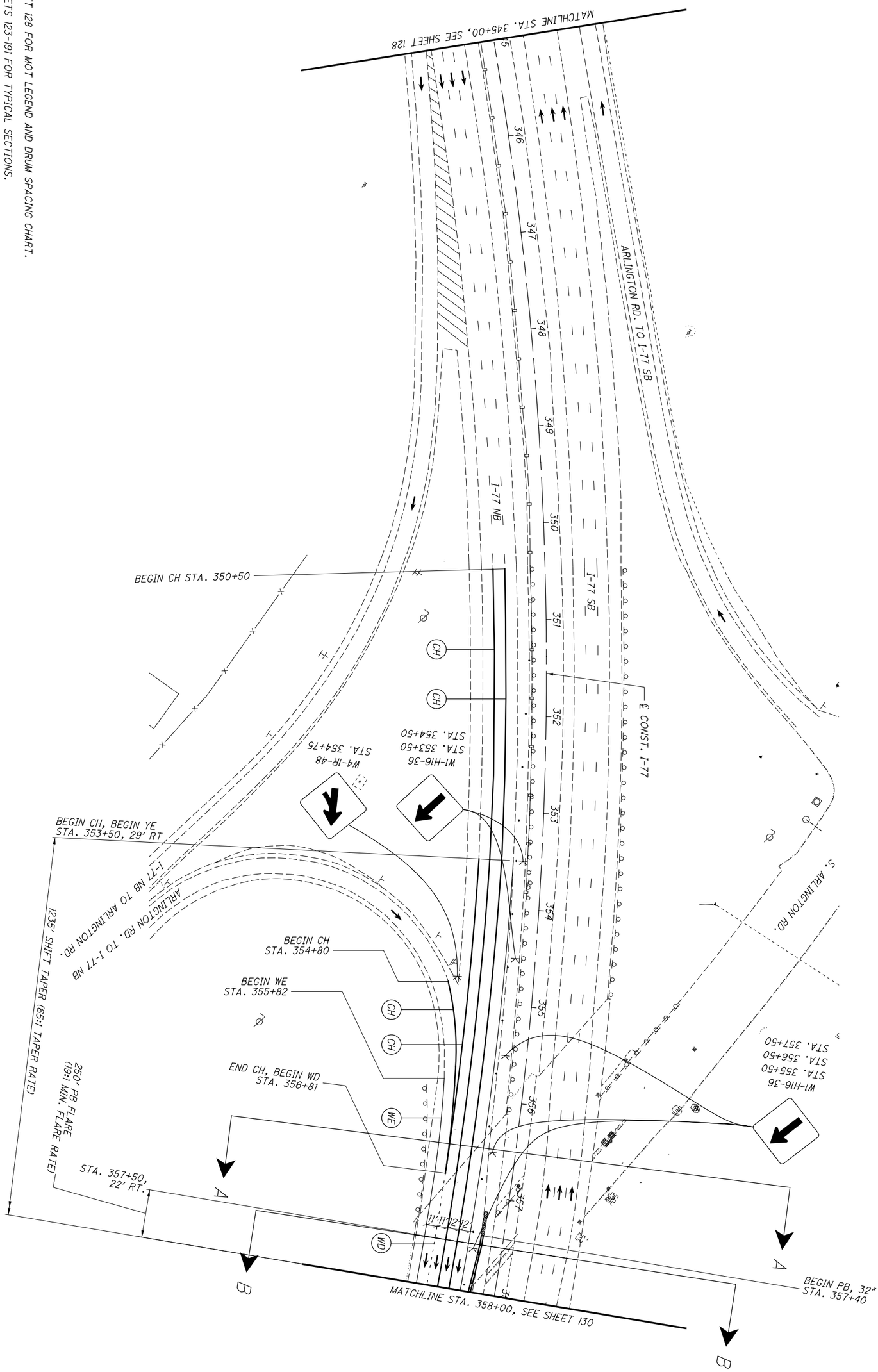
SUM-77 / 277 / 224
VARIOUS

128
1288

N:\03\69\06744-08\06002_SUM-76-10.95\Design\MOT\Sheets\06002_MP105.dgn Sheet 1/31/2021 5:28:29 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. SEE SHEETS 123-191 FOR TYPICAL SECTIONS.

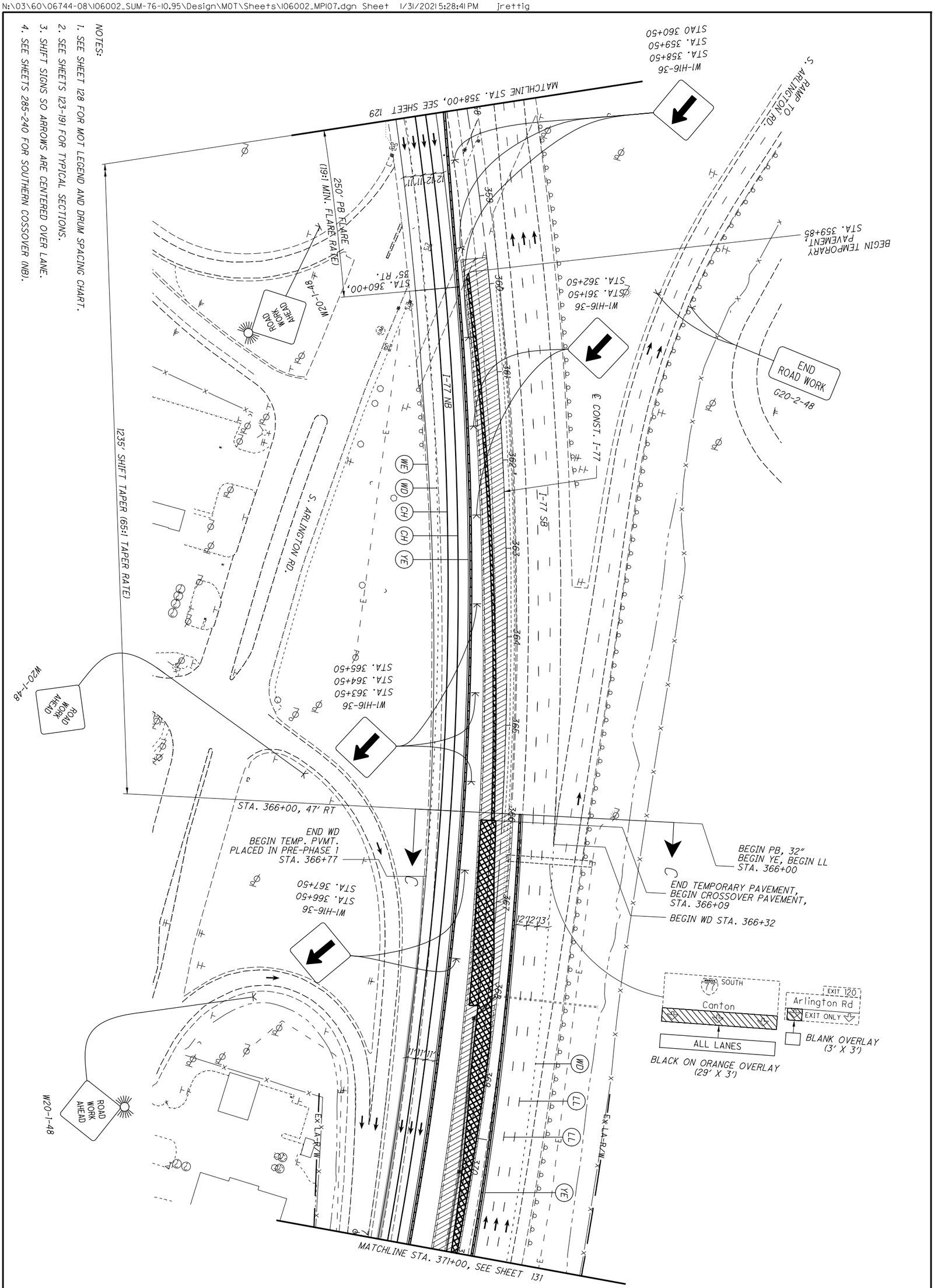


129 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 I-77 - STA. 345+00 TO STA. 358+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MP107.dgn Sheet 1/31/2021 5:28:41 PM jrettig

NOTES:

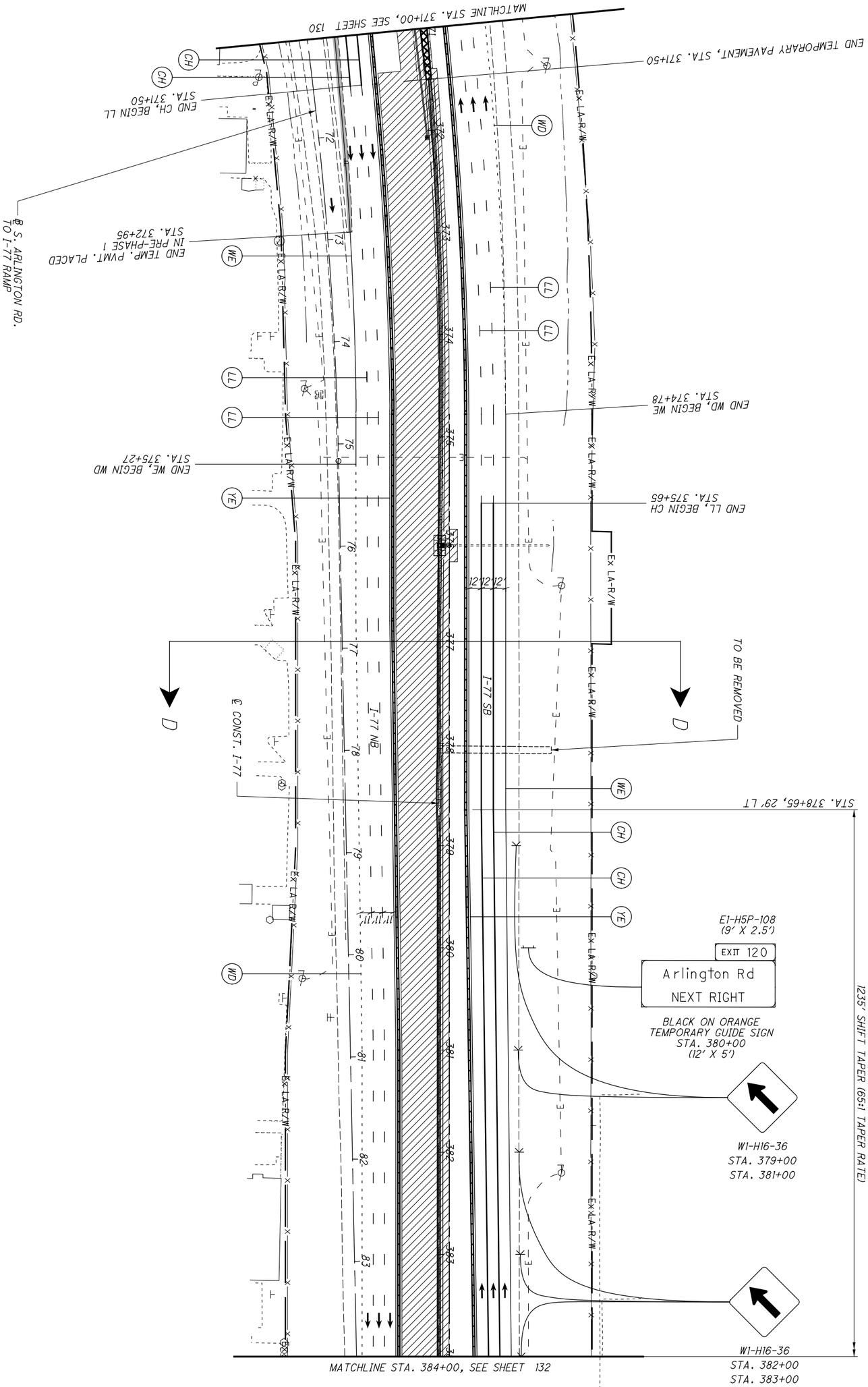
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. SEE SHEETS 123-191 FOR TYPICAL SECTIONS.
3. SHIFT SIGNS SO ARROWS ARE CENTERED OVER LANE.
4. SEE SHEETS 285-240 FOR SOUTHERN COSSOVER (NB).



130 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 I-77 - STA. 358+00 TO STA. 371+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

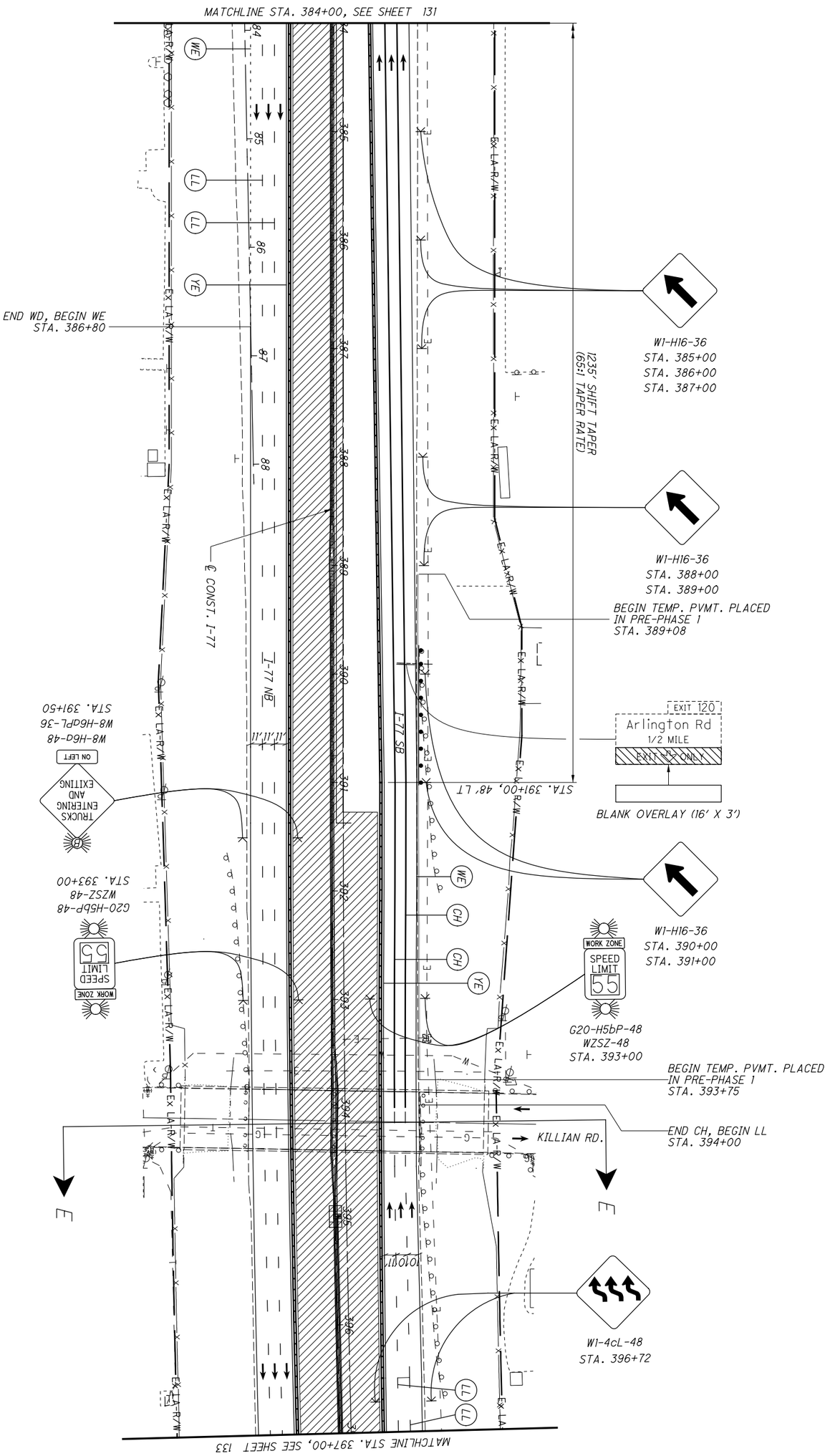
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. SEE SHEETS 123-191 FOR TYPICAL SECTIONS.



131 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 I-77 - STA. 371+00 TO STA. 384+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. SEE SHEETS 123-191 FOR TYPICAL SECTIONS.



132 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 I-77 - STA. 384+00 TO STA. 397+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.

2. SEE SHEETS 123-191 FOR TYPICAL SECTIONS.

3. INSTALL CONTRACTOR ACCESS POINTS PER ODOT STANDARD CONSTRUCTION DRAWING MT-103.10. ACCESS POINTS MAY BE RELOCATED AT THE APPROVAL OF THE ENGINEER, AS NECESSARY TO ACCOMPLISH CONSTRUCTION ACTIVITIES. CONTRACTOR ACCESS POINTS ARE SHOWN FOR INFORMATIONAL PURPOSES AND THE LOCATION CAN BE ADJUSTED AT THE APPROVAL OF THE ENGINEER.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED .
CHECKED .

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I-77 - STA. 397+00 TO STA. 410+00

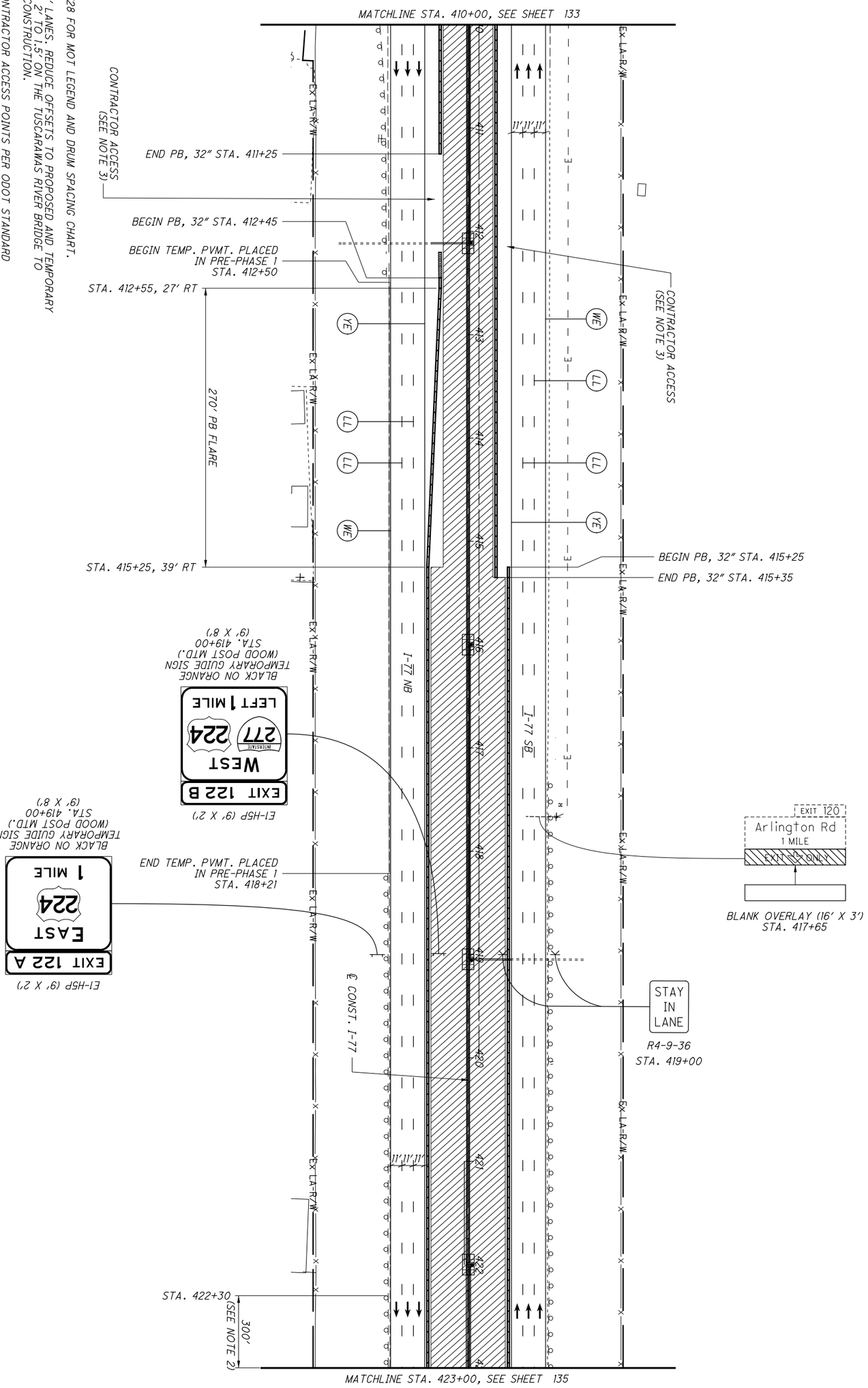
SUM-77/277/224
VARIOUS

133
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MPI10.dgn Sheet 1/31/2021 5:28:53 PM jrettig

NOTES:

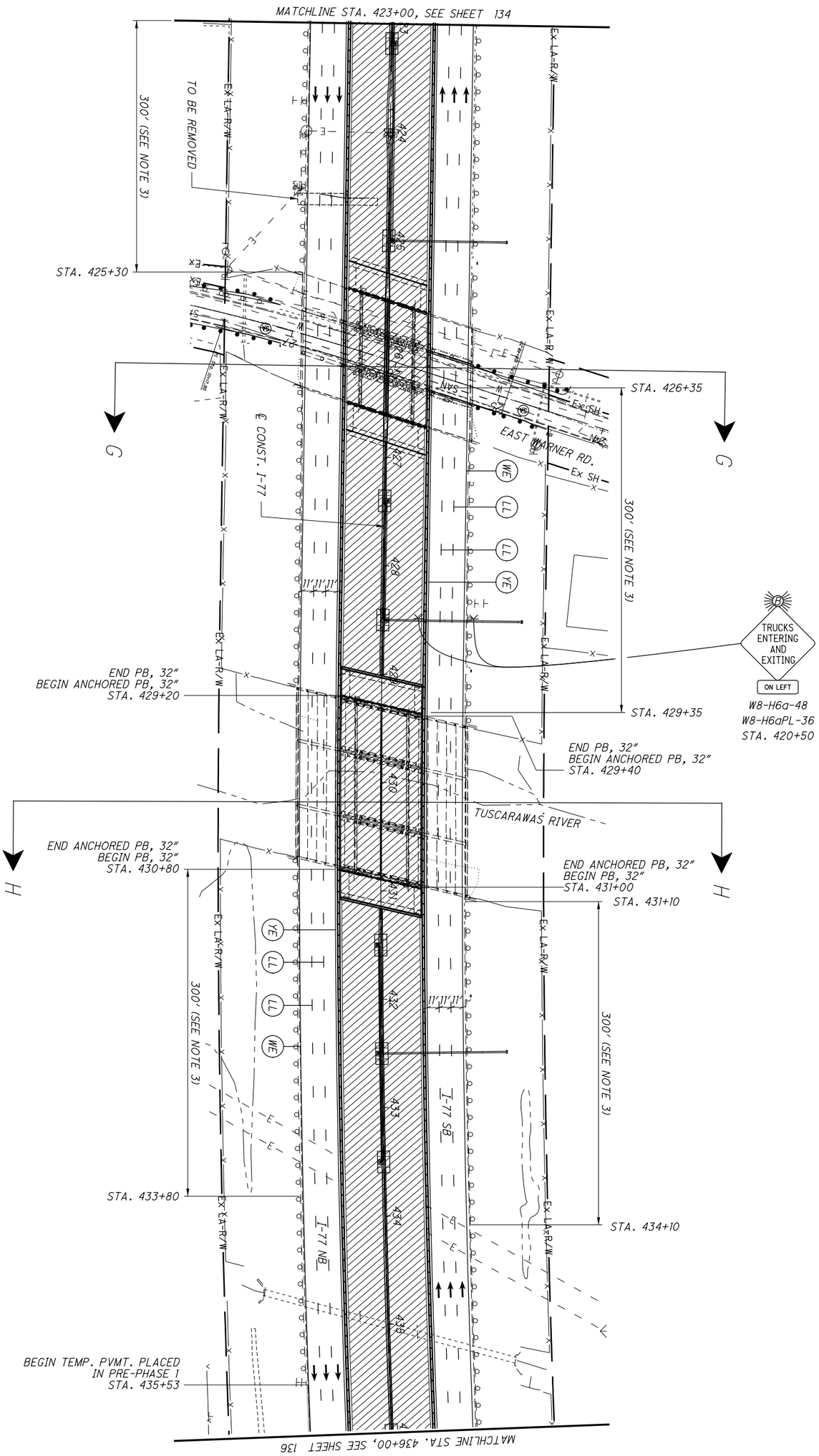
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. MAINTAIN 11' LANES. REDUCE OFFSETS TO PROPOSED AND TEMPORARY BARRIER FROM 2' TO 1.5' ON THE TUSCARAWAS RIVER BRIDGE TO ACCOMODATE CONSTRUCTION.
3. INSTALL CONTRACTOR ACCESS POINTS PER ODOT STANDARD CONSTRUCTION DRAWING MT-103.10. ACCESS POINTS MAY BE RELOCATED AT THE APPROVAL OF THE ENGINEER AS NECESSARY TO ACCOMPLISH CONSTRUCTION ACTIVITIES. CONTRACTOR ACCESS POINTS ARE SHOWN FOR INFORMATIONAL PURPOSES AND THE LOCATION CAN BE ADJUSTED AT THE APPROVAL OF THE ENGINEER.



134 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 I-77 - STA. 410+00 TO STA. 423+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. SEE SHEETS 123-191 FOR TYPICAL SECTIONS.
3. MAINTAIN 11' LANES. REDUCE OFFSETS TO PROPOSED AND TEMPORARY BARRIER FROM 2' TO 1.5' ON THE TUSCARAWAS RIVER BRIDGE TO ACCOMODATE CONSTRUCTION.

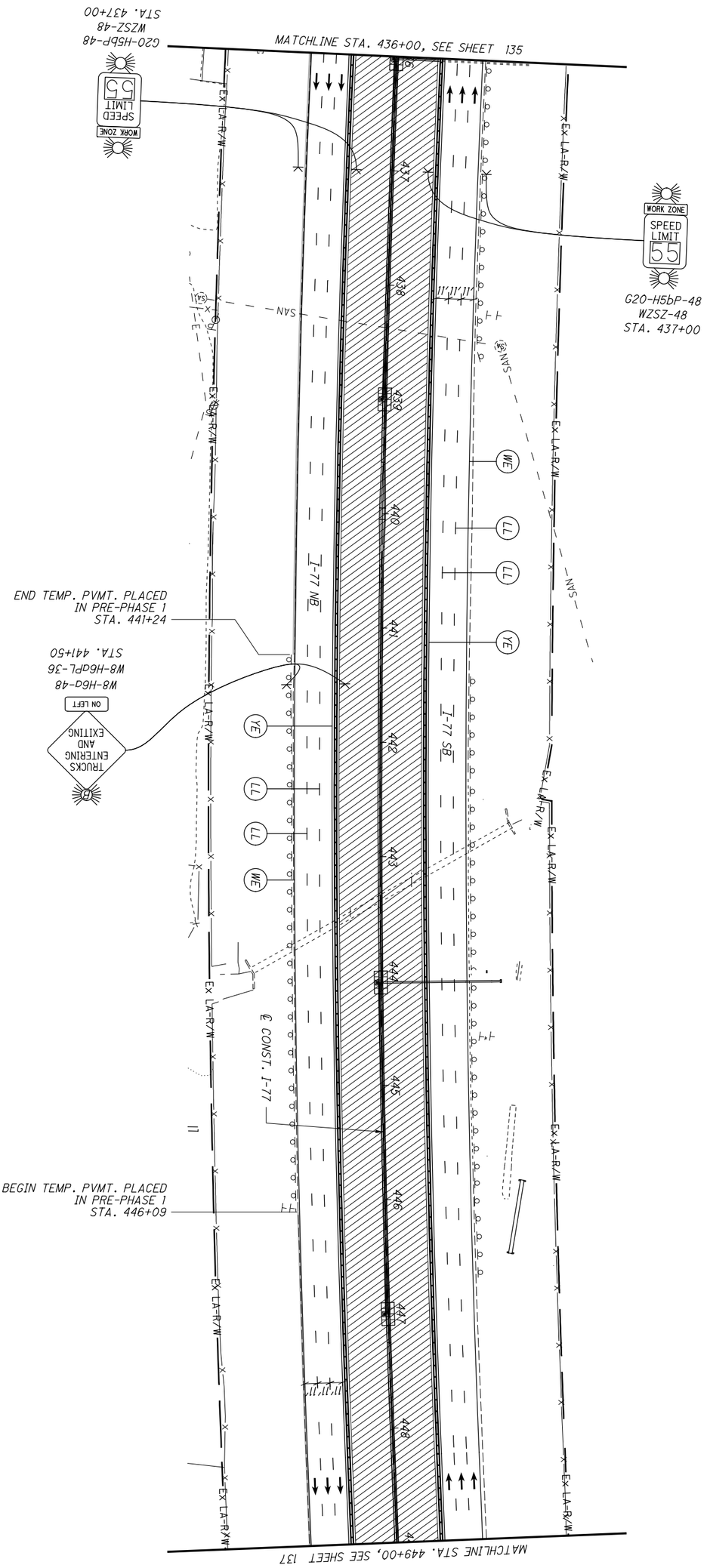


135 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 I-77 - STA. 423+00 TO STA. 436+00	CALCULATED . CHECKED . 0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\I06002_SUM-76-I0.95\Design\MOT\Sheets\I06002_MPI13.dgn Sheet 1/31/20215:29:06 PM jrettig

NOTES:

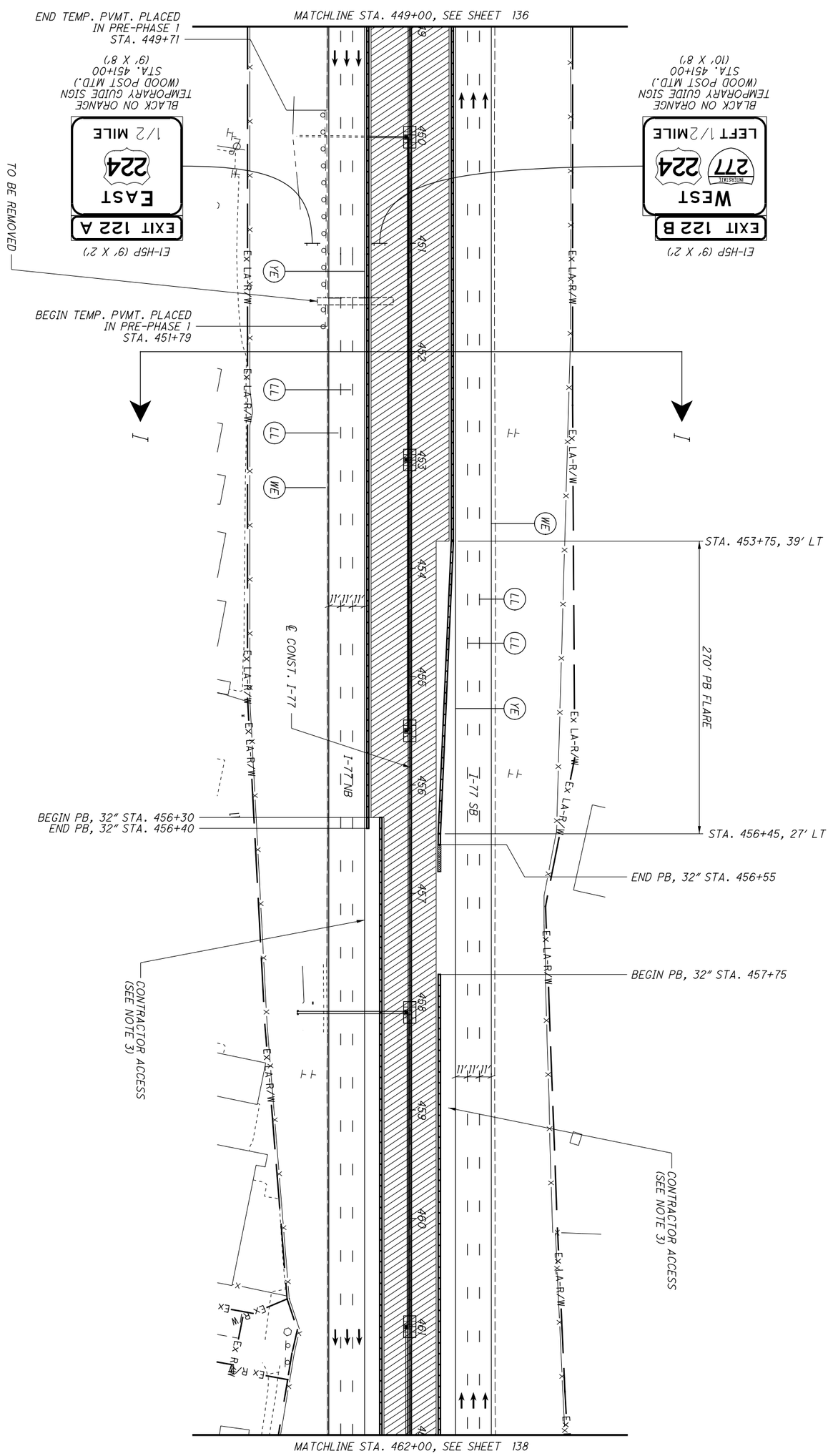
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.



136 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 I-77 - STA. 436+00 TO STA. 449+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

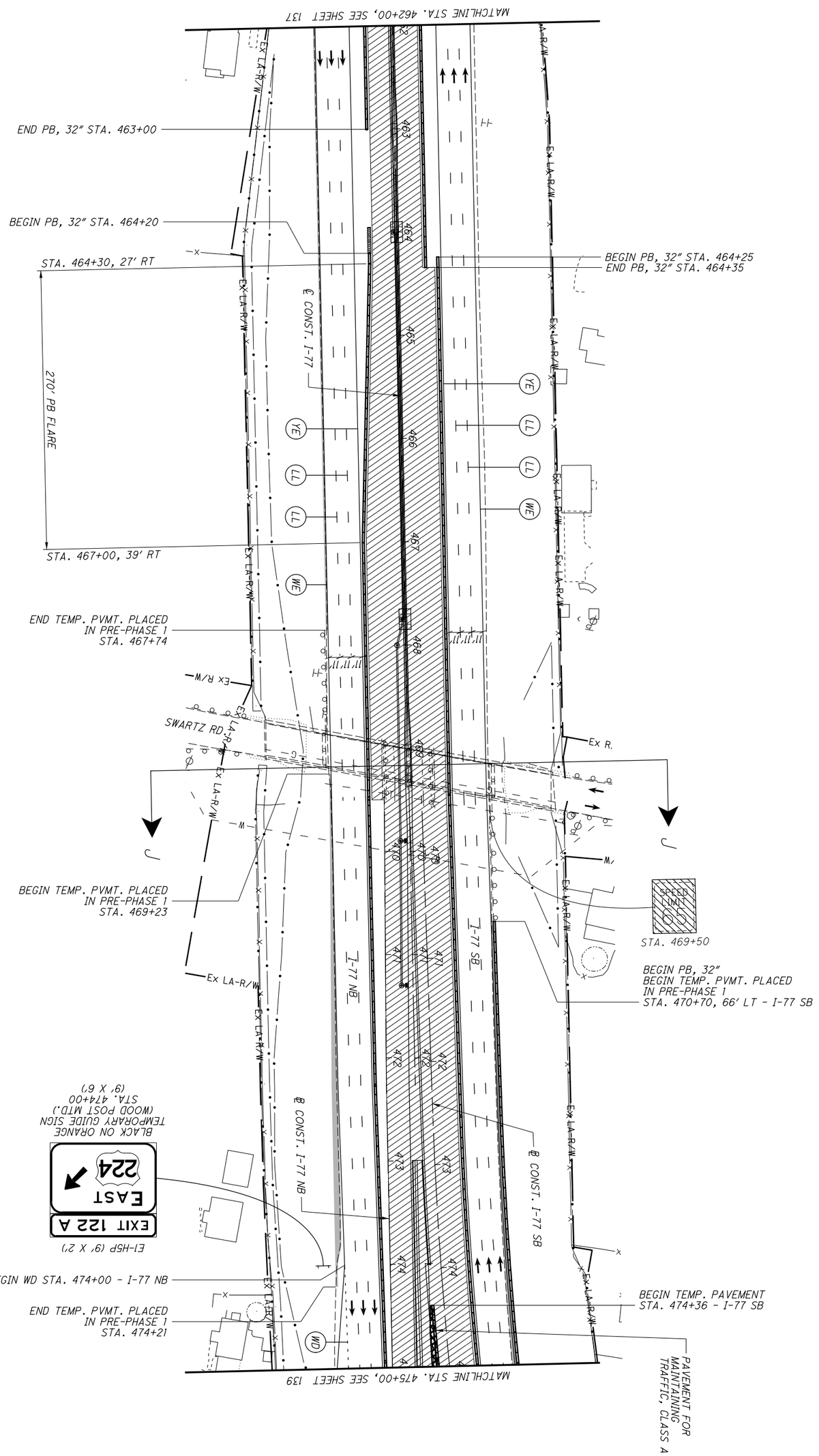
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. SEE SHEETS 123-191 FOR TYPICAL SECTIONS.
3. INSTALL CONTRACTOR ACCESS POINTS PER ODOT STANDARD CONSTRUCTION DRAWING MT-103.10. ACCESS POINTS MAY BE RELOCATED AT THE APPROVAL OF THE ENGINEER, AS NECESSARY TO ACCOMPLISH CONSTRUCTION ACTIVITIES. CONTRACTOR ACCESS POINTS ARE SHOWN FOR INFORMATIONAL PURPOSES AND THE LOCATION CAN BE ADJUSTED AT THE APPROVAL OF THE ENGINEER.



137 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 I-77 - STA. 449+00 TO STA. 462+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. SEE SHEETS 123-191 FOR TYPICAL SECTIONS.



138 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 I-77 - STA. 462+00 TO STA. 475+00	CALCULATED . CHECKED . 0 50 / 25 100 HORIZONTAL SCALE IN FEET

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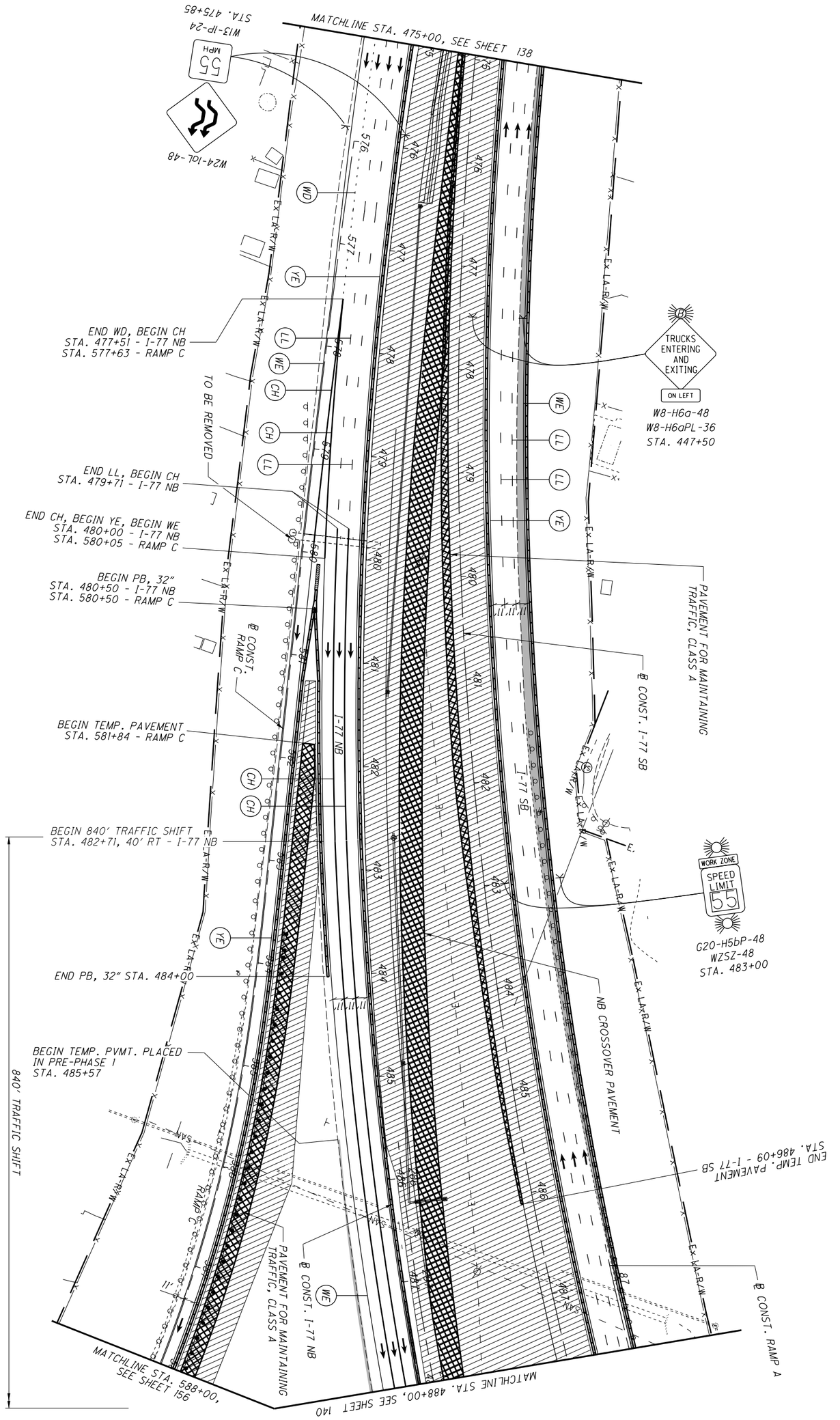


NOTES:

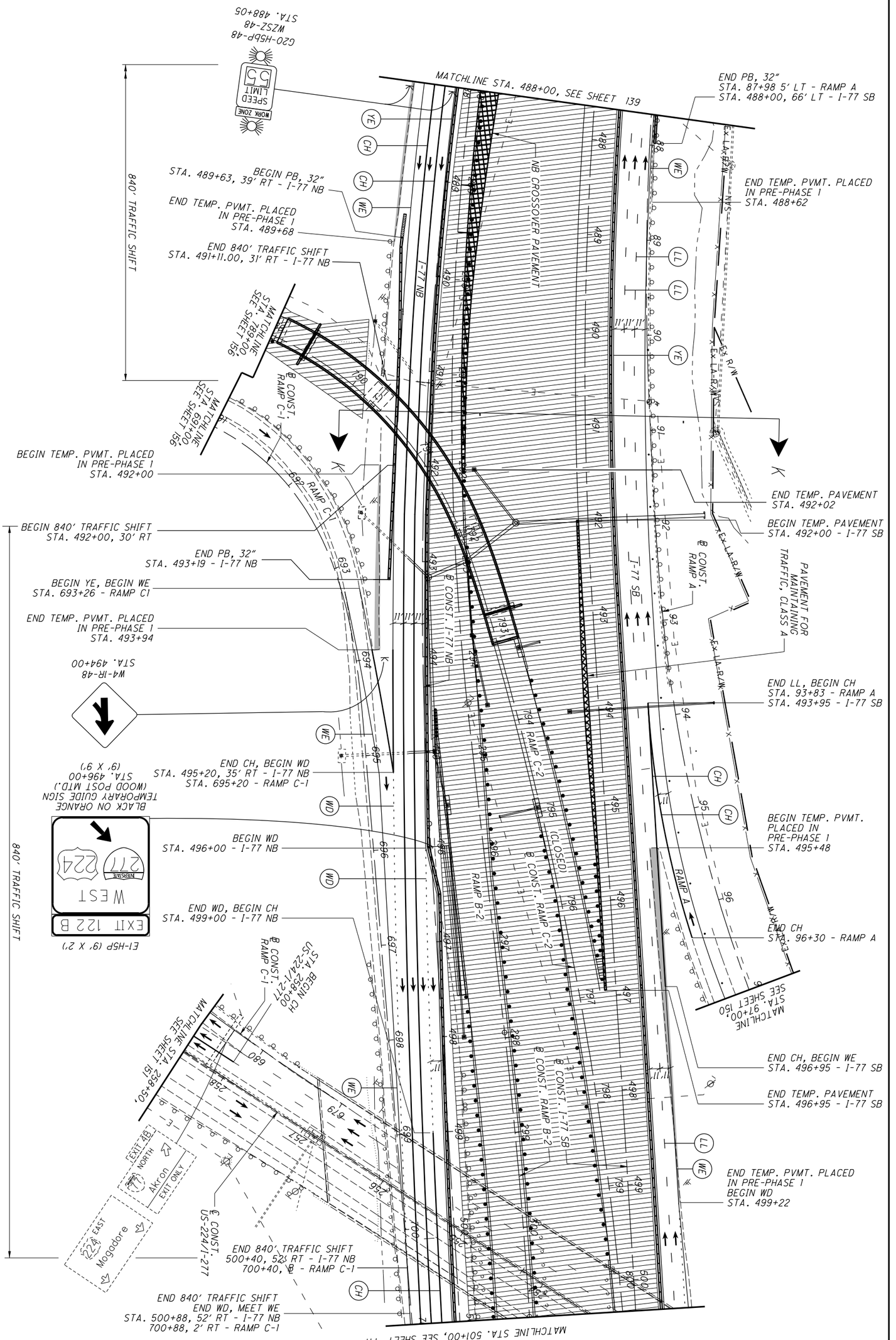
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. SEE SHEETS 157-170 FOR RAMP C CROSS SECTIONS.
3. SEE SHEETS 294-297 FOR NORTHERN CROSSOVER (NB).

NO.	DATE	REVISIONS DESCRIPTION
8	04/30/21	I-77 NB LANE SHIFT/SIGNING CHANGES

139 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 I-77 - STA. 475+00 TO STA. 488+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. SEE SHEETS 123-191 FOR TYPICAL SECTIONS.
3. SEE SHEETS 116 AND 118 FOR ADDITIONAL DETAILS.



NO.	DATE	REVISIONS DESCRIPTION
8	04/30/21	I-77 NB LANE SHIFT/SIGNING CHANGES

140 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 I-77 - STA. 488+00 TO STA. 501+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

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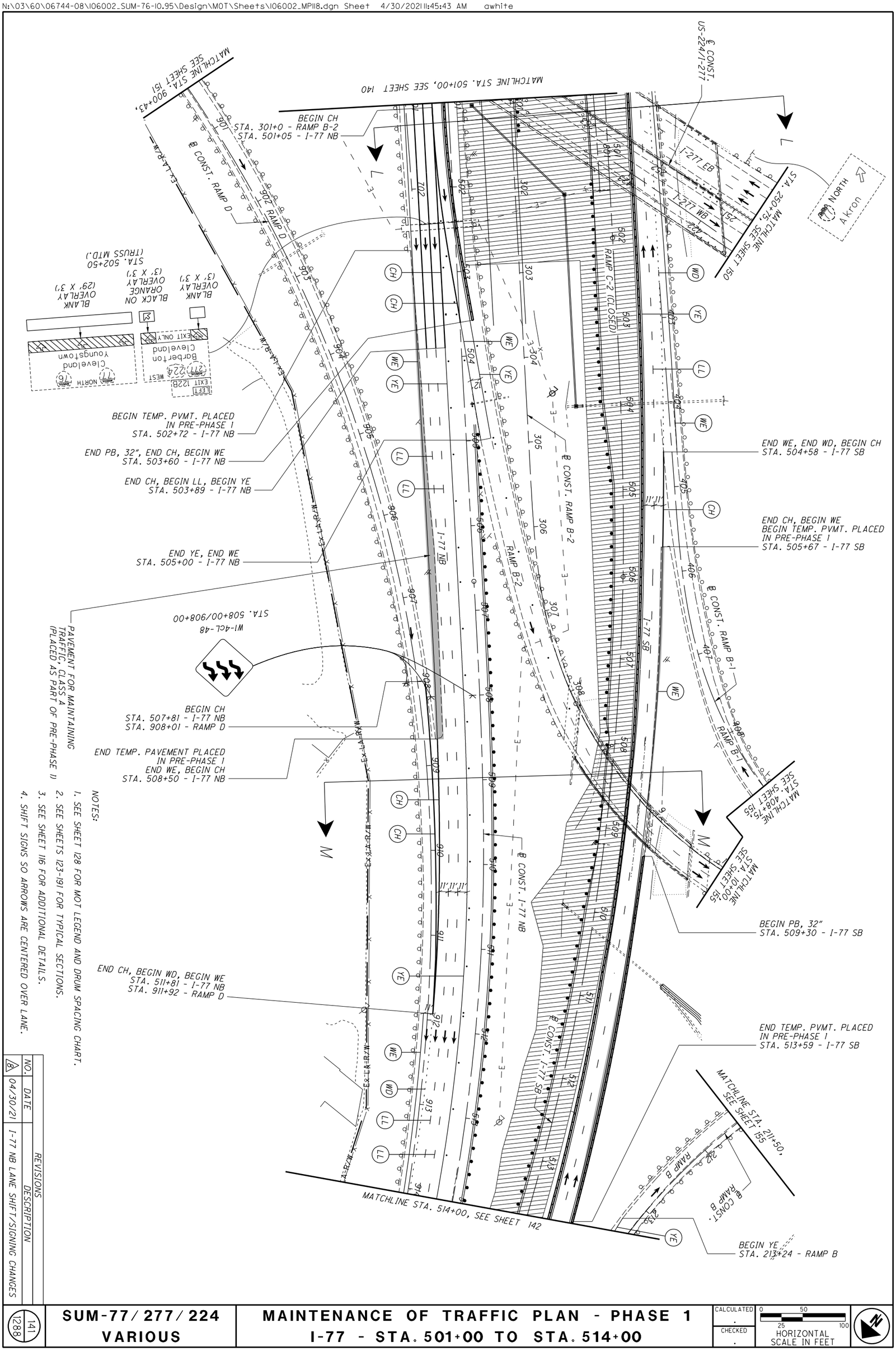

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. SEE SHEETS 123-191 FOR TYPICAL SECTIONS.
3. SEE SHEET 116 FOR ADDITIONAL DETAILS.
4. SHIFT SIGNS SO ARROWS ARE CENTERED OVER LANE.

NO.	DATE	REVISIONS DESCRIPTION
8	04/30/21	I-77 NB LANE SHIFT/SIGNING CHANGES

141 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 I-77 - STA. 501+00 TO STA. 514+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

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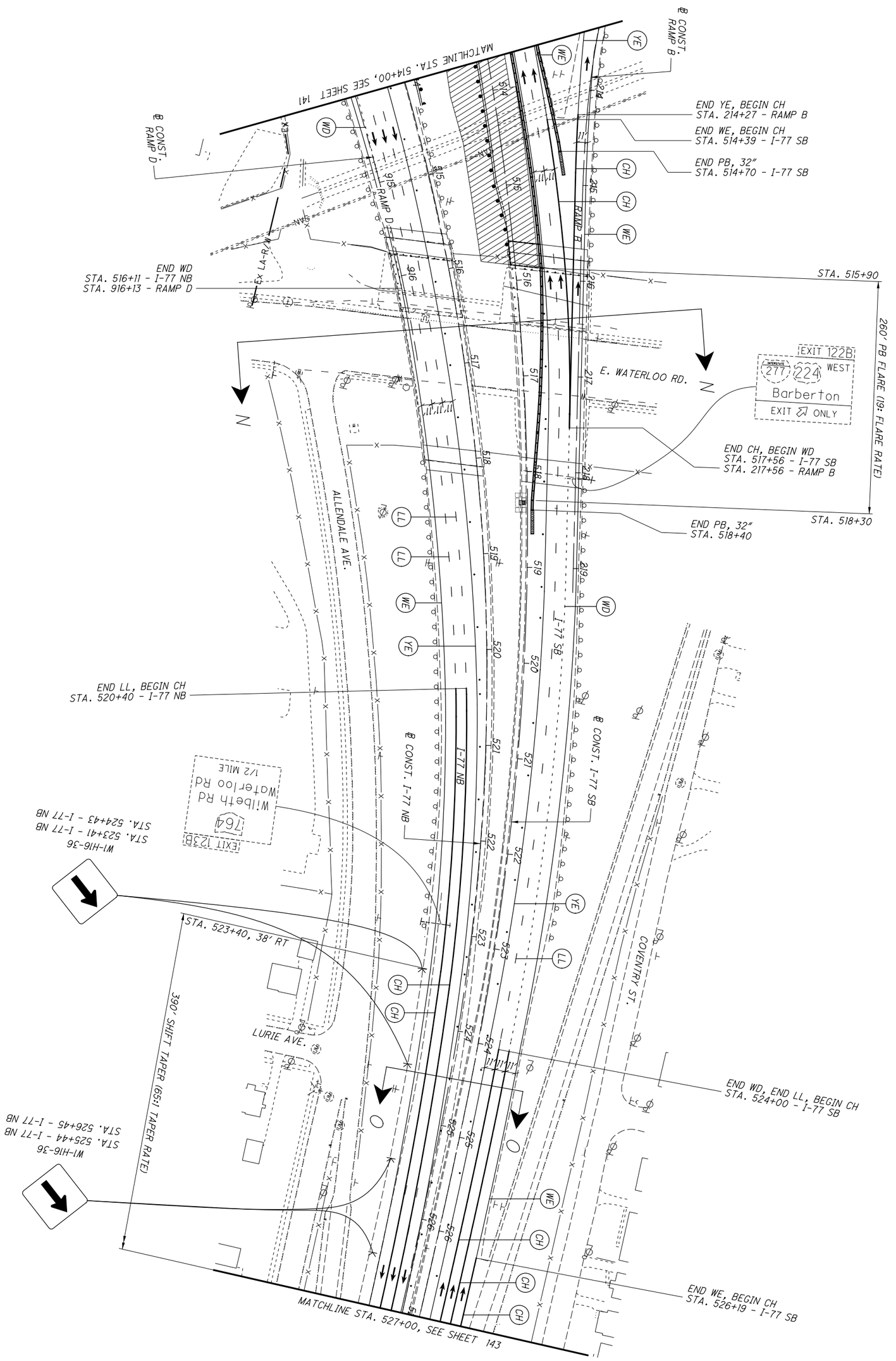
NOTES:

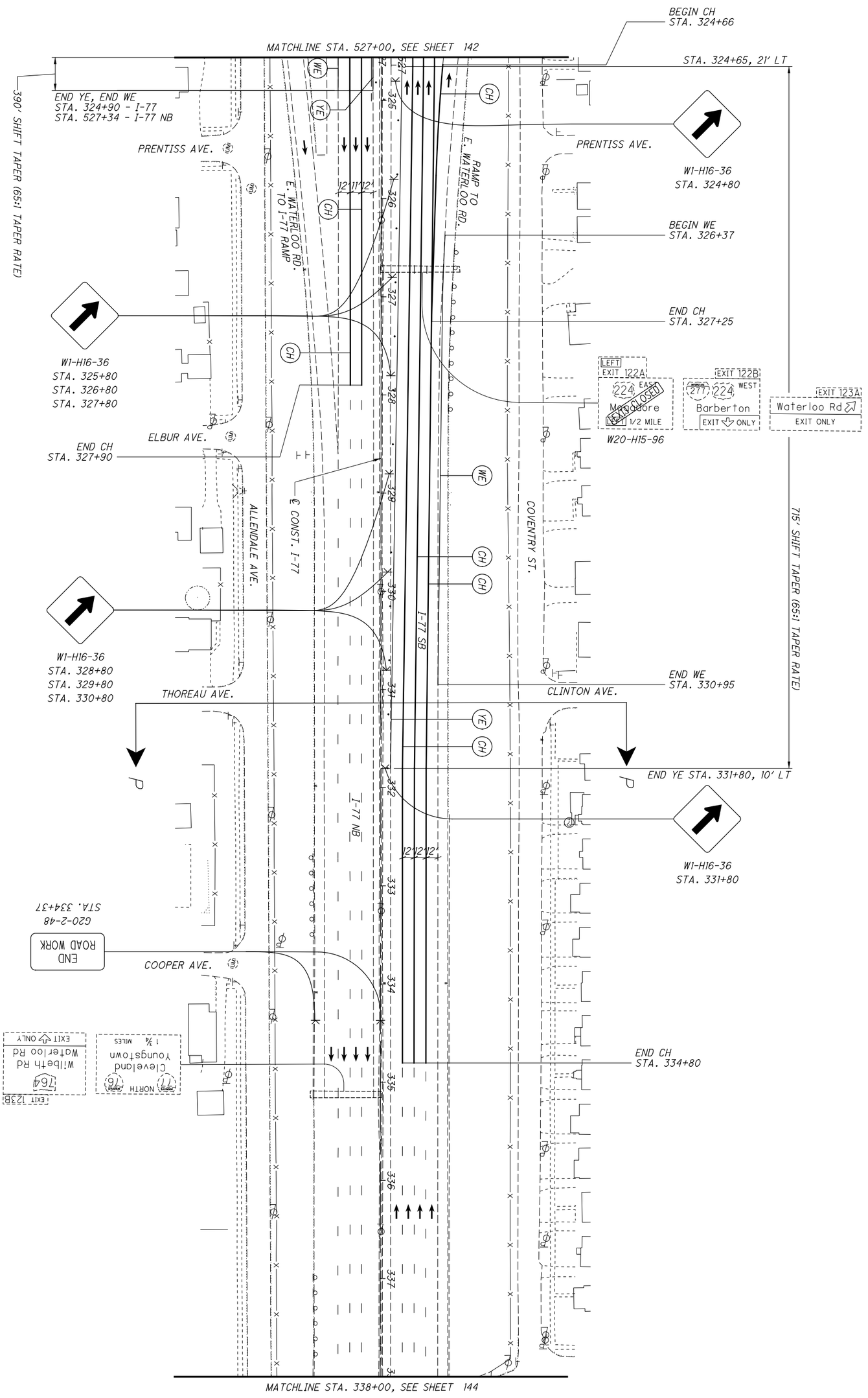
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. SEE SHEETS 123-191 FOR TYPICAL SECTIONS.



142 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 I-77 - STA. 514+00 TO STA. 527+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. SEE SHEETS 123-191 FOR TYPICAL SECTIONS.
3. SHIFT SIGNS SO ARROWS ARE CENTERED OVER LANE.



143 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 I-77 - STA. 527+00 TO STA. 338+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

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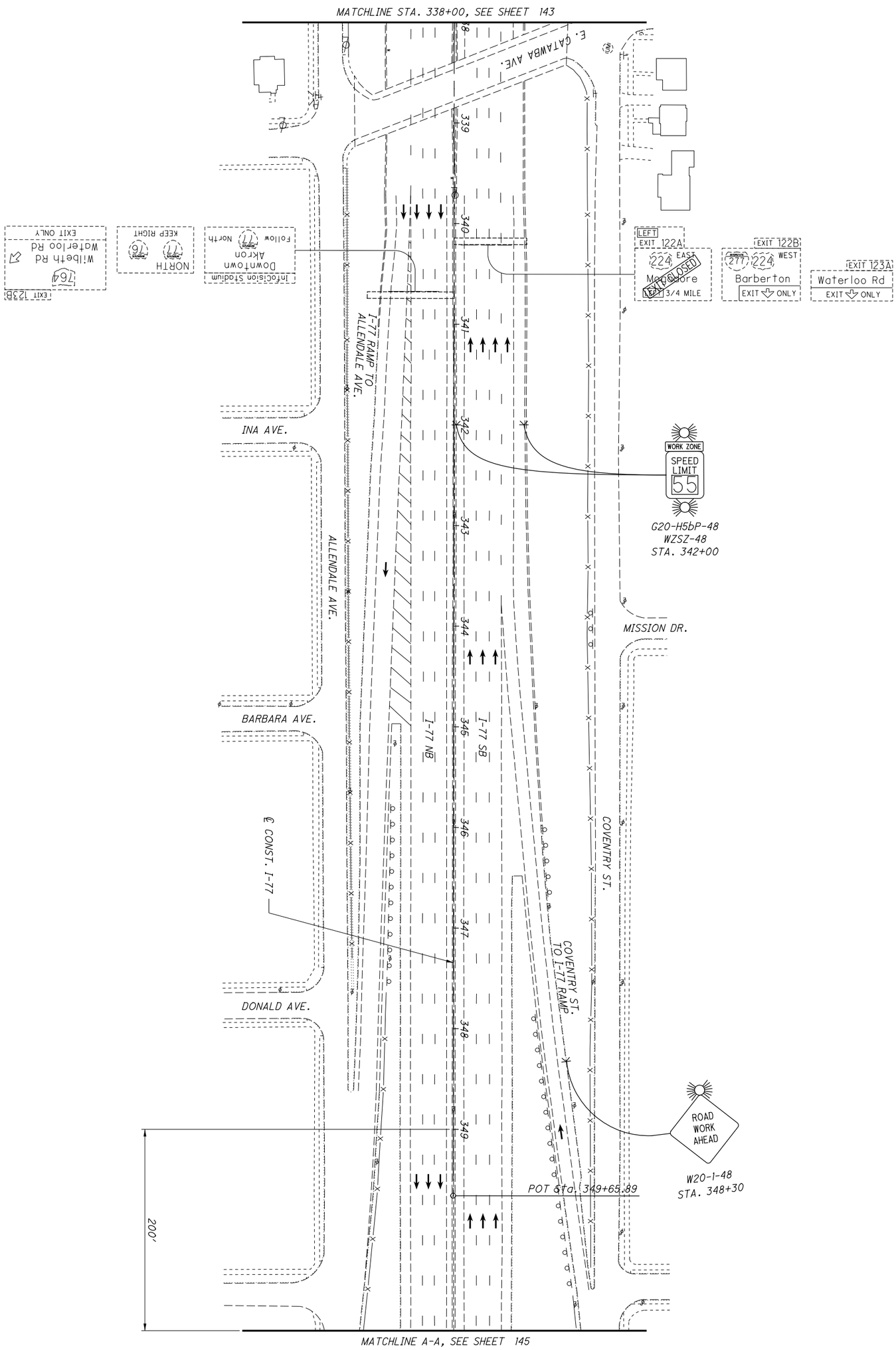
NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.



144 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 I-77 - STA. 338+00 TO M.L. A-A	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED .
CHECKED .

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I-77 - M.L. A-A TO NORTH LIMITS

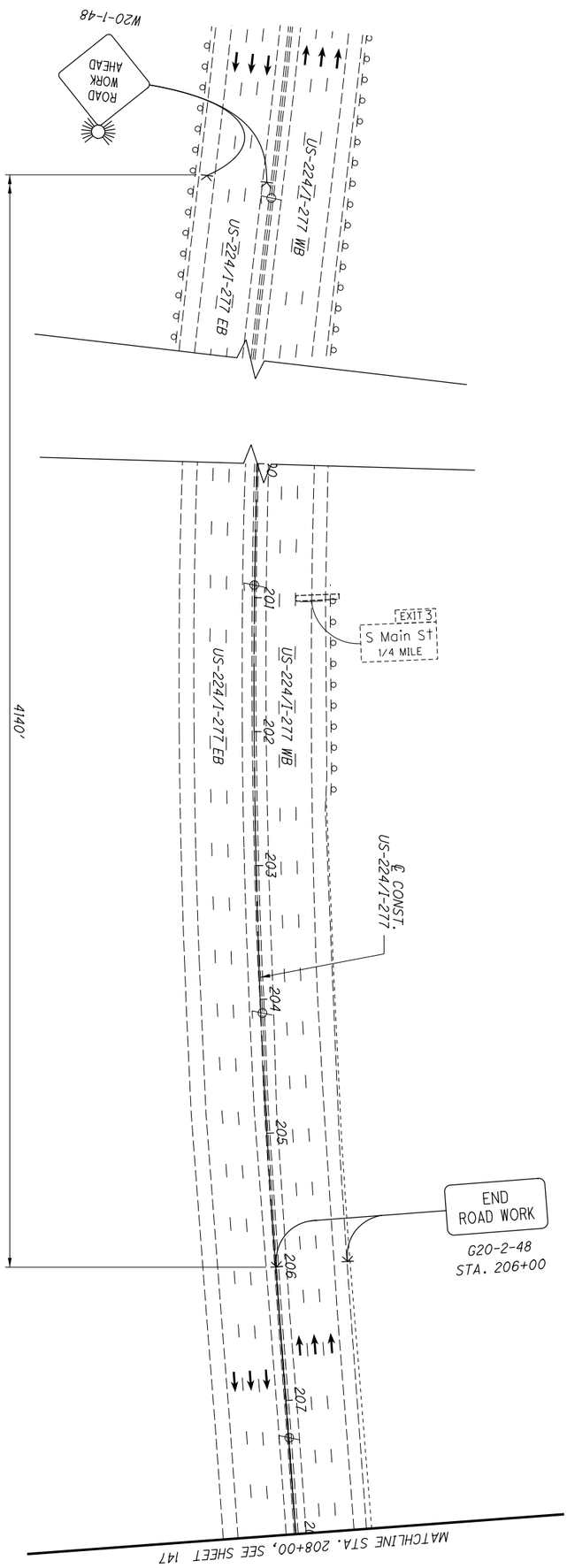
SUM-77/277/224
VARIOUS

145
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MPI22.dgn Sheet 1/31/2021 5:30:26 PM jrettig

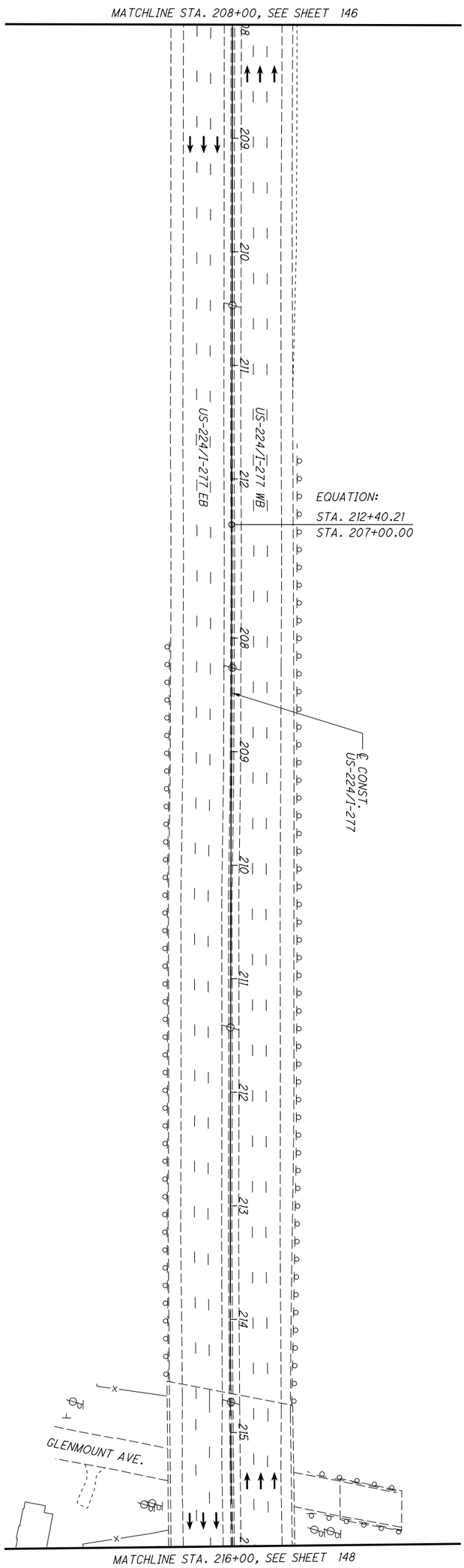
NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.



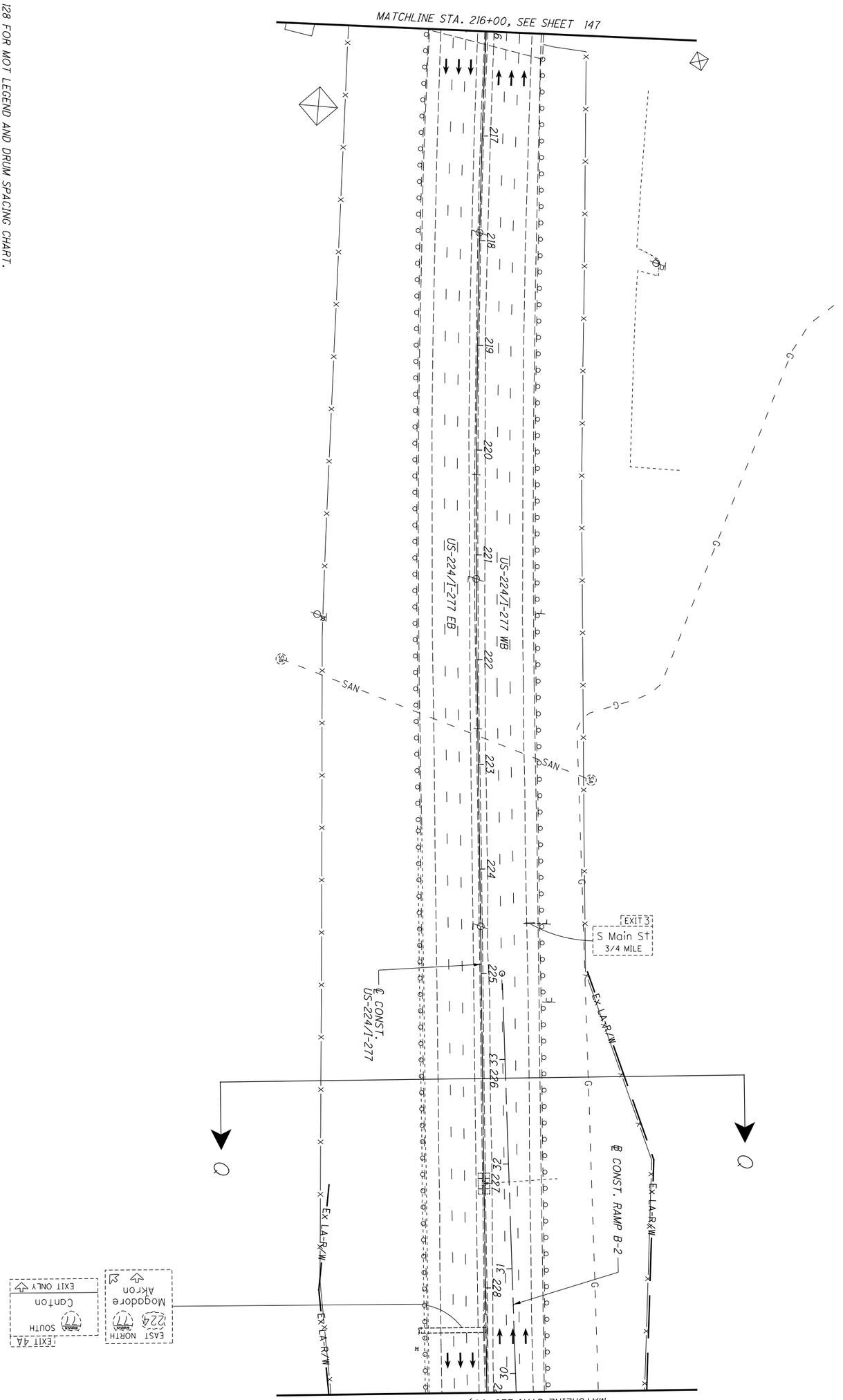
NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.



NOTES:

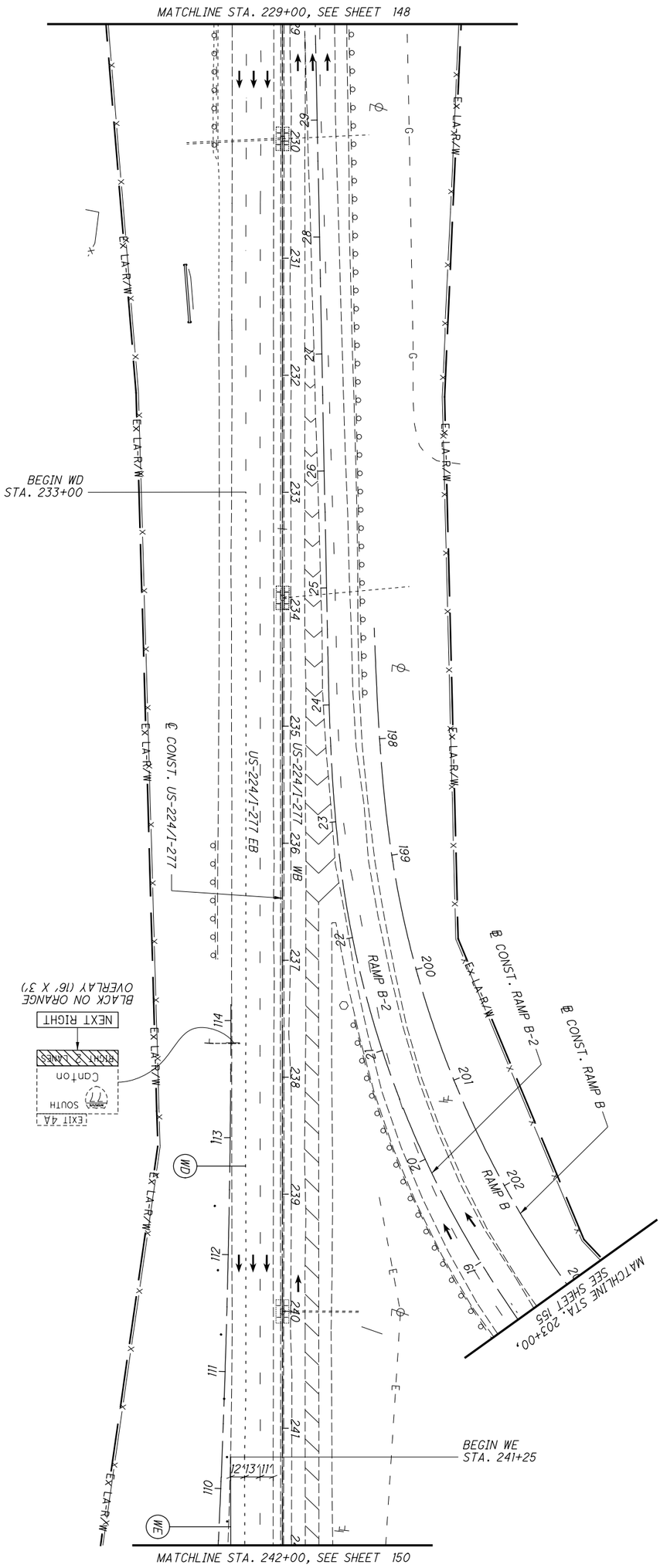
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. SEE SHEETS 123-191 FOR TYPICAL SECTIONS.
3. SHIFT SIGNS SO ARROWS ARE CENTERED OVER LANE.



148 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 US-224/I-277 - STA. 216+00 TO STA. 229+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.



149 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 US-224/I-277 - STA. 229+00 TO STA. 242+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

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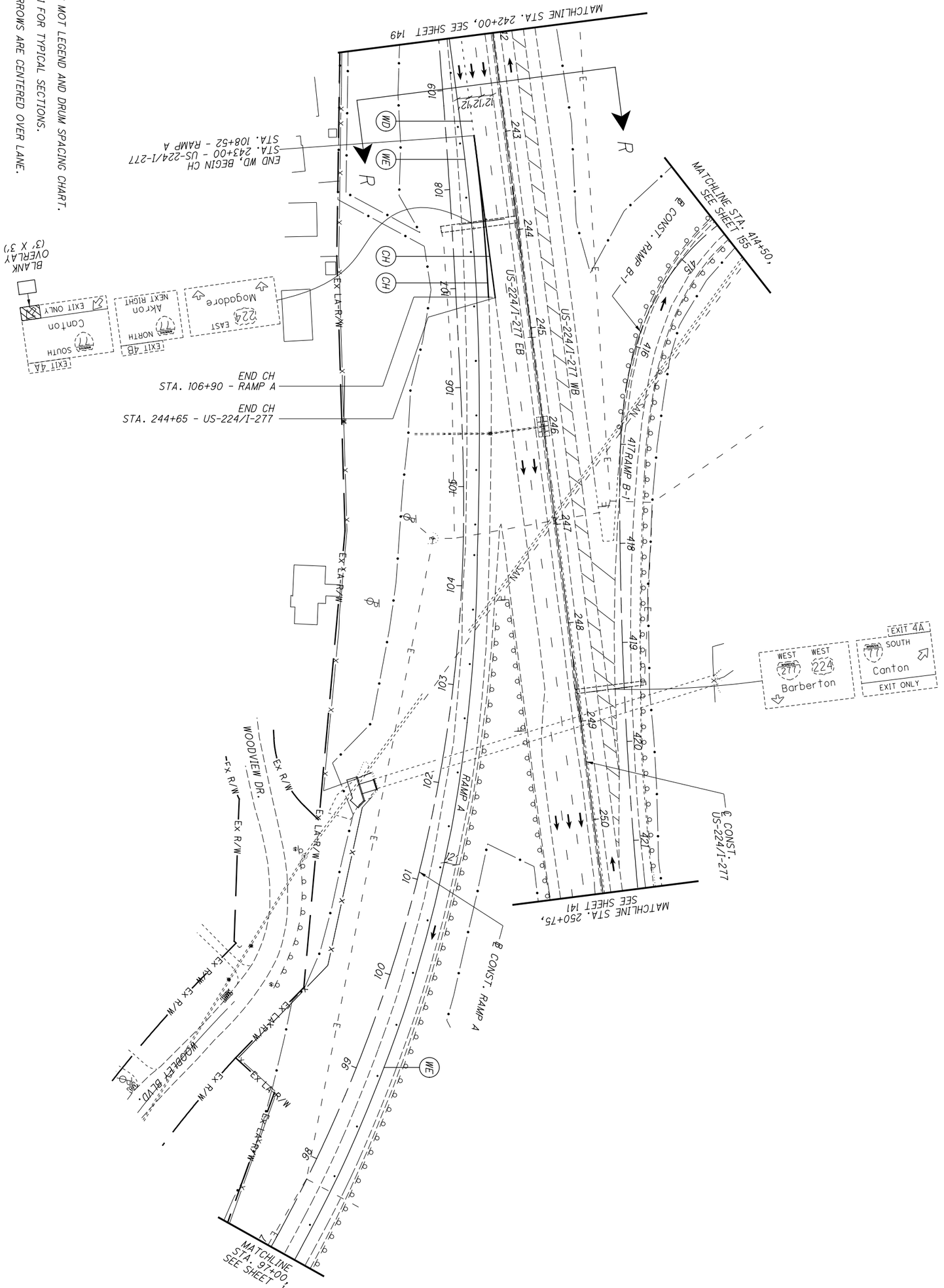
NOTES:

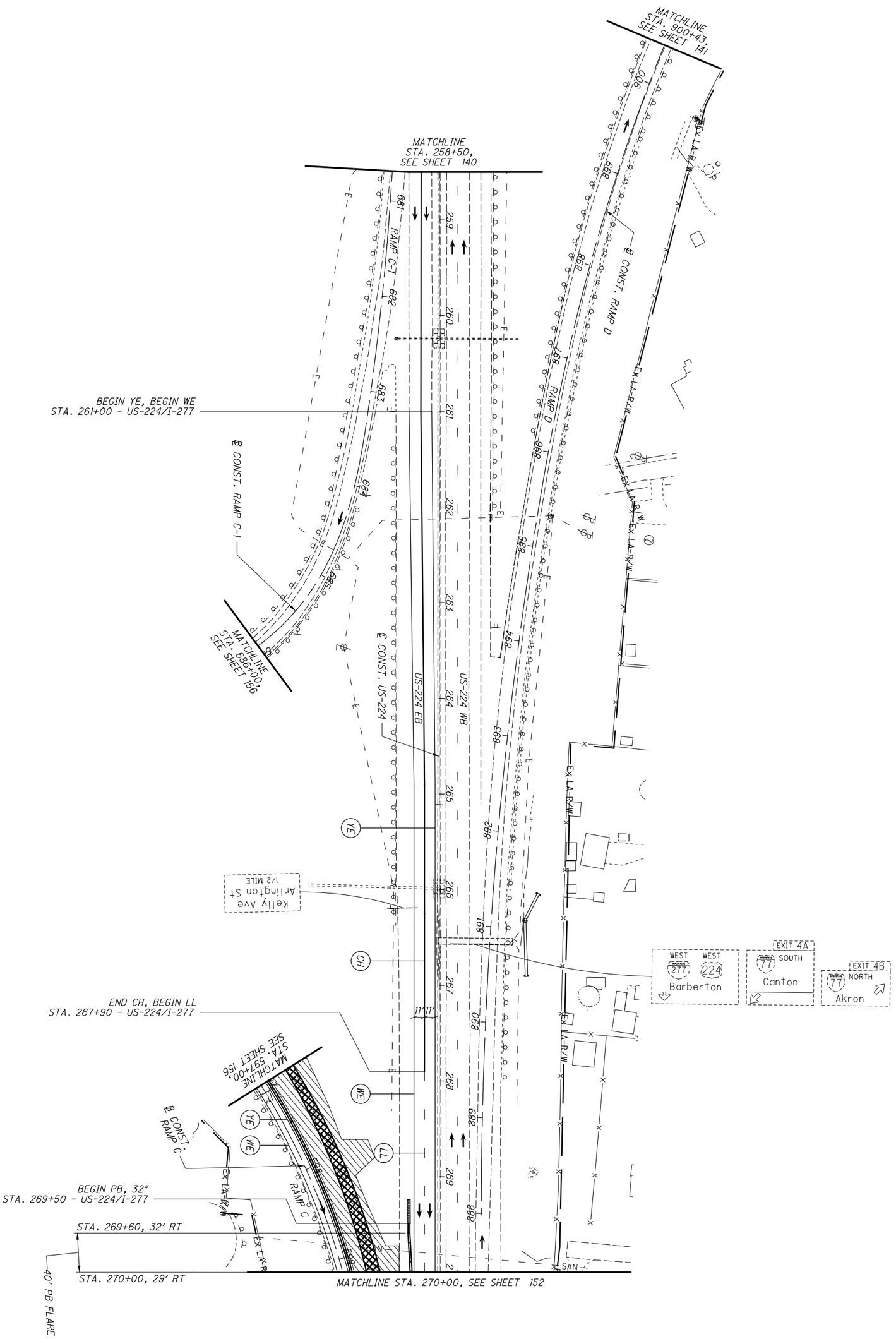
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. SEE SHEETS 123-191 FOR TYPICAL SECTIONS.
3. SHIFT SIGNS SO ARROWS ARE CENTERED OVER LANE.



150 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 US-224/I-277 - STA. 242+00 TO STA. 250+75	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

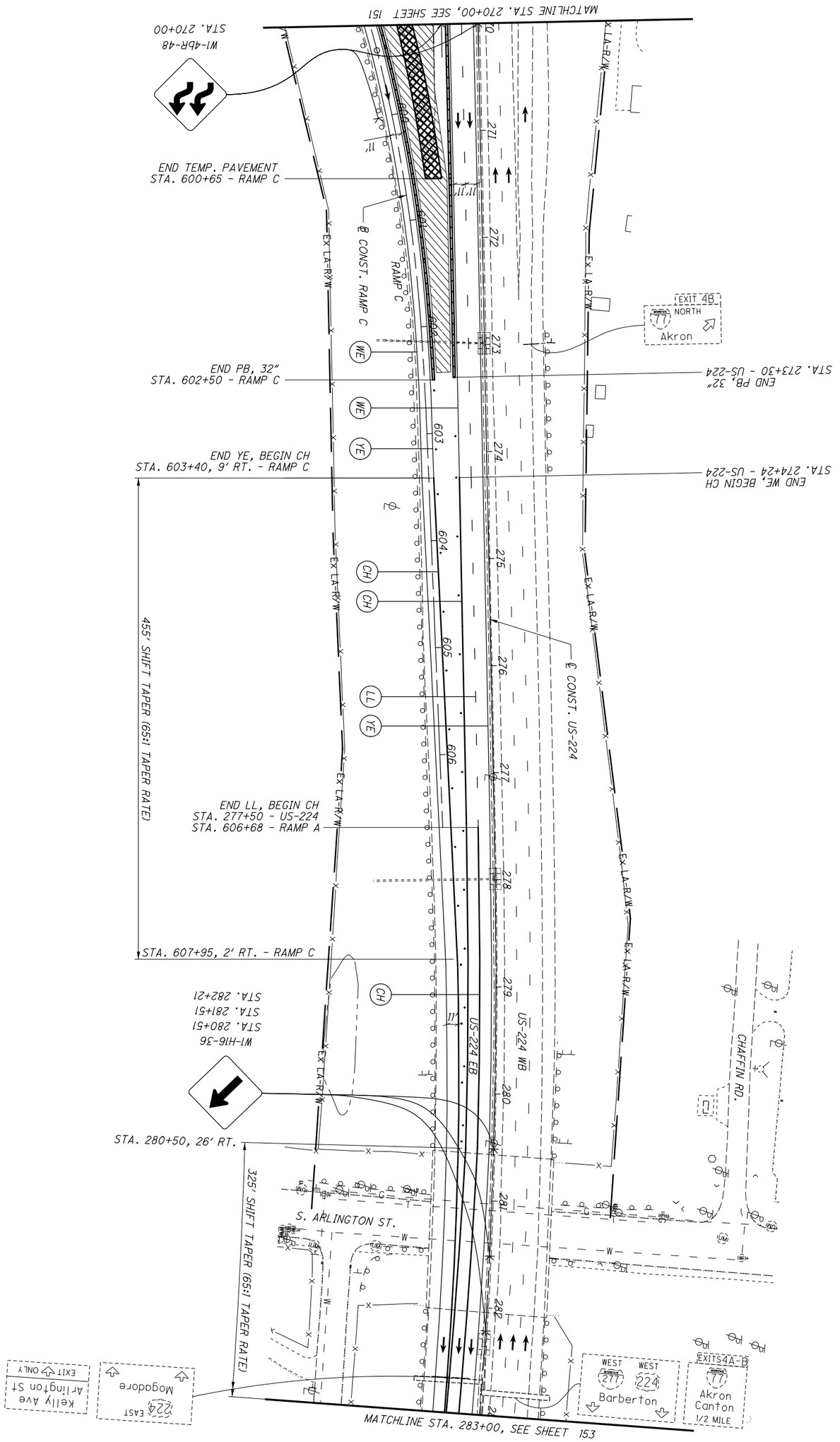
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.



151 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 US-224 - STA. 258+50 TO STA. 270+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

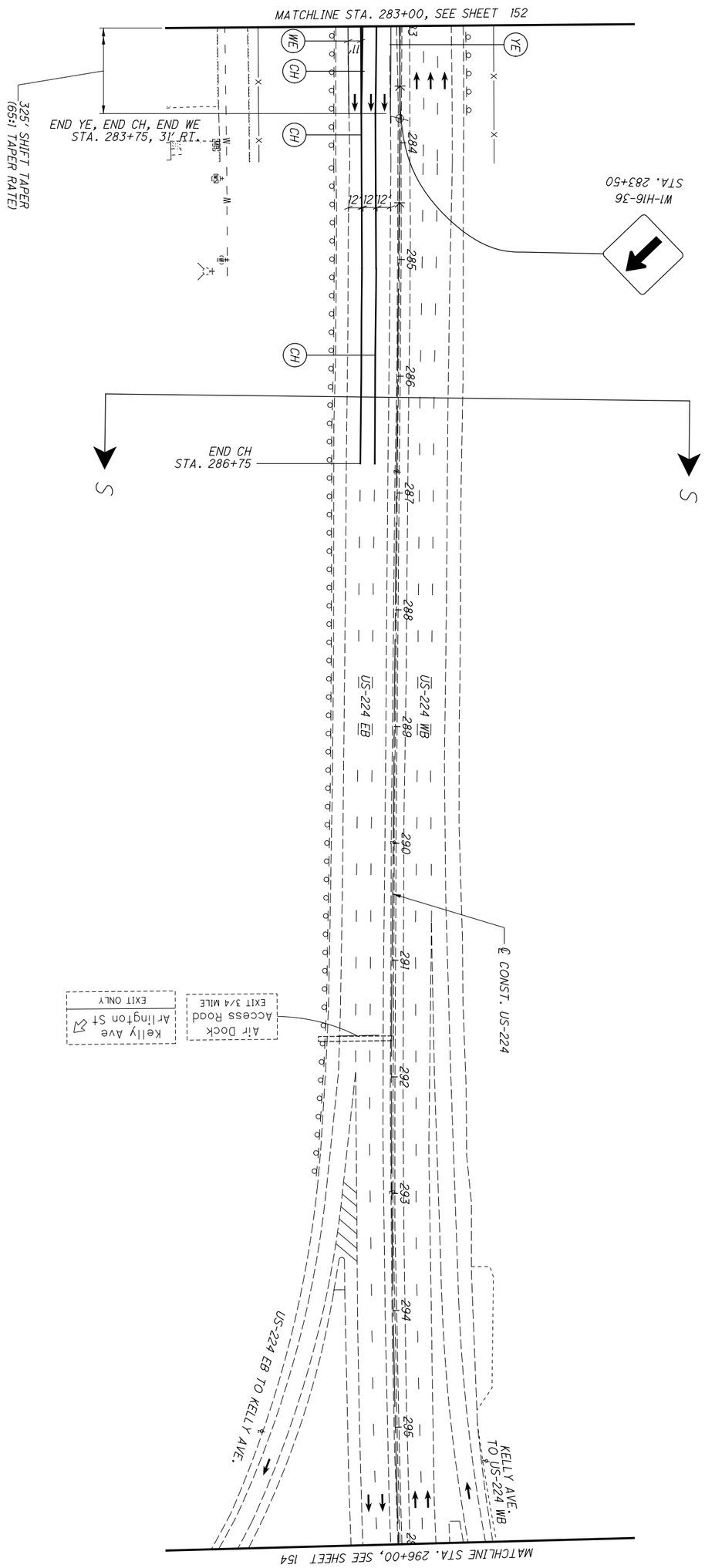
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.



152 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 US-224 - STA. 270+00 TO STA. 283+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. SEE SHEETS 123-191 FOR TYPICAL SECTIONS.



153 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 US-224 - STA. 283+00 TO STA. 296+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED .
CHECKED .

TRAFFIC PLAN - PHASE 1

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
US-224 - STA. 296+00 TO EAST LIMITS

SUM-77/277/224
VARIOUS

154
1288

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NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. SEE SHEETS 123-191 FOR TYPICAL SECTIONS.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED .
CHECKED .

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
RAMP B - STA. 203+00 TO STA. 211+50

SUM-77/277/224
VARIOUS

155
1288

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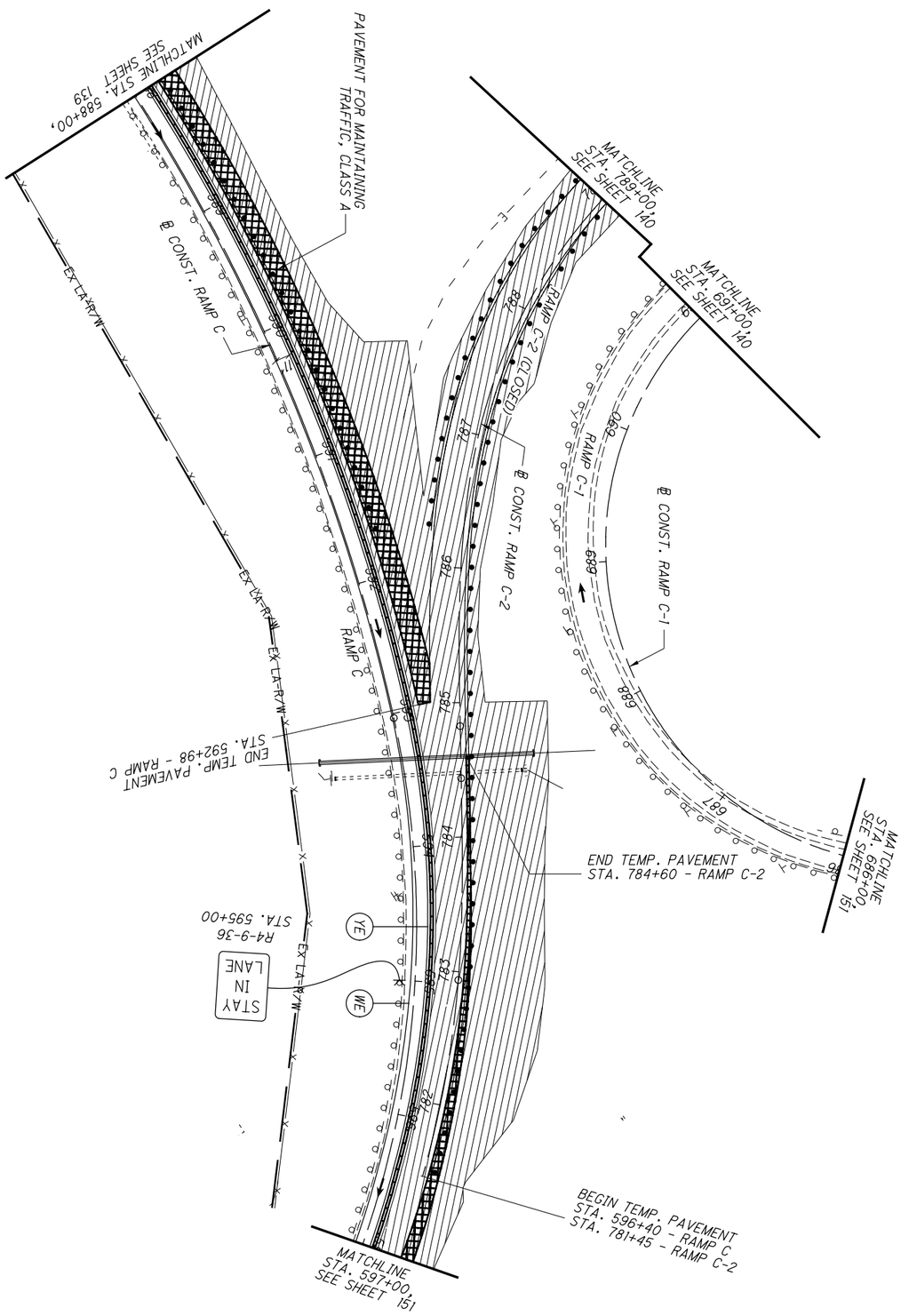
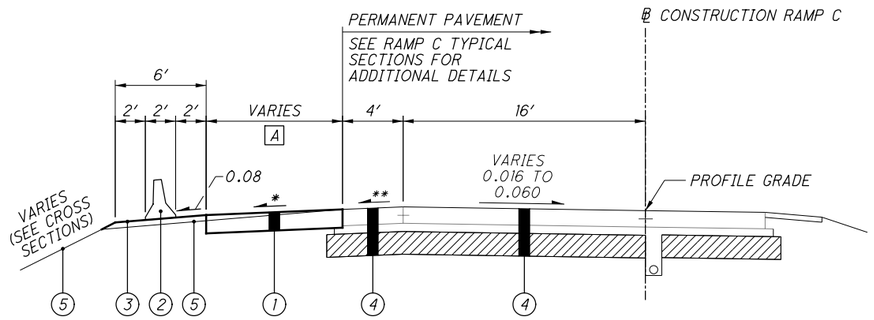
NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. SEE SHEETS 157-170 FOR RAMP C CROSS SECTIONS.
3. SEE SHEET 118 FOR ADDITIONAL DETAILS.



156 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 RAMP C - STA. 588+00 TO STA. 597+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET



A 11.0′ FROM STA. 581+22.52 TO STA. 581+84.12

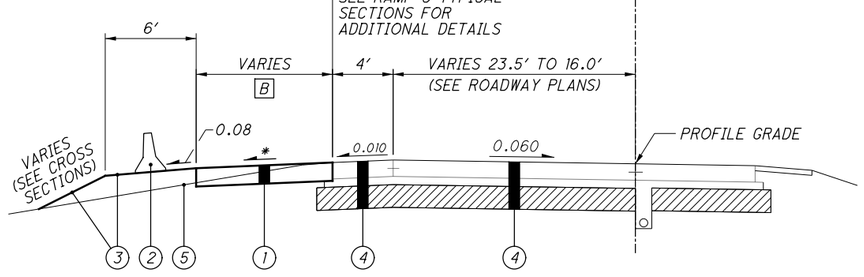
VARIES
11.0′ AT STA. 581+84.12 TO
15.0′ AT STA. 582+14.15

15.0′ FROM STA. 582+14.15 TO STA. 592+70.54

VARIES
15.0′ AT STA. 592+70.54 TO
8.9′ AT STA. 592+97.65

RAMP C TEMPORARY PAVEMENT SECTION

STA. 581+22.52 TO STA. 592+97.65



B VARIES
7.8′ AT STA. 596+40.00 TO
15.0′ AT STA. 599+74.24

15.0′ FROM STA. 599+74.24 TO STA. 600+26.97

VARIES
15.0′ AT STA. 600+26.97 TO
9.9′ AT STA. 600+65.37

RAMP C TEMPORARY PAVEMENT SECTION

STA. 596+40.00 TO STA. 600+65.37

LEGEND

(1) ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A

(2) ITEM 622 - PORTABLE BARRIER, 32″

(3) ITEM 659 - SEEDING AND MULCHING (TEMPORARY GRADING)

(4) PERMANENT PAVEMENT - SEE RAMP C TYPICAL SECTIONS FOR DETAILS

(5) PERMANENT GRADING - SEE CROSS SECTIONS FOR ADDITIONAL INFORMATION

* VARIES 0.040 MAX. TO 0.010 MIN.
TEMPORARY PAVEMENT CROSS SLOPE SHALL MATCH PERMANENT PAVEMENT SHOULDER SLOPE

** VARIES 0.040 MAX. TO 0.010 MIN.
SEE ROADWAY TYPICAL SECTIONS FOR HIGH SIDE SHOULDER SLOPES

TYPICAL SECTIONS - RAMP C TEMPORARY PAVEMENT

SUM-77 / 277 / 224
VARIOUS

157
1288

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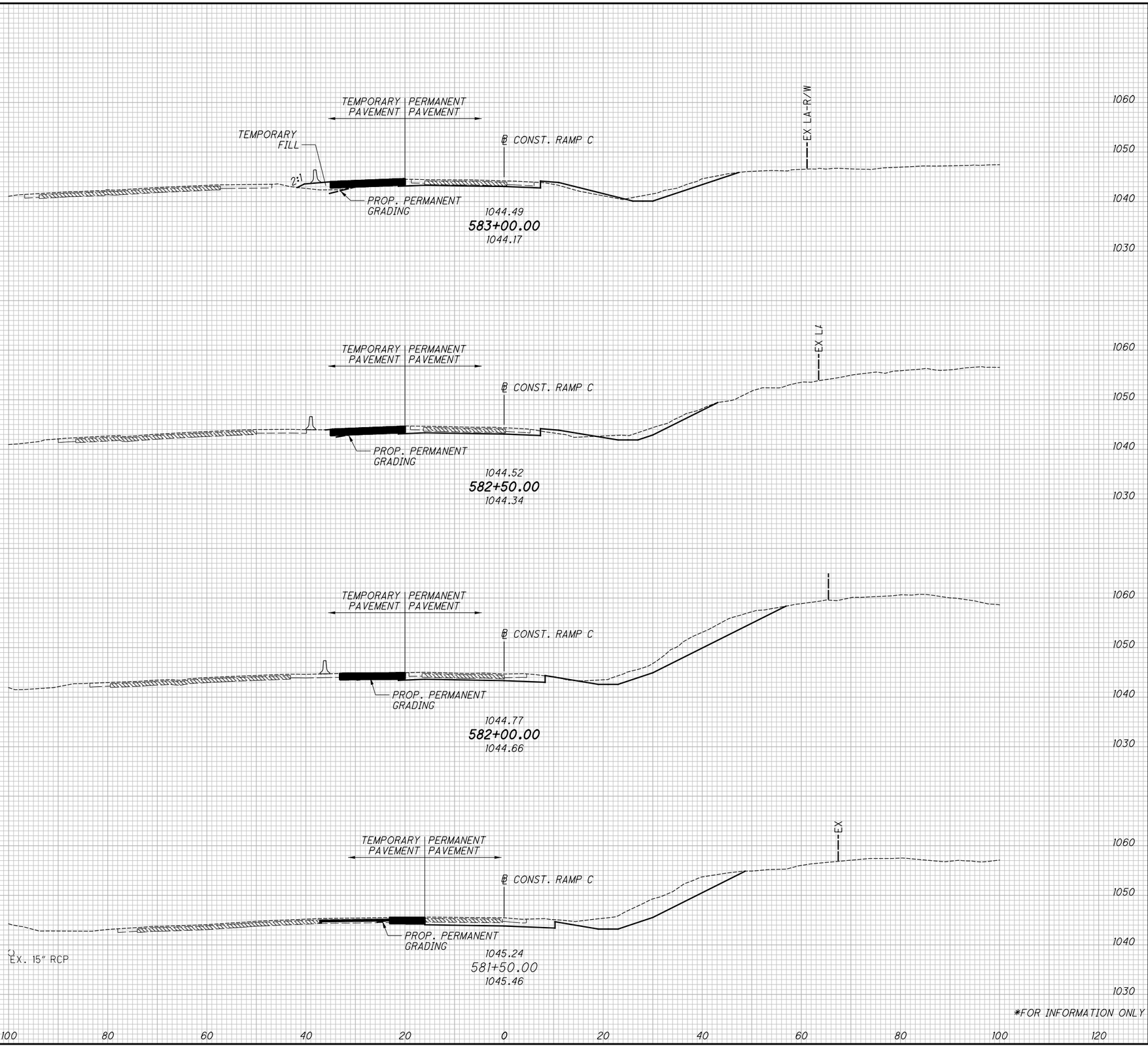
SEEDING END WIDTH	SEEDING SQ. YDS.
7	22
1	3
0	0
0	
*25	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
6	9	12	8
7	0	12	0
6	0	6	0
0	0		
		*30	*8

CALCULATED KMC
CHECKED SSR

CROSS SECTIONS RAMP C
STA. 581+50.00 TO STA. 583+00.00

SUM-77 / 277 / 224
VARIOUS

158
1288

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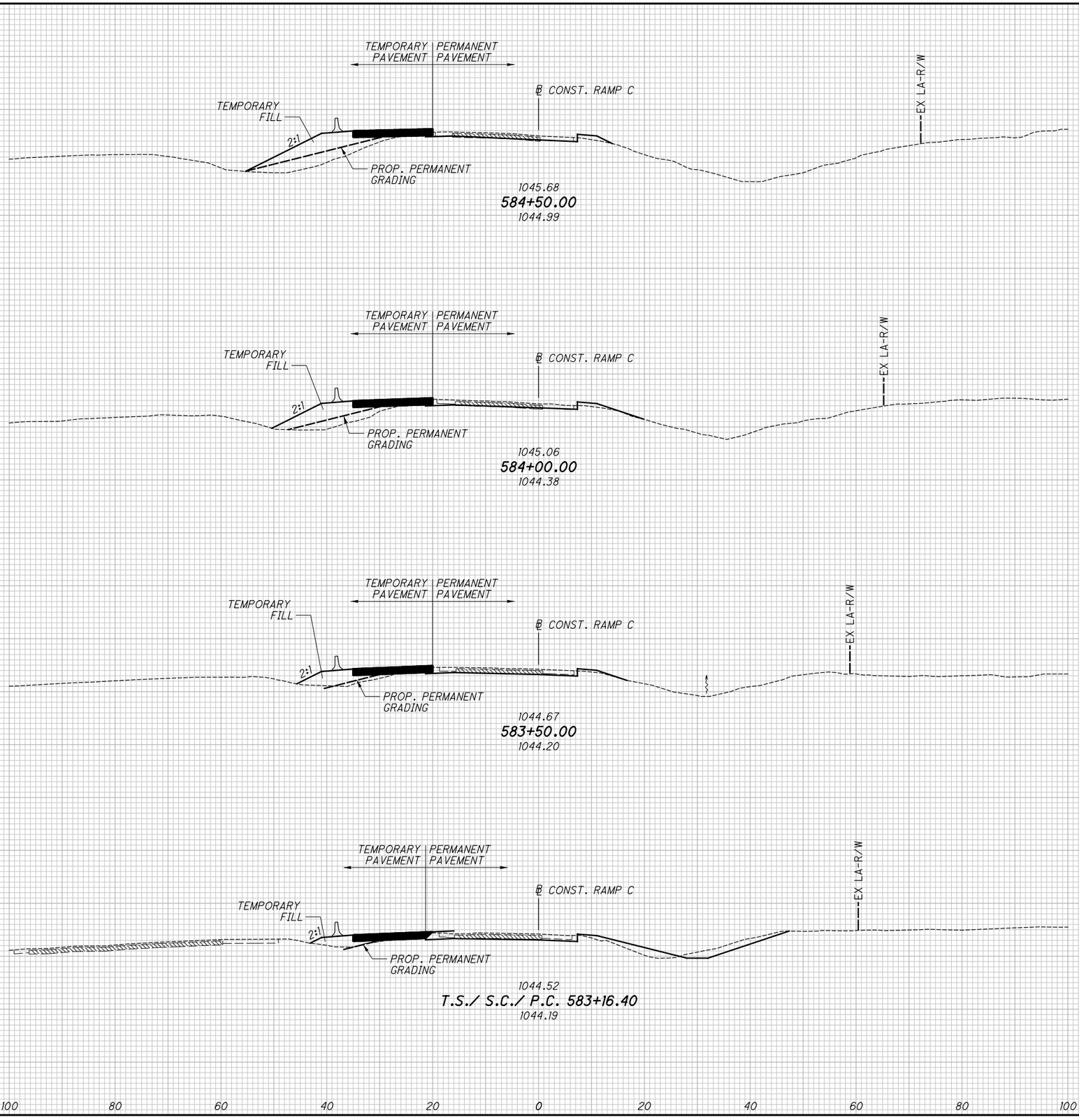


SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
22	107	3	47	6	81
17	77	3	40	6	60
11	37	3	25	4	26
8	14	3	16	3	7
	*235			*19	*174

*FOR INFORMATION ONLY

CALCULATED KMC
CHECKED SSR

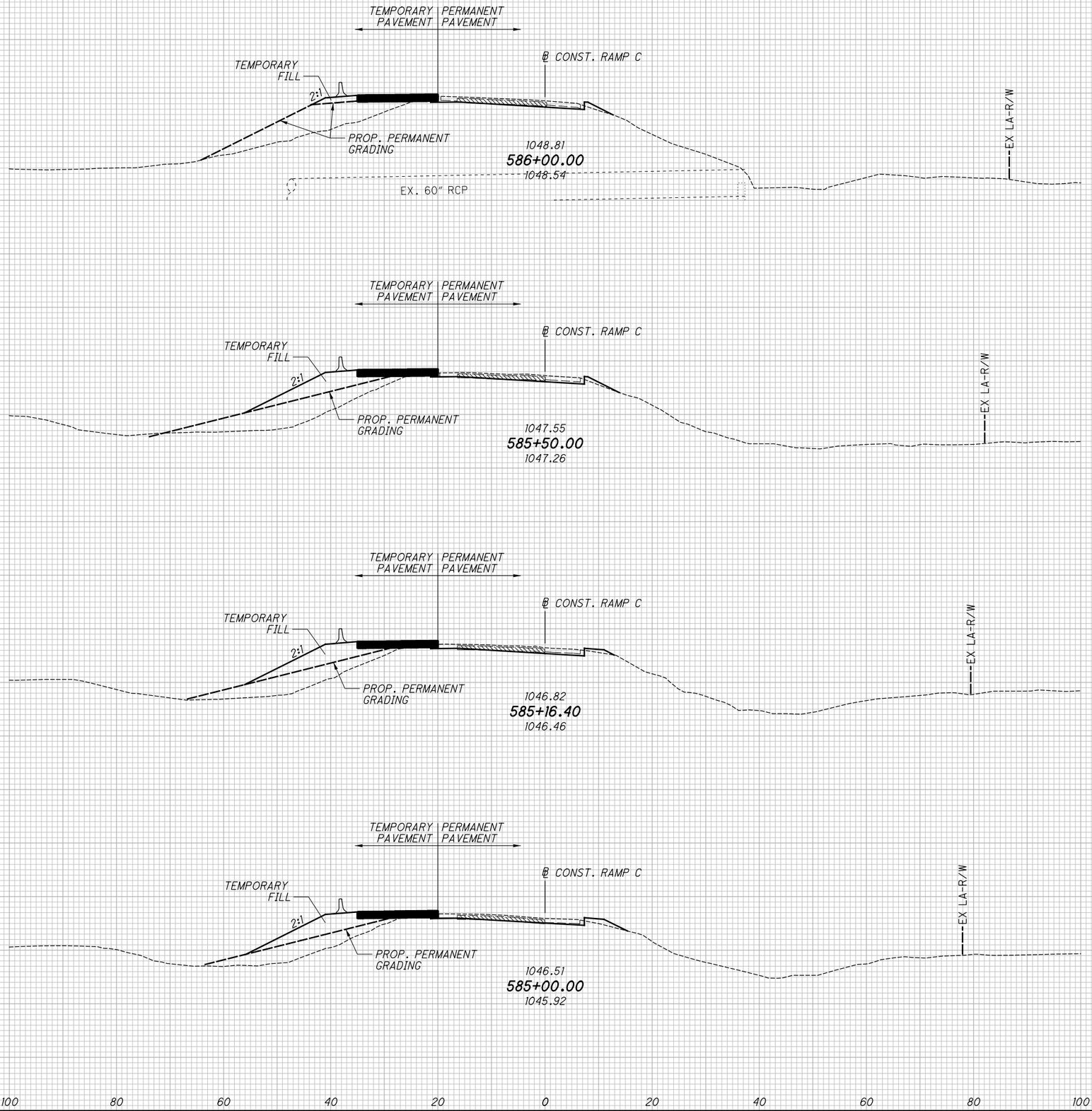
CROSS SECTIONS RAMP C
STA. 583+16.40 TO STA. 584+50.00

SUM-77 / 277 / 224
VARIOUS

159
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_XMI05.dgn Design 1/31/2021 5:31:20 PM jrettig

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
9	88	2	8	4	56
23	85	2	53	3	67
23	41	2	53	1	31
23	124	2	52	5	92
*338				*13	*246



*FOR INFORMATION ONLY

CALCULATED KMC
CHECKED SSR

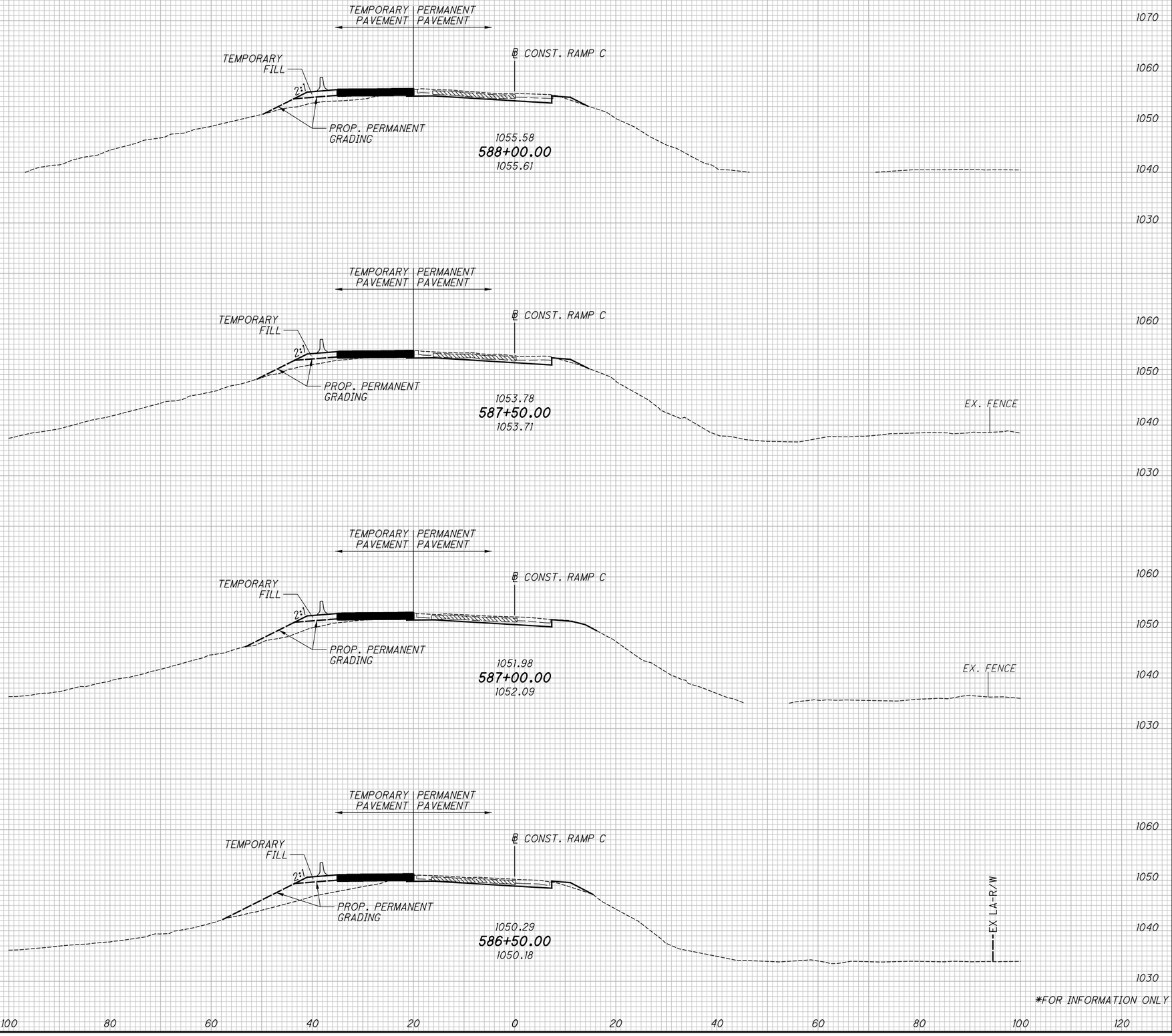
CROSS SECTIONS RAMP C
STA. 585+00.00 TO STA. 586+00.00

SUM-77/277/224
VARIOUS

160
1288

N:\03\60\06744-08\06002_SUM-76-10.95\Design\MOT\Sheets\06002_XM05.dgn Design 1/31/2021 5:31:23 PM jrettig

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
9	49	3	8	7	15
9	49	5	8	7	15
9	49	3	8	6	15
9	49	3	8	5	15
*196				*25	*60



*FOR INFORMATION ONLY

CALCULATED KMC
CHECKED SSR

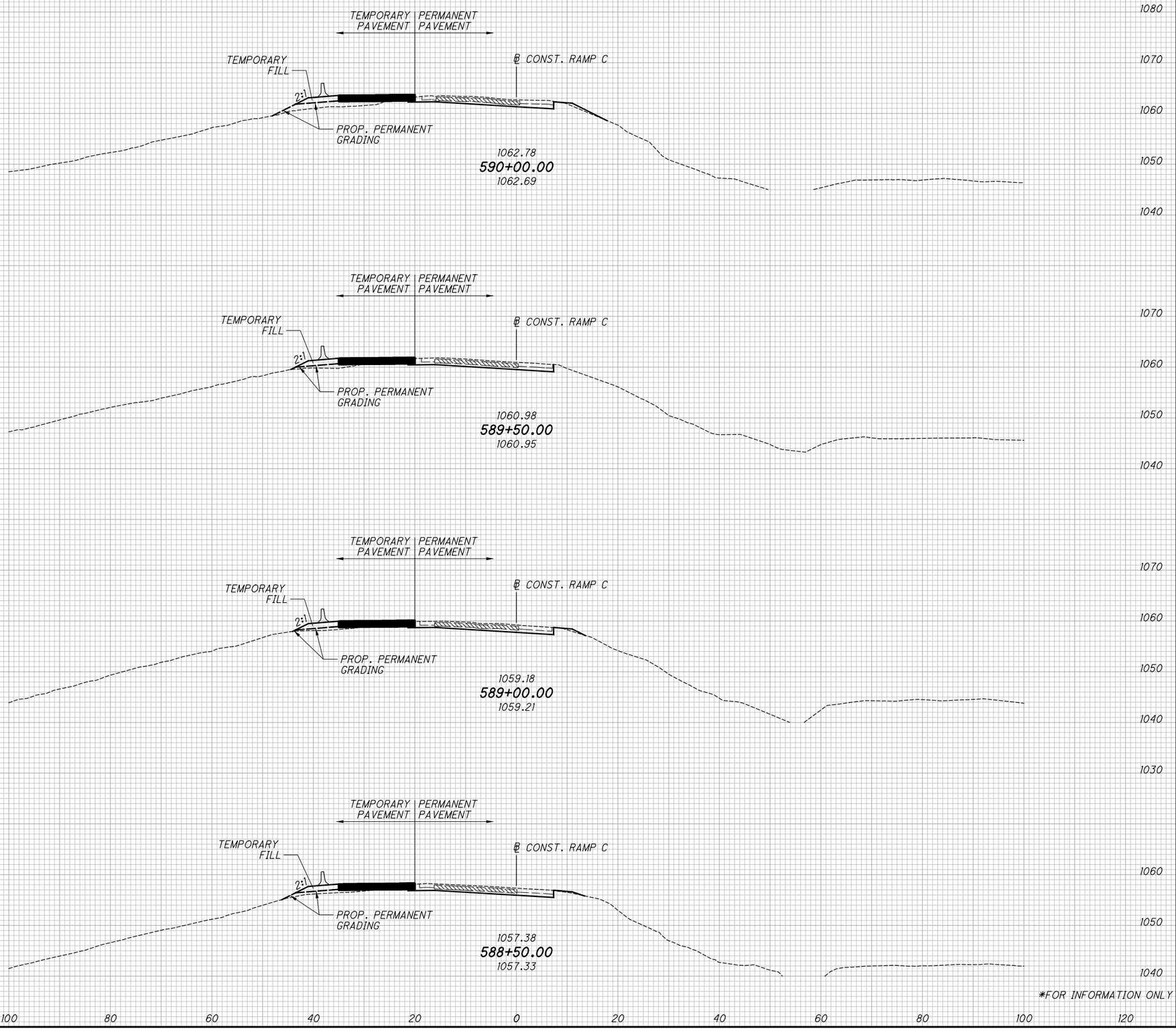
CROSS SECTIONS RAMP C
STA. 586+50.00 TO STA. 588+00.00

SUM-77 / 277 / 224
VARIOUS

161
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_XMI05.dgn Design 1/31/2021 5:31:25 PM jrettig

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
9	49	2	8	6	15
9	49	5	8	11	15
9	49	7	8	11	15
9	49	5	8	11	15
*196				*35	*60



*FOR INFORMATION ONLY

CALCULATED KMC
CHECKED SSR

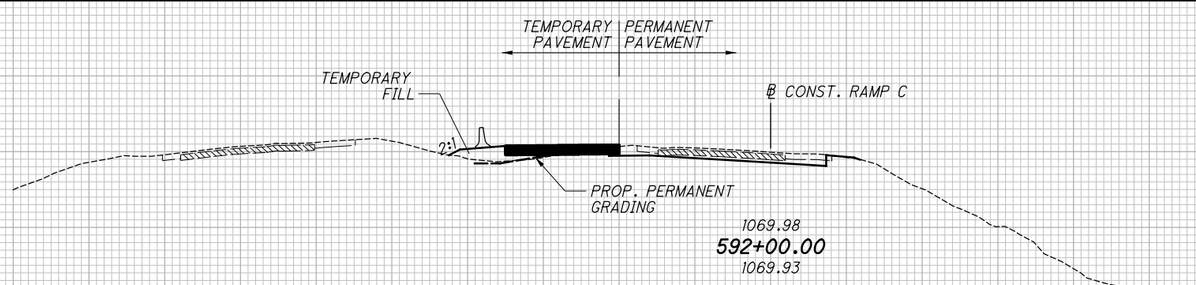
CROSS SECTIONS RAMP C
STA. 588+50.00 TO STA. 590+00.00

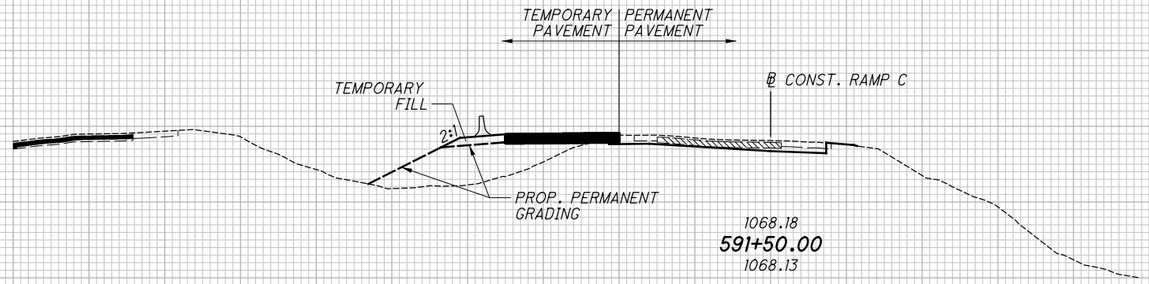
SUM-77 / 277 / 224
VARIOUS

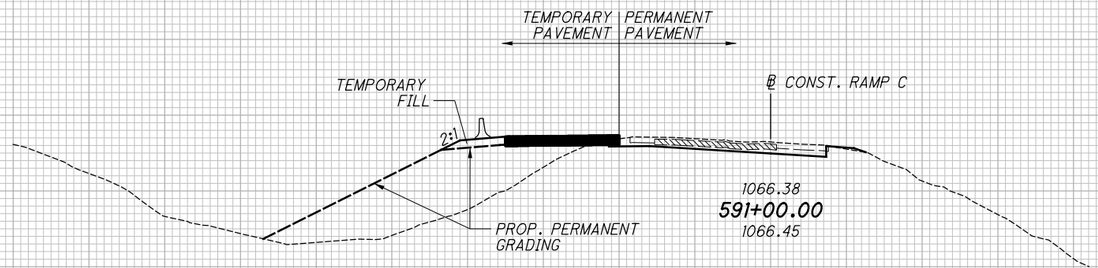
162
1288

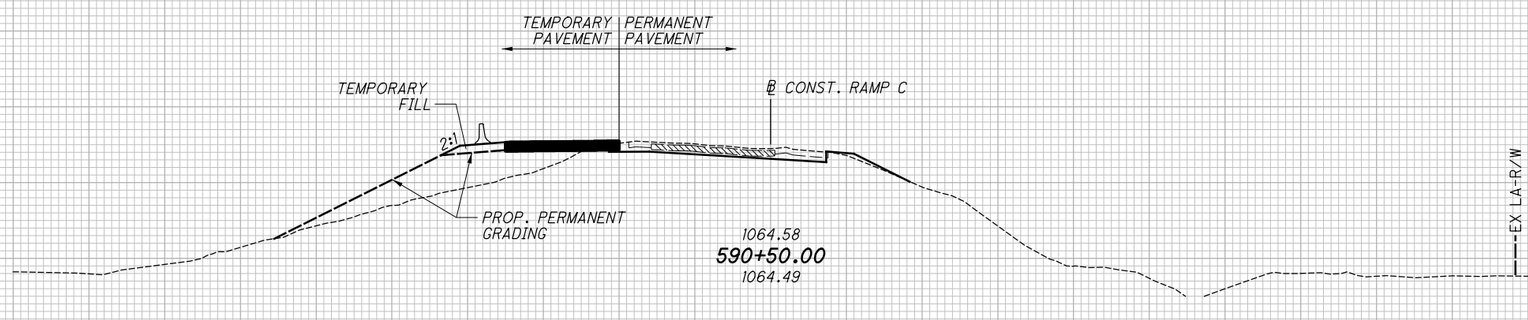
N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_XMI05.dgn Design 1/31/2021 5:31:27 PM jrettig

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
8	46	5	13	6	19
9	49	2	8	4	15
9	49	3	8	5	15
9	49	2	8	5	15
*193				*20	*64









1080 1070 1060 1050 1090 1040 120 100 80 60 40 20 0 20 40 60 80 100 120

*FOR INFORMATION ONLY

CALCULATED KMC
CHECKED SSR

CROSS SECTIONS RAMP C
STA. 590+50.00 TO STA. 592+00.00

SUM-77/277/224
VARIOUS

163
1288

jrettig
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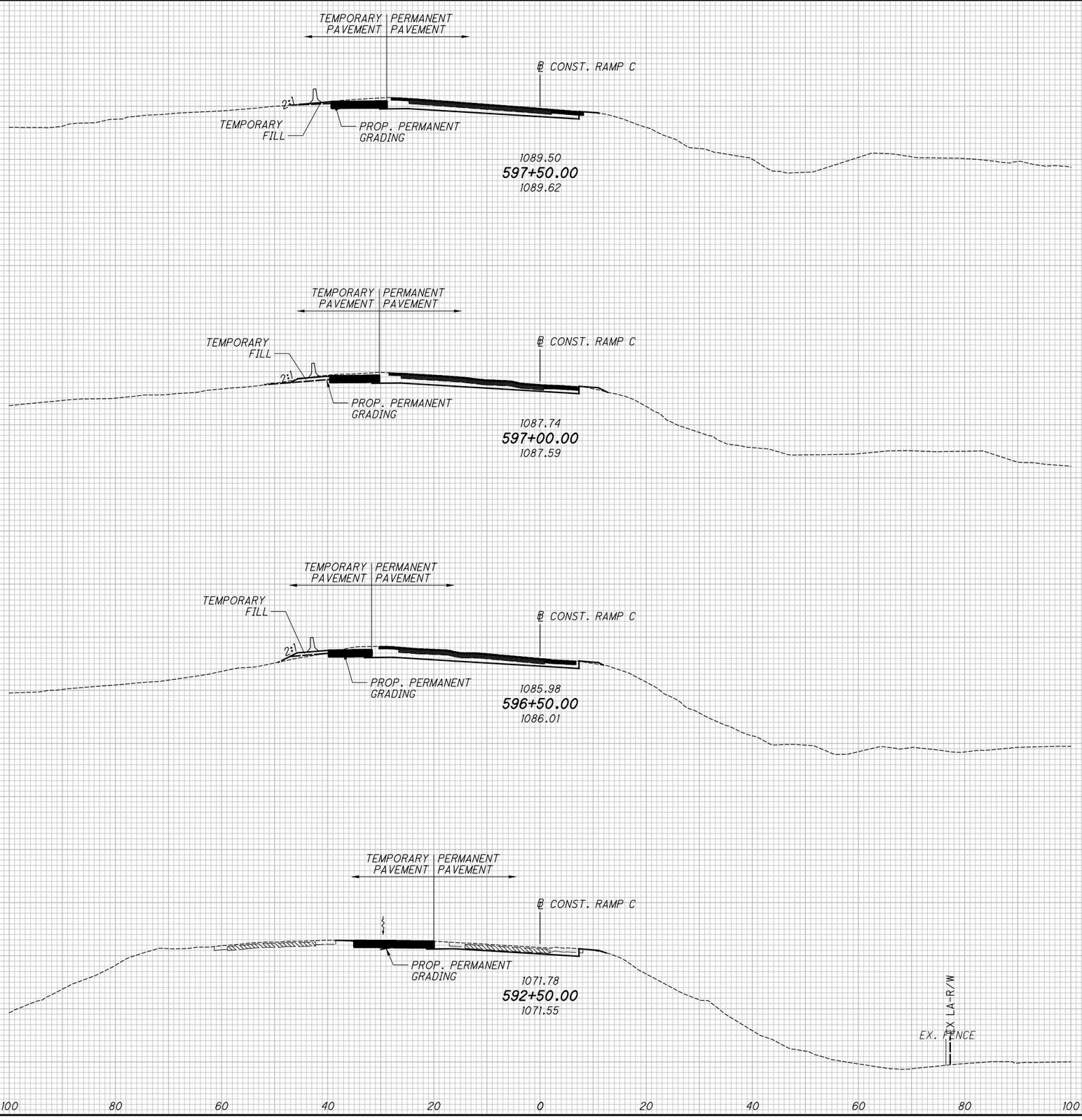
SEEDING END WIDTH	SEEDING SQ. YDS.
6	39
8	
	42
8	
	245
3	
	31
	*357



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
9	0	15	0
7	0		
6	4	12	4
5	0		
		9	12
		*36	*16

CALCULATED KMC
CHECKED SSR

CROSS SECTIONS RAMP C
STA. 592+50.00 TO STA. 597+50.00

SUM-77 / 277 / 224
VARIOUS

164
1288

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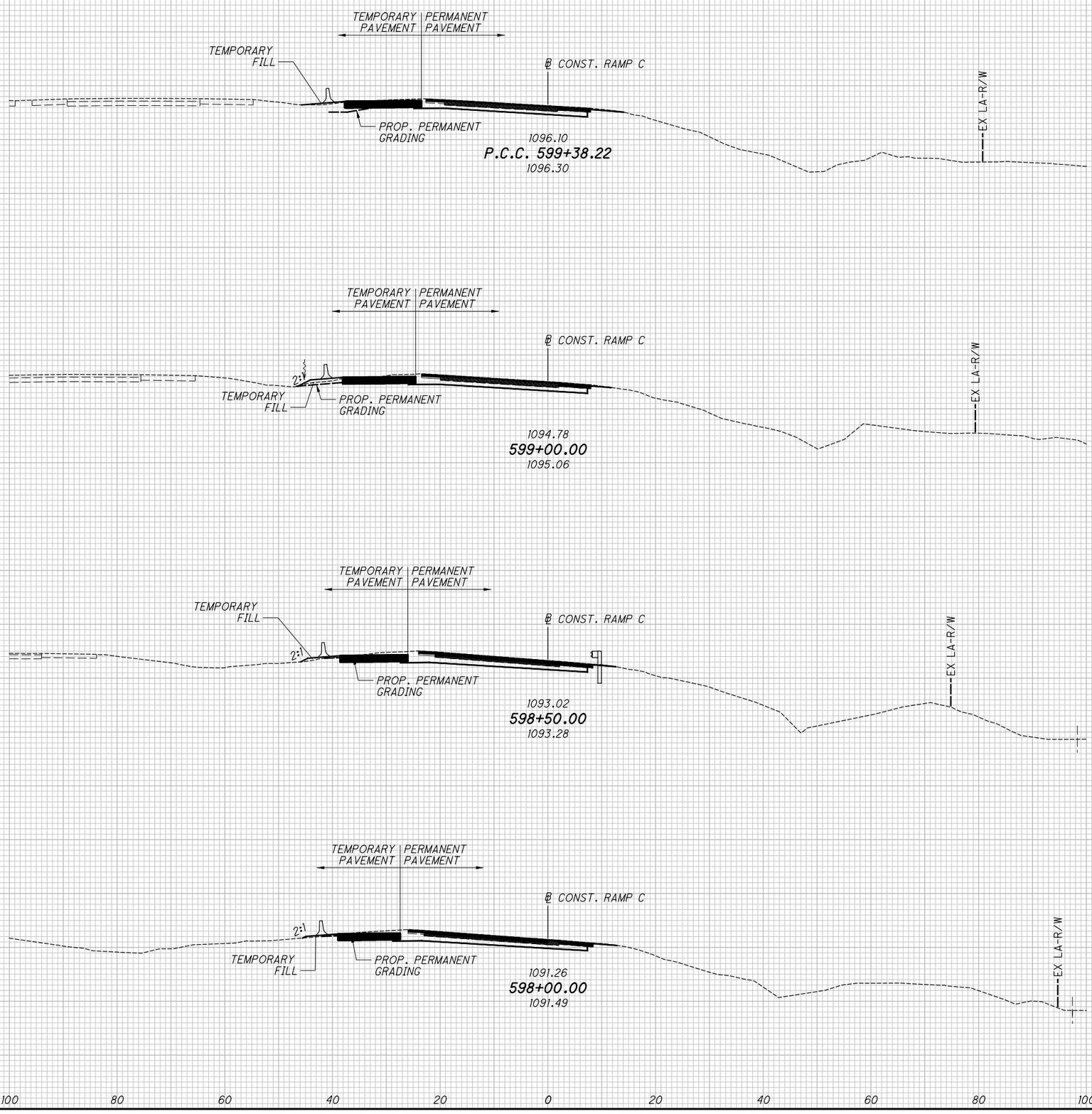
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
8	45	4	2	8	4
9		8	3		
8	35	11	2	18	5
7	39	10	1	19	3
	36			18	1
	*155			*63	*13



*FOR INFORMATION ONLY

CALCULATED KMC
CHECKED SSR

CROSS SECTIONS RAMP C
STA. 598+00.00 TO STA. 599+38.22

SUM-77 / 277 / 224
VARIOUS

165
1288

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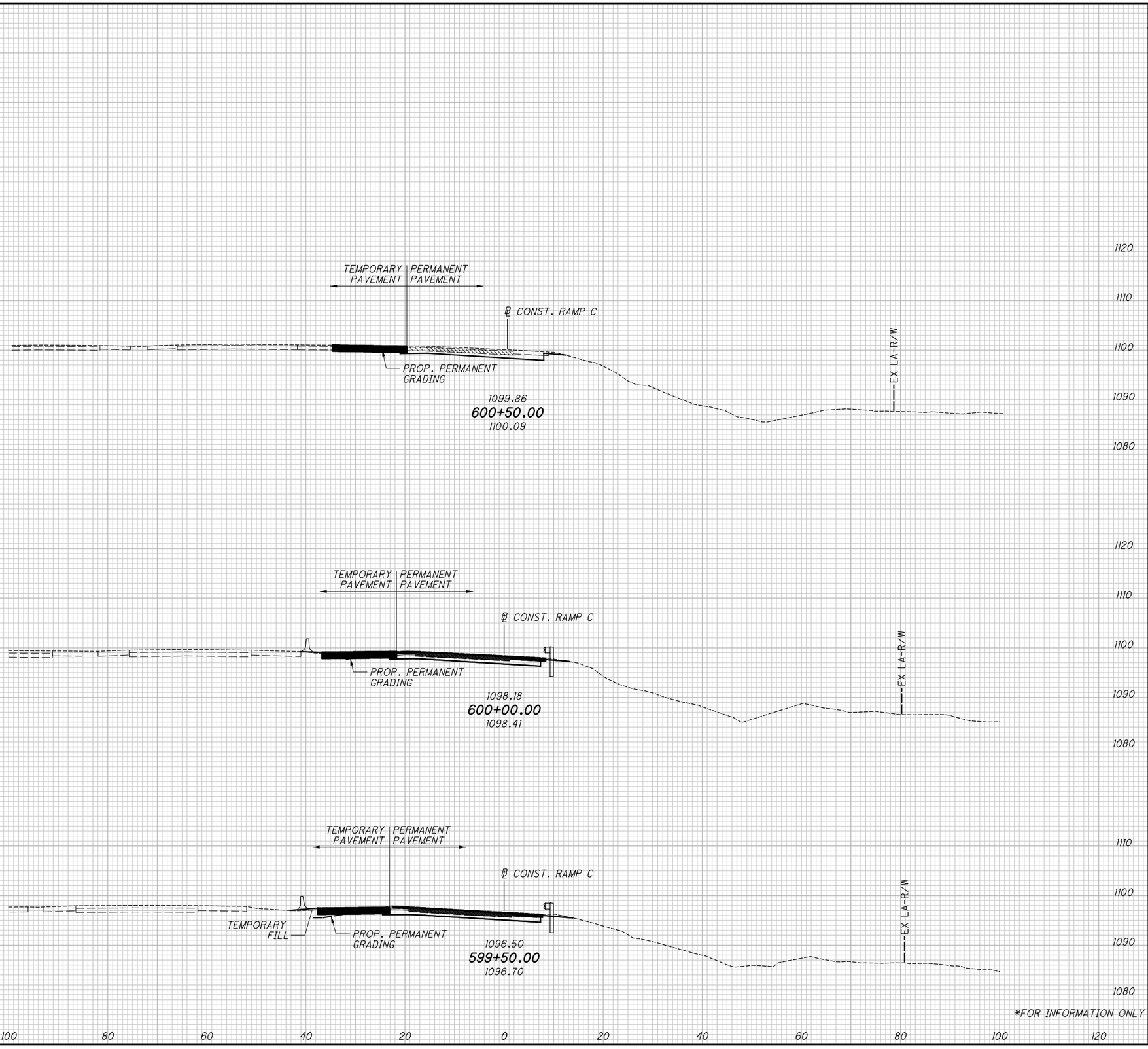
SEEDING	
END WIDTH	SQ. YDS.
0	11
4	27
6	9
*47	



END AREA	
CUT	FILL
18	0
4	1
4	1
*29	*4

VOLUME	
CUT	FILL
20	1
7	2
2	1

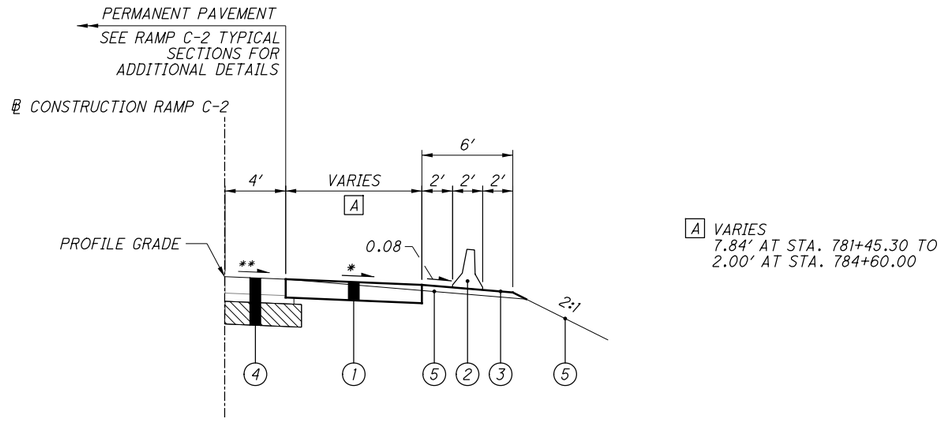
CALCULATED KMC
CHECKED SSR

CROSS SECTIONS RAMP C
STA. 599+50.00 TO STA. 600+50.00

SUM-77 / 277 / 224
VARIOUS

166
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_XMI05.dgn Design 1/31/2021 5:31:36 PM jrettig



A VARIES
7.84′ AT STA. 781+45.30 TO
2.00′ AT STA. 784+60.00

RAMP C-2 - TEMPORARY PAVEMENT SECTION

STA. 781+45.30 TO STA. 784+60.00

LEGEND

(1) ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A

(2) ITEM 622 - PORTABLE BARRIER, 32″

(3) ITEM 659 - SEEDING AND MULCHING (TEMPORARY GRADING)

(4) PERMANENT PAVEMENT - SEE RAMP C-2 TYPICAL SECTIONS FOR DETAILS

(5) PERMANENT GRADING - SEE CROSS SECTIONS FOR ADDITIONAL INFORMATION

* VARIES 0.040 MAX. TO 0.010 MIN.
TEMPORARY PAVEMENT CROSS SLOPE SHALL MATCH PERMANENT PAVEMENT SHOULDER SLOPE

** VARIES 0.040 MAX. TO 0.010 MIN.
SEE ROADWAY TYPICAL SECTIONS FOR HIGH SIDE SHOULDER SLOPES

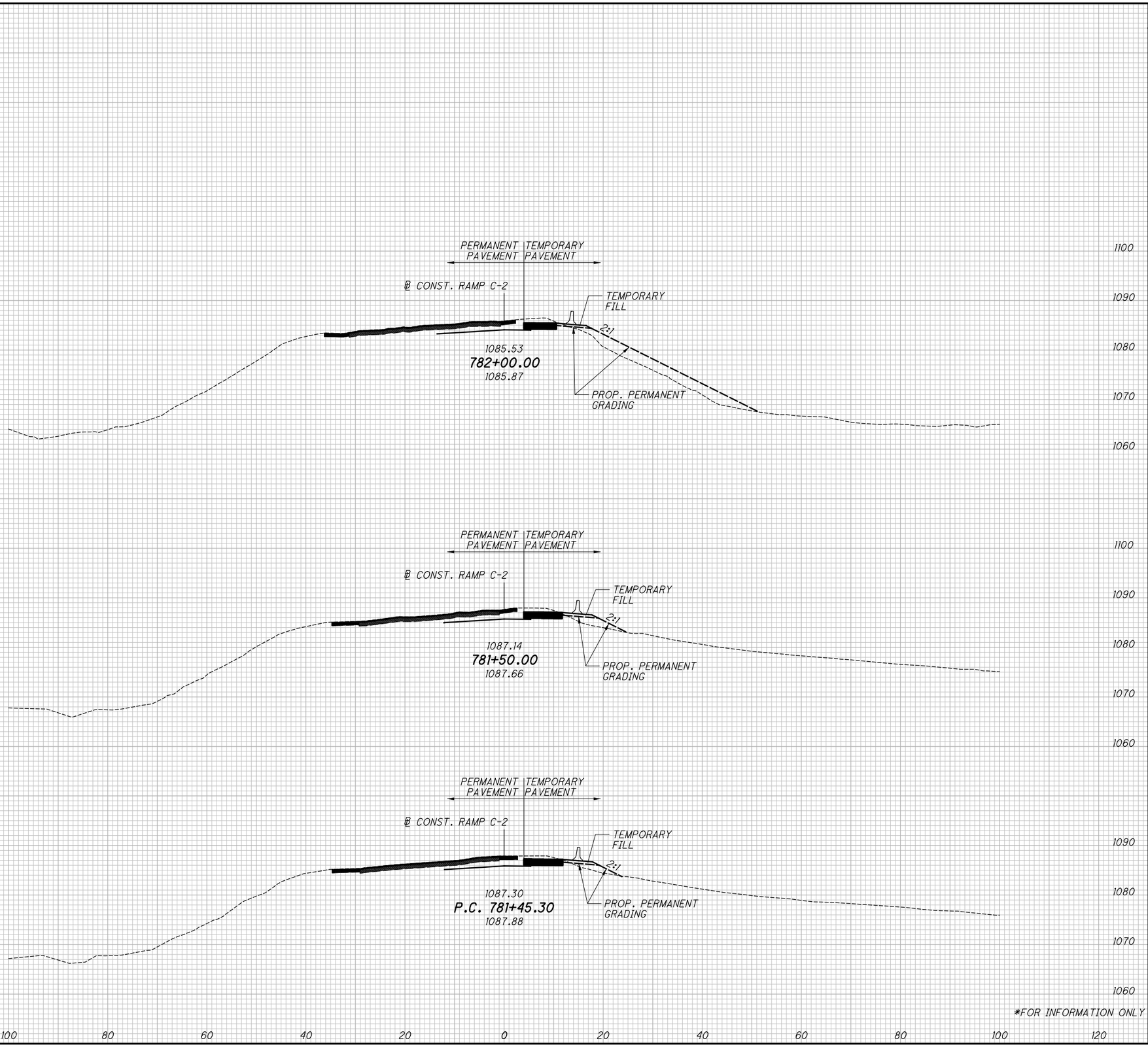
TYPICAL SECTIONS - RAMP C-2 TEMPORARY PAVEMENT

SUM-77 / 277 / 224
VARIOUS

167
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MT402.dgn Sheet 1/31/2021 5:31:42 PM jrettig

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
7	41	5	2	10	6
7	4	6	4	1	1
7	7	6	3		
	*45			*11	*7



*FOR INFORMATION ONLY

CALCULATED KMC
CHECKED SSR

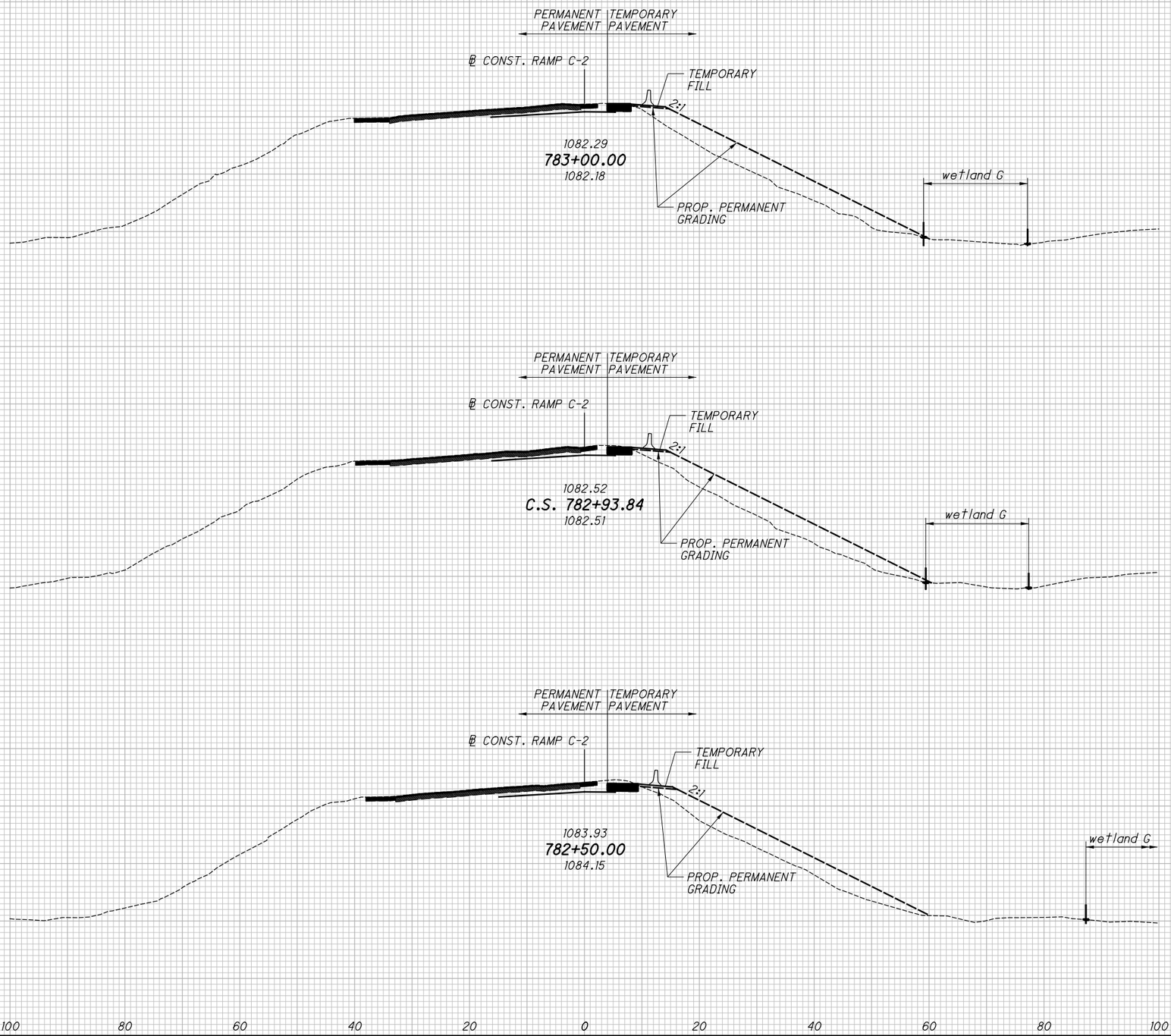
CROSS SECTIONS RAMP C-2
STA. 781+45.30 TO STA. 782+00.00

SUM-77 / 277 / 224
VARIOUS

168
1288

N:\03\60\06744-08\106002-SUM-76-10.95\Design\MOT\Sheets\106002_XMI07.dgn Design 1/31/2021 5:31:43 PM jrettig

SEEDING	
END WIDTH	SQ. YDS.
7	5
7	34
7	40
	*79



END AREA	
CUT	FILL
3	2
3	2
4	2

VOLUME	
CUT	FILL
1	0
6	3
8	4
*15	*7

*FOR INFORMATION ONLY

CALCULATED KMC
CHECKED SSR

CROSS SECTIONS RAMP C-2
STA. 782+50.00 TO STA. 783+00.00

SUM-77/277/224
VARIOUS

169
1288

jrettig
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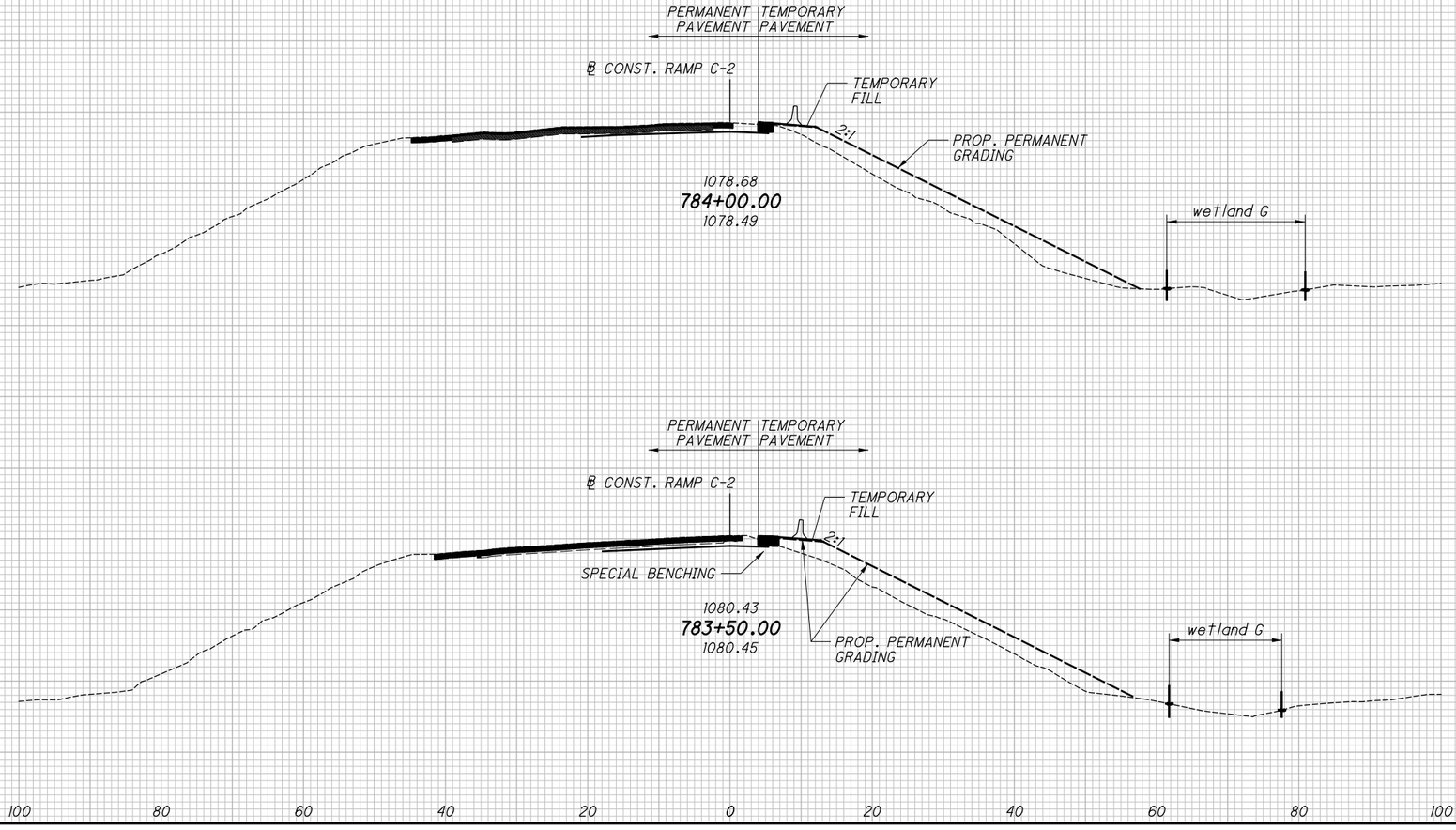
SEEDING	
END WIDTH	SQ. YDS.
6	35
6	
	37
	*72



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1	0		
		1	1
0	1		
		3	3
		*4	*4

*FOR INFORMATION ONLY

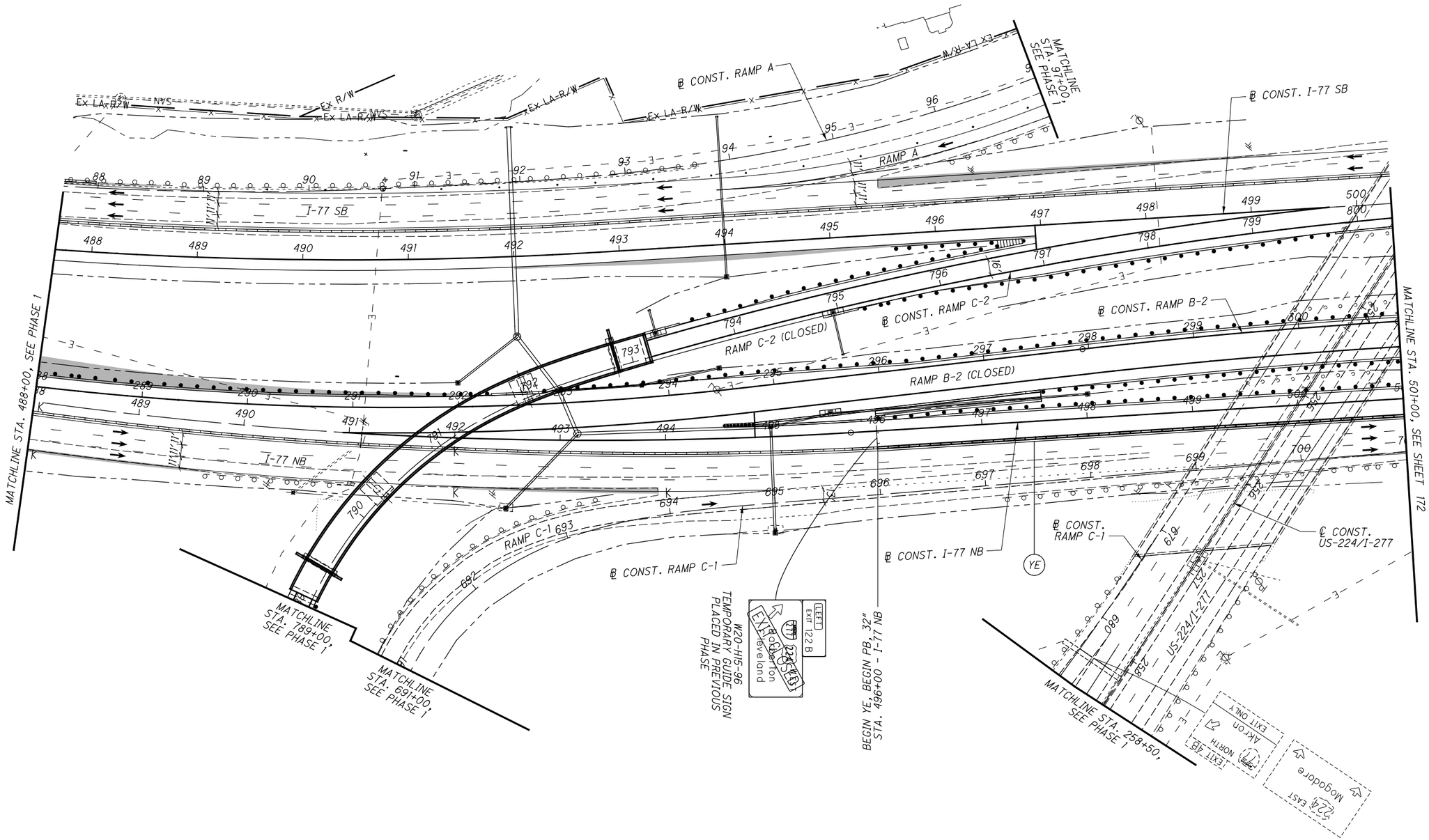
CALCULATED KMC
CHECKED SSR

CROSS SECTIONS RAMP C-2
STA. 783+50.00 TO STA. 784+00.00

SUM-77/277/224
VARIOUS

170
1288

jrettig
N:\03\60\06744-08\06002_SUM-76-10.95\Design\MOT\Sheets\06002_XM107.dgn Design 1/31/2021 5:31:47 PM



NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.

2. MOT SIGNS AND DEVICES ARE EXISTING FROM PHASE 1 UNLESS OTHERWISE NOTED.

3. SEE SHEETS 116 AND 118 FOR ADDITIONAL DETAILS.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED .
CHECKED .

MAINTENANCE OF TRAFFIC PLAN - PHASE 1A
I-77 - STA. 488+00 TO STA. 501+00

SUM-77/277/224
VARIOUS

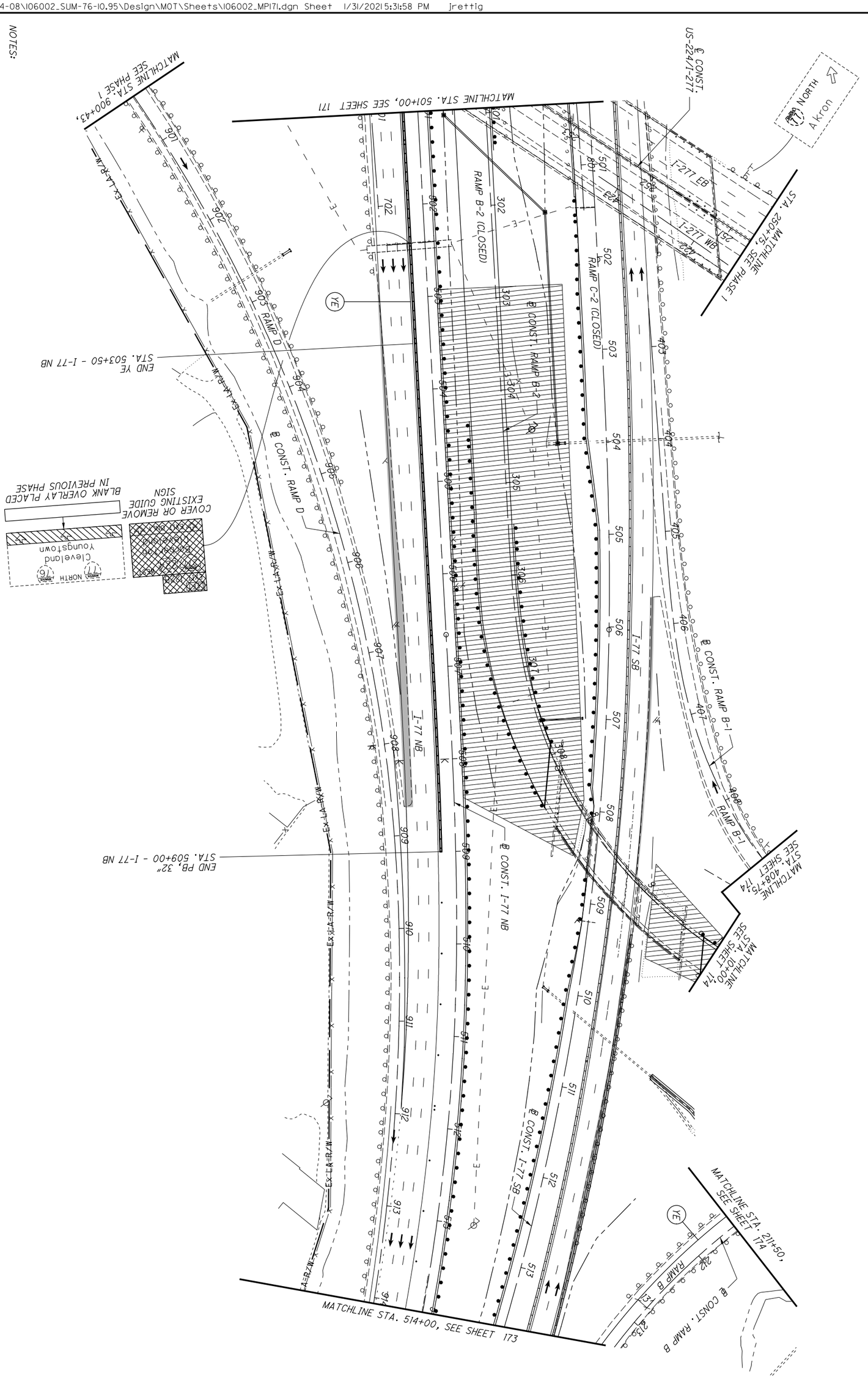
171
1288

N:\03\60\06744-08\106002-SUM-76-10.95\Design\MOT\Sheets\106002_MPI70.dgn Sheet 1/31/2021 5:31:52 PM jrettig

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MP171.dgn Sheet 1/31/2021 5:31:58 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. MOT SIGNS AND DEVICES ARE EXISTING FROM PHASE I UNLESS OTHERWISE NOTED.
3. SEE SHEETS 116 AND 118 FOR ADDITIONAL DETAILS.

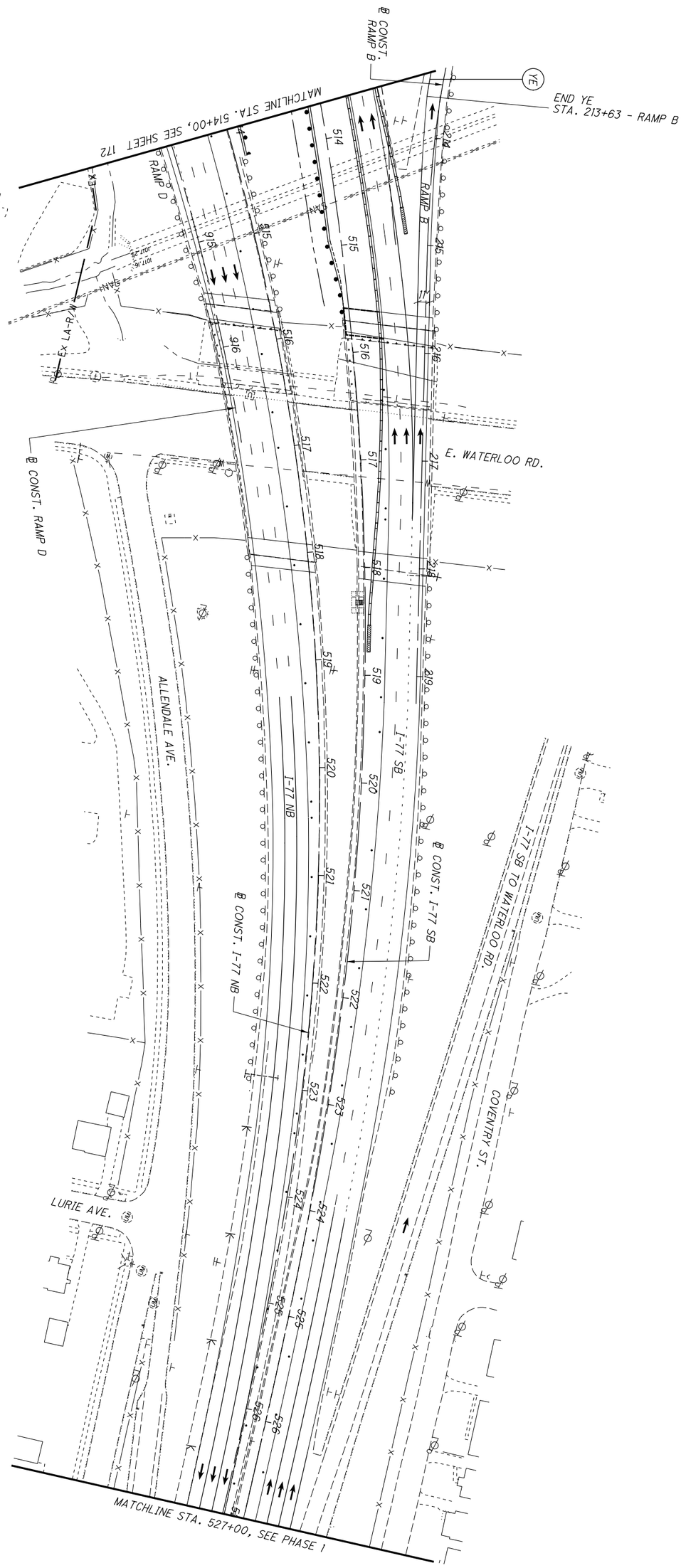


172 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1A I-77 - STA. 501+00 TO STA. 514+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MPI72.dgn Sheet 1/31/2021 5:32:01 PM jrettig

NOTES:

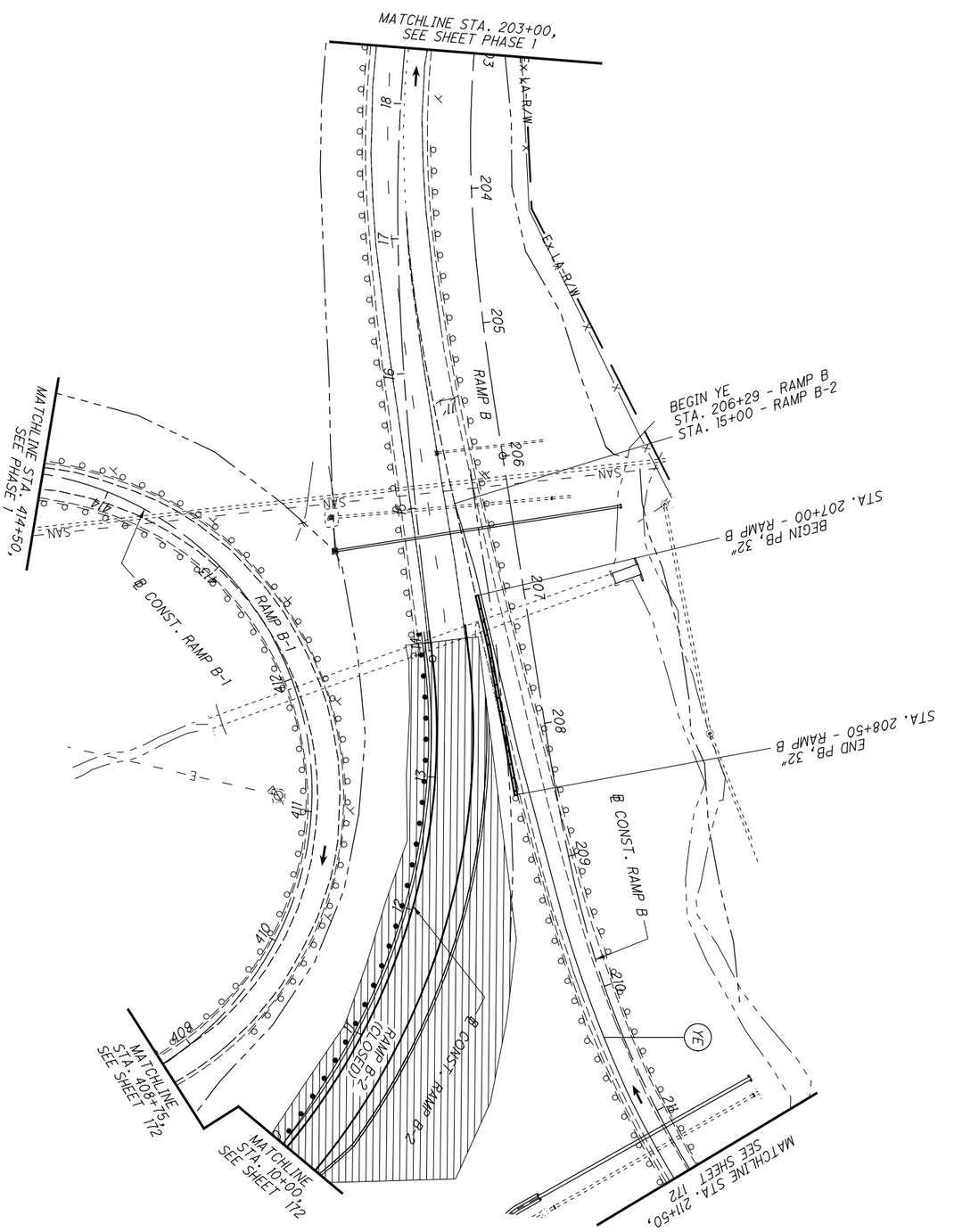
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. MOT SIGNS AND DEVICES ARE EXISTING FROM PHASE 1 UNLESS OTHERWISE NOTED.



173 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1A I-77 - STA. 514+00 TO STA. 527+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. MOT SIGNS AND DEVICES ARE EXISTING FROM PHASE 1 UNLESS OTHERWISE NOTED.
3. SEE SHEET 116 FOR ADDITIONAL DETAILS.

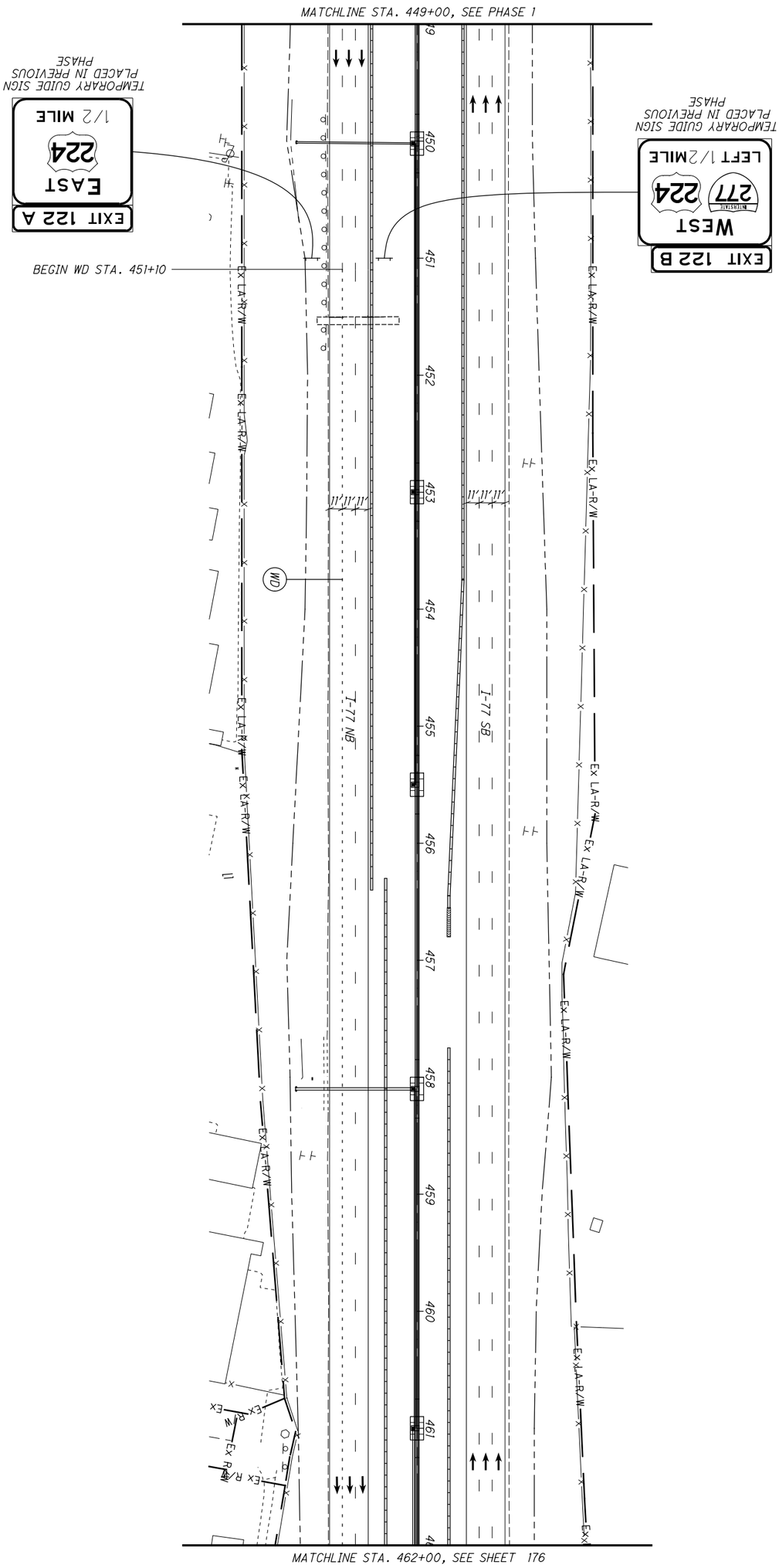


174 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1A RAMP B - STA. 203+00 TO STA. 211+50	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\I06002_SUM-76-I0.95\Design\MOT\Sheets\I06002_MPI79.dgn Sheet 1/31/2021 5:32:07 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. MOT SIGNS AND DEVICES ARE EXISTING FROM PHASE 1 UNLESS OTHERWISE NOTED.

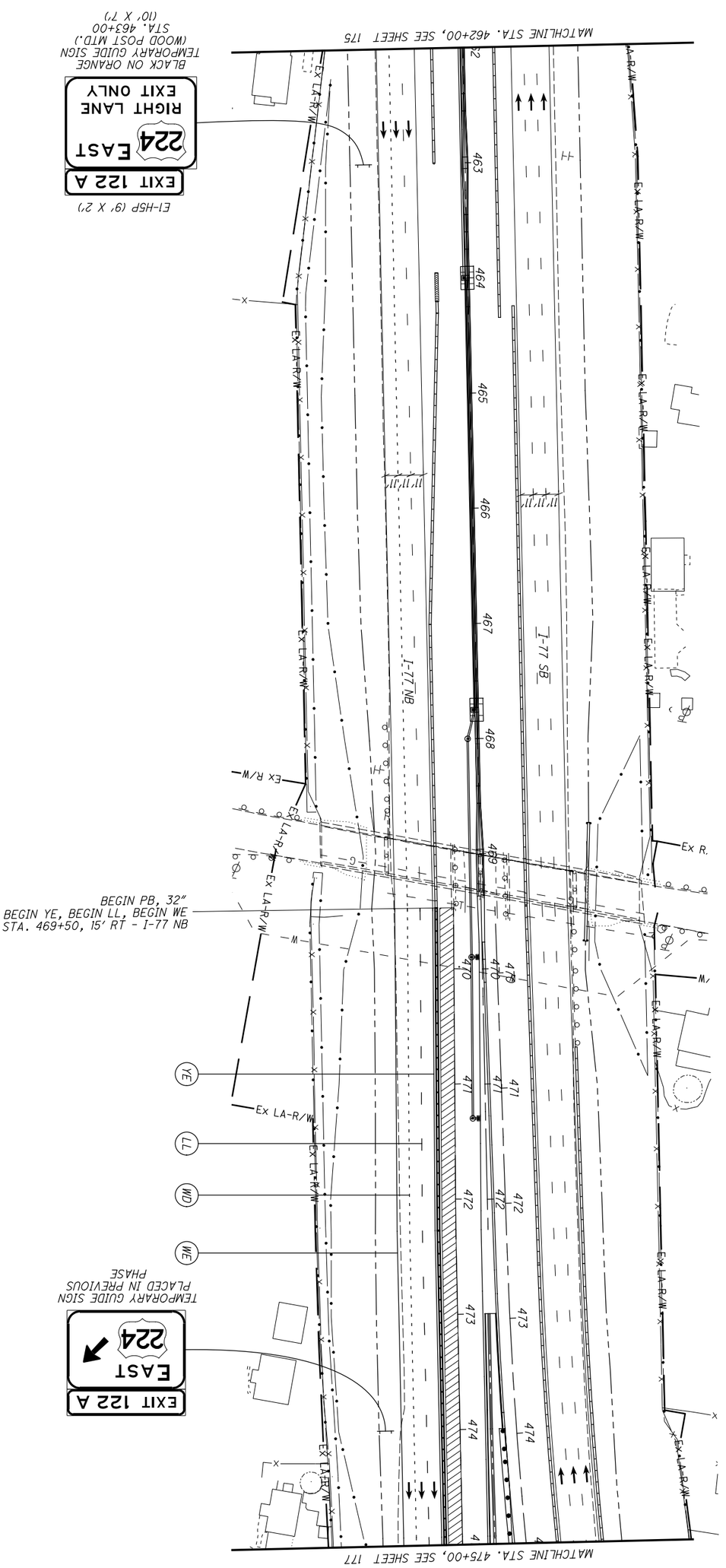


175 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1B I-77 - STA. 449+00 TO STA. 462+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

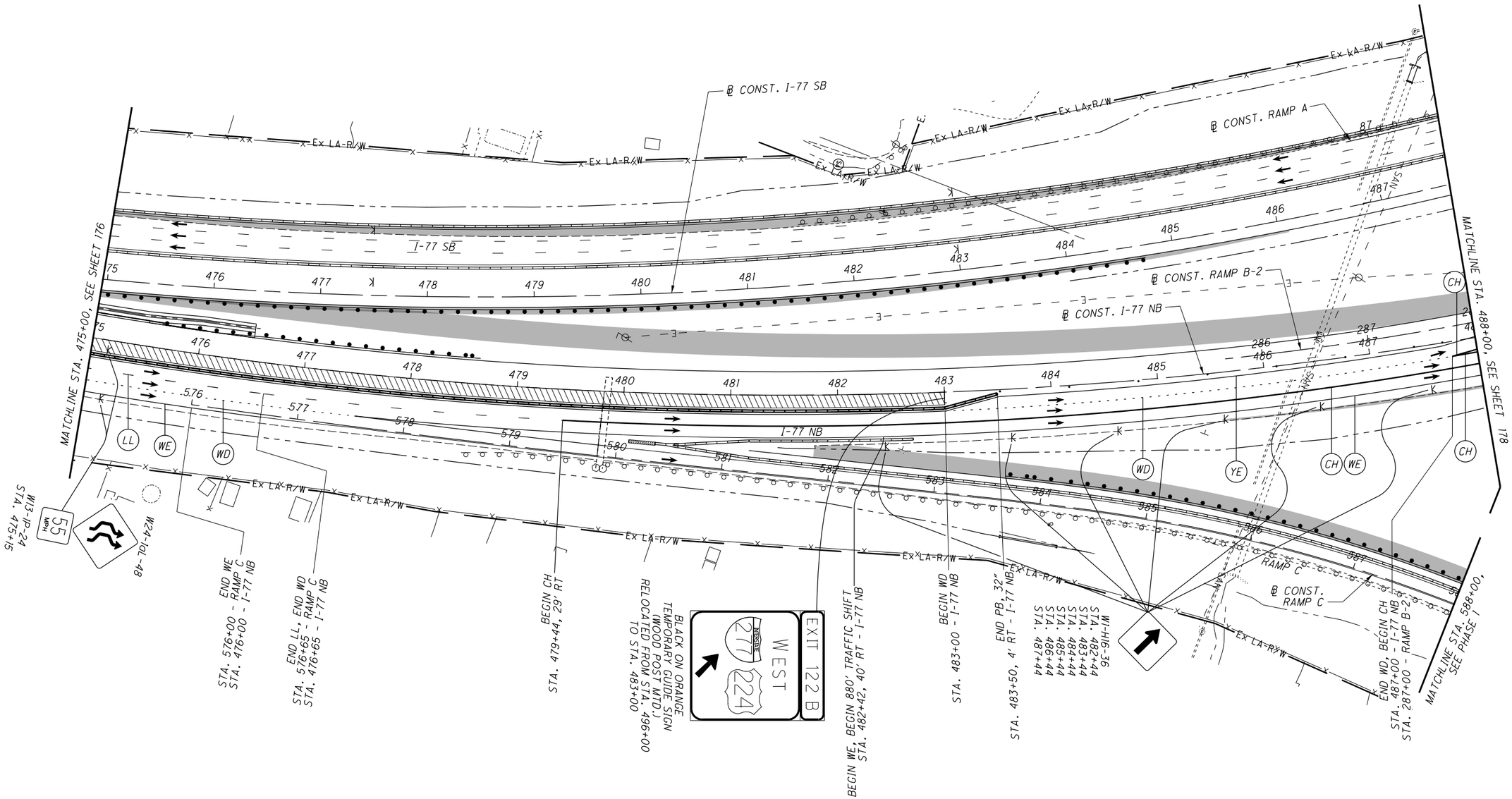
N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MPI80.dgn Sheet 1/31/2021 5:32:11 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. MOT SIGNS AND DEVICES ARE EXISTING FROM PHASE 1 UNLESS OTHERWISE NOTED.



176 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1B I-77 - STA. 462+00 TO STA. 475+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET



NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. SEE SHEETS 157-170 FOR RAMP C CROSS SECTIONS.
3. MOT SIGNS AND DEVICES ARE EXISTING FROM PHASE 1 UNLESS OTHERWISE NOTED.

REVISIONS		
NO.	DATE	DESCRIPTION
6	04/23/21	I-77 NB LANE SHIFT/SIGNING CHANGES

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED .
CHECKED .

MAINTENANCE OF TRAFFIC PLAN - PHASE 1B
I-77 - STA. 475+00 TO STA. 488+00

SUM-77/277/224
VARIOUS

177
1288

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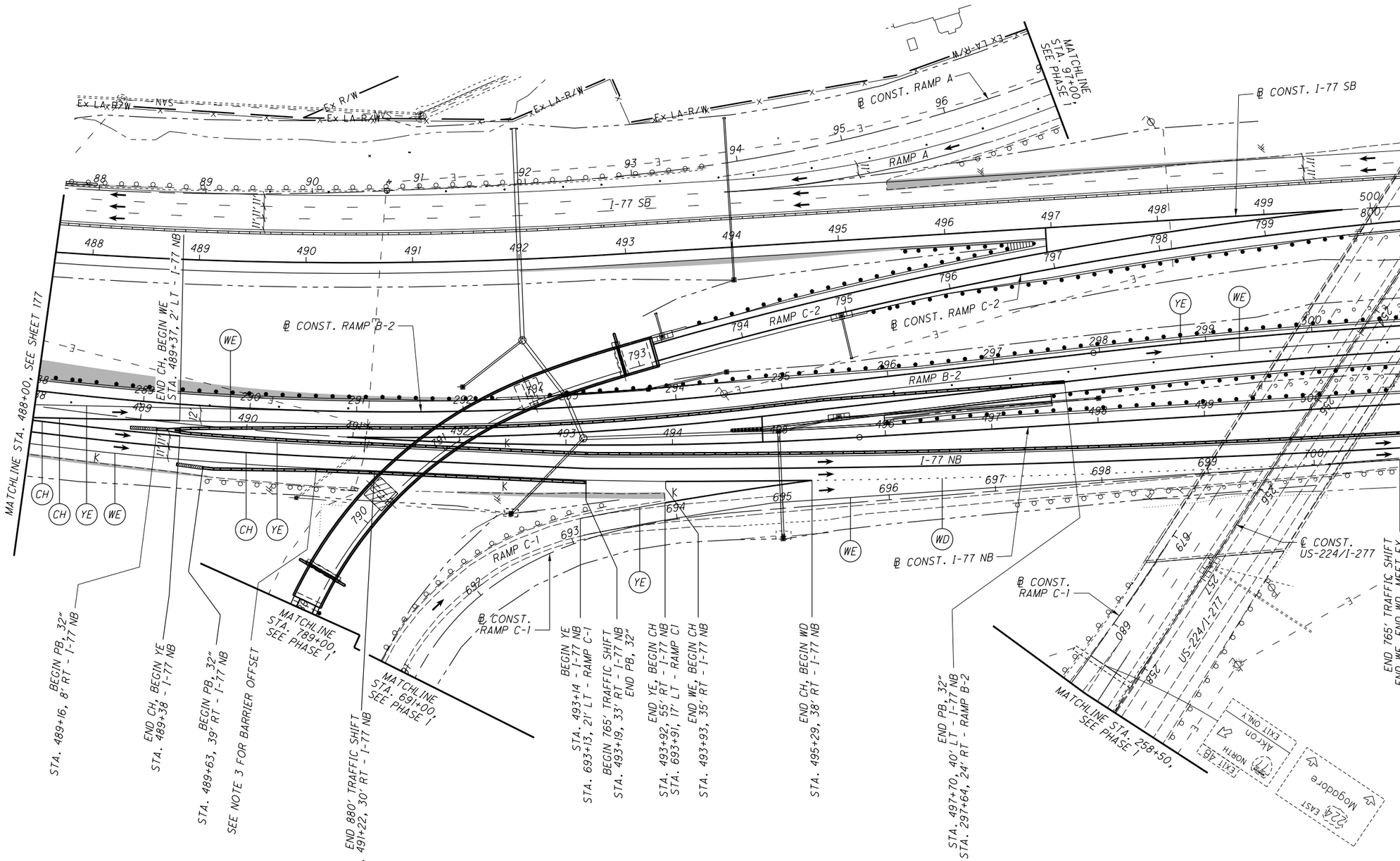


NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. MOT SIGNS AND DEVICES ARE EXISTING FROM PHASE I UNLESS OTHERWISE NOTED.
3. OFFSET TO NB RIGHT BARRIER IS 1' FROM STA. 490+69 TO STA. 493+19.

REVISIONS		
NO.	DATE	DESCRIPTION
6	04/23/21	I-77 NB LANE SHIFT/SIGNING CHANGES

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED . CHECKED .

MAINTENANCE OF TRAFFIC PLAN - PHASE 1B
I-77 - STA. 488+00 TO STA. 501+00

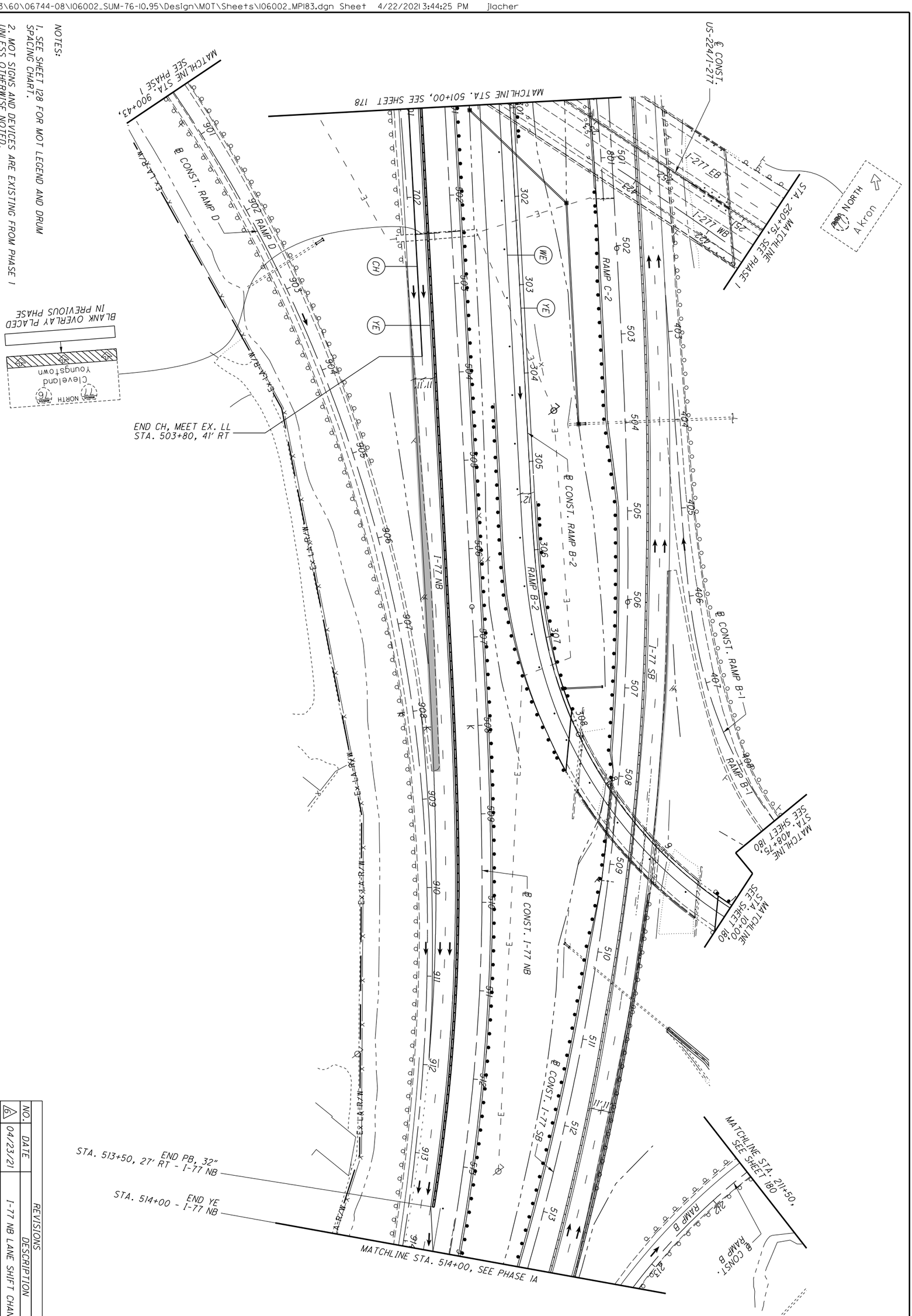
SUM-77/277/224
VARIOUS

178
1288

N:\03\60\06744-08\106002-SUM-76-10.95\Design\MOT\Sheets\106002-MPI82.dgn Sheet 4/22/2021 3:43:54 PM jlacher

N:\03\60\06744-08\I06002_SUM-76-10.95\Design\MOT\Sheets\I06002_MPI83.dgn Sheet 4/22/2021 3:44:25 PM jlacher

NOTES:
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. MOT SIGNS AND DEVICES ARE EXISTING FROM PHASE I UNLESS OTHERWISE NOTED.



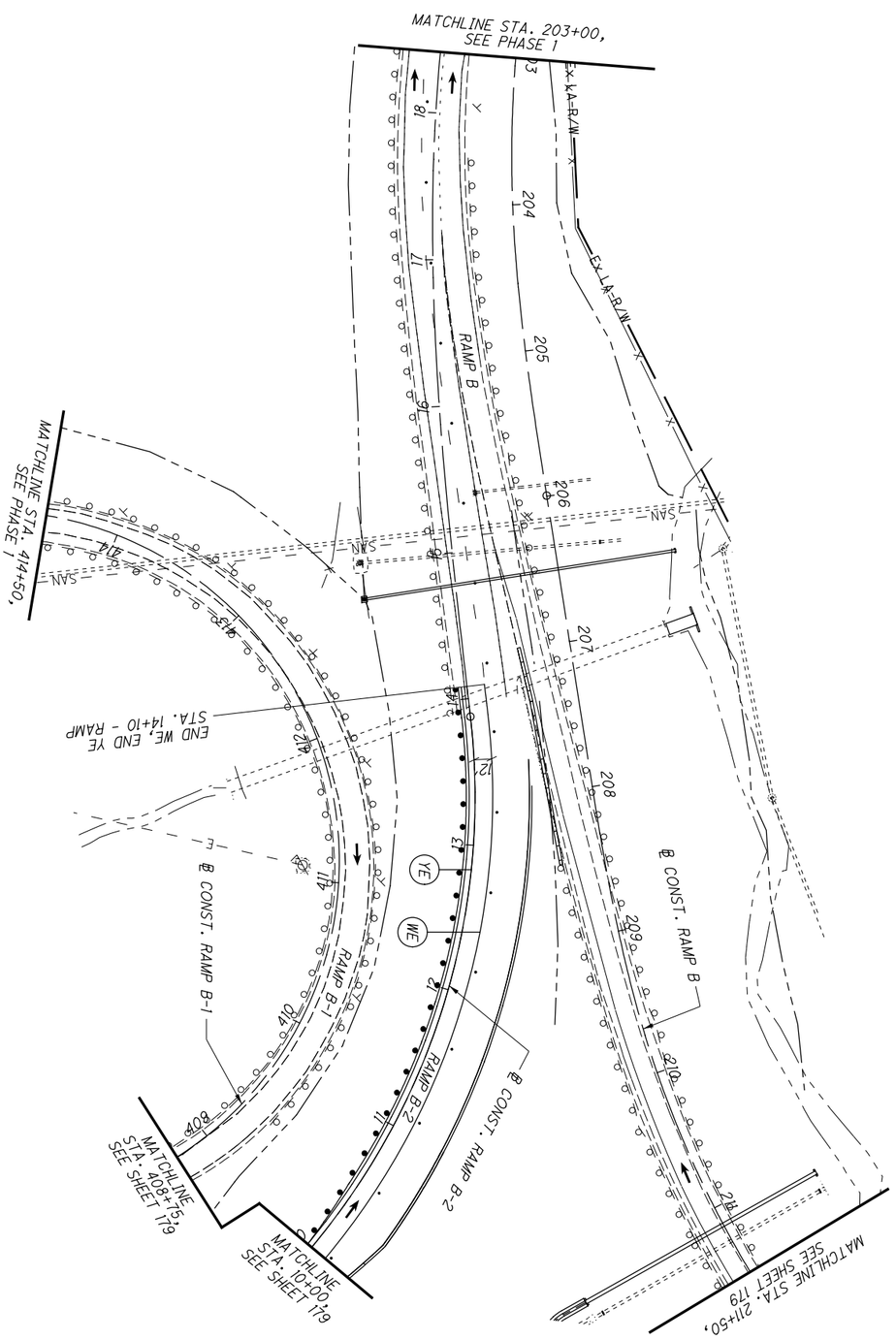
NO.	DATE	REVISIONS DESCRIPTION
6	04/23/21	I-77 NB LANE SHIFT CHANGES

1288	179	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1B I-77 - STA. 501+00 TO STA. 514+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\I06002_SUM-76-10.95\Design\MOT\Sheets\I06002_MPI84.dgn Sheet 1/31/2021 5:32:27 PM jrettig

NOTES:

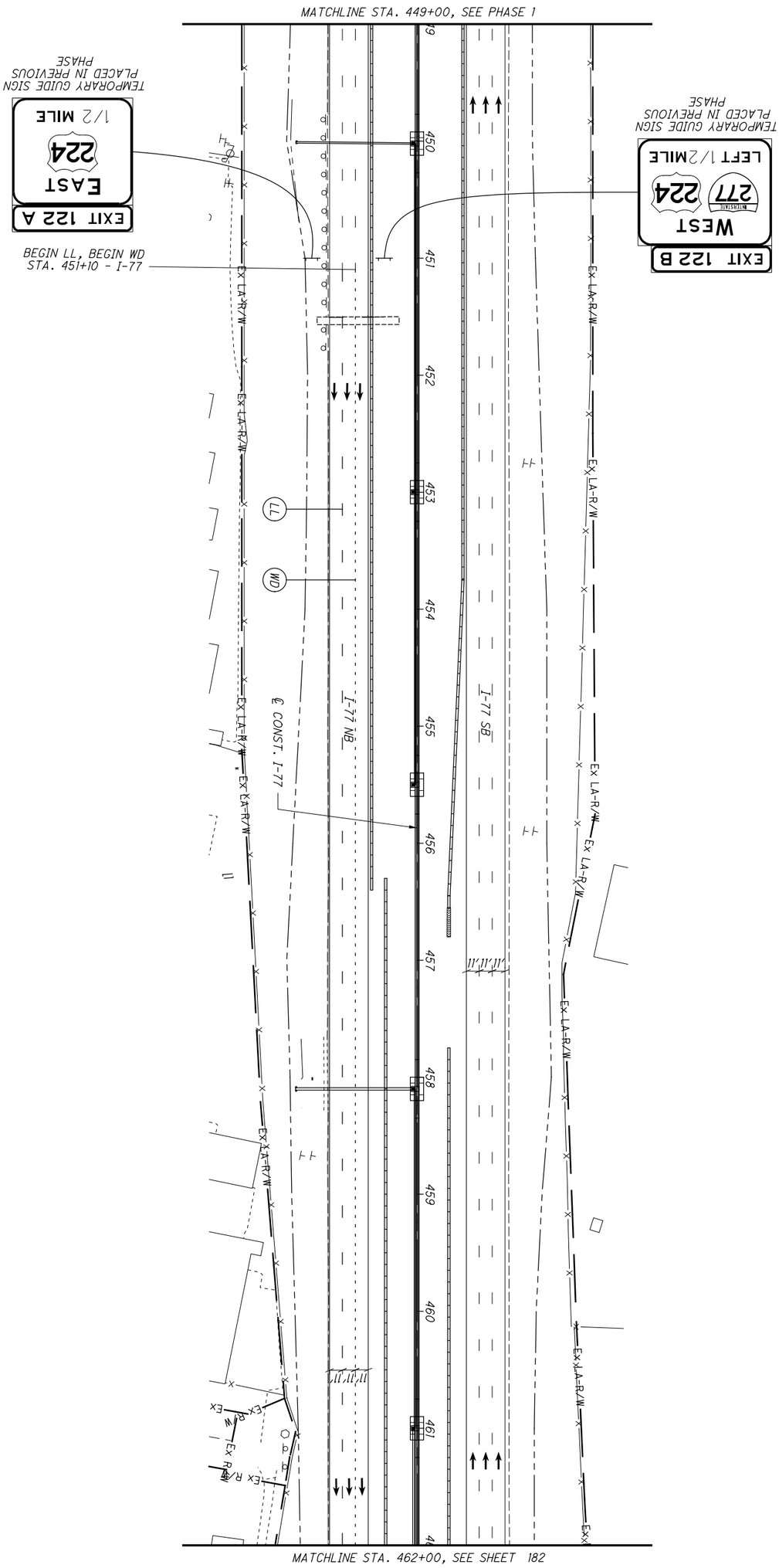
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. MOT SIGNS AND DEVICES ARE EXISTING FROM PHASE 1 UNLESS OTHERWISE NOTED.



180 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1B RAMP B - STA. 203+00 TO STA. 211+50	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. MOT SIGNS AND DEVICES ARE EXISTING FROM PHASE 1 UNLESS OTHERWISE NOTED.



181 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1C I-77 - STA. 449+00 TO STA. 462+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. MOT SIGNS AND DEVICES ARE EXISTING FROM PHASE 1 UNLESS OTHERWISE NOTED.

HORIZONTAL SCALE IN FEET
0 25 50 100

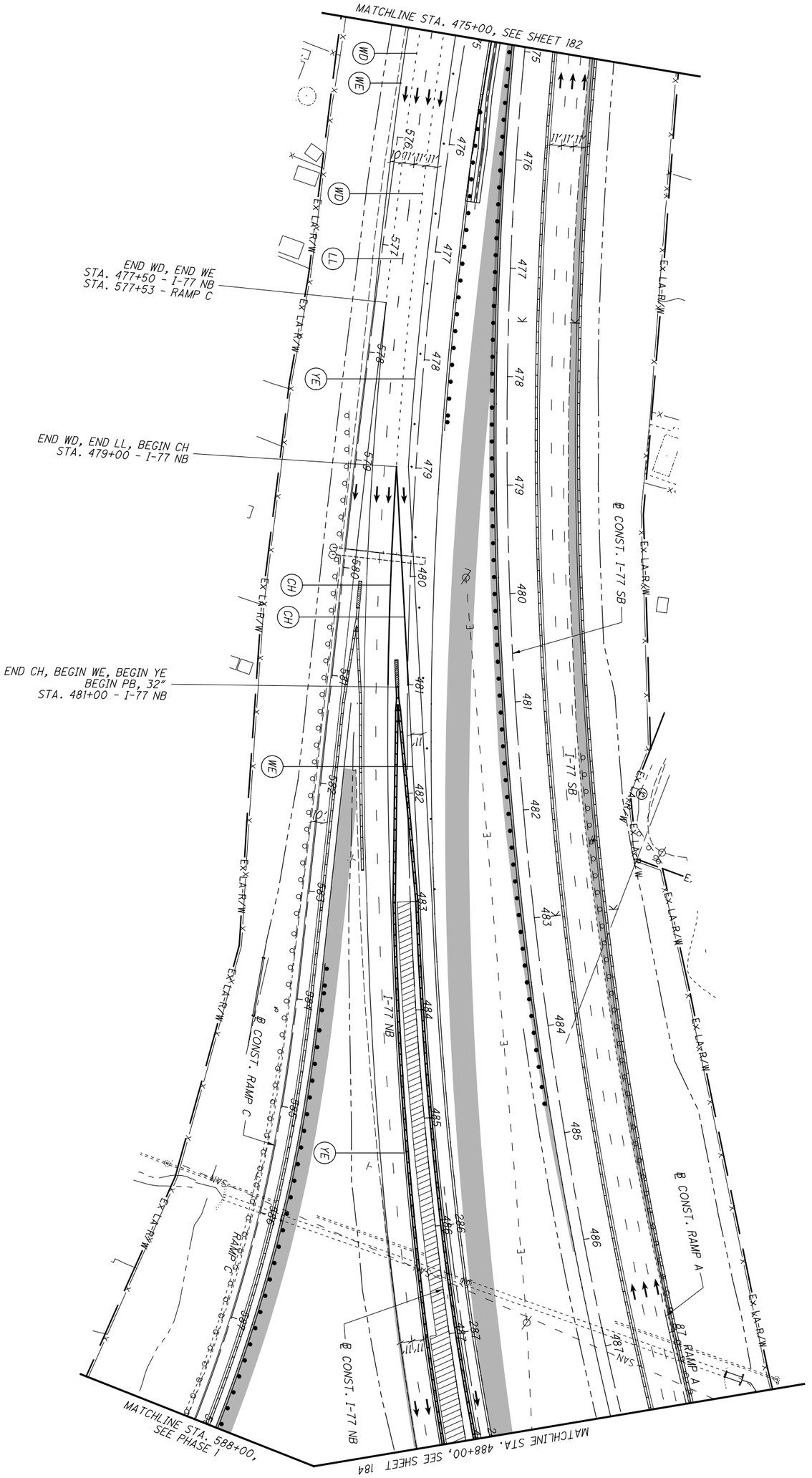
CALCULATED .
CHECKED .

MAINTENANCE OF TRAFFIC PLAN - PHASE 1C
I-77 - STA. 462+00 TO STA. 475+00

SUM-77 / 277 / 224
VARIOUS

182
1288

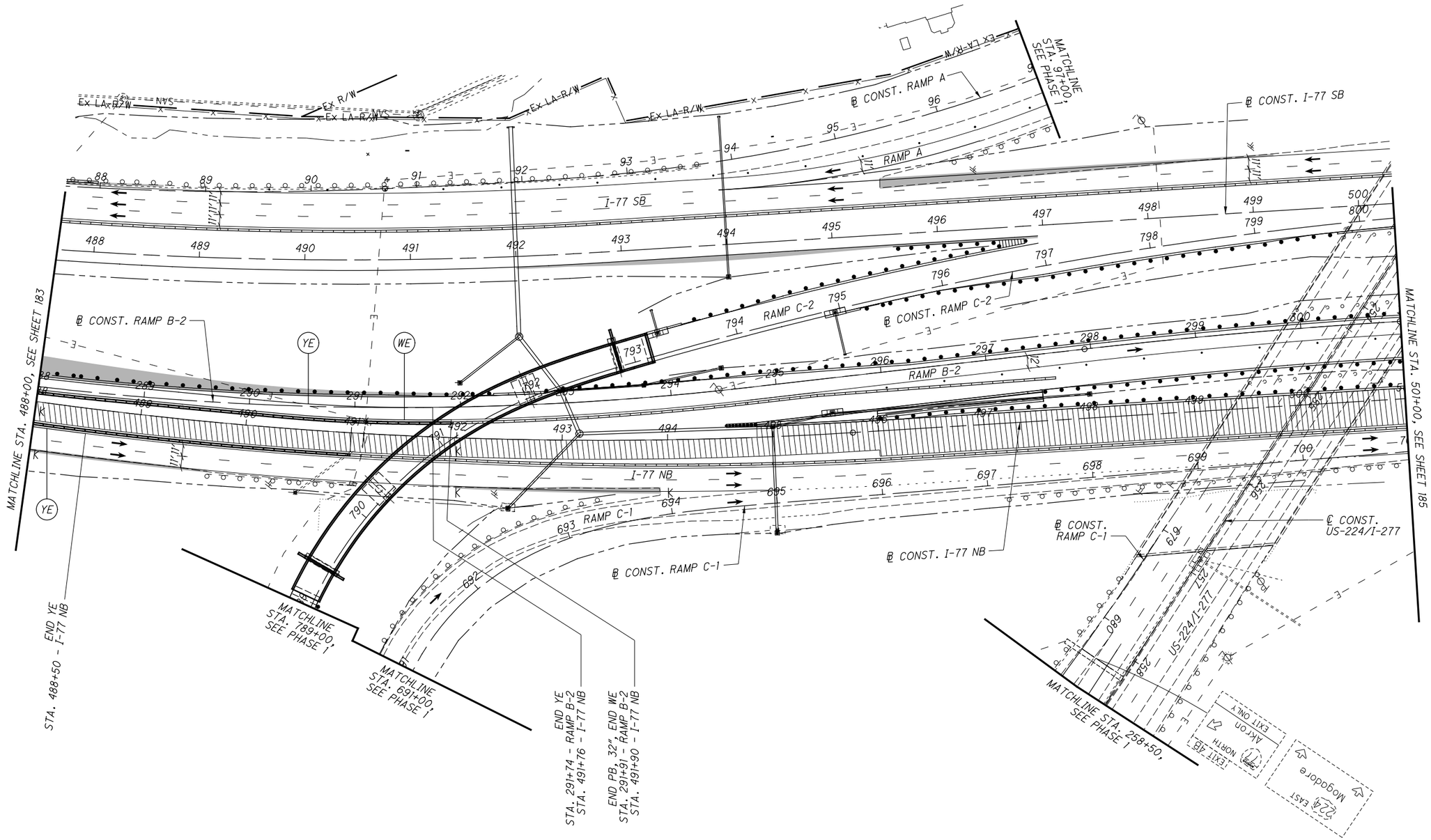
N:\03\60\06744-08\106002-SUM-76-10.95\Design\MOT\Sheets\106002_MPI89.dgn Sheet 1/31/2021 5:32:33 PM jrettig



NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. MOT SIGNS AND DEVICES ARE EXISTING FROM PHASE 1 UNLESS OTHERWISE NOTED.

183 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1C I-77 - STA. 475+00 TO STA. 488+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET



NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. MOT SIGNS AND DEVICES ARE EXISTING FROM PHASE 1 UNLESS OTHERWISE NOTED.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED .
CHECKED .

MAINTENANCE OF TRAFFIC PLAN - PHASE 1C
I-77 - STA. 488+00 TO STA. 501+00

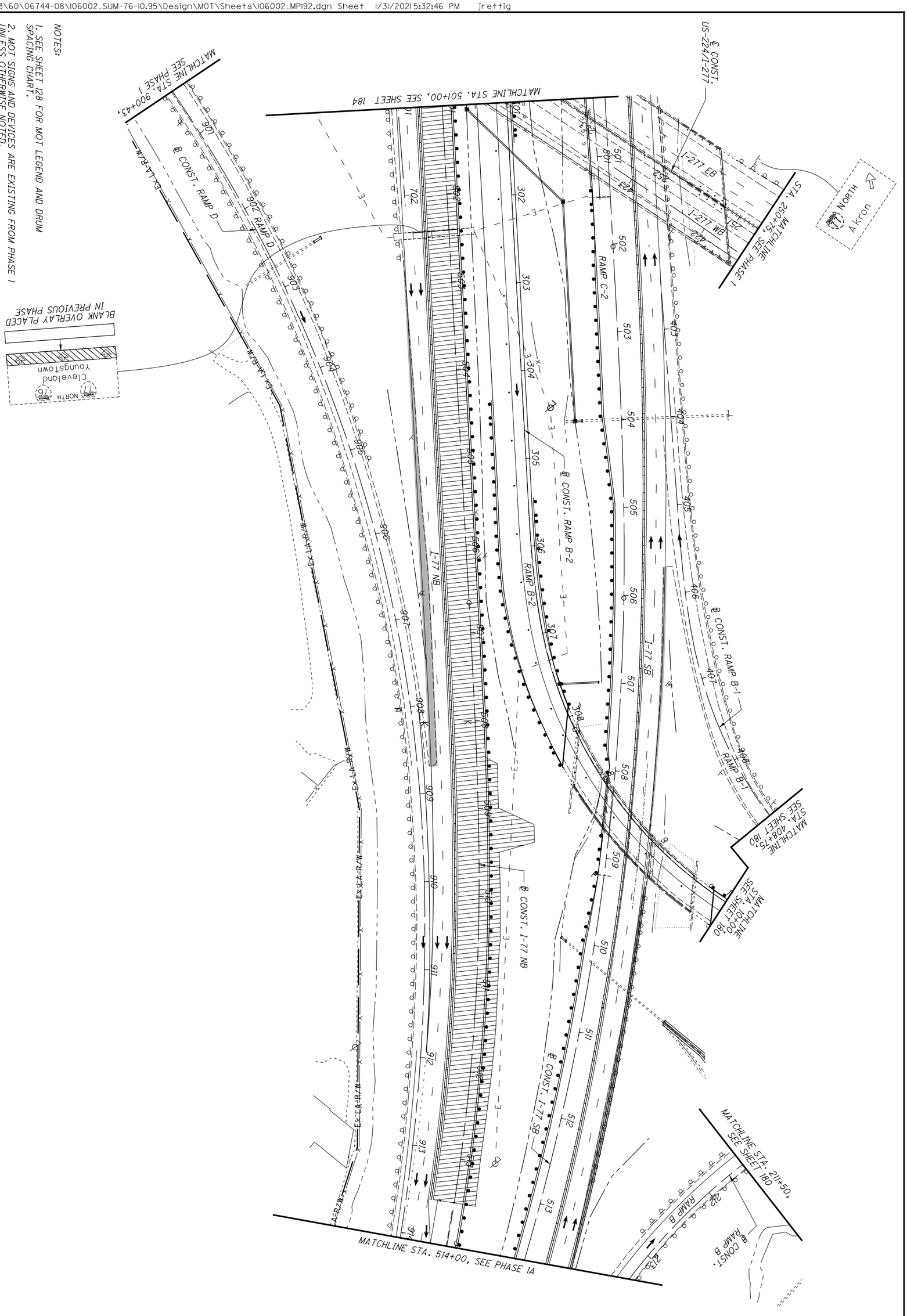
SUM-77/277/224
VARIOUS

184
1288

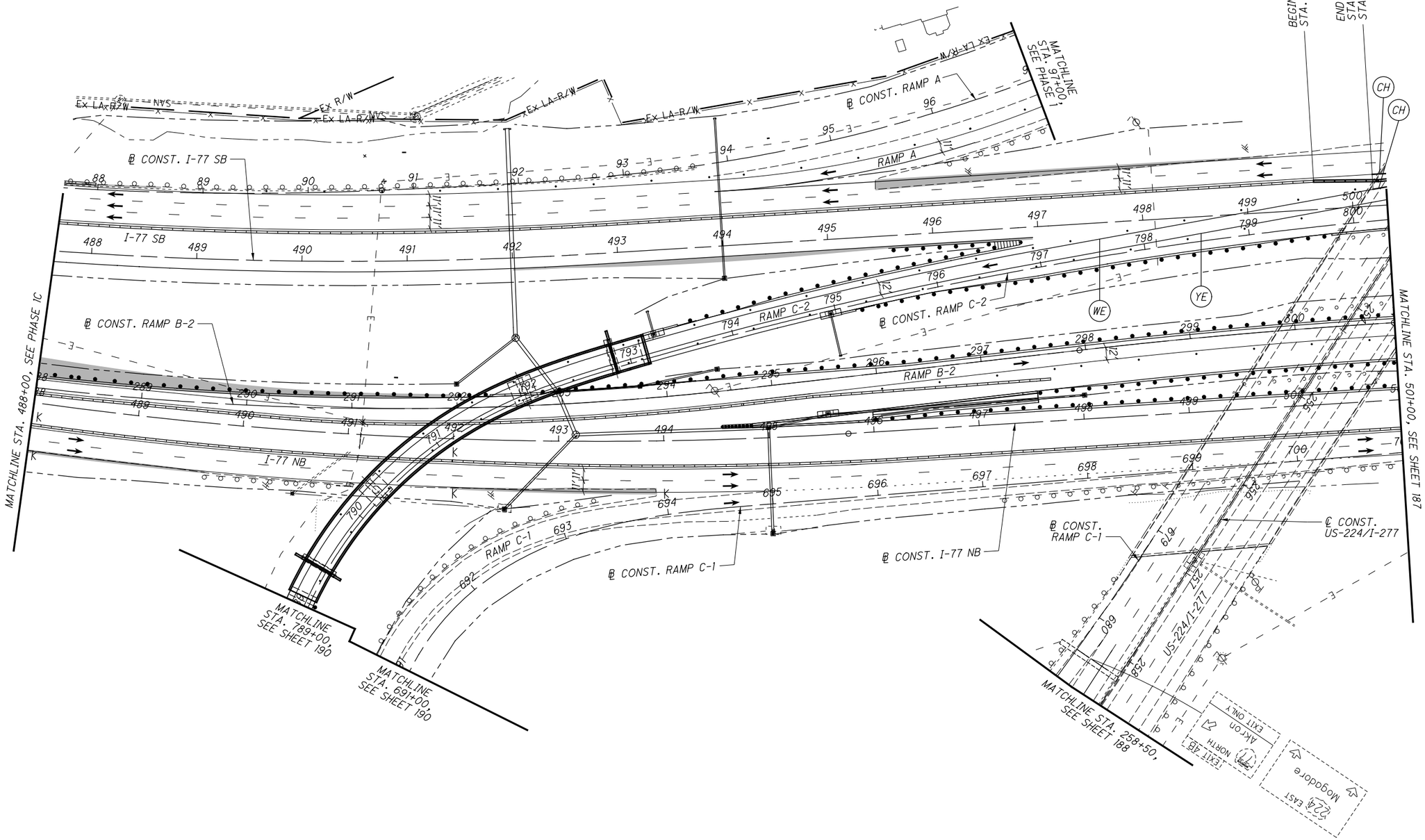
N:\03\60\06744-08\106002-SUM-76-10.95\Design\MOT\Sheets\106002-MPI9I.dgn Sheet 1/31/2021 5:32:40 PM jrettig

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MPI92.dgn Sheet 1/31/2021 5:32:46 PM jrettig

NOTES:
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. MOT SIGNS AND DEVICES ARE EXISTING FROM PHASE 1 UNLESS OTHERWISE NOTED.



185 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 1C I-77 - STA. 501+00 TO STA. 514+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET



NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. MOT SIGNS AND DEVICES ARE EXISTING FROM PHASE 1 UNLESS OTHERWISE NOTED.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED .
CHECKED .

MAINTENANCE OF TRAFFIC PLAN - WINTER
I-77 - STA. 488+00 TO STA. 501+00

SUM-77/277/224
VARIOUS

186
1288

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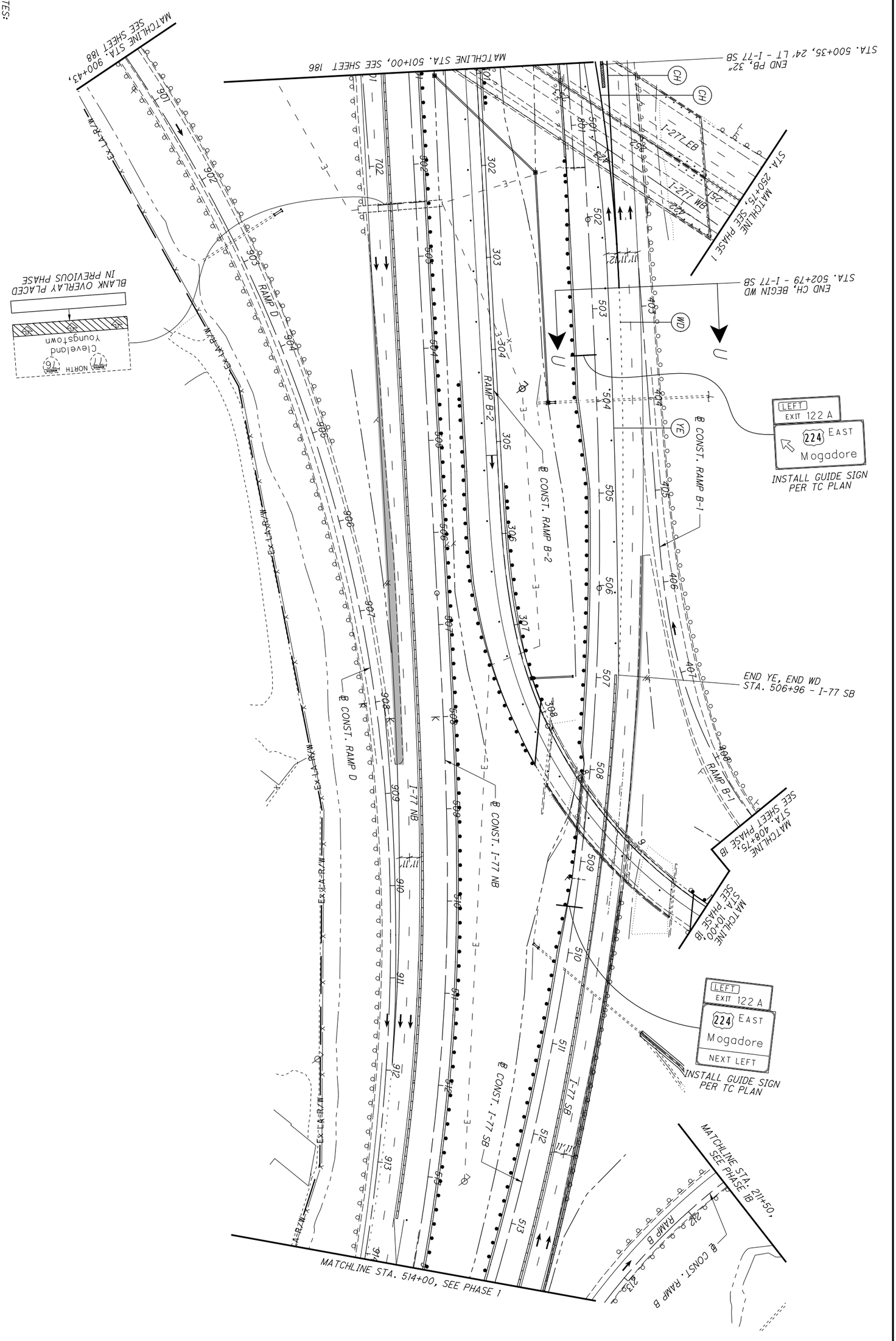
NOTES:

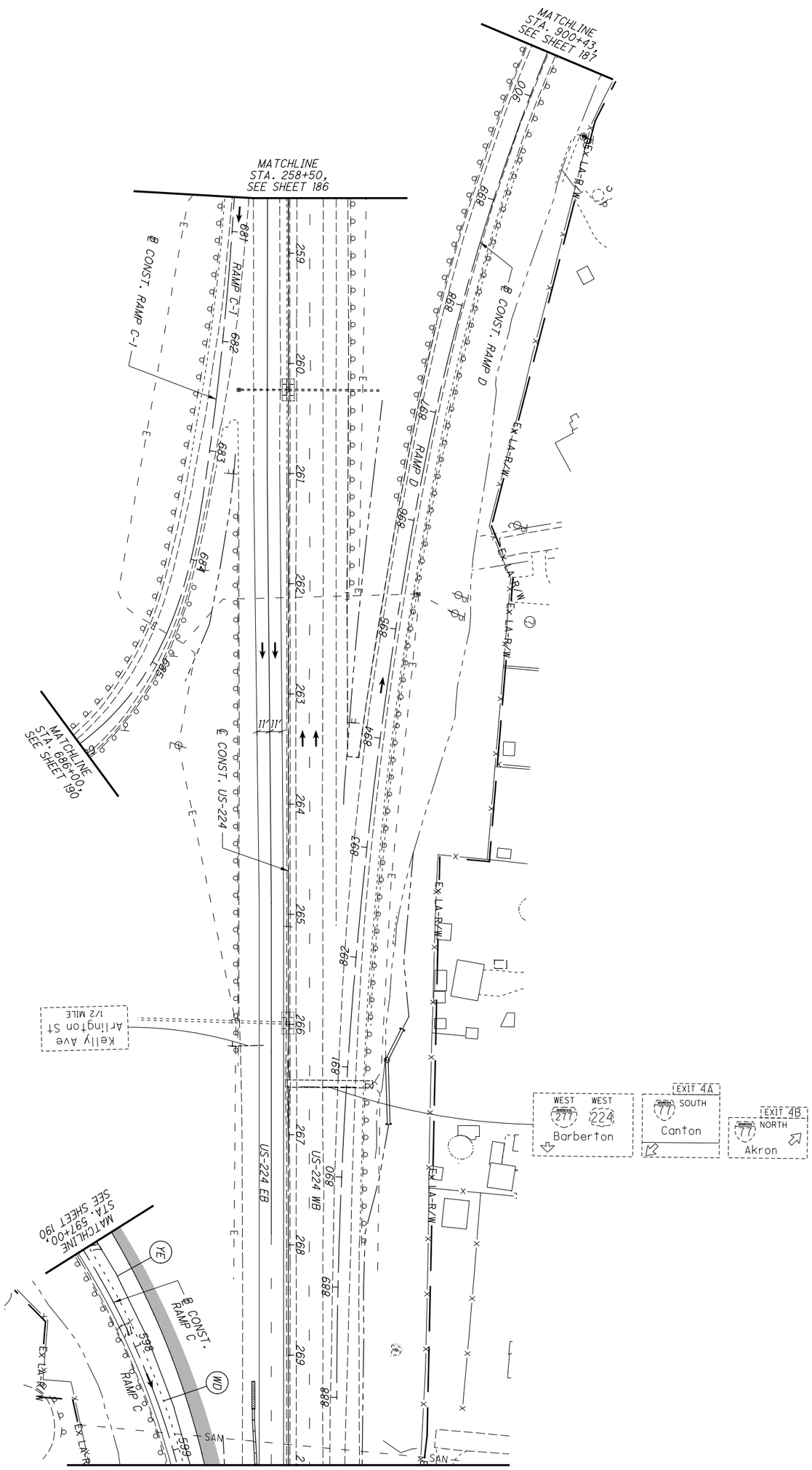
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. MOT SIGNS AND DEVICES ARE EXISTING FROM PHASE I UNLESS OTHERWISE NOTED.
3. SEE SHEETS 123-191 FOR TYPICAL SECTIONS.



187 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - WINTER I-77 - STA. 501+00 TO STA. 514+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. MOT SIGNS AN DEVICES ARE EXISTING FROM PHASE 1 UNLESS OTHERWISE NOTED.



188 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - WINTER US-224 - STA. 258+50 TO STA. 270+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

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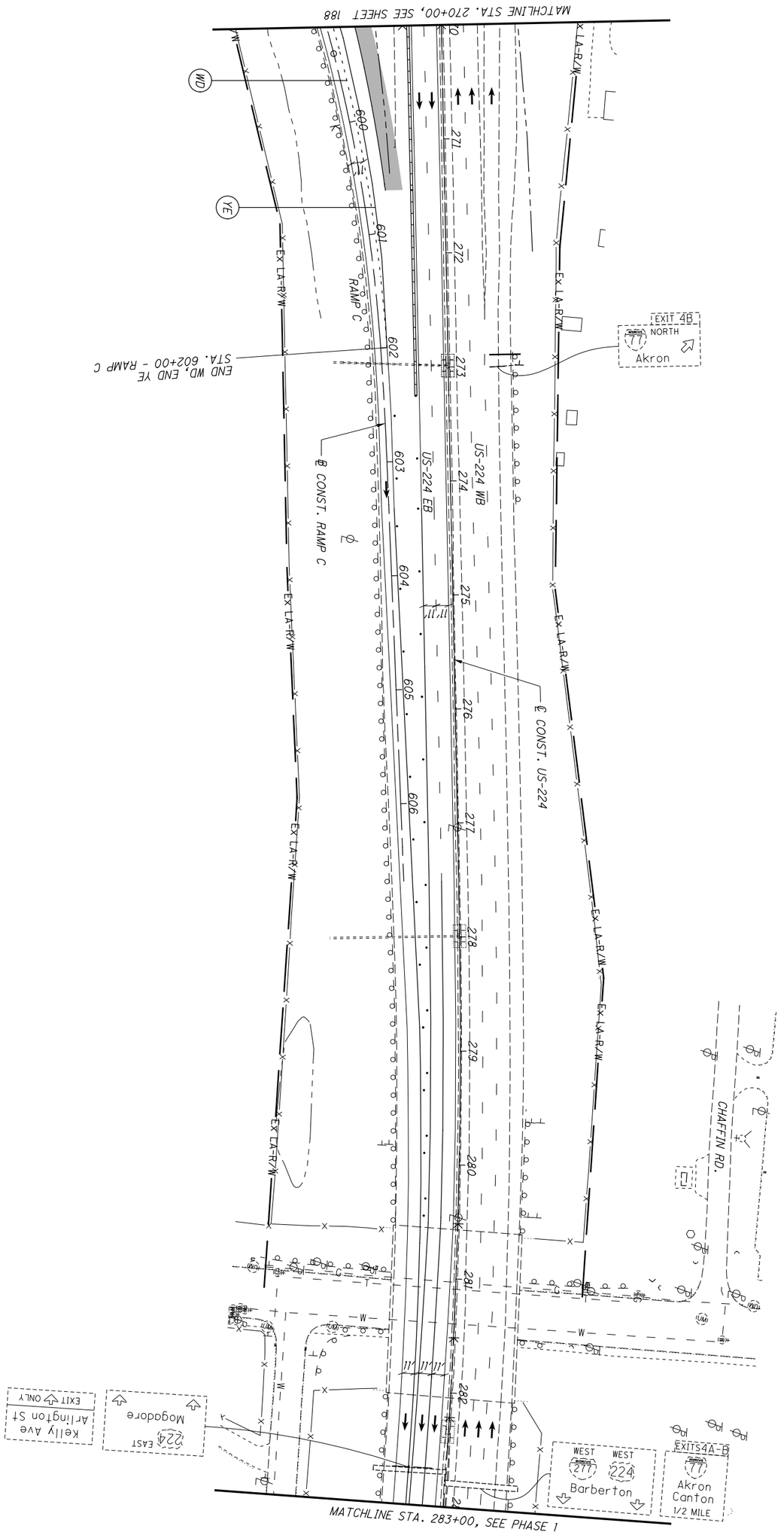
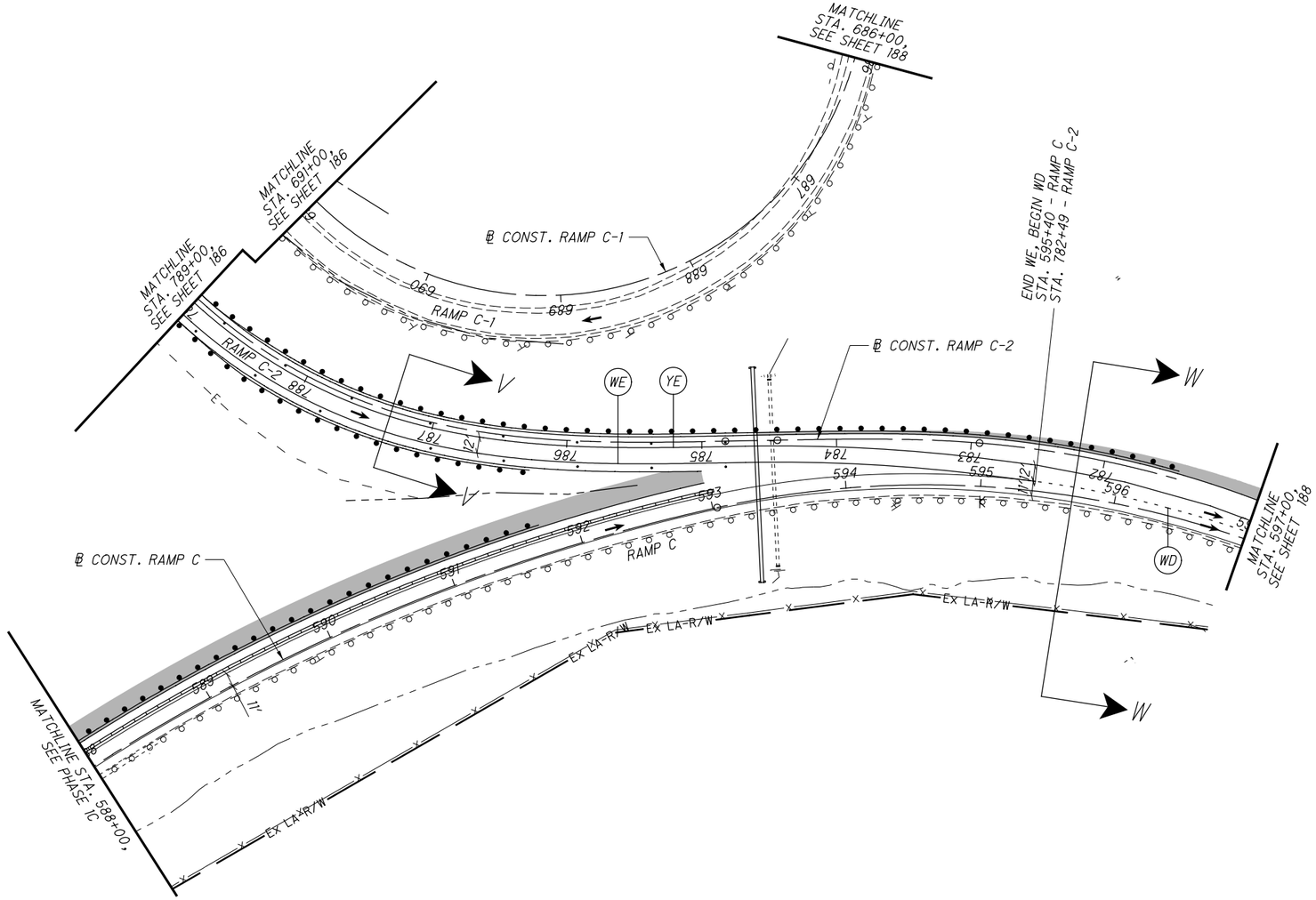
NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. MOT SIGNS AN DEVICES ARE EXISTING FROM PHASE 1 UNLESS OTHERWISE NOTED.



189 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - WINTER US-224 - STA. 270+00 TO STA. 283+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET



NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. SEE SHEETS -1--1 FOR RAMP C CROSS SECTIONS.
3. MOT SIGNS AND DEVICES ARE EXISTING FROM PHASE 1 UNLESS OTHERWISE NOTED.
4. SEE SHEETS 123-191 FOR TYPICAL SECTIONS.

N

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED .
CHECKED .

MAINTENANCE OF TRAFFIC PLAN - WINTER
RAMP C - STA. 588+00 TO STA. 597+00

SUM-77 / 277 / 224
VARIOUS

190
1288

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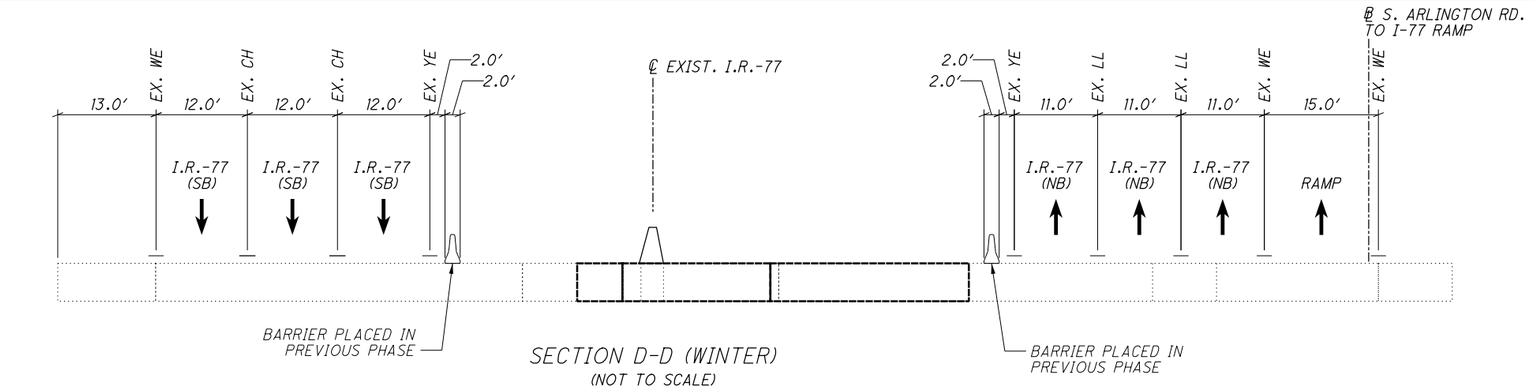
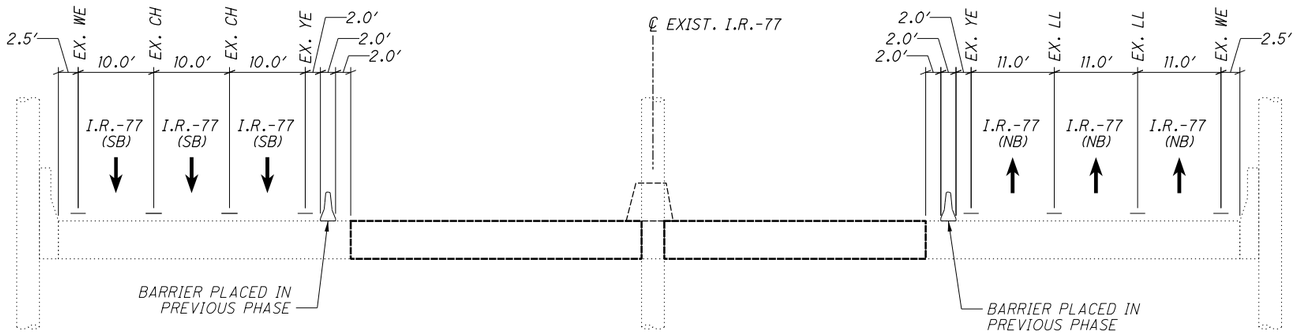
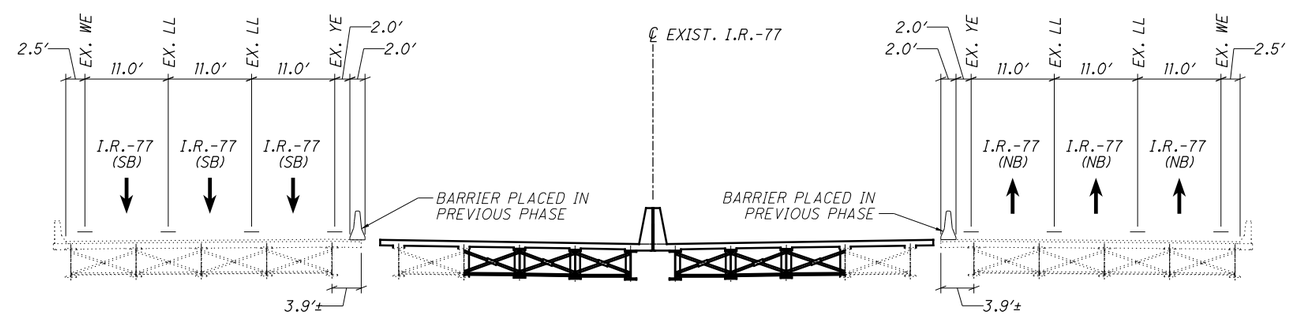


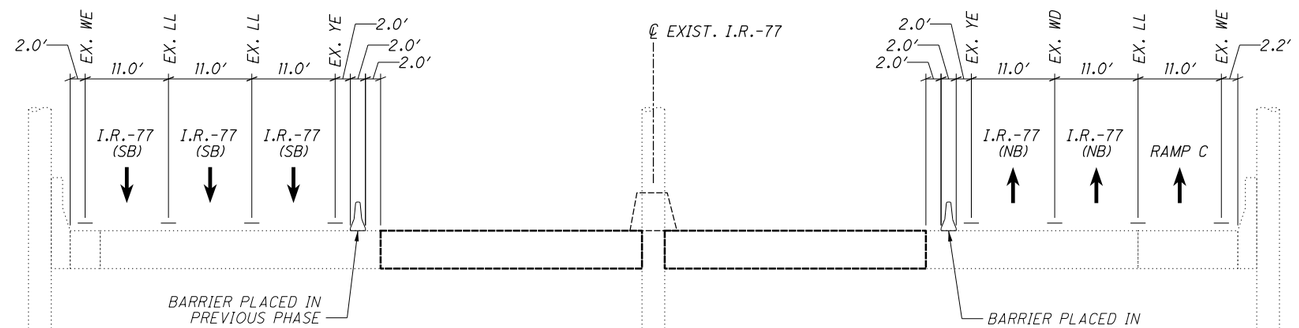
SECTION D-D (WINTER)
(NOT TO SCALE)



SECTION E-E (WINTER)
(NOT TO SCALE)



SECTION H-H (WINTER)
(NOT TO SCALE)



SECTION J-J (WINTER)
(NOT TO SCALE)

CALCULATED EMB
CHECKED JAR

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS - PHASE 1

SUM-77 / 277 / 224
VARIOUS

191
1288

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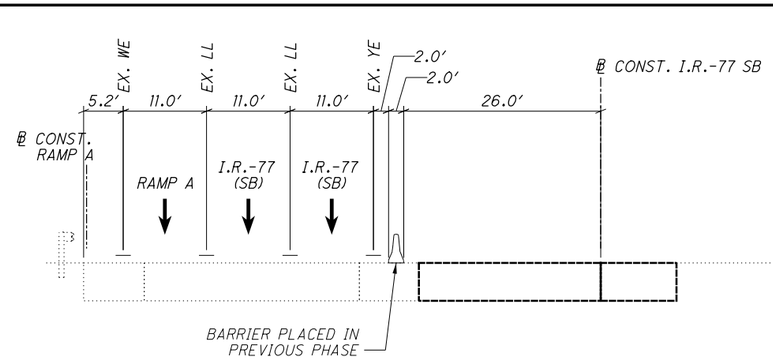
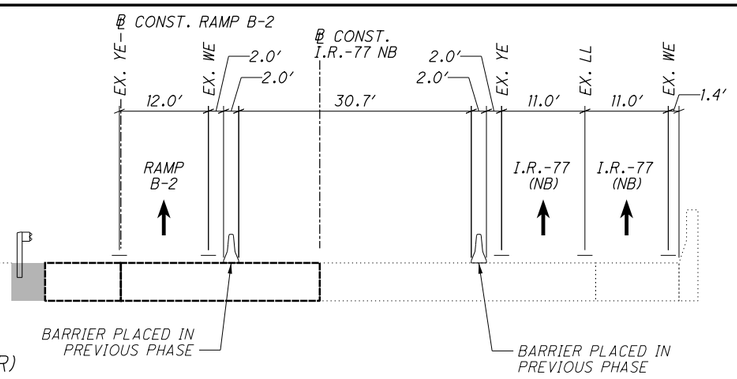
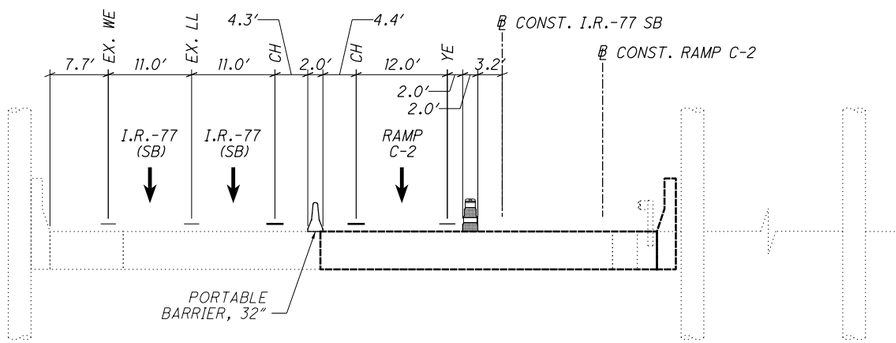
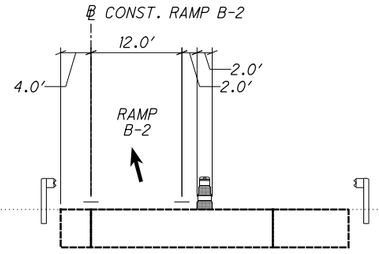


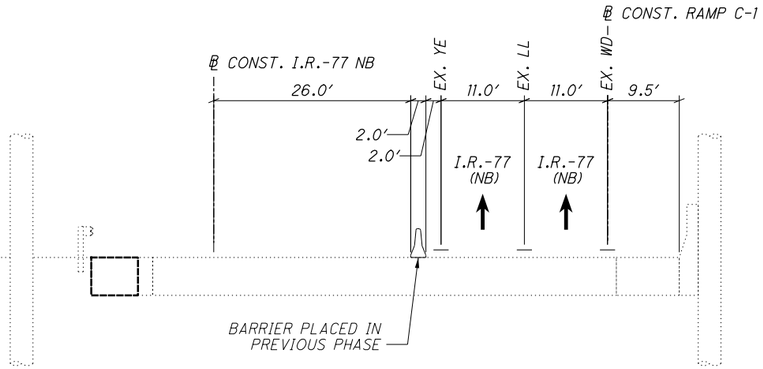
SECTION K-K (WINTER)
(NOT TO SCALE)



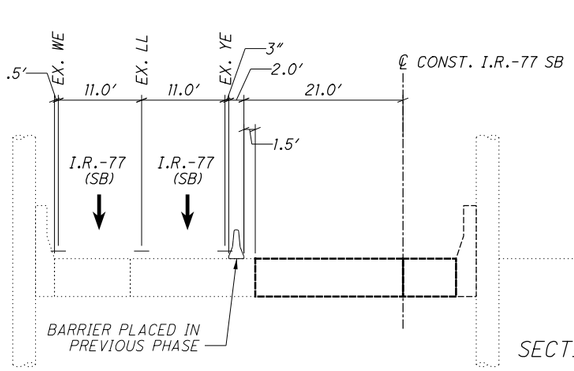


SECTION L2-L2 (WINTER)
(NOT TO SCALE)

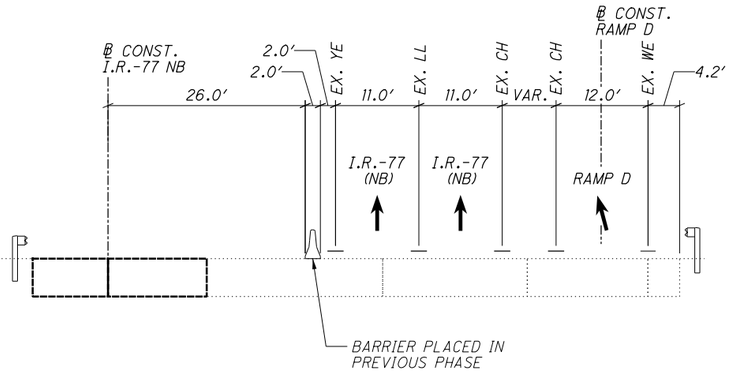




SECTION L1-L1 (WINTER)
(NOT TO SCALE)



SECTION M-M (WINTER)
(NOT TO SCALE)



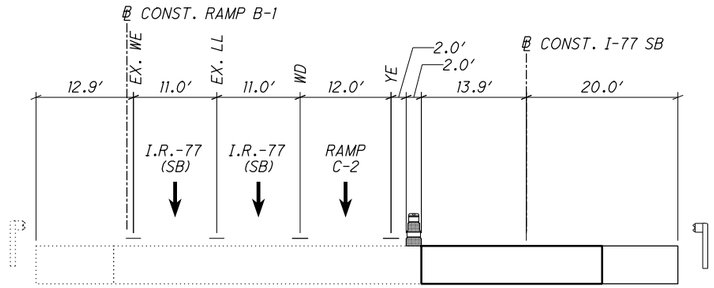
CALCULATED EMB
CHECKED JAR

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS - PHASE 1

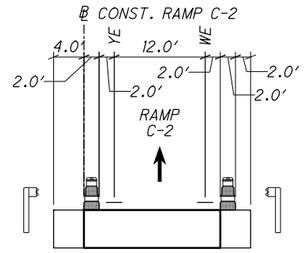
SUM-77 / 277 / 224
VARIOUS

192
1288

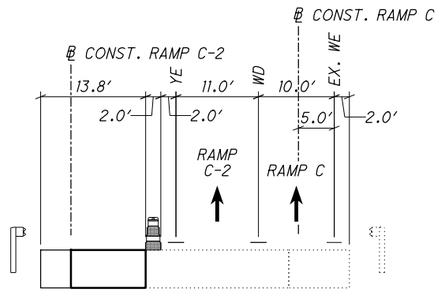
N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MY106.dgn Sheet 1/31/2021 5:33:50 PM jrettig



SECTION U-U (WINTER)
(NOT TO SCALE)



SECTION V-V (WINTER)
(NOT TO SCALE)



SECTION W-W (WINTER)
(NOT TO SCALE)

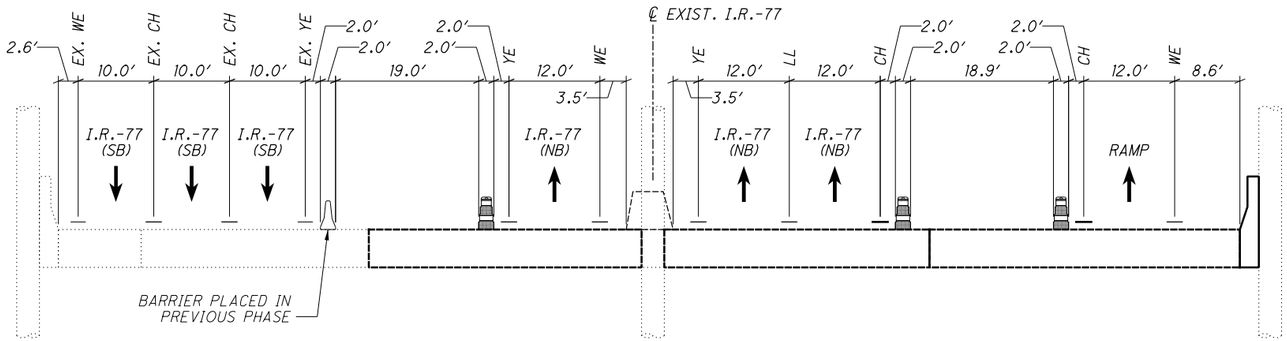
CALCULATED EMB
CHECKED JAR

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS - PHASE 1

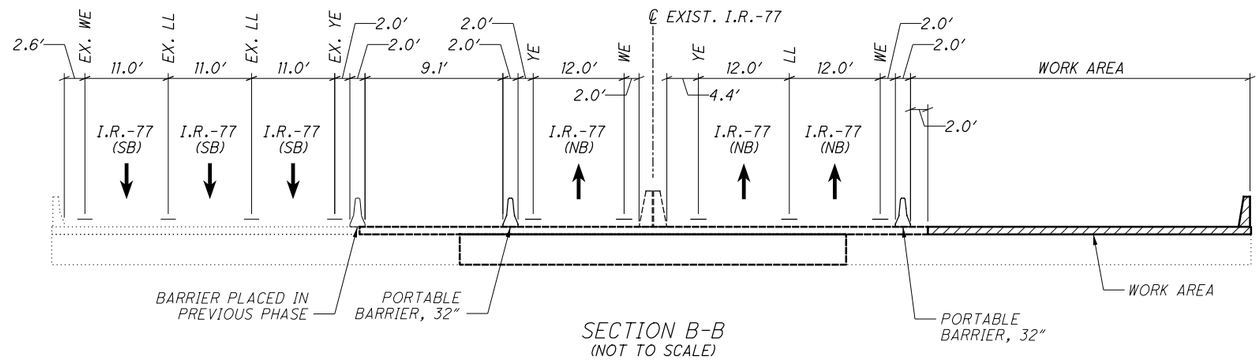
SUM-77/277/224
VARIOUS

193
1288

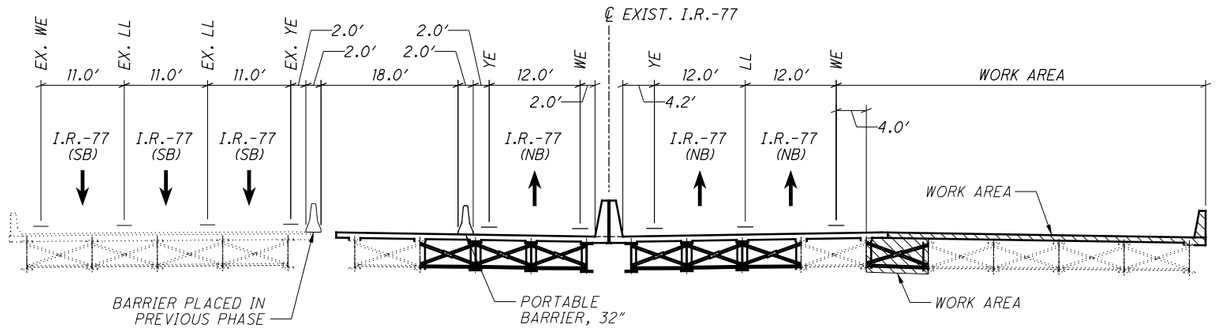
N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MY107.dgn Sheet 1/31/2021 5:33:52 PM jrettig



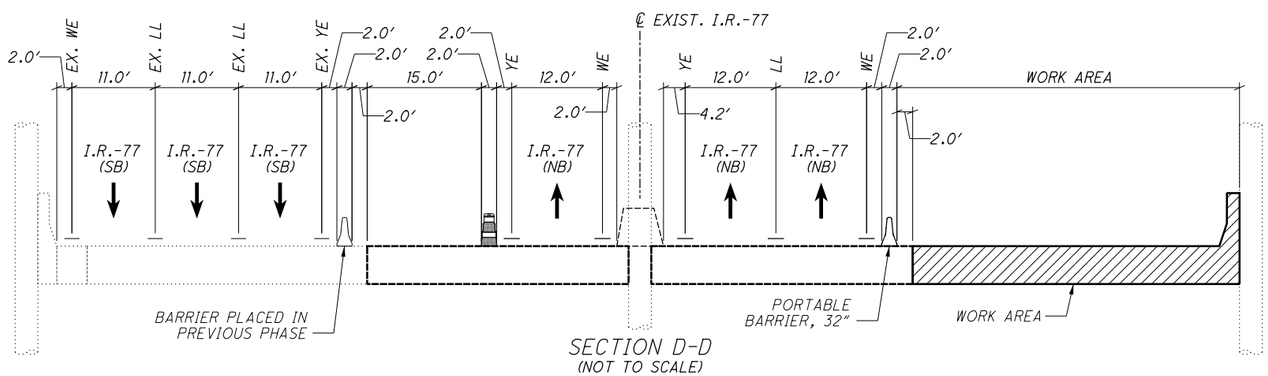
SECTION A-A
(NOT TO SCALE)



SECTION B-B
(NOT TO SCALE)



SECTION C-C
(NOT TO SCALE)



SECTION D-D
(NOT TO SCALE)

CALCULATED EMB
CHECKED JML

TRAFFIC TYPICAL SECTIONS - PHASE 2

MAINTENANCE OF TRAFFIC

SUM-77 / 277 / 224
VARIOUS

194
1288

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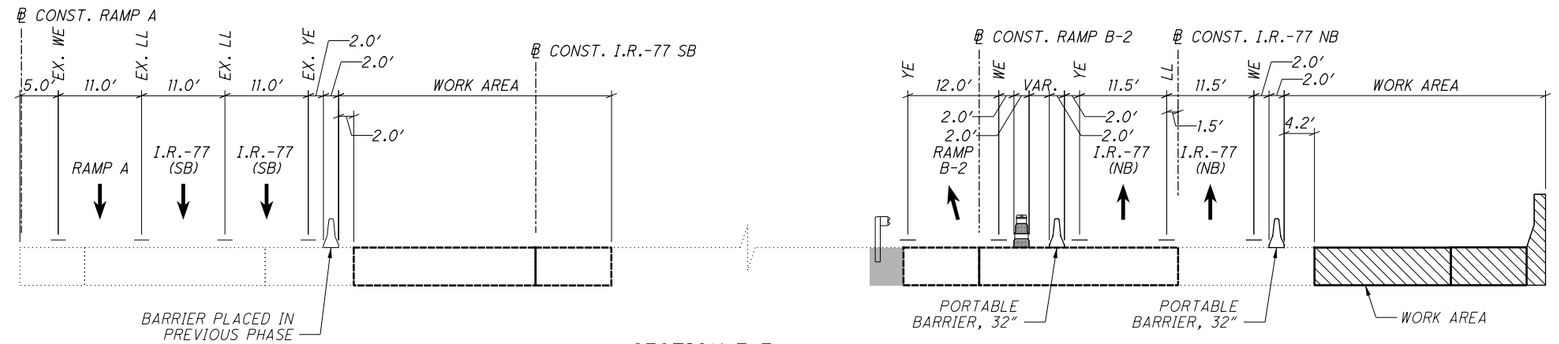
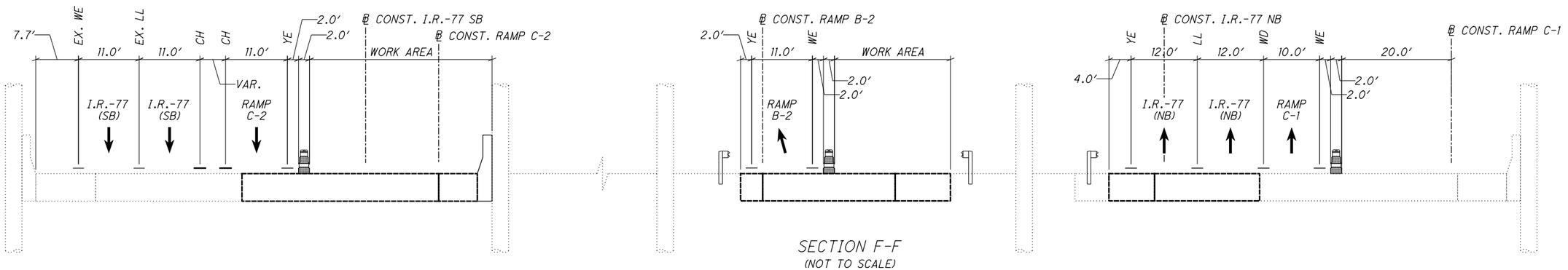
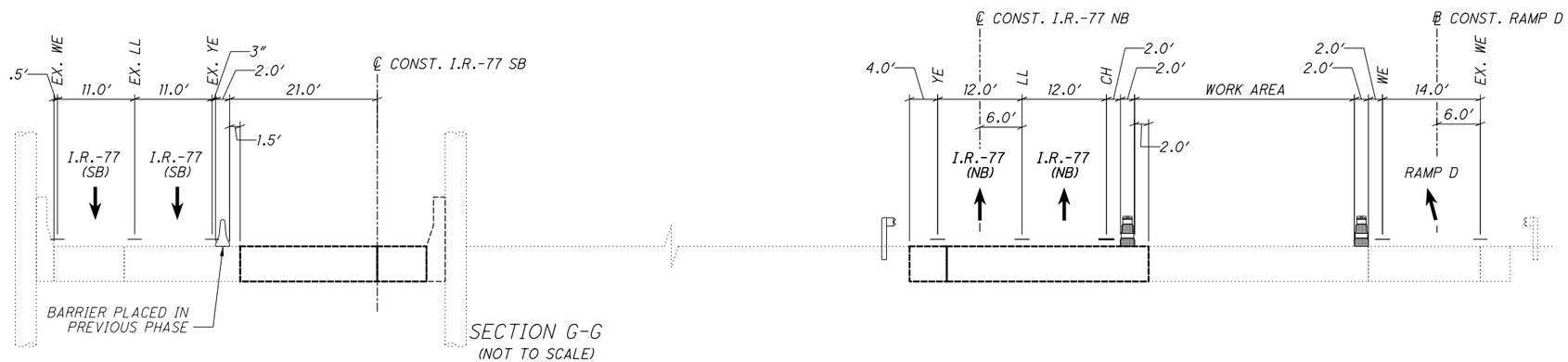


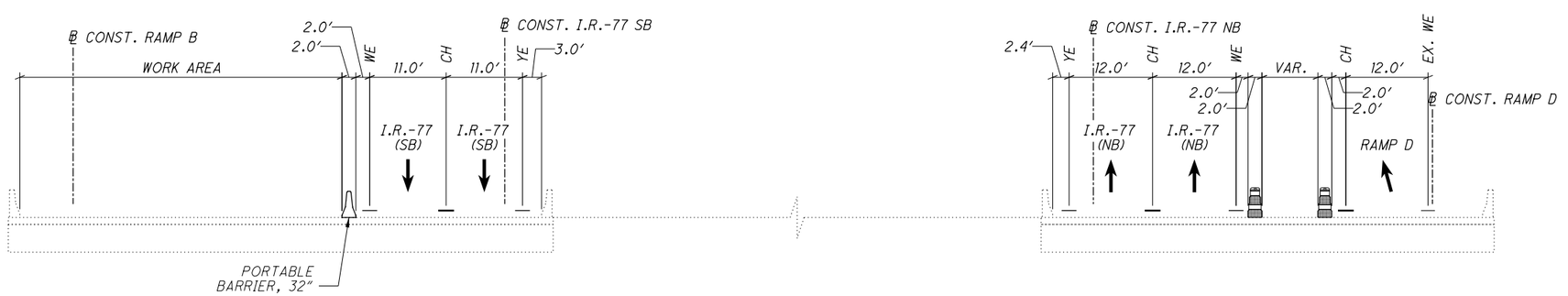
SECTION E-E
(NOT TO SCALE)



SECTION F-F
(NOT TO SCALE)



SECTION G-G
(NOT TO SCALE)



SECTION H-H
(NOT TO SCALE)

CALCULATED EMB
CHECKED JML

TRAFFIC TYPICAL SECTIONS - PHASE 2

MAINTENANCE OF TRAFFIC

SUM-77 / 277 / 224
VARIOUS

195
1288

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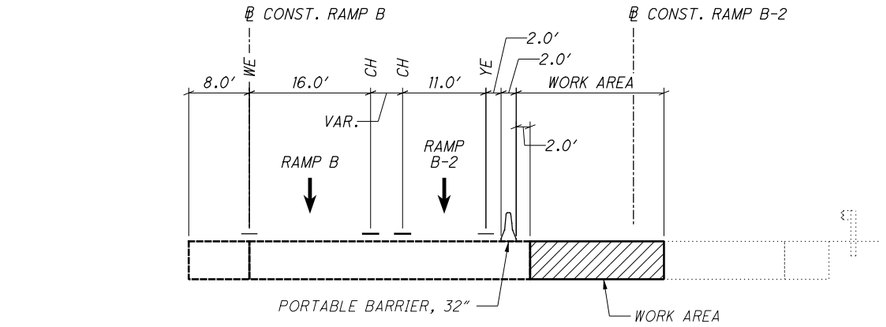
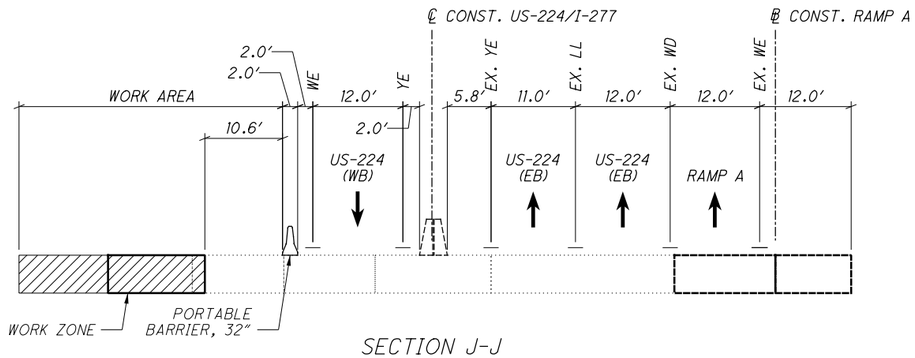
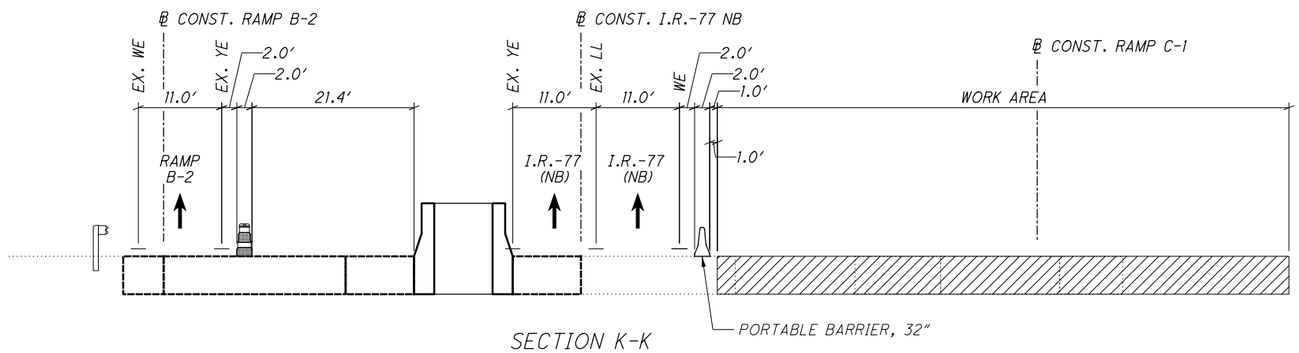


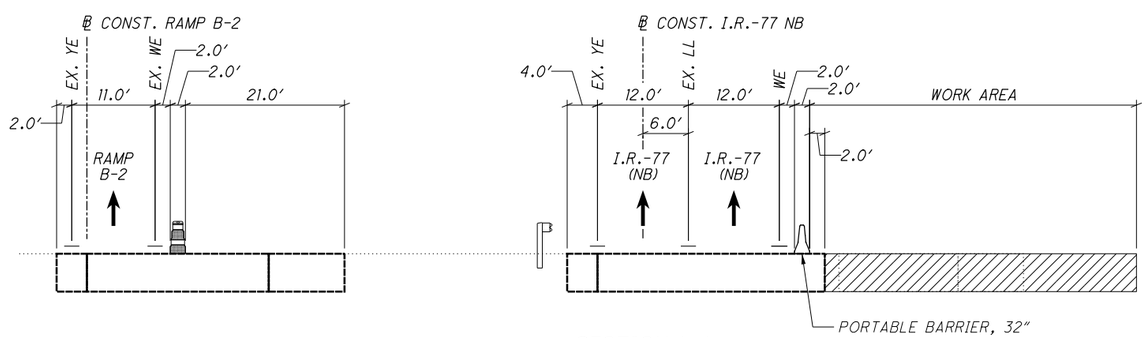
SECTION I-I
(NOT TO SCALE)



SECTION J-J
(NOT TO SCALE)



SECTION K-K
(NOT TO SCALE)



SECTION L-L
(NOT TO SCALE)

CALCULATED EMB
CHECKED JML

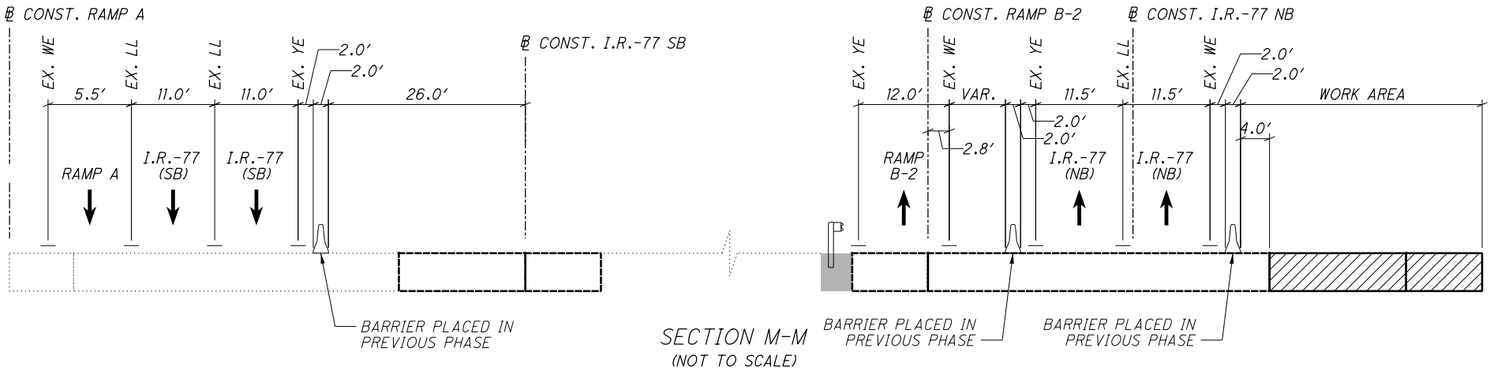
TRAFFIC TYPICAL SECTIONS - PHASE 2

MAINTENANCE OF TRAFFIC

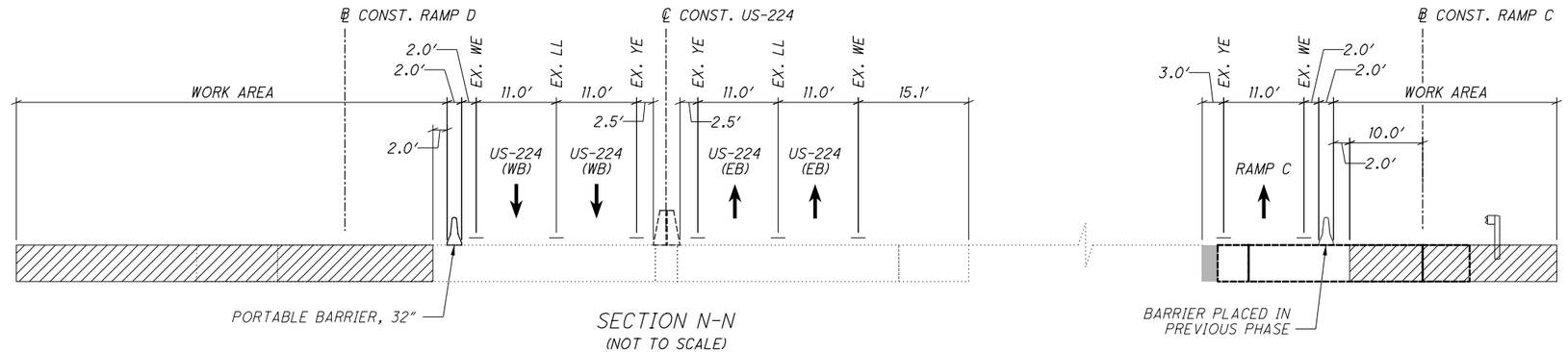
SUM-77 / 277 / 224
VARIOUS

196
1288

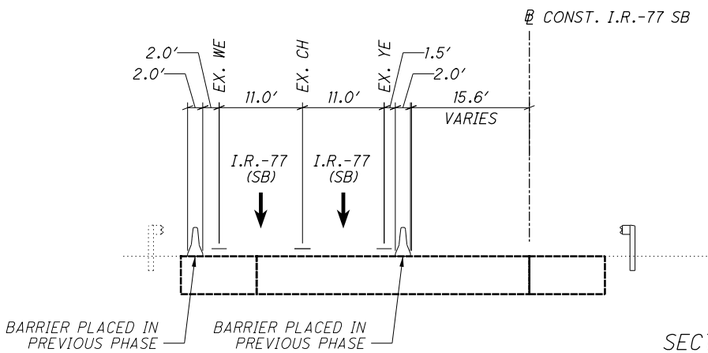
N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MY202.dgn Sheet 1/31/2021 5:34:12 PM jrettig



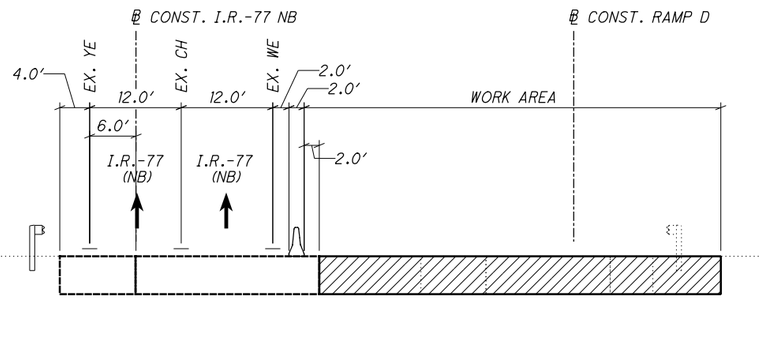
SECTION M-M
(NOT TO SCALE)

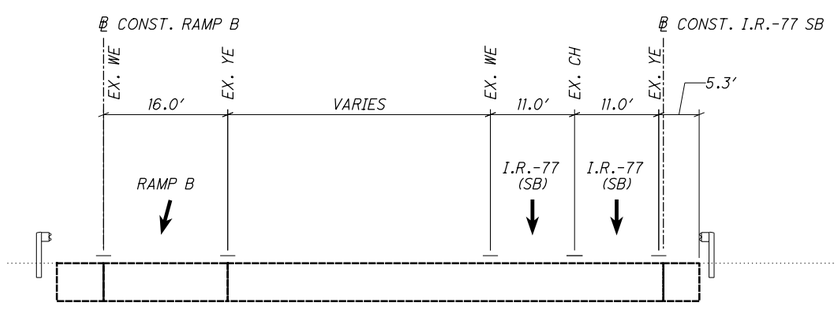


SECTION N-N
(NOT TO SCALE)

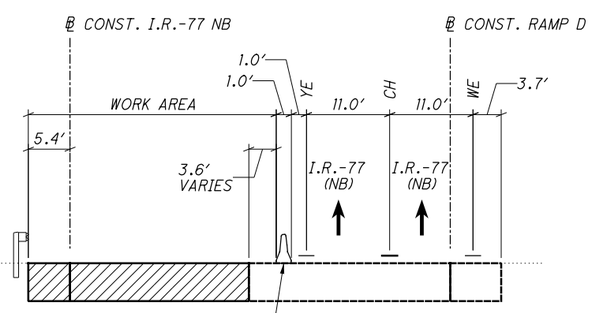


SECTION O-O
(NOT TO SCALE)





SECTION P-P
(NOT TO SCALE)



CALCULATED EMB
CHECKED JML

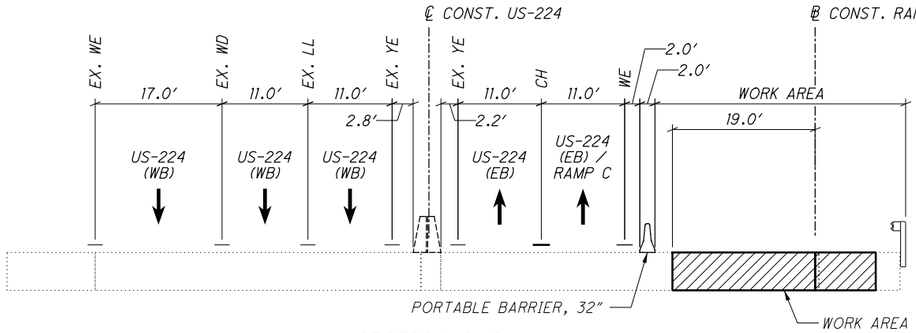
TRAFFIC TYPICAL SECTIONS - PHASE 2

MAINTENANCE OF TRAFFIC

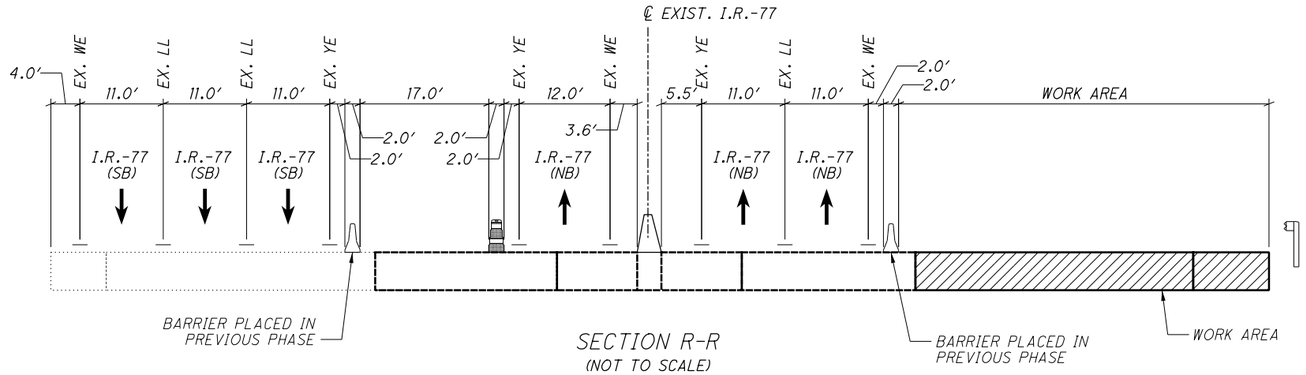
SUM-77 / 277 / 224
VARIOUS

197
1288

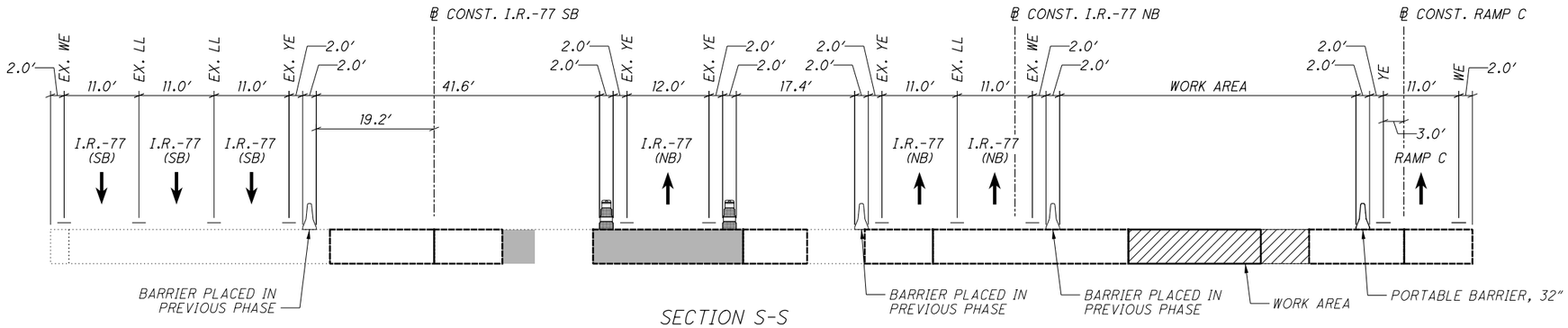
N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MY203.dgn Sheet 1/31/2021 5:34:15 PM jrettig



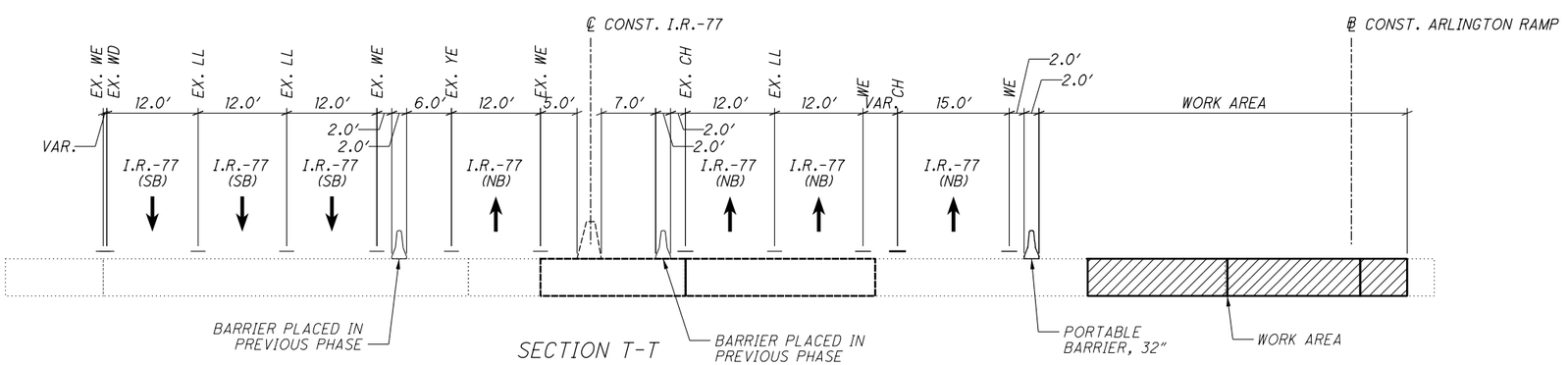
SECTION Q-Q
(NOT TO SCALE)



SECTION R-R
(NOT TO SCALE)



SECTION S-S
(NOT TO SCALE)



SECTION T-T
(NOT TO SCALE)

CALCULATED EMB
CHECKED JML

TRAFFIC TYPICAL SECTIONS - PHASE 2

MAINTENANCE OF TRAFFIC

SUM-77/277/224
VARIOUS

198
1288

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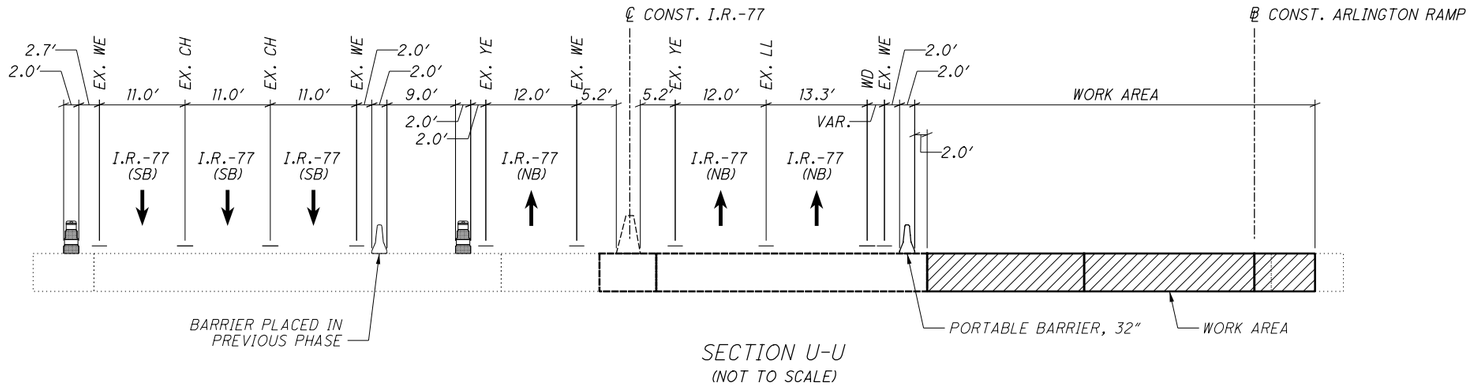


SECTION U-U
(NOT TO SCALE)

CALCULATED EMB
CHECKED JML

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS - PHASE 2

SUM-77 / 277 / 224
VARIOUS

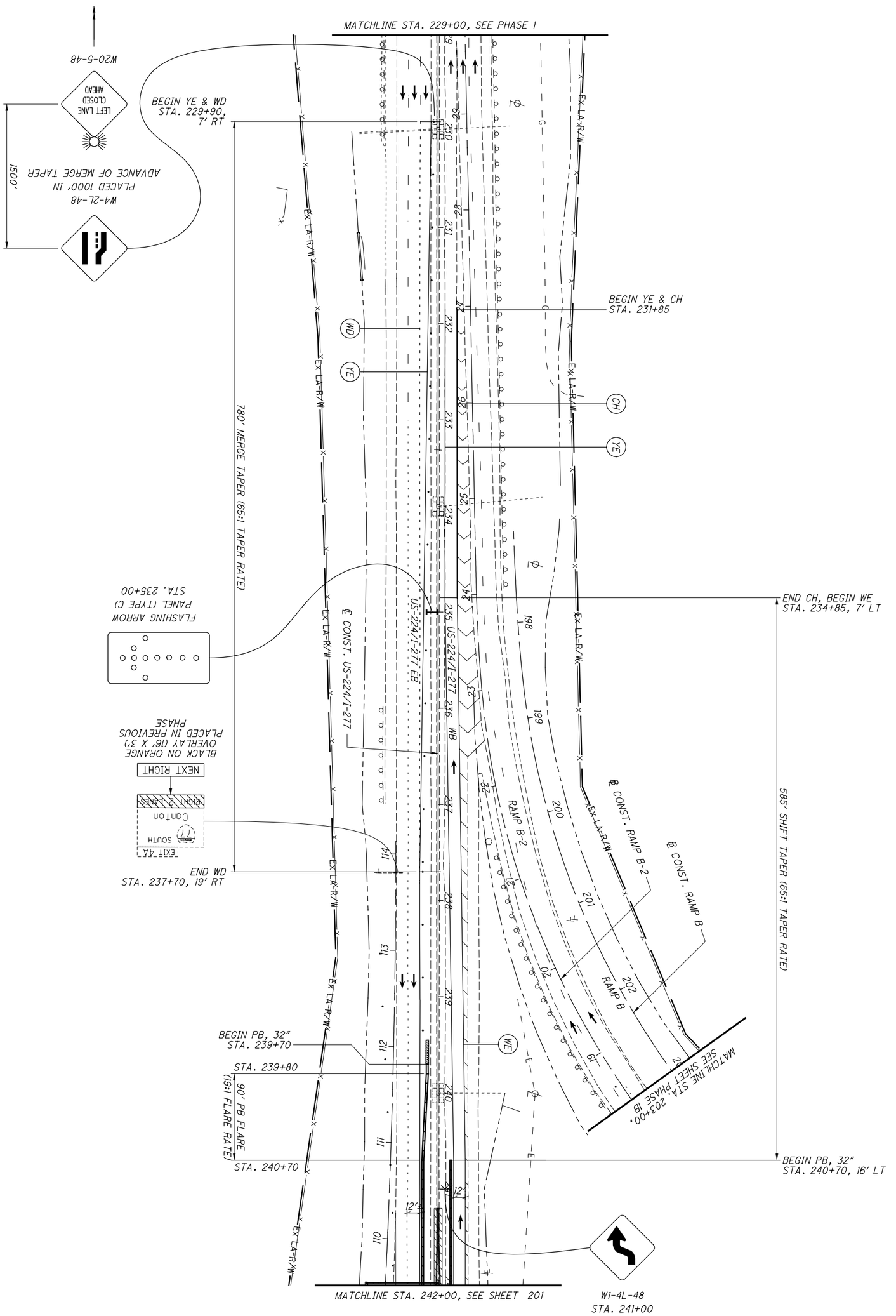
199
1288

N:\03\60\06744-08\106002_SUM-76-I0.95\Design\MOT\Sheets\106002_MY205.dgn Sheet 1/31/2021 5:34:18 PM jrettig

N:\03\60\06744-08\I06002_SUM-76-I0.95\Design\MOT\Sheets\I06002_MP504.dgn Sheet 1/31/2021 5:34:39 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.



200 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC - PRE-PHASE 2 US-224/I-277 - STA. 229+00 TO STA. 242+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

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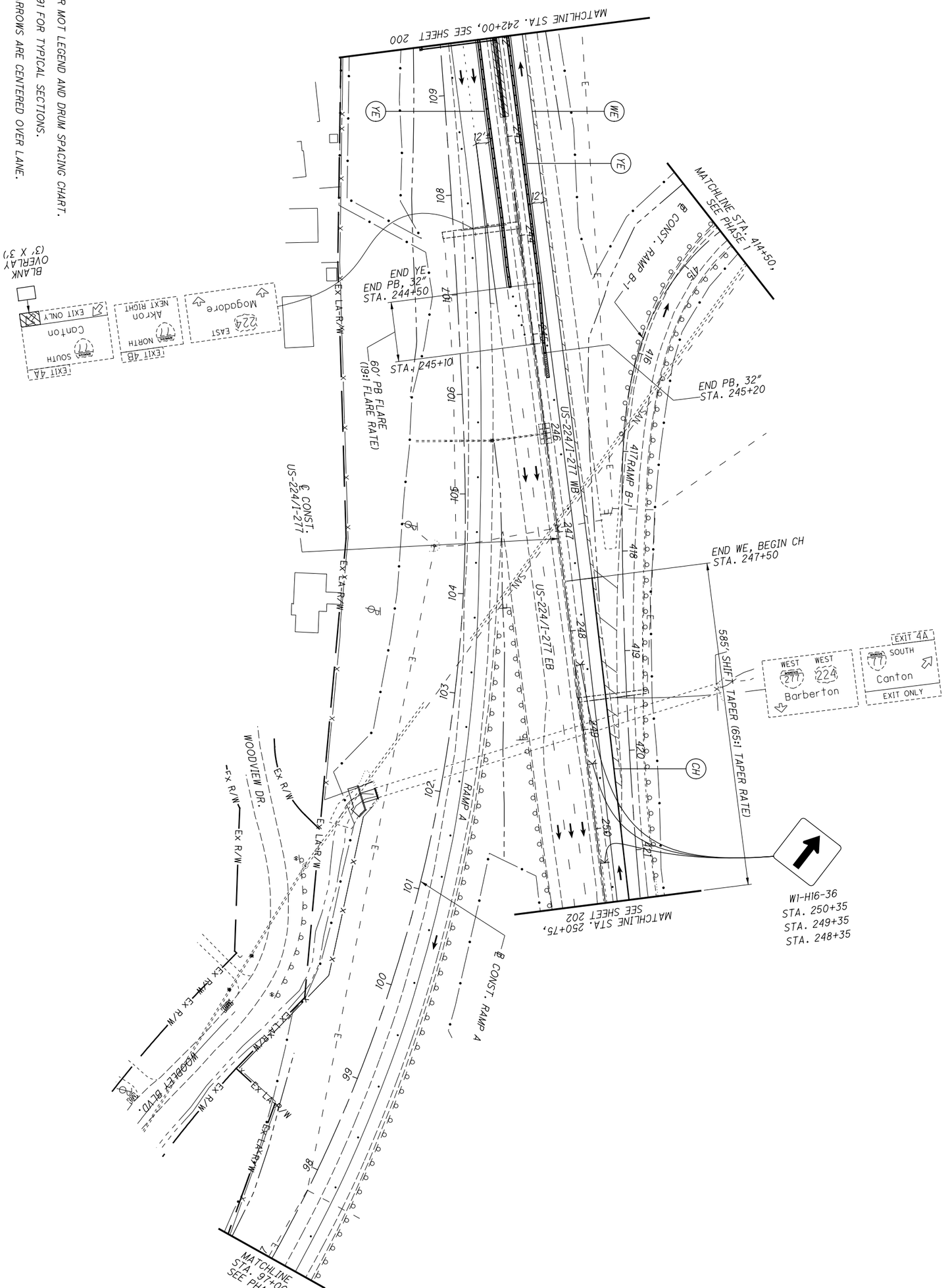
NOTES:

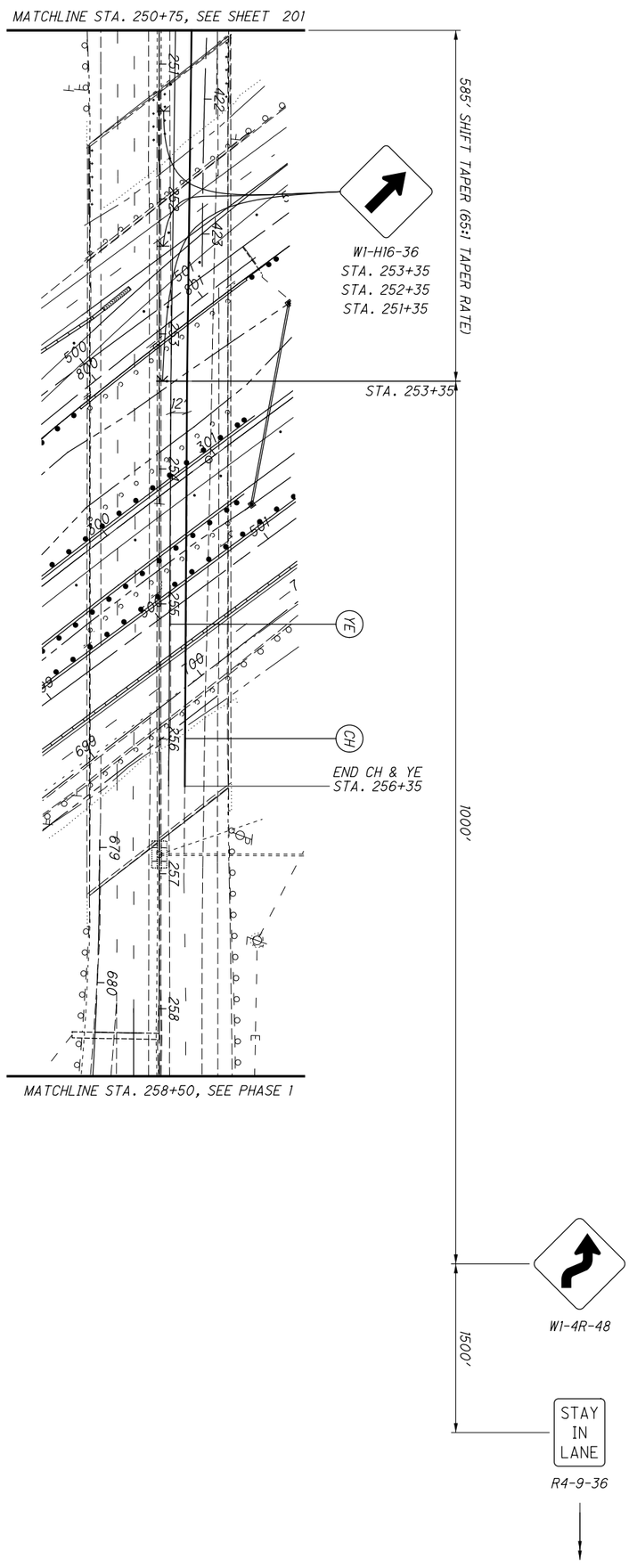
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. SEE SHEETS 123-191 FOR TYPICAL SECTIONS.
3. SHIFT SIGNS SO ARROWS ARE CENTERED OVER LANE.

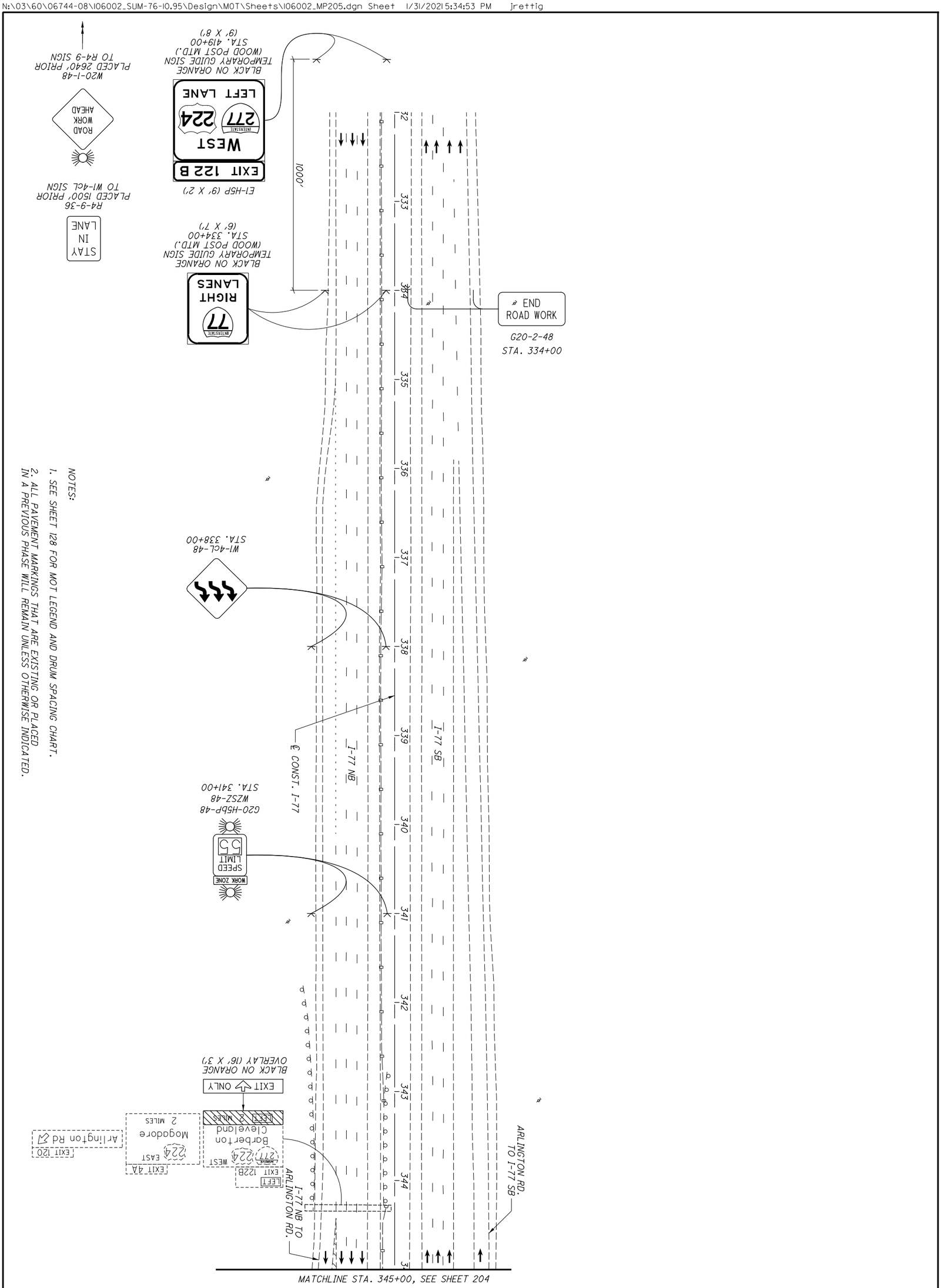


201 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC - PRE-PHASE 2 US-224/I-277 - STA. 242+00 TO STA. 250+75	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET	N

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.





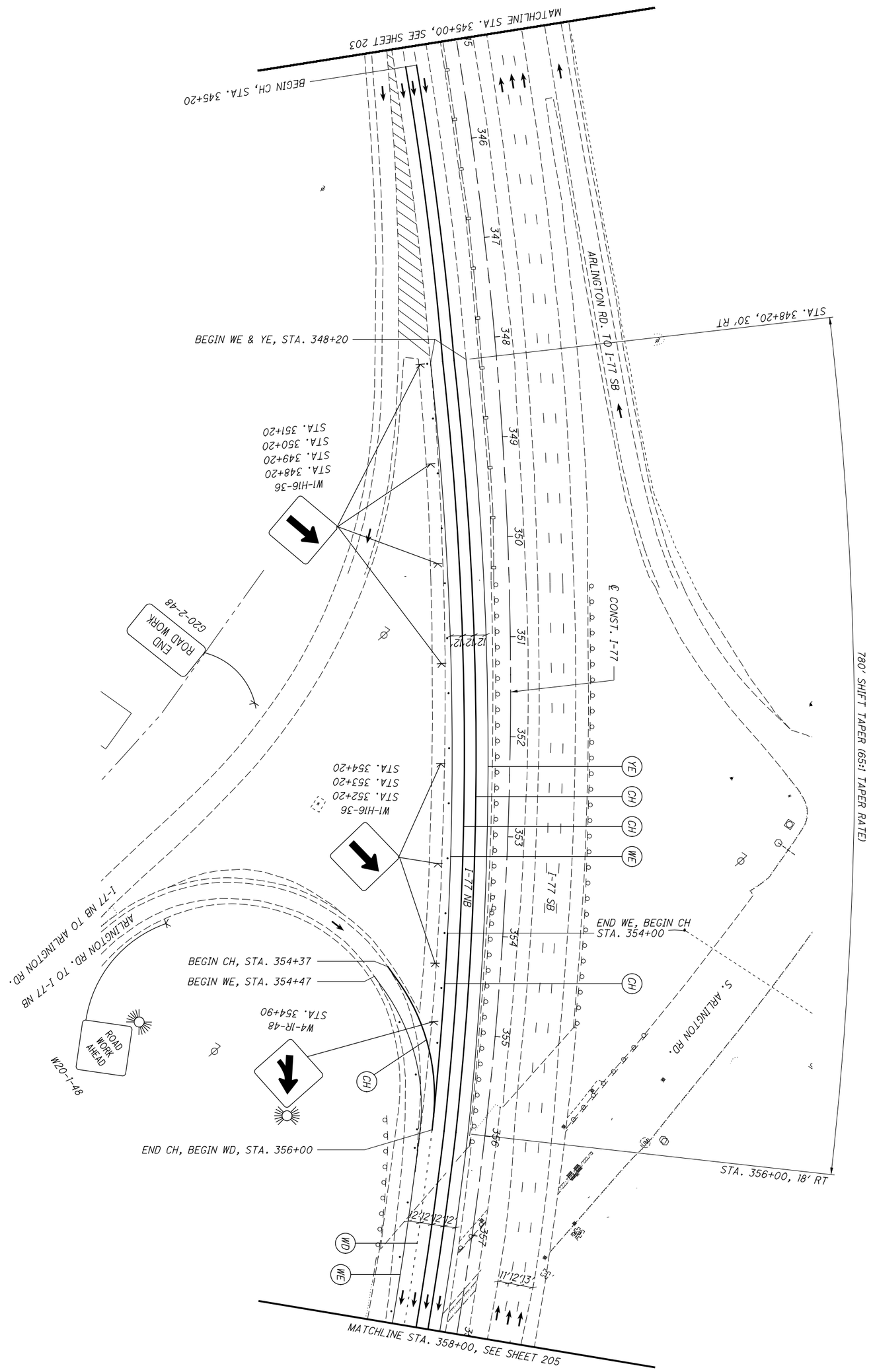
NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

203 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2 I-77 - STA. 332+00 TO STA. 345+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



204 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2 I-77 - STA. 345+00 TO STA. 358+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

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NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 285-240 FOR SOUTHERN CROSSOVER (NB).

MATCHLINE STA. 358+00, SEE SHEET 204

ROAD WORK AHEAD

END CH, BEGIN LL, 63' RT STA. 359+00

FLASHING ARROW PANEL (TYPE C) STA. 360+00

S. ARLINGTON RD.

780' RAMP MERGE (65:1 TAPER RATE)

I-77 NB

I-77 SB

℄ CONST. I-77

W.Z. IMPACT ATTENUATOR

BEGIN PB STA. 364+50

STA. 364+60, 73' RT

BEGIN CH, STA. 364+65

W1-4bL-48 STA. 367+00

NORTH Akron

RELOCATED SIGN FROM GORE

ROAD WORK AHEAD

540' PB FLARE (19:1 MIN FLARE RATE)

END WD STA. 366+80, 51' RT

BEGIN PB STA. 367+30

W.Z. IMPACT ATTENUATOR

ONLY ONLY

R3-H8cg-48 STA. 367+80

SOUTH Canton

EXIT 120 Arlington Rd

EXIT ONLY

ALL LANES

OVERLAY PLACED IN PREVIOUS PHASE

OVERLAY PLACED IN PREVIOUS PHASE

END CH, BEGIN WE, YE STA. 368+50

BEGIN PB, 32" STA. 368+80

END LL, BEGIN CH, STA. 369+00

W.Z. IMPACT ATTENUATOR

E5-H2dL-48 STA. 369+40

EXIT

EX. LA R/W

STA. 370+00, 45' RT

ROAD CLOSED

R11-2-48 STA. 368+80

BEGIN YE, STA. 368+32

BEGIN WE, STA. 369+14

MATCHLINE STA. 371+00, SEE SHEET 206

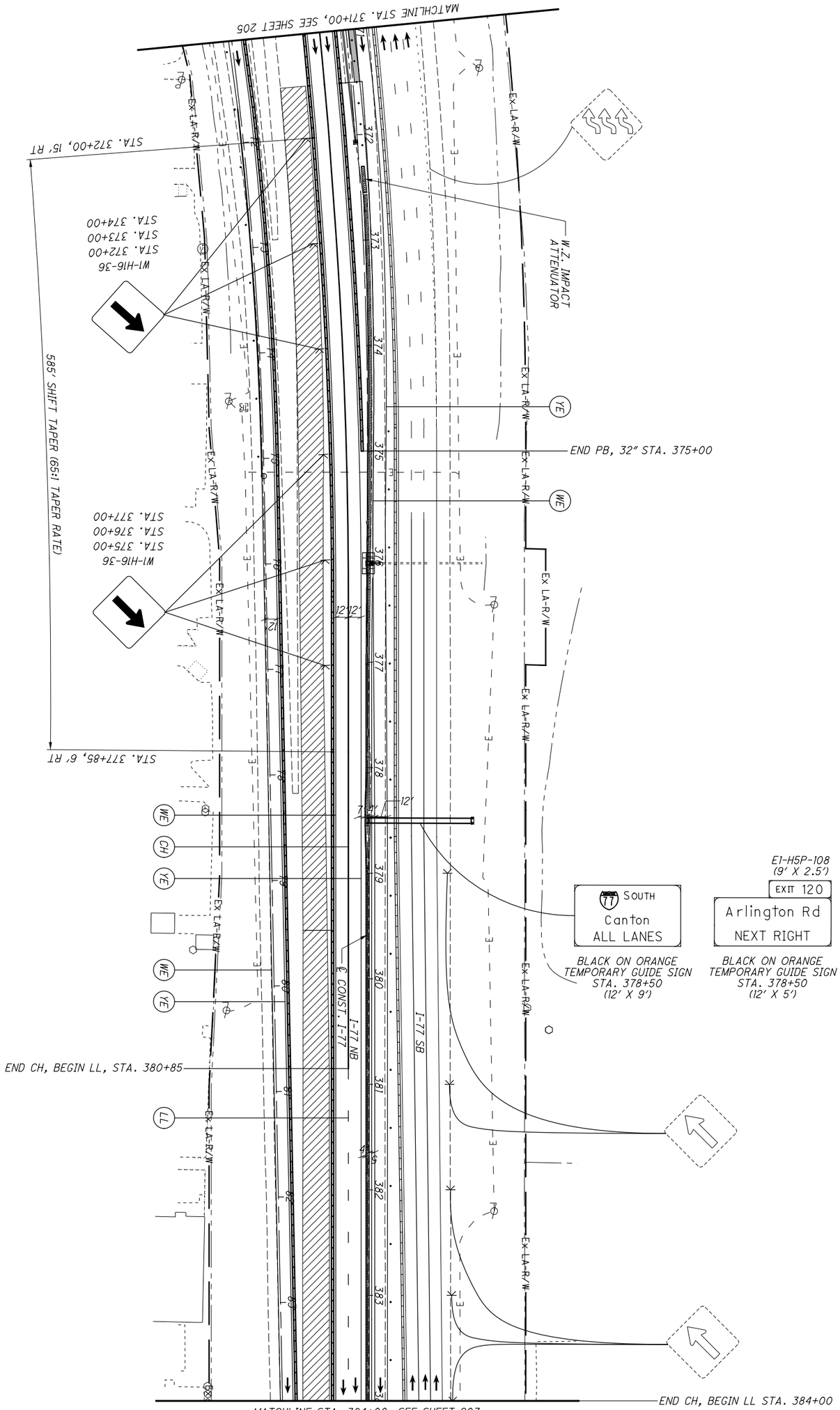
RAMP TO S. ARLINGTON RD.

END ROAD WORK

205 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2 I-77 - STA. 358+00 TO STA. 371+00	CALCULATED . CHECKED . 0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

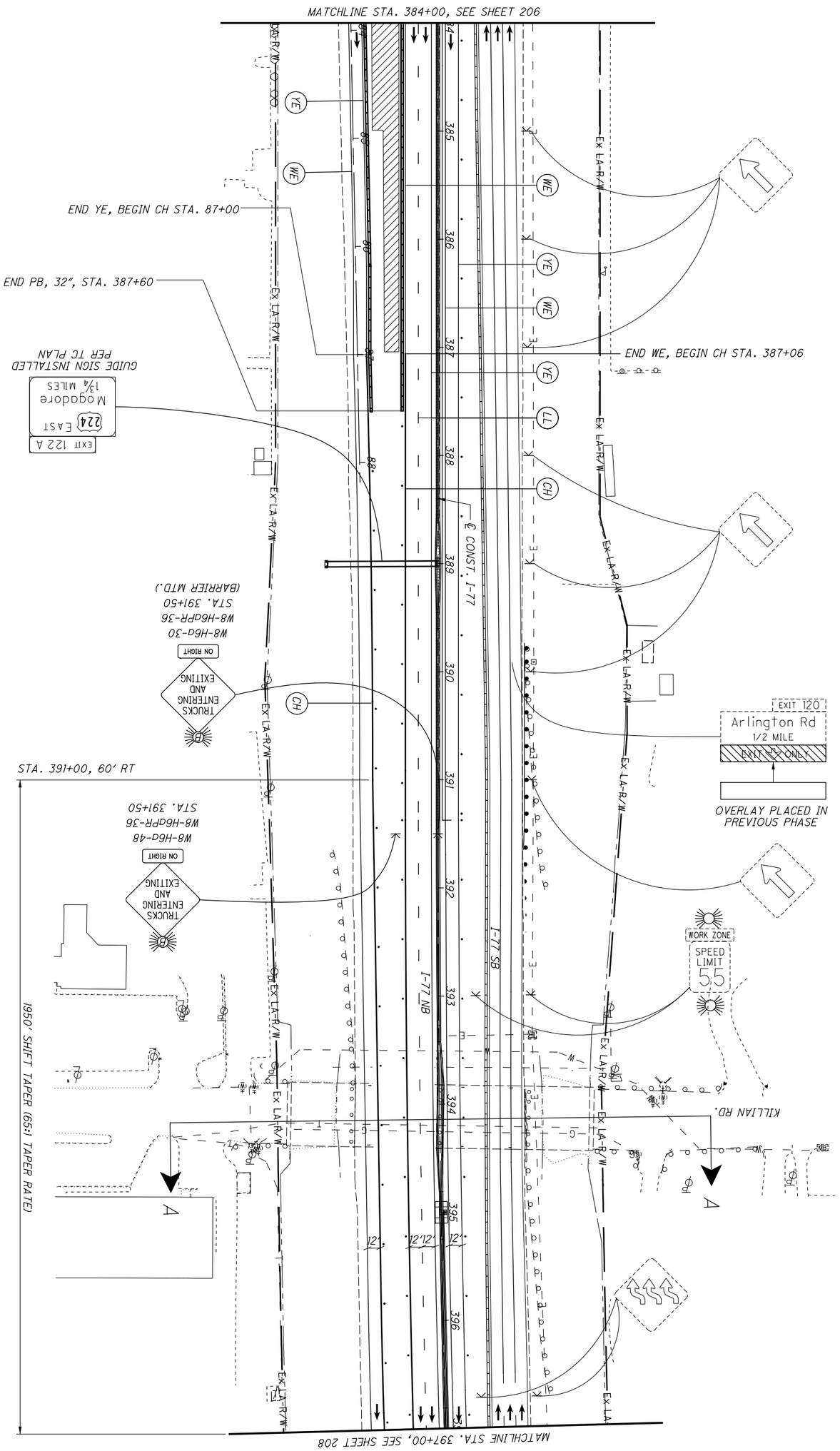
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



206 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2 I-77 - STA. 371+00 TO STA. 384+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET	N

NOTES:

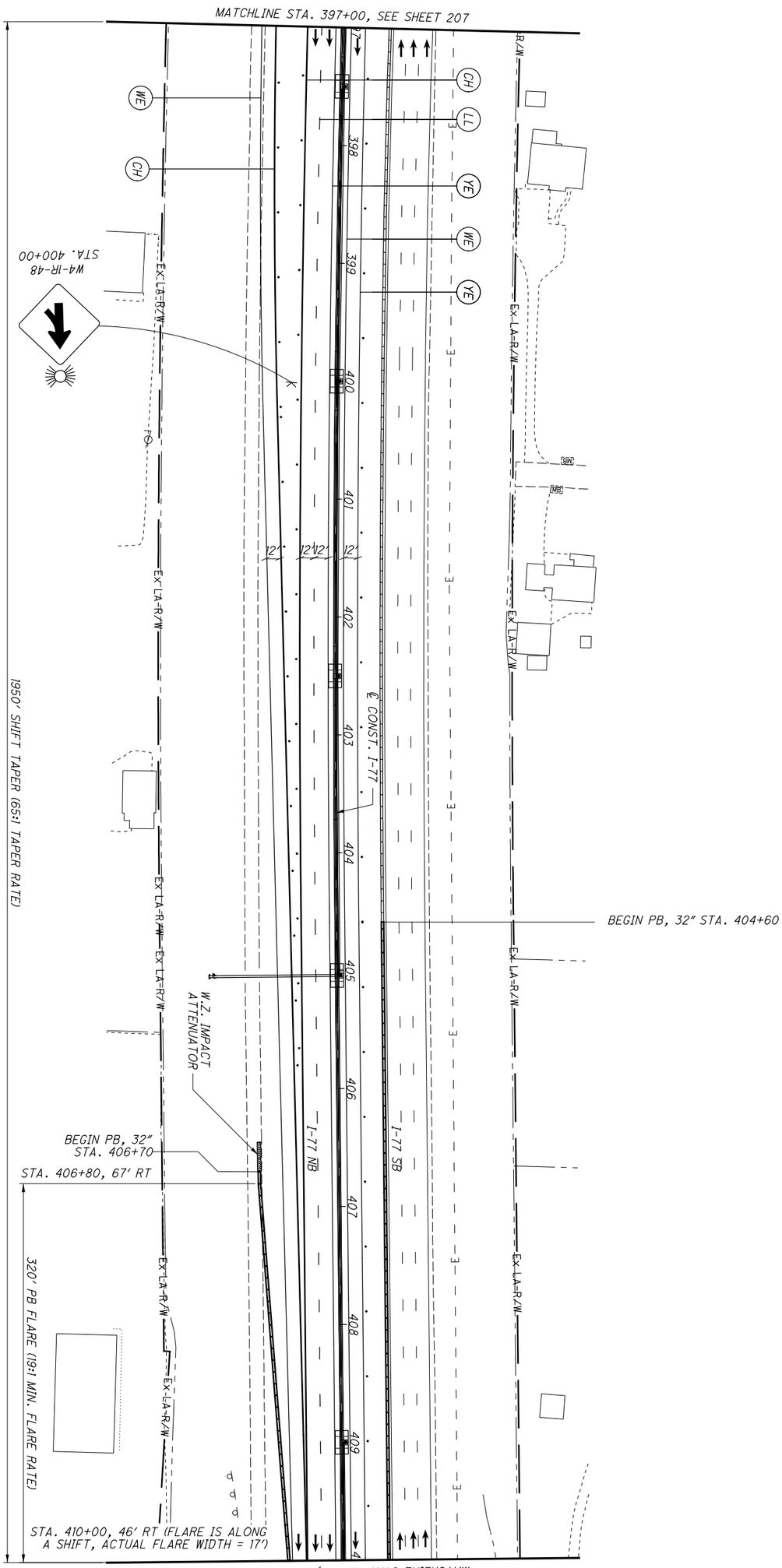
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 194-199 FOR TYPICAL SECTIONS.
4. MAINTAIN MINIMUM OF 2' OFFSET FROM CENTER PIER BARRIER.



207 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2 I-77 - STA. 384+00 TO STA. 397+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

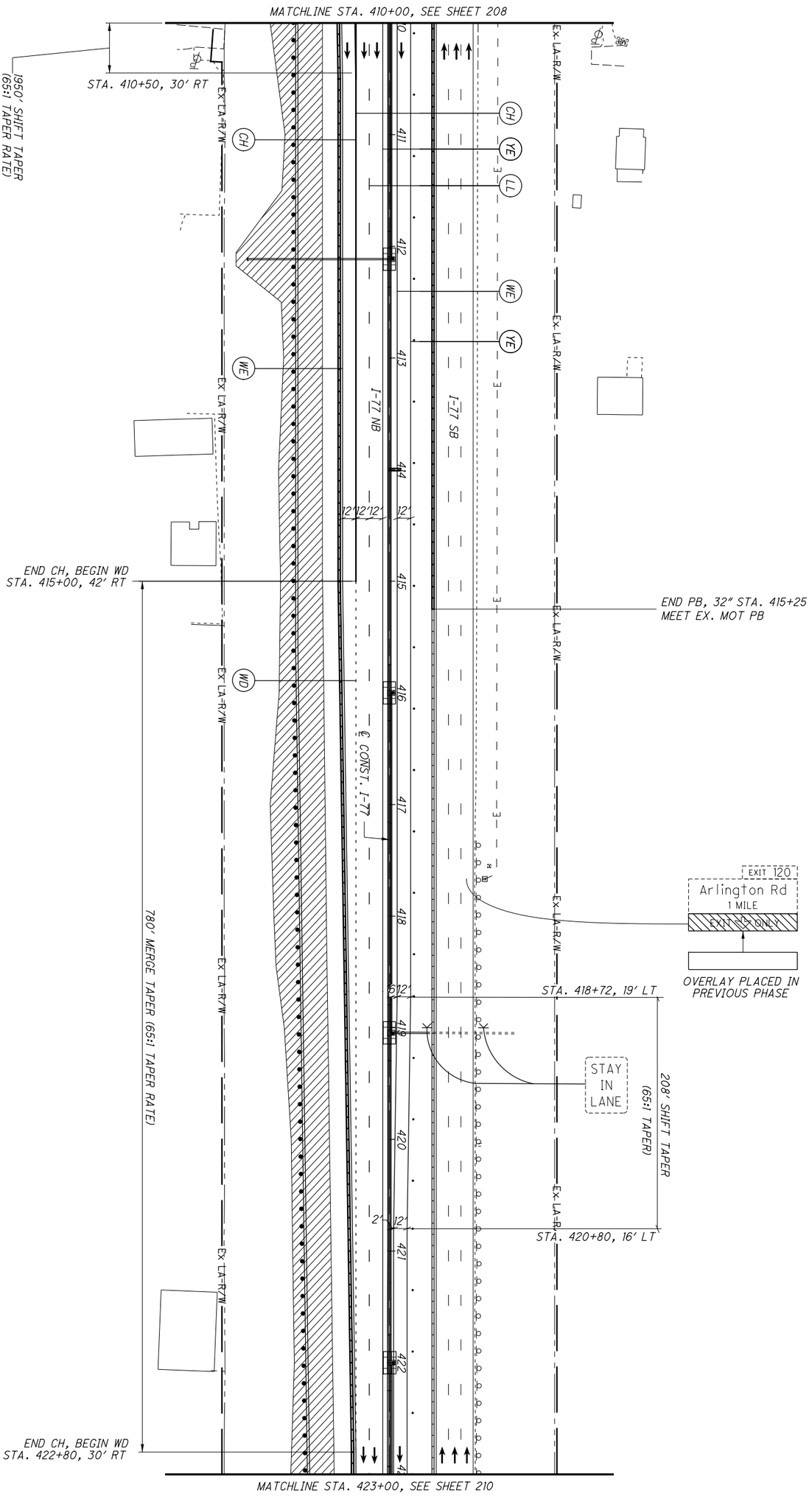
NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



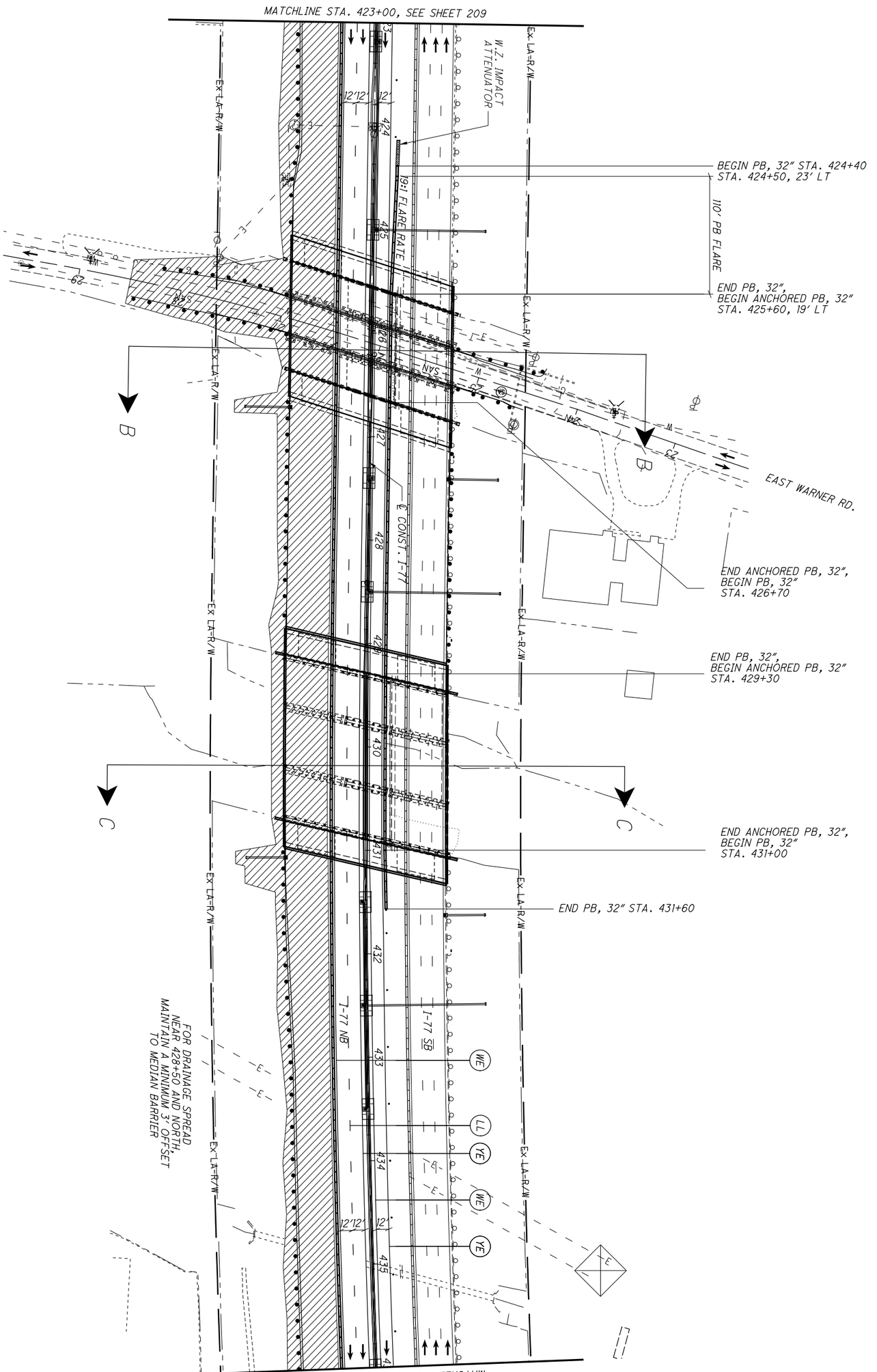
NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



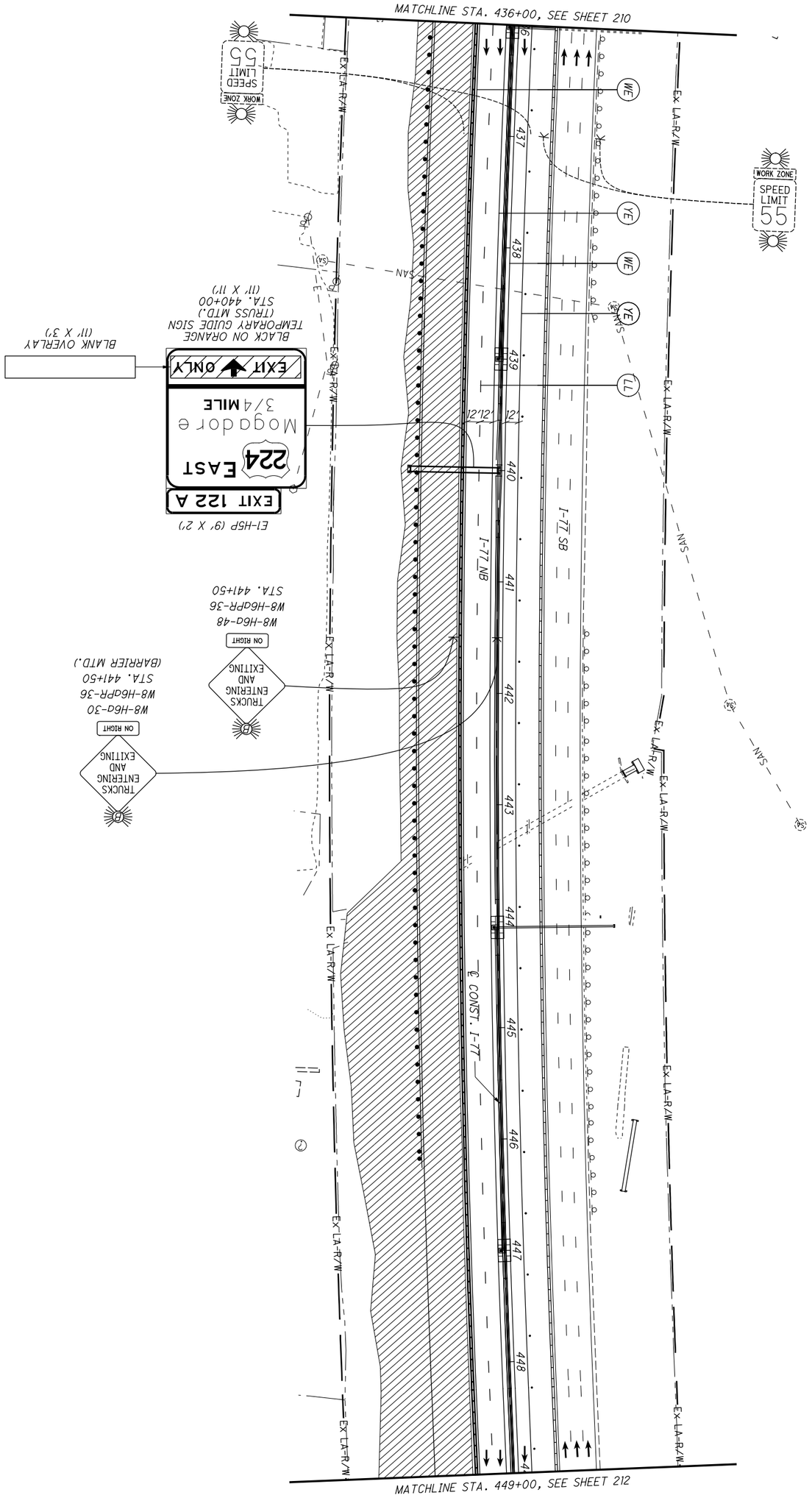
NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 194-199 FOR TYPICAL SECTIONS.



NOTES:

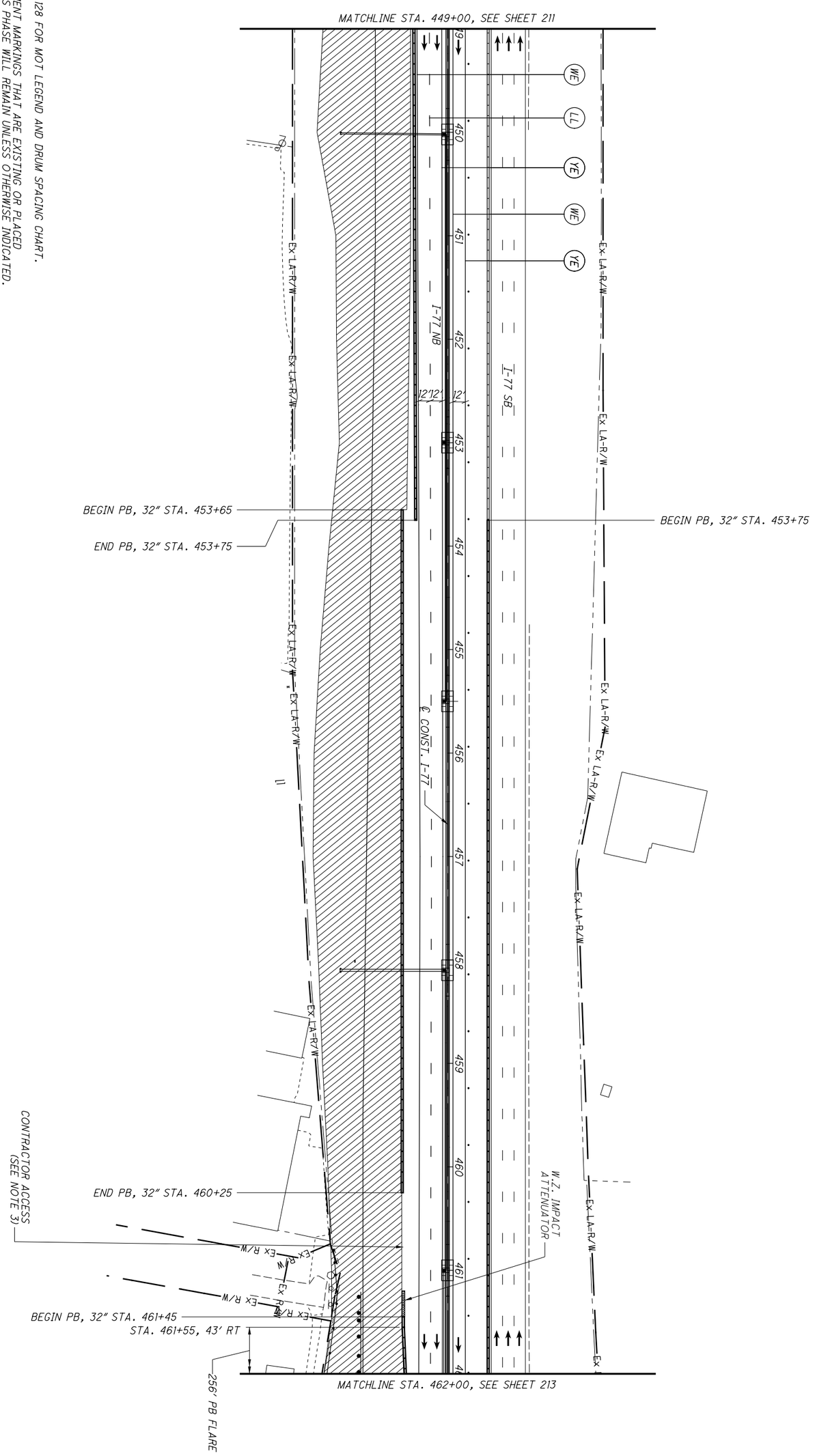
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



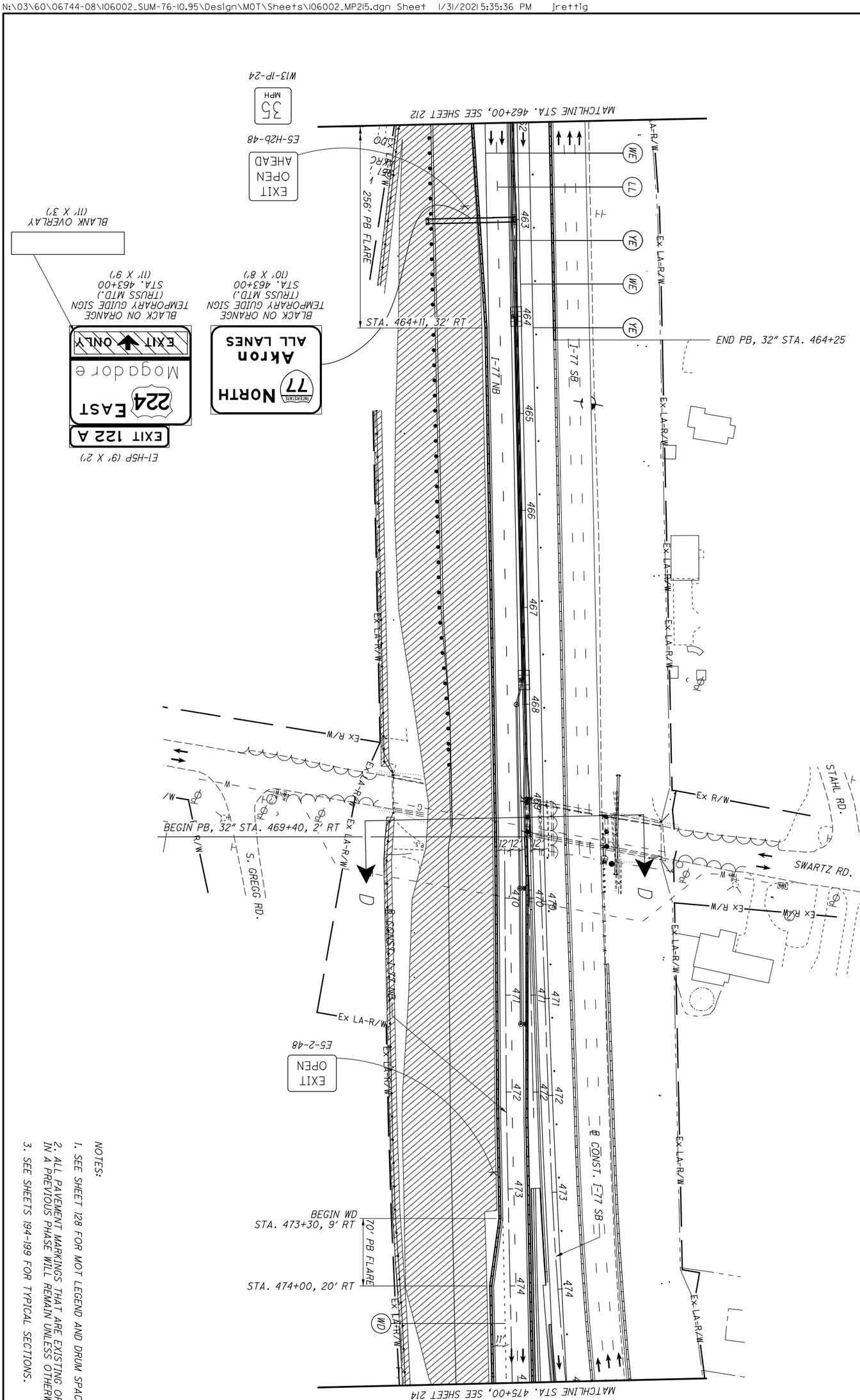
211 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2 I-77 - STA. 436+00 TO STA. 449+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. INSTALL CONTRACTOR ACCESS POINTS PER ODOT STANDARD CONSTRUCTION DRAWING MT-103.10. ACCESS POINTS MAY BE RELOCATED AT THE APPROVAL OF THE ENGINEER, AS NECESSARY TO ACCOMPLISH CONSTRUCTION ACTIVITIES. CONTRACTOR ACCESS POINTS ARE SHOWN FOR INFORMATIONAL PURPOSES AND THE LOCATION CAN BE ADJUSTED AT THE APPROVAL OF THE ENGINEER.



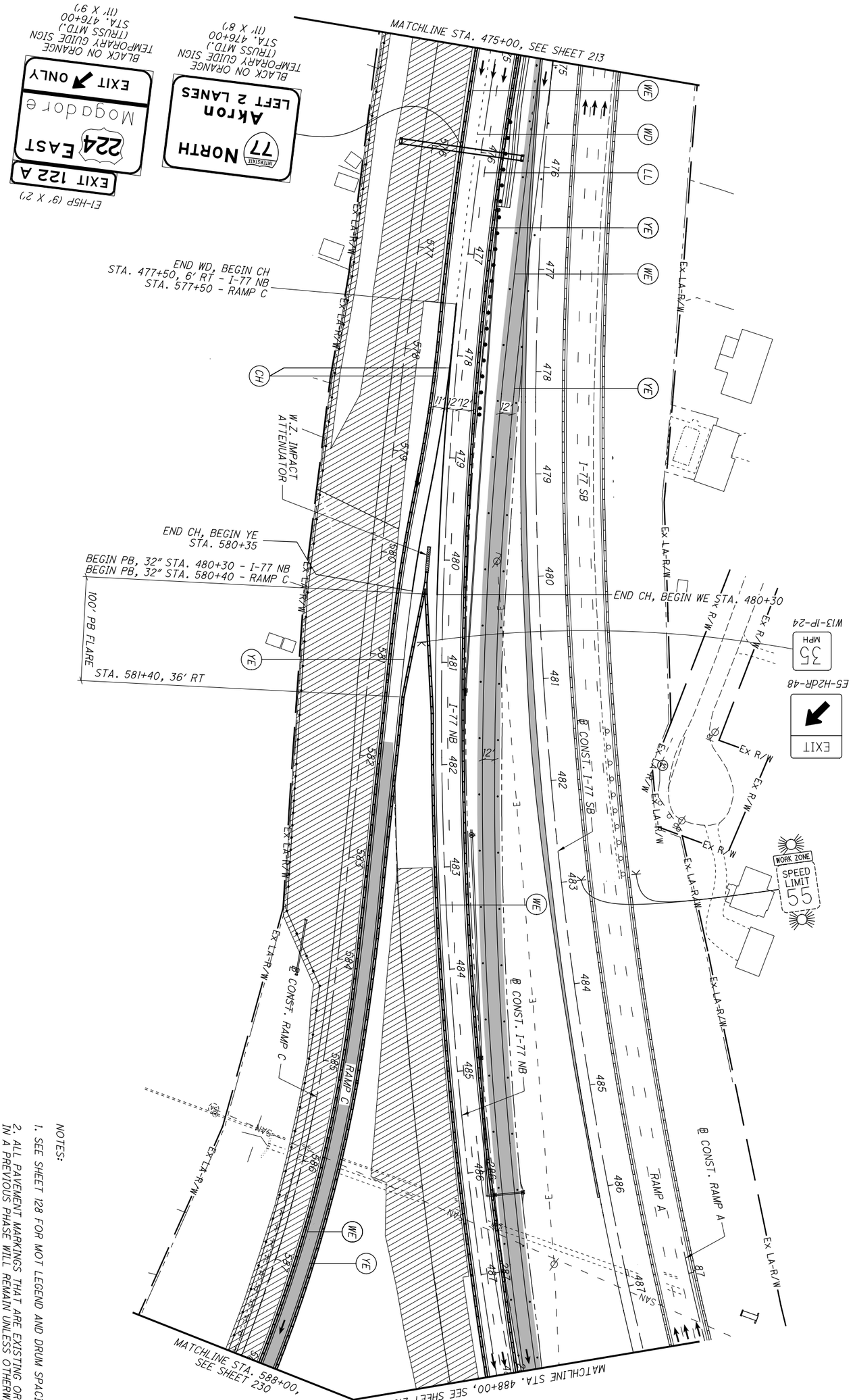
212 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2 I-77 - STA. 449+00 TO STA. 462+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET



NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 194-199 FOR TYPICAL SECTIONS.

213 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2 I-77 - STA. 462+00 TO STA. 475+00	CALCULATED . CHECKED . 0 50 25 100 HORIZONTAL SCALE IN FEET



NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 293-261 FOR NORTHERN CROSSOVER (NB).

214 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2 I-77 - STA. 475+00 TO STA. 488+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

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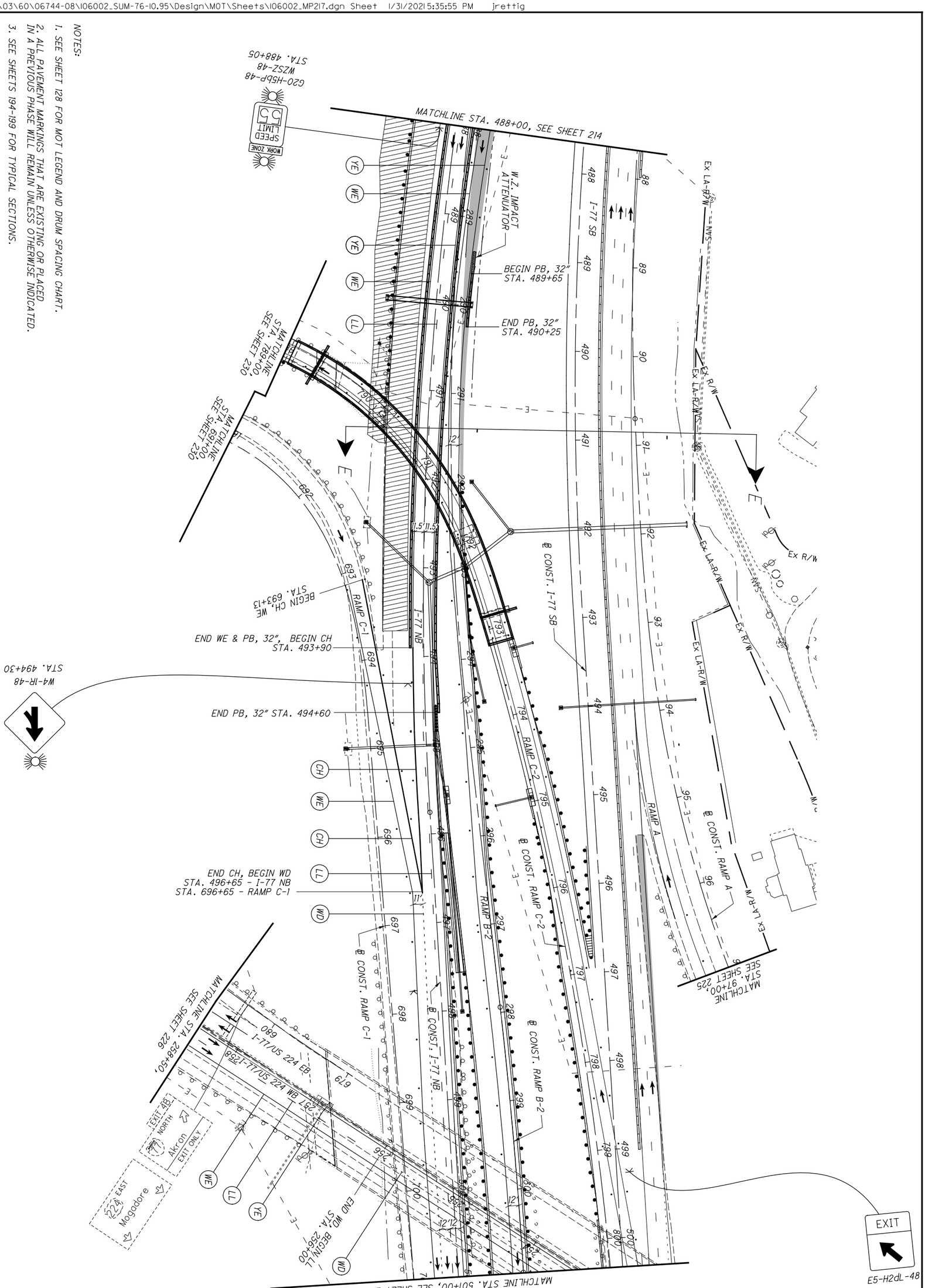
NOTES:

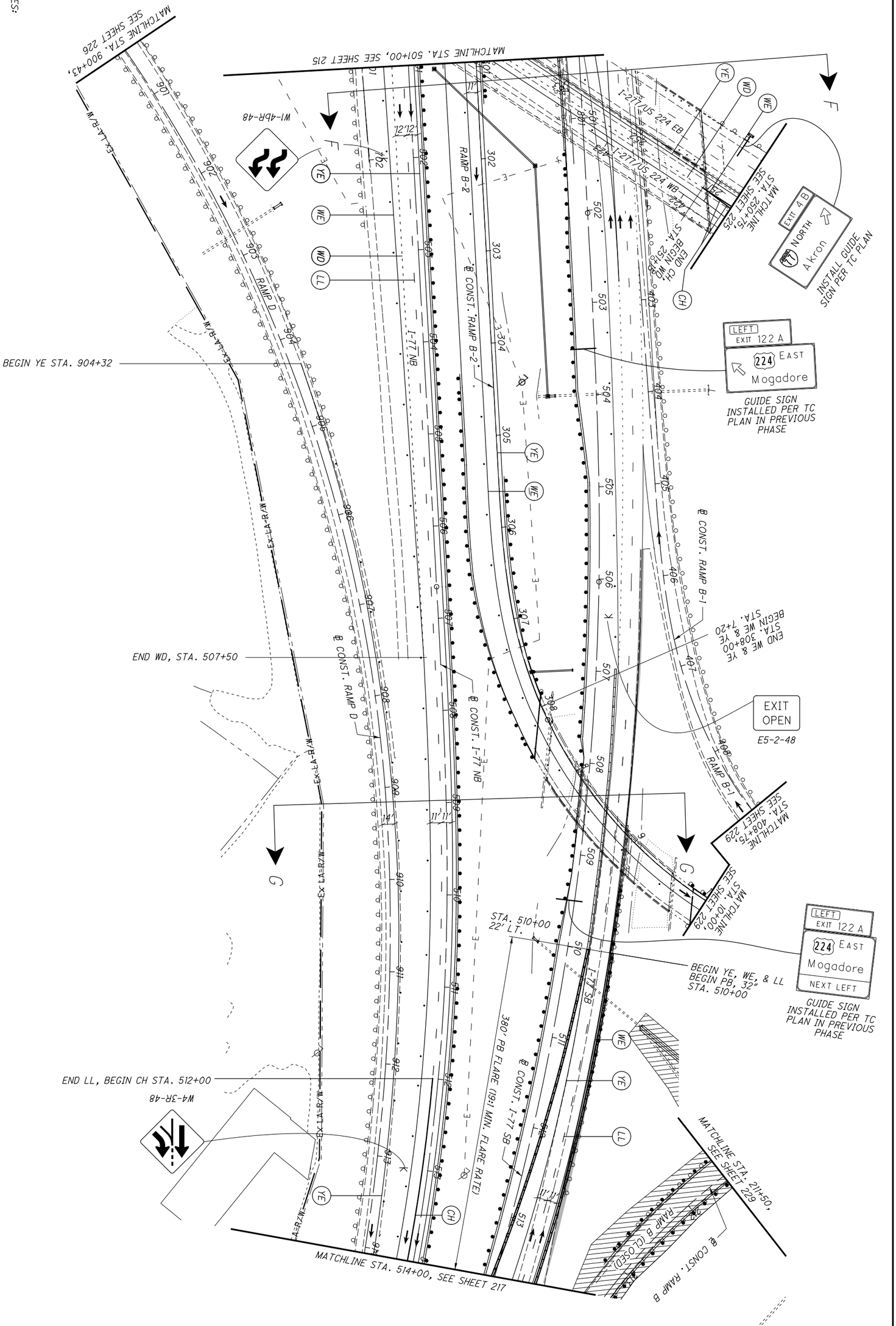
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 194-199 FOR TYPICAL SECTIONS.



215 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2 I-77 - STA. 488+00 TO STA. 501+00	CALCULATED . CHECKED . 0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 194-199 FOR TYPICAL SECTIONS.



216 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2 I-77 - STA. 501+00 TO STA. 514+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

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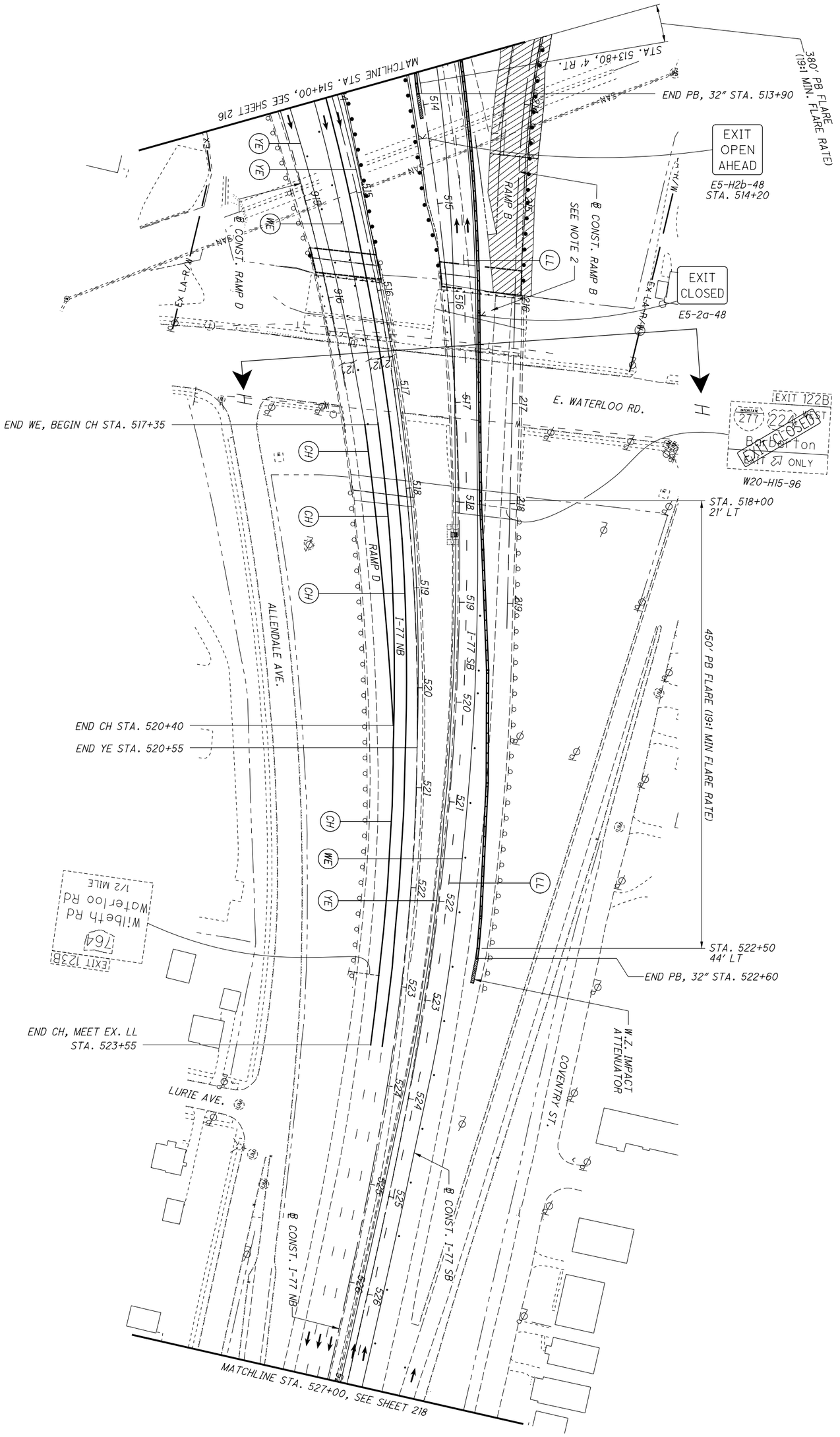
NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 194-199 FOR TYPICAL SECTIONS.
4. SEE RAMP B DETOUR SHEET 119 FOR ADDITIONAL SIGNS.

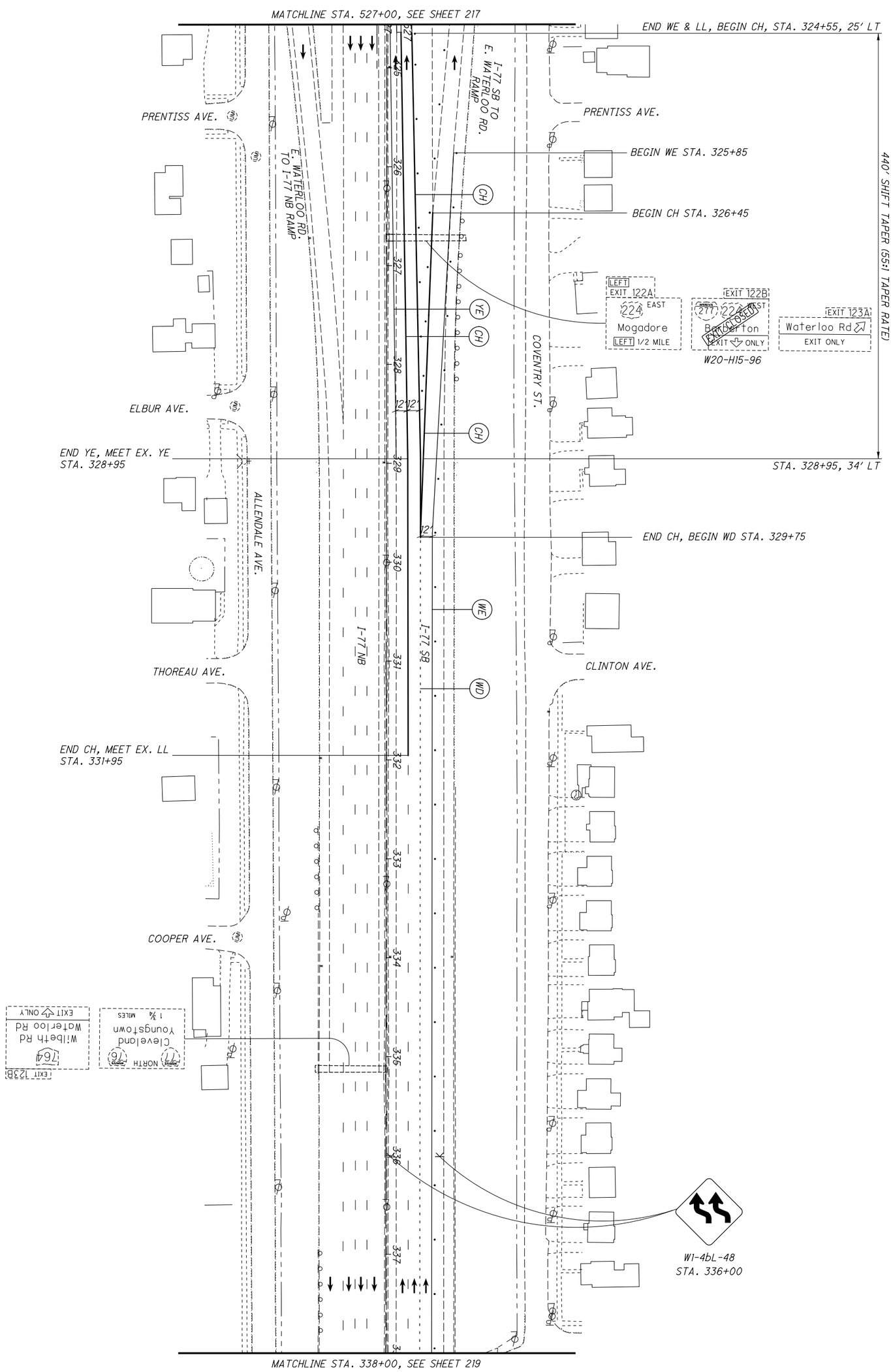


217 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2 I-77 - STA. 514+00 TO STA. 527+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET	N

N:\03\60\06744-08\I06002_SUM-76-I0.95\Design\MOT\Sheets\I06002_MP220.dgn Sheet 1/31/2021 5:36:54 PM jrettig

NOTES:

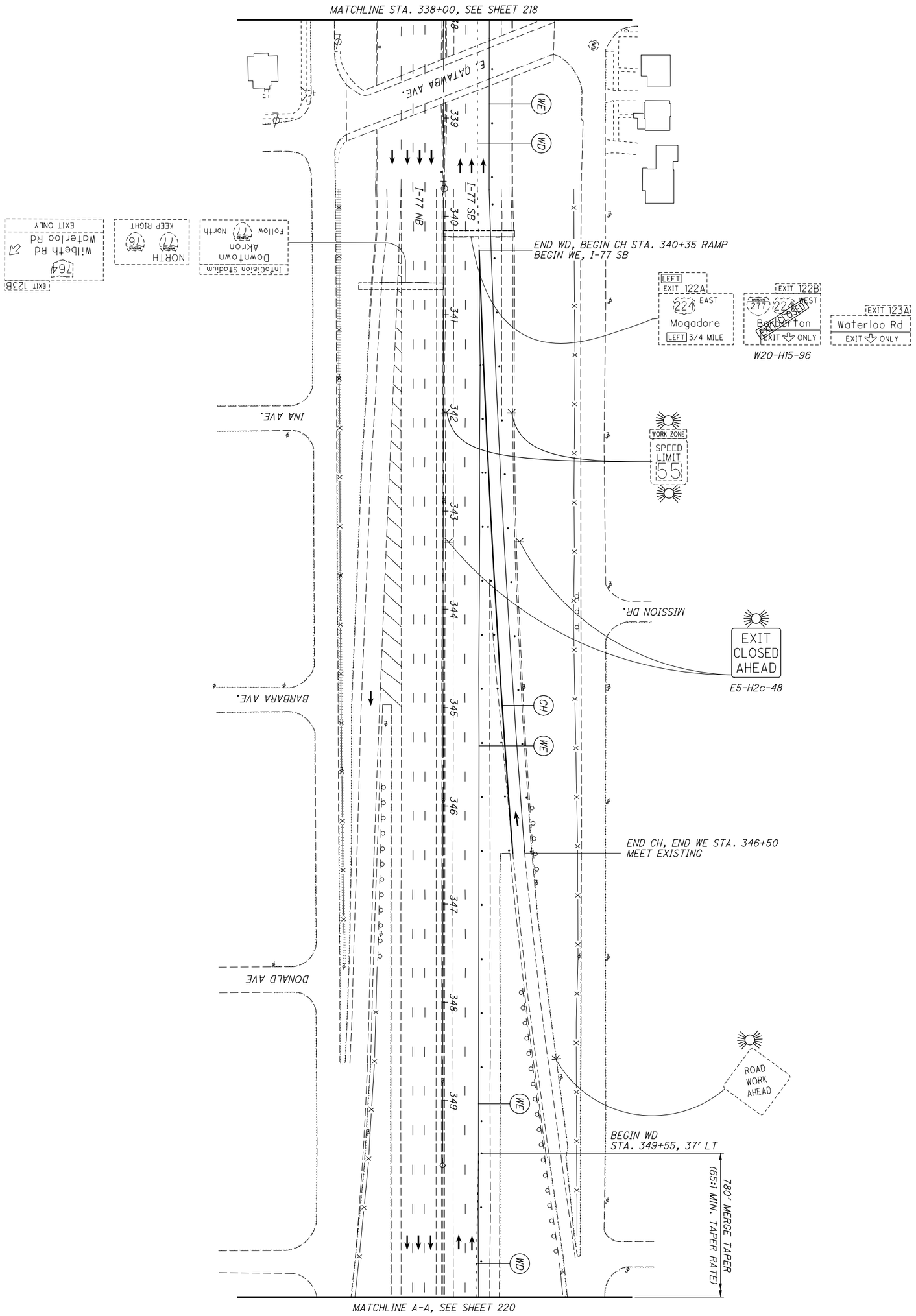
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



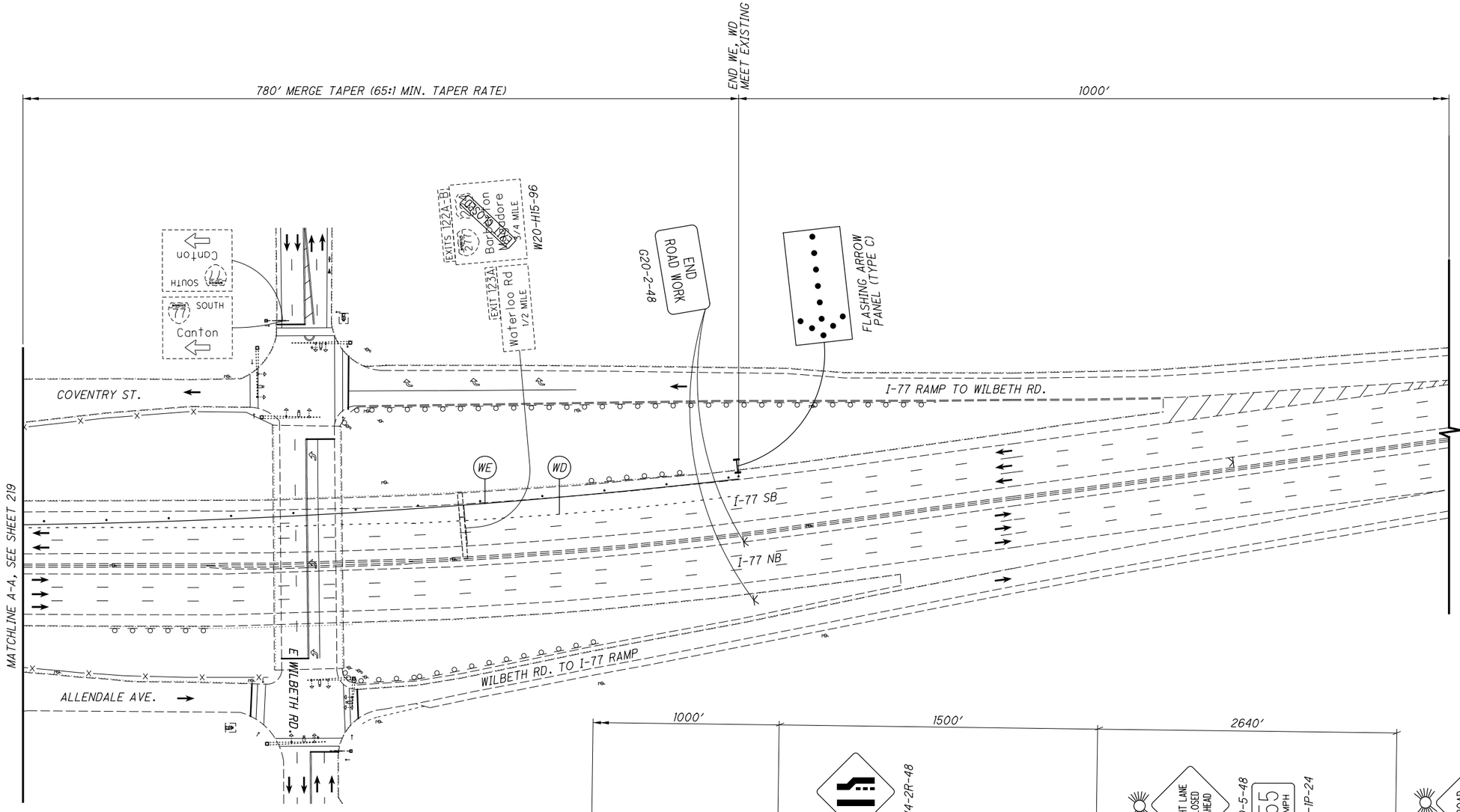
218 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2 I-77 - STA. 527+00 TO STA. 328+00	CALCULATED . CHECKED . 0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



219 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2 I-77 - STA. 338+00 TO M.L. A-A	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET	N



NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.

2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED .
CHECKED .

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I-77 - M.L. A-A TO NORTH LIMITS

SUM-77/277/224
VARIOUS

220
1288

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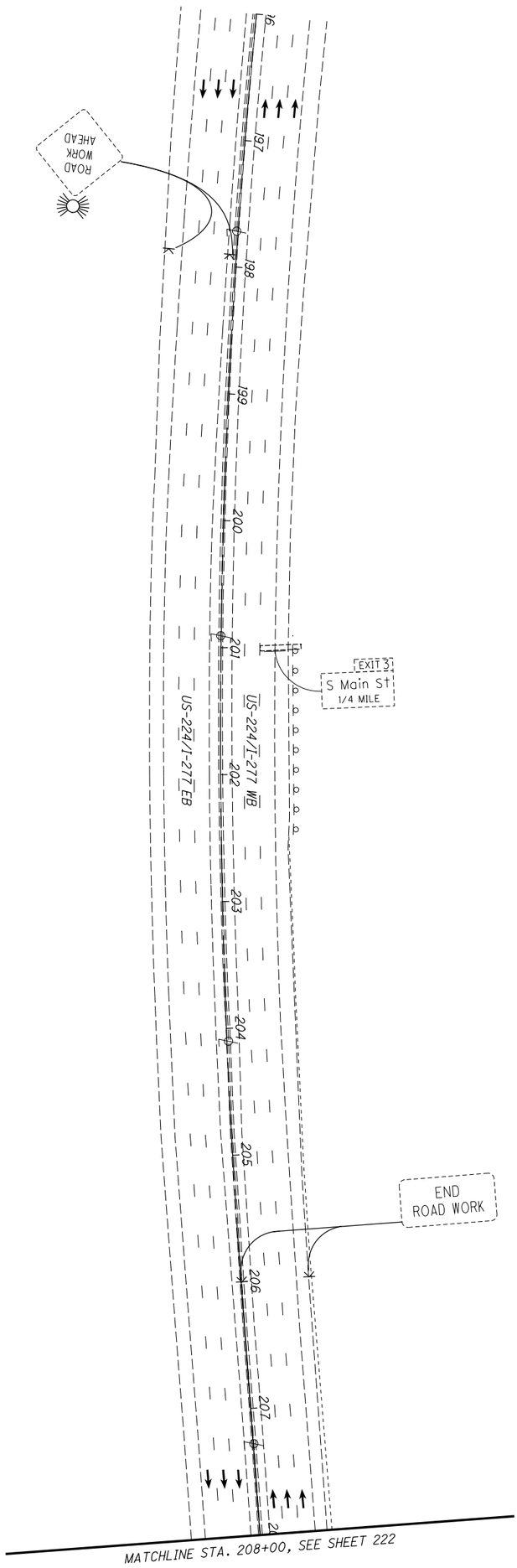
NOTES:

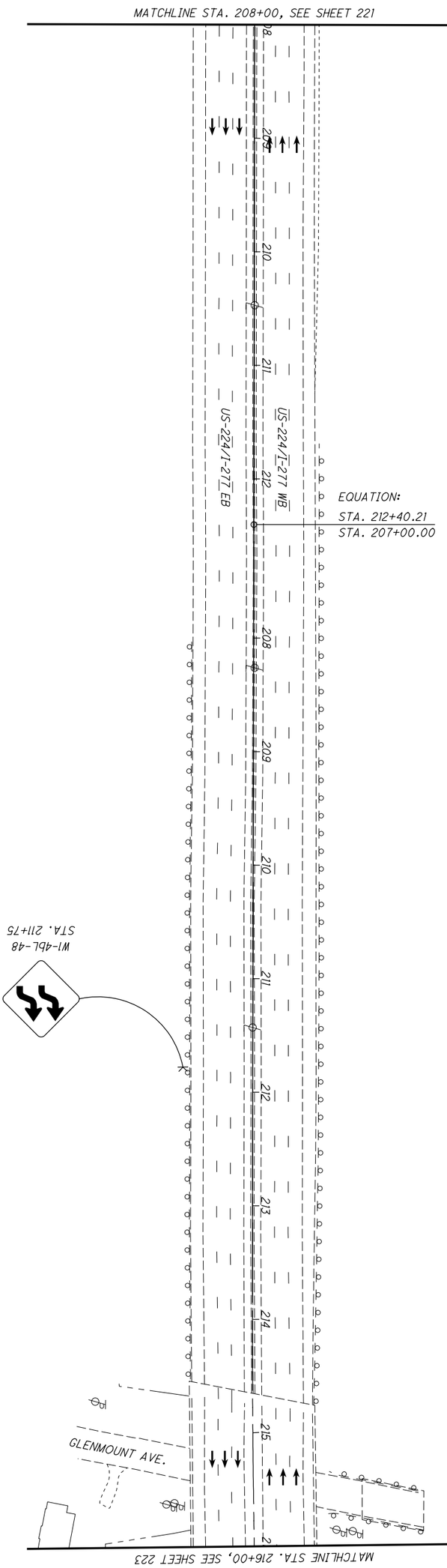
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEET 146 FOR OTHER PREVIOUSLY PLACED ADVANCE WARNING SIGNS.



221 / 1288	**SUM-77/277/224** **VARIOUS**	**MAINTENANCE OF TRAFFIC PLAN - PHASE 2** **US 224/I-277 - STA. 196+00 TO STA. 208+00**	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

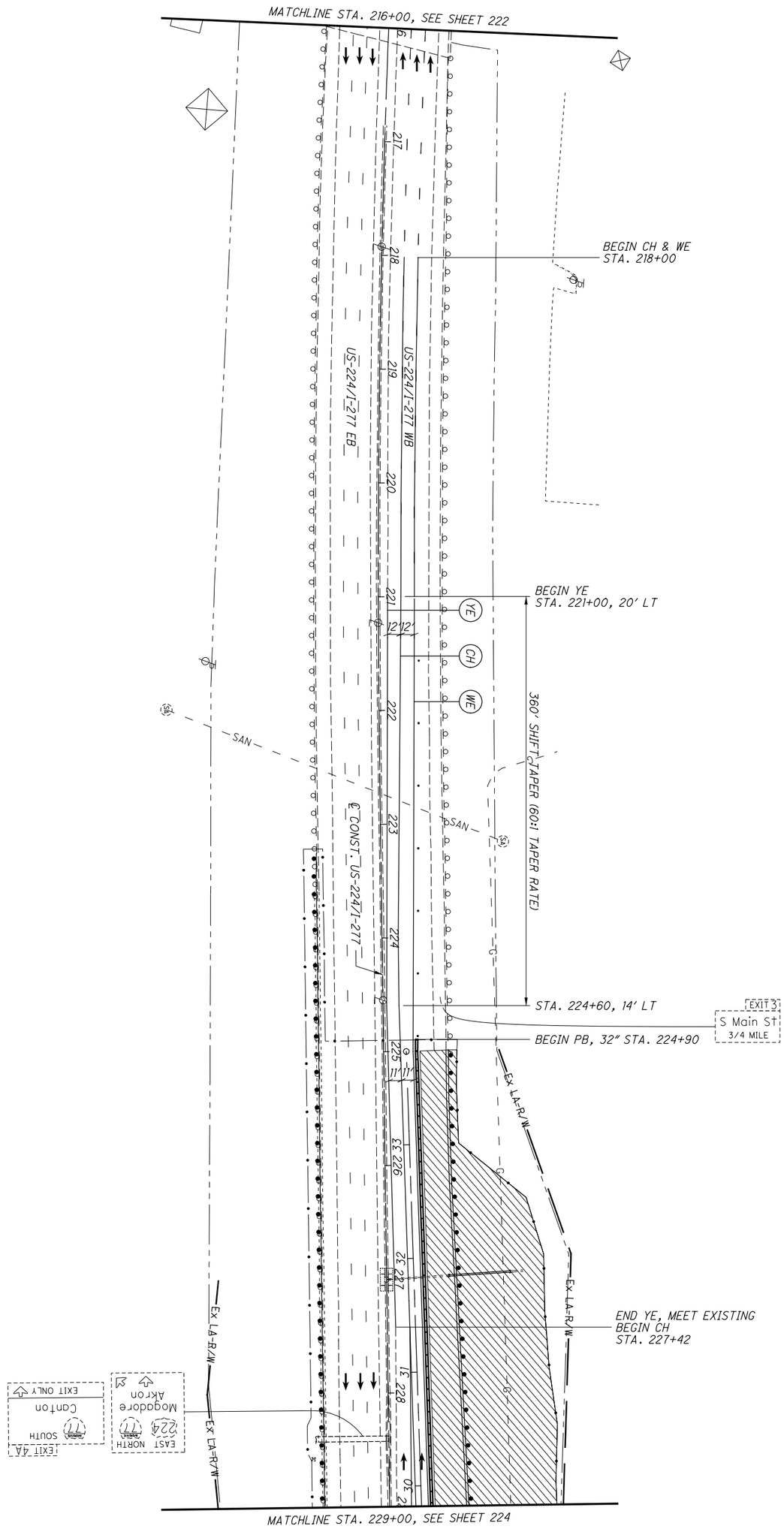
NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



NOTES:

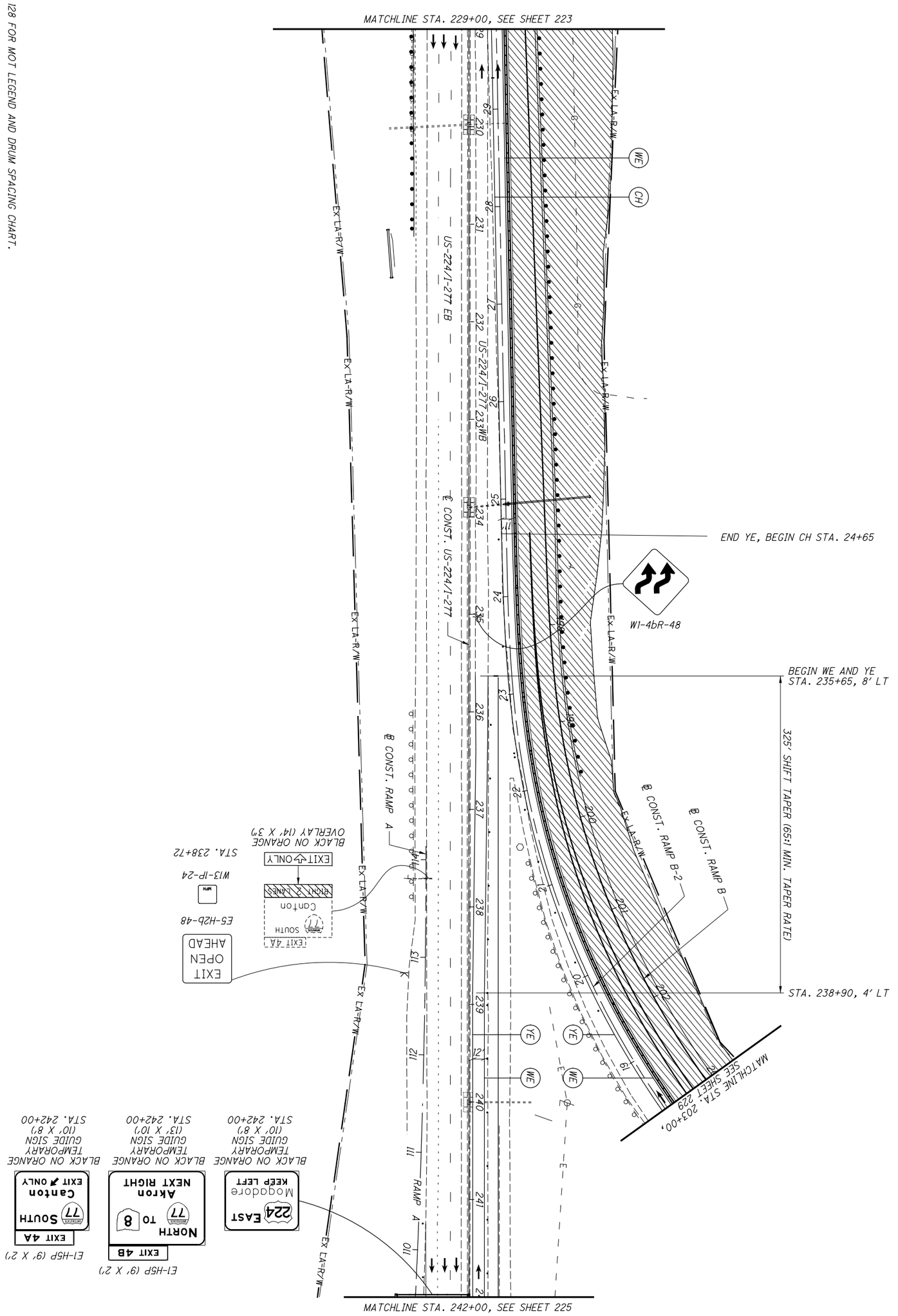
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



223 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2 US-224 / I-277 - STA. 216+00 TO STA. 229+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

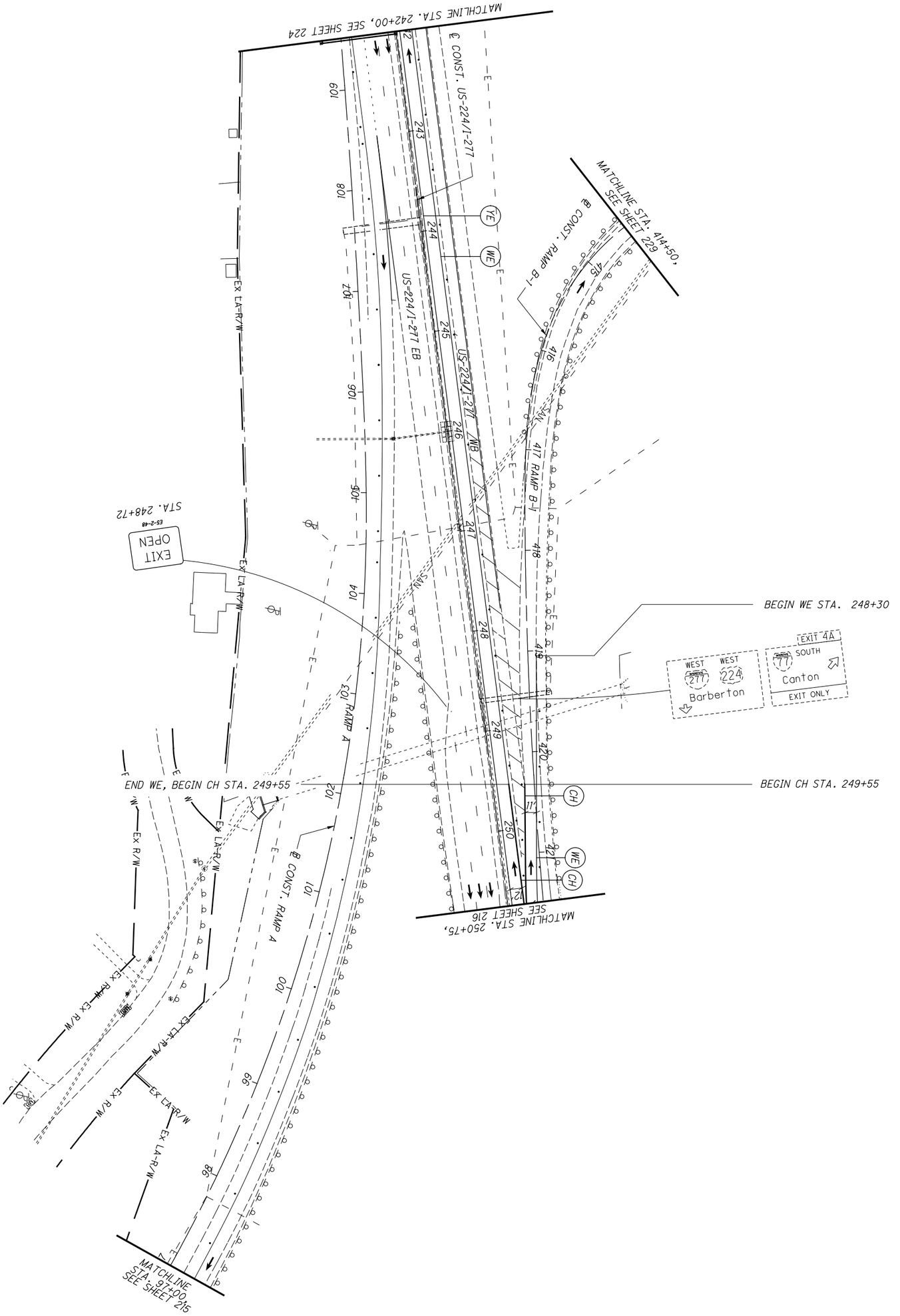


224 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2 US-224/I-277 - STA. 229+00 TO STA. 242+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\I06002_SUM-76-10.95\Design\MOT\Sheets\I06002_MP227.dgn Sheet 1/31/2021 5:37:21 PM jrettig

NOTES:

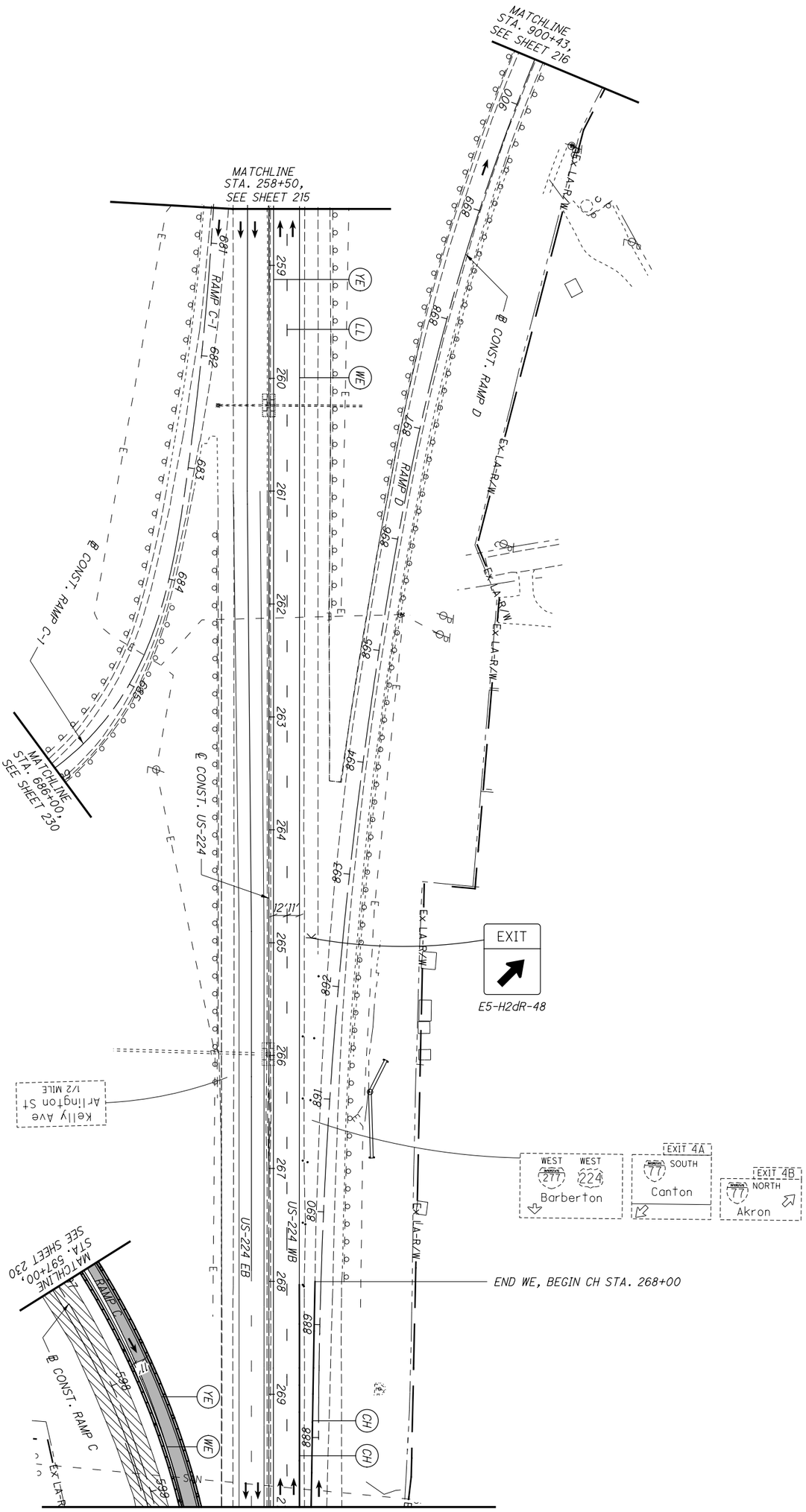
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



225 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2 US-224/I-277 - STA. 242+00 TO STA. 250+75	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

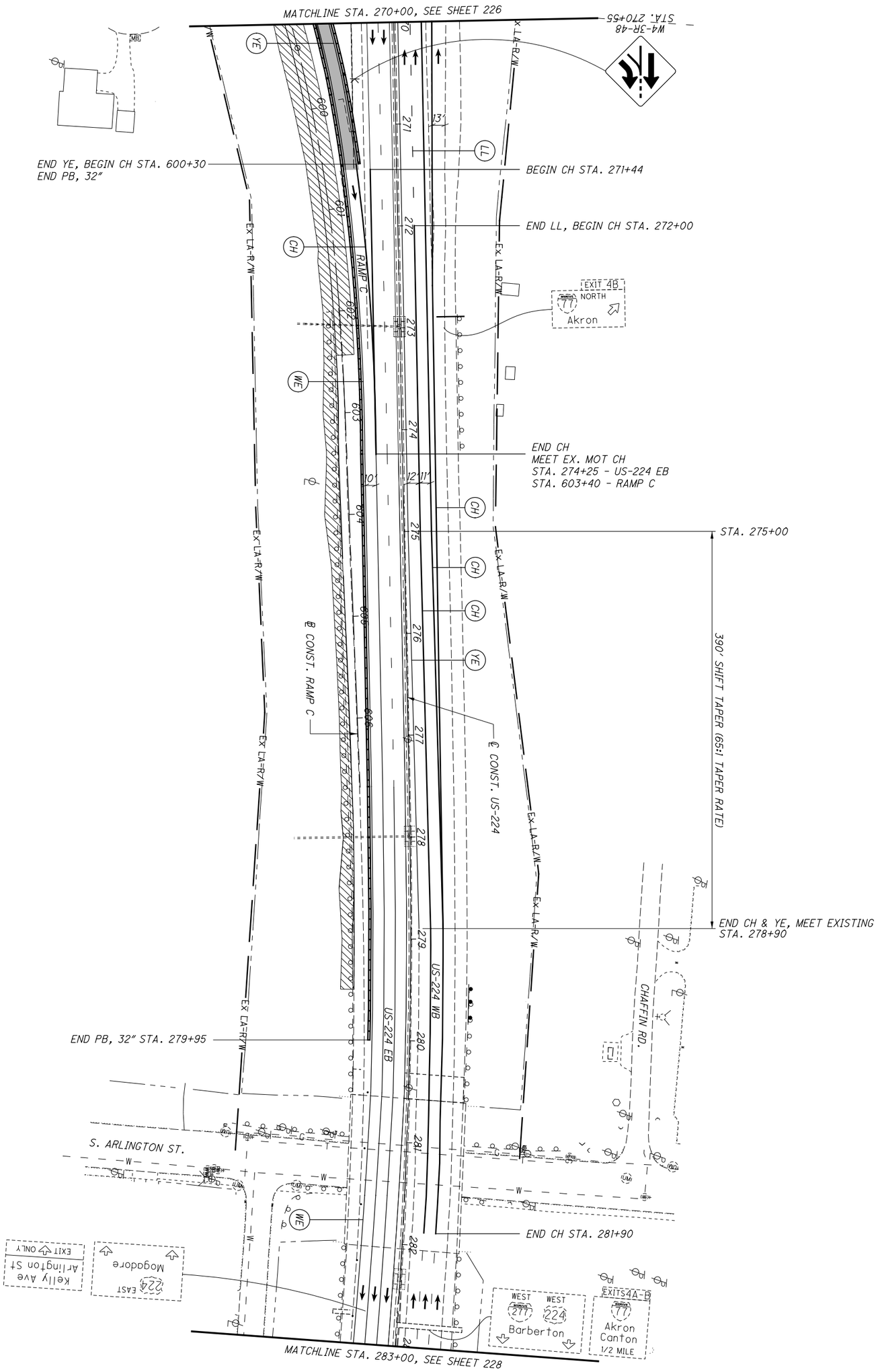
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MP229.dgn Sheet 1/31/2021 5:37:43 PM jrettig

NOTES:

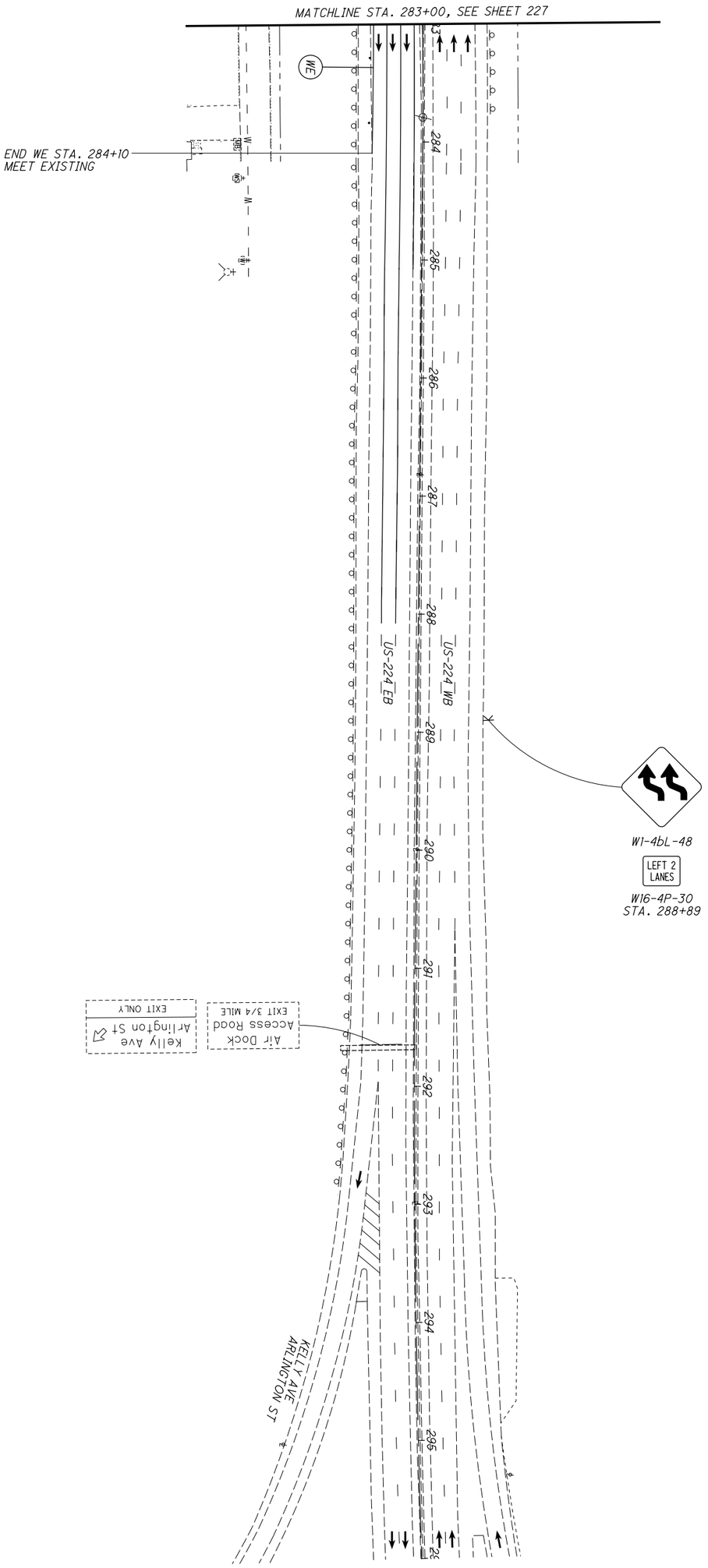
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



227 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2 US-224 - STA. 270+00 TO STA. 283+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

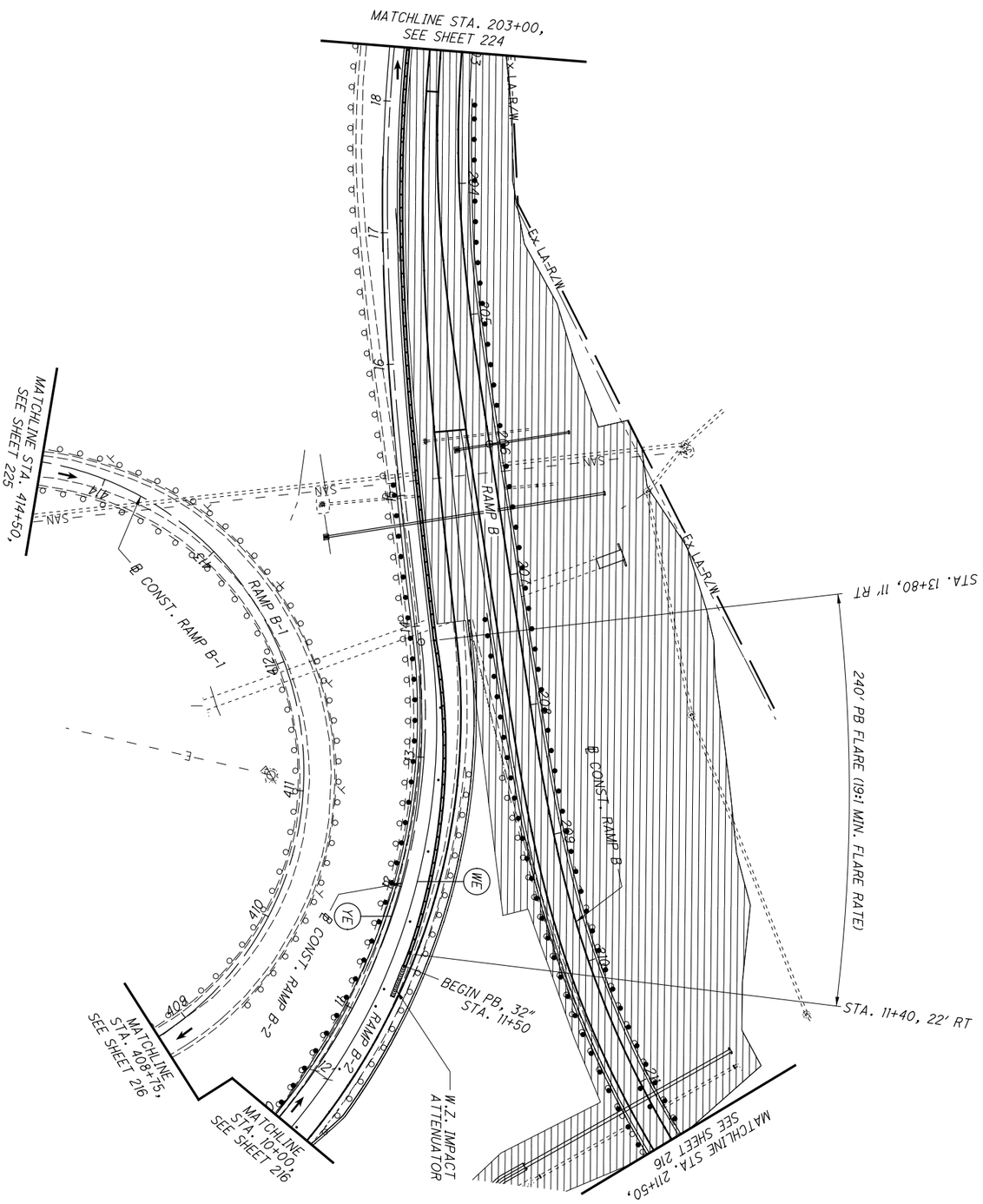
NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



NOTES:

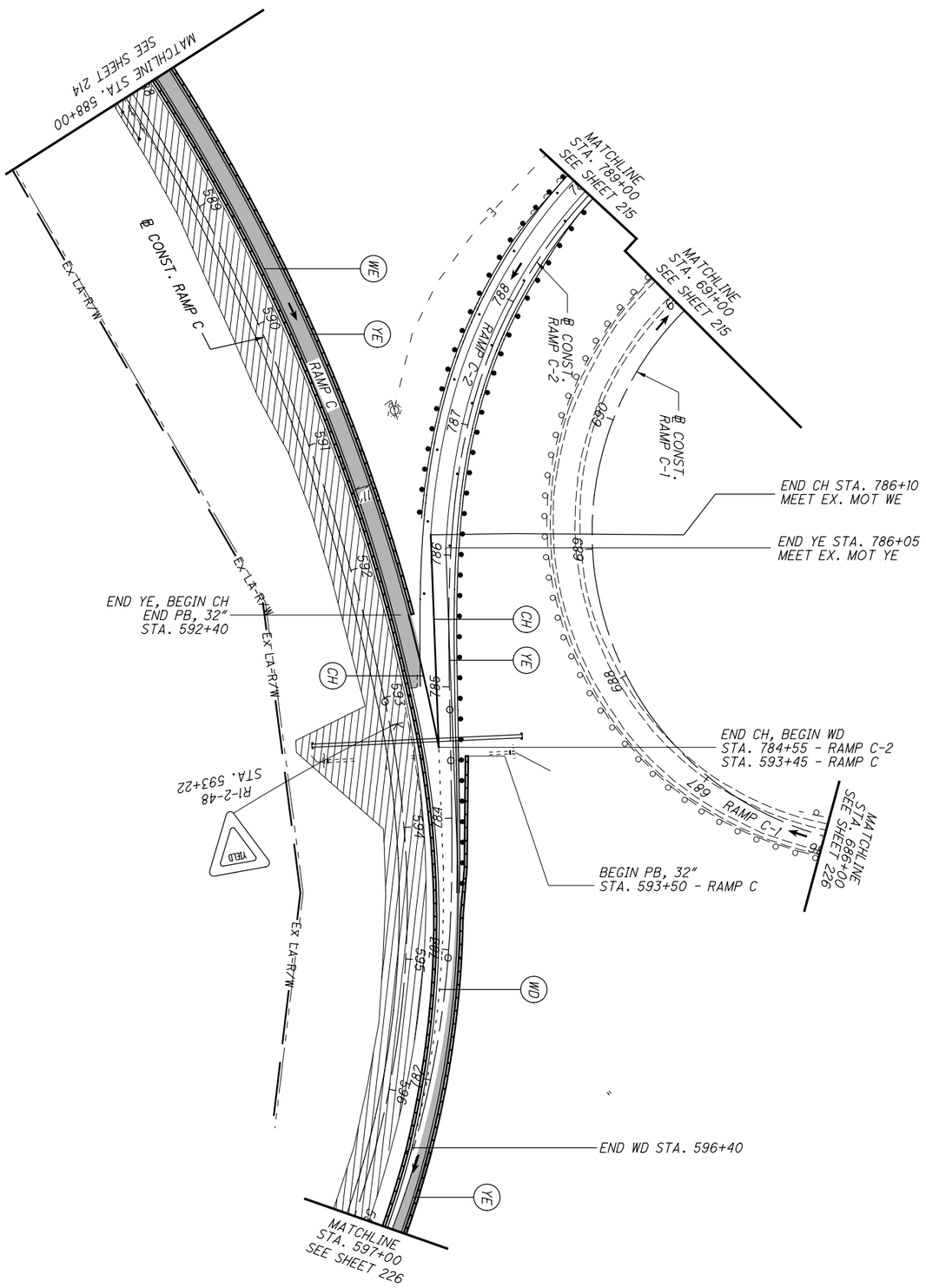
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2 RAMP B - STA. 203+00 TO STA. 211+50	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

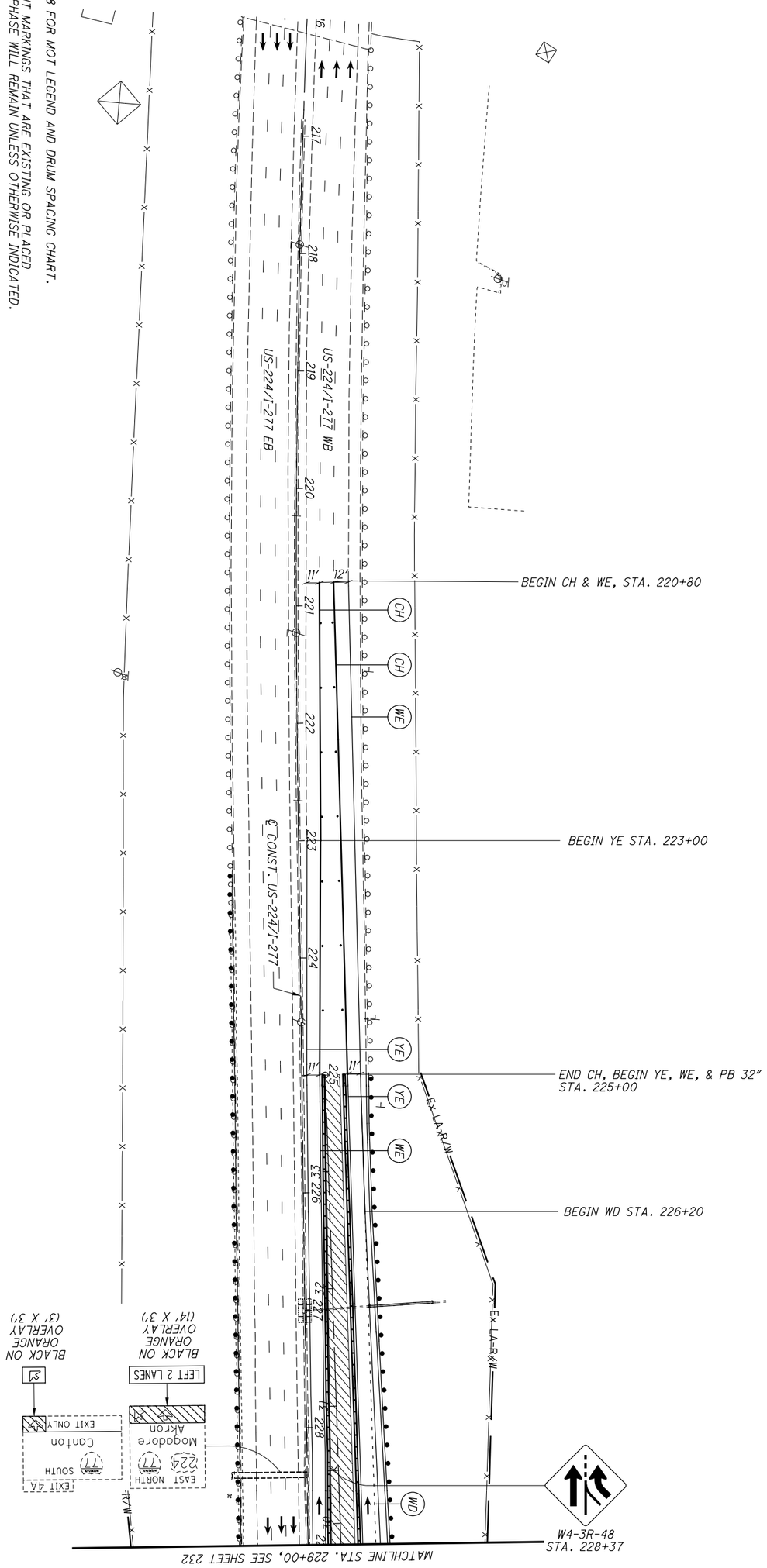
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



230 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2 RAMP C - STA. 588+00 TO STA. 597+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET	N

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

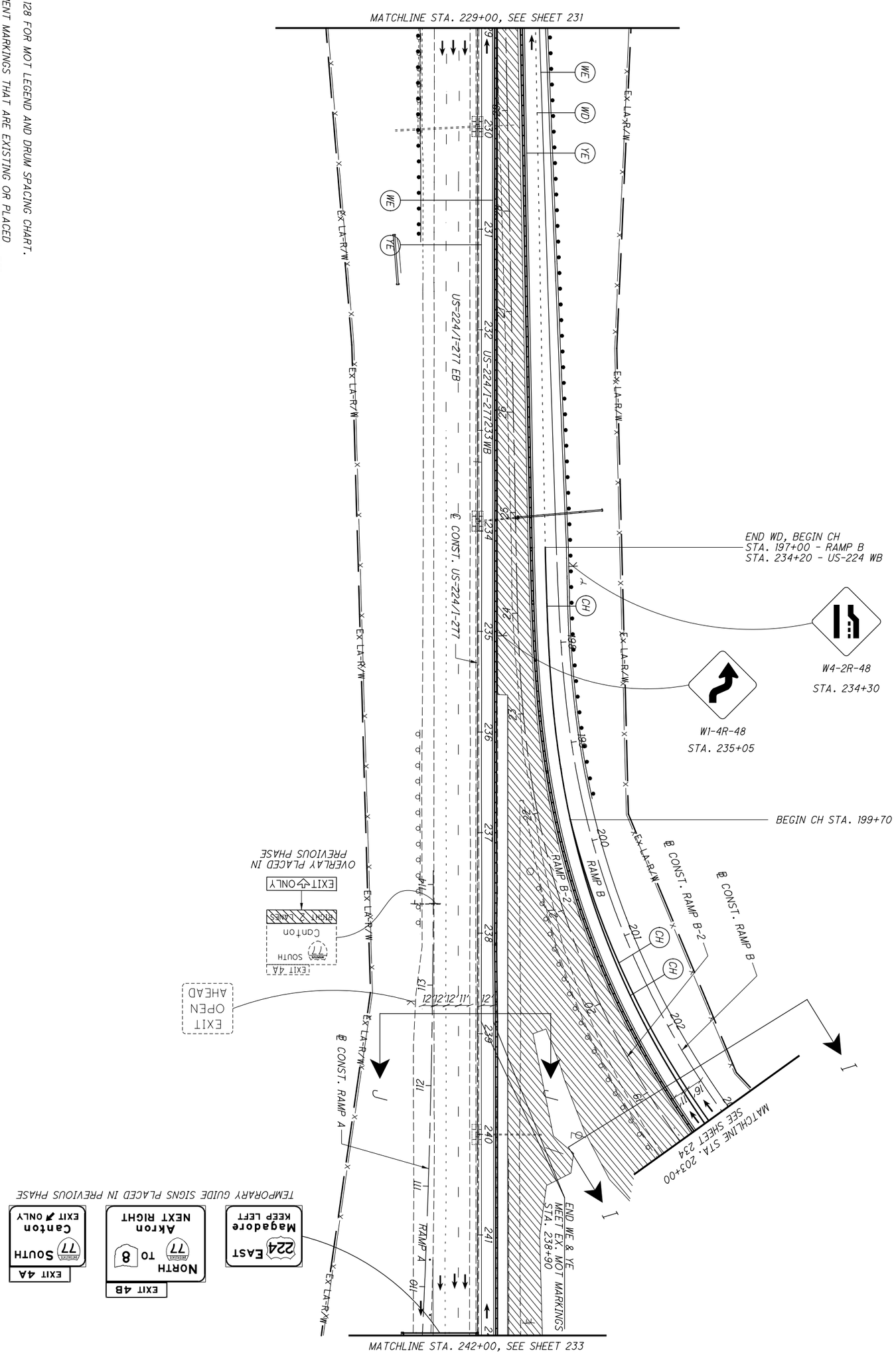


231 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2A US-224/I-277 - STA. 216+00 TO STA. 229+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\I06002_SUM-76-I0.95\Design\MOT\Sheets\I06002_MP235.dgn Sheet 1/31/2021 5:39:03 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 194-199 FOR TYPICAL SECTIONS.

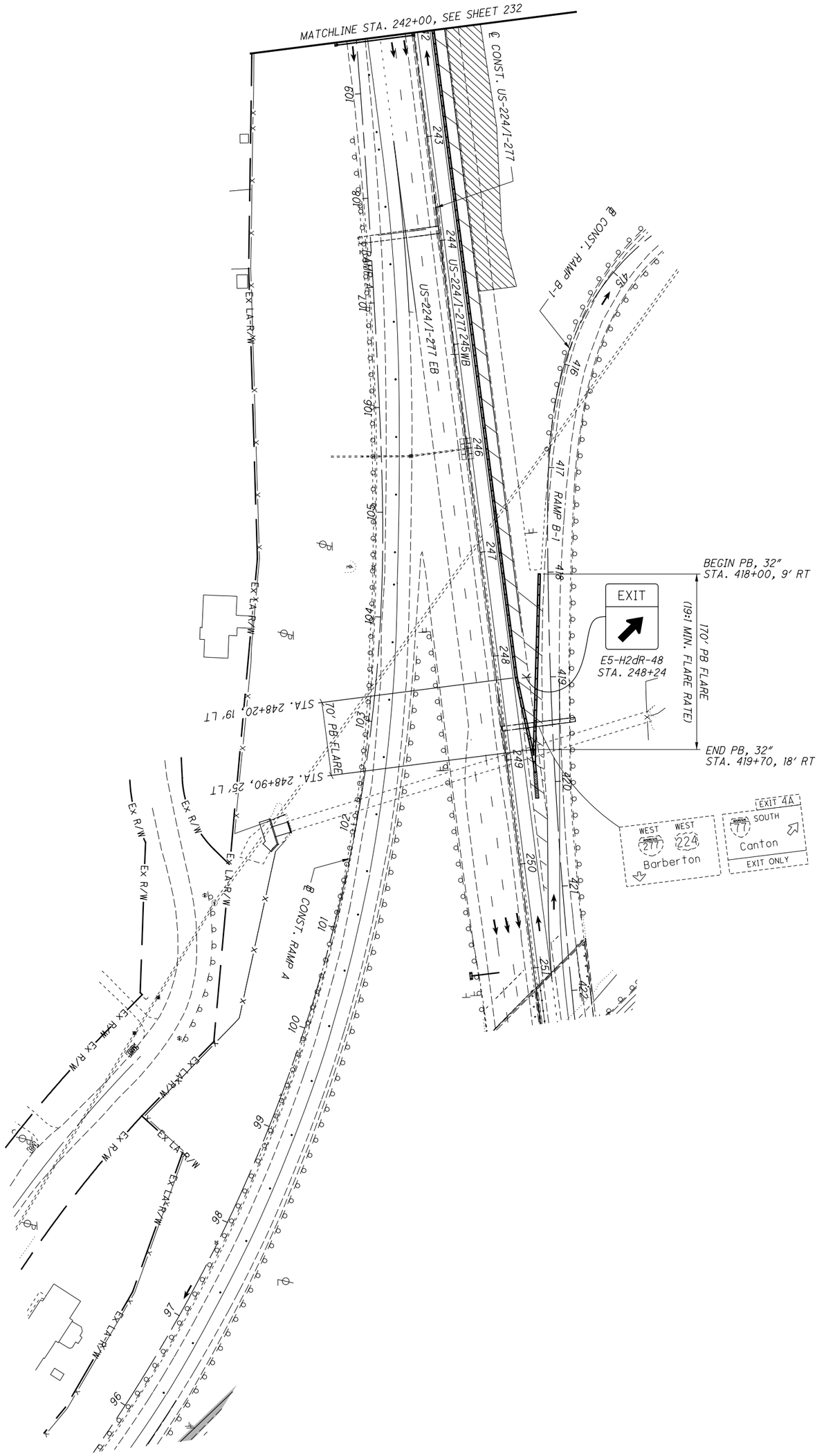


232 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2A US-224 / I-277 - STA. 229+00 TO STA. 242+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MP280.dgn Sheet 1/31/2021 5:39:24 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

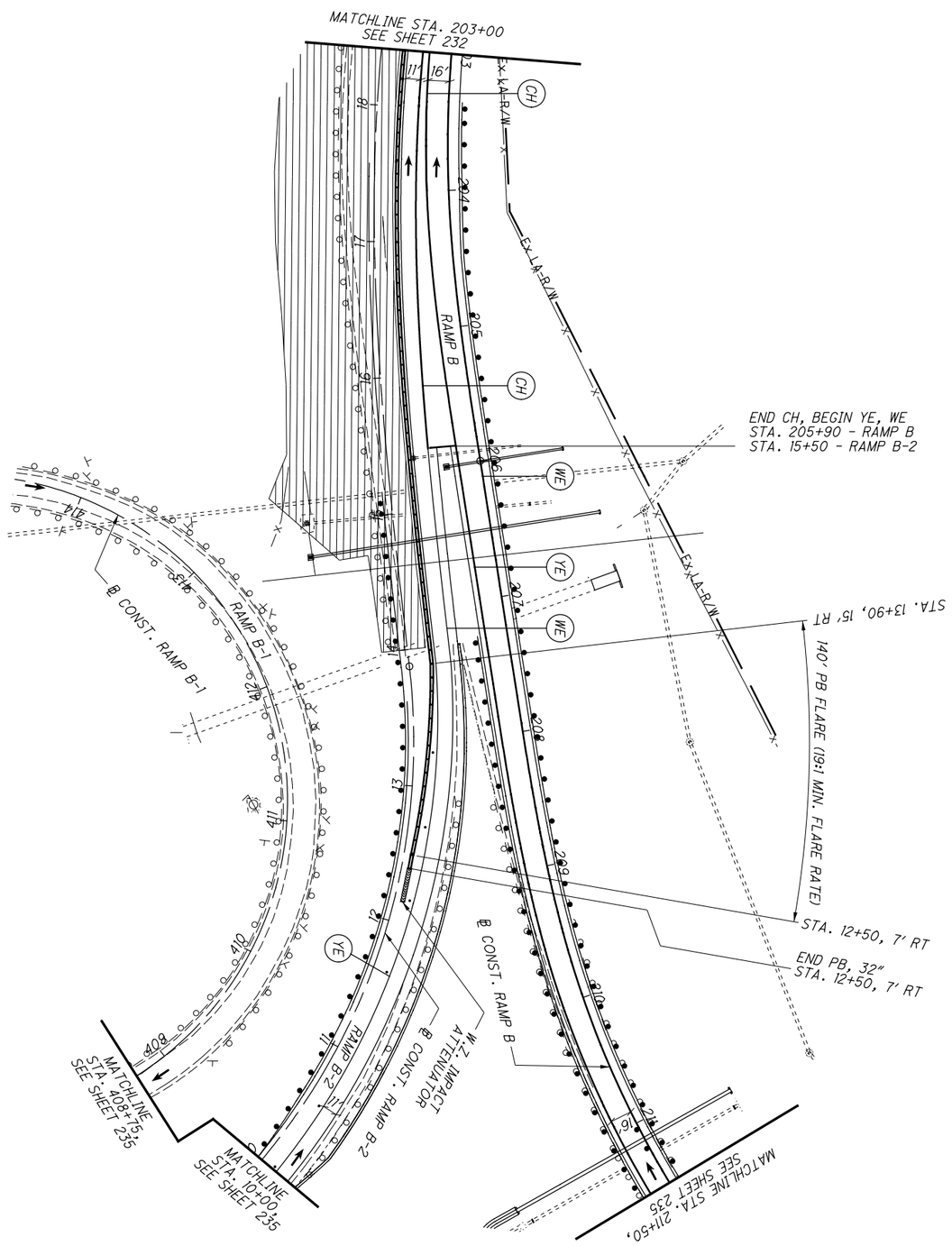


233 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2A US-224/I-277 - STA. 242+00 TO STA. 250+75	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\I06002_SUM-76-10.95\Design\MOT\Sheets\I06002_MP236.dgn Sheet 1/31/2021 5:39:48 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

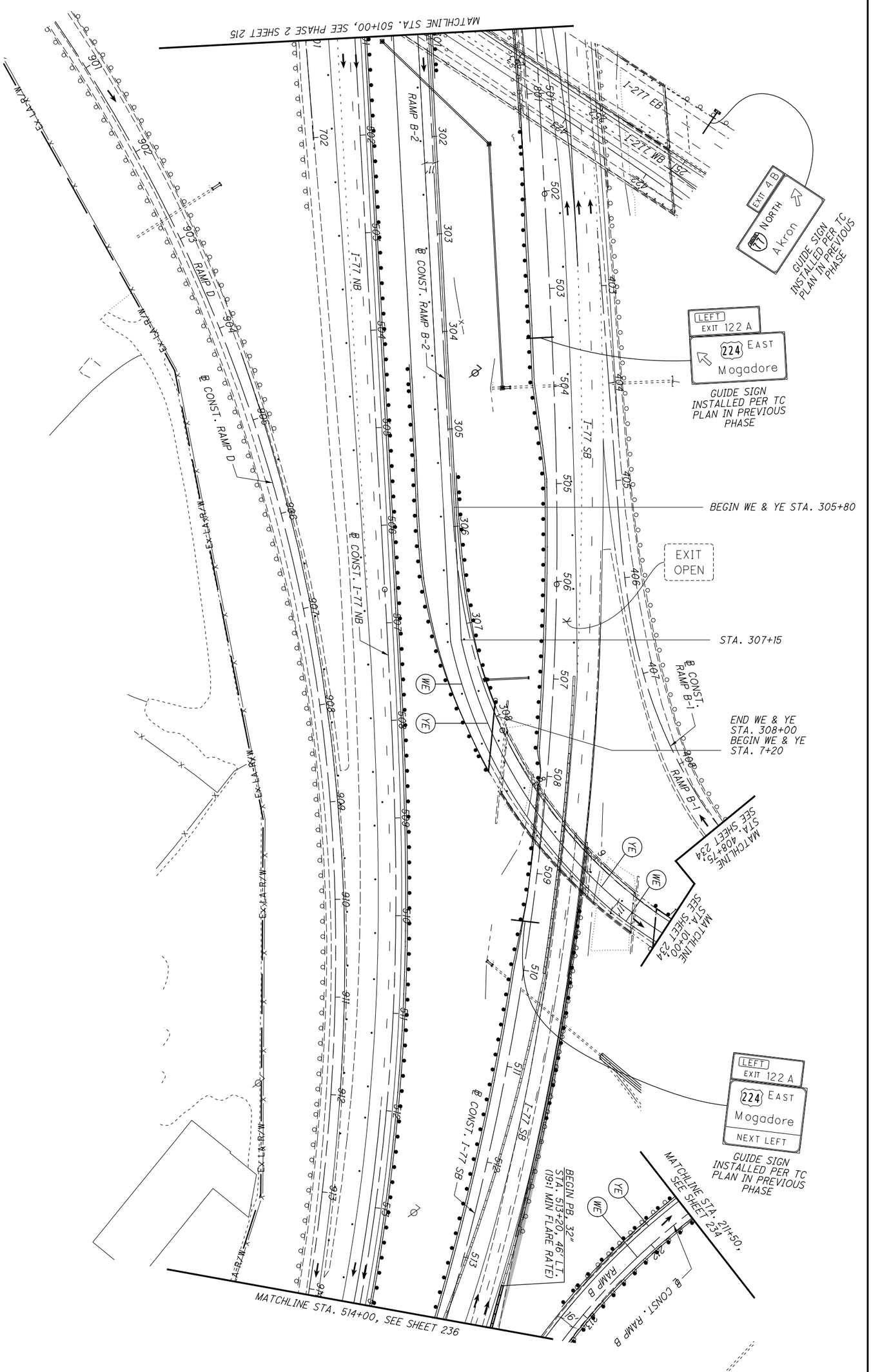


234 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2A RAMP B - STA. 203+00 TO STA. 211+50	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MP239.dgn Sheet 1/31/2021 5:39:58 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

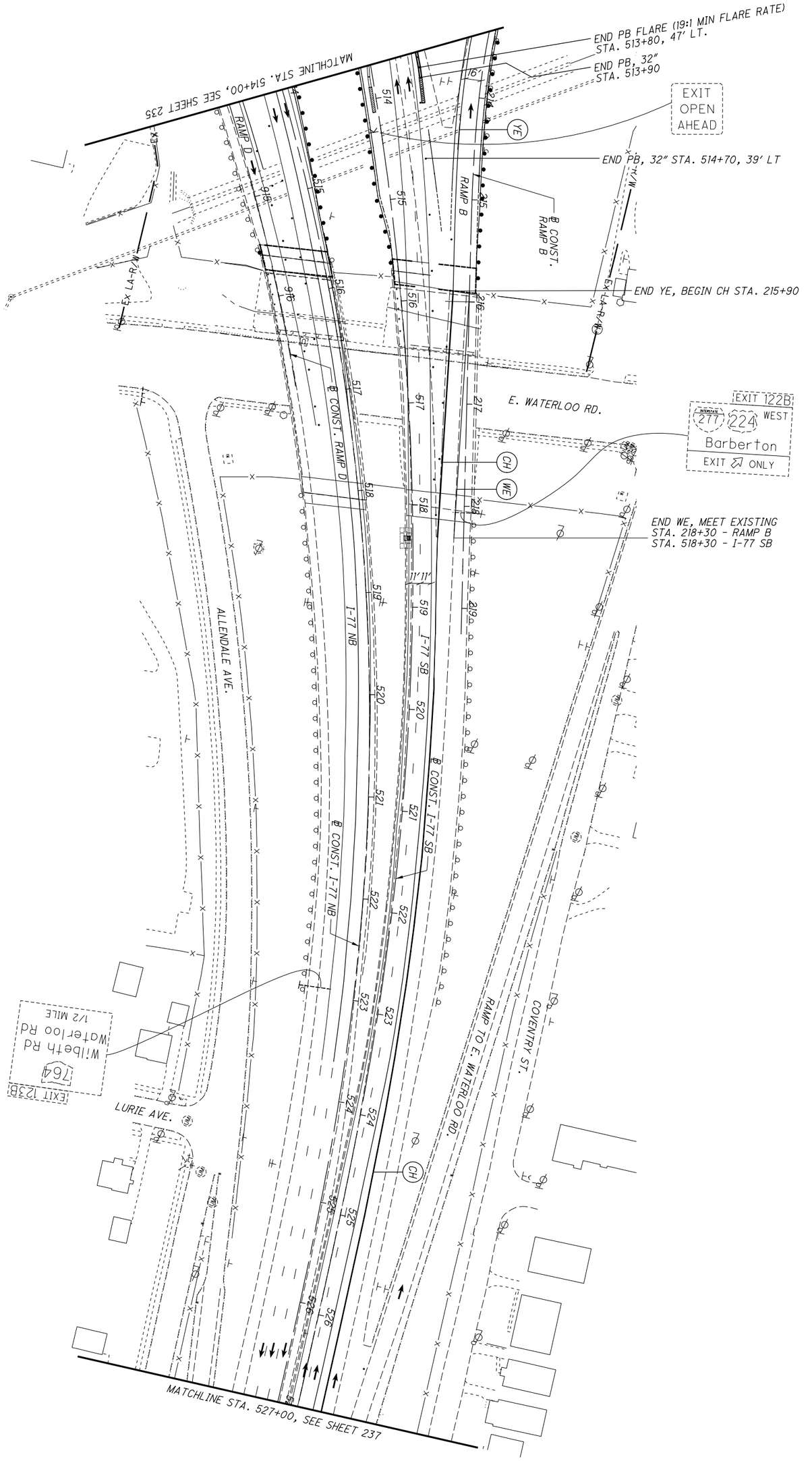


235 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2A I-77 - STA. 501+00 TO STA. 514+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\I06002_SUM-76-I0.95\Design\MOT\Sheets\I06002_MP237.dgn Sheet 1/31/2021 5:40:06 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

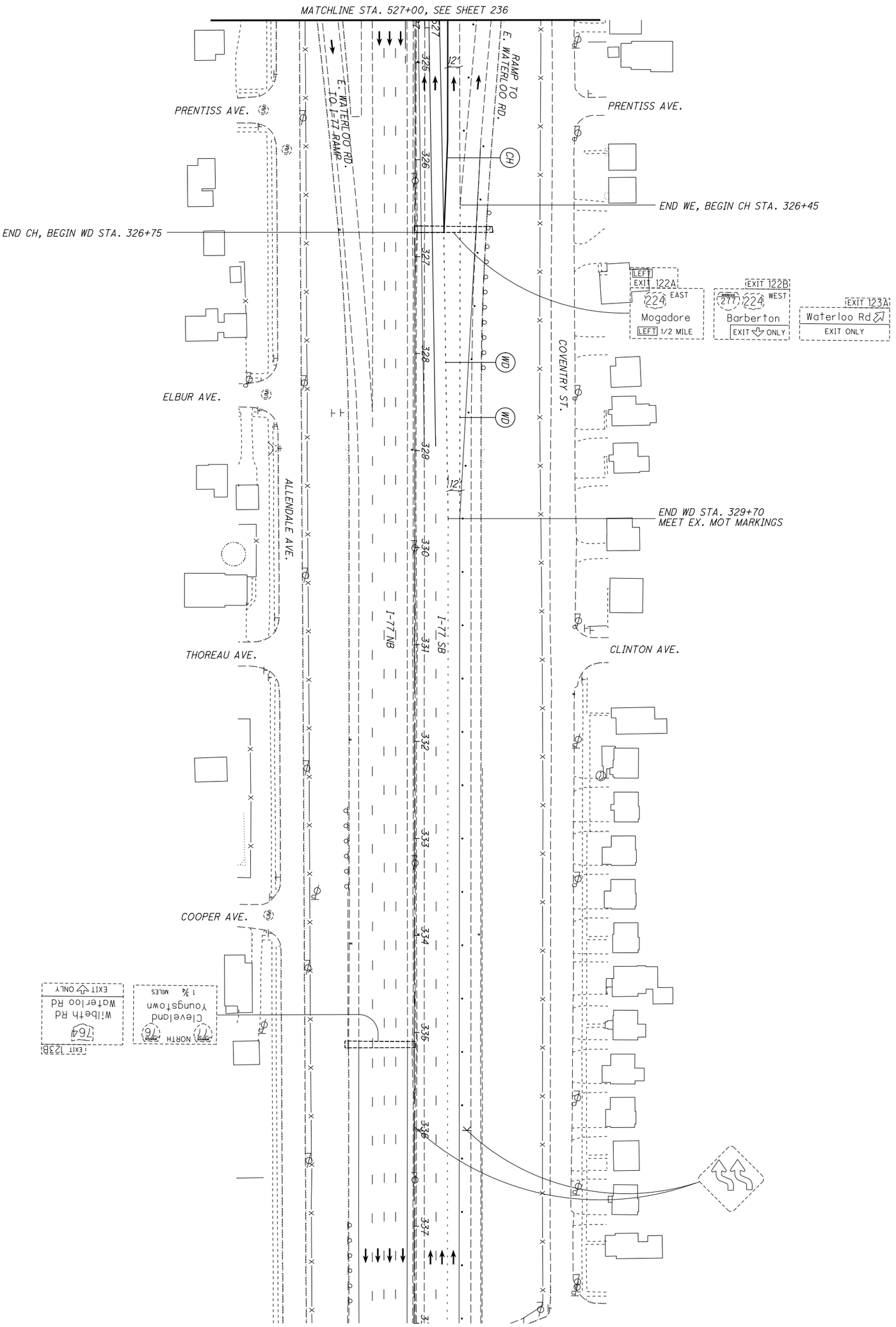


236 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2A I-77 - STA. 514+00 TO STA. 527+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

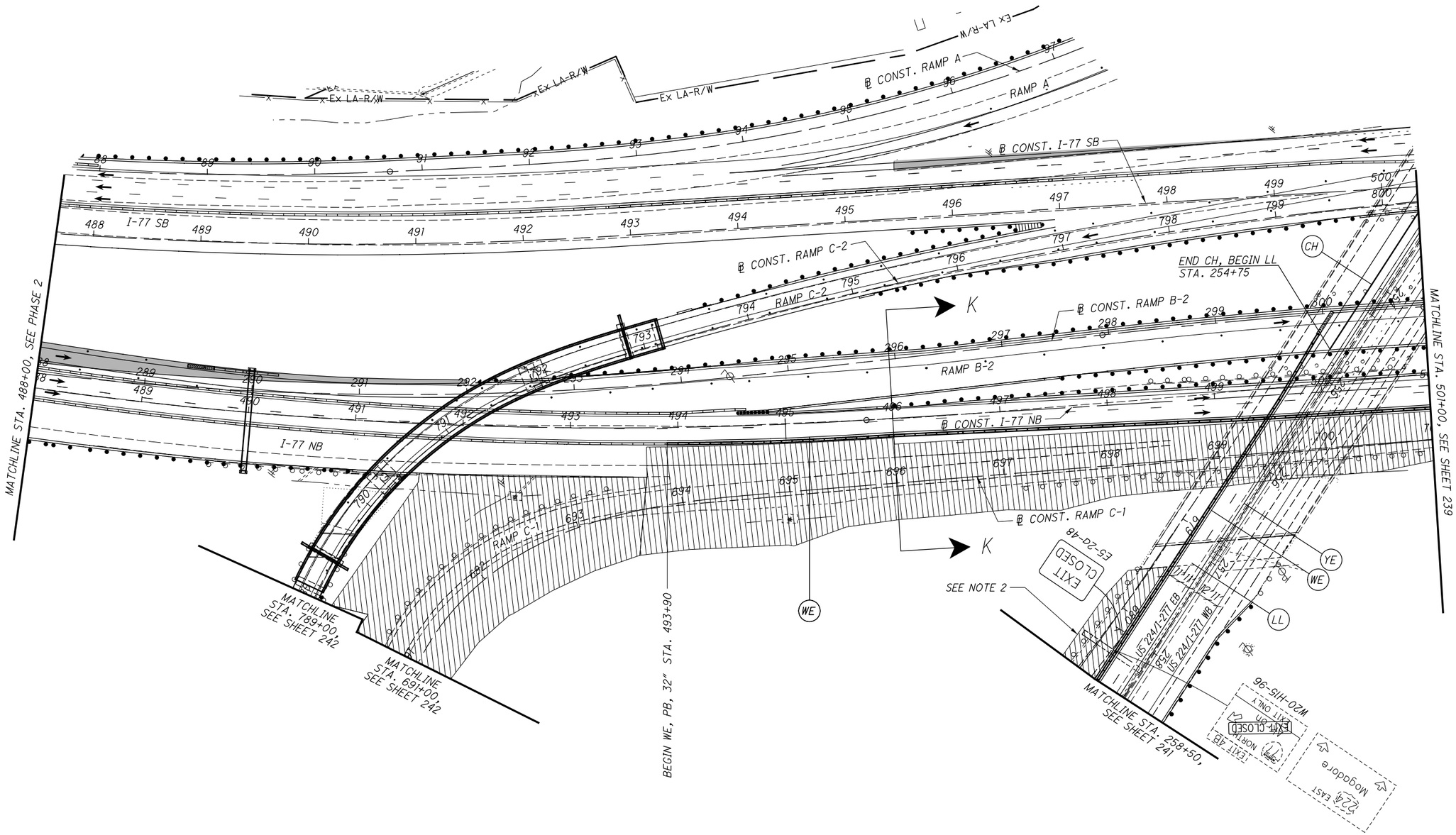
N:\03\60\06744-08\I06002_SUM-76-I0.95\Design\MOT\Sheets\I06002_MP238.dgn Sheet 1/31/2021 5:40:29 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



237 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2A I-77 - STA. 527+00 TO STA. 338+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET



NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 194-199 FOR TYPICAL SECTIONS.
4. SEE RAMP C-1 DETOUR ON SHEET 117 FOR ADDITIONAL SIGNS.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED .
CHECKED .

MAINTENANCE OF TRAFFIC PLAN - PHASE 2B
I-77 - STA. 488+00 TO STA. 501+00

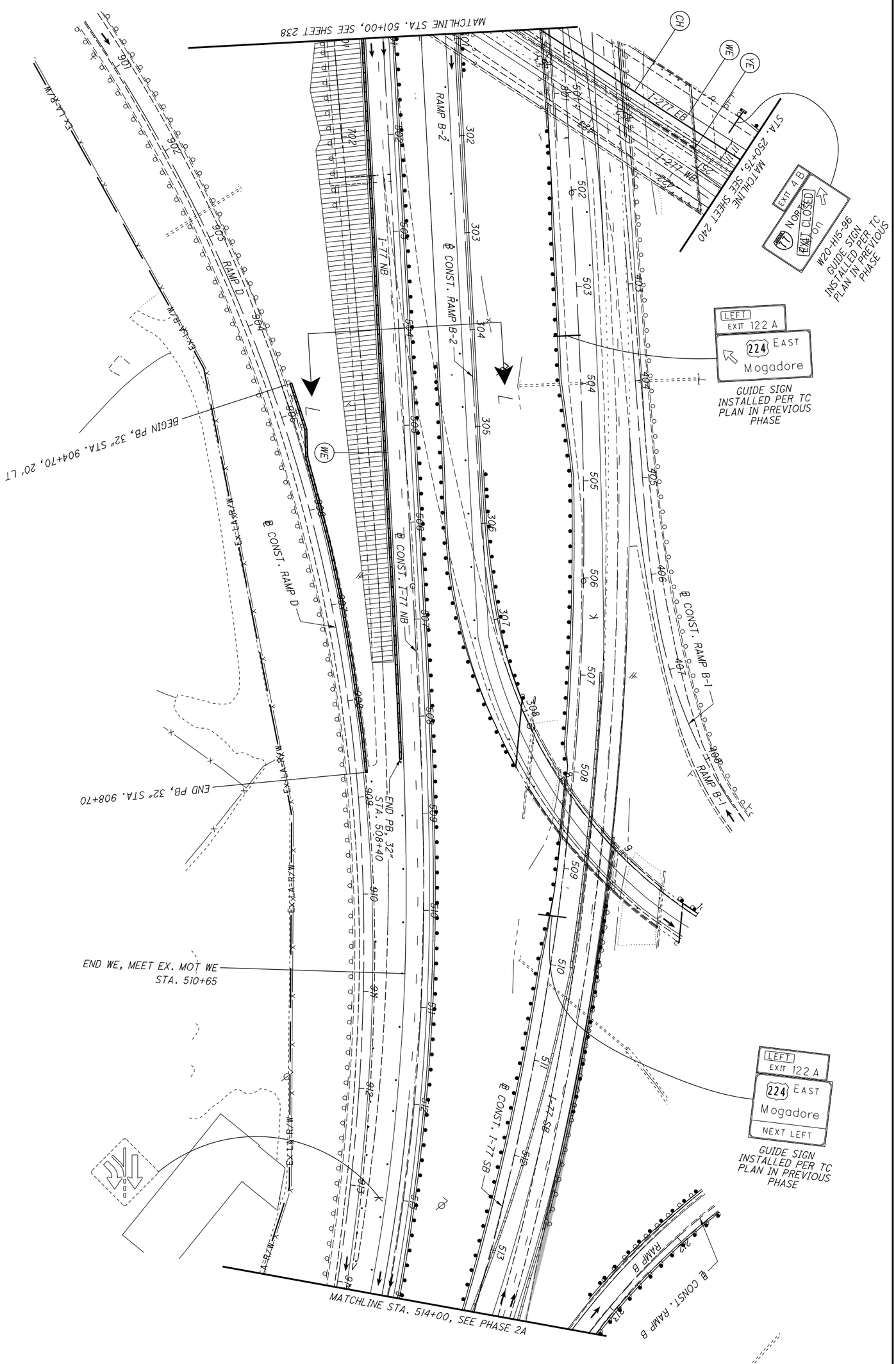
SUM-77/277/224
VARIOUS

238
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MP240.dgn Sheet 1/31/2021 5:40:50 PM jrettig

NOTES:

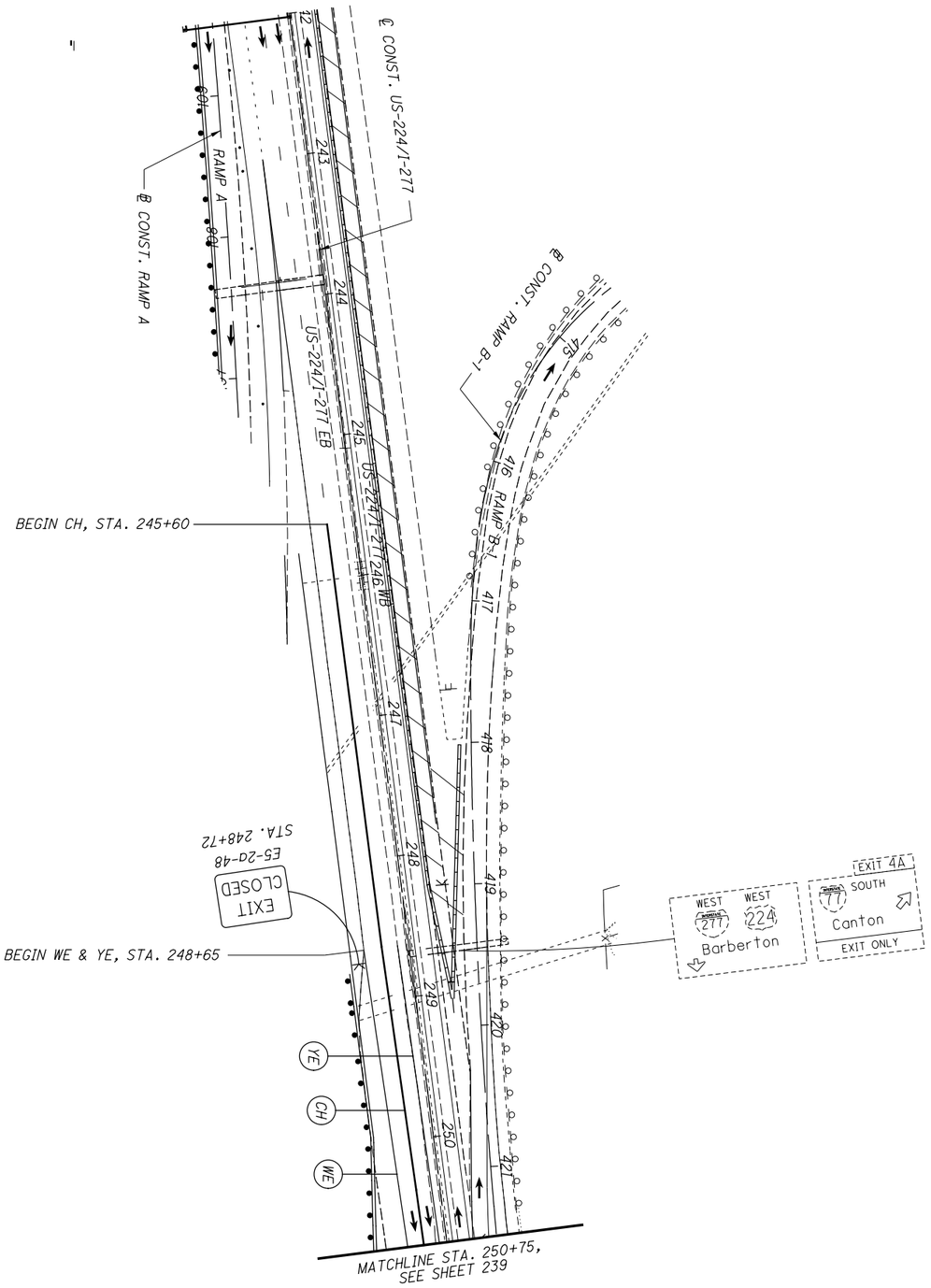
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 194-199 FOR TYPICAL SECTIONS.



239 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2B I-77 - STA. 501+00 TO STA. 514+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

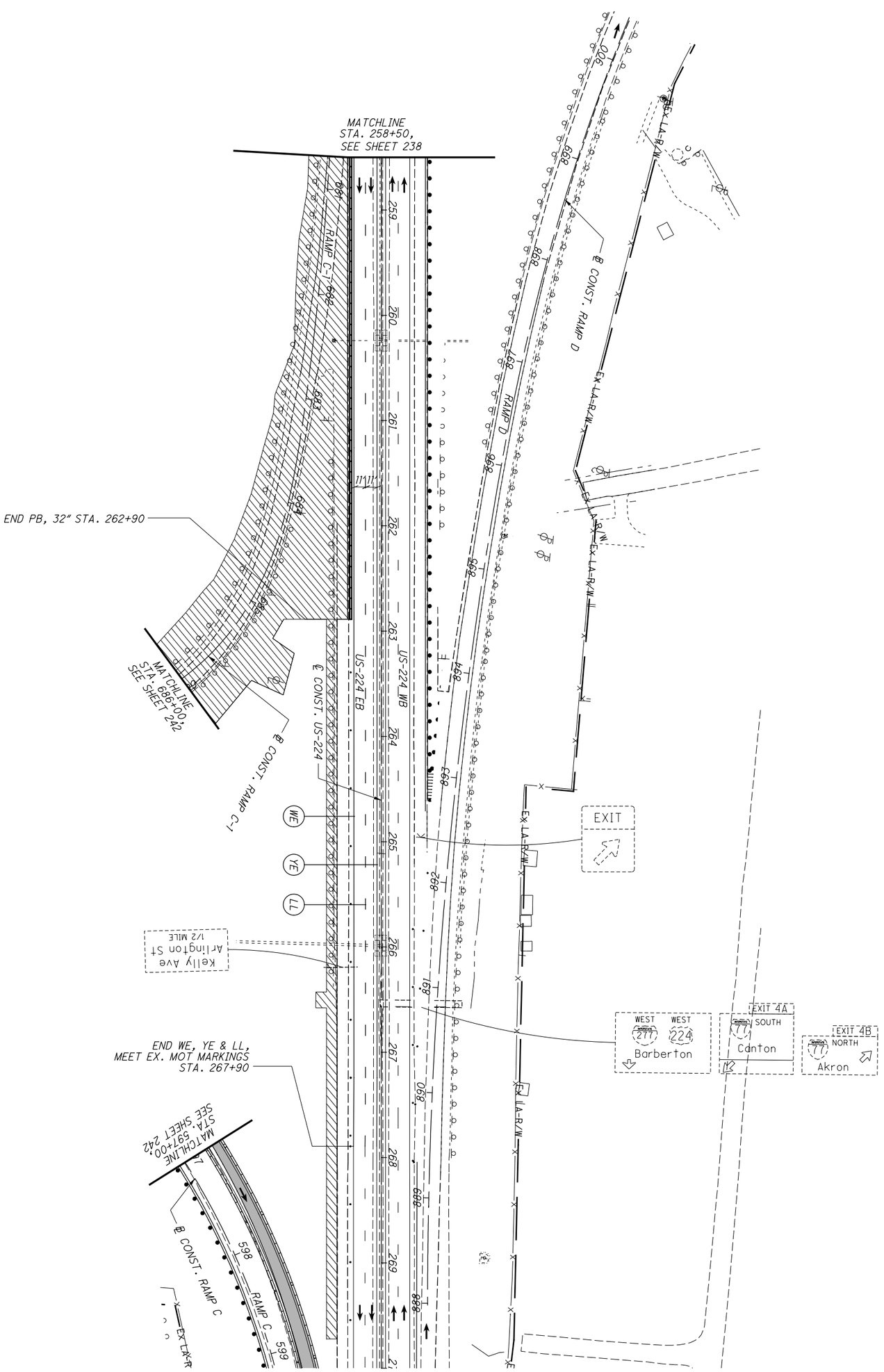
NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

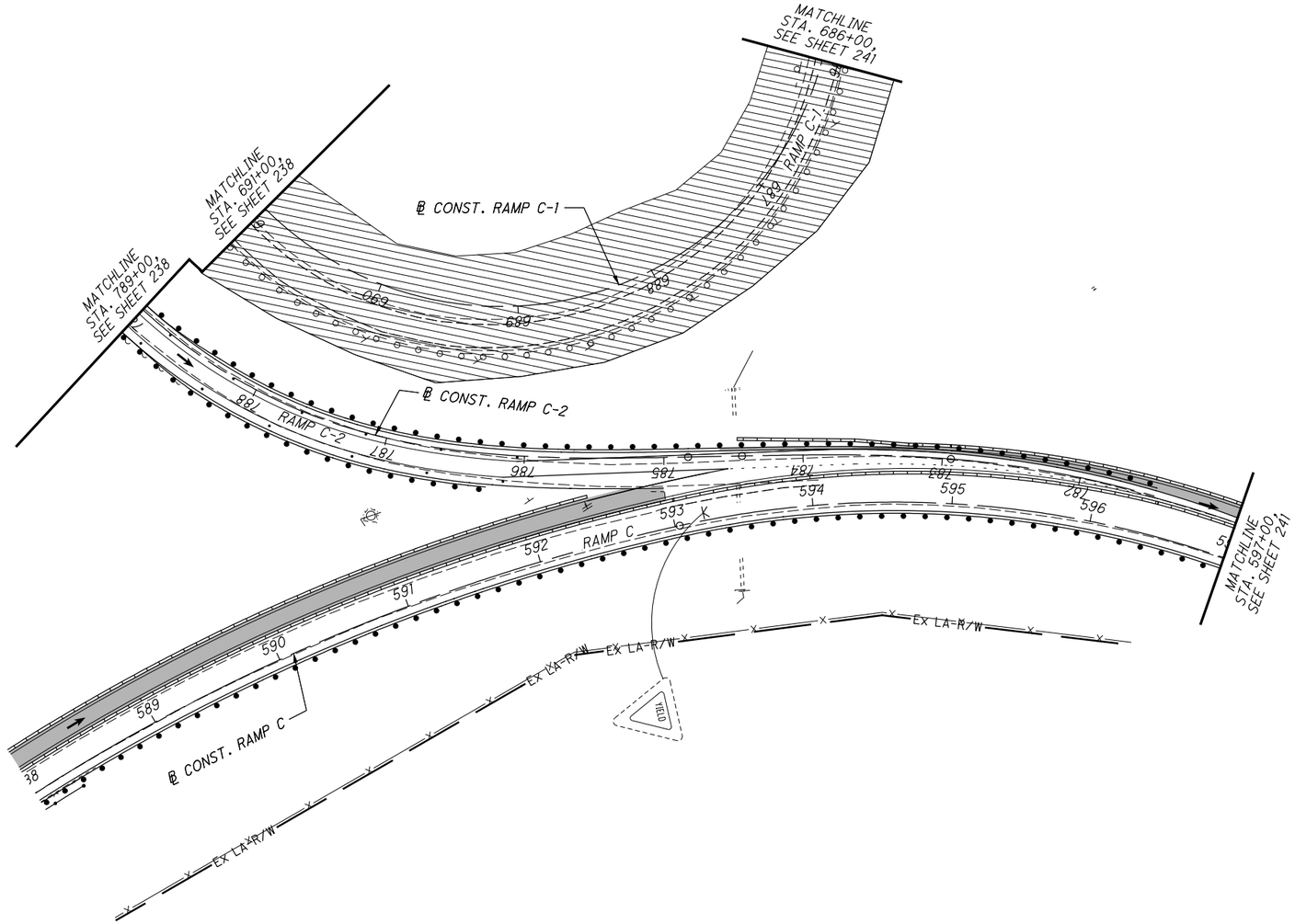


NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



241 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2B US-224 - STA. 258+50 TO STA. 270+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET	N



NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.

2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED .
CHECKED .

MAINTENANCE OF TRAFFIC PLAN - PHASE 2B
RAMP C - STA. 588+00 TO STA. 597+00

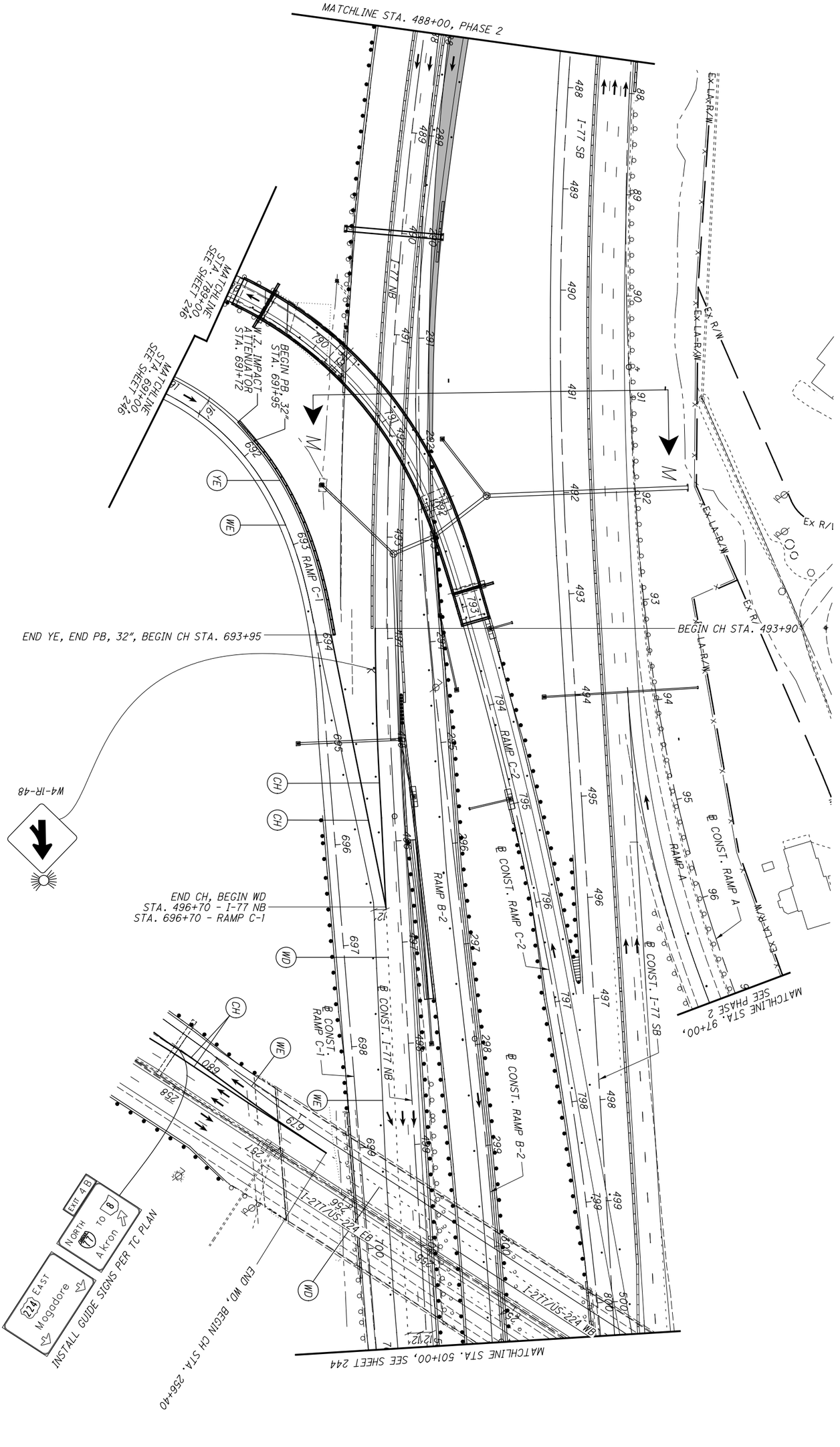
SUM-77/277/224
VARIOUS

242
1288

N:\03\60\06744-08\106002_SUM-76-I0.95\Design\MOT\Sheets\106002_MP244.dgn Sheet 1/31/2021 5:41:44 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 194-199 FOR TYPICAL SECTIONS.

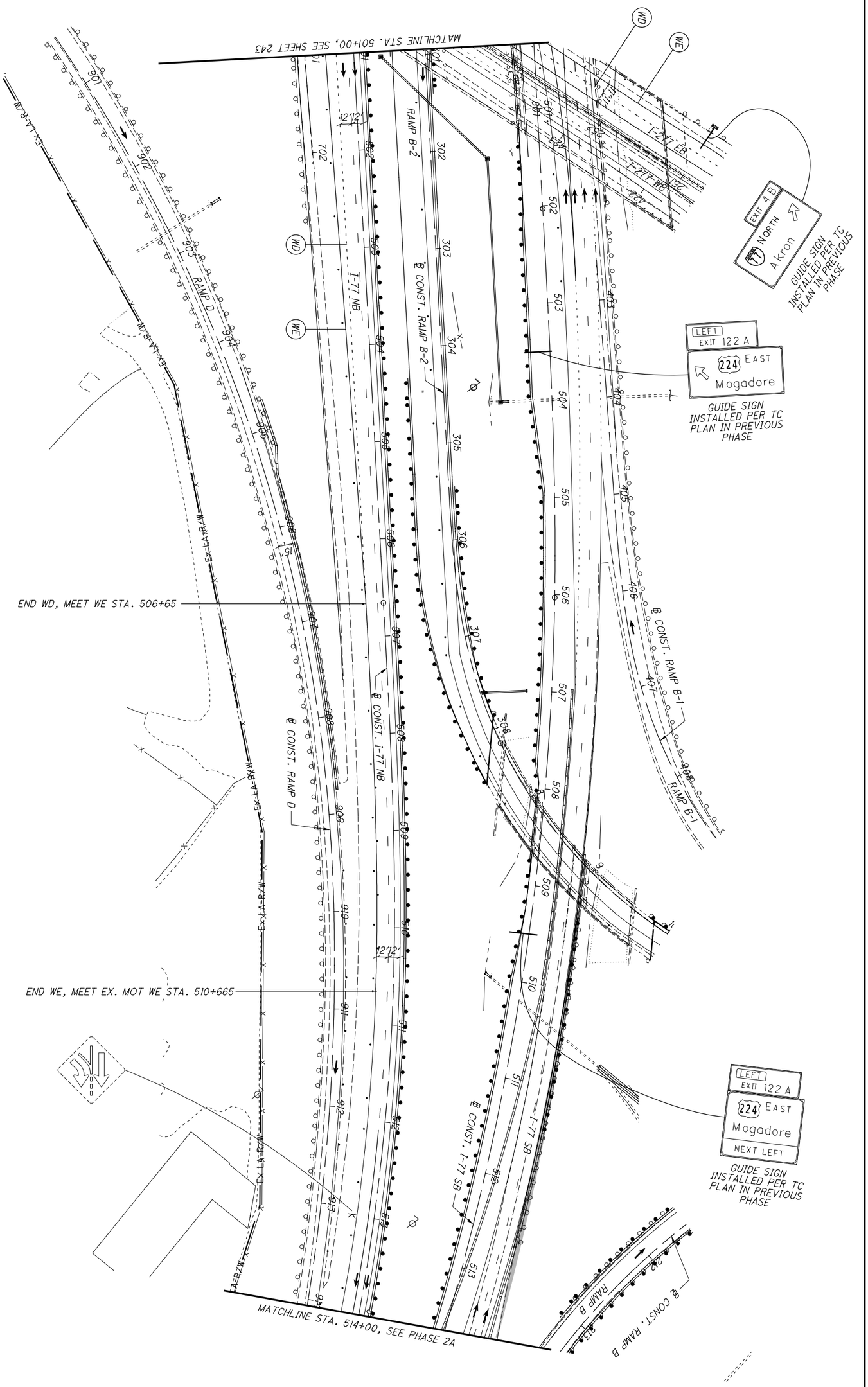


243 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2C I-77 - STA. 488+00 TO STA. 501+00	CALCULATED . CHECKED . 0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\I06002_SUM-76-I0.95\Design\MOT\Sheets\I06002_MP247.dgn Sheet 1/31/2021 5:42:02 PM jrettig

NOTES:

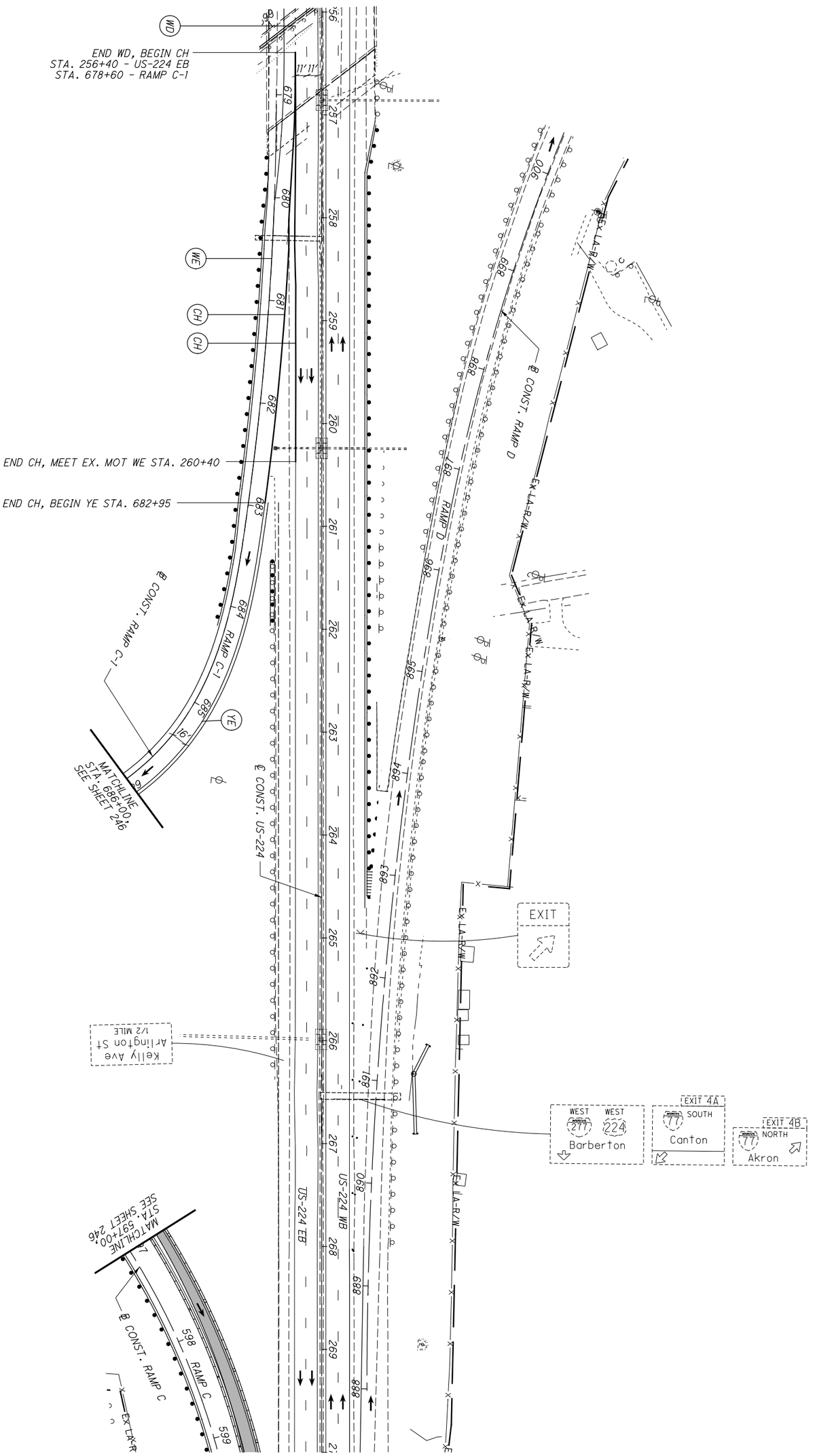
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



244 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2C I-77 - STA. 501+00 TO STA. 514+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



245 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2C I-77 - STA. 256+00 TO STA. 270+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.

2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MP248.dgn Sheet 1/31/2021 5:42:15 PM jrettig

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED .
CHECKED .

MAINTENANCE OF TRAFFIC PLAN - PHASE 2C
RAMP C - STA. 588+00 TO STA. 597+00

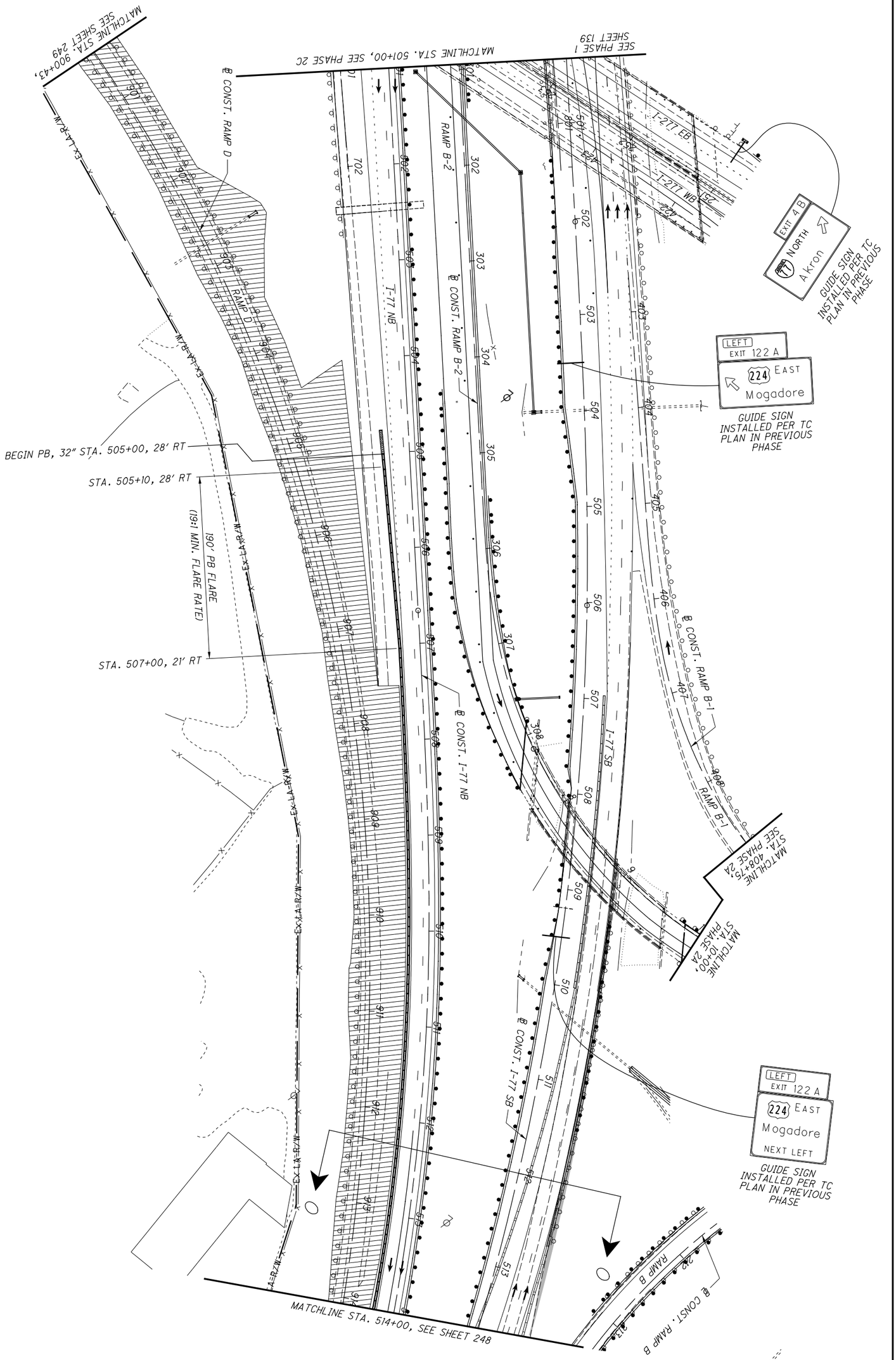
SUM-77/277/224
VARIOUS

246
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MP253.dgn Sheet 1/31/2021 5:42:22 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 194-199 FOR TYPICAL SECTIONS.

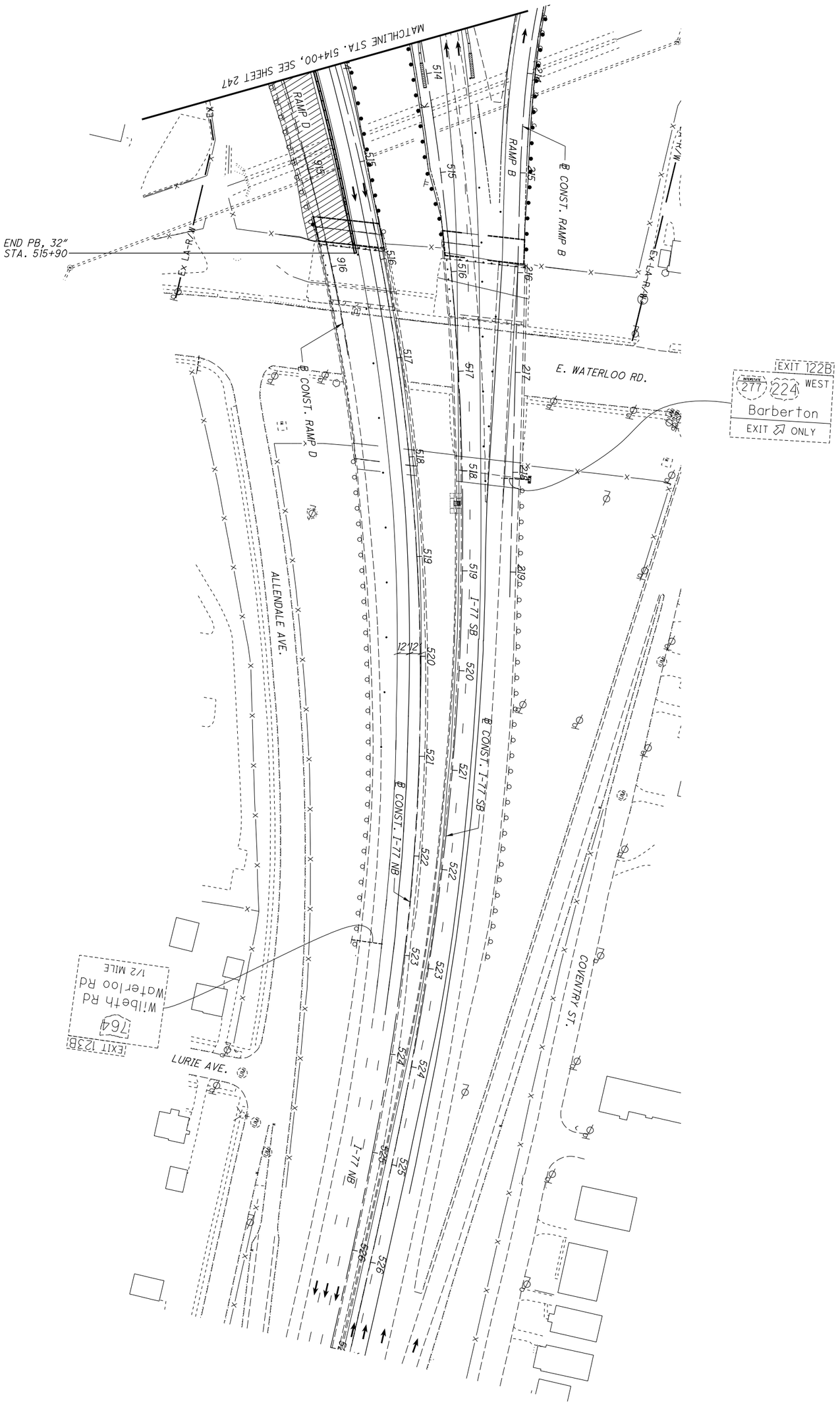


247 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2D I-77 - STA. 501+00 TO STA. 514+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

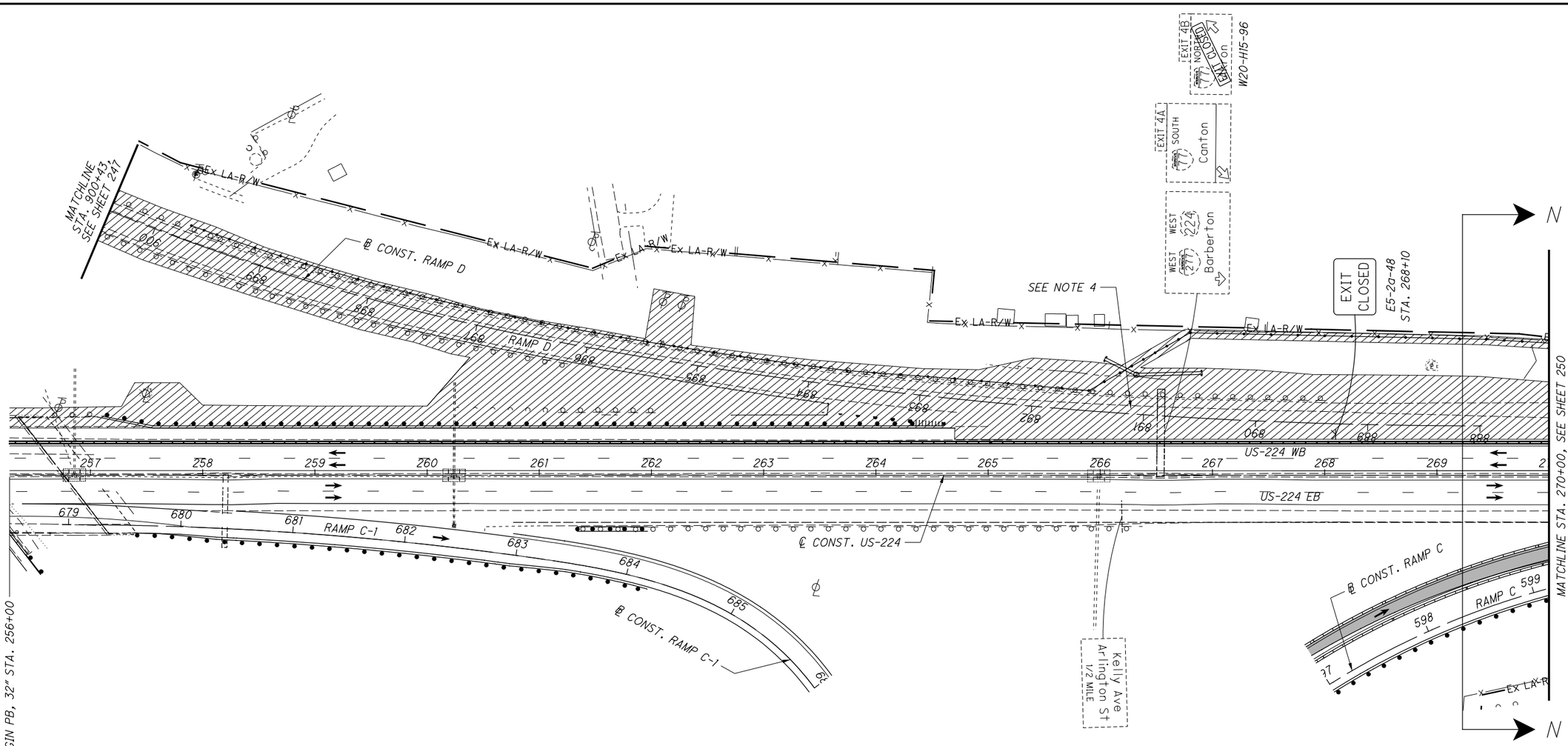
N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MP254.dgn Sheet 1/31/2021 5:42:32 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



248 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2D I-77 - STA. 514+00 TO STA. 527+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET



NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 194-199 FOR TYPICAL SECTIONS.
4. SEE RAMP D DETOUR ON SHEET 120 FOR ADDITIONAL SIGNS.

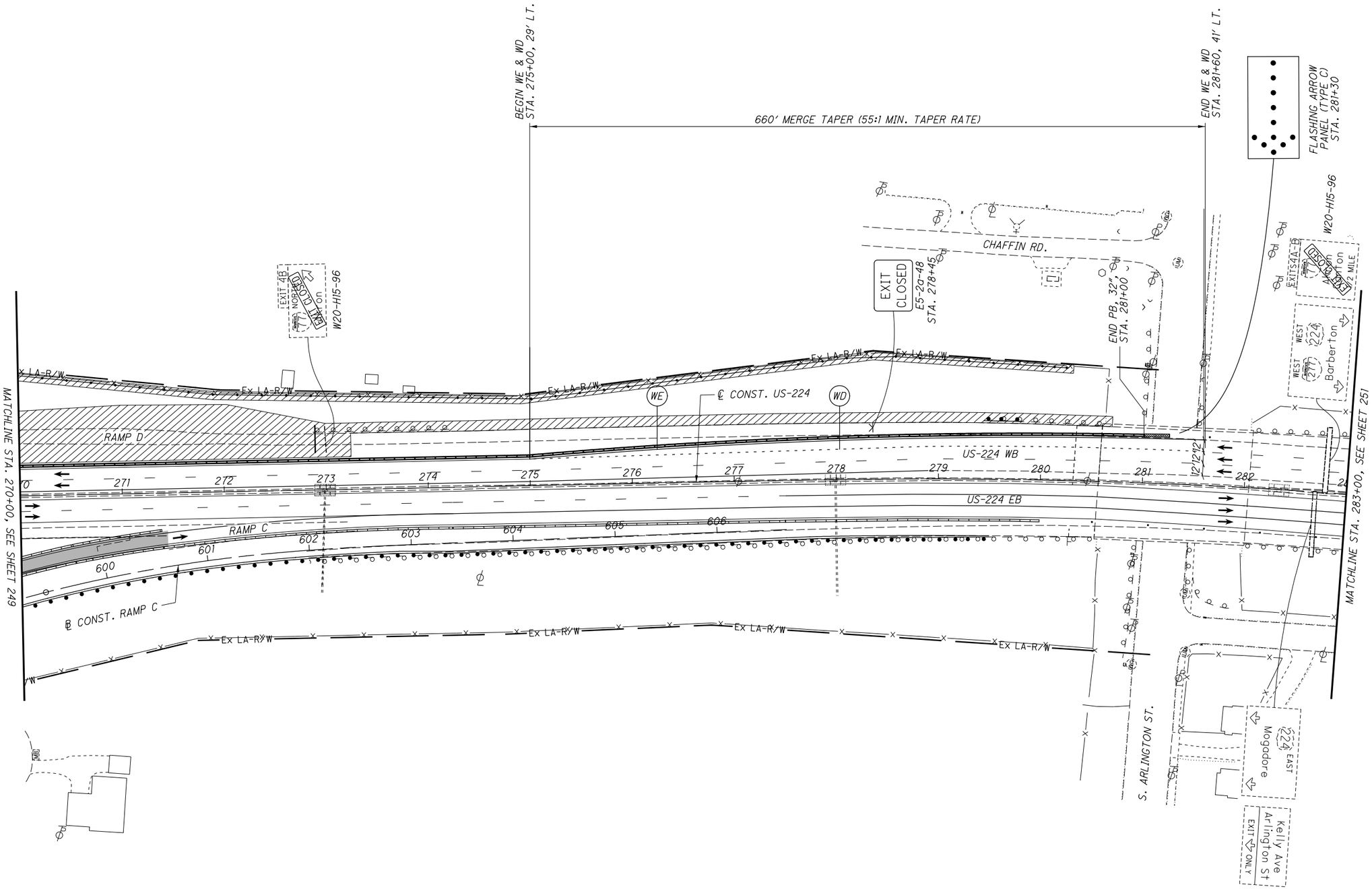
HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED .
CHECKED .

MAINTENANCE OF TRAFFIC PLAN - PHASE 2D
US-224 - STA. 258+50 TO STA. 270+00

SUM-77/277/224
VARIOUS

249
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MP25i.dgn Sheet 1/31/2021 5:42:35 PM jrettig



NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.

2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED .
CHECKED .

TRAFFIC PLAN - PHASE 2D

MAINTENANCE OF TRAFFIC
US-224 - STA. 270+00 TO STA. 283+00

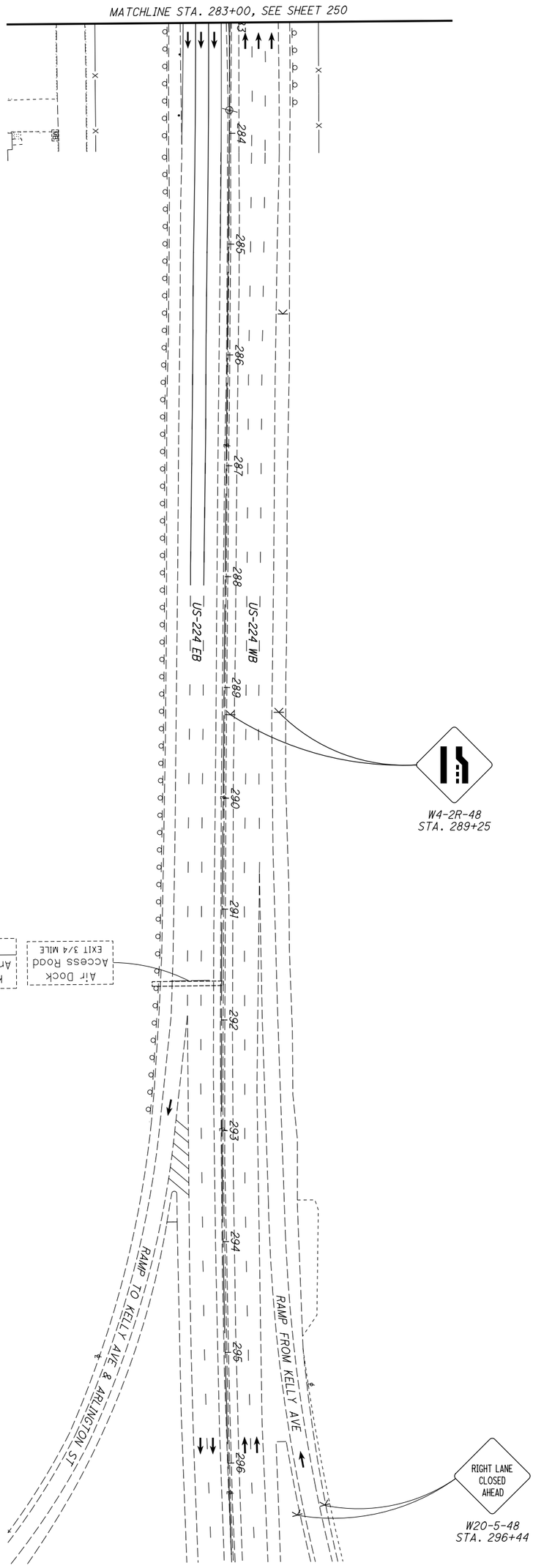
SUM-77/277/224
VARIOUS

250
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MP252.dgn Sheet 1/31/2021 5:42:42 PM jrettig

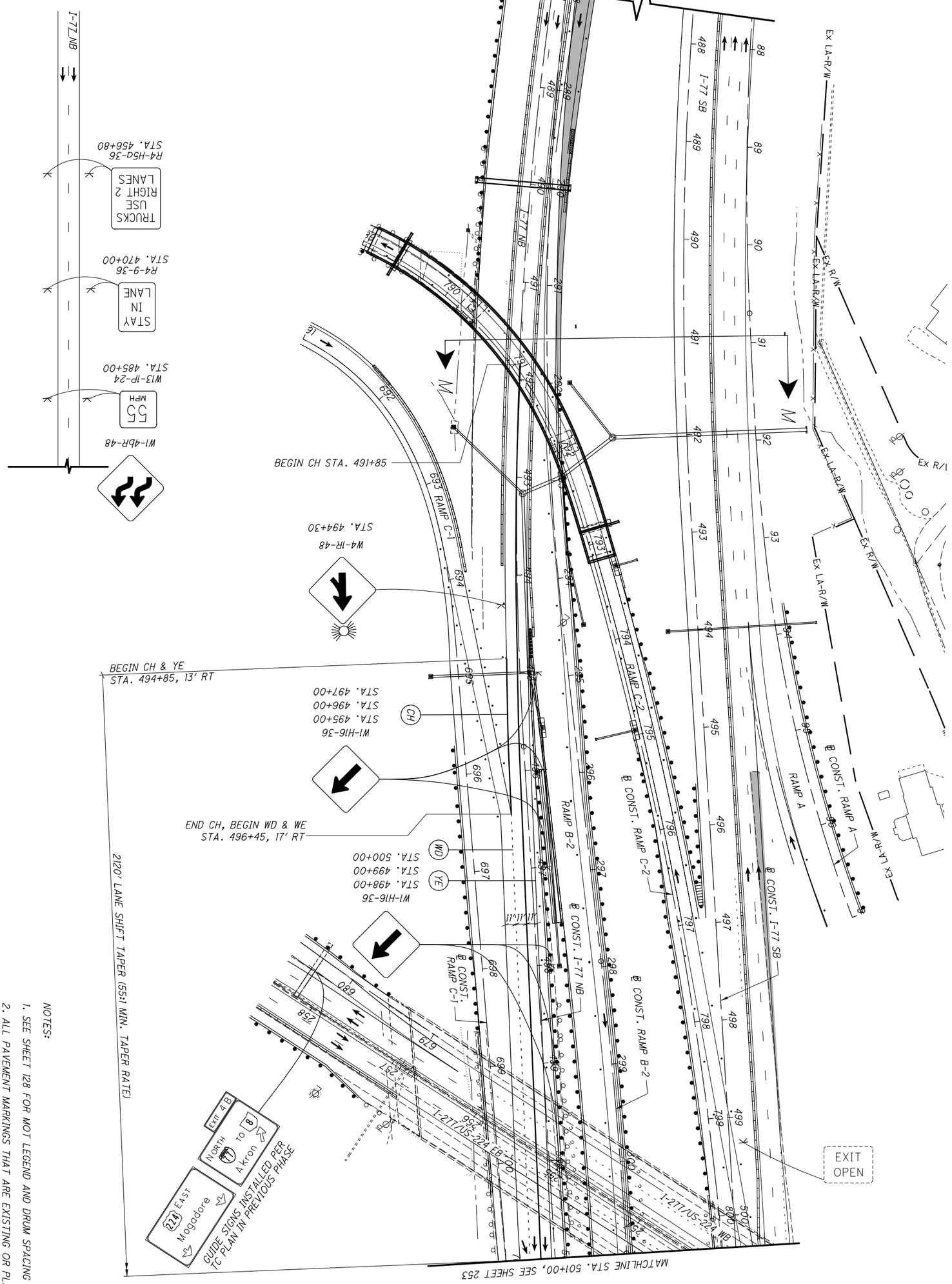
NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



251 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2D US-224 - STA. 283+00 TO STA. 296+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\I06002_SUM-76-I0.95\Design\MOT\Sheets\I06002_MP292.dgn Sheet 1/31/2021 5:43:21 PM jrettig



NOTES:

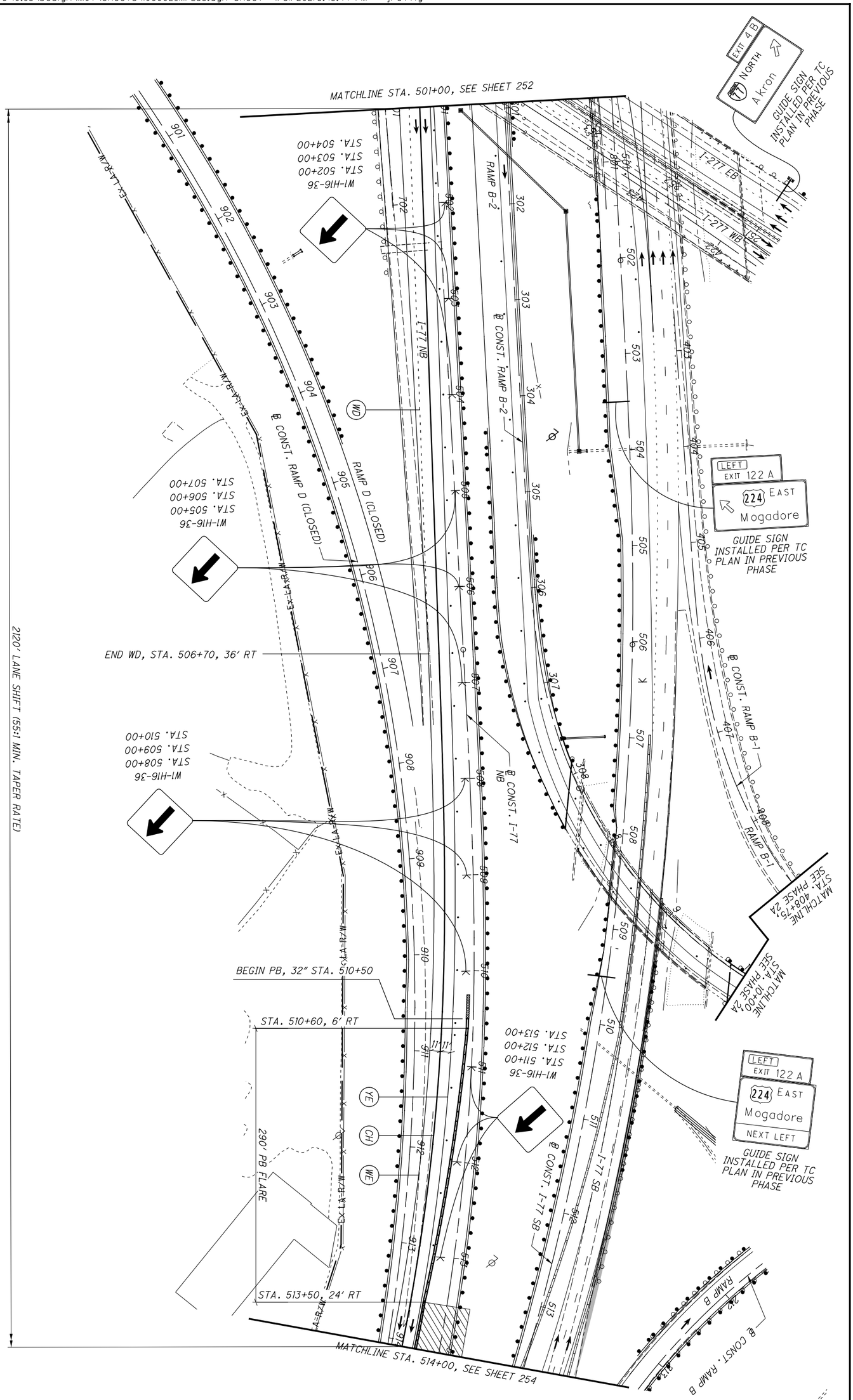
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 194-199 FOR TYPICAL SECTIONS.

252 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2E I-77 - STA. 488+00 TO STA. 501+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MP255.dgn Sheet 1/31/2021 5:43:44 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

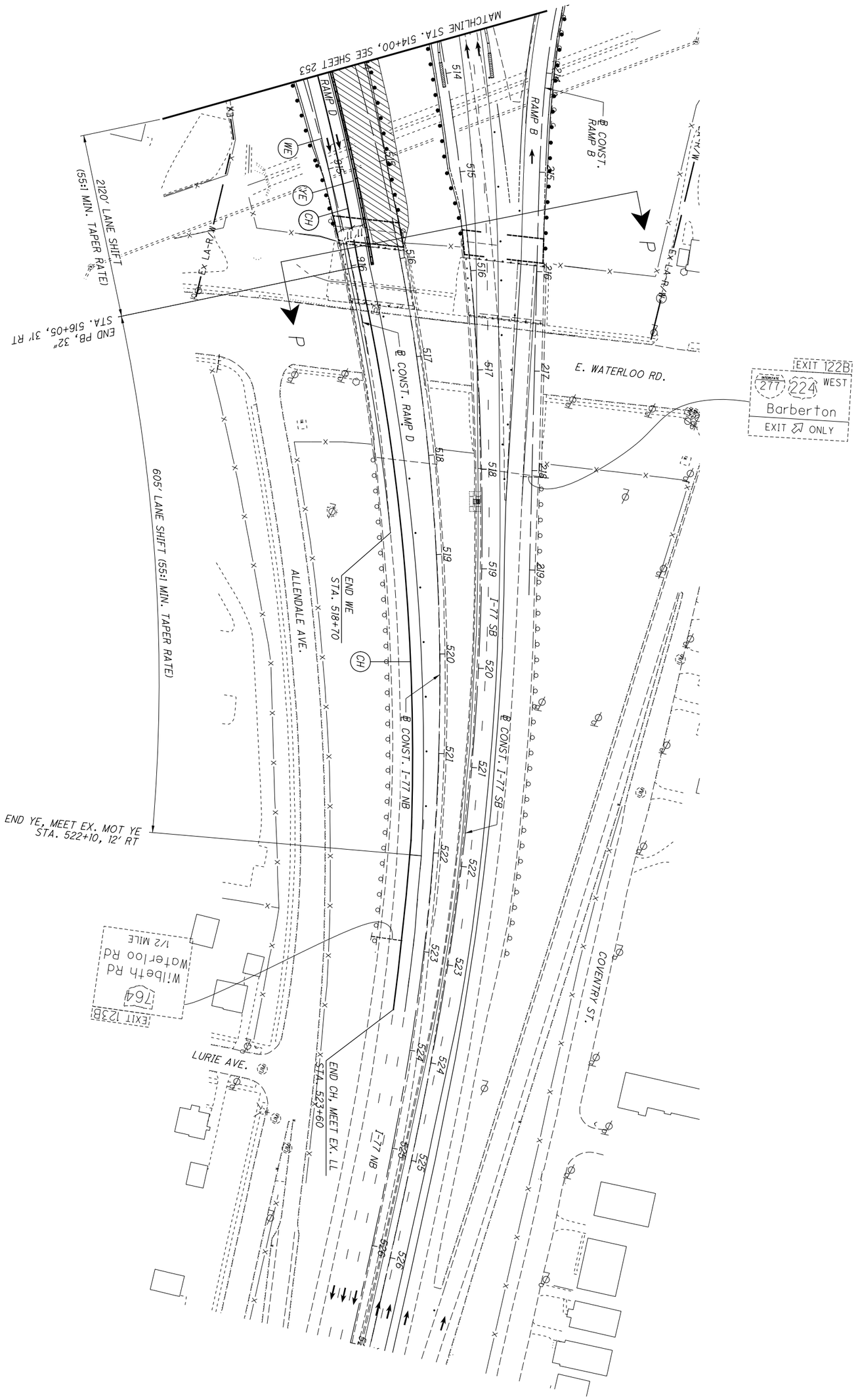


253 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2E I-77 - STA. 501+00 TO STA. 514+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MP256.dgn Sheet 1/31/2021 5:44:08 PM jrettig

NOTES:

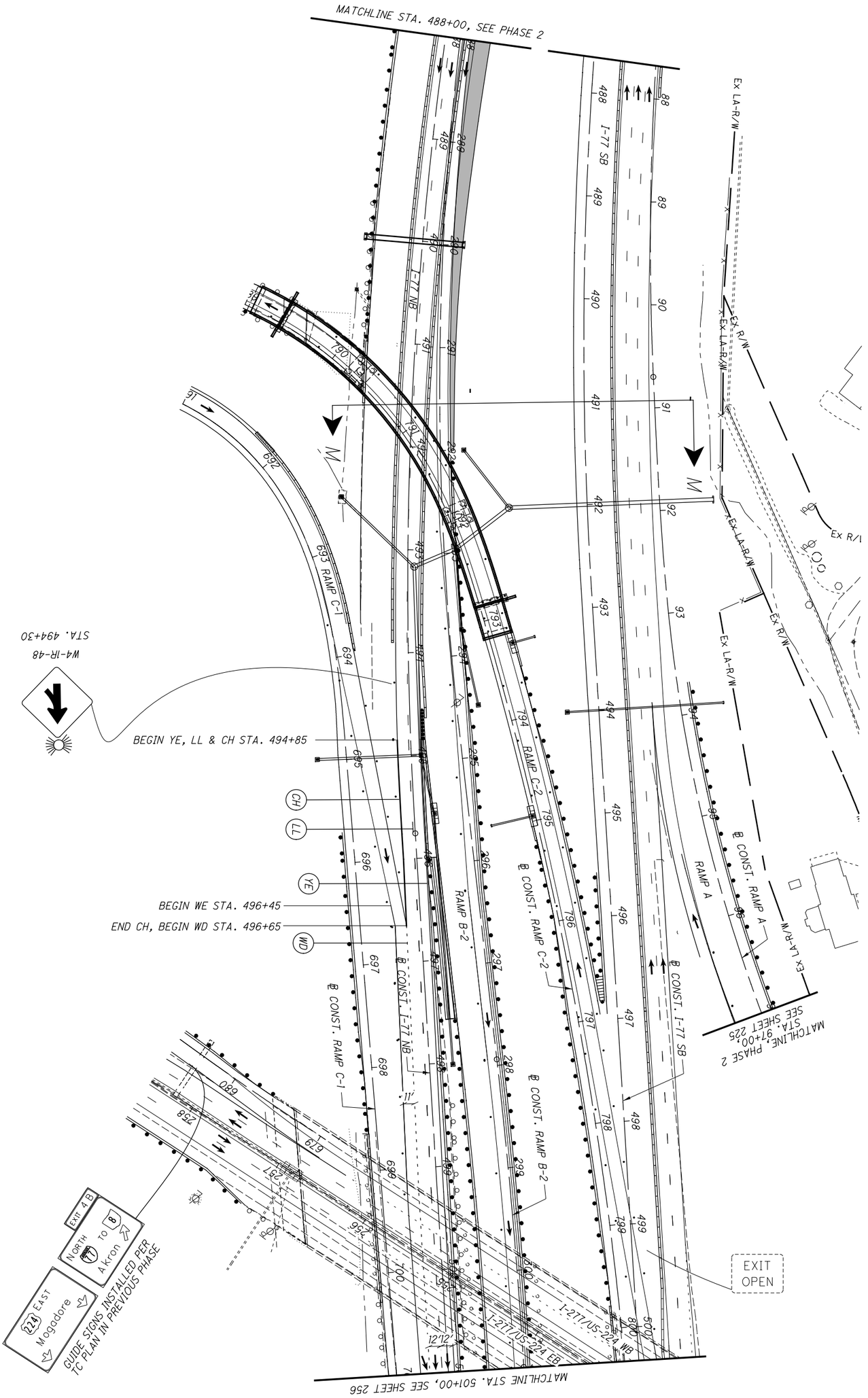
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 194-199 FOR TYPICAL SECTIONS.



254 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2E I-77 - STA. 514+00 TO STA. 527+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 194-199 FOR TYPICAL SECTIONS.

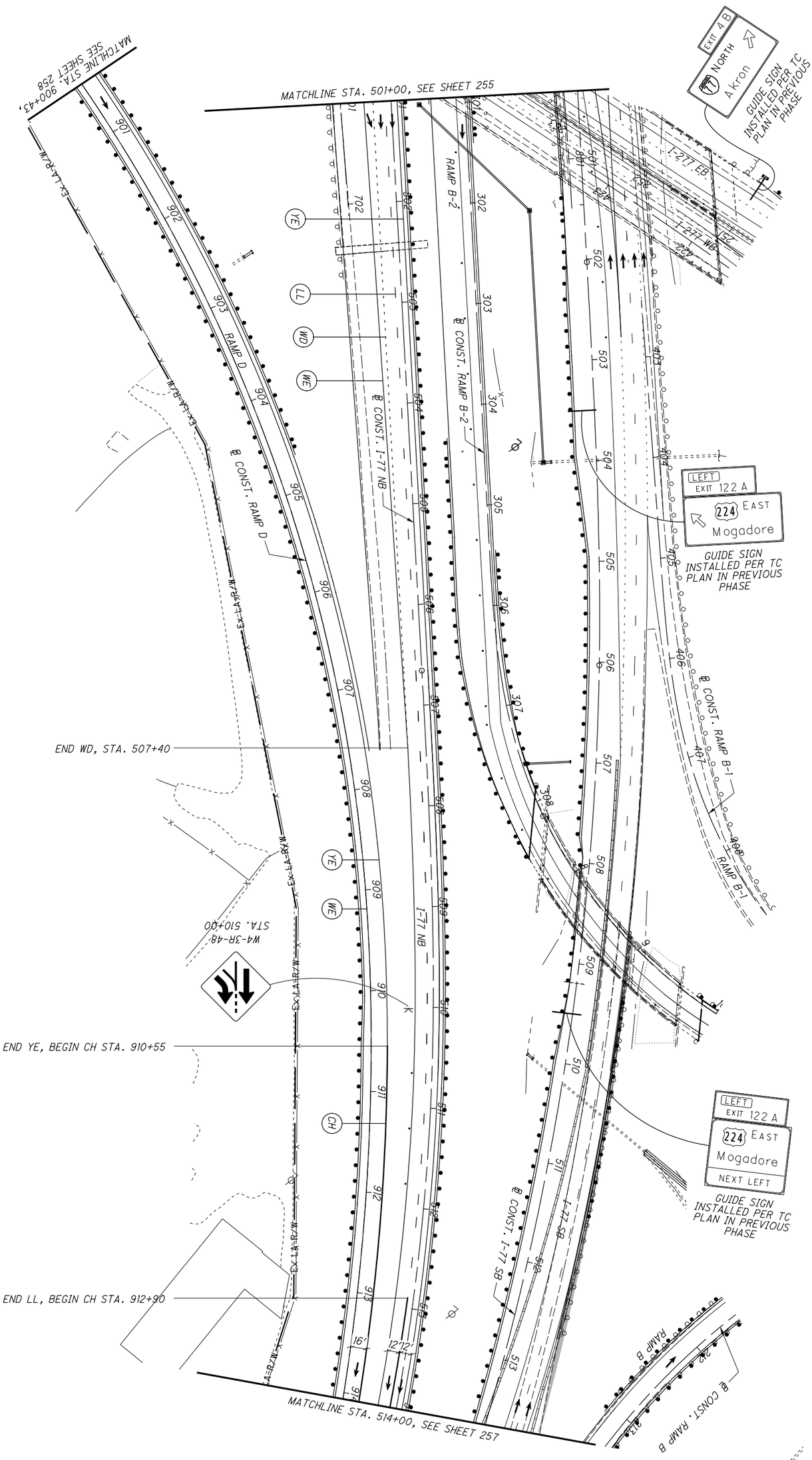


255 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2F I-77 - STA. 488+00 TO STA. 501+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MP257.dgn Sheet 1/31/2021 5:44:22 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

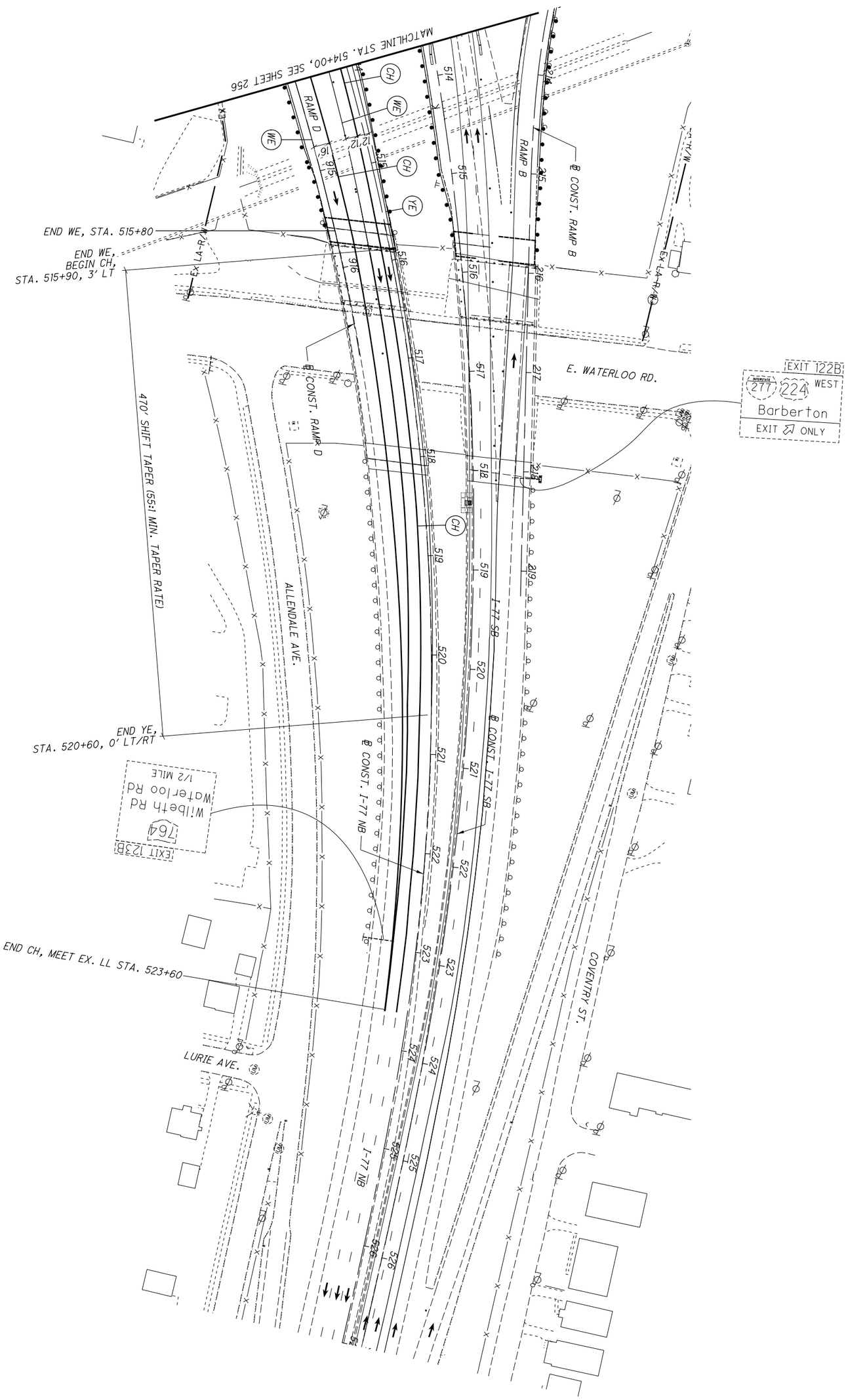


256 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2F I-77 - STA. 501+00 TO STA. 514+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\I06002_SUM-76-I0.95\Design\MOT\Sheets\I06002_MP258.dgn Sheet 1/31/2021 5:44:29 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

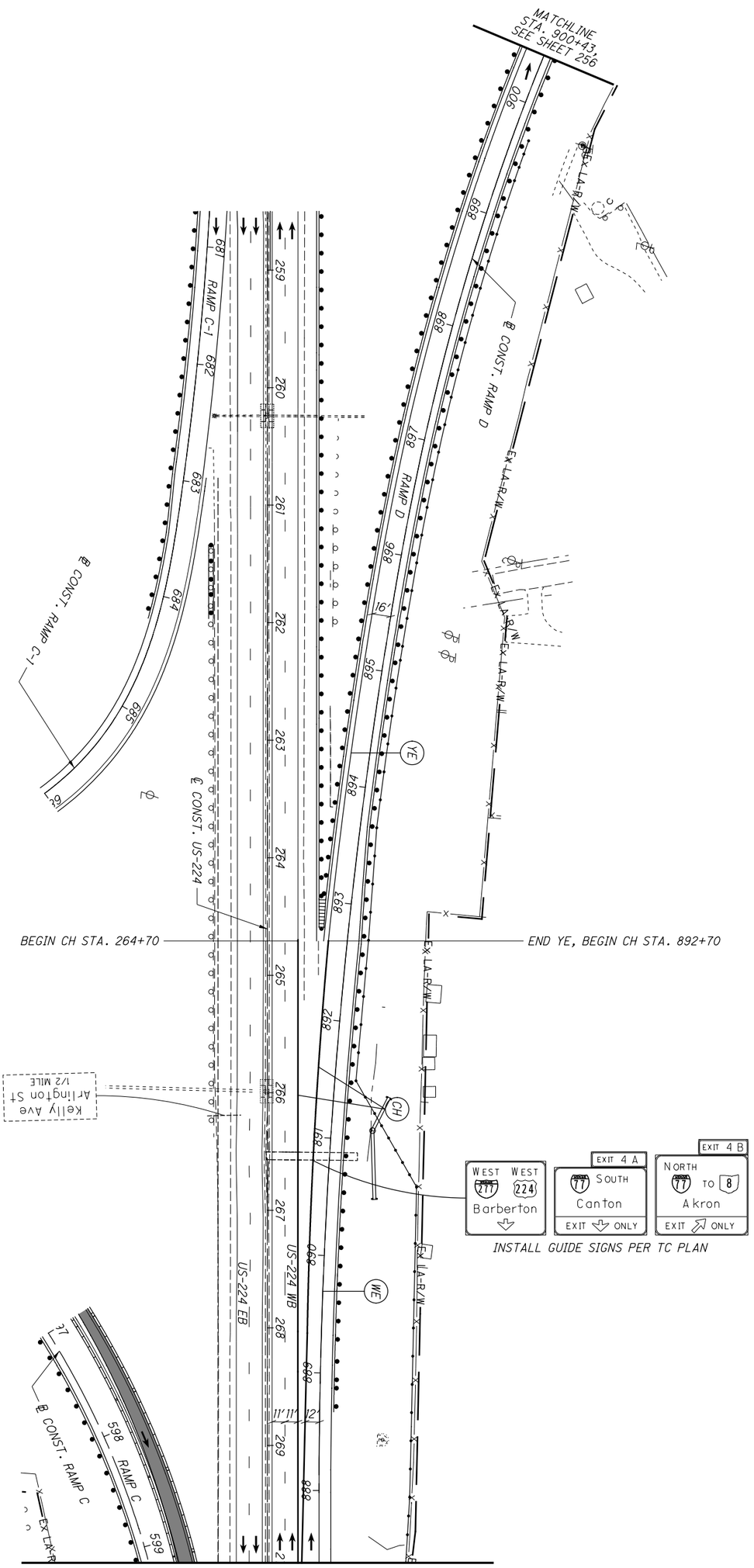


257 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2F I-77 - STA. 514+00 TO STA. 527+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\I06002_SUM-76-10.95\Design\MOT\Sheets\I06002_MP259.dgn Sheet 1/31/2021 5:44:33 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

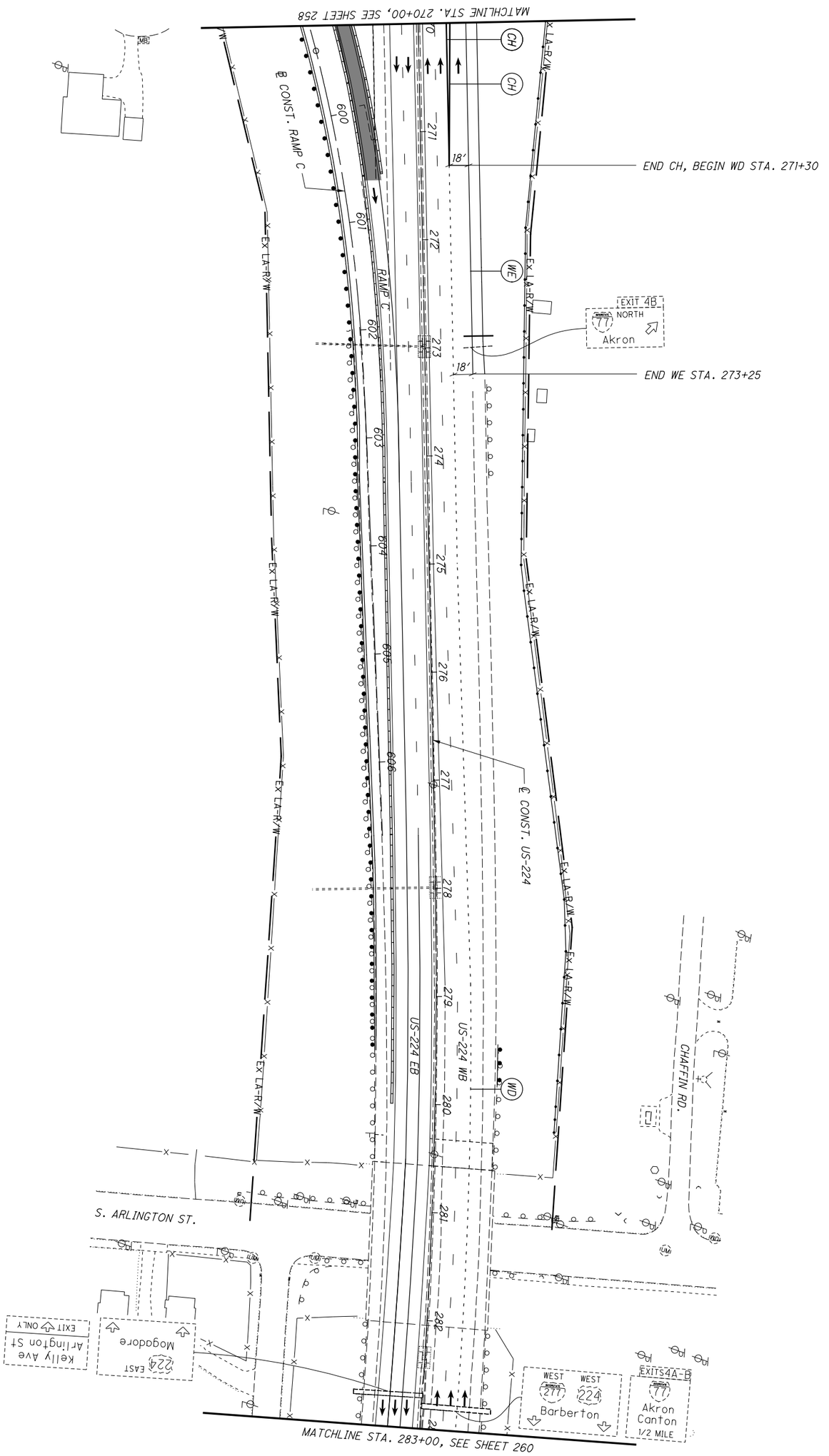


258 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2F US-224 - STA. 258+50 TO STA. 270+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MP260.dgn Sheet 1/31/2021 5:44:38 PM jrettig

NOTES:

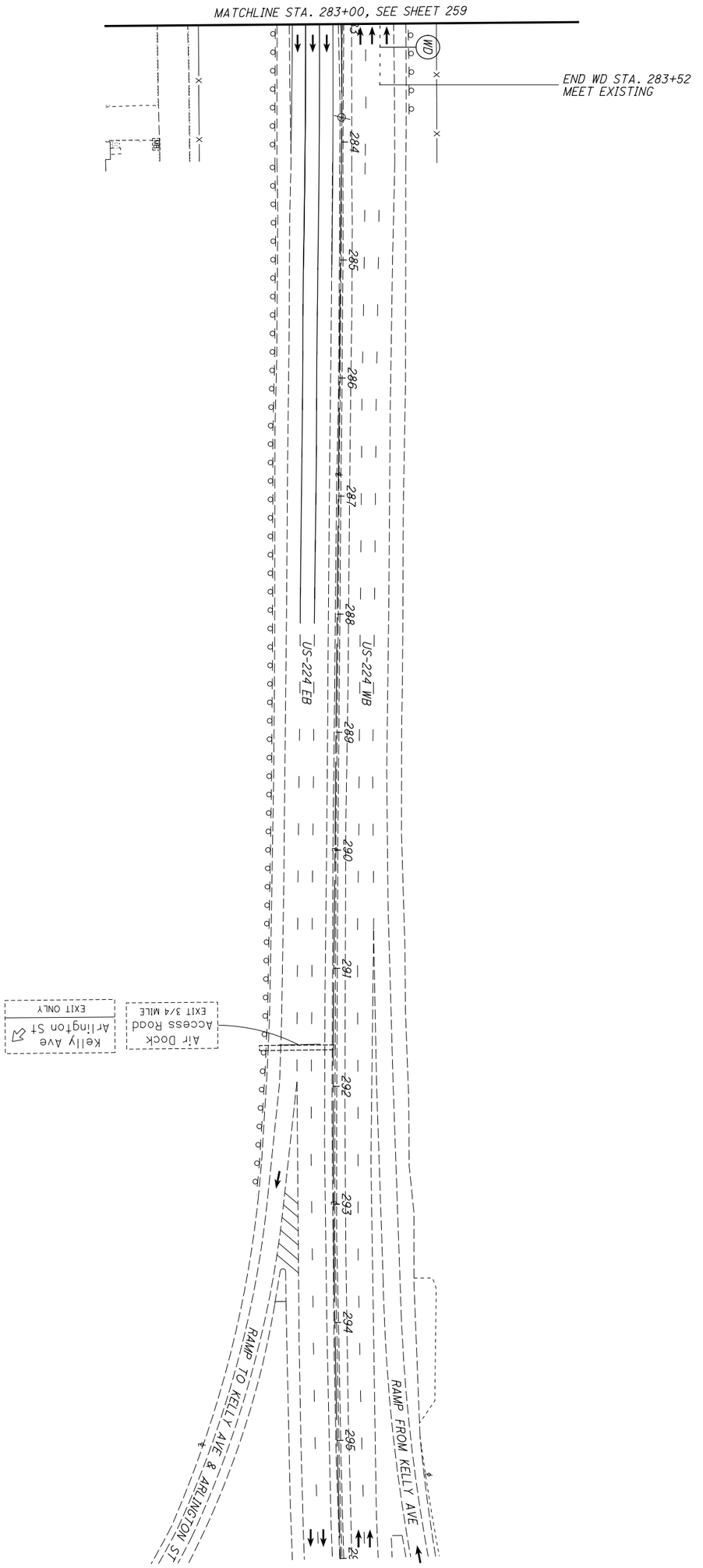
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



259 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2F US-224 - STA. 270+00 TO STA. 283+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

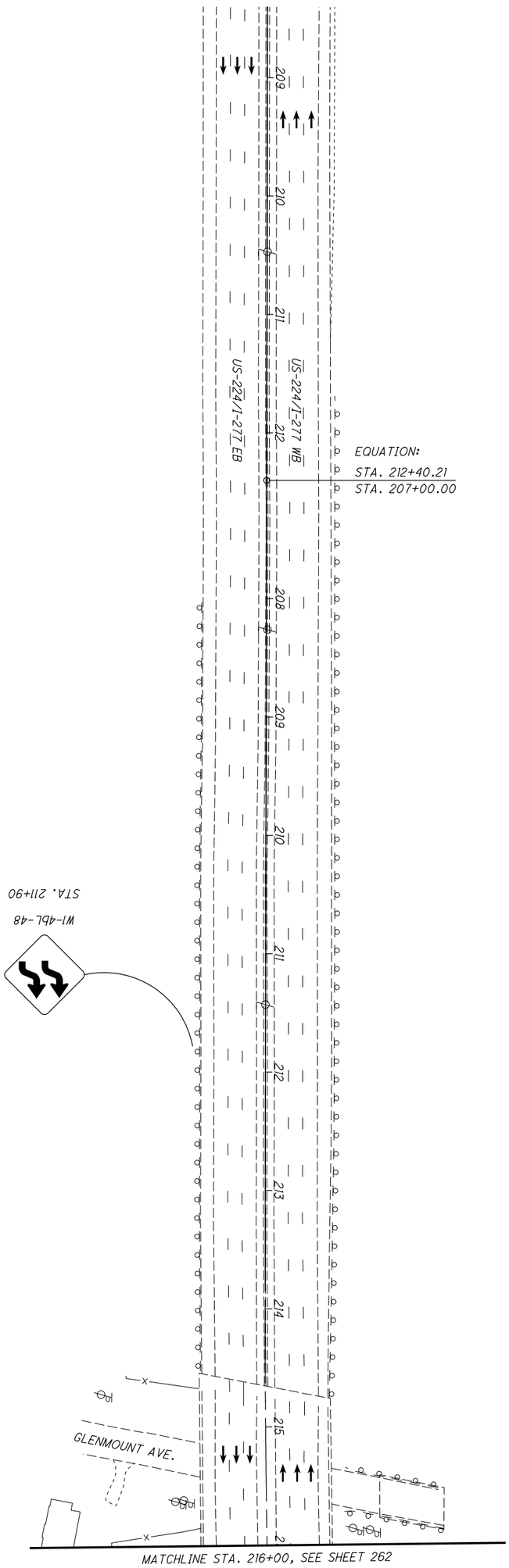


260 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2F US-224 - STA. 283+00 TO STA. 296+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\I06002_SUM-76-I0.95\Design\MOT\Sheets\I06002_MP283.dgn Sheet 1/31/2021 5:45:04 PM jrettig

NOTES:

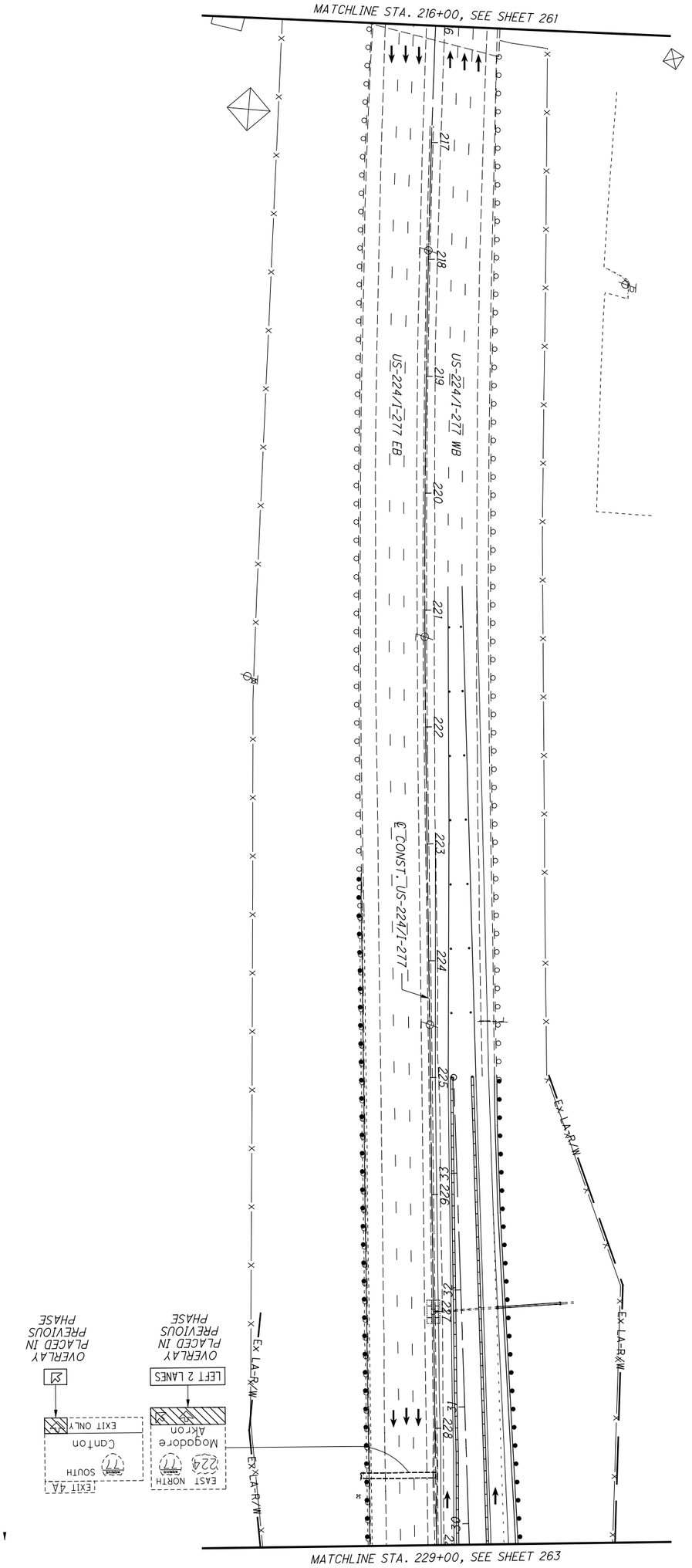
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



261 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2G US-224/I-277 - STA. 209+00 TO STA. 216+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

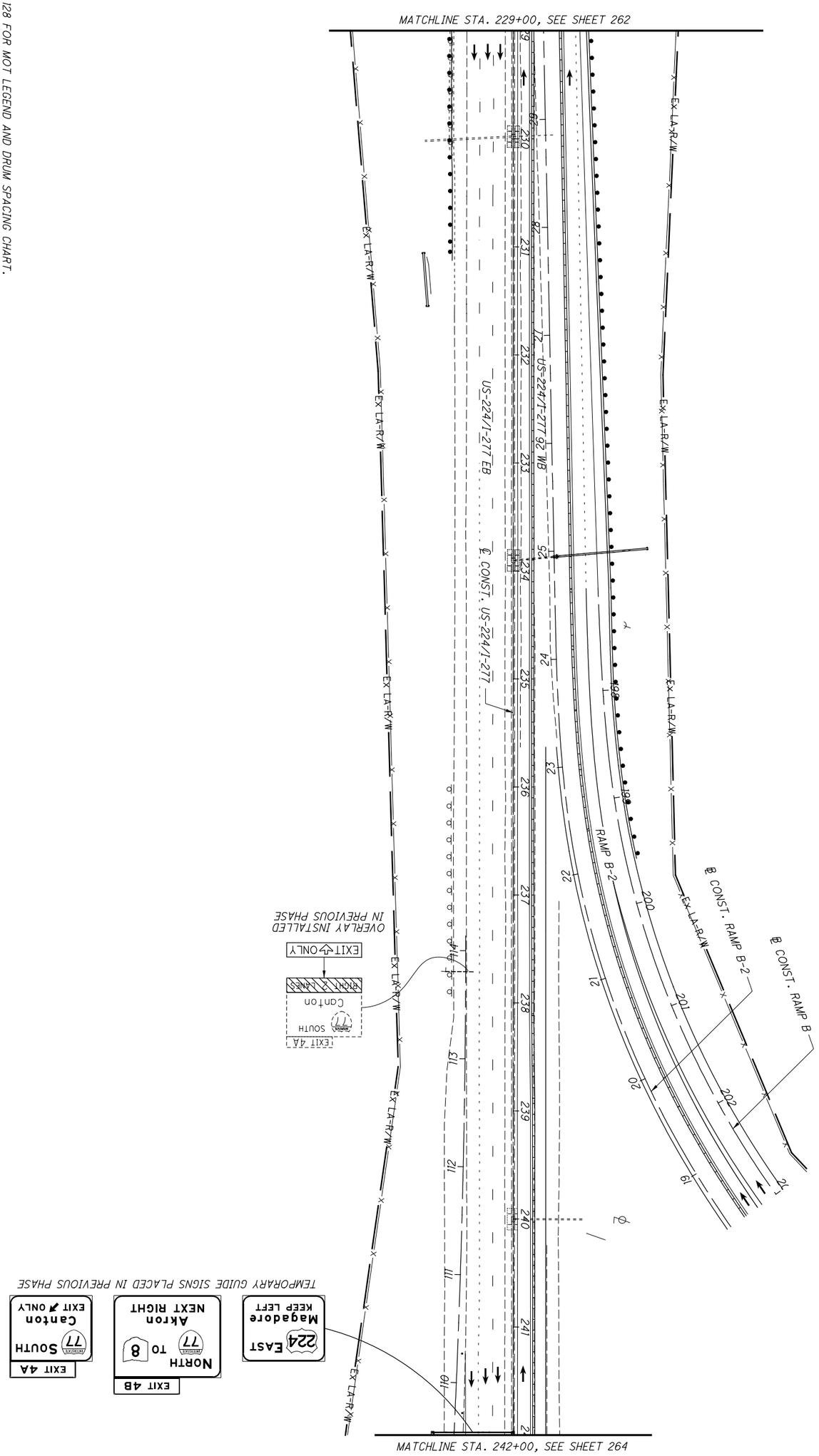


262 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2G US-224/I-277 - STA. 216+00 TO STA. 229+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\I06002_SUM-76-10.95\Design\MOT\Sheets\I06002_MP285.dgn Sheet 1/31/2021 5:45:11 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

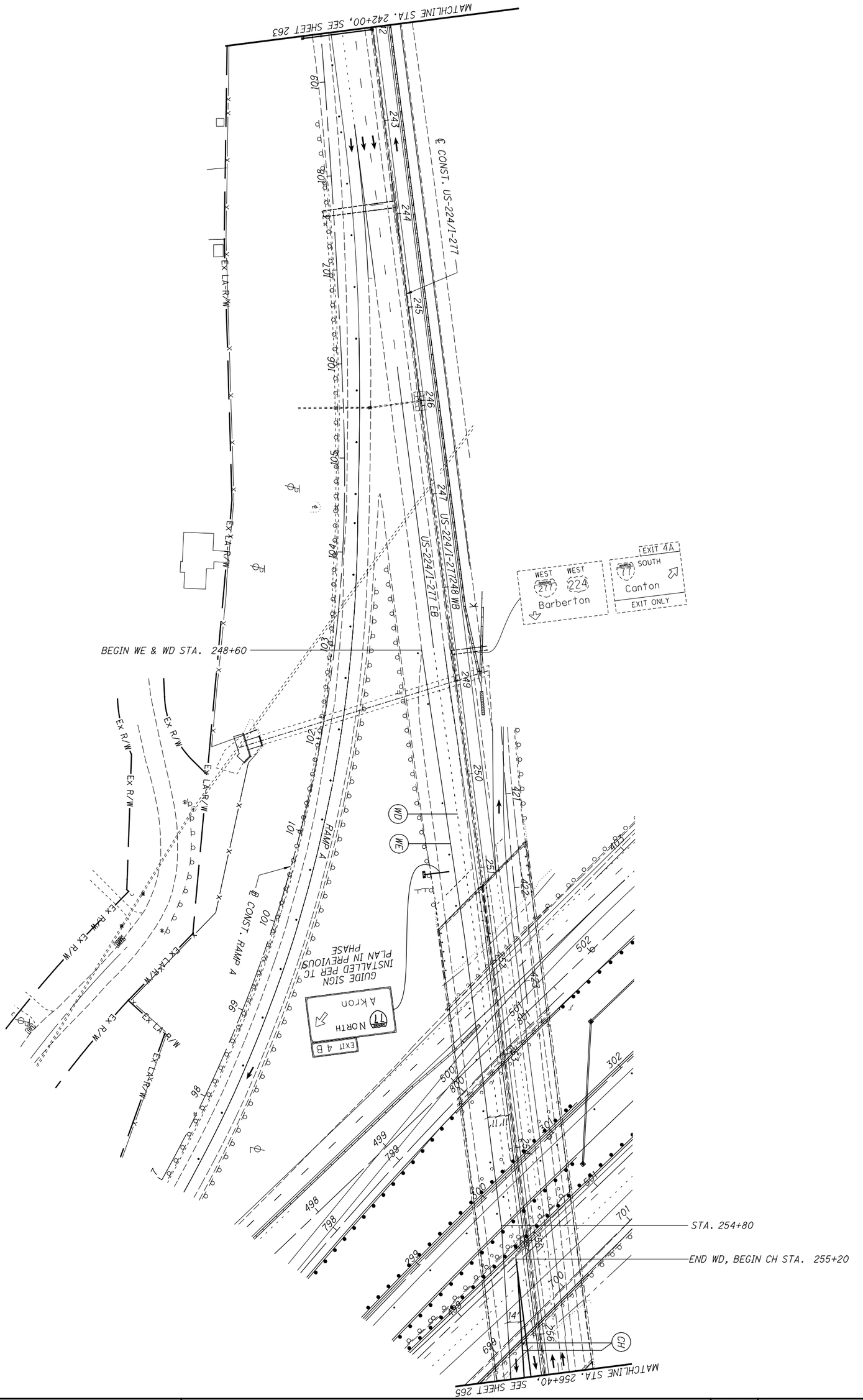


263 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2G US-224/I-277 - STA. 229+00 TO STA. 242+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\I06002_SUM-76-I0.95\Design\MOT\Sheets\I06002_MP286.dgn Sheet 1/31/2021 5:45:14 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

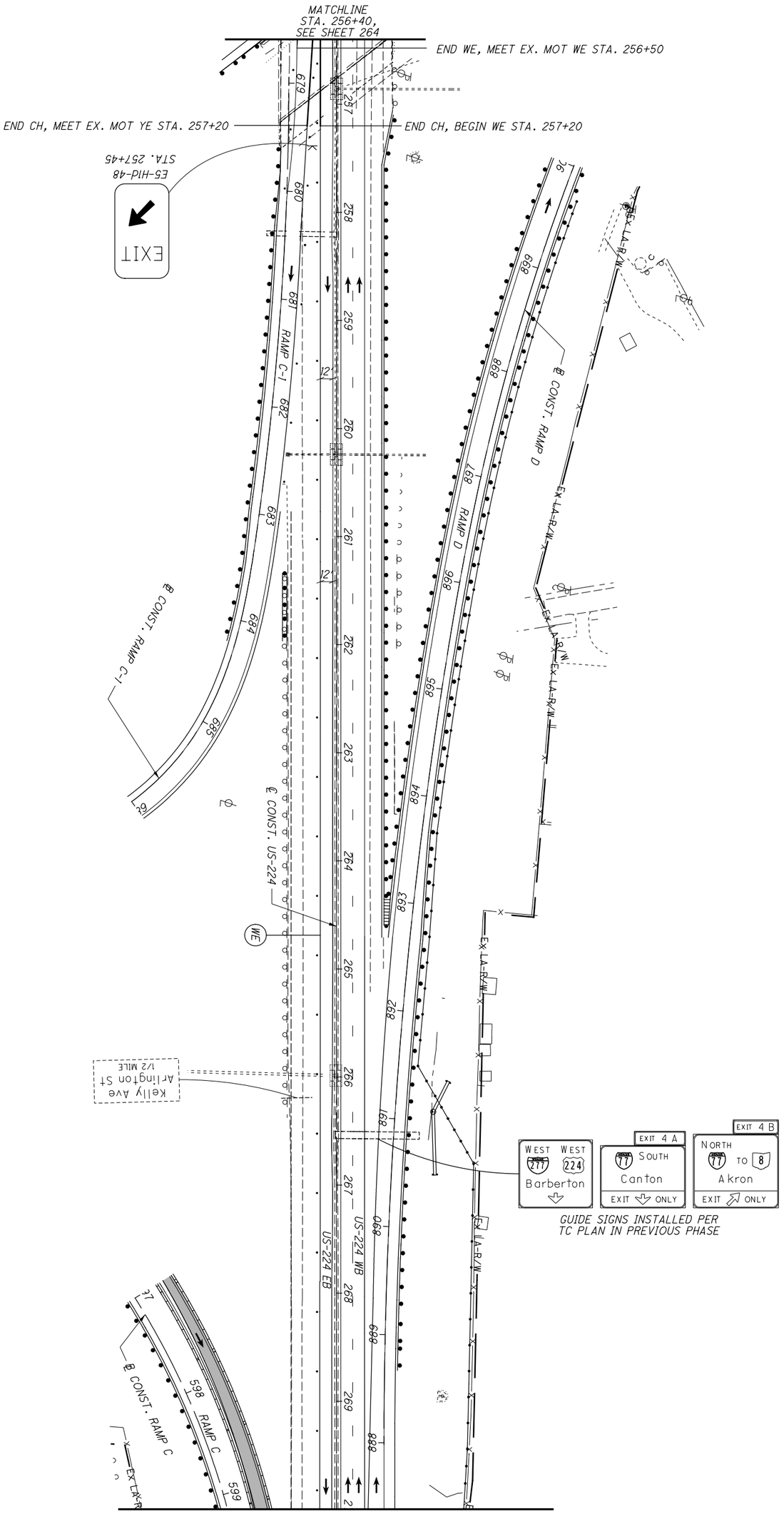


264 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2G US-224/I-277 - STA. 242+00 TO STA. 256+40	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\I06002_SUM-76-I0.95\Design\MOT\Sheets\I06002_MP262.dgn Sheet 1/31/2021 5:45:37 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

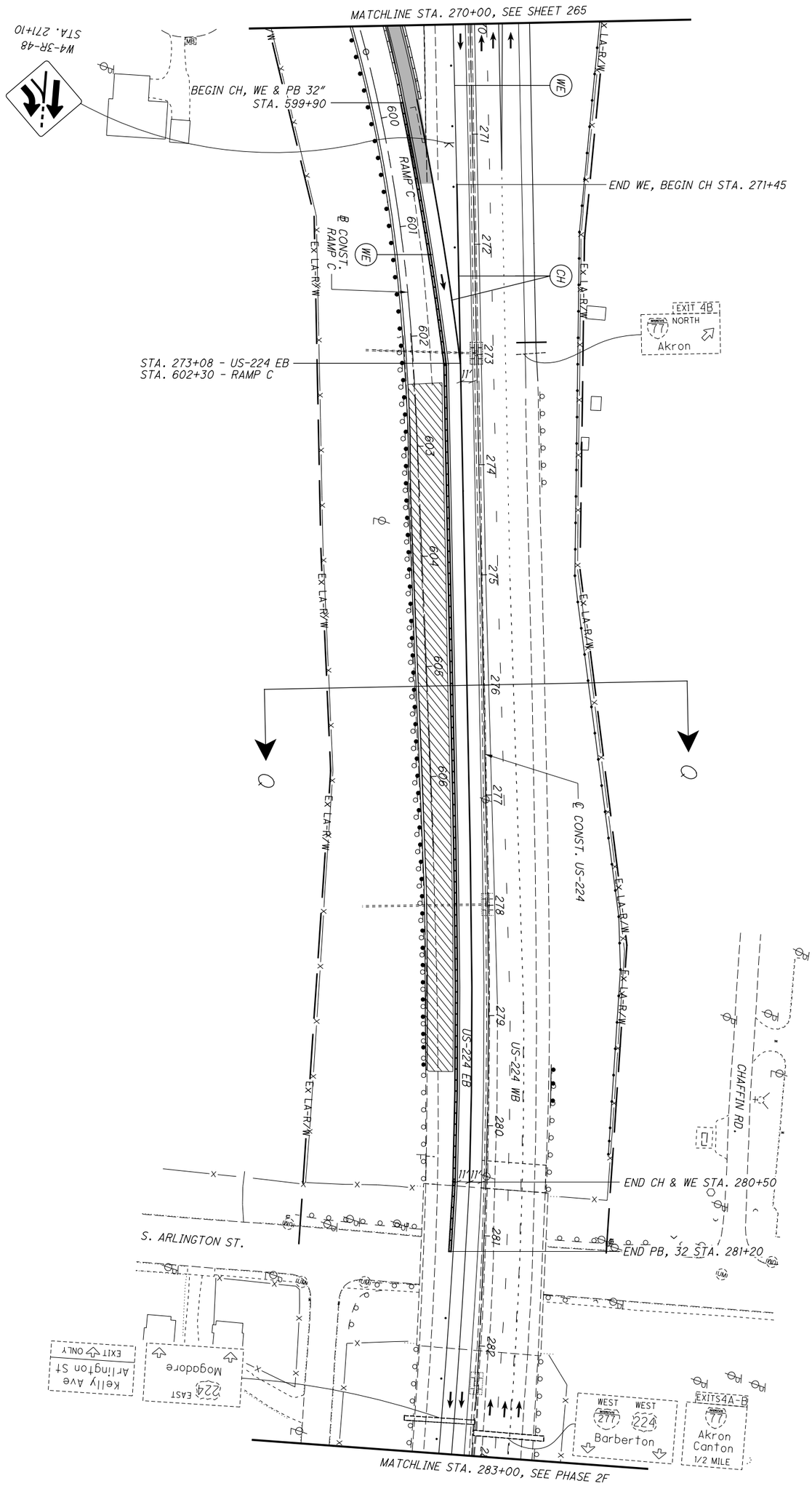


265 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2G US-224 - STA. 256+40 TO STA. 270+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

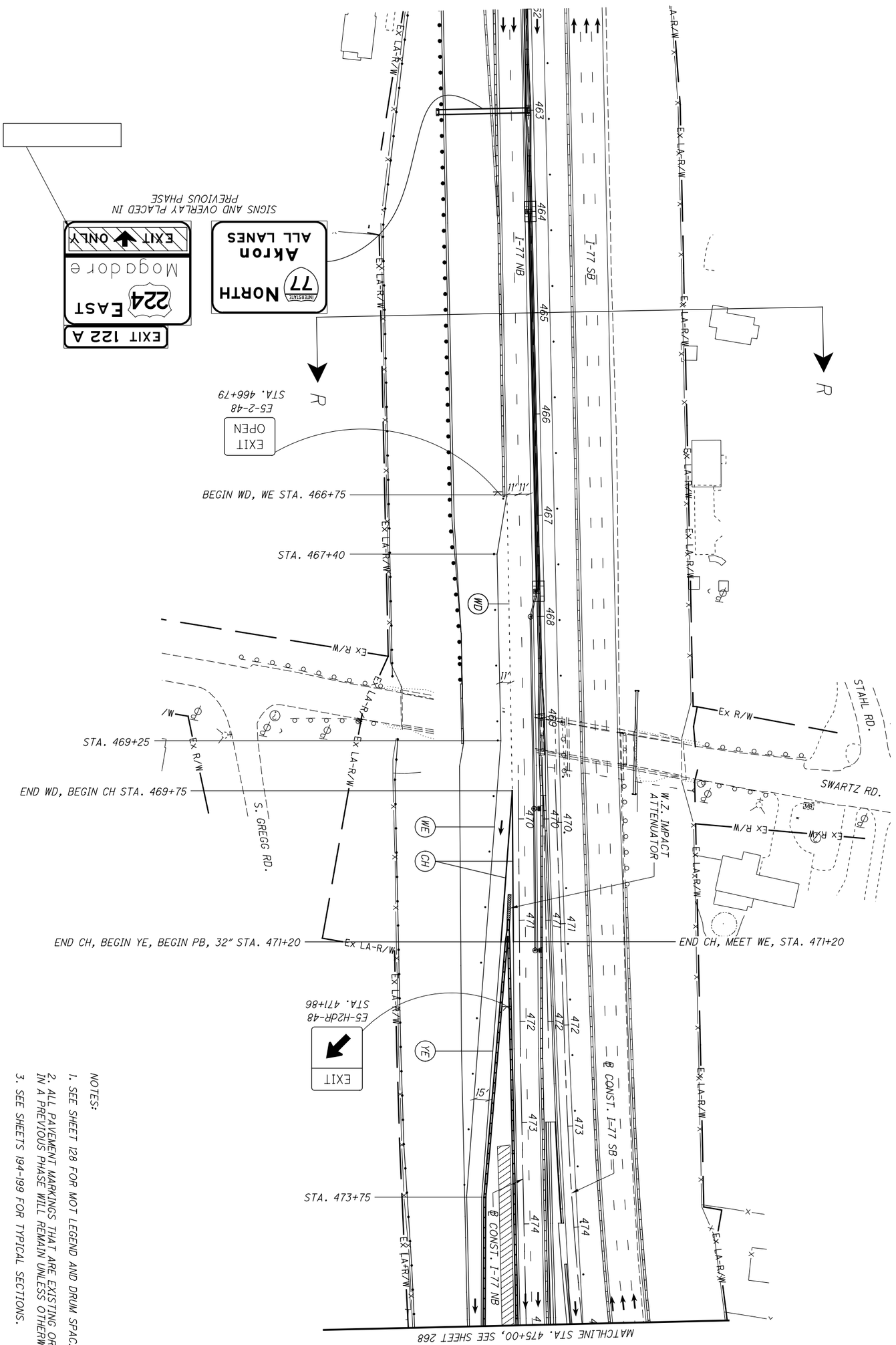
N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MP263.dgn Sheet 1/31/2021 5:45:43 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 194-199 FOR TYPICAL SECTIONS.



266 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2G US-224 - STA. 270+00 TO STA. 283+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

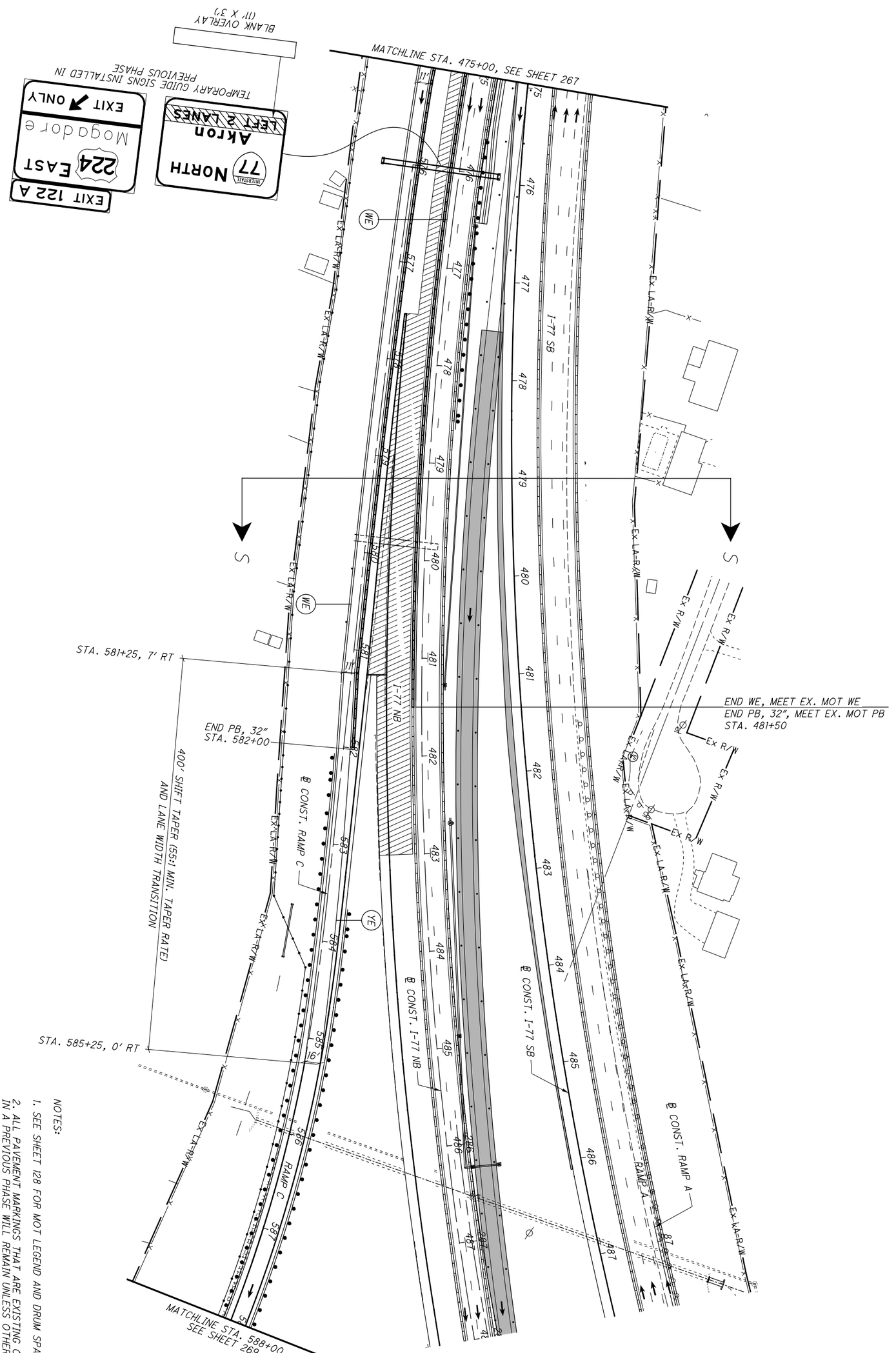


NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 194-199 FOR TYPICAL SECTIONS.

267 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2H I-77 - STA. 462+00 TO STA. 475+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\I06002_SUM-76-I0.95\Design\MOT\Sheets\I06002_MP266.dgn Sheet 2/2/2021 11:06:10 AM jrettig



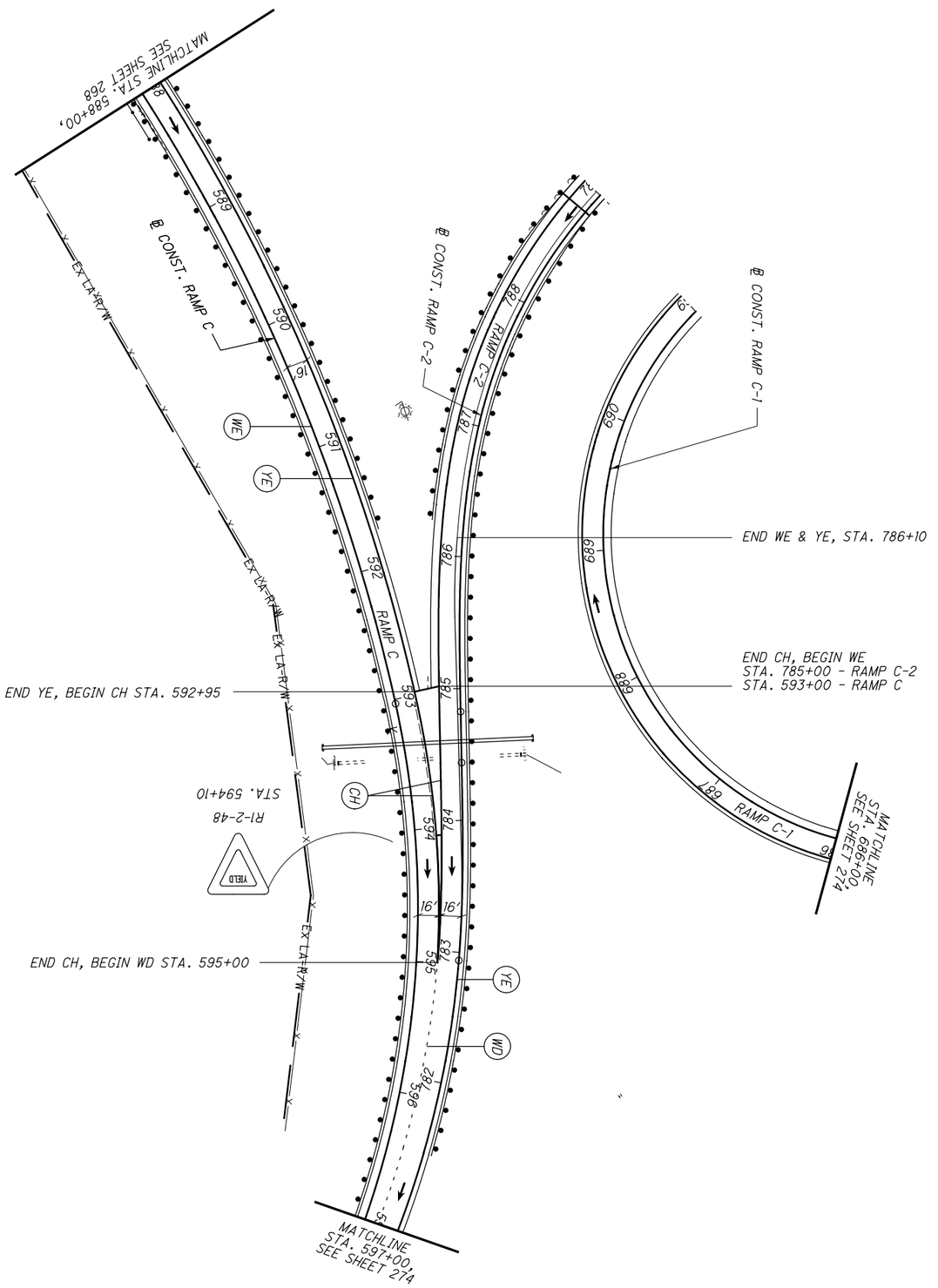
NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 194-199 FOR TYPICAL SECTIONS.

268 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2H I-77 - STA. 475+00 TO STA. 488+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

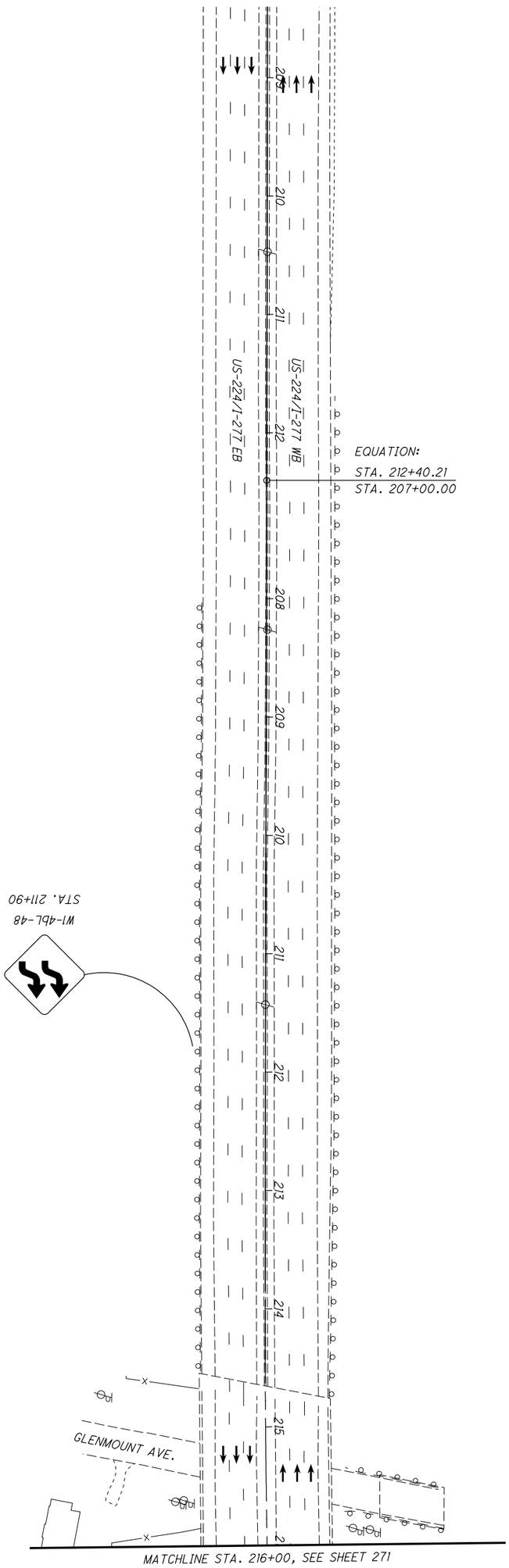
NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



NOTES:

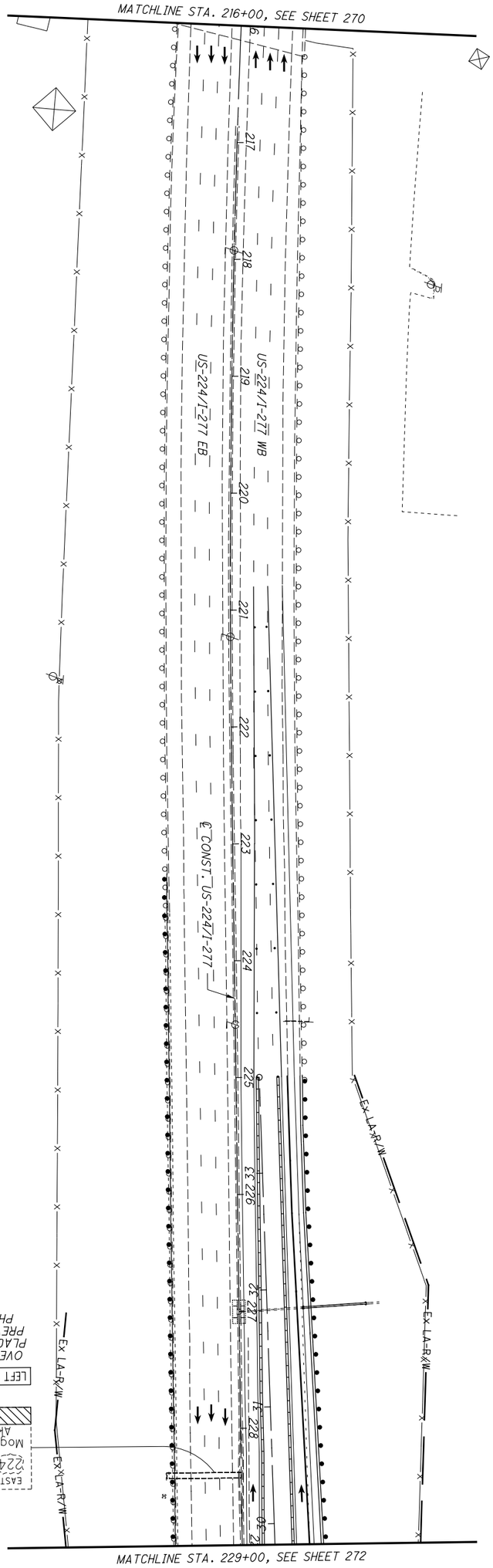
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



270 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2H US-224/I-277 - STA. 209+00 TO STA. 216+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

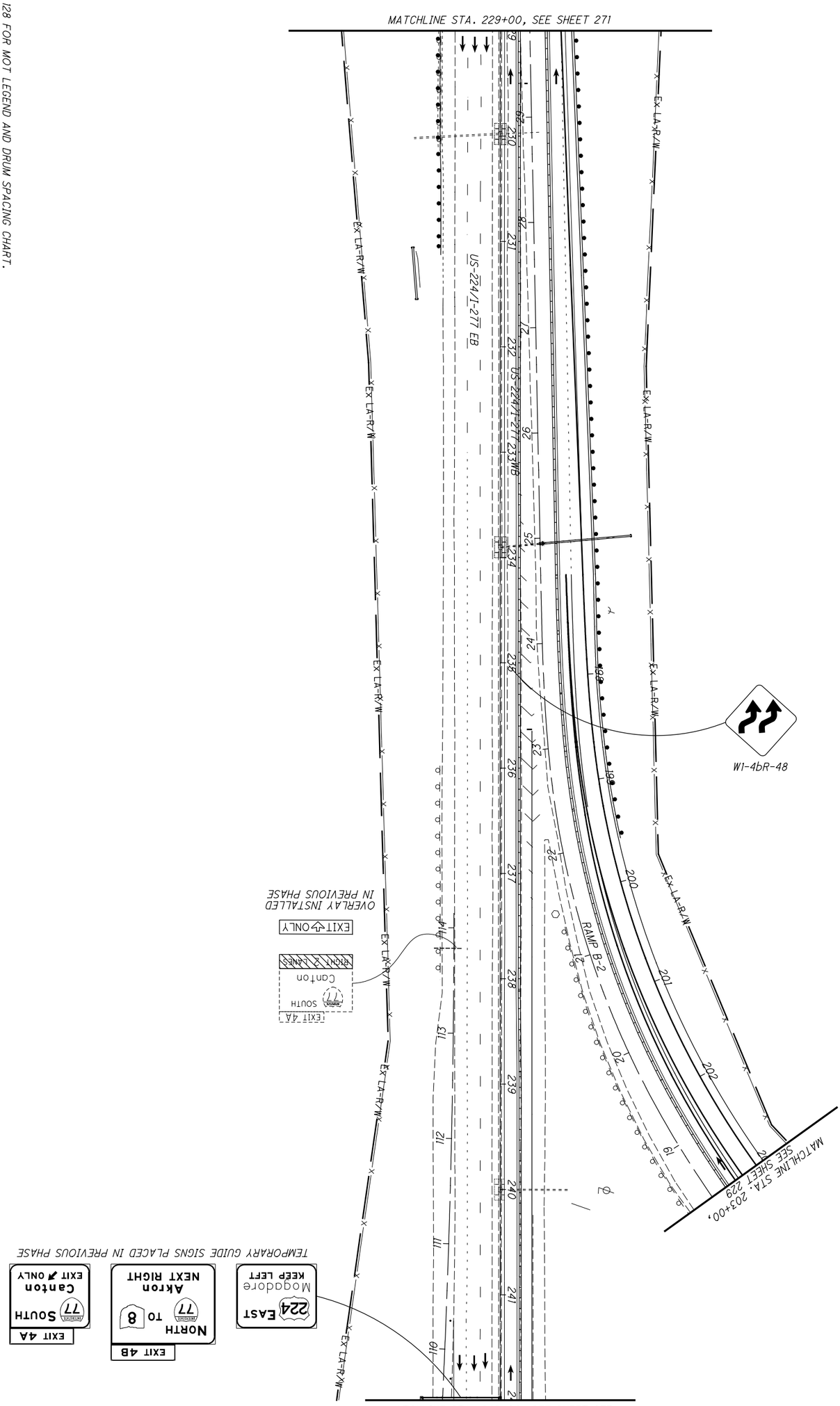
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



271 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2H US-224/I-277 - STA. 216+00 TO STA. 229+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

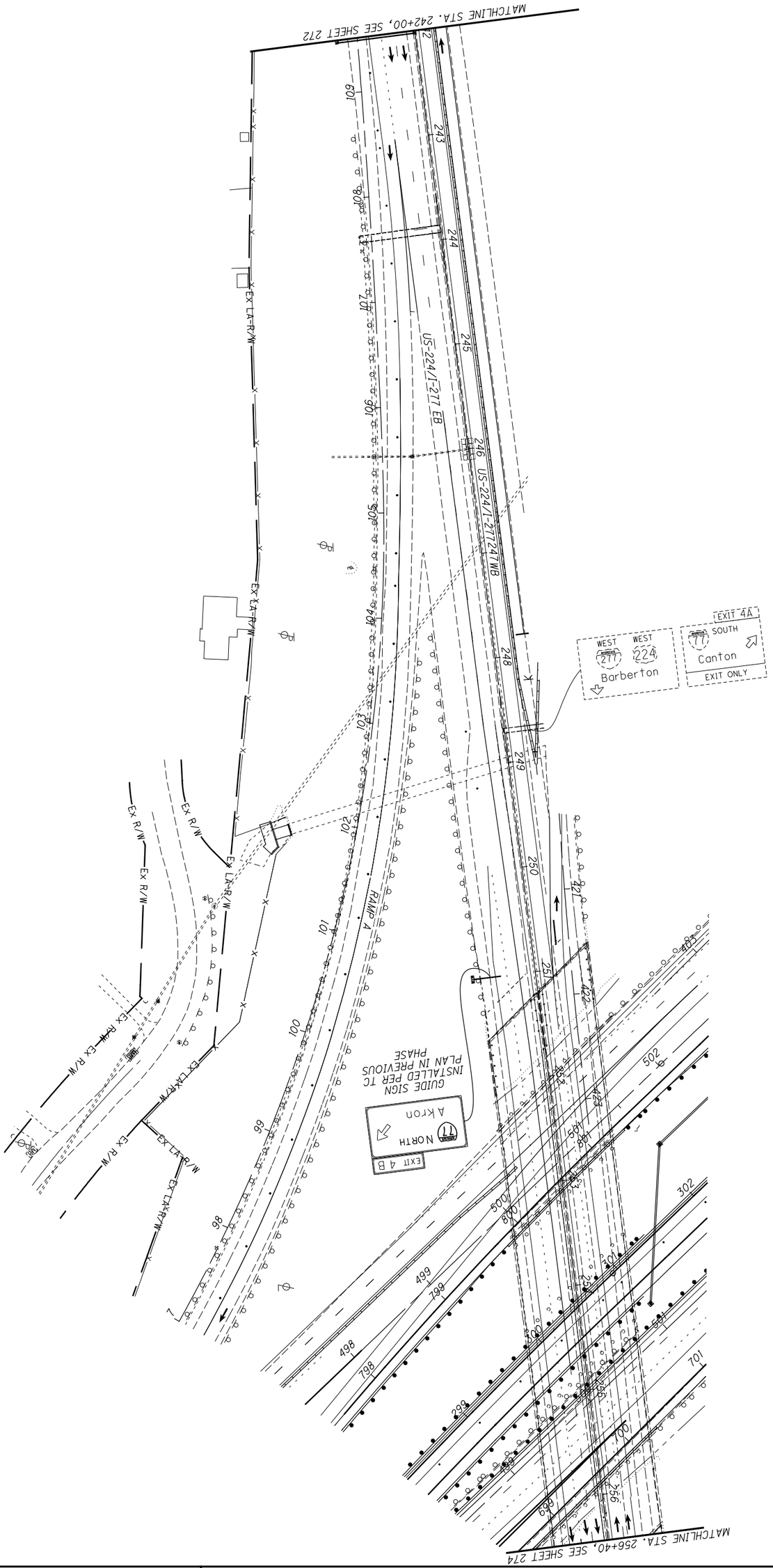


272 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2H US-224 / I-277 - STA. 229+00 TO STA. 242+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MP290.dgn Sheet 1/31/2021 5:46:33 PM jrettig

NOTES:

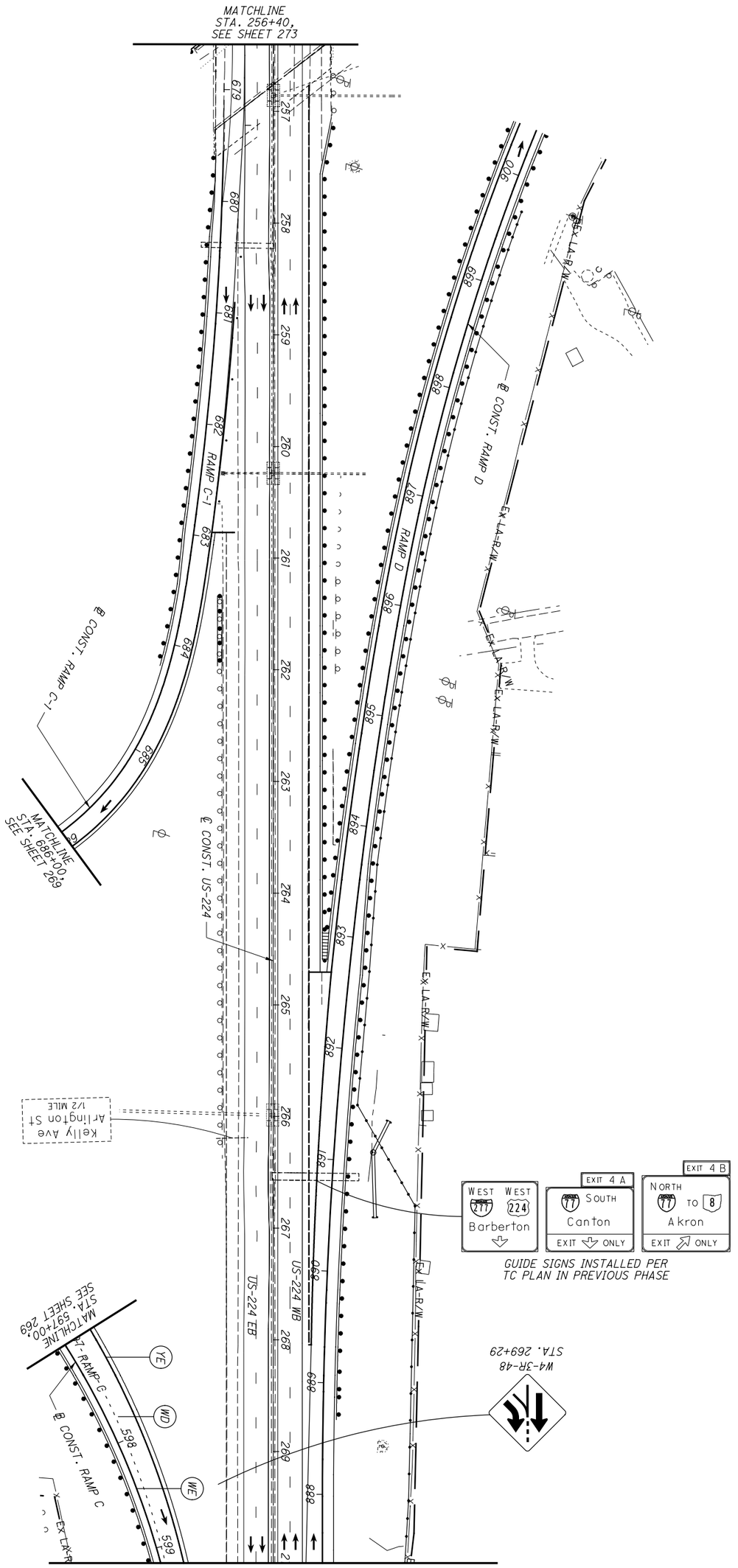
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



273 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2H US-224 / I-277 - STA. 242+00 TO STA. 256+40	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

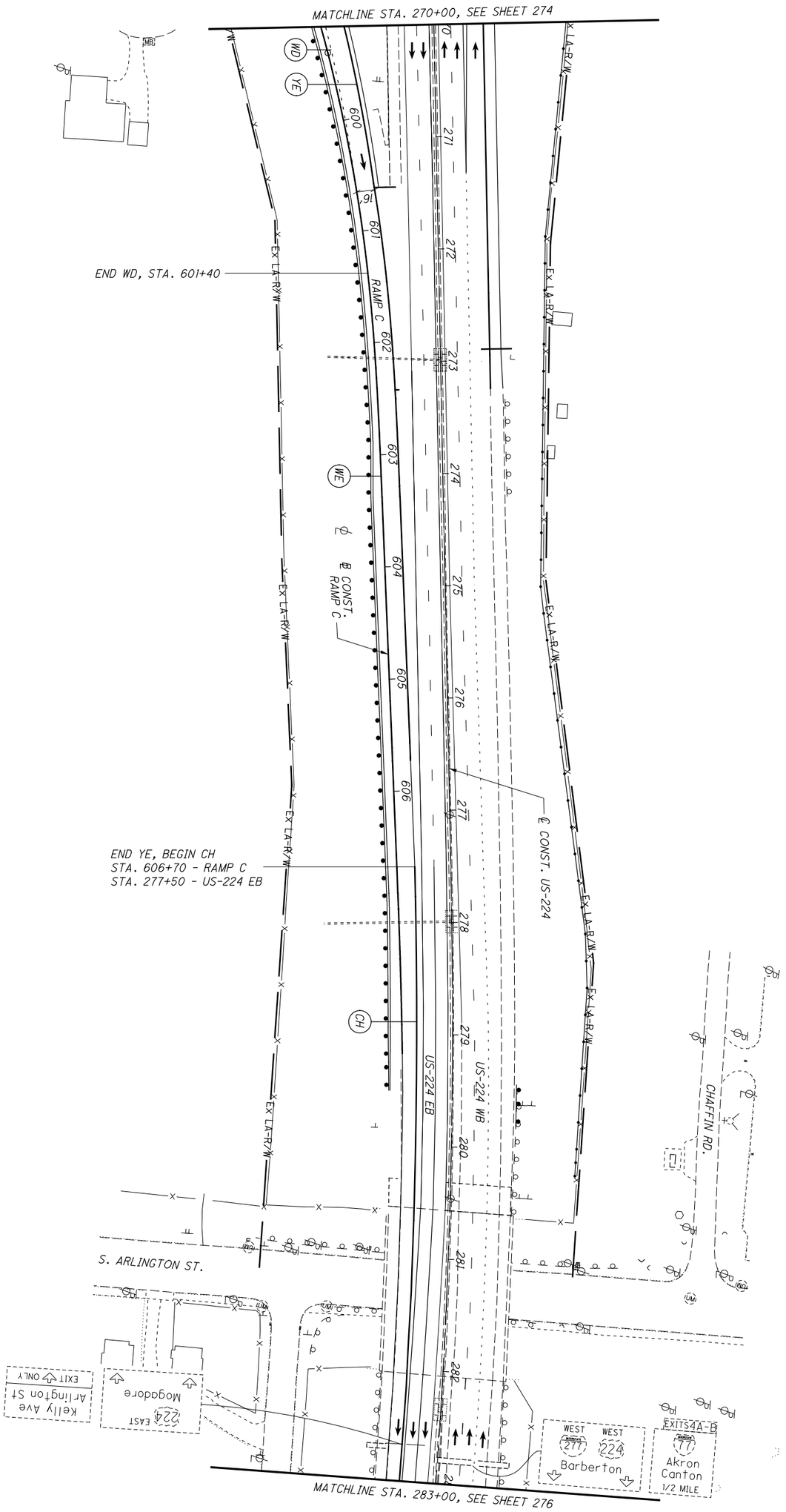
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



274 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2H US-224 - STA. 256+40 TO STA. 270+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

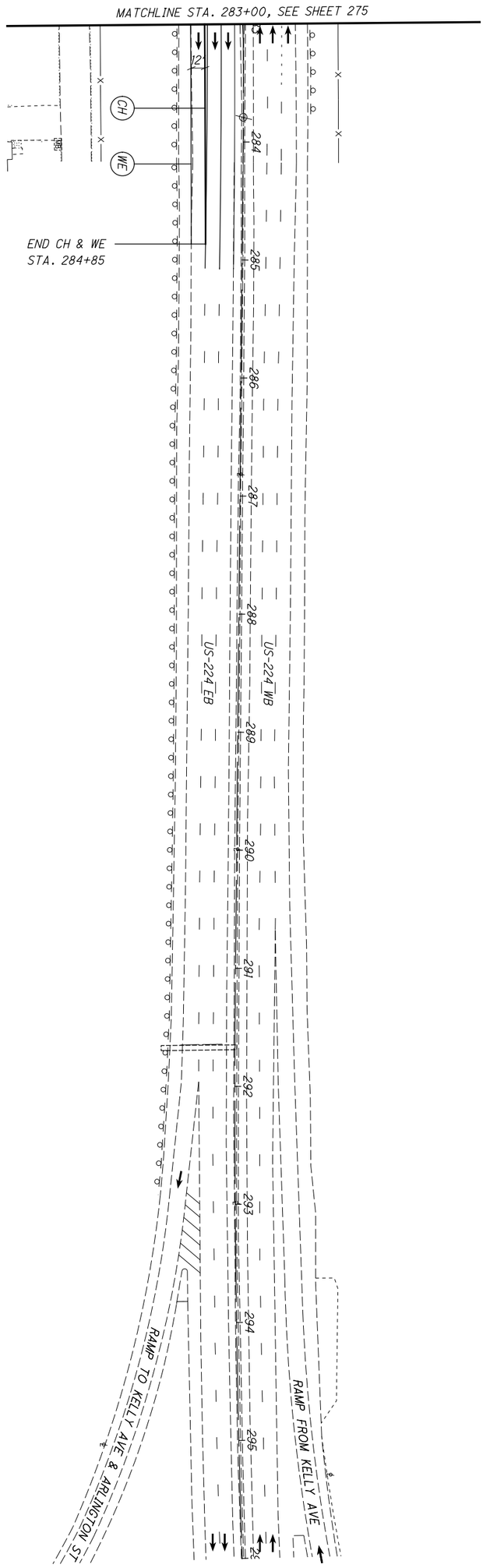
NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



NOTES:

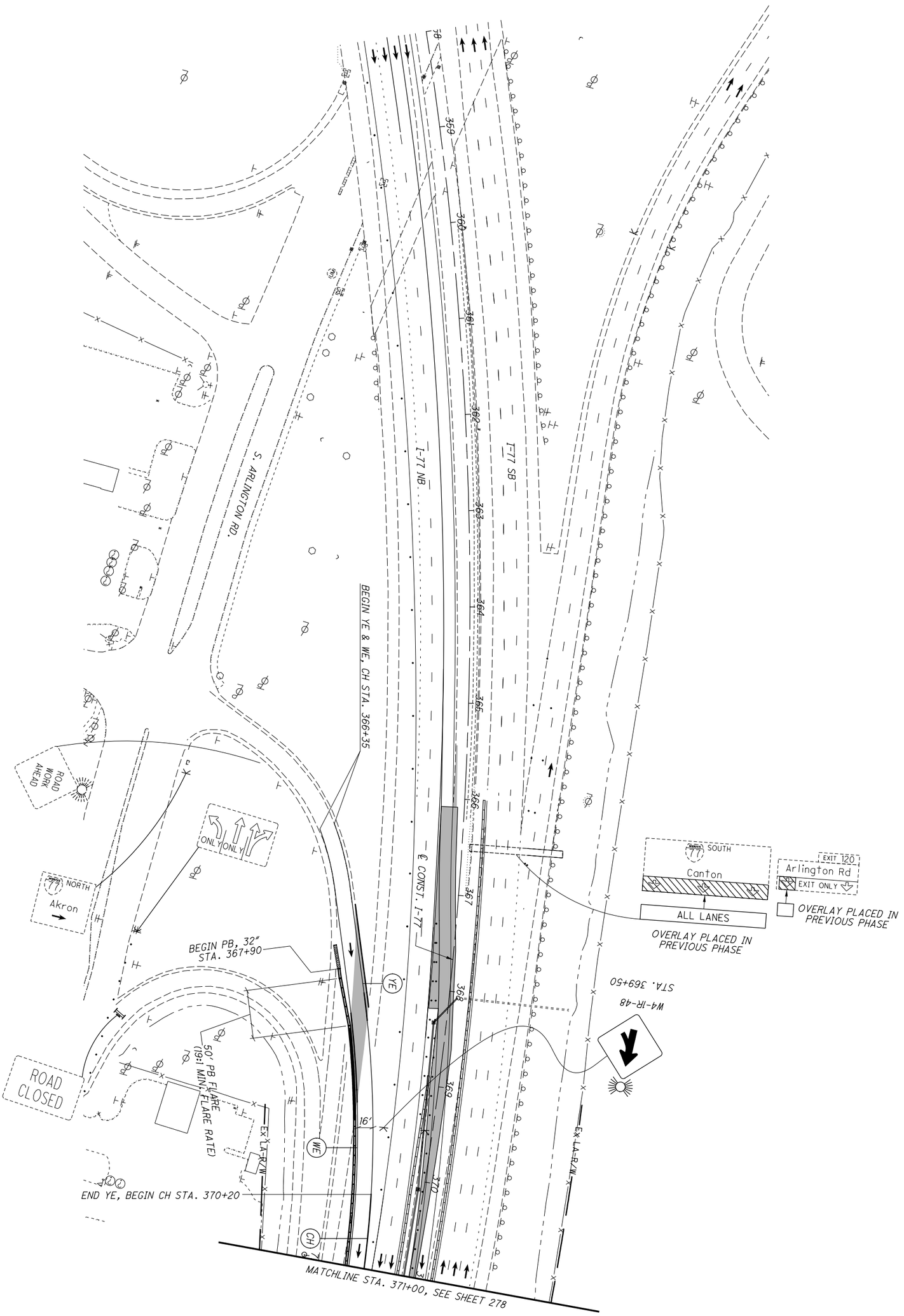
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MP271.dgn Sheet 1/31/2021 5:47:13 PM jrettig

NOTES:

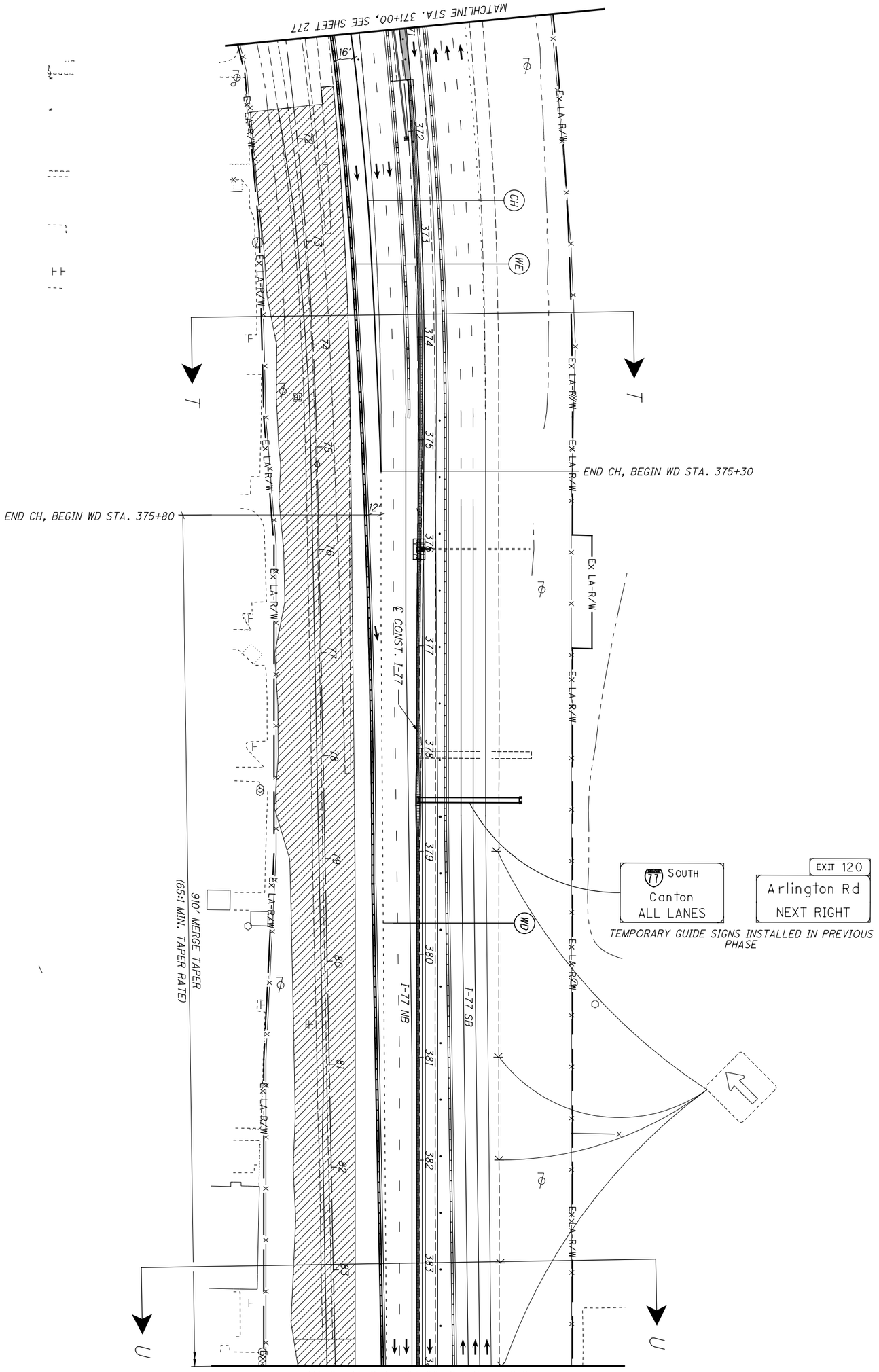
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



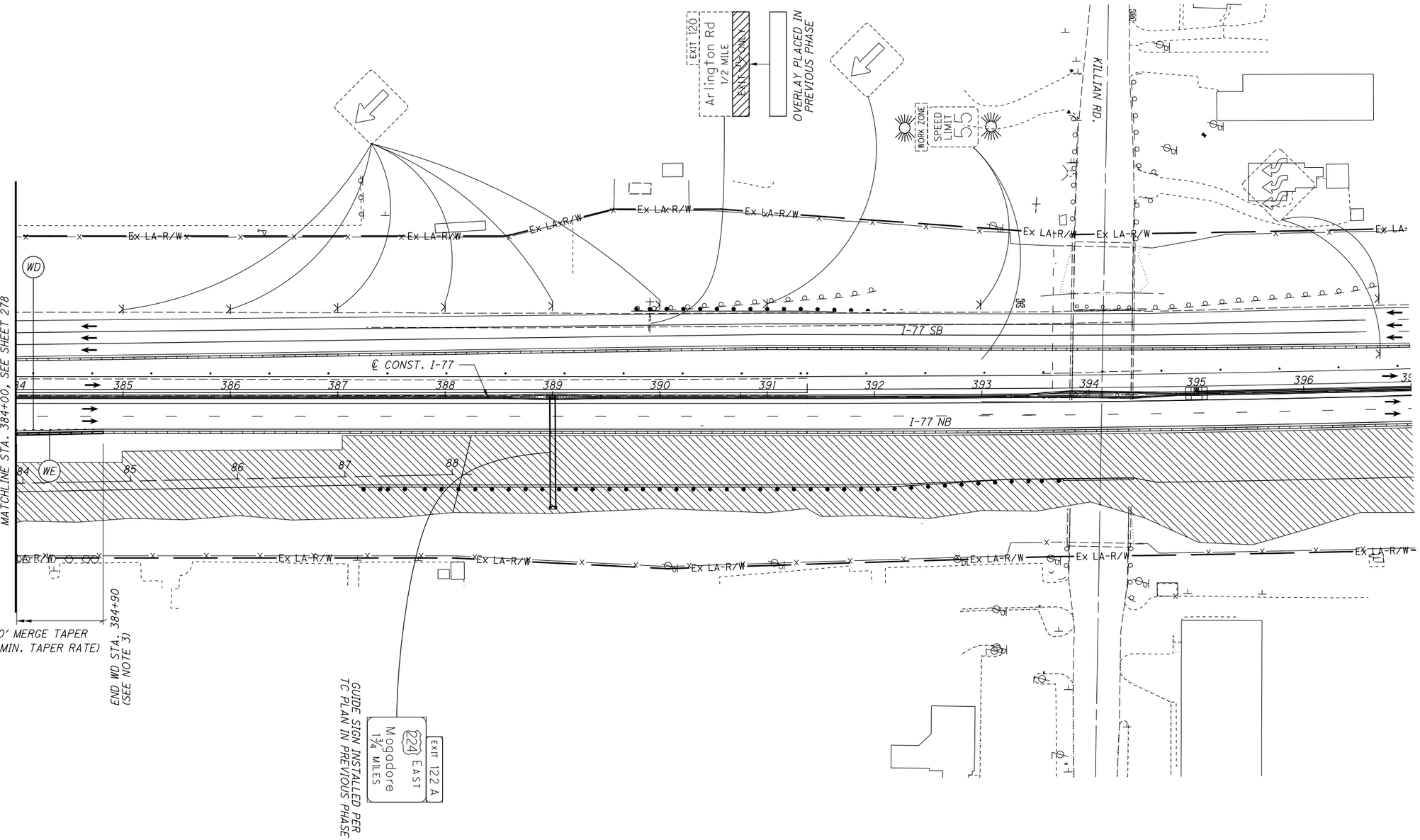
277 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2I I-77 - STA. 358+00 TO STA. 371+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 194-199 FOR TYPICAL SECTIONS.



278 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2I I-77 - STA. 371+00 TO STA. 384+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET



NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.

2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

3. THE NORTHBOUND TEMPORARY BARRIER AND EDGE LINE SHALL CONTINUE TO STA. 422+80 AS SHOWN ON SHEET 209.

REVISIONS		
NO.	DATE	DESCRIPTION
2	04/05/21	CLARIFIED PORTABLE BARRIER LIMITS

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED . CHECKED .

TRAFFIC PLAN - PHASE 2I

MAINTENANCE OF TRAFFIC STA. 384+00 TO STA. 397+00

I-77 - STA. 384+00 TO STA. 397+00

SUM-77/277/224
VARIOUS

279
1288

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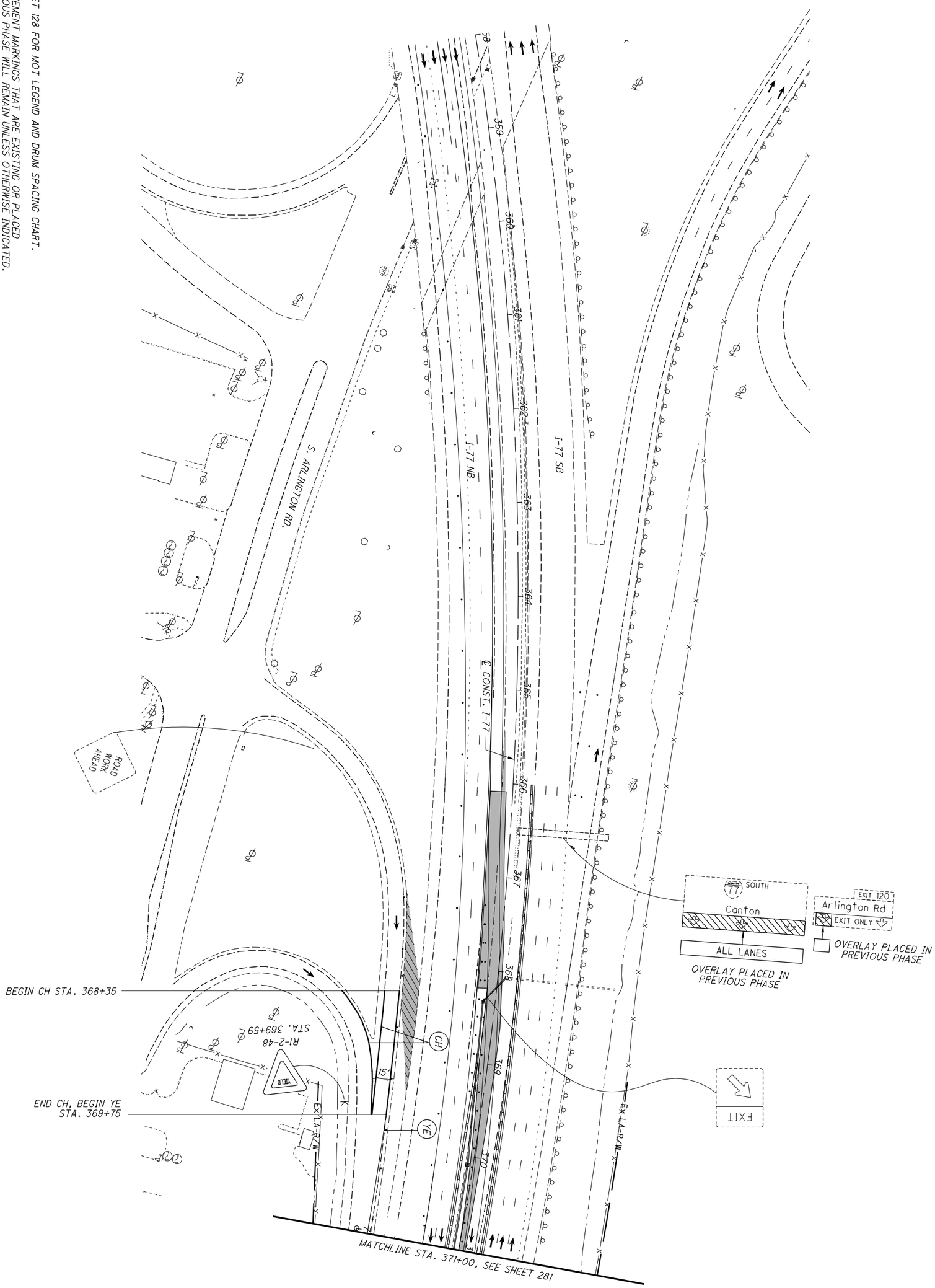
NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



280 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2J I-77 - STA. 358+00 TO STA. 371+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

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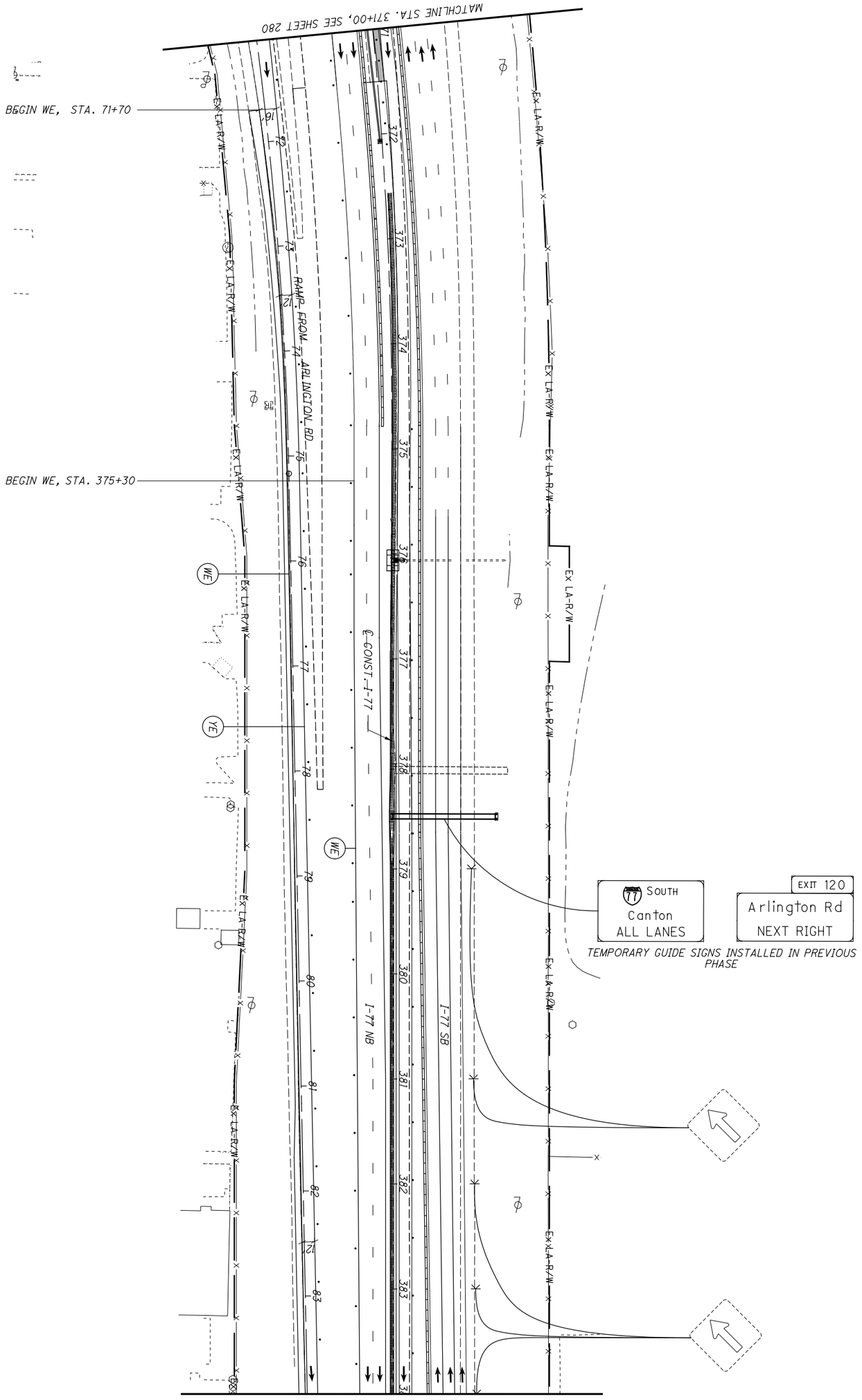
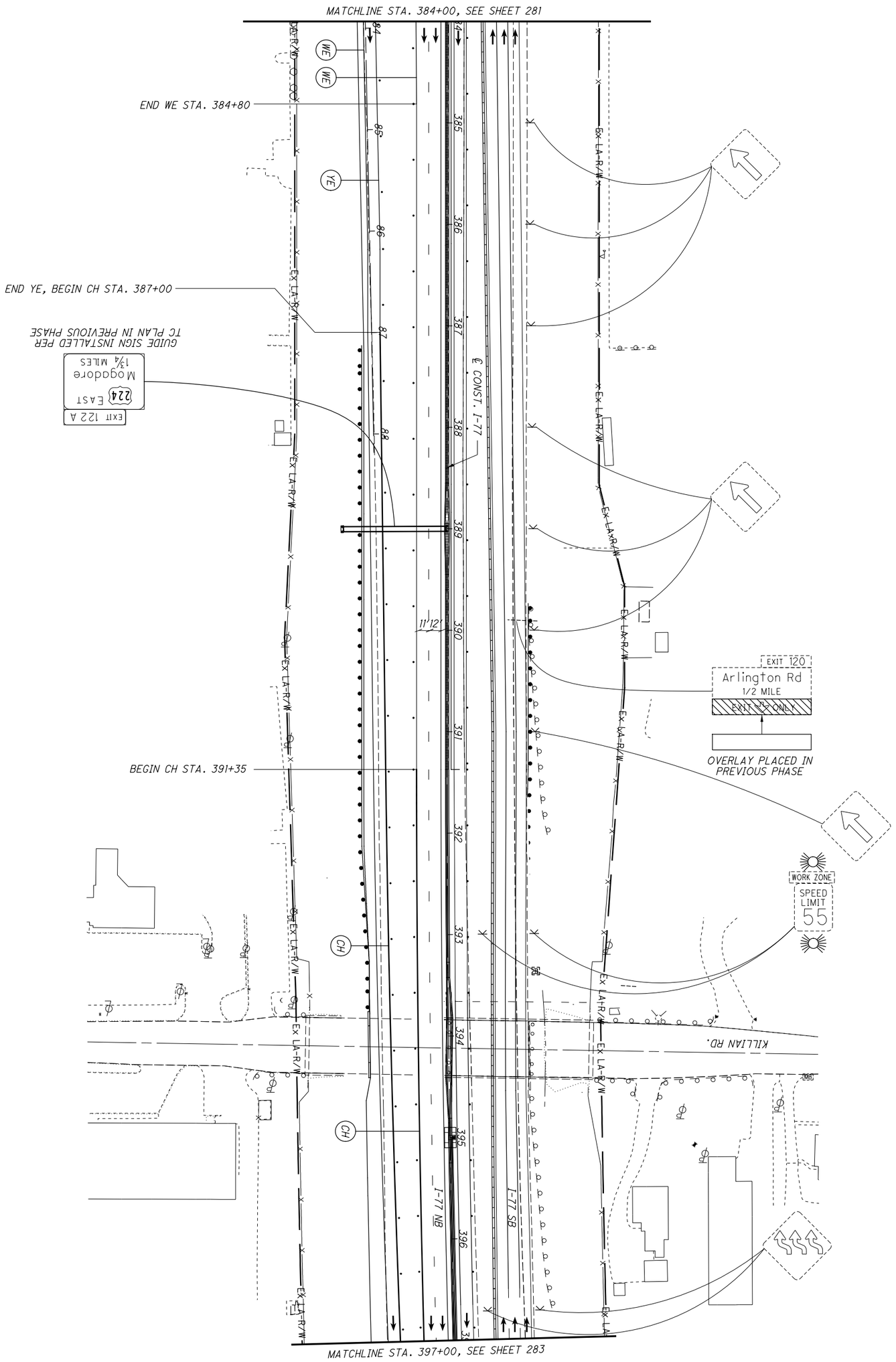
NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



281 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2J I-77 - STA. 371+00 TO STA. 384+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\I06002_SUM-76-I0.95\Design\MOT\Sheets\I06002_MP276.dgn Sheet 1/31/2021 5:47:52 PM jrettig



NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

282 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2J I-77 - STA. 384+00 TO STA. 397+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

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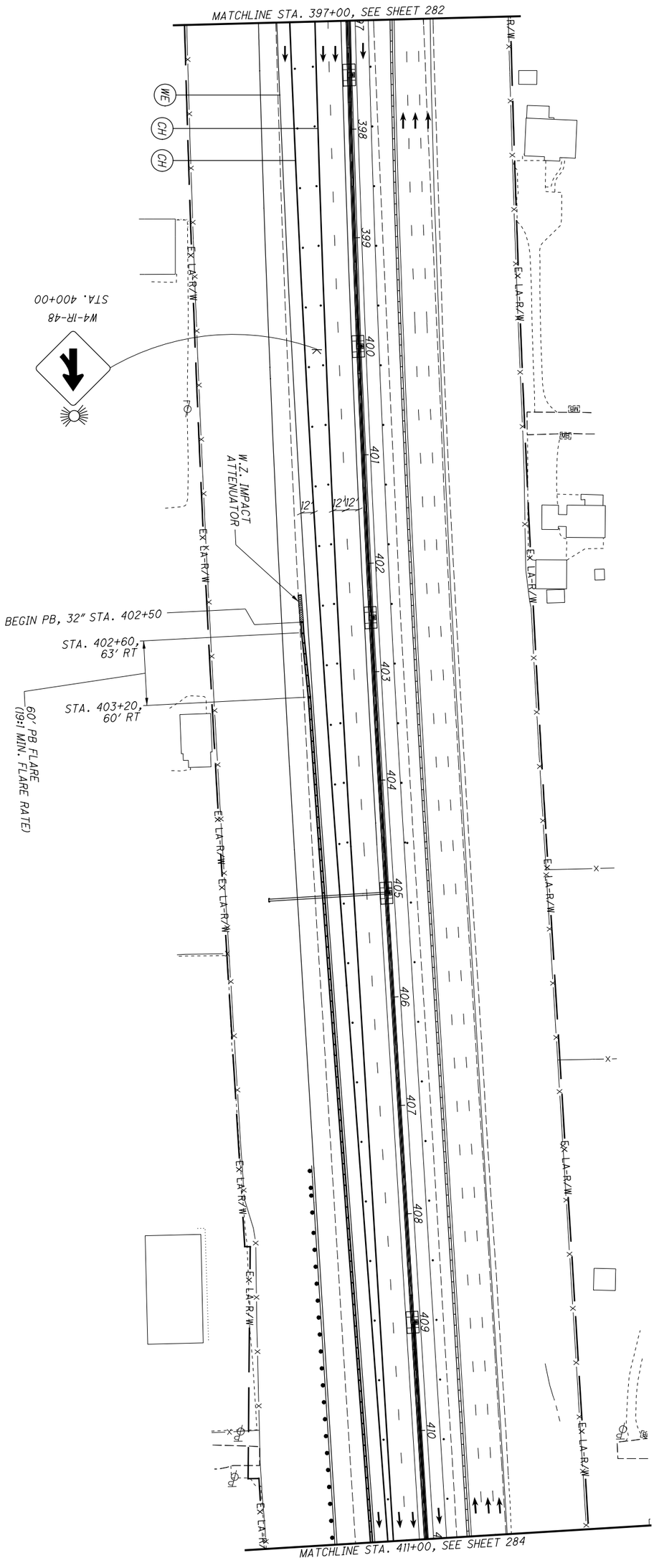

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

283 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2J I-77 - STA. 3397+00 TO STA. 411+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

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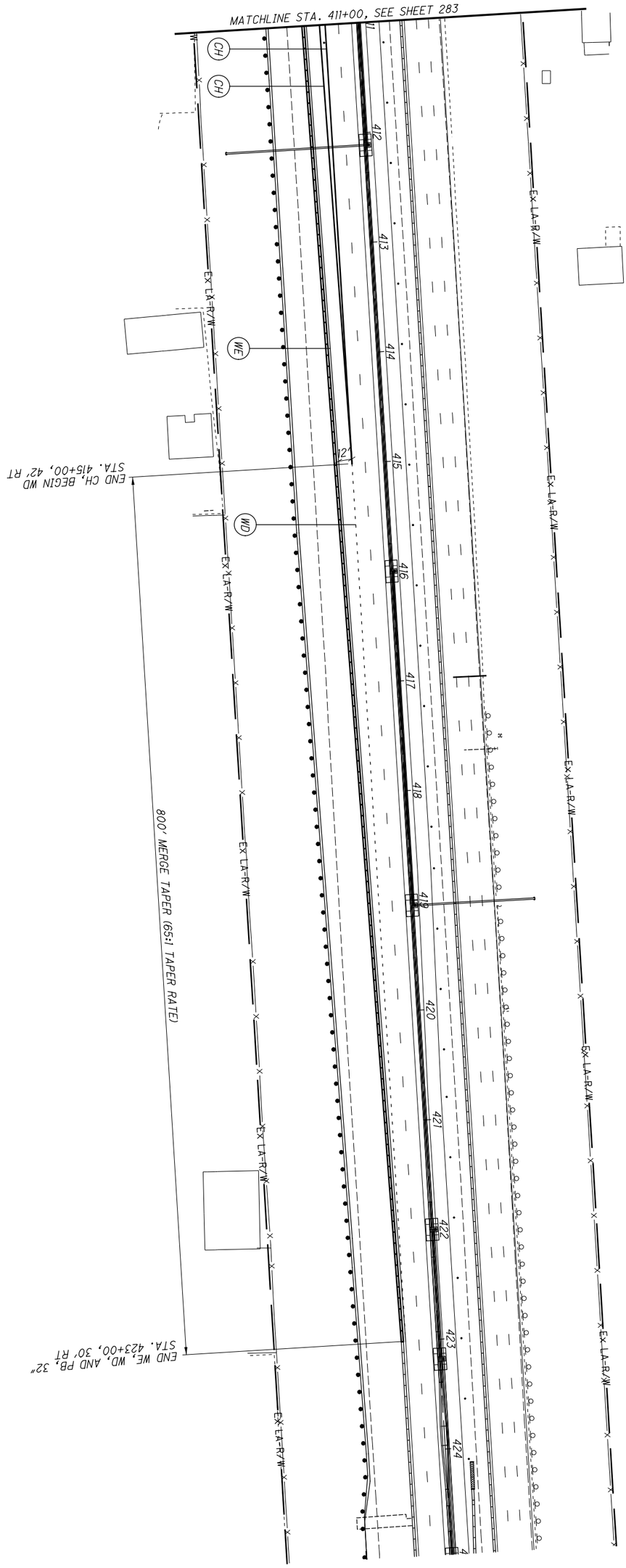
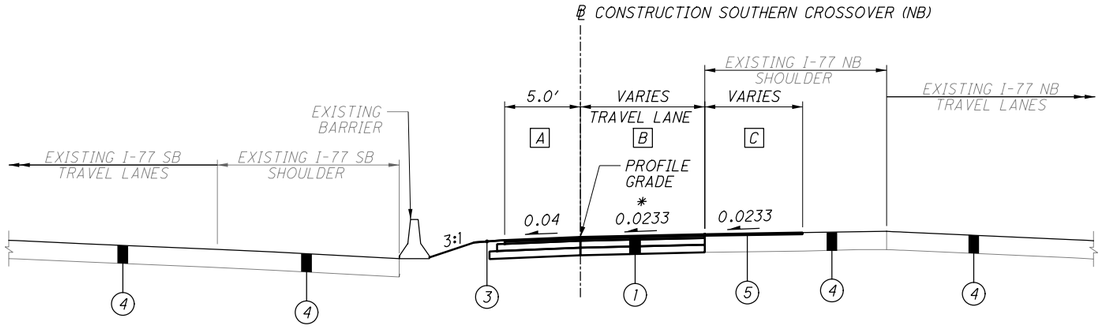


NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

284 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 2J I-77 - STA. 411+00 TO STA. 424+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET



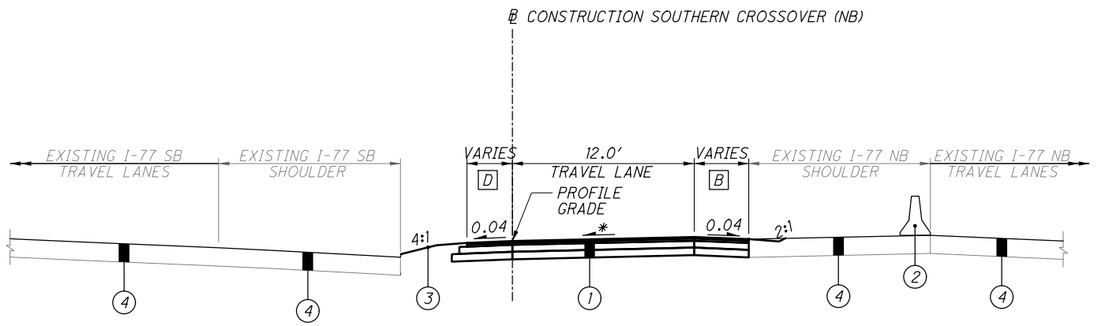
SOUTHERN CROSSOVER (NB) - WIDENING EXISTING PAVEMENT

STA. 10+12.00 TO STA. 12+09.80

A VARIES
5.0' AT STA. 11+50.00 TO
3.0 AT STA. 11+98.04

B VARIES
0.0' AT STA. 10+12.00 TO
3.4' AT STA. 12+09.80

C VARIES
12.0' AT STA. 10+12.00 TO
0.0' AT STA. 12+09.80

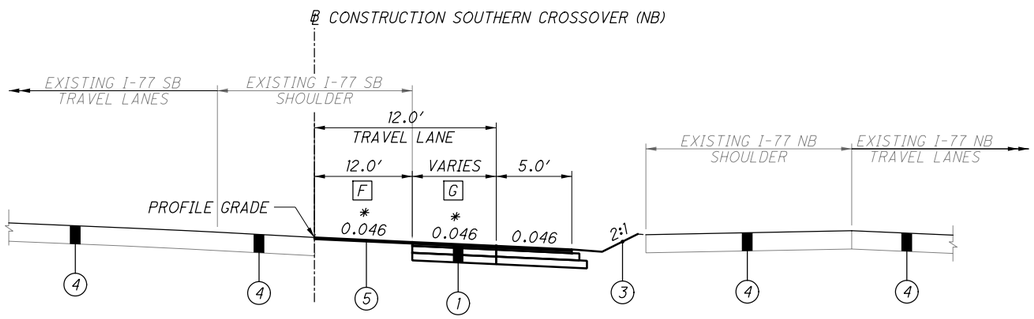


SOUTHERN CROSSOVER (NB) PAVEMENT SECTION

STA. 12+09.80 TO STA. 12+94.21

D VARIES
3.0' AT STA. 12+09.80 TO
0.0 AT STA. 12+94.21

E VARIES
0.0' AT STA. 12+09.80 TO
5.0' AT STA. 12+94.21



SOUTHERN CROSSOVER (NB) - WIDENING EXISTING PAVEMENT

STA. 12+94.21 TO STA. 16+50.37

F VARIES
0.0' AT STA. 12+94.21 TO
12.0' AT STA. 15+42.82

G VARIES
12.0' AT STA. 12+94.21 TO
0.0' AT STA. 16+50.37

LEGEND

(1) ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A

(2) ITEM 622 - PORTABLE BARRIER, 32"

(3) ITEM 659 - SEEDING AND MULCHING (TEMPORARY GRADING)

(4) PERMANENT PAVEMENT

(5) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE
ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22

* TRANSITIONS FROM 0.0233 TO -0.0460,
STA. 11+98.04 TO STA. 13+89.04

TYPICAL SECTIONS - SOUTHERN CROSSOVER (NB) PAVEMENT

SUM-77 / 277 / 224
VARIOUS

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MY501.dgn Sheet 1/31/2021 5:48:18 PM jrettig

NOTE:
CONTRACTOR TO FIELD VERIFY THE ELEVATIONS AND COORDINATE WITH THE ENGINEER DURING CONSTRUCTION.

EX. ELECTRIC, ODOT DISTRICT 4, O.L.E.

PC Sta. 10+00.00 = 366+08.61, 11.88' RT.

PRC Sta. 11+17.92

SB I-77

NB I-77

C1 C2 D-2

DND

ABANDON INLET AND CONNECT PIPES THROUGH

END TAPER +53.45. 3.0' LT.

℄ CONST. SOUTHERN CROSSOVER (NB)

BEGIN TAPER +50.00. 5.0' LT.

SOUTHERN CROSSOVER (NB)

℄ CONST. I-77

TEMP. CB-2-2B

TEMP. 12"

MATCHLINE STA. 14+00.00, SEE SHEET 287

365 366 367 368 369 370

5' 12' 12'

BEGIN WORK SOUTHERN CROSSOVER (NB) STA. 10+12.00

P.I. Sta. 10+58.98	P.I. Sta. 13+85.32
Δ = 3° 23' 15" (LT)	Δ = 13° 11' 42" (RT)
Dc = 2° 52' 22"	Dc = 2° 28' 41"
R = 1,994.50'	R = 2,312.00'
T = 58.98'	T = 267.41'
L = 117.92'	L = 532.45'
E = 0.87'	E = 15.41'
C = 117.90'	C = 531.27'
C.B. = N 14° 29' 47" W	C.B. = N 9° 35' 33" W

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND.

BEGIN PROFILE SOUTHERN CROSSOVER (NB) STA. 10+12.00

GRAPHIC GRADE

P.V.I. STA 12+96.95
ELEV = 1,090.62'
146.09' VC

GRAPHIC GRADE

PROPOSED PROFILE SOUTHERN CROSSOVER (NB)

EXISTING GROUND

STA 12+23.91 ELEV = 1,089.47'

NB CROSSOVER STA 12+24.50, 16.33' RT = IR-77 STA 368+34.10, 13.08' RT
TEMP. CB-2-2B, GRATE ELEV 1089.37
TEMP. 12" (N) 1086.37
TEMP. 12" (SW) 1085.37

STA 13+69.99 ELEV = 1,092.69'

+1.56 % +2.83 %

TEMP. 174'-12" TYPE C @ 1.81%

NB CROSSOVER STA 14+00.00, 19.74' RT = IR-77 STA 370+08.51, 5.86' RT
TEMP. CB-2-2B, GRATE ELEV 1092.52
TEMP. 12" (S) 1089.52
TEMP. 12" (N) 1089.52

MATCHLINE STA. 14+00.00

1,086.59

1,086.55 1,086.67 1,086.87 1,087.09 1,087.31 1,087.53 1,087.84 1,088.16 1,088.48 1,088.79 1,089.10 1,089.41 1,089.74 1,090.10 1,090.49 1,090.92 1,091.38 1,091.88 1,092.41 1,092.97 1,093.54

1,086.60 1,086.73 1,087.01 1,087.36 1,087.40 1,087.28 1,087.68 1,087.53 1,087.90 1,088.02 1,088.27 1,088.69 1,089.26 1,092.84 1,094.19 1,090.68 1,091.24 1,091.82 1,092.41 1,092.95 1,093.54

1,105 1,100 1,095 1,090 1,085 1,080 1,075

10+00 11+00 12+00 13+00 14+00

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED KMC CHECKED SSR

PLAN & PROFILE - SOUTHERN CROSSOVER (NB)
PHASE 2 - STA. 10+00.00 TO STA. 14+00.00

SUM-77 / 277 / 224
VARIOUS

286
1288

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NOTES:

1. SEE SHEET 128 FOR MOT LEGEND.

END WORK SOUTHERN CROSSOVER (NB) STA. 16+50.37

NOTE:

CONTRACTOR TO FIELD VERIFY THE ELEVATIONS AND COORDINATE WITH THE ENGINEER DURING CONSTRUCTION.

C3

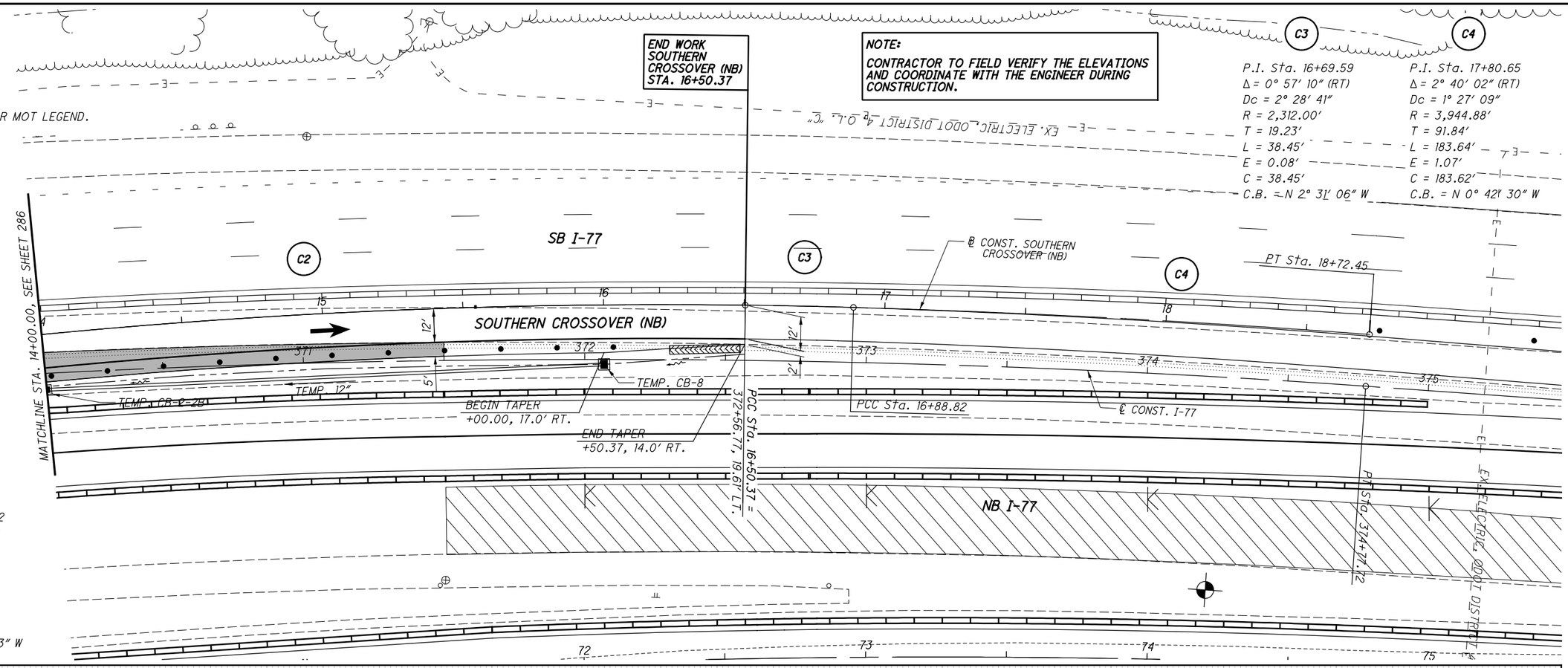
P.I. Sta. 16+69.59
Δ = 0° 57′ 10″ (RT)
Dc = 2° 28′ 41″
R = 2,312.00′
T = 19.23′
L = 38.45′
E = 0.08′
C = 38.45′
C.B. = N 2° 31′ 06″ W

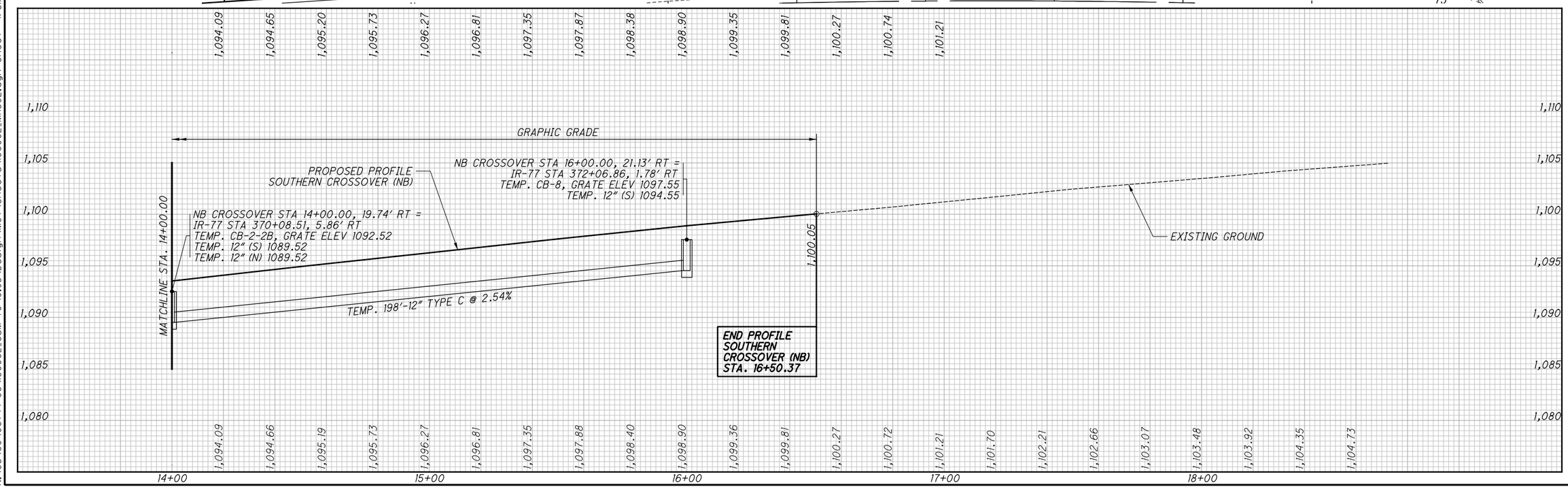
C4

P.I. Sta. 17+80.65
Δ = 2° 40′ 02″ (RT)
Dc = 1° 27′ 09″
R = 3,944.88′
T = 91.84′
L = 183.64′
E = 1.07′
C = 183.62′
C.B. = N 0° 42′ 30″ W

C2

P.I. Sta. 13+85.32
Δ = 13° 11′ 42″ (RT)
Dc = 2° 28′ 41″
R = 2,312.00′
T = 267.41′
L = 532.45′
E = 15.41′
C = 531.27′
C.B. = N 9° 35′ 33″ W





HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KMC
CHECKED SSR

SOUTHERN CROSSOVER (NB)
14+00.00 TO STA. 18+72.45

PLAN & PROFILE - SOUTHERN CROSSOVER (NB)
PHASE 2 - STA. 14+00.00 TO STA. 18+72.45

SUM-77/277/224
VARIOUS

287
1288

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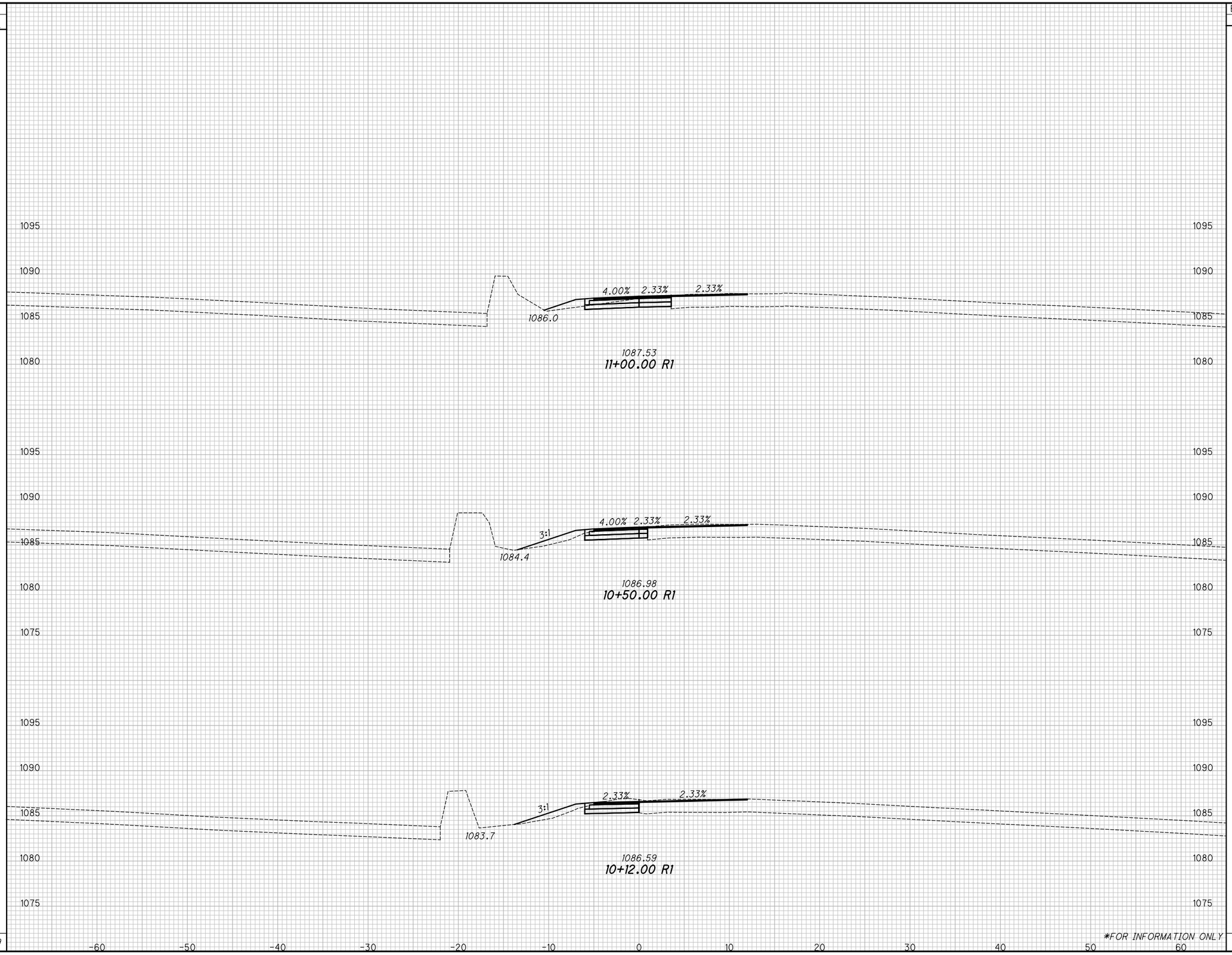
SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
5	35	8	3	14	6
8	34	7	4	11	6
8	*69	9	4	*25	*12



CALCULATED KMC
CHECKED SSR

CROSS SECTIONS - SOUTHERN CROSSOVER (NB)
PHASE 2 - STA. 10+12.00 TO STA. 11+00.00

SUM-77/277/224
VARIOUS

288
1288

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SEEDING	
END WIDTH	SQ. YDS.
	6
	28
	4
	13
	1
	16
	*57

END AREA	
CUT	FILL
22	0
11	2
11	1

VOLUME	
CUT	FILL
31	2
20	3
18	4
*69	*9

CALCULATED KMC
CHECKED SSR

1100
1095
1090
1085
1080

4.00% 0.44% 4.00% 2%
1089.7
TEMP. 12" TYPE C

1089.91
12+50.00 R1

NB CROSSOVER STA 11+98.44, 8.61' LT =
IR-77 STA 368+06.19, 9.74' LT
EX. I-3-B, GRATE ELEV 1087.79
(ABANDON INLET AND CONNECT PIPES THROUGH)
EX. 15" RCP W 1082.44
TEMP. 12" (NE) 1082.69

NB CROSSOVER STA 12+24.50, 16.33' RT =
IR-77 STA 368+34.10, 13.08' RT
TEMP. CB-2-2B, GRATE ELEV 1089.37
TEMP. 12" (N) 1086.37
TEMP. 12" (SW) 1085.37

4.00% 2.33% 2.33%
TEMP. 36'-12" TYPE B @ 7.44%
EX. 15" RCP (DND)

1089.10
12+00.00 R1

4.00% 2.33% 2.33%

1088.32
11+50.00 R1

-60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60

*FOR INFORMATION ONLY

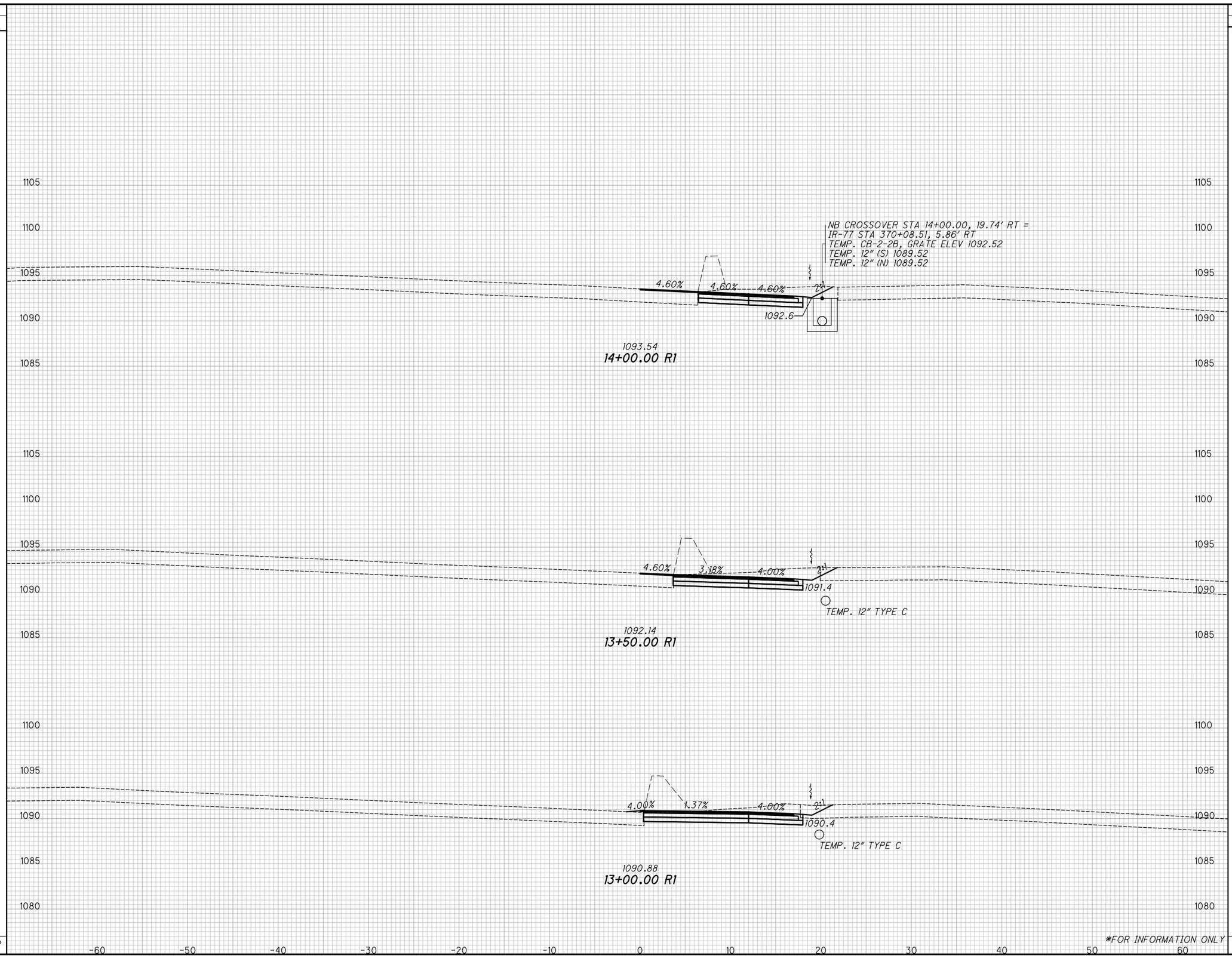
CROSS SECTIONS - SOUTHERN CROSSOVER (NB)
PHASE 2 - STA. 11+50.00 TO STA. 12+50.00

SUM-77/277/224
VARIOUS

289
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Basemaps\106002_BM510.dgn BLP_MOT_NB02 1/31/2021 5:48:47 PM jrettig

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
4	22	23	0	46	0
4	27	27	0	52	0
5	33	29	0	47	0
	*82			*145	0



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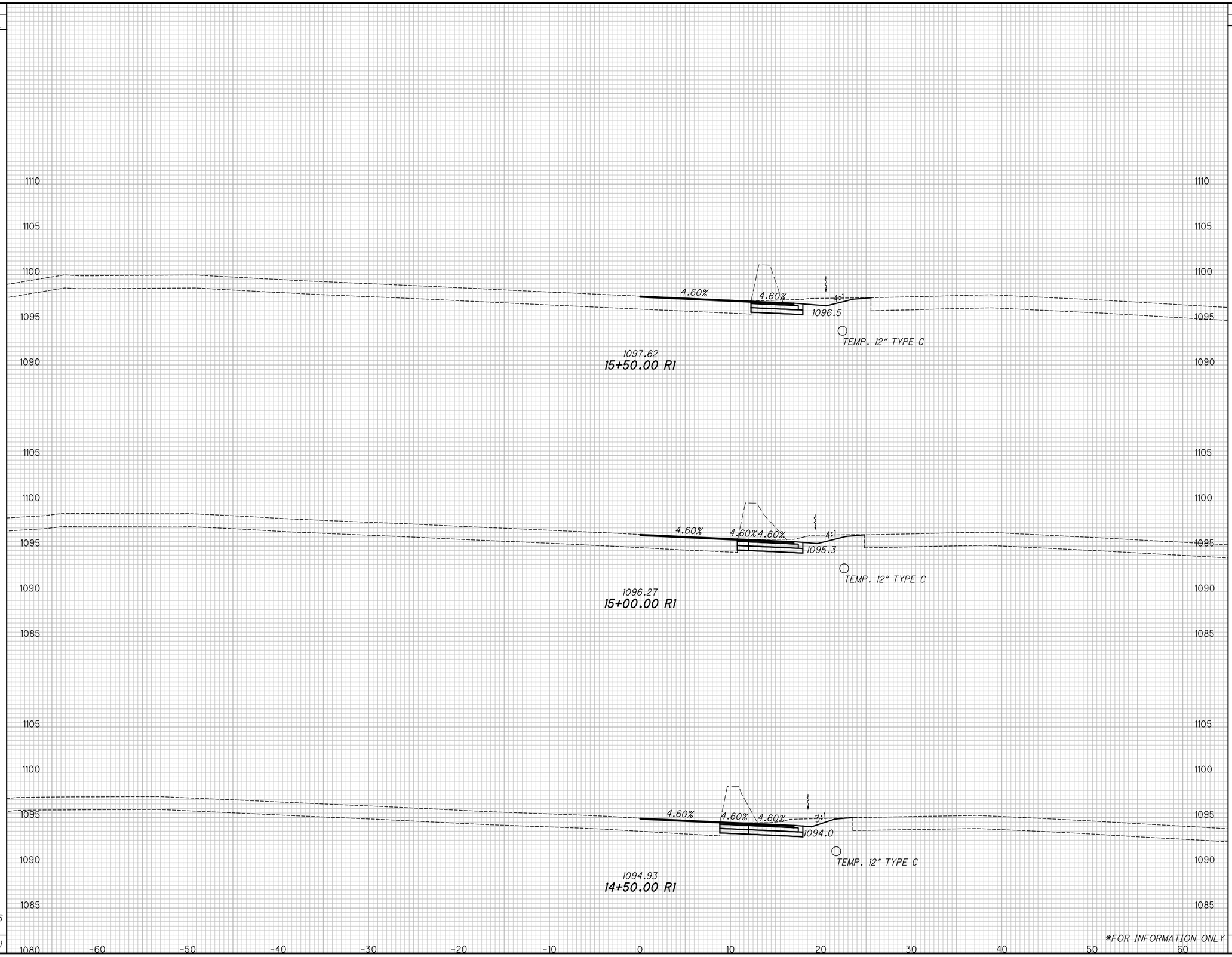
CALCULATED KMC
CHECKED SSR

CROSS SECTIONS - SOUTHERN CROSSOVER (NB)
PHASE 2 - STA. 13+00.00 TO STA. 14+00.00

SUM-77/277/224
VARIOUS

290
1288

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
8	40	12	0	23	0
7	35	13	0	26	0
6	26	15	0	35	0
*101				*84	*0



CALCULATED KMC
CHECKED SSR

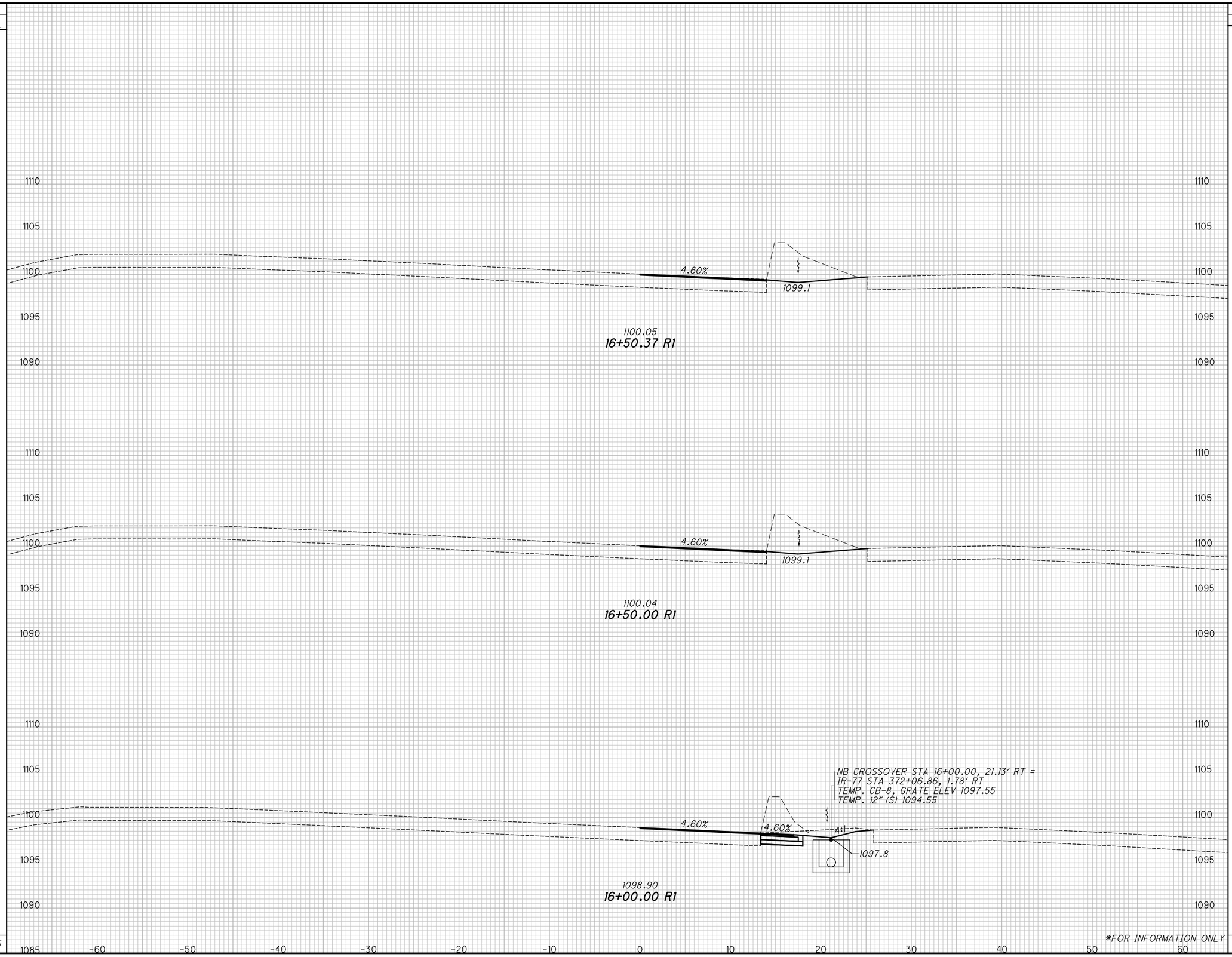
CROSS SECTIONS - SOUTHERN CROSSOVER (NB)
PHASE 2 - STA. 14+50.00 TO STA. 15+50.00

SUM-77/277/224
VARIOUS

291
1288

N:\03\60\06744-08\106002-SUM-76-10.95\Design\MOT\Basemaps\106002_BM510.dgn BLP_MOT_NB02 1/31/2021 5:48:48 PM jrettig

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0	0	0	0	0	0
0	22	0	0	10	0
8	43	11	0	21	0
	*65			*31	*0



*FOR INFORMATION ONLY

CALCULATED KMC
CHECKED SSR

CROSS SECTIONS - SOUTHERN CROSSOVER (NB)
PHASE 2 - STA. 16+00.00 TO STA. 16+50.37

SUM-77/277/224
VARIOUS

292
1288

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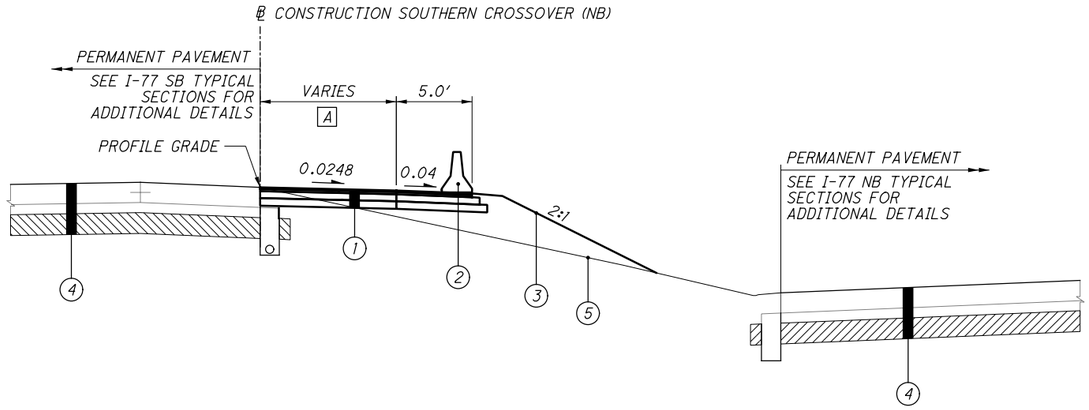
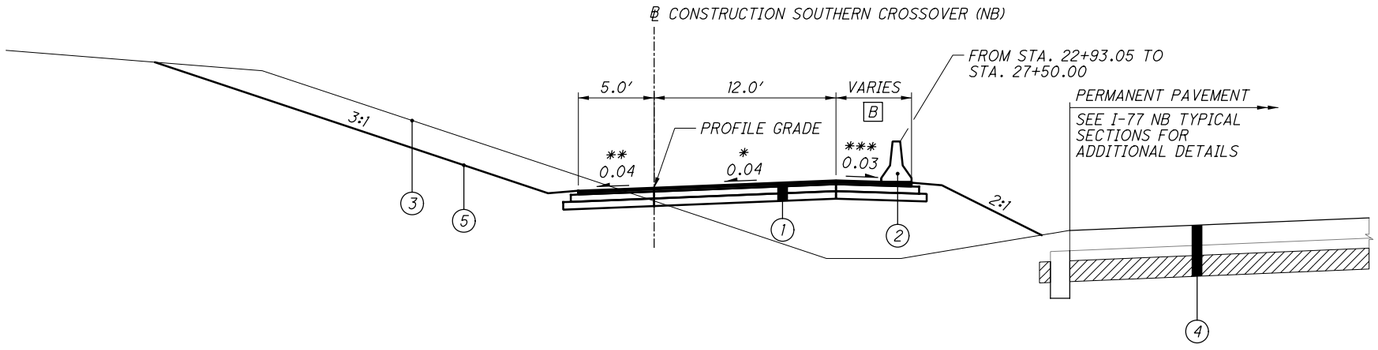


NORTHERN CROSSOVER (NB) - WIDENING EXISTING PAVEMENT

STA. 20+70.76 TO STA. 22+93.05

A VARIES
0.0′ AT STA. 20+70.67 TO
12.0 AT STA. 22+93.05



NORTHERN CROSSOVER (NB) PAVEMENT SECTION

STA. 22+93.05 TO STA. 34+34.89

B 5.0′ FROM STA. 22+93.05 TO STA. 33+20.41

VARIES
5.0′ AT STA. 33+20.41 TO
0.0 AT STA. 34+34.89

* TRANSITIONS FROM -0.0248 TO 0.04,
STA. 23+56.22 TO STA. 25+38.22

TRANSITIONS FROM 0.04 TO 0.0545,
STA. 31+50.00 TO STA. 32+00.00

0.0545,
STA. 32+00.00 TO STA. 34+34.89

** TRANSITIONS FROM -0.0526 TO -0.0615,
STA. 23+56.22 TO STA. 24+00.00

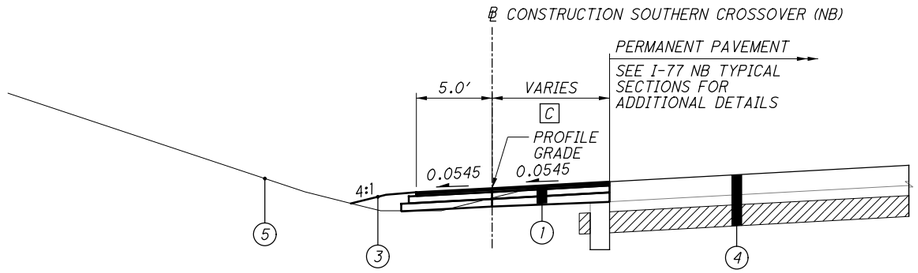
TRANSITIONS FROM -0.0615 TO 0.04,
STA. 24+00.00 TO STA. 24+50.00

TRANSITIONS FROM 0.04 TO 0.0545,
STA. 31+50.00 TO STA. 32+00.00

0.0545,
STA. 32+00.00 TO STA. 34+34.89

*** TRANSITIONS FROM 0.04 TO 0.03,
STA. 23+56.22 TO STA. 25+38.22

TRANSITIONS FROM 0.03 TO -.0244,
STA. 31+50.00 TO STA. 34+34.89



NORTHERN CROSSOVER (NB) - WIDENING EXISTING PAVEMENT

STA. 34+34.89 TO STA. 36+89.84

C VARIES
12.0′ AT STA. 34+34.89 TO
0.0′ AT STA. 36+89.84

LEGEND

1. ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
2. ITEM 622 - PORTABLE BARRIER, 32″
3. ITEM 659 - SEEDING AND MULCHING (TEMPORARY GRADING)
4. PERMANENT PAVEMENT - SEE I-77 TYPICAL SECTIONS FOR DETAILS
5. PERMANENT GRADING - SEE CROSS SECTIONS FOR ADDITIONAL INFORMATION

PHASE 2 - STA. 14+00.00 TO STA. 18+72.45

SUM-77/277/224
VARIOUS

293
1288

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C1

P.I. Sta. 21+90.95
Δ = 1° 45′ 11″ (LT)
Dc = 0° 27′ 33″
R = 12,480.18′
T = 190.95′
L = 381.86′
E = 1.46′
C = 381.85′
C.B. = N 13° 41′ 13″ W

C2

P.I. Sta. 29+69.04
Δ = 16° 48′ 15″ (LT)
Dc = 1° 26′ 29″
R = 3,975.36′
T = 587.18′
L = 1,165.93′
E = 43.13′
C = 1,161.76′
C.B. = N 22° ~~57′ 56″~~ W

BEGIN WORK NORTHERN CROSSOVER (NB) STA. 20+70.66

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND.

PC Sta. 472+54.68

PC Sta. 20+00.00 = 473+95.23, ~~4.0′~~ LT.

SB I-77

℄ CONST. SB I-77

℄ CONST. NORTHERN CROSSOVER (NB)

PCC Sta. 23+81.86

NORTHERN CROSSOVER (NB)

5′

12′

5′

MATCHLINE STA. 24+00.00, SEE SHEET 295

PC Sta. 474+93.14

TEMP. CB-2-2B

STUB PIPE

TEMP. 12″

NB I-77

℄ CONST. NB I-77

PC Sta. 576+00.00

4%D

GRAPHIC GRADE

P.V.I STA 24+29.15
ELEV = 1,054.36′
272.19′ VC

PROPOSED PROFILE NORTHERN CROSSOVER (NB)

STA 22+93.05
ELEV = 1,054.32′

EXISTING GROUND

1,053.86

BEGIN PROFILE NORTHERN CROSSOVER (NB) STA. 20+70.66

NB CROSSOVER STA 22+51.76, 35.73′ RT =
NB IR-77 STA 476+53.74, 23.67′ LT
TEMP. CB-2-2B, GRATE ELEV 1046.77
TEMP. 12″ (N) 1043.01
TEMP. 12″ (W) 1043.01 (STUB)

TEMP. 470′-12″ TYPE B @ 1.00%

MATCHLINE STA. 24+00.00

HORIZONTAL SCALE IN FEET

CALCULATED KMC
CHECKED SSR

PLAN & PROFILE - NORTHERN CROSSOVER (NB)
PHASE 2 - STA. 20+70.66 TO STA. 24+00.00

SUM-77/277/224
VARIOUS

294
1288

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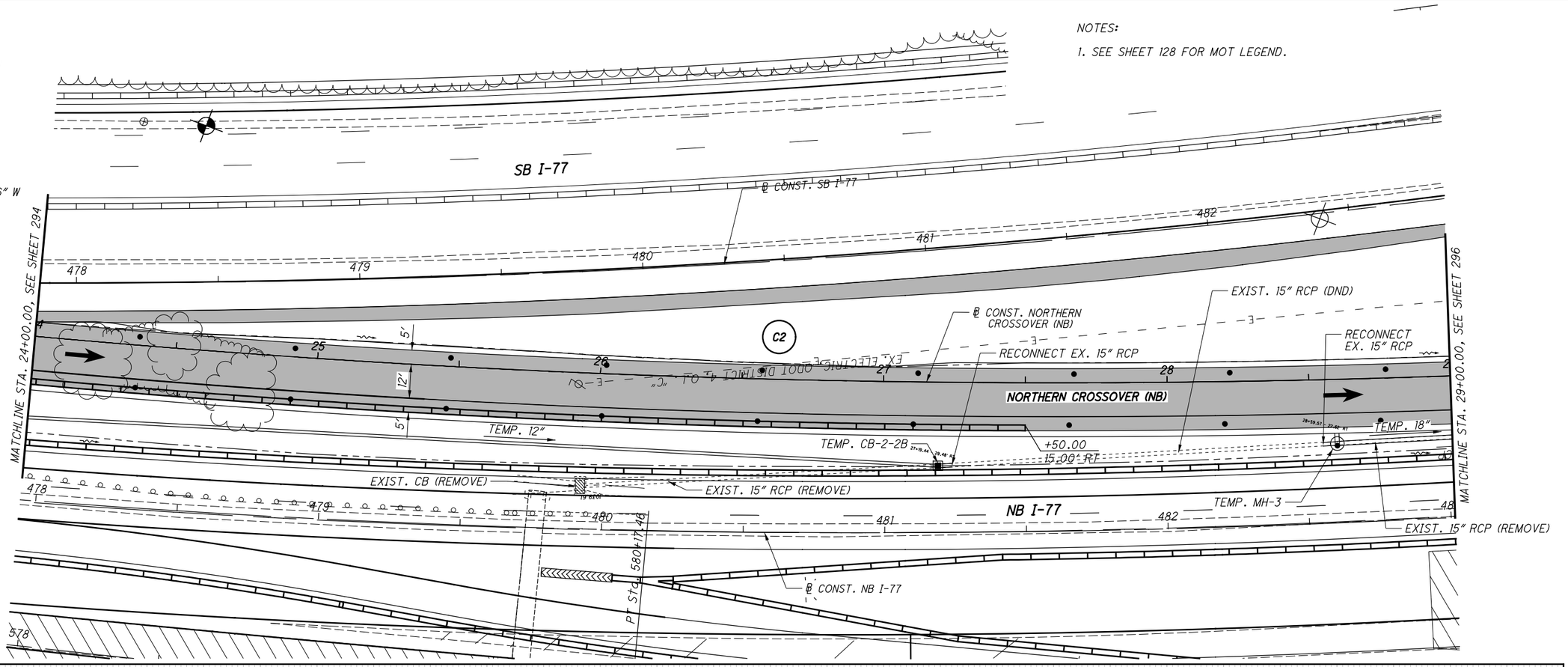
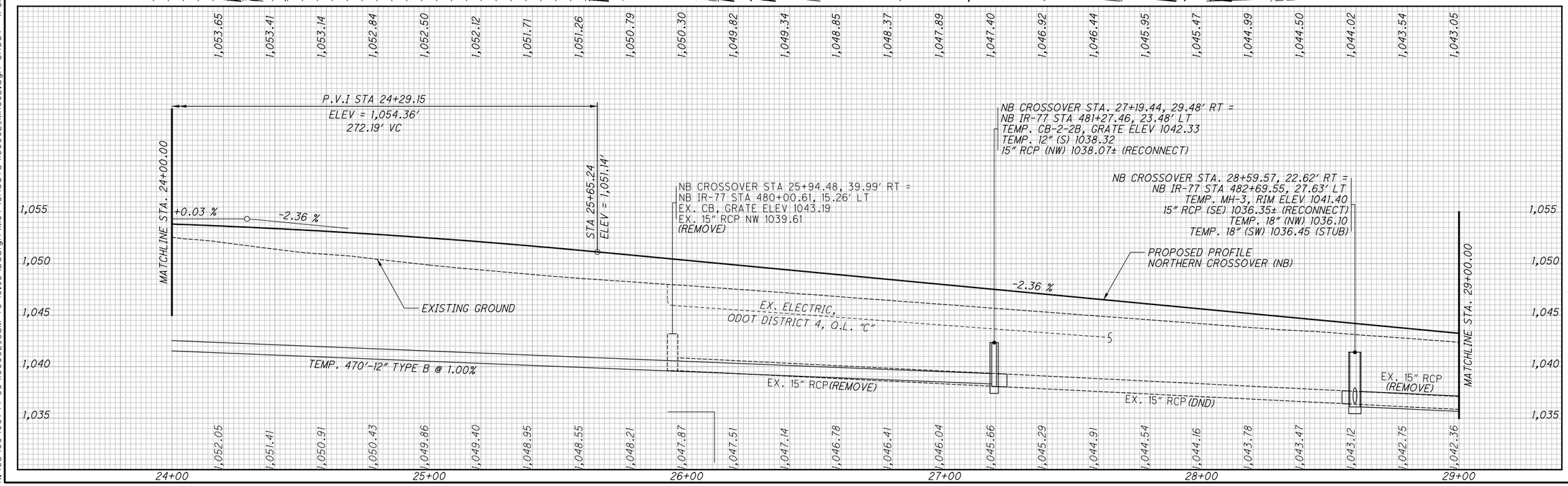
C2

P.I. Sta. 29+69.04
Δ = 16° 48′ 15″ (LT)
Dc = 1° 26′ 29″
R = 3,975.36′
T = 587.18′
L = 1,165.93′
E = 43.13′
C = 1,161.76′
C.B. = N 22° 57′ 56″ W

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND.





CALCULATED KMC
CHECKED SSR

HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN & PROFILE - NORTHERN CROSSOVER (NB)
PHASE 2 - STA. 24+00.00 TO STA. 29+00.00

SUM-77/277/224
VARIOUS

295
1288

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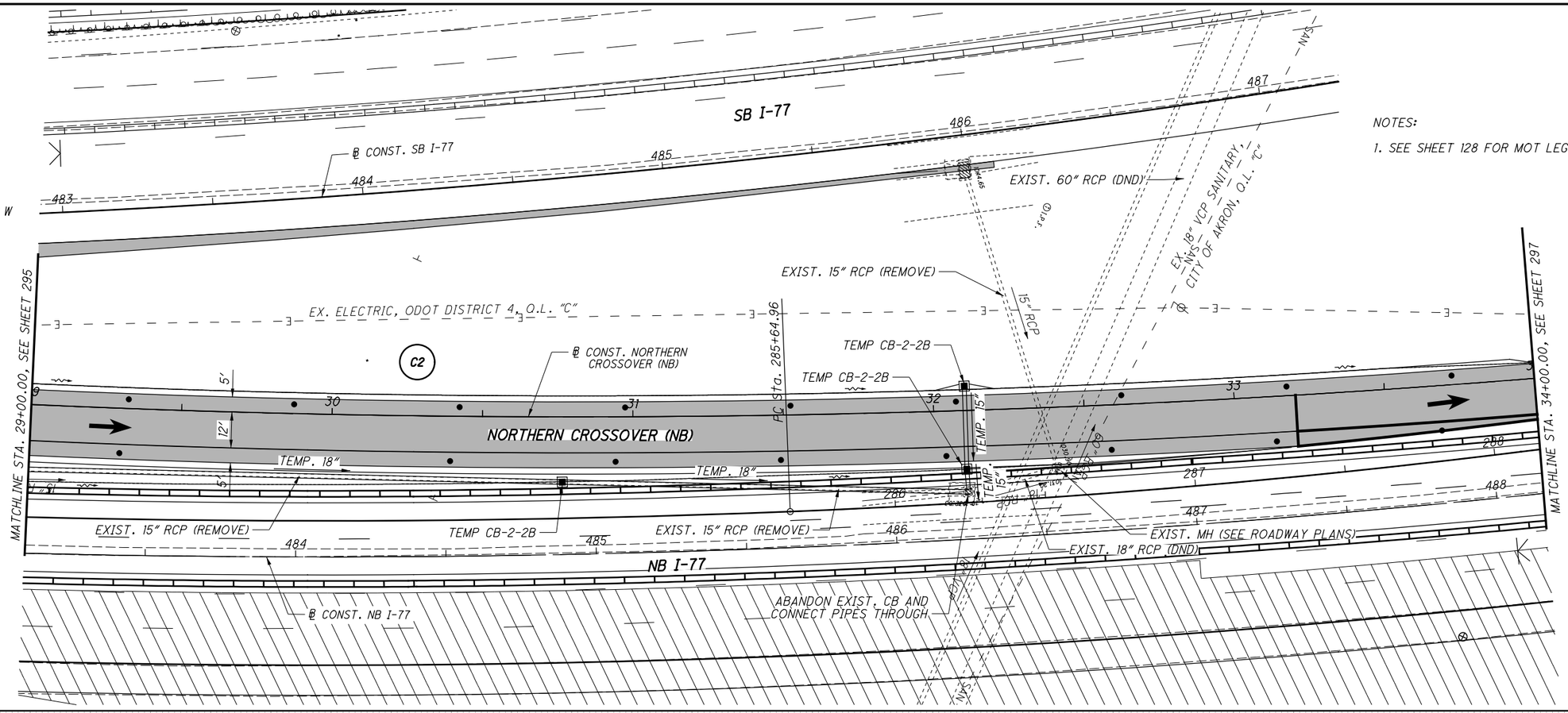
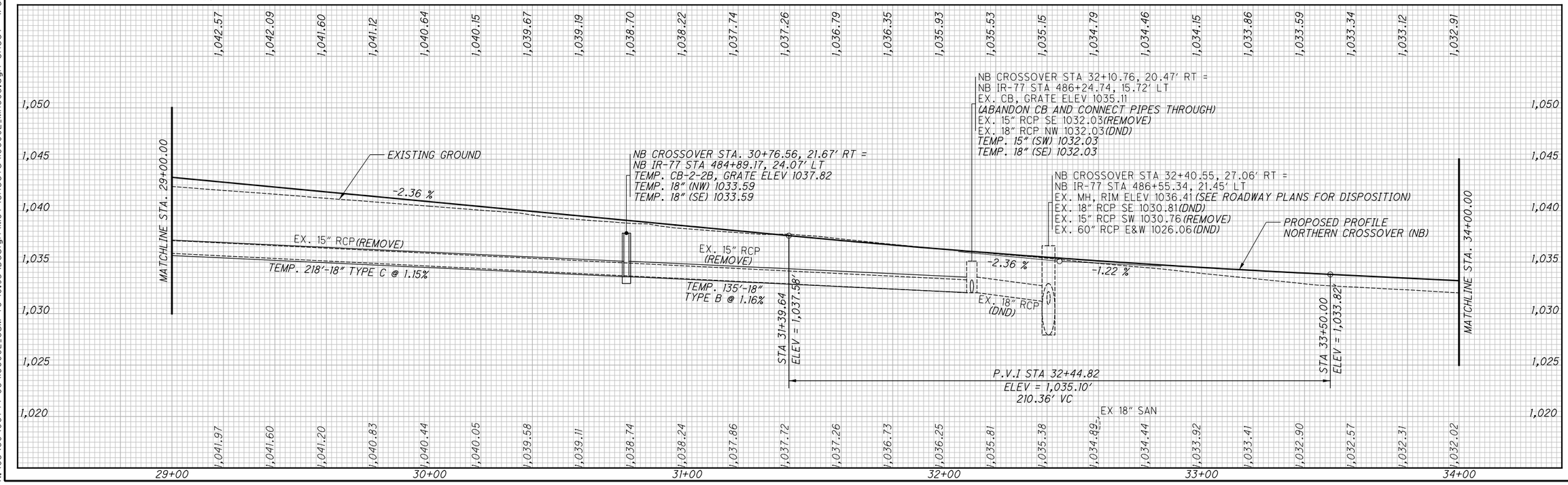
C2

P.I. Sta. 29+69.04
Δ = 16° 48′ 15″ (LT)
Dc = 1° 26′ 29″
R = 3,975.36′
T = 587.18′
L = 1,165.93′
E = 43.13′
C = 1,161.76′
C.B. = N 22° 57′ 56″ W



NOTES:

1. SEE SHEET 128 FOR MOT LEGEND.



CALCULATED	CHECKED
KMC	SSR

HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN & PROFILE - NORTHERN CROSSOVER (NB)

PHASE 2 - STA. 29+00.00 TO STA. 34+00.00

SUM-77/277/224
VARIOUS

296
1288

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SB I-77

@ CONST. SB I-77

C2

P.I. Sta. 29+69.04
Δ = 16° 48′ 15″ (LT)
Dc = 1° 26′ 29″
R = 3,975.36′
T = 587.18′
L = 1,165.93′
E = 43.13′
C = 1,161.76′
C.B. = N 22° 57′ 56″ W

C3

P.I. Sta. 36+65.19
Δ = 8° 07′ 01″ (LT)
Dc = 3° 27′ 47″
R = 1,654.50′
T = 117.39′
L = 234.39′
E = 4.16′
C = 234.19′
C.B. = N 35° 25′ 34″ W

END WORK NORTHERN CROSSOVER (NB) STA. 36+89.57

EX. ELECTRIC, ODOT DISTRICT 4, O.L. "C"

30" RCP

PCC Sta. 35+47.79

PT Sta. 37+82.18 = 292+00.00, 9.00' LT.

@ CONST. NORTHERN CROSSOVER (NB)

TIE INTO PROP. PERMANENT DITCH

@ CONST. RAMP B-2

RAMP C-2

MATCHLINE STA. 34+00.00, SEE SHEET 296

NORTHERN CROSSOVER (NB)

NB I-77

BEGIN TAPER
+25.64, 12.0' RT.

END TAPER
+89.80, 10.0' RT.

@ CONST. NB I-77

24" RCP

18" RCP

CS Sta. 791+47.33

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND.

END PROFILE
NORTHERN
CROSSOVER (NB)
STA. 36+89.57

GRAPHIC GRADE

P.V.I. STA 34+50.00
ELEV = 1,032.60'

MATCHLINE STA. 34+00.00

-1.22 %

PROPOSED PROFILE
NORTHERN CROSSOVER (NB)

EX. ELECTRIC,
ODOT DISTRICT 4, O.L. "C"

EX. ELEC.

EXISTING GROUND

STA 37+23.13, 19.39' RT
EX. CB, GRATE ELEV 1029.43
EX. 18" RCP SE 1026.93
EX. 24" RCP NW 1023.10
EX. 30" RCP SW 1025.93

1,032.73 1,032.57 1,032.41 1,032.26 1,032.05 1,031.83 1,031.61 1,031.38 1,031.16 1,030.96 1,030.76 1,030.57 1,030.40 1,030.23

1,031.72 1,031.44 1,031.26 1,031.23 1,031.24 1,031.23 1,031.23 1,031.26 1,031.06 1,030.89 1,030.71 1,030.54 1,030.39 1,030.22 1,030.09 1,029.95 1,029.81 1,029.69 1,029.55

1,050 1,045 1,040 1,035 1,030 1,025 1,020

34+00 35+00 36+00 37+00

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KMC
CHECKED SSR

PLAN & PROFILE - NORTHERN CROSSOVER (NB)
PHASE 2 - STA. 34+00.00 TO STA. 36+89.57

SUM-77/277/224
VARIOUS

297
1288

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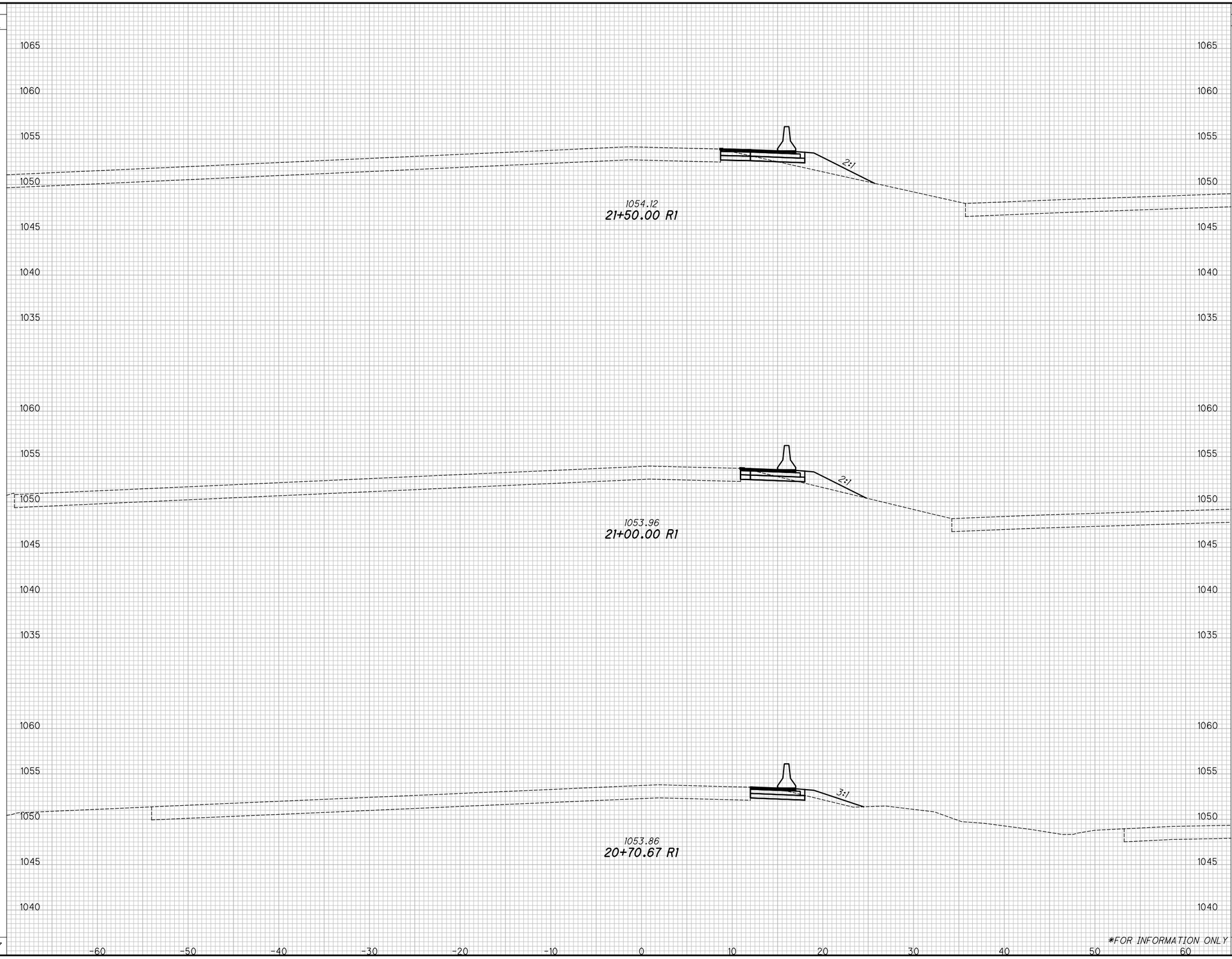
SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
8	44	4	9	7	14
7	23	4	6	5	5
7	*67	6	4	*12	*19



*FOR INFORMATION ONLY

CALCULATED KMC
CHECKED SSR

CROSS SECTIONS - NORTHERN CROSSOVER (NB)
PHASE 2 - STA. 20+70.67 TO STA. 21+50.00

SUM-77/277/224
VARIOUS

298
1288

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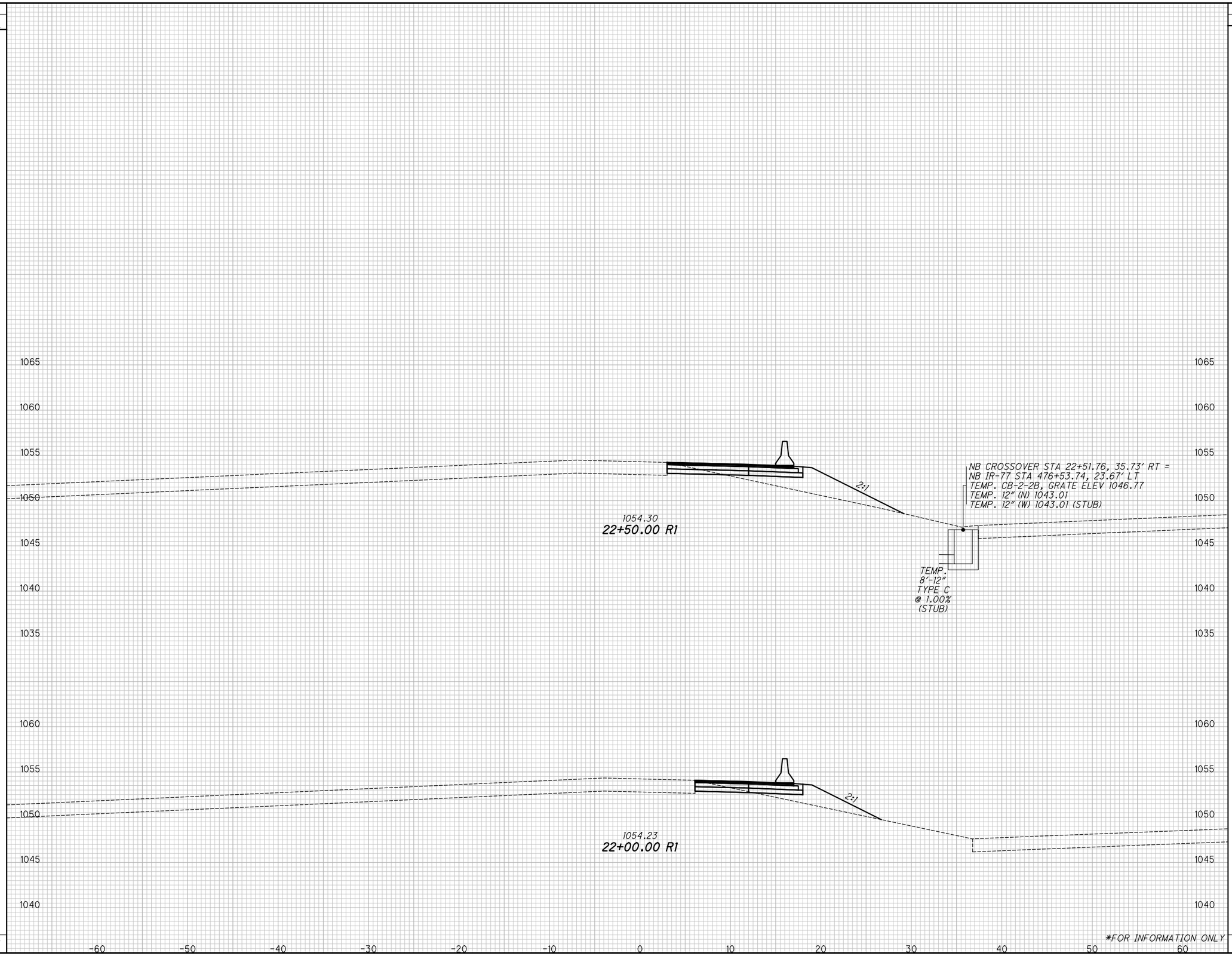
SEEDING	
END WIDTH	SQ. YDS.
12	61
10	50
	*111



END AREA		VOLUME	
CUT	FILL	CUT	FILL
4	24		
4	13		
		7	34
		7	20
		*14	*54

CALCULATED KMC
CHECKED SSR

CROSS SECTIONS - NORTHERN CROSSOVER (NB)
PHASE 2 - STA. 22+00.00 TO STA. 22+50.00

SUM-77 / 277 / 224
VARIOUS

299
1288

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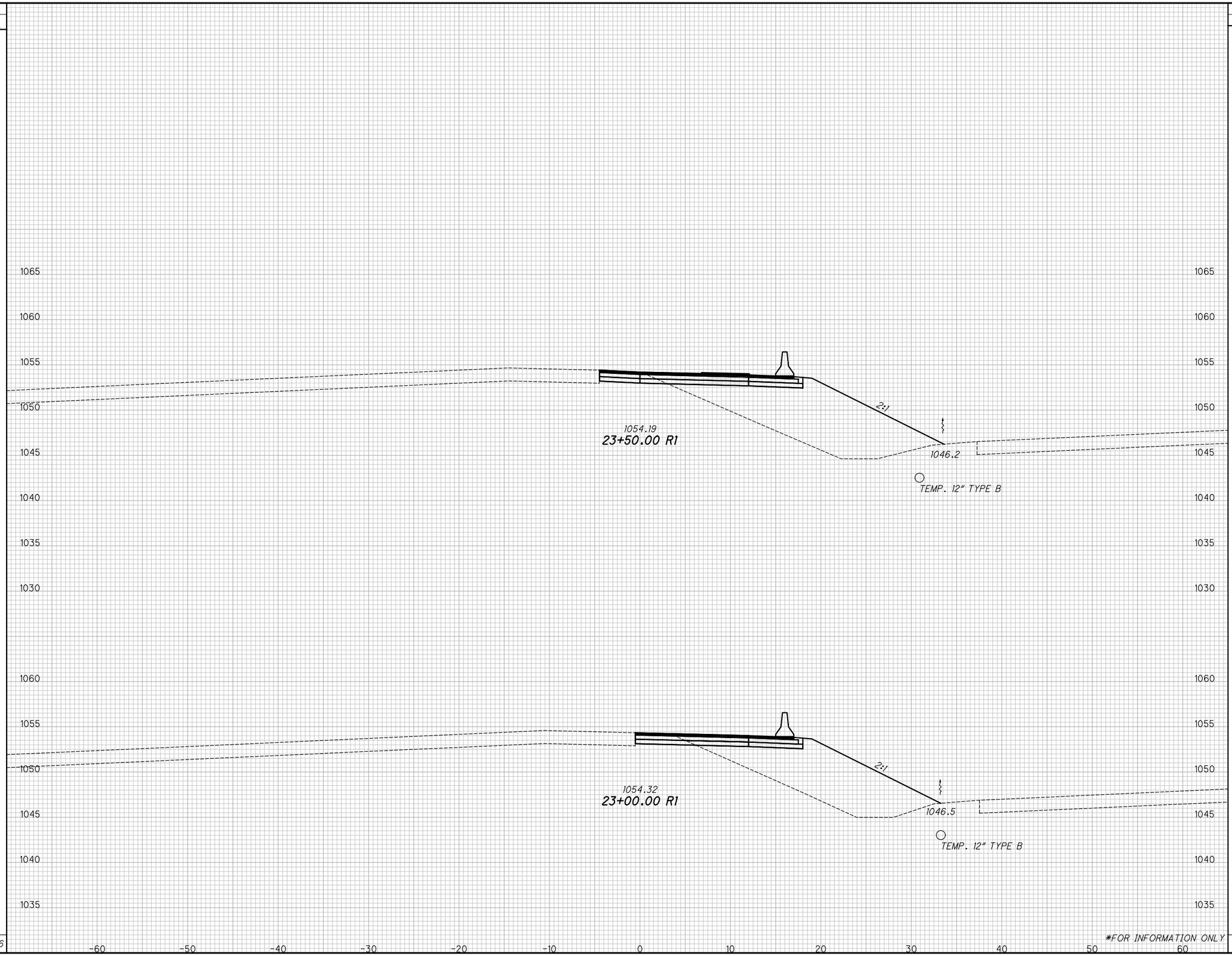
SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
17	95	7	121		
17	81	6	98		
	*176			9	113
				*21	*316

CALCULATED KMC
CHECKED SSR



*FOR INFORMATION ONLY

CROSS SECTIONS - NORTHERN CROSSOVER (NB)
PHASE 2 - STA. 23+00.00 TO STA. 23+50.00

SUM-77 / 277 / 224
VARIOUS

300
1288

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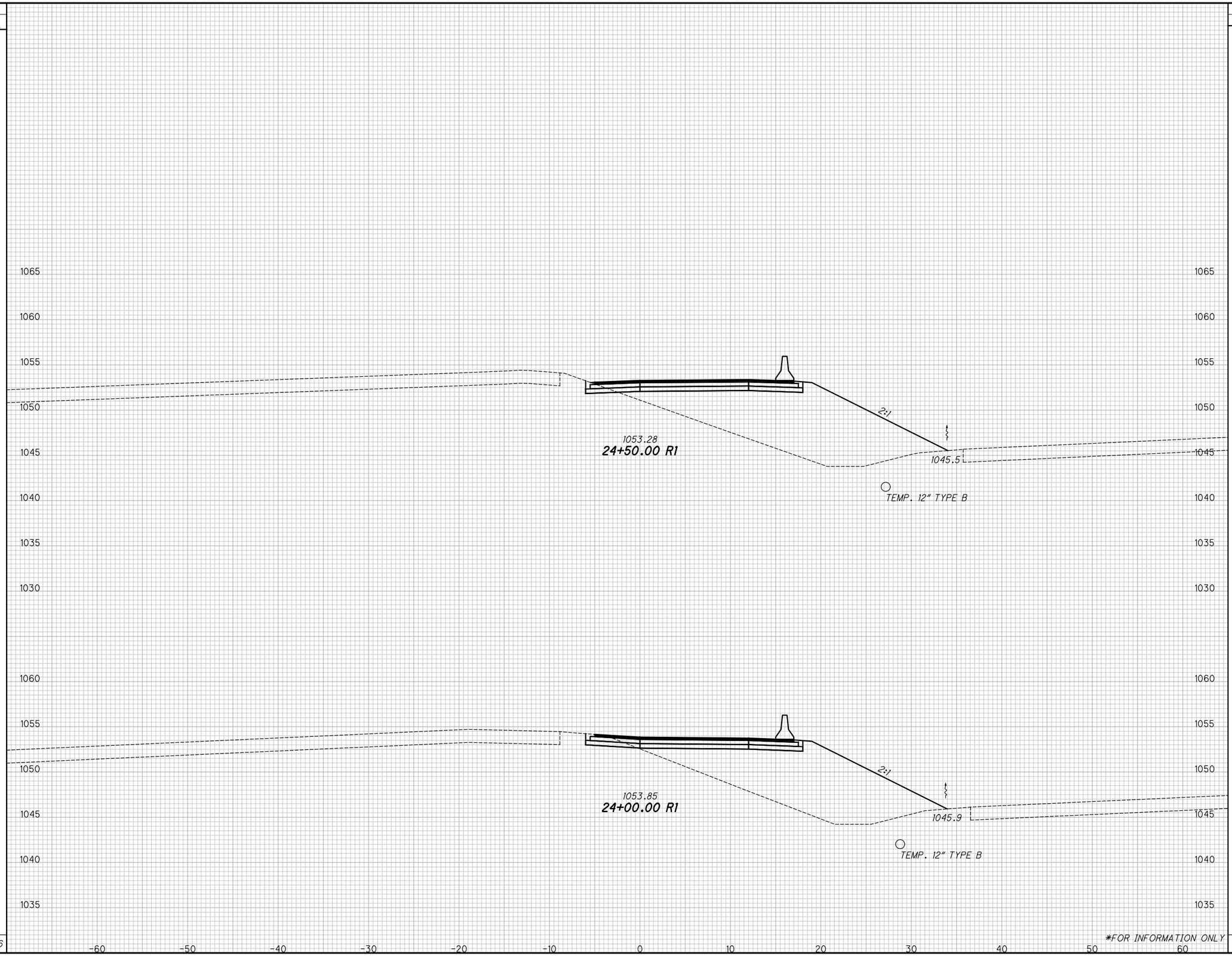
SEEDING	
END WIDTH	SQ. YDS.
18	99
18	97
	*196



END AREA		VOLUME	
CUT	FILL	CUT	FILL
3	158		
5	142		
		7	278
		11	244
		*18	*522

*FOR INFORMATION ONLY

CALCULATED KMC
CHECKED SSR

CROSS SECTIONS - NORTHERN CROSSOVER (NB)
PHASE 2 - STA. 24+00.00 TO STA. 24+50.00

SUM-77 / 277 / 224
VARIOUS

301
1288

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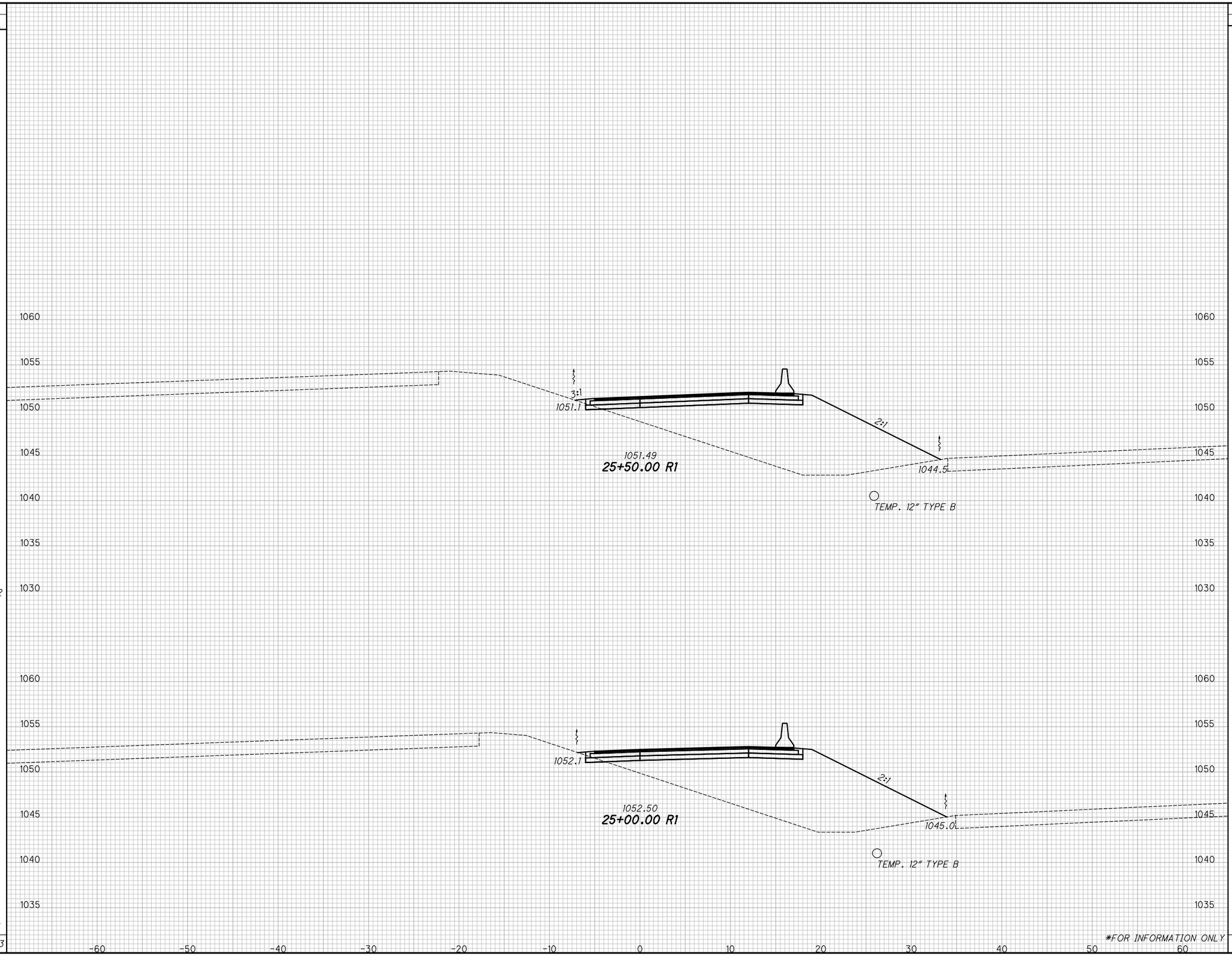
SEEDING	
END WIDTH	SQ. YDS.
18	
	102
19	
	101
	*203



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1	165		
		2	306
1	166		
		4	300
		*6	*606

CALCULATED KMC
CHECKED SSR

CROSS SECTIONS - NORTHERN CROSSOVER (NB)
PHASE 2 - STA. 25+00.00 TO STA. 25+50.00

SUM-77/277/224
VARIOUS

302
1288

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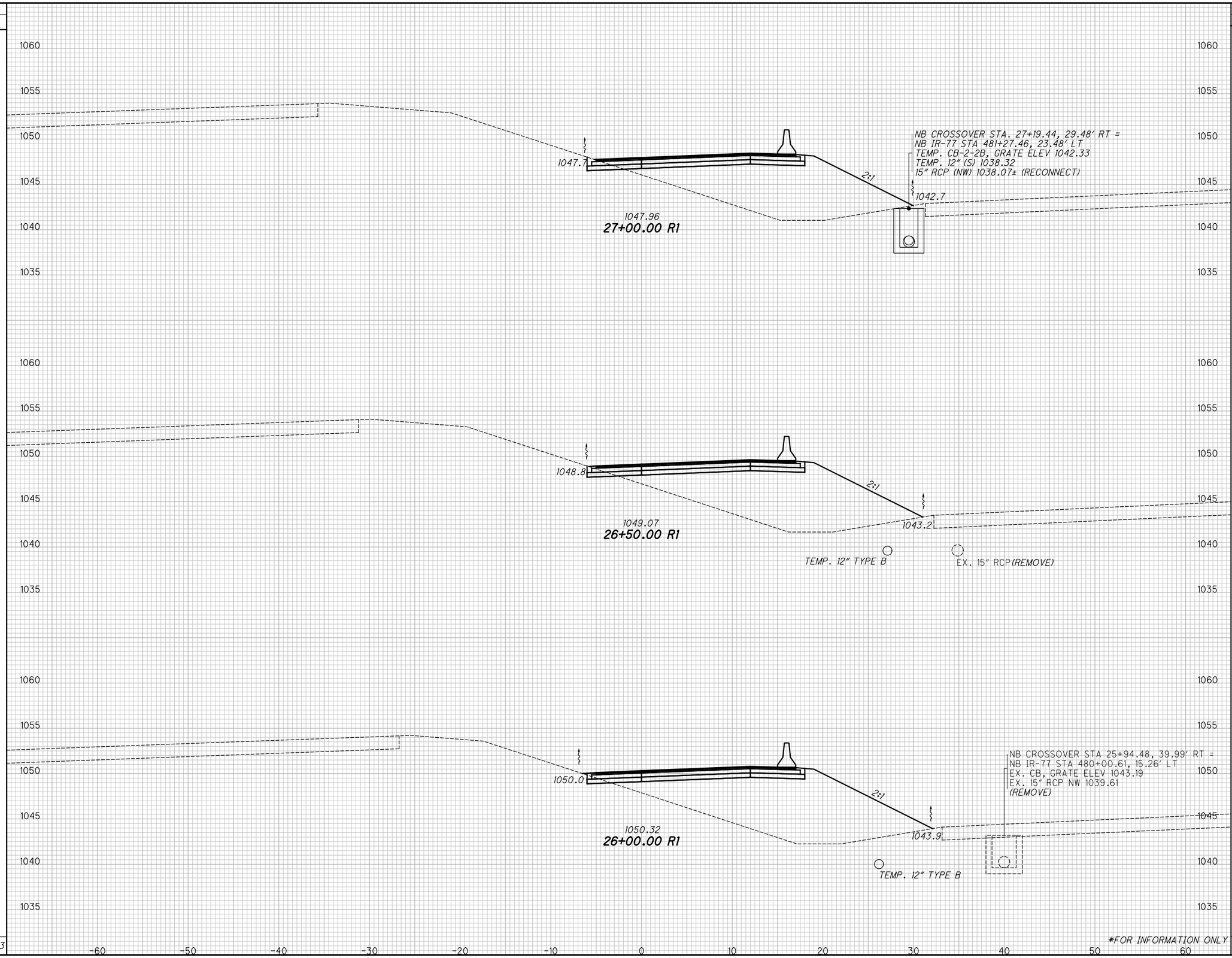
SEEDING END WIDTH	SEEDING SQ. YDS.
13	
	77
14	
	85
16	
	95
	*203



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
3	117		
		5	231
2	132		
		3	258
1	147		
		2	289
		*10	*778

CALCULATED KMC
CHECKED SSR

CROSS SECTIONS - NORTHERN CROSSOVER (NB)
PHASE 2 - STA. 26+00.00 TO STA. 27+00.00

SUM-77 / 277 / 224
VARIOUS

303
1288

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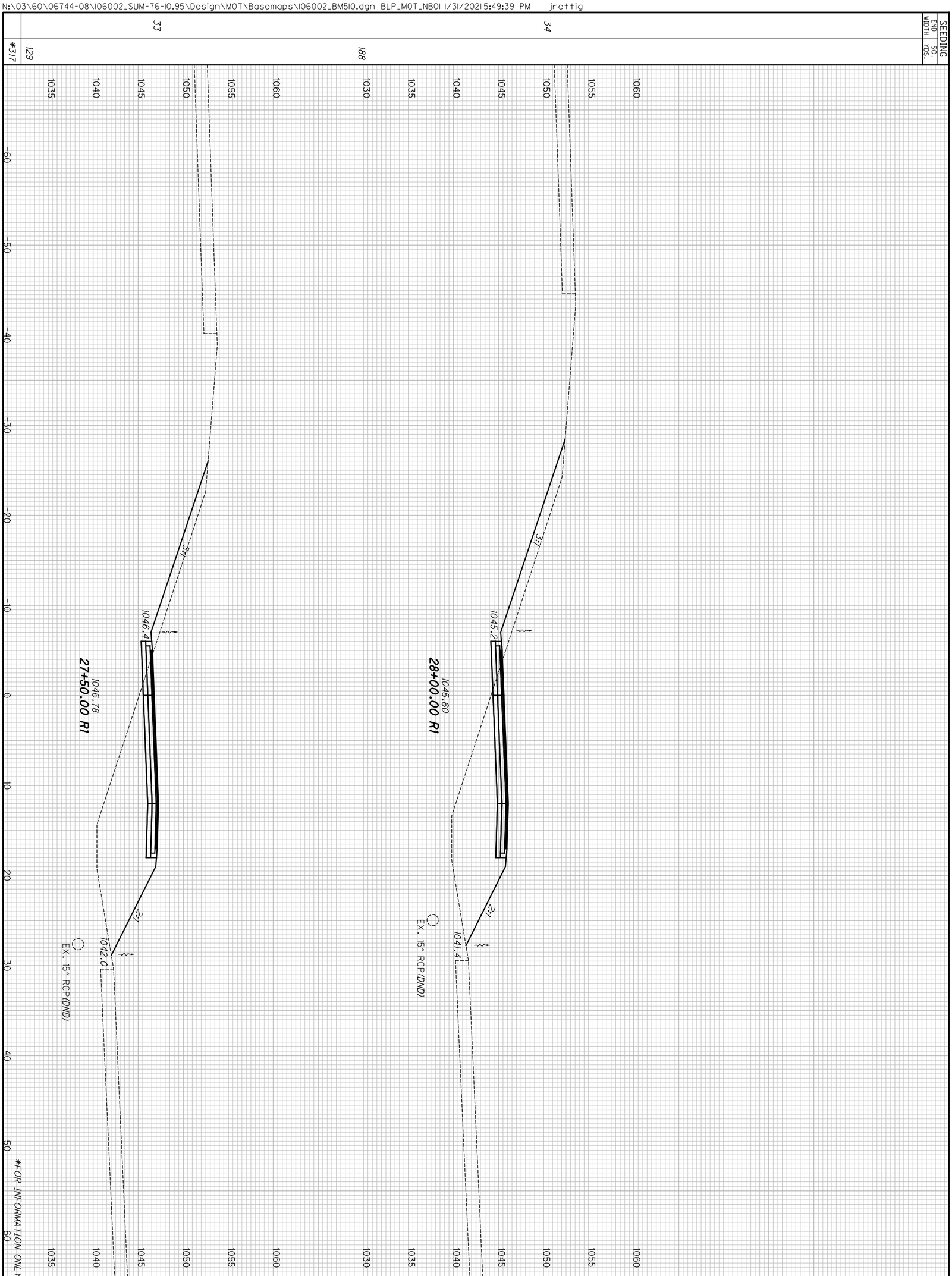


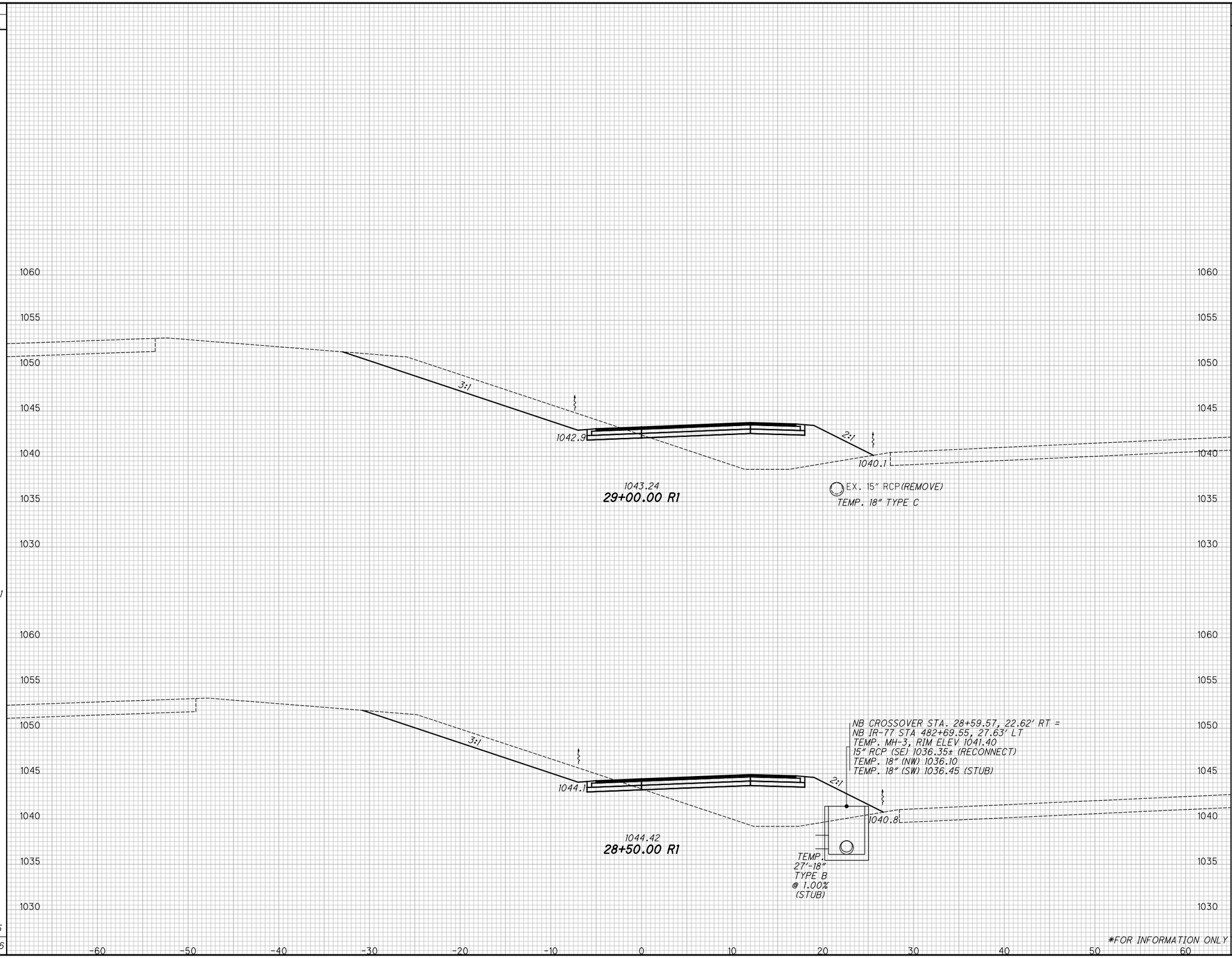
304
1288

SUM-77/277/224
VARIOUS

CROSS SECTIONS - NORTHERN CROSSOVER (NB)
PHASE 2 - STA. 27+50.00 TO STA. 28+00.00

CALCULATED KMC
CHECKED SSR

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
37	201	51	65	85	131
36	195	41	77	64	155
	*396			*149	*286



*FOR INFORMATION ONLY

CALCULATED KMC
CHECKED SSR

CROSS SECTIONS - NORTHERN CROSSOVER (NB)
PHASE 2 - STA. 28+50.00 TO STA. 29+00.00

SUM-77 / 277 / 224
VARIOUS

305
1288

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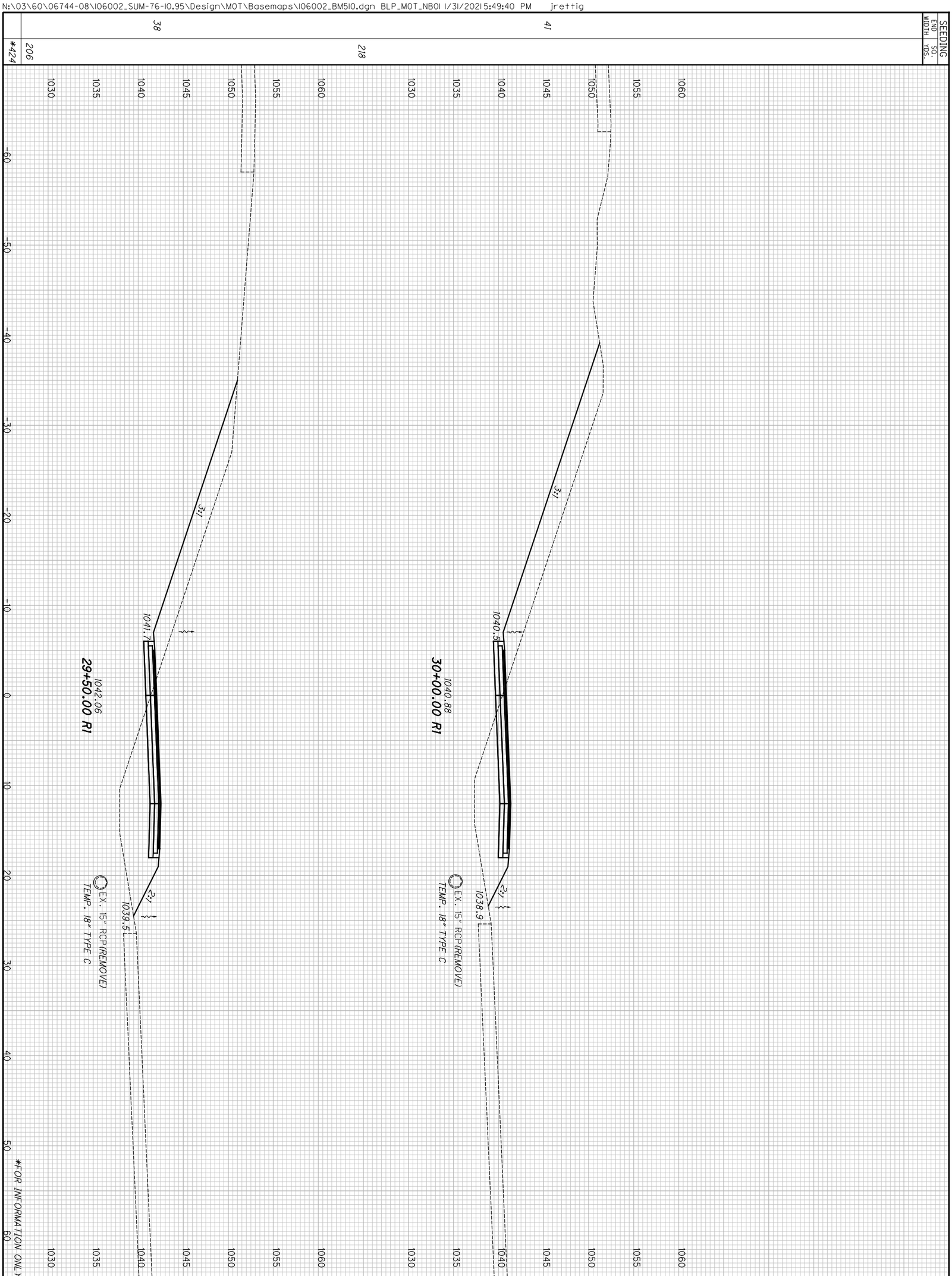


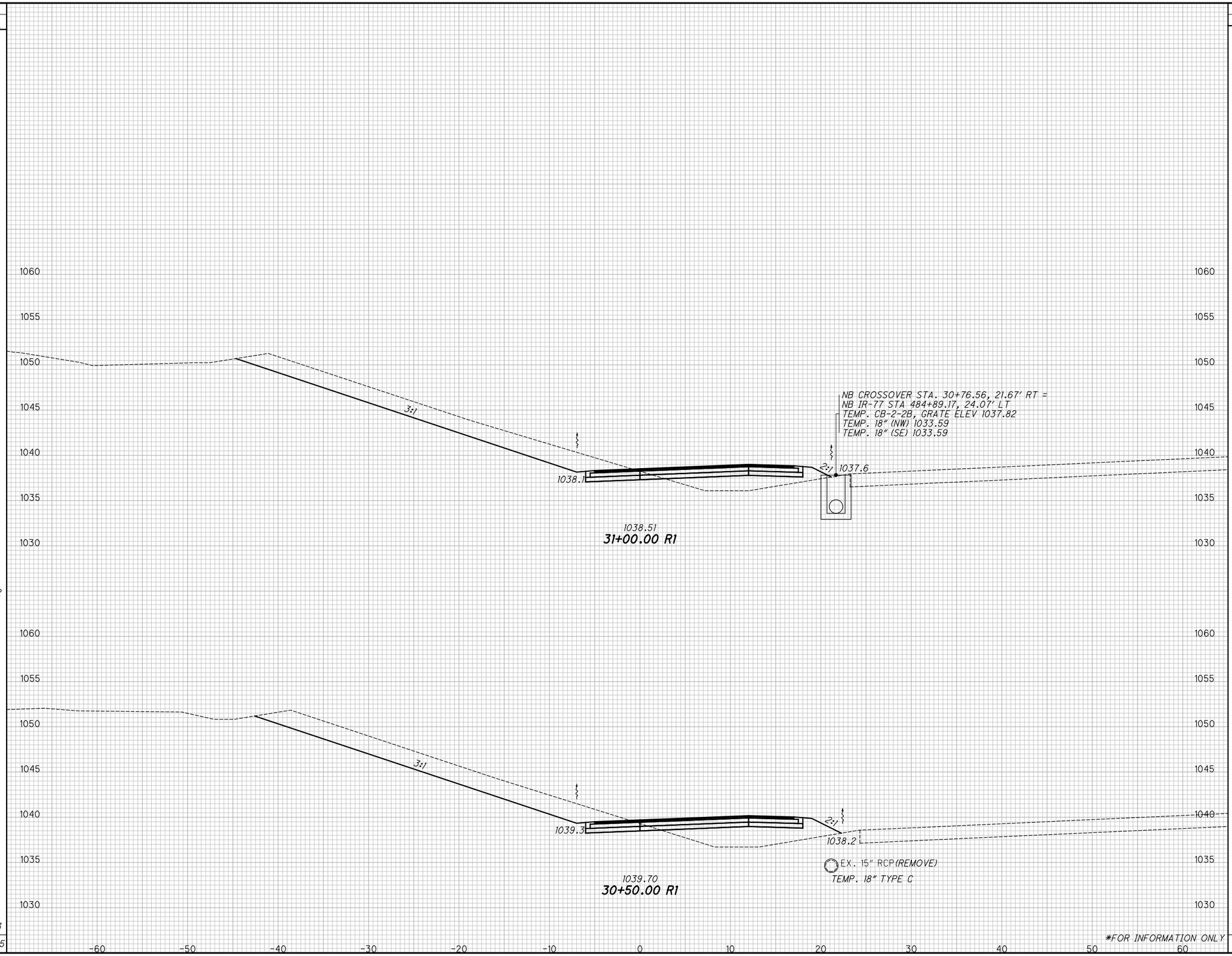
306
1288

SUM-77/277/224
VARIOUS

CROSS SECTIONS - NORTHERN CROSSOVER (NB)
PHASE 2 - STA. 29+50.00 TO STA. 30+00.00

CALCULATED KMC
CHECKED SSR

SEEDING	
END WIDTH	SQ. YDS.
44	
	242
43	
	233
	*475



END AREA		VOLUME	
CUT	FILL	CUT	FILL
81	21		
		150	48
81	31		
		150	68
		*300	*116

*FOR INFORMATION ONLY

CALCULATED KMC
CHECKED SSR

CROSS SECTIONS - NORTHERN CROSSOVER (NB)
PHASE 2 - STA. 30+50.00 TO STA. 31+00.00

SUM-77 / 277 / 224
VARIOUS

307
1288

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SEEDING	
END WIDTH	SQ. YDS.
45	
	244
43	
	241
	*485

NB CROSSOVER STA. 32+10.43, 8.14' LT =
NB IR-77 STA 486+25.20, 50.92' LT
TEMP. CB-2-2B, GRATE ELEV 1035.53
TEMP. 15" (NE) 1032.28

NB CROSSOVER STA. 32+10.43, 19.49' RT =
NB IR-77 STA 486+24.57, 23.29' LT
TEMP. CB-2-2B, GRATE ELEV 1036.13
TEMP. 15" (SW) 1032.09
TEMP. 15" (NE) 1032.09

NB CROSSOVER STA 32+10.76, 20.47' RT =
NB IR-77 STA 486+24.74, 15.72' LT
EX. CB, GRATE ELEV 1035.11
(ABANDON CB AND CONNECT PIPES THROUGH)
EX. 15" RCP SE 1032.03(REMOVE)
EX. 18" RCP NW 1032.03(DND)
TEMP. 15" (SW) 1032.03
TEMP. 18" (SE) 1032.03

EX. 15" RCP(REMOVE)

3:1

1035.8

2:1

1036.3

TEMP. 28'-15" TYPE B @ 0.68%

TEMP. 8'-15" TYPE C @ 0.75%

1036.25
32+00.00 R1

3:1

2:1

1037.0

1037.0

EX. 15" RCP(REMOVE)

TEMP. 18" TYPE B

1037.34
31+50.00 R1

*FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
119	8		
		216	17
114	10		
		181	29
		*397	*46

CALCULATED KMC
CHECKED SSR

CROSS SECTIONS - NORTHERN CROSSOVER (NB)
PHASE 2 - STA. 31+50.00 TO STA. 32+00.00

SUM-77 / 277 / 224
VARIOUS

308
1288

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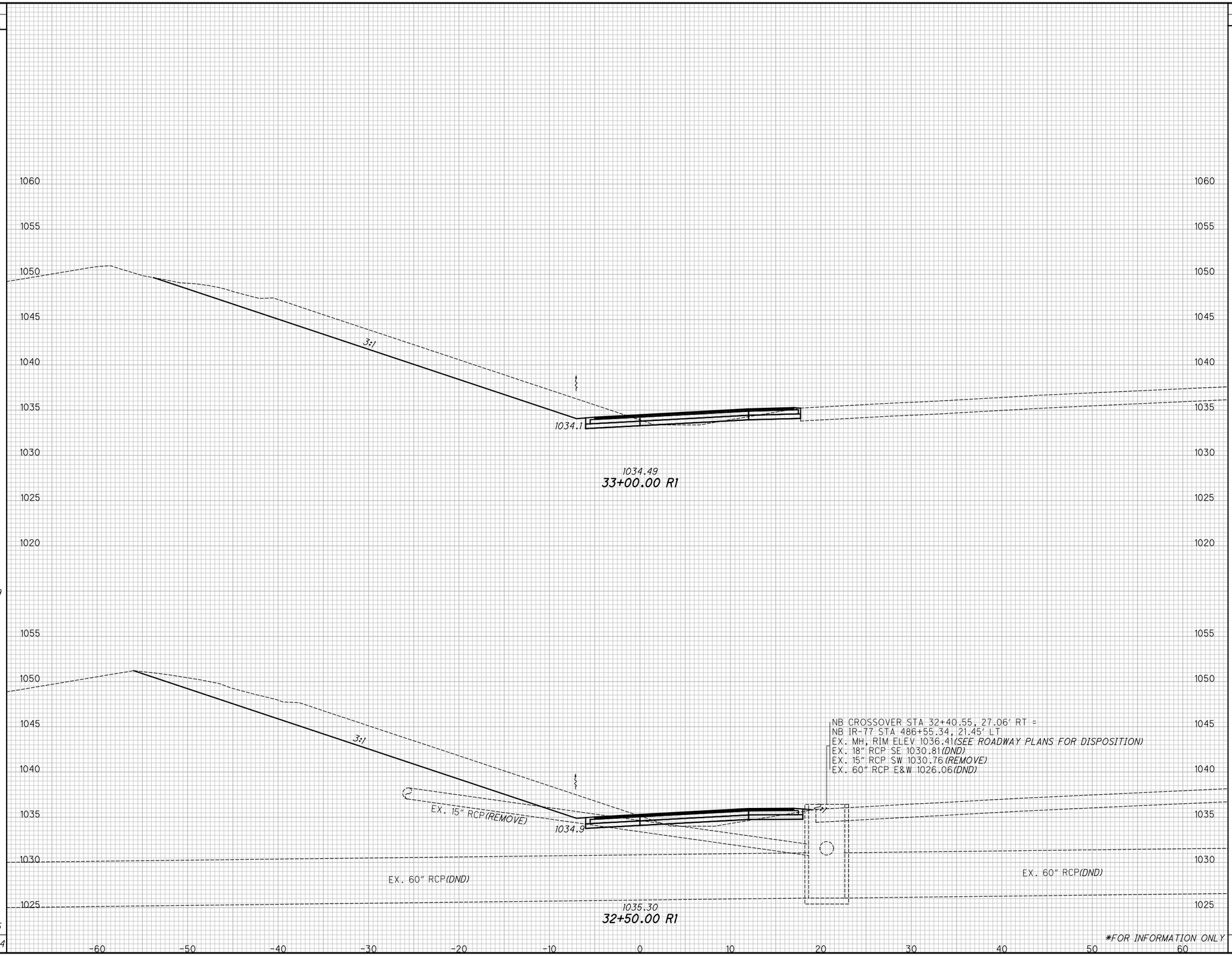
SEEDING	
END WIDTH	SQ. YDS.
50	
289	
54	
275	
*564	



END AREA	
CUT	FILL
105	1
125	3
*FOR INFORMATION ONLY	

VOLUME	
CUT	FILL
213	4
226	10
*439	*14

CALCULATED KMC
CHECKED SSR

CROSS SECTIONS - NORTHERN CROSSOVER (NB)
PHASE 2 - STA. 32+50.00 TO STA. 33+00.00

SUM-77 / 277 / 224
VARIOUS

309
1288

N:\03\60\06744-08\06002_SUM-76-10.95\Design\MOT\Basemaps\106002_BM510.dgn BLP_MOT_NB01 1/31/2021 5:49:41 PM jrettig

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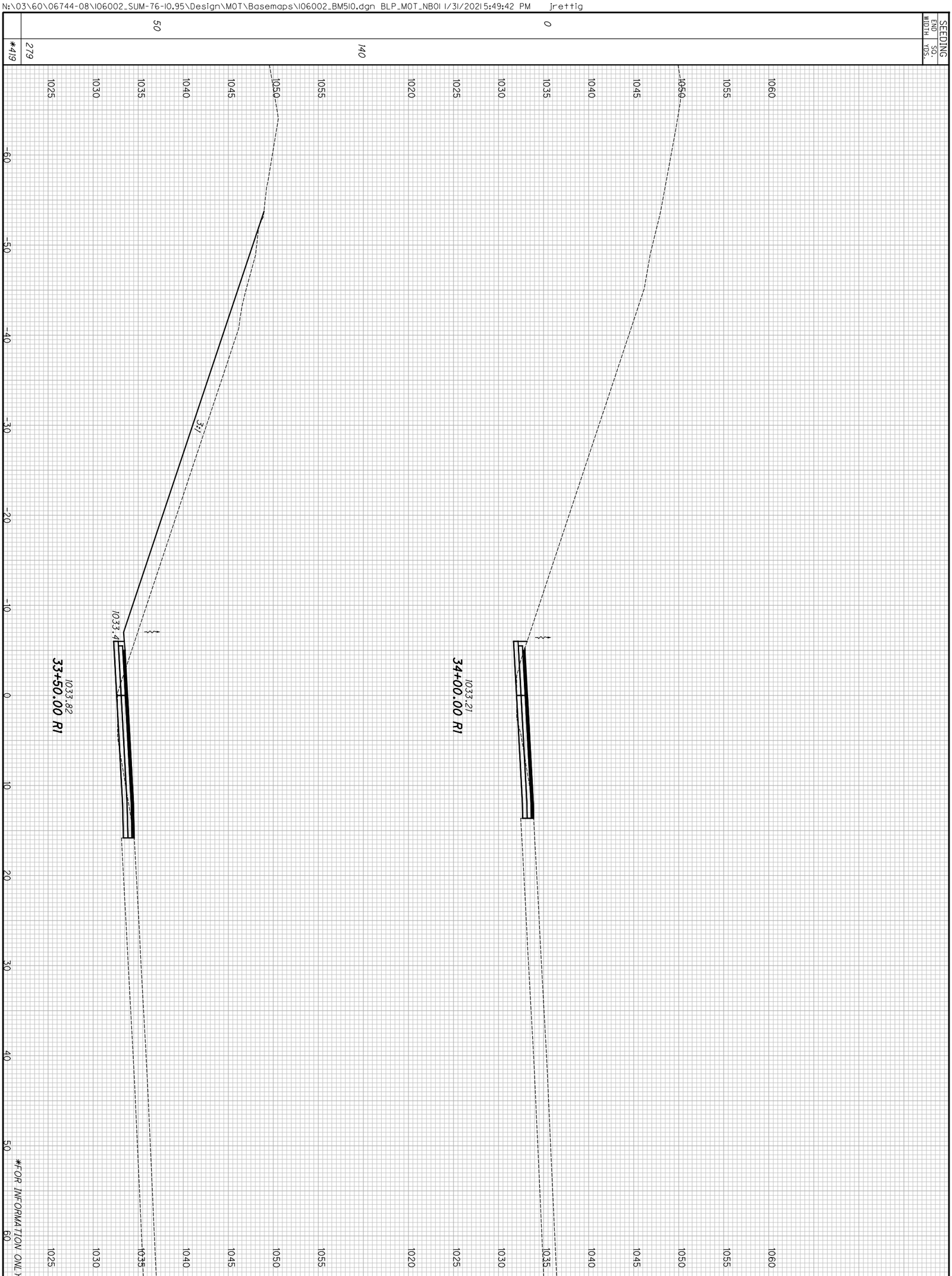
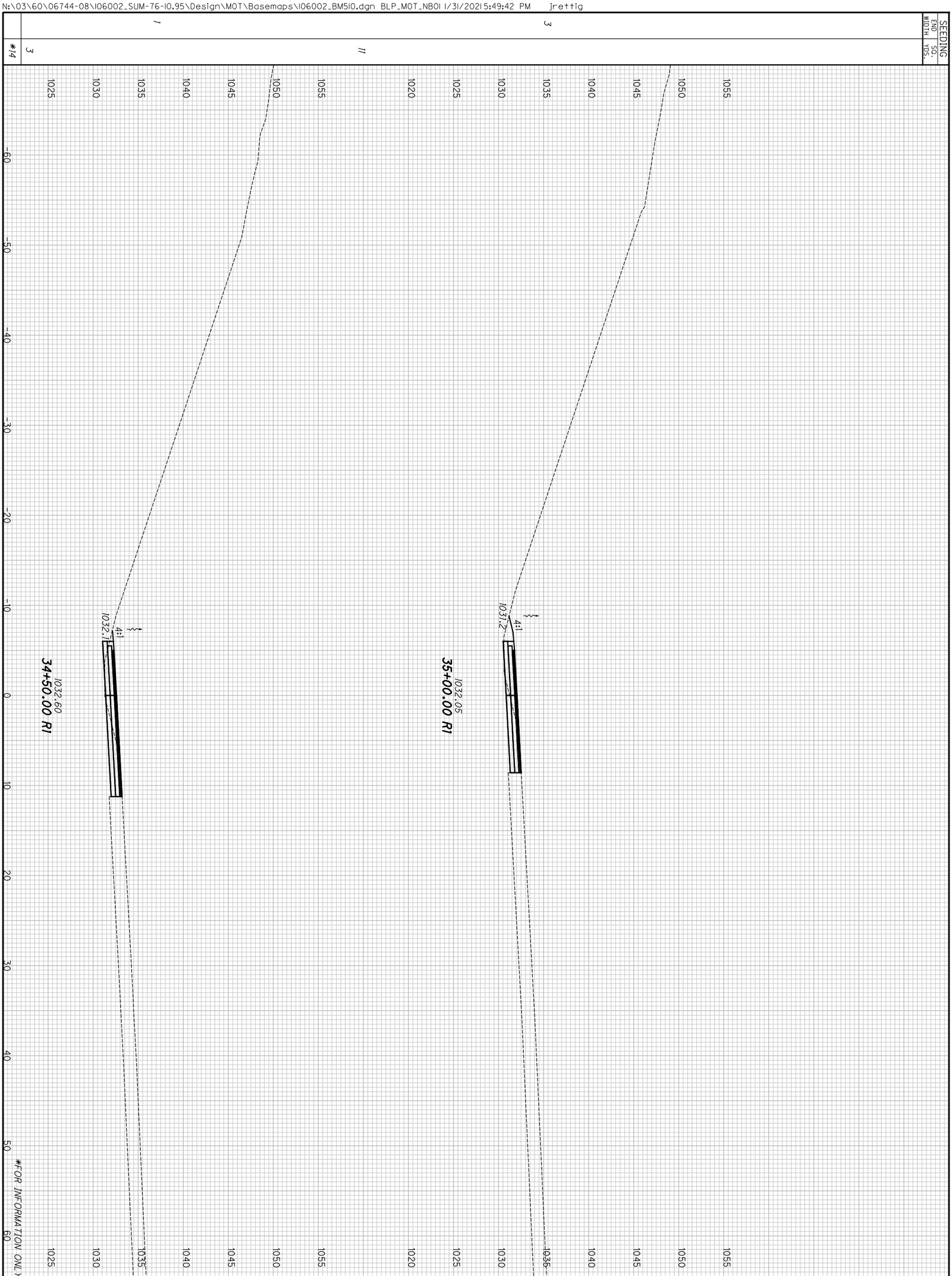


310 / 1288	SUM-77/277/224 VARIOUS	CROSS SECTIONS - NORTHERN CROSSOVER (NB) PHASE 2 - STA. 33+50.00 TO STA. 34+00.00

CALCULATED KMC
CHECKED SSR

N:\03\60\06744-08\I06002_SUM-76-10.95\Design\MOT\Basemaps\I06002_BM510.dgn BLP_MOT_NB01 1/31/2021 5:49:42 PM jrettig

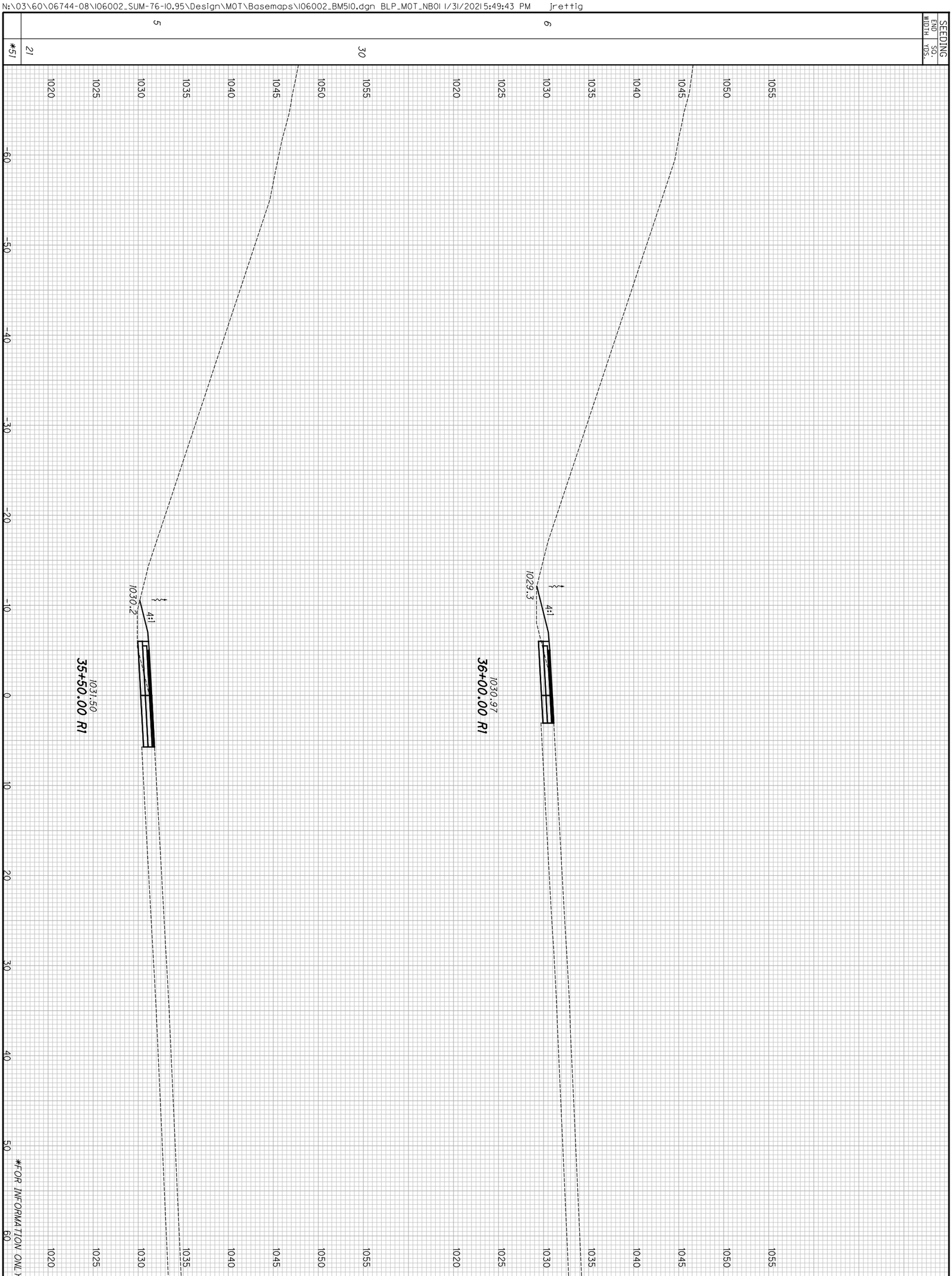


SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
*14	3	10	0	*37	*2
1	3	9	2	19	0
11				18	2

311 / 1288	SUM-77 / 277 / 224 VARIOUS	CROSS SECTIONS - NORTHERN CROSSOVER (NB) PHASE 2 - STA. 34+50.00 TO STA. 35+00.00

CALCULATED KMC
CHECKED SSR

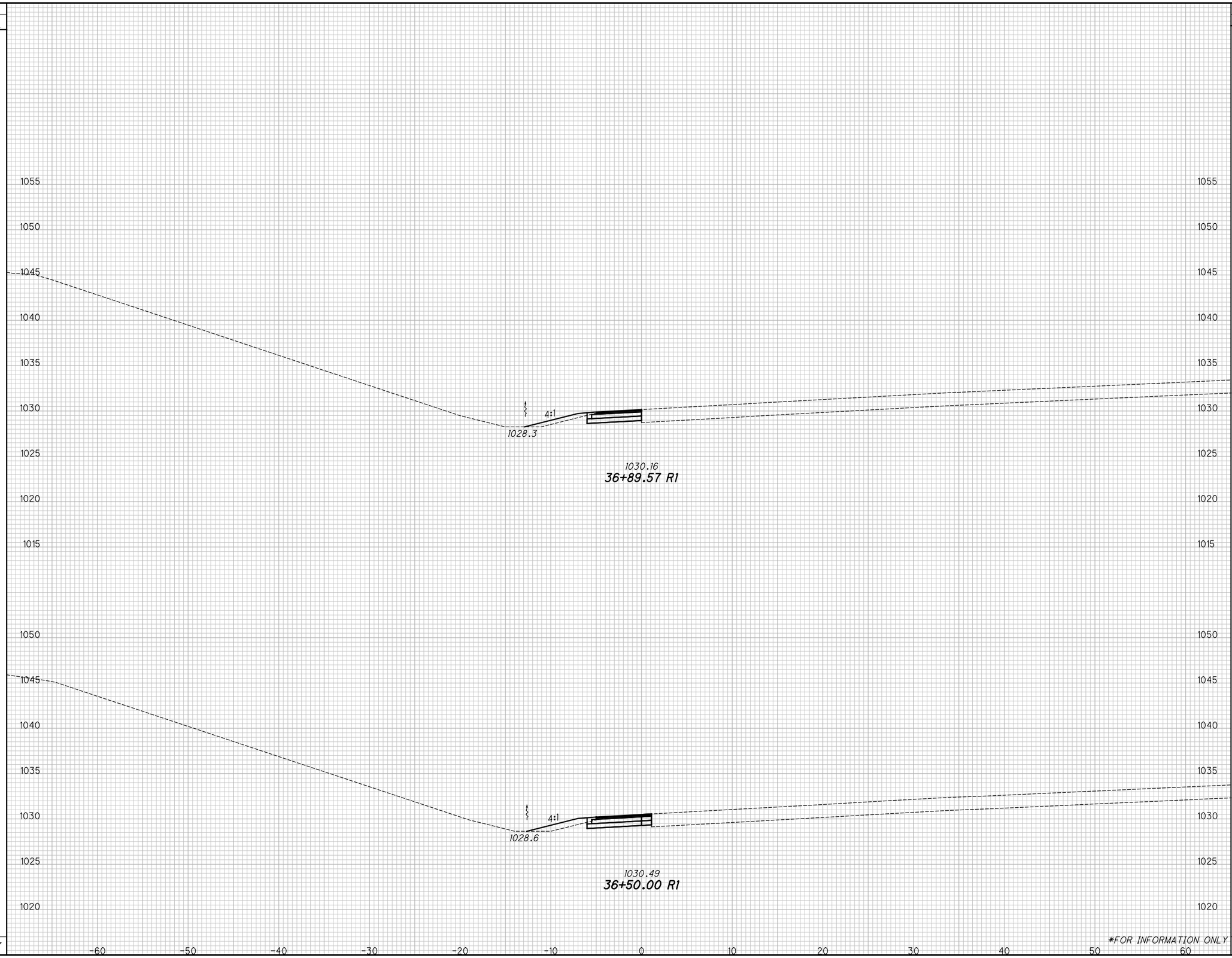
N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Basemaps\106002_BM510.dgn BLP_MOT_NB01 1/31/2021 5:49:43 PM jrettig



312 / 1288	SUM-77 / 277 / 224 VARIOUS	CROSS SECTIONS - NORTHERN CROSSOVER (NB) PHASE 2 - STA. 35+50.00 TO STA. 36+00.00

CALCULATED KMC
CHECKED SSR

SEEDING	
END WIDTH	SQ. YDS.
7	
	31
7	
	36
	*67



END AREA	
CUT	FILL
7	3
8	3

VOLUME	
CUT	FILL
11	4
16	6
*27	*10

*FOR INFORMATION ONLY

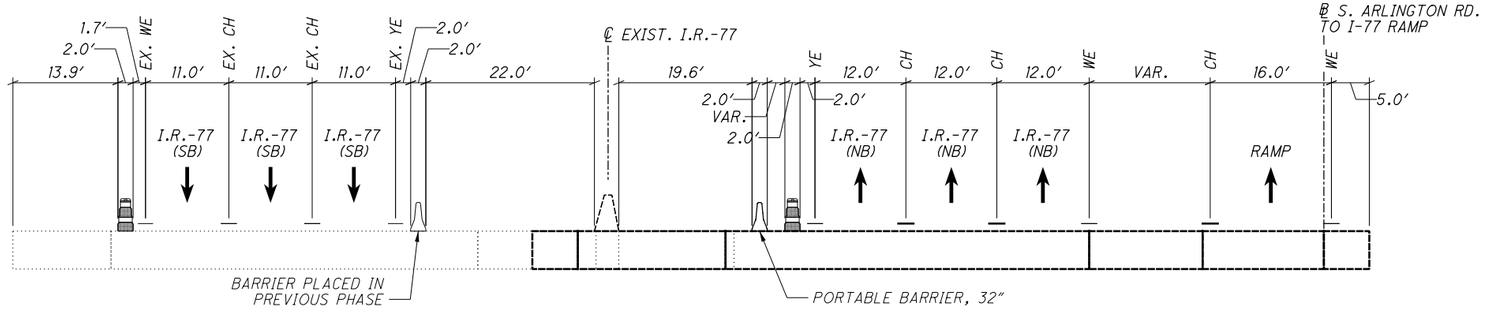
CALCULATED KMC
CHECKED SSR

CROSS SECTIONS - NORTHERN CROSSOVER (NB)
PHASE 2 - STA. 36+50.00 TO STA. 36+89.57

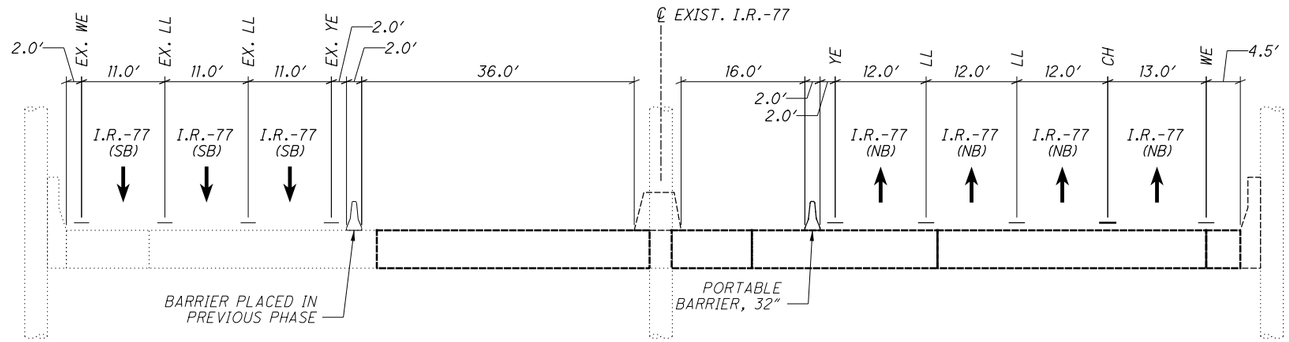
SUM-77/277/224
VARIOUS

313
1288

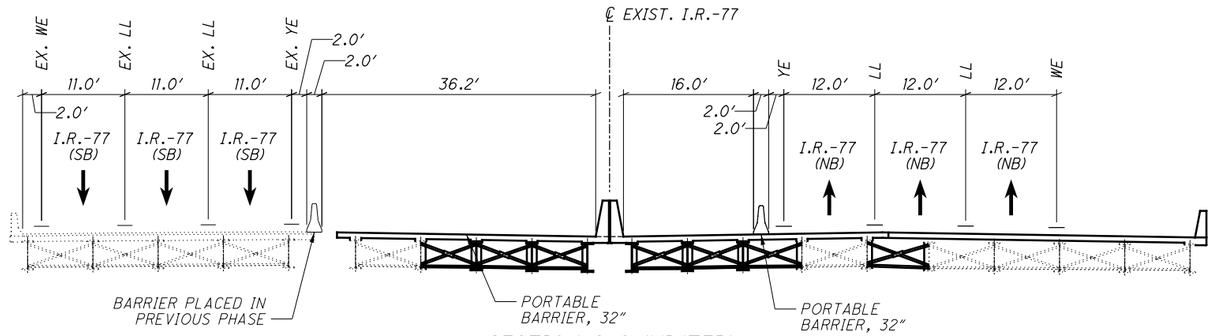
N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Basemaps\106002_BM510.dgn BLP_MOT_NB01 1/31/2021 5:49:44 PM jrettig



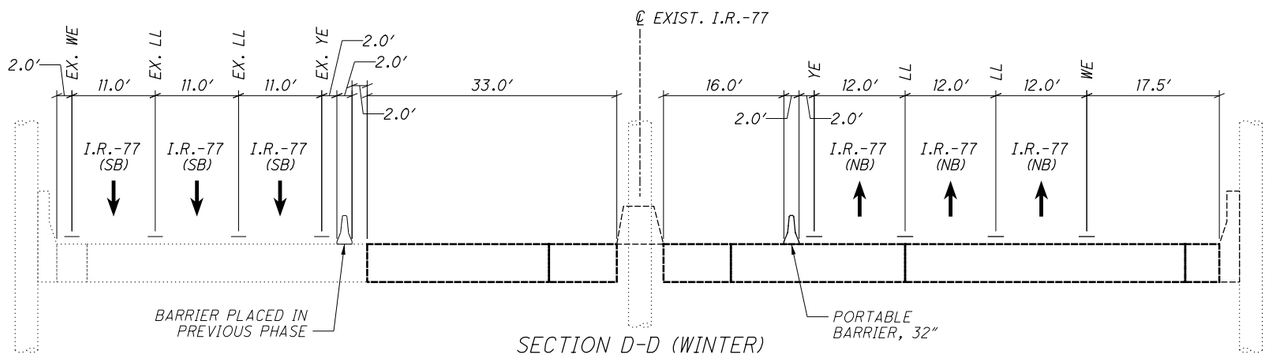
I-77 STA. 377+00 (WINTER)
(NOT TO SCALE)



SECTION A-A (WINTER)
(NOT TO SCALE)



SECTION C-C (WINTER)
(NOT TO SCALE)



SECTION D-D (WINTER)
(NOT TO SCALE)

CALCULATED EMB
CHECKED JAR

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS - PHASE 2

SUM-77 / 277 / 224
VARIOUS

314
1288

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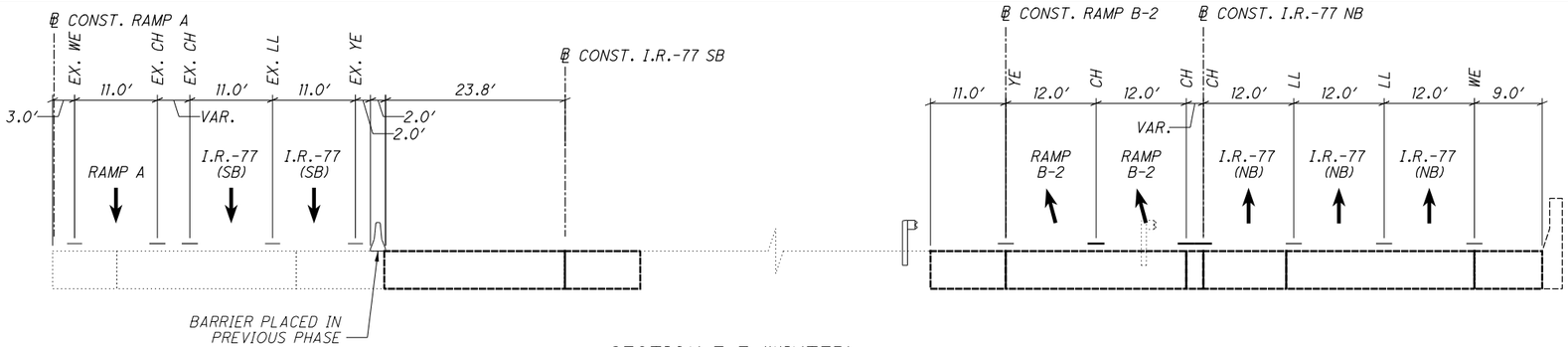
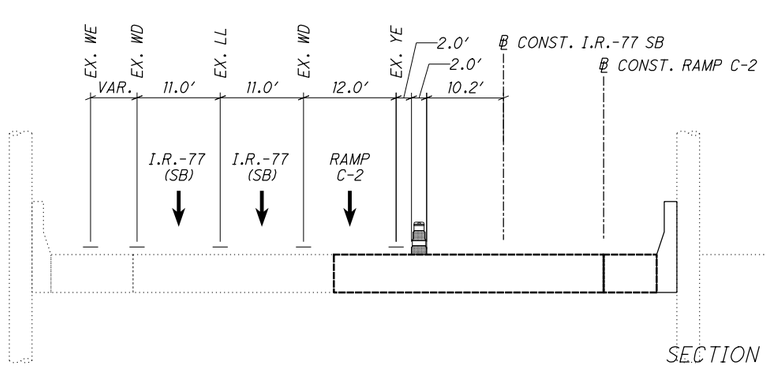
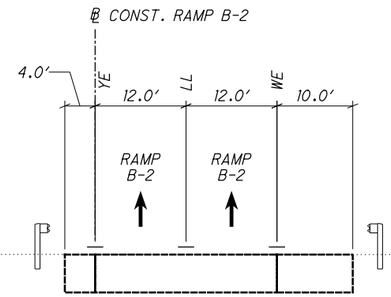
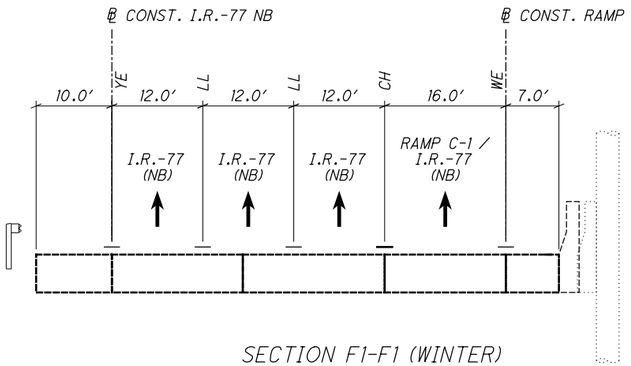


SECTION E-E (WINTER)
(NOT TO SCALE)

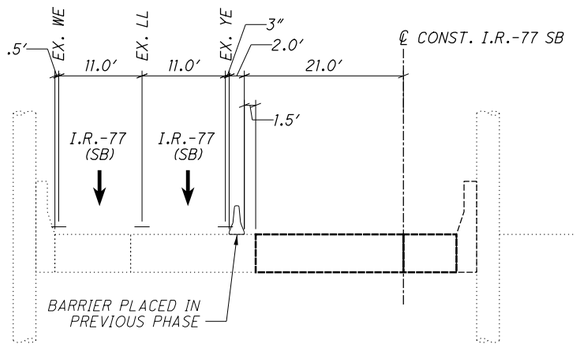


SECTION F2-F2 (WINTER)
(NOT TO SCALE)

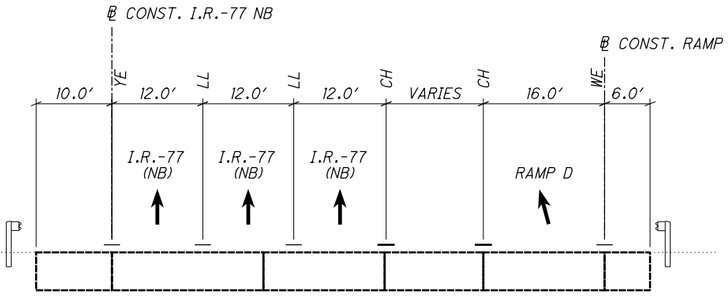




SECTION F1-F1 (WINTER)
(NOT TO SCALE)



SECTION G-G (WINTER)
(NOT TO SCALE)



CALCULATED EMB
CHECKED JAR

TRAFFIC TYPICAL SECTIONS - PHASE 2

MAINTENANCE OF TRAFFIC

SUM-77 / 277 / 224
VARIOUS

315
1288

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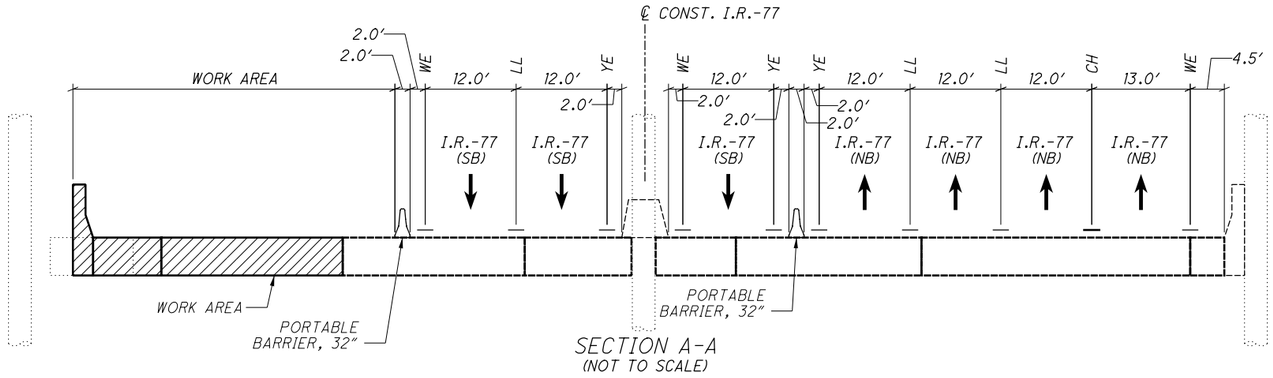
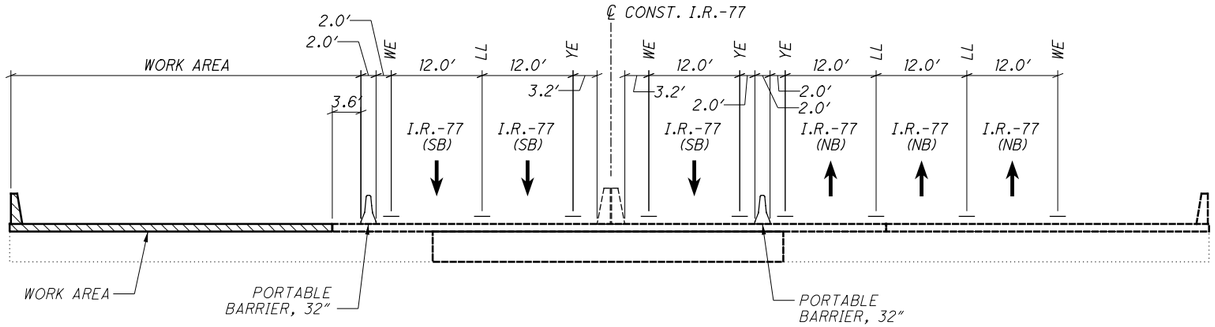
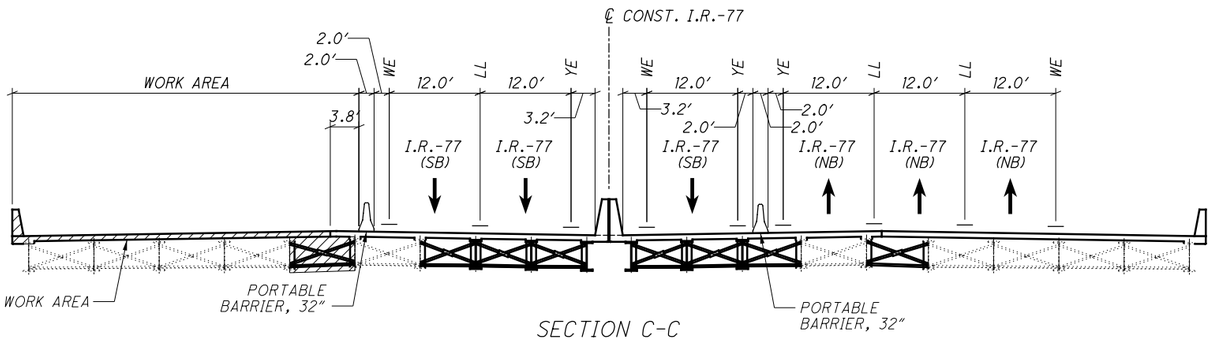


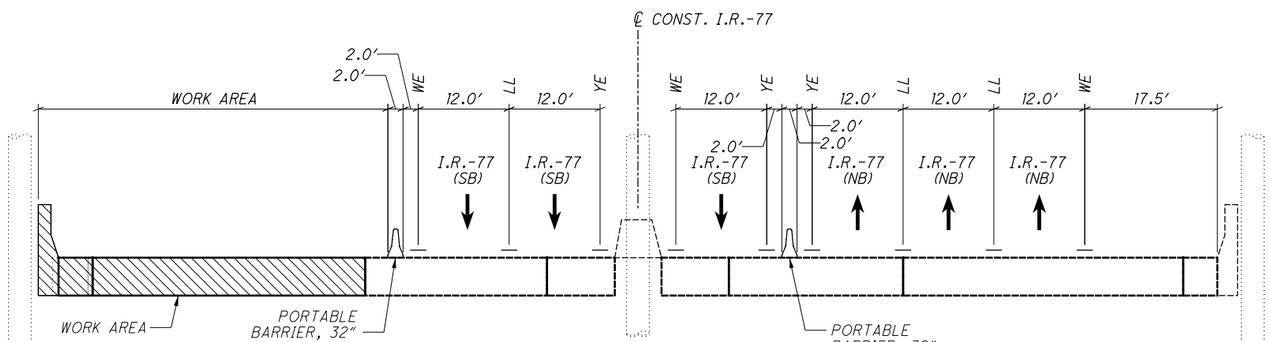
SECTION A-A
(NOT TO SCALE)



SECTION B-B
(NOT TO SCALE)



SECTION C-C
(NOT TO SCALE)



SECTION D-D
(NOT TO SCALE)

CALCULATED EMB
CHECKED JML

TRAFFIC TYPICAL SECTIONS - PHASE 3

MAINTENANCE OF TRAFFIC

SUM-77 / 277 / 224
VARIOUS

316
1288

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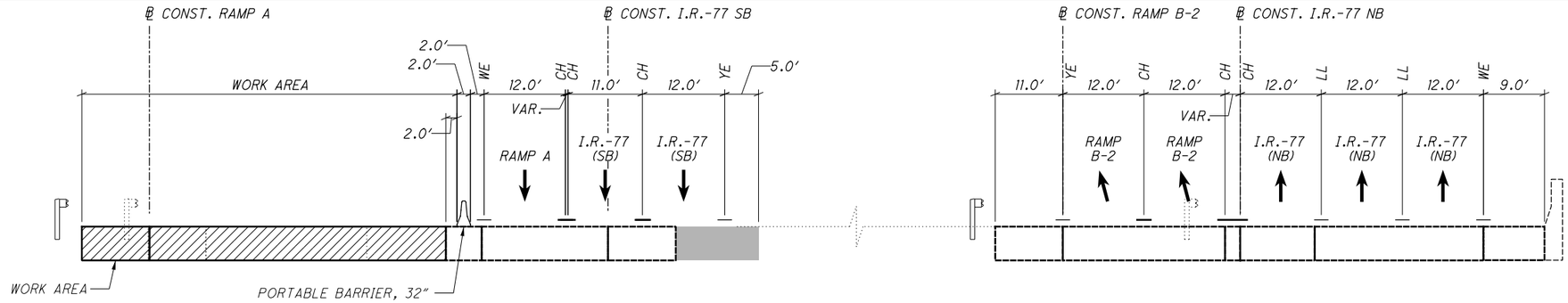
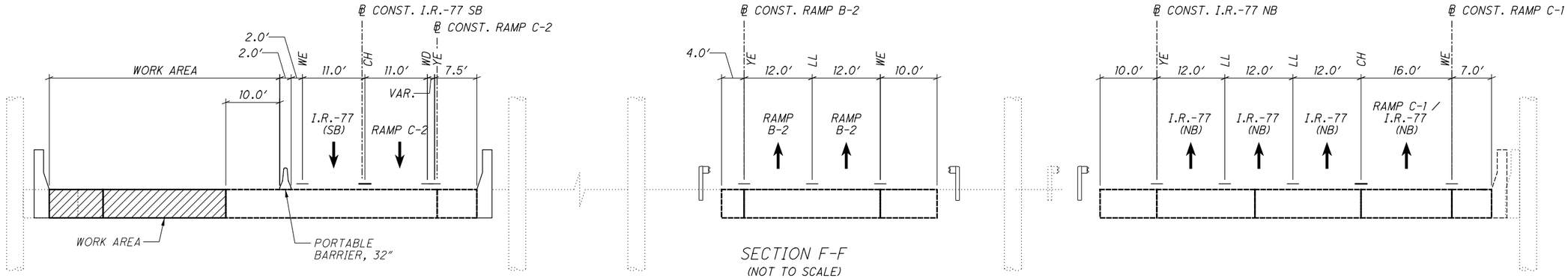
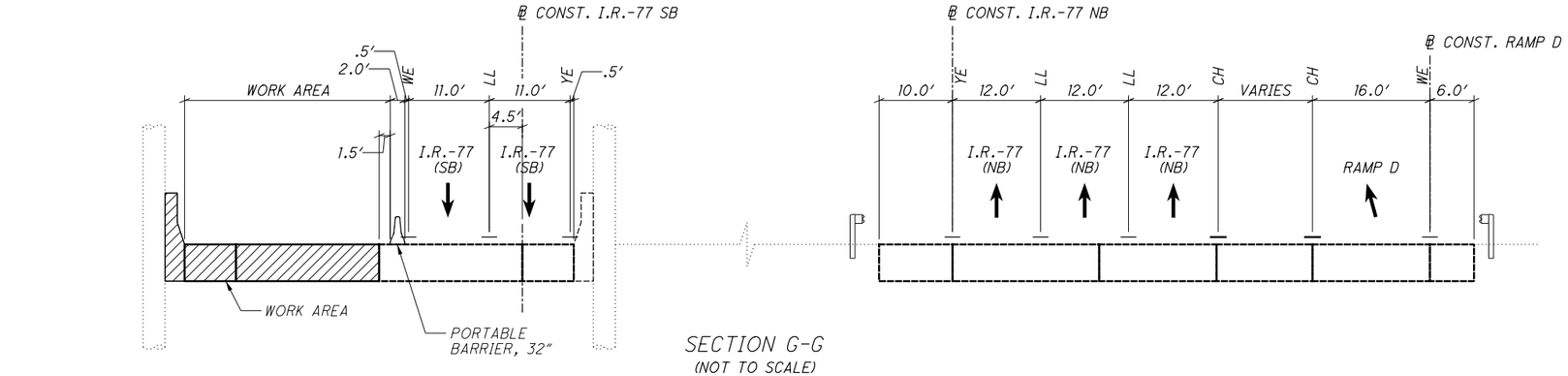


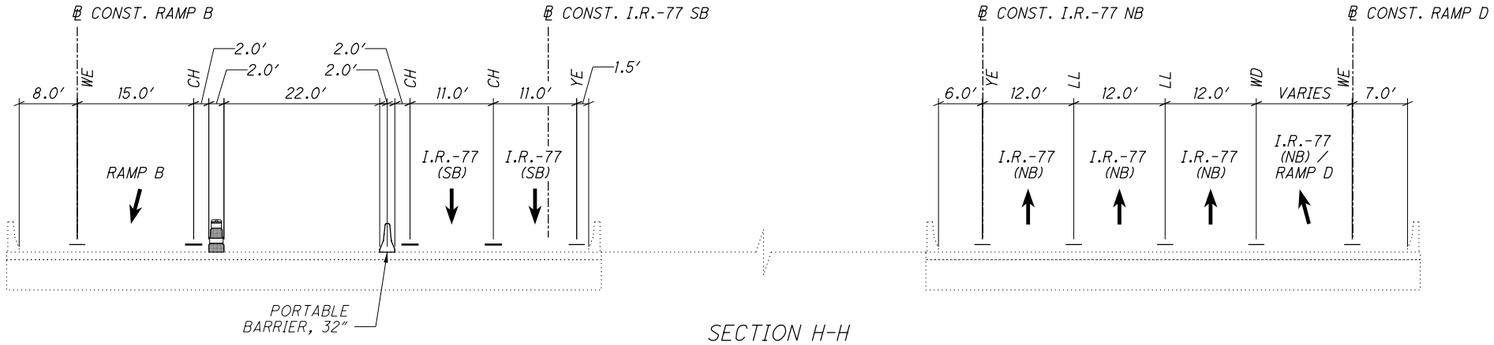
SECTION E-E
(NOT TO SCALE)



SECTION F-F
(NOT TO SCALE)



SECTION G-G
(NOT TO SCALE)



SECTION H-H
(NOT TO SCALE)

CALCULATED EMB
CHECKED JML

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS - PHASE 3

SUM-77 / 277 / 224
VARIOUS

317
1288

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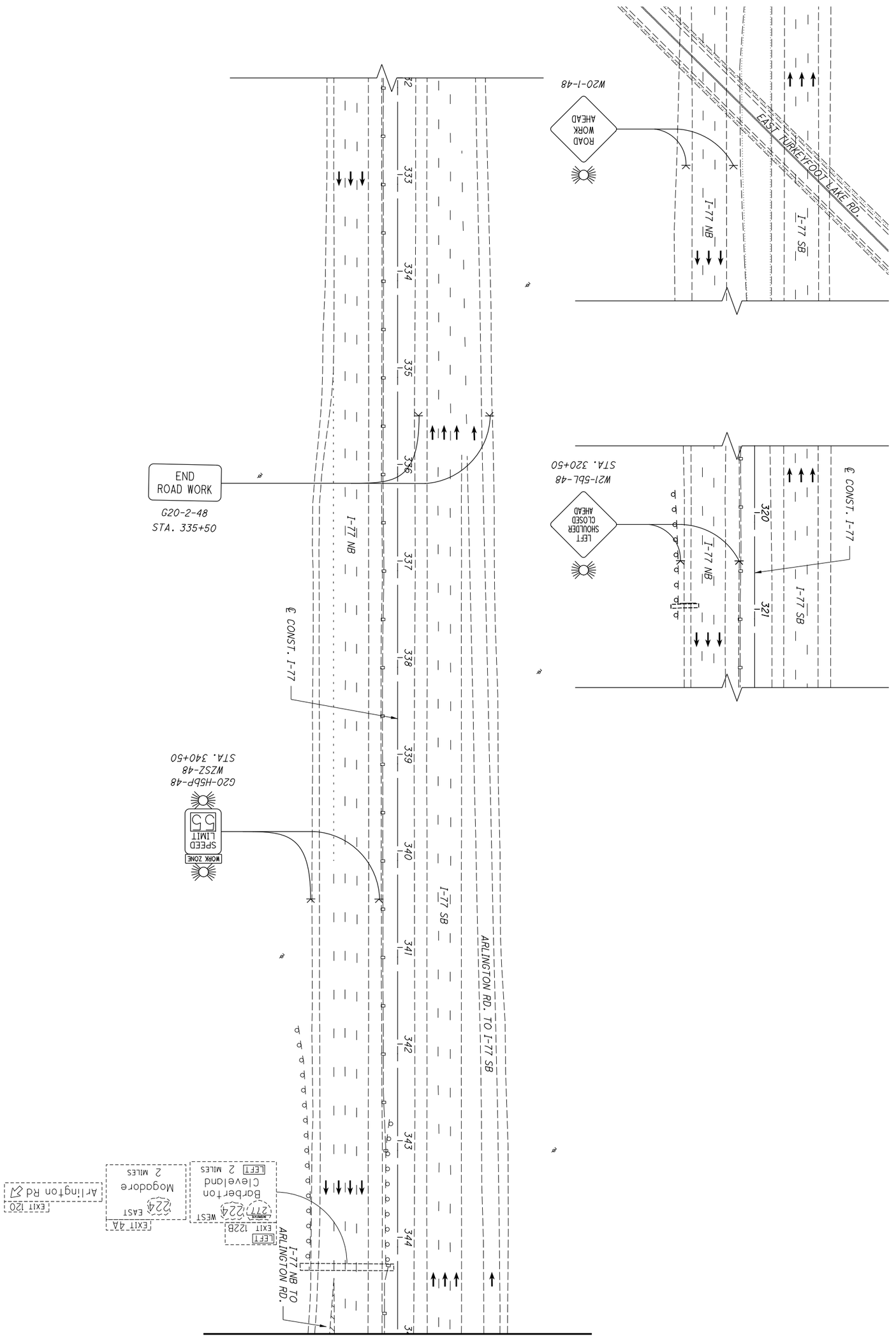
NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

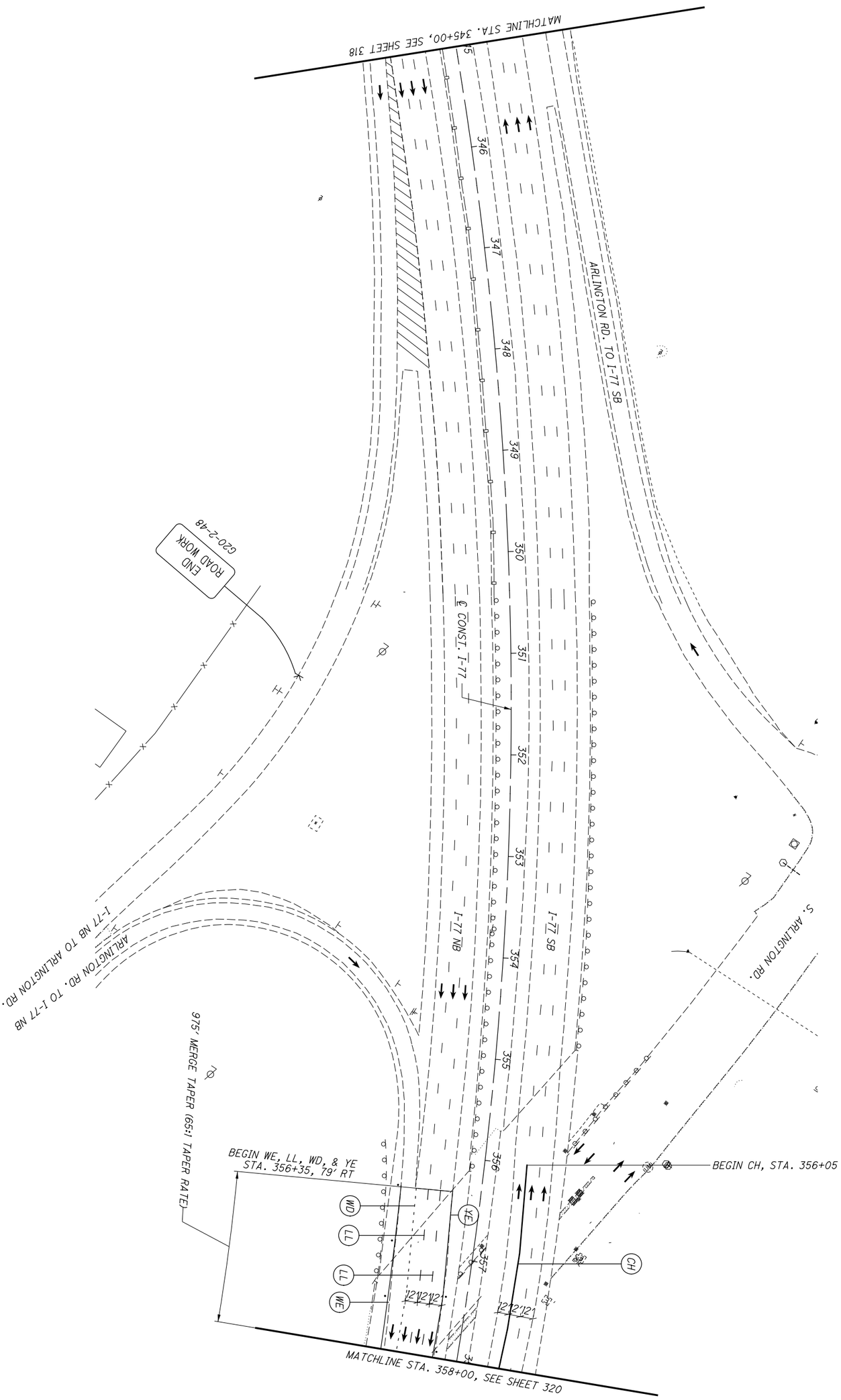


318 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3 I-77 - STA. 332+00 TO STA. 345+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET	N

N:\03\60\06744-08\I06002_SUM-76-10.95\Design\MOT\Sheets\I06002_MP306.dgn Sheet 1/31/2021 5:50:49 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



319 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3 I-77 - STA. 345+00 TO STA. 358+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

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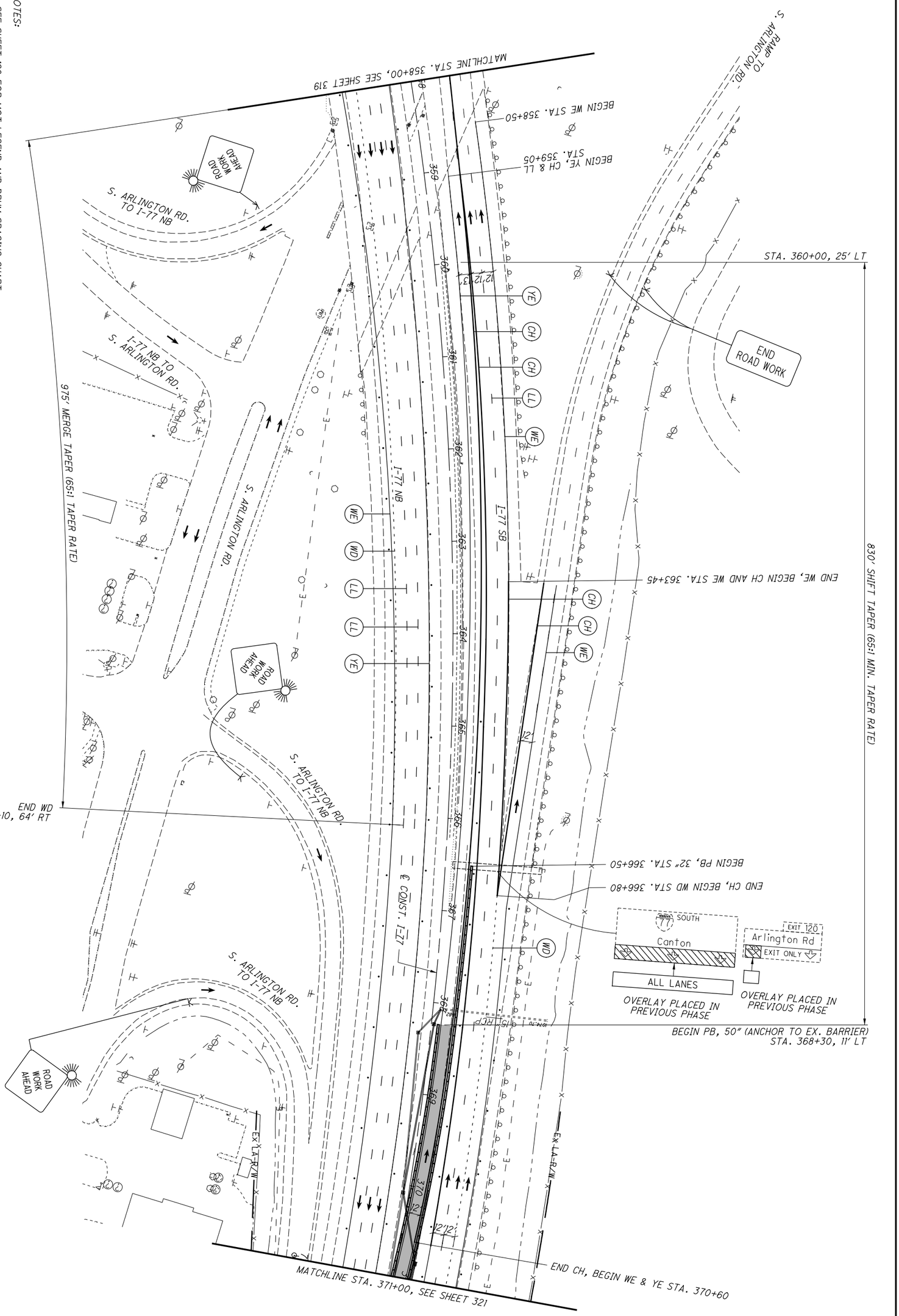
NOTES:

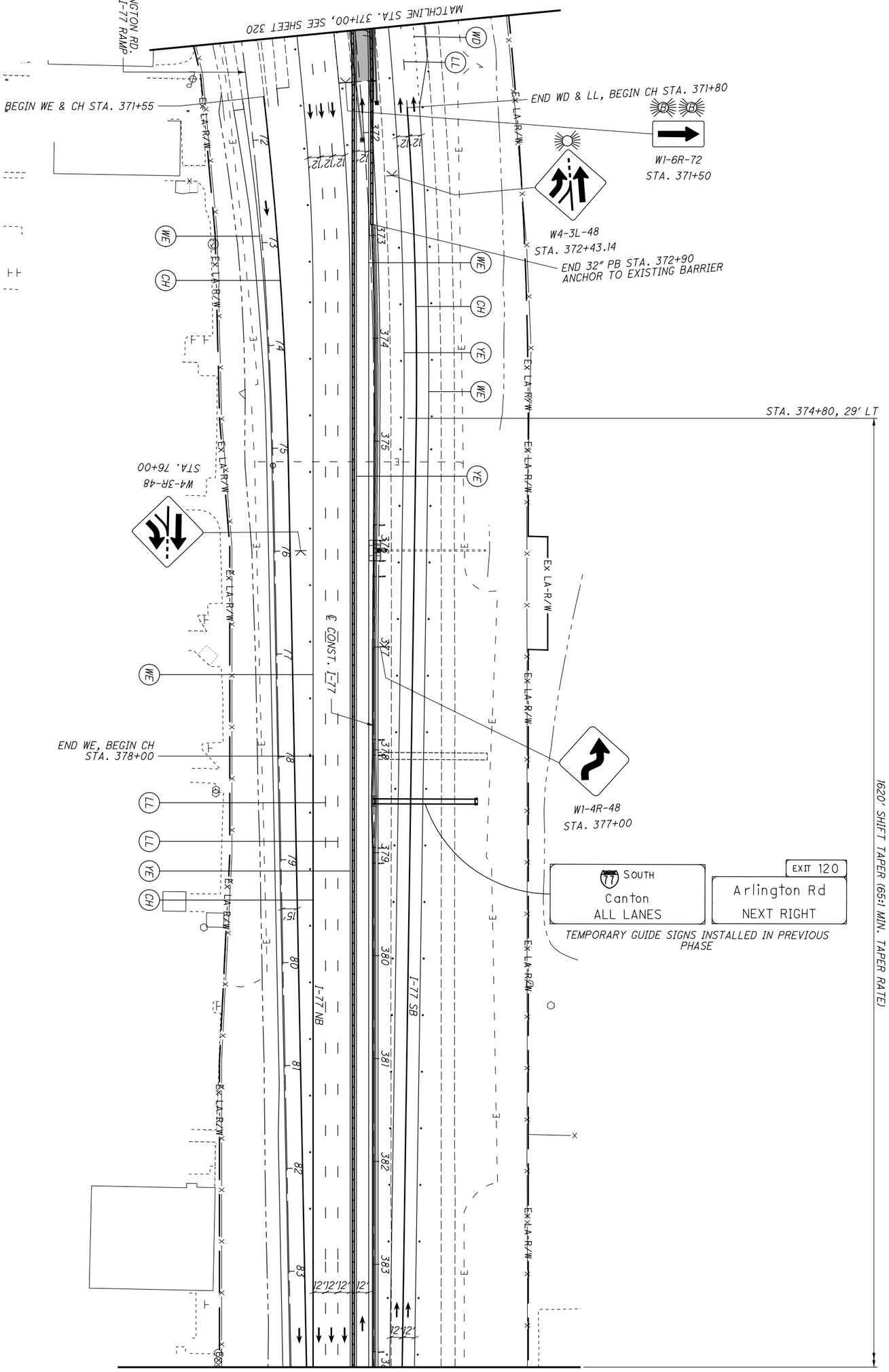
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 366-367 FOR SOUTHERN CROSSOVER (SB).



320 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3 I-77 - STA. 358+00 TO STA. 371+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

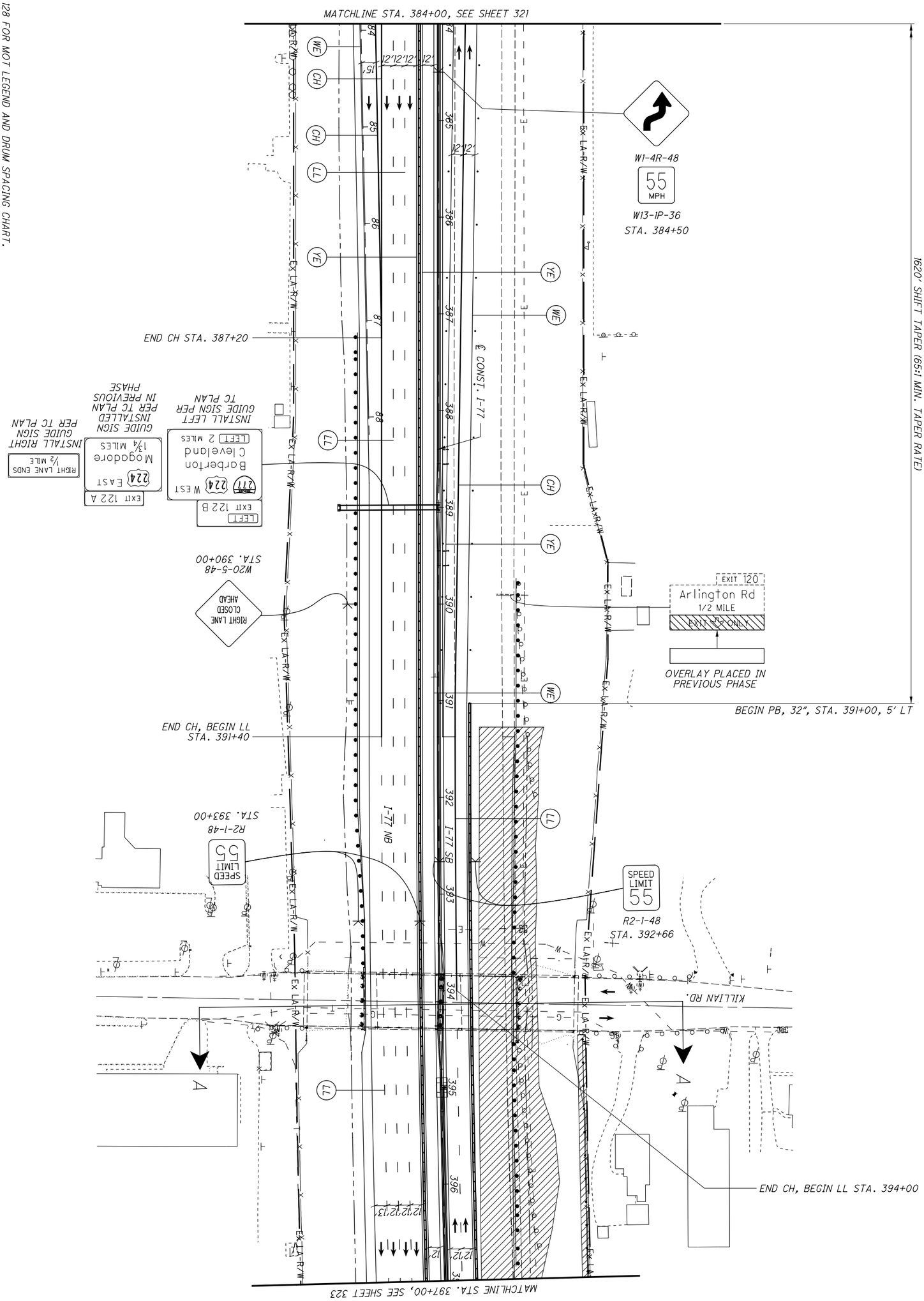
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 366-367 FOR SOUTHERN CROSSOVER (SB).



321 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3 I-77 - STA. 371+00 TO STA. 384+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

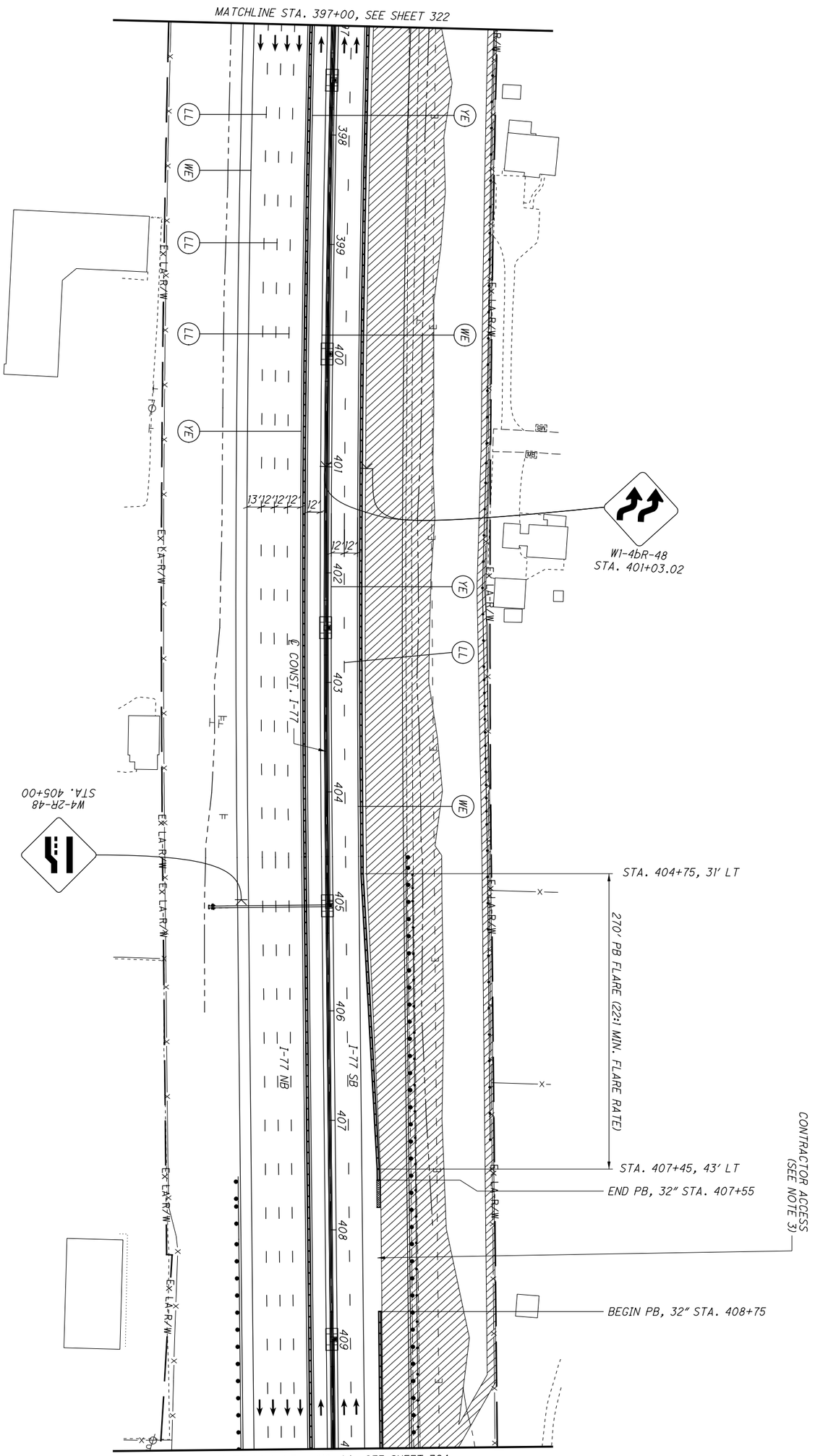
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 316-317 FOR TYPICAL SECTIONS.



322 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3 I-77 - STA. 384+00 TO STA. 397+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

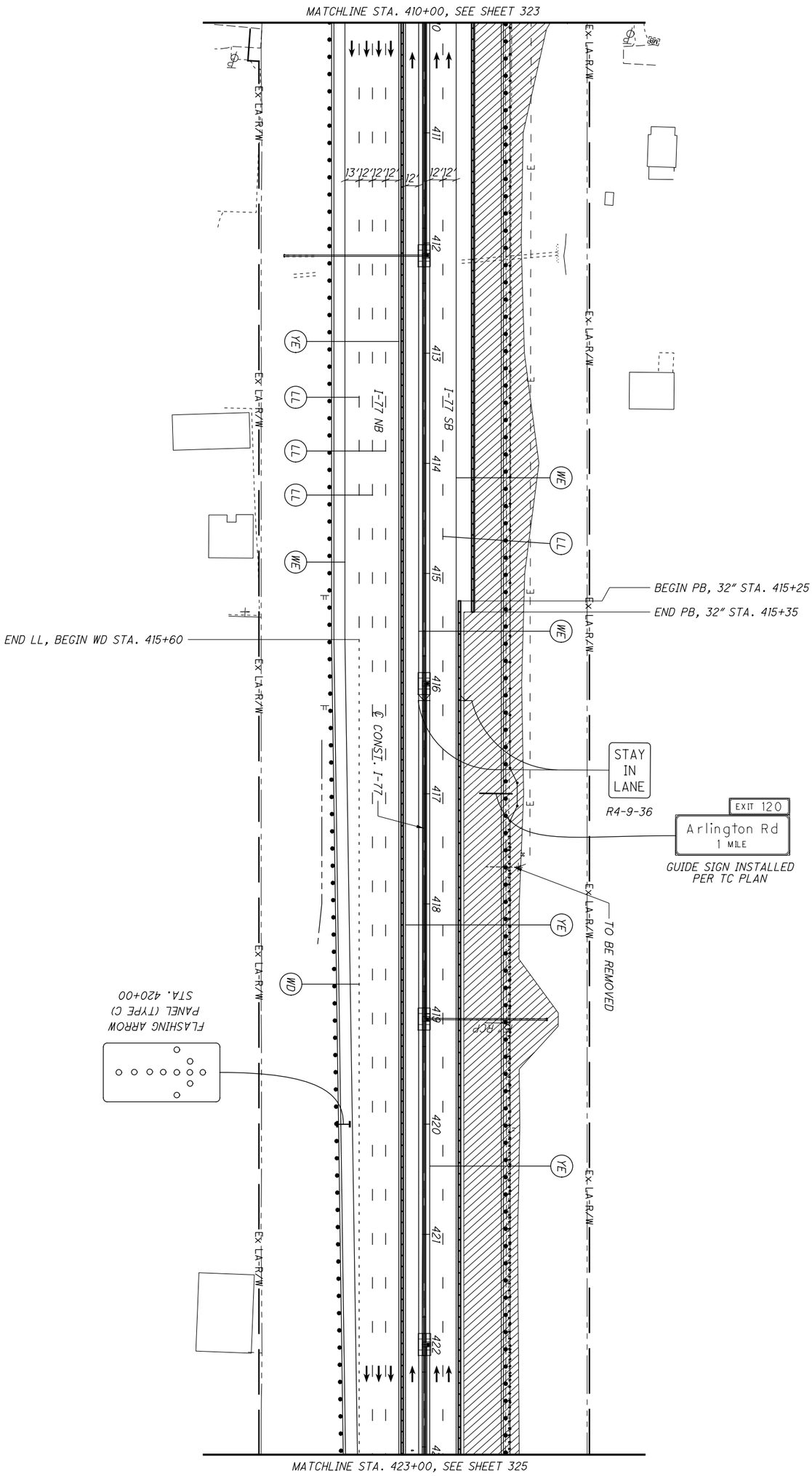
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. INSTALL CONTRACTOR ACCESS POINTS PER ODOT STANDARD CONSTRUCTION DRAWING MT-103.10. ACCESS POINTS MAY BE RELOCATED AT THE APPROVAL OF THE ENGINEER, AS NECESSARY TO ACCOMPLISH CONSTRUCTION ACTIVITIES. CONTRACTOR ACCESS POINTS ARE SHOWN FOR INFORMATIONAL PURPOSES AND THE LOCATION CAN BE ADJUSTED AT THE APPROVAL OF THE ENGINEER.



323 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3 I-77 - STA. 397+00 TO STA. 410+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



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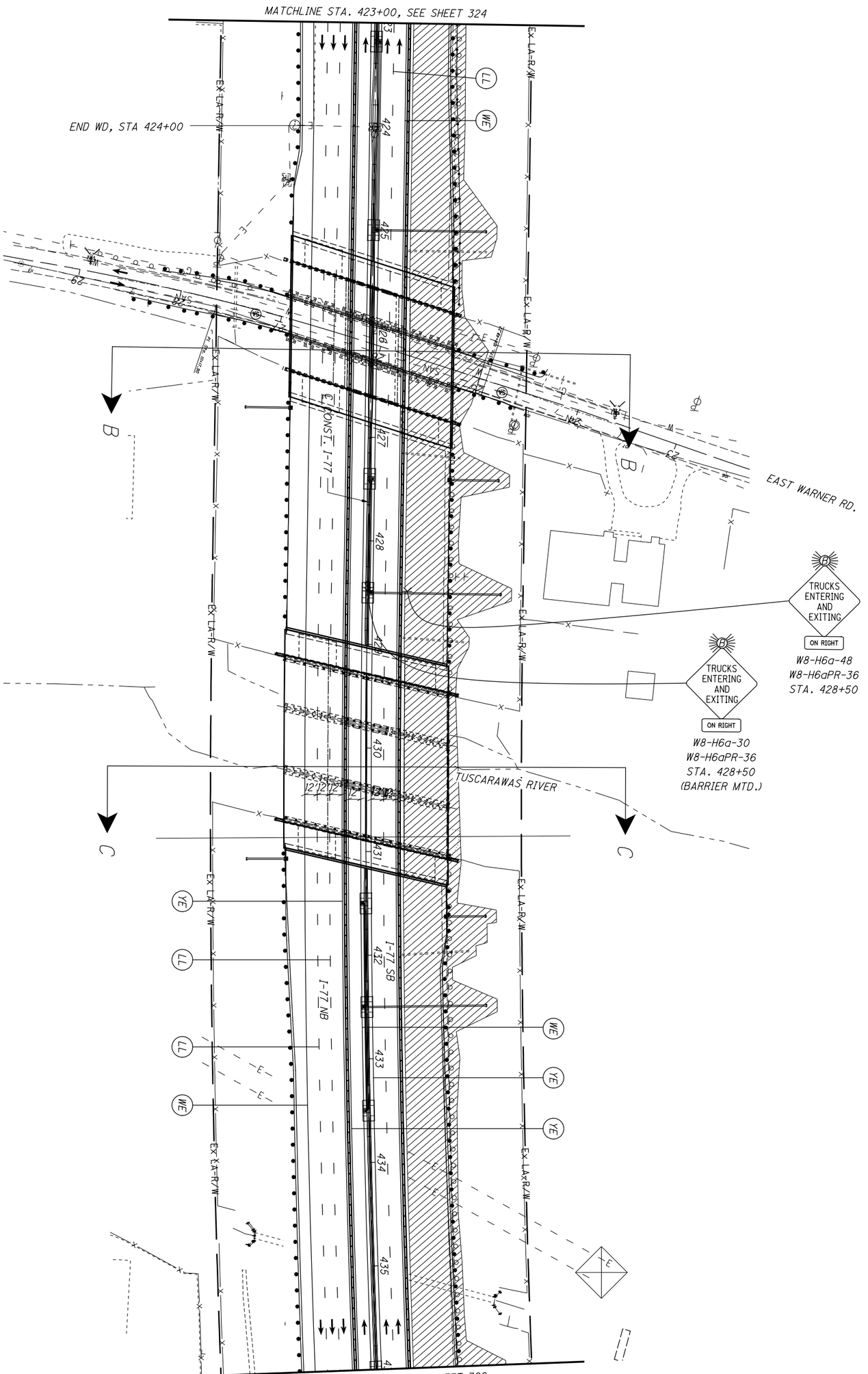
NOTES:

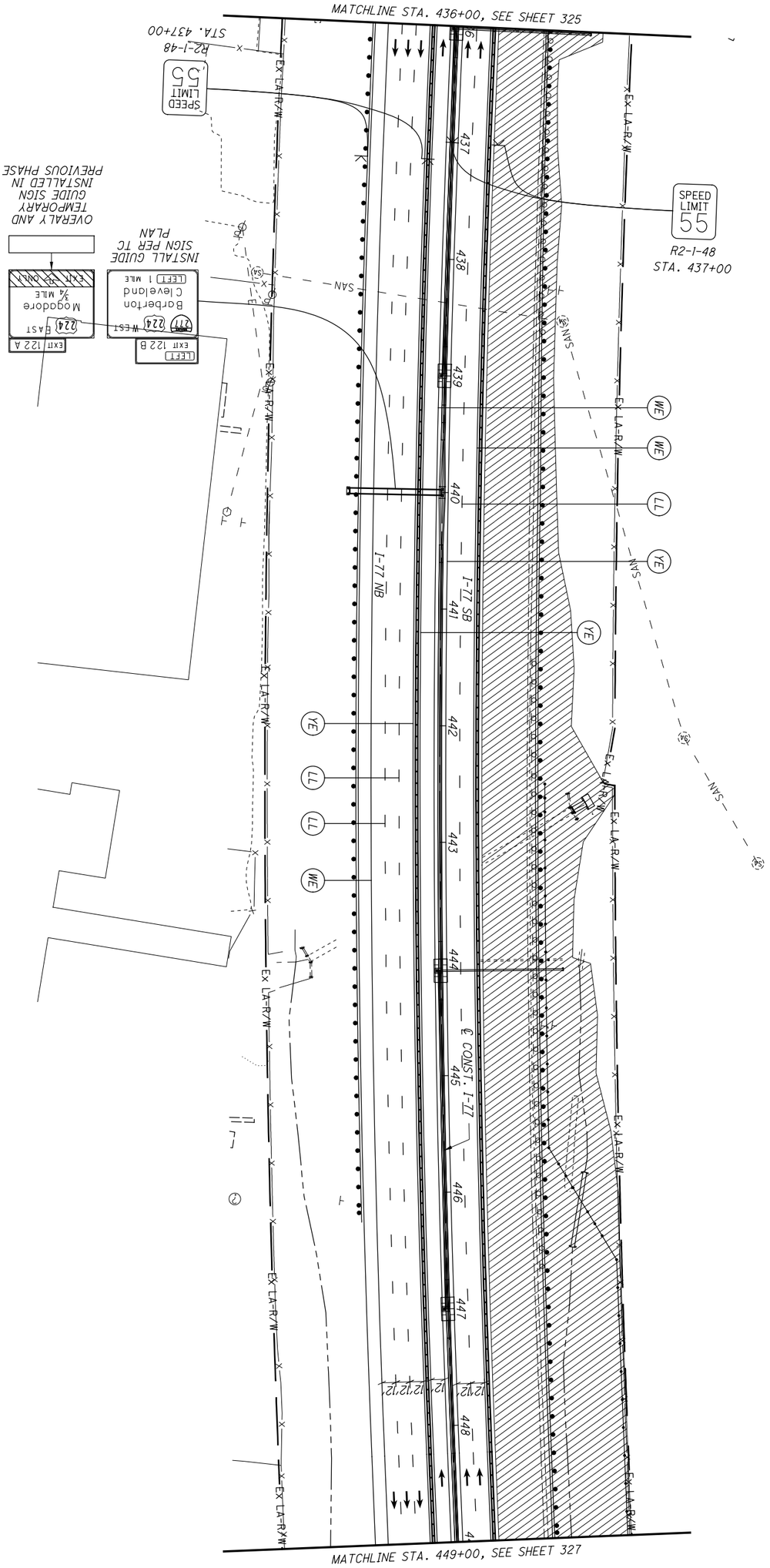
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 316-317 FOR TYPICAL SECTIONS.



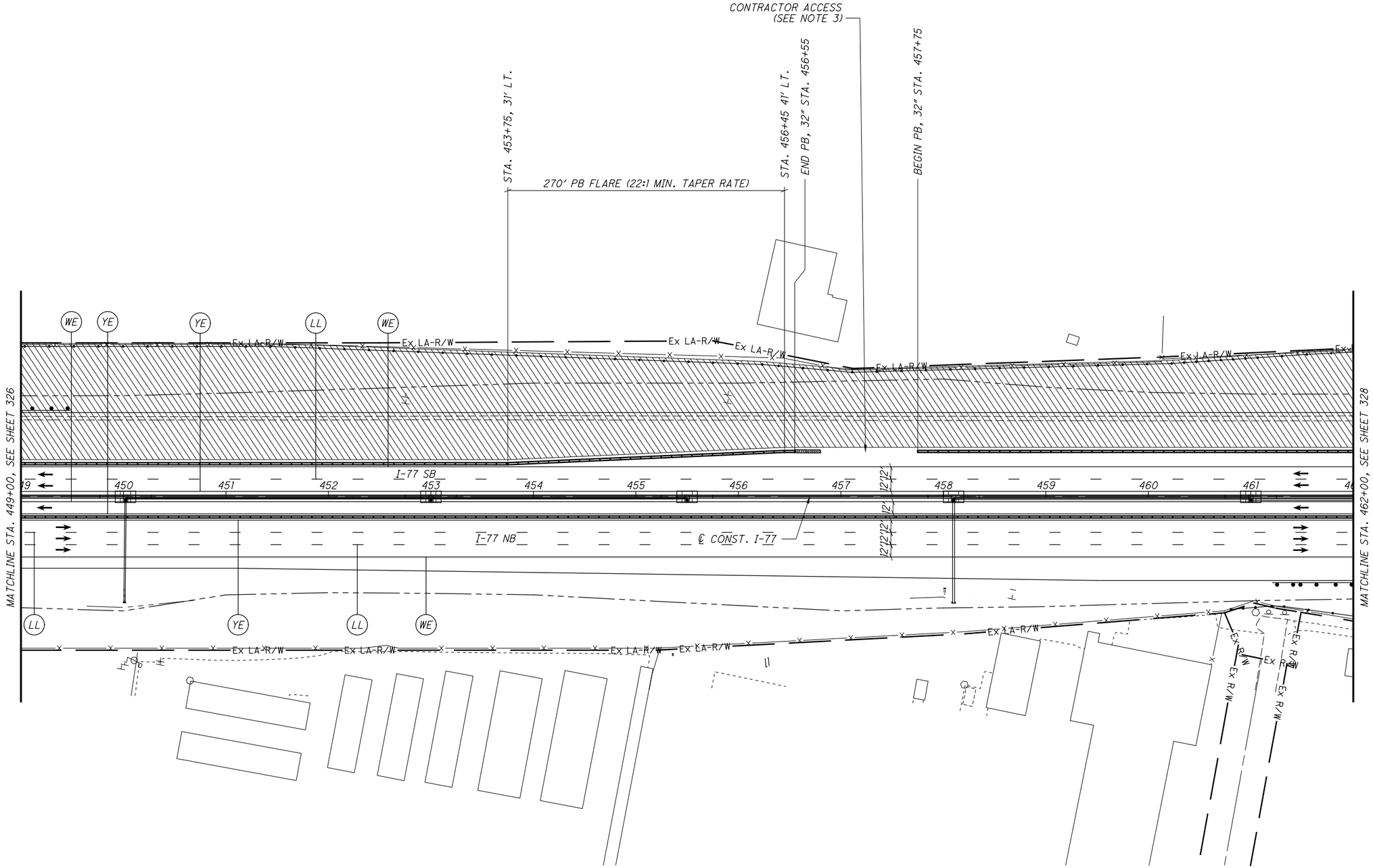
325 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3 I-77 - STA. 423+00 TO STA. 436+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



326 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3 I-77 - STA. 436+00 TO STA. 449+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET



NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.

2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

3. INSTALL CONTRACTOR ACCESS POINTS PER ODOT STANDARD CONSTRUCTION DRAWING MT-103.10. ACCESS POINTS MAY BE RELOCATED AT THE APPROVAL OF THE ENGINEER, AS NECESSARY TO ACCOMPLISH CONSTRUCTION ACTIVITIES. CONTRACTOR ACCESS POINTS ARE SHOWN FOR INFORMATIONAL PURPOSES AND THE LOCATION CAN BE ADJUSTED AT THE APPROVAL OF THE ENGINEER.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED .
CHECKED .

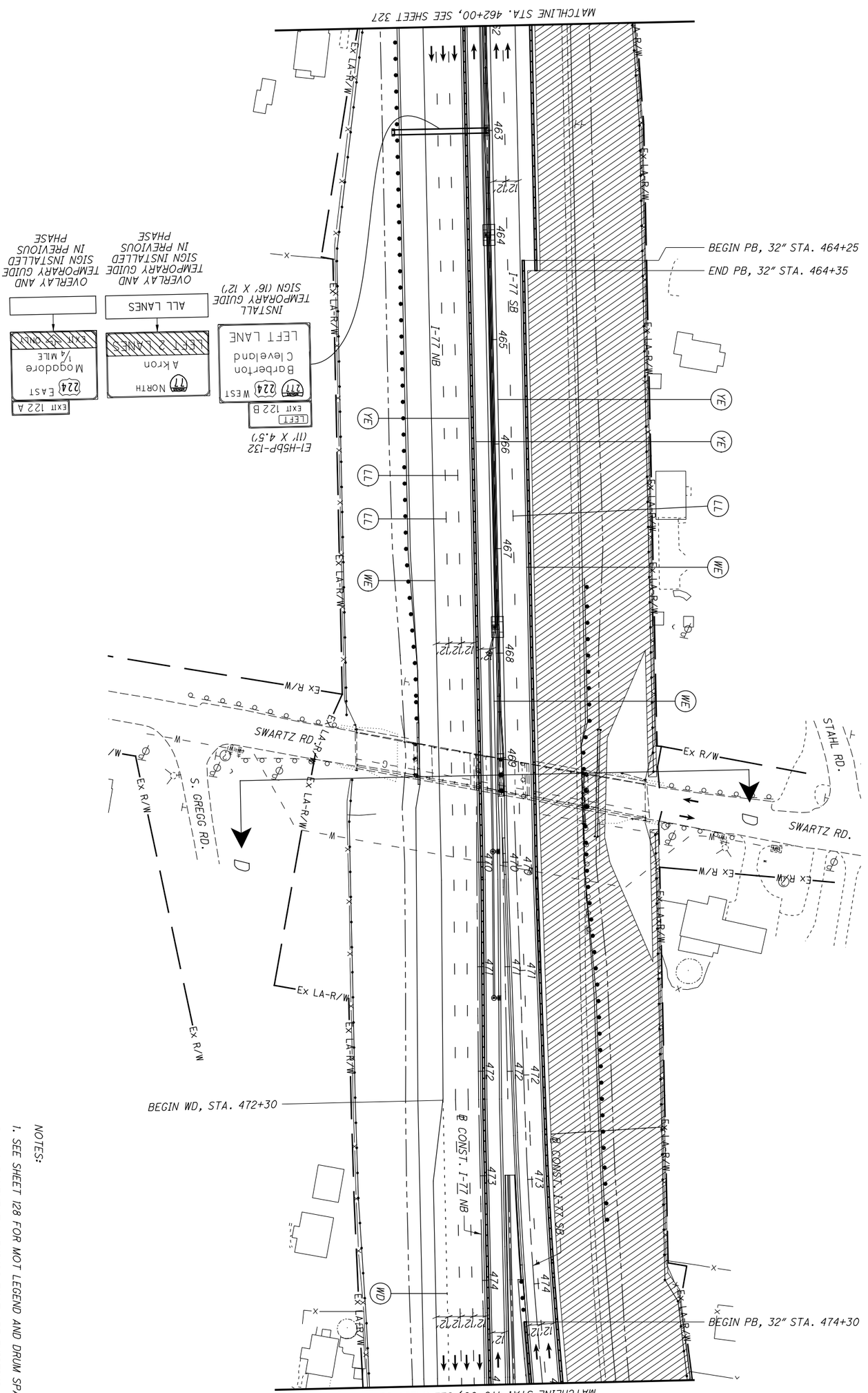
MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I-77 - STA. 449+00 TO STA. 462+00

SUM-77/277/224
VARIOUS

327
1288

N:\03\60\06744-08\106002-SUM-76-10.95\Design\MOT\Sheets\106002-MP314.dgn Sheet 1/31/2021 5:51:42 PM jrettig

N:\03\60\06744-08\I06002_SUM-76-I0.95\Design\MOT\Sheets\I06002_MP3I5.dgn Sheet 1/3I/2021 5:52:06 PM jrettig

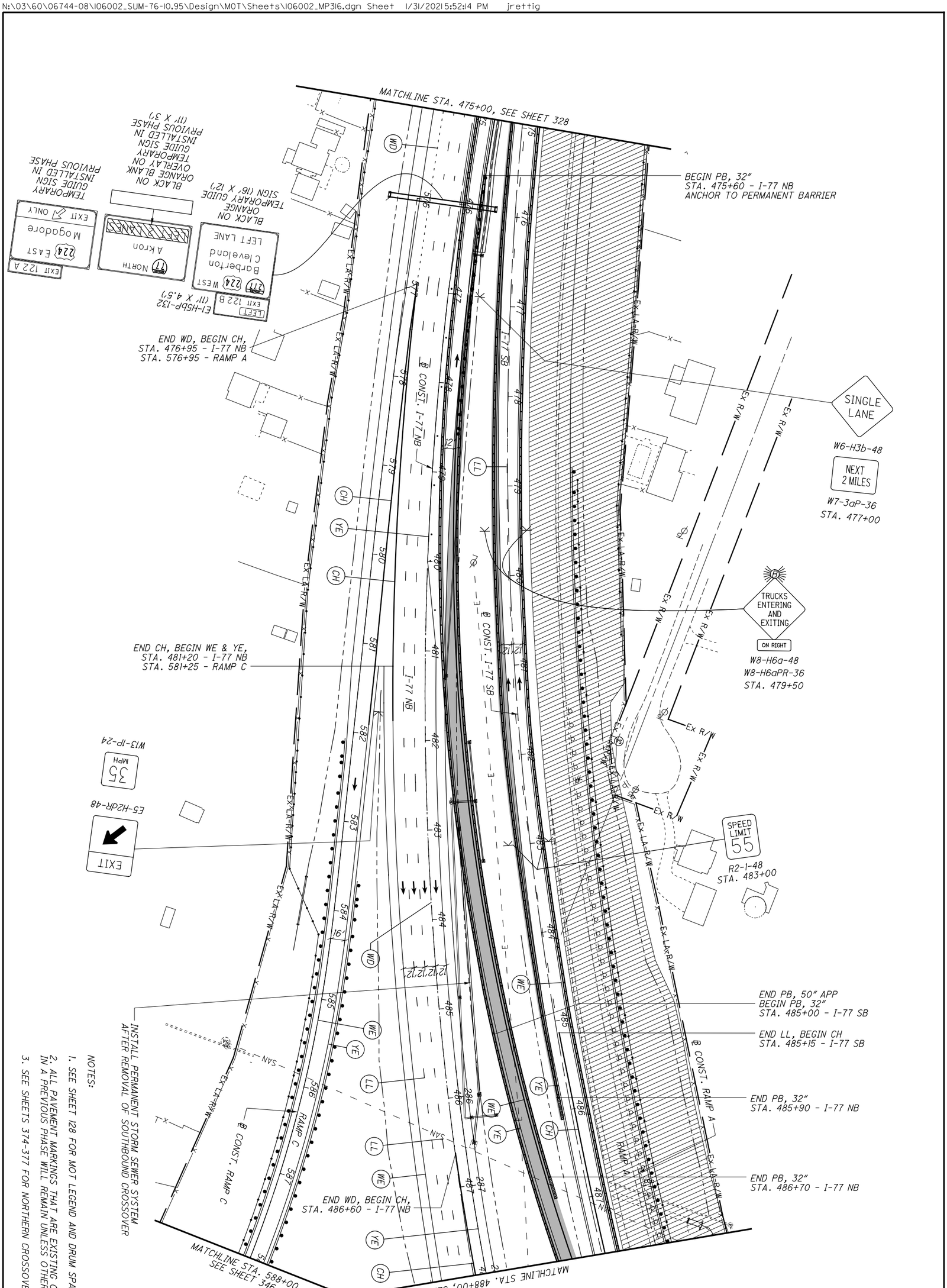


NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 316-317 FOR TYPICAL SECTIONS.

328 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3 I-77 - STA. 462+00 TO STA. 475+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\I06002_SUM-76-10.95\Design\MOT\Sheets\I06002_MP316.dgn Sheet 1/31/2021 5:52:14 PM jrettig

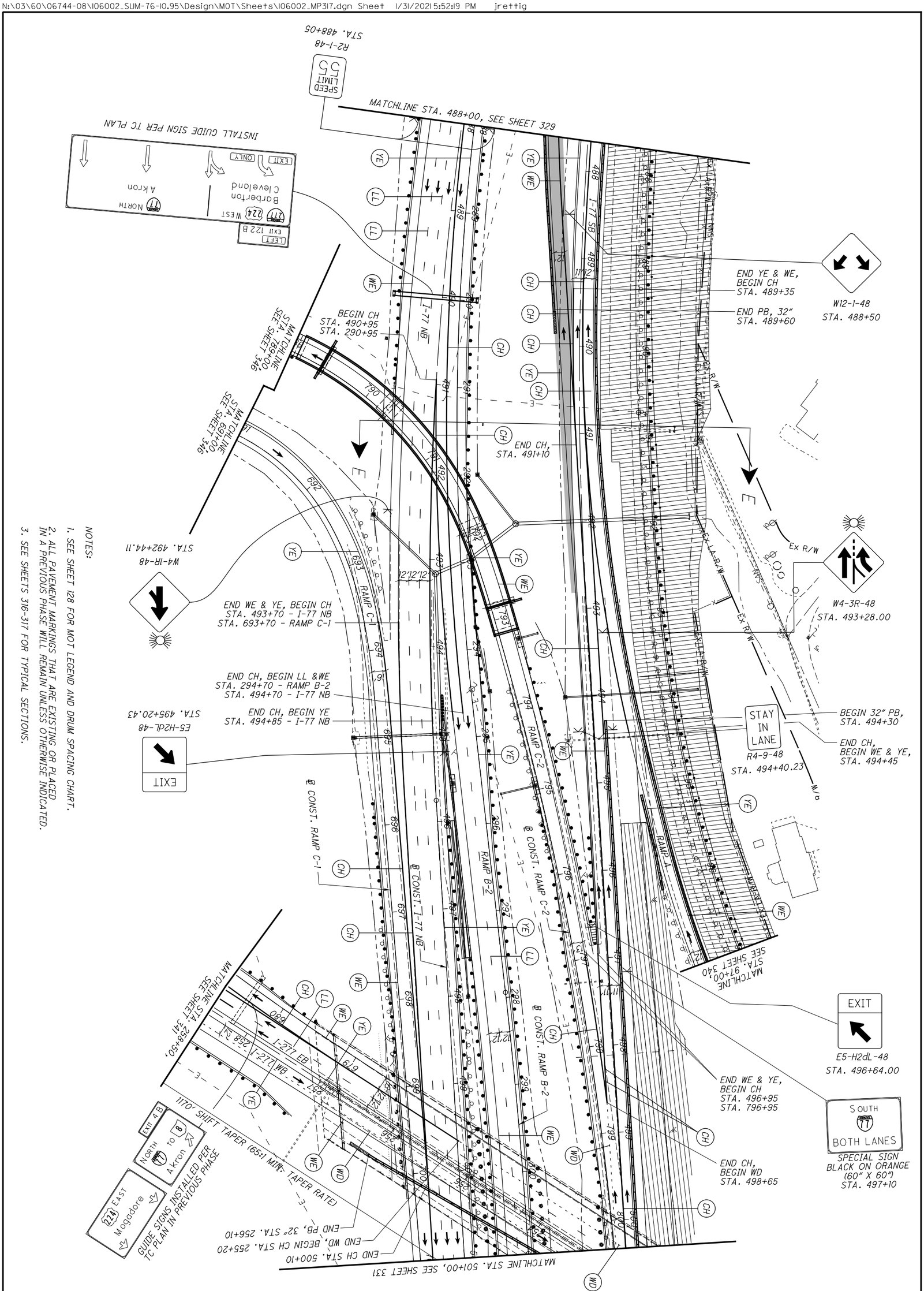


NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 374-377 FOR NORTHERN CROSSOVER (SB).

329 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3 I-77 - STA. 475+00 TO STA. 488+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\I06002_SUM-76-I0.95\Design\MOT\Sheets\I06002_MP3I7.dgn Sheet 1/31/2021 5:52:19 PM jrettig



NOTES:

1. SEE SHEET I28 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 316-317 FOR TYPICAL SECTIONS.

330 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3 I-77 - STA. 488+00 TO STA. 501+00	CALCULATED . CHECKED . 0 50 25 100 HORIZONTAL SCALE IN FEET

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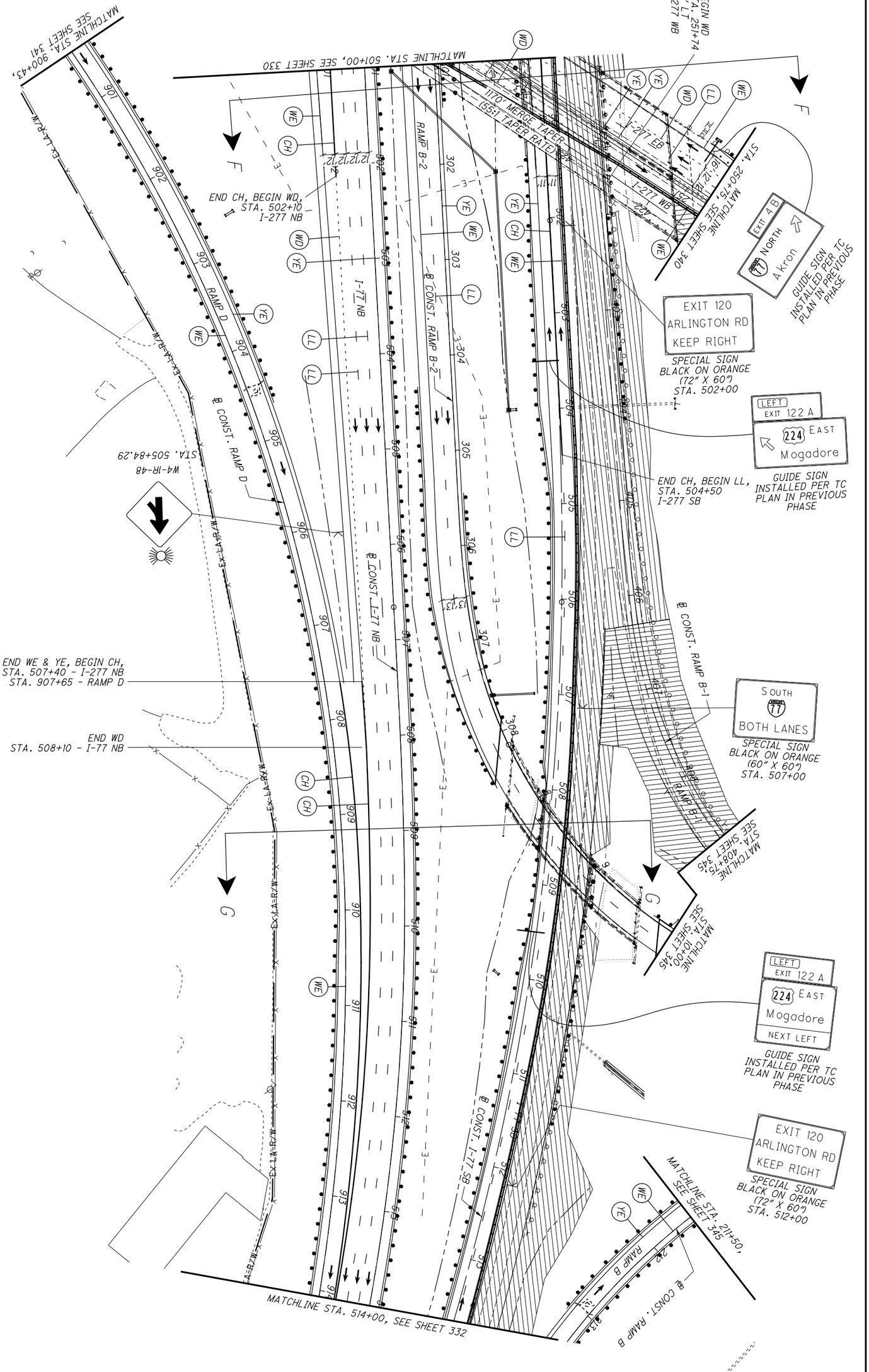
NOTES:

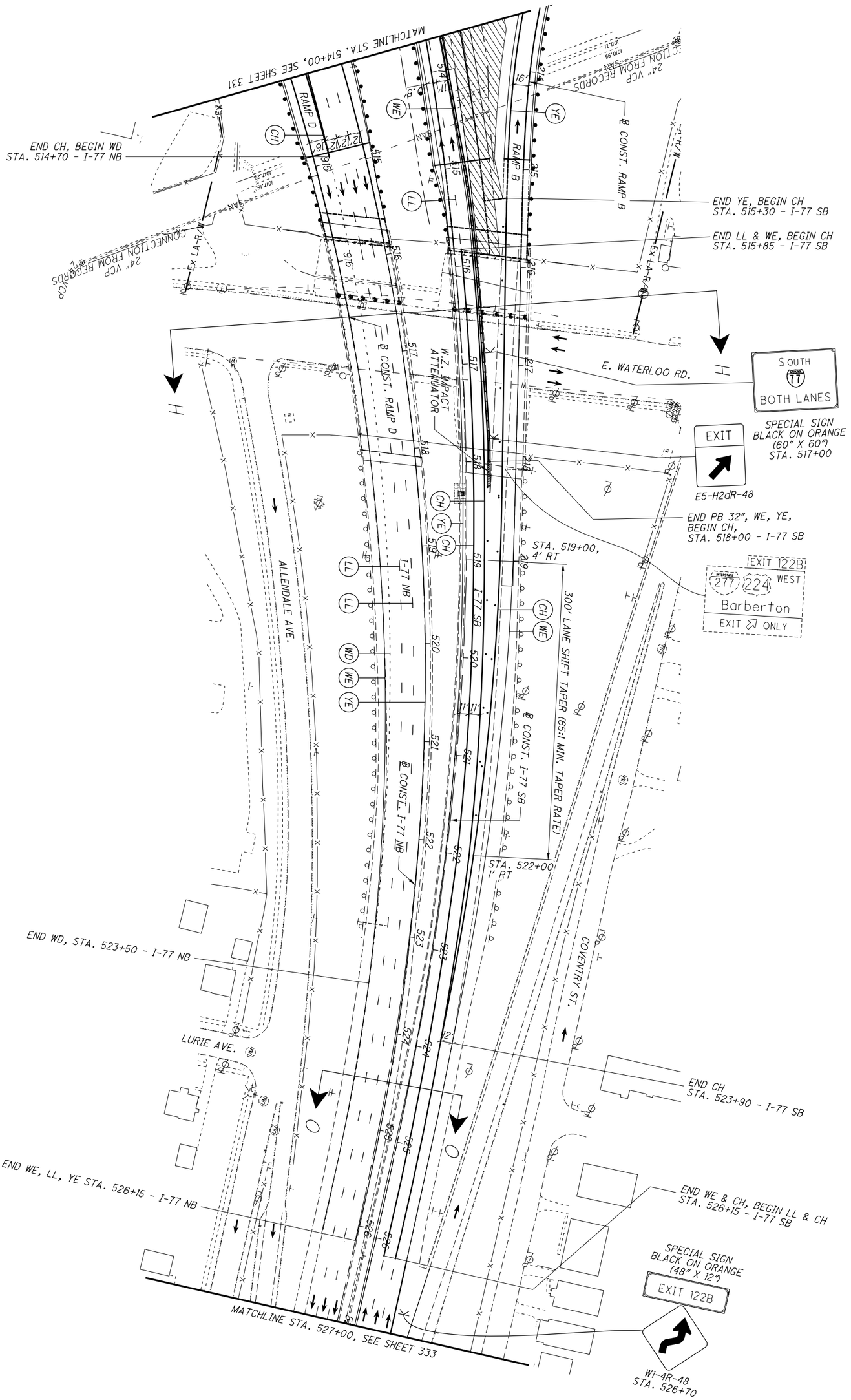
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 316-317 FOR TYPICAL SECTIONS.



331 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3 I-77 - STA. 501+00 TO STA. 514+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 316-317 FOR TYPICAL SECTIONS.

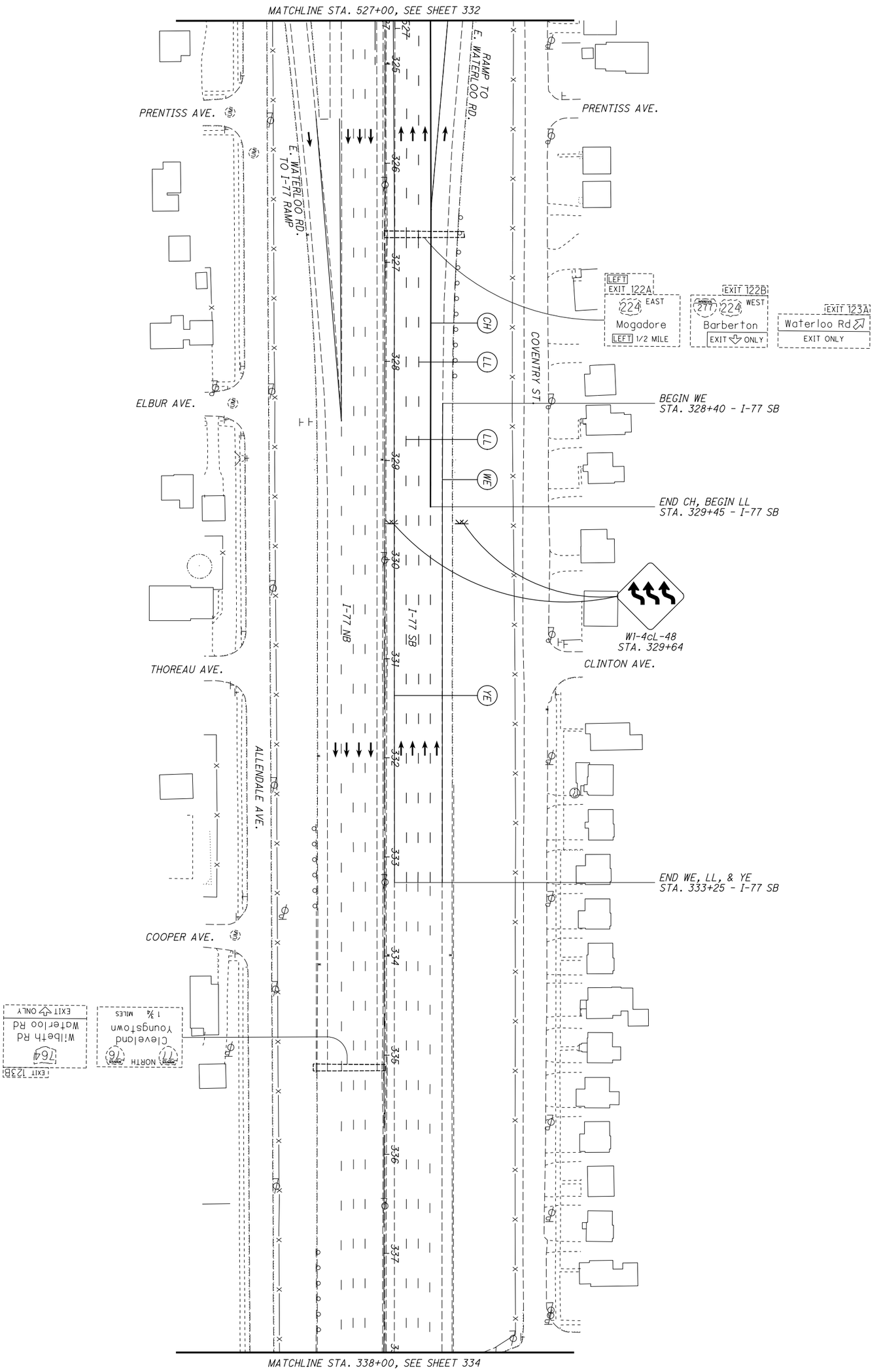


332 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3 I-77 - STA. 514+00 TO STA. 527+00	CALCULATED . CHECKED . 0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MP320.dgn Sheet 1/31/2021 5:52:36 PM jrettig

NOTES:

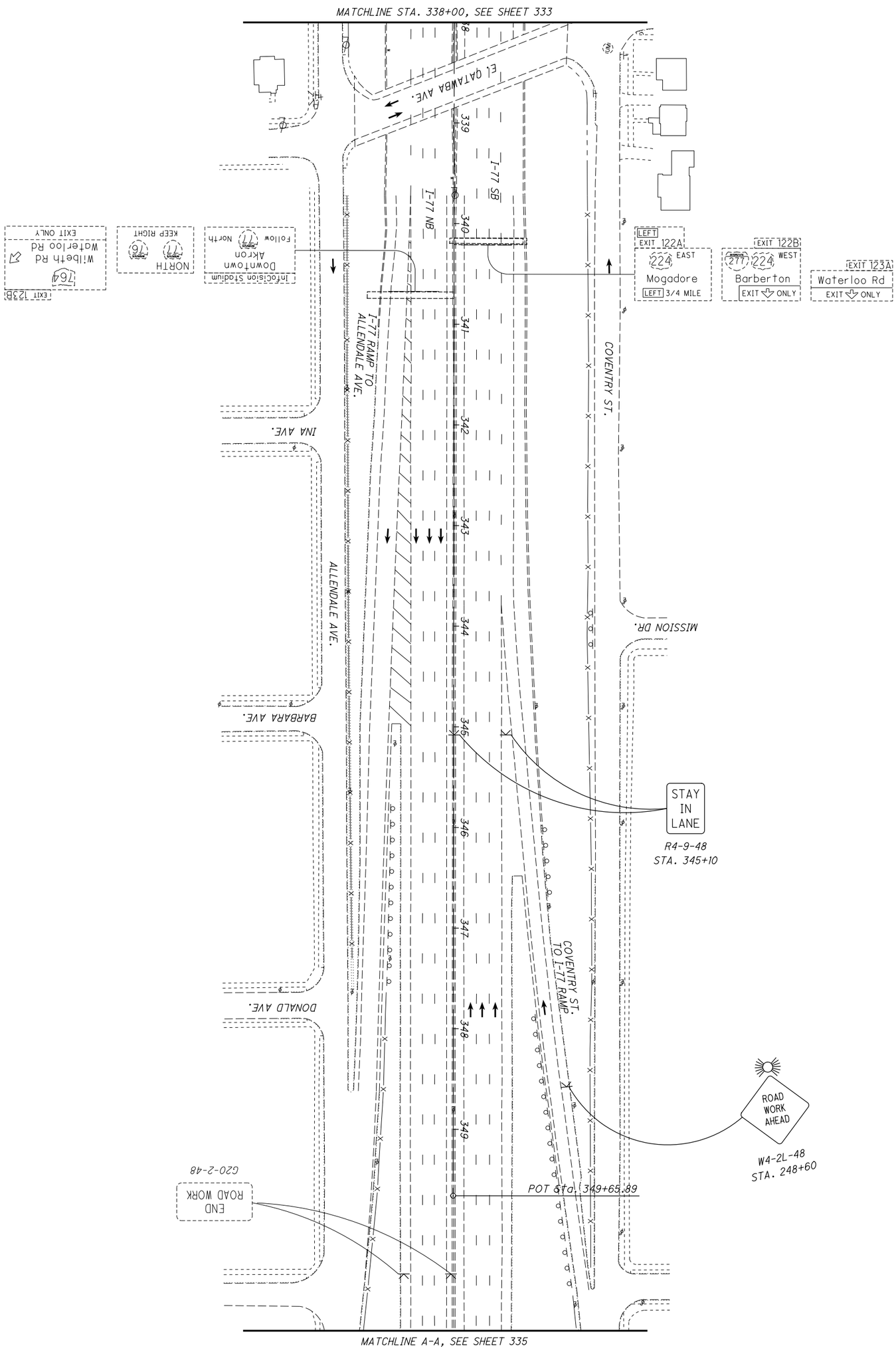
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



333 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3 I-77 - STA. 527+00 TO STA. 338+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

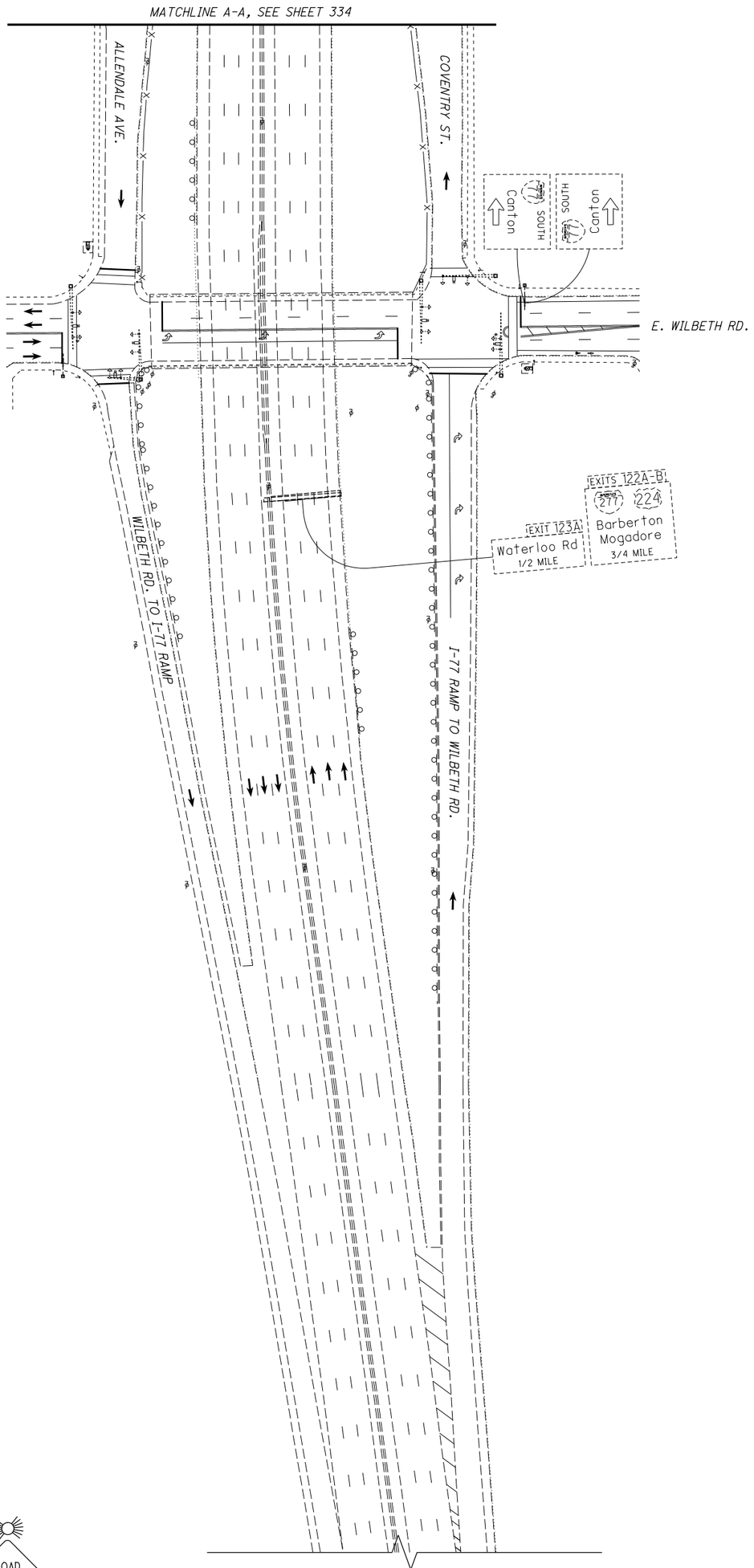
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

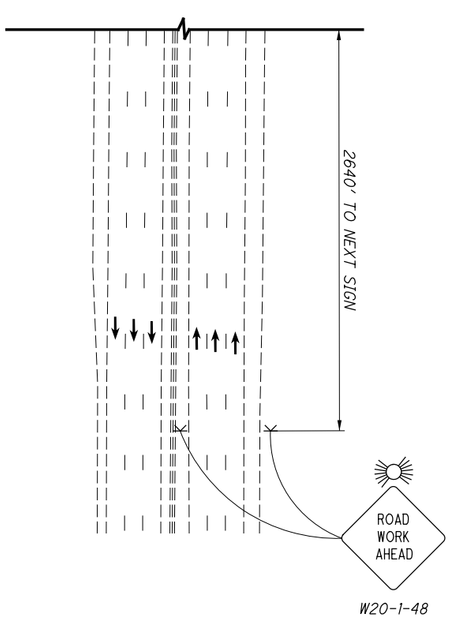


334 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3 I-77 - STA. 338+00 TO M.L. A-A	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

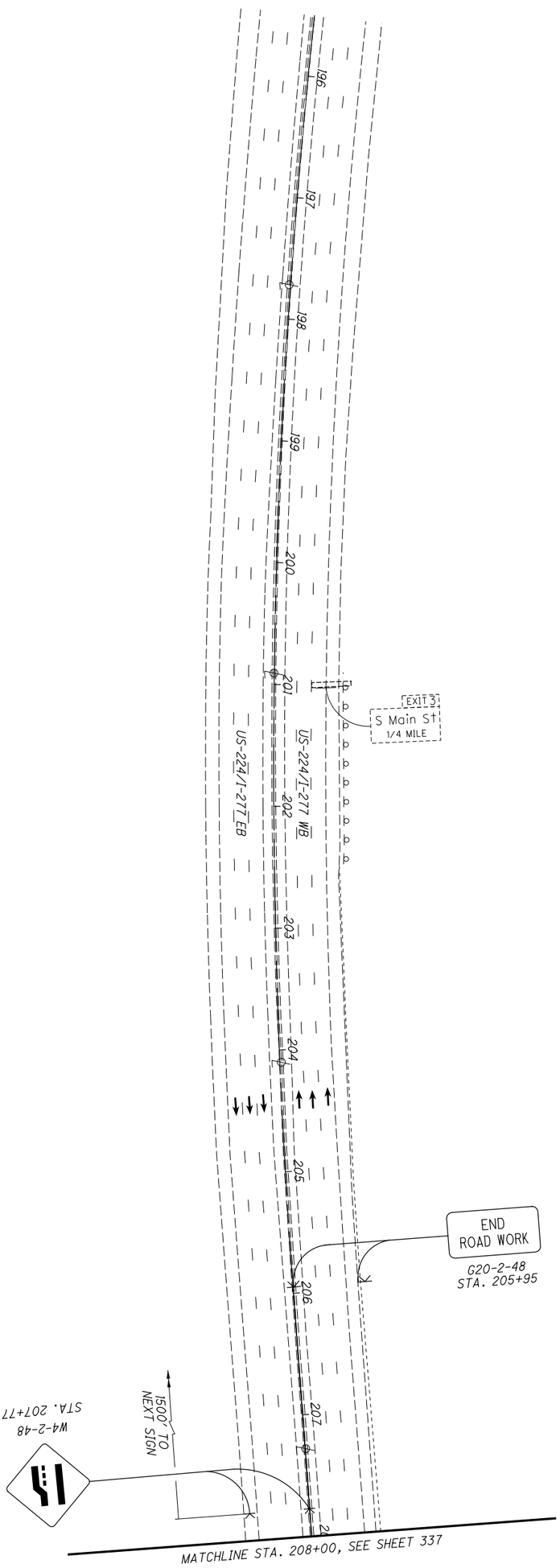




335 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3 I-77 - M.L. A-A TO NORTH LIMITS	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

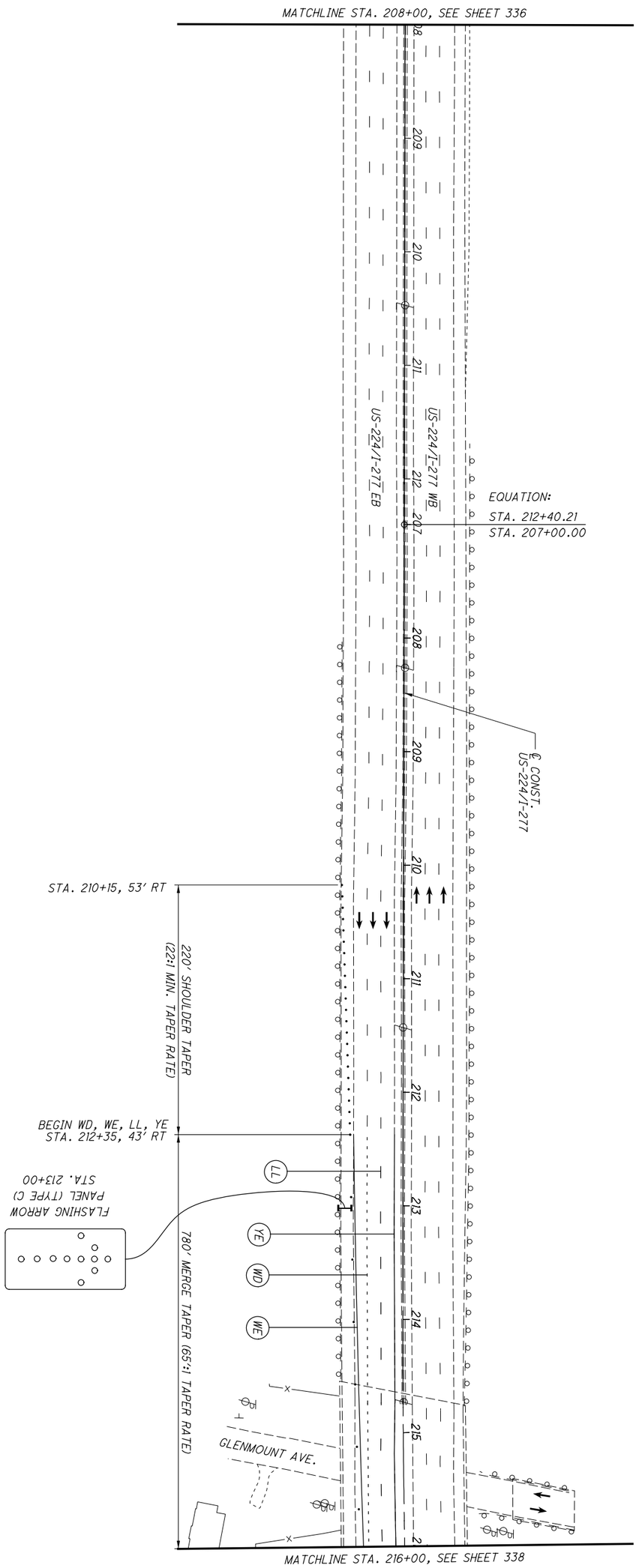
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



336 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3 US-224/I-277 - STA. 195+50 TO STA. 208+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

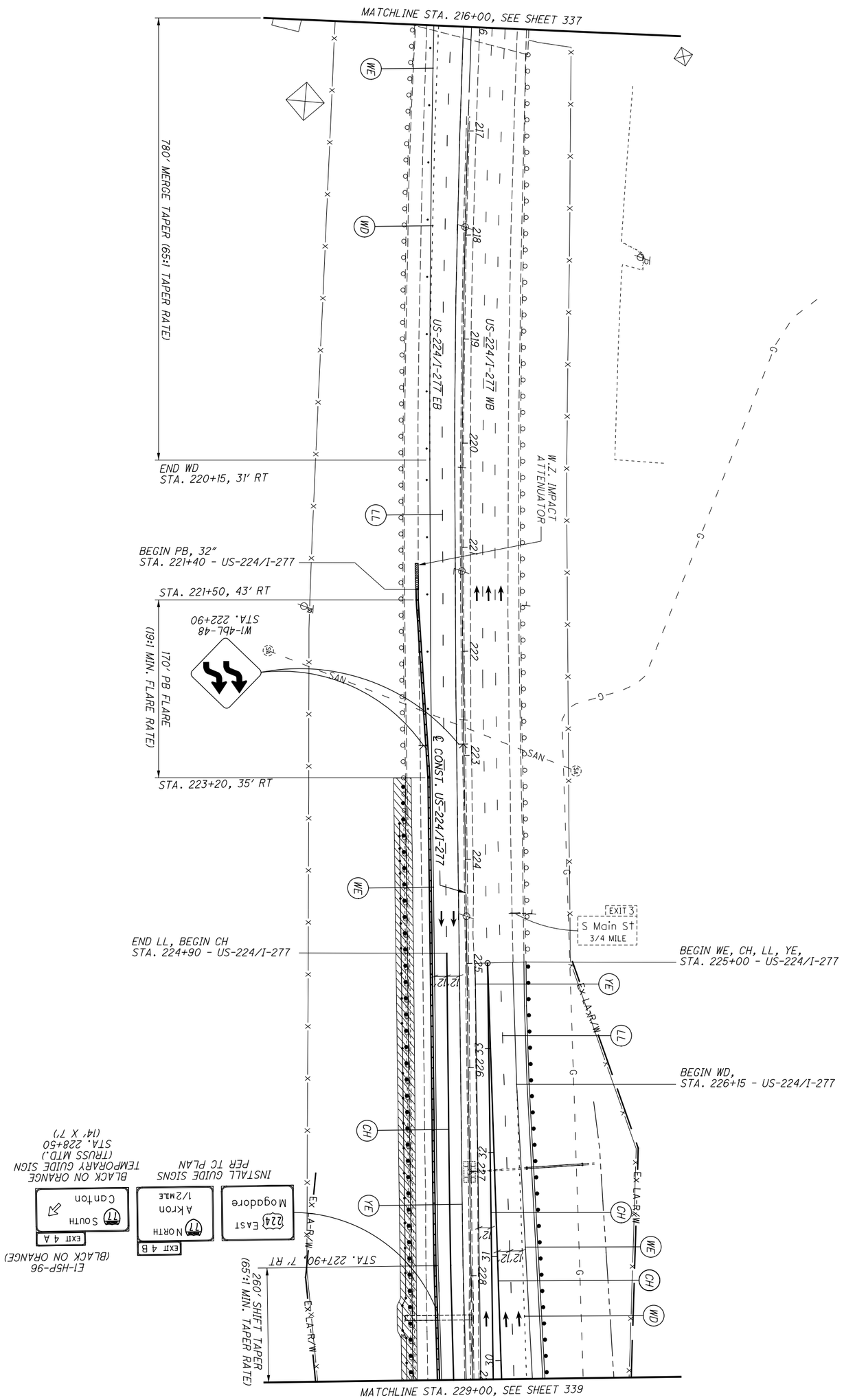
NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



NOTES:

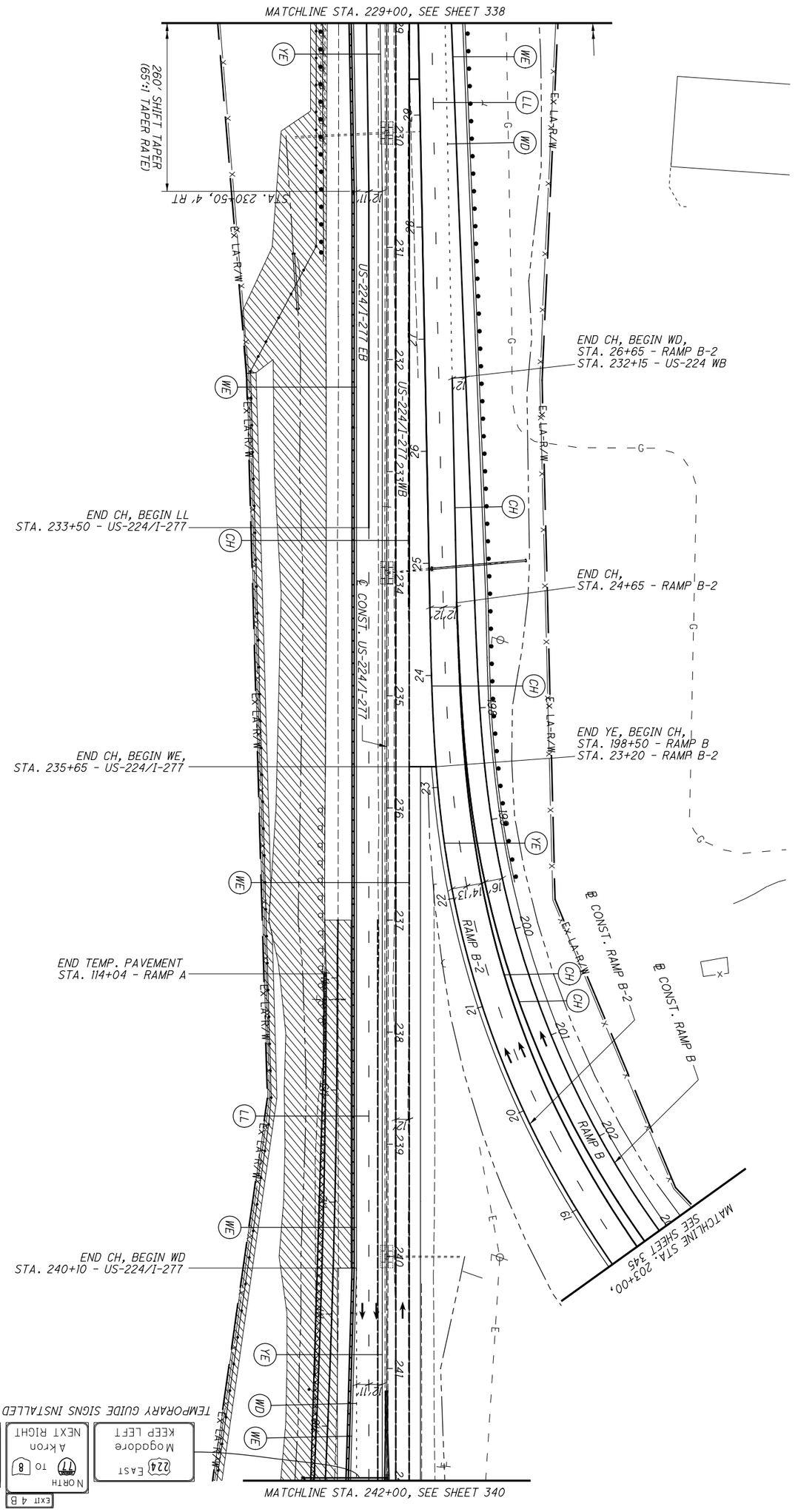
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



338 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3 US-224/I-277 - STA. 216+00 TO STA. 229+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

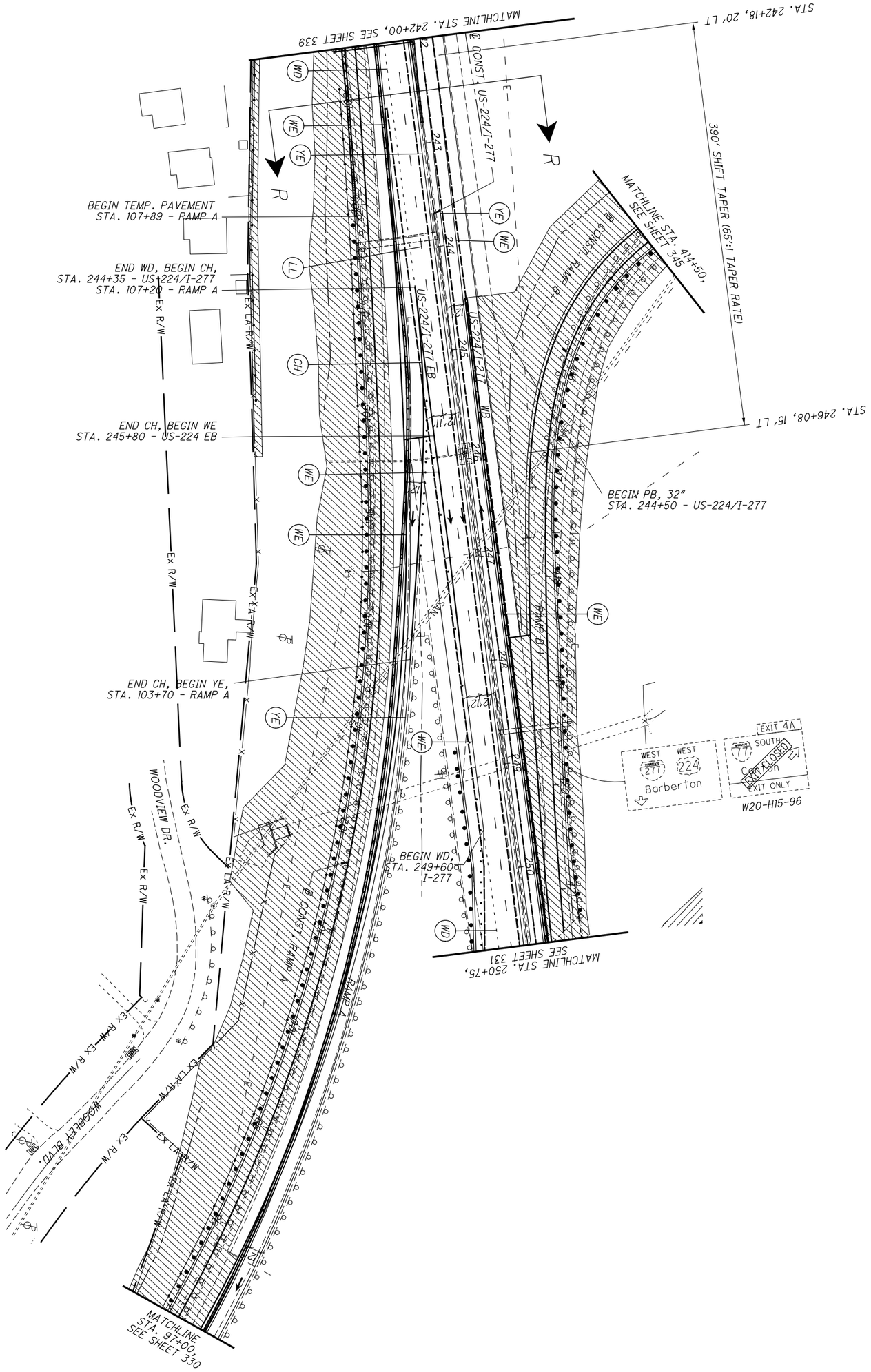
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 347-351 FOR RAMP A CROSS SECTIONS.



339 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3 US-224/I-277 - STA. 229+00 TO STA. 242+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

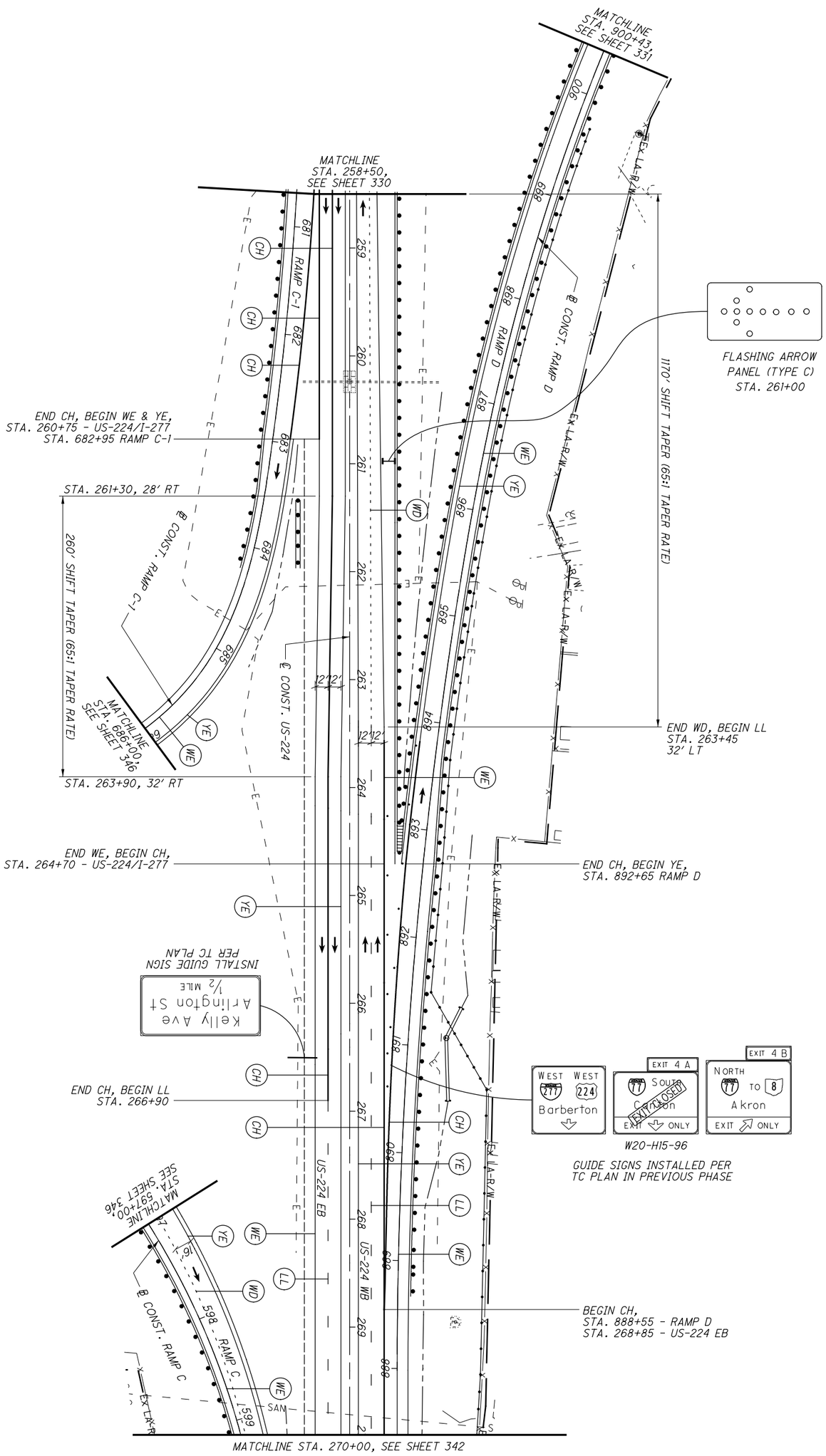
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 316-317 FOR TYPICAL SECTIONS.



340 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3 US-224/I-277 - STA. 242+00 TO STA. 250+75	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET	N

NOTES:

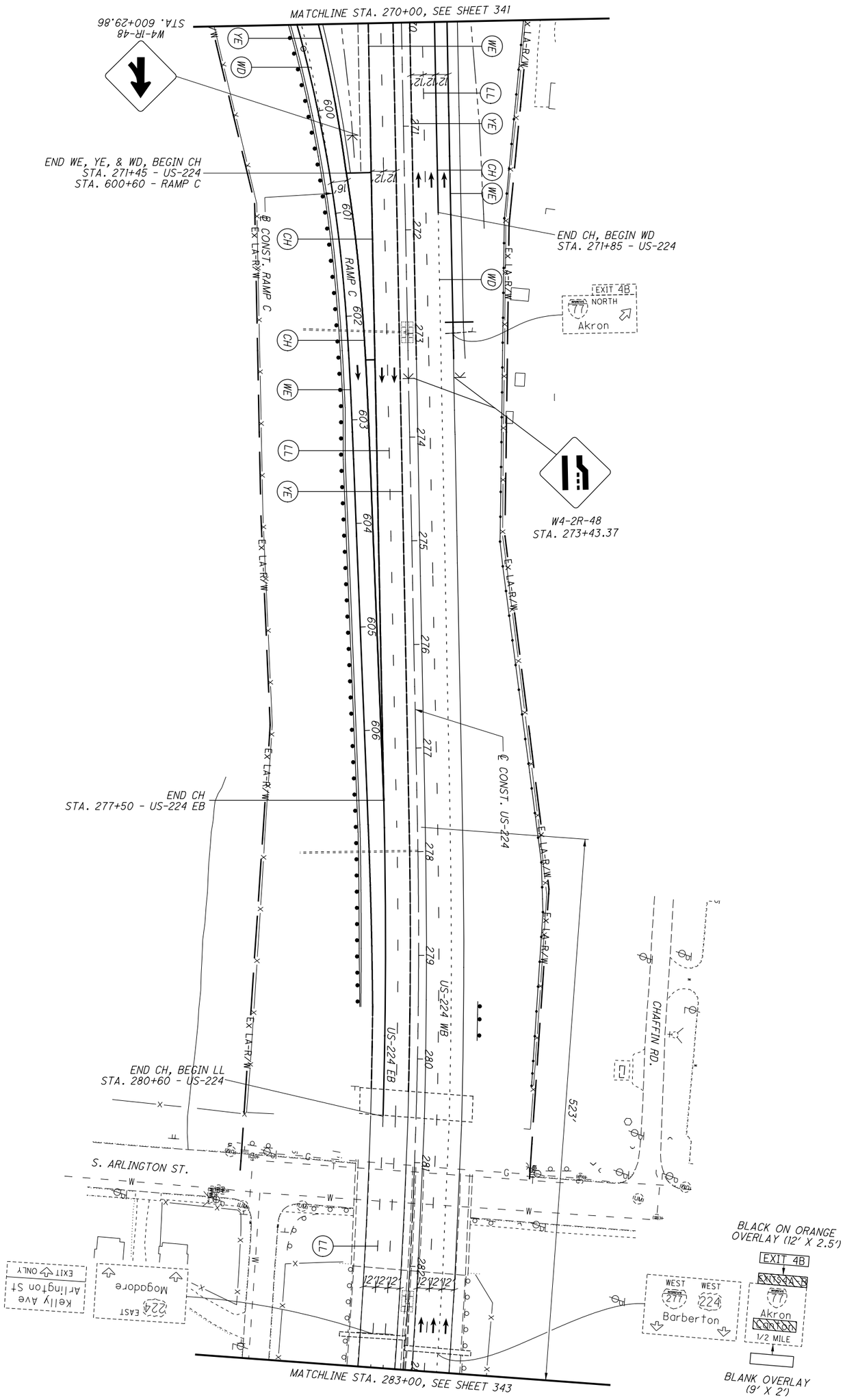
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



341 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3 US-224 - STA. 258+50 TO STA. 270+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

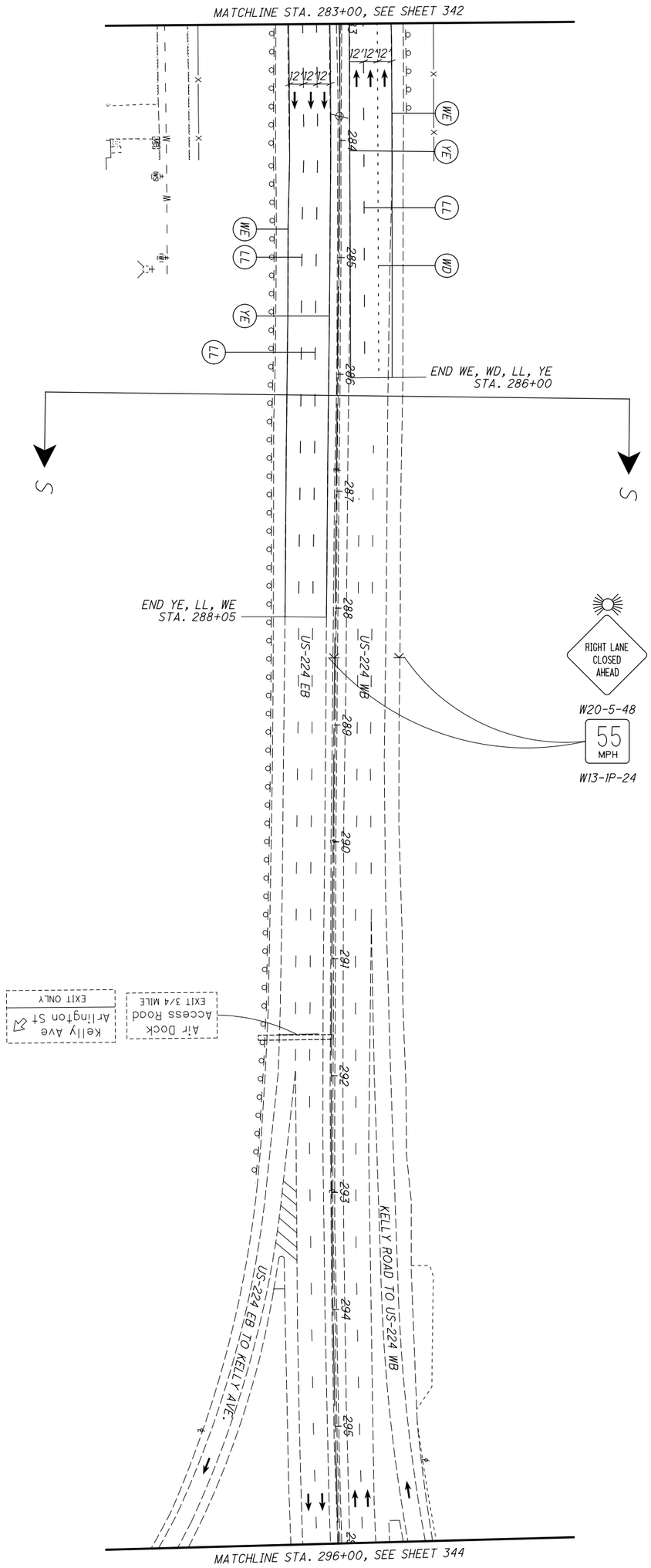
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



342 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3 US-224 - STA. 270+00 TO STA. 283+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 316-317 FOR TYPICAL SECTIONS.



343 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3 US-224 - STA. 283+00 TO STA. 296+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.

2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED .
CHECKED .

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
US-224 - STA. 296+00 TO EAST LIMITS

SUM-77/277/224
VARIOUS

344
1288

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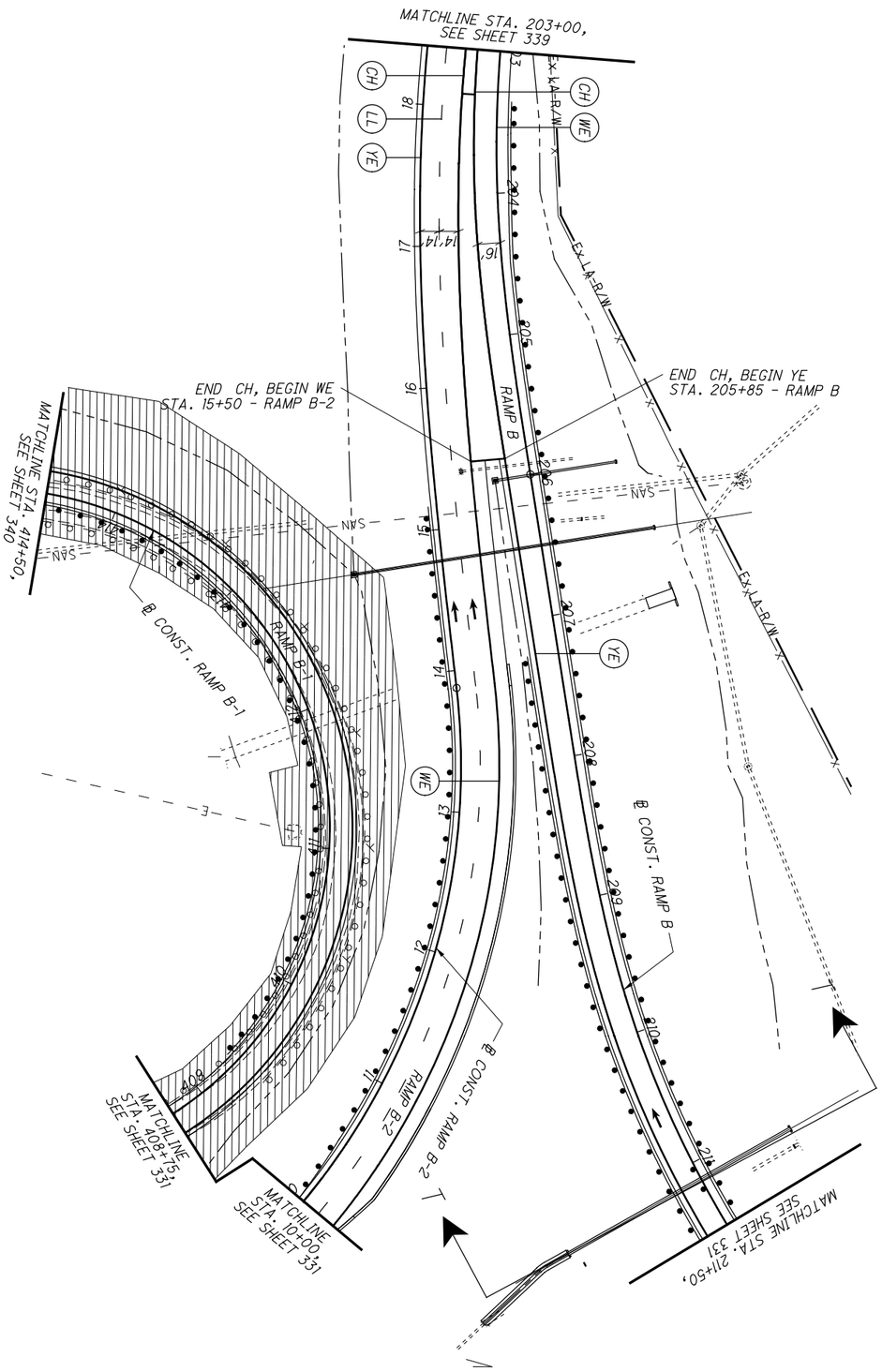
NOTES:

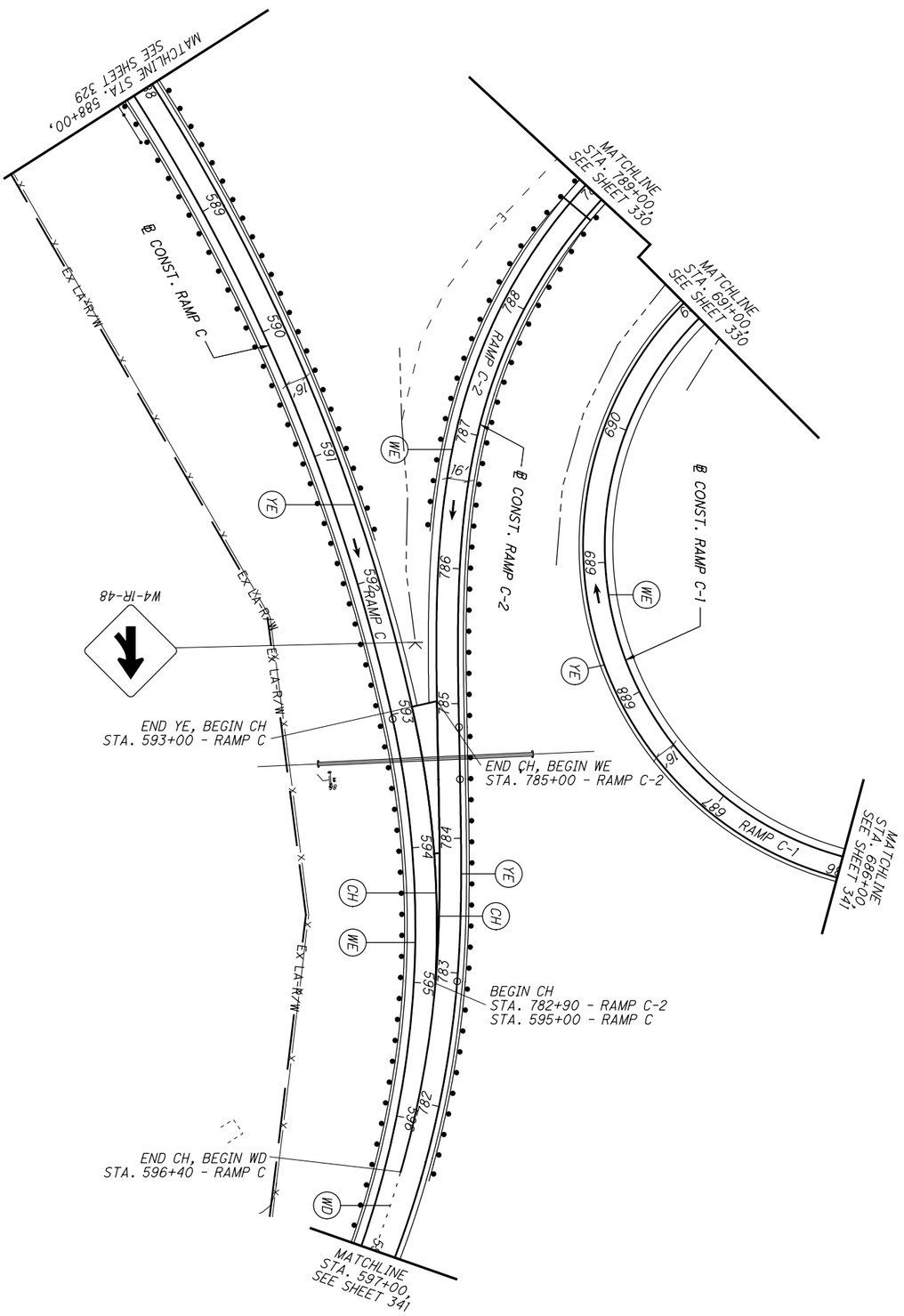
1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 316-317 FOR TYPICAL SECTIONS.



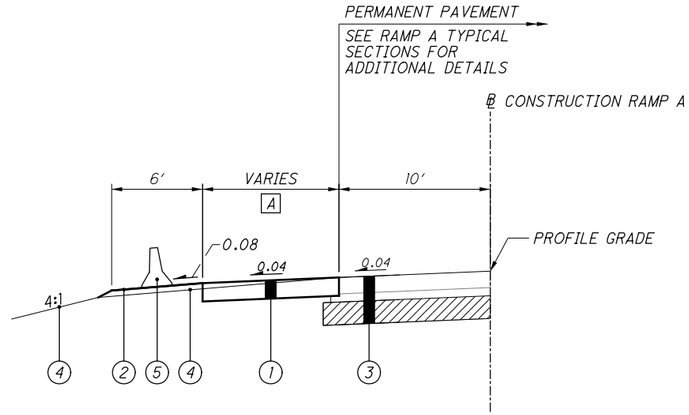
345 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3 RAMP B - STA. 203+00 TO STA. 211+50	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



346 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3 RAMP C - STA. 588+00 TO STA. 597+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET



RAMP A - TEMPORARY PAVEMENT SECTION

STA. 107+89.21 TO STA. 114+03.67

A 2.0′ FROM STA. 107+89.21 TO STA. 109+02.47

VARIES
2.00′ AT STA. 109+02.47 TO
4.26′ AT STA. 111+13.28

4.26′ AT STA. 111+13.28 TO
2.00′ AT STA. 113+24.08

2.0′ FROM STA. 113+24.08 TO STA. 114+03.67

LEGEND

(1) ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A

(2) ITEM 659 - SEEDING AND MULCHING (TEMPORARY GRADING)

(3) PERMANENT PAVEMENT - SEE RAMP A TYPICAL SECTIONS FOR DETAILS

(4) PERMANENT GRADING - SEE CROSS SECTIONS FOR ADDITIONAL INFORMATION

(5) ITEM 622 - PORTABLE BARRIER, 32″

TYPICAL SECTIONS- RAMP A TEMPORARY PAVEMENT

SUM-77 / 277 / 224
VARIOUS

347
1288

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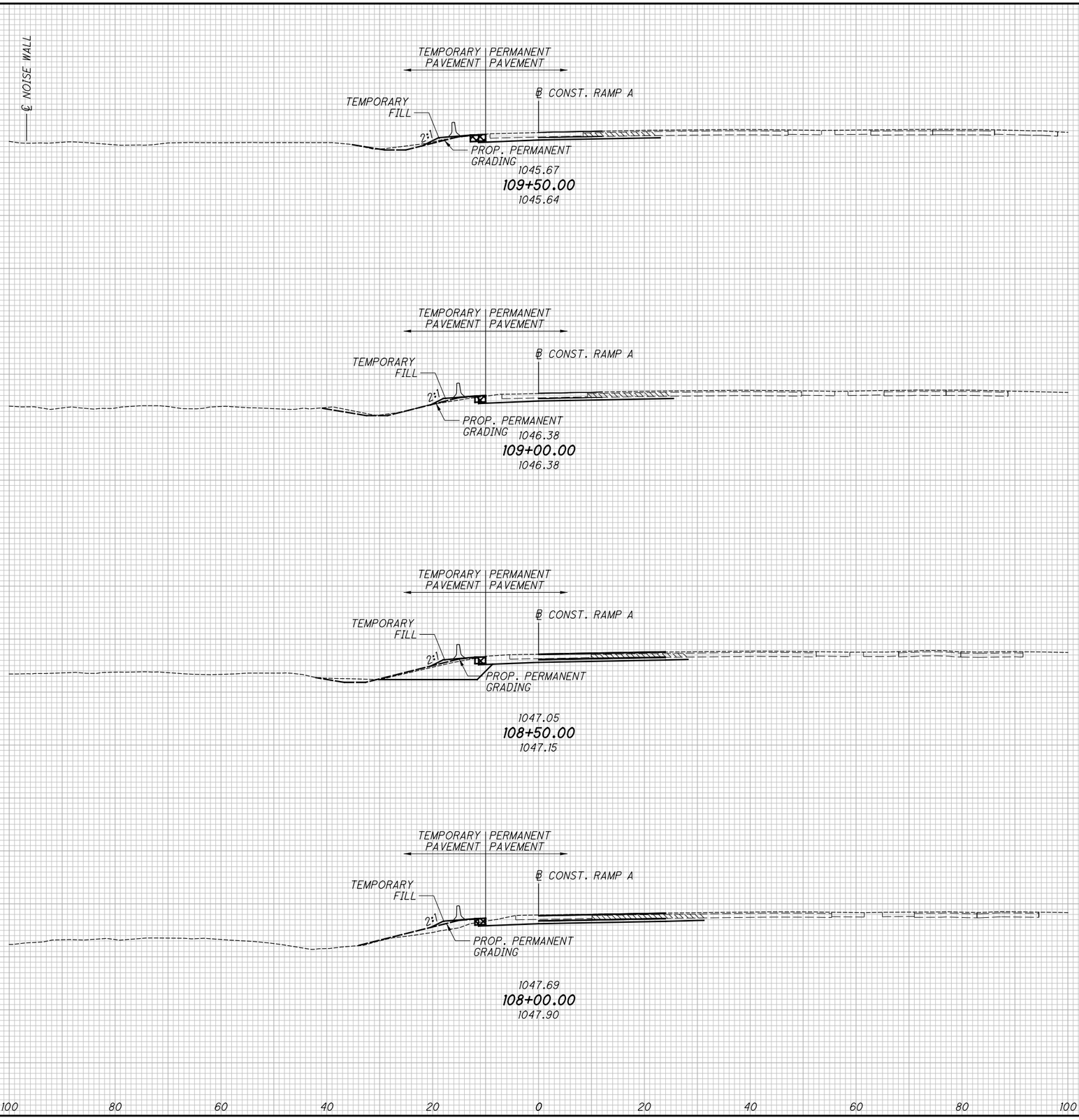
SEEDING END WIDTH	SEEDING SQ. YDS.
9	50
9	47
9	47
9	
*144	



*FOR INFORMATION ONLY

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2	2		
1	2	3	4
1	2	2	4
0	2	1	4
		*6	*12

CALCULATED KMC
CHECKED SSR

CROSS SECTIONS RAMP A
STA. 108+00.00 TO STA. 109+50.00

SUM-77 / 277 / 224
VARIOUS

348
1288

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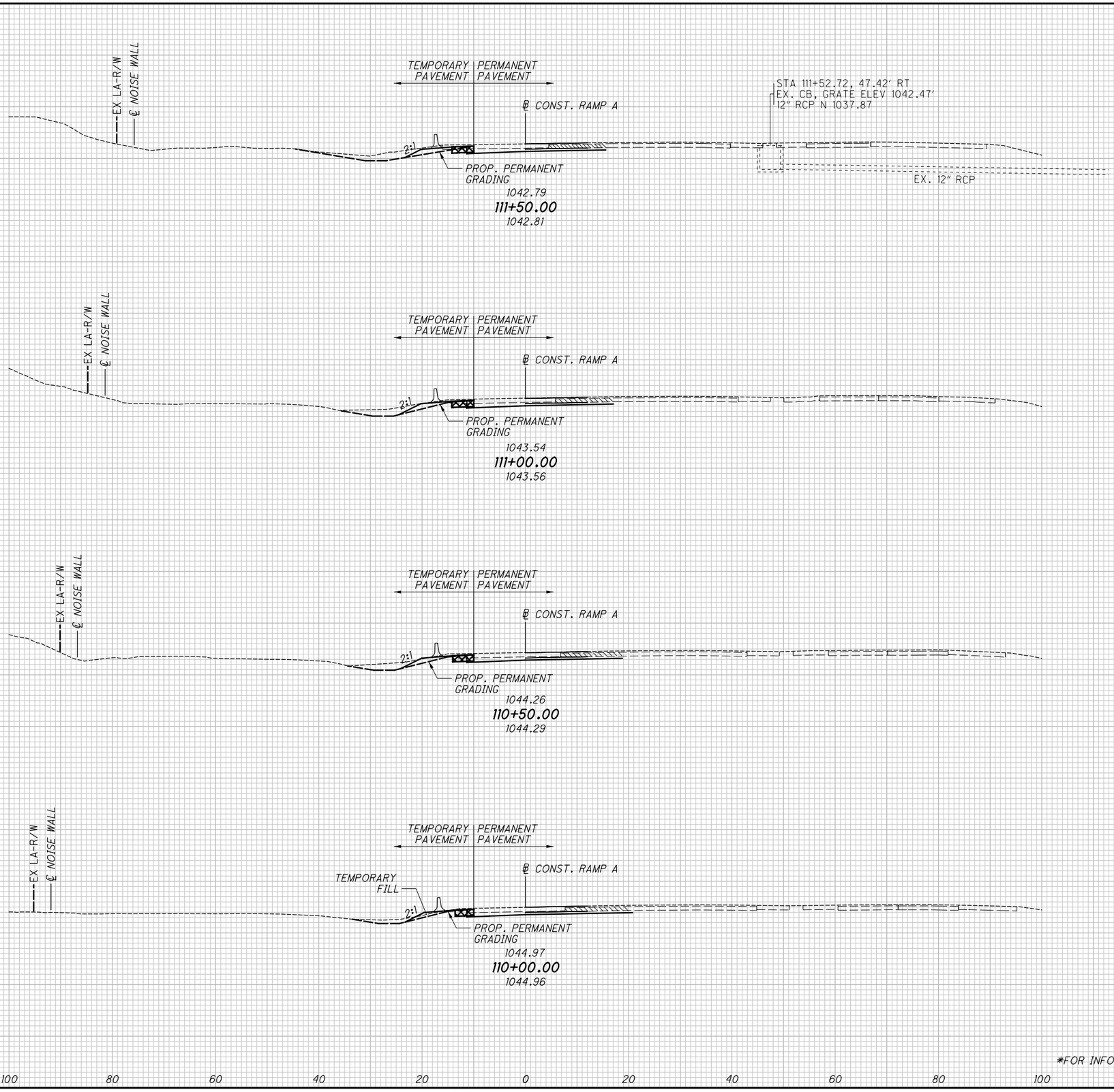
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
9	55	4	0	6	0
11	58	3	0	6	0
10	57	3	0	6	1
10	54	3	1	5	3
40	*224			*23	*4



*FOR INFORMATION ONLY

CALCULATED KMC
CHECKED SSR

CROSS SECTIONS RAMP A
STA. 110+00.00 TO STA. 111+50.00

SUM-77 / 277 / 224
VARIOUS

349
1288

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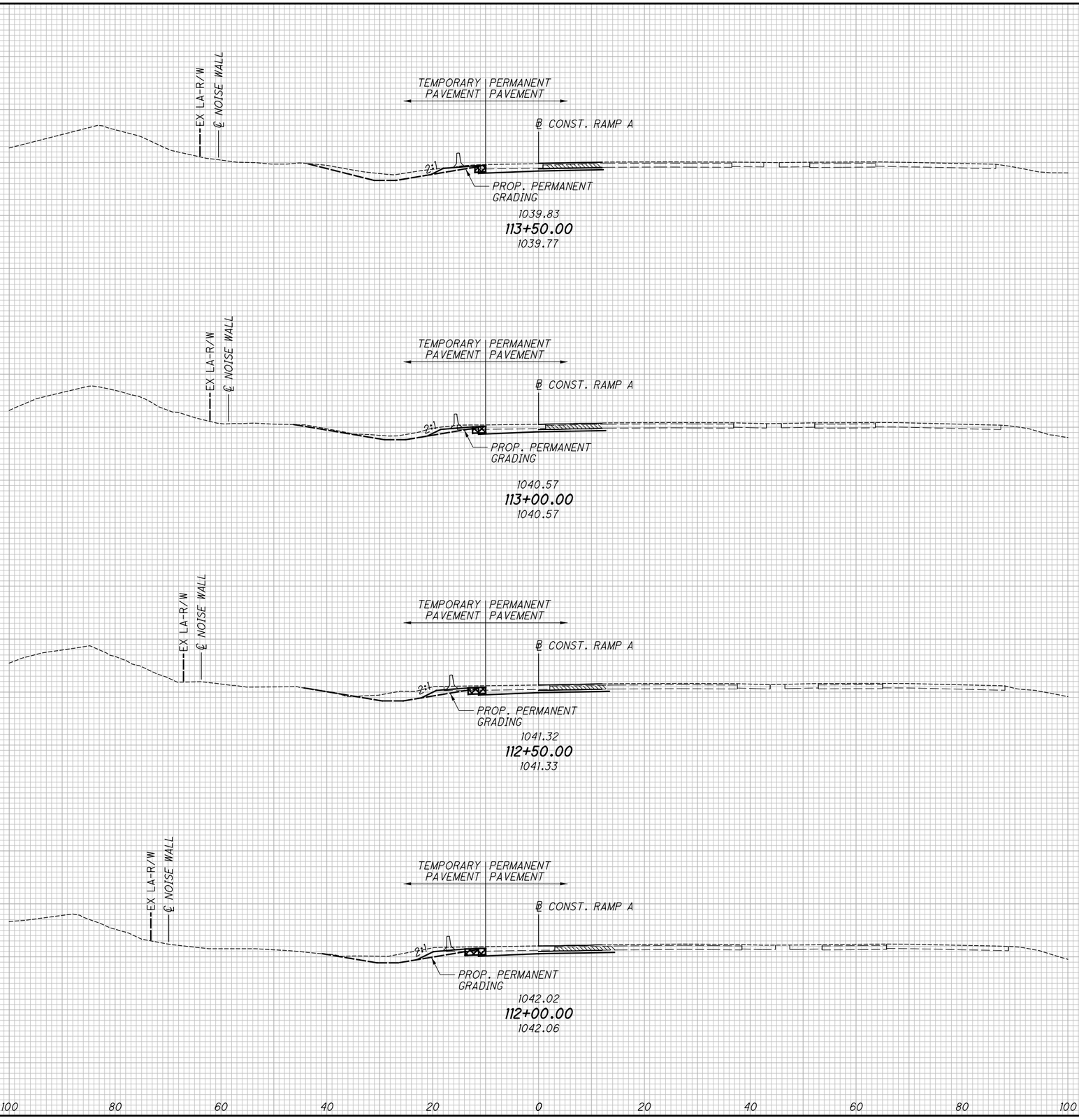
SEEDING END WIDTH	SEEDING SQ. YDS.
8	47
9	
9	49
9	50
9	51
*197	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1	0		
		3	0
2	0		
3	0		
		5	0
3	0		
		6	0
3	0		
		6	0
*20	*0		

*FOR INFORMATION ONLY

CALCULATED KMC
CHECKED SSR

CROSS SECTIONS RAMP A
STA. 112+00.00 TO STA. 113+50.00

SUM-77/277/224
VARIOUS

350
1288

N:\03\60\06744-08\06002_SUM-76-10.95\Design\MOT\Sheets\06002_XM10L.dgn Design 1/31/2021 5:53:36 PM jrettig

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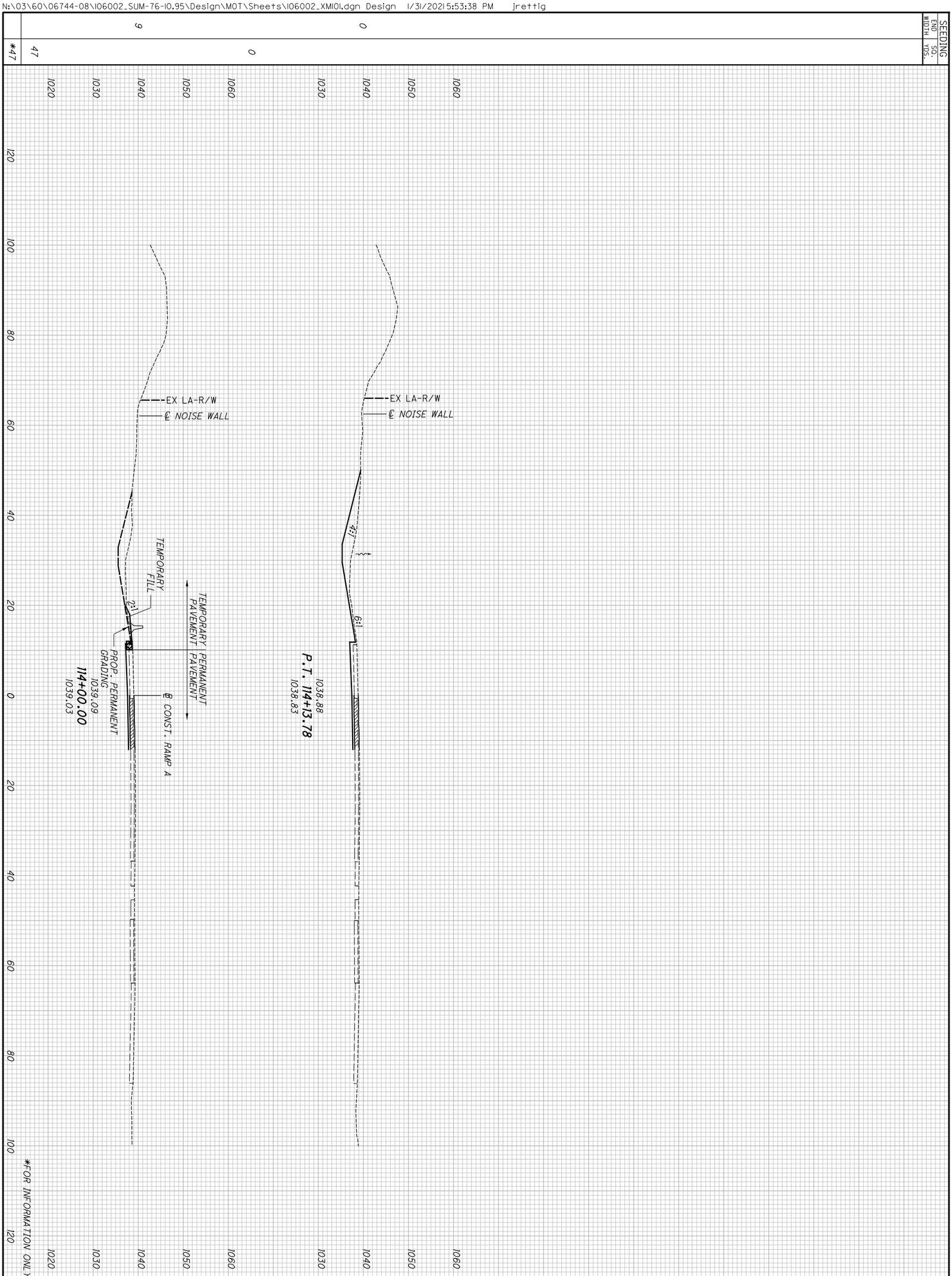
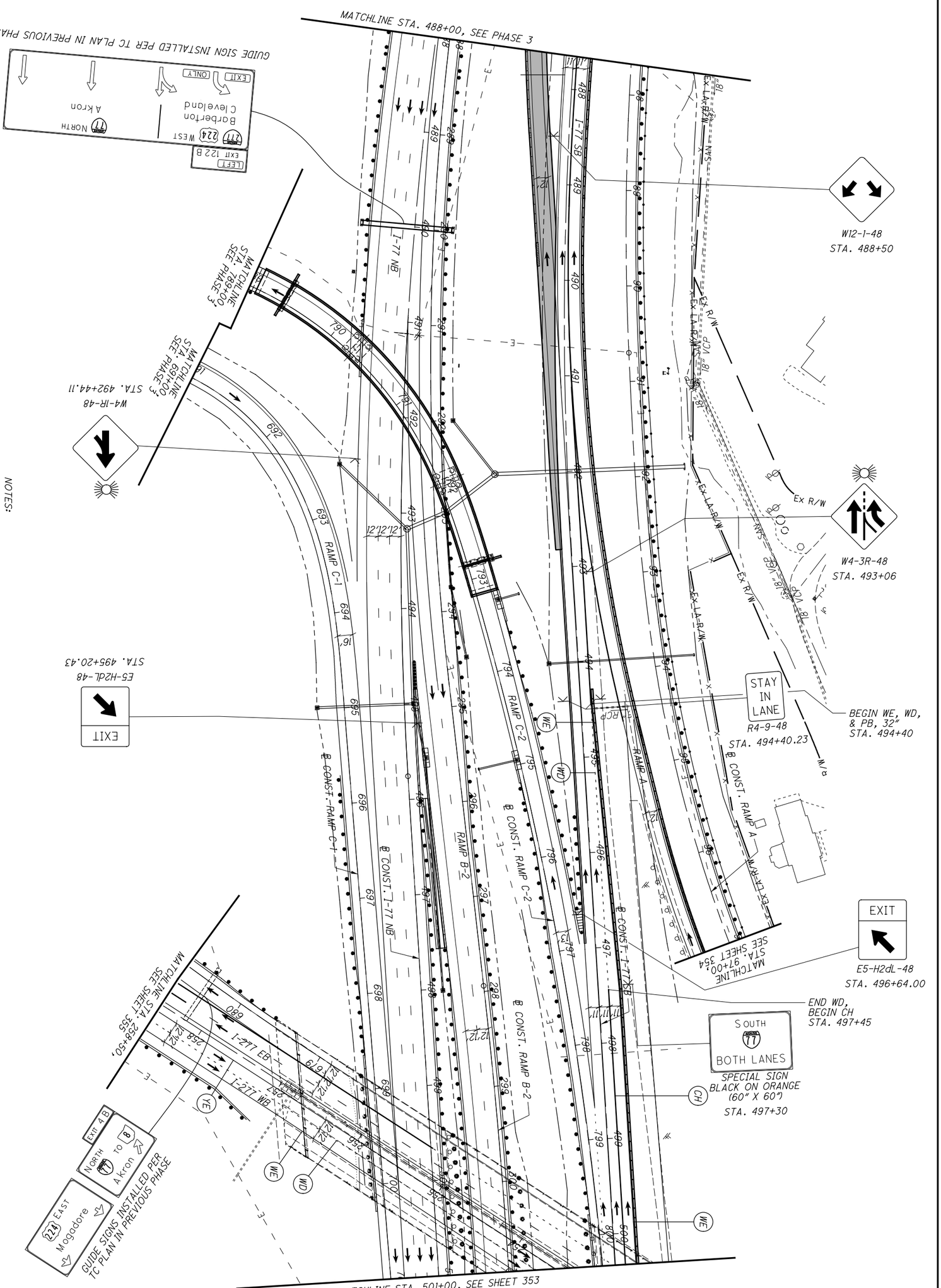


SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
*47	47	0	0	0	0
		1	2	2	2

351 / 1288	**SUM-77 / 277 / 224** **VARIOUS**	**CROSS SECTIONS RAMP A** **STA. 114+00.00 TO STA. 114+13.78**

CALCULATED KMC
CHECKED SSR

N:\03\60\06744-08\I06002_SUM-76-I0.95\Design\MOT\Sheets\I06002_MP382.dgn Sheet 1/31/2021 5:54:02 PM jrettig



NOTES:

1. SEE SHEET I28 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

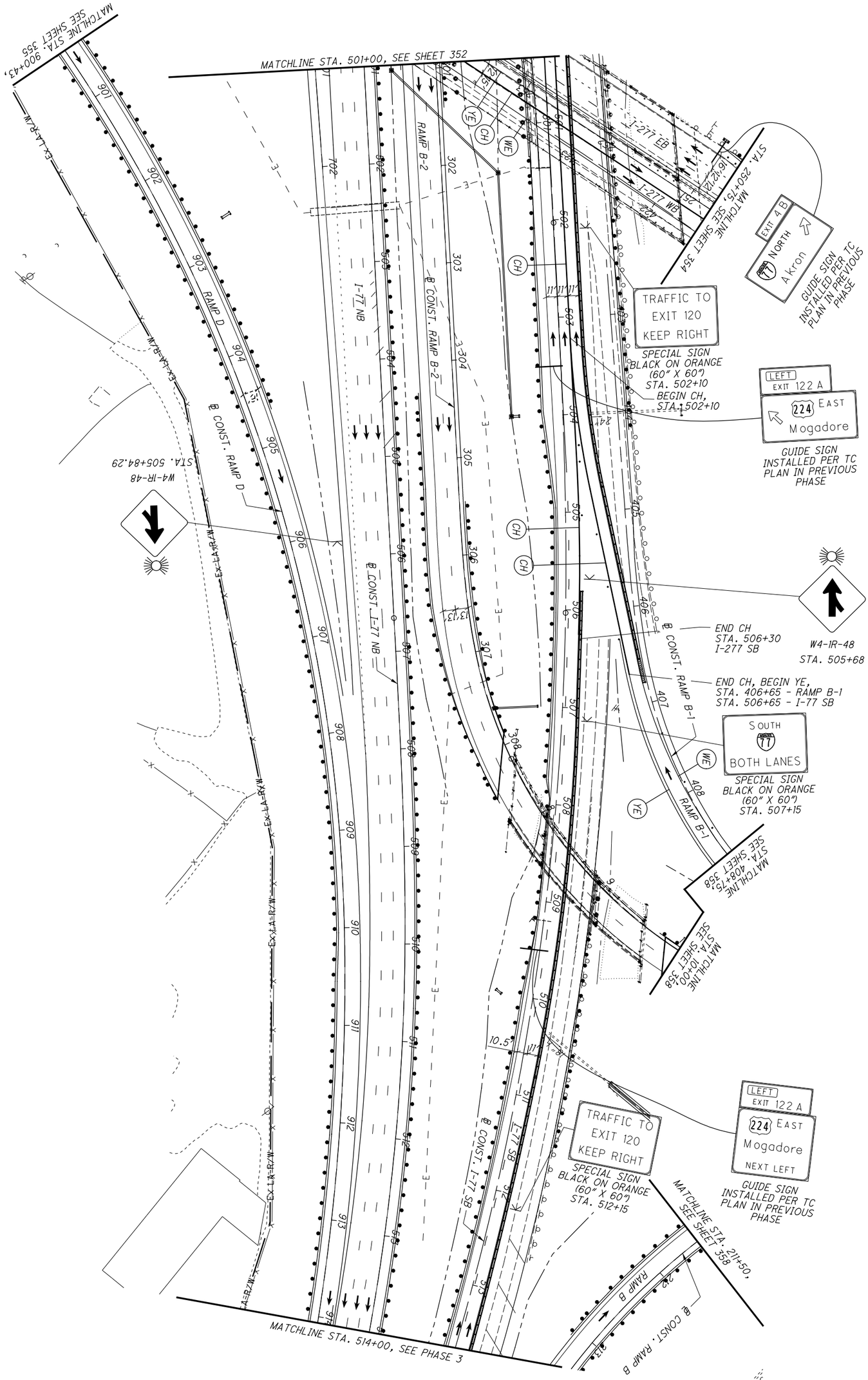
352 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3A I-77 - STA. 488+00 TO STA. 501+00	CALCULATED . CHECKED .

0 50 100
25
HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MP383.dgn Sheet 1/31/2021 5:54:09 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

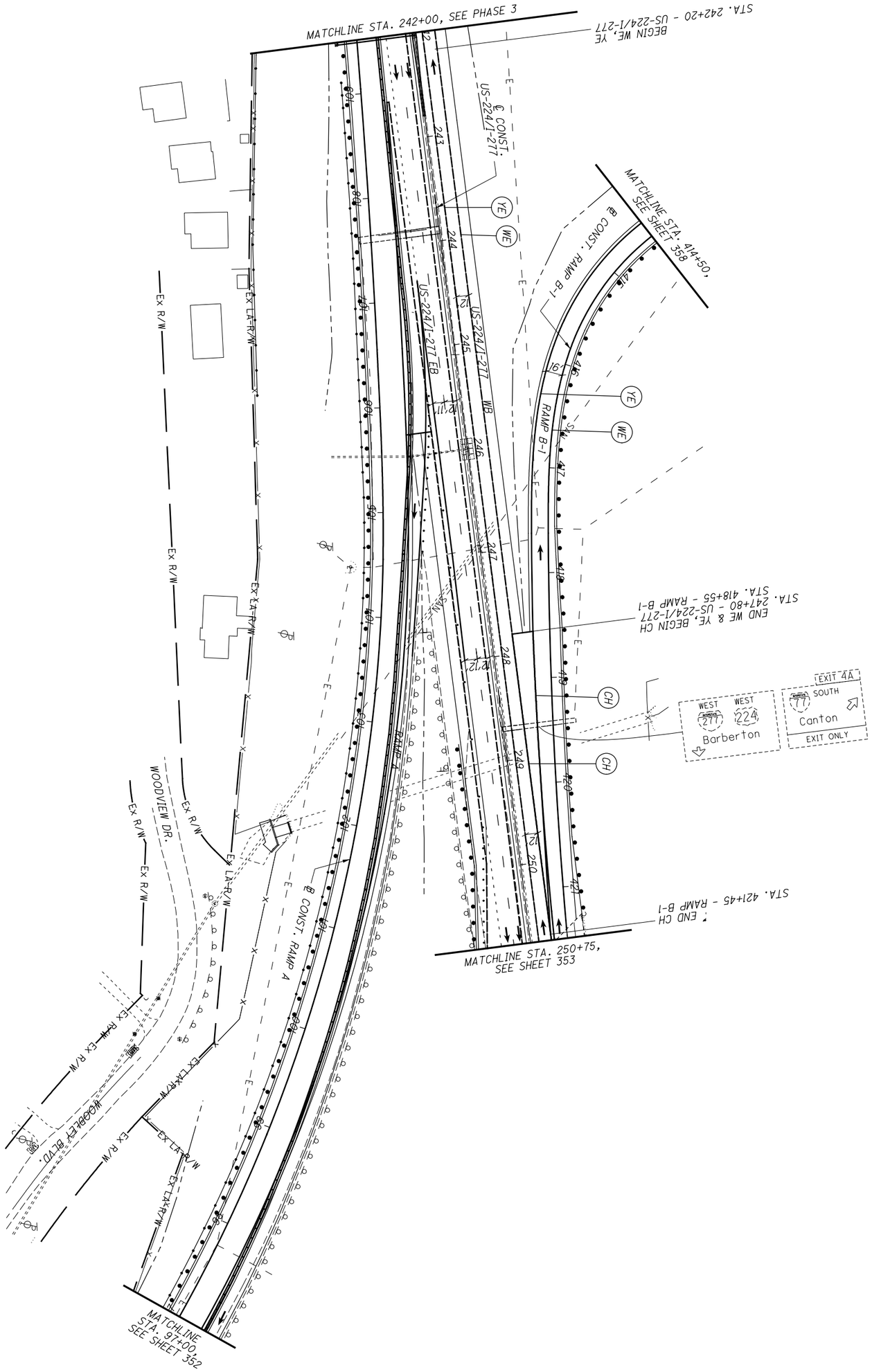


353 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3A I-77 - STA. 501+00 TO STA. 514+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MP392.dgn Sheet 1/31/2021 5:54:14 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

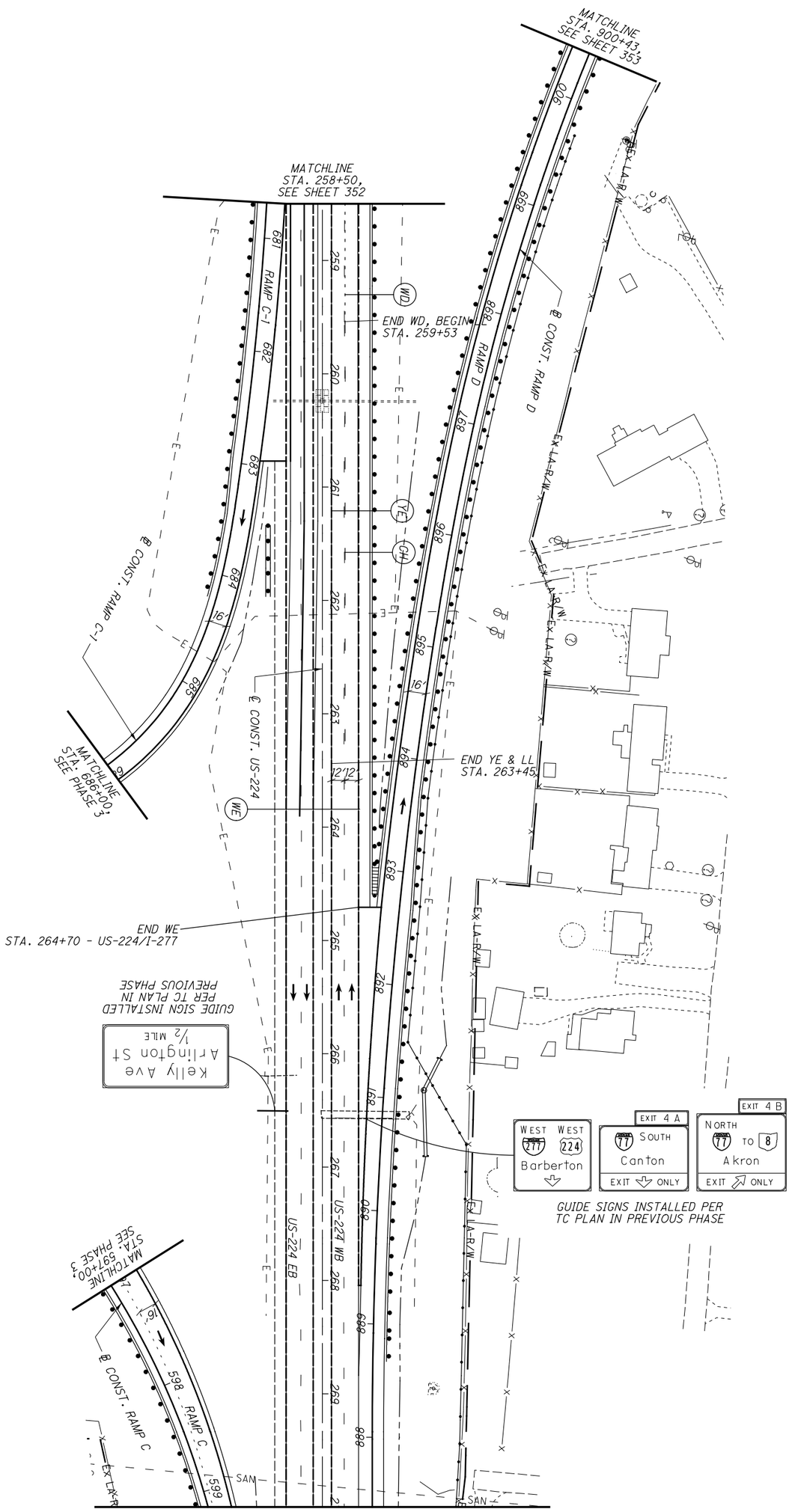


354 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3A US-224/I-277 - STA. 242+00 TO STA. 250+75	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MP393.dgn Sheet 1/31/2021 5:54:17 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



355 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3A US-224 - STA. 258+50 TO STA. 270+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.

2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED .
CHECKED .

MAINTENANCE OF TRAFFIC PLAN - PHASE 3A
US-224 - STA. 270+00 TO STA. 283+00

SUM-77/277/224
VARIOUS

356
1288

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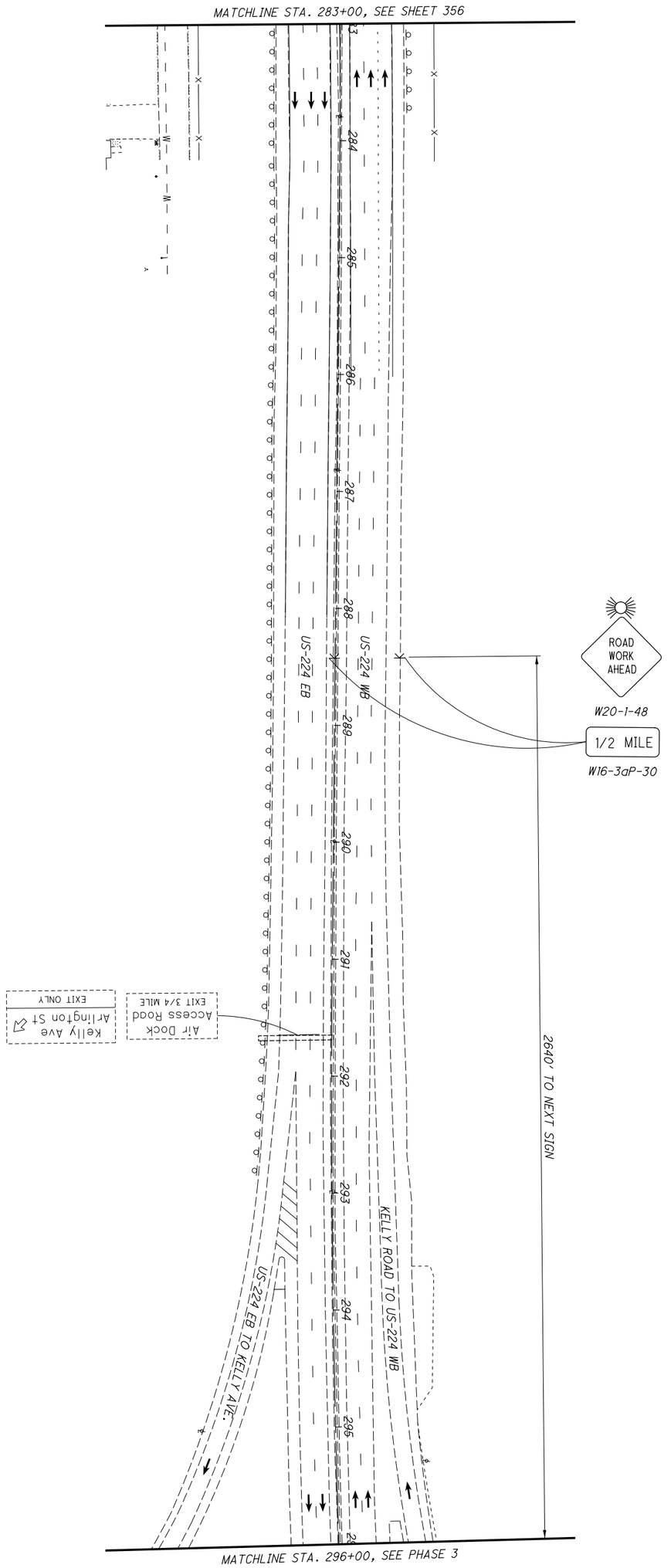
N:\03\60\06744-08\I06002_SUM-76-I0.95\Design\MOT\Sheets\I06002_MP395.dgn Sheet 1/31/2021 5:54:23 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

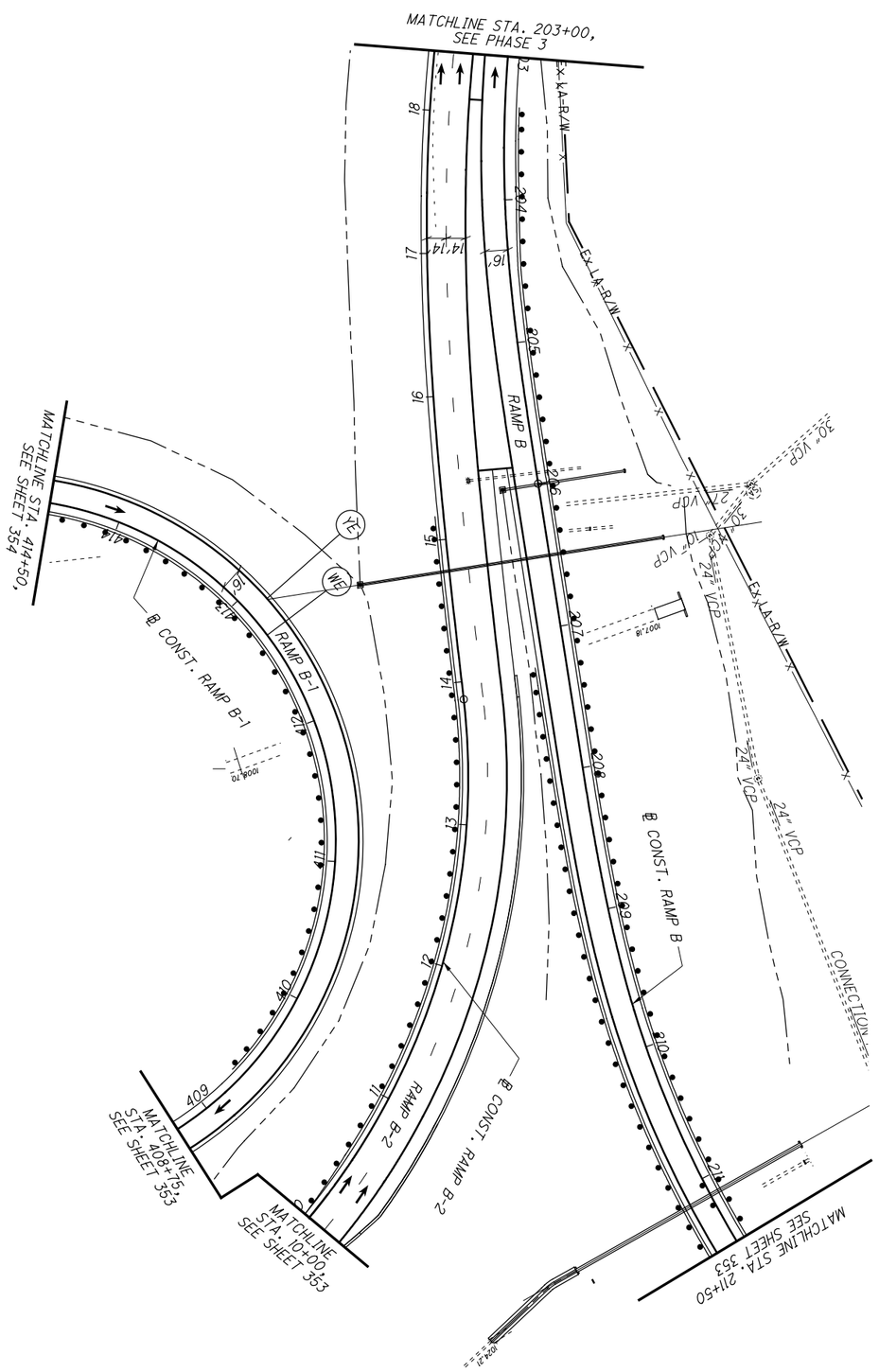


357 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3A US-224 - STA. 283+00 TO STA. 296+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\I06002_SUM-76-10.95\Design\MOT\Sheets\I06002_MP397.dgn Sheet 1/31/2021 5:54:27 PM jrettig

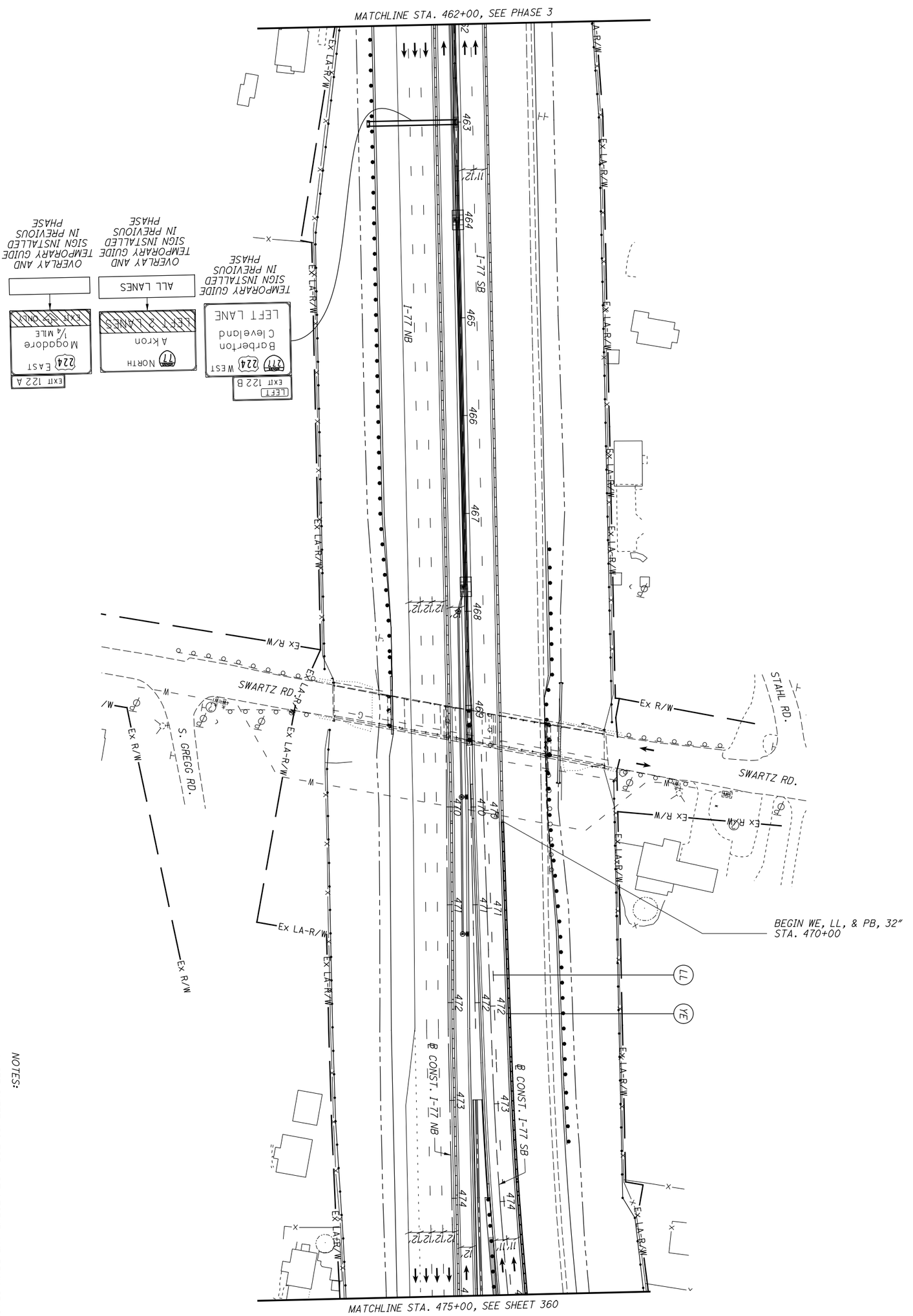
NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



358 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3A RAMP B - STA. 203+00 TO STA. 211+50	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\I06002_SUM-76-I0.95\Design\MOT\Sheets\I06002_MP425.dgn Sheet 1/31/2021 5:54:50 PM jrettig

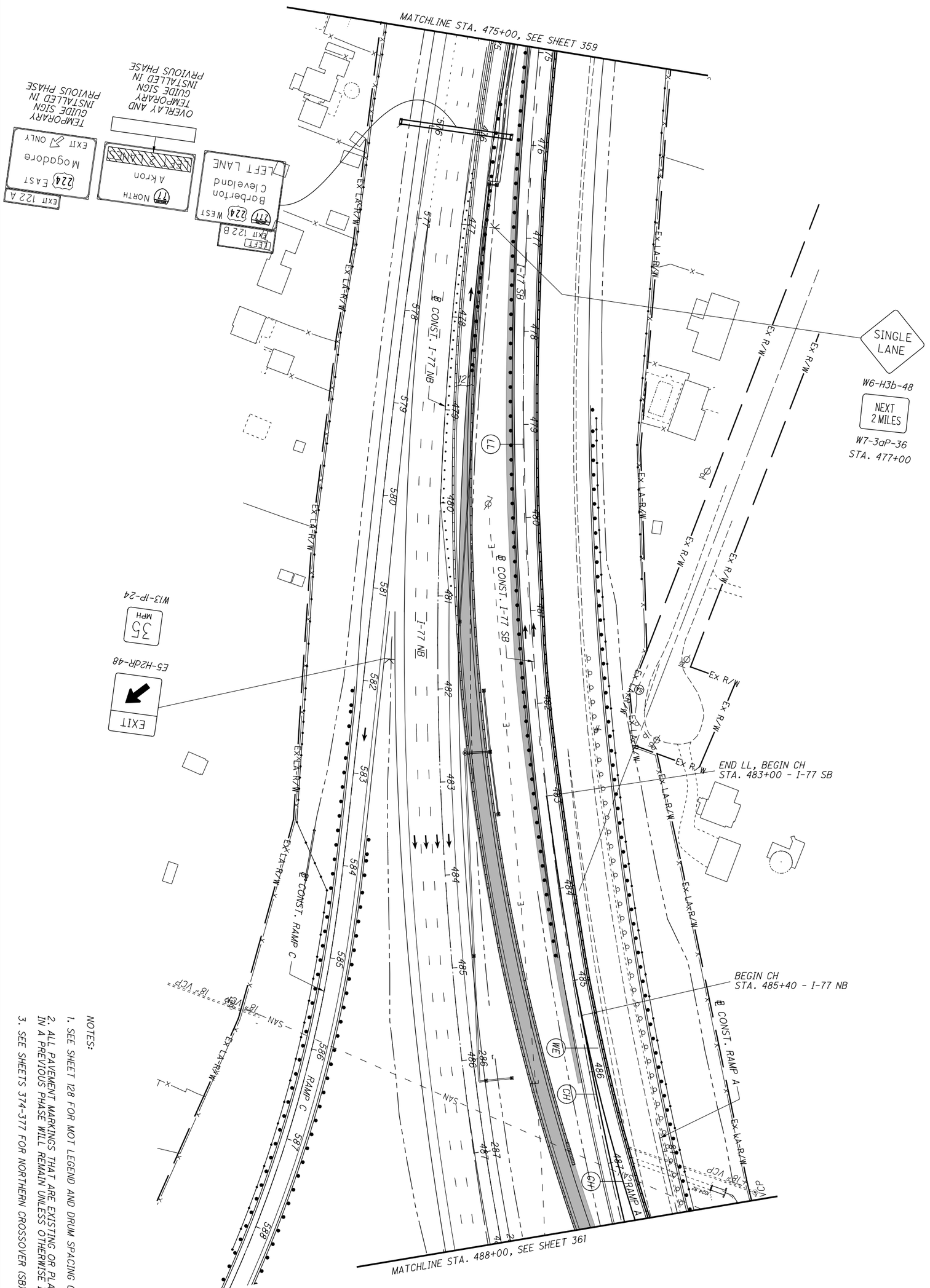


NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

359 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3B I-77 - STA. 462+00 TO STA. 475+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MP426.dgn Sheet 1/31/2021 5:54:57 PM jrettig



NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.
3. SEE SHEETS 374-377 FOR NORTHERN CROSSOVER (SB).

360 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3B I-77 - STA. 475+00 TO STA. 488+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

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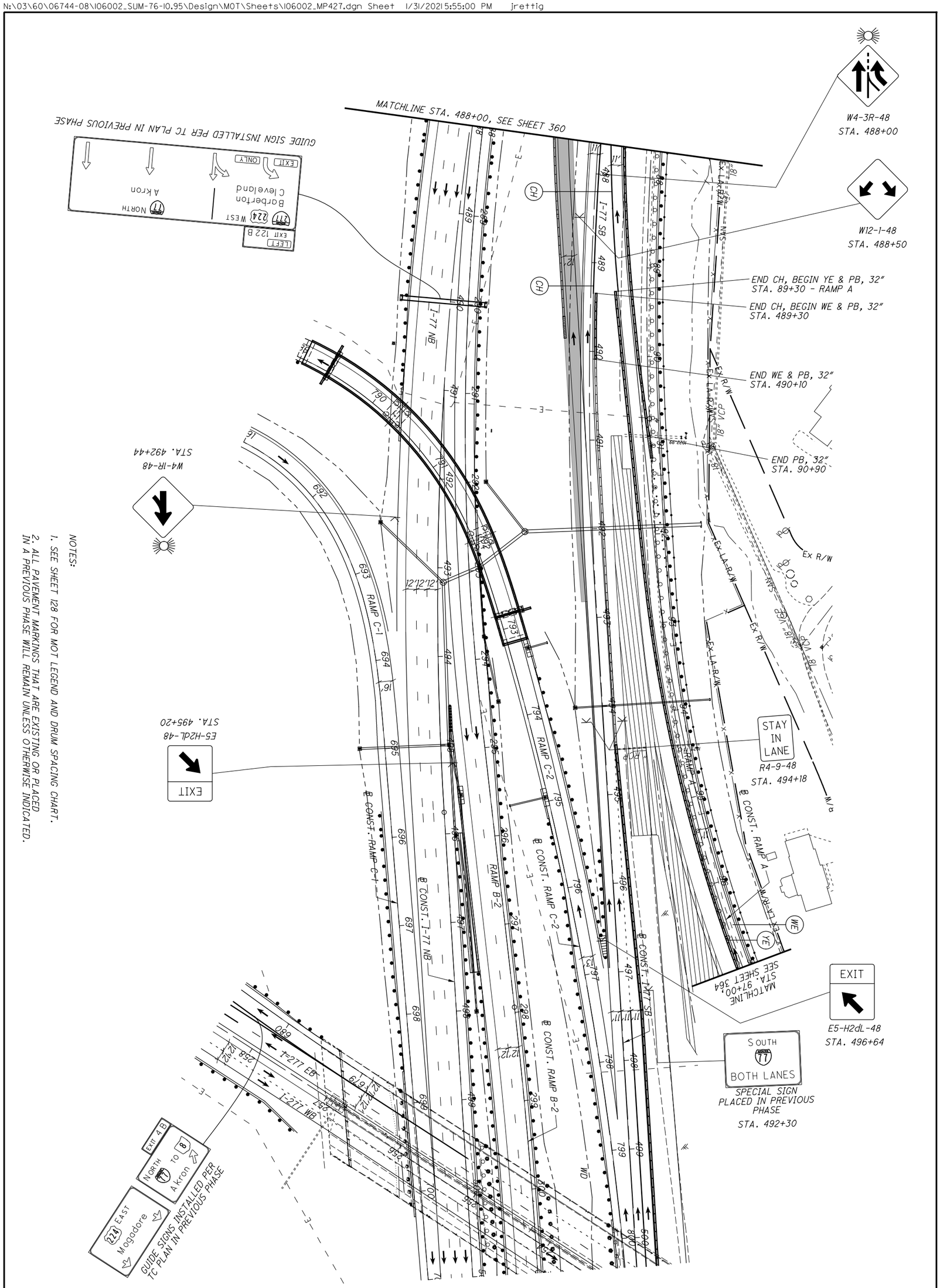


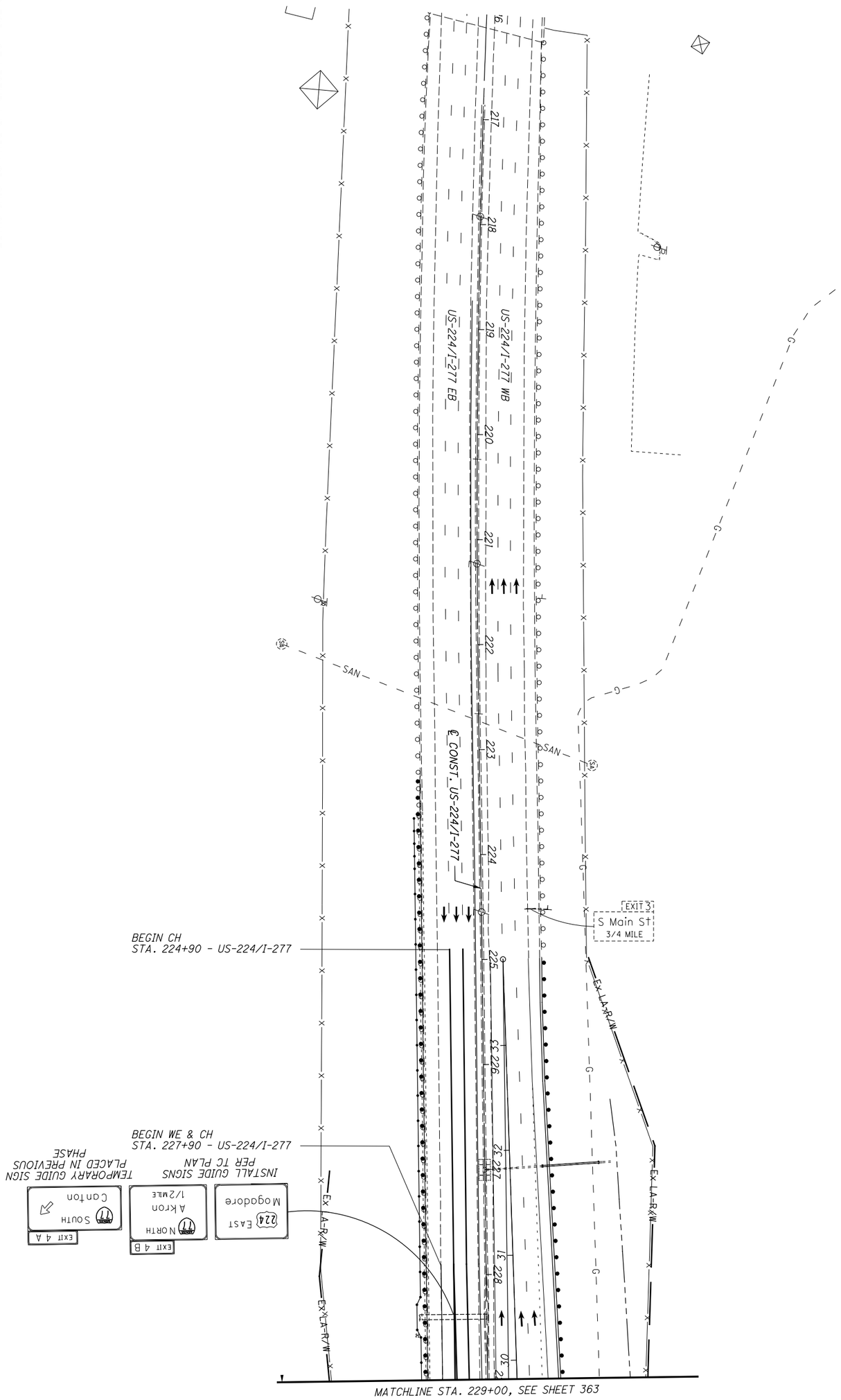
NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

361 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3B I-77 - STA. 488+00 TO STA. 501+00	CALCULATED . CHECKED . 0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

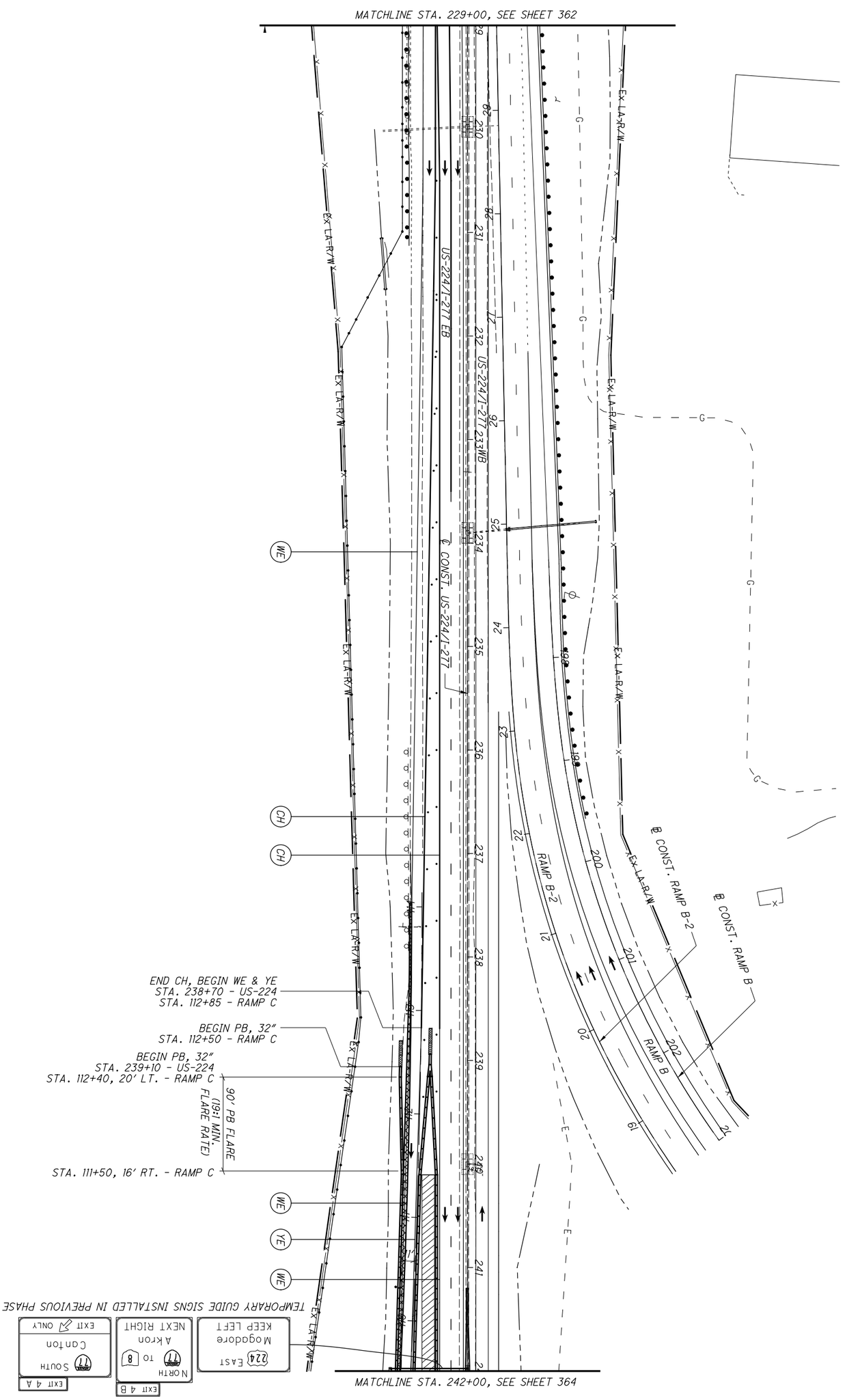


362 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3B US-224/I-277 - STA. 216+00 TO STA. 229+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET	N

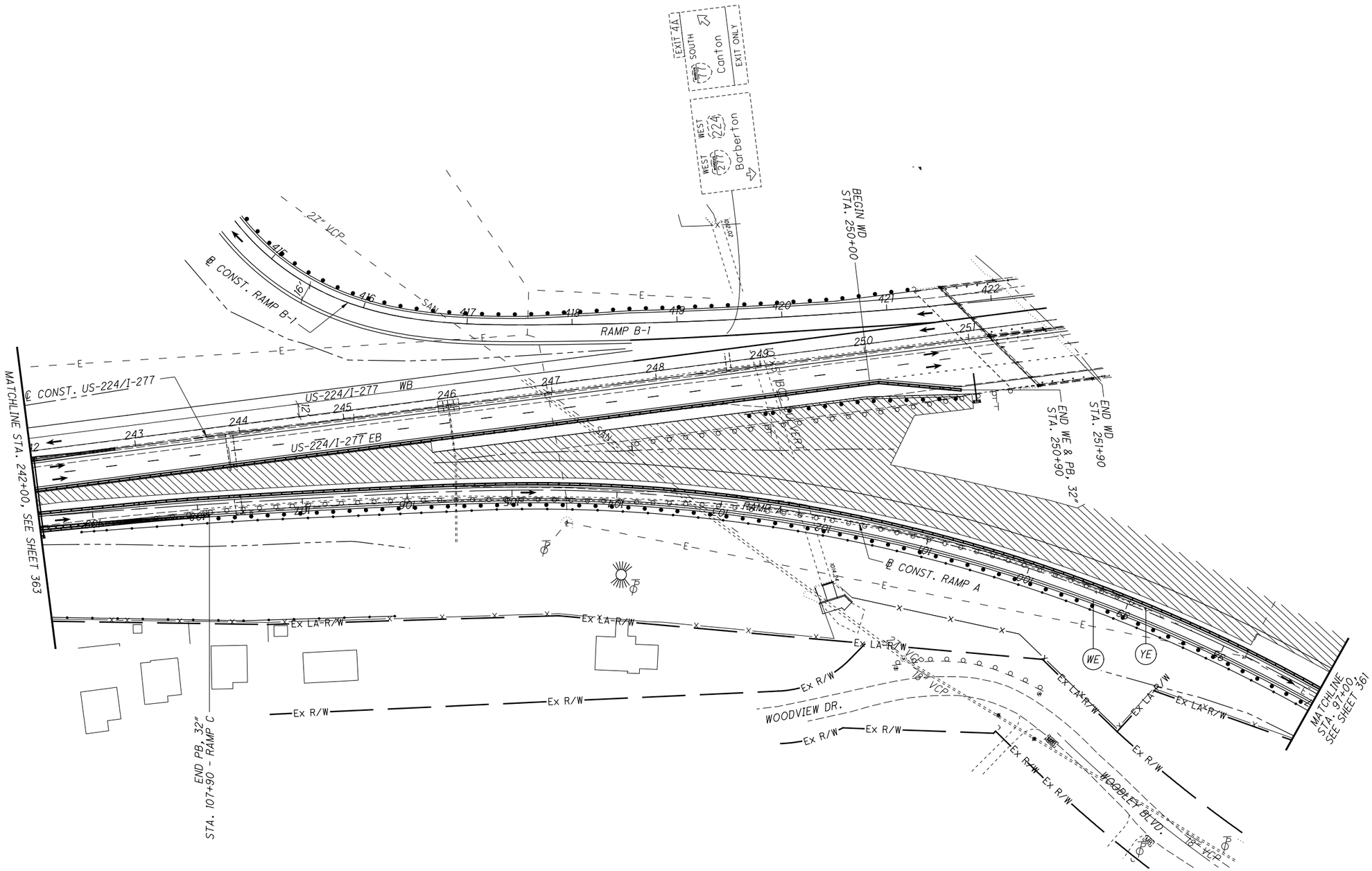
N:\03\60\06744-08\I06002_SUM-76-I0.95\Design\MOT\Sheets\I06002_MP429.dgn Sheet 1/31/2021 5:55:08 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



363 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 3B US-224 / I-277 - STA. 229+00 TO STA. 242+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET



NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.

2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

HORIZONTAL SCALE IN FEET
0 25 50 100

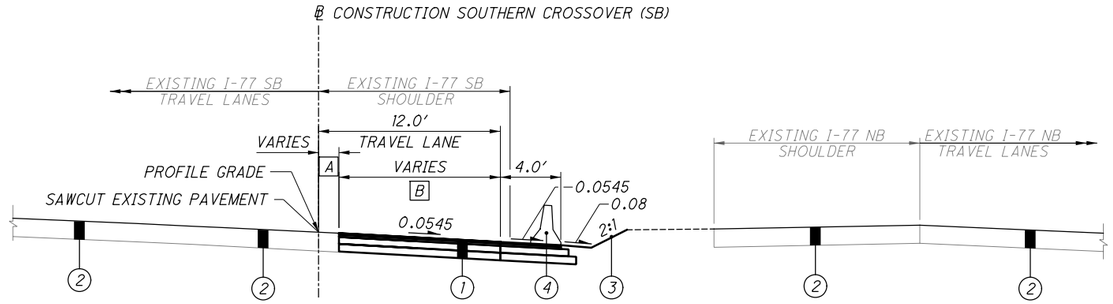
CALCULATED .
CHECKED .

MAINTENANCE OF TRAFFIC PLAN - PHASE 3B
US-224/I-277 - STA. 242+00 TO STA. 250+75

SUM-77/277/224
VARIOUS

364
1288

N:\03\60\06744-08\06002_SUM-76-10.95\Design\MOT\Sheets\06002_MP430.dgn Sheet 1/31/2021 5:55:12 PM jrettig

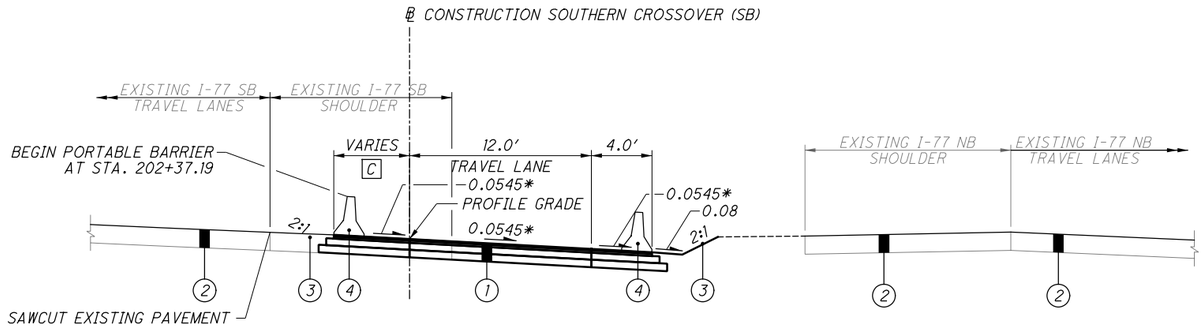


SOUTHERN CROSSOVER (SB) - REPLACING EXISTING SHOULDER

STA. 200+00.00 TO STA. 201+00.45

A VARIES
1.35′ AT STA. 200+00.00 TO
0.0′ AT STA. 201+00.45

B VARIES
10.65′ AT STA. 200+00.00 TO
12.0′ AT STA. 201+00.45

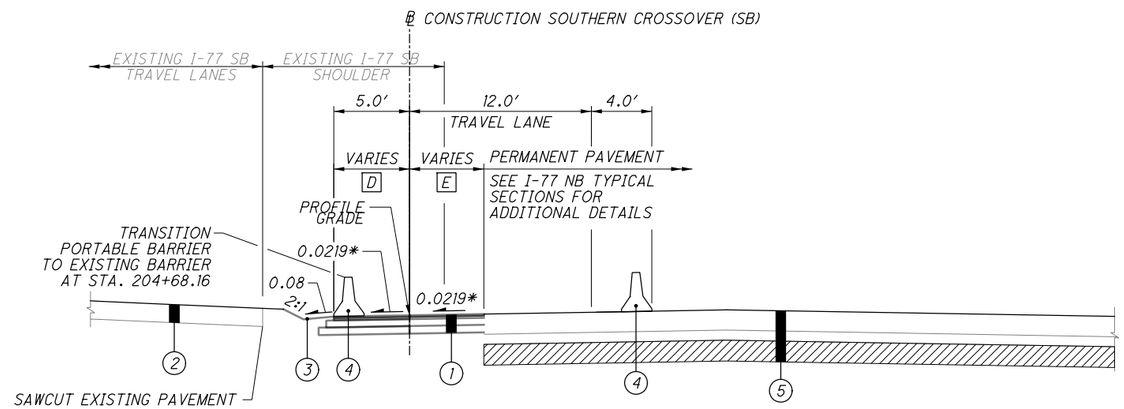


SOUTHERN CROSSOVER (SB) PAVEMENT SECTION

STA. 201+00.45 TO STA. 203+28.40

C VARIES
0.0′ AT STA. 201+00.45 TO
5.0′ AT STA. 202+37.19

* TRANSITIONS FROM 0.0545 TO -0.0219,
STA. 201+00.45 TO STA. 203+28.40



SOUTHERN CROSSOVER (SB) - WIDENING EXISTING PAVEMENT

STA. 203+28.40 TO STA. 206+56.46

D ITEM 615 VARIES
5.0′ AT STA. 203+28.40 TO
0.0′ AT STA. 204+68.16

E ITEM 615 VARIES
4.9′ AT STA. 203+48.40 TO
0.0′ AT STA. 204+11.18

* TRANSITIONS FROM 0.0219 TO 0.0351,
STA. 203+28.40 TO STA. 206+56.46
TEMPORARY PAVEMENT CROSS SLOPE
SHALL MATCH PERMANENT PAVEMENT
SHOULDER SLOPE

LEGEND

(1) ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A

(2) PERMANENT PAVEMENT

(3) ITEM 659 - SEEDING AND MULCHING (TEMPORARY GRADING)

(4) ITEM 622 - PORTABLE BARRIER, 32"

(5) PERMANENT PAVEMENT - SEE I-77 TYPICAL SECTIONS FOR DETAILS

TYPICAL SECTIONS - SOUTHERN CROSSOVER (SB) PAVEMENT

SUM-77/277/224
VARIOUS

365
1288

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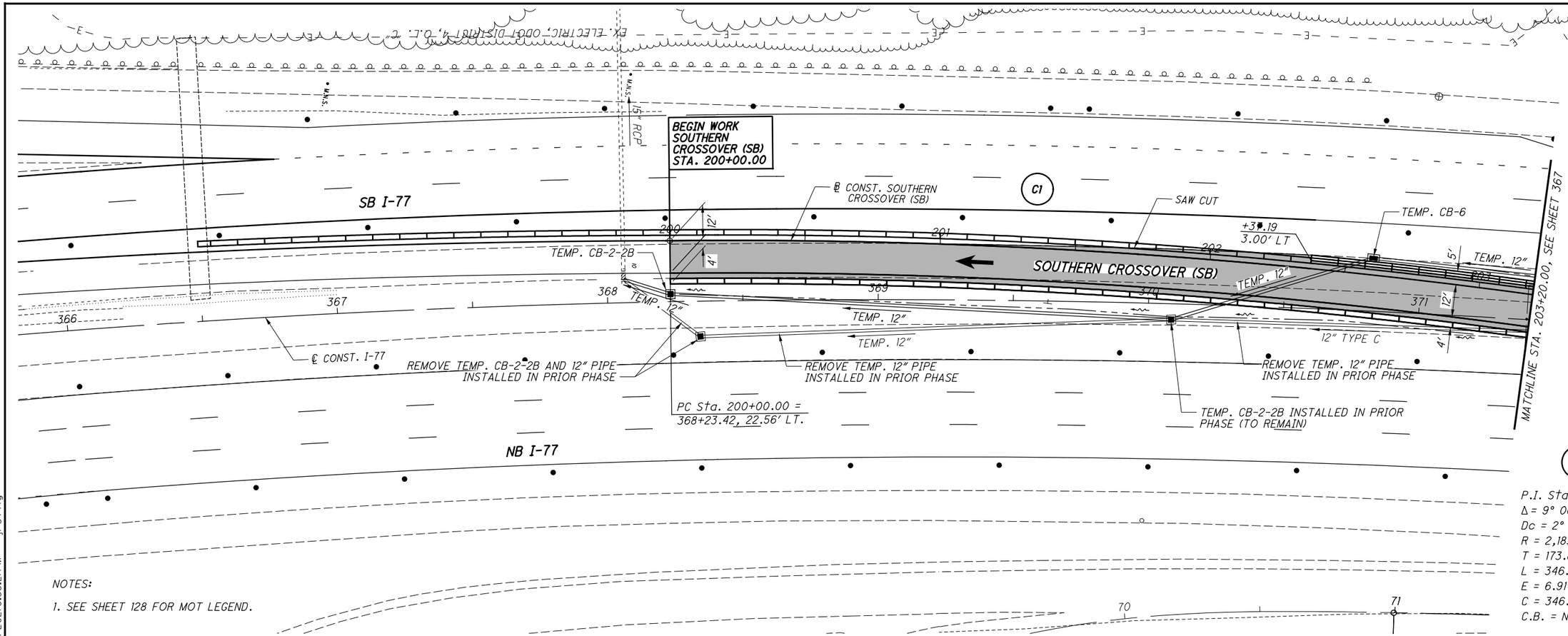
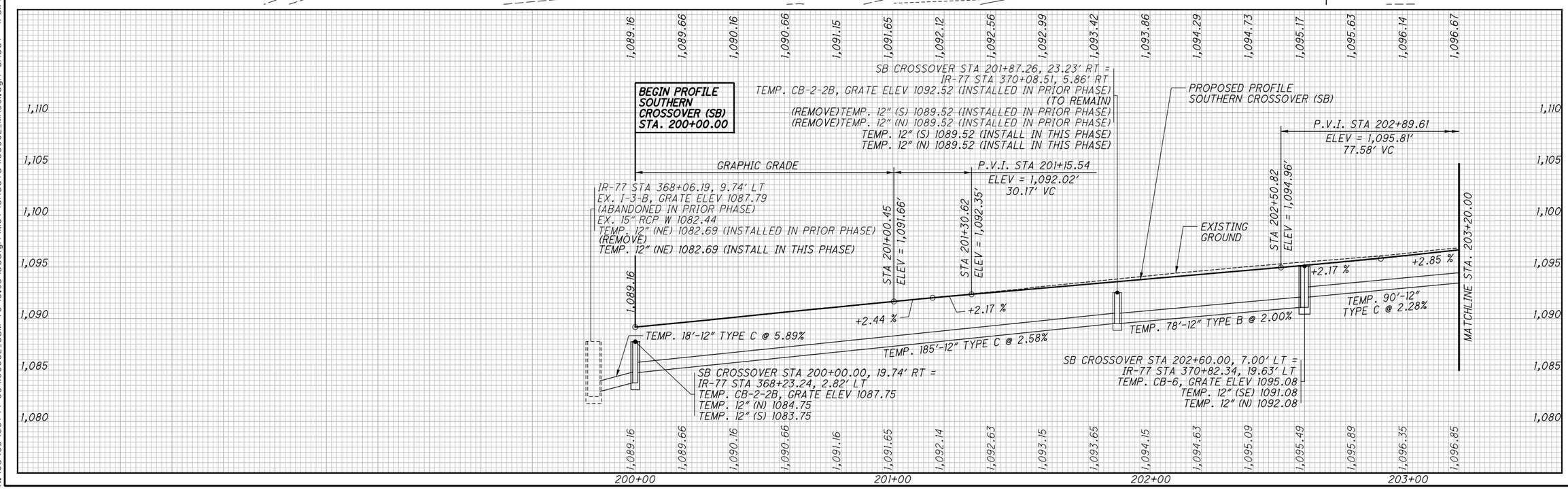


C1

P.I. Sta. 201+73.82
Δ = 9° 06' 10" (RT)
Dc = 2° 37' 26"
R = 2,183.54'
T = 173.82'
L = 346.91'
E = 6.91'
C = 346.54'
C.B. = N 4° 15' 23" W

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND.



N:\03\60\06744-08\I06002_SUM-76-10.95\Design\MOT\Sheets\I06002_MH80I.dgn Sheet 1/31/2021 5:55:21 PM jrettig

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KMC
CHECKED SSR

SUM-77/277/224
VARIOUS

PLAN & PROFILE - SOUTHERN CROSSOVER (SB)
PHASE 3 - STA. 200+00.00 TO STA. 203+20.00

366
1288

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND.

C1

P.I. Sta. 201+73.82
Δ = 9° 06′ 10″ (RT)
Dc = 2° 37′ 26″
R = 2,183.54′
T = 173.82′
L = 346.91′
E = 6.91′
C = 346.54′
C.B. = N 4° 15′ 23″ W

END WORK SOUTHERN CROSSOVER (SB) STA. 206+56.46

SB I-77

MATCHLINE STA. 203+20.00, SEE SHEET 366

TEMP. 12″

TEMP. CB-2-2B

℄ CONST. SOUTHERN CROSSOVER (SB)

+68.16
3.00′ LT

372 373 374 375 376 37

205 206

N 0° 17′ 42″ E

SOUTHERN CROSSOVER (SB)

POT Sta. 206+56.46

15″ RCP

M.M.S.

℄ CONST. I-77

12′

12′

4′

TEMP. 12″

REMOVE. TEMP. CB-8 AND 12″ PIPE INSTALLED IN PRIOR PHASE

PT Sta. 203+46.91

PT Sta. 374+77.72

NB I-77

EX. ELECTRIC ODOT DISTRICT 4 Q.L. "C"

DISTRICT 4 ODOT ELECTRIC

72 73 74 75 76

END PROFILE SOUTHERN CROSSOVER (SB) STA. 206+56.46

1,097.24 1,097.81 1,098.37 1,098.88 1,099.38 1,099.86 1,100.31 1,100.76 1,101.19 1,101.62 1,102.03 1,102.44 1,102.85 1,103.23 1,103.61 1,103.99

1,115
1,110
1,105
1,100
1,095
1,090
1,085

GRAPHIC GRADE

1,104.29

SB CROSSOVER STA 203+50.00, 8.00′ LT =
IR-77 STA 371+72.12, 15.01′ LT
TEMP. CB-2-2B, GRATE ELEV 1097.13
TEMP. 12″ (S) 1094.13

PROPOSED PROFILE SOUTHERN CROSSOVER (SB)

MATCHLINE STA. 203+20.00

STA 203+28.40
ELEV = 1,096.91′

EXISTING GROUND

TEMP. 90′-12″ TYPE C @ 2.28%

1,097.18 1,097.62 1,098.15 1,098.68 1,099.38 1,099.85 1,100.30 1,100.76 1,101.18 1,101.61 1,102.04 1,102.45 1,102.84 1,103.22 1,103.60 1,103.99

204+00 205+00 206+00

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KMC
CHECKED SSR

PLAN & PROFILE - SOUTHERN CROSSOVER (SB)
PHASE 3 - STA. 203+20.00 TO STA. 206+56.46

SUM-77 / 277 / 224
VARIOUS

367
1288

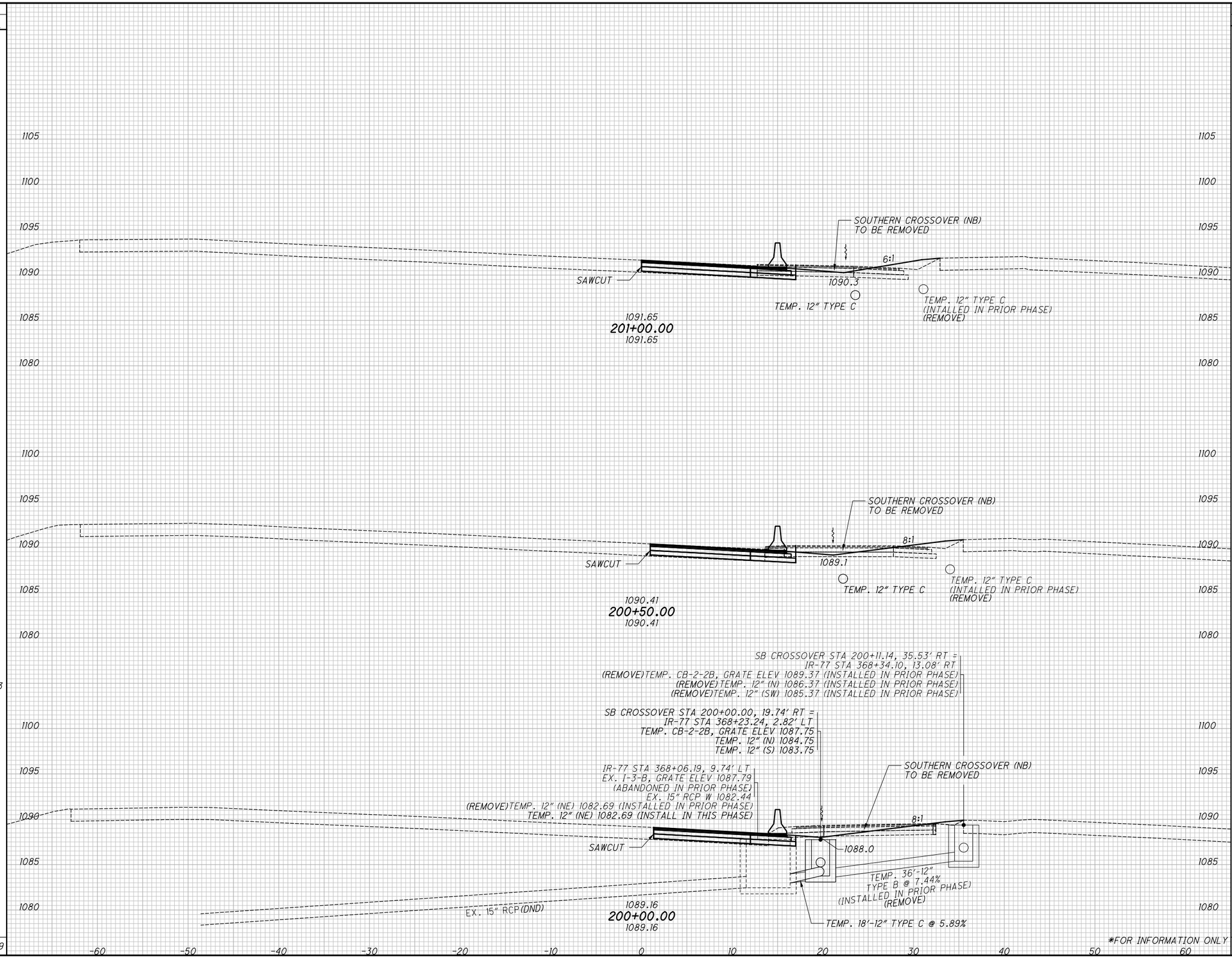
N:\03\60\06744-08\106002-SUM-76-10.95\Design\MOT\Sheets\106002_MH802.dgn Sheet 1/31/2021 5:55:24 PM jrettig

SEEDING	
END WIDTH	SQ. YDS.
16	96
19	103
19	
·	*199

END AREA	
CUT	FILL
1	4
2	3
5	1
·	·

VOLUME	
CUT	FILL
3	6
6	4
*9	*10

CALCULATED KMC
CHECKED SSR



*FOR INFORMATION ONLY

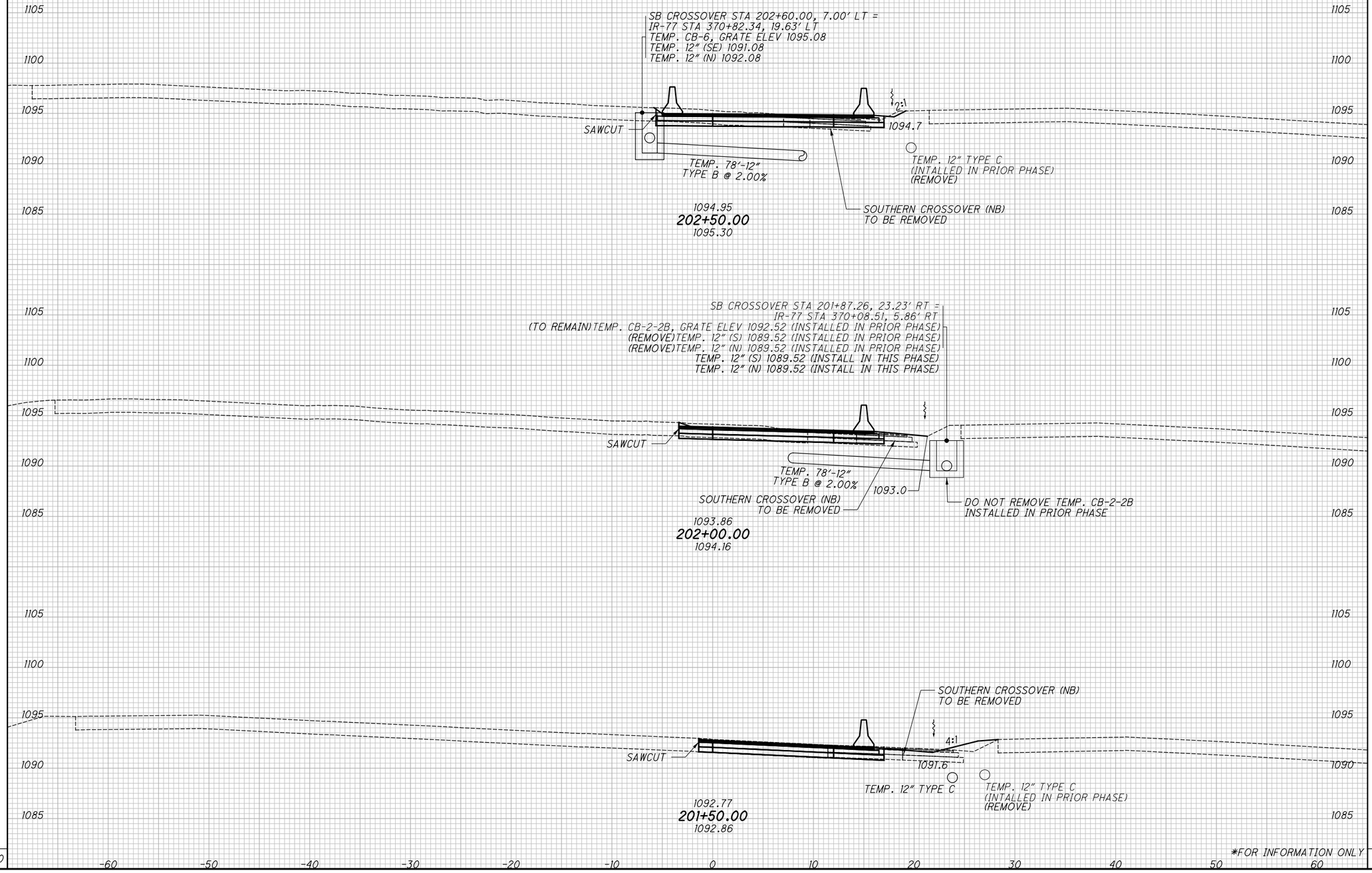
CROSS SECTIONS - SOUTHERN CROSSOVER (SB)
PHASE 3 - STA. 200+00.00 TO STA. 201+00.00

SUM-77/277/224
VARIOUS

368
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Basemaps\106002_BM513.dgn BLP_MOT_SB02 1/31/2021 5:55:44 PM jrettig

SEEDING	
END WIDTH	SQ. YDS.
3	19
4	44
11	77
·	*140



*FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
3	0		
		4	0
1	0		
1	3		
		2	3
·	·	*8	*9
		2	6

CALCULATED KMC
CHECKED SSR

CROSS SECTIONS - SOUTHERN CROSSOVER (SB)
PHASE 3 - STA. 201+50.00 TO STA. 202+50.00

SUM-77 / 277 / 224
VARIOUS

369
1288

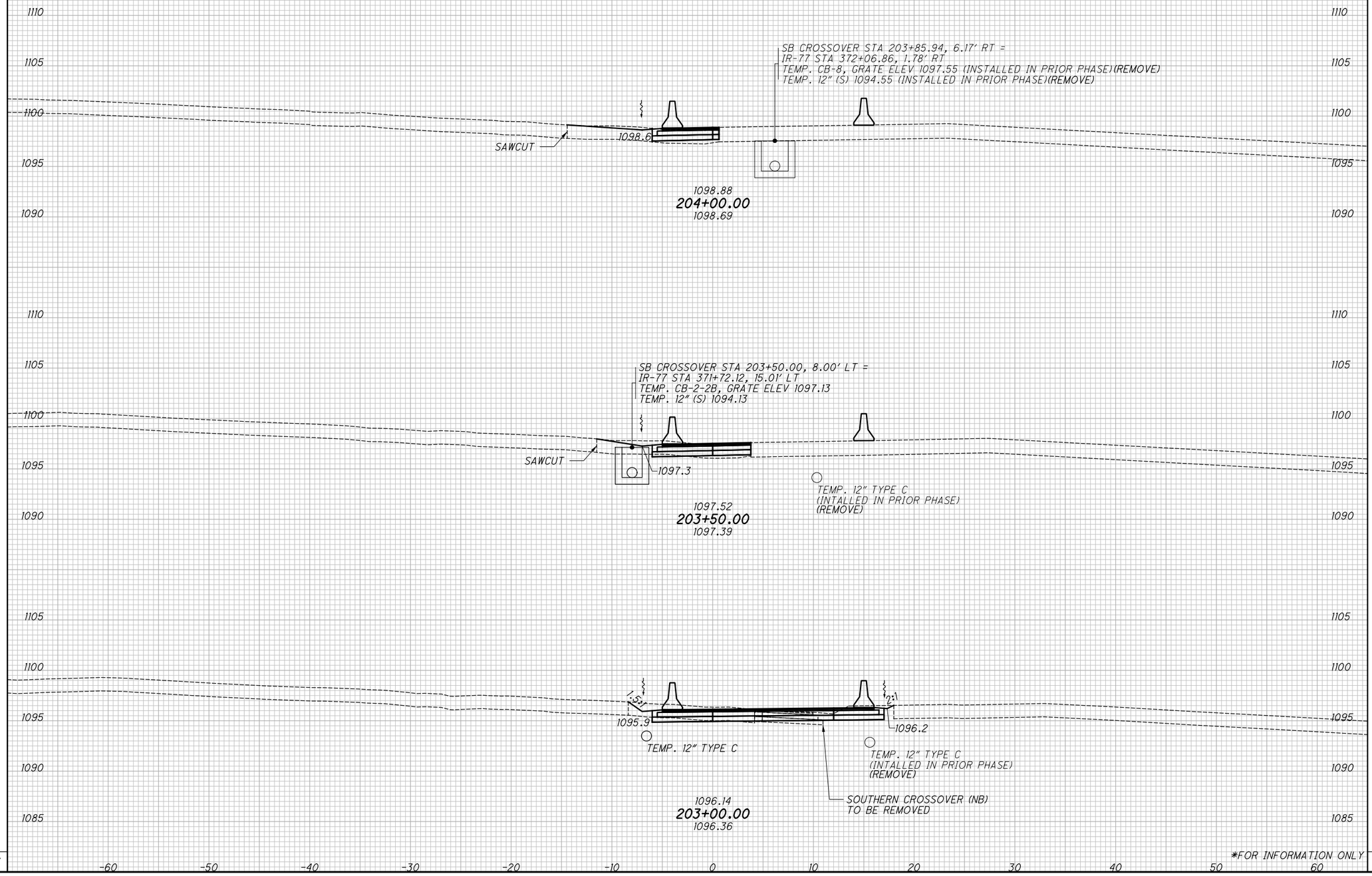
N:\03\60\06744-08\06002_SUM-76-10.95\Design\MOT\Basemaps\06002_BM5i3.dgn BLP_MOT_SB02 1/31/2021 5:55:44 PM jrettig

SEEDING	
END WIDTH	SQ. YDS.
8	39
6	26
4	18
.	*83

END AREA	
CUT	FILL
0	0
1	0
10	0
.	.

VOLUME	
CUT	FILL
1	0
10	0
12	0
*23	*0

CALCULATED KMC
CHECKED SSR



*FOR INFORMATION ONLY

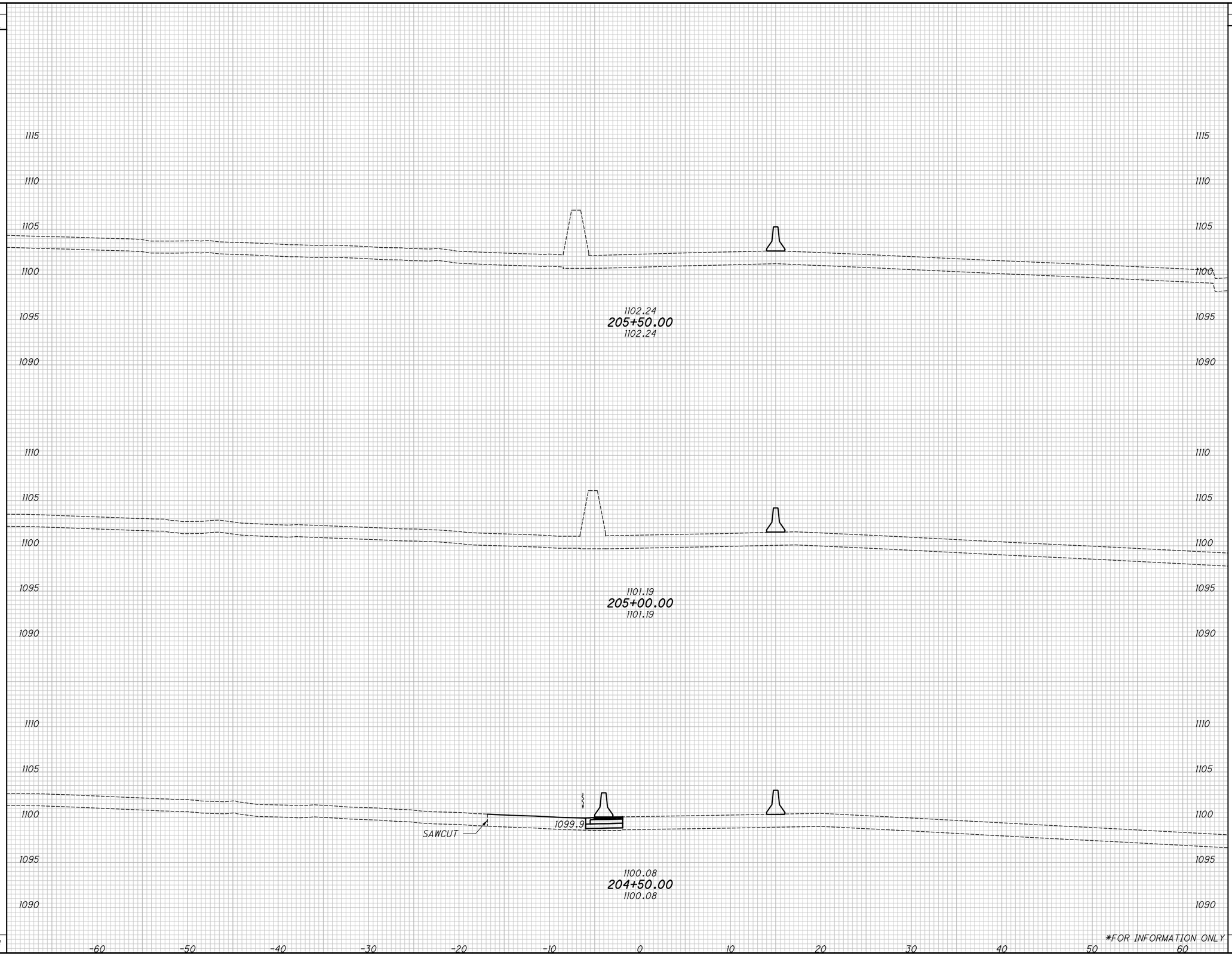
CROSS SECTIONS - SOUTHERN CROSSOVER (SB)
PHASE 3 - STA. 203+00.00 TO STA. 204+00.00

SUM-77/277/224
VARIOUS

370
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Basemaps\106002_BM513.dgn BLP_MOT_SB02 1/31/2021 5:55:44 PM jrettig

SEEDING	
END WIDTH	SQ. YDS.
0	0
0	0
0	0
0	0
24	*24



END AREA	
CUT	FILL
0	0
0	0
0	0
0	0
.	.

VOLUME	
CUT	FILL
0	0
0	0
0	0
0	0
*0	*0

*FOR INFORMATION ONLY

CALCULATED KMC
CHECKED SSR

CROSS SECTIONS - SOUTHERN CROSSOVER (SB)
PHASE 3 - STA. 204+50.00 TO STA. 205+50.00

SUM-77/277/224
VARIOUS

3.71
12.88

N:\03\60\06744-08\06002_SUM-76-10.95\Design\MOT\Basemaps\06002_BM5I3.dgn BLP_MOT_SB02 1/31/2021 5:55:45 PM jrettig

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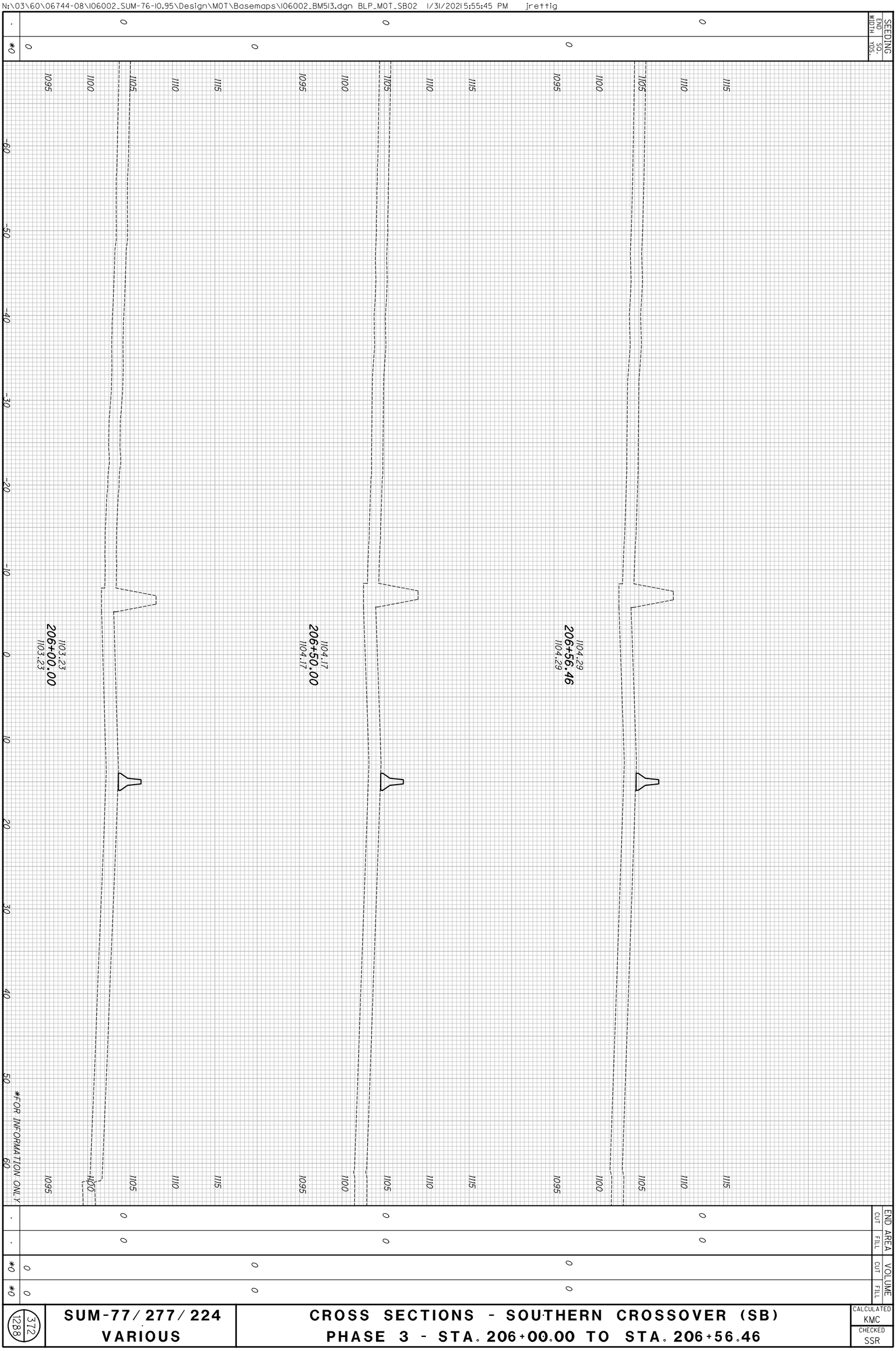
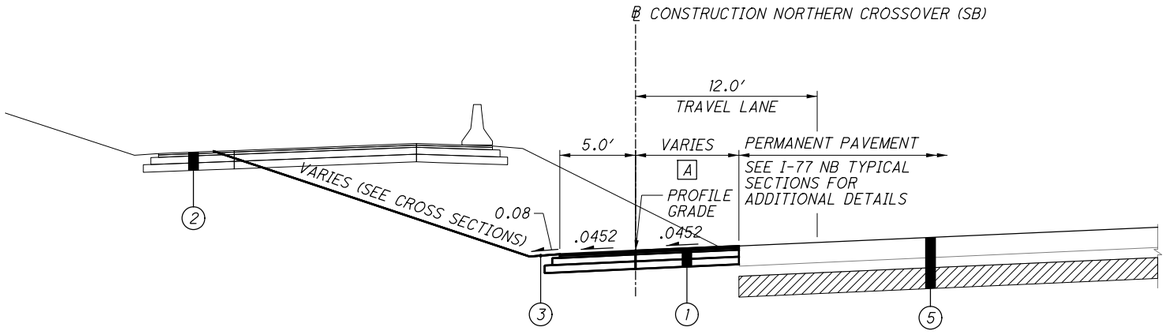


372 / 1288	SUM-77 / 277 / 224 VARIOUS	CROSS SECTIONS - SOUTHERN CROSSOVER (SB) PHASE 3 - STA. 206+00.00 TO STA. 206+56.46

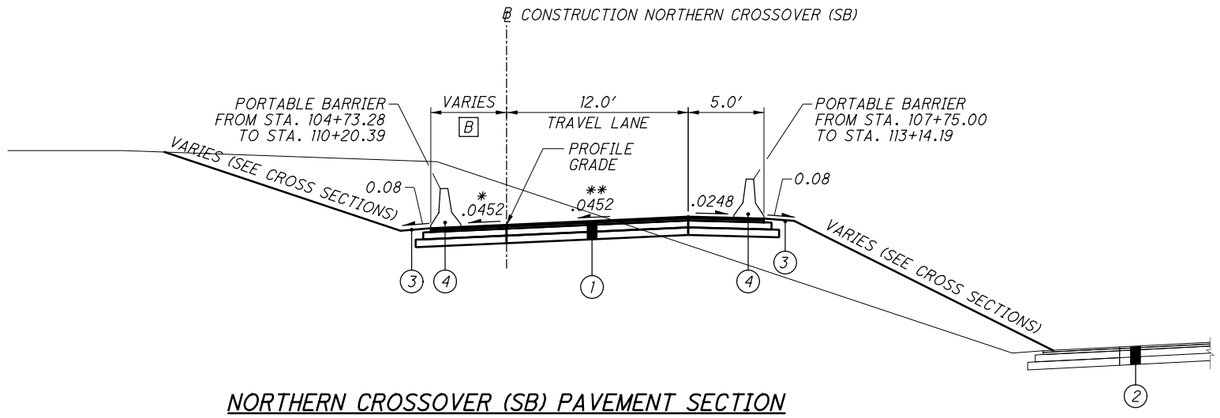
CALCULATED KMC
CHECKED SSR



NORTHERN CROSSOVER (SB) - WIDENING EXISTING PAVEMENT

STA. 100+00.00 TO STA. 103+97.73

A ITEM 615 VARIES
0.0′ AT STA. 100+00.00 TO
12.0′ AT STA. 103+97.73



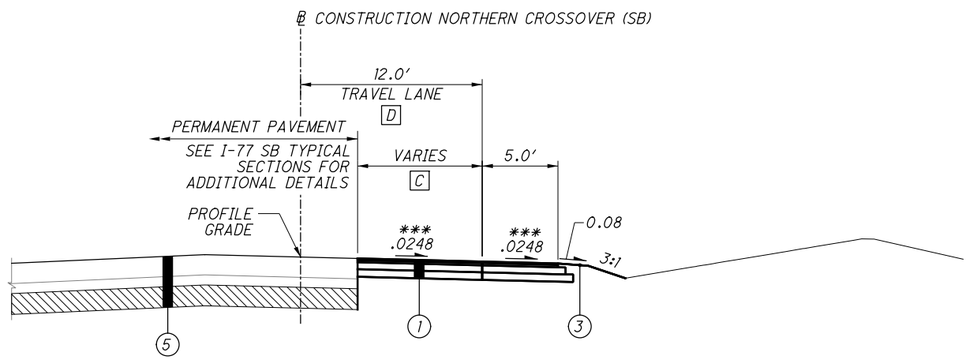
NORTHERN CROSSOVER (SB) PAVEMENT SECTION

STA. 103+97.73 TO STA. 113+39.12

B VARIES
5.0′ AT STA. 103+97.73 TO
STA. 112+75.06
5.0′ AT STA. 112+75.06 TO
0.0′ AT STA. 113+39.12

* TRANSITIONS FROM 0.0452 TO -0.0556,
STA. 111+43.12 TO STA. 112+75.06

** TRANSITIONS FROM 0.0452 TO -0.0248,
STA. 112+75.06 TO STA. 113+39.12



NORTHERN CROSSOVER (SB) - WIDENING EXISTING PAVEMENT

STA. 113+39.12 TO STA. 116+11.65

C ITEM 615 VARIES
12.0′ AT STA. 113+39.12 TO
1.5′ AT STA. 116+11.65

D TRAVEL LANE VARIES
12.0′ AT STA. 115+46.65 TO
11.0′ AT STA. 116+11.65

*** TRANSITIONS FROM 0.0248 TO 0.040,
STA. 114+76.06 TO STA. 116+11.65
TEMPORARY PAVEMENT CROSS SLOPE
SHALL MATCH PERMANENT PAVEMENT
SHOULDER SLOPE

LEGEND

(1) ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A

(2) TEMPORARY PAVEMENT (TO BE REMOVED)

(3) ITEM 659 - SEEDING AND MULCHING (TEMPORARY GRADING)

(4) ITEM 622 - PORTABLE BARRIER, 32"

(5) PERMANENT PAVEMENT - SEE I-77 TYPICAL SECTIONS FOR DETAILS

TYPICAL SECTIONS - NORTHERN CROSSOVER (SB) PAVEMENT

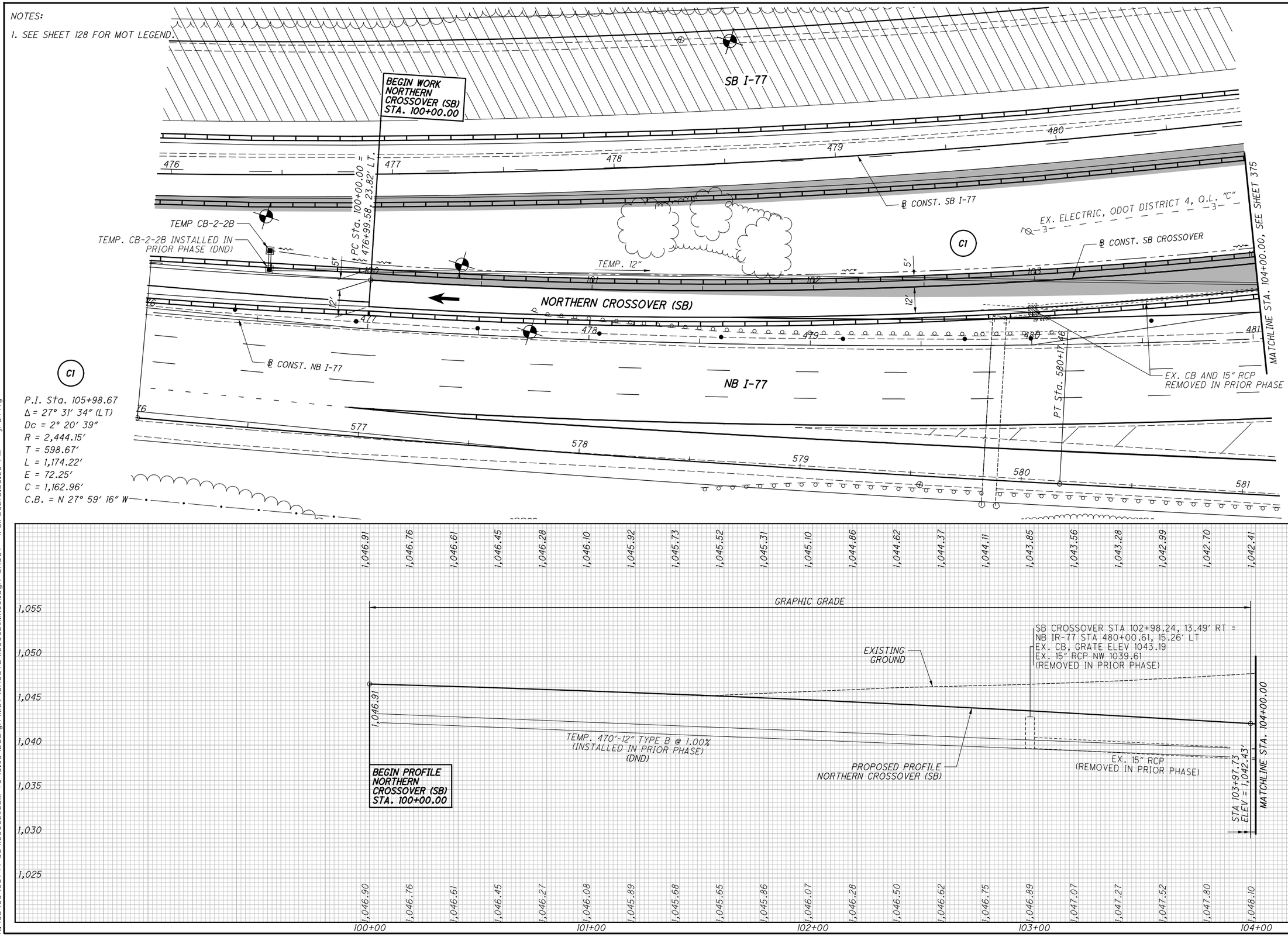
SUM-77/277/224
VARIOUS

373
1288

N:\03\60\06744-08\06002_SUM-76-10.95\Design\MOT\Sheets\06002_MY901.dgn Sheet 1/31/2021 5:55:59 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND.



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KMC
CHECKED SSR

PLAN & PROFILE - NORTHERN CROSSOVER (SB)
PHASE 3 - STA. 100+00.00 TO STA. 104+00.00

SUM-77/277/224
VARIOUS

374
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MH901.dgn Sheet 1/31/2021 5:56:08 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND.

C1

P.I. Sta. 105+98.67
Δ = 27° 31′ 34″ (LT)
Dc = 2° 20′ 39″
R = 2,444.15′
T = 598.67′
L = 1,174.22′
E = 72.25′
C = 1,162.96′
C.B. = N 27° 59′ 16″ W

SB I-77

NB I-77

MATCHLINE STA. 104+00.00, SEE SHEET 374

MATCHLINE STA. 109+00.00, SEE SHEET 376

℄ CONST. SB I-77

℄ CONST. NB I-77

℄ CONST. NORTHERN CROSSOVER (SB)

EX. ELECTRIC, ODOT DISTRICT 4, O.L. "C"

NORTHERN CROSSOVER (SB)

TEMP. CB-2-2B
+73.28
3.00′ LT

TEMP. 15″

TEMP. CB-2-2B

TEMP. 12″

TEMP. CB-2-2B

TEMP. 12″

TEMP. 18″

5′

12′

4′

5′

TEMP. 18″

ABANDON TEMP. CB-2-2B
INSTALLED IN PRIOR PHASE

TEMP. MH-3 INSTALLED
IN PRIOR PHASE (DND)

15″ RCP

+75.00
15.00′ RT

PC Sta. 285+64.96

TIE INTO
PERMANENT
PROPOSED DITCH

ABANDON TEMP. CB-2-2B
INSTALLED IN PRIOR PHASE
AND CONNECT PIPES THROUGH

TEMP. 18″

481 482 483 484 485 486 280

SB CROSSOVER STA. 104+24.07, 12.16′ RT =
NB IR-77 STA 481+27.46, 23.48′ LT
TEMP. CB-2-2B, GRATE ELEV 1042.33
(INSTALLED IN PRIOR PHASE)
(ABANDON CB AND CONNECT PIPES THROUGH)
TEMP. 12″ (S) 1038.32 (INSTALLED IN PRIOR PHASE)(DND)
15″ RCP (NW) 1038.07± (RECONNECTED IN PRIOR PHASE)(DND)

SB CROSSOVER
STA 105+00.00, 8.15′ LT
TEMP. CB-2-2B
GRATE ELEV 1040.92
TEMP. 15″ (NW) 1038.17

SB CROSSOVER STA 105+64.27, 18.53′ RT =
NB IR-77 STA 482+69.55, 27.63′ LT
TEMP. MH-3, RIM ELEV 1041.40 (INSTALLED IN PRIOR PHASE)(DND)
15″ RCP (SE) 1036.35± (RECONNECTED IN PRIOR PHASE)(DND)
TEMP. 18″ (NW) 1036.10 (INSTALLED IN PRIOR PHASE)(DND)
TEMP. 18″ (SW) 1036.45 (INSTALL IN THIS PHASE)

SB CROSSOVER STA 105+66.24, 8.15′ LT
TEMP. CB-2-2B, GRATE ELEV 1040.72
TEMP. 12″ (NW) 1037.72
TEMP. 15″ (SE) 1037.47
TEMP. 18″ (NE) 1036.72

SB CROSSOVER STA 106+34.00, 8.15′ LT
TEMP. CB-2-2B, GRATE ELEV 1040.92
TEMP. 12″ (SE) 1038.42

SB CROSSOVER STA 107+78.28, 44.01′ RT =
NB IR-77 STA 484+89.17, 24.07′ LT
TEMP. CB-2-2B, GRATE ELEV 1037.82
(INSTALLED IN PRIOR PHASE)
(ABANDON CB AND CONNECT PIPES THROUGH)
TEMP. 18″ (SE) 1033.59 (INSTALLED IN PRIOR PHASE)(DND)
TEMP. 18″ (NW) 1033.59 (INSTALLED IN PRIOR PHASE)(DND)

PROPOSED PROFILE
NORTHERN CROSSOVER (SB)

EXISTING GROUND

-1.47 %

+1.18 %

+1.18 %

EX. 15″ RCP (RT) (DND)

TEMP. 12″ TYPE B
(INSTALLED IN PRIOR PHASE)
(DND)

TEMP. 66′-15″ TYPE C @ 1.06% (LT)

P.V.I STA. 105+50.04
ELEV = 1,040.21′
304.62′ VC

EX. 15″ RCP (RT)
(REMOVED IN PRIOR PHASE)

TEMP. 68′-12″ TYPE C @ 1.03% (LT)

STA 107+02.35
ELEV = 1,042.00′

EX. ELECTRIC,
ODOT DISTRICT 4, O.L. "C"

TEMP. 218′-18″
TYPE C @ 1.15% (RT)
(INSTALLED IN PRIOR PHASE)
(DND)

TEMP. 135′-18″ TYPE B @ 1.16%
(INSTALLED IN PRIOR PHASE)
(DND)

1,042.14 1,041.90 1,041.70 1,041.53 1,041.40 1,041.30 1,041.24 1,041.21 1,041.21 1,041.26 1,041.33 1,041.44 1,041.59 1,041.77 1,041.98 1,042.22 1,042.46 1,042.69 1,042.93 1,043.17 1,043.40 1,043.64 1,043.88 1,044.11 1,044.35

1,047.65 1,047.12 1,046.58 1,046.04 1,045.53 1,045.08 1,044.63 1,044.19 1,043.74 1,043.29 1,042.75 1,042.19 1,041.39 1,041.84 1,042.20 1,042.58 1,042.99 1,043.41 1,043.86 1,044.33 1,044.82 1,045.32 1,045.86 1,046.40 1,046.99

1,050 1,055 1,045 1,040 1,035 1,030 1,025

104+00 105+00 106+00 107+00 108+00 109+00

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KMC
CHECKED SSR

PLAN & PROFILE - NORTHERN CROSSOVER (SB)
PHASE 3 - STA. 104+00.00 TO STA. 109+00.00

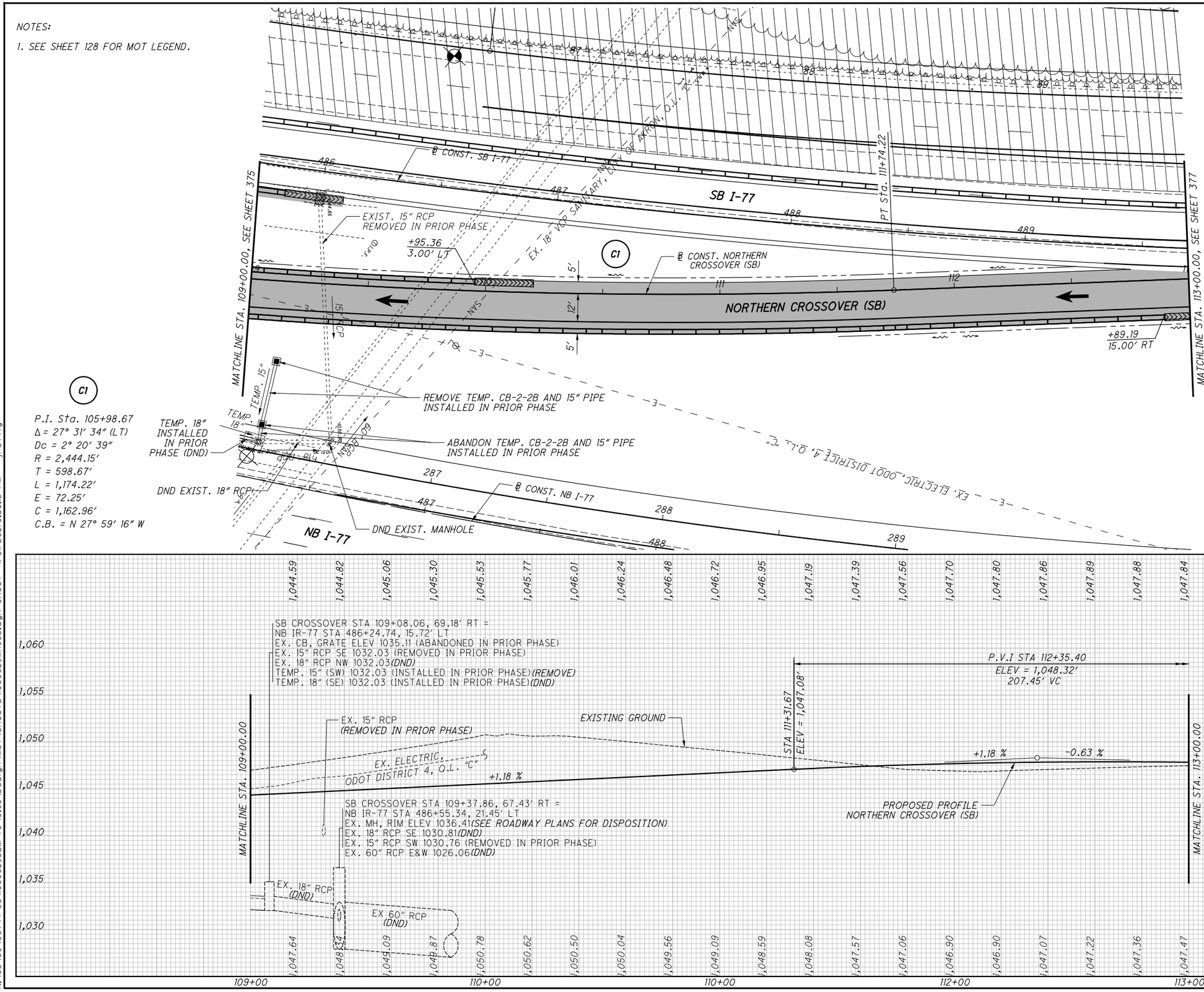
SUM-77/277/224
VARIOUS

375
1288

N:\03\60\06744-08\06002_SUM-76-10.95\Design\MOT\Sheets\06002_MH902.dgn Sheet 1/31/2021 5:56:11 PM jrettig

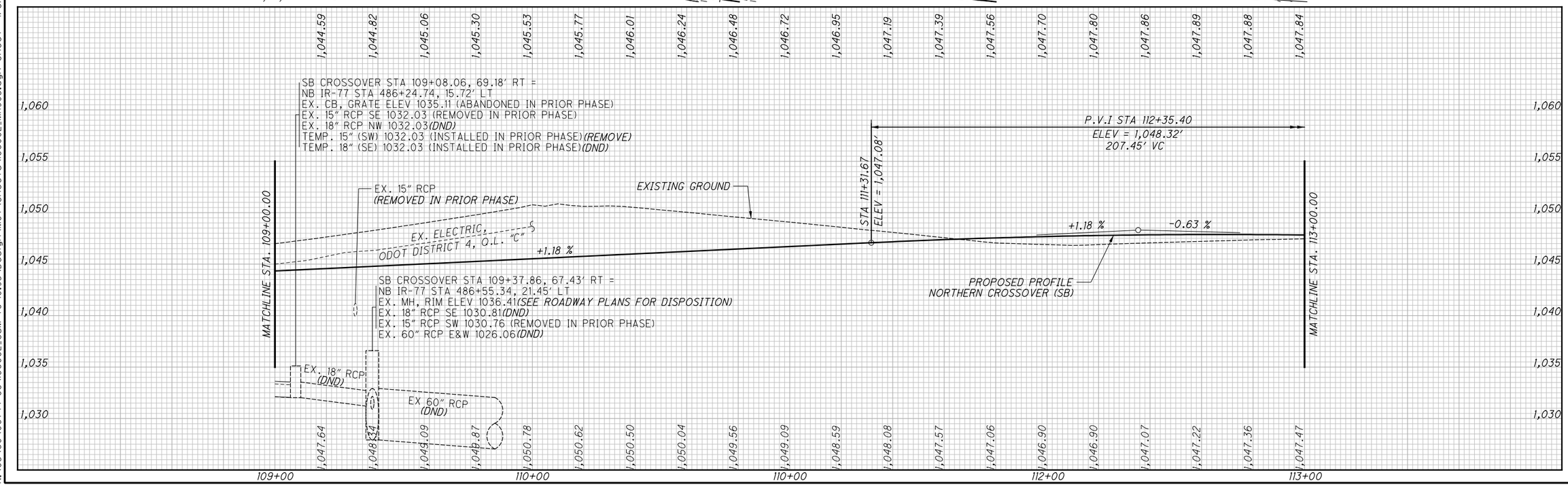
NOTES:

1. SEE SHEET 128 FOR MOT LEGEND.



C1

P.I. Sta. 105+98.67
Δ = 27° 31' 34" (LT)
Dc = 2° 20' 39"
R = 2,444.15'
T = 598.67'
L = 1,174.22'
E = 72.25'
C = 1,162.96'
C.B. = N 27° 59' 16" W



HORIZONTAL SCALE IN FEET
0 10 20 40

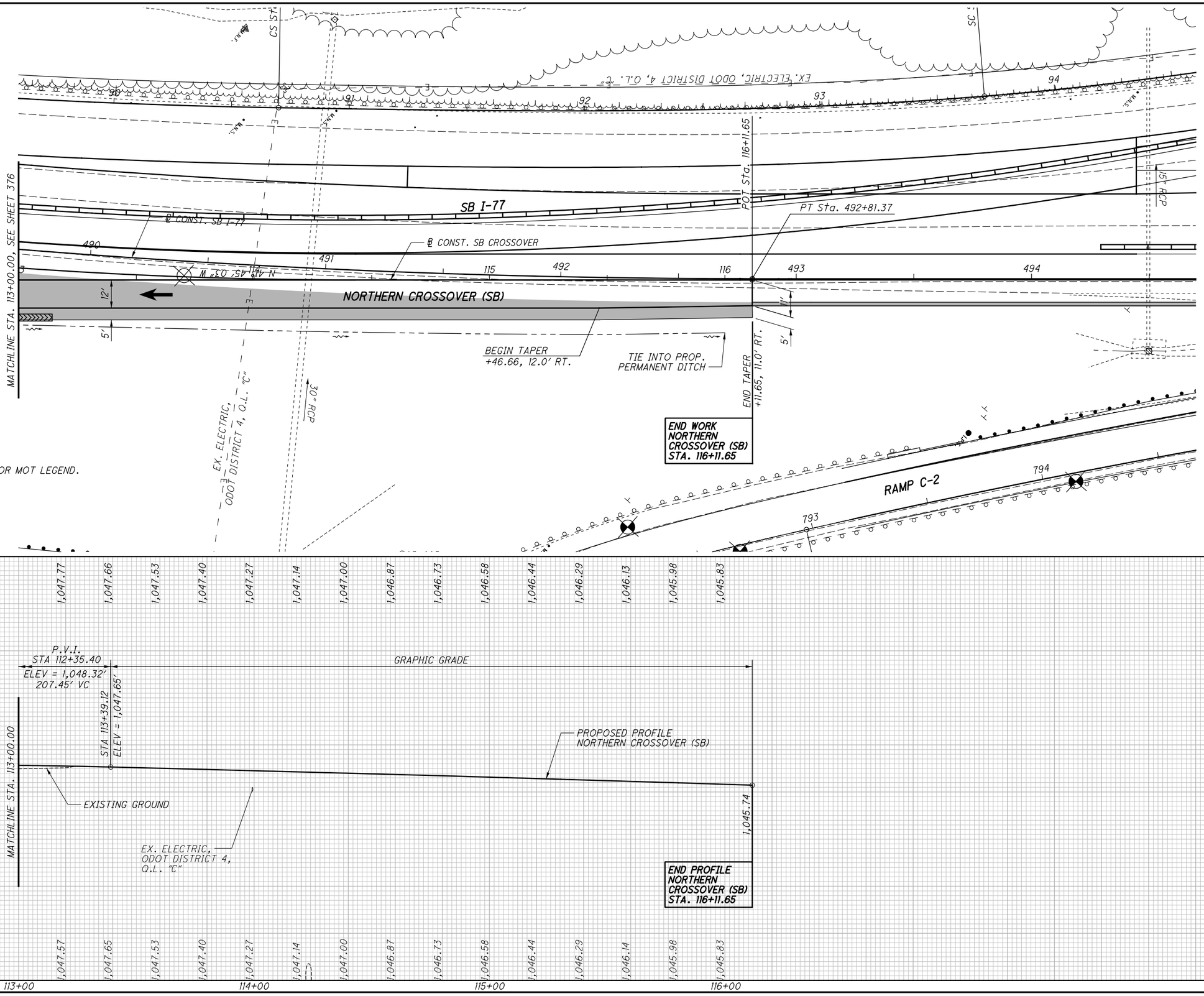
CALCULATED KMC
CHECKED SSR

PLAN & PROFILE - NORTHERN CROSSOVER (SB)
PHASE 3 - STA. 109+00.00 TO STA. 113+00.00

SUM-77/277/224
VARIOUS

376
1288

N:\03\60\06744-08\06002_SUM-76-10.95\Design\MOT\Sheets\06002_MH903.dgn Sheet 1/31/2021 5:56:13 PM jrettig



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KMC
CHECKED SSR

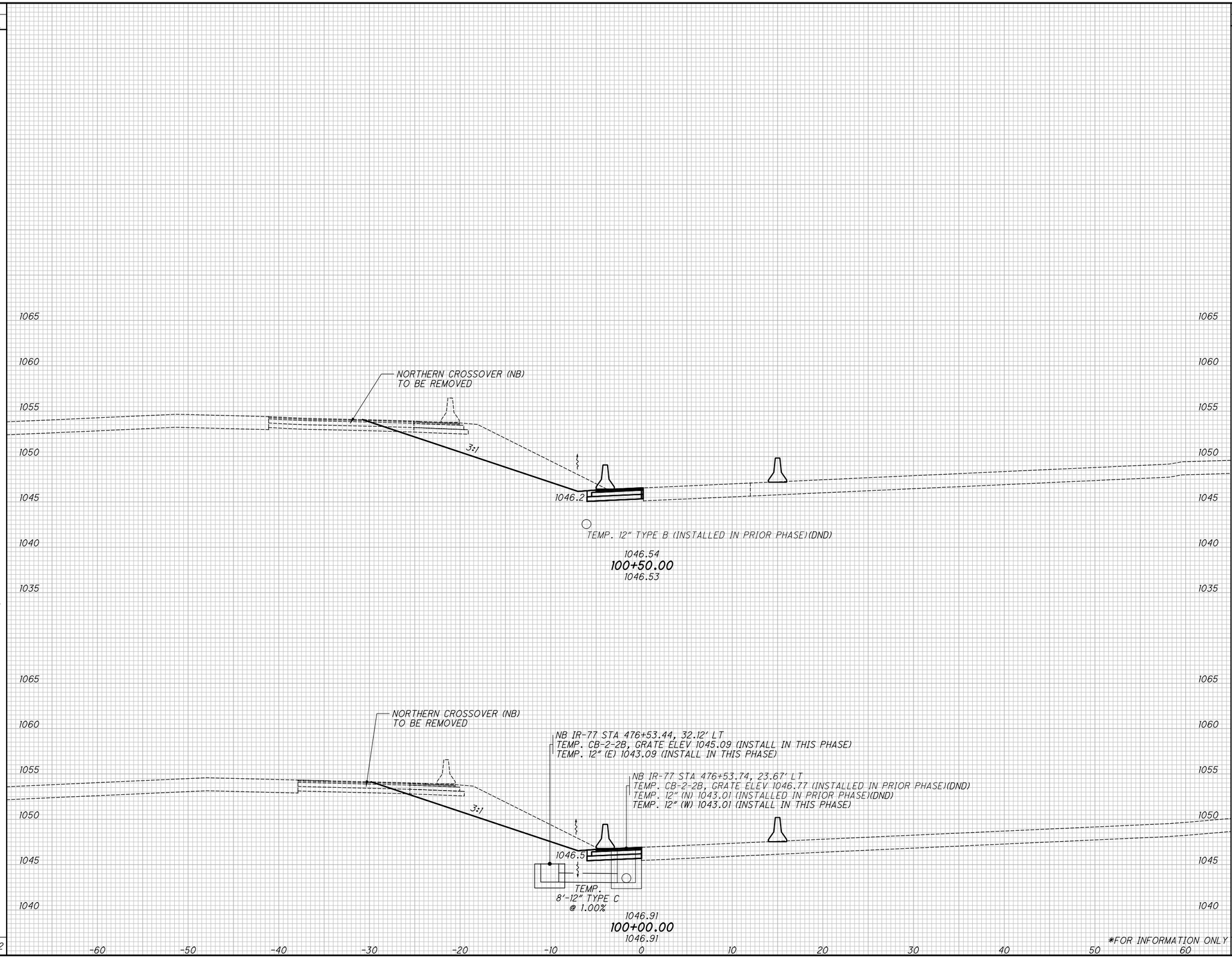
PLAN & PROFILE - NORTHERN CROSSOVER (SB)
PHASE 3 - STA. 113+00.00 TO STA. 116+11.65

SUM-77/277/224
VARIOUS

377
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MH904.dgn Sheet 1/31/2021 5:56:16 PM jrettig

SEEDING	
END WIDTH	SQ. YDS.
26	142
25	
*142	



END AREA	
CUT	FILL
54	0
45	0
*92	*0

VOLUME	
CUT	FILL
92	0
*92	*0

CALCULATED	CHECKED
KMC	SSR

CROSS SECTIONS - NORTHERN CROSSOVER (SB)
PHASE 3 - STA. 100+00.00 TO STA. 100+50.00

SUM-77 / 277 / 224
VARIOUS

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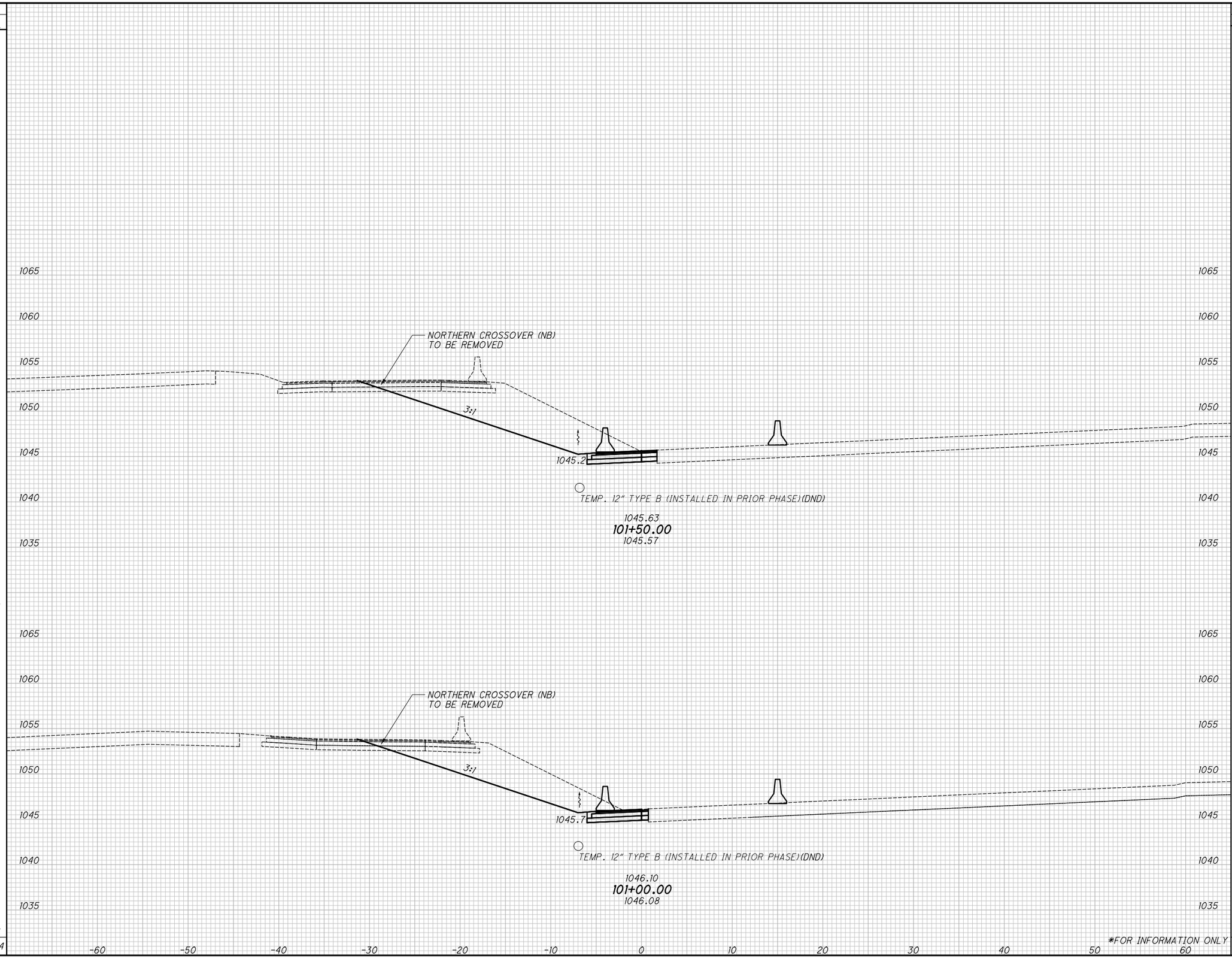
SEEDING	
END WIDTH	SQ. YDS.
27	148
27	146
	*294



END AREA		VOLUME	
CUT	FILL	CUT	FILL
86	0		
70	0		
		144	0
		115	0
		*259	*0

CALCULATED KMC
CHECKED SSR

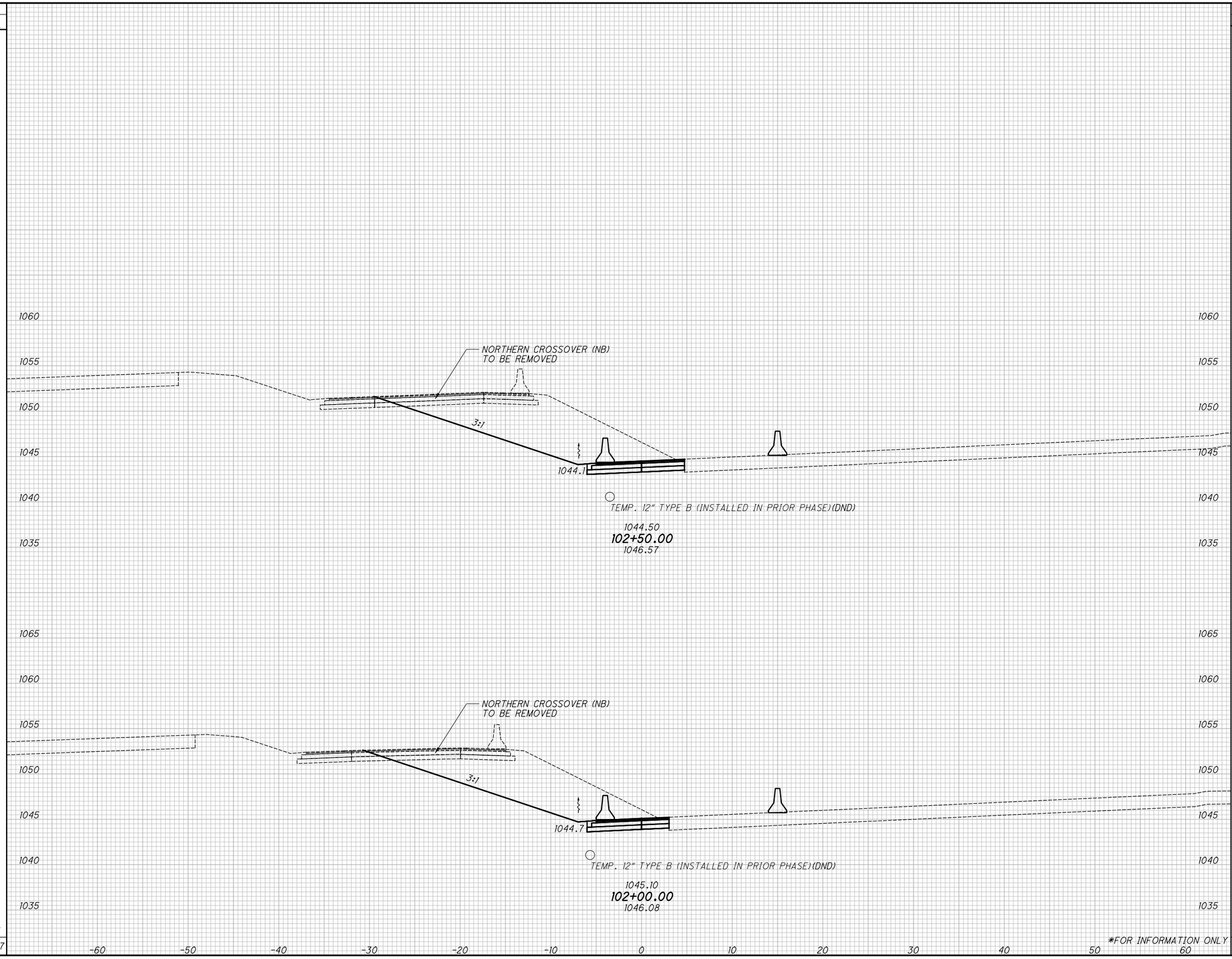
CROSS SECTIONS - NORTHERN CROSSOVER (SB)
PHASE 3 - STA. 101+00.00 TO STA. 101+50.00

SUM-77/277/224
VARIOUS

379
1288

N:\03\60\06744-08\106002-SUM-76-10.95\Design\MOT\Basemaps\106002_BM5ll.dgn CL_P_MOT_SB001 1/31/2021 5:56:37 PM jrettig

SEEDING	
END WIDTH	SQ. YDS.
25	
141	
26	
146	
*287	



END AREA	
CUT	FILL
113	0
101	0
*FOR INFORMATION ONLY	

VOLUME	
CUT	FILL
198	0
173	0
*371	*0

CALCULATED KMC
CHECKED SSR

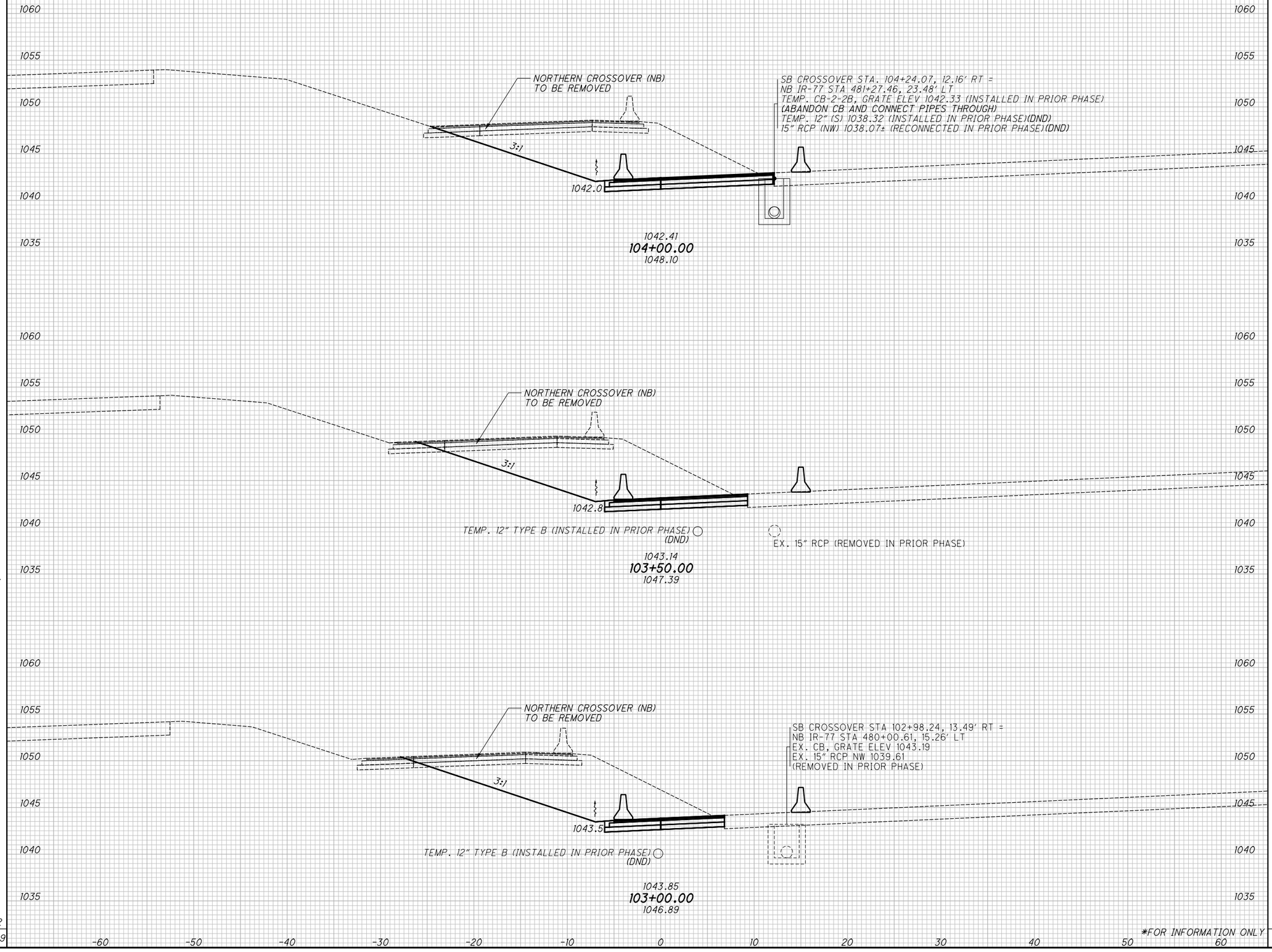
CROSS SECTIONS - NORTHERN CROSSOVER (SB)
PHASE 3 - STA. 102+00.00 TO STA. 102+50.00

SUM-77/277/224
VARIOUS

380
1288

N:\03\60\06744-08\106002-SUM-76-10.95\Design\MOT\Basemaps\106002_BM5ll.dgn CL_P_MOT_SB001 1/31/2021 5:56:37 PM jrettig

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
20	114	127	0	231	0
21	123	122	0	220	0
23	132	116	0	212	0
	*369			*663	*0



CALCULATED KMC
CHECKED SSR

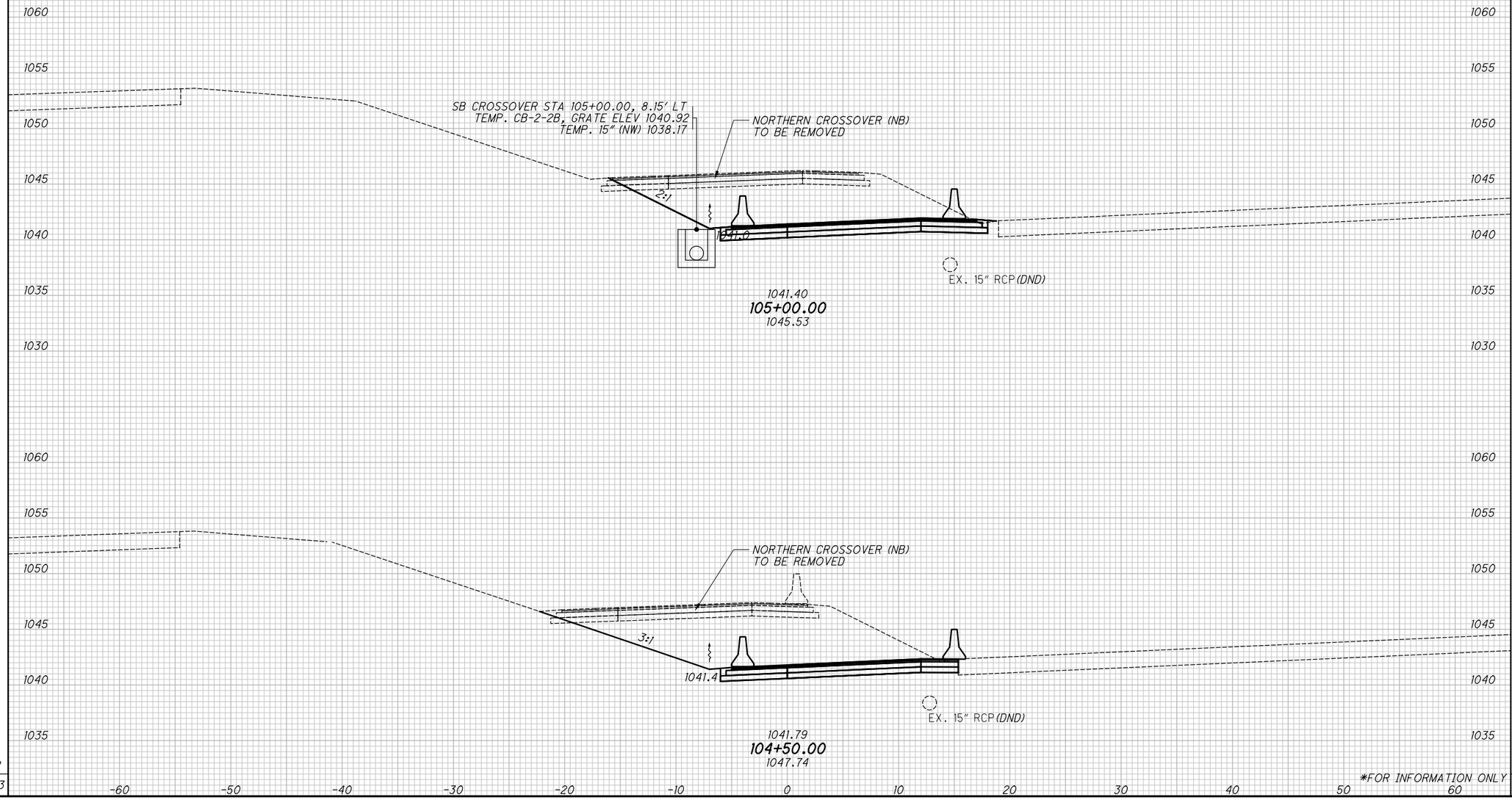
CROSS SECTIONS - NORTHERN CROSSOVER (SB)
PHASE 3 - STA. 103+00.00 TO STA. 104+00.00

SUM-77 / 277 / 224
VARIOUS

381
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Basemaps\106002_BM511.dgn CL_P_MOT_SB001 1/31/2021 5:56:38 PM jrettig

SEEDING	
END WIDTH	SQ. YDS.
12	
	81
17	
102	
*183	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
112	0		
		221	0
127	0		
		235	0
		*456	*0

CALCULATED KMC
CHECKED SSR

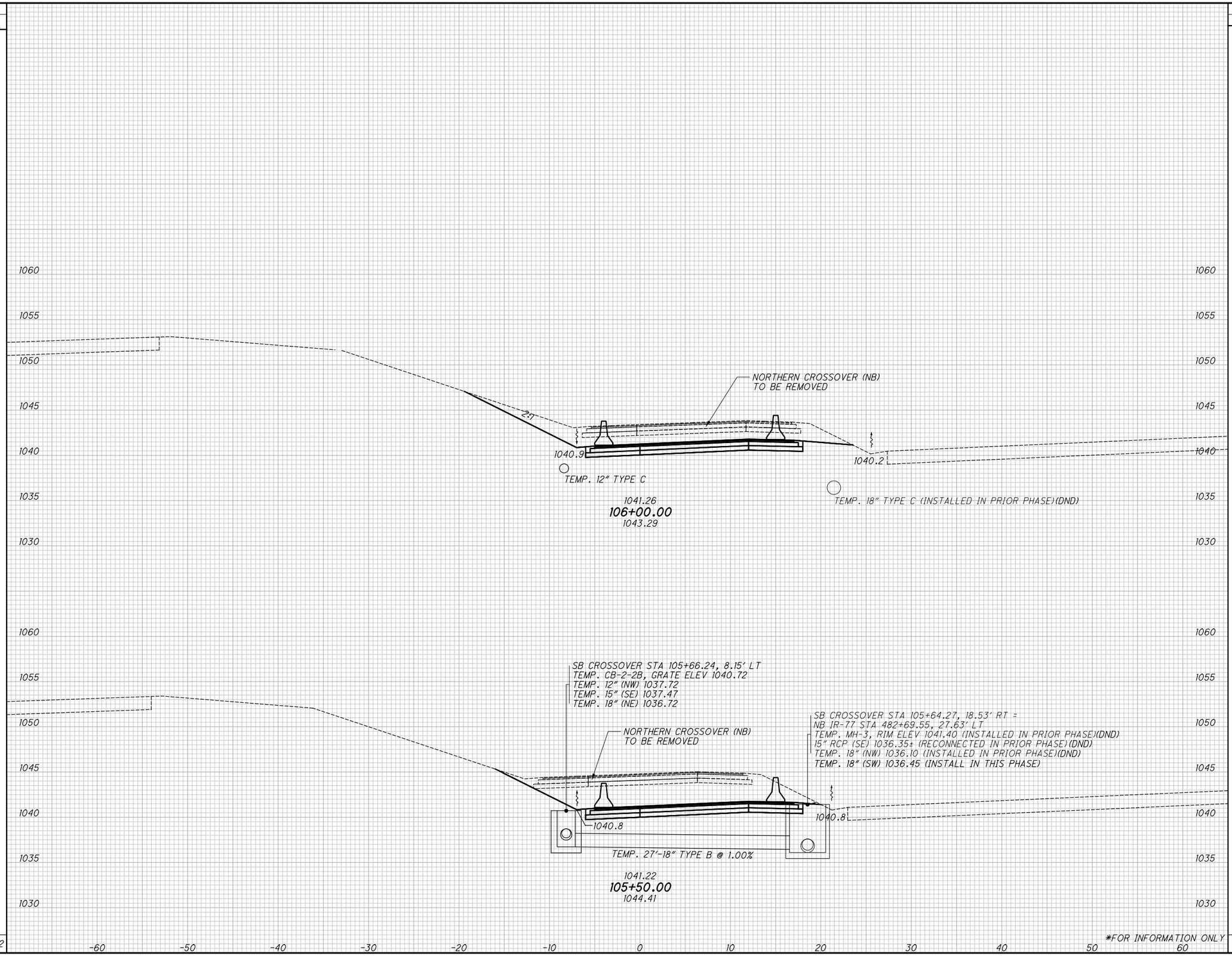
CROSS SECTIONS - NORTHERN CROSSOVER (SB)
PHASE 3 - STA. 104+50.00 TO STA. 105+00.00

SUM-77 / 277 / 224
VARIOUS

382
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Basemaps\106002_BM511.dgn CL_P_MOT_SB001 1/31/2021 5:56:38 PM jrettig

SEEDING	
END WIDTH	SQ. YDS.
20	93
13	69
	*162



END AREA		VOLUME	
CUT	FILL	CUT	FILL
73	0		
94	0	155	0
		191	0
		*346	*0

CALCULATED	CHECKED
KMC	SSR

CROSS SECTIONS - NORTHERN CROSSOVER (SB)
PHASE 3 - STA. 105+50.00 TO STA. 106+00.00

SUM-77/277/224
VARIOUS

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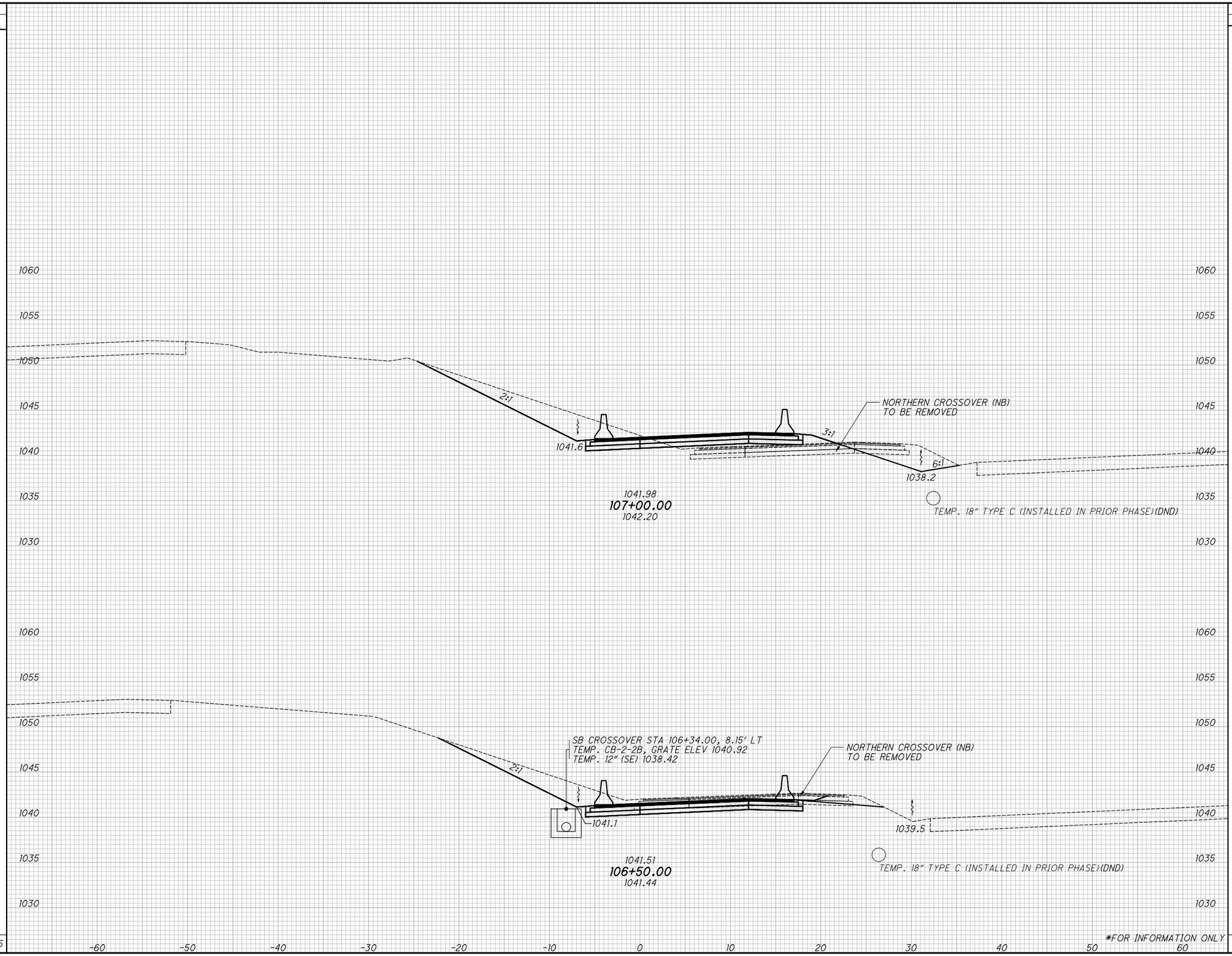
SEEDING	
END WIDTH	SQ. YDS.
39	183
27	132
	*315



END AREA	
CUT	FILL
60	5
47	1
*FOR INFORMATION ONLY	

VOLUME	
CUT	FILL
99	6
111	1
*210	*7

CALCULATED KMC
CHECKED SSR

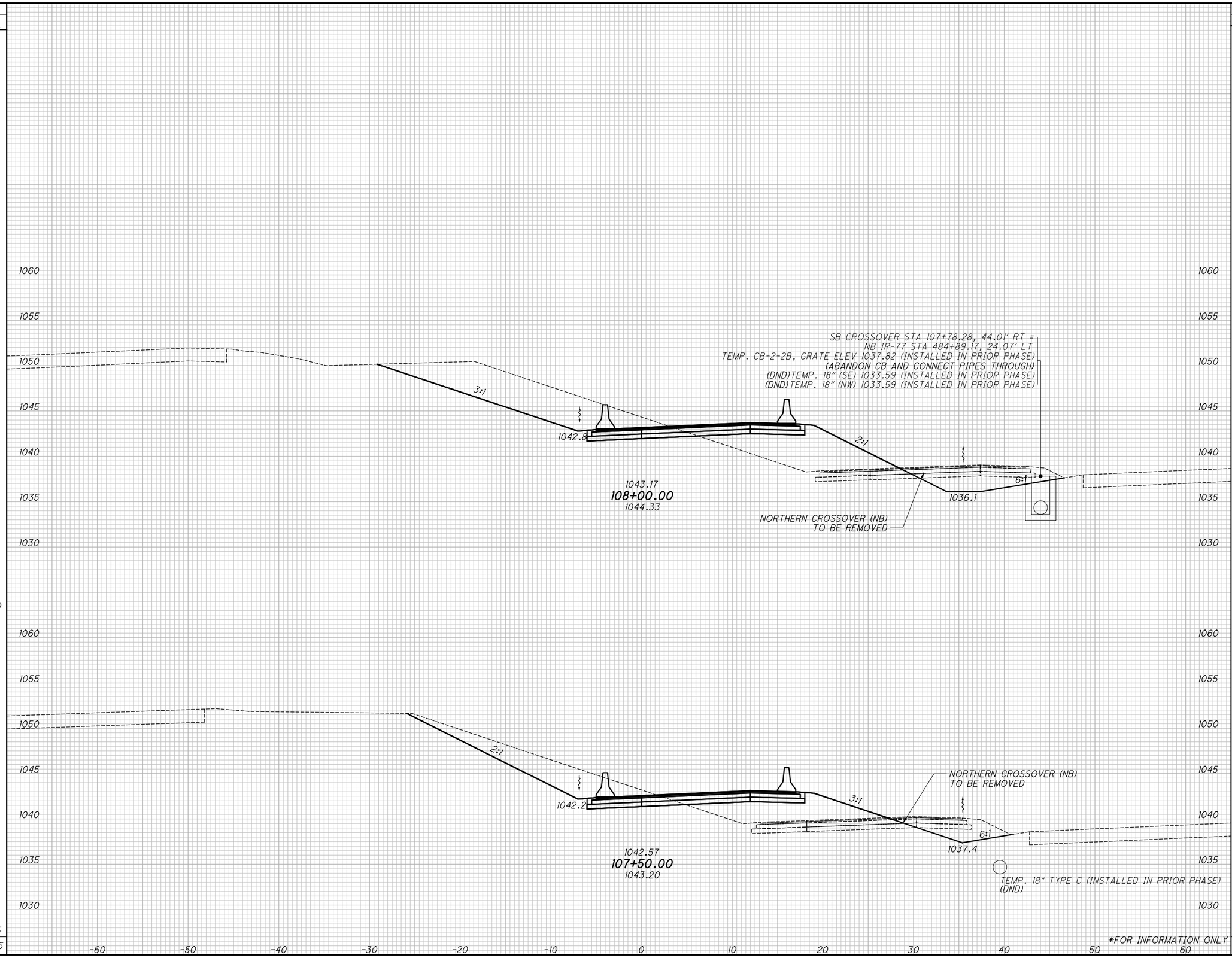
CROSS SECTIONS - NORTHERN CROSSOVER (SB)
PHASE 3 - STA. 106+50.00 TO STA. 107+00.00

SUM-77 / 277 / 224
VARIOUS

384
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Basemaps\106002_BM5ii.dgn CL_P_MOT_SB00ii 1/31/2021 5:56:39 PM jrettig

SEEDING	
END WIDTH	SQ. YDS.
55	
	280
46	
	235
	*515



END AREA		VOLUME	
CUT	FILL	CUT	FILL
116	54		
		173	84
71	37		
		121	39
		*294	*123

CALCULATED KMC
CHECKED SSR

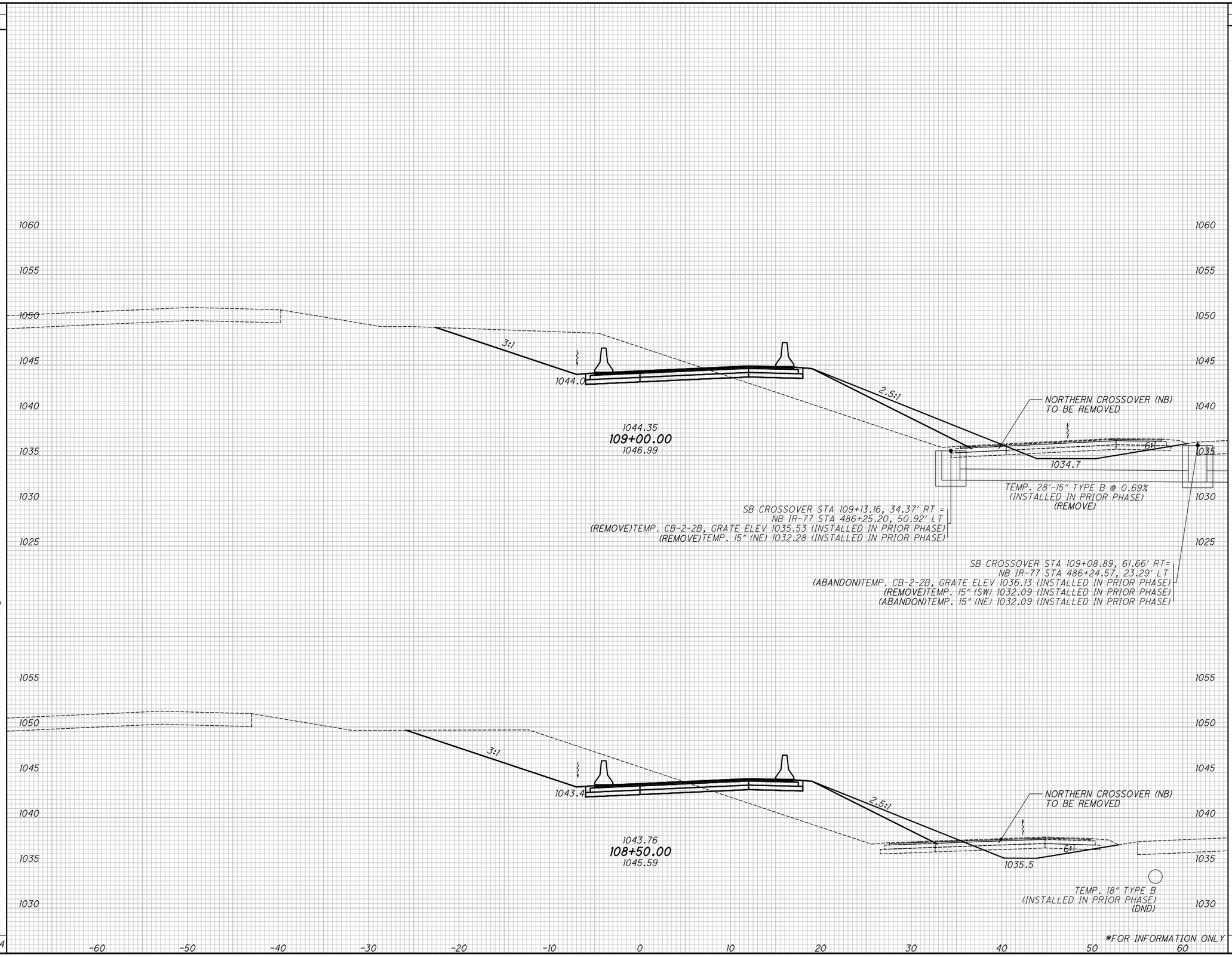
CROSS SECTIONS - NORTHERN CROSSOVER (SB)
PHASE 3 - STA. 107+50.00 TO STA. 108+00.00

SUM-77/277/224
VARIOUS

385
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Basemaps\106002_BM5ll.dgn CL_P_MOT_SB00l l/31/2021 5:56:39 PM jrettig

SEEDING	
END WIDTH	SQ. YDS.
62	332
58	312
	*644



*FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
98	73		
106	73		
190	135		
206	118		
*396	*253		

CALCULATED KMC
CHECKED SSR

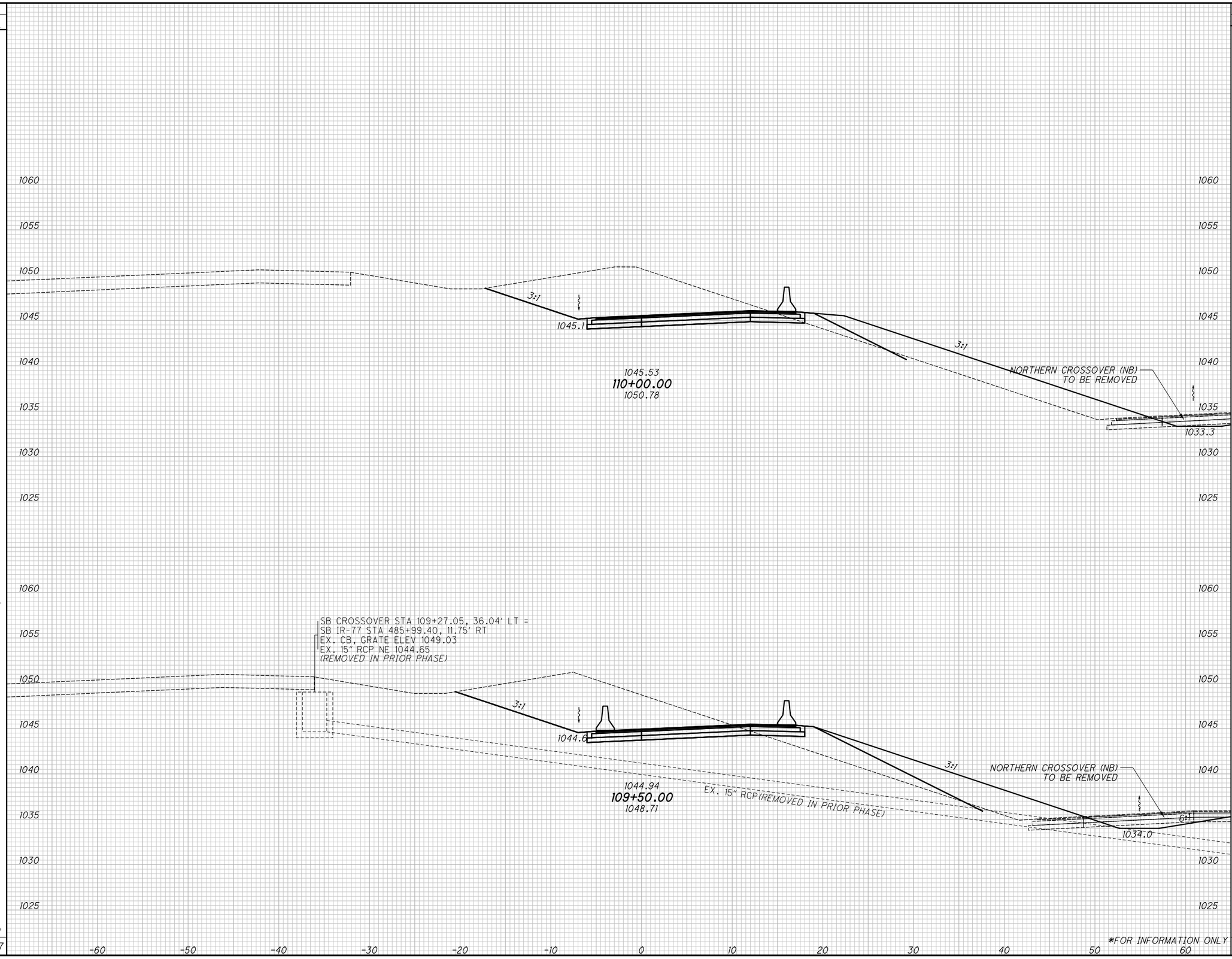
CROSS SECTIONS - NORTHERN CROSSOVER (SB)
PHASE 3 - STA. 108+50.00 TO STA. 109+00.00

SUM-77/277/224
VARIOUS

386
1288

N:\03\60\06744-08\106002-SUM-76-10.95\Design\MOT\Basemaps\106002_BM5ll.dgn CL_P_MOT_SB001 1/31/2021 5:56:39 PM jrettig

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
61					
	347			231	143
64					
	350			206	141
	*697			*437	*284



*FOR INFORMATION ONLY

CALCULATED KMC
CHECKED SSR

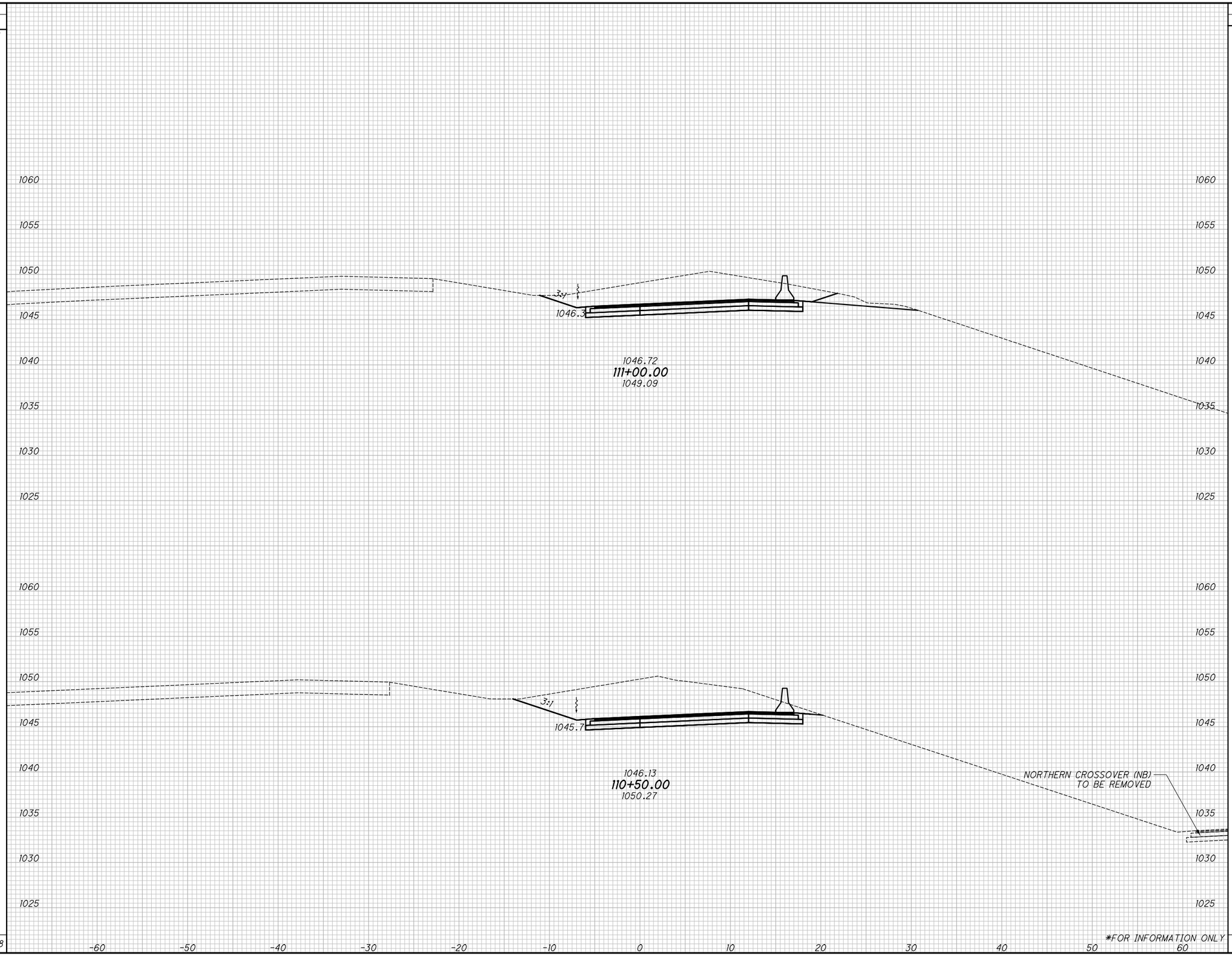
CROSS SECTIONS - NORTHERN CROSSOVER (SB)
PHASE 3 - STA. 109+50.00 TO STA. 110+00.00

SUM-77/277/224
VARIOUS

387
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Basemaps\106002_BM5ii.dgn CL_P_MOT_SB001 1/31/2021 5:56:40 PM jrettig

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
18	80	101	0	203	0
11	198	118	0	226	69
	*278			*429	*69



*FOR INFORMATION ONLY

CALCULATED KMC
CHECKED SSR

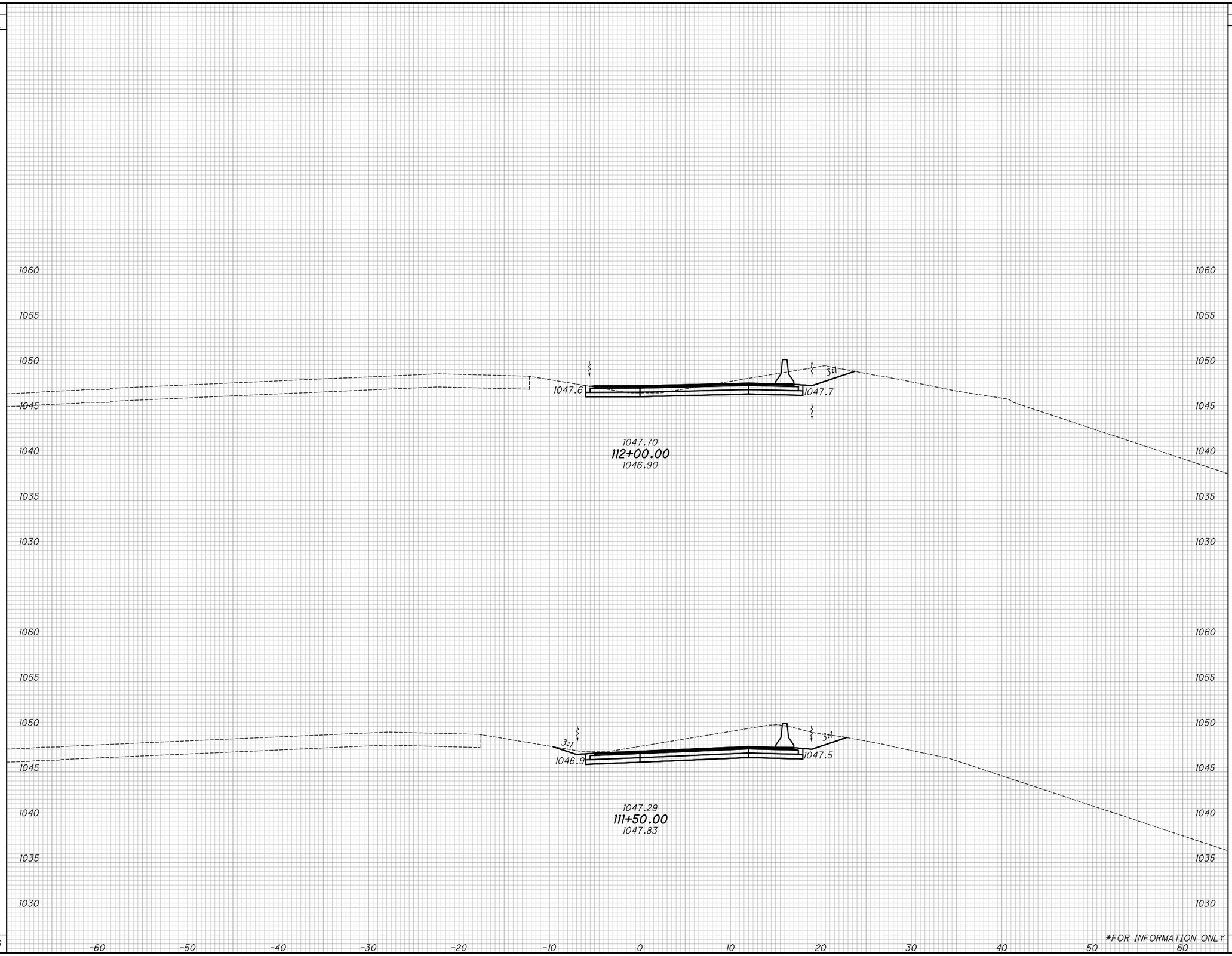
CROSS SECTIONS - NORTHERN CROSSOVER (SB)
PHASE 3 - STA. 110+50.00 TO STA. 111+00.00

SUM-77/277/224
VARIOUS

388
1288

emaps SUM0002_RVSH.dgn CL P_NOT_SB001 1/31/2021 5:56:40 PM jcutting

SEEDING	
END WIDTH	SQ. YDS.
6	41
9	75
	*116



END AREA		VOLUME	
CUT	FILL	CUT	FILL
37	0		
66	0	95	0
		155	0
		*250	*0

CALCULATED KMC
CHECKED SSR

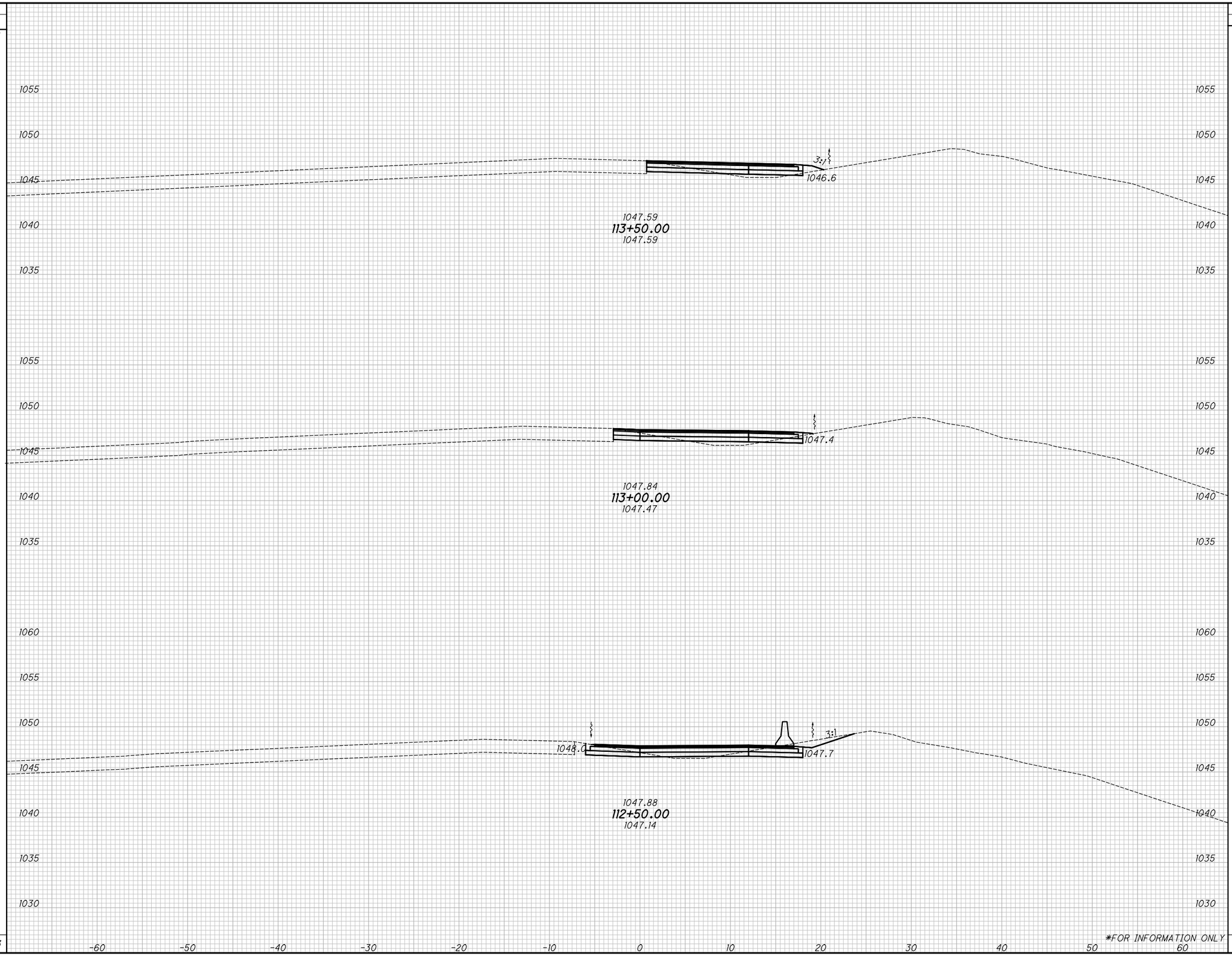
CROSS SECTIONS - NORTHERN CROSSOVER (SB)
PHASE 3 - STA. 111+50.00 TO STA. 112+00.00

SUM-77/277/224
VARIOUS

389
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Basemaps\106002_BM511.dgn CL_P_MOT_SB001 1/31/2021 5:56:40 PM jrettig

SEEDING END WIDTH	SEEDING SQ. YDS.
2	10
1	20
6	33
	*63



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
6	2		
		12	4
7	2		
		21	2
16	0		
		49	0
		*82	*6

*FOR INFORMATION ONLY

CALCULATED KMC
CHECKED SSR

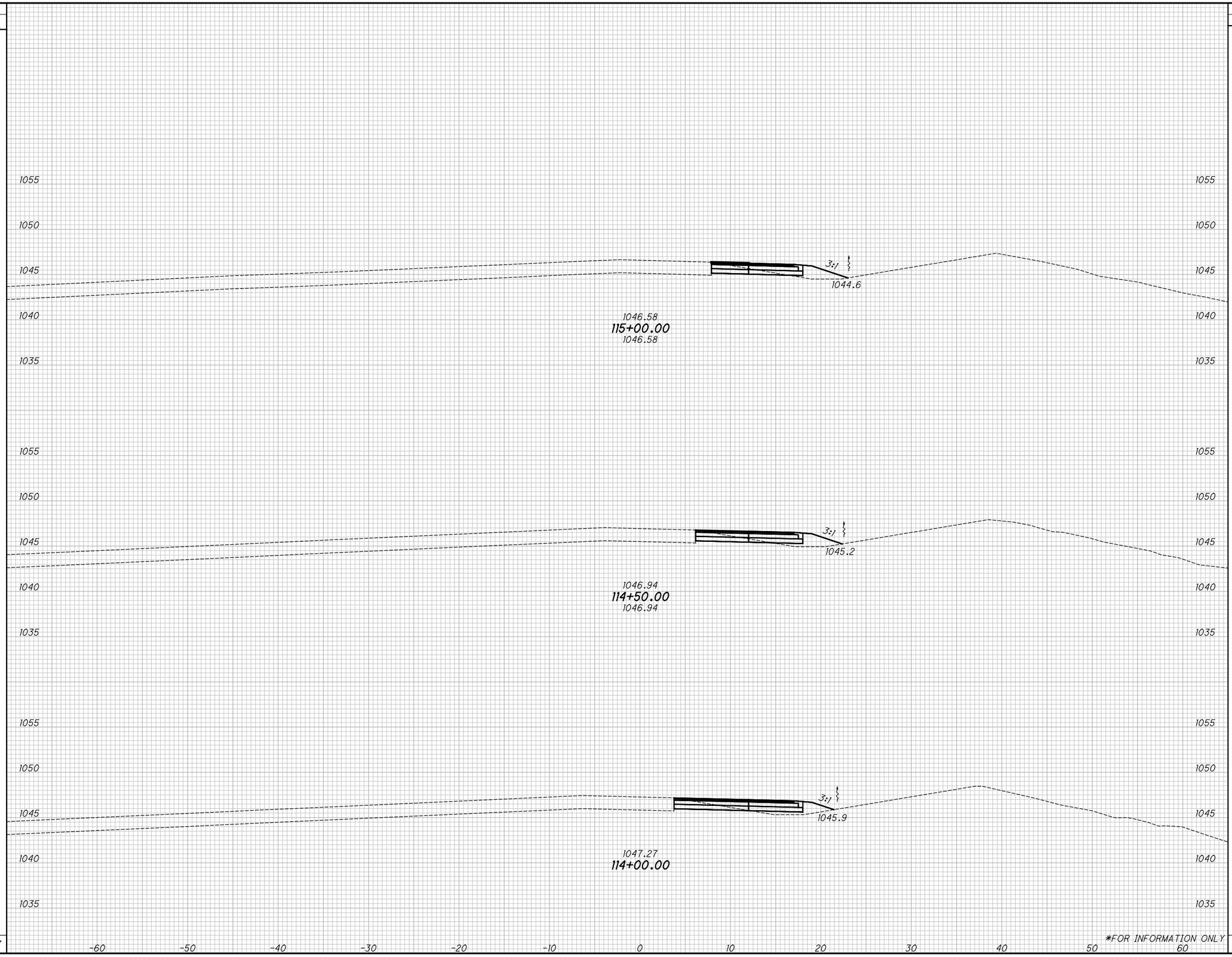
CROSS SECTIONS - NORTHERN CROSSOVER (SB)
PHASE 3 - STA. 112+50.00 TO STA. 113+50.00

SUM-77/277/224
VARIOUS

390
1288

emaps\8106002_RW41.dgn GL_B_MOT_SB001 1/31/2021 5:56:40 PM jsattig

SEEDING	
END WIDTH	SQ. YDS.
5	27
5	23
4	17
	*67



END AREA	
CUT	FILL
5	5
5	5
5	4

VOLUME	
CUT	FILL
9	9
9	8
10	6
*28	*23

*FOR INFORMATION ONLY

CALCULATED KMC
CHECKED SSR

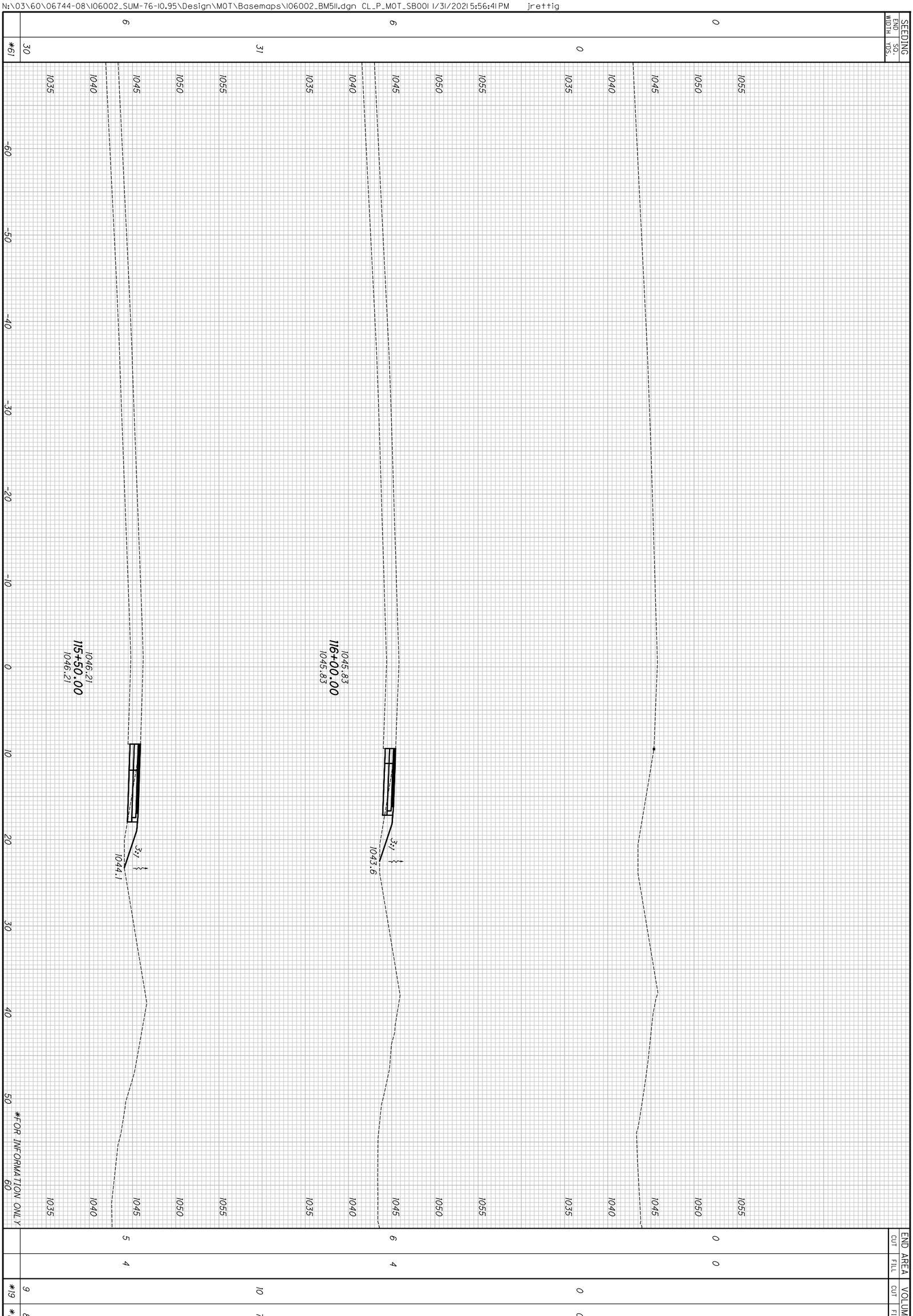
CROSS SECTIONS - NORTHERN CROSSOVER (SB)
PHASE 3 - STA. 114+00.00 TO STA. 115+00.00

SUM-77/277/224
VARIOUS

391
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Basemaps\106002_BM5ii.dgn CL_P_MOT_SB001 1/31/2021 5:56:41 PM jrettig

N:\03\60\06744-08\I06002_SUM-76-10.95\Design\MOT\Basemaps\I06002_BM5II.dgn CL_P_MOT_SB00I 1/3I/2021 5:56:4I PM jrettig

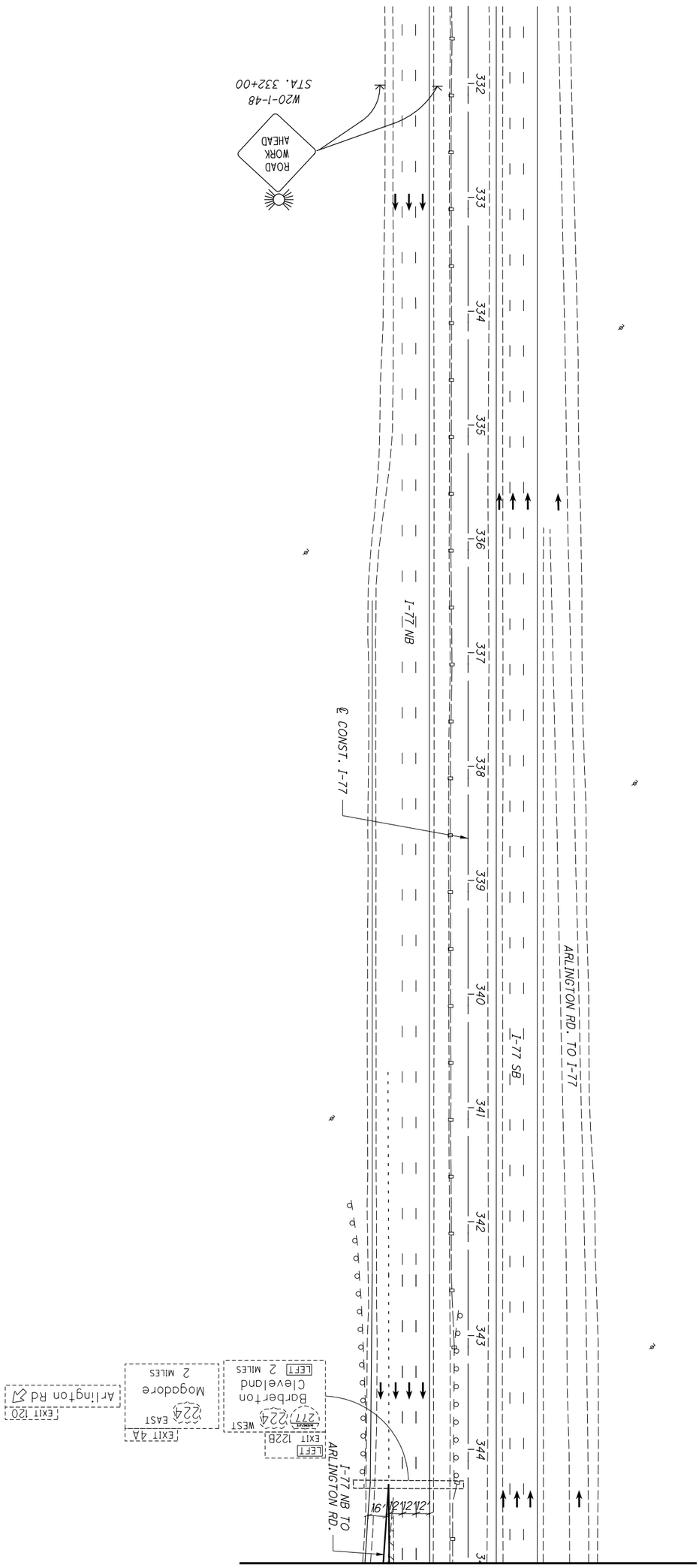


392 / 1288	SUM-77 / 277 / 224 VARIOUS
CROSS SECTIONS - NORTHERN CROSSOVER (SB) PHASE 3 - STA. 115+50.00 TO STA. 116+00.00	CALCULATED KMC / CHECKED SSR

N:\03\60\06744-08\I06002_SUM-76-I0.95\Design\MOT\Sheets\I06002_MP405.dgn Sheet 1/31/2021 5:56:47 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

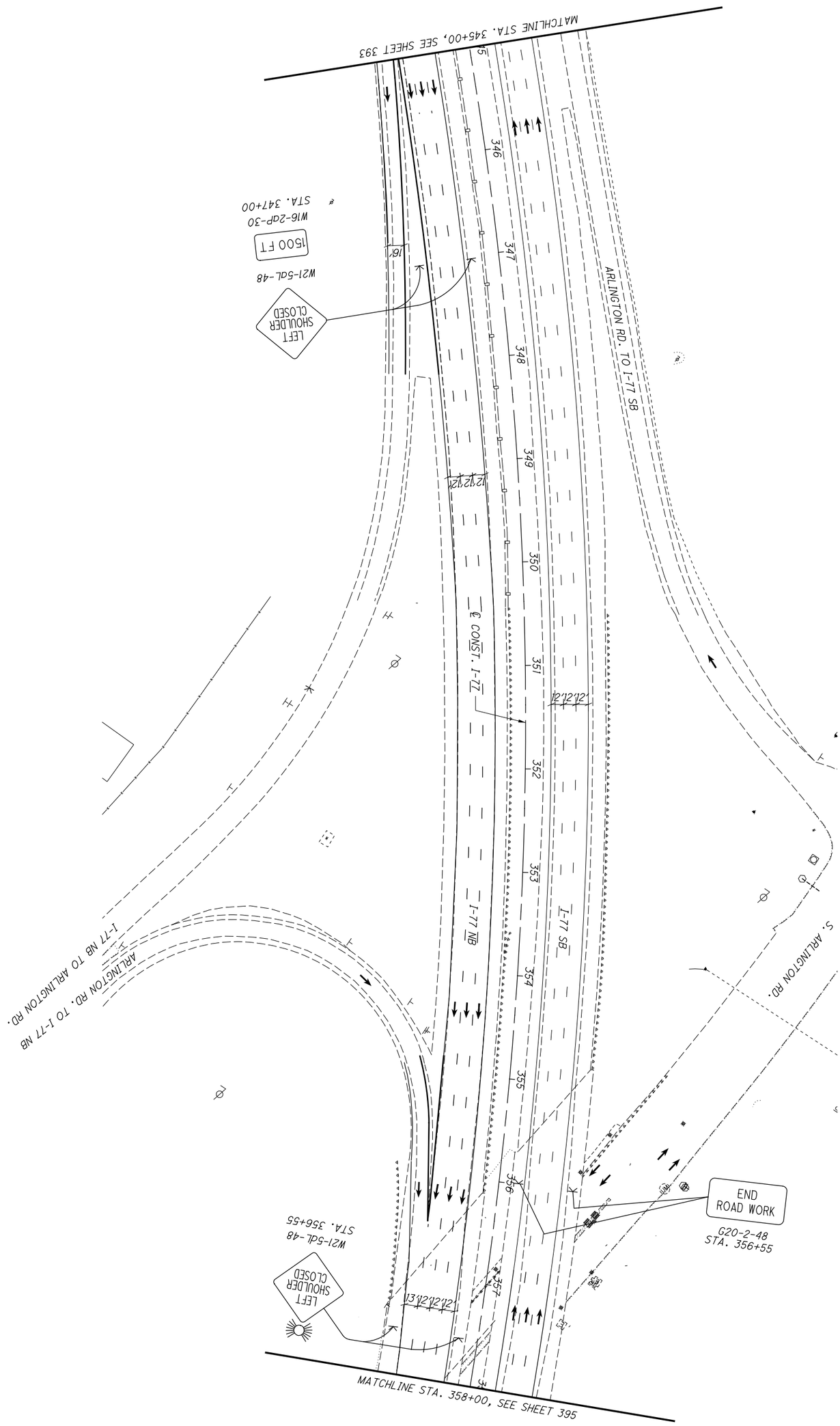


393 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 4 I-77 - SOUTH LIMITS TO STA. 345+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

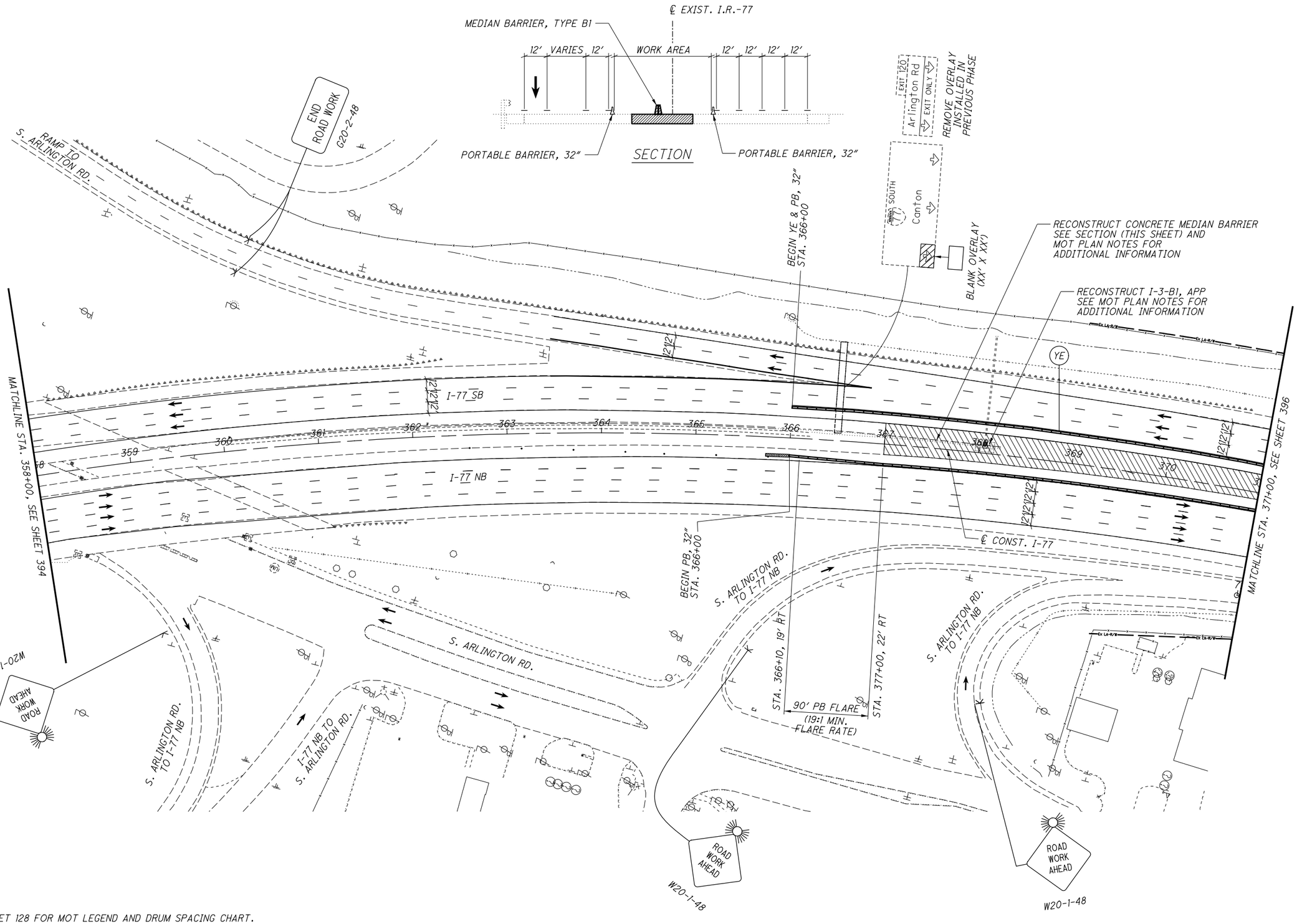
N:\03\60\06744-08\I06002_SUM-76-I0.95\Design\MOT\Sheets\I06002_MP406.dgn Sheet 1/31/2021 5:56:50 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



394 / 1288	SUM-77/277/224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 4 I-77 - STA. 345+00 TO STA. 358+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET



NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.

2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

HORIZONTAL SCALE IN FEET
0 25 50 100

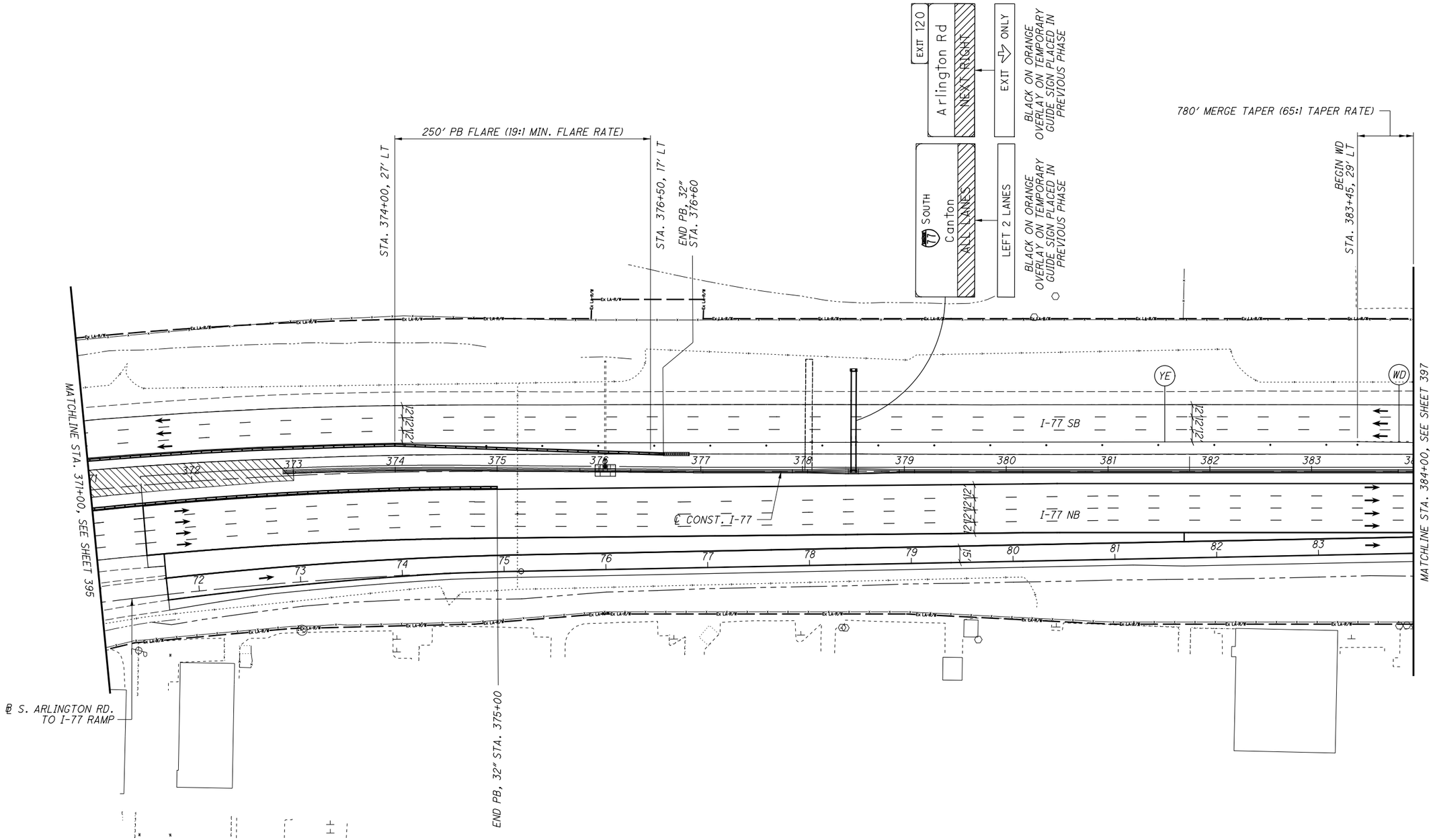
CALCULATED .
CHECKED .

MAINTENANCE OF TRAFFIC PLAN - PHASE 4
I-77 - STA. 358+00 TO STA. 371+00

SUM-77/277/224
VARIOUS

395
1288

N:\03\60\06744-08\06002_SUM-76-10.95\Design\MOT\Sheets\06002_MP407.dgn Sheet 1/31/2021 5:56:54 PM jrettig



NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.

2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED .
CHECKED .

MAINTENANCE OF TRAFFIC PLAN - PHASE 4
I-77 - STA. 371+00 TO STA. 384+00

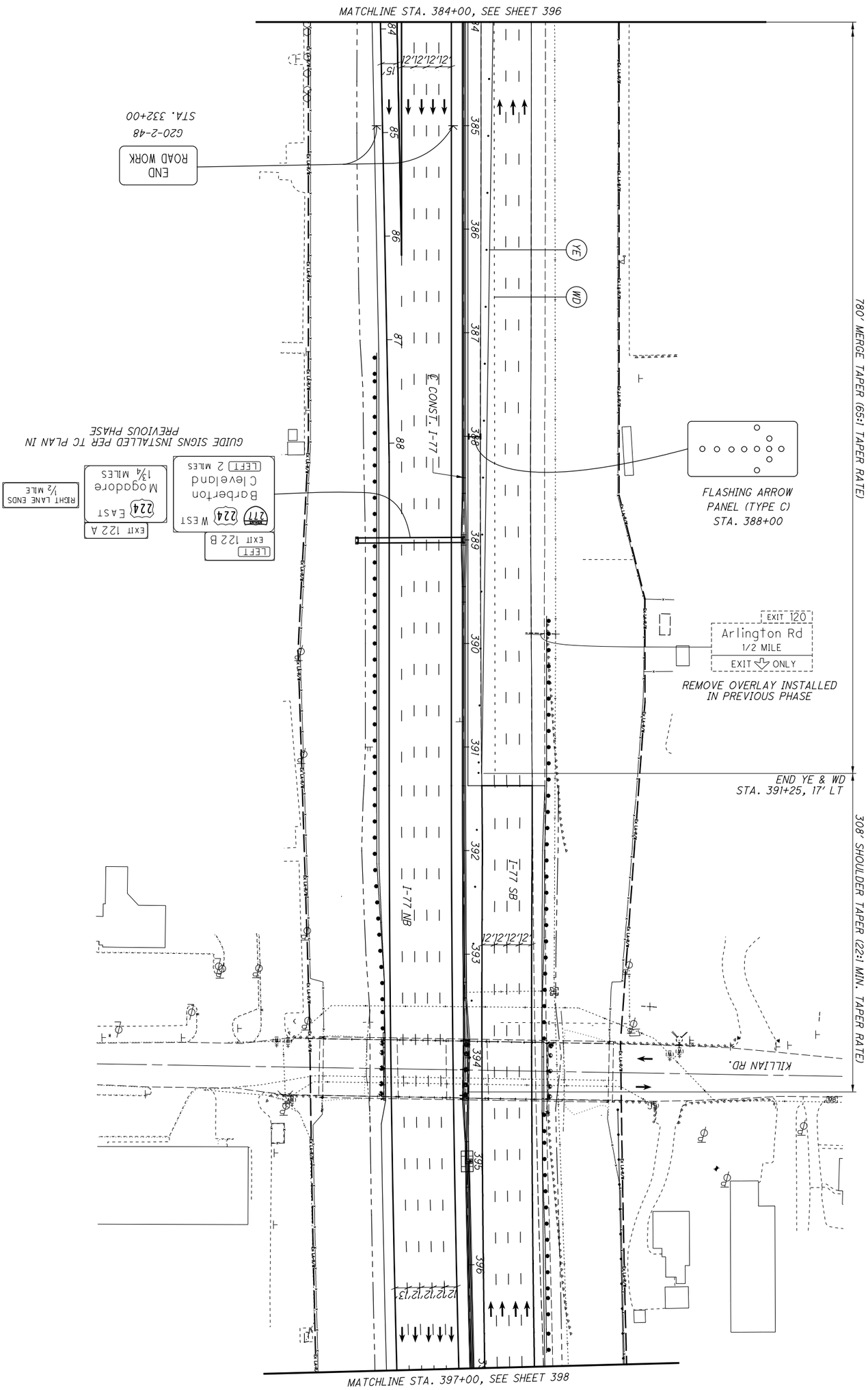
SUM-77/277/224
VARIOUS

396
1288

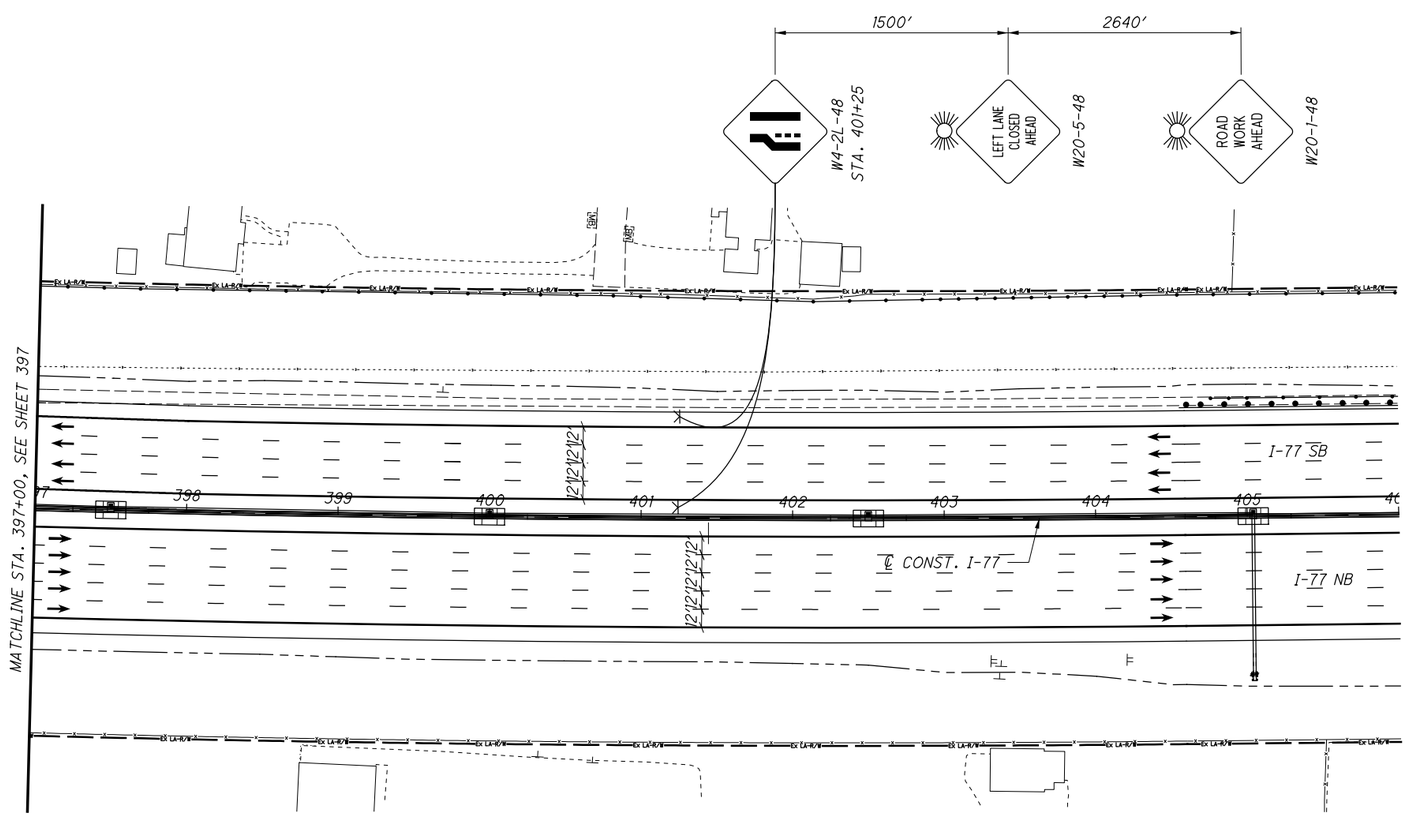
N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MP408.dgn Sheet 1/31/2021 5:56:57 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.



397 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 4 I-77 - STA. 384+00 TO STA. 397+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET



NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.

2. ALL PAVEMENT MARKINGS THAT ARE EXISTING OR PLACED IN A PREVIOUS PHASE WILL REMAIN UNLESS OTHERWISE INDICATED.

N

0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED .
CHECKED .

MAINTENANCE OF TRAFFIC PLAN - PHASE 4
I-77 - STA. 397+00 TO STA. 445+00

SUM-77/277/224
VARIOUS

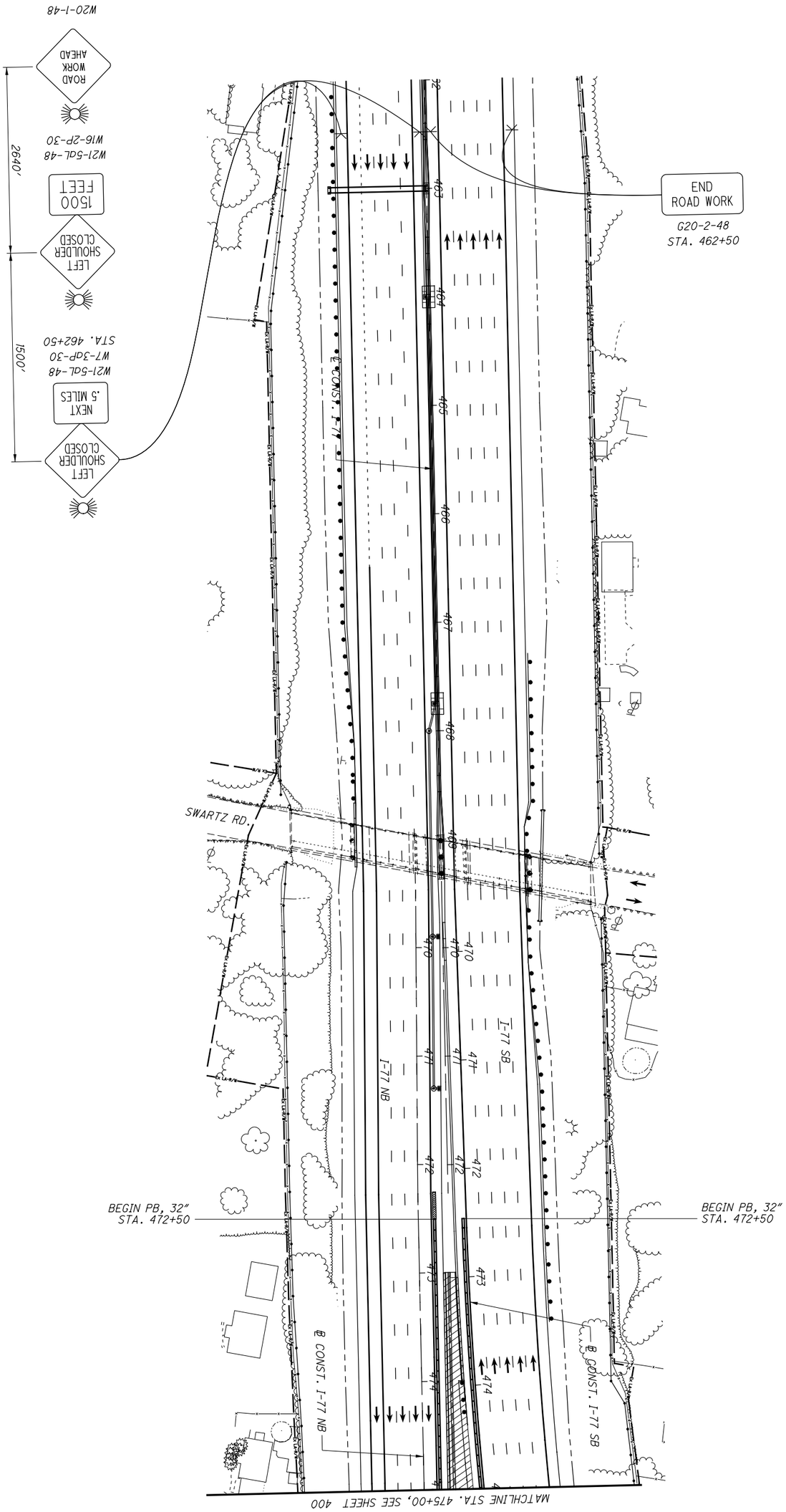
398
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MP410.dgn Sheet 1/31/2021 5:57:08 PM jrettig

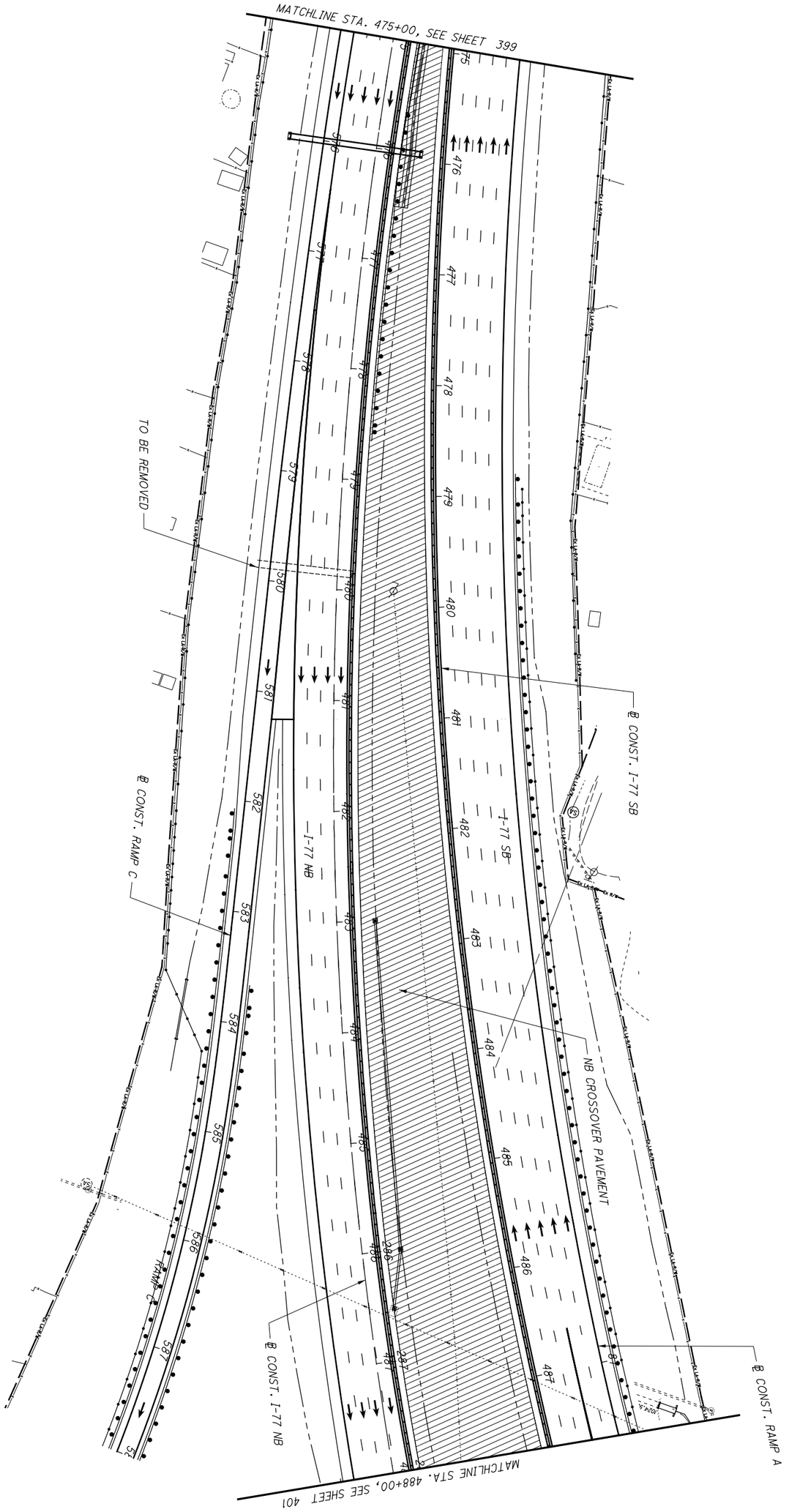
N:\03\60\06744-08\106002_SUM-76-10.95\Design\MOT\Sheets\106002_MP415.dgn Sheet 1/31/2021 5:57:30 PM jrettig

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. PAVEMENT MARKINGS AND SIGNS INSTALLED PER TC PLAN.



399 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 4 I-77 - STA. 462+00 TO STA. 475+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET



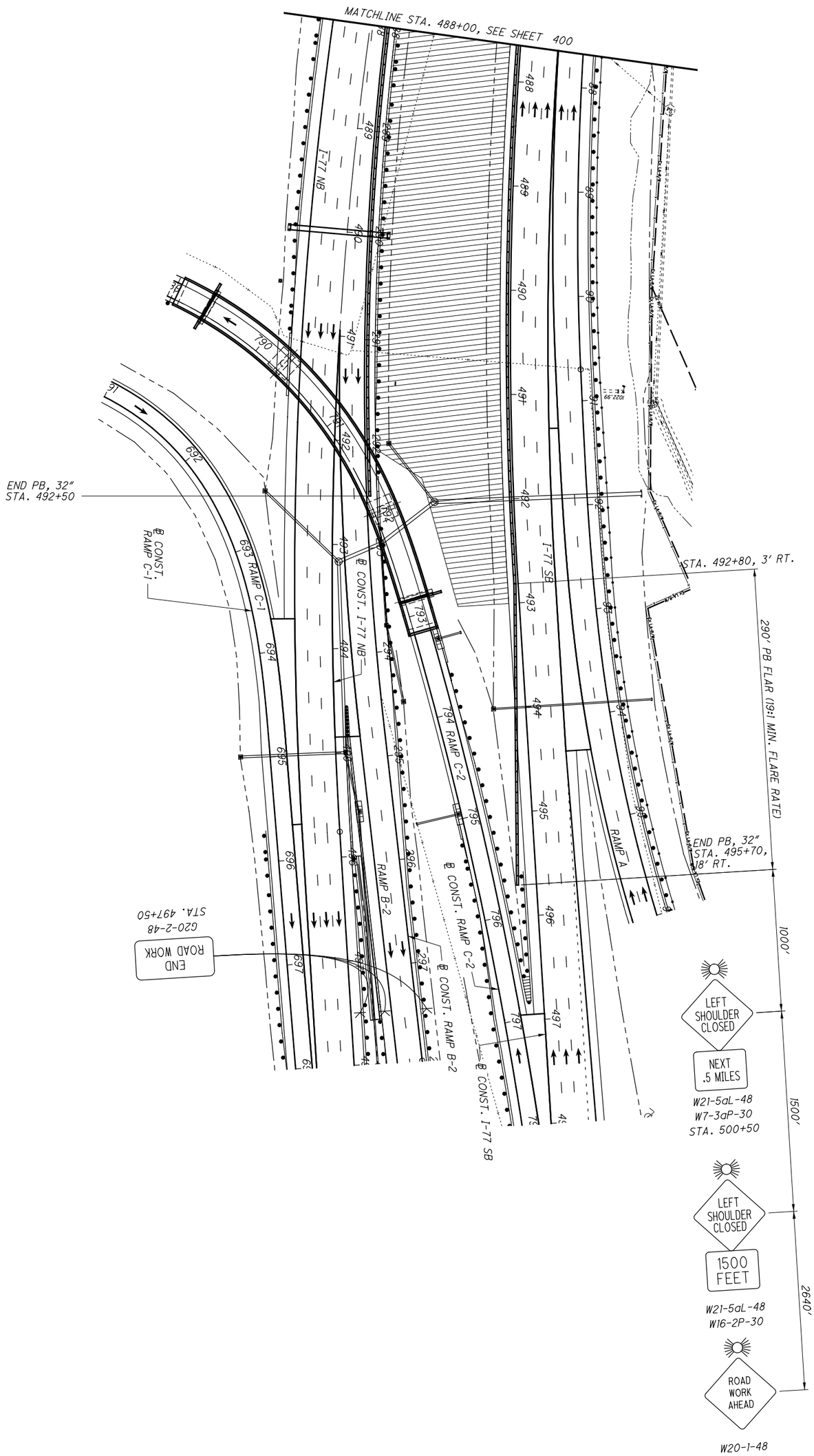
NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. PAVEMENT MARKINGS AND SIGNS INSTALLED PER TC PLAN.

400 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 4 I-77 - STA. 475+00 TO STA. 488+00	CALCULATED . CHECKED .	0 50 25 100 HORIZONTAL SCALE IN FEET

NOTES:

1. SEE SHEET 128 FOR MOT LEGEND AND DRUM SPACING CHART.
2. PAVEMENT MARKINGS AND SIGNS INSTALLED PER TC PLAN.



401 / 1288	SUM-77 / 277 / 224 VARIOUS	MAINTENANCE OF TRAFFIC PLAN - PHASE 4 I-77 - STA. 488+00 TO STA. 501+00	CALCULATED . CHECKED . 0 50 25 100 HORIZONTAL SCALE IN FEET

SHEET NUMBER									PARTICIPATION						ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE CALCS	73		407		410		416		01/IMS/PV	02/IMS/PV	03/IMS/BR	04/IMS/BR	05/IMS/BR	06/IMS/BR						
																			ROADWAY	
	LS								LS	LS					201	11000	LS		CLEARING AND GRUBBING	66
			20		9				26	3					202	20010	29	EACH	HEADWALL REMOVED	
			233574						210217	23357					202	23000	233574	SY	PAVEMENT REMOVED	
			3750						3375	375					202	30700	3750	FT	CONCRETE BARRIER REMOVED	
			169						152	17					202	32000	169	FT	CURB REMOVED	
			86						77	9					202	32700	86	SY	GUTTER REMOVED	
			4526		16				4088	454					202	35100	4542	FT	PIPE REMOVED, 24" AND UNDER	
			168						151	17					202	35200	168	FT	PIPE REMOVED, OVER 24"	
			34740						31266	3474					202	38000	34740	FT	GUARDRAIL REMOVED	
			2027						1824	203					202	48000	2027	FT	CABLE BARRIER REMOVED	
			36						32	4					202	58100	36	EACH	CATCH BASIN REMOVED	
			3						3						202	58200	3	EACH	INLET REMOVED	
			1						1						202	58500	1	EACH	CATCH BASIN ABANDONED	
			586						527	59					SPECIAL	20270000	586	FT	FILL AND PLUG EXISTING CONDUIT, 15"	70
			360						324	36					SPECIAL	20270000	360	FT	FILL AND PLUG EXISTING CONDUIT, 18"	70
					308				277	31					SPECIAL	20270000	308	FT	FILL AND PLUG EXISTING CONDUIT, 24"	70
			214						193	21					SPECIAL	20270000	214	FT	FILL AND PLUG EXISTING CONDUIT, 30"	70
			10998						9898	1100					202	75000	10998	FT	FENCE REMOVED	
	16400						155465		154679	17186					203	10000	171865	CY	EXCAVATION	
	16300						85050		91215	10135					203	20000	101350	CY	EMBANKMENT	
2071									1864	207					204	10000	2071	SY	SUBGRADE COMPACTION	
							935		842	93					204	13000	935	CY	EXCAVATION OF SUBGRADE	
							935		842	93					204	20000	935	CY	EMBANKMENT	
	100								90	10					204	30020	100	CY	GRANULAR MATERIAL, TYPE C	
	156								140	16					204	45000	156	HOUR	PROOF ROLLING	69
7629									6866	763					206	10500	7629	TON	CEMENT	
294563									265107	29456					206	11000	294563	SY	CURING COAT	
294563									265107	29456					206	15010	294563	SY	CEMENT STABILIZED SUBGRADE, 12 INCHES DEEP	
LS									LS	LS					206	30000	LS		MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS	
376									338	38					209	60201	376	STA	LINEAR GRADING, AS PER PLAN	67
			32678						29410	3268					606	15050	32678	FT	GUARDRAIL, TYPE MGS	
			2870						2583	287					606	15100	2870	FT	GUARDRAIL, TYPE MGS WITH LONG POSTS	
			250						225	25					606	15150	250	FT	GUARDRAIL, TYPE MGS HALF POST SPACING	
			50						45	5					606	15250	50	FT	GUARDRAIL, TYPE MGS QUARTER POST SPACING	
			25						23	2					606	15550	25	FT	GUARDRAIL, BARRIER DESIGN, TYPE MGS	
			1						1						606	20050	1	EACH	ROUNDED END SECTION	
			22						20	2					606	26150	22	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	67
			22						20	2					606	26550	22	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
			24						22	2					606	35002	24	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
			17						15	2					606	35102	17	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
			1						1						606	60002	1	EACH	IMPACT ATTENUATOR, TYPE 1 (UNIDIRECTIONAL)	68
			1						1						606	60040	1	EACH	IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL (60 MPH, 90" WIDTH)	68
			1						1						606	60040	1	EACH	IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL (65 MPH, 69" WIDTH)	68
			1						1						606	60040	1	EACH	IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL (70 MPH, 48" WIDTH)	68
			1518						1366	152					607	23000	1518	FT	FENCE, TYPE CLT	
			1518						1366	152					607	70000	1518	FT	FENCELINE SEEDING AND MULCHING	
			9982						8984	998					607	98000	9982	FT	FENCE, MISC.: TEMPORARY FENCE	68
2100									1890	210					622	10100	2100	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE B1	
5708									5137	571					622	10140	5708	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C1	
			1983						1785	198					622	10160	1983	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	
			71						64	7					622	10161	71	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN	68
3									3						622	10200	3	EACH	BARRIER TRANSITION	907
			23						21	2					622	25000	23	EACH	CONCRETE BARRIER END SECTION, TYPE D	
			3						3						622	25001	3	EACH	CONCRETE BARRIER END SECTION, TYPE D, AS PER PLAN	68
14									13	1					622	25006	14	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1	
56									50	6					622	25014	56	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1	
4									4						622	25015	4	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN	68

REVISIONS

NO.	DATE	DESCRIPTION
8	04/30/21	ADDED TEMPORARY FENCE QUANTITY

CALCULATED LRK
CHECKED PJF

GENERAL SUMMARY

SUM-77 / 277 / 224
VARIOUS

402
1288

D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_GG001.dgn Sheet 4/30/2021 2:26:53 PM lkirkland

SHEET NUMBER											PARTICIPATION						ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE CALCS	73	407	408	410	416	444	911	1158	1184	1228	01/IMS/PV	02/IMS/PV	03/IMS/BR	04/IMS/BR	05/IMS/BR	06/IMS/BR						
																					ROADWAY (CONTINUED)	
		9									8	1					622	25050	9	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	
		2									2						622	25051	2	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN	68
	12										11	1					623	38500	12	EACH	MONUMENT ASSEMBLY	
	2										2						623	39500	2	EACH	MONUMENT BOX ADJUSTED TO GRADE	
	6										5	1					SPECIAL	69098000	6	EACH	VERTICAL CLEARANCE	68
																					~~ROADWAY (RIGID PAVEMENT OPTION)~~	
	~~16400~~				~~160956~~						~~159620~~	~~17736~~					~~203~~	~~10000~~	~~177356~~	~~CY~~	~~EXCAVATION~~	
	~~16300~~				~~85288~~						~~91429~~	~~10159~~					~~203~~	~~20000~~	~~101588~~	~~CY~~	~~EMBANKMENT~~	
																					EROSION CONTROL	
				8							7	1					601	11000	8	SY	RIPRAP, TYPE D	
								310		210			202	108	210		601	20000	520	SY	CRUSHED AGGREGATE SLOPE PROTECTION	
272											245	27					601	21000	272	SY	CONCRETE SLOPE PROTECTION	
	8		128								122	14					601	21050	136	SY	TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT	
			94								85	9					601	21060	94	SY	TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT	
							21									21	601	28101	21	CY	DUMPED ROCK FILL, AS PER PLAN	910
				26							23	3					601	32000	26	CY	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER	
				61							55	6					601	32100	61	CY	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	
			12								11	1					601	32104	12	CY	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC	
				7							6	1					601	32110	7	CY	ROCK CHANNEL PROTECTION, TYPE B WITH AGGREGATE FILTER	
									637				414	223			601	32200	637	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
			70								63	7					601	32204	70	CY	ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC	
			17	3							18	2					601	32210	20	CY	ROCK CHANNEL PROTECTION, TYPE C WITH AGGREGATE FILTER	
			177								159	18					601	32211	177	CY	ROCK CHANNEL PROTECTION, TYPE C WITH AGGREGATE FILTER, AS PER PLAN	72
			249								224	25					601	32311	249	CY	ROCK CHANNEL PROTECTION, TYPE D WITH AGGREGATE FILTER, AS PER PLAN	72
				78							70	8					601	37500	78	FT	PAVED GUTTER, TYPE 1-2	
			507								456	51					601	37501	507	FT	PAVED GUTTER, TYPE 1-2, AS PER PLAN	72
					3						3						659	00100	3	EACH	SOIL ANALYSIS TEST	
					25156						22640	2516					659	00300	25156	CY	TOPSOIL	
					226634						203971	22663					659	10000	226634	SY	SEEDING AND MULCHING	
					11332						10199	1133					659	14000	11332	SY	REPAIR SEEDING AND MULCHING	
					11332						10199	1133					659	15000	11332	SY	INTER-SEEDING	
					31.62						28.46	3.16					659	20000	31.62	TON	COMMERCIAL FERTILIZER	
					46.83						42.15	4.68					659	31000	46.83	ACRE	LIME	
					1255						1130	125					659	35000	1255	MGAL	WATER	
					7312						6581	731					670	00500	7312	SY	SLOPE EROSION PROTECTION	
			20260								18234	2026					670	00700	20260	SY	DITCH EROSION PROTECTION	
			242								218	24					671	15060	242	SY	EROSION CONTROL MAT, TYPE G	
						LS					LS	LS					832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
						LS					LS	LS					832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
						LS					LS	LS					832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
						1150000					1035000	115000					832	30000	1150000	EACH	EROSION CONTROL	72
			5435								4892	543					836	10000	5435	SY	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1	
			299								269	30					836	10020	299	SY	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 2	

REVISIONS		
NO.	DATE	DESCRIPTION
4	04/20/21	REVISED RIPRAP, TYPE D QUANTITY
5	04/22/21	UPDATED SEEDING QUANTITIES & REVISED ITEM 601 QUANTITIES
6	04/26/21	REVISED ITEM 601 QUANTITY

CALCULATED LRK
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GENERAL SUMMARY

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SHEET NUMBER									PARTICIPATION						ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	73			409	410		911		01/IMS/PV	02/IMS/PV	03/IMS/BR	04/IMS/BR	05/IMS/BR	06/IMS/BR						
																			DRAINAGE	
				12.2	11.7				21.5	2.4					602	20000	23.9	CY	CONCRETE MASONRY	
				65167					58650	6517					605	11110	65167	FT	6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
	40			1953					1794	199					605	13410	1993	FT	6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
				70071					63064	7007					605	14020	70071	FT	6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
				1464					1318	146					611	00510	1464	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
	200			2948					2833	315					611	00900	3148	FT	6" CONDUIT, TYPE B	
	200								180	20					611	01100	200	FT	6" CONDUIT, TYPE C	
	200								180	20					611	01400	200	FT	6" CONDUIT, TYPE E	
	240								216	24					611	01500	240	FT	6" CONDUIT, TYPE F	
				4428					3985	443					611	05900	4428	FT	15" CONDUIT, TYPE B	
				9					8	1					611	05900	9	FT	15" CONDUIT, TYPE B, 706.02	
				327					294	33					611	06100	327	FT	15" CONDUIT, TYPE C	
				665					599	66					611	06700	665	FT	15" CONDUIT, TYPE F	
					7				6	1					611	07200	7	FT	18" CONDUIT, TYPE A, 706.02	
				1054					949	105					611	07400	1054	FT	18" CONDUIT, TYPE B	
				121					109	12					611	07600	121	FT	18" CONDUIT, TYPE C	
				40					36	4					611	08200	40	FT	18" CONDUIT, TYPE F	
				554					499	55					611	08900	554	FT	21" CONDUIT, TYPE B	
				297					267	30					611	09100	297	FT	21" CONDUIT, TYPE C	
				103					93	10					611	10200	103	FT	24" CONDUIT, TYPE A	
					10				9	1					611	10200	10	FT	24" CONDUIT, TYPE A, 706.02	
				101					91	10					611	10400	101	FT	24" CONDUIT, TYPE B	
				8					7	1					611	10400	8	FT	24" CONDUIT, TYPE B, 706.02	
				183					165	18					611	13400	183	FT	30" CONDUIT, TYPE B	
				90					81	9					611	13600	90	FT	30" CONDUIT, TYPE C	
				44					40	4					611	16400	44	FT	36" CONDUIT, TYPE B	
				130					117	13					611	16600	130	FT	36" CONDUIT, TYPE C	
					16				14	2					611	23600	16	FT	60" CONDUIT, TYPE A, 706.02	
					12				11	1					611	25000	12	FT	66" CONDUIT, TYPE A, 706.02	
					20				18	2					611	30000	20	FT	96" CONDUIT, TYPE A, 707.02, 707.03 OR 707.04	
							16							16	611	95001	16	FT	10' X 5' CONDUIT, TYPE A, 706.05, AS PER PLAN	911
					317				285	32					611	96550	317	FT	FIELD PAVING OF EXISTING PIPE, 96" 707.02, 707.03 OR 707.04	
					20				18	2					611	96560	20	FT	CONDUIT, FIELD PAVING OF PIPE, 96" 707.02, 707.03 OR 707.04	
				460					414	46					611	96600	460	FT	CONDUIT, BORED OR JACKED, 15", TYPE B, 748.06	70
				155					140	15					611	96600	155	FT	CONDUIT, BORED OR JACKED, 18", TYPE B, 748.06	70
				102					92	10					611	96600	102	FT	CONDUIT, BORED OR JACKED, 24", TYPE B, 748.06	70
					294				265	29					611	96600	294	FT	CONDUIT, BORED OR JACKED, 30", TYPE A, 748.06	70
				199					179	20					611	96600	199	FT	CONDUIT, BORED OR JACKED, 42", TYPE B, 748.06	70
				22					20	2					611	97400	22	FT	CONDUIT, MISC.: 18", TYPE B, 748.06, OPEN CUT	70
					46				41	5					611	97400	46	FT	CONDUIT, MISC.: 30", TYPE A, 748.06, OPEN CUT	70
				1					1						611	98151	1	EACH	CATCH BASIN, NO. 3, AS PER PLAN	71
				6					5	1					611	98180	6	EACH	CATCH BASIN, NO. 3A	
				2					2						611	98370	2	EACH	CATCH BASIN, NO. 6	
				1					1						611	98371	1	EACH	CATCH BASIN, NO. 6, AS PER PLAN	71
				13					12	1					611	98410	13	EACH	CATCH BASIN, NO. 8	
				7					6	1					611	99100	7	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1	
				21					19	2					611	99110	21	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	70
				3					3						611	99114	3	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D	
				6					5	1					611	99574	6	EACH	MANHOLE, NO. 3	
				1					1						611	99661	1	EACH	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN	70
	4			64					61	7					611	99710	68	EACH	PRECAST REINFORCED CONCRETE OUTLET	
	10000								9000	1000					SPECIAL	61199820	10000	LB	MISCELLANEOUS METAL	70

REVISIONS		
NO.	DATE	DESCRIPTION
6	04/26/21	REVISED CONDUITS, BORED OR JACKED

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SHEET NUMBER									PARTICIPATION						ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE CALCS	OFFICE CALCS				409				01/IMS/PV	02/IMS/PV	03/IMS/BR	04/IMS/BR	05/IMS/BR	06/IMS/BR						
																			PAVEMENT	
567									510	57					254	01000	567	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1 1/4"	
3914	60048								57566	6396					302	46000	63962	CY	ASPHALT CONCRETE BASE, PG64-22	
4911	45836								45672	5075					304	20000	50747	CY	AGGREGATE BASE	
2956	44384								42606	4734					407	20000	47340	GAL	NON-TRACKING TACK COAT	
1792									1613	179					408	10001	1792	GAL	PRIME COAT, AS PER PLAN	70
61									55	6					441	50000	61	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
61									55	6					441	50300	61	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	
1156									1040	116					441	50701	1156	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), AS PER PLAN	67
1041	16399								15696	1744					442	00100	17440	CY	ANTI-SEGREGATION EQUIPMENT	
813	12964								12399	1378					442	10101	13777	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446), AS PER PLAN	69
690	10972								10496	1166					442	10301	11662	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN	70
212	537								674	75					609	24511	749	FT	CURB, TYPE 4-C, AS PER PLAN	70
250									225	25					617	10101	250	CY	COMPACTED AGGREGATE, AS PER PLAN	70
4479									4031	448					617	20000	4479	SY	SHOULDER PREPARATION	
13									12	1					617	25000	13	MGAL	WATER	
1	12								12	1					618	40600	13	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	
~~45835~~									~~41252~~	~~4583~~					~~304~~	~~20000~~	~~45835~~	~~CY~~	~~PAVEMENT (RIGID PAVEMENT OPTION)~~ ~~AGGREGATE BASE~~	
~~266109~~									~~239498~~	~~26611~~					~~452~~	~~15020~~	~~266109~~	~~SY~~	~~12" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P WITH QC/QA~~	
~~537~~									~~483~~	~~54~~					~~609~~	~~24511~~	~~537~~	~~FT~~	~~CURB, TYPE 4-C, AS PER PLAN~~	~~70~~
~~12~~									~~11~~	~~1~~					~~618~~	~~40700~~	~~12~~	~~MILE~~	~~RUMBLE STRIPS, SHOULDER (CONCRETE)~~	
																			SANITARY SEWER	
					126				113	13					611	12100	126	FT	27" CONDUIT, TYPE C, 707.48 (SANITARY)	
					1				1						611	99574	1	EACH	MANHOLE, NO. 3 (SANITARY)	
					2				2						611	99575	2	EACH	MANHOLE, NO. 3, AS PER PLAN (SANITARY)	72
					2				2						611	99655	2	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN (SANITARY)	72

REVISIONS		
NO.	DATE	DESCRIPTION
7	04/28/21	DELETED PRESSURE RELIEF JOINT ITEM

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SHEET NUMBER									PARTICIPATION						ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
1083	1092	1093		1102	1110	1112		1126	01/IMS/PV	02/IMS/PV	03/IMS/BR	04/IMS/BR	05/IMS/BR	06/IMS/BR						
																			LIGHTING	
																			FOR LIGHTING GENERAL SUMMARY	*1040*
																			TRAFFIC SURVEILLANCE	
																			FOR TRAFFIC SURVEILLANCE GENERAL SUMMARY	*1021*
																			TRAFFIC CONTROL	
																			FOR TRAFFIC CONTROL GENERAL SUMMARY	*936-937*
																			RETAINING WALLS	
																			FOR RETAINING WALL 1 GENERAL SUMMARY	*1136*
																			FOR RETAINING WALL 2 GENERAL SUMMARY	*1147*
																			NOISE BARRIERS	
64584		*43600*		*48504*	*42715*	*76855*		*41282*		*317540*					*SPECIAL*	*60610210*	*317540*	*SF*	*NOISE BARRIER (REFLECTIVE)*	*1080*
	5376									*5376*					*SPECIAL*	*60610920*	*5376*	*SF*	*NOISE BARRIER (REFLECTIVE), INFINITY WALL*	*1080*
																			STRUCTURE 20 FOOT SPAN AND UNDER	
																			FOR 10' X 5' CONCRETE BOX CULVERT GENERAL SUMMARY	*911*
																			STRUCTURE OVER 20 FOOT SPAN	
																			FOR SUM-077-0802L/R GENERAL SUMMARY	*1158*
																			FOR SUM-077-0810L/R GENERAL SUMMARY	*1184*
																			FOR SUM-077-0927R GENERAL SUMMARY	*1228*
																			MAINTENANCE OF TRAFFIC	
																			FOR MAINTENANCE OF TRAFFIC GENERAL SUMMARY	*85-86*
									LS	*LS*					*108*	*10000*	*LS*		*INCIDENTALS*	
									LS	*LS*					*614*	*11000*	*LS*		*CPM PROGRESS SCHEDULE*	
									32	*4*					*619*	*16021*	*36*	*MNTH*	*MAINTAINING TRAFFIC*	
									LS	*LS*					*623*	*10000*	*LS*		*FIELD OFFICE, TYPE C, AS PER PLAN*	*67*
									LS	*LS*					*624*	*10000*	*LS*		*CONSTRUCTION LAYOUT STAKES AND SURVEYING*	
																			MOBILIZATION	

REVISIONS		
NO.	DATE	DESCRIPTION
1	03/15/21	FIELD OFFICE MONTHS REVISED

CALCULATED LRK
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GENERAL SUMMARY

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SHEET NO.	202 HEADWALL REMOVED EACH	202 PAVEMENT REMOVED SY	202 CONCRETE BARRIER REMOVED FT	202 CURB REMOVED FT		202 PIPE REMOVED, 24" AND UNDER FT	202 PIPE REMOVED, OVER 24" FT		202 GUARDRAIL REMOVED FT	202 CABLE BARRIER REMOVED FT		202 CATCH BASIN REMOVED EACH	202 INLET REMOVED EACH	202 CATCH BASIN ABANDONED EACH		SPECIAL FILL AND PLUG EXISTING CONDUIT, 15" FT	SPECIAL FILL AND PLUG EXISTING CONDUIT, 18" FT	SPECIAL FILL AND PLUG EXISTING CONDUIT, 30" FT		202 FENCE REMOVED FT	202 GUTTER REMOVED SY	607 FENCE, MISC.: TEMPORARY FENCE FT	606 GUARDRAIL, TYPE MGS FT	606 GUARDRAIL, TYPE MGS WITH LONG POSTS FT
417			804											1										
419												36	3											
423																586	360	214		10998		9982		
424																							31504	2270
425																							1174	600
426									18524	2027														
427									16216															
428	20																							
431						4526	168														86			
443		233574	2946	169																				
TOTALS CARRIED TO GENERAL SUMMARY	20	233574	3750	169		4526	168		34740	2027		36	3	1		586	360	214		10998	86	9982	32678	2870

SHEET NO.	606 GUARDRAIL, TYPE MGS HALF POST SPACING FT	606 GUARDRAIL, TYPE MGS QUARTER POST SPACING FT	606 GUARDRAIL, BARRIER DESIGN, TYPE MGS FT	606 ROUNDED END SECTION EACH	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 1 (UNIDIRECTIONAL) EACH	606 IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL (60 MPH, 90" WIDTH) EACH	606 IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL (65 MPH, 69" WIDTH) EACH	606 IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL (70 MPH, 48" WIDTH) EACH	607 FENCE, TYPE CLT FT	607 FENCELINE SEEDING AND MULCHING FT	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE D FT	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN FT	622 CONCRETE BARRIER END SECTION, TYPE D EACH	622 CONCRETE BARRIER END SECTION, TYPE D, 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, ONE-WAY EACH	626* BARRIER REFLECTOR, TYPE 1, BI-DIRECTIONAL EACH	626* BARRIER REFLECTOR, TYPE 3, ONE-WAY EACH	626* BARRIER REFLECTOR, TYPE 3, BI-DIRECTIONAL EACH
417															1983	71	23	3	9	2				
423													1518	1518										
424	200	50	25		21	18	20	16	1	1	1													
425	50			1	1	4	4	1				1									266	4	451	6
* QUANTITY CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY ON SHEET 936																								
TOTALS CARRIED TO GENERAL SUMMARY	250	50	25	1	22	22	24	17	1	1	1	1	1518	1518	1983	71	23	3	9	2	266	4	451	6

CALCULATED LRK
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REVISIONS

NO.	DATE	DESCRIPTION
8	04/30/21	ADDED TEMPORARY FENCE QUANTITY

ROADWAY SUBSUMMARY

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SHEET NO.	601 ROCK CHANNEL PROTECTION, TYPE C WITH AGGREGATE FILTER, AS PER PLAN CY	601 ROCK CHANNEL PROTECTION, TYPE D WITH AGGREGATE FILTER, AS PER PLAN CY	601 TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT SY	601 TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT SY	601 ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC CY	601 ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC CY	601 ROCK CHANNEL PROTECTION, TYPE C WITH AGGREGATE FILTER CY	601 PAVED GUTTER, TYPE 1-2, AS PER PLAN FT		670 DITCH EROSION PROTECTION SY			671 EROSION CONTROL MAT, TYPE G SY				836 SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1 SY	836 SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 2 SY				
420				47		21	7			8628							3823	299				
421	17	122				8	2			7616			242				594					
422	160	127		47	12	41	8	507		4016							1018					
432			8																			
433			22																			
434			24																			
435			14																			
436			14																			
437			18																			
438			28																			
TOTALS CARRIED TO GENERAL SUMMARY	177	249	128	94	12	70	17	507		20260			242				5435	299				

SHEET NO.
TOTALS CARRIED TO GENERAL SUMMARY

REVISIONS		
NO.	DATE	DESCRIPTION
5	04/22/21	REVISED ITEM 601 - RCP QUANTITY
6	04/26/21	REVISED ITEM 601 - RCP QUANTITY

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EROSION CONTROL SUBSUMMARY

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SHEET NO.	602 CONCRETE MASONRY		605 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	605 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	605 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	611 CONDUIT, BORED OR JACKED, 24", TYPE B, 748.06	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	611 6" CONDUIT, TYPE B	611 15" CONDUIT, TYPE B	611 15" CONDUIT, TYPE B, 706.02	611 15" CONDUIT, TYPE C	611 15" CONDUIT, TYPE F	611 18" CONDUIT, TYPE B	611 18" CONDUIT, TYPE C	611 18" CONDUIT, TYPE F	611 21" CONDUIT, TYPE B	611 21" CONDUIT, TYPE C	611 24" CONDUIT, TYPE A	611 24" CONDUIT, TYPE B	611 24" CONDUIT, TYPE B, 706.02	611 30" CONDUIT, TYPE B	611 30" CONDUIT, TYPE C
	CY		FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
428	9.4																						
429	2.8					102			2788			249	1054	71		456		103					
430									1640	9	327	416		50	40	98	297		101	8	183	90	
432			8408	761	7575		108	480															
433			8401		5895		223	355															
434			5932		4821		262	324															
435			11038	213	9384		161	329															
436			8872	74	13783		216	356															
437			12652		13307		255	462															
438			9415	218	12863		231	382															
439			449	687	2443		8	260															
TOTALS CARRIED TO GENERAL SUMMARY	12.2		65167	1953	70071	102	1464	2948	4428	9	327	665	1054	121	40	554	297	103	101	8	183	90	

SHEET NO.	611 36" CONDUIT, TYPE B	611 36" CONDUIT, TYPE C	611 CONDUIT, BORED OR JACKED, 15", TYPE B, 748.06	611 CONDUIT, BORED OR JACKED, 18", TYPE B, 748.06	611 CONDUIT, BORED OR JACKED, 42", TYPE B, 748.06	611 CONDUIT, MISC.: 18", TYPE B, 748.06, OPEN CUT	611 27" CONDUIT, TYPE C, 707.48 (SANITARY)	611 CATCH BASIN, NO. 3, AS PER PLAN	611 CATCH BASIN, NO. 3A	611 CATCH BASIN, NO. 6	611 CATCH BASIN, NO. 6, AS PER PLAN	611 CATCH BASIN, NO. 8	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1, AS PER PLAN	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D	611 MANHOLE, NO. 3	611 MANHOLE, NO. 3 (SANITARY)	611 MANHOLE, NO. 3, AS PER PLAN (SANITARY)	611 MANHOLE ADJUSTED TO GRADE, AS PER PLAN (SANITARY)	611 MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN	611 PRECAST REINFORCED CONCRETE OUTLET
	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
417													7	8								
418								1	6	2	1	13		13	1	3	6					
419																					1	
429	44	65	340		199																	
430		65	120	155		22																
431							126											1	2	2		
432																						4
433																						11
434																						12
435																						7
436																						7
437																						9
438																						14
TOTALS CARRIED TO GENERAL SUMMARY	44	130	460	155	199	22	126	1	6	2	1	13	7	21	1	3	6	1	2	2	1	64

CALCULATED LRK
CHECKED PJF

DRAINAGE SUBSUMMARY

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VARIOUS

REVISIONS

NO.	DATE	DESCRIPTION
6	04/26/21	REVISED CONDUITS, BORED OR JACKED

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SHEET NO.	202 PIPE REMOVED, 24" AND UNDER FT		202 HEADWALL REMOVED EACH		SPECIAL FILL AND PLUG EXISTING CONDUIT, 24" FT		601 ROCK CHANNEL PROTECTION, TYPE A WITH FILTER CY		601 ROCK CHANNEL PROTECTION, TYPE B WITH FILTER CY		601 ROCK CHANNEL PROTECTION, TYPE B WITH AGGREGATE FILTER CY		601 ROCK CHANNEL PROTECTION, TYPE C WITH AGGREGATE FILTER CY		601 PAVED GUTTER, TYPE 1-2 FT		602 CONCRETE MASONRY CY		601 RIPRAP, TYPE D SY			
908			1				26										2.4		8			
909			1						21								1.9					
916			1						40								4.4					
917			1														0.43					
918			1														0.31					
919	8		2		169						6.13				78		1.12					
920	8		2		139								2.22				1.12					
TOTALS CARRIED TO GENERAL SUMMARY	16		9		308		26		61		7		3		78		11.7		8			

SHEET NO.	611 18" CONDUIT, TYPE A, 706.02 FT		611 24" CONDUIT, TYPE A, 706.02 FT		611 CONDUIT, BORED OR JACKED, 30", TYPE A, 748.06 FT		611 CONDUIT, MISC.: 30", TYPE A, 748.06, OPEN CUT FT		611 60" CONDUIT, TYPE A, 706.02 FT		611 66" CONDUIT, TYPE A, 706.02 FT		611 96" CONDUIT, TYPE A, 707.02, 707.03 OR 707.04 FT		611 FIELD PAVING OF EXISTING PIPE, 96" 707.02, 707.03 OR 707.04 FT		611 CONDUIT, FIELD PAVING OF PIPE, 96" 707.02, 707.03 OR 707.04 FT					
908											12											
909									16													
916													20		317		20					
917			10																			
918	7																					
919					156		24															
920					138		22															
TOTALS CARRIED TO GENERAL SUMMARY	7		10		294		46		16		12		20		317		20					

CALCULATED CJC
CHECKED PJF

CULVERT SUBSUMMARY

SUM-77/277/224
VARIOUS

REVISIONS		
NO.	DATE	DESCRIPTION
4	04/20/21	ADDED RIPRAP, TYPE D ITEM & QTY

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SHEET NO.	STATION TO STATION		203 EXCAVATION	203 EXCAVATION (SPECIAL BENCHING)	203 EXCAVATION (STREAM UNDERCUT)	203 EMBANKMENT	203 EMBANKMENT (SPECIAL BENCHING)	203 EMBANKMENT (STREAM UNDERCUT)	204 EXCAVATION OF SUBGRADE	204 EMBANKMENT		659 SEEDING AND MULCHING (SM)		659 SOIL ANALYSIS TEST	659 TOPSOIL (4" FOR VEGETATED FILTER STRIPS & VEGETATED BIOFILTERS)	659 TOPSOIL (111*(SM))/(1000) - (4" FOR VFS & VBF)	659 REPAIR SEEDING AND MULCHING (0.05*(SM))	659 INTER-SEEDING (0.05*(SM))	659 COMM. FERTILIZER [(30*(SM))+ (20*.05*(SM))*9 /(1000*2000)	659 LIME (SM)/14840)	659 WATER [(2*300*(SM)) +(300*0.05*(SM))*9 /(1000*1000)	670 SLOPE EROSION PROTECTION		
			CY	CY	CY	CY	CY	CY	CY	CY		SY		EACH	CY	CY	SY	SY	TON	ACRE	MGAL	SY		
	I.R. 77																							
520	370+00.00	371+50.00	57			0						28												
521	372+00.00	373+50.00	169			5						0												
522	374+00.00	375+00.00	156			15						0												
523	376+00.00	379+00.00	248			11						0												
524	380+00.00	383+00.00	90			25						0												
525	384+00.00	387+00.00	126			10						0												
526	388+00.00	390+00.00	218			26						737												
527	391+00.00	391+50.00	207			3						481												
528	392+00.00	393+00.00	377			15						931												
529	393+50.00	394+50.00	423			15						1000												
530	395+00.00	396+00.00	724			18						1609												
531	396+50.00	397+50.00	651			13						1286												
532	398+00.00	399+00.00	627			8						1103												
533	399+50.00	400+50.00	822			0						1192												
534	401+00.00	402+00.00	813			0						958												
535	402+50.00	403+50.00	794			5						1042												
536	404+00.00	405+00.00	969	196		124	196					1639												
537	406+00.00	408+00.00	1120			116						1705												
538	409+00.00	411+00.00	896	54		59	54					1261												
539	412+00.00	415+00.00	1576	54		102	54					1767												
540	416+00.00	418+00.00	1272			33						1384			11									
541	419+00.00	421+00.00	1647	239		329	239					1361												
542	422+00.00	425+00.00	1643	239		367	239					1512												
543	425+30.16	426+85.73	315			40						132												
544	427+00.00	428+50.00	710			28						356												
545	429+00.00	429+28.48	123			35						72												
546	430+89.09	432+00.00	484			92						386												
547	432+50.00	434+00.00	679			50						548												
548	434+50.00	435+50.00	533			28						430												
549	436+00.00	437+00.00	518			35						514												
550	437+50.00	439+00.00	848			35						633												
551	439+50.00	441+00.00	856	40		128	40					869												
552	441+50.00	443+00.00	896	622		474	622					1256												
553	443+50.00	445+00.00	985	424		479	424					1625												
554	445+50.00	447+00.00	1624	28		102	28					2050												
555	447+50.00	449+00.00	1301			50						1930												
556	450+00.00	453+00.00	2818			42						3634												
557	454+00.00	457+00.00	3103			186						4201			214							1965		
558	458+00.00	460+00.00	2215			348						2656			22							46		
559	461+00.00	462+00.00	2045			180						1967												
560	463+00.00	464+00.00	2815			83						2316												
561	465+00.00	466+00.00	3044			45						2389												
562	467+00.00	468+00.00	2616			7						1966												
563	469+00.00		411			0						190												
SUBTOTALS CARRIED TO SHEET 416			44564	1896		3766	1896					51116			247							2011		

CALCULATED ATR
CHECKED PJF

EARTHWORK SUBSUMMARY AND CALCULATIONS

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SHEET NO.	STATION TO STATION		203 EXCAVATION CY	203 EXCAVATION (SPECIAL BENCHING) CY	203 EXCAVATION (STREAM UNDERCUT) CY	203 EMBANKMENT CY	203 EMBANKMENT (SPECIAL BENCHING) CY	203 EMBANKMENT (STREAM UNDERCUT) CY	204 EXCAVATION OF SUBGRADE CY	204 EMBANKMENT CY		659 SEEDING AND MULCHING (SM) SY		659 SOIL ANALYSIS TEST EACH	659 TOPSOIL (4" FOR VEGETATED FILTER STRIPS & VEGETATED BIOFILTERS) CY	659 TOPSOIL (111*(SM))/(1000) - (4" FOR VFS & VBF) CY	659 REPAIR SEEDING AND MULCHING (0.05*(SM)) SY	659 INTER-SEEDING (0.05*(SM)) SY	659 COMM. FERTILIZER [(30*(SM))+ (20*.05*(SM))*9 /(1000*2000) TON	659 LIME (SM)/14840) ACRE	659 WATER [(2*300*(SM)) +(300*0.05*(SM))*9 /(1000*1000) MGAL	670 SLOPE EROSION PROTECTION SY		
	NB I.R. 77																							
564	469+46.96	471+00.00	1244			8						1189												
565	472+00.00	473+00.00	1077			24						1176												
566	474+00.00	475+00.00	584			4						587												
567	475+50.00	476+50.00	506			1			109	109		206												
568	477+00.00	478+00.00	517			0			547	547		247												
569	478+50.00	479+50.00	536			0						258												
570	480+00.00	481+00.00	627			1						278												
571	481+50.00	482+50.00	622			1						380												
572	483+00.00	484+00.00	760			1						684			43									
573	484+50.00	485+50.00	999			7						1299			55									
574	486+00.00	487+00.00	169			0						644			44									
575	487+50.00	488+50.00	179			1						569			16									
576	489+00.00	490+00.00	129			1						430												
577	490+50.00	491+50.00	152			0						381												
578	492+00.00	493+00.00	188			0						297												
579	493+50.00	494+50.00	84			0						14												
580	495+00.00	495+75.99	63			18						0												
581	496+00.00	498+00.00	196			52						311												
582	499+00.00	501+00.00	253			49						555			11									
583	502+00.00	504+00.00	267			37						972			31									
584	505+00.00	507+00.00	325			20						708			3									
585	507+50.00	508+50.00	127			47						336												
586	509+00.00	510+50.00	118			38						264												
587	510+65.75	512+00.00	94			76						302												
588	512+50.00	513+50.00	62			49						236												
589	514+00.00	514+85.00	29			21						134												
	SB I.R. 77																							
591	469+42.49	472+00.00	2836			0						1624												
592	472+54.68	473+50.00	1626			0						867												
593	474+00.00	475+00.00	1954			0						1214												
594	475+50.00	476+50.00	1839			6						1350												
595	477+00.00	478+00.00	1483			22						1364												
596	478+50.00	480+00.00	1862			145						1872												
597	480+50.00	482+00.00	1640			547						2075												
598	482+50.00	483+50.00	1111	212		1003	212					1797			97									
599	484+00.00	485+00.00	482	334		1118	334					1547			17									
600	485+50.00	486+50.00	457	216		1009	216					1456			21									
601	487+00.00	488+00.00	423			3						595			21									
602	488+50.00	489+50.00	476			6						627			21									
603	490+00.00	491+00.00	463			3						631			21									
604	491+50.00	492+81.37	362			5						577			22									
605	493+00.00	495+00.00	379			67						911												
606	496+00.00	498+00.00	376			35						1134			100								372	
607	499+00.00	502+00.00	541			48						1007			74								445	
608	502+03.04	503+50.00	340			91						951			74									
609	504+00.00	505+50.00	198			78						692			52									
610	506+00.00	506+50.00	118			35						297			11									
611	507+00.00	508+00.00	205			10						469												
612	508+50.00	509+50.00	446			63						1006												
613	510+00.00	511+50.00	729			107						1422			48									
614	512+00.00	513+00.00	691			71						1295			23									
615	513+50.00	514+95.00	321			46						743			17									
SUBTOTALS CARRIED TO SHEET 416			31265	762		4974	762		656	656		39980			822							817		

CALCULATED ATR
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EARTHWORK SUBSUMMARY AND CALCULATIONS

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SHEET NO.	STATION TO STATION		203 EXCAVATION CY	203 EXCAVATION (SPECIAL BENCHING) CY	203 EXCAVATION (STREAM UNDERCUT) CY	203 EMBANKMENT CY	203 EMBANKMENT (SPECIAL BENCHING) CY	203 EMBANKMENT (STREAM UNDERCUT) CY	204 EXCAVATION OF SUBGRADE CY	204 EMBANKMENT CY		659 SEEDING AND MULCHING (SM) SY		659 SOIL ANALYSIS TEST EACH	659 TOPSOIL (4" FOR VEGETATED FILTER STRIPS & VEGETATED BIOFILTERS) CY	659 TOPSOIL (111*(SM))/(1000) - (4" FOR VFS & VBF) CY	659 REPAIR SEEDING AND MULCHING (0.05*(SM)) SY	659 INTER-SEEDING (0.05*(SM)) SY	659 COMM. FERTILIZER [(30*(SM))+ (20*.05*(SM))*9 /(1000*2000) TON	659 LIME (SM)/14840) ACRE	659 WATER [(2*300*(SM)) +(300*0.05*(SM))*9 /(1000*1000) MGAL	670 SLOPE EROSION PROTECTION SY		
	I.R. 277/U.S. 224																								
617	223+00.00	225+00.00																							
618	226+00.00	228+00.00																							
619	229+00.00	230+00.00	67			0						178													
620	231+00.00	233+00.00	587			0						1461			50										
621	234+00.00	236+00.00	676			26						1630			68										
622	237+00.00	240+00.00	313			90						1284			55										
623	241+00.00	243+00.00	282			54						1150													
624	244+00.00	246+00.00	216			79						839			32										
625	247+00.00	248+00.00	163			57						593			29										
626	249+00.00	250+00.00	149			287						800			28										
627	250+94.27	257+01.49	0			22						109													
628	258+00.00	259+00.00	0			100						444													
629	260+00.00	262+00.00	466			78						1197			53										
630	263+00.00	265+00.00	21			34						173			3										
631	266+00.00	268+00.00																							
632	269+00.00	271+00.00	205			50						1050													
633	272+00.00	274+00.00	15			7						160													
634	275+00.00	277+00.00																							
635	277+72.76	278+50.00	28			5						205													
636	279+00.00	280+00.00	15			0						69													
637	280+31.79																								
	RAMP A																								
638	86+63.69	87+50.00	208	361	88	1114	361	88				1123													
639	88+00.00	89+00.00	313	411	213	1160	411	213				1225													
640	89+50.00	90+50.00	241	309	155	1012	309	155				937													
641	90+70.00	91+50.00	147	324	90	915	324	90				768													
642	91+90.00	92+50.00	178	339		626	339					684													
643	93+00.00	93+70.00	117	277		568	277					536													
644	94+00.00	95+00.00	118	373		895	373					850													
645	95+50.00	97+00.00	707	475		1301	475					1686			63										
646	97+50.00	98+50.00	706	412		1425	412					1889			14										
647	99+00.00	100+00.00	483	642		1698	642					1919													
648	100+50.00	101+50.00	277	775		1600	775					1872													
649	102+00.00	103+00.00	406	784		1208	784					1688			44										
650	103+50.00	104+50.00	279	602		305	602					777													
651	104+55.37	105+50.00	192	727		293	727					819													
652	106+00.00	107+00.00	199	292		103	292					690													
653	107+50.00	109+50.00	204			49						1027			6										
654	110+00.00	111+50.00	227			6						727			32										
655	112+00.00	113+50.00	255			2						823			40										
656	114+00.00	114+13.78	27			0						65			3										
	RAMP B																								
657	197+05.36	198+50.00	418			201						806			12										
658	199+00.00	200+00.00	1099			0						584			16										
659	200+50.00	202+00.00	1909			0						856			28										
660	202+50.00	203+99.50	441			236						511			7										
661	204+00.00	205+00.00	121	101		2329	101					905													
662	205+50.00	205+99.50	28	204		1397	204					451													
663	206+00.00	206+25.00	19	238	15	1655	238	15				483													
664	206+50.00	207+00.00	358	558	148	3479	558	148				1333													
665	207+50.00	207+73.39	170	255	37	1271	255	37				806													
666	208+00.00	208+50.00	320	516	64	1634	516	64				1684													
667	209+00.00	209+50.00	231	641	110	669	641	110				1162													
668	209+73.39	210+00.00	215	589	98	329	589	98				824													
SUBTOTALS CARRIED TO SHEET 416			13816	10205	1018	28369	10205	1018				41852			583										

CALCULATED ATR
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EARTHWORK SUBSUMMARY AND CALCULATIONS

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SHEET NO.	STATION TO STATION		203 EXCAVATION CY	203 EXCAVATION (SPECIAL BENCHING) CY	203 EXCAVATION (STREAM UNDERCUT) CY	203 EMBANKMENT CY	203 EMBANKMENT (SPECIAL BENCHING) CY	203 EMBANKMENT (STREAM UNDERCUT) CY	204 EXCAVATION OF SUBGRADE CY	204 EMBANKMENT CY		659 SEEDING AND MULCHING (SM) SY		659 SOIL ANALYSIS TEST EACH	659 TOPSOIL (4" FOR VEGETATED FILTER STRIPS & VEGETATED BIOFILTERS) CY	659 TOPSOIL (1111*(SM))/(1000) - (4" FOR VFS & VBF) CY	659 REPAIR SEEDING AND MULCHING (0.05*(SM)) SY	659 INTER-SEEDING (0.05*(SM)) SY	659 COMM. FERTILIZER [(30*(SM))+ (20*.05*(SM))*9 /(1000*2000) TON	659 LIME (SM)/14840) ACRE	659 WATER [(2*300*(SM)) +(300*0.05*(SM))*9 /(1000*1000) MGAL	670 SLOPE EROSION PROTECTION SY		
	RAMP B																							
669	210+50.00	211+00.00	113			2						270												
670	211+50.00	212+50.00	225			9						519												
671	213+00.00	213+58.80	72			12						313												
672	214+00.00	214+90.00	26			53						299												
673	215+00.00	215+58.80	0			0						0												
	RAMP B-1																							
674	402+43.78	403+50.00	160			11						454			25								212	
675	404+00.00	405+01.68	143			9						457			35								304	
676	405+50.00	407+00.00	458			8						631			36								336	
677	407+01.68	408+50.00	618			7						791			27								247	
678	408+50.17	409+50.00	601			0						775			25									
679	410+00.00	411+00.00	441			14						722			15									
680	411+50.00	412+50.00	389			37						1123												
681	413+00.00	414+00.00	348	192		316	192					1337			76									
682	414+50.00	415+50.00	162	158		434	158					1019			69								156	
683	415+62.45	416+50.00	164	20		279	20					896			54								229	
684	417+00.00	417+62.45	47			57						427			10								92	
685	418+00.00	419+00.00	19			74						344												
686	419+50.00	420+50.00	49			14						272												
687	421+00.00	421+40.51	18			5						74												
	RAMP B-2																							
688	285+64.96	286+50.00	879			0						950			19									
689	287+00.00	288+00.00	1035			0						1078			20									
690	288+50.00	289+50.00	1310			0						1136			12									
691	290+00.00	291+00.00	1721			0						1183			6									
692	291+50.00	292+50.00	4689			0						1042												
693	293+00.00	294+00.00	3186			0						416												
694	294+50.00	295+00.00	1613			0						338												
695	295+50.00	296+50.00	1810			0						253												
696	297+00.00	297+94.13	1149			0						433												
697	298+00.00	299+00.00	1354			0						789												
698	299+50.00	300+50.00	697			7						799												
699	300+94.13	301+50.00	137			283						624			28									
700	302+00.00	303+00.00	147			1930						1052			102									
701	303+50.00	304+50.00	51			3370						1156			112									
702	305+00.00	305+50.00	46	65		2395	65					908			77									
703	306+00.00	307+30.56	43	663		2229	663					1409			104									
704	307+50.00	9+83.20	41	75		34	75					172												
705	10+00.00	11+00.00	155	823		828	823					1270												
706	11+50.00	13+00.00	102	559		411	559					1044												
707	13+50.00	14+50.00	93			162						479												
708	15+00.00	16+50.00	981			24						1470			96								879	
709	17+00.00	18+50.00	1764			0						1592												
710	19+00.00	20+00.00	1054			0						945			71									
711	20+50.00	22+00.00	482			11						452			17									
712	22+39.81	24+00.00	137			10						64												
713	24+50.00	25+50.00	209	219		547	219					726												
714	26+00.00	27+50.00	248	508		1687	508					1389												
715	28+00.00	29+00.00	138	481		1890	481					1345												
716	29+50.00	30+50.00	125	524		1389	524					1450												
717	31+00.00	32+00.00	134	705		701	705					1335												
718	32+50.00	33+50.00	39	147		85	147					276												
719	33+82.00		0			0						0												
SUBTOTALS CARRIED TO SHEET 416			29622	5139		19334	5139					38298			1036								2455	

CALCULATED ATR
CHECKED PJF

EARTHWORK SUBSUMMARY AND CALCULATIONS

SUM-77/277/224
VARIOUS

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SHEET NO.	STATION TO STATION		203 EXCAVATION CY	203 EXCAVATION (SPECIAL BENCHING) CY	203 EXCAVATION (STREAM UNDERCUT) CY	203 EMBANKMENT CY	203 EMBANKMENT (SPECIAL BENCHING) CY	203 EMBANKMENT (STREAM UNDERCUT) CY	204 EXCAVATION OF SUBGRADE CY	204 EMBANKMENT CY		659 SEEDING AND MULCHING (SM) SY		659 SOIL ANALYSIS TEST EACH	659 TOPSOIL (4" FOR VEGETATED FILTER STRIPS & VEGETATED BIOFILTERS) CY	659 TOPSOIL (111*(SM))/(1000) - (4" FOR VFS & VBF) CY	659 REPAIR SEEDING AND MULCHING (0.05*(SM)) SY	659 INTER-SEEDING (0.05*(SM)) SY	659 COMM. FERTILIZER [(30*(SM))+ (20*.05*(SM))*9 /(1000*2000) TON	659 LIME (SM)/14840) ACRE	659 WATER [(2*300*(SM)) +(300*0.05*(SM))*9 /(1000*1000) MGAL	670 SLOPE EROSION PROTECTION SY		
	RAMP C																								
720	576+00.00	577+00.00	189			8			135	135		455													
721	577+50.00	578+50.00	186			8			144	144		537													
722	579+00.00	580+00.00	388			0						656													
723	580+17.46	581+00.00	460			0						634													
724	581+50.00	582+50.00	388			22						977													
725	583+00.00	583+50.00	70	46		57	46					604			23										
726	584+00.00	585+00.00	16	242		222	242					641			45										
727	585+16.40	586+00.00	39	348		523	348					872			21										
728	586+50.00	587+50.00	82	171		194	171					798													
729	588+00.00	589+00.00	91	14		88	14					705													
730	589+50.00	591+00.00	122	330		829	330					1344													
731	591+50.00	592+50.00	91	50		102	50					467													
732	593+00.00	593+50.00	41			6						112													
733	594+00.00	595+00.00	55			8						178													
734	595+50.00	596+50.00	152			20						419													
735	597+00.00	598+50.00	305			7						703													
736	599+00.00	600+00.00	174			3						411													
737	600+50.00	601+50.00	55			2						184													
738	602+00.00	603+00.00	27			12						204													
739	603+37.81	604+00.00	10			13						181													
740	604+50.00	605+50.00	19			12						178													
741	606+00.00	606+67.88	8			5						79													
	RAMP C-1																								
742	679+55.23	680+00.00	45			0						112													
743	680+50.00	681+00.00	58			0						136													
744	681+50.00	682+50.00	52			29						245													
745	683+00.00	683+50.00	96			35						373			10									91	
746	684+00.00	685+00.00	176			47						646			32									301	
747	685+18.39	686+00.00	249			38						986			39									366	
748	686+50.00	688+00.00	388	161		147	161					1525			60									556	
749	688+50.00	689+50.00	381	160		170	160					1111			56									367	
750	690+00.00	691+00.00	588	7		26	7					1184			56									94	
751	691+50.00	692+50.00	852			0						1196			28										
752	693+00.00	694+50.00	599			3						946													
753	694+94.95	696+00.00	126			15						524													
754	696+50.00	697+50.00	88			9						442			8										
755	698+00.00	699+00.00	60			3						319													
756	699+50.00	701+00.00	49			3						358													
757	701+50.00	702+11.45	25			0						115													
	RAMP C-2																								
758	781+45.30	782+50.00	131	615		484	615					898													
759	782+93.84	783+50.00	52	556		494	556					745													
760	784+00.00	784+50.00	31	128		144	128					337													
761	784+82.53	786+00.00	34			110						516													
762	786+50.00	787+50.00	18			110						511													
763	788+00.00	789+00.00	42	31		21	31					295													
764	789+07.95	793+15.70	114	221		177	221					460													
765	793+50.00	794+50.00	169			525						653													
766	795+00.00	796+00.00	476			186						981			19									178	
767	796+50.00	798+00.00	250			38						749			8									76	
768	798+50.00	799+50.00	249			0						550													
769	800+00.00	801+00.00	277			13						720													
770	801+48.92		0			0						0													
SUBTOTALS CARRIED TO SHEET 416			8643	3080		4968	3080		279	279		28972			405								2029		

CALCULATED ATR
CHECKED PJF

EARTHWORK SUBSUMMARY AND CALCULATIONS

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SHEET NO.	STATION TO STATION		203 EXCAVATION CY	203 EXCAVATION (SPECIAL BENCHING) CY	203 EXCAVATION (STREAM UNDERCUT) CY	203 EMBANKMENT CY	203 EMBANKMENT (SPECIAL BENCHING) CY	203 EMBANKMENT (STREAM UNDERCUT) CY	204 EXCAVATION OF SUBGRADE CY	204 EMBANKMENT CY		659 SEEDING AND MULCHING (SM) SY		659 SOIL ANALYSIS TEST EACH	659 TOPSOIL (4" FOR VEGETATED FILTER STRIPS & VEGETATED BIOFILTERS) CY	659 TOPSOIL (111*(SM))/(1000) - (4" FOR VFS & VBF) CY	659 REPAIR SEEDING AND MULCHING (0.05*(SM)) SY	659 INTER-SEEDING (0.05*(SM)) SY	659 COMM. FERTILIZER [(30*(SM))+ (20*.05*(SM))*9 /(1000*2000) TON	659 LIME (SM)/14840) ACRE	659 WATER [(2*300*(SM)) +(300*0.05*(SM))*9 /(1000*1000) MGAL	670 SLOPE EROSION PROTECTION SY		
	RAMP D																								
771	887+98.38	888+50.00	87			20						392													
772	889+00.00	890+00.00	532			8						798													
773	890+50.00	891+50.00	642			33						864													
774	892+00.00	893+50.00	463			29						773													
775	894+00.00	895+17.13	241			8						456			14										
776	895+50.00	897+00.00	206			23						571			18										
777	897+17.13	898+00.00	69			14						251													
778	898+50.00	899+50.00	77			17						317													
779	900+00.00	901+01.12	82			18						358													
780	901+50.00	903+00.00	115	450		185	450					881													
781	903+50.00	905+00.00	126			103						666													
782	905+50.00	907+00.00	168			64						552													
783	907+50.00	908+55.05	193			7						228													
784	909+00.00	910+50.00	42			21						181													
785	910+55.05	912+00.00	1			155						263													
786	912+50.00	913+50.00	0			125						206													
787	914+00.00	915+00.00	1			16						73													
	ARLINGTON RD. RAMP D																								
788	70+99.52	72+50.00	182			3						479													
789	73+00.00	74+50.00	282			13						708													
790	75+00.00	76+00.00	160			14						499													
791	76+50.00	78+00.00	285			24						848													
792	78+50.00	80+00.00	125			27						683			28										
793	80+50.00	81+50.00	71			20						473			21										
794	82+00.00	83+00.00	93			16						511			21										
795	83+50.00	84+50.00	93			10						494			24										
796	85+00.00	86+00.00	111			10						475			27										
797	86+50.00	87+50.00	88			7						511			9										
798	88+00.00	88+18.25	6			0						53													
	WARNER ROAD																								
799	24+00.00	25+00.00	124			34						386													
800	25+50.00	26+00.00	89			0						76													
801	26+07.65	26+50.00	162			1						129													
802	27+00.00	27+50.00	76			37						219													
803	27+70.00	28+50.00	13			27						217													
1065 - 1132	NOISE WALLS											11825													
SUBTOTALS THIS SHEET			5005	450		1089	450					26416			162										
SUBTOTALS SHEET 411			44564	1896		3766	1896					51116			247									2011	
SUBTOTALS SHEET 412			31265	762		4974	762		656	656		39980			822									817	
SUBTOTALS SHEET 413			13816	10205	1018	28369	10205	1018				41852			583										
SUBTOTALS SHEET 414			29622	5139		19334	5139					38298			1036									2455	
SUBTOTALS SHEET 415			8643	3080		4968	3080		279	279		28972			405									2029	
SUBTOTALS FOR SEEDING AND MULCHING CALCULATIONS												226634		3	3255	21901	11332	11332	31.62	46.83	1255				
TOTALS CARRIED TO THE GENERAL SUMMARY (FLEXIBLE)			155465			85050																			
~~**0.75" PVMT. THICKNESS ADJUSTMENT**~~			~~5491~~	--	--	~~238~~	--	--	935	935		226634		3	25156		11332	11332	31.62	46.83	1255	7312		
~~**TOTALS CARRIED TO THE GENERAL SUMMARY (RIGID)**~~			~~160956~~			~~85288~~																			

REVISIONS

NO.	DATE	DESCRIPTION
5	04/22/21	UPDATED SEEDING QUANTITIES

CALCULATED ATR
CHECKED PJF

EARTHWORK SUBSUMMARY AND CALCULATIONS

SUM-77/277/224
VARIOUS

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE		202 CATCH BASIN ABANDONED EACH	202 CONCRETE BARRIER REMOVED FT			611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1 EACH	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1 EACH		622 CONCRETE BARRIER, SINGLE SLOPE, TYPE D FT	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN FT	622 CONCRETE BARRIER END SECTION, TYPE D EACH	622 CONCRETE BARRIER END SECTION, TYPE D, 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				
AB-1	487	105+52.61 (RAMP A)		RT		1																
B-1	457	393+75.00 (I.R. 77)	394+40.00 (I.R. 77)	RT			60						36		1		1					
B-2	457	393+85.00 (I.R. 77)	394+54.30 (I.R. 77)	LT			68						40		1		1					
B-3	469	468+65.00 (I.R. 77)	469+23.83 (I.R. 77)	RT			52						30		1		1					
B-4	469	469+15.00 (I.R. 77)	469+65.40 (I.R. 77)	LT			49						22		1		1					
B-5	469	469+72.74 (SB I.R. 77)	473+95.11 (SB I.R. 77)	RT									374	20	1			1				
B-6	472	475+50.00 (NB I.R. 77)	475+64.00 (NB I.R. 77)	LT											1							
B-7	473	491+00.00 (NB I.R. 77)	491+59.27 (NB I.R. 77)	RT			59							31		1		1				
B-8	473	494+84.83 (NB I.R. 77)	496+00.00 (NB I.R. 77)	LT									87		2							
B-9	478	500+45.03 (SB I.R. 77)	502+00.00 (SB I.R. 77)	LT			156						126		1		1					
B-10	478	508+04.86 (SB I.R. 77)	508+73.02 (SB I.R. 77)	RT			67						40		2							
B-11	478	508+62.79 (SB I.R. 77)	509+30.71 (SB I.R. 77)	LT			61						40		1		1					
B-12	492	292+31.83 (RAMP B-2)	292+80.00 (RAMP B-2)	LT			71							20		2						
B-13	492 - 493	294+77.53 (RAMP B-2)	297+50.00 (RAMP B-2)	RT									245		2							
B-14	494	9+99.70 (RAMP B-2)	14+00.00 (RAMP B-2)	RT									401				2					
B-15	500	698+64.18 (RAMP C-1)	700+28.18 (RAMP C-1)	RT			161						135		1		1					
B-16	503	793+37.64 (RAMP C-2)	793+51.56 (RAMP C-2)	LT											1							
B-17	503	795+05.04 (RAMP C-2)	795+19.05 (RAMP C-2)	RT											1							
B-18	503	799+78.00 (RAMP C-2)	801+34.00 (RAMP C-2)	RT									127		2							
B-19	509	25+31.58 (WARNER RD)	26+98.84 (WARNER RD)	RT									140		2							
B-20	509	25+20.00 (WARNER RD)	26+88.48 (WARNER RD)	LT									140		2							
D-1	457	395+00.00 (I.R. 77)		LT							1											
D-2	457	397+50.00 (I.R. 77)		LT							1											
D-3	457	400+00.00 (I.R. 77)		LT						1												
D-4	457	402+50.00 (I.R. 77)		LT						1												
D-5	459	405+04.00 (I.R. 77)		LT						1												
D-6	459	409+00.00 (I.R. 77)		LT						1												
D-7	459	412+11.50 (I.R. 77)		LT						1												
D-8	461	416+00.00 (I.R. 77)		LT						1												
D-9	461	419+04.50 (I.R. 77)		LT						1												
D-10	461	422+00.00 (I.R. 77)		LT							1											
D-11	461	425+00.00 (I.R. 77)		LT							1											
D-12	463	428+50.00 (I.R. 77)		LT							1											
D-13	463	431+50.00 (I.R. 77)		RT							1											
D-14	463	432+50.00 (I.R. 77)		RT							1											
D-15	463	433+50.00 (I.R. 77)		RT							1											
TOTALS CARRIED TO SUBSUMMARY SHEET				**407 409**		1	804			7	8		1983	71	23	3	9	2				

CALCULATED CJC
CHECKED PJF

ESTIMATED QUANTITIES

SUM-77 / 277 / 224
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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE		611 CATCH BASIN, NO. 3, AS PER PLAN EA	611 CATCH BASIN, NO. 3A EA		611 CATCH BASIN, NO. 6 EA	611 CATCH BASIN, NO. 6, AS PER PLAN EA		611 CATCH BASIN, NO. 8 EA		611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1 EA	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1, AS PER PLAN EA		611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D EA		611 MANHOLE, NO. 3 EA			
D-16	463	436+02.00 (I.R. 77)		RT										1								
D-17	463	439+00.00 (I.R. 77)		RT										1								
D-18	465	444+10.00 (I.R. 77)		RT										1								
D-19	465	447+00.00 (I.R. 77)		RT										1								
D-20	465	450+02.00 (I.R. 77)		RT										1								
D-21	467	453+00.00 (I.R. 77)		RT										1								
D-22	467	458+10.00 (I.R. 77)		RT										1								
D-23	467	461+00.00 (I.R. 77)		RT										1								
D-24	469	464+00.00 (I.R. 77)		RT										1								
D-25	469	467+75.00 (I.R. 77)		RT										1								
D-26	492	286+00.00 (RAMP B-2)		LT								1										
D-27	492	292+00.00 (RAMP B-2)		LT								1										
D-28	492	292+58.27 (RAMP B-2)		LT																1		
D-29	492	493+16.33 (NB I.R. 77)		LT																1		
D-30	492	292+96.00 (RAMP B-2)		LT		1																
D-31	473	492+50.00 (NB I.R. 77)		RT								1										
D-32	492	294+50.00 (RAMP B-2)		LT								1										
D-33	473	495+00.00 (NB I.R. 77)		LT						1												
D-34	500	495+00.30 (NB I.R. 77)		RT								1										
D-35	493	297+94.13 (RAMP B-2)		RT								1										
D-36	493	301+00.00 (RAMP B-2)		RT								1										
D-37	478	801+48.91 (RAMP C-2)		RT								1										
D-38	478	504+00.00 (SB I.R. 77)		RT								1										
D-39	488	206+00.00 (RAMP B)		RT								1										
D-40	492	293+75.00 (RAMP B-2)		LT			1															
D-41	493	295+50.00 (RAMP B-2)		RT														1				
D-42	477	494+00.00 (SB I.R. 77)		RT								1										
D-43	503	794+95.02 (RAMP C-2)		RT														1				
D-44	494	307+60.94 (RAMP B-2)		LT			1															
D-45	503	793+27.70 (RAMP C-2)		LT														1				
D-46	461	427+40.06 (I.R. 77)		LT			1															
D-47	463	431+63.18 (I.R. 77)		RT			1															
D-48	461	426+72.66 (I.R. 77)		RT			1															
D-49	463	431+06.54 (I.R. 77)		RT			1															
D-54	494	14+74.90 (RAMP B-2)		LT								1										
D-55	472	483+00.00 (NB I.R. 77)		LT								1										
D-56	453	376+06.24 (I.R. 77)		LT												1						
D-57	469	471+30.00 (NB I.R. 77)		LT					1													
D-58	469	471+30.00 (NB I.R. 77)		LT																1		
D-59	469	469+90.00 (NB I.R. 77)		LT					1													
D-60	469	469+90.00 (NB I.R. 77)		LT																1		
D-61	469	468+00.00 (I.R. 77)		RT																1		
D-62	467	455+50.00 (I.R. 77)		RT										1								
D-63	461	427+40.00 (I.R. 77)		LT										1								
D-64	461	423+18.00 (I.R. 77)		LT										1								
D-70	504	891+08.82 (RAMP D)		RT																1		
TOTALS CARRIED TO SUBSUMMARY SHEET				**409**		1	6		2	1		13		13	1		3			6		

CALCULATED CJC
CHECKED PJF

ESTIMATED QUANTITIES

SUM-77 / 277 / 224
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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE		202 CATCH BASIN REMOVED		202 INLET REMOVED		611 MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN												
						EA		EA		EA												
DJ-1	492	286+55.15 (RAMP B-2)		LT						1												
DR-1	457	395+16.73 (I.R. 77)		LT				1														
DR-2	457	399+06.76 (I.R. 77)		LT				1														
DR-3	457	400+03.46 (I.R. 77)		LT		1																
DR-4	459	405+04.20 (I.R. 77)		LT		1																
DR-5	459	412+11.65 (I.R. 77)		LT		1																
DR-6	461	419+04.03 (I.R. 77)		RT		1																
DR-7	461	419+04.51 (I.R. 77)		LT		1																
DR-8	461	425+19.36 (I.R. 77)		LT		1																
DR-9	461	427+12.48 (I.R. 77)		RT		1																
DR-10	463	428+91.17 (I.R. 77)		LT		1																
DR-11	463	423+01.72 (I.R. 77)		RT		1																
DR-12	463	436+02.21 (I.R. 77)		RT		1																
DR-13	463	436+01.97 (I.R. 77)		LT		1																
DR-14	465	444+01.29 (I.R. 77)		RT		1																
DR-15	465	444+01.91 (I.R. 77)		LT		1																
DR-16	465	450+01.82 (I.R. 77)		RT		1																
DR-17	467	458+01.39 (I.R. 77)		RT		1																
DR-18	467	458+01.16 (I.R. 77)		LT		1																
DR-19	467	463+01.06 (I.R. 77)		RT		1																
DR-20	467	463+01.84 (I.R. 77)		LT		1																
DR-21	469	468+00.62 (I.R. 77)		RT		1																
DR-22	469	468+00.83 (I.R. 77)		LT		1																
DR-23	472	480+00.61 (I.R. 77)		LT		1																
DR-24	492	286+24.58 (RAMP B-2)		LT		1																
DR-25	476	485+99.41 (SB I.R. 77)		RT		1																
DR-26	473	490+51.22 (NB I.R. 77)		RT		1																
DR-27	492	291+40.49 (RAMP B-2)		RT		1																
DR-28	473	492+50.00 (NB I.R. 77)		RT		1																
DR-29	492	493+26.17 (NB I.R. 77)		LT		1																
DR-30	492	294+93.48 (RAMP B-2)		RT		1																
DR-31	500	694+97.93 (RAMP C-1)		RT		1																
DR-32	477	494+49.80 (I.R. 77)		RT		1																
DR-33	474	504+56.97 (I.R. 77)		LT		1																
DR-34	503	797+28.34 (RAMP C-2)		LT		1																
DR-36	453	376+06.24 (I.R. 77)		LT				1														
DR-38	495	24+95.06 (RAMP B-2)		RT		1																
DR-39	500	782+42.06 (RAMP C-1)		LT		1																
DR-40	494	15+39.31 (RAMP B-2)		RT		1																
DR-41	494	14+99.40 (RAMP B-2)		LT		1																
TOTALS CARRIED TO SUBSUMMARY SHEET				407 409		36		3		1												

CALCULATED CJC
CHECKED PJF

ESTIMATED QUANTITIES

SUM-77 / 277 / 224
VARIOUS

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE					601 TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT SY		601 ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC CY		601 ROCK CHANNEL PROTECTION, TYPE C WITH AGGREGATE FILTER CY				670 DITCH EROSION PROTECTION SY				836 SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1 SY	836 SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 2 SY
E-1	507	71+69.06 (ARL RAMP D)	72+50.00 (ARL RAMP D)	RT																	98.32	
E-2	507	72+50.00 (ARL RAMP D)	77+50.00 (ARL RAMP D)	RT													609.31					
E-3	507 , 508	78+50.00 (ARL RAMP D)	83+50.00 (ARL RAMP D)	RT													611.13					
E-4	508	83+50.00 (ARL RAMP D)	87+00.00 (ARL RAMP D)	RT													427.85					
E-5	459	405+04.00 (I.R. 77)		RT							1.56											
E-6	455 , 457	389+50.00 (I.R. 77)	399+00.00 (I.R. 77)	RT													1165.30					
E-7	459	412+11.50 (I.R. 77)		RT							1.33											
E-8	457 , 459	399+00.00 (I.R. 77)	404+59.11 (I.R. 77)	RT																	906.04	
E-9	461	419+05.00 (I.R. 77)		LT							1.33											
E-10	457	391+37.36 (I.R. 77)	395+00.00 (I.R. 77)	LT													442.22					
E-11	461	425+00.00 (I.R. 77)		LT							1.33											
E-12	463	428+50.00 (I.R. 77)		LT							1.33											
E-13	457 , 459	395+00.00 (I.R. 77)	408+00.00 (I.R. 77)	LT																	2088.81	
E-14	463	432+50.00 (I.R. 77)		LT							1.33											
E-15	459	404+59.11 (I.R. 77)	405+00.00 (I.R. 77)	RT																		50.01
E-16	463	436+02.00 (I.R. 77)		LT							1.33											
E-17	459	405+00.00 (I.R. 77)	406+00.00 (I.R. 77)	RT																	200.01	
E-18	465	444+10.00 (I.R. 77)		LT									1.33									
E-19	507	71+50.00 (ARL RAMP D)	71+69.06 (ARL RAMP D)	RT													23.82					
E-20	465	450+01.00 (I.R. 77)		RT							1.33											
E-21	461	416+51.33 (I.R. 77)	418+00.00 (I.R. 77)	RT													123.89					
E-22	467	458+10.00 (I.R. 77)		RT							1.56											
E-23	461	418+00.00 (I.R. 77)	418+40.68 (I.R. 77)	RT													34.08					
E-24	465	444+01.12 (I.R. 77)	445+00.00 (I.R. 77)	RT													161.45					
E-25	465	445+00.00 (I.R. 77)	447+00.00 (I.R. 77)	RT																		248.50
E-26	469	468+68.00 (I.R. 77)	468+75.00 (I.R. 77)	LT							1.56											
E-27	465	447+00.00 (I.R. 77)	450+00.00 (I.R. 77)	RT													485.05					
E-28	477	492+00.00 (SB I.R. 77)		LT									5.50									
E-29	465	450+00.00 (I.R. 77)	451+00.00 (I.R. 77)	RT																	163.07	
E-30	465 , 467	451+00.00 (I.R. 77)	454+00.00 (I.R. 77)	RT													600.07					
E-31	465	444+09.35 (I.R. 77)	445+72.75 (I.R. 77)	LT																	205.79	
E-32	465	446+50.00 (I.R. 77)	447+50.00 (I.R. 77)	LT																	160.62	
E-33	465	447+50.00 (I.R. 77)	449+00.00 (I.R. 77)	LT													240.87					
E-34	465 , 467	449+00.00 (I.R. 77)	458+00.00 (I.R. 77)	LT													1800.44					
E-35	463	431+82.86 (I.R. 77)		LT					23.63													
E-36	467 , 469	458+00.00 (I.R. 77)	464+00.00 (I.R. 77)	LT													967.38					
E-37	463	431+25.24 (I.R. 77)		RT					23.28													
E-38	467 , 469	458+00.00 (I.R. 77)	464+00.00 (I.R. 77)	RT													733.46					
E-39	488	206+00.00 (RAMP B)		LT							1.33											
E-40	469	469+75.00 (SB I.R. 77)	471+00.00 (SB I.R. 77)	LT													104.38					
E-41	497	582+50.00 (RAMP C)	583+65.35 (RAMP C)	RT													96.41					
E-42	477	494+00.00 (SB I.R. 77)		LT							1.33											
E-43	503	794+95.00 (RAMP C-2)		RT							1.33											
E-44	494	307+74.76 (RAMP B-2)		LT							1.33											
E-45	503	793+27.70 (RAMP C-2)		LT							1.33											
TOTALS CARRIED TO SUBSUMMARY SHEET				408					47		21		7				8628				3823	299

CALCULATED CJC
CHECKED PJF

ESTIMATED QUANTITIES

SUM-77 / 277 / 224
VARIOUS

420
1288

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	601 ROCK CHANNEL PROTECTION, TYPE C WITH AGGREGATE FILTER, AS PER PLAN CY		601 ROCK CHANNEL PROTECTION, TYPE D WITH AGGREGATE FILTER, AS PER PLAN CY				601 ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC CY		601 ROCK CHANNEL PROTECTION, TYPE C WITH AGGREGATE FILTER CY				670 DITCH EROSION PROTECTION SY		671 EROSION CONTROL MAT, TYPE G SY		836 SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1 SY	
E-46	461	427+40.06 (I.R. 77)		LT							1.33												
E-47	463	431+63.18 (I.R. 77)		LT							1.33												
E-48	461	426+72.66 (I.R. 77)		RT							1.33												
E-49	463	431+06.54 (I.R. 77)		RT							1.33												
E-50	495	25+00.81 (RAMP B-2)		RT							1.33												
E-51	496	31+85.70 (RAMP B-2)		RT							1.33												
E-53	476	480+50.00 (SB I.R. 77)	482+00.00 (SB I.R. 77)	LT									1.56				122.40						
E-54	488	206+00.00 (RAMP B)		LT																			
E-55	476	482+00.00 (SB I.R. 77)	484+50.00 (SB I.R. 77)	LT																	203.47		
E-56	476	484+50.00 (SB I.R. 77)	487+00.00 (SB I.R. 77)	LT													297.82						
E-57	472	481+43.00 (NB I.R. 77)	483+00.00 (NB I.R. 77)	LT													250.69						
E-58	472	483+00.00 (NB I.R. 77)	286+00.00 (RAMP B-2)	LT													363.39						
E-59	492	286+00.00 (RAMP B-2)	290+50.00 (RAMP B-2)	LT													545.60						
E-60	472	483+00.00 (NB I.R. 77)	486+50.00 (NB I.R. 77)	RT													297.05						
E-61	472 , 473	486+50.00 (NB I.R. 77)	488+50.00 (NB I.R. 77)	RT													249.08						
E-62	476 , 477	484+00.00 (SB I.R. 77)	493+00.00 (NB I.R. 77)	RT													754.36						
E-63	477	493+00.00 (SB I.R 77)	494+00.00 (SB I.R. 77)	RT													150.36						
E-64	477	494+00.00 (SB I.R. 77)	495+57.00 (SB I.R. 77)	RT													131.12						
E-65	492	290+50.00 (RAMP B-2)	292+00.00 (RAMP B-2)	LT													181.88						
E-66	473	490+92.96 (NB I.R. 77)	492+50.00 (NB I.R. 77)	RT													195.29						
E-67	473	492+50.00 (NB I.R. 77)	493+50.00 (NB I.R. 77)	RT													125.21						
E-68	492 , 493	294+50.00 (RAMP B-2)	296+06.92 (RAMP B-2)	LT													130.72						
E-69	493	297+50.00 (RAMP B-2)	299+51.15 (RAMP B-2)	RT													166.66						
E-70	500	689+00.00 (RAMP C-1)	692+00.00 (RAMP C-1)	LT													287.89						
E-71	500	692+00.00 (RAMP C-1)	692+47.47 (RAMP C-1)	LT													47.38						
E-72	500	690+50.00 (RAMP C-1)	692+50.00 (RAMP C-1)	RT													222.52						
E-73	500	693+50.00 (RAMP C-1)	694+97.52 (RAMP C-1)	RT													247.29						
E-74	500	694+97.52 (RAMP C-1)	696+50.00 (RAMP C-1)	RT													186.62						
E-75	500	696+50.00 (RAMP C-1)	697+50.00 (RAMP C-1)	RT													83.34						
E-76	493	301+00.00 (RAMP B-2)	305+50.00 (RAMP B-2)	RT													375.12						
E-77	474	507+50.00 (NB I.R. 77)	508+50.00 (NB I.R. 77)	LT													85.08						
E-78	503	799+91.89 (RAMP C-2)	801+48.91 (RAMP C-2)	RT													129.76						
E-79	478	500+88.15 (SB I.R. 77)	504+00.00 (SB I.R. 77)	RT													261.01						
E-80	478	504+00.00 (SB I.R. 77)	507+00.00 (SB I.R. 77)	RT													248.94						
E-81	504	887+98.38 (RAMP D)	890+78.60 (RAMP D)	RT																	306.84		
E-82	504	894+00.00 (RAMP D)	896+50.00 (RAMP D)	LT													210.81						
E-83	504	896+50.00 (RAMP D)	897+00.00 (RAMP D)	LT																	42.68		
E-84	498	591+50.00 (RAMP C)	592+50.00 (RAMP C)	LT													180.49						
E-85	499	600+00.00 (RAMP C)	600+50.00 (RAMP C)	LT													42.77						
E-86	485	87+71.89 (RAMP A)	91+90.00 (RAMP A)	LT	16.73		121.97												241.99				
E-87	485	92+00.00 (RAMP A)	92+50.00 (RAMP A)	LT																	40.82		
E-88	480 , 481	113+00.00 (RAMP A)	232+00.00 (I.R. 277)	LT/RT													796.47						
E-89	486	98+00.00 (RAMP A)	99+00.00 (RAMP A)	LT													80.83						
E-90	477	496+00.00 (SB I.R. 77)	498+00.00 (SB I.R. 77)	LT													167.68						
TOTALS CARRIED TO SUBSUMMARY SHEET				**408**	17		122				8		2				7616		242		594		

REVISIONS

NO.	DATE	DESCRIPTION
5	04/22/21	REVISED ITEM 601 - RCP QUANTITY
6	04/26/21	REVISED ITEM 601 - RCP QUANTITY

CALCULATED CJC
CHECKED PJF

ESTIMATED QUANTITIES

SUM-77/277/224
VARIOUS

421
1288

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	601 ROCK CHANNEL PROTECTION, TYPE C WITH AGGREGATE FILTER, AS PER PLAN (CY)		601 ROCK CHANNEL PROTECTION, TYPE D WITH AGGREGATE FILTER, AS PER PLAN (CY)		601 TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT (SY)	601 ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC (CY)	601 ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC (CY)		601 ROCK CHANNEL PROTECTION, TYPE C WITH AGGREGATE FILTER (CY)		601 PAVED GUTTER, TYPE 1-2, AS PER PLAN (FT)		670 DITCH EROSION PROTECTION (SY)				836 SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1 (SY)	
E-91	494	11+97.63 (RAMP B-2)	13+50.00 (RAMP B-2)	RT													145.02					
E-92	478 , 479	510+00.00 (SB I.R. 77)	514+95.00 (SB I.R. 77)	RT													408.44					
E-93	479	512+00.00 (SB I.R. 77)	513+00.00 (SB I.R. 77)	LT													93.99					
E-94	479	514+00.00 (SB I.R. 77)	514+95.00 (SB I.R. 77)	LT													80.99					
E-96	483 , 484	269+40.00 (I.R. 277)	272+00.00 (I.R. 277)	LT													318.02					
E-97	487	109+50.00 (RAMP A)	113+00.00 (RAMP A)	LT													290.89					
E-99	486	99+00.00 (RAMP A)	99+54.51 (RAMP A)	LT							37.82											
E-100	486	102+00.00 (RAMP A)	103+50.00 (RAMP A)	RT													130.61					
E-101	486	101+50.00 (RAMP A)	102+00.00 (RAMP A)	RT																	44.46	
E-102	485	87+00.00 (RAMP A)	87+50.00 (RAMP A)	LT																	59.75	
E-103	495	26+50.00 (RAMP B-2)	29+00.00 (RAMP B-2)	RT																	209.31	
E-104	488 , 489	206+25.00 (RAMP B)	210+50.00 (RAMP B)	LT	159.77		126.56														223.37	
E-105	488	206+00.00 (RAMP B)	206+18.25 (RAMP B)	LT									7.67									
E-106	488	204+50.00 (RAMP B)	206+00.00 (RAMP B)	LT													131.15					
E-107	488	198+00.00 (RAMP B)	203+00.00 (RAMP B)	LT													406.98					
E-108	488	25+00.00 (RAMP B-2)	198+00.00 (RAMP B)	RT/LT																	108.09	
E-109	495	25+00.00 (RAMP B-2)	26+50.00 (RAMP B-2)	RT													183.34					
E-110	490	413+00.00 (RAMP B-1)	416+50.00 (RAMP B-1)	RT													361.20					
E-111	490	408+50.17 (RAMP B-1)	411+00.00 (RAMP B-1)	RT													240.16					
E-112	494	14+00.00 (RAMP B-2)		RT					6.67													
E-113	494	14+00.00 (RAMP B-2)	15+30.60 (RAMP B-2)	RT													105.83					
E-114	494	16+21.88 (RAMP B-2)	14+80.11 (RAMP B-2)	LT													177.32					
E-115	495	19+00.00 (RAMP B-2)	21+00.00 (RAMP B-2)	LT													257.70					
E-116	495 , 496	29+00.00 (RAMP B-2)	31+00.00 (RAMP B-2)	RT													244.52					
E-117	490	411+00.00 (RAMP B-1)	413+00.00 (RAMP B-1)	RT													208.23					
E-118	481	240+00.00 (I.R. 277)	241+00.00 (I.R. 277)	LT													84.96					
E-119	469 , 472	473+00.00 (NB I.R. 77)	476+50.00 (NB I.R. 77)	LT											348.97							
E-120	493	295+92.25 (RAMP B-2)	297+50.00 (RAMP B-2)	RT											157.75							
E-121	494	9+98.08 (RAMP B-2)		LT					39.81													
E-123	465	445+72.75 (I.R. 77)	445+85.64 (I.R. 77)	LT						7.22												
E-126	480	230+97.30 (I.R. 277)	231+05.28 (I.R. 277)	RT							1.78											
E-127	497	583+65.35 (RAMP C)	584+20.81 (RAMP C)	RT							1.33											
E-128	504	891+38.08 (RAMP D)	891+47.42 (RAMP D)	RT						4.63												
E-131	487	106+00.00 (RAMP A)	107+50.00 (RAMP A)	LT													125.14					
E-133	480	231+55.13 (I.R. 277)	232+00.00 (I.R. 277)	RT																	55.00	
E-134	480	230+00.00 (I.R. 277)	230+97.30 (I.R. 277)	RT																	125.40	
E-135	497	584+26.89 (RAMP C)	584+50.00 (RAMP C)	RT													21.29					
E-136	504	891+39.15 (RAMP D)	893+00.00 (RAMP D)	RT																	192.02	
TOTALS CARRIED TO SUBSUMMARY SHEET				**408**	160		127		47	12	41		8		507		4016				1018	

REVISIONS		
NO.	DATE	DESCRIPTION
5	04/22/21	REVISED ITEM 601 - RCP QUANTITY
6	04/26/21	REVISED ITEM 601 - RCP QUANTITY

CALCULATED CJC
CHECKED PJF

ESTIMATED QUANTITIES

SUM-77/277/224
VARIOUS

422
1288

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE		SPECIAL FILL AND PLUG EXISTING CONDUIT, 15" FT	SPECIAL FILL AND PLUG EXISTING CONDUIT, 18" FT	SPECIAL FILL AND PLUG EXISTING CONDUIT, 30" FT		202 FENCE REMOVED FT		607 FENCE, TYPE CL T FT	607 FENCELINE SEEDING AND MULCHING FT		607 FENCE, MISC.: TEMPORARY FENCE FT							
F-1	1262	394+44.76 (I.R. 77)	394+52.39 (I.R. 77)	LT								12	12									
F-2	1263	407+19.12 (I.R. 77)	407+69.10 (I.R. 77)	LT								50	50									
F-3	1264	446+11.52 (I.R. 77)	446+61.98 (I.R. 77)	LT								50	50									
F-4	1265	460+30.84 (I.R. 77)	460+80.59 (I.R. 77)	RT								50	50									
F-5	1266	469+16.39 (I.R. 77)	469+23.99 (I.R. 77)	LT								11	11									
F-6	1266	469+62.86 (SB I.R. 77)	469+74.92 (SB I.R. 77)	LT								15	15									
F-7	1266	468+55.82 (I.R. 77)	468+68.03 (I.R. 77)	RT								15	15									
F-8	1266	469+08.95 (I.R. 77)	469+18.21 (I.R. 77)	RT								11	11									
F-9	1267	480+72.73 (SB I.R. 77)	481+24.33 (SB I.R. 77)	LT								50	50									
F-10	1267	583+59.12 (RAMP C)	584+08.84 (RAMP C)	RT								50	50									
F-11	1268	87+52.08 (RAMP A)	92+38.86 (RAMP A)	LT								477	477									
F-12	1268	93+01.79 (RAMP A)	98+46.73 (RAMP A)	LT								527	527									
F-13	1269	231+60.95 (I.R. 277/224)	232+10.61 (I.R. 277/224)	RT								50	50									
F-14	1270	105+66.09 (RAMP A)	106+17.26 (RAMP A)	RT								50	50									
F-15	1271	890+62.72 (RAMP D)	891+13.56 (RAMP D)	RT								50	50									
F-16	1272	280+23.33 (I.R. 277/224)	280+64.06 (I.R. 277/224)	LT								50	50									
FP-8	461	DR-8	PR-8	LT		82																
FP-9	461	DR-9	PR-9	LT		88																
FP-10	463	DR-10	PR-10	LT		86																
FP-11	463	PR-11	PR-11A	LT		78																
FP-15	465	DR-15	PR-15	LT		79																
FP-17	467	DR-17	PR-17	RT			76															
FP-26	473	DR-26	DR-27	LT/RT			120															
FP-27	477	PR-27A	PR-27	LT/RT				214														
FP-32	477	DR-32	PR-32	LT/RT		130																
FP-39	500	DR-39	EX-2	LT		43																
FP-41	488 , 494	DR-41	PR-41	LT/RT			164															
FR-1	1262 - 1263	394+52.16 (I.R. 77)	407+69.10 (I.R. 77)	LT						1311					1311							
FR-2	1264 - 1266	446+11.52 (I.R. 77)	469+23.44 (I.R. 77)	LT						2319					2319							
FR-3	1265 - 1266	460+30.84 (I.R. 77)	468+67.45 (I.R. 77)	RT						845					845							
FR-4	1266 - 1267	469+62.43 (SB I.R. 77)	481+24.33 (SB I.R. 77)	LT						1137					1137							
FR-5	1266 - 1267	469+17.32 (I.R. 77)	584+08.84 (RAMP C)	RT						1497					1497							
FR-6	1268	87+52.08 (RAMP A)	92+38.86 (RAMP A)	LT						480												
FR-7	1268	93+01.79 (RAMP A)	98+46.73 (RAMP A)	LT						536												
FR-8	1269 - 1270	231+60.95 (I.R. 277/224)	245+73.76 (I.R. 277/224)	RT						1420					1420							
FR-9	1271 - 1272	266+30.23 (I.R. 277/224)	280+64.06 (I.R. 277/224)	LT						1453					1453							
TOTALS CARRIED TO SUBSUMMARY SHEET				407		586	360	214		10998		1518	1518		9982							

CALCULATED CJC
CHECKED PJF

ESTIMATED QUANTITIES

SUM-77 / 277 / 224
VARIOUS

REVISIONS		
NO.	DATE	DESCRIPTION
8	04/30/21	ADDED TEMPORARY FENCE QUANTITY

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	606 GUARDRAIL, TYPE MGS	606 GUARDRAIL, TYPE MGS WITH LONG POSTS	606 GUARDRAIL, TYPE MGS HALF POST SPACING	606 GUARDRAIL, TYPE MGS QUARTER POST SPACING	606 GUARDRAIL, BARRIER DESIGN, TYPE MGS	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	606 ROUNDED END SECTION	606 ANCHOR ASSEMBLY, MGS TYPE T	606 ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	606 IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL (60 MPH, 90" WIDTH)	606 IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL (65 MPH, 69" WIDTH)	606 IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL (70 MPH, 48" WIDTH)	606 IMPACT ATTENUATOR, TYPE 1 (UNIDIRECTIONAL)	626 BARRIER REFLECTOR, TYPE 1, ONE-WAY	626 BARRIER REFLECTOR, TYPE 1, BI-DIRECTIONAL	626 BARRIER REFLECTOR, TYPE 3, ONE-WAY	626 BARRIER REFLECTOR, TYPE 3, BI-DIRECTIONAL
					FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
G-1	455 , 457	387+19.56 (I.R. 77)	393+75.00 (I.R. 77)	RT	575.00					1				1								
G-2	457	394+54.30 (I.R. 77)	396+86.59 (I.R. 77)	LT	150.00					1				1								
G-3	459 , 461	407+50.59 (I.R. 77)	425+06.61 (I.R. 77)	RT	1675.00					1				1								
G-4	459 , 461	404+55.95 (I.R. 77)	425+53.84 (I.R. 77)	LT	2087.50						1		1									
G-5	461 , 463	426+62.18 (I.R. 77)	428+86.69 (I.R. 77)	RT	202.36					1	1											
G-6	461 , 463	427+09.41 (I.R. 77)	429+20.46 (I.R. 77)	LT	188.23					1	1											
G-7	463 , 465	430+96.10 (I.R. 77)	446+23.71 (I.R. 77)	RT	1525.00						1		1									
G-8	463 , 465	431+32.29 (I.R. 77)	449+48.04 (I.R. 77)	LT	1725.00					1				1								
G-9	467 , 469	461+21.17 (I.R. 77)	468+65.00 (I.R. 77)	RT	662.50					1				1								
G-10	469	467+30.42 (I.R. 77)	469+15.00 (I.R. 77)	LT	175.00						1		1									
G-11	469	469+62.50 (SB I.R. 77)	473+45.51 (SB I.R. 77)	LT	300.00					1				1								
G-12	472	475+64.00 (NB I.R. 77)	478+63.75 (NB I.R. 77)	LT	287.50						1		1									
G-13	473	487+97.20 (NB I.R. 77)	491+00.00 (NB I.R. 77)	RT	225.00					1				1								
G-14	473 - 475	496+00.00 (NB I.R. 77)	514+85.00 (NB I.R. 77)	LT	1790.33		50.00	50.00			1											
G-15	469 , 476	473+95.11 (SB I.R. 77)	484+73.31 (SB I.R. 77)	RT	1000.00					1				1								
G-15A	477	495+57.46 (SB I.R. 77)	496+84.41 (SB I.R. 77)	RT	37.50		50.00						1		1							
G-16	478 - 479	508+73.02 (SB I.R. 77)	514+95.00 (SB I.R. 77)	RT	595.3					1												
G-17	478 - 479	509+30.71 (SB I.R. 77)	511+46.12 (SB I.R. 77)	LT	137.50					1				1								
G-18	480	223+25.02 (I.R. 277/224)	231+12.50 (I.R. 277/224)	RT		775.00							1									
G-19	482	248+78.78 (I.R. 277/224)	250+85.44 (I.R. 277/224)	RT	150.00									1								
G-20	482 - 483	257+10.03 (I.R. 277/224)	264+61.85 (I.R. 277/224)	LT	675.78		50.00									1						
G-20A	484	279+44.11 (I.R. 277/224)	279+81.23 (I.R. 277/224)	LT		25.00							1									
G-21	483	261+32.00 (I.R. 277/224)	261+96.50 (I.R. 277/224)	RT					25.00									1				
G-22	485 - 487	478+80.33 (SB I.R. 77)	111+39.67 (RAMP A)	LT	3162.50								1	1								
G-23	488 - 489	203+35.49 (RAMP B)	214+90.00 (RAMP B)	LT	984.00	150.00							1									
G-24	488 - 489	207+26.23 (RAMP B)	213+07.52 (RAMP B)	RT	525.00								1	1								
G-25	490	409+32.36 (RAMP B-1)	421+30.69 (RAMP B-1)	LT	1162.50						1		1									
G-26	490	502+00.00 (SB I.R. 77)	404+19.09 (RAMP B-1)	LT	137.50					1				1								
G-27	492	288+11.17 (RAMP B-2)	292+31.83 (RAMP B-2)	LT	337.50					1				1								
G-28	492 - 493	292+80.00 (RAMP B-2)	301+40.65 (RAMP B-2)	LT	850.00						1		1									
G-28A	493	297+50.00 (RAMP B-2)	300+99.84 (RAMP B-2)	RT	337.50						1		1									
G-29	493 - 494	305+45.15 (RAMP B-2)	307+88.67 (RAMP B-2)	LT	162.50					1				1								
G-30	493 - 494	304+31.85 (RAMP B-2)	7+65.76 (RAMP B-2)	RT	350.00					1				1								
G-31	494	9+81.21 (RAMP B-2)	15+16.41 (RAMP B-2)	LT	525.00						1		1									
G-32	495 - 496	22+03.60 (RAMP B-2)	33+81.95 (RAMP B-2)	RT	980.55	131.95								1								
G-33	497 - 499	582+07.62 (RAMP C)	279+50.00 (I.R. 277/224)	RT	2337.50	250.00								1								
G-34	497 - 498	583+64.85 (RAMP C)	591+72.95 (RAMP C)	LT	750.00								1	1								
G-35	500	679+60.74 (RAMP C-1)	684+21.24 (RAMP C-1)	RT	450.00						1		1									
G-36	500	695+70.21 (RAMP C-1)	698+64.18 (RAMP C-1)	RT	212.50					1				1								
G-37	502	596+40.56 (RAMP C)	789+07.95 (RAMP C-2)	RT/LT	500.00	250.00					1		1									
G-38	502	786+26.05 (RAMP C-2)	789+07.95 (RAMP C-2)	LT	287.50						1		1									
G-39	503	793+51.56 (RAMP C-2)	796+59.71 (RAMP C-2)	LT	235.69		50.00			1												
G-40	503	795+19.05 (RAMP C-2)	799+78.00 (RAMP C-2)	RT	435.80					1	1											
G-41	478	501+34.03 (SB I.R. 77)	508+04.86 (SB I.R. 77)	RT	647.71					1	1											
G-42	504 - 506	888+67.17 (RAMP D)	914+89.25 (RAMP D)	RT	1967.40	587.58								1								
TOTALS CARRIED TO SUBSUMMARY SHEET				407	31504	2170	200	50	25	20	16		18	21	1	1		1				

CALCULATED CJC
CHECKED PJF

ESTIMATED QUANTITIES

SUM-77 / 277 / 224
VARIOUS

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1288

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	606 GUARDRAIL, TYPE MGS	606 GUARDRAIL, TYPE MGS WITH LONG POSTS	606 GUARDRAIL, TYPE MGS HALF POST SPACING	606 GUARDRAIL, TYPE MGS QUARTER POST SPACING	606 GUARDRAIL, BARRIER DESIGN, TYPE MGS	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	606 ROUNDED END SECTION	606 ANCHOR ASSEMBLY, MGS TYPE T	606 ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	606 IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL (60 MPH, 90" WIDTH)	606 IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL (65 MPH, 69" WIDTH)	606 IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL (70 MPH, 48" WIDTH)	606 IMPACT ATTENUATOR, TYPE 1 (UNIDIRECTIONAL)	626 BARRIER REFLECTOR, TYPE 1, ONE-WAY	626 BARRIER REFLECTOR, TYPE 1, BI-DIRECTIONAL	626 BARRIER REFLECTOR, TYPE 3, ONE-WAY	626 BARRIER REFLECTOR, TYPE 3, BI-DIRECTIONAL
					FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
G-43	504 - 505	893+01.77 (RAMP D)	904+64.95 (RAMP D)	LT	512.50	600.00	50.00						1										
G-44	509	24+40.09 (WARNER RD)	25+31.58 (WARNER RD)	RT	60.74					1		1	1										
G-45	509	24+58.25 (WARNER RD)	25+20.00 (WARNER RD)	LT	25.00					1			1										
G-46	509	26+98.84 (WARNER RD)	28+21.81 (WARNER RD)	RT	100.00					1													
G-47	509	26+88.48 (WARNER RD)	28+45.93 (WARNER RD)	LT	75.00					1				1									
G-48	473	494+54.51 (NB I.R. 77)	494+84.83 (NB I.R. 77)	LT														1					
G-49	455 , 457	389+73.71 (I.R. 77)	393+85.00 (I.R. 77)	LT	400.00						1		1										
REFLECTORS																							
	453 - 469	371+50.00 (I.R. 77)	G-15	LT															103		11		
	453 - 472	371+50.00 (I.R. 77)	G-12	RT															104		4		
	481	241+20.00 (I.R. 277/224)	242+80.00 (I.R. 277/224)	LT/RT															6				
	455 - 457	G-1	B-1	RT															1		7		
	457	B-2	G-2	LT															1		3		
	459 - 465	G-3	G-7	RT															4		36		
	459 - 465	G-4	G-8	LT															4		42		
	467 - 469	G-9	B-3	RT															1		8		
	469	G-10	G-11	LT															1		6		
	473	G-13	B-7	RT															1		4		
	473 - 475	G-48	G-14	LT															1		20		
	477	G-15A		RT																	2		
	478	B-9	G-26	LT															2		3		
	478 - 479	B-11	G-17	LT															1		3		
	480	G-18		RT																	9		
	482	G-19		RT																	3		
	482 - 483	G-20		LT																	9		
	483	G-21		RT																	2		
	484	G-20A		LT																	1		
	485 - 487	G-22		LT																	33		
	488 - 489	G-23		LT																	20		
	488 - 489	G-24		RT																	11		
	490	G-25		LT																	20		
	492 - 493	G-27	G-28	LT																	14		
	492 - 493	B-13	G-28A	RT															3		5		
	493 - 494	G-29		LT																	5		
	493 - 494	G-30		RT																	8		
	494	G-31		LT																	12		
	494	B-14		RT															10				
	495 - 496	G-32		RT																	14		
	497 - 499	G-33		RT																	34		
	497 - 498	G-34		LT																	9		
	500	G-35		RT																	6		
	500	G-36	B-15	RT															2		4		
	502 - 503	G-37	G-16	RT															12		32		
	502 - 503	G-38	G-39	LT															9		10		
	504 - 506	G-42		RT																	27		
	504 - 505	G-43		LT																	13		
	509	G-44	G-46	RT																2		3	
	509	G-45	G-47	LT																2		3	
TOTALS CARRIED TO SUBSUMMARY SHEET				**407**	1174	600	50			4	1	1	4	1			1		266	4	450	6	

CALCULATED CJC
CHECKED PJF

ESTIMATED QUANTITIES

SUM-77 / 277 / 224
VARIOUS

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	202 GUARDRAIL REMOVED FT	202 CABLE BARRIER REMOVED FT
GR-1	457	391+64.60 (I.R. 77)	393+83.82 (I.R. 77)	RT	222	
GR-2	457	394+53.25 (I.R. 77)	396+70.61 (I.R. 77)	LT	218	
GR-2A	457	399+29.71 (I.R. 77)	399+61.46 (I.R. 77)	LT/RT	32	
GR-3	457 , 459 , 461	400+57.96 (I.R. 77)	420+85.10 (I.R. 77)	LT		2027
GR-4	459	409+23.14 (I.R. 77)	412+49.28 (I.R. 77)	RT	327	
GR-5	461	417+32.05 (I.R. 77)	425+79.05 (I.R. 77)	LT	848	
GR-5A	461	418+21.43 (I.R. 77)	425+31.61 (I.R. 77)	RT	711	
GR-6	461	422+18.57 (I.R. 77)	425+50.77 (I.R. 77)	RT	333	
GR-7	461	424+01.54 (I.R. 77)	425+63.08 (I.R. 77)	LT	162	
GR-8	461 , 463	427+28.93 (I.R. 77)	429+27.50 (I.R. 77)	RT	201	
GR-9	461 , 463	426+68.43 (I.R. 77)	428+64.11 (I.R. 77)	LT	199	
GR-10	461 , 463	426+36.86 (I.R. 77)	429+13.66 (I.R. 77)	RT	278	
GR-11	461 , 463	426+84.09 (I.R. 77)	429+46.73 (I.R. 77)	LT	263	
GR-12	463	430+67.48 (I.R. 77)	435+53.23 (I.R. 77)	RT	489	
GR-13	463	431+05.31 (I.R. 77)	438+65.08 (I.R. 77)	LT	757	
GR-14	463	430+90.52 (I.R. 77)	432+98.00 (I.R. 77)	LT	209	
GR-15	465	441+23.87 (I.R. 77)	446+08.86 (I.R. 77)	RT	488	
GR-16	465	441+38.04 (I.R. 77)	446+70.42 (I.R. 77)	LT	530	
GR-17	465 , 467	449+77.10 (I.R. 77)	451+78.85 (I.R. 77)	RT	196	
GR-18	465 , 467	450+11.23 (I.R. 77)	451+87.02 (I.R. 77)	RT	170	
GR-19	469	465+31.73 (I.R. 77)	469+47.29 (I.R. 77)	RT	416	
GR-20	469	467+84.00 (I.R. 77)	468+69.58 (I.R. 77)	RT	86	
GR-21	469	469+62.07 (SB I.R. 77)	470+67.58 (SB I.R. 77)	LT	106	
GR-22	469	468+85.82 (I.R. 77)	472+85.31 (SB I.R. 77)	LT	404	
GR-23	472	477+73.18 (NB I.R. 77)	480+10.90 (NB I.R. 77)	LT	238	
GR-24	473	489+67.54 (NB I.R. 77)	490+92.73 (NB I.R. 77)	RT	127	
GR-25	474 - 475	507+81.44 (NB I.R. 77)	514+85.00 (NB I.R. 77)	LT	706	
GR-26	478 - 479	508+71.58 (SB I.R. 77)	514+95.00 (SB I.R. 77)	RT	623	
GR-27	478 - 479	509+26.38 (SB I.R. 77)	512+64.32 (SB I.R. 77)	LT	344	
GR-28	480	223+25.02 (I.R. 277/224)	230+07.75 (I.R. 277/224)	RT	682	
GR-28A	481	235+97.60 (I.R. 277/224)	238+00.92 (I.R. 277/224)	RT	204	
GR-29	482	247+69.22 (I.R. 277/224)	250+85.44 (I.R. 277/224)	RT	317	
GR-30	482 - 483	257+10.03 (I.R. 277/224)	262+03.66 (I.R. 277/224)	LT	494	
GR-30A	484	279+50.47 (I.R. 277/224)	279+81.23 (I.R. 277/224)	LT	32	
GR-31	485 - 487	481+51.60 (SB I.R. 77)	108+60.29 (RAMP A)	LT	2701	
GR-32	486	95+97.00 (RAMP A)	103+74.62 (RAMP A)	RT	800	
GR-33	488 - 489	203+66.73 (RAMP B)	214+90.00 (RAMP B)	RT/LT	1124	
GR-34	489	208+46.49 (RAMP B)	212+84.68 (RAMP B)	RT	452	
GR-35	490	501+98.59(SB I.R. 77)	421+31.97 (RAMP B-1)	LT	1882	
GR-36A	492	289+99.41 (RAMP B-2)	291+51.12 (RAMP B-2)	RT	153	
TOTALS CARRIED TO SUBSUMMARY SHEET				**407**	18524	2027

CALCULATED CJC
CHECKED PJF

ESTIMATED QUANTITIES

SUM-77 / 277 / 224
VARIOUS

426
1288

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	202 GUARDRAIL REMOVED	202 CABLE BARRIER REMOVED																
					FT	FT																
GR-36	490	409+34.76 (RAMP B-1)	416+90.65 (RAMP B-1)	RT	804																	
GR-37	493 - 494	298+30.38 (RAMP B-2)	307+94.03 (RAMP B-2)	RT/LT	966																	
GR-38	493 - 494	306+15.37 (RAMP B-2)	7+69.82 (RAMP B-2)	RT	250																	
GR-39	494	9+94.28 (RAMP B-2)	12+96.47 (RAMP B-2)	RT	323																	
GR-40	494 - 495	9+73.83 (RAMP B-2)	21+32.09 (RAMP B-2)	LT	1164																	
GR-41	495 - 496	24+05.10 (RAMP B-2)	33+81.95 (RAMP B-2)	RT	977																	
GR-42	497 - 499	578+55.92 (RAMP C)	279+50.00 (I.R. 277/224)	RT	2989																	
GR-43	497 - 498	583+77.93 (RAMP C)	591+80.23 (RAMP C)	LT	814																	
GR-44	500	679+57.99 (RAMP C-1)	686+24.97 (RAMP C-1)	RT	646																	
GR-45	500	684+20.18 (RAMP C-1)	693+38.64 (RAMP C-1)	LT	1017																	
GR-46	500	697+14.82 (RAMP C-1)	698+66.02 (RAMP C-1)	RT	152																	
GR-47	500	700+24.92 (RAMP C-1)	502+74.57 (NB I.R. 77)	RT	246																	
GR-48	502	596+71.47 (RAMP C)	789+56.23 (RAMP C-2)	RT/LT	841																	
GR-49	502	785+93.94 (RAMP C-2)	789+41.06 (RAMP C-2)	LT	367																	
GR-50	503	791+63.57 (RAMP C-2)	793+47.91 (RAMP C-2)	LT	189																	
GR-51	503	792+21.88 (RAMP C-2)	795+73.23 (RAMP C-2)	RT	351																	
GR-52	503	799+71.29 (RAMP C-2)	502+58.32 (SB I.R. 77)	RT	287																	
GR-53	504 - 506	889+38.43 (RAMP D)	914+89.19 (RAMP D)	RT	2538																	
GR-54	504 - 505	896+13.82 (RAMP D)	905+19.37 (RAMP D)	LT	915																	
GR-55	509	27+31.88 (WARNER RD)	28+21.81 (WARNER RD)	RT	91																	
GR-56	483	261+34.45 (I.R. 277/224)	261+96.50 (I.R. 277/224)	RT	63																	
GR-57	455 , 457	389+77.05 (I.R. 77)	392+02.08 (I.R. 77)	LT	226																	
TOTALS CARRIED TO SUBSUMMARY SHEET				407	16216																	

CALCULATED CJC
CHECKED PJF

ESTIMATED QUANTITIES

SUM-77 / 277 / 224
VARIOUS

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE		202 HEADWALL REMOVED EA		602 CONCRETE MASONRY CY														
HR-4	459	405+03.96 (I.R. 77)		RT.		1																
HR-5	459	412+11.76 (I.R. 77)		RT		1																
HR-7	461	419+04.88 (I.R. 77)		LT		1																
HR-8	461	425+19.64 (I.R. 77)		LT		1																
HR-9	461	427+22.50 (I.R. 77)		LT		1																
HR-10	463	428+98.36 (I.R. 77)		LT		1																
HR-11	463	431+96.79 (I.R. 77)		LT		1																
HR-13	463	436+02.13 (I.R. 77)		LT		1																
HR-15	465	444+01.51 (I.R. 77)		LT		1																
HR-16	465	450+01.01 (I.R. 77)		RT		1																
HR-17	467	458+01.27 (I.R. 77)		RT		1																
HR-27	477	490+98.85 (SB I.R. 77)		LT		1																
HR-32	477	494+49.55 (SB I.R. 77)		LT		1																
HR-33	474	504+50.80 (NB I.R. 77)		LT		1																
HR-34	503	797+24.43 (RAMP C-2)		RT		1																
HR-35	478	503+99.81 (SB I.R. 77)		RT		1																
HR-36	496	31+86.07 (RAMP B-2)		RT		1																
HR-38	495	24+98.76 (RAMP B-2)		RT		1																
HR-40	488	15+41.24 (RAMP B-2)		RT		1																
HR-41	488	14+96.76 (RAMP B-2)		RT		1																
HW-5	459	405+04.00 (I.R. 77)		RT				0.39														
HW-7	459	412+11.50 (I.R. 77)		RT				0.27														
HW-9	461	419+05.00 (I.R. 77)		LT				0.27														
HW-11	461	425+00.00 (I.R. 77)		LT				0.27														
HW-12	463	428+50.00 (I.R. 77)		LT				0.27														
HW-14	463	432+50.00 (I.R. 77)		LT				0.27														
HW-16	463	436+02.00 (I.R. 77)		LT				0.27														
HW-18	465	444+10.00 (I.R. 77)		LT				0.27														
HW-20	465	450+01.00 (I.R. 77)		RT				0.27														
HW-22	467	458+10.00 (I.R. 77)		RT				0.46														
HW-25	469	468+75.00 (I.R. 77)		LT.				0.46														
HW-26	469	469+75.00 (SB I.R. 77)		LT				0.46														
HW-28	477	91+92.43 (RAMP A)		LT				0.92														
HW-39	488	206+00.00 (RAMP B)		LT				0.27														
HW-42	477	93+94.24 (RAMP A)		LT				0.27														
HW-43	503	794+95.02 (RAMP C-2)		RT				0.27														
HW-44	494	307+74.41 (RAMP B-2)		LT				0.27														
HW-45	503	793+25.64 (RAMP C-2)		LT				0.27														
HW-46	461	427+40.06 (I.R. 77)		LT				0.27														
HW-47	463	431+63.18 (I.R. 77)		LT				0.27														
HW-48	461	426+72.66 (I.R. 77)		RT				0.27														
HW-49	463	431+06.54 (I.R. 77)		RT				0.27														
HW-50	495	25+00.81 (RAMP B-2)		RT				0.27														
HW-51	496	31+85.70 (RAMP B-2)		RT				0.27														
HW-54	488	206+50.00 (RAMP B)		LT				0.33														
HW-70	504	890+50.00 (RAMP D)		RT				0.6														
HW-71	504	891+38.08 (RAMP D)		RT				0.6														
TOTALS CARRIED TO SUBSUMMARY SHEET				407 409		20		9.4														

CALCULATED CJC
CHECKED PJF

ESTIMATED QUANTITIES

SUM-77 / 277 / 224
VARIOUS

428
1288

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	611 15" CONDUIT, TYPE B FT	611 CONDUIT, BORED OR JACKED, 15", TYPE B, 748.06 FT		611 15" CONDUIT, TYPE F FT	611 18" CONDUIT, TYPE B FT	611 18" CONDUIT, TYPE C FT		611 21" CONDUIT, TYPE B FT		611 24" CONDUIT, TYPE A FT	611 CONDUIT, BORED OR JACKED, 24", TYPE B, 748.06 FT		611 36" CONDUIT, TYPE B FT	611 36" CONDUIT, TYPE C FT	611 CONDUIT, BORED OR JACKED, 42", TYPE B, 748.06 FT		602 CONCRETE MASONRY CY	
HW-102	465	446+50.00 (I.R. 77)		LT																		0.76	
HW-105	480	231+55.13 (I.R. 277)		RT																		0.33	
HW-106	497	583+65.35 (RAMP C)		RT																		0.27	
HW-112	465	445+85.63 (I.R. 77)		LT																		0.76	
HW-115	480	231+05.28 (I.R. 277)		RT																		0.33	
HW-116	497	584+20.81 (RAMP C)		RT																		0.27	
P-1	457	D-1	D-2	LT	250																		
P-2	457	D-2	D-3	LT					250														
P-3	457	D-3	D-4	LT					250														
P-4	457 , 459	D-4	D-5	LT					254														
P-5	459	D-5	HW-5	RT								110											
P-6	459	D-6	D-7	LT	312																		
P-7	459	D-7	P-7A	RT	88																		
P-7A	459	P-7	HW-7	RT				44															
P-8	461	D-8	D-9	LT	305																		
P-9	461	D-9	P-9A	LT	73																		
P-9A	461	P-9	HW-9	LT				38															
P-10	461	D-10	D-64	LT	118																		
P-11	461	D-11	P-11A	LT		76																	
P-11A	461	P-11	HW-11	LT				33															
P-12	463	D-12	P-12A	LT		76																	
P-12A	463	P-12	HW-12	LT				55															
P-13	463	D-13	D-14	RT	100																		
P-14	463	D-14	P-14A	LT		81																	
P-14A	463	P-14	HW-14	LT				38															
P-15	463	D-15	D-14	RT	100																		
P-16	463	D-16	P-16A	LT	79																		
P-16A	463	P-16	HW-16	LT				41															
P-17	463	D-17	D-16	RT	298																		
P-18	465	D-18	HW-18	LT		107																	
P-19	465	D-19	D-18	RT	290																		
P-20	465	D-20	HW-20	RT	102																		
P-21	465 , 467	D-21	D-20	RT	298																		
P-22	467	D-22	HW-22	RT											102								
P-23	467	D-23	D-22	RT								290											
P-24	467 , 469	D-24	D-23	RT					300														
P-25	469	D-25	D-24	RT	375																		
P-26	469	HW-26	HW-25	LT										103									
P-26A	492	D-26	DJ-1	LT								56											
P-27	492	D-27	D-28	LT						71													
P-28	477	D-28	HW-28	LT																199			
P-29	492	D-29	D-30	LT/RT														44					
P-30	492	D-30	D-28	LT															65				
TOTALS CARRIED TO SUBSUMMARY SHEET				**409**	2788	340		249	1054	71		456		103	102		44	65	199		2.8		

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ESTIMATED QUANTITIES

SUM-77 / 277 / 224
VARIOUS

REVISIONS

NO.	DATE	DESCRIPTION
6	04/26/21	REVISED CONDUITS, BORED OR JACKED

429
1288

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	611 15" CONDUIT, TYPE B FT	611 CONDUIT, BORED OR JACKED, 15", TYPE B, 748.06 FT	611 15" CONDUIT, TYPE C FT	611 15" CONDUIT, TYPE F FT	611 15" CONDUIT, TYPE B, 706.02 FT	611 18" CONDUIT, TYPE C FT	611 18" CONDUIT, TYPE F FT	611 21" CONDUIT, TYPE B 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 24" CONDUIT, TYPE B, 706.02 FT	611 36" CONDUIT, TYPE C FT	611 CONDUIT, BORED OR JACKED, 18", TYPE B, 748.06 FT	611 CONDUIT, MISC.: 18", TYPE B, 748.06, OPEN CUT FT	
P-31	473	D-31	D-29	LT								98										
P-32	492	D-32	D-40	LT	75																	
P-33	492	D-33	D-29	RT												183						
P-34	500	D-34	D-33	RT										101								
P-35	493	D-35	D-41	RT	244																	
P-36	493	D-36	D-37	LT/RT	152																	
P-37	478	D-37	D-38	RT			250															
P-38	478	D-38	503+99.77 (I.R. 77)	RT														8				
P-39	488	D-39	P-39A	RT	30																	
P-39A	488	P-39	HW-39	LT				62														
P-40	492	D-40	D-30	LT	79																	
P-41	493	D-41	D-33	RT	58																	
P-42	477	D-42	P-42A	LT/RT		120																
P-42A	477	P-42	HW-42	LT				35														
P-43	503	D-43	HW-43	RT				43														
P-44	494	D-44	HW-44	LT				45														
P-45	503	D-45	HW-45	LT			22															
P-46	461	D-46	HW-46	LT				51														
P-47	463	D-47	HW-47	LT				41														
P-48	461	D-48	HW-48	RT				47														
P-49	463	D-49	HW-49	RT				41														
P-50	495	24+94.84 (RAMP B-2)	HW-38	RT	87																	
P-51	496	31+73.91 (RAMP B-2)	P-51A	RT	7																	
P-51A	496	P-51A	HW-51	RT				51														
P-54	494 , 488	D-54	P-54A	LT/RT																	155	22
P-54A	488	P-54	HW-54	LT							40											
P-55	472	D-55	D-26	LT									297									
P-56	453	D-56	376+06.22 (I.R. 77)	LT					9													
P-57	469	D-57	D-58	LT	5																	
P-58	469	D-58	D-60	LT	140																	
P-59	469	D-59	D-60	LT	5																	
P-60	469	D-60	D-61	RT	190																	
P-61	469	D-61	D-25	RT	26																	
P-62	467	D-62	D-21	RT	250																	
P-63	461 , 463	D-63	D-12	LT	110																	
P-64	461	D-64	D-11	LT	182																	
P-70	504	HW-70	D-70	RT													59					
P-71	504	D-70	HW-71	RT													31					
P-102	465	HW-102	HW-112	LT																65		
P-105	480	HW-105	HW-115	RT						50												
P-106	497	HW-106	HW-116	RT			55															
TOTALS CARRIED TO SUBSUMMARY SHEET				409	1640	120	327	416	9	50	40	98	297	101		183	90	8	65	155	22	

CALCULATED CJC
CHECKED PJF

ESTIMATED QUANTITIES

SUM-77 / 277 / 224
VARIOUS

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE		202 PIPE REMOVED, 24" AND UNDER FT	202 PIPE REMOVED, OVER 24" FT		202 GUTTER REMOVED SY		611 MANHOLE ADJUSTED TO GRADE, AS PER PLAN (SANITARY) EACH	611 MANHOLE, NO. 3 (SANITARY) EACH	611 MANHOLE, NO. 3, AS PER PLAN (SANITARY) EACH	611 27" CONDUIT, TYPE C, 707.48 (SANITARY) FT							
PR-1	457	DR-1	DR-2	LT		390															
PR-2	457	DR-2	DR-3	LT		94															
PR-3	457 , 459	DR-3	DR-4	LT		501															
PR-4	459	DR-4	HR-4	RT		111															
PR-5	459	DR-5	HR-5	LT/RT		131															
PR-6	461	DR-6	DR-7	LT/RT		27															
PR-7	461	DR-7	HR-7	LT		98															
PR-8	461	FP-8	HR-8	LT		27															
PR-9	461	FP-9	HR-9	LT		45															
PR-10	463	FP-10	HR-10	LT		37															
PR-11	463	DR-11	FP-11	LT		12															
PR-11A	463	FP-11	HR-11	LT		34															
PR-12	463	DR-12	DR-13	LT/RT		26															
PR-13	463	DR-13	HR-13	LT		103															
PR-14	465	DR-14	DR-15	LT/RT		27															
PR-15	465	FP-15	HR-15	LT		12															
PR-16	465	DR-16	HR-16	RT		96															
PR-17	467	FP-17	HR-17	RT		6															
PR-18	467	DR-18	DR-17	LT/RT		27															
PR-19	467	DR-19	DR-17	RT		500															
PR-20	467	DR-20	DR-19	LT/RT		27															
PR-21	467 , 469	DR-21	DR-19	RT		500															
PR-22	469	DR-22	DR-21	LT/RT		27															
PR-23	472	DR-23	DR-24	LT		621															
PR-24	492	DR-24	DJ-1	LT		31															
PR-25	476	DR-25	DJ-1	RT		104															
PR-27	477	FP-27	HR-27	LT			6														
PR-27A	492	DR-27	FP-27	LT/RT			40														
PR-28	473	DR-28	DR-29	LT/RT		112															
PR-29	492	DR-29	DR-27	LT		182															
PR-30	492	DR-30	DR-29	LT		174															
PR-31	500	DR-31	DR-30	LT		105															
PR-32	477	FP-32	HR-32	LT		8															
PR-33	474	DR-33	HR-33	LT		44															
PR-34	503	DR-34	HR-34	LT/RT		43															
PR-35	478	HR-35	503+99.77 (SB I.R 77)	RT		19															
PR-36	496	31+83.91 (RAMP B-2)	HR-36	RT		66															
PR-37	495	24+94.84 (RAMP B-2)	DR-38	RT		2															
PR-38	495	DR-38	HR-38	RT		55															
PR-39	453	DR-36	376+06.22 (I.R. 77)	LT		8															
PR-40	488 , 494	DR-40	HR-40	LT/RT		80															
PR-41	488	FP-41	HR-41	LT		14															
R-1	465	445+19.63 (I.R. 77)	446+01.78 (I.R. 77)	LT					50.23												
R-2	478 - 479	510+71.80 (SB I.R. 77)	211+25.80 (RAMP B)	LT/RT					35.02												
SA-1	486	101+34.90 (RAMP A)		LT									1								
SA-2	486	102+00.00 (RAMP A)		LT									1								
SA-3	486	102+50.00 (RAMP A)		LT								1									
SJ-1	509	24+75.22 (WARNER RD)		LT							1										
SJ-2	509	27+24.75 (WARNER RD)		LT							1										
SP-1	486	SA-1	SA-2	LT										62							
SP-2	486	SA-2	SA-3	LT										64							
SR-1	486	SA-1	SA-3	LT			122														
TOTALS CARRIED TO SUBSUMMARY SHEET				407 409		4526	168		86		2	1	2	126							

CALCULATED C.JC
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ESTIMATED QUANTITIES

SUM-77 / 277 / 224
VARIOUS

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	601 TIED CONCRETE BLOCK MAT WITH TYPE I UNDERLAYMENT SY		605 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		605 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		605 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		611 6" CONDUIT, TYPE B FT		611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS FT		611 PRECAST REINFORCED CONCRETE OUTLET EACH		FOR INFORMATION ONLY 6" PLUG EACH	6" X 6" TEE EACH	6" X 6" CROSS EACH	6" - 90° BEND EACH
U-1	922	383+89.45 (I.R. 77)	U-25	RT			591						48						1	1		1
U-2	932	24+50.00 (WARNER RD)	U-93	RT					19										1			
U-3	932	425+45.00 (I.R. 77)	U-92	LT					40										1	1		
U-4	932	425+40.00 (I.R. 77)	U-92	LT					35										1			1
U-5	932	425+25.00 (I.R. 77)	D-11	LT					20				8		5				1			2
U-6	932	425+17.00 (I.R. 77)	U-87	RT					17										1	1		
U-7	932	429+13.26 (I.R. 77)	U-102	LT					58										1	1		
U-8	932	429+09.41 (I.R. 77)	U-102	LT					54										1			1
U-9	932	428+98.93 (I.R. 77)	D-12	LT					44				8		5				1			2
U-10	932	428+93.71 (I.R. 77)	U-99	RT					44										1	1		
U-11	932	428+83.33 (I.R. 77)	U-100	RT					42										1	1		
U-12	932	428+79.56 (I.R. 77)	U-100	RT					39										1		1	
U-13	927	693+69.53 (RAMP C-1)	U-15	CENTER					132											1		
U-14	927	693+62.87 (RAMP C-1)	U-211	LT					127										1			1
U-15	927	694+94.95 (RAMP C-1)	D-34	RT									8		23							1
U-16	922	395+00.00 (I.R. 77)	U-286	RT									60									
U-17	926	583+50.00 (RAMP C)	U-319	CENTER					34													
U-18	929	509+01.61 (I.R. SB 77)	U-252	LT									34									
U-19	922	72+25.00 (RAMP D ARL)	U-22	RT					56											1		
U-20	922	375+17.87 (I.R. 77)	U-316	RT							347		25						1			
U-21	922	375+18.11 (I.R. 77)	U-20	RT			346												1			
U-22	922	75+11.71 (RAMP D ARL)	OUTLET	LT	2						342		31		14		1		1	1		
U-23	922	75+11.71 (RAMP D ARL)	U-19	RT			287												1			
U-24	922	377+93.12 (I.R. 77)	U-26	RT							269		42						1			1
U-25	922	383+89.70 (I.R. 77)	U-137	RT			783												1			
U-26	922	82+18.45 (RAMP D ARL)	OUTLET	LT	2						702		22		18		1		1	1		
U-27	922	83+95.00 (RAMP D ARL)	U-139	CENTER			795												1			
U-28	922	83+95.00 (RAMP D ARL)	U-27	RT							227		8						1	1		1
U-29	922	383+99.45 (I.R. 77)	U-286	RT							1101								1	1		
U-30	922	384+00.00 (I.R. 77)	U-31	RT			425						12						1	1		1
U-31	922	84+05.00 (RAMP D ARL)	U-16	CENTER			1090												1	1		
U-32	922	84+05.00 (RAMP D ARL)	U-31	RT							801		10						1	1		1
U-33	922 , 923	391+37.36 (I.R. 77)	U-34	LT							860		10									1
U-34	922 , 923	391+37.36 (I.R. 77)	D-3	LT			860						60							1		
U-35	922	391+37.36 (I.R. 77)	D-1	LT			362						15									1
U-36	922 , 923	395+05.00 (I.R. 77)	D-2	LT			244						13						1			1
U-37	922 , 923	395+05.00 (I.R. 77)	D-2	RT			245						12						1			1
U-38	922	394+62.50 (I.R. 77)	U-286	RT							38		10						1			1
U-39	922 , 923	395+05.00 (I.R. 77)	U-40	RT							997		12						1			1
U-40	922 , 923	395+05.00 (I.R. 77)	OUTLET	RT	2		997						10		19		1		1	1		
U-41	922 , 923	395+05.00 (I.R. 77)	U-40	RT							998								1	1		
U-42	923	397+55.00 (I.R. 77)	D-3	LT			245												1	1		
U-43	923	397+55.00 (I.R. 77)	D-3	RT			245						12						1			1
U-44	923	400+05.00 (I.R. 77)	U-45	LT							893								1	1		
U-45	923	400+05.00 (I.R. 77)	OUTLET	LT	2		893						10		24		1		1			1
TOTALS CARRIED TO SUBSUMMARY SHEET				408 409	8		8408		761		7575		480		108		4		36	20	1	21

CALCULATED DRJ
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UNDERDRAIN QUANTITIES

SUM-77 / 277 / 224
VARIOUS

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	601 TIED CONCRETE BLOCK MAT WITH TYPE I UNDERLAYMENT SY		605 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		605 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		605 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		611 6" CONDUIT, TYPE B FT		611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS FT		611 PRECAST REINFORCED CONCRETE OUTLET EACH		FOR INFORMATION ONLY 6" PLUG EACH	6" X 6" TEE EACH	6" X 6" CROSS EACH	6" - 90° BEND EACH
U-46	923	400+05.00 (I.R. 77)	D-4	LT			245						12						1			1
U-47	923	400+05.00 (I.R. 77)	D-4	RT			245						12						1			1
U-48	923	402+55.00 (I.R 77)	D-5	LT			249						12						1			1
U-49	923	402+55.00 (I.R 77)	D-5	RT			244						12		5				1			2
U-50	923	405+09.00 (I.R. 77)	D-6	LT			391						12						1			1
U-51	923	405+09.00 (I.R. 77)	D-6	RT			391						12						1			1
U-52	923	405+09.00 (I.R. 77)	U-53	RT							391		12						1			1
U-53	923	405+09.00 (I.R. 77)	OUTLET	RT	2		391						10		20		1		1	1		
U-54	923	405+09.00 (I.R. 77)	U-53	RT							391								1	1		
U-55	923	409+05.00 (I.R. 77)	U-56	LT							295								1	1		
U-56	923	409+05.00 (I.R. 77)	OUTLET	LT	2		295						10		24		1		1			1
U-57	923	409+05.00 (I.R. 77)	D-7	LT			307						12						1			1
U-58	923	409+05.00 (I.R. 77)	D-7	RT			302						12		5				1			2
U-59	923	409+05.00 (I.R. 77)	U-60	RT							302		12						1			1
U-60	923	409+05.00 (I.R. 77)	OUTLET	RT	2		301						10		12		1		1	1		
U-61	923	409+05.00 (I.R. 77)	U-60	RT							302								1	1		
U-62	923	412+06.50 (I.R. 77)	U-63	LT							394								1	1		
U-63	923	412+06.50 (I.R. 77)	OUTLET	LT	2		393						10		27		1		1			1
U-64	923	412+16.50 (I.R. 77)	D-8	LT			384						12						1			1
U-65	923	412+16.50 (I.R. 77)	D-8	RT			384						12						1			1
U-66	923	412+16.50 (I.R. 77)	U-67	RT							383		11						1			1
U-67	923	412+16.50 (I.R. 77)	OUTLET	RT	2		383						10		21		1		1	1		
U-68	923	412+16.50 (I.R. 77)	U-67	RT							384								1	1		
U-69	923	416+05.00 (I.R. 77)	U-70	LT							295								1	1		
U-70	923	416+05.00 (I.R. 77)	OUTLET	LT	2		295						10		19		1		1			1
U-71	923	416+05.00 (I.R. 77)	D-9	LT			294						9		5				1			2
U-72	923	416+05.00 (I.R. 77)	D-9	RT			300						12						1			1
U-73	923	416+05.00 (I.R. 77)	U-74	RT							295		7						1			1
U-74	923	416+05.00 (I.R. 77)	OUTLET	RT	2		295						10		16		1		1	1		
U-75	923	416+05.00 (I.R. 77)	U-74	RT							295								1	1		
U-76	923 , 924	419+10.00 (I.R. 77)	U-77	LT							290								1	1		
U-77	923 , 924	419+10.00 (I.R. 77)	OUTLET	LT	2		290						10		18		1		1			1
U-78	923 , 924	419+10.00 (I.R. 77)	D-10	LT			290						12						1			1
U-79	923 , 924	419+10.00 (I.R. 77)	D-10	RT			290						12						1			1
U-80	923 , 924	419+05.00 (I.R. 77)	U-81	RT							295		3						1			1
U-81	923 , 924	419+05.00 (I.R. 77)	OUTLET	RT	2		295						10		16		1		1	1		
U-82	923 , 924	419+05.00 (I.R. 77)	U-81	RT							295								1	1		
U-83	922	388+29.90 (I.R. 77)	U-16	RT							671								1	1		
U-84	932	422+05.00 (I.R. 77)	U-85	LT							290								1	1		
U-85	932	422+05.00 (I.R. 77)	OUTLET	LT	2		290						16		15		1		1			1
U-86	932	422+05.00 (I.R. 77)	D-11	LT			290						8		5				1			2
U-87	932	422+05.00 (I.R. 77)	D-11	RT			295						12						1			
U-88	932	422+05.00 (I.R. 77)	OUTLET	RT	2		272						17		15		1		1			
U-89	932	422+05.00 (I.R. 77)	U-88	RT							55		2						1	1		1
U-90	932	422+05.00 (I.R. 77)	U-88	RT							272								1			
TOTALS CARRIED TO SUBSUMMARY SHEET				408 409	22		8401				5895		355		223		11		45	17		30

CALCULATED DRJ
CHECKED PJF

UNDERDRAIN QUANTITIES

SUM-77 / 277 / 224
VARIOUS

433
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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	601 TIED CONCRETE BLOCK MAT WITH TYPE I UNDERLAYMENT SY		605 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		605 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FABRIC FT		605 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		611 6" CONDUIT, TYPE B FT		611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS FT		611 PRECAST REINFORCED CONCRETE OUTLET EACH		FOR INFORMATION ONLY 6" PLUG EACH	6" X 6" TEE EACH	6" X 6" CROSS EACH	6" - 90° BEND EACH
U-91	926 , 927	483+04.97 (I.R. NB 77)	U-103	LT							293								1	1		
U-92	932	425+05.00 (I.R. 77)	OUTLET	LT	2								16		15		1					
U-93	932	27+70.00 (WARNER RD)	EX-1	RT							314		4		12				1	1		1
U-94	932	27+70.00 (WARNER RD)	OUTLET	LT	2						319		4		14		1		1			1
U-95	932	427+18.23 (I.R. 77)	D-46	LT							11				10				1			
U-96	932	427+13.29 (I.R. 77)	OUTLET	LT	2		132						18		13		1		1			1
U-97	932	427+52.06 (I.R. 77)	U-96	LT							93								1	1		
U-98	932	426+98.68 (I.R. 77)	D-12	LT			147						8		5				1			2
U-99	932	426+91.46 (I.R. 77)	D-12	RT			159						12						1			
U-100	932	426+76.72 (I.R. 77)	OUTLET	RT	2		164						18		13		1		1			
U-101	932	426+78.01 (I.R. 77)	U-100	RT							163								1			
U-102	932	428+55.00 (I.R. 77)	OUTLET	LT	2								18		14		1					
U-103	926 , 927	483+04.97 (I.R. NB 77)	D-23	LT			294						10		13				1	1		
U-104	932	431+37.46 (I.R. 77)	D-47	LT							16				10				1			
U-105	932	431+33.34 (I.R. 77)	OUTLET	LT	2		111						10		20		1		1			1
U-106	932	431+21.90 (I.R. 77)	D-13	LT			28						12						1			1
U-107	932	431+16.37 (I.R. 77)	D-13	RT			34						12						1			1
U-108	932	431+05.22 (I.R 77)	OUTLET	RT	2		145						12		16		1		1			
U-109	932	431+11.51 (I.R. 77)	U-108	RT							139								1			
U-110	932	431+68.21 (I.R. 77)	U-105	LT							77								1	1		
U-111	932	431+55.00 (I.R. 77)	D-14	LT			90						12		5				1			2
U-112	932	431+55.00 (I.R. 77)	D-14	RT			95						12						1			
U-113	932	433+45.00 (I.R. 77)	U-114	LT							90								1	1		
U-114	932	433+45.00 (I.R. 77)	OUTLET	LT	2		90						10		19		1		1	1		
U-115	932	433+45.00 (I.R. 77)	U-114	LT							89		2						1			1
U-116	932	433+45.00 (I.R. 77)	D-14	LT			90						12		5				1			2
U-117	932	433+45.00 (I.R. 77)	U-112	RT			95												1	1		
U-118	932	433+45.00 (I.R. 77)	U-108	RT			95												1	1		
U-119	932	433+45.00 (I.R. 77)	U-108	RT							96								1		1	
U-120	924	435+95.00 (I.R. 77)	U-121	LT							244								1	1		
U-121	924	435+95.00 (I.R. 77)	OUTLET	LT	2		243						10		18		1		1	1		
U-122	924	435+95.00 (I.R. 77)	U-121	LT							244		3						1			1
U-123	924	435+95.00 (I.R. 77)	D-15	LT			245						12						1			1
U-124	924	435+95.00 (I.R. 77)	D-15	RT			245						12						1			1
U-125	924	435+95.00 (I.R. 77)	OUTLET	RT	2		246						10		18		1		1			1
U-126	924	435+95.00 (I.R. 77)	U-125	RT							246								1	1		
U-127	924	444+05.00 (I.R. 77)	U-128	LT							794								1	1		
U-128	924	444+05.00 (I.R. 77)	OUTLET	LT	2		794						10		15		1		1	1		
U-129	924	444+05.00 (I.R. 77)	U-128	LT							794		7						1			1
U-130	924	438+95.00 (I.R. 77)	D-16	LT			288						12		5				1			2
U-131	924	438+95.00 (I.R. 77)	D-16	RT			293						12						1			1
U-132	924	443+95.00 (I.R. 77)	OUTLET	RT	2		799						10		22		1		1			1
U-133	924	443+95.00 (I.R. 77)	U-132	RT							799								1	1		
U-134	924	444+05.00 (I.R. 77)	D-17	LT			505						12						1			1
U-135	924	444+05.00 (I.R. 77)	D-17	RT			505						12						1			1
TOTALS CARRIED TO SUBSUMMARY SHEET				408 409	24		5932				4821		324		262		12		43	15	1	24

CALCULATED XXX CHECKED XXX

UNDERDRAIN QUANTITIES

SUM-77 / 277 / 224
VARIOUS

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	601 TIED CONCRETE BLOCK MAT WITH TYPE I UNDERLAYMENT SY		605 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		605 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		605 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		611 6" CONDUIT, TYPE B FT		611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS FT		611 PRECAST REINFORCED CONCRETE OUTLET EACH		FOR INFORMATION ONLY 6" PLUG EACH	6" X 6" TEE EACH	6" X 6" CROSS EACH	6" - 90° BEND EACH
U-136	932	425+02.71 (I.R. 77)	U-88	RT					26										1	1		
U-137	922	376+06.25 (I.R. 77)	U-24	RT					83											1		
U-138	932	424+97.21 (I.R. 77)	U-88	RT					21										1		1	
U-139	922	76+00.00 (RAMP D ARL)	U-26	CENTER					83											1		
U-141	924 , 925	453+95.00 (I.R. 77)	U-142	LT							978								1	1		
U-142	924 , 925	453+95.00 (I.R. 77)	OUTLET	LT	2		978						10		12		1		1	1		
U-143	924 , 925	453+95.00 (I.R. 77)	U-142	LT							978		12						1			1
U-144	924 , 925	446+95.00 (I.R. 77)	D-18	LT			280						12		5				1			2
U-145	924 , 925	446+95.00 (I.R. 77)	D-18	RT			285						12						1			1
U-146	924 , 925	446+95.00 (I.R. 77)	OUTLET	RT	2		296						10		18		1		1			1
U-147	924 , 925	446+95.00 (I.R. 77)	U-146	RT							296								1	1		
U-148	925	449+97.00 (I.R. 77)	D-19	LT			297						12						1			1
U-149	925	449+97.00 (I.R. 77)	D-19	RT			297						12						1			1
U-150	925	449+97.00 (I.R. 77)	OUTLET	RT	2		297						10		25		1		1			1
U-151	925	449+97.00 (I.R. 77)	U-150	RT							298								1	1		
U-152	925	452+95.00 (I.R. 77)	D-20	LT			293						12						1			1
U-153	925	452+95.00 (I.R. 77)	D-20	RT			287						9		5				1			2
U-154	925	458+00.00 (I.R. 77)	OUTLET	RT	2		793						10		24		1		1			1
U-155	925	458+00.00 (I.R. 77)	U-154	RT							793								1	1		
U-156	925	458+00.00 (I.R. 77)	D-21	LT			500						12						1			1
U-157	925	458+00.00 (I.R. 77)	D-21	RT			500						15						1			1
U-158	925	458+00.00 (I.R. 77)	U-159	LT							400								1	1		
U-159	925	458+00.00 (I.R. 77)	OUTLET	LT	2		400						10		24		1		1	1		
U-160	925	458+00.00 (I.R. 77)	U-159	LT							400		12						1			1
U-161	925	467+70.00 (I.R. 77)	U-162	LT							960								1	1		
U-162	925	467+70.00 (I.R. 77)	OUTLET	LT	2		960						10		24		1		1	1		
U-163	925	467+70.00 (I.R. 77)	U-162	LT							960		12						1			1
U-164	925	460+95.00 (I.R. 77)	D-22	LT			285						12						1			1
U-165	925	460+95.00 (I.R. 77)	U-166	RT							126		2						1	1		1
U-166	925	460+95.00 (I.R. 77)	D-22	RT			281						19		5				1			2
U-167	925	467+70.00 (I.R. 77)	OUTLET	RT	2		955						10		19		1		1			1
U-168	925	466+99.56 (I.R. 77)	U-167	RT							885								1	1		
U-169	925	463+95.00 (I.R. 77)	D-23	RT			295						12						1			1
U-170	925	463+95.00 (I.R. 77)	D-23	RT			295						12						1	1		
U-171	925	463+95.00 (I.R. 77)	U-170	RT							295		12						1			1
U-172	925	467+70.00 (I.R. 77)	D-24	LT			370						12						1			1
U-173	925	467+70.00 (I.R. 77)	D-24	RT			370						12						1	1		
U-174	925	467+70.00 (I.R. 77)	U-173	RT							370		12						1			1
U-175	925	468+67.50 (I.R. 77)	U-339	LT							93		10						1			1
U-176	925 , 926	478+41.90 (I.R. SB 77)	U-339	LT			1061												1	1		
U-177	925 , 926	478+41.90 (I.R. SB 77)	U-339	LT							1064								1	1		
U-178	925	469+46.73 (I.R. SB 77)	U-340	LT			176													1		
U-179	925 , 926	472+63.00 (I.R. NB 77)	D-25	LT			487						12						1	1		
U-180	925 , 926	472+63.00 (I.R. NB 77)	U-341	LT							488								1	1		
TOTALS CARRIED TO SUBSUMMARY SHEET				**408 409**	14		11038		213		9384		329		161		7		41	21	1	26

CALCULATED DRJ
CHECKED PJF

UNDERDRAIN QUANTITIES

SUM-77 / 277 / 224
VARIOUS

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	601 TIED CONCRETE BLOCK MAT WITH TYPE I UNDERLAYMENT SY		605 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		605 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		605 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		611 6" CONDUIT, TYPE B FT		611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS FT		611 PRECAST REINFORCED CONCRETE OUTLET EACH		FOR INFORMATION ONLY 6" PLUG EACH	6" X 6" TEE EACH	6" X 6" CROSS EACH	6" - 90° BEND EACH
U-181	925 , 926	472+27.58 (I.R. NB 77)	U-341	RT			452															1
U-182	925 , 926	478+41.90 (I.R. SB 77)	U-178	RT							911		9						1	1		1
U-183	925	469+85.83 (I.R. NB 77)	U-179	LT							48		10						1	1		3
U-184	925 , 926	472+26.99 (I.R. NB 77)	U-181	RT							280		10						1	1		1
U-185	926	478+41.97 (I.R. SB 77)	U-176	LT							706		10						1	1		1
U-186	926	472+73.15 (I.R. NB 77)	U-323	LT							426		1						1			2
U-187	926	472+73.15 (I.R. NB 77)	D-126	LT			1024						10		13				1	1		
U-188	926	472+73.15 (I.R. NB 77)	U-324	RT							427								1			
U-189	926	472+73.15 (I.R. NB 77)	U-325	RT							429								1			
U-190	926	472+73.15 (I.R. NB 77)	U-326	RT							429								1			
U-191	926	577+52.62 (RAMP C)	U-318	LT/RT			530						15						1			2
U-192	926 , 927	478+52.00 (I.R. SB 77)	U-193	LT							784								1	1		
U-193	926 , 927	478+52.00 (I.R. SB 77)	OUTLET	LT	2		785						10		12		1		1	1		
U-194	926 , 927	478+52.00 (I.R. SB 77)	U-193	LT							788		12						1	1		
U-195	926 , 927	478+52.00 (I.R. SB 77)	U-194	LT							793		24						1			1
U-196	926 , 927	478+52.00 (I.R. SB 77)	OUTLET	RT	2						499				34		1		1			1
U-197	926 , 927	481+17.43 (I.R. NB 77)	OUTLET	RT	2						488				19		1		1			1
U-198	927 , 931	592+45.00 (RAMP C)	U-17	CENTER			895															
U-199	927	483+55.00 (I.R. SB 77)	D-42	RT							1047				21				1			1
U-200	927	486+55.00 (I.R. SB 77)	U-208	LT							774								1	1		
U-201	927	486+55.00 (I.R. SB 77)	U-208	LT			784						48						1	1		
U-202	927	486+55.00 (I.R. SB 77)	U-201	LT							788		24						1			1
U-203	927	286+61.87 (RAMP B-2)	U-204	LT							626								1	1		
U-204	927	286+04.88 (RAMP B-2)	D-30	CENTER			685						12		6				1	1		
U-205	927	486+05.00 (I.R. NB 77)	U-206	RT							653		12						1	1		
U-206	927	486+05.00 (I.R. NB 77)	U-204	CENTER			651						32						1	2		
U-207	927	88+75.56 (RAMP A)	U-201	RT							561								1	1		
U-208	927	486+55.00 (I.R. SB 77)	OUTLET	CENTER	2		776						10		12		1		1	1		
U-209	927 , 928	94+36.91 (RAMP A)	U-210	LT							104								1		1	
U-210	927 , 928	94+36.91 (RAMP A)	OUTLET	CENTER	2		104						10		12		1		1	1		
U-211	927	694+94.95 (RAMP C-1)	U-15	LT									16									
U-212	927 , 928	494+49.48 (I.R. SB 77)	U-213	LT							351								1	1		
U-213	927 , 928	494+49.48 (I.R. SB 77)	OUTLET	LT	2		351						8		24		1		1	1		
U-214	927 , 928	494+56.54 (I.R. SB 77)	U-217	CENTER			692						12							1		1
U-215	927 , 928	494+05.00 (I.R. SB 77)	U-214	RT							290		10						1	1		1
U-216	927	793+16.70 (RAMP C-2)	D-43	CENTER			164						3		10				1			1
U-217	927 , 928	795+00.13 (RAMP C-2)	OUTLET	CENTER	2		800						8		19		1		1	1		
U-218	927	293+01.02 (RAMP B-2)	D-40	LT					74										1			
U-219	927	295+29.19 (RAMP B-2)	D-40	LT							144				10				1			
U-220	927	486+05.00 (I.R. NB 77)	U-225	RT							648								1	1		
U-221	927	295+50.81 (RAMP B-2)	U-224	RT							262								1	1		
U-222	927	494+95.00 (I.R. NB 77)	D-29	CENTER			179						6						1			1
U-223	927	494+95.00 (I.R. NB 77)	U-205	RT							240								1			
U-224	927	292+56.62 (RAMP B-2)	U-204	RT							34		24						1			
U-225	927	494+95.00 (I.R. NB 77)	D-31	RT							253		10		24				1			3
TOTALS CARRIED TO SUBSUMMARY SHEET				408 409	14		8872		74		13783		356		216		7		41	25	1	23

CALCULATED DRJ
CHECKED PJF

UNDERDRAIN QUANTITIES

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VARIOUS

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	601 TIED CONCRETE BLOCK MAT WITH TYPE I UNDERLAYMENT SY		605 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		605 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		605 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		611 6" CONDUIT, TYPE B FT		611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS FT		611 PRECAST REINFORCED CONCRETE OUTLET EACH		FOR INFORMATION ONLY 6" PLUG EACH	6" X 6" TEE EACH	6" X 6" CROSS EACH	6" - 90° BEND EACH
U-226	927 , 931	783+89.12 (RAMP C-2)	OUTLET	LT/CEN	2		511						20		11		1		1			3
U-227	927 , 931	688+05.00 (RAMP C-1)	U-13	CENTER			558												1			
U-228	927 , 928	300+94.13 (RAMP B-2)	D-41	RT							532				10				1			
U-229	927 , 928	501+00.00 (I.R. NB 77)	U-230	LT							595								1	1		
U-230	927 , 928	501+00.00 (I.R. NB 77)	D-33	CENTER			595						10		5				1	1		
U-231	927 , 928	501+94.76 (I.R. NB 77)	U-230	RT							738		36						1			3
U-232	927 , 928	696+11.41 (RAMP C-1)	U-233	LT							108		16						1			1
U-233	927 , 928	701+95.00 (RAMP C-1)	D-34	CENTER			692						8		25				1	1		1
U-234	927 , 928	701+95.00 (RAMP C-1)	U-233	RT							692								1	1		
U-235	927 , 928	300+94.13 (RAMP B-2)	D-40	LT/RT			718						36						1			2
U-236	928 , 930	104+13.60 (RAMP A)	U-210	LT							866								1			
U-237	928 , 930	104+13.60 (RAMP A)	U-210	CENTER			872												1			
U-238	928	796+95.44(RAMP C-2)	U-214	LT							241		2						1	1		1
U-239	928	495+46.00 (I.R. SB 77)	U-213	LT			254						7						1			1
U-240	928	498+05.00 (I.R. SB 77)	U-241	LT							697		8						1	1		1
U-241	928	498+05.00 (I.R. SB 77)	OUTLET	LT	2		892						6		33		1		1	1		
U-242	928	498+05.00 (I.R. SB 77)	U-241	LT							398		15						1	1		1
U-243	928	796+95.44 (RAMP C-2)	U-217	RT							604								1	1		
U-244	928 , 931	683+06.47 (RAMP C-1)	U-303	LT							342		13						1			1
U-245	928 , 931	269+40.00 (I.R. 277)	OUTLET	LT	2						1235		10		14		1		1			3
U-246	928 , 930	251+34.47 (I.R. 277)	OUTLET	RT	2						335				20		1		1			1
U-247	928	308+14.55 (RAMP B-2)	U-255	RT							289		12						1	1		1
U-248	928	507+36.56 (I.R. NB 77)	U-258	RT							71		12						1			1
U-249	928 , 930	421+40.51 (RAMP B-1)	OUTLET	CENTER	2		541						6		31		1		1			1
U-250	928 , 930	421+31.93 (RAMP B-1)	U-249	LT							326		8						1	1		1
U-251	928	907+58.86 (RAMP D)	U-270	LT							71		16						1			1
U-252	928 , 929	503+05.00 (I.R. SB 77)	U-253	LT							599		12						1		1	
U-252A	928	502+03.04 (I.R. SB 77)	U-217	LT							97		24						1			1
U-253	928 , 929	503+05.00 (I.R. SB 77)	OUTLET	RT	2		597						7		21		1		1		1	
U-254	928	503+05.00 (I.R. SB 77)	U-253	RT							469		10						1	1		1
U-255	928	307+91.51 (RAMP B-2)	D-36	CEN/RT			691						34		12				1			3
U-256	928	306+90.85 (RAMP B-2)	U-255	RT							596								1	1		
U-257	928	508+95.00 (I.R. NB 77)	U-258	LT							790								1	1		
U-258	928	506+65.75 (I.R. NB 77)	D-36	CENTER			561						10		18							2
U-259	928	507+36.56 (I.R. NB 77)	U-260	RT							537		12						1			1
U-260	928	507+36.56 (I.R. NB 77)	OUTLET	RT	2		537						8		18		1		1	1		
U-261	928	507+37.03 (I.R. NB 77)	U-260	RT							537								1	1		
U-262	928 , 931	897+55.00 (RAMP D)	U-270	CENTER			933												1			
U-263	930	247+75.74 (I.R. 277)	OUTLET	LT	2		976								19		1		1			1
U-264	926 , 927	483+04.97 (I.R. NB 77)	U-103	RT			296						24						1			1
U-265	928 - 930	415+95.00 (RAMP B-1)	U-241	CENTER			893												1			
U-266	928 , 929	504+49.51 (I.R. SB 77)	U-18	LT							458		10						1	1		2
U-267	928 , 929	514+85.00 (I.R. NB 77)	U-268	RT							740		24						1			1
U-268	928 , 929	514+85.00 (I.R. NB 77)	U-270	RT			734						40						1	1		
U-269	928 , 929	911+04.13 (RAMP D)	U-268	LT							344								1	1		
U-270	928 , 929	914+89.43 (RAMP D)	OUTLET	CENTER	2		801						6		18		1		1		1	
TOTALS CARRIED TO SUBSUMMARY SHEET				408 409	18		12652				13307		462		255		9		45	19	3	37

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UNDERDRAIN QUANTITIES

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	601 TIED CONCRETE BLOCK MAT WITH TYPE I UNDERLAYMENT SY		605 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		605 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		605 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		611 6" CONDUIT, TYPE B FT		611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS FT		611 PRECAST REINFORCED CONCRETE OUTLET EACH		FOR INFORMATION ONLY 6" PLUG EACH	6" X 6" TEE EACH	6" X 6" CROSS EACH	6" - 90° BEND EACH
U-271	929 , 930	9+88.71 (RAMP B-2)	OUTLET	CENTER	2		679						4		20		1		1	1		
U-272	929 , 930	9+95.65 (RAMP B-2)	U-271	RT							682		14						1			1
U-273	929 , 930	10+30.00 (RAMP B-2)	D-39	RT							527		6						1	1		
U-274	929	514+95.00 (I.R. SB 77)	U-18	LT							603								1			
U-275	929	514+95.00 (I.R. SB 77)	U-252	LT							596								1			
U-276	929	514+95.00 (I.R. SB 77)	U-253	CENTER			593												1			
U-277	929	514+95.00 (I.R. SB 77)	U-253	RT							591								1	1		
U-278	929	514+62.10 (I.R. NB 77)	OUTLET	LT	2						564				12		1		1			1
U-279	929	914+75.00 (RAMP D)	OUTLET	RT	2						418				19		1		1			1
U-280	929 , 930	208+36.29 (RAMP B)	U-281	CENTER			444												1	1		
U-281	929	214+90.00 (RAMP B)	OUTLET	CENTER	2		210						6		11		1		1			
U-282	930	208+26.29 (RAMP B)	OUTLET	CENTER	2		221						6		12		1		1			1
U-283	930	205+95.00 (RAMP B)	OUTLET	CENTER			890						10		19				1	1		
U-284	930	203+95.00 (RAMP B)	U-283	LT							684								1	1		
U-285	930	205+85.71 (RAMP B)	U-283	RT							308		16						1	1		1
U-286	922	395+00.00 (I.R. 77)	D-1	RT									12									
U-288	930	16+72.93 (RAMP B-2)	U-283	RT			773						16						1	1		
U-289	930	16+72.82 (RAMP B-2)	U-289	RT							783		12						1	1		
U-290	930	237+95.00 (I.R. 277)	U-289	LT							378		26						1			3
U-291	930	24+70.00 (RAMP B-2)	U-292	RT							912								1	1		
U-292	930	24+69.80 (RAMP B-2)	OUTLET	RT	2		912						11		11		1		1	1		
U-293	930	24+69.48 (RAMP B-2)	U-292	RT							695		2						1	1		1
U-294	930	24+70.09 (RAMP B-2)	U-292	CENTER							912		24						1			1
U-295	930	245+79.53 (I.R. 277)	U-320	RT							842		12						1	1		1
U-296	930	104+23.60 (RAMP A)	U-320	LT			926												1			
U-297	930	104+23.60 (RAMP A)	U-300	CENTER							1026								1	1		
U-298	930	247+95.20 (I.R. 277)	U-296	RT							533		38						1	1		3
U-300	930	237+00.00 (I.R. 277)	OUTLET	RT	2								12		18		1					
U-301	931	682+95.50 (RAMP C-1)	U-303	RT							263		8						1	1		1
U-302	931	260+76.94 (I.R. 277)	U-244	LT							133		8							1		1
U-303	928 , 931	683+06.47 (RAMP C-1)	OUTLET	CENTER	2		339						7		15		1		1	1		
U-304	931	683+16.47 (RAMP C-1)	OUTLET	CENTER	2		486						6		19		1		1			1
U-305	931	894+05.02 (RAMP D)	OUTLET	CENTER	2		345						6		11		1		1			1
U-306	931	273+25.00 (I.R. 277)	OUTLET	CENTER	2		986						6		16		1					1
U-307	931	891+66.12 (RAMP D)	U-306	LT							101		16						1	1		1
U-309	931	597+80.00 (RAMP C)	U-310	LT							493		16						1	1		1
U-310	931	600+45.00 (RAMP C)	OUTLET	CENTER	2		795						6		12		1		1			1
U-311	931	279+50.00 (I.R. 277)	OUTLET	RT	2		816						6		16		1					1
U-312	931	602+74.37 (RAMP C)	U-311	LT							213		16						1	1		
U-313	931	277+49.68 (I.R. 277)	U-311	RT							606		24						1	1		1
U-314	922	371+50.00 (I.R 77)	U-20	RT					17										1	1		
U-315	922	371+50.00 (I.R 77)	U-21	RT					17										1		1	
U-316	922	371+67.11 (I.R. 77)	U-22	RT									24							1		
U-317	922	72+17.82 (RAMP D ARL)	U-22	RT					49										1	1		
U-318	926	582+83.01 (RAMP C)	U-319	CENTER					33													
U-319	926	583+16.39 (RAMP C)	OUTLET	RT	2								6		20		1			1		
U-320	930	113+50.00 (RAMP A)	U-300	CENTER					102													1
TOTALS CARRIED TO SUBSUMMARY SHEET				408 409	28		9415		218		12863		382		231		14		38	26	1	25

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UNDERDRAIN QUANTITIES

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	601 TIED CONCRETE BLOCK MAT WITH TYPE I UNDERLAYMENT SY		605 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		605 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		605 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FT		611 6" CONDUIT, TYPE B FT		611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS FT		611 PRECAST REINFORCED CONCRETE OUTLET EACH		FOR INFORMATION ONLY 6" PLUG EACH	6" X 6" TEE EACH	6" X 6" CROSS EACH	6" - 90° BEND EACH
U-321	925 , 926	478+41.90 (I.R. SB 77)	U-178	LT							892		24						1			2
U-322	926	472+63.00 (I.R. NB 77)	U-181	RT							35		24						1			2
U-323	926	477+00.00 (I.R. NB 77)	U-327	LT			99															
U-324	926	477+00.00 (I.R. NB 77)	U-328	RT			100															
U-325	926	477+00.00 (I.R. NB 77)	U-329	RT			101															
U-326	926	577+00.00 (RAMP C)	U-330	RT			100															
U-327	926	478+00.00 (I.R. NB 77)	U-331	LT					149													
U-328	926	478+00.00 (I.R. NB 77)	U-332	RT					150													
U-329	926	478+00.00 (I.R. NB 77)	U-333	RT					151													
U-330	926	578+00.00 (RAMP C)	U-334	RT					150													
U-331	926	479+50.00 (I.R. NB 77)	U-187	LT							348									1		
U-332	926	479+50.00 (I.R. NB 77)	U-187	RT							351		24									1
U-333	926	479+50.00 (I.R. NB 77)	U-328	RT							169		24							1		1
U-334	926	579+50.00 (RAMP C)	U-191	RT							224		8							1		1
U-335	927	286+04.92 (RAMP B-2)	U-204	LT							37		10						1	1		1
U-336	927	291+33.79 (RAMP B-2)	U-206	RT							119								1	1		
U-337	927	494+49.48 (I.R. SB 77)	U-214	LT							7		12						1			2
U-339	925	467+75.00 (I.R. 77)	U-340	LT									60									
U-340	925	467+75.00 (I.R. 77)	D-25	LT									12									
U-341	925	467+75.00 (I.R. 77)	U-179	RT									60									
U-342	925 , 926	471+25.83 (I.R. NB 77)	D-59	LT							132		1		4				1			
U-343	926	472+63.00 (I.R. NB 77)	D-57	LT							129		1		4				1			
U-344	927	293+03.47 (RAMP B-2)	U-235	CENTER					72										1	1		
U-345	927	493+04.36 (I.R. NB 77)	D-29	CENTER			49												1			
U-346	930	15+45.66 (RAMP B-2)	U-273	RT					15										1			
TOTALS CARRIED TO SUBSUMMARY SHEET				**409**			449		687		2443		260		8				10	6		10

CALCULATED DRJ
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UNDERDRAIN QUANTITIES

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STATION TO STATION		SIDE	LENGTH	AVERAGE WIDTH W	SURFACE AREA A A=LxW	CADD AREAS		202 PAVEMENT REMOVED (ASPHALT)	202 PAVEMENT REMOVED (COMPOSITE)		202 CONCRETE BARRIER REMOVED	202 CURB REMOVED								
								SY	SY		FT	FT								
I.R. 77																				
371+50.00	425+14.88	RT	5364.88	36.00	193135.68				21460											
371+50.00	418+00.00	RT IN	4650.00	24.00	111600.00			12400												
371+50.00	372+95.23	RT OUT	145.23	12.00	1742.76			194												
371+50.00	399+35.53	LT/RT	2785.53								2786									
388+24.90	418+00.00	RT OUT	2975.10	12.00	35701.20			3967												
418+00.00	425+32.73	RT OUT	732.73	10.00	7327.30			815												
418+00.00	425+46.04	RT IN	746.04	4.00	2984.16			332												
426+71.88	428+94.41	RT	222.53	36.00	8011.08				891											
426+53.10	429+22.56	RT IN	269.46	4.00	1077.84			120												
426+39.75	429+12.98	RT OUT	273.23	10.00	2732.30			304												
431+01.68	469+46.33	RT	3844.65	36.00	138407.40				15379											
430+82.85	469+46.33	RT IN	3863.48	4.00	15453.92			1718												
430+72.79	469+46.33	RT OUT	3873.54	10.00	38735.40			4304												
375+92.24	376+20.24	LT IN	28.00	13.50	378.00			42												
391+37.36	425+44.14	LT	3406.78	36.00	122644.08				13628											
391+37.36	399+50.00	LT IN	812.64	26.00	21128.64			2348												
391+37.36	399+50.00	LT OUT	812.64	12.00	9751.68			1084												
399+50.00	418+00.00	LT OUT	1850.00	12.00	22200.00			2467												
399+50.00	407+50.00	LT IN	800.00	10.00	8000.00			889												
407+50.00	418+00.00	LT IN	1050.00	4.00	4200.00			467												
418+00.00	425+62.89	LT IN	762.89	4.00	3051.56			340												
418+00.00	425+76.21	LT OUT	776.21	10.00	7762.10			863												
427+01.15	429+15.35	LT	214.20	36.00	7711.20				857											
426+69.91	429+34.62	LT IN	264.71	4.00	1058.84			118												
426+83.29	429+44.37	LT OUT	261.08	10.00	2610.80			291												
431+24.09	469+46.33	LT	3822.24	36.00	137600.64				15289											
430+95.64	469+46.33	LT IN	3850.69	4.00	15402.76			1712												
431+05.83	469+46.33	LT OUT	3840.50	10.00	38405.00			4268												
NB I.R. 77																				
469+46.96	475+00.00	RT	553.04	36.00	19909.44				2213											
469+46.96	475+00.00	RT	553.04	10.00	5530.40			615												
469+46.96	475+00.00	LT/RT	553.04	4.00	2212.16			246												
475+00.00	514+85.00	RT	3985.00	36.00	143460.00				15940											
475+00.00	496+84.34	LT/RT	2184.34	4.00	8737.36				971											
481+74.26	493+90.86	RT	1216.60	10.00	12166.00				1352											
504+94.42	514+85.00	LT	990.58	4.00	3962.32				441											
506+00.38	508+47.43	RT	247.05	10.00	2470.50				275											
SB I.R. 77																				
469+42.49	472+00.00	LT	257.51	36.00	9270.36				1031											
469+42.49	472+00.00	LT	257.51	10.00	2575.10			287												
469+42.49	472+00.00	LT	257.51	4.00	1030.04			115												
472+00.00	514+95.00	LT	4295.00	36.00	154620.00				17180											
472+00.00	479+98.77	LT	798.77	10.00	7987.70			888												
472+00.00	496+83.59	LT/RT	2483.59	4.00	9934.36				1104											
505+68.78	514+31.65	LT	862.87	10.00	8628.70				959											
505+39.37	514+95.00	RT	955.63	4.00	3822.52				425											
MAINLINE MEDIAN/SHOULDER PAVEMENT VARIABILITY						24743.99		2750												
SUBTOTALS CARRIED TO SHEET						**443**		153339			2786									

CALCULATED LRK
CHECKED PJF

PAVEMENT REMOVAL CALCULATIONS

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1288

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STATION TO STATION		SIDE	LENGTH	AVERAGE WIDTH W	SURFACE AREA A A=LxW	CADD AREAS		202 PAVEMENT REMOVED (ASPHALT) SY	202 PAVEMENT REMOVED (COMPOSITE) SY		202 CONCRETE BARRIER REMOVED FT	202 CURB REMOVED FT								
EXISTING RAMP A																				
237+00.00 (I.R. 277)	05+10.21	LT/RT				16307.21			1812											
237+00.00 (I.R. 277)	243+53.95 (I.R. 277)	RT	653.95	8.00	5231.60			582												
01+74.46	14+44.39	RT	1269.93	8.00	10159.44			1129												
05+10.21	14+44.39	LT	934.18	12.00	11210.16			1246												
05+10.21	14+44.39	LT	934.18	16.00	14946.88				1661											
479+98.77 (SB I.R. 77)	495+46.33 (SB I.R. 77)	LT				22891.11			2544											
479+98.77 (SB I.R. 77)	495+46.33 (SB I.R. 77)	LT	1547.56	10.00	15475.60			1720												
EXISTING RAMP B																				
514+31.65 (SB I.R. 77)	514+95.00 (SB I.R. 77)	LT				3566.98			397											
04+93.90	11+06.64	LT	612.74	16.00	9803.84				1090											
04+93.90	12+10.40	LT	716.50	3.00	2149.50			239				129								
04+93.90	13+43.03	RT	849.13	7.00	5943.91			661												
11+06.64	12+10.40	LT	103.76	15.00	1556.40				173											
12+10.40	13+43.03	LT	132.63	12.00	1591.56				177											
13+43.03	20+02.20	LT	659.17	16.00	10546.72				1172											
13+43.03	20+02.20	LT	659.17	15.00	9887.55			1099												
13+43.03	27+97.76	RT	1454.73	7.00	10183.11			1132												
13+43.03	20+02.20	LT				4642.58			516											
20+02.20	27+97.76	LT				18311.05			2035											
EXISTING RAMP B1																				
00+48.22	03+84.29	LT				7863.44			874											
00+48.22	15+96.61	RT	1548.39	7.00	10838.73			1205												
03+84.29	15+96.61	LT	1212.32	16.00	19397.12				2156											
03+84.29	15+96.61	LT	1212.32	3.00	3636.96			405												
495+47.77 (SB I.R. 77)	505+68.78 (SB I.R. 77)	LT				23791.14			2644											
EXISTING RAMP B2																				
496+84.34 (NB I.R. 77)	504+94.42 (NB I.R. 77)	LT				16436.16			1827											
04+01.70	07+29.60	RT	327.90	16.00	5246.40				583											
04+01.70	07+55.22	RT	353.52	16.00	5656.32			629												
04+01.70	07+11.80	LT	310.1	3.50	1085.35			121				19								
09+82.07	15+42.67	LT	560.6	8.50	4765.1			530				21								
09+87.61	15+42.67	RT	555.06	16.00	8880.96				987											
09+95.83	14+11.03	RT	415.2	16.00	6643.2			739												
14+11.03	15+42.67	RT	131.64			1870.48		208												
EXISTING RAMP C																				
473+83.49 (NB I.R. 77)	481+74.26 (NB I.R. 77)	RT				17678.96			1965											
04+77.58	23+12.82	LT	1835.24	16.00	29363.84				3263											
04+77.58	15+83.15	LT	1105.57	3.00	3316.71			369												
04+77.58	25+17.54	RT	2039.96	7.00	14279.72			1587												
15+83.15	23+12.82	LT				9787.64			1088											
15+83.15	23+12.82	LT	729.67	3.00	2189.01			244												
23+12.82	279+50.00 (I.R. 277)	RT/LT				9184.86			1021											
273+13.40 (I.R. 277)	279+50.00 (I.R. 277)	RT	636.60	7.00	4456.20			496												
SUBTOTALS CARRIED TO SHEET						**443**		42326				169								

CALCULATED LRK
CHECKED PJF

PAVEMENT REMOVAL CALCULATIONS

SUM-77 / 277 / 224
VARIOUS

0:\2017\20172581\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_CC002.dgn Sheet 1/14/2021 8:19:58 AM pfry

STATION TO STATION		SIDE	LENGTH	AVERAGE WIDTH W	SURFACE AREA A A=LxW	CADD AREAS		202 PAVEMENT REMOVED (ASPHALT) SY	202 PAVEMENT REMOVED (COMPOSITE) SY		202 CONCRETE BARRIER REMOVED FT	202 CURB REMOVED FT								
EXISTING RAMP C1																				
00+65.17	03+85.97	LT				8417.31			936											
00+67.91	15+23.17	RT	1455.26	5.00	7276.30			809												
03+85.97	15+23.17	LT	1137.20	16.00	18195.20				2022											
03+85.97	15+23.17	LT	1137.20	3.00	3411.60			380												
493+90.86 (NB I.R. 77)	506+00.41 (NB I.R. 77)	RT				30987.45			3444											
EXISTING RAMP C2																				
496+83.59 (SB I.R. 77)	505+39.37 (SB I.R. 77)	RT				17660.69			1963											
4+64.69	09+25.10	LT	460.41	3.00	1381.23			154												
4+64.69	09+40.55	RT	475.86	16.00	7613.76				846											
4+64.69	09+61.64	RT	496.95	6.00	2981.70			332												
12+06.21	16+48.92	LT	442.71	3.00	1328.13			148												
12+10.90	16+48.92	RT	438.02	16.00	7008.32				779											
12+16.53	16+48.92	RT	432.39	6.00	2594.34			289												
EXISTING RAMP D																				
04+62.26	273+25.00 (I.R. 277)	LT				13031.23			1448											
268+21.55 (I.R. 277)	273+25.00 (I.R. 277)	LT				5966.38		663												
00+00.00	19+50.45	RT	1950.45	7.00	13653.15			1518												
04+62.26	19+50.45	LT	1488.19	16.00	23811.04				2646											
04+62.26	19+50.45	LT	1488.19	3.00	4464.57			497												
508+47.43 (NB I.R. 77)	514+85.00 (NB I.R. 77)	RT				20347.58			2261											
RAMP PAVEMENT VARIABILITY						7464.40		830												
I.R. 277/U.S. 224																				
225+00.00	228+68.89	LT	368.89	24.00	8853.36				984											
225+00.00	228+68.89	LT	368.89	10.00	3688.90			410												
228+68.89	235+63.23	LT	694.34	12.00	8332.08				926											
235+63.23	247+80.74	LT	1217.51	2.00	2435.02				271											
236+69.26	247+22.80	LT	1053.54	10.00	10535.40			1171												
247+80.74	250+78.79	LT	298.05	12.00	3576.60				398											
257+25.96	263+55.40	LT	629.44	10.00	6294.40			700												
257+50.96	264+70.74	LT	719.78	2.00	1439.56				160											
264+70.74	273+25.00	LT	854.26	12.00	10251.12				1140											
237+00.00	245+79.53	RT	879.53	12.00	10554.36				1173											
245+79.53	250+05.00	RT	425.47	2.00	850.94				95											
246+92.36	250+56.72	RT	364.36	10.00	3643.6			405												
271+44.10	279+50.00	RT	805.90	12.00	9670.8				1075											
241+20.00	242+80.00	LT/RT	160.00	8.33	1332.8			149			160									
SUBTOTALS CARRIED TO SHEET						**443**		31022			160									

CALCULATED LRK
CHECKED PJF

PAVEMENT REMOVAL CALCULATIONS

SUM-77 / 277 / 224
VARIOUS

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STATION TO STATION		SIDE	LENGTH	AVERAGE WIDTH W	SURFACE AREA A A=LxW	CADD AREAS		202 PAVEMENT REMOVED (ASPHALT) SY	202 PAVEMENT REMOVED (COMPOSITE) SY		202 CONCRETE BARRIER REMOVED FT	202 CURB REMOVED FT							
ARLINGTON RD RAMP D																			
71+69.06	72+94.22	LT	125.16	20.00	2503.20				279										
71+69.06	72+94.22	LT	125.16	3.00	375.48			42											
71+69.06	72+94.22	RT	125.16	10.00	1251.60			140											
72+94.22	88+18.25	LT				34896.64			3878										
72+94.22	88+18.25	RT	1524.03	10.00	15240.30			1694											
WARNER RD																			
24+50.00	27+70.00	LT/RT	320.00	24.00	7680.00			854											
SUBTOTALS THIS SHEET								6887											
SUBTOTALS SHEET		440						153339			2786								
SUBTOTALS SHEET		441						42326				169							
SUBTOTALS SHEET		442						31022			160								
TOTALS CARRIED TO SHEET		407						233574			2946	169							

CALCULATED LRK
CHECKED PJF

PAVEMENT REMOVAL CALCULATIONS

SUM-77 / 277 / 224
VARIOUS

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PROJECT DESCRIPTION

PROJECT CONSISTS OF THE FULL DEPTH RECONSTRUCTION OF 2.7 MILES OF I-77, INCLUDING AN ADDITIONAL THROUGH LANE, AND RECONSTRUCTION OF THE I-77/I-277/US-224 INTERCHANGE IN SUMMIT COUNTY. PROJECT ALSO INCLUDES THE RECONSTRUCTION OF THE RAMP C-2 BRIDGE OVER NORTHBOUND I-77, WIDENING OF THE I-77 BRIDGES OVER WARNER ROAD AND WIDENING AND REDECKING OF THE I-77 BRIDGES OVER THE TUSCARAWAS RIVER.

* LONGITUDE: W81° 29' 39.1"
* LATITUDE: N41° 0' 22.3"

* LONGITUDE AND LATITUDE TO APPROX. CENTER OF PROJECT

BMP'S

POST-CONSTRUCTION STORM WATER BEST MANAGEMENT PRACTICES (BMP) FOR REDEVELOPMENT PROJECTS UTILIZING VEGETATED BIOFILTERS & VEGETATED FILTER STRIPS REQUIRE WATER QUALITY TREATMENT.

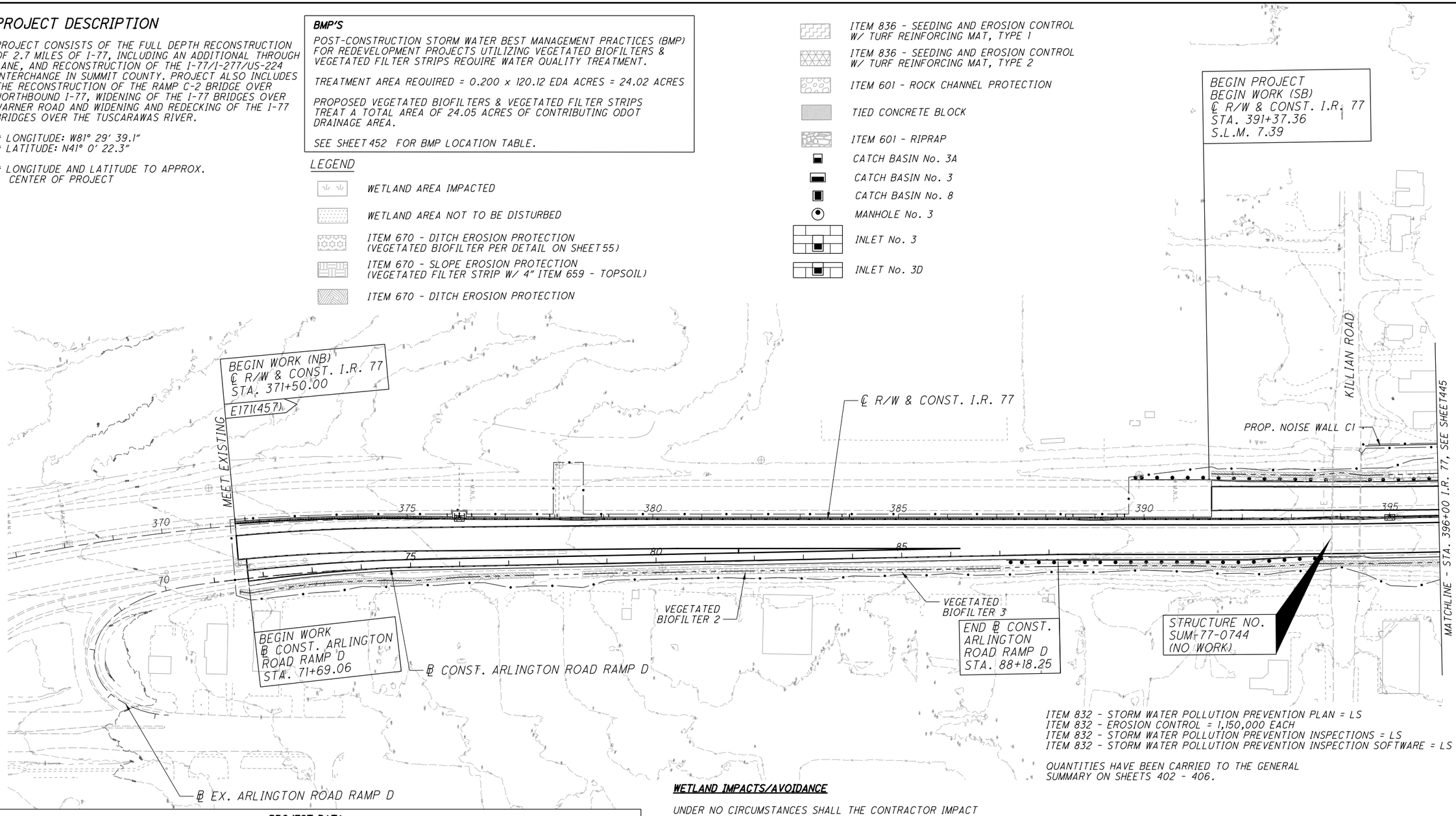
TREATMENT AREA REQUIRED = 0.200 x 120.12 EDA ACRES = 24.02 ACRES

PROPOSED VEGETATED BIOFILTERS & VEGETATED FILTER STRIPS TREAT A TOTAL AREA OF 24.05 ACRES OF CONTRIBUTING ODOT DRAINAGE AREA.

SEE SHEET 452 FOR BMP LOCATION TABLE.

LEGEND

- WETLAND AREA IMPACTED
- WETLAND AREA NOT TO BE DISTURBED
- ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)
- ITEM 670 - SLOPE EROSION PROTECTION (VEGETATED FILTER STRIP W/ 4" ITEM 659 - TOPSOIL)
- ITEM 670 - DITCH EROSION PROTECTION
- ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1
- ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 2
- ITEM 601 - ROCK CHANNEL PROTECTION
- TIED CONCRETE BLOCK
- ITEM 601 - RIPRAP
- CATCH BASIN No. 3A
- CATCH BASIN No. 3
- CATCH BASIN No. 8
- MANHOLE No. 3
- INLET No. 3
- INLET No. 3D



ITEM 832 - STORM WATER POLLUTION PREVENTION PLAN = LS
ITEM 832 - EROSION CONTROL = 1,150,000 EACH
ITEM 832 - STORM WATER POLLUTION PREVENTION INSPECTIONS = LS
ITEM 832 - STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE = LS

QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY ON SHEETS 402 - 406.

PROJECT DATA			
TOTAL AREA OF PROJECT (RIGHT OF WAY)	174.56 AC.	PRE-CONSTRUCTION RUNOFF COEFFICIENT	0.64
PROJECT EARTH DISTURBING ACTIVITIES	120.12 AC.	POST CONSTRUCTION RUNOFF COEFFICIENT	0.67
CONTRACTOR EARTH DISTURBING ACTIVITIES	1.00 AC.	IMPERVIOUS AREA FOR PRE-CONSTRUCTION	63.04 AC.
NOI EARTH DISTURBING ACTIVITIES	121.12 AC.	IMPERVIOUS AREA FOR POST CONSTRUCTION	73.67 AC.
SOIL DATA		SUMMIT COUNTY SOIL SURVEY (NRCS WEB SOIL SURVEY)	
IMMEDIATE RECEIVING STREAM(S) OR SURFACE WATER(S)		TUSCARAWAS RIVER	
SUBSEQUENT RECEIVING STREAM(S) OR SURFACE WATER(S)		MUSKINGUM RIVER	

WETLAND IMPACTS/AVOIDANCE

UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR IMPACT THE REMAINING WETLANDS INDICATED ON THE PLAN. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE EQUIPMENT AND/OR MATERIALS WITHIN THESE WETLANDS.

TO PROTECT AND DELINEATE THE BOUNDARY OF THE EXISTING REMAINING WETLANDS, TEMPORARY CONSTRUCTION FENCE AND FILTER FABRIC FENCE (1,800 LINEAR FEET, PAYMENT FOR THIS ITEM WILL BE MADE UNDER ITEM 832, EROSION CONTROL) SHALL BE INSTALLED ALONG THE PROPOSED CONSTRUCTION LIMITS WITHIN THE WETLANDS AREA BY THE CONTRACTOR PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES WITHIN THESE LIMITS AND ADJACENT AREA AND MAINTAINED BY THE CONTRACTOR THROUGHOUT PROJECT CONSTRUCTION.

REVISIONS		
NO.	DATE	DESCRIPTION
4	04/20/21	WETLAND NOTE REVISED

FOR GEOMETRIC PLAN, SEE SHEETS 13 -22
FOR CURVE DATA, SEE SHEETS 23 -26

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED ZJP
CHECKED PJF

PROJECT SITE PLAN
BEGIN TO STA. 396+00 I.R. 77

SUM-77 / 277 / 224
VARIOUS

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WETLAND AREA IMPACTED

WETLAND AREA NOT TO BE DISTURBED

ITEM 670 - DITCH EROSION PROTECTION
(VEGETATED BIOFILTER PER DETAIL ON SHEET 55)

ITEM 670 - SLOPE EROSION PROTECTION
(VEGETATED FILTER STRIP W/ 4" ITEM 659 - TOPSOIL)

ITEM 601 - RIPRAP

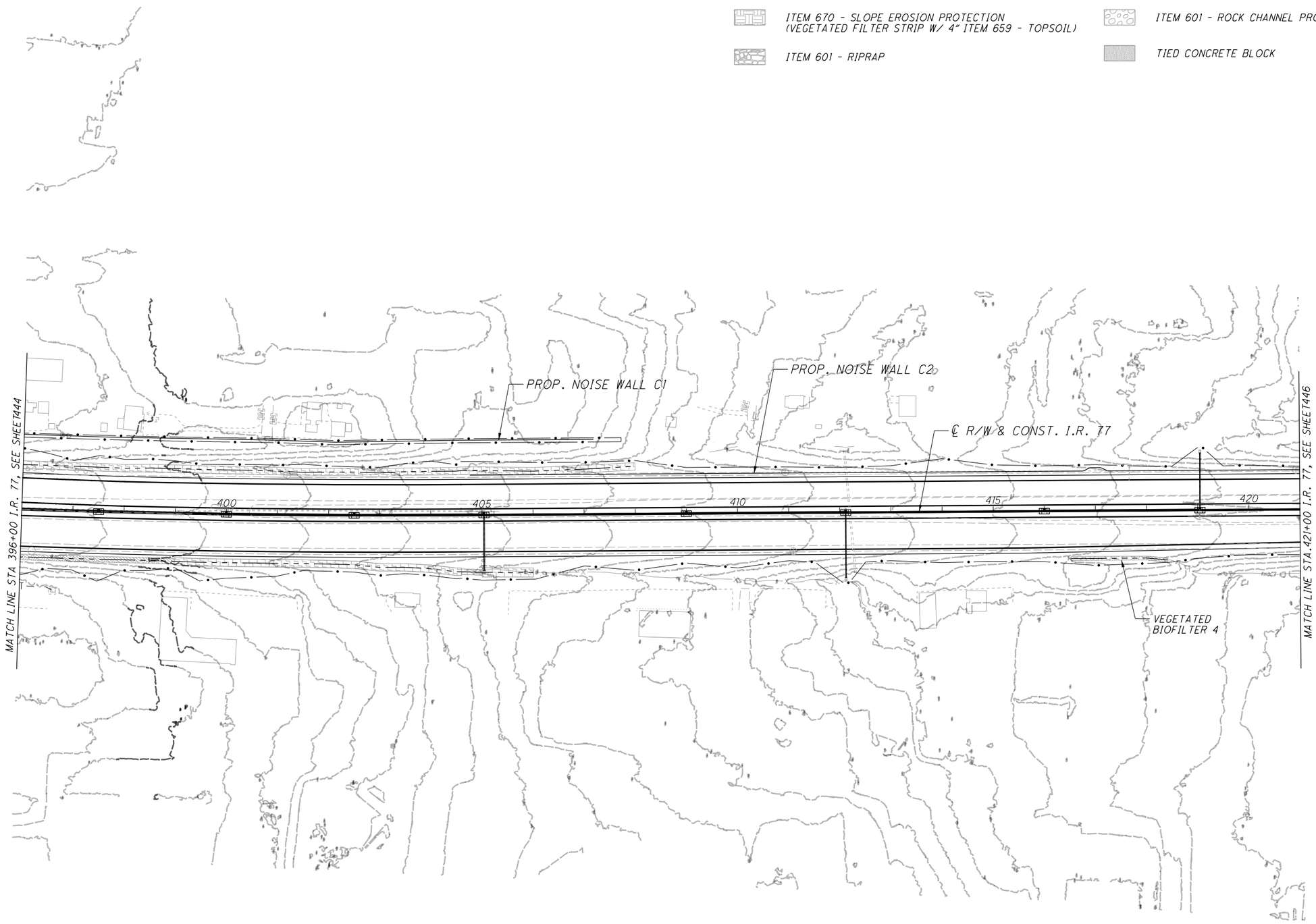
ITEM 670 - DITCH EROSION PROTECTION

ITEM 836 - SEEDING AND EROSION CONTROL
W/ TURF REINFORCING MAT, TYPE 1

ITEM 836 - SEEDING AND EROSION CONTROL
W/ TURF REINFORCING MAT, TYPE 2

ITEM 601 - ROCK CHANNEL PROTECTION

TIED CONCRETE BLOCK



FOR GEOMETRIC PLAN, SEE SHEETS 13 -22
FOR CURVE DATA, SEE SHEETS 23-26

N

0 50 100 200
HORIZONTAL
SCALE IN FEET

CALCULATED ZJP
CHECKED PJF

PROJECT SITE PLAN
STA. 396+00 TO STA. 421+00

SUM-77/277/224
VARIOUS

445
1288

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WETLAND AREA IMPACTED

WETLAND AREA NOT TO BE DISTURBED

ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET55)

ITEM 670 - SLOPE EROSION PROTECTION (VEGETATED FILTER STRIP W/ 4" ITEM 659 - TOPSOIL)

TIED CONCRETE BLOCK

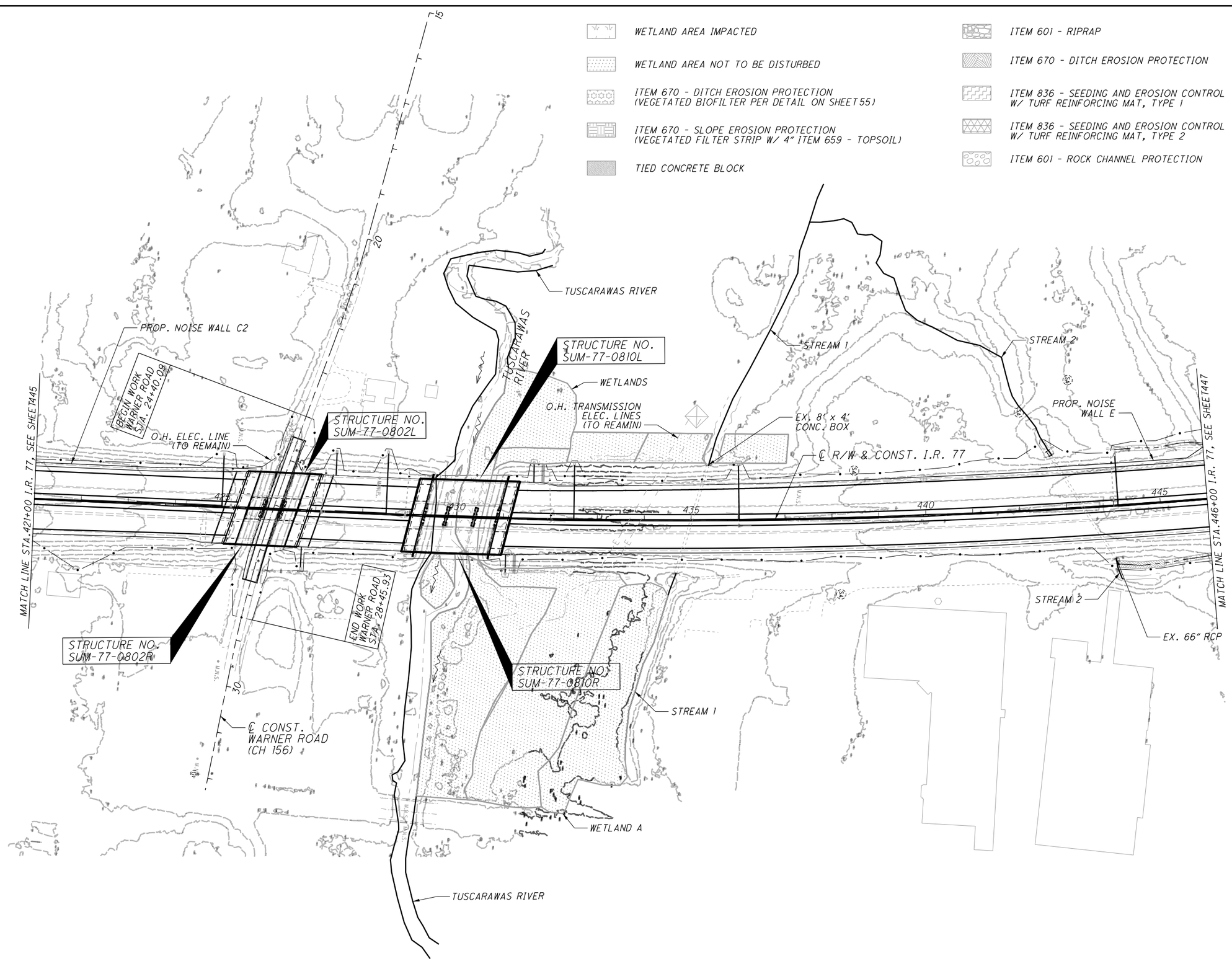
ITEM 601 - RIPRAP

ITEM 670 - DITCH EROSION PROTECTION

ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1

ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 2

ITEM 601 - ROCK CHANNEL PROTECTION



FOR GEOMETRIC PLAN, SEE SHEETS 13 -22
FOR CURVE DATA, SEE SHEETS 23 -26

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED ZJP
CHECKED PJF

PROJECT SITE PLAN
STA. 421+00 TO STA. 446+00

SUM-77/277/224
VARIOUS

446
1288

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WETLAND AREA IMPACTED

WETLAND AREA NOT TO BE DISTURBED

ITEM 670 - DITCH EROSION PROTECTION
(VEGETATED BIOFILTER PER DETAIL ON SHEET55)

ITEM 670 - SLOPE EROSION PROTECTION
(VEGETATED FILTER STRIP W/ 4" ITEM 659 - TOPSOIL)

TIED CONCRETE BLOCK

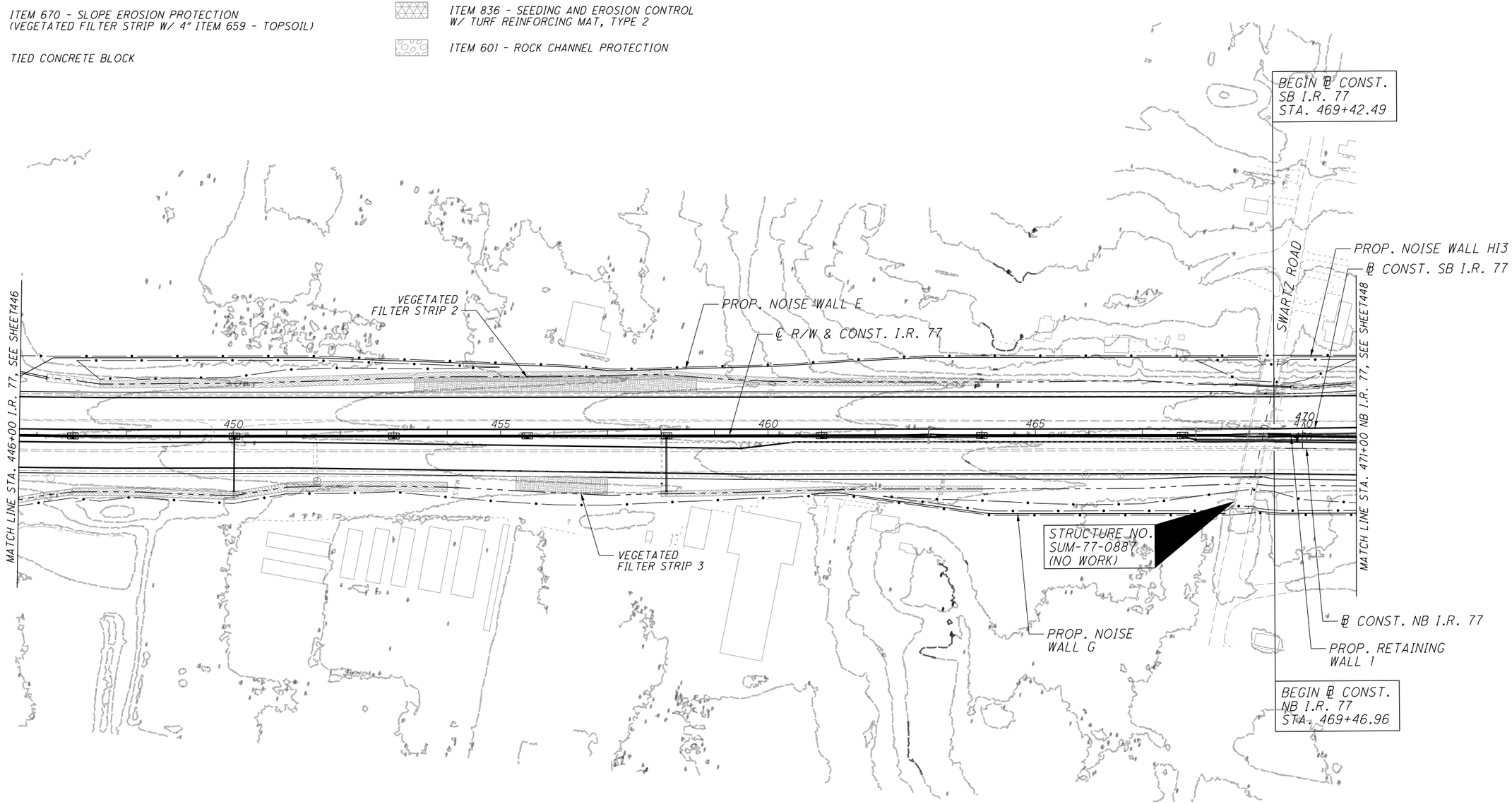
ITEM 601 - RIPRAP

ITEM 670 - DITCH EROSION PROTECTION

ITEM 836 - SEEDING AND EROSION CONTROL
W/ TURF REINFORCING MAT, TYPE 1

ITEM 836 - SEEDING AND EROSION CONTROL
W/ TURF REINFORCING MAT, TYPE 2

ITEM 601 - ROCK CHANNEL PROTECTION



FOR GEOMETRIC PLAN, SEE SHEETS 13 -22
FOR CURVE DATA, SEE SHEETS 23-26

N

0 50 100 200
HORIZONTAL
SCALE IN FEET

CALCULATED ZJP
CHECKED PJF

PROJECT SITE PLAN
STA. 446+00 I.R. 77 TO STA. 471+00 NB I.R. 77

SUM-77/277/224
VARIOUS

447
1288

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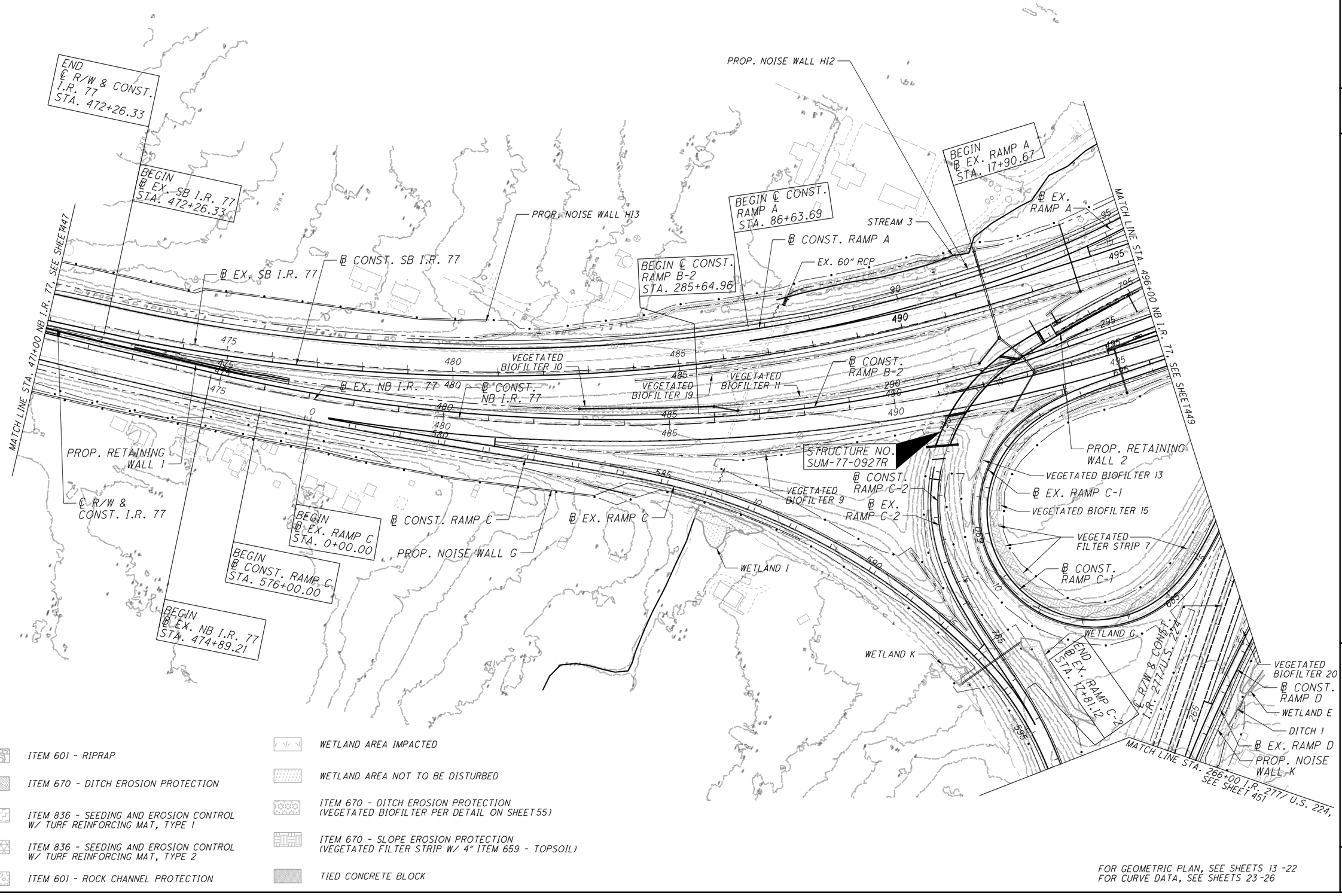

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED ZJP
CHECKED PJF

PROJECT SITE PLAN
STA. 471+00 TO STA. 496+00

SUM-77/277/224
VARIOUS

448
1288

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ITEM 601 - RIPRAP

ITEM 670 - DITCH EROSION PROTECTION

ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1

ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 2

ITEM 601 - ROCK CHANNEL PROTECTION

WETLAND AREA IMPACTED

TIED CONCRETE BLOCK

WETLAND AREA NOT TO BE DISTURBED

ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)

ITEM 670 - SLOPE EROSION PROTECTION (VEGETATED FILTER STRIP W/ 4" ITEM 659 - TOPSOIL)

PROP. NOISE WALL H11

MATCH LINE STA. 243+00, I.R. 277/ U.S. 224, SEE SHEET 450

℄ R/W & CONST. I.R. 277/ U.S. 224

VEGETATED FILTER STRIP 6

END ℄ EX. RAMP B-2 STA. 15+42.67

STREAM 4

VEGETATED FILTER STRIP 5

PROP. NOISE WALL H12

VEGETATED BIOFILTER 17

℄ EX. RAMP B-2

EX. 96" CMP

STREAM 3

℄ EX. RAMP B

END WORK RAMP B STA. 214+90.00

℄ EX. RAMP A

VEGETATED BIOFILTER 22

EX. 10' x 5' CONC. BOX

WETLAND B (DO NOT DISTURB)

END PROJECT END WORK ℄ CONST. SB I.R. 77 STA. 514+95.00 S.L.M. 9.74

BEGIN PROJECT SUM-76/77/8-8.42/9.77/0.00 DB (PID 102329)

E171 (457) E180 (428)

℄ CONST. RAMP B1

℄ EX. RAMP B1

STREAM 3

℄ CONST. RAMP B

EX. 84" TWIN CMP

STRUCTURE NO. SUM-77-0973L (NO WORK)

VEGETATED FILTER STRIP 4

VEGETATED BIOFILTER 8

STREAM 3

END ℄ CONST. RAMP B1 STA. 423+44.13

BEGIN ℄ EX. RAMP B-1 STA. 0+00.00

BEGIN ℄ CONST. RAMP B-1 STA. 402+43.78

END ℄ EX. RAMP B-1 STA. 17+90.88

℄ CONST. RAMP B-2

STRUCTURE NO. SUM-77-0958L

BEGIN ℄ EX. RAMP B STA. 0+00.00

END ℄ CONST. RAMP B STA. 219+25.00

VEGETATED BIOFILTER 24

VEGETATED FILTER STRIP 9

WETLAND F

℄ CONST. RAMP A

VEGETATED BIOFILTER 21

WETLAND C

VEGETATED BIOFILTER 23

℄ EX. SB I.R. 77

E. WATERLOO RD.

VEGETATED FILTER STRIP 8

MATCH LINE STA. 496+00, NB I.R. 77, SEE SHEET 448

℄ CONST. RAMP C-2

℄ CONST. SB I.R. 77

BEGIN ℄ EX. RAMP B-2 STA. 0+00.00

END ℄ CONST. RAMP C-2 STA. 801+48.92

BEGIN ℄ EX. RAMP C-2 STA. 0+00.00

℄ CONST. NB I.R. 77

℄ EX. RAMP C-2

℄ EX. NB I.R. 77

VEGETATED BIOFILTER 1

VEGETATED BIOFILTER 12

VEGETATED BIOFILTER 14

END ℄ CONST. RAMP C-1 STA. 702+11.45

WETLAND D

DITCH 1

℄ EX. RAMP D

END EX. ℄ RAMP C-1 STA. 18+62.36

℄ EX. RAMP C-1

BEGIN WORK ℄ CONST. RAMP C-1 STA. 678+94.49

℄ CONST. RAMP C-1

℄ CONST. RAMP D

END ℄ EX. RAMP D STA. 21+60.12

END WORK ℄ CONST. NB I.R. 77 STA. 514+85.00

STRUCTURE NO. SUM-77-0369 (NO WORK)

BEGIN ℄ EX. RAMP C-1 STA. 0+00.00

END WORK RAMP D STA. 914+89.43

STREAM

STRUCTURE NO. SUM-77-0973R (NO WORK)

PROP. NOISE WALL K

VEGETATED BIOFILTER 20

END ℄ CONST. RAMP D STA. 916+89.75

A STRUCTURE NO. SUM-277-0369

WETLAND E

FOR GEOMETRIC PLAN, SEE SHEETS 13 -22
FOR CURVE DATA, SEE SHEETS 23 -26

HORIZONTAL SCALE IN FEET
0 50 100 200

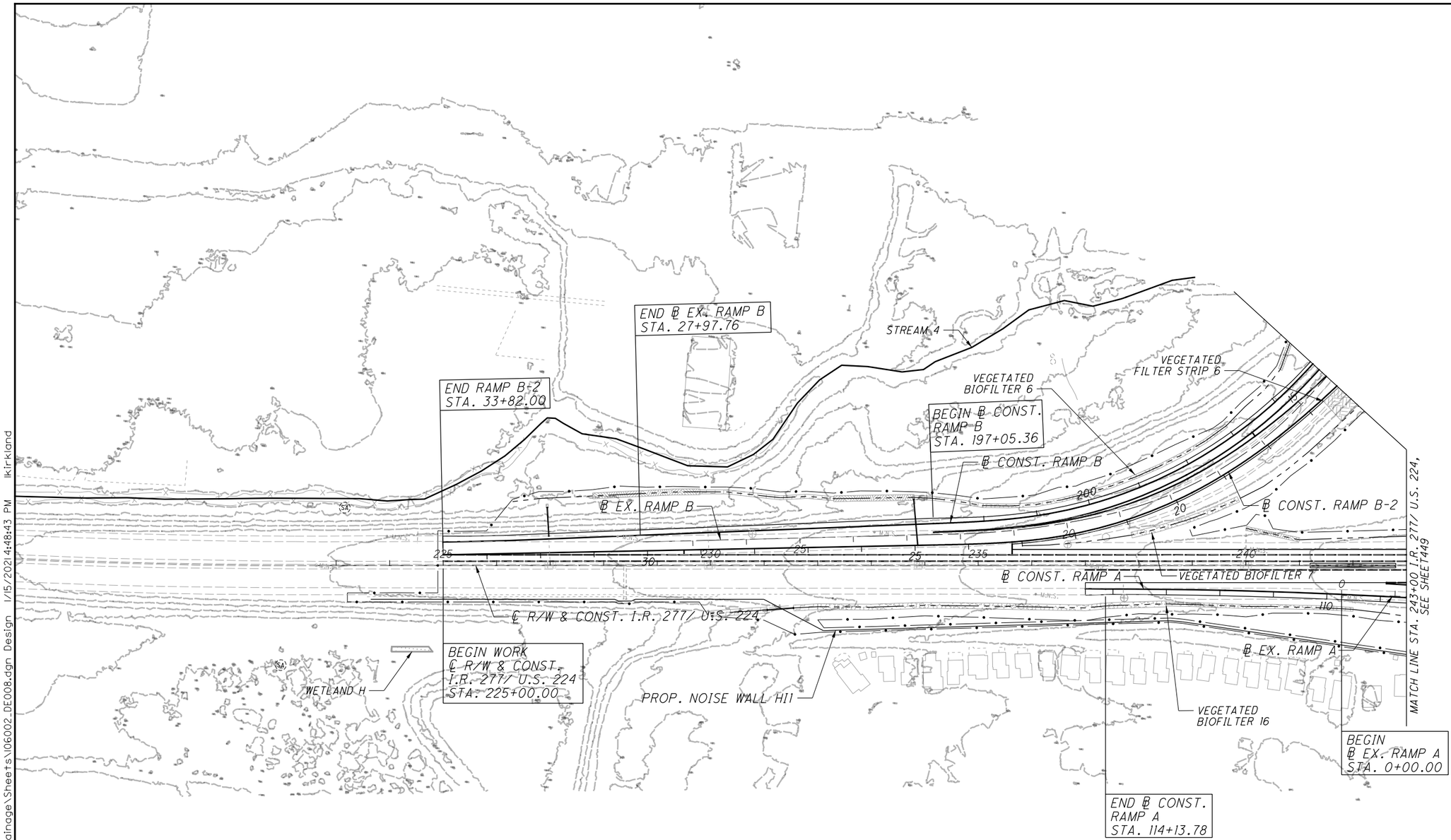
CALCULATED ZJP
CHECKED PJF

PROJECT SITE PLAN
STA. 496+00 TO STA. 521+00

SUM-77/277/224
VARIOUS

449
1288

D:\2017\2017258\ProjectData\SUM\06002\Design\Drainage\Sheets\06002_DE006.dgn Design 1/15/2021 4:48:09 PM Ikirkland



ITEM 601 - RIPRAP

ITEM 670 - DITCH EROSION PROTECTION

ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1

ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 2

ITEM 601 - ROCK CHANNEL PROTECTION

WETLAND AREA IMPACTED

WETLAND AREA NOT TO BE DISTURBED

ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)

ITEM 670 - SLOPE EROSION PROTECTION (VEGETATED FILTER STRIP W/ 4" ITEM 659 - TOPSOIL)

TIED CONCRETE BLOCK

FOR GEOMETRIC PLAN, SEE SHEETS 13 -22
FOR CURVE DATA, SEE SHEETS 23-26

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED ZJP
CHECKED PJF

PROJECT SITE PLAN
BEGIN TO STA. 243+00 I.R. 277/ U.S. 224

SUM-77/277/224
VARIOUS

450
1288

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ITEM 601 - RIPRAP

ITEM 670 - DITCH EROSION PROTECTION

ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1

ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 2

ITEM 601 - ROCK CHANNEL PROTECTION

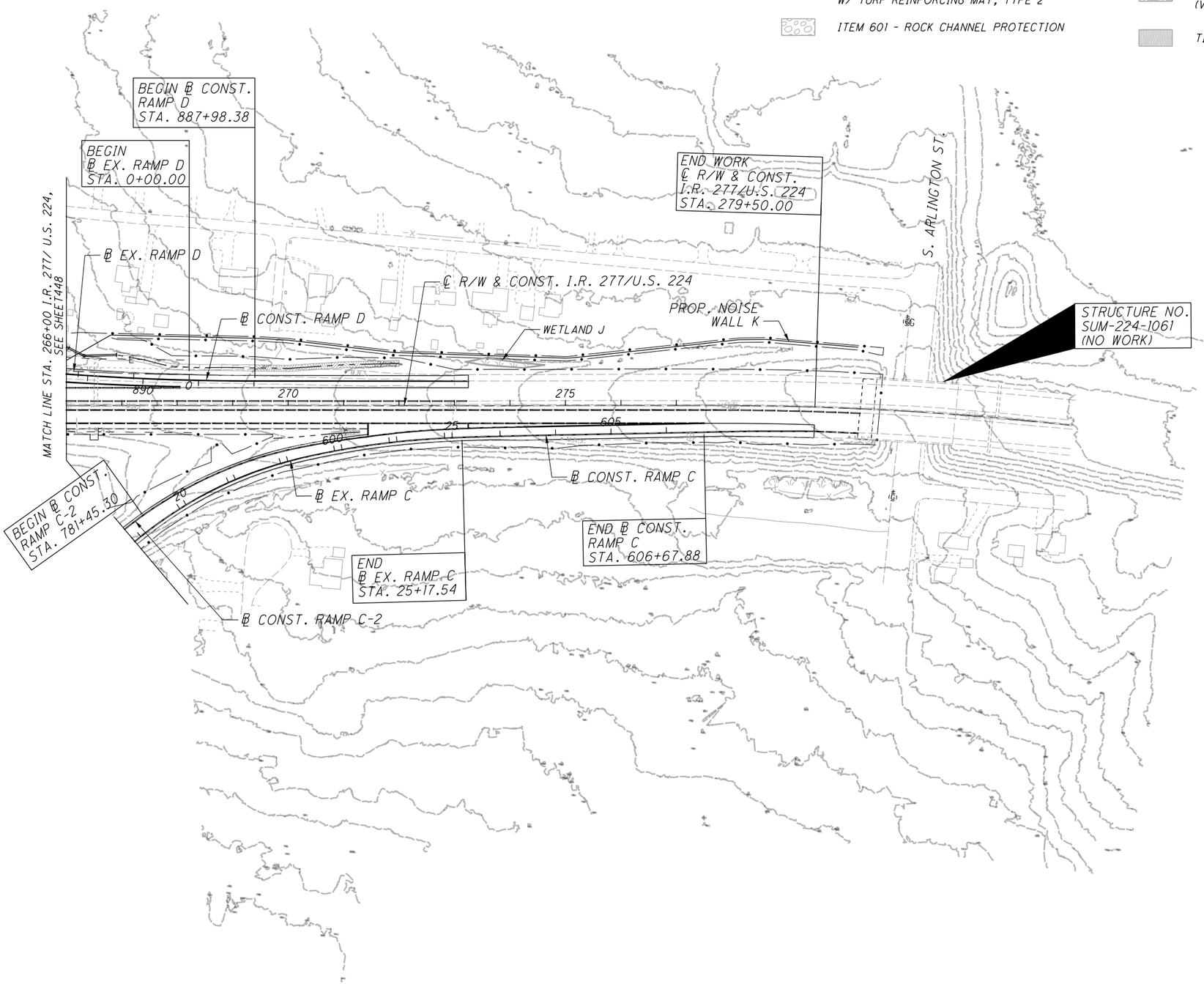
WETLAND AREA IMPACTED

WETLAND AREA NOT TO BE DISTURBED

ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET55)

ITEM 670 - SLOPE EROSION PROTECTION (VEGETATED FILTER STRIP W/ 4" ITEM 659 - TOPSOIL)

TIED CONCRETE BLOCK



FOR GEOMETRIC PLAN, SEE SHEETS 13 -22
FOR CURVE DATA, SEE SHEETS 23-26

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED ZJP
CHECKED PJF

PROJECT SITE PLAN
STA. 266+00 TO END

SUM-77/277/224
VARIOUS

451
1288

0:\2017\2017258\ProjectData\SUM\106002\Design\Drainage\Sheets\106002_DE009.dgn Design 1/15/2021 4:48:55 PM lkirkland

BMP TYPE	LOCATION	SIDE	DITCH WIDTH	STATION	LATITUDE	LONGITUDE	EDA CREDIT (ACRES)
BIOFILTER 1	SB I.R. 77	RT.	4.0'	510+00	41.027451° N	-81.503705° W	1.57
				514+95	41.028651° N	-81.504493° W	
BIOFILTER 2	ARLINGTON ROAD RAMP D	RT.	4.0'	78+50	40.993156° N	-81.493466° W	1.24
				83+50	40.994528° N	-81.493472° W	
BIOFILTER 3	ARLINGTON ROAD RAMP D	RT.	4.0'	83+50	40.994528° N	-81.493472° W	0.77
				87+00	40.995489° N	-81.493460° W	
BIOFILTER 4	℄ R/W & CONST. I.R. 77	RT.	4.0'	416+50	41.003581° N	-81.493716° W	0.24
				418+00	41.003988° N	-81.493740° W	
BIOFILTER 6	RAMP B	LT.	4.0'	198+00	41.025269° N	-81.508252° W	1.02
				203+00	41.025781° N	-81.506654° W	
BIOFILTER 7	RAMP B2	LT.	4.0'	19+00	41.025412° N	-81.506536° W	0.54
				21+00	41.025181° N	-81.507233° W	
BIOFILTER 8	RAMP B1	RT.	4.0'	408+50	41.026864° N	-81.503936° W	0.72
				411+00	41.026657° N	-81.504933° W	
BIOFILTER 9	NB I.R. 77	RT.	4.0' 6.0' 8.0'	483+00	41.021627° N	-81.497365° W	1.68
				488+50	41.023009° N	-81.498238° W	
BIOFILTER 10	NB I.R. 77	LT.	5.0'	483+00	41.021532° N	-81.497672° W	0.91
				486+00	41.022274° N	-81.498120° W	
BIOFILTER 11	RAMP B2	LT.	5.0' 4.0'	286+00	41.022274° N	-81.498120° W	1.44
				290+50	41.023318° N	-81.498962° W	
BIOFILTER 12	RAMP B2	RT.	4.0'	301+00	41.025579° N	-81.501312° W	0.68
				305+50	41.026520° N	-81.502368° W	
BIOFILTER 13	RAMP C1	LT.	4.0'	689+00	41.024260° N	-81.497721° W	0.87
				692+00	41.023889° N	-81.498802° W	
BIOFILTER 14	RAMP C1	RT.	4.0'	696+50	41.024834° N	-81.499932° W	0.64
				697+50	41.025035° N	-81.500179° W	
BIOFILTER 15	RAMP C1	RT.	4.0'	690+50	41.024110° N	-81.499103° W	1.04
				692+50	41.024104° N	-81.498907° W	
BIOFILTER 16	℄ R/W & CONST. I.R. 277	RT.	4.0' 6.0'	232+00	41.024684° N	-81.509312° W	2.29
				242+00	41.024893° N	-81.505698° W	
BIOFILTER 17	RAMP B1	RT.	4.0'	413+00	41.026192° N	-81.505445° W	0.69
				416+50	41.025331° N	-81.504406° W	
BIOFILTER 19	SB I.R. 77	RT.	4.0'	484+00	41.021772° N	-81.498056° W	0.87
				493+00	41.023810° N	-81.499920° W	
BIOFILTER 20	RAMP D	LT.	4.0'	894+00	41.025743° N	-81.498022° W	0.38
				896+50	41.025754° N	-81.498939° W	
BIOFILTER 21	SB I.R. 77	RT.	4.0' 5.0'	504+00	41.026137° N	-81.502456° W	1.10
				507+00	41.026728° N	-81.503205° W	
BIOFILTER 22	RAMP A	RT.	4.0'	102+00	41.025046° N	-81.502941° W	0.32
				103+50	41.025067° N	-81.503508° W	
BIOFILTER 23	RAMP B2	LT.	4.0' 5.0'	301+50	41.025549° N	-81.501633° W	1.03
				304+60	41.026137° N	-81.502456° W	
BIOFILTER 24	SB I.R. 77	LT.	4.0'	496+00	41.024271° N	-81.500877° W	0.46
				498+00	41.024645° N	-81.501413° W	

BMP TYPE	LOCATION	SIDE	DITCH WIDTH	STATION	LATITUDE	LONGITUDE	EDA CREDIT (ACRES)
FILTER STRIP 2	℄ R/W & CONST. I.R. 77	LT.	N/A	453+38	41.013575° N	-81.495739° W	0.90
				458+67	41.015000° N	-81.496089° W	
FILTER STRIP 3	℄ R/W & CONST. I.R. 77	RT.	N/A	455+28	41.014179° N	-81.495213° W	0.25
				457+00	41.014645° N	-81.495306° W	
FILTER STRIP 4	RAMP B1	LT.	N/A	402+87	41.025674° N	-81.502539° W	0.56
				408+50	41.026680° N	-81.504017° W	
FILTER STRIP 5	RAMP B1	LT.	N/A	414+68	41.025706° N	-81.504890° W	0.28
				417+56	41.025459° N	-81.503995° W	
FILTER STRIP 6	RAMP B2	LT.	N/A	15+16	41.026211° N	-81.505574° W	0.29
				16+67	41.025900° N	-81.505949° W	
FILTER STRIP 7	RAMP C1	RT.	N/A	683+45	41.025282° N	-81.498754° W	0.72
				690+50	41.024080° N	-81.498253° W	
FILTER STRIP 8	RAMP C2	RT.	N/A	795+45	41.024421° N	-81.500374° W	0.15
				796+95	41.024699° N	-81.500774° W	
FILTER STRIP 9	SB I.R. 77	LT.	N/A	498+00	41.024686° N	-81.501350° W	0.40
				500+44	41.025183° N	-81.501945° W	
					TREATMENT PROVIDED		24.05
					TREATMENT REQUIRED*		24.02

* CALCULATED PER L&D VOL. 2, SEC. 1115.7

FOR TYPICAL SECTIONS, SEE SHEET 55
FOR PROJECT SITE PLANS, SEE SHEETS 444 - 451

CALCULATED ATR
CHECKED CJC

BMP TABLE

SUM-77 / 277 / 224
VARIOUS

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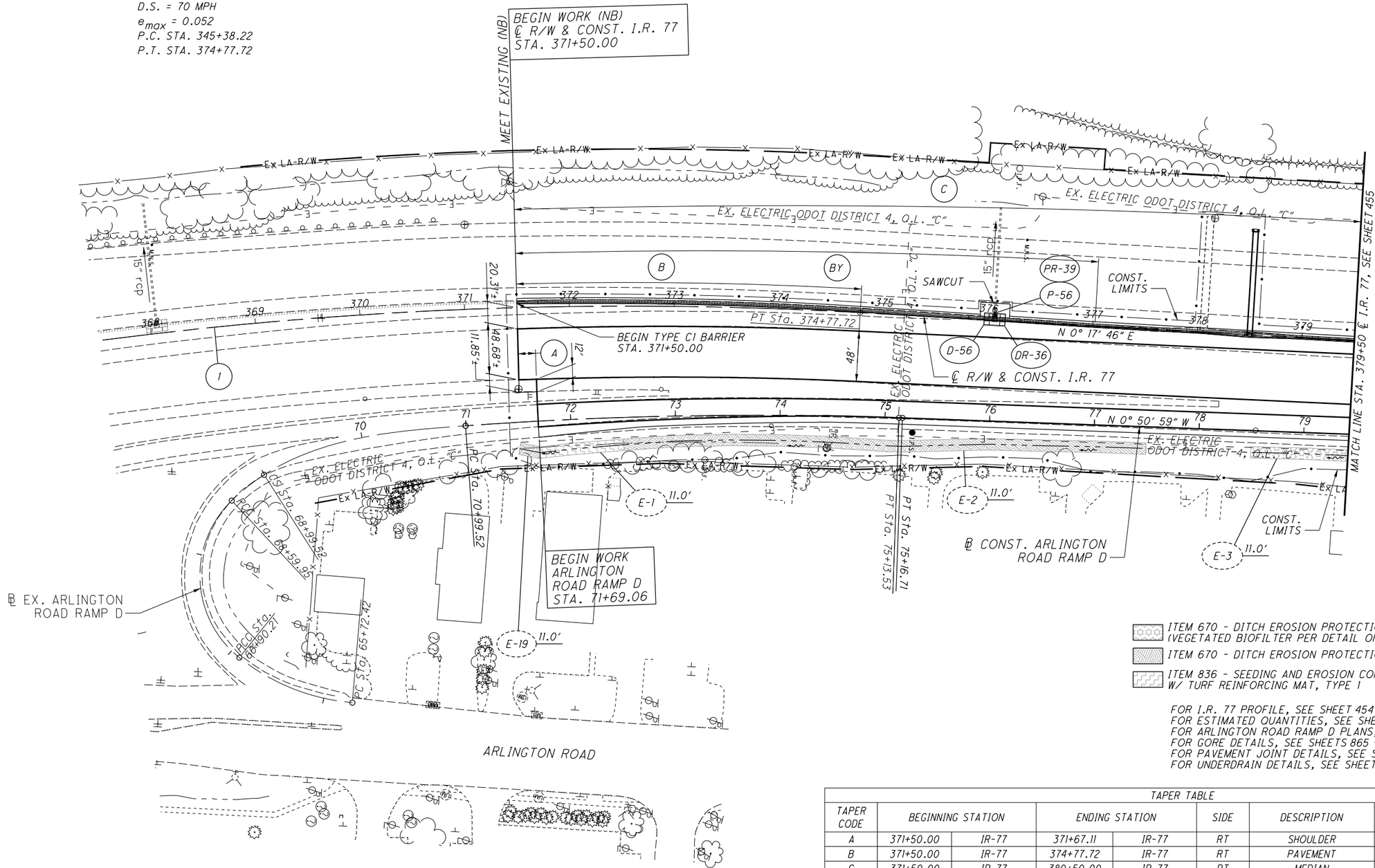
(1) ℄ R/W & CONST. I.R. 77
P.I. Sta. 360+81.72
Δ = 43° 10′ 45″ (RT)
Dc = 1° 28′ 08″
R = 3,900.50′
T = 1,543.50′
L = 2,939.50′
E = 294.29′
C = 2,870.43′
C.B. = N 21° 17′ 37″ W
D.S. = 70 MPH
e_{max} = 0.052
P.C. STA. 345+38.22
P.T. STA. 374+77.72



ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)
ITEM 670 - DITCH EROSION PROTECTION
ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE I

FOR I.R. 77 PROFILE, SEE SHEET 454
FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR ARLINGTON ROAD RAMP D PLANS, SEE SHEETS 507- 508
FOR GORE DETAILS, SEE SHEETS 865 - 868
FOR PAVEMENT JOINT DETAILS, SEE SHEETS 893 - 896
FOR UNDERDRAIN DETAILS, SEE SHEET 922

TAPER TABLE

TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
A	371+50.00	IR-77	371+67.11	IR-77	RT	SHOULDER	11.85′	12.00′	114:1
B	371+50.00	IR-77	374+77.72	IR-77	RT	PAVEMENT	48.68′	48.00′	482:1
C	371+50.00	IR-77	380+50.00	IR-77	RT	MEDIAN	20.31′	12.00′	108:1
BY	371+50.00	IR-77	377+02.12	IR-77	LT	MEDIAN BARRIER	4.94′	0.00′	112:1

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED LRK
CHECKED PJF

PLAN - I.R. 77
BEGIN TO STA. 379+50

SUM-77 / 277 / 224
VARIOUS

453
1288

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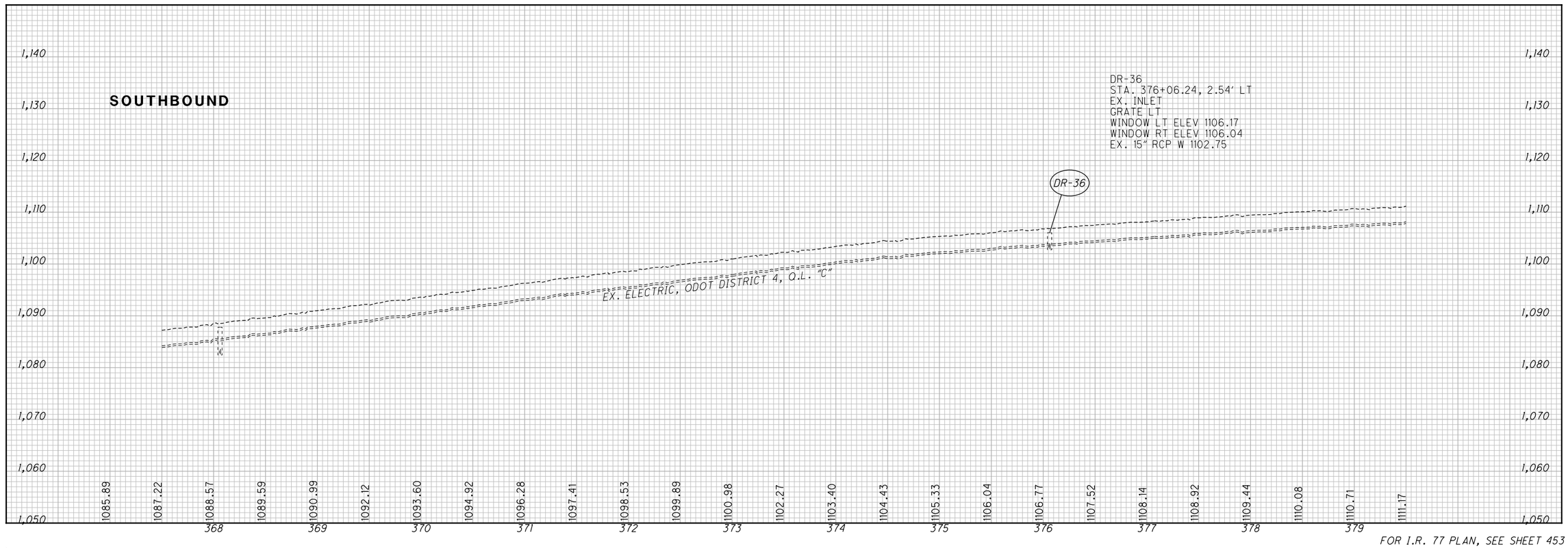
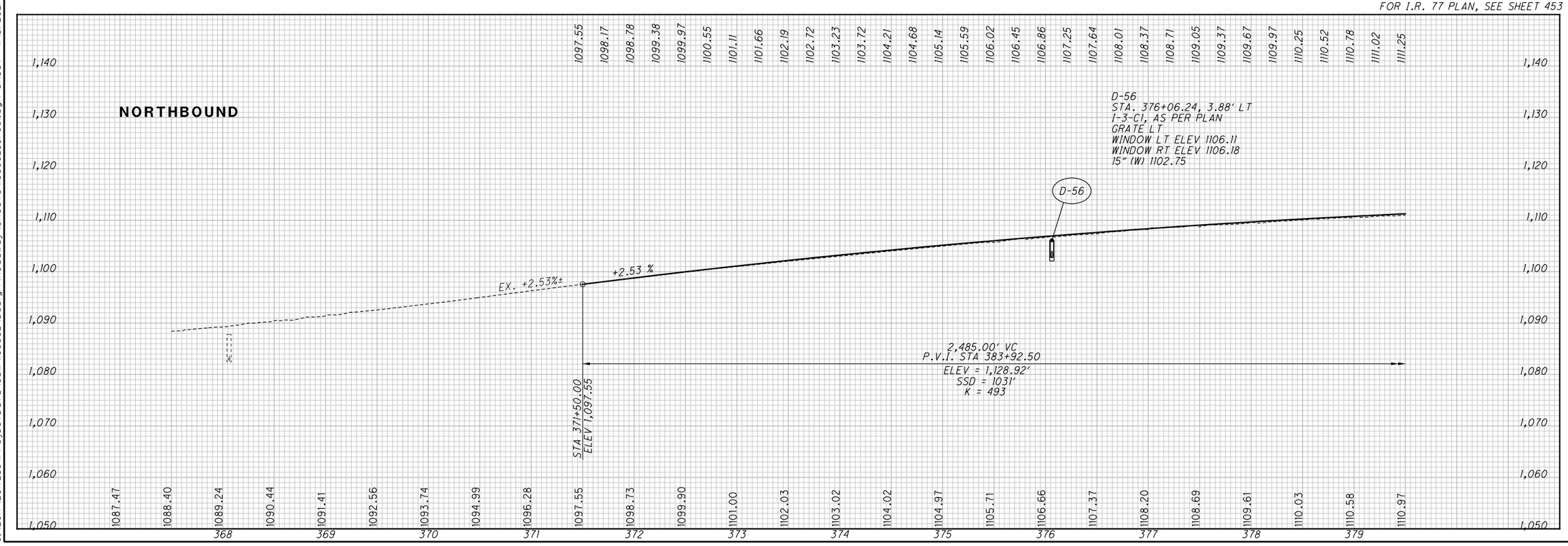


FOR I.R. 77 PLAN, SEE SHEET 453



CALCULATED CJC
CHECKED PJF

PROFILE - I.R. 77
BEGIN TO STA. 379+50

SUM-77 / 277 / 224
VARIOUS

454
1288

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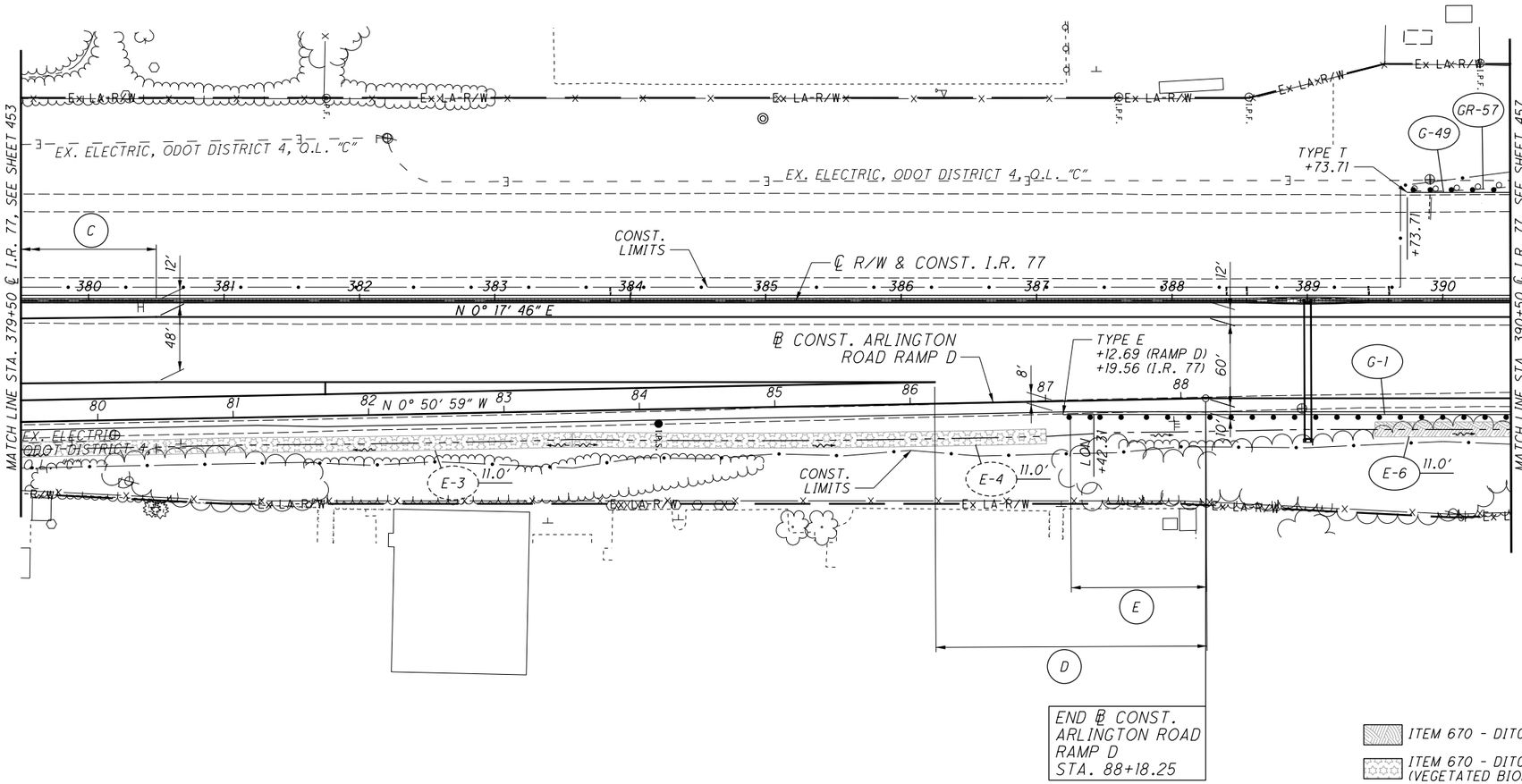

ITEM 670 - DITCH EROSION PROTECTION

ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)

FOR I.R. 77 PROFILE, SEE SHEET 456
FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR ARLINGTON ROAD RAMP D PLANS, SEE SHEETS 507- 508
FOR GORE DETAILS, SEE SHEETS 865 - 868
FOR PAVEMENT JOINT DETAILS, SEE SHEETS 893 - 896
FOR UNDERDRAIN DETAILS, SEE SHEET 922

TAPER TABLE

TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
C	371+50.00	IR-77	380+50.00	IR-77	RT	MEDIAN	20.31'	12.00'	108:1
D	86+18.37	ARL. RAMP D	88+18.25	ARL. RAMP D	RT	PAVEMENT	16.00'	12.00'	50:1
E	87+18.15	ARL. RAMP D	88+18.25	ARL. RAMP D	RT	SHOULDER	8.00'	10.00'	50:1

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LRK
CHECKED PJF

PLAN - I.R. 77
STA. 379+50 TO STA. 390+50

SUM-77/277/224
VARIOUS

455
1288

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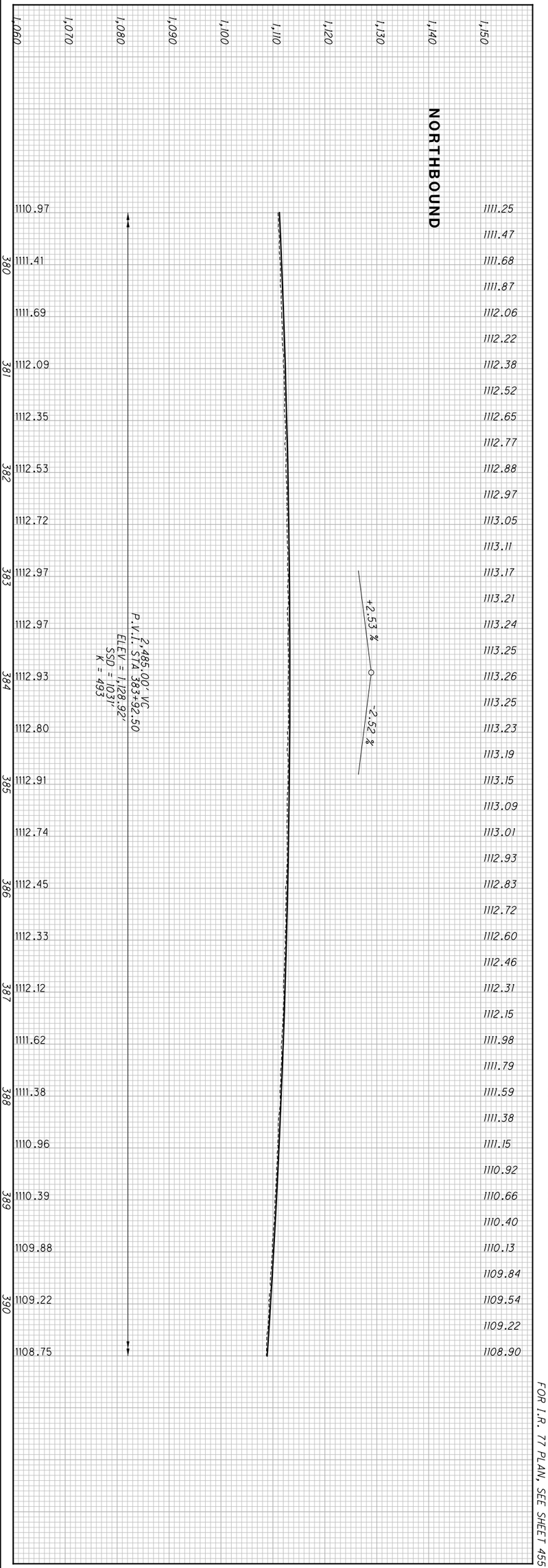
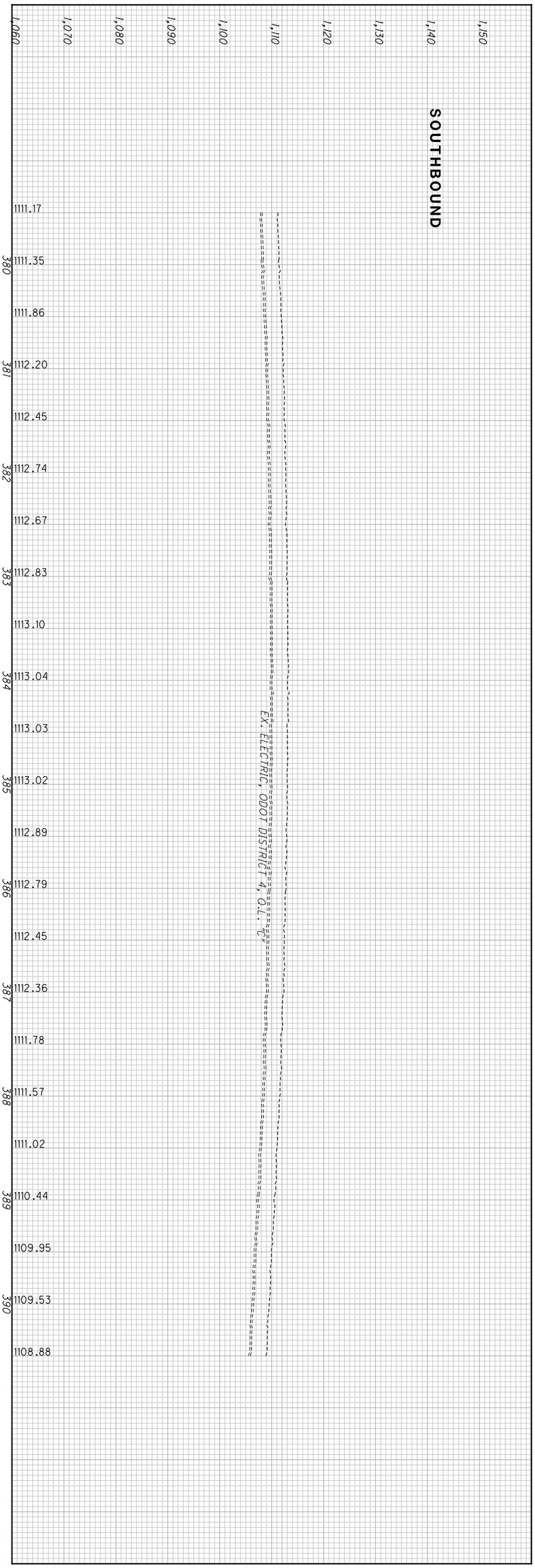
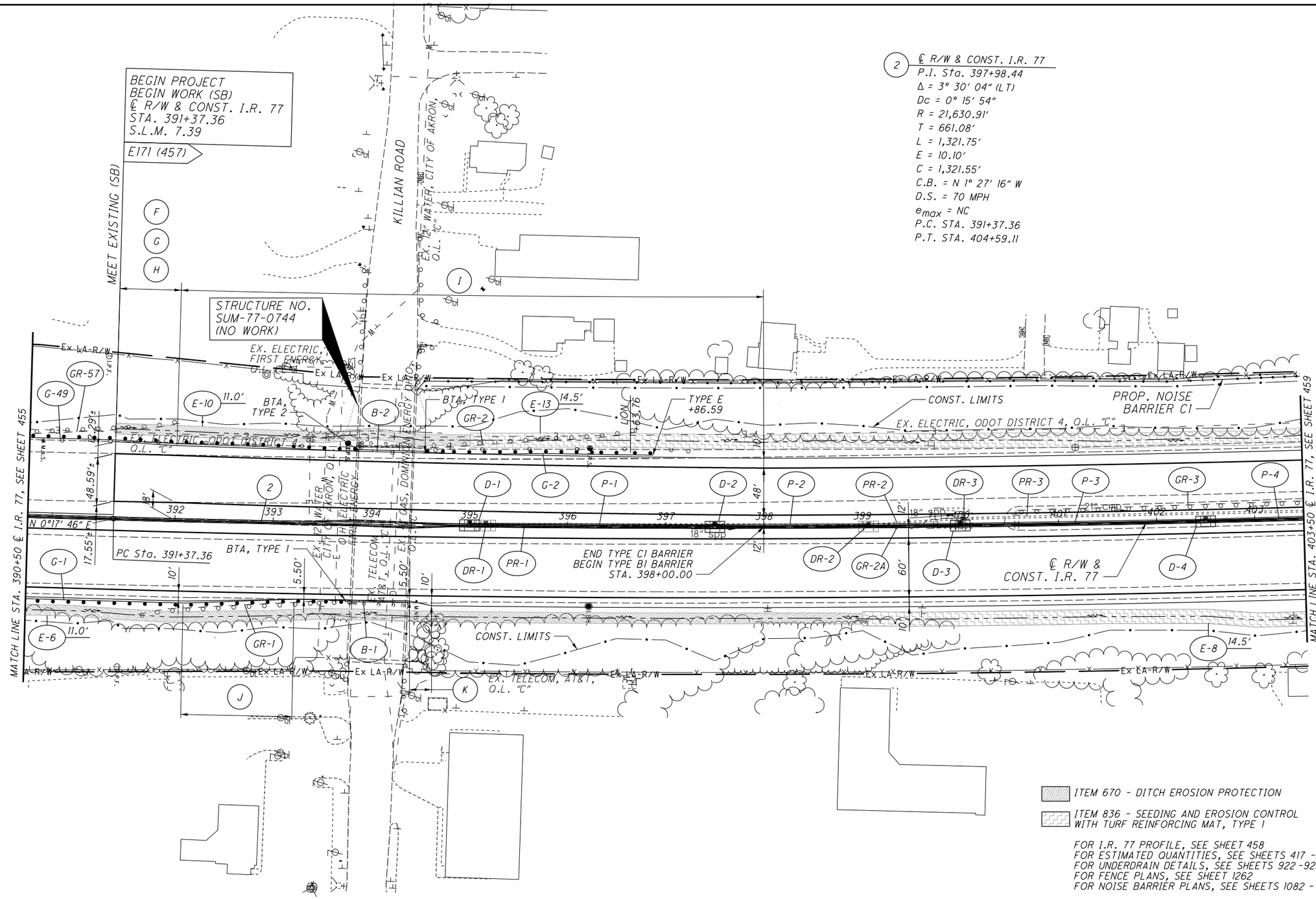




FOR I.R. 77 PLAN, SEE SHEET 455

456 / 1288	**SUM-77 / 277 / 224** **VARIOUS**	**PROFILE - I.R. 77** **STA. 379+50 TO STA. 390+50**

CALCULATED CJC
CHECKED PJF



2 ℄ R/W & CONST. I.R. 77
P.I. Sta. 397+98.44
Δ = 3° 30' 04" (LT)
Dc = 0° 15' 54"
R = 21,630.91'
T = 661.08'
L = 1,321.75'
E = 10.10'
C = 1,321.55'
C.B. = N 1° 27' 16" W
D.S. = 70 MPH
e_{max} = NC
P.C. STA. 391+37.36
P.T. STA. 404+59.11

ITEM 670 - DITCH EROSION PROTECTION

ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1

FOR I.R. 77 PROFILE, SEE SHEET 458
FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR UNDERDRAIN DETAILS, SEE SHEETS 922 -923
FOR FENCE PLANS, SEE SHEET 1262
FOR NOISE BARRIER PLANS, SEE SHEETS 1082 - 1091

TAPER TABLE

TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
F	391+37.36	IR-77	392+00.00	IR-77	LT	SHOULDER	12.29'	10.00'	27:1
G	391+37.36	IR-77	392+00.00	IR-77	LT	PAVEMENT	48.59'	48.00'	106:1
H	391+37.36	IR-77	392+00.00	IR-77	LT	MEDIAN	17.55'	18.00'	139:1
I	392+00.00	IR-77	398+00.00	IR-77	LT	MEDIAN	18.00'	12.00'	100:1
J	392+12.50	IR-77	393+25.00	IR-77	RT	SHOULDER	10.00'	5.50'	25:1
K	394+40.00	IR-77	394+62.50	IR-77	RT	SHOULDER	5.50'	10.00'	5:1

N

0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED LRK
CHECKED PJF

PLAN - I.R. 77
STA. 390+50 TO STA. 403+50

SUM-77 / 277 / 224
VARIOUS

457
1288

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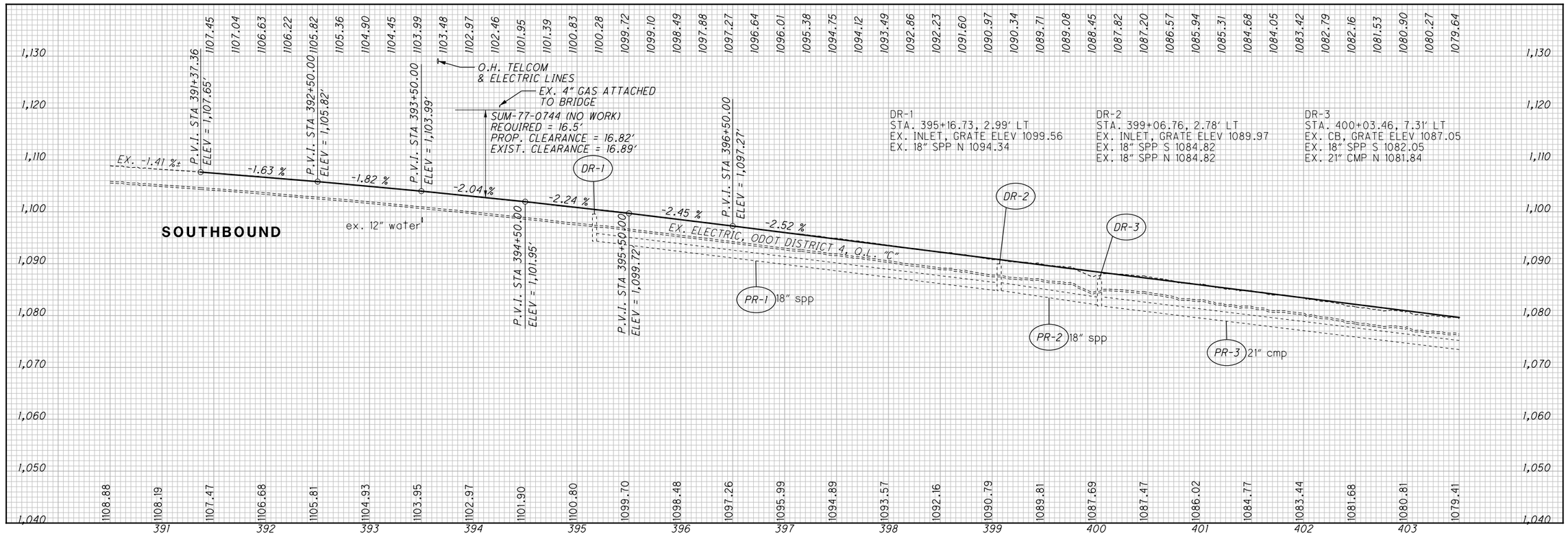

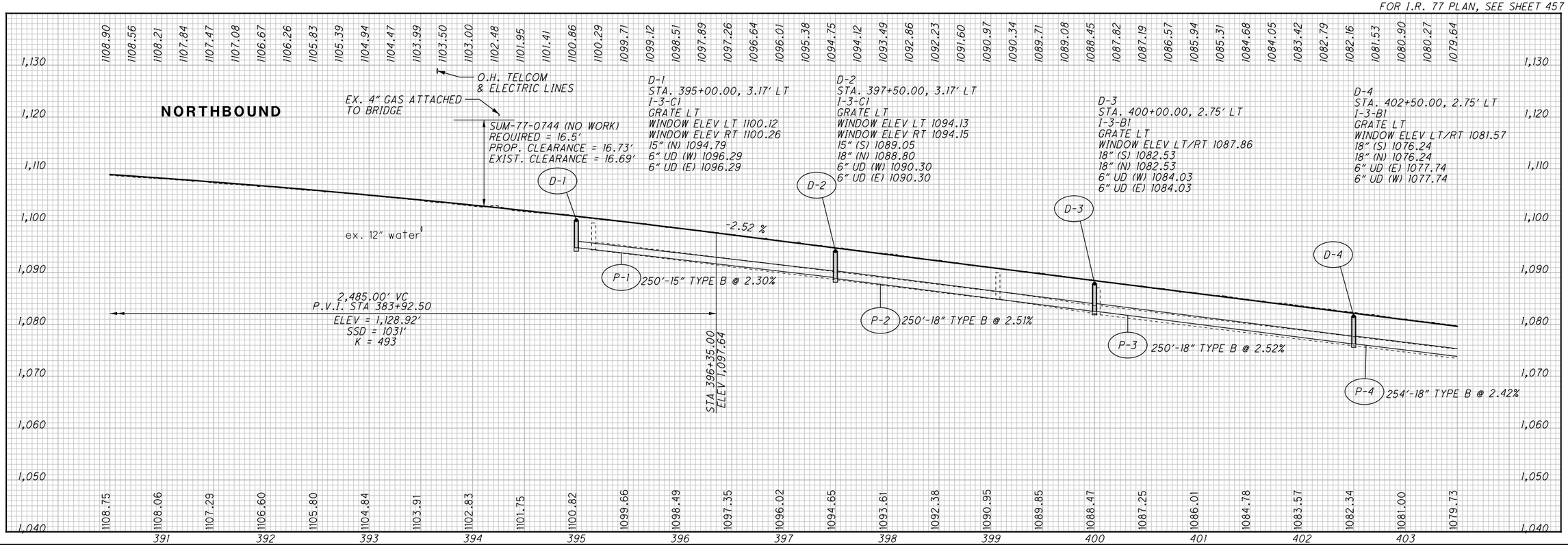

PROFILE - I.R. 77
STA. 390+50 TO STA. 403+50

CALCULATED CJC
CHECKED PJF

SUM-77/277/224
VARIOUS

458
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_GF003.dgn Sheet 1/15/2021 02:57 AM pfry

(2) ℄ R/W & CONST. I.R. 77
P.I. Sta. 397+98.44
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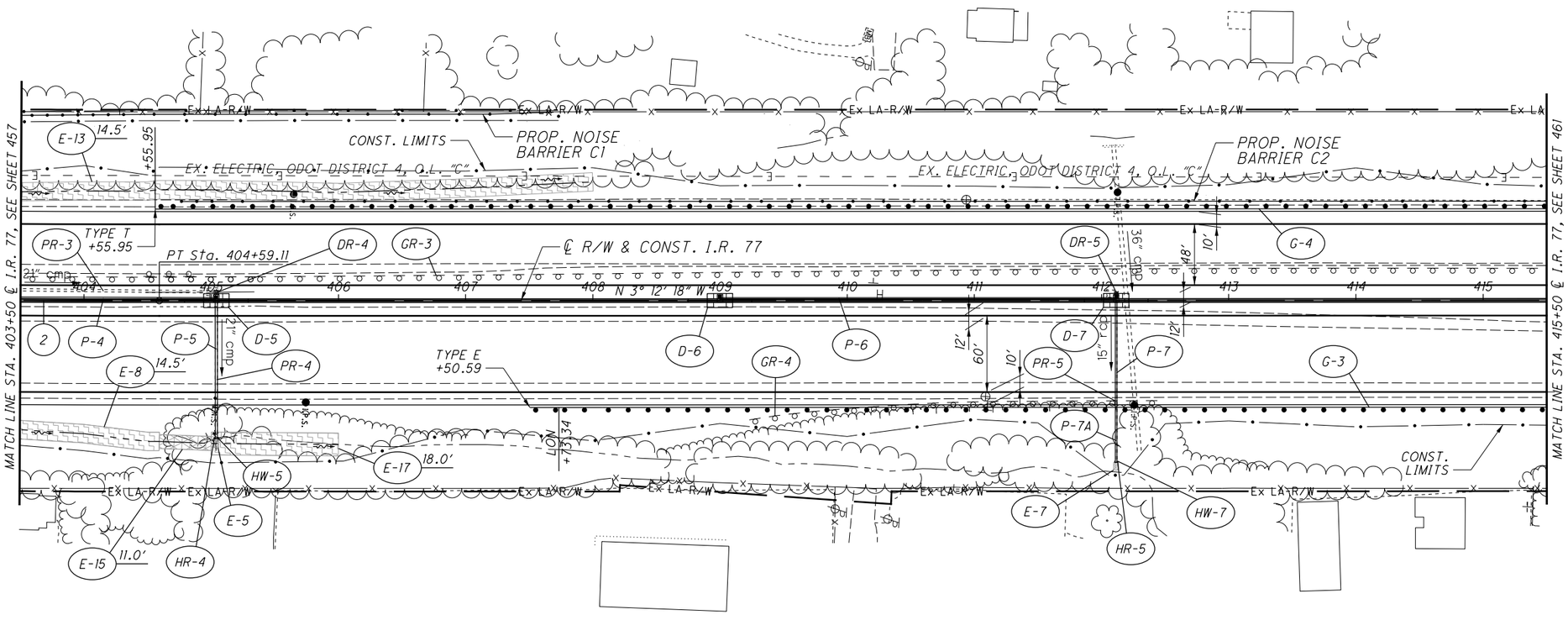
Dc = 0° 15′ 54″
R = 21,630.91′
T = 661.08′
L = 1,321.75′
E = 10.10′
C = 1,321.55′
C.B. = N 1° 27′ 16″ W
D.S. = 70 MPH
e_{max} = NC
P.C. STA. 391+37.36
P.T. STA. 404+59.11



ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET55)

ITEM 601 - ROCK CHANNEL PROTECTION

ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1

ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 2

FOR I.R. 77 PROFILE, SEE SHEET 460
FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR UNDERDRAIN DETAILS, SEE SHEET 923
FOR FENCE PLANS, SEE SHEET 1263
FOR NOISE BARRIER PLANS, SEE SHEETS 1082 - 1091

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED LRK
CHECKED PJF

PLAN - I.R. 77
STA. 403+50 TO STA. 415+50

SUM-77/277/224
VARIOUS

459
1288

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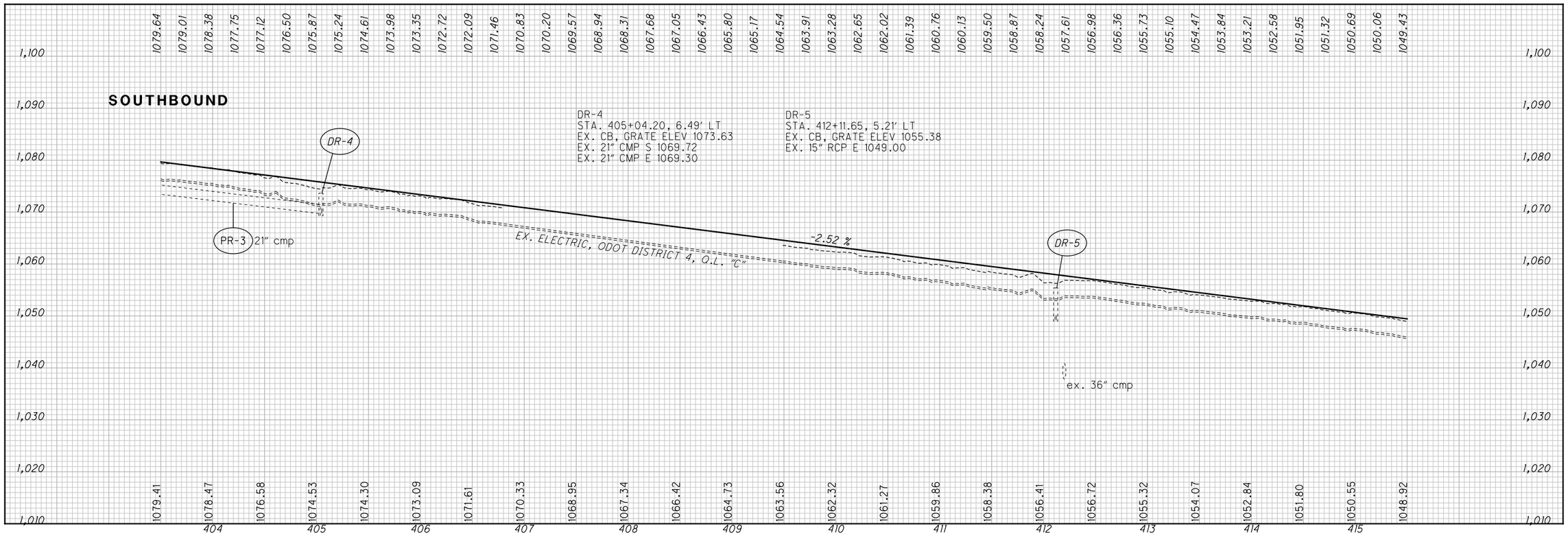
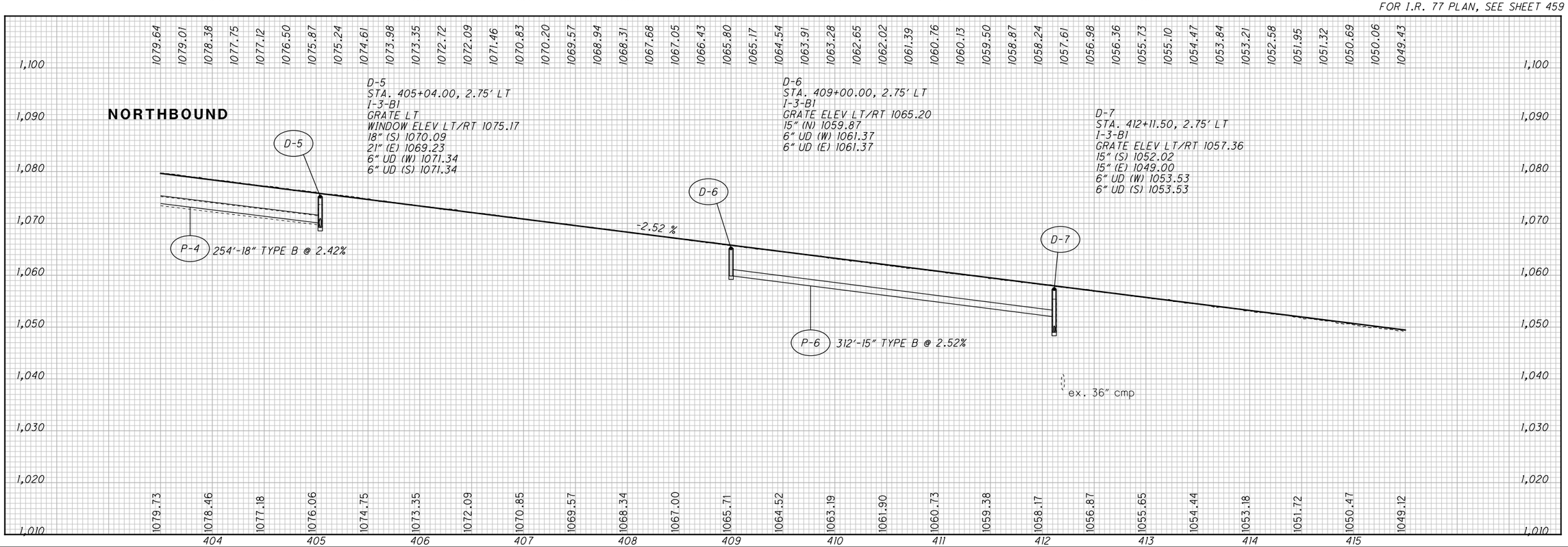


FOR I.R. 77 PLAN, SEE SHEET 459



PROFILE - I.R. 77
STA. 403+50 TO STA. 415+50

CALCULATED CJC
CHECKED PJF

SUM-77/277/224
VARIOUS

460
1288

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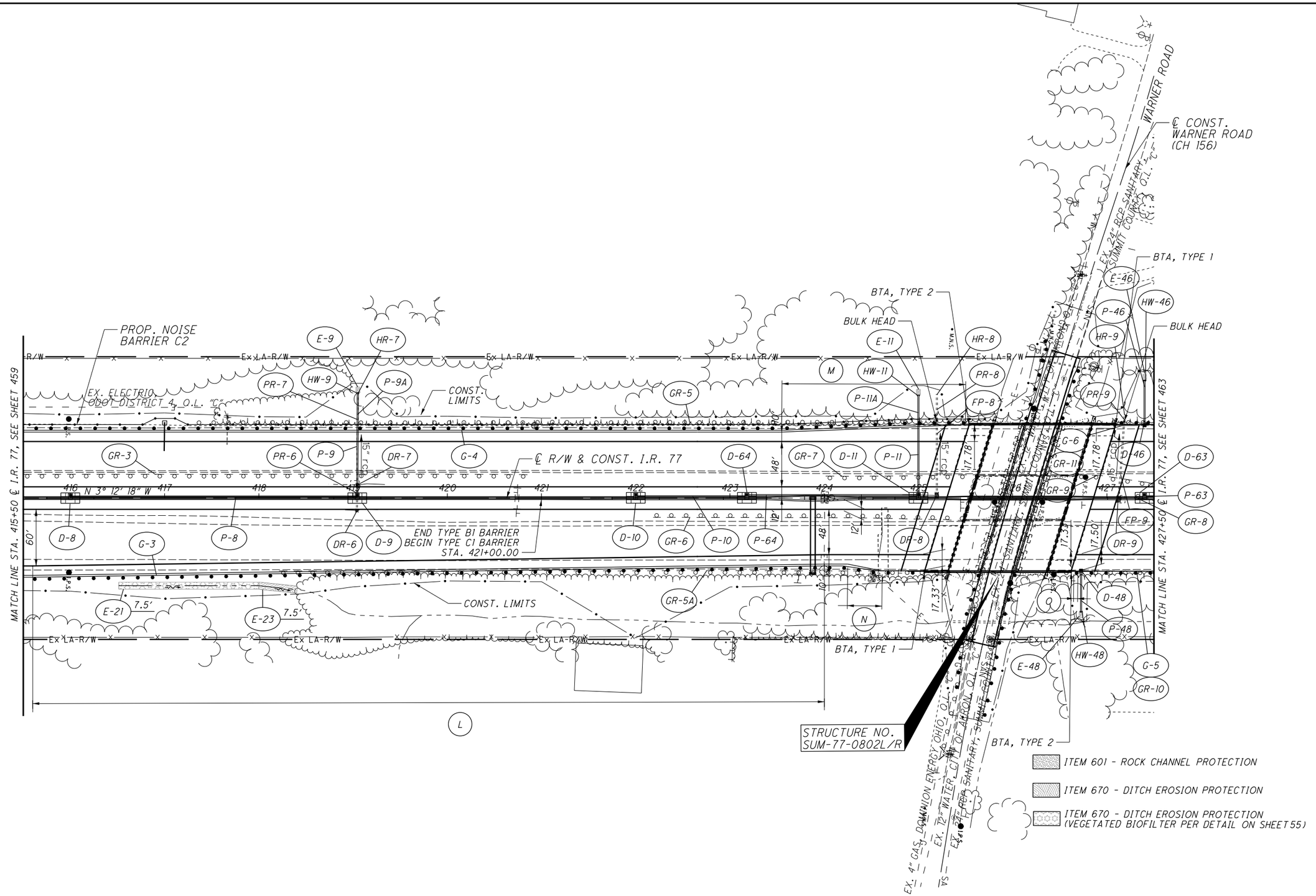


FOR I.R. 77 PROFILE, SEE SHEET 462
FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR WARNER ROAD PLANS, SEE SHEET 509
FOR UNDERDRAIN DETAILS, SEE SHEETS 923 - 924, 932
FOR NOISE BARRIER PLANS, SEE SHEETS 1082 - 1091
FOR STRUCTURE PLANS, SEE SHEETS 1155 - 1180
FOR ITS PLANS, SEE SHEETS 1020 - 1036

TAPER TABLE

TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
L	415+60.00	IR-77	424+00.00	IR-77	RT	PAVEMENT	60.00'	48.00'	70:1
M	423+55.00	IR-77	425+49.49	IR-77	LT	SHOULDER	10.00'	17.78'	25:1
N	424+25.00	IR-77	424+61.65	IR-77	RT	SHOULDER	10.00'	17.33'	5:1
O	426+65.00	IR-77	426+69.25	IR-77	RT	SHOULDER	17.33'	17.50'	25:1

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LRK
CHECKED PJF

PLAN - I.R. 77
STA. 415+50 TO STA. 427+50

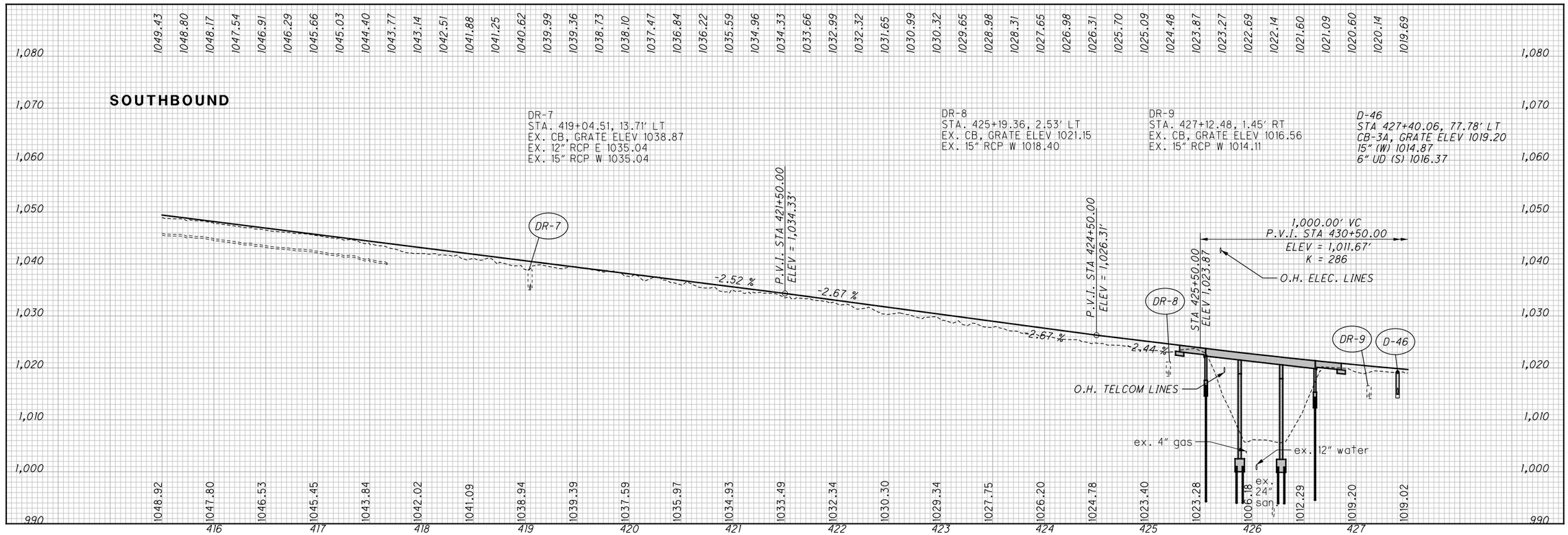
SUM-77 / 277 / 224
VARIOUS

461
1288

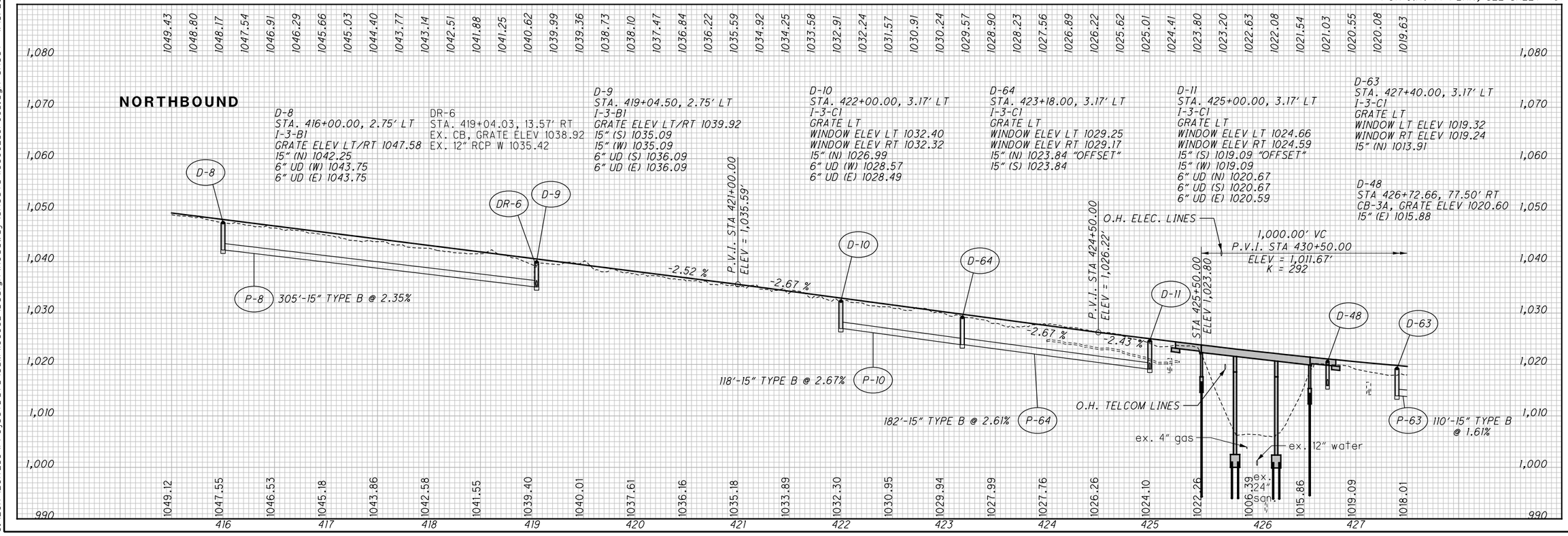
O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_GP005.dgn Sheet 1/15/2021 10:22:05 AM pfry

PROFILE - I.R. 77
STA. 415+50 TO STA. 427+50

CALCULATED CJC
CHECKED PJF



FOR I.R. 77 PLAN, SEE SHEET 461



SUM-77 / 277 / 224
VARIOUS

462
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_GF005.dgn Sheet 1/15/2021 10:22:09 AM pfry

3 ℄ R/W & CONST. I.R. 77
P.I. Sta. 438+34.18
Δ = 7° 59′ 02″ (LT)
Dc = 0° 24′ 10″
R = 14,228.56′
T = 992.94′
L = 1,982.67′
E = 34.60′
C = 1,981.07′
C.B. = N 7° 11′ 49″ W
D.S. = 70 MPH
e_{max} = NC
P.C. STA. 428+41.24
P.T. STA. 448+23.91

WETLANDS
O.H. ELEC. TRANSMISSION LINES
TUSCARAWAS RIVER
BULK HEAD
BTA, TYPE 2
BTA, TYPE 1
CONST. LIMITS
℄ R/W & CONST. I.R. 77
EX. 8" SANITARY, SUMMIT COUNTY, O.L.
EX. ELECTRIC, FIRST ENERGY, O.L. "C"
STRUCTURE NO. SUM-77-0810L/R
MATCH LINE STA. 427+50 ℄ I.R. 77, SEE SHEET 461
MATCH LINE STA. 439+50 ℄ I.R. 77, SEE SHEET 465
PC Sta. 428+41.24

ITEM 601 - ROCK CHANNEL PROTECTION
WETLAND
WETLAND AREA NOT TO BE DISTURBED
ITEM 601 - TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT

FOR I.R. 77 PROFILE, SEE SHEET 464
FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR UNDERDRAIN DETAILS, SEE SHEETS 924 , 932
FOR STRUCTURE PLANS, SEE SHEETS 1181 - 1224

TAPER TABLE

TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
P	427+60.00	IR-77	427+67.00	IR-77	LT	SHOULDER	17.78′	17.50′	25:1
Q	431+22.50	IR-77	433+10.00	IR-77	RT	SHOULDER	17.50′	10.00′	25:1
R	431+80.00	IR-77	432+13.00	IR-77	LT	SHOULDER	17.07′	10.00′	5:1
S	431+50.00	IR-77	439+90.00	IR-77	LT	PAVEMENT	48.00′	60.00′	70:1
CG	431+50.00	SB IR-77	431+80.00	SB IR-77	LT	SHOULDER	17.50′	17.07′	70:1

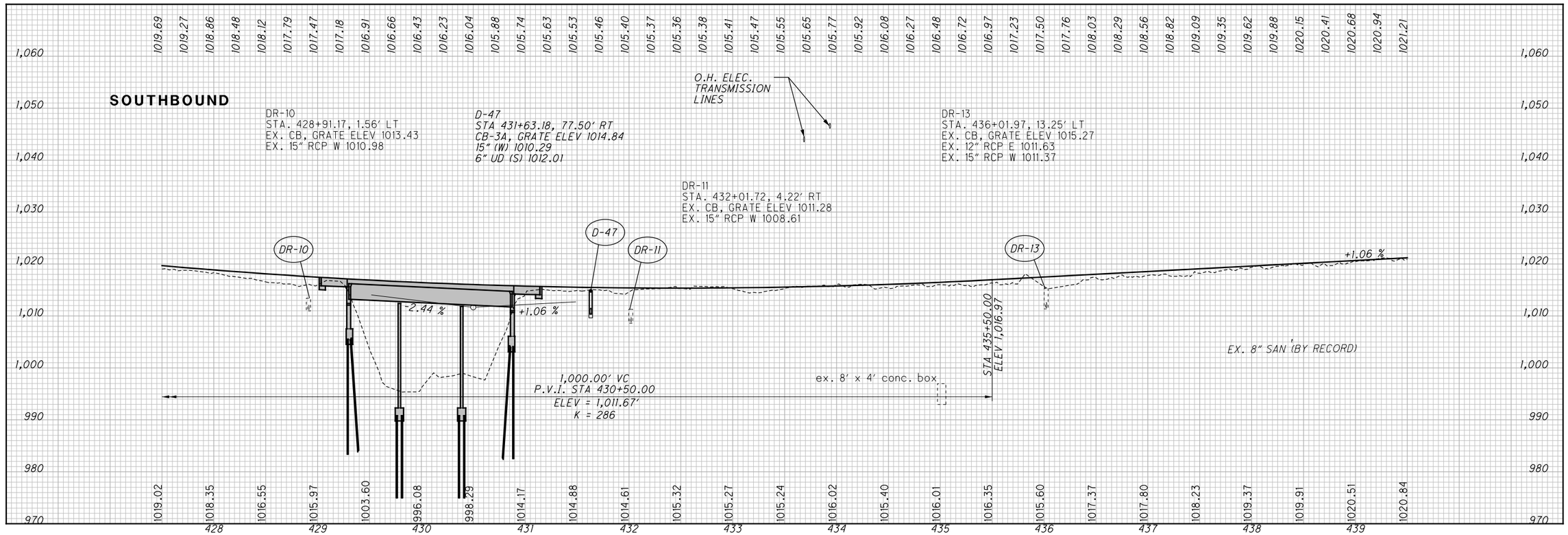
HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED LRK
CHECKED PJF

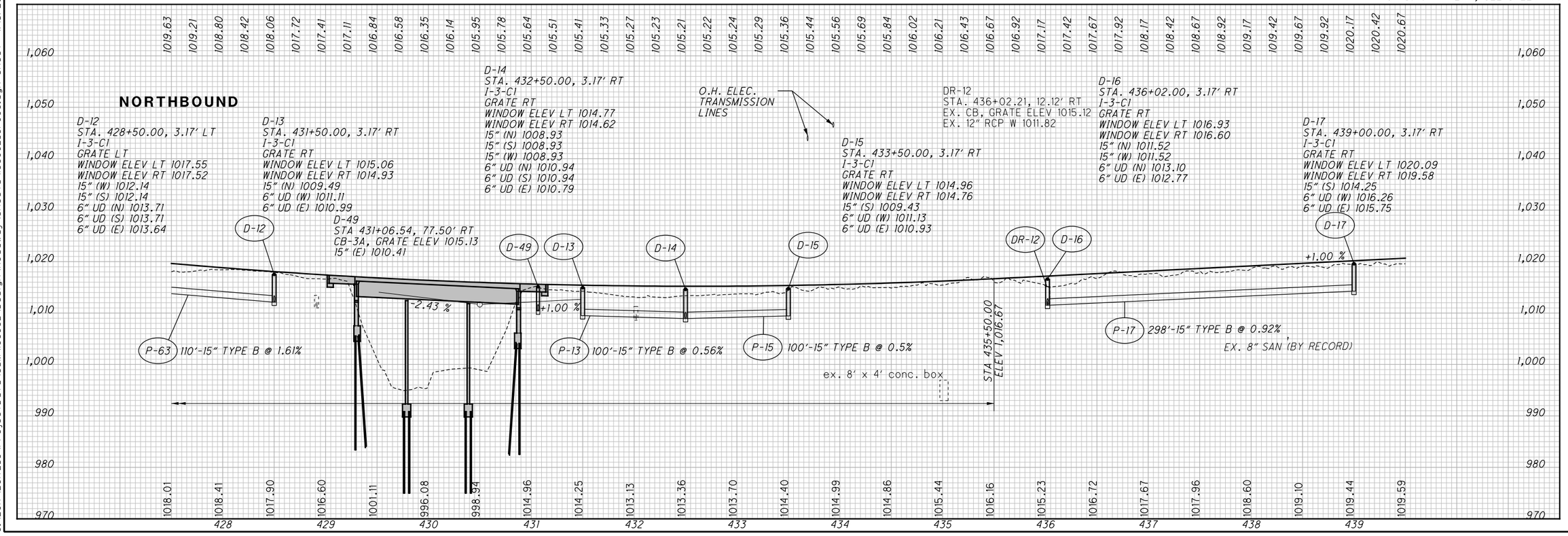
PLAN - I.R. 77
STA. 427+50 TO STA. 439+50

SUM-77 / 277 / 224
VARIOUS

463
1288

D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_GP006.dgn Sheet 1/15/2021 10:22:13 AM pfry





PROFILE - I.R. 77
STA. 427+50 TO STA. 439+50

CALCULATED CJC
CHECKED PJF

SUM-77 / 277 / 224
VARIOUS

464
1288

D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_GF006.dgn Sheet 1/15/2021 10:22:17 AM pfry

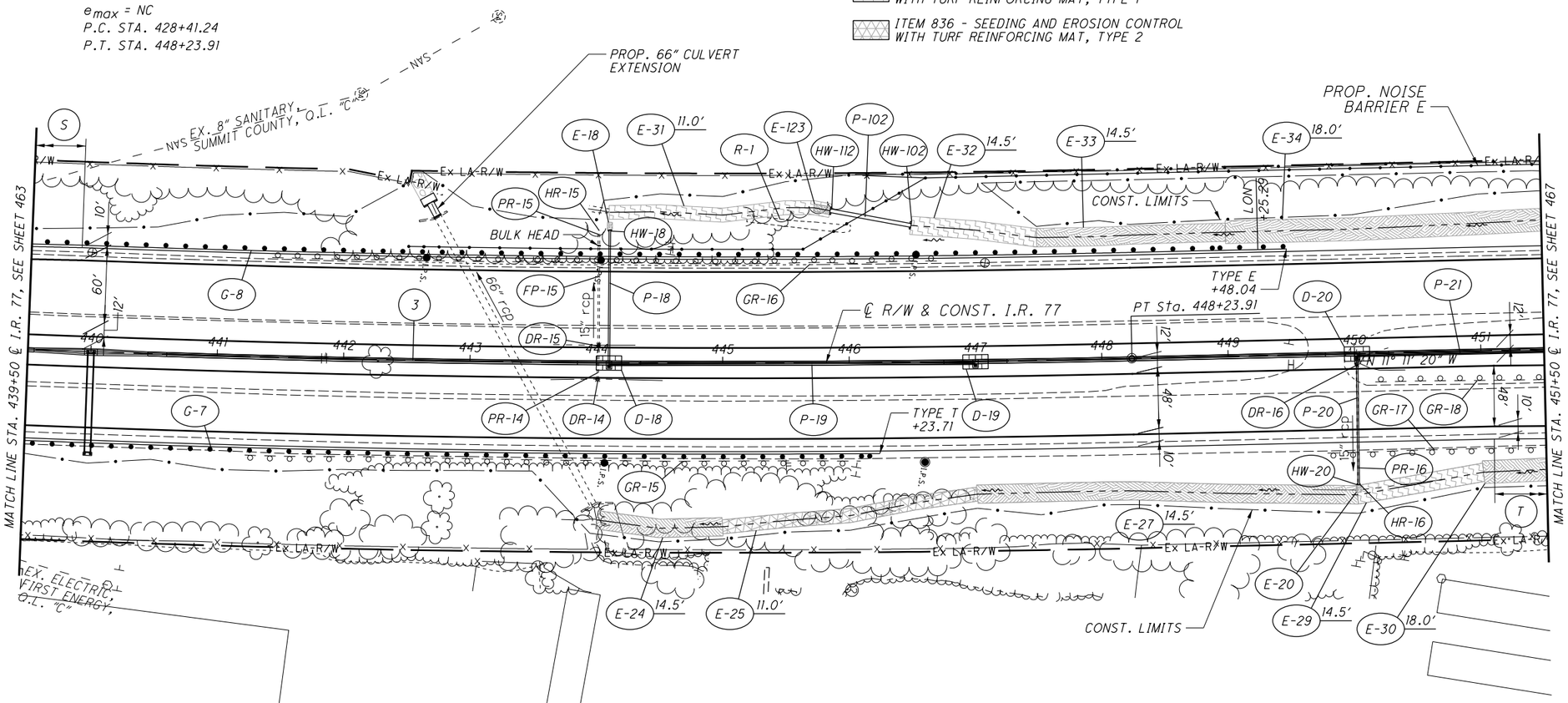
(3) ℄ R/W & CONST. I.R. 77
P.I. Sta. 438+34.18
Δ = 7° 59′ 02″ (LT)
Dc = 0° 24′ 10″
R = 14,228.56′
T = 992.94′
L = 1,982.67′
E = 34.60′
C = 1,981.07′
C.B. = N 7° 11′ 49″ W
D.S. = 70 MPH
e_{max} = NC
P.C. STA. 428+41.24
P.T. STA. 448+23.91

ITEM 601 - ROCK CHANNEL PROTECTION

ITEM 670 - DITCH EROSION PROTECTION

ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1

ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 2



FOR I.R. 77 PROFILE, SEE SHEET 466
FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR CULVERT DETAILS, SEE SHEET 908
FOR UNDERDRAIN DETAILS, SEE SHEETS 924 - 925
FOR FENCE PLANS, SEE SHEET 1264
FOR NOISE BARRIER PLANS, SEE SHEETS 1092 - 1100

TAPER TABLE

TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
S	431+50.00	I.R-77	439+90.00	I.R-77	LT	PAVEMENT	48.00′	60.00′	70:1
T	451+10.00	I.R-77	459+50.00	I.R-77	RT	MEDIAN	12.00′	24.00′	70:1

HORIZONTAL SCALE IN FEET
0 25 50 100

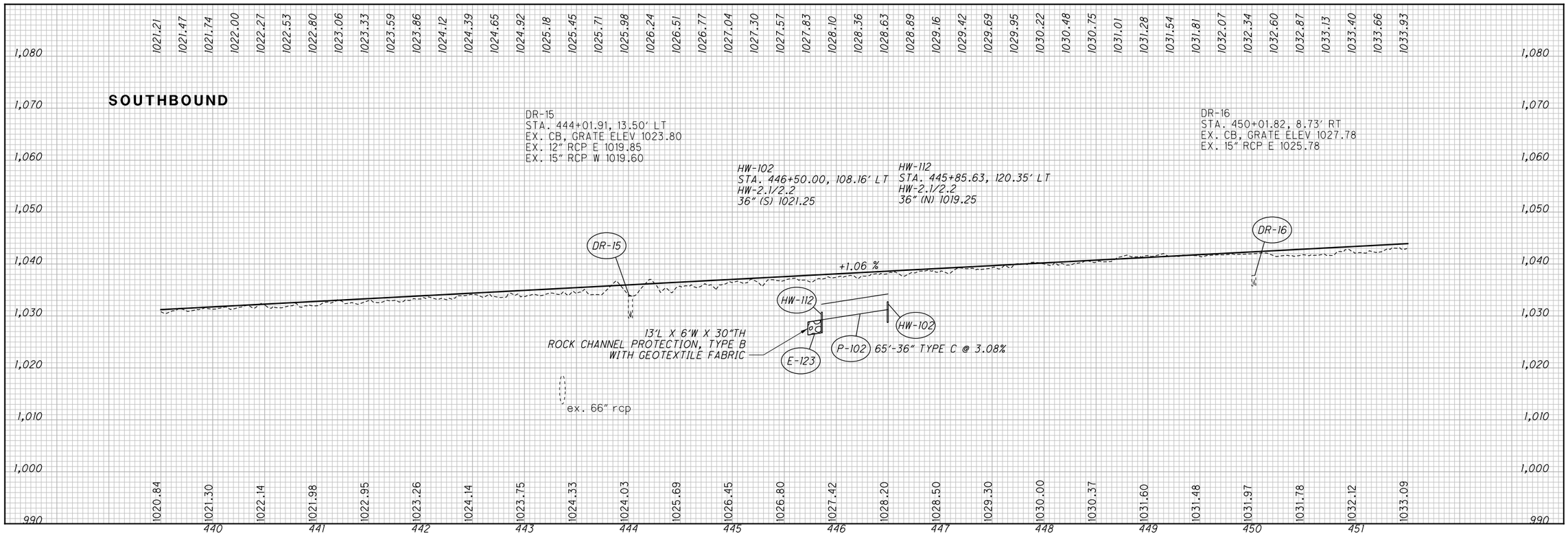
CALCULATED LRK
CHECKED PJF

PLAN - I.R. 77
STA. 439+50 TO STA. 451+50

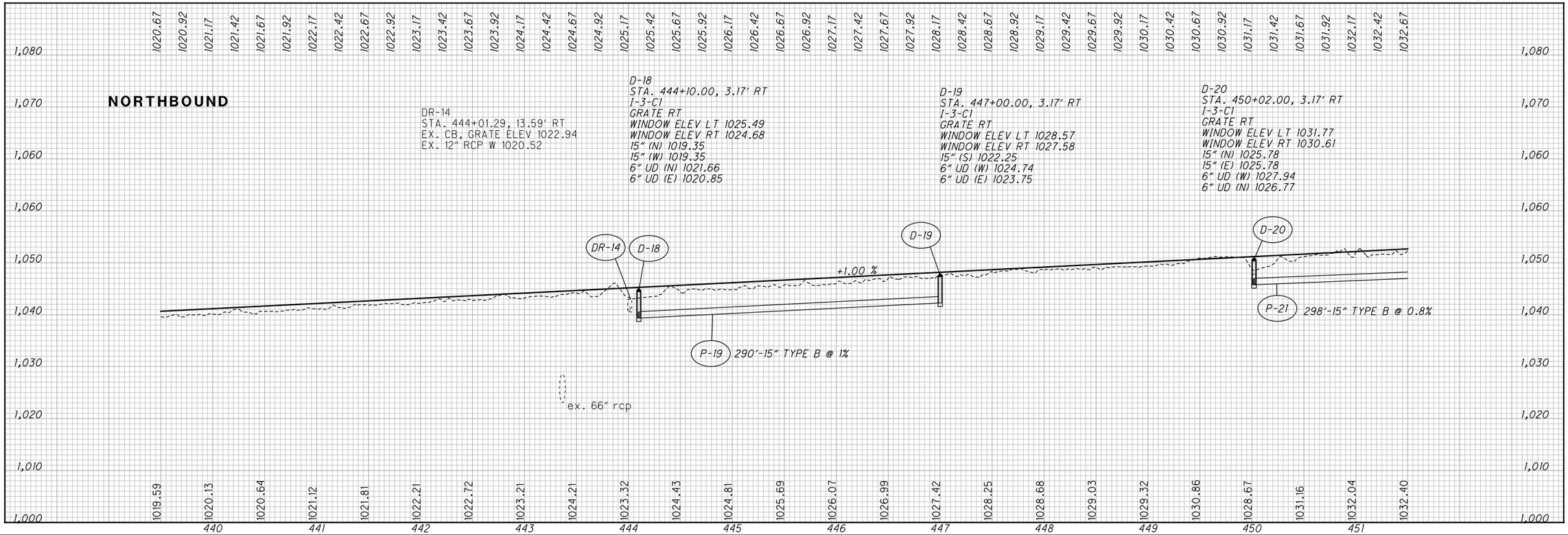
SUM-77/277/224
VARIOUS

465
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_GP007.dgn Sheet 1/15/2021 10:22:21 AM pfry



FOR I.R. 77 PLAN, SEE SHEET 465



PROFILE - I.R. 77
STA. 439+50 TO STA. 451+50

CALCULATED CJC
CHECKED PJF

SUM-77/277/224
VARIOUS

466
1288

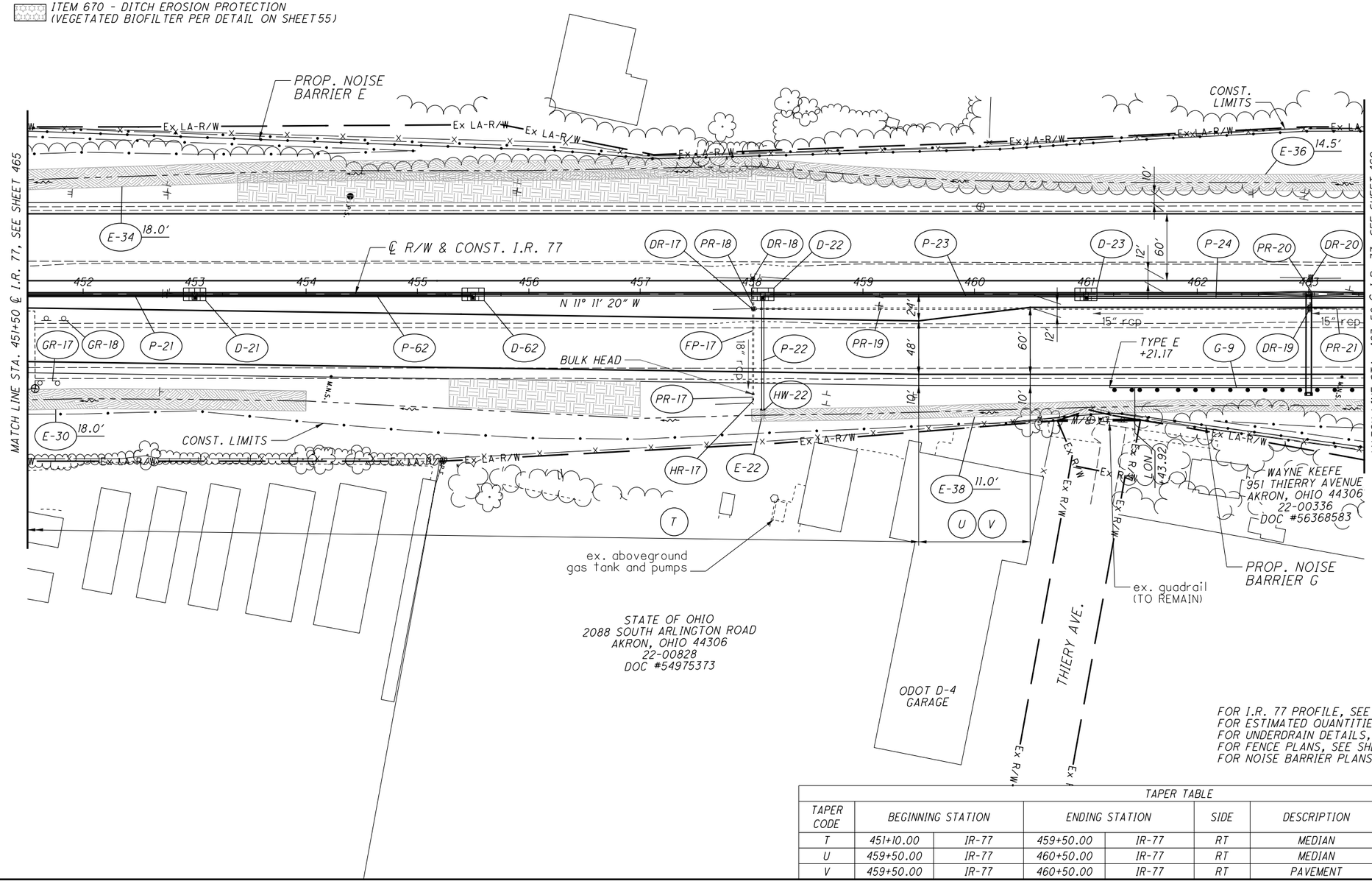
D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_GF007.dgn Sheet 1/15/2021 10:22:24 AM pfry

ITEM 670 - SLOPE EROSION PROTECTION
(VEGETATED FILTER STRIP W/ 4" ITEM 659 - TOPSOIL)

ITEM 601 - ROCK CHANNEL PROTECTION

ITEM 670 - DITCH EROSION PROTECTION

ITEM 670 - DITCH EROSION PROTECTION
(VEGETATED BIOFILTER PER DETAIL ON SHEET 55)



FOR I.R. 77 PROFILE, SEE SHEET 468
FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR UNDERDRAIN DETAILS, SEE SHEET 925
FOR FENCE PLANS, SEE SHEET 1265
FOR NOISE BARRIER PLANS, SEE SHEETS 1092 - 1109

TAPER TABLE

TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
T	451+10.00	IR-77	459+50.00	IR-77	RT	MEDIAN	12.00'	24.00'	70:1
U	459+50.00	IR-77	460+50.00	IR-77	RT	MEDIAN	24.00'	12.00'	8:1
V	459+50.00	IR-77	460+50.00	IR-77	RT	PAVEMENT	48.00'	60.00'	8:1

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LRK
CHECKED PJF

PLAN - I.R. 77
STA. 451+50 TO STA. 463+50

SUM-77/277/224
VARIOUS

467
1288

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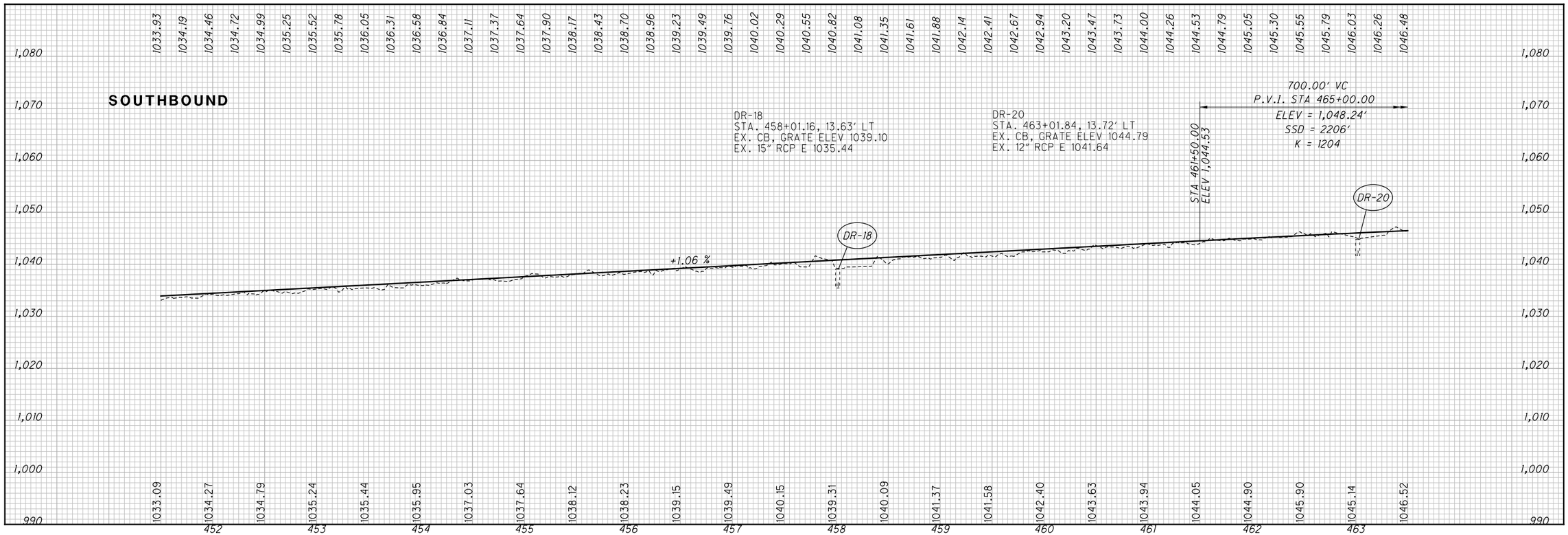
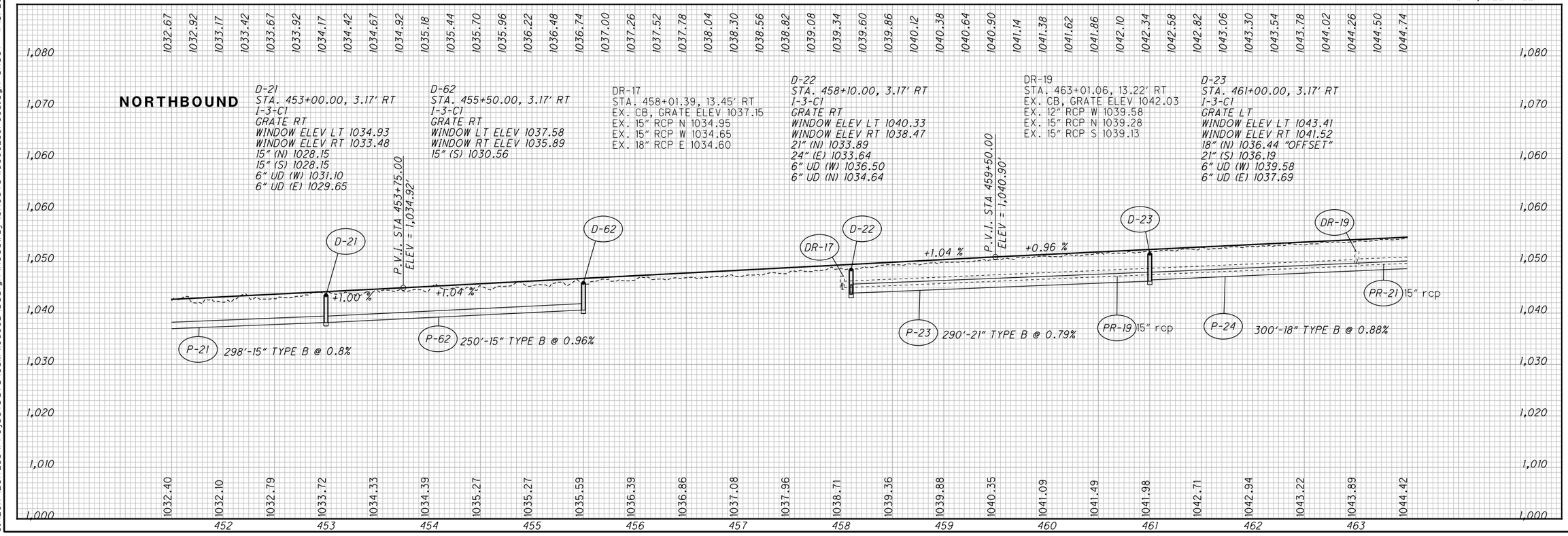
PROFILE - I.R. 77
STA. 451+50 TO STA. 463+50

CALCULATED CJC
CHECKED PJF



FOR I.R. 77 PLAN, SEE SHEET 467



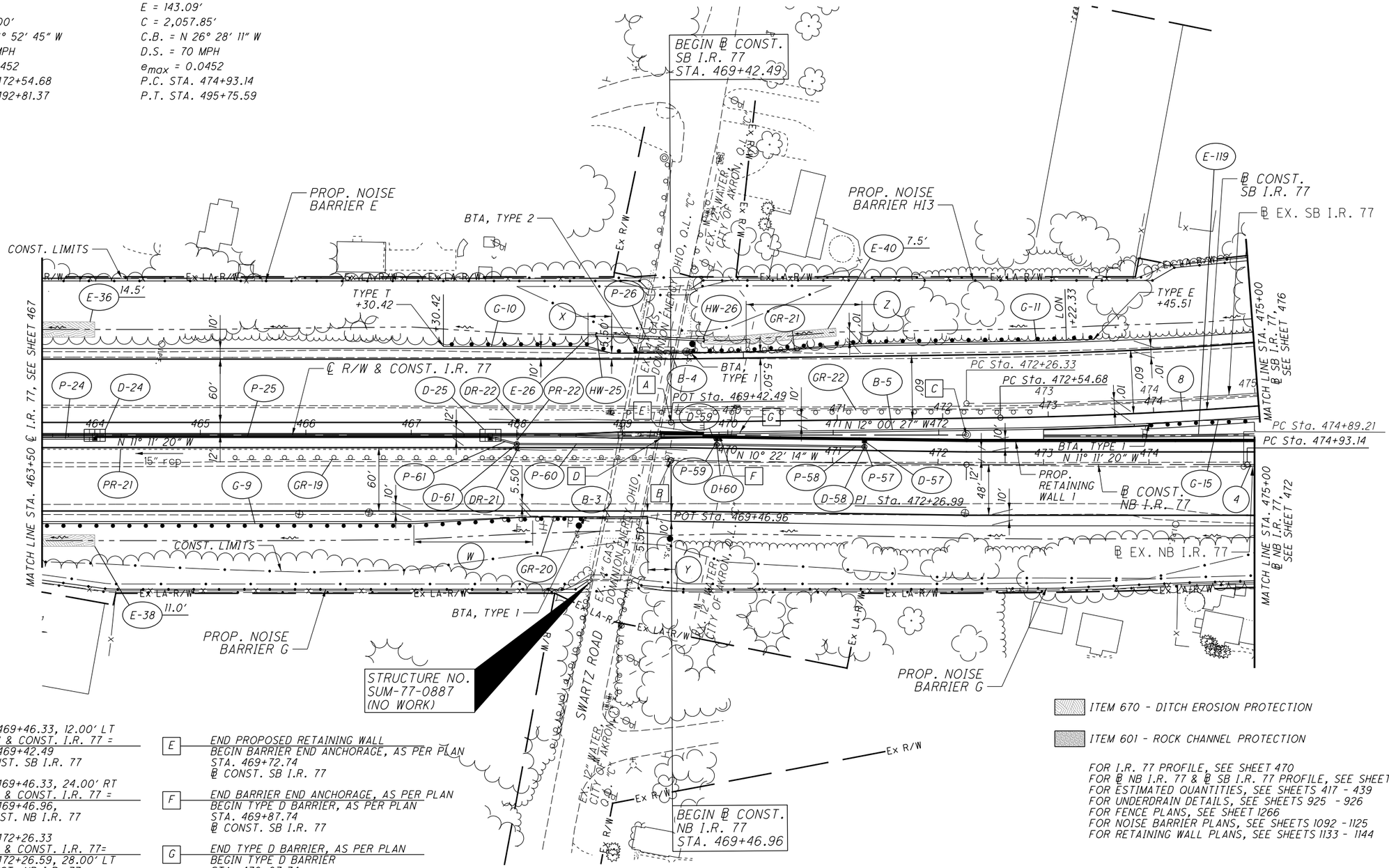
SUM-77 / 277 / 224
VARIOUS

468
1288

D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_GF008.dgn Sheet 1/15/2021 10:22:31 AM pfry

8 — ℄ CONST. SB I.R. 77
P.I. Sta. 482+91.41
Δ = 29° 44′ 36″ (LT)
Dc = 1° 28′ 03″
R = 3,904.07′
T = 1,036.73′
L = 2,026.68′
E = 135.31′
C = 2,004.00′
C.B. = N 26° 52′ 45″ W
D.S. = 70 MPH
e_{max} = 0.0452
P.C. STA. 472+54.68
P.T. STA. 492+81.37

4 — ℄ CONST. NB I.R. 77
P.I. Sta. 485+59.78
Δ = 30° 33′ 43″ (LT)
Dc = 1° 28′ 03″
R = 3,904.07′
T = 1,066.64′
L = 2,082.45′
E = 143.09′
C = 2,057.85′
C.B. = N 26° 28′ 11″ W
D.S. = 70 MPH
e_{max} = 0.0452
P.C. STA. 474+93.14
P.T. STA. 495+75.59



A — STA. 469+46.33, 12.00′ LT
℄ R/W & CONST. I.R. 77 =
STA. 469+42.49
℄ CONST. SB I.R. 77

B — STA. 469+46.33, 24.00′ RT
℄ R/W & CONST. I.R. 77 =
STA. 469+46.96,
℄ CONST. NB I.R. 77

C — STA. 472+26.33
℄ R/W & CONST. I.R. 77=
STA. 472+26.59, 28.00′ LT
℄ CONST. NB I.R. 77 =
STA. 472+22.29, 16.00′ RT
℄ CONST. SB I.R. 77

D — END TYPE C1 BARRIER
BEGIN PROPOSED RETAINING WALL T
STA. 469+36.72
℄ R/W & CONST. I.R. 77

E — END PROPOSED RETAINING WALL
BEGIN BARRIER END ANCHORAGE, AS PER PLAN
STA. 469+72.74
℄ CONST. SB I.R. 77

F — END BARRIER END ANCHORAGE, AS PER PLAN
BEGIN TYPE D BARRIER, AS PER PLAN
STA. 469+87.74
℄ CONST. SB I.R. 77

G — END TYPE D BARRIER, AS PER PLAN
BEGIN TYPE D BARRIER
STA. 470+07.74
℄ CONST. SB I.R. 77

ITEM 670 - DITCH EROSION PROTECTION

ITEM 601 - ROCK CHANNEL PROTECTION

FOR I.R. 77 PROFILE, SEE SHEET 470
FOR ℄ NB I.R. 77 & ℄ SB I.R. 77 PROFILE, SEE SHEET 471
FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR UNDERDRAIN DETAILS, SEE SHEETS 925 - 926
FOR FENCE PLANS, SEE SHEET 1266
FOR NOISE BARRIER PLANS, SEE SHEETS 1092 - 1125
FOR RETAINING WALL PLANS, SEE SHEETS 1133 - 1144

TAPER TABLE

TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
W	467+02.50	IR-77	468+15.00	IR-77	RT	SHOULDER	10.00′	5.50′	25:1
X	468+67.50	IR-77	468+90.00	IR-77	LT	SHOULDER	10.00′	5.50′	5:1
Y	469+23.83	IR-77	469+46.33	IR-77	RT	SHOULDER	5.50′	10.00′	5:1
Z	470+12.50	SB IR-77	471+25.00	SB IR-77	LT	SHOULDER	5.50′	10.00′	25:1

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LRK
CHECKED PJF

PLAN - I.R. 77 / NB I.R. 77 / SB I.R. 77
STA. 463+50 TO STA. 475+00

SUM-77 / 277 / 224
VARIOUS

469
1288

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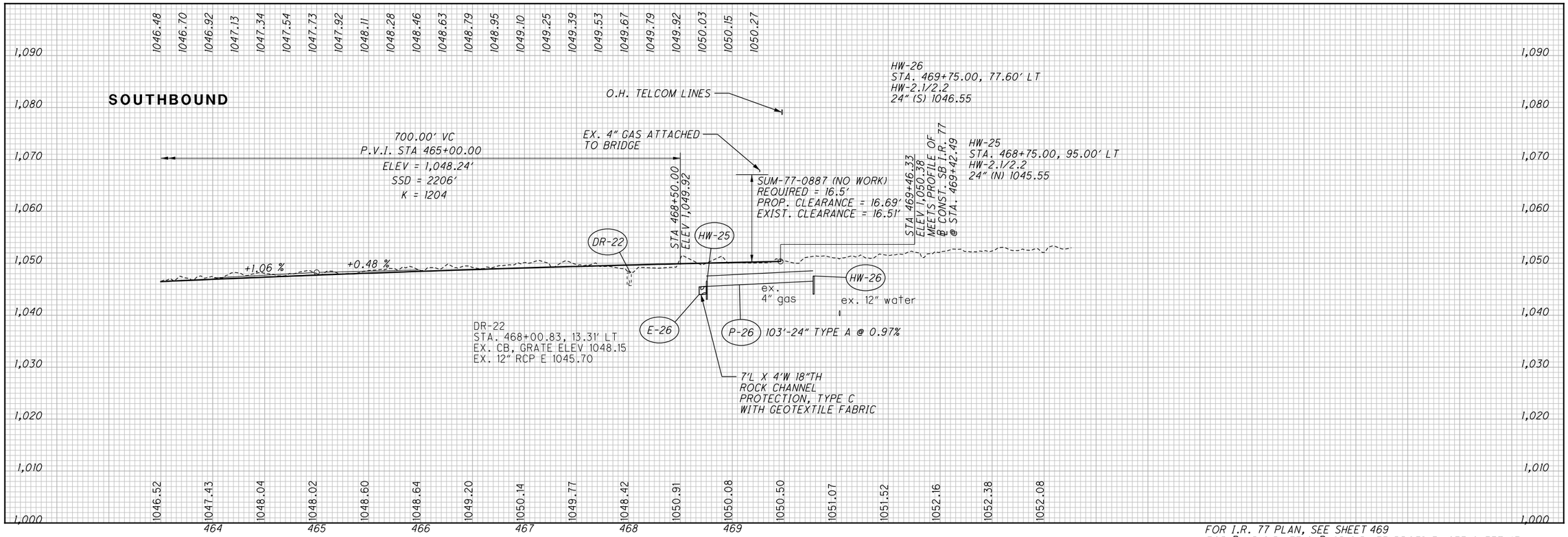
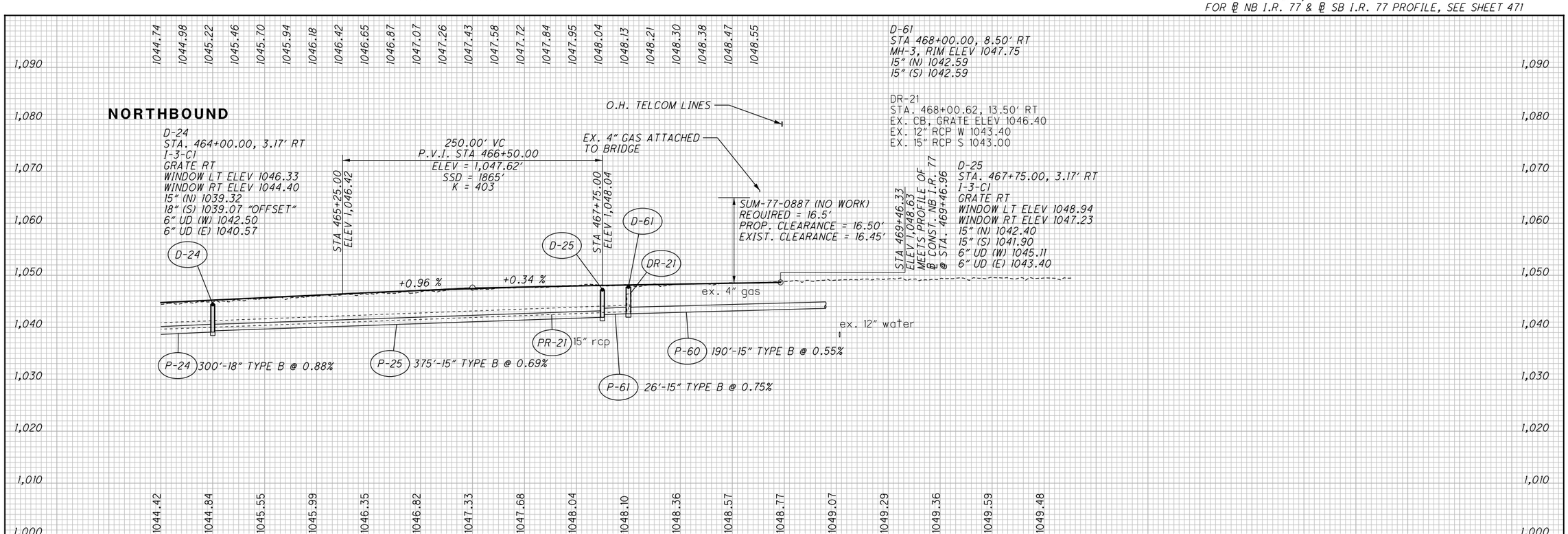
PROFILE - I.R. 77
STA. 463+50 TO STA. 469+46.33

CALCULATED CJC
CHECKED PJF



FOR I.R. 77 PLAN, SEE SHEET 469
FOR ℄ NB I.R. 77 & ℄ SB I.R. 77 PROFILE, SEE SHEET 471



SUM-77 / 277 / 224
VARIOUS

STA. 469+46.33

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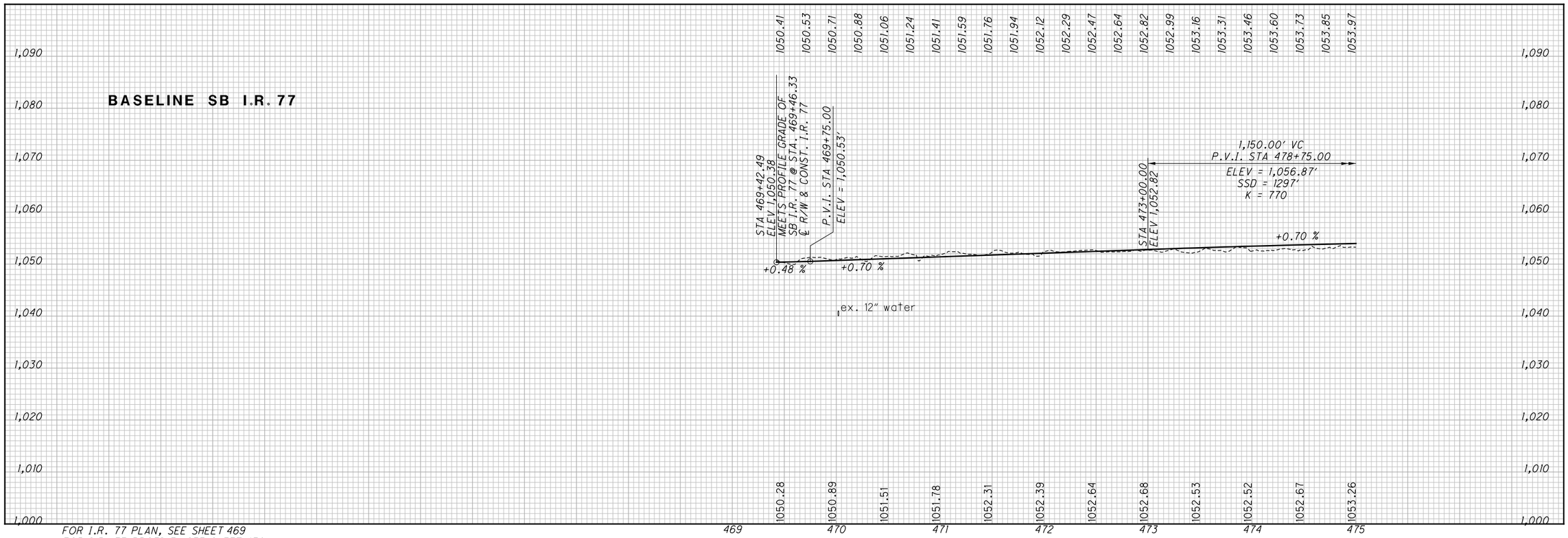
BASELINE SB I.R. 77



FOR I.R. 77 PLAN, SEE SHEET 469
FOR I.R. 77 PROFILE, SEE SHEET 470

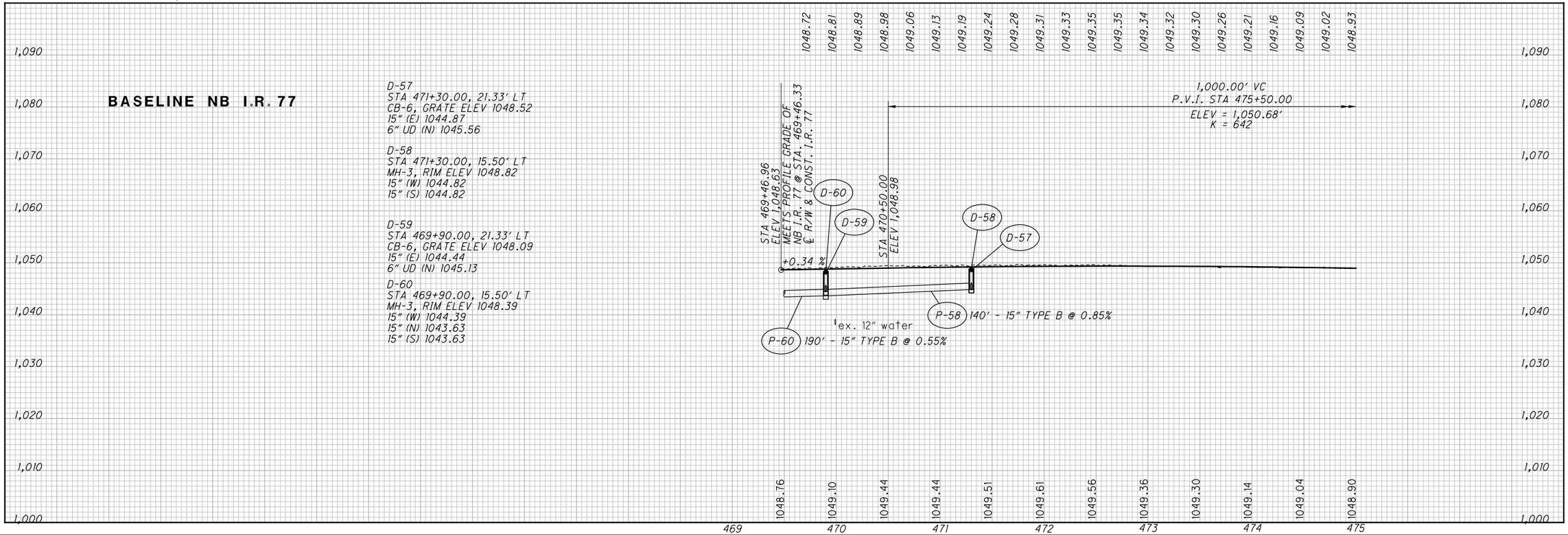
BASELINE NB I.R. 77

D-57
STA 471+30.00, 21.33' LT
CB-6, GRATE ELEV 1048.52
15" (E) 1044.87
6" UD (N) 1045.56

D-58
STA 471+30.00, 15.50' LT
MH-3, RIM ELEV 1048.82
15" (W) 1044.82
15" (S) 1044.82

D-59
STA 469+90.00, 21.33' LT
CB-6, GRATE ELEV 1048.09
15" (E) 1044.44
6" UD (N) 1045.13

D-60
STA 469+90.00, 15.50' LT
MH-3, RIM ELEV 1048.39
15" (W) 1044.39
15" (N) 1043.63
15" (S) 1043.63



CALCULATED CJC
CHECKED PJF

PROFILE - NB I.R. 77 / SB I.R. 77
BEGIN TO STA. 475+00

SUM-77 / 277 / 224
VARIOUS

471
1288

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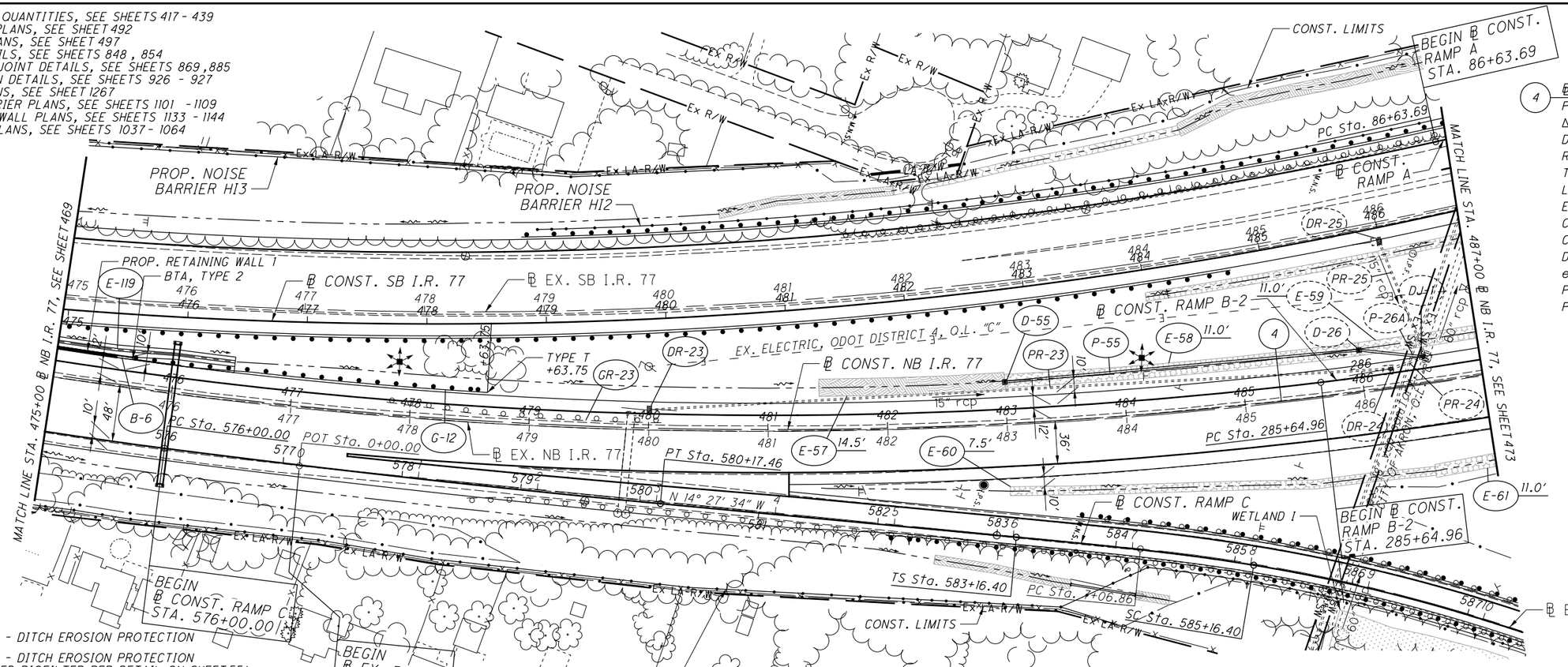
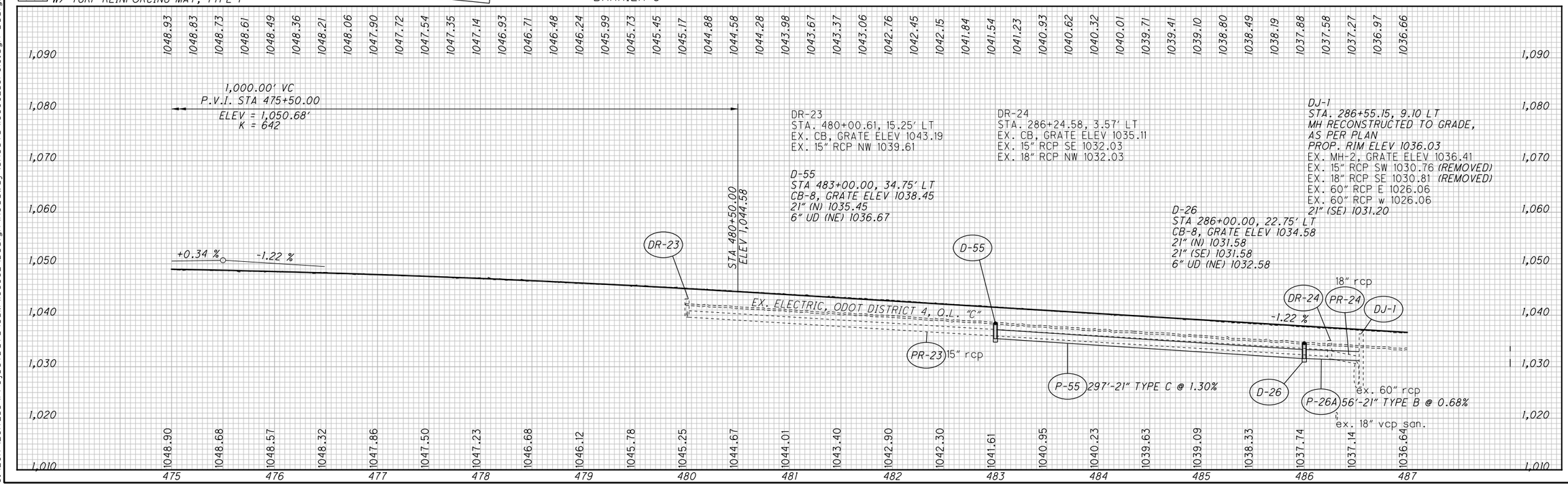
FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR RAMP B-2 PLANS, SEE SHEET 492
FOR RAMP C PLANS, SEE SHEET 497
FOR GORE DETAILS, SEE SHEETS 848 , 854
FOR PAVEMENT JOINT DETAILS, SEE SHEETS 869 ,885
FOR UNDERDRAIN DETAILS, SEE SHEETS 926 - 927
FOR FENCE PLANS, SEE SHEET 1267
FOR NOISE BARRIER PLANS, SEE SHEETS 1101 - 1109
FOR RETAINING WALL PLANS, SEE SHEETS 1133 - 1144
FOR LIGHTING PLANS, SEE SHEETS 1037 - 1064



ITEM 670 - DITCH EROSION PROTECTION
ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)
ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE I
WETLAND AREA NOT TO BE DISTURBED



HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED LRK
CHECKED PJF

PLAN AND PROFILE - NB I.R. 77 STA. 475+00 TO STA. 487+00

SUM-77/277/224
VARIOUS

472
1288

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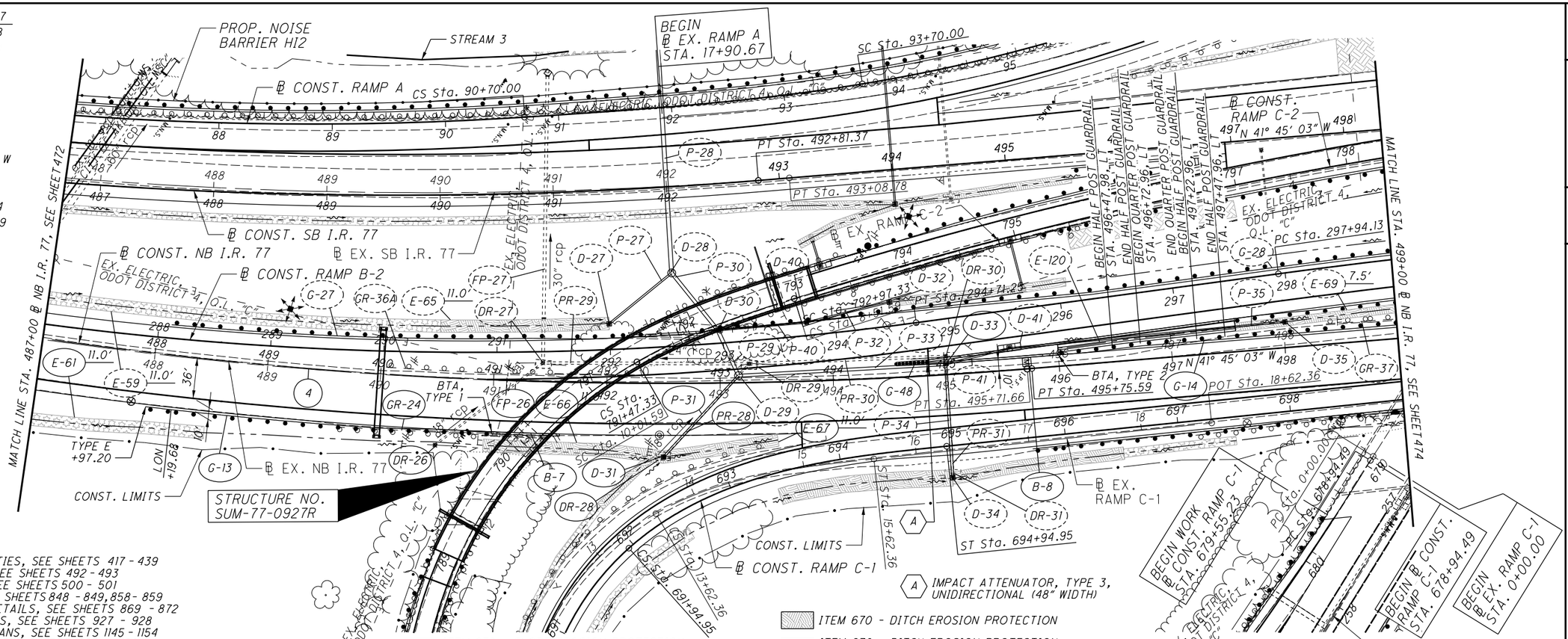
4

℄ CONST. NB I.R. 77
P.I. Sta. 485+59.78
Δ = 30° 33′ 43″ (LT)
Dc = 1° 28′ 03″
R = 3,904.07′
T = 1,066.64′
L = 2,082.45′
E = 143.09′
C = 2,057.85′
C.B. = N 26° 28′ 11″ W
D.S. = 70 MPH
e_{max} = 0.0452
P.C. STA. 474+93.14
P.T. STA. 495+75.59



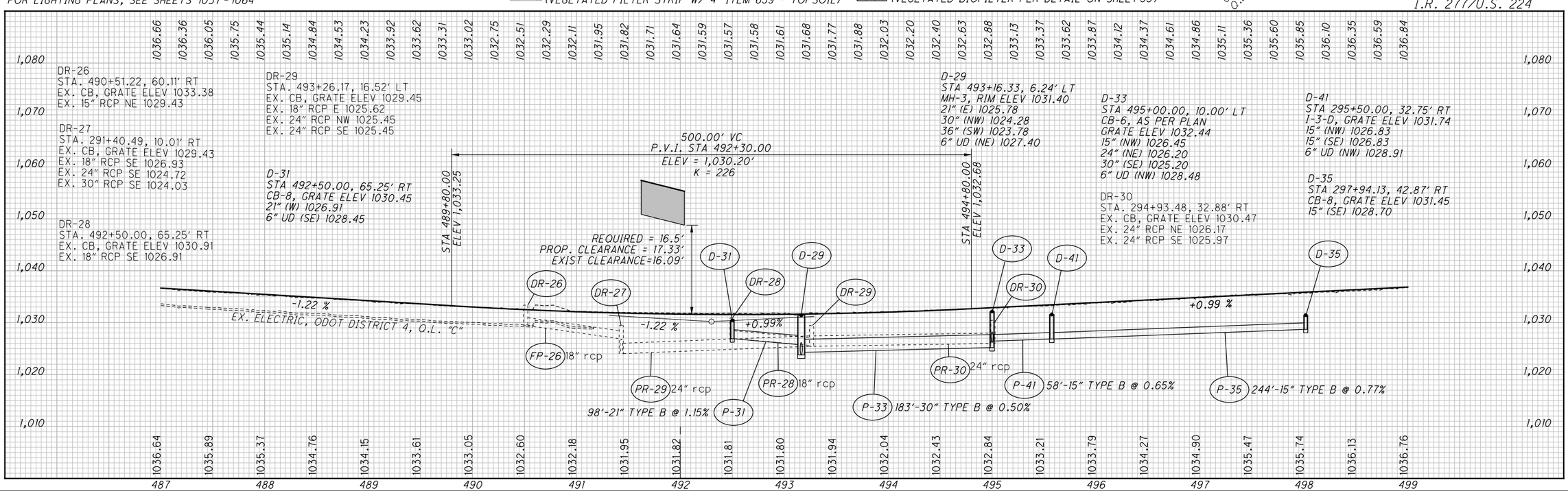
FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR RAMP B-2 PLANS, SEE SHEETS 492 - 493
FOR RAMP C-1 PLANS, SEE SHEETS 500 - 501
FOR GORE DETAILS, SEE SHEETS 848 - 849, 858 - 859
FOR PAVEMENT JOINT DETAILS, SEE SHEETS 869 - 872
FOR UNDERDRAIN DETAILS, SEE SHEETS 927 - 928
FOR RETAINING WALL PLANS, SEE SHEETS 1145 - 1154
FOR STRUCTURE PLANS, SEE SHEETS 1225 - 1261
FOR LIGHTING PLANS, SEE SHEETS 1037 - 1064

(A) IMPACT ATTENUATOR, TYPE 3, UNIDIRECTIONAL (48" WIDTH)

ITEM 670 - DITCH EROSION PROTECTION

ITEM 670 - SLOPE EROSION PROTECTION (VEGETATED FILTER STRIP W/ 4" ITEM 659 - TOPSOIL)

ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)



PLAN AND PROFILE - NB I.R. 77
STA. 487+00 TO STA. 499+00

SUM-77/277/224
VARIOUS

CALCULATED LRK
CHECKED PJF

HORIZONTAL SCALE IN FEET
0 25 50 100

473
1288

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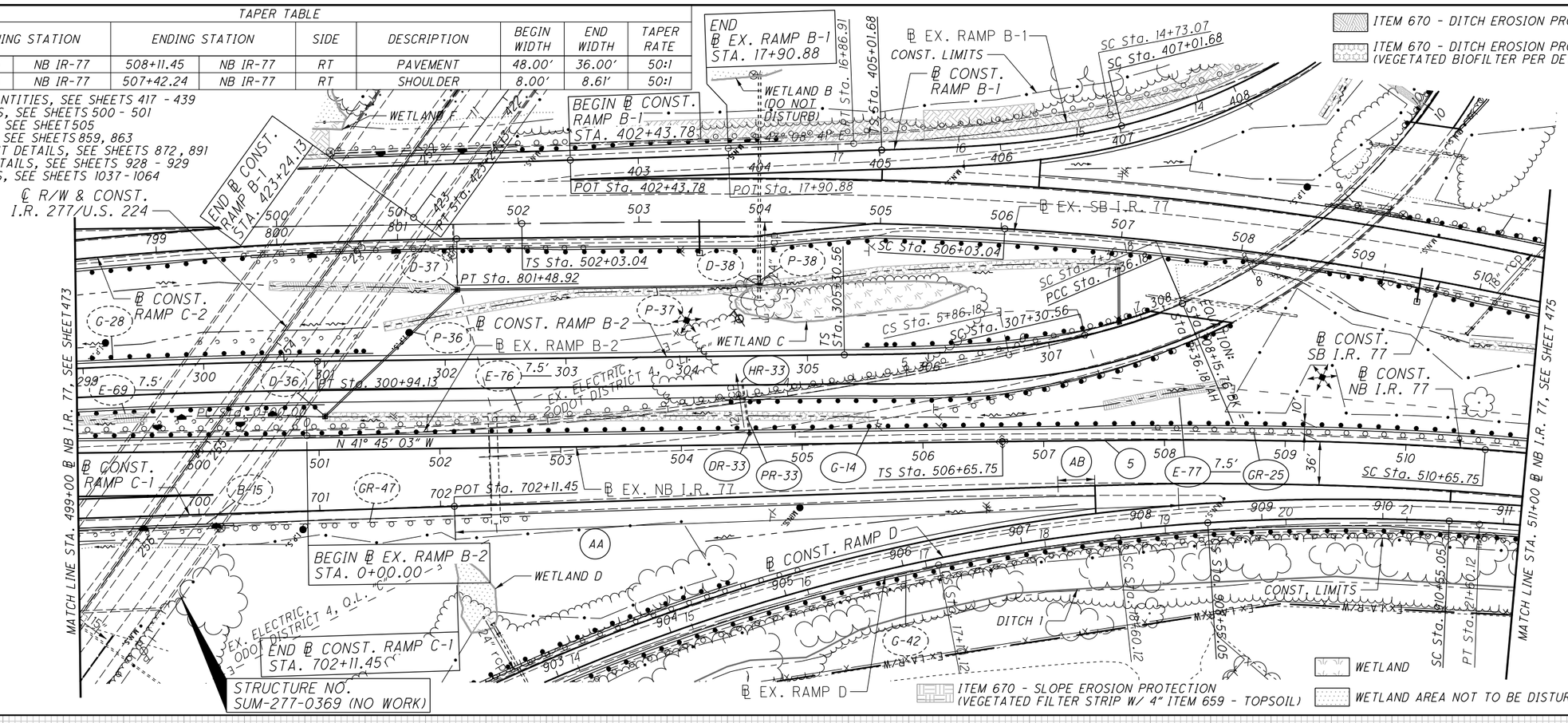
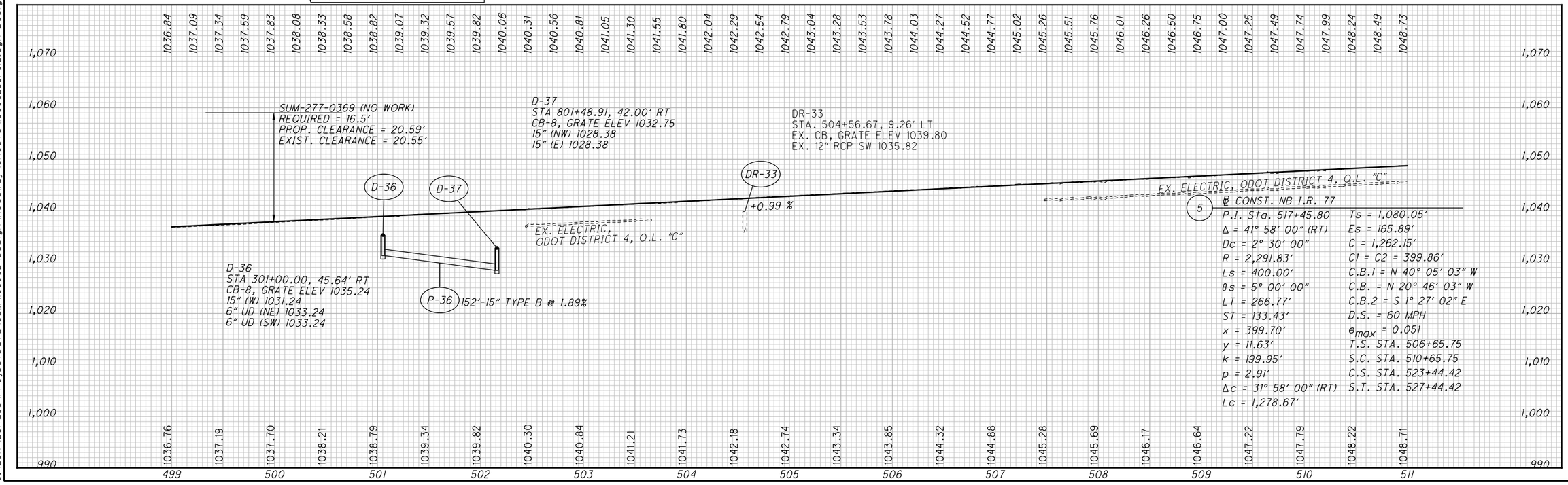
TAPER TABLE								
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
AA	502+11.45	NB IR-77	508+11.45	NB IR-77	RT	PAVEMENT	48.00′	36.00′	50:1
AB	507+11.53	NB IR-77	507+42.24	NB IR-77	RT	SHOULDER	8.00′	8.61′	50:1

FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR RAMP C-1 PLANS, SEE SHEETS 500 - 501
FOR RAMP D PLANS, SEE SHEET 505
FOR GORE DETAILS, SEE SHEETS 859, 863
FOR PAVEMENT JOINT DETAILS, SEE SHEETS 872, 891
FOR UNDERDRAIN DETAILS, SEE SHEETS 928 - 929
FOR LIGHTING PLANS, SEE SHEETS 1037 - 1064





PLAN AND PROFILE - NB I.R. 77
STA. 499+00 TO STA. 511+00

SUM-77/277/224
VARIOUS

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ITEM 670 - DITCH EROSION PROTECTION

ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)

PROPOSED WORK (PAVEMENT, APPROACH SLAB, EARTHWORK, GUARDRAIL, ETC.) BY OTHERS (SUM-76/77/8-8.42/9.77/0.00 DB, PID 102329)

TAPER TABLE								
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
AC	514+12.50	NB IR-77	515+25.00	NB IR-77	LT	SHOULDER	10.00′	5.50′	25:1
AD	914+75.00	RAMP D	915+06.25	RAMP D	RT	SHOULDER	8.00′	6.75′	25:1
AE	914+93.91	RAMP D	915+74.42	RAMP D	RT	PAVEMENT	16.00′	14.38′	50:1

FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR RAMP D PLANS, SEE SHEETS 505 - 506
FOR GORE DETAILS, SEE SHEETS 863, 864
FOR PAVEMENT JOINT DETAILS, SEE SHEETS 891 - 892
FOR UNDERDRAIN DETAILS, SEE SHEET 929

NOTE 'A'
PROPOSED GUARDRAIL SHALL CONNECT TO THE GUARDRAIL AND BTA BEING INSTALLED BY OTHERS IN THE PID 102329 PROJECT

END PROJECT
END WORK
℄ CONST. SB I.R. 77
STA. 514+95.00
S.L.M. 9.74

BEGIN PROJECT
SUM-76/77/8-8.42/9.77/0.00 DB
(PID 102329)

END WORK
RAMP B
STA. 214+90.00

E171 (457) E180 (428)

SC Sta. 5+66.20
CS Sta. 213+58.80

CONST. LIMITS

℄ EX. SB I.R. 77

℄ CONST. SB I.R. 77

ST STD. 215+58.80
TS STD. 3+66.20

STRUCTURE NO. SUM-77-0973L (NO WORK)

END ℄ CONST. RAMP B STA. 219+25.00
POT Sta. 219+25.00

BEGIN ℄ EX. RAMP B STA. 0+00.00
POT Sta. 0+00.00

℄ CONST. RAMP B

℄ EX. NB I.R. 77

EX. ELECTRIC, ODOT DISTRICT 4, O.L. "C"

℄ CONST. NB I.R. 77

BTA, TYPE 1

EX. 24" vcp sa. (BY RECORDS)

EX. 84" cmp

EX. TELECOM. MH

MATCH LINE STA. 511+00 ℄ NB I.R. 77, SEE SHEET 474

CONST. LIMITS

DITCH 1

STREAM 4

WATERLOO RD.

PI Sta. 916+89.75

END WORK
℄ CONST. NB I.R. 77
STA. 514+85.00

END WORK
RAMP D
STA. 914+89.43

END ℄ CONST.
RAMP D
STA. 916+89.75

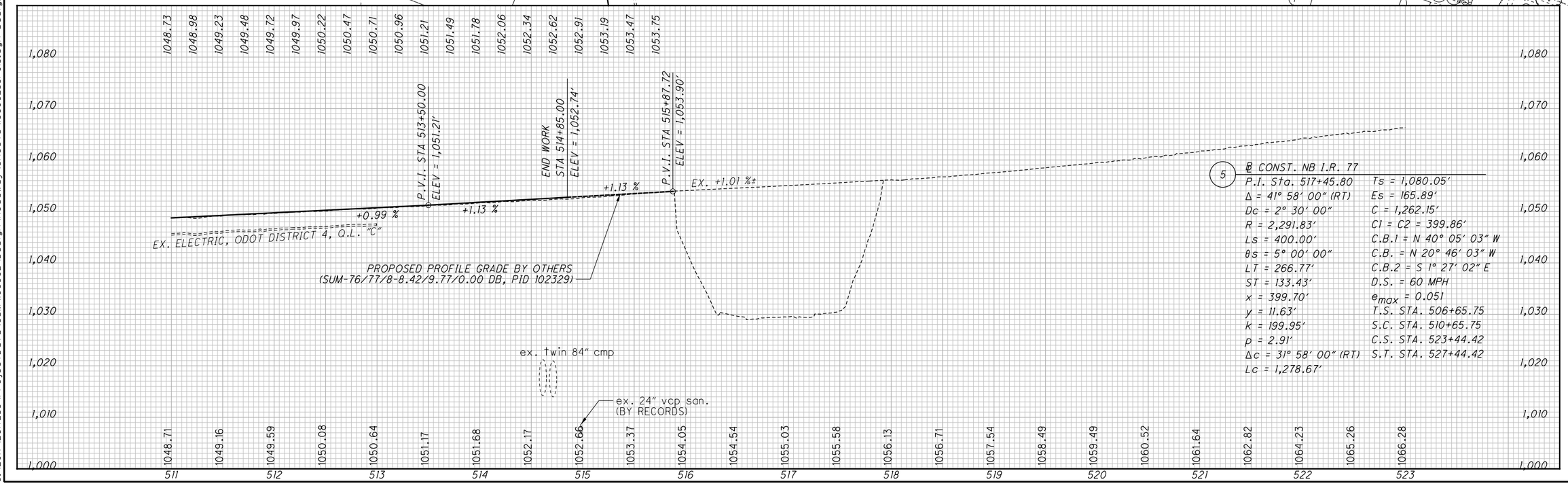
℄ CONST. RAMP D

STRUCTURE NO. SUM-77-0973R (NO WORK)

CS Sta. 523+01.37

CS Sta. 523+44.42

SEE NOTE 'A'



5 ℄ CONST. NB I.R. 77

P.I. Sta. 517+45.80	Ts = 1,080.05′
Δ = 41° 58′ 00″ (RT)	Es = 165.89′
Dc = 2° 30′ 00″	C = 1,262.15′
R = 2,291.83′	C1 = C2 = 399.86′
Ls = 400.00′	C.B.1 = N 40° 05′ 03″ W
θs = 5° 00′ 00″	C.B. = N 20° 46′ 03″ W
LT = 266.77′	C.B.2 = S 1° 27′ 02″ E
ST = 133.43′	D.S. = 60 MPH
x = 399.70′	e_{max} = 0.051
y = 11.63′	T.S. STA. 506+65.75
k = 199.95′	S.C. STA. 510+65.75
p = 2.91′	C.S. STA. 523+44.42
Δc = 31° 58′ 00″ (RT)	S.T. STA. 527+44.42
Lc = 1,278.67′	

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LRK
CHECKED PJF

PLAN AND PROFILE - NB I.R. 77
STA. 511+00 TO END

SUM-77/277/224
VARIOUS

475
1288

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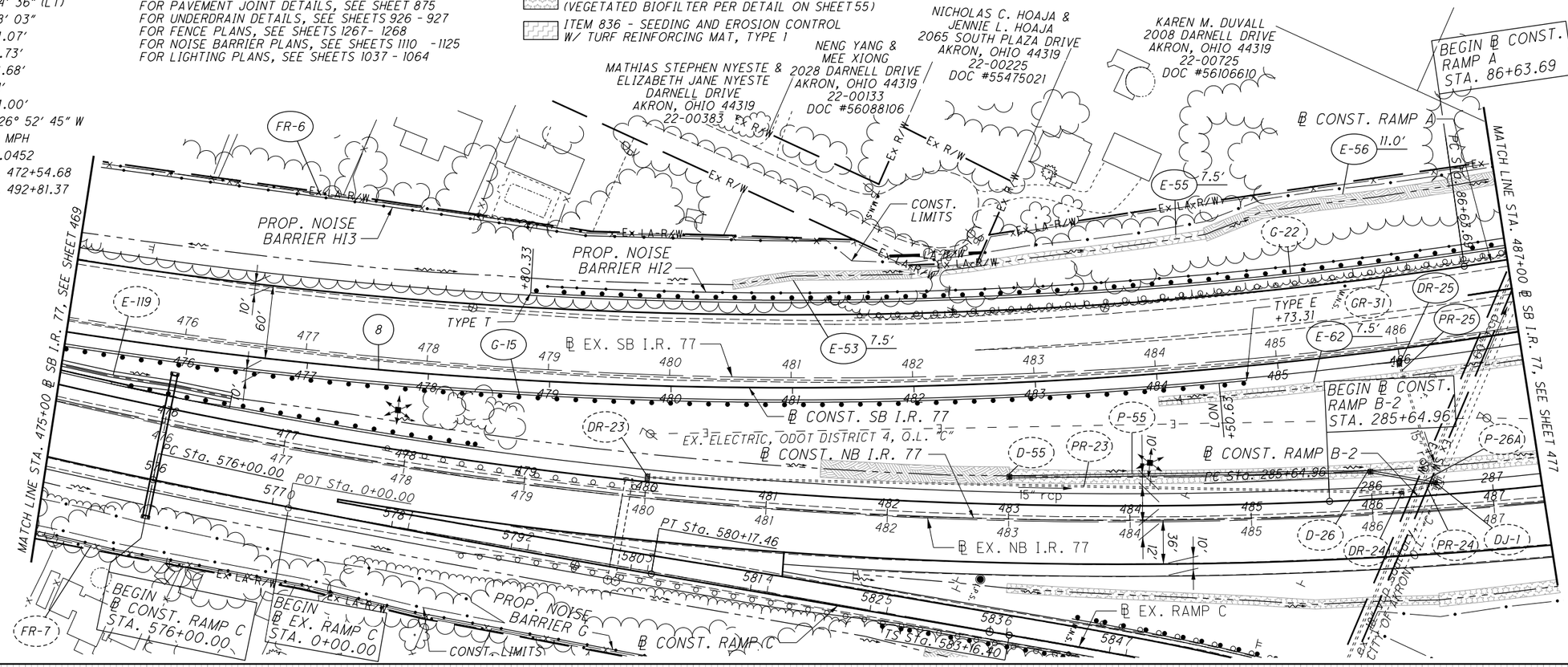
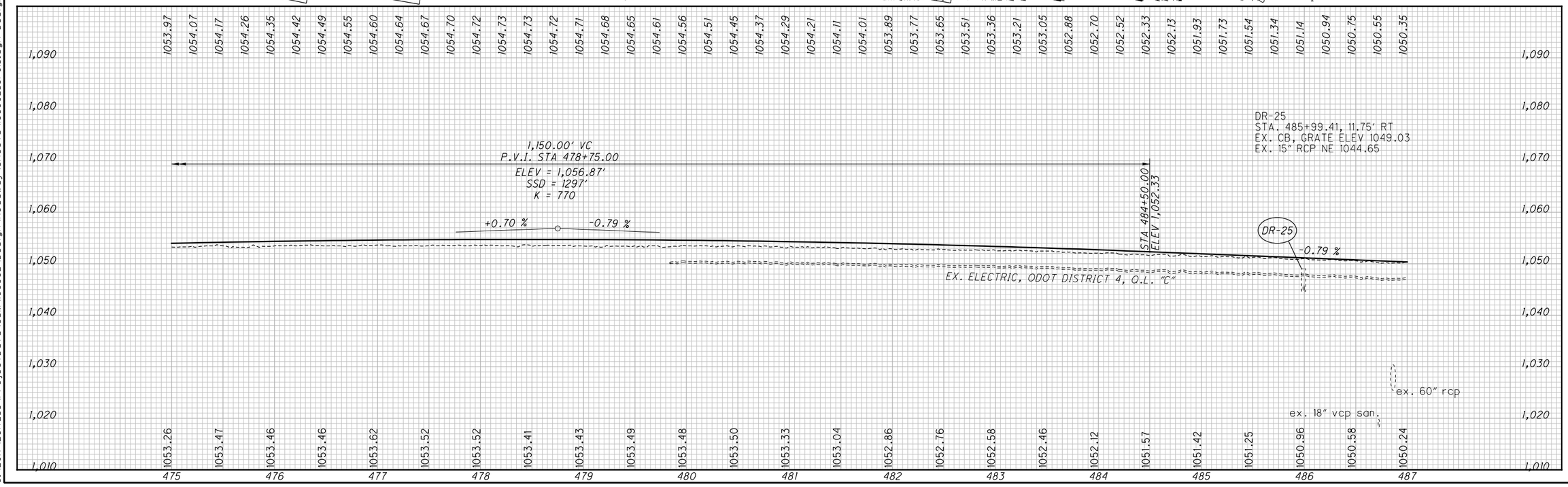
8 — ℄ CONST. SB I.R. 77
P.I. Sta. 482+91.41
Δ = 29° 44′ 36″ (LT)
Dc = 1° 28′ 03″
R = 3,904.07′
T = 1,036.73′
L = 2,026.68′
E = 135.31′
C = 2,004.00′
C.B. = N 26° 52′ 45″ W
D.S. = 70 MPH
e_{max} = 0.0452
P.C. STA. 472+54.68
P.T. STA. 492+81.37

FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR RAMP A PLANS, SEE SHEET 485
FOR GORE DETAILS, SEE SHEET 841
FOR PAVEMENT JOINT DETAILS, SEE SHEET 875
FOR UNDERDRAIN DETAILS, SEE SHEETS 926 - 927
FOR FENCE PLANS, SEE SHEETS 1267- 1268
FOR NOISE BARRIER PLANS, SEE SHEETS 1110 -1125
FOR LIGHTING PLANS, SEE SHEETS 1037 - 1064

ITEM 670 - DITCH EROSION PROTECTION
ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)
ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1





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HORIZONTAL SCALE IN FEET
CALCULATED LRK
CHECKED PJF

PLAN AND PROFILE - SB I.R. 77
STA. 475+00 TO STA. 487+00

SUM-77 / 277 / 224
VARIOUS

476
1288

ITEM 601 - ROCK CHANNEL PROTECTION

ITEM 670 - DITCH EROSION PROTECTION

ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)

ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE I

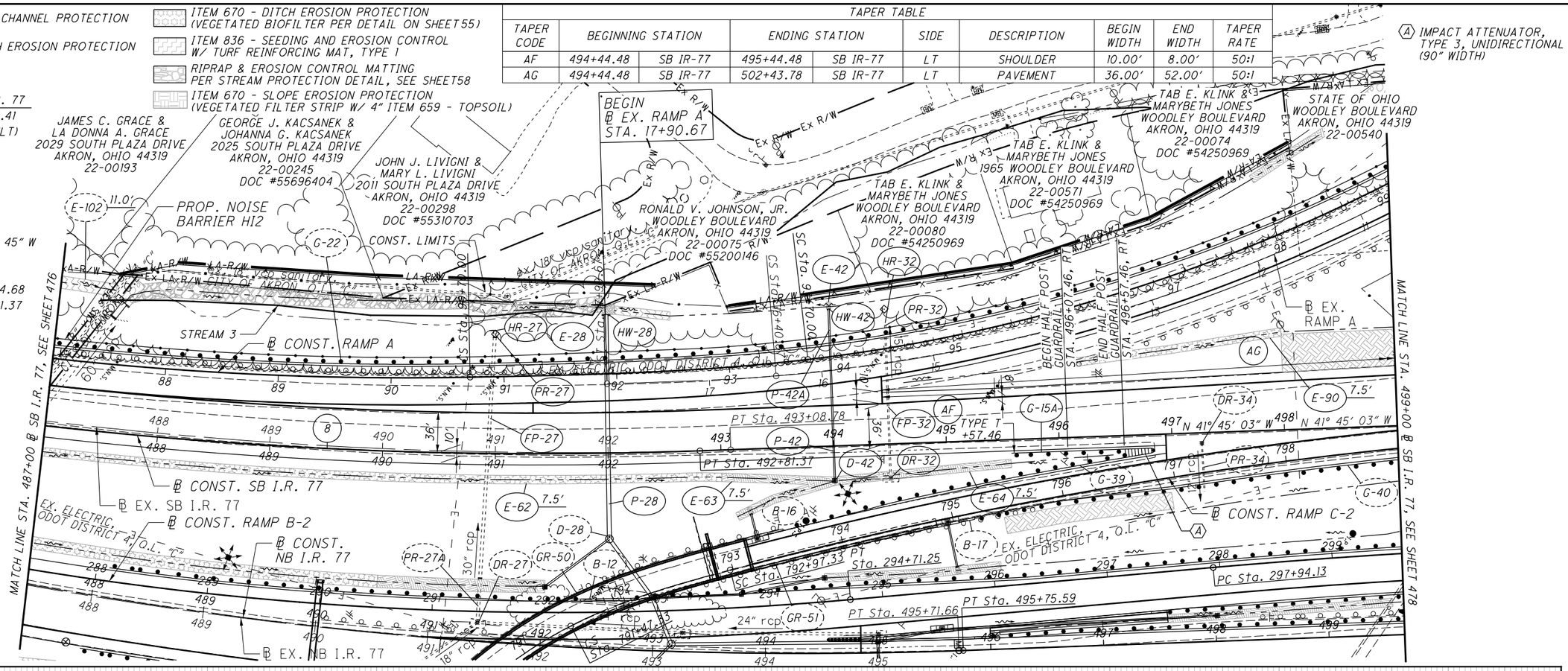
RIPRAP & EROSION CONTROL MATTING PER STREAM PROTECTION DETAIL, SEE SHEET 58

ITEM 670 - SLOPE EROSION PROTECTION (VEGETATED FILTER STRIP W/ 4" ITEM 659 - TOPSOIL)

TAPER TABLE									
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
AF	494+44.48	SB IR-77	495+44.48	SB IR-77	LT	SHOULDER	10.00'	8.00'	50:1
AG	494+44.48	SB IR-77	502+43.78	SB IR-77	LT	PAVEMENT	36.00'	52.00'	50:1

(8) ℄ CONST. SB I.R. 77
P.I. Sta. 482+91.41
Δ = 29° 44' 36" (LT)
Dc = 1° 28' 03"
R = 3,904.07'
T = 1,036.73'
L = 2,026.68'
E = 135.31'
C = 2,004.00'
C.B. = N 26° 52' 45" W
D.S. = 70 MPH
e_{max} = 0.0452
P.C. STA. 472+54.68
P.T. STA. 492+81.37

(A) IMPACT ATTENUATOR, TYPE 3, UNIDIRECTIONAL (90° WIDTH)



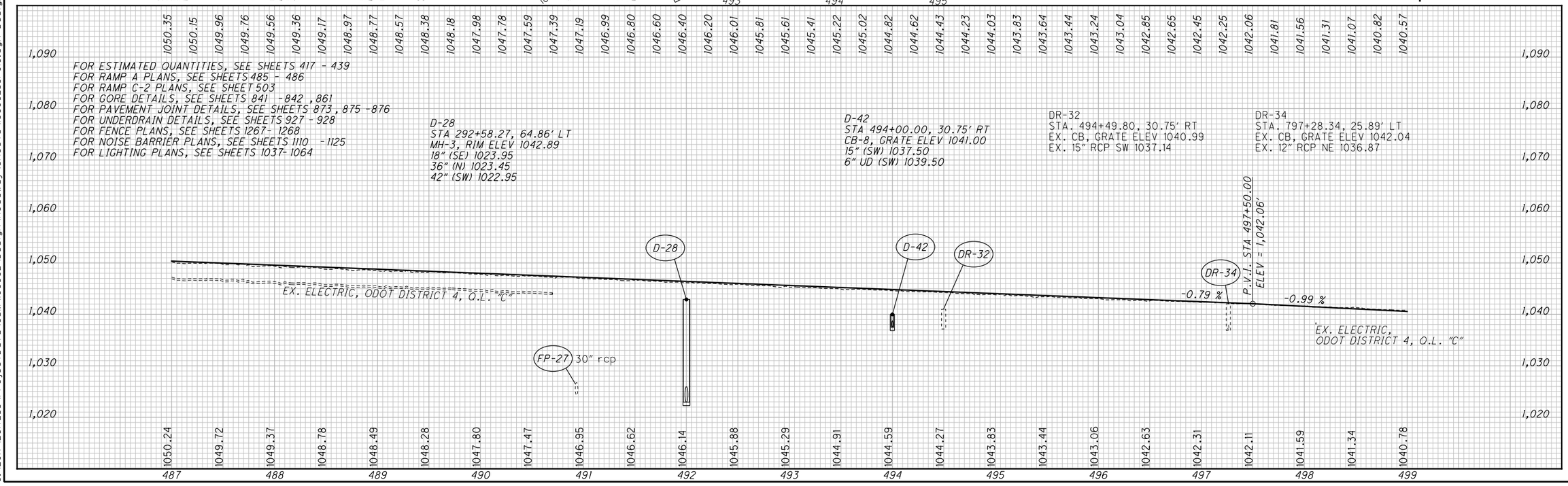
FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR RAMP A PLANS, SEE SHEETS 485 - 486
FOR RAMP C-2 PLANS, SEE SHEET 503
FOR GORE DETAILS, SEE SHEETS 841 -842 , 861
FOR PAVEMENT JOINT DETAILS, SEE SHEETS 873 , 875 -876
FOR UNDERDRAIN DETAILS, SEE SHEETS 927 - 928
FOR FENCE PLANS, SEE SHEETS 1267- 1268
FOR NOISE BARRIER PLANS, SEE SHEETS 1110 -1125
FOR LIGHTING PLANS, SEE SHEETS 1037- 1064

D-28
STA 292+58.27, 64.86' LT
MH-3, RIM ELEV 1042.89
18" (SE) 1023.95
36" (N) 1023.45
42" (SW) 1022.95

D-42
STA 494+00.00, 30.75' RT
CB-8, GRATE ELEV 1041.00
15" (SW) 1037.50
6" UD (SW) 1039.50

DR-32
STA. 494+49.80, 30.75' RT
EX. CB, GRATE ELEV 1040.99
EX. 15" RCP SW 1037.14

DR-34
STA. 797+28.34, 25.89' LT
EX. CB, GRATE ELEV 1042.04
EX. 12" RCP NE 1036.87



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HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LRK
CHECKED PJF

PLAN AND PROFILE - SB I.R. 77
STA. 487+00 TO STA. 499+00

SUM-77 / 277 / 224
VARIOUS

477
1288

ITEM 601 - ROCK CHANNEL PROTECTION
ITEM 670 - DITCH EROSION PROTECTION
ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)
ITEM 670 - SLOPE EROSION PROTECTION (VEGETATED FILTER STRIP W/ 4" ITEM 659 - TOPSOIL)
WETLAND
WETLAND AREA NOT TO BE DISTURBED

TAPER TABLE

TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
AG	494+44.48	SB IR-77	502+43.78	SB IR-77	LT	PAVEMENT	36.00'	52.00'	50:1
AH	503+95.44	SB IR-77	504+95.44	SB IR-77	RT	PAVEMENT	48.00'	36.00'	8:1
AI	503+95.44	SB IR-77	504+95.44	SB IR-77	RT	SHOULDER	8.00'	10.00'	50:1
AJ	507+75.50	SB IR-77	507+94.00	SB IR-77	RT	SHOULDER	10.00'	7.00'	6:1
AK	509+25.00	SB IR-77	510+00.00	SB IR-77	RT	SHOULDER	7.00'	10.00'	25:1

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LRK
CHECKED PJF

STRUCTURE NO. SUM-277-0369 (NO WORK)
STRUCTURE NO. SUM-77-0958L (NO WORK)
END WORK ℄ CONST. RAMP B-1 STA. 421+40.51
END ℄ CONST. RAMP B-1 STA. 423+24.13
BEGIN ℄ EX. RAMP B-1 STA. 0+00.00
END ℄ EX. RAMP B-1 STA. 17+90.88
℄ CONST. RAMP B-1
BEGIN ℄ CONST. RAMP B-1 STA. 402+43.78
℄ R/W & CONST. I.R. 277/U.S. 224
WETLAND F
WETLAND B (DO NOT DISTURB)
CONST. LIMITS
℄ CONST. RAMP B-2
℄ EX. RAMP B-1
℄ EX. SB I.R. 77
℄ CONST. SB I.R. 77
℄ CONST. RAMP C-2
BEGIN ℄ EX. RAMP C-2 STA. 0+00.00
END ℄ CONST. RAMP C-2 STA. 801+48.92
WETLAND C
BEGIN ℄ EX. RAMP B-2 STA. 0+00.00
℄ CONST. NB I.R. 77
℄ EX. NB I.R. 77
EX. ELECTRIC, ODOT DISTRICT 4, O.L. "C"
PROP. 18" CULVERT EXTENSION
BTA, TYPE 1
BTA, TYPE 2
MATCH LINE STA. 499+00 ℄ SB I.R. 77, SEE SHEET 477
MATCH LINE STA. 511+00 ℄ SB I.R. 77, SEE SHEET 479

FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR RAMP B-1 PLANS, SEE SHEETS 490 - 491
FOR RAMP C-2 PLANS, SEE SHEET 503
FOR GORE DETAILS, SEE SHEETS 846 ,861
FOR PAVEMENT JOINT DETAILS, SEE SHEETS 873 - 874
FOR CULVERT DETAILS, SEE SHEET 918
FOR UNDERDRAIN DETAILS, SEE SHEETS 928 - 929
FOR LIGHTING PLANS, SEE SHEETS 1037- 1064

D-37
STA 801+48.91, 42.00' RT
CB-8, GRATE ELEV 1032.75
15" (NW) 1028.38
15" (E) 1028.38

D-38
STA 504+00.00, 52.72' RT
CB-8, GRATE ELEV 1028.07
15" (SE) 1025.66
24" (SW) 1024.91

9 ℄ CONST. SB I.R. 77
P.I. Sta. 515+02.63
Δ = 41° 58' 00" (RT)
Dc = 2° 00' 00"
R = 2,864.79'
Ls = 400.00'
θs = 4° 00' 00"
LT = 266.73'
ST = 133.40'
x = 399.81'
y = 9.31'
k = 199.97'
p = 2.33'
Δc = 33° 58' 00" (RT)
Lc = 1,698.33'
Ts = 1,299.59'
Es = 205.96'
C = 1,673.57'
C1 = C2 = 399.91'
C.B.1 = N 40° 25' 03" W
C.B. = N 20° 46' 03" W
C.B.2 = N 1° 07' 03" W
D.S. = 60 MPH
emax = 0.045
T.S. STA. 502+03.04
S.C. STA. 506+03.04
C.S. STA. 523+01.37
S.T. STA. 527+01.37

SUM-277-0369 (NO WORK)
REQUIRED = 16.5'
PROP. CLEARANCE = 16.66'
EXIST. CLEARANCE = 16.19'

SUM-77-0958L (NO WORK)
REQUIRED = 16.5'
PROP. CLEARANCE = 16.71'
EXIST. CLEARANCE = 15.98'

-0.99 %
-0.65 %
+2.83 %
STA 499+75.00 ELEV 1,039.83
250.00' VC
P.V.I. STA 501+00.00
ELEV = 1,038.59'
K = 735
STA 504+25.00 ELEV 1,037.78
STA 508+10.00 ELEV 1,033.98
490.00' VC
P.V.I. STA 510+55.00
ELEV = 1,032.39'
K = 141
ex. 24" rcp
ex. 18" rcp
P-37 250'-15" TYPE C @ 1.09%
EX. ELECTRIC, ODOT DISTRICT 4, O.L. "C"

PLAN AND PROFILE - SB I.R. 77
STA. 499+00 TO STA. 511+00
SUM-77/277/224
VARIOUS

478
1288

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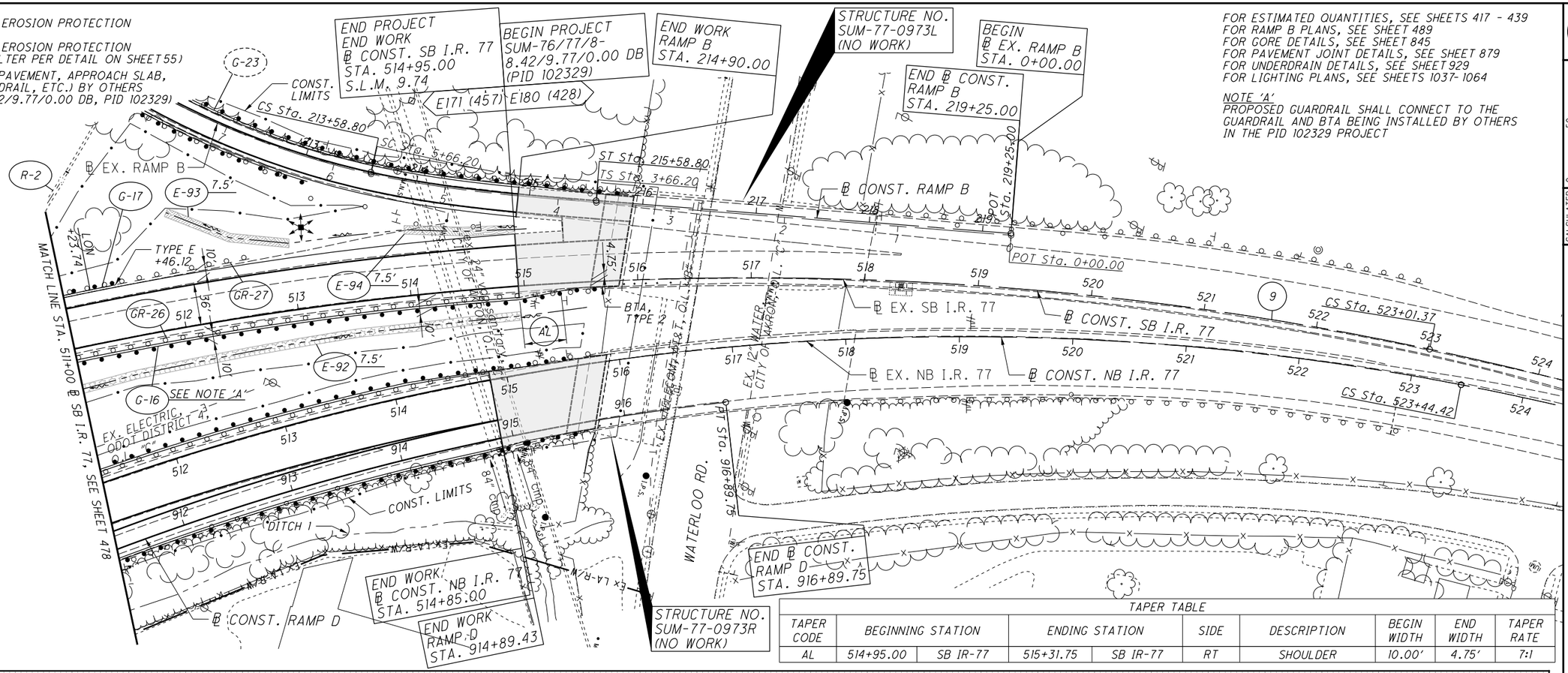
ITEM 670 - DITCH EROSION PROTECTION

ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)

PROPOSED WORK (PAVEMENT, APPROACH SLAB, EARTHWORK, GUARDRAIL, ETC.) BY OTHERS (SUM-76/77/8-8.42/9.77/0.00 DB, PID 102329)

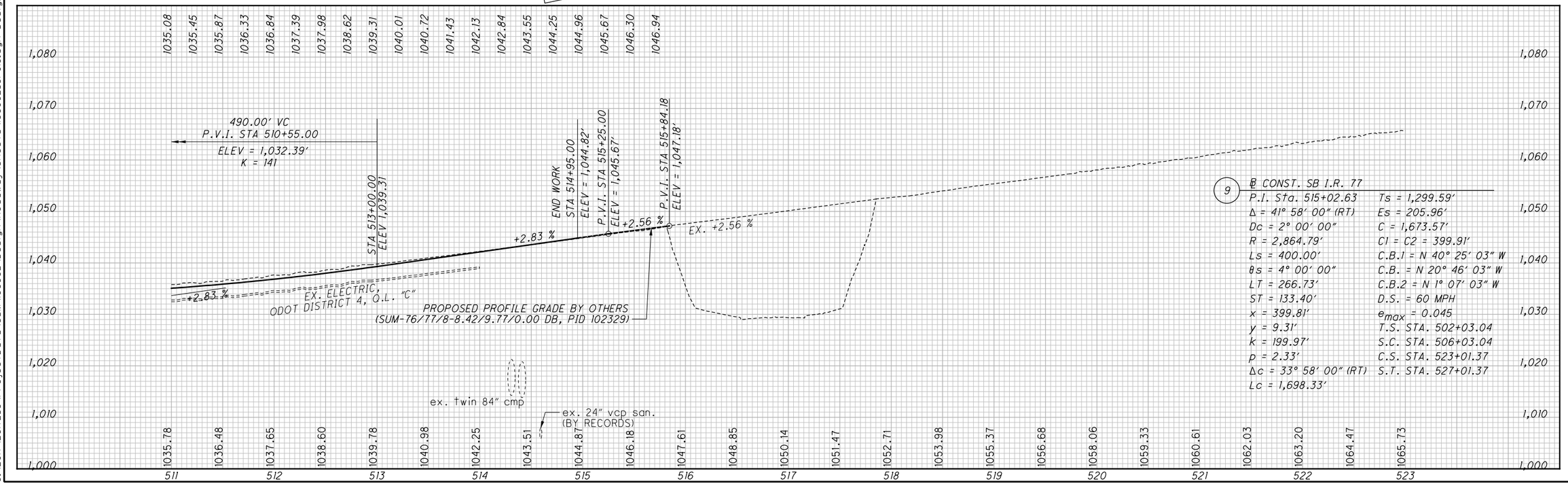
FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR RAMP B PLANS, SEE SHEET 489
FOR GORE DETAILS, SEE SHEET 845
FOR PAVEMENT JOINT DETAILS, SEE SHEET 879
FOR UNDERDRAIN DETAILS, SEE SHEET 929
FOR LIGHTING PLANS, SEE SHEETS 1037-1064

NOTE 'A'
PROPOSED GUARDRAIL SHALL CONNECT TO THE GUARDRAIL AND BTA BEING INSTALLED BY OTHERS IN THE PID 102329 PROJECT



TAPER TABLE

TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
AL	514+95.00	SB IR-77	515+31.75	SB IR-77	RT	SHOULDER	10.00'	4.75'	7:1



9 ℄ CONST. SB I.R. 77

P.I. Sta. 515+02.63	Ts = 1,299.59'
Δ = 41° 58' 00" (RT)	Es = 205.96'
Dc = 2° 00' 00"	C = 1,673.57'
R = 2,864.79'	C1 = C2 = 399.91'
Ls = 400.00'	C.B.1 = N 40° 25' 03" W
θs = 4° 00' 00"	C.B. = N 20° 46' 03" W
LT = 266.73'	C.B.2 = N 1° 07' 03" W
ST = 133.40'	D.S. = 60 MPH
x = 399.81'	e_{max} = 0.045
y = 9.31'	T.S. STA. 502+03.04
k = 199.97'	S.C. STA. 506+03.04
p = 2.33'	C.S. STA. 523+01.37
Δc = 33° 58' 00" (RT)	S.T. STA. 527+01.37
Lc = 1,698.33'	

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LRK
CHECKED PJF

PLAN AND PROFILE - SB I.R. 77 STA. 511+00 TO END

SUM-77/277/224
VARIOUS

479
1288

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ITEM 601 - ROCK CHANNEL PROTECTION

ITEM 670 - DITCH EROSION PROTECTION

ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)

ITEM 836 - SEEDING AND EROSION CONTROL W/ TRUF REINFORCING MAT, TYPE I

END WORK RAMP B-2 STA. 33+82.00

END ℄ EX. RAMP B STA. 27+97.76

BEGIN ℄ CONST. RAMP B STA. 197+05.36

℄ CONST. RAMP B

STREAM 4

CONST. LIMITS

EX. 1 1/4" GAS, EVERFLOW EASTERN PARTNERS, LP, O.L. "D" (ABANDONED)

EX. 1 1/4" GAS, EVERFLOW EASTERN PARTNERS, LP, O.L. "D" (ABANDONED)

℄ CONST. RAMP B-2

℄ EX. RAMP B

POT Sta. 27+97.76

S 83° 32' 30" W

28 S 83° 15' 20" W 27

ST Sta. 197+05.36

ST Sta. 24+64.81

N 84° 41' 15" E

SAWCUT

SAWCUT

POT Sta. 33+82.00

CONNECT TO EXISTING GUARDRAIL, PER MGS-4.3 STA. 223+25.02

EX. 36" SANITARY SEWER, CITY OF AKRON, O.L.

BEGIN LONG POST GUARDRAIL STA. 223+25.02, RT.

BEGIN WORK (WB) I.R. 277/U.S. 224 STA. 225+00.00

CONST. LIMITS

PROP. NOISE BARRIER H11

℄ R/W & CONST. I.R. 277/U.S. 224

TYPE T +12.50

END LONG POST GUARDRAIL STA. 231+12.50, RT.

MATCH LINE STA. 234+50 ℄ I.R. 277/U.S. 224, SEE SHEET 481

I.P.S.

E-51 HR-36 HW-51 P-51A GR-41 PR-36 P-51 G-32 E-50 PR-38 HW-50 HR-38 P-50 PR-37 DR-38 E-88 11.0' E-134 11.0' P-105 HW-105 E-133 11.0' E-126 HW-115

Ex LA-R/W

10.92'

24'

15'

8'

12'

15"

———————— PROPOSED PAVEMENT STRIPING/EDGE LINE

FOR STORM SEWER PROFILE, SEE SHEET 921
FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR RAMP B-2 PLANS, SEE SHEETS 495 - 496
FOR GORE DETAILS, SEE SHEETS 851 - 853
FOR PAVEMENT JOINT DETAILS, SEE SHEETS 882 - 884
FOR UNDERDRAIN DETAILS, SEE SHEET 930
FOR FENCE PLANS, SEE SHEET 1269
FOR NOISE BARRIER PLANS, SEE SHEETS 1110 - 1125
FOR LIGHTING PLANS, SEE SHEETS 1037- 1064

HORIZONTAL SCALE IN FEET
0 25 50 100

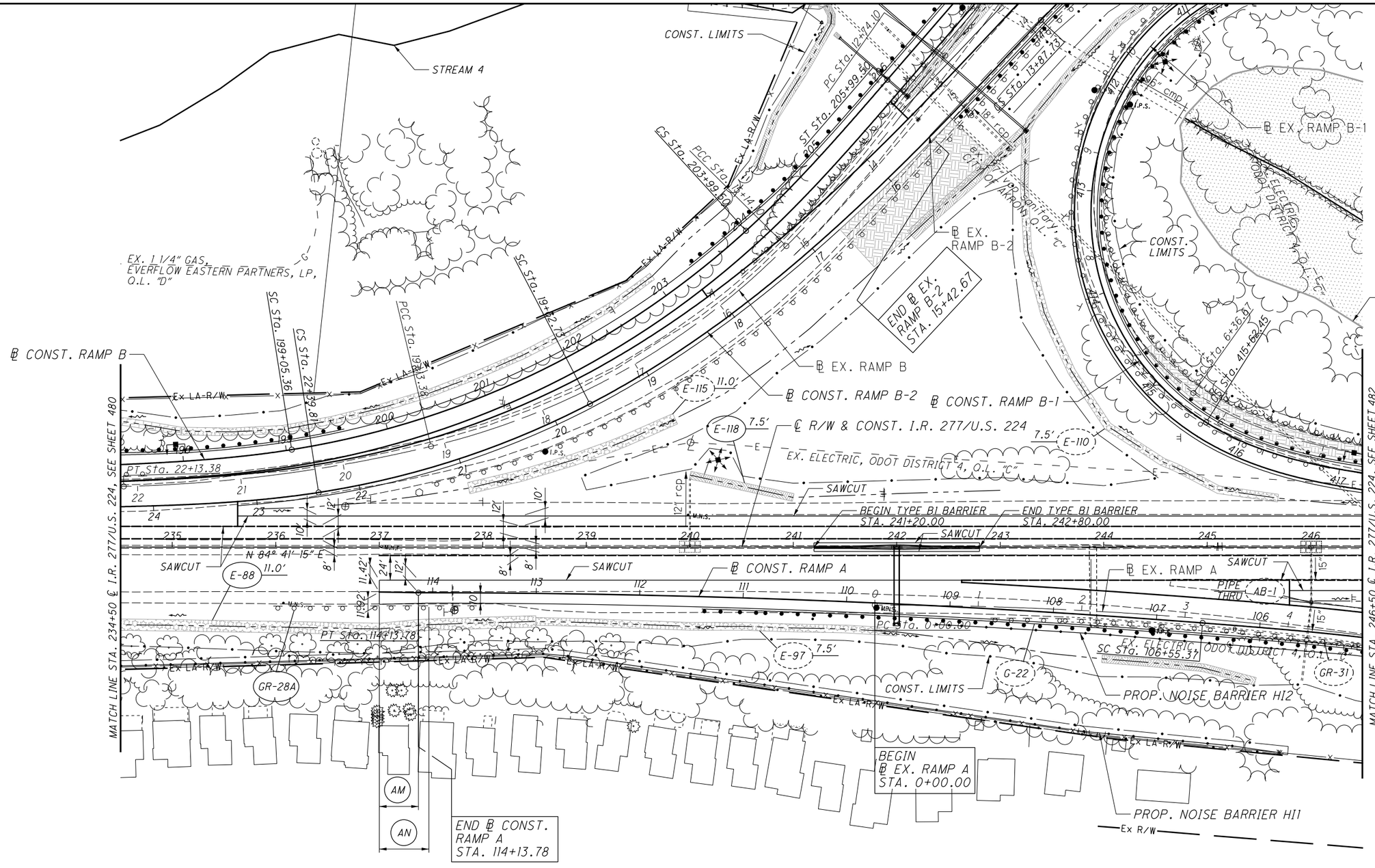
CALCULATED LRK
CHECKED PJF

PLAN - I.R. 277/U.S. 224 BEGIN TO STA. 234+50

SUM-77/277/224
VARIOUS

480
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_GP020.dgn Sheet 1/15/2021 10:45:21 AM pfry



WETLAND

WETLAND AREA NOT TO BE DISTURBED

ITEM 670 - SLOPE EROSION PROTECTION (VEGETATED FILTER STRIP W/ 4" ITEM 659 - TOPSOIL)

ITEM 601 - ROCK CHANNEL PROTECTION

ITEM 670 - DITCH EROSION PROTECTION

ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)

ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1

FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR RAMP A PLANS, SEE SHEET 487
FOR RAMP B-2 PLANS, SEE SHEET 495
FOR GORE DETAILS, SEE SHEETS 843 - 844 , 851
FOR PAVEMENT JOINT DETAILS, SEE SHEETS 877 - 878, 882
FOR UNDERDRAIN DETAILS, SEE SHEET 930
FOR FENCE PLANS, SEE SHEET 1270
FOR NOISE BARRIER PLANS, SEE SHEETS 1110 - 1125
FOR LIGHTING PLANS, SEE SHEETS 1037 - 1064

PROPOSED PAVEMENT STRIPING/EDGE LINE

TAPER TABLE

TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
AM	237+00.00	IR-277/US-224	237+37.85	IR-277/US-224	RT	PAVEMENT	11.42'	12.00'	65:1
AN	237+00.00	IR-277/US-224	237+47.95	IR-277/US-224	RT	SHOULDER	11.92'	10.00'	25:1

N

0 25 50 100 HORIZONTAL SCALE IN FEET

CALCULATED LRK CHECKED PJF

PLAN - I.R. 277/U.S. 224
STA. 234+50 TO STA. 246+50

SUM-77/277/224
VARIOUS

481
1288

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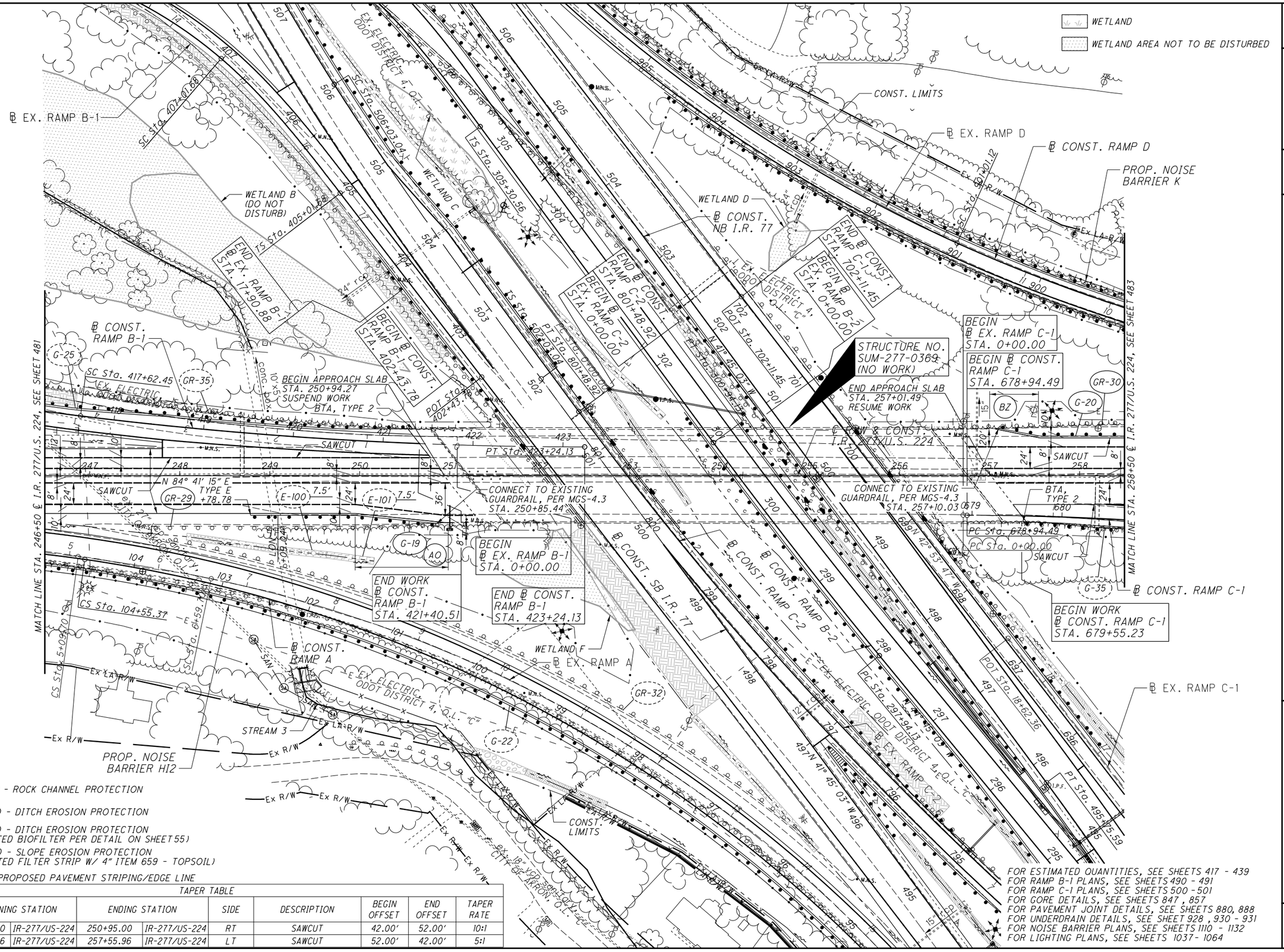

TAPER TABLE

TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN OFFSET	END OFFSET	TAPER RATE
AO	249+95.00	IR-277/US-224	250+95.00	IR-277/US-224	RT	SAWCUT	42.00'	52.00'	10:1
BZ	257+05.96	IR-277/US-224	257+55.96	IR-277/US-224	LT	SAWCUT	52.00'	42.00'	5:1

FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR RAMP B-1 PLANS, SEE SHEETS 490 - 491
FOR RAMP C-1 PLANS, SEE SHEETS 500 - 501
FOR GORE DETAILS, SEE SHEETS 847 , 857
FOR PAVEMENT JOINT DETAILS, SEE SHEETS 880, 888
FOR UNDERDRAIN DETAILS, SEE SHEET 928 , 930 - 931
FOR NOISE BARRIER PLANS, SEE SHEETS 1110 - 1132
FOR LIGHTING PLANS, SEE SHEETS 1037- 1064

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LRK
CHECKED PJF

PLAN - I.R. 277/U.S. 224
STA. 246+50 TO STA. 258+50

SUM-77/277/224
VARIOUS

482
1288

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ITEM 670 - DITCH EROSION PROTECTION

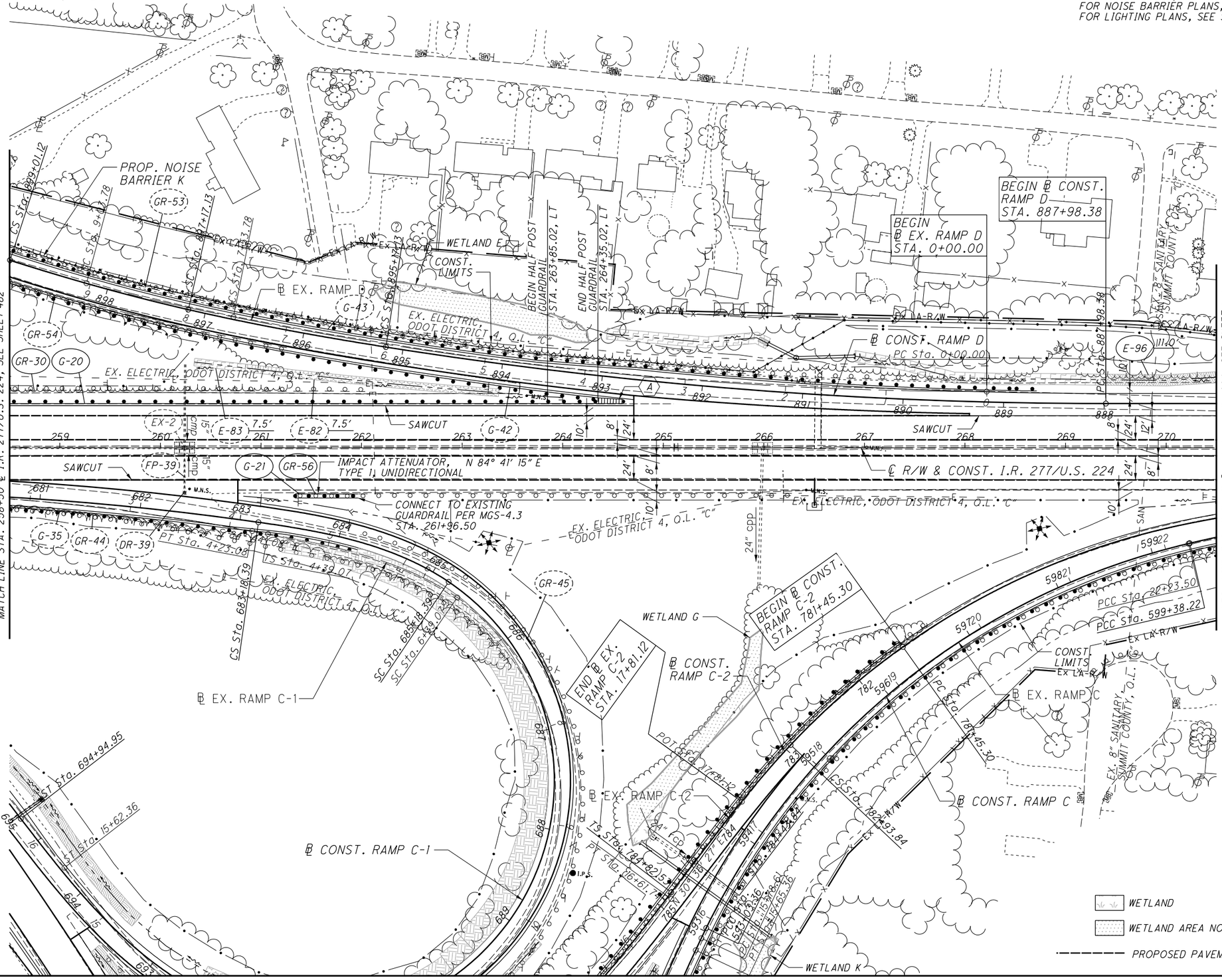
ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)

ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1

ITEM 670 - SLOPE EROSION PROTECTION (VEGETATED FILTER STRIP W/ 4" ITEM 659 - TOPSOIL)

(A) IMPACT ATTENUATOR, TYPE 3, UNIDIRECTIONAL (69" WIDTH)

FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR RAMP C-1 PLANS, SEE SHEETS 500 - 501
FOR RAMP D PLANS, SEE SHEET 504
FOR GORE DETAILS, SEE SHEETS 857 , 862
FOR PAVEMENT JOINT DETAILS, SEE SHEETS 888 , 890
FOR UNDERDRAIN DETAILS, SEE SHEET 931
FOR FENCE PLANS, SEE SHEET 1271
FOR NOISE BARRIER PLANS, SEE SHEETS 1126 -1132
FOR LIGHTING PLANS, SEE SHEETS 1037- 1064



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HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LRK
CHECKED PJF

PLAN - I.R. 277/U.S. 224
STA. 258+50 TO STA. 270+50

SUM-77/277/224
VARIOUS

96 ℄ R/W & CONST. I.R. 277/U.S. 224
P.I. Sta. 280+91.67
Δ = 6° 22′ 18″ (RT)
Dc = 1° 00′ 00″
R = 5,729.58′
T = 318.91′
L = 637.17′
E = 8.87′
C = 636.84′
C.B. = N 87° 52′ 24″ E
P.C. STA. 277+72.76
P.T. STA. 284+09.93

END WORK (EB)
℄ R/W & CONST.
I.R. 277/U.S. 224
STA. 279+50.00

CONNECT TO EXISTING GUARDRAIL, PER MGS-4.3
STA. 279+81.23

BEGIN LONG POST GUARDRAIL
STA. 279+44.11, LT.

END LONG POST GUARDRAIL
STA. 279+81.23, LT.

PROP. NOISE BARRIER K

WETLAND J

CONST. LIMITS

TYPE T
+44.11

STRUCTURE NO.
SUM-224-1061
(NO WORK)

S. ARLINGTON ST.

MATCH LINE STA. 270+50 ℄ I.R. 277/U.S. 224, SEE SHEET 483

℄ R/W & CONST. I.R. 277/U.S. 224

N 84° 41′ 15″ E

℄ EX. RAMP C

℄ CONST. RAMP C

END
℄ EX. RAMP C
STA. 25+17.54

END ℄ CONST.
RAMP C
STA. 606+67.88

PT STA. 601+37.81

PT STA. 25+17.54

PT STA. 603+37.81

PT STA. 606+67.88

PT STA. 277+42.76

PT STA. 284+09.93

EX. 3" GAS, DOMINION ENERGY OHIO

EX. TELECOM, MCI/VERIZON, O.L.

EX. 16" WATER, CITY OF AKRON, O.L.

EX. 6" WATER, CITY OF AKRON, O.L. "D"

TAPER TABLE								
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
AP	272+95.00	IR-277/US-224	273+25.00	IR-277/US-224	LT	PAVEMENT	12.00′	11.89′	267:1
AQ	272+95.00	IR-277/US-224	273+25.00	IR-277/US-224	LT	SHOULDER	10.00′	11.19′	25:1
AR	277+50.00	IR-277/US-224	279+50.00	IR-277/US-224	RT	PAVEMENT	16.00′	12.00′	50:1
AS	277+80.00	IR-277/US-224	279+50.00	IR-277/US-224	RT	SHOULDER	8.00′	11.40′	50:1

FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR RAMP C PLANS, SEE SHEET 499
FOR GORE DETAILS, SEE SHEETS 855 -856
FOR PAVEMENT JOINT DETAILS, SEE SHEETS 886 - 887
FOR UNDERDRAIN DETAILS, SEE SHEET 931
FOR FENCE PLANS, SEE SHEET 1272
FOR NOISE BARRIER PLANS, SEE SHEETS 1126 -1132
FOR LIGHTING PLANS, SEE SHEETS 1037- 1064

WETLAND
WETLAND AREA NOT TO BE DISTURBED
ITEM 670 - DITCH EROSION PROTECTION
PROPOSED PAVEMENT STRIPING/EDGE LINE

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LRK
CHECKED PJF

PLAN - I.R. 277/U.S. 224
STA. 270+50 TO END

SUM-77/277/224
VARIOUS

484
1288

G:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_GP024.dgn Sheet 1/15/2021 10:15:34 AM pfry

13 ℄ CONST. RAMP A
P.I. STA. 92+70.10
Ls = 300.00'
f s = 5° 37' 30"
LT = 200.10'
ST = 100.09'
x = 299.71'
y = 9.81'
k = 149.95'
p = 2.45'
C.S. STA. 90+70.00
S.C. STA. 93+70.00

12 ℄ CONST. RAMP A
P.I. Sta. 88+67.18
Δ = 8° 07' 34" (LT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 203.49'
L = 406.31'
E = 7.22'
C = 405.96'
C.B. = N 36° 44' 56" W
D.S. = 60 MPH
e max = 0.045
P.C. STA. 86+63.69
C.S. STA. 90+70.00

NENG YANG & MEE XIONG
2028 DARNELL DRIVE
AKRON, OHIO 44319
22-00133
DOC #56088106

NICHOLAS C. HOAJA & JENNIE L. HOAJA
2065 SOUTH PLAZA DRIVE
AKRON, OHIO 44319
22-00225
DOC #55475021

KAREN M. DUVALL
2008 DARNELL DRIVE
AKRON, OHIO 44319
22-00725
DOC #56106610

JAMES C. GRACE & LA DONNA A. GRACE
2029 SOUTH PLAZA DRIVE
AKRON, OHIO 44319
22-00193

GEORGE J. KACSANEK & JOHANNA G. KACSANEK
2025 SOUTH PLAZA DRIVE
AKRON, OHIO 44319
22-00245
DOC #55696404

JOHN J. LIVIGNI & MARY L. LIVIGNI
2011 SOUTH PLAZA DRIVE
AKRON, OHIO 44319
22-00298
DOC #55310703

BEGIN ℄ CONST. RAMP A STA. 86+63.69

CONST. LIMITS

PROP. 60" CULVERT EXTENSION

PROP. NOISE BARRIER HI2

℄ EX. SB I.R. 77

℄ EX. NB I.R. 77

℄ CONST. RAMP A

STREAM 3

℄ CONST. NB I.R. 77

℄ CONST. SB I.R. 77

EX. ELECTRIC, ODOT DISTRICT 4, O.L. "C"

ex. 18" vcp sanitary, CITY OF AKRON, O.L. "C"

MATCH LINE STA. 92+50 ℄ RAMP A, SEE SHEET 486

ITEM 601 - ROCK CHANNEL PROTECTION

ITEM 670 - DITCH EROSION PROTECTION

ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)

ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1

RIPRAP & EROSION CONTROL MATTING PER STREAM PROTECTION DETAIL, SEE SHEET 58

FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR SB I.R. 77 PLANS, SEE SHEETS 476 - 477
FOR GORE DETAILS, SEE SHEETS 841 - 842
FOR PAVEMENT JOINT DETAILS, SEE SHEETS 875 - 876
FOR CULVERT DETAILS, SEE SHEET 909
FOR UNDERDRAIN DETAILS, SEE SHEET 927
FOR FENCE PLANS, SEE SHEETS 1267 - 1268
FOR NOISE BARRIER PLANS, SEE SHEETS 1110 - 1125
FOR LIGHTING PLANS, SEE SHEETS 1037 - 1064

436.31' GRAPHIC GRADE

STA 86+63.69
ELEV = 1,047.92

STA 91+00.00
ELEV = 1,044.02

-0.72 %

EX. ELECTRIC, ODOT DISTRICT 4, O.L. "C"

30" rcp FP-27

ex. 60" rcp

ex. 18" vcp san

P-28 36" TYPE B

PLAN AND PROFILE - RAMP A
BEGIN ℄ RAMP A, STA. 86+63.69 TO STA. 92+50

SUM-77/277/224
VARIOUS

485
1288

CALCULATED LRK
CHECKED PJF

HORIZONTAL SCALE IN FEET
0 25 50 100

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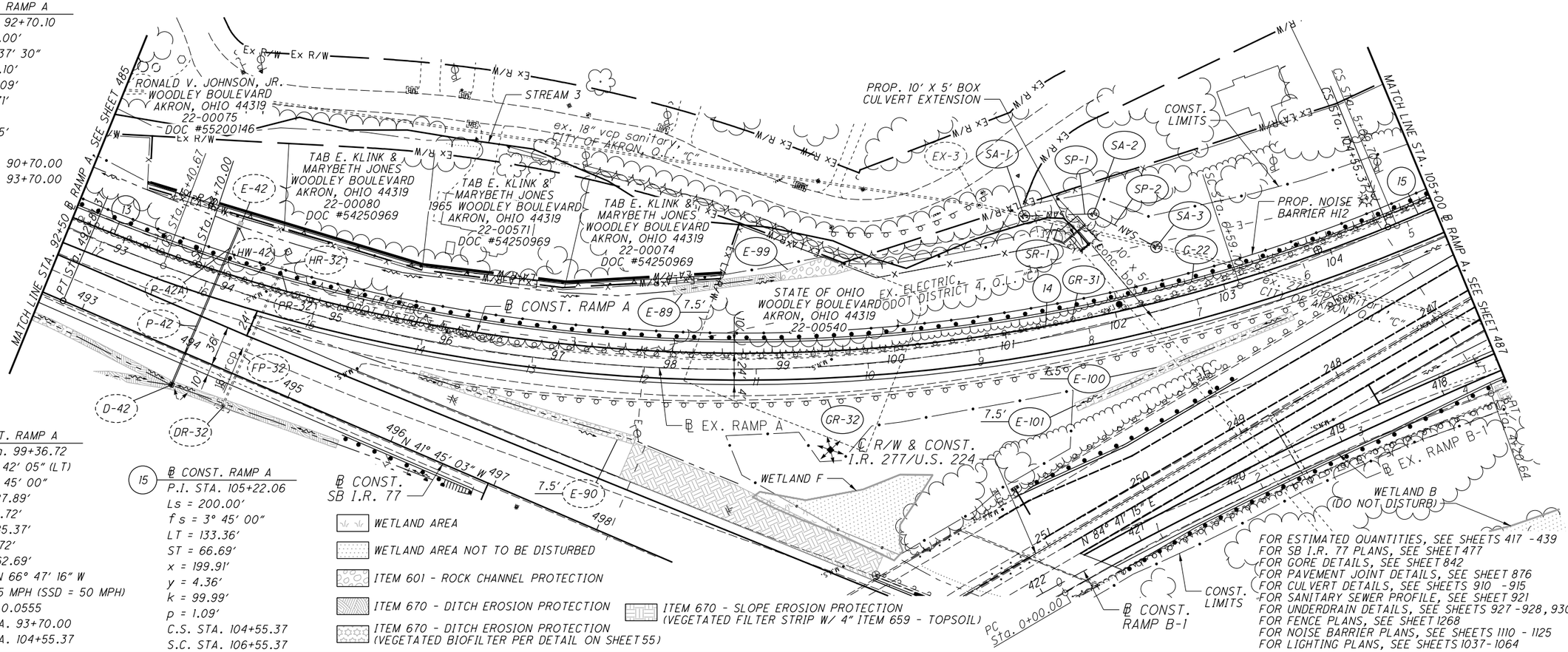
13 ℄ CONST. RAMP A
P.I. STA. 92+70.10
Ls = 300.00'
f s = 5° 37' 30"
LT = 200.10'
ST = 100.09'
x = 299.71'
y = 9.81'
k = 149.95'
p = 2.45'
C.S. STA. 90+70.00
S.C. STA. 93+70.00

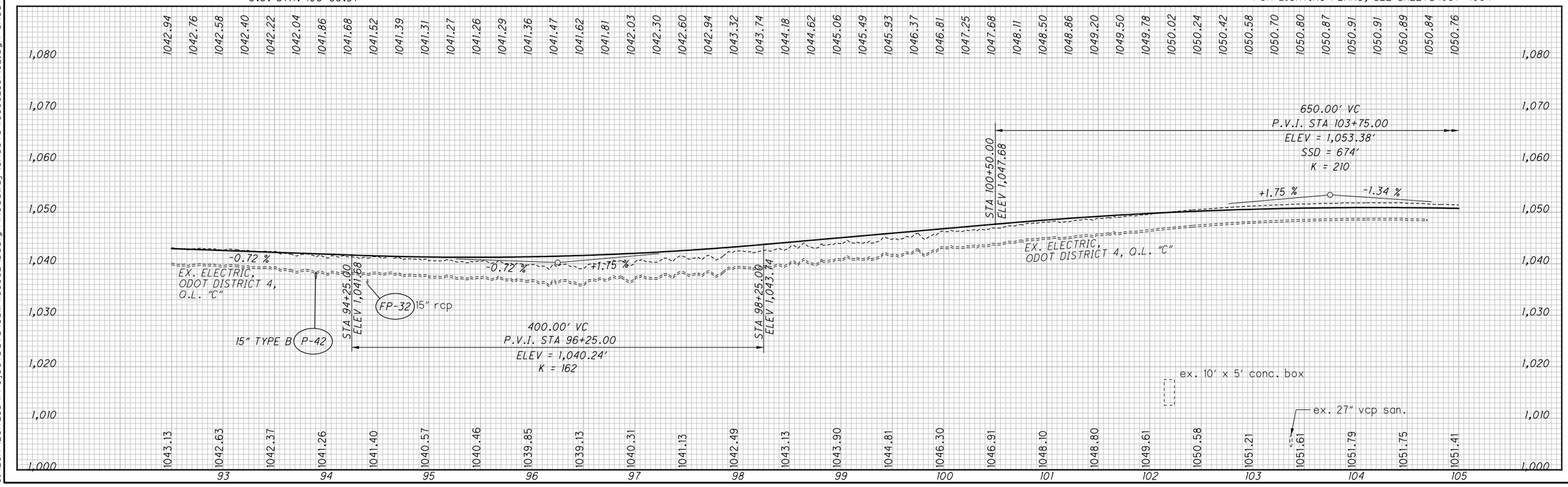
14 ℄ CONST. RAMP A
P.I. Sta. 99+36.72
Δ = 40° 42' 05" (LT)
Dc = 3° 45' 00"
R = 1,527.89'
T = 566.72'
L = 1,085.37'
E = 101.72'
C = 1,062.69'
C.B. = N 66° 47' 16" W
D.S = 55 MPH (SSD = 50 MPH)
e_{max} = 0.0555
S.C. STA. 93+70.00
C.S. STA. 104+55.37

15 ℄ CONST. RAMP A
P.I. STA. 105+22.06
Ls = 200.00'
f s = 3° 45' 00"
LT = 133.36'
ST = 66.69'
x = 199.91'
y = 4.36'
k = 99.99'
p = 1.09'
C.S. STA. 104+55.37
S.C. STA. 106+55.37



WETLAND AREA
WETLAND AREA NOT TO BE DISTURBED
ITEM 601 - ROCK CHANNEL PROTECTION
ITEM 670 - DITCH EROSION PROTECTION
ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)
ITEM 670 - SLOPE EROSION PROTECTION (VEGETATED FILTER STRIP W/ 4" ITEM 659 - TOPSOIL)

FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR SB I.R. 77 PLANS, SEE SHEET 477
FOR GORE DETAILS, SEE SHEET 842
FOR PAVEMENT JOINT DETAILS, SEE SHEET 876
FOR CULVERT DETAILS, SEE SHEETS 910 - 915
FOR SANITARY SEWER PROFILE, SEE SHEET 921
FOR UNDERDRAIN DETAILS, SEE SHEETS 927 - 928, 930
FOR FENCE PLANS, SEE SHEET 1268
FOR NOISE BARRIER PLANS, SEE SHEETS 1110 - 1125
FOR LIGHTING PLANS, SEE SHEETS 1037 - 1064



SUM-77 / 277 / 224
VARIOUS

PLAN AND PROFILE - RAMP A
STA. 92+50 TO STA. 105+00

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LRK
CHECKED PJF

486
1288

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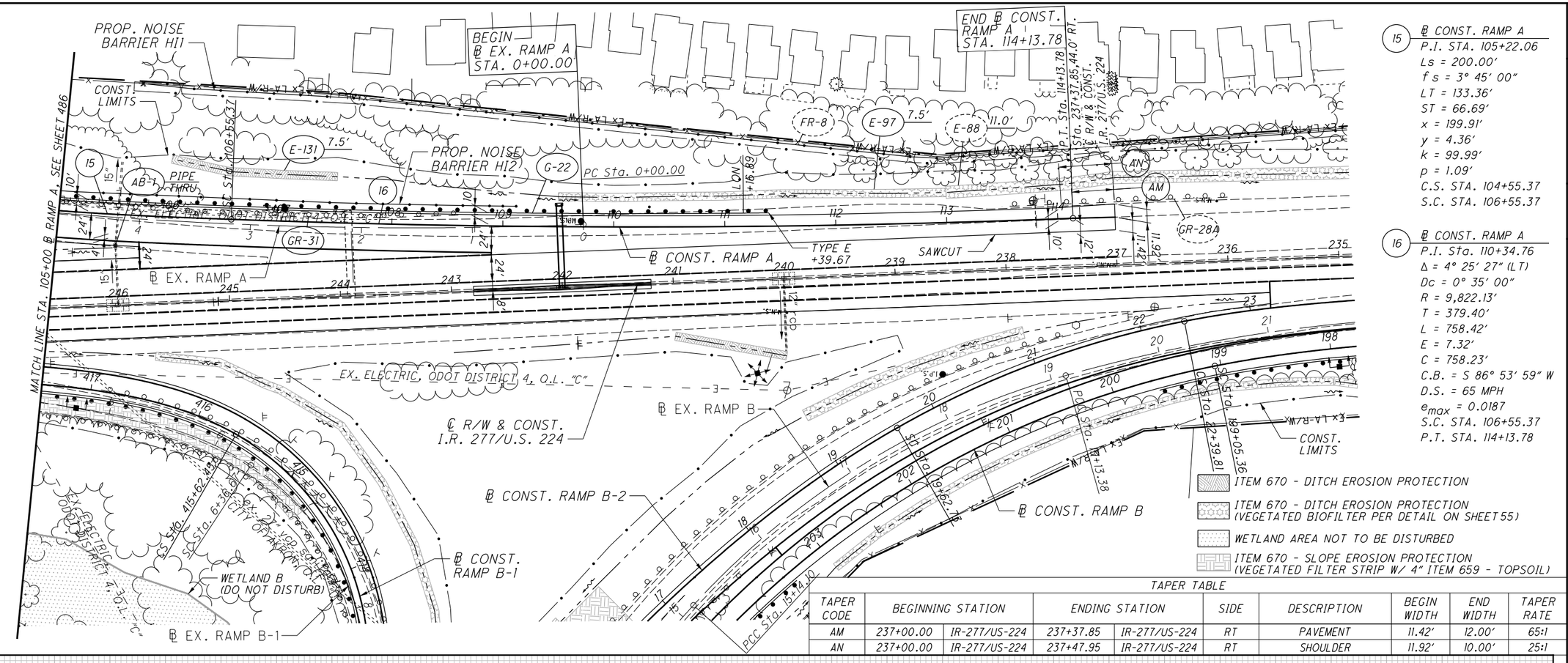
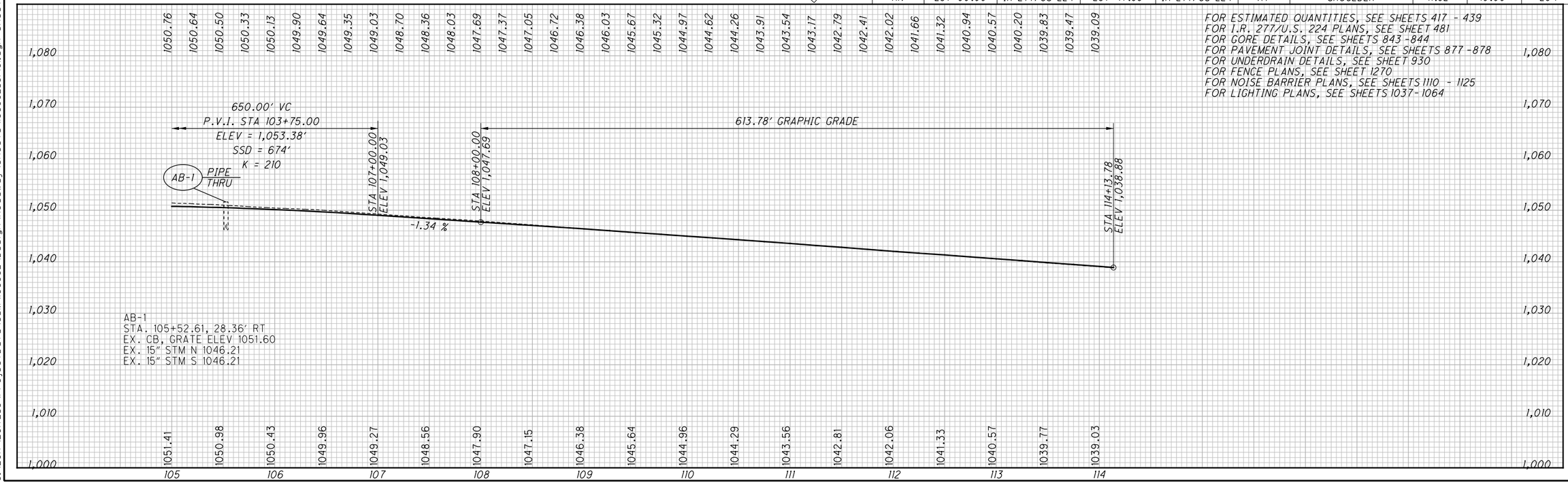


(15) ℄ CONST. RAMP A
P.I. STA. 105+22.06
Ls = 200.00'
f s = 3° 45' 00"
LT = 133.36'
ST = 66.69'
x = 199.91'
y = 4.36'
k = 99.99'
p = 1.09'
C.S. STA. 104+55.37
S.C. STA. 106+55.37

(16) ℄ CONST. RAMP A
P.I. Sta. 110+34.76
Δ = 4° 25' 27" (LT)
Dc = 0° 35' 00"
R = 9,822.13'
T = 379.40'
L = 758.42'
E = 7.32'
C = 758.23'
C.B. = S 86° 53' 59" W
D.S. = 65 MPH
e_{max} = 0.0187
S.C. STA. 106+55.37
P.T. STA. 114+13.78

TAPER TABLE

TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
AM	237+00.00	IR-277/US-224	237+37.85	IR-277/US-224	RT	PAVEMENT	11.42'	12.00'	65:1
AN	237+00.00	IR-277/US-224	237+47.95	IR-277/US-224	RT	SHOULDER	11.92'	10.00'	25:1



FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR I.R. 277/U.S. 224 PLANS, SEE SHEET 481
FOR GORE DETAILS, SEE SHEETS 843 -844
FOR PAVEMENT JOINT DETAILS, SEE SHEETS 877 -878
FOR UNDERDRAIN DETAILS, SEE SHEET 930
FOR FENCE PLANS, SEE SHEET 1270
FOR NOISE BARRIER PLANS, SEE SHEETS 1110 - 1125
FOR LIGHTING PLANS, SEE SHEETS 1037- 1064

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED LRK
CHECKED PJF

PLAN AND PROFILE - RAMP A
STA. 105+00 TO END

SUM-77/277/224
VARIOUS

487
1288

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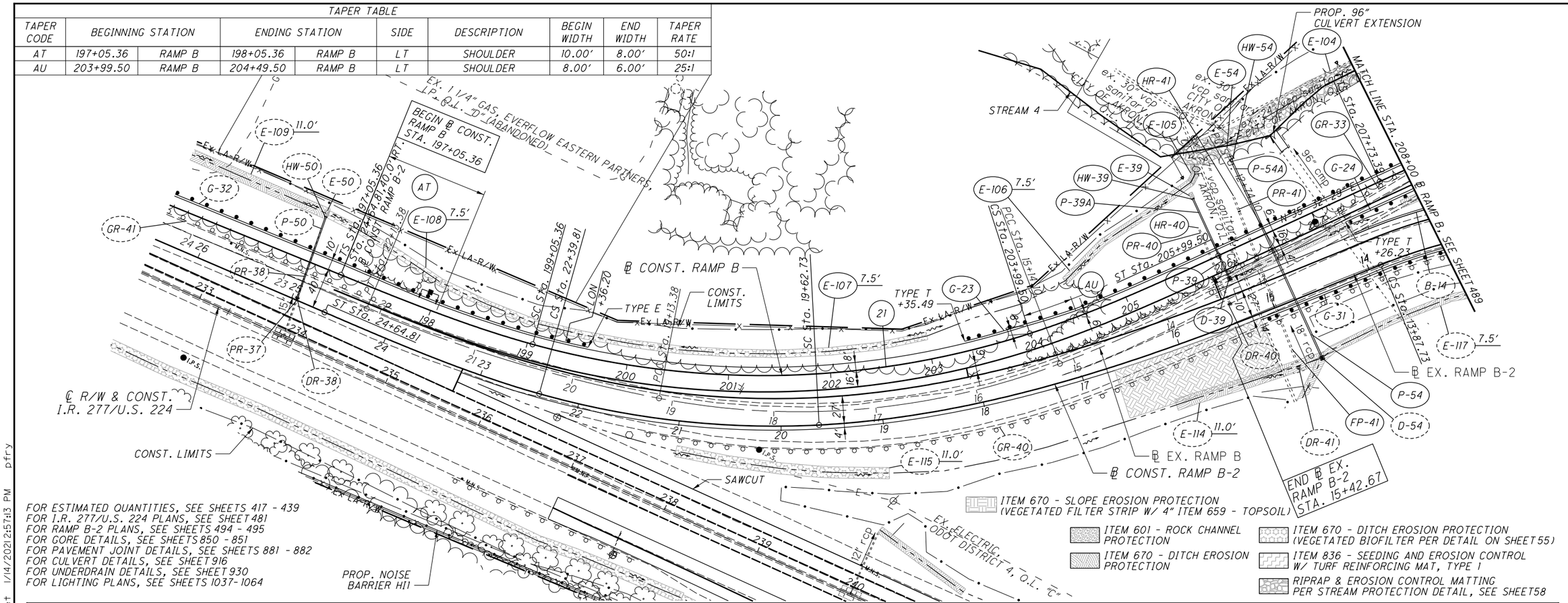
TAPER TABLE								
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
AT	197+05.36	RAMP B	198+05.36	RAMP B	LT	SHOULDER	10.00′	8.00′	50:1
AU	203+99.50	RAMP B	204+49.50	RAMP B	LT	SHOULDER	8.00′	6.00′	25:1

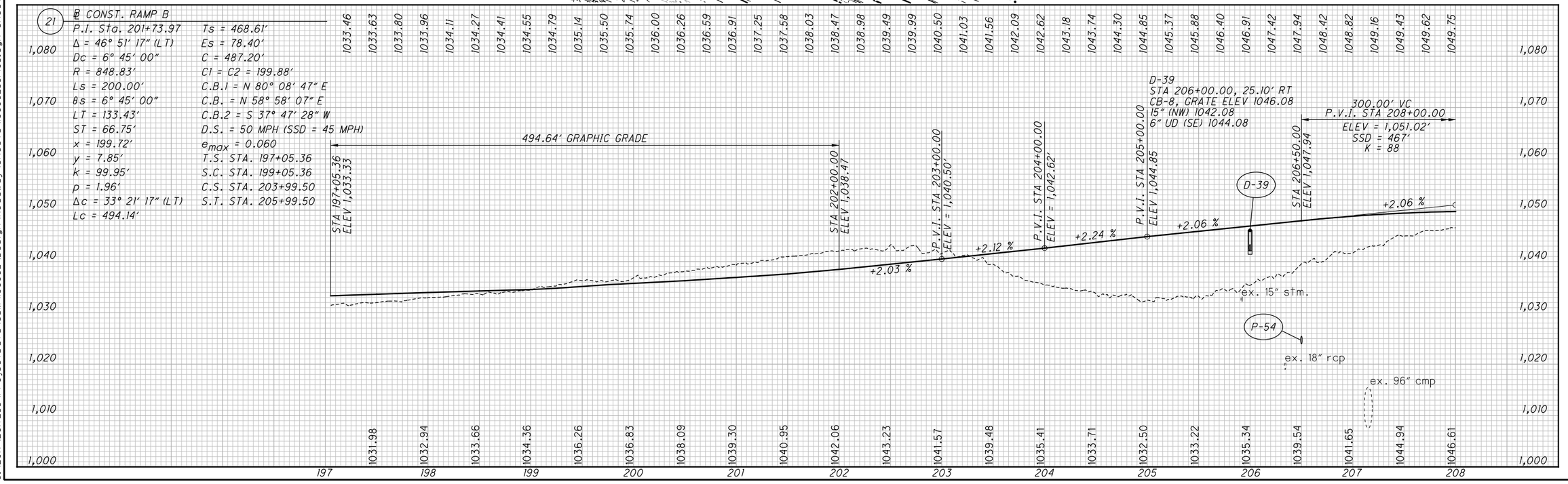


FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR I.R. 277/U.S. 224 PLANS, SEE SHEET 481
FOR RAMP B-2 PLANS, SEE SHEETS 494 - 495
FOR GORE DETAILS, SEE SHEETS 850 - 851
FOR PAVEMENT JOINT DETAILS, SEE SHEETS 881 - 882
FOR CULVERT DETAILS, SEE SHEET 916
FOR UNDERDRAIN DETAILS, SEE SHEET 930
FOR LIGHTING PLANS, SEE SHEETS 1037- 1064

ITEM 670 - SLOPE EROSION PROTECTION (VEGETATED FILTER STRIP W/ 4" ITEM 659 - TOPSOIL)
ITEM 601 - ROCK CHANNEL PROTECTION
ITEM 670 - DITCH EROSION PROTECTION
ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)
ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1
RIPRAP & EROSION CONTROL MATTING PER STREAM PROTECTION DETAIL, SEE SHEET 58

21 ℄ CONST. RAMP B

P.I. Sta. 201+73.97	Ts = 468.61′
Δ = 46° 51′ 17″ (LT)	Es = 78.40′
Dc = 6° 45′ 00″	C = 487.20′
R = 848.83′	C1 = C2 = 199.88′
Ls = 200.00′	C.B.1 = N 80° 08′ 47″ E
θs = 6° 45′ 00″	C.B. = N 58° 58′ 07″ E
LT = 133.43′	C.B.2 = S 37° 47′ 28″ W
ST = 66.75′	D.S. = 50 MPH (SSD = 45 MPH)
x = 199.72′	e_{max} = 0.060
y = 7.85′	T.S. STA. 197+05.36
k = 99.95′	S.C. STA. 199+05.36
p = 1.96′	C.S. STA. 203+99.50
Δc = 33° 21′ 17″ (LT)	S.T. STA. 205+99.50
Lc = 494.14′	



HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED LRK
CHECKED PJF

PLAN AND PROFILE - RAMP B
BEGIN TO 208+00.00

SUM-77/277/224
VARIOUS

488
1288

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ITEM 670 - DITCH EROSION PROTECTION

RIPRAP & EROSION CONTROL MATTING PER STREAM PROTECTION DETAIL, SEE SHEET58

PROPOSED WORK (PAVEMENT, APPROACH SLAB, EARTHWORK, GUARDRAIL, ETC.) BY OTHERS (SUM-76/77/8-8.42/9.77/0.00 DB, PID 102329)

WETLAND AREA NOT TO BE DISTURBED

NOTE 'A'
PROPOSED GUARDRAIL SHALL CONNECT TO THE GUARDRAIL AND BTA BEING INSTALLED BY OTHERS IN THE PID 102329 PROJECT

FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR SB I.R. 77 PLANS, SEE SHEET 479
FOR GORE DETAILS, SEE SHEET 845
FOR PAVEMENT JOINT DETAILS, SEE SHEET 879
FOR CULVERT DETAILS, SEE SHEET 919
FOR UNDERDRAIN DETAILS, SEE SHEETS 929 - 930
FOR LIGHTING PLANS, SEE SHEETS 1037- 1064

END WORK ℄ RAMP B STA. 214+90.00

BEGIN PROJECT SUM-76/77/8-8.42/9.77/0.00 DB (PID 102329)

END PROJECT END WORK ℄ CONST. SB I.R. 77 STA. 514+95.00 S.L.M. 9.74

BEGIN ℄ EX. RAMP B STA. 0+00.00

END ℄ CONST. RAMP B STA. 219+25.00

POT sta. 219+25.00, 48.0' LT. ℄ CONST. SB I.R. 77

POT sta. 0+00.00

STRUCTURE NO. SUM-77-0973L (NO WORK)

STRUCTURE NO. SUM-77-0973R (NO WORK)

WATERLOO RD.

EX. LA-R/W

CONST. LIMITS

E-104

ex. 24" vcp sanitary CITY OF AKRON, O.L. "D"

STREAM 4

℄ CONST. RAMP B

GR-33

SC sta. 209+73.65

ST sta. 10+78.65

MATCH LINE STA. 208+00 ℄ RAMP B, SEE SHEET 488

℄ EX. RAMP B

℄ EX. RAMP B-2

℄ CONST. RAMP B-2

℄ EX. RAMP B-1

℄ CONST. RAMP B-1

EX. ELECTRIC ODOT DISTRICT O.L. "C"

WETLAND B (DO NOT DISTURB)

CONST. LIMITS

E-91

7.5'

PROP. 30" CULVERT

24" rcp

R-2

E-93

7.5'

GR-34

G-24

SEE NOTE 'A'

G-23

22

SC sta. 213+58.80

ES sta. 8+78.65

BEGIN LONG POST GUARDRAIL STA. 212+50, LT.

CS sta. 213+58.80

ST sta. 215+58.80

Is.Sign 3+66.20

BEGIN LONG POST GUARDRAIL STA. 214+00, LT.

BTA, TYPE 2

TYPE E +07.52

LON +85.46

E-94

7.5'

CONST. LIMITS

℄ CONST. SB I.R. 77

END WORK ℄ CONST. NB I.R. STA. 514+85.00

84" cmp

EX. TELECOM, AT&T O.L.

WATER, CITY OF AKRON, O.L.

℄ CONST. NB I.R. 77

L3 L2 L1

209 210 211 212 213 214 215 216 217 218 219

513 514 515 516 517 518 519

N 17° 30" W

S 16° 59" E

23'

4'

16'

7'

6'

2'

11'

12'

41'

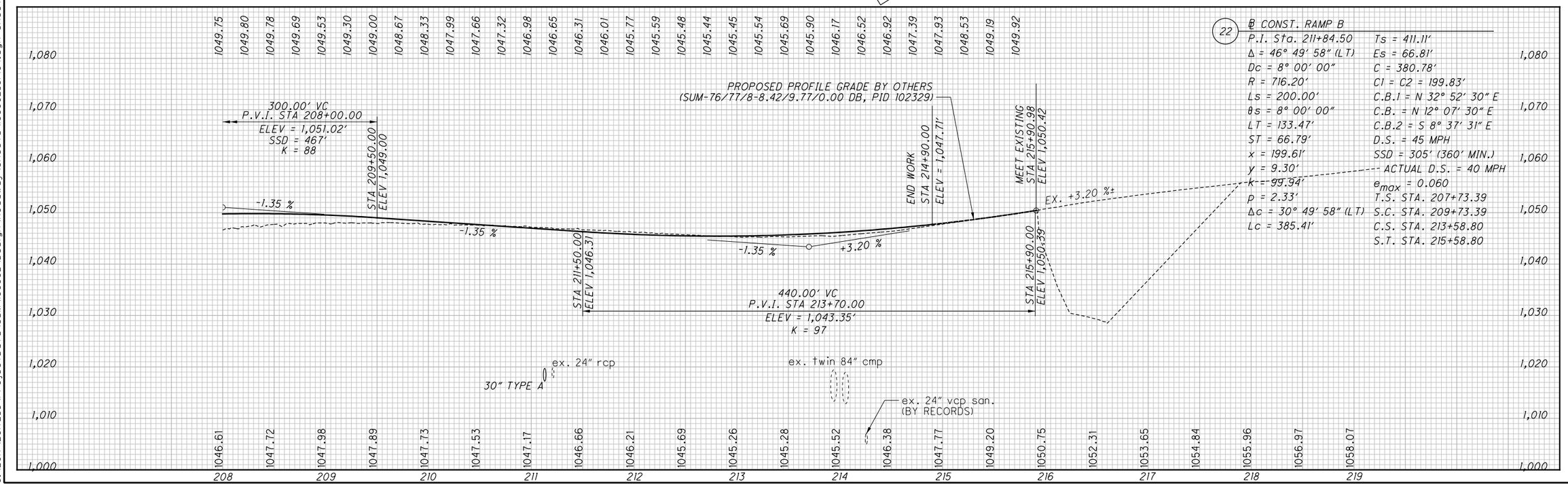
10'

3'

1'

4'

2'



22 ℄ CONST. RAMP B

P.I. Sta. 211+84.50	Ts = 411.11'
Δ = 46° 49' 58" (LT)	Es = 66.81'
Dc = 8° 00' 00"	C = 380.78'
R = 716.20'	C1 = C2 = 199.83'
Ls = 200.00'	C.B.1 = N 32° 52' 30" E
θs = 8° 00' 00"	C.B. = N 12° 07' 30" E
LT = 133.47'	C.B.2 = S 8° 37' 31" E
ST = 66.79'	D.S. = 45 MPH
x = 199.61'	SSD = 305' (360' MIN.)
y = 9.30'	ACTUAL D.S. = 40 MPH
K = 99.94'	e_{max} = 0.060
p = 2.33'	T.S. STA. 207+73.39
Δc = 30° 49' 58" (LT)	S.C. STA. 209+73.39
Lc = 385.41'	C.S. STA. 213+58.80
	S.T. STA. 215+58.80

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LRK
CHECKED PJF

PLAN AND PROFILE - RAMP B STA. 208+00 TO END

SUM-77 / 277 / 224
VARIOUS

489
1288

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FOR RAMP B-1 PROFILE, SEE SHEET 491
FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR SB I.R. 77 PLANS, SEE SHEET 478
FOR I.R. 277/U.S. 224 PLANS, SEE SHEET 482
FOR GORE DETAILS, SEE SHEETS 846 - 847
FOR PAVEMENT JOINT DETAILS, SEE SHEETS 874 ,880
FOR UNDERDRAIN DETAILS, SEE SHEETS 928 - 930
FOR LIGHTING PLANS, SEE SHEETS 1037- 1064

℄ CONST. RAMP B-1
P.I. Sta. 407+76.50
Δ = 17° 26′ 53″ (LT)
Dc = 11° 45′ 00″
R = 487.62′
T = 74.83′
L = 148.49′
E = 5.71′
C = 147.92′
C.B. = N 63° 22′ 14″ W
D.S. = 40 MPH (SSD = 35 MPH)
e_{max} = 0.060
S.C. STA. 407+01.68
P.C.C. STA. 408+50.17

℄ CONST. RAMP B-1
P.I. Sta. 438+65.75
Δ = 170° 56′ 49″ (LT)
Dc = 24° 00′ 00″
R = 238.73′
T = 3,015.57′
L = 712.28′
E = 2,786.28′
C = 475.98′
C.B. = S 22° 25′ 55″ W
D.S. = 30 MPH (SSD = 25 MPH)
e_{max} = 0.060
P.C.C. STA. 408+50.17
C.S. STA. 415+62.45

℄ CONST. RAMP B-1
P.I. STA. 416+33.74
Ls = 200.00′
f s = 25° 15′ 00″
LT = 131.48′
ST = 71.29′
x = 195.95′
y = 30.41′
k = 99.36′
p = 6.58′
C.S. STA. 415+62.45
S.C. STA. 417+62.45

℄ CONST. RAMP B-1
P.I. Sta. 406+35.31
Ls = 200.00′
f s = 11° 45′ 00″
LT = 133.63′
ST = 66.93′
x = 199.16′
y = 13.63′
k = 99.86′
p = 3.41′
T.S. STA. 405+01.68
S.C. STA. 407+01.68

℄ CONST. RAMP B-1
P.I. Sta. 420+43.64
Δ = 7° 01′ 15″ (LT)
Dc = 1° 15′ 00″
R = 4,583.66′
T = 281.19′
L = 561.67′
E = 8.62′
C = 561.32′
C.B. = N 88° 11′ 53″ E
D.S. = 65 MPH
e_{max} = 0.036
S.C. STA. 417+62.45
P.T. STA. 423+24.13

℄ CONST. NB I.R. 77

(A) Sta. 502+43.78, 52.00′ LT. ℄ CONST. SB I.R. 77

WETLAND

WETLAND AREA NOT TO BE DISTURBED

ITEM 670 - SLOPE EROSION PROTECTION (VEGETATED FILTER STRIP W/ 4" ITEM 659 - TOPSOIL)

ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)

ITEM 601 - ROCK CHANNEL PROTECTION

ITEM 670 - DITCH EROSION PROTECTION

RIPRAP & EROSION CONTROL MATTING PER STREAM PROTECTION DETAIL, SEE SHEET 58

ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 2

TAPER TABLE

TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
AV	405+01.68	RAMP B-1	405+51.68	RAMP B-1	LT	SHOULDER	8.00′	6.00′	25:1
AW	417+55.68	RAMP B-1	418+55.68	RAMP B-1	LT	SHOULDER	6.00′	10.00′	25:1
AX	418+55.68	RAMP B-1	421+51.12	RAMP B-1	RT	PAVEMENT	16.00′	12.45′	83:1

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LRK
CHECKED PJF

PLAN - RAMP B-1
STA. 402+43.78 TO STA. 423+24.13

SUM-77/277/224
VARIOUS

490
1288

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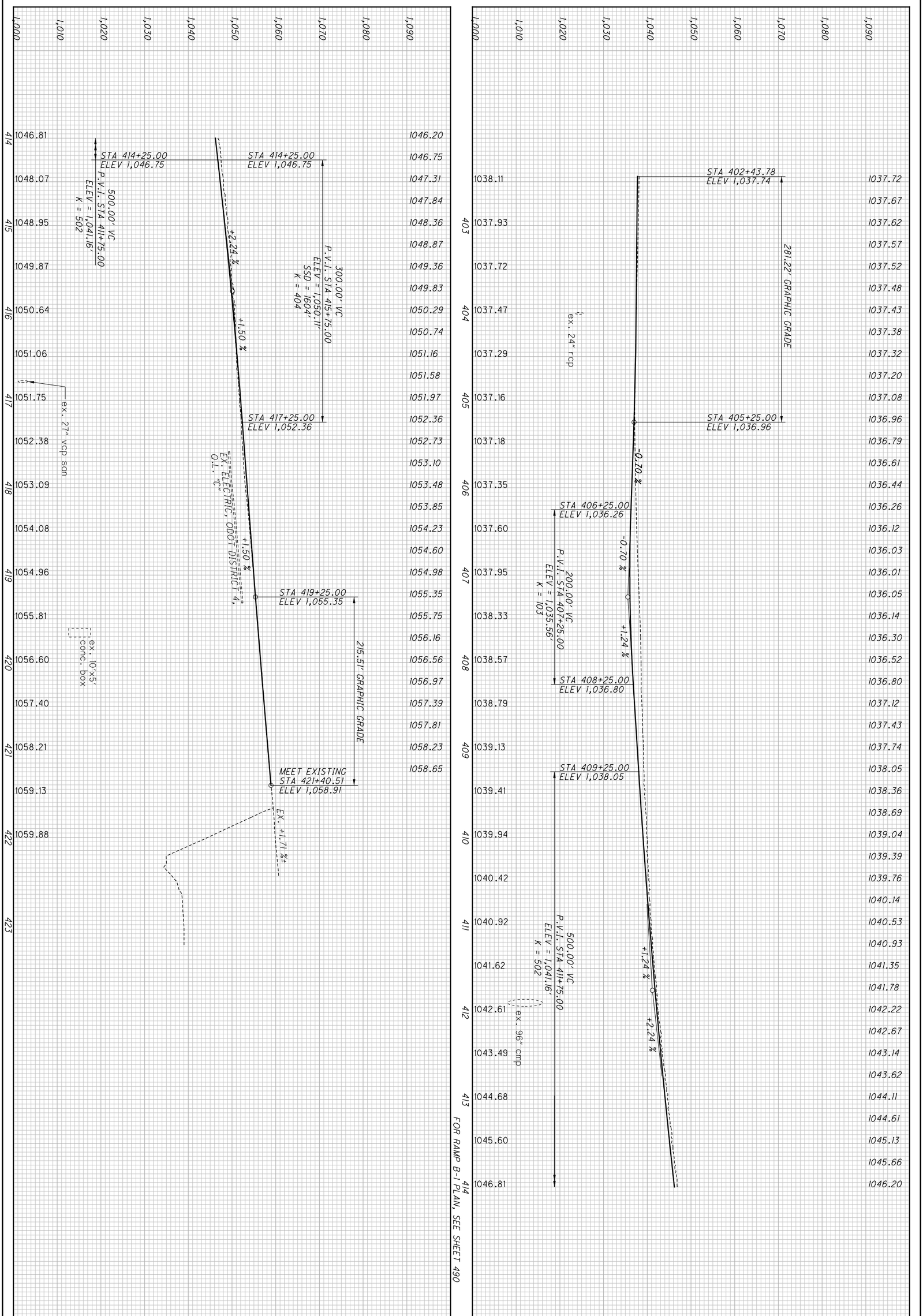


491 / 1288	**SUM-77 / 277 / 224** **VARIOUS**	**PROFILE - RAMP B-1** **STA. 402+43.78 TO STA. 423+24.13**

CALCULATED CJC
CHECKED PJF

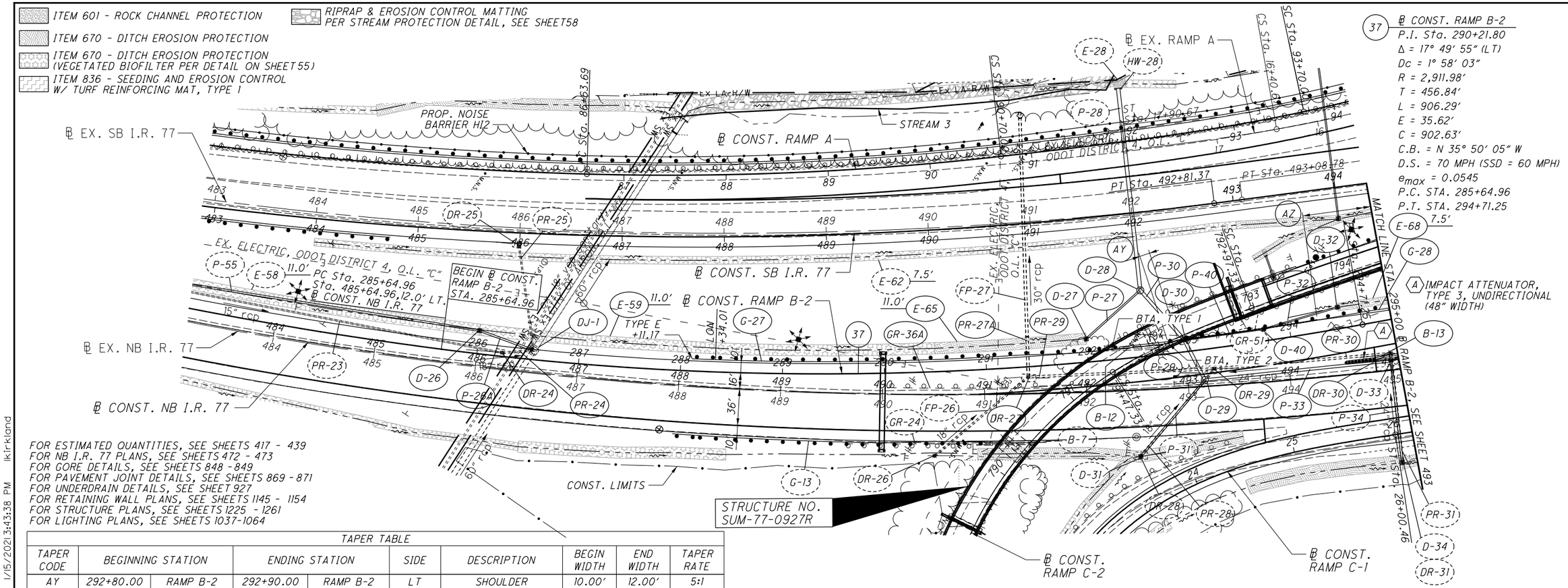
ITEM 601 - ROCK CHANNEL PROTECTION

ITEM 670 - DITCH EROSION PROTECTION

ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)

ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1

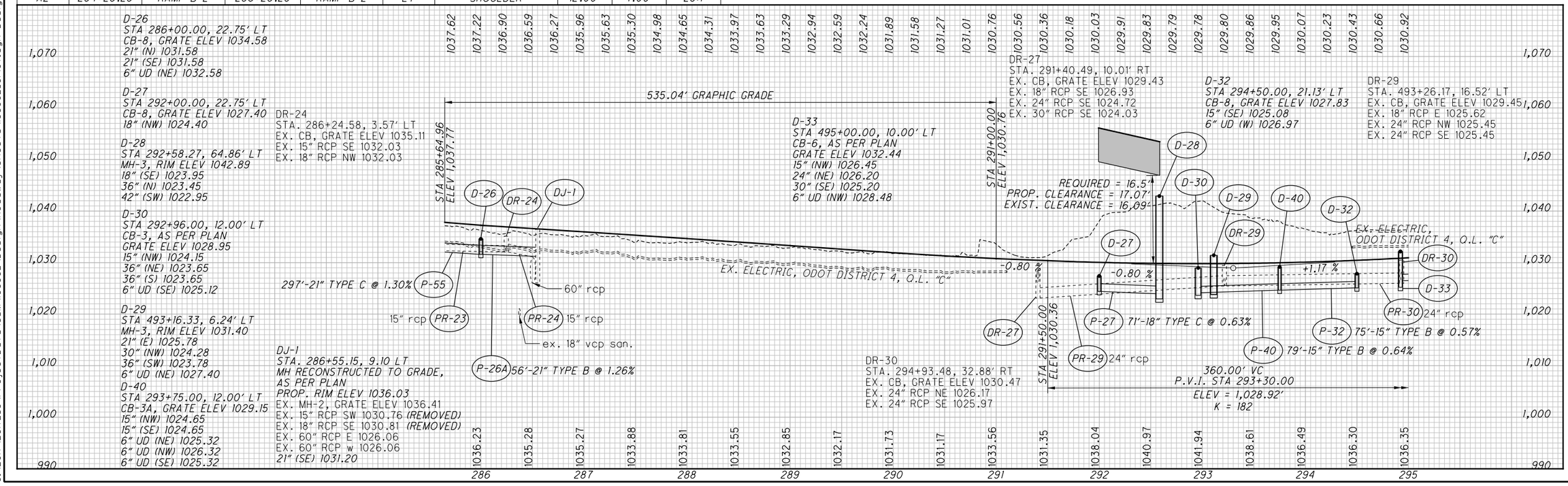
RIPRAP & EROSION CONTROL MATTING PER STREAM PROTECTION DETAIL, SEE SHEET 58



FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR NB I.R. 77 PLANS, SEE SHEETS 472 - 473
FOR GORE DETAILS, SEE SHEETS 848 - 849
FOR PAVEMENT JOINT DETAILS, SEE SHEETS 869 - 871
FOR UNDERDRAIN DETAILS, SEE SHEET 927
FOR RETAINING WALL PLANS, SEE SHEETS 1145 - 1154
FOR STRUCTURE PLANS, SEE SHEETS 1225 - 1261
FOR LIGHTING PLANS, SEE SHEETS 1037-1064

TAPER TABLE

TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
AY	292+80.00	RAMP B-2	292+90.00	RAMP B-2	LT	SHOULDER	10.00'	12.00'	5:1
AZ	294+28.29	RAMP B-2	296+28.29	RAMP B-2	LT	SHOULDER	12.00'	4.00'	25:1



PROFILE - RAMP B-2 TO STA. 295+00

CALCULATED LRK
CHECKED PJF

SUM-77/277/224
VARIOUS

492
1288

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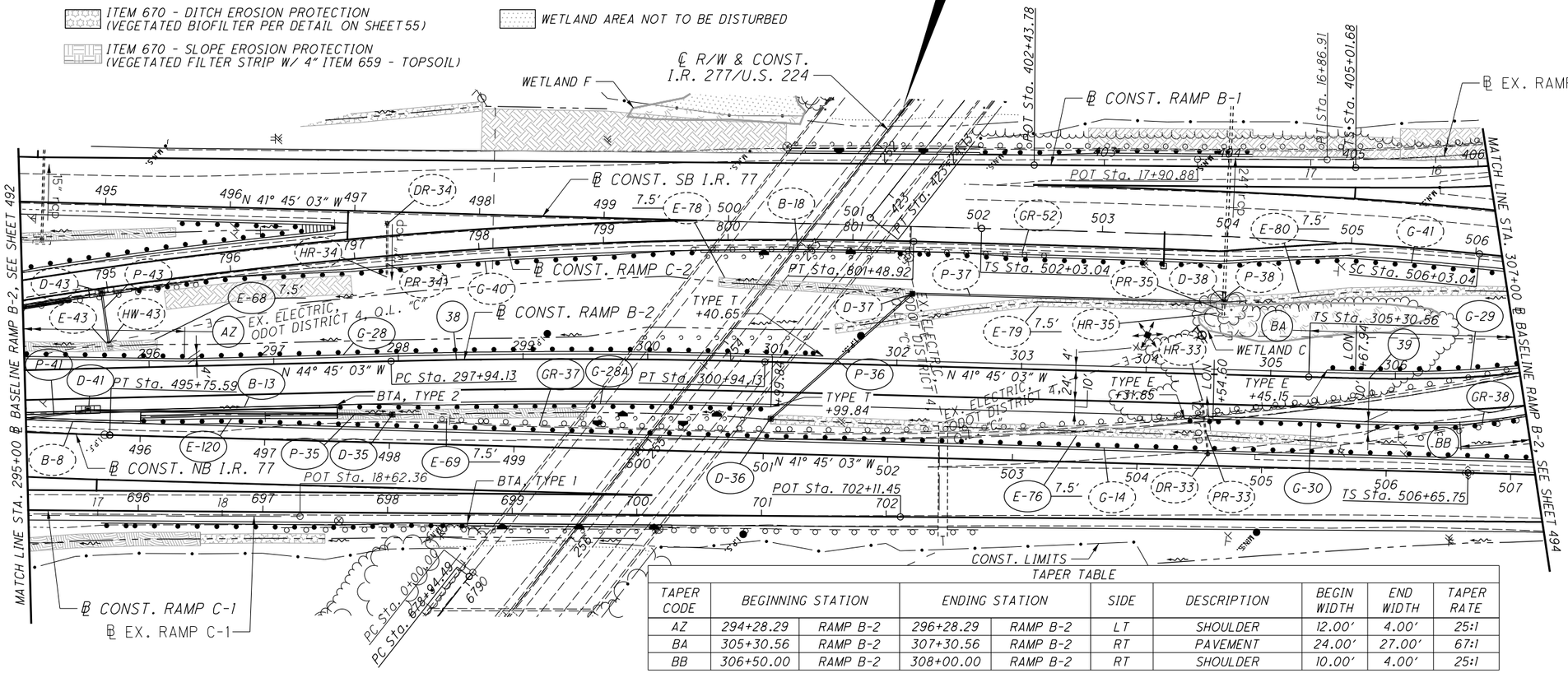
39 ℄ CONST. RAMP B-2
P.I. STA. 306+64.20
Ls = 200.00'
f s = 12° 00' 01"
LT = 133.64'
ST = 66.95'
x = 199.12'
y = 13.92'
k = 99.85'
p = 3.49'
T.S. STA. 305+30.56
S.C. STA. 307+30.56

38 ℄ CONST. RAMP B-2
P.I. Sta. 299+44.16
Δ = 3° 00' 00" (RT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 150.03'
L = 300.00'
E = 1.96'
C = 299.97'
C.B. = N 43° 15' 03" W
D.S. = 60 MPH
e_{max} = 0.027
P.C. STA. 297+94.13
P.T. STA. 300+94.13

ITEM 670 - DITCH EROSION PROTECTION
ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)
ITEM 670 - SLOPE EROSION PROTECTION (VEGETATED FILTER STRIP W/ 4" ITEM 659 - TOPSOIL)
WETLAND
WETLAND AREA NOT TO BE DISTURBED

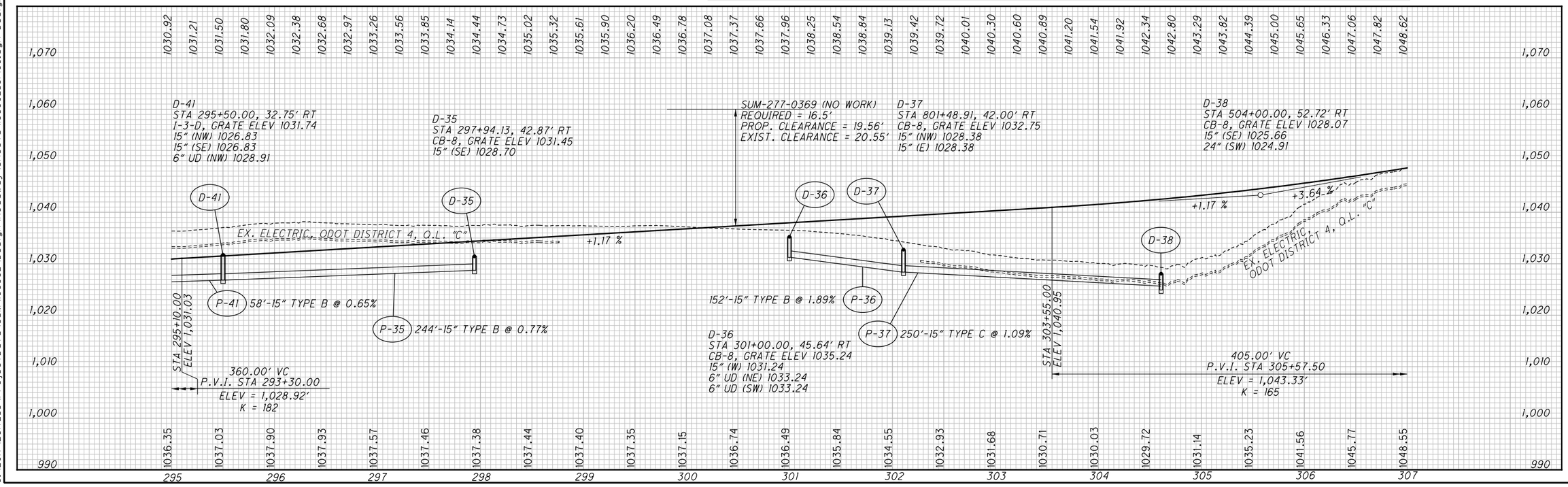
STRUCTURE NO. SUM-277-0369 (NO WORK)

FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR UNDERDRAIN DETAILS, SEE SHEETS 927 - 928
FOR LIGHTING PLANS, SEE SHEETS 1037-1064



TAPER TABLE

TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
AZ	294+28.29	RAMP B-2	296+28.29	RAMP B-2	LT	SHOULDER	12.00'	4.00'	25:1
BA	305+30.56	RAMP B-2	307+30.56	RAMP B-2	RT	PAVEMENT	24.00'	27.00'	67:1
BB	306+50.00	RAMP B-2	308+00.00	RAMP B-2	RT	SHOULDER	10.00'	4.00'	25:1



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HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED LRK
CHECKED PJF

PLAN AND PROFILE - RAMP B-2
STA. 295+00 TO STA. 307+00

SUM-77/277/224
VARIOUS

493
1288

TAPER TABLE								
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
BA	305+30.56	RAMP B-2	307+30.56	RAMP B-2	RT	PAVEMENT	24.00′	27.00′	67:1
BB	306+50.00	RAMP B-2	308+00.00	RAMP B-2	RT	SHOULDER	10.00′	4.00′	25:1
BC	10+00.00	RAMP B-2	10+30.00	RAMP B-2	RT	SHOULDER	4.00′	10.00′	5:1

(40) ℄ CONST. RAMP B-2
P.I. Sta. 307+73.27
Δ = 10° 13′ 25″ (LT)
Dc = 12° 00′ 01″
(NDC Dc = 9° 00′ MAX.)
R = 477.46′
T = 42.71′
L = 85.19′
E = 1.91′
C = 85.08′
C.B. = N 58° 51′ 46″ W
D.S. = 35 MPH (45 MPH MIN.)
SSD = 205′ (360′ MIN.)
ACTUAL D.S. = 30 MPH
e_{max} = 0.057
S.C. STA. 307+30.56
P.C.C. STA. 308+15.76 BK /
STA. 7+36.18 AH

(39) ℄ CONST. RAMP B-2
P.I. STA. 306+64.20
Ls = 200.00′
f s = 12° 00′ 01″
LT = 133.64′
ST = 66.95′
x = 199.12′
y = 13.92′
k = 99.85′
p = 3.49′
T.S. STA. 305+30.56
S.C. STA. 307+30.56

(42) ℄ CONST. RAMP B-2
P.I. STA. 17+73.39
Ls = 575.00′
f s = 19° 24′ 22″
LT = 385.66′
ST = 193.79′
x = 568.44′
y = 64.39′
k = 286.40′
p = 16.16′
C.S. STA. 13+87.73
S.C. STA. 19+62.73

ITEM 670 - SLOPE EROSION PROTECTION (VEGETATED FILTER STRIP W/ 4″ ITEM 659 - TOPSOIL)

ITEM 670 - DITCH EROSION PROTECTION

ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1

RIPRAP & EROSION CONTROL MATTING PER STREAM PROTECTION DETAIL, SEE SHEET58

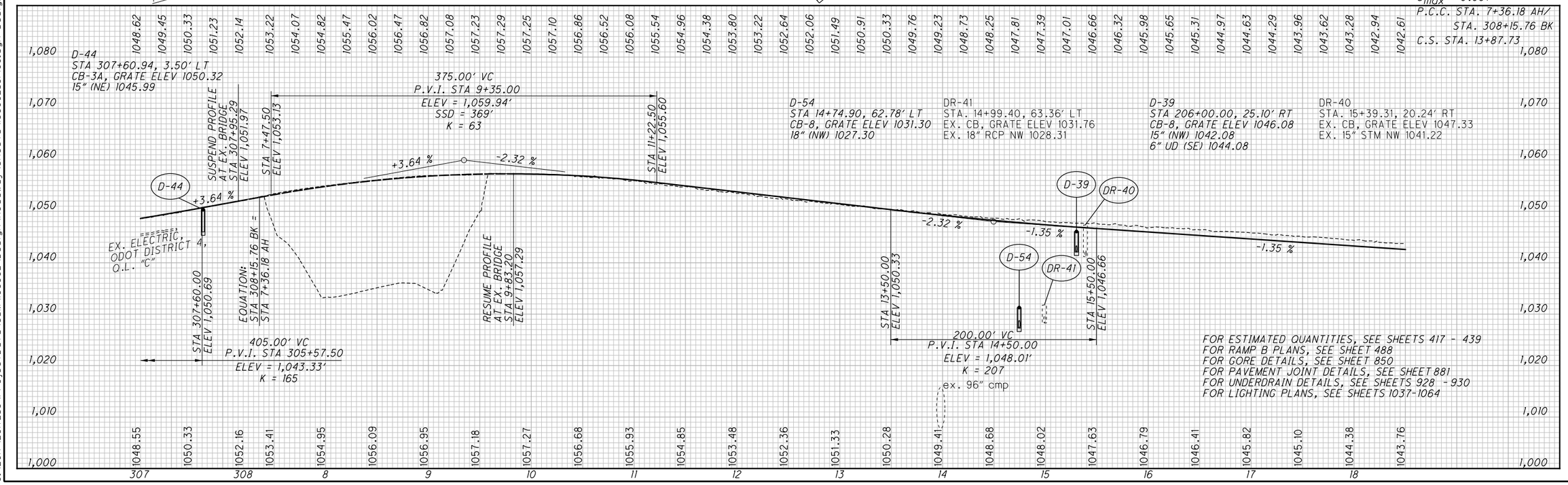
ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET55)

WETLAND

WETLAND AREA NOT TO BE DISTURBED

ITEM 601 - TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT

℄ CONST. RAMP B-1
℄ EX. RAMP B-1
WETLAND B (DO NOT DISTURB)
CONST. LIMITS
EX. ELECTRIC, ODOT DISTRICT 4, O.L.
MATCH LINE STA. 307+00 ℄ RAMP B-2, SEE SHEET 493
MATCH LINE STA. 18+50 ℄ RAMP B-2, SEE SHEET 495
BTA, TYPE 1
BTA, TYPE 2
TYPE T
EQUATION: STA 308+15.76 BK = STA 7+36.18 AH
℄ CONST. NB I.R. 77
℄ CONST. SB I.R. 77
℄ CONST. RAMP D
℄ EX. RAMP D
℄ CONST. RAMP B
℄ EX. RAMP B
℄ CONST. RAMP B-2
CONST. LIMITS
STREAM 4
STRUCTURE NO. SUM-77-0958L (NO WORK)
GR-37 GR-38 GR-39 GR-40
G-29 G-30 G-31
P-44 D-44 P-54 P-39 P-40 P-41 P-54A
E-77 E-91 E-112 E-113 E-114 E-121
DR-41 FP-41 D-54 DR-40 D-39
HW-44 HW-39 HW-40 HW-41 HW-54
B-14 BA BB BC
SC Sta. 14+73.07
SC Sta. 407+01.68
SC Sta. 408+50.17
SC Sta. 12+73.07
SC Sta. 13+87.73
SC Sta. 15+14.10
SC Sta. 203+99.50
SC Sta. 205+39.10
SC Sta. 12+74.65
SC Sta. 209+73.39
ST Sta. 10+78.65
TS Sta. 207+73.39
PCCC Sta. 36.18
PCCC Sta. 15+14.10
PT Sta. 910+60.12
CS Sta. 908+65.05
PT Sta. 910+55.05
CS Sta. 910+65.75
96″ cmp
18″ RCP
11.0′
7.5′



FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR RAMP B PLANS, SEE SHEET 488
FOR GORE DETAILS, SEE SHEET 850
FOR PAVEMENT JOINT DETAILS, SEE SHEET 881
FOR UNDERDRAIN DETAILS, SEE SHEETS 928 - 930
FOR LIGHTING PLANS, SEE SHEETS 1037-1064

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LRK
CHECKED PJF

PLAN AND PROFILE - RAMP B-2
STA. 307+00 TO STA. 18+50

SUM-77 / 277 / 224
VARIOUS

494
1288

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(42) ℄ CONST. RAMP B-2
P.I. STA. 17+73.39
Ls = 575.00'
f s = 19° 24' 22"
LT = 385.66'
ST = 193.79'
x = 568.44'
y = 64.39'
k = 286.40'
p = 16.16'
C.S. STA. 13+87.73
S.C. STA. 19+62.73

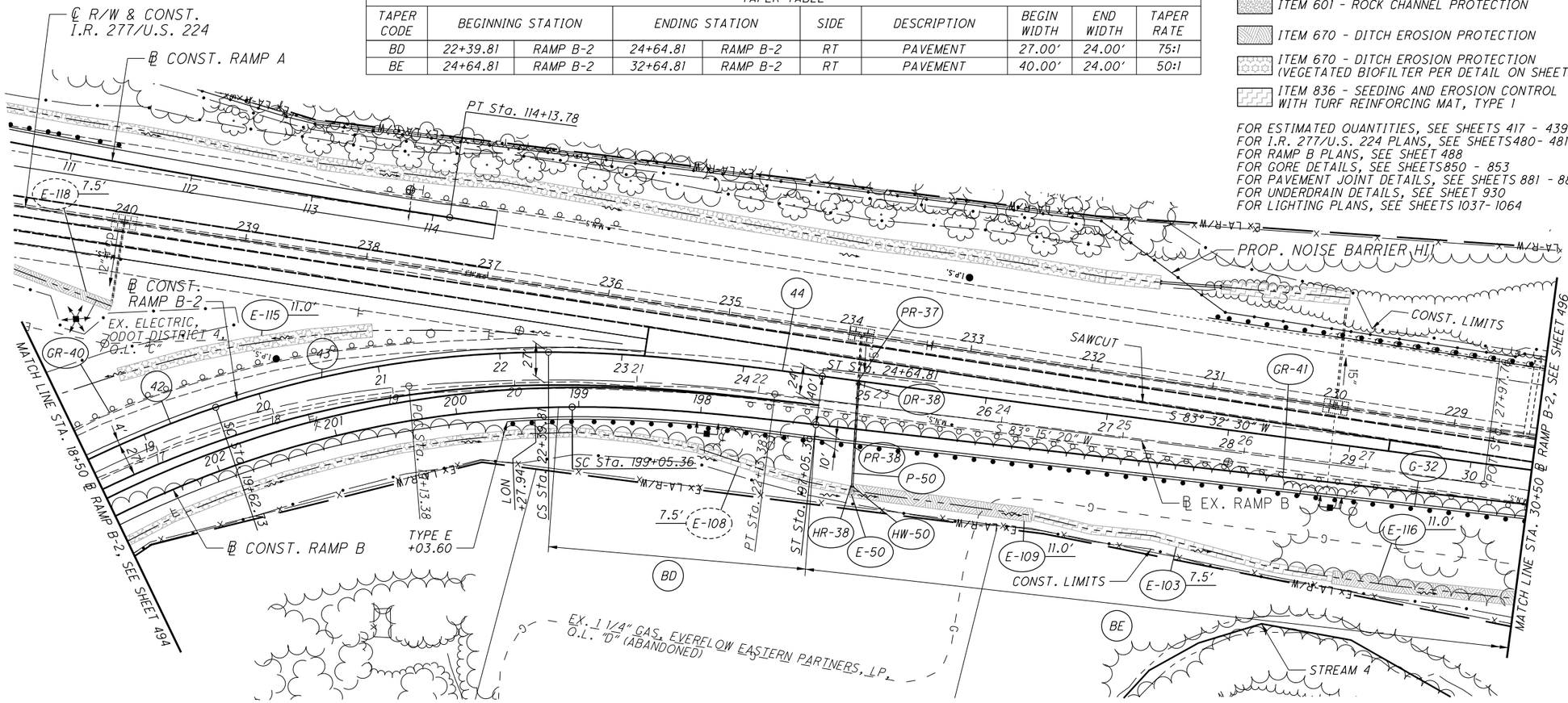
(43) ℄ CONST. RAMP B-2
P.I. Sta. 21+02.51
Δ = 18° 42' 10" (RT)
Dc = 6° 45' 00"
R = 848.83'
T = 139.78'
L = 277.08'
E = 11.43'
C = 275.85'
C.B. = S 66° 35' 48" W
D.S. = 50 MPH
e_{max} = 0.060
S.C. STA. 19+62.73
C.S. STA. 22+39.81

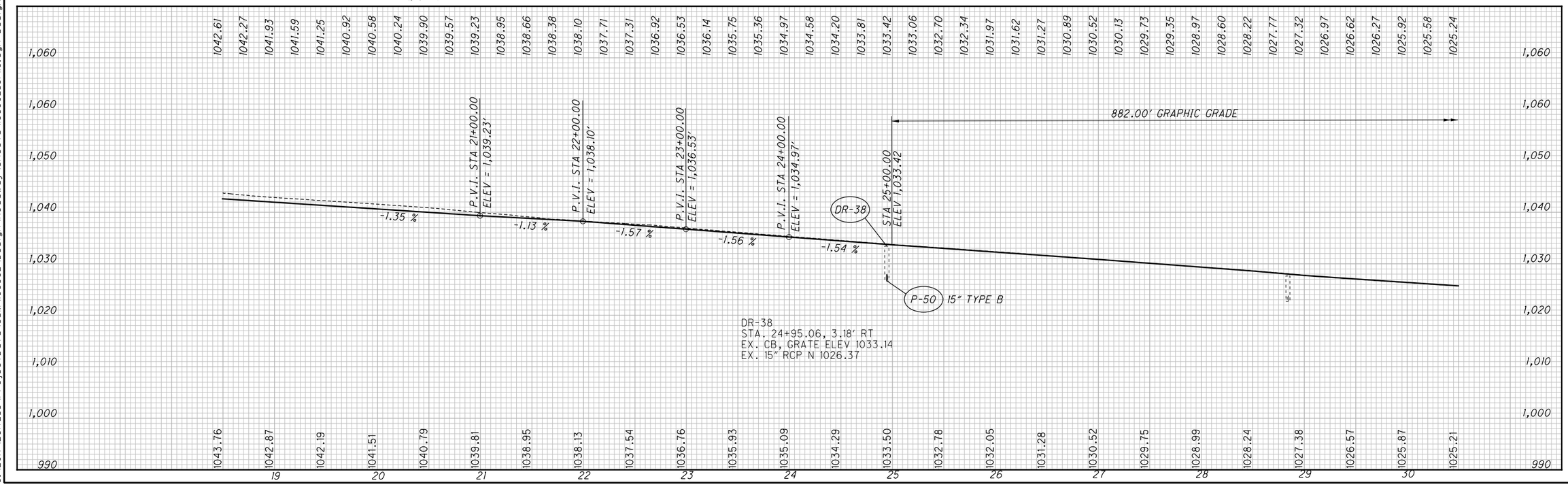
(44) ℄ CONST. RAMP B-2
P.I. STA. 23+14.93
Ls = 225.00'
f s = 7° 35' 37"
LT = 150.14'
ST = 75.13'
x = 224.61'
y = 9.93'
k = 112.43'
p = 2.48'
C.S. STA. 22+39.81
S.T. STA. 24+64.81

TAPER TABLE									
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
BD	22+39.81	RAMP B-2	24+64.81	RAMP B-2	RT	PAVEMENT	27.00'	24.00'	75:1
BE	24+64.81	RAMP B-2	32+64.81	RAMP B-2	RT	PAVEMENT	40.00'	24.00'	50:1

ITEM 601 - ROCK CHANNEL PROTECTION
ITEM 670 - DITCH EROSION PROTECTION
ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)
ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1

FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR I.R. 277/U.S. 224 PLANS, SEE SHEETS 480 - 481
FOR RAMP B PLANS, SEE SHEET 488
FOR GORE DETAILS, SEE SHEETS 850 - 853
FOR PAVEMENT JOINT DETAILS, SEE SHEETS 881 - 884
FOR UNDERDRAIN DETAILS, SEE SHEET 930
FOR LIGHTING PLANS, SEE SHEETS 1037 - 1064





HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED LRK
CHECKED PJF

PLAN AND PROFILE - RAMP B-2
STA. 18+50 TO STA. 30+50

SUM-77/277/224
VARIOUS

495
1288

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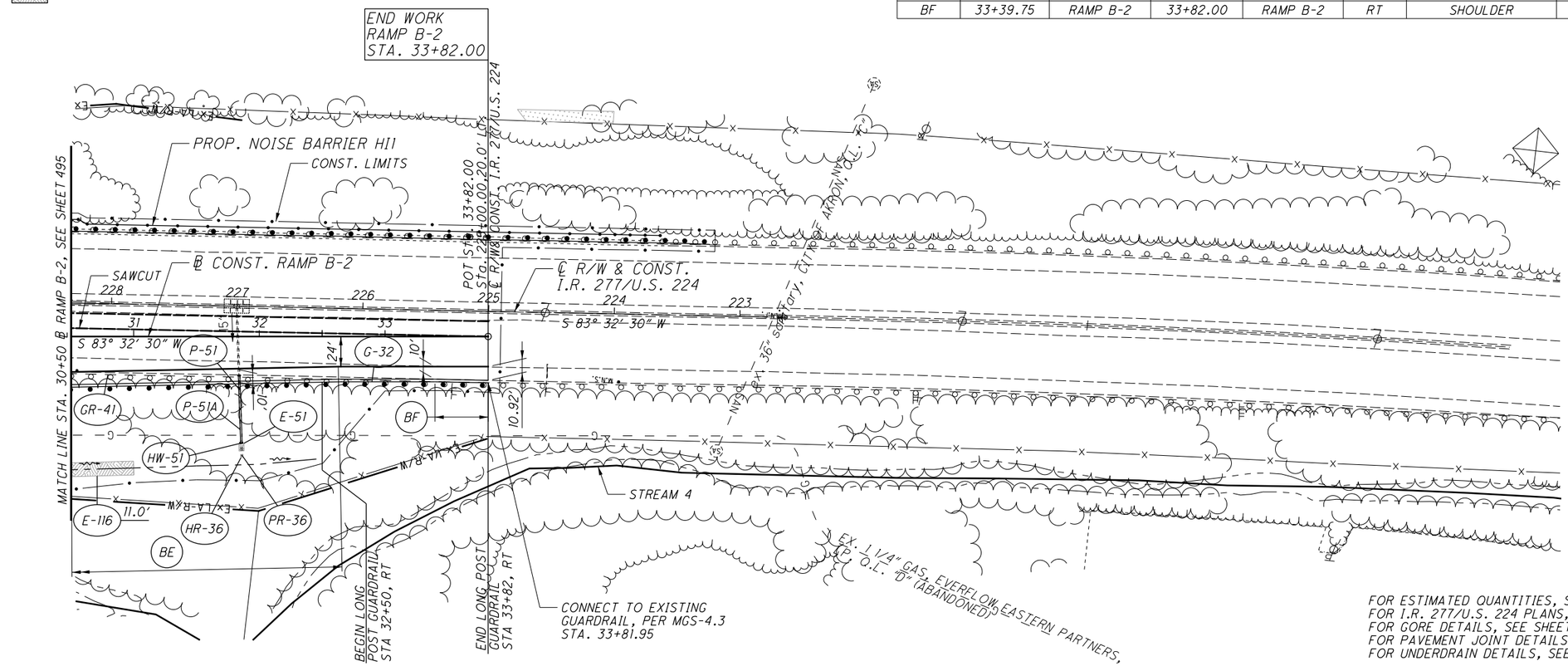
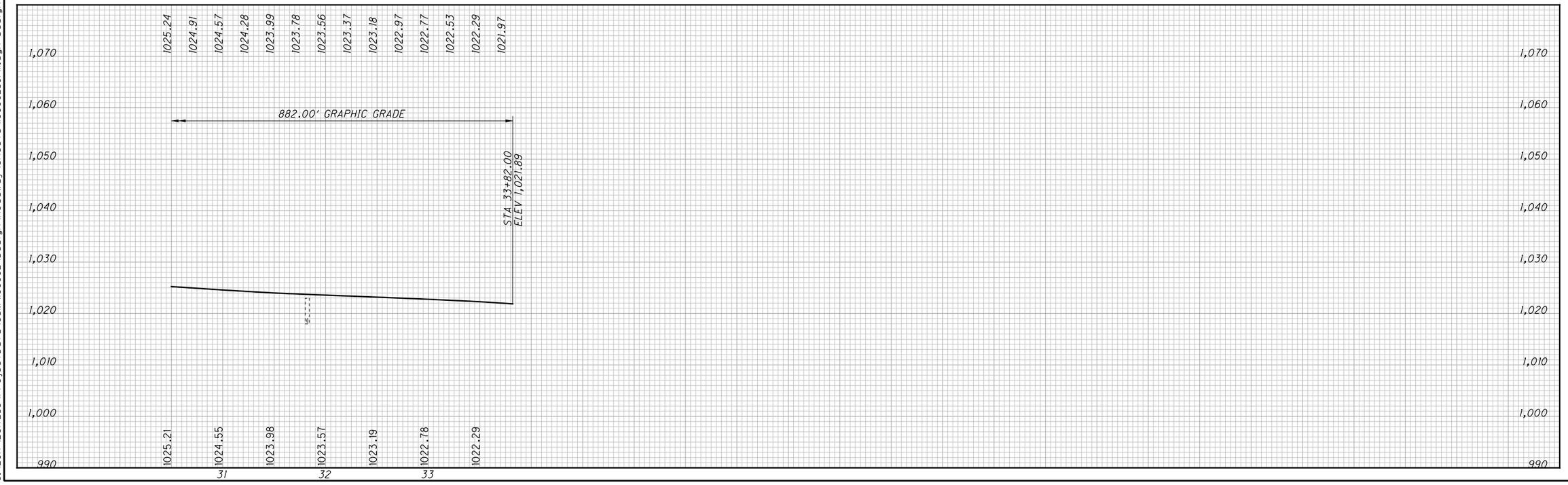
ITEM 601 - ROCK CHANNEL PROTECTION

ITEM 670 - DITCH EROSION PROTECTION

TAPER TABLE								
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
BE	24+64.81	RAMP B-2	32+64.81	RAMP B-2	RT	PAVEMENT	40.00′	24.00′	50:1
BF	33+39.75	RAMP B-2	33+82.00	RAMP B-2	RT	SHOULDER	10.00′	10.92′	46:1



FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR I.R. 277/U.S. 224 PLANS, SEE SHEET 480
FOR GORE DETAILS, SEE SHEET 853
FOR PAVEMENT JOINT DETAILS, SEE SHEET 884
FOR UNDERDRAIN DETAILS, SEE SHEET 930



HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LRK
CHECKED PJF

PLAN AND PROFILE - RAMP B-2
STA. 30+50 TO END

SUM-77/277/224
VARIOUS

496
1288

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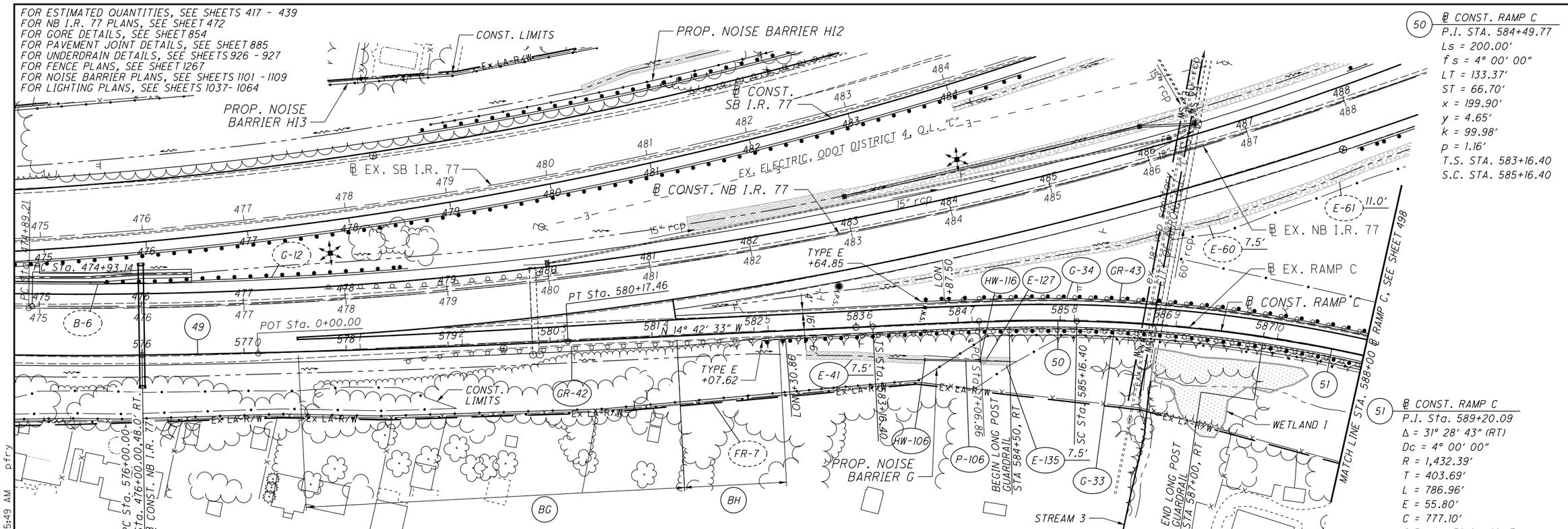
FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR NB I.R. 77 PLANS, SEE SHEET 472
FOR GORE DETAILS, SEE SHEET 854
FOR PAVEMENT JOINT DETAILS, SEE SHEET 885
FOR UNDERDRAIN DETAILS, SEE SHEETS 926 - 927
FOR FENCE PLANS, SEE SHEET 1267
FOR NOISE BARRIER PLANS, SEE SHEETS 1101 - 1109
FOR LIGHTING PLANS, SEE SHEETS 1037- 1064



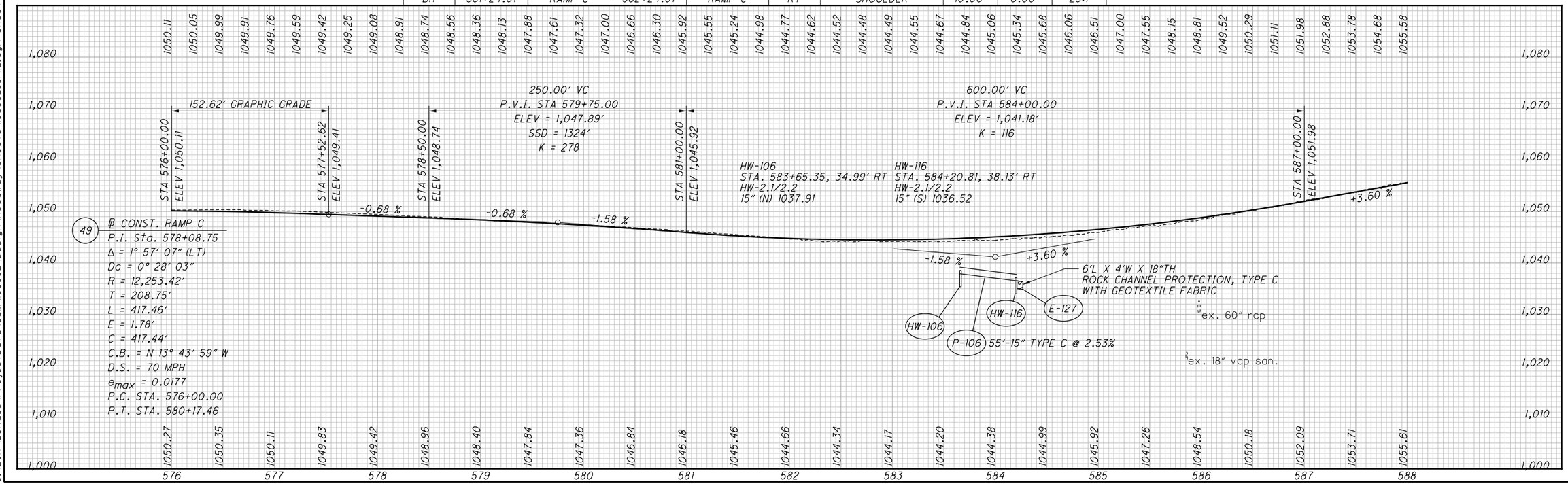
℄ CONST. RAMP C
P.I. STA. 584+49.77
Ls = 200.00'
f s = 4° 00' 00"
LT = 133.37'
ST = 66.70'
x = 199.90'
y = 4.65'
k = 99.98'
p = 1.16'
T.S. STA. 583+16.40
S.C. STA. 585+16.40

℄ CONST. RAMP C
P.I. Sta. 589+20.09
Δ = 31° 28' 43" (RT)
Dc = 4° 00' 00"
R = 1,432.39'
T = 403.69'
L = 786.96'
E = 55.80'
C = 777.10'
C.B. = N 5° 01' 48" E
D.S. = 60 MPH (SSD = 50 MPH)
e_{max} = 0.060
S.C. STA. 585+16.40
P.C.C. STA. 593+03.36

TAPER TABLE									
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
BG	577+52.62	RAMP C	581+24.01	RAMP C	LT	PAVEMENT	12.00'	16.00'	93:1
BH	581+24.01	RAMP C	582+24.01	RAMP C	RT	SHOULDER	10.00'	6.00'	25:1

ITEM 670 - DITCH EROSION PROTECTION

WETLAND AREA NOT TO BE DISTURBED



℄ CONST. RAMP C
P.I. Sta. 578+08.75
Δ = 1° 57' 07" (LT)
Dc = 0° 28' 03"
R = 12,253.42'
T = 208.75'
L = 417.46'
E = 1.78'
C = 417.44'
C.B. = N 13° 43' 59" W
D.S. = 70 MPH
e_{max} = 0.0177
P.C. STA. 576+00.00
P.T. STA. 580+17.46

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LRK
CHECKED PJF

PLAN AND PROFILE - RAMP C
BEGIN TO STA. 588+00

SUM-77 / 277 / 224
VARIOUS

497
1288

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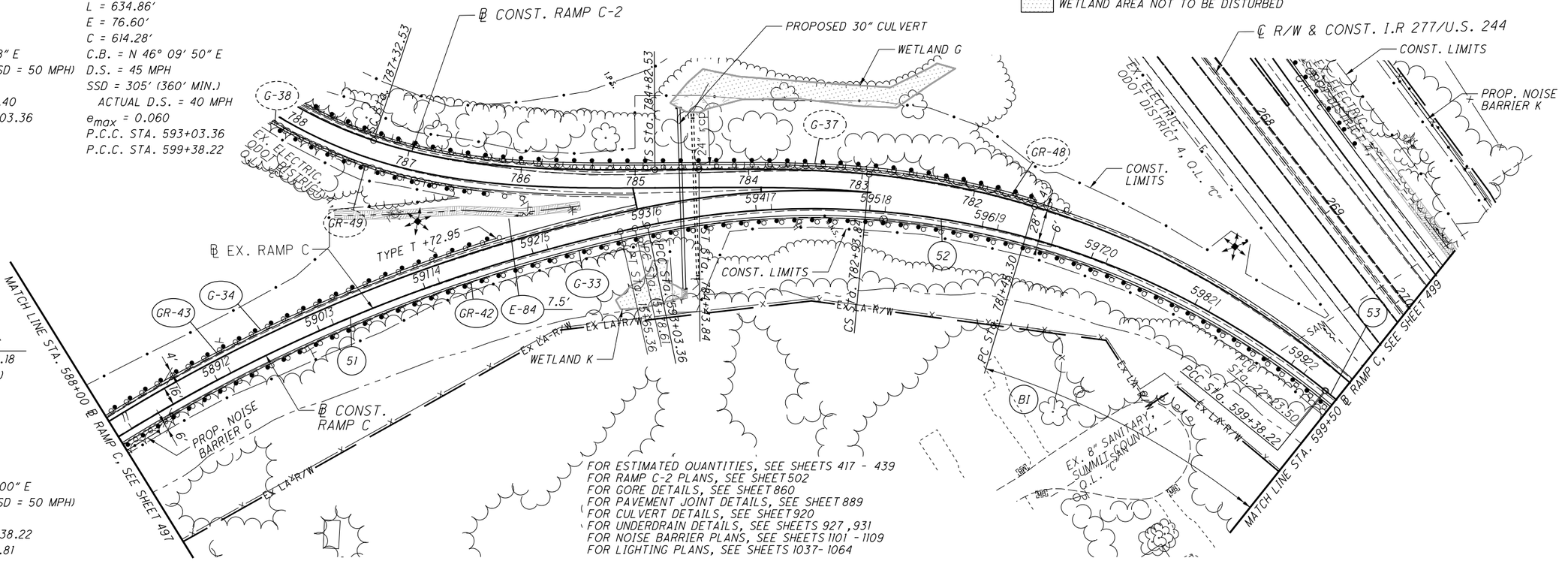
51 ℄ CONST. RAMP C
P.I. Sta. 589+20.09
Δ = 31° 28′ 43″ (RT)
Dc = 4° 00′ 00″
R = 1,432.39′
T = 403.69′
L = 786.96′
E = 55.80′
C = 777.10′
C.B. = N 5° 01′ 48″ E
D.S. = 60 MPH (SSD = 50 MPH)
e_{max} = 0.060
S.C. STA. 585+16.40
P.C.C. STA. 593+03.36

52 ℄ CONST. RAMP C
P.I. Sta. 596+43.35
Δ = 50° 47′ 20″ (RT)
Dc = 8° 00′ 00″
R = 716.20′
T = 339.99′
L = 634.86′
E = 76.60′
C = 614.28′
C.B. = N 46° 09′ 50″ E
D.S. = 45 MPH
SSD = 305′ (360′ MIN.)
ACTUAL D.S. = 40 MPH
e_{max} = 0.060
P.C.C. STA. 593+03.36
P.C.C. STA. 599+38.22

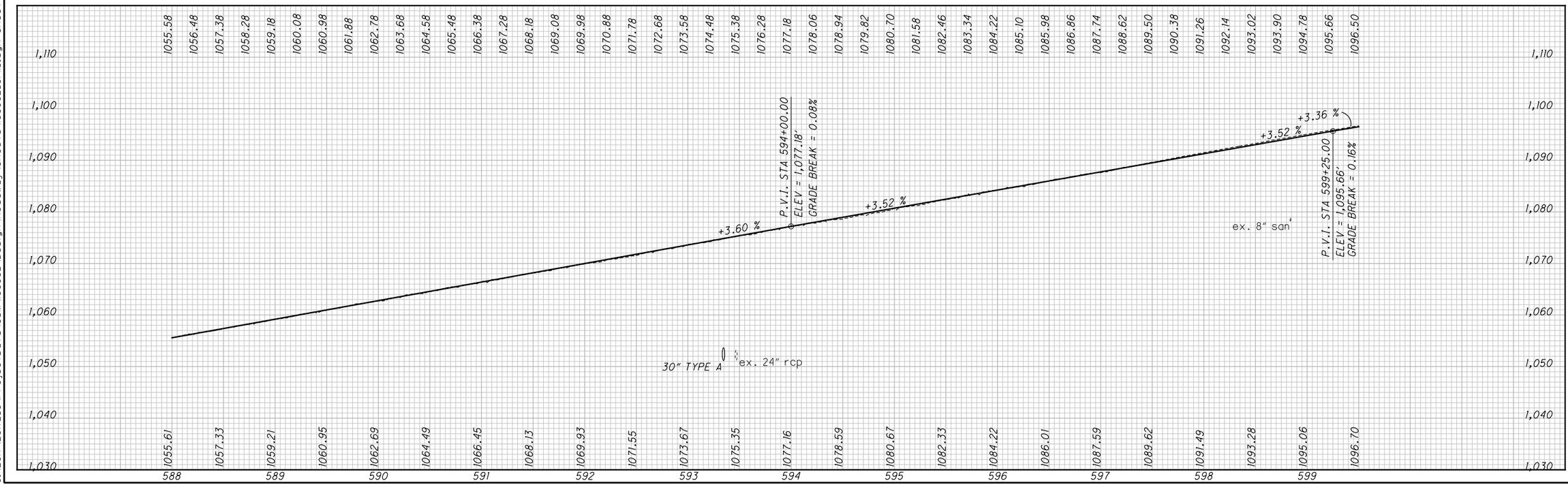
53 ℄ CONST. RAMP C
P.I. Sta. 600+38.18
Δ = 7° 59′ 01″ (RT)
Dc = 4° 00′ 00″
R = 1,432.39′
T = 99.96′
L = 199.59′
E = 3.48′
C = 199.43′
C.B. = N 75° 33′ 00″ E
D.S. = 60 MPH (SSD = 50 MPH)
e_{max} = 0.060
P.C.C. STA. 599+38.22
C.S. STA. 601+37.81

TAPER TABLE									
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
B1	596+40.00	RAMP C	600+60.00	RAMP C	LT	PAVEMENT	28.00′	16.00′	35:1

ITEM 670 - DITCH EROSION PROTECTION
ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE I
WETLAND
WETLAND AREA NOT TO BE DISTURBED



FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR RAMP C-2 PLANS, SEE SHEET 502
FOR GORE DETAILS, SEE SHEET 860
FOR PAVEMENT JOINT DETAILS, SEE SHEET 889
FOR CULVERT DETAILS, SEE SHEET 920
FOR UNDERDRAIN DETAILS, SEE SHEETS 927, 931
FOR NOISE BARRIER PLANS, SEE SHEETS 1101 - 1109
FOR LIGHTING PLANS, SEE SHEETS 1037- 1064



HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED LRK
CHECKED PJF

PLAN - RAMP C
STA. 588+00 TO STA. 599+50

SUM-77/277/224
VARIOUS

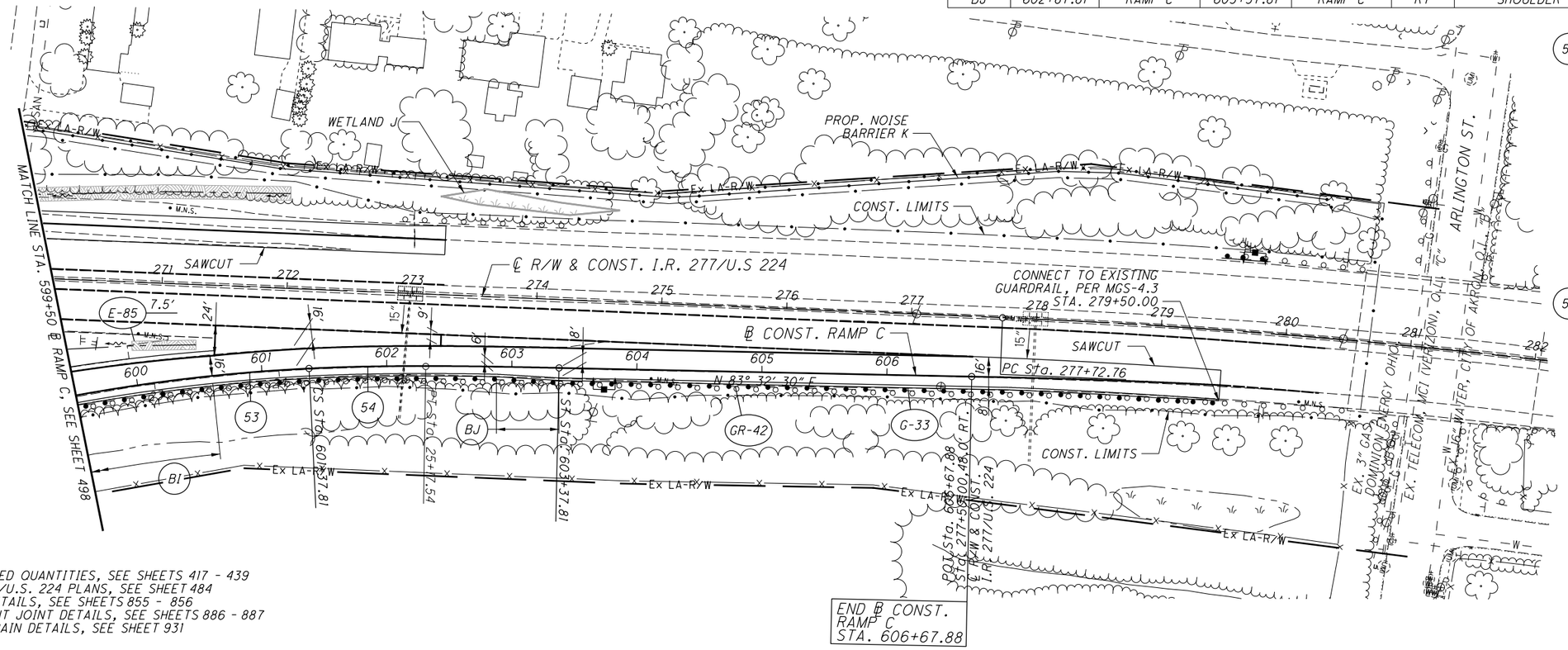
498
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\106002_GPII3.dgn Sheet 1/14/2021 8:05:52 AM pfry

ITEM 670 - DITCH EROSION PROTECTION

WETLAND AREA NOT TO BE DISTURBED

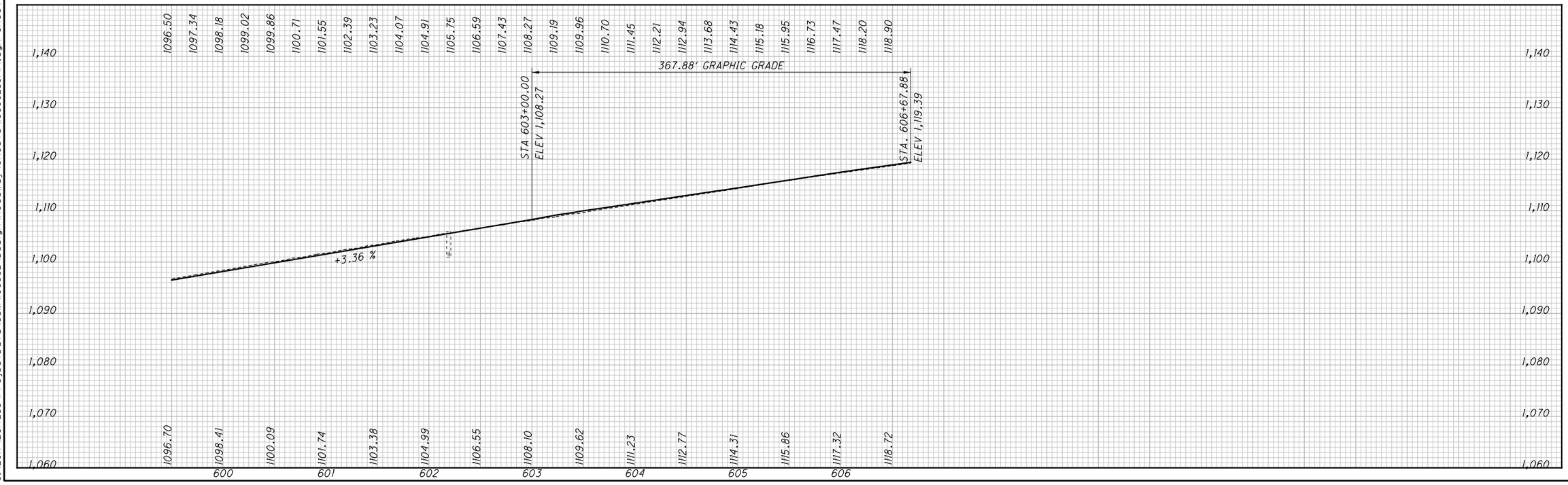
TAPER TABLE								
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
BI	596+40.00	RAMP C	600+60.00	RAMP C	LT	PAVEMENT	28.00'	16.00'	35:1
BJ	602+87.81	RAMP C	603+37.81	RAMP C	RT	SHOULDER	6.00'	8.00'	25:1



53 ℄ CONST. RAMP C
P.I. Sta. 600+38.18
Δ = 7° 59' 01" (RT)
Dc = 4° 00' 00"
R = 1,432.39'
T = 99.96'
L = 199.59'
E = 3.48'
C = 199.43'
C.B. = N 75° 33' 00" E
D.S. = 60 MPH (SSD = 50 MPH)
emax = 0.060
P.C.C. STA. 599+38.22
C.S. STA. 601+37.81

54 ℄ CONST. RAMP C
P.I. STA. 602+04.51
Ls = 200.00'
f s = 4° 00' 00"
LT = 133.37'
ST = 66.70'
x = 199.90'
y = 4.65'
k = 99.98'
p = 1.16'
C.S. STA. 601+37.81
S.T. STA. 603+37.81

FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR I.R. 277/U.S. 224 PLANS, SEE SHEET 484
FOR GORE DETAILS, SEE SHEETS 855 - 856
FOR PAVEMENT JOINT DETAILS, SEE SHEETS 886 - 887
FOR UNDERDRAIN DETAILS, SEE SHEET 931



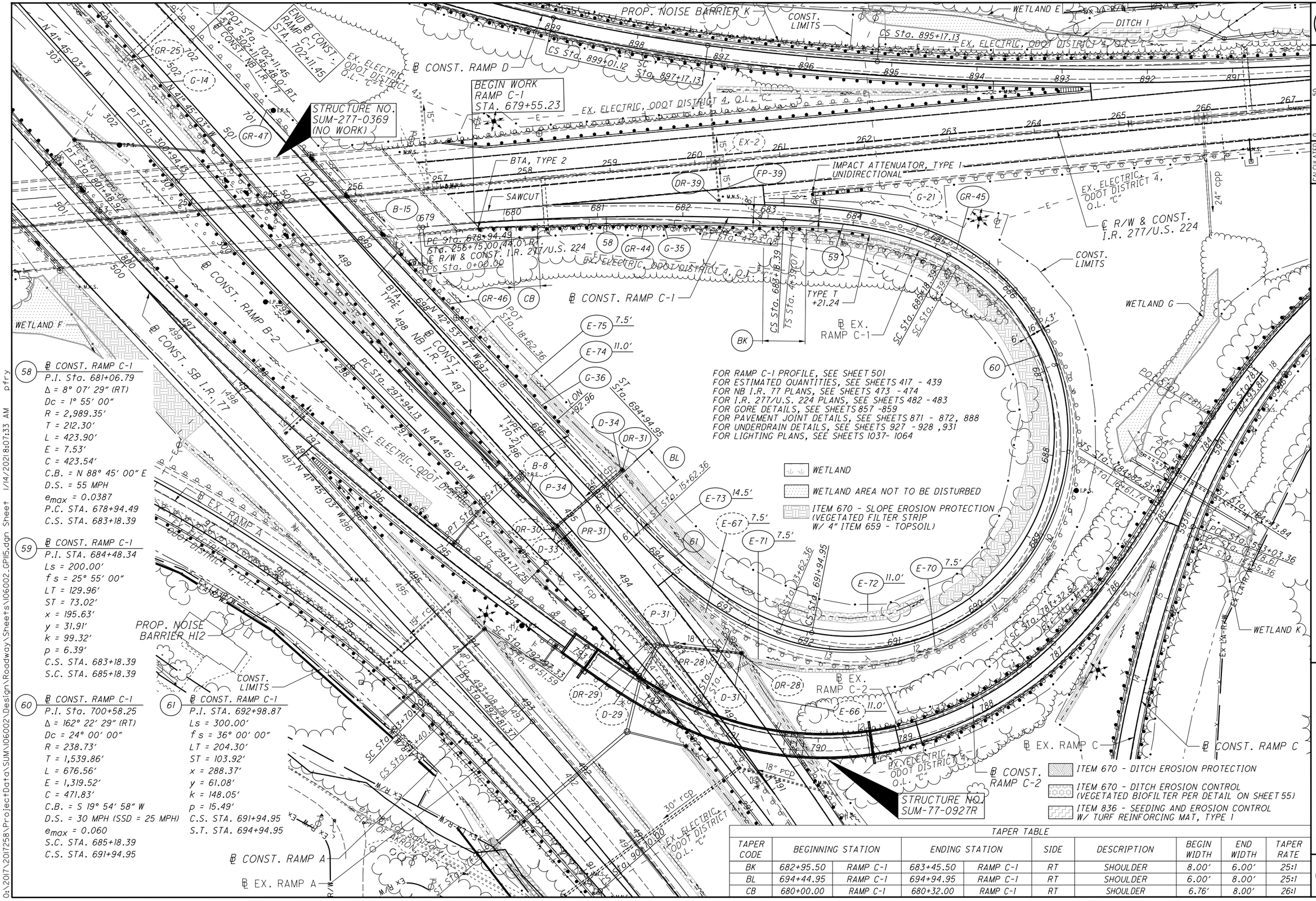
HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED LRK
CHECKED PJF

PLAN AND PROFILE - RAMP C
STA. 599+50 TO END

SUM-77/277/224
VARIOUS

499
1288

0:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_GPI14.dgn Sheet 1/14/2021 8:05:56 AM pfry


℄ CONST. RAMP C-1
P.I. Sta. 681+06.79
Δ = 8° 07′ 29″ (RT)
Dc = 1° 55′ 00″
R = 2,989.35′
T = 212.30′
L = 423.90′
E = 7.53′
C = 423.54′
C.B. = N 88° 45′ 00″ E
D.S. = 55 MPH
emax = 0.0387
P.C. STA. 678+94.49
C.S. STA. 683+18.39
℄ CONST. RAMP C-1
P.I. STA. 684+48.34
Ls = 200.00′
f s = 25° 55′ 00″
LT = 129.96′
ST = 73.02′
x = 195.63′
y = 31.91′
k = 99.32′
p = 6.39′
C.S. STA. 683+18.39
S.C. STA. 685+18.39
℄ CONST. RAMP C-1
P.I. Sta. 700+58.25
Δ = 162° 22′ 29″ (RT)
Dc = 24° 00′ 00″
R = 238.73′
T = 1,539.86′
L = 676.56′
E = 1,319.52′
C = 471.83′
C.B. = S 19° 54′ 58″ W
D.S. = 30 MPH (SSD = 25 MPH)
emax = 0.060
S.C. STA. 685+18.39
C.S. STA. 691+94.95
℄ CONST. RAMP C-1
P.I. STA. 692+98.87
Ls = 300.00′
f s = 36° 00′ 00″
LT = 204.30′
ST = 103.92′
x = 288.37′
y = 61.08′
k = 148.05′
p = 15.49′
C.S. STA. 691+94.95
S.T. STA. 694+94.95
FOR RAMP C-1 PROFILE, SEE SHEET 501
FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR NB I.R. 77 PLANS, SEE SHEETS 473 -474
FOR I.R. 277/U.S. 224 PLANS, SEE SHEETS 482 -483
FOR GORE DETAILS, SEE SHEETS 857 -859
FOR PAVEMENT JOINT DETAILS, SEE SHEETS 871 - 872, 888
FOR UNDERDRAIN DETAILS, SEE SHEETS 927 -928 ,931
FOR LIGHTING PLANS, SEE SHEETS 1037- 1064
WETLAND
WETLAND AREA NOT TO BE DISTURBED
ITEM 670 - SLOPE EROSION PROTECTION (VEGETATED FILTER STRIP W/ 4" ITEM 659 - TOPSOIL)
ITEM 670 - DITCH EROSION PROTECTION
ITEM 670 - DITCH EROSION CONTROL (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)
ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE I
TAPER TABLE
TAPER CODE | BEGINNING STATION | | ENDING STATION | | SIDE | DESCRIPTION | BEGIN WIDTH | END WIDTH | TAPER RATE
BK | 682+95.50 | RAMP C-1 | 683+45.50 | RAMP C-1 | RT | SHOULDER | 8.00′ | 6.00′ | 25:1
BL | 694+44.95 | RAMP C-1 | 694+94.95 | RAMP C-1 | RT | SHOULDER | 6.00′ | 8.00′ | 25:1
CB | 680+00.00 | RAMP C-1 | 680+32.00 | RAMP C-1 | RT | SHOULDER | 6.76′ | 8.00′ | 26:1
PROP. NOISE BARRIER K
PROP. NOISE BARRIER H12
CONST. LIMITS
BEGIN WORK RAMP C-1 STA. 679+55.23
STRUCTURE NO. SUM-277-0369 (NO WORK)
STRUCTURE NO. SUM-77-0927R
END ℄ CONST. RAMP C-1 STA. 702+11.45
POT Sta. 702+11.45 ℄ CONST. NB I.R. 77
POT Sta. 18+62.36
POT Sta. 694+94.95
PC Sta. 678+94.49
PT Sta. 300+94.45
PC Sta. 256+75.00 44.0′ RT. ℄ R/W & CONST. I.R. 277/U.S. 224
PC Sta. 0+00.00
PT Sta. 423.90
PC Sta. 297+94.13
PT Sta. 294+71.25
PT Sta. 493+08.28
PT Sta. 492+81.37
CS Sta. 683+18.39
TS Sta. 684+39.07
SC Sta. 685+18.39
SC Sta. 691+94.95
CS Sta. 691+94.95
CS Sta. 695+76.15
CS Sta. 899+01.12
SC Sta. 897+17.13
CS Sta. 895+17.13
ST Sta. 694+94.95
TYPE T +70.24
TYPE T +21.24
TYPE T +70.24
℄ CONST. RAMP A
℄ EX. RAMP A
℄ CONST. RAMP B-2
℄ CONST. SB I.R. 77
℄ CONST. NB I.R. 77
℄ CONST. RAMP C-1
℄ EX. RAMP C-1
℄ EX. RAMP C-2
℄ CONST. RAMP C-2
℄ EX. RAMP C
℄ CONST. RAMP C
℄ R/W & CONST. I.R. 277/U.S. 224
EX. ELECTRIC, ODOT DISTRICT 4, Q.L. "C"
EX. ELECTRIC, ODOT DISTRICT 4, O.L. "C"
WETLAND E
WETLAND F
WETLAND G
WETLAND K
DITCH I
BTA, TYPE 2
BTA, TYPE 1
IMPACT ATTENUATOR, TYPE I UNIDIRECTIONAL
SAWCUT
24" CPP
18" RCP
24" RCP
30" RCP
EX. LA-R/W
EX. R/W
58
59
60
61
BK
BL
CB
G-14
G-25
G-47
G-46
G-44
G-35
G-21
G-45
B-15
B-8
B-34
D-34
D-33
D-31
D-29
DR-39
DR-31
DR-30
DR-29
DR-28
FP-39
PR-31
PR-28
P-34
P-31
EX-2
E-75 7.5′
E-74 11.0′
E-73 14.5′
E-67 7.5′
E-71 7.5′
E-72 11.0′
E-70 7.5′
E-66 11.0′
HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED LRK
CHECKED PJF
PLAN - RAMP C-1
STA. 678+94.49 TO STA. 702+11.45
SUM-77/277/224
VARIOUS
500
1288
0:\2017\2017258\Project Data\SUM\06002\Design\Roadway\Sheets\06002_GPI15.dgn Sheet1 1/14/2021 8:07:33 AM pfry

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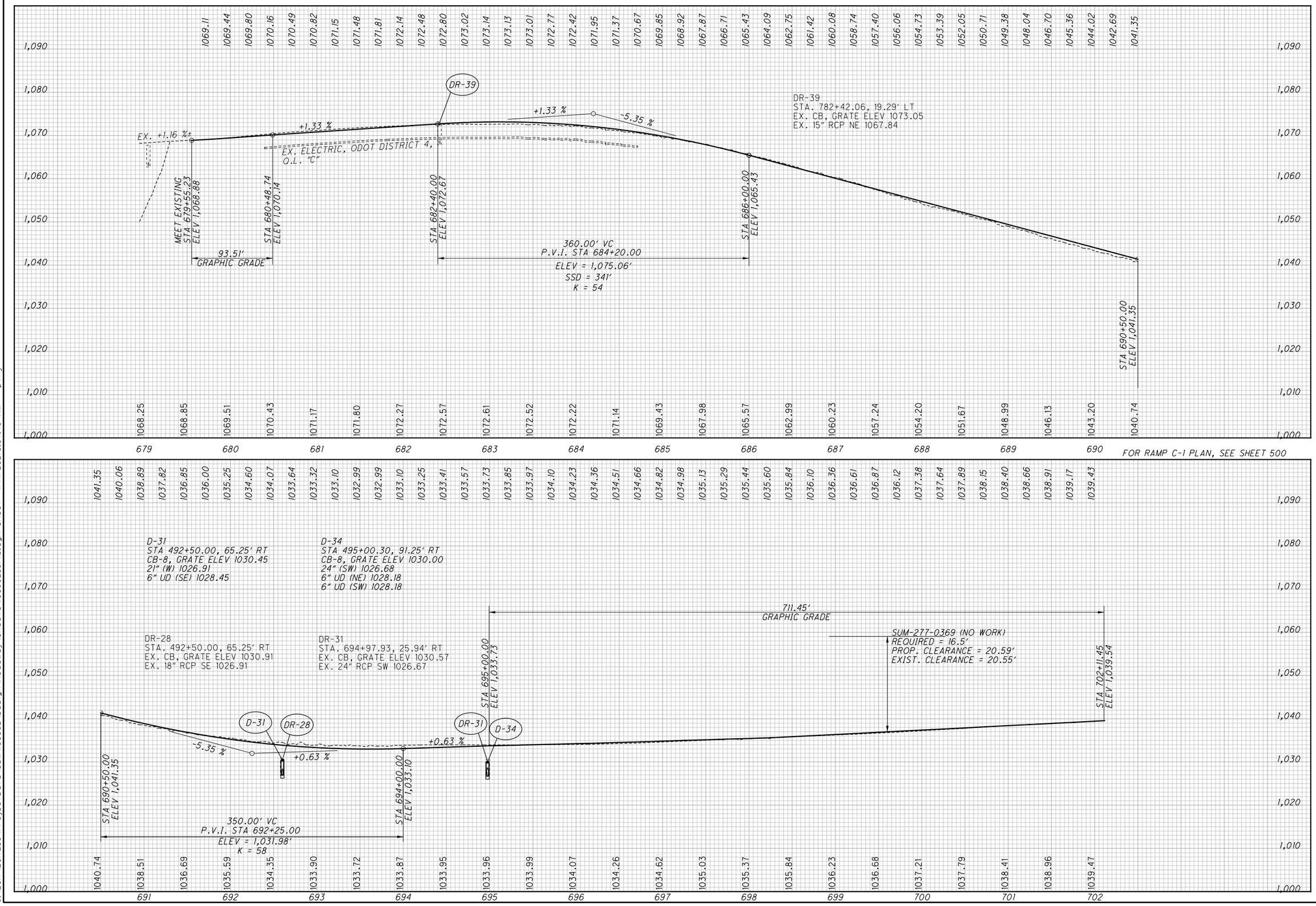


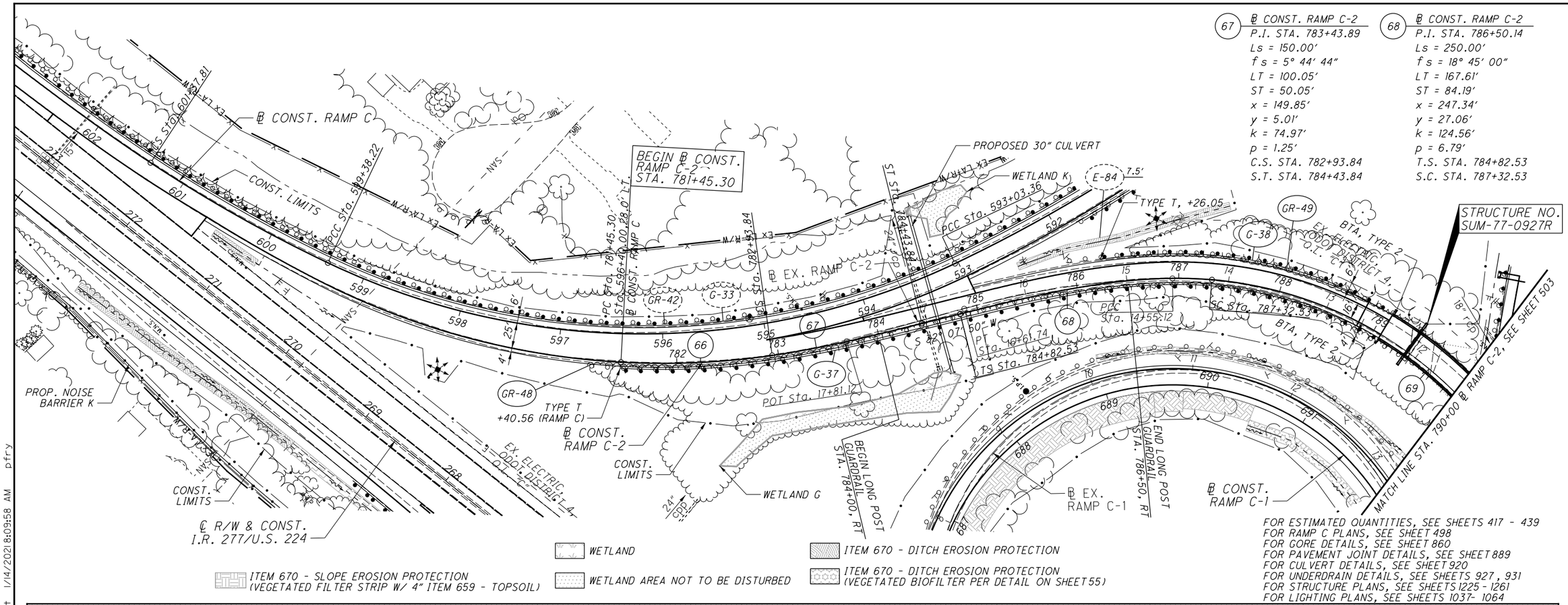
FOR RAMP C-1 PLAN, SEE SHEET 500

CALCULATED CJC
CHECKED PJF

PROFILE - RAMP C-1

STA. 678+94.99 TO STA. 702+11.45

SUM-77 / 277 / 224
VARIOUS



ITEM 670 - SLOPE EROSION PROTECTION (VEGETATED FILTER STRIP W/ 4" ITEM 659 - TOPSOIL)

WETLAND

WETLAND AREA NOT TO BE DISTURBED

ITEM 670 - DITCH EROSION PROTECTION

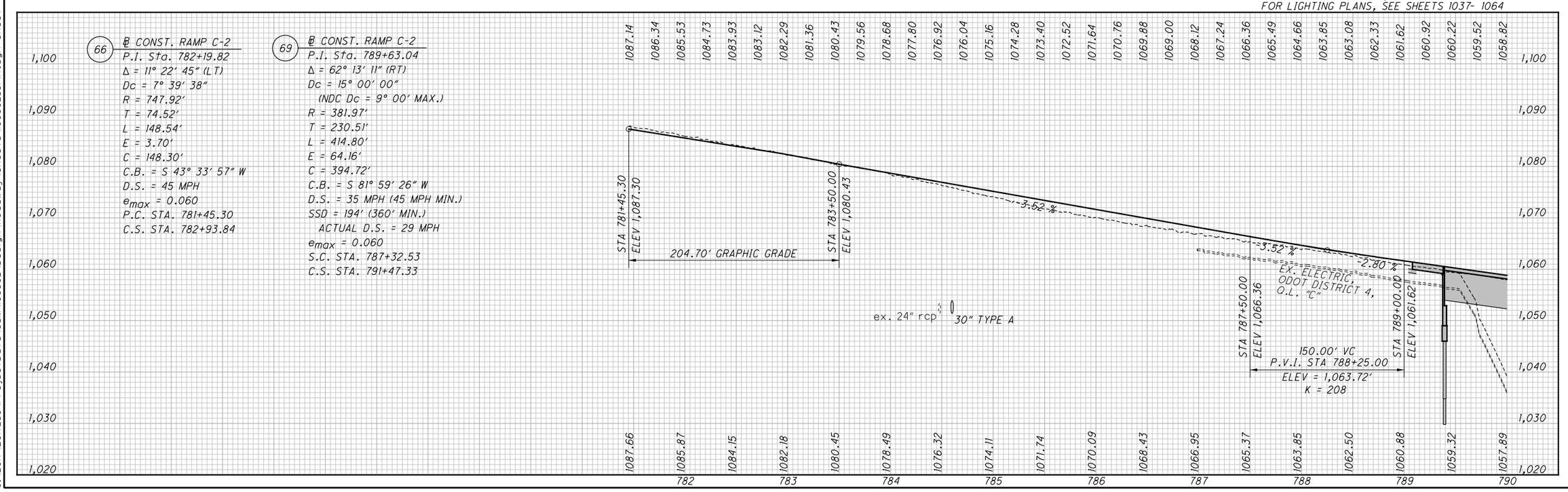
ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)

67 ℄ CONST. RAMP C-2
P.I. STA. 783+43.89
Ls = 150.00'
f s = 5° 44' 44"
LT = 100.05'
ST = 50.05'
x = 149.85'
y = 5.01'
k = 74.97'
p = 1.25'
C.S. STA. 782+93.84
S.T. STA. 784+43.84

68 ℄ CONST. RAMP C-2
P.I. STA. 786+50.14
Ls = 250.00'
f s = 18° 45' 00"
LT = 167.61'
ST = 84.19'
x = 247.34'
y = 27.06'
k = 124.56'
p = 6.79'
T.S. STA. 784+82.53
S.C. STA. 787+32.53

66 ℄ CONST. RAMP C-2
P.I. Sta. 782+19.82
Δ = 11° 22' 45" (LT)
Dc = 7° 39' 38"
R = 747.92'
T = 74.52'
L = 148.54'
E = 3.70'
C = 148.30'
C.B. = S 43° 33' 57" W
D.S. = 45 MPH
e_{max} = 0.060
P.C. STA. 781+45.30
C.S. STA. 782+93.84

69 ℄ CONST. RAMP C-2
P.I. Sta. 789+63.04
Δ = 62° 13' 11" (RT)
Dc = 15° 00' 00"
(NDC Dc = 9° 00' MAX.)
R = 381.97'
T = 230.51'
L = 414.80'
E = 64.16'
C = 394.72'
C.B. = S 81° 59' 26" W
D.S. = 35 MPH (45 MPH MIN.)
SSD = 194' (360' MIN.)
ACTUAL D.S. = 29 MPH
e_{max} = 0.060
S.C. STA. 787+32.53
C.S. STA. 791+47.33



FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR RAMP C PLANS, SEE SHEET 498
FOR GORE DETAILS, SEE SHEET 860
FOR PAVEMENT JOINT DETAILS, SEE SHEET 889
FOR CULVERT DETAILS, SEE SHEET 920
FOR UNDERDRAIN DETAILS, SEE SHEETS 927, 931
FOR STRUCTURE PLANS, SEE SHEETS 1225 - 1261
FOR LIGHTING PLANS, SEE SHEETS 1037- 1064

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LRK
CHECKED PJF

PLAN AND PROFILE - RAMP C-2
BEGIN ℄ STA. 781+45.30 TO STA. 790+00

SUM-77 / 277 / 224
VARIOUS

502
1288

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_GPH17.dgn Sheet 1/14/2021 8:09:58 AM pfry

TAPER TABLE									
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
BX	795+95.44	RAMP C-2	796+95.44	RAMP C-2	RT	SHOULDER	4.00'	8.00'	25:1

STRUCTURE NO. SUM-77-0927R

℄ CONST. RAMP B-2

℄ CONST. RAMP C-2
P.I. Sta. 789+63.04
Δ = 62° 13' 11" (RT)
Dc = 15° 00' 00"
(NDC Dc = 9° 00' MAX.)
R = 381.97'
T = 230.51'
L = 414.80'
E = 64.16'
C = 394.72'
C.B. = S 81° 59' 26" W
D.S. = 35 MPH (45 MPH MIN.)
SSD = 194' (360' MIN.)
ACTUAL D.S. = 29 MPH
emax = 0.060
S.C. STA. 787+32.53
C.S. STA. 791+47.33

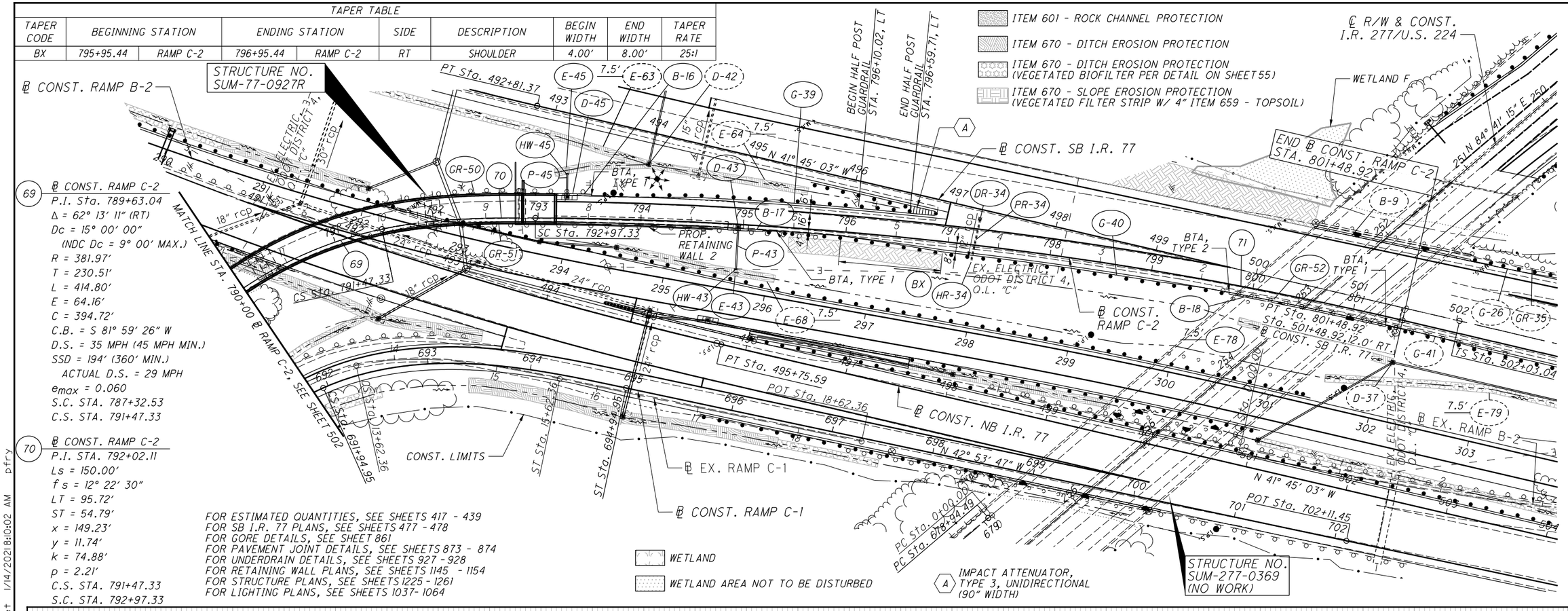
℄ CONST. RAMP C-2
P.I. STA. 792+02.11
Ls = 150.00'
fs = 12° 22' 30"
LT = 95.72'
ST = 54.79'
x = 149.23'
y = 11.74'
k = 74.88'
p = 2.21'
C.S. STA. 791+47.33
S.C. STA. 792+97.33

FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR SB I.R. 77 PLANS, SEE SHEETS 477 - 478
FOR GORE DETAILS, SEE SHEET 861
FOR PAVEMENT JOINT DETAILS, SEE SHEETS 873 - 874
FOR UNDERDRAIN DETAILS, SEE SHEETS 927 - 928
FOR RETAINING WALL PLANS, SEE SHEETS 1145 - 1154
FOR STRUCTURE PLANS, SEE SHEETS 1225 - 1261
FOR LIGHTING PLANS, SEE SHEETS 1037- 1064

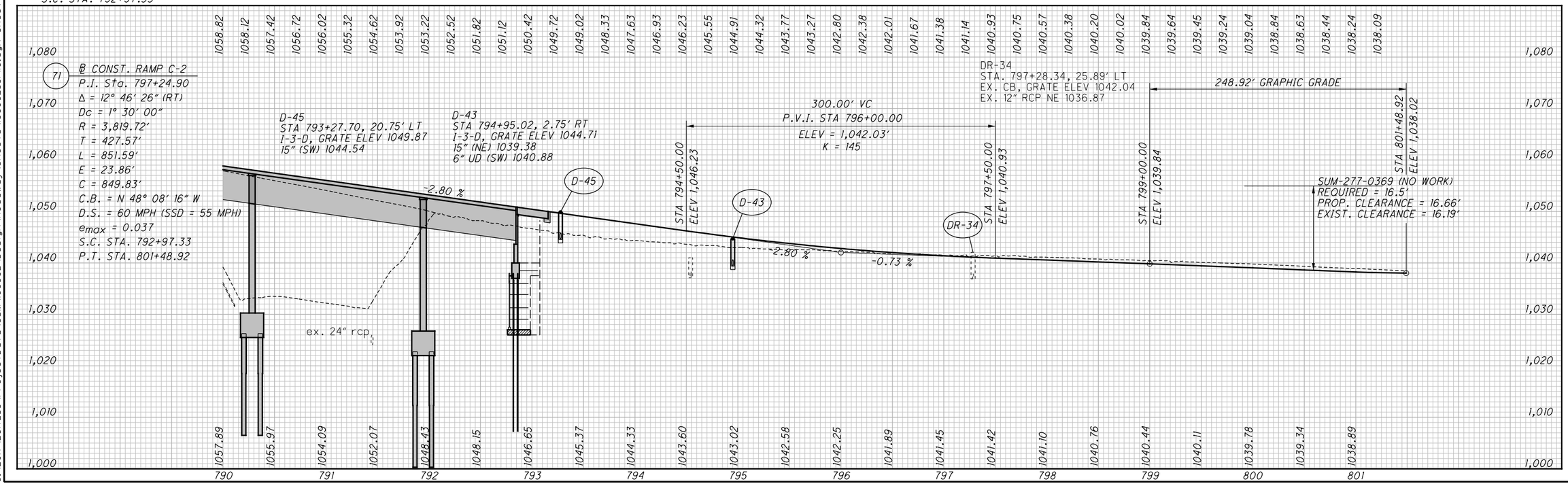
ITEM 601 - ROCK CHANNEL PROTECTION
ITEM 670 - DITCH EROSION PROTECTION
ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)
ITEM 670 - SLOPE EROSION PROTECTION (VEGETATED FILTER STRIP W/ 4" ITEM 659 - TOPSOIL)

WETLAND
WETLAND AREA NOT TO BE DISTURBED

(A) IMPACT ATTENUATOR, TYPE 3, UNIDIRECTIONAL (90" WIDTH)



71 ℄ CONST. RAMP C-2
P.I. Sta. 797+24.90
Δ = 12° 46' 26" (RT)
Dc = 1° 30' 00"
R = 3,819.72'
T = 427.57'
L = 851.59'
E = 23.86'
C = 849.83'
C.B. = N 48° 08' 16" W
D.S. = 60 MPH (SSD = 55 MPH)
emax = 0.037
S.C. STA. 792+97.33
P.T. STA. 801+48.92



CALCULATED LRK
CHECKED PJF

PROFILE - RAMP C-2
790+00 TO END

PLAN AND PROFILE
STA. 790+00 TO END

SUM-77 / 277 / 224
VARIOUS

503
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_GP116.dgn Sheet 1/14/2021 8:10:02 AM pfry

(76) ℄ CONST. RAMP D
P.I. Sta. 891+58.50
Δ = 8° 59′ 04″ (RT)
Dc = 1° 15′ 00″
R = 4,583.66′
T = 360.12′
L = 718.75′
E = 14.12′
C = 718.02′
C.B. = S 89° 10′ 47″ W
D.S. = 65 MPH
emax = 0.036
P.C. STA. 887+98.38
C.S. STA. 895+17.13

(77) ℄ CONST. RAMP D
P.I. STA. 896+29.68
Ls = 200.00′
fs = 4° 00′ 00″
LT = 112.54′
ST = 87.54′
x = 199.87′
y = 6.11′
k = 99.98′
p = 0.44′
C.S. STA. 895+17.13
S.C. STA. 897+17.13

TAPER TABLE

TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
BM	889+33.61	RAMP D	892+66.83	RAMP D	LT	PAVEMENT	12.00′	16.00′	83:1
BN	892+66.83	RAMP D	893+66.83	RAMP D	RT	SHOULDER	10.00′	6.00′	25:1

(A) IMPACT ATTENUATOR, TYPE 3, UNDIRECTIONAL (69″ WIDTH)

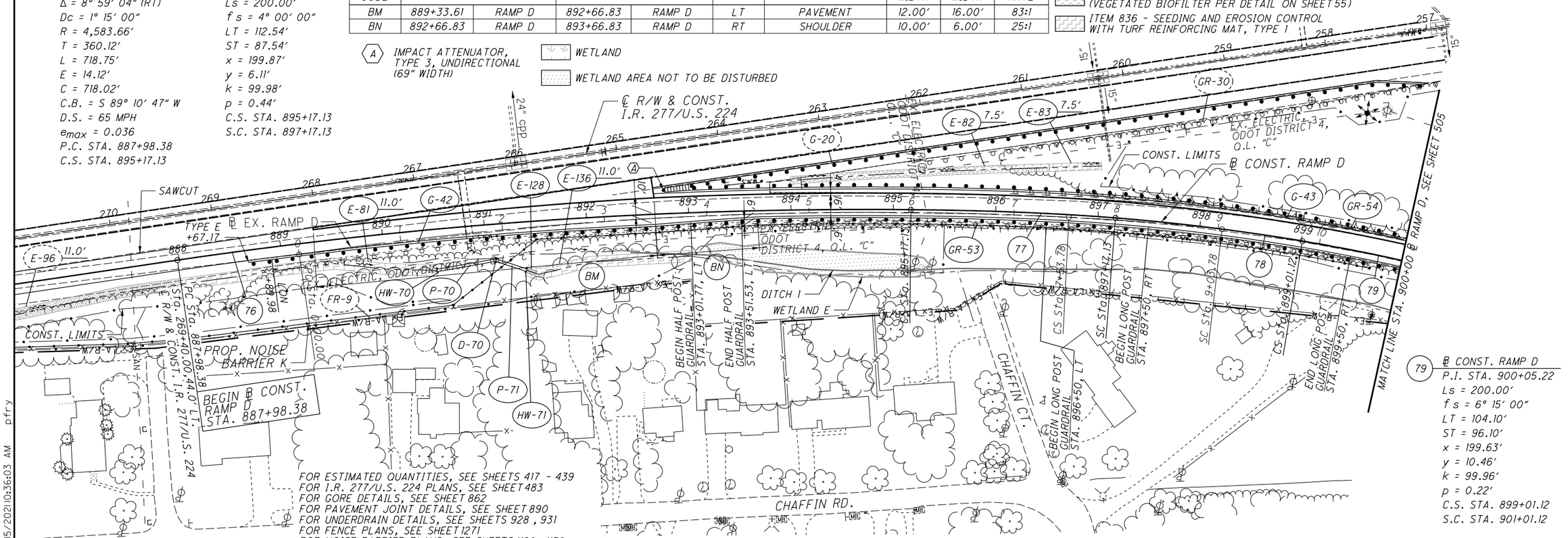
WETLAND

WETLAND AREA NOT TO BE DISTURBED

ITEM 670 - DITCH EROSION PROTECTION

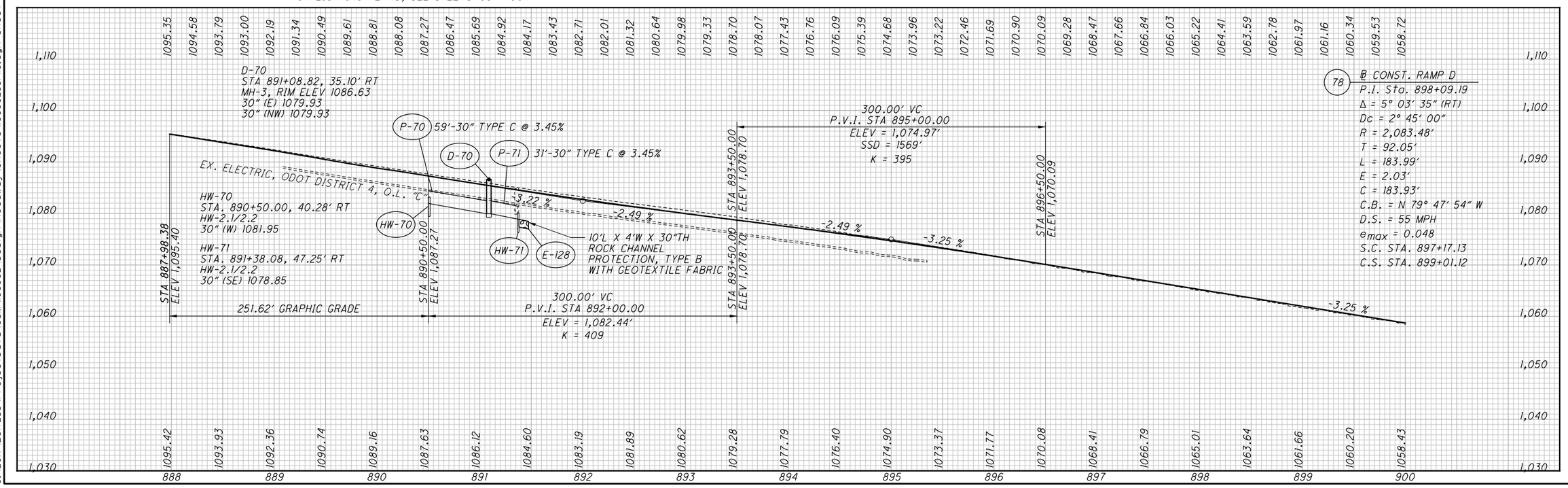
ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)

ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1



FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR I.R. 277/U.S. 224 PLANS, SEE SHEET 483
FOR GORE DETAILS, SEE SHEET 862
FOR PAVEMENT JOINT DETAILS, SEE SHEET 890
FOR UNDERDRAIN DETAILS, SEE SHEETS 928 , 931
FOR FENCE PLANS, SEE SHEET 1271
FOR NOISE BARRIER PLANS, SEE SHEETS 1126 - 1132
FOR LIGHTING PLANS, SEE SHEETS 1037- 1064

(79) ℄ CONST. RAMP D
P.I. STA. 900+05.22
Ls = 200.00′
fs = 6° 15′ 00″
LT = 104.10′
ST = 96.10′
x = 199.63′
y = 10.46′
k = 99.96′
p = 0.22′
C.S. STA. 899+01.12
S.C. STA. 901+01.12



(78) ℄ CONST. RAMP D
P.I. Sta. 898+09.19
Δ = 5° 03′ 35″ (RT)
Dc = 2° 45′ 00″
R = 2,083.48′
T = 92.05′
L = 183.99′
E = 2.03′
C = 183.93′
C.B. = N 79° 47′ 54″ W
D.S. = 55 MPH
emax = 0.048
S.C. STA. 897+17.13
C.S. STA. 899+01.12

CALCULATED LRK
CHECKED PJF

HORIZONTAL SCALE IN FEET 0 25 50 100

PLAN AND PROFILE - RAMP D
BEGIN TO STA. 900+00

SUM-77 / 277 / 224
VARIOUS

504
1288

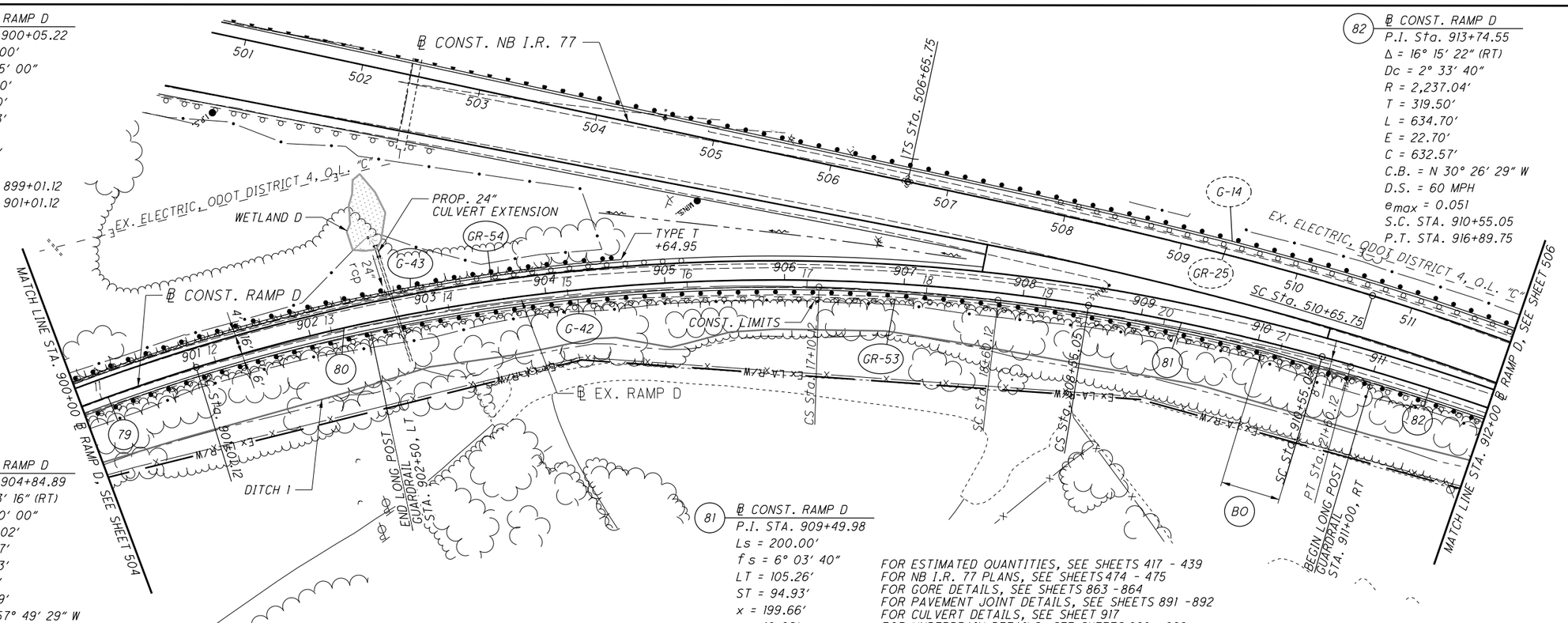
D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_GP118.dgn Sheet 1/15/2021 10:36:03 AM pfry

79 ℄ CONST. RAMP D
P.I. STA. 900+05.22
Ls = 200.00′
f s = 6° 15′ 00″
LT = 104.10′
ST = 96.10′
x = 199.63′
y = 10.46′
k = 99.96′
p = 0.22′
C.S. STA. 899+01.12
S.C. STA. 901+01.12

80 ℄ CONST. RAMP D
P.I. Sta. 904+84.89
Δ = 26° 23′ 16″ (RT)
Dc = 3° 30′ 00″
R = 1,637.02′
T = 383.77′
L = 753.93′
E = 44.38′
C = 747.29′
C.B. = N 57° 49′ 29″ W
D.S. = 50 MPH
e_{max} = 0.048
S.C. STA. 901+01.12
C.S. STA. 908+55.05

81 ℄ CONST. RAMP D
P.I. STA. 909+49.98
Ls = 200.00′
f s = 6° 03′ 40″
LT = 105.26′
ST = 94.93′
x = 199.66′
y = 10.02′
k = 99.96′
p = 0.27′
C.S. STA. 908+55.05
S.C. STA. 910+55.05

82 ℄ CONST. RAMP D
P.I. Sta. 913+74.55
Δ = 16° 15′ 22″ (RT)
Dc = 2° 33′ 40″
R = 2,237.04′
T = 319.50′
L = 634.70′
E = 22.70′
C = 632.57′
C.B. = N 30° 26′ 29″ W
D.S. = 60 MPH
e_{max} = 0.051
S.C. STA. 910+55.05
P.T. STA. 916+89.75



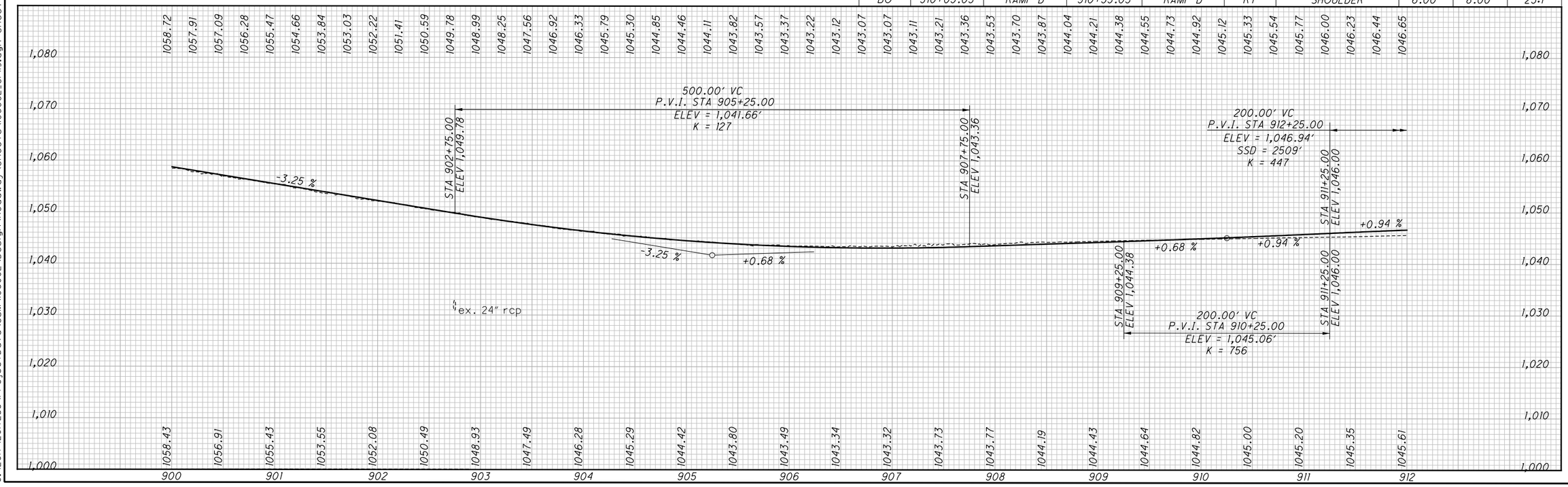
FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR NB I.R. 77 PLANS, SEE SHEETS474 - 475
FOR GORE DETAILS, SEE SHEETS 863 - 864
FOR PAVEMENT JOINT DETAILS, SEE SHEETS 891 -892
FOR CULVERT DETAILS, SEE SHEET 917
FOR UNDERDRAIN DETAILS, SEE SHEETS 928 - 929

WETLAND

WETLAND AREA NOT TO BE DISTURBED

TAPER TABLE

TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
BO	910+05.05	RAMP D	910+55.05	RAMP D	RT	SHOULDER	6.00′	8.00′	25:1



CALCULATED LRK
CHECKED PJF

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN AND PROFILE - RAMP D
STA. 900+00 TO STA. 912+00

SUM-77 / 277 / 224
VARIOUS

505
1288

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ITEM 670 - DITCH EROSION PROTECTION

ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)

PROPOSED WORK (PAVEMENT, APPROACH SLAB, EARTHWORK, GUARDRAIL, ETC.) BY OTHERS (SUM-76/77/8-8.42/9.77/0.00 DB, PID 102329)

TAPER TABLE								
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
AD	914+75.00	RAMP D	915+06.25	RAMP D	RT	SHOULDER	8.00'	6.75'	25:1
AE	914+93.91	RAMP D	915+74.42	RAMP D	RT	PAVEMENT	16.00'	14.38'	50:1

END PROJECT
END WORK
℄ CONST. SB I.R. 77
STA. 514+95.00
S.L.M. 9.74

BEGIN PROJECT
SUM-76/77/8-
8.42/9.77/0.00 DB
(PID 102329)

E171 (457) E180 (428)

℄ CONST. SB I.R. 77

℄ CONST. RAMP B

STRUCTURE NO.
SUM-77-0973L
(NO WORK)

END ℄ CONST.
RAMP B
STA. 219+25.00

BEGIN
℄ EX. RAMP B
STA. 0+00.00

POT Sta. 219+25.00

℄ POT Sta. 0+00.00

℄ EX. RAMP B

MATCH LINE STA. 912+00 ℄ RAMP D, SEE SHEET 505

EX. ELECTRIC, ODOT DISTRICT 4, O.L.

"C" CONST. LIMITS

EX. TELECOM AT&T O.L.

EX. 12" WATER CITY OF AKRON O.L.

G-42 SEE NOTE 'A'

GR-25 G-14

GR-53 AD

82

AE

6.75'

8'

BTA, TYPE 1

℄ CONST. RAMP D

℄ CONST. NB I.R. 77

DITCH I

END WORK
℄ CONST. NB I.R. 77
STA. 514+85.00

END WORK
RAMP D
STA. 914+89.43

END LONG POST-TO-POST GUARDRAIL
STA. 915+47.67, RT

WATERLOO RD.

PT Sta. 916+89.75
Sta. 516+89.75 48.0' RT.
℄ CONST. NB I.R. 77

ALLENDALE AVE.

BS Sta. 523+01.37

ES Sta. 523+44.42

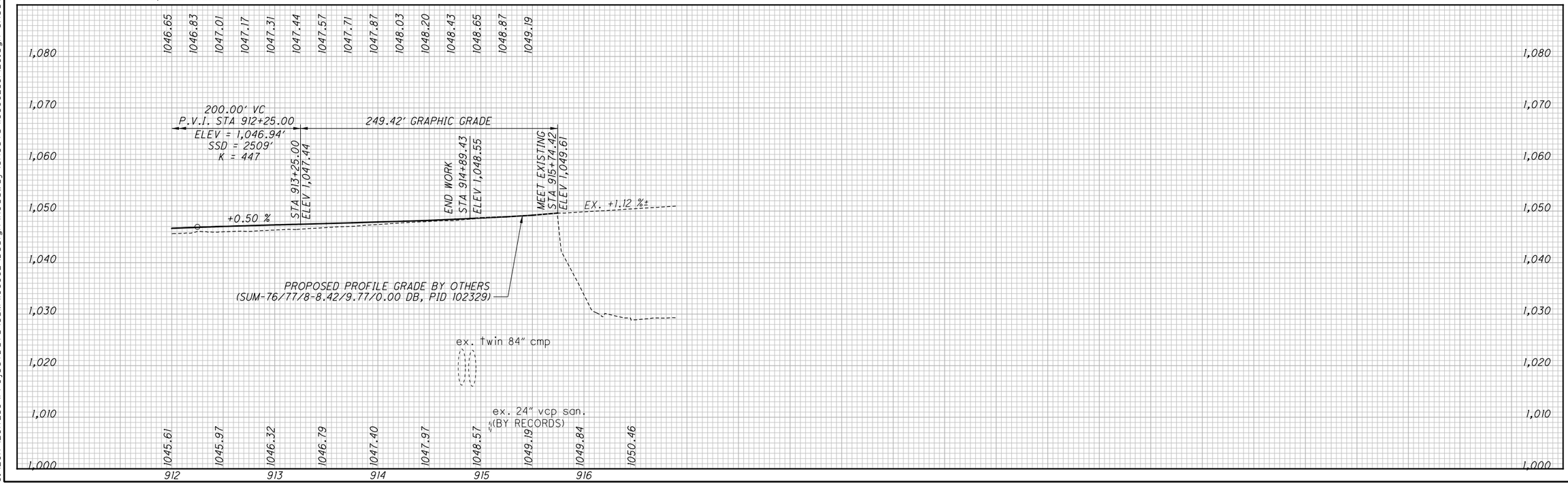
STRUCTURE NO.
SUM-77-0973R
(NO WORK)

END ℄ CONST.
RAMP D
STA. 916+89.75

82 ℄ CONST. RAMP D
P.I. Sta. 913+74.55
Δ = 16° 15' 22" (RT)
Dc = 2° 33' 40"
R = 2,237.04'
T = 319.50'
L = 634.70'
E = 22.70'
C = 632.57'
C.B. = N 30° 26' 29" W
D.S. = 60 MPH
emax = 0.051
S.C. STA. 910+55.05
P.T. STA. 916+89.75

NOTE 'A'
PROPOSED GUARDRAIL SHALL CONNECT TO THE GUARDRAIL AND BTA BEING INSTALLED BY OTHERS IN THE PID 102329 PROJECT

FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR NB I.R. 77 PLANS, SEE SHEET 475
FOR GORE DETAILS, SEE SHEET 864
FOR PAVEMENT JOINT DETAILS, SEE SHEET 892
FOR UNDERDRAIN DETAILS, SEE SHEET 929



HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LRK
CHECKED PJF

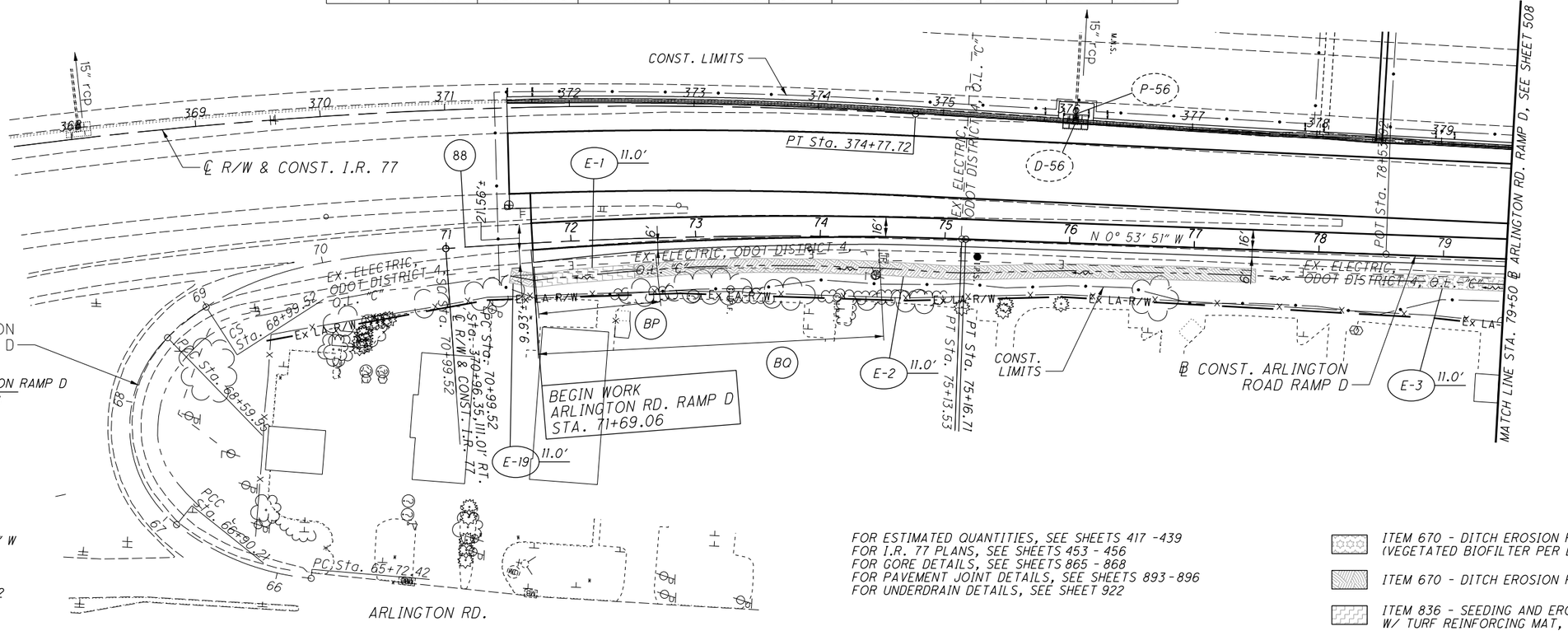
PLAN AND PROFILE - RAMP D
STA. 912+00 TO END

SUM-77/277/224
VARIOUS

506
1288

D:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_GP120.dgn Sheet1 1/15/2021 10:36:32 AM pfry

TAPER TABLE									
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
BP	71+69.06	ARL. RAMP D	72+67.31	ARL. RAMP D	RT	SHOULDER	9.93′	6.00′	25:1
BQ	71+69.06	ARL. RAMP D	74+47.06	ARL. RAMP D	LT/RT	PAVEMENT	21.56′	16.00′	50:1

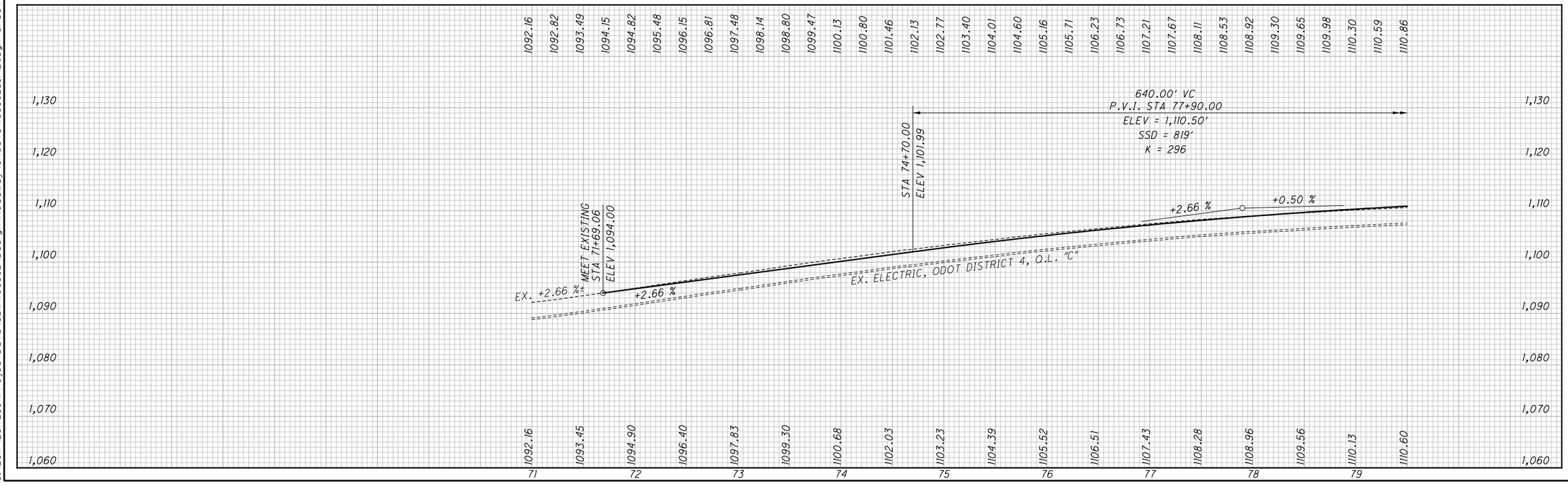


FOR ESTIMATED QUANTITIES, SEE SHEETS 417 -439
FOR I.R. 77 PLANS, SEE SHEETS 453 - 456
FOR GORE DETAILS, SEE SHEETS 865 - 868
FOR PAVEMENT JOINT DETAILS, SEE SHEETS 893-896
FOR UNDERDRAIN DETAILS, SEE SHEET 922

ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)

ITEM 670 - DITCH EROSION PROTECTION

ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE I



HORIZONTAL SCALE IN FEET
0 25 50 100

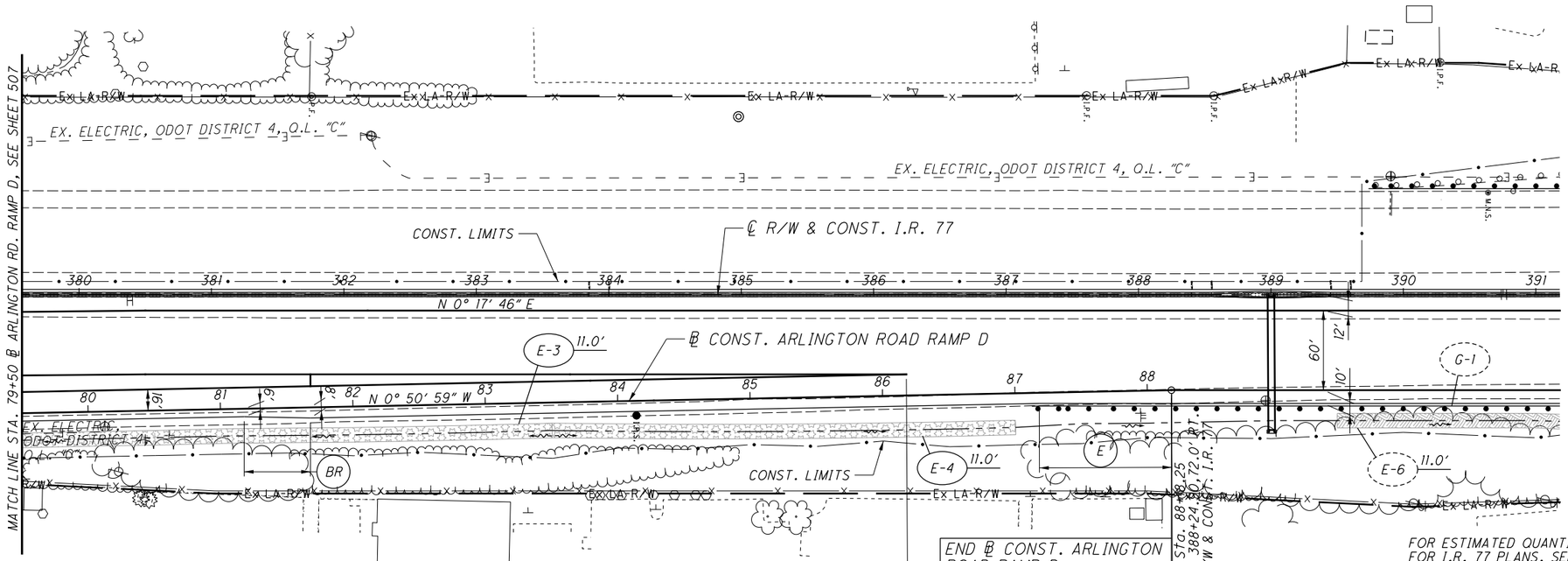
CALCULATED LRK
CHECKED PJF

PLAN AND PROFILE- ARLINGTON RD. RAMP D
BEGIN TO STA. 79+50

SUM-77/277/224
VARIOUS

507
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\106002_GPI21.dgn Sheet1 1/14/2021 8:07 PM pfry



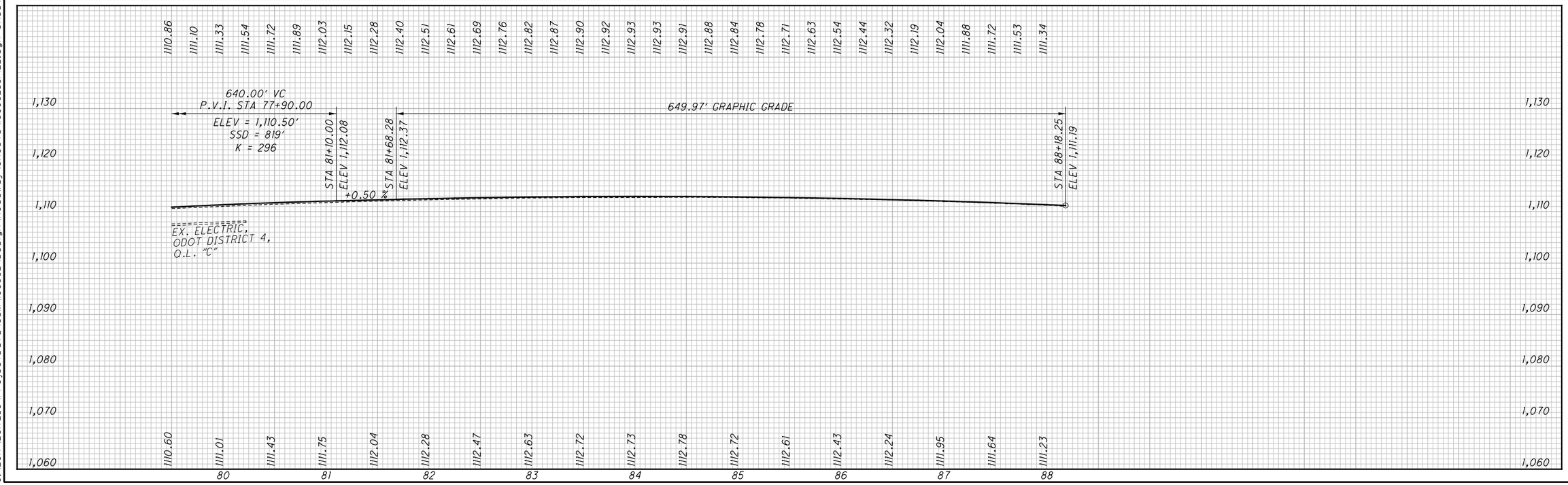
FOR ESTIMATED QUANTITIES, SEE SHEETS 417 -439
FOR I.R. 77 PLANS, SEE SHEETS 453 - 456
FOR GORE DETAILS, SEE SHEETS 865 - 868
FOR PAVEMENT JOINT DETAILS, SEE SHEETS 893-896
FOR UNDERDRAIN DETAILS, SEE SHEET 922

ITEM 670 - DITCH EROSION CONTROL

ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)

TAPER TABLE

TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
D	86+18.37	ARL. RAMP D	88+18.25	ARL. RAMP D	RT	PAVEMENT	16.00'	12.00'	50:1
E	87+18.15	ARL. RAMP D	88+18.25	ARL. RAMP D	RT	SHOULDER	8.00'	10.00'	50:1
BR	81+17.83	ARL. RAMP D	81+67.80	ARL. RAMP D	RT	SHOULDER	6.00'	8.00'	25:1



N

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LRK
CHECKED PJF

PLAN AND PROFILE - ARLINGTON RD. RAMP D STA. 79+50 TO END

SUM-77/277/224
VARIOUS

508
1288

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TAPER TABLE								
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
BS	24+63.23	WARNER RD.	24+70.60	WARNER RD.	LT	SHOULDER	4.00′	2.95′	7:1
BT	25+03.51	WARNER RD.	25+13.44	WARNER RD.	RT	SHOULDER	4.00′	5.99′	5:1
BU	26+07.65	WARNER RD.	26+88.48	WARNER RD.	LT	SHOULDER	2.95′	1.57′	59:1
BV	27+16.82	WARNER RD.	27+70.00	WARNER RD.	RT	SHOULDER	8.53′	6.40′	25:1
BW	27+38.16	WARNER RD.	27+48.86	WARNER RD.	LT	SHOULDER	1.57′	2.00′	25:1
CA	26+07.65	WARNER RD.	27+16.82	WARNER RD.	RT	SHOULDER	5.99′	8.53′	43:1
CC	24+50.00	WARNER RD.	24+66.00	WARNER RD.	LT	PAVEMENT	12.46′	12.00′	35:1
CD	24+50.00	WARNER RD.	24+89.00	WARNER RD.	RT	PAVEMENT	10.88′	12.00′	35:1
CE	27+53.50	WARNER RD.	27+70.00	WARNER RD.	LT	PAVEMENT	12.00′	11.73′	61:1
CF	27+53.50	WARNER RD.	27+70.00	WARNER RD.	RT	PAVEMENT	12.00′	11.53′	35:1

HORIZONTAL SCALE IN FEET (0, 10, 20, 40)

CALCULATED LRK CHECKED PJF

℄ CONST. WARNER ROAD (CH 156)

℄ R/W WARNER ROAD (CH 156)

BEGIN WORK WARNER ROAD STA. 24+40.09

CONST. LIMITS

PT Sta. 108+48.22

PC Sta. 26+07.65

PT Sta. 111+17.90

END WORK WARNER ROAD STA. 28+45.93

PT STA. 29+31.09

S 74° 56′ 15″ E

S 76° 16′ 11″ E

S 81° 38′ 30″ E

EX. 24″ RCP SANITARY, SUMMIT COUNTY, O.L. "C"

EX. 12″ WATER, CITY OF AKRON, O.L. "C"

EX. 4″ GAS, DOMINION ENERGY OHIO, O.L. "C"

(TO BE RELOCATED BY OWNER)

BTA, TYPE 1

TYPE T +58.25

TYPE T +46.47

TYPE E +45.93

12″ cmp

15″ rcp

18″ W

ROUNDED END SECTION

CONNECT TO EXISTING GUARDRAIL, PER MGS-4.3 STA. 28+21.81

EX. ELECTRIC, ODOT DISTRICT 4, O.L.

STRUCTURE NO. SUM-77-0802L

STRUCTURE NO. SUM-77-0802R

PROP. NOISE BARRIER C2

℄ R/W & CONST. I.R. 77

N 3° 12′ 18″ W

℄ R/W WARNER ROAD (CH 156)
P.I. Sta. 106+34.16
Δ = 4° 15′ 45″ (RT)
Dc = 0° 59′ 42″
R = 5,757.59′
T = 214.27′
L = 428.33′
E = 3.99′
C = 428.24′
C.B. = S 77° 44′ 24″ E
P.C. Sta. 104+19.89
P.T. Sta. 108+48.22

℄ CONST. WARNER ROAD (CH 156)
P.I. Sta. 27+69.62
Δ = 7° 50′ 44″ (LT)
Dc = 2° 25′ 32″
R = 2,362.12′
T = 161.98′
L = 323.44′
E = 5.55′
C = 323.19′
C.B. = S 80° 11′ 33″ E
D.S. = 45 MPH
e_{max} = NC
P.C. STA. 26+07.65
P.T. STA. 29+31.09

FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR I.R. 77 PLANS, SEE SHEET 461
FOR UNDERDRAIN DETAILS, SEE SHEET 932
FOR STRUCTURE PLANS, SEE SHEETS 1155 - 1180

EX-1
STA. 24+64.02, 22.75′ RT
EX. CB, GRATE ELEV 1003.59
EX. 12″ CMP W 1000.59
EX. 12″ CMP N 1000.44
6″ UD (W) 1001.59

SJ-1
STA. 24+75.22, 6.19 LT
SAN. MH ADJUSTED TO GRADE, AS PER PLAN
PROP. RIM ELEV 1005.09
EX. SAN MH, GRATE ELEV 1005.12
EX. 24″ RCP W 991.41
EX. 24″ RCP E 991.41

VERT. CLEARANCE
REQUIRED = 14.5′
SUM-77-0802R EXIST. = 14.20′
SUM-77-0802R PROP. = 14.64′
SUM-77-0802L EXIST. = 14.43′
SUM-77-0802L PROP. = 14.55′

SJ-2
STA. 27+24.75, 4.18 LT
SAN. MH ADJUSTED TO GRADE, AS PER PLAN
PROP. RIM ELEV 1006.75
EX. SAN MH, GRATE ELEV 1006.96
EX. 24″ RCP W 990.92
EX. 24″ RCP E 990.92

MEET EXISTING P.V.I. STA 24+50.00 ELEV = 1,005.13

MEET EXISTING P.V.I. STA 27+70.00 ELEV = 1,007.65

EX. +0.63 %±

+0.25 %

+0.35 %

+0.35 %

+1.60 %

+1.60 %

EX. +1.06 %±

P.V.I. STA 25+20.00 ELEV = 1,005.31 (NO VERTICAL CURVE)

STA 25+85.00 ELEV 1,005.54

STA 27+20.00 ELEV 1,006.86

135.00′ VC
P.V.I. STA 26+52.50
ELEV = 1,005.77′
K = 108

ex. 12″ cmp

ex. 24″ cmp

1,005.13 1,005.20 1,005.26 1005.33 1005.42 1005.50 1005.60 1005.75 1005.96 1006.22 1006.55 1006.93 1007.33

1004.82 1005.13 1005.43 1005.77 1006.13 1006.60 1006.96 1007.48 1007.91

24 25 26 27 28

1,025 1,020 1,015 1,010 1,005 1,000 995 990 985

PLAN AND PROFILE - WARNER ROAD
STA. 23+75.79 TO STA. 28+70.89

SUM-77 / 277 / 224
VARIOUS

509
1288

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LEGEND

(##) - SEE SHEET NUMBER

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XL001.dgn Sheet 1/11/2021 6:43 PM pfry

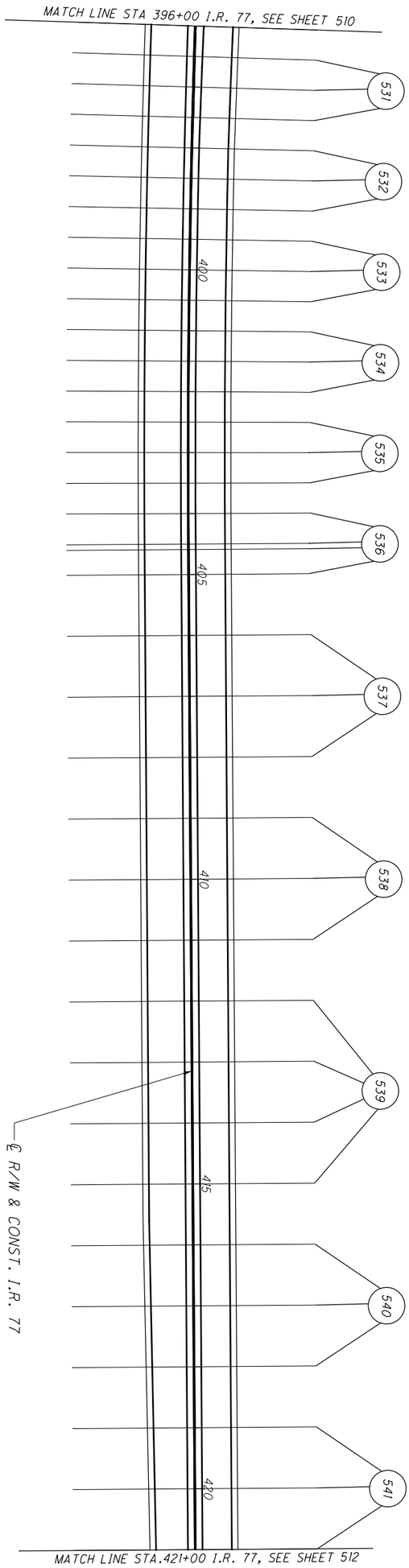
HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED ZJP
CHECKED PJF

CROSS SECTION LAYOUT SHEET
BEGIN TO STA. 396+00

SUM-77/277/224
VARIOUS

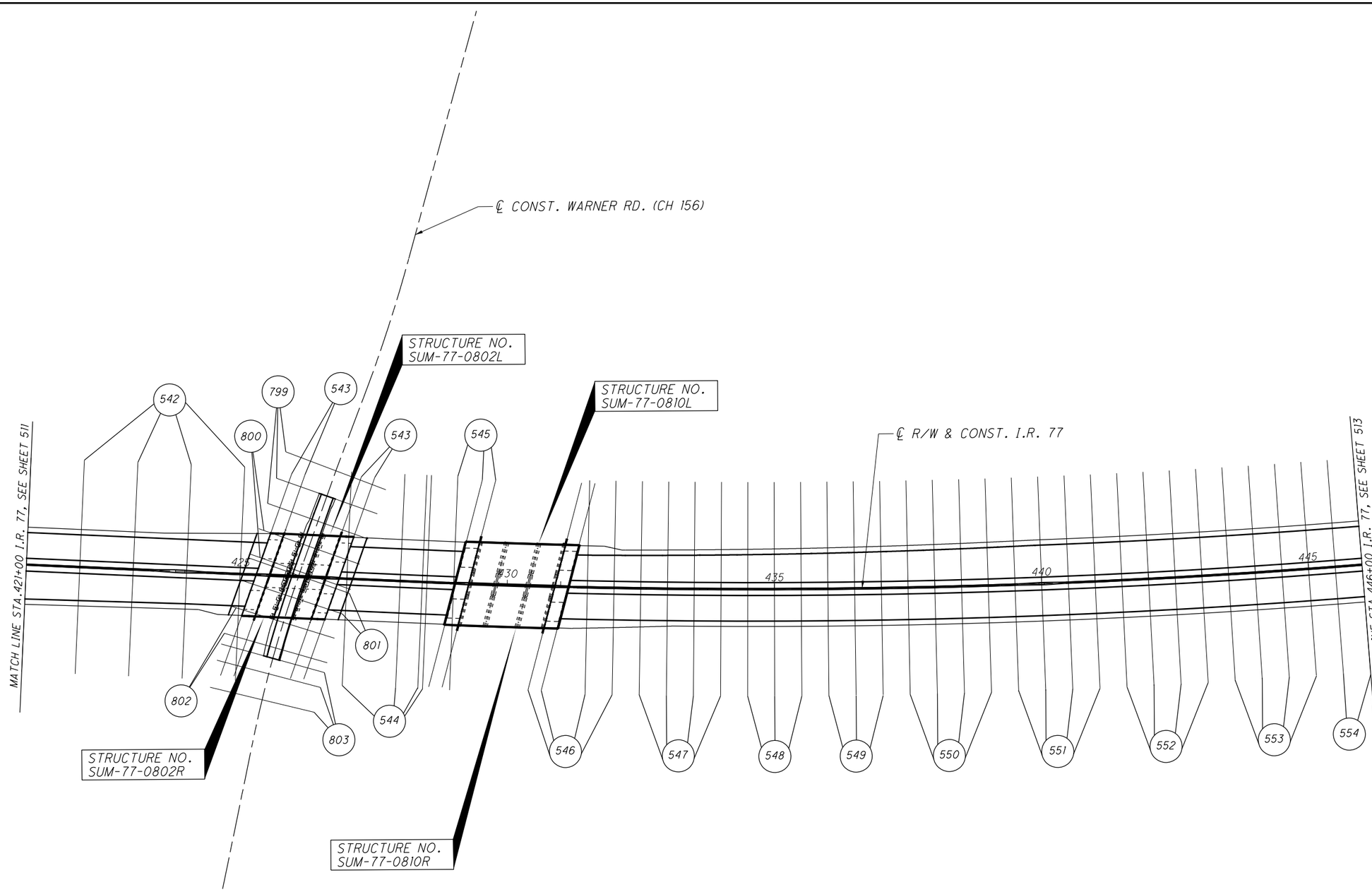
510
1288



LEGEND

(##) - SEE SHEET NUMBER

511 / 1288	SUM-77/277/224 VARIOUS	CROSS SECTION LAYOUT SHEET STA. 396+00 TO STA. 421+00	CALCULATED ZJP CHECKED PJF	0 100 50 200 HORIZONTAL SCALE IN FEET



LEGEND

(##) - SEE SHEET NUMBER

N

0 50 100 200 HORIZONTAL SCALE IN FEET

CALCULATED ZJP | CHECKED PJF

CROSS SECTION LAYOUT SHEET
STA. 421+00 TO STA. 446+00

SUM-77/277/224
VARIOUS

512
1288

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LEGEND

(##) - SEE SHEET NUMBER

0 50 100 200
HORIZONTAL SCALE IN FEET

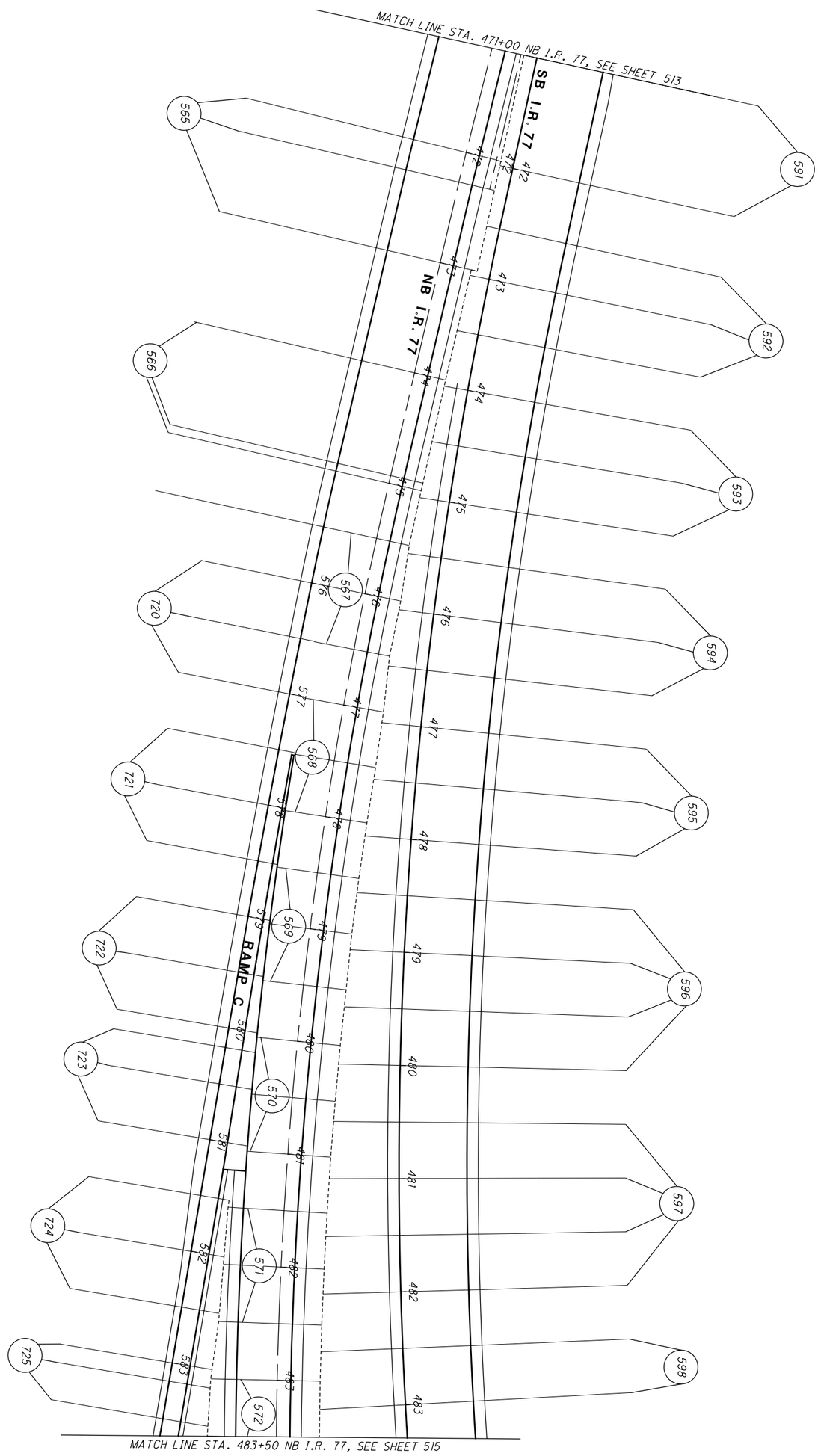
CALCULATED ZJP
CHECKED PJF

CROSS SECTION LAYOUT SHEET
STA. 446+00 I.R. 77 TO STA. 471+00 NB I.R. 77

SUM-77/277/224
VARIOUS

513
1288

O:\2017\20172581\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XL004.dgn Design 1/11/2021 2:17:08 PM pfry

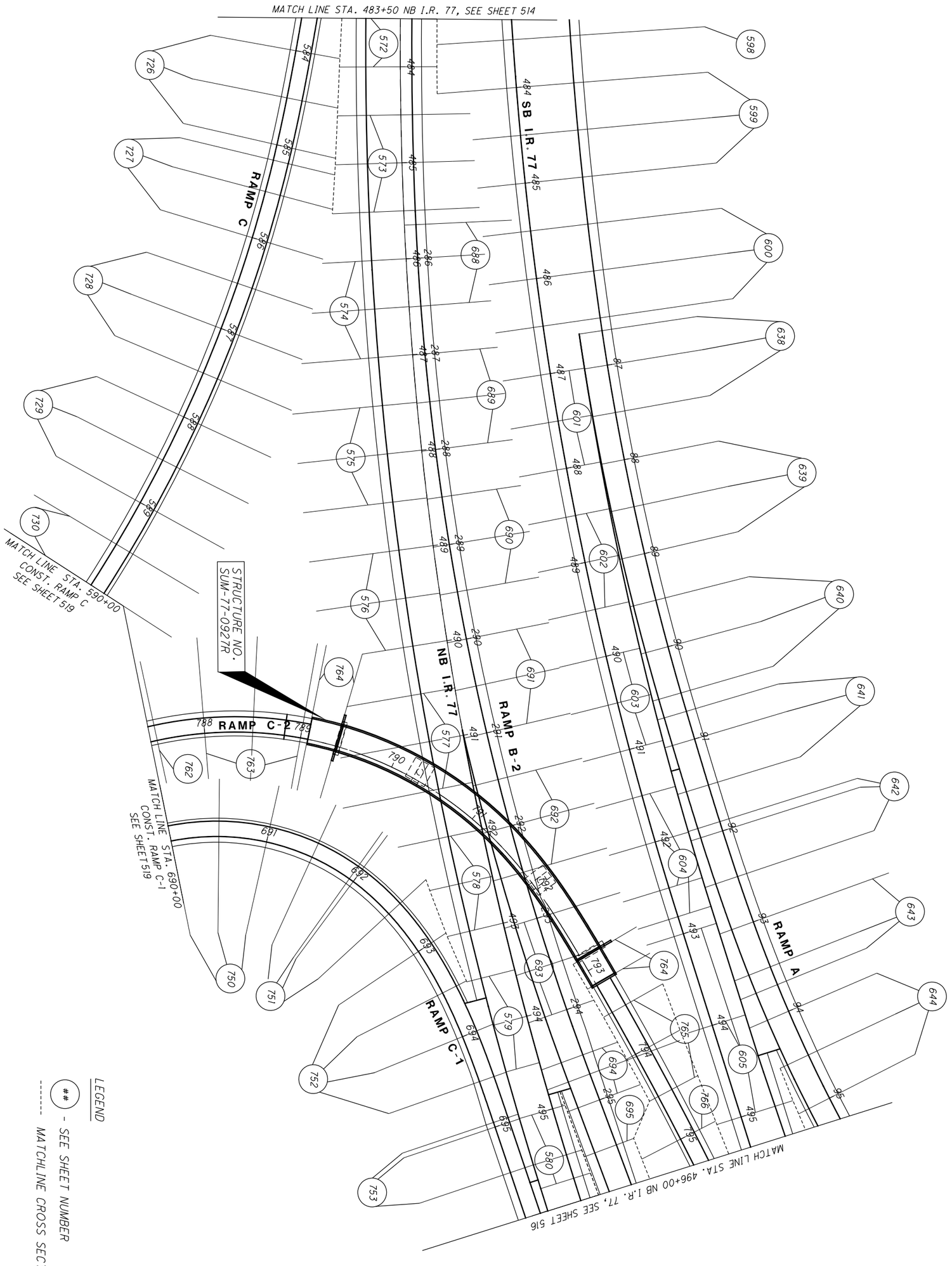


LEGEND

(##) - SEE SHEET NUMBER

------ MATCHLINE CROSS SECTION

514 / 1288	SUM-77 / 277 / 224 VARIOUS	CROSS SECTION LAYOUT SHEET STA. 471+00 TO STA. 483+50	CALCULATED ZJP CHECKED PJF	0 50 25 100 HORIZONTAL SCALE IN FEET



515 / 1288	SUM-77 / 277 / 224 VARIOUS	CROSS SECTION LAYOUT SHEET STA. 483+50 TO STA. 496+00	CALCULATED ZJP CHECKED PJF	0 50 25 100 HORIZONTAL SCALE IN FEET

MATCH LINE STA. 101+50
CONST. RAMP A
SEE SHEET 518

MATCH LINE STA. 250+00
CONST. I.R. 277
SEE SHEET 518

RAMP A

I.R. 277 / U.S. 224

RAMP B-1

SB I.R. 77

RAMP C-2

RAMP B-2

NB I.R. 77

MATCH LINE STA. 496+00 NB I.R. 77, SEE SHEET 515

MATCH LINE STA. 506+50 NB I.R. 77, SEE SHEET 517

STRUCTURE NO.
SUM-277-0369
(NO WORK)

RAMP D

MATCH LINE STA. 258+00
CONST. I.R. 277
SEE SHEET 519

MATCH LINE STA. 899+50
CONST. RAMP D
SEE SHEET 519

LEGEND

(##) - SEE SHEET NUMBER

------ MATCHLINE CROSS SECTION

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED ZJP
CHECKED PJF

CROSS SECTION LAYOUT SHEET
STA. 496+00 TO STA. 506+50

SUM-77 / 277 / 224
VARIOUS

516
1288

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MATCH LINE STA. 11+50 CONST. RAMP B-2
SEE SHEET 518

MATCH LINE STA. 210+00
CONST. RAMP B
SEE SHEET 518

RAMP B-1

RAMP B-2

RAMP B

RAMP D

SB I.R. 77

NB I.R. 77

MATCH LINE STA. 506+50 NB I.R. 77, SEE SHEET 516

STRUCTURE NO.
SUM-77-0973L
(NO WORK)

STRUCTURE NO.
SUM-77-0973R
(NO WORK)

A STRUCTURE NO.
SUM-77-0958L
(NO WORK)

LEGEND

(##) - SEE SHEET NUMBER

------- MATCHLINE CROSS SECTION

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED ZJP
CHECKED PJF

CROSS SECTION LAYOUT SHEET
STA. 506+50 TO END

SUM-77/277/224
VARIOUS

517
1288

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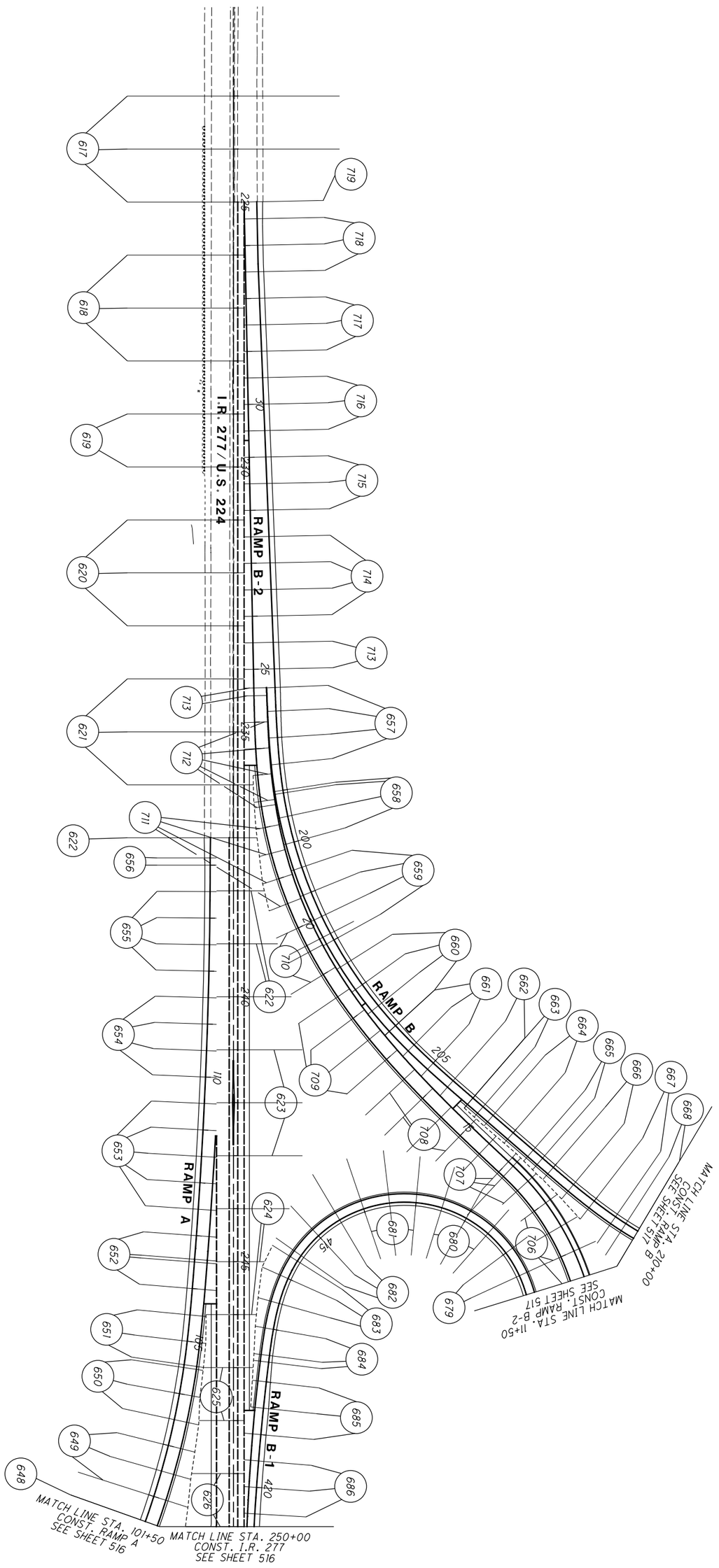

LEGEND

(##) - SEE SHEET NUMBER

------ MATCHLINE CROSS SECTION

518 / 1288	SUM-77/277/224 VARIOUS	CROSS SECTION LAYOUT SHEET BEGIN TO STA. 250+00 I.R. 277/U.S. 224	CALCULATED ZJP CHECKED PJF	0 100 25 100 HORIZONTAL SCALE IN FEET

MATCH LINE STA. 899+50
CONST. RAMP D
SEE SHEET 516

MATCH LINE STA. 258+00
CONST. I.R. 277
SEE SHEET 516

RAMP D

I.R. 277 / U.S. 224

STRUCTURE NO.
SUM-224-1061
(NO WORK)

RAMP C-1

RAMP C-2

RAMP C

MATCH LINE STA. 690+00
CONST. RAMP C-1
SEE SHEET 515

MATCH LINE STA. 590+00
CONST. RAMP C
SEE SHEET 515

LEGEND

(##) - SEE SHEET NUMBER

------- MATCHLINE CROSS SECTION

N

0 50 100 200
HORIZONTAL
SCALE IN FEET

CALCULATED ZJP
CHECKED PJF

CROSS SECTION LAYOUT SHEET
STA. 258+00 TO END

SUM-77 / 277 / 224
VARIOUS

519
1288

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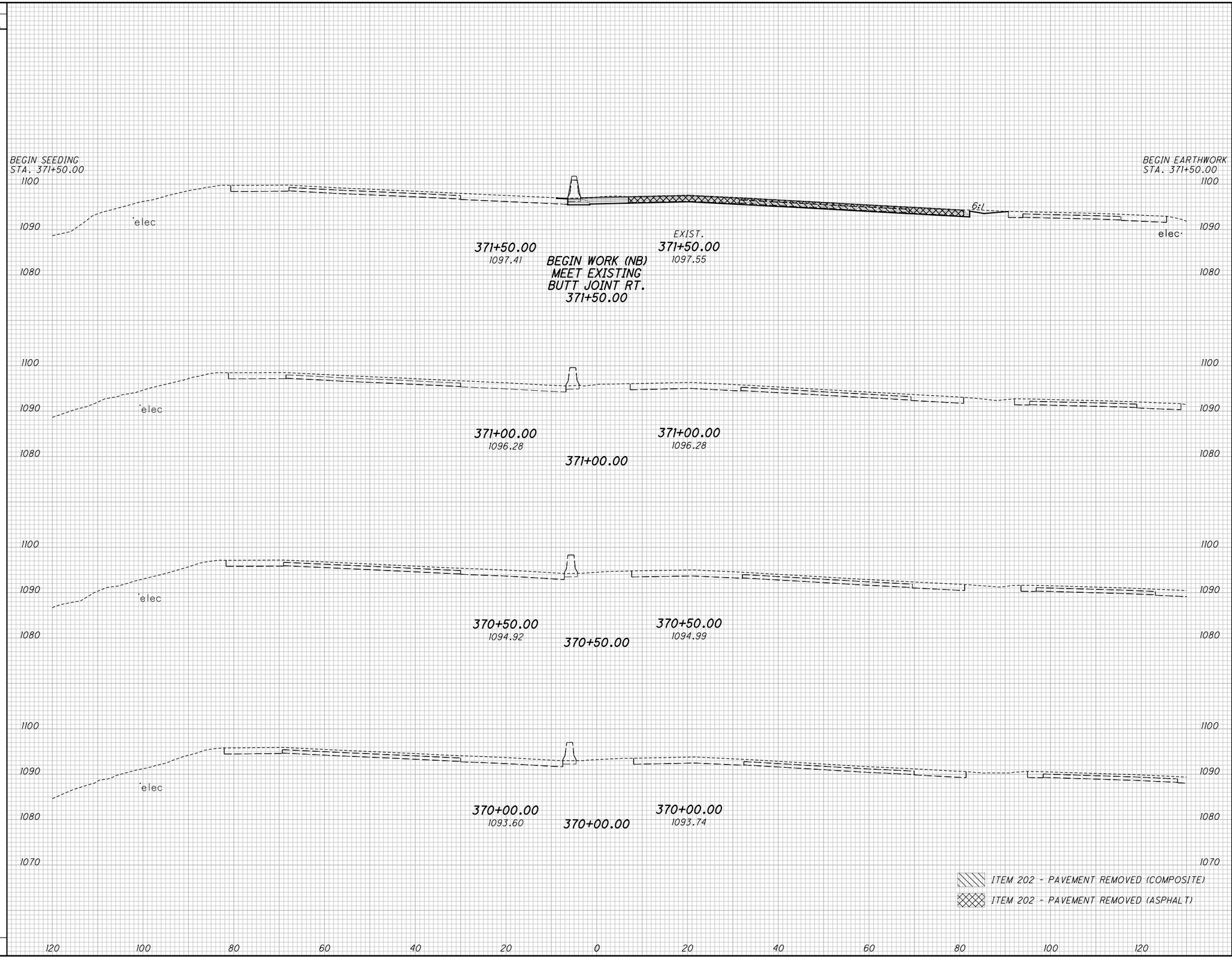
SEEDING	
END WIDTH	SQ. YDS.
	28
10	
	28



END AREA	
CUT	FILL
38	0

VOLUME	
CUT	FILL
57	0

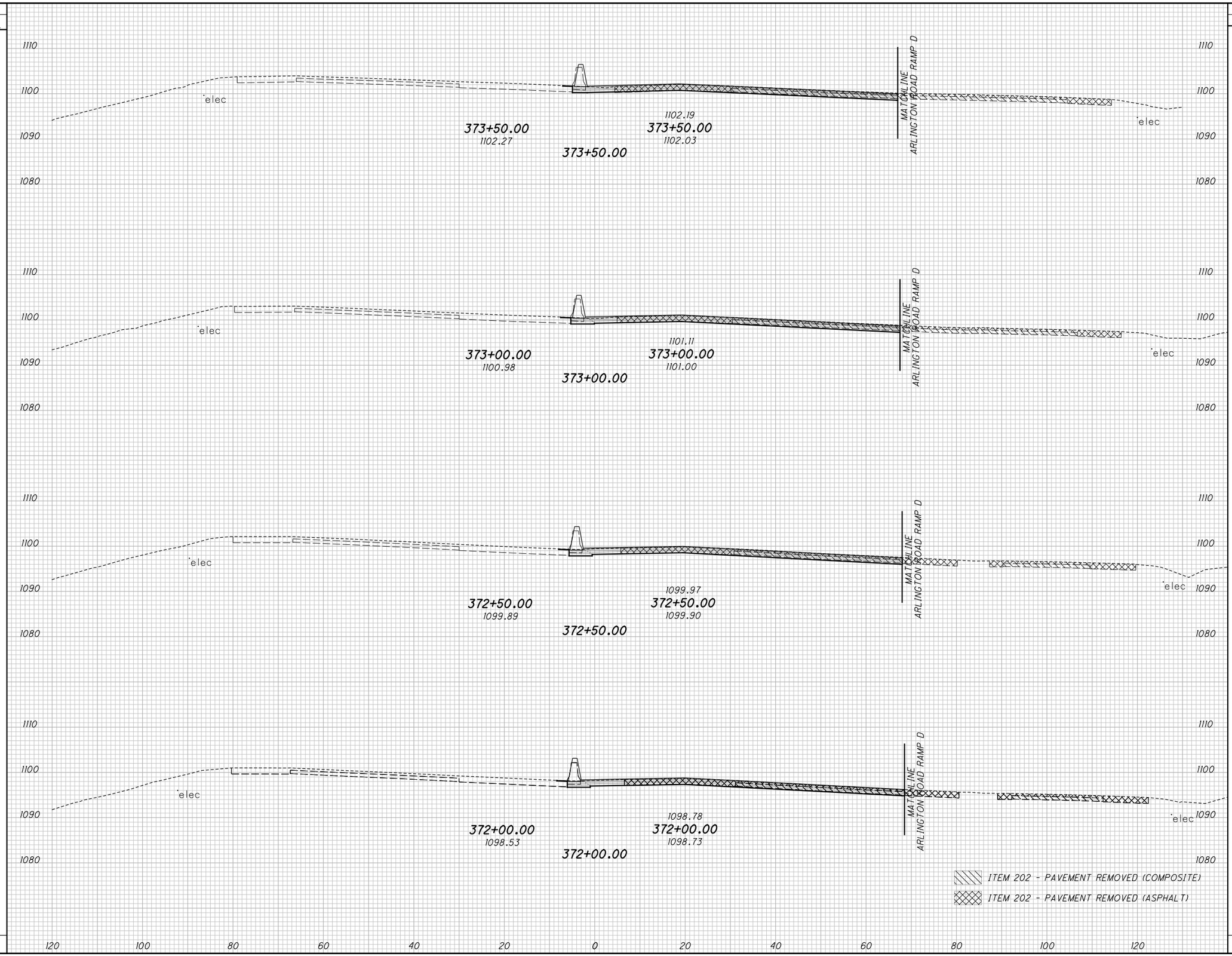
CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 77
STA. 370+00.00 TO STA. 371+50.00

SUM-77 / 277 / 224
VARIOUS

O:\2017\20172581Project Data\SUM\106002\Design\Roadway\Sheets\106002_XS001.dgn Sheet 1/15/2021 9:15:37 AM pfry

SEEDING	
END WIDTH	SQ. YDS.
	0
0	
	0
	0
0	
	0
0	
	0
0	
	0



END AREA	
CUT	FILL
21	1
23	0
25	0
24	0
45	0
169	5

VOLUME	
CUT	FILL
39	4
41	1
44	0
45	0

CALCULATED CJC
CHECKED PJF

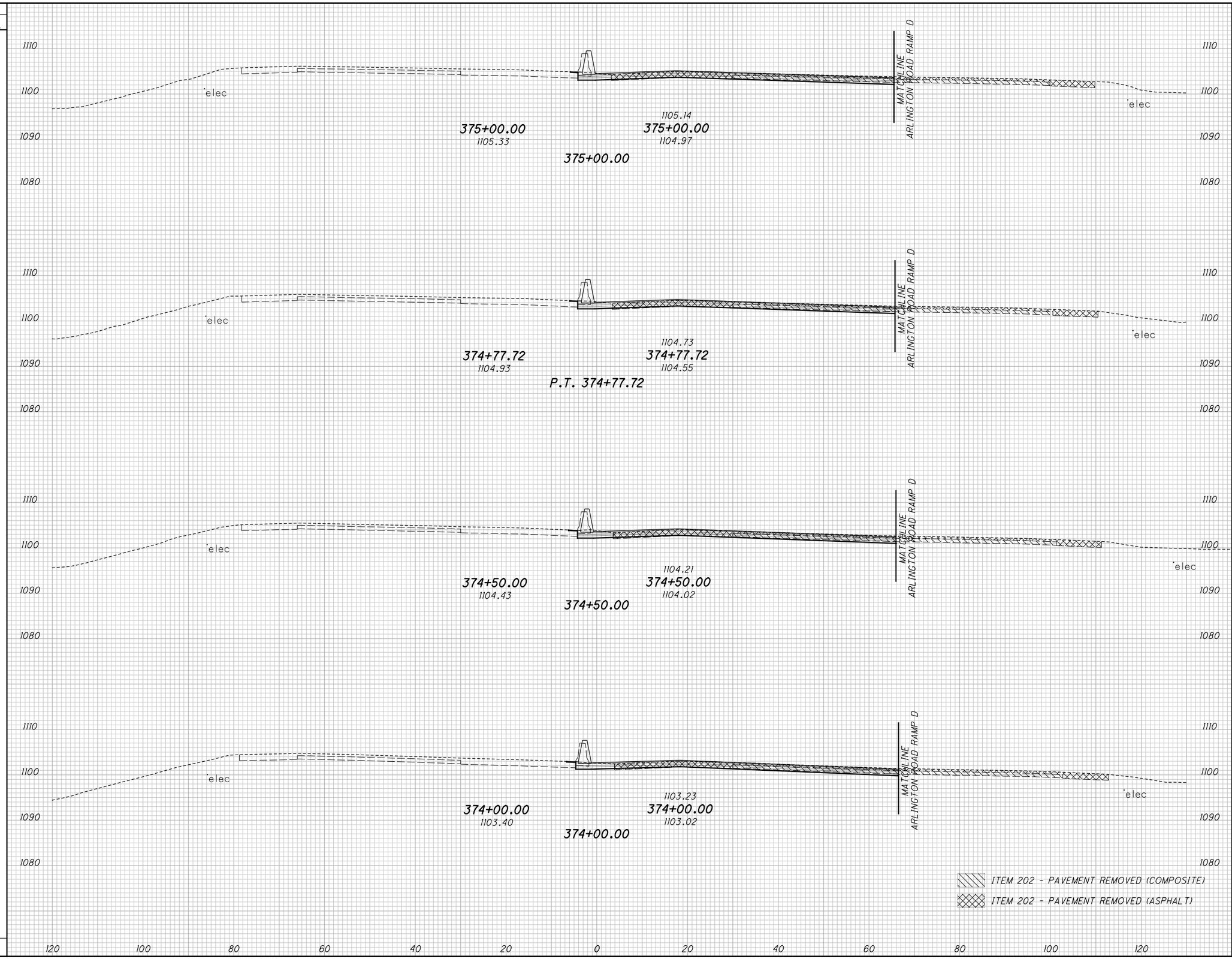
CROSS SECTIONS - I.R. 77
STA. 372+00.00 TO STA. 373+50.00

SUM-77 / 277 / 224
VARIOUS

521
1288

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS001.dgn Sheet 1/15/2021 9:55:51 AM pfry

SEEDING	
END WIDTH	SQ. YDS.
0	0
0	0
0	0
0	0
0	0



END AREA	
CUT	FILL
21	2
21	3
21	3
21	3

VOLUME	
CUT	FILL
78	4
17	2
22	3
39	6
156	15

CALCULATED CJC
CHECKED PJF

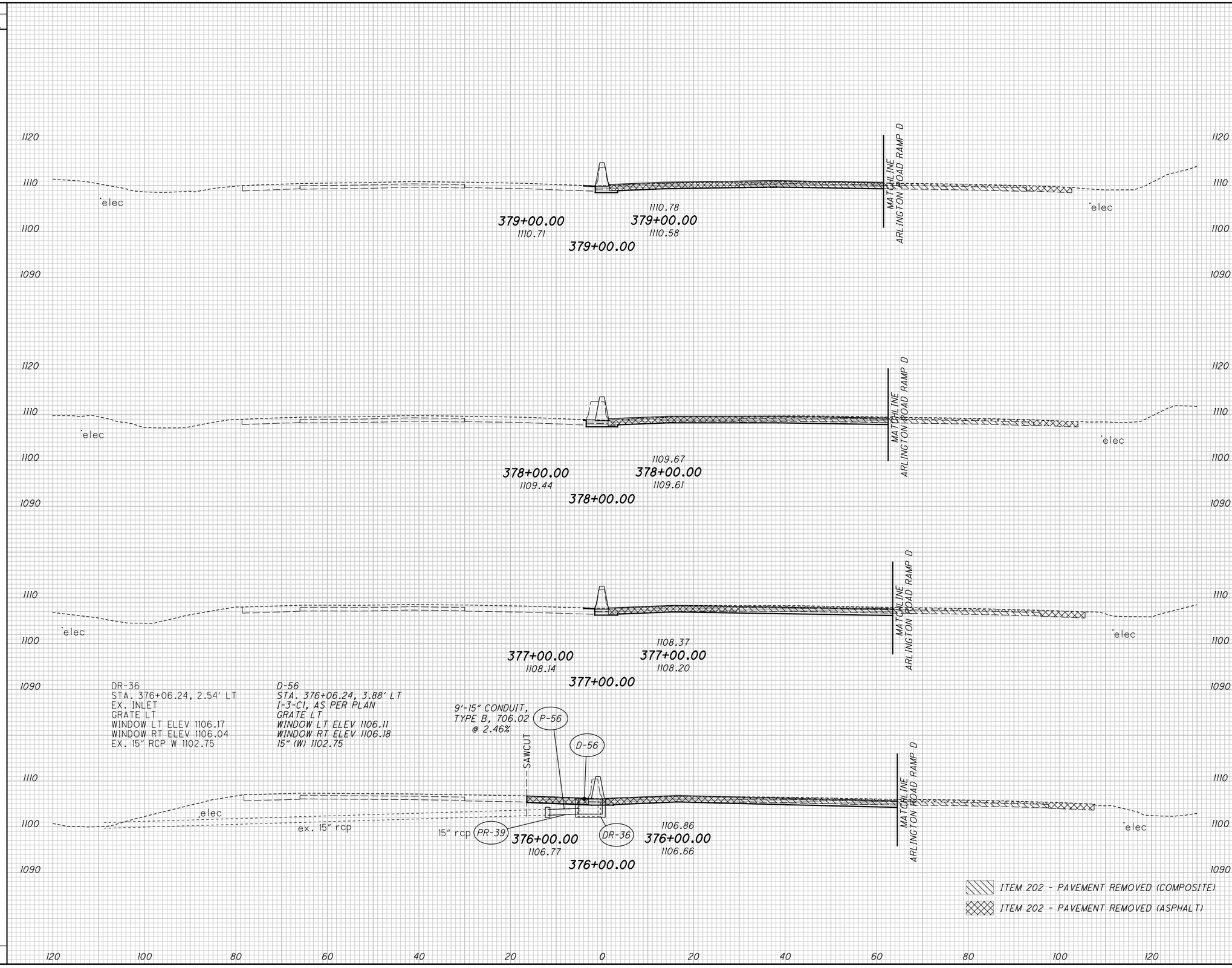
CROSS SECTIONS - I.R. 77
STA. 374+00.00 TO STA. 375+00.00

SUM-77 / 277 / 224
VARIOUS

522
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS001.dgn Sheet 1/15/2021 9:55:54 AM pfry

SEEDING	
END WIDTH	SQ. YDS.
	0
	0
	0
	0
	0
	0
	0



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		22	9
7	1		
		54	2
22	0		
		87	0
25	0		
		85	0
21	0		
		248	11

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 77
STA. 376+00.00 TO STA. 379+00.00

SUM-77 / 277 / 224
VARIOUS

523
1288

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SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0	0				
				24	4
0		7	1		
	0			24	4
0		6	1		
	0			22	6
0		6	2		
	0			20	11
0		5	4		
	0			90	25

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 77
STA. 380+00.00 TO STA. 383+00.00

SUM-77 / 277 / 224
VARIOUS

524
1288

383+00.00
1112.83 elec
1113.17
383+00.00
1112.97
MATCHLINE ARLINGTON ROAD RAMP D
383+00.00

382+00.00
1112.74 elec
1112.88
382+00.00
1112.53
MATCHLINE ARLINGTON ROAD RAMP D
382+00.00

381+00.00
1112.20 elec
1112.38
381+00.00
1112.09
MATCHLINE ARLINGTON ROAD RAMP D
381+00.00

380+00.00
1111.35 elec
1111.68
380+00.00
1111.41
MATCHLINE ARLINGTON ROAD RAMP D
elec
380+00.00

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)
ITEM 202 - PAVEMENT REMOVED (ASPHALT)

1120 1110 1100 1130 1120 1110 1100 1130 1120 1110 1100 1130 1120 1110 1100 1090

120 100 80 60 40 20 0 20 40 60 80 100 120

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS001.dgn Sheet 1/15/2021 9:6:01 AM pfry

SEEDING	
END WIDTH	SQ. YDS.
	0
0	
	0
0	
	0
0	
	0
0	
	0

END AREA	
CUT	FILL
11	0
8	1
7	1
6	1

VOLUME	
CUT	FILL
39	0
35	2
28	4
24	4
126	10

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 77
STA. 384+00.00 TO STA. 387+00.00

SUM-77 / 277 / 224
VARIOUS

525
1288

D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS001.dgn Sheet 1/15/2021 9:16:05 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	272
22	
	256
24	
	209
26	
0	
	0
0	
	737

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		96	9
21	4		
		67	13
15	3		
		46	4
AH 18	0		
BK 10	0		
		9	0
10	0		
		218	26

CALCULATED CJC
CHECKED PJF

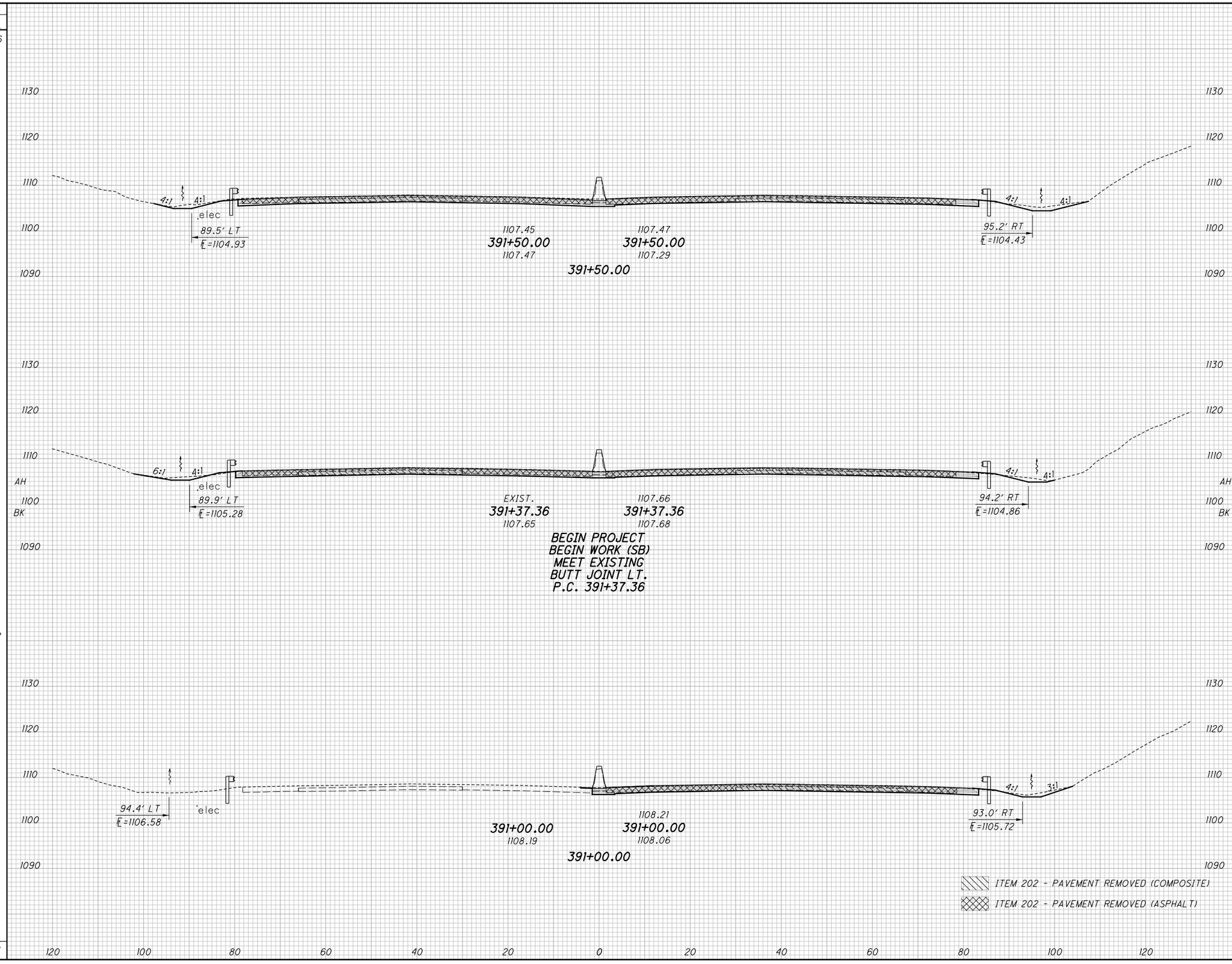
CROSS SECTIONS - I.R. 77
STA. 388+00.00 TO STA. 390+00.00

SUM-77 / 277 / 224
VARIOUS

526
1288

D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS001.dgn Sheet 1/15/2021 9:16:08 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	306			136	2
54		67	0		
	73			29	0
50		57	1		
22	102	30	1	42	1
27		31	1		
	481			207	3



CALCULATED CJC
CHECKED PJF

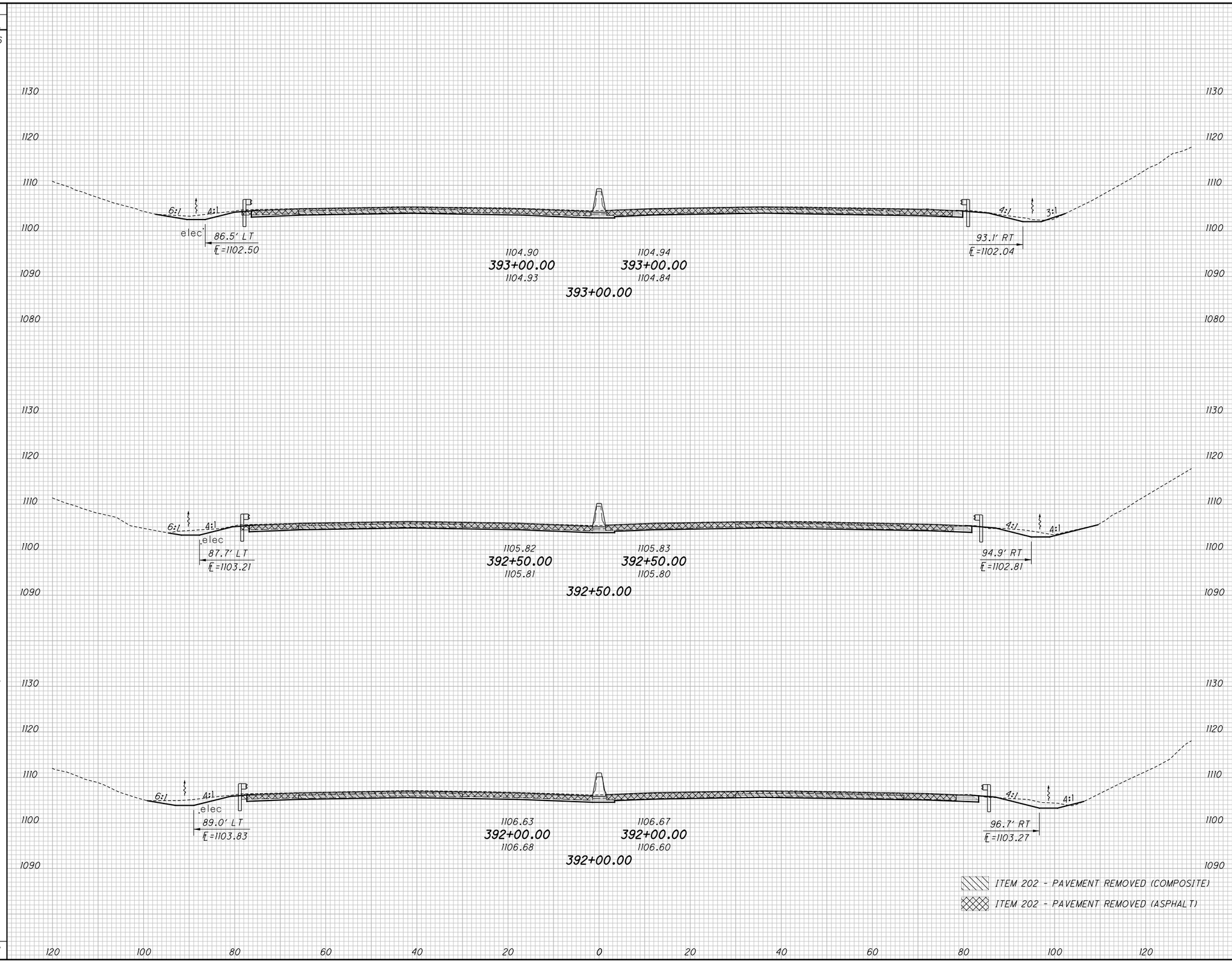
CROSS SECTIONS - I.R. 77
STA. 391+00.00 TO STA. 391+50.00

SUM-77 / 277 / 224
VARIOUS

527
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS001.dgn Sheet 1/15/2021 9:6:11 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	306			118	6
55		64	3		
	311			122	5
57		68	2		
	314			137	4
56		80	2		
	931			377	15



CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 77
STA. 392+00.00 TO STA. 393+00.00

SUM-77 / 277 / 224
VARIOUS

528
1288

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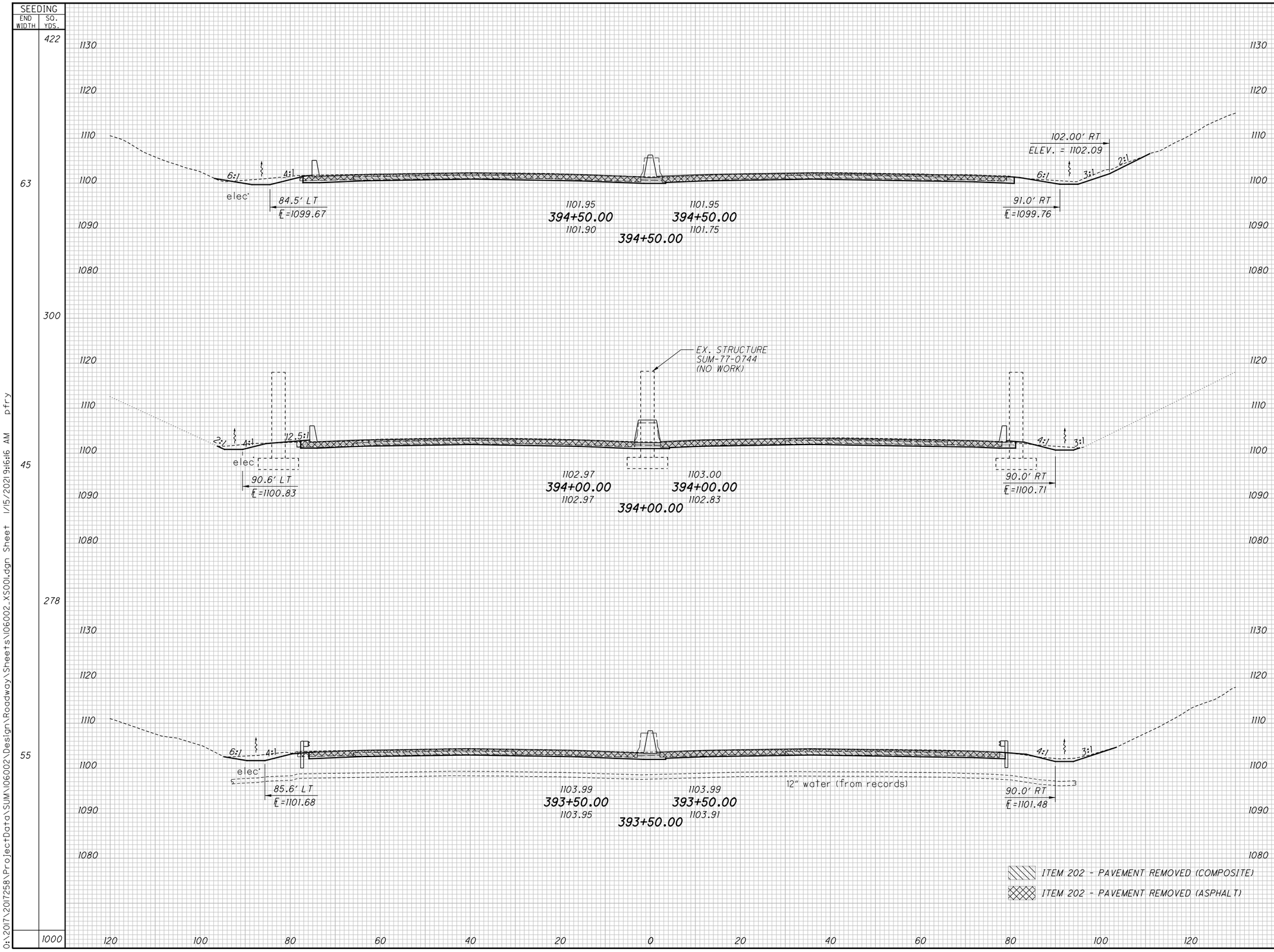
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	422			176	5
63		77	1		
	300			130	4
45		63	3		
	278			117	6
55		63	3		
	1000			423	15



CALCULATED CJC
CHECKED PJF

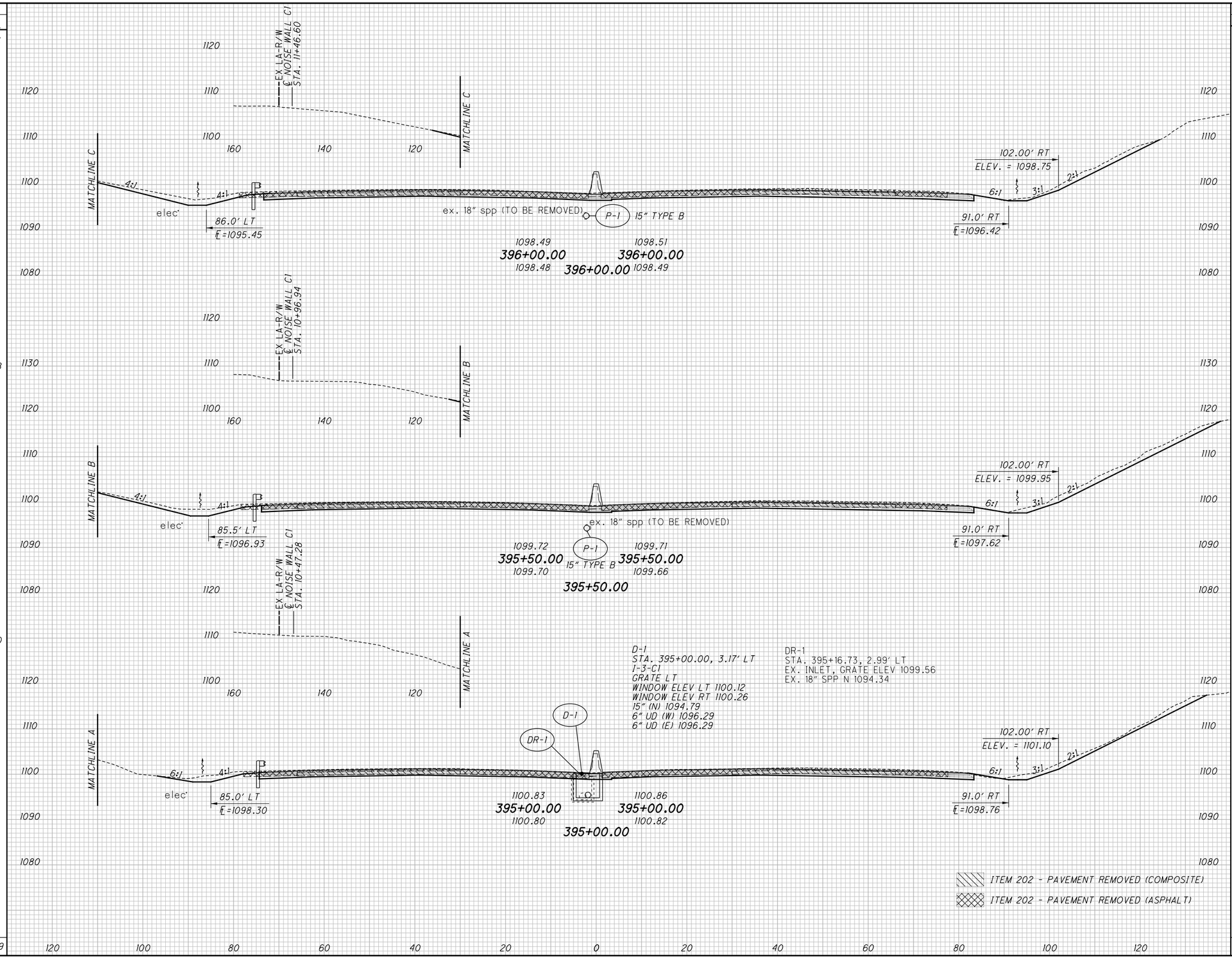
CROSS SECTIONS - I.R. 77
STA. 393+50.00 TO STA. 394+50.00

SUM-77 / 277 / 224
VARIOUS

529
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS001.dgn Sheet 1/15/2021 9:16:16 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	481			225	6
99		134	3		
	578			259	6
109		146	3		
	550			240	6
89		113	4		
	1609			724	18



CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 77
STA. 395+00.00 TO STA. 396+00.00

SUM-77 / 277 / 224
VARIOUS

530
1288

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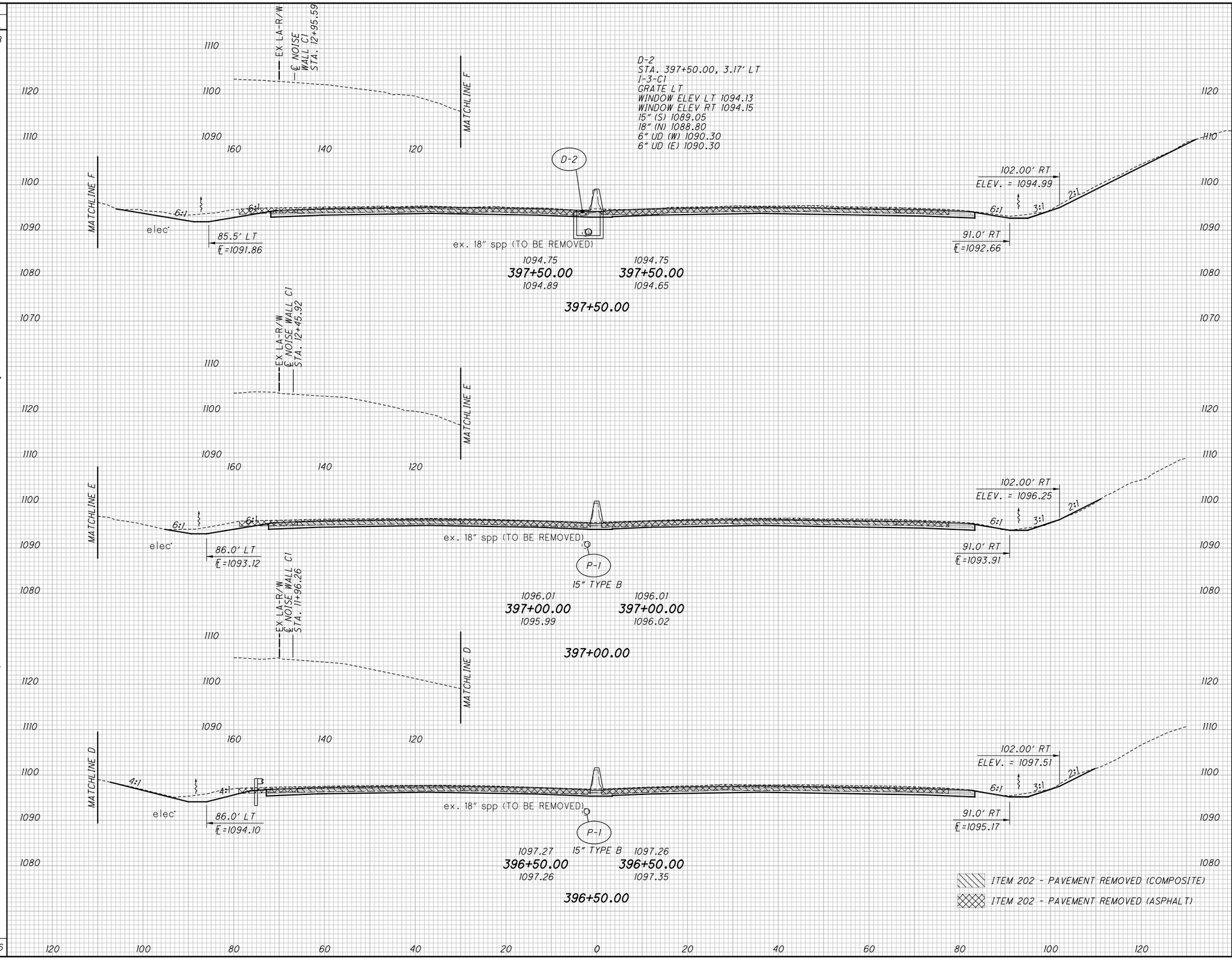
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	458			240	3
98		136	1		
	447			218	4
63		99	3		
	381			193	6
74		109	3		
	1286			651	13



CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 77
STA. 396+50.00 TO STA. 397+50.00

SUM-77 / 277 / 224
VARIOUS

531
1288

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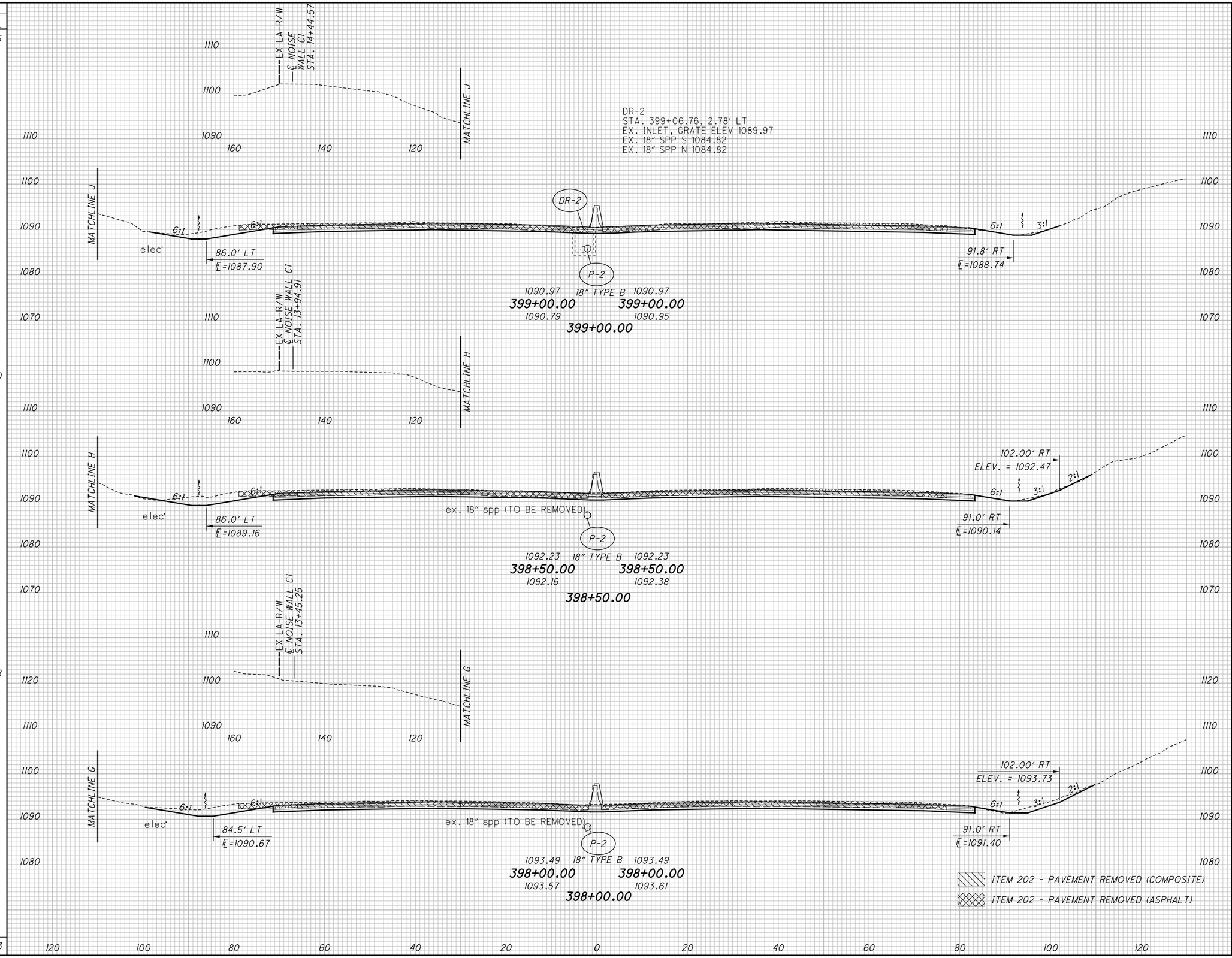
SEEDING END WIDTH	SEEDING SQ. YDS.
	375
57	
	350
69	
	378
67	
	1103



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		214	1
101	1		
		196	3
111	2		
		217	4
123	2		
		627	8

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 77
STA. 398+00.00 TO STA. 399+00.00

SUM-77 / 277 / 224
VARIOUS

532
1288

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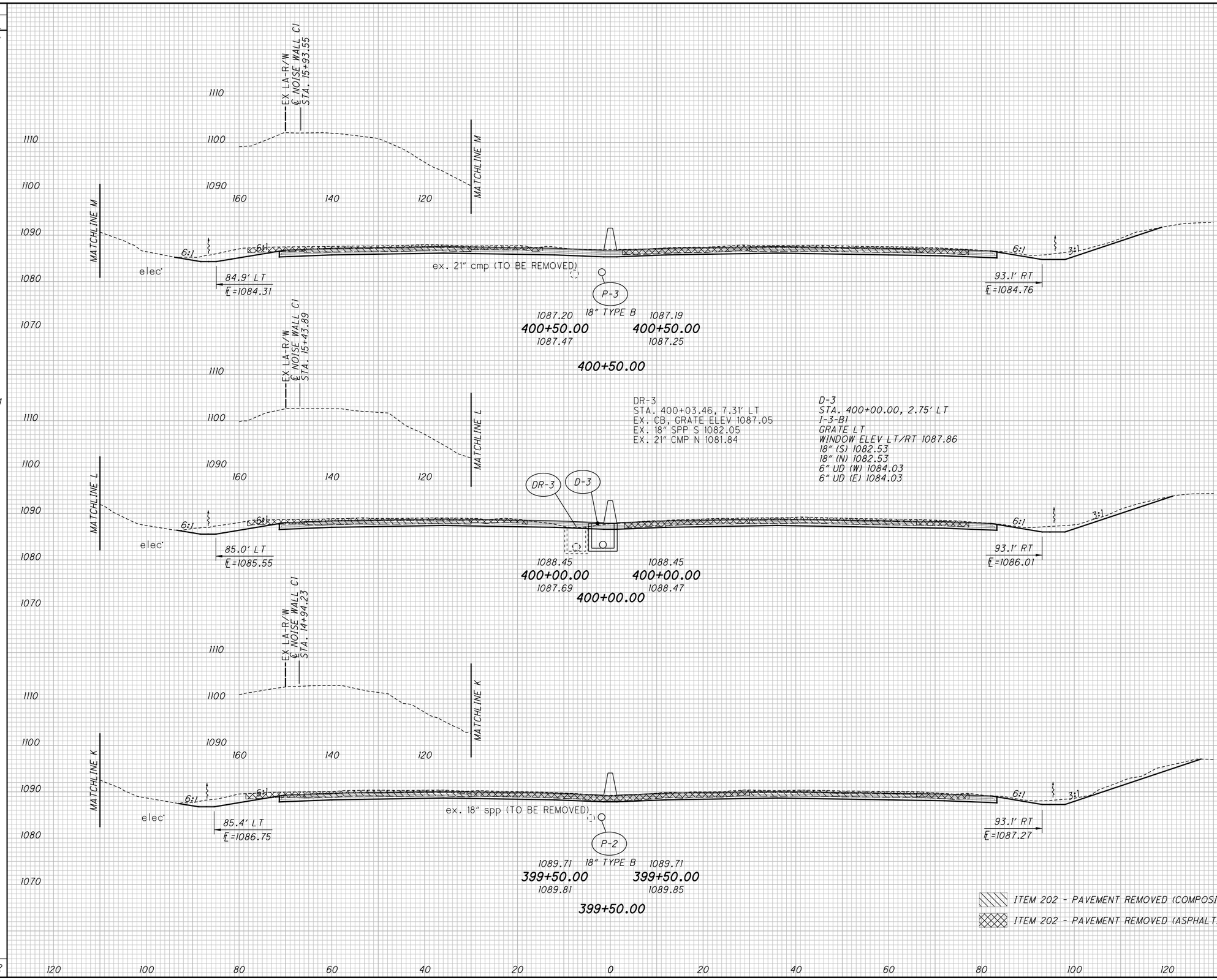
SEEDING END WIDTH	SEEDING SQ. YDS.
	381
70	
	394
72	
	417
78	
	1192



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		289	0
157	0		
		279	0
144	0		
		254	0
130	0		
		822	0

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 77
STA. 399+50.00 TO STA. 400+50.00

SUM-77 / 277 / 224
VARIOUS

533
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS001.dgn Sheet 1/15/2021 9:6:34 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	303			261	0
55		147	0		
	311			272	0
57		147	0		
	344			280	0
67		155	0		
	958			813	0

EX LA-R/W
℄ NOISE WALL C1
STA. 17+42.58
MATCHLINE O
elec
82.8' LT
℄=1080.88
ex. 21" cmp (TO BE REMOVED)
P-3 18" TYPE B
94.0' RT
℄=1080.83
1083.42 402+00.00 1083.44
1083.42 402+00.00 1083.57
402+00.00

EX LA-R/W
℄ NOISE WALL C1
STA. 16+92.90
MATCHLINE P
82.0' LT
℄=1082.28
93.1' RT
℄=1082.24
1084.68 401+50.00 1084.77
1084.68 401+50.00 1084.78
401+50.00

EX LA-R/W
℄ NOISE WALL C1
STA. 16+43.22
MATCHLINE N
84.0' LT
℄=1083.20
93.1' RT
℄=1083.50
1085.94 401+00.00 1086.02
1085.94 401+00.00 1086.01
401+00.00

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)
ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED CJC
CHECKED PJF

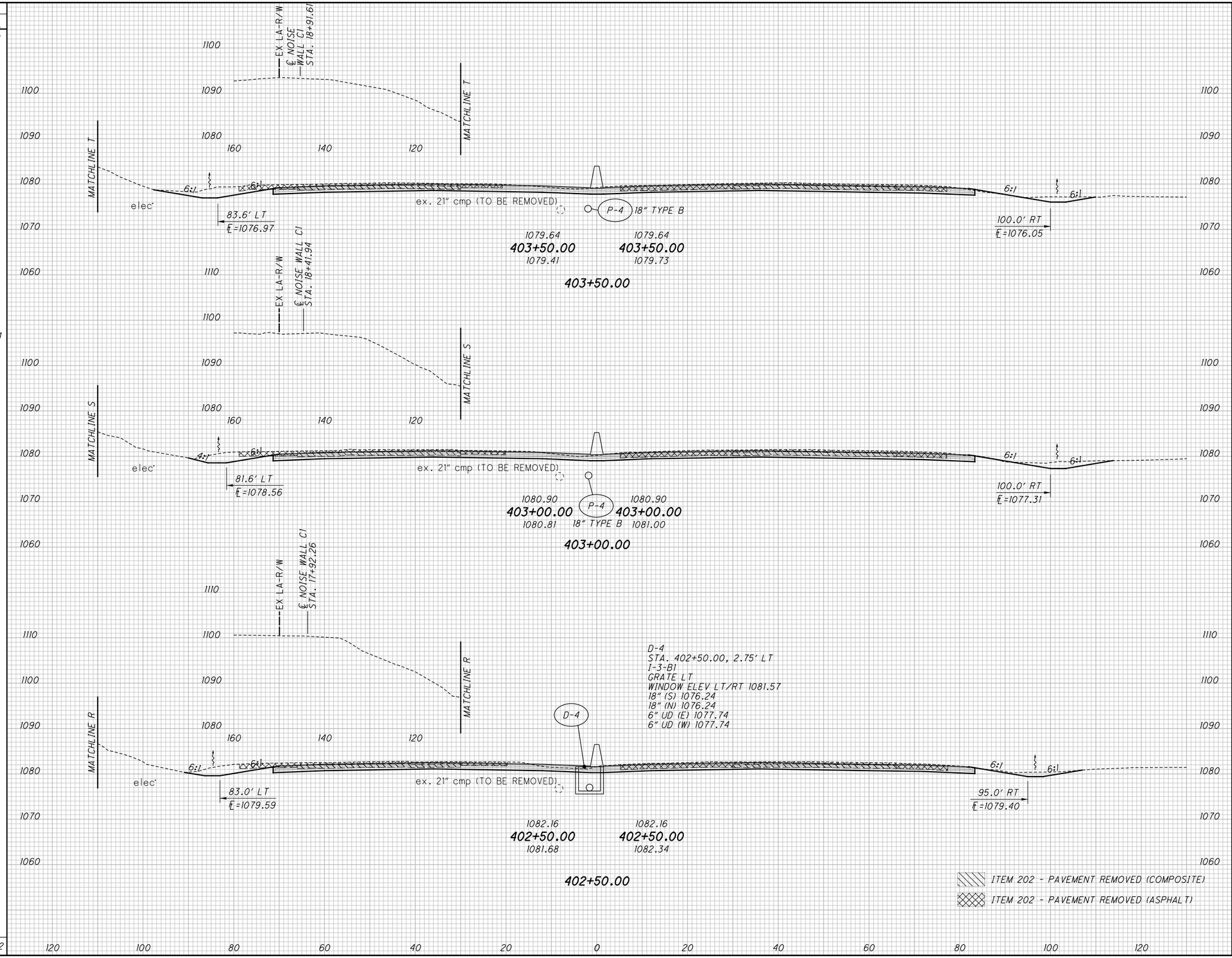
CROSS SECTIONS - I.R. 77
STA. 401+00.00 TO STA. 402+00.00

SUM-77 / 277 / 224
VARIOUS

534
1288

O:\2017\2017258\Project Data\SUM\106002\Design\Roadway\Sheets\106002_XS001.dgn Sheet 1/15/2021 9:16:39 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	381
64	
	344
60	
	317
54	
	1042



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		267	4
144	1		
		268	1
145	0		
		259	0
135	0		
		794	5

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 77
STA. 402+50.00 TO STA. 403+50.00

SUM-77 / 277 / 224
VARIOUS

535
1288

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SEEDING END WIDTH	SEEDING SQ. YDS.
	800
82	
	361
77	
	75
72	
	403
73	
	1639

DR-4
STA. 405+04.20, 6.49' LT
EX. CB, GRATE ELEV 1073.63
EX. 21" CMP S 1069.72
EX. 21" CMP E 1069.30

HW-5
STA. 405+04.00, 108.54' RT
HW-2.1/2.2
21" (W) 1068.02

D-5
STA. 405+04.00, 2.75' LT
I-3-B1
GRATE LT
WINDOW ELEV LT/RT 1075.17
18" (S) 1070.09
21" (E) 1069.23
6" UD (W) 1071.34
6" UD (S) 1071.34

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		(139)	(139)
		459	81
(75)	(75)		
128	33		
		(57)	(57)
		208	31
(0)	(0)		
147	8		
		47	3
131	7		
		255	9
144	3		
		(196)	(196)
		969	124

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 77
STA. 404+00.00 TO STA. 405+00.00

SUM-77 / 277 / 224
VARIOUS

536
1288

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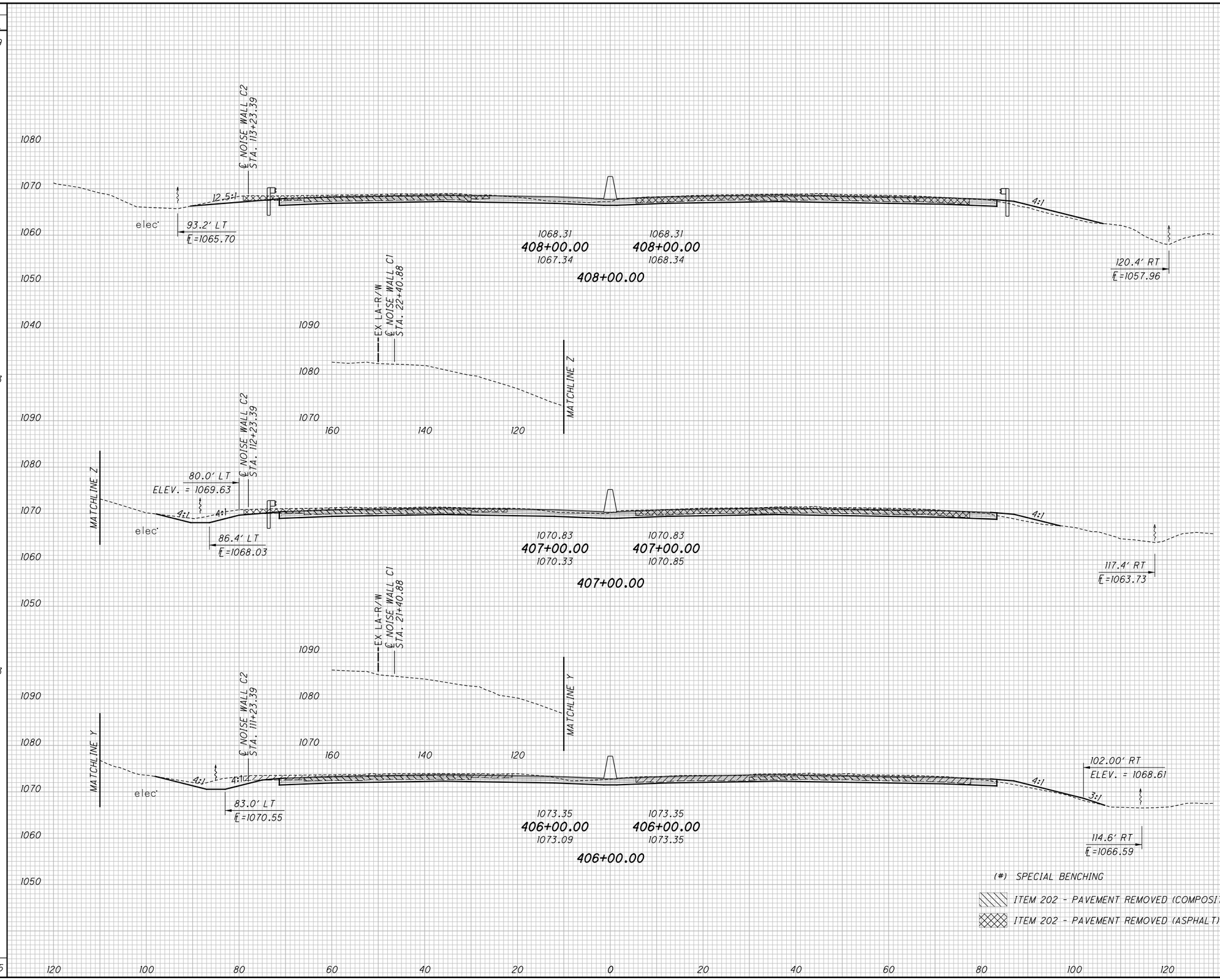
SEEDING END WIDTH	SEEDING SQ. YDS.
	489
53	
	583
52	
	633
62	
	1705



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		320	33
94	14		
		376	44
109	10		
		424	39
(0) 120	(0) 11		
		1120	116

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 77
STA. 406+00.00 TO STA. 408+00.00

SUM-77 / 277 / 224
VARIOUS

537
1288

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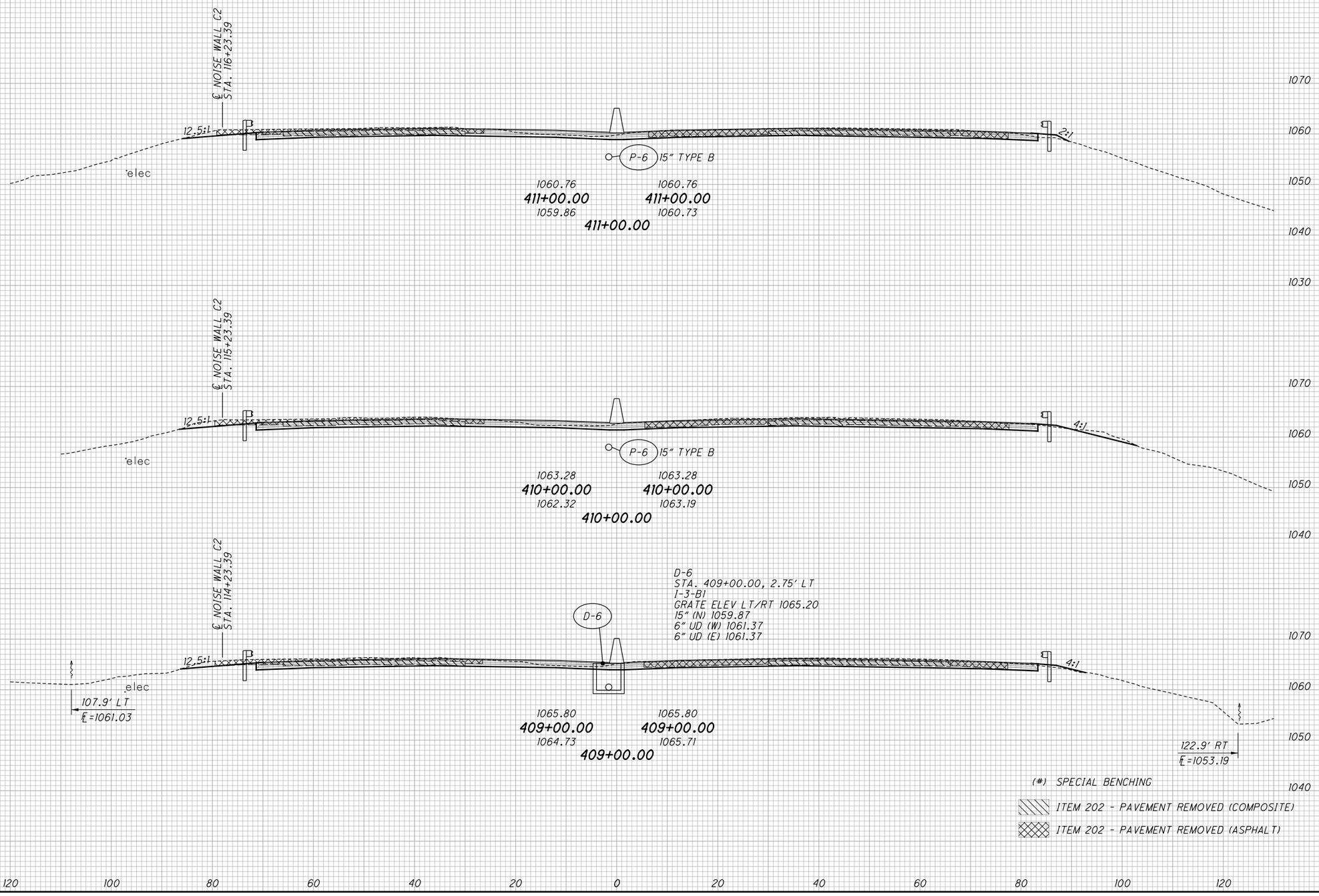
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	378			(54)	(54)
				267	37
32		(0)	(0)		
		73	4		
	433			309	11
46		94	2		
	450			320	11
35		79	4		
	1261			(54)	(54)
				896	59



(#) SPECIAL BENCHING

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 77
STA. 409+00.00 TO STA. 411+00.00

SUM-77 / 277 / 224
VARIOUS

538
1288

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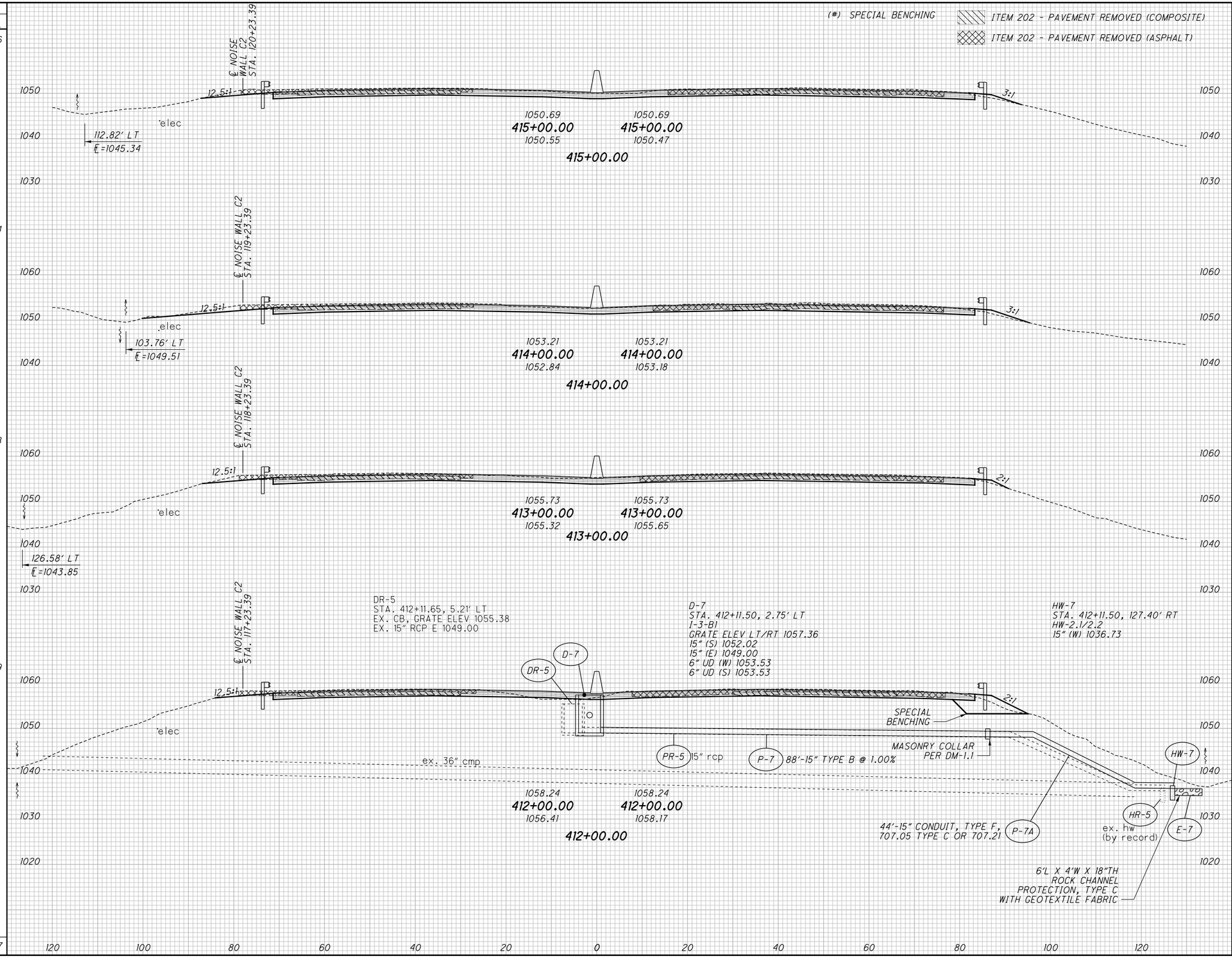
SEEDING END WIDTH	SEEDING SQ. YDS.
	406
37	
	494
52	
	478
34	
	389
36	
1767	

(#) SPECIAL BENCHING

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		407	26
110	5		
		422	20
118	6		
		417	19
(0)	(0)		
107	4		
		(54)	(54)
		330	37
(29)	(29)		
71	16		
		(54)	(54)
		1576	102

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 77
STA. 412+00.00 TO STA. 415+00.00

SUM-77 / 277 / 224
VARIOUS

539
1288

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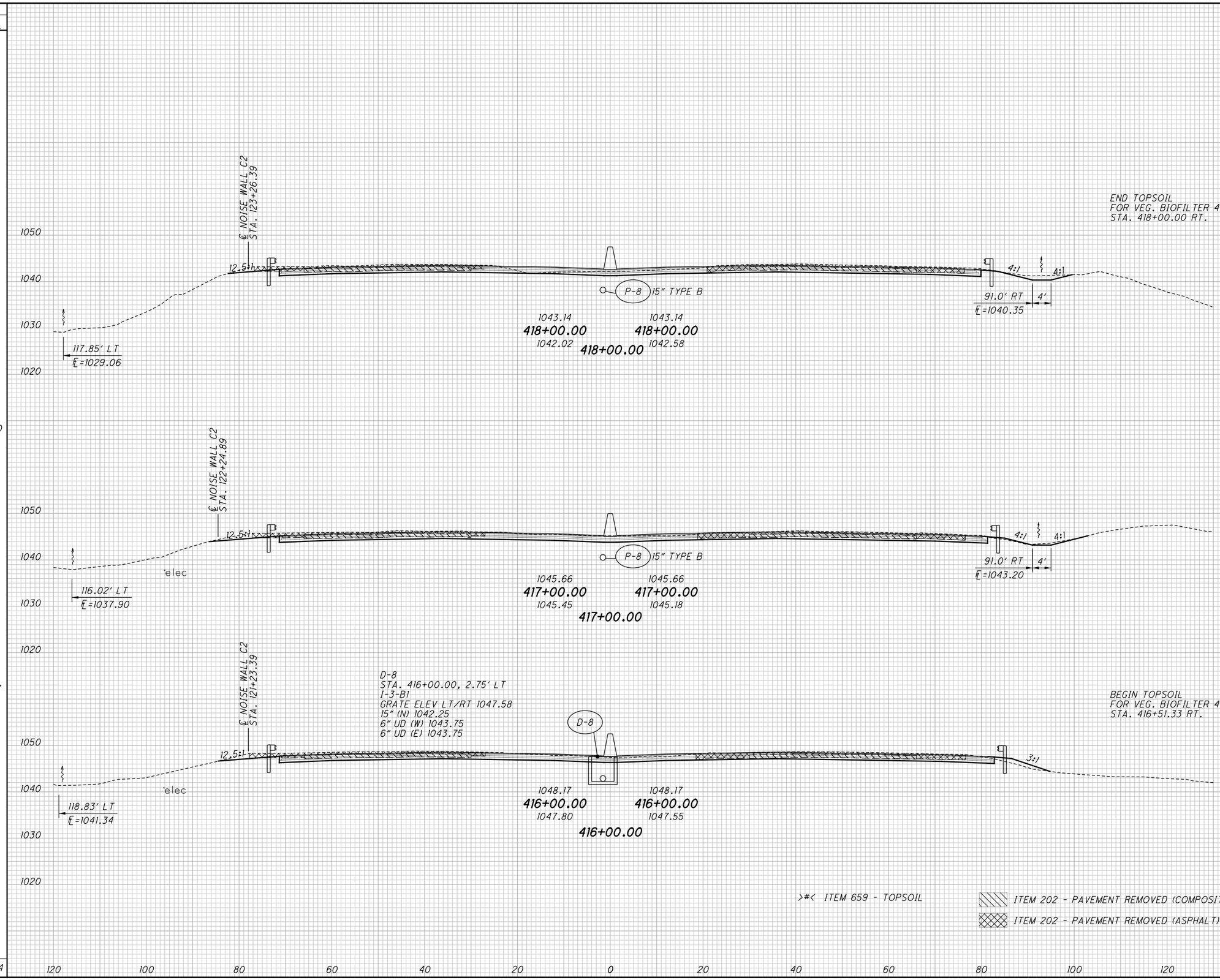
SEEDING END WIDTH	SEEDING SQ. YDS.
	417
42	
	500
48	
	467
36	
	1384



>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		431	7
	AH >0<		
	BK >2<		
106	1		
			>7<
		417	6
119	>2< 2		
			>4<
	>2< >0<	424	20
110	9		
			>11<
		1272	33

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 77
STA. 416+00.00 TO STA. 418+00.00

SUM-77 / 277 / 224
VARIOUS

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SEEDING	
END WIDTH	SQ. YDS.
	706
27	
	311
29	
	344
33	
	1361

END AREA	
CUT	FILL
(0)	(0)
142	2
157	2
127	3

VOLUME	
CUT	FILL
(239)	(239)
567	313
554	7
526	9
(239)	(239)
1647	329

CALCULATED C.JC
CHECKED PJF

CROSS SECTIONS - I.R. 77
STA. 419+00.00 TO STA. 421+00.00

SUM-77 / 277 / 224
VARIOUS

541
1288

℄ NOISE WALL C2
STA. 126+26.39
12.5:1
12.5:1
1035.59 421+00.00 1034.93
1035.59 421+00.00 1035.18
421+00.00
119.7' LT
℄=1018.15
125.9' RT
℄=1010.50

℄ NOISE WALL C2
STA. 125+26.39
12.5:1
4:1
1038.10 420+00.00 1037.59
1038.10 420+00.00 1037.61
420+00.00
120.1' LT
℄=1023.10
121.1' RT
℄=1017.91

℄ NOISE WALL C2
STA. 124+26.39
12.5:1
4:1
HW-9
STA. 419+05.00, 111.90' LT
HW-2.1/2.2
15" (E) 1025.78
6'L X 4'W X 18"TH ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC
ex. hw (by record)
E-9
HR-7
HW-9
P-9A 38'-15" CONDUIT, TYPE F, 707.05 TYPE C OR 707.21
MASONRY COLLAR PER DM-1.1
119.89' LT
℄=1025.66
DR-7
STA. 419+04.51, 13.71' LT
EX. CB, GRATE ELEV 1038.87
EX. 12" RCP E 1035.04
EX. 15" RCP W 1035.04
D-9
STA. 419+04.50, 2.75' LT
I-3-B1
GRATE ELEV LT/RT 1039.92
15" (S) 1035.09
15" (W) 1035.09
6" UD (S) 1036.09
6" UD (E) 1036.09
DR-6
STA. 419+04.03, 13.57' RT
EX. CB, GRATE ELEV 1038.92
EX. 12" RCP W 1035.42
D-9
DR-7
DR-6
PR-6 12" rcp
1040.62 419+00.00 1038.94
1040.62 419+00.00 1039.40
419+00.00
15" rcp PR-7
P-9 73'-15" TYPE B @ 1.00%
121.9' RT
℄=1022.94

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)
ITEM 202 - PAVEMENT REMOVED (ASPHALT)
(#) SPECIAL BENCHING

1040 1030 1020 1010 1000 1050 1040 1030 1020 1010
120 100 80 60 40 20 0 20 40 60 80 100 120

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SEEDING END WIDTH	SEEDING SQ. YDS.
	62
	21
	322
	37
	389
	33
	739
	100
	1512

REVISIONS NO.	DATE	DESCRIPTION
6	04/26/21	REVISED CONDUIT, BORED OR JACKED

HW-11
STA. 425+00.00, 109.36' LT
HW-2.1/2.2
15" (E) 1012.27

℄ NOISE WALL C2
STA. 130+26.51

HW-11
E-11
3:1
MASONRY COLLAR PER DM-1.1
P-11A 33'-15" CONDUIT, TYPE F, 707.05 TYPE C OR 707.21
6'L X 4'W X 18"TH ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC
P-11 76'-15" TYPE B, BORED OR JACKED @ 1.00%
D-11
4:1

1025.09 | 425+00.00 | 1023.40
1025.01 | 425+00.00 | 1024.10
425+00.00

D-11
STA. 425+00.00, 3.17' LT
I-3-C1
GRATE LT
WINDOW ELEV LT 1024.66
WINDOW ELEV RT 1024.59
15" (S) 1019.09 "OFFSET"
15" (W) 1019.09
6" UD (N) 1020.67
6" UD (S) 1020.67
6" UD (E) 1020.59

elec

℄ NOISE WALL C2
STA. 129+26.43

12.5:1
ITS WORK PAD
85.3' RT
ELEV. = 1025.94
2:1
elec (by record)
P-64 15" TYPE B

1027.65 | 424+00.00 | 1026.20
1027.56 | 424+00.00 | 1027.76
424+00.00

D-64
STA. 423+18.00, 3.17' LT
I-3-C1
GRATE LT
WINDOW ELEV LT 1029.25
WINDOW ELEV RT 1029.17
15" (N) 1023.84 "OFFSET"
15" (S) 1023.84

℄ NOISE WALL C2
STA. 128+26.39

D-64
12.5:1
12.5:1

1030.32 | 423+00.00 | 1029.34
1030.24 | 423+00.00 | 1029.94
423+00.00

D-10
STA. 422+00.00, 3.17' LT
I-3-C1
GRATE LT
WINDOW ELEV LT 1032.40
WINDOW ELEV RT 1032.32
15" (N) 1026.99
6" UD (W) 1028.57
6" UD (E) 1028.49

MATCHLINE AA
2:1
2:1
EX LA-R/W
SPECIAL BENCHING
138.7' RT
℄=1006.75
132.8' RT
℄=1004.25
120
140
160

℄ NOISE WALL C2
STA. 127+26.39

D-10
12.5:1
ITS WORK PAD
90.0' RT
ELEV. = 1031.09
12.5:1
2:1
SPECIAL BENCHING
MATCHLINE AA

1032.99 | 422+00.00 | 1032.34
1032.91 | 422+00.00 | 1032.30
422+00.00

(#) SPECIAL BENCHING
ITEM 202 - PAVEMENT REMOVED (COMPOSITE)
ITEM 202 - PAVEMENT REMOVED (ASPHALT)

1030 1020 1010 1000 1040

120 100 80 60 40 20 0 20 40 60 80 100 120

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		156	10
105	16		
		428	35
126	3		
		494	9
(0)	(0)		
141	2		
		(239)	(239)
		565	313
(129)	(129)		
164	167		
		(239)	(239)
		1643	367

CALCULATED
CHECKED

CROSS SECTIONS - I.R. 77
STA. 422+00.00 TO STA. 425+00.00

SUM-77 / 277 / 224
VARIOUS

542
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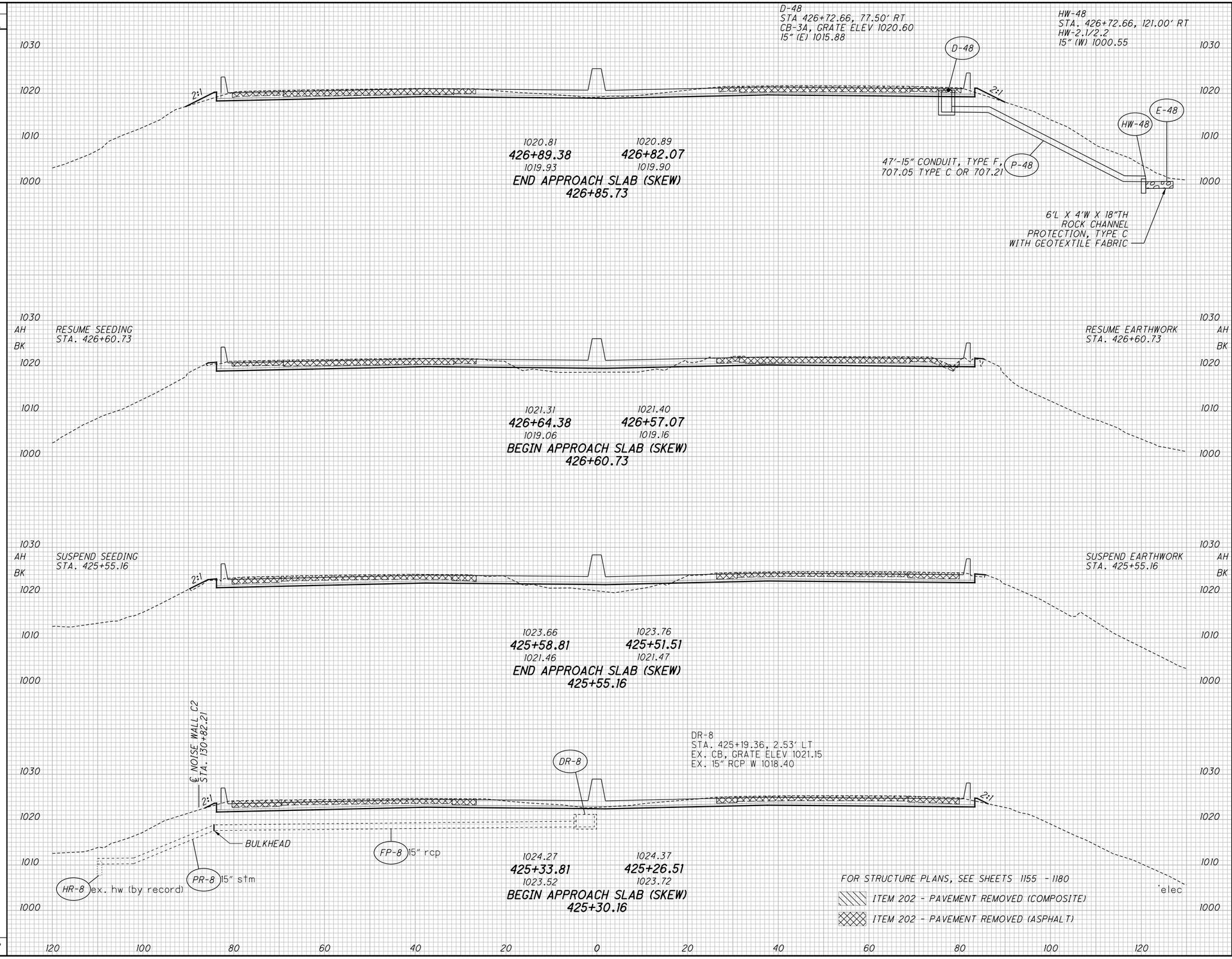
SEEDING END WIDTH	SEEDING SQ. YDS.
	29
25	
	54
14	
0	
0	
19	
	49
16	
	132



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		56	5
139	8		
		112	18
103	30		
0	0		
0	0		
143	34		
		147	17
175	2		
		315	40

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 77
STA. 425+30.16 TO STA. 426+85.73

SUM-77 / 277 / 224
VARIOUS

543
1288

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SEEDING END WIDTH	SEEDING SQ. YDS.
	78
	20
	19
	19
	87
	19
	172
	12
	356

REVISIONS NO.	DATE	DESCRIPTION
6	04/26/21	REVISED CONDUIT, BORED OR JACKED

D-12
STA. 428+50.00, 3.17' LT
I-3-C1
GRATE LT
WINDOW ELEV LT 1017.55
WINDOW ELEV RT 1017.52
15" (W) 1012.14
15" (S) 1012.14
6" UD (N) 1013.71
6" UD (S) 1013.71
6" UD (E) 1013.64

MASONRY COLLAR PER DM-1.1

P-12 76'-15" TYPE B, BORED OR JACKED @ 1.00%

P-12A 55'-15" CONDUIT, TYPE F, 707.05 TYPE C OR 707.21

MATCHLINE CC

1018.12 428+50.00 1016.55
1018.06 428+50.00 1017.90
428+50.00

EX LA-R/W

E-12 HW-12

6'L X 4'W X 18"TH ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC

HW-12
STA. 428+50.00, 128.90' LT
HW-2.1/2.2
15" (E) 998.77

133.44' LT
℄=997.94

15" TYPE B P-63

1018.25 428+41.24 1016.93
1018.19 428+41.24 1018.10
P.C. 428+41.24

15" TYPE B P-63

1018.86 428+00.00 1018.35
1018.80 428+00.00 1018.41
428+00.00

6'L X 4'W X 18"TH ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC

EX LA-R/W

E-46 HW-46

MATCHLINE BB

HW-46
STA. 427+40.06, 125.26' LT
HW-2.1/2.2
15" (E) 999.37

129.52' LT
℄=998.98

HR-9 ex. hw (by record)

D-46
STA 427+40.06, 77.78' LT
CB-3A, GRATE ELEV 1019.20
15" (W) 1014.87
6" UD (S) 1016.37

D-46 D-63 DR-9

BULKHEAD

MATCHLINE END SKEWED APPROACH SLAB

FP-9 15" rcp (by record)

P-46 51'-15" CONDUIT, TYPE F, 707.05 TYPE C OR 707.21

PR-9 15" stm (by record)

MATCHLINE BB

1020.60 427+00.00 1019.20
1020.55 427+00.00 1019.09
427+00.00

DR-9
STA. 427+12.48, 1.45' RT
EX. CB, GRATE ELEV 1016.56
EX. 15" RCP W 1014.11

D-63
STA. 427+40.00, 3.17' LT
I-3-C1
GRATE LT
WINDOW LT ELEV 1019.32
WINDOW RT ELEV 1019.24
15" (N) 1013.91

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)
ITEM 202 - PAVEMENT REMOVED (ASPHALT)

120 100 80 60 40 20 0 20 40 60 80 100 120

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		120	6
100	1		
		34	0
112	0		
129	0		
		184	0
		372	22
72	12		
		710	28

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 77
STA. 427+00.00 TO STA. 428+50.00

SUM-77 / 277 / 224
VARIOUS

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1288

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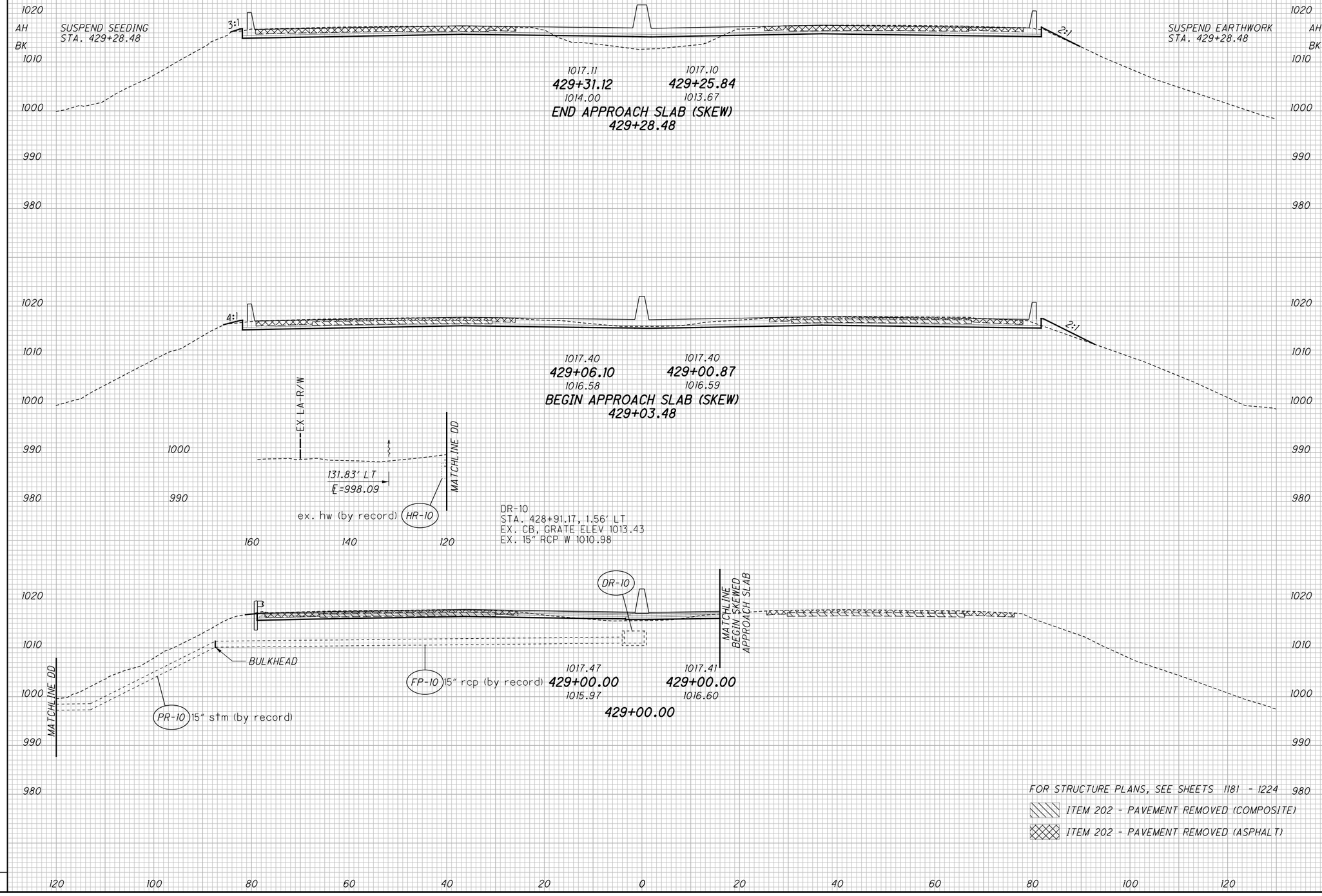
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0		0	0		
21		116	63		
	65			113	34
26		128	10		
	7			10	1
	8	30	5		
	72			123	35



CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 77
STA. 429+00.00 TO STA. 429+28.48

SUM-77 / 277 / 224
VARIOUS

545
1288

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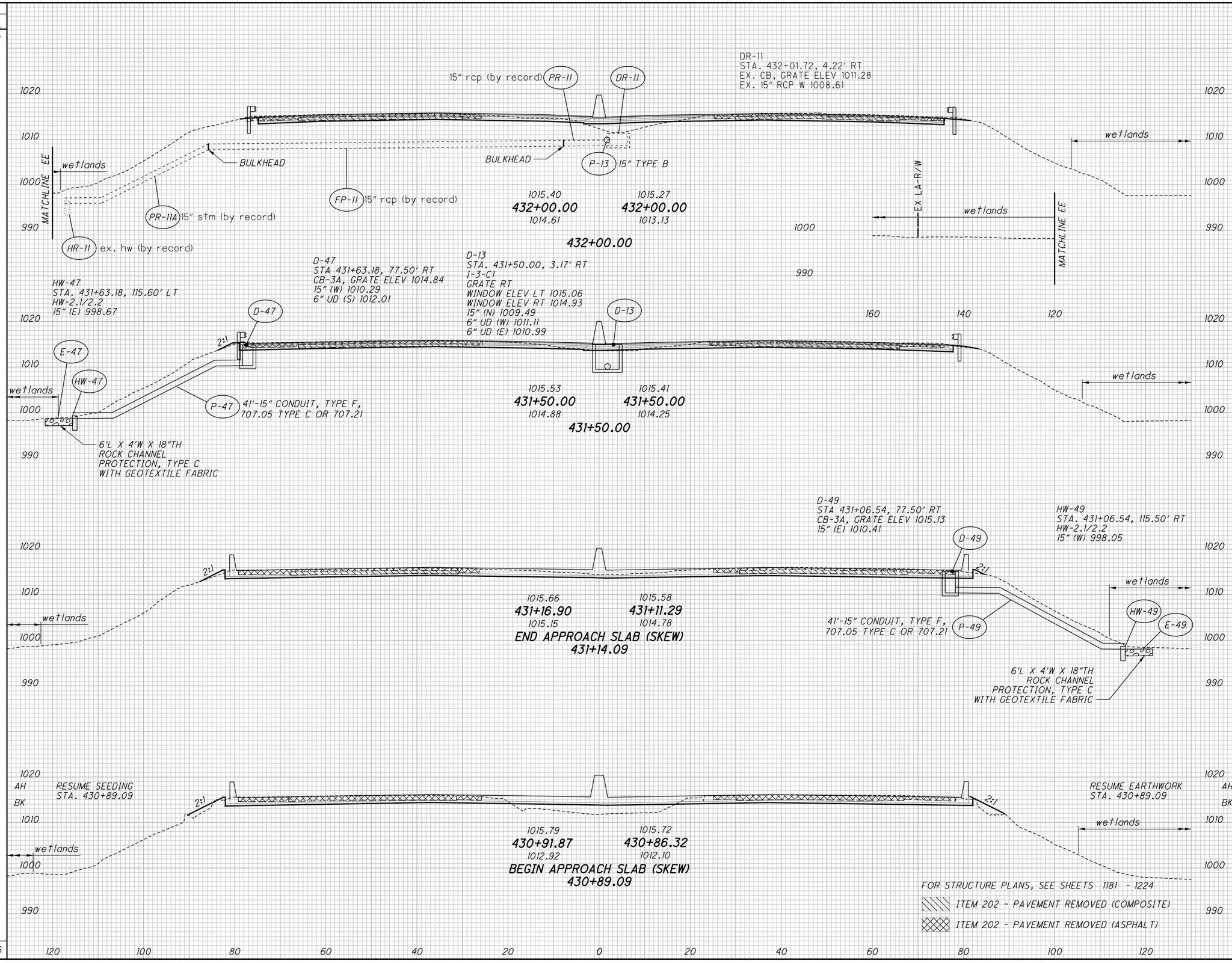
SEEDING END WIDTH	SEEDING SQ. YDS.
20	128
21	114
19	80
27	64
0	
	386

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		122	30
57	24		
		116	25
68	3		
		134	4
134	3		
		112	33
107	68		
0	0		
		484	92

CALCULATED CJC
CHECKED PJF



CROSS SECTIONS - I.R. 77
STA. 430+89.09 TO STA. 432+00.00

SUM-77 / 277 / 224
VARIOUS

546
1288

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REVISIONS		
NO.	DATE	DESCRIPTION
6	04/26/21	REVISED CONDUIT, BORED OR JACKED

SEEDING	
END WIDTH	SQ. YDS.
25	128
21	128
29	139
26	153
	548

END AREA	
CUT	FILL
112	5
95	9
73	6
75	8

VOLUME	
CUT	FILL
194	10
192	13
156	14
137	13
679	50

CALCULATED CJC
CHECKED PJF

1020
1010
1000
990

wetlands

1015.77
434+00.00
1016.02

1015.56
434+00.00
1014.99

434+00.00

D-15
STA. 433+50.00, 3.17' RT
I-3-C1
GRATE RT
WINDOW ELEV LT 1014.96
WINDOW ELEV RT 1014.76
15" (S) 1009.43
6" UD (W) 1011.13
6" UD (E) 1010.93

D-15

4:1

1015.55
433+50.00
1015.24

1015.36
433+50.00
1014.40

433+50.00

12.5:1

P-15 15" TYPE B

1015.41
433+00.00
1015.27

1015.24
433+00.00
1013.70

433+00.00

D-14
STA. 432+50.00, 3.17' RT
I-3-C1
GRATE RT
WINDOW ELEV LT 1014.77
WINDOW ELEV RT 1014.62
15" (N) 1008.93
15" (S) 1008.93
15" (W) 1008.93
6" UD (N) 1010.94
6" UD (S) 1010.94
6" UD (E) 1010.79

D-14

HW-14
STA. 432+50.00, 115.52' LT
HW-2.1/2.2
15" (E) 999.13

MASONRY COLLAR PER DM-1.1

P-14 81'-15" TYPE B, BORED OR JACKED @ 1.00%

P-14A 38'-15" CONDUIT, TYPE F, 707.05 TYPE C OR 707.21

HW-14

6'L X 4'W X 18"TH ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC

E-14

1015.36
432+50.00
1015.32

1015.21
432+50.00
1013.36

432+50.00

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

120 100 80 60 40 20 0 20 40 60 80 100 120

CROSS SECTIONS - I.R. 77
STA. 432+50.00 TO STA. 434+00.00

SUM-77 / 277 / 224
VARIOUS

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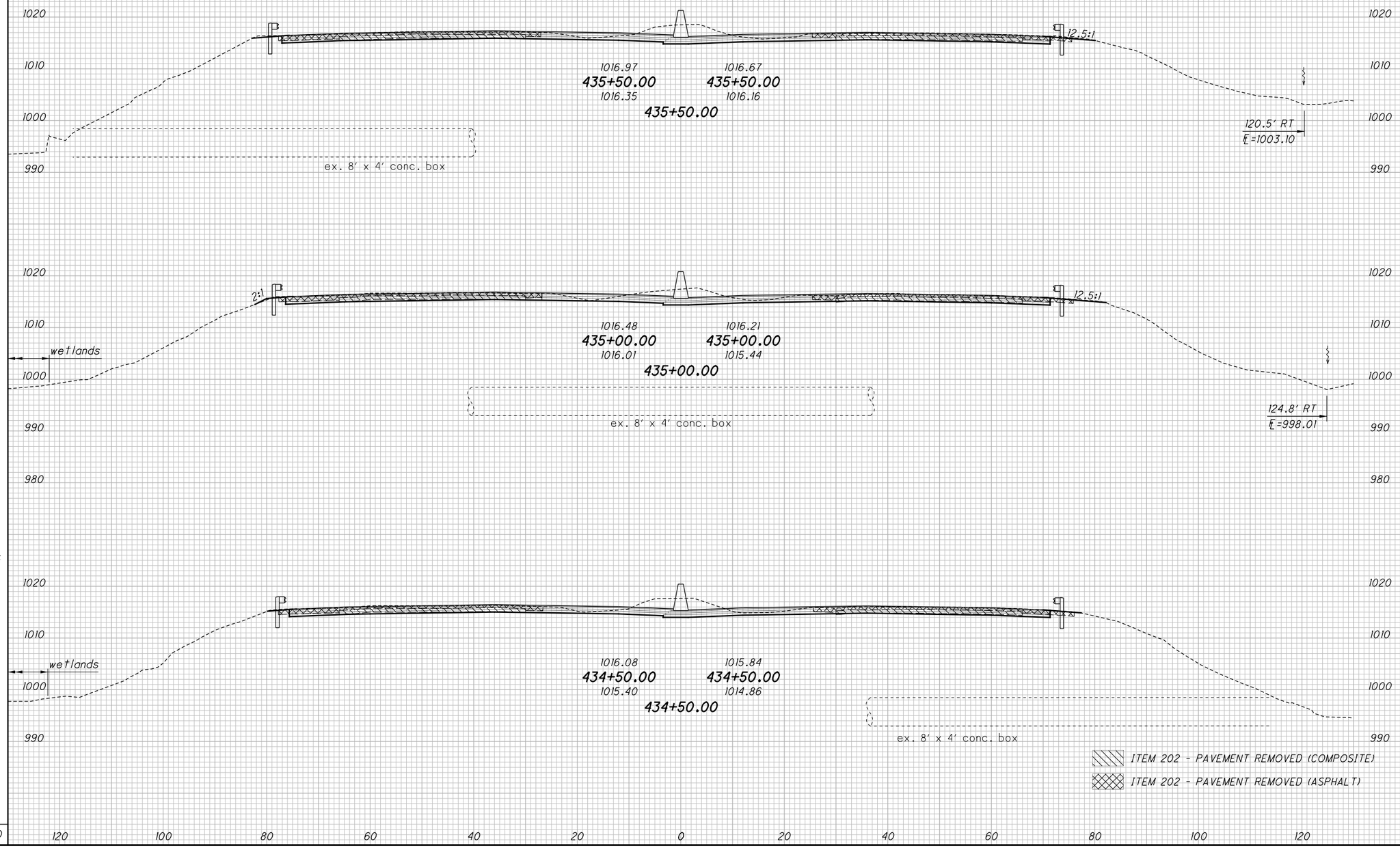
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	147			168	11
25		104	3		
	147			185	7
28		96	5		
	136			180	10
21		98	6		
	430			533	28



CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 77
STA. 434+50.00 TO STA. 435+50.00

SUM-77 / 277 / 224
VARIOUS

548
1288

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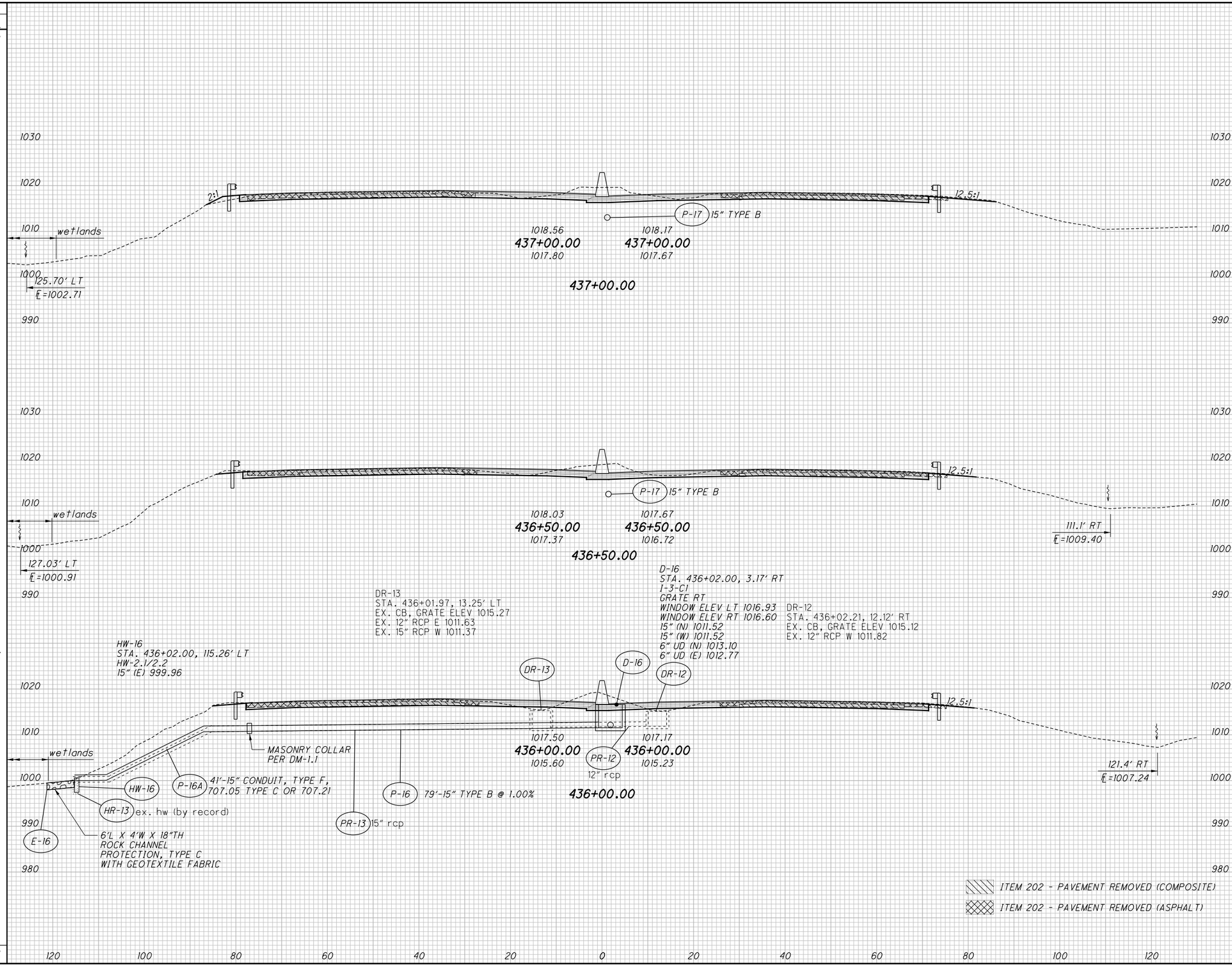
SEEDING END WIDTH	SEEDING SQ. YDS.
	194
33	
	167
27	
	153
28	
	514

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		191	14
98	8		
		173	10
89	3		
		154	11
77	9		
		518	35

CALCULATED CJC
CHECKED PJF



CROSS SECTIONS - I.R. 77
STA. 436+00.00 TO STA. 437+00.00

SUM-77 / 277 / 224
VARIOUS

549
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS001.dgn Sheet 1/15/2021 9:17:49 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	158			214	10
30		120	5		
	156			219	8
26		116	4		
	144			211	7
26		112	4		
	175			204	10
37		108	7		
	633			848	35

CALCULATED CJC
CHECKED PJF

D-17
STA. 439+00.00, 3.17' RT
I-3-C1
GRATE RT
WINDOW ELEV LT 1020.09
WINDOW ELEV RT 1019.58
15" (S) 1014.25
6" UD (W) 1016.26
6" UD (E) 1015.75

ex. 8" san. (by record)

1020.68 439+00.00 1020.51
1020.17 439+00.00 1019.44
439+00.00

ex. 8" san. (by record)

1020.15 438+50.00 1019.91
1019.67 438+50.00 1019.10
438+50.00

112.00' LT
℄=1012.49

1019.62 438+00.00 1019.37
1019.17 438+00.00 1018.60
438+00.00

111.25' LT
℄=1007.45

1019.09 437+50.00 1018.23
1018.67 437+50.00 1017.96
437+50.00

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)
ITEM 202 - PAVEMENT REMOVED (ASPHALT)

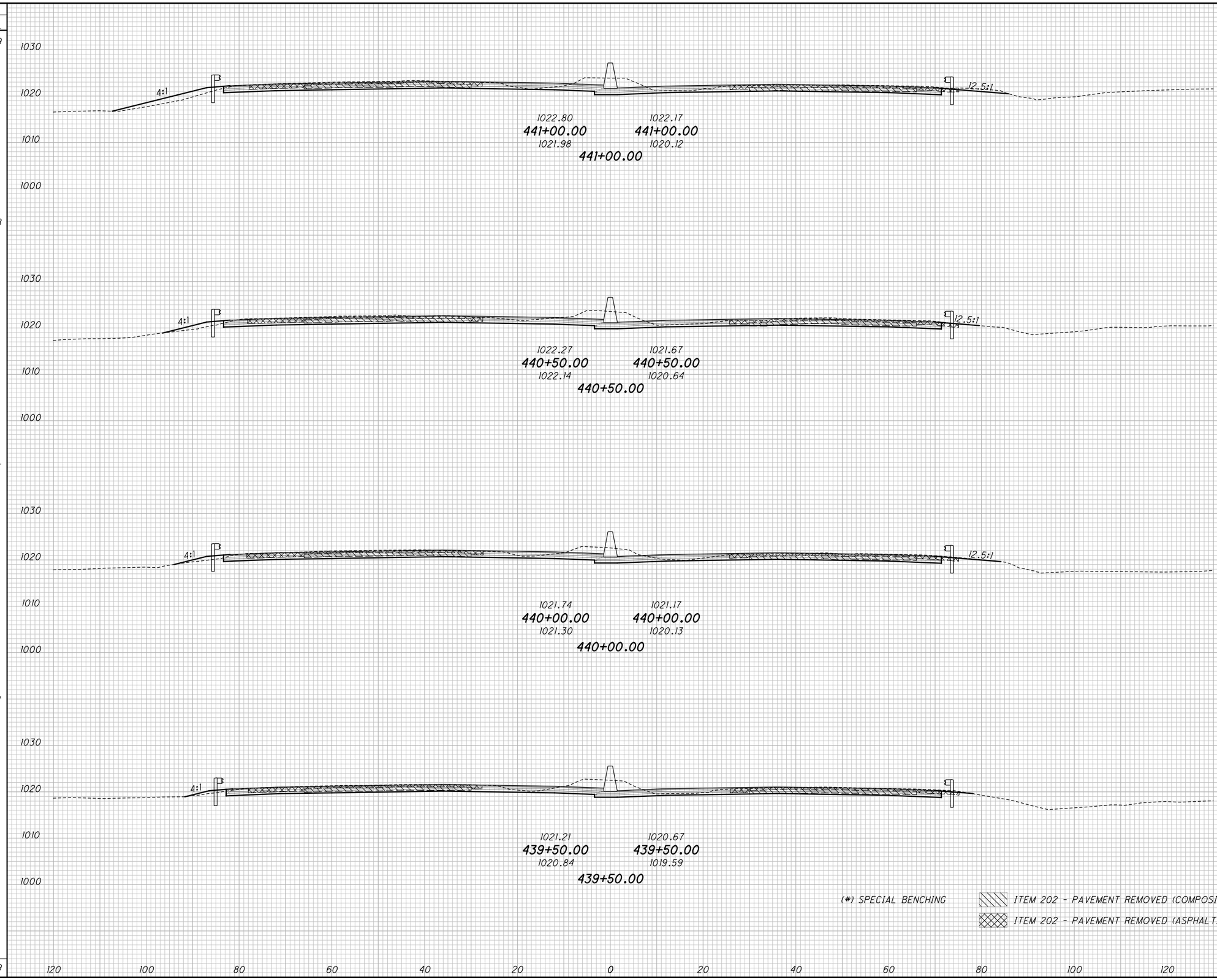
CROSS SECTIONS - I.R. 77
STA. 437+50.00 TO STA. 439+00.00

SUM-77 / 277 / 224
VARIOUS

550
1288

D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS001.dgn Sheet 1/15/2021 9:17:53 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
50	289
	228
32	
	183
34	
	169
27	
	869



(#) SPECIAL BENCHING

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		(40)	(40)
		222	63
(0)	(0)		
115	24		
		219	33
121	12		
108	8	212	19
111	6	203	13
		(40)	(40)
		856	128

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 77
STA. 439+50.00 TO STA. 441+00.00

SUM-77 / 277 / 224
VARIOUS

551
1288

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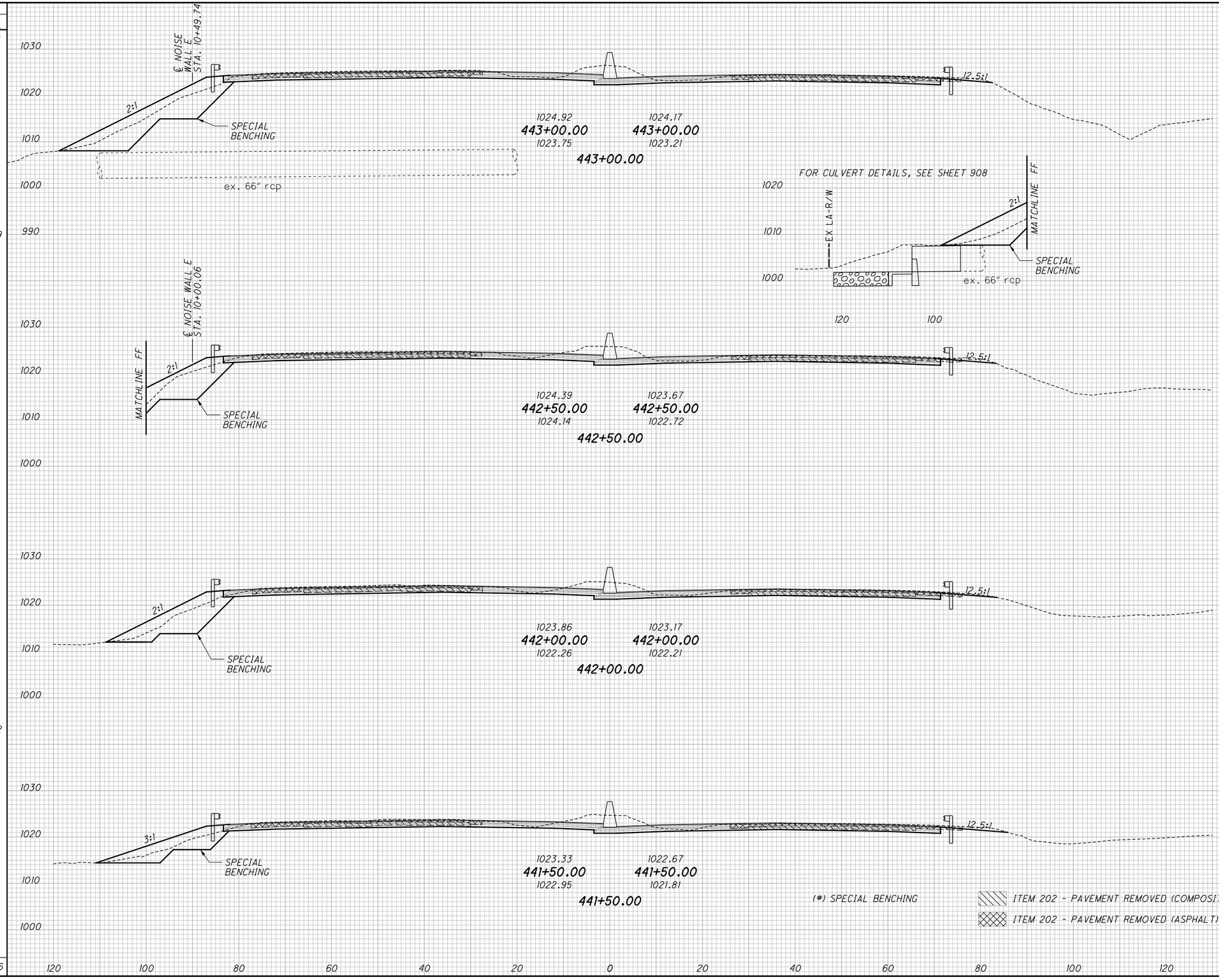


SEEDING END WIDTH	SEEDING SQ. YDS.
	314
61	
	339
61	
	311
51	
	292
54	
	1256

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		(162)	(162)
		223	131
(112)	(112)		
118	70		
		(197)	(197)
		226	137
(101)	(101)		
126	78		
		(158)	(158)
		224	119
(70)	(70)		
116	50		
		(105)	(105)
		223	87
(43)	(43)		
125	44		
		(622)	(622)
		896	474

CALCULATED CJC
CHECKED PJF

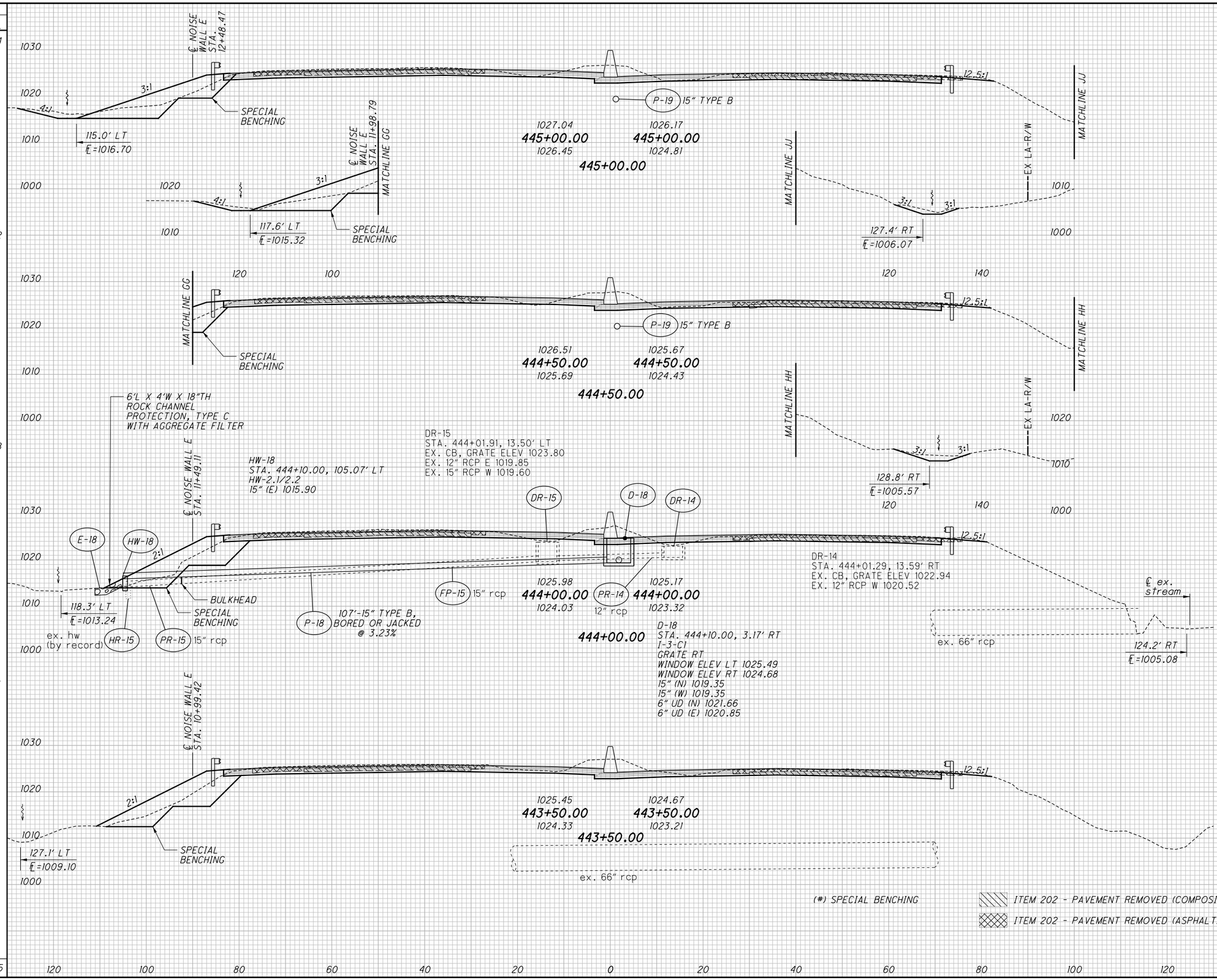
CROSS SECTIONS - I.R. 77
STA. 441+50.00 TO STA. 443+00.00

SUM-77 / 277 / 224
VARIOUS

552
1288

0:\2017\20172581\Project Data\SUM\106002\Design\Roadway\Sheets\106002_XS001.dgn Sheet 1/15/2021 9:18:00 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	494
83	
	472
87	
	378
49	
	281
52	
	1625



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		(80)	(80)
		314	90
(56)	(56)		
141	58		
		(110)	(110)
		252	119
(63)	(63)		
131	70		
		(117)	(117)
		213	134
(63)	(63)		
99	75		
		(117)	(117)
		206	136
(63)	(63)		
123	72		
		(424)	(424)
		985	479

CALCULATED CJC
CHECKED PJF

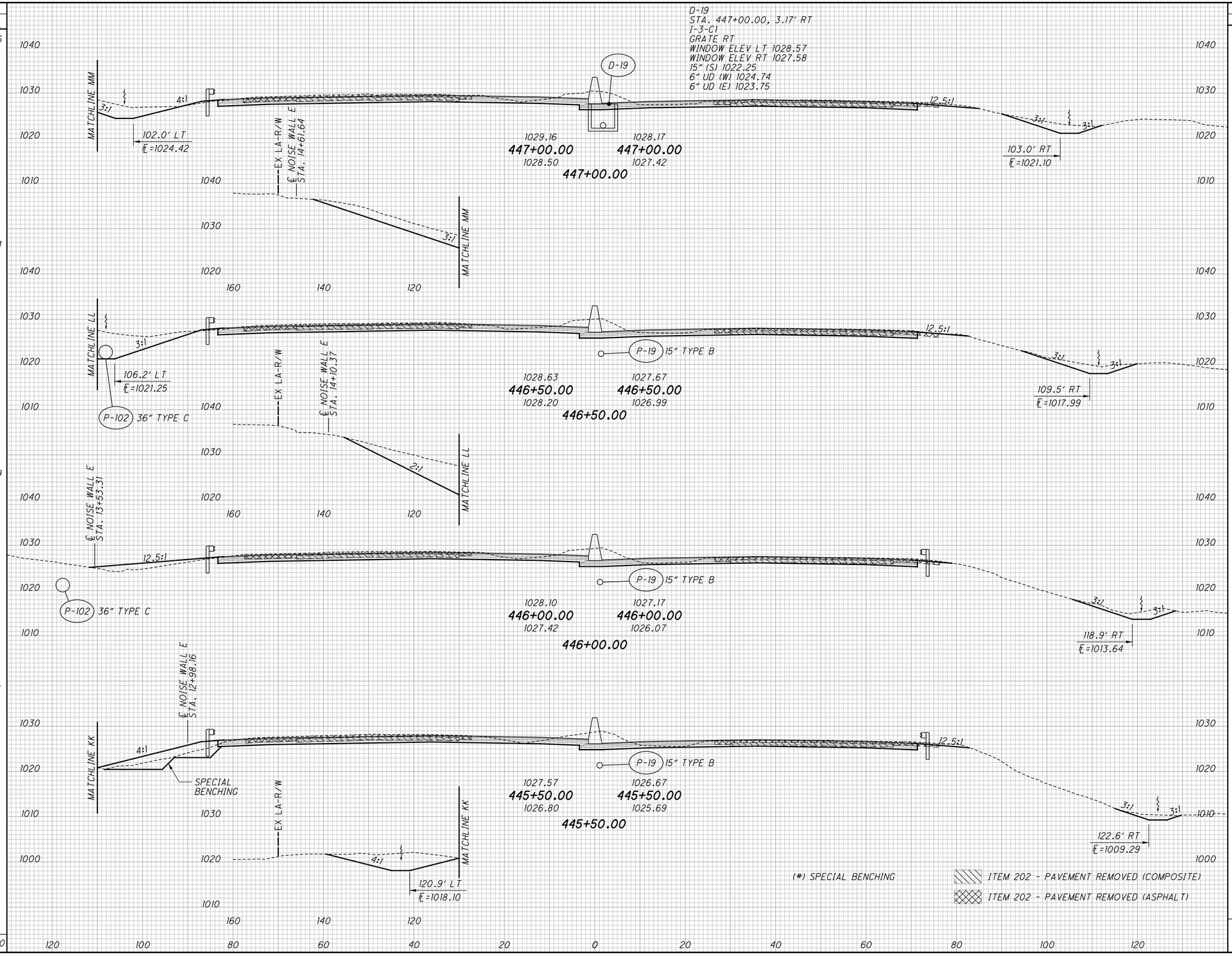
CROSS SECTIONS - I.R. 77
STA. 443+50.00 TO STA. 445+00.00

SUM-77 / 277 / 224
VARIOUS

553
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS001.dgn Sheet 1/15/2021 9:18:03 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	506
	109
	594
	105
	489
	71
	461
	95
	2050



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		382	7
		251	4
		511	7
		301	4
		413	28
(0)	(0)		
145	26		
		(28)	(28)
		318	60
(30)	(30)		
198	39		
		(28)	(28)
		1624	102

CALCULATED CJC
CHECKED PJF

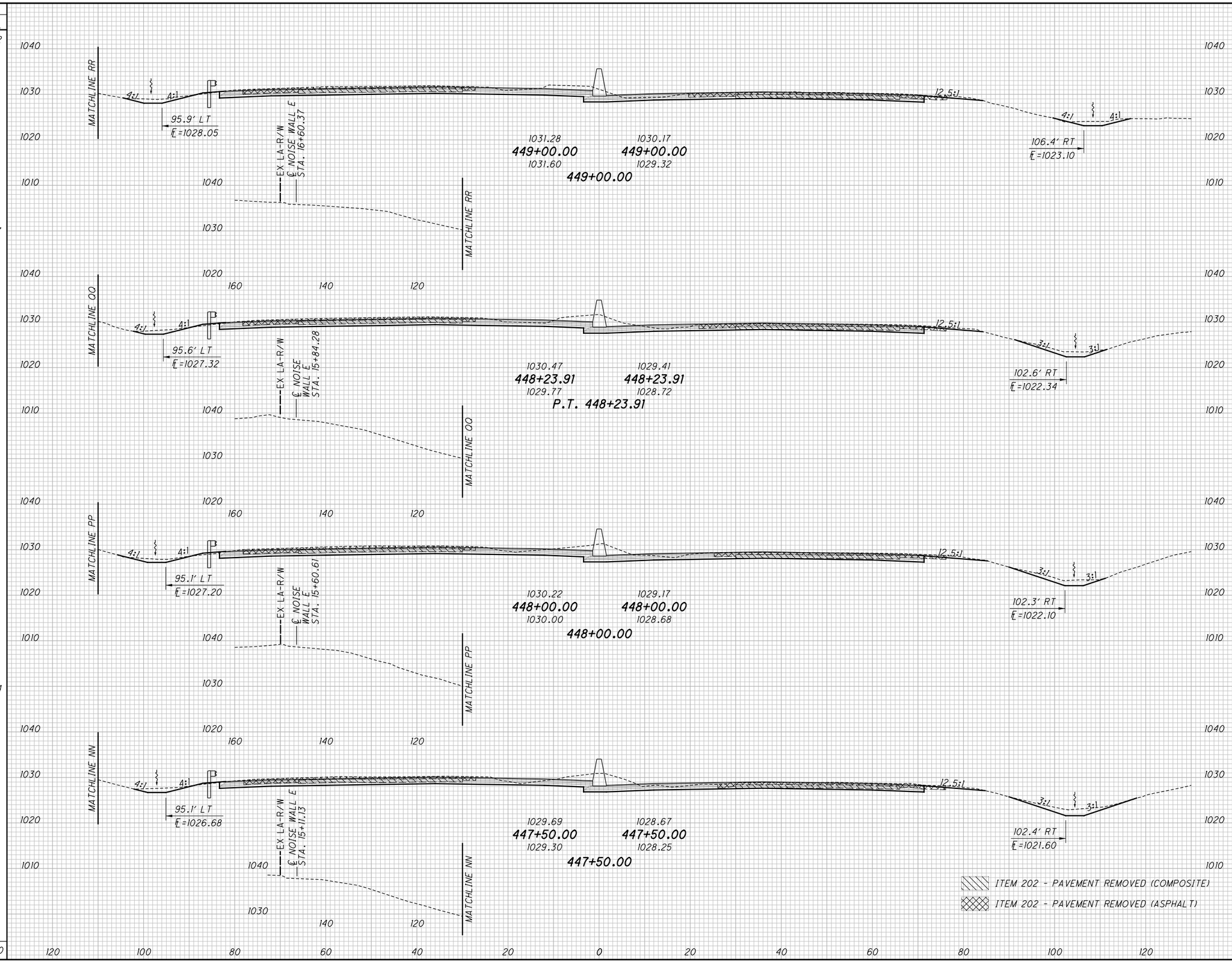
CROSS SECTIONS - I.R. 77
STA. 445+50.00 TO STA. 447+00.00

SUM-77 / 277 / 224
VARIOUS

554
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS001.dgn Sheet 1/15/2021 9:8:10 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	822			459	28
63		141	4		
	537			411	11
64		151	4		
	177			136	4
69		157	4		
	394			295	7
73		162	4		
	1930			1301	50



CALCULATED CJC
CHECKED PJF

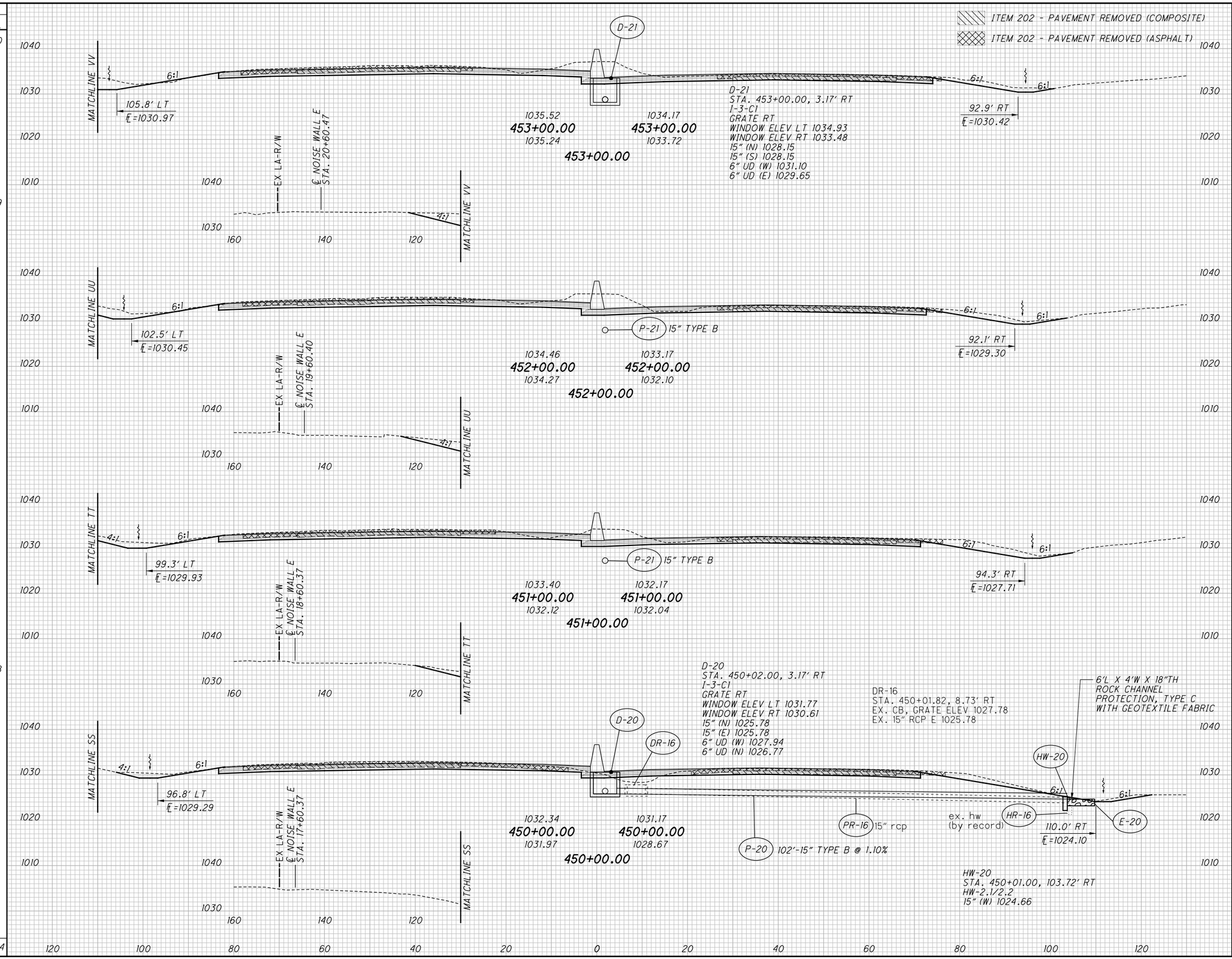
CROSS SECTIONS - I.R. 77
STA. 447+50.00 TO STA. 449+00.00

SUM-77 / 277 / 224
VARIOUS

555
1288

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS001.dgn Sheet 1/15/2021 9:8:14 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
77	900
	889
83	
	917
82	
	928
85	
	3634



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		761	9
212	3		
		774	7
206	1		
		733	4
190	1		
		550	22
107	11		
		2818	42

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 77
STA. 450+00.00 TO STA. 453+00.00

SUM-77 / 277 / 224
VARIOUS

556
1288

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SEEDING END WIDTH	SEEDING SQ. YDS.
	[333]
	1039
[29]	AH
[61]	BK
96	
	[644]
	1078
[55]	
98	
	[425]
	1078
[52]	AH
[27]	BK
[85]	
[27]	
96	
	[300]
	1006
[27]	
85	
	[178]
[25]	AH
[0]	BK
	[1965]
	4201

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>37<
		691	91
	>10<		
	>20<		
206	19		
	>18<		
224	10		
			>70<
		796	54
	>17<		
	>9<		
			>9<
	>9<		
225	5		
			>33<
		785	13
	>9<		
199	2		
			>19<
	>8<		
	>0<		
			>46<
		831	28
			>214<
		3103	186

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 77
STA. 454+00.00 TO STA. 457+00.00

SUM-77 / 277 / 224
VARIOUS

557
1288

END SLOPE EROSION PROTECTION FOR VEG. FILTER STRIP 3 STA. 457+00.00 RT.

END TOPSOIL FOR VEG. FILTER STRIP 3 STA. 457+00.00 RT.

EX LA-R/W

℄ NOISE WALL E STA. 24+60.98

111.0' LT ℄=1034.34

109.9' RT ℄=1032.66

1039.76 457+00.00 1039.49

1038.30 457+00.00 1037.08

457+00.00

℄ NOISE WALL E STA. 23+60.67

MATCHLINE YY

BEGIN SLOPE EROSION PROTECTION FOR VEG. FILTER STRIP 3 STA. 455+28.44 RT.

BEGIN TOPSOIL FOR VEG. FILTER STRIP 3 STA. 455+28.44 RT.

MATCHLINE XX

109.0' LT ℄=1032.55

99.5' RT ℄=1031.84

1037.64 455+00.00 1037.64

1036.22 455+00.00 1035.27

455+00.00

℄ NOISE WALL E STA. 22+60.61

D-62
STA. 455+50.00, 3.17' RT
I-3-C1
GRATE RT
WINDOW LT ELEV 1037.58
WINDOW RT ELEV 1035.89
15" (S) 1030.56

MATCHLINE WW

109.0' LT ℄=1031.49

94.3' RT ℄=1031.43

1036.58 454+00.00 1035.95

1035.18 454+00.00 1034.39

454+00.00

P-62 15" TYPE B

℄ NOISE WALL E STA. 21+60.54

BEGIN SLOPE EROSION PROTECTION FOR VEG. FILTER STRIP 2 STA. 453+38.46 LT.

BEGIN TOPSOIL FOR VEG. FILTER STRIP 2 STA. 453+38.46 LT.

MATCHLINE YY

109.0' LT ℄=1033.61

104.7' RT ℄=1032.25

1038.70 456+00.00 1038.23

1037.26 456+00.00 1036.39

456+00.00

>#< ITEM 659 - TOPSOIL

[#] ITEM 670 - SLOPE EROSION PROTECTION

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

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SEEDING	
END WIDTH	SQ. YDS.
	861
76	
	856
78	
[0] [25]	
[46] 939	
[31] 91	
[46]	2656

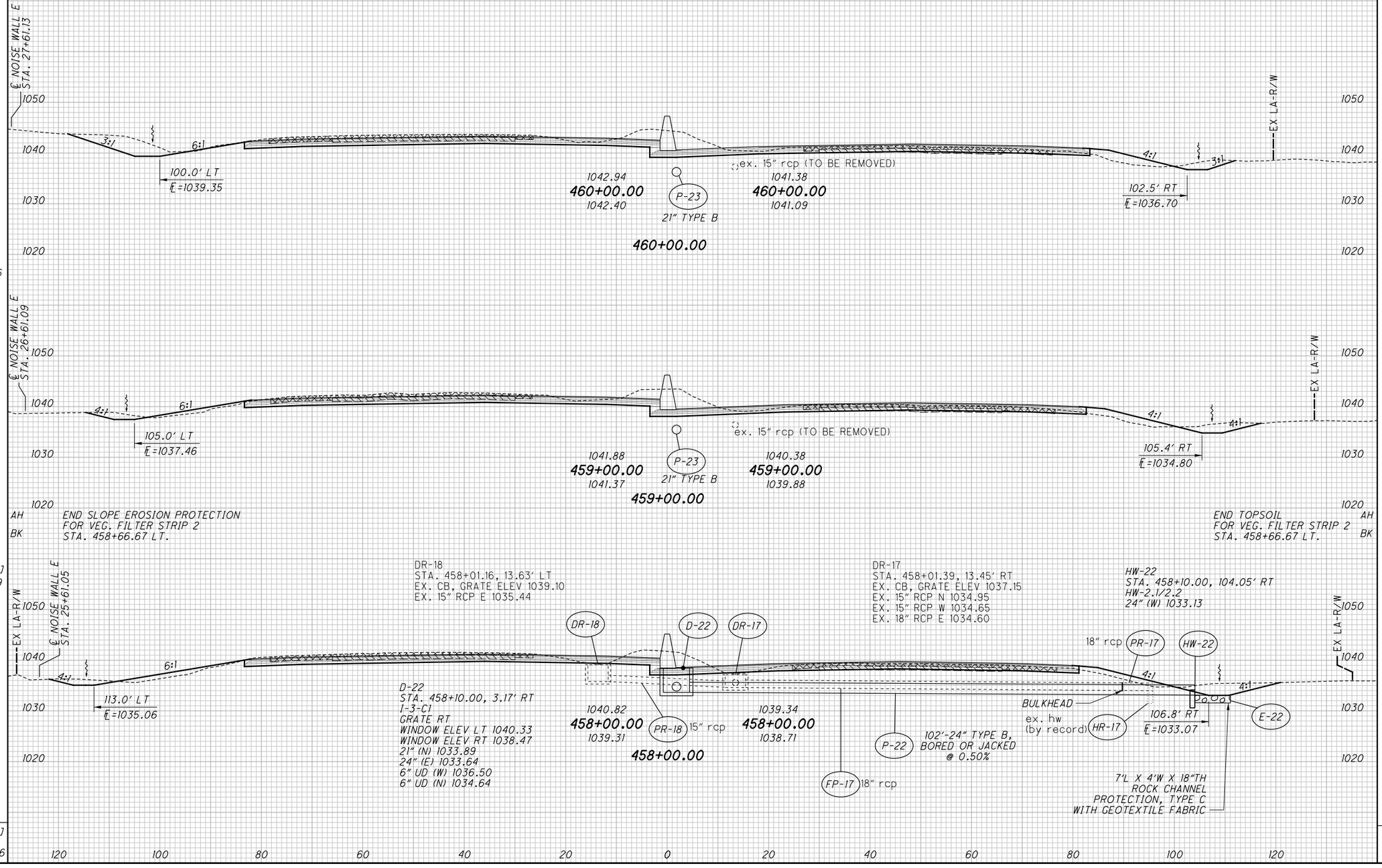
REVISIONS		
NO.	DATE	DESCRIPTION
6	04/26/21	REVISED CONDUIT, BORED OR JACKED

>#< ITEM 659 - TOPSOIL

[#] ITEM 670 - SLOPE EROSION PROTECTION

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		856	106
211	29		
		720	120
178	36		
			>0<
			>8<
			>22<
		639	122
			>10<
167	30		
			>22<
		2215	348

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 77
STA. 458+00.00 TO STA. 460+00.00

SUM-77 / 277 / 224
VARIOUS

558
1288

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SEEDING	
END WIDTH	SQ. YDS.
	1039
	88
	928
	79
	1967

END AREA	
CUT	FILL
	272
	251

VOLUME	
CUT	FILL
1076	80
	26
969	100
	28
2045	180

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 77
STA. 461+00.00 TO STA. 462+00.00

SUM-77 / 277 / 224
VARIOUS

559
1288

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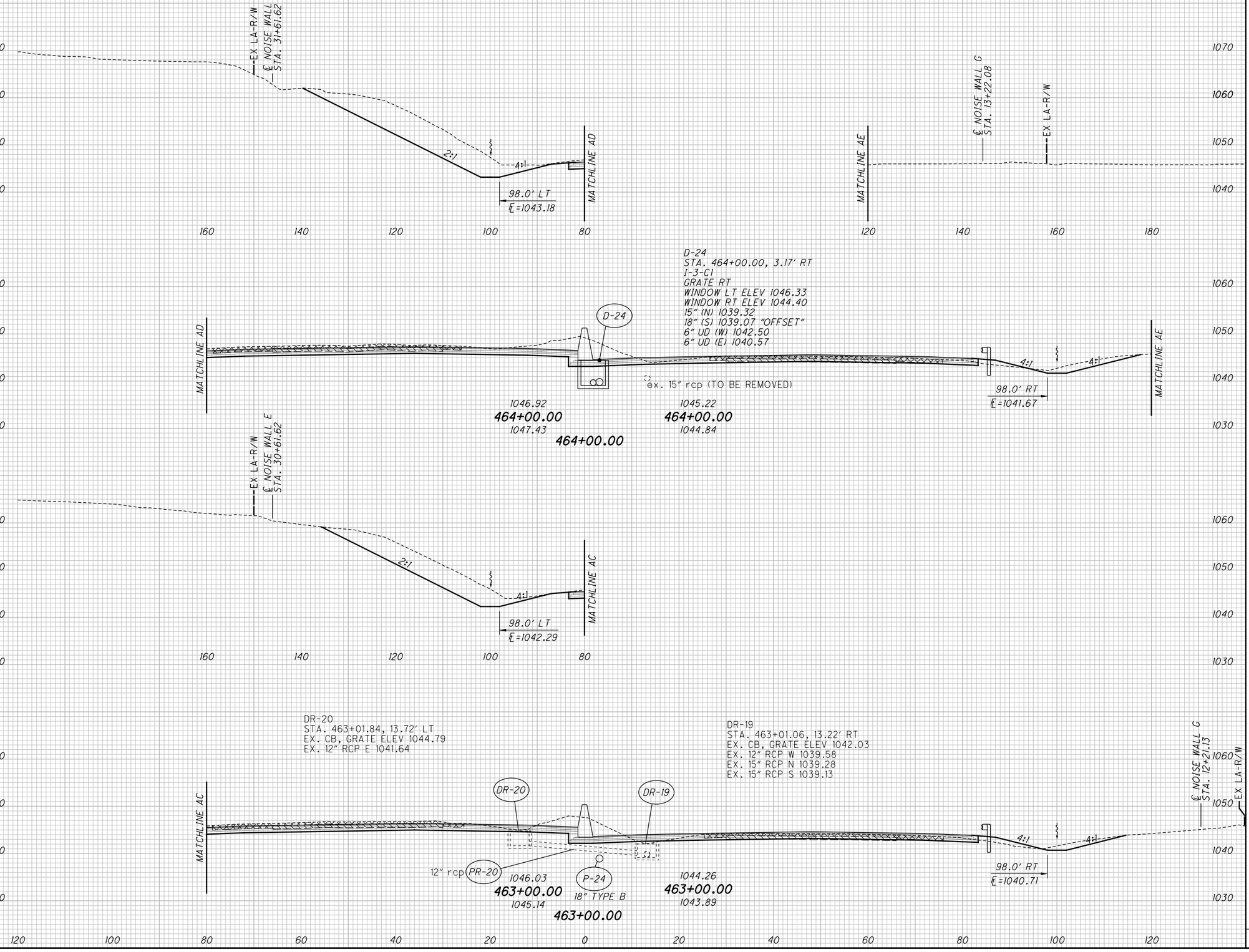
SEEDING	
END WIDTH	SQ. YDS.
	1172
	107
	1144
	99
	2316

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)



END AREA	
CUT	FILL
409	10

VOLUME	
CUT	FILL
1485	33
1330	50
2815	83

CALCULATED CJC
CHECKED PJF

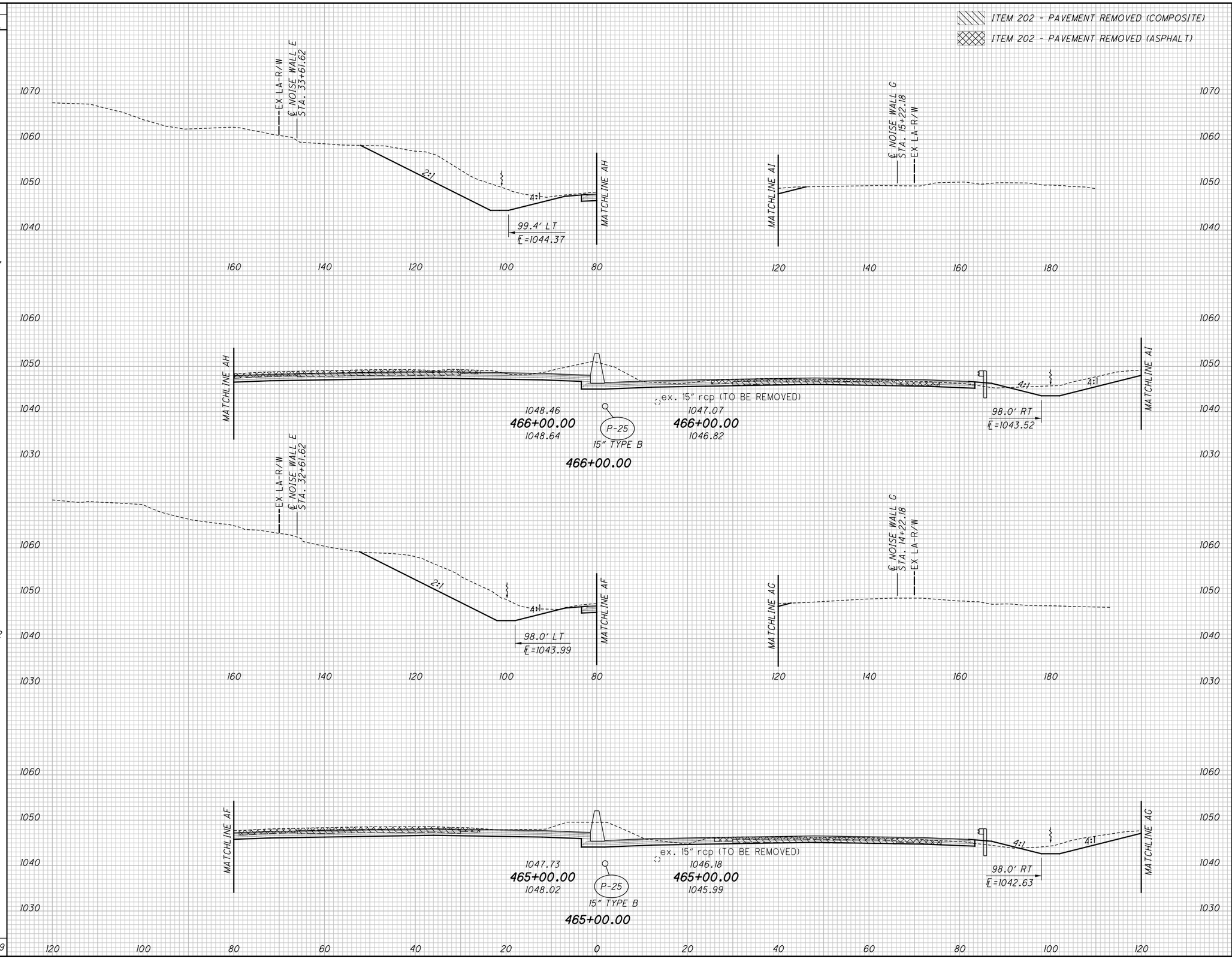
CROSS SECTIONS - I.R. 77
STA. 463+00.00 TO STA. 464+00.00

SUM-77 / 277 / 224
VARIOUS

560
1288

D:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS001.dgn Sheet 1/15/2021 9:8:39 AM pfry

SEEDING	
END WIDTH	SQ. YDS.
	1217
	107
	1172
	104
	2389



END AREA	
CUT	FILL
407	6
393	8

VOLUME	
CUT	FILL
1563	19
1481	26
3044	45

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 77
STA. 465+00.00 TO STA. 466+00.00

SUM-77 / 277 / 224
VARIOUS

561
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SEEDING	
END WIDTH	SQ. YDS.
	783
	101
	1183
	112
	1966

END AREA	
CUT	FILL
378	0
437	4

VOLUME	
CUT	FILL
1107	0
1509	7
2616	7

CALCULATED CJC
CHECKED PJF

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)
ITEM 202 - PAVEMENT REMOVED (ASPHALT)

EX LA-R/W
℄ NOISE WALL E STA. 35+61.62
2:1
2:1
MATCHLINE AL
94.0' LT
E=1045.17

D-25
STA. 467+75.00, 3.17' RT
I-3-C1
GRATE RT
WINDOW LT ELEV 1048.94
WINDOW RT ELEV 1047.23
15" (N) 1042.40
15" (S) 1041.90
6" UD (W) 1045.11
6" UD (E) 1043.40

DR-22
STA. 468+00.83, 13.31' LT
EX. CB, GRATE ELEV 1048.15
EX. 12" RCP E 1045.70

DR-21
STA. 468+00.62, 13.50' RT
EX. CB, GRATE ELEV 1046.40
EX. 12" RCP W 1043.40
EX. 15" RCP S 1043.00

D-61
STA 468+00.00, 8.50' RT
MH-3, RIM ELEV 1047.75
15" (N) 1042.59
15" (S) 1042.59

DR-22
PR-22 12" rcp
D-25
D-61
DR-21
MATCHLINE AL
MATCHLINE AM
4:1
4:1
91.7' RT
E=1045.32
1049.67
468+00.00
1048.42
1048.13
468+00.00
1048.10
468+00.00
P-61 26'-15" TYPE B @ 0.75%

℄ NOISE WALL G STA. 17+22.18
EX LA-R/W
MATCHLINE AM

EX LA-R/W
℄ NOISE WALL E STA. 34+61.62
2:1
4:1
MATCHLINE AJ
100.4' LT
E=1044.76

℄ NOISE WALL G STA. 16+22.18
EX LA-R/W
MATCHLINE AK

MATCHLINE AJ
(ex. 15" rcp (TO BE REMOVED)
1049.10
467+00.00
1050.14
P-25
15" TYPE B
467+00.00
1047.72
467+00.00
1047.68
4:1
4:1
97.0' RT
E=1044.42
MATCHLINE AK

CROSS SECTIONS - I.R. 77
STA. 467+00.00 TO STA. 468+00.00

SUM-77 / 277 / 224
VARIOUS

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1288

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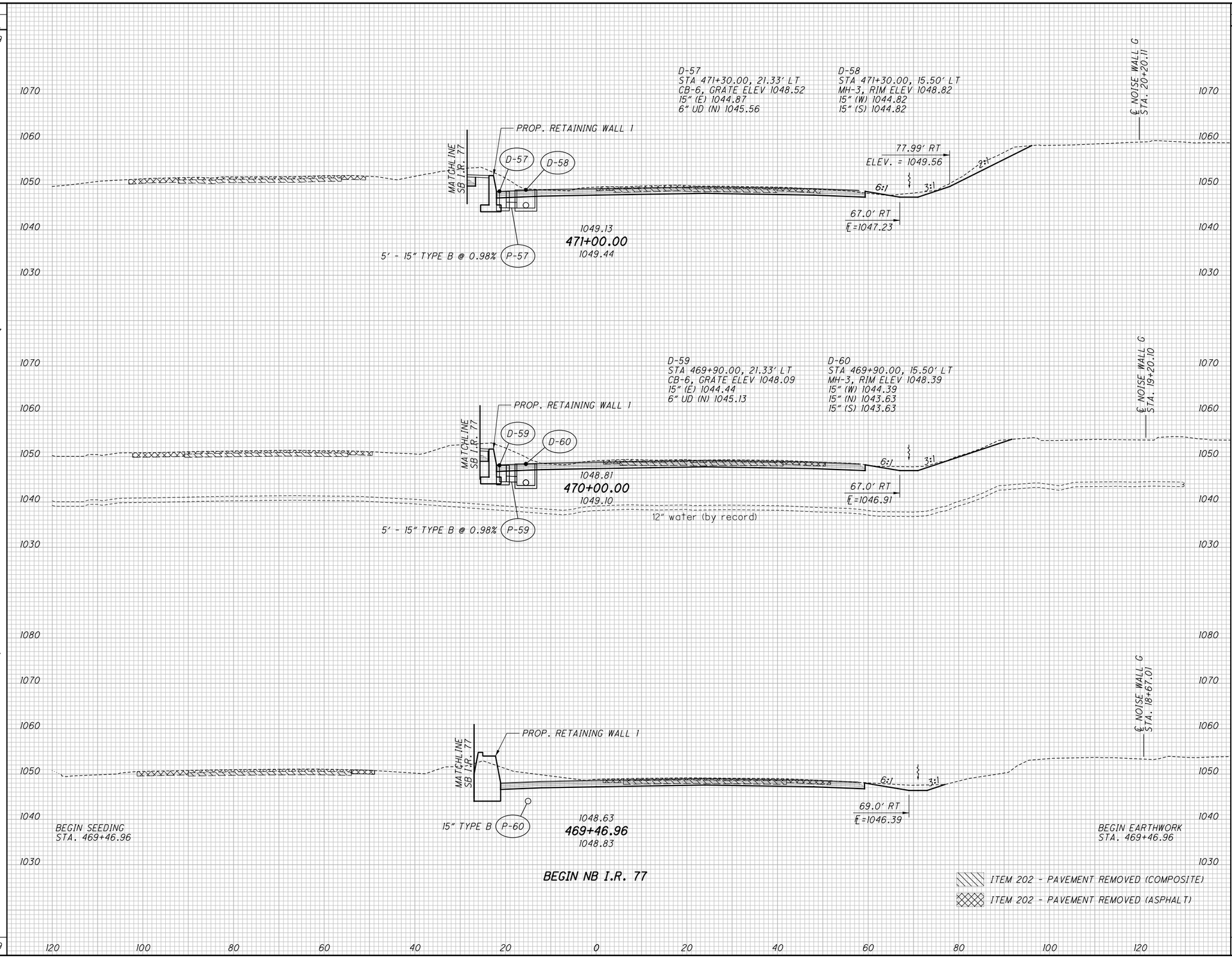
SEEDING END WIDTH	SEEDING SQ. YDS.
34	

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	539			504	6
45		136	1		
	467			480	2
39		123	0		
	183			260	0
23		142	0		
	1189			1244	8



CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - NB I.R. 77
STA. 469+46.96 TO STA. 471+00.00

SUM-77 / 277 / 224
VARIOUS

564
1288

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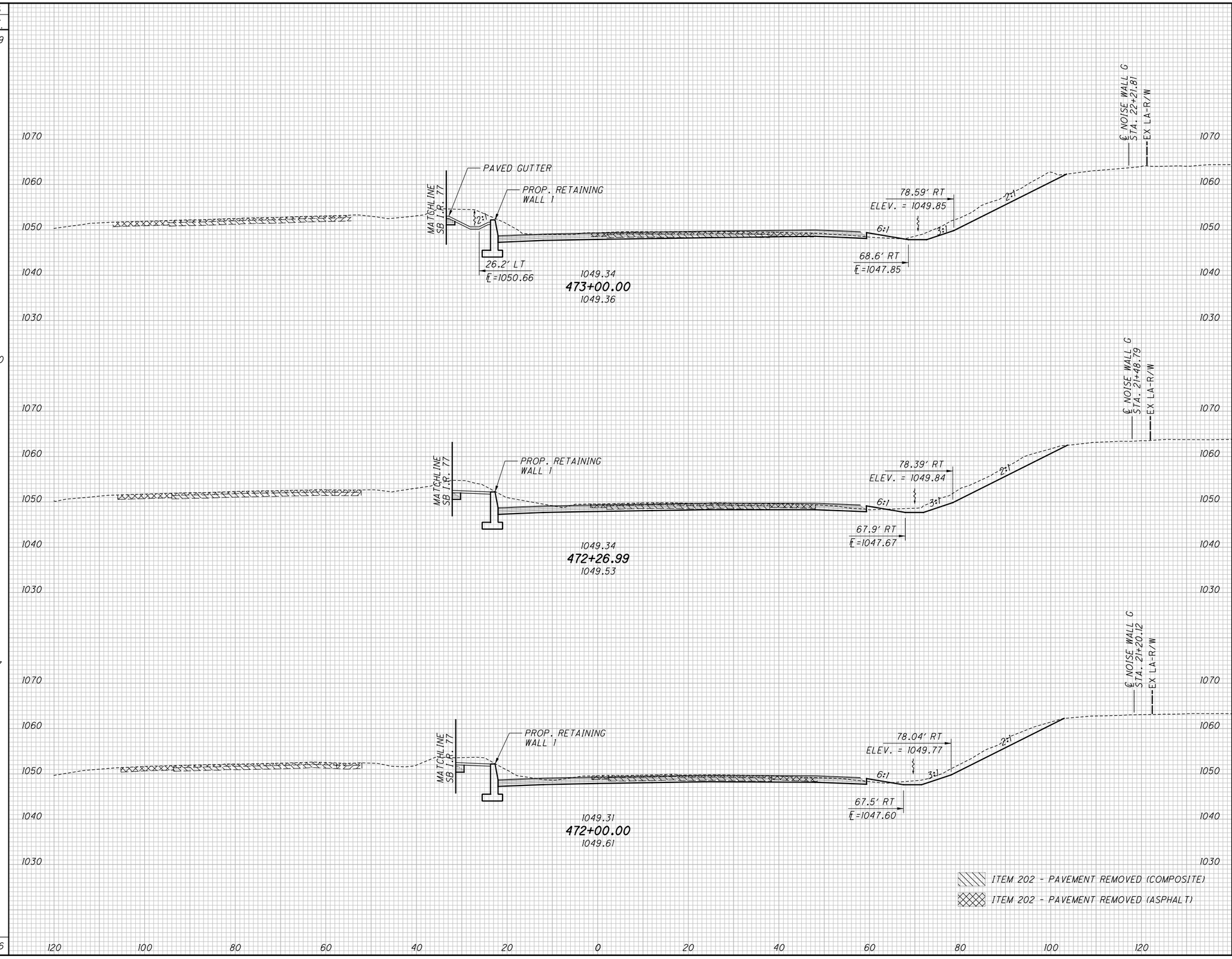
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	589			491	13
53		160	5		
	430			437	9
53		163	2		
	157			149	2
52		136	2		
	1176			1077	24



CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - NB I.R. 77
STA. 472+00.00 TO STA. 473+00.00

SUM-77 / 277 / 224
VARIOUS

565
1288

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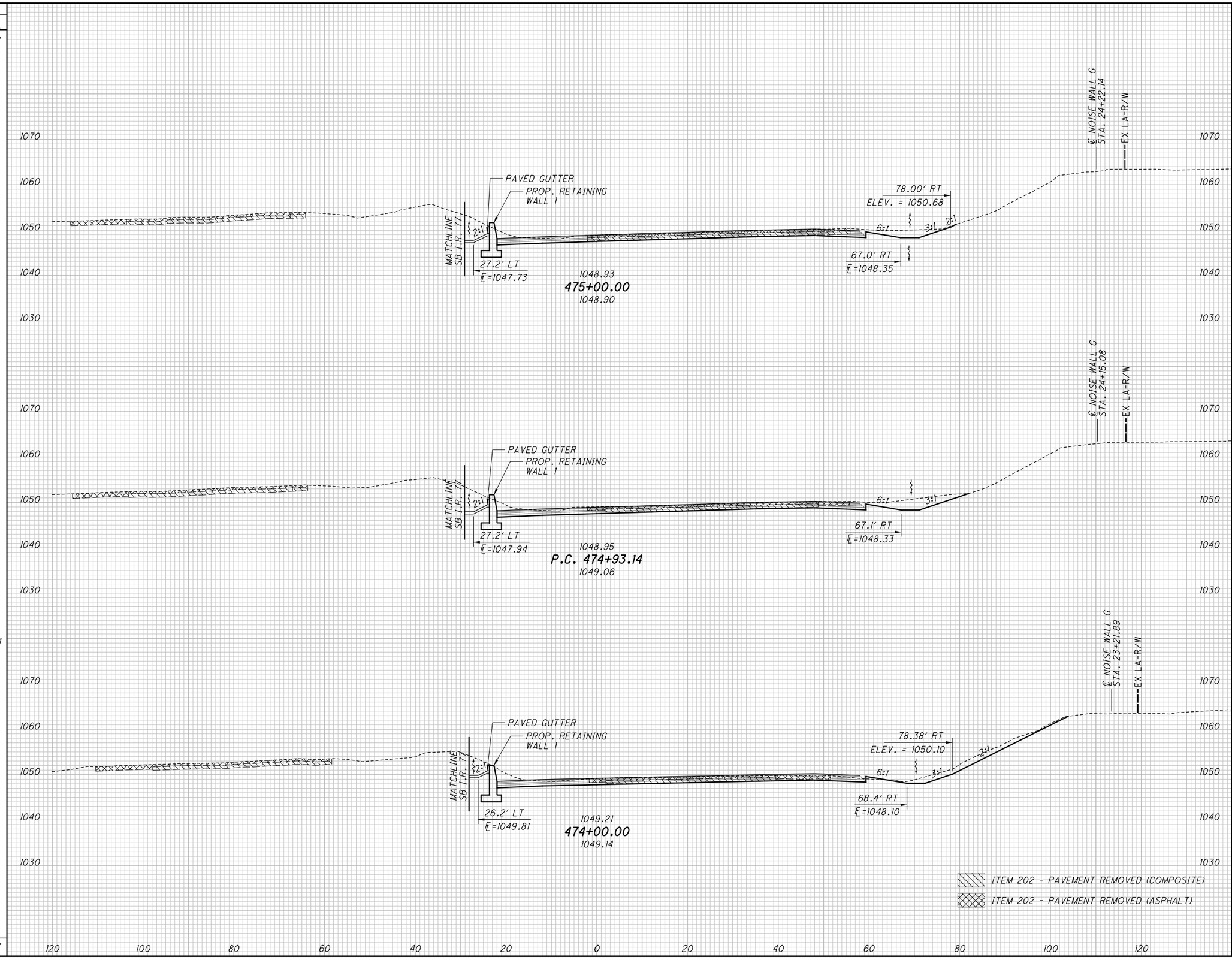
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	142			182	1
26		94	0		
	21			26	0
29		113	0		
	424			376	3
53		105	2		
	587			584	4



CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - NB I.R. 77
STA. 474+00.00 TO STA. 475+00.00

SUM-77 / 277 / 224
VARIOUS

566
1288

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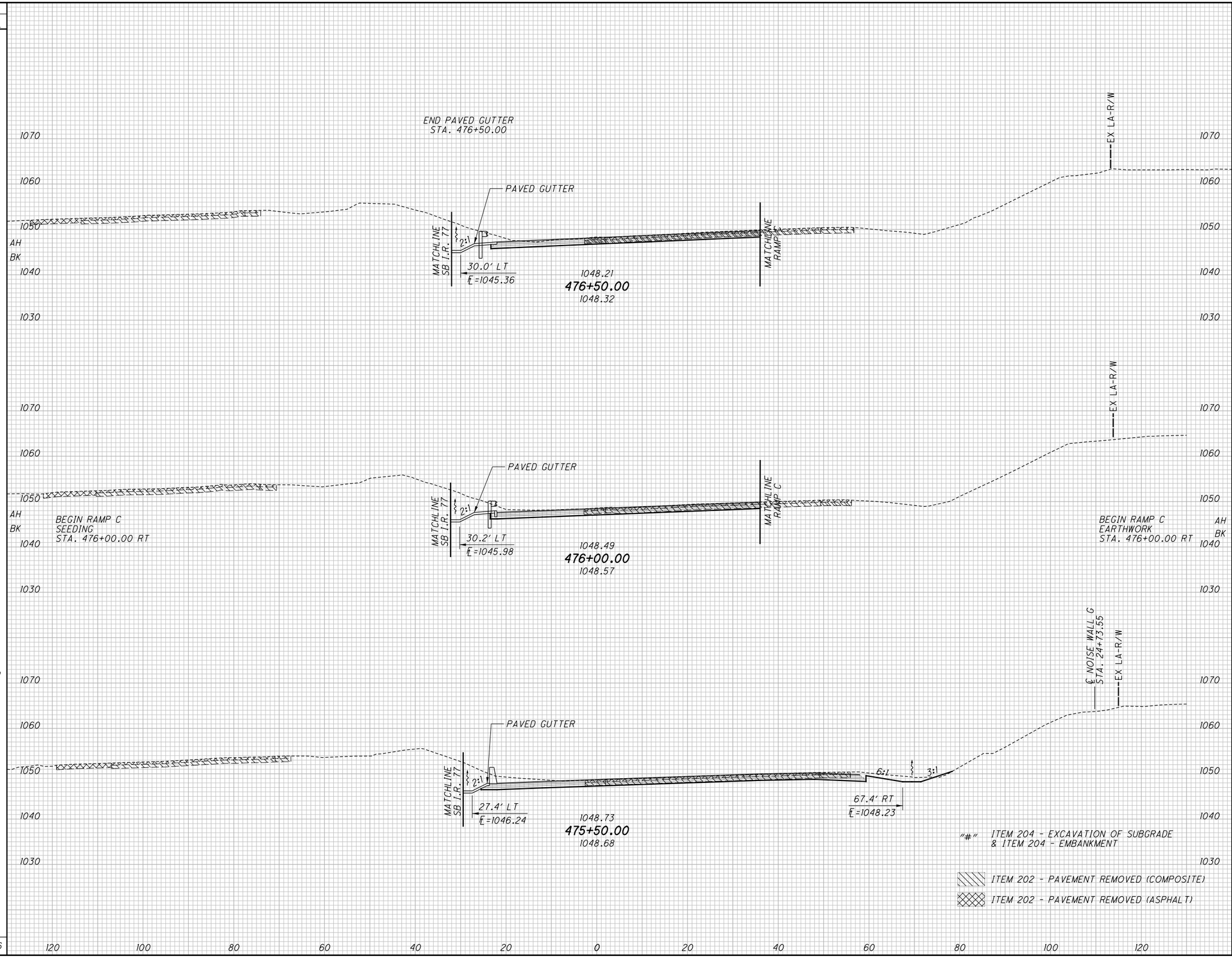
SEEDING END WIDTH	SEEDING SQ. YDS.
	67
10	
0	
	0
0	
25	
	139
25	
	206



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		"109"	"109"
		153	0
"0"	"0"		
79	0		
		152	0
AH 85			
BK 114	0		
		201	1
103	1		
		"109"	"109"
		506	1

"#" ITEM 204 - EXCAVATION OF SUBGRADE & ITEM 204 - EMBANKMENT

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

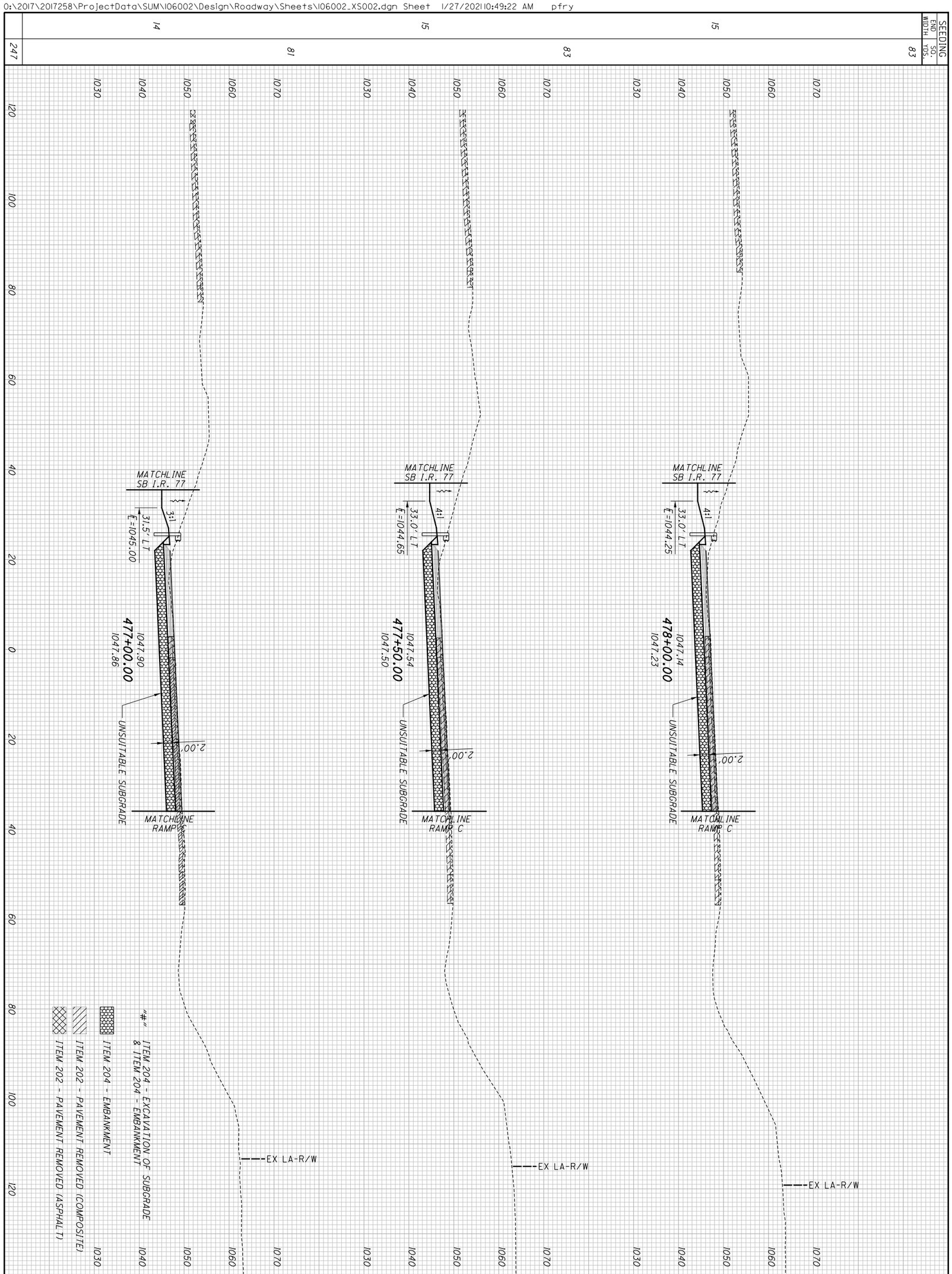
CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - NB I.R. 77
STA. 475+50.00 TO STA. 476+50.00

SUM-77 / 277 / 224
VARIOUS

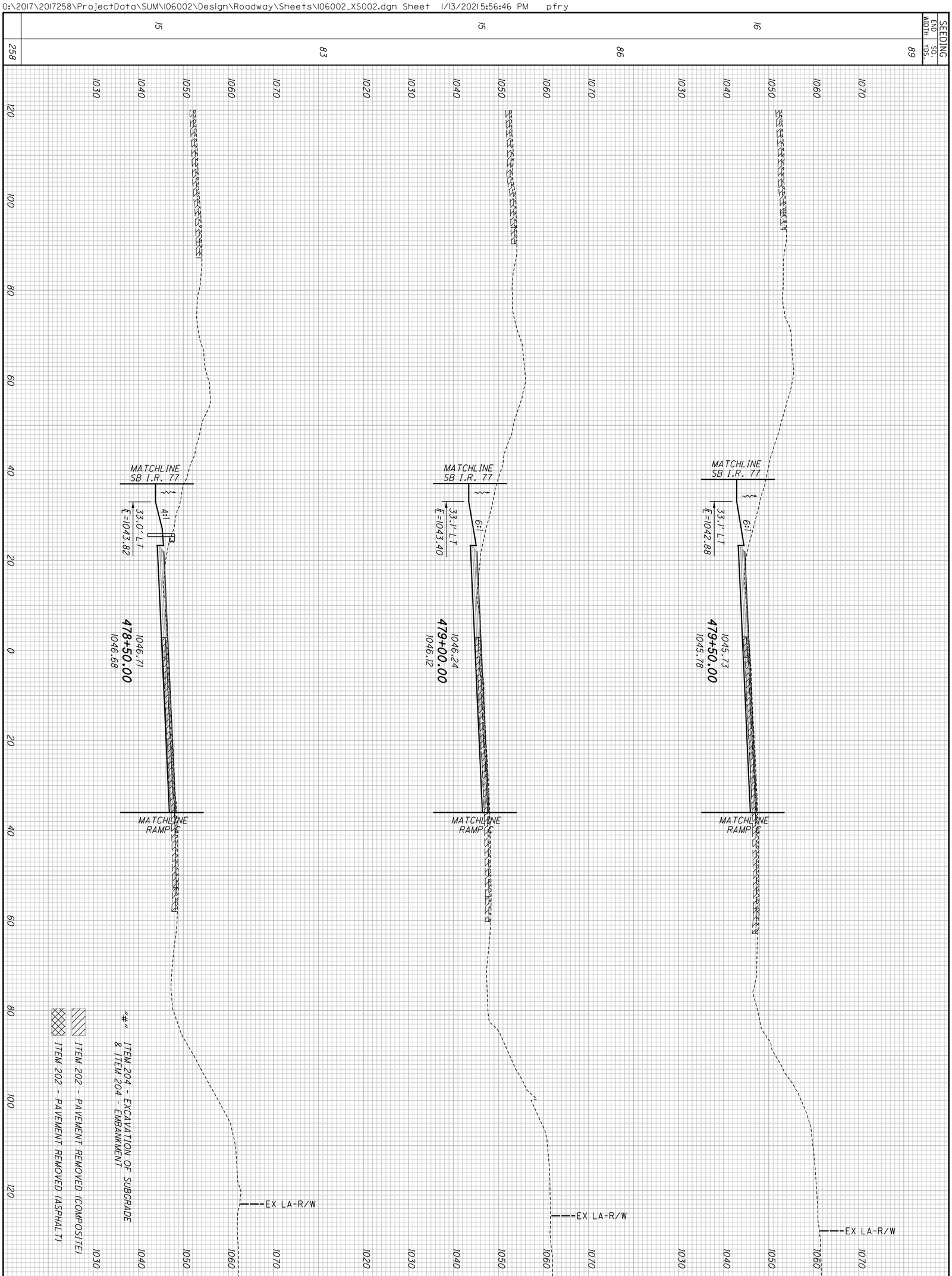
567
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS002.dgn Sheet 1/13/2021 5:56:41 PM pfry

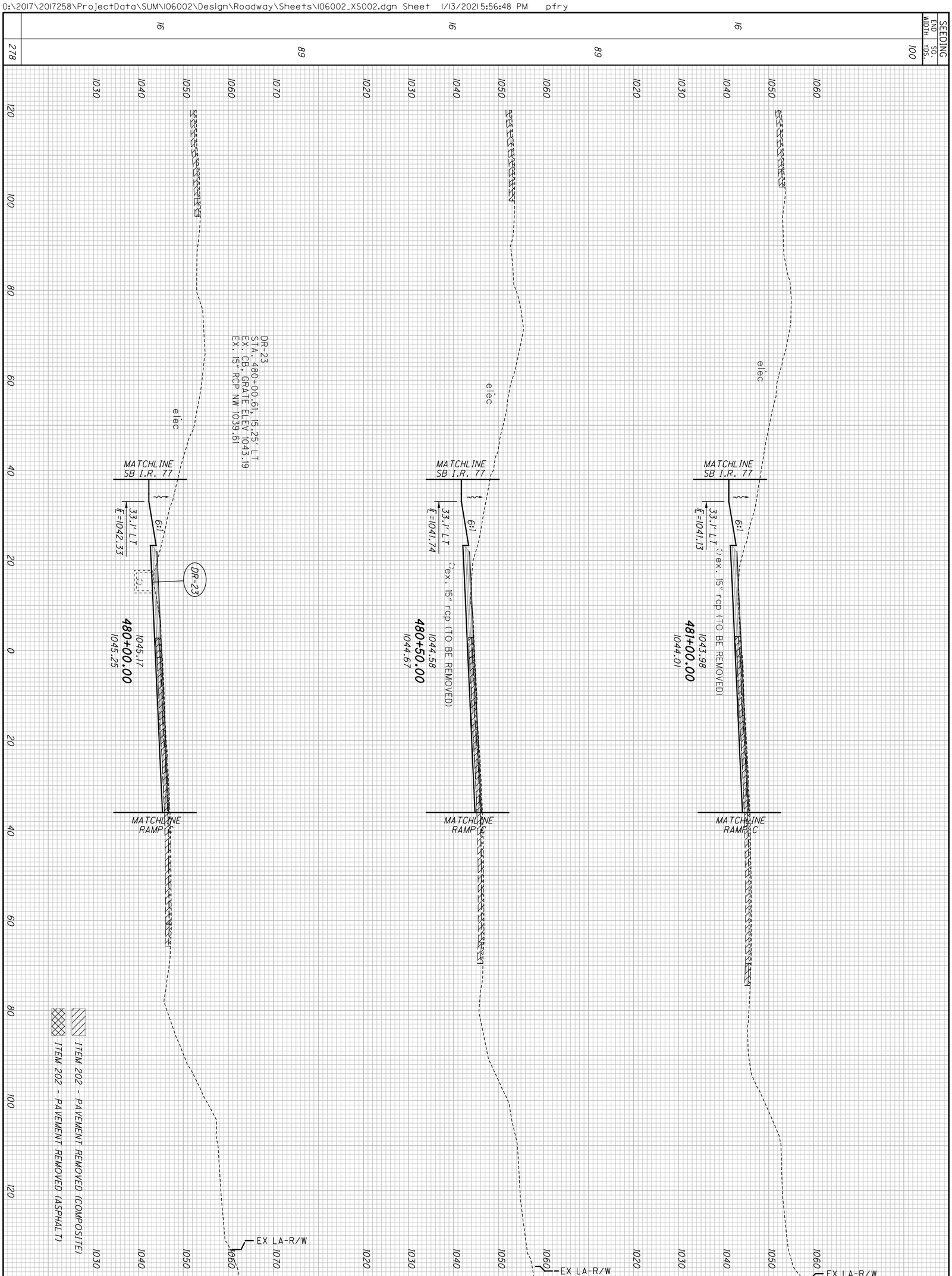


568 / 1288	**SUM-77/277/224** **VARIOUS**	**CROSS SECTIONS - NB I.R. 77** **STA. 477+00.00 TO STA. 478+00.00**

CALCULATED CJC
CHECKED PJF

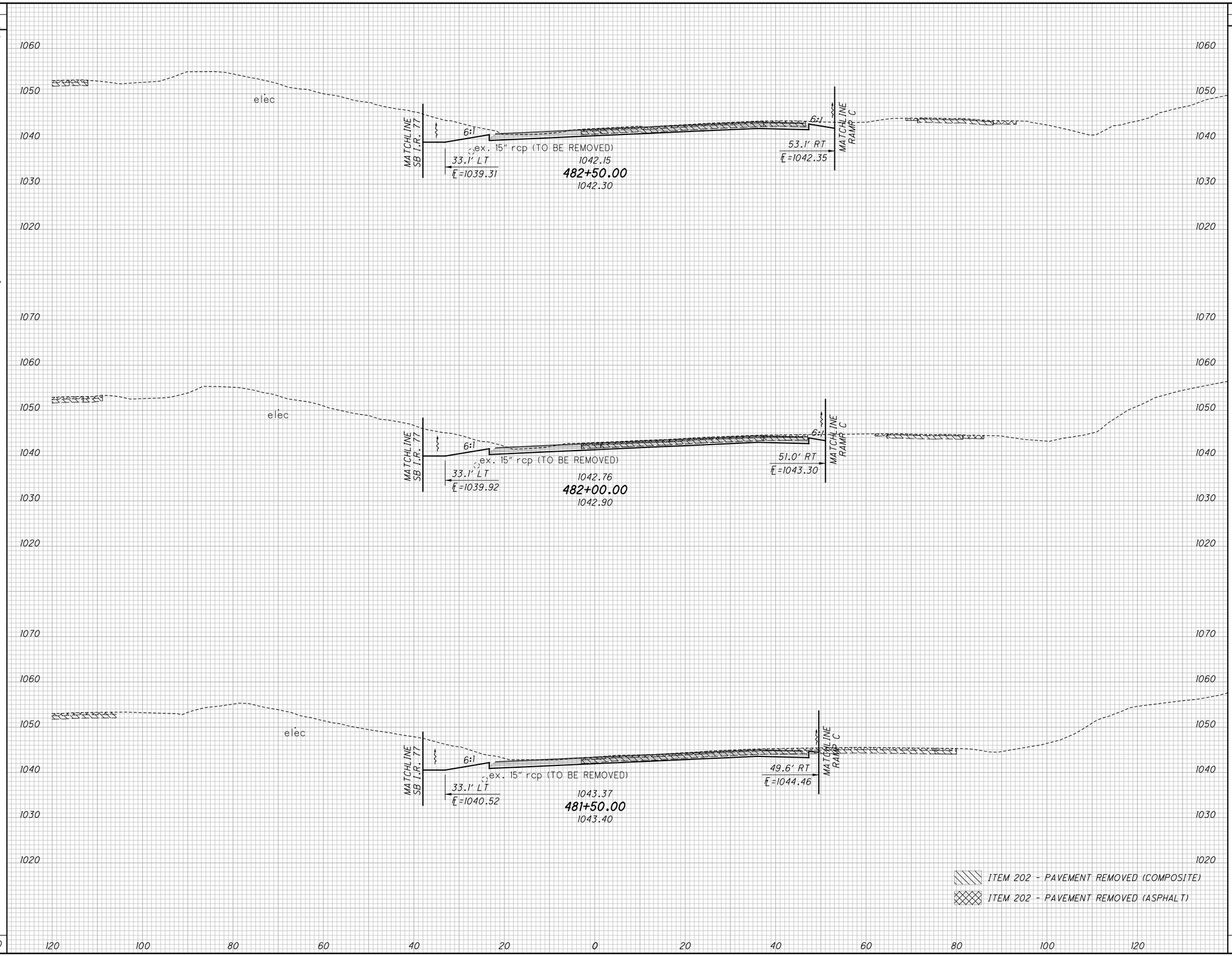

SEEDING
END WIDTH
SQ. YDS.
MATCHLINE SB I.R. 77
MATCHLINE RAMP C
33.0' LT
E=1043.82
4:1
478+50.00
1046.71
1046.68
33.1' LT
E=1043.40
6:1
479+00.00
1046.24
1046.12
33.1' LT
E=1042.88
6:1
479+50.00
1045.73
1045.78
EX LA-R/W
"#" ITEM 204 - EXCAVATION OF SUBGRADE & ITEM 204 - EMBANKMENT
ITEM 202 - PAVEMENT REMOVED (COMPOSITE)
ITEM 202 - PAVEMENT REMOVED (ASPHALT)
END AREA
CUT
FILL
VOLUME
CUT
FILL

| | | |



570 / 1288	**SUM-77/277/224** **VARIOUS**	**CROSS SECTIONS - NB I.R. 77** **STA. 480+00.00 TO STA. 481+00.00**
		CALCULATED CJC CHECKED PJF

SEEDING END WIDTH	SEEDING SQ. YDS.
	144
23	
	122
21	
	114
20	
	380



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		207	0
106	0		
		201	0
111	0		
		214	1
120	1		
		622	1

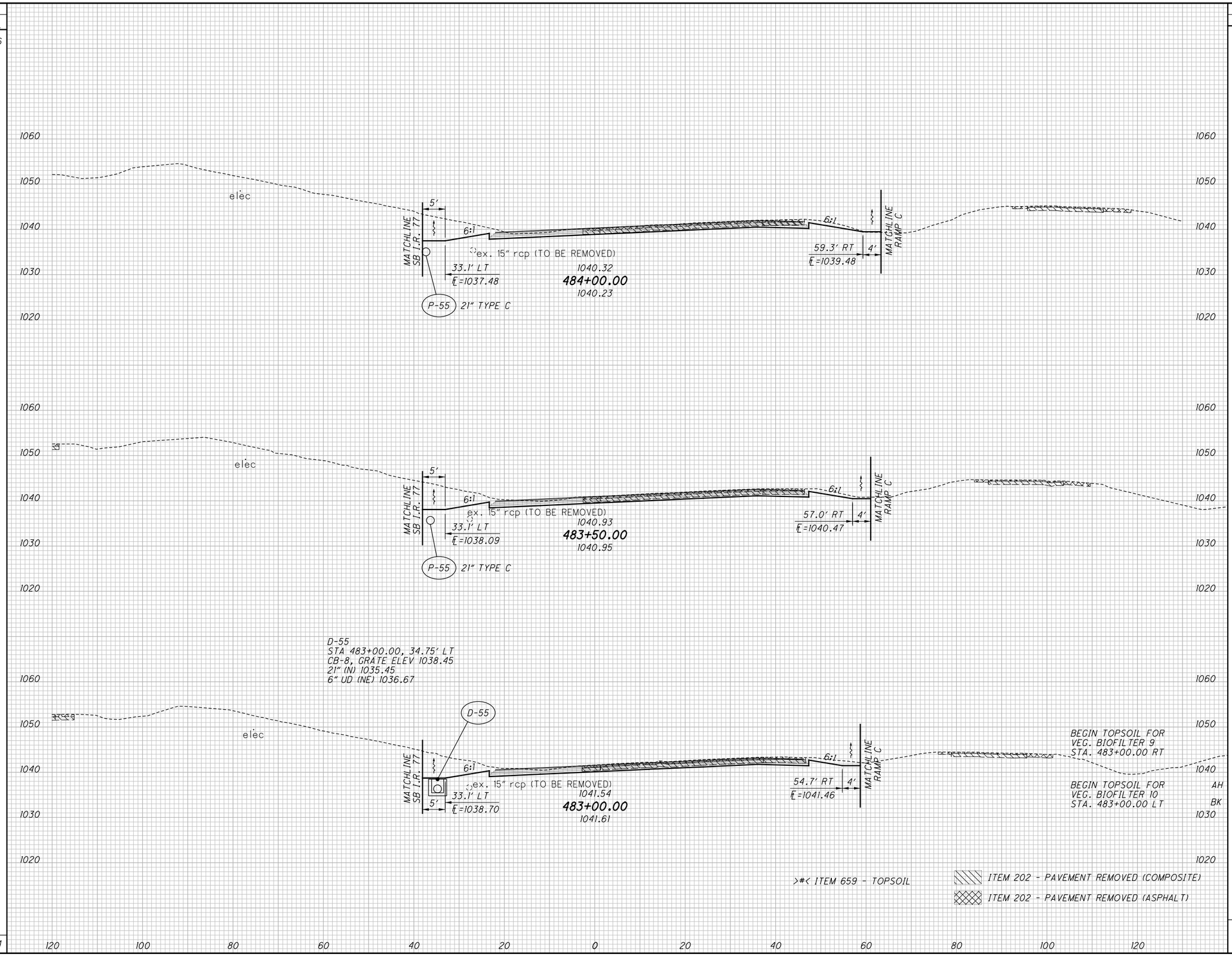
CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - NB I.R. 77
STA. 481+50.00 TO STA. 482+50.00

SUM-77 / 277 / 224
VARIOUS

D:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS002.dgn Sheet 1/13/2021 5:56:51 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	336
34	
	181
31	
	167
29	
	684



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>16<
		327	1
	>8<		
113	0		
			>14<
		214	0
	>7<		
118	0		
			>13<
		219	0
	>7<		
	>0<		
118	0		
			>43<
		760	1

CALCULATED CJC
CHECKED PJF

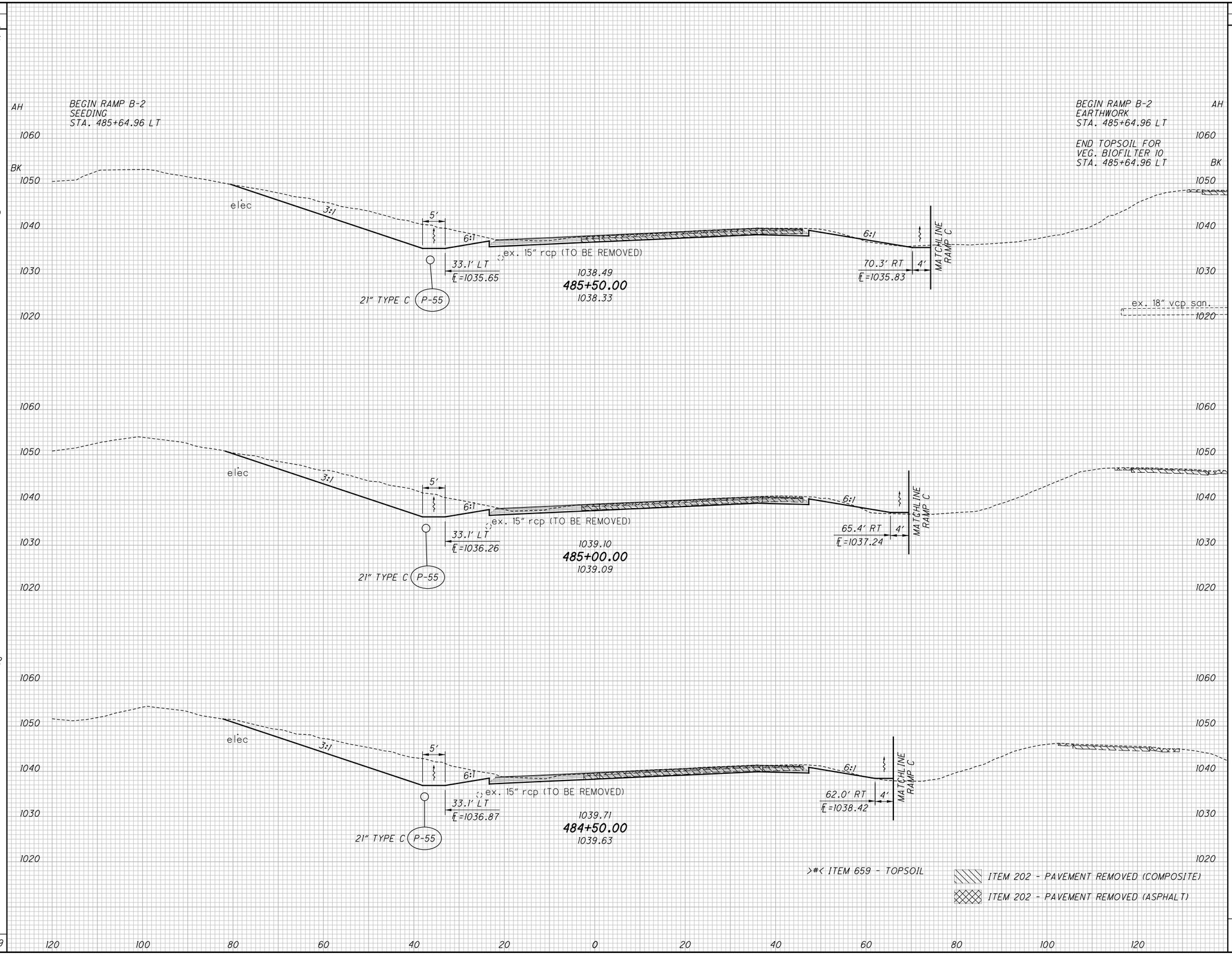
CROSS SECTIONS - NB I.R. 77
STA. 483+00.00 TO STA. 484+00.00

SUM-77 / 277 / 224
VARIOUS

572
1288

0:\2017\2017258\Project Data\SUM\06002\Design\Roadway\Sheets\06002_XS002.dgn Sheet 1/13/2021 5:56:53 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	136
35	
	160
98	
94	
	511
90	
	492
87	
	1299



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>10<
		38	0
	>8<		
29	0		
	>12<		
226	0		
			>7<
		124	0
	>12<		
220	0		
			>20<
		409	3
222	>10< 3		
		428	>18< 4
240	>9< 1		
		999	>55< 7

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - NB I.R. 77
STA. 484+50.00 TO STA. 485+50.00

SUM-77 / 277 / 224
VARIOUS

573
1288

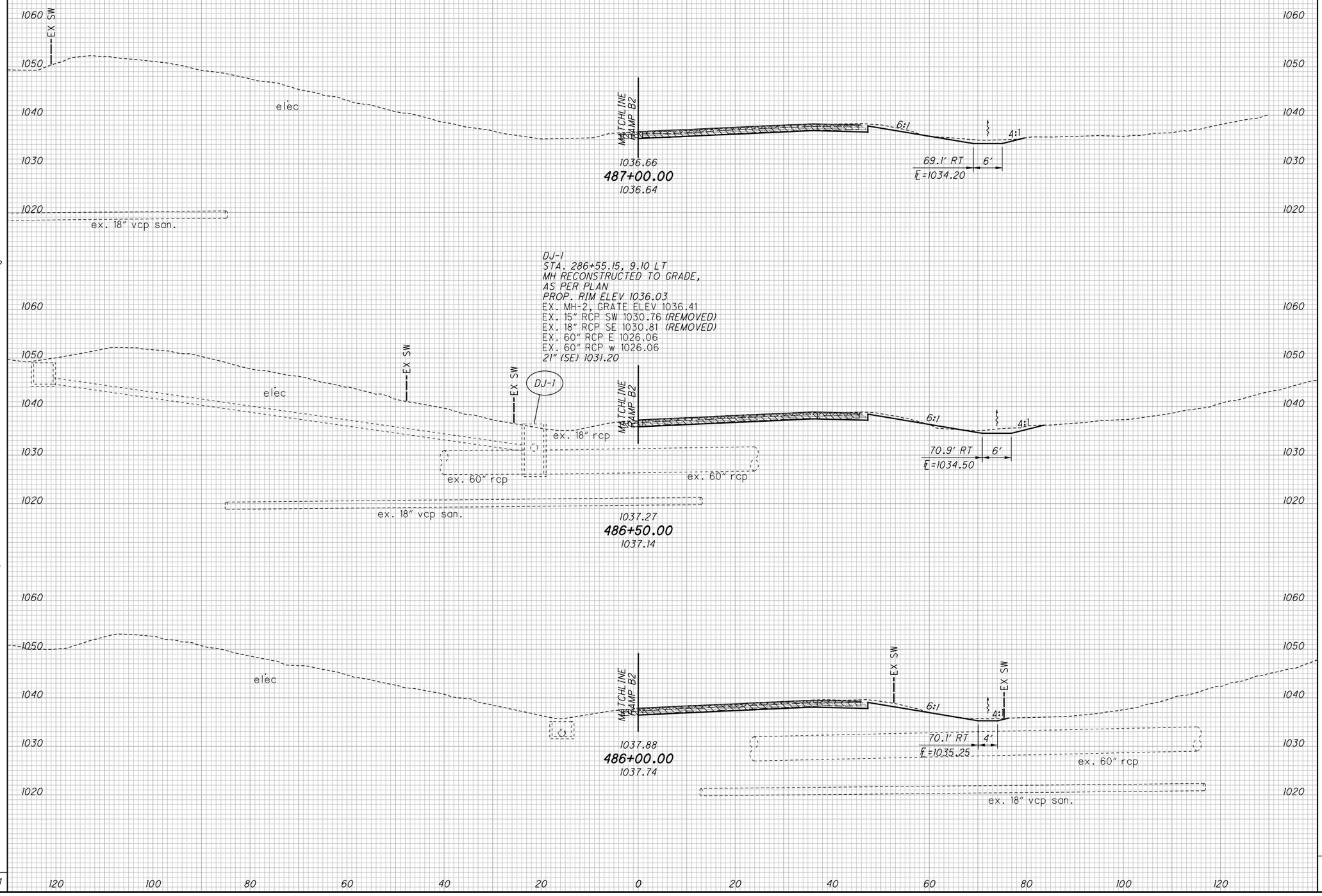
D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS002.dgn Sheet 1/13/2021 5:56:56 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	208
38	
	222
42	
	214
35	
	644

>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>14<
		56	0
	>8<		
31	0		
			>15<
		57	0
	>8<		
31	0		
			>15<
		56	0
	>8<		
29	0		
			>44<
		169	0

CALCULATED CJC
CHECKED PJF

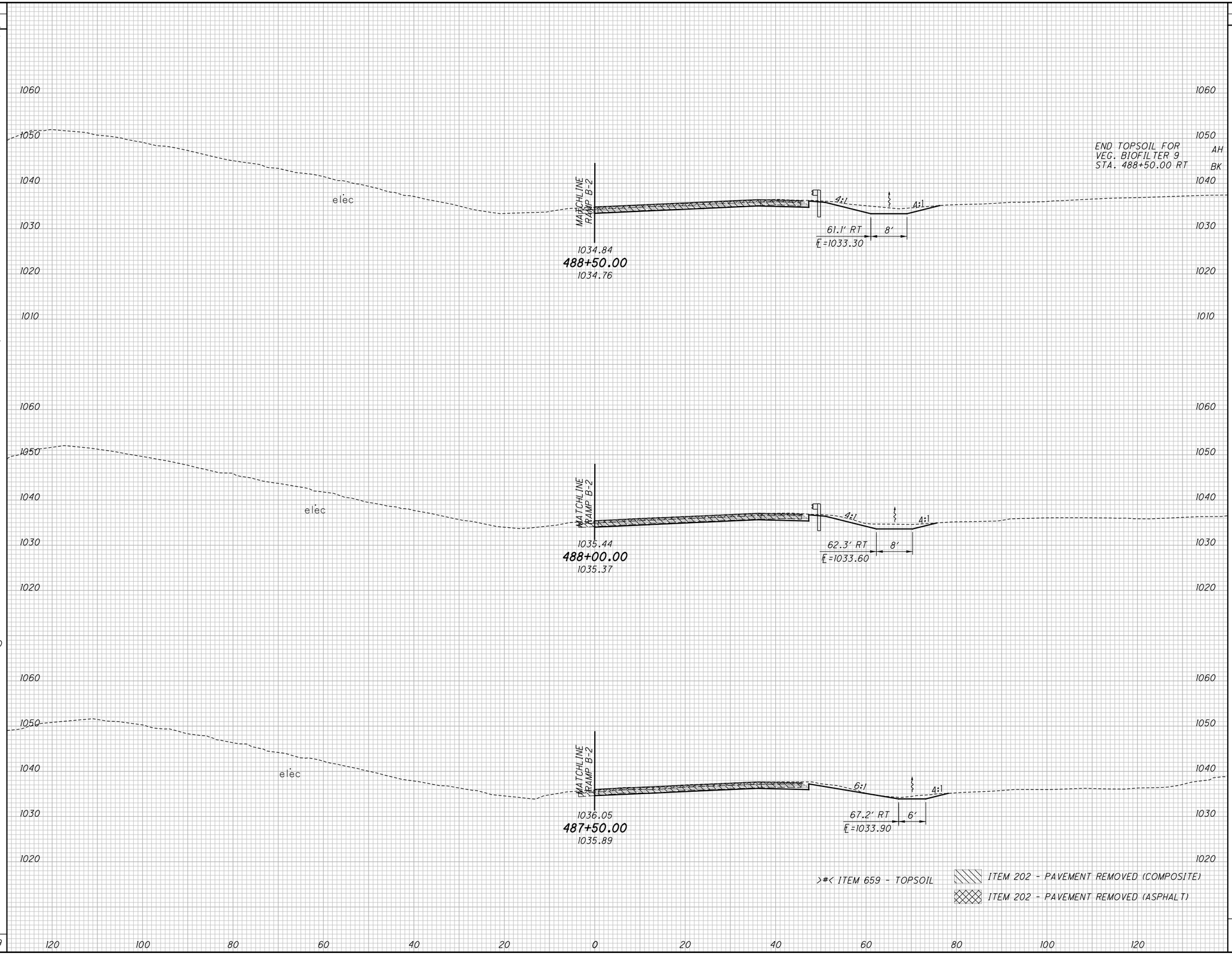
CROSS SECTIONS - NB I.R. 77
STA. 486+00.00 TO STA. 487+00.00

SUM-77 / 277 / 224
VARIOUS

574
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS002.dgn Sheet 1/13/2021 5:56:58 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	175			51	1
35		38	0		
	194			68	0
	200			60	>10< 0
37		30	>7< 0		
	569			179	>16< 1



CALCULATED CJC
CHECKED PJF

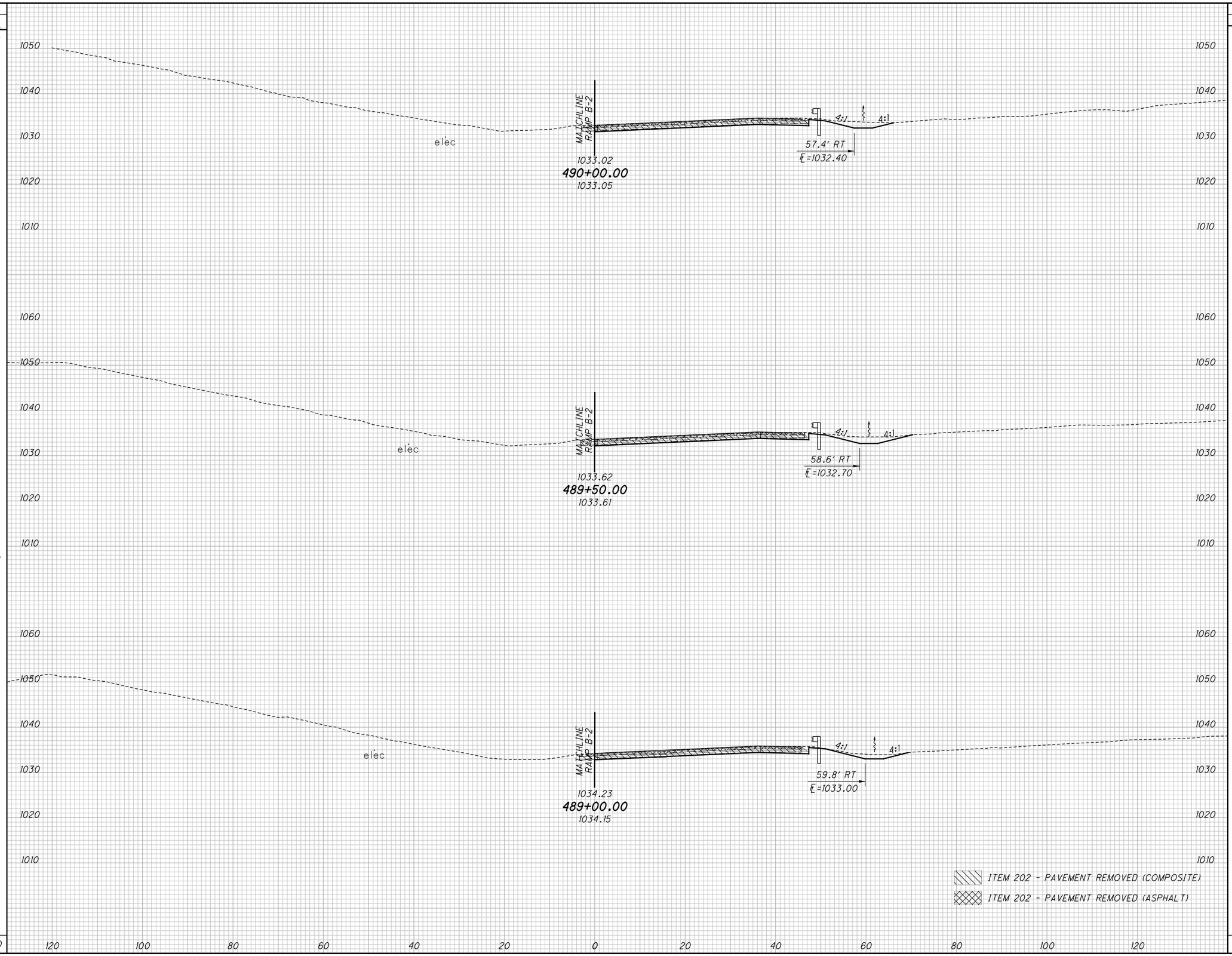
CROSS SECTIONS - NB I.R. 77
STA. 487+50.00 TO STA. 488+50.00

SUM-77 / 277 / 224
VARIOUS

575
1288

D:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS002.dgn Sheet 1/13/2021 5:57:01 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	125			46	0
24		23	0		
	147			44	0
29		25	0		
	158			39	1
28		17	1		
	430			129	1



CALCULATED CJC
CHECKED PJF

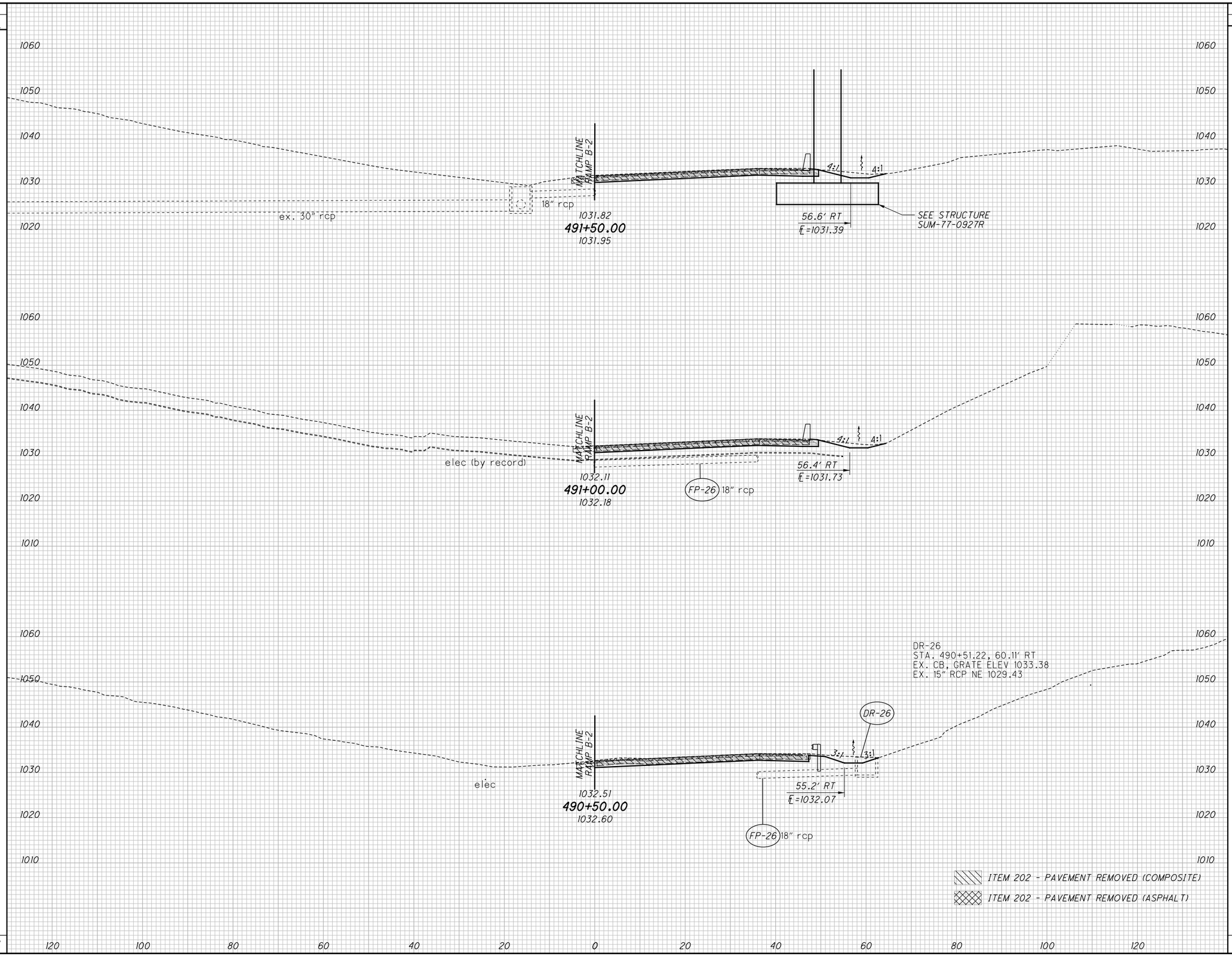
CROSS SECTIONS - NB I.R. 77
STA. 489+00.00 TO STA. 490+00.00

SUM-77 / 277 / 224
VARIOUS

576
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS002.dgn Sheet 1/13/2021 5:57:03 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	147
21	
	117
21	
	117
21	
	381



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		59	0
28	0		
		47	0
23	0		
		46	0
27	0		
		152	0

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - NB I.R.77
STA. 490+50.00 TO STA. 491+50.00

SUM-77 / 277 / 224
VARIOUS

577
1288

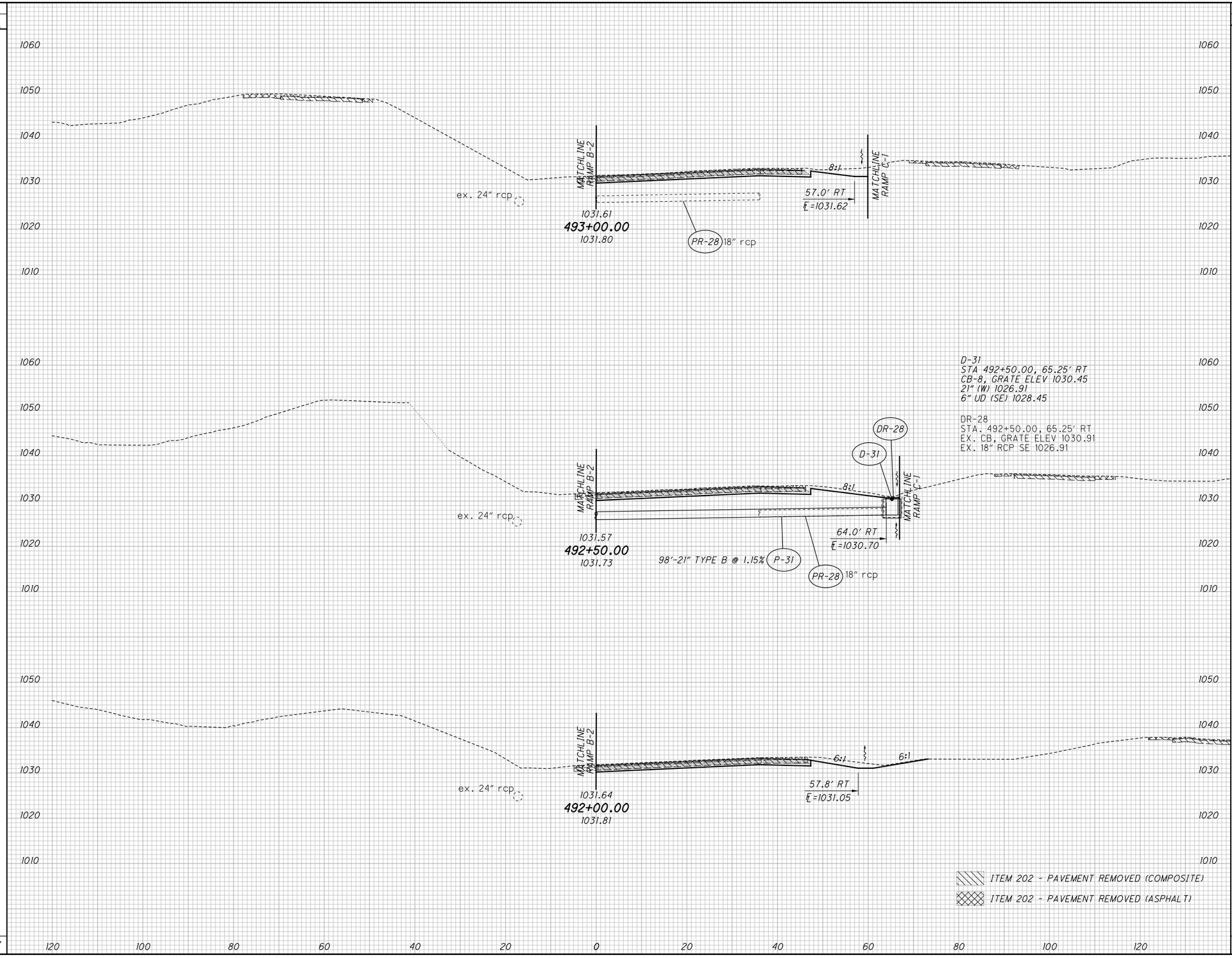
D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS002.dgn Sheet 1/13/2021 5:57:05 PM pfry

SEEDING	
END WIDTH	SQ. YDS.
	53
14	
	97
21	
	147
32	
	297

END AREA	
CUT	FILL
36	0
34	0
36	0

VOLUME	
CUT	FILL
58	0
65	0
65	0
188	0

CALCULATED CJC
CHECKED PJF

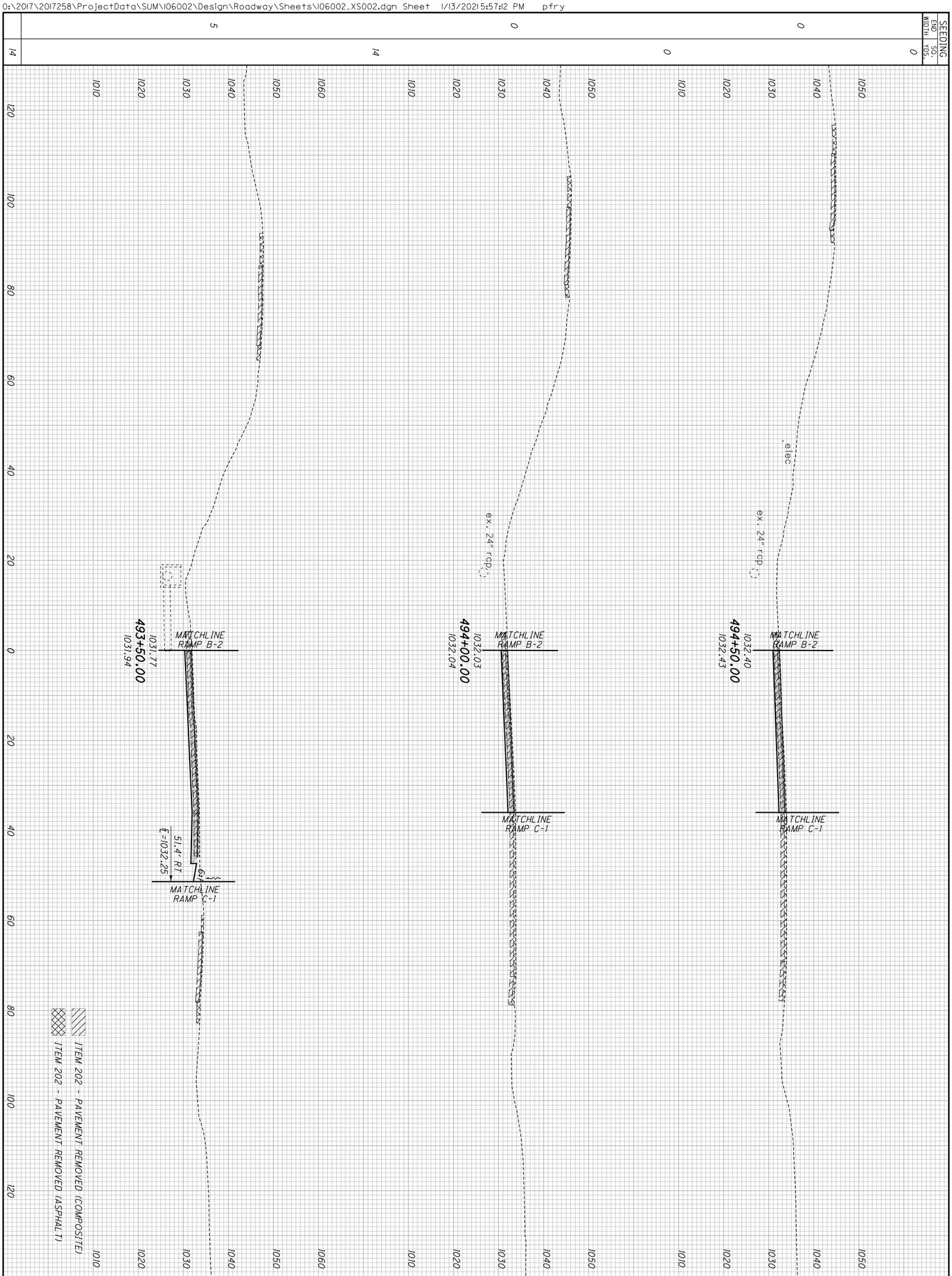


CROSS SECTIONS - NB I.R. 77
STA. 492+00.00 TO STA. 493+00.00

SUM-77 / 277 / 224
VARIOUS

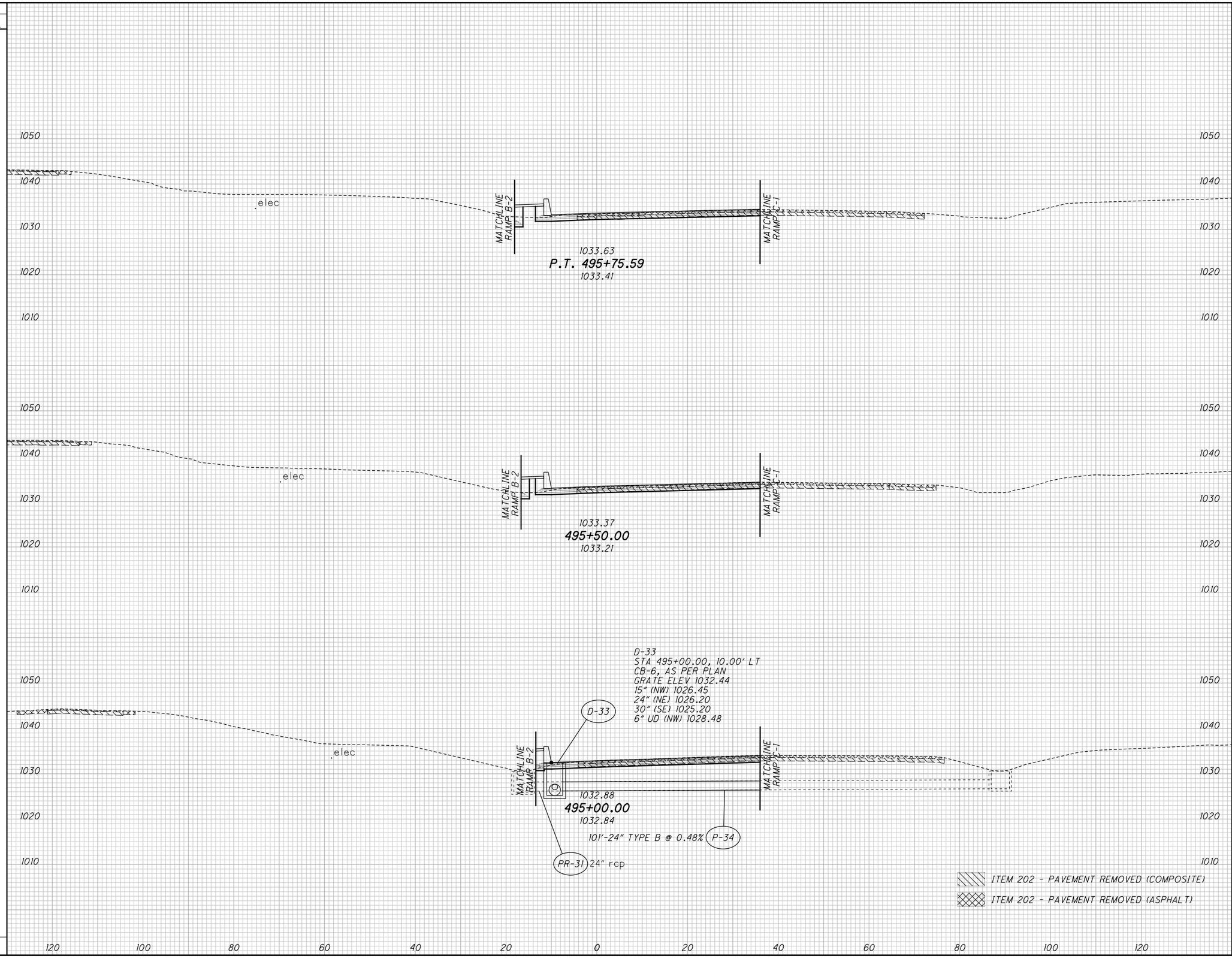
578
1288

D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS002.dgn Sheet 1/13/2021 5:57:09 PM pfry



579 / 1288	SUM-77/277/224 VARIOUS	CROSS SECTIONS - NB I.R. 77 STA. 493+50.00 TO STA. 494+50.00	CALCULATED CJC / CHECKED PJF

SEEDING END WIDTH	SEEDING SQ. YDS.
	0
	0
	0
	0



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		16	9
18	7		
		16	5
16	4		
		31	4
18	0		
		63	18

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - NB I.R. 77
STA. 495+00.00 TO STA. 495+75.59

SUM-77 / 277 / 224
VARIOUS

580
1288

D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS002.dgn Sheet 1/13/2021 5:57:4 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	161			81	17
13		19	5		
	111			59	9
7		13	0		
	39			56	26
0		17	14		
	311			196	52

CALCULATED CJC
CHECKED PJF

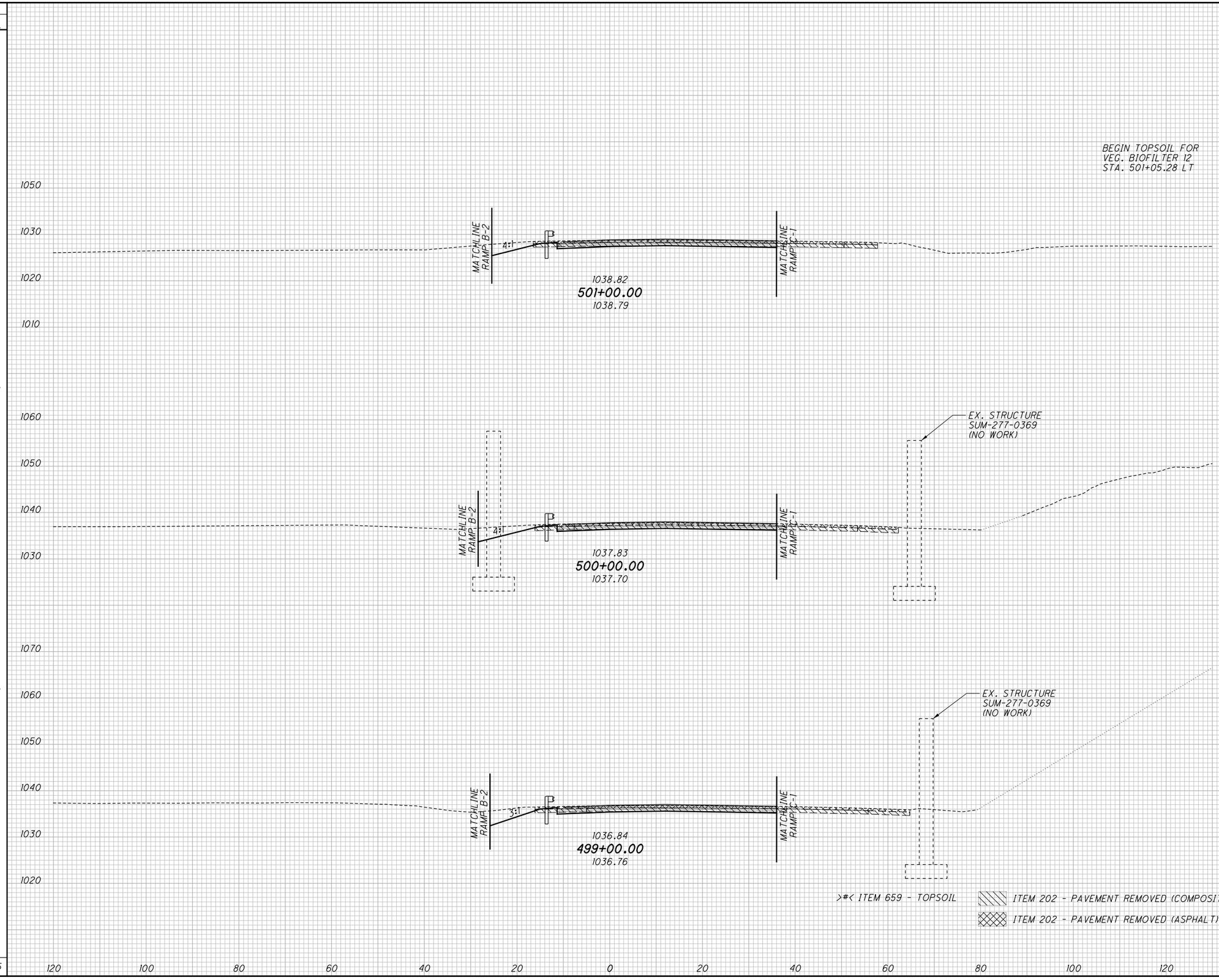
CROSS SECTIONS - NB I.R. 77
STA. 496+00.00 TO STA. 498+00.00

SUM-77 / 277 / 224
VARIOUS

581
1288

D:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS002.dgn Sheet 1/13/2021 5:57:17 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	167
16	
	194
19	
	194
16	
	555



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	>11<		
		72	15
	AH >3<		
	BK >0<		
21	4		
		87	17
26	5		
		94	17
25	4		
	>11<		
		253	49

CALCULATED CJC
CHECKED PJF

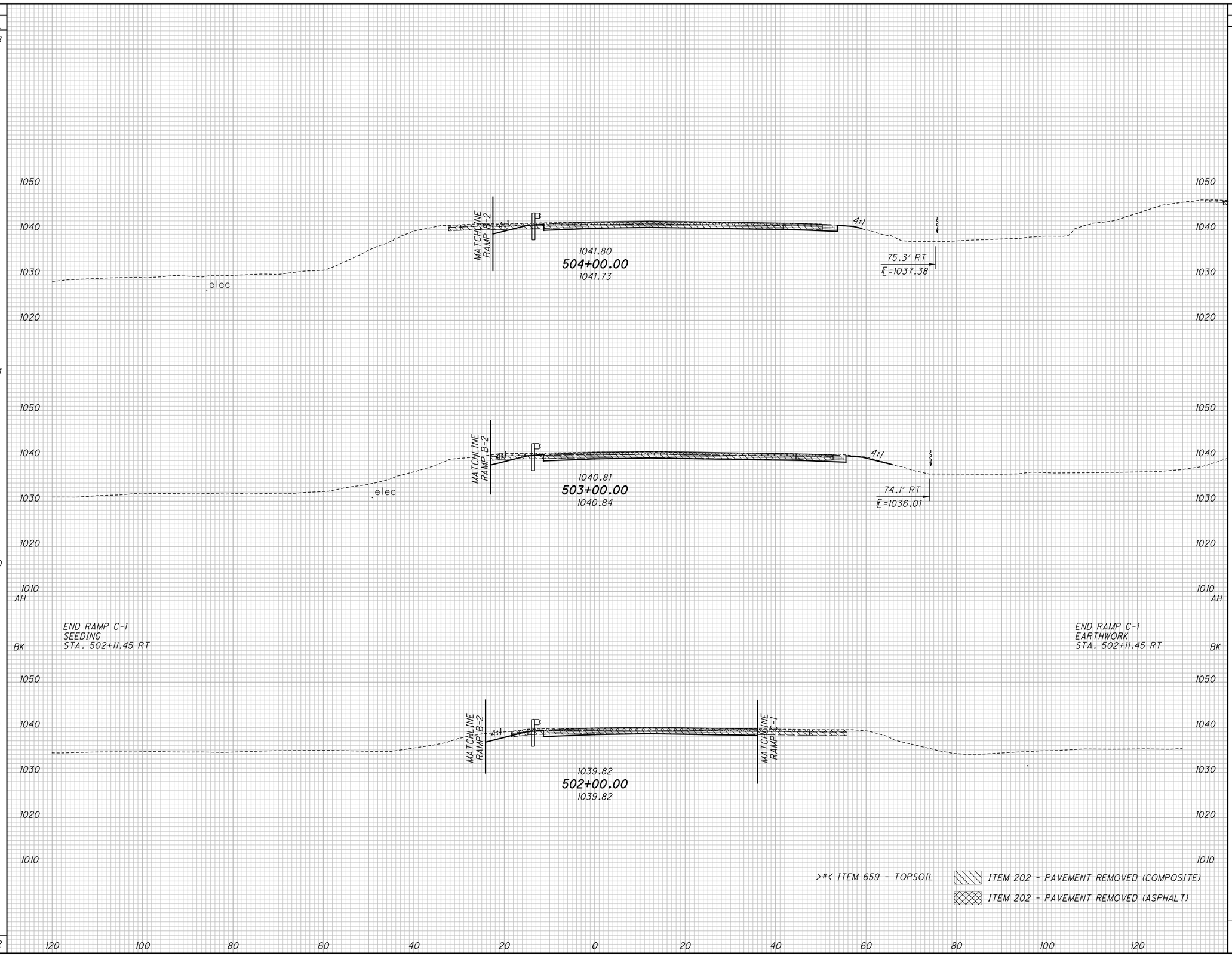
CROSS SECTIONS - NB I.R. 77
STA. 499+00.00 TO STA. 501+00.00

SUM-77 / 277 / 224
VARIOUS

582
1288

D:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS002.dgn Sheet 1/13/2021 5:57:19 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	328
24	
	294
29	
	330
38	
18	
	20
14	
	972



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>9<
		98	13
	>3<		
16	4		
			>11<
		72	13
	>3<		
23	3		
			>10<
		89	10
	>3<		
31	3		
	>3<		
20	3		
			>1<
		8	1
	>3<		
18	4		
			>31<
		267	37

CALCULATED CJC
CHECKED PJF

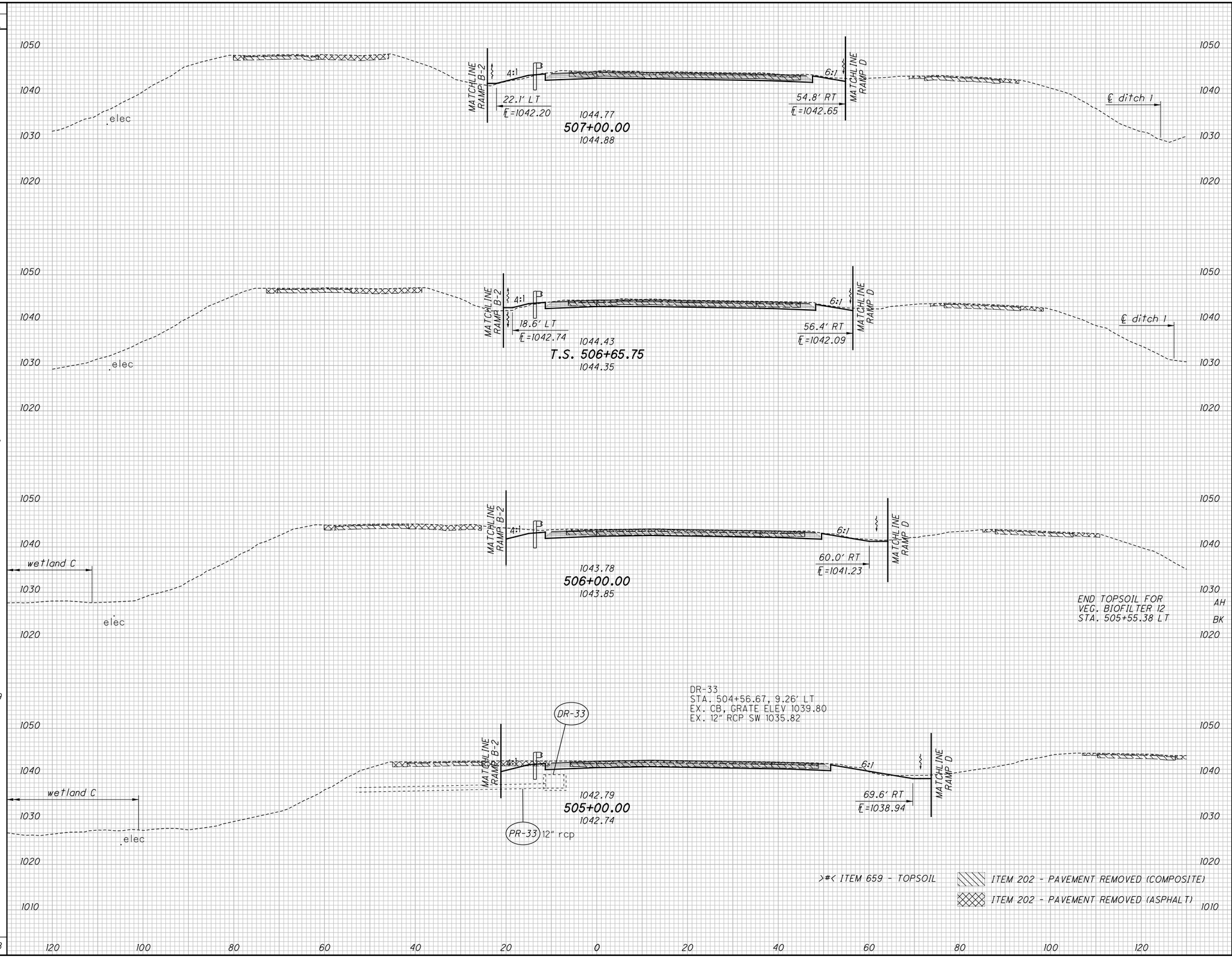
CROSS SECTIONS - NB I.R. 77
STA. 502+00.00 TO STA. 504+00.00

SUM-77 / 277 / 224
VARIOUS

583
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS002.dgn Sheet 1/13/2021 5:57:21 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	119			55	6
23		33	3		
	82			41	4
20		31	3		
	168			86	4
26		40	0		
	339			143	>3< 6
35		37	>2< 3		
	708			325	>3< 20



CALCULATED CJC
CHECKED PJF

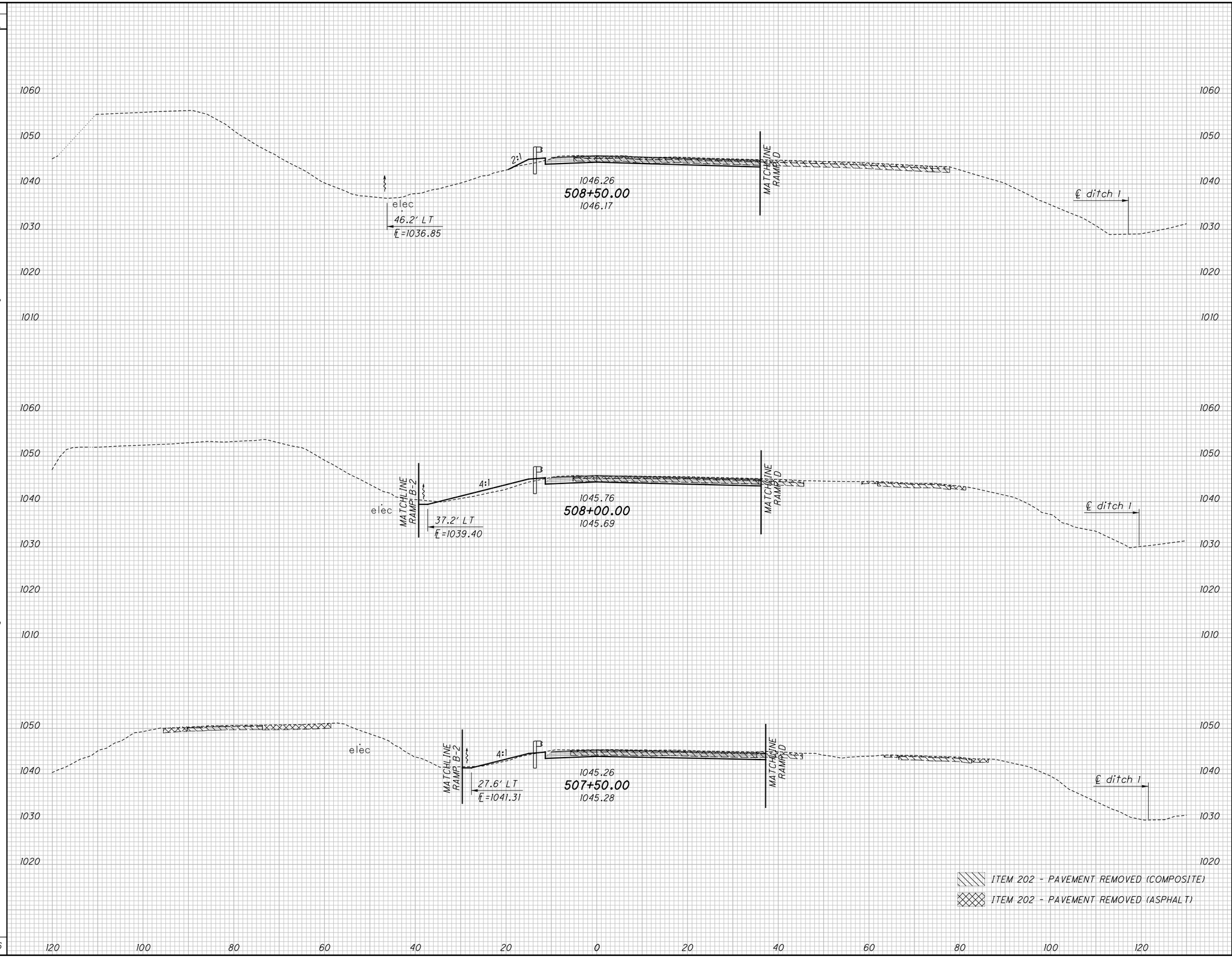
CROSS SECTIONS - NB I.R.77
STA. 505+00.00 TO STA. 507+00.00

SUM-77/277/224
VARIOUS

584
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS002.dgn Sheet 1/13/2021 5:57:23 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
14	75
	122
30	
	139
20	
	336



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		39	9
21	5		
		42	19
24	16		
		46	19
26	4		
		127	47

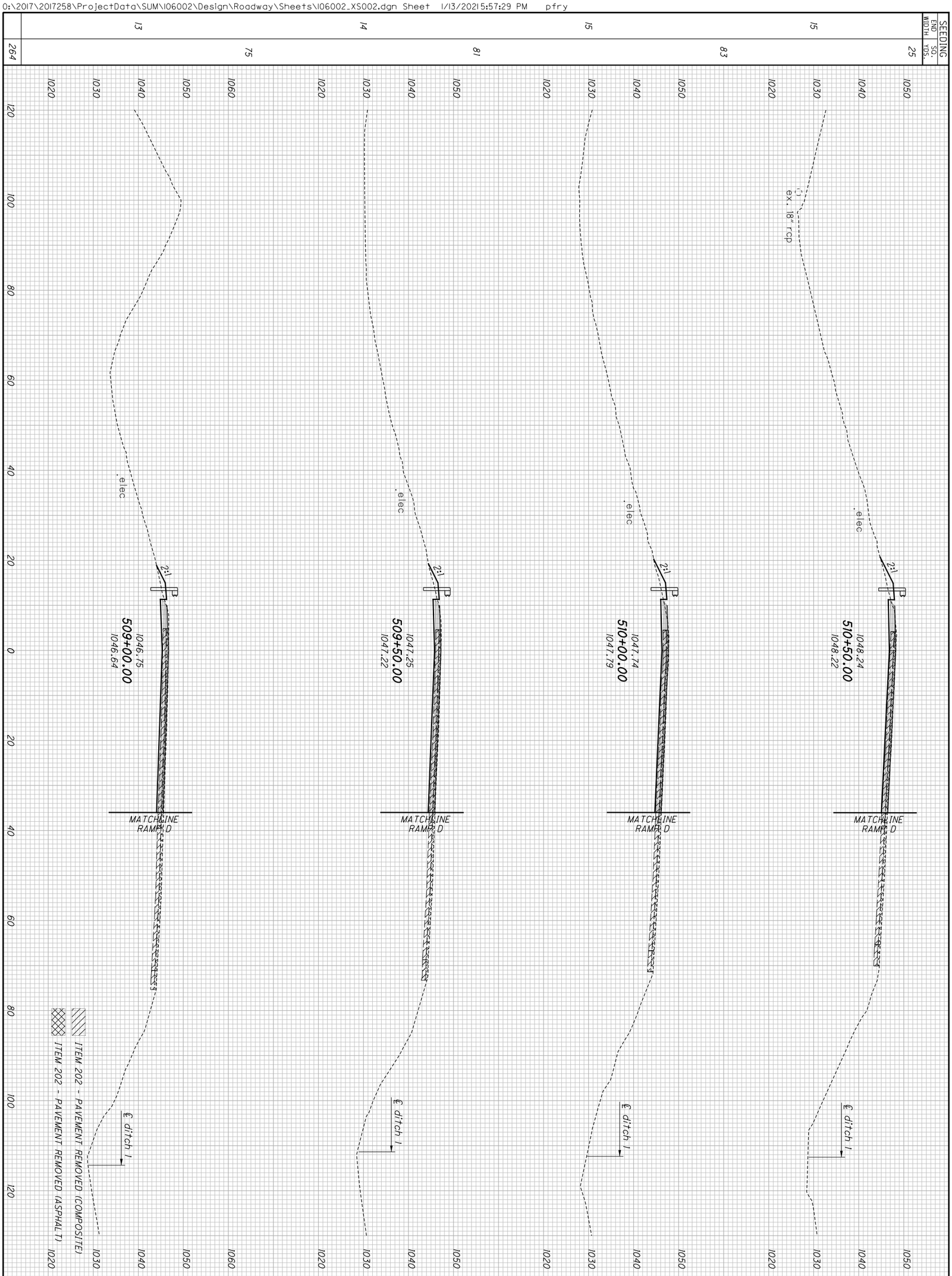
CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - NB I.R. 77
STA. 507+50.00 TO STA. 508+50.00

SUM-77 / 277 / 224
VARIOUS

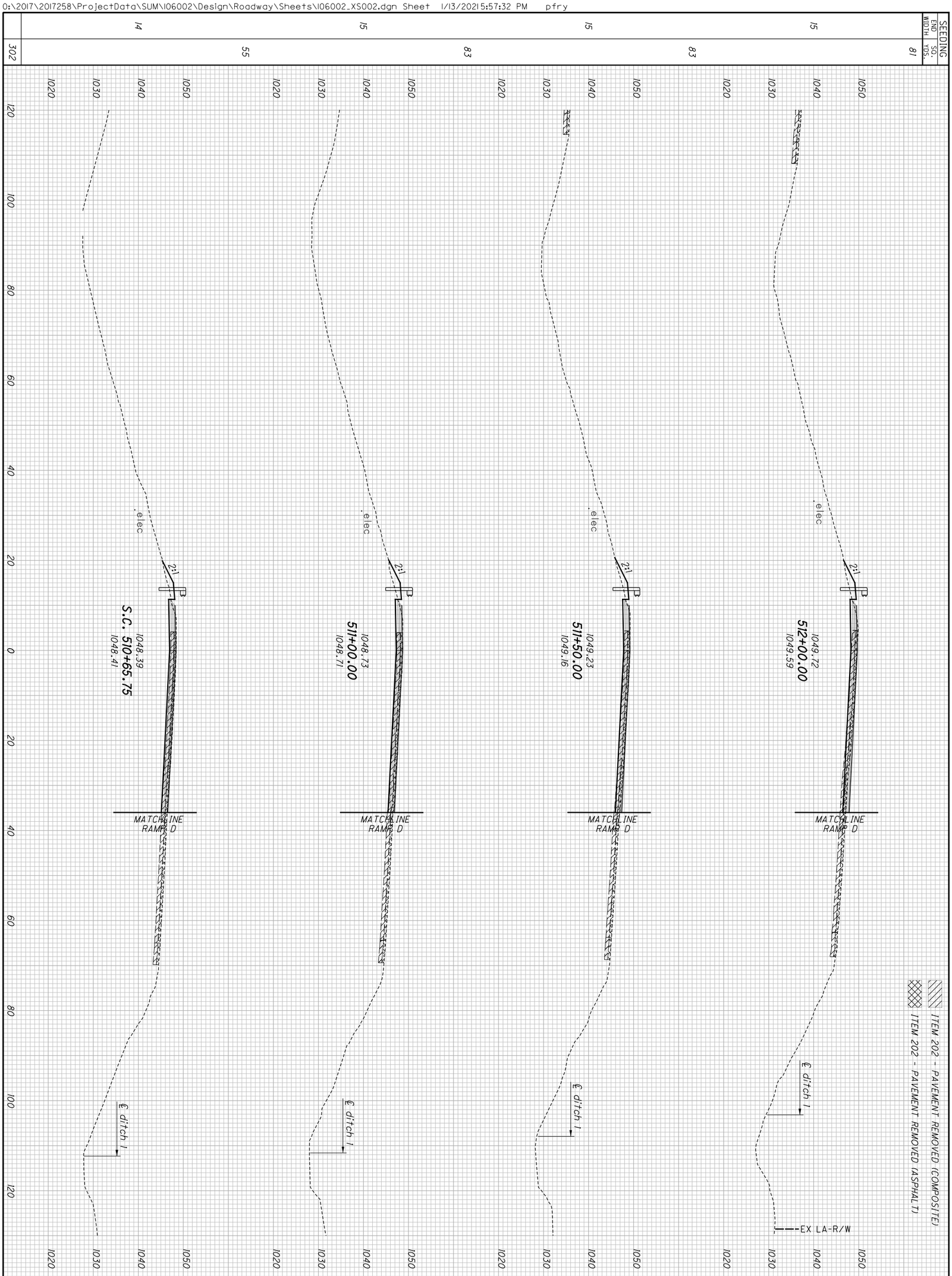
585
1288

D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS002.dgn Sheet 1/13/2021 5:57:26 PM pfry



586 / 1288	**SUM-77 / 277 / 224** **VARIOUS**	**CROSS SECTIONS - NB I.R. 77** **STA. 509+00.00 TO STA. 510+50.00**
		CALCULATED CJC CHECKED PJF

0:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS002.dgn Sheet 1/13/2021 5:57:32 PM pfry



SEEDING END WIDTH	SEEDING SQ. YDS.
15	81
15	83
15	83
14	55
15	302

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
16	11	21	28
8	14	23	22
9	16	28	16
7	19	22	10
		94	76

587
1288

SUM-77/277/224
VARIOUS

CROSS SECTIONS - NB I.R. 77
STA. 510+65.75 TO STA. 512+00.00

CALCULATED CJC
CHECKED PJF

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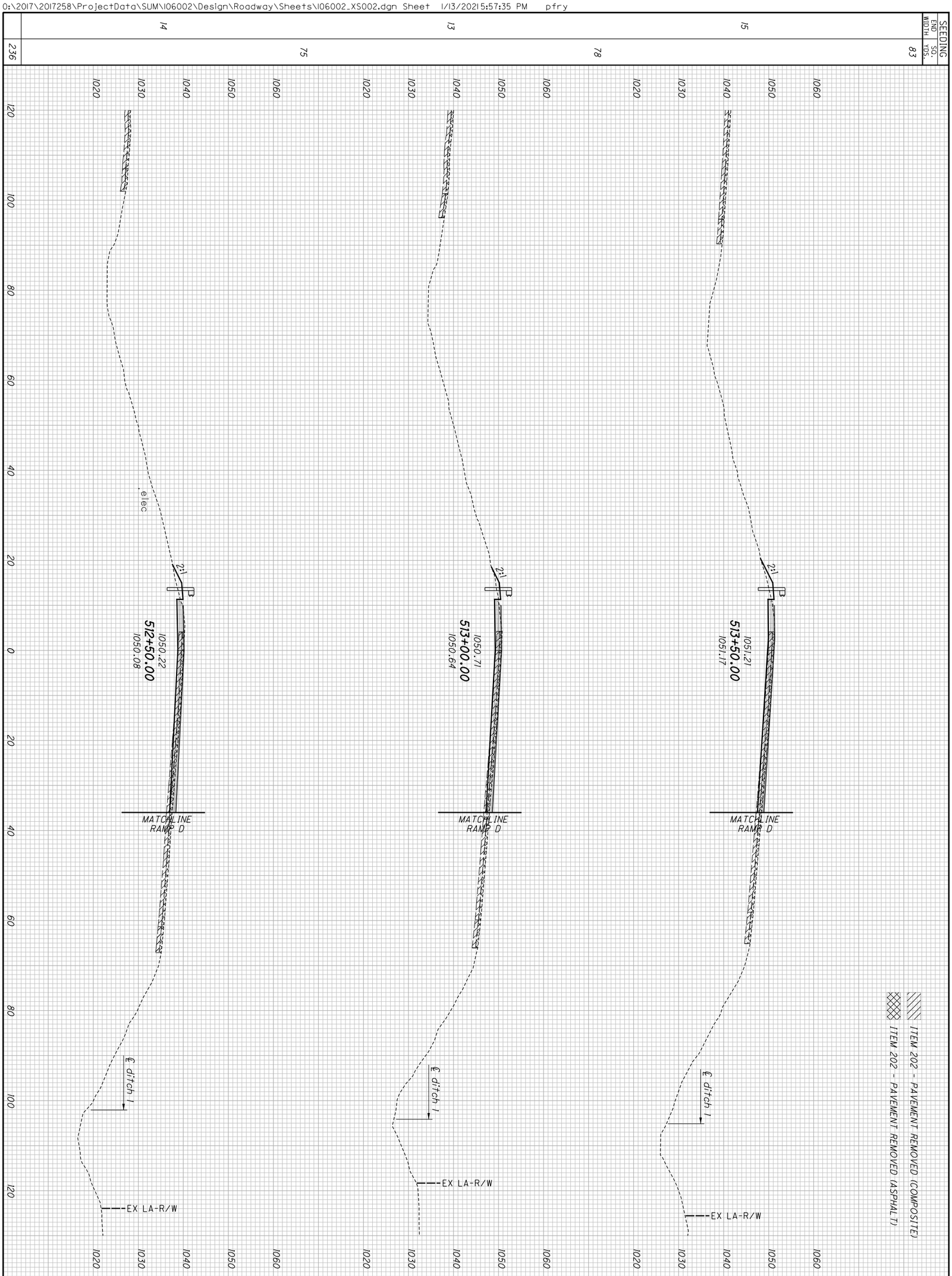
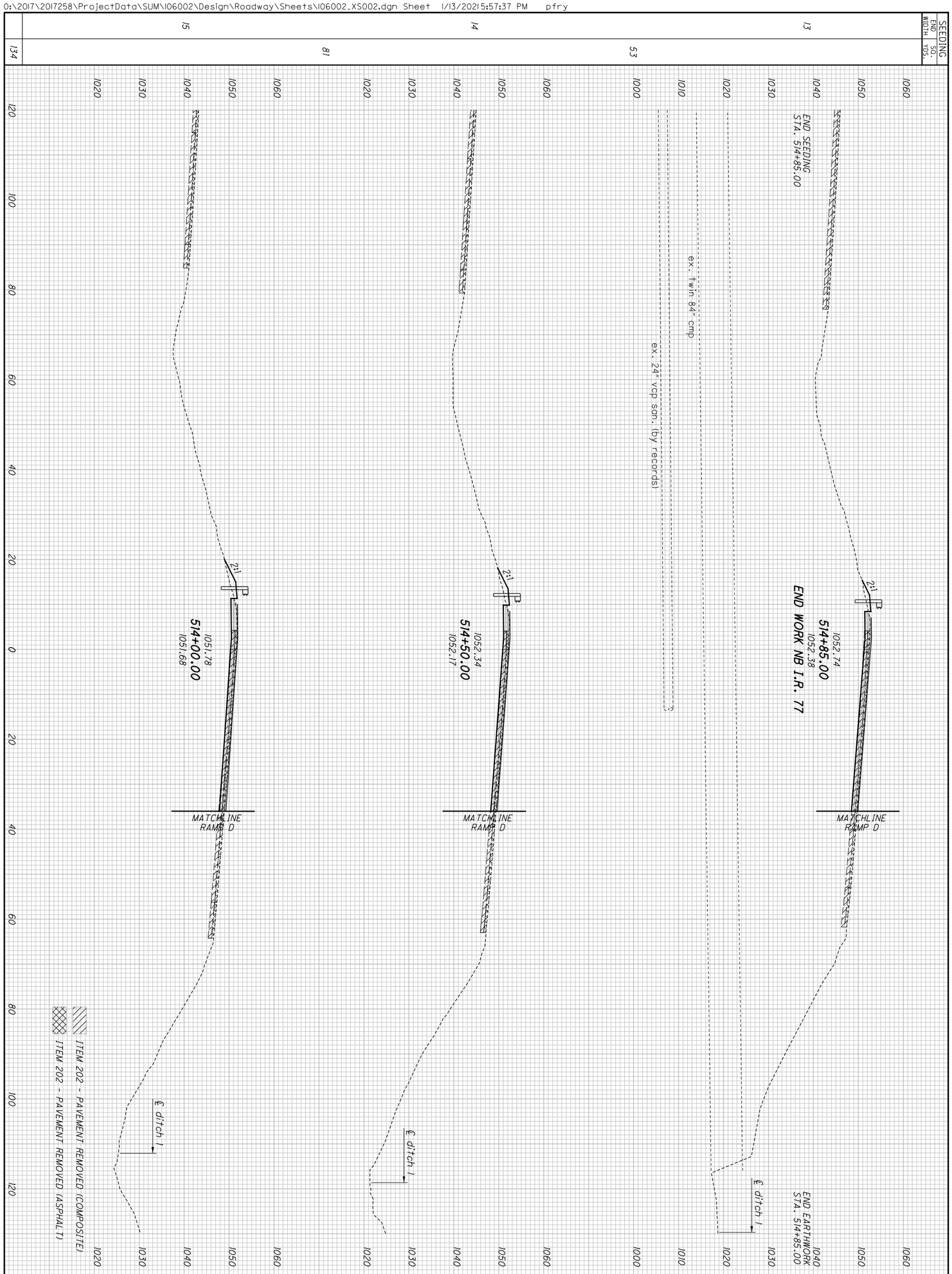


588 / 1288	**SUM-77 / 277 / 224** **VARIOUS**	**CROSS SECTIONS - NB I.R. 77** **STA. 512+50.00 TO STA. 513+50.00**

CALCULATED CJC
CHECKED PJF



589 / 1288	**SUM-77 / 277 / 224** **VARIOUS**
	CROSS SECTIONS - NB I.R. 77 **STA. 514+00.00 TO STA. 514+85.00**
	CALCULATED CJC CHECKED PJF

SEEDING	
END WIDTH	SQ. YDS.

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

1053.90
515+87.72
1053.90
MEET EXISTING
END APPROACH SLAB (SKEW)
(FUTURE BY OTHERS)

4:1
3:1
1053.62
515+62.72
1053.60
BEGIN APPROACH SLAB (SKEW)
(FUTURE BY OTHERS)

2:1
1053.47
515+50.00
1053.37
(FUTURE BY OTHERS)
MATCHLINE
BEGIN SKEWED
APPROACH SLAB

2:1
1052.91
515+00.00
1052.66
(FUTURE BY OTHERS)
MATCHLINE
RAMP D

ex. 24" vcp san. (by record)

1050 1040 1030 1020 1010

120 100 80 60 40 20 0 20 40 60 80 100 120

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CJC
CHECKED PJF

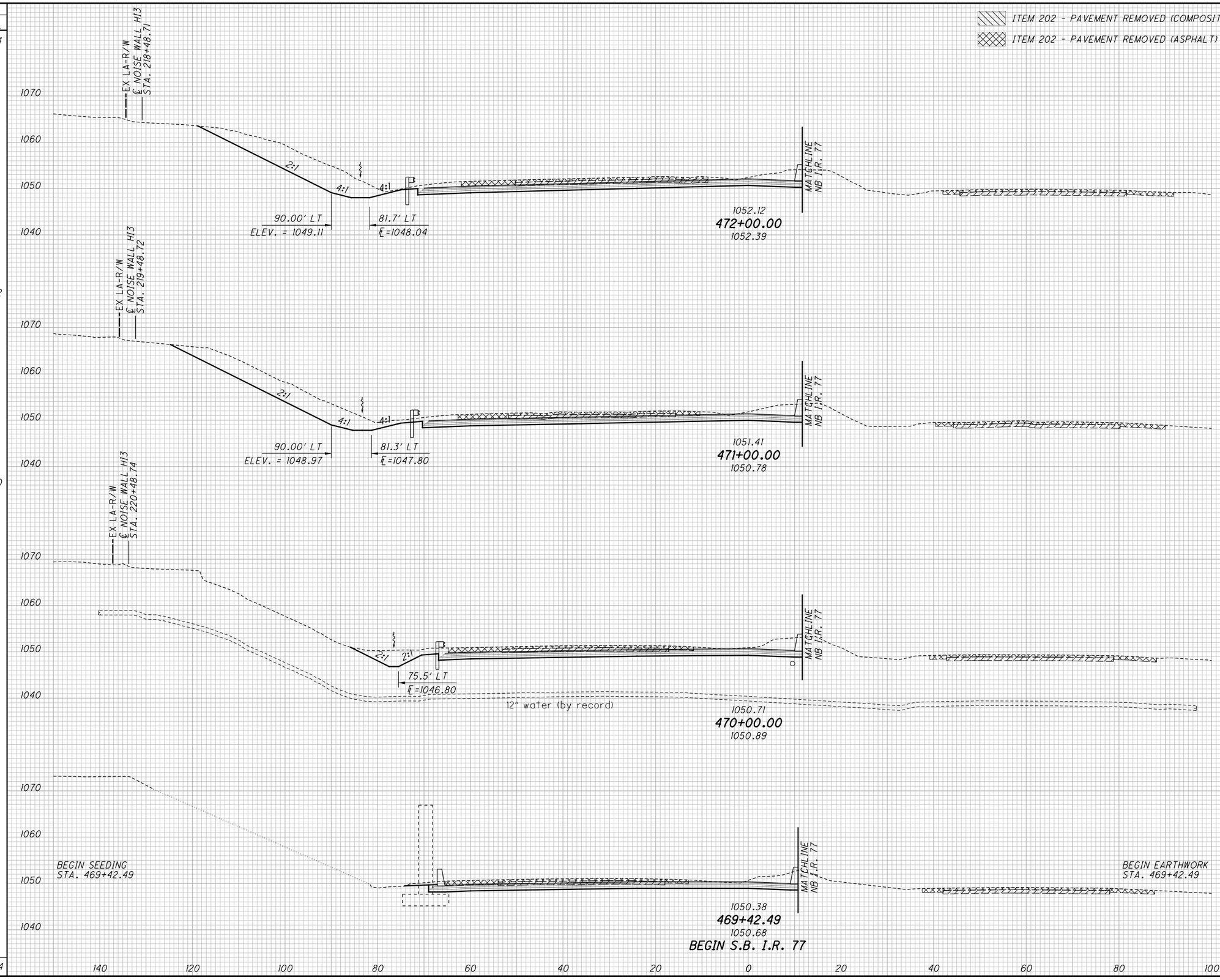
CROSS SECTIONS - NB I.R. 77
STA. 515+00.00 TO STA. 515+87.72

SUM-77 / 277 / 224
VARIOUS

590
1288

0:\2017\2017258\Project Data\SUM\106002\Design\Roadway\Sheets\106002_XS002.dgn Sheet 1/13/2021 5:57:40 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	334
57	
	672
64	
	500
26	
	118
11	
	1624



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		573	0
290	0		
		1100	0
304	0		
		865	0
163	0		
		298	0
117	0		
		2836	0

CALCULATED CJC
CHECKED PJF

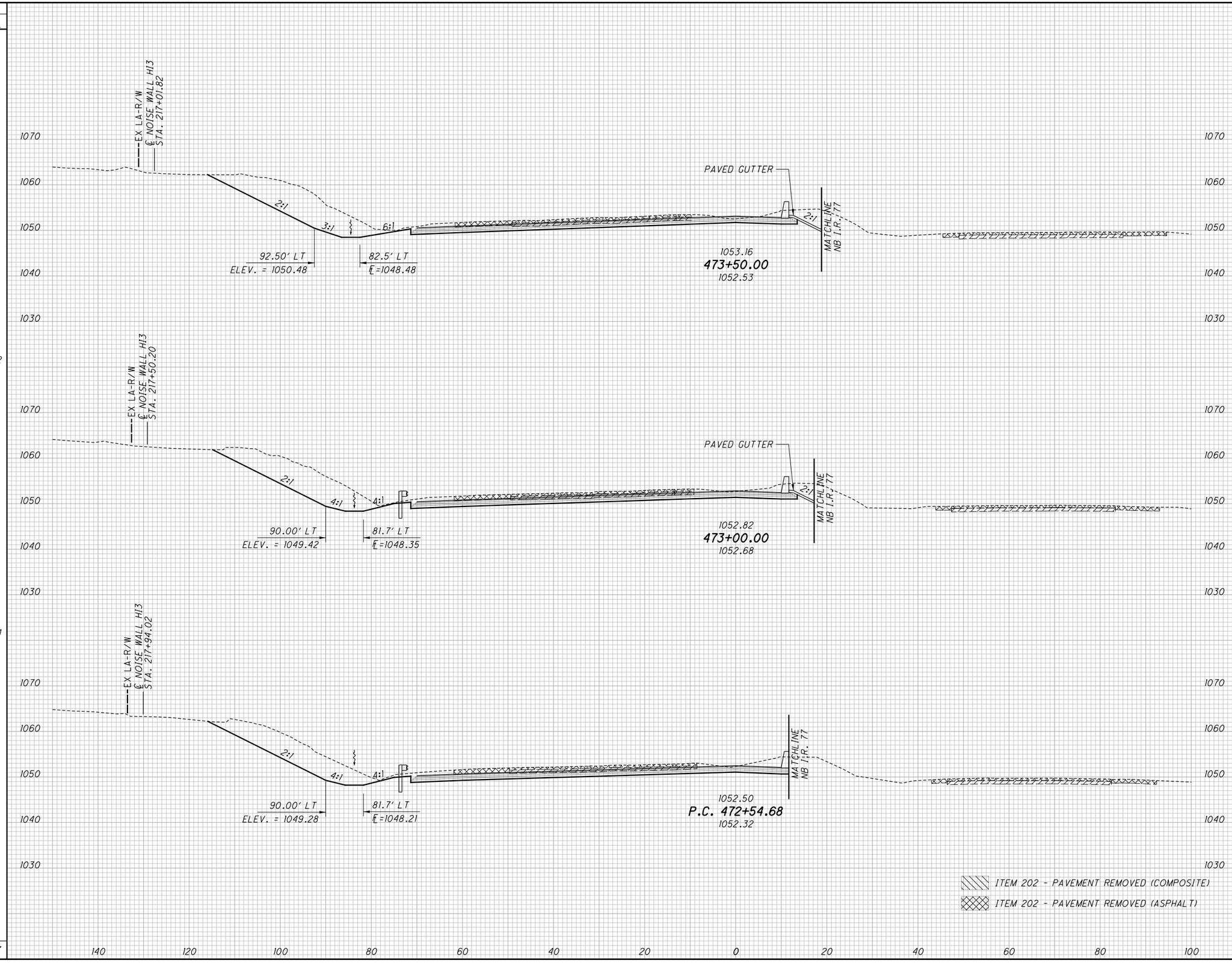
CROSS SECTIONS - SB I.R. 77
STA. 469+42.49 TO STA. 472+00.00

SUM-77 / 277 / 224
VARIOUS

591
1288

0:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS003.dgn Sheet 1/15/2021 9:2:14 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	311
53	
	292
52	
	264
53	
	867



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		566	0
312	0		
		572	0
306	0		
		488	0
276	0		
		1626	0

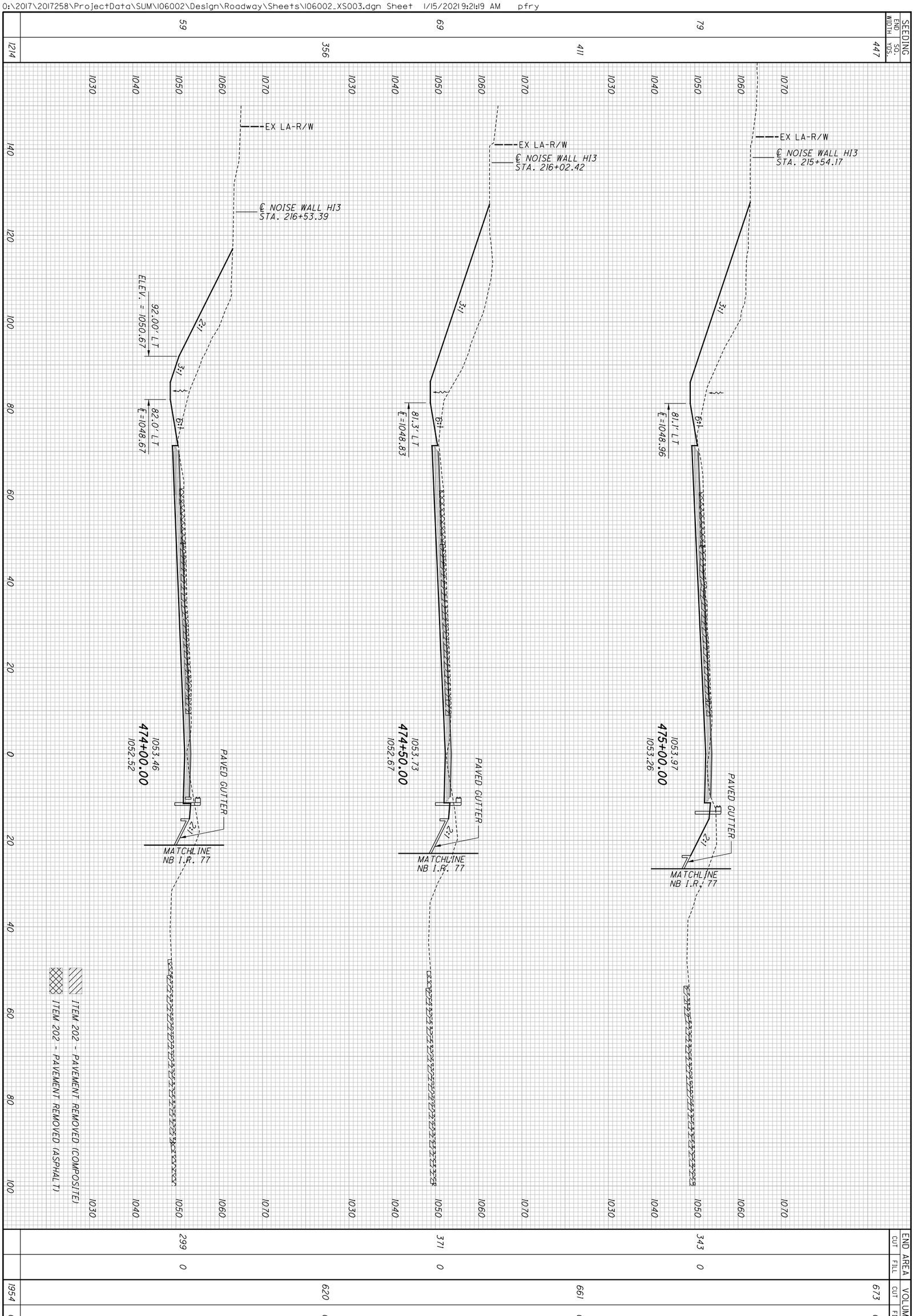
CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - SB I.R. 77
STA. 472+54.68 TO STA. 473+50.00

SUM-77 / 277 / 224
VARIOUS

592
1288

D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS003.dgn Sheet 1/15/2021 9:21:17 AM pfry

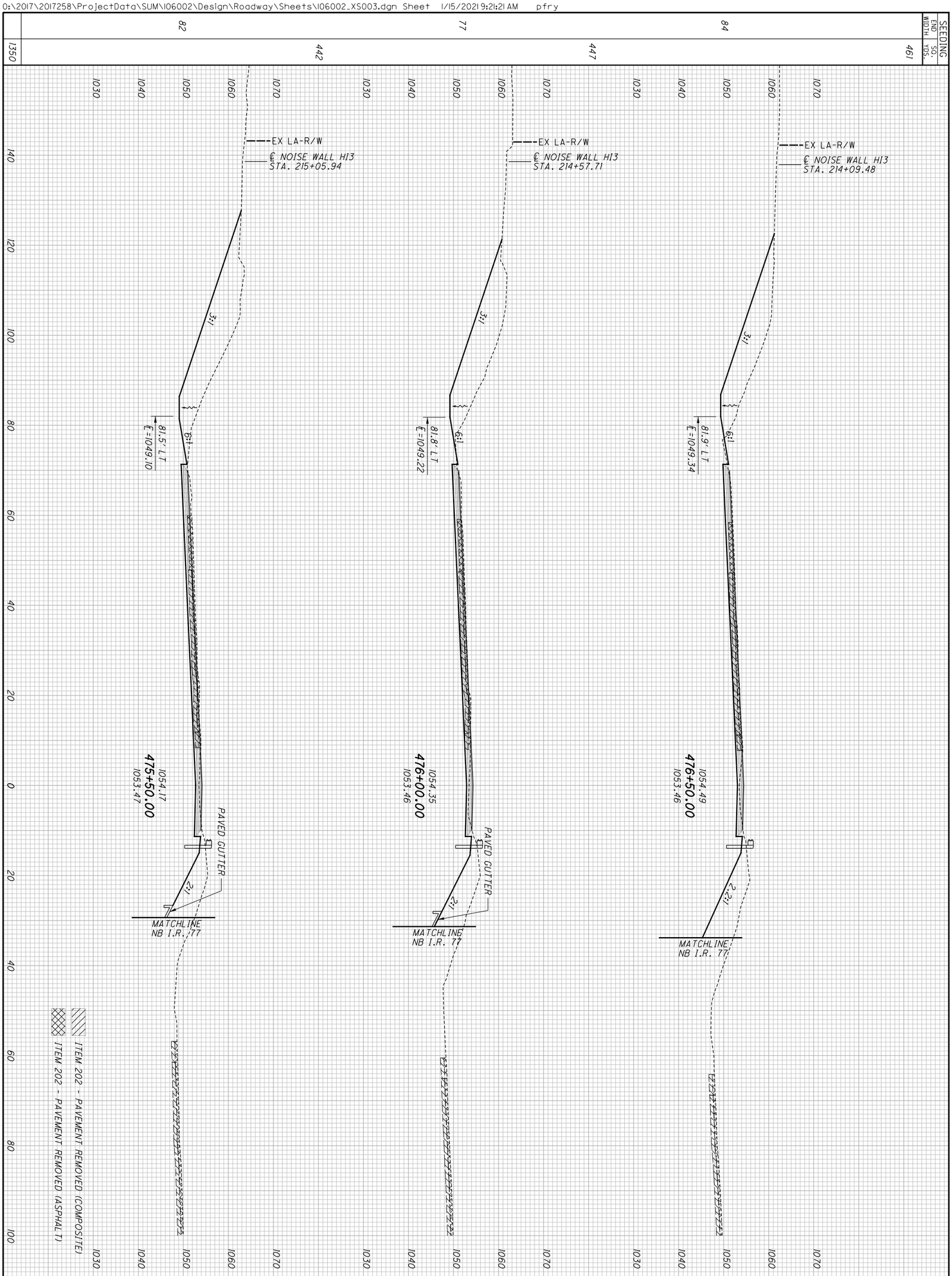


593
1288

SUM-77/277/224
VARIOUS

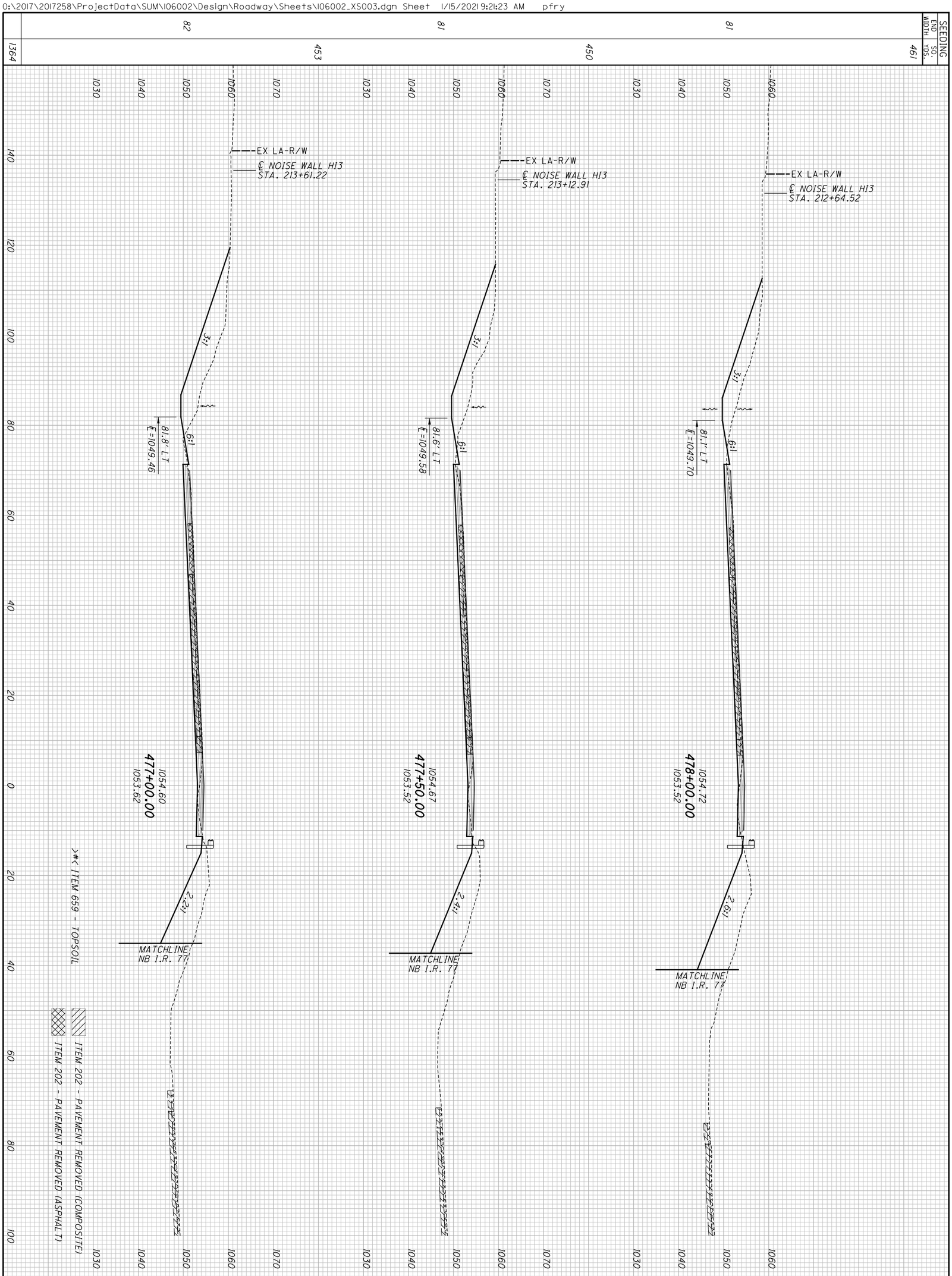
CROSS SECTIONS - SB I.R. 77
STA. 474+00.00 TO STA. 475+00.00

CALCULATED CJC
CHECKED PJF



1288 / 594	**SUM-77/277/224** **VARIOUS**	**CROSS SECTIONS - SB I.R. 77** **STA. 475+50.00 TO STA. 476+50.00**

CALCULATED CJC
CHECKED PJF



1364	82	453	81	450	81	461	SEEDING END WIDTH
	1030 1040 1050 1060 1070		1030 1040 1050 1060 1070		1030 1040 1050 1060		SQ. YDS.
	140 120 100 80 60 40 20 0 20 40 60 80 100						
	282		259		257		END AREA CUT
	2		2		2		FILL
1483	501		478		504		VOLUME CUT
22	4		4		14		FILL

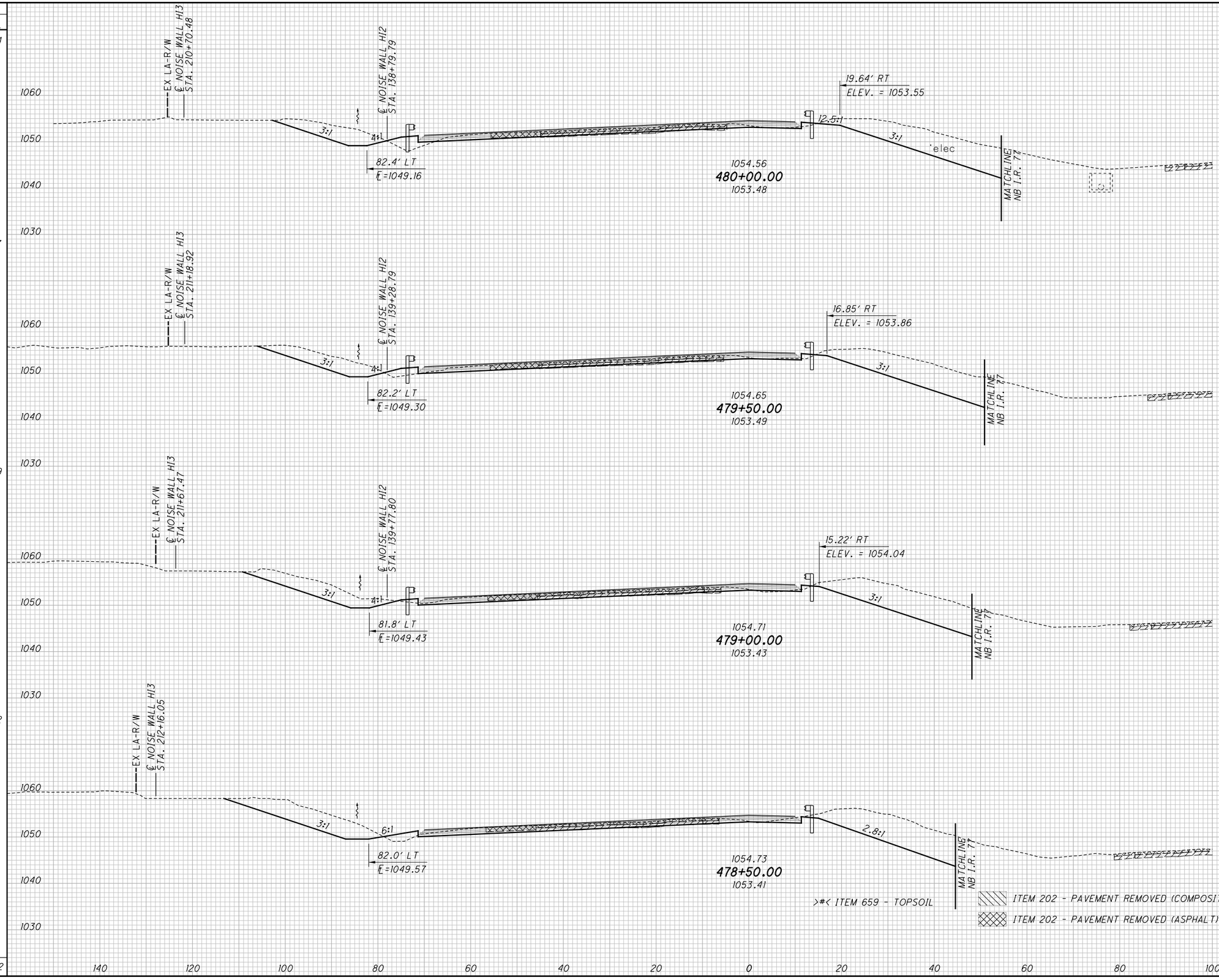
595
1288

SUM-77/277/224
VARIOUS

CROSS SECTIONS - SB I.R. 77
STA. 477+00.00 TO STA. 478+00.00

CALCULATED CJC
CHECKED PJF

SEEDING END WIDTH	SEEDING SQ. YDS.
84	464
84	467
85	469
85	472
	1872



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		432	54
242	27		
		453	44
247	20		
		470	27
261	9		
		507	20
287	13		
		1862	145

CALCULATED CJC
CHECKED PJF

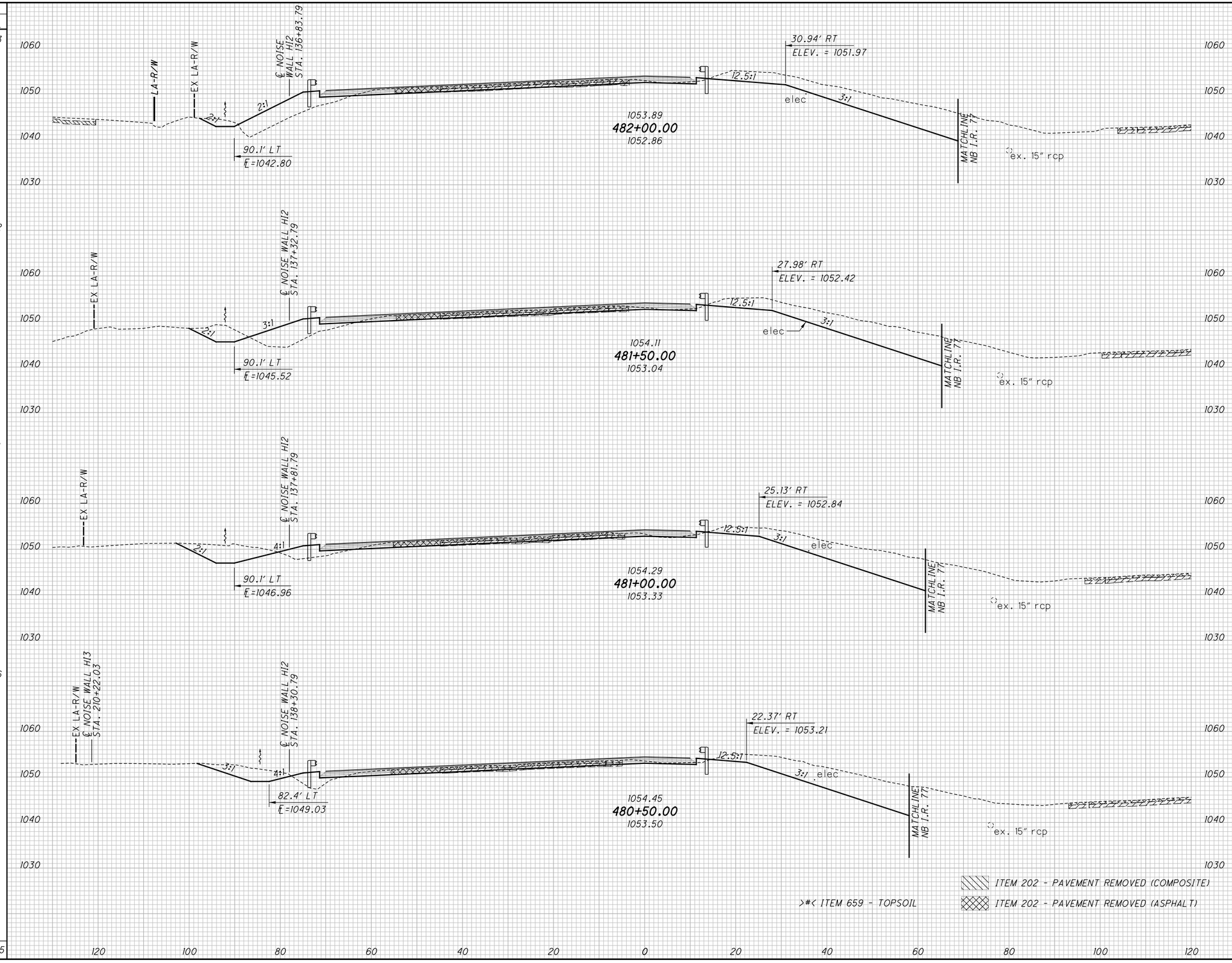
CROSS SECTIONS - SB I.R. 77
STA. 478+50.00 TO STA. 480+00.00

SUM-77 / 277 / 224
VARIOUS

596
1288

D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\106002_XS003.dgn Sheet 1/15/2021 9:21:25 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	553
95	
	522
93	
	514
92	
	486
83	
	2075



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		375	243
210	84		
		402	145
224	73		
		431	99
242	34		
		432	60
225	31		
		1640	547

CALCULATED CJC
CHECKED PJF

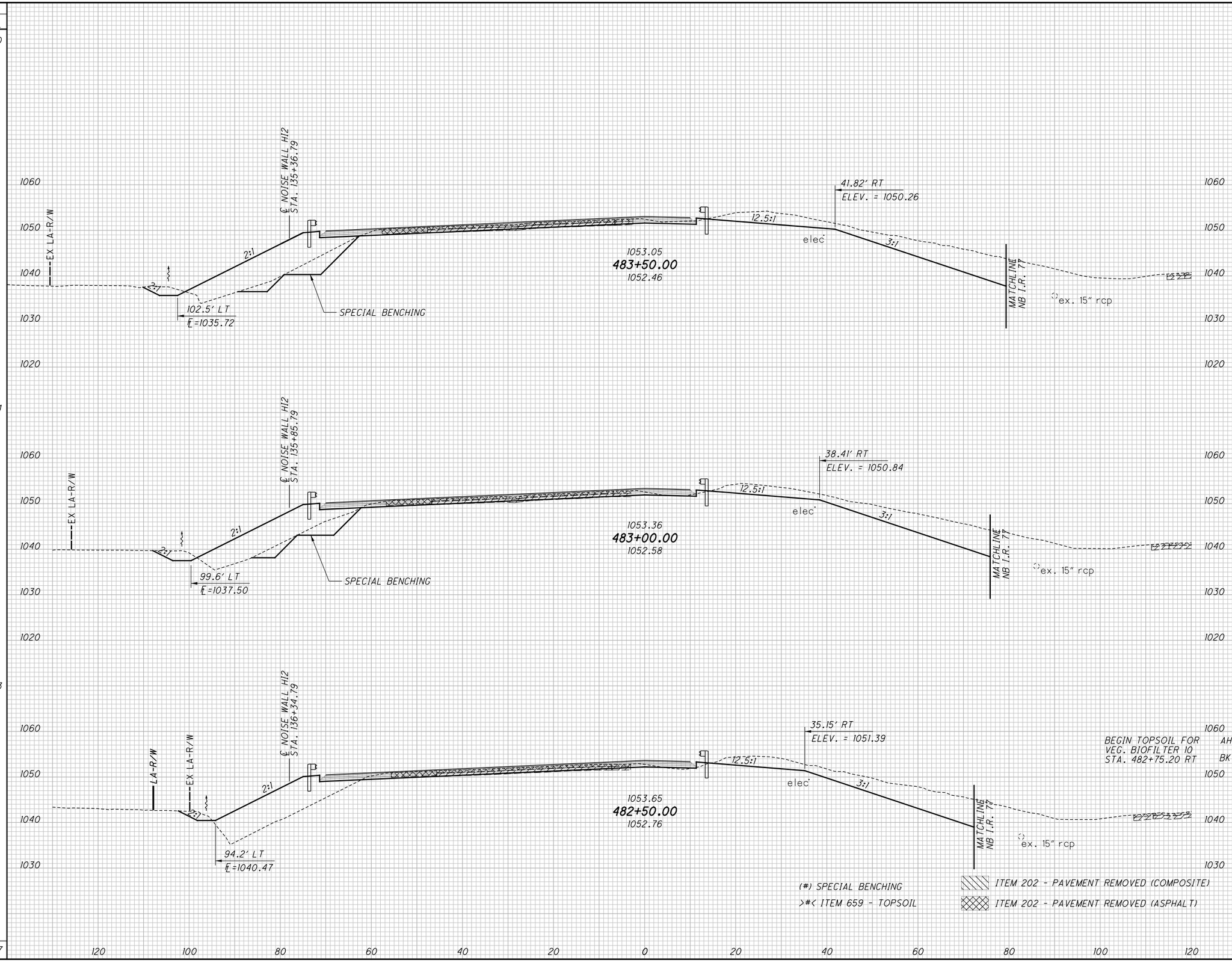
CROSS SECTIONS - SB I.R. 77
STA. 480+50.00 TO STA. 482+00.00

SUM-77 / 277 / 224
VARIOUS

597
1288

0:\2017\2017258\Project Data\SUM\06002\Design\Roadway\Sheets\06002_XS003.dgn Sheet 1/15/2021 9:21:27 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	550
119	
	644
113	
	603
104	
1797	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>41<
		(101)	(101)
		296	356
	>21<		
(44)	(44)		
239	192		
			>38<
		(76)	(76)
		428	330
	>20<		
(38)	(38)		
223	164		
			>18<
		(35)	(35)
		387	317
	>20<		
	>0<		
(0)	(0)		
195	178		
			>97<
		(212)	(212)
		1111	1003

CALCULATED CJC
CHECKED PJF

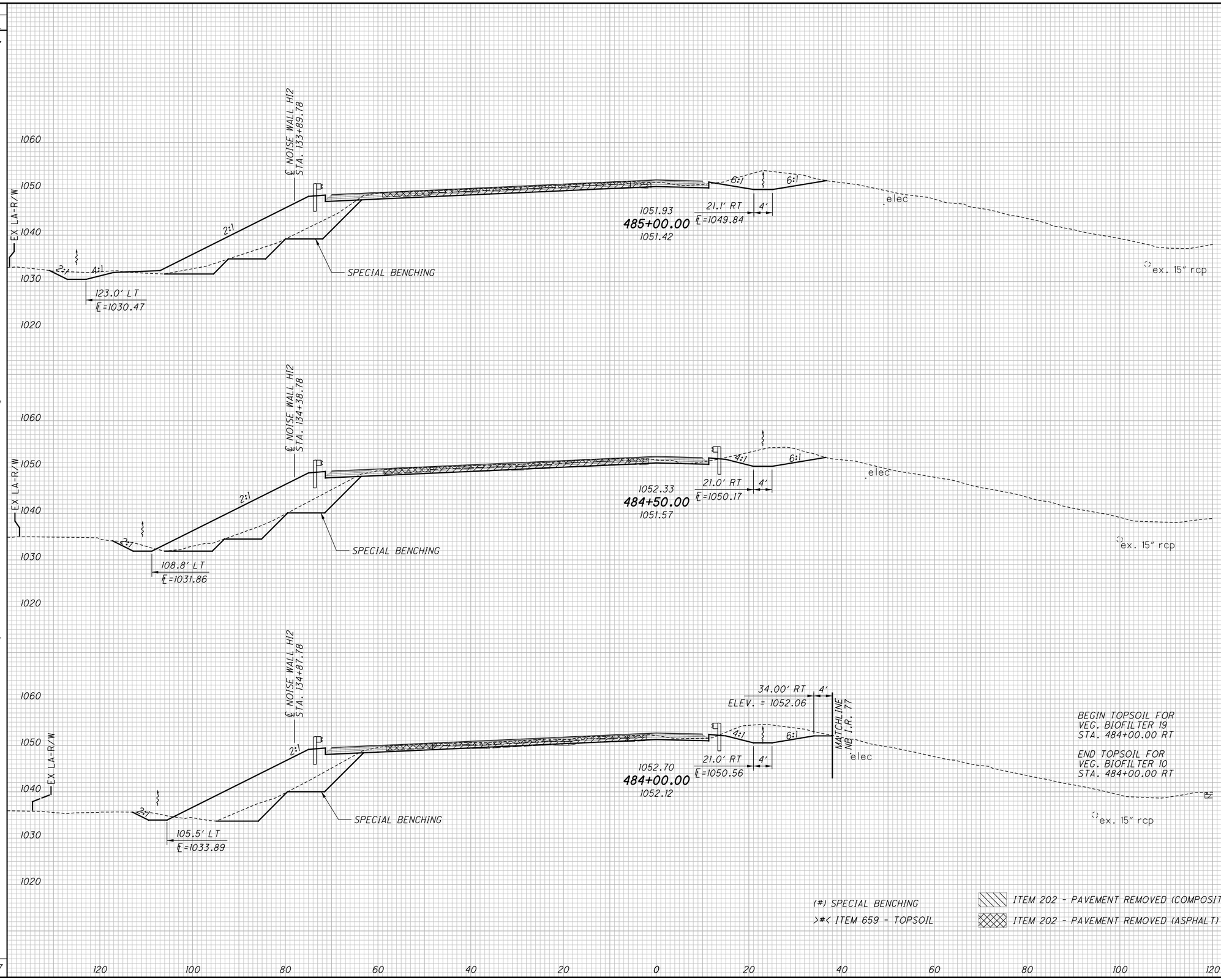
CROSS SECTIONS - SB I.R. 77
STA. 482+50.00 TO STA. 483+50.00

SUM-77 / 277 / 224
VARIOUS

598
1288

0:\2017\2017258\Project Data\SUM\06002\Design\Roadway\Sheets\06002_XS003.dgn Sheet 1/15/2021 9:21:30 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	567
100	
	519
87	
	461
79	
	1547



(#) SPECIAL BENCHING
>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)
ITEM 202 - PAVEMENT REMOVED (ASPHALT)

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>7<
		(94)	(94)
		175	408
	>4<		
(63)	(63)		
91	191		
			>6<
		(119)	(119)
		158	354
	>2<		
(66)	(66)		
80	191		
			>4<
		(121)	(121)
		149	356
	>2<		
AH			
BK	>23<		
(65)	(65)		
81	193		
			>17<
		(334)	(334)
		482	1118

CALCULATED CJC
CHECKED PJF

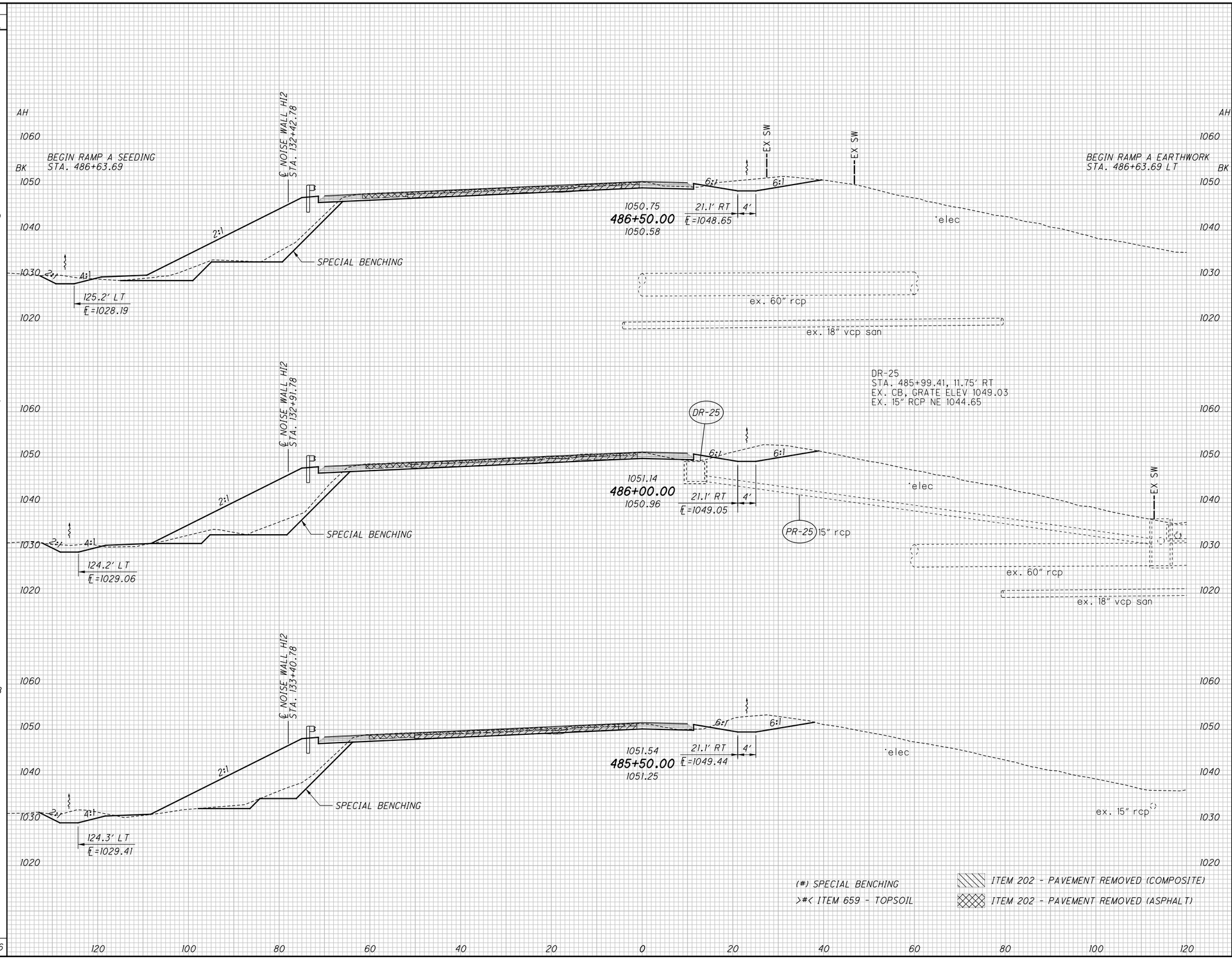
CROSS SECTIONS - SB I.R. 77
STA. 484+00.00 TO STA. 485+00.00

SUM-77 / 277 / 224
VARIOUS

599
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS003.dgn Sheet 1/15/2021 9:21:32 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	137
34	
	160
106	
	105
	581
	578
104	
	1456



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>5<
		(0)	(0)
		89	1
	>4<		
(0)	(0)		
AH 66	0		
	>4<		
(44)	(44)		
BK 90	235		
			>2<
		(24)	(24)
		44	120
	>4<		
(49)	(49)		
82	239		
			>7<
		(101)	(101)
		155	439
	>4<		
(60)	(60)		
85	235		
			>7<
		(91)	(91)
		169	449
	>4<		
(38)	(38)		
98	250		
			>21<
		(216)	(216)
		457	1009

CALCULATED CJC
CHECKED PJF

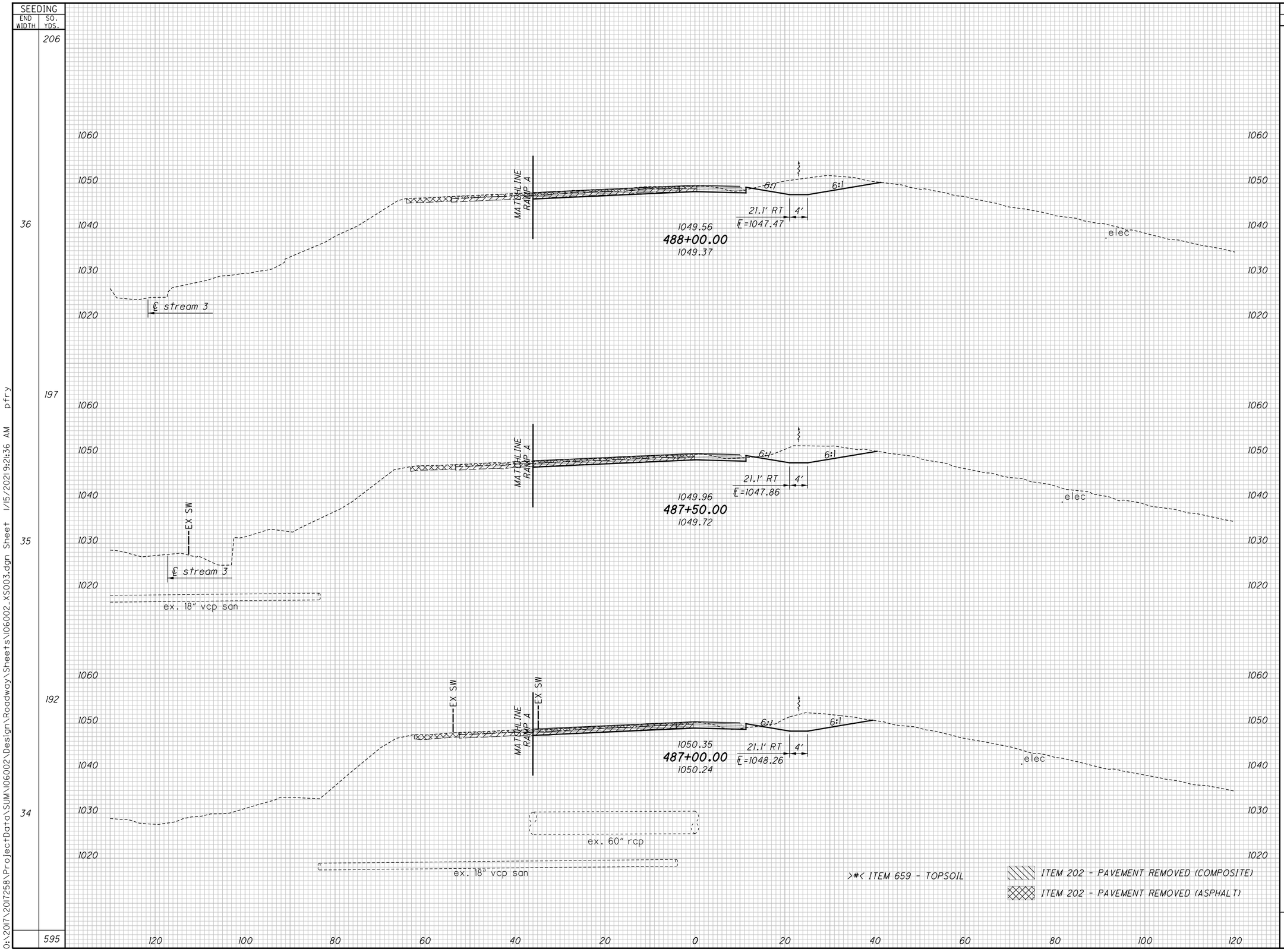
CROSS SECTIONS - SB I.R. 77
STA. 485+50.00 TO STA. 486+50.00

SUM-77 / 277 / 224
VARIOUS

600
1288

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS003.dgn Sheet 1/15/2021 9:21:34 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	206				>7<
				147	2
36		83	>4< 0		
	197			145	>7< 0
35		74	>4< 0		
	192			131	>7< 1
34		67	>4< 1		
	595			423	>21< 3



CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - SB I.R. 77
STA. 487+00.00 TO STA. 488+00.00

SUM-77 / 277 / 224
VARIOUS

601
1288

0:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS003.dgn Sheet 1/15/2021 9:21:36 AM pfry

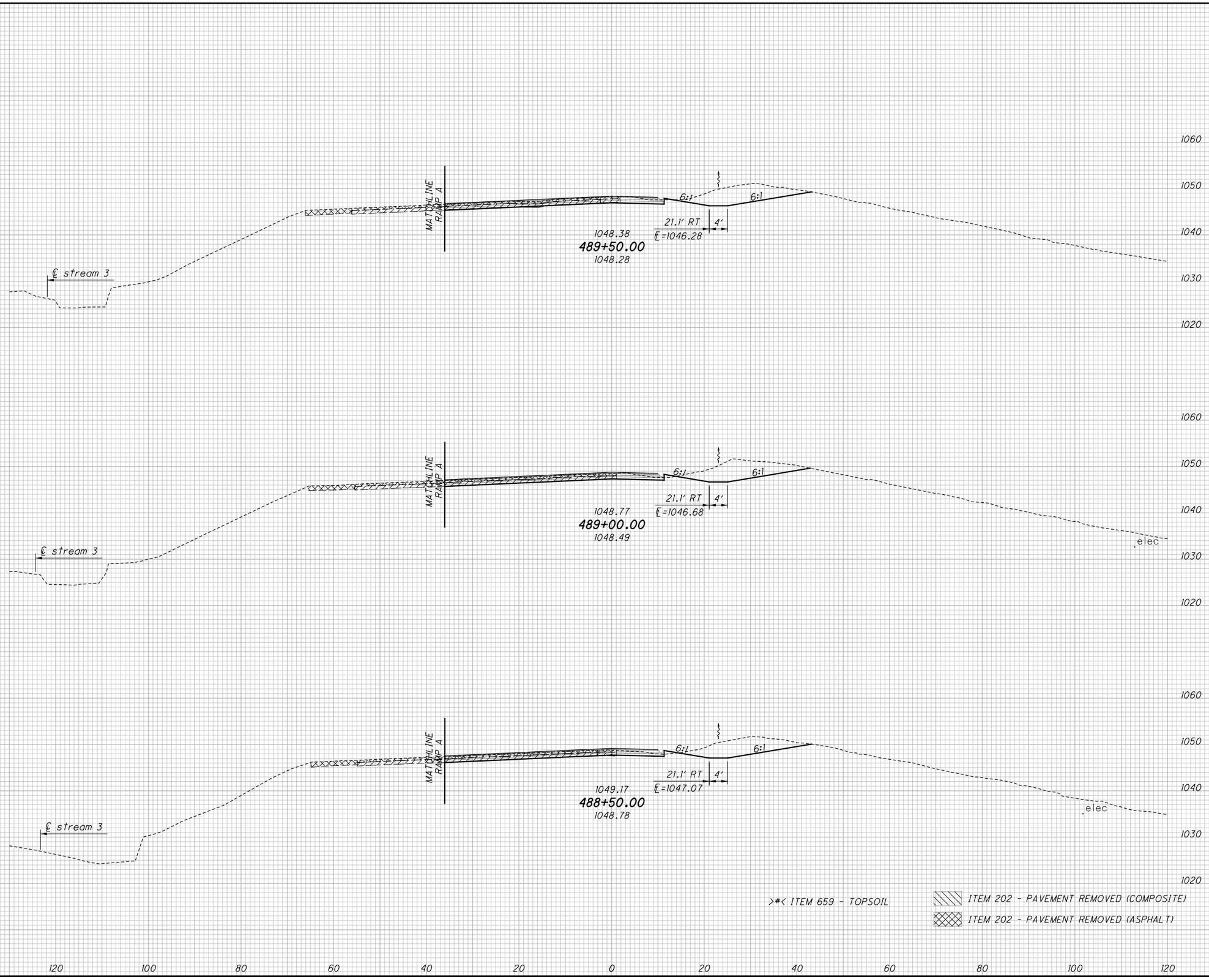
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	211				>7<
				169	1
38		86	>4< 1		
	208				>7<
				158	2
37		85	>4< 1		
	208			149	>7< 3
38		76	>4< 2		
	627			476	>21< 6

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - SB I.R. 77
STA. 488+50.00 TO STA. 489+50.00

SUM-77 / 277 / 224
VARIOUS

602
1288



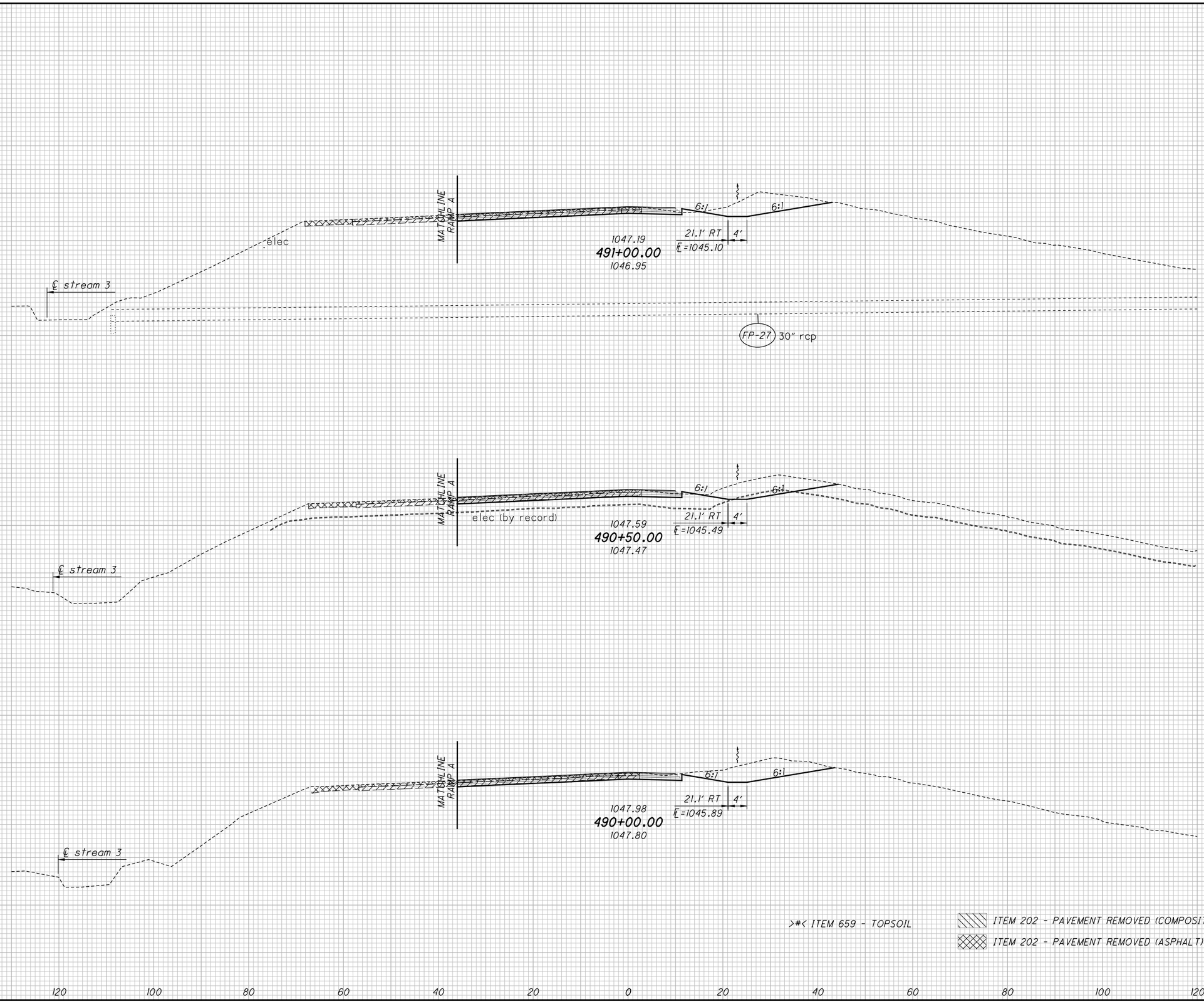
>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS003.dgn Sheet 1/15/2021 9:21:38 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	206				>7<
				138	2
37		80	>4< 1		
	211				>7<
				155	1
39		87	>4< 0		
	214				>7<
				170	0
38		97	>4< 0		
	631			463	>21< 3



CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - SB I.R. 77
STA. 490+00.00 TO STA. 491+00.00

SUM-77 / 277 / 224
VARIOUS

603
1288

0:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS003.dgn Sheet 1/15/2021 9:21:40 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	68
33	
	117
34	
	192
35	
	200
37	
	577

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>3<
		40	0
	>4<		
57	0		
			>5<
		72	1
	>4<		
67	1		
			>7<
		124	2
	>4<		
67	1		
			>7<
		126	2
	>4<		
69	1		
			>22<
		362	5

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - SB I.R. 77
STA. 491+50.00 TO STA. 492+81.37

SUM-77 / 277 / 224
VARIOUS

604
1288

MATCHLINE RAMP A

1045.76
P.T. 492+81.37
1045.52
℄ =1043.51
21.1' RT
4'
6:1
6:1

1046.01
492+50.00
1045.88
℄ =1043.79
21.1' RT
4'

1046.40
492+00.00
1046.14
℄ =1044.25
21.1' RT
4'

1046.80
491+50.00
1046.62
℄ =1044.70
21.1' RT
4'

elec

D-28
STA 292+58.27, 64.86' LT
MH-3, RIM ELEV 1042.89
18" (SE) 1023.95
36" (N) 1023.45
42" (SW) 1022.95

199'-42" TYPE B, BORED OR JACKED @ 0.30% P-28

℄ stream 3

>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

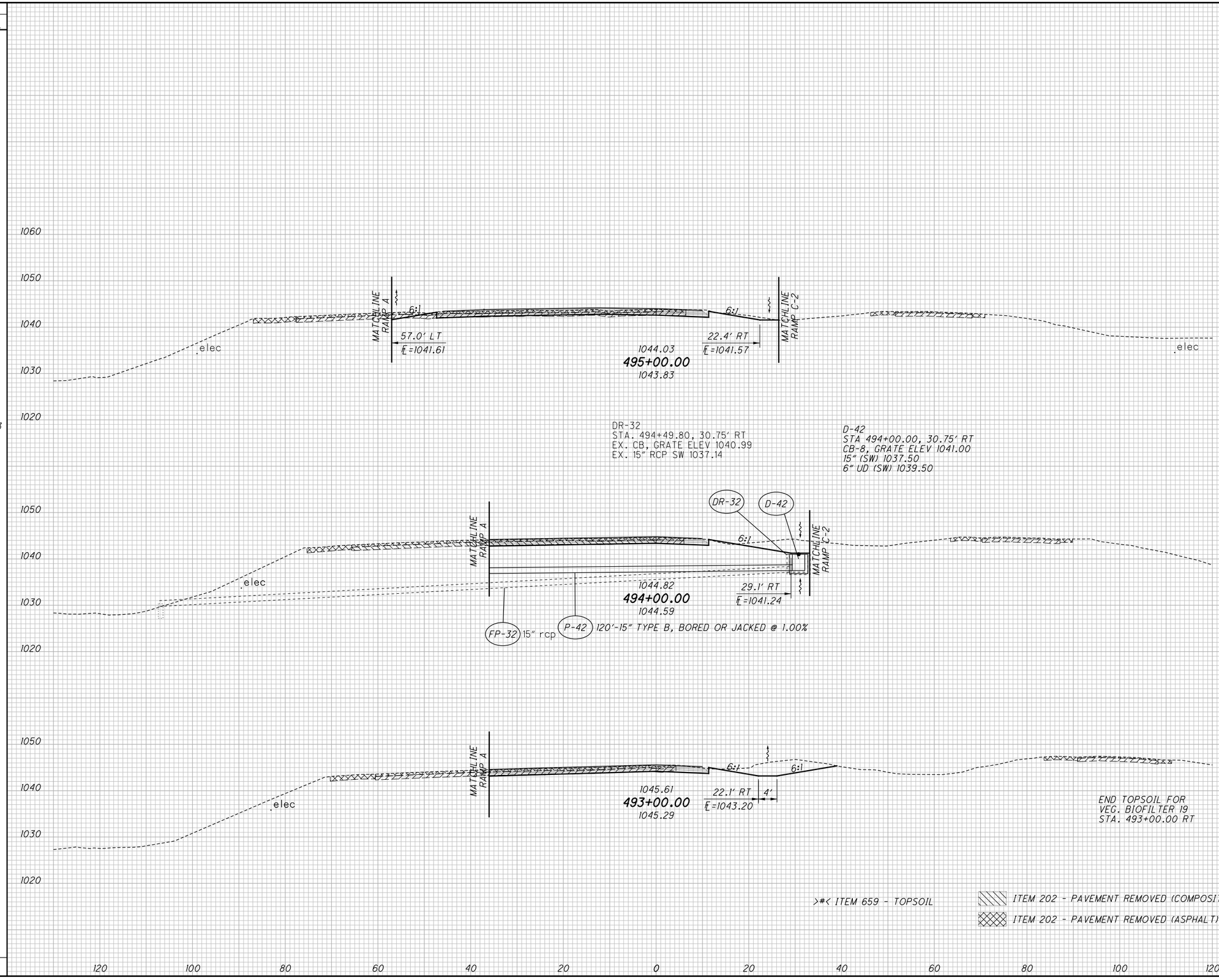
ITEM 202 - PAVEMENT REMOVED (ASPHALT)

1060 1050 1040 1030 1020

120 100 80 60 40 20 0 20 40 60 80 100 120

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS003.dgn Sheet 1/15/2021 9:21:42 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	317
28	
	283
23	
	311
33	
	911



>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		104	31
13	14		
		94	30
38	2		
		181	6
60	>0<	AH	
	>4<	BK	
	1		
		379	67

CALCULATED CJC
CHECKED PJF

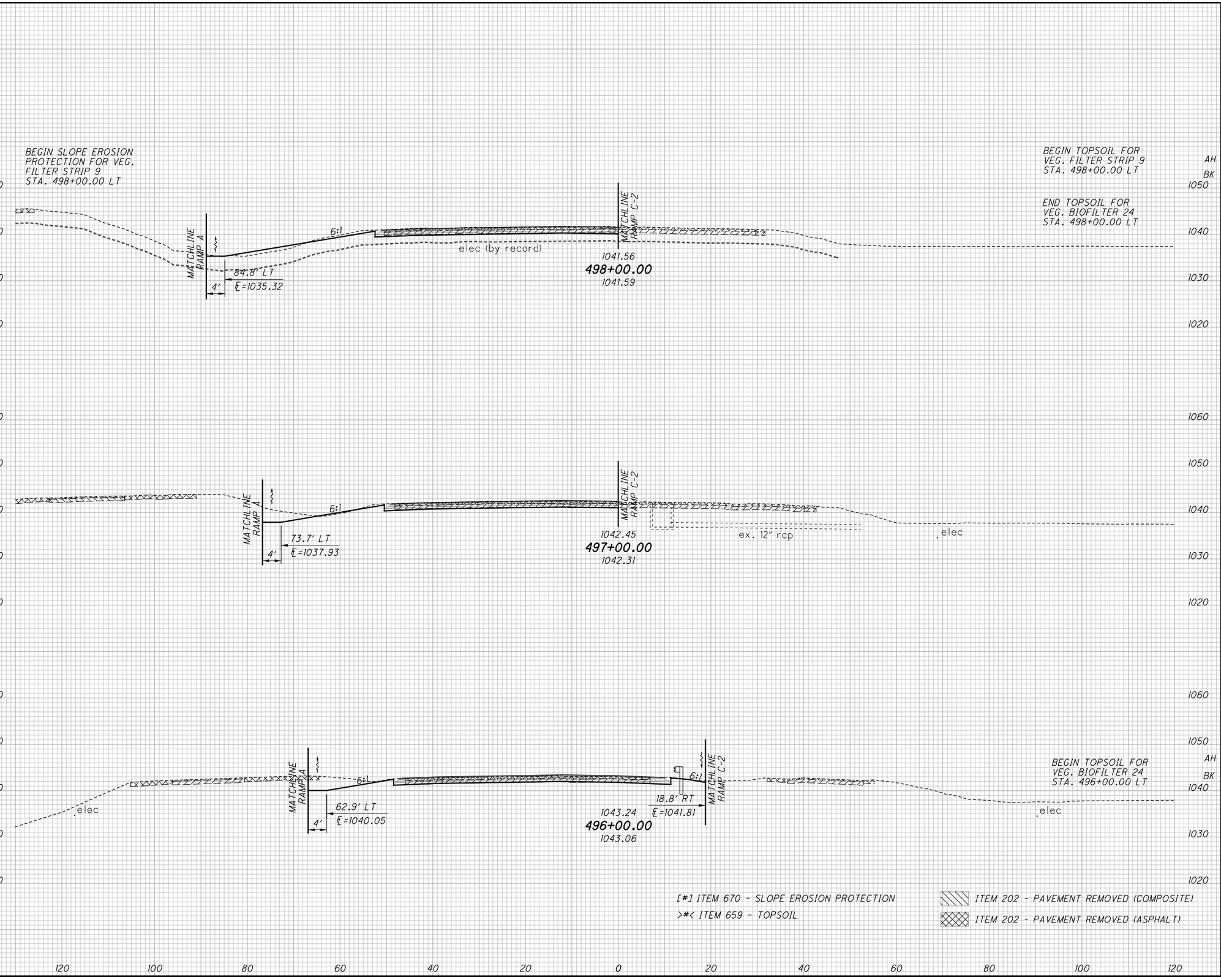
CROSS SECTIONS - SB I.R. 77
STA. 493+00.00 TO STA. 495+00.00

SUM-77/277/224
VARIOUS

605
1288

0:\2017\2017258\Project Data\SUM\06002\Design\Roadway\Sheets\06002_XS003.dgn Sheet 1/15/2021 9:21:45 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	[372]
	450
[34]	
[0]	
38	
	367
28	
	317
29	
	[372]
	1134



[#] ITEM 670 - SLOPE EROSION PROTECTION

>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>41<
		119	13
	>11<		
	>11<		
24	5		
			>35<
		111	13
36	>8<		
	2		
			>24<
		146	9
	>5<		
	>0<		
43	3		
			>100<
		376	35

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - SB I.R. 77
STA. 496+00.00 TO STA. 498+00.00

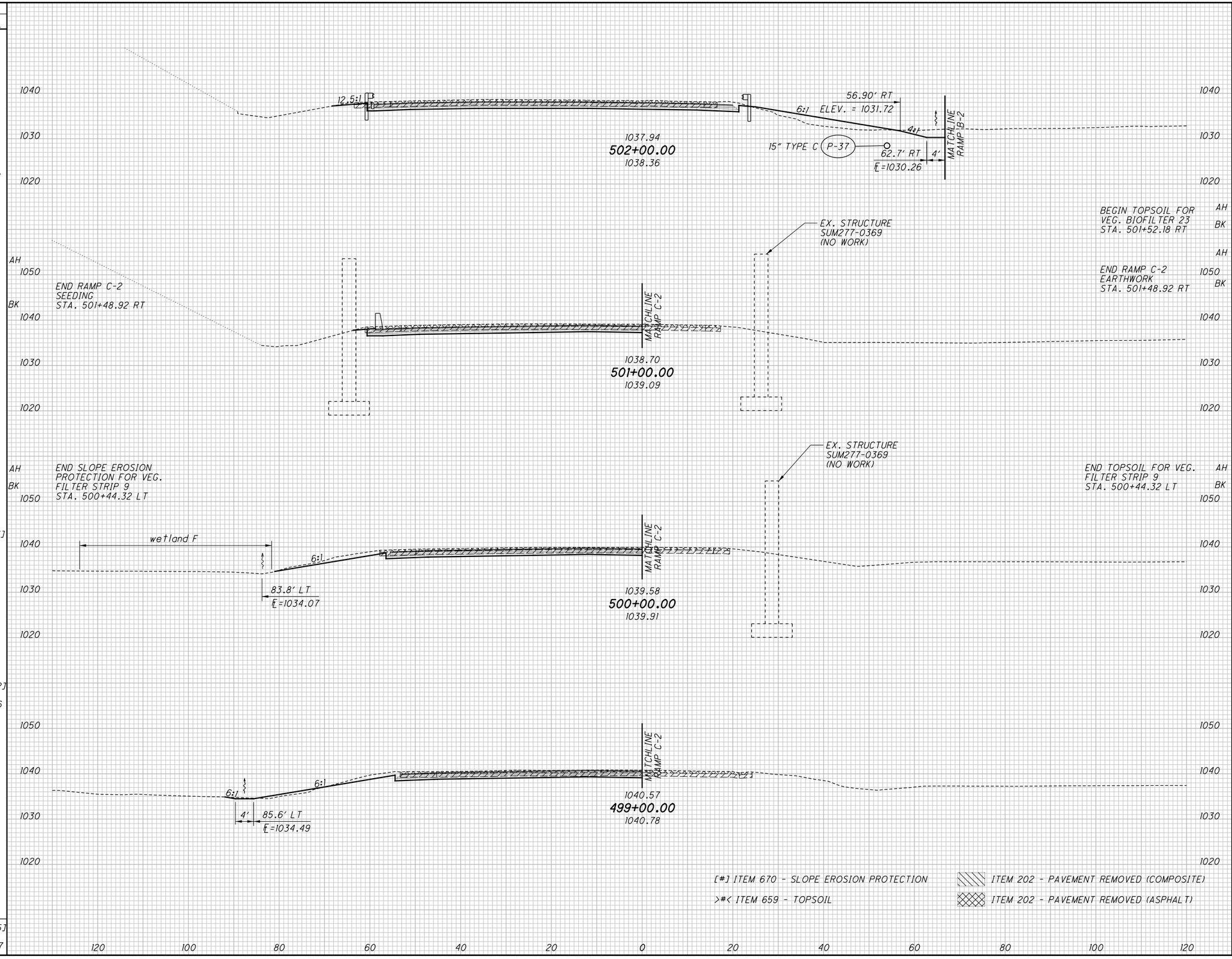
SUM-77 / 277 / 224
VARIOUS

606
1288

0:\2017\2017258\Project Data\SUM\06002\Design\Roadway\Sheets\06002_XS003.dgn Sheet 1/15/2021 9:21:48 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	20
60	
	318
52	
8	
46	
9	
	217
[0]	
[25]	
	[123]
[25]	
30	
	[322]
	406
[33]	
43	
	[445]
	1007

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>1<
		8	3
	>13<		
75	27		
			>25<
		131	40
	>15<		
	>0<		
63	15		
36	1		
		70	1
41	0		
		167	0
	>0<		
	>8<		
49	0		
			>13<
			>35<
		165	4
	>11<		
40	2		
			>74<
		541	48



[#] ITEM 670 - SLOPE EROSION PROTECTION

>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED CJC
CHECKED PJF

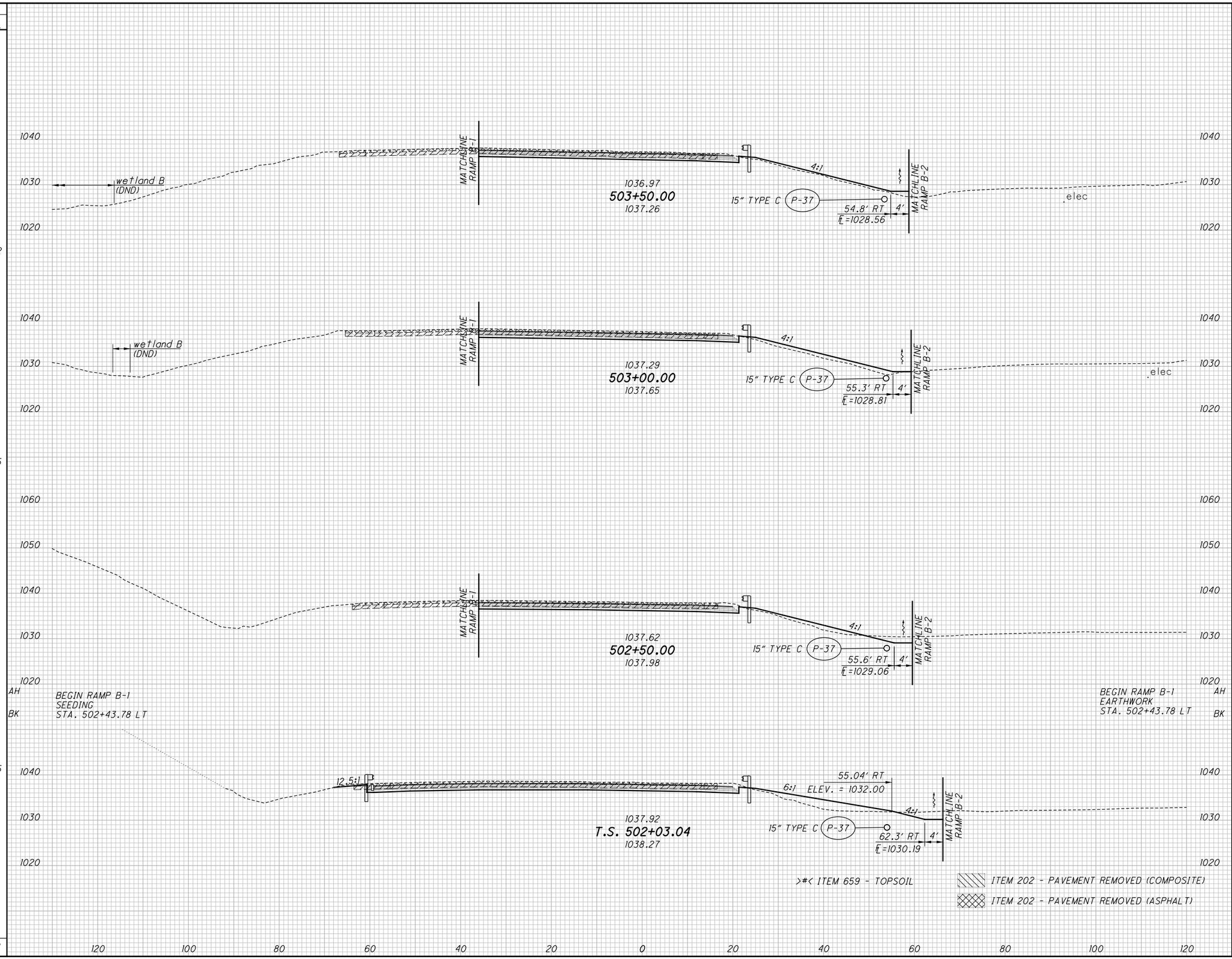
CROSS SECTIONS - SB I.R. 77
STA. 499+00.00 TO STA. 502+00.00

SUM-77 / 277 / 224
VARIOUS

607
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS003.dgn Sheet 1/15/2021 9:21:50 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
40	211
40	222
40	225
41	28
41 AH / 58 BK	265
59	
	951



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>17<
		69	11
	>10<		
35	7		
			>19<
		67	20
	>10<		
37	15		
			>19<
		83	22
	>10<		
53	9		
			>2<
		12	3
	>10<		
50	15		
	>10<		
72	16		
			>17<
		109	35
	>12<		
73	30		
			>74<
		340	91

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - SB I.R. 77
STA. 502+03.04 TO STA. 503+50.00

SUM-77 / 277 / 224
VARIOUS

608
1288

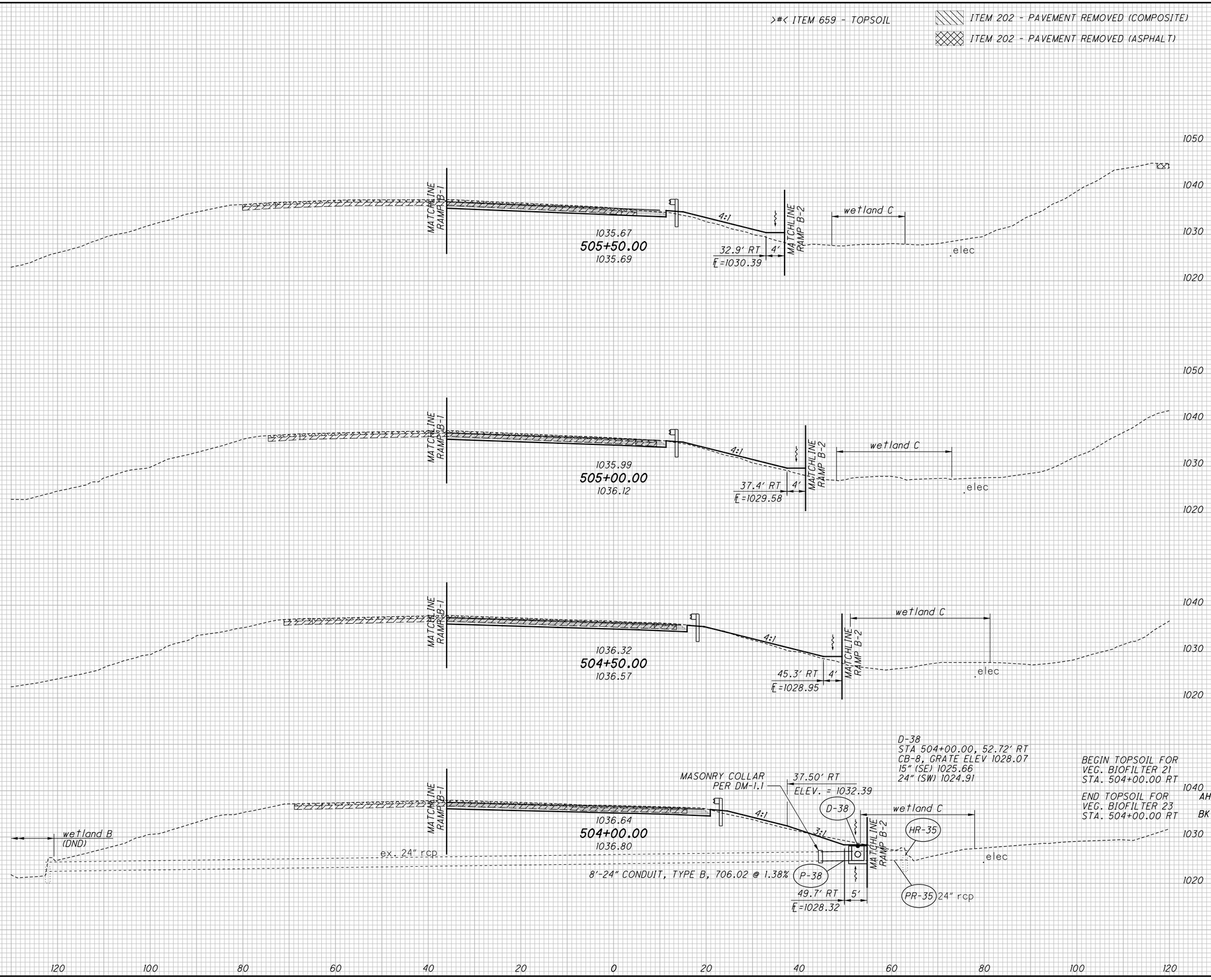
0:\2017\20171258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS003.dgn Sheet 1/15/2021 9:21:53 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	139
27	
	164
32	
	189
36	
	200
36	
	692

>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)



D-38
STA 504+00.00, 52.72' RT
CB-8, GRATE ELEV 1028.07
15" (SE) 1025.66
24" (SW) 1024.91

BEGIN TOPSOIL FOR VEG. BIOFILTER 21 STA. 504+00.00 RT

END TOPSOIL FOR VEG. BIOFILTER 23 STA. 504+00.00 RT

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>9<
		41	33
	>6<		
24	18		
			>12<
		44	24
	>7<		
23	8		
			>15<
		49	12
30	>9< 5		
			>16<
		64	9
39	>8< AH >8< BK 5		
			>52<
		198	78

CALCULATED CJC
CHECKED PJF

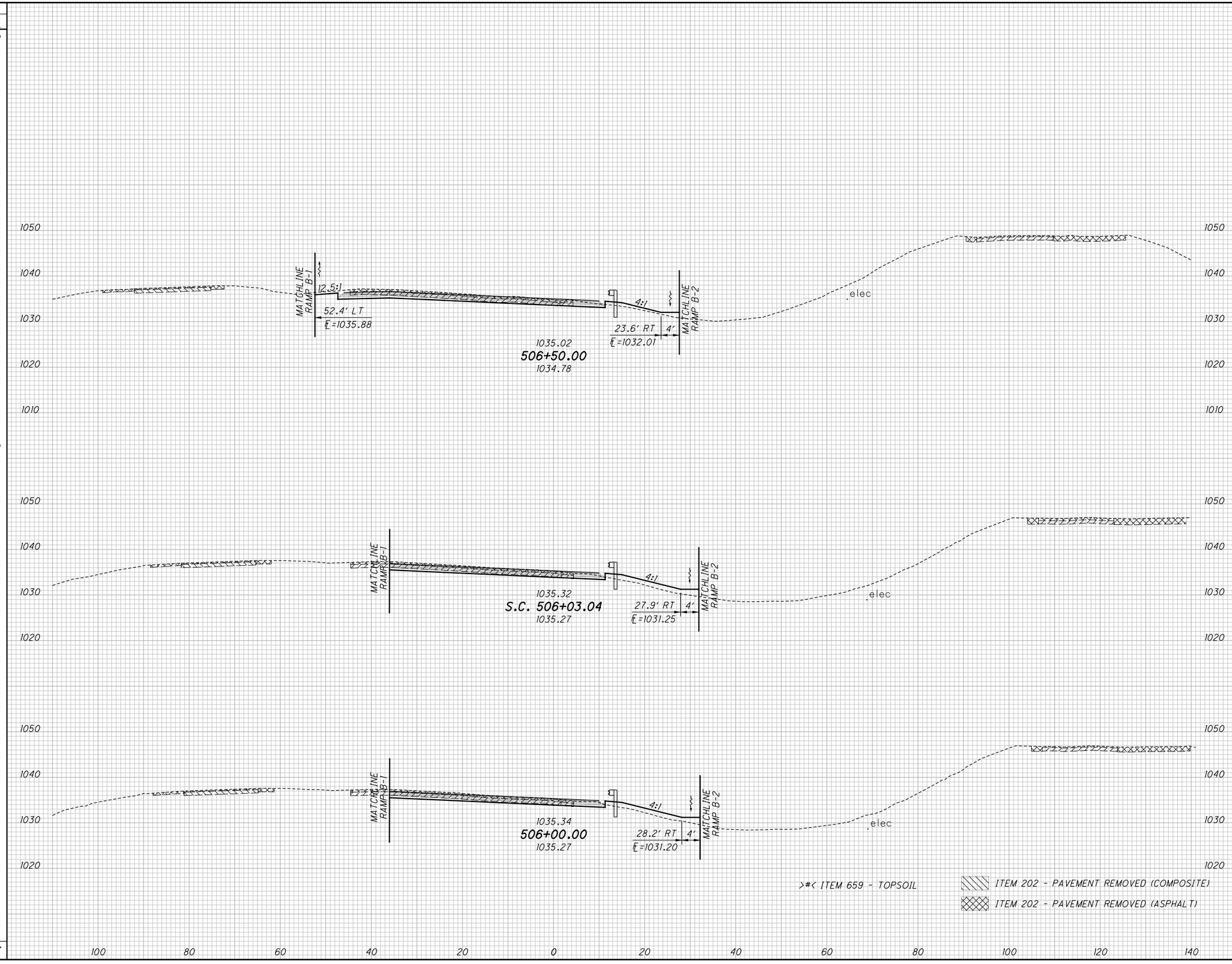
CROSS SECTIONS - SB I.R. 77
STA. 504+00.00 TO STA. 505+50.00

SUM-77 / 277 / 224
VARIOUS

609
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS003.dgn Sheet 1/15/2021 9:21:55 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	169
24	
	120
22	
	8
23	
	297



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>5<
		70	10
	>3<		
33	8		
			>6<
		46	23
20	>4<		
	19		
		2	>0<
			2
20	>4<		
	18		
		118	>11<
			35

>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED CJC

CHECKED PJF

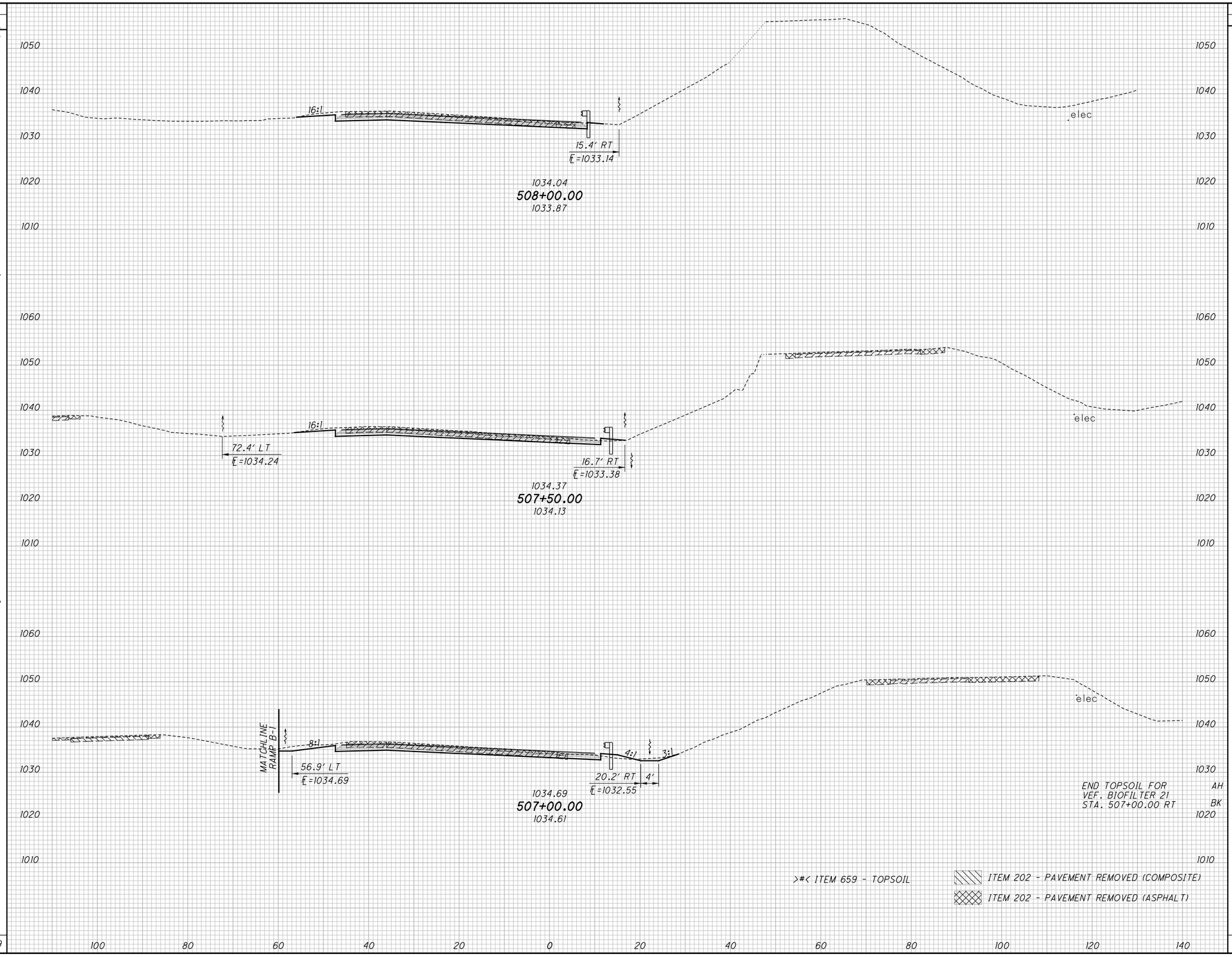
CROSS SECTIONS - SB I.R. 77
STA. 506+00.00 TO STA. 506+50.00

SUM-77 / 277 / 224
VARIOUS

610
1288

0:\2017\20171258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS003.dgn Sheet 1/15/2021 9:21:59 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	164
23	
	133
25	
	172
37	
	469



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		77	3
33	0		
		59	2
31	2		
		69	5
43	>0<		
	>2<		
	3		
		205	10

CALCULATED CJC
CHECKED PJF

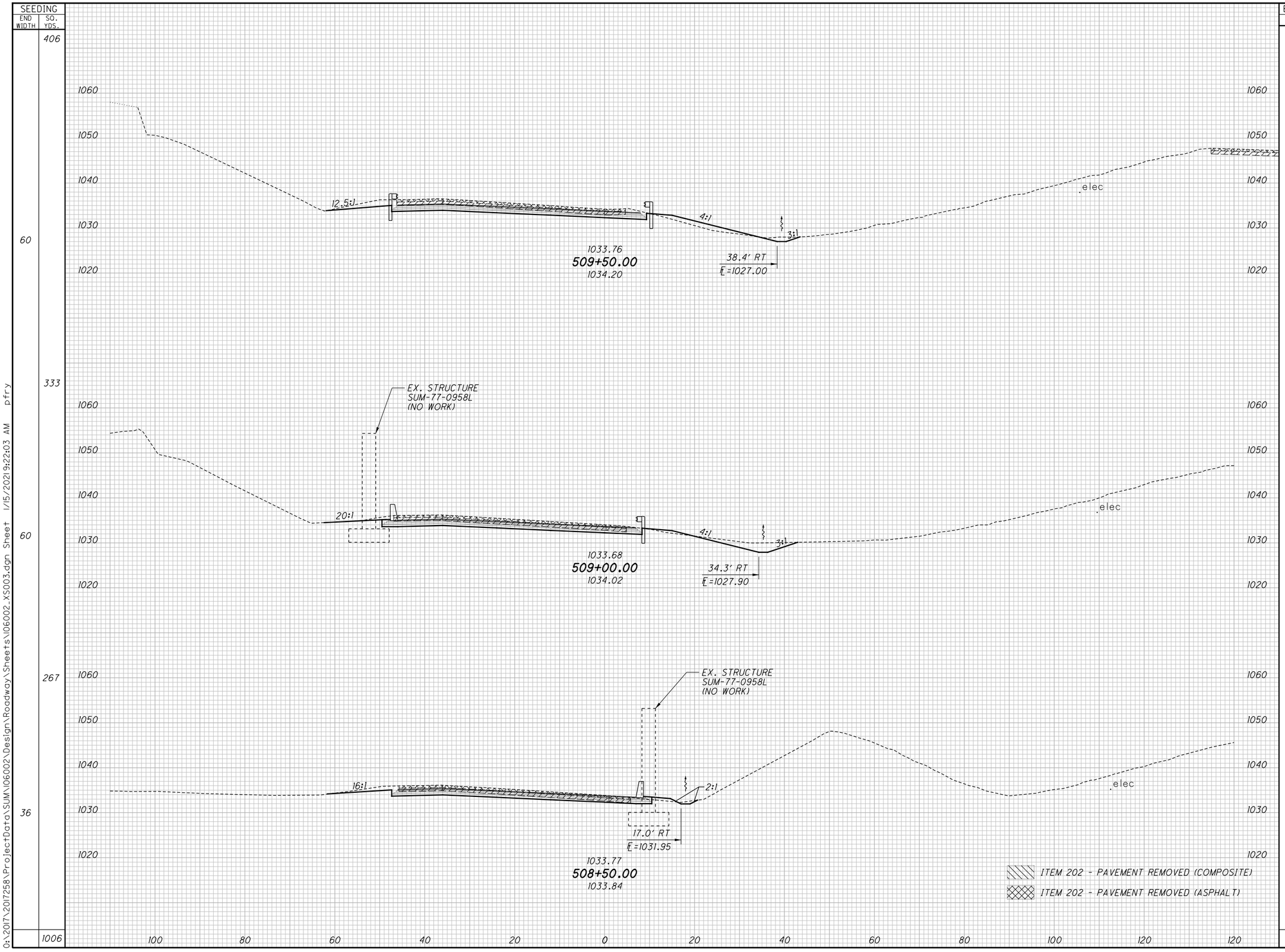
CROSS SECTIONS - SB I.R. 77
STA. 507+00.00 TO STA. 508+00.00

SUM-77 / 277 / 224
VARIOUS

611
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS003.dgn Sheet 1/15/2021 9:22:01 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
60	406	81	17	175	38
	333			150	19
60	267	81	3	121	6
36		50	3		
	1006			446	63



CALCULATED CJC
CHECKED PJF

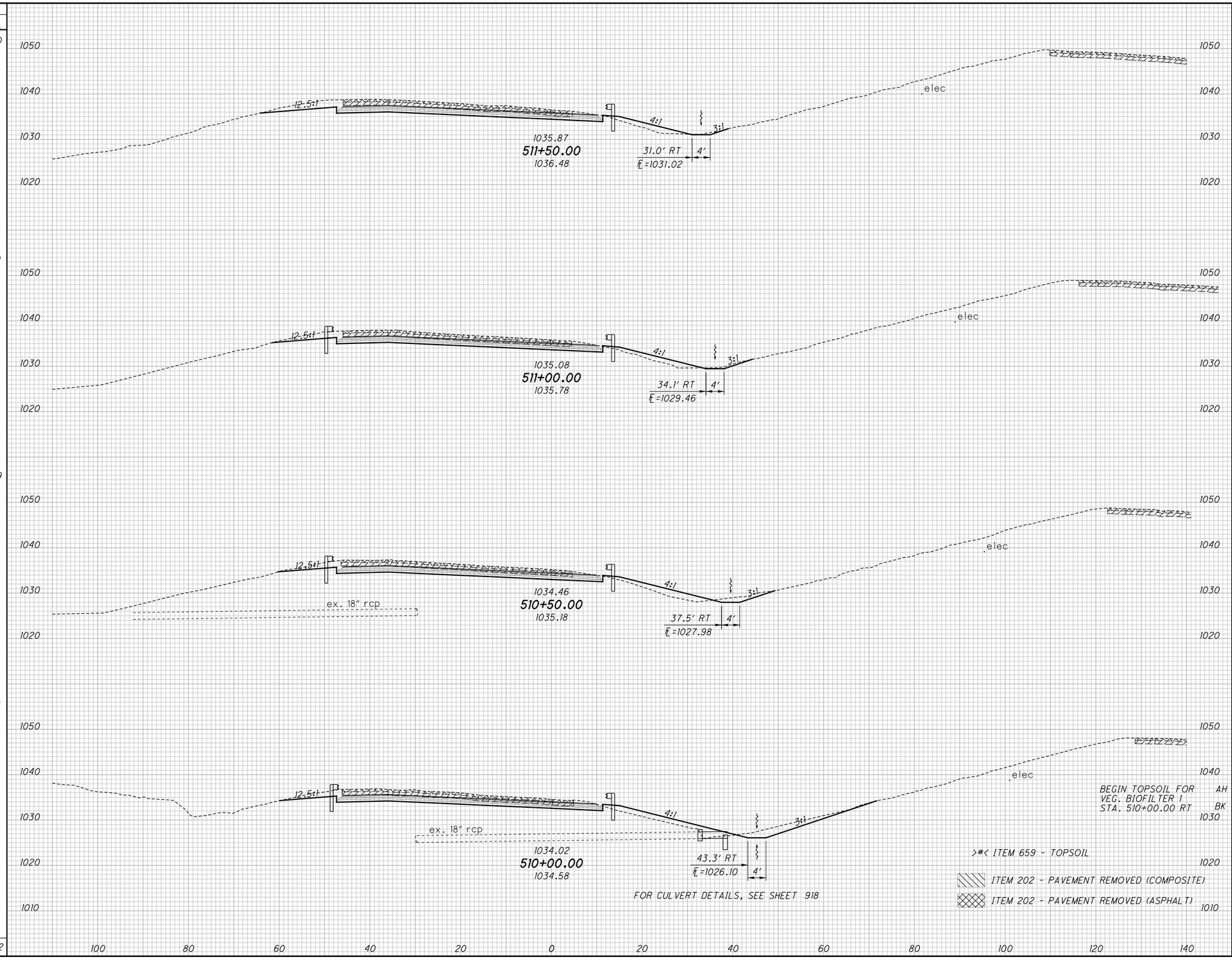
CROSS SECTIONS - SB I.R. 77
STA. 508+50.00 TO STA. 509+50.00

SUM-77 / 277 / 224
VARIOUS

612
1288

0:\2017\20171258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS003.dgn Sheet 1/15/2021 9:22:03 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	350
56	
	319
59	
	339
63	
	414
86	
	1422



BEGIN TOPSOIL FOR VEG. BIOFILTER 1 STA. 510+00.00 RT — AH BK

>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

FOR CULVERT DETAILS, SEE SHEET 918

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>9<
		192	21
	>5<		
100	11		
			>10<
		178	21
	>6<		
92	12		
			>13<
		172	27
	>8<		
94	17		
			>16<
		187	38
	>9<		
	>0<		
108	24		
			>48<
		729	107

CALCULATED CJC
CHECKED PJF

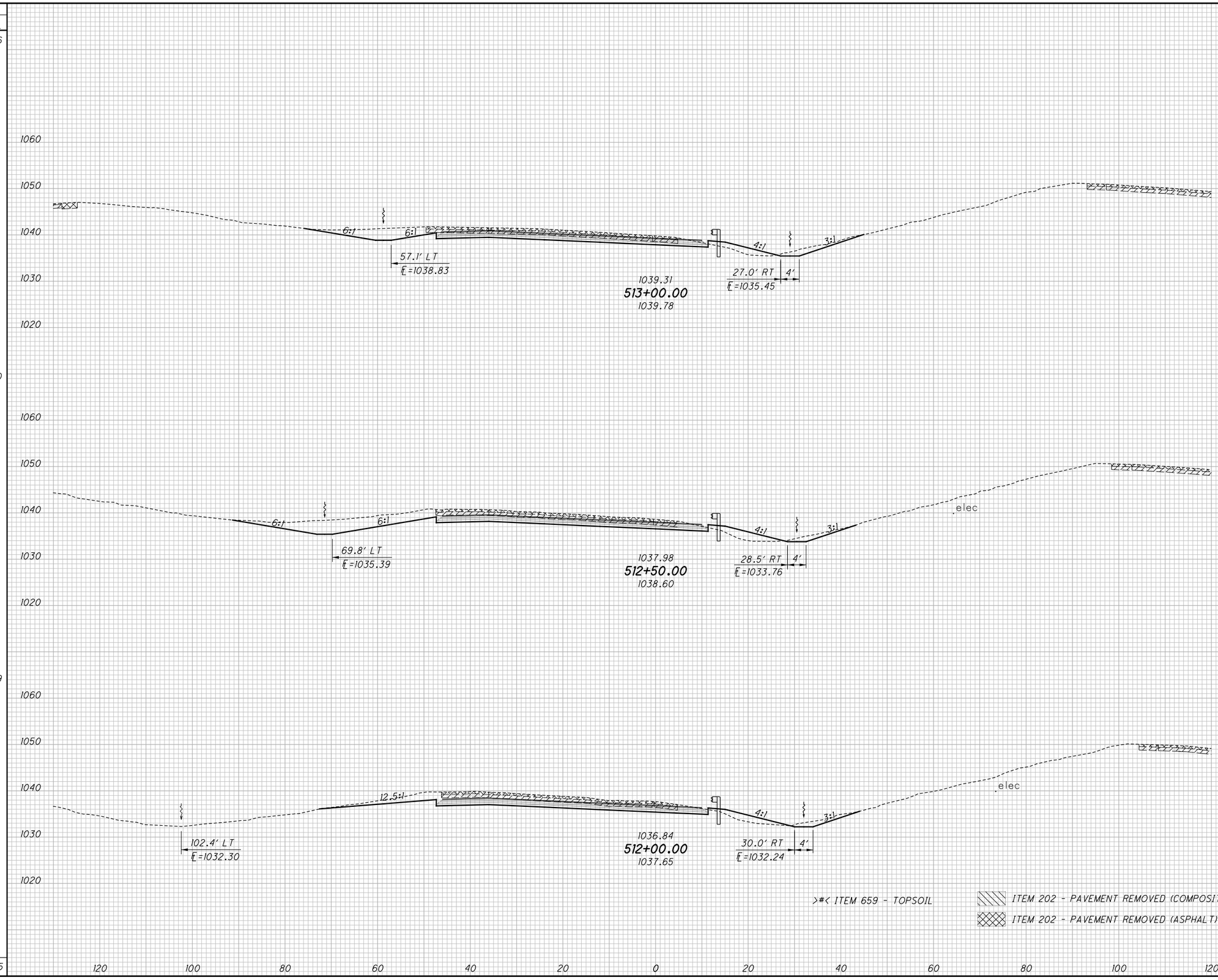
CROSS SECTIONS - SB I.R. 77
STA. 510+00.00 TO STA. 511+50.00

SUM-77 / 277 / 224
VARIOUS

613
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS003.dgn Sheet 1/15/2021 9:22:05 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	406				>6<
				195	19
74		109	>4<		
	450		12		
				249	>8<
					26
88		160	>5<		
			16		
	439			247	>9<
					26
70		107	>5<		
			12		
	1295			691	>23<
					71



>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOUND)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED CJC

CHECKED PJF

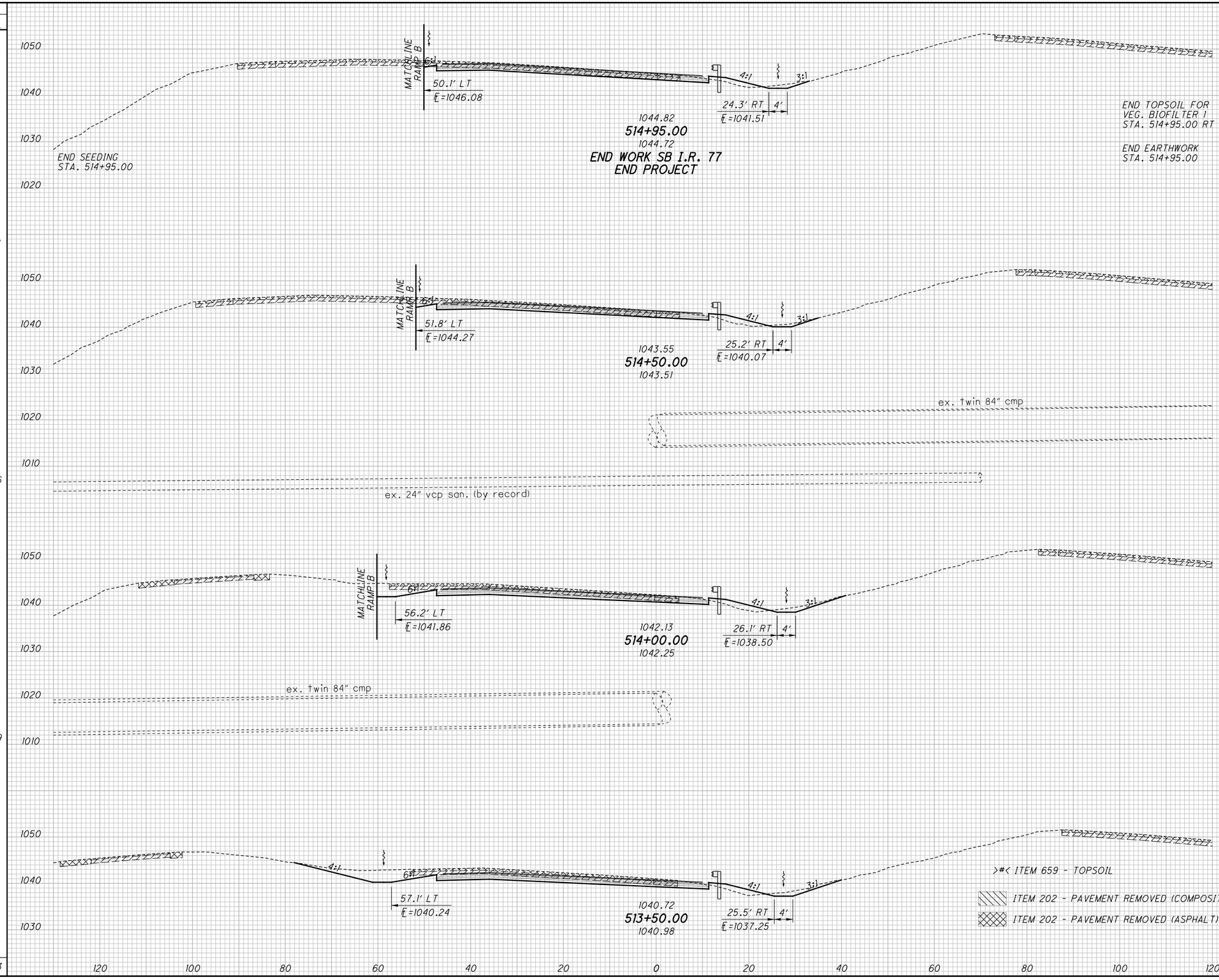
CROSS SECTIONS - SB I.R. 77
STA. 512+00.00 TO STA. 513+00.00

SUM-77 / 277 / 224
VARIOUS

614
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\I06002_XS003.dgn Sheet1 1/15/2021 9:22:08 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
32	
	168
35	
	236
50	
	339
72	
	743



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	>0<		
	>3<		>5<
29	6	56	13
	>3<		
38	9		
			>6<
		103	17
	>4<		
73	9		
			>6<
		162	16
	>3<		
102	8		
			>17<
		321	46

>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - SB I.R. 77
STA. 513+50.00 TO STA. 514+95.00

SUM-77/277/224
VARIOUS

615
1288

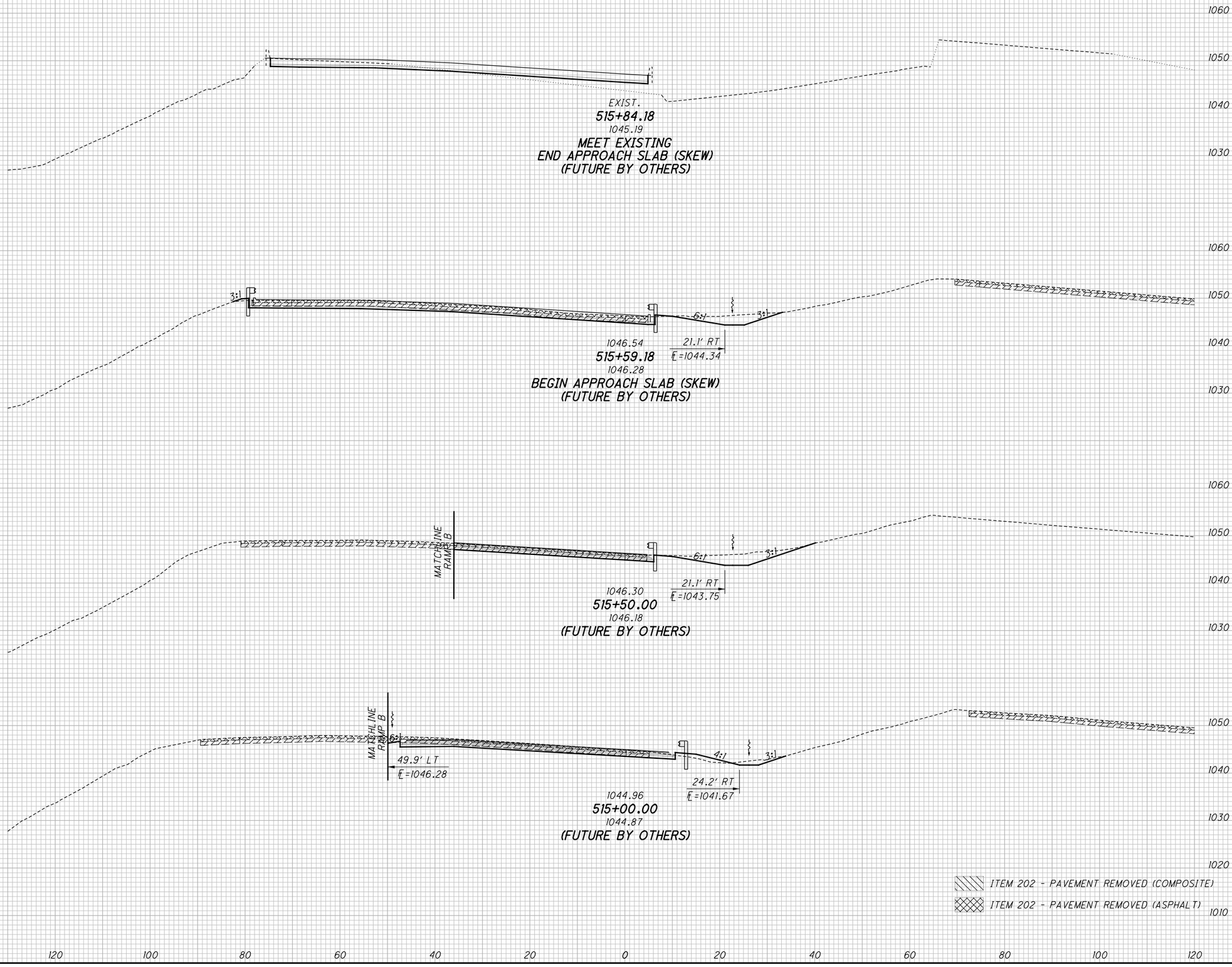
0:\2017\2017258\Project Data\SUM\06002\Design\Roadway\Sheets\06002_XS003.dgn Sheet 1/15/2021 9:22:10 AM pfry

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED CJC
CHECKED PJF



CROSS SECTIONS - SB I.R. 77
STA. 515+00.00 TO STA. 515+84.18

SUM-77 / 277 / 224
VARIOUS

616
1288

D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS003.dgn Sheet 1/15/2021 9:22:12 AM pfry

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED CJC
CHECKED PJF

BEGIN RAMP B-2
SEEDING
STA. 225+00.00 LT

BEGIN RAMP B-2
EARTHWORK
STA. 225+00.00 LT

MATCHLINE RAMP B-2 SAWCUT

℄ NOISE WALL H11
STA. 11+35.31

EX LA-R/W

℄ stream 4

1 1/4" gas (abandoned)

225+00.00
1021.71
BEGIN WORK
MEET EXISTING

℄ NOISE WALL H11
STA. 10+35.31

224+00.00
1020.67

223+00.00
1019.85

ex. 36" san. (by record)

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

1040 1030 1020 1010 1000 990

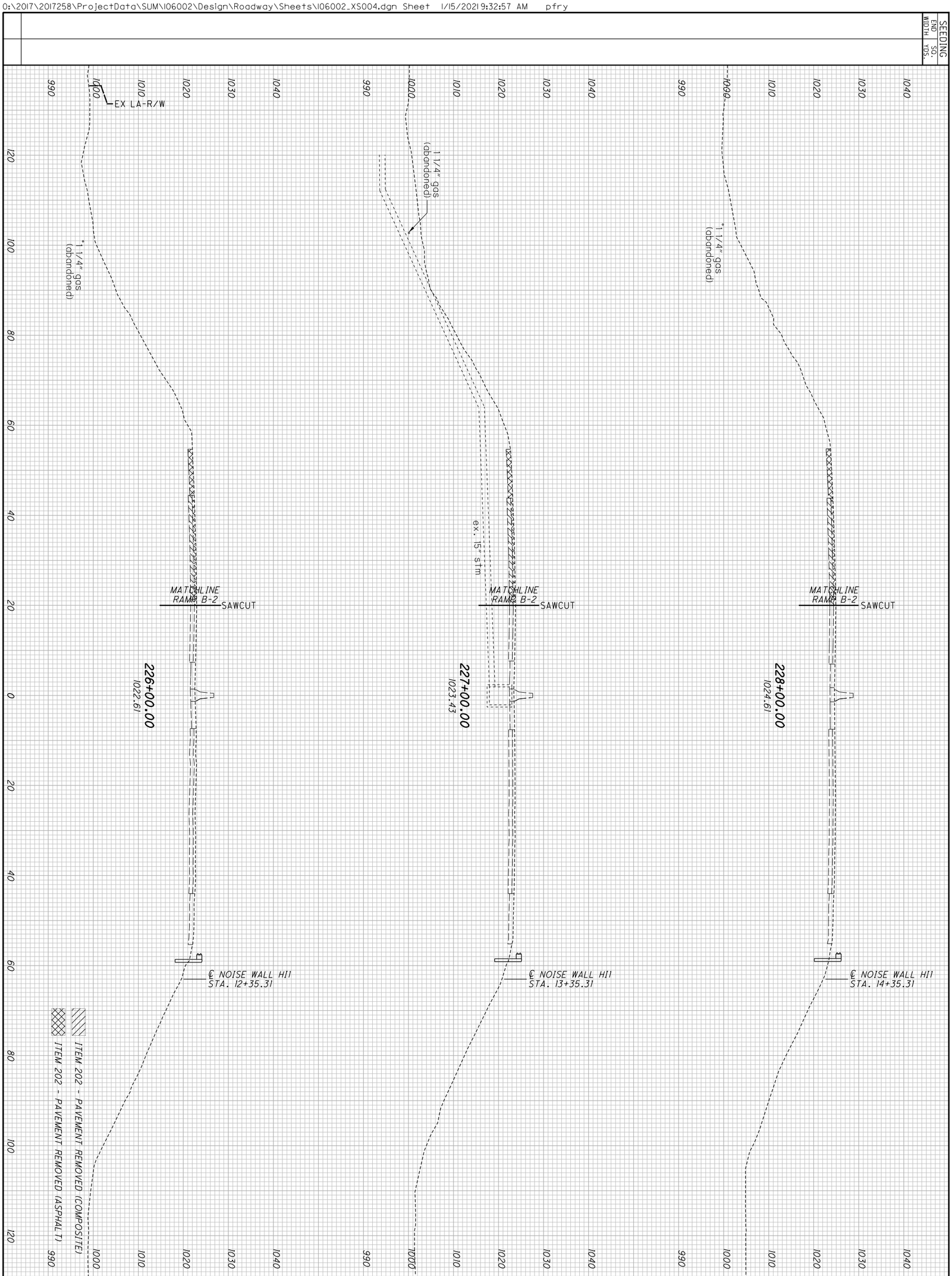
120 100 80 60 40 20 0 20 40 60 80 100 120

CROSS SECTIONS - I.R. 277/U.S. 224
STA. 223+00.00 TO STA. 225+00.00

SUM-77/277/224
VARIOUS

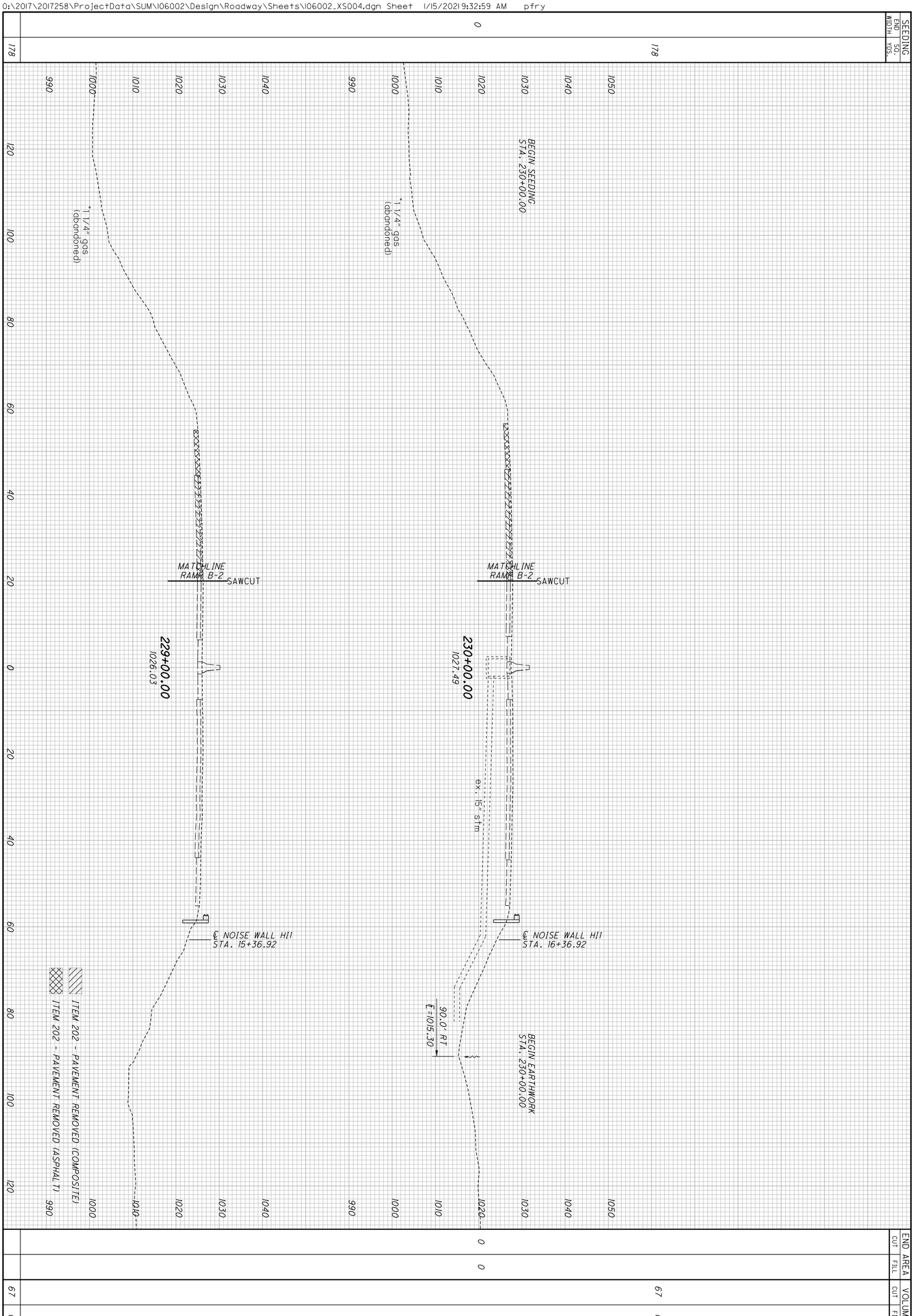
617
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS004.dgn Sheet 1/15/2021 9:32:45 AM pfry

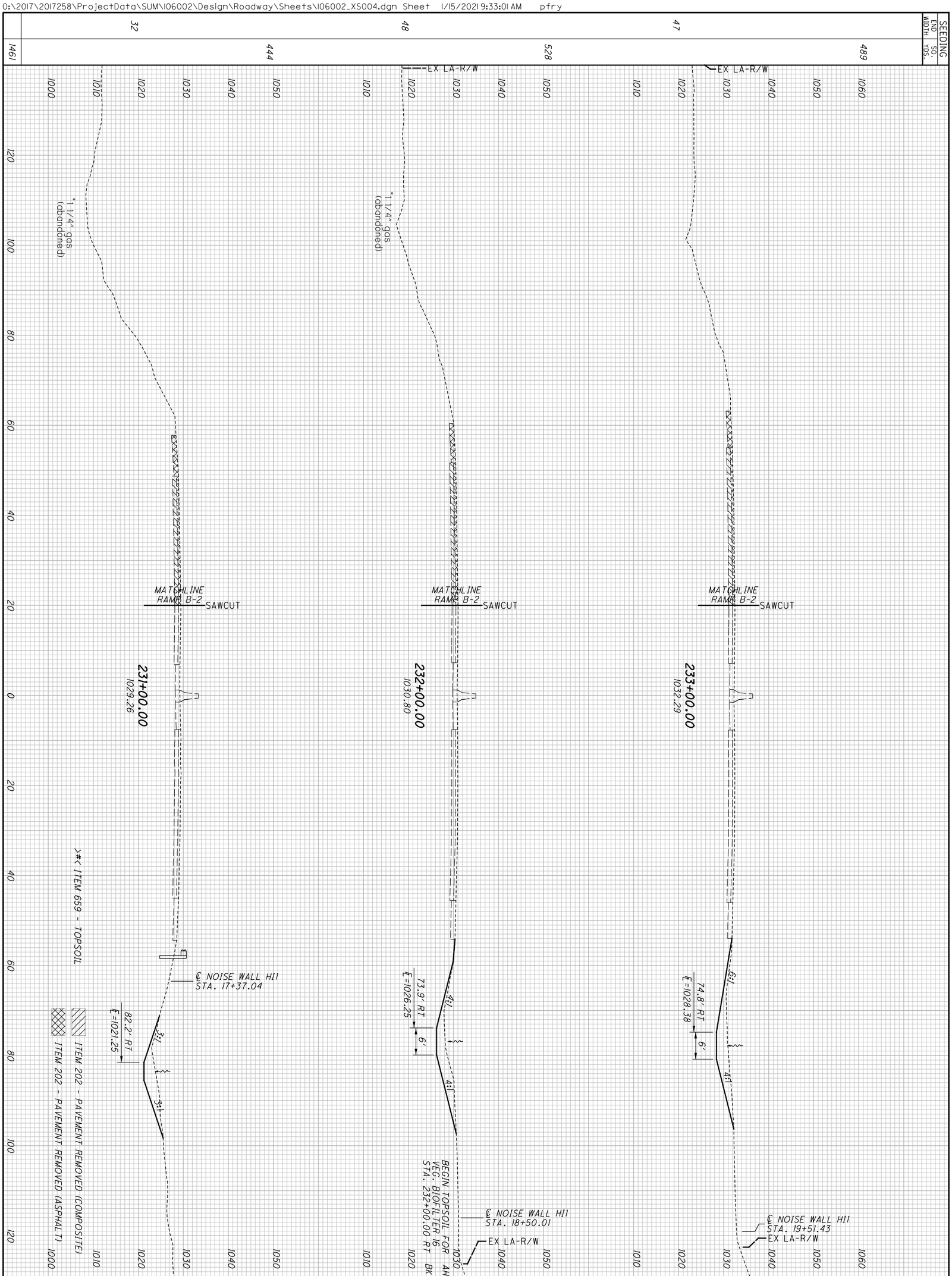


618 / 1288	**SUM-77/277/224** **VARIOUS**	**CROSS SECTIONS - I.R. 277/U.S. 224** **STA. 226+00.00 TO STA. 228+00.00**

CALCULATED CJC
CHECKED PJF



619 1288	SUM-77/277/224 VARIOUS	CROSS SECTIONS - I.R. 277/U.S. 224 STA. 229+00.00 TO STA. 230+00.00	CALCULATED CJC CHECKED PJF

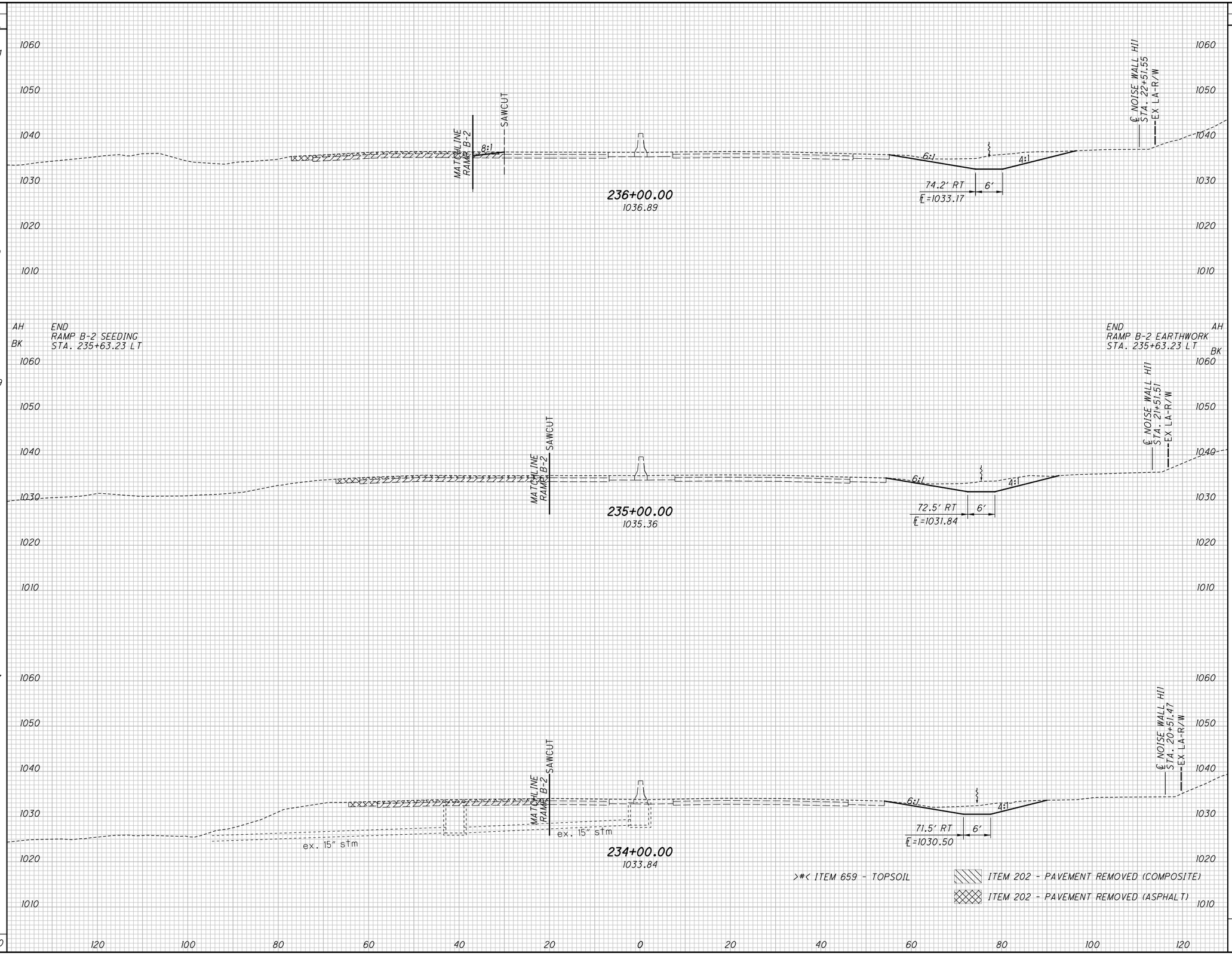


620 / 1288	SUM-77/277/224 VARIOUS	CROSS SECTIONS - I.R. 277/U.S. 224 STA. 231+00.00 TO STA. 233+00.00

CALCULATED CJC
CHECKED PJF

SEEDING END WIDTH	SEEDING SQ. YDS.
	644
53	
	210
50	
45	
	309
43	
	467
41	
	1630

AH BK — END RAMP B-2 SEEDING STA. 235+63.23 LT



END RAMP B-2 EARTHWORK STA. 235+63.23 LT — AH BK

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>24<
		285	19
	>6<		
70	6		
			>8<
		88	7
	>6<		
59	5		
	>6<		
59	0		
			>14<
		129	0
	>6<		
51	0		
			>22<
		174	0
	>6<		
43	0		
			>68<
		676	26

>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

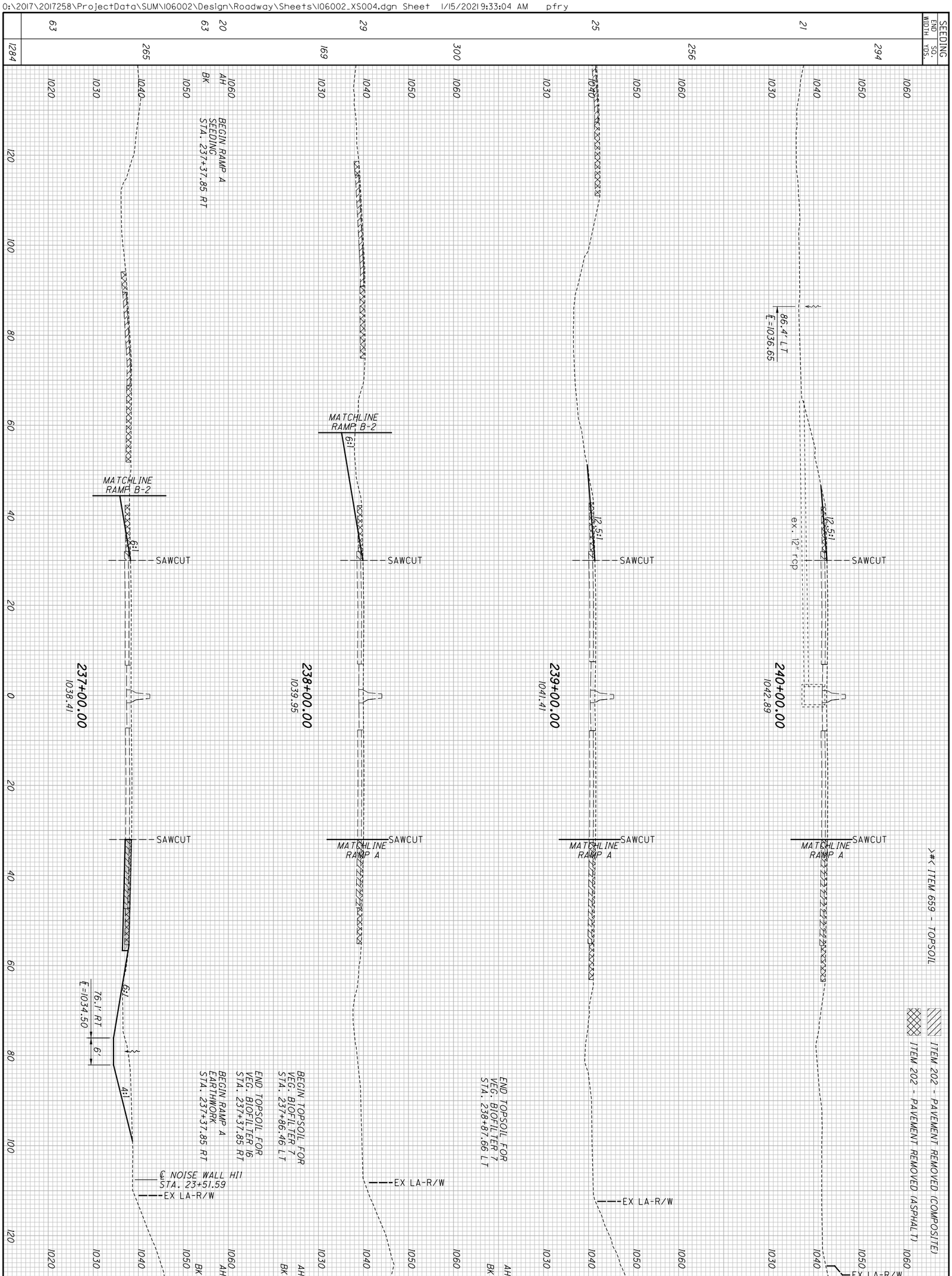
CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 277/U.S. 224
STA. 234+00.00 TO STA. 236+00.00

SUM-77/277/224
VARIOUS

621
1288

0:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS004.dgn Sheet 1/15/2021 9:33:03 AM pfry



622 / 1288	SUM-77/277/224 VARIOUS
CROSS SECTIONS - I.R. 277/U.S. 224 STA. 237+00.00 TO STA. 240+00.00	CALCULATED CJC / CHECKED PJF

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	372			69	24
38		33	4		
	406			119	15
35		31	4		
	372			94	15
32		20	4		
	1150			282	54

CALCULATED CJC
CHECKED PJF

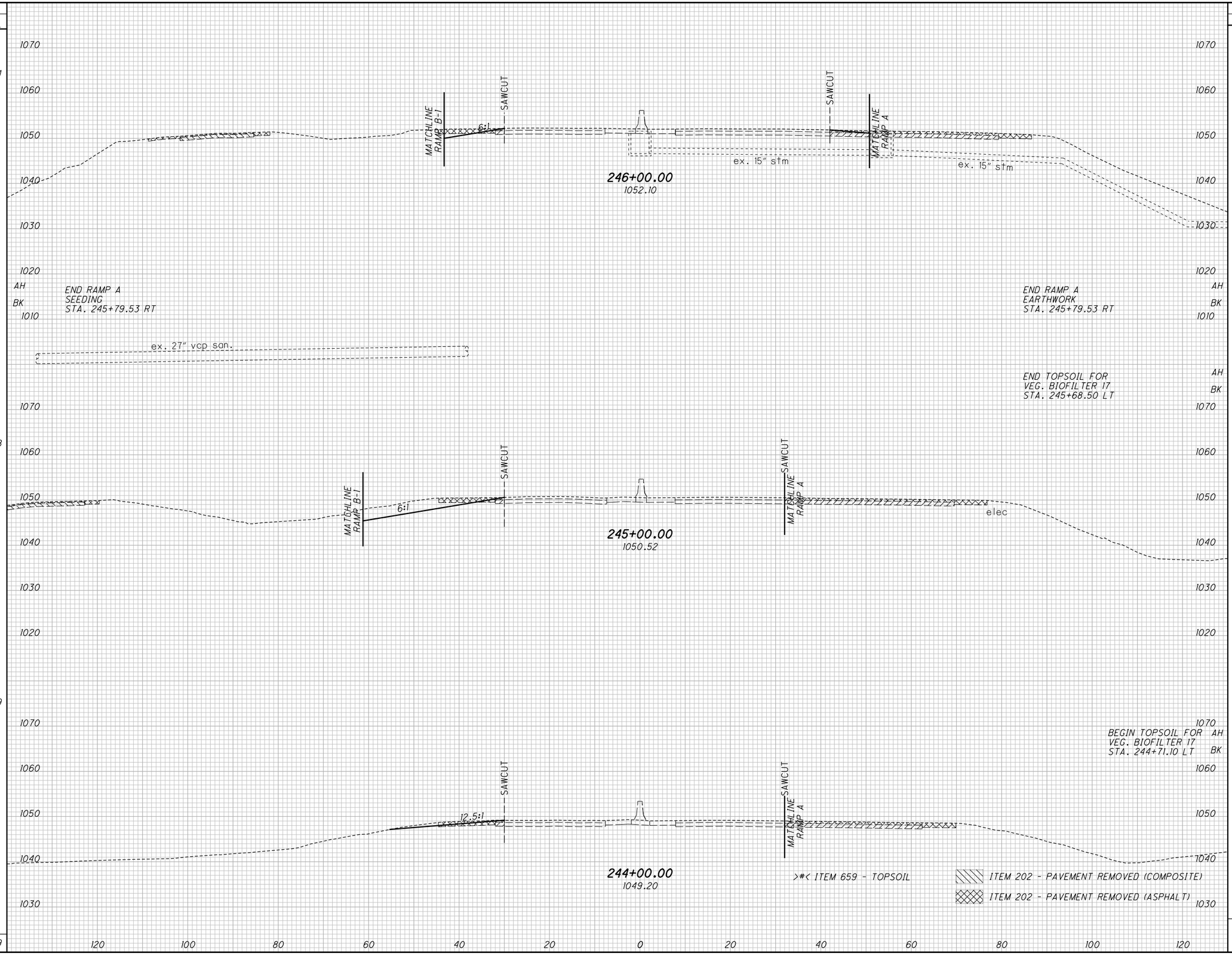
CROSS SECTIONS - I.R. 277/U.S. 224
STA. 241+00.00 TO STA. 243+00.00

SUM-77/277/224
VARIOUS

623
1288

O:\2017\20171258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS004.dgn Sheet 1/15/2021 9:33:06 AM pfry

SEEDING	
END WIDTH	SQ. YDS.
	244
	22
	48
20	
15	
	208
	32
	339
29	
	839



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		17	41
3	14		
		3	9
4	11		
4	4		
	>0<		
	>5<		
			>19<
		87	9
	>10<		
55	2		
			>13<
		109	20
	>15<		
	>0<		
4	9		
			>32<
		216	79

>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED CJC
CHECKED PJF

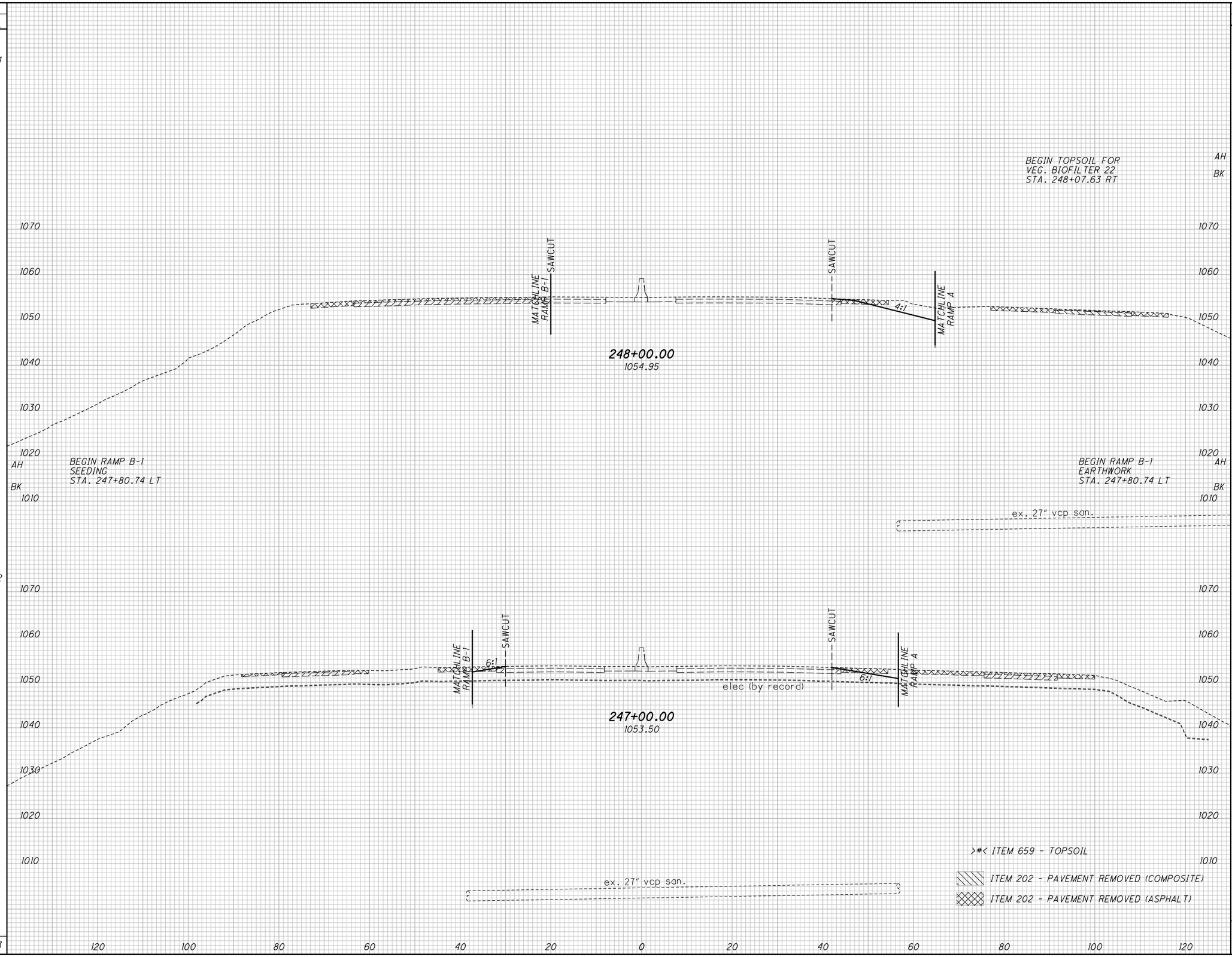
CROSS SECTIONS - I.R. 277/U.S. 224
STA. 244+00.00 TO STA. 246+00.00

SUM-77/277/224
VARIOUS

624
1288

D:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS004.dgn Sheet 1/15/2021 9:33:08 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	344
23	
	47
21	
23	
	202
22	
	593



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>29<
		106	28
	>6<		
	>0<		
27	6		
		17	4
21	6		
21	9		
		40	25
6	8		
		163	>29< 57

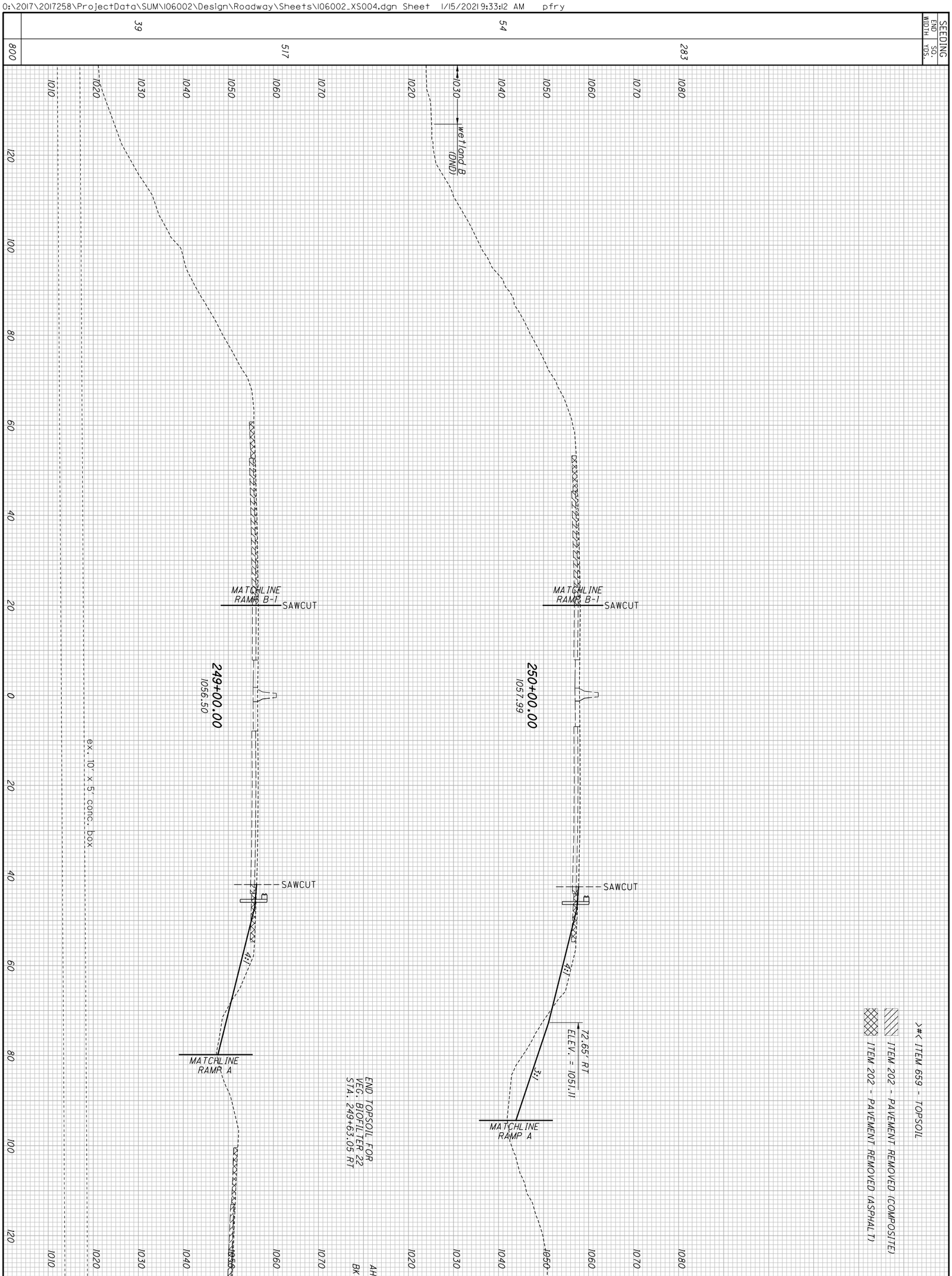
CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 277/U.S. 224
STA. 247+00.00 TO STA. 248+00.00

SUM-77/277/224
VARIOUS

625
1288

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS004.dgn Sheet 1/15/2021 9:33:10 AM pfry

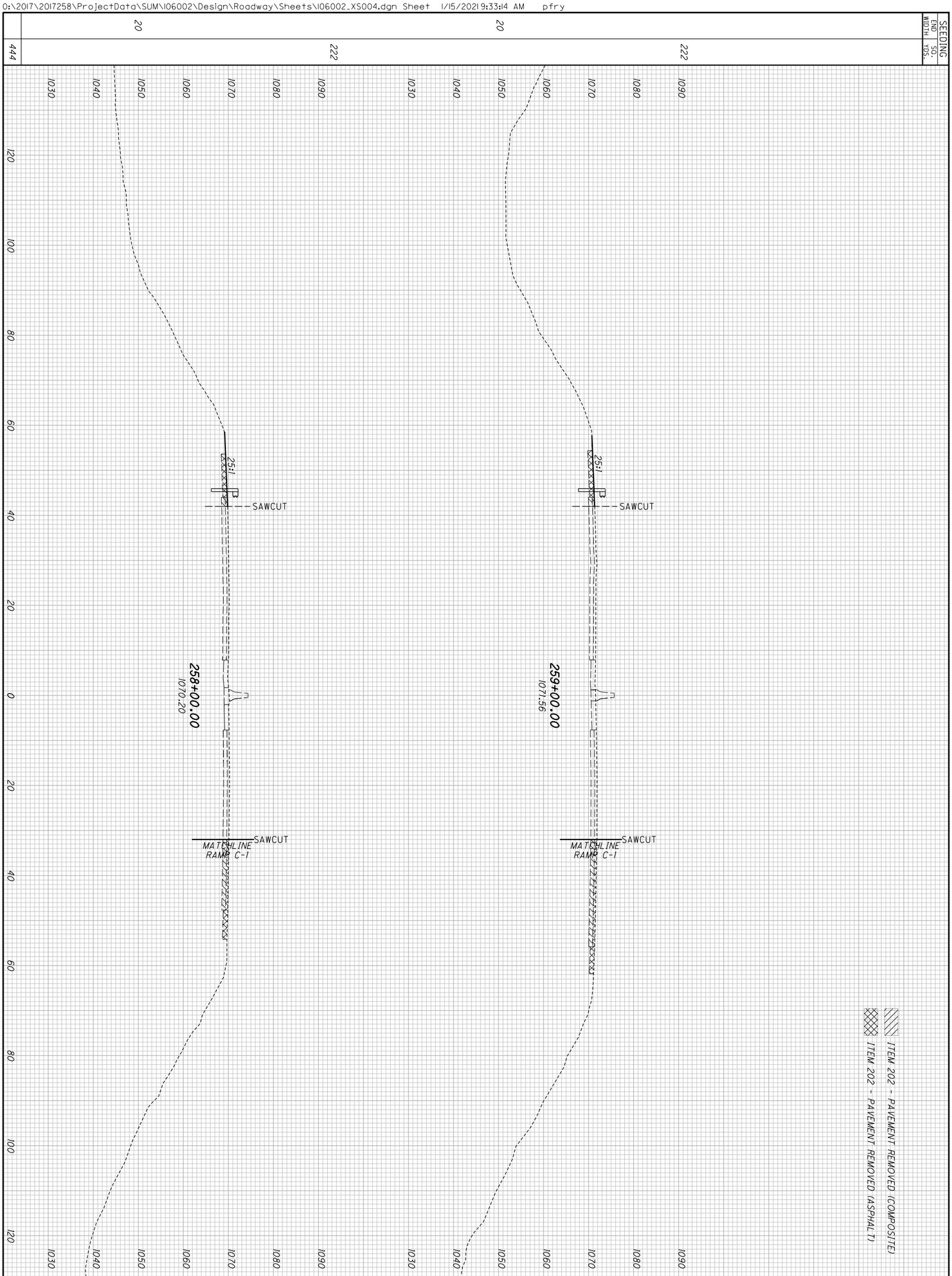


626 / 1288	**SUM-77 / 277 / 224** **VARIOUS**	**CROSS SECTIONS - I.R. 277 / U.S. 224** **STA. 249+00.00 TO STA. 250+00.00**

CALCULATED CJC
CHECKED PJF

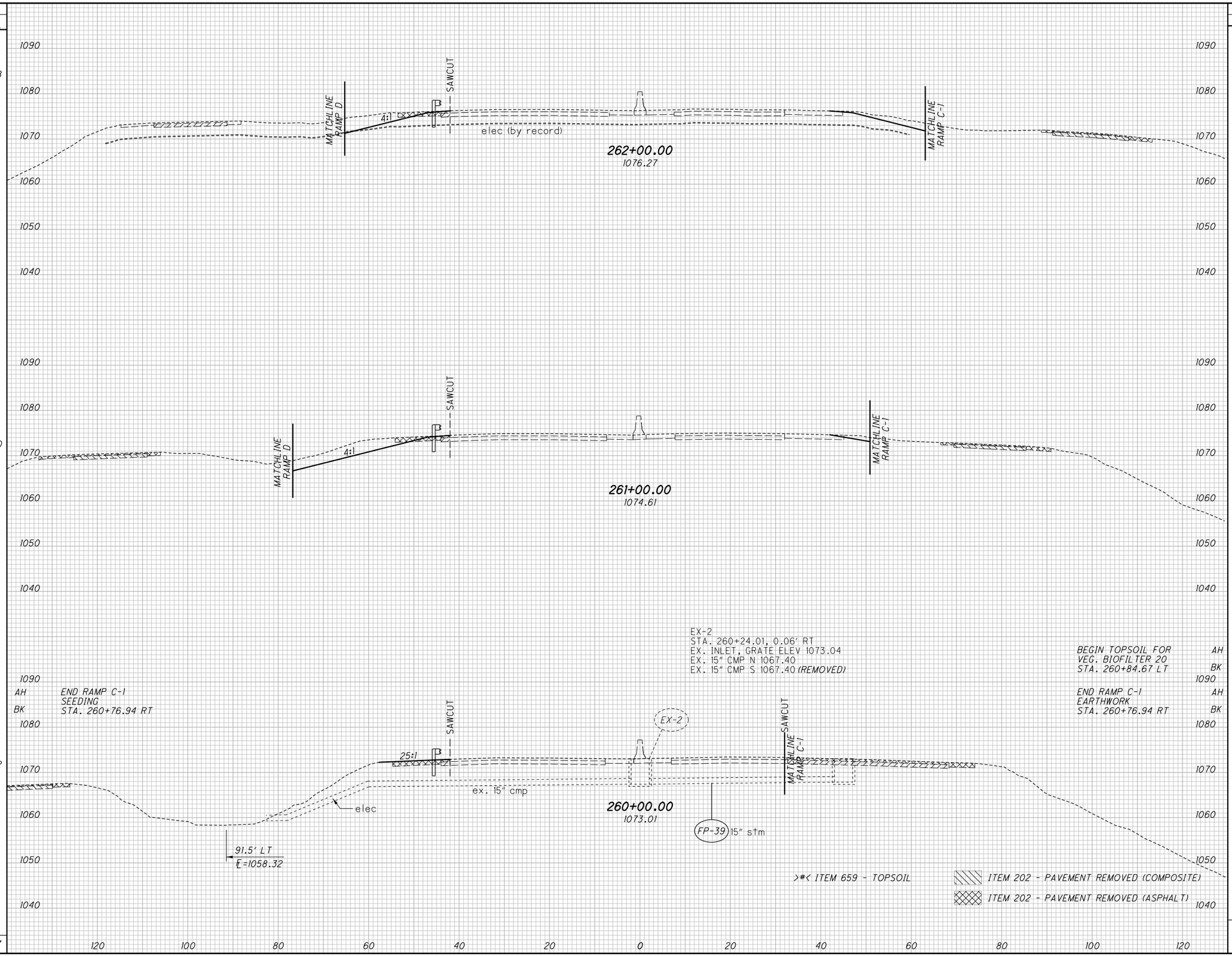
SEEDING	
END WIDTH	SQ. YDS.
	109
0	

0:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS004.dgn Sheet 1/15/2021 9:33:14 AM pfry



628 / 1288	SUM-77/277/224 VARIOUS
CROSS SECTIONS - I.R. 277/U.S. 224 STA. 258+00.00 TO STA. 259+00.00	CALCULATED CJC / CHECKED PJF

SEEDING END WIDTH	SEEDING SQ. YDS.
	328
45	
	500
45	
	117
46	
39	
	252
20	
	1197



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>17<
		113	20
	>6<		
54	6		
			>30<
		226	22
	>10<		
68	6		
			>6<
		51	6
AH	>10<		
BK	>0<		
AH 52	7		
BK 53	7		
		76	30
0	14		
			>53<
		466	78

CALCULATED CJC
CHECKED PJF

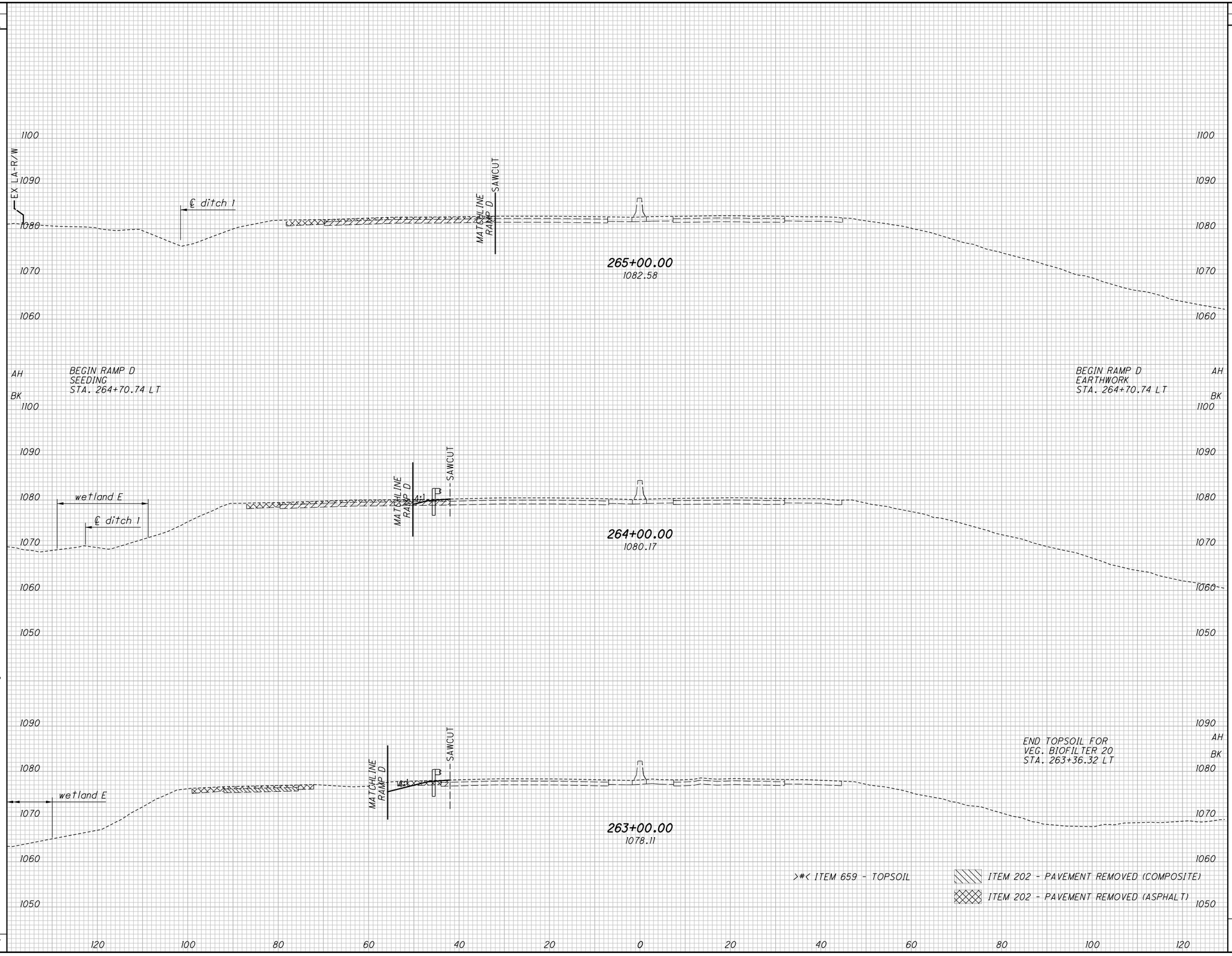
CROSS SECTIONS - I.R. 277/U.S. 224
STA. 260+00.00 TO STA. 262+00.00

SUM-77/277/224
VARIOUS

629
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS004.dgn Sheet 1/15/2021 9:33:16 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
0	
5	
	51
8	
	122
14	
	173



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0	0		
6	0		
		8	10
0	8		
		13	24
AH	>0<		
BK	>2<		>3<
7	>3< 5		
		21	>3< 34

CALCULATED CJC
CHECKED PJF

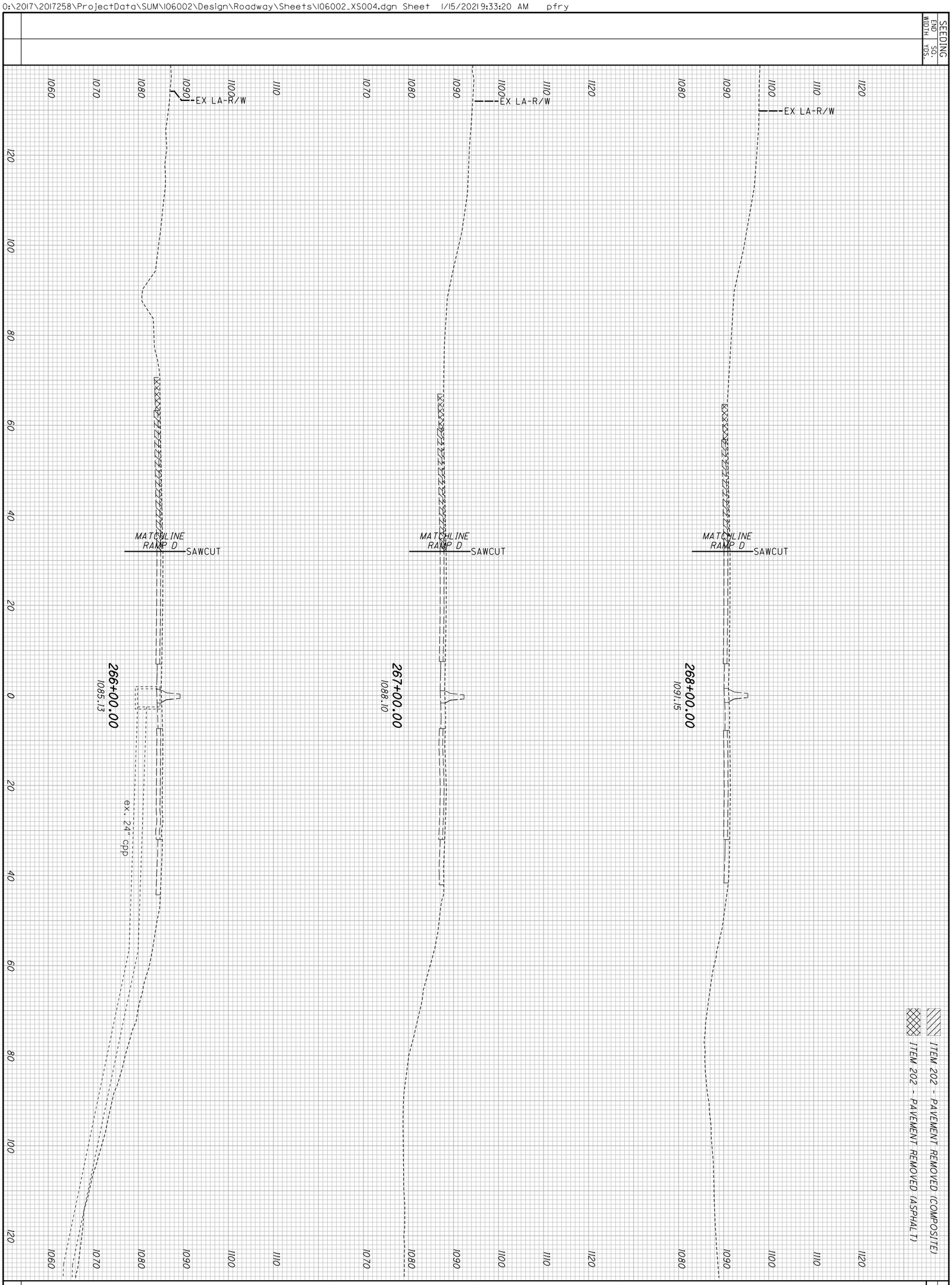
CROSS SECTIONS - I.R. 277/ U.S. 224
STA. 263+00.00 TO STA. 265+00.00

SUM-77/277/224
VARIOUS

630
1288

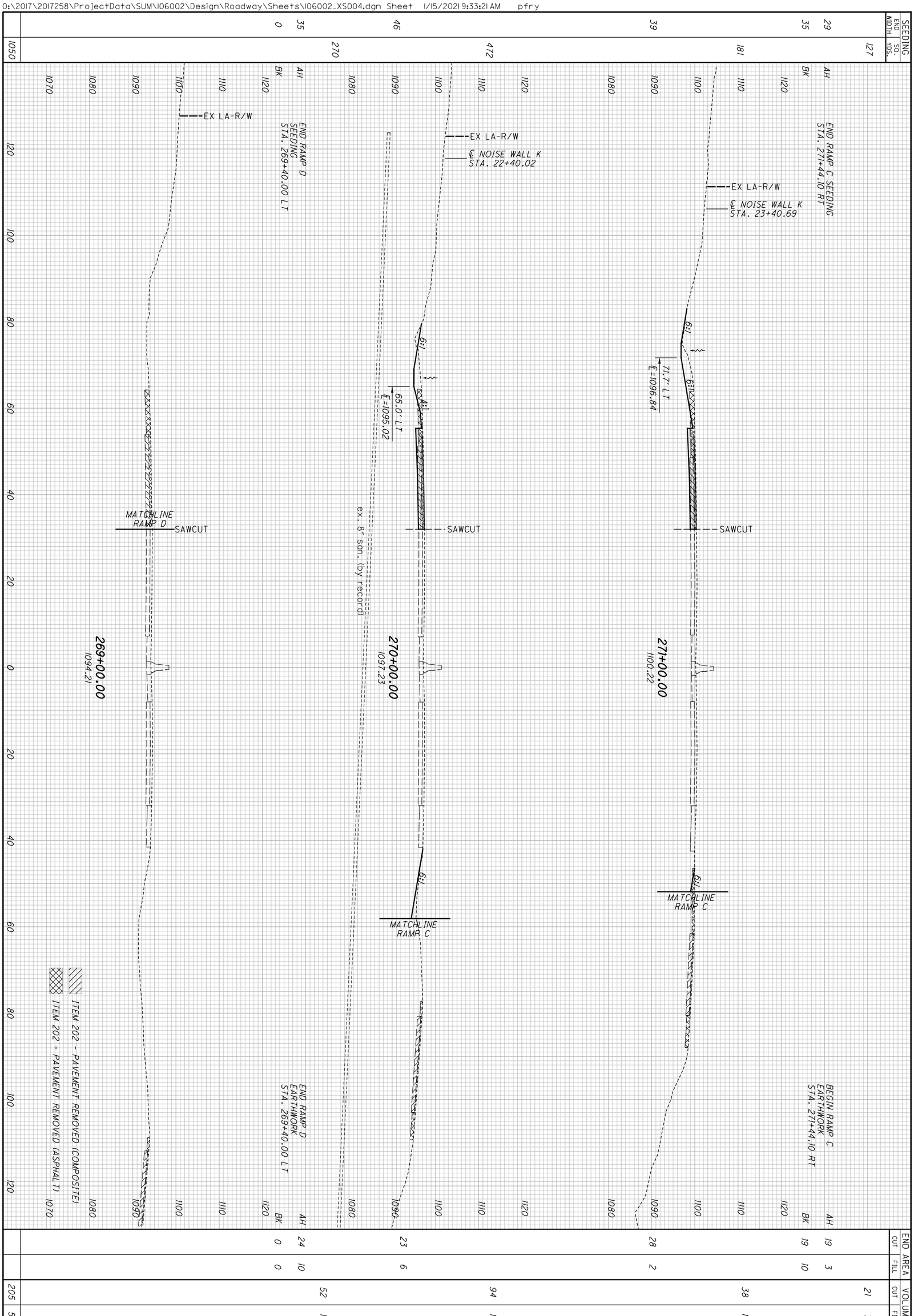
D:\2017\201258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS004.dgn Sheet 1/15/2021 9:33:18 AM pfry

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS004.dgn Sheet 1/15/2021 9:33:20 AM pfry

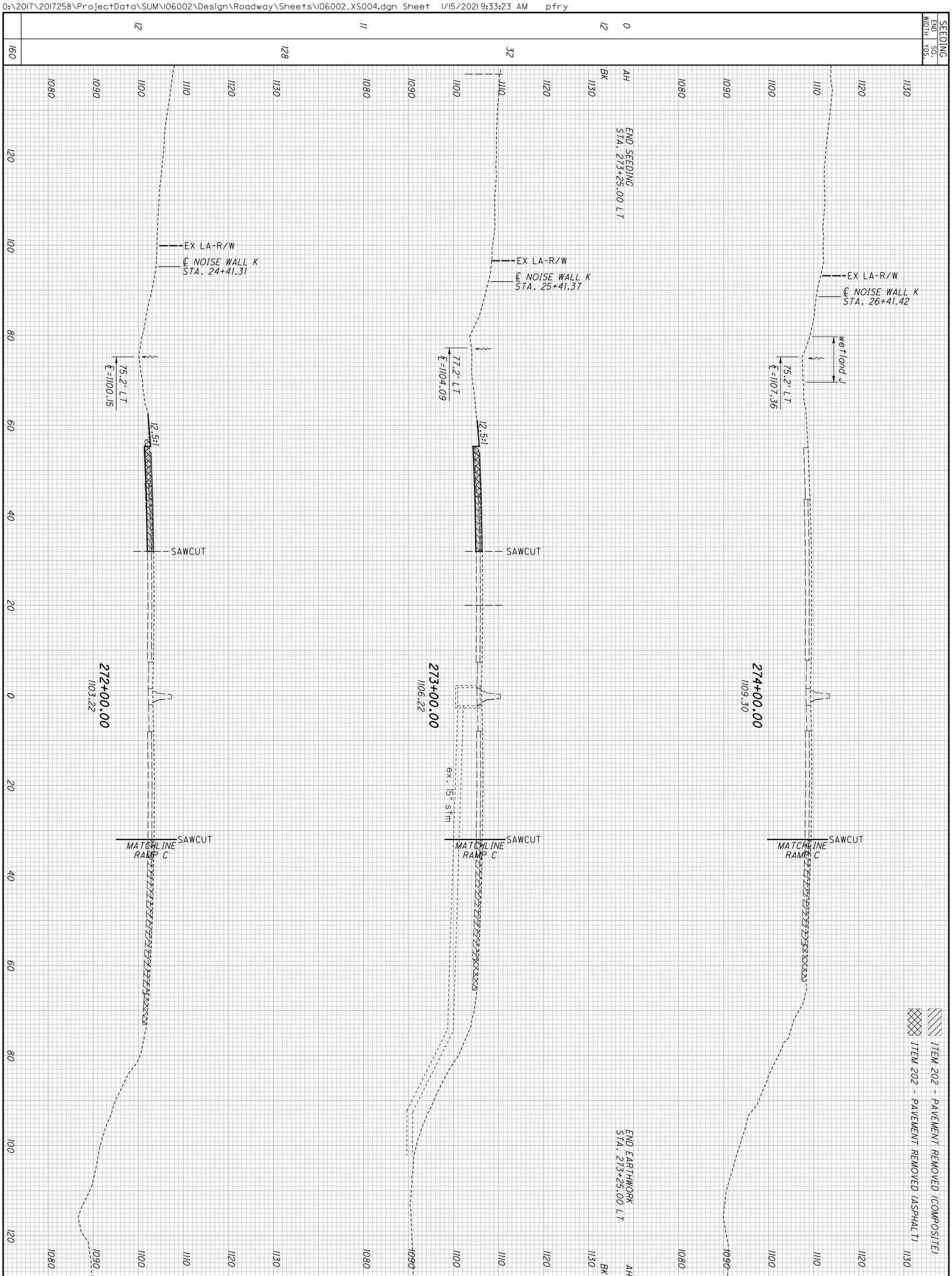


631 / 1288	**SUM-77 / 277 / 224** **VARIOUS**	**CROSS SECTIONS - I.R. 277 / U.S. 224** **STA. 266+00.00 TO STA. 268+00.00**

CALCULATED CJC
CHECKED PJF



632 / 1288	**SUM-77 / 277 / 224** **VARIOUS**	**CROSS SECTIONS - I.R. 277 / U.S. 224** **STA. 269+00.00 TO STA. 271+00.00**
		CALCULATED CJC CHECKED PJF

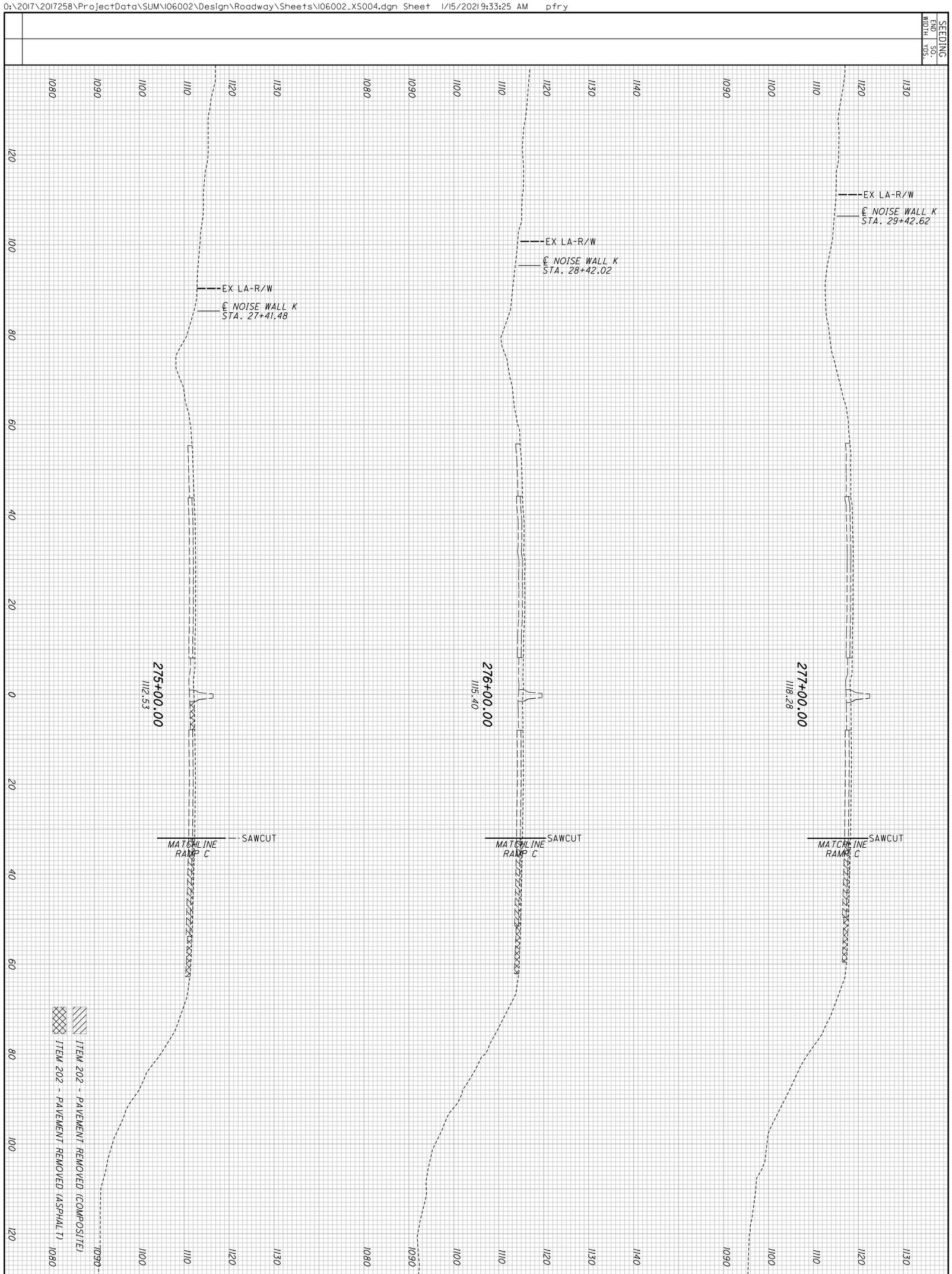


633
1288

SUM-77/277/224
VARIOUS

CROSS SECTIONS - I.R. 277/U.S. 224
STA. 272+00.00 TO STA. 274+00.00

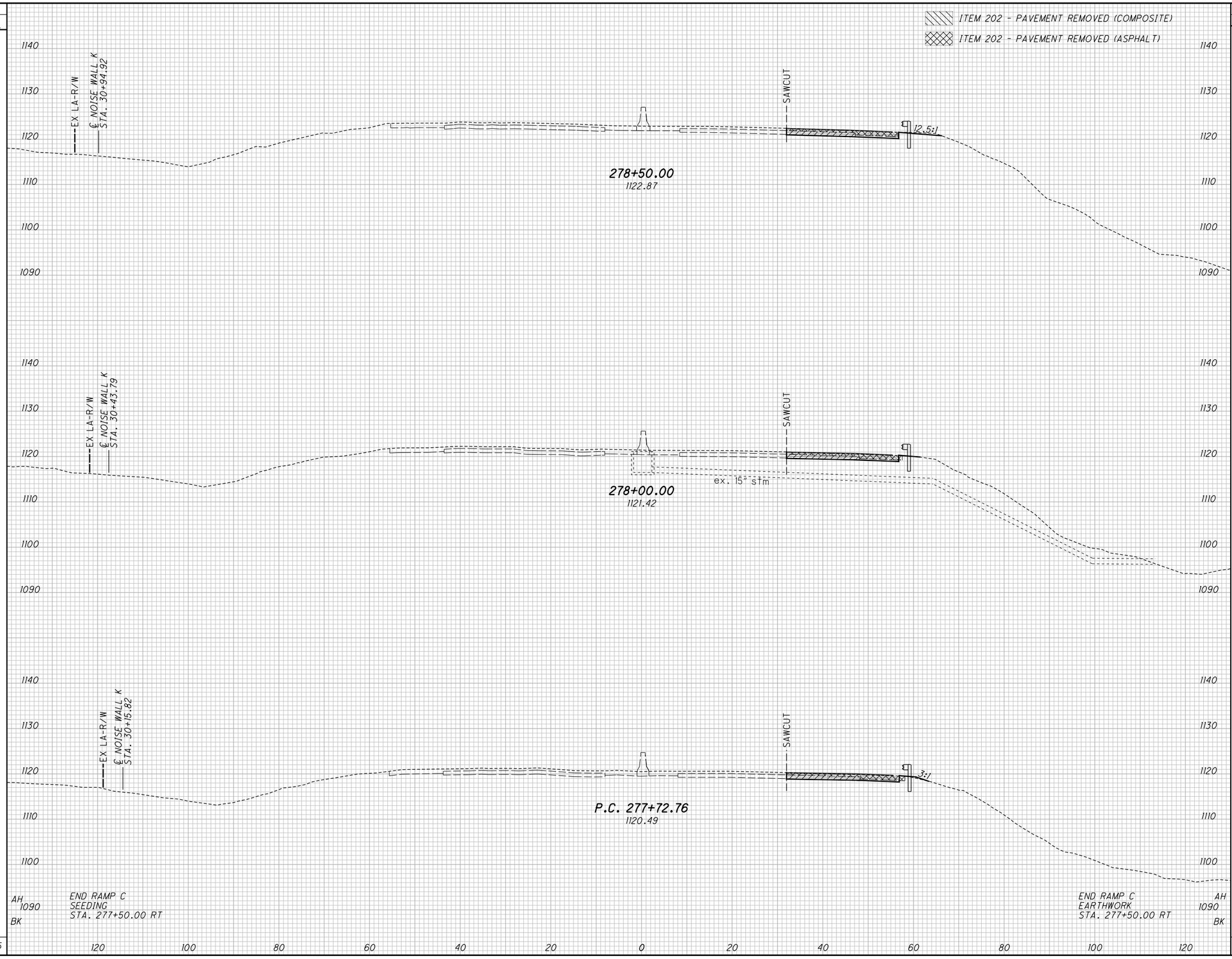
CALCULATED CJC
CHECKED PJF



634 / 1288	**SUM-77/277/224** **VARIOUS**	**CROSS SECTIONS - I.R. 277/U.S. 224** **STA. 275+00.00 TO STA. 277+00.00**

CALCULATED CJC
CHECKED PJF

SEEDING END WIDTH	SEEDING SQ. YDS.
	75
15	
	69
10	
	33
12	
	28
10	
0	
	205



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		13	0
7	0		
		9	1
3	1		
3	2	3	2
3	2	3	2
3	2		
0	0		
		28	5

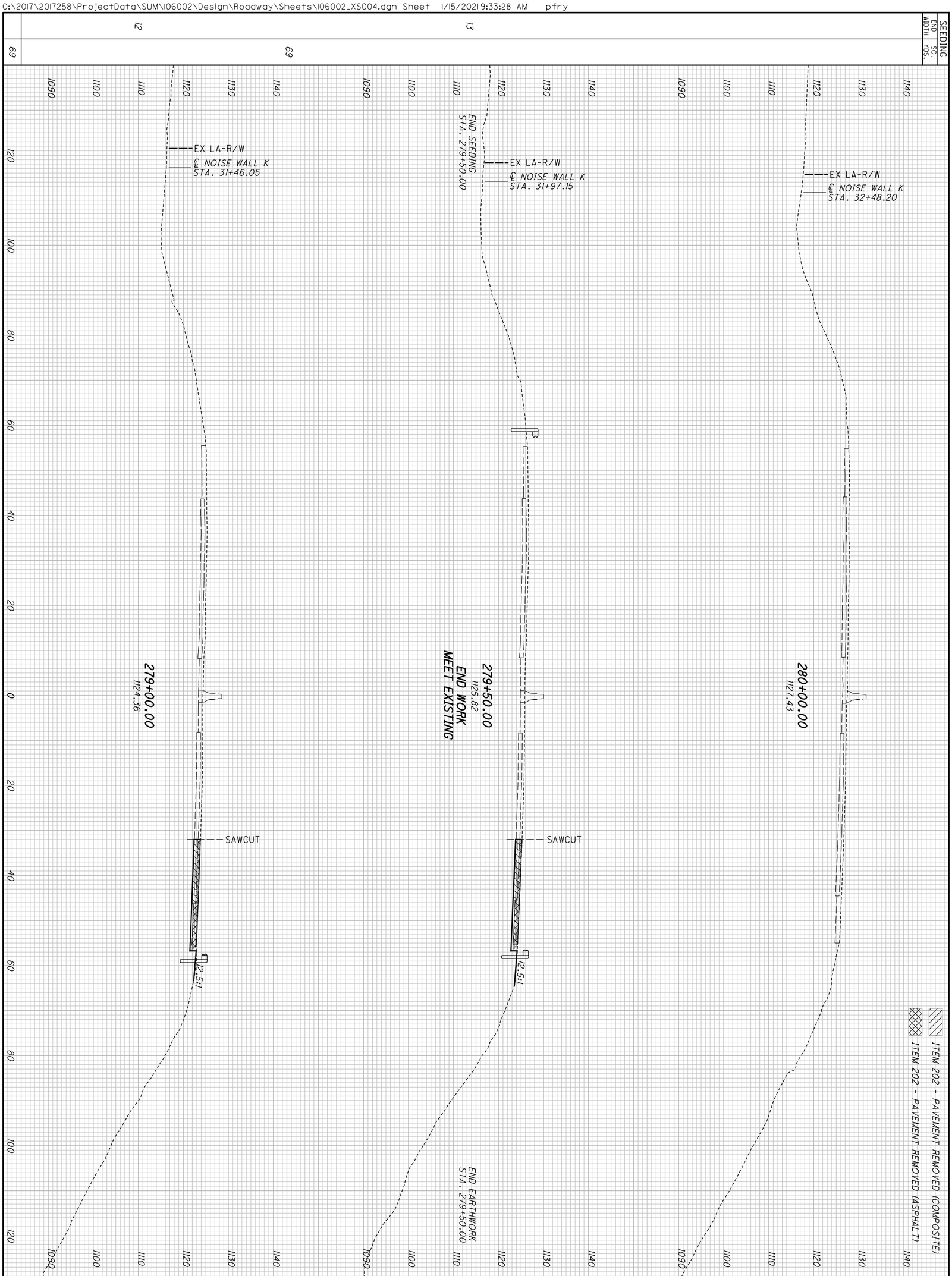
CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - I.R. 277/U.S. 224
STA. 277+72.76 TO STA. 278+50.00

SUM-77/277/224
VARIOUS

635
1288

D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS004.dgn Sheet 1/15/2021 9:33:27 AM pfry



636 / 1288	SUM-77/277/224 VARIOUS
CROSS SECTIONS - I.R. 277/U.S. 224 STA. 279+00.00 TO STA. 280+00.00	CALCULATED CJC CHECKED PJF

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED CJC
CHECKED PJF

1140
1130
1120
1110
1100
1090

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)
ITEM 202 - PAVEMENT REMOVED (ASPHALT)

EX LA-R/W

280+31.79
1128.29
BEGIN APPROACH SLAB (SKEW)

120 100 80 60 40 20 0 20 40 60 80 100 120

CROSS SECTIONS - I.R. 277 / U.S. 224
STA. 280+31.79

SUM-77 / 277 / 224
VARIOUS

637
1288

D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS004.dgn Sheet 1/15/2021 9:33:30 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	422
76	
	411
72	
	290
72	
	1123

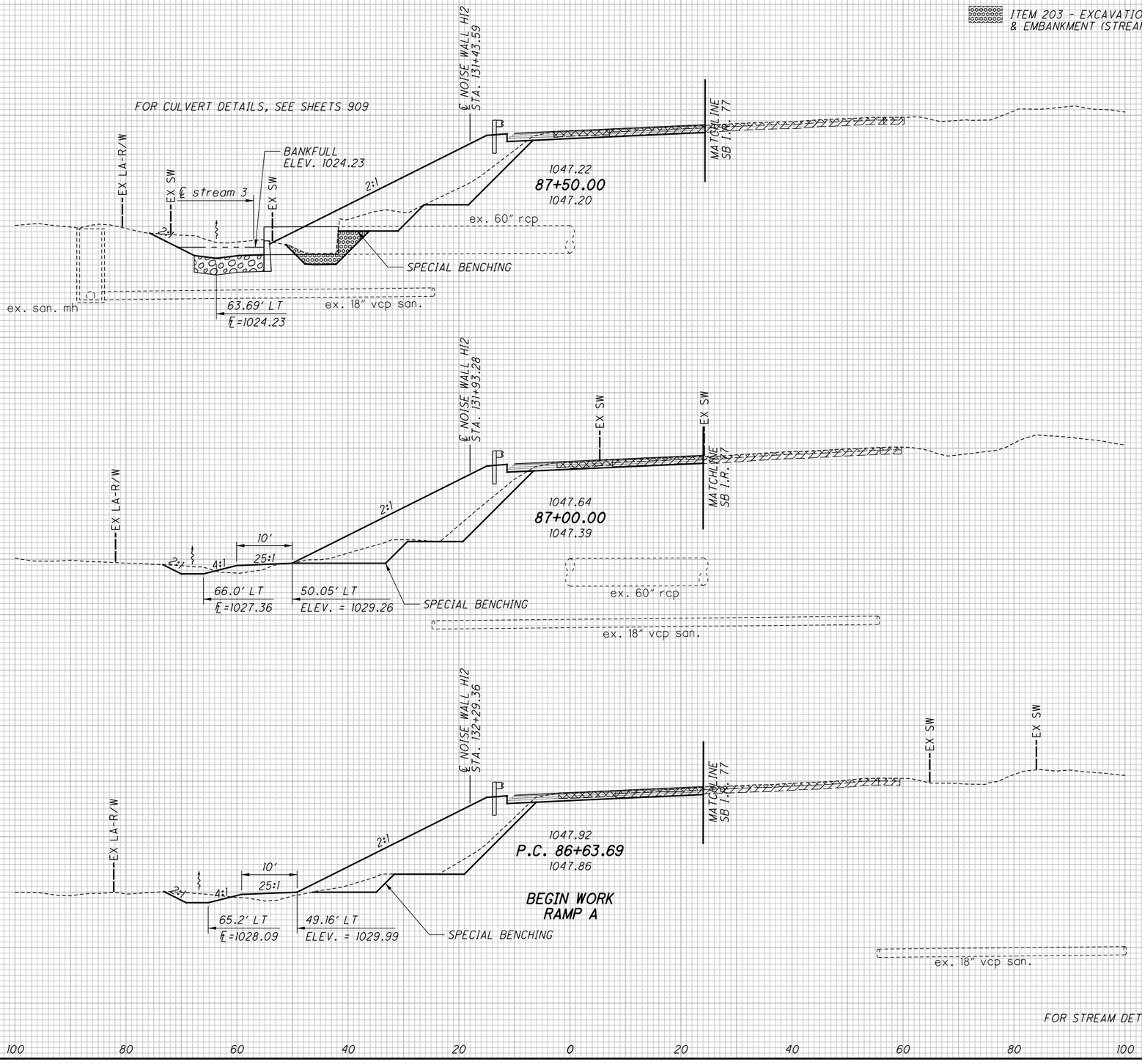
(#) SPECIAL BENCHING

'#' STREAM UNDERCUT

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

ITEM 203 - EXCAVATION (STREAM UNDERCUT) & EMBANKMENT (STREAM UNDERCUT)



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		'58'	'58'
		(142)	(142)
		106	416
'32'	'32'		
(78)	(78)		
61	222		
		'30'	'30'
		(140)	(140)
		73	399
'0'	'0'		
(73)	(73)		
18	209		
		(79)	(79)
		29	299
(44)	(44)		
25	235		
		'88'	'88'
		(361)	(361)
		208	1114

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP A
STA. 86+63.69 TO STA. 87+50.00

SUM-77 / 277 / 224
VARIOUS

638
1288

0:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS101.dgn Sheet 1/15/2021 9:36:30 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	400
73	
	408
74	
	417
76	
	1225

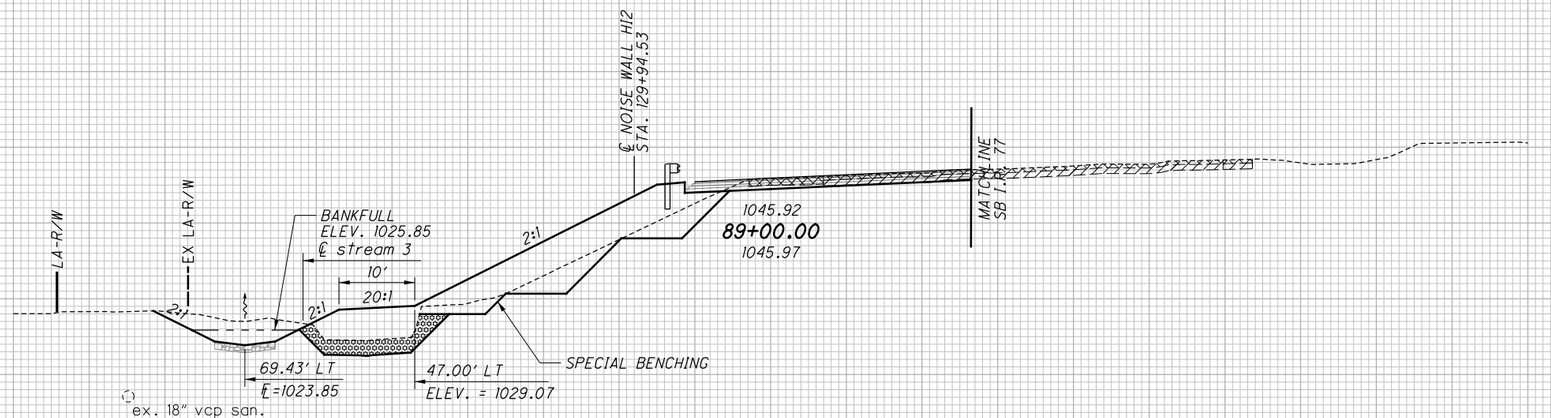
(#) SPECIAL BENCHING

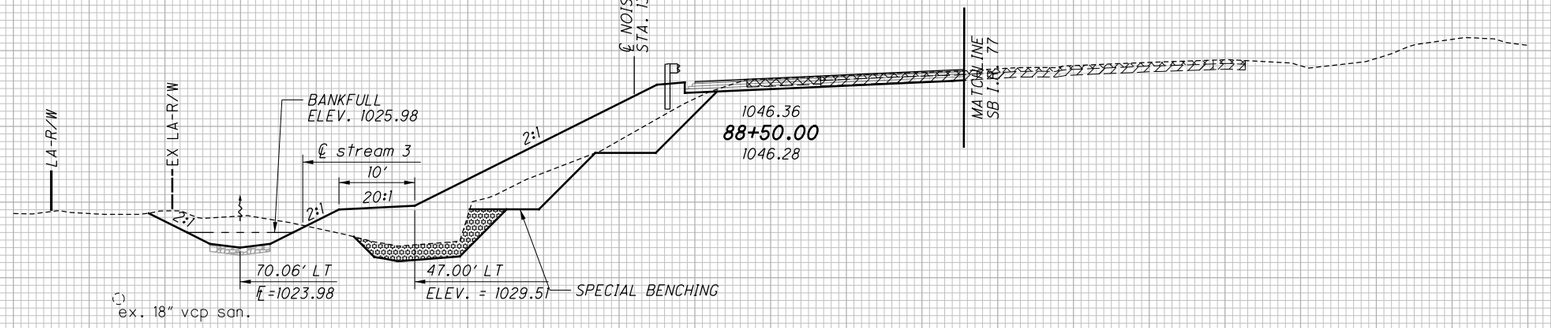
'#' STREAM UNDERCUT

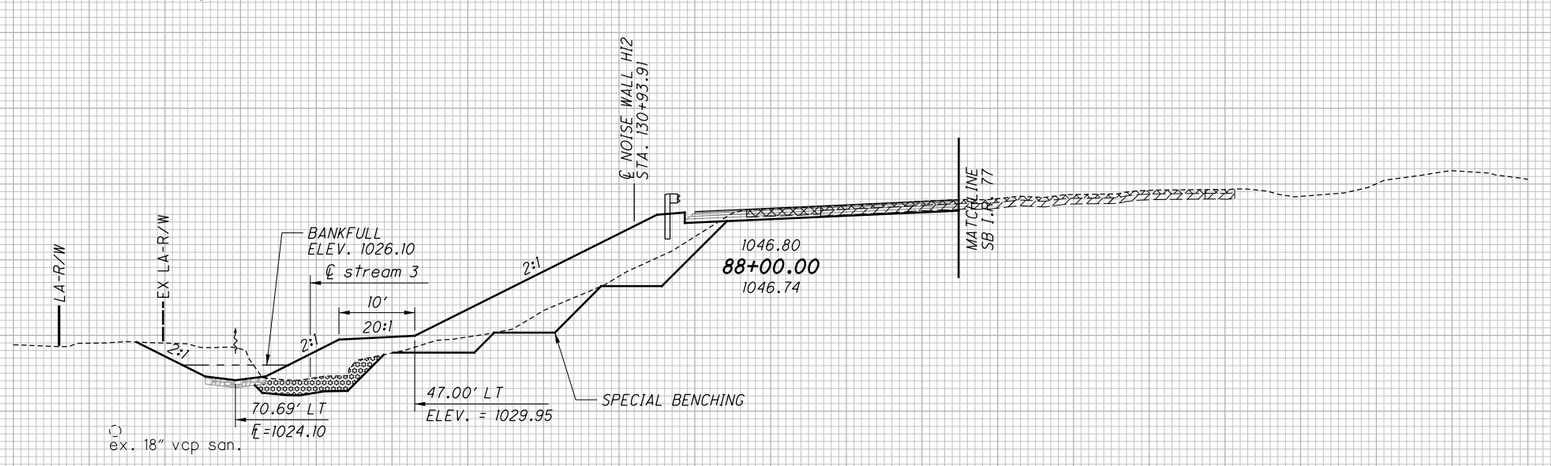
ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

ITEM 203 - EXCAVATION (STREAM UNDERCUT) & EMBANKMENT (STREAM UNDERCUT)







FOR STREAM DETAILS, SEE SHEET 58

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		'70'	'70'
		(131)	(131)
		99	361
		'39'	'39'
		(71)	(71)
		53	196
		'75'	'75'
		(138)	(138)
		107	385
		'42'	'42'
		(78)	(78)
		63	220
		'68'	'68'
		(142)	(142)
		107	414
		'31'	'31'
		(75)	(75)
		53	227
		'213'	'213'
		(411)	(411)
		313	1160

CALCULATED CJC

CHECKED PJF

CROSS SECTIONS - RAMP A STA. 88+00.00 TO STA. 89+00.00

SUM-77 / 277 / 224

VARIOUS

639
1288

0:\2017\20172581\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS101.dgn Sheet 1/15/2021 9:36:32 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	156
70	
	389
	392
71	
	937

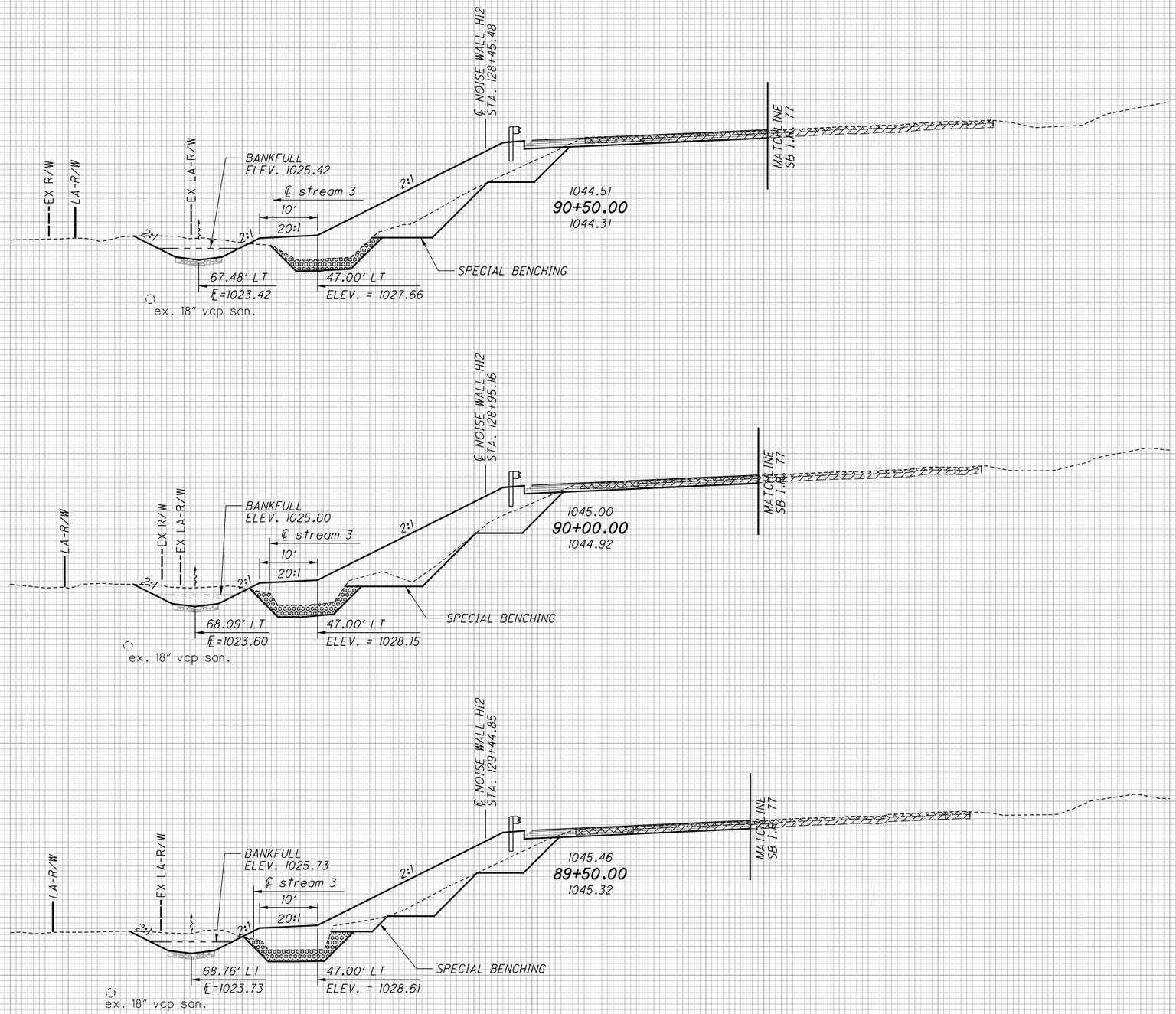
(#) SPECIAL BENCHING

'#' STREAM UNDERCUT

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

ITEM 203 - EXCAVATION (STREAM UNDERCUT) & EMBANKMENT (STREAM UNDERCUT)



FOR STREAM DETAILS, SEE SHEET 58

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		'24'	'24'
		(53)	(53)
		44	175
'32'	'32'		
(72)	(72)		
57	236		
		'63'	'63'
		(129)	(129)
		100	438
'36'	'36'		
(67)	(67)		
51	237		
		'68'	'68'
		(127)	(127)
		97	399
'37'	'37'		
(70)	(70)		
54	194		
		'155'	'155'
		(309)	(309)
		241	1012

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP A
STA. 89+50.00 TO STA. 90+50.00

SUM-77 / 277 / 224
VARIOUS

640
1288

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS101.dgn Sheet 1/15/2021 9:36:34 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	244
60	
	317
54	
	207
70	
	768

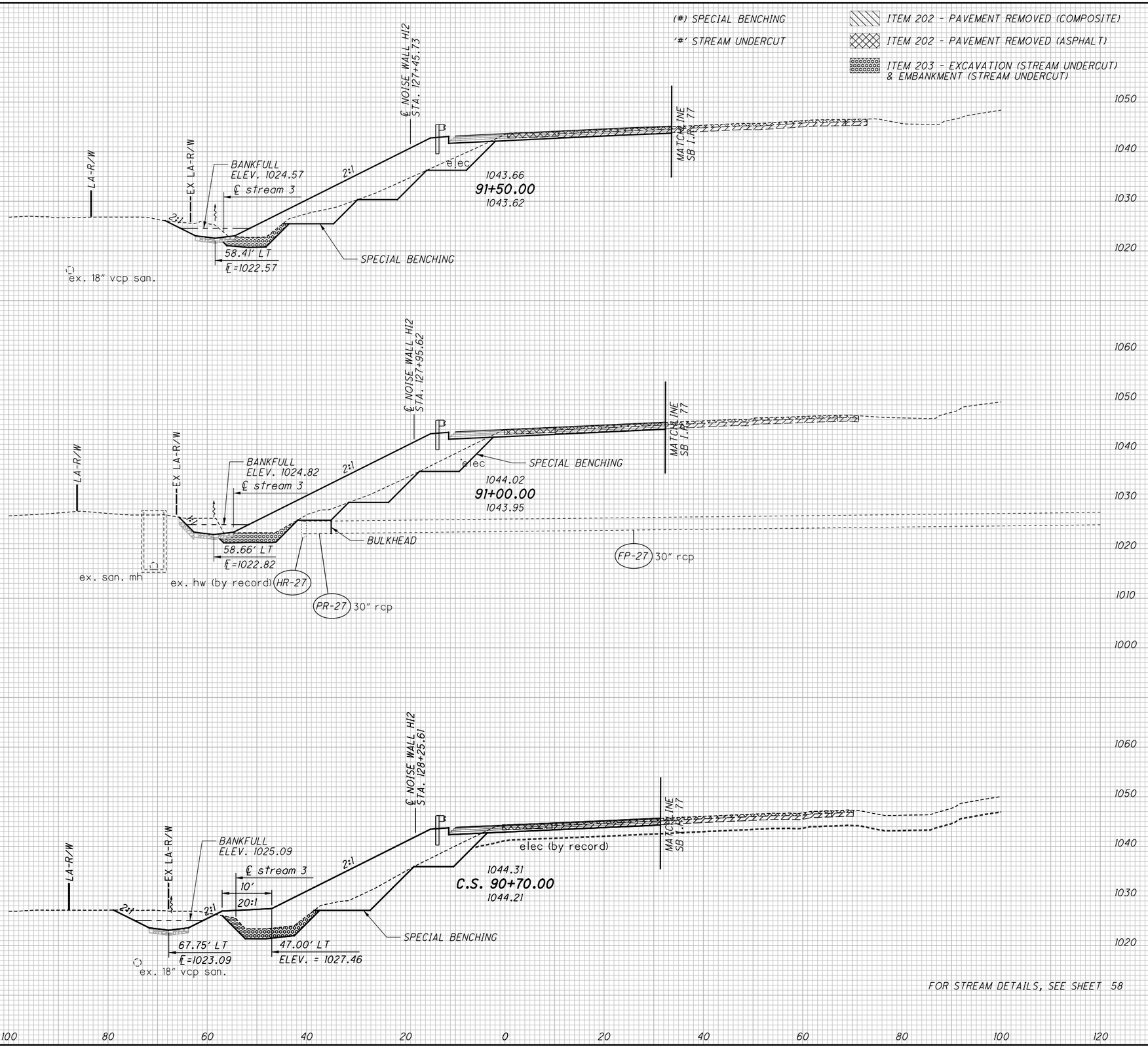
(#) SPECIAL BENCHING

'#' STREAM UNDERCUT

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

ITEM 203 - EXCAVATION (STREAM UNDERCUT) & EMBANKMENT (STREAM UNDERCUT)



FOR STREAM DETAILS, SEE SHEET 58

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		'16'	'16'
		(114)	(114)
		41	273
		'21'	'21'
		(76)	(76)
		31	194
		'42'	'42'
		(133)	(133)
		56	386
		'24'	'24'
		(68)	(68)
		29	223
		'32'	'32'
		(77)	(77)
		50	256
		'34'	'34'
		(70)	(70)
		61	237
		'90'	'90'
		(324)	(324)
		147	915

CALCULATED CJC

CHECKED PJF

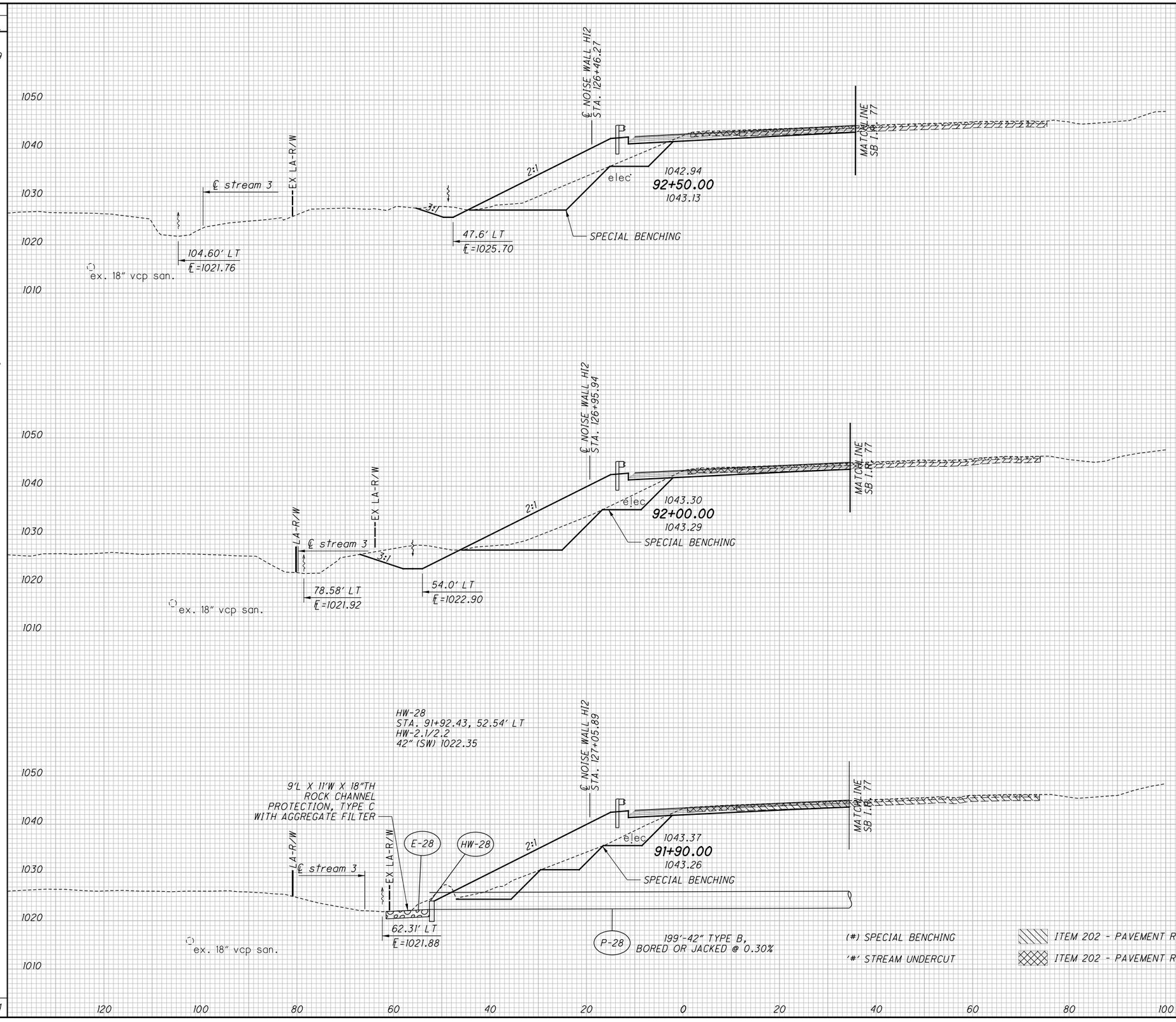
CROSS SECTIONS - RAMP A STA. 90+70.00 TO STA. 91+50.00

SUM-77 / 277 / 224

VARIOUS

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS10L.dgn Sheet1 1/15/2021 9:36:36 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	289			(147)	(147)
				66	268
	53				
		(86)	(86)		
		31	146		
	331			(161)	(161)
				94	294
	66				
		(88)	(88)		
		71	172		
	64			(31)	(31)
				18	64
	50	'0'	'0'		
		(78)	(78)		
		25	175		
	684			(339)	(339)
				178	626



(#) SPECIAL BENCHING
'#' STREAM UNDERCUT

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)
ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED CJC
CHECKED PJF

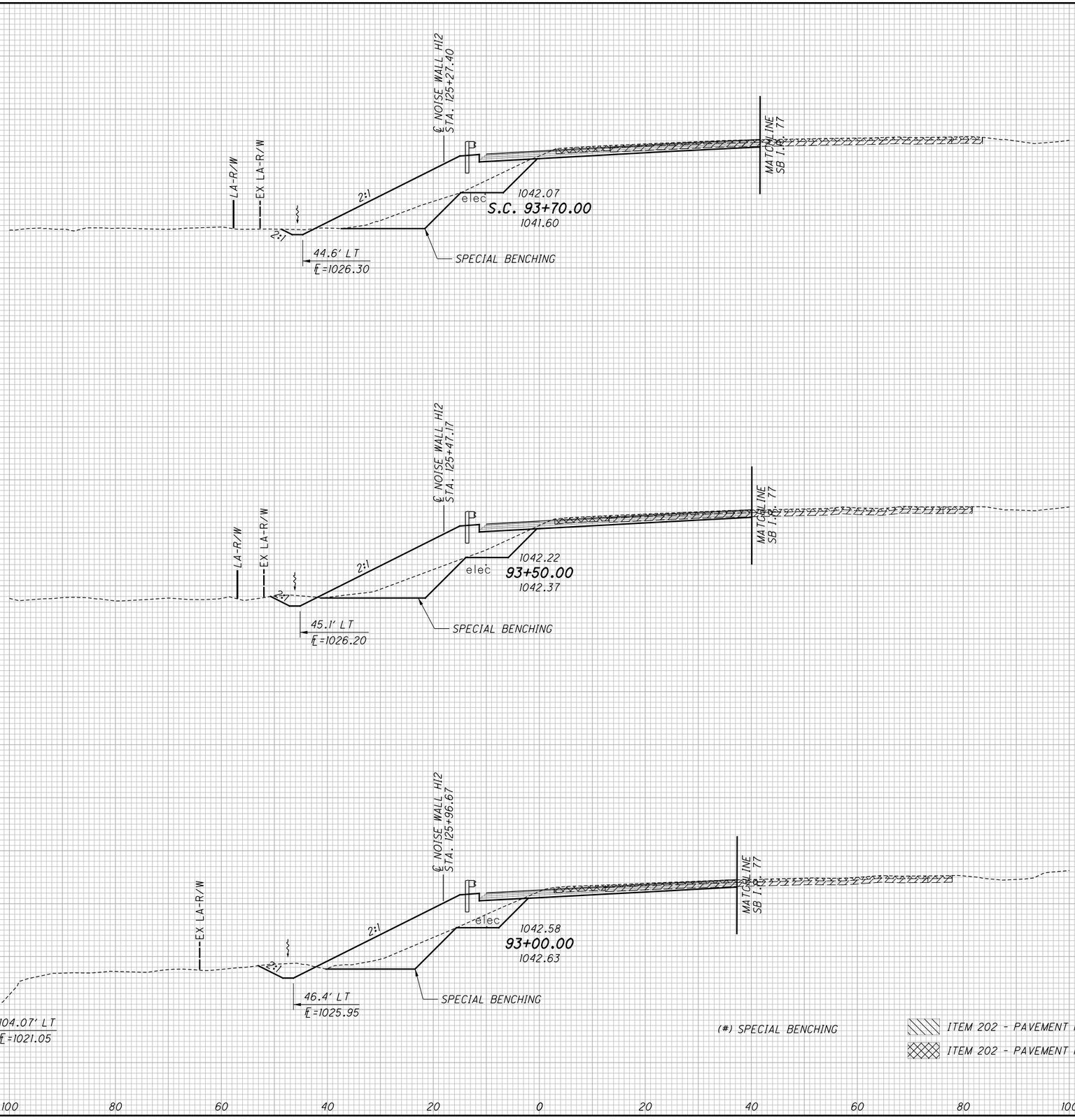
CROSS SECTIONS - RAMP A
STA. 91+90.00 TO STA. 92+50.00

SUM-77 / 277 / 224
VARIOUS

642
1288

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS101.dgn Sheet 1/15/2021 9:36:41 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	152			(83)	(83)
				29	180
	46			(75)	(75)
				25	163
	106			(56)	(56)
				21	116
	49			(76)	(76)
				32	151
	278			(138)	(138)
				67	272
	51			(73)	(73)
				40	143
	536			(277)	(277)
				117	568



(#) SPECIAL BENCHING

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP A
STA. 93+00.00 TO STA. 93+70.00

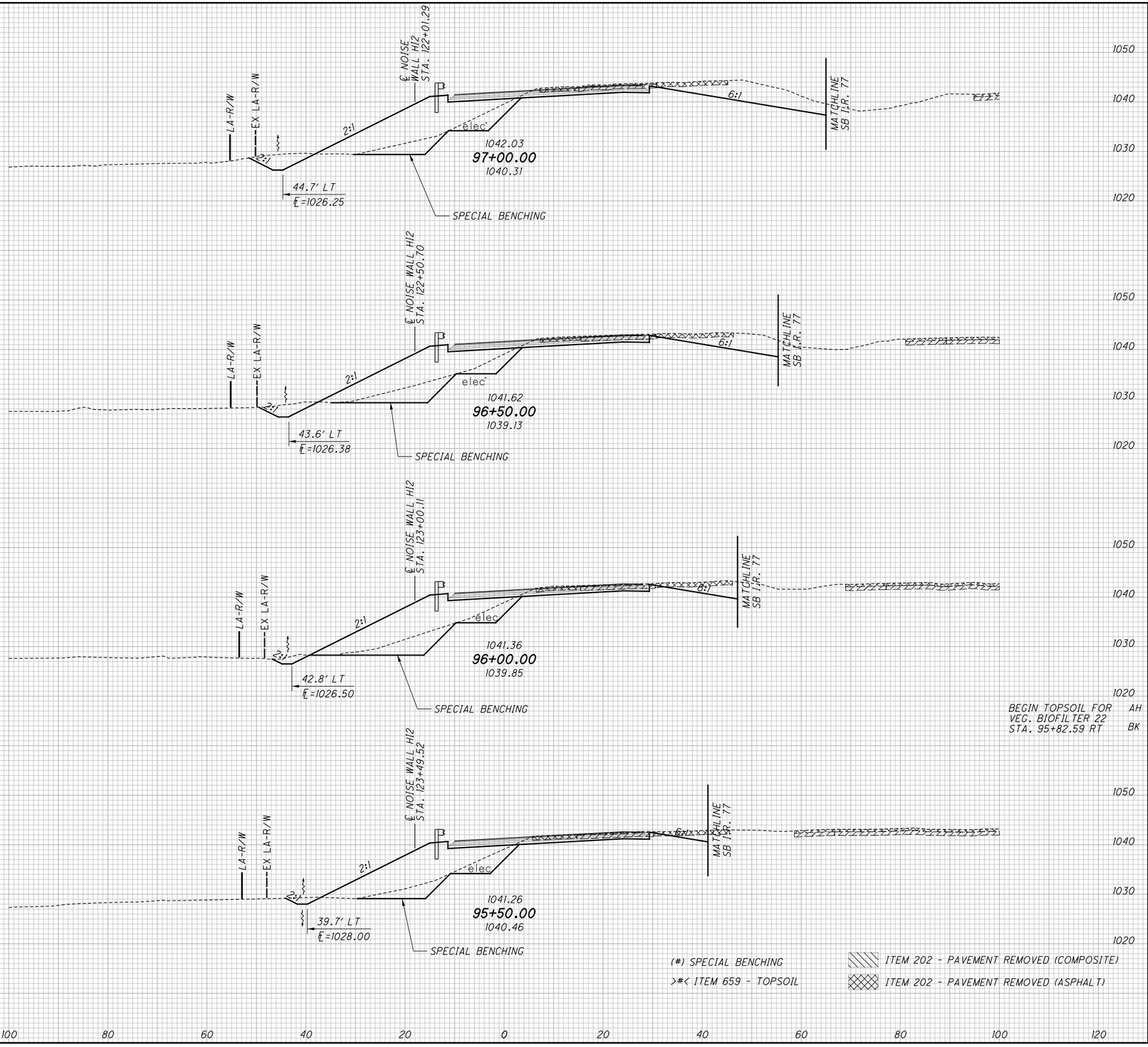
SUM-77 / 277 / 224
VARIOUS

643
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS101.dgn Sheet 1/15/2021 9:36:45 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
				(119)	(119)
	300			36	306

SEEDING END WIDTH	SEEDING SQ. YDS.
	519
87	
	450
75	
	386
64	
	331
55	
	1686



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>26<
		(119)	(119)
		280	369
	>12<		
(58)	(58)		
150	180		
			>19<
		(116)	(116)
		226	313
	>9<		
(67)	(67)		
94	158		
			>14<
		(126)	(126)
		132	306
	>6<		
(69)	(69)		
49	172		
			>4<
	>5<		
	>0<		
		(114)	(114)
		69	313
(54)	(54)		
26	166		
			>63<
		(475)	(475)
		707	1301

BEGIN TOPSOIL FOR VEG. BIOFILTER 22 STA. 95+82.59 RT — AH BK

(#) SPECIAL BENCHING

>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED CJC

CHECKED PJF

CROSS SECTIONS - RAMP A STA. 95+50.00 TO STA. 97+00.00

SUM-77 / 277 / 224

VARIOUS

645
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS101.dgn Sheet1 1/15/2021 9:36:50 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	639
112	
	642
119	
	608
100	
	1889

END TOPSOIL FOR VEG. BIOFILTER 24 STA. 97+73.00 RT — AH BK

(#) SPECIAL BENCHING

>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		(156)	(156)
		206	536
(79)	(79)		
116	274		
		(132)	(132)
		233	470
(64)	(64)		
136	234		
	>0<		
	>17<		
			>14<
		(124)	(124)
		267	419
	>16<		
(70)	(70)		
152	219		
			>14<
		(412)	(412)
		706	1425

CALCULATED CJC
CHECKED PJF

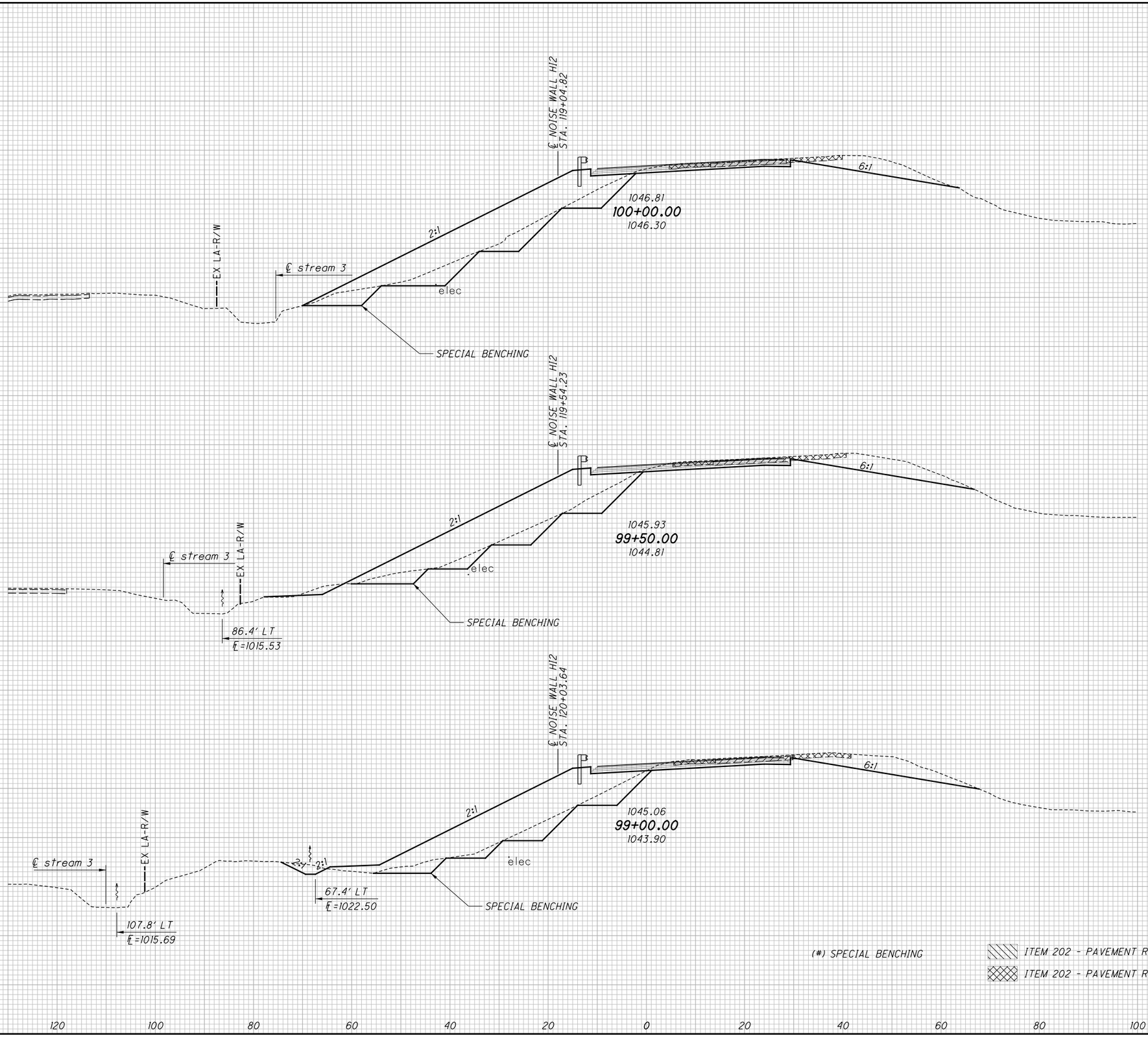
CROSS SECTIONS - RAMP A
STA. 97+50.00 TO STA. 98+50.00

SUM-77 / 277 / 224
VARIOUS

646
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS01.dgn Sheet 1/15/2021 9:36:52 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	611
111	
	644
121	
	664
118	
	1919



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		(249)	(249)
		122	558
(133)	(133)		
77	310		
		(217)	(217)
		167	572
(101)	(101)		
103	308		
		(176)	(176)
		194	568
(89)	(89)		
106	305		
		(642)	(642)
		483	1698

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP A
STA. 99+00.00 TO STA. 100+00.00

SUM-77 / 277 / 224
VARIOUS

647
1288

D:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS101.dgn Sheet 1/15/2021 9:36:54 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	658
108	
	606
110	
	608
109	
	1872

SA-1
STA. 101+34.90, 100.27' LT
MH-3, AS PER PLAN
RIM ELEV 1018.05
EX. 27" VCP SE 1007.05
27" (NW) 1007.05

EX-3
STA. 100+94.18, 115.99' LT
EX. SAN MH, GRATE ELEV 1021.34
EX. 12" VCP SW 1009.19
EX. 18" VCP SE 1008.19
EX. 27" VCP NW 1007.54

℄ NOISE WALL H12
STA. 117+56.59

1049.20
101+50.00
1048.80

77.7' RT
℄=1040.90

℄ NOISE WALL H12
STA. 118+06.00

1048.50
101+00.00
1048.10

℄ NOISE WALL H12
STA. 118+55.41

1047.68
100+50.00
1046.91

EX LA-R/W

℄ stream 3

elec

ex. 10' X 5' box culvert

SPECIAL BENCHING

2:1

6:1

SA-1

SR-1

ex. 27" vcp san.
(TO REMAIN)

ex. 27" vcp san.

EX-3

ex. 18" vcp san.

(#) SPECIAL BENCHING

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

FOR CULVERT DETAILS, SEE SHEETS 910 - 915

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		(256)	(256)
		97	556
(131)	(131)		
42	295		
		(257)	(257)
		84	523
(147)	(147)		
49	270		
		(262)	(262)
		96	521
(136)	(136)		
55	293		
		(775)	(775)
		277	1600

CALCULATED CJC
CHECKED PJF

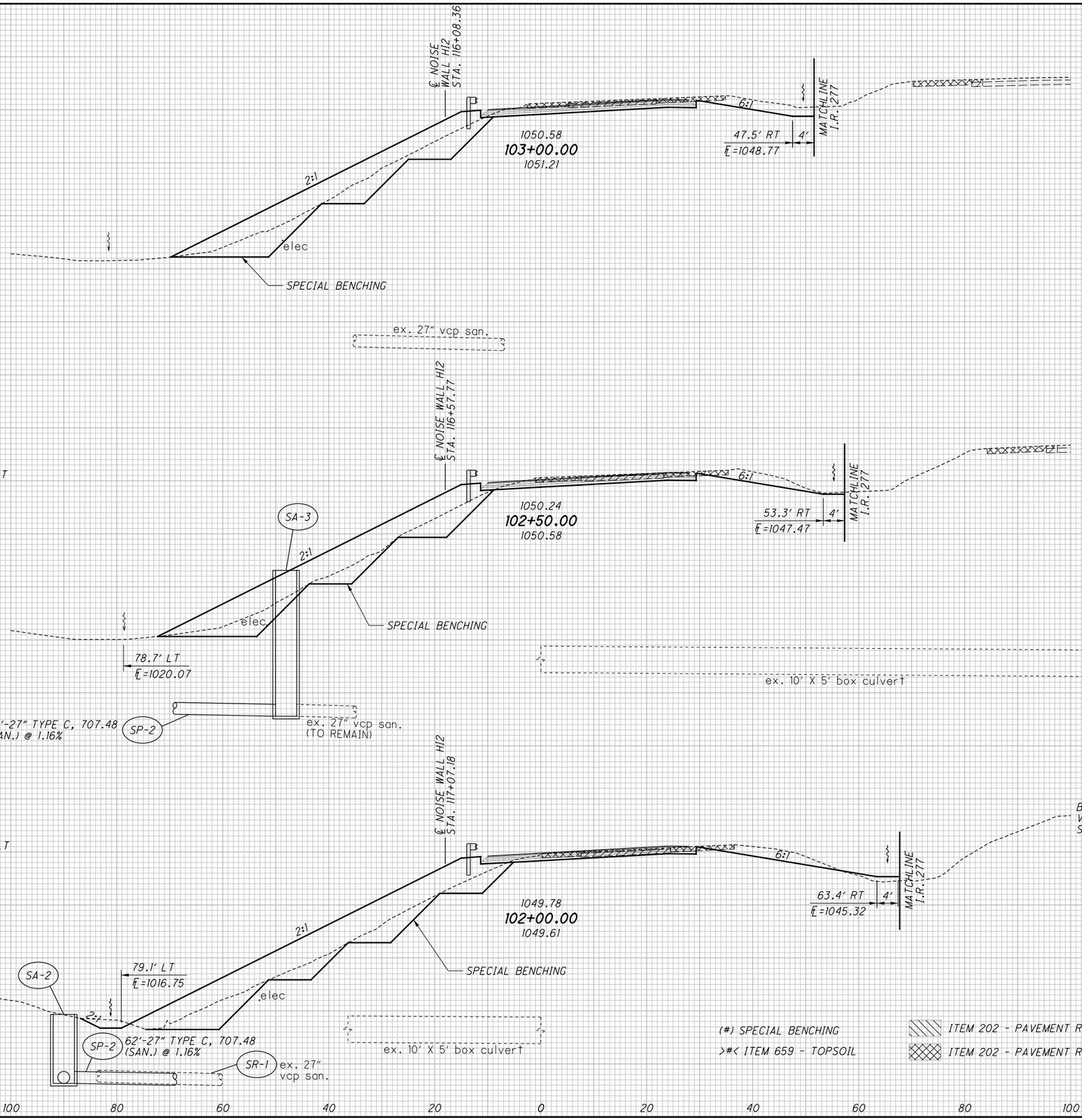
CROSS SECTIONS - RAMP A
STA. 100+50.00 TO STA. 101+50.00

SUM-77 / 277 / 224
VARIOUS

648
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS01.dgn Sheet 1/15/2021 9:36:56 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	497
94	
	547
103	
	644
129	
	1688



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>11<
		(289)	(289)
		156	301
	>7<		
(148)	(148)		
79	190		
			>14<
		(249)	(249)
		132	400
	>8<		
(121)	(121)		
64	242		
			>19<
		(246)	(246)
		118	507
	>12<		
	>0<		
(145)	(145)		
63	306		
			>44<
		(784)	(784)
		406	1208

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP A
STA. 102+00.00 TO STA. 103+00.00

SUM-77 / 277 / 224
VARIOUS

649
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS101.dgn Sheet 1/15/2021 9:36:59 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	24
40	
	314
73	
	439
85	
	777

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		(20)	(20)
		12	2
(103)	(103)		
67	10		
		(263)	(263)
		123	94
(181)	(181)		
66	91		
		(319)	(319)
		144	209
(164)	(164)		
89	135		
		(602)	(602)
		279	305

CALCULATED CJC
CHECKED PJF

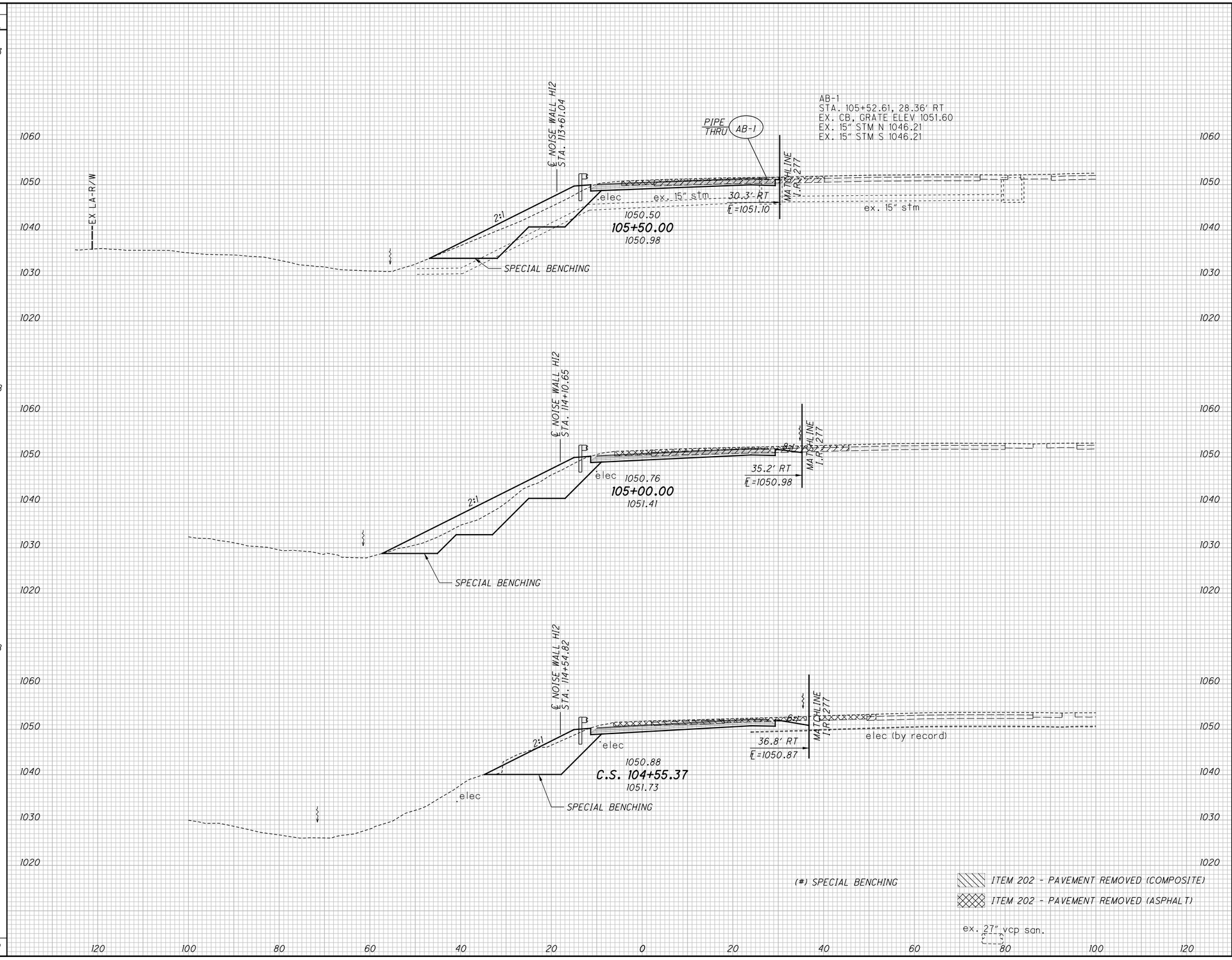
CROSS SECTIONS - RAMP A
STA. 103+50.00 TO STA. 104+50.00

SUM-77 / 277 / 224
VARIOUS

650
1288

D:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS101.dgn Sheet 1/15/2021 9:37:02 AM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	253
47	
	308
64	
	258
40	
	819



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		(244)	(244)
		53	90
(135)	(135)		
30	47		
		(269)	(269)
		61	122
(156)	(156)		
36	85		
		(214)	(214)
		78	81
(103)	(103)		
58	13		
		(727)	(727)
		192	293

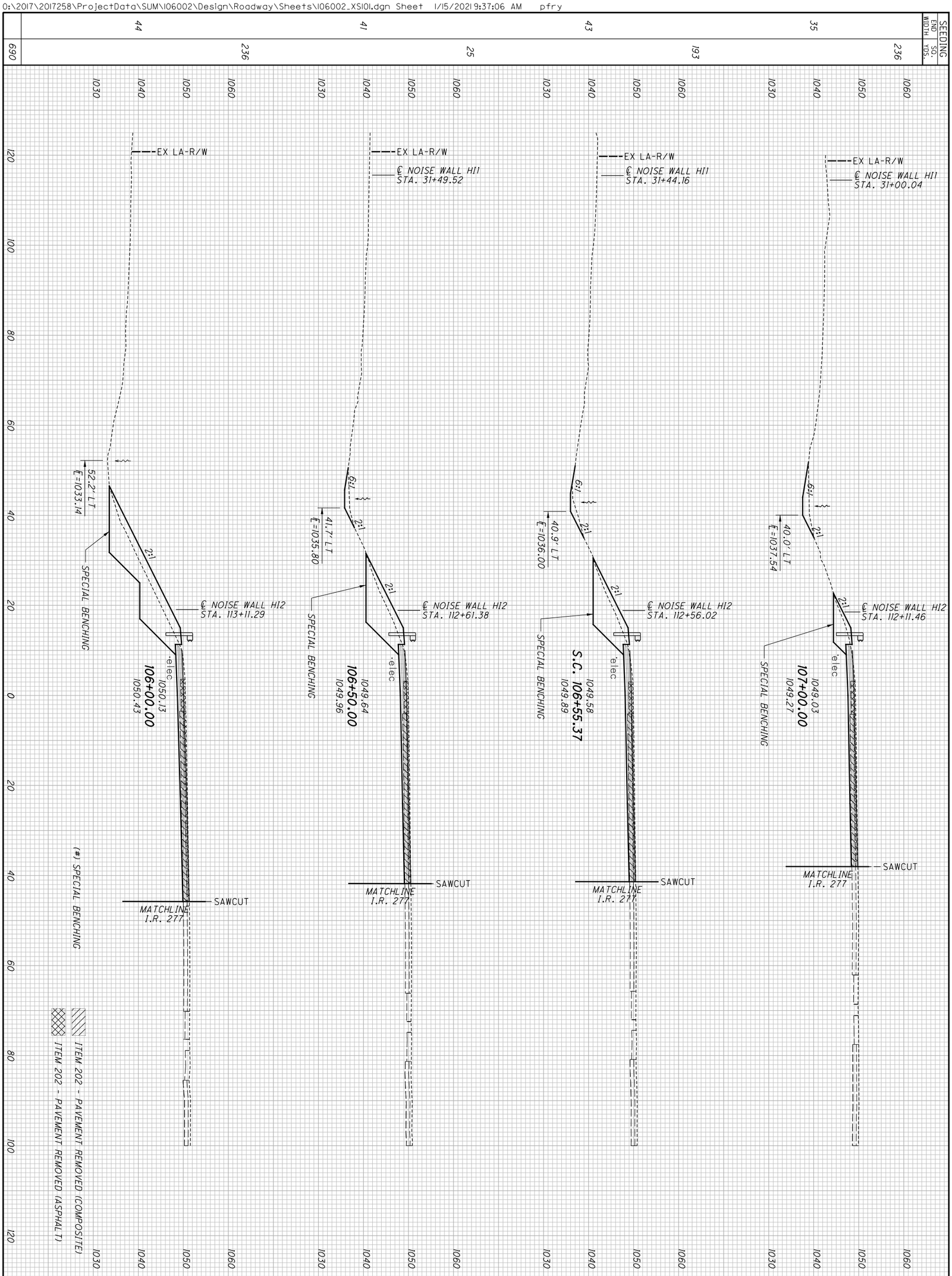
CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP A
STA. 104+55.37 TO STA. 105+50.00

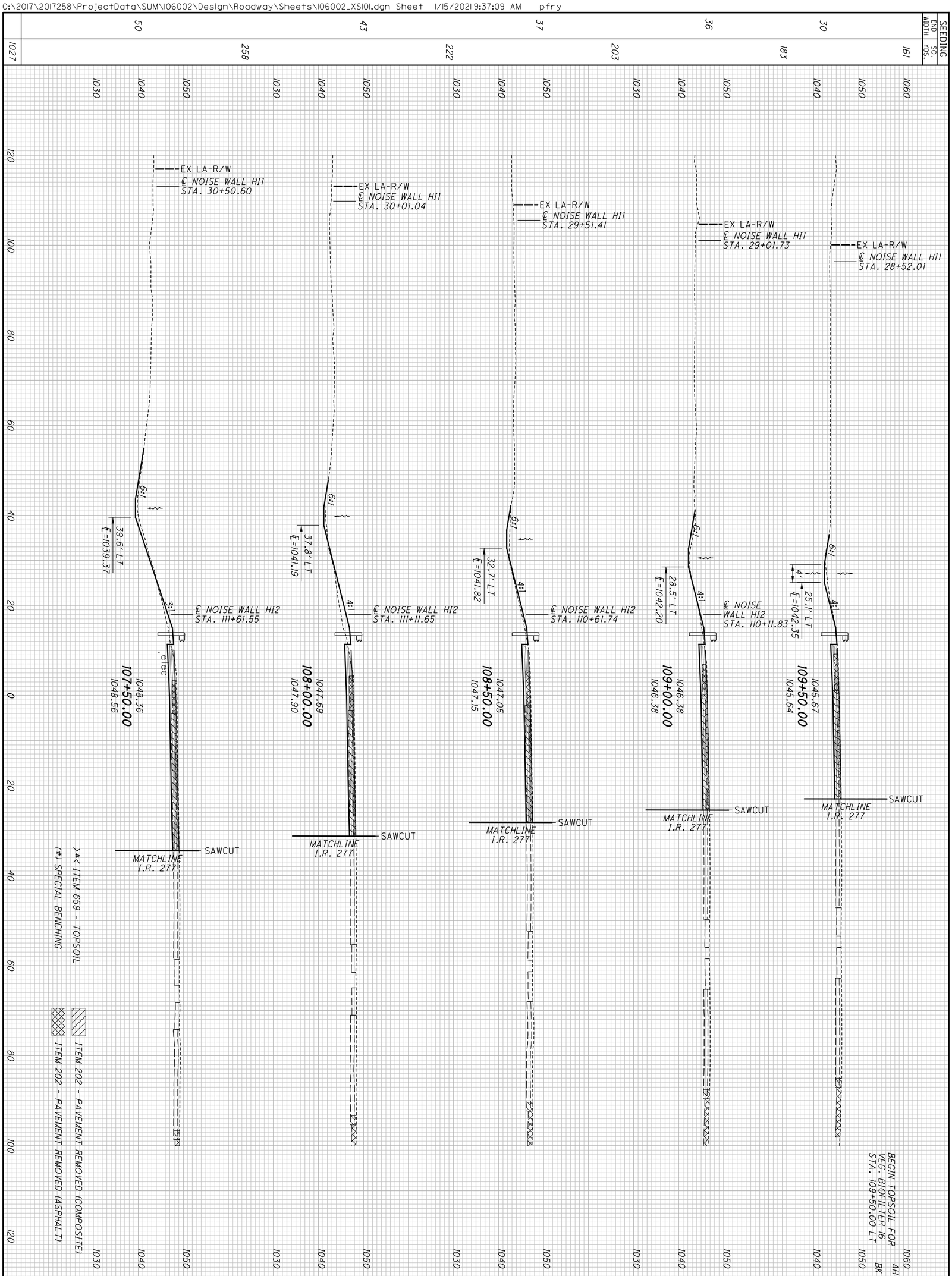
SUM-77 / 277 / 224
VARIOUS

651
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS101.dgn Sheet 1/15/2021 9:37:04 AM pfry


EX LA-R/W
℄ NOISE WALL HI1
STA. 31+00.04
℄ NOISE WALL HI2
STA. 112+11.46
40.0' LT
E=1037.54
SPECIAL BENCHING
1049.03
107+00.00
1049.27
SAWCUT
MATCHLINE
I.R. 277
EX LA-R/W
℄ NOISE WALL HI1
STA. 31+44.16
℄ NOISE WALL HI2
STA. 112+56.02
40.9' LT
E=1036.00
SPECIAL BENCHING
1049.58
S.C. 106+55.37
1049.89
SAWCUT
MATCHLINE
I.R. 277
EX LA-R/W
℄ NOISE WALL HI1
STA. 31+49.52
℄ NOISE WALL HI2
STA. 112+61.38
41.7' LT
E=1035.80
SPECIAL BENCHING
1049.64
106+50.00
1049.96
SAWCUT
MATCHLINE
I.R. 277
EX LA-R/W
℄ NOISE WALL HI2
STA. 113+11.29
52.2' LT
E=1033.14
SPECIAL BENCHING
1050.13
106+00.00
1050.43
SAWCUT
MATCHLINE
I.R. 277
(#) SPECIAL BENCHING
ITEM 202 - PAVEMENT REMOVED (COMPOSITE)
ITEM 202 - PAVEMENT REMOVED (ASPHALT)
SEEDING
END WIDTH
SQ. YDS.
END AREA
CUT
FILL
VOLUME
CUT
FILL

| | | |

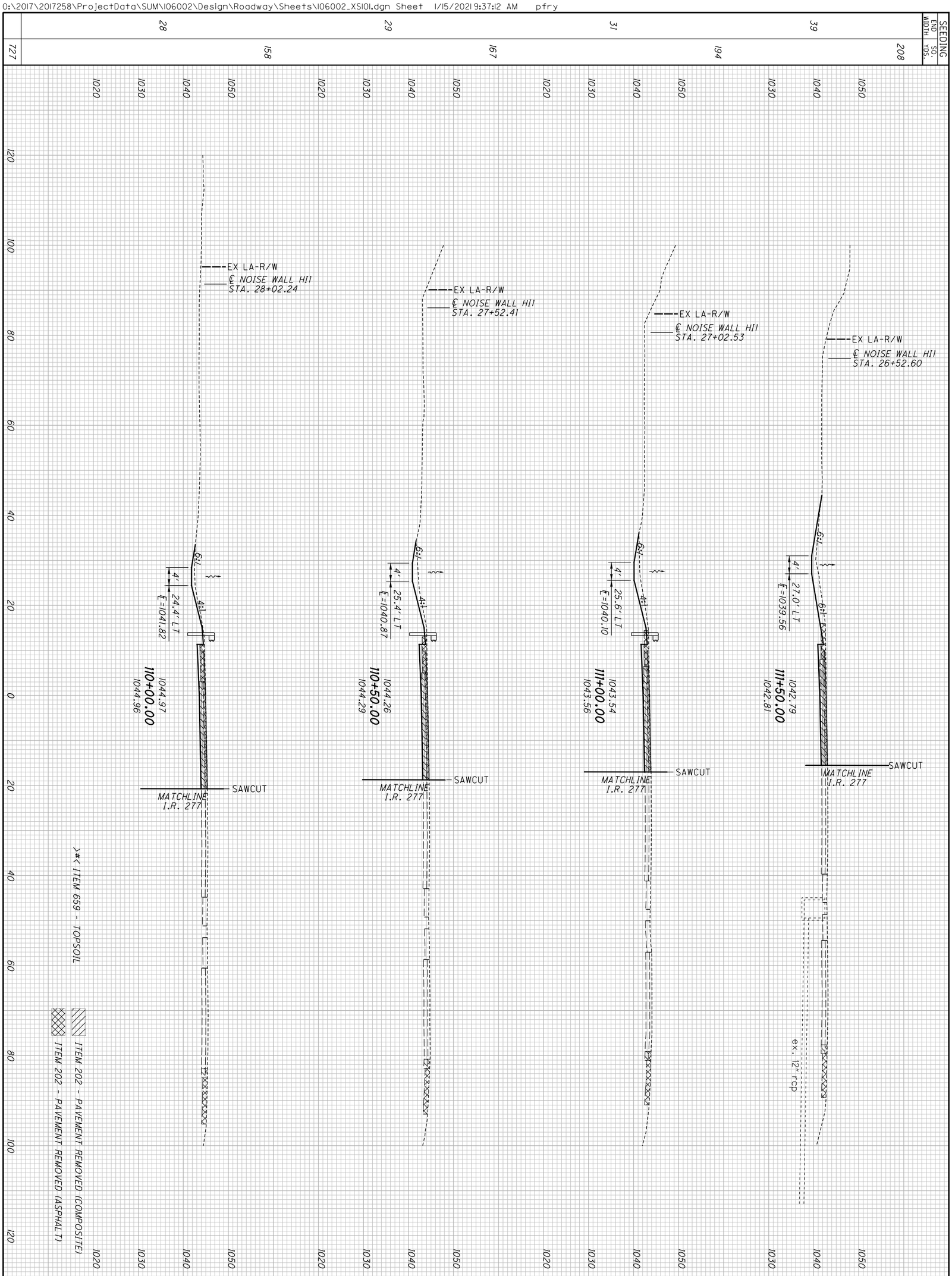


SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
50	258	33	7	204	49
43	222	23	15	52	20
37	203	24	5	44	19
36	183	18	2	39	6
30	161	18	1	33	3
		>3<	>0<	36	1
		(0)	(0)		>6<

AH
BK

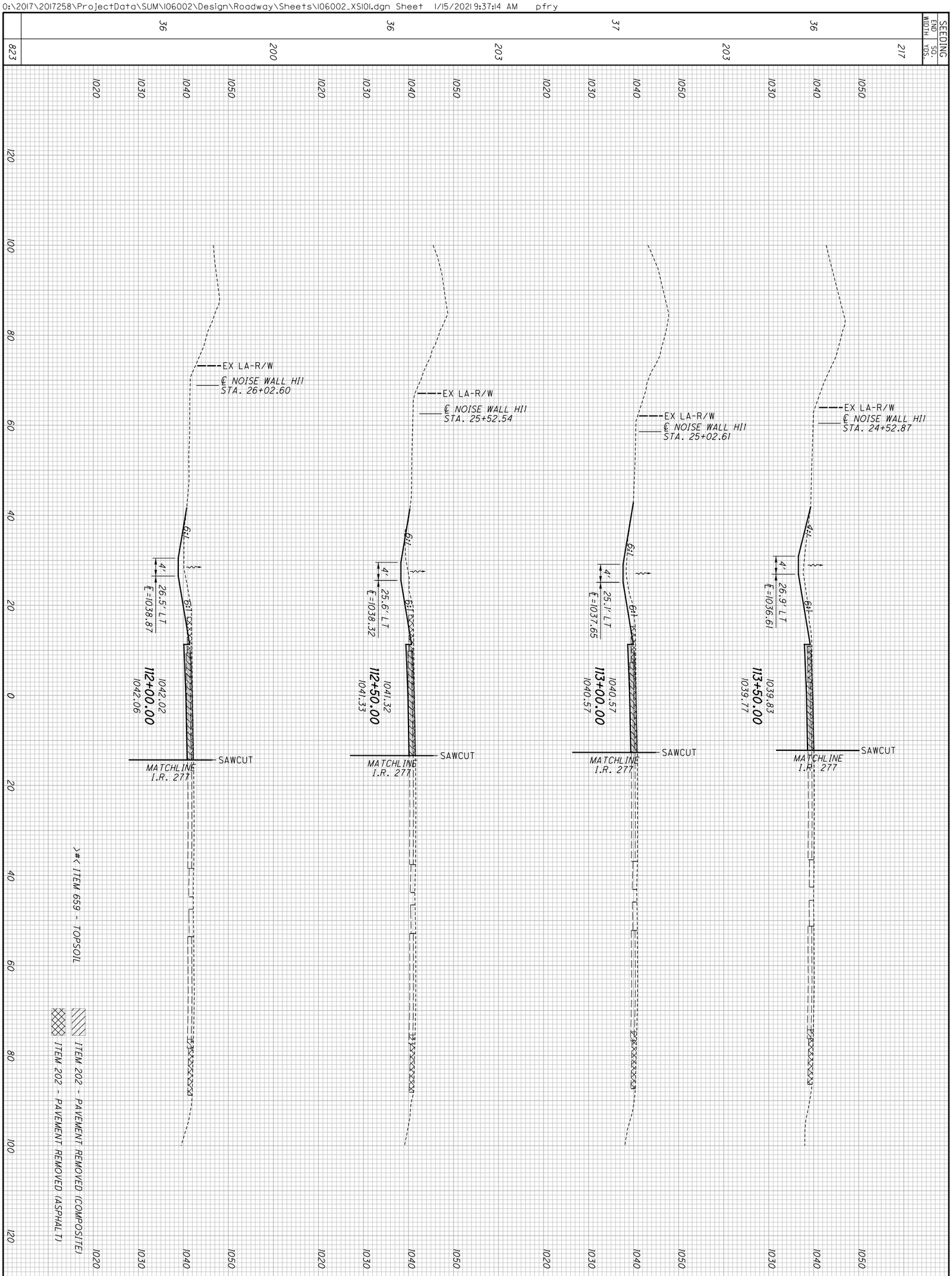
653 1288	SUM-77/277/224 VARIOUS	CROSS SECTIONS - RAMP A STA. 107+50.00 TO STA. 109+50.00

CALCULATED CJC
CHECKED PJF



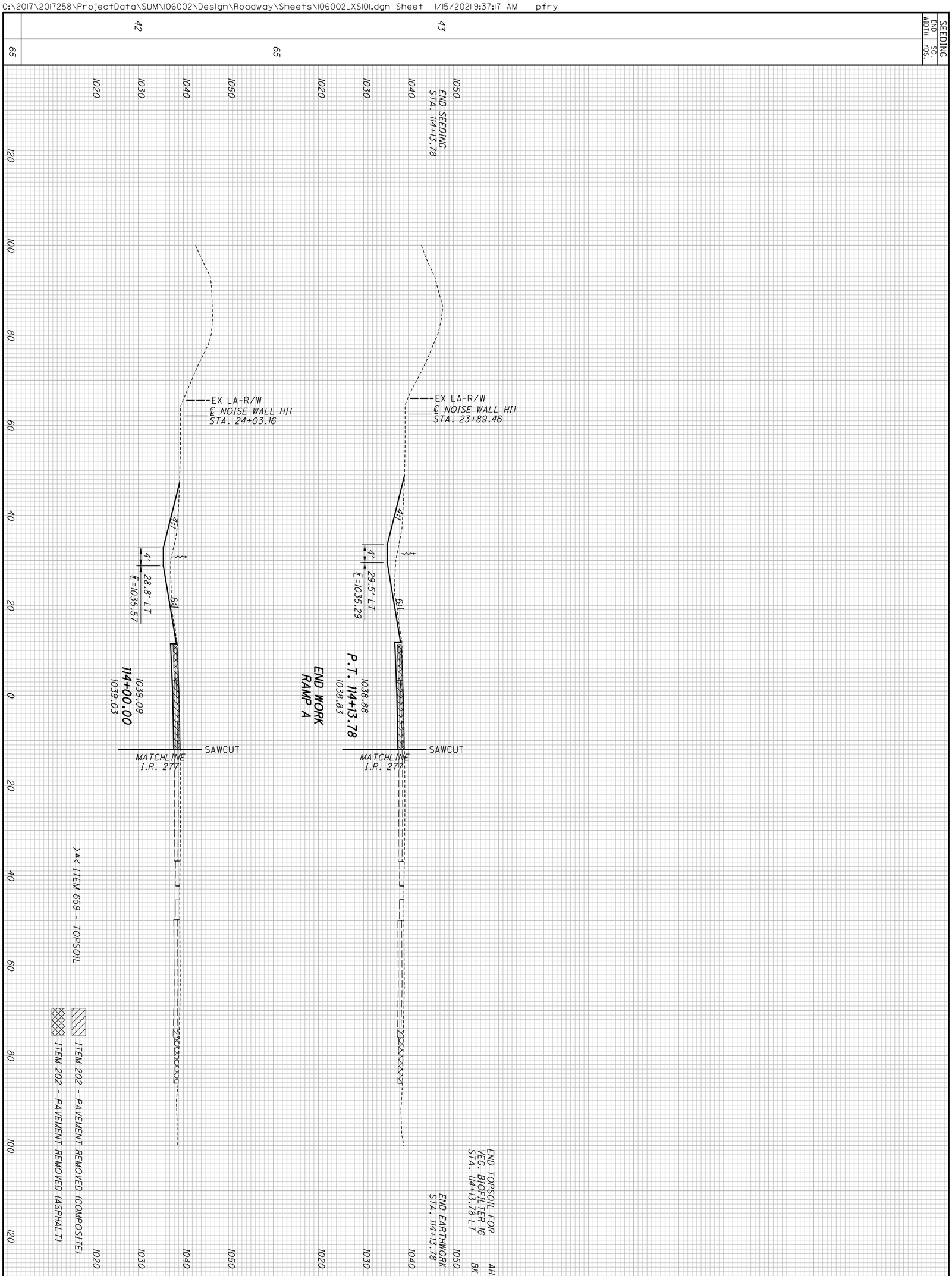
SUM-77/277/224 VARIOUS	CROSS SECTIONS - RAMP A STA. 110+00.00 TO STA. 111+50.00	CALCULATED CJC CHECKED PJF
654 1288		

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS101.dgn Sheet 1/15/2021 9:37:14 AM pfry



655 / 1288	**SUM-77 / 277 / 224** **VARIOUS**	**CROSS SECTIONS - RAMP A** **STA. 112+00.00 TO STA. 113+50.00**

CALCULATED CJC
CHECKED PJF



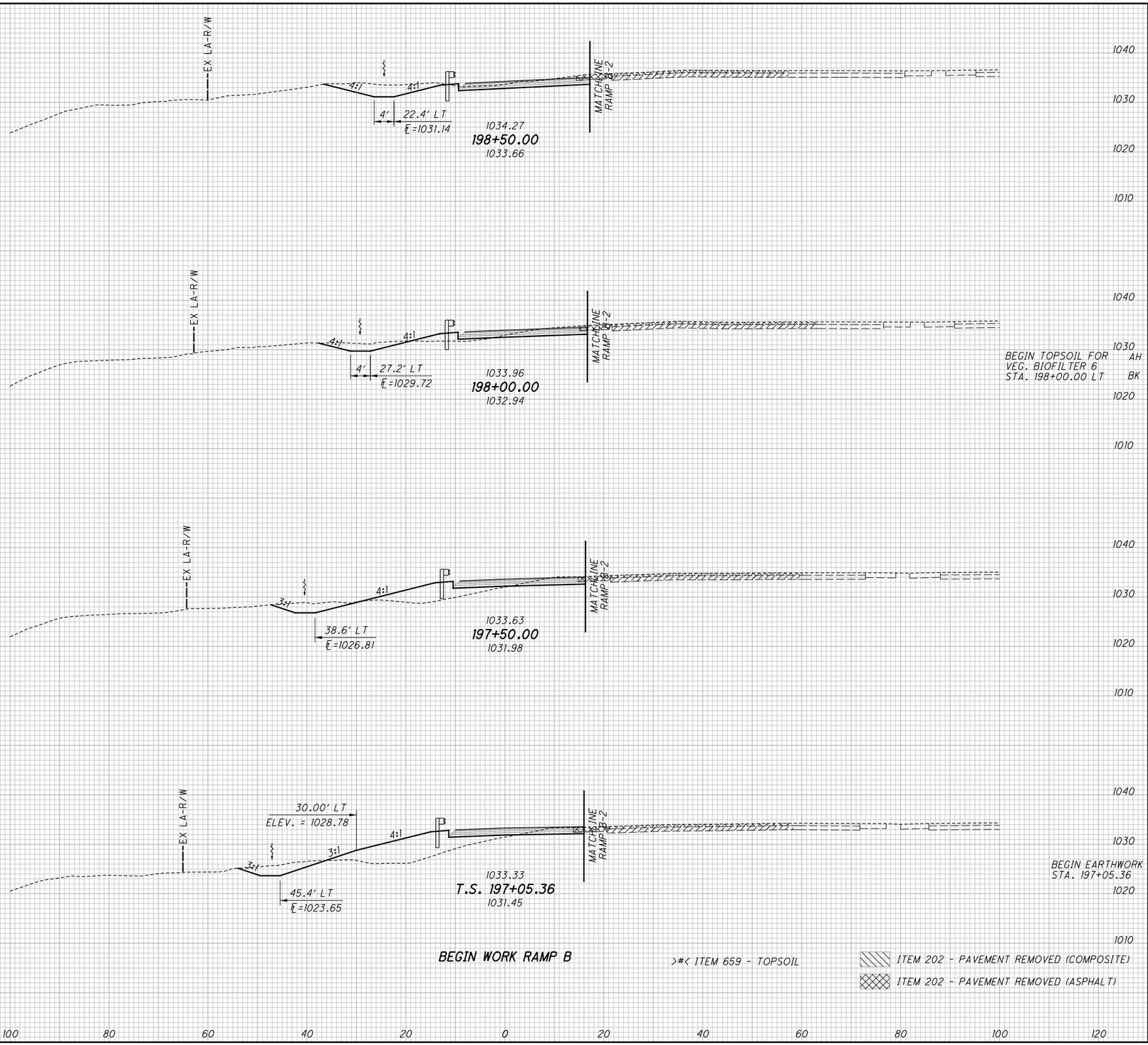
656
1288

SUM-77/277/224
VARIOUS

CROSS SECTIONS - RAMP A
STA. 114+00.00 TO STA. 114+13.78

CALCULATED CJC
CHECKED PJF

SEEDING END WIDTH	SEEDING SQ. YDS.
33	178
	186
34	214
43	228
49	806



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>5<
		180	1
	>3<		
70	1		
			>7<
		105	11
	>5<		
	>0<		
43	11		
		74	59
37	53		
		59	130
34	104		
		418	>12<
			201

CALCULATED CJC
CHECKED PJF

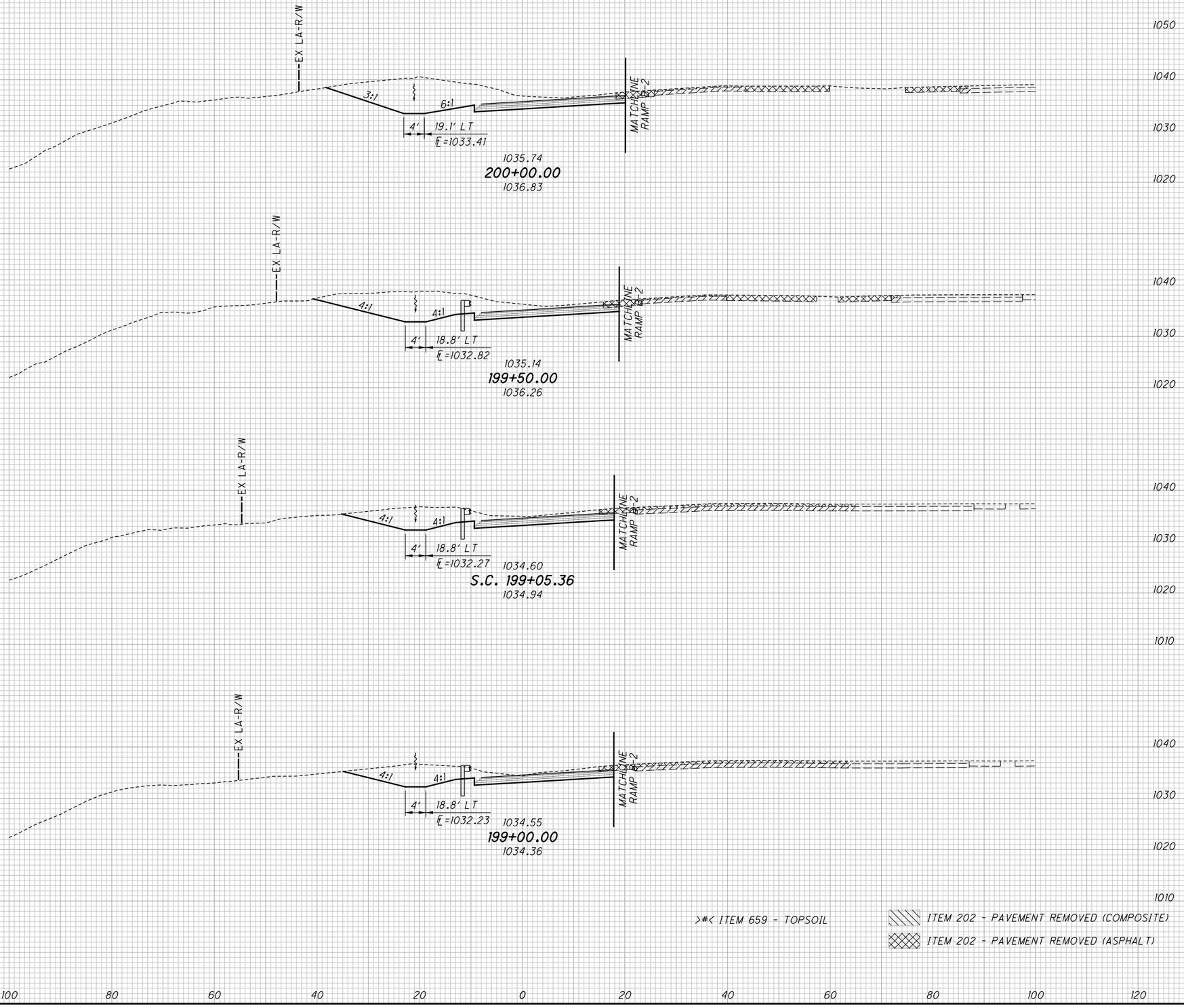
CROSS SECTIONS - RAMP B
STA. 197+05.36 TO STA. 198+50.00

SUM-77 / 277 / 224
VARIOUS

657
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS02.dgn Sheet 1/14/2021 4:22:40 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	194			430	>7< 0
35		212	>4< 0		
	200			376	>6< 0
37		194	>2< 0		
	171			268	>3< 0
32		130	>2< 0		
	19			25	>0< 0
31		124	>2< 0		
	584			1099	>16< 0



>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED CJC

CHECKED PJF

CROSS SECTIONS - RAMP B
STA. 199+00.00 TO STA. 200+00.00

SUM-77 / 277 / 224
VARIOUS

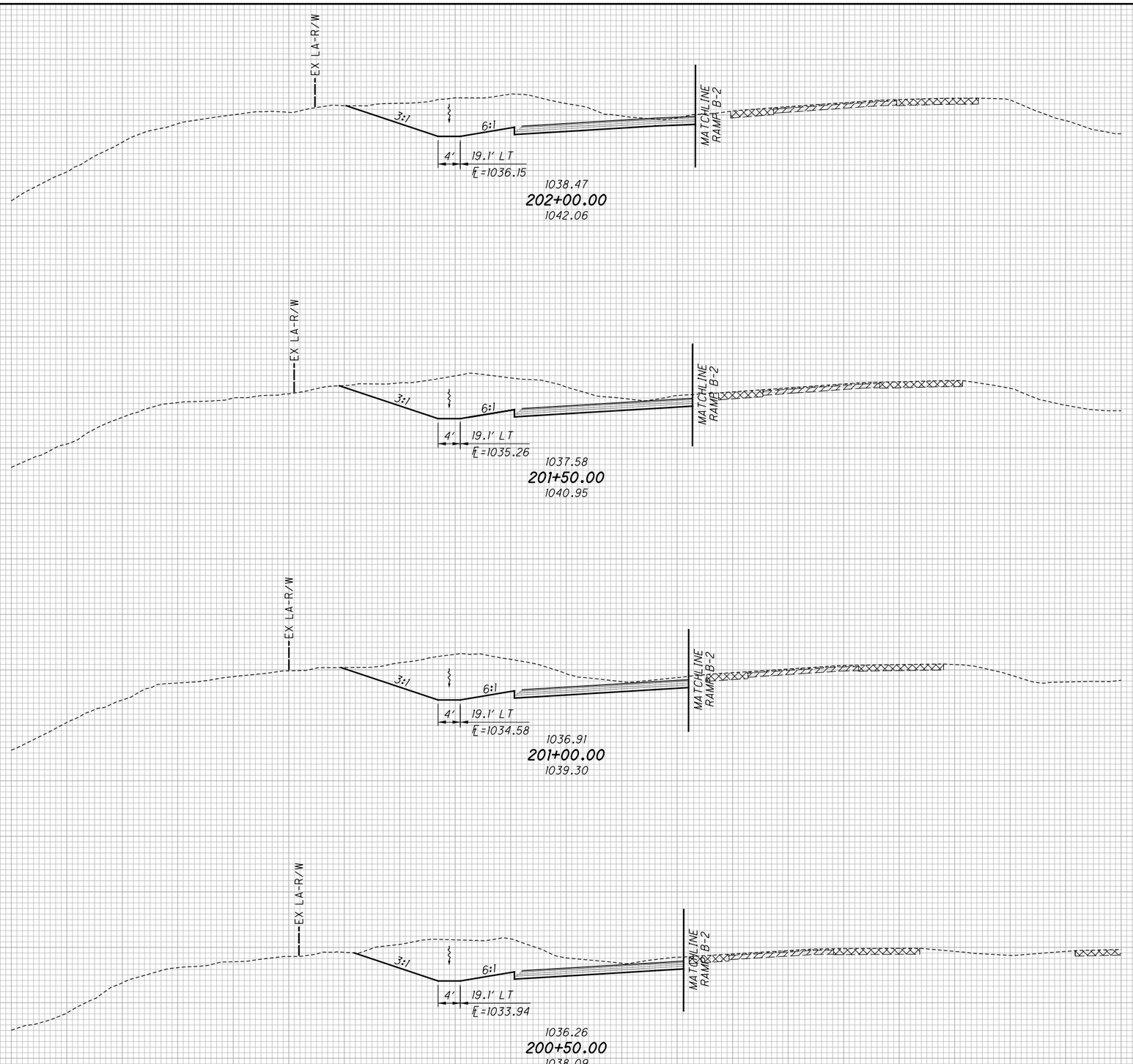
658
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS102.dgn Sheet 1/14/2021 4:22:42 PM pfry

CROSS SECTIONS - RAMP B
STA. 200+50.00 TO STA. 202+00.00

CALCULATED CJC
CHECKED PJF

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	189			428	>7< 0
37		258	>4< 0		
	231			495	>7< 0
46		277	>4< 0		
	233			505	>7< 0
38		268	>4< 0		
	203			481	>7< 0
35		252	>4< 0		
	856			1909	>28< 0



>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

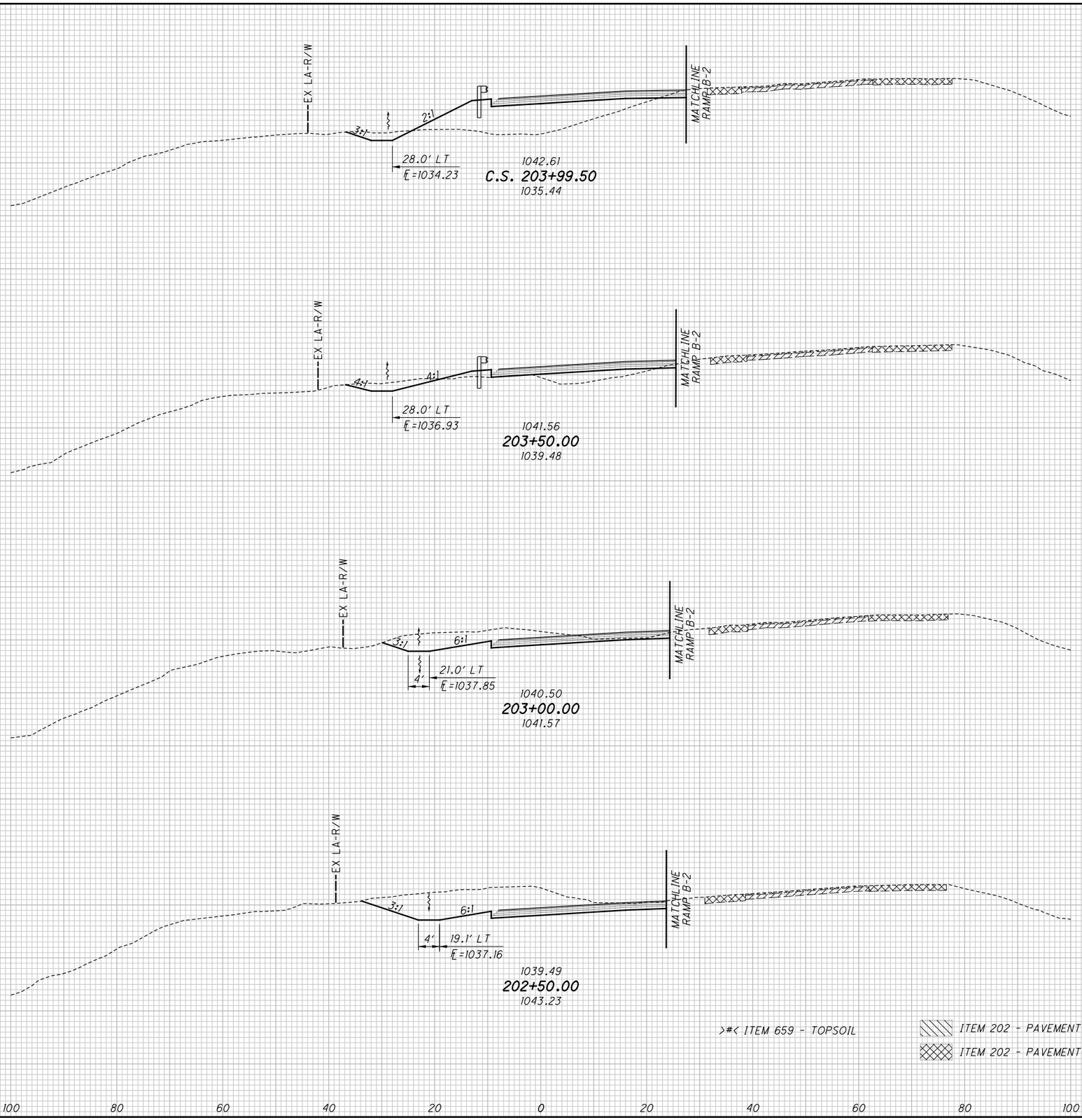
ITEM 202 - PAVEMENT REMOVED (ASPHALT)

SUM-77 / 277 / 224
VARIOUS

659
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS02.dgn Sheet 1/14/2021 4:22:45 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	2
35	
	187
33	
	164
26	
	158
31	
	511



>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		0	3
16	174		
		33	196
20	40		
		119	37
108	>0<		
	>4< 0		
		289	>7< 0
204	>4< 0		
		441	>7< 236

CALCULATED CJC
CHECKED PJF

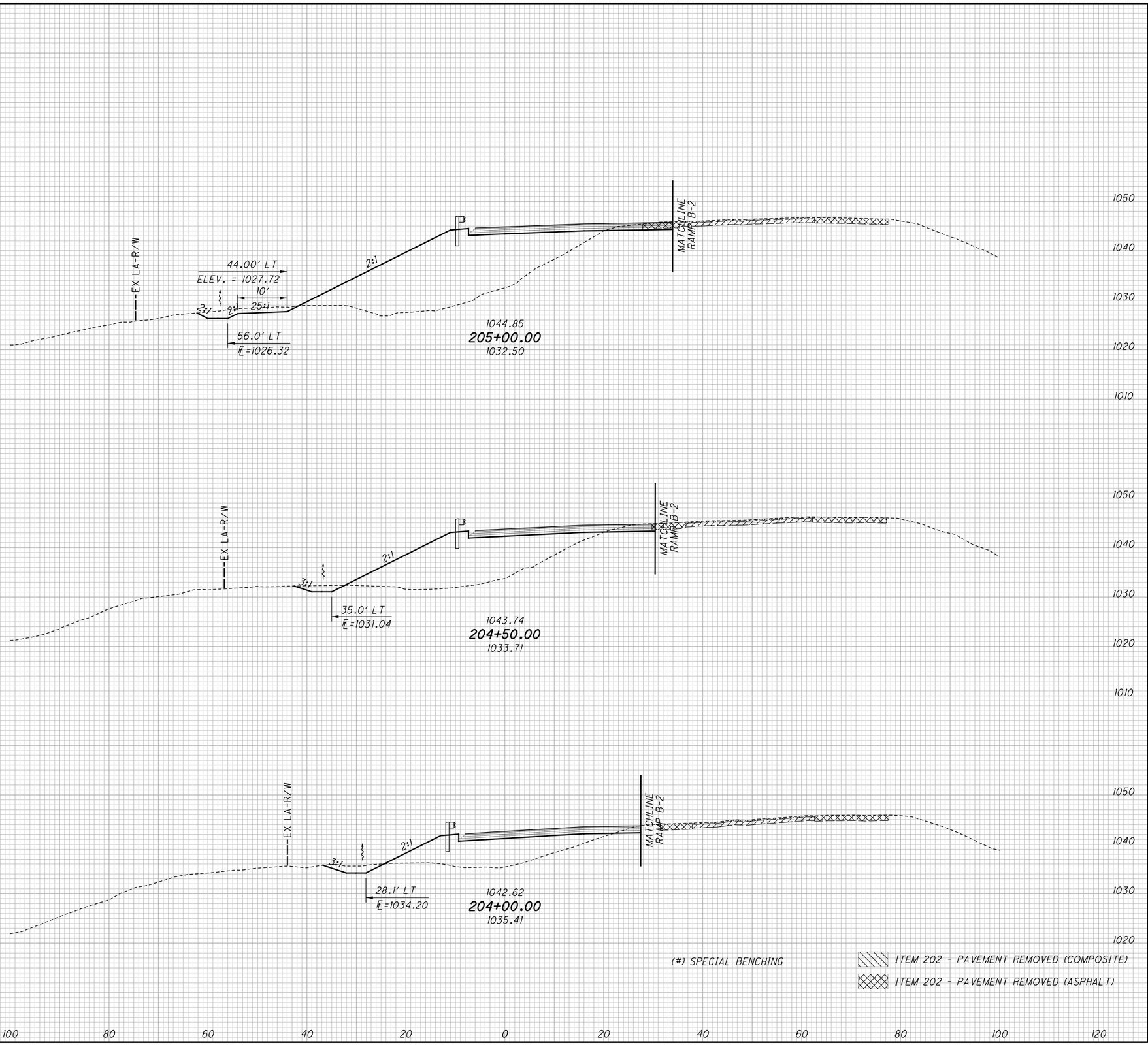
CROSS SECTIONS - RAMP B
STA. 202+50.00 TO STA. 203+99.50

SUM-77 / 277 / 224
VARIOUS

660
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS02.dgn Sheet 1/14/2021 4:22:47 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	383
65	
	303
44	
	219
35	
	905



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		(101)	(101)
		44	1104
(0)	(0)		
28	513		
		44	769
19	317		
		33	456
17	175		
		(101)	(101)
		121	2329

CALCULATED CJC
CHECKED PJF

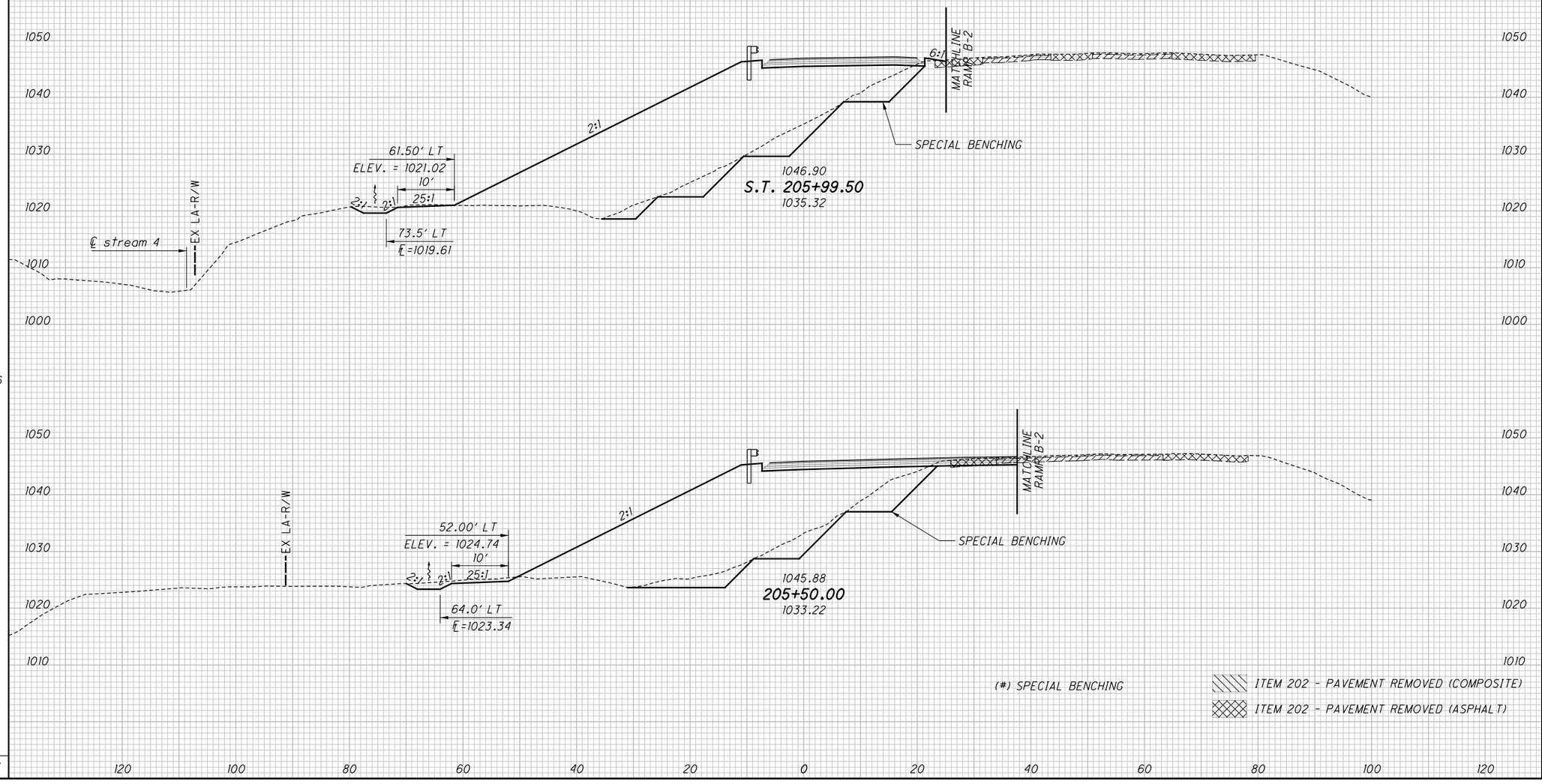
CROSS SECTIONS - RAMP B
STA. 204+00.00 TO STA. 205+00.00

SUM-77 / 277 / 224
VARIOUS

661
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS02.dgn Sheet 1/14/2021 4:22:50 PM pfry

SEEDING	
END WIDTH	SQ. YDS.
	5
	89
	446
	73
	451



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		(2)	(2)
		0	15
(111)	(111)		
10	829		
		(202)	(202)
		28	1382
(109)	(109)		
20	679		
		(204)	(204)
		28	1397

CALCULATED CJC
CHECKED PJF

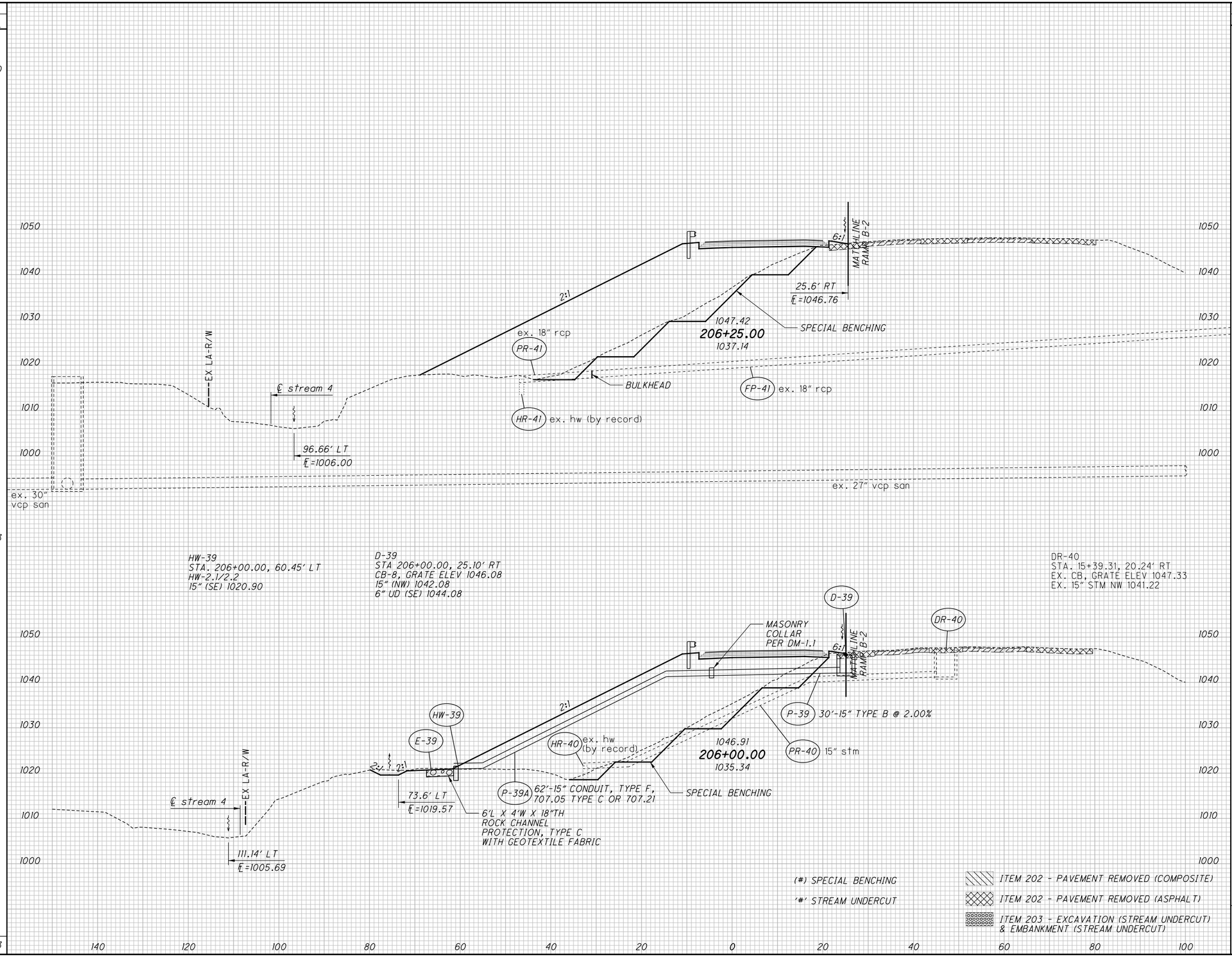
CROSS SECTIONS - RAMP B
STA. 205+50.00 TO STA. 205+99.50

SUM-77 / 277 / 224
VARIOUS

662
1288

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS102.dgn Sheet 1/14/2021 4:22:52 PM pfry

SEEDING	
END WIDTH	SQ. YDS.
	250
79	
	233
89	
	483



(#) SPECIAL BENCHING

'#' STREAM UNDERCUT

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

ITEM 203 - EXCAVATION (STREAM UNDERCUT) & EMBANKMENT (STREAM UNDERCUT)

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		'15'	'15'
		(136)	(136)
		14	860
'0'	'0'		
(107)	(107)		
1	886		
		(102)	(102)
		5	795
(114)	(114)		
10	831		
		'15'	'15'
		(238)	(238)
		19	1655

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B
STA. 206+00.00 TO STA. 206+25.00

SUM-77 / 277 / 224
VARIOUS

663
1288

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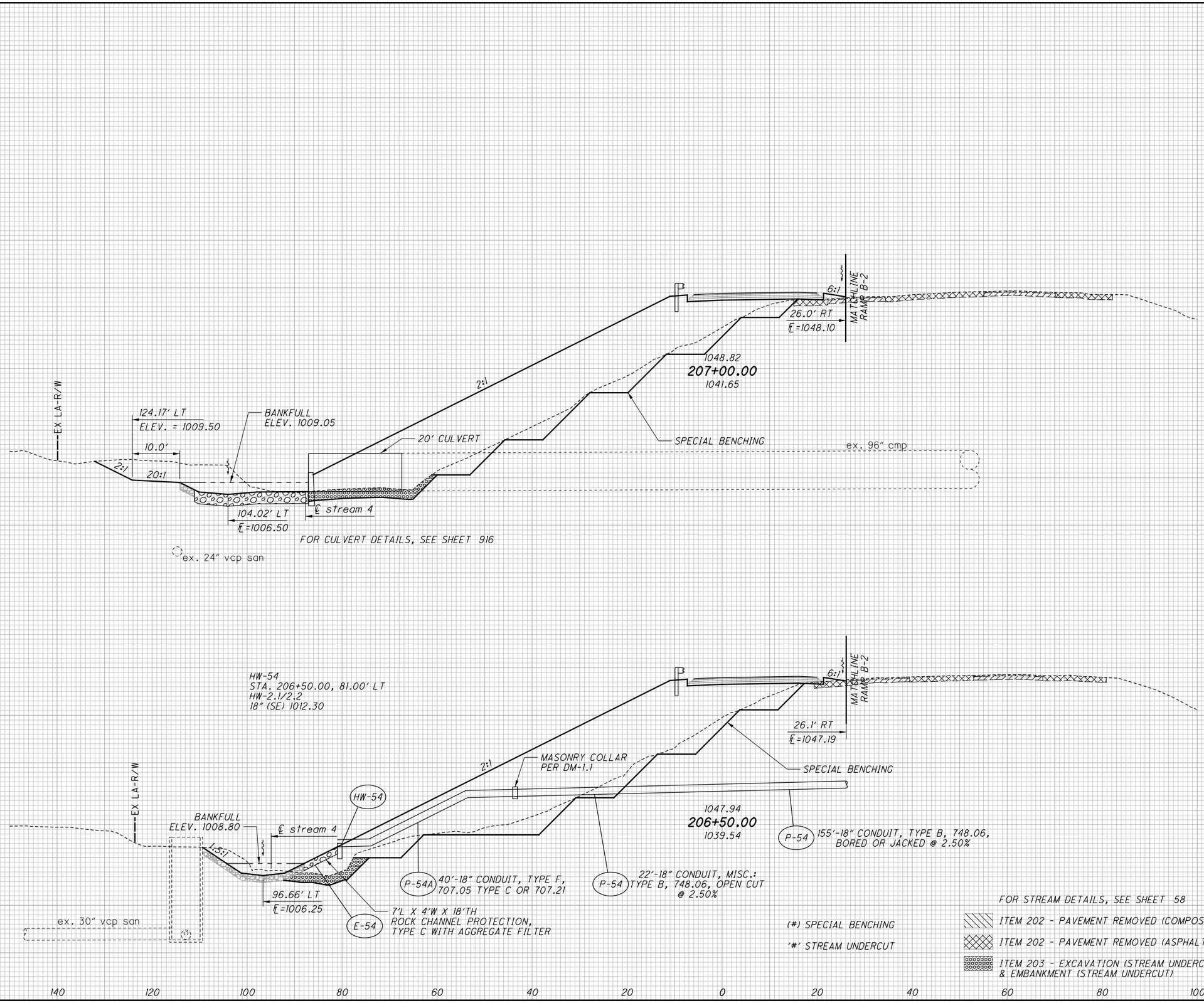
SEEDING END WIDTH	SEEDING SQ. YDS.
	714
122	
	619
101	
	1333



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		'71'	'71'
		(254)	(254)
		204	1656
'51'	'51'		
(142)	(142)		
136	998		
		'77'	'77'
		(304)	(304)
		154	1823
'32'	'32'		
(186)	(186)		
30	971		
		'148'	'148'
		(558)	(558)
		358	3479

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B
STA. 206+50.00 TO STA. 207+00.00

SUM-77 / 277 / 224
VARIOUS

664
1288

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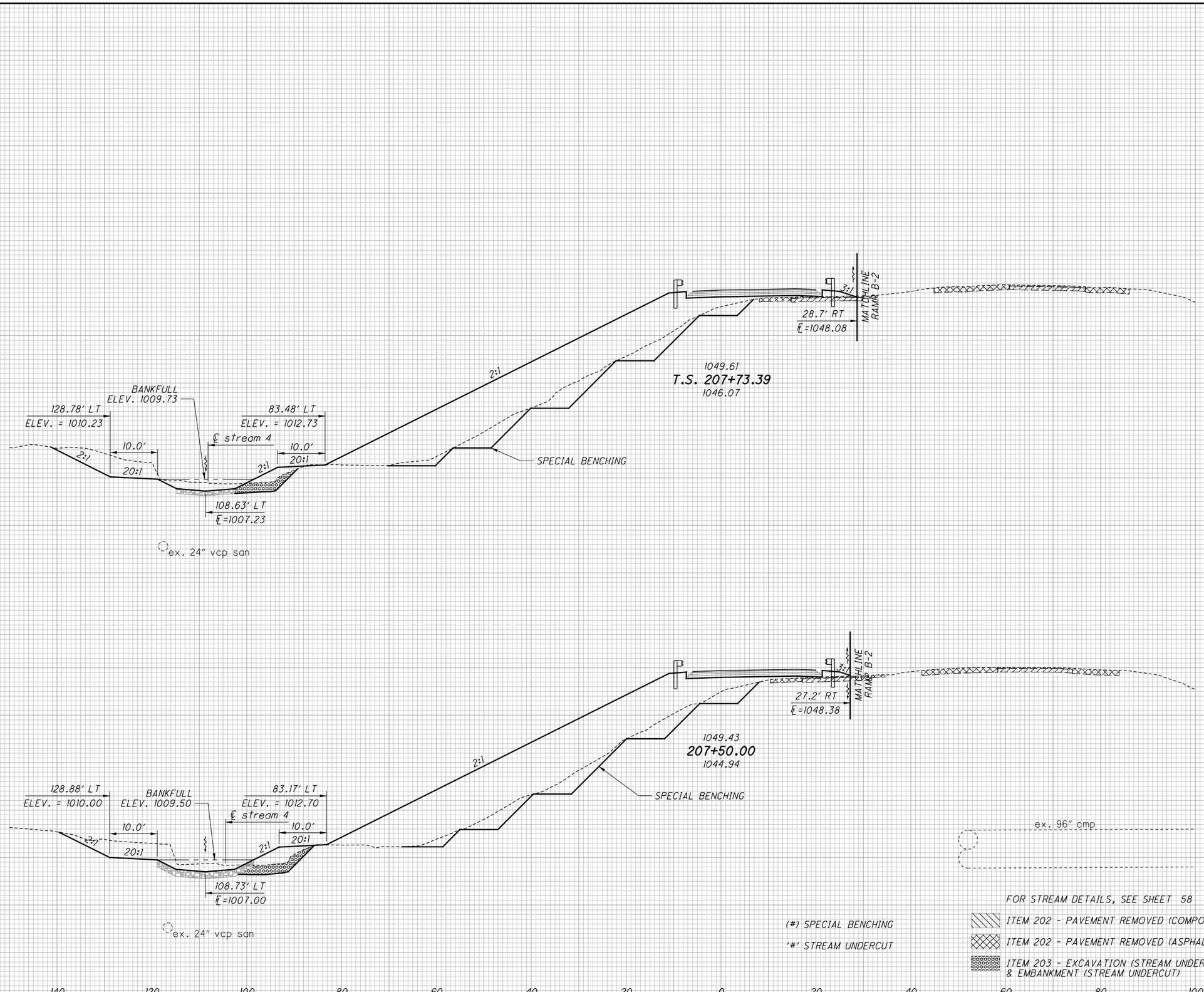
SEEDING END WIDTH	SEEDING SQ. YDS.
	438
148	
	368
135	
	806



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		'16'	'16'
		(137)	(137)
		94	628
'22'	'22'		
(141)	(141)		
92	694		
'26'	'26'	'21'	'21'
(132)	(132)	(118)	(118)
84	791	76	643
		'37'	'37'
		(255)	(255)
		170	1271

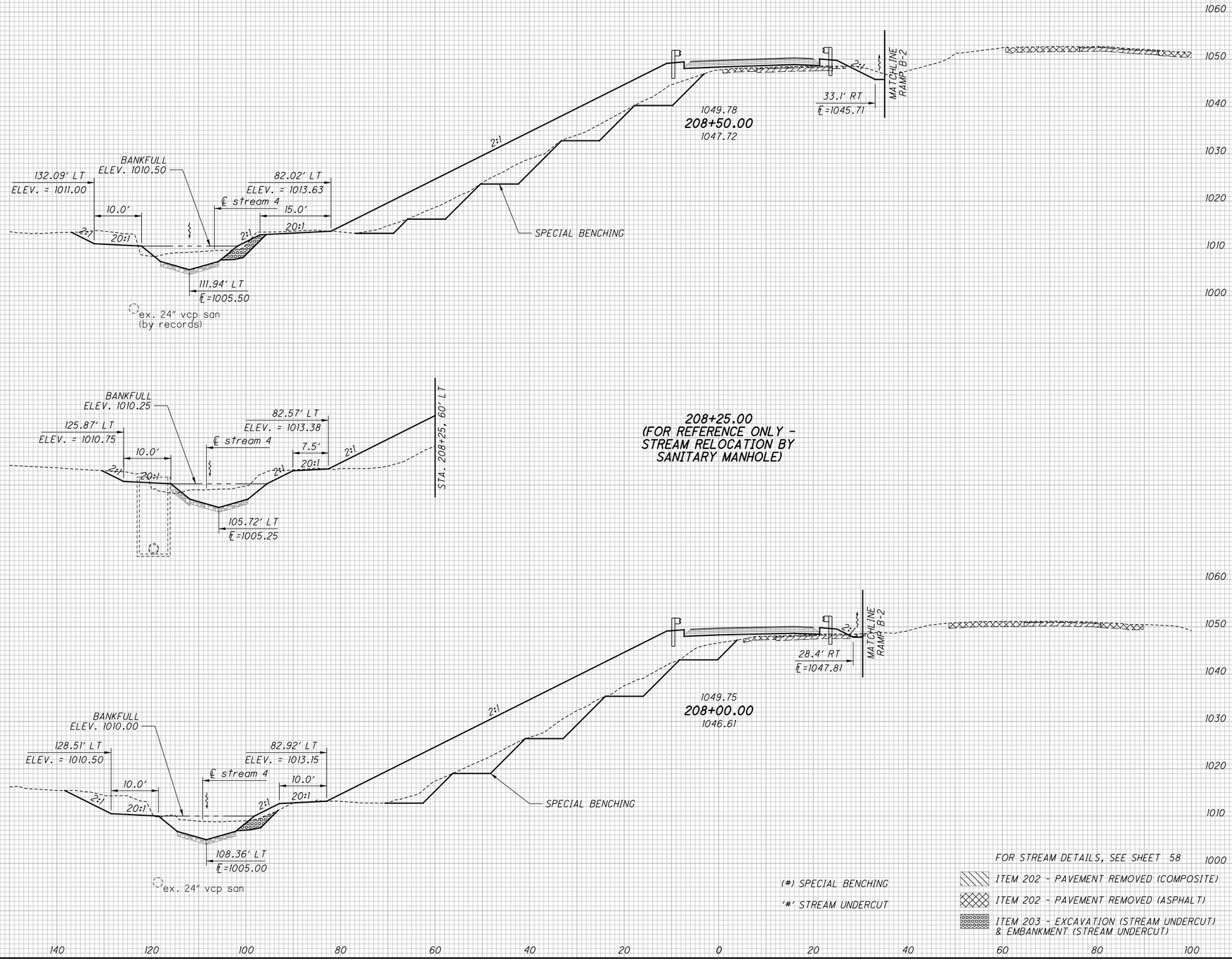
CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B
STA. 207+50.00 TO STA. 207+73.39

SUM-77 / 277 / 224
VARIOUS

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS02.dgn Sheet 1/14/2021 4:22:58 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	853
151	
	831
148	
	1684



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		'40'	'40'
		(272)	(272)
		151	688
'15'	'15'		
(126)	(126)		
85	441		
		'24'	'24'
		(244)	(244)
		169	946
'11'	'11'		
(138)	(138)		
98	581		
		'64'	'64'
		(516)	(516)
		320	1634

CALCULATED CJC
CHECKED PJF

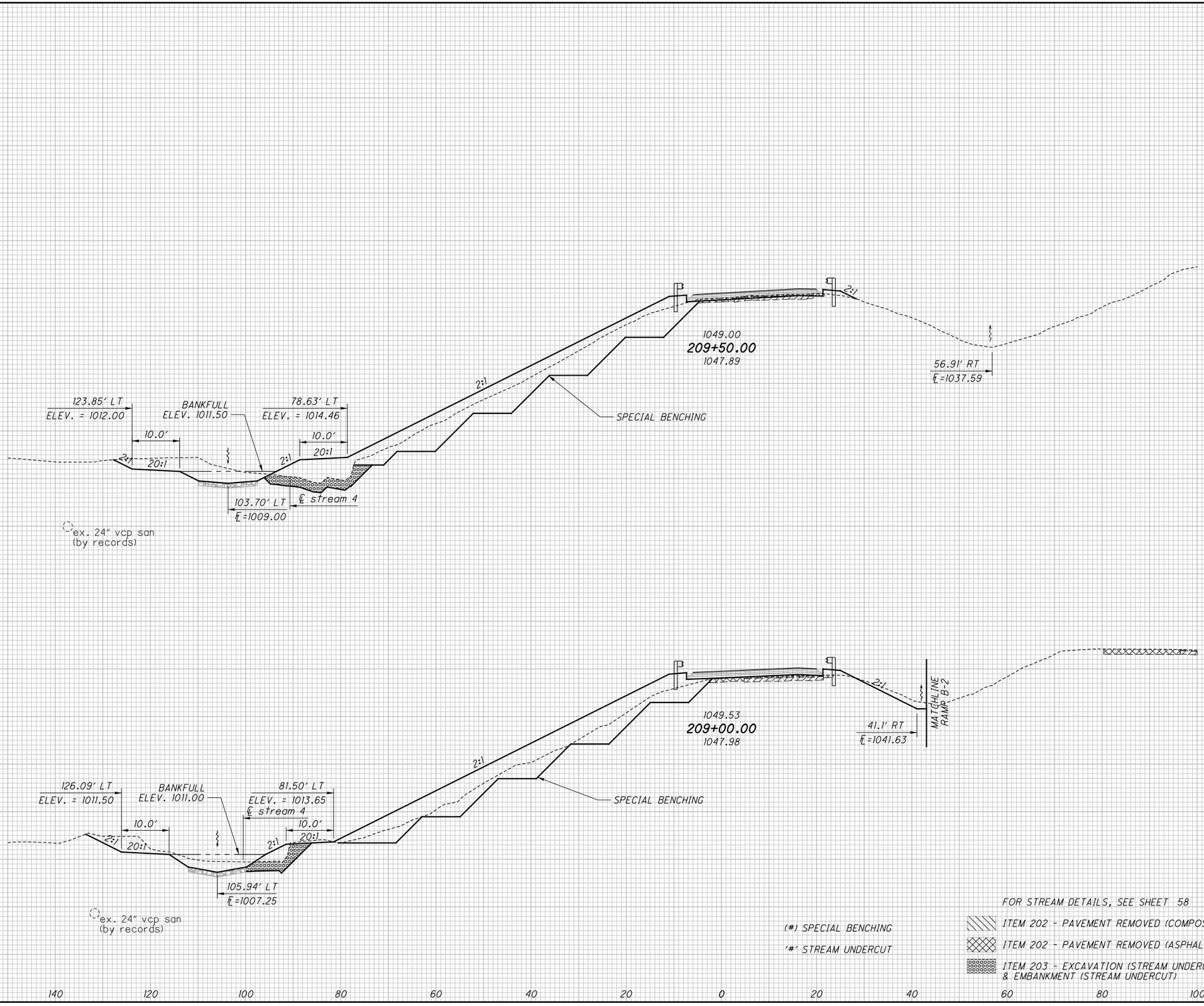
CROSS SECTIONS - RAMP B
STA. 208+00.00 TO STA. 208+50.00

SUM-77 / 277 / 224
VARIOUS

666
1288

D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS02.dgn Sheet 1/14/2021 2:22:59 PM pfry

SEEDING	
END WIDTH	SQ. YDS.
	351
136	
	811
156	
	1162



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		'42'	'42'
		(242)	(242)
		80	181
'45'	'45'		
(263)	(263)		
85	225		
		'68'	'68'
		(399)	(399)
		151	488
'28'	'28'		
(168)	(168)		
78	302		
		'110'	'110'
		(641)	(641)
		231	669

FOR STREAM DETAILS, SEE SHEET 58

(#) SPECIAL BENCHING

'#' STREAM UNDERCUT

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

ITEM 203 - EXCAVATION (STREAM UNDERCUT) & EMBANKMENT (STREAM UNDERCUT)

CALCULATED CJC
CHECKED PJF

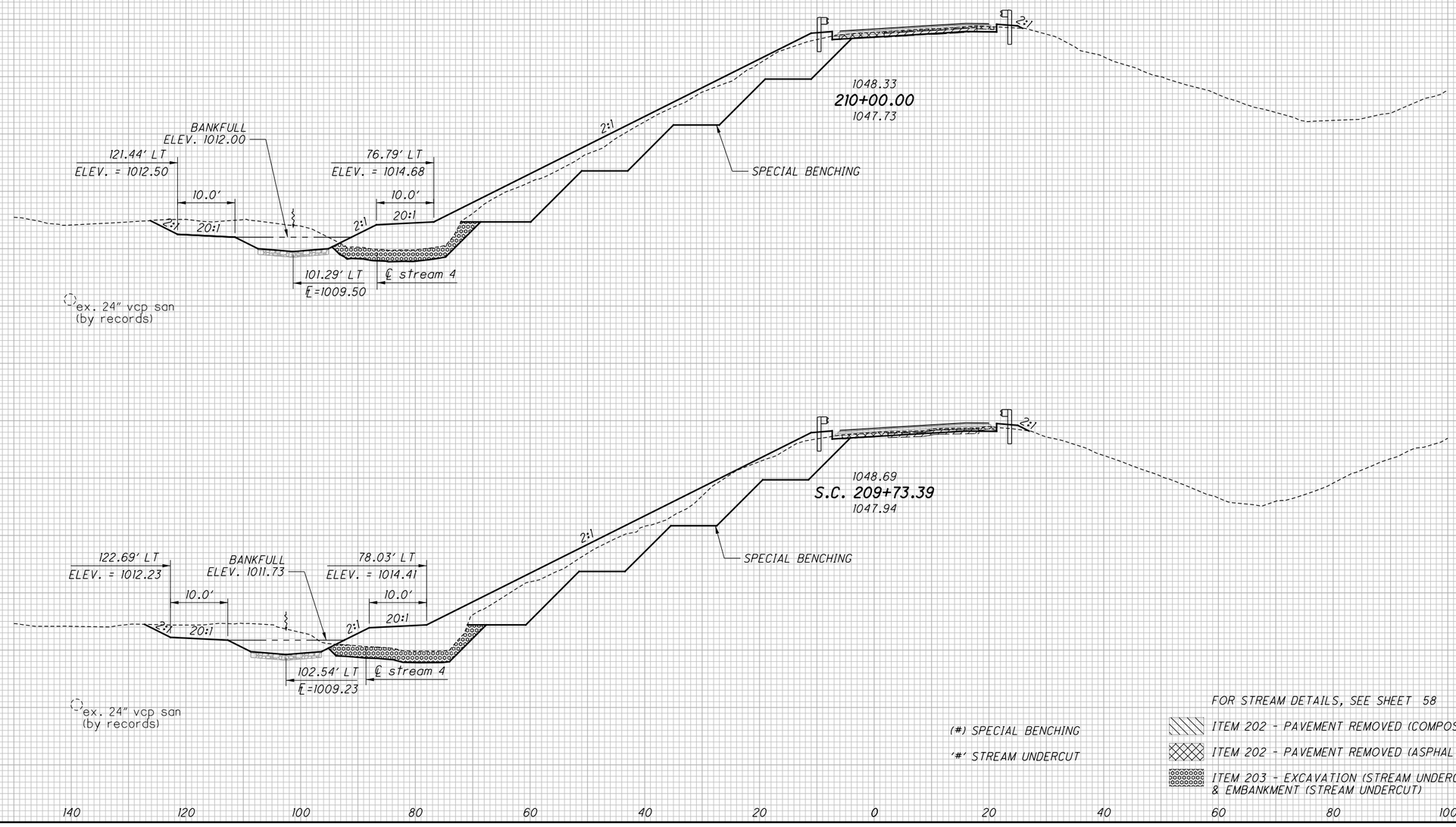
CROSS SECTIONS - RAMP B
STA. 209+00.00 TO STA. 209+50.00

SUM-77 / 277 / 224
VARIOUS

667
1288

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS02.dgn Sheet 1/14/2021 4:23:02 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	431
132	
	393
134	
	824



FOR STREAM DETAILS, SEE SHEET 58

(#) SPECIAL BENCHING

'#' STREAM UNDERCUT

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

ITEM 203 - EXCAVATION (STREAM UNDERCUT) & EMBANKMENT (STREAM UNDERCUT)

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		'47'	'47'
		(289)	(289)
		115	153
'51'	'51'		
(312)	(312)		
104	163		
		'51'	'51'
		(300)	(300)
		100	176
'53'	'53'		
(296)	(296)		
99	194		
		'98'	'98'
		(589)	(589)
		215	329

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B
STA. 209+73.39 TO STA. 210+00.00

SUM-77 / 277 / 224
VARIOUS

668
1288

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SEEDING	
END WIDTH	SQ. YDS.
	139
24	
	131
23	
	270

END AREA	
CUT	FILL
33	0
'0' (0) 20	'0' (0) 2

VOLUME	
CUT	FILL
64	0
49	2
113	2

CALCULATED CJC
CHECKED PJF

(#) SPECIAL BENCHING

'#' STREAM UNDERCUT

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

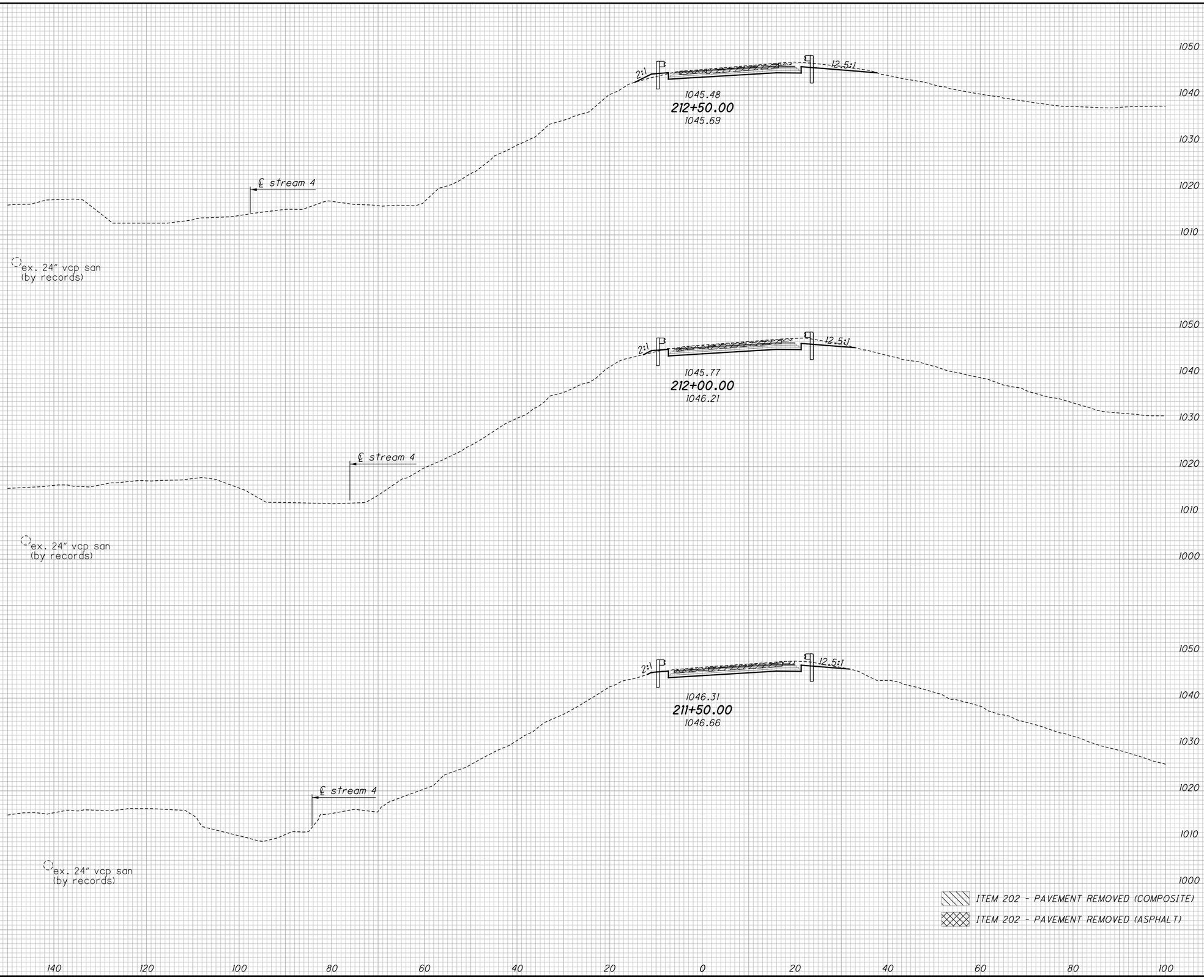
CROSS SECTIONS - RAMP B
STA. 210+50.00 TO STA. 211+00.00

SUM-77 / 277 / 224
VARIOUS

669
1288

O:\2017\2017258\Project Data\SUM\106002\Design\Roadway\Sheets\106002_XS102.dgn Sheet 1/14/2021 4:23:05 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
35	194
	175
28	
26	150
	519



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		69	4
43	3		
		81	4
45	1		
36	0	75	1
		225	9

CALCULATED CJC
CHECKED PJF

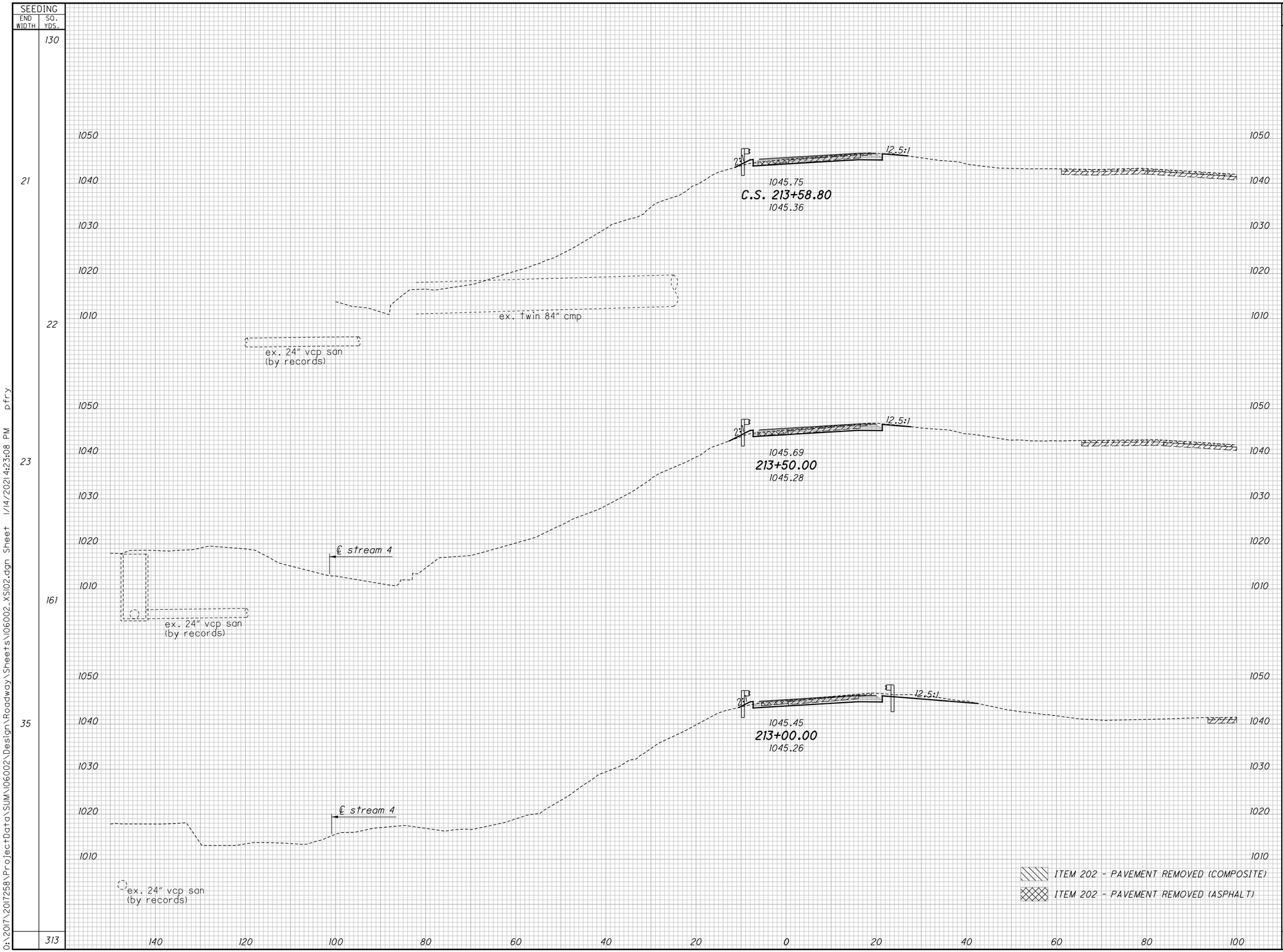
CROSS SECTIONS - RAMP B
STA. 211+50.00 TO STA. 212+50.00

SUM-77 / 277 / 224
VARIOUS

670
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS02.dgn Sheet 1/14/2021 4:23:06 PM pfry

SEEDING	
END WIDTH	SQ. YDS.
	130
21	
	22
23	
	161
35	
	313



END AREA	
CUT	FILL
12	2
13	2
31	1

VOLUME	
CUT	FILL
27	8
4	1
41	3
72	12

CALCULATED CJC
CHECKED PJF

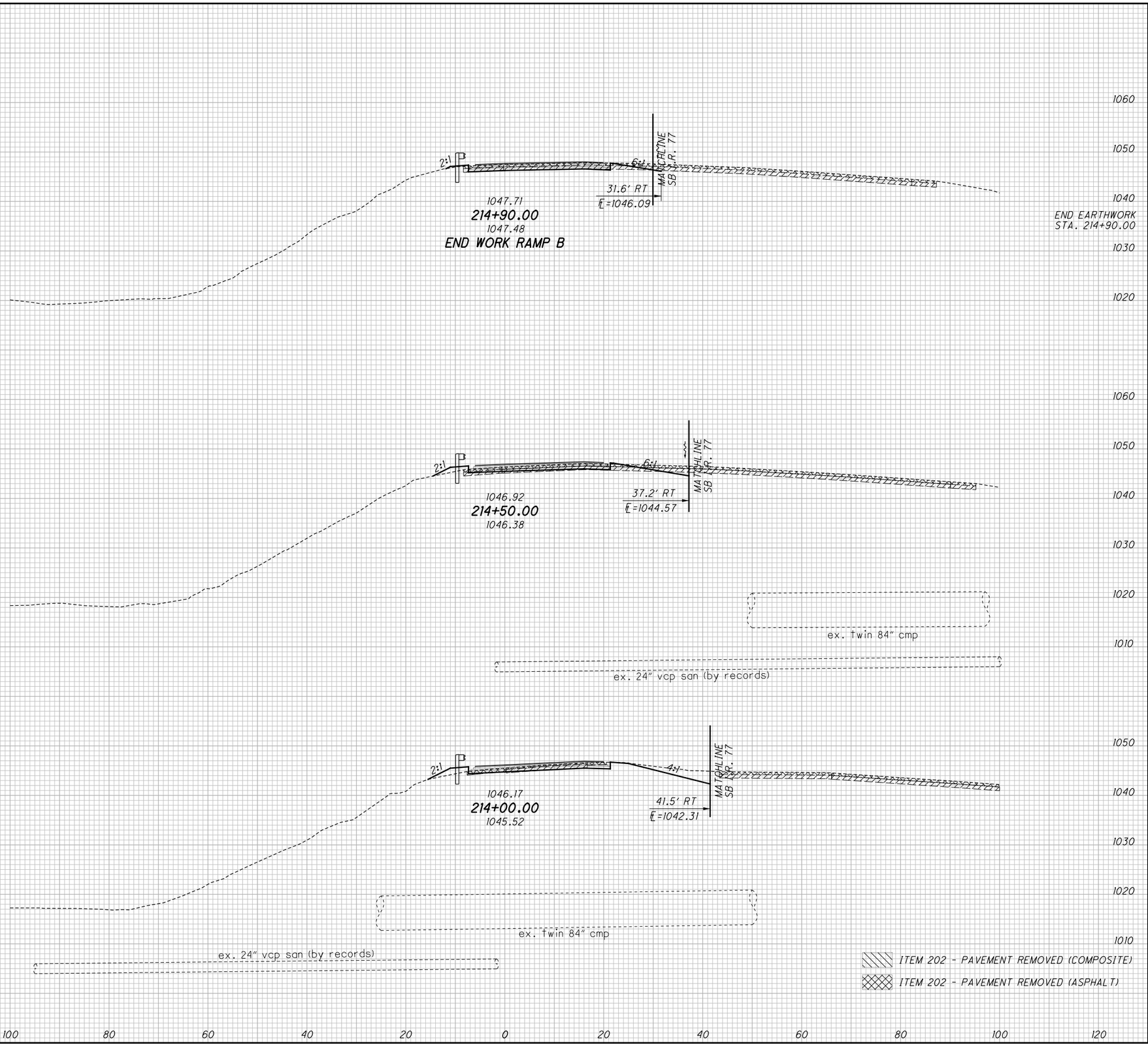
CROSS SECTIONS - RAMP B
STA. 213+00.00 TO STA. 213+58.80

SUM-77 / 277 / 224
VARIOUS

671
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS02.dgn Sheet 1/14/2021 4:23:08 PM pfry

SEEDING	
END WIDTH	SQ. YDS.
22	
	116
30	
	183
36	
	299



END AREA	
CUT	FILL
1	8
2	23
2	23
24	30
24	9
26	53

VOLUME	
CUT	FILL
2	23
24	30

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B
STA. 214+00.00 TO STA. 214+90.00

SUM-77 / 277 / 224
VARIOUS

672
1288

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS102.dgn Sheet 1/14/2021 4:23:10 PM pfry

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CJC
CHECKED PJF

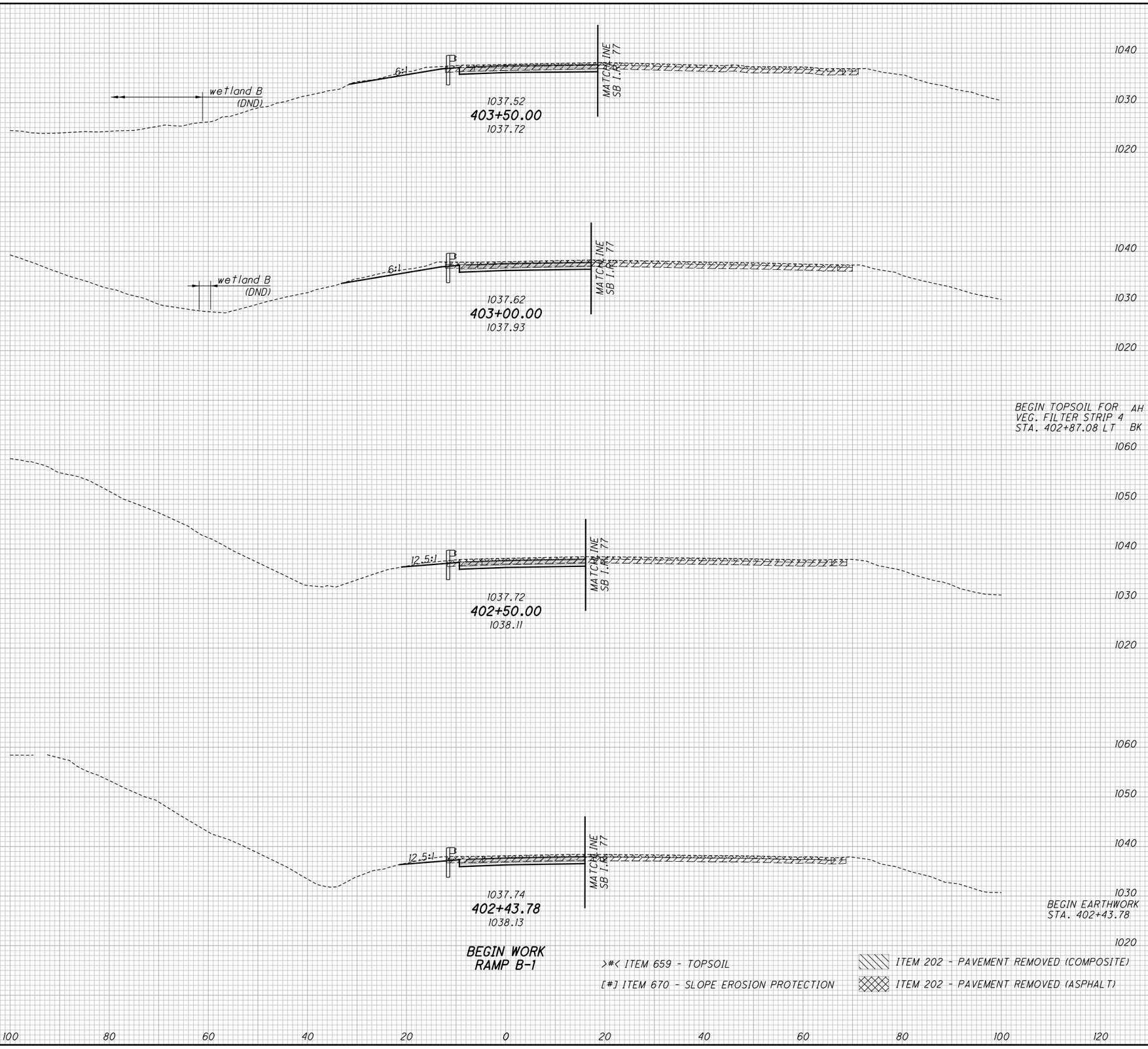
CROSS SECTIONS - RAMP B
STA. 215+00.00 TO STA. 215+58.80

SUM-77 / 277 / 224
VARIOUS

673
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS02.dgn Sheet 1/14/2021 4:23:12 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	[94]
	156
[17]	
28	
	[94]
	158
[17]	
29	
	[24]
[17]	
[0]	
	128
17	
12	
17	
	[212]
	454



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>11<
		48	5
	>6<		
28	2		
			>11<
		57	3
	>6<		
34	1		
			>3<
	>6<		
	>0<		
		50	3
20	2		
		5	0
21	1		
		160	>25<
			11

>#< ITEM 659 - TOPSOIL

[#] ITEM 670 - SLOPE EROSION PROTECTION

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED CJC

CHECKED PJF

CROSS SECTIONS - RAMP B-1
STA. 402+43.78 TO STA. 403+50.00

SUM-77 / 277 / 224
VARIOUS

674
1288

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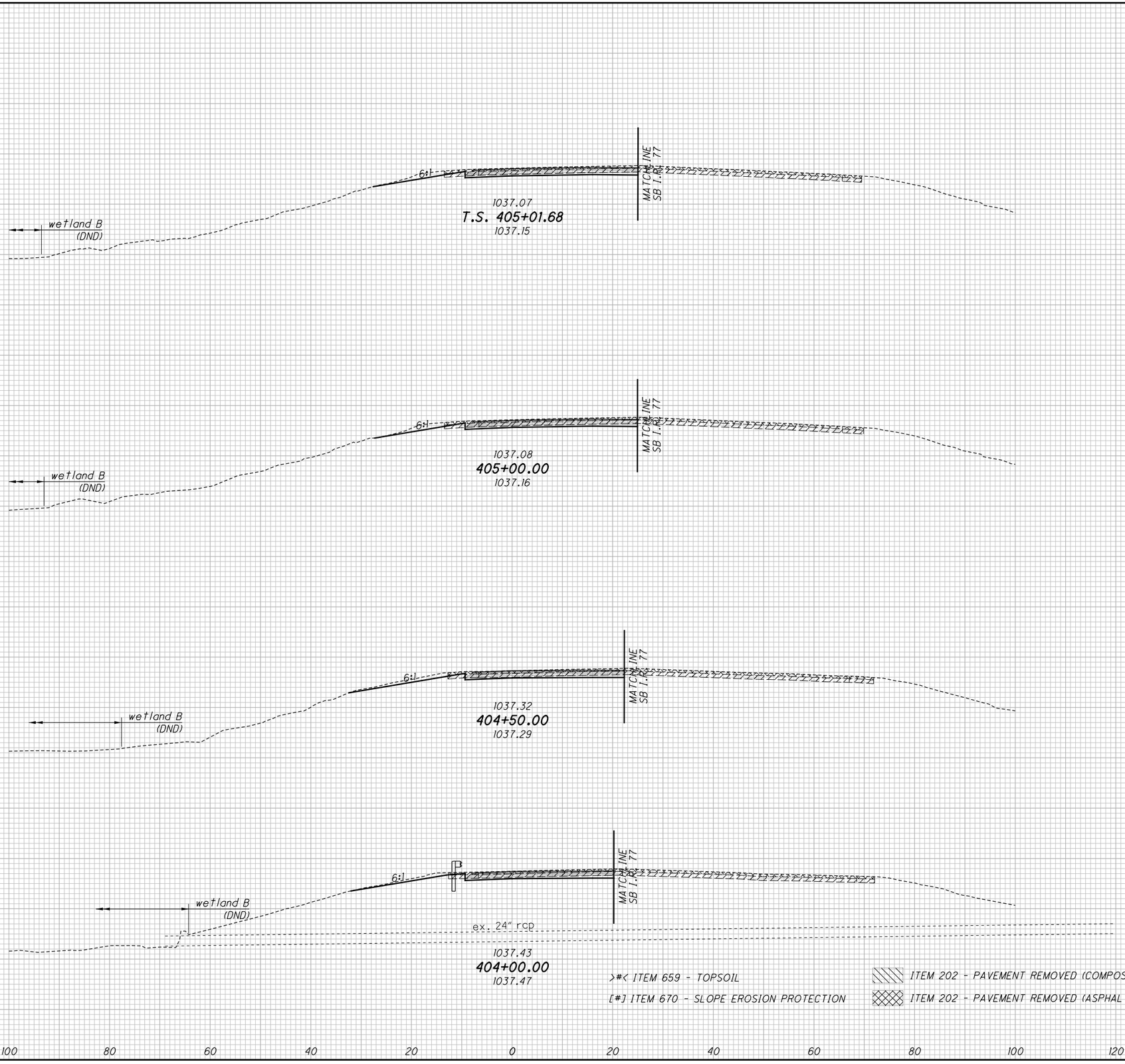
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	[113] 148			52	>13< 3
[17] 24		24	>6< 2		
	[3] 4			2	>0< 0
[17] 24		25	>6< 1		
	[94] 147			45	>11< 2
[17] 29		24	>6< 1		
	[94] 158			44	>11< 4
[17] 28		24	>6< 3		
[304] 457				143	>35< 9



>#< ITEM 659 - TOPSOIL

[#] ITEM 670 - SLOPE EROSION PROTECTION

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED CJC

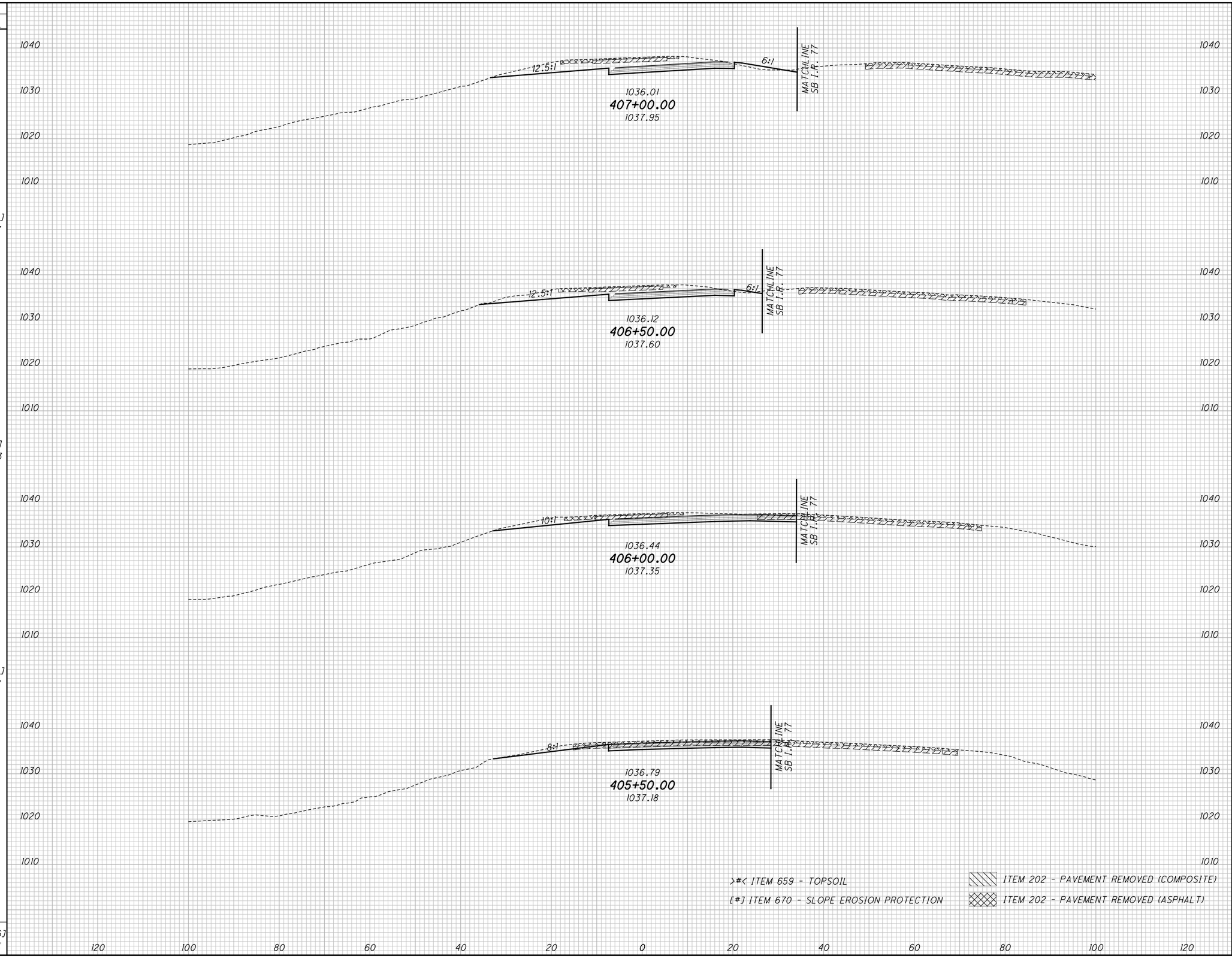
CHECKED PJF

CROSS SECTIONS - RAMP B-1
STA. 404+00.00 TO STA. 405+01.68

SUM-77 / 277 / 224
VARIOUS

675
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS03.dgn Sheet 1/13/2021 6:09:07 PM pfry



SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	[3] 9			7	>0< 0
[15] 47		106	>5< 5		
	[83] 247			182	>9< 6
[15] 42		91	>5< 1		
	[111] 203			161	>12< 1
[25] 31		83	>8< 0		
	[139] 172			108	>15< 1
[25] 31		34	>8< 1		
[336] 631				458	>36< 8

CALCULATED CJC
CHECKED PJF

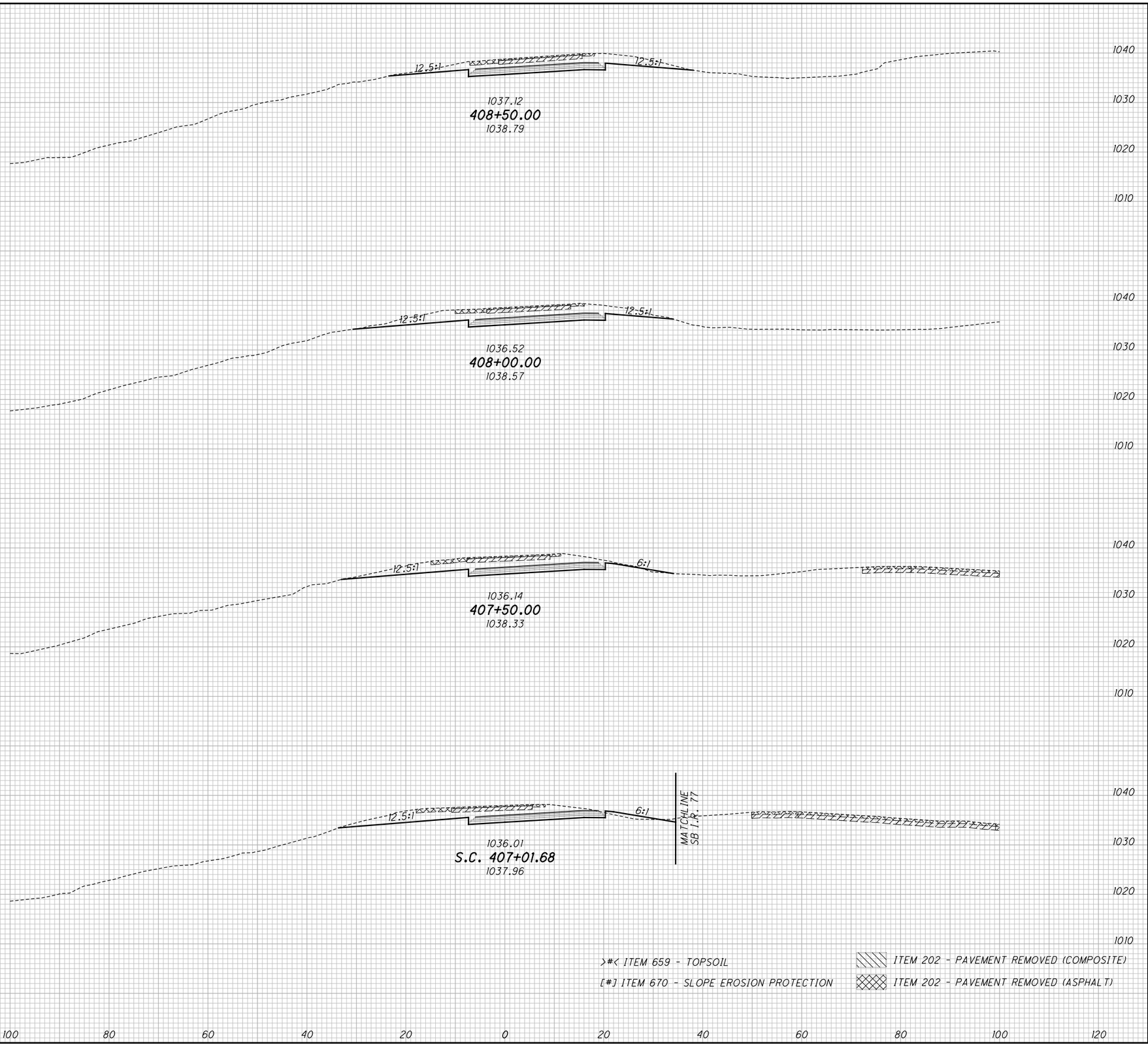
CROSS SECTIONS - RAMP B-1
STA. 405+50.00 TO STA. 407+00.00

SUM-77 / 277 / 224
VARIOUS

676
1288

0:\2017\20172581\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS103.dgn Sheet 1/13/2021 6:09:10 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	[0] 1				>0< 0
[15] 45		103	>5< 0	1	
	[83] 258			206	>9< 0
[15] 48		120	>5< 0		
	[83] 272			215	>9< 1
[15] 50		112	>5< 1		
	[81] 260			196	>9< 6
[15] 47		107	>5< 6		
	[247] 791			618	>27< 7



>#< ITEM 659 - TOPSOIL

[#] ITEM 670 - SLOPE EROSION PROTECTION

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED CJC

CHECKED PJF

CROSS SECTIONS - RAMP B-1
STA. 407+01.68 TO STA. 408+50.00

SUM-77 / 277 / 224
VARIOUS

677
1288

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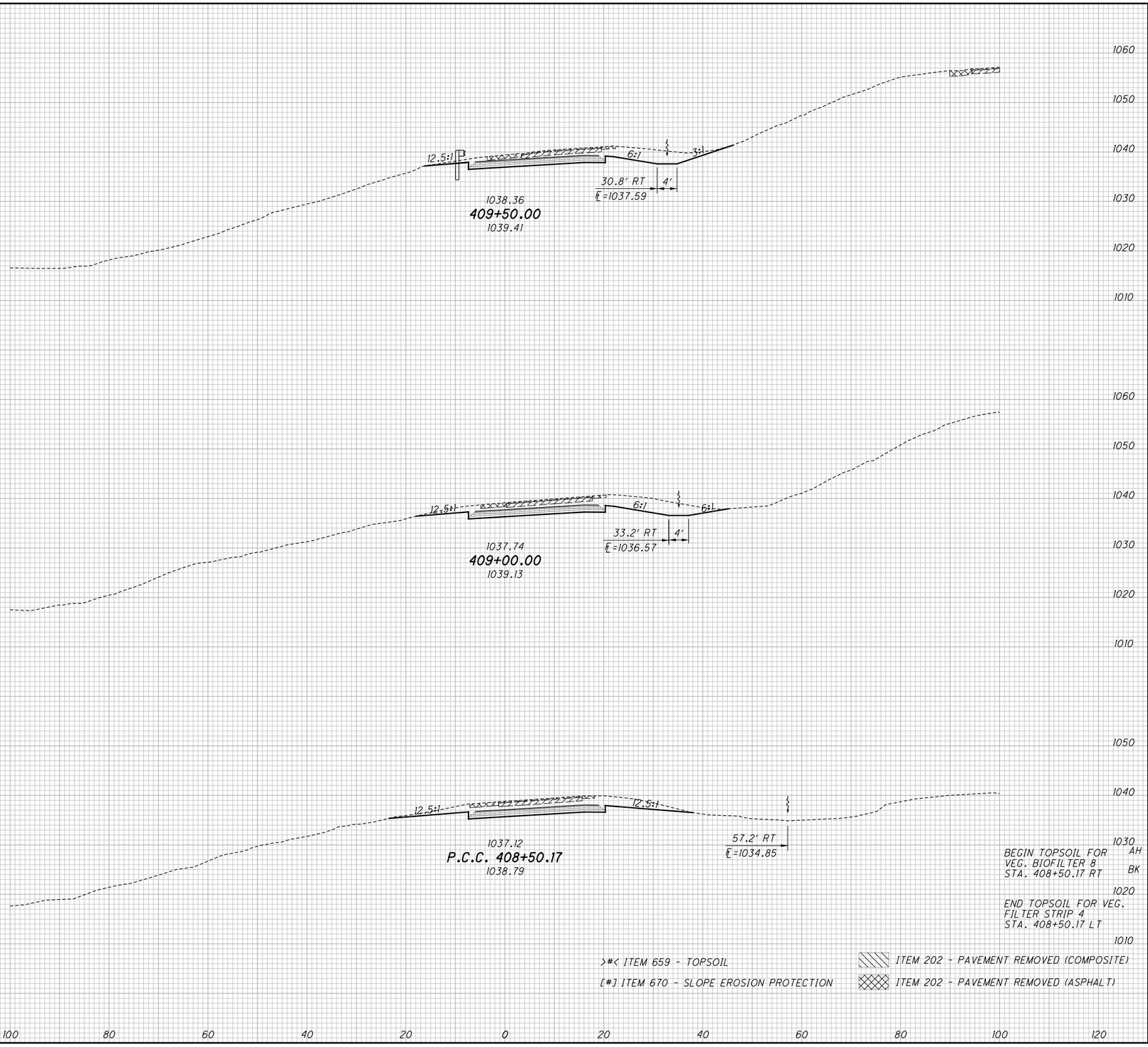
SEEDING END WIDTH	SEEDING SQ. YDS.
	256
50	
	267
46	
	252
[0] [15] 45	
	775



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>7<
		182	0
	>4<		
103	0		
			>8<
		207	0
	>5<		
121	0		
			>10<
		212	0
	>6<		
	>5<		
109	0		
			>25<
		601	0

>#< ITEM 659 - TOPSOIL

[#] ITEM 670 - SLOPE EROSION PROTECTION

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B-1
STA. 408+50.17 TO STA. 409+50.00

SUM-77 / 277 / 224
VARIOUS

678
1288

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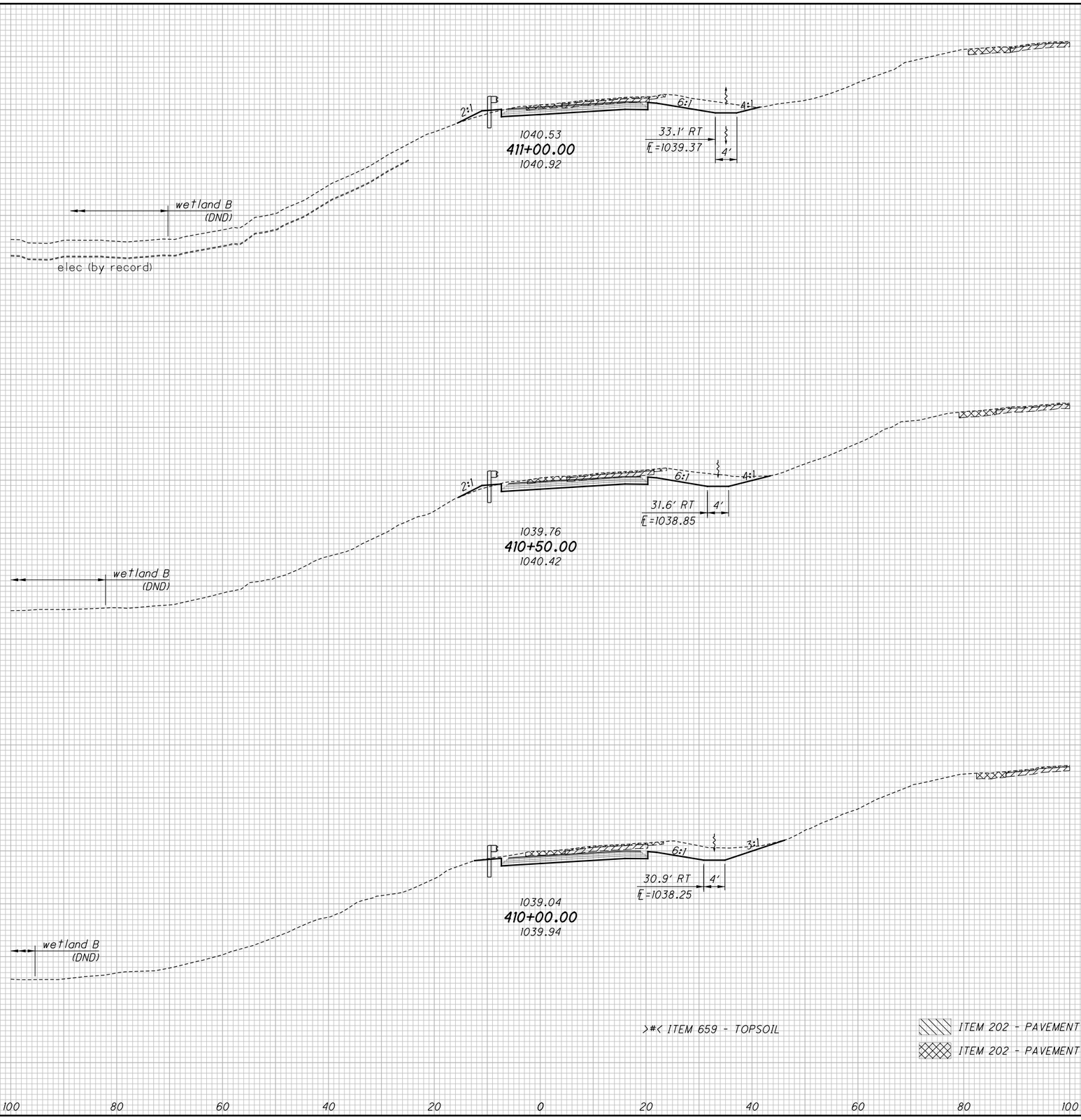
SEEDING	
END WIDTH	SQ. YDS.
	253
41	
	233
43	
	236
42	
	722



END AREA		VOLUME		
CUT	FILL	CUT	FILL	
		140	6	
	>0<			
	>5<			
71	4			
			>8<	
		140	6	
	>4<			
80	2			
		161	>7< 2	
	>4<			
94	0			
			>15<	
		441	14	

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B-1
STA. 410+00.00 TO STA. 411+00.00

SUM-77 / 277 / 224
VARIOUS

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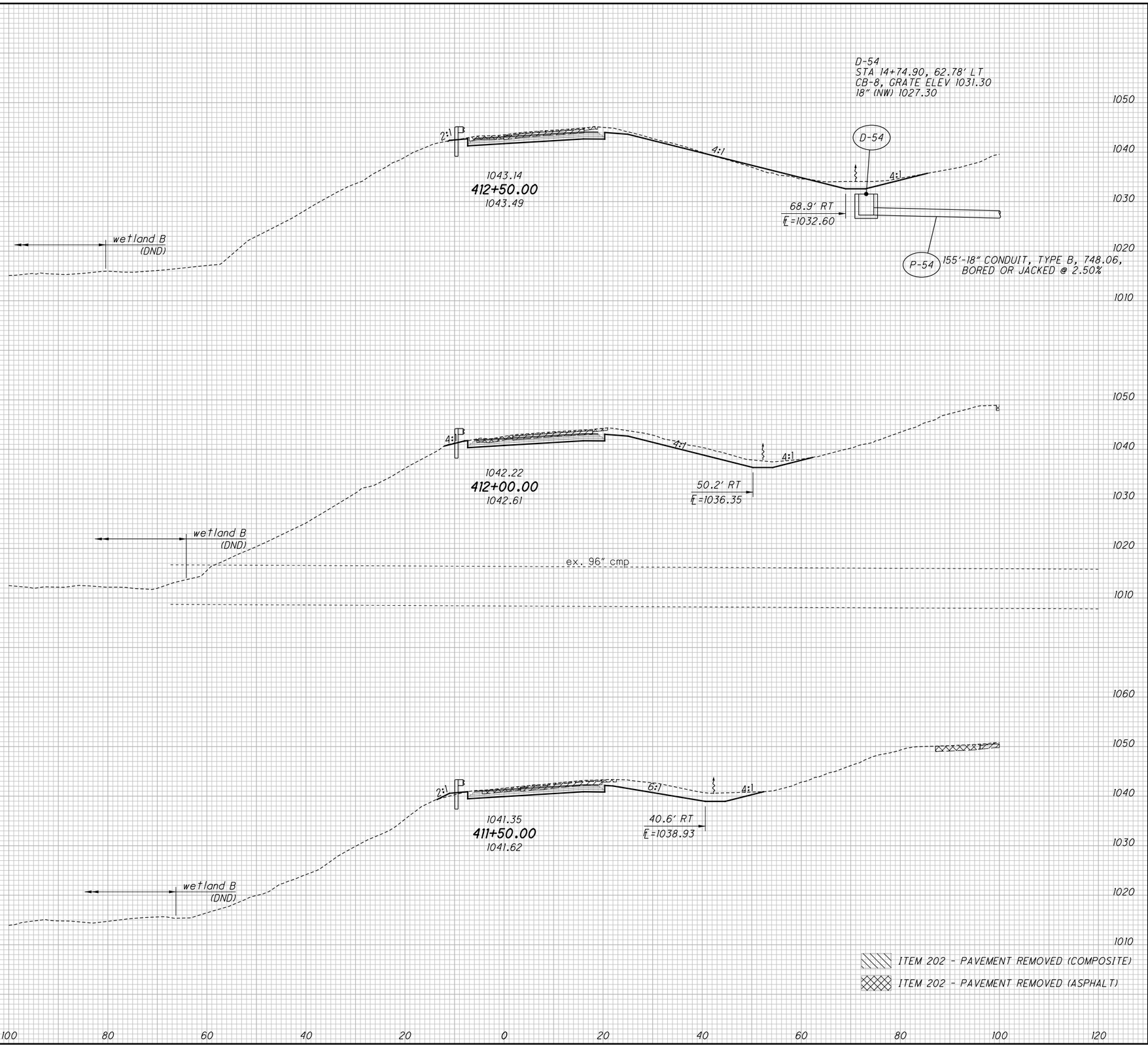
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	428			105	29
82		61	6		
	392			133	6
59		83	0		
	303			151	2
50		80	2		
	1123			389	37



CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B-1
STA. 411+50.00 TO STA. 412+50.00

SUM-77 / 277 / 224
VARIOUS

680
1288

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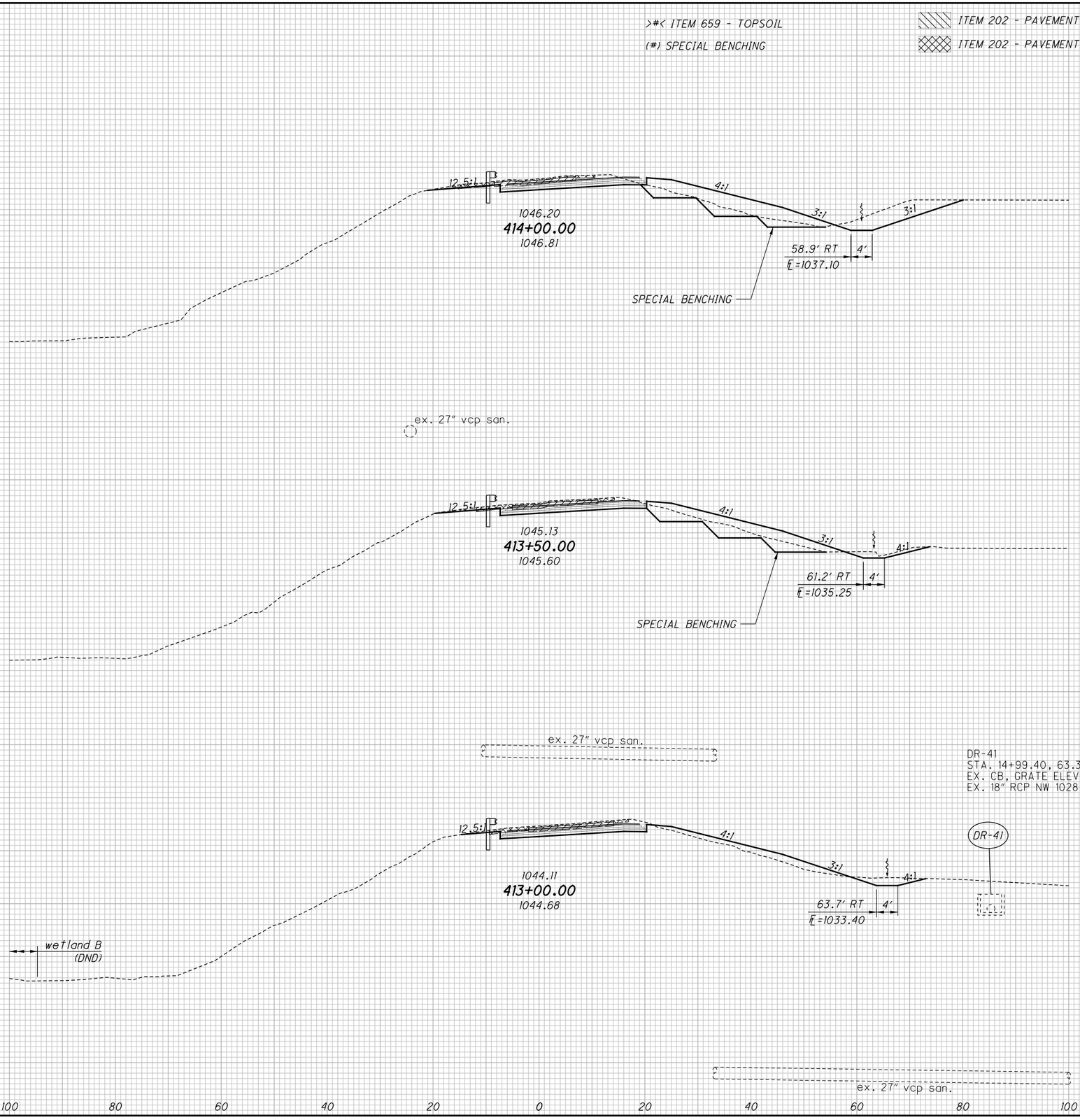
SEEDING	
END WIDTH	SQ. YDS.
	464
86	
	456
78	
	417
72	
	1337

>#< ITEM 659 - TOPSOIL

(#) SPECIAL BENCHING

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		(68)	(68)
			>24<
		128	151
(34)	(34)		
	>13<		
89	67		
		(78)	(78)
			>25<
		127	102
(50)	(50)		
	>14<		
48	43		
		(46)	(46)
			>27<
		93	63
(0)	(0)		
	>15<		
	>0<		
52	25		
		(192)	(192)
			>76<
		348	316

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B-1
STA. 413+00.00 TO STA. 414+00.00

SUM-77 / 277 / 224
VARIOUS

681
1288

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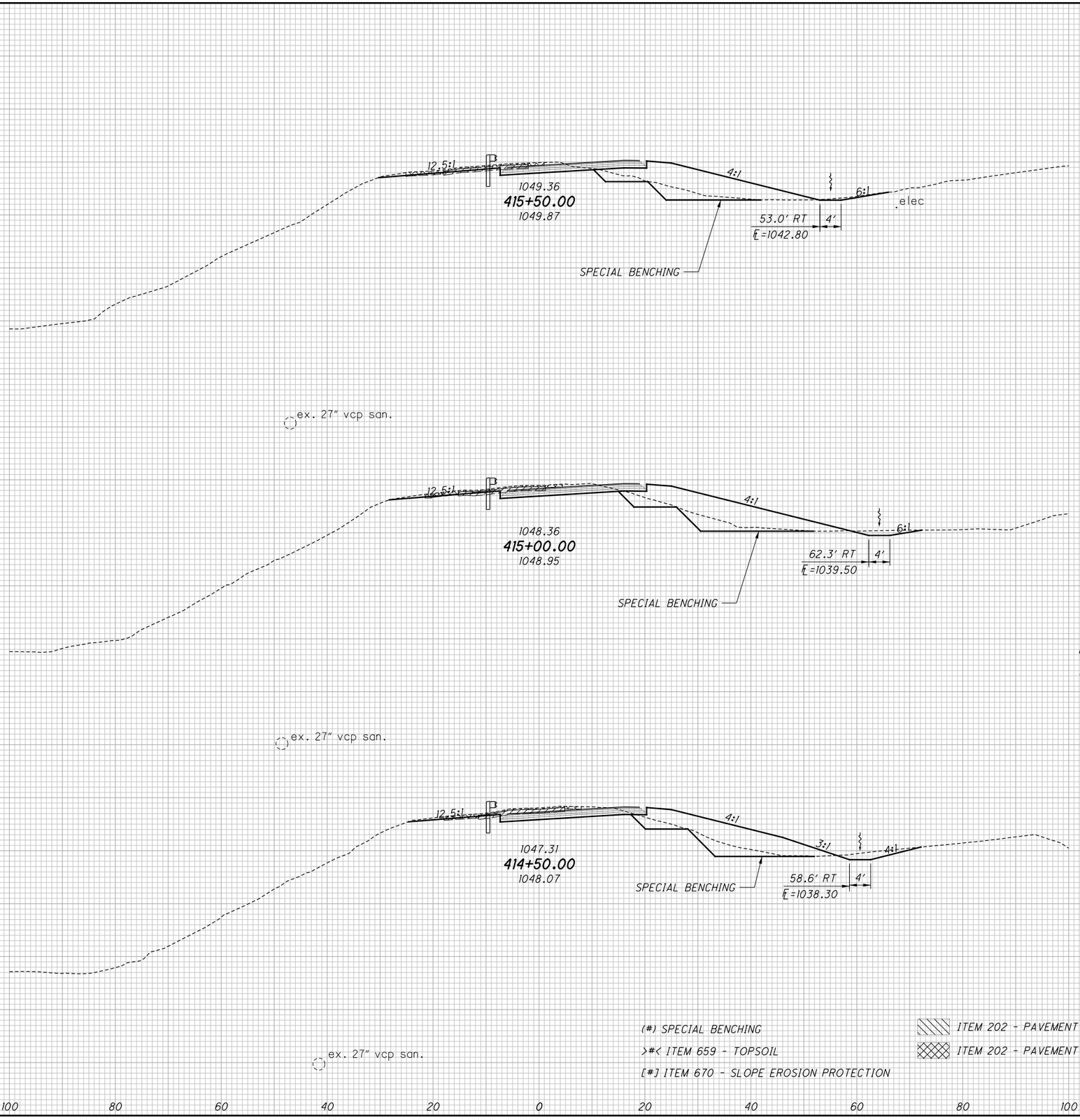
SEEDING END WIDTH	SEEDING SQ. YDS.
	[21]
	100
[15]	
80	
	[83]
	458
[15]	
85	
	[52]
[15]	
[0]	
81	
	[156]
	1019



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		(15)	(15)
			>7<
		11	47
(34)	(34)		
	>16<		
26	104		
		(69)	(69)
			>32<
		65	197
(41)	(41)		
	>19<		
44	109		
			>21<
	>18<		
	>13<		
		(74)	(74)
			>9<
		86	190
(39)	(39)		
	>13<		
49	96		
		(158)	(158)
			>69<
		162	434

(#) SPECIAL BENCHING
>#< ITEM 659 - TOPSOIL
[#] ITEM 670 - SLOPE EROSION PROTECTION

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)
ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B-1
STA. 414+50.00 TO STA. 415+50.00

SUM-77 / 277 / 224
VARIOUS

682
1288

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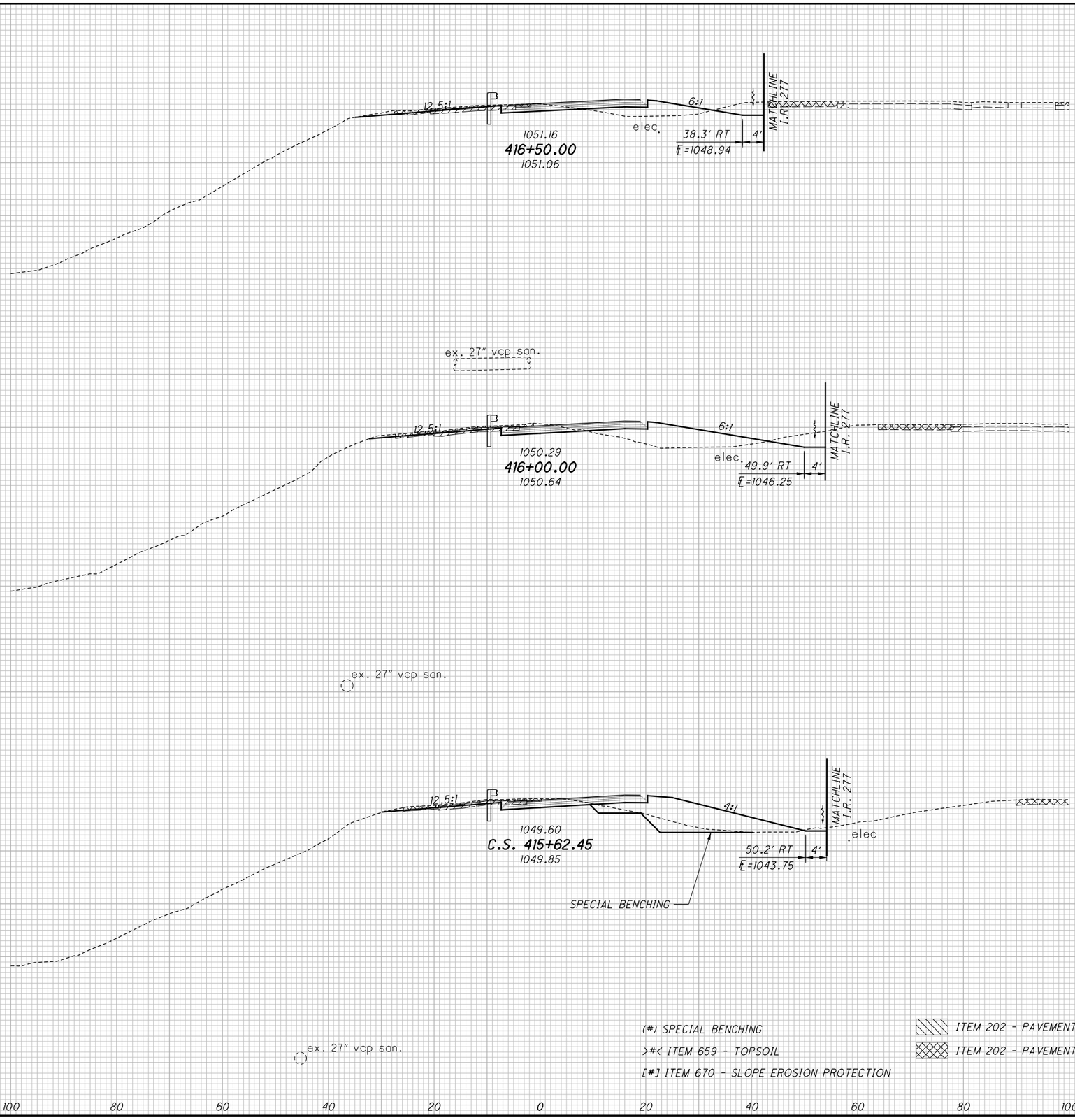
SEEDING END WIDTH	SEEDING SQ. YDS.
	[83] 286
[15] 56	
	[83] 339
[15] 66	
	[63] 271
[15] 64	
	[229] 896



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>9<
		50	46
	>5<		
	>11<		
33	39		
			>24<
		69	109
(0)	(0)		
	>15<		
41	79		
		(20)	(20)
			>21<
		45	124
(29)	(29)		
	>15<		
23	99		
		(20)	(20)
			>54<
		164	279

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B-1
STA. 415+62.45 TO STA. 416+50.00

SUM-77 / 277 / 224
VARIOUS

683
1288

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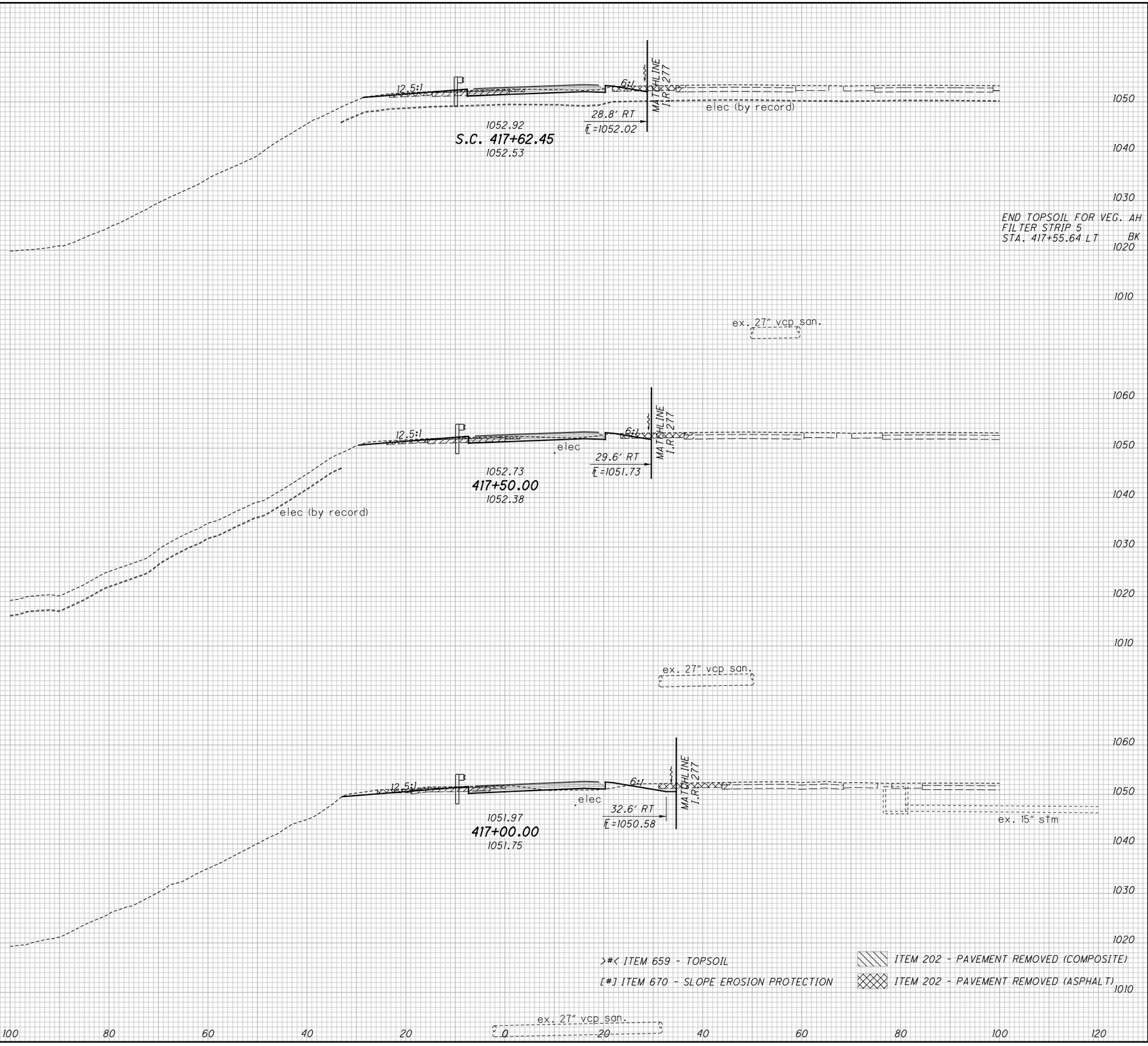
SEEDING END WIDTH	SEEDING SQ. YDS.
	140
36	
[0]	
[15]	
	[9]
	51
[15]	
38	
	[83] 236
[15] 47	
	[92] 427



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		8	32
12	16		
	>0<		
	>5<		>1<
		6	6
	>5<		
15	10		
			>9<
21	>5<	33	19
	11		
		47	>10<
			57

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B-1
STA. 417+00.00 TO STA. 417+62.45

SUM-77 / 277 / 224
VARIOUS

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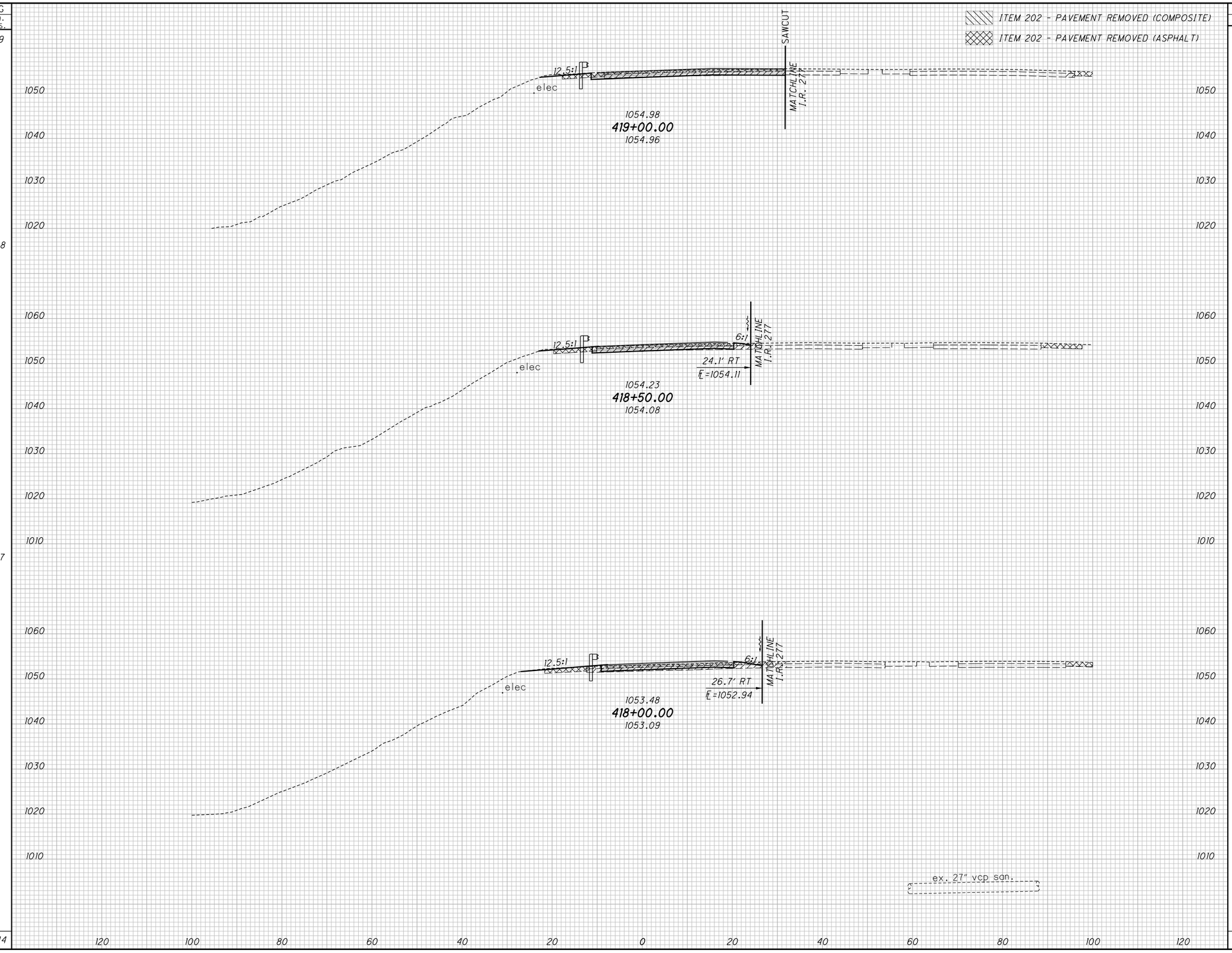
SEEDING END WIDTH	SEEDING SQ. YDS.
	89
17	
	108
22	
	147
31	
	344



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		12	10
5	7		
		6	21
1	16		
0	30		
		1	43
		19	74

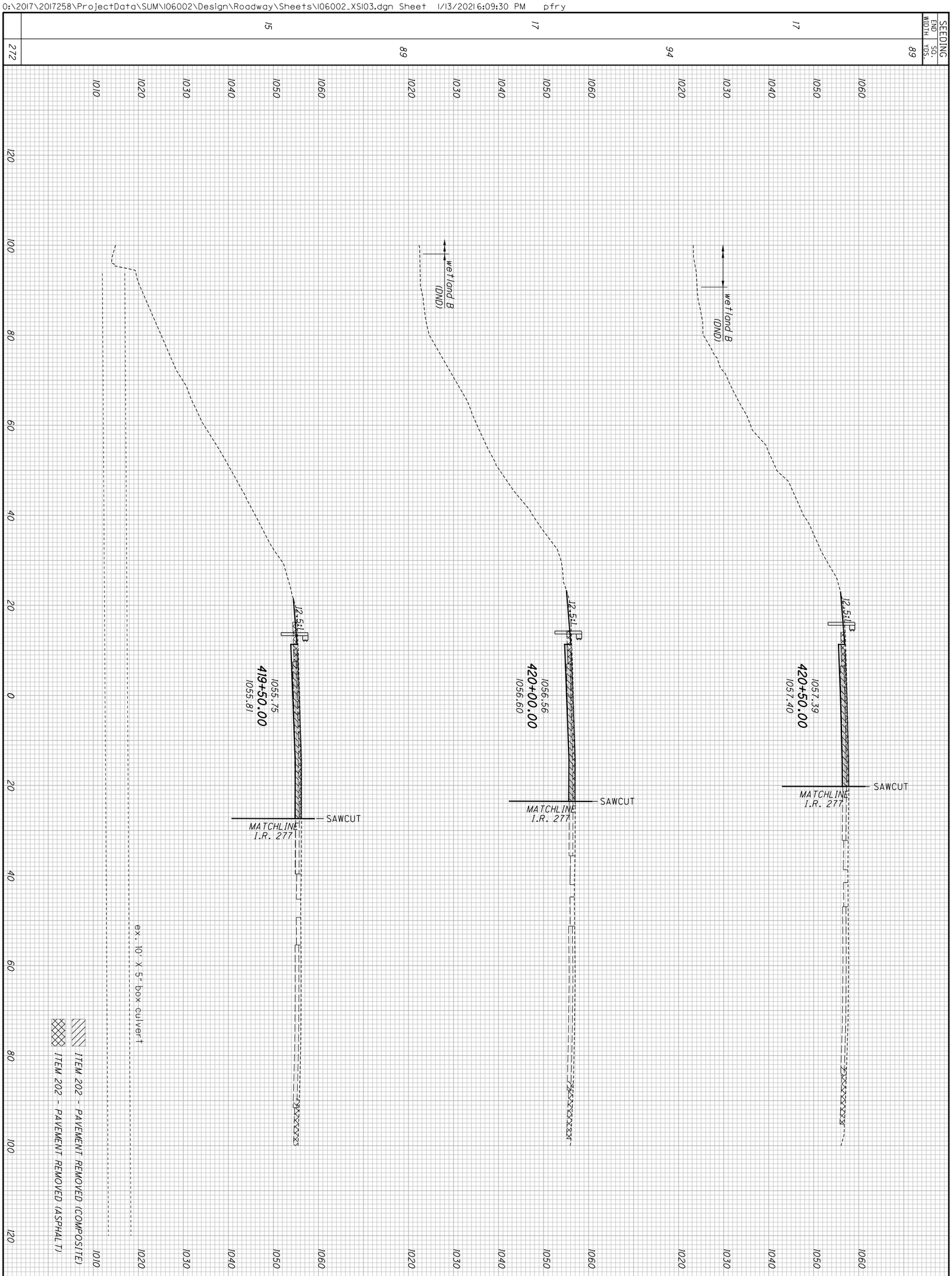
CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B-1
STA. 418+00.00 TO STA. 419+00.00

SUM-77 / 277 / 224
VARIOUS

685
1288

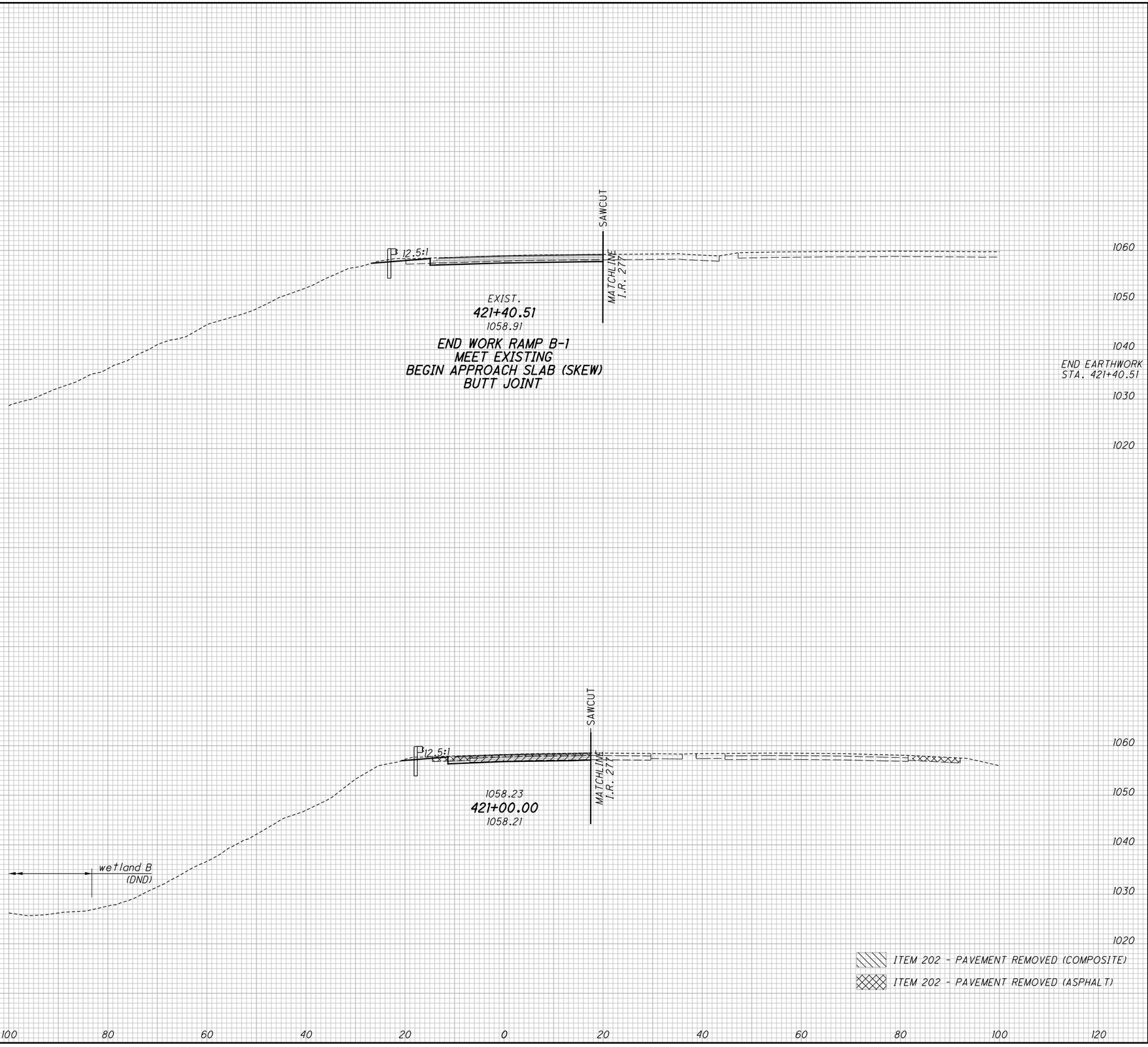
O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS103.dgn Sheet 1/13/2021 6:09:28 PM pfry



686 / 1288	**SUM-77/277/224** **VARIOUS**	**CROSS SECTIONS - RAMP B-1** **STA. 419+50.00 TO STA. 420+50.00**

CALCULATED CJC
CHECKED PJF

SEEDING	
END WIDTH	SQ. YDS.
18	
	74
15	
	74



END AREA	
CUT	FILL
16	4
8	2
18	5

VOLUME	
CUT	FILL
18	5

CALCULATED CJC
CHECKED PJF

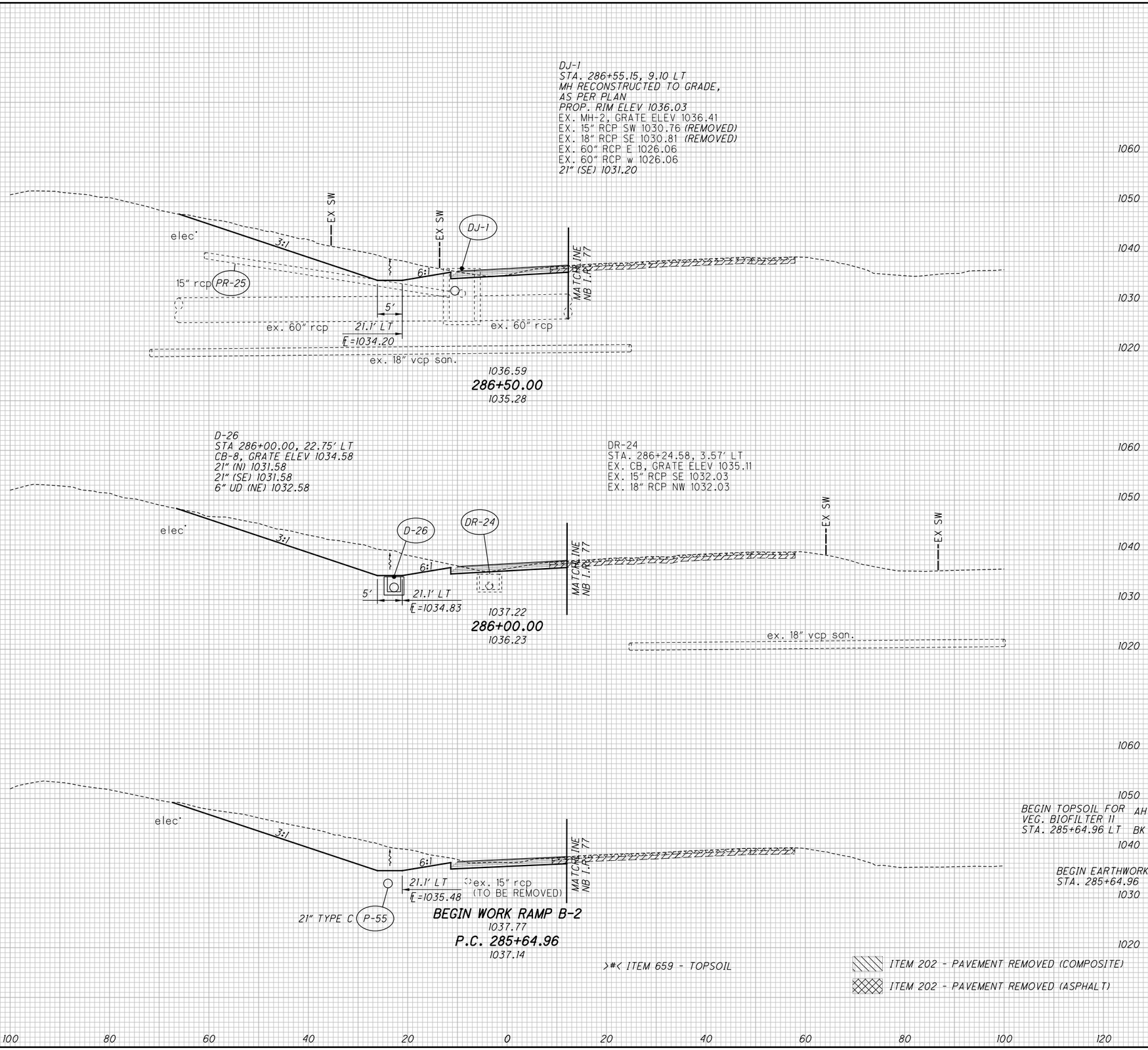
CROSS SECTIONS - RAMP B-1
STA. 421+00.00 TO STA. 421+40.51

SUM-77 / 277 / 224
VARIOUS

687
1288

D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS03.dgn Sheet 1/13/2021 6:09:32 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	356
62	
	347
63	
	247
64	
	950



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>7<
		315	0
	>4<		
165	0		
			>7<
		319	0
180	>4< 0		
			>5<
		245	0
	>4<		
	>0<		
197	0		
			>19<
		879	0

>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B-2
STA. 285+64.96 TO STA. 286+50.00

SUM-77 / 277 / 224
VARIOUS

688
1288

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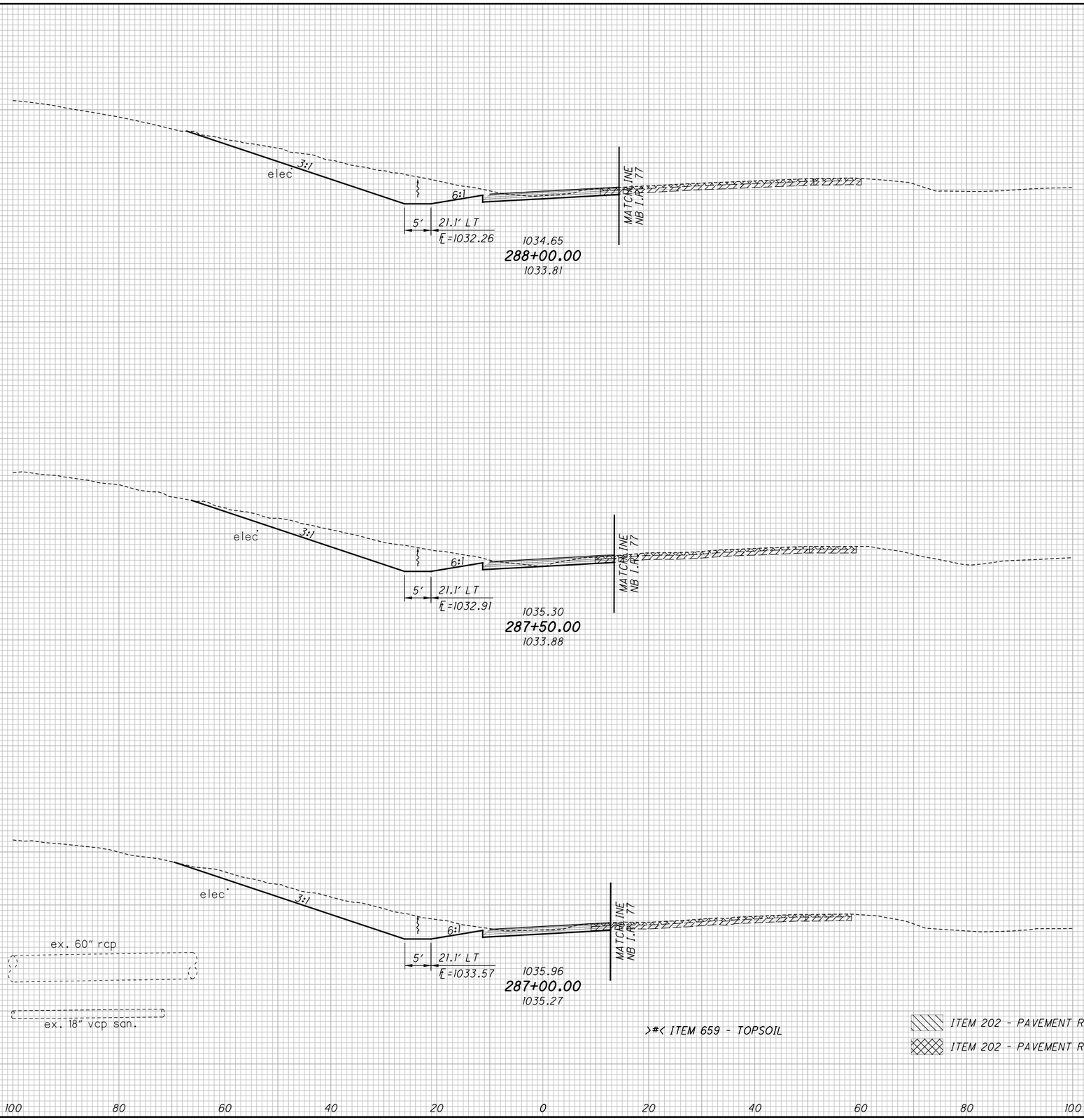
SEEDING END WIDTH	SEEDING SQ. YDS.
	367
64	
	353
63	
	358
66	
	1078



>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>6<
		387	0
	>4<		
193	0		
			>7<
		332	0
166	>4< 0		
		316	>7< 0
175	>4< 0		
		1035	>20< 0

CALCULATED CJC
CHECKED PJF

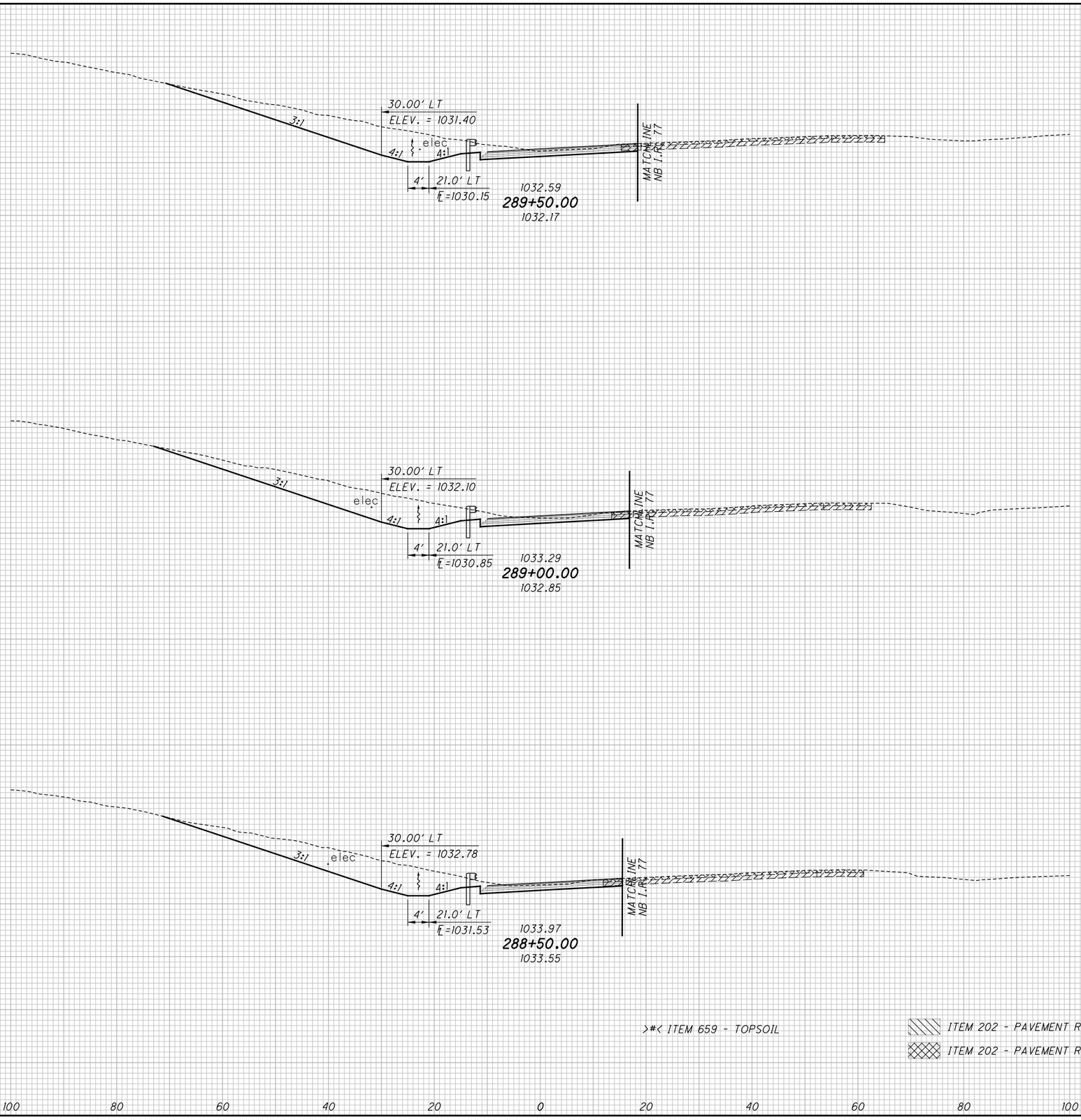
CROSS SECTIONS - RAMP B-2
STA. 287+00.00 TO STA. 288+00.00

SUM-77 / 277 / 224
VARIOUS

689
1288

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS104.dgn Sheet 1/13/2021 6:10:16 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	372			448	>4< 0
67		234	>2< 0		
	381			435	>4< 0
70		236	>2< 0		
	383			427	>4< 0
68		225	>2< 0		
	1136			1310	>12< 0



>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED CJC
CHECKED PJF

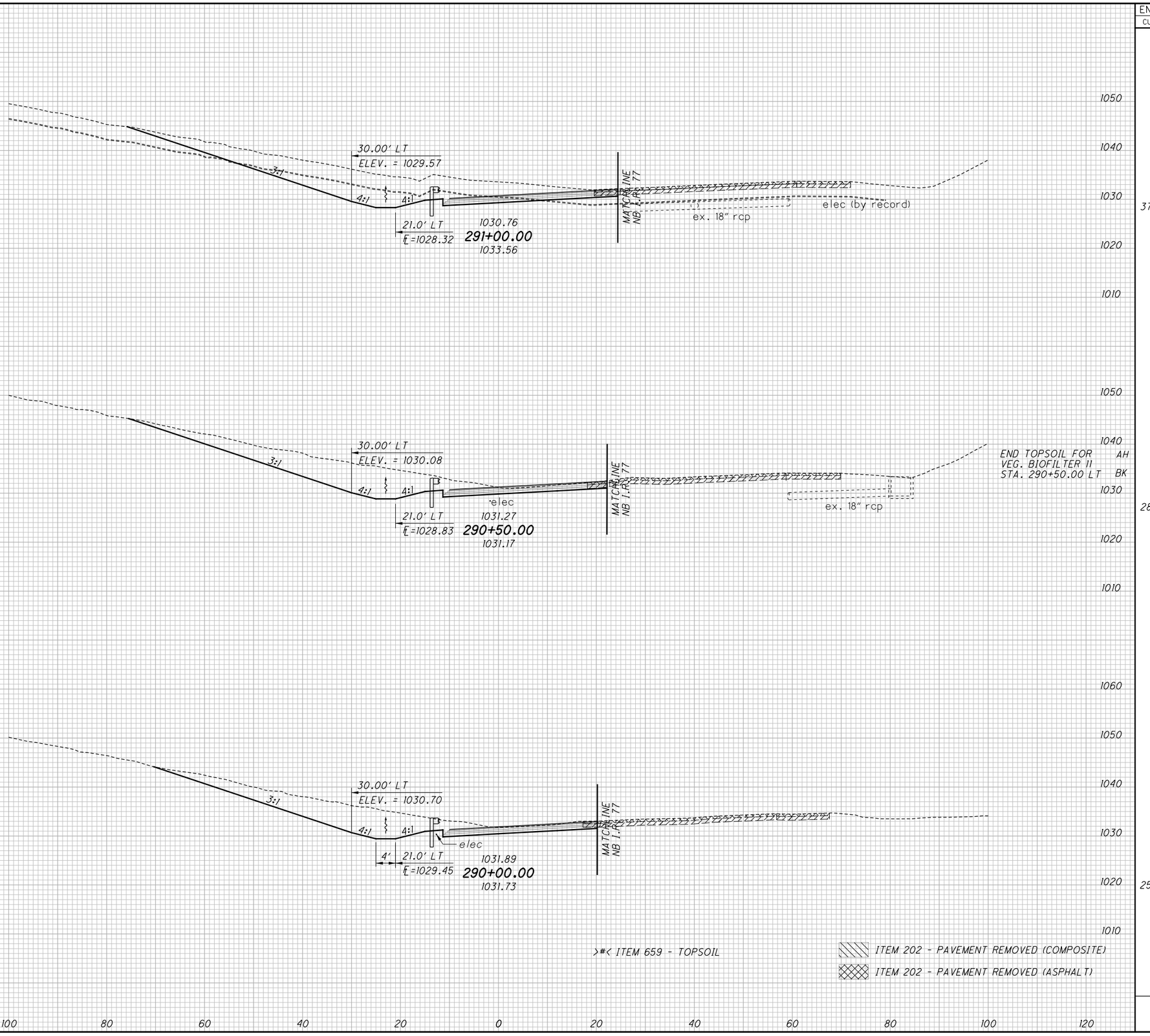
CROSS SECTIONS - RAMP B-2
STA. 288+50.00 TO STA. 289+50.00

SUM-77 / 277 / 224
VARIOUS

690
1288

D:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS104.dgn Sheet 1/13/2021 6:10:18 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	394			619	0
73		374	0		
	403			608	0
72		283	0		
	386			494	>6< 0
67		250	>2< 0		
	1183			1721	>6< 0



>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED CJC
CHECKED PJF

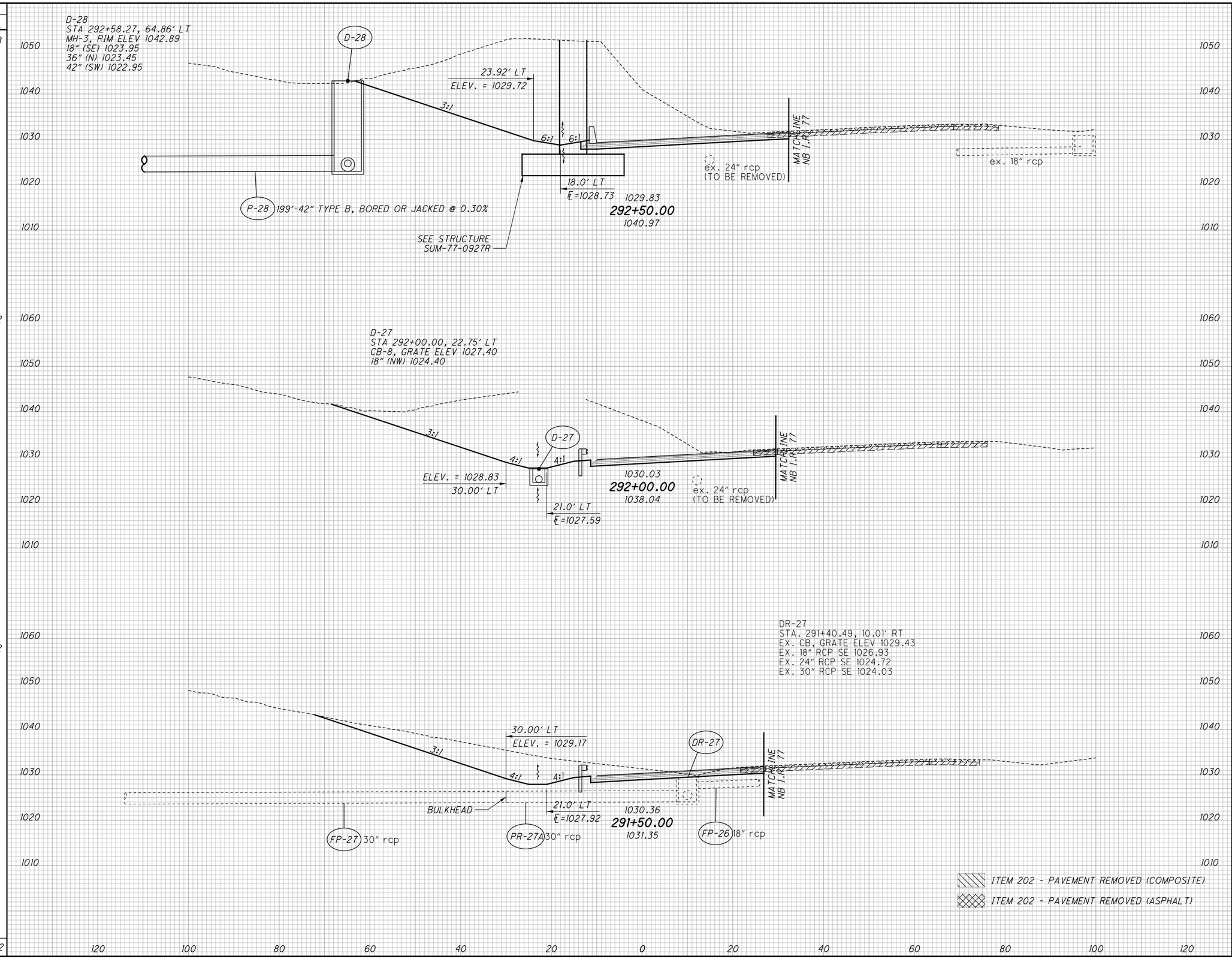
CROSS SECTIONS - RAMP B-2
STA. 290+00.00 TO STA. 291+00.00

SUM-77 / 277 / 224
VARIOUS

691
1288

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS104.dgn Sheet 1/13/2021 6:10:21 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	328
58	
	342
65	
	372
69	
	1042



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		1993	0
1104	0		
		1723	0
757	0		
		973	0
294	0		
		4689	0

CALCULATED CJC
CHECKED PJF

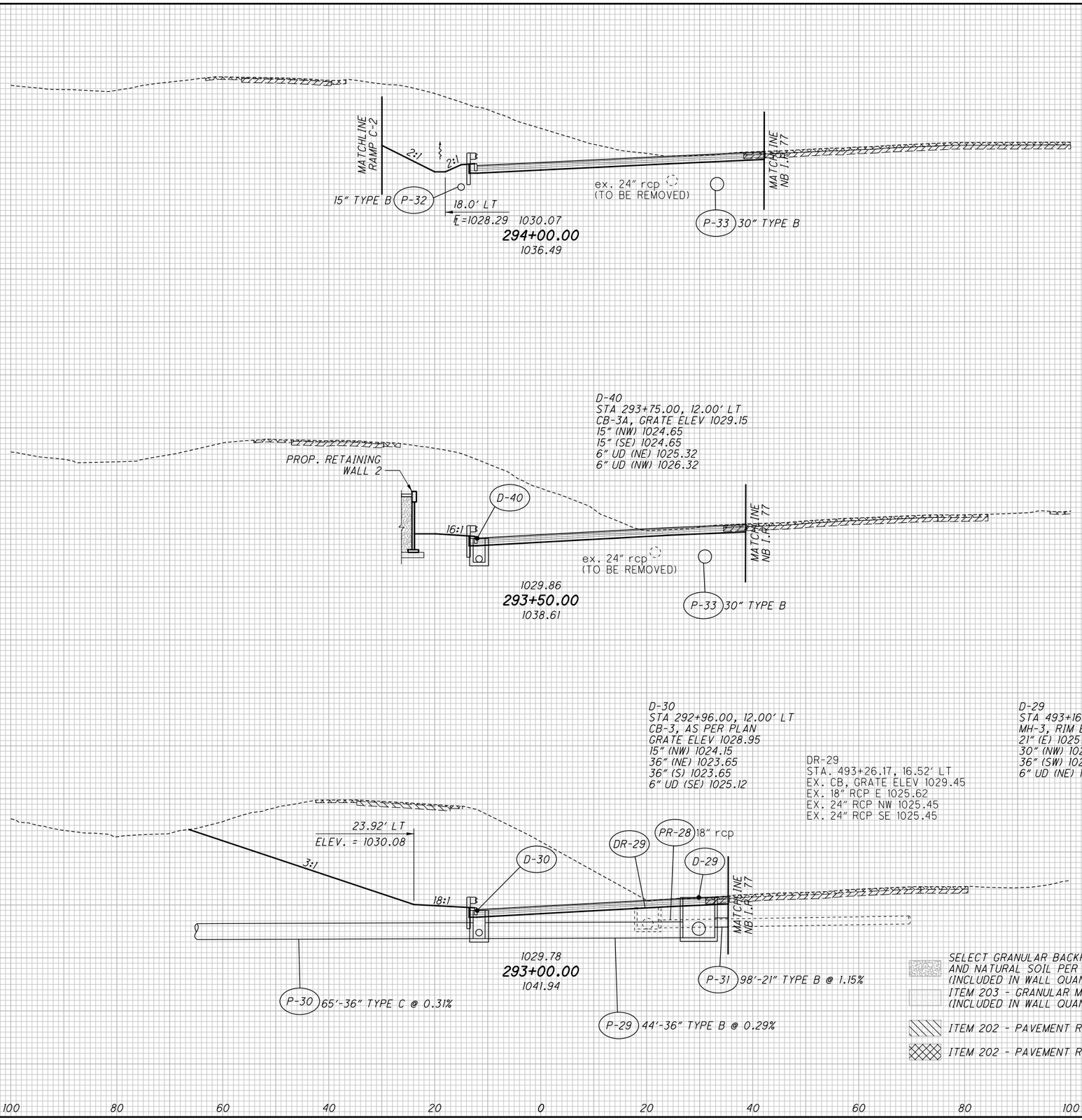
CROSS SECTIONS - RAMP B-2
STA. 291+50.00 TO STA. 292+50.00

SUM-77 / 277 / 224
VARIOUS

692
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS104.dgn Sheet 1/13/2021 6:0:23 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	136
19	
	83
11	
	197
60	
	416



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		941	0
479	0		
		859	0
449	0		
		1386	0
1048	0		
		3186	0

CALCULATED CJC
CHECKED PJF

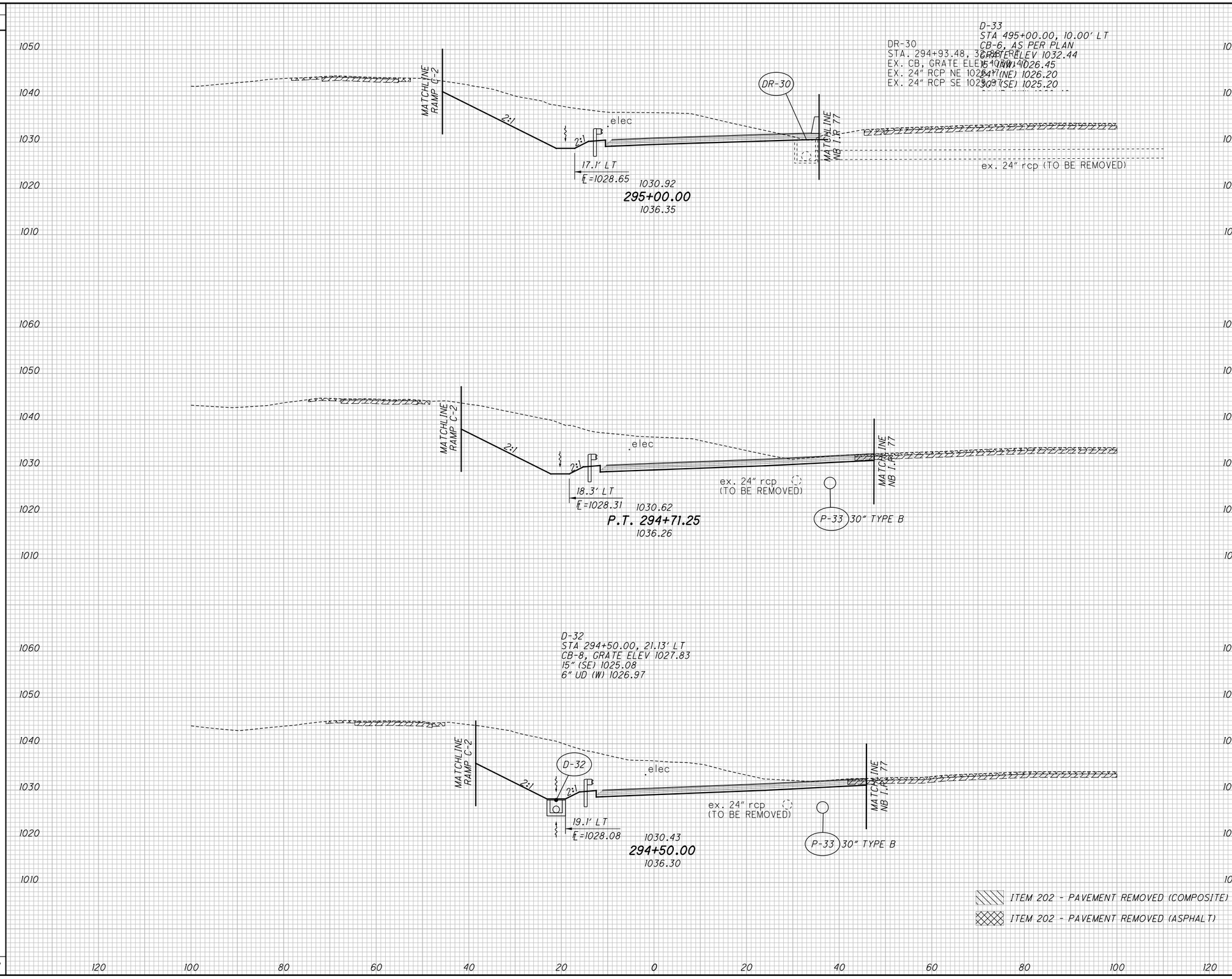
CROSS SECTIONS - RAMP B-2
STA. 293+00.00 TO STA. 294+00.00

SUM-77 / 277 / 224
VARIOUS

693
1288

D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS104.dgn Sheet 1/13/2021 6:10:27 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	144			694	0
		439	0		
40					
	118			506	0
		512	0		
34					
	76			413	0
		537	0		
30					
	338			1613	0



CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B-2
STA. 294+50.00 TO STA. 295+00.00

SUM-77 / 277 / 224
VARIOUS

694
1288

0:\2017\20172581\Project Data\SUM\06002\Design\Roadway\Sheets\06002_XS104.dgn Sheet 1/13/2021 6:10:31 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	89			569	0
17		328	0		
	89			629	0
15		351	0		
	75			612	0
12		310	0		
253				1810	0

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B-2
STA. 296+50.00 TO STA. 295+50.00

SUM-77 / 277 / 224
VARIOUS

695
1288

1050
1040
1030
1020
1010

elec
MATCHLINE RAMP C-2
4:1
15.0' LT
℄=1030.62
1032.68
296+50.00
1037.93
15" TYPE B
P-35
38.4' RT
℄=1032.29
MATCHLINE NB 1-R 77

elec.
MATCHLINE RAMP C-2
4:1
16.1' LT
℄=1029.98
1032.09
296+00.00
1037.90
15" TYPE B
P-35
MATCHLINE NB 1-R 77

D-41
STA 295+50.00, 32.75' RT
1-3-D, GRATE ELEV 1031.74
15" (NW) 1026.83
15" (SE) 1026.83
6" UD (NW) 1028.91

D-41
elec
MATCHLINE RAMP C-2
2:1
15.1' LT
℄=1029.32
1031.50
295+50.00
1037.03
E-43
MATCHLINE NB 1-R 77

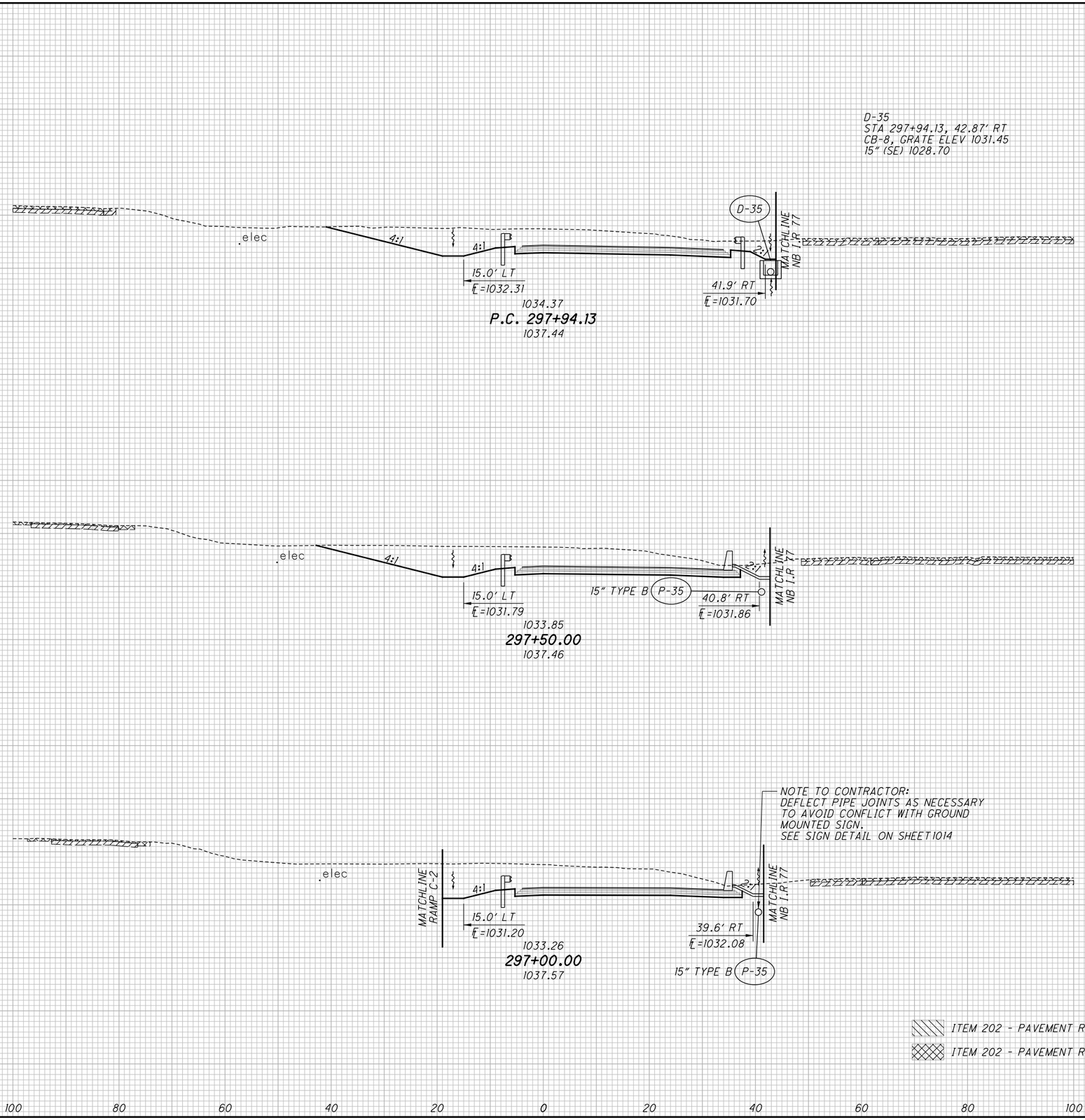
6'L X 4'W X 18" TH
ROCK CHANNEL
PROTECTION, TYPE C
WITH GEOTEXTILE FABRIC

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)
ITEM 202 - PAVEMENT REMOVED (ASPHALT)

120 100 80 60 40 20 0 20 40 60 80 100 120

D:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\I06002_XS104.dgn Sheet 1/13/2021 6:10:34 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	34
52	
	235
	164
15	
	433



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		65	0
302	0		
		515	0
328	0		
		569	0
287	0		
		1149	0

CALCULATED CJC
CHECKED PJF

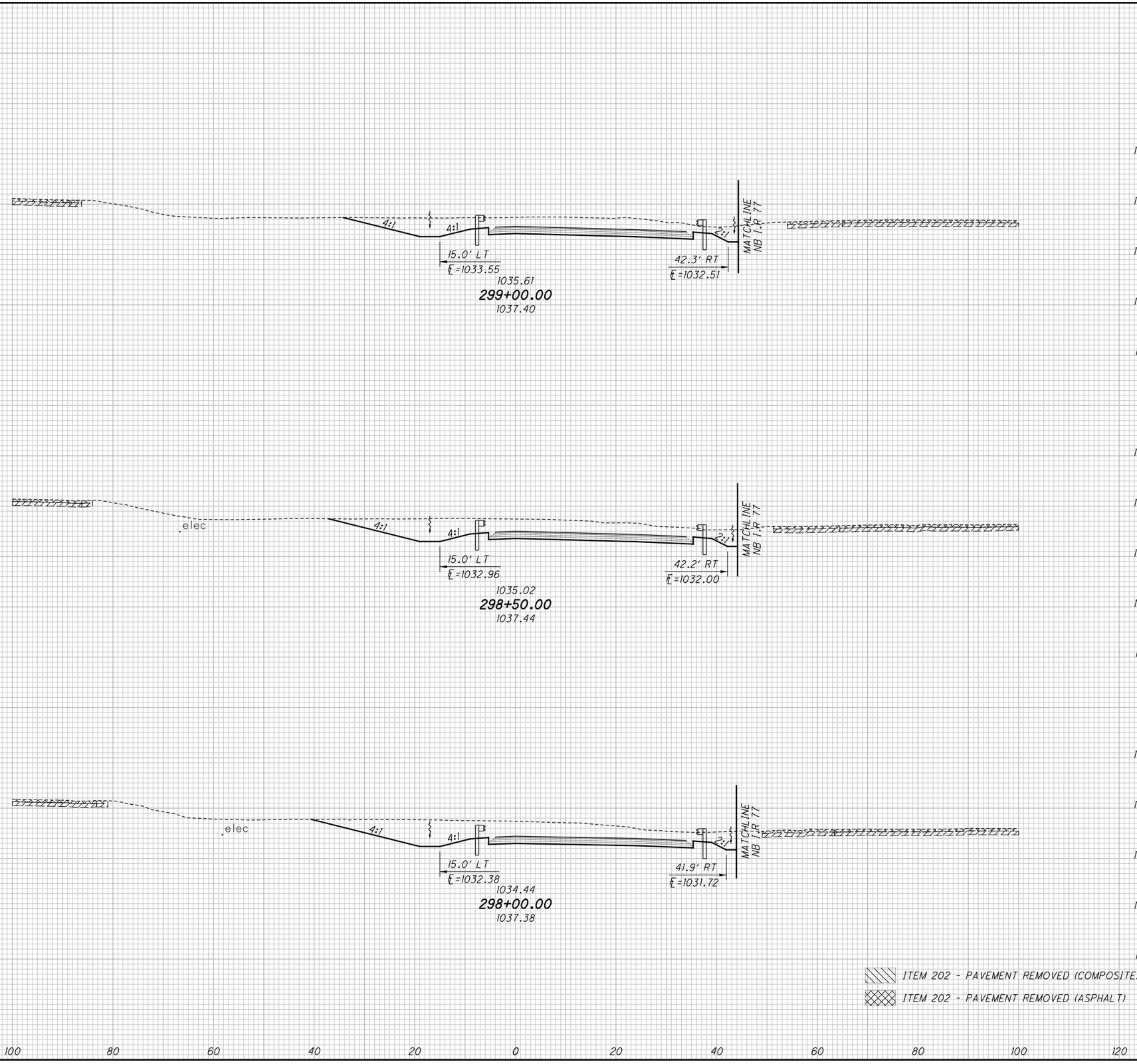
CROSS SECTIONS - RAMP B-2
STA. 297+00.00 TO STA. 297+94.13

SUM-77 / 277 / 224
VARIOUS

696
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\106002_XS104.dgn Sheet 1/13/2021 6:10:37 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	250			379	0
46		225	0		
	261			453	0
48		264	0		
	278			522	0
52		300	0		
	789			1354	0



CALCULATED CJC
CHECKED PJF

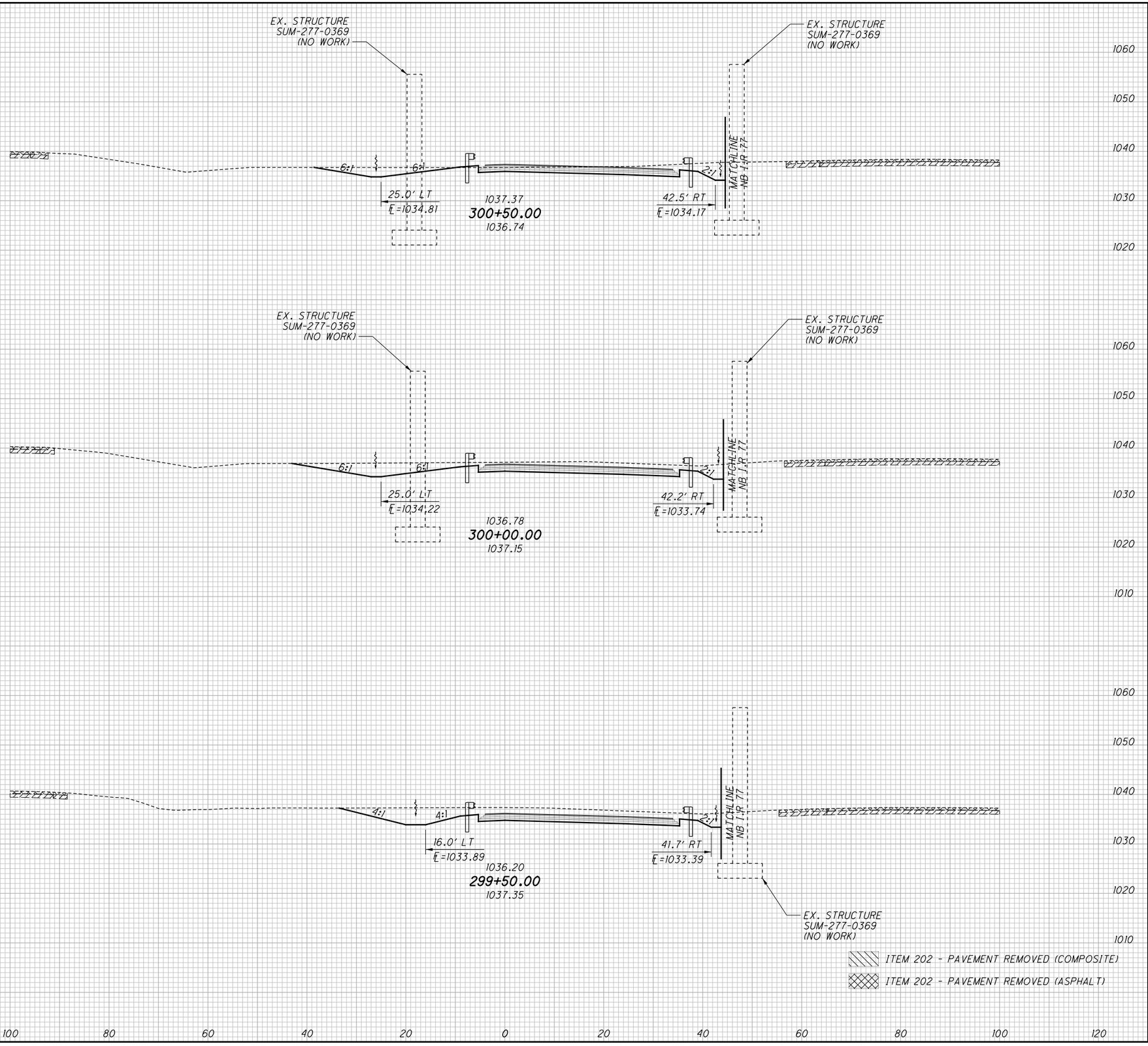
CROSS SECTIONS - RAMP B-2
STA. 298+00.00 TO STA. 299+00.00

SUM-77 / 277 / 224
VARIOUS

697
1288

D:\2017\20171258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XSI04.dgn Sheet 1/13/2021 6:10:40 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	238
50	
	289
54	
	272
44	
	799



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		127	6
108	1		
		250	1
162	0		
		320	0
184	0		
		697	7

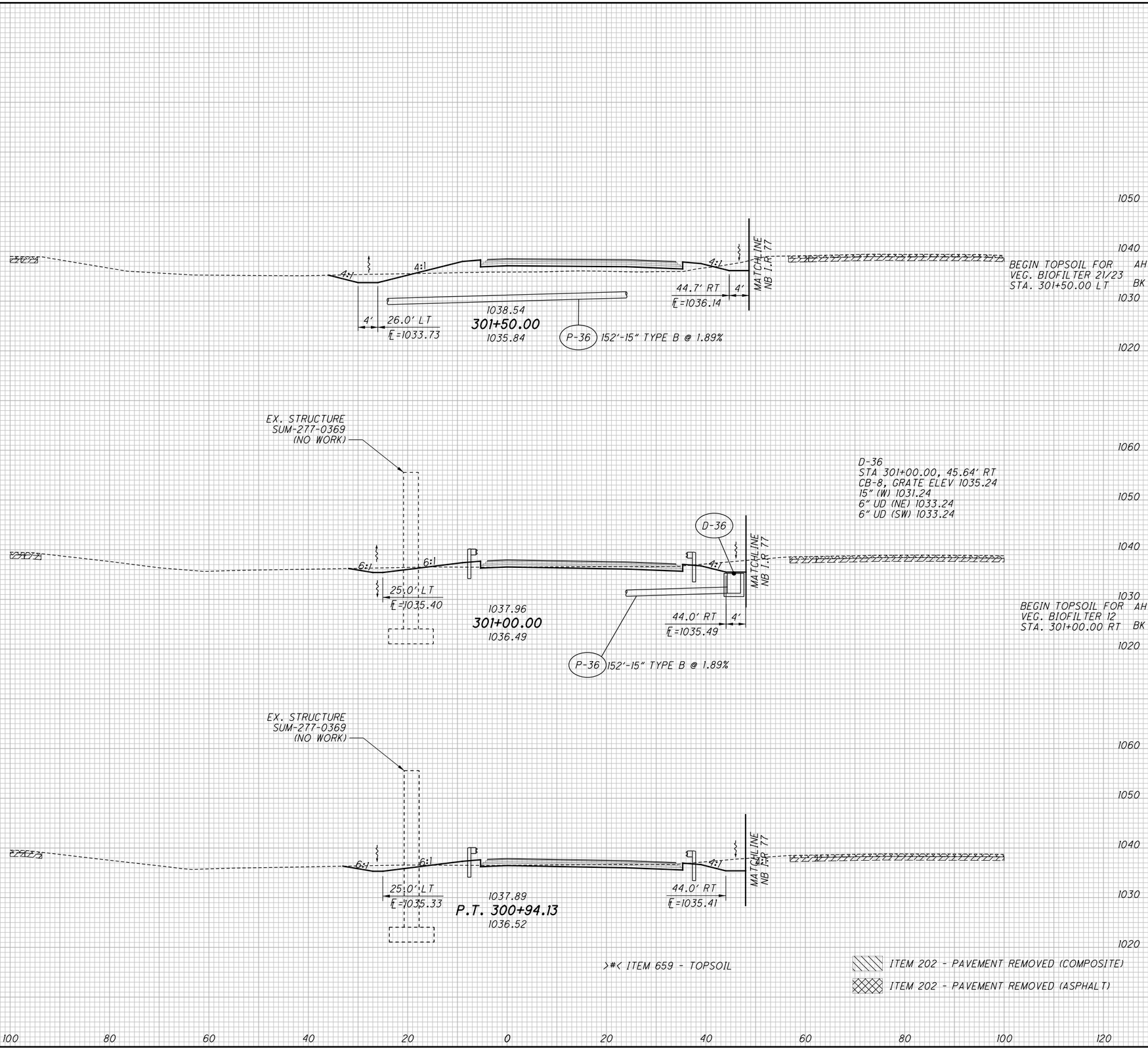
CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B-2
STA. 299+50.00 TO STA. 300+50.00

SUM-77 / 277 / 224
VARIOUS

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS104.dgn Sheet 1/13/2021 6:10:42 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	322
52	
	272
46	
	30
47	
	624



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>23<
		65	220
	>11<		
	>4<		
29	60		
			>5<
		63	62
	>2<		
	>0<		
39	7		
		9	1
48	6		
			>28<
		137	283

CALCULATED CJC
CHECKED PJF

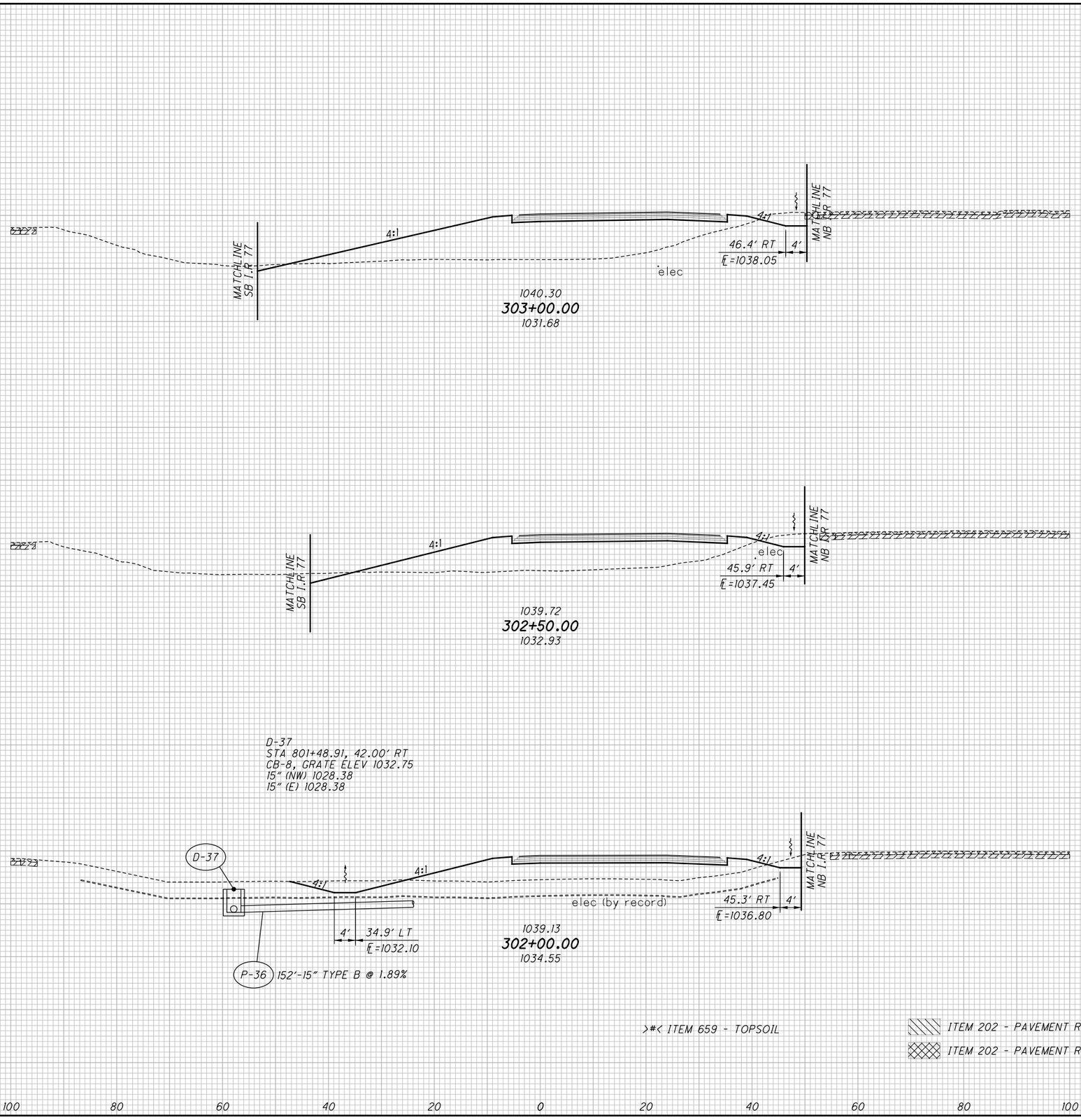
CROSS SECTIONS - RAMP B-2
STA. 300+94.13 TO STA. 301+50.00

SUM-77/277/224
VARIOUS

699
1288

0:\2017\20172581\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS104.dgn Sheet 1/13/2021 6:10:44 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	372
67	
	344
57	
	336
64	
	1052



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>38<
		37	827
	>21<		
24	413		
			>35<
		47	660
	>17<		
27	300		
			>29<
		63	443
	>14<		
41	178		
			>102<
		147	1930

>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B-2
STA. 302+00.00 TO STA. 303+00.00

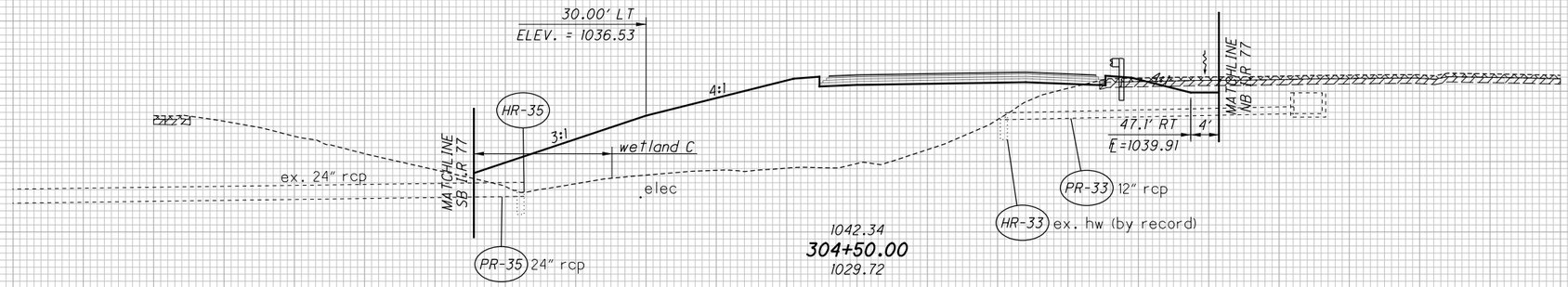
SUM-77 / 277 / 224
VARIOUS

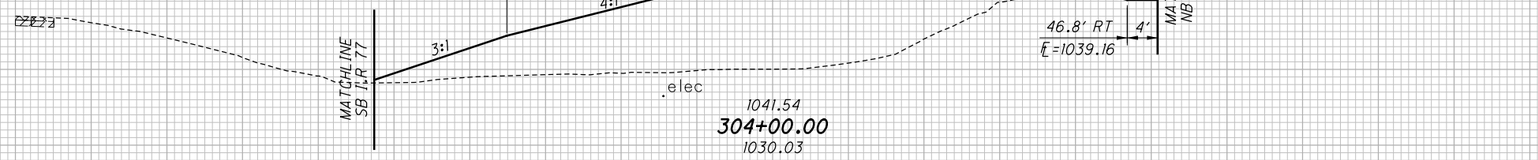
700
1288

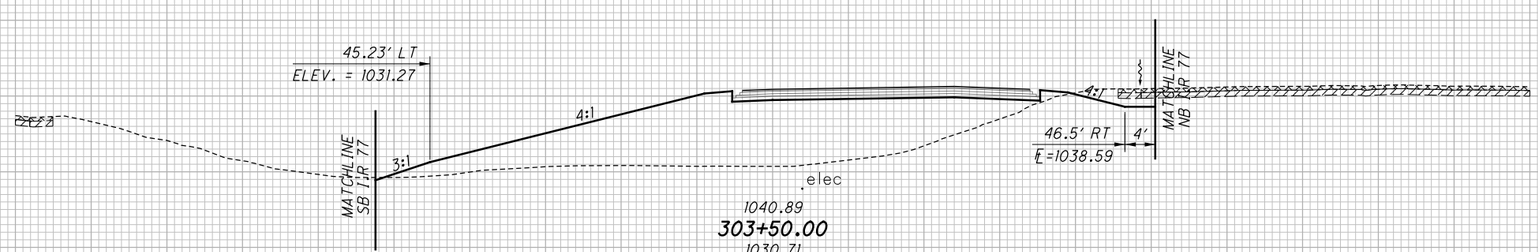
0:\2017\20172581\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS104.dgn Sheet 1/13/2021 6:10:47 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	403
70	
	381
67	
	372
67	
	1156

D-38
STA 504+00.00, 52.72' RT
CB-8, GRATE ELEV 1028.07
15" (SE) 1025.66
24" (SW) 1024.91







>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>38<
		18	1246
	>20<		
8	664		
			>37<
		13	1147
	>20<		
6	575		
			>37<
		20	977
	>20<		
16	480		
			>112<
		51	3370

CALCULATED CJC
CHECKED PJF

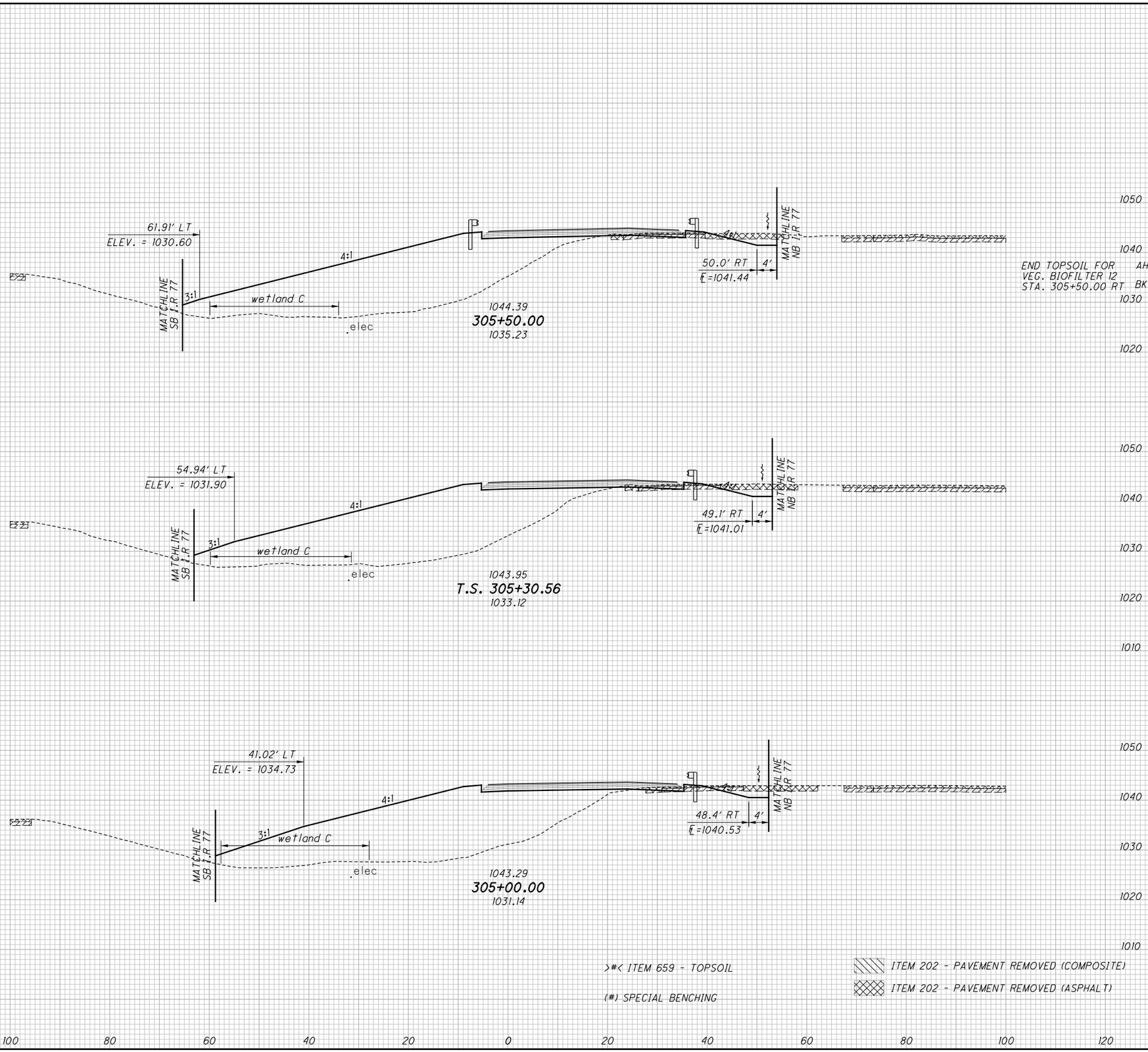
CROSS SECTIONS - RAMP B-2
STA. 303+50.00 TO STA. 304+50.00

SUM-77 / 277 / 224
VARIOUS

701
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\106002_XS104.dgn Sheet 1/13/2021 6:10:49 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	469			(65)	(65)
					>36<
				25	1141
		(0)	(0)		
			>19<		
			>22<		
83		10	662		
					>16<
	176			8	483
					>23<
80		12	680		
	263				>25<
				13	771
			>21<		
75		11	682		
				(65)	(65)
					>77<
908				46	2395



CALCULATED CJC
CHECKED PJF

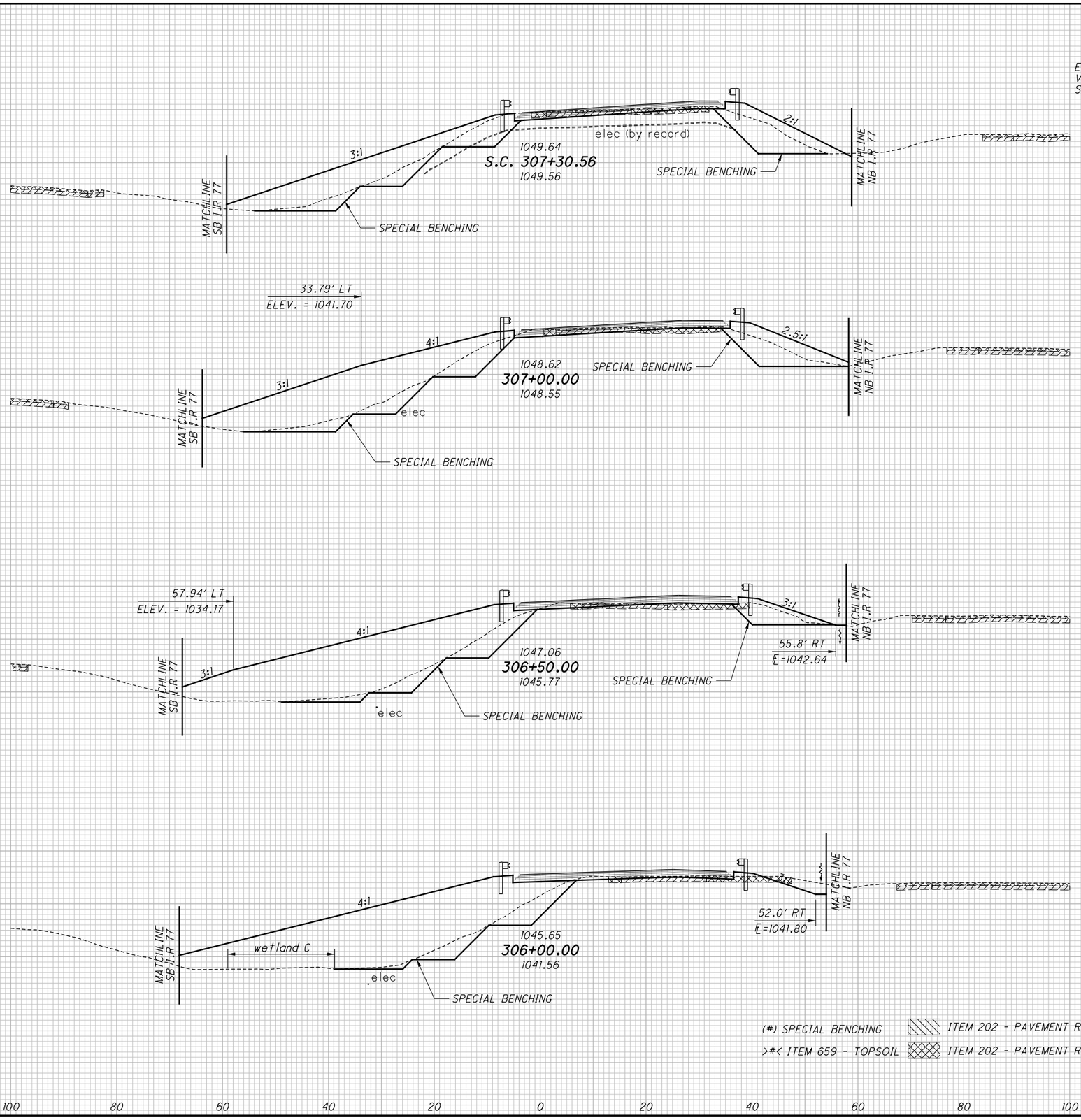
CROSS SECTIONS - RAMP B-2
STA. 305+00.00 TO STA. 305+50.00

SUM-77 / 277 / 224
VARIOUS

702
1288

0:\2017\201758\ProjectData\SUM\06002\Design\Roadway\Sheets\106002_XS104.dgn Sheet 1/13/2021 6:10:52 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	136
86	
	295
88	
	492
89	
	486
86	
	1409



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		(89)	(89)
		6	93
	>0<		
	>17<		>12<
(157)	(157)		
	>17<		
8	219		
		(169)	(169)
			>20<
		8	338
(142)	(142)		
	>18<		
7	378		
		(236)	(236)
			>35<
		10	810
(113)	(113)		
	>20<		
4	497		
		(169)	(169)
			>37<
		19	988
(70)	(70)		
	>20<		
17	570		
(663)	(663)		
	>104<		
43	2229		

CALCULATED CJC
CHECKED PJF

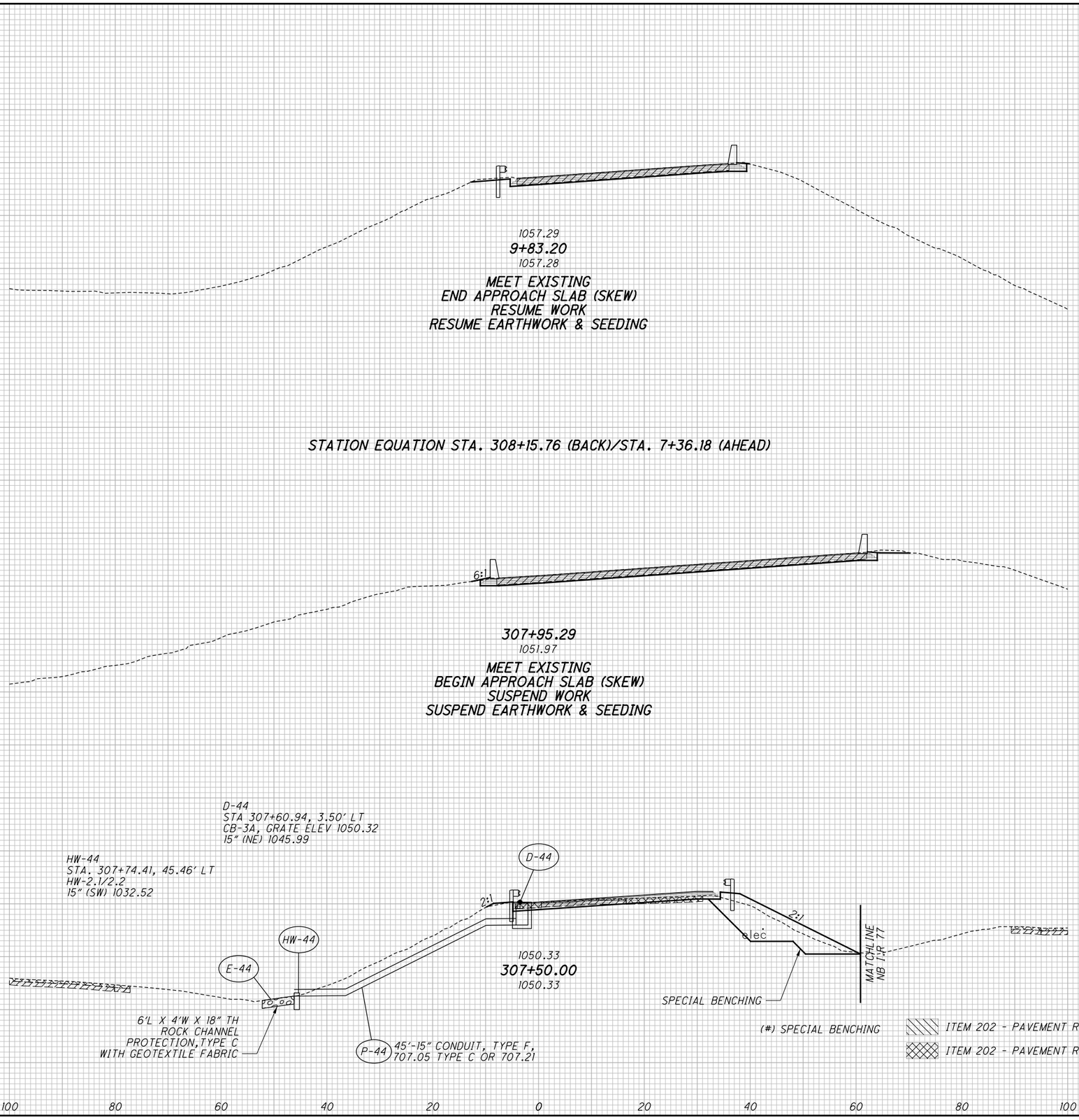
CROSS SECTIONS - RAMP B-2
STA. 306+00.00 TO STA. 307+30.56

SUM-77 / 277 / 224
VARIOUS

703
1288

0:\2017\20172581\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS104.dgn Sheet 1/13/2021 6:10:54 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	36
19	
0	
	136
40	
	172



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		13	0
AH 17	0		
BK 0	0		
AH 0	0		
(0)	(0)		
BK 24	0		
		(75)	(75)
		28	34
		(89)	(89)
		9	40
		(75)	(75)
		41	34

CALCULATED CJC
CHECKED PJF

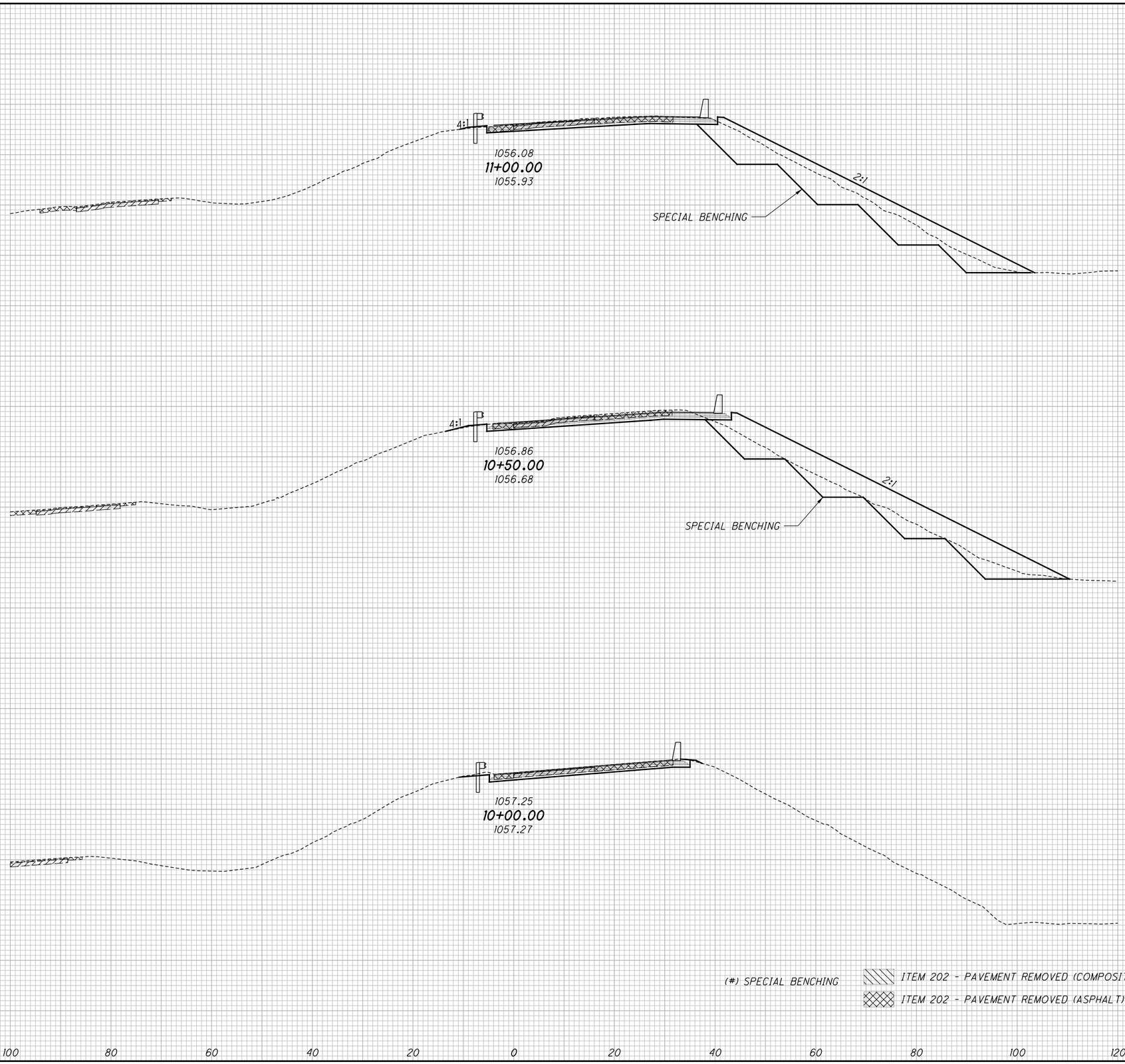
CROSS SECTIONS - RAMP B-2
STA. 307+50.00 TO STA. 9+83.20

SUM-77 / 277 / 224
VARIOUS

704
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\106002_XS104.dgn Sheet 1/13/2021 6:10:57 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	450
87	
	503
94	
	317
20	
	1270



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		(363)	(363)
		46	212
(221)	(221)		
28	131		
		(332)	(332)
		56	369
(138)	(138)		
33	267		
		(128)	(128)
		53	247
(0)	(0)		
24	0		
		(823)	(823)
		155	828

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B-2
STA. 10+00.00 TO STA. 11+00.00

SUM-77 / 277 / 224
VARIOUS

705
1288

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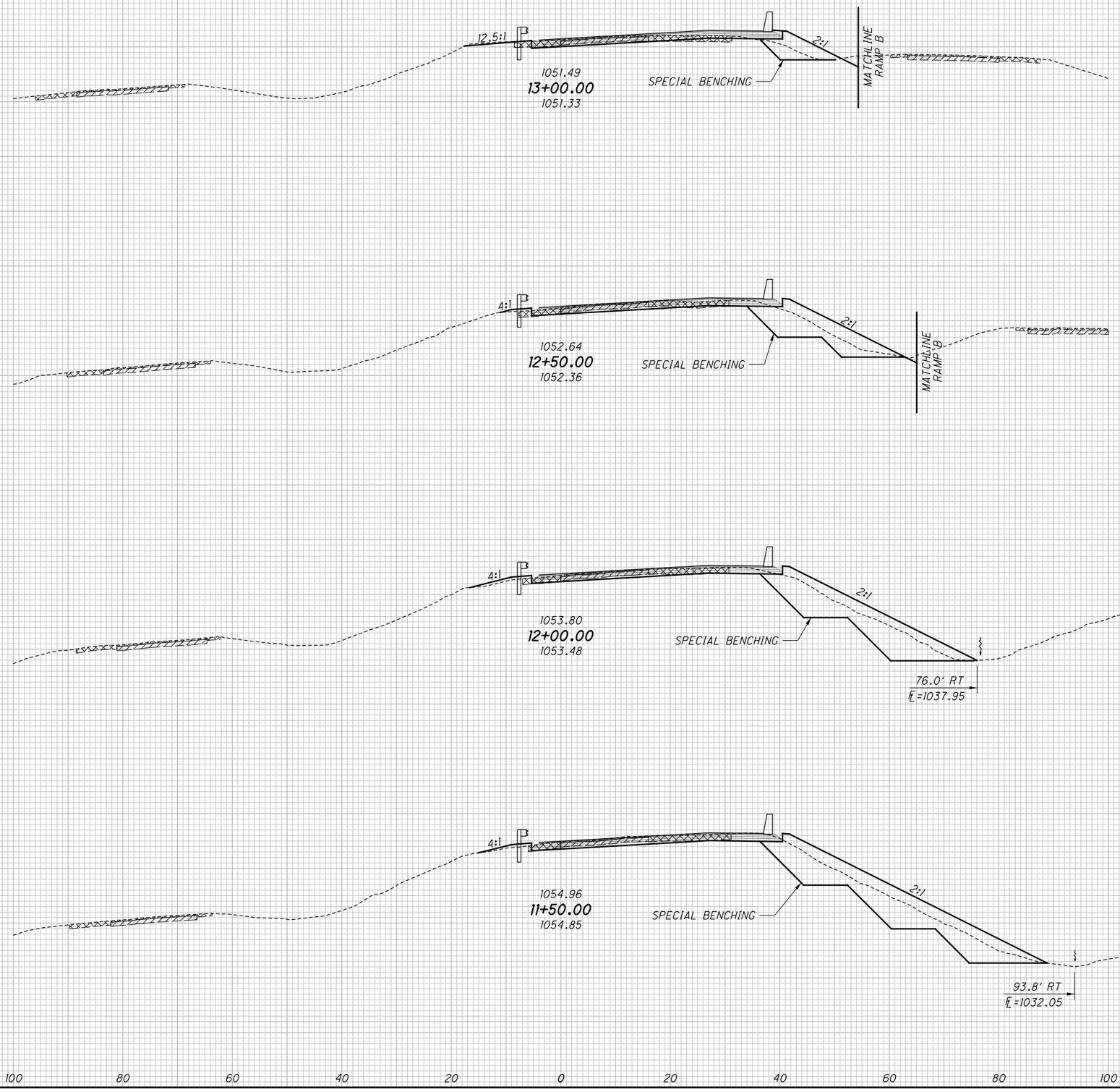
(#) SPECIAL BENCHING

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)



SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	172			(15)	(15)
				18	62
35		(16)	(16)		
		11	34		
	208			(78)	(78)
				24	81
40		(68)	(68)		
		15	53		
	283			(185)	(185)
				27	113
62		(132)	(132)		
		14	69		
	381			(281)	(281)
				33	155
75		(171)	(171)		
		22	98		
	1044			(559)	(559)
				102	411

CALCULATED CJC

CHECKED PJF

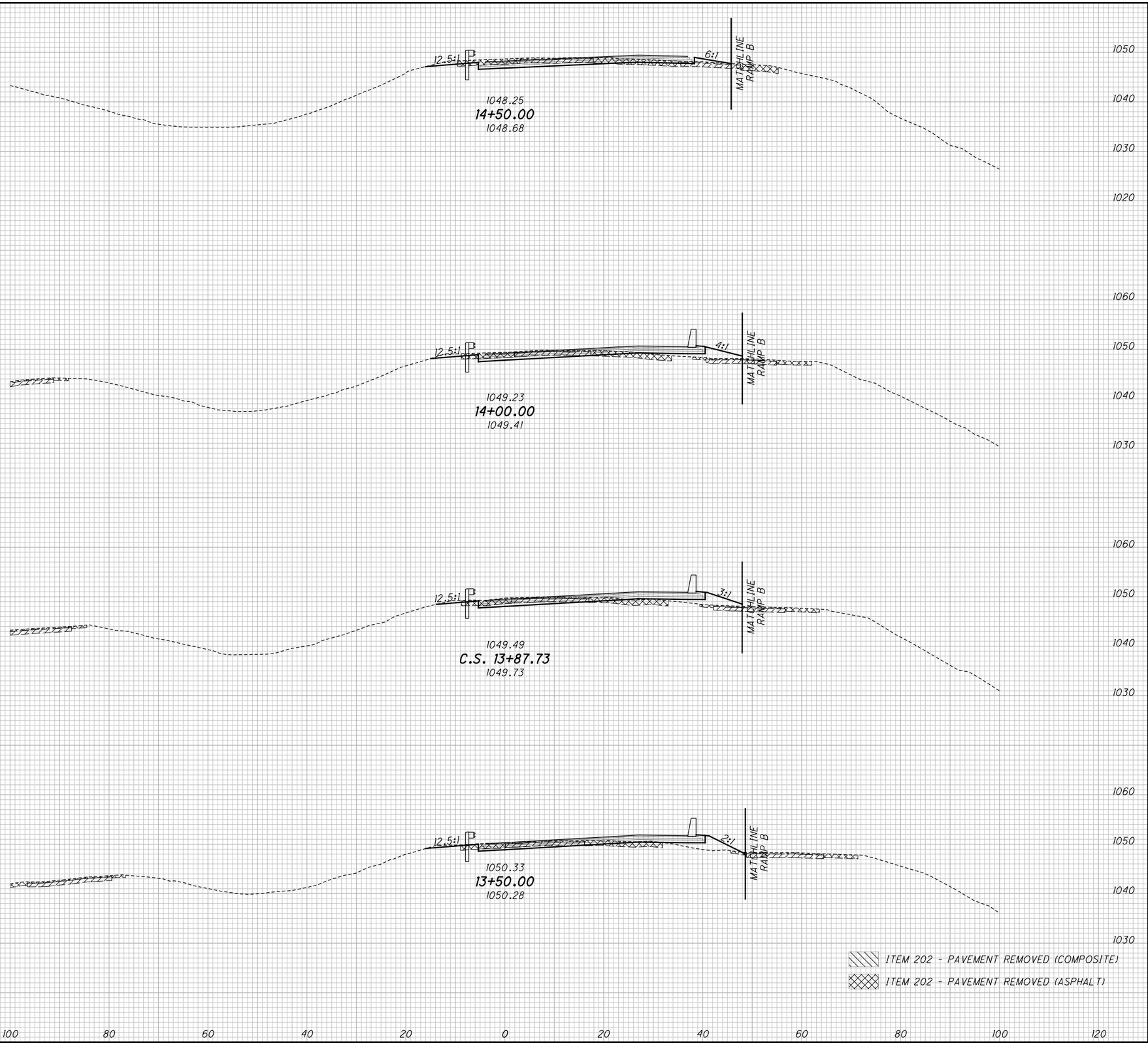
CROSS SECTIONS - RAMP B-2
STA. 11+50.00 TO STA. 13+00.00

SUM-77 / 277 / 224
VARIOUS

706
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\I06002_XSI04.dgn Sheet 1/13/2021 6:11:02 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	200			45	36
25		19	21		
	139			30	56
25		13	39		
	33			5	18
24		10	41		
	107			13	52
27		(0) 8	(0) 33		
	479			93	162



CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B-2
STA. 13+50.00 TO STA. 14+50.00

SUM-77 / 277 / 224
VARIOUS

707
1288

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS104.dgn Sheet 1/13/2021 6:11:05 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	381
[0]	
[49]	
	[99]
[51]	
67	
	[283]
	375
[51]	
68	
	[294]
	386
[55]	
71	
	[203]
	328
[54]	
[0]	
47	
	[879]
	1470

END SLOPE EROSION PROTECTION FOR VEG. FILTER STRIP 6 STA. 16+67.86 LT

40.00' LT
ELEV. = 1037.00
4:1
3:1
4:1
53.1' LT
℄=1032.63

MATCHLINE RAMP B

1045.31
16+50.00
1046.41

END TOPSOIL FOR VEG. FILTER STRIP 6 STA. 16+67.86 LT

30.00' LT
ELEV. = 1040.17
4:1
3:1
4:1
53.6' LT
℄=1032.32

MATCHLINE RAMP B

1045.98
16+00.00
1046.79

DR-40
STA. 15+39.31, 20.24' RT
EX. CB, GRATE ELEV 1047.33
EX. 15" STM NW 1041.22

DR-40

30.00' LT
ELEV. = 1040.85
4:1
3:1
4:1
56.5' LT
℄=1032.01

MATCHLINE RAMP B

1046.66
15+50.00
1047.63

PR-40 ex. 15" rcp

DR-41
STA. 14+99.40, 63.36' LT
EX. CB, GRATE ELEV 1031.76
EX. 18" RCP NW 1028.31

D-54
STA 14+74.90, 62.78' LT
CB-8, GRATE ELEV 1031.30
18" (NW) 1027.30

BEGIN SLOPE EROSION PROTECTION FOR VEG. FILTER STRIP 6 STA. 15+16.41 LT

6.6'
72.23' LT
ELEV. = 1033.94
DR-41
D-54
4:1
4:1
59.3' LT
℄=1031.70

12.5:1
6:1

MATCHLINE RAMP B

1047.39
15+00.00
1048.02

BEGIN TOPSOIL FOR VEG. FILTER STRIP 6 STA. 15+16.41 LT

P-54 155'-18" CONDUIT, TYPE B, 748.06, BORED OR JACKED @ 2.50%

FP-41 ex. 18" rcp

ex. 27" vcp san

>#< ITEM 659 - TOPSOIL
[#] ITEM 670 - SLOPE EROSION PROTECTION
ITEM 202 - PAVEMENT REMOVED (COMPOSITE)
ITEM 202 - PAVEMENT REMOVED (ASPHALT)

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		366	0
	>0<		
	>16<		
			>11<
	>16<		
181	0		
			>31<
		294	0
	>17<		
137	0		
			>32<
		210	4
	>18<		
90	4		
			>22<
		111	20
	>18<		
	>0<		
30	18		
			>96<
		981	24

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B-2
STA. 15+00.00 TO STA. 16+50.00

SUM-77/277/224
VARIOUS

708
1288

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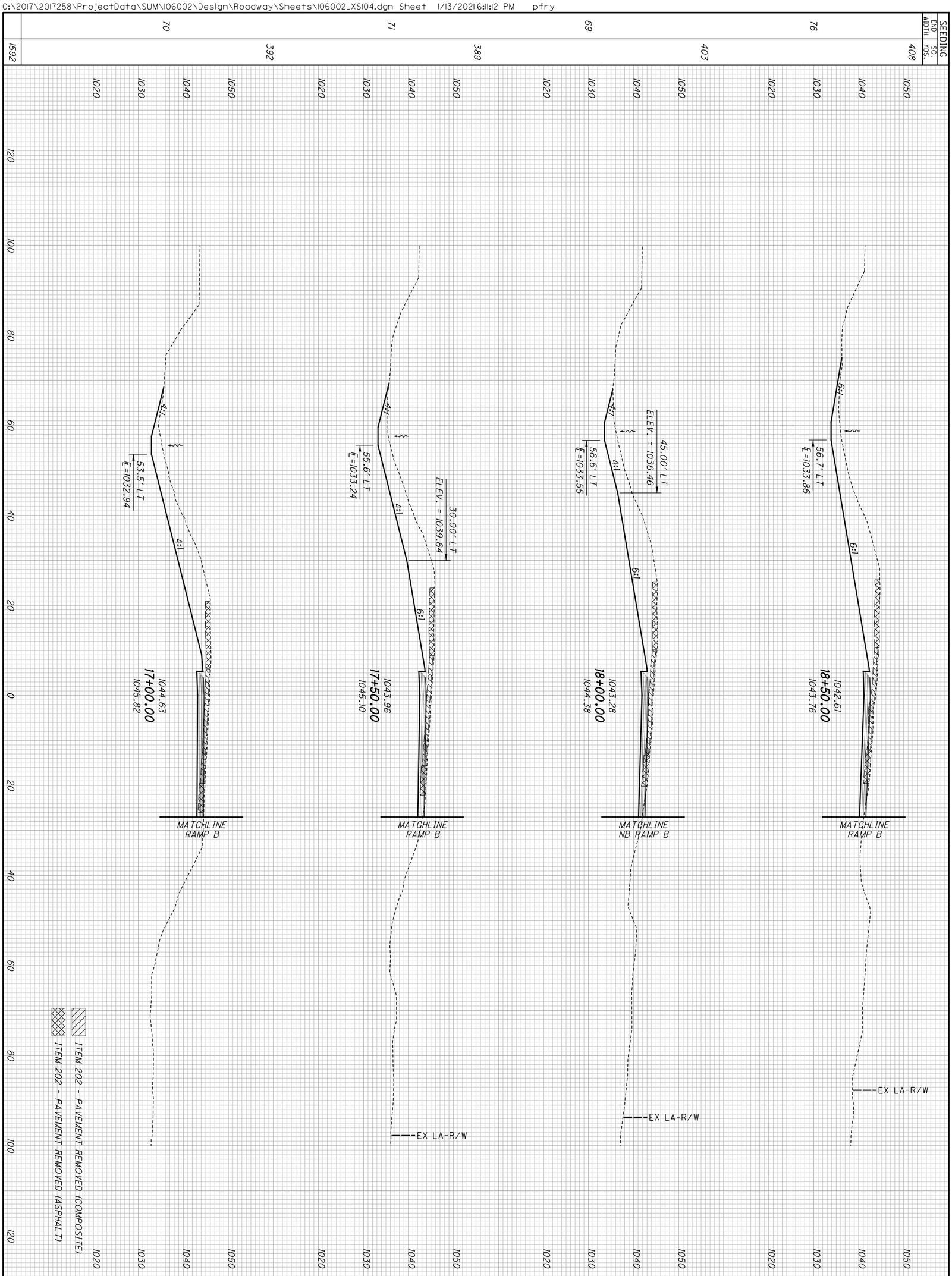
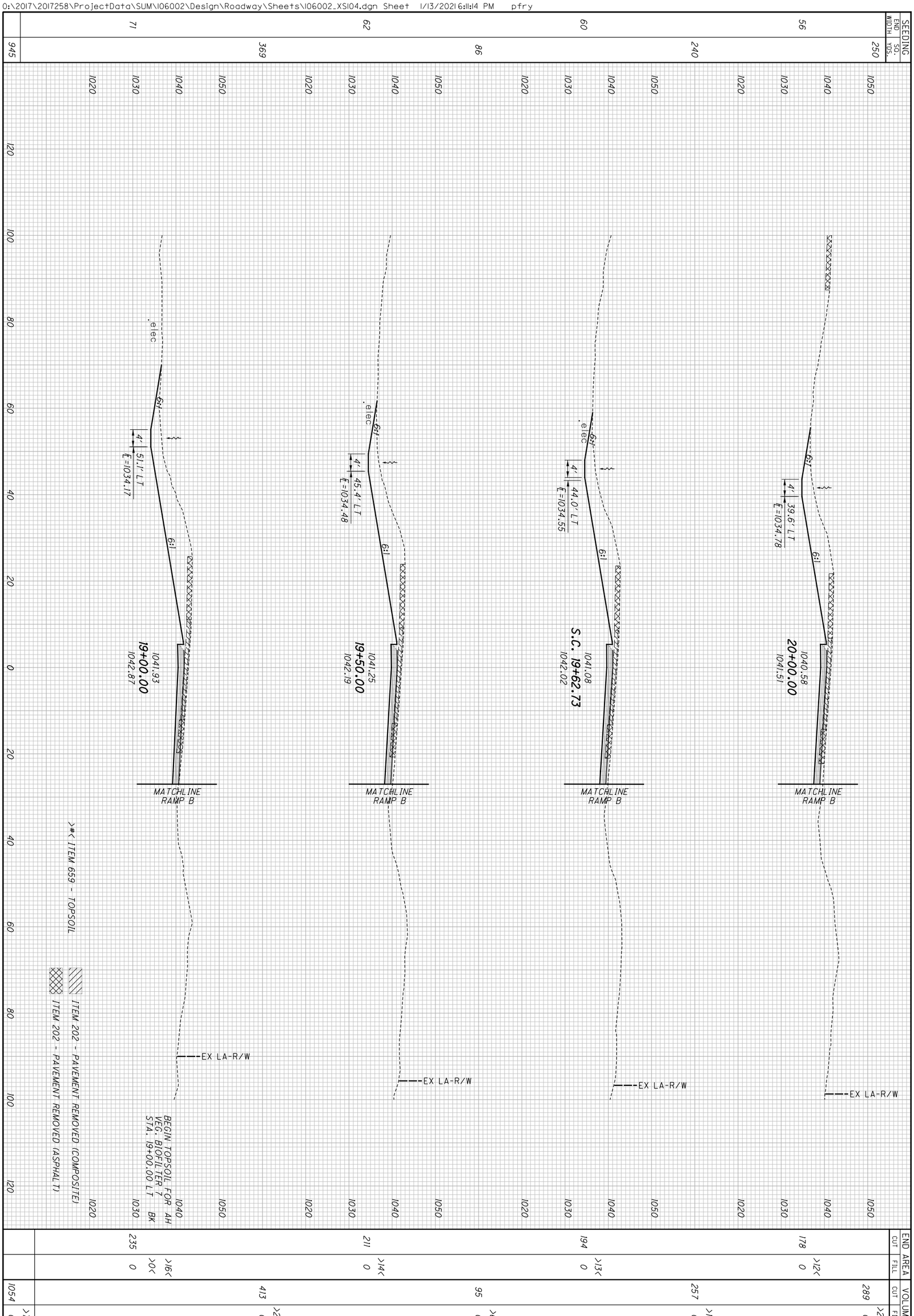


709
1288

SUM-77/277/224
VARIOUS

CROSS SECTIONS - RAMP B-2
STA. 17+00.00 TO STA. 18+50.00

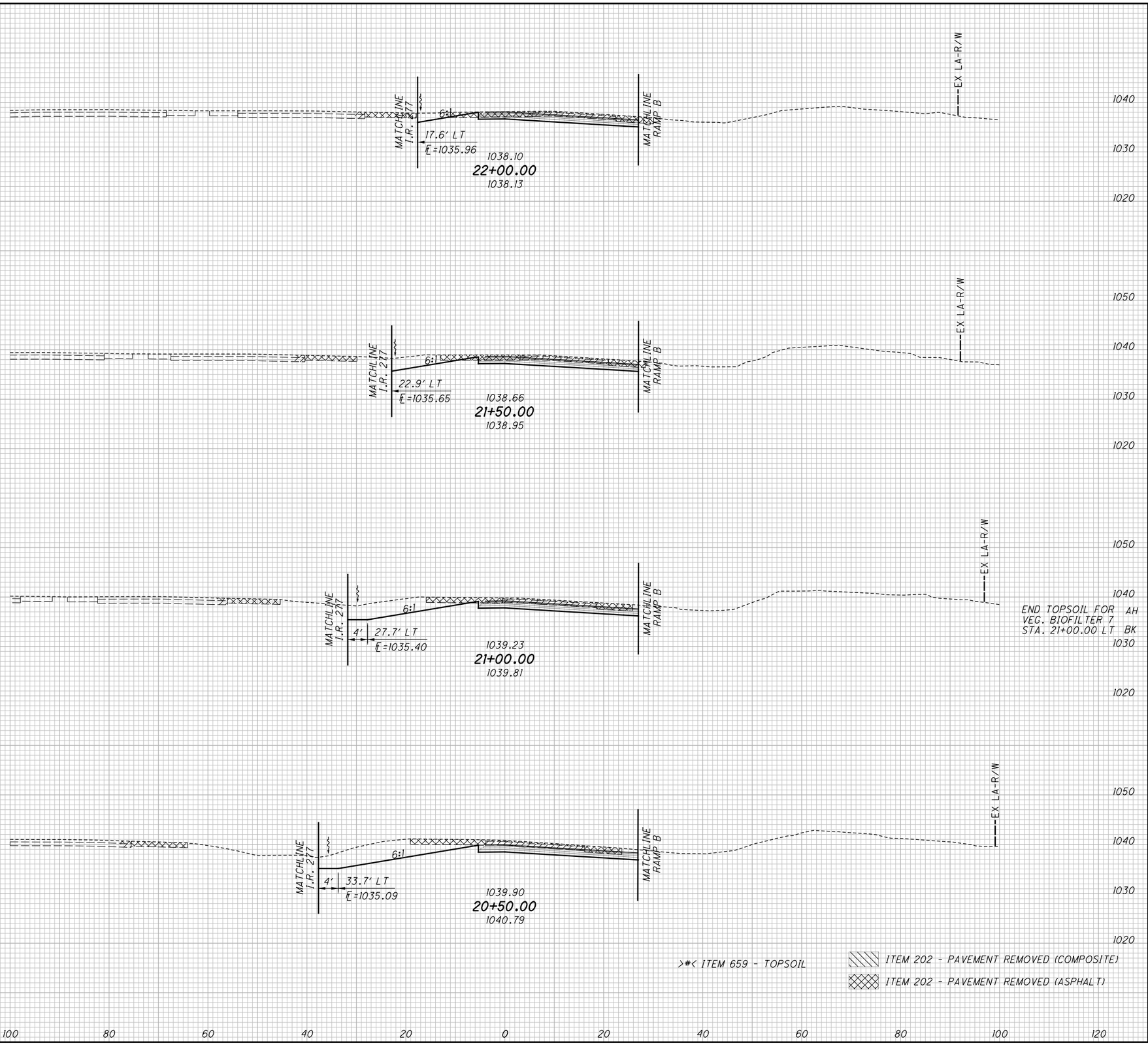
CALCULATED CJC
CHECKED PJF



710 / 1288	**SUM-77/277/224** **VARIOUS**	**CROSS SECTIONS - RAMP B-2** **STA. 19+00.00 TO STA. 20+00.00**

CALCULATED CJC
CHECKED PJF

SEEDING END WIDTH	SEEDING SQ. YDS.
	55
15	
	94
19	
	131
28	
	172
34	
	452



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		45	4
36	3		
		83	5
54	2		
		140	2
97	>0< 0		>17<
	>8<	214	0
134	>10< 0		
		482	>17< 11

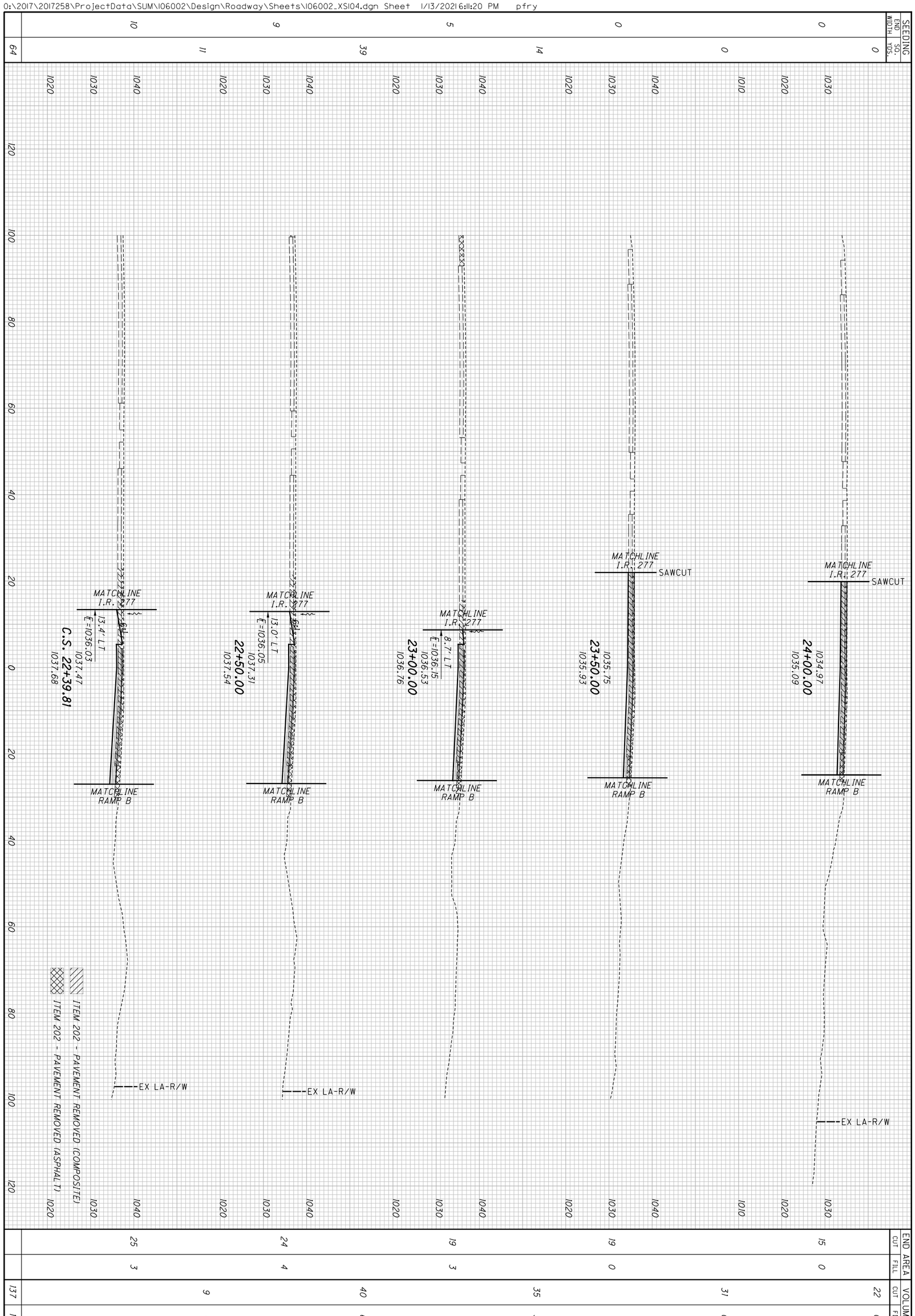
CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B-2
STA. 20+50.00 TO STA. 22+00.00

SUM-77 / 277 / 224
VARIOUS

711
1288

O:\2017\2017258\Project Data\SUM\106002\Design\Roadway\Sheets\106002_XS104.dgn Sheet 1/13/2021 6:11:17 PM pfry



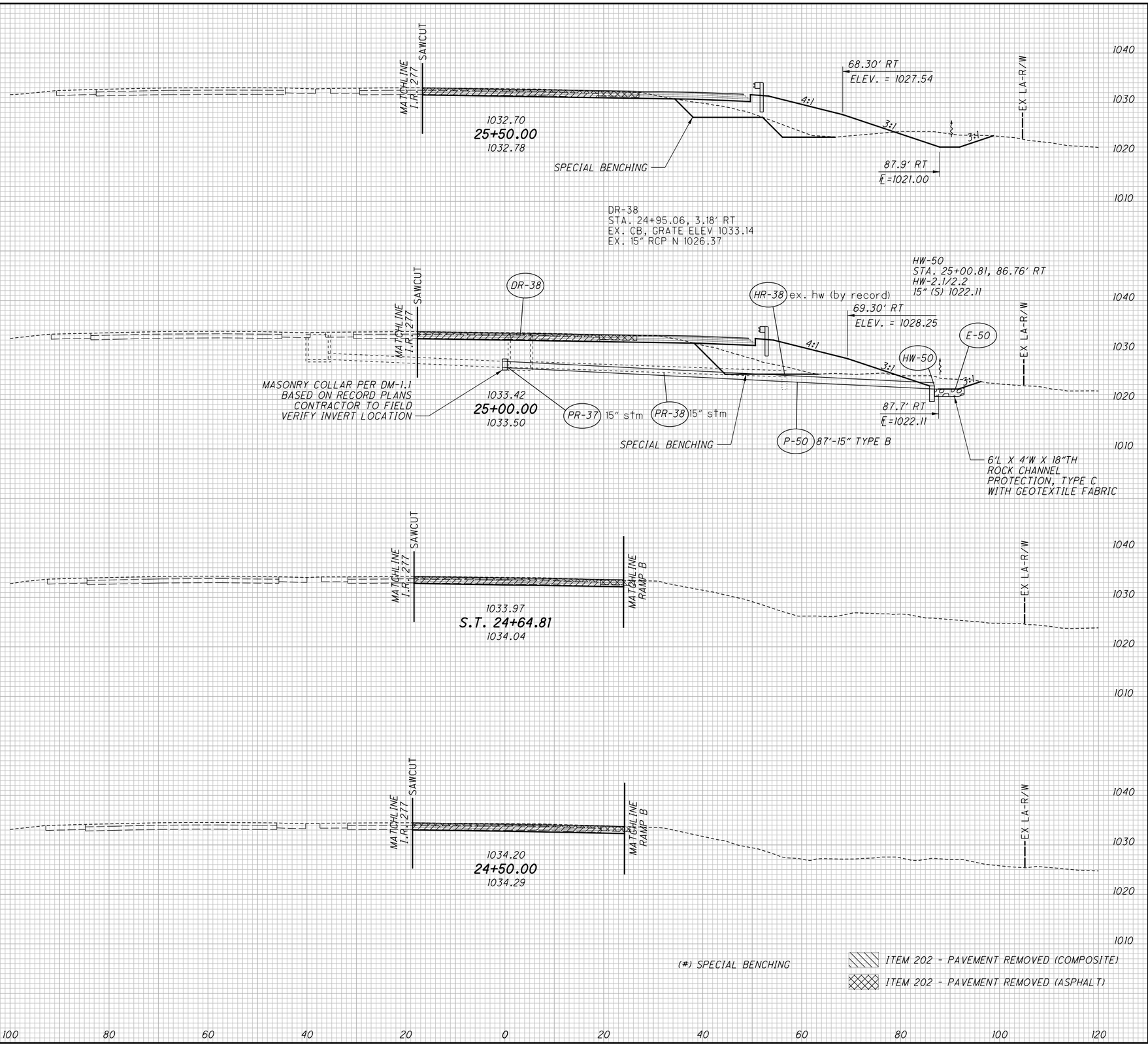
712
1288

SUM-77/277/224
VARIOUS

CROSS SECTIONS - RAMP B-2
STA. 22+39.81 TO STA. 24+00.00

CALCULATED CJC
CHECKED PJF

SEEDING END WIDTH	SEEDING SQ. YDS.
	319
56	
	303
53	
	104
0	
	0
0	
	726



(#) SPECIAL BENCHING

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		(89)	(89)
		91	244
(46)	(46)		
45	133		
		(94)	(94)
		81	229
(56)	(56)		
43	114		
		(36)	(36)
		33	74
(0)	(0)		
7	0		
		4	0
9	0		
		(219)	(219)
		209	547

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B-2
STA. 24+50.00 TO STA. 25+50.00

SUM-77 / 277 / 224
VARIOUS

713
1288

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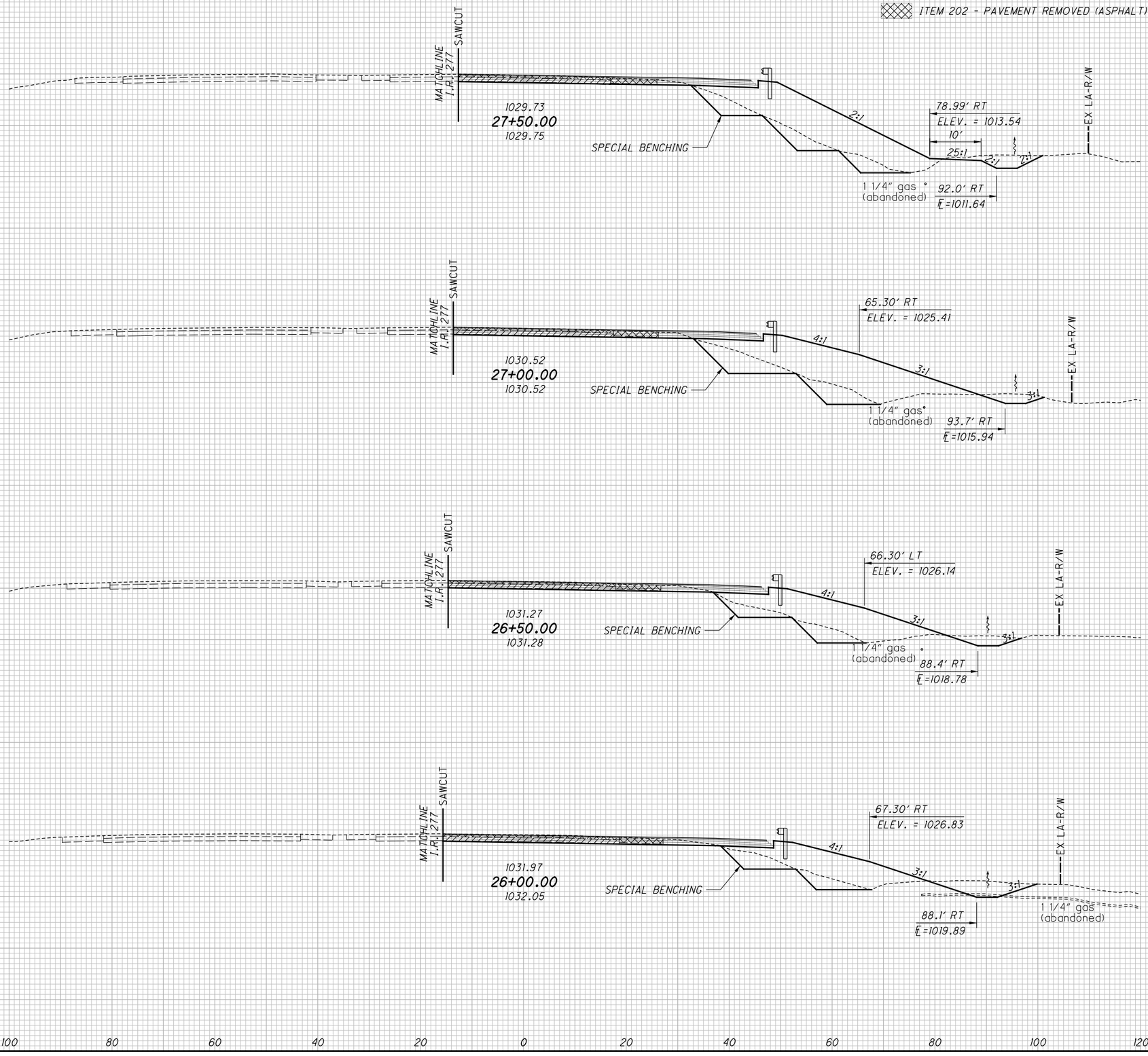
SEEDING END WIDTH	SEEDING SQ. YDS.
	389
65	
	353
62	
	328
56	
	319
59	
	1389

(#) SPECIAL BENCHING

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		(147)	(147)
		62	548
(74)	(74)		
33	246		
		(147)	(147)
		55	460
(85)	(85)		
26	251		
		(123)	(123)
		53	395
(48)	(48)		
31	176		
		(91)	(91)
		78	284
(50)	(50)		
53	131		
		(508)	(508)
		248	1687

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B-2
STA. 26+00.00 TO STA. 27+50.00

SUM-77 / 277 / 224
VARIOUS

714
1288

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS104.dgn Sheet 1/13/2021 6:11:26 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	464
82	
	450
80	
	431
75	
	1345

(#) SPECIAL BENCHING

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		(156)	(156)
		44	613
(82)	(82)		
27	327		
		(161)	(161)
		44	630
(92)	(92)		
20	353		
		(164)	(164)
		50	647
(85)	(85)		
34	346		
		(481)	(481)
		138	1890

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B-2
STA. 28+00.00 TO STA. 29+00.00

SUM-77 / 277 / 224
VARIOUS

715
1288

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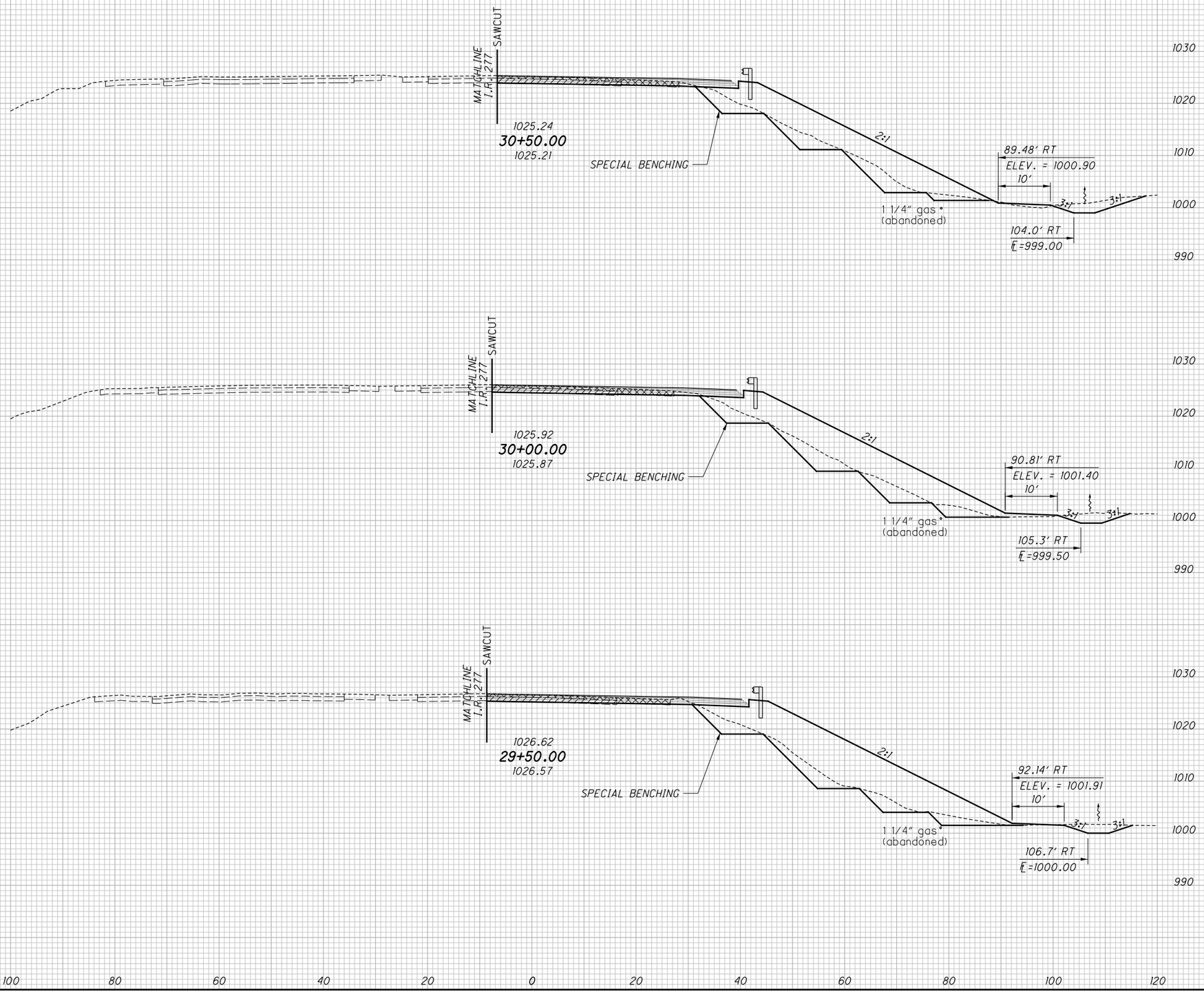
SEEDING END WIDTH	SEEDING SQ. YDS.
90	486
	489
86	475
85	1450

(#) SPECIAL BENCHING

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		(171)	(171)
		43	388
		(88)	(88)
		26	230
		(177)	(177)
		44	452
		(103)	(103)
		21	258
		(176)	(176)
		38	549
		(87)	(87)
		20	335
		(524)	(524)
		125	1389

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B-2
STA. 29+50.00 TO STA. 30+50.00

SUM-77 / 277 / 224
VARIOUS

716
1288

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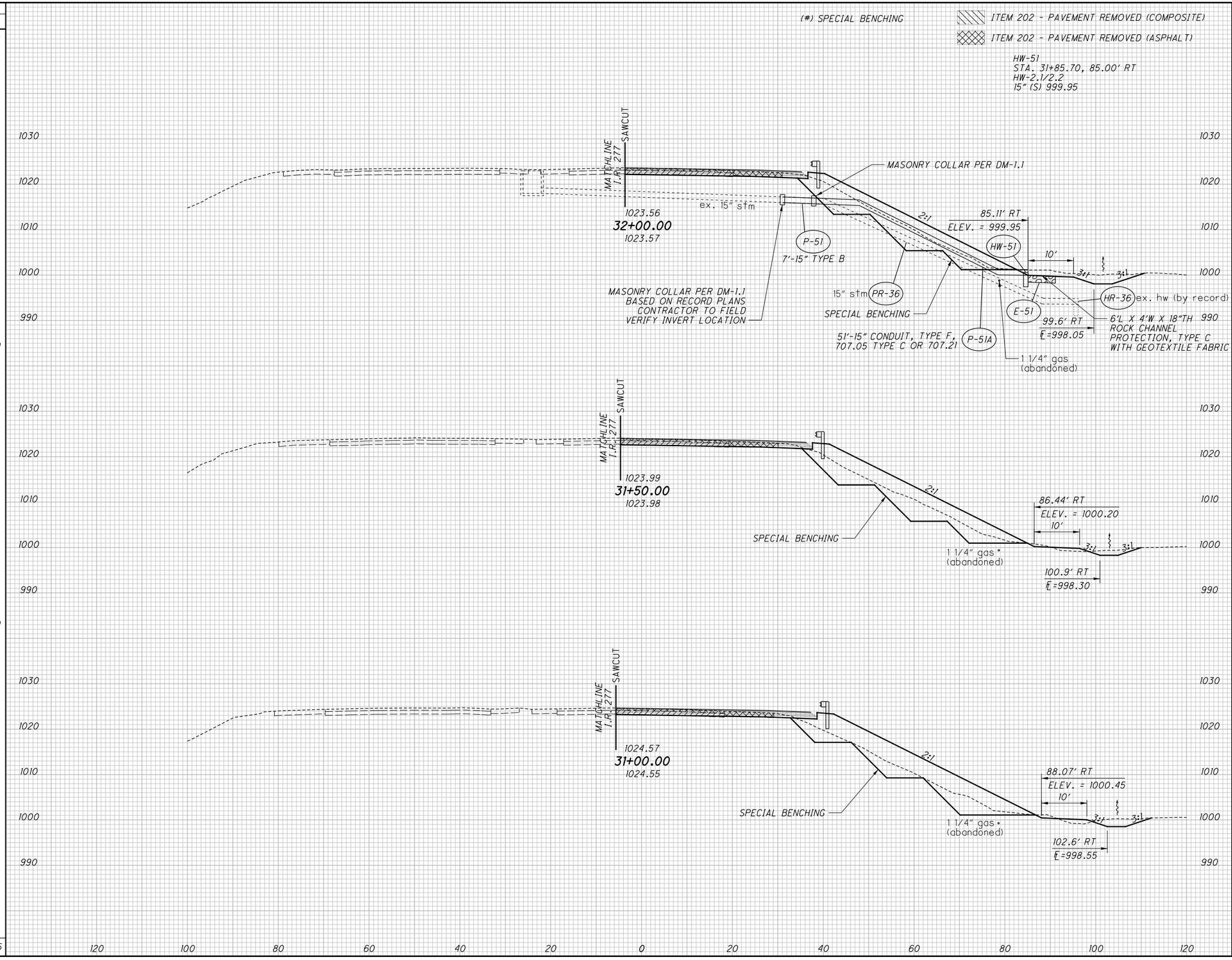
SEEDING	
END WIDTH	SQ. YDS.
	397
85	
	469
84	
	469
85	
	1335

(#) SPECIAL BENCHING

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

HW-51
STA. 31+85.70, 85.00' RT
HW-2.1/2.2
15" (S) 999.95



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		(272)	(272)
		47	181
		(135)	(135)
		42	105
		(234)	(234)
		54	221
(118)	(118)		
16	134		
		(199)	(199)
		33	299
(97)	(97)		
20	189		
		(705)	(705)
		134	701

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B-2
STA. 31+00.00 TO STA. 32+00.00

SUM-77 / 277 / 224
VARIOUS

717
1288

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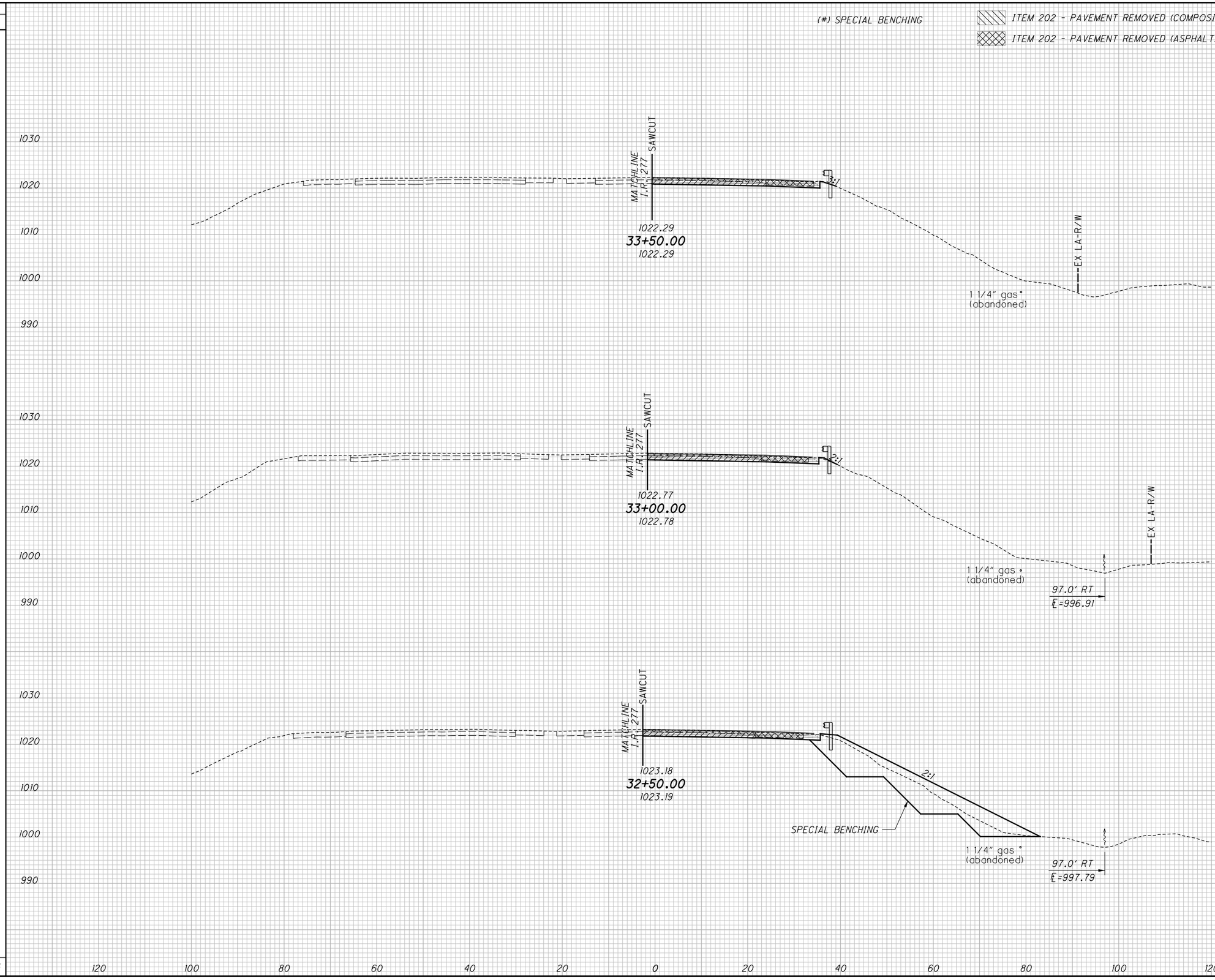
SEEDING	
END WIDTH	SQ. YDS.
	34
9	
	53
10	
	189
58	
	276

(#) SPECIAL BENCHING

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		10	0
6	0		
		13	1
(0) 8	(0) 1		
(159) 9	(159) 90	(147) 16	(147) 84
		(147) 39	(147) 85

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP B-2
STA. 32+50.00 TO STA. 33+50.00

SUM-77 / 277 / 224
VARIOUS

718
1288

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SEEDING	
END WIDTH	SQ. YDS.
10	

END AREA	
CUT	FILL
11	0

VOLUME	
CUT	FILL

CALCULATED	CHECKED
CJC	PJF

CROSS SECTIONS - RAMP B-2
STA. 33+82.00

SUM-77 / 277 / 224
VARIOUS

719
1288

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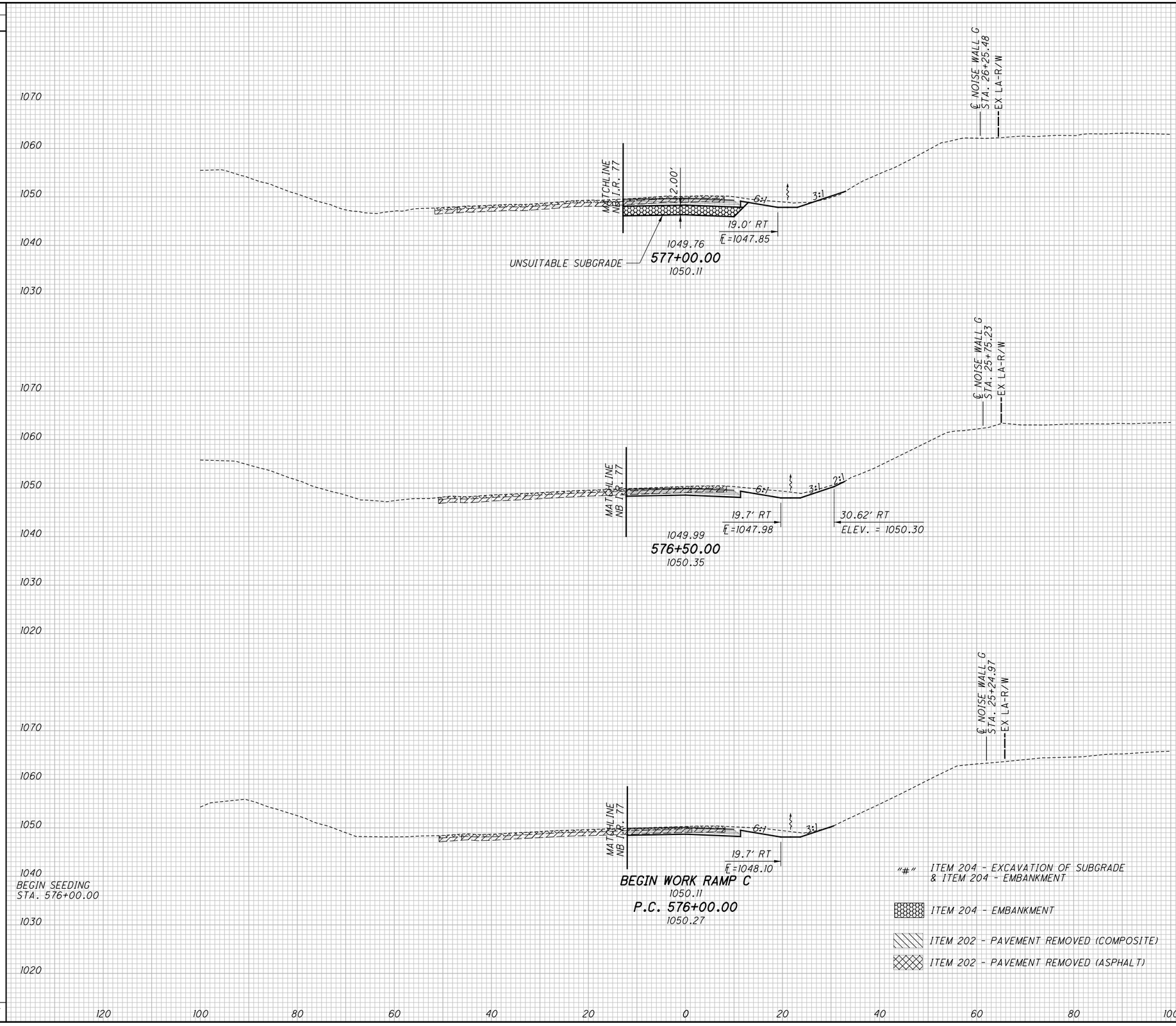
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	158			"91"	"91"
				63	5
28		"48"	"48"		
		33	3		
	153			"44"	"44"
				65	3
27		"0"	"0"		
		37	0		
	144			61	0
25		29	0		
	455			"135"	"135"
				189	8



CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP C
STA. 576+00.00 TO STA. 577+00.00

SUM-77 / 277 / 224
VARIOUS

720
1288

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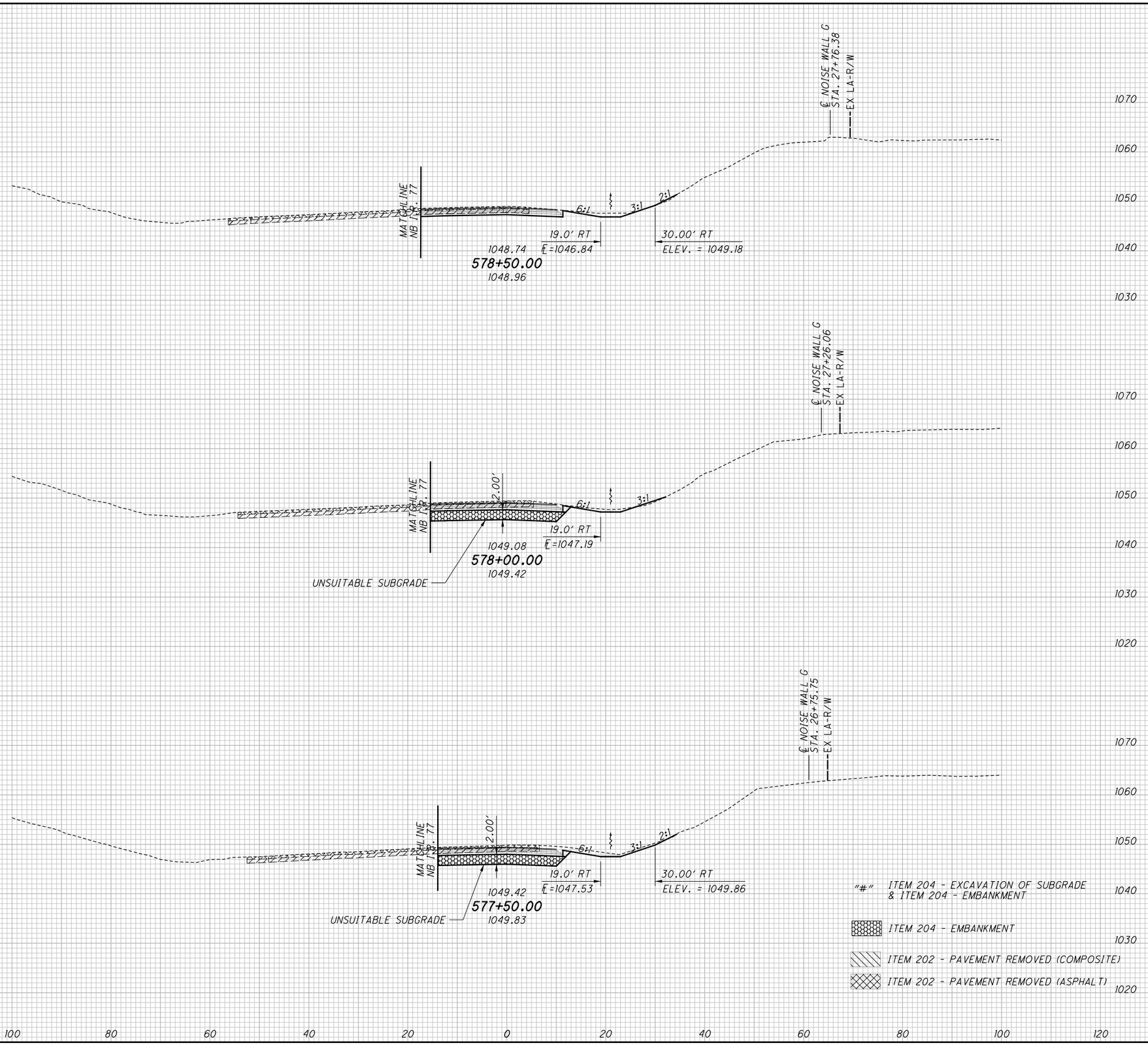
SEEDING END WIDTH	SEEDING SQ. YDS.
	225
29	
	156
27	
	156
29	
	537



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		78	1
"0"	"0"		
26	1		
		"49"	"49"
		50	3
"53"	"53"		
28	2		
		"95"	"95"
		58	4
"50"	"50"		
35	2		
		"144"	"144"
		186	8

"#" ITEM 204 - EXCAVATION OF SUBGRADE & ITEM 204 - EMBANKMENT

ITEM 204 - EMBANKMENT

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP C
STA. 577+50.00 TO STA. 578+50.00

SUM-77 / 277 / 224
VARIOUS

721
1288

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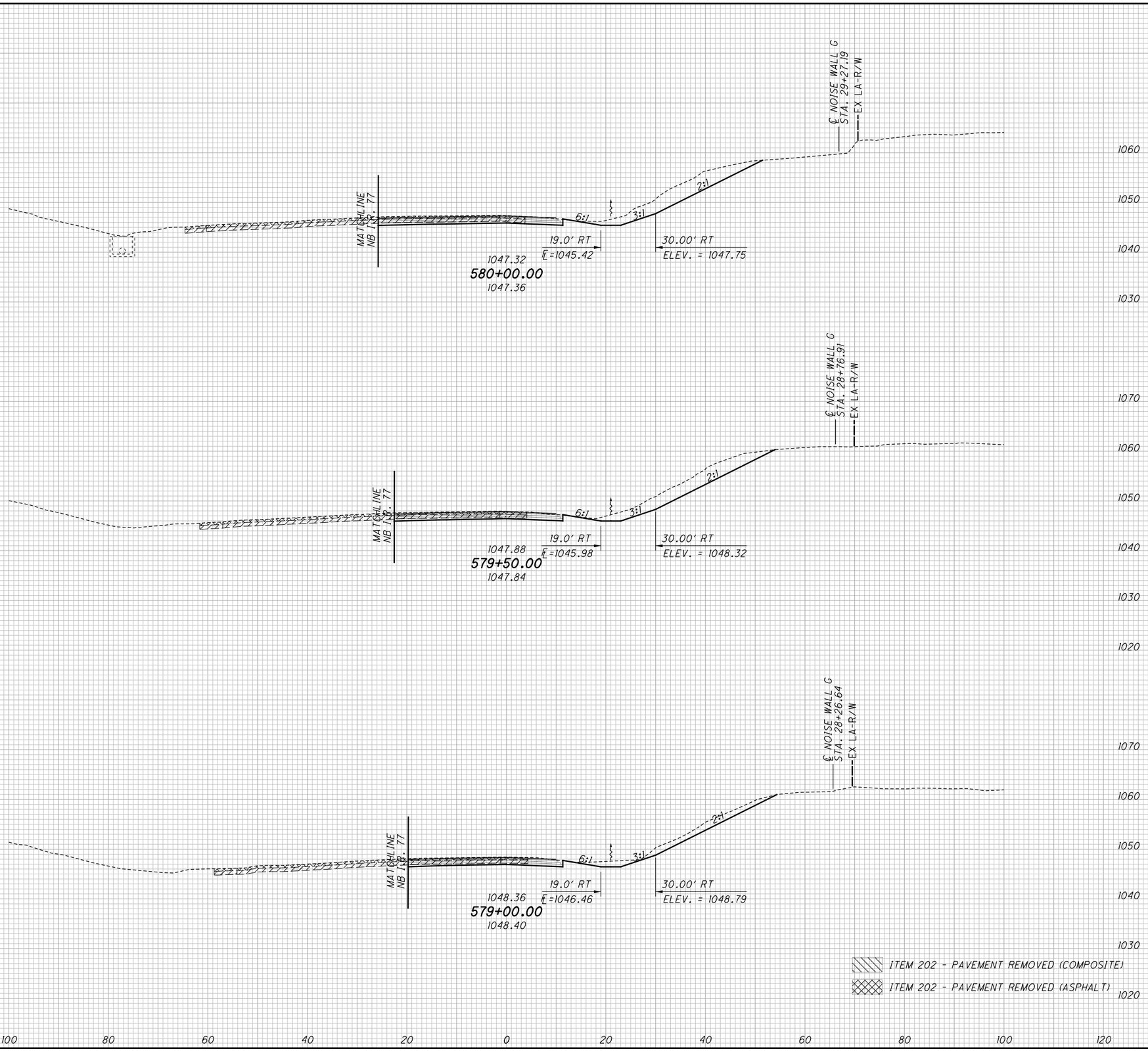
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	92			65	0
49		100	0		
	278			181	0
51		95	0		
	286			142	0
52		58	0		
	656			388	0



CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP C
STA. 579+00.00 TO STA. 580+00.00

SUM-77 / 277 / 224
VARIOUS

722
1288

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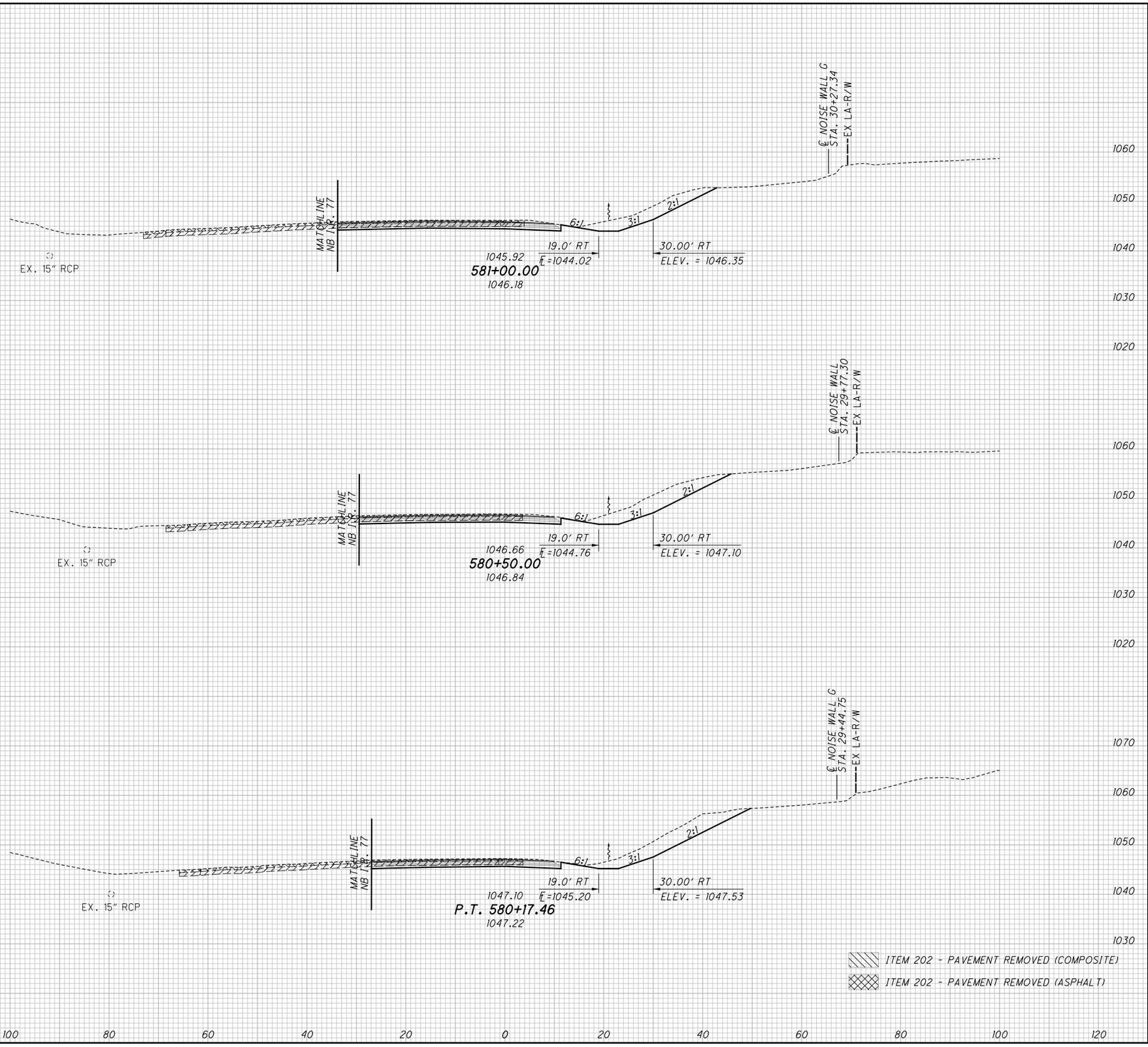
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	250			175	0
39		83	0		
	225			166	0
42		96	0		
	159			119	0
46		102	0		
	634			460	0



CALCULATED CJC
CHECKED PJF

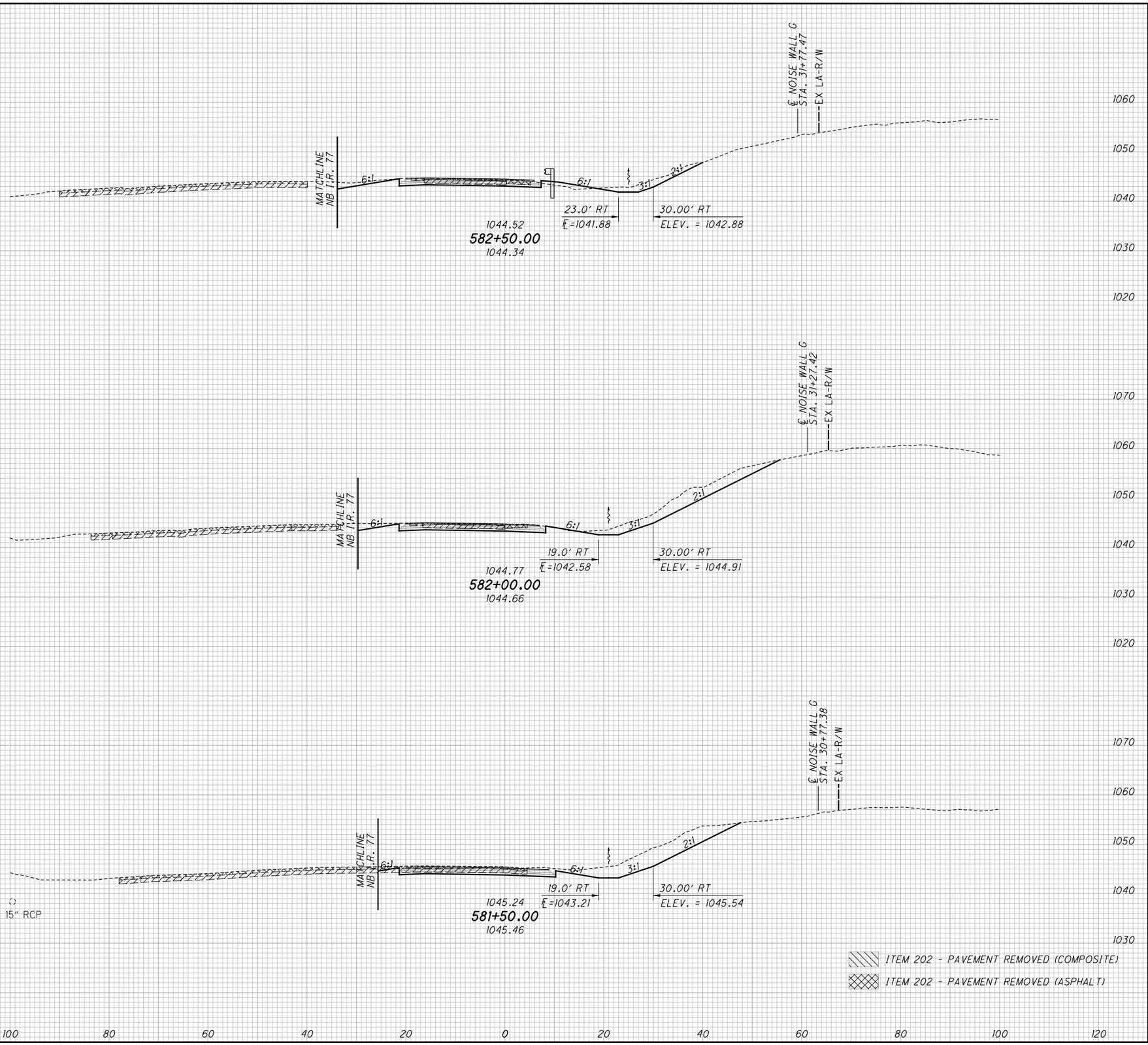
CROSS SECTIONS - RAMP C
STA. 580+17.46 TO STA. 581+00.00

SUM-77 / 277 / 224
VARIOUS

723
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS05.dgn Sheet 1/13/2021 6:15:03 PM pfry

SEEDING	
END WIDTH	SQ. YDS.
	319
54	
	333
66	
	325
51	
	977



END AREA	
CUT	FILL
42	7
98	0
106	0

VOLUME	
CUT	FILL
69	16
130	6
189	0
388	22

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP C
STA. 581+50.00 TO STA. 582+50.00

SUM-77 / 277 / 224
VARIOUS

724
1288

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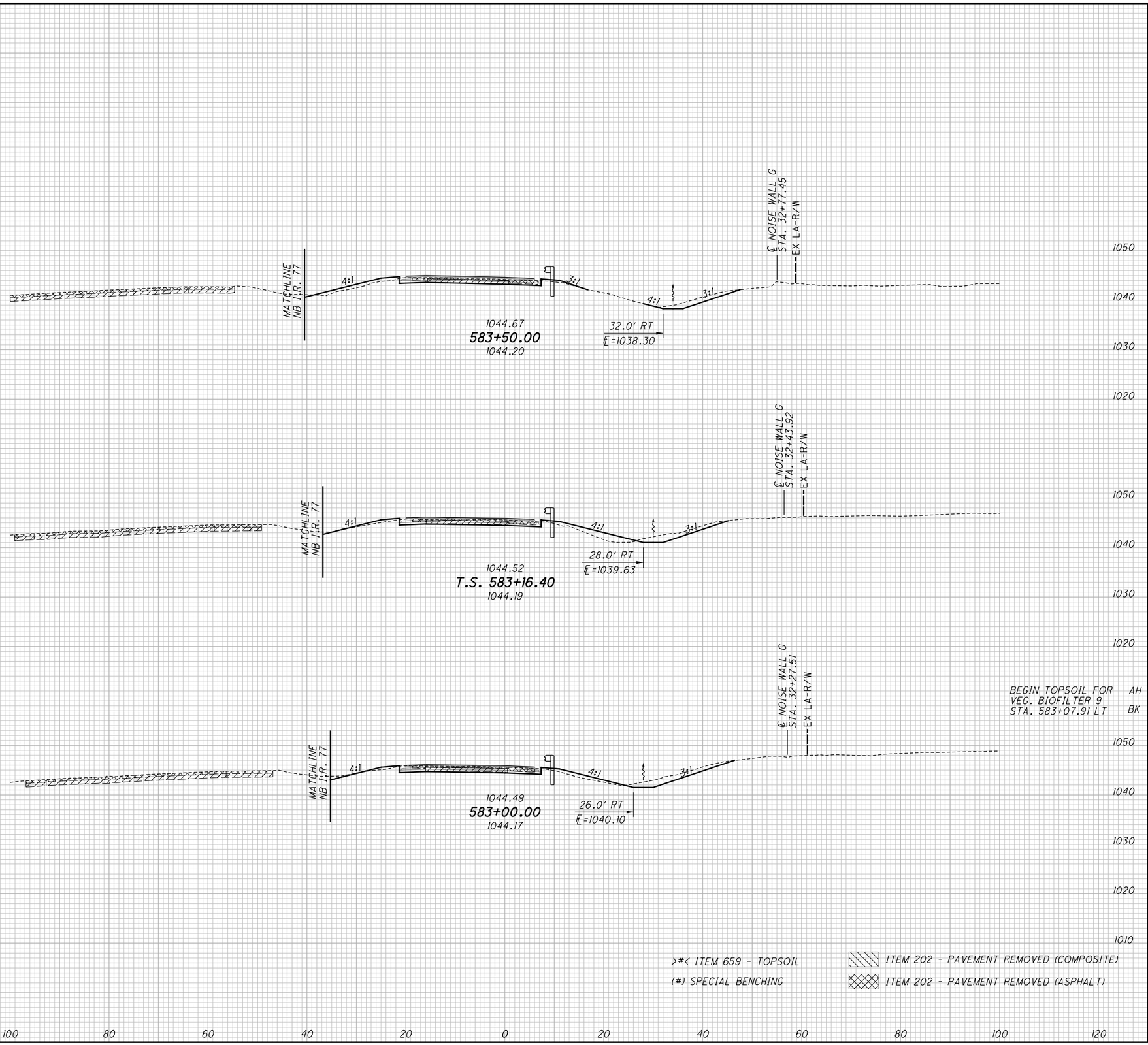


SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	272			(46)	(46)
					>13<
				23	34
56		(0)	(0)		
			>7<		
		20	7		
	220				>8<
				29	15
62		27	>6< 17		
	112		>5< >0<	18	>2< 8
61		32	10		
	604			(46) 70	(46) >23< 57

>#< ITEM 659 - TOPSOIL
(#) SPECIAL BENCHING
ITEM 202 - PAVEMENT REMOVED (COMPOSITE)
ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED CJC
CHECKED PJF

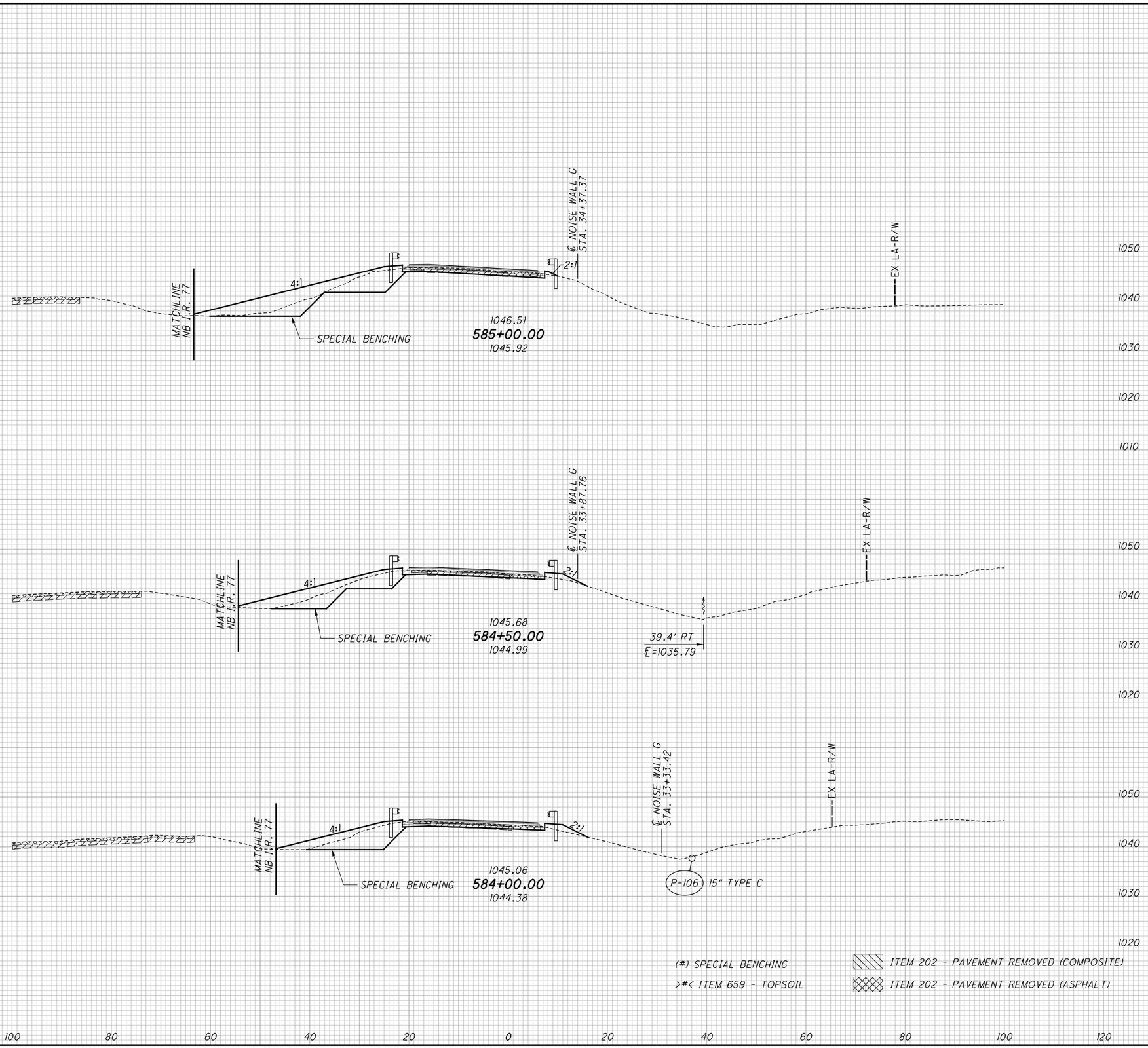
CROSS SECTIONS - RAMP C
STA. 583+00.00 TO STA. 583+50.00

SUM-77 / 277 / 224
VARIOUS

725
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS105.dgn Sheet 1/13/2021 6:15:07 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	99			(42)	(42)
					>8<
				3	46
53		(64)	(64)		
					>13<
		4	69		
	286			(106)	(106)
					>21<
				6	106
50		(51)	(51)		
					>10<
		3	46		
	256			(94)	(94)
					>16<
				7	70
42		(50)	(50)		
					>7<
		5	30		
	641			(242)	(242)
					>45<
				16	222



(#) SPECIAL BENCHING

>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED CJC

CHECKED PJF

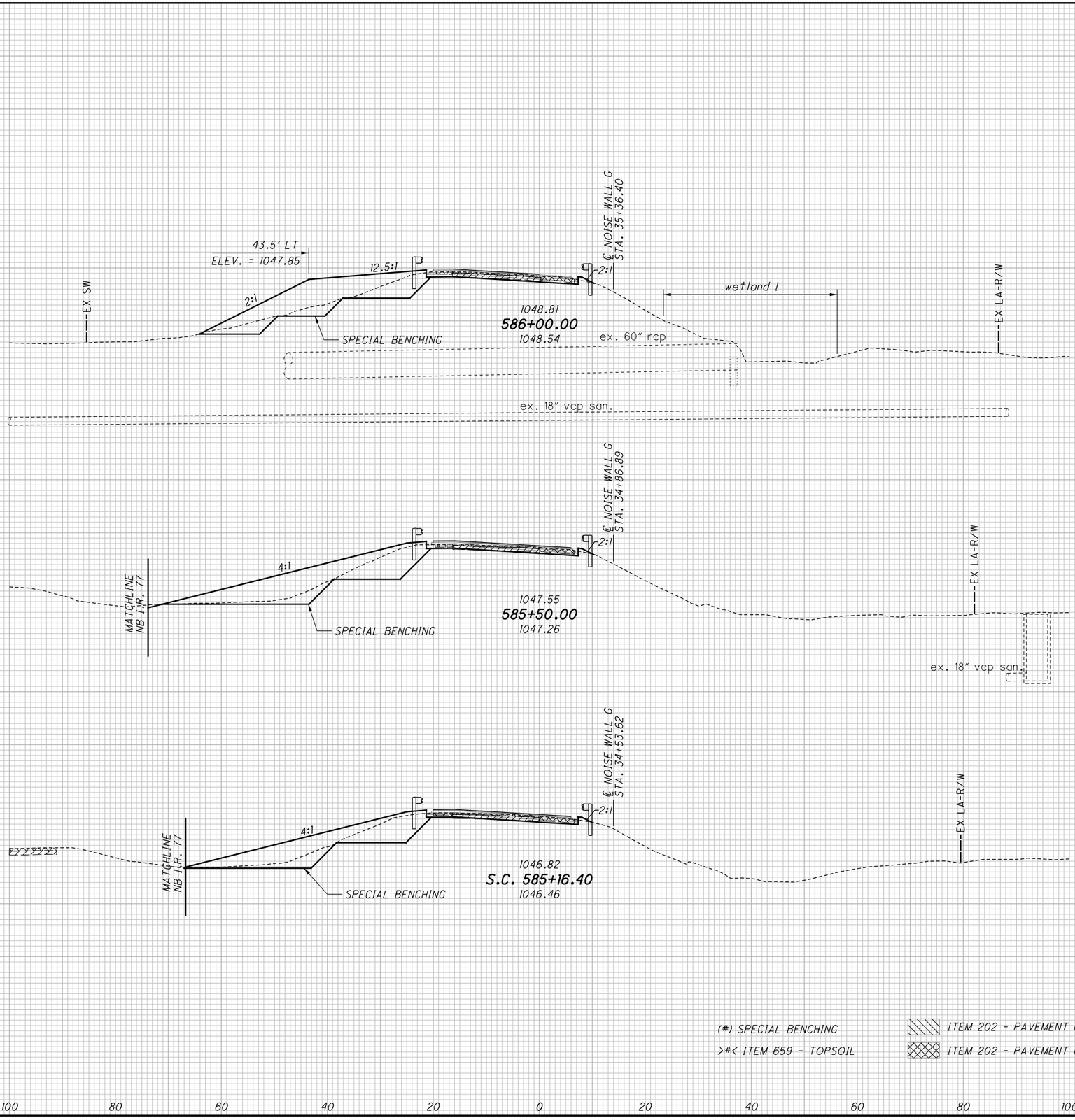
CROSS SECTIONS - RAMP C
STA. 584+00.00 TO STA. 585+00.00

SUM-77 / 277 / 224
VARIOUS

726
1288

D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS05.dgn Sheet 1/13/2021 6:5:09 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	306
59	
	342
64	
	224
56	
	872



(#) SPECIAL BENCHING

>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		(120)	(120)
		18	181
(66)	(66)		
8	126		
	>0<		
	>18<		
		(133)	(133)
			>2<
		14	221
(78)	(78)		
	>16<		
7	113		
		(95)	(95)
			>19<
		7	121
(74)	(74)		
	>14<		
5	81		
		(348)	(348)
			>21<
		39	523

CALCULATED CJC
CHECKED PJF

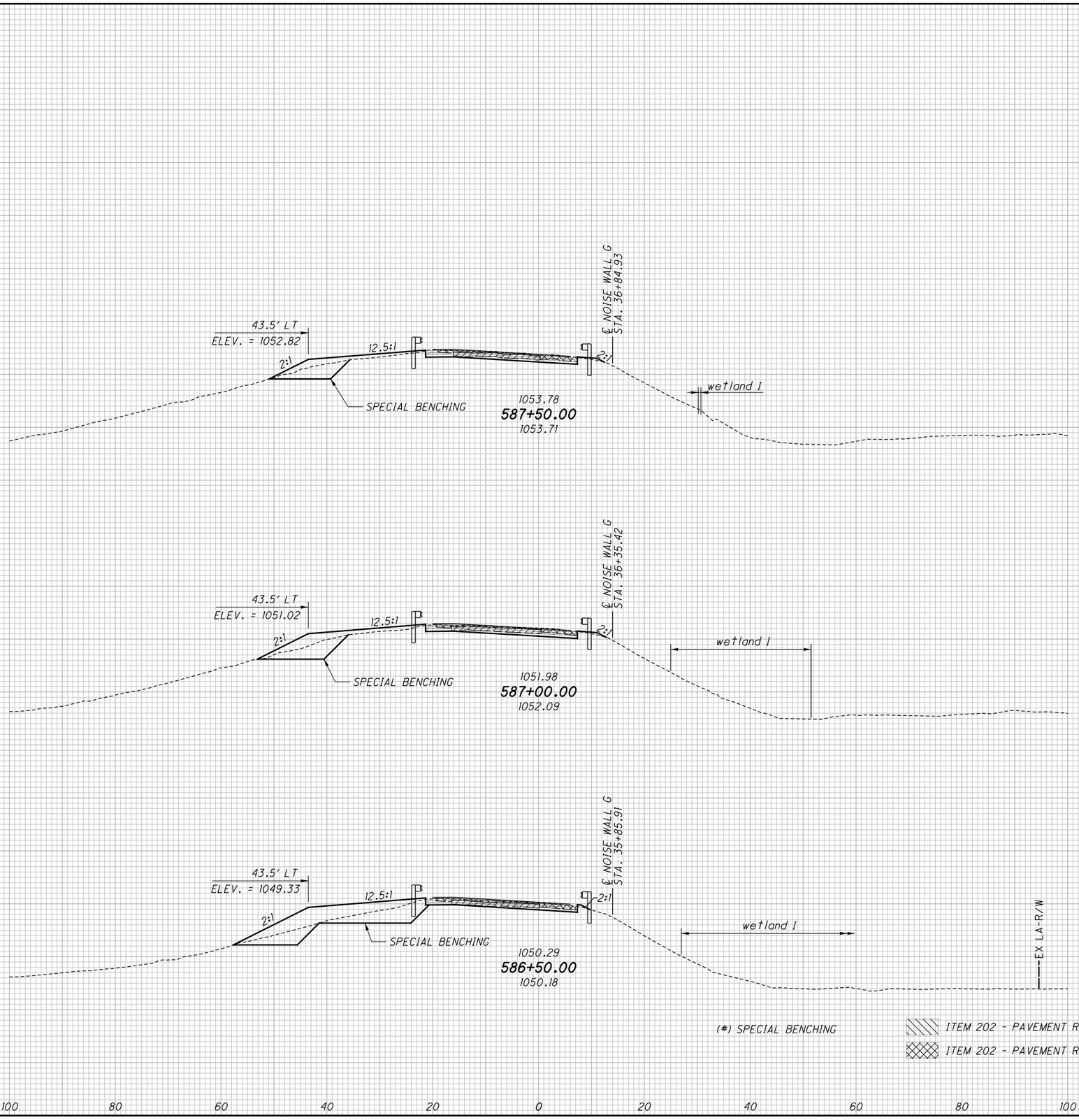
CROSS SECTIONS - RAMP C
STA. 585+16.40 TO STA. 586+00.00

SUM-77 / 277 / 224
VARIOUS

727
1288

O:\2017\20172581\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS105.dgn Sheet 1/13/2021 6:15:11 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	256
46	
	264
49	
	278
51	
	798



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		(36)	(36)
		28	48
(24)	(24)		
15	23		
		(49)	(49)
		29	52
(29)	(29)		
16	33		
		(86)	(86)
		25	94
(64)	(64)		
11	69		
		(171)	(171)
		82	194

CALCULATED CJC
CHECKED PJF

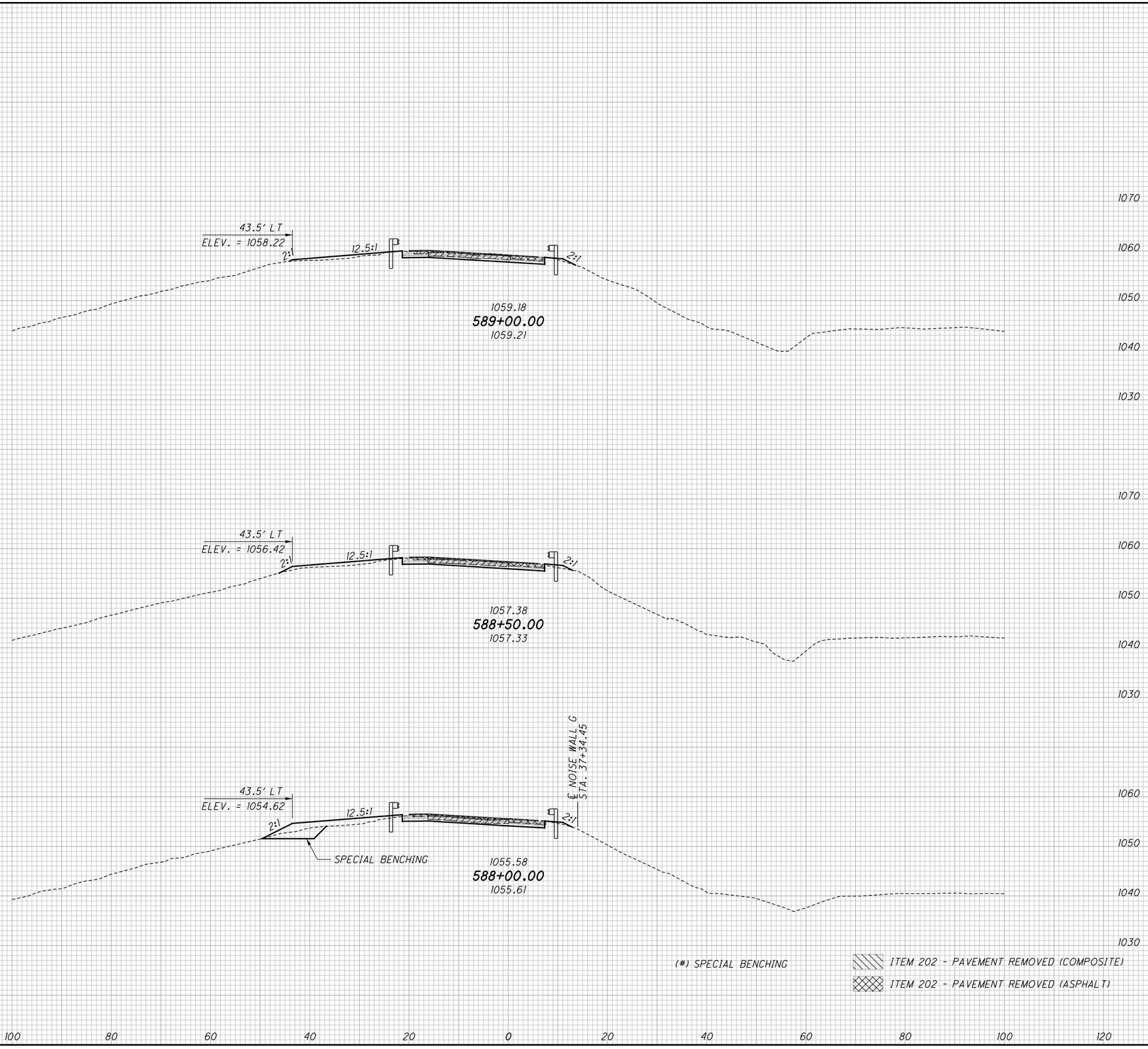
CROSS SECTIONS - RAMP C
STA. 586+50.00 TO STA. 587+50.00

SUM-77 / 277 / 224
VARIOUS

728
1288

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS105.dgn Sheet 1/13/2021 6:15:13 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	233
40	
	228
42	
	244
46	
	705



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		31	24
17	10		
		31	23
(0)	(0)		
16	15		
		(14)	(14)
		29	41
(15)	(15)		
15	29		
		(14)	(14)
		91	88

CALCULATED CJC
CHECKED PJF

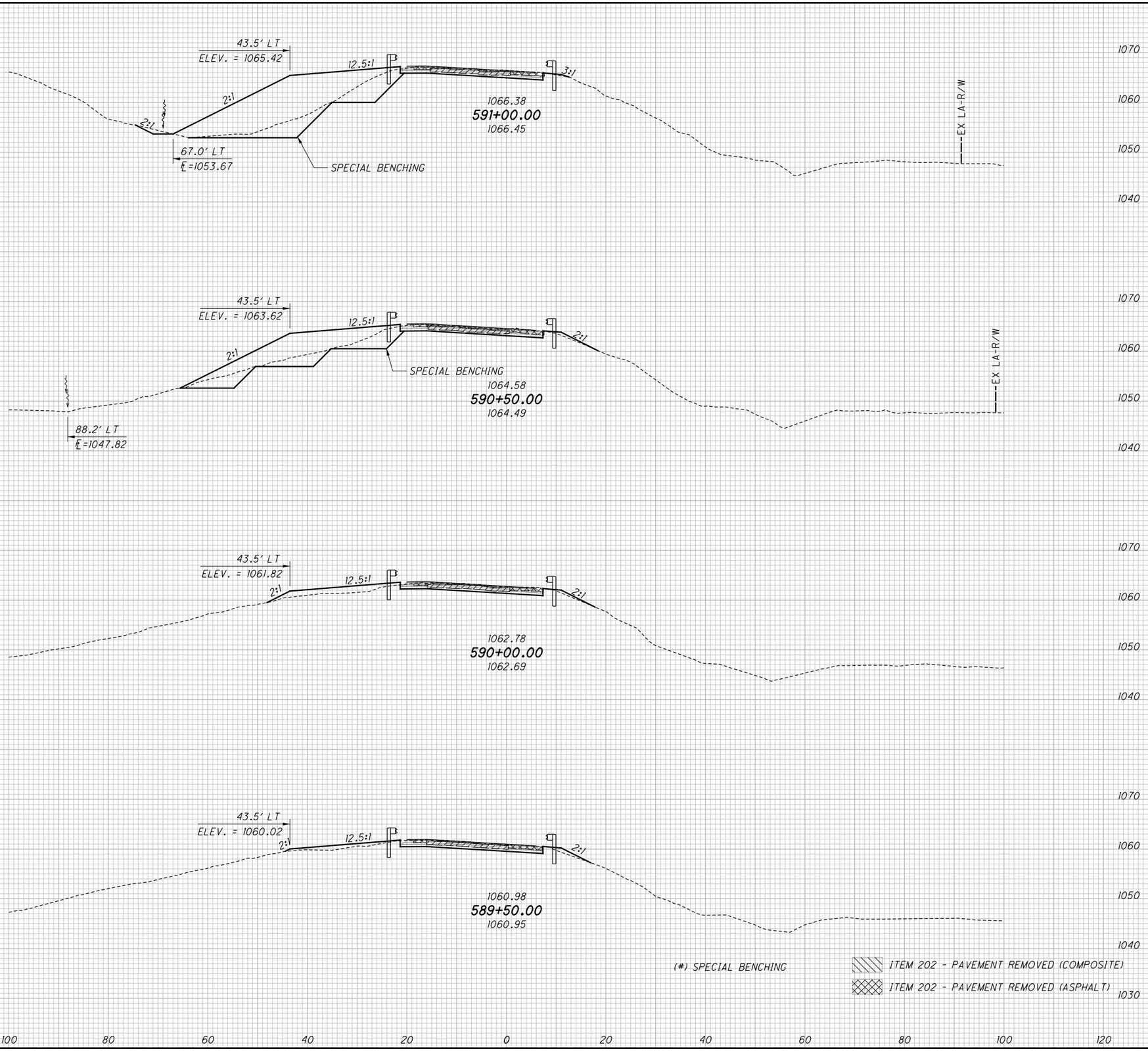
CROSS SECTIONS - RAMP C
STA. 588+00.00 TO STA. 589+00.00

SUM-77 / 277 / 224
VARIOUS

729
1288

D:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS105.dgn Sheet 1/13/2021 6:15:15 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	361
72	
	394
70	
	331
49	
	258
44	
	1344



(#) SPECIAL BENCHING

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		(125)	(125)
		33	314
(81)	(81)		
19	236		
		(140)	(140)
		31	332
(70)	(70)		
15	123		
		(65)	(65)
		28	141
(0)	(0)		
15	29		
		30	42
17	16		
		(330)	(330)
		122	829

CALCULATED CJC
CHECKED PJF

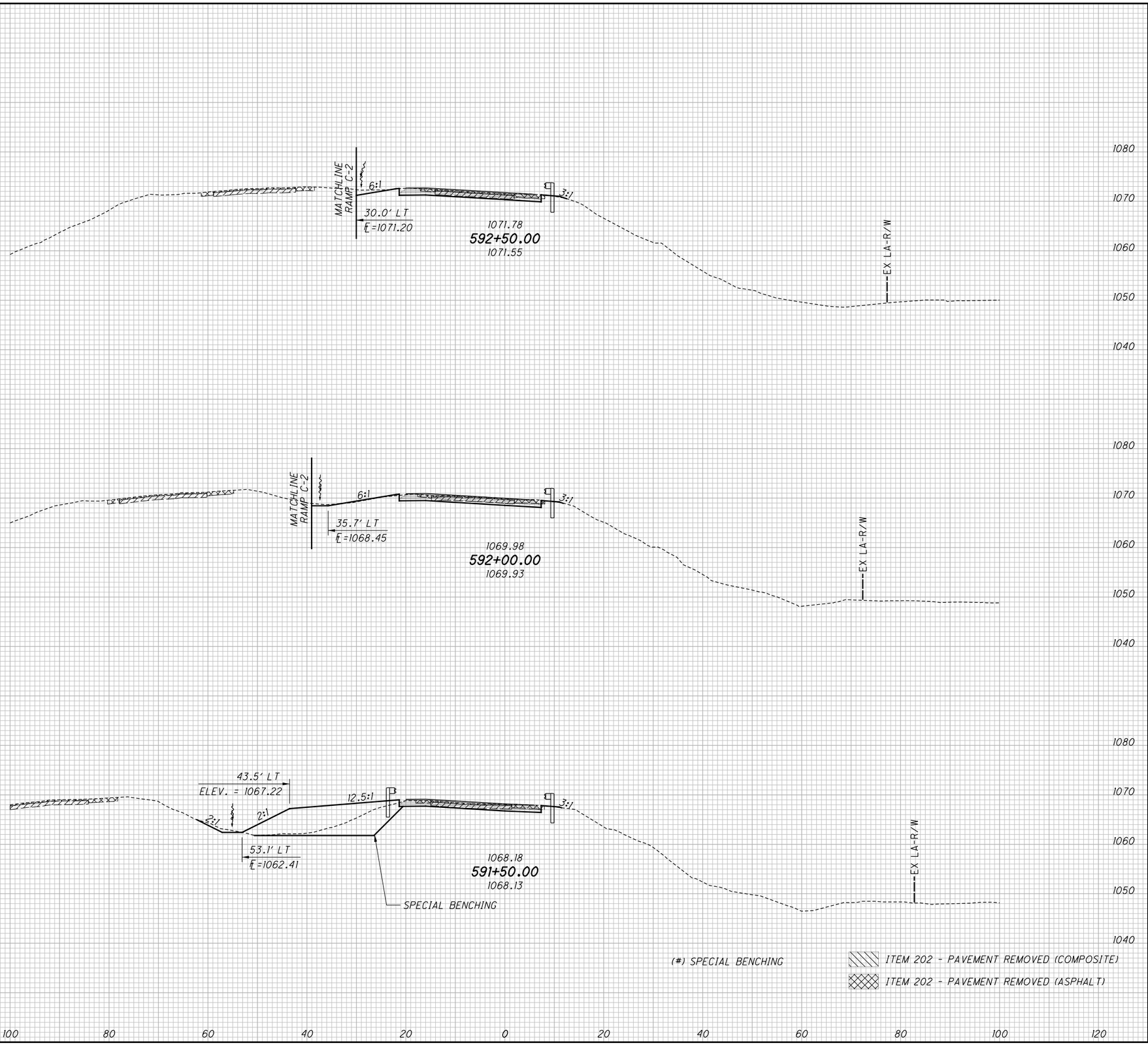
CROSS SECTIONS - RAMP C
STA. 589+50.00 TO STA. 591+00.00

SUM-77 / 277 / 224
VARIOUS

730
1288

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS105.dgn Sheet 1/13/2021 6:15:17 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	86			28	2
21		18	1		
	139			32	3
29		(0) 17	(0) 2		
	242			(50) 31	(50) 97
58		(54) 17	(54) 103		
	467			(50) 91	(50) 102



(#) SPECIAL BENCHING

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED CJC
CHECKED PJF

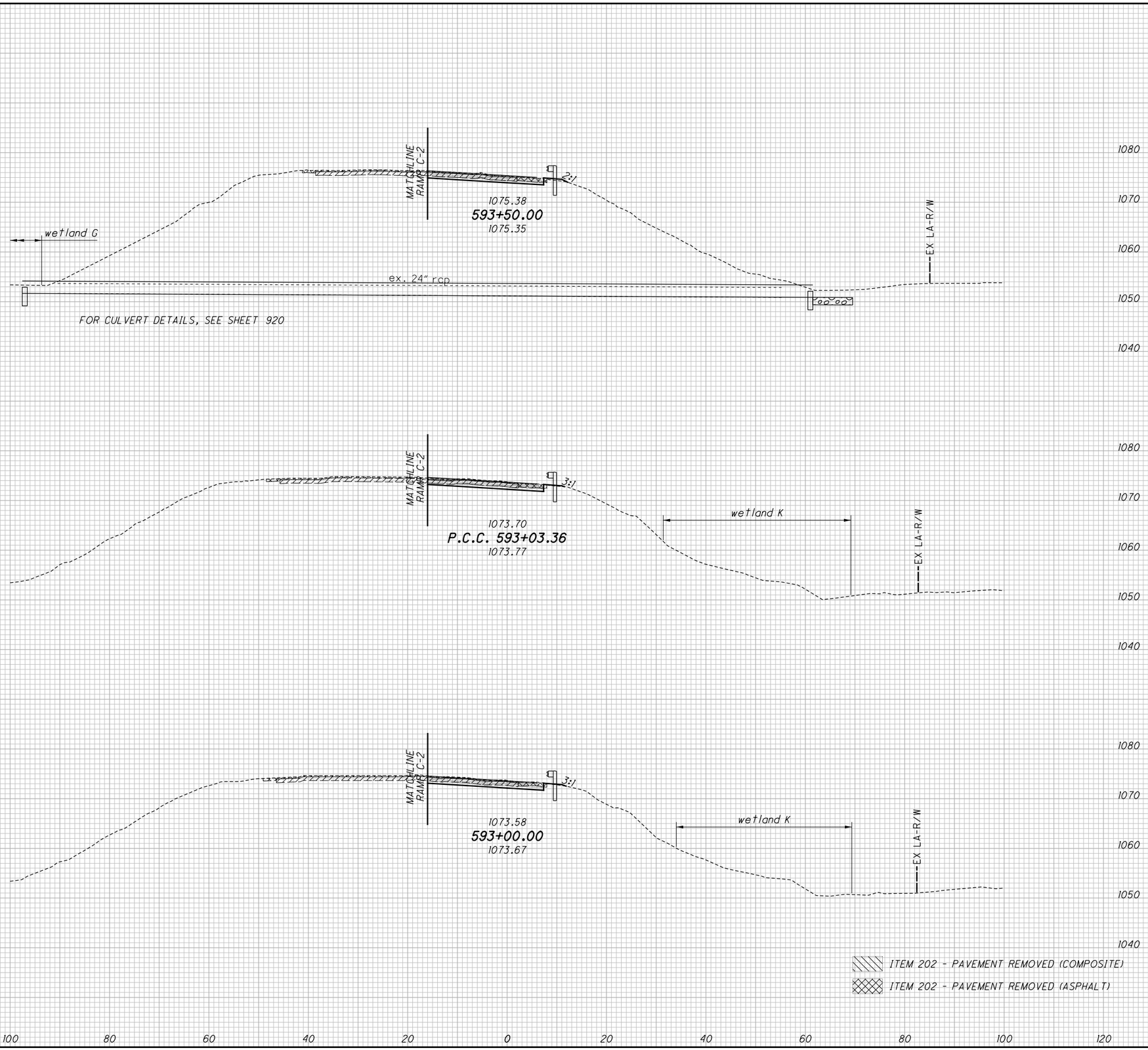
CROSS SECTIONS - RAMP C
STA. 591+50.00 TO STA. 592+50.00

SUM-77 / 277 / 224
VARIOUS

731
1288

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS105.dgn Sheet 1/13/2021 6:15:19 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
10	56
10	52
10	4
10	
	112



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		21	3
11	2		
		19	3
11	1		
		1	0
12	1		
		41	6

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP C
STA. 593+00.00 TO STA. 593+50.00

SUM-77 / 277 / 224
VARIOUS

732
1288

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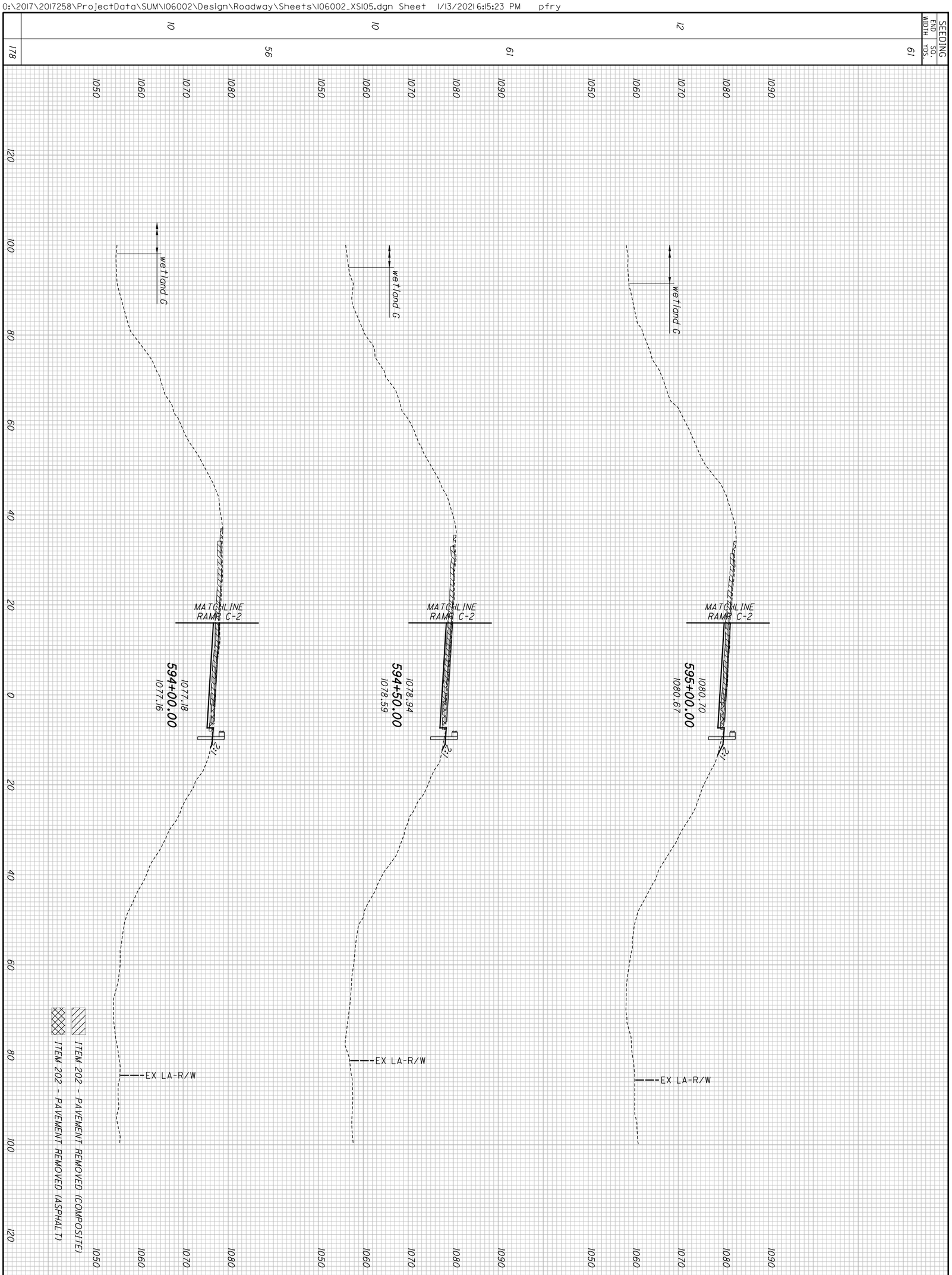
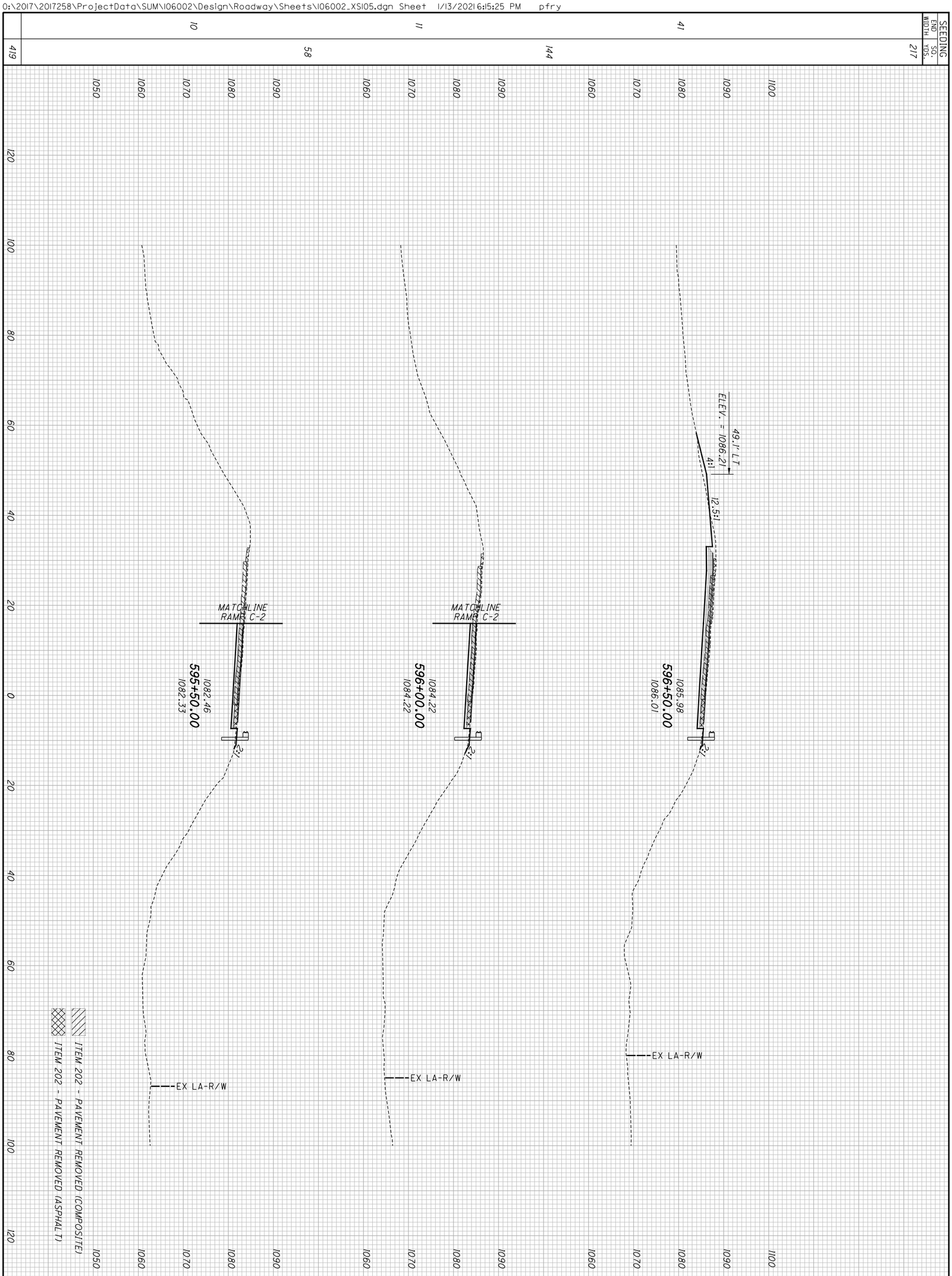


733
1288

SUM-77/277/224
VARIOUS

CROSS SECTIONS - RAMP C
STA. 594+00.00 TO STA. 595+00.00

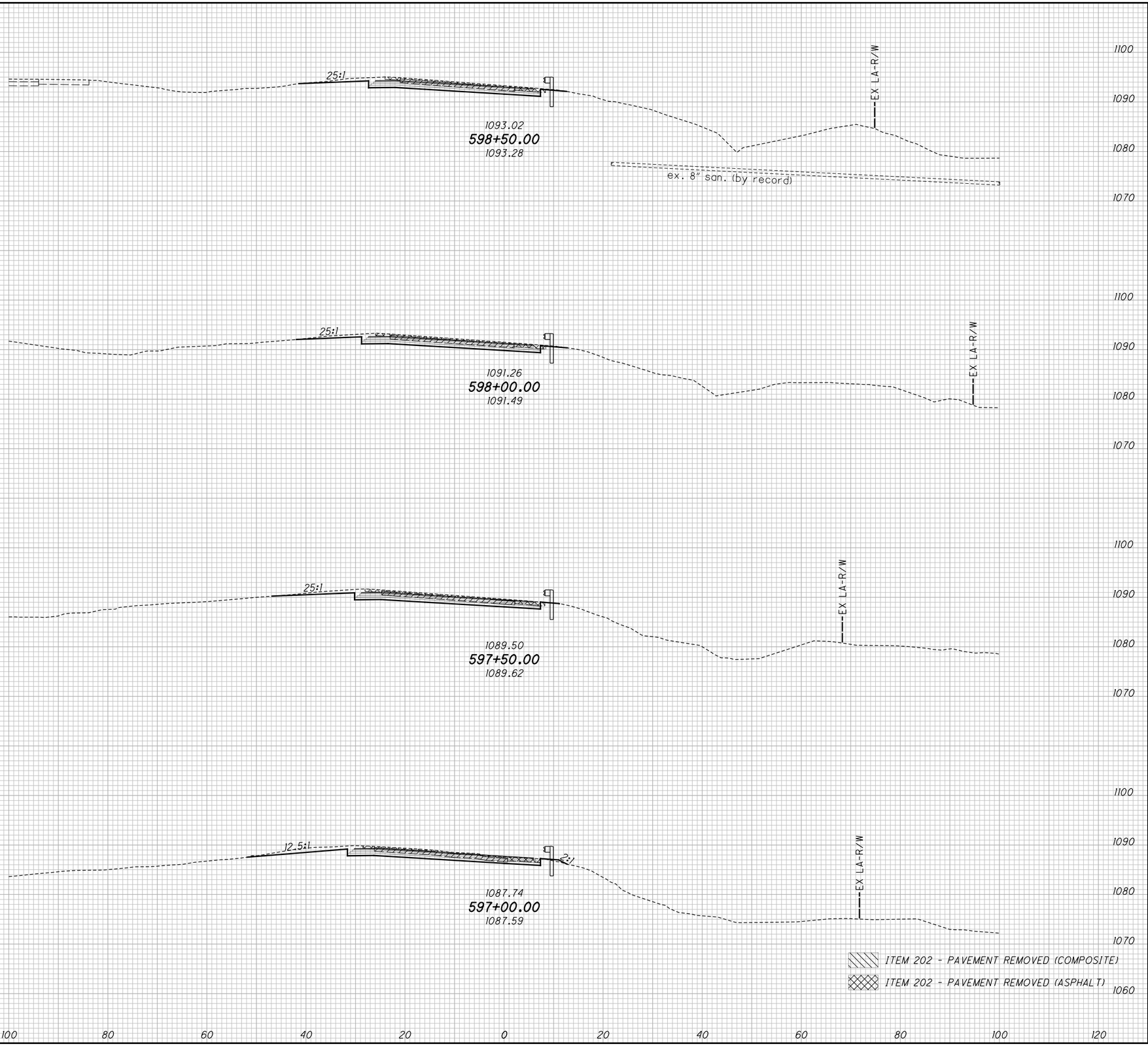
CALCULATED CJC
CHECKED PJF



SEEDING END AREA VOLUME									
WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL				
419	217	10	11	41					
		58	144						
		1050	1060	1070	1080	1090	1100		
		120	100	80	60	40	20	0	20	40	60	80	100	120	
		11	1	14	1	41	9		
		152	20	23	2	51	9	78	9

734 / 1288	SUM-77 / 277 / 224 VARIOUS	CROSS SECTIONS - RAMP C STA. 595+50.00 TO STA. 596+50.00	CALCULATED CJC CHECKED PJF

SEEDING END WIDTH	SEEDING SQ. YDS.	STA.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
30	183	598+50.00	42	1	78	1
	164				76	2
29		598+00.00	40	1		
	167				74	2
31		597+50.00	40	1		
	189				77	2
37		597+00.00	43	1		
	703				305	7



CALCULATED CJC
CHECKED PJF

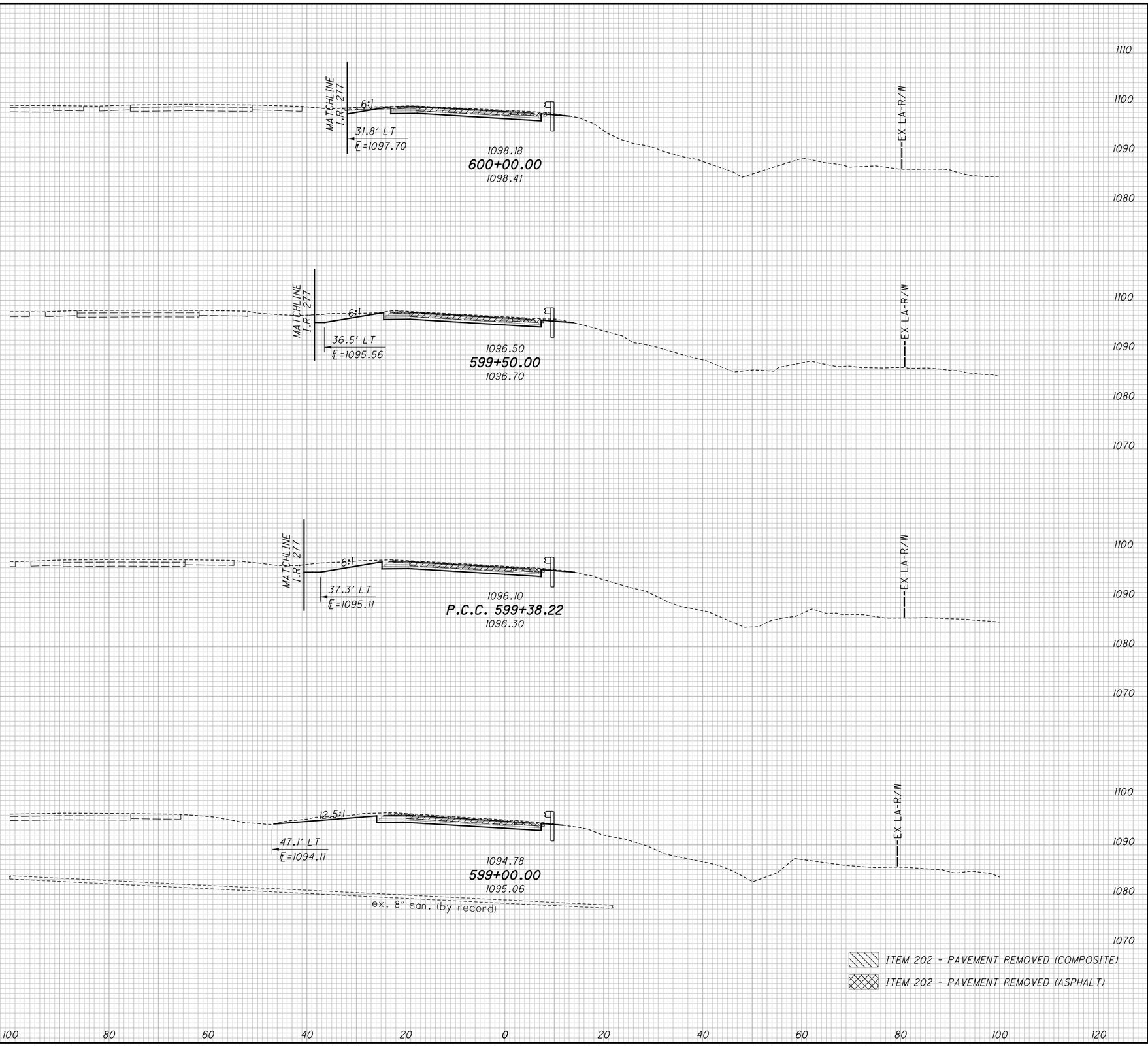
CROSS SECTIONS - RAMP C
STA. 597+00.00 TO STA. 598+50.00

SUM-77 / 277 / 224
VARIOUS

735
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS05.dgn Sheet 1/13/2021 6:15:27 PM pfry

SEEDING	
END WIDTH	SQ. YDS.
	103
21	
	133
27	
	37
29	
	138
36	
	411



END AREA	
CUT	FILL
25	1
40	0
46	0
42	0

VOLUME	
CUT	FILL
33	2
60	1
19	0
62	0
174	3

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP C
STA. 599+00.00 TO STA. 600+00.00

SUM-77 / 277 / 224
VARIOUS

736
1288

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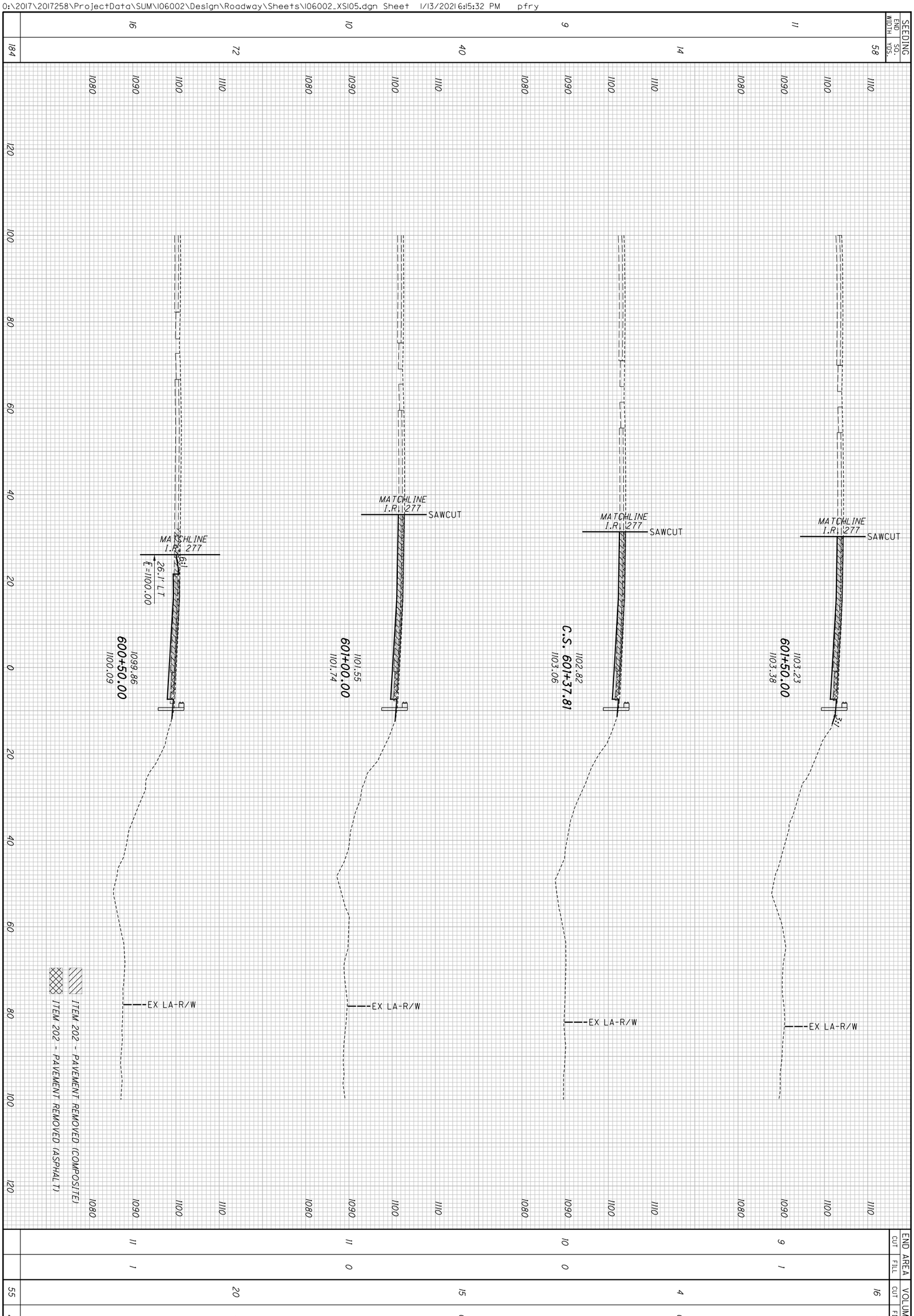
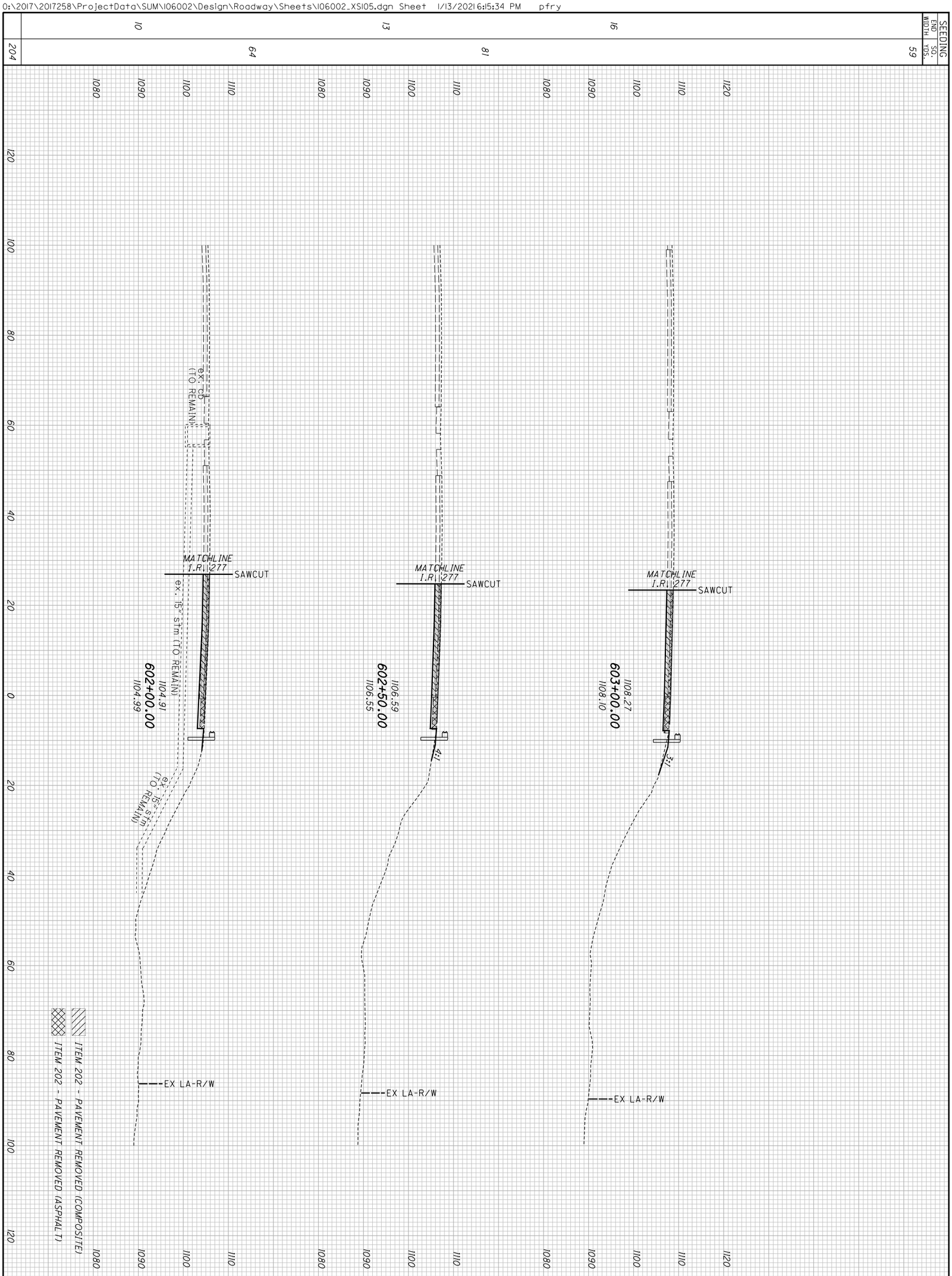


| | | |

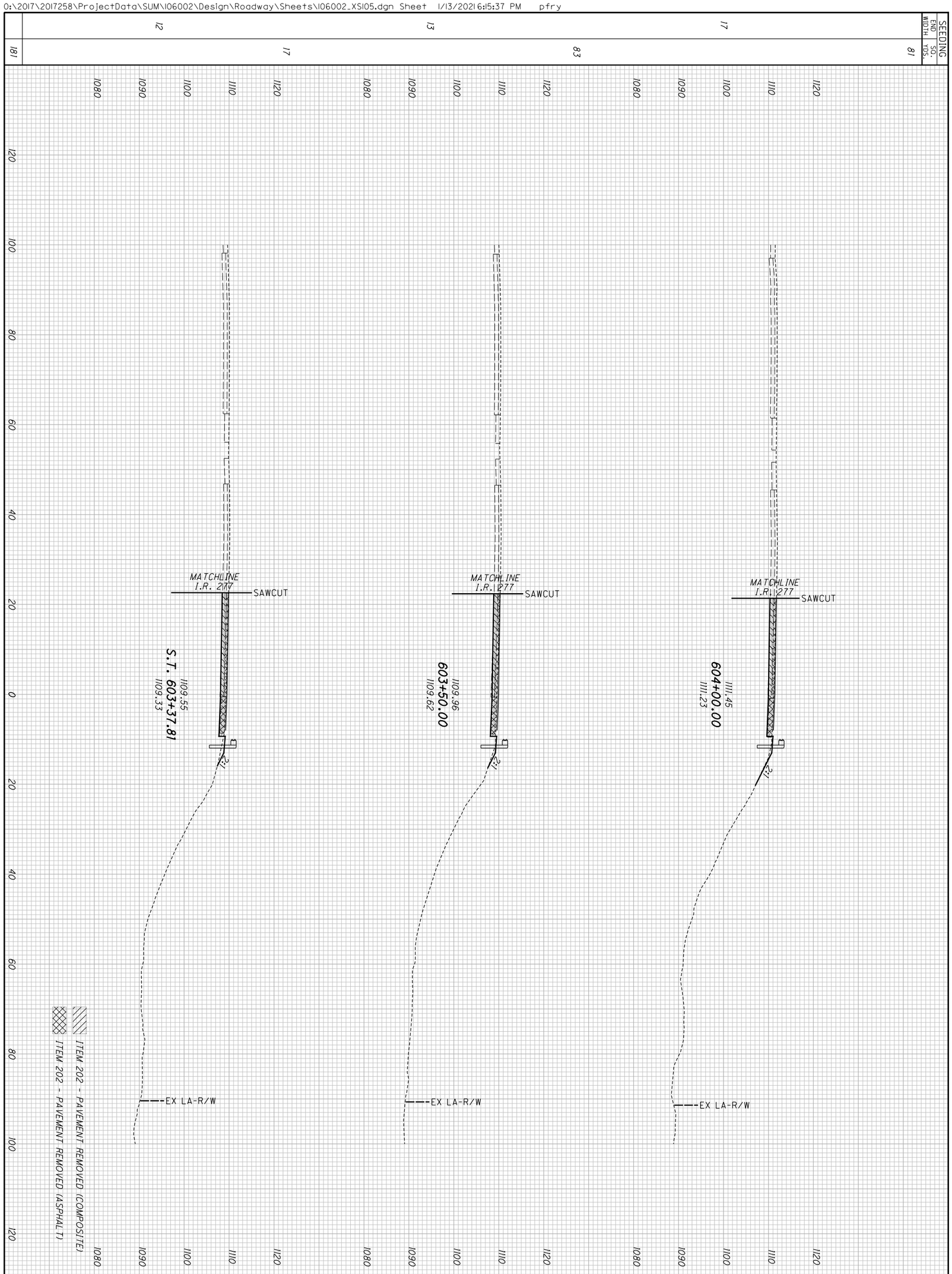


738
1288

SUM-77/277/224
VARIOUS

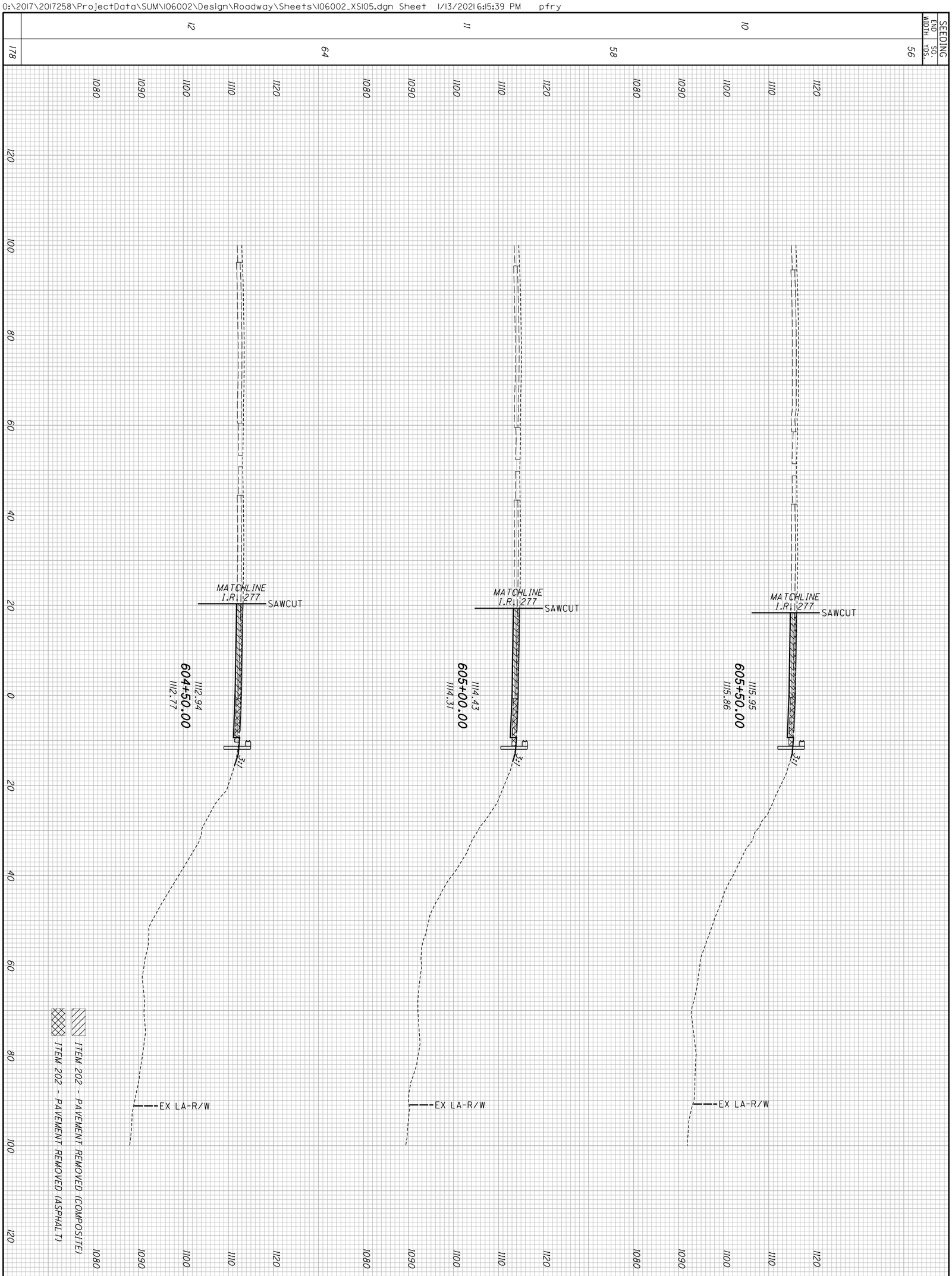
CROSS SECTIONS - RAMP C
STA. 602+00.00 TO STA. 603+00.00

CALCULATED CJC
CHECKED PJF

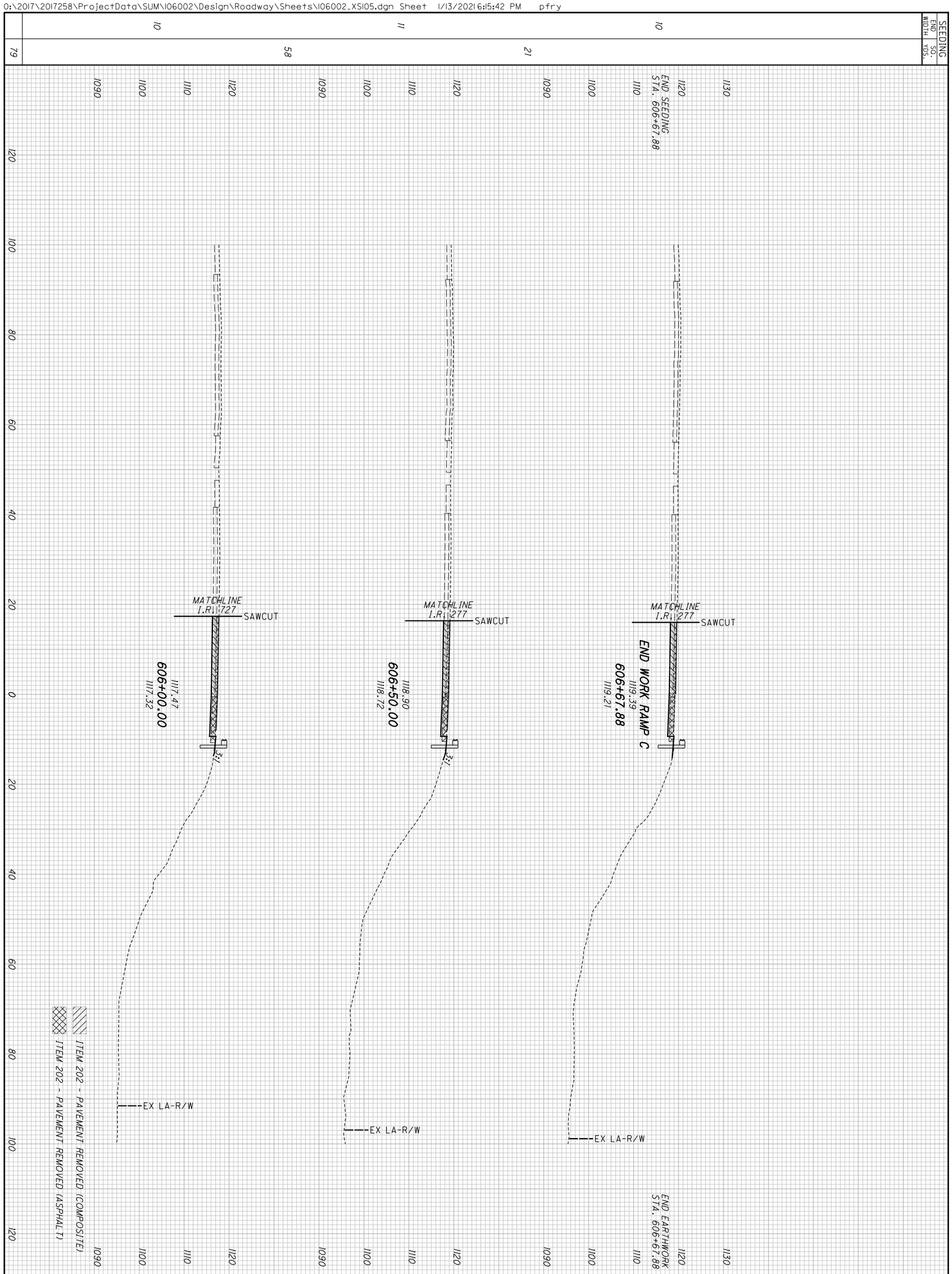


739 / 1288	SUM-77/277/224 VARIOUS
CROSS SECTIONS - RAMP C STA. 603+37.81 TO 604+00.00	CALCULATED CJC CHECKED PJF

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS105.dgn Sheet 1/13/2021 6:15:39 PM pfry

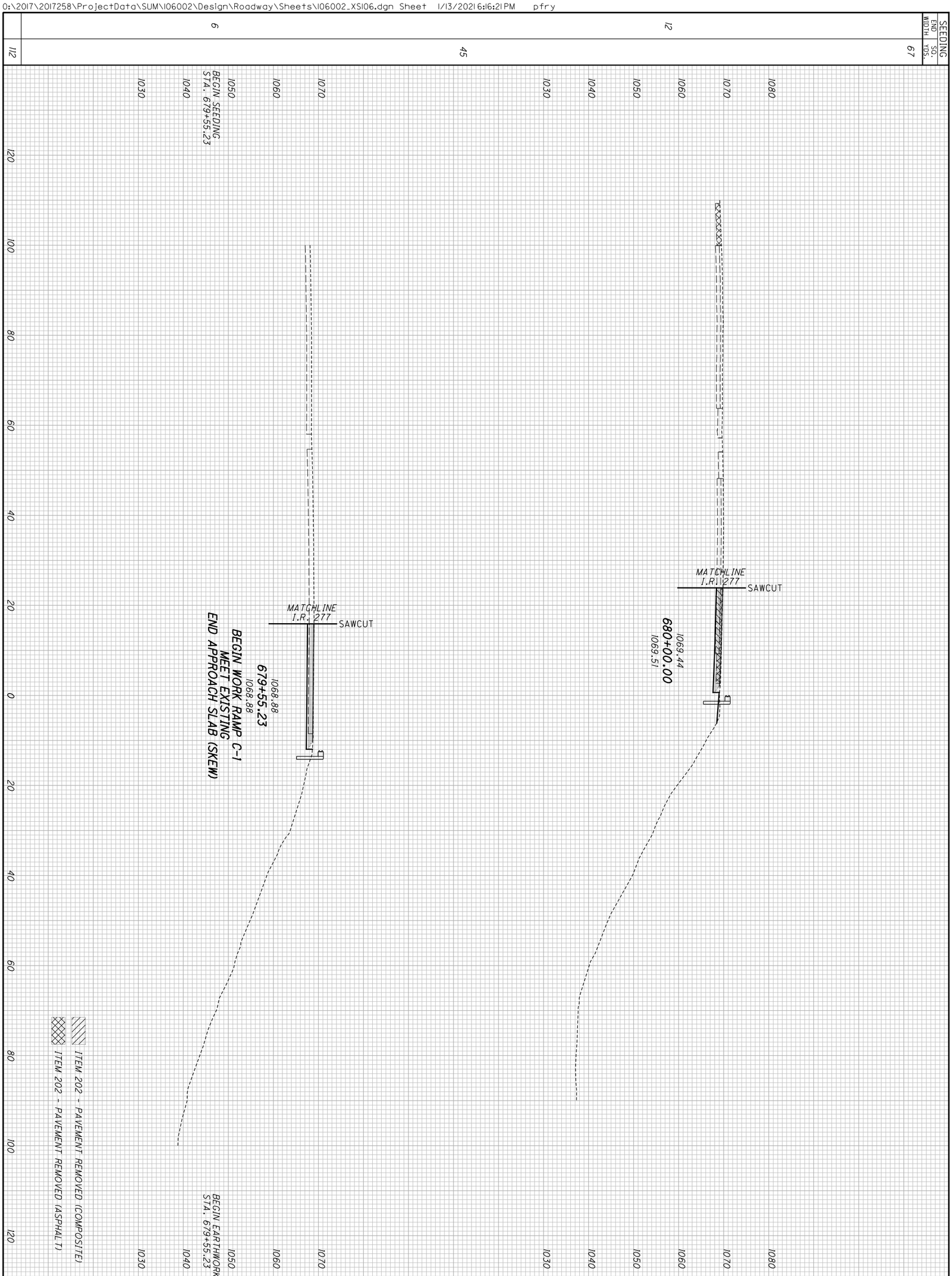


740 / 1288	SUM-77/277/224 VARIOUS
	CROSS SECTIONS - RAMP C STA. 604+50.00 TO STA. 605+50.00
CALCULATED	CJC
CHECKED	PJF

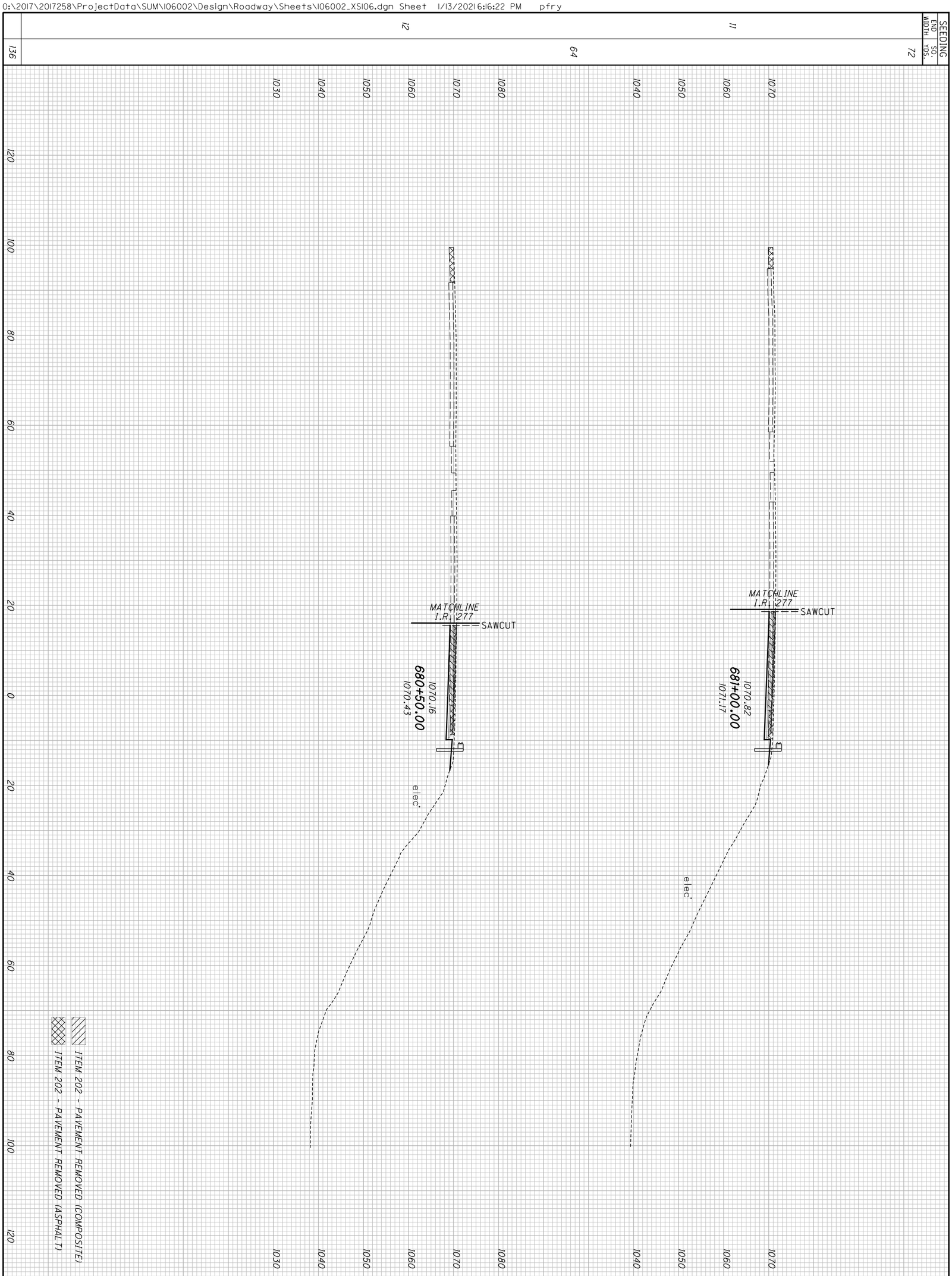


741 / 1288	**SUM-77/277/224** **VARIOUS**
	CROSS SECTIONS - RAMP C **STA. 606+00.00 TO STA. 606+67.88**
	CALCULATED CJC CHECKED PJF

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS106.dgn Sheet 1/13/2021 6:16:21 PM pfry



742 / 1288	**SUM-77 / 277 / 224** **VARIOUS**	**CROSS SECTIONS - RAMP C-1** **STA. 679+55.23 TO STA. 680+00.00**
		CALCULATED CJC CHECKED PJF



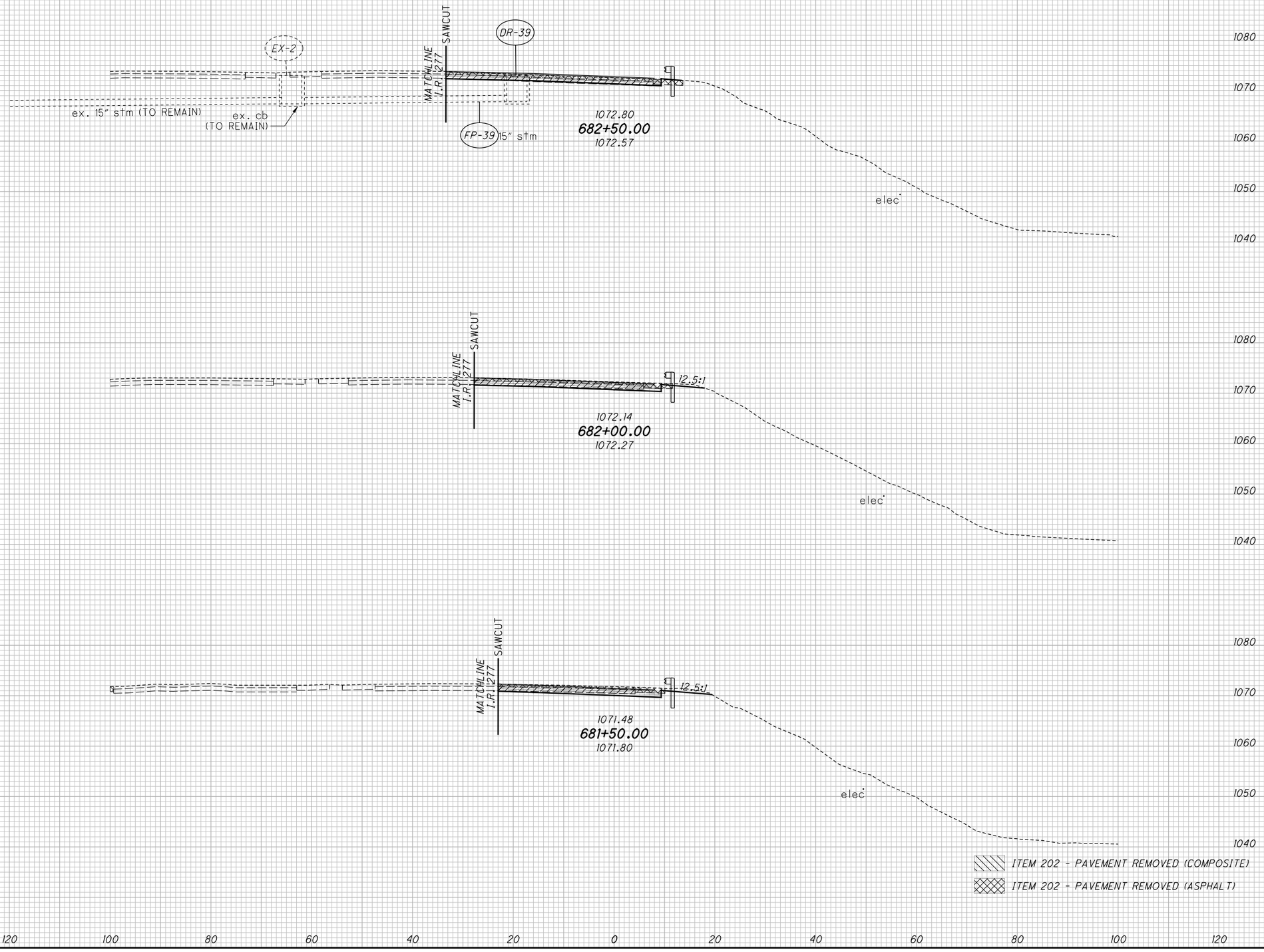
743 / 1288	**SUM-77/277/224** **VARIOUS**	**CROSS SECTIONS - RAMP C-1** **STA. 680+50.00 TO STA. 681+00.00**

CALCULATED CJC
CHECKED PJF

SEEDING END WIDTH	SEEDING SQ. YDS.
	100
9	
	64
14	
	81
15	
	245

EX-2
STA. 260+24.01, 0.06' RT
EX. INLET, GRATE ELEV 1073.04
EX. 15" CMP N 1067.40
EX. 15" CMP S 1067.40 *(REMOVED)*

DR-39
STA. 782+42.06, 19.29' LT
EX. CB, GRATE ELEV 1073.05
EX. 15" RCP NE 1067.84



	120	100	80	60	40	20	0	20	40	60	80	100	120	

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		17	17
1	9		
		10	10
10	2		
		25	2
17	0		
		52	29

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP C-1
STA. 681+50.00 TO STA. 682+50.00

SUM-77 / 277 / 224
VARIOUS

744
1288

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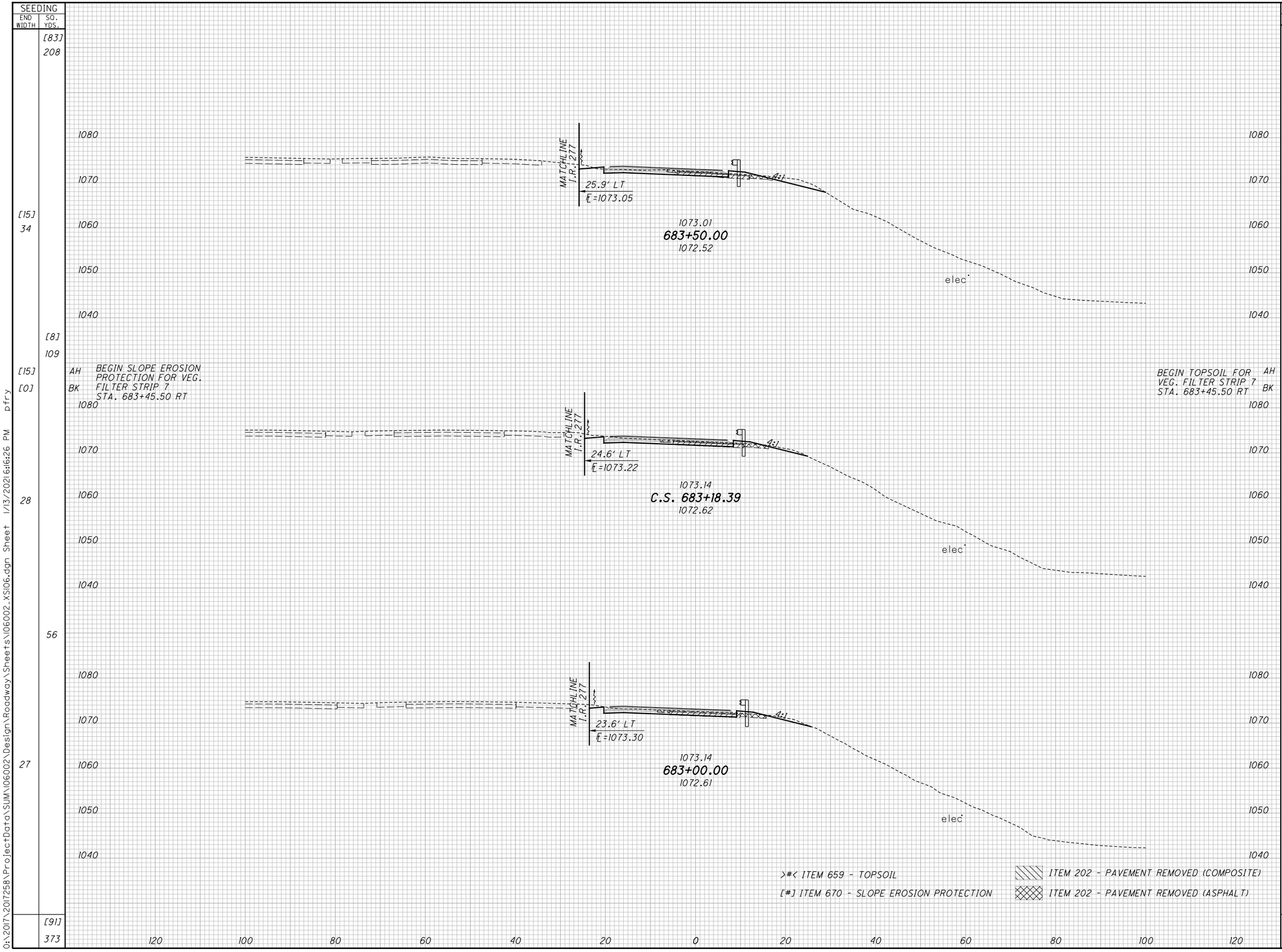
SEEDING END WIDTH	SEEDING SQ. YDS.
	[83]
	208
[15]	
34	
	[8]
	109
[15]	
[0]	
28	
	56
27	
	[91]
	373



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>9<
		57	17
	>5<		
27	10		
			>1<
		27	12
	>5<		
	>0<		
19	10		
		12	6
17	9		
		96	>10< 35

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP C-1
STA. 683+00.00 TO STA. 683+50.00

SUM-77 / 277 / 224
VARIOUS

745
1288

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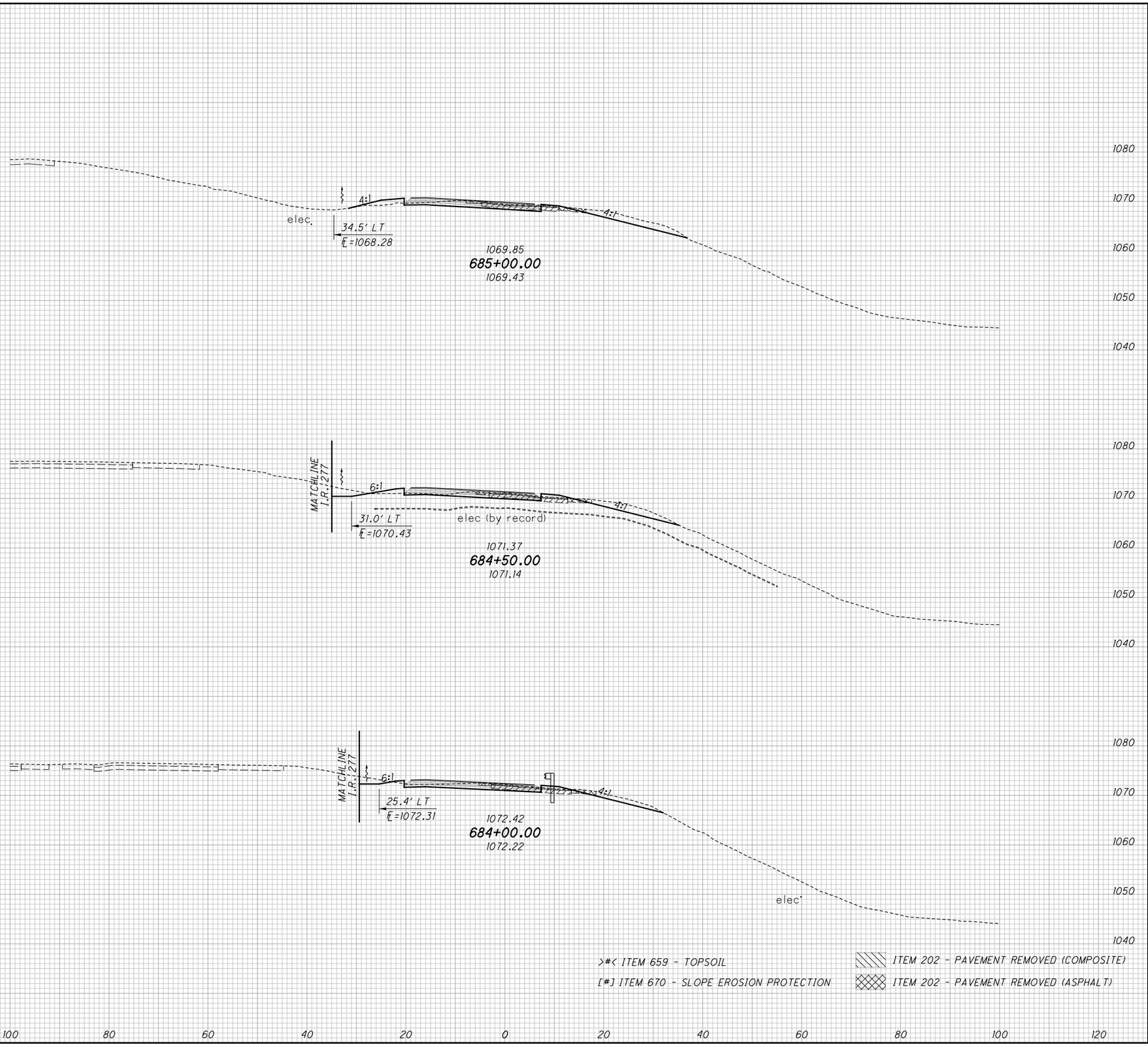
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	[51] 110			29	>5< 7
[25] 52		42	>8< 11		
	[139] 283			77	>15< 21
[25] 50		41	>8< 12		
	[111] 253			70	>12< 19
[15] 41		35	>5< 8		
	[301] 646			176	>32< 47



>#< ITEM 659 - TOPSOIL

[#] ITEM 670 - SLOPE EROSION PROTECTION

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED CJC

CHECKED PJF

CROSS SECTIONS - RAMP C-1
STA. 684+00.00 TO STA. 685+00.00

SUM-77 / 277 / 224
VARIOUS

746
1288

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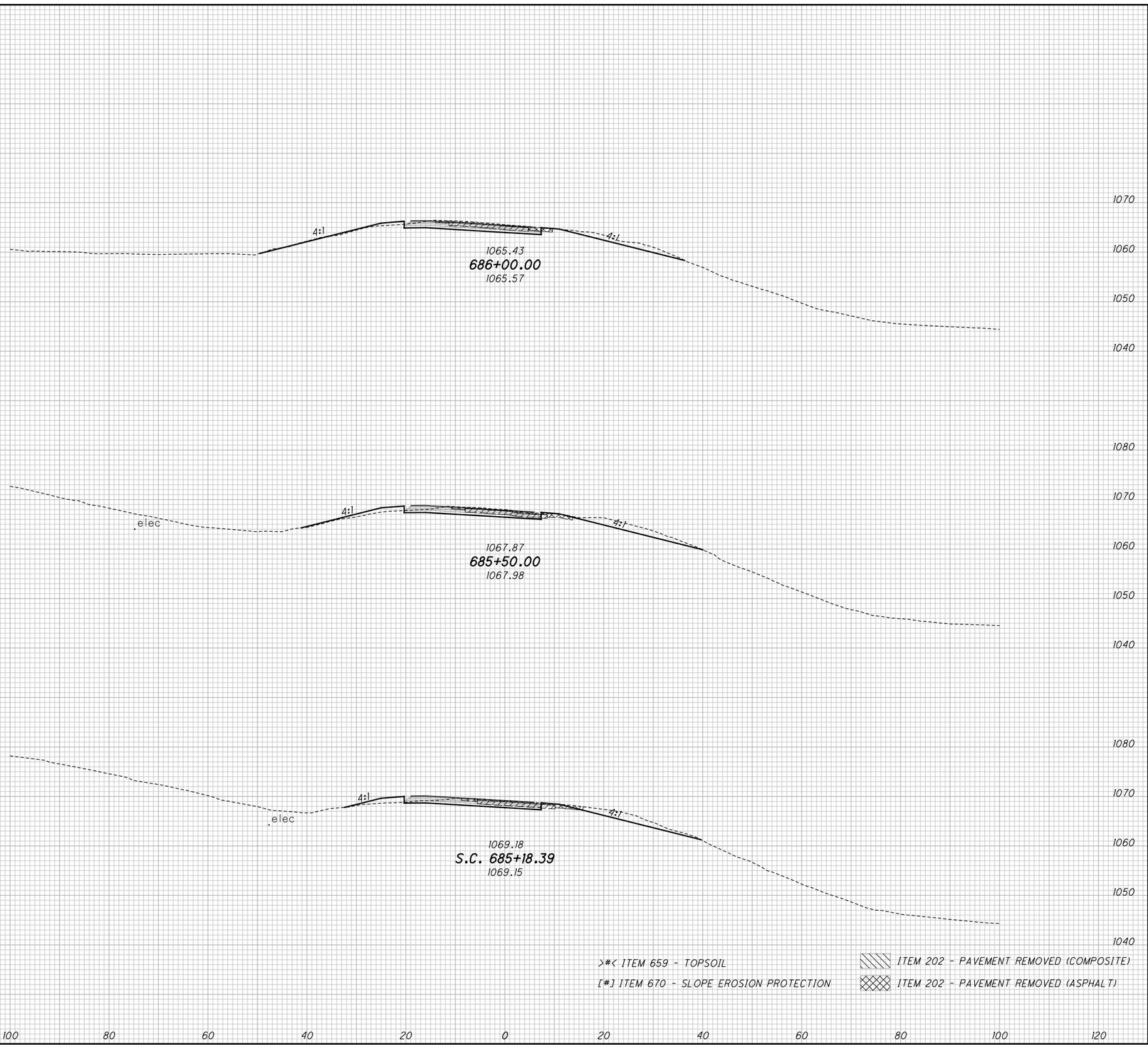
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	[139] 394			104	>15< 6
[25] 70		49	>8< 6		
	[139] 378			91	>15< 18
[25] 66		49	>8< 13		
	[88] 214			54	>9< 14
[25] 56		44	>8< 11		
	[366] 986			249	>39< 38



>#< ITEM 659 - TOPSOIL

[#] ITEM 670 - SLOPE EROSION PROTECTION

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

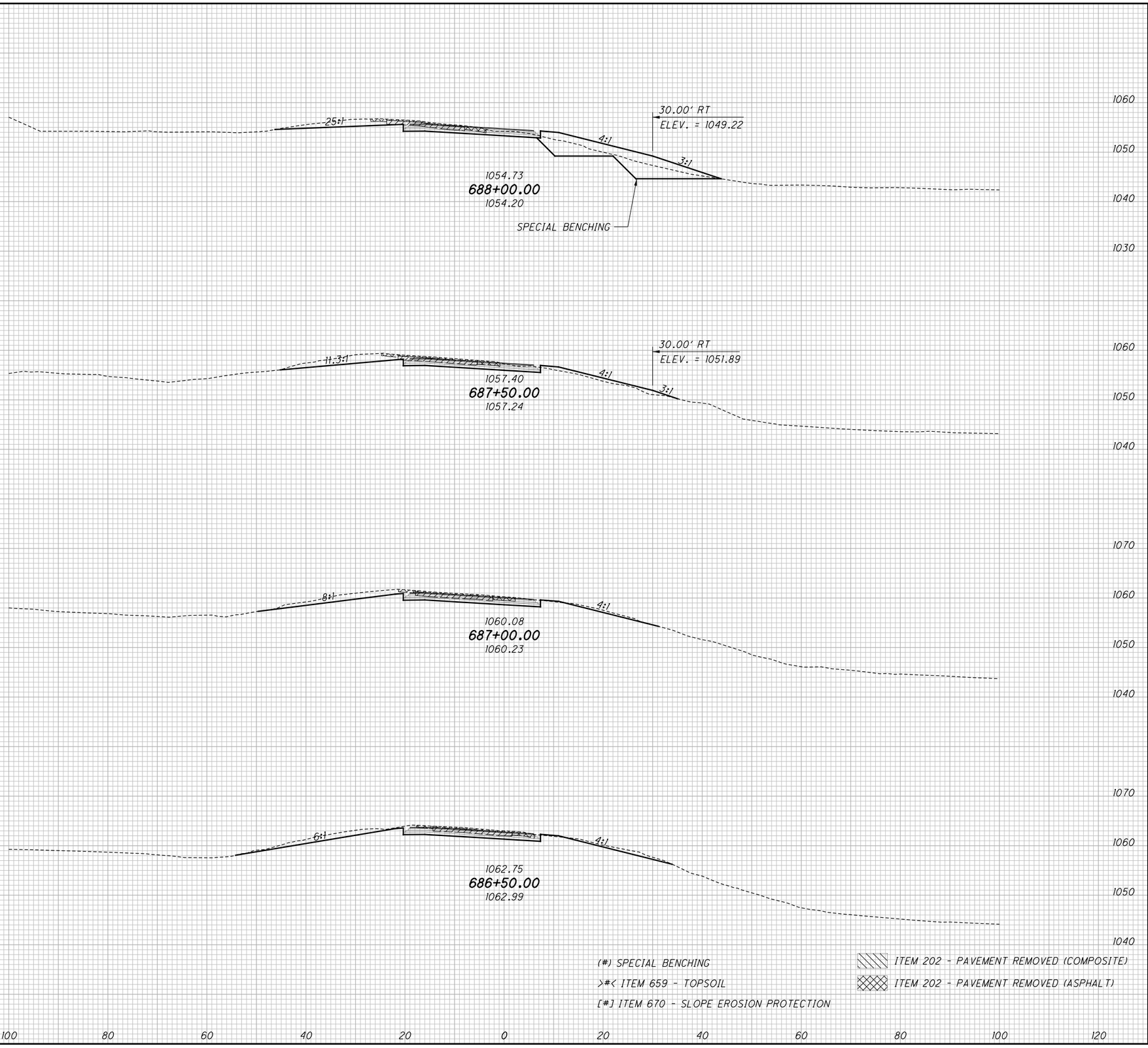
CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP C-1
STA. 685+18.39 TO STA. 686+00.00

SUM-77 / 277 / 224
VARIOUS

747
1288

0:\2017\20172581\Project Data\SUM\106002\Design\Roadway\Sheets\106002_XS106.dgn Sheet 1/13/2021 6:16:30 PM pfry



SEEDING END WIDTH	SEEDING SQ. YDS.
[25]	[139]
74	403
	[139]
	383
[25]	
64	
	[139]
	358
[25]	
65	
	[139]
	381
[25]	
72	
	[556]
	1525

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		(101)	(101)
			>15<
		78	92
(65)	(65)		
	>8<		
43	45		
		(60)	(60)
			>15<
		88	48
(0)	(0)		
	>8<		
52	7		
			>15<
		106	6
	>8<		
62	0		
			>15<
		116	1
	>8<		
63	1		
		(161)	(161)
			>60<
		388	147

(#) SPECIAL BENCHING

>#< ITEM 659 - TOPSOIL

[#] ITEM 670 - SLOPE EROSION PROTECTION

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED CJC

CHECKED PJF

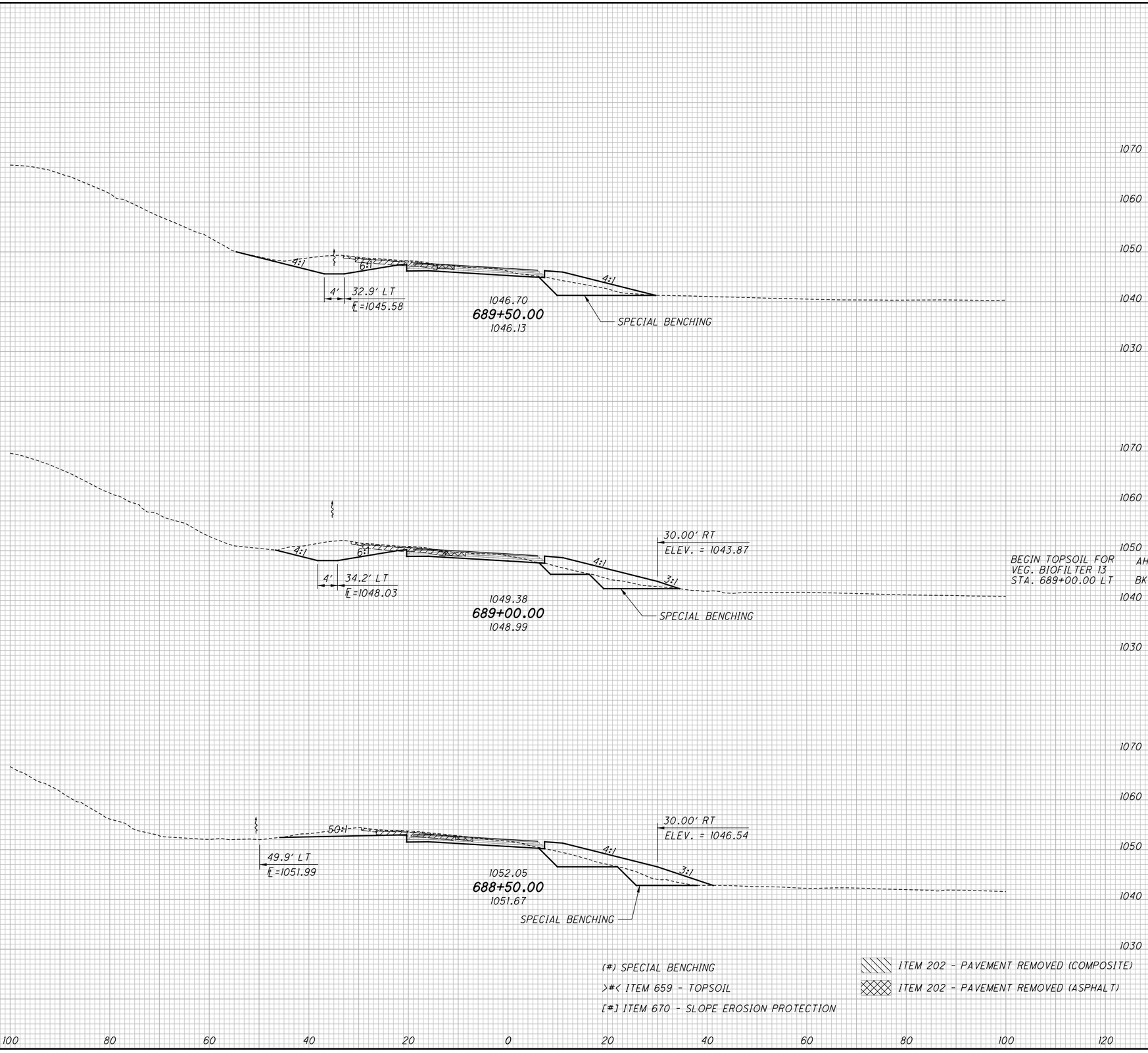
CROSS SECTIONS - RAMP C-1
STA. 686+50.00 TO STA. 688+00.00

SUM-77 / 277 / 224
VARIOUS

748
1288

0:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS106.dgn Sheet 1/13/2021 6:6:32 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	[103] 361
[20] 69	
	[125] 372
[25] 65	
	[139] 378
[25] 71	
	[367] 1111



(#) SPECIAL BENCHING
>#< ITEM 659 - TOPSOIL
[#] ITEM 670 - SLOPE EROSION PROTECTION

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)
ITEM 202 - PAVEMENT REMOVED (ASPHALT)

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		(38)	(38)
			>19<
		134	37
(33)	(33)		
	>11<		
74	20		
		(56)	(56)
			>22<
		139	51
(27)	(27)		
	>13<		
AH	>8<		
BK			
76	35		
		(66)	(66)
			>15<
		108	82
(44)	(44)		
	>8<		
41	54		
		(160)	(160)
			>56<
		381	170

CALCULATED CJC
CHECKED PJF

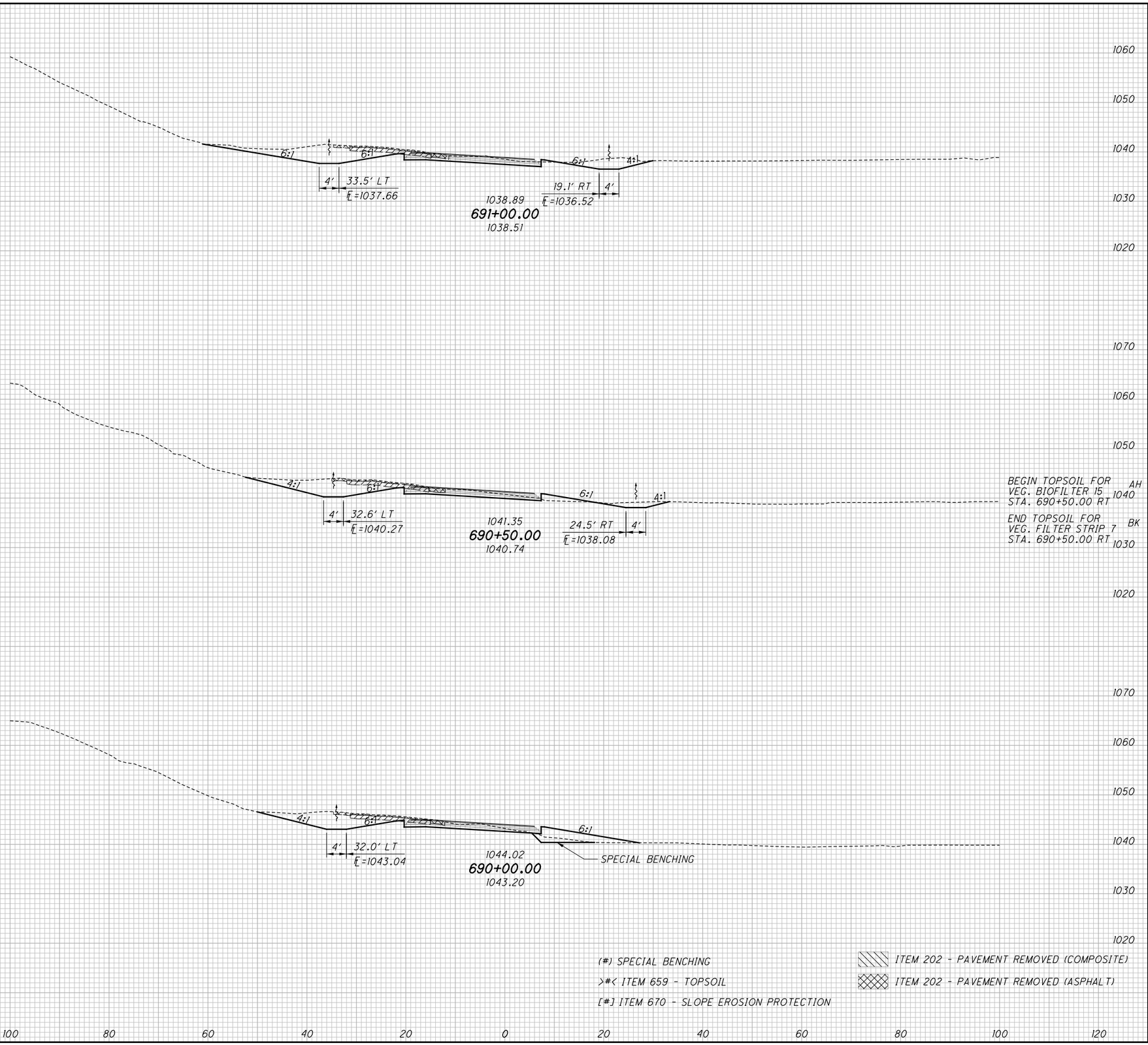
CROSS SECTIONS - RAMP C-1
STA. 688+50.00 TO STA. 689+50.00

SUM-77 / 277 / 224
VARIOUS

749
1288

D:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS106.dgn Sheet 1/13/2021 6:16:34 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	417
75	
	403
[0] AH [17] BK 70	
	[94] 364
[17] 61	
	[94] 1184



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>18<
		237	0
	>9<		
120	0		
			>19<
		198	4
	>11<		
(0)	(0)		
	>11<		
94	4		
		(7)	(7)
			>19<
		153	22
(8)	(8)		
	>10<		
71	20		
		(7)	(7)
			>36<
		588	26

(#) SPECIAL BENCHING
>#< ITEM 659 - TOPSOIL
[#] ITEM 670 - SLOPE EROSION PROTECTION

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)
ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED CJC
CHECKED PJF

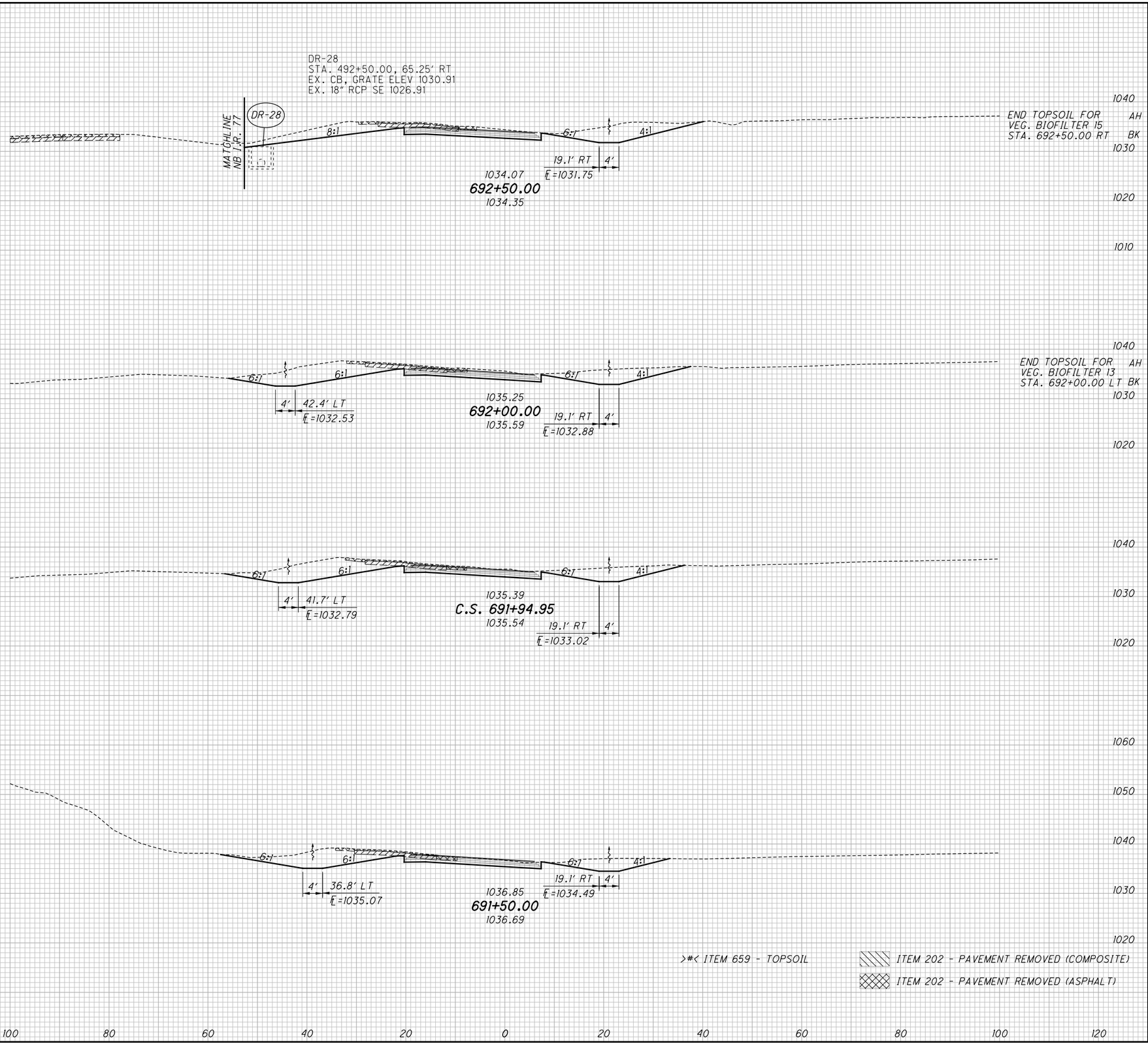
CROSS SECTIONS - RAMP C-1
STA. 690+00.00 TO STA. 691+00.00

SUM-77 / 277 / 224
VARIOUS

750
1288

D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS06.dgn Sheet 1/13/2021 6:6:36 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	356
73	
	417
77	
	43
77	
	380
75	
	1196



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		260	0
	>0<		
	>4<		
152	0		
			>8<
		306	0
	>4<		
	>12<		
178	0		
			>2<
		32	0
	>12<		
169	0		
			>18<
		254	0
	>10<		
136	0		
			>28<
		852	0

CALCULATED CJC
CHECKED PJF

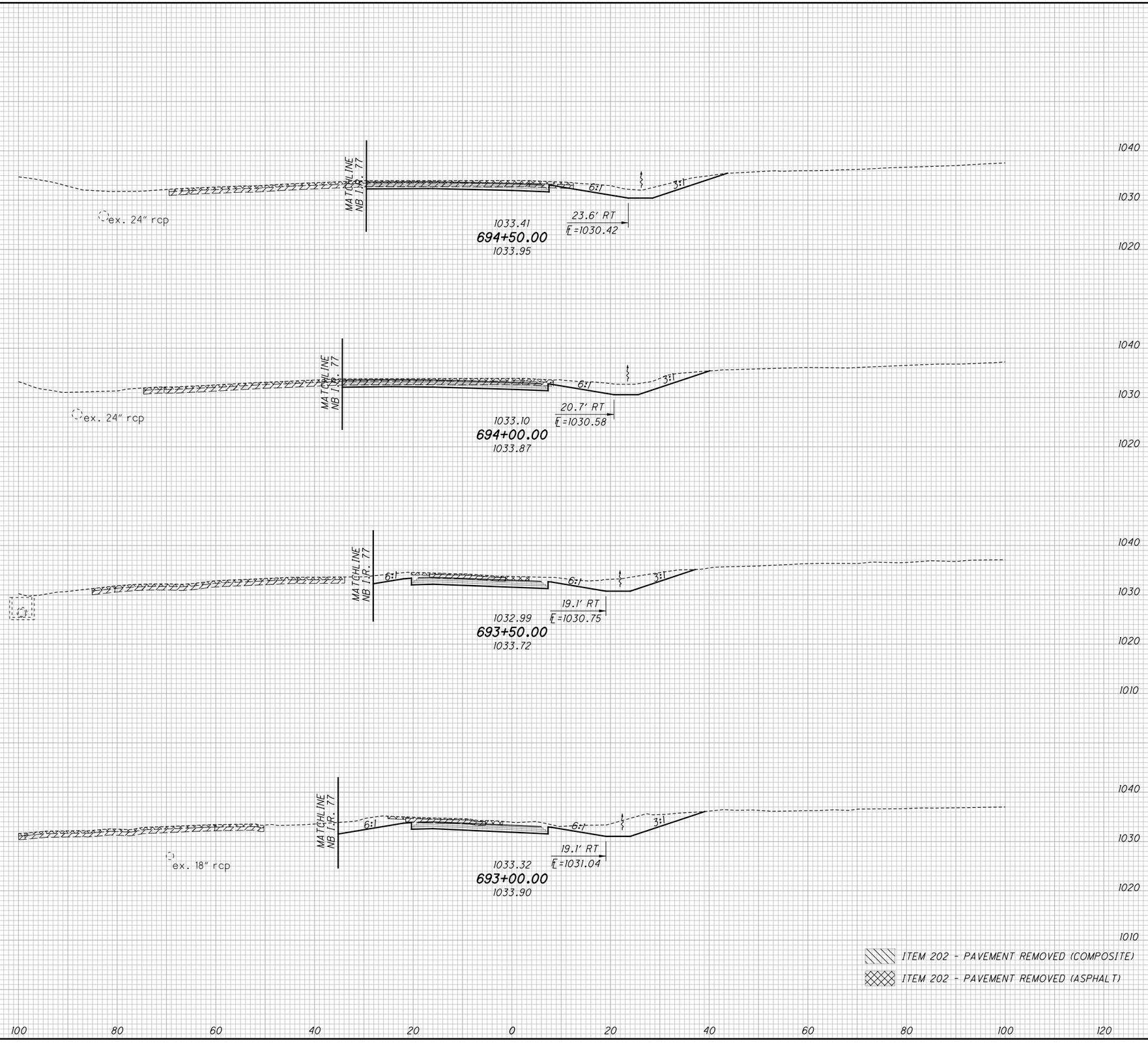
CROSS SECTIONS - RAMP C-1
STA. 691+50.00 TO STA. 692+50.00

SUM-77 / 277 / 224
VARIOUS

751
1288

D:\2017\20172581\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS106.dgn Sheet 1/13/2021 6:16:38 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	210			89	2
42		66	1		
	225			131	1
39		76	0		
	233			165	0
45		102	0		
	278			214	0
55		129	0		
	946			599	3



CALCULATED CJC
CHECKED PJF

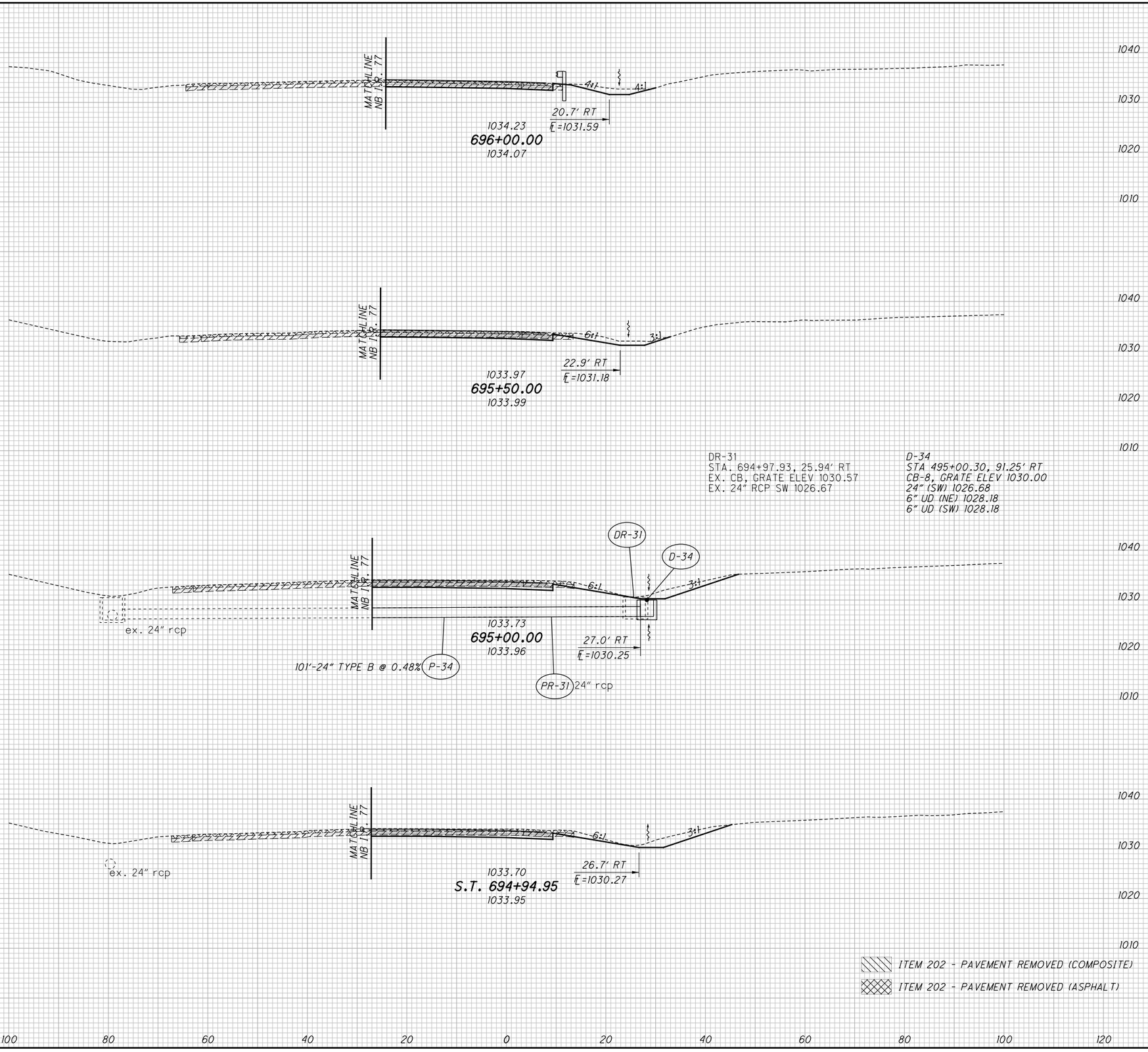
CROSS SECTIONS - RAMP C-1
STA. 693+00.00 TO STA. 694+50.00

SUM-77 / 277 / 224
VARIOUS

752
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\X06002_XS106.dgn Sheet 1/13/2021 6:16:40 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	144			28	5
26		16	2		
	153			35	5
29		22	3		
	203			56	5
44		39	2		
	24			7	0
42		41	2		
	524			126	15



CALCULATED CJC
CHECKED PJF

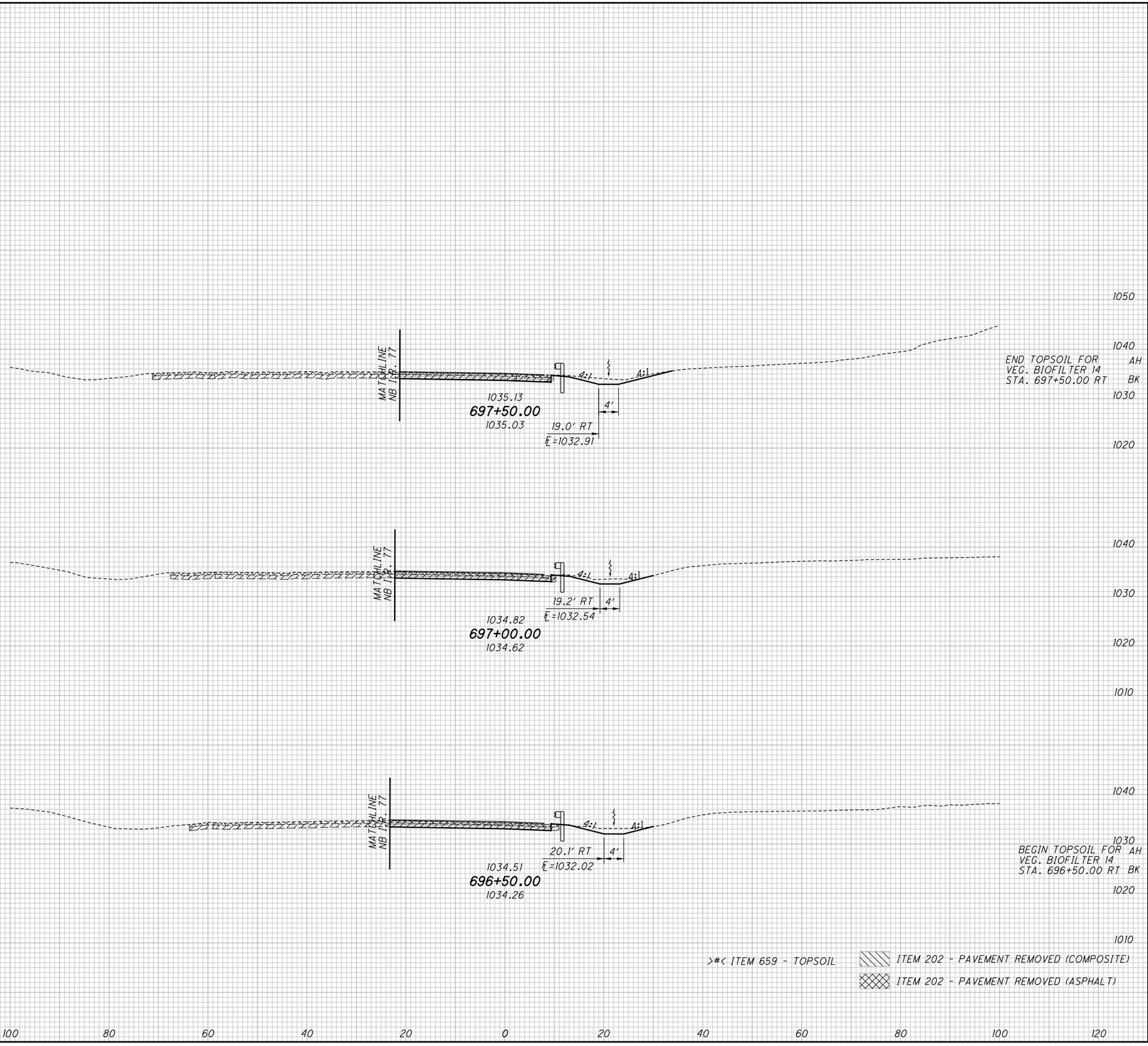
CROSS SECTIONS - RAMP C-1
STA. 694+94.95 TO STA. 696+00.00

SUM-77 / 277 / 224
VARIOUS

753
1288

D:\2017\20171258\Project Data\SUM\106002\Design\Roadway\Sheets\106002_XS06.dgn Sheet 1/13/2021 6:16:43 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	142
30	
	156
26	
	144
26	
	442



>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		33	1
	>0<		
	>2<		
19	1		
			>4<
		30	3
13	>2<		
	2		
			>4<
		25	5
14	>2<		
	>0<		
	3		
			>8<
		88	9

CALCULATED CJC
CHECKED PJF

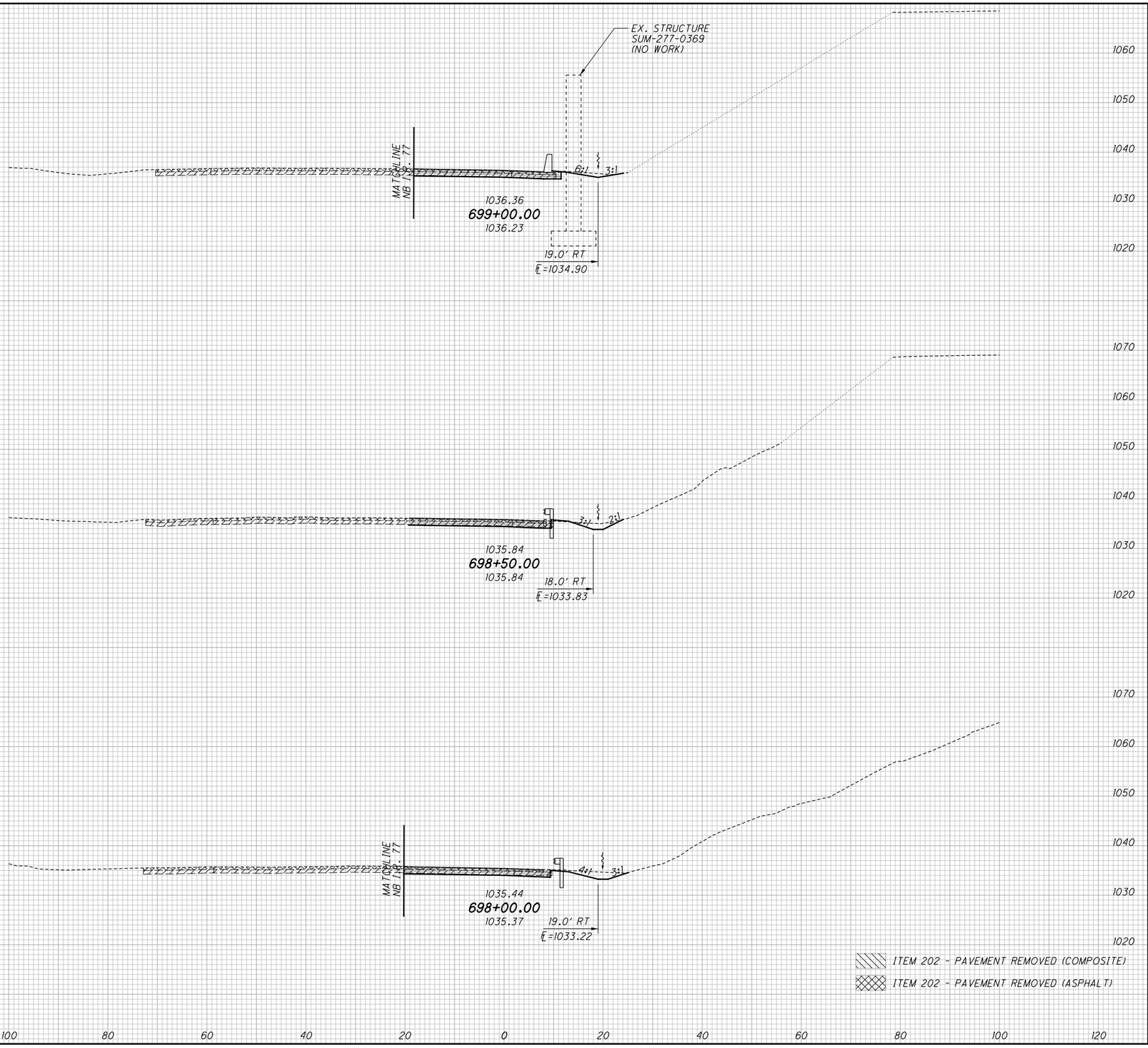
CROSS SECTIONS - RAMP C-1
STA. 696+50.00 TO STA. 697+50.00

SUM-77/277/224
VARIOUS

754
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\X06002_XS106.dgn Sheet 1/13/2021 6:16:46 PM pfry

SEEDING	
END WIDTH	SQ. YDS.
	97
19	
	108
20	
	114
21	
	319



END AREA	
CUT	FILL
9	0
13	1
17	0

VOLUME	
CUT	FILL
12	1
20	1
28	1
60	3

CALCULATED CJC
CHECKED PJF

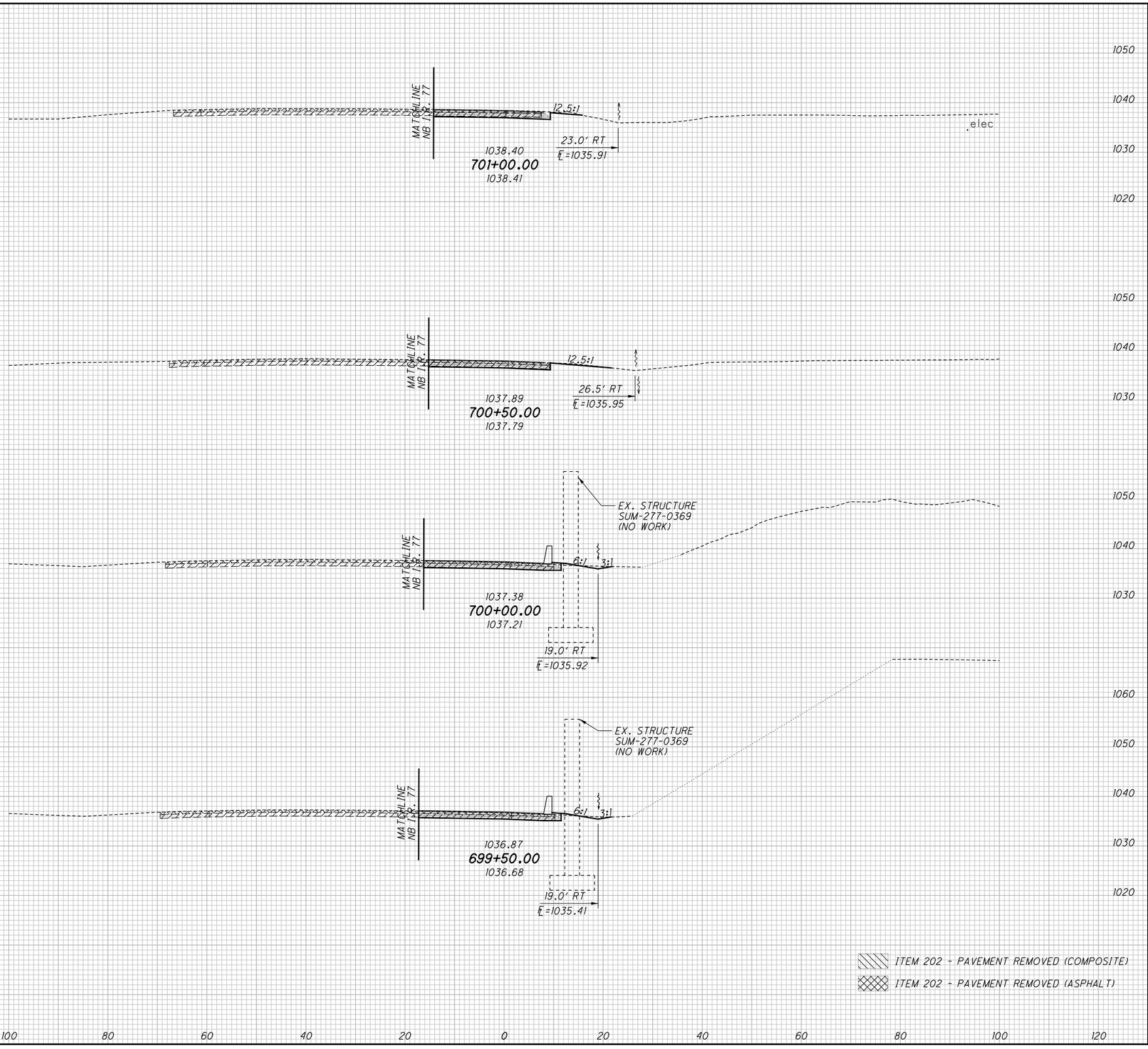
CROSS SECTIONS - RAMP C-1
STA. 698+00.00 TO STA. 699+00.00

SUM-77/277/224
VARIOUS

755
1288

0:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS106.dgn Sheet 1/13/2021 6:16:48 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	92			19	0
12		9	0		
	83			13	0
18		5	0		
	94			9	1
16		5	1		
	89			8	2
16		4	1		
	358			49	3



CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP C-1
STA. 699+50.00 TO STA. 701+00.00

SUM-77 / 277 / 224
VARIOUS

SEEDING END WIDTH	SEEDING SQ. YDS.
20	
21	
13	
94	
21	
	115

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
10	0		
11	0	4	0
12	0	21	0
		25	0

CALCULATED CJC
CHECKED PJF

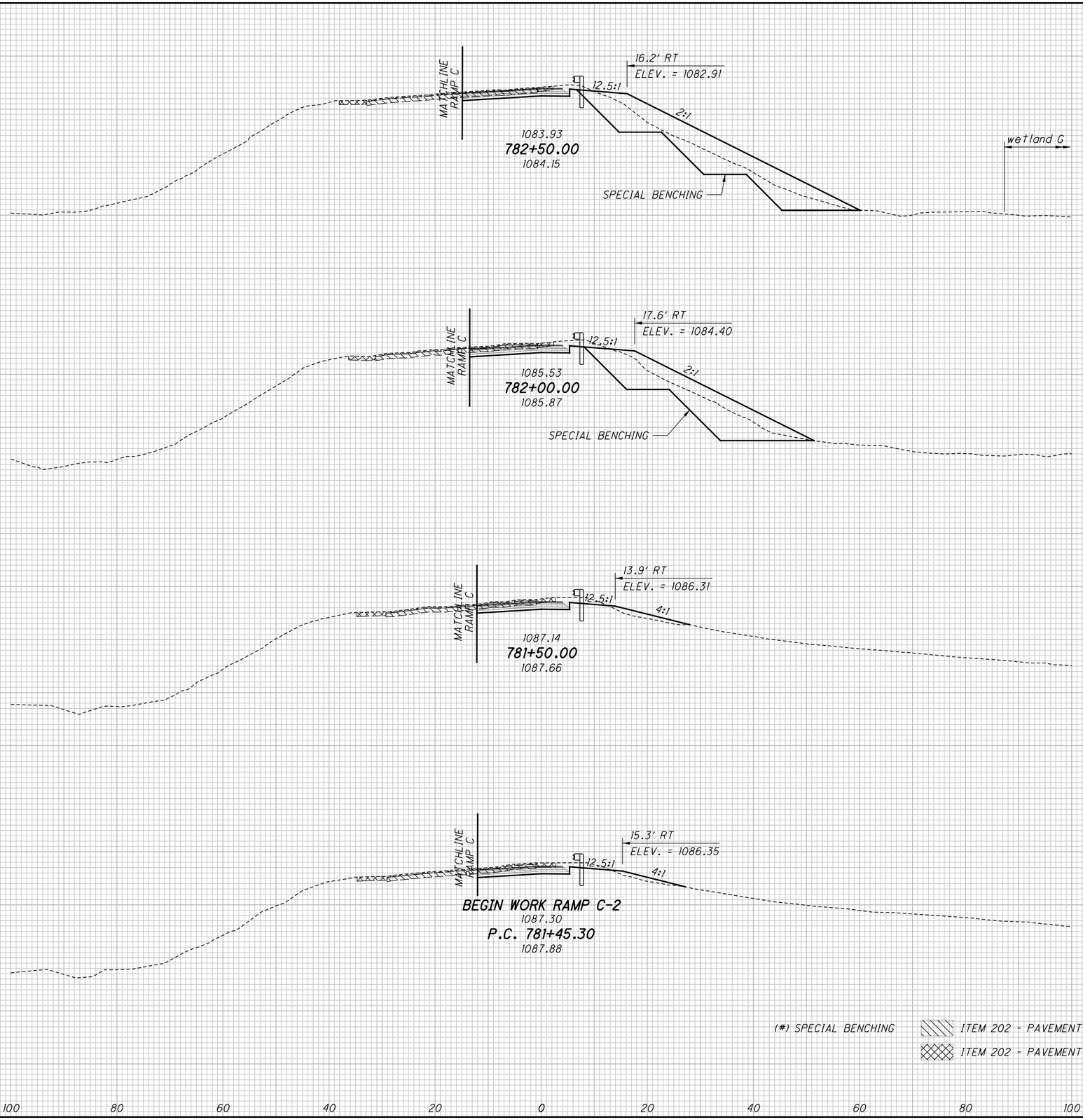
CROSS SECTIONS - RAMP C-1
STA. 701+50.00 TO END

SUM-77 / 277 / 224
VARIOUS

757
1288

D:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS06.dgn Sheet 1/13/2021 6:6:52 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	319
65	
	333
55	
	231
28	
	15
28	
	898



(#) SPECIAL BENCHING

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		(222)	(222)
		30	219
(137)	(137)		
21	129		
		(260)	(260)
		45	187
(144)	(144)		
28	73		
		(133)	(133)
		51	77
(0)	(0)		
27	10		
		5	1
26	7		
		(615)	(615)
		131	484

CALCULATED CJC
CHECKED PJF

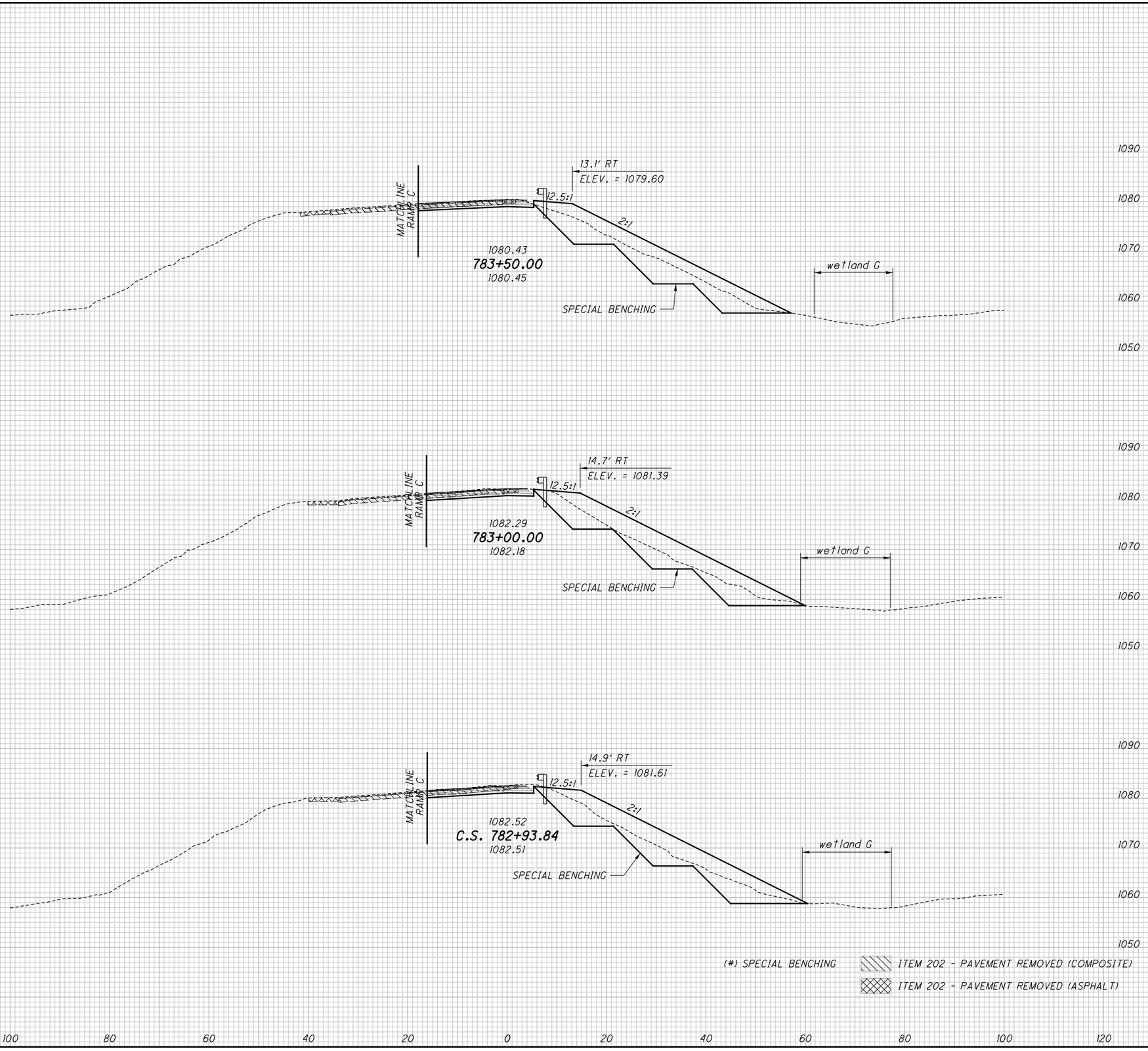
CROSS SECTIONS - RAMP C-2
STA. 781+45.30 TO STA. 782+50.00

SUM-77 / 277 / 224
VARIOUS

758
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS107.dgn Sheet 1/13/2021 6:17:21 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	347			(278)	(278)
				24	214
62		(142)	(142)		
		13	117		
	353			(248)	(248)
				25	247
65		(126)	(126)		
		14	150		
	45			(30)	(30)
				3	33
66		(136)	(136)		
		16	141		
	745			(556)	(556)
				52	494



CALCULATED CJC
CHECKED PJF

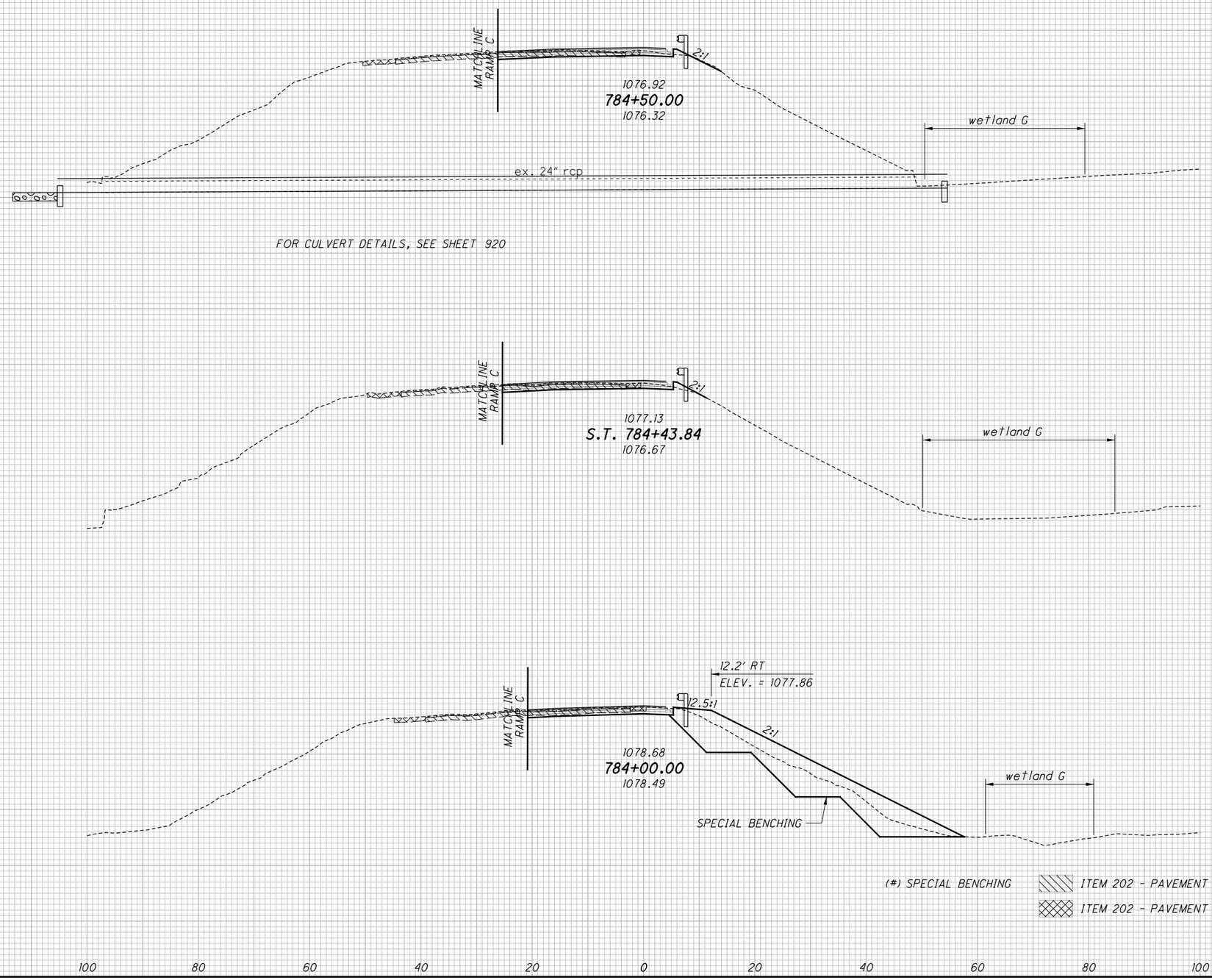
CROSS SECTIONS - RAMP C-2
STA. 782+93.84 TO STA. 783+50.00

SUM-77 / 277 / 224
VARIOUS

759
1288

0:\2017\20172581Project Data\SUM\106002\Design\Roadway\Sheets\106002_XS107.dgn Sheet 1/13/2021 6:17:23 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	145
15	
	9
12	
	183
63	
	337



(#) SPECIAL BENCHING

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		11	48
9	2		
		2	1
(0) 9	(0) 3		
		(128) 18	(128) 95
(158) 13	(158) 114		
		(128) 31	(128) 144

CALCULATED CJC
CHECKED PJF

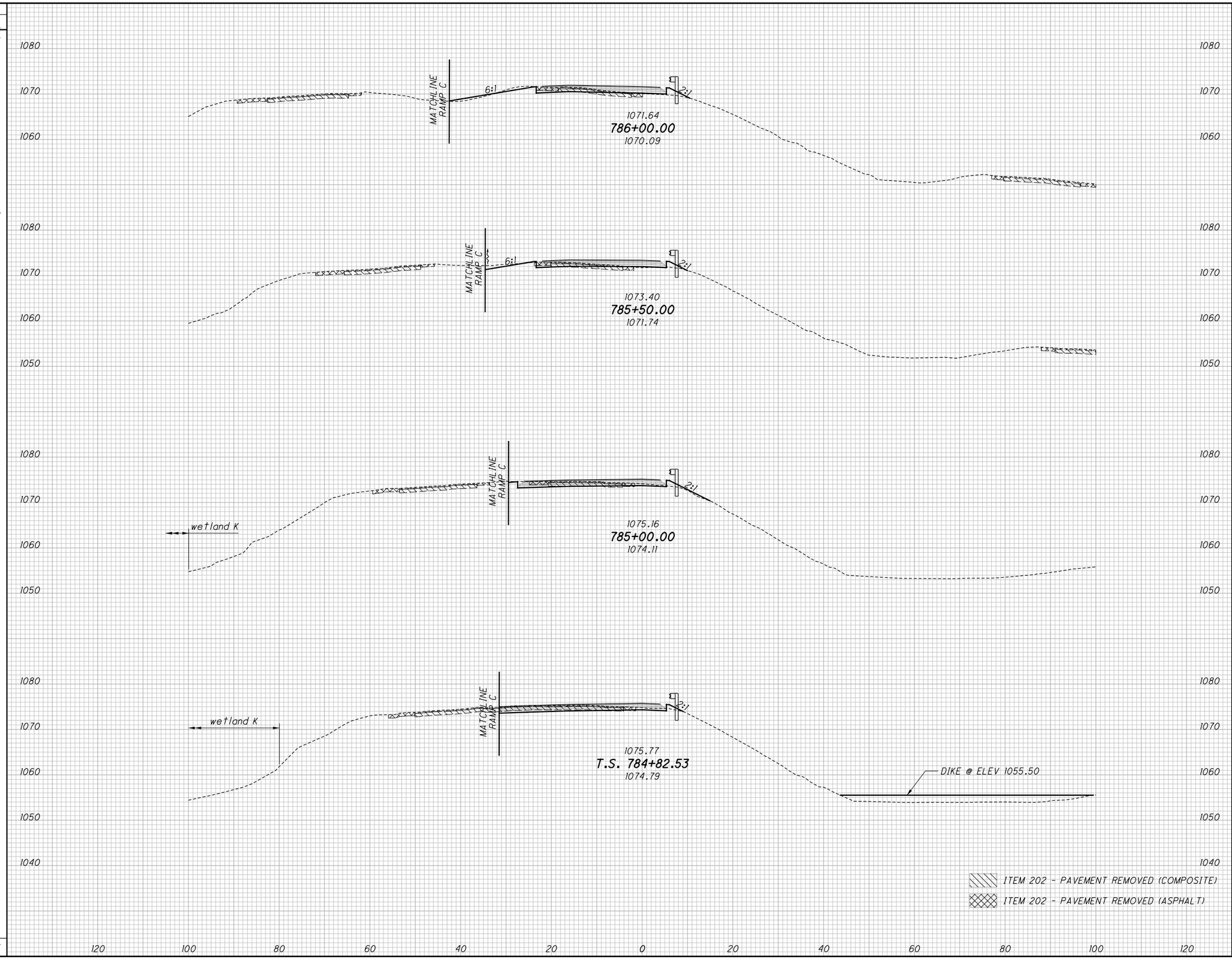
CROSS SECTIONS - RAMP C-2
STA. 784+50.00 TO STA. 784+00.00

SUM-77 / 277 / 224
VARIOUS

760
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS107.dgn Sheet 1/13/2021 6:11:25 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	164
32	
	153
23	
	117
19	
	82
65	
	516



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		6	39
5	17		
		9	27
5	12		
		13	17
9	6		
		6	27
10	77		
		34	110

CALCULATED CJC
CHECKED PJF

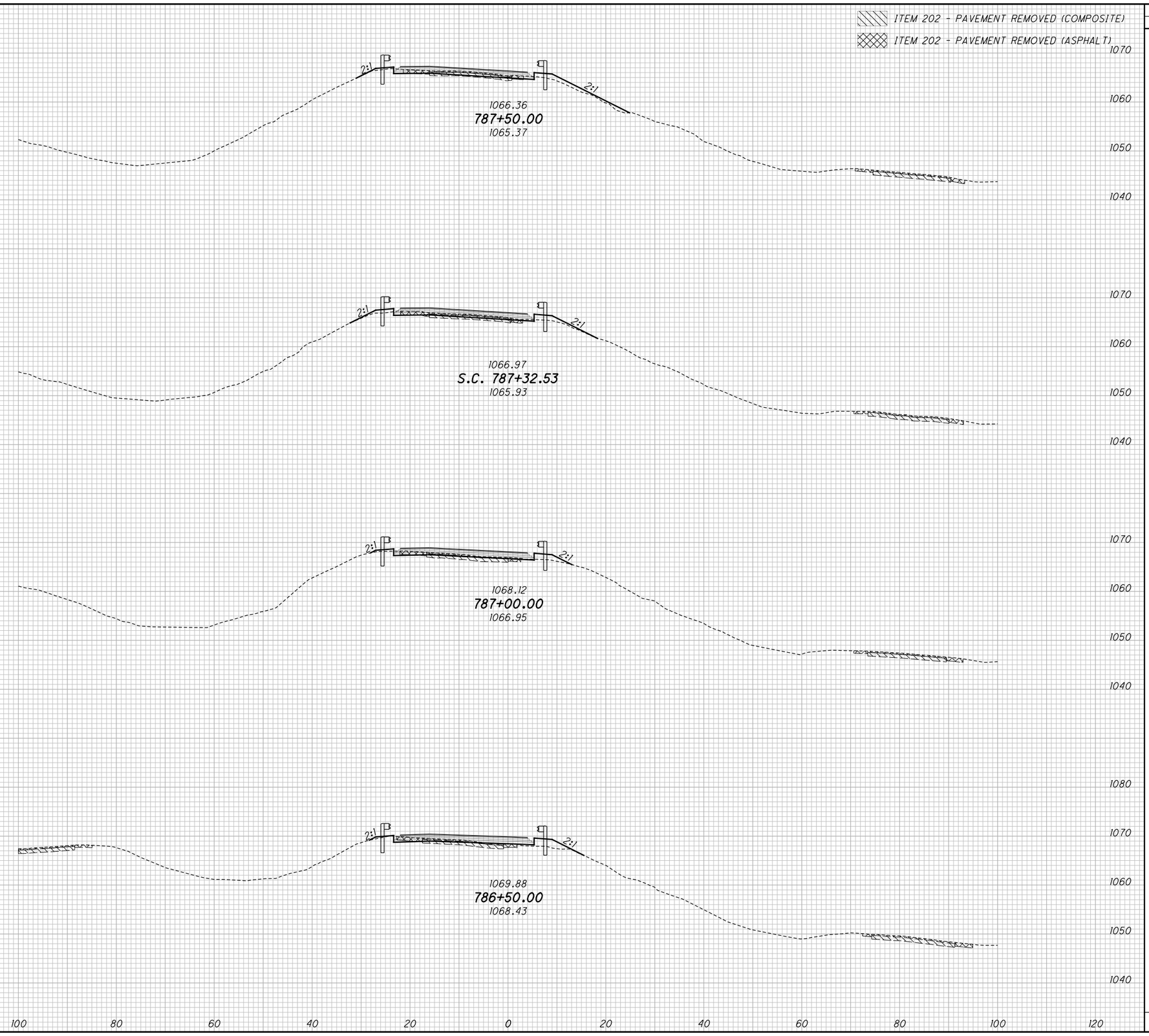
CROSS SECTIONS - RAMP C-2
STA. 784+82.53 TO STA. 786+00.00

SUM-77 / 277 / 224
VARIOUS

761
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\106002_XS107.dgn Sheet 1/13/2021 6:17:27 PM pfry

SEEDING	
END WIDTH	SQ. YDS.
40	192
	72
34	
	105
24	
	142
27	
	511



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		10	29
3	21		
		2	13
2	20		
		2	25
2	21		
		4	43
2	25		
		18	110

CALCULATED CJC
CHECKED PJF

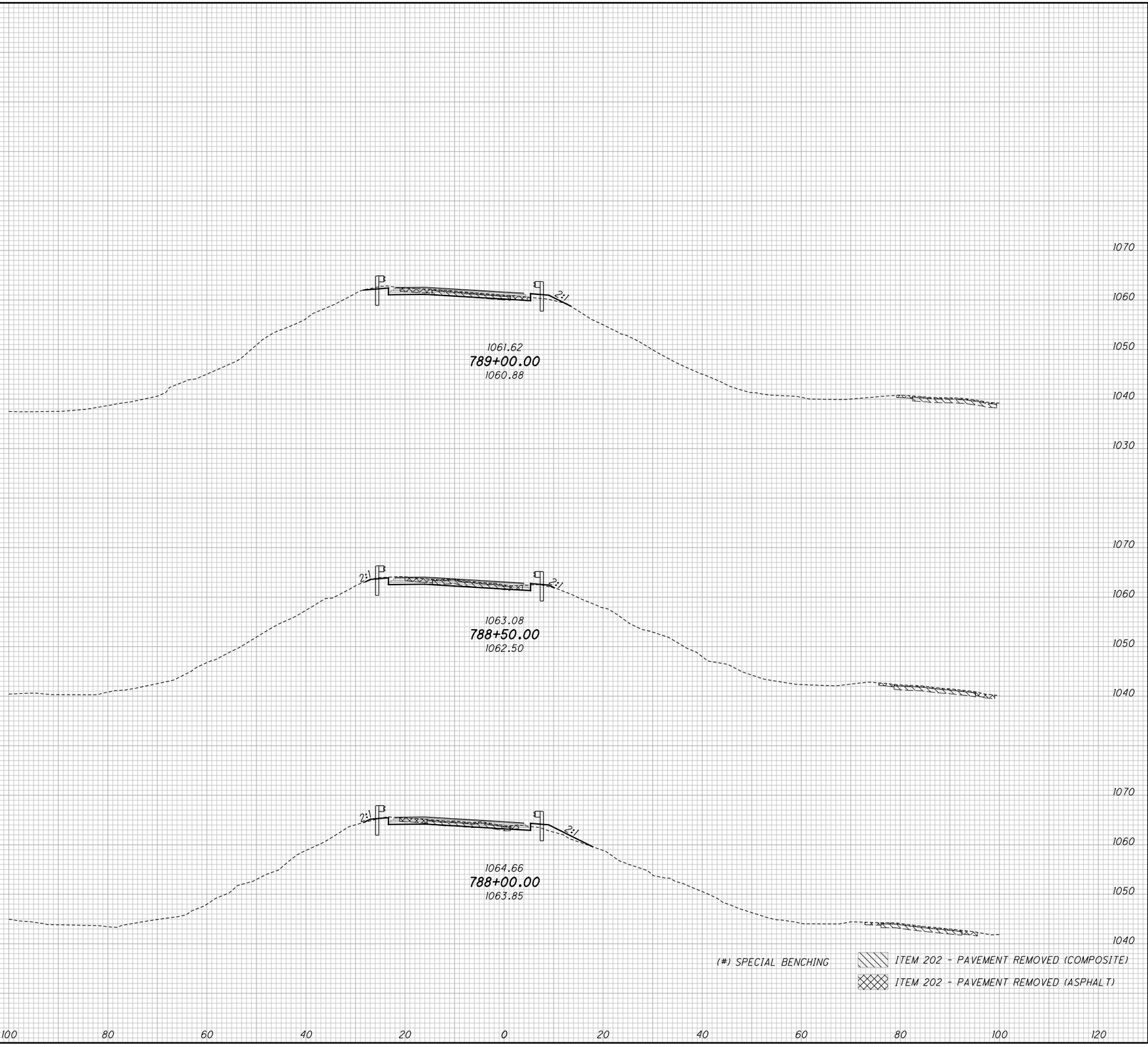
CROSS SECTIONS - RAMP C-2
STA. 786+50.00 TO STA. 787+50.00

SUM-77 / 277 / 224
VARIOUS

762
1288

D:\2017\20171258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS107.dgn Sheet1 1/13/2021 6:17:29 PM pfry

SEEDING	
END WIDTH	SQ. YDS.
	37
24	
	122
20	
	136
29	
	295



(#) SPECIAL BENCHING

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		(31)	(31)
		4	5
(0)	(0)		
9	5		
		19	6
12	1		
		19	10
8	10		
		(31)	(31)
		42	21

CALCULATED CJC
CHECKED PJF

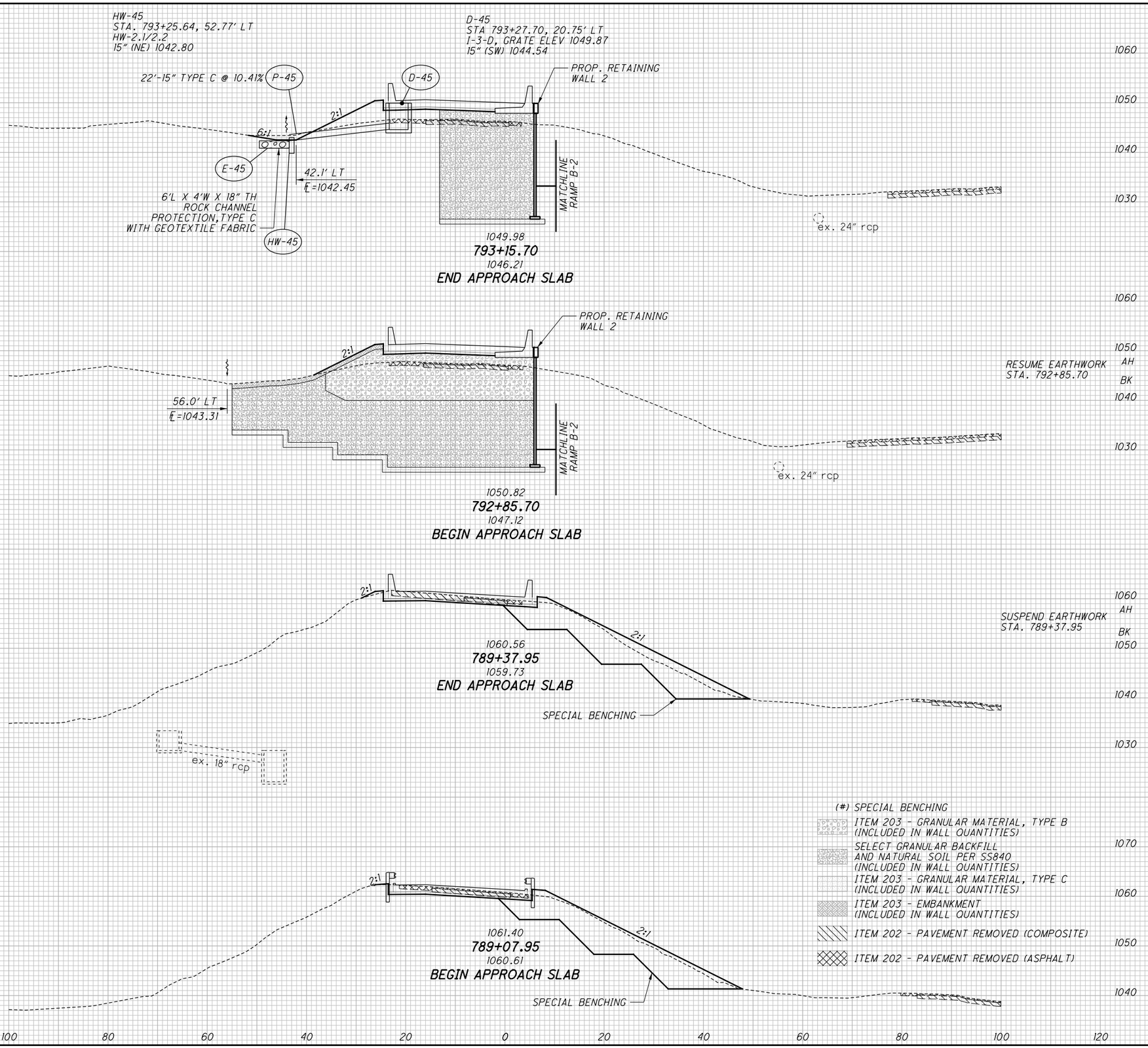
CROSS SECTIONS - RAMP C-2
STA. 788+00.00 TO STA. 789+00.00

SUM-77 / 277 / 224
VARIOUS

763
1288

D:\2017\2017258\Project Data\SUM\106002\Design\Roadway\Sheets\106002_XS107.dgn Sheet1 1/13/2021 6:17:31 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	154
38	
	103
24	
0	
0	
62	
	203
60	
	460



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		54	99
36	62		
		39	34
35	0		
0	0		
0 (190) 18	0 (190) 51		
(208) 19	(208) 29		
		(221) 21	(221) 44
		(221) 114	(221) 177

CALCULATED CJC
CHECKED PJF

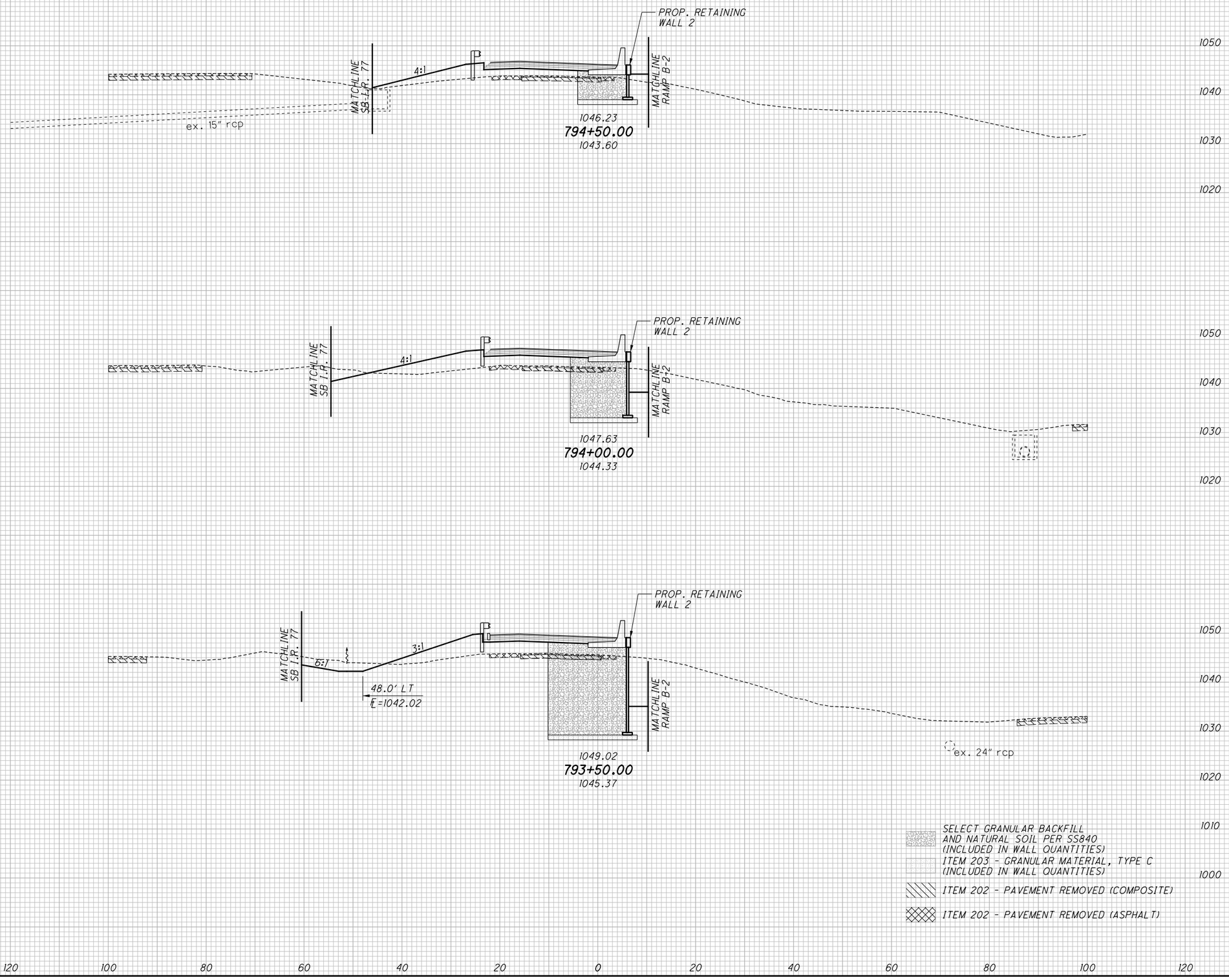
CROSS SECTIONS - RAMP C-2
STA. 789+07.95 TO STA. 793+15.70

SUM-77 / 277 / 224
VARIOUS

764
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS107.dgn Sheet 1/13/2021 6:17:33 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	250			85	156
28		0	89		
	181			19	182
37		21	108		
	222			65	187
43		49	94		
	653			169	525



CALCULATED CJC
CHECKED PJF

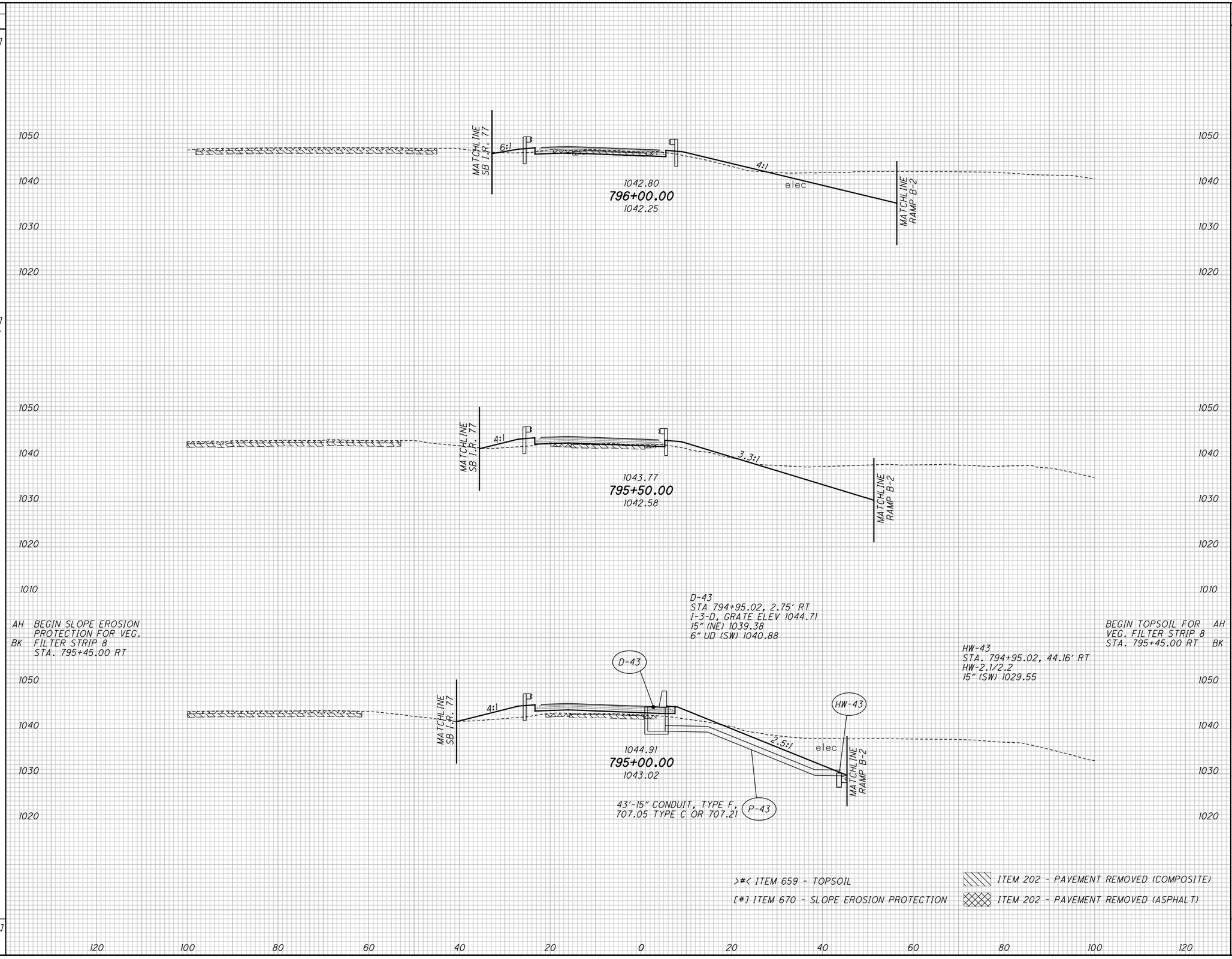
CROSS SECTIONS - RAMP C-2
STA. 793+50.00 TO STA. 794+50.00

SUM-77 / 277 / 224
VARIOUS

765
1288

0:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS107.dgn Sheet 1/13/2021 6:17:37 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	[83]
	281
[15]	
64	
	[86]
	353
[16]	
63	
	[9]
	347
[15]	
[0]	
62	
	[178]
	981



>#< ITEM 659 - TOPSOIL

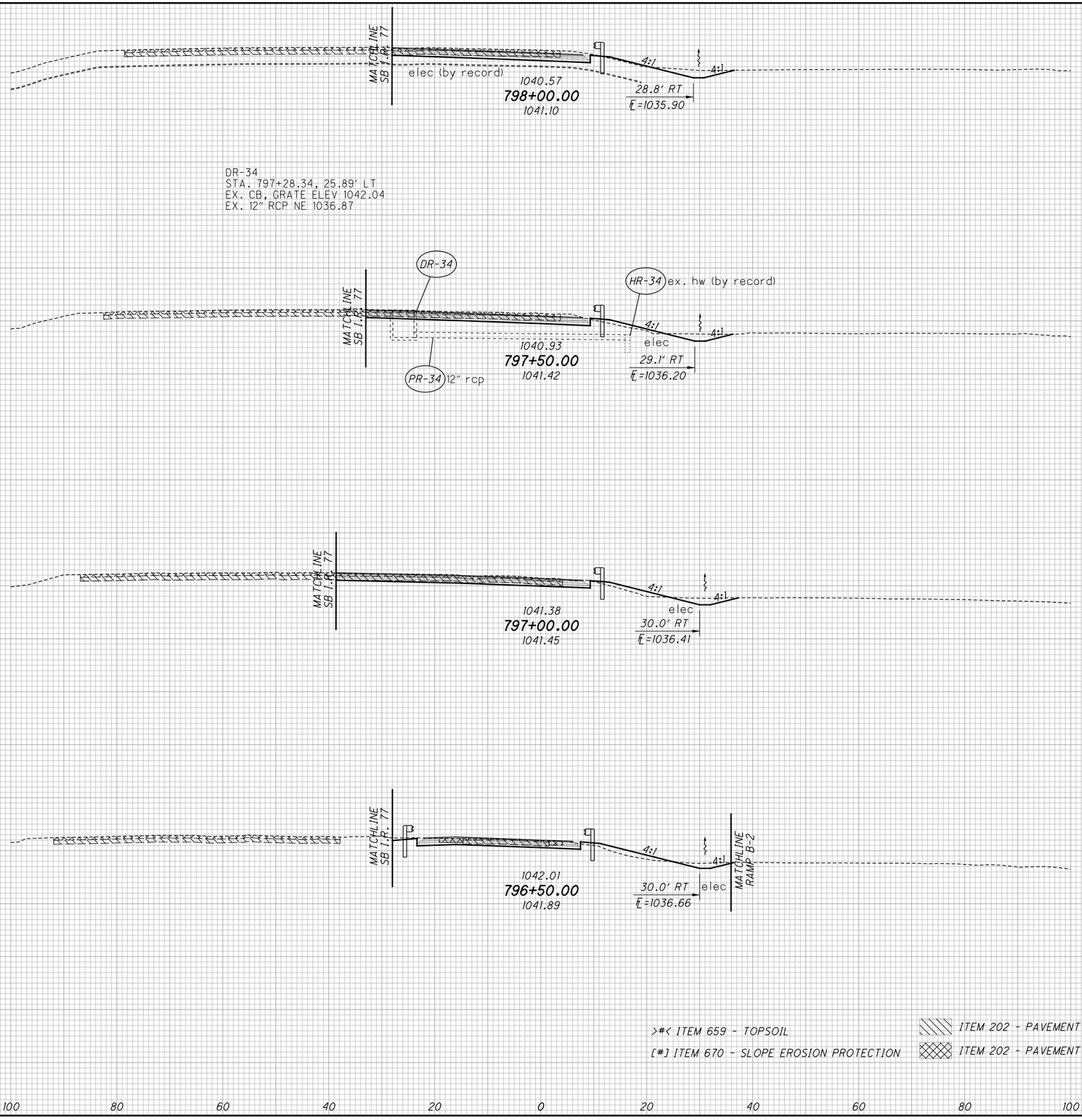
[#] ITEM 670 - SLOPE EROSION PROTECTION

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>9<
		119	21
	>5<		
102	16		
			>9<
		183	53

SEEDING END WIDTH	SEEDING SQ. YDS.
	183
33	
	183
33	
	186
34	
[0] [15]	[76] 197
[15] 37	
	[76] 749



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		72	2
40	2		
		70	8
36	7		
		58	14
27	8		
	>0<		
	>5<		
		50	>8< 14
	>5<		
27	7		
		250	>8< 38

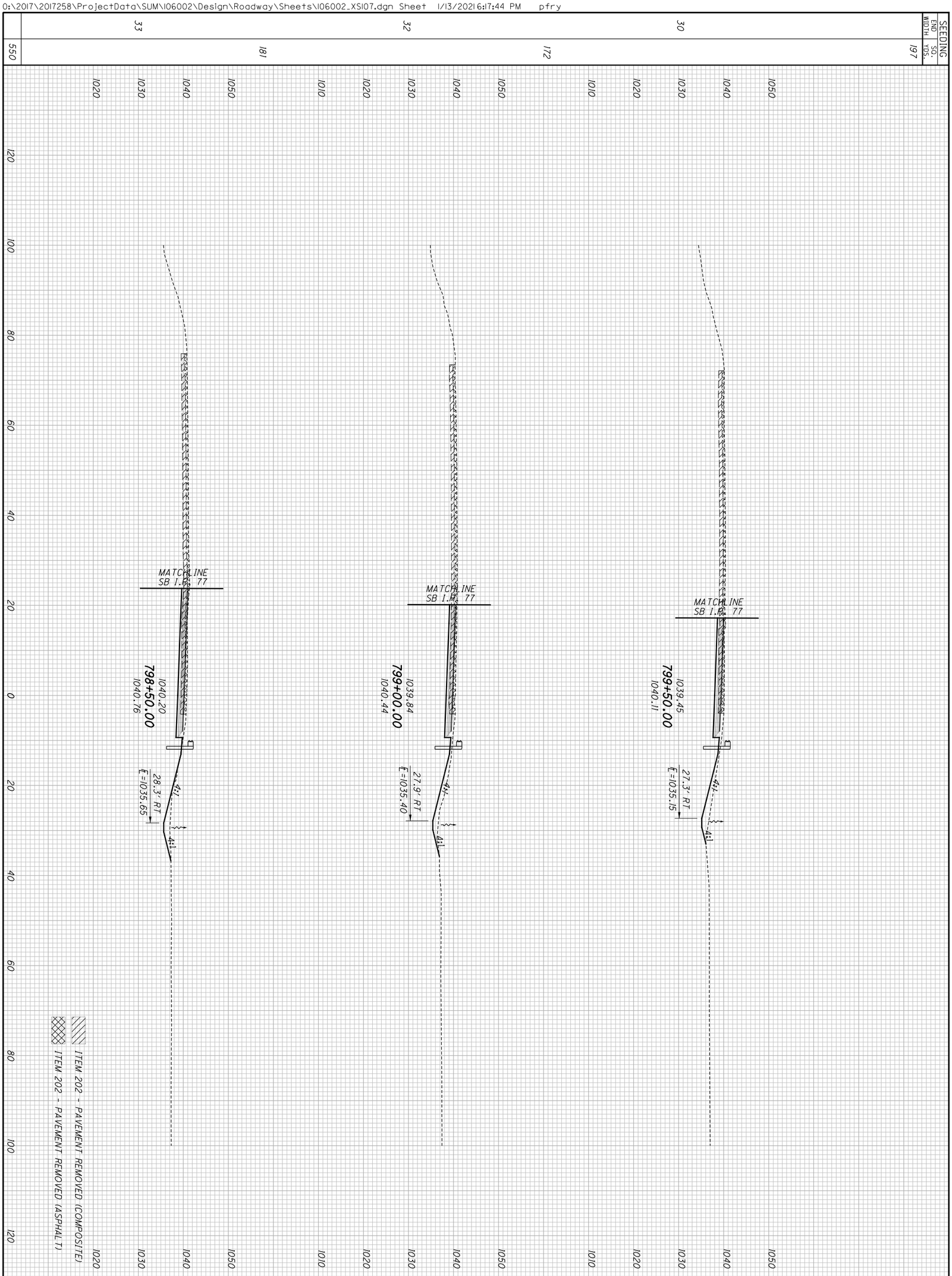
CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP C-2
STA. 796+50.00 TO STA. 798+00.00

SUM-77 / 277 / 224
VARIOUS

767
1288

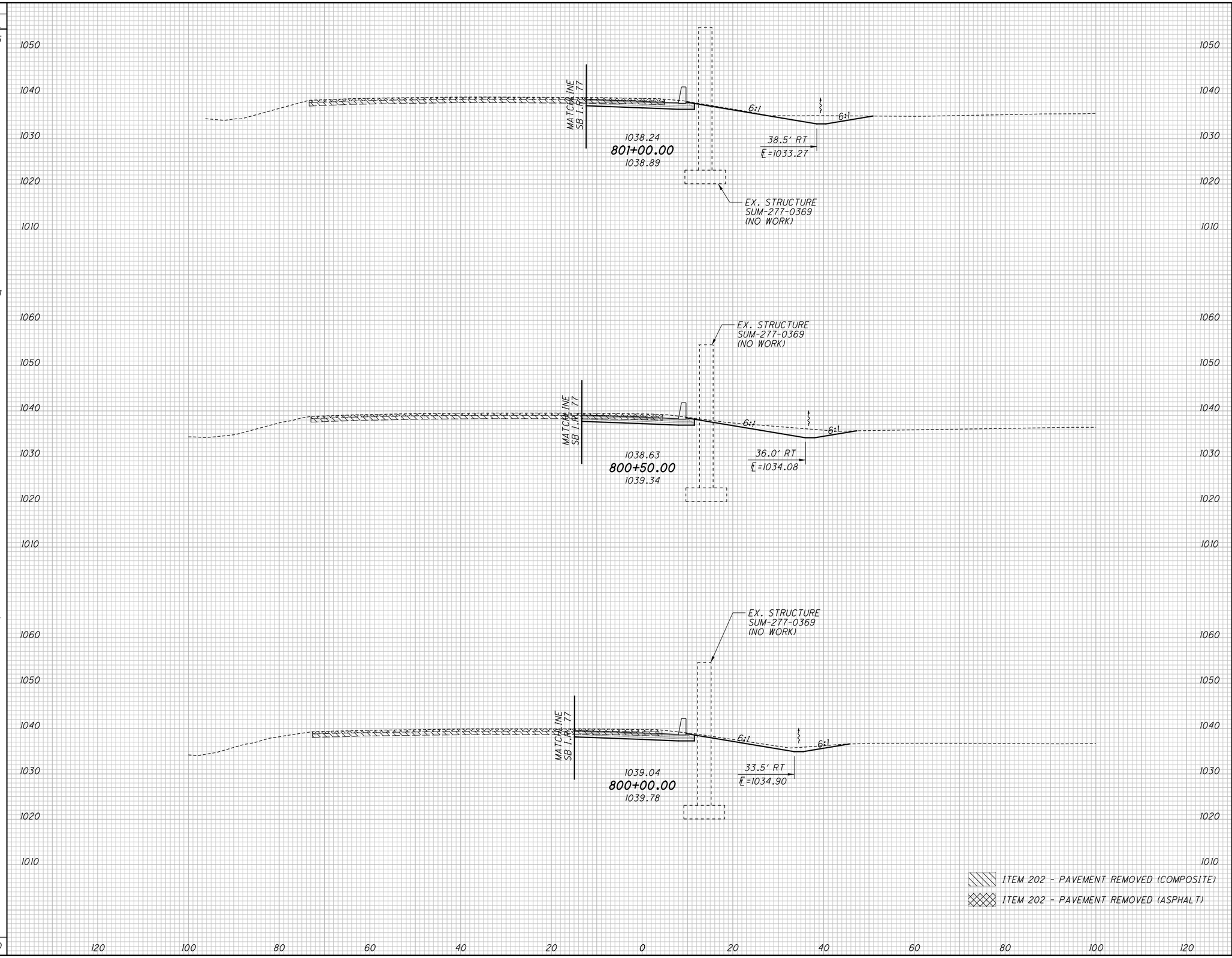
D:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS107.dgn Sheet 1/13/2021 6:17:41 PM pfry



768 / 1288	**SUM-77 / 277 / 224** **VARIOUS**	**CROSS SECTIONS - RAMP C-2** **STA. 798+50.00 TO STA. 799+50.00**

CALCULATED CJC
CHECKED PJF

SEEDING END WIDTH	SEEDING SQ. YDS.
	245
46	
	244
42	
	231
41	
	720



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		70	13
50	0		
		105	0
63	0		
47	0		
		102	0
		277	13

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP C-2
STA. 800+00.00 TO STA. 801+00.00

SUM-77 / 277 / 224
VARIOUS

769
1288

0:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS107.dgn Sheet 1/13/2021 6:17:46 PM pfry

SEEDING	
END WIDTH	SQ. YDS.
44	
	0

END AREA	
CUT	FILL
27	14

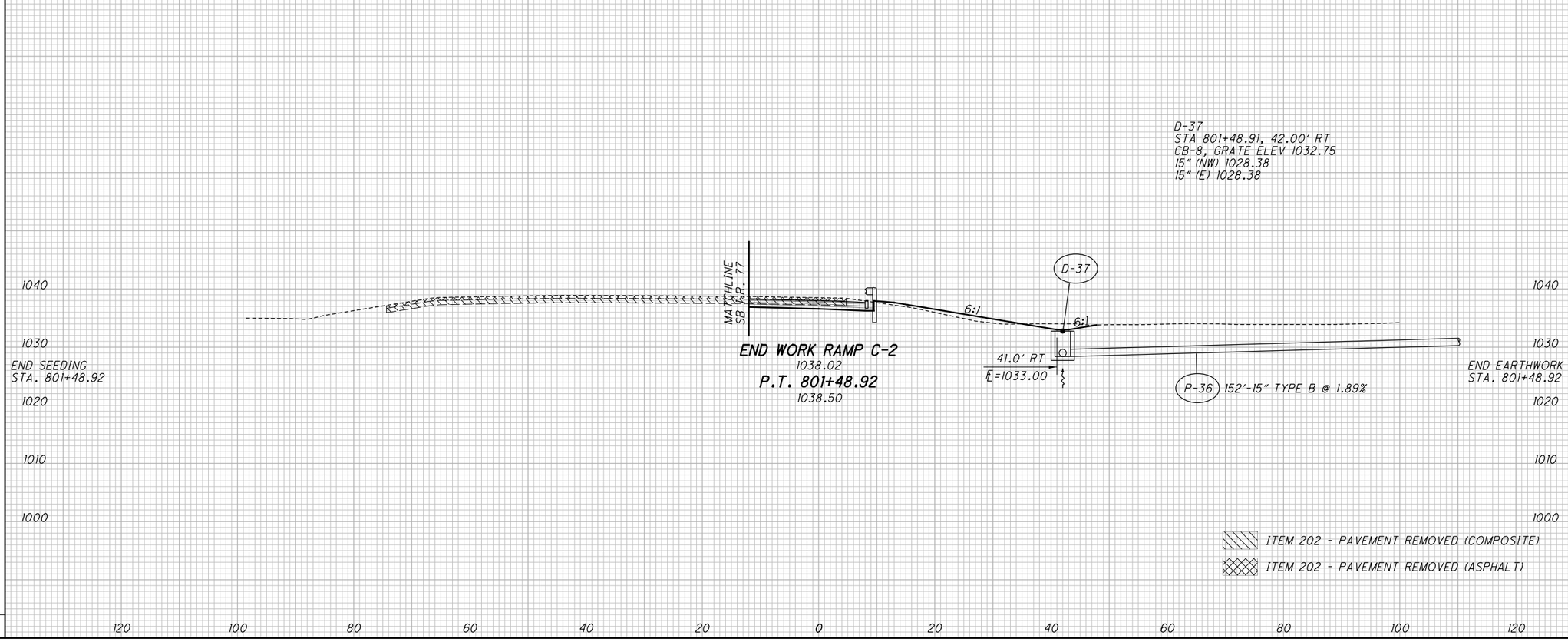
VOLUME	
CUT	FILL
0	0

CALCULATED CJC
CHECKED PJF

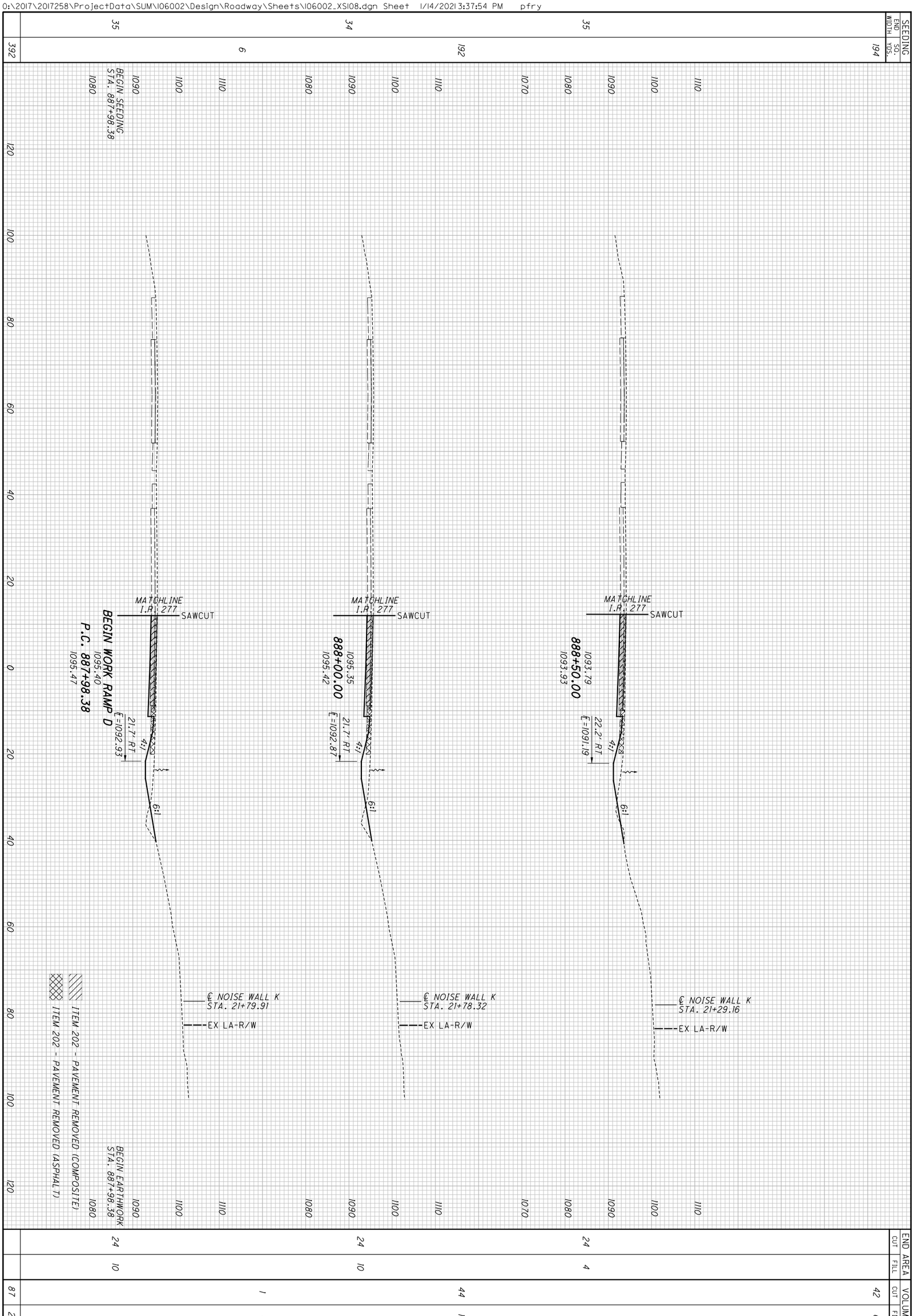
CROSS SECTIONS - RAMP C-2
STA. 801+48.92

SUM-77 / 277 / 224
VARIOUS

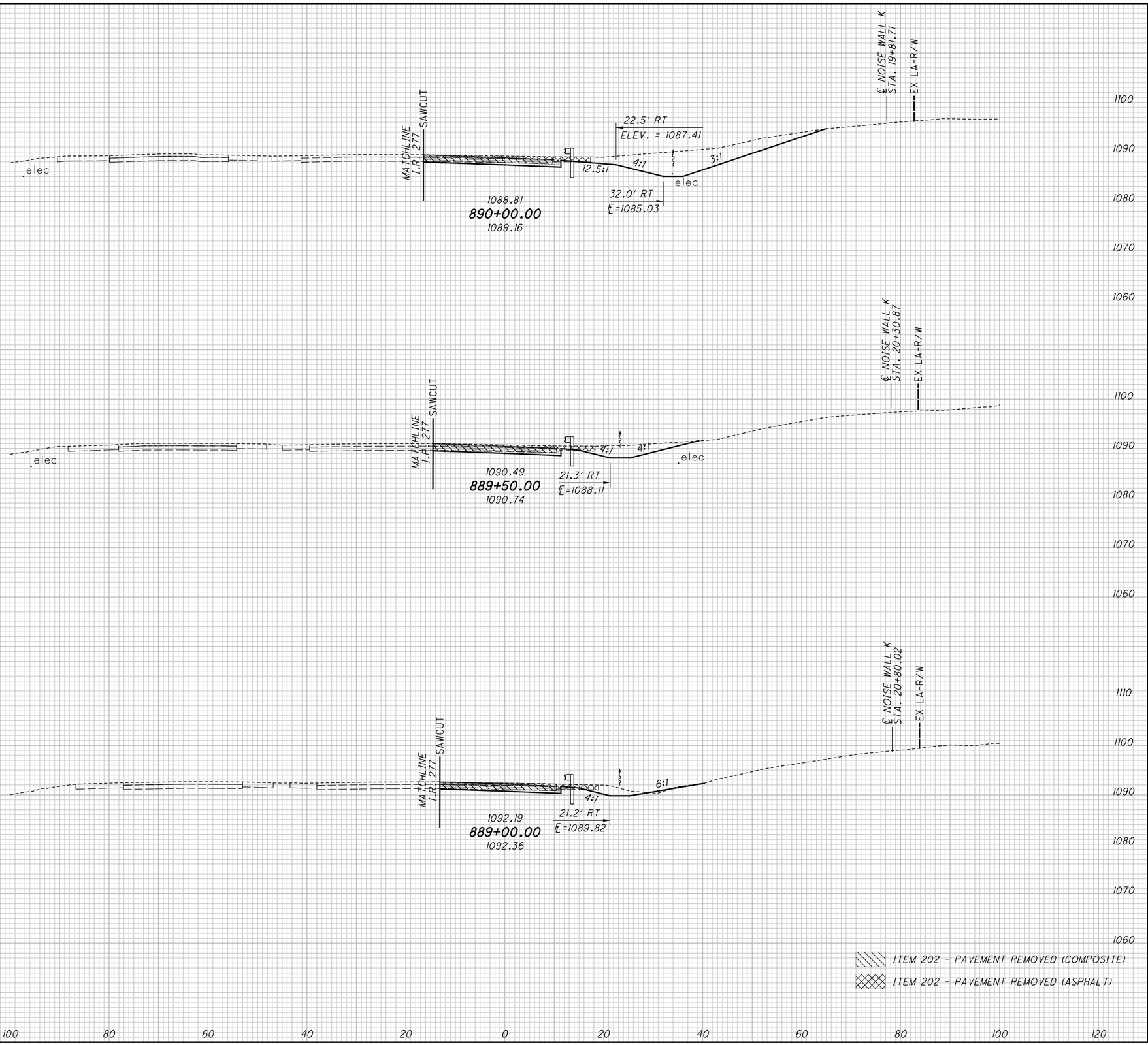
770
1288



O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS07.dgn Sheet 1/13/2021 6:17:47 PM pfry


SEEDING
END WIDTH
SQ. YDS.
392
6
35
BEGIN SEEDING STA. 887+98.38
1080
1090
1100
1110
MATCHLINE I.R. 277
SAWCUT
BEGIN WORK RAMP D
P.C. 887+98.38
1095.40
1095.47
21.7' RT
℄=1092.93
4:1
6:1
℄ NOISE WALL K
STA. 21+79.91
EX LA-R/W
192
34
1070
888+00.00
1095.35
1095.42
℄=1092.87
℄ NOISE WALL K
STA. 21+78.32
194
35
888+50.00
1093.79
1093.93
22.2' RT
℄=1091.19
℄ NOISE WALL K
STA. 21+29.16
ITEM 202 - PAVEMENT REMOVED (COMPOSITE)
ITEM 202 - PAVEMENT REMOVED (ASPHALT)
BEGIN EARTHWORK STA. 887+98.38
END AREA
CUT
FILL
24
10
4
87
20
1
44
13
42
6
VOLUME
SUM-77/277/224
VARIOUS
771
1288
CROSS SECTIONS - RAMP D
STA. 887+98.38 TO STA. 888+50.00
CALCULATED
CJC
CHECKED
PJF

SEEDING END WIDTH	SEEDING SQ. YDS.
	342
61	
	264
34	
	192
35	
	798



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		301	2
141	1		
		171	2
44	1		
		60	4
21	3		
		532	8

CALCULATED CJC
CHECKED PJF

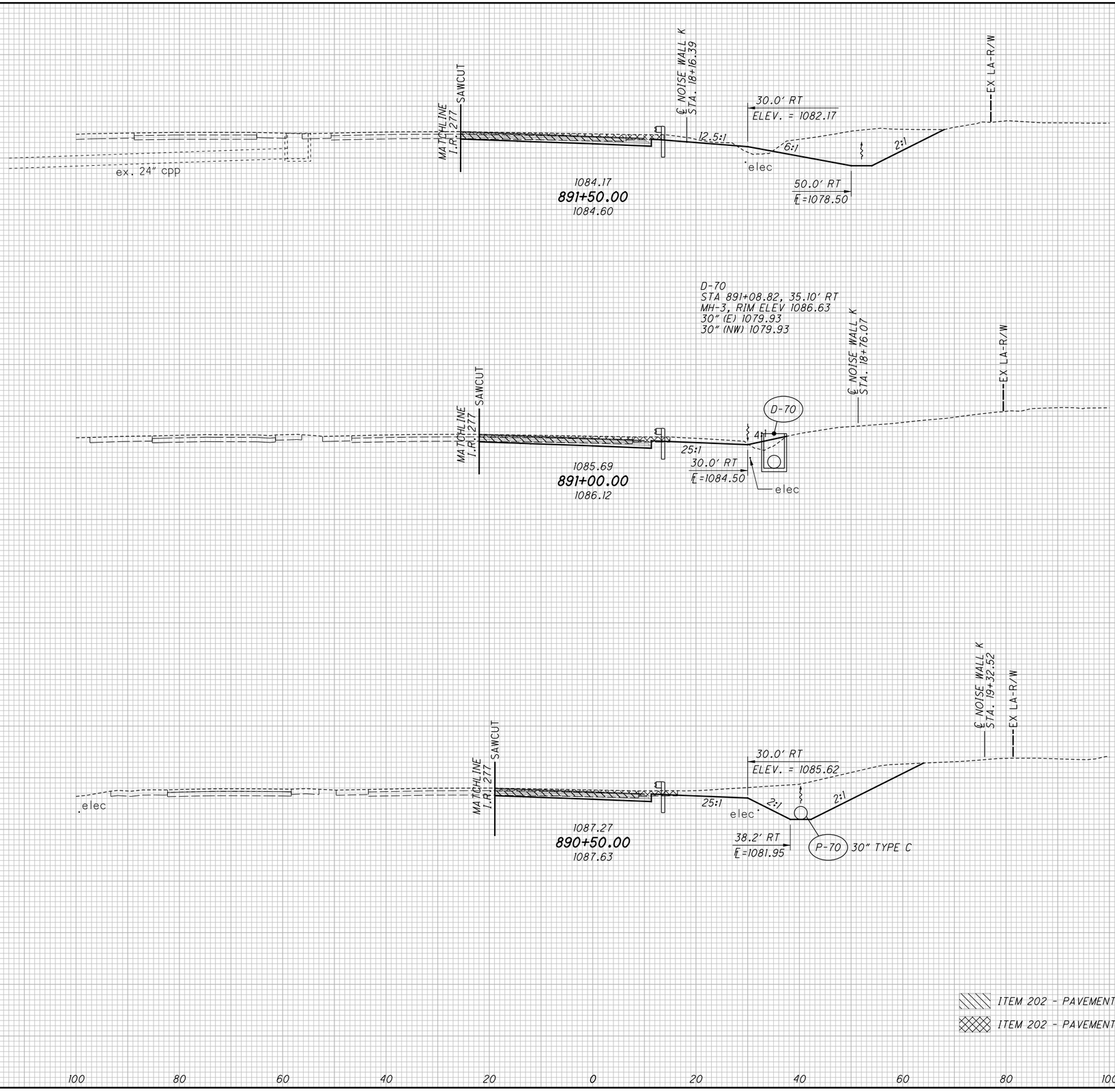
CROSS SECTIONS - RAMP D
STA. 889+00.00 TO STA. 890+00.00

SUM-77 / 277 / 224
VARIOUS

772
1288

D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS08.dgn Sheet 1/14/2021 3:38:08 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	353			270	12
64		164	6		
	258			177	13
29		27	8		
	253			195	8
62		184	1		
	864			642	33



CALCULATED CJC
CHECKED PJF

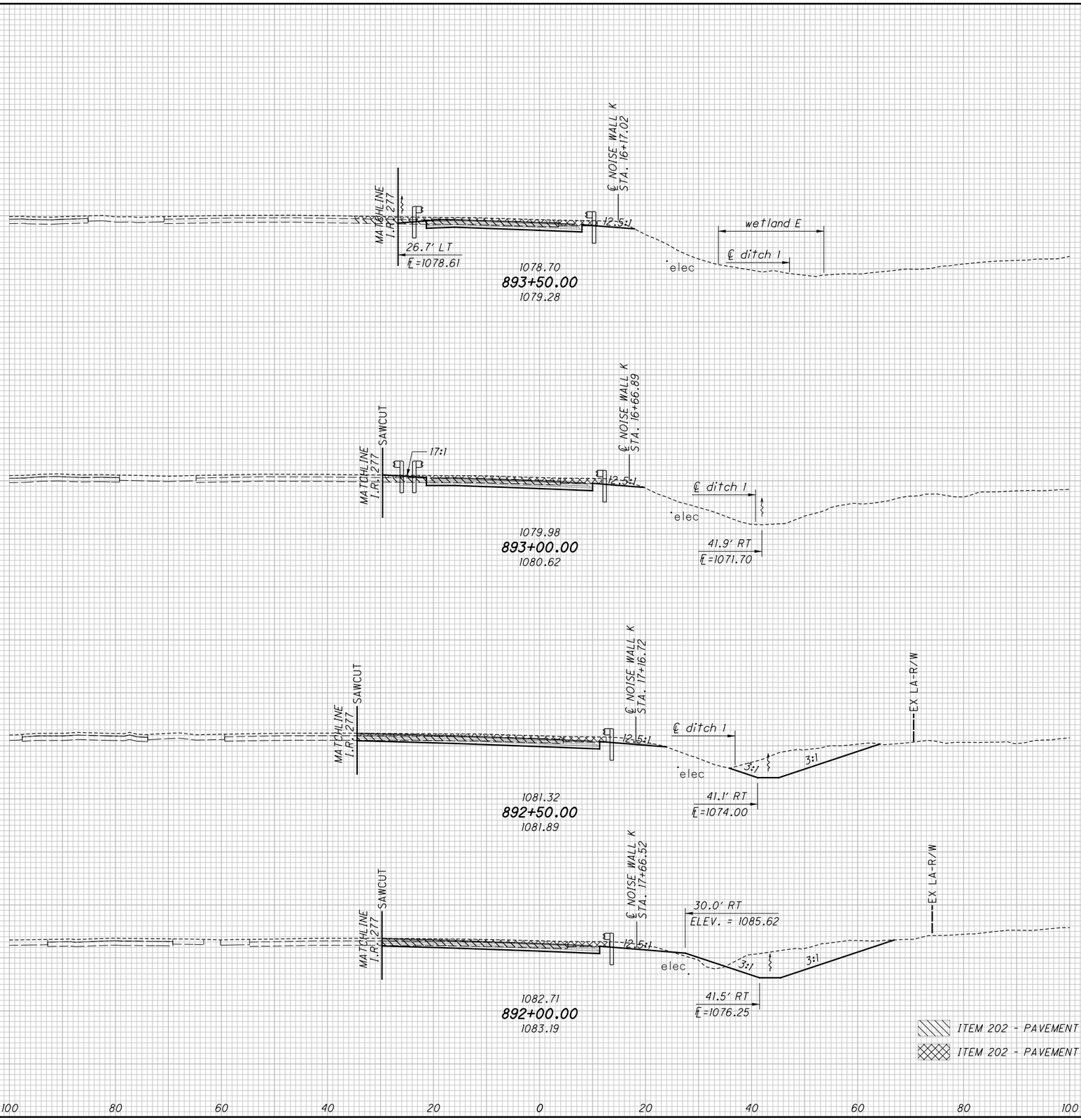
CROSS SECTIONS - RAMP D 890+50.00 TO STA. 891+50.00

SUM-77 / 277 / 224
VARIOUS

773
1288

0:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS108.dgn Sheet 1/14/2021 3:38:10 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	131
22	
	131
25	
	203
48	
	308
63	
	773



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		64	3
26	2		
		52	10
30	9		
108	1	128	9
128	7	219	7
		463	29

CALCULATED CJC
CHECKED PJF

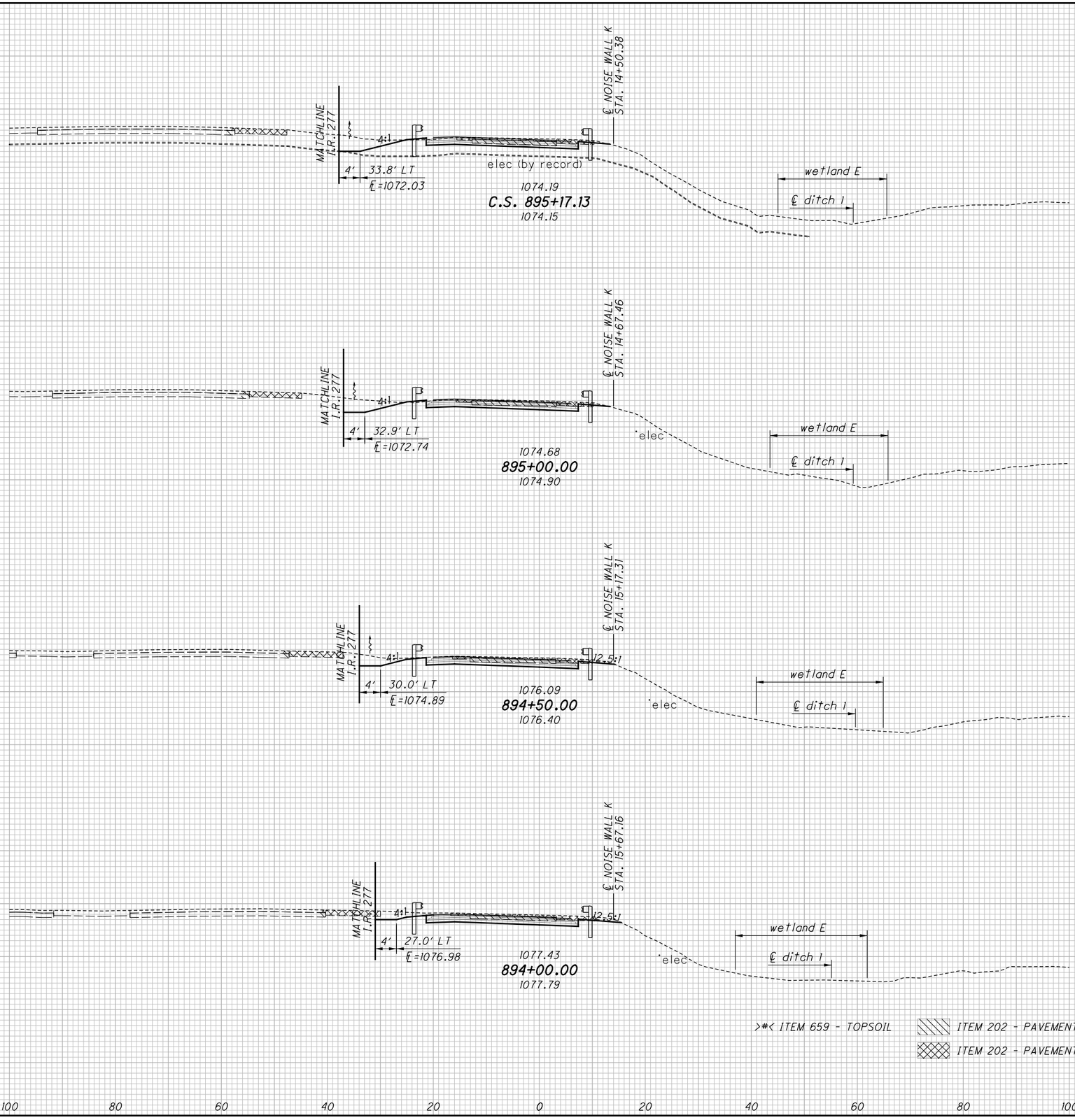
CROSS SECTIONS - RAMP D
STA. 892+00.00 TO STA. 893+50.00

SUM-77 / 277 / 224
VARIOUS

774
1288

D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS08.dgn Sheet 1/14/2021 3:38:12 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	110
29	
	54
28	
	150
26	
	142
25	
	456



BEGIN TOPSOIL FOR VEG. BIOFILTER 20. STA. 894+00.00 LT — AH BK

>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		55	>4< 2
43	>3< 2		
		28	>2< 1
45	>3< 2		
		80	>5< 3
41	>2< 1		
		78	>3< 2
43	>1< >0< 1		
		241	>14< 8

CALCULATED CJC
CHECKED PJF

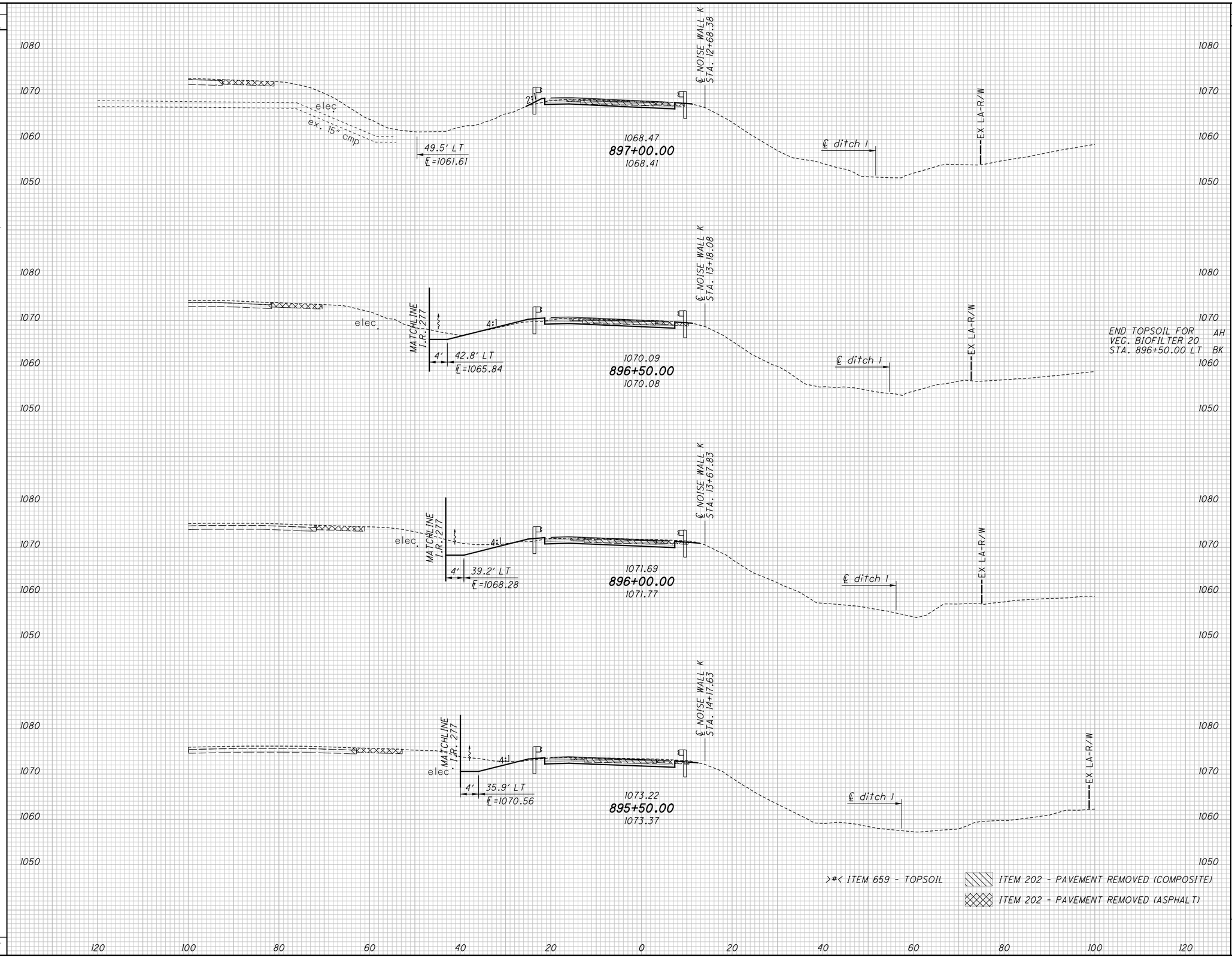
CROSS SECTIONS - RAMP D
STA. 894+00.00 TO STA. 895+17.13

SUM-77 / 277 / 224
VARIOUS

775
1288

0:\2017\20172581Project Data\SUM\106002\Design\Roadway\Sheets\106002_XS108.dgn Sheet 1/14/2021 3:38:15 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	37
19	
	156
37	
	197
34	
	181
31	
	571



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		8	3
14	4		
		40	8
	>0<		
	>6<		
29	5		
		70	>10< 7
47	>5< 3		
		88	>8< 5
48	>4< 2		
			>18<
		206	23

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP D
STA. 895+50.00 TO STA. 897+00.00

SUM-77 / 277 / 224
VARIOUS

776
1288

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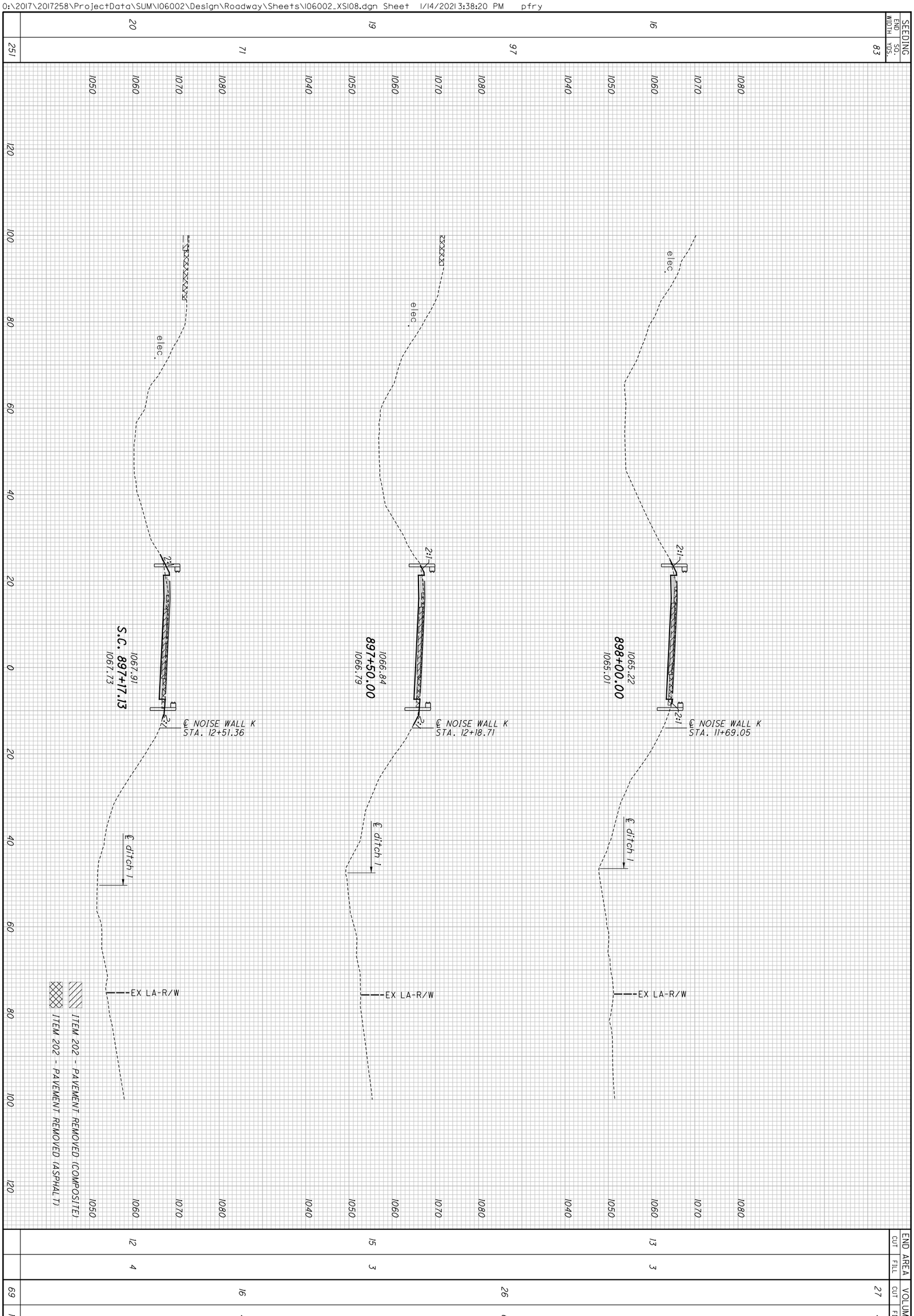


SEEDING END WIDTH	SEEDING SQ. YDS.
251	83
20	16
71	97
19	16

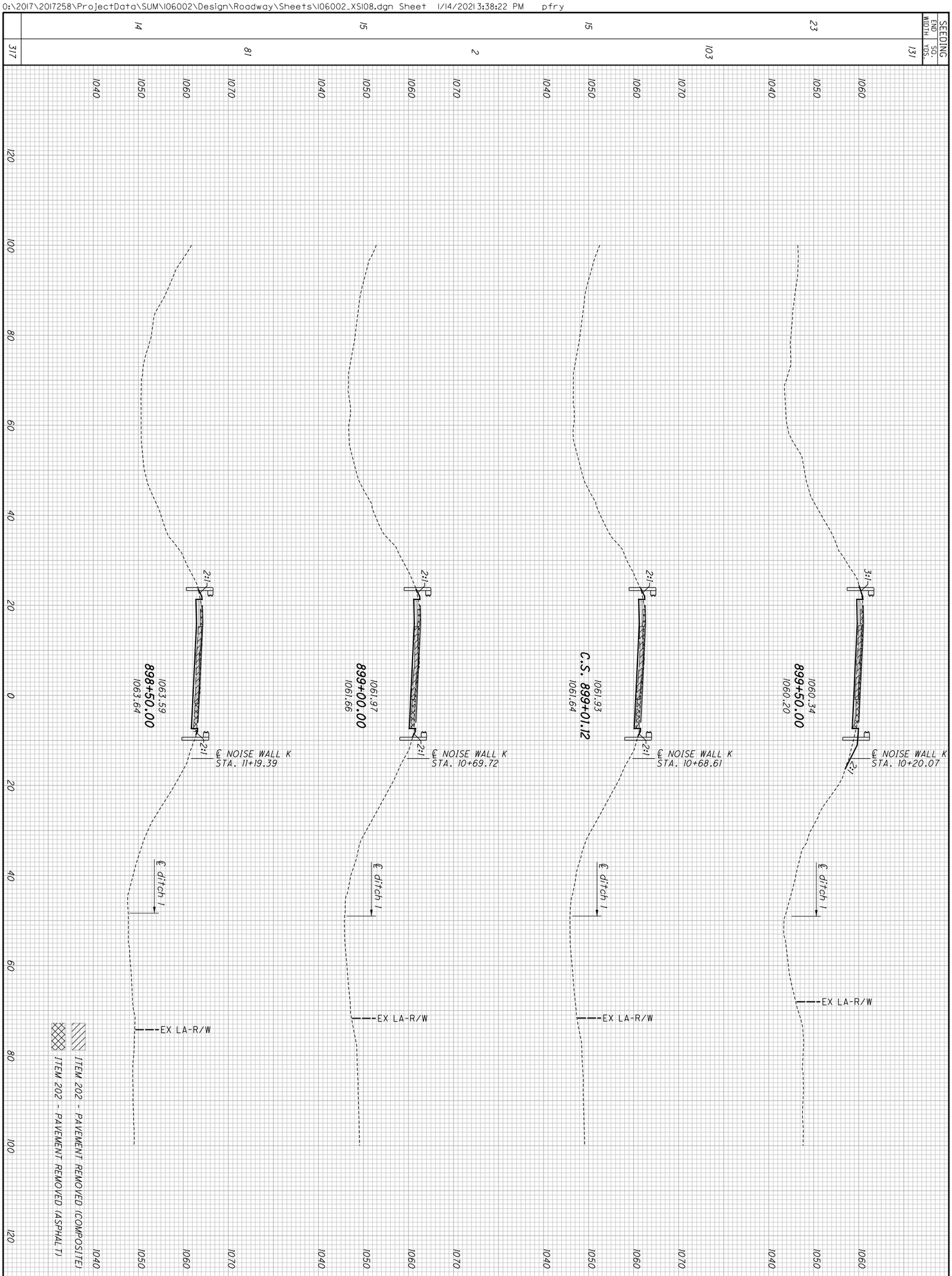
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
12	4	69	14
15	3	26	6
13	3	27	4

777
1288

SUM-77/277/224
VARIOUS

CROSS SECTIONS - RAMP D
STA. 897+17.13 TO STA. 898+00.00

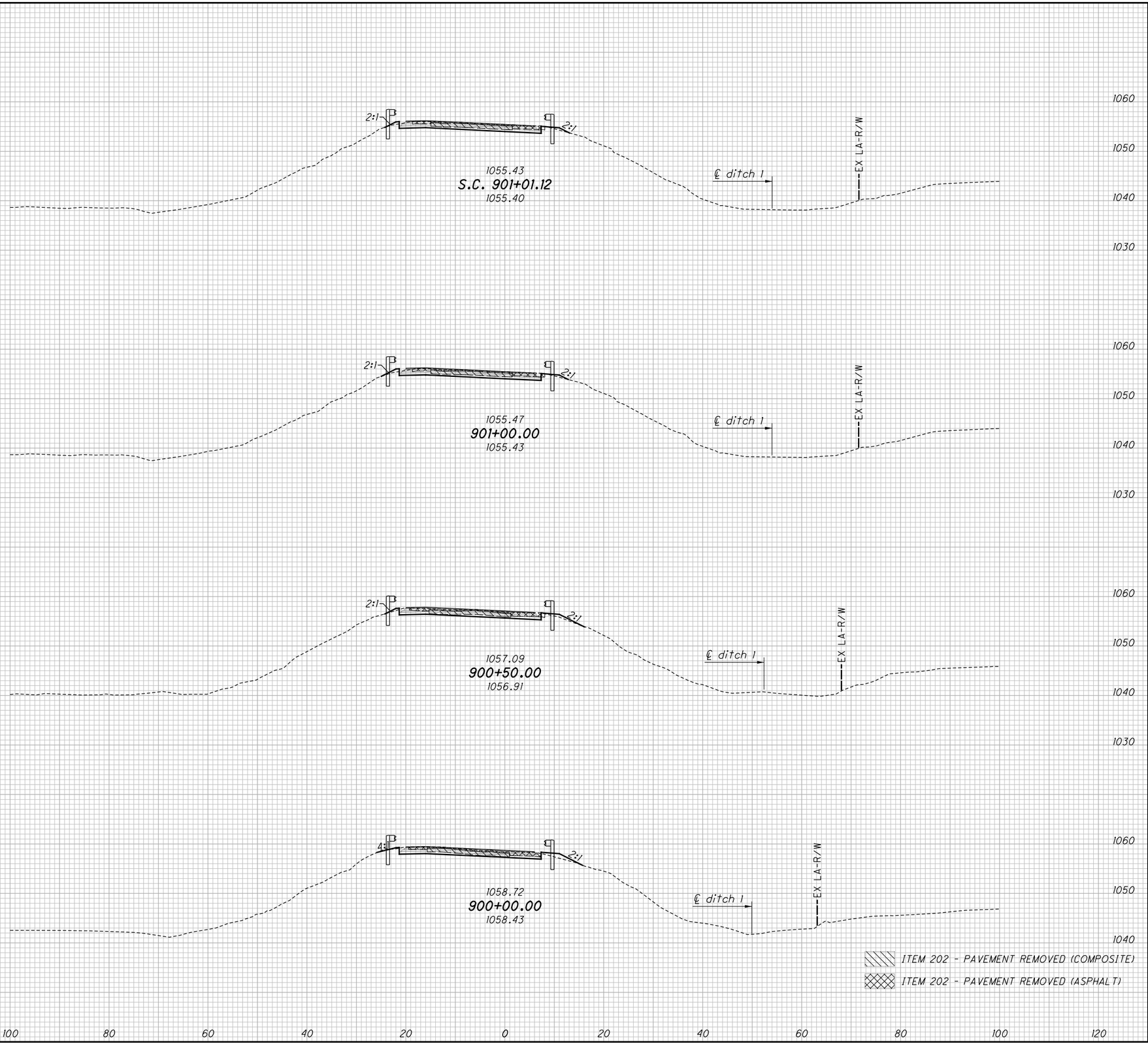
CALCULATED CJC
CHECKED PJF



SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
14	317	16	1	77	17
15	81	12	1	26	2
15	2	13	1	1	0
23	103	14	6	24	6
	131			26	9

778 / 1288	SUM-77/277/224 VARIOUS	CROSS SECTIONS - RAMP D STA. 898+50.00 TO STA. 899+50.00	CALCULATED CJC CHECKED PJF

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	106			28	5
20		16	2		
	2			1	0
20		15	3		
	119			27	6
23		14	4		
	131			26	7
24		14	4		
	358			82	18



CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP D
STA. 900+00.00 TO STA. 901+01.12

SUM-77 / 277 / 224
VARIOUS

779
1288

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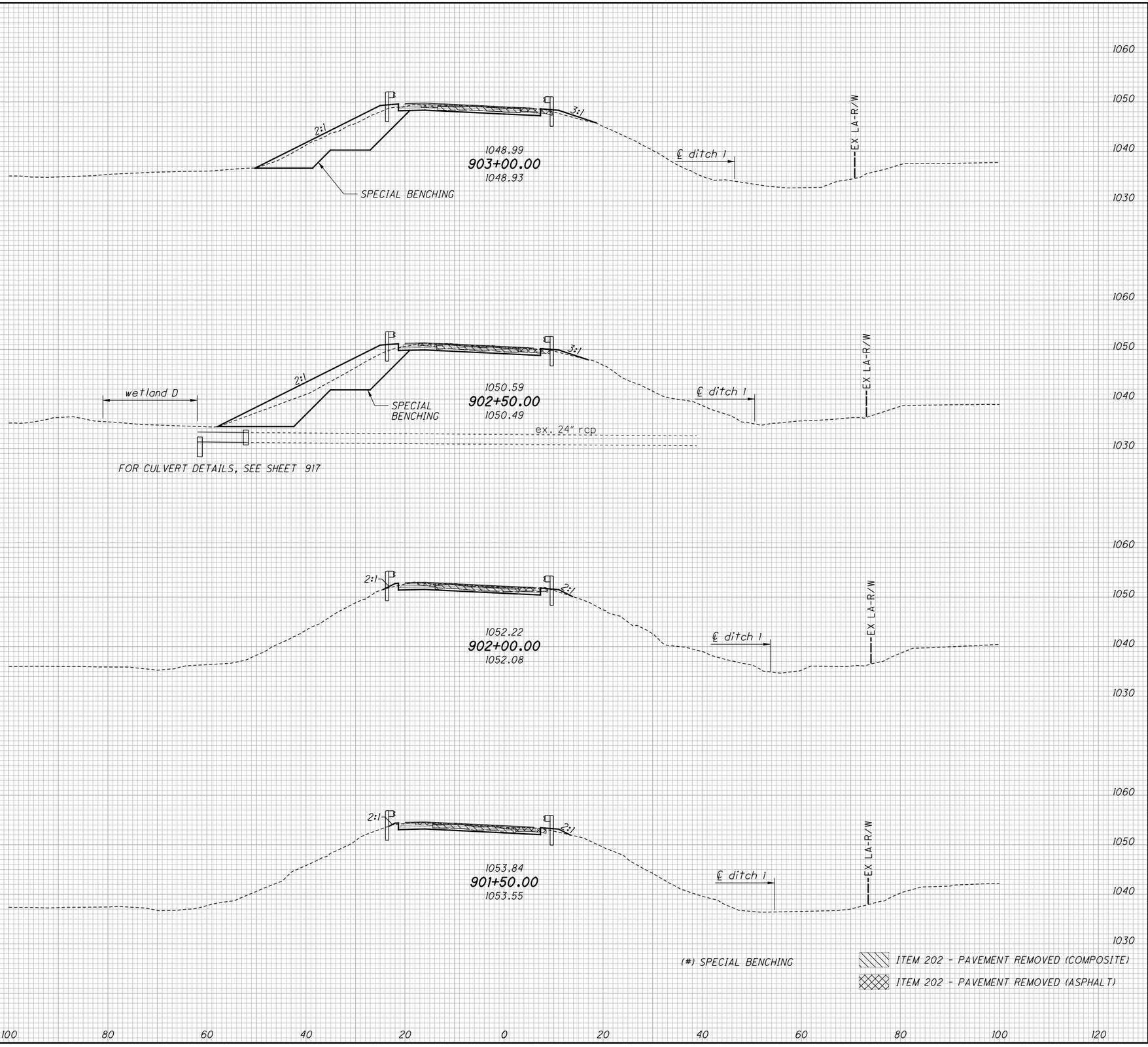
SEEDING END WIDTH	SEEDING SQ. YDS.
	217
54	
	322
62	
	231
21	
	111
19	
	881



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		(106)	(106)
		29	34
(115)	(115)		
15	28		
		(225)	(225)
		28	84
(128)	(128)		
15	63		
		(119)	(119)
		29	61
(0)	(0)		
16	3		
		29	6
15	3		
		(450)	(450)
		115	185

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP D
STA. 901+50.00 TO STA. 903+00.00

SUM-77 / 277 / 224
VARIOUS

780
1288

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SEEDING	
END WIDTH	SQ. YDS.
	211
42	
	186
25	
	136
24	
	133
24	
	666

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		31	44
17	29		
		32	32
18	6		
		32	12
17	7		
		31	15
(0) 16	(0) 9		
		126	103

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP D
STA. 903+50.00 TO STA. 905+00.00

SUM-77 / 277 / 224
VARIOUS

781
1288

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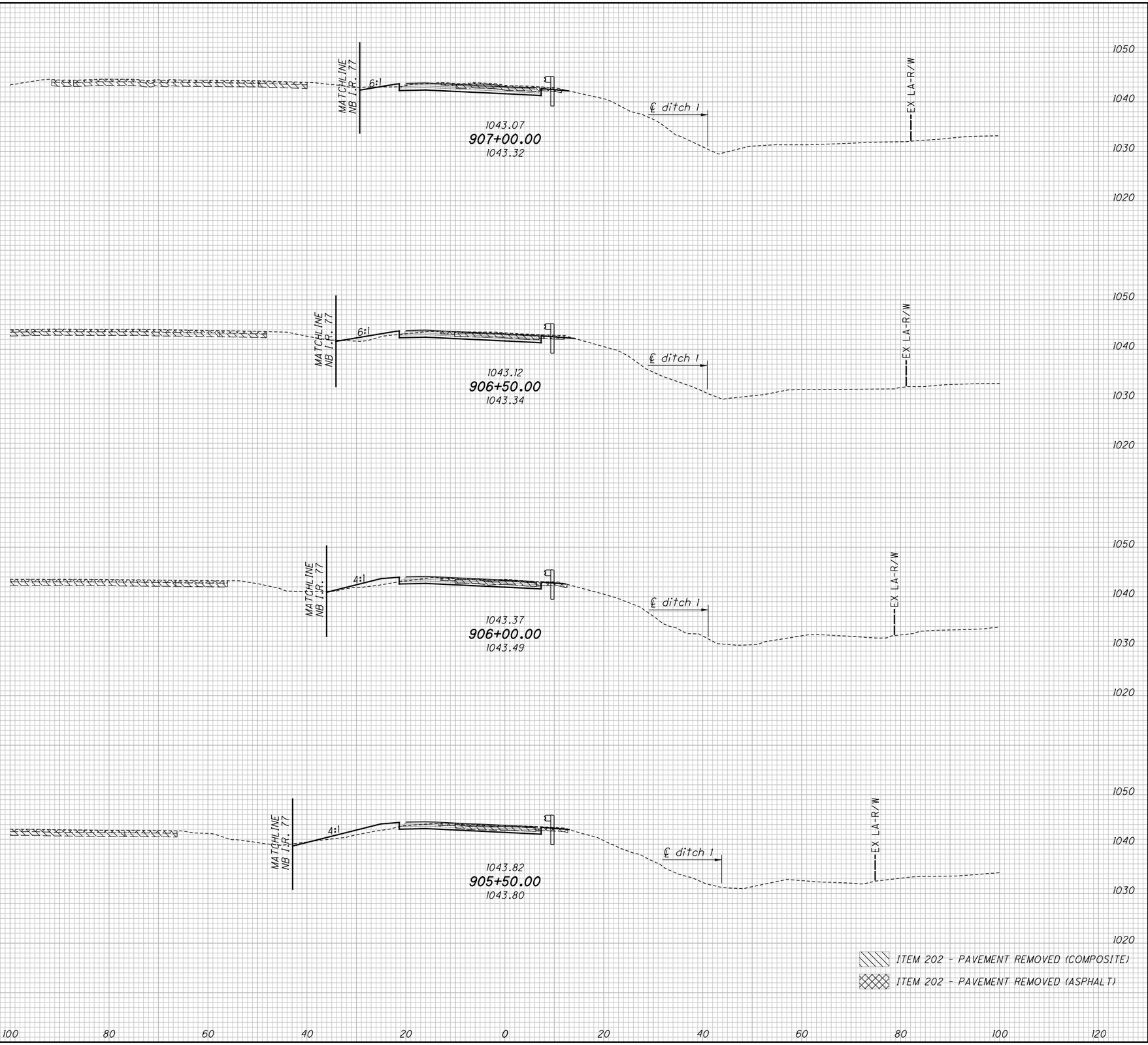
SEEDING END WIDTH	SEEDING SQ. YDS.
	108
20	
	128
26	
	147
27	
	169
34	
	552



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		56	4
29	3		
		46	11
21	9		
		35	20
17	13		
		31	29
17	18		
		168	64

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP D
STA. 905+50.00 TO STA. 907+00.00

SUM-77 / 277 / 224
VARIOUS

782
1288

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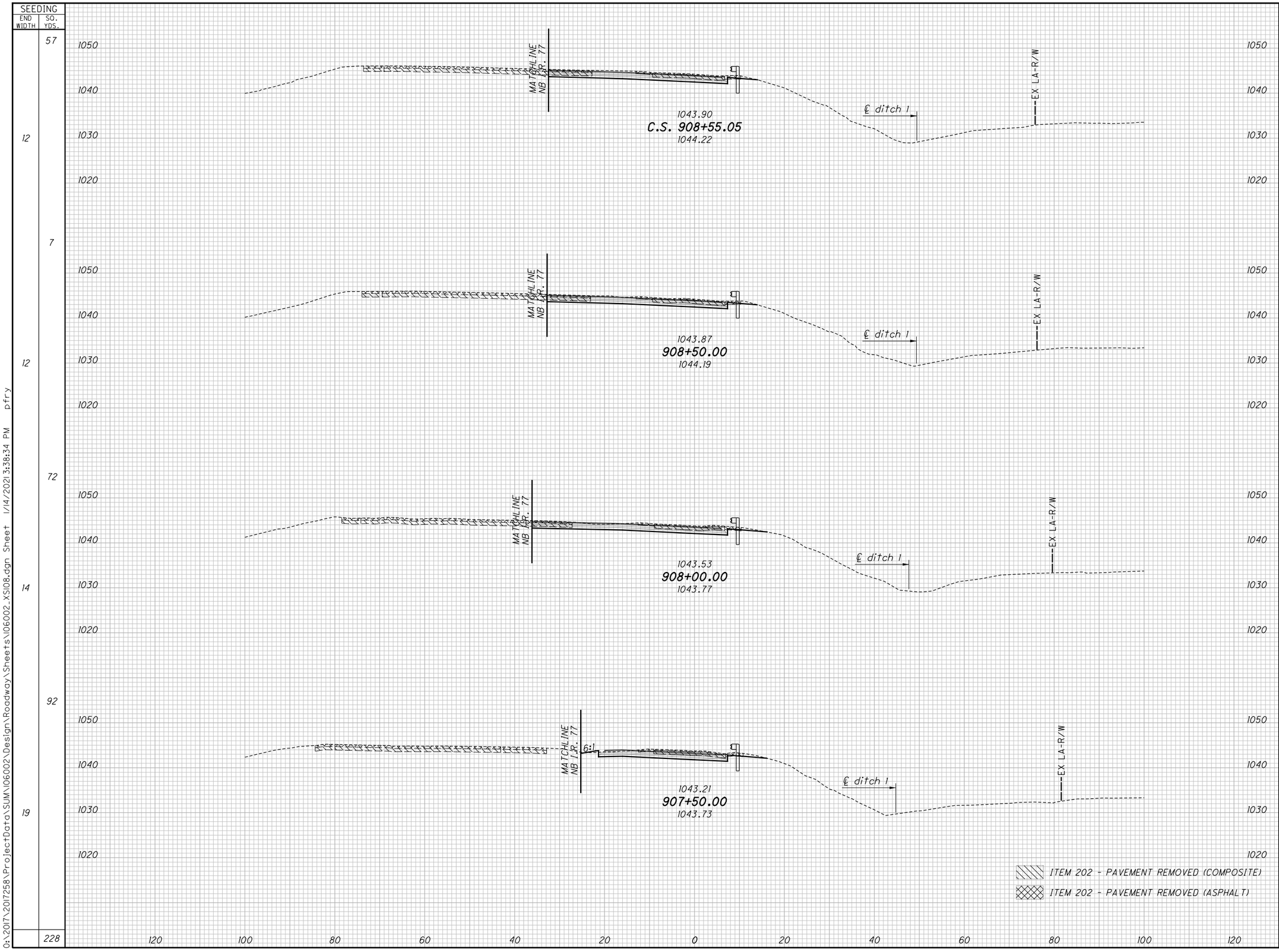
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	57			44	3
12		38	1		
	7			7	0
12		36	1		
	72			73	2
14		43	1		
	92			69	2
19		32	1		
	228			193	7



CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP D
STA. 907+50.00 TO STA. 908+55.05

SUM-77 / 277 / 224
VARIOUS

783
1288

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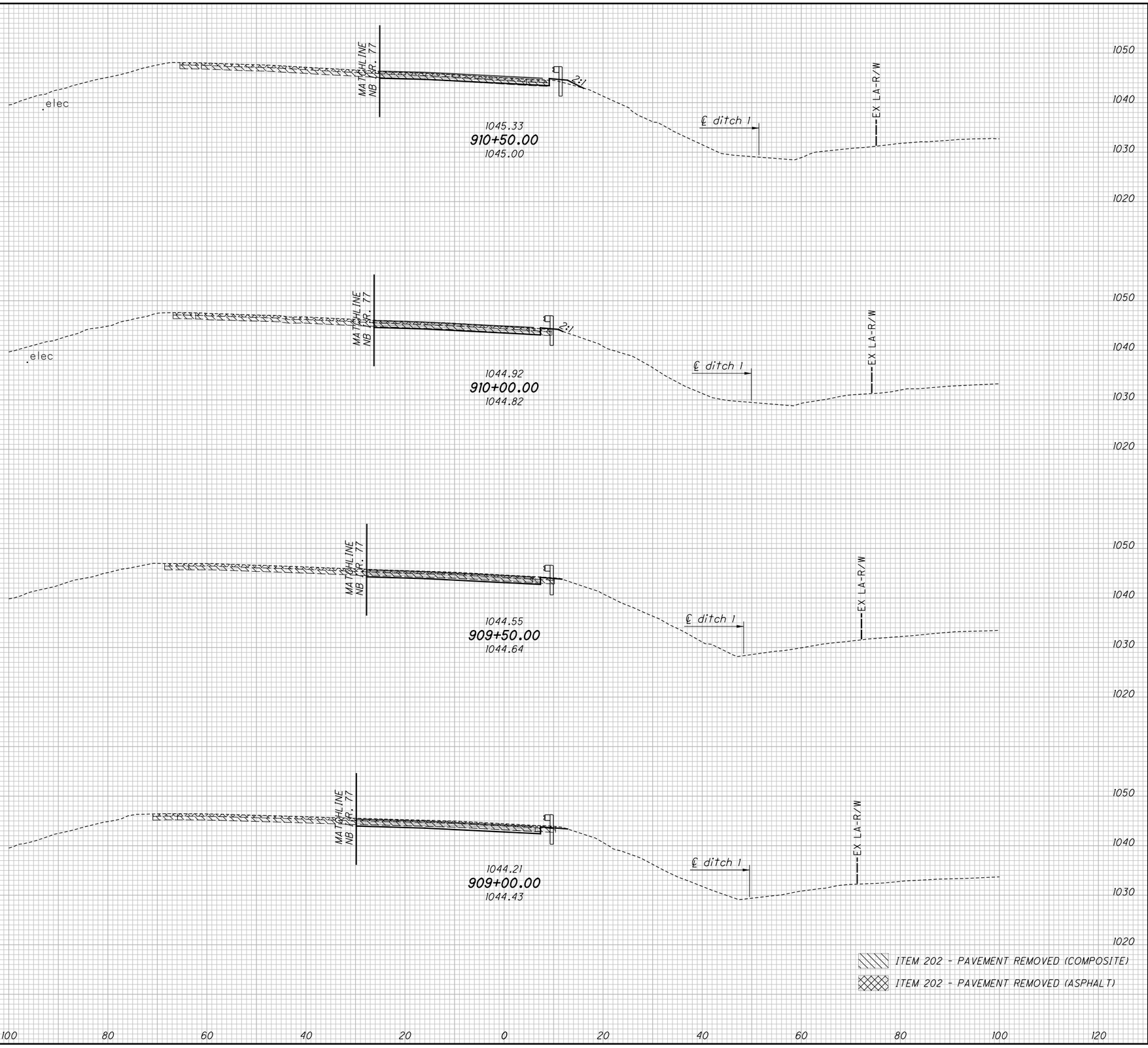
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	7			0	1
10		0	6		
	58			5	8
11		5	3		
	58			14	6
10		10	3		
	58			23	6
11		15	3		
	181			42	21



CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP D
STA. 909+00.00 TO STA. 910+50.00

SUM-77 / 277 / 224
VARIOUS

784
1288

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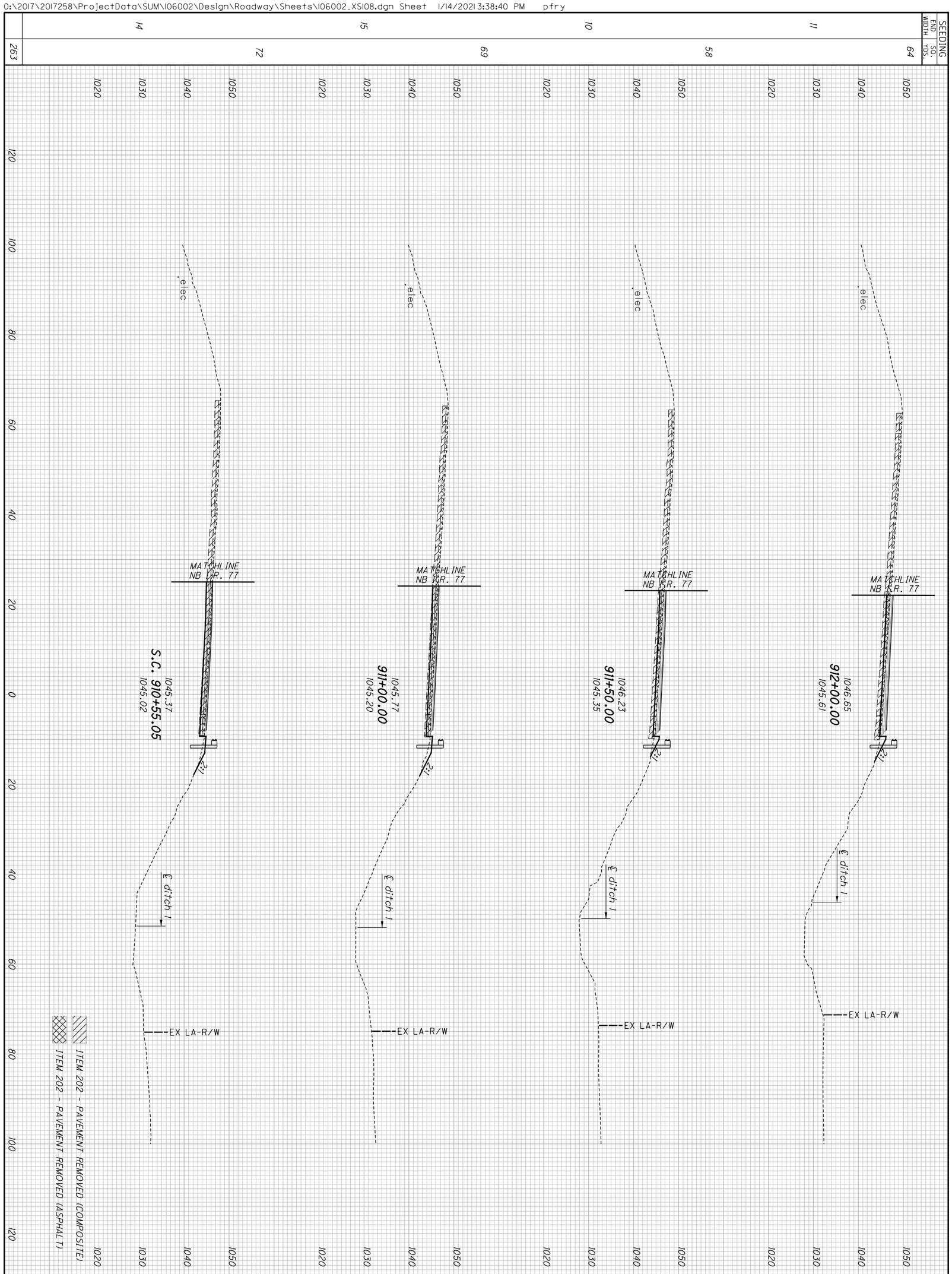
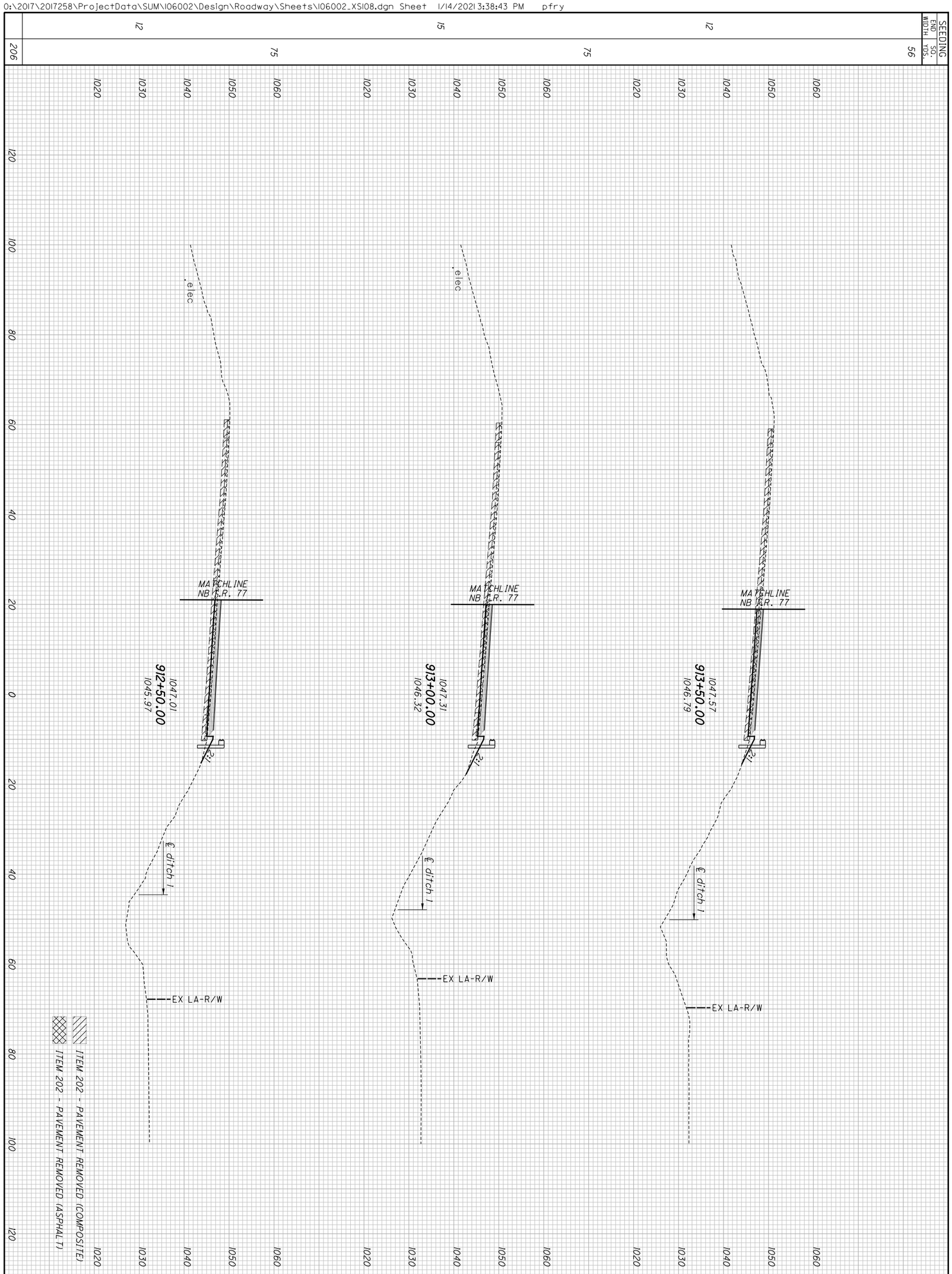
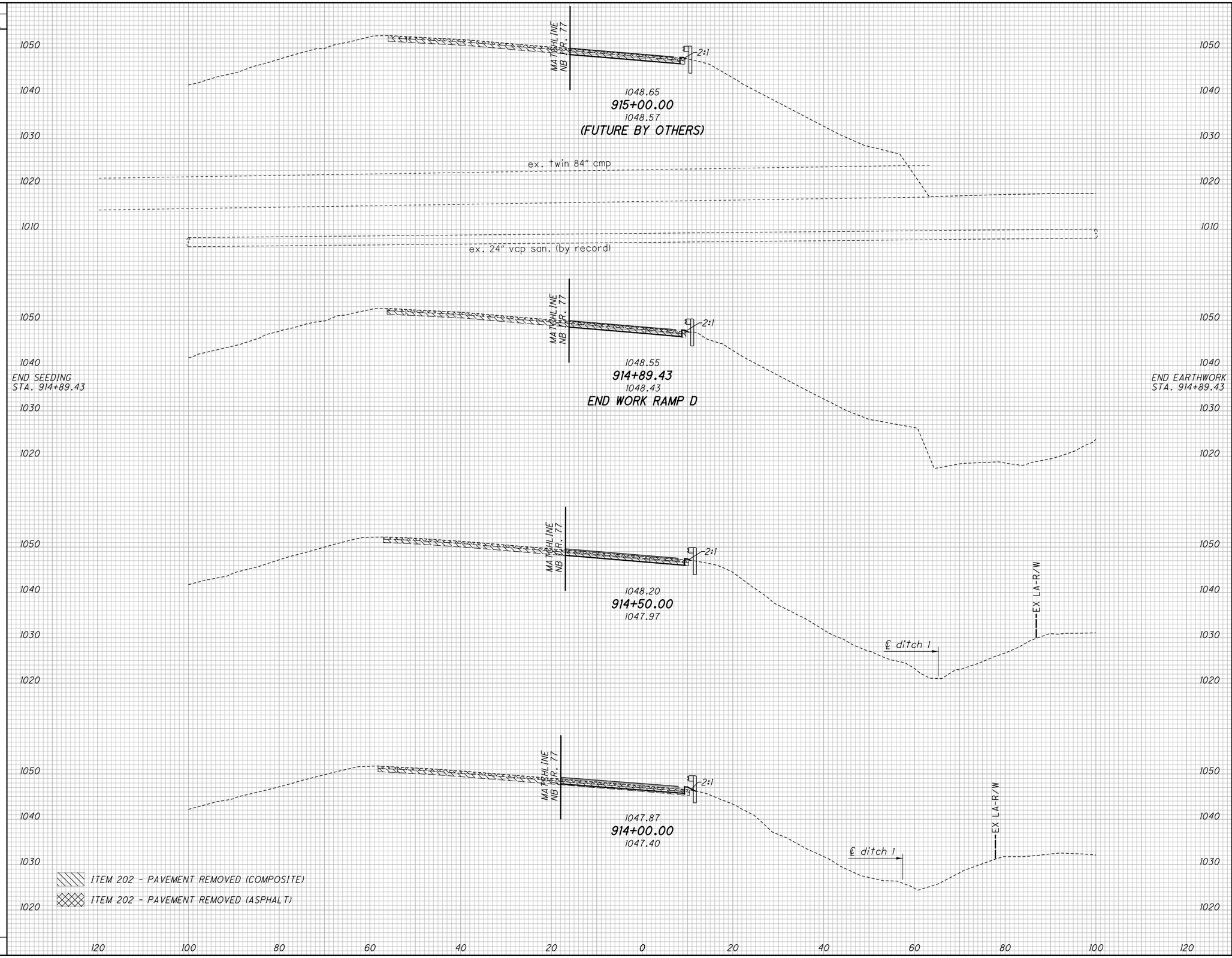


SUM-77/277/224 VARIOUS	CROSS SECTIONS - RAMP D STA. 910+55.05 TO STA. 912+00.00	CALCULATED CJC CHECKED PJF
785 1288		



786 / 1288	**SUM-77 / 277 / 224** **VARIOUS**	**CROSS SECTIONS - RAMP D** **STA. 912+50.00 TO STA. 913+50.00**
		CALCULATED CJC CHECKED PJF

SEEDING	
END WIDTH	SQ. YDS.
7	
	31
7	
	42
8	
	73



END AREA	
CUT	FILL
1	2
0	3
0	10

VOLUME	
CUT	FILL
1	4
0	12
1	16

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - RAMP D
STA. 914+00.00 TO STA. 915+00.00

SUM-77 / 277 / 224
VARIOUS

787
1288

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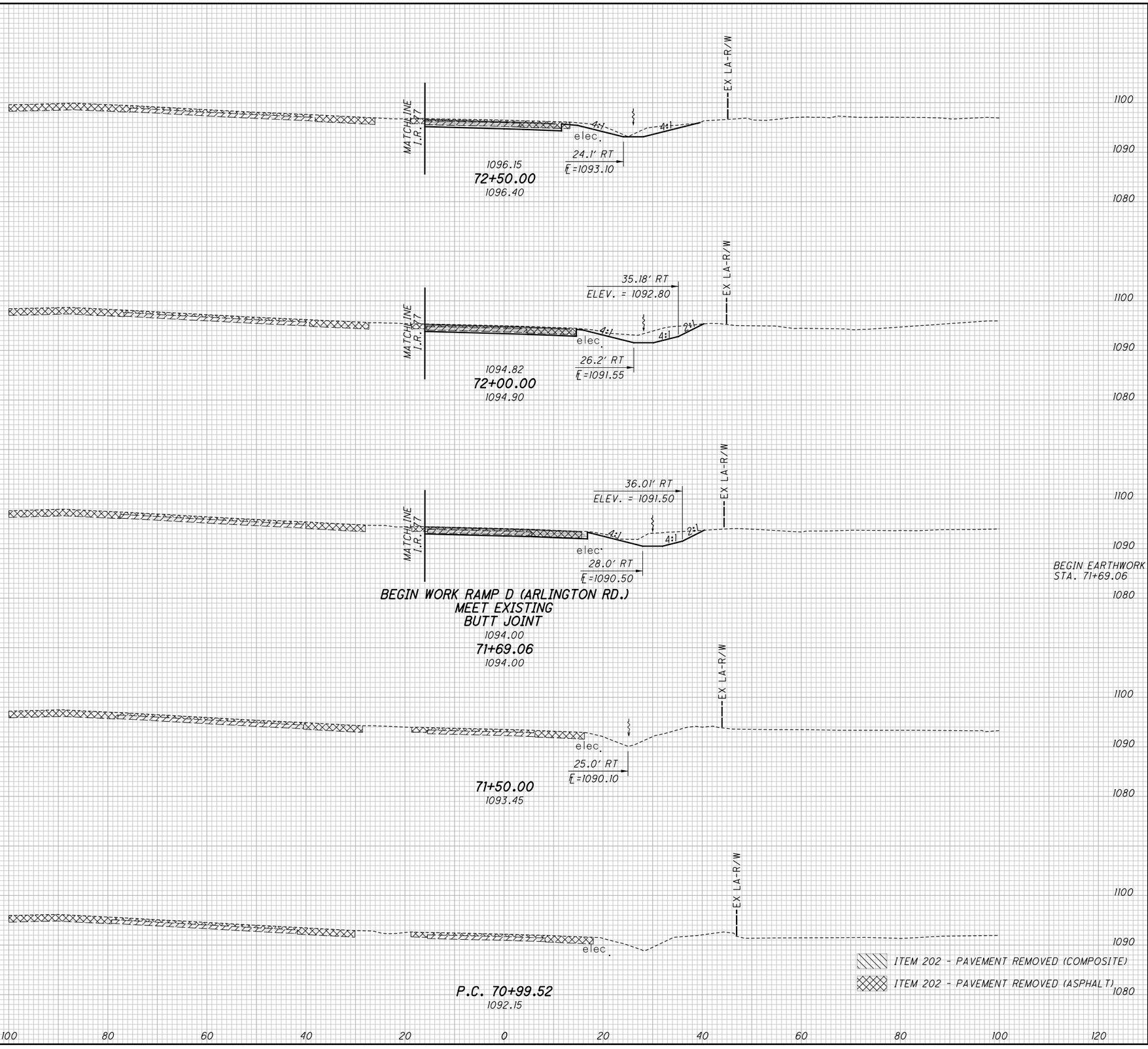
SEEDING END WIDTH	SEEDING SQ. YDS.
	189
34	
	183
32	
	107
30	
	479



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		67	2
33	1		
		69	1
42	0		
		46	0
39	0		
		182	3

CALCULATED CJC
CHECKED PJF

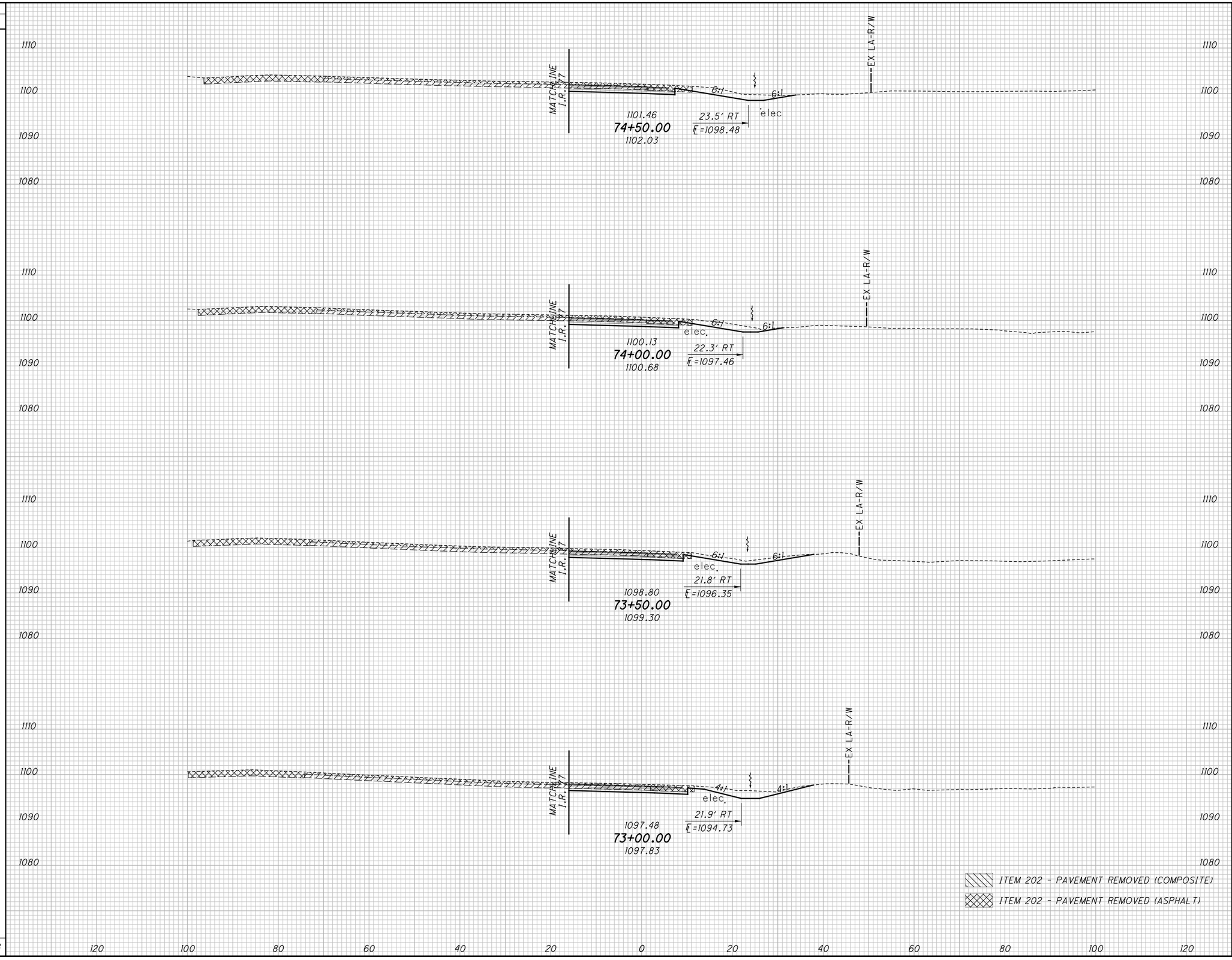
CROSS SECTIONS - ARLINGTON ROAD RAMP D
STA. 70+99.52 TO STA. 72+50.00

SUM-77 / 277 / 224
VARIOUS

788
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS09.dgn Sheet 1/13/2021 6:20:57 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	175			72	4
32		42	2		
	169			73	4
29		37	2		
	175			68	3
34		36	1		
	189			69	2
34		39	1		
	708			282	13



CALCULATED CJC
CHECKED PJF

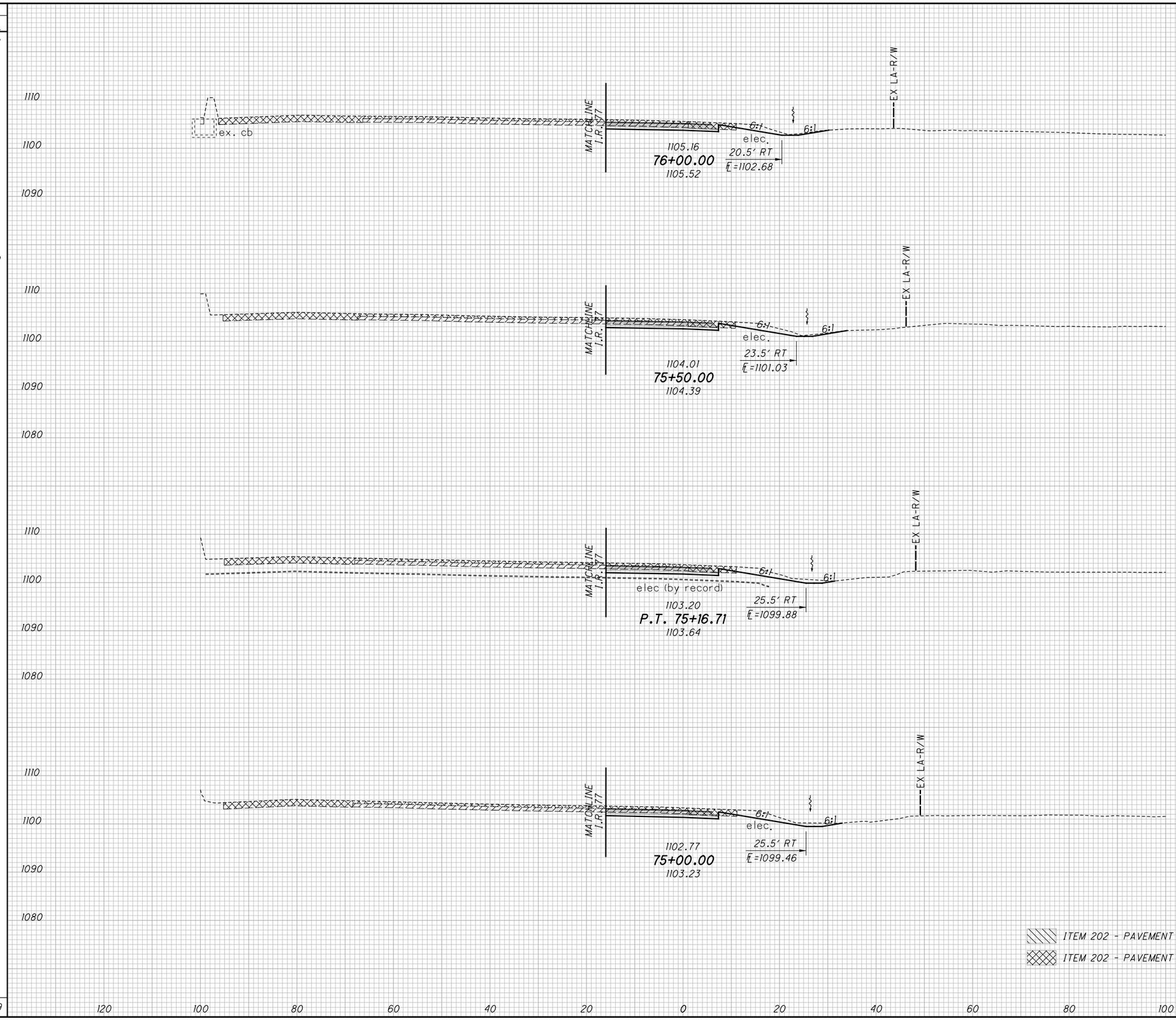
CROSS SECTIONS - ARLINGTON ROAD RAMP D STA. 73+00.00 TO STA. 74+50.00

SUM-77/277/224
VARIOUS

789
1288

G:\2017\20172581\Project Data\SUM\06002\Design\Roadway\Sheets\06002_XS109.dgn Sheet 1/13/2021 6:21:00 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	158
29	
	169
32	
	115
30	
	57
31	
	499



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		45	6
26	3		
		53	5
31	2		
		40	2
34	2		
		22	1
36	2		
		160	14

CALCULATED CJC
CHECKED PJF

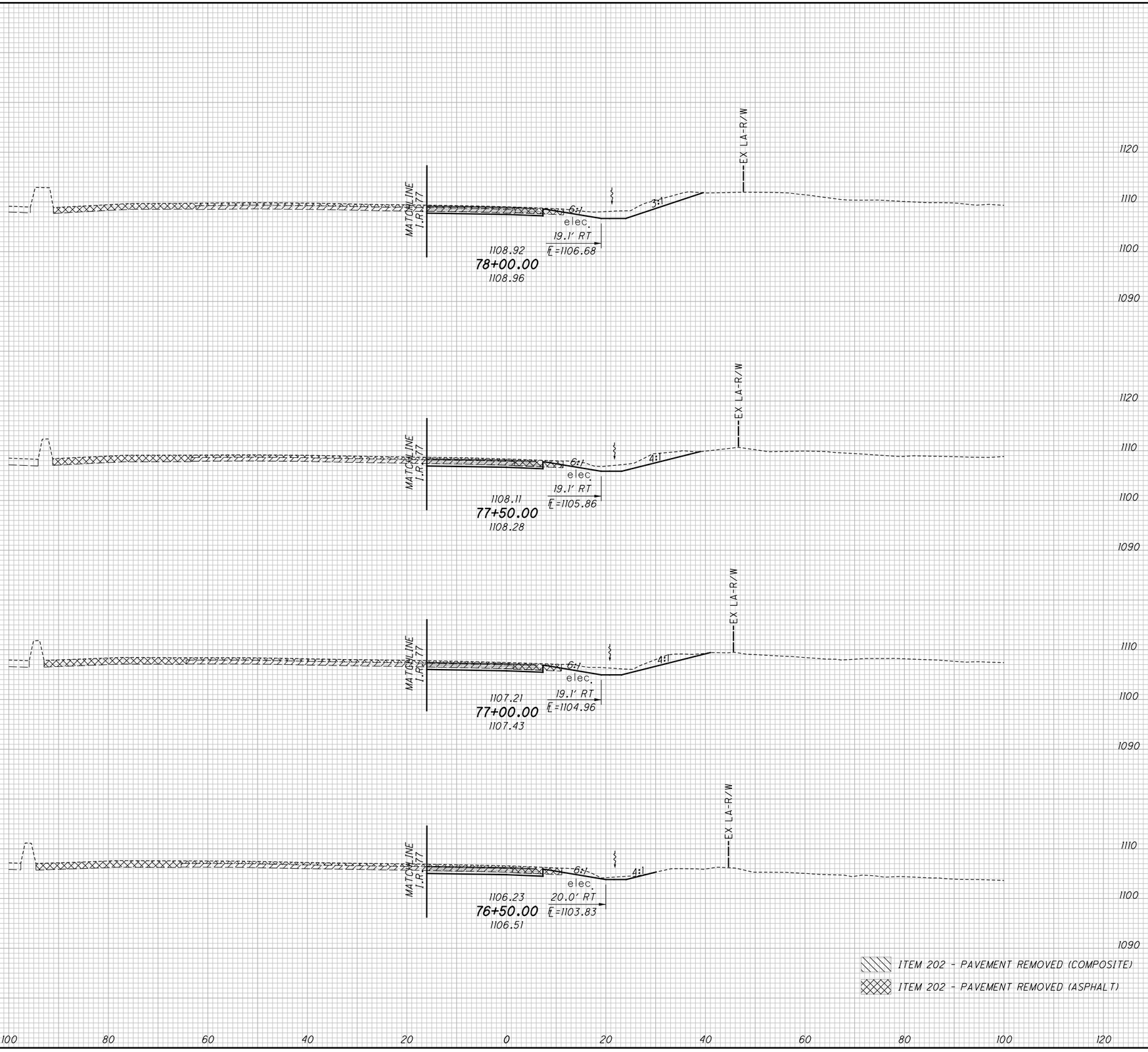
CROSS SECTIONS - ARLINGTON ROAD RAMP D STA. 75+00.00 TO STA. 76+00.00

SUM-77/277/224
VARIOUS

790
1288

D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\106002_XSI09.dgn Sheet 1/13/2021 6:21:02 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	228			69	6
39		42	3		
	214			78	6
38		42	3		
	217			78	6
40		42	3		
	189			60	6
28		23	3		
	848			285	24



CALCULATED CJC
CHECKED PJF

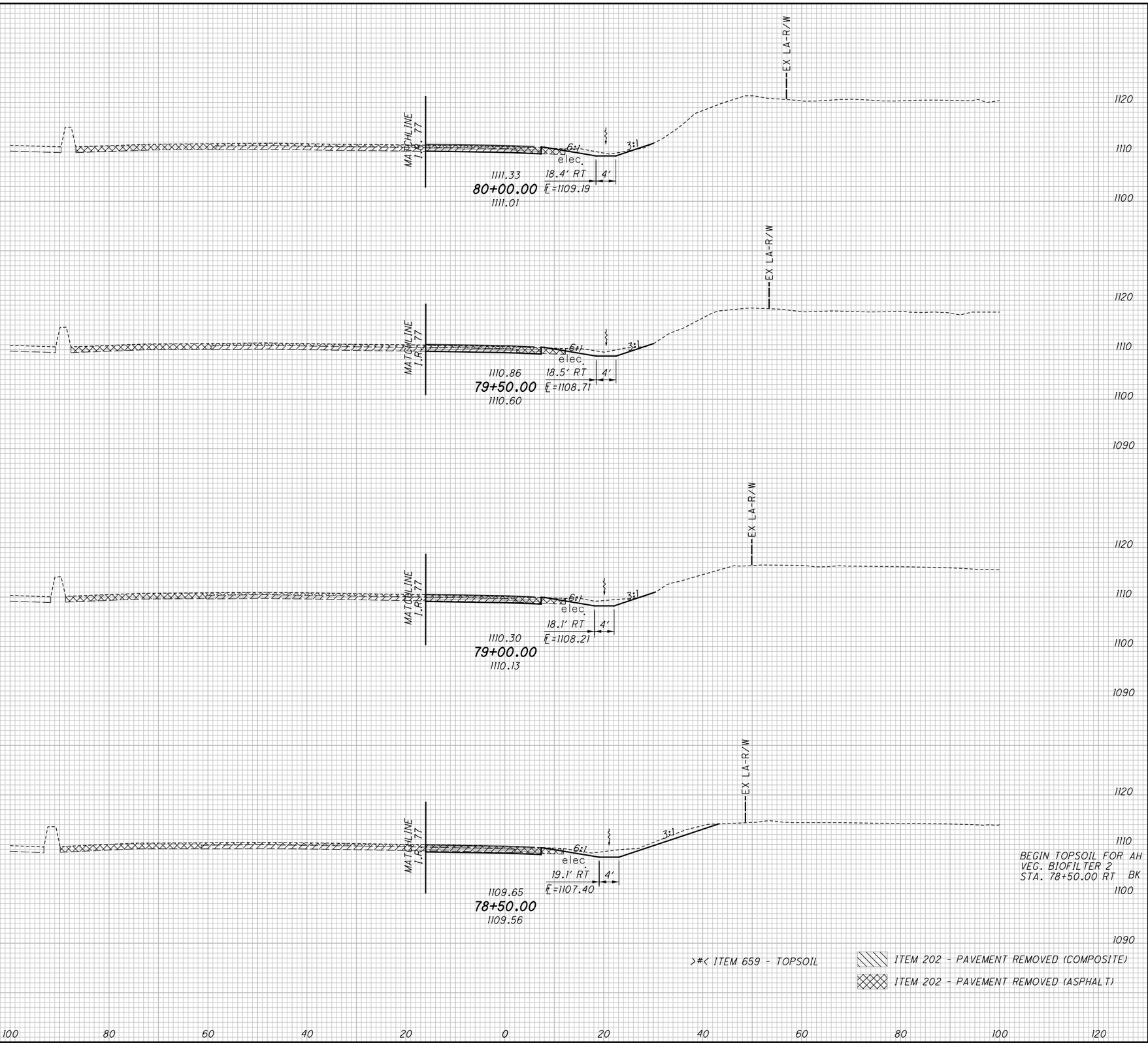
CROSS SECTIONS - ARLINGTON ROAD RAMP D
STA. 76+50.00 TO STA. 78+00.00

SUM-77/277/224
VARIOUS

791
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS109.dgn Sheet 1/13/2021 6:21:04 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	161
29	
	161
29	
	161
29	
	200
43	
	683



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>7<
		24	8
	>4<		
10	5		
			>7<
		25	7
	>4<		
17	3		
			>7<
		31	6
	>4<		
17	3		
			>7<
		45	6
	>4<		
	>0<		
32	3		
			>28<
		125	27

CALCULATED

CHECKED

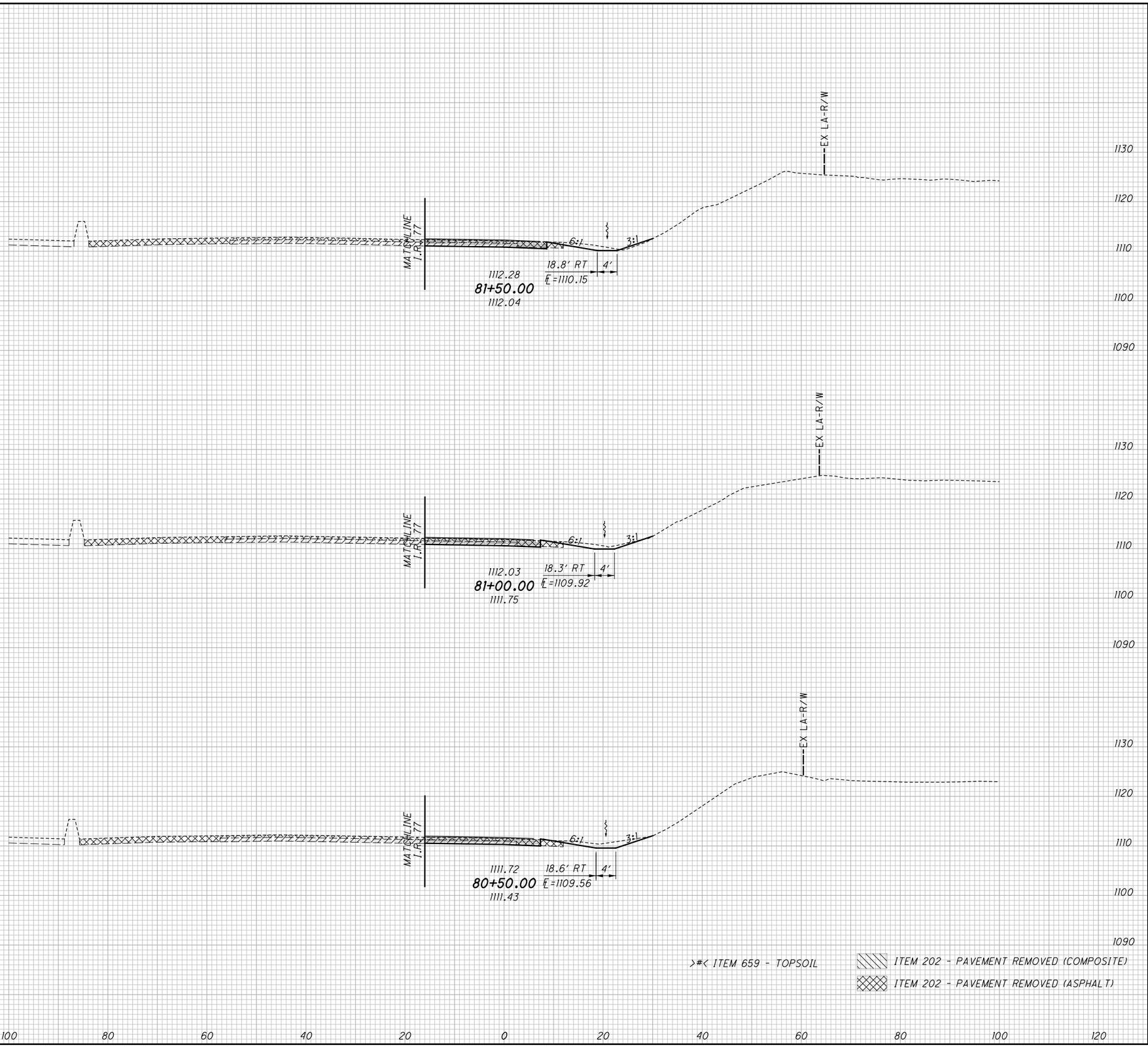
CROSS SECTIONS - ARLINGTON ROAD RAMP D
STA. 78+50.00 TO STA. 80+00.00

SUM-77 / 277 / 224
VARIOUS

792
1288

0:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS109.dgn Sheet 1/13/2021 6:21:07 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	156				>7<
				23	6
27			>4<		
		12	4		
	156				>7<
				22	7
29			>4<		
		12	4		
	161				>7<
				26	7
29			>4<		
		16	4		
	473			71	>21< 20



CALCULATED

CHECKED

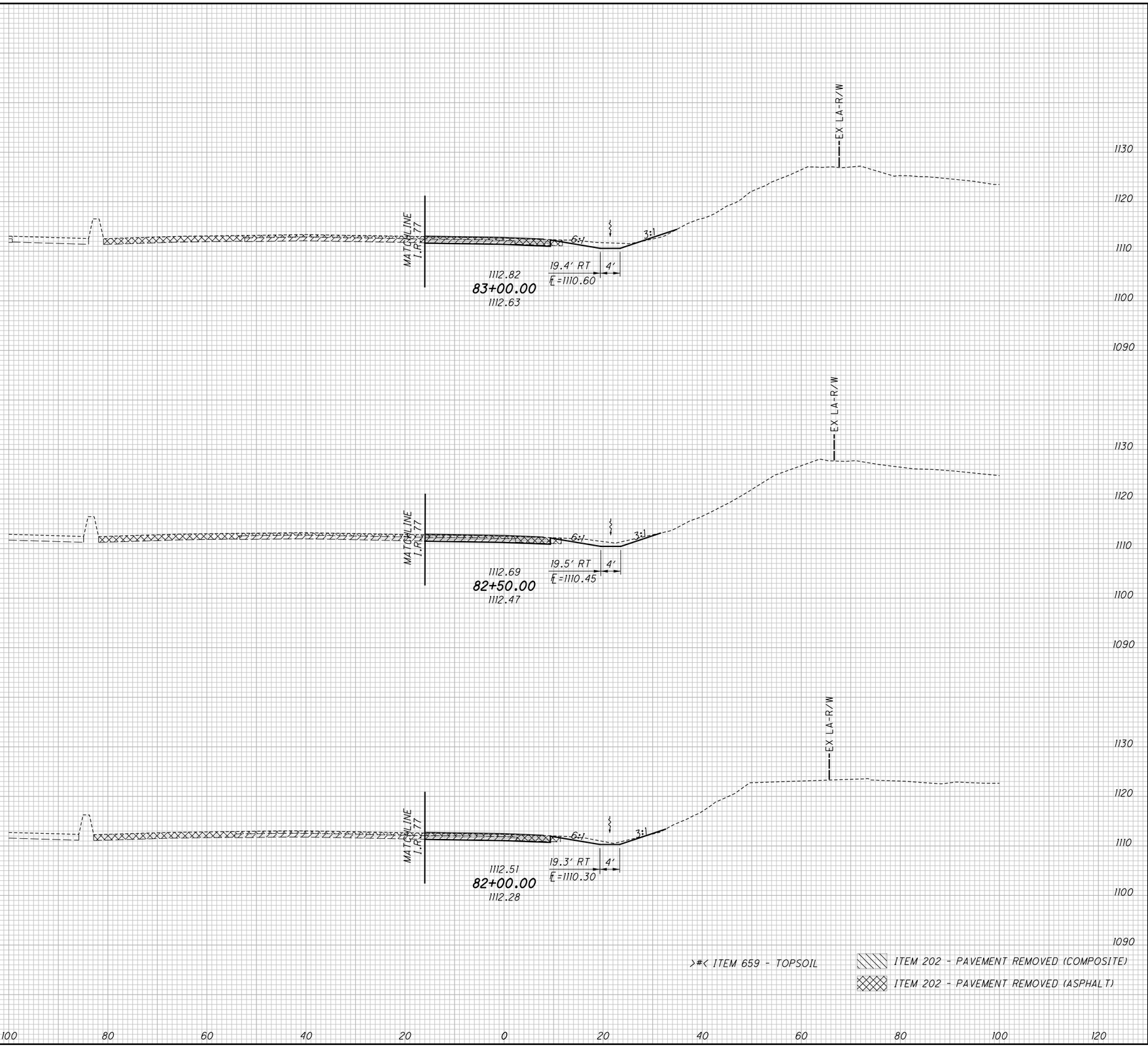
CROSS SECTIONS - ARLINGTON ROAD RAMP D
STA. 80+50.00 TO STA. 81+50.00

SUM-77 / 277 / 224
VARIOUS

793
1288

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS109.dgn Sheet 1/13/2021 6:11:09 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	186			31	>7< 8
32		18	>4< 4		
	167			33	>7< 5
28		18	>4< 1		
	158			29	>7< 3
29		13	>4< 2		
	511			93	>21< 16



>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED

CHECKED

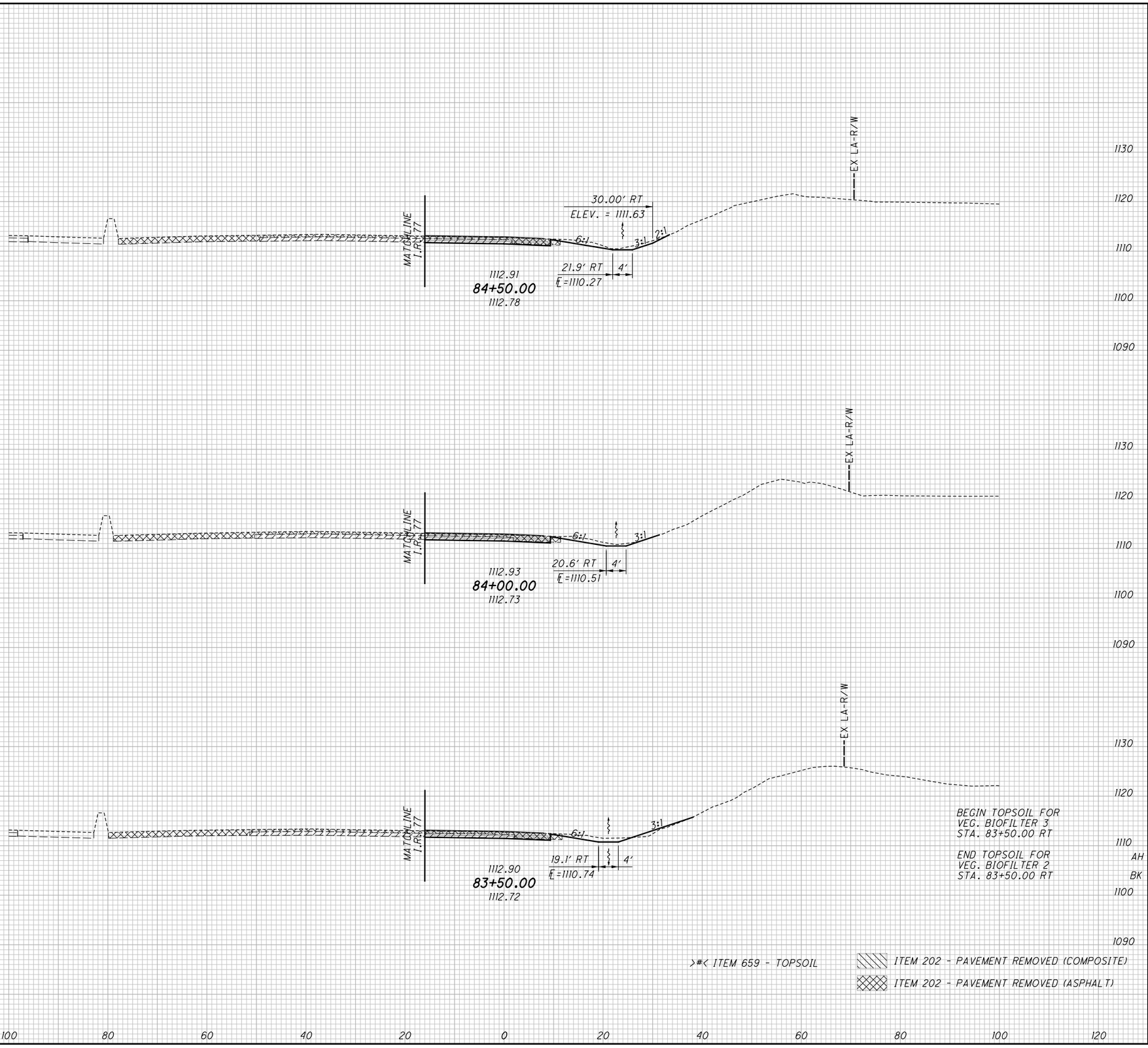
CROSS SECTIONS - ARLINGTON ROAD RAMP D
STA. 82+00.00 TO STA. 83+00.00

SUM-77 / 277 / 224
VARIOUS

794
1288

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS109.dgn Sheet 1/13/2021 6:21:41 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	158
30	
	161
28	
	175
35	
	494



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			>9<
		36	2
	>5<		
18	1		
			>8<
		30	2
	>4<		
14	1		
		27	>7<
			6
AH	>4<		
BK	>4<		
15	5		
			>24<
		93	10

CALCULATED

CHECKED

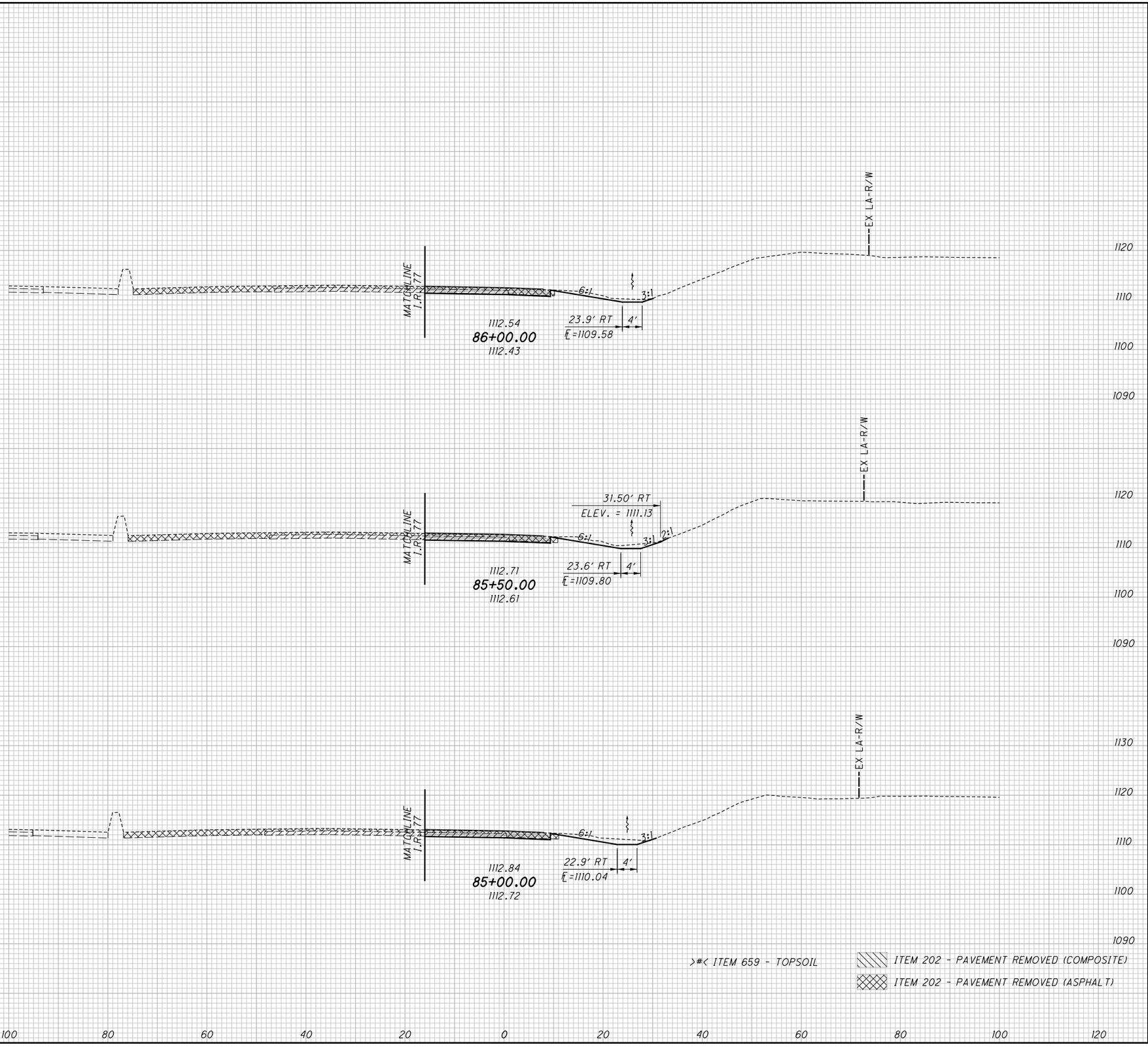
CROSS SECTIONS - ARLINGTON ROAD RAMP D
STA. 83+50.00 TO STA. 84+50.00

SUM-77/277/224
VARIOUS

795
1288

D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\U06002_XS109.dgn Sheet 1/13/2021 6:21:13 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	161			35	>9< 6
26		19	>5< 1		
	156			37	>9< 2
30		21	>5< 1		
	158			39	>9< 2
27		21	>5< 1		
	475			111	>27< 10



>#< ITEM 659 - TOPSOIL

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

CALCULATED

CHECKED

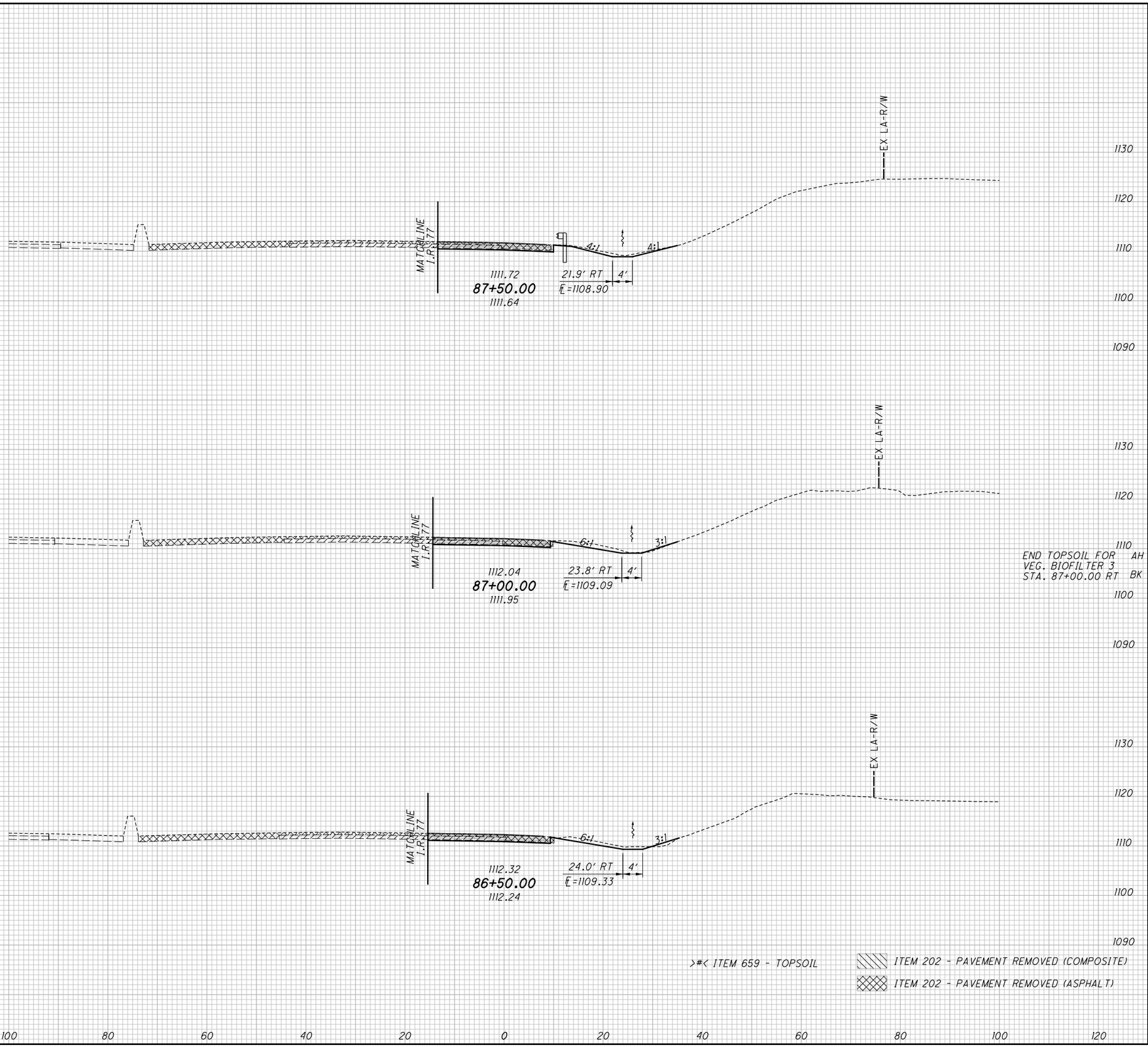
CROSS SECTIONS - ARLINGTON ROAD RAMP D
STA. 85+00.00 TO STA. 86+00.00

SUM-77/277/224
VARIOUS

796
1288

D:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\I06002_XSI09.dgn Sheet1 1/13/2021 6:21:14 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.
	158
31	
	175
	178
32	
	511



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		21	0
13	0		
		31	1
20	>0<		
	>5<		
	1		
		36	>9<
			6
19	>5<		
	5		
		88	>9<
			7

CALCULATED

CHECKED

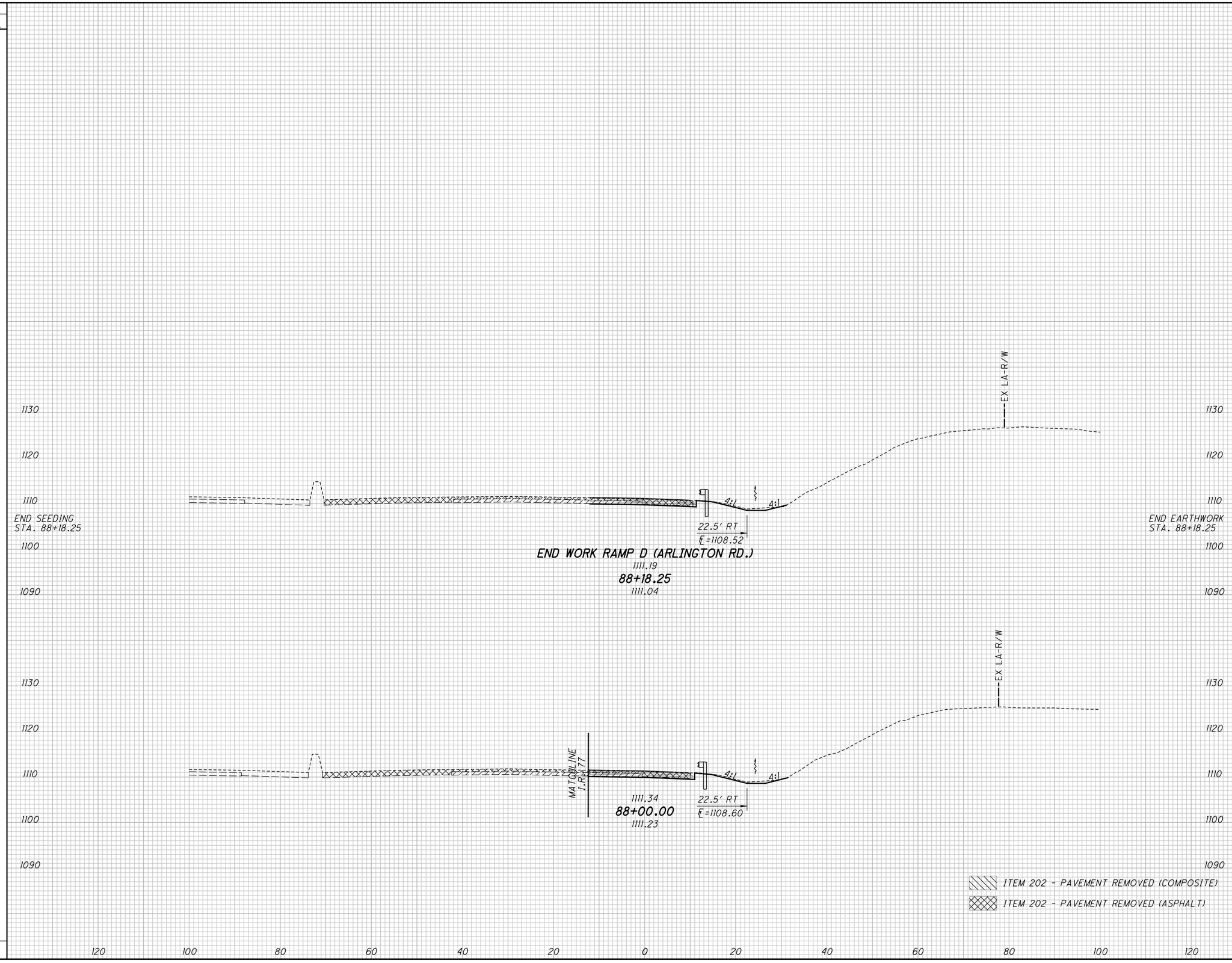
CROSS SECTIONS - ARLINGTON ROAD RAMP D
STA. 86+50.00 TO STA. 87+50.00

SUM-77 / 277 / 224
VARIOUS

797
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS09.dgn Sheet 1/13/2021 6:21:16 PM pfry

SEEDING	
END WIDTH	SQ. YDS.
END SEEDING STA. 88+18.25	26
	53
	26
	53



END AREA		VOLUME	
CUT	FILL	CUT	FILL
8	0		
		6	0
10	0		
		6	0

CALCULATED CJC
CHECKED PJF

CROSS SECTIONS - ARLINGTON ROAD RAMP D STA. 88+00.00 TO STA. 88+18.25

SUM-77 / 277 / 224
VARIOUS

798
1288

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS109.dgn Sheet 1/13/2021 6:21:18 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	103			60	1
24		29	1		
	175			45	17
39		20	17		
	108			19	16
0		0	0		
	386			124	34

SJ-1
STA. 24+75.22, 6.19 LT
SAN. MH ADJUSTED TO GRADE, AS PROP. RIM ELEV 1005.09
EX. SAN MH, GRATE ELEV 1005.12
EX. 24" RCP W 991.41
EX. 24" RCP E 991.41

EX-1
STA. 24+64.02, 22.75' RT
EX. CB, GRATE ELEV 1003.59
EX. 12" CMP W 1000.59
EX. 12" CMP N 1000.44
6" UD (W) 1001.59

BEGIN FULL DEPTH PAVEMENT
MEET EXISTING
BUTT JOINT

BEGIN SEEDING
STA. 24+00.00

BEGIN EARTHWORK
STA. 24+00.00

EXISTING PAVEMENT REMOVED (COMPOSITE)
EXISTING PAVEMENT REMOVED (ASPHALT)

CALCULATED TMT
CHECKED PJF

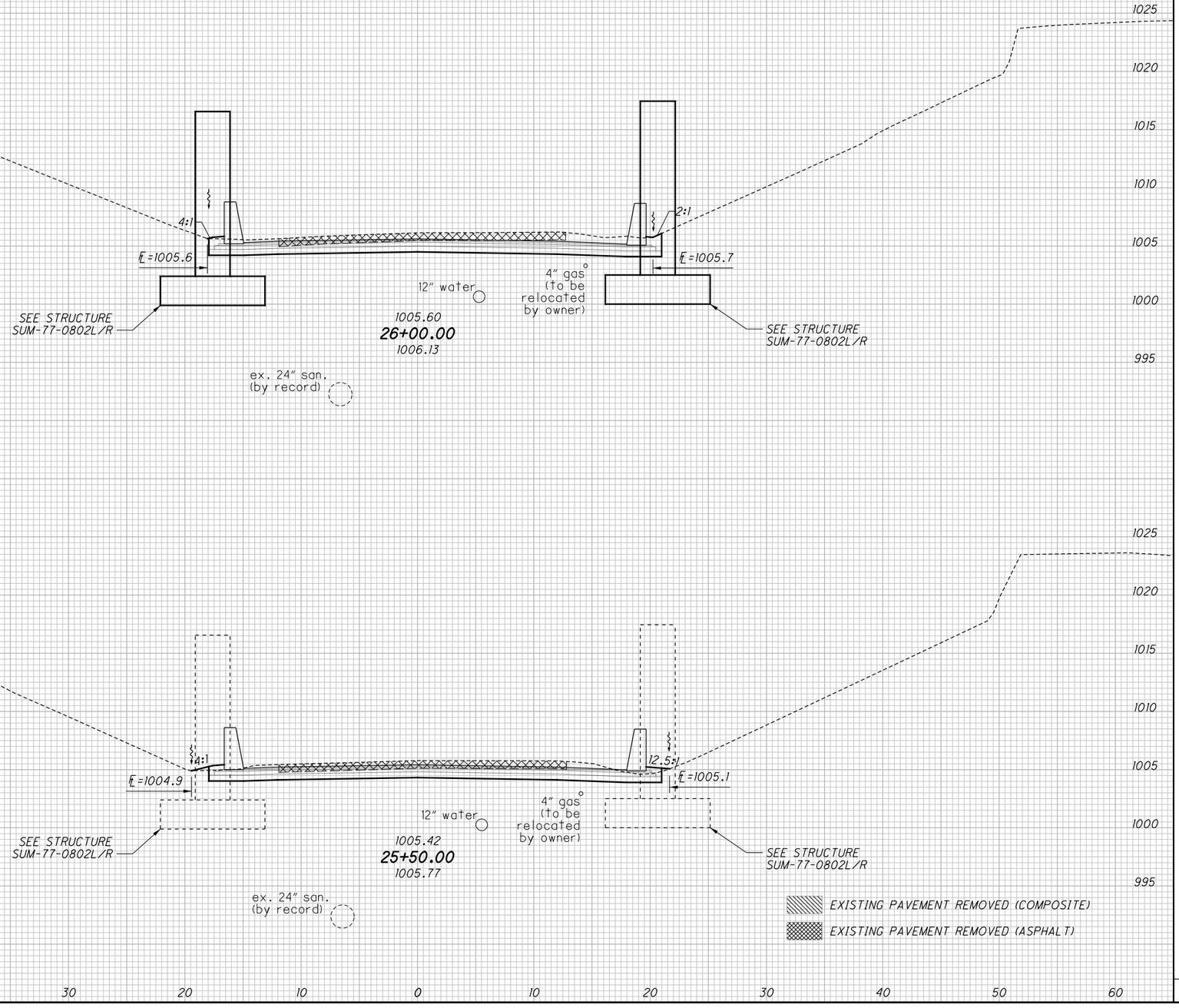
CROSS SECTIONS - WARNER ROAD
STA. 24+00.00 TO STA. 25+00.00

SUM-77/277/224
VARIOUS

799
1288

0:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS10.dgn Design 1/13/2021 2:49 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	9			13	0
11		46	0		
	67			76	0
13		36	0		
	76			89	0



CALCULATED TMT
CHECKED PJF

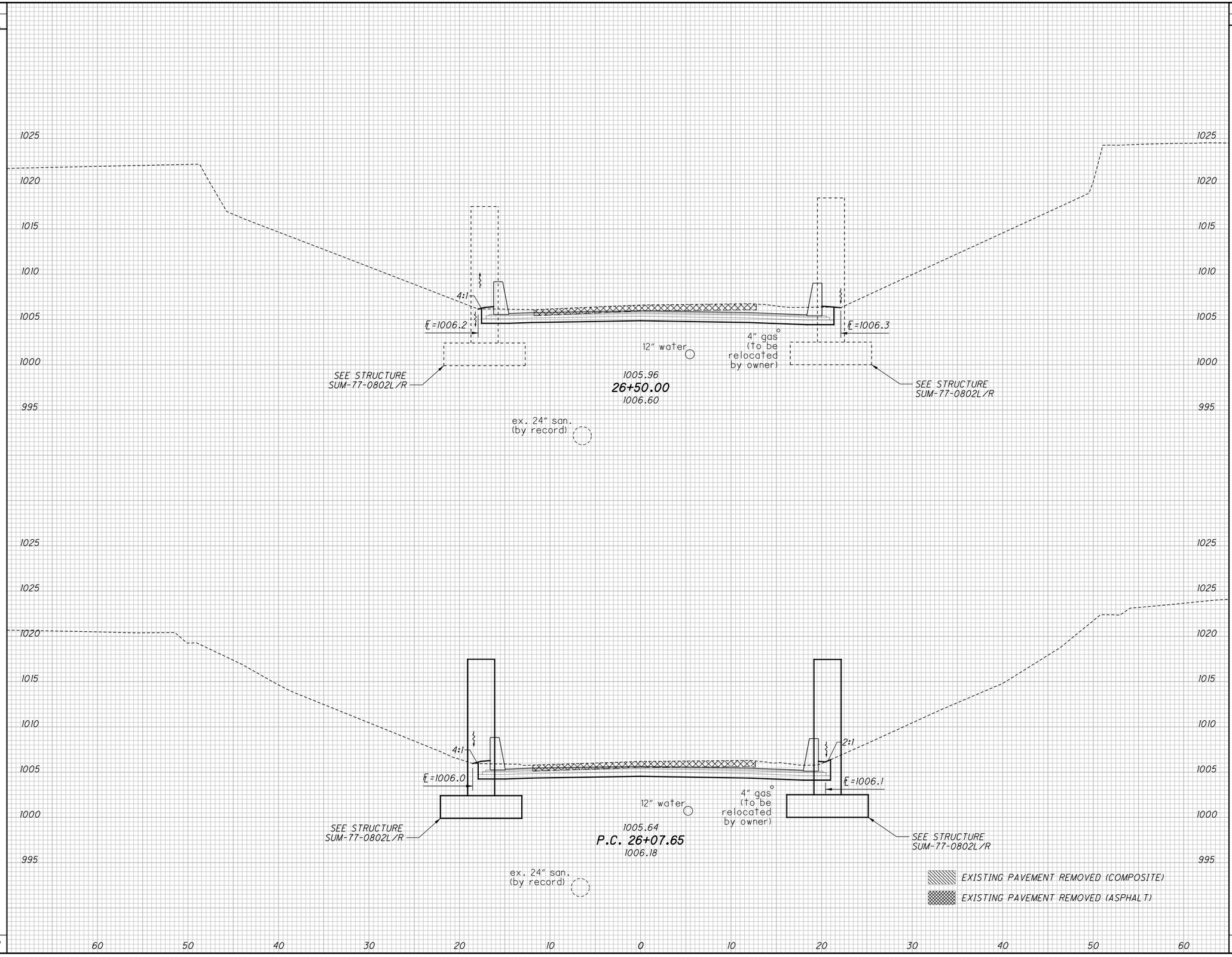
CROSS SECTIONS - WARNER ROAD
STA. 25+50.00 TO STA. 26+00.00

SUM-77/277/224
VARIOUS

800
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\106002_XS110.dgn Design 1/13/2021 6:22:02 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	75			83	1
12		52	0		
	54			79	0
11		49	0		
	129			162	1



CALCULATED TMT
CHECKED PJF

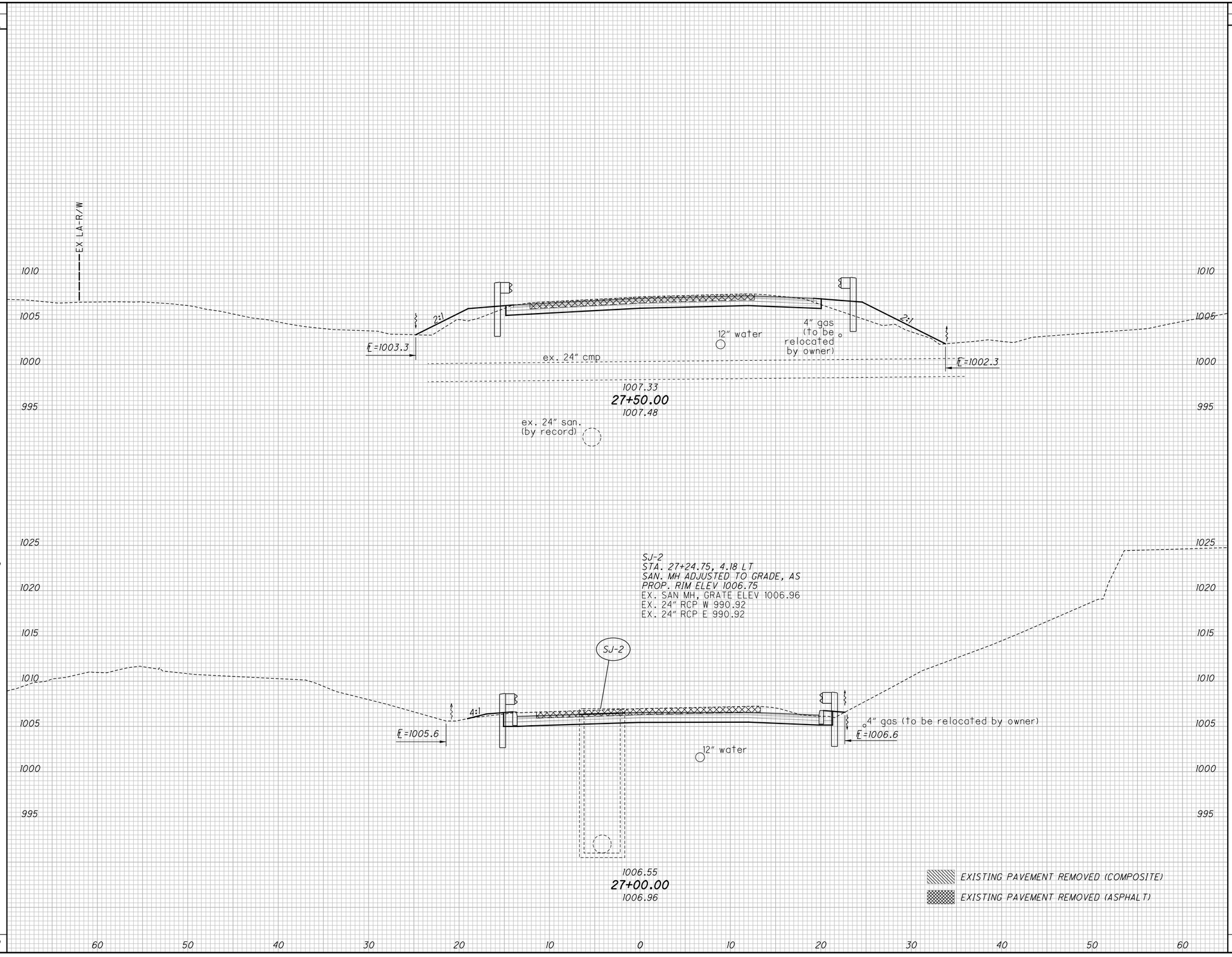
CROSS SECTIONS - WARNER ROAD
STA. 26+07.65 TO STA. 26+50.00

SUM-77/277/224
VARIOUS

801
1288

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002_XS110.dgn Design 1/13/2021 6:22:03 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	80			17	17
	35	26	21		
	139			59	20
	15	38	1		
	219			76	37



CALCULATED TMT
CHECKED PJF

CROSS SECTIONS - WARNER ROAD
STA. 27+00.00 TO STA. 27+50.00

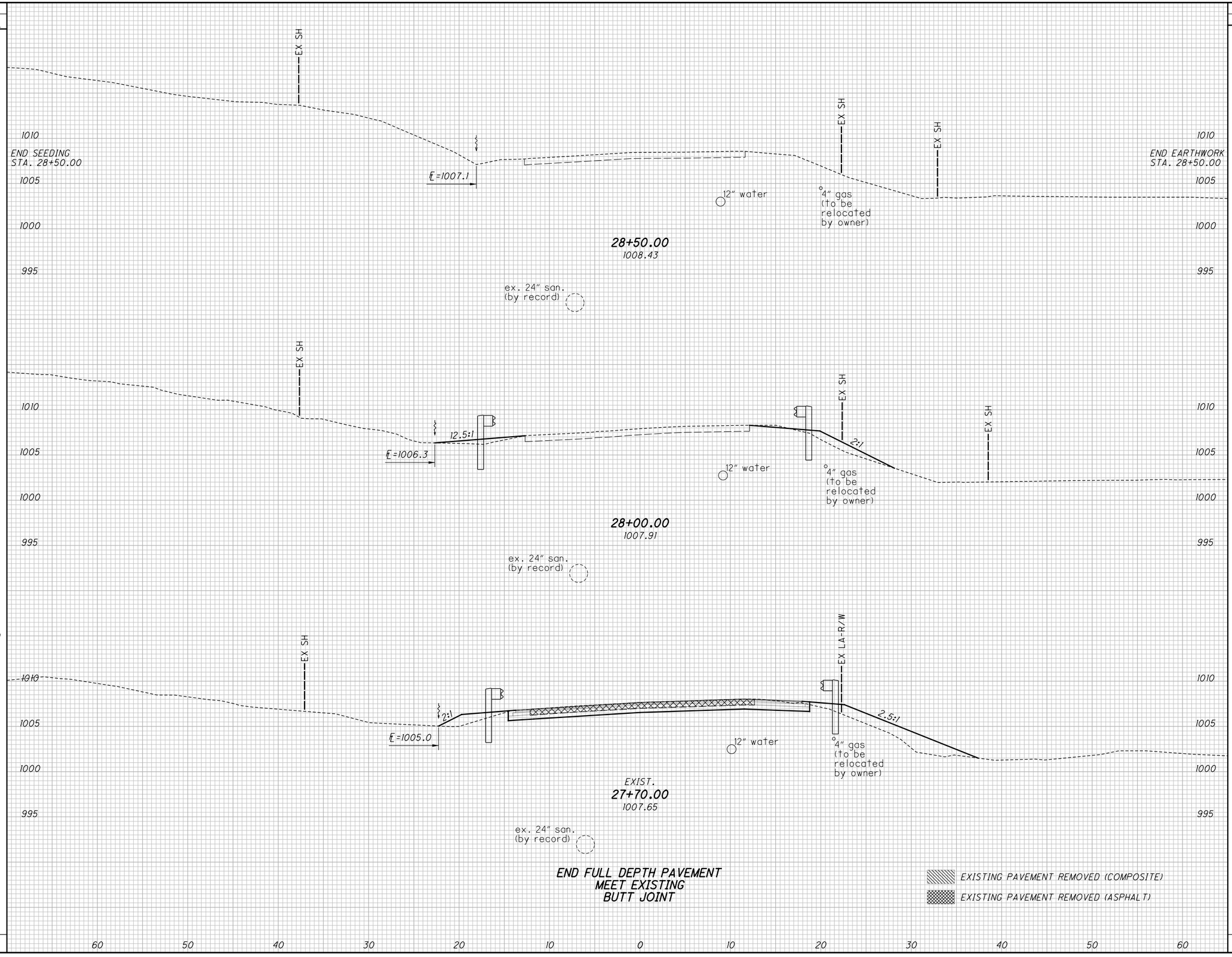
SUM-77 / 277 / 224
VARIOUS

802
1288

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS110.dgn Design 1/13/2021 6:22:04 PM pfry

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0		0	0		
	97			1	8
35		1	9		
	120			12	19
37		20	25		
	217			13	27

CALCULATED TMT
CHECKED PJF



CROSS SECTIONS - WARNER ROAD
STA. 27+70.00 TO STA. 28+50.00

SUM-77 / 277 / 224
VARIOUS

803
1288

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_XS110.dgn Design 1/13/2021 6:22:06 PM pfry

CURVE 1 SUPERELEVATION TABLE

P.I. STA. 360+81.72 Dc = 1° 28′ 08″

MEDIAN - CENTERLINE R/W & CONST. I.R. 77	BASELINE CONTROL		N.B. INSIDE LANES					N.B. OUTSIDE LANES					REMARKS
	STATION	*PROFILE GRADE - VARIES	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	LANE ELEVATION	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
	371+50.00	1097.55	24.00	-0.0535	-1.28	499	1096.27	24.68	-0.0535	-1.32	250	1094.95	EXIST.
	371+68.00	1098.00	24.00	-0.0520	-1.25		1096.75	24.65	-0.0520	-1.28		1095.47	PROP. F.S.
	371+75.00	1098.17	24.00	-0.0520	-1.25		1096.92	24.63	-0.0520	-1.28		1095.64	
	372+00.00	1098.78	24.00	-0.0520	-1.25		1097.53	24.58	-0.0520	-1.28		1096.25	
	372+25.00	1099.38	24.00	-0.0520	-1.25		1098.13	24.53	-0.0520	-1.28		1096.86	
	372+50.00	1099.97	24.00	-0.0520	-1.25		1098.72	24.47	-0.0520	-1.27		1097.45	
	372+70.12	1100.43	24.00	-0.0520	-1.25		1099.18	24.43	-0.0520	-1.27		1097.91	F.S.
	372+75.00	1100.55	24.00	-0.0516	-1.24		1099.31	24.42	-0.0516	-1.26		1098.05	
	373+00.00	1101.11	24.00	-0.0495	-1.19		1099.92	24.37	-0.0495	-1.21		1098.72	
	373+25.00	1101.66	24.00	-0.0474	-1.14		1100.52	24.32	-0.0474	-1.15		1099.37	
	373+50.00	1102.19	24.00	-0.0453	-1.09		1101.10	24.27	-0.0453	-1.10		1100.00	
	373+75.00	1102.72	24.00	-0.0433	-1.04		1101.68	24.21	-0.0433	-1.05		1100.63	
	374+00.00	1103.23	24.00	-0.0412	-0.99		1102.24	24.16	-0.0412	-1.00		1101.25	
	374+25.00	1103.72	24.00	-0.0391	-0.94		1102.78	24.11	-0.0391	-0.94		1101.84	
	374+50.00	1104.21	24.00	-0.0370	-0.89		1103.32	24.06	-0.0370	-0.89		1102.43	
	374+75.00	1104.68	24.00	-0.0349	-0.84		1103.84	24.01	-0.0349	-0.84		1103.00	
	374+77.72	1104.73	24.00	-0.0347	-0.83	500	1103.90	24.00	-0.0347	-0.83	250	1103.06	P.T.
	375+00.00	1105.14	24.00	-0.0328	-0.79		1104.35	24.00	-0.0328	-0.79		1103.57	
	375+25.00	1105.59	24.00	-0.0308	-0.74		1104.85	24.00	-0.0308	-0.74		1104.11	
	375+50.00	1106.02	24.00	-0.0287	-0.69		1105.33	24.00	-0.0287	-0.69		1104.64	
	375+75.00	1106.45	24.00	-0.0266	-0.64		1105.81	24.00	-0.0266	-0.64		1105.17	
	376+00.00	1106.86	24.00	-0.0245	-0.59		1106.27	24.00	-0.0245	-0.59		1105.68	
	376+25.00	1107.25	24.00	-0.0224	-0.54		1106.71	24.00	-0.0224	-0.54		1106.17	
	376+50.00	1107.64	24.00	-0.0203	-0.49		1107.15	24.00	-0.0203	-0.49		1106.67	
	376+75.00	1108.01	24.00	-0.0183	-0.44		1107.57	24.00	-0.0183	-0.44		1107.13	
	377+00.00	1108.37	24.00	-0.0162	-0.39		1107.98	24.00	-0.0162	-0.39		1107.59	
	377+02.12	1108.40	24.00	-0.0160	-0.38		1108.02	24.00	-0.0160	-0.38		1107.63	R.C.
	377+25.00	1108.71	24.00	-0.0122	-0.29		1108.42	24.00	-0.0160	-0.38		1108.03	
	377+50.00	1109.05	24.00	-0.0080	-0.19		1108.86	24.00	-0.0160	-0.38		1108.47	
	377+75.00	1109.37	24.00	-0.0039	-0.09		1109.28	24.00	-0.0160	-0.38		1108.89	
	377+98.12	1109.65	24.00	0.0000	0.00		1109.65	24.00	-0.0160	-0.38		1109.27	H.F.
	378+00.00	1109.67	24.00	0.0003	0.01	250	1109.68	24.00	-0.0160	-0.38		1109.29	
	378+25.00	1109.97	24.00	0.0045	0.11		1110.08	24.00	-0.0160	-0.38		1109.69	
	378+50.00	1110.25	24.00	0.0086	0.21		1110.46	24.00	-0.0160	-0.38		1110.07	
	378+75.00	1110.52	24.00	0.0128	0.31		1110.83	24.00	-0.0160	-0.38		1110.44	
	378+94.12	1110.72	24.00	0.0160	0.38		1111.10	24.00	-0.0160	-0.38		1110.72	N.C.

*NOTE: PROFILE GRADE VARIES FROM 23.31′ RT. AT STA. 371+50.00 TO 12′ RT. AT STA. 380+50.00

CALCULATED LRK
CHECKED PJF

SUPERELEVATION TABLE
C/L I.R. 77

SUM-77/277/244
VARIOUS

804
1288

O:\2017\2017258\ProjectData\SUM\106002\Design\Roadway\Sheets\106002_GE001.dgn Sheet 1/11/2021 1:10:42 PM pfry

CURVE 3 SUPERELEVATION TABLE

P.I. STA. 438+34.18 Dc = 0° 24′ 10″

CALCULATED LRK CHECKED PJF

			MEDIAN - CENTERLINE R/W & CONST. I.R. 77	N.B. INSIDE SHOULDERS					BASELINE CONTROL		N.B. INSIDE LANES					N.B. OUTSIDE LANES					N.B. OUTSIDE SHOULDERS					REMARKS
				EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	LANE ELEVATION	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
				1025.93		-0.40	-0.0400	10.00	424+46.00	1026.33	24.00	0.0160	0.38		1026.71	24.00	-0.0160	-0.38		1026.33	14.20	-0.0400	-0.57		1025.76	
				1025.82		-0.40	-0.0400	10.00	424+50.00	1026.22	24.00	0.0160	0.38		1026.60	24.00	-0.0160	-0.38		1026.22	15.00	-0.0384	-0.58		1025.64	
				1025.54		-0.40	-0.0400	10.00	424+61.65	1025.94	24.00	0.0160	0.38		1026.32	24.00	-0.0160	-0.38		1025.94	17.33	-0.0337	-0.58		1025.36	
				1025.44		-0.40	-0.0400	10.00	424+66.00	1025.84	24.00	0.0160	0.38		1026.22	24.00	-0.0160	-0.38		1025.84	17.33	-0.0320	-0.55	250	1025.29	
				1025.26		-0.36	-0.0364	10.00	424+75.00	1025.62	24.00	0.0160	0.38		1026.00	24.00	-0.0160	-0.38		1025.62	17.33	-0.0284	-0.49		1025.13	
				1024.75		-0.26	-0.0264	10.00	425+00.00	1025.01	24.00	0.0160	0.38		1025.39	24.00	-0.0160	-0.38		1025.01	17.33	-0.0184	-0.32		1024.69	
				1024.63	250	-0.24	-0.0240	10.00	425+06.00	1024.87	24.00	0.0160	0.38		1025.25	24.00	-0.0160	-0.38		1024.87	17.33	-0.0160	-0.28		1024.59	
				1024.25		-0.16	-0.0164	10.00	425+25.00	1024.41	24.00	0.0160	0.38		1024.79	24.00	-0.0160	-0.38		1024.41	17.33	-0.0160	-0.28		1024.13	
				1024.22		-0.16	-0.0160	10.00	425+26.00	1024.38	24.00	0.0160	0.38		1024.76	24.00	-0.0160	-0.38		1024.38	17.33	-0.0160	-0.28		1024.10	
				1023.64		-0.16	-0.0160	10.00	425+50.00	1023.80	24.00	0.0160	0.38		1024.18	24.00	-0.0160	-0.38		1023.80	17.33	-0.0160	-0.28		1023.52	
				1023.51		-0.16	-0.0160	10.00	425+55.16	1023.67	24.00	0.0160	0.38		1024.05	24.00	-0.0160	-0.38		1023.67	17.33	-0.0160	-0.28		1023.39	END APPROACH SLAB
				BRIDGE SUM-77-0802R																						
				1021.16		-0.16	-0.0160	10.00	426+60.73	1021.32	24.00	0.0160	0.38		1021.70	24.00	-0.0160	-0.38		1021.32	17.33	-0.0160	-0.28		1021.04	BEGIN APPROACH SLAB
				1021.08		-0.16	-0.0160	10.00	426+65.00	1021.24	24.00	0.0160	0.38		1021.62	24.00	-0.0160	-0.38		1021.24	17.33	-0.0160	-0.28		1020.96	
				1021.01		-0.16	-0.0160	10.00	426+68.00	1021.17	24.00	0.0160	0.38		1021.55	24.00	-0.0160	-0.38		1021.17	17.45	-0.0160	-0.28		1020.89	
				1020.99		-0.16	-0.0160	10.00	426+69.25	1021.15	24.00	0.0160	0.38		1021.53	24.00	-0.0160	-0.38		1021.15	17.50	-0.0165	-0.29		1020.86	
				1020.87		-0.16	-0.0160	10.00	426+75.00	1021.03	24.00	0.0160	0.38		1021.41	24.00	-0.0160	-0.38		1021.03	17.50	-0.0188	-0.33		1020.70	
				1020.66		-0.16	-0.0160	10.00	426+86.00	1020.82	24.00	0.0160	0.38		1021.20	24.00	-0.0160	-0.38		1020.82	17.50	-0.0232	-0.41	250	1020.41	
				1020.32		-0.22	-0.0216	10.00	427+00.00	1020.54	24.00	0.0160	0.38		1020.92	24.00	-0.0160	-0.38		1020.54	17.50	-0.0288	-0.50		1020.04	
				1019.76	250	-0.32	-0.0316	10.00	427+25.00	1020.08	24.00	0.0160	0.38		1020.46	24.00	-0.0160	-0.38		1020.08	17.50	-0.0388	-0.68		1019.40	
				1019.69		-0.33	-0.0328	10.00	427+28.00	1020.02	24.00	0.0160	0.38		1020.40	24.00	-0.0160	-0.38		1020.02	17.50	-0.0400	-0.70		1019.32	
				1019.30		-0.40	-0.0400	10.00	427+46.00	1019.70	24.00	0.0160	0.38		1020.08	24.00	-0.0160	-0.38		1019.70	17.50	-0.0400	-0.70		1019.00	
				1019.23		-0.40	-0.0400	10.00	427+50.00	1019.63	24.00	0.0160	0.38		1020.01	24.00	-0.0160	-0.38		1019.63	17.50	-0.0400	-0.70		1018.93	
				1018.81		-0.40	-0.0400	10.00	427+75.00	1019.21	24.00	0.0160	0.38		1019.59	24.00	-0.0160	-0.38		1019.21	17.50	-0.0400	-0.70		1018.51	
				1018.40		-0.40	-0.0400	10.00	428+00.00	1018.80	24.00	0.0160	0.38		1019.18	24.00	-0.0160	-0.38		1018.80	17.50	-0.0400	-0.70		1018.10	
				1018.04		-0.40	-0.0400	10.00	428+24.00	1018.44	24.00	0.0160	0.38		1018.82	24.00	-0.0160	-0.38		1018.44	17.50	-0.0400	-0.70		1017.74	
				1018.02		-0.40	-0.0400	10.00	428+25.00	1018.42	24.00	0.0160	0.38		1018.80	24.00	-0.0160	-0.38		1018.42	17.50	-0.0396	-0.69		1017.73	
				1017.83		-0.40	-0.0400	10.00	428+38.00	1018.23	24.00	0.0160	0.38		1018.61	24.00	-0.0160	-0.38		1018.23	17.50	-0.0344	-0.60		1017.63	
				1017.80		-0.39	-0.0387	10.00	428+41.24	1018.19	24.00	0.0160	0.38		1018.57	24.00	-0.0160	-0.38		1018.19	17.50	-0.0331	-0.58	250	1017.61	P.C.
				1017.71	250	-0.35	-0.0352	10.00	428+50.00	1018.06	24.00	0.0160	0.38		1018.44	24.00	-0.0160	-0.38		1018.06	17.50	-0.0296	-0.52		1017.54	
				1017.47		-0.25	-0.0252	10.00	428+75.00	1017.72	24.00	0.0160	0.38		1018.10	24.00	-0.0160	-0.38		1017.72	17.50	-0.0196	-0.34		1017.38	
				1017.39		-0.22	-0.0216	10.00	428+84.00	1017.61	24.00	0.0160	0.38		1017.99	24.00	-0.0160	-0.38		1017.61	17.50	-0.0160	-0.28		1017.33	
				1017.27		-0.16	-0.0160	10.00	428+98.00	1017.43	24.00	0.0160	0.38		1017.81	24.00	-0.0160	-0.38		1017.43	17.50	-0.0160	-0.28		1017.15	
				1017.25		-0.16	-0.0160	10.00	429+00.00	1017.41	24.00	0.0160	0.38		1017.79	24.00	-0.0160	-0.38		1017.41	17.50	-0.0160	-0.28		1017.13	
				1016.95		-0.16	-0.0160	10.00	429+25.00	1017.11	24.00	0.0160	0.38		1017.49	24.00	-0.0160	-0.38		1017.11	17.50	-0.0160	-0.28		1016.83	
				1016.91		-0.16	-0.0160	10.00	429+28.48	1017.07	24.00	0.0160	0.38		1017.45	24.00	-0.0160	-0.38		1017.07	17.50	-0.0160	-0.28		1016.79	END APPROACH SLAB
				BRIDGE SUM-77-0810R																						
				1015.54		-0.16	-0.0160	10.00	430+89.09	1015.70	24.00	0.0160	0.38		1016.08	24.00	-0.0160	-0.38		1015.70	17.50	-0.0160	-0.28		1015.42	BEGIN APPROACH SLAB
				1015.48		-0.16	-0.0160	10.00	431+00.00	1015.64	24.00	0.0160	0.38		1016.02	24.00	-0.0160	-0.38		1015.64	17.50	-0.0160	-0.28		1015.36	
				1015.46		-0.16	-0.0160	10.00	431+03.00	1015.62	24.00	0.0160	0.38		1016.00	24.00	-0.0160	-0.38		1015.62	17.50	-0.0160	-0.28		1015.34	
				1015.39		-0.16	-0.0160	10.00	431+17.00	1015.55	24.00	0.0160	0.38		1015.93	24.00	-0.0160	-0.38		1015.55	17.50	-0.0216	-0.38		1015.17	
				1015.35		-0.18	-0.0182	10.00	431+22.50	1015.53	24.00	0.0160	0.38		1015.91	24.00	-0.0160	-0.38		1015.53	17.50	-0.0238	-0.42		1015.11	
				1015.32		-0.19	-0.0192	10.00	431+25.00	1015.51	24.00	0.0160	0.38		1015.89	24.00	-0.0160	-0.38		1015.51	17.40	-0.0248	-0.43	250	1015.08	
				1015.12	250	-0.29	-0.0292	10.00	431+50.00	1015.41	24.00	0.0160	0.38		1015.79	24.00	-0.0160	-0.38		1015.41	16.40	-0.0348	-0.57		1014.84	
				1015.03		-0.34	-0.0344	10.00	431+63.00	1015.37	24.00	0.0160	0.38		1015.75	24.00	-0.0160	-0.38		1015.37	15.88	-0.0400	-0.64		1014.73	
				1014.94		-0.39	-0.0392	10.00	431+75.00	1015.33	24.00	0.0160	0.38		1015.71	24.00	-0.0160	-0.38		1015.33	15.40	-0.0400	-0.62		1014.71	
				1014.92		-0.40	-0.0400	10.00	431+77.00	1015.32	24.00	0.0160	0.38		1015.70	24.00	-0.0160	-0.38		1015.32	15.32	-0.0400	-0.61		1014.71	

*NOTE: EXTEND CROSS SLOPE TO THE FACE OF THE BARRIER

SUPERELEVATION TABLE
C/L I.R. 77

SUM-77/277/244
VARIOUS

805
1288

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CURVE 3 SUPERELEVATION TABLE

P.I. STA. 438+34.18 Dc = 0° 24' 10"

REMARKS	S.B. OUTSIDE SHOULDERS					S.B. OUTSIDE LANES					S.B. INSIDE LANES					BASELINE CONTROL		S.B. INSIDE SHOULDERS					MEDIAN - CENTERLINE R/W & CONST. I.R. 77			
	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	PROFILE GRADE	STATION	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION				
	1025.24		-0.58	-0.0400	14.60	1025.82		-0.38	-0.0160	24.00	1026.20		0.38	0.0160	24.00	1025.82	424+70.00	10.00	-0.0400	-0.40		1025.42				
	1025.11		-0.59	-0.0400	14.80	1025.70		-0.38	-0.0160	24.00	1026.08		0.38	0.0160	24.00	1025.70	424+75.00	10.00	-0.0380	-0.38		1025.32				
	1024.77		-0.61	-0.0400	15.32	1025.38		-0.38	-0.0160	24.00	1025.76		0.38	0.0160	24.00	1025.38	424+88.00	10.00	-0.0328	-0.33	250	1025.05				
	1024.53		-0.56	-0.0352	15.80	1025.09		-0.38	-0.0160	24.00	1025.47		0.38	0.0160	24.00	1025.09	425+00.00	10.00	-0.0280	-0.28		1024.81				
	1024.06	250	-0.42	-0.0252	16.80	1024.48		-0.38	-0.0160	24.00	1024.86		0.38	0.0160	24.00	1024.48	425+25.00	10.00	-0.0180	-0.18		1024.30				
	1023.97		-0.39	-0.0232	17.00	1024.36		-0.38	-0.0160	24.00	1024.74		0.38	0.0160	24.00	1024.36	425+30.00	10.00	-0.0160	-0.16		1024.20				
	1023.64		-0.28	-0.0160	17.72	1023.92		-0.38	-0.0160	24.00	1024.30		0.38	0.0160	24.00	1023.92	425+48.00	10.00	-0.0160	-0.16		1023.76				
	1023.60		-0.28	-0.0160	17.78	1023.88		-0.38	-0.0160	24.00	1024.26		0.38	0.0160	24.00	1023.88	425+49.49	10.00	-0.0160	-0.16		1023.72				
	1023.59		-0.28	-0.0160	17.78	1023.87		-0.38	-0.0160	24.00	1024.25		0.38	0.0160	24.00	1023.87	425+50.00	10.00	-0.0160	-0.16		1023.71				
END APPROACH SLAB	1023.46		-0.28	-0.0160	17.78	1023.74		-0.38	-0.0160	24.00	1024.12		0.38	0.0160	24.00	1023.74	425+55.16	10.00	-0.0160	-0.16		1023.58				
	BRIDGE SUM-77-0802L																									
BEGIN APPROACH SLAB	1021.10		-0.28	-0.0160	17.78	1021.38		-0.38	-0.0160	24.00	1021.76		0.38	0.0160	24.00	1021.38	426+60.73	10.00	-0.0160	-0.16		1021.22				
	1020.81		-0.28	-0.0160	17.78	1021.09		-0.38	-0.0160	24.00	1021.47		0.38	0.0160	24.00	1021.09	426+75.00	10.00	-0.0160	-0.16		1020.93				
	1020.52		-0.28	-0.0160	17.78	1020.80		-0.38	-0.0160	24.00	1021.18		0.38	0.0160	24.00	1020.80	426+90.00	10.00	-0.0160	-0.16		1020.64				
	1020.32		-0.28	-0.0160	17.78	1020.60		-0.38	-0.0160	24.00	1020.98		0.38	0.0160	24.00	1020.60	427+00.00	10.00	-0.0200	-0.20		1020.40				
	1020.13		-0.28	-0.0160	17.78	1020.41		-0.38	-0.0160	24.00	1020.79		0.38	0.0160	24.00	1020.41	427+10.00	10.00	-0.0240	-0.24	250	1020.17				
	1019.75		-0.39	-0.0220	17.78	1020.14		-0.38	-0.0160	24.00	1020.52		0.38	0.0160	24.00	1020.14	427+25.00	10.00	-0.0300	-0.30		1019.84				
	1019.12	250	-0.57	-0.0320	17.78	1019.69		-0.38	-0.0160	24.00	1020.07		0.38	0.0160	24.00	1019.69	427+50.00	10.00	-0.0400	-0.40		1019.29				
	1018.88		-0.64	-0.0360	17.78	1019.52		-0.38	-0.0160	24.00	1019.90		0.38	0.0160	24.00	1019.52	427+60.00	10.00	-0.0400	-0.40		1019.12				
	1018.72		-0.68	-0.0388	17.50	1019.40		-0.38	-0.0160	24.00	1019.78		0.38	0.0160	24.00	1019.40	427+67.00	10.00	-0.0400	-0.40		1019.00				
	1018.65		-0.70	-0.0400	17.50	1019.35		-0.38	-0.0160	24.00	1019.73		0.38	0.0160	24.00	1019.35	427+70.00	10.00	-0.0400	-0.40		1018.95				
	1018.57		-0.70	-0.0400	17.50	1019.27		-0.38	-0.0160	24.00	1019.65		0.38	0.0160	24.00	1019.27	427+75.00	10.00	-0.0400	-0.40		1018.87				
	1018.16		-0.70	-0.0400	17.50	1018.86		-0.38	-0.0160	24.00	1019.24		0.38	0.0160	24.00	1018.86	428+00.00	10.00	-0.0400	-0.40		1018.46				
	1017.78		-0.70	-0.0400	17.50	1018.48		-0.38	-0.0160	24.00	1018.86		0.38	0.0160	24.00	1018.48	428+25.00	10.00	-0.0400	-0.40		1018.08				
	1017.55		-0.70	-0.0400	17.50	1018.25		-0.38	-0.0160	24.00	1018.63		0.38	0.0160	24.00	1018.25	428+41.00	10.00	-0.0400	-0.40		1017.85				
P.C.	1017.55		-0.70	-0.0400	17.50	1018.25		-0.38	-0.0160	24.00	1018.63		0.38	0.0160	24.00	1018.25	428+41.24	10.00	-0.0399	-0.40		1017.85				
	1017.43		-0.70	-0.0400	17.50	1018.13		-0.38	-0.0160	24.00	1018.51		0.38	0.0160	24.00	1018.13	428+50.00	10.00	-0.0364	-0.36		1017.77				
	1017.37		-0.70	-0.0400	17.50	1018.07		-0.38	-0.0160	24.00	1018.45		0.38	0.0160	24.00	1018.07	428+54.00	10.00	-0.0348	-0.35	250	1017.72				
	1017.24		-0.55	-0.0316	17.50	1017.79		-0.38	-0.0160	24.00	1018.17		0.38	0.0160	24.00	1017.79	428+75.00	10.00	-0.0264	-0.26		1017.53				
	1017.09	250	-0.38	-0.0216	17.50	1017.47		-0.38	-0.0160	24.00	1017.85		0.38	0.0160	24.00	1017.47	429+00.00	10.00	-0.0164	-0.16		1017.31				
	1017.09		-0.37	-0.0212	17.50	1017.46		-0.38	-0.0160	24.00	1017.84		0.38	0.0160	24.00	1017.46	429+01.00	10.00	-0.0160	-0.16		1017.30				
	1017.03		-0.28	-0.0160	17.50	1017.31		-0.38	-0.0160	24.00	1017.69		0.38	0.0160	24.00	1017.31	429+14.00	10.00	-0.0160	-0.16		1017.15				
	1016.90		-0.28	-0.0160	17.50	1017.18		-0.38	-0.0160	24.00	1017.56		0.38	0.0160	24.00	1017.18	429+25.00	10.00	-0.0160	-0.16		1017.02				
END APPROACH SLAB	1016.86		-0.28	-0.0160	17.50	1017.14		-0.38	-0.0160	24.00	1017.52		0.38	0.0160	24.00	1017.14	429+28.48	10.00	-0.0160	-0.16		1016.98				
	BRIDGE SUM-77-0810L																									
BEGIN APPROACH SLAB	1015.52		-0.28	-0.0160	17.50	1015.80		-0.38	-0.0160	24.00	1016.18		0.38	0.0160	24.00	1015.80	430+89.09	10.00	-0.0160	-0.16		1015.64				
	1015.46		-0.28	-0.0160	17.50	1015.74		-0.38	-0.0160	24.00	1016.12		0.38	0.0160	24.00	1015.74	431+00.00	10.00	-0.0160	-0.16		1015.58				
	1015.37		-0.28	-0.0160	17.50	1015.65		-0.38	-0.0160	24.00	1016.03		0.38	0.0160	24.00	1015.65	431+20.00	10.00	-0.0160	-0.16		1015.49				
	1015.35		-0.28	-0.0160	17.50	1015.63		-0.38	-0.0160	24.00	1016.01		0.38	0.0160	24.00	1015.63	431+25.00	10.00	-0.0180	-0.18		1015.45				
	1015.30		-0.28	-0.0160	17.50	1015.58		-0.38	-0.0160	24.00	1015.96		0.38	0.0160	24.00	1015.58	431+35.00	10.00	-0.0220	-0.22	250	1015.36				
	1015.15		-0.39	-0.0220	17.50	1015.53		-0.38	-0.0160	24.00	1015.91		0.38	0.0160	24.00	1015.53	431+50.00	10.00	-0.0280	-0.28		1015.25				
	1014.91	250	-0.55	-0.0320	17.14	1015.45		-0.39	-0.0160	24.36	1015.84		0.38	0.0160	24.00	1015.46	431+75.00	10.00	-0.0380	-0.38		1015.08				
	1014.85		-0.58	-0.0340	17.07	1015.43		-0.39	-0.0160	24.43	1015.82		0.38	0.0160	24.00	1015.44	431+80.00	10.00	-0.0400	-0.40		1015.04				
	1014.85		-0.55	-0.0400	13.86	1015.40		-0.39	-0.0160	24.64	1015.79		0.38	0.0160	24.00	1015.41	431+95.00	10.00	-0.0400	-0.40		1015.01				

CURVE 4 - SUPERELEVATION TABLE

P.I. Sta. 485+59.78	Dc = 1° 28' 03"

LEFT SIDE					BASELINE CONTROL		RIGHT INSIDE					RIGHT OUTSIDE					RAMP C AUXILIARY LANE					REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
1048.96		-0.24	-0.0200	12.00	471+31.58	1049.20	24.00	0.0160	0.38		1049.58	24.00	-0.0160	-0.38		1049.20						N.C.
1049.00		-0.24	-0.0200	12.00	471+50.00	1049.24	24.00	0.0160	0.38		1049.62	24.00	-0.0129	-0.31		1049.31						
1049.04		-0.24	-0.0200	12.00	471+75.00	1049.28	24.00	0.0160	0.38		1049.66	24.00	-0.0088	-0.21		1049.45						
1049.07		-0.24	-0.0200	12.00	472+00.00	1049.31	24.00	0.0160	0.38		1049.69	24.00	-0.0046	-0.11		1049.58						
1049.09		-0.24	-0.0200	12.00	472+25.00	1049.33	24.00	0.0160	0.38		1049.71	24.00	-0.0004	-0.01		1049.70						
1049.10		-0.24	-0.0200	12.00	472+26.99	1049.34	24.00	0.0160	0.38		1049.72	24.00	-0.0001	0.00	250	1049.72						P.I.
1049.10		-0.24	-0.0200	12.00	472+27.58	1049.34	24.00	0.0160	0.38		1049.72	24.00	0.0000	0.00		1049.72						H.F.
1049.11		-0.24	-0.0200	12.00	472+50.00	1049.35	24.00	0.0160	0.38		1049.73	24.00	0.0037	0.09		1049.82						
1049.11		-0.24	-0.0200	12.00	472+75.00	1049.35	24.00	0.0160	0.38		1049.73	24.00	0.0079	0.19		1049.92						
1049.10		-0.24	-0.0200	12.00	473+00.00	1049.34	24.00	0.0160	0.38		1049.72	24.00	0.0121	0.29		1050.01						
1049.08		-0.24	-0.0200	12.00	473+23.58	1049.32	24.00	0.0160	0.38		1049.70	24.00	0.0160	0.38		1050.09						R.C.
1049.08		-0.24	-0.0200	12.00	473+25.00	1049.32	24.00	0.0161	0.39		1049.71	24.00	0.0161	0.39		1050.09						
1049.06		-0.24	-0.0200	12.00	473+43.98	1049.30	24.00	0.0177	0.42		1049.72	12.00	0.0177	0.21		1049.94	12.00	0.0177	0.21		1050.15	
1049.06		-0.24	-0.0200	12.00	473+50.00	1049.30	24.00	0.0182	0.44		1049.74	12.00	0.0182	0.22		1049.96	12.00	0.0177	0.21		1050.17	
1049.03		-0.24	-0.0200	12.00	473+71.58	1049.27	24.00	0.0200	0.48		1049.75	12.00	0.0200	0.24		1049.99	12.00	0.0177	0.21		1050.20	
1048.98		-0.28	-0.0237	12.00	473+75.00	1049.26	24.00	0.0203	0.49		1049.75	12.00	0.0203	0.24		1049.99	12.00	0.0177	0.21		1050.20	
1048.90		-0.31	-0.0255	12.00	474+00.00	1049.21	24.00	0.0224	0.54		1049.75	12.00	0.0224	0.27		1050.02	12.00	0.0177	0.21		1050.23	
1048.83		-0.33	-0.0273	12.00	474+25.00	1049.16	24.00	0.0245	0.59		1049.75	12.00	0.0245	0.29		1050.04	12.00	0.0177	0.21		1050.25	
1048.74		-0.35	-0.0291	12.00	474+50.00	1049.09	24.00	0.0265	0.64		1049.73	12.00	0.0265	0.32		1050.04	12.00	0.0177	0.21		1050.26	
1048.65		-0.37	-0.0309	12.00	474+75.00	1049.02	24.00	0.0286	0.69	500	1049.71	12.00	0.0286	0.34	250	1050.05	12.00	0.0177	0.21		1050.26	
1048.56		-0.39	-0.0322	12.00	474+93.14	1048.95	24.00	0.0301	0.72		1049.67	12.00	0.0301	0.36		1050.03	12.00	0.0177	0.21		1050.25	P.C.
1048.54	1000	-0.39	-0.0327	12.00	475+00.00	1048.93	24.00	0.0307	0.74		1049.67	12.00	0.0307	0.37		1050.04	12.00	0.0177	0.21		1050.25	
1048.42		-0.41	-0.0345	12.00	475+25.00	1048.83	24.00	0.0328	0.79		1049.62	12.00	0.0328	0.39		1050.01	12.00	0.0177	0.21		1050.22	
1048.29		-0.44	-0.0363	12.00	475+50.00	1048.73	24.00	0.0349	0.84		1049.57	12.00	0.0349	0.42		1049.99	12.00	0.0177	0.21		1050.20	
1048.15		-0.46	-0.0381	12.00	475+75.00	1048.61	24.00	0.0370	0.89		1049.50	12.00	0.0370	0.44		1049.94	12.00	0.0177	0.21		1050.15	
1048.01		-0.48	-0.0399	12.00	476+00.00	1048.49	24.00	0.0390	0.94		1049.43	12.00	0.0390	0.47		1049.89	12.00	0.0177	0.21		1050.11	
1047.86		-0.50	-0.0417	12.00	476+25.00	1048.36	24.00	0.0411	0.99		1049.35	12.00	0.0411	0.49		1049.84						
1047.69		-0.52	-0.0435	12.00	476+50.00	1048.21	24.00	0.0432	1.04		1049.25	12.00	0.0432	0.52		1049.77						
1047.53		-0.54	-0.0452	12.00	476+73.98	1048.07	24.00	0.0452	1.08		1049.15	12.00	0.0452	0.54		1049.70						F.S.
1047.52		-0.54	-0.0452	12.00	476+75.00	1048.06	24.00	0.0452	1.08		1049.14	12.00	0.0452	0.54		1049.69						
1047.36		-0.54	-0.0452	12.00	477+00.00	1047.90	24.00	0.0452	1.08		1048.98	12.00	0.0452	0.54		1049.53						
1047.18		-0.54	-0.0452	12.00	477+25.00	1047.72	24.00	0.0452	1.08		1048.80	12.00	0.0452	0.54		1049.35						
1047.00		-0.54	-0.0452	12.00	477+50.00	1047.54	24.00	0.0452	1.08		1048.62	12.00	0.0452	0.54		1049.17						
1046.81		-0.54	-0.0452	12.00	477+75.00	1047.35	24.00	0.0452	1.08		1048.43	12.00	0.0452	0.54		1048.98						
1046.60		-0.54	-0.0452	12.00	478+00.00	1047.14	24.00	0.0452	1.08		1048.22	12.00	0.0452	0.54		1048.77						
1046.39		-0.54	-0.0452	12.00	478+25.00	1046.93	24.00	0.0452	1.08		1048.01	12.00	0.0452	0.54		1048.56						
1046.17		-0.54	-0.0452	12.00	478+50.00	1046.71	24.00	0.0452	1.08		1047.79	12.00	0.0452	0.54		1048.34						
1045.94		-0.54	-0.0452	12.00	478+75.00	1046.48	24.00	0.0452	1.08		1047.56	12.00	0.0452	0.54		1048.11						
1045.70		-0.54	-0.0452	12.00	479+00.00	1046.24	24.00	0.0452	1.08		1047.32	12.00	0.0452	0.54		1047.87						
1045.45		-0.54	-0.0452	12.00	479+25.00	1045.99	24.00	0.0452	1.08		1047.07	12.00	0.0452	0.54		1047.62						
1045.19		-0.54	-0.0452	12.00	479+50.00	1045.73	24.00	0.0452	1.08		1046.81	12.00	0.0452	0.54		1047.36						
1044.91		-0.54	-0.0452	12.00	479+75.00	1045.45	24.00	0.0452	1.08		1046.53	12.00	0.0452	0.54		1047.08						
1044.63		-0.54	-0.0452	12.00	480+00.00	1045.17	24.00	0.0452	1.08		1046.25	12.00	0.0452	0.54		1046.80						
1044.34		-0.54	-0.0452	12.00	480+25.00	1044.88	24.00	0.0452	1.08		1045.96	12.00	0.0452	0.54		1046.51						
1044.04		-0.54	-0.0452	12.00	480+50.00	1044.58	24.00	0.0452	1.08		1045.66	12.00	0.0452	0.54		1046.21						
1043.74		-0.54	-0.0452	12.00	480+75.00	1044.28	24.00	0.0452	1.08		1045.36	12.00	0.0452	0.54		1045.91						
1043.44		-0.54	-0.0452	12.00	481+00.00	1043.98	24.00	0.0452	1.08		1045.06	12.00	0.0452	0.54		1045.61						
1043.13		-0.54	-0.0452	12.00	481+25.00	1043.67	24.00	0.0452	1.08		1044.75	12.00	0.0452	0.54		1045.30						
1042.83		-0.54	-0.0452	12.00	481+50.00	1043.37	24.00	0.0452	1.08		1044.45	12.00	0.0452	0.54		1045.00						
1042.52		-0.54	-0.0452	12.00	481+75.00	1043.06	24.00	0.0452	1.08		1044.14	12.00	0.0452	0.54		1044.69						
1042.22		-0.54	-0.0452	12.00	482+00.00	1042.76	24.00	0.0452	1.08		1043.84	12.00	0.0452	0.54		1044.39						
1041.91		-0.54	-0.0452	12.00	482+25.00	1042.45	24.00	0.0452	1.08		1043.53	12.00	0.0452	0.54		1044.08						
1041.61		-0.54	-0.0452	12.00	482+50.00	1042.15	24.00	0.0452	1.08		1043.23	12.00	0.0452	0.54		1043.78						
1041.30		-0.54	-0.0452	12.00	482+75.00	1041.84	24.00	0.0452	1.08		1042.92	12.00	0.0452	0.54		1043.47						
1041.00		-0.54	-0.0452	12.00	483+00.00	1041.54	24.00	0.0452	1.08		1042.62	12.00	0.0452	0.54		1043.17						

CALCULATED LRK
CHECKED PJF

SUPERELEVATION TABLE
NORTHBOUND I.R. 77

SUM-77/277/244
VARIOUS

807
1288

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CURVE 4 - SUPERELEVATION TABLE

P.I. Sta. 485+59.78	Dc = 1° 28' 03"

LEFT SIDE					BASELINE CONTROL		RIGHT INSIDE				RIGHT OUTSIDE										REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION						
1040.69		-0.54	-0.0452	12.00	483+25.00	1041.23	24.00	0.0452	1.08		1042.31	12.00	0.0452	0.54		1042.86						
1040.39		-0.54	-0.0452	12.00	483+75.00	1040.93	24.00	0.0452	1.08		1042.01	12.00	0.0452	0.54		1042.56						
1040.08		-0.54	-0.0452	12.00	483+75.00	1040.62	24.00	0.0452	1.08		1041.70	12.00	0.0452	0.54		1042.25						
1039.78		-0.54	-0.0452	12.00	484+00.00	1040.32	24.00	0.0452	1.08		1041.40	12.00	0.0452	0.54		1041.95						
1039.47		-0.54	-0.0452	12.00	484+25.00	1040.01	24.00	0.0452	1.08		1041.09	12.00	0.0452	0.54		1041.64						
1039.17		-0.54	-0.0452	12.00	484+50.00	1039.71	24.00	0.0452	1.08		1040.79	12.00	0.0452	0.54		1041.34						
1038.87		-0.54	-0.0452	12.00	484+75.00	1039.41	24.00	0.0452	1.08		1040.49	12.00	0.0452	0.54		1041.04						
1038.56		-0.54	-0.0452	12.00	485+00.00	1039.10	24.00	0.0452	1.08		1040.18	12.00	0.0452	0.54		1040.73						
1038.26		-0.54	-0.0452	12.00	485+25.00	1038.80	24.00	0.0452	1.08		1039.88	12.00	0.0452	0.54		1040.43						
1037.95		-0.54	-0.0452	12.00	485+50.00	1038.49	24.00	0.0452	1.08		1039.57	12.00	0.0452	0.54		1040.12						
1037.77		-0.54	-0.0452	12.00	485+64.96	1038.31	24.00	0.0452	1.08		1039.39	12.00	0.0452	0.54		1039.94						
					485+75.00	1038.19	12.00	0.0452	0.54		1038.73	24.00	0.0452	1.08		1039.82						
					486+00.00	1037.88	12.00	0.0452	0.54		1038.42	24.00	0.0452	1.08		1039.51						
					486+25.00	1037.58	12.00	0.0452	0.54		1038.12	24.00	0.0452	1.08		1039.21						
					486+50.00	1037.27	12.00	0.0452	0.54		1037.81	24.00	0.0452	1.08		1038.90						
					486+75.00	1036.97	12.00	0.0452	0.54		1037.51	24.00	0.0452	1.08		1038.60						
					487+00.00	1036.66	12.00	0.0452	0.54		1037.20	24.00	0.0452	1.08		1038.29						
					487+25.00	1036.36	12.00	0.0452	0.54		1036.90	24.00	0.0452	1.08		1037.99						
					487+50.00	1036.05	12.00	0.0452	0.54		1036.59	24.00	0.0452	1.08		1037.68						
					487+75.00	1035.75	12.00	0.0452	0.54		1036.29	24.00	0.0452	1.08		1037.38						
					488+00.00	1035.44	12.00	0.0452	0.54		1035.98	24.00	0.0452	1.08		1037.07						
					488+25.00	1035.14	12.00	0.0452	0.54		1035.68	24.00	0.0452	1.08		1036.77						
					488+50.00	1034.84	12.00	0.0452	0.54		1035.38	24.00	0.0452	1.08		1036.47						
					488+75.00	1034.53	12.00	0.0452	0.54		1035.07	24.00	0.0452	1.08		1036.16						
					489+00.00	1034.23	12.00	0.0452	0.54		1034.77	24.00	0.0452	1.08		1035.86						
					489+25.00	1033.92	12.00	0.0452	0.54		1034.46	24.00	0.0452	1.08		1035.55						
					489+50.00	1033.62	12.00	0.0452	0.54		1034.16	24.00	0.0452	1.08		1035.25						
					489+75.00	1033.31	12.00	0.0452	0.54		1033.85	24.00	0.0452	1.08		1034.94						
					490+00.00	1033.02	12.00	0.0452	0.54		1033.56	24.00	0.0452	1.08		1034.65						
					490+25.00	1032.75	12.00	0.0452	0.54		1033.29	24.00	0.0452	1.08		1034.38						
					490+50.00	1032.51	12.00	0.0452	0.54		1033.05	24.00	0.0452	1.08		1034.14						
					490+75.00	1032.29	12.00	0.0452	0.54		1032.83	24.00	0.0452	1.08		1033.92						
					491+00.00	1032.11	12.00	0.0452	0.54		1032.65	24.00	0.0452	1.08		1033.74						
					491+25.00	1031.95	12.00	0.0452	0.54		1032.49	24.00	0.0452	1.08		1033.58						
					491+50.00	1031.82	12.00	0.0452	0.54		1032.36	24.00	0.0452	1.08		1033.45						
					491+75.00	1031.71	12.00	0.0452	0.54		1032.25	24.00	0.0452	1.08		1033.34						
					492+00.00	1031.64	12.00	0.0452	0.54		1032.18	24.00	0.0452	1.08		1033.27						
					492+25.00	1031.59	12.00	0.0452	0.54		1032.13	24.00	0.0452	1.08		1033.22						
					492+50.00	1031.57	12.00	0.0452	0.54		1032.11	24.00	0.0452	1.08		1033.20						
					492+75.00	1031.58	12.00	0.0452	0.54		1032.12	24.00	0.0452	1.08		1033.21						
					493+00.00	1031.61	12.00	0.0452	0.54		1032.15	24.00	0.0452	1.08		1033.24						
					493+25.00	1031.68	12.00	0.0452	0.54		1032.22	24.00	0.0452	1.08		1033.31						
					493+50.00	1031.77	12.00	0.0452	0.54		1032.31	24.00	0.0452	1.08		1033.40						

CALCULATED LRK
CHECKED PJF

SUPERELEVATION TABLE
NORTHBOUND I.R. 77

SUM-77/277/244
VARIOUS

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CURVE 4 - SUPERELEVATION TABLE

P.I. Sta. 485+59.78	Dc = 1° 28' 03"

					BASELINE CONTROL		RIGHT INSIDE					RIGHT OUTSIDE										REMARKS
					STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION						
					493+72.19	1031.87	12.00	0.0452	0.54		1032.41	24.00	0.0452	1.08		1033.50						F.S.
					493+75.00	1031.88	12.00	0.0449	0.54		1032.42	24.00	0.0449	1.08		1033.50						
					494+00.00	1032.03	12.00	0.0421	0.51		1032.54	24.00	0.0421	1.01		1033.55						
					494+25.00	1032.20	12.00	0.0393	0.47		1032.67	24.00	0.0393	0.94		1033.61						
					494+50.00	1032.40	12.00	0.0366	0.44		1032.84	24.00	0.0366	0.88		1033.72						
					494+75.00	1032.63	12.00	0.0338	0.41		1033.04	24.00	0.0338	0.81		1033.85						
					495+00.00	1032.88	12.00	0.0310	0.37		1033.25	24.00	0.0310	0.74		1034.00						
					495+25.00	1033.13	12.00	0.0282	0.34	750	1033.47	24.00	0.0282	0.68	250	1034.15						
					495+50.00	1033.37	12.00	0.0254	0.30		1033.67	24.00	0.0254	0.61		1034.28						
					495+75.00	1033.62	12.00	0.0227	0.27		1033.89	24.00	0.0227	0.54		1034.44						
					495+75.59	1033.63	12.00	0.0226	0.27		1033.90	24.00	0.0226	0.54		1034.44						P.T.
					496+00.00	1033.87	12.00	0.0199	0.24		1034.11	24.00	0.0199	0.48		1034.59						
					496+25.00	1034.12	12.00	0.0171	0.21		1034.33	24.00	0.0171	0.41		1034.74						
					496+34.99	1034.22	12.00	0.0160	0.19		1034.41	24.00	0.0160	0.38		1034.80						R.C.
					496+50.00	1034.37	12.00	0.0160	0.19		1034.56	24.00	0.0135	0.32		1034.89						
					496+75.00	1034.61	12.00	0.0160	0.19		1034.80	24.00	0.0093	0.22		1035.03						
					497+00.00	1034.86	12.00	0.0160	0.19		1035.05	24.00	0.0052	0.12		1035.18						
					497+25.00	1035.11	12.00	0.0160	0.19		1035.30	24.00	0.0010	0.02		1035.33						
					497+30.99	1035.17	12.00	0.0160	0.19		1035.36	24.00	0.0000	0.00		1035.36						H.F.
					497+50.00	1035.36	12.00	0.0160	0.19		1035.55	24.00	-0.0032	-0.08	250	1035.48						
					497+75.00	1035.60	12.00	0.0160	0.19		1035.79	24.00	-0.0073	-0.18		1035.62						
					498+00.00	1035.85	12.00	0.0160	0.19		1036.04	24.00	-0.0115	-0.28		1035.77						
					498+25.00	1036.10	12.00	0.0160	0.19		1036.29	24.00	-0.0157	-0.38		1035.92						
					498+26.99	1036.12	12.00	0.0160	0.19		1036.31	24.00	-0.0160	-0.38		1035.93						N.C.

CALCULATED LRK
CHECKED PJF

SUPERELEVATION TABLE
NORTHBOUND I.R. 77

SUM-77/277/244
VARIOUS

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CURVE 5 - SUPERELEVATION TABLE

P.I. Sta. 517+45.80	Dc = 2° 30′ 00″

BASELINE CONTROL		RIGHT INSIDE					RIGHT OUTSIDE											REMARKS
STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION							
506+12.86	1043.91	12.00	0.0160	0.19		1044.10	24.00	-0.0160	-0.38		1043.72							N.C.
506+25.00	1044.03	12.00	0.0123	0.15		1044.18	24.00	-0.0160	-0.38		1043.79							
506+50.00	1044.27	12.00	0.0048	0.06	275	1044.33	24.00	-0.0160	-0.38		1043.94							
506+65.75	1044.43	12.00	0.0000	0.00		1044.43	24.00	-0.0160	-0.38		1044.05							T.S./H.F.
506+75.00	1044.52	12.00	-0.0028	-0.03		1044.49	24.00	-0.0160	-0.38		1044.10							
507+00.00	1044.77	12.00	-0.0104	-0.12		1044.65	24.00	-0.0160	-0.38		1044.26							
507+18.64	1044.95	12.00	-0.0160	-0.19		1044.76	24.00	-0.0160	-0.38		1044.37							R.C.
507+25.00	1045.02	12.00	-0.0166	-0.20		1044.82	24.00	-0.0166	-0.40		1044.42							
507+50.00	1045.26	12.00	-0.0192	-0.23		1045.03	24.00	-0.0192	-0.46		1044.57							
507+75.00	1045.51	12.00	-0.0217	-0.26		1045.25	24.00	-0.0217	-0.52		1044.73							
508+00.00	1045.76	12.00	-0.0242	-0.29		1045.47	24.00	-0.0242	-0.58		1044.89							
508+25.00	1046.01	12.00	-0.0267	-0.32		1045.69	24.00	-0.0267	-0.64		1045.05							
508+50.00	1046.26	12.00	-0.0292	-0.35		1045.91	24.00	-0.0292	-0.70		1045.21							
508+75.00	1046.50	12.00	-0.0318	-0.38		1046.12	24.00	-0.0318	-0.76		1045.36							
509+00.00	1046.75	12.00	-0.0343	-0.41	826	1046.34	24.00	-0.0343	-0.82	275	1045.52							
509+25.00	1047.00	12.00	-0.0368	-0.44		1046.56	24.00	-0.0368	-0.88		1045.68							
509+50.00	1047.25	12.00	-0.0393	-0.47		1046.78	24.00	-0.0393	-0.94		1045.84							
509+75.00	1047.49	12.00	-0.0418	-0.50		1046.99	24.00	-0.0418	-1.00		1045.99							
510+00.00	1047.74	12.00	-0.0444	-0.53		1047.21	24.00	-0.0444	-1.07		1046.14							
510+25.00	1047.99	12.00	-0.0469	-0.56		1047.43	24.00	-0.0469	-1.13		1046.30							
510+50.00	1048.24	12.00	-0.0494	-0.59		1047.65	24.00	-0.0494	-1.19		1046.46							
510+65.75	1048.39	12.00	-0.0510	-0.61		1047.78	24.00	-0.0510	-1.22		1046.55							S.C./F.S.
510+75.00	1048.49	12.00	-0.0510	-0.61		1047.88	24.00	-0.0510	-1.22		1046.65							
511+00.00	1048.73	12.00	-0.0510	-0.61		1048.12	24.00	-0.0510	-1.22		1046.89							
511+25.00	1048.98	12.00	-0.0510	-0.61		1048.37	24.00	-0.0510	-1.22		1047.14							
511+50.00	1049.23	12.00	-0.0510	-0.61		1048.62	24.00	-0.0510	-1.22		1047.39							
511+75.00	1049.48	12.00	-0.0510	-0.61		1048.87	24.00	-0.0510	-1.22		1047.64							
512+00.00	1049.72	12.00	-0.0510	-0.61		1049.11	24.00	-0.0510	-1.22		1047.88							
512+25.00	1049.97	12.00	-0.0510	-0.61		1049.36	24.00	-0.0510	-1.22		1048.13							
512+50.00	1050.22	12.00	-0.0510	-0.61		1049.61	24.00	-0.0510	-1.22		1048.38							F.S.
512+75.00	1050.47	12.00	-0.0540	-0.65		1049.82	24.00	-0.0540	-1.30		1048.53							
513+00.00	1050.71	12.00	-0.0569	-0.68		1050.03	24.00	-0.0569	-1.37		1048.66							
513+25.00	1050.96	12.00	-0.0599	-0.72		1050.24	24.00	-0.0599	-1.44		1048.80							
513+50.00	1051.21	12.00	-0.0628	-0.75		1050.46	24.00	-0.0628	-1.51		1048.95							
513+75.00	1051.49	12.00	-0.0658	-0.79		1050.70	24.00	-0.0658	-1.58		1049.12							
514+00.00	1051.78	12.00	-0.0687	-0.82	705	1050.96	24.00	-0.0687	-1.65	235	1049.31							
514+25.00	1052.06	12.00	-0.0717	-0.86		1051.20	24.00	-0.0717	-1.72		1049.48							
514+50.00	1052.34	12.00	-0.0746	-0.90		1051.44	24.00	-0.0746	-1.79		1049.65							
514+75.00	1052.62	12.00	-0.0776	-0.93		1051.69	24.00	-0.0776	-1.86		1049.83							
515+00.00	1052.91	12.00	-0.0805	-0.97		1051.94	24.00	-0.0805	-1.93		1050.01							
515+25.00	1053.19	12.00	-0.0835	-1.00		1052.19	24.00	-0.0835	-2.00		1050.18							EX. F.S.
515+50.00	1053.47	12.00	-0.0835	-1.00		1052.47	24.00	-0.0835	-2.00		1050.46							
515+75.00	1053.75	12.00	-0.0835	-1.00		1052.75	24.00	-0.0835	-2.00		1050.74							
515+87.72	1053.90	12.00	-0.0835	-1.00		1052.90	24.00	-0.0835	-2.00		1050.89							EXIST.

*NOTE: END WORK AT STA. 514+85.00, LIMITS SHOWN PAST THAT STATION ARE TO BE CONSTRUCTED BY OTHERS AS PART OF THE SUM-76/77/8-8.42/9.77/0.00 DB (PID 102329) PROJECT

CALCULATED LRK
CHECKED PJF

SUPERELEVATION TABLE
NORTHBOUND I.R. 77

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CURVE 8 - SUPERELEVATION TABLE

P.I. Sta. 482+91.41	Dc = 1° 28' 03"

RAMP A AUXILIARY LANE					LEFT OUTSIDE					LEFT INSIDE					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						
1049.83		-0.38	-0.0160	24.00	1050.21		-0.19	-0.0160	12.00	1050.40		0.38	0.0160	24.00	*468+54.57	1050.02						N.C.
1049.85		-0.38	-0.0160	24.00	1050.23		-0.19	-0.0160	12.00	1050.42		0.30	0.0126	24.00	*468+75.00	1050.12						
1049.86		-0.38	-0.0160	24.00	1050.24		-0.19	-0.0160	12.00	1050.43		0.20	0.0084	24.00	*469+00.00	1050.23						
1049.88		-0.38	-0.0160	24.00	1050.26		-0.19	-0.0160	12.00	1050.45		0.10	0.0043	24.00	*469+25.00	1050.35						
1049.88		-0.38	-0.0160	24.00	1050.26		-0.19	-0.0160	12.00	1050.46	250	0.02	0.0007	24.00	*469+46.33 469+42.49	1050.44						
1049.88		-0.38	-0.0160	24.00	1050.27		-0.19	-0.0160	12.00	1050.46		0.00	0.0000	24.00	469+46.73	1050.46						H.F.
1049.89		-0.38	-0.0160	24.00	1050.28		-0.19	-0.0160	12.00	1050.47		-0.01	-0.0005	24.00	469+50.00	1050.48						
1049.90		-0.38	-0.0160	24.00	1050.29		-0.19	-0.0160	12.00	1050.48		-0.11	-0.0047	24.00	469+75.00	1050.59						
1049.92		-0.38	-0.0160	24.00	1050.30		-0.19	-0.0160	12.00	1050.50		-0.21	-0.0089	24.00	470+00.00	1050.71						
1049.99		-0.38	-0.0160	24.00	1050.38		-0.19	-0.0160	12.00	1050.57		-0.31	-0.0130	24.00	470+25.00	1050.88						
1050.05		-0.38	-0.0160	24.00	1050.43		-0.19	-0.0160	12.00	1050.63		-0.38	-0.0160	24.00	470+42.73	1051.01						R.C.
1050.07		-0.40	-0.0165	24.00	1050.47		-0.20	-0.0165	12.00	1050.66		-0.40	-0.0165	24.00	470+50.00	1051.06						
1050.15		-0.44	-0.0182	24.00	1050.58		-0.22	-0.0182	12.00	1050.80		-0.44	-0.0182	24.00	470+75.00	1051.24						
1050.22		-0.48	-0.0198	24.00	1050.70		-0.24	-0.0198	12.00	1050.93		-0.48	-0.0198	24.00	471+00.00	1051.41						
1050.30		-0.52	-0.0215	24.00	1050.82		-0.26	-0.0215	12.00	1051.07		-0.52	-0.0215	24.00	471+25.00	1051.59						
1050.37		-0.56	-0.0232	24.00	1050.92		-0.28	-0.0232	12.00	1051.20		-0.56	-0.0232	24.00	471+50.00	1051.76						
1050.45		-0.60	-0.0248	24.00	1051.05		-0.30	-0.0248	12.00	1051.34		-0.60	-0.0248	24.00	471+75.00	1051.94						
1050.53		-0.64	-0.0265	24.00	1051.17		-0.32	-0.0265	12.00	1051.48		-0.64	-0.0265	24.00	472+00.00	1052.12						
1050.60		-0.68	-0.0282	24.00	1051.27		-0.34	-0.0282	12.00	1051.61		-0.68	-0.0282	24.00	472+25.00	1052.29						
1050.68		-0.72	-0.0298	24.00	1051.40		-0.36	-0.0298	12.00	1051.75		-0.72	-0.0298	24.00	472+50.00	1052.47						
1050.69	250	-0.72	-0.0301	24.00	1051.42	417	-0.36	-0.0301	12.00	1051.78	625	-0.72	-0.0301	24.00	472+54.68	1052.50						P.C.
1050.75		-0.76	-0.0315	24.00	1051.51		-0.38	-0.0315	12.00	1051.88		-0.76	-0.0315	24.00	472+75.00	1052.64						
1050.83		-0.80	-0.0332	24.00	1051.62		-0.40	-0.0332	12.00	1052.02		-0.80	-0.0332	24.00	473+00.00	1052.82						
1050.90		-0.84	-0.0348	24.00	1051.74		-0.42	-0.0348	12.00	1052.15		-0.84	-0.0348	24.00	473+25.00	1052.99						
1050.97		-0.88	-0.0365	24.00	1051.85		-0.44	-0.0365	12.00	1052.28		-0.88	-0.0365	24.00	473+50.00	1053.16						
1051.02		-0.92	-0.0382	24.00	1051.93		-0.46	-0.0382	12.00	1052.39		-0.92	-0.0382	24.00	473+75.00	1053.31						
1051.07		-0.96	-0.0398	24.00	1052.03		-0.48	-0.0398	12.00	1052.50		-0.96	-0.0398	24.00	474+00.00	1053.46						
1051.11		-1.00	-0.0415	24.00	1052.11		-0.50	-0.0415	12.00	1052.60		-1.00	-0.0415	24.00	474+25.00	1053.60						
1051.14		-1.04	-0.0432	24.00	1052.17		-0.52	-0.0432	12.00	1052.69		-1.04	-0.0432	24.00	474+50.00	1053.73						
1051.16		-1.08	-0.0448	24.00	1052.24		-0.54	-0.0448	12.00	1052.77		-1.08	-0.0448	24.00	474+75.00	1053.85						
1051.17		-1.08	-0.0452	24.00	1052.25		-0.54	-0.0452	12.00	1052.80		-1.08	-0.0452	24.00	474+80.73	1053.88						F.S.
1051.26		-1.08	-0.0452	24.00	1052.34		-0.54	-0.0452	12.00	1052.89		-1.08	-0.0452	24.00	475+00.00	1053.97						
1051.36		-1.08	-0.0452	24.00	1052.44		-0.54	-0.0452	12.00	1052.99		-1.08	-0.0452	24.00	475+25.00	1054.07						
1051.46		-1.08	-0.0452	24.00	1052.54		-0.54	-0.0452	12.00	1053.09		-1.08	-0.0452	24.00	475+50.00	1054.17						
1051.55		-1.08	-0.0452	24.00	1052.63		-0.54	-0.0452	12.00	1053.18		-1.08	-0.0452	24.00	475+75.00	1054.26						
1051.64		-1.08	-0.0452	24.00	1052.72		-0.54	-0.0452	12.00	1053.27		-1.08	-0.0452	24.00	476+00.00	1054.35						
1051.71		-1.08	-0.0452	24.00	1052.79		-0.54	-0.0452	12.00	1053.34		-1.08	-0.0452	24.00	476+25.00	1054.42						
1051.78		-1.08	-0.0452	24.00	1052.86		-0.54	-0.0452	12.00	1053.41		-1.08	-0.0452	24.00	476+50.00	1054.49						
1051.84		-1.08	-0.0452	24.00	1052.92		-0.54	-0.0452	12.00	1053.47		-1.08	-0.0452	24.00	476+75.00	1054.55						
1051.89		-1.08	-0.0452	24.00	1052.97		-0.54	-0.0452	12.00	1053.52		-1.08	-0.0452	24.00	477+00.00	1054.60						
1051.93		-1.08	-0.0452	24.00	1053.01		-0.54	-0.0452	12.00	1053.56		-1.08	-0.0452	24.00	477+25.00	1054.64						
1051.96		-1.08	-0.0452	24.00	1053.04		-0.54	-0.0452	12.00	1053.59		-1.08	-0.0452	24.00	477+50.00	1054.67						
1051.99		-1.08	-0.0452	24.00	1053.07		-0.54	-0.0452	12.00	1053.62		-1.08	-0.0452	24.00	477+75.00	1054.70						
1052.01		-1.08	-0.0452	24.00	1053.09		-0.54	-0.0452	12.00	1053.64		-1.08	-0.0452	24.00	478+00.00	1054.72						
1052.02		-1.08	-0.0452	24.00	1053.10		-0.54	-0.0452	12.00	1053.65		-1.08	-0.0452	24.00	478+25.00	1054.73						
1052.02		-1.08	-0.0452	24.00	1053.10		-0.54	-0.0452	12.00	1053.65		-1.08	-0.0452	24.00	478+50.00	1054.73						
1052.01		-1.08	-0.0452	24.00	1053.09		-0.54	-0.0452	12.00	1053.64		-1.08	-0.0452	24.00	478+75.00	1054.72						
1052.00		-1.08	-0.0452	24.00	1053.08		-0.54	-0.0452	12.00	1053.63		-1.08	-0.0452	24.00	479+00.00	1054.71						
1051.97		-1.08	-0.0452	24.00	1053.05		-0.54	-0.0452	12.00	1053.60		-1.08	-0.0452	24.00	479+25.00	1054.68						
1051.94		-1.08	-0.0452	24.00	1053.02		-0.54	-0.0452	12.00	1053.57		-1.08	-0.0452	24.00	479+50.00	1054.65						

*NOTE: STATIONS ARE BASED ON THE CENTERLINE R/W & CONST. I.R. 77

CALCULATED LRK
CHECKED PJF

SUPERELEVATION TABLE
SOUTHBOUND I.R. 77

SUM-77/277/244
VARIOUS

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CURVE 8 - SUPERELEVATION TABLE

P.I. Sta. 482+91.41	Dc = 1° 28' 03"

RAMP A AUXILIARY LANE					LEFT OUTSIDE					LEFT INSIDE					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						
1051.90		-1.08	-0.0452	24.00	1052.98		-0.54	-0.0452	12.00	1053.53		-1.08	-0.0452	24.00	479+75.00	1054.61						
1051.85		-1.08	-0.0452	24.00	1052.93		-0.54	-0.0452	12.00	1053.48		-1.08	-0.0452	24.00	480+00.00	1054.56						
1051.80		-1.08	-0.0452	24.00	1052.88		-0.54	-0.0452	12.00	1053.43		-1.08	-0.0452	24.00	480+25.00	1054.51						
1051.74		-1.08	-0.0452	24.00	1052.82		-0.54	-0.0452	12.00	1053.37		-1.08	-0.0452	24.00	480+50.00	1054.45						
1051.66		-1.08	-0.0452	24.00	1052.74		-0.54	-0.0452	12.00	1053.29		-1.08	-0.0452	24.00	480+75.00	1054.37						
1051.58		-1.08	-0.0452	24.00	1052.66		-0.54	-0.0452	12.00	1053.21		-1.08	-0.0452	24.00	481+00.00	1054.29						
1051.50		-1.08	-0.0452	24.00	1052.58		-0.54	-0.0452	12.00	1053.13		-1.08	-0.0452	24.00	481+25.00	1054.21						
1051.40		-1.08	-0.0452	24.00	1052.48		-0.54	-0.0452	12.00	1053.03		-1.08	-0.0452	24.00	481+50.00	1054.11						
1051.30		-1.08	-0.0452	24.00	1052.38		-0.54	-0.0452	12.00	1052.93		-1.08	-0.0452	24.00	481+75.00	1054.01						
1051.18		-1.08	-0.0452	24.00	1052.26		-0.54	-0.0452	12.00	1052.81		-1.08	-0.0452	24.00	482+00.00	1053.89						
1051.06		-1.08	-0.0452	24.00	1052.14		-0.54	-0.0452	12.00	1052.69		-1.08	-0.0452	24.00	482+25.00	1053.77						
1050.94		-1.08	-0.0452	24.00	1052.02		-0.54	-0.0452	12.00	1052.57		-1.08	-0.0452	24.00	482+50.00	1053.65						
1050.80		-1.08	-0.0452	24.00	1051.88		-0.54	-0.0452	12.00	1052.43		-1.08	-0.0452	24.00	482+75.00	1053.51						
1050.65		-1.08	-0.0452	24.00	1051.73		-0.54	-0.0452	12.00	1052.28		-1.08	-0.0452	24.00	483+00.00	1053.36						
1050.50		-1.08	-0.0452	24.00	1051.58		-0.54	-0.0452	12.00	1052.13		-1.08	-0.0452	24.00	483+25.00	1053.21						
1050.34		-1.08	-0.0452	24.00	1051.42		-0.54	-0.0452	12.00	1051.97		-1.08	-0.0452	24.00	483+50.00	1053.05						
1050.17		-1.08	-0.0452	24.00	1051.25		-0.54	-0.0452	12.00	1051.80		-1.08	-0.0452	24.00	483+75.00	1052.88						
1049.99		-1.08	-0.0452	24.00	1051.07		-0.54	-0.0452	12.00	1051.62		-1.08	-0.0452	24.00	484+00.00	1052.70						
1049.81		-1.08	-0.0452	24.00	1050.89		-0.54	-0.0452	12.00	1051.44		-1.08	-0.0452	24.00	484+25.00	1052.52						
1049.62		-1.08	-0.0452	24.00	1050.70		-0.54	-0.0452	12.00	1051.25		-1.08	-0.0452	24.00	484+50.00	1052.33						
1049.42		-1.08	-0.0452	24.00	1050.50		-0.54	-0.0452	12.00	1051.05		-1.08	-0.0452	24.00	484+75.00	1052.13						
1049.22		-1.08	-0.0452	24.00	1050.30		-0.54	-0.0452	12.00	1050.85		-1.08	-0.0452	24.00	485+00.00	1051.93						
1049.02		-1.08	-0.0452	24.00	1050.10		-0.54	-0.0452	12.00	1050.65		-1.08	-0.0452	24.00	485+25.00	1051.73						
1048.83		-1.08	-0.0452	24.00	1049.91		-0.54	-0.0452	12.00	1050.46		-1.08	-0.0452	24.00	485+50.00	1051.54						
1048.63		-1.08	-0.0452	24.00	1049.71		-0.54	-0.0452	12.00	1050.26		-1.08	-0.0452	24.00	485+75.00	1051.34						
1048.43		-1.08	-0.0452	24.00	1049.51		-0.54	-0.0452	12.00	1050.06		-1.08	-0.0452	24.00	486+00.00	1051.14						
1048.23		-1.08	-0.0452	24.00	1049.31		-0.54	-0.0452	12.00	1049.86		-1.08	-0.0452	24.00	486+25.00	1050.94						
1048.04		-1.08	-0.0452	24.00	1049.12		-0.54	-0.0452	12.00	1049.67		-1.08	-0.0452	24.00	486+50.00	1050.75						
1047.93		-1.08	-0.0452	24.00	1049.01		-0.54	-0.0452	12.00	1049.56		-1.08	-0.0452	24.00	486+63.69	1050.64						
					1048.92		-1.08	-0.0452	24.00	1050.01		-0.54	-0.0452	12.00	486+75.00	1050.55						
					1048.72		-1.08	-0.0452	24.00	1049.81		-0.54	-0.0452	12.00	487+00.00	1050.35						
					1048.52		-1.08	-0.0452	24.00	1049.61		-0.54	-0.0452	12.00	487+25.00	1050.15						
					1048.33		-1.08	-0.0452	24.00	1049.42		-0.54	-0.0452	12.00	487+50.00	1049.96						
					1048.13		-1.08	-0.0452	24.00	1049.22		-0.54	-0.0452	12.00	487+75.00	1049.76						
					1047.93		-1.08	-0.0452	24.00	1049.02		-0.54	-0.0452	12.00	488+00.00	1049.56						
					1047.73		-1.08	-0.0452	24.00	1048.82		-0.54	-0.0452	12.00	488+25.00	1049.36						
					1047.54		-1.08	-0.0452	24.00	1048.63		-0.54	-0.0452	12.00	488+50.00	1049.17						
					1047.34		-1.08	-0.0452	24.00	1048.43		-0.54	-0.0452	12.00	488+75.00	1048.97						
					1047.14		-1.08	-0.0452	24.00	1048.23		-0.54	-0.0452	12.00	489+00.00	1048.77						
					1046.94		-1.08	-0.0452	24.00	1048.03		-0.54	-0.0452	12.00	489+25.00	1048.57						
					1046.75		-1.08	-0.0452	24.00	1047.84		-0.54	-0.0452	12.00	489+50.00	1048.38						
					1046.55		-1.08	-0.0452	24.00	1047.64		-0.54	-0.0452	12.00	489+75.00	1048.18						
					1046.35		-1.08	-0.0452	24.00	1047.44		-0.54	-0.0452	12.00	490+00.00	1047.98						
					1046.15		-1.08	-0.0452	24.00	1047.24		-0.54	-0.0452	12.00	490+25.00	1047.78						
					1045.96		-1.08	-0.0452	24.00	1047.05		-0.54	-0.0452	12.00	490+50.00	1047.59						
					1045.76		-1.08	-0.0452	24.00	1046.85		-0.54	-0.0452	12.00	490+75.00	1047.39						
					1045.56		-1.08	-0.0452	24.00	1046.65		-0.54	-0.0452	12.00	491+00.00	1047.19						
					1045.36		-1.08	-0.0452	24.00	1046.45		-0.54	-0.0452	12.00	491+25.00	1046.99						

CALCULATED LRK
CHECKED PJF

SUPERELEVATION TABLE
SOUTHBOUND I.R. 77

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VARIOUS

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CURVE 8 - SUPERELEVATION TABLE

P.I. Sta. 482+91.41	Dc = 1° 28' 03"

					LEFT OUTSIDE					LEFT INSIDE					BASELINE CONTROL		RIGHT SIDE					REMARKS
					EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE						
					1045.20		-1.08	-0.0452	24.00	1046.29		-0.54	-0.0452	12.00	491+45.74	1046.83						F.S.
					1045.19		-1.07	-0.0447	24.00	1046.26		-0.54	-0.0447	12.00	491+50.00	1046.80						
					1045.09		-1.01	-0.0419	24.00	1046.10		-0.50	-0.0419	12.00	491+75.00	1046.60						
					1044.99		-0.94	-0.0392	24.00	1045.93		-0.47	-0.0392	12.00	492+00.00	1046.40						
					1044.89		-0.87	-0.0364	24.00	1045.76		-0.44	-0.0364	12.00	492+25.00	1046.20						
					1044.80		-0.81	-0.0336	24.00	1045.61		-0.40	-0.0336	12.00	492+50.00	1046.01						
					1044.70		-0.74	-0.0308	24.00	1045.44		-0.37	-0.0308	12.00	492+75.00	1045.81						
					1044.68	250	-0.72	-0.0301	24.00	1045.40	750	-0.36	-0.0301	12.00	492+81.37	1045.76						P.T.
					1044.60		-0.67	-0.0281	24.00	1045.27		-0.34	-0.0281	12.00	493+00.00	1045.61						
					1044.50		-0.61	-0.0253	24.00	1045.11		-0.30	-0.0253	12.00	493+25.00	1045.41						
					1044.41		-0.54	-0.0225	24.00	1044.95		-0.27	-0.0225	12.00	493+50.00	1045.22						
					1044.31		-0.47	-0.0197	24.00	1044.78		-0.24	-0.0197	12.00	493+75.00	1045.02						
					1044.21		-0.41	-0.0169	24.00	1044.62		-0.20	-0.0169	12.00	494+00.00	1044.82						
					1044.17		-0.38	-0.0160	24.00	1044.56		-0.19	-0.0160	12.00	494+08.54	1044.75						R.C.
					1044.11		-0.38	-0.0160	24.00	1044.49		-0.13	-0.0105	12.00	494+25.00	1044.62						
					1044.02		-0.38	-0.0160	24.00	1044.40		-0.03	-0.0022	12.00	494+50.00	1044.43						
					1043.99		-0.38	-0.0160	24.00	1044.37		0.00	0.0000	12.00	494+56.54	1044.37						H.F.
					1043.92		-0.38	-0.0160	24.00	1044.30	250	0.07	0.0062	12.00	494+75.00	1044.23						
					1043.82		-0.38	-0.0160	24.00	1044.20		0.17	0.0145	12.00	495+00.00	1044.03						
					1043.80		-0.38	-0.0160	24.00	1044.18		0.19	0.0160	12.00	495+04.54	1043.99						N.C.

CALCULATED LRK
CHECKED PJF

SUPERELEVATION TABLE
SOUTHBOUND I.R. 77

SUM-77/277/244
VARIOUS

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CURVE 9 - SUPERELEVATION TABLE

P.I. Sta. 515+02.63	Dc = 2° 00' 00"

RAMP B-1 ACCEL LANE					LEFT OUTSIDE					LEFT INSIDE					BASELINE CONTROL		RAMP C-2 DECEL LANE					
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	REMARKS
1038.33		-0.21	-0.0160	13.02	1038.54		-0.38	-0.0160	24.00	1038.92		0.19	0.0160	12.00	500+95.48	1038.73						N.C.
1038.32		-0.21	-0.0160	13.11	1038.52		-0.37	-0.0153	24.00	1038.89		0.19	0.0160	12.00	501+00.00	1038.70						
1038.20		-0.22	-0.0160	13.61	1038.41		-0.28	-0.0116	24.00	1038.69		0.19	0.0160	12.00	501+25.00	1038.50						
1038.08		-0.23	-0.0160	14.09	1038.31		-0.19	-0.0081	24.00	1038.50		0.19	0.0160	12.00	501+48.92	1038.31	12.00	-0.0247	-0.30		1038.01	
1038.08		-0.23	-0.0160	14.12	1038.30		-0.19	-0.0079	24.00	1038.49		0.19	0.0160	12.00	501+50.00	1038.30	12.00	-0.0243	-0.29	221	1038.01	
1037.99		-0.23	-0.0160	14.56	1038.22		-0.11	-0.0046	24.00	1038.33		0.19	0.0160	12.00	501+72.02	1038.14	12.00	-0.0160	-0.19		1037.95	
1037.98		-0.23	-0.0160	14.62	1038.21		-0.10	-0.0042	24.00	1038.31		0.19	0.0160	12.00	501+75.00	1038.12	12.00	-0.0160	-0.19		1037.93	
1037.88		-0.24	-0.0160	15.12	1038.12	280	-0.01	-0.0005	24.00	1038.13		0.19	0.0160	12.00	502+00.00	1037.94	12.00	-0.0160	-0.19		1037.75	
1037.87		-0.24	-0.0160	15.18	1038.11		0.00	0.0000	24.00	1038.11		0.19	0.0160	12.00	502+03.04	1037.92	12.00	-0.0160	-0.19		1037.73	T.S./H.F.
1037.80		-0.25	-0.0160	15.62	1038.05		0.08	0.0033	24.00	1037.97		0.19	0.0160	12.00	502+25.00	1037.78	12.00	-0.0160	-0.19		1037.59	
1037.74		-0.26	-0.0160	16.00	1038.00		0.15	0.0061	24.00	1037.85		0.19	0.0160	12.00	502+43.78	1037.66	12.00	-0.0160	-0.19		1037.47	
					1037.98		0.17	0.0070	24.00	1037.81		0.19	0.0160	12.00	502+50.00	1037.62	12.00	-0.0160	-0.19		1037.43	
					1037.90		0.26	0.0107	24.00	1037.64		0.19	0.0160	12.00	502+75.00	1037.45	12.00	-0.0160	-0.19		1037.26	
					1037.83		0.35	0.0144	24.00	1037.48		0.19	0.0160	12.00	503+00.00	1037.29	12.00	-0.0160	-0.19		1037.10	
					1037.80		0.38	0.0160	24.00	1037.41		0.19	0.0160	12.00	503+10.60	1037.22	12.00	-0.0160	-0.19		1037.03	R.C.
					1037.76		0.42	0.0174	24.00	1037.34		0.21	0.0174	12.00	503+25.00	1037.13	12.00	-0.0160	-0.19		1036.94	
					1037.69		0.48	0.0199	24.00	1037.21		0.24	0.0199	12.00	503+50.00	1036.97	12.00	-0.0160	-0.19		1036.78	
					1037.61		0.54	0.0224	24.00	1037.07		0.27	0.0224	12.00	503+75.00	1036.80	12.00	-0.0160	-0.19		1036.61	
					1037.55		0.59	0.0244	24.00	1036.96		0.29	0.0244	12.00	503+95.44	1036.67	12.00	-0.0160	-0.19		1036.48	
					1037.54		0.60	0.0249	24.00	1036.94		0.30	0.0249	12.00	504+00.00	1036.64						
					1037.46		0.66	0.0273	24.00	1036.81		0.33	0.0273	12.00	504+25.00	1036.48						
					1037.39	280	0.72	0.0298	24.00	1036.68	840	0.36	0.0298	12.00	504+50.00	1036.32						
					1037.31		0.78	0.0323	24.00	1036.54		0.39	0.0323	12.00	504+75.00	1036.15						
					1037.24		0.84	0.0348	24.00	1036.41		0.42	0.0348	12.00	505+00.00	1035.99						
					1037.17		0.90	0.0373	24.00	1036.28		0.45	0.0373	12.00	505+25.00	1035.83						
					1037.10		0.95	0.0397	24.00	1036.15		0.48	0.0397	12.00	505+50.00	1035.67						
					1037.02		1.01	0.0422	24.00	1036.01		0.51	0.0422	12.00	505+75.00	1035.50						
					1036.95		1.07	0.0447	24.00	1035.88		0.54	0.0447	12.00	506+00.00	1035.34						
					1036.94		1.08	0.0450	24.00	1035.86		0.54	0.0450	12.00	506+03.04	1035.32						S.C./F.S.
					1036.80		1.08	0.0450	24.00	1035.72		0.54	0.0450	12.00	506+25.00	1035.18						
					1036.64		1.08	0.0450	24.00	1035.56		0.54	0.0450	12.00	506+50.00	1035.02						
					1036.47		1.08	0.0450	24.00	1035.39		0.54	0.0450	12.00	506+75.00	1034.85						
					1036.31		1.08	0.0450	24.00	1035.23		0.54	0.0450	12.00	507+00.00	1034.69						
					1036.15		1.08	0.0450	24.00	1035.07		0.54	0.0450	12.00	507+25.00	1034.53						
					1035.99		1.08	0.0450	24.00	1034.91		0.54	0.0450	12.00	507+50.00	1034.37						
					1035.82		1.08	0.0450	24.00	1034.74		0.54	0.0450	12.00	507+75.00	1034.20						
					1035.66		1.08	0.0450	24.00	1034.58		0.54	0.0450	12.00	508+00.00	1034.04						
					1035.51		1.08	0.0450	24.00	1034.43		0.54	0.0450	12.00	508+25.00	1033.89						
					1035.39		1.08	0.0450	24.00	1034.31		0.54	0.0450	12.00	508+50.00	1033.77						
					1035.32		1.08	0.0450	24.00	1034.24		0.54	0.0450	12.00	508+75.00	1033.70						
					1035.30		1.08	0.0450	24.00	1034.22		0.54	0.0450	12.00	509+00.00	1033.68						
					1035.32		1.08	0.0450	24.00	1034.24		0.54	0.0450	12.00	509+25.00	1033.70						
					1035.38		1.08	0.0450	24.00	1034.30		0.54	0.0450	12.00	509+50.00	1033.76						
					1035.49		1.08	0.0450	24.00	1034.41		0.54	0.0450	12.00	509+75.00	1033.87						
					1035.64		1.08	0.0450	24.00	1034.56		0.54	0.0450	12.00	510+00.00	1034.02						
					1035.84		1.08	0.0450	24.00	1034.76		0.54	0.0450	12.00	510+25.00	1034.22						
					1036.08		1.08	0.0450	24.00	1035.00		0.54	0.0450	12.00	510+50.00	1034.46						
					1036.37		1.08	0.0450	24.00	1035.29		0.54	0.0450	12.00	510+75.00	1034.75						
					1036.70		1.08	0.0450	24.00	1035.62		0.54	0.0450	12.00	511+00.00	1035.08						
					1037.07		1.08	0.0450	24.00	1035.99		0.54	0.0450	12.00	511+25.00	1035.45						
					1037.49		1.08	0.0450	24.00	1036.41		0.54	0.0450	12.00	511+50.00	1035.87						
					1037.95		1.08	0.0450	24.00	1036.87		0.54	0.0450	12.00	511+75.00	1036.33						
					1038.46		1.08	0.0450	24.00	1037.38		0.54	0.0450	12.00	512+00.00	1036.84						
					1039.01		1.08	0.0450	24.00	1037.93		0.54	0.0450	12.00	512+25.00	1037.39						

CALCULATED LRK
CHECKED PJF

SUPERELEVATION TABLE
SOUTHBOUND I.R. 77

SUM-77/277/244
VARIOUS

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CURVE 9 - SUPERELEVATION TABLE

P.I. Sta. 515+02.63	Dc = 2° 00' 00"

					LEFT OUTSIDE					LEFT INSIDE					BASELINE CONTROL							REMARKS
					EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE						
					1039.60		1.08	0.0450	24.00	1038.52		0.54	0.0450	12.00	512+50.00	1037.98						
					1040.24		1.08	0.0450	24.00	1039.16		0.54	0.0450	12.00	512+75.00	1038.62						
					1040.93		1.08	0.0450	24.00	1039.85		0.54	0.0450	12.00	513+00.00	1039.31						
					1041.63		1.08	0.0450	24.00	1040.55		0.54	0.0450	12.00	513+25.00	1040.01						
					1042.34		1.08	0.0450	24.00	1041.26		0.54	0.0450	12.00	513+50.00	1040.72						
					1043.05		1.08	0.0450	24.00	1041.97		0.54	0.0450	12.00	513+75.00	1041.43						
					1043.59		1.08	0.0450	24.00	1042.51		0.54	0.0450	12.00	513+94.27	1041.97						F.S.
					1043.85		1.14	0.0477	24.00	1042.70		0.57	0.0477	12.00	514+00.00	1042.13						
					1044.65		1.21	0.0504	24.00	1043.44		0.60	0.0504	12.00	514+25.00	1042.84						
					1045.47	222	1.28	0.0532	24.00	1044.19	668	0.64	0.0532	12.00	514+50.00	1043.55						
					1046.26		1.34	0.0559	24.00	1044.92		0.67	0.0559	12.00	514+75.00	1044.25						
					1047.07		1.41	0.0586	24.00	1045.66		0.70	0.0586	12.00	515+00.00	1044.96						
					1047.88		1.47	0.0613	24.00	1046.41		0.74	0.0613	12.00	515+25.00	1045.67						EX. F.S.
					1048.51		1.47	0.0613	24.00	1047.04		0.74	0.0613	12.00	515+50.00	1046.30						
					1049.15		1.47	0.0613	24.00	1047.68		0.74	0.0613	12.00	515+75.00	1046.94						
					1049.39		1.47	0.0613	24.00	1047.92		0.74	0.0613	12.00	515+84.18	1047.18						EXIST.

*NOTE: END WORK AT STA. 514+95.00, LIMITS SHOWN PAST THAT STATION ARE TO BE CONSTRUCTED BY OTHERS AS PART OF THE SUM-76/77/8-8.42/9.77/0.00 DB (PID 102329) PROJECT

CALCULATED LRK
CHECKED PJF

SUPERELEVATION TABLE
SOUTHBOUND I.R. 77

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CURVE 12 - SUPERELEVATION TABLE

P.I. Sta. 88+67.18 | Dc = 2° 00' 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	
					86+63.69	1047.92	24.00	0.0452	1.08	222	1049.00	P.C./77 F.S.
					86+64.76	1047.92	24.00	0.0450	1.08		1049.00	F.S.
					86+75.00	1047.83	24.00	0.0450	1.08		1048.91	
					87+00.00	1047.64	24.00	0.0450	1.08		1048.71	
					87+25.00	1047.43	24.00	0.0450	1.08		1048.51	
					87+50.00	1047.22	24.00	0.0450	1.08		1048.30	
					87+75.00	1047.01	24.00	0.0450	1.08		1048.09	
					88+00.00	1046.80	24.00	0.0450	1.08		1047.88	
					88+25.00	1046.58	24.00	0.0450	1.08		1047.66	
					88+50.00	1046.36	24.00	0.0450	1.08		1047.44	
					88+75.00	1046.14	24.00	0.0450	1.08		1047.22	
					89+00.00	1045.92	24.00	0.0450	1.08		1047.00	
					89+25.00	1045.69	24.00	0.0450	1.08		1046.77	
					89+50.00	1045.46	24.00	0.0450	1.08		1046.54	
					89+75.00	1045.23	24.00	0.0450	1.08		1046.31	
					90+00.00	1045.00	24.00	0.0450	1.08		1046.08	
					90+25.00	1044.75	24.00	0.0450	1.08		1045.83	
					90+50.00	1044.51	24.00	0.0450	1.08		1045.59	
					90+70.00	1044.31	24.00	0.0450	1.08		1045.39	C.S./F.S.

SPIRAL 13 - SUPERELEVATION TABLE

P.I. Sta. 92+70.10 |

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	
					90+70.00	1044.31	24.00	0.0450	1.08	1190	1045.39	C.S./F.S.
					90+75.00	1044.26	24.00	0.0452	1.08		1045.34	
					91+00.00	1044.02	24.00	0.0461	1.11		1045.13	
					91+25.00	1043.84	24.00	0.0469	1.13		1044.97	
					91+50.00	1043.66	24.00	0.0478	1.15		1044.81	
					91+75.00	1043.48	24.00	0.0487	1.17		1044.65	
					92+00.00	1043.30	24.00	0.0496	1.19		1044.49	
					92+25.00	1043.12	24.00	0.0504	1.21		1044.33	
					92+50.00	1042.94	24.00	0.0513	1.23		1044.17	
					92+75.00	1042.76	24.00	0.0522	1.25		1044.01	
					93+00.00	1042.58	24.00	0.0531	1.27		1043.85	
					93+25.00	1042.40	24.00	0.0539	1.29		1043.69	
					93+50.00	1042.22	24.00	0.0548	1.32		1043.54	
					93+70.00	1042.07	24.00	0.0555	1.33		1043.40	S.C./F.S.

CALCULATED LRK | CHECKED PJF

SUPERELEVATION TABLE
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CURVE 14 - SUPERELEVATION TABLE

P.I. Sta. 99+36.72 | Dc = 3° 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	
					93+70.00	1042.07	24.00	0.0555	1.33		1043.40	S.C./F.S.
					93+75.00	1042.04	24.00	0.0555	1.33		1043.37	
					94+00.00	1041.86	24.00	0.0555	1.33		1043.19	
					94+25.00	1041.68	24.00	0.0555	1.33		1043.01	
					94+50.00	1041.52	24.00	0.0555	1.33		1042.85	
					94+75.00	1041.39	24.00	0.0555	1.33		1042.72	
					95+00.00	1041.31	24.00	0.0555	1.33		1042.64	
					95+25.00	1041.27	24.00	0.0555	1.33		1042.60	
					95+50.00	1041.26	24.00	0.0555	1.33		1042.59	
					95+75.00	1041.29	24.00	0.0555	1.33		1042.62	
					96+00.00	1041.36	24.00	0.0555	1.33		1042.69	
					96+25.00	1041.47	24.00	0.0555	1.33		1042.80	
					96+50.00	1041.62	24.00	0.0555	1.33		1042.95	
					96+75.00	1041.81	24.00	0.0555	1.33		1043.14	
					97+00.00	1042.03	24.00	0.0555	1.33		1043.36	
					97+25.00	1042.30	24.00	0.0555	1.33		1043.63	
					97+50.00	1042.60	24.00	0.0555	1.33		1043.93	
					97+75.00	1042.94	24.00	0.0555	1.33		1044.27	
					98+00.00	1043.32	24.00	0.0555	1.33		1044.65	
					98+25.00	1043.74	24.00	0.0555	1.33		1045.07	
					98+50.00	1044.18	24.00	0.0555	1.33		1045.51	
					98+75.00	1044.62	24.00	0.0555	1.33		1045.95	
					99+00.00	1045.06	24.00	0.0555	1.33		1046.39	
					99+25.00	1045.49	24.00	0.0555	1.33		1046.82	
					99+50.00	1045.93	24.00	0.0555	1.33		1047.26	
					99+75.00	1046.37	24.00	0.0555	1.33		1047.70	
					100+00.00	1046.81	24.00	0.0555	1.33		1048.14	
					100+25.00	1047.25	24.00	0.0555	1.33		1048.58	
					100+50.00	1047.68	24.00	0.0555	1.33		1049.01	
					100+75.00	1048.11	24.00	0.0555	1.33		1049.44	
					101+00.00	1048.50	24.00	0.0555	1.33		1049.83	
					101+25.00	1048.86	24.00	0.0555	1.33		1050.19	
					101+50.00	1049.20	24.00	0.0555	1.33		1050.53	
					101+75.00	1049.50	24.00	0.0555	1.33		1050.83	
					102+00.00	1049.78	24.00	0.0555	1.33		1051.11	
					102+25.00	1050.02	24.00	0.0555	1.33		1051.35	
					102+50.00	1050.24	24.00	0.0555	1.33		1051.57	
					102+75.00	1050.42	24.00	0.0555	1.33		1051.75	
					103+00.00	1050.58	24.00	0.0555	1.33		1051.91	
					103+25.00	1050.71	24.00	0.0555	1.33		1052.04	
					103+50.00	1050.80	24.00	0.0555	1.33		1052.13	
					103+75.00	1050.87	24.00	0.0555	1.33		1052.20	
					104+00.00	1050.91	24.00	0.0555	1.33		1052.24	
					104+25.00	1050.91	24.00	0.0555	1.33		1052.24	
					104+50.00	1050.89	24.00	0.0555	1.33		1052.22	
					104+55.37	1050.88	24.00	0.0555	1.33		1052.21	C.S./F.S.

SPIRAL 15 - SUPERELEVATION TABLE

P.I. Sta. 105+22.06

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	
					104+55.37	1050.88	24.00	0.0555	1.33		1052.21	C.S./F.S.
					104+75.00	1050.84	24.00	0.0519	1.25		1052.09	
					105+00.00	1050.76	24.00	0.0473	1.14		1051.90	
					105+25.00	1050.64	24.00	0.0427	1.02		1051.66	
					105+50.00	1050.50	24.00	0.0381	0.91		1051.41	
					105+75.00	1050.33	24.00	0.0335	0.80	226	1051.13	
					106+00.00	1050.13	24.00	0.0289	0.69		1050.82	
					106+25.00	1049.90	24.00	0.0243	0.58		1050.48	
					106+50.00	1049.64	24.00	0.0197	0.47		1050.11	
					106+55.37	1049.58	24.00	0.0187	0.45		1050.03	S.C./F.S.

CALCULATED LRK | CHECKED PJF

SUPERELEVATION TABLE RAMP A

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CURVE 16 - SUPERELEVATION TABLE

P.I. Sta. 110+34.76	Dc = 0° 35' 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	
					106+55.37	1049.58	24.00	0.0187	0.45		1050.03	S.C./F.S.
					106+75.00	1049.35	24.00	0.0187	0.45		1049.80	
					107+00.00	1049.03	24.00	0.0187	0.45		1049.48	
					107+25.00	1048.70	24.00	0.0187	0.45		1049.15	
					107+50.00	1048.36	24.00	0.0187	0.45		1048.81	
					107+75.00	1048.03	24.00	0.0187	0.45		1048.48	
					108+00.00	1047.69	24.00	0.0187	0.45		1048.14	
					108+25.00	1047.37	24.00	0.0187	0.45		1047.82	
					108+50.00	1047.05	24.00	0.0187	0.45		1047.50	
					108+75.00	1046.72	24.00	0.0187	0.45		1047.17	
					108+89.94	1046.53	26.00	0.0187	0.49		1047.02	
					109+00.00	1046.38	25.47	0.0187	0.48		1046.86	
					109+25.00	1046.03	24.19	0.0187	0.45		1046.48	
					109+50.00	1045.67	22.97	0.0187	0.43		1046.10	
					109+75.00	1045.32	21.82	0.0187	0.41		1045.73	
					110+00.00	1044.97	20.73	0.0187	0.39		1045.36	
					110+25.00	1044.62	19.71	0.0187	0.37		1044.99	
					110+50.00	1044.26	18.75	0.0187	0.35		1044.61	
					110+75.00	1043.91	17.85	0.0187	0.33		1044.24	
					111+00.00	1043.54	17.02	0.0187	0.32		1043.86	
					111+25.00	1043.17	16.25	0.0187	0.30		1043.47	
					111+50.00	1042.79	15.55	0.0187	0.29		1043.08	
					111+75.00	1042.41	14.91	0.0187	0.28		1042.69	
					112+00.00	1042.02	14.33	0.0187	0.27		1042.29	
					112+25.00	1041.66	13.82	0.0187	0.26		1041.92	
					112+50.00	1041.32	13.37	0.0187	0.25		1041.57	
					112+75.00	1040.94	12.98	0.0187	0.24		1041.18	
					113+00.00	1040.57	12.66	0.0187	0.24		1040.81	
					113+25.00	1040.20	12.40	0.0187	0.23		1040.43	
					113+50.00	1039.83	12.21	0.0187	0.23		1040.06	
					113+75.00	1039.47	12.08	0.0187	0.23		1039.70	
					114+00.00	1039.09	12.01	0.0187	0.22		1039.31	
					114+13.78 = 237+37.85	1038.88	12.00	0.0187	0.22		1039.10	P.T./F.S.

LEFT SIDE					*SAWCUT 32' RT. (C/L I.R. 277)		RIGHT SIDE						REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
					237+00.00	1038.52	11.42	-0.0244	-0.28		1038.24	EXIST.
					237+25.00	1038.91	11.80	-0.0206	-0.24	553	1038.67	
					237+37.85 = 114+13.78	1039.10	12.00	-0.0187	-0.22		1038.88	P.T./F.S.

*NOTE: ELEVATION IS EXISTING ELEVATION AT SAWCUT 32' RIGHT OF EXISTING C/L I.R. 277 (EXISTING ELEVATIONS TO BE VERIFIED IN FIELD)

CALCULATED LRK
CHECKED PJF

SUPERELEVATION TABLE RAMP A

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CURVE 21 - SUPERELEVATION TABLE

P.I. Sta. 201+73.97 | Dc = 6° 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	
					197+05.36	1033.33	16.00	0.0160	0.26		1033.59	S.T./N.C.
					197+25.00	1033.46	16.00	0.0203	0.32		1033.78	
					197+50.00	1033.63	16.00	0.0258	0.41		1034.04	
					197+75.00	1033.80	16.00	0.0313	0.50		1034.30	
					198+00.00	1033.96	16.00	0.0368	0.59	284	1034.55	
					198+25.00	1034.11	16.00	0.0423	0.68		1034.79	
					198+50.00	1034.27	16.00	0.0478	0.76		1035.03	
					198+75.00	1034.41	16.00	0.0533	0.85		1035.26	
					199+00.00	1034.55	16.00	0.0588	0.94		1035.49	
					199+05.36	1034.60	16.00	0.0600	0.96		1035.56	S.C./F.S.
					199+25.00	1035.79	16.00	0.0600	0.96		1036.75	
					199+50.00	1036.14	16.00	0.0600	0.96		1037.10	
					199+75.00	1036.50	16.00	0.0600	0.96		1037.46	
					200+00.00	1036.74	16.00	0.0600	0.96		1037.70	
					200+25.00	1036.00	16.00	0.0600	0.96		1036.96	
					200+50.00	1036.26	16.00	0.0600	0.96		1037.22	
					200+75.00	1036.59	16.00	0.0600	0.96		1037.55	
					201+00.00	1036.91	16.00	0.0600	0.96		1037.87	
					201+25.00	1037.25	16.00	0.0600	0.96		1038.21	
					201+50.00	1037.58	16.00	0.0600	0.96		1038.54	
					201+75.00	1038.03	16.00	0.0600	0.96		1038.99	
					202+00.00	1038.47	16.00	0.0600	0.96		1039.43	
					202+25.00	1038.98	16.00	0.0600	0.96		1039.94	
					202+50.00	1039.49	16.00	0.0600	0.96		1040.45	
					202+75.00	1039.99	16.00	0.0600	0.96		1040.95	
					203+00.00	1040.50	16.00	0.0600	0.96		1041.46	
					203+25.00	1041.03	16.00	0.0600	0.96		1041.99	
					203+50.00	1041.56	16.00	0.0600	0.96		1042.52	
					203+75.00	1042.09	16.00	0.0600	0.96		1043.05	
					203+99.50	1042.61	16.00	0.0600	0.96		1043.57	C.S./F.S.
					204+00.00	1042.62	16.00	0.0599	0.96		1043.58	
					204+25.00	1043.18	16.00	0.0544	0.87		1044.05	
					204+50.00	1043.74	16.00	0.0489	0.78		1044.52	
					204+75.00	1044.30	16.00	0.0434	0.69		1044.99	
					205+00.00	1044.85	16.00	0.0379	0.61	284	1045.46	
					205+25.00	1045.37	16.00	0.0324	0.52		1045.89	
					205+50.00	1045.88	16.00	0.0269	0.43		1046.31	
					205+75.00	1046.40	16.00	0.0214	0.34		1046.74	
					205+99.50	1046.90	16.00	0.0160	0.26		1047.16	S.T./N.C.

CURVE 22 - SUPERELEVATION TABLE

P.I. Sta. 211+84.50 | Dc = 8° 00′ 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	
					207+73.39	1049.61	16.00	0.0160	0.26		1049.87	T.S./N.C.
					207+75.00	1049.62	16.00	0.0164	0.26		1049.88	
					208+00.00	1049.75	16.00	0.0219	0.35		1050.10	
					208+25.00	1049.80	16.00	0.0274	0.44		1050.24	
					208+50.00	1049.78	16.00	0.0329	0.53		1050.31	
					208+75.00	1049.69	16.00	0.0384	0.61	284	1050.30	
					209+00.00	1049.53	16.00	0.0439	0.70		1050.23	
					209+25.00	1049.30	16.00	0.0494	0.79		1050.09	
					209+50.00	1049.00	16.00	0.0549	0.88		1049.88	
					209+73.39	1048.69	16.00	0.0600	0.96		1049.65	S.C./F.S.
					209+75.00	1048.67	16.00	0.0600	0.96		1049.63	
					210+00.00	1048.33	16.00	0.0600	0.96		1049.29	
					210+25.00	1047.99	16.00	0.0600	0.96		1048.95	
					210+50.00	1047.66	16.00	0.0600	0.96		1048.62	
					210+75.00	1047.32	16.00	0.0600	0.96		1048.28	
					211+00.00	1046.98	16.00	0.0600	0.96		1047.94	
					211+25.00	1046.65	16.00	0.0600	0.96		1047.61	
					211+50.00	1046.31	16.00	0.0600	0.96		1047.27	
					211+75.00	1046.01	16.00	0.0600	0.96		1046.97	
					212+00.00	1045.77	16.00	0.0600	0.96		1046.73	
					212+25.00	1045.59	16.00	0.0600	0.96		1046.55	
					212+50.00	1045.48	16.00	0.0600	0.96		1046.44	
					212+75.00	1045.44	16.00	0.0600	0.96		1046.40	
					213+00.00	1045.45	16.00	0.0600	0.96		1046.41	
					213+25.00	1045.54	16.00	0.0600	0.96		1046.50	
					213+50.00	1045.69	16.00	0.0600	0.96		1046.65	
					213+58.80	1045.75	16.00	0.0600	0.96		1046.71	C.S./F.S.
					213+75.00	1045.90	16.00	0.0549	0.88		1046.78	
					214+00.00	1046.17	16.00	0.0470	0.75		1046.92	
					214+25.00	1046.52	16.00	0.0392	0.63		1047.15	
					214+50.00	1046.92	16.00	0.0313	0.50		1047.42	
					214+75.00	1047.39	16.00	0.0235	0.38		1047.77	
					215+00.00	1047.93	16.00	0.0156	0.25	199	1048.18	
					215+25.00	1048.53	16.00	0.0077	0.12		1048.65	
					215+49.63	1049.18	16.00	0.0000	0.00		1049.18	H.F.
					215+50.00	1049.19	16.00	-0.0001	0.00		1049.19	
					215+58.80	1049.44	16.00	-0.0029	-0.05		1049.39	S.T.
					215+75.00	1049.92	16.00	-0.0080	-0.13		1049.79	
					215+90.98	1050.42	16.00	-0.0130	-0.21		1050.21	EXIST.

*NOTE: END WORK AT STA. 214+90.00, LIMITS SHOWN PAST THAT STATION ARE TO BE CONSTRUCTED BY OTHERS AS PART OF THE SUM-76/77/8-8.42/9.77/0.00 DB (PID 102329) PROJECT

CALCULATED LRK | CHECKED PJF

SUPERELEVATION TABLE
RAMP B

SUM-77/277/244
VARIOUS

819
1288

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SPIRAL 27 - SUPERELEVATION TABLE

P.I. Sta. 406+35.31

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		
						402+43.78	1037.74	16.00	0.0160	0.26		1038.00		N.C.
						402+50.00	1037.72	16.00	0.0156	0.25		1037.97		
						402+75.00	1037.67	16.00	0.0140	0.22		1037.89		
						403+00.00	1037.62	16.00	0.0123	0.20		1037.82		
						403+25.00	1037.57	16.00	0.0107	0.17	953	1037.74		
						403+50.00	1037.52	16.00	0.0090	0.14		1037.66		
						403+75.00	1037.48	16.00	0.0074	0.12		1037.60		
						404+00.00	1037.43	16.00	0.0058	0.09		1037.52		
						404+25.00	1037.38	16.00	0.0041	0.07		1037.45		
						404+43.48	1037.35	16.00	0.0029	0.05		1037.40		
						404+50.00	1037.32	16.00	0.0044	0.07	278	1037.39		
						404+75.00	1037.20	16.00	0.0100	0.16		1037.36		
						405+00.00	1037.08	16.00	0.0156	0.25		1037.33		
						405+01.68	1037.07	16.00	0.0160	0.26		1037.33		T.S./N.C.
						405+25.00	1036.96	16.00	0.0211	0.34		1037.30		
						405+50.00	1036.79	16.00	0.0266	0.43		1037.22		
						405+75.00	1036.61	16.00	0.0321	0.51		1037.12		
						406+00.00	1036.44	16.00	0.0376	0.60		1037.04		
						406+25.00	1036.26	16.00	0.0431	0.69	284	1036.95		
						406+50.00	1036.12	16.00	0.0486	0.78		1036.90		
						406+75.00	1036.03	16.00	0.0541	0.87		1036.90		
						407+00.00	1036.01	16.00	0.0596	0.95		1036.96		
						407+01.68	1036.01	16.00	0.0600	0.96		1036.97		S.C./F.S.

CURVE 28 - SUPERELEVATION TABLE

P.I. Sta. 407+76.50 | 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		
						407+01.68	1036.01	16.00	0.0600	0.96		1036.97		S.C./F.S.
						407+25.00	1036.05	16.00	0.0600	0.96		1037.01		
						407+50.00	1036.14	16.00	0.0600	0.96		1037.10		
						407+75.00	1036.30	16.00	0.0600	0.96		1037.26		
						408+00.00	1036.52	16.00	0.0600	0.96		1037.48		
						408+25.00	1036.80	16.00	0.0600	0.96		1037.76		
						408+50.00	1037.12	16.00	0.0600	0.96		1038.08		
						408+50.17	1037.12	16.00	0.0600	0.96		1038.08		P.C.C./F.S.

CALCULATED LRK | CHECKED PJF

SUPERELEVATION TABLE
RAMP B-1

SUM-77/277/244
VARIOUS

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1288

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CURVE 29 - SUPERELEVATION TABLE

P.I. Sta. 438+65.75 | Dc = 24° 00′ 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	
					408+50.17	1037.12	16.00	0.0600	0.96		1038.08	P.C.C./F.S.
					408+75.00	1037.43	16.00	0.0600	0.96		1038.39	
					409+00.00	1037.74	16.00	0.0600	0.96		1038.70	
					409+25.00	1038.05	16.00	0.0600	0.96		1039.01	
					409+50.00	1038.36	16.00	0.0600	0.96		1039.32	
					409+75.00	1038.69	16.00	0.0600	0.96		1039.65	
					410+00.00	1039.04	16.00	0.0600	0.96		1040.00	
					410+25.00	1039.39	16.00	0.0600	0.96		1040.35	
					410+50.00	1039.76	16.00	0.0600	0.96		1040.72	
					410+75.00	1040.14	16.00	0.0600	0.96		1041.10	
					411+00.00	1040.53	16.00	0.0600	0.96		1041.49	
					411+25.00	1040.93	16.00	0.0600	0.96		1041.89	
					411+50.00	1041.35	16.00	0.0600	0.96		1042.31	
					411+75.00	1041.78	16.00	0.0600	0.96		1042.74	
					412+00.00	1042.22	16.00	0.0600	0.96		1043.18	
					412+25.00	1042.67	16.00	0.0600	0.96		1043.63	
					412+50.00	1043.14	16.00	0.0600	0.96		1044.10	
					412+75.00	1043.62	16.00	0.0600	0.96		1044.58	
					413+00.00	1044.11	16.00	0.0600	0.96		1045.07	
					413+25.00	1044.61	16.00	0.0600	0.96		1045.57	
					413+50.00	1045.13	16.00	0.0600	0.96		1046.09	
					413+75.00	1045.66	16.00	0.0600	0.96		1046.62	
					414+00.00	1046.20	16.00	0.0600	0.96		1047.16	
					414+25.00	1046.75	16.00	0.0600	0.96		1047.71	
					414+50.00	1047.31	16.00	0.0600	0.96		1048.27	
					414+75.00	1047.84	16.00	0.0600	0.96		1048.80	
					415+00.00	1048.36	16.00	0.0600	0.96		1049.32	
					415+25.00	1048.87	16.00	0.0600	0.96		1049.83	
					415+50.00	1049.36	16.00	0.0600	0.96		1050.32	
					415+62.45	1049.60	16.00	0.0600	0.96		1050.56	C.S./F.S.

SPIRAL 30 - SUPERELEVATION TABLE

P.I. Sta. 416+33.74 |

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	
					415+62.45	1049.60	16.00	0.0600	0.96		1050.56	C.S./F.S.
					415+75.00	1049.83	16.00	0.0585	0.94		1050.77	
					416+00.00	1050.29	16.00	0.0555	0.89		1051.18	
					416+25.00	1050.74	16.00	0.0525	0.84		1051.58	
					416+50.00	1051.16	16.00	0.0495	0.79		1051.95	
					416+75.00	1051.58	16.00	0.0465	0.74	521	1052.32	
					417+00.00	1051.97	16.00	0.0435	0.70		1052.67	
					417+25.00	1052.36	16.00	0.0405	0.65		1053.01	
					417+50.00	1052.73	16.00	0.0375	0.60		1053.33	
					417+62.45	1052.92	16.00	0.0360	0.58		1053.50	S.C./F.S.

CALCULATED LRK | CHECKED PJF

SUPERELEVATION TABLE
RAMP B-1

SUM-77/277/244
VARIOUS

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1288

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CURVE 31 - SUPERELEVATION TABLE

P.I. Sta. 420+43.64	Dc = 1° 15' 00"

LEFT SIDE					BASELINE CONTROL		RIGHT SIDE					
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	REMARKS
					417+62.45	1052.92	16.00	0.0360	0.58		1053.50	S.C./F.S.
					417+75.00	1053.10	16.00	0.0360	0.58		1053.68	
					418+00.00	1053.48	16.00	0.0360	0.58		1054.06	
					418+25.00	1053.85	16.00	0.0360	0.58		1054.43	
					418+50.00	1054.23	16.00	0.0360	0.58		1054.81	
					418+55.68	1054.31	16.00	0.0360	0.58		1054.89	
					418+75.00	1054.60	15.77	0.0360	0.57		1055.17	
					419+00.00	1054.98	15.47	0.0360	0.56		1055.54	
					419+25.00	1055.35	15.17	0.0360	0.55		1055.90	
					419+50.00	1055.75	14.87	0.0360	0.54		1056.29	
					419+75.00	1056.16	14.57	0.0360	0.52		1056.68	
					420+00.00	1056.56	14.27	0.0360	0.51		1057.07	F.S.
					420+25.00	1056.97	13.97	0.0305	0.43		1057.40	
					420+50.00	1057.39	13.67	0.0251	0.34		1057.73	
					420+75.00	1057.81	13.37	0.0196	0.26	381	1058.07	
					421+00.00	1058.23	13.07	0.0142	0.19		1058.42	
					421+25.00	1058.65	12.77	0.0087	0.11		1058.76	
					421+40.51	1058.91	12.58	0.0053	0.07		1058.98	EXIST.

CALCULATED LRK
CHECKED PJF

SUPERELEVATION TABLE
RAMP B-1

SUM-77/277/244
VARIOUS

822
1288

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CURVE 37 - SUPERELEVATION TABLE

P.I. Sta. 290+21.80 | Dc = 1° 58′ 03″

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	
					285+64.96	1037.77	12.00	0.0452	0.54		1038.31	P.C./77 F.S.
					285+75.00	1037.62	12.00	0.0485	0.58	250	1038.20	
					285+92.86	1037.33	12.03	0.0545	0.66		1037.99	F.S.
					286+00.00	1037.22	12.05	0.0545	0.66		1037.88	
					286+25.00	1036.90	12.16	0.0545	0.66		1037.56	
					286+50.00	1036.59	12.31	0.0545	0.67		1037.26	
					286+75.00	1036.27	12.52	0.0545	0.68		1036.95	
					287+00.00	1035.96	12.79	0.0545	0.70		1036.66	
					287+25.00	1035.63	13.11	0.0545	0.71		1036.34	
					287+50.00	1035.30	13.48	0.0545	0.73		1036.03	
					287+75.00	1034.98	13.91	0.0545	0.76		1035.74	
					288+00.00	1034.65	14.39	0.0545	0.78		1035.43	
					288+25.00	1034.31	14.93	0.0545	0.81		1035.12	
					288+50.00	1033.97	15.52	0.0545	0.85		1034.82	
					288+75.00	1033.63	16.16	0.0545	0.88		1034.51	
					289+00.00	1033.29	16.86	0.0545	0.92		1034.21	
					289+25.00	1032.94	17.61	0.0545	0.96		1033.90	
					289+50.00	1032.59	18.42	0.0545	1.00		1033.59	
					289+75.00	1032.24	19.28	0.0545	1.05		1033.29	
					290+00.00	1031.89	20.19	0.0545	1.10		1032.99	
					290+25.00	1031.58	21.16	0.0545	1.15		1032.73	
					290+50.00	1031.27	22.18	0.0545	1.21		1032.48	
					290+75.00	1031.01	23.26	0.0545	1.27		1032.28	
					290+91.54	1030.85	24.00	0.0545	1.31		1032.16	
					291+00.00	1030.76	24.00	0.0545	1.31		1032.07	
					291+25.00	1030.56	24.00	0.0545	1.31		1031.87	
					291+50.00	1030.36	24.00	0.0545	1.31		1031.67	
					291+75.00	1030.18	24.00	0.0545	1.31		1031.49	
					292+00.00	1030.03	24.00	0.0545	1.31		1031.34	
					292+25.00	1029.91	24.00	0.0545	1.31		1031.22	
					292+50.00	1029.83	24.00	0.0545	1.31		1031.14	
					292+75.00	1029.79	24.00	0.0545	1.31		1031.10	
					293+00.00	1029.78	24.00	0.0545	1.31		1031.09	
					293+25.00	1029.80	24.00	0.0545	1.31		1031.11	
					293+50.00	1029.86	24.00	0.0545	1.31		1031.17	
					293+63.03	1029.90	24.00	0.0545	1.31		1031.21	F.S.
					293+75.00	1029.95	24.00	0.0525	1.26		1031.21	
					294+00.00	1030.07	24.00	0.0483	1.16	248	1031.23	
					294+25.00	1030.23	24.00	0.0441	1.06		1031.29	
					294+50.00	1030.43	24.00	0.0399	0.96		1031.39	
					294+71.25	1030.62	24.00	0.0363	0.87		1031.49	P.T.

CURVE 38 - SUPERELEVATION TABLE

P.I. Sta. 299+44.16 | Dc = 1° 00′ 00″

BASELINE CONTROL		RIGHT SIDE					RIGHT SHOULDER					REMARKS
STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
294+71.25	1030.62	24.00	0.0363	0.87		1031.49						P.T.
294+75.00	1030.66	24.00	0.0357	0.86		1031.52						
294+78.29	1030.69	24.00	0.0351	0.84		1031.53	10.00	0.0499	0.50		1032.03	
295+00.00	1030.92	24.00	0.0315	0.76		1031.68	10.00	0.0304	0.30		1031.98	
295+25.00	1031.21	24.00	0.0273	0.66		1031.87	10.00	0.0079	0.08		1031.94	
295+50.00	1031.50	24.00	0.0231	0.55		1032.05	10.00	-0.0146	-0.15		1031.91	
295+75.00	1031.80	24.00	0.0189	0.45		1032.25	10.00	-0.0370	-0.37		1031.88	
295+78.29	1031.83	24.00	0.0183	0.44		1032.27	10.00	-0.0400	-0.40		1031.87	
295+91.96	1031.99	24.00	0.0160	0.38		1032.37						N.C.
296+00.00	1032.09	24.00	0.0146	0.35		1032.44						
296+25.00	1032.38	24.00	0.0104	0.25		1032.63						
296+50.00	1032.68	24.00	0.0062	0.15	248	1032.83						
296+75.00	1032.97	24.00	0.0020	0.05		1033.02						
296+87.10	1033.11	24.00	0.0000	0.00		1033.11						FLAT
297+00.00	1033.26	24.00	-0.0022	-0.05		1033.21						
297+25.00	1033.56	24.00	-0.0064	-0.15		1033.41						
297+50.00	1033.85	24.00	-0.0106	-0.25		1033.60						
297+75.00	1034.14	24.00	-0.0148	-0.36		1033.78						
297+82.24	1034.23	24.00	-0.0160	-0.38		1033.85						N.C.
297+94.13	1034.37	24.00	-0.0180	-0.43		1033.94						P.C.
298+00.00	1034.44	24.00	-0.0190	-0.46		1033.98						
298+25.00	1034.73	24.00	-0.0232	-0.56		1034.17						
298+47.65	1035.00	24.00	-0.0270	-0.65		1034.35						F.S.
298+50.00	1035.02	24.00	-0.0270	-0.65		1034.37						
298+75.00	1035.32	24.00	-0.0270	-0.65		1034.67						
299+00.00	1035.61	24.00	-0.0270	-0.65		1034.96						
299+25.00	1035.90	24.00	-0.0270	-0.65		1035.25						
299+50.00	1036.20	24.00	-0.0270	-0.65		1035.55						
299+75.00	1036.49	24.00	-0.0270	-0.65		1035.84						
300+00.00	1036.78	24.00	-0.0270	-0.65		1036.13						
300+25.00	1037.08	24.00	-0.0270	-0.65		1036.43						
300+46.18	1037.33	24.00	-0.0270	-0.65		1036.68						F.S.
300+50.00	1037.37	24.00	-0.0263	-0.63		1036.74						
300+75.00	1037.66	24.00	-0.0216	-0.52		1037.14						
300+94.13	1037.89	24.00	-0.0180	-0.43		1037.46						P.T.
301+00.00	1037.96	24.00	-0.0169	-0.41		1037.55						
301+04.79	1038.01	24.00	-0.0160	-0.38		1037.63						N.C.
301+25.00	1038.25	24.00	-0.0122	-0.29		1037.96						
301+50.00	1038.54	24.00	-0.0075	-0.18	222	1038.36						
301+75.00	1038.84	24.00	-0.0028	-0.07		1038.77						
301+90.04	1039.01	24.00	0.0000	0.00		1039.01						FLAT
302+00.00	1039.13	24.00	0.0019	0.05		1039.18						
302+25.00	1039.42	24.00	0.0066	0.16		1039.58						
302+50.00	1039.72	24.00	0.0113	0.27		1039.99						
302+75.00	1040.01	24.00	0.0159	0.38		1040.39						
302+75.29	1040.01	24.00	0.0160	0.38		1040.39						N.C.

CALCULATED LRK | CHECKED PJF

SUPERELEVATION TABLE
RAMP B-2

SUM-77/277/244
VARIOUS

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SPIRAL 39 - SUPERELEVATION TABLE

P.I. Sta. 306+64.20

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	
					305+30.56	1043.95	24.00	0.0160	0.38		1044.33	T.S./N.C.
					305+50.00	1044.39	24.34	0.0210	0.51		1044.90	
					305+75.00	1045.00	24.78	0.0274	0.68		1045.68	
					306+00.00	1045.65	25.22	0.0338	0.85		1046.50	
					306+25.00	1046.33	25.65	0.0403	1.03	162	1047.36	
					306+50.00	1047.06	26.09	0.0467	1.22		1048.28	
					306+75.00	1047.82	26.53	0.0531	1.41		1049.23	
					307+00.00	1048.62	26.97	0.0595	1.60		1050.22	
					307+25.00	1049.45	27.40	0.0660	1.81		1051.26	
					307+30.56	1049.64	27.50	0.0674	1.85		1051.49	S.C./EX. F.S.

*NOTE: EDGE OF PAVEMENT VARIES FROM 0.00' RT. AT STA. 305+30.56 TO 0.50' RT. AT STA. 307+30.56 IN RELATION TO THE PROFILE GRADE

CURVE 40- SUPERELEVATION TABLE

P.I. Sta. 307+73.27 | Dc = 12° 00' 01"

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	
					307+30.56	1049.64	27.50	0.0674	1.85		1051.49	S.C./EX. F.S.
					307+50.00	1050.33	27.50	0.0674	1.85		1052.18	
					307+75.00	1051.23	27.50	0.0674	1.85		1053.08	
					307+95.29	1051.97	27.50	0.0674	1.85		1053.82	EXIST.

*NOTE: EDGE OF PAVEMENT IS 0.50' RT. OF THE PROFILE GRADE

CALCULATED LRK | CHECKED PJF

SUPERELEVATION TABLE RAMP B-2

SUM-77/277/244 VARIOUS

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CURVE 41 - SUPERELEVATION TABLE

P.I. Sta. 11+24.11 | Dc = 12° 00' 01"

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		
						9+90.79	1057.27	27.50	0.0833	2.29		1059.56		EXIST.
						10+00.00	1057.25	27.50	0.0809	2.22		1059.47		
						10+25.00	1057.10	27.38	0.0744	2.04	161	1059.14		
						10+50.00	1056.86	27.25	0.0680	1.85		1058.71		
						10+75.00	1056.52	27.13	0.0615	1.67		1058.19		
						10+92.41	1056.22	27.04	0.0570	1.54		1057.76		F.S.
						11+00.00	1056.08	27.00	0.0570	1.54		1057.62		
						11+25.00	1055.54	27.00	0.0570	1.54		1057.08		
						11+50.00	1054.96	27.00	0.0570	1.54		1056.50		
						11+75.00	1054.38	27.00	0.0570	1.54		1055.92		
						12+00.00	1053.80	27.00	0.0570	1.54		1055.34		
						12+25.00	1053.22	27.00	0.0570	1.54		1054.76		
						12+50.00	1052.64	27.00	0.0570	1.54		1054.18		
						12+75.00	1052.06	27.00	0.0570	1.54		1053.60		
						13+00.00	1051.49	27.00	0.0570	1.54		1053.03		
						13+25.00	1050.91	27.00	0.0570	1.54		1052.45		
						13+50.00	1050.33	27.00	0.0570	1.54		1051.87		
						13+75.00	1049.76	27.00	0.0570	1.54		1051.30		
						13+87.73	1049.49	27.00	0.0570	1.54		1051.03		C.S./F.S.

*NOTE: EDGE OF PAVEMENT VARIES FROM 0.50' RT. AT STA. 10+00.00 TO 0.00' RT. AT STA. 11+00.00 IN RELATION TO THE PROFILE GRADE

SPIRAL 42- SUPERELEVATION TABLE

P.I. Sta. 17+73.39 |

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		
						13+87.73	1049.49	27.00	0.0570	1.54		1051.03		C.S./F.S.
						14+00.00	1049.23	27.00	0.0545	1.47		1050.70		
						14+25.00	1048.73	27.00	0.0494	1.33		1050.06		
						14+50.00	1048.25	27.00	0.0443	1.20		1049.45		
						14+75.00	1047.81	27.00	0.0392	1.06		1048.87		
						15+00.00	1047.39	27.00	0.0342	0.92		1048.31		
						15+25.00	1047.01	27.00	0.0291	0.79		1047.80		
						15+50.00	1046.66	27.00	0.0240	0.65		1047.31		
						15+75.00	1046.32	27.00	0.0189	0.51		1046.83		
						15+89.23	1046.13	27.00	0.0160	0.43		1046.56		N.C.
						16+00.00	1045.98	27.00	0.0138	0.37		1046.35		
						16+25.00	1045.65	27.00	0.0087	0.23		1045.88		
						16+50.00	1045.31	27.00	0.0036	0.10		1045.41		
						16+67.86	1045.07	27.00	0.0000	0.00		1045.07		FLAT
						16+75.00	1044.97	27.00	-0.0015	-0.04	205	1044.93		
						17+00.00	1044.63	27.00	-0.0065	-0.18		1044.45		
						17+25.00	1044.29	27.00	-0.0116	-0.31		1043.98		
						17+46.49	1044.00	27.00	-0.0160	-0.43		1043.57		N.C.
						17+50.00	1043.96	27.00	-0.0167	-0.45		1043.51		
						17+75.00	1043.62	27.00	-0.0218	-0.59		1043.03		
						18+00.00	1043.28	27.00	-0.0269	-0.73		1042.55		
						18+25.00	1042.94	27.00	-0.0320	-0.86		1042.08		
						18+50.00	1042.61	27.00	-0.0371	-1.00		1041.61		
						18+75.00	1042.27	27.00	-0.0421	-1.14		1041.13		
						19+00.00	1041.93	27.00	-0.0472	-1.27		1040.66		
						19+25.00	1041.59	27.00	-0.0523	-1.41		1040.18		
						19+50.00	1041.25	27.00	-0.0574	-1.55		1039.70		
						19+62.73	1041.08	27.00	-0.0600	-1.62		1039.46		S.C./F.S.

CALCULATED LRK | CHECKED PJF

SUPERELEVATION TABLE RAMP B-2

SUM-77/277/244 VARIOUS

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CURVE 43 - SUPERELEVATION TABLE

P.I. Sta. 21+02.51 | Dc = 6° 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	
					19+62.73	1041.08	27.00	-0.0600	-1.62		1039.46	S.C./F.S.
					19+75.00	1040.92	27.00	-0.0600	-1.62		1039.30	
					20+00.00	1040.58	27.00	-0.0600	-1.62		1038.96	
					20+25.00	1040.24	27.00	-0.0600	-1.62		1038.62	
					20+50.00	1039.90	27.00	-0.0600	-1.62		1038.28	
					20+75.00	1039.57	27.00	-0.0600	-1.62		1037.95	
					21+00.00	1039.23	27.00	-0.0600	-1.62		1037.61	
					21+25.00	1038.95	27.00	-0.0600	-1.62		1037.33	
					21+50.00	1038.66	27.00	-0.0600	-1.62		1037.04	
					21+75.00	1038.38	27.00	-0.0600	-1.62		1036.76	
					22+00.00	1038.10	27.00	-0.0600	-1.62		1036.48	
					22+25.00	1037.71	27.00	-0.0600	-1.62		1036.09	
					22+39.81	1037.47	27.00	-0.0600	-1.62		1035.85	C.S./F.S.

SPIRAL 44- SUPERELEVATION TABLE

P.I. Sta. 23+14.93

LEFT SHOULDER					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	
1037.43		-0.04	-0.0100	4.00	22+39.81	1037.47	27.00	-0.0600	-1.62		1035.85	C.S./F.S.
1037.28		-0.03	-0.0082	4.00	22+50.00	1037.31	26.86	-0.0580	-1.56		1035.75	
1036.90		-0.02	-0.0038	4.00	22+75.00	1036.92	26.53	-0.0531	-1.41		1035.51	
1036.53		0.00	0.0006	4.00	23+00.00	1036.53	26.20	-0.0482	-1.26		1035.27	
1036.26		0.02	0.0038	4.00	23+18.46	1036.24	25.95	-0.0446	-1.16		1035.08	
					23+25.00	1036.14	25.86	-0.0433	-1.12		1035.02	
					23+50.00	1035.75	25.53	-0.0385	-0.98	213	1034.77	
					23+75.00	1035.36	25.20	-0.0336	-0.85		1034.51	
					24+00.00	1034.97	24.86	-0.0287	-0.71		1034.26	
					24+25.00	1034.58	24.53	-0.0238	-0.58		1034.00	
					24+50.00	1034.20	24.20	-0.0189	-0.46		1033.74	
					24+64.81	1033.97	24.00	-0.0160	-0.38		1033.59	N.C.

CALCULATED LRK | CHECKED PJF

SUPERELEVATION TABLE RAMP B-2

SUM-77/277/244 VARIOUS

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CURVE 49 - SUPERELEVATION TABLE

P.I. Sta. 578+08.75 | Dc = 0° 28' 03"

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	
1049.90		-0.21	-0.0177	12.00	576+00.00	1050.11						P.C.
1049.84		-0.21	-0.0177	12.05	576+25.00	1050.05						
1049.77		-0.22	-0.0177	12.22	576+50.00	1049.99						
1049.69		-0.22	-0.0177	12.48	576+75.00	1049.91						
1049.53		-0.23	-0.0177	12.86	577+00.00	1049.76						
1049.35		-0.24	-0.0177	13.34	577+25.00	1049.59						
1049.17		-0.25	-0.0177	13.93	577+50.00	1049.42						
1049.16		-0.25	-0.0177	14.00	577+52.62	1049.41						
1049.03		-0.22	-0.0177	12.24	577+75.00	1049.25						
1048.86		-0.22	-0.0177	12.51	578+00.00	1049.08						
1048.68		-0.23	-0.0177	12.78	578+25.00	1048.91						
1048.51		-0.23	-0.0177	13.05	578+50.00	1048.74						
1048.32		-0.24	-0.0177	13.32	578+75.00	1048.56						
1048.12		-0.24	-0.0177	13.59	579+00.00	1048.36						
1047.88		-0.25	-0.0177	13.86	579+25.00	1048.13						
1047.63		-0.25	-0.0177	14.13	579+50.00	1047.88						
1047.36		-0.25	-0.0177	14.40	579+75.00	1047.61						
1047.13		-0.26	-0.0177	14.60	579+93.86	1047.39						F.S.
1047.08	250	-0.24	-0.0162	14.66	580+00.00	1047.32						
1047.08		-0.23	-0.0160	14.67	580+00.66	1047.31						N.C.
1046.92		-0.18	-0.0118	14.85	580+17.46	1047.10						P.T.
1046.85		-0.15	-0.0099	14.93	580+25.00	1047.00						
1046.60		-0.06	-0.0037	15.20	580+50.00	1046.66						
1046.46		0.00	0.0000	15.36	580+64.66	1046.46						FLAT
1046.34	250	0.04	0.0026	15.47	580+75.00	1046.30						
1046.06		0.14	0.0088	15.74	581+00.00	1045.92						
1045.80		0.24	0.0148	16.00	581+24.01	1045.56						
1045.79		0.24	0.0151	16.00	581+25.00	1045.55						
1045.76		0.26	0.0160	16.00	581+28.66	1045.50						N.C.
1045.50		0.26	0.0160	16.00	581+50.00	1045.24						
1045.24		0.26	0.0160	16.00	581+75.00	1044.98						
1045.03		0.26	0.0160	16.00	582+00.00	1044.77						
1044.88		0.26	0.0160	16.00	582+25.00	1044.62						
1044.78		0.26	0.0160	16.00	582+50.00	1044.52						
1044.74		0.26	0.0160	16.00	582+75.00	1044.48						
1044.75		0.26	0.0160	16.00	583+00.00	1044.49						
1044.78		0.26	0.0160	16.00	583+16.40	1044.52						T.S./N.C.

SPIRAL 50 - SUPERELEVATION TABLE

P.I. Sta. 584+49.77 |

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	
1044.78		0.26	0.0160	16.00	583+16.40	1044.52						T.S./N.C.
1044.84		0.29	0.0179	16.00	583+25.00	1044.55						
1045.04		0.37	0.0234	16.00	583+50.00	1044.67						
1045.30		0.46	0.0289	16.00	583+75.00	1044.84						
1045.61	284	0.55	0.0344	16.00	584+00.00	1045.06						
1045.98		0.64	0.0399	16.00	584+25.00	1045.34						
1046.41		0.73	0.0454	16.00	584+50.00	1045.68						
1046.87		0.81	0.0509	16.00	584+75.00	1046.06						
1047.41		0.90	0.0564	16.00	585+00.00	1046.51						
1047.78		0.96	0.0600	16.00	585+16.40	1046.82						S.C./F.S.

CALCULATED LRK | CHECKED PJF

SUPERELEVATION TABLE
RAMP C

SUM-77/277/244
VARIOUS

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CURVE 51 - SUPERELEVATION TABLE

P.I. Sta. 589+20.09 | Dc = 4° 00′ 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		
1047.78		0.96	0.0600	16.00	585+16.40	1046.82							S.C./F.S.
1047.96		0.96	0.0600	16.00	585+25.00	1047.00							
1048.51		0.96	0.0600	16.00	585+50.00	1047.55							
1049.11		0.96	0.0600	16.00	585+75.00	1048.15							
1049.77		0.96	0.0600	16.00	586+00.00	1048.81							
1050.48		0.96	0.0600	16.00	586+25.00	1049.52							
1051.25		0.96	0.0600	16.00	586+50.00	1050.29							
1052.07		0.96	0.0600	16.00	586+75.00	1051.11							
1052.94		0.96	0.0600	16.00	587+00.00	1051.98							
1053.84		0.96	0.0600	16.00	587+25.00	1052.88							
1054.74		0.96	0.0600	16.00	587+50.00	1053.78							
1055.64		0.96	0.0600	16.00	587+75.00	1054.68							
1056.54		0.96	0.0600	16.00	588+00.00	1055.58							
1057.44		0.96	0.0600	16.00	588+25.00	1056.48							
1058.34		0.96	0.0600	16.00	588+50.00	1057.38							
1059.24		0.96	0.0600	16.00	588+75.00	1058.28							
1060.14		0.96	0.0600	16.00	589+00.00	1059.18							
1061.04		0.96	0.0600	16.00	589+25.00	1060.08							
1061.94		0.96	0.0600	16.00	589+50.00	1060.98							
1062.84		0.96	0.0600	16.00	589+75.00	1061.88							
1063.74		0.96	0.0600	16.00	590+00.00	1062.78							
1064.64		0.96	0.0600	16.00	590+25.00	1063.68							
1065.54		0.96	0.0600	16.00	590+50.00	1064.58							
1066.44		0.96	0.0600	16.00	590+75.00	1065.48							
1067.34		0.96	0.0600	16.00	591+00.00	1066.38							
1068.24		0.96	0.0600	16.00	591+25.00	1067.28							
1069.14		0.96	0.0600	16.00	591+50.00	1068.18							
1070.04		0.96	0.0600	16.00	591+75.00	1069.08							
1070.94		0.96	0.0600	16.00	592+00.00	1069.98							
1071.84		0.96	0.0600	16.00	592+25.00	1070.88							
1072.74		0.96	0.0600	16.00	592+50.00	1071.78							
1073.64		0.96	0.0600	16.00	592+75.00	1072.68							
1074.54		0.96	0.0600	16.00	593+00.00	1073.58							
1074.66		0.96	0.0600	16.00	593+03.36	1073.70							P.C.C./F.S.

CURVE 52 - SUPERELEVATION TABLE

P.I. Sta. 596+43.35 | Dc = 8° 00′ 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		
1074.66		0.96	0.0600	16.00	593+03.36	1073.70							P.C.C./F.S.
1075.44		0.96	0.0600	16.00	593+25.00	1074.48							
1076.34		0.96	0.0600	16.00	593+50.00	1075.38							
1077.24		0.96	0.0600	16.00	593+75.00	1076.28							
1078.14		0.96	0.0600	16.00	594+00.00	1077.18							
1079.02		0.96	0.0600	16.00	594+25.00	1078.06							
1079.90		0.96	0.0600	16.00	594+50.00	1078.94							
1080.78		0.96	0.0600	16.00	594+75.00	1079.82							
1081.66		0.96	0.0600	16.00	595+00.00	1080.70							
1082.54		0.96	0.0600	16.00	595+25.00	1081.58							
1083.42		0.96	0.0600	16.00	595+50.00	1082.46							
1084.30		0.96	0.0600	16.00	595+75.00	1083.34							
1085.18		0.96	0.0600	16.00	596+00.00	1084.22							
1086.06		0.96	0.0600	16.00	596+25.00	1085.10							
1086.59		0.96	0.0600	16.00	596+40.00	1085.63							
1087.64		1.66	0.0600	27.71	596+50.00	1085.98							
1088.48		1.62	0.0600	27.00	596+75.00	1086.86							
1089.32		1.58	0.0600	26.29	597+00.00	1087.74							
1090.15		1.53	0.0600	25.57	597+25.00	1088.62							
1090.99		1.49	0.0600	24.86	597+50.00	1089.50							
1091.83		1.45	0.0600	24.14	597+75.00	1090.38							
1092.67		1.41	0.0600	23.43	598+00.00	1091.26							
1093.50		1.36	0.0600	22.71	598+25.00	1092.14							
1094.34		1.32	0.0600	22.00	598+50.00	1093.02							
1095.18		1.28	0.0600	21.29	598+75.00	1093.90							
1096.01		1.23	0.0600	20.57	599+00.00	1094.78							
1096.85		1.19	0.0600	19.86	599+25.00	1095.66							
1097.27		1.17	0.0600	19.48	599+38.22	1096.10							P.C.C./F.S.

CALCULATED LRK
CHECKED PJF

SUPERELEVATION TABLE RAMP C

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CURVE 53 - SUPERELEVATION TABLE

P.I. Sta. 600+38.18	Dc = 4° 00′ 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		
1097.27		1.17	0.0600	19.48	599+38.22	1096.10							P.C.C./F.S.
1097.65		1.15	0.0600	19.14	599+50.00	1096.50							
1098.45		1.11	0.0600	18.43	599+75.00	1097.34							
1099.24		1.06	0.0600	17.71	600+00.00	1098.18							
1100.04		1.02	0.0600	17.00	600+25.00	1099.02							
1100.84		0.98	0.0600	16.29	600+50.00	1099.86							
1101.16		0.96	0.0600	16.00	600+60.00	1100.20							
1101.67		0.96	0.0600	16.00	600+75.00	1100.71							
1102.51		0.96	0.0600	16.00	601+00.00	1101.55							
1103.35		0.96	0.0600	16.00	601+25.00	1102.39							
1103.78		0.96	0.0600	16.00	601+37.81	1102.82							C.S./F.S.

SPIRAL 54 - SUPERELEVATION TABLE

P.I. Sta. 602+04.51	

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		
1103.78		0.96	0.0600	16.00	601+37.81	1102.82							C.S./F.S.
1104.15		0.92	0.0573	16.00	601+50.00	1103.23							
1104.90		0.83	0.0518	16.00	601+75.00	1104.07							
1105.65		0.74	0.0463	16.00	602+00.00	1104.91							
1106.40		0.65	0.0408	16.00	602+25.00	1105.75							
1107.15	284	0.56	0.0353	16.00	602+50.00	1106.59							
1107.91		0.48	0.0298	16.00	602+75.00	1107.43							
1108.66		0.39	0.0243	16.00	603+00.00	1108.27							
1109.49		0.30	0.0188	16.00	603+25.00	1109.19							
1109.81		0.26	0.0160	16.00	603+37.81	1109.55							N.C.

CURVE 96 - SUPERELEVATION TABLE

P.I. Sta. 280+91.67	Dc = 1° 00′ 00″

LEFT SIDE					*SAWCUT 32' RT. (C/L I.R. 277)		RIGHT SIDE						REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION		
					277+72.76	1120.28	15.55	-0.0160	-0.25		1120.03		P.C./N.C.
					277+75.00	1120.34	15.50	-0.0163	-0.25		1120.09		
					278+00.00	1121.01	15.00	-0.0199	-0.30		1120.71		
					278+25.00	1121.69	14.50	-0.0235	-0.34		1121.35		
					278+50.00	1122.39	14.00	-0.0271	-0.38	579	1122.01		
					278+75.00	1123.10	13.50	-0.0307	-0.41		1122.69		
					279+00.00	1123.81	13.00	-0.0343	-0.45		1123.36		
					279+25.00	1124.52	12.50	-0.0379	-0.47		1124.05		
					279+50.00	1125.23	12.00	-0.0415	-0.50		1124.73		EXIST.

*NOTE: ELEVATION IS EXISTING ELEVATION AT SAWCUT 32' RIGHT OF EXISTING C/L I.R. 277 (EXISTING ELEVATIONS ARE TO BE VERIFIED IN FIELD)

CALCULATED LRK | CHECKED PJF

SUPERELEVATION TABLE RAMP C

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CURVE 58 - SUPERELEVATION TABLE

P.I. Sta. 681+06.79 | Dc = 1° 55' 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		
1069.16		0.28	0.0223	12.62	679+55.23	1068.88							EXIST.
1069.43		0.32	0.0245	13.09	679+75.00	1069.11							
1069.82		0.38	0.0274	13.87	680+00.00	1069.44							
1070.25	552	0.45	0.0302	14.86	680+25.00	1069.80							
1070.67		0.53	0.0329	16.00	680+48.74	1070.14							
1070.69		0.53	0.0330	16.00	680+50.00	1070.16							
1071.06		0.57	0.0359	16.00	680+75.00	1070.49							
1071.44		0.62	0.0387	16.00	681+00.00	1070.82							F.S.
1071.77		0.62	0.0387	16.00	681+25.00	1071.15							
1072.10		0.62	0.0387	16.00	681+50.00	1071.48							
1072.43		0.62	0.0387	16.00	681+75.00	1071.81							
1072.76		0.62	0.0387	16.00	682+00.00	1072.14							
1073.10		0.62	0.0387	16.00	682+25.00	1072.48							
1073.42		0.62	0.0387	16.00	682+50.00	1072.80							
1073.64		0.62	0.0387	16.00	682+75.00	1073.02							
1073.76		0.62	0.0387	16.00	683+00.00	1073.14							
1073.76		0.62	0.0387	16.00	683+18.39	1073.14							C.S./F.S.

SPIRAL 59 - SUPERELEVATION TABLE

P.I. Sta. 684+48.34 |

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		
1073.76		0.62	0.0387	16.00	683+18.39	1073.14							C.S./F.S.
1073.76		0.63	0.0394	16.00	683+25.00	1073.13							
1073.68		0.67	0.0421	16.00	683+50.00	1073.01							
1073.49		0.72	0.0447	16.00	683+75.00	1072.77							
1073.18	587	0.76	0.0474	16.00	684+00.00	1072.42							
1072.75		0.80	0.0501	16.00	684+25.00	1071.95							
1072.21		0.84	0.0527	16.00	684+50.00	1071.37							
1071.56		0.89	0.0554	16.00	684+75.00	1070.67							
1070.78		0.93	0.0580	16.00	685+00.00	1069.85							
1070.14		0.96	0.0600	16.00	685+18.39	1069.18							S.C./F.S.

CALCULATED LRK | CHECKED PJF

SUPERELEVATION TABLE
RAMP C-1

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CURVE 60 - SUPERELEVATION TABLE

P.I. Sta. 700+58.25 | Dc = 24° 00′ 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	
1070.14		0.96	0.0600	16.00	685+18.39	1069.18						S.C./F.S.
1069.88		0.96	0.0600	16.00	685+25.00	1068.92						
1068.83		0.96	0.0600	16.00	685+50.00	1067.87						
1067.67		0.96	0.0600	16.00	685+75.00	1066.71						
1066.39		0.96	0.0600	16.00	686+00.00	1065.43						
1065.05		0.96	0.0600	16.00	686+25.00	1064.09						
1063.71		0.96	0.0600	16.00	686+50.00	1062.75						
1062.38		0.96	0.0600	16.00	686+75.00	1061.42						
1061.04		0.96	0.0600	16.00	687+00.00	1060.08						
1059.70		0.96	0.0600	16.00	687+25.00	1058.74						
1058.36		0.96	0.0600	16.00	687+50.00	1057.40						
1057.02		0.96	0.0600	16.00	687+75.00	1056.06						
1055.69		0.96	0.0600	16.00	688+00.00	1054.73						
1054.35		0.96	0.0600	16.00	688+25.00	1053.39						
1053.01		0.96	0.0600	16.00	688+50.00	1052.05						
1051.67		0.96	0.0600	16.00	688+75.00	1050.71						
1050.34		0.96	0.0600	16.00	689+00.00	1049.38						
1049.00		0.96	0.0600	16.00	689+25.00	1048.04						
1047.66		0.96	0.0600	16.00	689+50.00	1046.70						
1046.32		0.96	0.0600	16.00	689+75.00	1045.36						
1044.98		0.96	0.0600	16.00	690+00.00	1044.02						
1043.65		0.96	0.0600	16.00	690+25.00	1042.69						
1042.31		0.96	0.0600	16.00	690+50.00	1041.35						
1041.02		0.96	0.0600	16.00	690+75.00	1040.06						
1039.85		0.96	0.0600	16.00	691+00.00	1038.89						
1038.78		0.96	0.0600	16.00	691+25.00	1037.82						
1037.81		0.96	0.0600	16.00	691+50.00	1036.85						
1036.96		0.96	0.0600	16.00	691+75.00	1036.00						
1036.35		0.96	0.0600	16.00	691+94.95	1035.39						C.S./F.S.

SPIRAL 61 - SUPERELEVATION TABLE

P.I. Sta. 692+98.87 |

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	
1036.35		0.96	0.0600	16.00	691+94.95	1035.39						C.S./F.S.
1036.20		0.95	0.0593	16.00	692+00.00	1035.25						
1035.49		0.89	0.0556	16.00	692+25.00	1034.60						
1034.90		0.83	0.0519	16.00	692+50.00	1034.07						
1034.41		0.77	0.0483	16.00	692+75.00	1033.64						
1034.03		0.71	0.0446	16.00	693+00.00	1033.32						
1033.75		0.65	0.0409	16.00	693+25.00	1033.10						
1033.59	426	0.60	0.0373	16.00	693+50.00	1032.99						
1033.53		0.54	0.0336	16.00	693+75.00	1032.99						
1033.58		0.48	0.0299	16.00	694+00.00	1033.10						
1033.67		0.42	0.0263	16.00	694+25.00	1033.25						
1033.77		0.36	0.0226	16.00	694+50.00	1033.41						
1033.87		0.30	0.0189	16.00	694+75.00	1033.57						
1033.96		0.26	0.0160	16.00	694+94.95	1033.70						S.C./N.C.

CALCULATED LRK | CHECKED PJF

SUPERELEVATION TABLE
RAMP C-1

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CURVE 66 - SUPERELEVATION TABLE

P.I. Sta. 782+19.82 | Dc = 7° 39' 38"

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	
1086.58		-0.72	-0.0600	12.00	781+45.30	1087.30						P.C./F.S.
1086.41		-0.73	-0.0600	12.13	781+50.00	1087.14						
1085.57		-0.77	-0.0600	12.81	781+75.00	1086.34						
1084.72		-0.81	-0.0600	13.50	782+00.00	1085.53						
1083.88		-0.85	-0.0600	14.18	782+25.00	1084.73						
1083.04		-0.89	-0.0600	14.87	782+50.00	1083.93						
1082.19		-0.93	-0.0600	15.56	782+75.00	1083.12						
1081.65		-0.96	-0.0600	16.00	782+90.99	1082.61						
1081.56		-0.96	-0.0600	16.00	782+93.84	1082.52						C.S./F.S.

SPIRAL 67 - SUPERELEVATION TABLE

P.I. Sta. 783+43.89 |

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	
1081.56		-0.96	-0.0600	16.00	782+93.84	1082.52						C.S./F.S.
1081.36		-0.93	-0.0582	16.00	783+00.00	1082.29						
1080.55		-0.81	-0.0509	16.00	783+25.00	1081.36						
1079.73		-0.70	-0.0435	16.00	783+50.00	1080.43						
1078.98	213	-0.58	-0.0362	16.00	783+75.00	1079.56						
1078.55		-0.51	-0.0321	16.00	783+89.12	1079.06						
1078.22		-0.46	-0.0289	16.00	784+00.00	1078.68						
1077.46		-0.34	-0.0215	16.00	784+25.00	1077.80						
1076.87		-0.26	-0.0160	16.00	784+43.84	1077.13						S.T./N.C.

CALCULATED LRK | CHECKED PJF

SUPERELEVATION TABLE
RAMP C-2

SUM-77/277/244
VARIOUS

832
1288

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SPIRAL 68 - SUPERELEVATION TABLE

P.I. Sta. 786+50.14

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	
1075.51		-0.26	-0.0160	16.00	784+82.53	1075.77						T.S./N.C.
1074.99		-0.17	-0.0107	16.00	785+00.00	1075.16						
1074.23		-0.05	-0.0031	16.00	785+25.00	1074.28						
1073.92		0.00	0.0000	16.00	785+35.16	1073.92						FLAT
1073.47		0.07	0.0045	16.00	785+50.00	1073.40						
1073.71		0.19	0.0121	16.00	785+75.00	1073.52						
1072.33		0.26	0.0160	16.00	785+87.79	1072.07						N.C.
1071.96	206	0.32	0.0197	16.00	786+00.00	1071.64						
1071.20		0.44	0.0273	16.00	786+25.00	1070.76						
1070.44		0.56	0.0349	16.00	786+50.00	1069.88						
1069.68		0.68	0.0425	16.00	786+75.00	1069.00						
1068.92		0.80	0.0501	16.00	787+00.00	1068.12						
1068.16		0.92	0.0577	16.00	787+25.00	1067.24						
1067.93		0.96	0.0600	16.00	787+32.53	1066.97						S.C./F.S.

CURVE 69 - SUPERELEVATION TABLE

P.I. Sta. 789+63.04 | Dc = 15° 00′ 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	
1067.93		0.96	0.0600	16.00	787+32.53	1066.97						S.C./F.S.
1067.32		0.96	0.0600	16.00	787+50.00	1066.36						
1066.45		0.96	0.0600	16.00	787+75.00	1065.49						
1065.62		0.96	0.0600	16.00	788+00.00	1064.66						
1064.81		0.96	0.0600	16.00	788+25.00	1063.85						
1064.04		0.96	0.0600	16.00	788+50.00	1063.08						
1063.29		0.96	0.0600	16.00	788+75.00	1062.33						
1062.58		0.96	0.0600	16.00	789+00.00	1061.62						
1061.88		0.96	0.0600	16.00	789+25.00	1060.92						
1061.18		0.96	0.0600	16.00	789+50.00	1060.22						
1060.48		0.96	0.0600	16.00	789+75.00	1059.52						
1059.78		0.96	0.0600	16.00	790+00.00	1058.82						
1059.08		0.96	0.0600	16.00	790+25.00	1058.12						
1058.38		0.96	0.0600	16.00	790+50.00	1057.42						
1057.68		0.96	0.0600	16.00	790+75.00	1056.72						
1056.98		0.96	0.0600	16.00	791+00.00	1056.02						
1056.28		0.96	0.0600	16.00	791+25.00	1055.32						
1055.66		0.96	0.0600	16.00	791+47.33	1054.70						C.S./F.S.

CALCULATED LRK | CHECKED PJF

SUPERELEVATION TABLE
RAMP C-2

SUM-77/277/244
VARIOUS

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SPIRAL 70 - SUPERELEVATION TABLE

P.I. Sta. 792+02.11

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	
1055.66		0.96	0.0600	16.00	791+47.33	1054.70						C.S./F.S.
1055.57		0.95	0.0596	16.00	791+50.00	1054.62						
1054.81		0.89	0.0558	16.00	791+75.00	1053.92						
1054.05	408	0.83	0.0519	16.00	792+00.00	1053.22						
1053.29		0.77	0.0481	16.00	792+25.00	1052.52						
1052.53		0.71	0.0443	16.00	792+50.00	1051.82						
1051.77		0.65	0.0404	16.00	792+75.00	1051.12						
1051.09		0.59	0.0370	16.00	792+97.33	1050.50						S.C./F.S.

CURVE 71 - SUPERELEVATION TABLE

P.I. Sta. 797+24.90 | Dc = 1° 30' 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	
1051.09		0.59	0.0370	16.00	792+97.33	1050.50						S.C./F.S.
1051.01		0.59	0.0370	16.00	793+00.00	1050.42						
1050.31		0.59	0.0370	16.00	793+25.00	1049.72						
1049.61		0.59	0.0370	16.00	793+50.00	1049.02						
1048.92		0.59	0.0370	16.00	793+75.00	1048.33						
1048.22		0.59	0.0370	16.00	794+00.00	1047.63						
1047.52		0.59	0.0370	16.00	794+25.00	1046.93						
1046.82		0.59	0.0370	16.00	794+50.00	1046.23						
1046.14		0.59	0.0370	16.00	794+75.00	1045.55						
1045.50		0.59	0.0370	16.00	795+00.00	1044.91						
1044.91		0.59	0.0370	16.00	795+25.00	1044.32						
1044.36		0.59	0.0370	16.00	795+50.00	1043.77						
1043.86		0.59	0.0370	16.00	795+75.00	1043.27						
1043.39		0.59	0.0370	16.00	796+00.00	1042.80						
1042.97		0.59	0.0370	16.00	796+25.00	1042.38						
1042.60		0.59	0.0370	16.00	796+50.00	1042.01						
1042.26		0.59	0.0370	16.00	796+75.00	1041.67						
1041.97		0.59	0.0370	16.00	797+00.00	1041.38						
1041.73		0.59	0.0370	16.00	797+25.00	1041.14						
1041.52		0.59	0.0370	16.00	797+50.00	1040.93						
1041.34		0.59	0.0370	16.00	797+75.00	1040.75						
1041.16		0.59	0.0370	16.00	798+00.00	1040.57						
1040.97		0.59	0.0370	16.00	798+25.00	1040.38						
1040.79		0.59	0.0370	16.00	798+50.00	1040.20						
1040.61		0.59	0.0370	16.00	798+75.00	1040.02						
1040.43		0.59	0.0370	16.00	799+00.00	1039.84						
1040.23		0.59	0.0370	16.00	799+25.00	1039.64						
1040.04		0.59	0.0370	16.00	799+50.00	1039.45						
1039.84		0.59	0.0370	16.00	799+74.46	1039.25						
1039.83		0.59	0.0370	15.98	799+75.00	1039.24						
1039.59		0.55	0.0370	14.91	800+00.00	1039.04						
1039.36		0.52	0.0370	14.02	800+25.00	1038.84						
1039.12		0.49	0.0370	13.29	800+50.00	1038.63						
1038.91		0.47	0.0370	12.72	800+75.00	1038.44						
1038.70		0.46	0.0370	12.31	801+00.00	1038.24						
1038.57		0.45	0.0370	12.14	801+16.07	1038.12						F.S.
1038.50	222	0.41	0.0337	12.08	801+25.00	1038.09						
1038.32		0.30	0.0247	12.00	801+48.92	1038.02						2/3 F.S.

CALCULATED LRK
CHECKED PJF

SUPERELEVATION TABLE
RAMP C-2

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CURVE 76 - SUPERELEVATION TABLE

P.I. Sta. 891+58.50 | Dc = 1° 15' 00"

LEFT SIDE					*SAWCUT 32' LT. (C/L I.R. 277)		RIGHT SIDE						REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
1095.40		-0.29	-0.0240	12.00	269+40.00 = 887+98.38	1095.69							P.C.
1095.71		-0.28	-0.0231	12.00	269+50.00	1095.99							
1096.50	939	-0.25	-0.0209	12.00	269+75.00	1096.75							
1097.29		-0.22	-0.0187	12.00	270+00.00	1097.51							
1098.05		-0.20	-0.0165	12.00	270+25.00	1098.25							
1098.22		-0.19	-0.0160	12.00	270+30.15	1098.41							N.C.
1098.81		-0.19	-0.0160	12.00	270+50.00	1099.00							
1099.50		-0.19	-0.0160	12.00	270+75.00	1099.69							
1100.18		-0.19	-0.0160	12.00	271+00.00	1100.37							
1101.00		-0.19	-0.0160	12.00	271+25.00	1101.19							
1101.81		-0.19	-0.0160	12.00	271+50.00	1102.00							
1102.53		-0.19	-0.0160	12.00	271+75.00	1102.72							
1103.25		-0.19	-0.0160	12.00	272+00.00	1103.44							
1104.01		-0.19	-0.0160	12.00	272+25.00	1104.20							
1104.76		-0.19	-0.0160	12.00	272+50.00	1104.95							
1105.50		-0.19	-0.0160	12.00	272+75.00	1105.69							
1106.23		-0.19	-0.0160	12.00	273+00.00	1106.42							
1106.54	946	-0.19	-0.0160	11.94	273+10.24	1106.73							N.C.
1107.02		-0.17	-0.0147	11.88	273+25.00	1107.19							EXIST.

*NOTE: ELEVATION IS EXISTING ELEVATION AT SAWCUT 32' LEFT OF EXISTING C/L I.R. 277 (EXISTING ELEVATIONS TO BE VERIFIED IN FIELD)

LEFT SHOULDER					LEFT SIDE					BASELINE CONTROL		REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	
					1095.69		0.29	0.0240	12.00	887+98.38 = 269+40.00	1095.40	P.C.
					1095.64		0.29	0.0241	12.00	888+00.00	1095.35	
					1094.90		0.32	0.0264	12.08	888+25.00	1094.58	
					1094.14	939	0.35	0.0286	12.29	888+50.00	1093.79	
					1093.39		0.39	0.0308	12.64	888+75.00	1093.00	
					1092.62		0.43	0.0330	13.13	889+00.00	1092.19	
					1091.82		0.48	0.0352	13.75	889+25.00	1091.34	
					1091.55		0.50	0.0360	14.00	889+33.61	1091.05	F.S.
					1090.93		0.44	0.0360	12.20	889+50.00	1090.49	
					1090.06		0.45	0.0360	12.50	889+75.00	1089.61	
					1089.27		0.46	0.0360	12.80	890+00.00	1088.81	
					1088.55		0.47	0.0360	13.10	890+25.00	1088.08	
					1087.75		0.48	0.0360	13.40	890+50.00	1087.27	
					1086.96		0.49	0.0360	13.70	890+75.00	1086.47	
					1086.19		0.50	0.0360	14.00	891+00.00	1085.69	
					1085.43		0.51	0.0360	14.30	891+25.00	1084.92	
					1084.70		0.53	0.0360	14.60	891+50.00	1084.17	
					1083.97		0.54	0.0360	14.90	891+75.00	1083.43	
					1083.26		0.55	0.0360	15.20	892+00.00	1082.71	
					1082.57		0.56	0.0360	15.50	892+25.00	1082.01	
					1081.89		0.57	0.0360	15.80	892+50.00	1081.32	
1081.56		0.12	0.0305	4.00	1081.44		0.58	0.0360	16.00	892+66.83	1080.86	
1081.31		0.09	0.0224	4.00	1081.22		0.58	0.0360	16.00	892+75.00	1080.64	
1080.55	252	-0.01	-0.0024	4.00	1080.56		0.58	0.0360	16.00	893+00.00	1079.98	
1079.80		-0.11	-0.0272	4.00	1079.91		0.58	0.0360	16.00	893+25.00	1079.33	
1079.60		-0.14	-0.0340	4.00	1079.74		0.58	0.0360	16.00	893+31.83	1079.16	
					1079.28		0.58	0.0360	16.00	893+50.00	1078.70	
					1078.65		0.58	0.0360	16.00	893+75.00	1078.07	
					1078.01		0.58	0.0360	16.00	894+00.00	1077.43	
					1077.34		0.58	0.0360	16.00	894+25.00	1076.76	
					1076.67		0.58	0.0360	16.00	894+50.00	1076.09	
					1075.97		0.58	0.0360	16.00	894+75.00	1075.39	
					1075.26		0.58	0.0360	16.00	895+00.00	1074.68	
					1074.77		0.58	0.0360	16.00	895+17.13	1074.19	C.S./F.S.

CALCULATED LRK | CHECKED PJF

SUPERELEVATION TABLE
RAMP D

SUM-77/277/244
VARIOUS

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SPIRAL 77 - SUPERELEVATION TABLE

P.I. Sta. 896+29.68

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	
1074.77		0.58	0.0360	16.00	895+17.13	1074.19						C.S./F.S.
1074.54		0.58	0.0365	16.00	895+25.00	1073.96						
1073.83		0.61	0.0380	16.00	895+50.00	1073.22						
1073.09		0.63	0.0395	16.00	895+75.00	1072.46						
1072.35		0.66	0.0410	16.00	896+00.00	1071.69						
1071.58	1042	0.68	0.0425	16.00	896+25.00	1070.90						
1070.79		0.70	0.0440	16.00	896+50.00	1070.09						
1070.01		0.73	0.0455	16.00	896+75.00	1069.28						
1069.22		0.75	0.0470	16.00	897+00.00	1068.47						
1068.68		0.77	0.0480	16.00	897+17.13	1067.91						S.C./F.S.

CURVE 78 - SUPERELEVATION TABLE

P.I. Sta. 898+09.19 | Dc = 2° 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	
1068.68		0.77	0.0480	16.00	897+17.13	1067.91						S.C./F.S.
1068.43		0.77	0.0480	16.00	897+25.00	1067.66						
1067.61		0.77	0.0480	16.00	897+50.00	1066.84						
1066.80		0.77	0.0480	16.00	897+75.00	1066.03						
1065.99		0.77	0.0480	16.00	898+00.00	1065.22						
1065.18		0.77	0.0480	16.00	898+25.00	1064.41						
1064.36		0.77	0.0480	16.00	898+50.00	1063.59						
1063.55		0.77	0.0480	16.00	898+75.00	1062.78						
1062.74		0.77	0.0480	16.00	899+00.00	1061.97						
1062.70		0.77	0.0480	16.00	899+01.12	1061.93						C.S./F.S.

CALCULATED LRK
CHECKED PJF

SUPERELEVATION TABLE RAMP D

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SPIRAL 79 - SUPERELEVATION TABLE

P.I. Sta. 900+05.22

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	
1062.70		0.77	0.0480	16.00	899+01.12	1061.93						C.S./F.S.
1061.93		0.77	0.0480	16.00	899+25.00	1061.16						
1061.11		0.77	0.0480	16.00	899+50.00	1060.34						
1060.30		0.77	0.0480	16.00	899+75.00	1059.53						
1059.49		0.77	0.0480	16.00	900+00.00	1058.72						
1058.68		0.77	0.0480	16.00	900+25.00	1057.91						
1057.86		0.77	0.0480	16.00	900+50.00	1057.09						
1057.05		0.77	0.0480	16.00	900+75.00	1056.28						
1056.24		0.77	0.0480	16.00	901+00.00	1055.47						
1056.20		0.77	0.0480	16.00	901+01.12	1055.43						S.C./F.S.

CURVE 80 - SUPERELEVATION TABLE

P.I. Sta. 904+84.89 | Dc = 3° 30′ 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	
1056.20		0.77	0.0480	16.00	901+01.12	1055.43						S.C./F.S.
1055.43		0.77	0.0480	16.00	901+25.00	1054.66						
1054.61		0.77	0.0480	16.00	901+50.00	1053.84						
1053.80		0.77	0.0480	16.00	901+75.00	1053.03						
1052.99		0.77	0.0480	16.00	902+00.00	1052.22						
1052.18		0.77	0.0480	16.00	902+25.00	1051.41						
1051.36		0.77	0.0480	16.00	902+50.00	1050.59						
1050.55		0.77	0.0480	16.00	902+75.00	1049.78						
1049.76		0.77	0.0480	16.00	903+00.00	1048.99						
1049.02		0.77	0.0480	16.00	903+25.00	1048.25						
1048.33		0.77	0.0480	16.00	903+50.00	1047.56						
1047.69		0.77	0.0480	16.00	903+75.00	1046.92						
1047.10		0.77	0.0480	16.00	904+00.00	1046.33						
1046.56		0.77	0.0480	16.00	904+25.00	1045.79						
1046.07		0.77	0.0480	16.00	904+50.00	1045.30						
1045.62		0.77	0.0480	16.00	904+75.00	1044.85						
1045.23		0.77	0.0480	16.00	905+00.00	1044.46						
1044.88		0.77	0.0480	16.00	905+25.00	1044.11						
1044.59		0.77	0.0480	16.00	905+50.00	1043.82						
1044.34		0.77	0.0480	16.00	905+75.00	1043.57						
1044.14		0.77	0.0480	16.00	906+00.00	1043.37						
1043.99		0.77	0.0480	16.00	906+25.00	1043.22						
1043.89		0.77	0.0480	16.00	906+50.00	1043.12						
1043.84		0.77	0.0480	16.00	906+75.00	1043.07						
1043.84		0.77	0.0480	16.00	907+00.00	1043.07						
1043.88		0.77	0.0480	16.00	907+25.00	1043.11						
1043.98		0.77	0.0480	16.00	907+50.00	1043.21						
1044.13		0.77	0.0480	16.00	907+75.00	1043.36						
1044.30		0.77	0.0480	16.00	908+00.00	1043.53						
1044.47		0.77	0.0480	16.00	908+25.00	1043.70						
1044.64		0.77	0.0480	16.00	908+50.00	1043.87						
1044.67		0.77	0.0480	16.00	908+55.05	1043.90						C.S./F.S.

CALCULATED LRK
CHECKED PJF

SUPERELEVATION TABLE
RAMP D

SUM-77/277/244
VARIOUS

837
1288

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SPIRAL 81 - SUPERELEVATION TABLE

P.I. Sta. 909+49.98

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	
1044.67		0.77	0.0480	16.00	908+55.05	1043.90						C.S./F.S.
1044.81		0.77	0.0483	16.00	908+75.00	1044.04						
1044.99		0.78	0.0487	16.00	909+00.00	1044.21						
1045.16		0.78	0.0490	16.00	909+25.00	1044.38						
1045.34		0.79	0.0494	16.00	909+50.00	1044.55						
1045.53	4167	0.80	0.0498	16.00	909+75.00	1044.73						
1045.72		0.80	0.0502	16.00	910+00.00	1044.92						
1045.93		0.81	0.0505	16.00	910+25.00	1045.12						
1046.14		0.81	0.0509	16.00	910+50.00	1045.33						
1046.19		0.82	0.0510	16.00	910+55.05	1045.37						S.C./F.S.

CURVE 82 - SUPERELEVATION TABLE

P.I. Sta. 913+74.55 | Dc = 2° 33′ 40″

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	
1046.19		0.82	0.0510	16.00	910+55.05	1045.37						S.C./F.S.
1046.36		0.82	0.0510	16.00	910+75.00	1045.54						
1046.59		0.82	0.0510	16.00	911+00.00	1045.77						
1046.82		0.82	0.0510	16.00	911+25.00	1046.00						
1047.05		0.82	0.0510	16.00	911+50.00	1046.23						
1047.26		0.82	0.0510	16.00	911+75.00	1046.44						
1047.47		0.82	0.0510	16.00	912+00.00	1046.65						F.S.
1047.70		0.87	0.0543	16.00	912+25.00	1046.83						
1047.93		0.92	0.0575	16.00	912+50.00	1047.01						
1048.14		0.97	0.0608	16.00	912+75.00	1047.17						
1048.33		1.02	0.0640	16.00	913+00.00	1047.31						
1048.52	481	1.08	0.0673	16.00	913+25.00	1047.44						
1048.70		1.13	0.0705	16.00	913+50.00	1047.57						
1048.89		1.18	0.0738	16.00	913+75.00	1047.71						
1049.10		1.23	0.0770	16.00	914+00.00	1047.87						
1049.31		1.28	0.0803	16.00	914+25.00	1048.03						
1049.54		1.34	0.0835	16.00	914+50.00	1048.20						EX. F.S.
1049.76		1.34	0.0835	16.00	914+75.00	1048.43						
1049.93		1.34	0.0835	16.00	914+93.91	1048.59						
1049.98		1.33	0.0835	15.88	915+00.00	1048.65						
1050.15		1.28	0.0835	15.36	915+25.00	1048.87						
1050.43		1.24	0.0835	14.85	915+50.00	1049.19						
1050.81		1.20	0.0835	14.35	915+74.42	1049.61						EXIST.

*NOTE: END WORK AT STA. 914+89.43, LIMITS SHOWN PAST THAT STATION ARE TO BE CONSTRUCTED BY OTHERS AS PART OF THE SUM-76/77/8-8.42/9.77/0.00 DB (PID 102329) PROJECT

CALCULATED LRK | CHECKED PJF

SUPERELEVATION TABLE RAMP D

SUM-77/277/244
VARIOUS

838
1288

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CURVE 88 - SUPERELEVATION TABLE

P.I. Sta. 73+08.33	Dc = 1° 30' 00"

LEFT SIDE					BASELINE CONTROL		RIGHT SIDE					
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	REMARKS
1094.42	200	0.42	0.0262	16.00	71+69.06	1094.00	5.56	-0.0262	-0.15	200	1093.85	EXIST.
1094.60		0.45	0.0280	16.00	71+74.82	1094.15	5.44	-0.0280	-0.15		1094.00	F.S.
1094.60		0.45	0.0280	16.00	71+75.00	1094.15	5.44	-0.0280	-0.15		1094.00	
1095.27		0.45	0.0280	16.00	72+00.00	1094.82	4.94	-0.0280	-0.14		1094.68	
1095.93		0.45	0.0280	16.00	72+25.00	1095.48	4.44	-0.0280	-0.12		1095.36	
1096.60		0.45	0.0280	16.00	72+50.00	1096.15	3.94	-0.0280	-0.11		1096.04	
1097.26		0.45	0.0280	16.00	72+75.00	1096.81	3.44	-0.0280	-0.10		1096.71	
1097.93		0.45	0.0280	16.00	73+00.00	1097.48	2.94	-0.0280	-0.08		1097.40	
1098.59		0.45	0.0280	16.00	73+25.00	1098.14	2.44	-0.0280	-0.07		1098.07	
1099.25		0.45	0.0280	16.00	73+50.00	1098.80	1.94	-0.0280	-0.05		1098.75	
1099.92		0.45	0.0280	16.00	73+75.00	1099.47	1.44	-0.0280	-0.04		1099.43	
1100.58		0.45	0.0280	16.00	74+00.00	1100.13	0.94	-0.0280	-0.03		1100.10	
1101.25		0.45	0.0280	16.00	74+25.00	1100.80	0.44	-0.0280	-0.01		1100.79	
1101.83		0.45	0.0280	16.00	74+47.06	1101.38	0.00	-0.0280	0.00		1101.38	
1101.91		0.45	0.0280	16.00	74+50.00	1101.46						
1102.58		0.45	0.0280	16.00	74+75.00	1102.13						
1102.89		0.45	0.0280	16.00	74+86.84	1102.44						F.S.
1103.15		0.38	0.0239	16.00	75+00.00	1102.77						
1103.50	200	0.30	0.0187	16.00	75+16.71	1103.20						P.T.
1103.66		0.26	0.0161	16.00	75+25.00	1103.40						
1103.67		0.26	0.0160	16.00	75+25.24	1103.41						N.C.

CALCULATED LRK
CHECKED PJF

SUPERELEVATION TABLE
ARLINGTON ROAD RAMP D

SUM-77/277/244
VARIOUS

839
1288

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CURVE 95 - SUPERELEVATION TABLE

P.I. Sta. 27+69.62	Dc = 2° 25' 32"

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	
1005.87		-0.19	-0.0160	12.00	26+60.00	1006.06	12.00	-0.0160	-0.19		1005.87	N.C.
1005.98		-0.19	-0.0160	12.00	26+70.00	1006.17	12.00	-0.0116	-0.14		1006.03	
1006.00		-0.22	-0.0182	12.00	26+75.00	1006.22	12.00	-0.0095	-0.11		1006.11	
1006.17	193	-0.33	-0.0275	12.00	26+96.67	1006.50	12.00	0.0000	0.00	191	1006.50	H.F.
1006.20		-0.35	-0.0289	12.00	27+00.00	1006.55	12.00	0.0015	0.02		1006.57	
1006.45		-0.48	-0.0397	12.00	27+25.00	1006.93	12.00	0.0124	0.15		1007.08	
1006.72		-0.61	-0.0505	12.00	27+50.00	1007.33	12.00	0.0233	0.28		1007.61	EXIST.
1006.94		-0.71	-0.0591	12.00	27+70.00	1007.65	12.00	0.0320	0.38		1008.03	EXIST.

CALCULATED LRK
CHECKED PJF

SUPERELEVATION TABLE
WARNER ROAD

SUM-77/277/244
VARIOUS

840
1288

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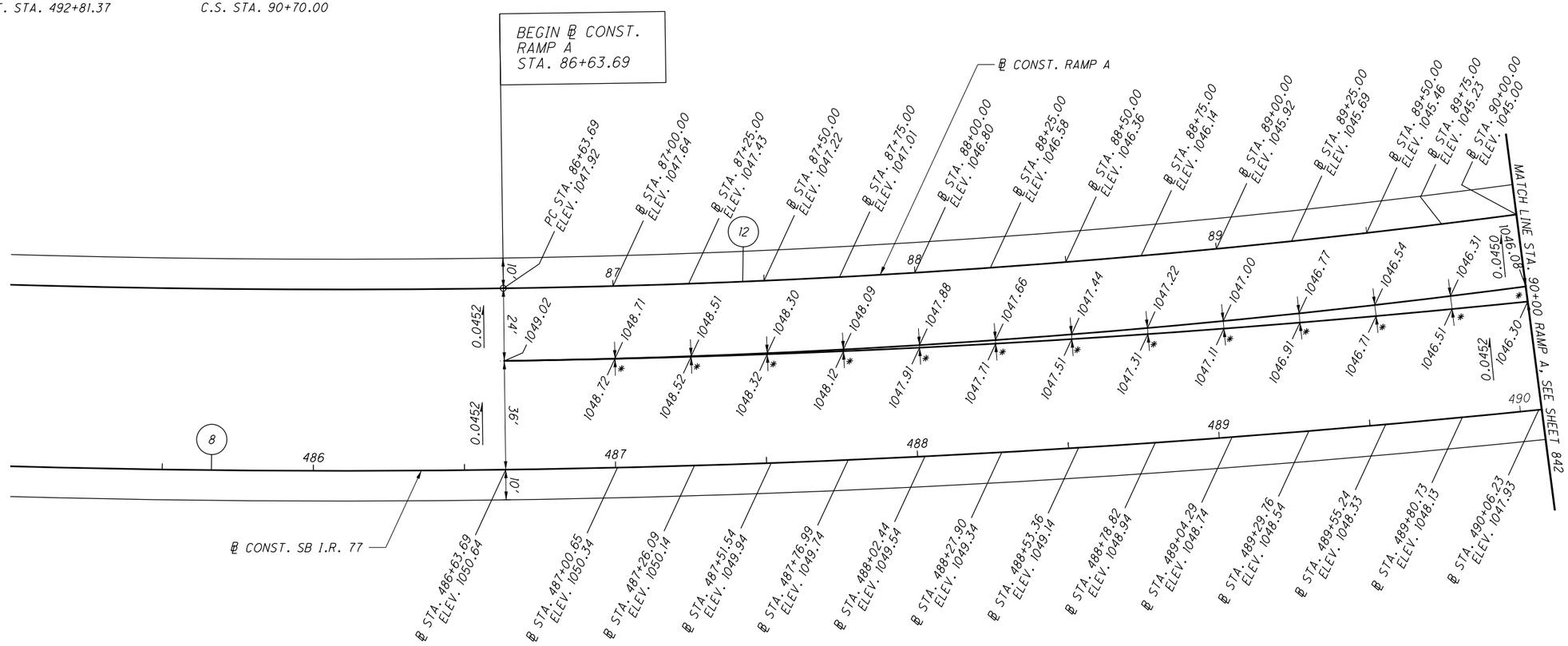
(8) ℄ CONST. SB I.R. 77
P.I. Sta. 482+91.41
Δ = 29° 44′ 36″ (LT)
Dc = 1° 28′ 03″
R = 3,904.07′
T = 1,036.73′
L = 2,026.68′
E = 135.31′
C = 2,004.00′
C.B. = N 26° 52′ 45″ W
D.S. = 70 MPH
e_{max} = 0.0452
P.C. STA. 472+54.68
P.T. STA. 492+81.37

(12) ℄ CONST. RAMP A
P.I. Sta. 88+67.18
Δ = 8° 07′ 34″ (LT)
Dc = 2° 00′ 00″
R = 2,864.79′
T = 203.49′
L = 406.31′
E = 7.22′
C = 405.96′
C.B. = N 36° 44′ 56″ W
D.S. = 60 MPH
e_{max} = 0.045
P.C. STA. 86+63.69
C.S. STA. 90+70.00



* GORE SLOPE INFORMATION

(READ FROM SB I.R. 77 E/P TO RAMP A E/P)

STA. 487+00.65, 0.06′ @ -0.0500
STA. 487+26.09, 0.18′ @ -0.0555
STA. 487+51.54, 0.33′ @ -0.0606
STA. 487+76.99, 0.55′ @ -0.0545
STA. 488+02.44, 0.83′ @ -0.0361
STA. 488+27.90, 1.16′ @ -0.0431
STA. 488+53.36, 1.55′ @ -0.0452
STA. 488+78.82, 1.99′ @ -0.0452
STA. 489+04.29, 2.49′ @ -0.0442
STA. 489+29.76, 3.04′ @ -0.0461
STA. 489+55.24, 3.65′ @ -0.0466
STA. 489+80.73, 4.32′ @ -0.0463
STA. 490+06.28, 5.04′ @ -0.0437

FOR SUPERELEVATION TABLES, SEE SHEETS 816 - 818
FOR SB I.R. 77 PROFILE, SEE SHEETS 476 - 479
FOR RAMP A PROFILE, SEE SHEETS 485 - 487

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED KRM
CHECKED LRK

RAMP GORE DETAILS
RAMP A AT SB I.R. 77 - BEGIN TO STA. 90+00

SUM-77 / 277 / 224
VARIOUS

841
1288

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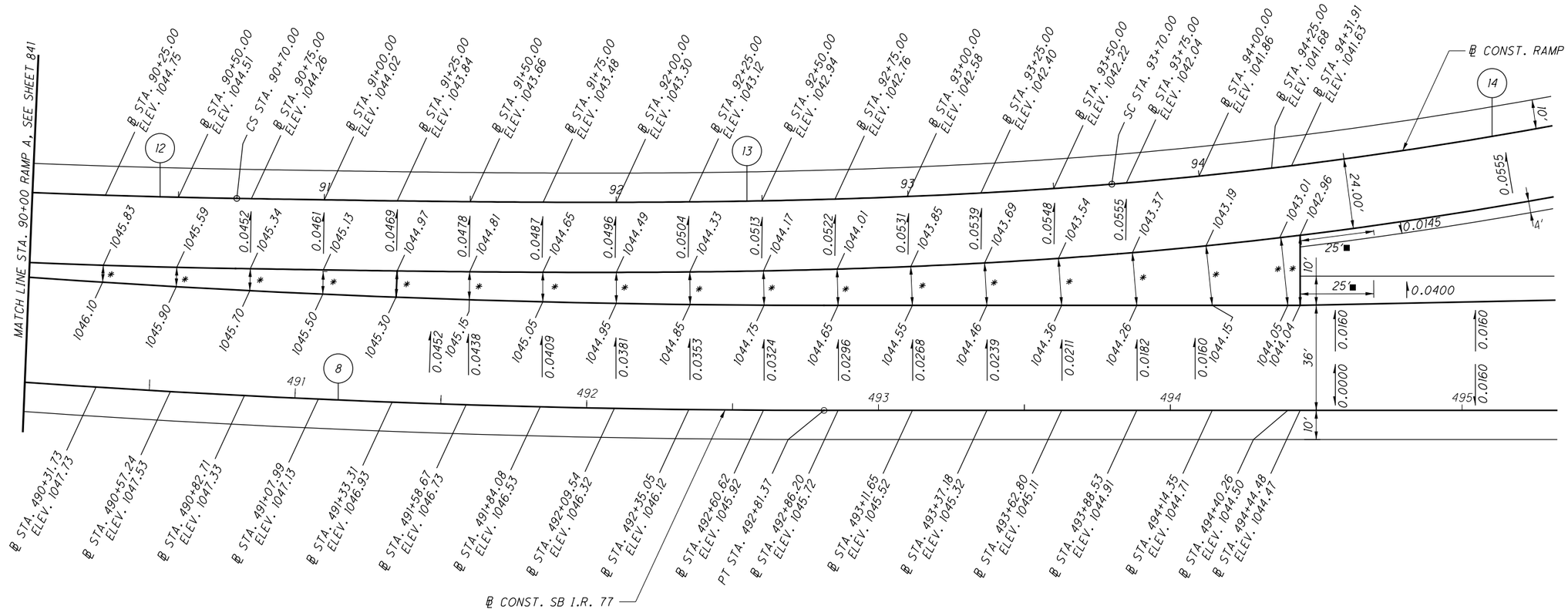
(8) ℄ CONST. SB I.R. 77
P.I. Sta. 482+91.41
Δ = 29° 44′ 36″ (LT)
Dc = 1° 28′ 03″
R = 3,904.07′
T = 1,036.73′
L = 2,026.68′
E = 135.31′
C = 2,004.00′
C.B. = N 26° 52′ 45″ W
D.S. = 70 MPH
e_{max} = 0.0452
P.C. STA. 472+54.68
P.T. STA. 492+81.37

(12) ℄ CONST. RAMP A
P.I. Sta. 88+67.18
Δ = 8° 07′ 34″ (LT)
Dc = 2° 00′ 00″
R = 2,864.79′
T = 203.49′
L = 406.31′
E = 7.22′
C = 405.96′
C.B. = N 36° 44′ 56″ W
D.S. = 60 MPH
e_{max} = 0.045
P.C. STA. 86+63.69
C.S. STA. 90+70.00

(13) ℄ CONST. RAMP A
P.I. STA. 92+70.10
Ls = 300.00′
θs = 5° 37′ 30″
LT = 200.10′
ST = 100.09′
x = 299.71′
y = 9.81′
k = 149.95′
p = 2.45′
C.S. STA. 90+70.00
S.C. STA. 93+70.00

(14) ℄ CONST. RAMP A
P.I. Sta. 99+36.72
Δ = 40° 42′ 05″ (LT)
Dc = 3° 45′ 00″
R = 1,527.89′
T = 566.72′
L = 1,085.37′
E = 101.72′
C = 1,062.69′
C.B. = N 66° 47′ 16″ W
D.S = 55 MPH (SSD = 50 MPH)
e_{max} = 0.0555
S.C. STA. 93+70.00
C.S. STA. 104+55.37



* GORE SLOPE INFORMATION

(READ FROM SB I.R. 77 E/P TO RAMP A E/P)

STA. 490+31.73, 5.82′ @ -0.0464
STA. 490+57.24, 6.65′ @ -0.0466
STA. 490+82.71, 7.53′ @ -0.0478
STA. 491+07.99, 8.32 @ -0.0445
STA. 491+33.31, 9.00′ @ -0.0367
STA. 491+58.67, 9.58′ @ -0.0355
STA. 491+84.08, 10.12′ @ -0.0395
STA. 492+09.54, 10.63′ @ -0.0433
STA. 492+35.05, 11.16′ @ -0.0466
STA. 492+60.62, 11.74′ @ -0.0494
STA. 492+86.20, 12.41′ @ -0.0516
STA. 493+11.65, 13.30′ @ -0.0526
STA. 493+37.18, 14.52′ @ -0.0530
STA. 493+62.80, 16.10 @ -0.0509
STA. 493+88.53, 18.08′ @ -0.0492
STA. 494+14.35, 20.49′ @ -0.0469
STA. 494+40.26, 23.32′ @ -0.0446
STA. 494+44.48, 24.00′ @ -0.0450

■ TRANSITION SHOULDER CROSS-SLOPE

FOR SUPERELEVATION TABLES, SEE SHEETS 816 - 818
FOR SB I.R. 77 PROFILE, SEE SHEETS 476 - 479
FOR RAMP A PROFILE, SEE SHEETS 485 - 487

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED KRM
CHECKED LRK

RAMP GORE DETAILS
RAMP A AT SB I.R. 77 - STA. 90+00 TO STA. 95+00

SUM-77 / 277 / 224
VARIOUS

842
1288

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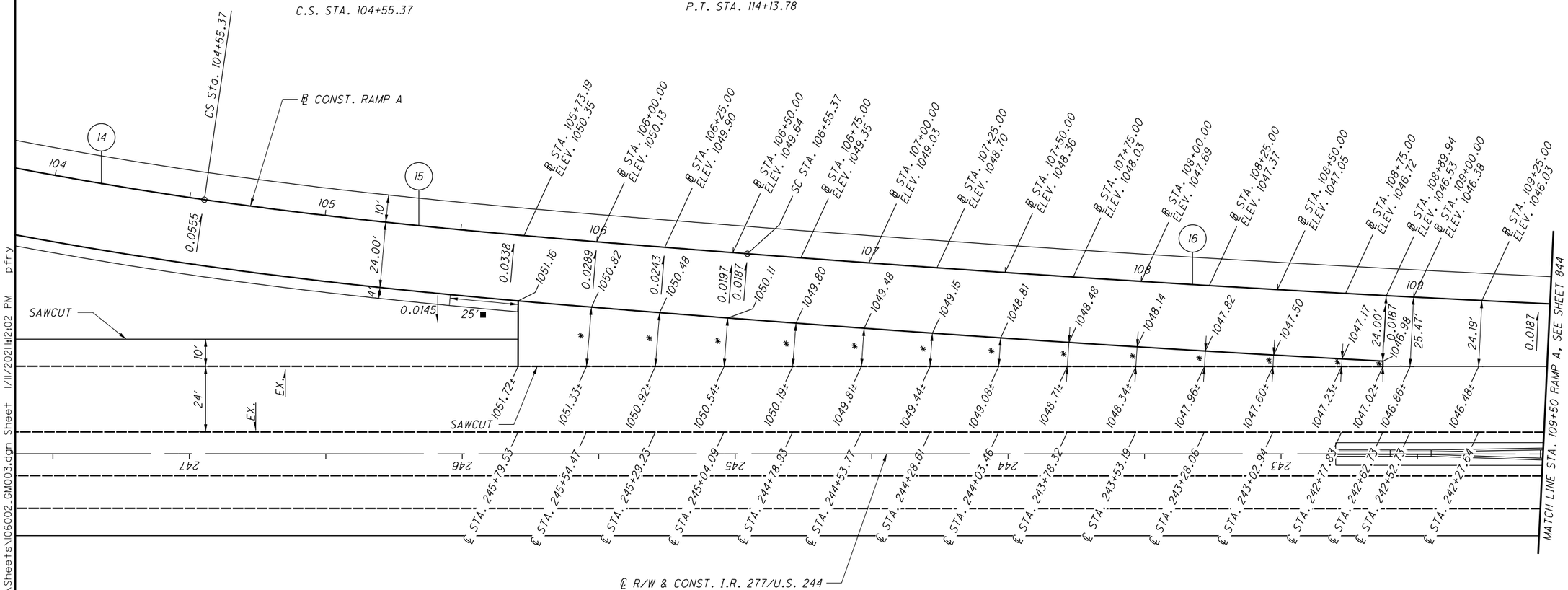
(14) ℄ CONST. RAMP A
P.I. Sta. 99+36.72
Δ = 40° 42′ 05″ (LT)
Dc = 3° 45′ 00″
R = 1,527.89′
T = 566.72′
L = 1,085.37′
E = 101.72′
C = 1,062.69′
C.B. = N 66° 47′ 16″ W
D.S = 55 MPH (SSD = 50 MPH)
e_{max} = 0.0555
S.C. STA. 93+70.00
C.S. STA. 104+55.37

(15) ℄ CONST. RAMP A
P.I. STA. 105+22.06
Ls = 200.00′
fs = 3° 45′ 00″
LT = 133.36′
ST = 66.69′
x = 199.91′
y = 4.36′
k = 99.99′
p = 1.09′
C.S. STA. 104+55.37
S.C. STA. 106+55.37

(16) ℄ CONST. RAMP A
P.I. Sta. 110+34.76
Δ = 4° 25′ 27″ (LT)
Dc = 0° 35′ 00″
R = 9,822.13′
T = 379.40′
L = 758.42′
E = 7.32′
C = 758.23′
C.B. = S 86° 53′ 59″ W
D.S. = 65 MPH
e_{max} = 0.0187
S.C. STA. 106+55.37
P.T. STA. 114+13.78



* GORE SLOPE INFORMATION

(READ FROM I.R. 277 E/P TO RAMP A E/P)

STA. 245+79.53, 24.00′ @ -0.0233
STA. 245+54.47, 21.78′ @ -0.0234
STA. 245+29.23, 19.76′ @ -0.0223
STA. 245+04.09, 17.81′ @ -0.0241
STA. 244+78.93, 15.88′ @ -0.0246
STA. 244+53.77, 14.03′ @ -0.0235
STA. 244+28.61, 12.23′ @ -0.0237
STA. 244+03.46, 10.50′ @ -0.0257
STA. 243+78.32, 8.83′ @ -0.0260
STA. 243+53.19, 7.23′ @ -0.0277
STA. 243+28.06, 5.70′ @-0.0246
STA. 243+02.94, 4.22′ @ -0.0237
STA. 242+77.83, 2.81′ @ -0.0214
STA. 242+62.73, 2.00′ @ -0.0200

■ TRANSITION SHOULDER CROSS-SLOPE

± CONSTRUCTED ELEVATIONS ARE TO MEET EXISTING ELEVATIONS AND ARE TO BE VERIFIED IN FIELD.

FOR SUPERELEVATION TABLES, SEE SHEETS 816 - 818
FOR RAMP A PROFILE, SEE SHEETS 485 - 487

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KRM
CHECKED LRK

RAMP GORE DETAILS
RAMP A AT I.R 277
STA. 104+00 TO STA. 109+50

SUM-77/277/224
VARIOUS

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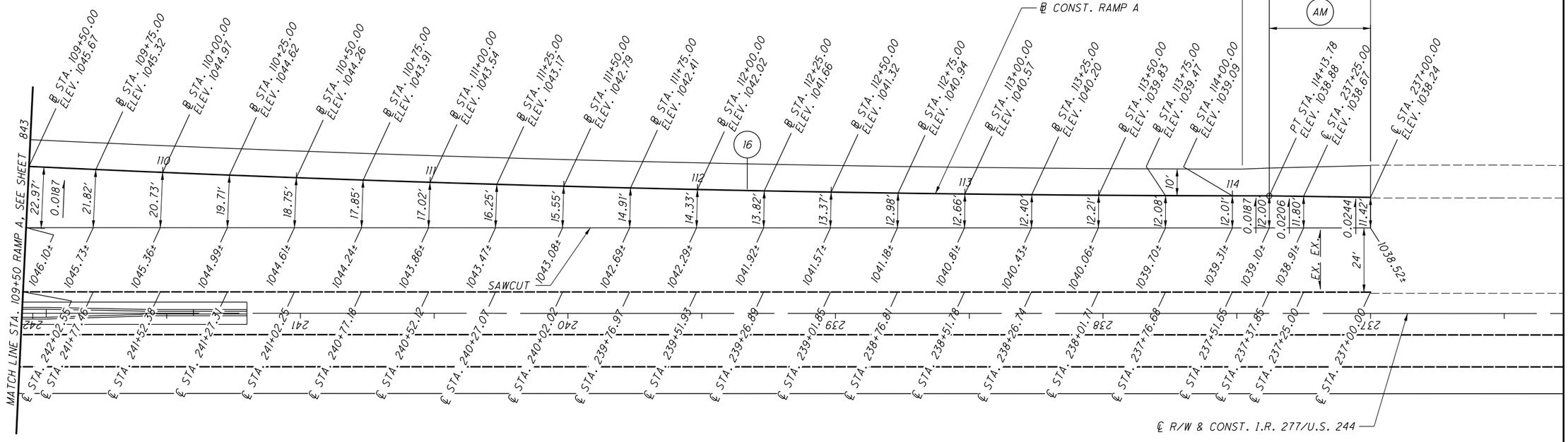
TAPER TABLE								
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
AM	237+00.00	IR-277/US-224	237+37.85	IR-277/US-224	RT	PAVEMENT	11.42′	12.00′	65:1
AN	237+00.00	IR-277/US-224	237+47.95	IR-277/US-224	RT	SHOULDER	11.92′	10.00′	25:1

16 — ℄ CONST. RAMP A
P.I. Sta. 110+34.76
Δ = 4° 25′ 27″ (LT)
Dc = 0° 35′ 00″
R = 9,822.13′
T = 379.40′
L = 758.42′
E = 7.32′
C = 758.23′
C.B. = S 86° 53′ 59″ W
D.S. = 65 MPH
e_{max} = 0.0187
S.C. STA. 106+55.37
P.T. STA. 114+13.78

END ℄ CONST. RAMP A
STA. 114+13.78



± CONSTRUCTED ELEVATIONS ARE TO MEET EXISTING ELEVATIONS AND ARE TO BE VERIFIED IN FIELD.

FOR SUPERELEVATION TABLES, SEE SHEETS 816 - 818
FOR RAMP A PROFILE, SEE SHEETS 485 - 487

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KRM
CHECKED LRK

RAMP GORE DETAILS
RAMP A AT I.R. 277 - STA. 109+50 TO END

SUM-77/277/224
VARIOUS

844
1288

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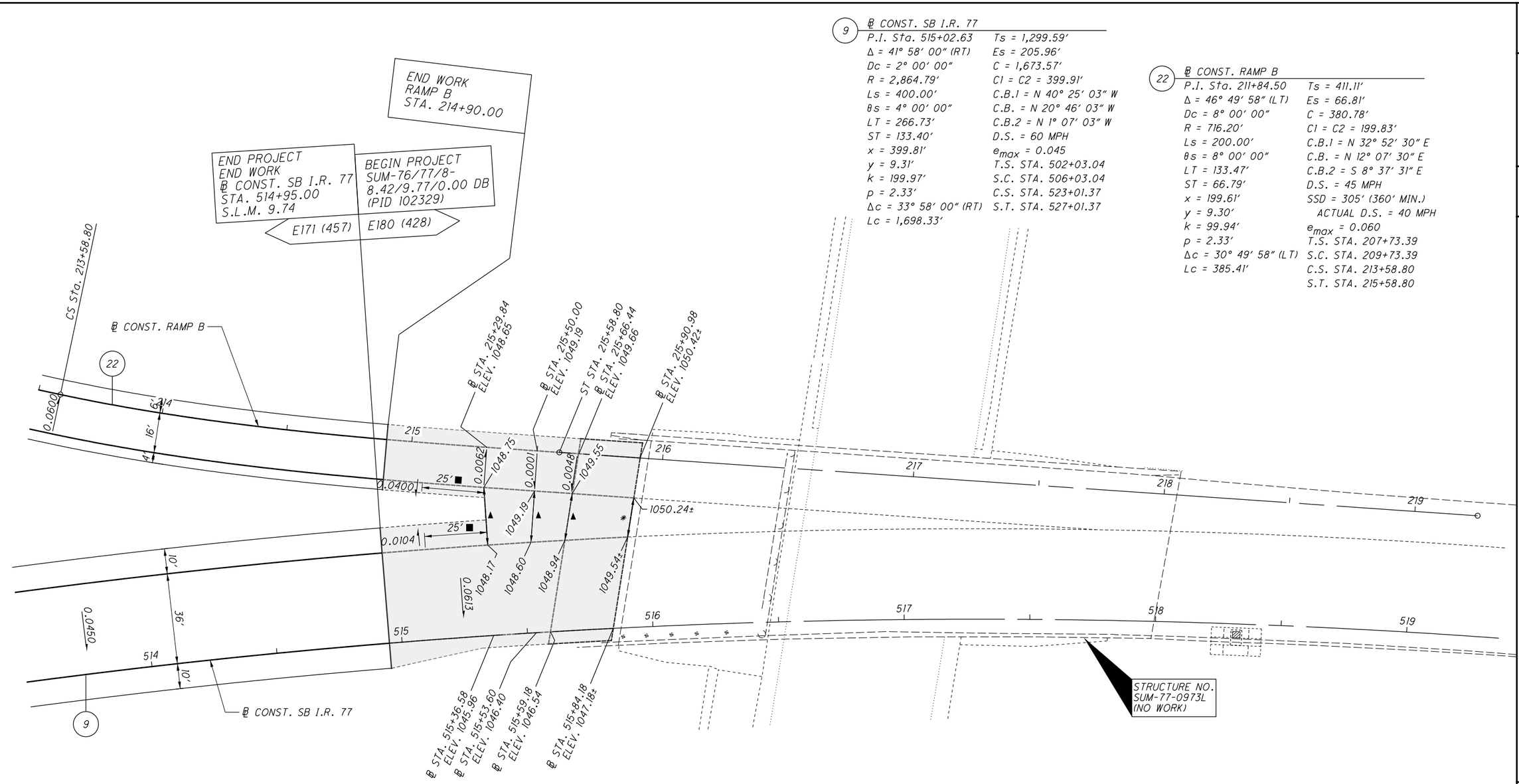

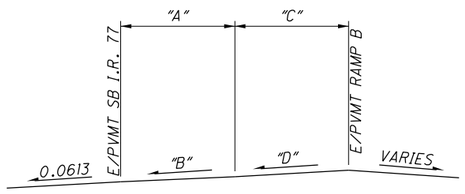

SECTION A-A

GORE SLOPE INFORMATION				
STATION	"A"	"B"	"C"	"D"
516+36.58	10.00′	0.0293	13.00′	0.0221
515+53.60	10.09′	0.0293	10.39′	0.0283
515+59.18	10.23′	0.0293	8.60′	0.0361

9 ℄ CONST. SB I.R. 77

P.I. Sta. 515+02.63	Ts = 1,299.59′
Δ = 41° 58′ 00″ (RT)	Es = 205.96′
Dc = 2° 00′ 00″	C = 1,673.57′
R = 2,864.79′	C1 = C2 = 399.91′
Ls = 400.00′	C.B.1 = N 40° 25′ 03″ W
θs = 4° 00′ 00″	C.B. = N 20° 46′ 03″ W
LT = 266.73′	C.B.2 = N 1° 07′ 03″ W
ST = 133.40′	D.S. = 60 MPH
x = 399.81′	e_{max} = 0.045
y = 9.31′	T.S. STA. 502+03.04
k = 199.97′	S.C. STA. 506+03.04
p = 2.33′	C.S. STA. 523+01.37
Δc = 33° 58′ 00″ (RT)	S.T. STA. 527+01.37
Lc = 1,698.33′	

22 ℄ CONST. RAMP B

P.I. Sta. 211+84.50	Ts = 411.11′
Δ = 46° 49′ 58″ (LT)	Es = 66.81′
Dc = 8° 00′ 00″	C = 380.78′
R = 716.20′	C1 = C2 = 199.83′
Ls = 200.00′	C.B.1 = N 32° 52′ 30″ E
θs = 8° 00′ 00″	C.B. = N 12° 07′ 30″ E
LT = 133.47′	C.B.2 = S 8° 37′ 31″ E
ST = 66.79′	D.S. = 45 MPH
x = 199.61′	SSD = 305′ (360′ MIN.)
y = 9.30′	ACTUAL D.S. = 40 MPH
k = 99.94′	e_{max} = 0.060
p = 2.33′	T.S. STA. 207+73.39
Δc = 30° 49′ 58″ (LT)	S.C. STA. 209+73.39
Lc = 385.41′	C.S. STA. 213+58.80
	S.T. STA. 215+58.80

PAVEMENT AND APPROACH SLAB BY OTHERS (SUM-76/77/8-8.42/9.77/0.00 DB, PID 102329)

▲ SEE SECTION A-A FOR DETAILS

■ TRANSITION SHOULDER CROSS-SLOPE

± CONSTRUCTED ELEVATIONS ARE TO MEET EXISTING ELEVATIONS AND ARE VERIFIED IN FIELD.

FOR SUPERELEVATION TABLES, SEE SHEETS 819
FOR SB I.R. 77 PROFILE, SEE SHEETS 476 - 479
FOR RAMP B PROFILE, SEE SHEETS 488 - 489

* GORE SLOPE INFORMATION

(READ FROM SB I.R. 77 E/P TO RAMP B E/P)

STA. 515+84.18, 15.80′ @ 0.0443

N

0 10 20 40 HORIZONTAL SCALE IN FEET

CALCULATED KRM CHECKED LRK

RAMP GORE DETAILS
RAMP B AT SB I.R. 77 - STA. 213+50 TO END

SUM-77/277/224
VARIOUS

845
1288

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TAPER TABLE									
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
AV	405+01.68	RAMP B-1	405+51.68	RAMP B-1	LT	SHOULDER	8.00′	6.00′	25:1

(9) ℄ CONST. SB I.R. 77

P.I. Sta. 515+02.63
Δ = 41° 58′ 00″ (RT)
Dc = 2° 00′ 00″
R = 2,864.79′
Ls = 400.00′
θs = 4° 00′ 00″
LT = 266.73′
ST = 133.40′
x = 399.81′
y = 9.31′
k = 199.97′
p = 2.33′
Δc = 33° 58′ 00″ (RT)
Lc = 1,698.33′

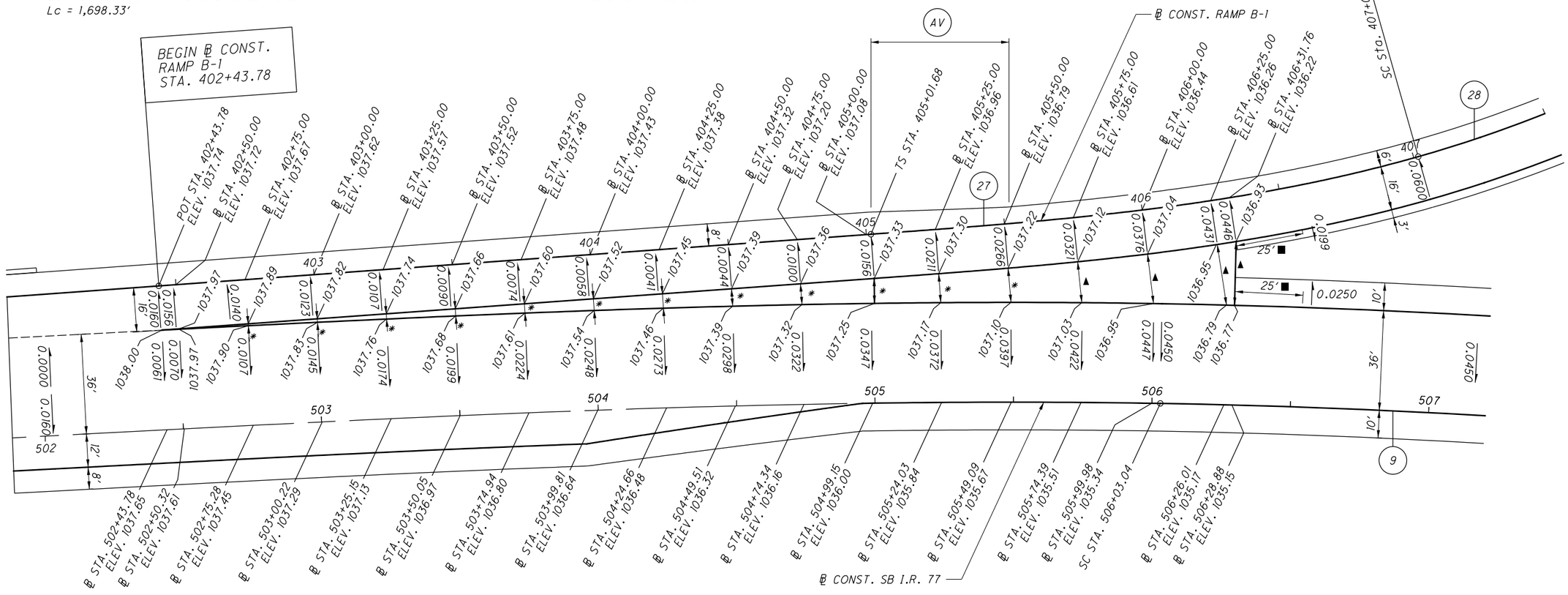
Ts = 1,299.59′
Es = 205.96′
C = 1,673.57′
C1 = C2 = 399.91′
C.B.1 = N 40° 25′ 03″ W
C.B. = N 20° 46′ 03″ W
C.B.2 = N 1° 07′ 03″ W
D.S. = 60 MPH
e_{max} = 0.045
T.S. STA. 502+03.04
S.C. STA. 506+03.04
C.S. STA. 523+01.37
S.T. STA. 527+01.37

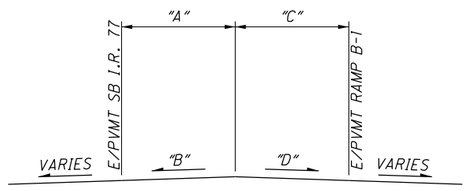
(27) ℄ CONST. RAMP B-1

P.I. STA. 406+35.31
Ls = 200.00′
f s = 11° 45′ 00″
LT = 133.63′
ST = 66.93′
x = 199.16′
y = 13.63′
k = 99.86′
p = 3.41′
T.S. STA. 405+01.68
S.C. STA. 407+01.68

(28) ℄ CONST. RAMP B-1

P.I. Sta. 407+76.50
Δ = 17° 26′ 53″ (LT)
Dc = 11° 45′ 00″
R = 487.62′
T = 74.83′
L = 148.49′
E = 5.71′
C = 147.92′
C.B. = N 63° 22′ 14″ W
D.S. = 40 MPH (SSD = 35 MPH)
e_{max} = 0.060
S.C. STA. 407+01.68
P.C.C. STA. 408+50.17





SECTION A-A

GORE SLOPE INFORMATION				
STATION	"A"	"B"	"C"	"D"
505+74.39	10.06′	0.0110	4.78′	0.0043
505+99.98	10.10′	0.0130	7.90′	0.0052
506+26.01	10.16′	0.0200	11.95′	0.0036
506+28.88	10.00′	0.0200	13.00′	0.0031

*** GORE SLOPE INFORMATION**

(READ FROM SB I.R. 77 E/P TO RAMP B-1 E/P)

STA. 502+50.32, 0.13′ @ 0.0000
STA. 502+75.28, 0.67′ @ -0.0149
STA. 503+00.22, 1.25′ @ -0.0080
STA. 503+25.15, 1.88′ @ -0.0106
STA. 503+50.05, 2.58′ @ -0.0078
STA. 503+74.94, 3.36′ @ -0.0030
STA. 503+99.81, 4.23′ @ -0.0047
STA. 504+24.66, 5.21′ @ -0.0019
STA. 504+49.51, 6.31′ @ 0.0000
STA. 504+74.34, 7.54′ @ 0.0053
STA. 504+99.15, 8.92 @ 0.0090
STA. 505+24.03, 10.49′ @ 0.0124
STA. 505+49.09, 12.39′ @ 0.0097

▲ SEE SECTION A-A FOR DETAILS

■ TRANSITION SHOULDER CROSS-SLOPE

FOR SUPERELEVATION TABLES, SEE SHEETS 820 - 822
FOR SB I.R. 77 PROFILE, SEE SHEETS 476 - 479
FOR RAMP B-1 PROFILE, SEE SHEETS 491

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KRM
CHECKED LRK

RAMP GORE DETAILS
RAMP B-1 AT SB I.R. 77 - BEGIN TO STA. 407+50

SUM-77 / 277 / 224
VARIOUS

846
1288

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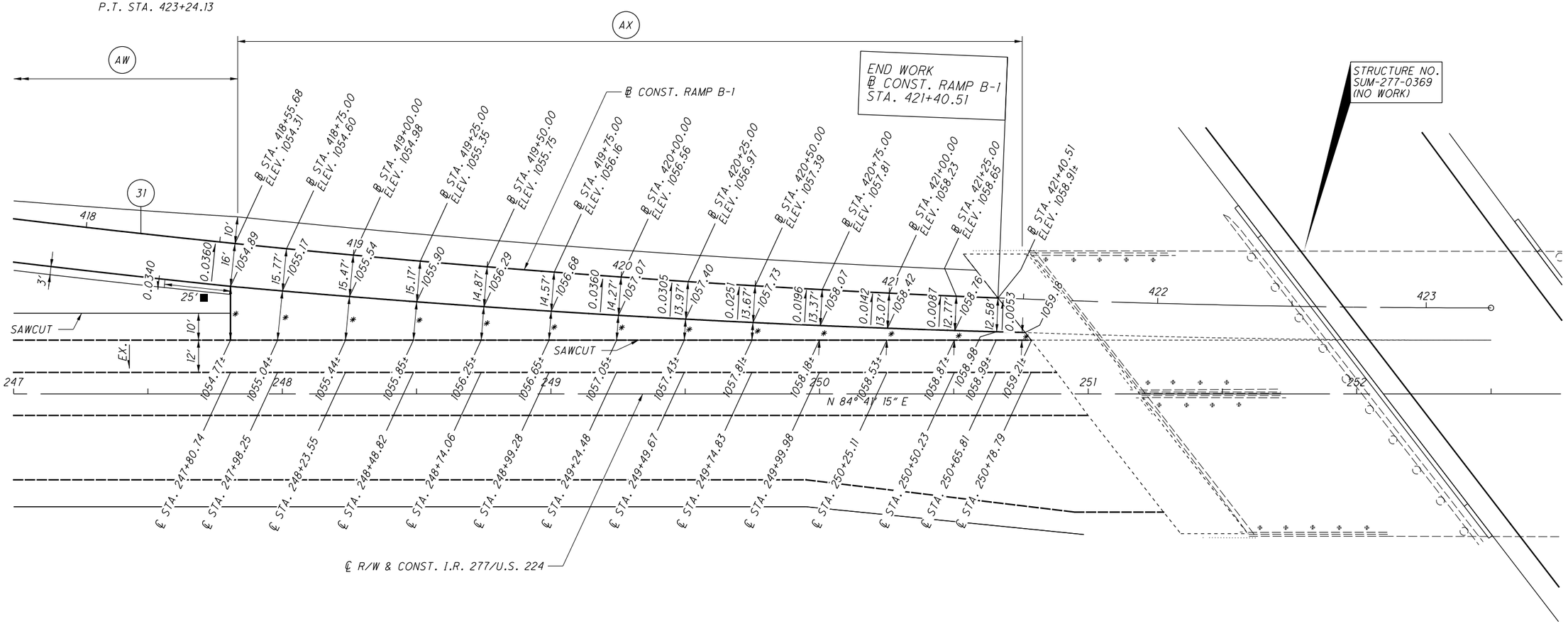
TAPER TABLE									
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
AW	417+55.68	RAMP B-1	418+55.68	RAMP B-1	LT	SHOULDER	6.00′	10.00′	25:1
AX	418+55.68	RAMP B-1	421+51.12	RAMP B-1	RT	PAVEMENT	16.00′	12.45′	83:1

(31) ℄ CONST. RAMP B-1
P.I. Sta. 420+43.64
Δ = 7° 01′ 15″ (LT)
Dc = 1° 15′ 00″
R = 4,583.66′
T = 281.19′
L = 561.67′
E = 8.62′
C = 561.32′
C.B. = N 88° 11′ 53″ E
D.S. = 65 MPH
e_{max} = 0.036
S.C. STA. 417+62.45
P.T. STA. 423+24.13



* GORE SLOPE INFORMATION
(READ FROM I.R. 277 E/P TO RAMP B-1 E/P)

STA. 247+80.74, 20.00′ @ 0.0060
STA. 247+98.25, 18.38′ @ 0.0071
STA. 248+23.55, 16.28′ @ 0.0061
STA. 248+48.82, 14.31′ @ 0.0035
STA. 248+74.06, 12.48′ @ 0.0032
STA. 248+99.28, 10.80′ @ 0.0028
STA. 249+24.48, 9.25′ @ 0.0022
STA. 249+49.67, 7.84′ @ -0.0038
STA. 249+74.83, 6.56′ @ -0.0122
STA. 249+99.98, 5.43′ @ -0.0203
STA. 250+25.11, 4.43′ @ -0.0248
STA. 250+50.23, 3.57′ @ -0.0308
STA. 250+65.81, 3.11′ @ -0.0032

■ TRANSITION SHOULDER CROSS-SLOPE

± CONSTRUCTED ELEVATIONS ARE TO MEET EXISTING ELEVATIONS AND ARE TO BE VERIFIED IN FIELD.

FOR SUPERELEVATION TABLES, SEE SHEETS 820 - 822
FOR RAMP B-1 PROFILE, SEE SHEETS 491

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KRM
CHECKED LRK

RAMP GORE DETAILS
RAMP B-1 AT I.R. 277 - STA. 418+00 TO END

SUM-77/277/224
VARIOUS

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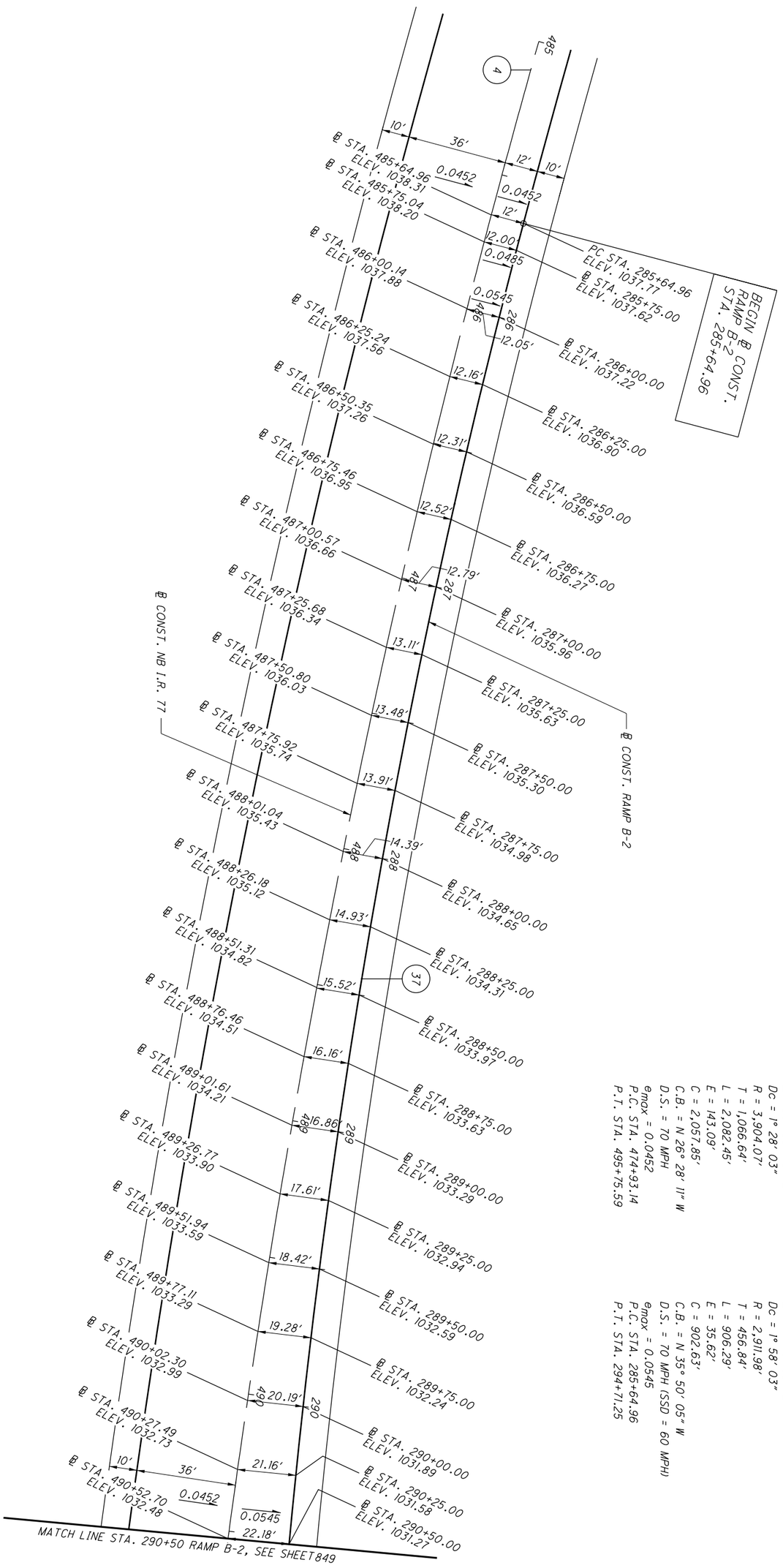


4 ℄ CONST. NB I.R. 77
P.I. Sta. 485+59.78
Δ = 30° 33' 43" (LT)
Dc = 1° 28' 03"
R = 3,904.07'
T = 1,066.64'
L = 2,082.45'
E = 143.09'
C = 2,057.85'
C.B. = N 26° 28' 11" W
D.S. = 70 MPH
emax = 0.0452
P.C. STA. 474+93.14
P.T. STA. 495+75.59

37 ℄ CONST. RAMP B-2
P.I. Sta. 290+21.80
Δ = 17° 49' 55" (LT)
Dc = 1° 58' 03"
R = 2,911.98'
T = 456.84'
L = 906.29'
E = 35.62'
C = 902.63'
C.B. = N 35° 50' 05" W
D.S. = 70 MPH (SSD = 60 MPH)
emax = 0.0545
P.C. STA. 285+64.96
P.T. STA. 294+71.25

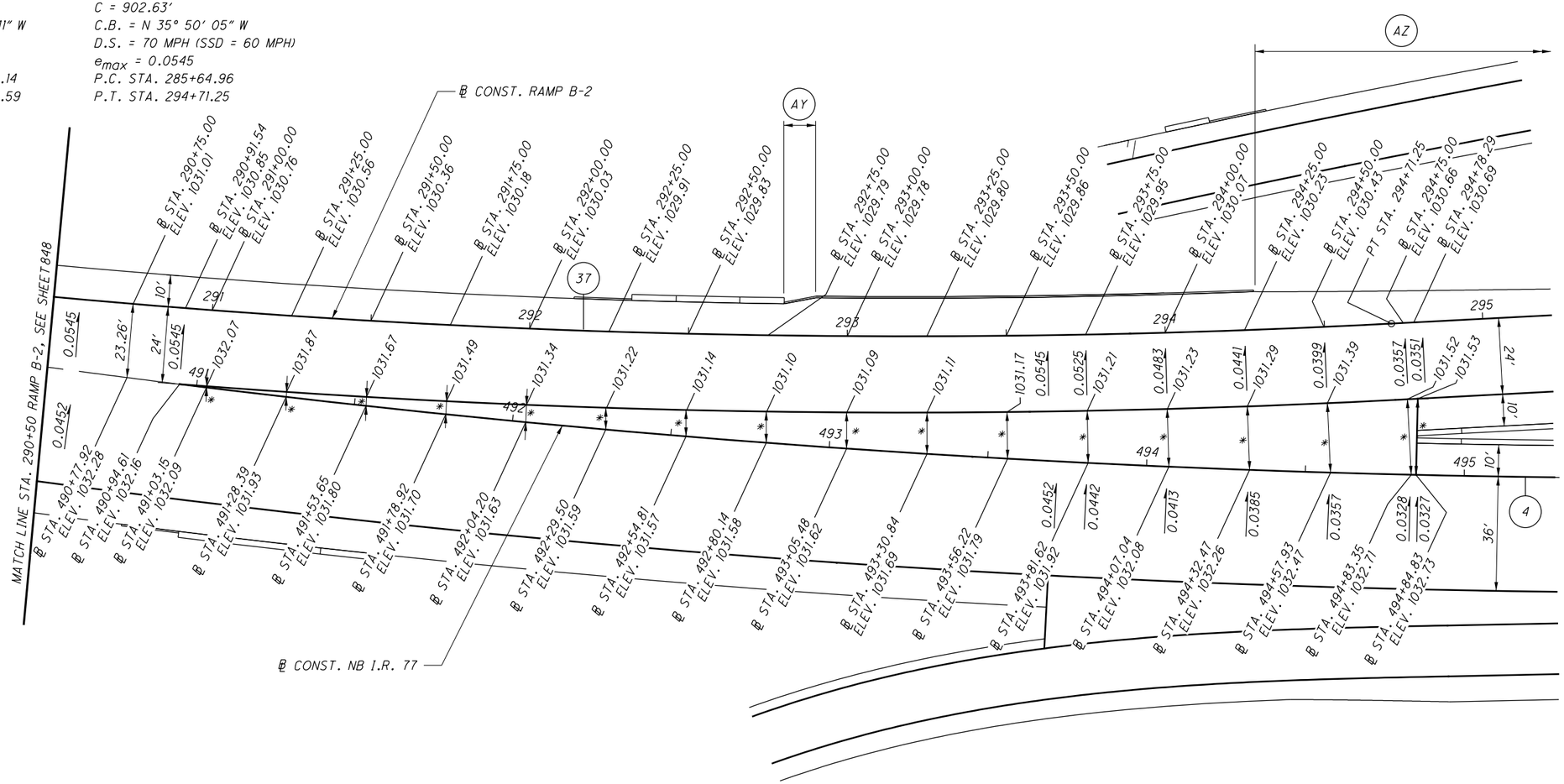
FOR SUPERELEVATION TABLES, SEE SHEETS 823 - 826
FOR NB I.R. 77 PROFILE, SEE SHEETS 472 - 475
FOR RAMP B-2 PROFILE, SEE SHEETS 492 - 496

848 / 1288	SUM-77/277/224 VARIOUS	RAMP GORE DETAILS RAMP B-2 AT NB I.R. 77 - BEGIN TO STA. 290+50	CALCULATED KRM CHECKED LRK	0 20 10 40 HORIZONTAL SCALE IN FEET

TAPER TABLE								
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
AY	292+80.00	RAMP B-2	292+90.00	RAMP B-2	LT	SHOULDER	10.00′	12.00′	5:1
AZ	294+28.29	RAMP B-2	296+28.29	RAMP B-2	LT	SHOULDER	12.00′	4.00′	25:1

(4) ℄ CONST. NB I.R. 77
P.I. Sta. 485+59.78
Δ = 30° 33′ 43″ (LT)
Dc = 1° 28′ 03″
R = 3,904.07′
T = 1,066.64′
L = 2,082.45′
E = 143.09′
C = 2,057.85′
C.B. = N 26° 28′ 11″ W
D.S. = 70 MPH
e_{max} = 0.0452
P.C. STA. 474+93.14
P.T. STA. 495+75.59

(37) ℄ CONST. RAMP B-2
P.I. Sta. 290+21.80
Δ = 17° 49′ 55″ (LT)
Dc = 1° 58′ 03″
R = 2,911.98′
T = 456.84′
L = 906.29′
E = 35.62′
C = 902.63′
C.B. = N 35° 50′ 05″ W
D.S. = 70 MPH (SSD = 60 MPH)
e_{max} = 0.0545
P.C. STA. 285+64.96
P.T. STA. 294+71.25



* GORE SLOPE INFORMATION

(READ FROM NB I.R. 77 E/P TO RAMP B-2)

STA. 491+03.15, 0.39′ @ -0.0513
STA. 491+28.39, 1.57′ @ -0.0382
STA. 491+53.65, 2.81′ @ -0.0463
STA. 491+78.92, 4.10′ @ -0.0512
STA. 492+04.20, 5.45′ @ -0.0532
STA. 492+29.50, 6.85′ @ -0.0540
STA. 492+54.81, 8.31′ @ -0.0517
STA. 492+80.14, 9.82′ @ -0.0489
STA. 493+05.48, 11.38′ @ -0.0466
STA. 493+30.84, 12.99′ @ -0.0446
STA. 493+56.22, 14.66′ @ -0.0423
STA. 493+81.62, 16.39′ @ -0.0433
STA. 494+07.04, 18.17′ @ -0.0468
STA. 494+32.47, 20.00′ @ -0.0485
STA. 494+57.93, 21.89′ @ -0.0493
STA. 494+83.35, 23.82′ @ -0.0500
STA. 494+84.83, 24.00′ @ -0.0500

FOR SUPERELEVATION TABLES, SEE SHEETS 823 - 826
FOR NB I.R. 77 PROFILE, SEE SHEETS 472 - 475
FOR RAMP B-2 PROFILE, SEE SHEETS 492 - 496

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED KRM
CHECKED LRK

RAMP GORE DETAILS
RAMP B-2 AT NB I.R. 77 - STA. 290+50 TO STA. 295+00

SUM-77/277/224
VARIOUS

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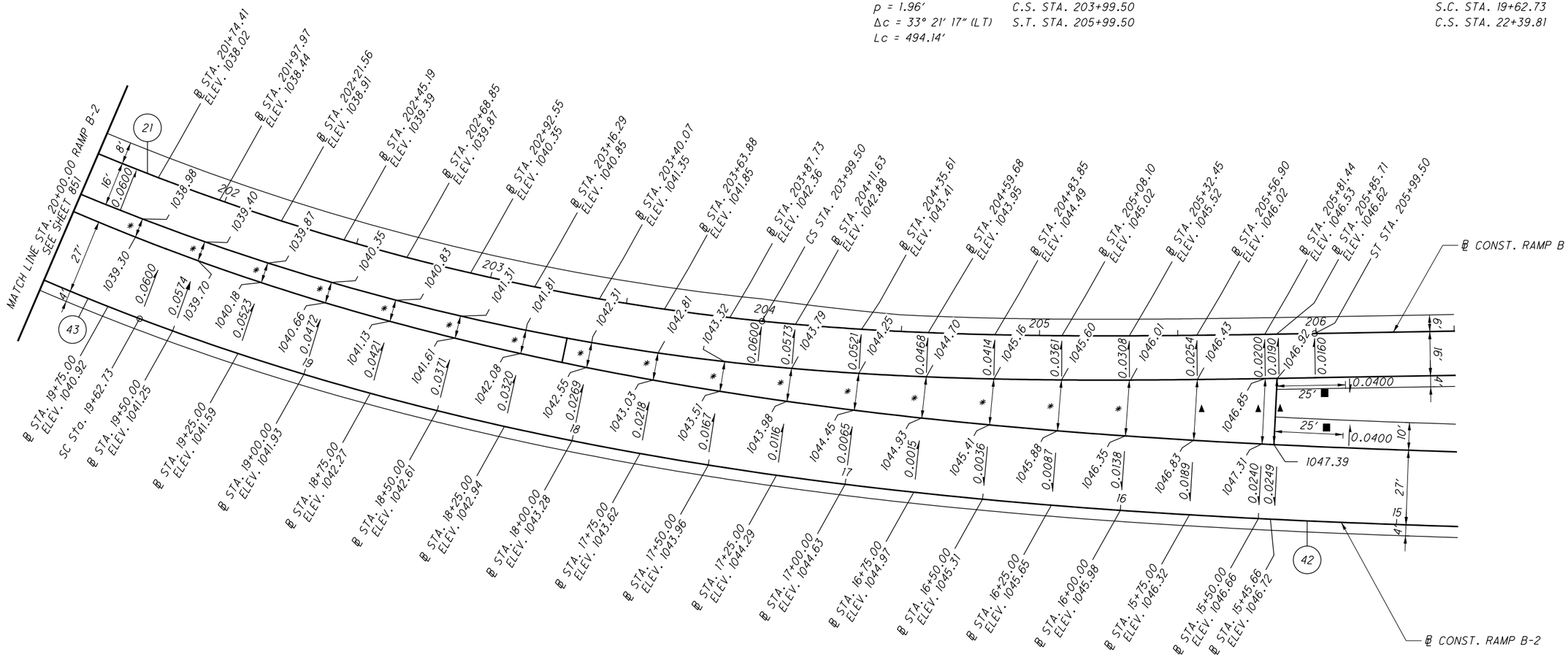
21	℄ CONST. RAMP B	
	P.I. Sta. 201+73.97	Ts = 468.61′
	Δ = 46° 51′ 17″ (LT)	Es = 78.40′
	Dc = 6° 45′ 00″	C = 487.20′
	R = 848.83′	C1 = C2 = 199.88′
	Ls = 200.00′	C.B.1 = N 80° 08′ 47″ E
	θs = 6° 45′ 00″	C.B. = N 58° 58′ 07″ E
	LT = 133.43′	C.B.2 = S 37° 47′ 28″ W
	ST = 66.75′	D.S. = 50 MPH (SSD = 45 MPH)
	x = 199.72′	e_{max} = 0.060
	y = 7.85′	T.S. STA. 197+05.36
	k = 99.95′	S.C. STA. 199+05.36
	p = 1.96′	C.S. STA. 203+99.50
	Δc = 33° 21′ 17″ (LT)	S.T. STA. 205+99.50
	Lc = 494.14′	

42	℄ CONST. RAMP B-2
	P.I. STA. 17+73.39
	Ls = 575.00′
	θs = 19° 24′ 22″
	LT = 385.66′
	ST = 193.79′
	x = 568.44′
	y = 64.39′
	k = 286.40′
	p = 16.16′
	C.S. STA. 13+87.73
	S.C. STA. 19+62.73

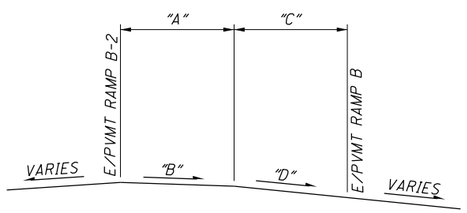
43	℄ CONST. RAMP B-2
	P.I. Sta. 21+02.51
	Δ = 18° 42′ 10″ (RT)
	Dc = 6° 45′ 00″
	R = 848.83′
	T = 139.78′
	L = 277.08′
	E = 11.43′
	C = 275.85′
	C.B. = S 66° 35′ 48″ W
	D.S. = 50 MPH
	e_{max} = 0.060
	S.C. STA. 19+62.73
	C.S. STA. 22+39.81



* GORE SLOPE INFORMATION

(READ FROM RAMP B-2 E/P TO RAMP B E/P)

STA. 19+75.00, 7.03′ @ -0.0455
STA. 19+50.00, 7.26′ @ -0.0413
STA. 19+25.00, 7.46′ @ -0.0416
STA. 19+00.00, 7.67′ @ -0.0404
STA. 18+75.00, 7.92′ @ -0.0379
STA. 18+50.00, 8.24′ @ -0.0364
STA. 18+25.00, 8.67′ @ -0.0311
STA. 18+00.00, 9.23′ @ -0.0260
STA. 17+75.00, 9.96′ @ -0.0221
STA. 17+50.00, 10.89′ @ -0.0174
STA. 17+25.00, 12.05′ @ -0.0158
STA. 17+00.00, 13.44′ @ -0.0149
STA. 16+75.00, 15.00′ @ -0.0153
STA. 16+50.00, 16.70′ @ -0.0150
STA. 16+25.00, 18.47′ @ -0.0152
STA. 16+00.00, 20.27′ @ -0.0168



SECTION A-A

GORE SLOPE INFORMATION				
STATION	"A"	"B"	"C"	"D"
15+75.00	10.00′	0.0131	12.03′	0.0224
15+50.00	10.00′	0.0080	13.72′	0.0277
15+45.66	10.00′	0.0071	14.00′	0.0285

▲ SEE SECTION A-A FOR DETAILS

■ TRANSITION SHOULDER CROSS-SLOPE

FOR SUPERELEVATION TABLES, SEE SHEETS 823 - 826
FOR RAMP B-2 PROFILE, SEE SHEETS 492 - 496
FOR RAMP B PROFILE, SEE SHEETS 488 - 489

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KRM CHECKED LRK

RAMP GORE DETAILS
RAMP B-2 AT RAMP B - STA. 15+00 - STA. 20+00

SUM-77/277/224
VARIOUS

850
1288

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(21) ℄ CONST. RAMP B

P.I. Sta. 201+73.97
Δ = 46° 51′ 17″ (LT)
Dc = 6° 45′ 00″
R = 848.83′
Ls = 200.00′
θs = 6° 45′ 00″
LT = 133.43′
ST = 66.75′
x = 199.72′
y = 7.85′
k = 99.95′
p = 1.96′
Δc = 33° 21′ 17″ (LT)
Lc = 494.14′

Ts = 468.61′
Es = 78.40′
C = 487.20′
C1 = C2 = 199.88′
C.B.1 = N 80° 08′ 47″ E
C.B. = N 58° 58′ 07″ E
C.B.2 = S 37° 47′ 28″ W
D.S. = 50 MPH (SSD = 45 MPH)
e_{max} = 0.060
T.S. STA. 197+05.36
S.C. STA. 199+05.36
C.S. STA. 203+99.50
S.T. STA. 205+99.50

(43) ℄ CONST. RAMP B-2

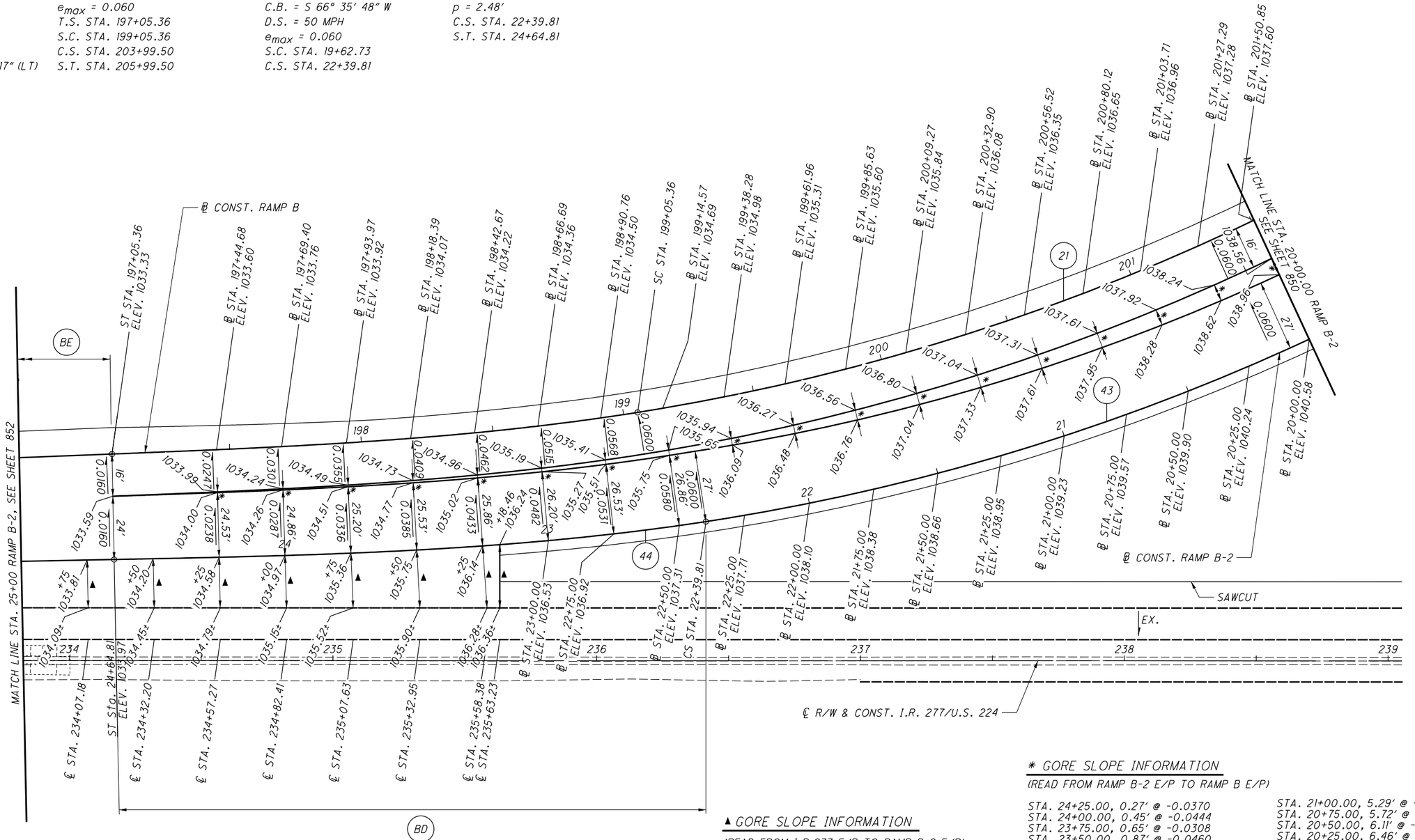
P.I. Sta. 21+02.51
Δ = 18° 42′ 10″ (RT)
Dc = 6° 45′ 00″
R = 848.83′
T = 139.78′
L = 277.08′
E = 11.43′
C = 275.85′
C.B. = S 66° 35′ 48″ W
D.S. = 50 MPH
e_{max} = 0.060
S.C. STA. 19+62.73
C.S. STA. 22+39.81

(44) ℄ CONST. RAMP B-2

P.I. STA. 23+14.93
Ls = 225.00′
fs = 7° 35′ 37″
LT = 150.14′
ST = 75.13′
x = 224.61′
y = 9.93′
k = 112.43′
p = 2.48′
C.S. STA. 22+39.81
S.T. STA. 24+64.81

TAPER TABLE

TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
BD	22+39.81	RAMP B-2	24+64.81	RAMP B-2	RT	PAVEMENT	27.00′	24.00′	75:1
BE	24+64.81	RAMP B-2	32+64.81	RAMP B-2	RT	PAVEMENT	40.00′	24.00′	50:1



± CONSTRUCTED ELEVATIONS ARE TO MEET EXISTING ELEVATIONS AND ARE TO BE VERIFIED IN FIELD.

FOR SUPERELEVATION TABLES, SEE SHEETS 823 - 826
FOR RAMP B-2 PROFILE, SEE SHEETS 492 - 496
FOR RAMP B PROFILE, SEE SHEETS 488 - 489

▲ GORE SLOPE INFORMATION

(READ FROM I.R.277 E/P TO RAMP B-2 E/P)

STA. 234+07.18, 18.14′ @ -0.0154
STA. 234+32.20, 18.64′ @ -0.0134
STA. 234+57.27, 19.20′ @ -0.0109
STA. 234+82.41, 19.88′ @ -0.0091
STA. 235+07.63, 20.79′ @ -0.0077
STA. 235+32.95, 21.99′ @ -0.0068
STA. 235+58.38, 23.58′ @ -0.0059
STA. 235+63.23, 24.00′ @ -0.0050

*** GORE SLOPE INFORMATION**

(READ FROM RAMP B-2 E/P TO RAMP B E/P)

STA. 24+25.00, 0.27′ @ -0.0370
STA. 24+00.00, 0.45′ @ -0.0444
STA. 23+75.00, 0.65′ @ -0.0308
STA. 23+50.00, 0.87′ @ -0.0460
STA. 23+25.00, 1.12′ @ -0.0536
STA. 23+00.00, 1.40′ @ -0.0571
STA. 22+75.00, 1.70′ @ -0.0588
STA. 22+50.00, 2.04′ @ -0.0490
STA. 22+25.00, 2.56′ @ -0.0586
STA. 22+00.00, 3.18′ @ -0.0660
STA. 21+75.00, 3.77′ @ -0.0531
STA. 21+50.00, 4.32′ @ -0.0556
STA. 21+25.00, 4.82′ @ -0.0602
STA. 21+00.00, 5.29′ @ -0.0567
STA. 20+75.00, 5.72′ @ -0.0594
STA. 20+50.00, 6.11′ @ -0.0589
STA. 20+25.00, 6.46′ @ -0.0588
STA. 20+00.00, 6.76′ @ -0.0592

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KRM
CHECKED LRK

RAMP GORE DETAILS
RAMP B-2 AT I.R. 277 - STA. 20+00 TO STA. 25+00

SUM-77 / 277 / 224
VARIOUS

851
1288

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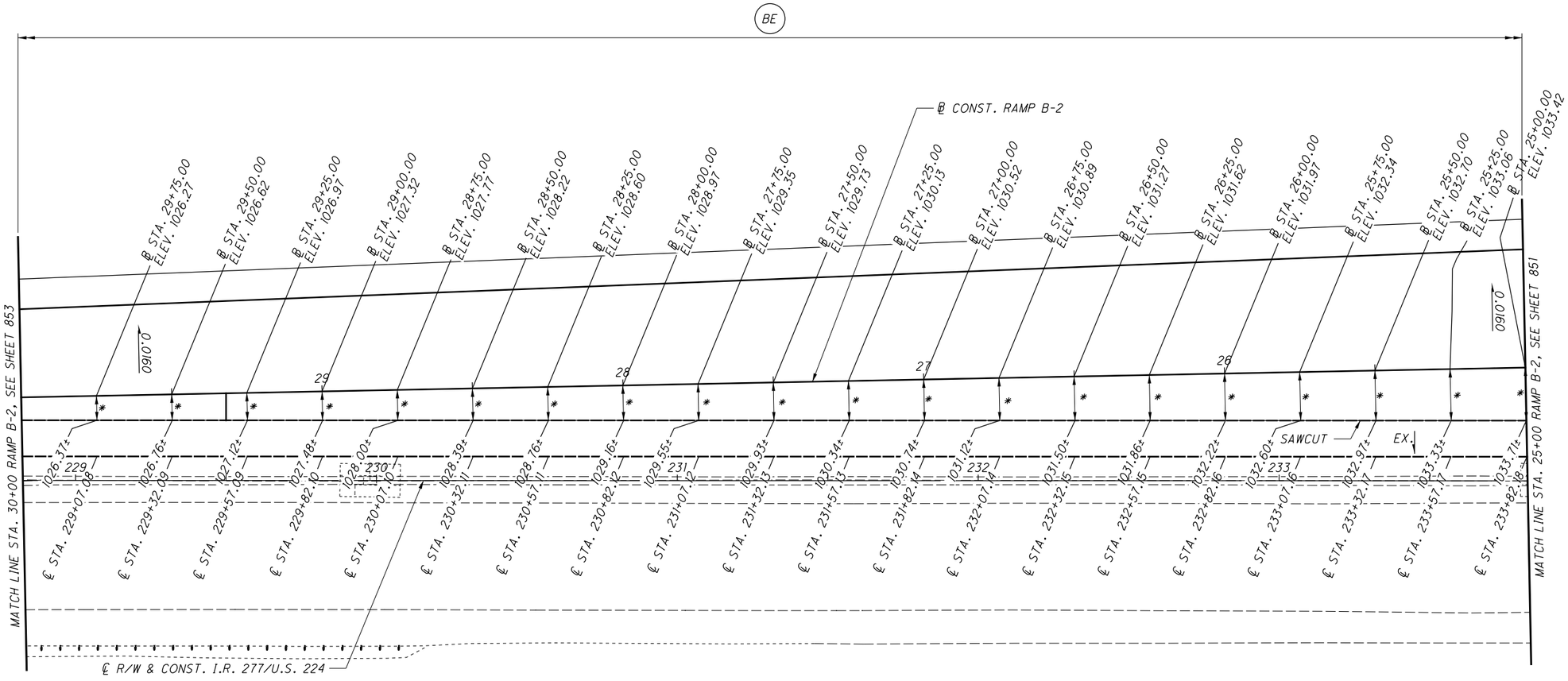
TAPER TABLE									
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
BE	24+64.81	RAMP B-2	32+64.81	RAMP B-2	RT	PAVEMENT	40.00′	24.00′	50:1



* GORE SLOPE INFORMATION

(READ FROM I.R. 277 E/P TO RAMP B-2 E/P)

STA. 229+07.08, 8.14′ @ -0.0123
STA. 229+32.09, 8.64′ @ -0.0162
STA. 229+57.09, 9.14′ @ -0.0164
STA. 229+82.10, 9.64′ @ -0.0166
STA. 230+07.10, 10.14′ @ -0.0227
STA. 230+32.11, 10.64′ @ -0.0160
STA. 230+57.11, 11.14′ @ -0.0144
STA. 230+82.12, 11.64′ @ -0.0163
STA. 231+07.12, 12.14′ @ -0.0165
STA. 231+32.13, 12.64′ @ -0.0158
STA. 231+57.13, 13.14′ @ -0.0160
STA. 231+82.14, 13.64′ @ -0.0161
STA. 232+07.14, 14.14′ @ -0.0163
STA. 232+32.15, 14.64′ @ -0.0157
STA. 232+57.15, 15.14′ @ -0.0159
STA. 232+82.16, 15.64′ @ -0.0160
STA. 233+07.16, 16.14′ @ -0.0161
STA. 233+32.17, 16.64′ @ -0.0162
STA. 233+57.17, 17.14′ @ -0.0158
STA. 233+82.18, 17.64′ @ -0.0164

± CONSTRUCTED ELEVATIONS ARE TO MEET EXISTING ELEVATIONS AND ARE TO BE VERIFIED IN FIELD

FOR SUPERELEVATION TABLES, SEE SHEETS 823 - 826
FOR RAMP B-2 PROFILE, SEE SHEETS 492 - 496

N

0 10 20 40 HORIZONTAL SCALE IN FEET

CALCULATED KRM
CHECKED LRK

RAMP GORE DETAILS
RAMP B-2 AT I.R. 277 - STA. 25+00 TO STA. 30+00

SUM-77/277/224
VARIOUS

852
1288

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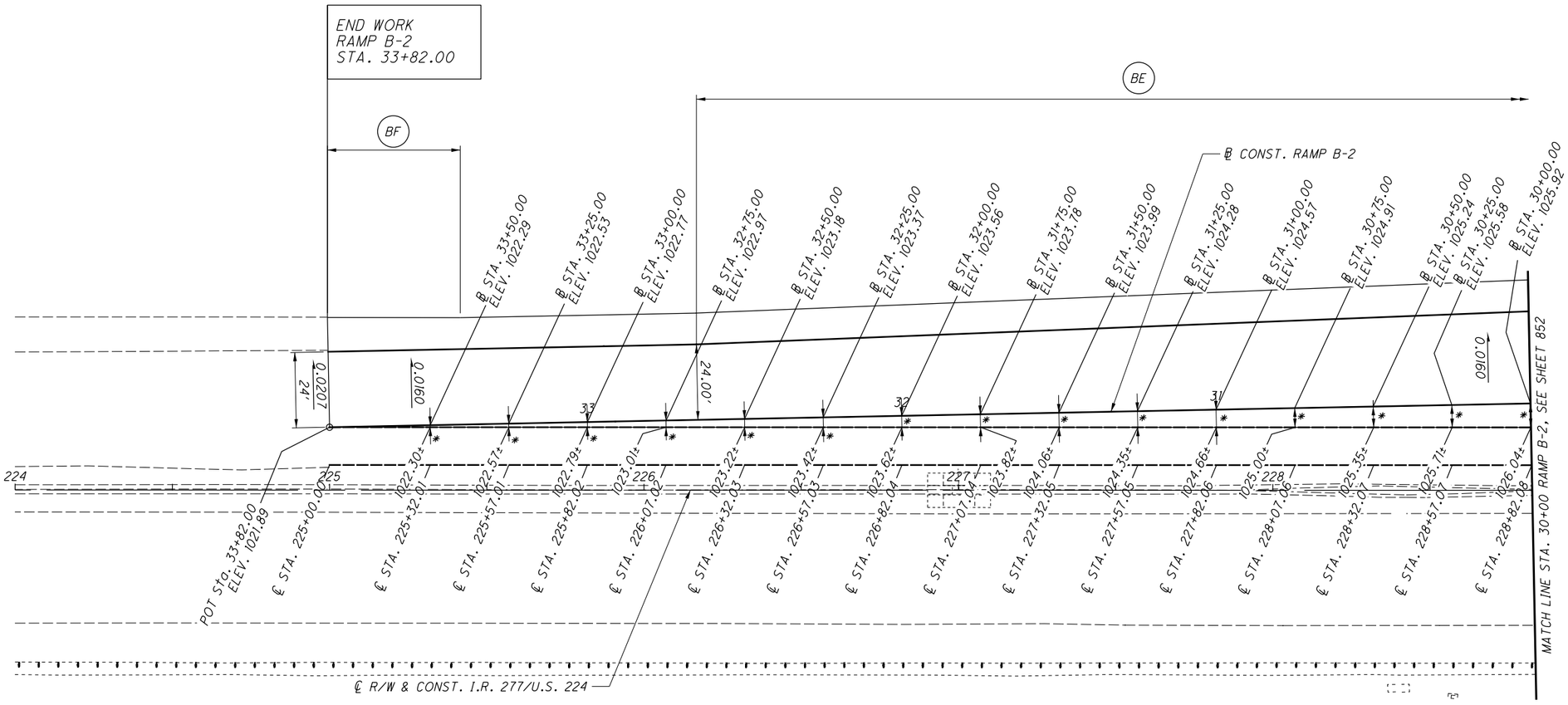
TAPER TABLE									
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
BE	24+64.81	RAMP B-2	32+64.81	RAMP B-2	RT	PAVEMENT	40.00′	24.00′	50:1
BF	33+39.75	RAMP B-2	33+82.00	RAMP B-2	RT	SHOULDER	10.00′	10.92′	46:1



* GORE SLOPE INFORMATION

(READ FROM I.R. 277 E/P TO RAMP B-2 E/P)

STA. 225+32.01, 0.64′ @ -0.0156
STA. 225+57.01, 1.14′ @ -0.0351
STA. 225+82.02, 1.64′ @ -0.0122
STA. 226+07.02, 2.14′ @ -0.0187
STA. 226+32.03, 2.64′ @ -0.0152
STA. 226+57.03, 3.14′ @ -0.0159
STA. 226+82.04, 3.64′ @ -0.0165
STA. 227+07.04, 4.14′ @ -0.0097
STA. 227+32.05, 4.64′ @ -0.0151
STA. 227+57.05, 5.14′ @ -0.0136
STA. 227+82.06, 5.64′ @ -0.0160
STA. 228+07.06, 6.14′ @ -0.0147
STA. 228+32.07, 6.64′ @ -0.0166
STA. 228+57.07, 7.14′ @ -0.0182
STA. 228+82.08, 7.64′ @ -0.0157

± CONSTRUCTED ELEVATIONS ARE TO MEET EXISTING ELEVATIONS AND ARE TO BE VERIFIED IN FIELD

FOR SUPERELEVATION TABLES, SEE SHEETS 823 - 826
FOR RAMP B-2 PROFILE, SEE SHEETS 492 - 496

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KRM
CHECKED LRK

RAMP GORE DETAILS
RAMP B-2 AT I.R. 277 - STA. 30+00 TO END

SUM-77 / 277 / 224
VARIOUS

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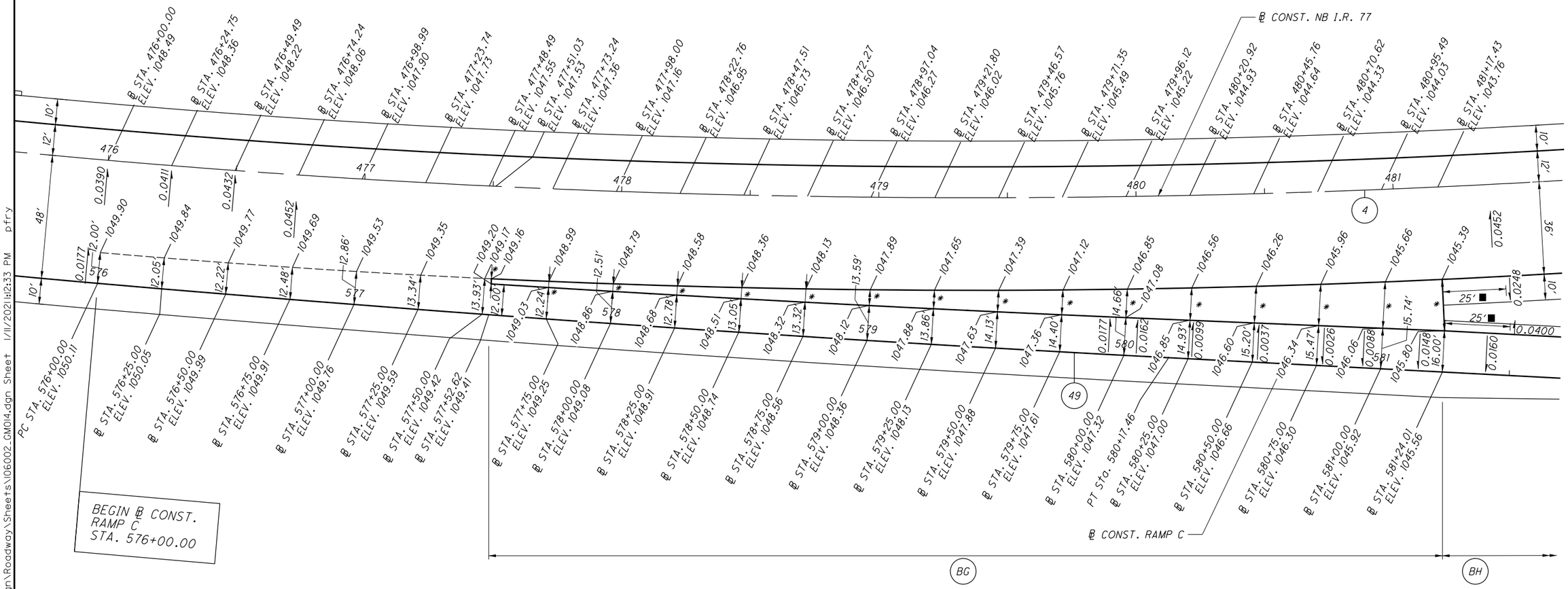
(4) ℄ CONST. NB I.R. 77
P.I. Sta. 485+59.78
Δ = 30° 33′ 43″ (LT)
Dc = 1° 28′ 03″
R = 3,904.07′
T = 1,066.64′
L = 2,082.45′
E = 143.09′
C = 2,057.85′
C.B. = N 26° 28′ 11″ W
D.S. = 70 MPH
e_{max} = 0.0452
P.C. STA. 474+93.14
P.T. STA. 495+75.59

(49) ℄ CONST. RAMP C
P.I. Sta. 578+08.75
Δ = 1° 57′ 07″ (LT)
Dc = 0° 28′ 03″
R = 12,253.42′
T = 208.75′
L = 417.46′
E = 1.78′
C = 417.44′
C.B. = N 13° 43′ 59″ W
D.S. = 70 MPH
e_{max} = 0.0177
P.C. STA. 576+00.00
P.T. STA. 580+17.46

TAPER TABLE

TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
BG	577+52.62	RAMP C	581+24.01	RAMP C	LT	PAVEMENT	12.00′	16.00′	93:1
BH	581+24.01	RAMP C	582+24.01	RAMP C	RT	SHOULDER	10.00′	6.00′	25:1



* GORE SLOPE INFORMATION
(READ FROM RAMP C E/P TO NB I.R. 77 E/P)

STA. 577+52.62, 2.00′ @ -0.0200
STA. 577+75.00, 2.39′ @ -0.0167
STA. 578+00.00, 2.93′ @ -0.0239
STA. 578+25.00, 3.57′ @ -0.0280
STA. 578+50.00, 4.32′ @ -0.0347
STA. 578+75.00, 5.18′ @ -0.0367
STA. 579+00.00, 6.15′ @ -0.0374
STA. 579+25.00, 7.22′ @ -0.0319
STA. 579+50.00, 8.40′ @ -0.0286
STA. 579+75.00, 9.69′ @ -0.0248
STA. 580+00.00, 11.09′ @ -0.0207
STA. 580+25.00, 12.59′ @ -0.0230
STA. 580+50.00, 14.25′ @ -0.0239
STA. 580+75.00, 16.07′ @ -0.0236
STA. 581+00.00, 18.05′ @ -0.0222
STA. 581+24.01, 20.00′ @ -0.0205

■ TRANSITION SHOULDER CROSS-SLOPE

FOR SUPERELEVATION TABLES, SEE SHEETS 827 - 829
FOR NB I.R. 77 PROFILE, SEE SHEETS 472 - 475
FOR RAMP C PROFILE, SEE SHEETS 497 - 499

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED KRM
CHECKED LRK

RAMP GORE DETAILS
RAMP C AT NB I.R. 77 - BEGIN TO STA. 581+50

SUM-77/277/224
VARIOUS

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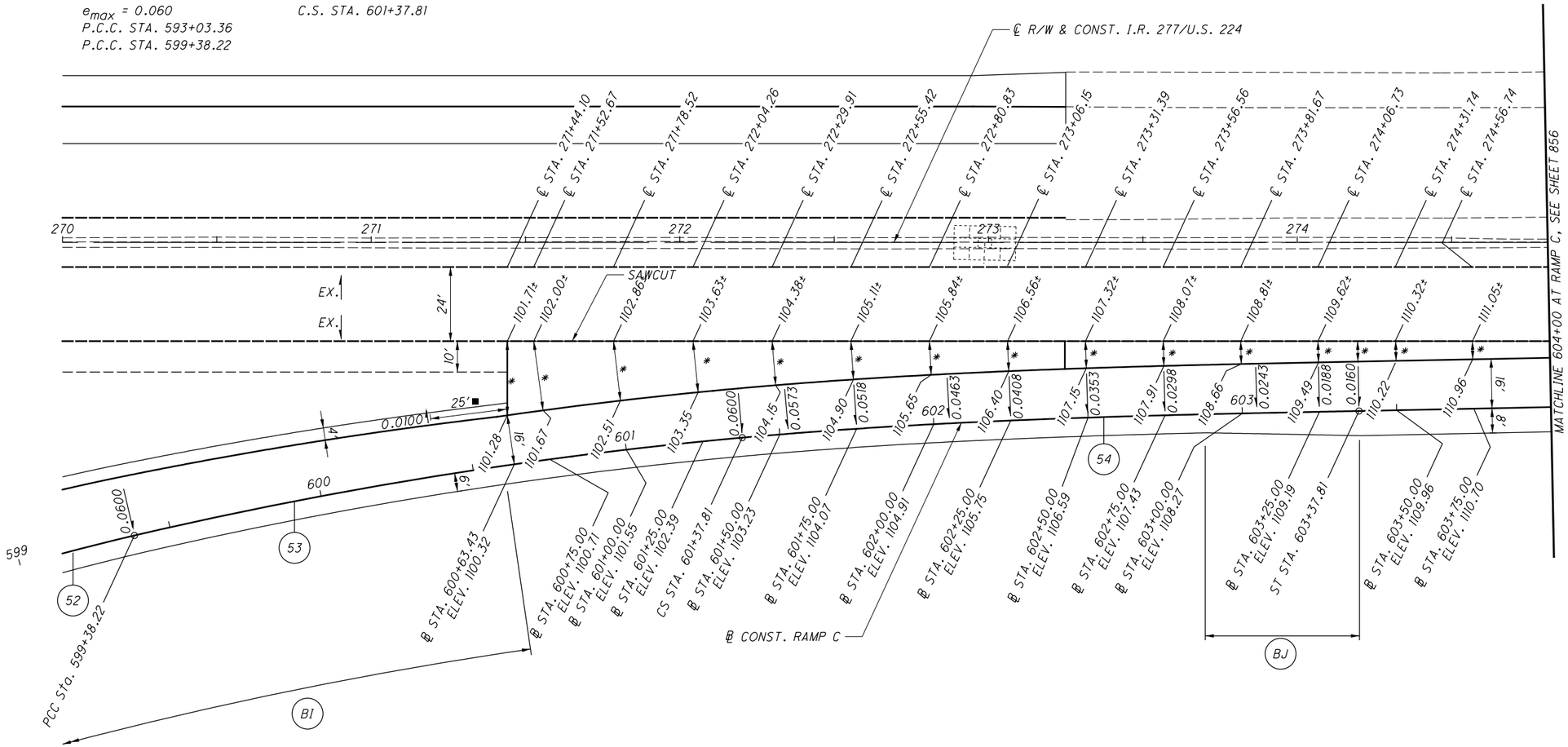
(52) ℄ CONST. RAMP C
P.I. Sta. 596+43.35
Δ = 50° 47′ 20″ (RT)
Dc = 8° 00′ 00″
R = 716.20′
T = 339.99′
L = 634.86′
E = 76.60′
C = 614.28′
C.B. = N 46° 09′ 50″ E
D.S. = 45 MPH
SSD = 305′ (360′ MIN.)
ACTUAL D.S. = 40 MPH
e_{max} = 0.060
P.C.C. STA. 593+03.36
P.C.C. STA. 599+38.22

(53) ℄ CONST. RAMP C
P.I. Sta. 600+38.18
Δ = 7° 59′ 01″ (RT)
Dc = 4° 00′ 00″
R = 1,432.39′
T = 99.96′
L = 199.59′
E = 3.48′
C = 199.43′
C.B. = N 75° 33′ 00″ E
D.S. = 60 MPH (SSD = 50 MPH)
e_{max} = 0.060
P.C.C. STA. 599+38.22
C.S. STA. 601+37.81

(54) ℄ CONST. RAMP C
P.I. STA. 602+04.51
Ls = 200.00′
f s = 4° 00′ 00″
LT = 133.37′
ST = 66.70′
x = 199.90′
y = 4.65′
k = 99.98′
p = 1.16′
C.S. STA. 601+37.81
S.T. STA. 603+37.81

TAPER TABLE

TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
BI	596+40.00	RAMP C	600+60.00	RAMP C	LT	PAVEMENT	28.00′	16.00′	35:1
BJ	602+87.81	RAMP C	603+37.81	RAMP C	RT	SHOULDER	6.00′	8.00′	25:1



* GORE SLOPE INFORMATION
(READ FROM RAMP C E/P TO I.R. 277 E/P)

STA. 600+63.43, 24.00′ @ 0.0179
STA. 600+75.00, 22.60′ @ 0.0146
STA. 600+00.00, 19.38′ @ 0.0181
STA. 601+25.00, 16.61′ @ 0.0169
STA. 601+50.00, 14.31′ @ 0.0161
STA. 601+75.00, 12.43′ @ 0.0169
STA. 602+00.00, 10.92′ @ 0.0174
STA. 602+25.00, 9.71′ @ 0.0165
STA. 602+50.00, 8.76′ @ 0.0194
STA. 602+75.00, 8.01′ @ 0.0200
STA. 603+00.00, 7.39′ @ 0.0203
STA. 603+25.00, 6.86′ @ 0.0190
STA. 603+50.00, 6.36′ @ 0.0157
STA. 603+75.00, 5.86′ @ 0.0154

■ TRANSITION SHOULDER CROSS-SLOPE

± CONSTRUCTED ELEVATIONS ARE TO MEET EXISTING ELEVATIONS AND ARE TO BE VERIFIED IN FIELD

FOR SUPERELEVATION TABLES, SEE SHEETS 827 - 829
FOR RAMP C PROFILE, SEE SHEETS 497 - 499

N

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KRM
CHECKED LRK

RAMP GORE DETAILS
RAMP C AT I.R. 277 - STA. 599+00 TO STA. 604+00

SUM-77/277/224
VARIOUS

855
1288

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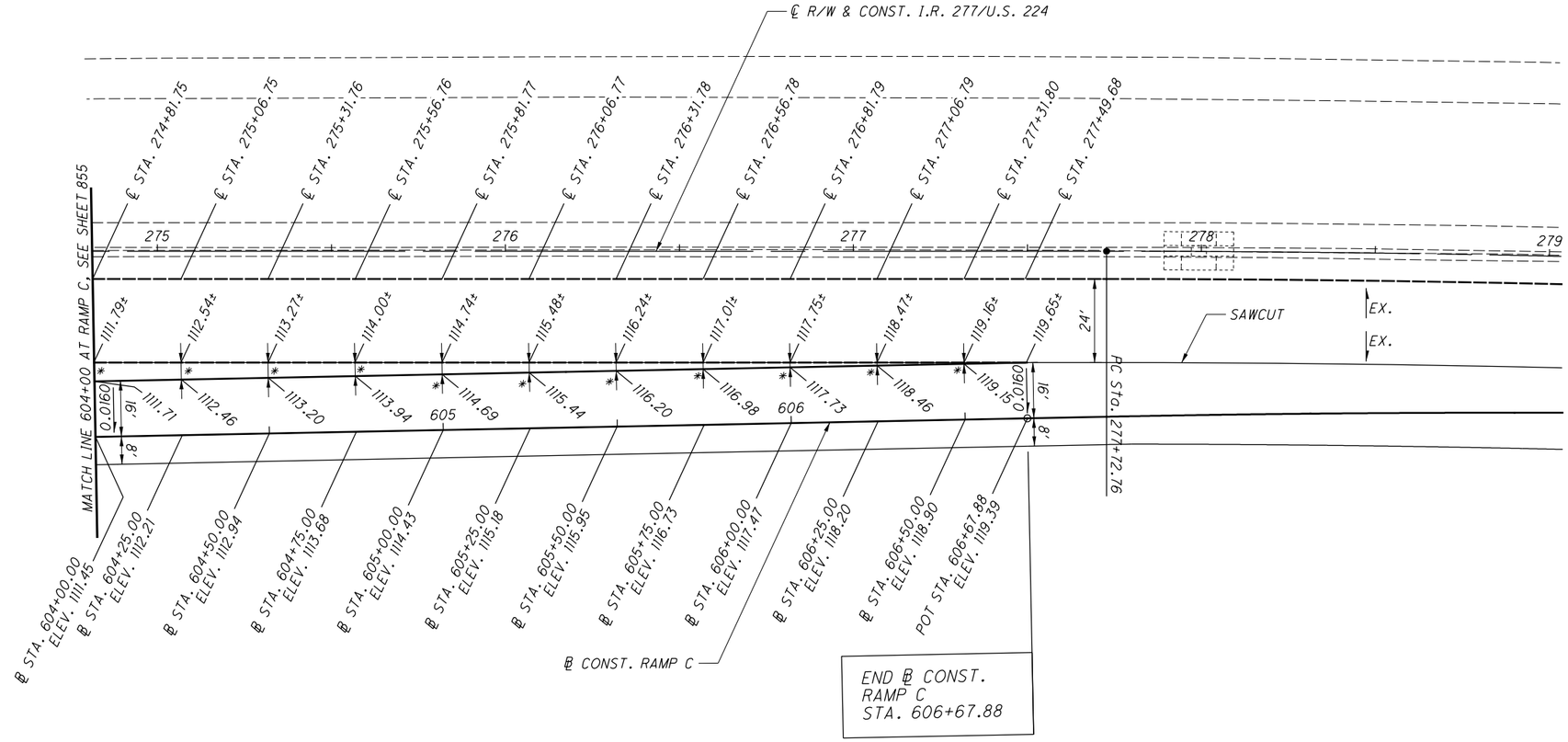

* GORE SLOPE INFORMATION

(READ FROM RAMP C E/P TO I.R. 277 E/P)

STA. 604+00.00, 5.36' @ 0.0149
STA. 604+25.00, 4.86' @ 0.0165
STA. 604+50.00, 4.36' @ 0.0161
STA. 604+75.00, 3.86' @ 0.0155
STA. 605+00.00, 3.36' @ 0.0149
STA. 605+25.00, 2.86' @ 0.0140
STA. 605+50.00, 2.36' @ 0.0169
STA. 605+75.00, 1.86' @ 0.0161
STA. 606+00.00, 1.36' @ 0.0147
STA. 606+25.00, 0.86' @ 0.0116
STA. 606+50.00, 0.36' @ 0.0278

± CONSTRUCTED ELEVATIONS ARE TO MEET EXISTING ELEVATIONS AND ARE TO BE VERIFIED IN FIELD.

FOR SUPERELEVATION TABLES, SEE SHEETS 827 - 829
FOR RAMP C PROFILE, SEE SHEETS 497 - 499

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KRM
CHECKED LRK

RAMP GORE DETAILS
RAMP C AT I.R. 277 - STA. 604+00 TO END

SUM-77/277/224
VARIOUS

856
1288

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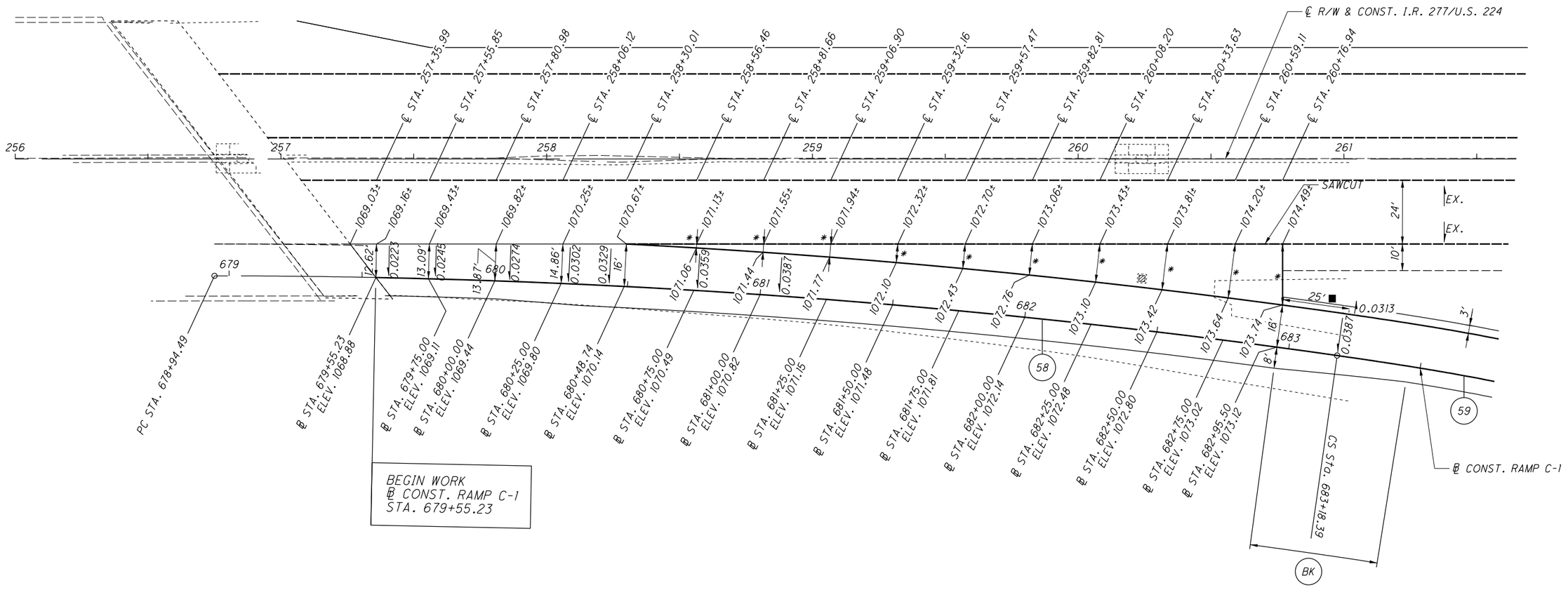
TAPER TABLE									
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
BK	682+95.50	RAMP C-1	683+45.50	RAMP C-1	RT	SHOULDER	8.00′	6.00′	25:1

(58) ℄ CONST. RAMP C-1
P.I. Sta. 681+06.79
Δ = 8° 07′ 29″ (RT)
Dc = 1° 55′ 00″
R = 2,989.35′
T = 212.30′
L = 423.90′
E = 7.53′
C = 423.54′
C.B. = N 88° 45′ 00″ E
D.S. = 55 MPH
e_{max} = 0.0387
P.C. STA. 678+94.49
C.S. STA. 683+18.39

(59) ℄ CONST. RAMP C-1
P.I. STA. 684+48.34
Ls = 200.00′
f s = 25° 55′ 00″
LT = 129.96′
ST = 73.02′
x = 195.63′
y = 31.91′
k = 99.32′
p = 6.39′
C.S. STA. 683+18.39
S.C. STA. 685+18.39



* GORE SLOPE INFORMATION
(READ FROM RAMP C-1 E/P TO I.R. 277 E/P)

STA. 680+75.00, 1.48′ @ 0.0473
STA. 681+00.00, 3.11′ @ 0.0354
STA. 681+25.00, 4.95′ @ 0.0343
STA. 681+50.00, 7.00′ @ 0.0314
STA. 681+75.00, 9.26′ @ 0.0292
STA. 682+00.00, 11.74′ @ 0.0256
STA. 682+25.00, 14.44′ @ 0.0229
STA. 682+50.00, 17.35′ @ 0.0225
STA. 682+75.00, 20.48′ @ 0.0273
STA. 682+95.50, 23.00′ @ 0.0326

■ TRANSITION SHOULDER CROSS-SLOPE

± CONSTRUCTED ELEVATIONS ARE TO MEET EXISTING ELEVATIONS AND ARE TO BE VERIFIED IN FIELD.

FOR SUPERELEVATION TABLES, SEE SHEETS 830 - 831
FOR RAMP C-1 PROFILE, SEE SHEETS 501

N

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KRM
CHECKED LRK

RAMP GORE DETAILS
RAMP C-1 AT I.R. 277 - BEGIN TO STA. 683+50

SUM-77/277/224
VARIOUS

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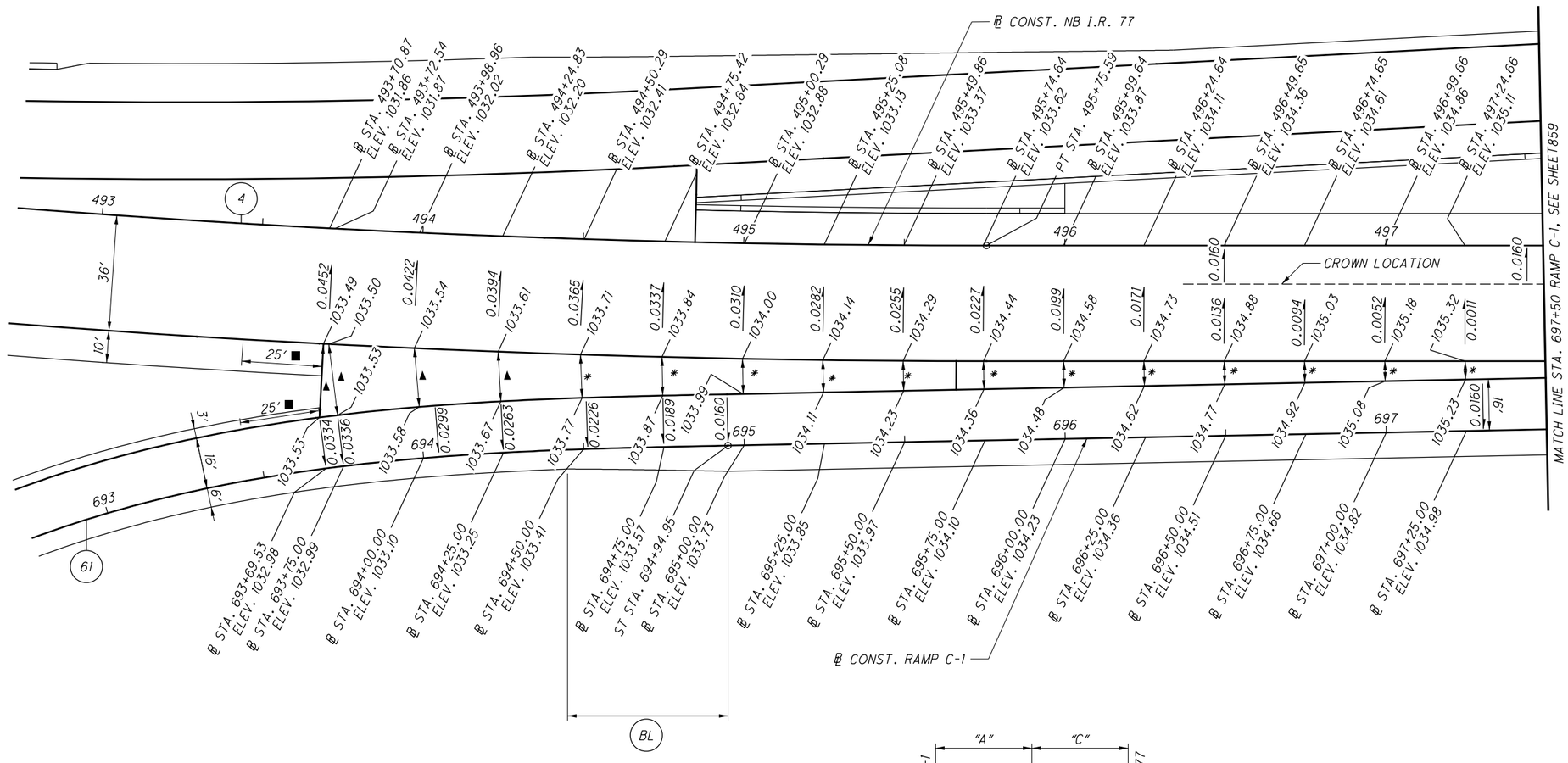
4 — ℄ CONST. NB I.R. 77
P.I. Sta. 485+59.78
Δ = 30° 33′ 43″ (LT)
Dc = 1° 28′ 03″
R = 3,904.07′
T = 1,066.64′
L = 2,082.45′
E = 143.09′
C = 2,057.85′
C.B. = N 26° 28′ 11″ W
D.S. = 70 MPH
e_{max} = 0.0452
P.C. STA. 474+93.14
P.T. STA. 495+75.59

61 — ℄ CONST. RAMP C-1
P.I. STA. 692+98.87
Ls = 300.00′
θs = 36° 00′ 00″
LT = 204.30′
ST = 103.92′
x = 288.37′
y = 61.08′
k = 148.05′
p = 15.49′
C.S. STA. 691+94.95
S.T. STA. 694+94.95

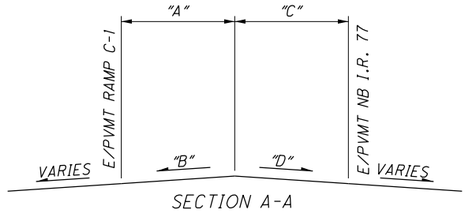
TAPER TABLE

TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
BL	694+44.95	RAMP C-1	694+94.95	RAMP C-1	RT	SHOULDER	6.00′	8.00′	25:1



* GORE SLOPE INFORMATION
(READ FROM RAMP C-1 E/P TO NB I.R. 77 E/P)

STA. 694+50.00, 13.48′ @ -0.0045
STA. 694+75.00, 12.05′ @ -0.0025
STA. 695+00.00, 10.96′ @ 0.0009
STA. 695+25.00, 10.06′ @ 0.0030
STA. 695+50.00, 9.32′ @ 0.0064
STA. 695+75.00, 8.73′ @ 0.0092
STA. 696+00.00, 8.23′ @ 0.0121
STA. 696+25.00, 7.73′ @ 0.0142
STA. 696+50.00, 7.23′ @ 0.0152
STA. 696+75.00, 6.73′ @ 0.0163
STA. 697+00.00, 6.23′ @ 0.0161
STA. 697+25.00, 5.73′ @ 0.0157



SECTION A-A

GORE SLOPE INFORMATION

STATION	"A"	"B"	"C"	"D"
693+69.53	13.00′	0.0071	10.00′	0.0132
693+75.00	12.19′	0.0085	10.15′	0.0132
694+00.00	8.28′	0.0076	10.08′	0.0102
694+25.00	5.46′	0.0026	10.04′	0.0074

▲ SEE SECTION A-A FOR DETAILS
■ TRANSITION SHOULDER CROSS-SLOPE

FOR SUPERELEVATION TABLES, SEE SHEETS 830 - 831
FOR NB I.R. 77 PROFILE, SEE SHEETS 472 - 475
FOR RAMP C-1 PROFILE, SEE SHEETS 501

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED KRM
CHECKED LRK

RAMP GORE DETAILS
RAMP C-1 AT NB I.R. 77 - STA. 693+00 TO STA. 697+50

SUM-77/277/224
VARIOUS

858
1288

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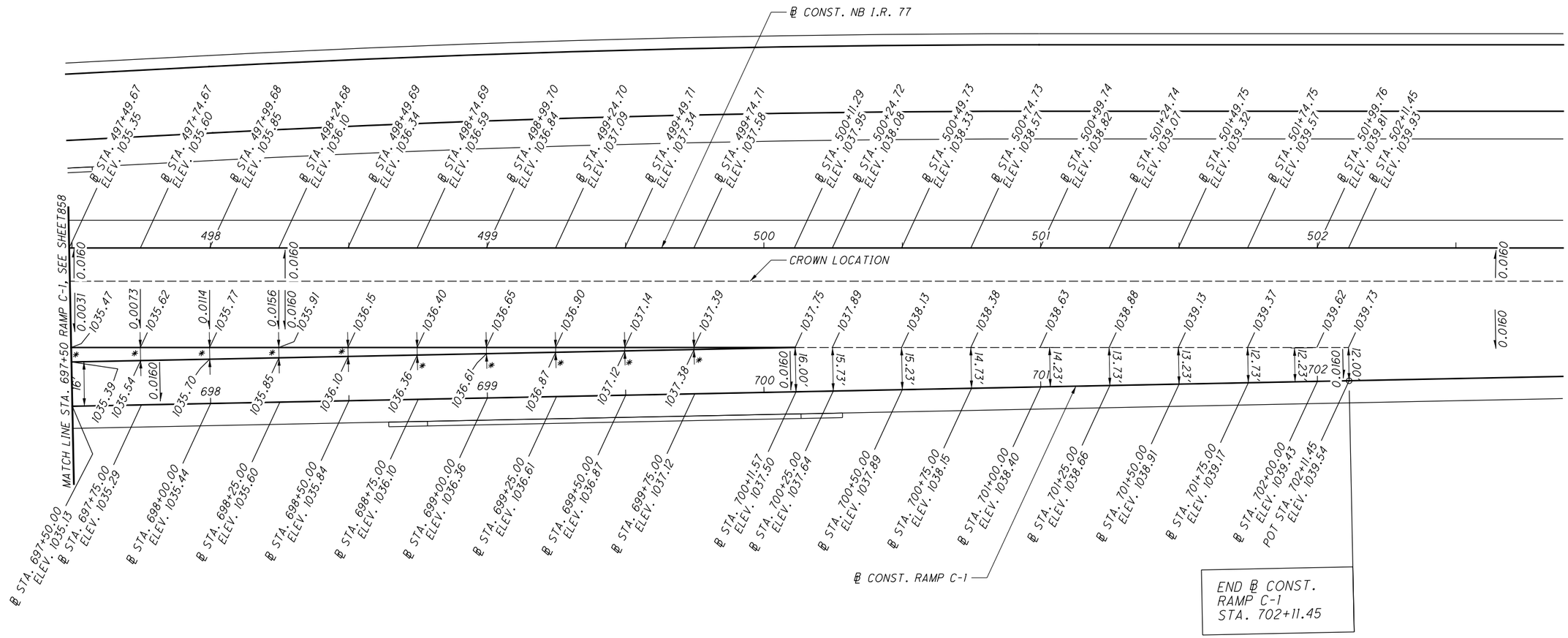

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HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KRM
CHECKED LRK

RAMP GORE DETAILS
RAMP C-1 AT NB I.R. 77 - STA. 697+50 TO END

SUM-77 / 277 / 224
VARIOUS

859
1288

TAPER TABLE								
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
B1	596+40.00	RAMP C	600+60.00	RAMP C	LT	PAVEMENT	28.00'	16.00'	35:1

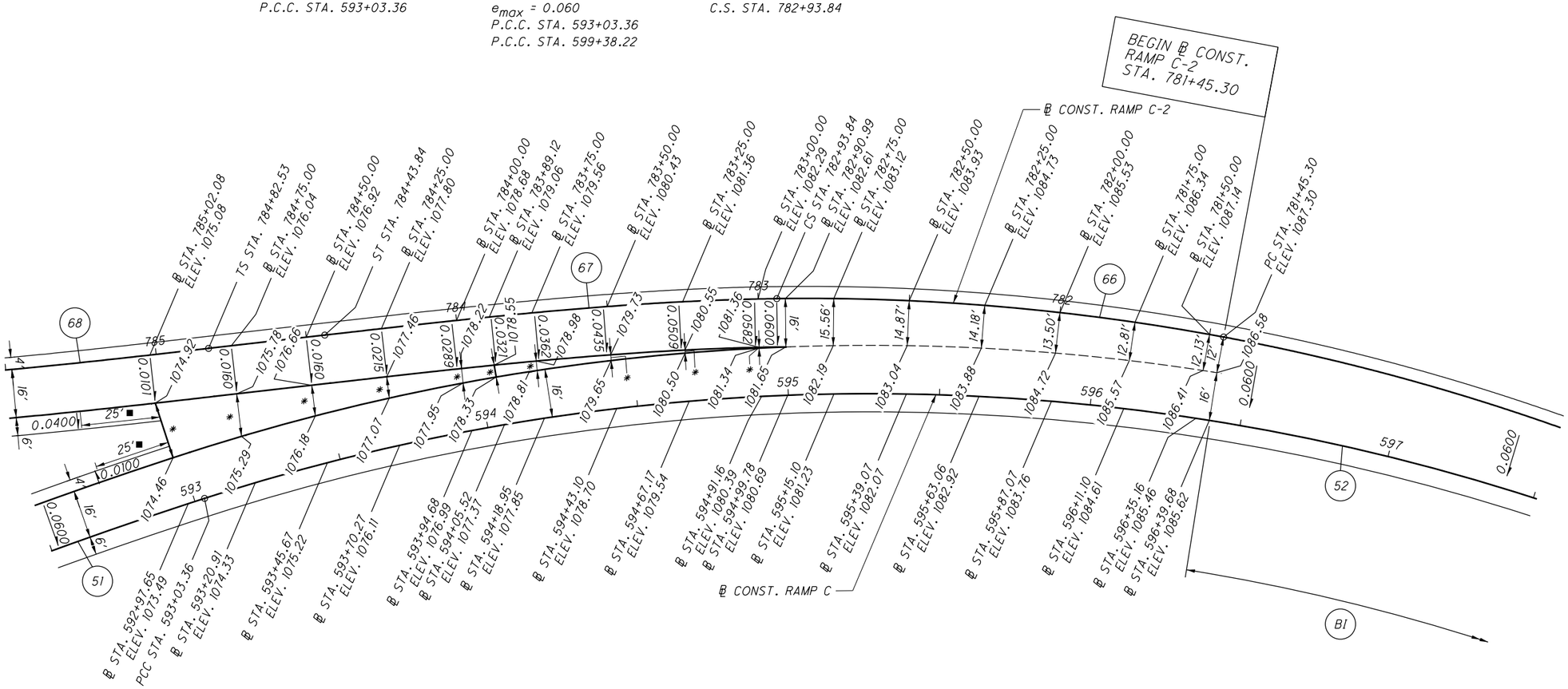
(51) ℄ CONST. RAMP C
P.I. Sta. 589+20.09
Δ = 31° 28' 43" (RT)
Dc = 4° 00' 00"
R = 1,432.39'
T = 403.69'
L = 786.96'
E = 55.80'
C = 777.10'
C.B. = N 5° 01' 48" E
D.S. = 60 MPH (SSD = 50 MPH)
e_{max} = 0.060
S.C. STA. 585+16.40
P.C.C. STA. 593+03.36

(52) ℄ CONST. RAMP C
P.I. Sta. 596+43.35
Δ = 50° 47' 20" (RT)
Dc = 8° 00' 00"
R = 716.20'
T = 339.99'
L = 634.86'
E = 76.60'
C = 614.28'
C.B. = N 46° 09' 50" E
D.S. = 45 MPH
SSD = 305' (360' MIN.)
ACTUAL D.S. = 40 MPH
e_{max} = 0.060
P.C.C. STA. 593+03.36
P.C.C. STA. 599+38.22

(66) ℄ CONST. RAMP C-2
P.I. Sta. 782+19.82
Δ = 11° 22' 45" (LT)
Dc = 7° 39' 38"
R = 747.92'
T = 74.52'
L = 148.54'
E = 3.70'
C = 148.30'
C.B. = S 43° 33' 57" W
D.S. = 45 MPH
e_{max} = 0.060
P.C. STA. 781+45.30
C.S. STA. 782+93.84

(67) ℄ CONST. RAMP C-2
P.I. STA. 783+43.89
Ls = 150.00'
f s = 5° 44' 44"
LT = 100.05'
ST = 50.05'
x = 149.85'
y = 5.01'
k = 74.97'
p = 1.25'
C.S. STA. 782+93.84
S.T. STA. 784+43.84

(68) ℄ CONST. RAMP C-2
P.I. STA. 786+50.14
Ls = 250.00'
f s = 18° 45' 00"
LT = 167.61'
ST = 84.19'
x = 247.34'
y = 27.06'
k = 124.56'
p = 6.79'
T.S. STA. 784+82.53
S.C. STA. 787+32.53



* GORE SLOPE INFORMATION
(READ FROM RAMP C E/P TO RAMP C-2 E/P)

STA. 592+97.65, 19.00' @ 0.0242
STA. 593+20.91, 14.13' @ 0.0347
STA. 593+45.67, 10.19' @ 0.0471
STA. 593+70.27, 7.12' @ 0.0548
STA. 593+94.68, 4.81' @ 0.0561
STA. 594+05.52, 4.00' @ 0.0550
STA. 594+18.95, 3.12' @ 0.0545
STA. 594+43.10, 1.89' @ 0.0423
STA. 594+67.17, 0.98' @ 0.0510
STA. 594+91.16, 0.25' @ 0.0800

■ TRANSITION SHOULDER CROSS-SLOPE

FOR SUPERELEVATION TABLES, SEE SHEETS 827 - 834
FOR RAMP C PROFILE, SEE SHEETS 497 - 499
FOR RAMP C-2 PROFILE, SEE SHEETS 502 - 503

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED KRM
CHECKED LRK

RAMP GORE DETAILS
RAMP C-2 AT RAMP C - BEGIN TO STA. 785+50

SUM-77/277/224
VARIOUS

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(9) ℄ CONST. SB I.R. 77

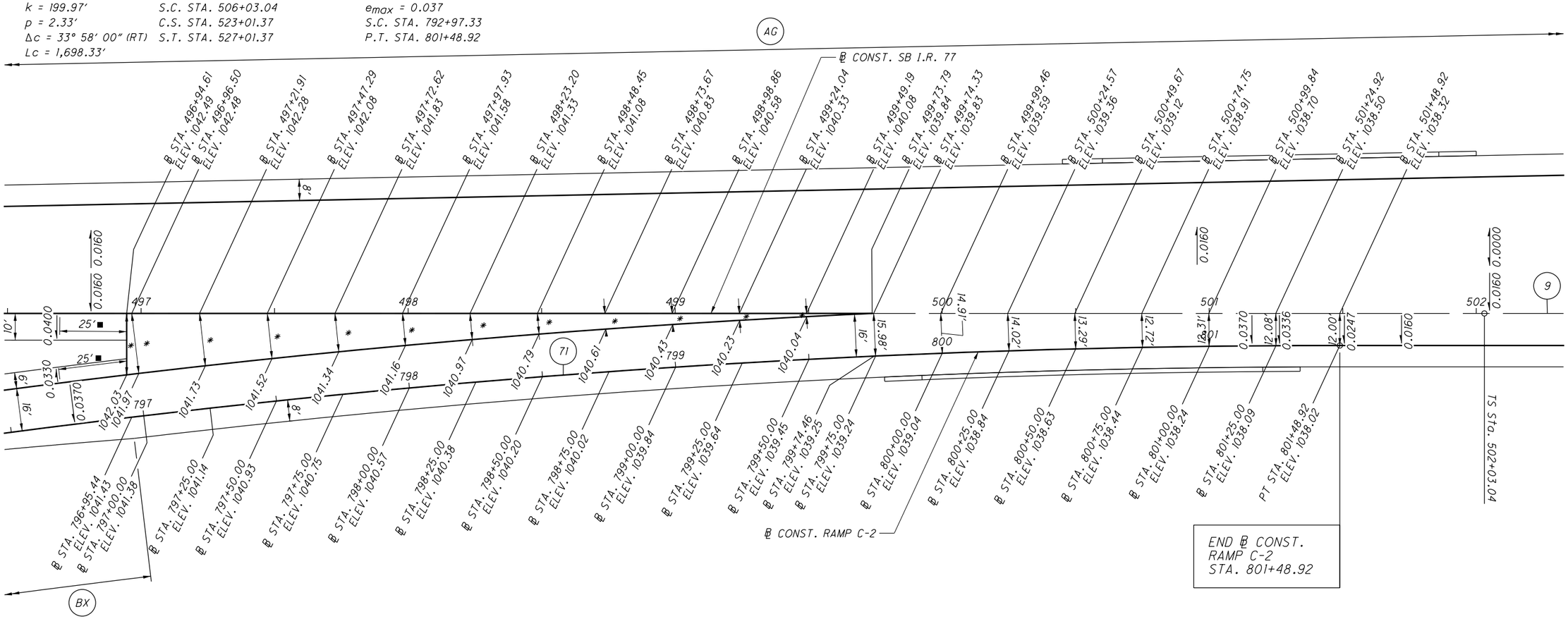
P.I. Sta. 515+02.63	Ts = 1,299.59′
Δ = 41° 58′ 00″ (RT)	Es = 205.96′
Dc = 2° 00′ 00″	C = 1,673.57′
R = 2,864.79′	C1 = C2 = 399.91′
Ls = 400.00′	C.B.1 = N 40° 25′ 03″ W
θs = 4° 00′ 00″	C.B. = N 20° 46′ 03″ W
LT = 266.73′	C.B.2 = N 1° 07′ 03″ W
ST = 133.40′	D.S. = 60 MPH
x = 399.81′	e_{max} = 0.045
y = 9.31′	T.S. STA. 502+03.04
k = 199.97′	S.C. STA. 506+03.04
p = 2.33′	C.S. STA. 523+01.37
Δc = 33° 58′ 00″ (RT)	S.T. STA. 527+01.37
Lc = 1,698.33′	

(71) ℄ CONST. RAMP C-2

P.I. Sta. 797+24.90	
Δ = 12° 46′ 26″ (RT)	
Dc = 1° 30′ 00″	
R = 3,819.72′	
T = 427.57′	
L = 851.59′	
E = 23.86′	
C = 849.83′	
C.B. = N 48° 08′ 16″ W	
D.S. = 60 MPH (SSD = 55 MPH)	
e_{max} = 0.037	
S.C. STA. 792+97.33	
P.T. STA. 801+48.92	

TAPER TABLE

TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
AG	494+44.48	SB IR-77	502+43.78	SB IR-77	LT	PAVEMENT	36.00′	52.00′	50:1
BX	795+95.44	RAMP C-2	796+95.44	RAMP C-2	RT	SHOULDER	4.00′	8.00′	25:1



* GORE SLOPE INFORMATION

(READ FROM RAMP C-2 E/P TO SB I.R. 77 E/P)

STA. 796+95.44, 23.00′ @ 0.0200
STA. 797+00.00, 22.62′ @ 0.0225
STA. 797+25.00, 19.72′ @ 0.0279
STA. 797+50.00, 16.99′ @ 0.0330
STA. 797+75.00, 14.43′ @ 0.0340
STA. 798+00.00, 12.04′ @ 0.0349
STA. 798+25.00, 9.82′ @ 0.0367
STA. 798+50.00, 7.76′ @ 0.0374
STA. 798+75.00, 5.87′ @ 0.0375
STA. 799+00.00, 4.15′ @ 0.0361
STA. 799+25.00, 2.59′ @ 0.0386
STA. 799+50.00, 1.20′ @ 0.0333

■ TRANSITION SHOULDER CROSS-SLOPE

FOR SUPERELEVATION TABLES, SEE SHEETS 832 - 834
FOR SB I.R. 77 PROFILE, SEE SHEETS 476 - 479
FOR RAMP C-2 PROFILE, SEE SHEETS 502 - 503

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KRM
CHECKED LRK

RAMP GORE DETAILS
RAMP C-2 AT SB I.R. 77 - STA. 796+50 TO END

SUM-77 / 277 / 224
VARIOUS

861
1288

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* GORE SLOPE INFORMATION

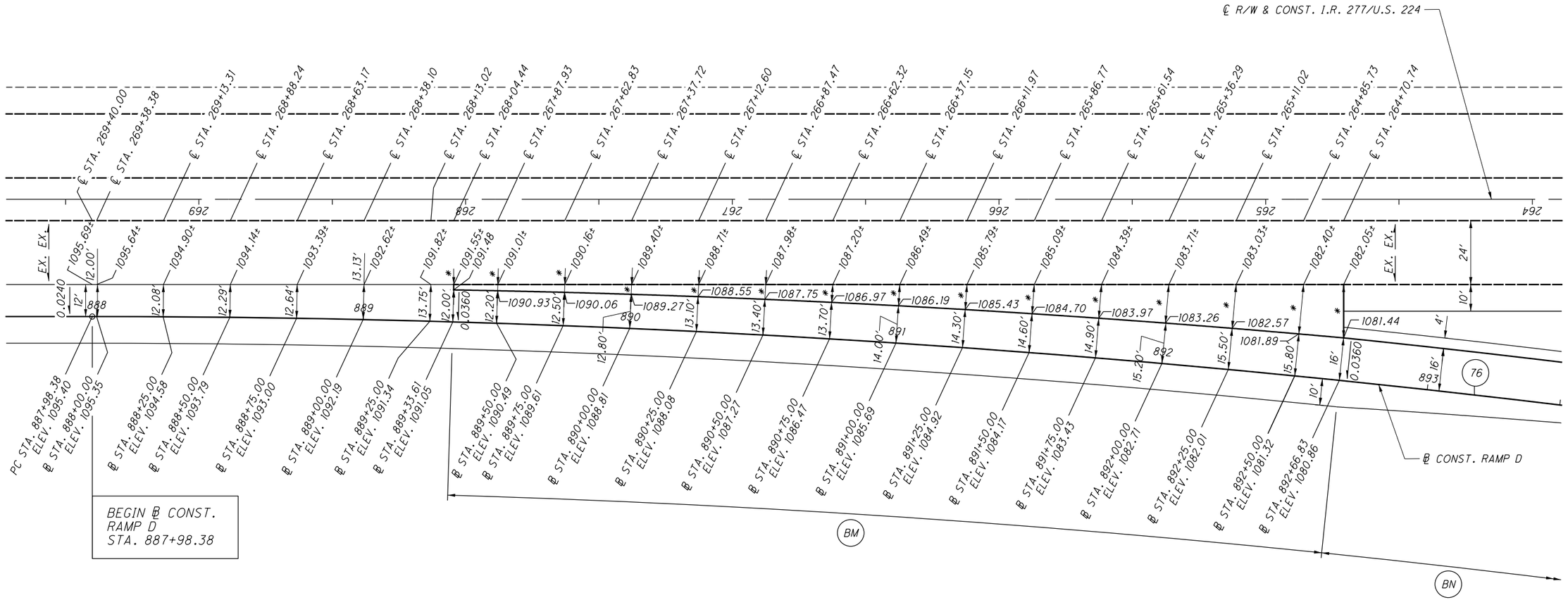
(READ FROM RAMP D E/P TO I.R. 277 E/P)

STA. 889+33.61, 2.00' @ 0.0350
STA. 889+50.00, 2.32' @ 0.0345
STA. 889+75.00, 2.92' @ 0.0342
STA. 890+00.00, 3.65' @ 0.0356
STA. 890+25.00, 4.53' @ 0.0353
STA. 890+50.00, 5.54' @ 0.0415
STA. 890+75.00, 6.68' @ 0.0344
STA. 891+00.00, 7.97' @ 0.0376
STA. 891+25.00, 9.40' @ 0.0383
STA. 891+50.00, 10.96' @ 0.0356
STA. 891+75.00, 12.66' @ 0.0332
STA. 892+00.00, 14.50' @ 0.0310
STA. 892+25.00, 16.48' @ 0.0279
STA. 892+50.00, 18.60' @ 0.0274
STA. 892+66.83, 20.00' @ 0.0305

TAPER TABLE

TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
BM	889+33.61	RAMP D	892+66.83	RAMP D	LT	PAVEMENT	12.00'	16.00'	83:1
BN	892+66.83	RAMP D	893+66.83	RAMP D	RT	SHOULDER	10.00'	6.00'	25:1

76 — ℄ CONST. RAMP D
P.I. Sta. 891+58.50
Δ = 8° 59' 04" (RT)
Dc = 1° 15' 00"
R = 4,583.66'
T = 360.12'
L = 718.75'
E = 14.12'
C = 718.02'
C.B. = S 89° 10' 47" W
D.S. = 65 MPH
e_{max} = 0.036
P.C. STA. 887+98.38
C.S. STA. 895+17.13



± CONSTRUCTED ELEVATIONS ARE TO MEET EXISTING ELEVATIONS AND ARE TO BE VERIFIED IN FIELD.

FOR SUPERELEVATION TABLES, SEE SHEETS 835 - 838
FOR RAMP D PLAN AND PROFILE, SEE SHEETS 504 - 506

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KRM
CHECKED LRK

RAMP GORE DETAILS
RAMP D AT I.R. 277 - BEGIN TO STA. 893+50

SUM-77/277/224
VARIOUS

862
1288

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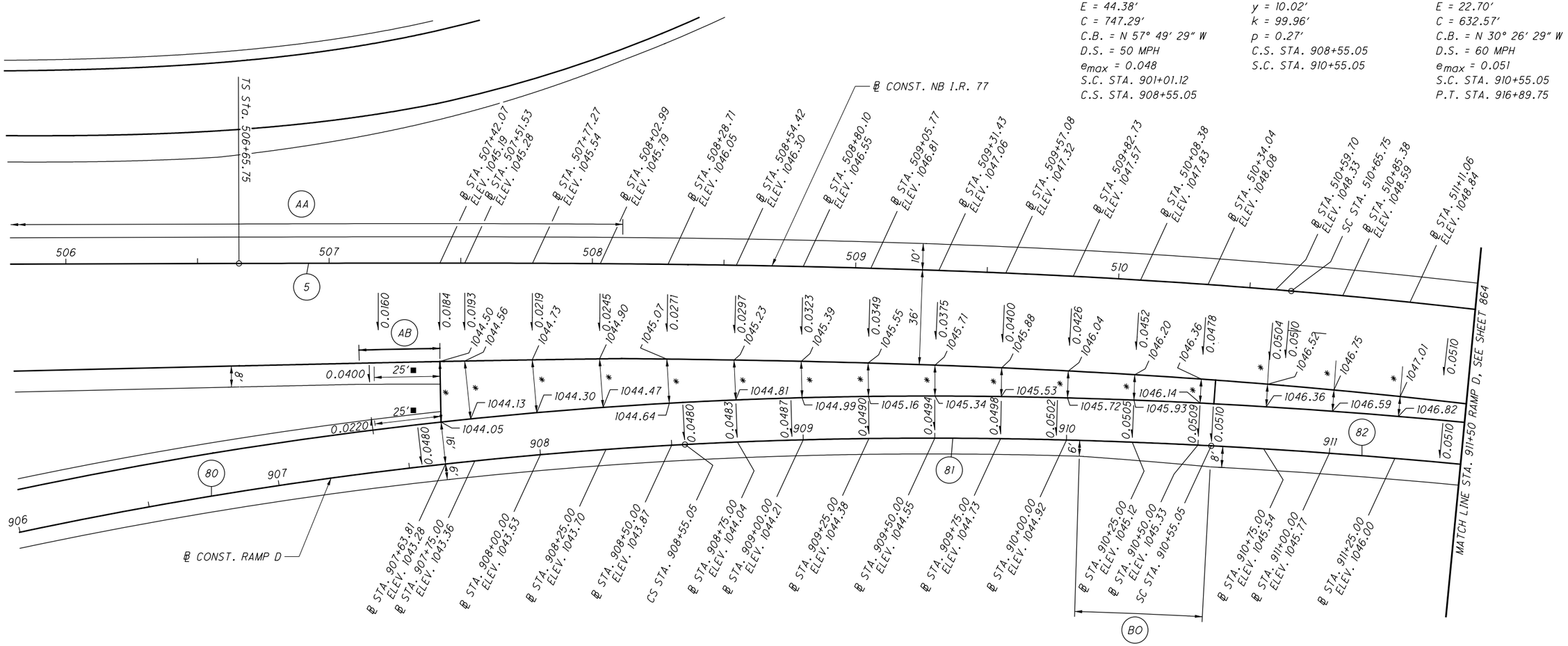
TAPER TABLE								
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
AA	500+11.45	NB IR-77	508+11.45	NB IR-77	RT	PAVEMENT	52.00′	36.00′	50:1
AB	507+11.53	NB IR-77	507+42.24	NB IR-77	RT	SHOULDER	8.00′	8.61′	50:1
BO	910+05.05	RAMP D	910+55.05	RAMP D	RT	SHOULDER	6.00′	8.00′	25:1



5 ℄ CONST. NB I.R. 77	
P.I. Sta. 517+45.80	Ts = 1,080.05′
Δ = 41° 58′ 00″ (RT)	Es = 165.89′
Dc = 2° 30′ 00″	C = 1,262.15′
R = 2,291.83′	C1 = C2 = 399.86′
Ls = 400.00′	C.B.1 = N 40° 05′ 03″ W
θs = 5° 00′ 00″	C.B. = N 20° 46′ 03″ W
LT = 266.77′	C.B.2 = S 1° 27′ 02″ E
ST = 133.43′	D.S. = 60 MPH
x = 399.70′	e_{max} = 0.051
y = 11.63′	T.S. STA. 506+65.75
k = 199.95′	S.C. STA. 510+65.75
p = 2.91′	C.S. STA. 523+44.42
Δc = 31° 58′ 00″ (RT)	S.T. STA. 527+44.42
Lc = 1,278.67′	

80 ℄ CONST. RAMP D
P.I. Sta. 904+84.89
Δ = 26° 23′ 16″ (RT)
Dc = 3° 30′ 00″
R = 1,637.02′
T = 383.77′
L = 753.93′
E = 44.38′
C = 747.29′
C.B. = N 57° 49′ 29″ W
D.S. = 50 MPH
e_{max} = 0.048
S.C. STA. 901+01.12
C.S. STA. 908+55.05

81 ℄ CONST. RAMP D
P.I. STA. 909+49.98
Ls = 200.00′
f s = 6° 03′ 40″
LT = 105.26′
ST = 94.93′
x = 199.66′
y = 10.02′
k = 99.96′
p = 0.27′
C.S. STA. 908+55.05
S.C. STA. 910+55.05

82 ℄ CONST. RAMP D
P.I. Sta. 913+74.55
Δ = 16° 15′ 22″ (RT)
Dc = 2° 33′ 40″
R = 2,237.04′
T = 319.50′
L = 634.70′
E = 22.70′
C = 632.57′
C.B. = N 30° 26′ 29″ W
D.S. = 60 MPH
e_{max} = 0.051
S.C. STA. 910+55.05
P.T. STA. 916+89.75

* GORE SLOPE INFORMATION

(READ FROM RAMP D E/P TO NB I.R. 77 E/P)

STA. 907+63.81, 23.00′ @ 0.0196
STA. 907+75.00, 22.11′ @ 0.0194
STA. 908+00.00, 20.14′ @ 0.0214
STA. 908+25.00, 18.49′ @ 0.0233
STA. 908+50.00, 16.78′ @ 0.0256
STA. 908+75.00, 15.19′ @ 0.0276
STA. 909+00.00, 13.83′ @ 0.0289
STA. 909+25.00, 12.70′ @ 0.0307
STA. 909+50.00, 11.74′ @ 0.0315
STA. 909+75.00, 10.94′ @ 0.0320
STA. 910+00.00, 10.25′ @ 0.0312
STA. 910+25.00, 9.65′ @ 0.0280
STA. 910+50.00, 9.11′ @ 0.0241
STA. 910+75.00, 8.60′ @ 0.0186
STA. 911+00.00, 8.08′ @ 0.0198
STA. 911+25.00, 7.57′ @ 0.0251

■ TRANSITION SHOULDER CROSS-SLOPE

FOR SUPERELEVATION TABLES, SEE SHEETS 835 - 838
FOR NB I.R. 77 PLAN AND PROFILE, SEE SHEET 474 - 475
FOR RAMP D PLAN AND PROFILE, SEE SHEETS 504 - 506

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED KRM
CHECKED LRK

RAMP GORE DETAILS
RAMP D AT NB I.R. 77 - STA. 906+00 TO STA. 911+50

SUM-77/277/224
VARIOUS

863
1288

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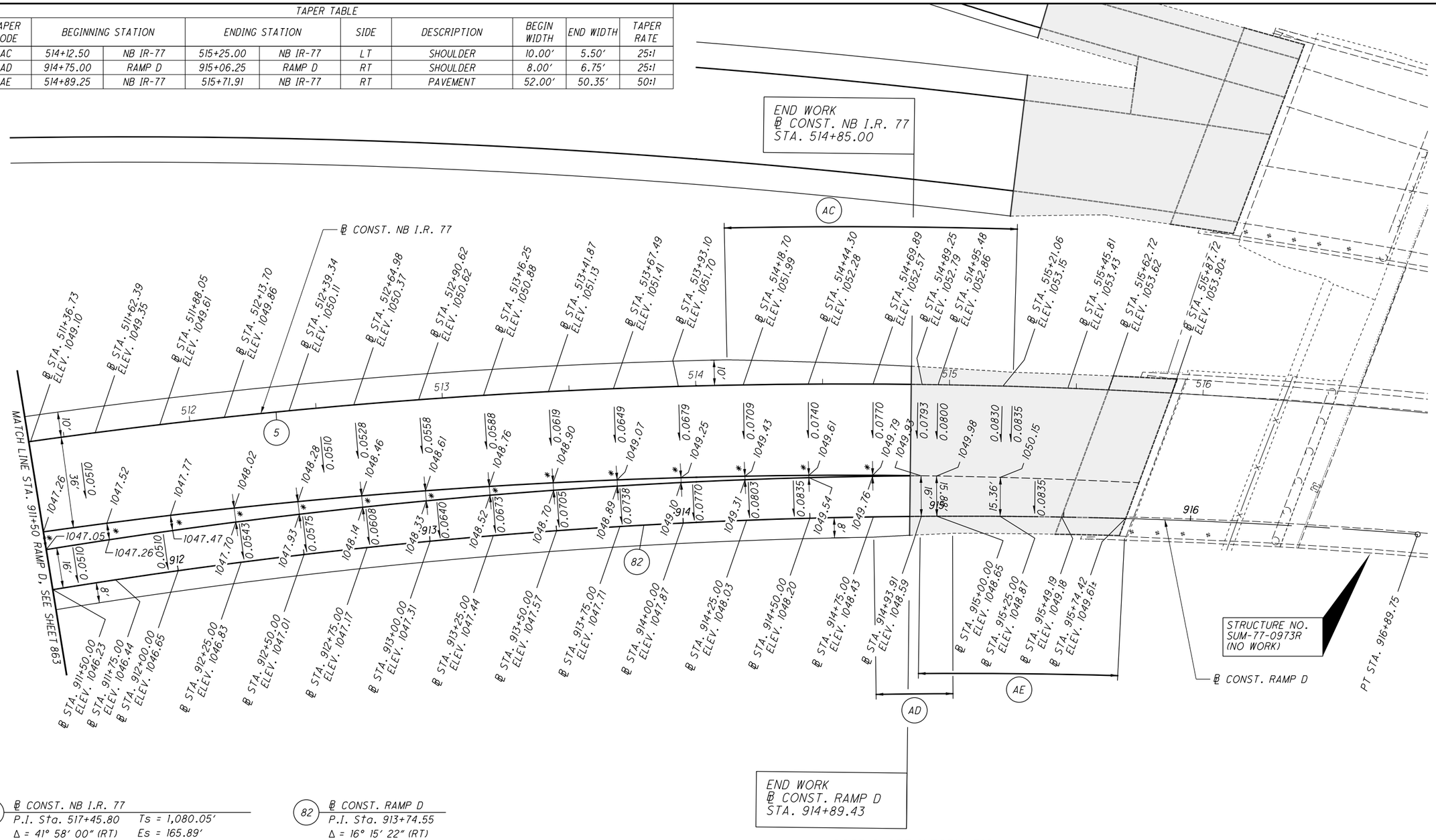
TAPER TABLE									
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
AC	514+12.50	NB IR-77	515+25.00	NB IR-77	LT	SHOULDER	10.00′	5.50′	25:1
AD	914+75.00	RAMP D	915+06.25	RAMP D	RT	SHOULDER	8.00′	6.75′	25:1
AE	514+89.25	NB IR-77	515+71.91	NB IR-77	RT	PAVEMENT	52.00′	50.35′	50:1



5 ℄ CONST. NB I.R. 77

P.I. Sta. 517+45.80	Ts = 1,080.05′
Δ = 41° 58′ 00″ (RT)	Es = 165.89′
Dc = 2° 30′ 00″	C = 1,262.15′
R = 2,291.83′	C1 = C2 = 399.86′
Ls = 400.00′	C.B.1 = N 40° 05′ 03″ W
θs = 5° 00′ 00″	C.B. = N 20° 46′ 03″ W
LT = 266.77′	C.B.2 = S 1° 27′ 02″ E
ST = 133.43′	D.S. = 60 MPH
x = 399.70′	e_{max} = 0.051
y = 11.63′	T.S. STA. 506+65.75
k = 199.95′	S.C. STA. 510+65.75
p = 2.91′	C.S. STA. 523+44.42
Δc = 31° 58′ 00″ (RT)	S.T. STA. 527+44.42
Lc = 1,278.67′	

82 ℄ CONST. RAMP D

P.I. Sta. 913+74.55	
Δ = 16° 15′ 22″ (RT)	
Dc = 2° 33′ 40″	
R = 2,237.04′	
T = 319.50′	
L = 634.70′	
E = 22.70′	
C = 632.57′	
C.B. = N 30° 26′ 29″ W	
D.S. = 60 MPH	
e_{max} = 0.051	
S.C. STA. 910+55.05	
P.T. STA. 916+89.75	

* GORE SLOPE INFORMATION

(READ FROM RAMP D E/P TO NB I.R. 77 E/P)

STA. 911+50.00, 7.06′ @ 0.0297
STA. 911+75.00, 6.55′ @ 0.0397
STA. 912+00.00, 6.04′ @ 0.0497
STA. 912+25.00, 5.52′ @ 0.0580
STA. 912+50.00, 5.01′ @ 0.0699
STA. 912+75.00, 4.50′ @ 0.0711
STA. 913+00.00, 3.98′ @ 0.0704
STA. 913+25.00, 3.47′ @ 0.0692
STA. 913+50.00, 2.96′ @ 0.0676
STA. 913+75.00, 2.44′ @ 0.0738
STA. 914+00.00, 1.93′ @ 0.0777
STA. 914+25.00, 1.41′ @ 0.0851
STA. 914+50.00, 0.90′ @ 0.0778
STA. 914+75.00, 0.39′ @ 0.0769

PAVEMENT AND APPROACH SLAB BY OTHERS (SUM-76/77/8-8.42/9.77/0.00 DB, PID 102329)

± CONSTRUCTED ELEVATIONS ARE TO MEET EXISTING ELEVATIONS AND ARE TO BE VERIFIED IN FIELD.

FOR SUPERELEVATION TABLES, SEE SHEETS 835 - 838
FOR NB I.R. 77 PLAN AND PROFILE, SEE SHEET 474 - 475
FOR RAMP D PLAN AND PROFILE, SEE SHEETS 504 - 506

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KRM
CHECKED LRK

RAMP D AT NB I.R. 77 - STA. 911+50 TO END
RAMP GORE DETAILS

SUM-77 / 277 / 224
VARIOUS

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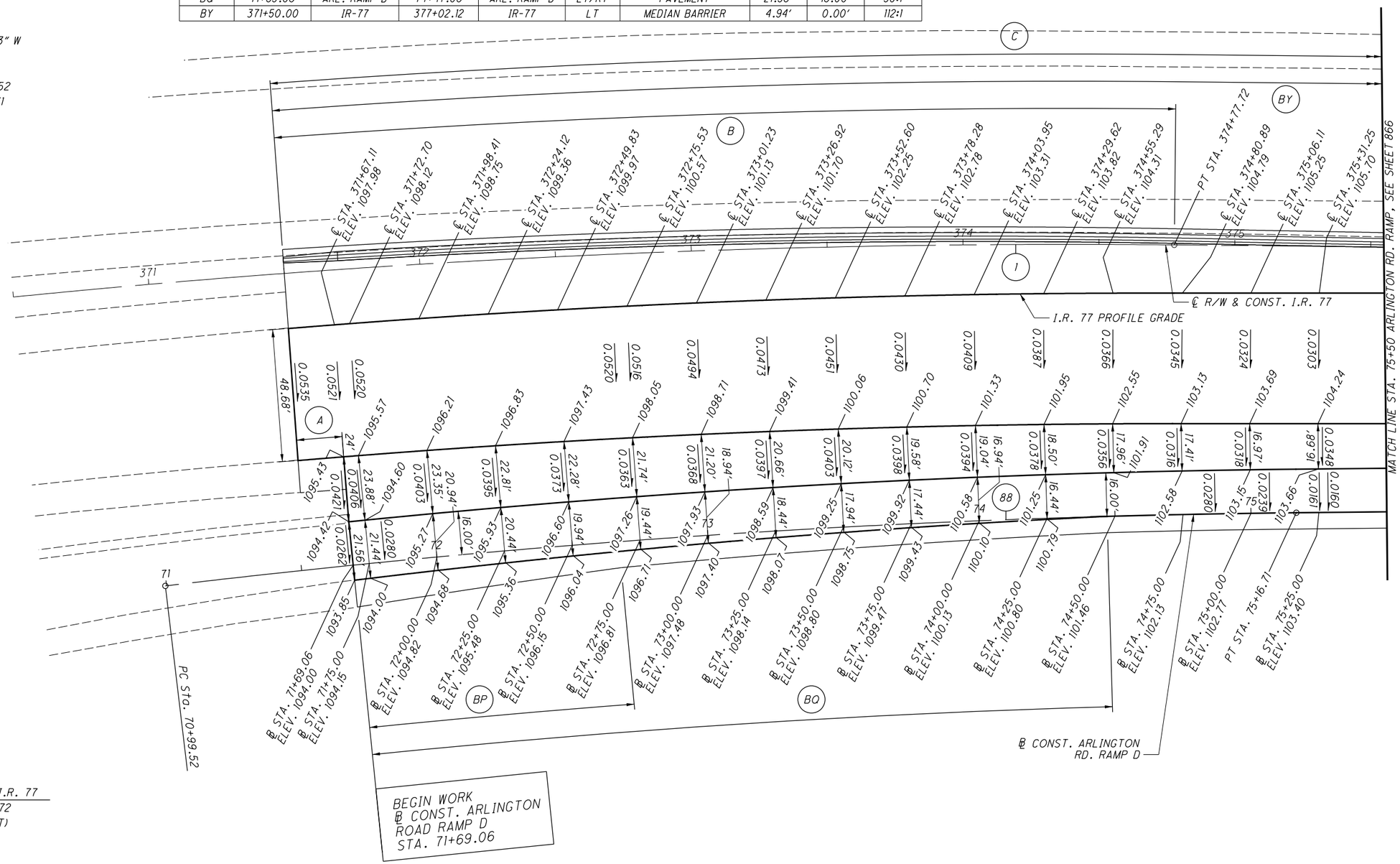
88 — ℄ CONST. ARLINGTON RAMP D
P.I. Sta. 73+08.33
Δ = 6° 15′ 29″ (RT)
Dc = 1° 30′ 00″
R = 3,819.72′
T = 208.81′
L = 417.19′
E = 5.70′
C = 416.99′
C.B. = N 3° 58′ 43″ W
D.S. = 50 MPH
e_{max} = 0.028
P.C. STA. 70+99.52
P.T. STA. 75+16.71

TAPER TABLE

TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
A	371+50.00	IR-77	371+67.11	IR-77	RT	SHOULDER	11.85′	12.00′	114:1
B	371+50.00	IR-77	374+77.72	IR-77	RT	PAVEMENT	48.68′	48.00′	482:1
C	371+50.00	IR-77	380+50.00	IR-77	RT	MEDIAN	20.31′	12.00′	108:1
BP	71+69.06	ARL. RAMP D	72+67.31	ARL. RAMP D	RT	SHOULDER	9.93′	6.00′	25:1
BQ	71+69.06	ARL. RAMP D	74+47.06	ARL. RAMP D	LT/RT	PAVEMENT	21.56′	16.00′	50:1
BY	371+50.00	IR-77	377+02.12	IR-77	LT	MEDIAN BARRIER	4.94′	0.00′	112:1



1 — ℄ R/W & CONST. I.R. 77
P.I. Sta. 360+81.72
Δ = 43° 10′ 45″ (RT)
Dc = 1° 28′ 08″
R = 3,900.50′
T = 1,543.50′
L = 2,939.50′
E = 294.29′
C = 2,870.43′
C.B. = N 21° 17′ 37″ W
D.S. = 70 MPH
e_{max} = 0.052
P.C. STA. 345+38.22
P.T. STA. 374+77.72

FOR SUPERELEVATION TABLES, SEE SHEET 839.
FOR I-77 PLAN AND PROFILE, SEE SHEETS 453 - 456 .
FOR ARLINGTON RD. RAMP D PLAN AND PROFILE, SEE SHEETS 507 - 508 .

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KRM
CHECKED LRK

RAMP GORE DETAILS - ARLINGTON RD.
RAMP D AT I.R. 77 - BEGIN TO STA . 75+50

SUM-77/277/224
VARIOUS

865
1288

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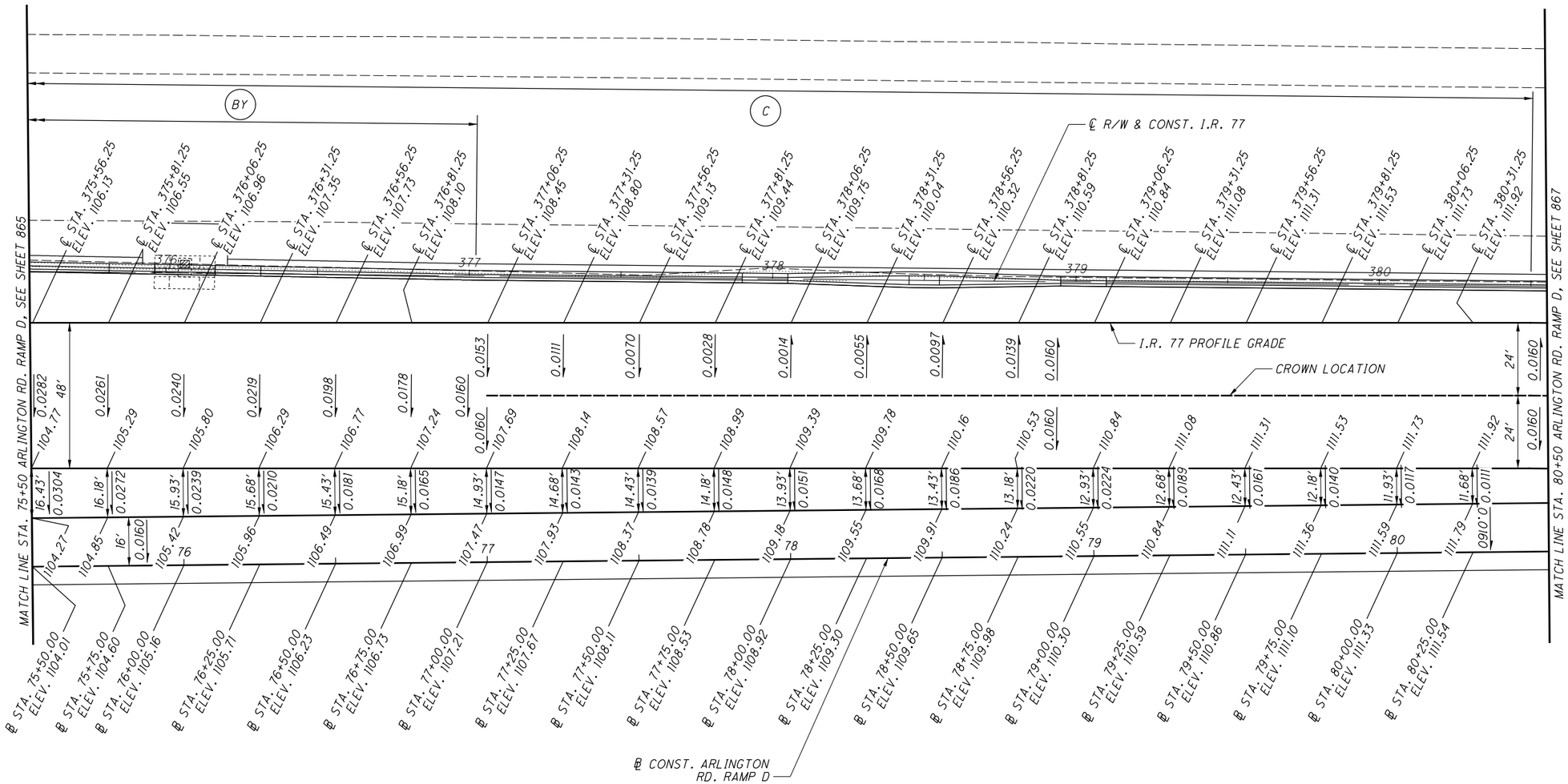
TAPER TABLE									
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
C	371+50.00	I-R-77	380+50.00	I-R-77	RT	MEDIAN	20.31′	12.00′	108:1
BY	371+50.00	I-R-77	377+02.12	I-R-77	LT	MEDIAN BARRIER	4.94′	0.00′	112:1



FOR SUPERELEVATION TABLES, SEE SHEET 839.
FOR I-77 PLAN AND PROFILE, SEE SHEETS 453 - 456 .
FOR ARLINGTON RD. RAMP D PLAN AND PROFILE, SEE SHEETS 507 - 508 .

N

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KRM
CHECKED LRK

RAMP GORE DETAILS - ARLINGTON RD.
RAMP D AT I.R. 77 - STA. 75+50 TO STA. 80+50

SUM-77/277/224
VARIOUS

866
1288

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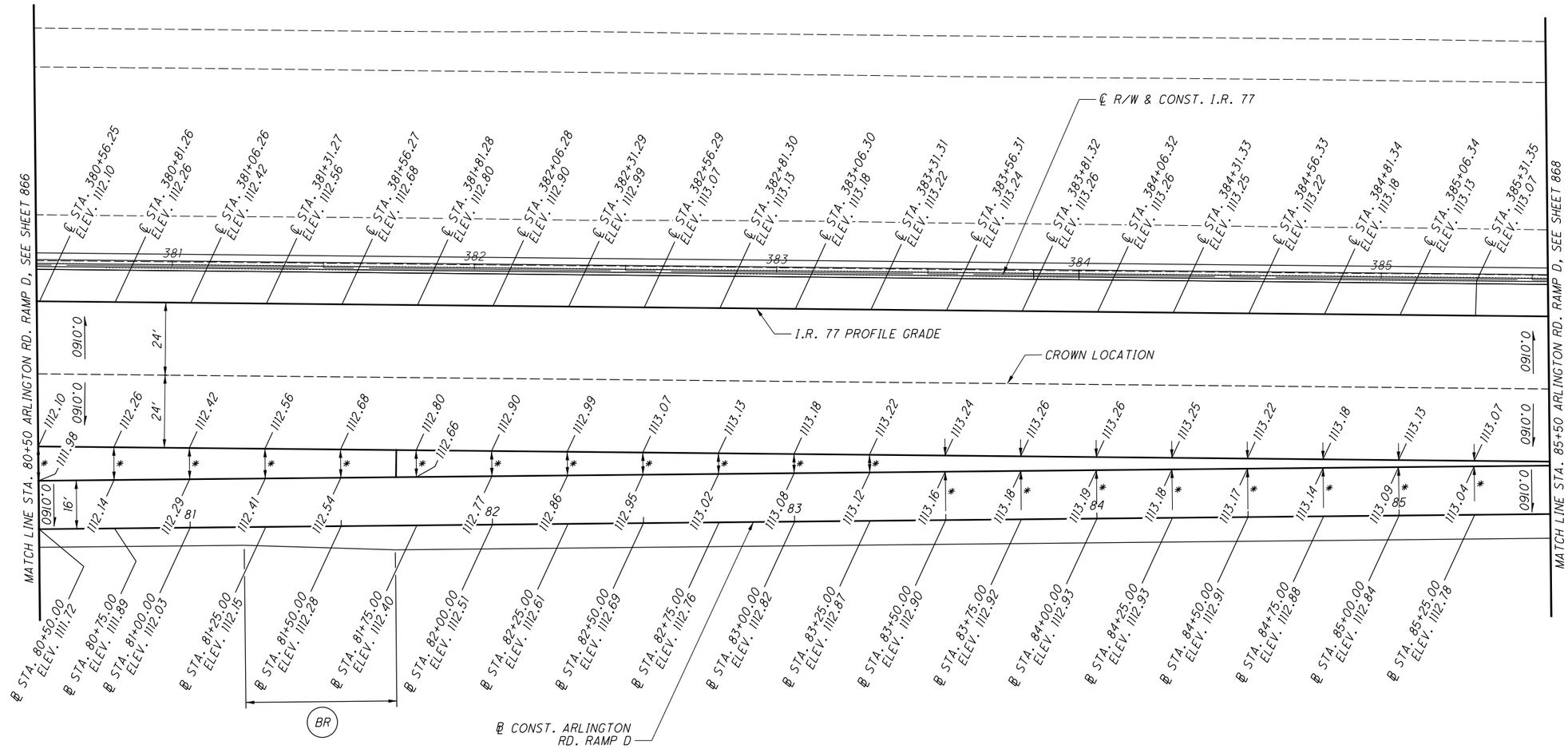
TAPER TABLE									
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
BR	81+17.83	ARL. RAMP D	81+67.80	ARL. RAMP D	RT	SHOULDER	6.00′	8.00′	25:1



* GORE SLOPE INFORMATION

(READ FROM RAMP D E/P TO I.R. 77 E/P)

STA. 80+50.00, 11.37′ @ 0.0106
STA. 80+75.00, 10.87′ @ 0.0110
STA. 81+00.00, 10.37′ @ 0.0125
STA. 81+25.00, 9.87′ @ 0.0152
STA. 81+50.00, 9.37′ @ 0.0149
STA. 81+75.00, 8.87′ @ 0.0158
STA. 82+00.00, 8.37′ @ 0.0155
STA. 82+25.00, 7.87′ @ 0.0165
STA. 82+50.00, 7.37′ @ 0.0163
STA. 82+75.00, 6.87′ @ 0.0160
STA. 83+00.00, 6.37′ @ 0.0157
STA. 83+25.00, 5.87′ @ 0.0170
STA. 83+50.00, 5.37′ @ 0.0149
STA. 83+75.00, 4.87′ @ 0.0164
STA. 84+00.00, 4.37′ @ 0.0160
STA. 84+25.00, 3.87′ @ 0.0181
STA. 84+50.00, 3.37′ @ 0.0148
STA. 84+75.00, 2.87′ @ 0.0139
STA. 85+00.00, 2.37′ @ 0.0169
STA. 85+25.00, 1.87′ @ 0.0160

FOR SUPERELEVATION TABLES, SEE SHEET 839.
FOR I-77 PLAN AND PROFILE, SEE SHEETS 453 - 456 .
FOR ARLINGTON RD. RAMP D PLAN AND PROFILE, SEE SHEETS 507 - 508 .

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KRM
CHECKED LRK

RAMP GORE DETAILS - ARLINGTON RD.
RAMP D AT I.R. 77 - STA. 80+50 TO STA. 85+50

SUM-77 / 277 / 224
VARIOUS

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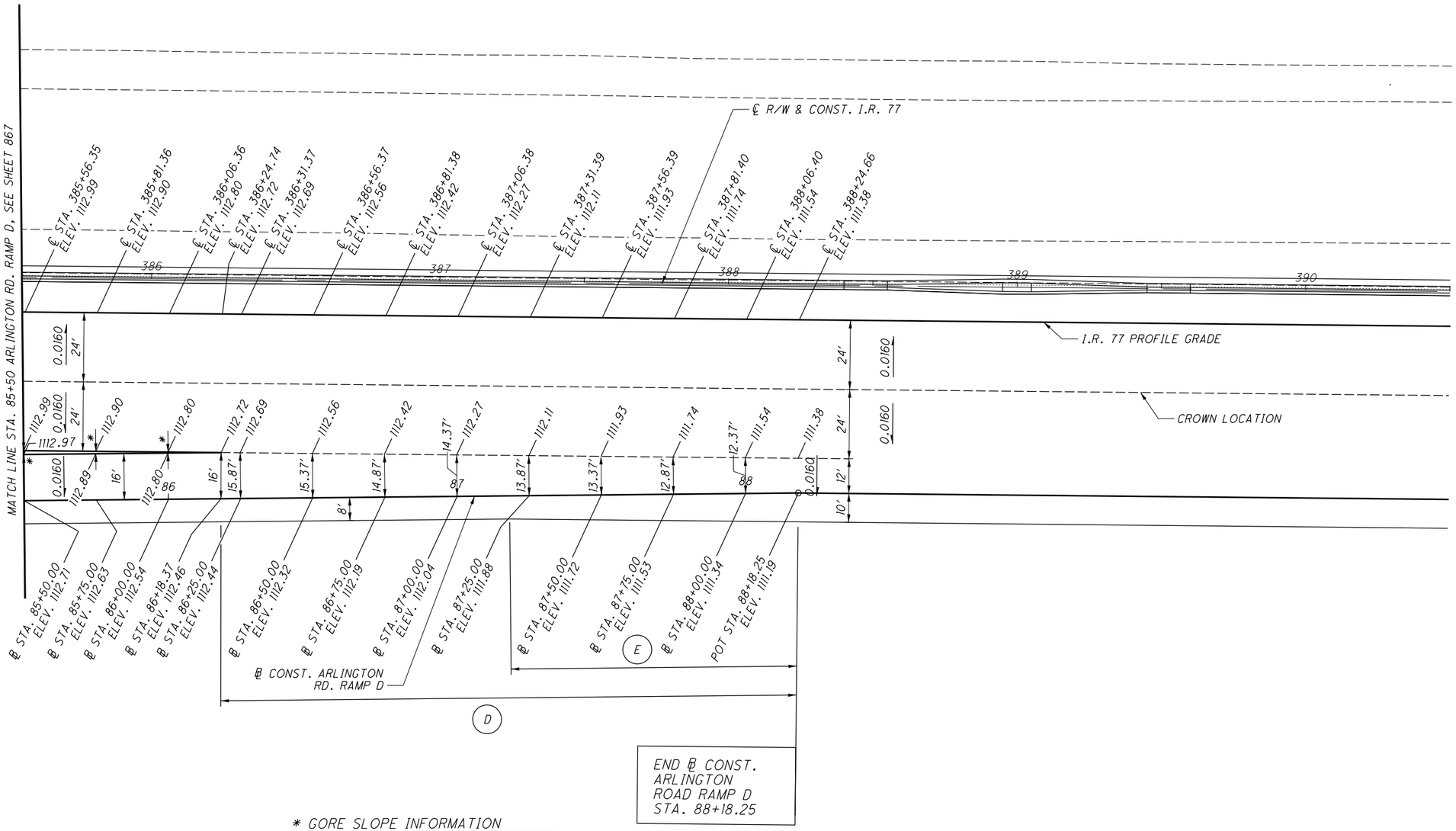
TAPER TABLE									
TAPER CODE	BEGINNING STATION		ENDING STATION		SIDE	DESCRIPTION	BEGIN WIDTH	END WIDTH	TAPER RATE
D	86+18.37	ARL. RAMP D	88+18.25	ARL. RAMP D	RT	PAVEMENT	16.00′	12.00′	50:1
E	87+18.15	ARL. RAMP D	88+18.25	ARL. RAMP D	RT	SHOULDER	8.00′	10.00′	50:1



* GORE SLOPE INFORMATION

(READ FROM RAMP D E/P TO I.R. 77 E/P)

STA. 85+50.00, 1.37′ @ 0.0146
STA. 85+75.00, 0.87′ @ 0.0115
STA. 86+00.00, 0.37′ @ 0.0000

FOR SUPERELEVATION TABLES, SEE SHEET 839.
FOR I-77 PLAN AND PROFILE, SEE SHEETS 453 - 456 .
FOR ARLINGTON RD. RAMP D PLAN AND PROFILE, SEE SHEETS 507 - 508 .

N

0 10 20 40 HORIZONTAL SCALE IN FEET

CALCULATED KRM CHECKED LRK

DETAILS - ARLINGTON RD.

GORE RAMP D AT I.R. 77 - STA. 85+50 TO END

SUM-77 / 277 / 224
VARIOUS

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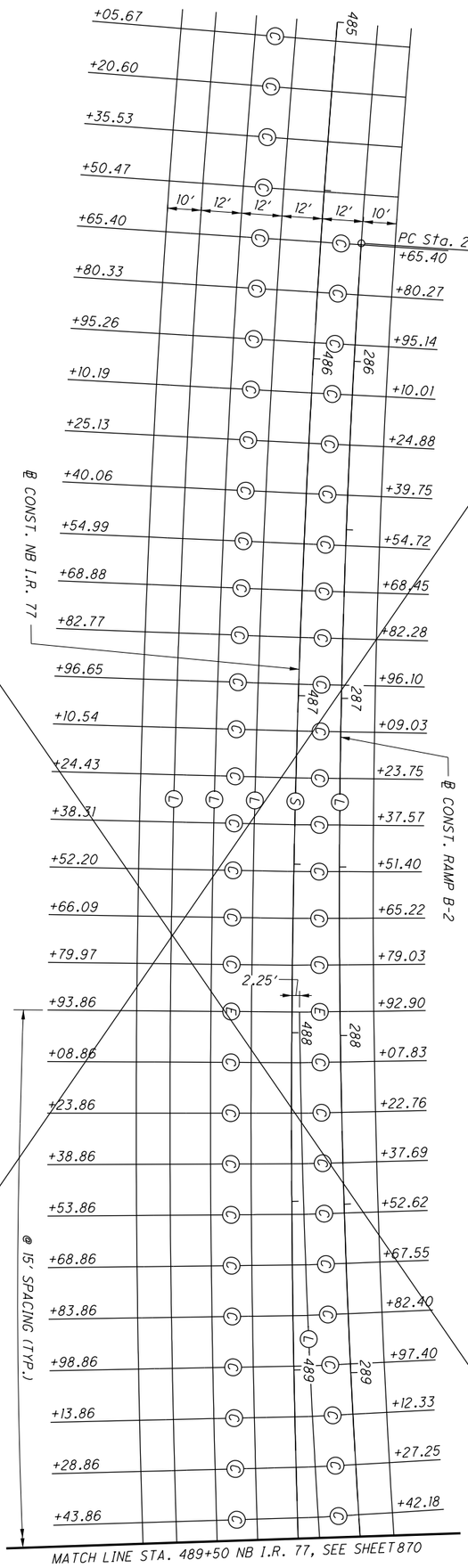


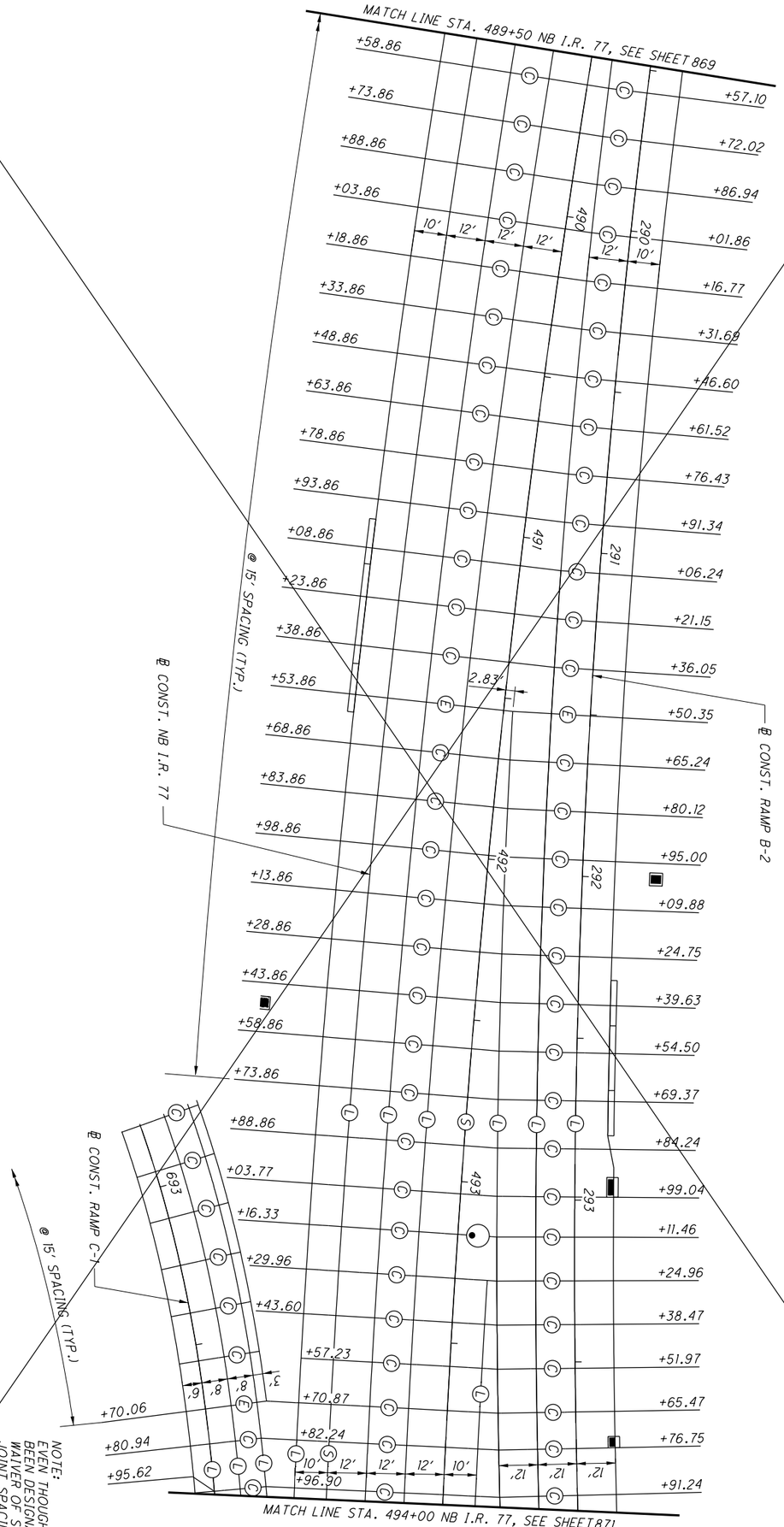
JOINT LEGEND

- Ⓒ CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
- Ⓔ EXPANSION JOINT (SEE STD. DWG. BP-2.2)
- Ⓛ LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
- Ⓢ LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
- Ⓨ BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

NOTE:
EVEN THOUGH SPECIFIC JOINTS MAY HAVE BEEN DESIGNATED BY PAVEMENT DETAILS, NO WAIVER OF STD. DWG. BP-2.2 CONTRACTION JOINT SPACING MAXIMUM OF 15 FEET IS INTENDED.

FOR GORE DETAILS, SEE SHEET 848

869 / 1288	SUM-77 / 277 / 224 VARIOUS	PAVEMENT JOINT DETAILS NB I.R. 77 - STA. 485+00 TO STA. 489+50	CALCULATED KRM CHECKED PJF 0 10 20 40 HORIZONTAL SCALE IN FEET



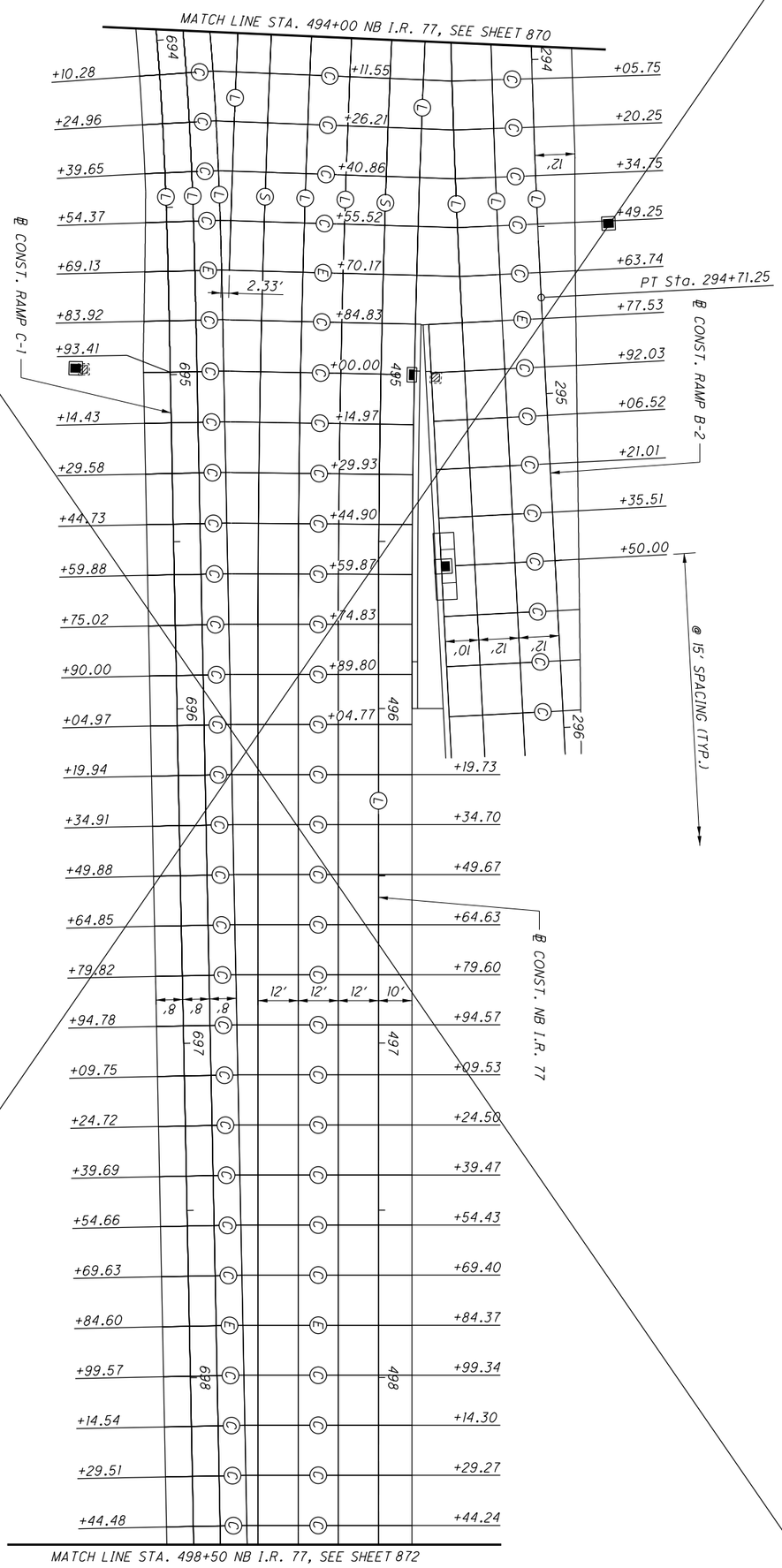
JOINT LEGEND

- (C) CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
- (E) EXPANSION JOINT (SEE STD. DWG. BP-2.2)
- (L) LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
- (S) LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
- (Y) BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

NOTE:
EVEN THOUGH SPECIFIC JOINTS MAY HAVE BEEN DESIGNATED BY PAVEMENT DETAILS, NO WAIVER OF STD. DWG. BP-2.2 CONTRACTION JOINT SPACING MAXIMUM OF 15 FEET IS INTENDED.

FOR GORE DETAILS, SEE SHEET 849

870 / 1288	SUM-77 / 277 / 224 VARIOUS	PAVEMENT JOINT DETAILS NB I.R. 77 - STA. 489+50 TO STA. 494+00	CALCULATED KRM CHECKED PJF 0 20 10 40 HORIZONTAL SCALE IN FEET



NOTE:
EVEN THOUGH SPECIFIC JOINTS MAY HAVE BEEN DESIGNATED BY PAVEMENT DETAILS, NO WAIVER OF STD. DWG. BP-2.2 CONTRACTION JOINT SPACING MAXIMUM OF 15 FEET IS INTENDED.

JOINT LEGEND

- (C) CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
- (E) EXPANSION JOINT (SEE STD. DWG. BP-2.2)
- (L) LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
- (S) LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
- (Y) BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

FOR GORE DETAILS, SEE SHEET 858

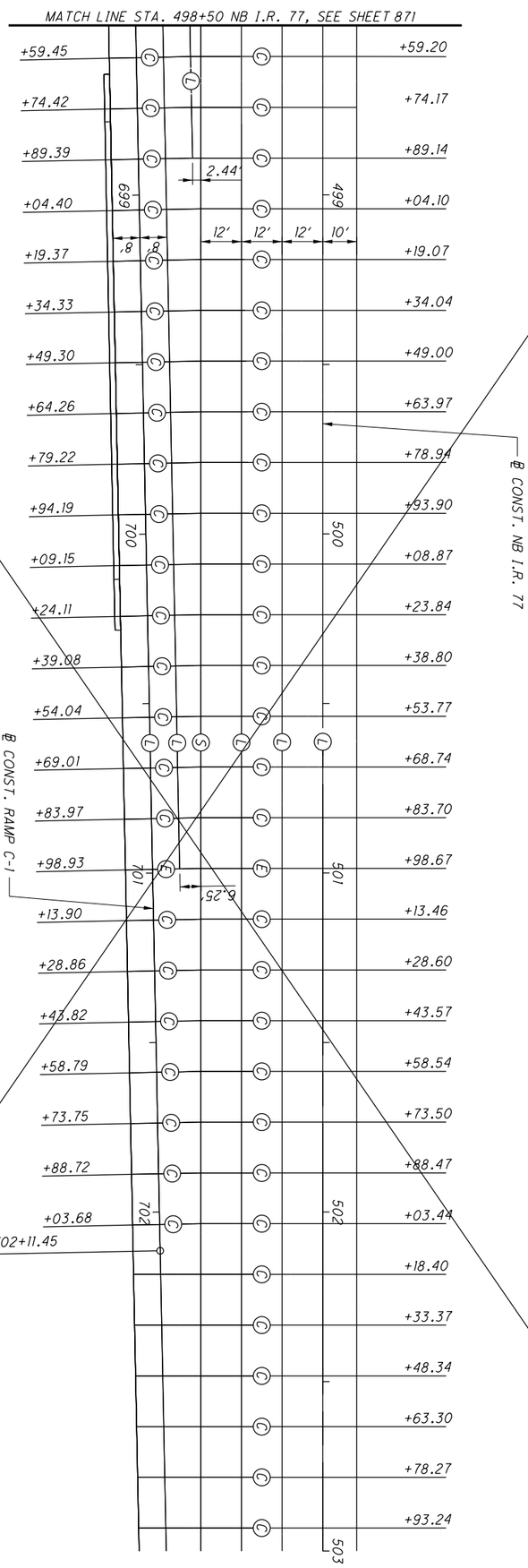
871
1288

SUM-77/277/224
VARIOUS

PAVEMENT JOINT DETAILS
NB I.R. 77 - STA. 494+00 TO STA. 498+50

CALCULATED KRM
CHECKED PJF

0 10 20 40
HORIZONTAL SCALE IN FEET



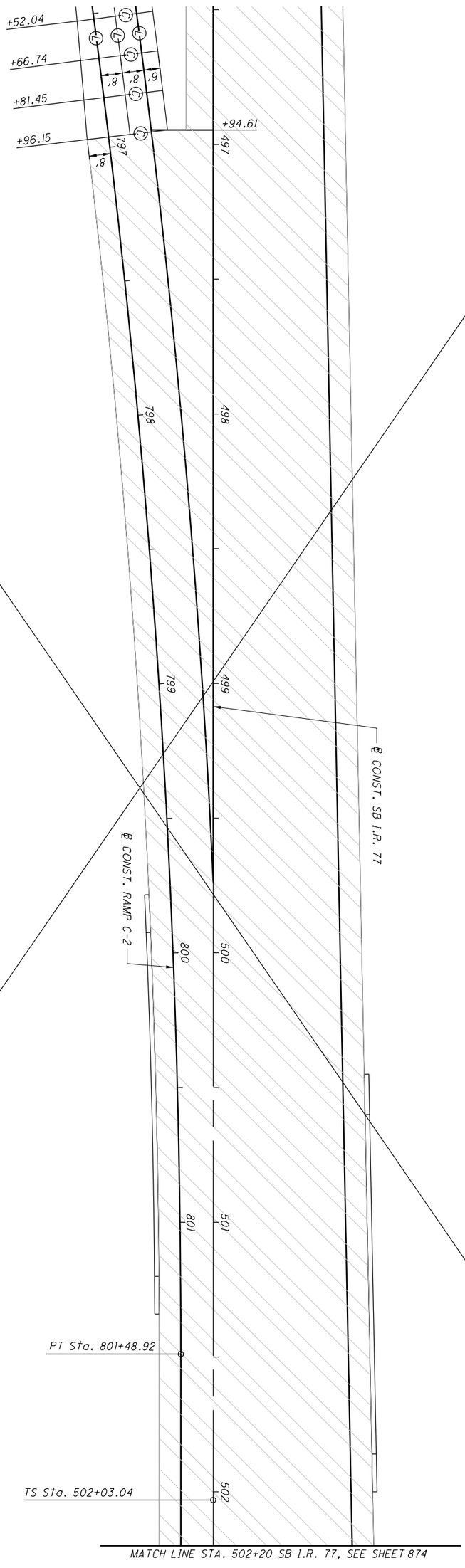
JOINT LEGEND

- (C) CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
- (E) EXPANSION JOINT (SEE STD. DWG. BP-2.2)
- (L) LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
- (S) LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
- (Y) BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

NOTE:
EVEN THOUGH SPECIFIC JOINTS MAY HAVE BEEN DESIGNATED BY PAVEMENT DETAILS, NO WAIVER OF STD. DWG. BP-2.2 CONTRACTION JOINT SPACING MAXIMUM OF 15 FEET IS INTENDED.

FOR GORE DETAILS, SEE SHEET 859

872 / 1288	SUM-77 / 277 / 224 VARIOUS	PAVEMENT JOINT DETAILS NB I.R. 77 - STA. 498+50 TO STA. 503+00	CALCULATED KRM CHECKED PJF 0 10 20 40 HORIZONTAL SCALE IN FEET



NOTE:
EVEN THOUGH SPECIFIC JOINTS MAY HAVE BEEN DESIGNATED BY PAVEMENT DETAILS, NO WAIVER OF STD. DWG. BP-2.2 CONTRACTION JOINT SPACING MAXIMUM OF 15 FEET IS INTENDED.

JOINT LEGEND

- Ⓒ CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
- Ⓔ EXPANSION JOINT (SEE STD. DWG. BP-2.2)
- Ⓛ LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
- Ⓢ LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
- Ⓨ BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

FOR GORE DETAILS, SEE SHEET 861

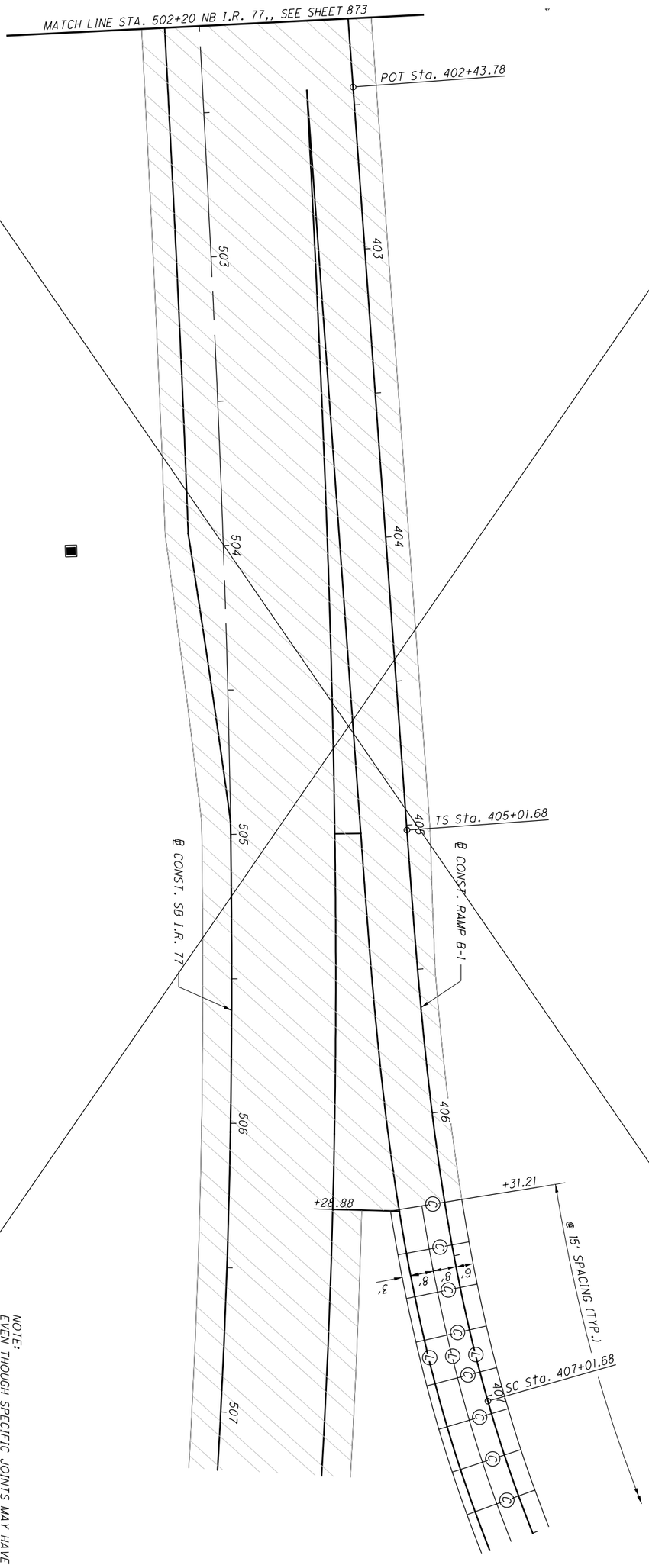
873
1288

SUM-77/277/224
VARIOUS

PAVEMENT JOINT DETAILS
SB I.R. 77 - STA. 496+50 TO STA. 502+20

CALCULATED KRM
CHECKED PJF

0 10 20 40
HORIZONTAL SCALE IN FEET



NOTE:
EVEN THOUGH SPECIFIC JOINTS MAY HAVE BEEN DESIGNATED BY PAVEMENT DETAILS, NO WAIVER OF STD. DWG. BP-2.2 CONTRACTION JOINT SPACING MAXIMUM OF 15 FEET IS INTENDED.

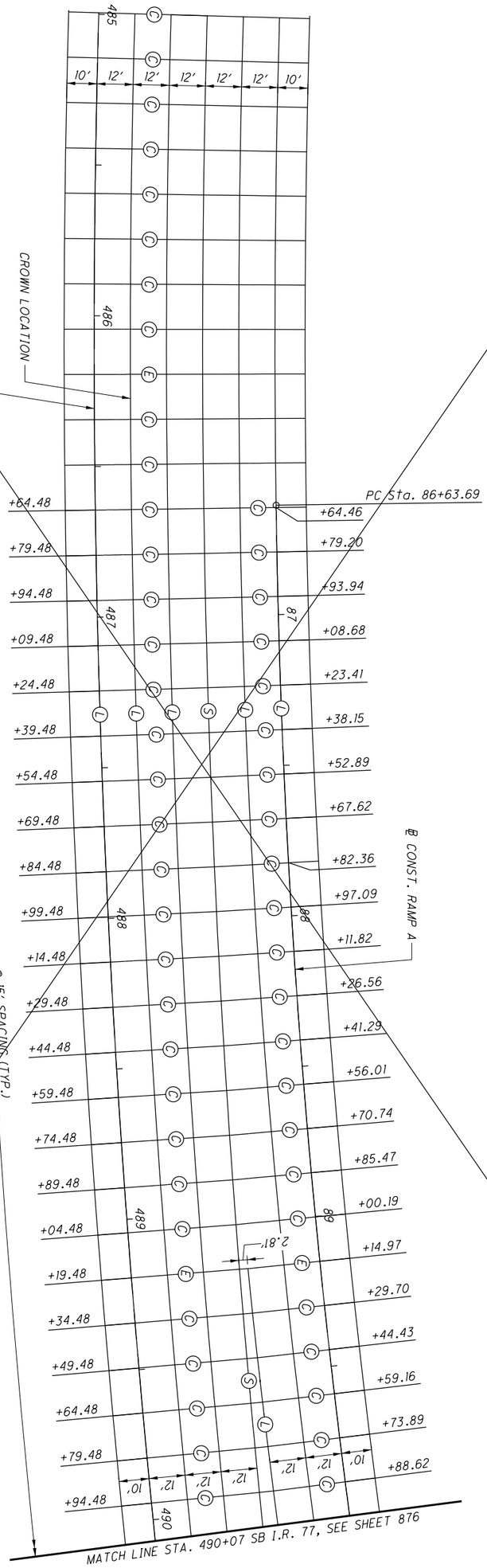
JOINT LEGEND

Ⓒ CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
Ⓔ EXPANSION JOINT (SEE STD. DWG. BP-2.2)
Ⓛ LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
Ⓢ LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
Ⓨ BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

FOR GORE DETAILS, SEE SHEET 846

ASPHALT PAVEMENT LIMITS

874 / 1288	SUM-77 / 277 / 224 VARIOUS	PAVEMENT JOINT DETAILS SB I.R. 77 - STA. 502+20 TO STA. 507+50	CALCULATED KRM CHECKED PJF	0 10 20 40 HORIZONTAL SCALE IN FEET



JOINT LEGEND

Ⓒ CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
Ⓔ EXPANSION JOINT (SEE STD. DWG. BP-2.2)
Ⓛ LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
Ⓢ LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
Ⓨ BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

NOTE:
EVEN THOUGH SPECIFIC JOINTS MAY HAVE BEEN DESIGNATED BY PAVEMENT DETAILS, NO WAIVER OF STD. DWG. BP-2.2 CONTRACTION JOINT SPACING MAXIMUM OF 15 FEET IS INTENDED.

FOR GORE DETAILS, SEE SHEET 841

875
1288

SUM-77/277/224
VARIOUS

PAVEMENT JOINT DETAILS

RAMP A AT SB I.R. 77 - STA. 485+00 TO STA. 490+07

CALCULATED KRM
CHECKED PJF

0 10 20 40
HORIZONTAL SCALE IN FEET

N

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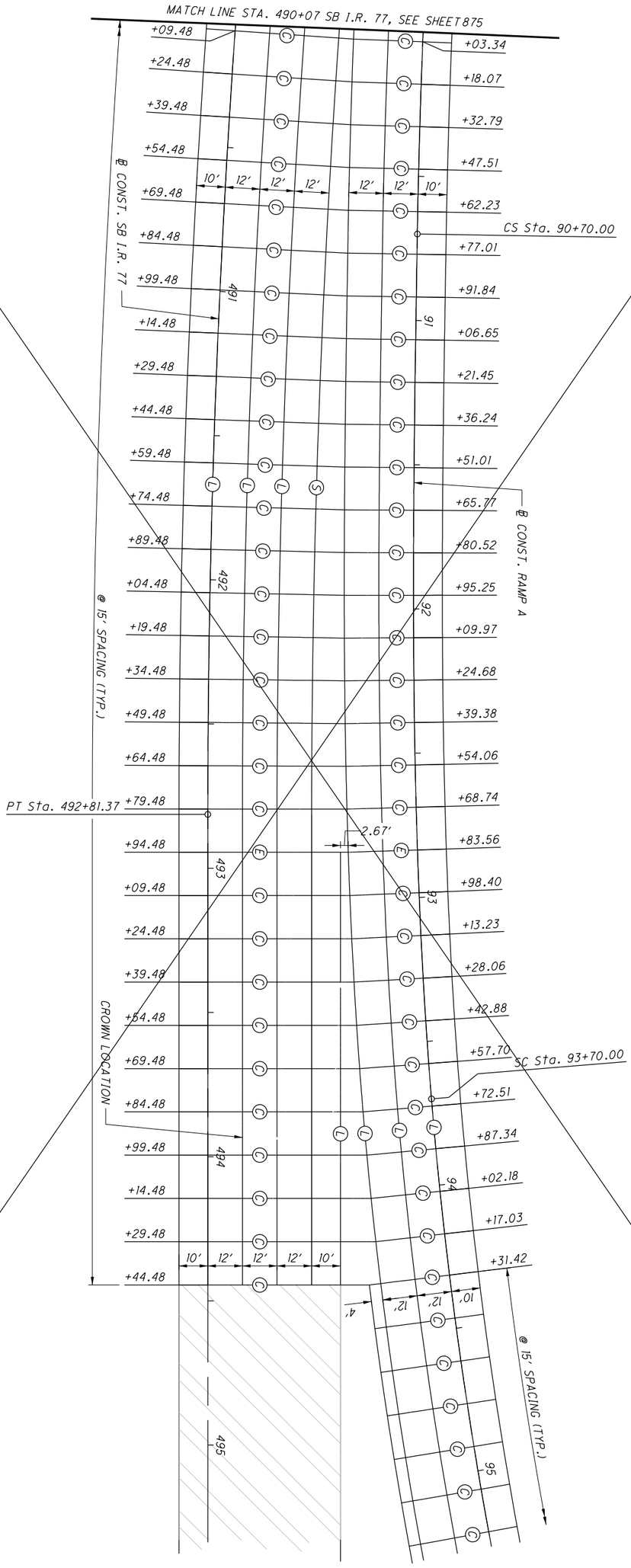


JOINT LEGEND

Ⓒ CONTRACTION JOINT (SEE STD. DWG. BP-2.2)

Ⓔ EXPANSION JOINT (SEE STD. DWG. BP-2.2)

Ⓛ LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)

Ⓢ LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)

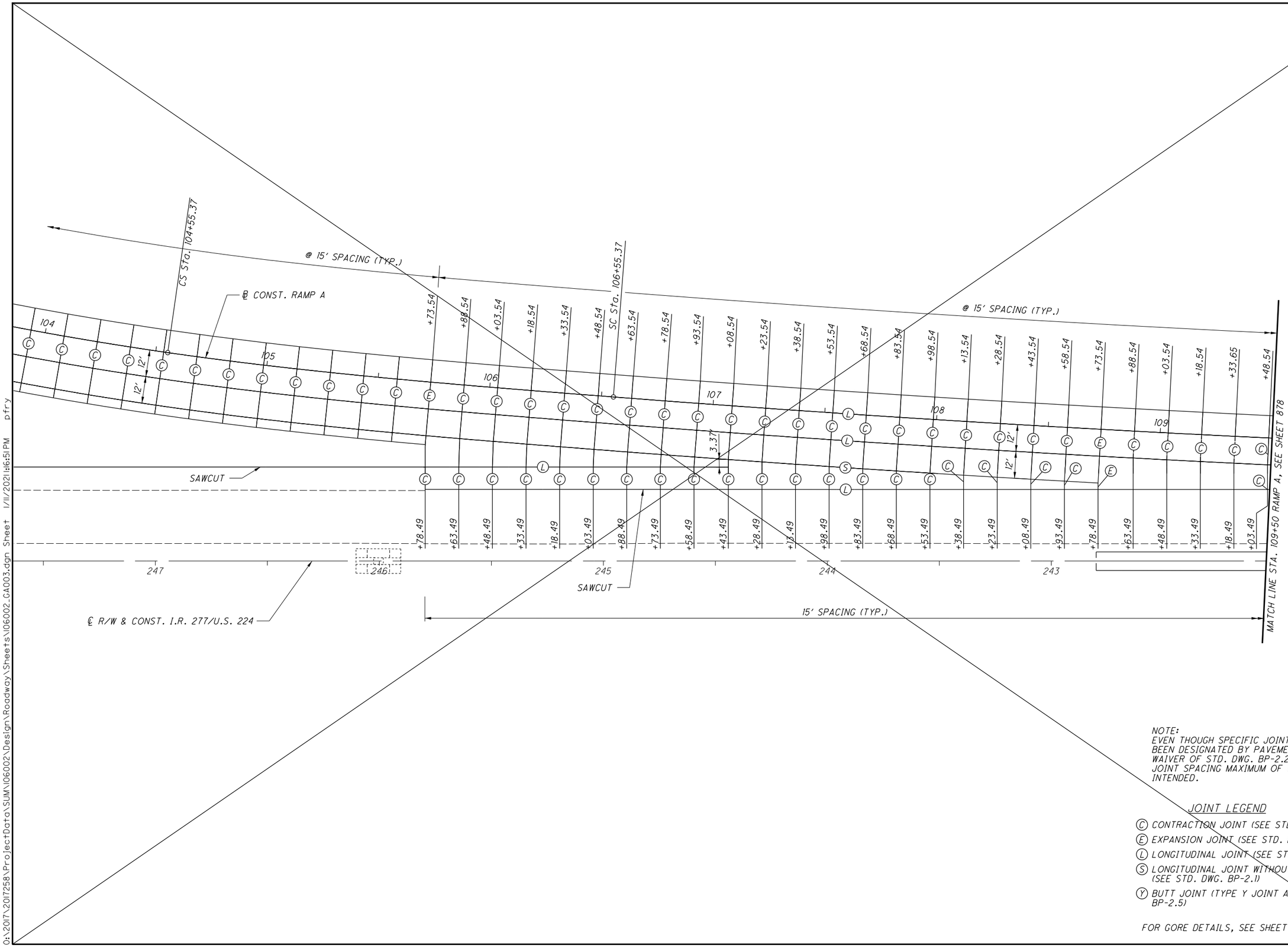
Ⓨ BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

NOTE:
EVEN THOUGH SPECIFIC JOINTS MAY HAVE BEEN DESIGNATED BY PAVEMENT DETAILS, NO WAIVER OF STD. DWG. BP-2.2 CONTRACTION JOINT SPACING MAXIMUM OF 15 FEET IS INTENDED.

FOR GORE DETAILS, SEE SHEET 842

ASPHALT PAVEMENT LIMITS

876 / 1288	SUM-77 / 277 / 224 VARIOUS	PAVEMENT JOINT DETAILS RAMP A AT SB I.R. 77 - STA. 490+07 TO END	CALCULATED KRM CHECKED PJF	0 10 20 40 HORIZONTAL SCALE IN FEET



NOTE:
EVEN THOUGH SPECIFIC JOINTS MAY HAVE BEEN DESIGNATED BY PAVEMENT DETAILS, NO WAIVER OF STD. DWG. BP-2.2 CONTRACTION JOINT SPACING MAXIMUM OF 15 FEET IS INTENDED.

JOINT LEGEND

- (C) CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
- (E) EXPANSION JOINT (SEE STD. DWG. BP-2.2)
- (L) LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
- (S) LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
- (Y) BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

FOR GORE DETAILS, SEE SHEET 843

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KRM
CHECKED PJF

PAVEMENT JOINT DETAILS
RAMP A AT I.R 277/ 224 - STA. 104+00 TO 109+50

SUM-77/277/224
VARIOUS

877
1288

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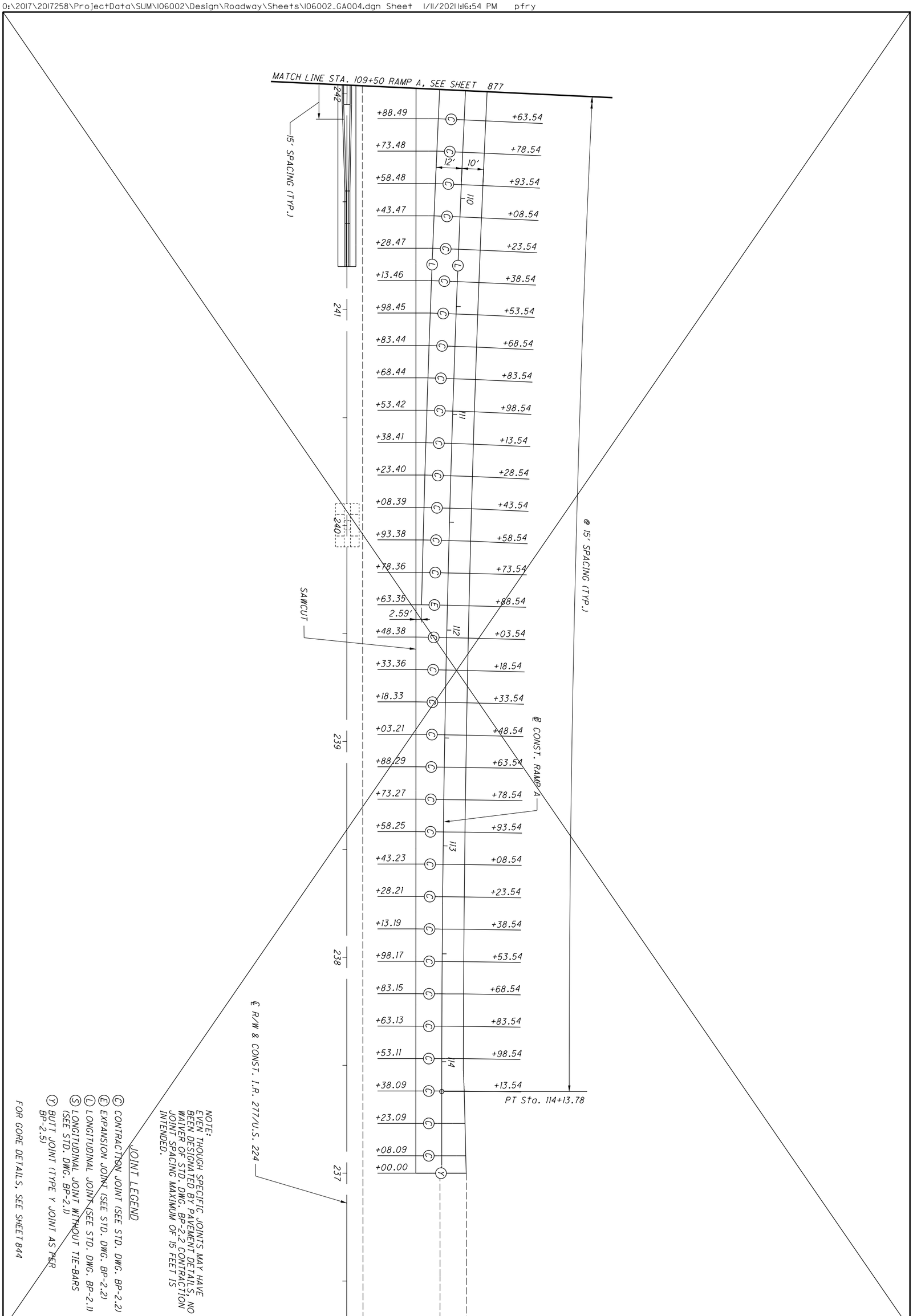

NOTE:
EVEN THOUGH SPECIFIC JOINTS MAY HAVE BEEN DESIGNATED BY PAVEMENT DETAILS, NO WAIVER OF STD. DWG. BP-2.2 CONTRACTION JOINT SPACING MAXIMUM OF 15 FEET IS INTENDED.

JOINT LEGEND

- (C) CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
- (E) EXPANSION JOINT (SEE STD. DWG. BP-2.2)
- (L) LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
- (S) LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
- (Y) BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

FOR GORE DETAILS, SEE SHEET 844

878
1288

SUM-77/277/224
VARIOUS

PAVEMENT JOINT DETAILS
RAMP A AT I.R. 277/224 - STA. 109+50 TO END

CALCULATED KRM
CHECKED PJF

0 10 20 40
HORIZONTAL SCALE IN FEET

N

PAVEMENT AND APPROACH SLAB BY OTHERS
(SUM-76/77/8-8.42/9.77/0.00 DB, PID 102329)

ASPHALT PAVEMENT LIMITS

END WORK
RAMP B
STA. 214+90.00

CS Sta. 213+58.80

@ 15' SPACING (TYP.)

℄ CONST. RAMP B

+90.00 +05.00 +17.70 +30.39

ST Sta. 215+58.80

WATERLOO ROAD

POT Sta. 219+25.00

214 215 216 217 218 219

4' 8' 6'

514 515 516 517 518 519

℄ CONST. SB I.R. 77

END PROJECT
END WORK
℄ CONST. SB I.R. 77
STA. 514+95.00
S.L.M. 9.74

E171 (457)

BEGIN PROJECT
SUM-76/77/8-
8.42/9.77/0.00 DB
(PID 102329)

E180 (428)

NOTE:
EVEN THOUGH SPECIFIC JOINTS MAY HAVE BEEN DESIGNATED BY PAVEMENT DETAILS, NO WAIVER OF STD. DWG. BP-2.2 CONTRACTION JOINT SPACING MAXIMUM OF 15 FEET IS INTENDED.

JOINT LEGEND

- (C) CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
- (E) EXPANSION JOINT (SEE STD. DWG. BP-2.2)
- (L) LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
- (S) LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
- (Y) BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

FOR GORE DETAILS, SEE SHEET 845

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KRM
CHECKED PJF

PAVEMENT JOINT DETAILS
RAMP B AT SB I.R. 77 - STA. 213+50 TO END

SUM-77/277/224
VARIOUS

879
1288

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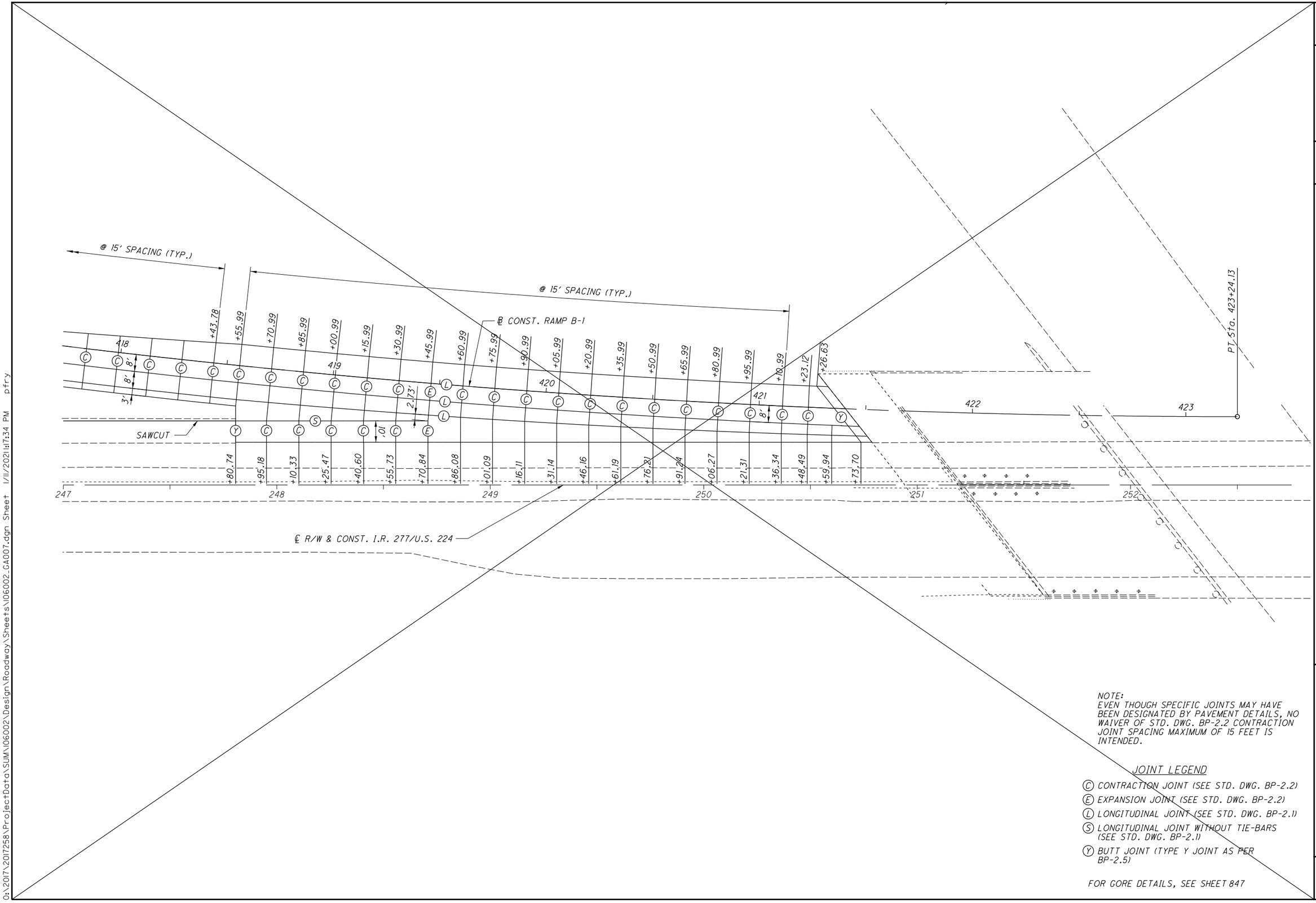

NOTE:
EVEN THOUGH SPECIFIC JOINTS MAY HAVE BEEN DESIGNATED BY PAVEMENT DETAILS, NO WAIVER OF STD. DWG. BP-2.2 CONTRACTION JOINT SPACING MAXIMUM OF 15 FEET IS INTENDED.

JOINT LEGEND

- (C) CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
- (E) EXPANSION JOINT (SEE STD. DWG. BP-2.2)
- (L) LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
- (S) LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
- (Y) BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

FOR GORE DETAILS, SEE SHEET 847

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KRM
CHECKED PJF

PAVEMENT JOINT DETAILS
RAMP B-1 AT I.R. 277/U.S. 224 - STA. 418+00 TO END

SUM-77/277/224
VARIOUS

880
1288

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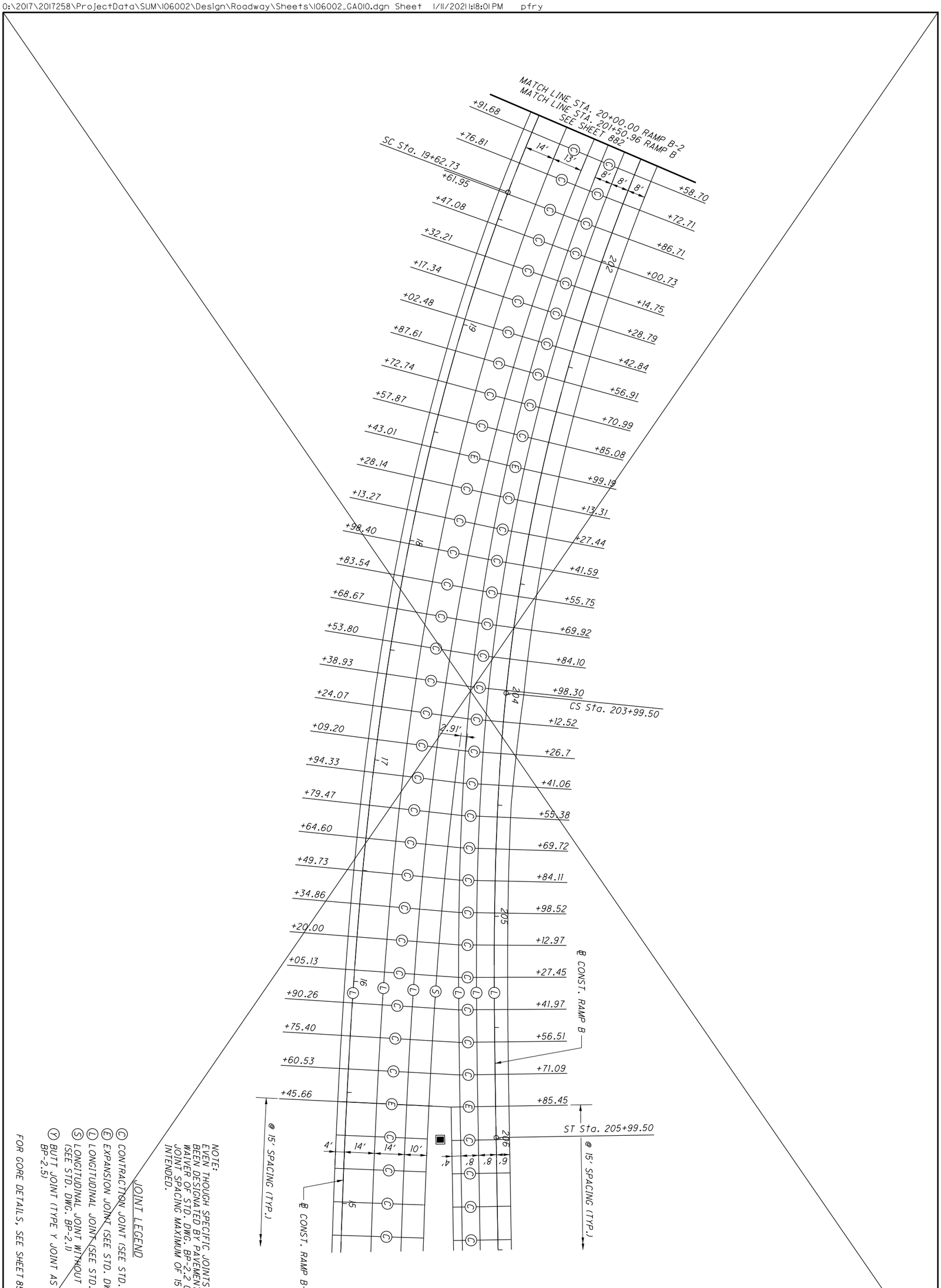


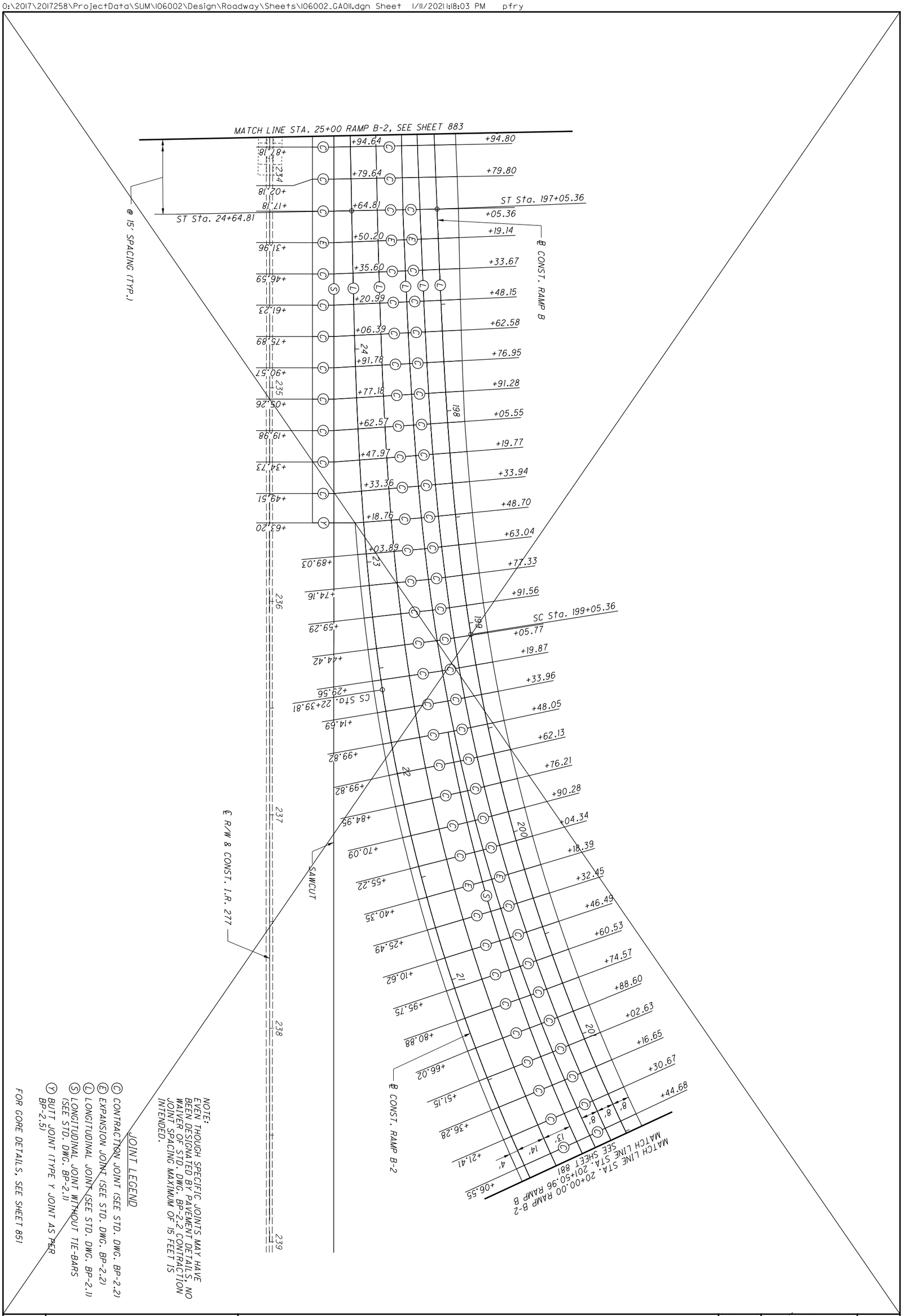
JOINT LEGEND

- (C) CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
- (E) EXPANSION JOINT (SEE STD. DWG. BP-2.2)
- (L) LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
- (S) LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
- (Y) BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

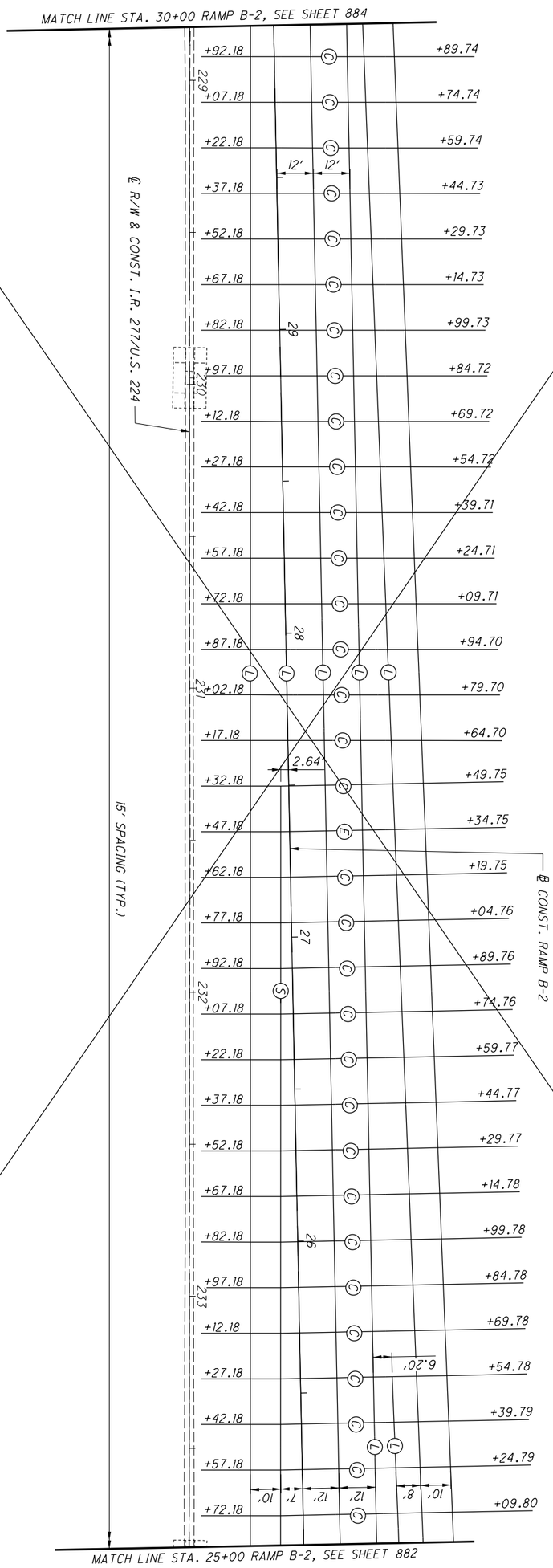
NOTE:
EVEN THOUGH SPECIFIC JOINTS MAY HAVE BEEN DESIGNATED BY PAVEMENT DETAILS, NO WAIVER OF STD. DWG. BP-2.2 CONTRACTION JOINT SPACING MAXIMUM OF 15 FEET IS INTENDED.

FOR GORE DETAILS, SEE SHEET 850

881 / 1288	SUM-77/277/224 VARIOUS	PAVEMENT JOINT DETAILS RAMP B-2 AT RAMP B - STA. 15+00 - STA. 20+00	CALCULATED KRM CHECKED PJF	0 20 10 40 HORIZONTAL SCALE IN FEET



882 / 1288	SUM-77 / 277 / 224 VARIOUS	PAVEMENT JOINT DETAILS RAMP B-2 AT I.R. 277 / 224 - STA. 20+00 TO 25+00	CALCULATED KRM CHECKED PJF	0 20 10 40 HORIZONTAL SCALE IN FEET



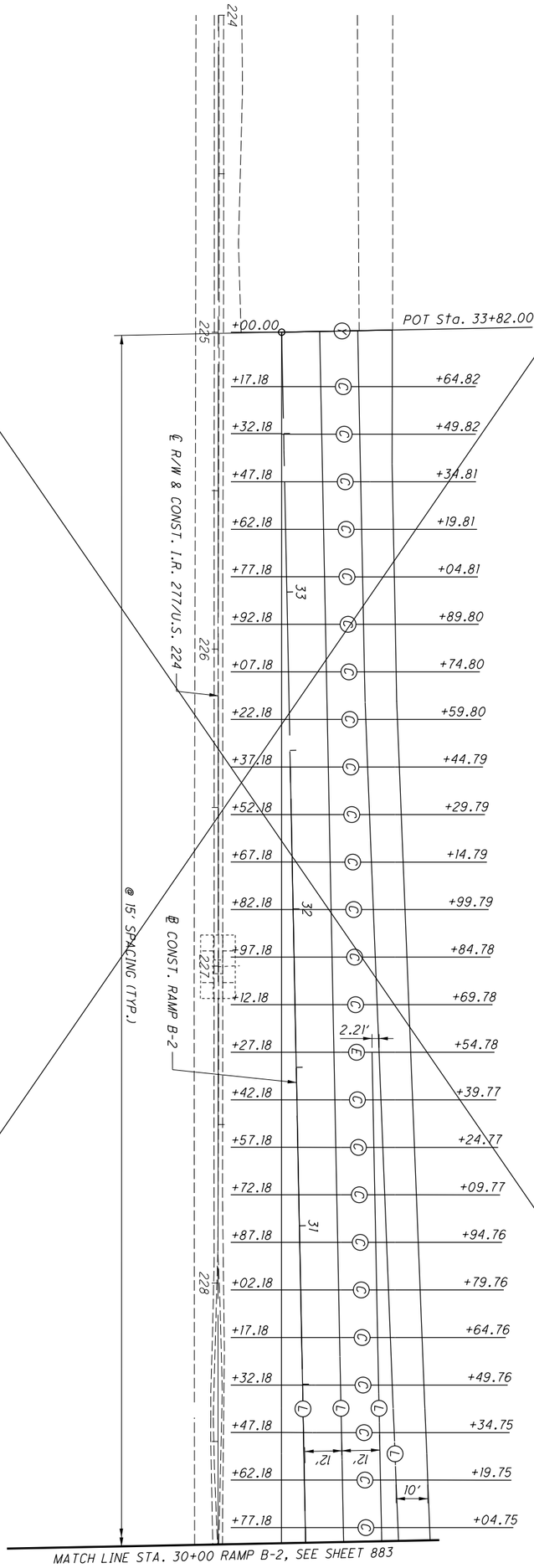
NOTE:
EVEN THOUGH SPECIFIC JOINTS MAY HAVE BEEN DESIGNATED BY PAVEMENT DETAILS, NO WAIVER OF STD. DWG. BP-2.2 CONTRACTION JOINT SPACING MAXIMUM OF 15 FEET IS INTENDED.

JOINT LEGEND

- Ⓒ CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
- Ⓔ EXPANSION JOINT (SEE STD. DWG. BP-2.2)
- Ⓛ LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
- Ⓢ LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
- Ⓨ BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

FOR GORE DETAILS, SEE SHEET 852

883 / 1288	SUM-77 / 277 / 224 VARIOUS	PAVEMENT JOINT DETAILS RAMP B-2 AT 277 / 224 - STA. 25+00 TO STA. 30+00	CALCULATED KRM CHECKED PJF	0 10 20 40 HORIZONTAL SCALE IN FEET



NOTE:
EVEN THOUGH SPECIFIC JOINTS MAY HAVE BEEN DESIGNATED BY PAVEMENT DETAILS, NO WAIVER OF STD. DWG. BP-2.2 CONTRACTION JOINT SPACING MAXIMUM OF 15 FEET IS INTENDED.

JOINT LEGEND

- (C) CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
- (E) EXPANSION JOINT (SEE STD. DWG. BP-2.2)
- (L) LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
- (S) LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
- (Y) BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

FOR GORE DETAILS, SEE SHEET 853

884
1288

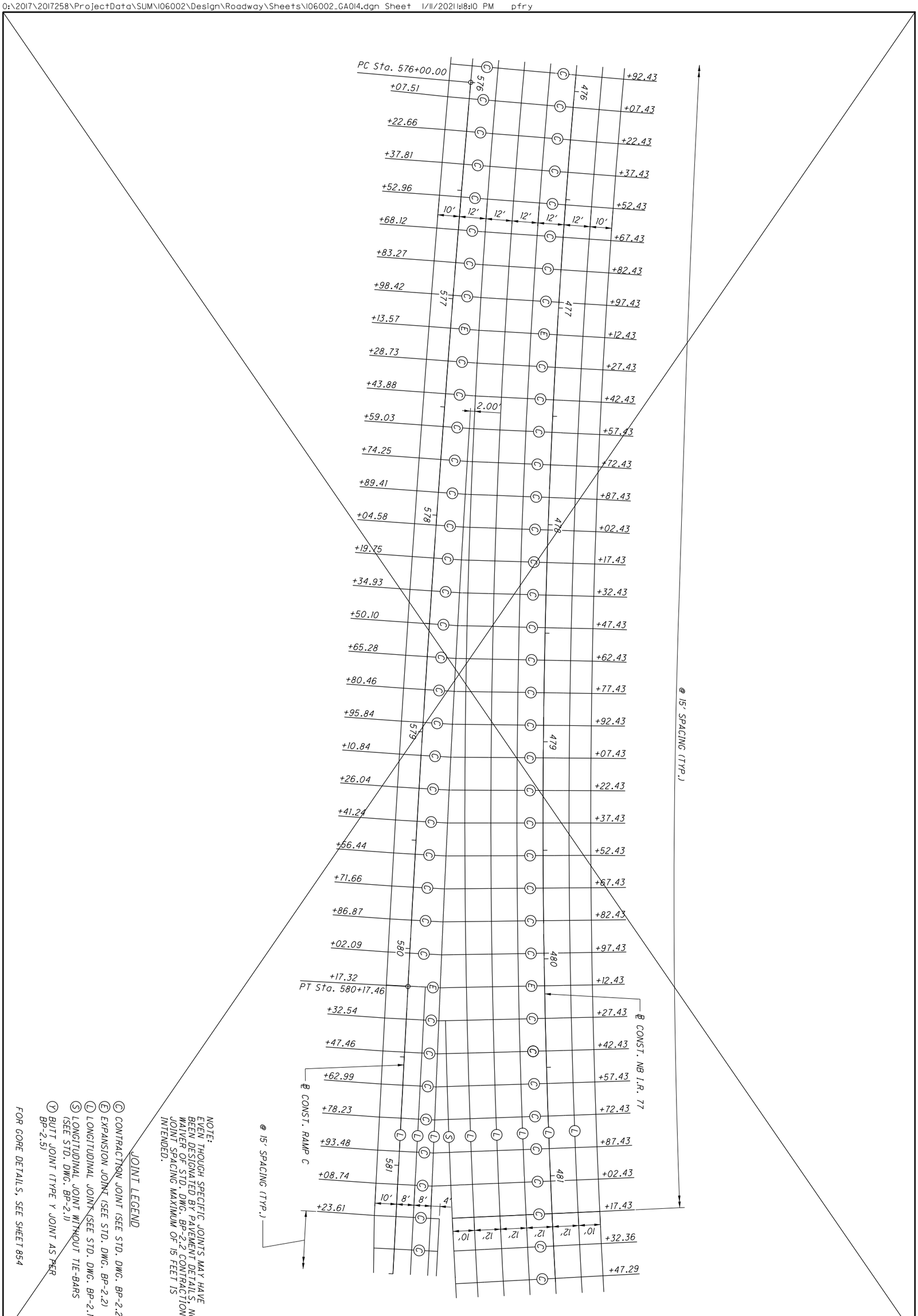
SUM-77/277/224
VARIOUS

PAVEMENT JOINT DETAILS
RAMP B-2 AT I.R. 277/224 - STA. 30+00 TO END

CALCULATED KRM
CHECKED PJF

0 10 20 40
HORIZONTAL SCALE IN FEET

N



NOTE:
EVEN THOUGH SPECIFIC JOINTS MAY HAVE BEEN DESIGNATED BY PAVEMENT DETAILS, NO WAIVER OF STD. DWG. BP-2.2 CONTRACTION JOINT SPACING MAXIMUM OF 15 FEET IS INTENDED.

JOINT LEGEND

- (C) CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
- (E) EXPANSION JOINT (SEE STD. DWG. BP-2.2)
- (L) LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
- (S) LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
- (Y) BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

FOR GORE DETAILS, SEE SHEET 854

885
1288

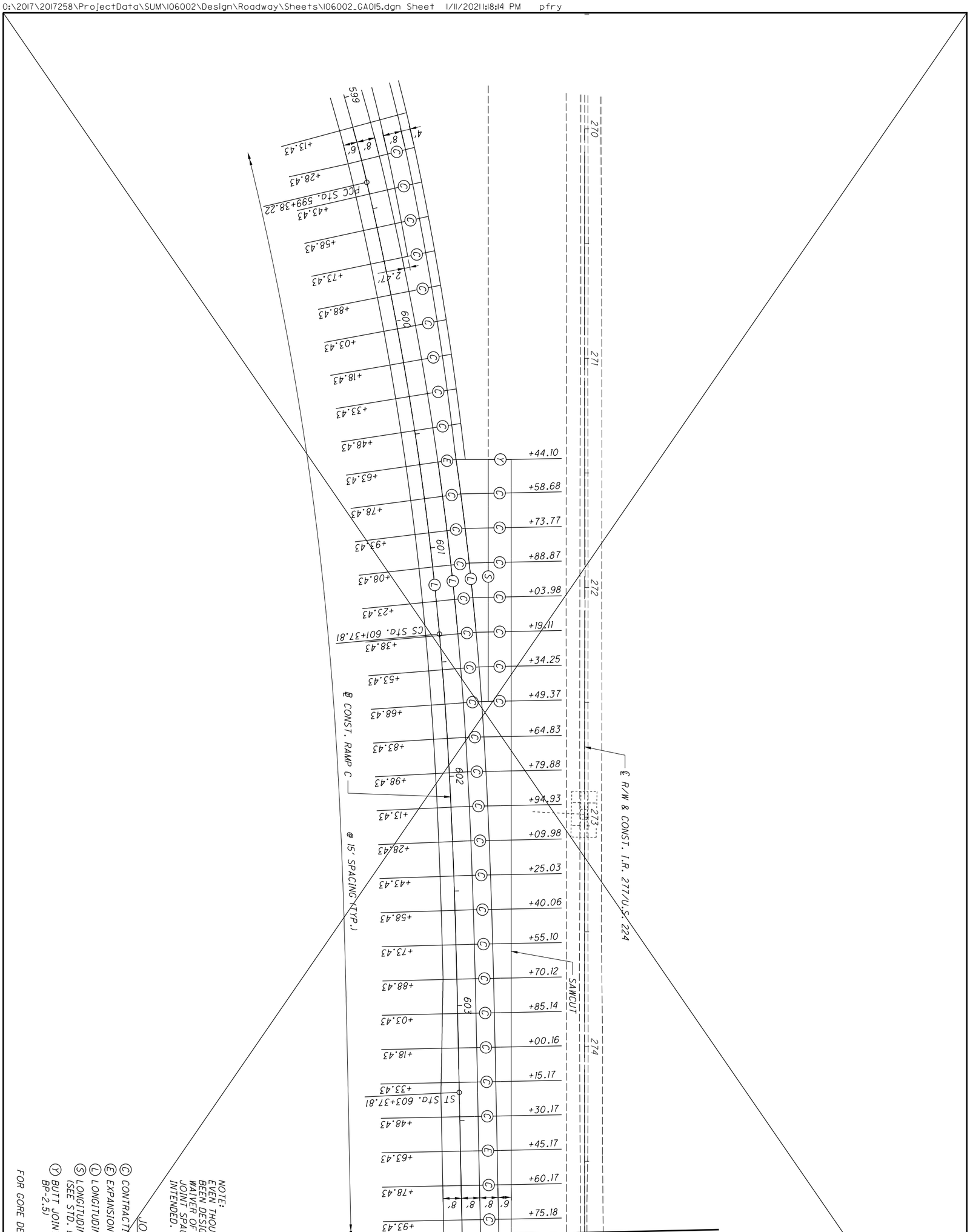
SUM-77/277/224
VARIOUS

PAVEMENT JOINT DETAILS
RAMP C AT NB I.R. 77 - BEGIN TO 581+50

CALCULATED KRM
CHECKED PJF

0 20
10 40
HORIZONTAL SCALE IN FEET

N



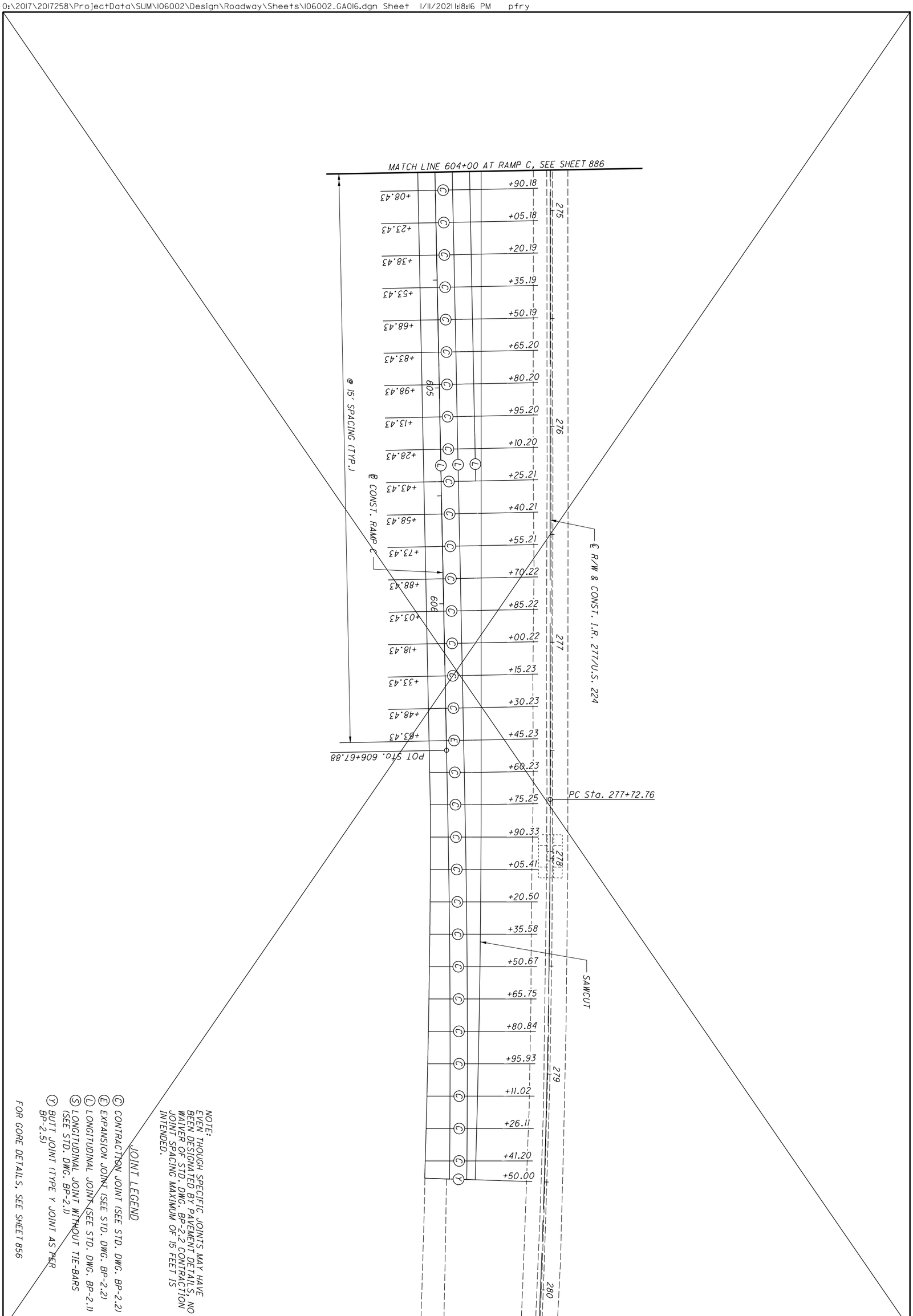
NOTE:
EVEN THOUGH SPECIFIC JOINTS MAY HAVE BEEN DESIGNATED BY PAVEMENT DETAILS, NO WAIVER OF STD. DWG. BP-2.2 CONTRACTION JOINT SPACING MAXIMUM OF 15 FEET IS INTENDED.

JOINT LEGEND

- (C) CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
- (E) EXPANSION JOINT (SEE STD. DWG. BP-2.2)
- (L) LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
- (S) LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
- (Y) BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

FOR GORE DETAILS, SEE SHEET 855

886 / 1288	SUM-77/277/224 VARIOUS	PAVEMENT JOINT DETAILS RAMP C AT I.R. 277/224 - STA. 599+00 TO 604+00	CALCULATED KRM CHECKED PJF	0 20 10 40 HORIZONTAL SCALE IN FEET



NOTE:
EVEN THOUGH SPECIFIC JOINTS MAY HAVE BEEN DESIGNATED BY PAVEMENT DETAILS, NO WAIVER OF STD. DWG. BP-2.2 CONTRACTION JOINT SPACING MAXIMUM OF 15 FEET IS INTENDED.

JOINT LEGEND

- (C) CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
- (E) EXPANSION JOINT (SEE STD. DWG. BP-2.2)
- (L) LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
- (S) LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
- (Y) BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

FOR GORE DETAILS, SEE SHEET 856

887
1288

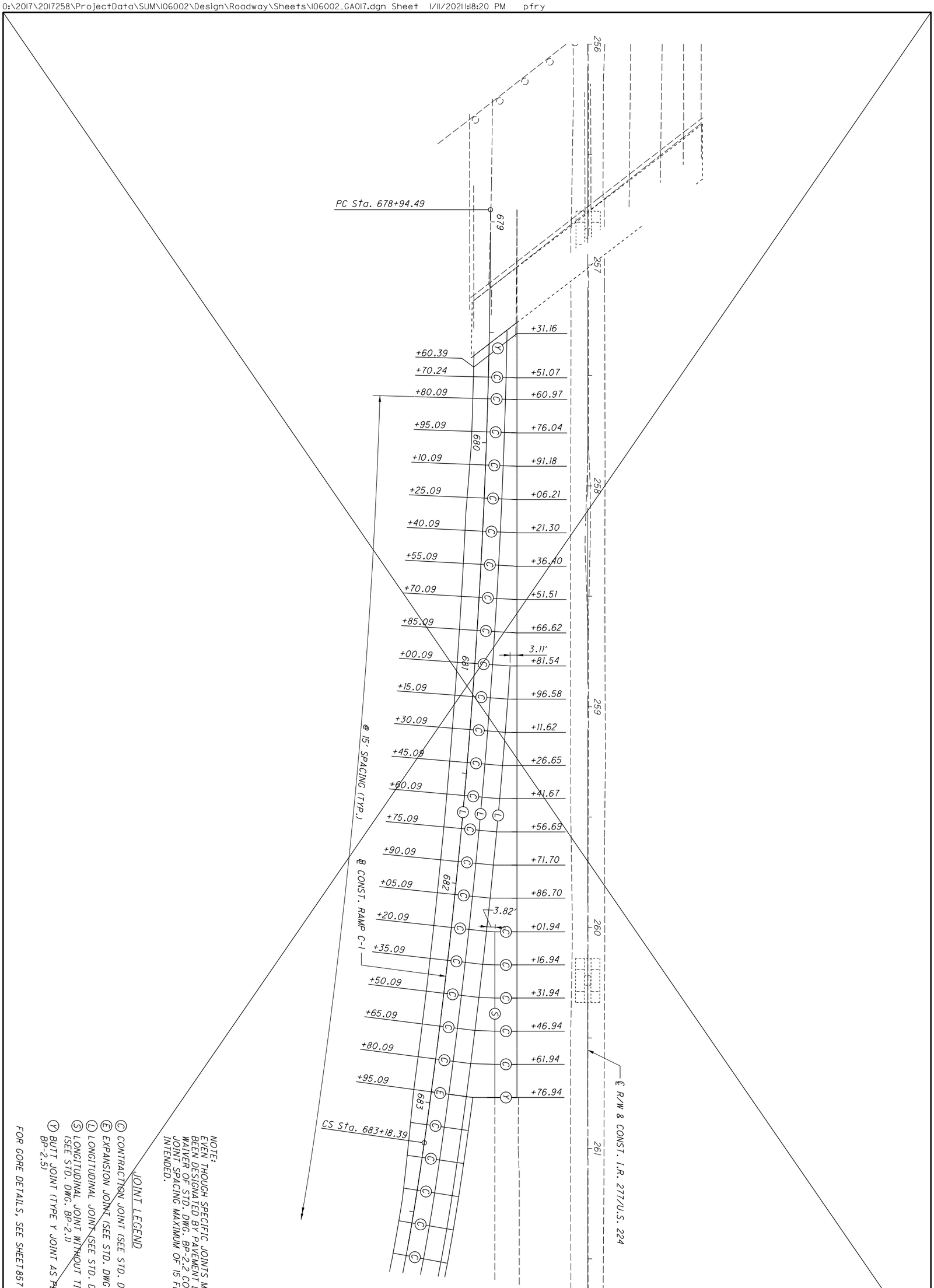
SUM-77/277/224
VARIOUS

PAVEMENT JOINT DETAILS
RAMP C AT I.R. 277/224 - STA. 604+00 TO END

CALCULATED KRM
CHECKED PJF

0 10 20 40
HORIZONTAL SCALE IN FEET

N



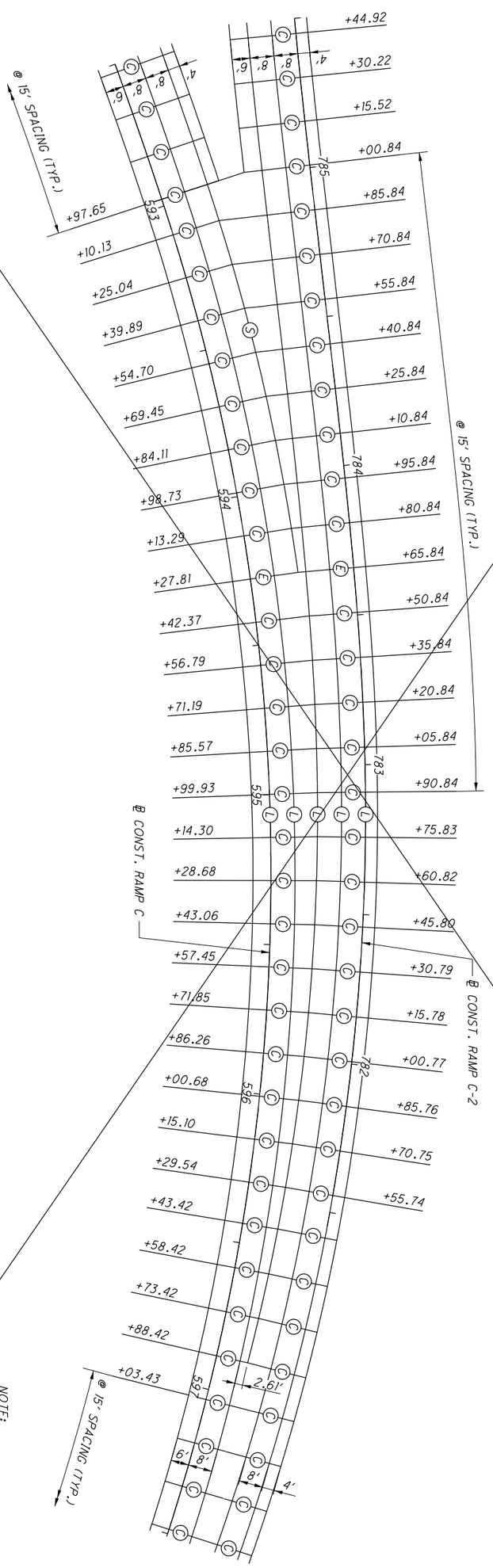
NOTE:
EVEN THOUGH SPECIFIC JOINTS MAY HAVE BEEN DESIGNATED BY PAVEMENT DETAILS, NO WAIVER OF STD. DWG. BP-2.2 CONTRACTION JOINT SPACING MAXIMUM OF 15 FEET IS INTENDED.

JOINT LEGEND

- (C) CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
- (E) EXPANSION JOINT (SEE STD. DWG. BP-2.2)
- (L) LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
- (S) LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
- (Y) BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

FOR GORE DETAILS, SEE SHEET 857

888 / 1288	SUM-77/277/224 VARIOUS	PAVEMENT JOINT DETAILS RAMP C-1 AT I.R. 277/224 - BEGIN TO 683+50	CALCULATED KRM CHECKED PJF	0 20 10 40 HORIZONTAL SCALE IN FEET



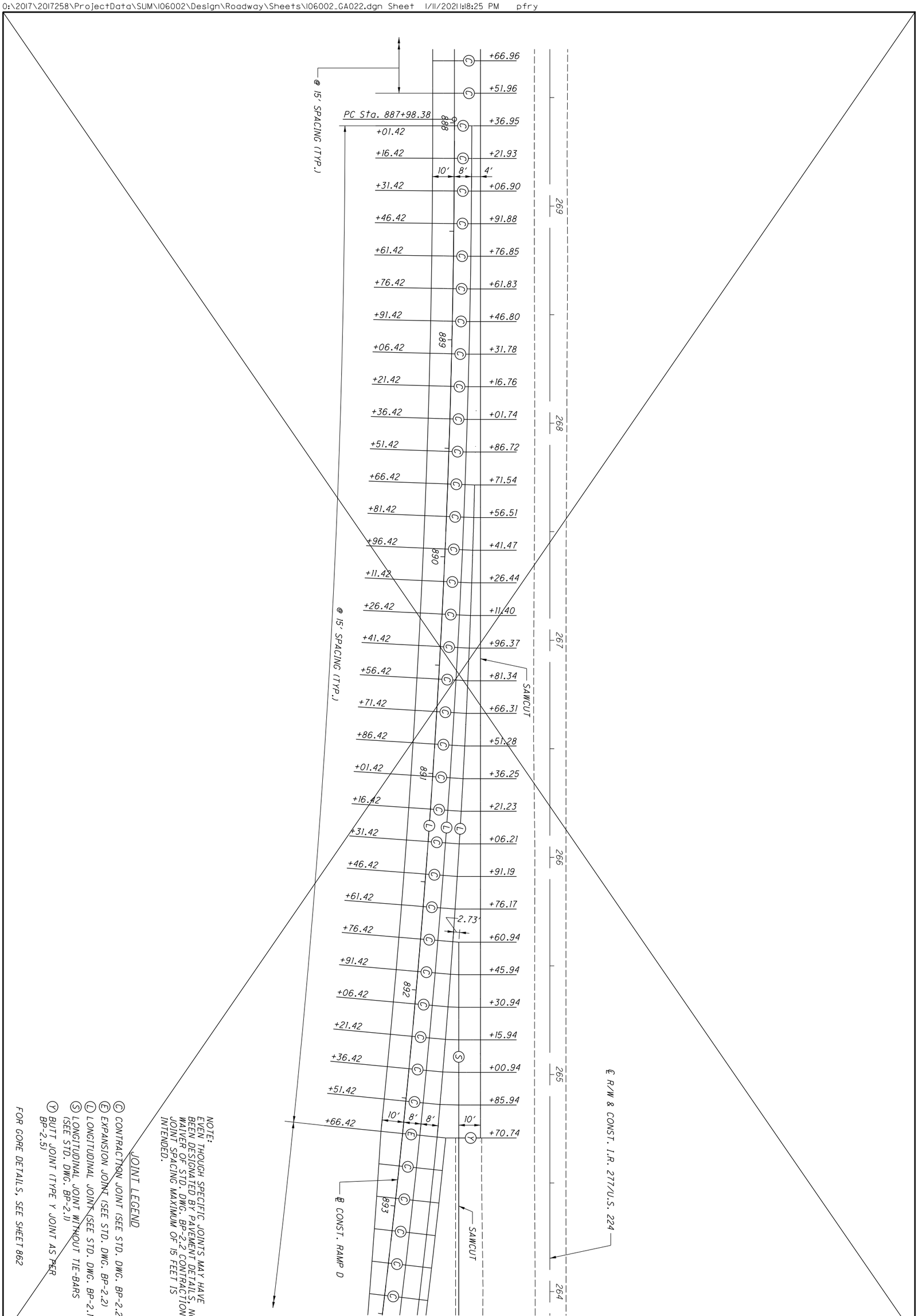
JOINT LEGEND

- (C) CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
- (E) EXPANSION JOINT (SEE STD. DWG. BP-2.2)
- (L) LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
- (S) LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
- (Y) BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

NOTE:
EVEN THOUGH SPECIFIC JOINTS MAY HAVE BEEN DESIGNATED BY PAVEMENT DETAILS, NO WAIVER OF STD. DWG. BP-2.2 CONTRACTION JOINT SPACING MAXIMUM OF 15 FEET IS INTENDED.

FOR GORE DETAILS, SEE SHEET 860

889 / 1288	SUM-77 / 277 / 224 VARIOUS	PAVEMENT JOINT DETAILS RAMP C-2 AT RAMP C - BEGIN TO STS. 785+50	CALCULATED KRM CHECKED PJF 0 10 20 40 HORIZONTAL SCALE IN FEET



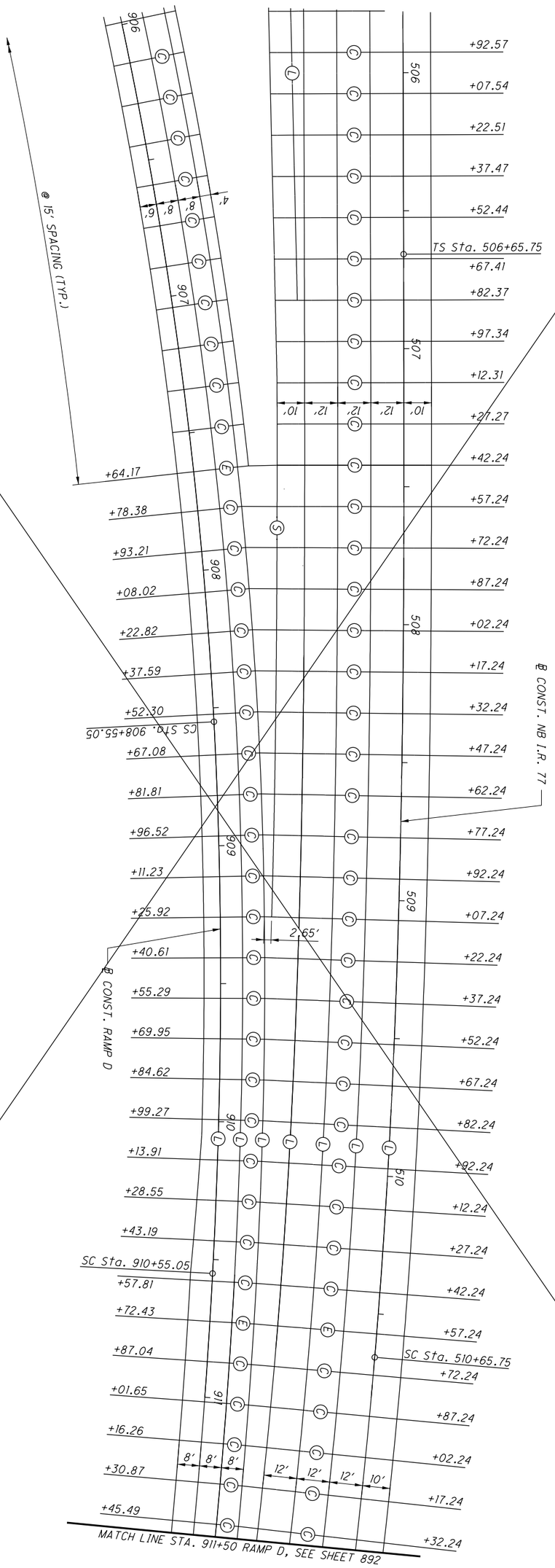
NOTE:
EVEN THOUGH SPECIFIC JOINTS MAY HAVE BEEN DESIGNATED BY PAVEMENT DETAILS, NO WAIVER OF STD. DWG. BP-2.2 CONTRACTION JOINT SPACING MAXIMUM OF 15 FEET IS INTENDED.

JOINT LEGEND

- (C) CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
- (E) EXPANSION JOINT (SEE STD. DWG. BP-2.2)
- (L) LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
- (S) LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
- (Y) BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

FOR GORE DETAILS, SEE SHEET 862

890 / 1288	SUM-77/277/224 VARIOUS	PAVEMENT JOINT DETAILS RAMP D AT I.R. 277/224 - BEGIN TO 893+50	CALCULATED KRM CHECKED PJF 0 10 20 40 HORIZONTAL SCALE IN FEET



JOINT LEGEND

- (C) CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
- (E) EXPANSION JOINT (SEE STD. DWG. BP-2.2)
- (L) LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
- (S) LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
- (Y) BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

NOTE:
EVEN THOUGH SPECIFIC JOINTS MAY HAVE BEEN DESIGNATED BY PAVEMENT DETAILS, NO WAIVER OF STD. DWG. BP-2.2 CONTRACTION JOINT SPACING MAXIMUM OF 15 FEET IS INTENDED.

FOR GORE DETAILS, SEE SHEET 863

PAVEMENT AND APPROACH SLAB BY OTHERS
(SUM-76/77/8-8.42/9.77/0.00 DB, PID 102329)

℄ CONST. NB I.R. 77

END WORK
℄ CONST. NB I.R. 77
STA. 514+85.00

WATERLOO ROAD

℄ CONST. RAMP D

END WORK
℄ CONST. RAMP D
STA. 914+89.43

MATCH LINE STA. 911+50 RAMP D, SEE SHEET 891

+47.24 +62.24 +77.24 +92.24 +07.24 +22.24 +37.24 +52.24 +67.24 +82.24 +97.24 +12.24 +27.24 +42.24 +57.24 +72.24 +87.24 +02.24 +17.24 +32.24 +47.24 +62.24 +73.62 +85.00 +98.18 +11.36 +24.54 +37.42

+60.10 +74.72 +89.34 +03.97 +18.59 +33.22 +47.85 +62.48 +77.11 +91.74 +06.38 +21.02 +35.66 +50.30 +64.95 +79.59 +94.24 +08.89 +23.54 +38.20 +52.85 +67.51 +78.63 +89.43 +02.31 +15.20 +23.96

912 913 914 915 916 512 513 514 515 516

10' 12' 12' 12' 8' 8' 8' 12' 12' 12' 8' 6' 21.65'

NOTE:
EVEN THOUGH SPECIFIC JOINTS MAY HAVE BEEN DESIGNATED BY PAVEMENT DETAILS, NO WAIVER OF STD. DWG. BP-2.2 CONTRACTION JOINT SPACING MAXIMUM OF 15 FEET IS INTENDED.

JOINT LEGEND

- (C) CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
- (E) EXPANSION JOINT (SEE STD. DWG. BP-2.2)
- (L) LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
- (S) LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
- (Y) BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

FOR GORE DETAILS, SEE SHEET 864

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KRM
CHECKED PJF

PAVEMENT JOINT DETAILS
RAMP D AT I.R. 77 - STA. 911+50 TO END

SUM-77/277/224
VARIOUS

892
1288

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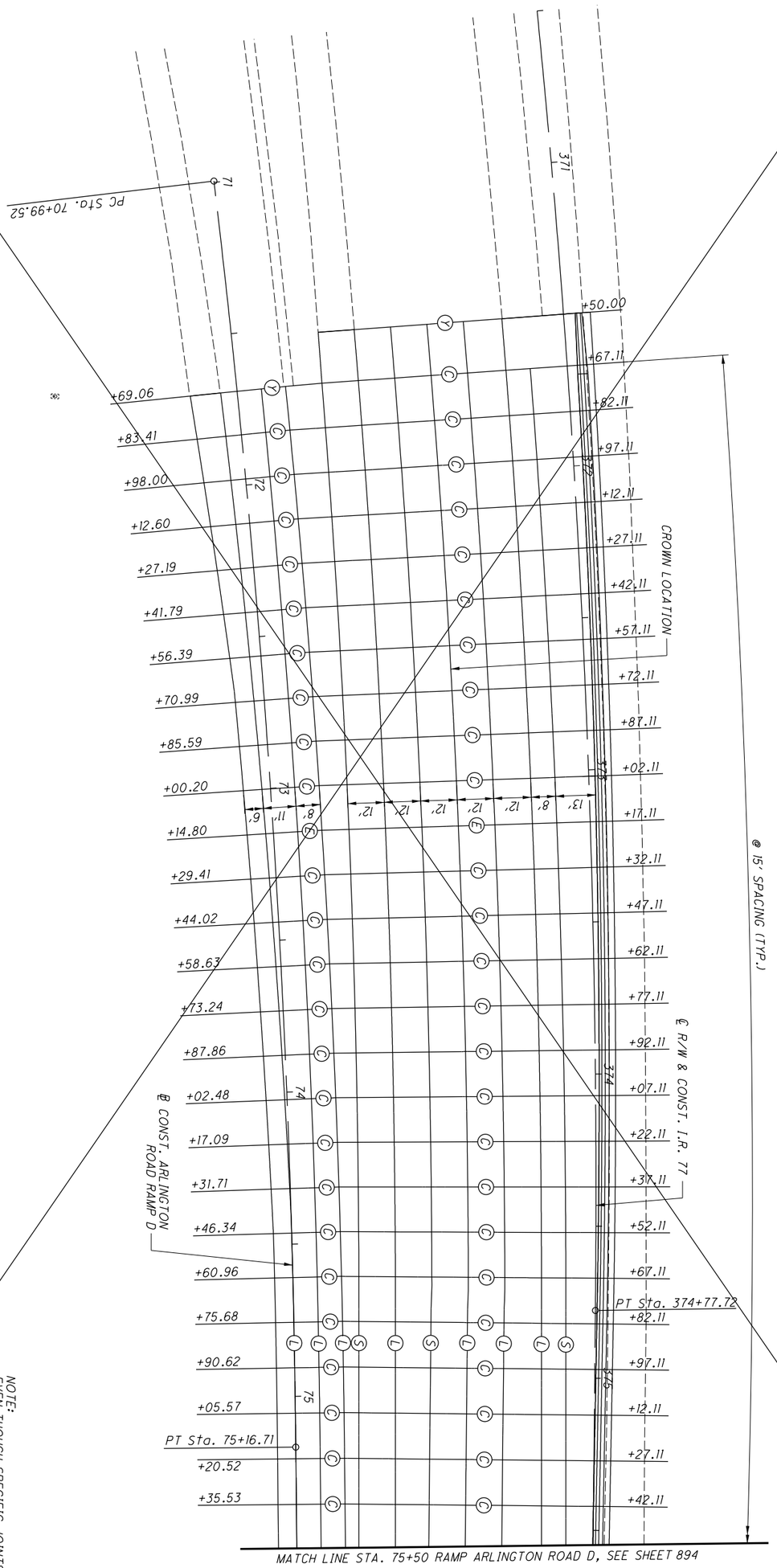


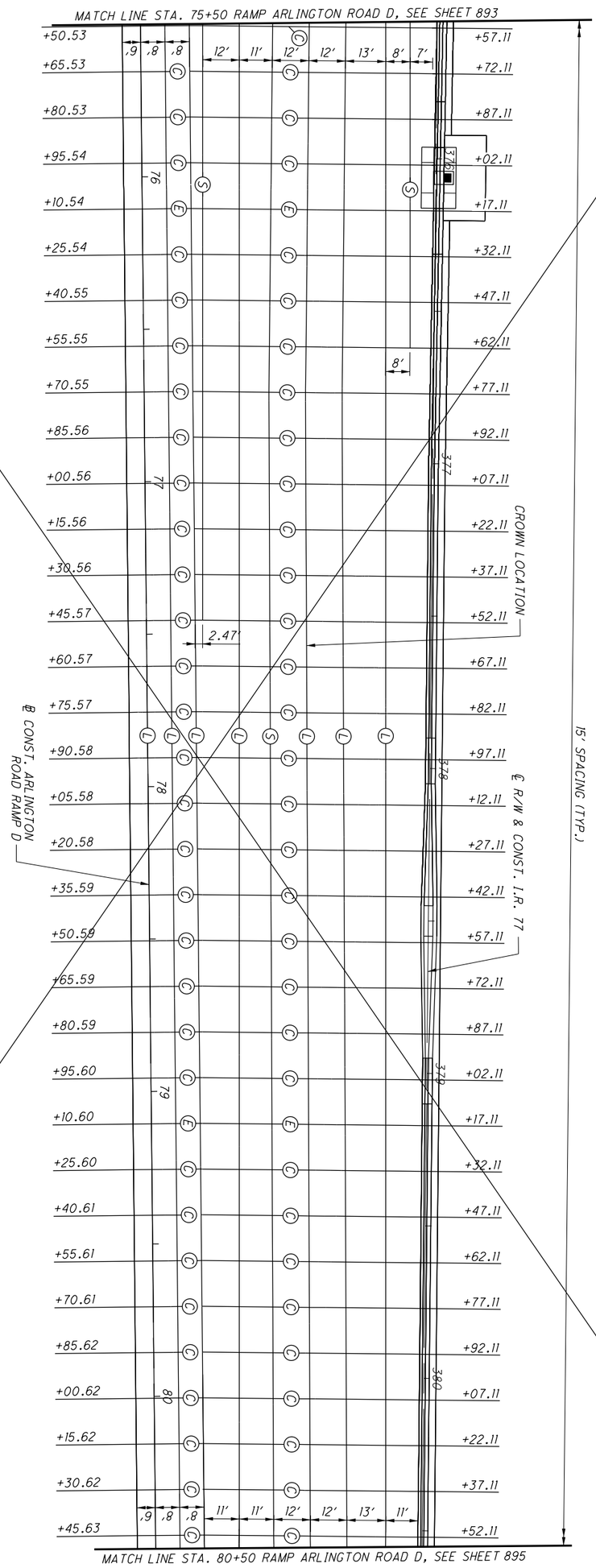
NOTE:
EVEN THOUGH SPECIFIC JOINTS MAY HAVE BEEN DESIGNATED BY PAVEMENT DETAILS, NO WAIVER OF STD. DWG. BP-2.2 CONTRACTION JOINT SPACING MAXIMUM OF 15 FEET IS INTENDED.

JOINT LEGEND

- (C) CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
- (E) EXPANSION JOINT (SEE STD. DWG. BP-2.2)
- (L) LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
- (S) LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
- (Y) BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

FOR GORE DETAILS, SEE SHEET 865

893 / 1288	SUM-77 / 277 / 224 VARIOUS	PAVEMENT JOINT DETAILS RAMP D (ARLINGTON) AT I.R. 77 - BEGIN TO 75+50	CALCULATED KRM CHECKED PJF	0 20 10 40 HORIZONTAL SCALE IN FEET



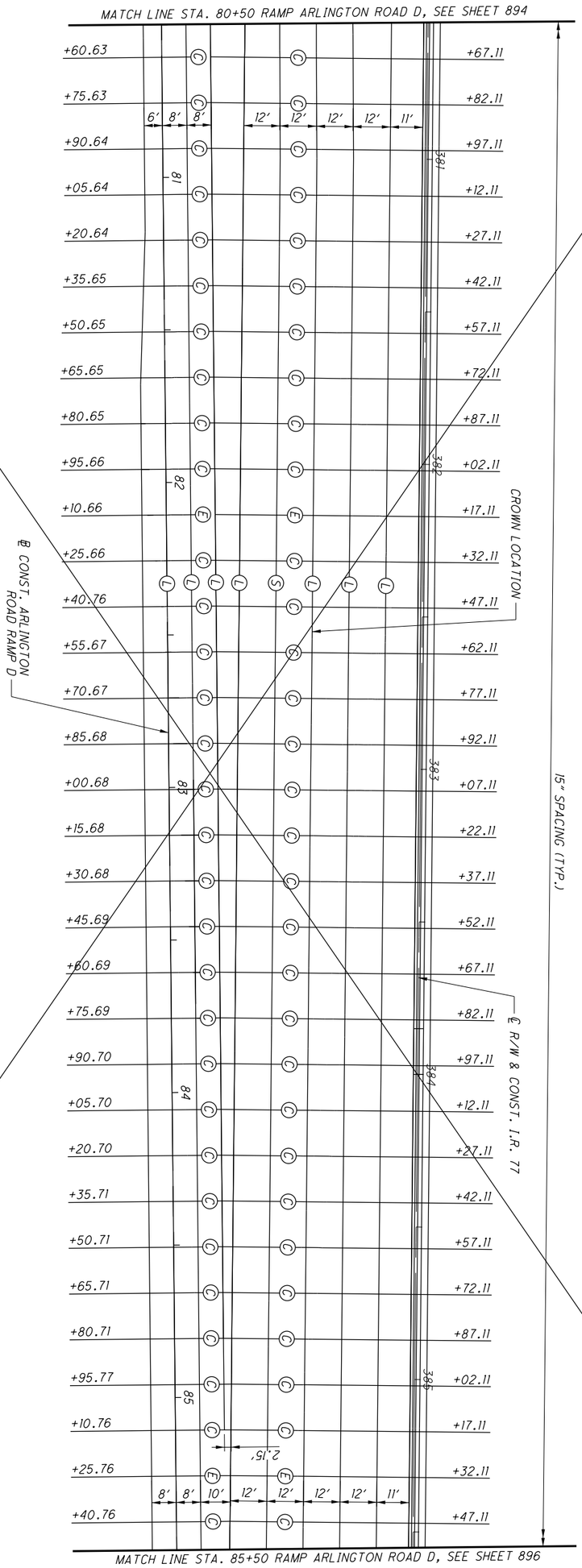
JOINT LEGEND

- (C) CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
- (E) EXPANSION JOINT (SEE STD. DWG. BP-2.2)
- (L) LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
- (S) LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
- (Y) BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

NOTE:
EVEN THOUGH SPECIFIC JOINTS MAY HAVE BEEN DESIGNATED BY PAVEMENT DETAILS, NO WAIVER OF STD. DWG. BP-2.2 CONTRACTION JOINT SPACING MAXIMUM OF 15 FEET IS INTENDED.

FOR GORE DETAILS, SEE SHEET 866

894 / 1288	SUM-77 / 277 / 224 VARIOUS	PAVEMENT JOINT DETAILS RAMP D (ARLINGTON) AT I.R. 77 - STA. 75+50 TO STA. 80+50	CALCULATED KRM CHECKED PJF	0 20 10 40 HORIZONTAL SCALE IN FEET



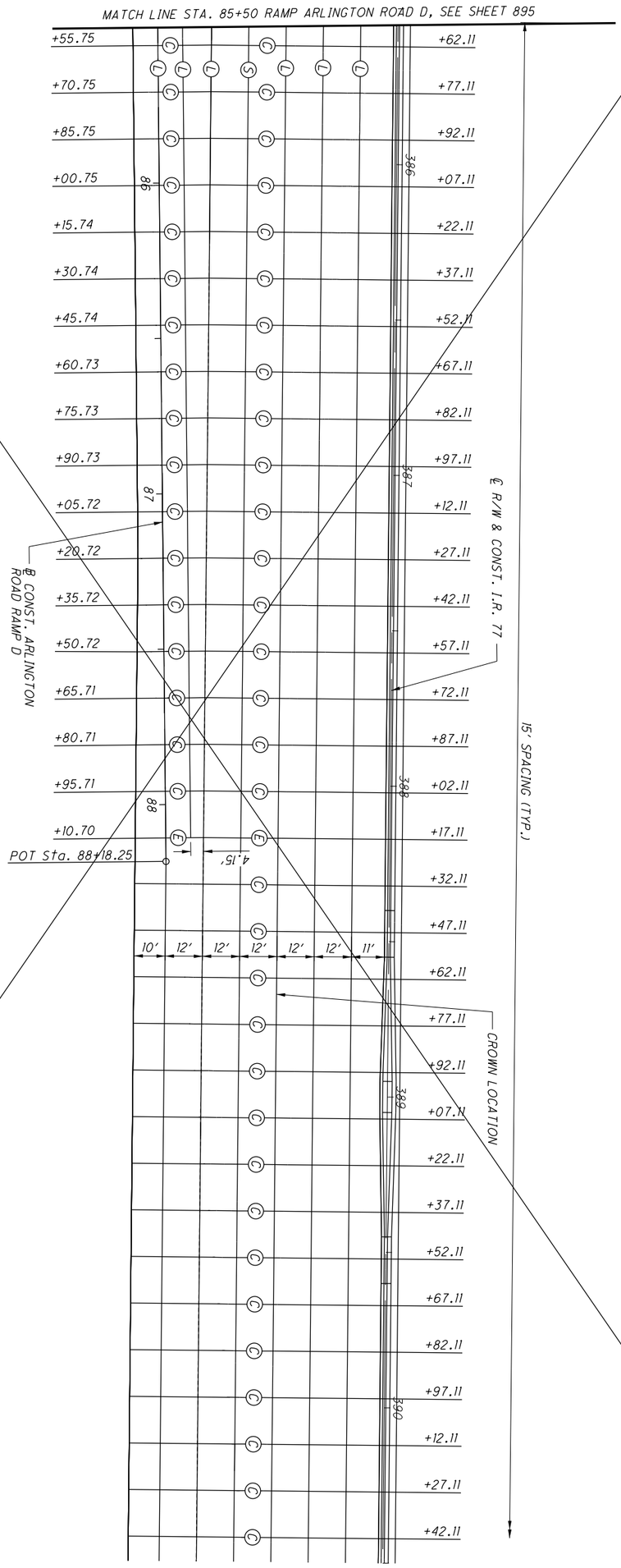
NOTE:
EVEN THOUGH SPECIFIC JOINTS MAY HAVE BEEN DESIGNATED BY PAVEMENT DETAILS, NO WAIVER OF STD. DWG. BP-2.2 CONTRACTION JOINT SPACING MAXIMUM OF 15 FEET IS INTENDED.

JOINT LEGEND

- (C) CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
- (E) EXPANSION JOINT (SEE STD. DWG. BP-2.2)
- (L) LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
- (S) LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
- (Y) BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

FOR GORE DETAILS, SEE SHEET 867

895 / 1288	SUM-77 / 277 / 224 VARIOUS	PAVEMENT JOINT DETAILS RAMP D (ARLINGTON) AT I.R. 77 - STA. 80+50 TO STA. 85+50	CALCULATED KRM CHECKED PJF	0 20 10 40 HORIZONTAL SCALE IN FEET



JOINT LEGEND

- (C) CONTRACTION JOINT (SEE STD. DWG. BP-2.2)
- (E) EXPANSION JOINT (SEE STD. DWG. BP-2.2)
- (L) LONGITUDINAL JOINT (SEE STD. DWG. BP-2.1)
- (S) LONGITUDINAL JOINT WITHOUT TIE-BARS (SEE STD. DWG. BP-2.1)
- (Y) BUTT JOINT (TYPE Y JOINT AS PER BP-2.5)

NOTE:
EVEN THOUGH SPECIFIC JOINTS MAY HAVE BEEN DESIGNATED BY PAVEMENT DETAILS, NO WAIVER OF STD. DWG. BP-2.2 CONTRACTION JOINT SPACING MAXIMUM OF 15 FEET IS INTENDED.

FOR GORE DETAILS, SEE SHEET 868

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BEGIN PROJECT
BEGIN WORK (SB)
℄ R/W & CONST. I.R. 77
STA. 391+37.36
S.L.M. 7.39

E171 (457)

MEET EXISTING (SOUTHBOUND)

PROP. NOISE WALL C1

O.H. ELEC. LINES AND TELCOM LINES (TO REMAIN)

KILLIAN ROAD

MATCHLINE - STA. 396+00 ℄ I.R. 77, SEE SHEET 898

BEGIN WORK (NB)
℄ R/W & CONST. I.R. 77
STA. 371+50.00

MEET EXISTING (NORTHBOUND)

℄ R/W & CONST. I.R. 77

370 375 380 385 390 395

70 75 80 85

BEGIN WORK
℄ CONST. ARLINGTON ROAD RAMP D
STA. 71+69.06

℄ CONST. ARLINGTON ROAD RAMP D

END ℄ CONST. ARLINGTON ROAD RAMP D STA. 88+18.25

STRUCTURE NO. SUM-77-0744 (NO WORK)

ARLINGTON ROAD

℄ EX. ARLINGTON ROAD RAMP D

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR REMOVAL QUANTITIES, SEE SHEETS 440 - 443

N

0 50 100 200
HORIZONTAL SCALE IN FEET

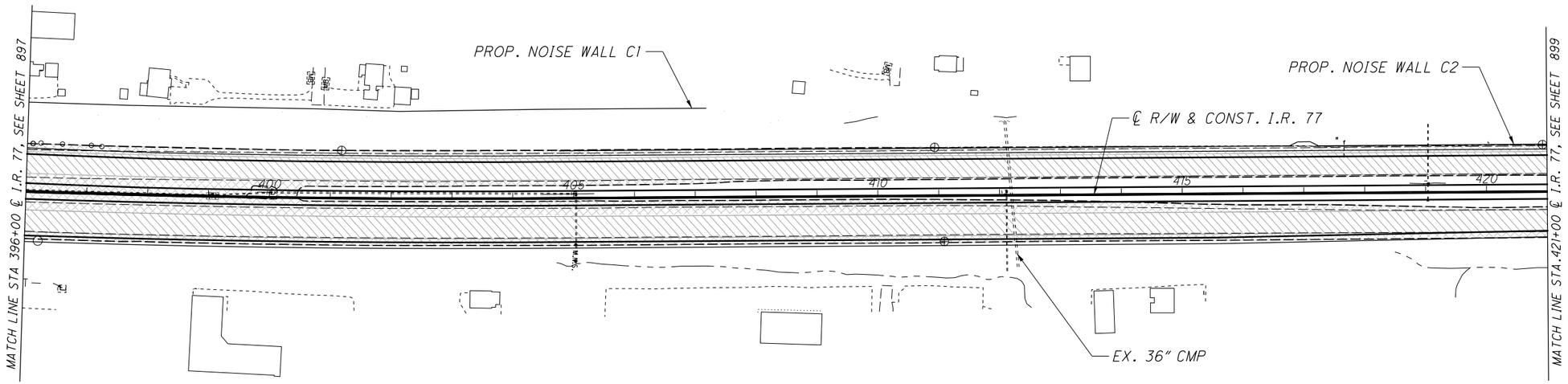
CALCULATED ZJP
CHECKED PJF

REMOVAL PLAN

PAVEMENT REMOVAL PLAN

SUM-77 / 277 / 224
VARIOUS

897
1288



ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR REMOVAL QUANTITIES, SEE SHEETS 440 - 443

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED ZJP
CHECKED PJF

PAVEMENT REMOVAL PLAN

SUM-77 / 277 / 224
VARIOUS

898
1288

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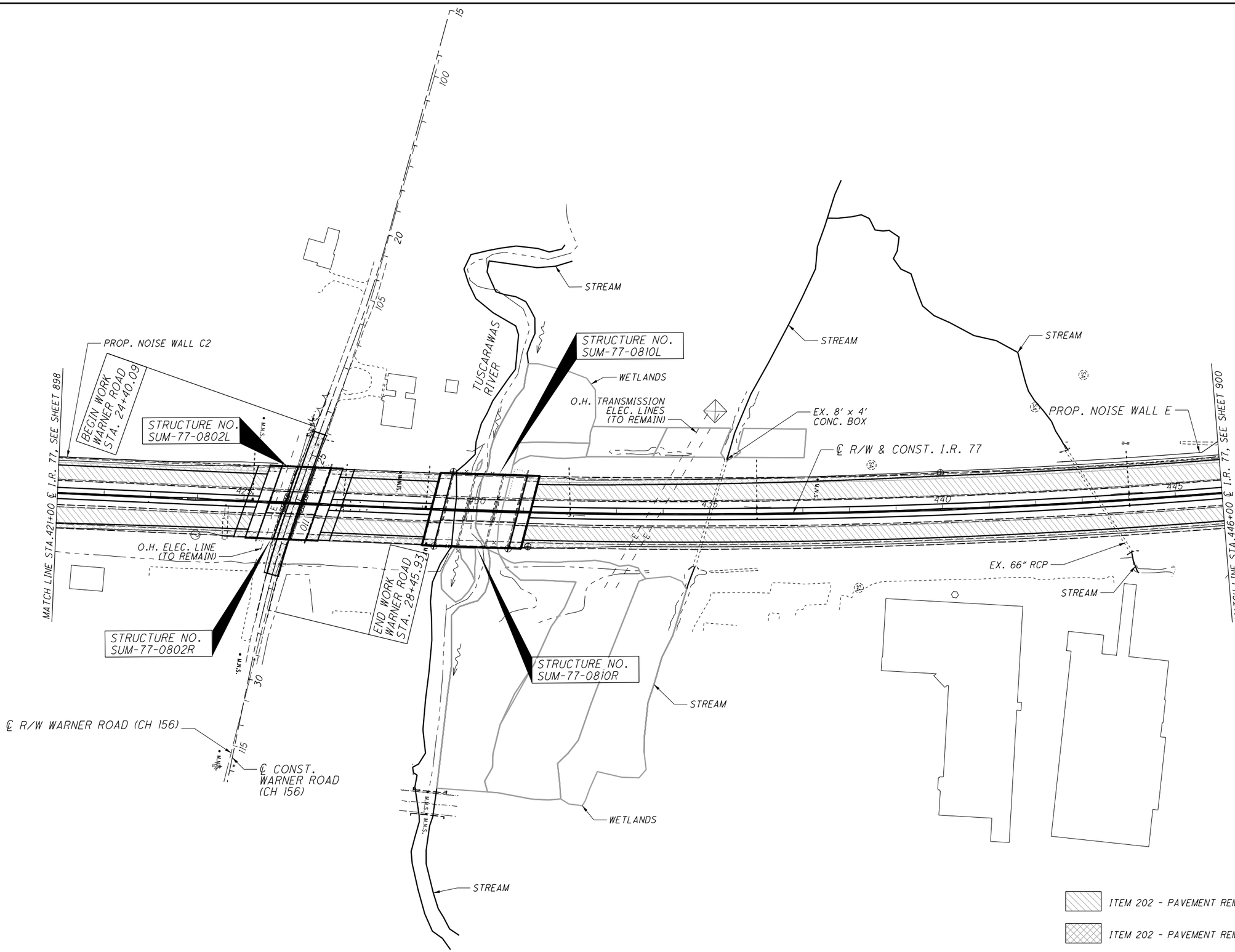

FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR REMOVAL QUANTITIES, SEE SHEETS 440 - 443

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED ZJP
CHECKED PJF

PAVEMENT REMOVAL PLAN

SUM-77/277/224
VARIOUS

899
1288

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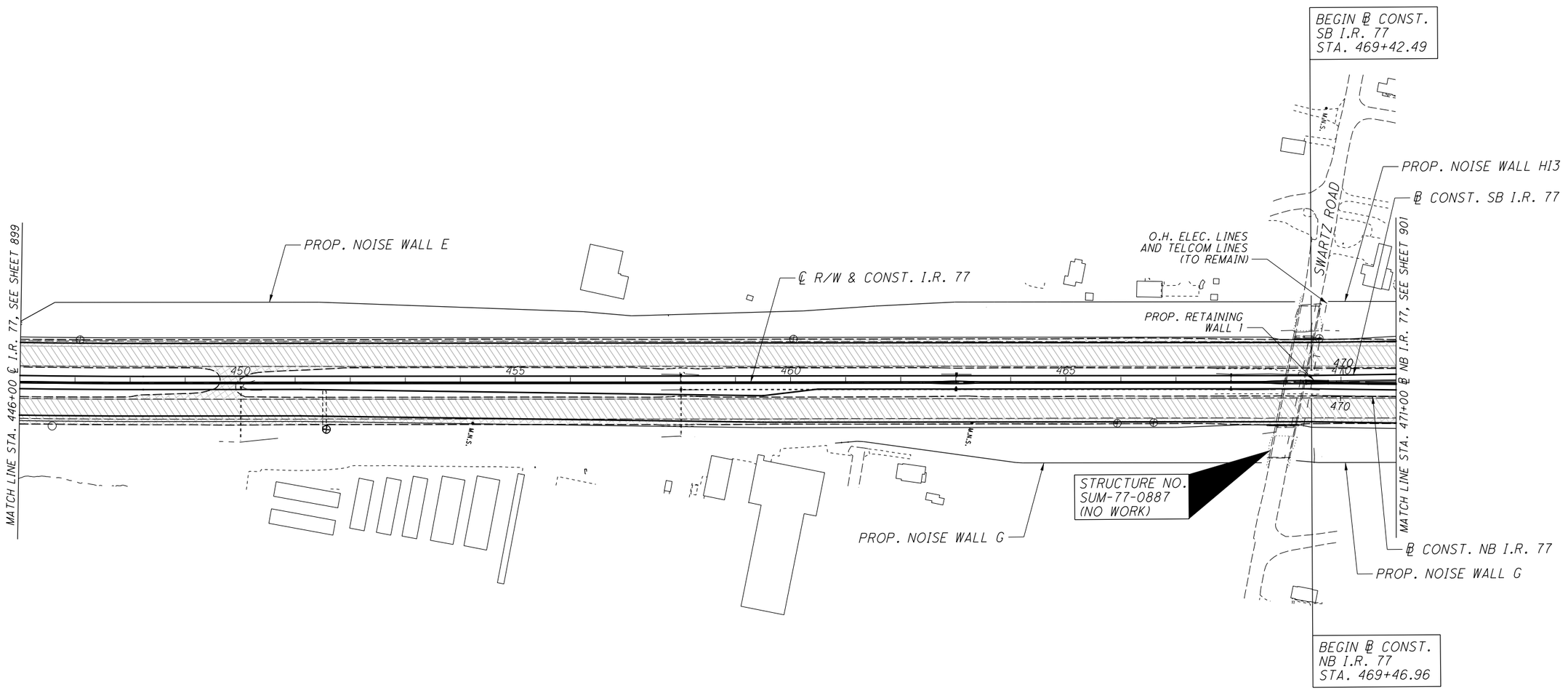

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR REMOVAL QUANTITIES, SEE SHEETS 440 - 443

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED ZJP
CHECKED PJF

PAVEMENT REMOVAL PLAN

SUM-77 / 277 / 224
VARIOUS

900
1288

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ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR REMOVAL QUANTITIES, SEE SHEETS 440 - 443

END
℄ R/W & CONST.
I.R. 77
STA. 472+26.33

BEGIN
℄ EX. SB I.R. 77
STA. 472+26.33

℄ R/W & CONST. I.R. 77

PROP. NOISE WALL HI3

PROP. NOISE WALL HI2

℄ EX. SB I.R. 77

℄ CONST. SB I.R. 77

MATCH LINE STA. 471+00 ℄ NB I.R. 77, SEE SHEET900

475

475

475

475

480

480

480

480

580

PROP. RETAINING WALL 1

℄ EX. NB I.R. 77

℄ CONST. NB I.R. 77

MATCH LINE STA. 483+50 ℄ NB I.R. 77, SEE SHEET902

℄ EX. RAMP C

℄ CONST. RAMP C

PROP. NOISE WALL G

BEGIN
℄ EX. RAMP C
STA. 0+00.00

BEGIN
℄ CONST. RAMP C
STA. 576+00.00

BEGIN
℄ EX. NB I.R. 77
STA. 474+89.21

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED ZJP
CHECKED PJF

PAVEMENT REMOVAL PLAN

SUM-77 / 277 / 224
VARIOUS

901
1288

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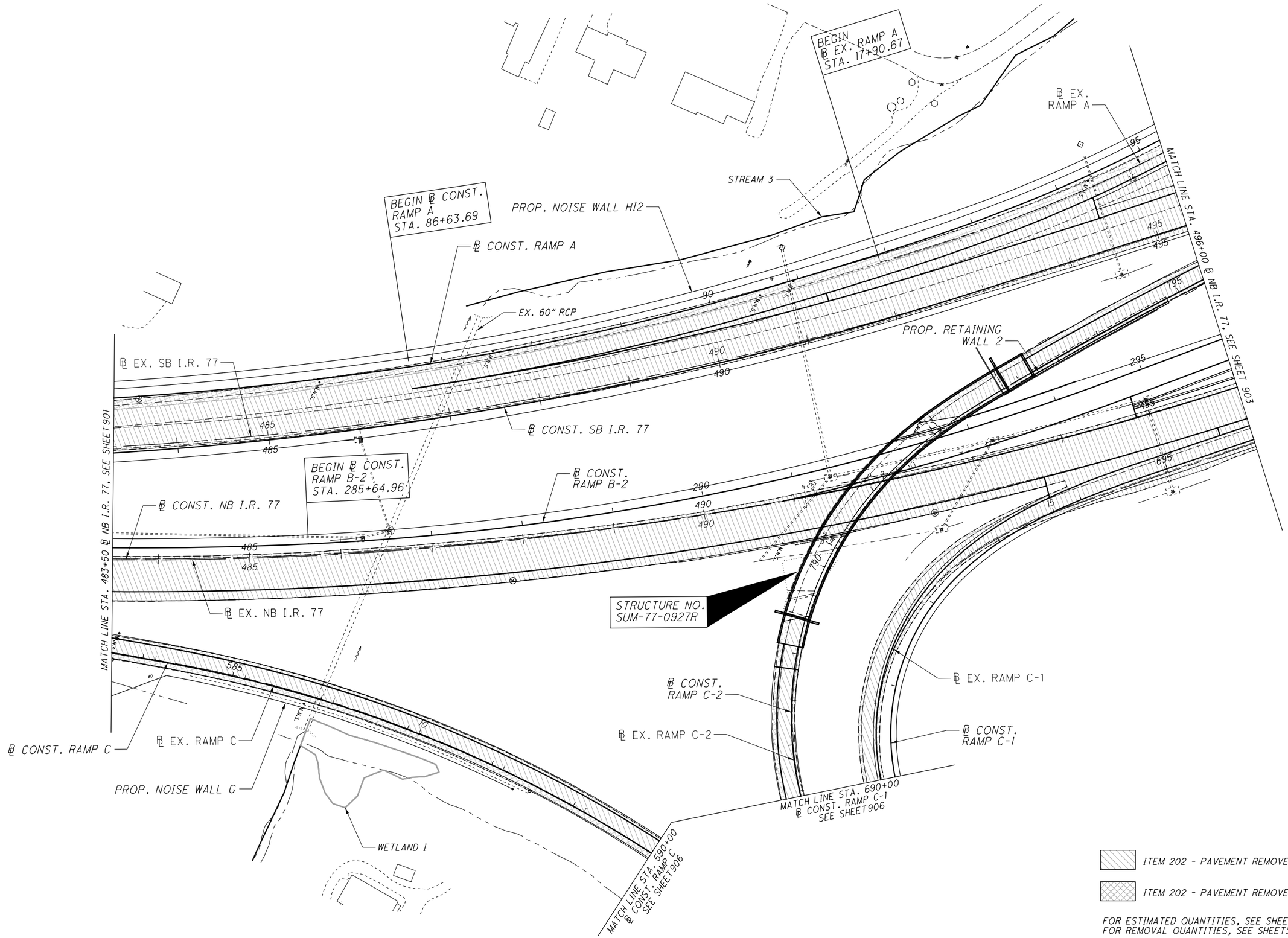

FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR REMOVAL QUANTITIES, SEE SHEETS 440 - 443

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED ZJP
CHECKED PJF

PAVEMENT REMOVAL PLAN

SUM-77 / 277 / 224
VARIOUS

902
1288

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STREAM 3

PROP. NOISE WALL HI2

℄ EX. RAMP A

℄ CONST. RAMP A

MATCH LINE
℄ CONST. RAMP A
STA. 101+50
SEE SHEET 905

MATCH LINE STA. 250+00
℄ I.R. 277/U.S. 224
SEE SHEET 905

END WORK
℄ CONST.
RAMP B-1
STA. 421+40.51

END ℄ CONST.
RAMP B-1
STA. 423+24.13

BEGIN
℄ EX. RAMP B-1
STA. 0+00.00

WETLAND F

BEGIN ℄ CONST.
RAMP B-1
STA. 402+43.78

END
℄ EX. RAMP B-1
STA. 17+90.88

WETLAND B
(DO NOT DISTURB)

℄ CONST. RAMP B-1

℄ EX. RAMP B-1

℄ EX. SB
I.R. 77

℄ CONST. SB I.R. 77

MATCH LINE STA. 496+00, ℄ NB I.R. 77, SEE SHEET 902

℄ CONST.
RAMP C-2

BEGIN ℄ EX. RAMP C-2
STA. 0+00.00

END ℄ CONST. RAMP C-2
STA. 801+48.92

WETLAND C

℄ EX. RAMP B-2

MATCH LINE STA. 508+50 ℄ NB I.R. 77, SEE SHEET 904

℄ EX. RAMP C-2

℄ CONST.
RAMP B-2

℄ CONST. NB I.R. 77

END ℄ EX. RAMP C-1
STA. 18+62.36

BEGIN ℄ EX. RAMP B-2
STA. 0+00.00

℄ EX. NB I.R. 77

℄ EX. RAMP C-1

℄ EX.
RAMP C-1

℄ CONST.
RAMP C-1

WETLAND D

END ℄ CONST. RAMP C-1
STA. 702+11.45

BEGIN WORK
℄ CONST. RAMP C-1
STA. 679+55.23

℄ R/W & CONST.
I.R. 277/U.S. 224

DITCH I

℄ EX. RAMP D

℄ CONST. RAMP D

MATCH LINE STA. 258+00
℄ I.R. 277/U.S. 224
SEE SHEET 906

BEGIN ℄ CONST.
RAMP C-1
STA. 678+94.49

BEGIN
℄ EX. RAMP C-1
STA. 0+00.00

STRUCTURE NO.
SUM-277-0369
(NO WORK)

MATCH LINE STA. 899+50
℄ CONST. RAMP D
SEE SHEET 906

PROP. NOISE WALL K

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR REMOVAL QUANTITIES, SEE SHEETS 440 - 443

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED ZJP
CHECKED PJF

REMOVAL PLAN

PAVEMENT REMOVAL

SUM-77 / 277 / 224
VARIOUS

903
1288

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END WORK
RAMP B
STA. 214+90.00

END PROJECT
END WORK
℄ CONST. SB I.R. 77
STA. 514+95.00
S.L.M. 9.74

BEGIN PROJECT
SUM-76/77/8-
8.42/9.77/0.00 DB
(PID 102329)

E171 (457) E180 (428)

STRUCTURE NO.
SUM-77-0973L
(NO WORK)

BEGIN
℄ EX. RAMP B
STA. 0+00.00

END ℄ CONST.
RAMP B
STA. 219+25.00

END
℄ EX. SB I.R. 77
STA. 527+07.37

END
℄ CONST. SB I.R. 77
STA. 527+07.37

℄ CONST. SB I.R. 77

MATCH LINE STA. 210+00
℄ CONST. RAMP B
SEE SHEET 905

℄ CONST.
RAMP B

STREAM 4

EX. 84"
TWIN CMP

℄ EX.
RAMP B

℄ EX. SB I.R. 77

MATCH LINE STA. 11+50
℄ CONST. RAMP B-2
SEE SHEET 905

℄ CONST.
RAMP B-2

℄ EX. RAMP B-2

℄ CONST.
RAMP B-1

℄ EX. RAMP B-1

STRUCTURE NO.
SUM-77-0958L
(NO WORK)

E. WATERLOO RD.

DITCH I

STREAM

℄ CONST. NB I.R. 77

℄ EX. NB I.R. 77

STRUCTURE NO.
SUM-77-0973R
(NO WORK)

END ℄ CONST.
NB I.R. 77
STA. 527+44.42

END
℄ EX. NB I.R. 77
STA. 527+44.42

MATCH LINE STA. 508+50
℄ NB I.R. 77, SEE SHEET 903

℄ CONST.
RAMP D

℄ EX. RAMP D

END WORK
℄ CONST. NB I.R. 77
STA. 514+85.00

END WORK
RAMP D
STA. 914+89.43

END ℄ CONST.
RAMP D
STA. 916+89.75

END
℄ EX. RAMP D
STA. 21+60.12

PAVEMENT REMOVED BY OTHERS
(SUM-76/77/8-8.42/9.77/0.00 DB,
PID 102329)

APPROACH SLABS REMOVED BY OTHERS
(SUM-76/77/8-8.42/9.77/0.00 DB,
PID 102329)

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR REMOVAL QUANTITIES, SEE SHEETS 440 - 443

N

0 50 100 200
HORIZONTAL
SCALE IN FEET

CALCULATED ZJP
CHECKED PJF

PAVEMENT REMOVAL PLAN

SUM-77 / 277 / 224
VARIOUS

904
1288

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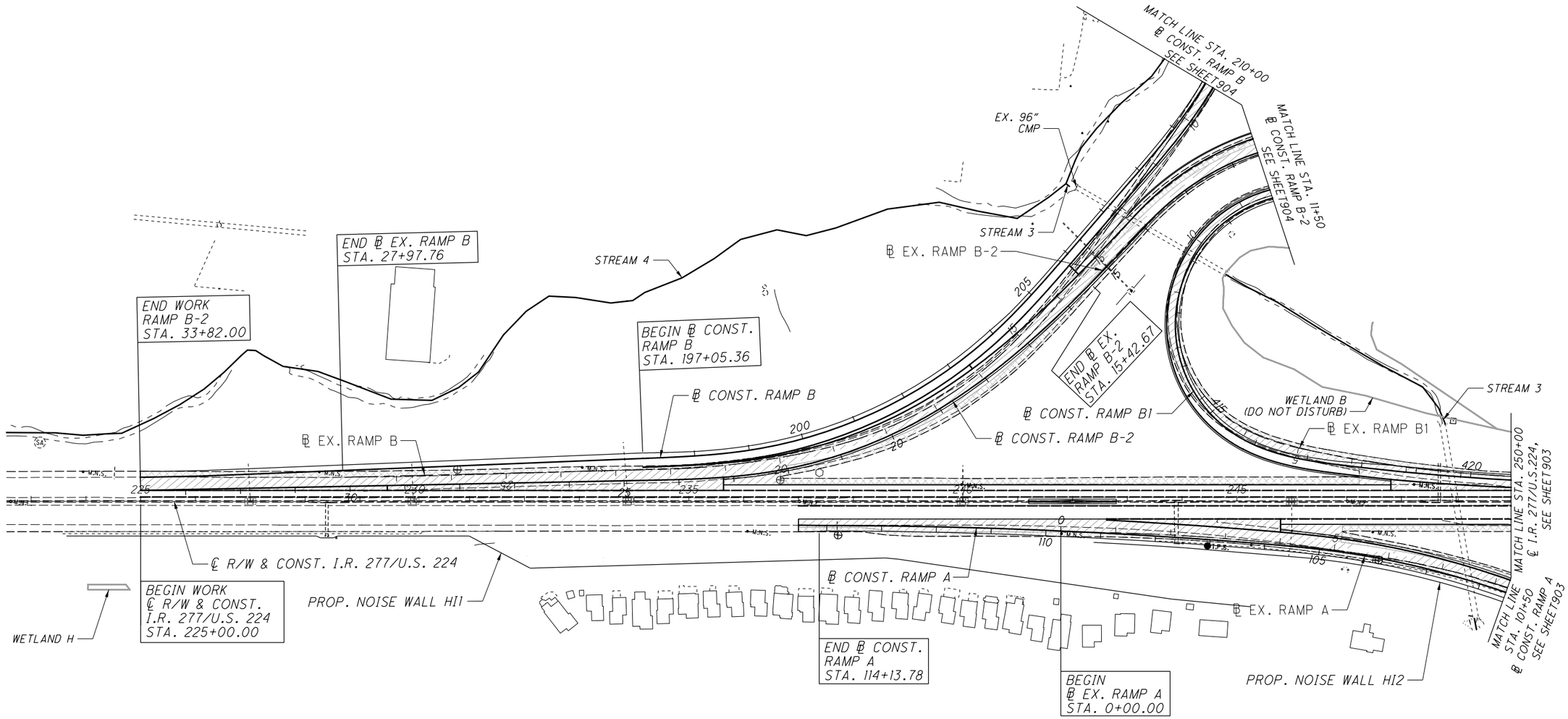

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR REMOVAL QUANTITIES, SEE SHEETS 440 - 443

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED ZJP
CHECKED PJF

PAVEMENT REMOVAL PLAN

PAVEMENT

SUM-77 / 277 / 224
VARIOUS

905
1288

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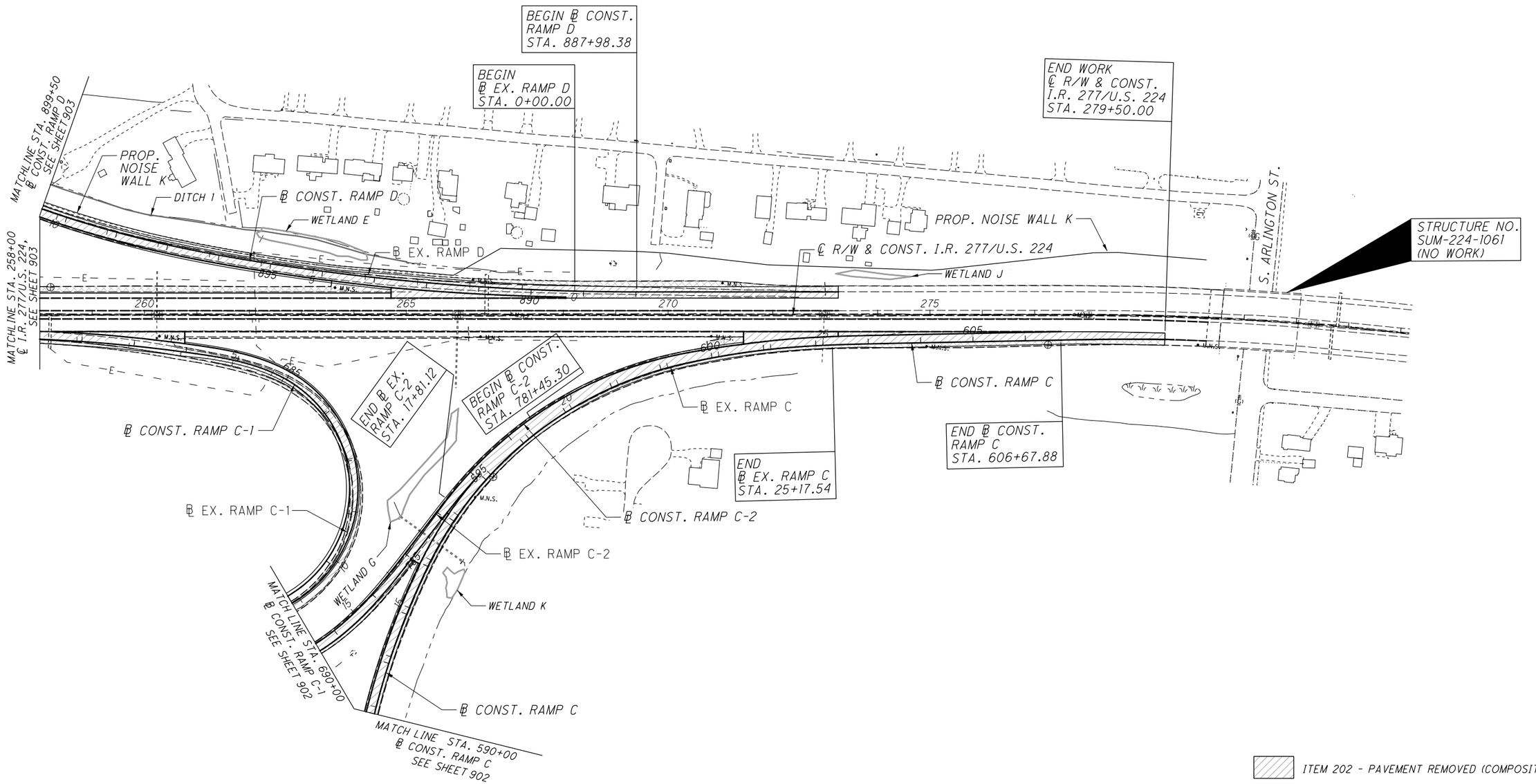

ITEM 202 - PAVEMENT REMOVED (COMPOSITE)

ITEM 202 - PAVEMENT REMOVED (ASPHALT)

FOR ESTIMATED QUANTITIES, SEE SHEETS 417 - 439
FOR REMOVAL QUANTITIES, SEE SHEETS 440 - 443

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED ZJP
CHECKED PJF

PAVEMENT REMOVAL PLAN

SUM-77 / 277 / 224
VARIOUS

906
1288

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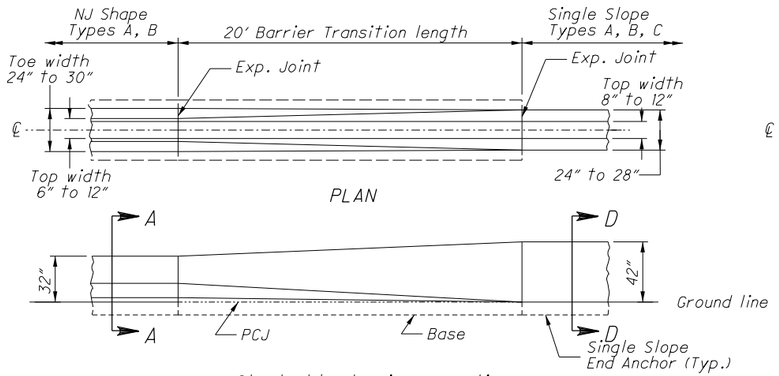
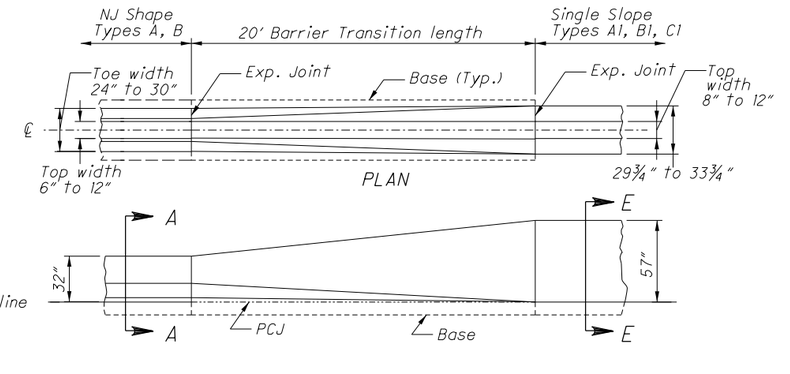


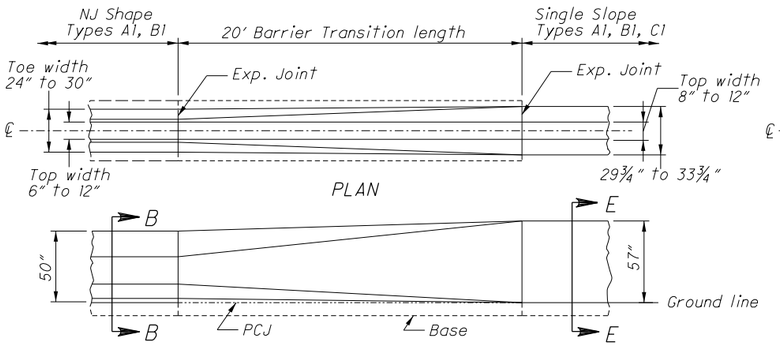
Standard low barrier connection

ELEVATION



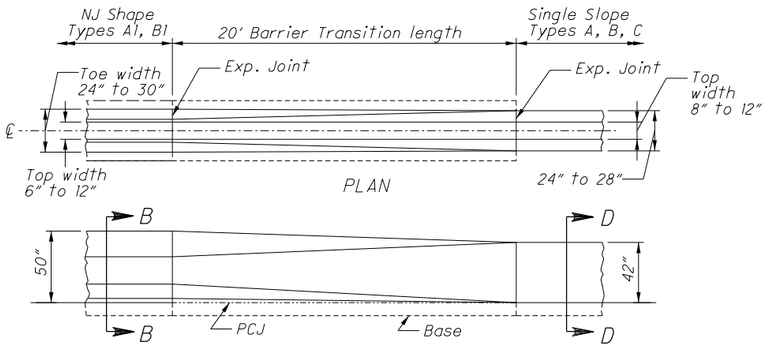
Atypical use

ELEVATION



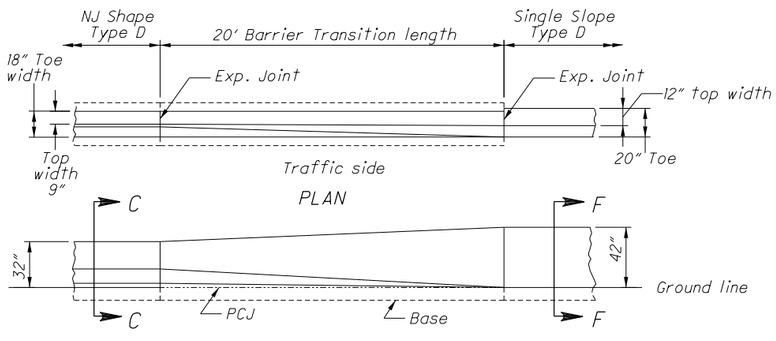
Standard tall barrier connection

ELEVATION



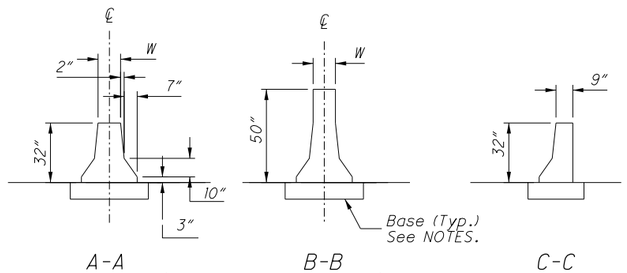
Atypical use

ELEVATION



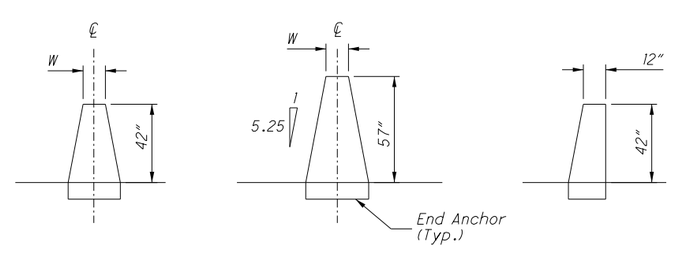
Standard Roadside barrier connection

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. 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.

OFFICE OF ROADWAY ENGINEERING

DESIGNED . REVIEWED .

REVISION DATE 10/20/2006 CHECKED CHECKED

PLAN INSERT SHEET

NJ SHAPE TO SINGLE SLOPE BARRIER TRANSITION

SUM-77/277/224
VARIOUS

1 / 1

907
1288

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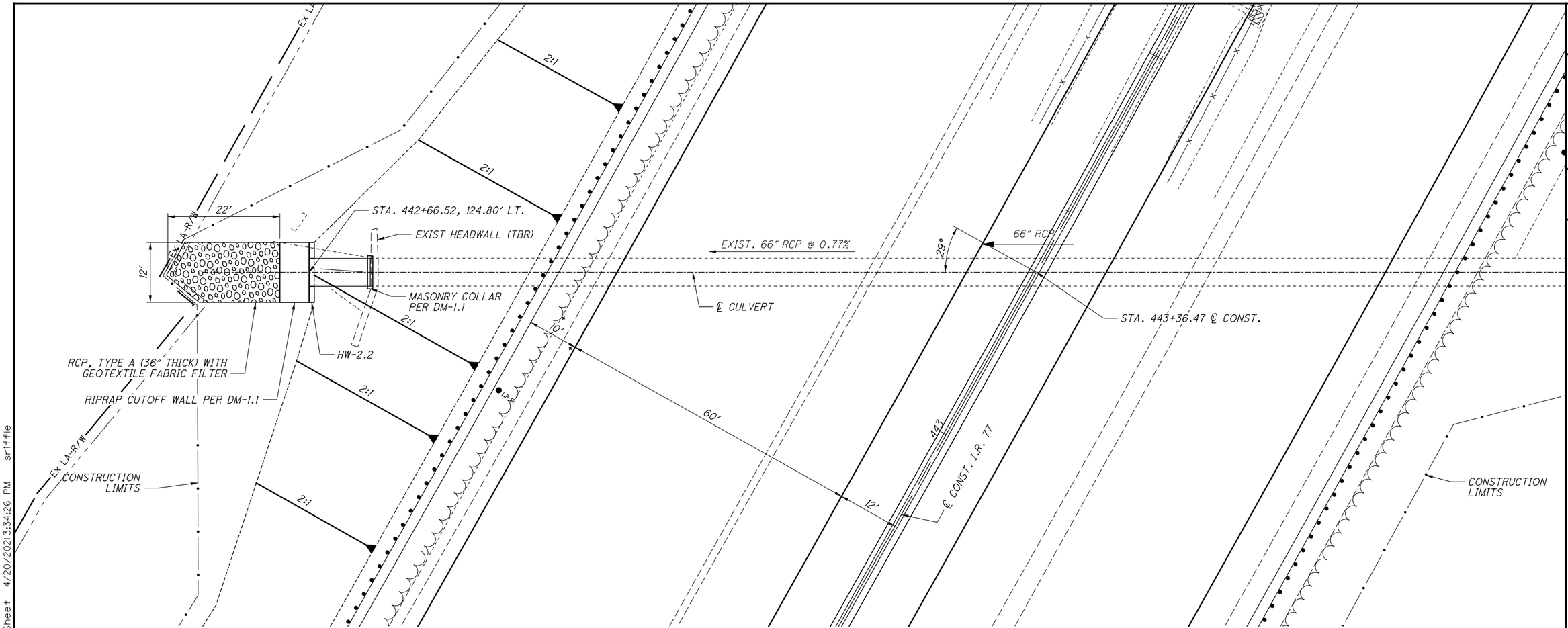
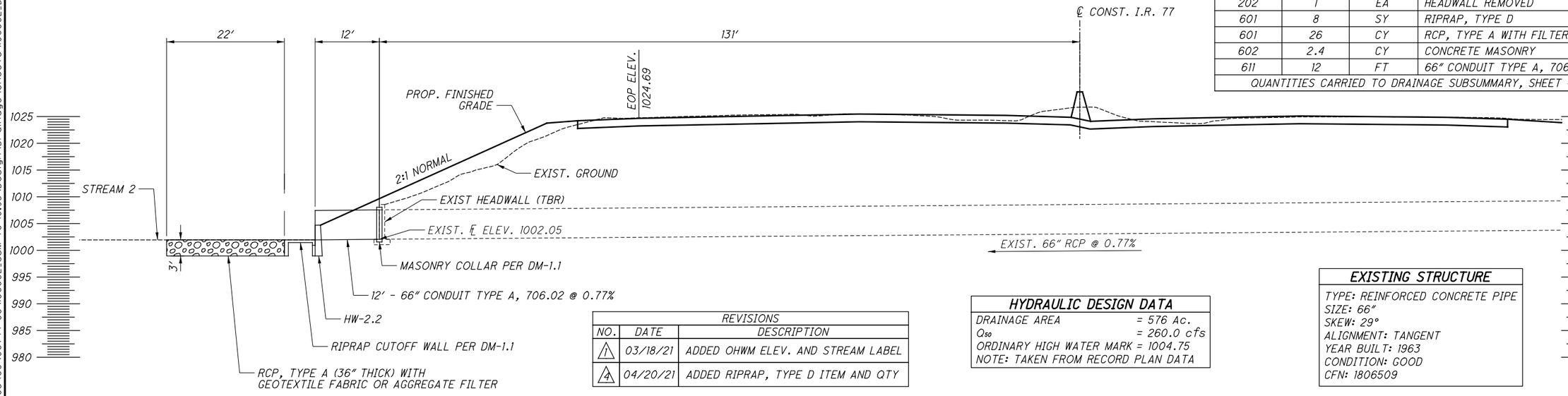


NOTES:
1. NO WORK IS PROPOSED FOR THE INLET SIDE OF THE EXISTING CULVERT.



ESTIMATED QUANTITIES			
ITEM	QUAN	UNIT	DESCRIPTION
202	1	EA	HEADWALL REMOVED
601	8	SY	RIPRAP, TYPE D
601	26	CY	RCP, TYPE A WITH FILTER
602	2.4	CY	CONCRETE MASONRY
611	12	FT	66" CONDUIT TYPE A, 706.02
QUANTITIES CARRIED TO DRAINAGE SUBSUMMARY, SHEET 410			

REVISIONS		
NO.	DATE	DESCRIPTION
1	03/18/21	ADDED OHWM ELEV. AND STREAM LABEL
4	04/20/21	ADDED RIPRAP, TYPE D ITEM AND QTY

HYDRAULIC DESIGN DATA	
DRAINAGE AREA	= 576 Ac.
Q_{50}	= 260.0 cfs
ORDINARY HIGH WATER MARK	= 1004.75
NOTE: TAKEN FROM RECORD PLAN DATA	

EXISTING STRUCTURE
TYPE: REINFORCED CONCRETE PIPE
SIZE: 66"
SKEW: 29°
ALIGNMENT: TANGENT
YEAR BUILT: 1963
CONDITION: GOOD
CFN: 1806509

HORIZONTAL SCALE IN FEET
0 5 10 20

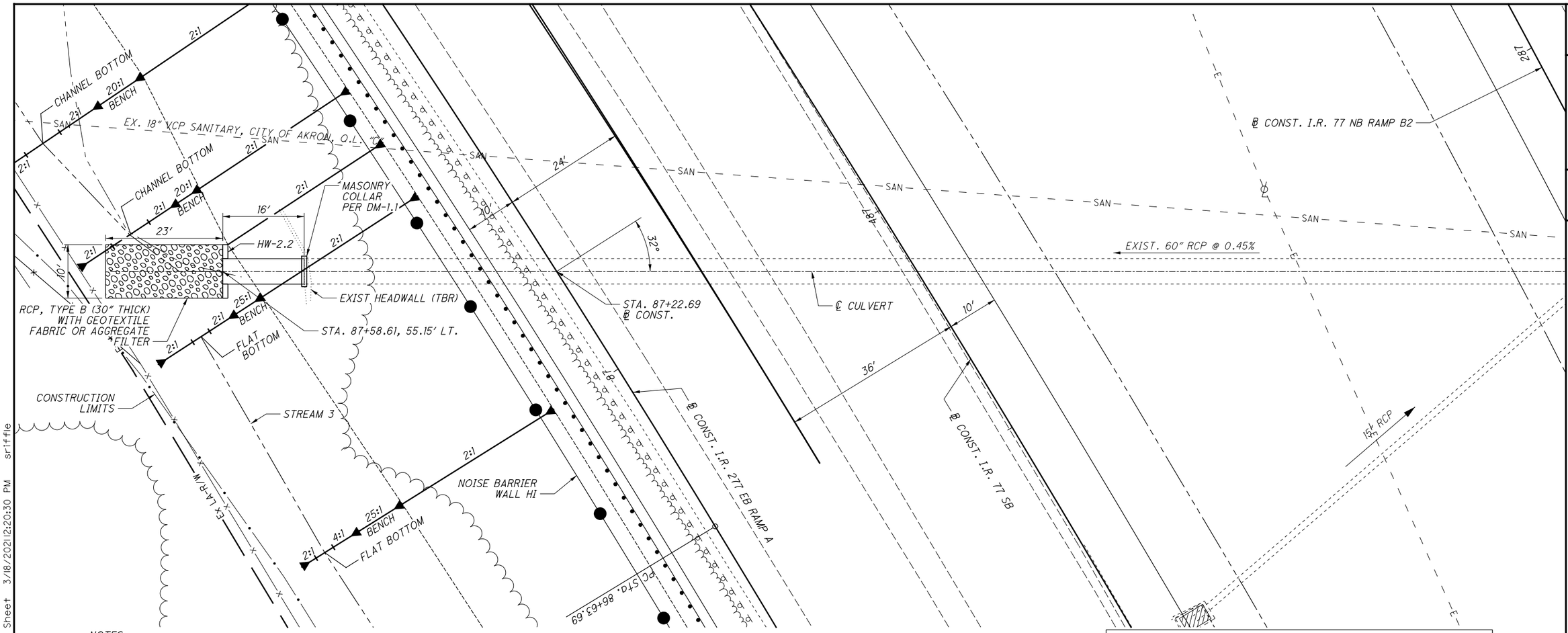
CALCULATED SSR
CHECKED DLT

CULVERT DETAIL
I-77 STA. 443+36

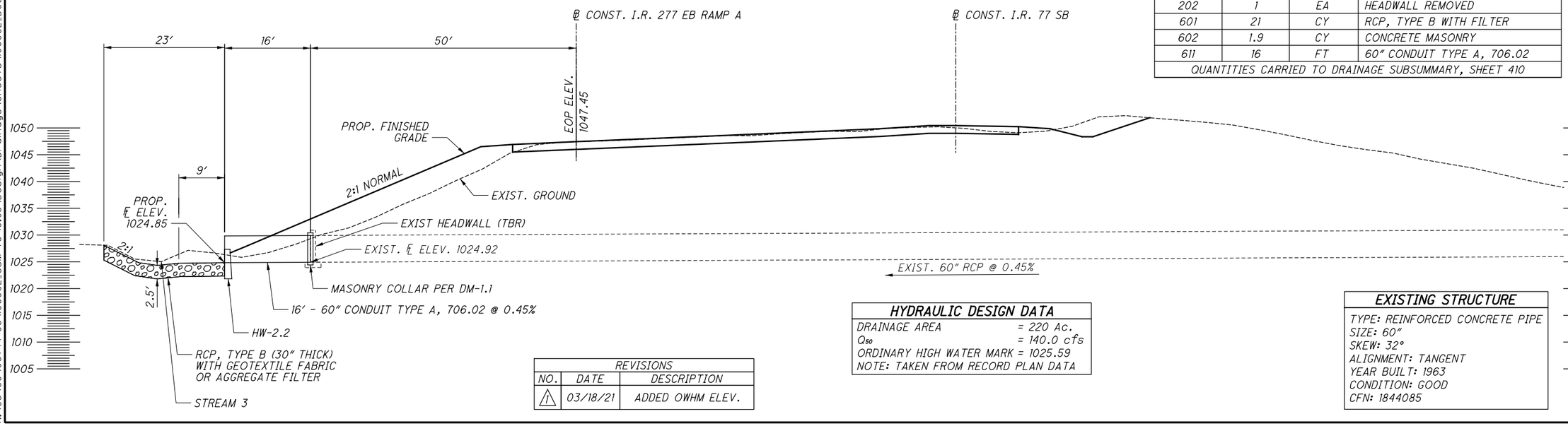
SUM-77 / 277 / 224
VARIOUS

908
1288

N:\03\60\06744-08\06002_SUM-76-10.95\Design\Drainage\Sheets\06002_DC001.dgn Sheet 4/20/2021 3:34:26 PM srieffle



NOTES:
1. NO WORK IS PROPOSED FOR THE INLET SIDE OF THE EXISTING CULVERT.



ESTIMATED QUANTITIES			
ITEM	QUAN	UNIT	DESCRIPTION
202	1	EA	HEADWALL REMOVED
601	21	CY	RCP, TYPE B WITH FILTER
602	1.9	CY	CONCRETE MASONRY
611	16	FT	60" CONDUIT TYPE A, 706.02
QUANTITIES CARRIED TO DRAINAGE SUBSUMMARY, SHEET 410			

REVISIONS		
NO.	DATE	DESCRIPTION
1	03/18/21	ADDED OWHM ELEV.

HYDRAULIC DESIGN DATA	
DRAINAGE AREA	= 220 Ac.
Q_{50}	= 140.0 cfs
ORDINARY HIGH WATER MARK	= 1025.59
NOTE: TAKEN FROM RECORD PLAN DATA	

EXISTING STRUCTURE
TYPE: REINFORCED CONCRETE PIPE
SIZE: 60"
SKEW: 32°
ALIGNMENT: TANGENT
YEAR BUILT: 1963
CONDITION: GOOD
CFN: 1844085

HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED SSR
CHECKED DLT

CULVERT DETAIL
RAMP A STA. 87+23

SUM-77 / 277 / 224
VARIOUS

909
1288

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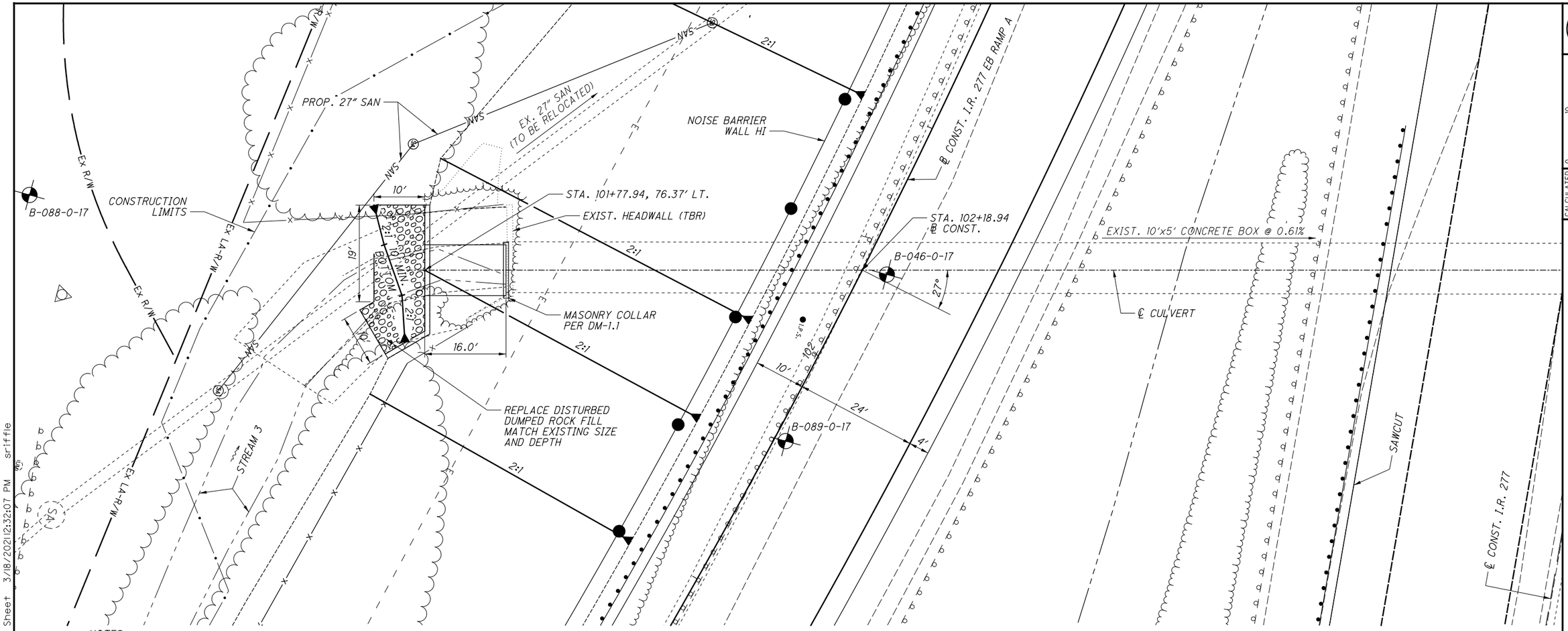
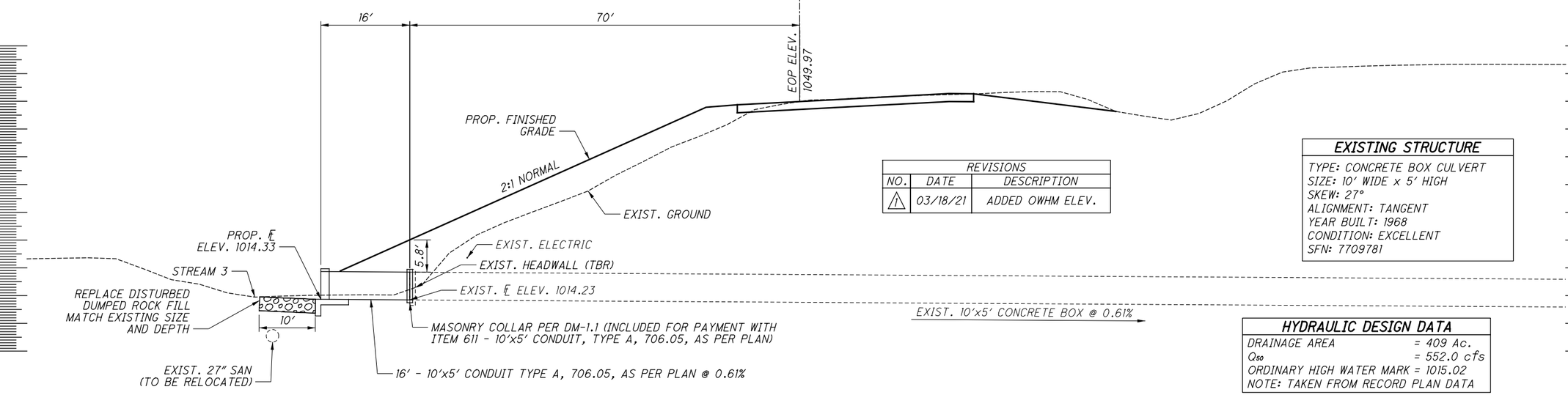


NOTES:
1. NO WORK IS PROPOSED FOR THE OUTLET SIDE OF THE EXISTING CULVERT.

2. THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH ITEM 611 EXCEPT THAT THE NEW CULVERT SHALL BE CAST-IN-PLACE. PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR ITEM 611 - 10'x5' CONDUIT TYPE A, 706.05, AS PER PLAN.

SEE SHEET 911 FOR ESTIMATED QUANTITIES
SEE SHEETS 911 - 915 FOR HEADWALL DETAILS



REVISIONS		
NO.	DATE	DESCRIPTION
1	03/18/21	ADDED OWHM ELEV.

EXISTING STRUCTURE

TYPE: CONCRETE BOX CULVERT
SIZE: 10' WIDE x 5' HIGH
SKEW: 27°
ALIGNMENT: TANGENT
YEAR BUILT: 1968
CONDITION: EXCELLENT
SFN: 7709781

HYDRAULIC DESIGN DATA

DRAINAGE AREA	= 409 Ac.
Q_{50}	= 552.0 cfs
ORDINARY HIGH WATER MARK	= 1015.02
NOTE: TAKEN FROM RECORD PLAN DATA	

HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED SSR
CHECKED DLT

CULVERT DETAIL
RAMP A STA. 102+19

SUM-77 / 277 / 224
VARIOUS

910
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\Drainage\Sheets\106002_DC003.dgn Sheet 3/18/2021 12:32:07 PM srifle

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2017, 8TH EDITION AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN DATA: THE FOLLOWING DESIGN DATA IS USED,

INTERNAL ANGLE OF FRICTION ϕ= 30 DEGREES
COEFFICIENT OF FRICTION δ= 0.30
UNIT WEIGHT OF SOIL = 120 PCF
UNIT WEIGHT OF CONCRETE = 150 PCF
SLOPE OF BACKFILL = 2:1

CONCRETE CLASS C:
COMPRESSIVE STRENGTH 4000 PSI (FOOTING, WINGWALL, AND FORESLOPE WALL)

REINFORCING STEEL:
ASTM A615, A616, OR A617 GRADE 60 MINIMUM YIELD STRENGTH 60,000 PSI (ALL REINFORCING SHALL BE EPOXY COATED)

FOUNDATION BEARING RESISTANCE

CULVERT EXTENSION FOOTINGS, AS DESIGNED, PRODUCE A MAX. SERVICE LOAD PRESSURE OF 1.3 KIPS/SQ. FT. AND A MAX. STRENGTH LOAD PRESSURE OF 1.9 KIPS/SQ. FT. THE FACTORED BEARING RESISTANCE IS 7.1 KIPS/SQ. FT.

PRECAST CONCRETE

AT THE OPTION OF THE CONTRACTOR, PRECAST HEADWALLS MAY BE FURNISHED PER ITEM 602.03 PRECAST STRUCTURES, PROVIDED THEY ARE SIZED TO MEET OR EXCEED THE MATERAL STRENGTHS AND WALL LIMITS AS SHOWN AND SPECIFIED. FULL COMPENSATION FOR THE PRECAST SUBSTITUTION IS THE VOLUME OF CONCRETE AND THE WEIGHT OF THE REINFORCING STEEL FOR THE CORRESPONDING CAST-IN-PLACE STRUCTURE.

FORESLOPE WALL ANCHOR DOWELS

ANCHOR PER CMS 510 WITH NONSHRINK, NONMETALLIC GROUT CONFORMING TO CMS 705.20 AND TO A DEPTH OF 5". PAYMENT FOR DOWEL HOLES, GROUT AND INSTALLATION SHALL BE INCLUDED WITH ITEM 511.

AS AN ALTERNATIVE TO RESIN BONDING, THREADED INSERTS OR NOPROTRUDING MECHANICAL CONNECTORS CAST INTO THE CULVERT BY THE MANUFACTURER MAY BE USED PROVIDED THEY CAN RESIST AN ULTIMATE PULL-OUT STRENGTH OF 12 KIPS AND MAINTAIN A MIN. COVER OF 3" AT THE BOTTOM OF THE CULVERT SLAB. MECHANICAL CONNECTORS MUST PROVIDE AN "L-SHAPED" BAR INSIDE THE CULVERT WITH A MIN. HORIZONTAL LENGTH OF 1'-0". PAYMENT FOR INSERTS OR MECHANICAL CONNECTORS SHALL BE INCLUDED WITH ITEM 611.

ITEM 202 - STRUCTURE REMOVED, AS PER PLAN

THIS WORK SHALL CONSIST OF REMOVING INLET STRUCTURE. END OF EXISTING BOX CULVERT SHALL BE THOROUGHLY CLEANED TO INSURE PROPER BOND WITH CONCRETE COLLAR. ALL WORK SHALL CONFORM TO CMS ITEM 202.

ITEM 512 - TYPE 2 WATERPROOFING

TYPE 2 WATERPROOFING PER CMS 512.09 AND 711.25, SHALL EXTEND VERTICALLY DOWN THE ENTIRE SIDES OF THE PRECAST CULVERT SECTIONS FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL.

TYPE 2 WATERPROOFING, PER CMS 512.09 AND 711.25 SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND 1'-0" VERTICALLY DOWN THE SIDES FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL.

TYPE 2 WATERPROOFING SHALL EXTEND 1'-0" ONTO ADJACENT EXISTING CULVERT AND NEW WINGWALLS. EXISTING CULVERT SURFACE SHALL BE CLEANED AS PER 512.08 FOR MEMBRANES.

ITEM 516 - PREFORMED EXPANSION JOINT FILLER

PREFORMED EXPANSION JOINT FILLER (PEJF) CONFORMING TO CMS 705.03, 1" THICK, SHALL BE PLACED ABOVE THE FOOTING BETWEEN THE SIDES OF THE BOX CULVERT AND THE ENDS OF THE WINGWALLS.

ITEM 518 - POROUS BACKFILL WITH GEOTEXTILE FABRIC

2'-0" THICK POROUS BACKFILL WITH FILTER FABRIC SHALL BE PLACED BEHIND THE WINGWALLS ONLY AND SHALL EXTEND TO 1'-0" 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 1'-0" ABOVE THE NORMAL WATER ELEVATION OR GROUND LINE AND SHALL HAVE A MAX. SPACING OF 10'-0". A MIN. OF ONE WEEPHOLE SHALL BE PROVIDED PER WINGWALL.

ITEM 611 - 10'x5' CONDUIT, TYPE A, 706.05, AS PER PLAN

THIS ITEM SHALL BE CONSTRUCTED IN CONFORMANCE WITH ITEM 611, EXCEPT THAT THE CONDUIT SHALL BE CAST-IN-PLACE.

ALL LABOR AND MATERIALS REQUIRED TO INSTALL MASONRY COLLAR SHALL BE INCLUDED FOR PAYMENT WITH ITEM 611 - 10'x5' CONDUIT, TYPE A, 706.05, AS PER PLAN.

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN

FOR THIS CULVERT, THE CONTRACTOR SHALL PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH CMS 501.05. THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE CULVERT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATION. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH CMS 501.05. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN.

ALL STEEL SHEETING, STEEL PILES, AND STEEL PLATES SHALL BE ASTM A572, GRADE 50.

ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH OOOT CMS 503. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN.

ESTIMATED QUANTITIES

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SHEET REF.
202	11001	LUMP		STRUCTURE REMOVED, AS PER PLAN	911
503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	911
503	21100	82	CY	UNCLASSIFIED EXCAVATION	
509	10000	2360	POUND	EPOXY COATED REINFORCING STEEL	
510	10000	24	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
511	46010	7	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING	
511	46510	18	CY	CLASS QC1 CONCRETE, FOOTING	
512	10100	23	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
512	33000	48	SY	TYPE 2 WATERPROOFING	
516	13600	17	SF	1" PREFORMED EXPANSION JOINT FILLER	
518	21200	8	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
601*	28101	21	CY	DUMPED ROCK FILL, AS PER PLAN	910
611**	95001	16	FT	10' x 5' CONDUIT, TYPE A, 706.05, AS PER PLAN	911

* INCLUDED FOR PAYMENT WITH THE EROSION CONTROL QUANTITIES - SEE THE GENERAL SUMMARY

** INCLUDED FOR PAYMENT WITH THE DRAINAGE QUANTITIES - SEE THE GENERAL SUMMARY.

DESIGN AGENCY
ms consultants, inc.
2221 Schrock Road
Columbus, Ohio 43229

DESIGNED TVB | DRAWN TVB | REVIEWED SR 05/07/20 | DATE
CHECKED WER | REVISED | STRUCTURE FILE NUMBER 7709781

STRUCTURE NOTES & QUANTITIES
I.R. 277 EB RAMP A CULVERT
STA. 102+19

SUM-77/277/224-VAR
PID No. 106002

1 / 5

911
1288

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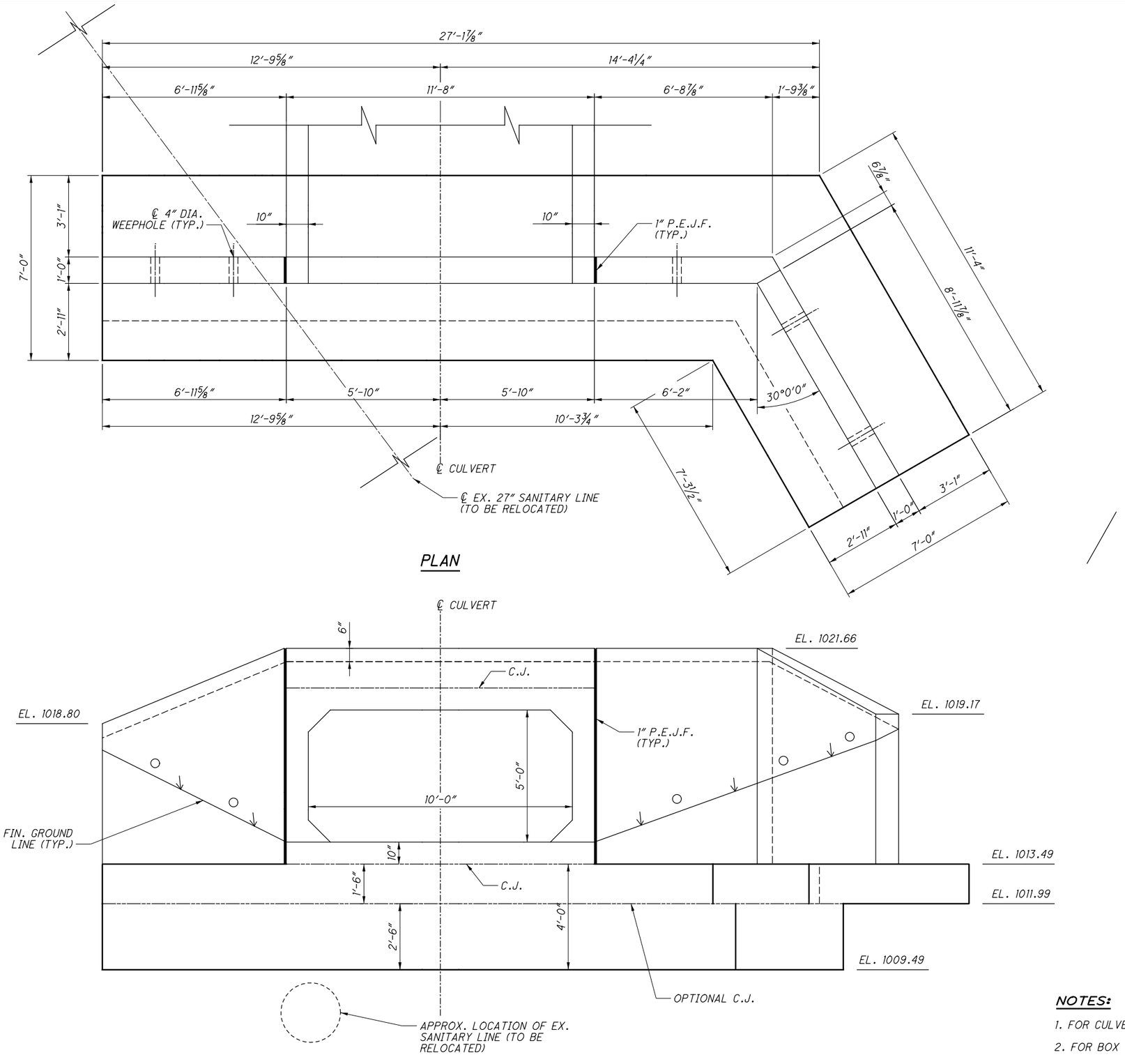

PLAN

ELEVATION

NOTES:

1. FOR CULVERT LOCATION PLAN, SEE SHEET 910/1288.
2. FOR BOX CULVERT DETAILS, SEE SHEET 914/1288.

DESIGN AGENCY
ms consultants, inc.
2221 Schrock Road
Columbus, Ohio 43229

DESIGNED	DRAWN	REVIEWED	DATE
TYB	TYB	SR	05/07/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
WER	.	77099781	

CULVERT HEADWALL PLAN & ELEVATION

I.R. 277 EB RAMP A CULVERT
STA. 102+19

SUM-77/277/224-VAR
PID No. 106002

2 / 5

912
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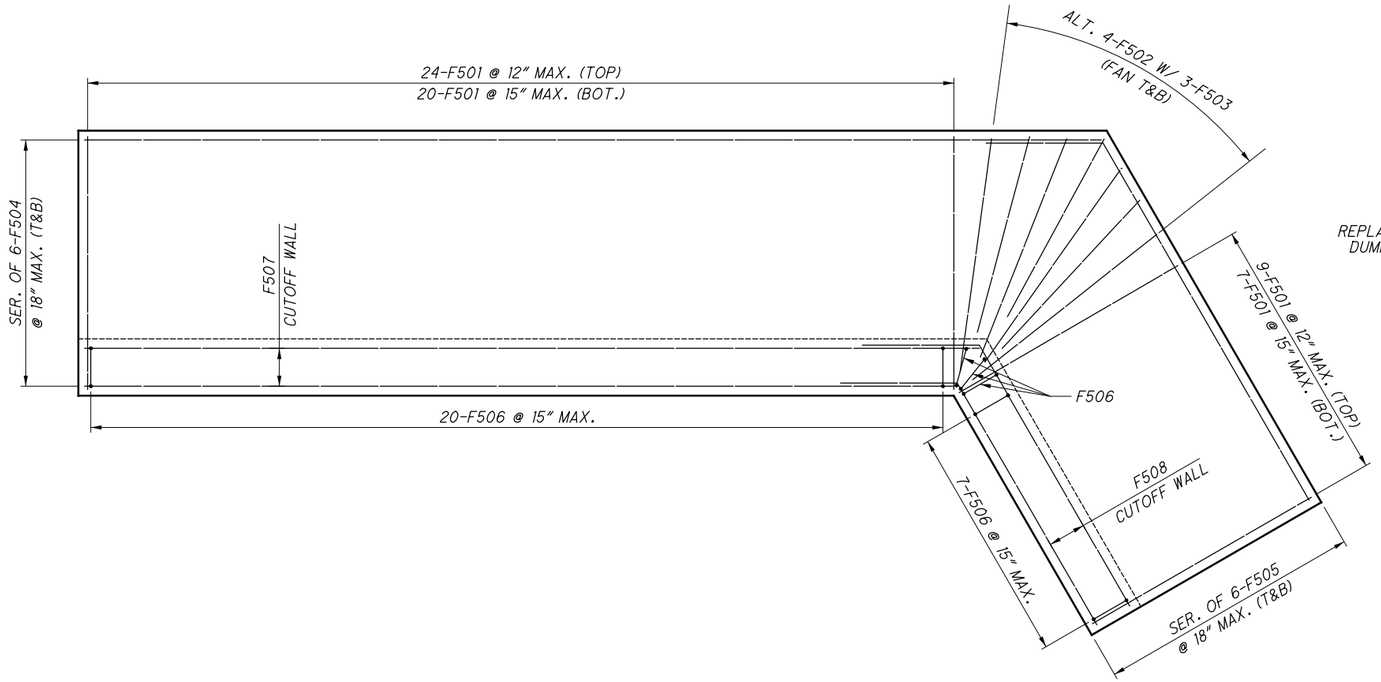
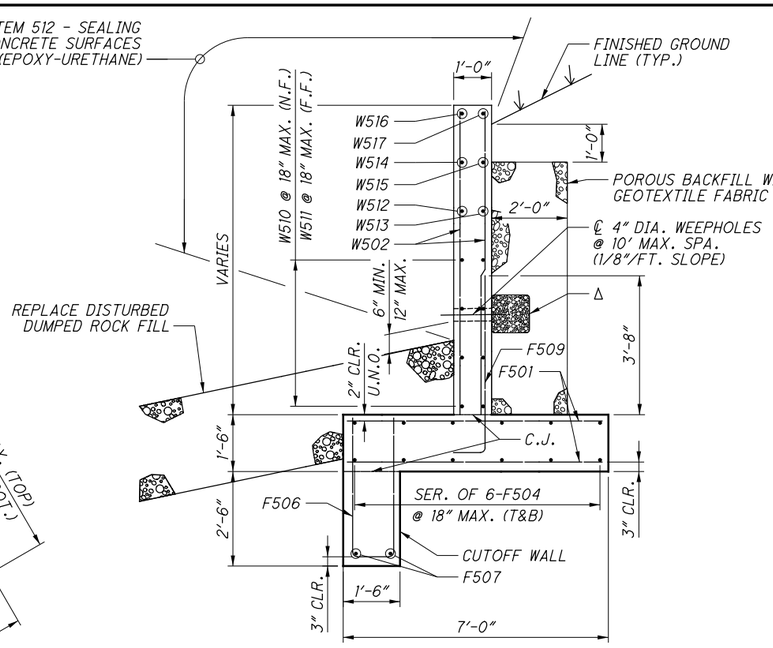
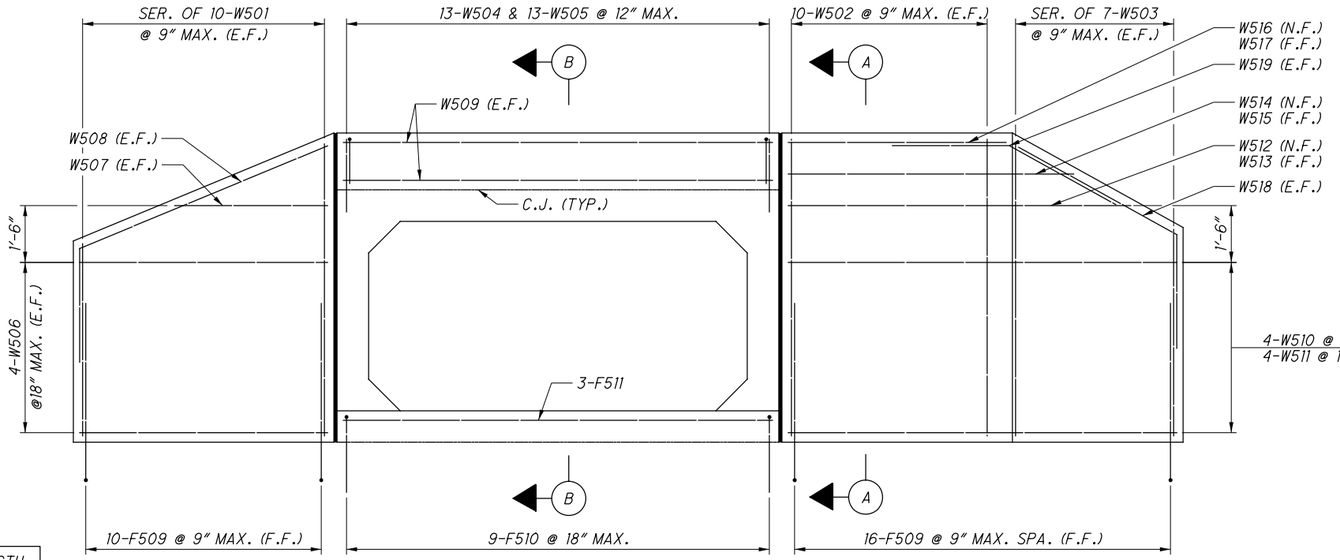


FOOTING PLAN

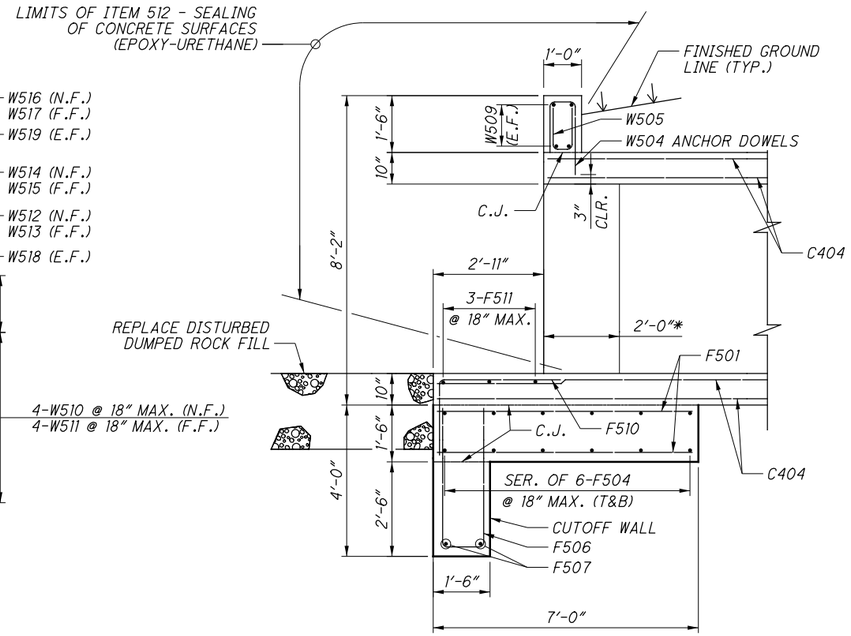


SECTION A-A



WINGWALL ELEVATION

MIN. LAP LENGTH	
#5 BAR	3'-1"



SECTION B-B

(CULVERT INLET BEVEL SHOWN)

NOTES:

1. FOR CULVERT LOCATION PLAN, SEE SHEET 910/1288 .
2. FOR BOX CULVERT DETAILS, SEE SHEET 914/1288 .

LEGEND:

* LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) INSIDE BOX (WALLS AND TOP SLAB)

Δ 2 CU. FT. FILTER FABRIC BAGGED NO. 3 AGGREGATE TO BE PLACED BEHIND WEEPHOLES. INCLUDE WITH ITEM 518 POROUS BACKFILL FOR PAYMENT.

DESIGN AGENCY
ms consultants, inc.
2221 Schrock Road
Columbus, Ohio 43229

DESIGNED	DRAWN	REVIEWED	DATE
TVB	TVB	SR	05/07/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
WER		7709781	

WINGWALL, HEADWALL, & FOOTING DETAILS
I.R. 277 EB RAMP A CULVERT
STA. 102+19

SUM-77/277/224-VAR
PID No. 106002

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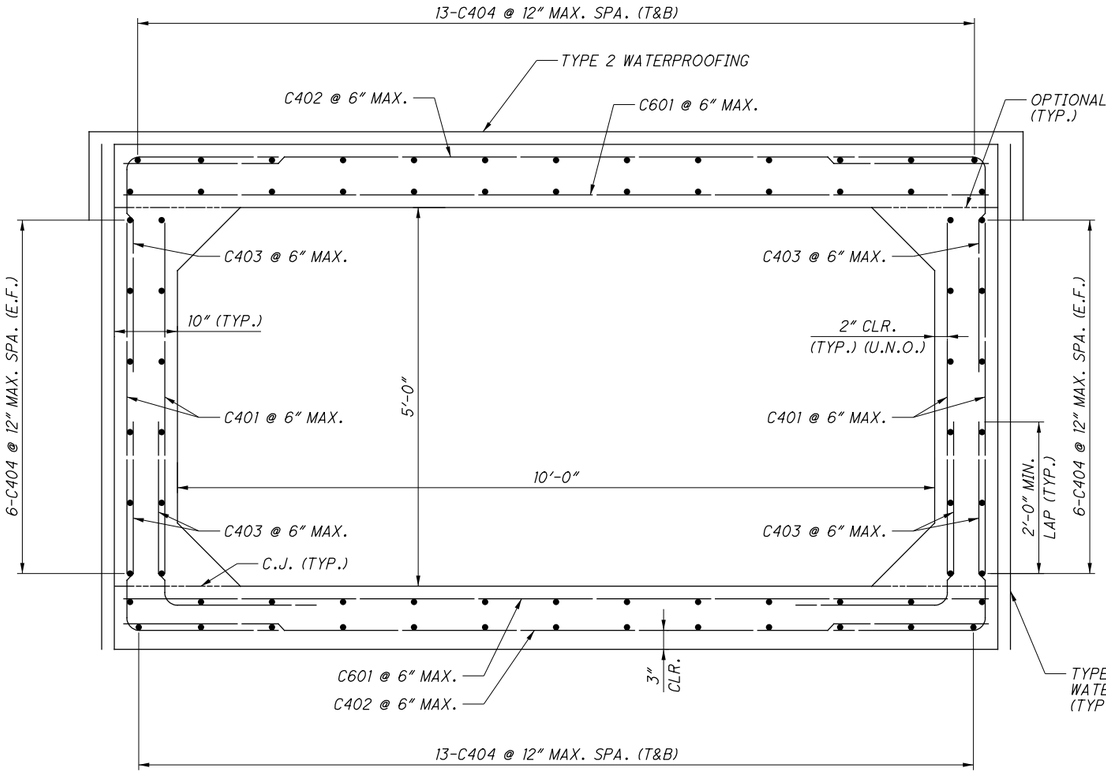
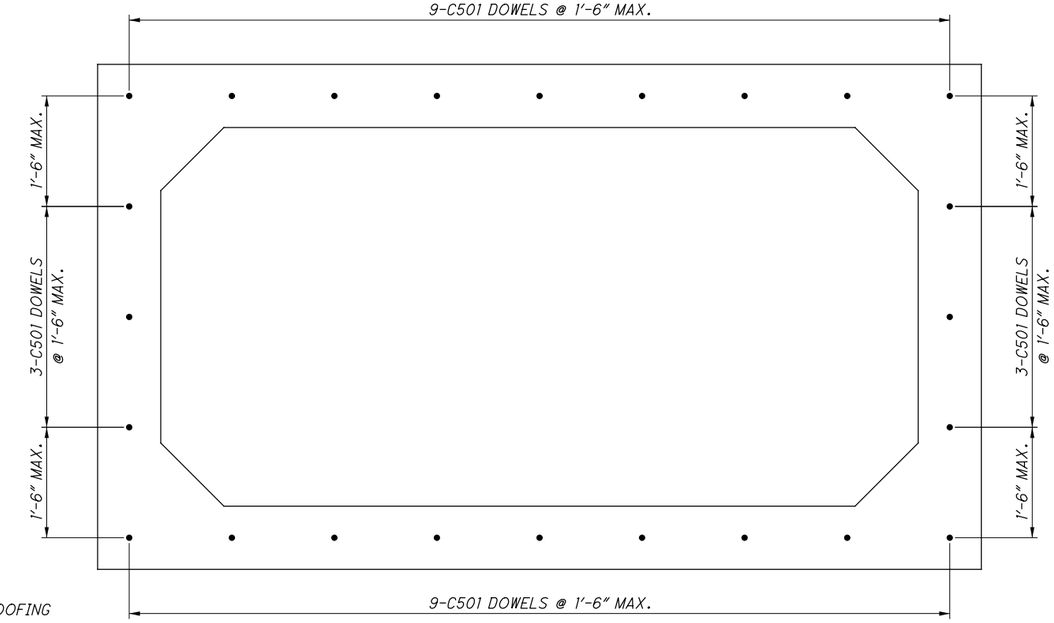
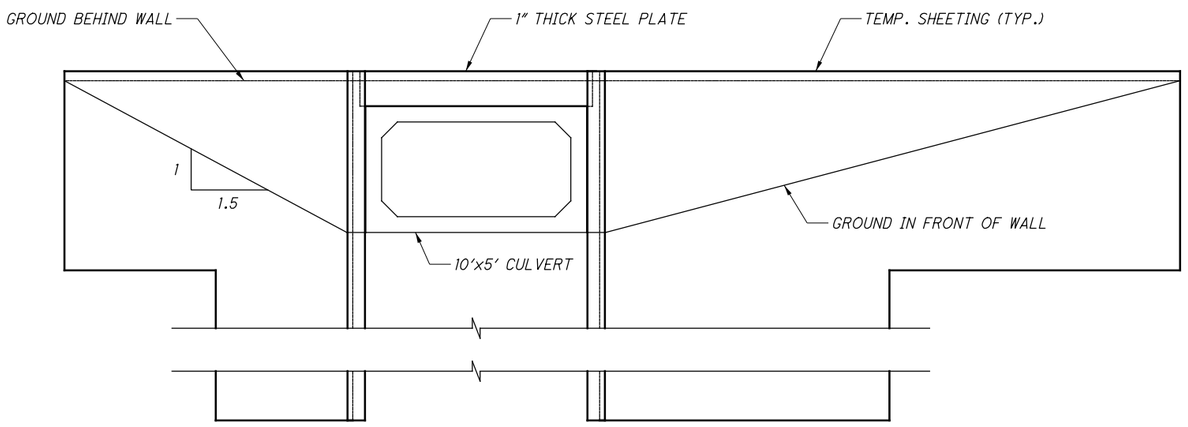


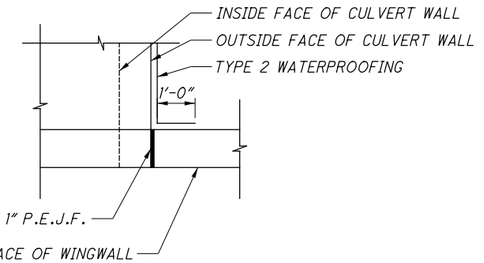
TYPICAL BOX SECTION



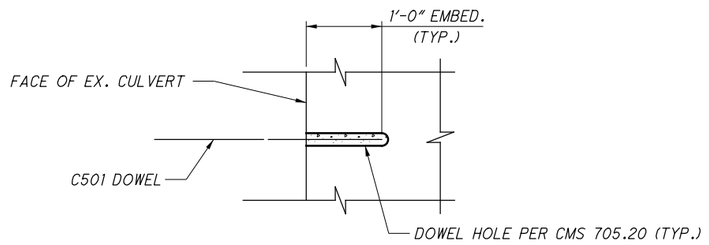
PROP. CULVERT AT FACE OF EX. CULVERT



EXCAVATION BRACING DETAIL



WATERPROOFING DETAIL



DOWEL DETAIL

DESIGN AGENCY
ms consultants, inc.
2221 Schrock Road
Columbus, Ohio 43229
DESIGNED TVB
DRAWN TVB
CHECKED WER
REVIEWED SR
DATE 05/07/20
REVISED
STRUCTURE FILE NUMBER 7709781

CULVERT DETAILS
I.R. 277 EB RAMP A CULVERT
STA. 102+19

SUM-77/277/224-VAR
PID No. 106002

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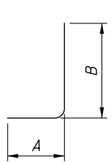
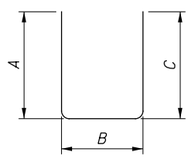
MARK	TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS					
					A	B	C	D	E	INC.
CULVERT HEADWALL REINFORCING SCHEDULE										
F501	60	6′-8″	417	ST						
F502	8	6′-2″	51	ST						
F503	6	5′-4″	33	ST						
	2	23′-2″								
F504	SER. OF	TO	312	ST						
	6	26′-9″								0′-8 5/8″
	2	10′-4″			7′-4″	1′-6″	2′-8″			
F505	SER. OF	TO	152	19	TO	TO	TO			0′-8 5/8″
	6	13′-11″			10′-11″	1′-6″	2′-8″			
F506	30	8′-1″	253	2	3′-7″	1′-2″	3′-7″			
F507	2	23′-6″	49	ST						
F508	2	10′-7″	22	19	7′-8″	1′-2″	2′-8″			
F509	26	5′-8″	154	1	10″	4′-11″				
F510	9	5′-0″	47	1	2′-0″	3′-1″				
F511	3	11′-4″	35	ST						
	2	5′-0″								
W501	SER. OF	TO	134	ST						0′-3 3/4″
	10	7′-10″								
W502	20	7′-10″	163	ST						
	2	7′-9″								
W503	SER. OF	TO	96	ST						0′-7 1/8″
	7	5′-4″								
W504	13	3′-6″	47	2	1′-2″	8″	1′-11″			
W505	13	2′-9″	37	2	1′-2″	8″	1′-2″			
W506	8	6′-6″	54	ST						
W507	2	4′-0″	8	ST						
W508	2	10′-0″	21	19	7′-1″	1′-1″	2′-9″			
W509	4	11′-4″	47	ST						
W510	4	14′-10″	62	19	8′-11″	3′-0″	5′-2″			
W511	4	15′-7″	65	19	9′-3″	3′-3″	5′-6″			
W512	1	11′-11″	12	19	6′-0″	3′-0″	5′-2″			
W513	1	12′-8″	13	19	6′-4″	3′-3″	5′-6″			
W514	1	9′-9″	10	19	3′-10″	3′-0″	5′-2″			
W515	1	10′-6″	11	19	4′-2″	3′-3″	5′-6″			
W516	1	5′-10″	6	ST						
W517	1	6′-5″	7	ST						
W518	2	12′-8″	26	19	7′-10″	2′-8″	4′-1″			
W519	2	7′-8″	16	19	3′-3″	4′-3″	1′-3″			
C401	132	4′-10″	*	ST						
C402	66	11′-4″	*	ST						
C403	198	4′-8″	*	1	2′-9″	2′-0″				
C404	76	15′-8″	*	ST						
C501	24	3′-2″	*	ST						
C601	66	11′-4″	*	ST						
		TOTAL =	2,360							

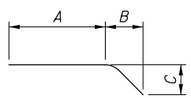
* CULVERT REINFORCING TO BE INCLUDED FOR PAYMENT WITH ITEM 611 - 10′ x 5′ CONDUIT, TYPE A, 706.05, AS PER PLAN



TYPE-1



TYPE-2



TYPE-19

NOTES:

1. BAR SIZE: 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 DIGITS ARE USED INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, AN F501 IS A #5 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 SHALL BE EPOXY-COATED.

DESIGN AGENCY
ms consultants, inc.
2221 Schrock Road
Columbus, Ohio 43229

DESIGNED TVB | DRAWN TVB | REVIEWED SR | DATE 05/07/20

CHECKED WER | REVISED | STRUCTURE FILE NUMBER 7709781

REINFORCING STEEL LIST
I.R. 277 EB RAMP A CULVERT
STA. 102+19

SUM-77/277/224-VAR
PID No. 106002

5 / 5

915
1288

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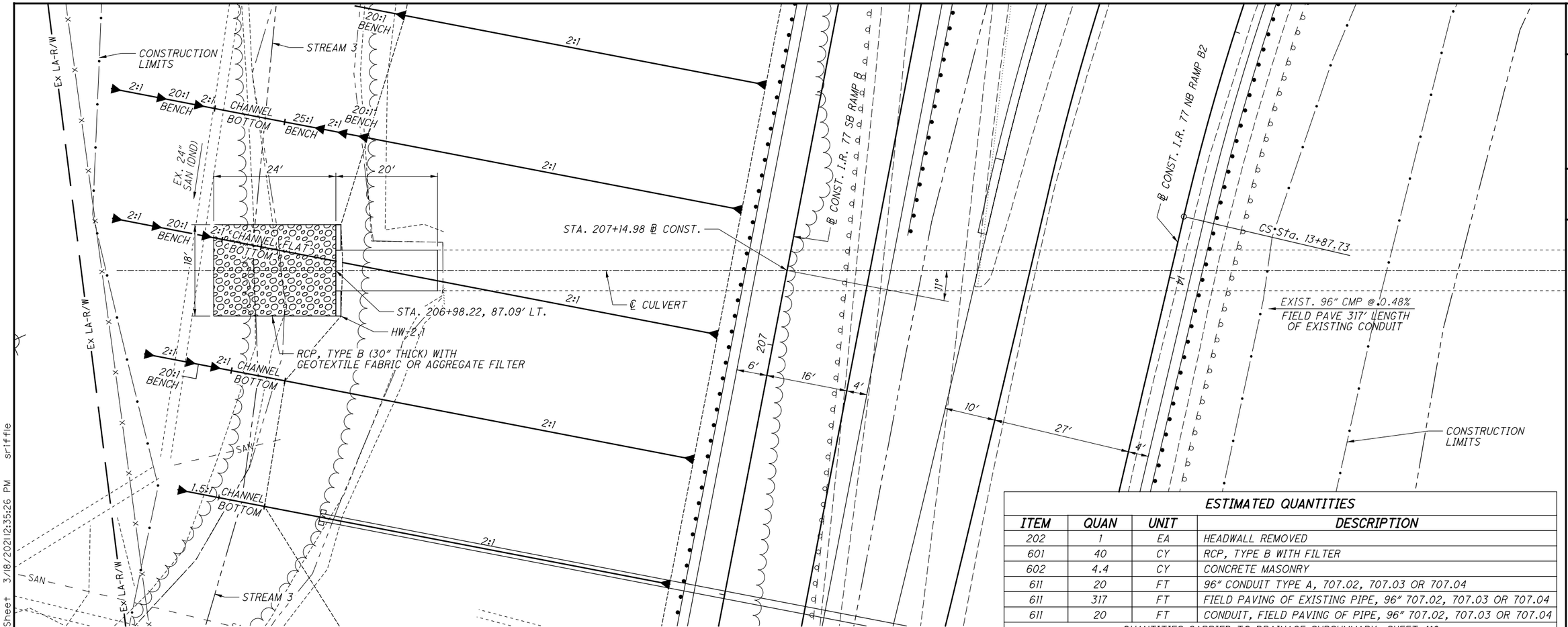
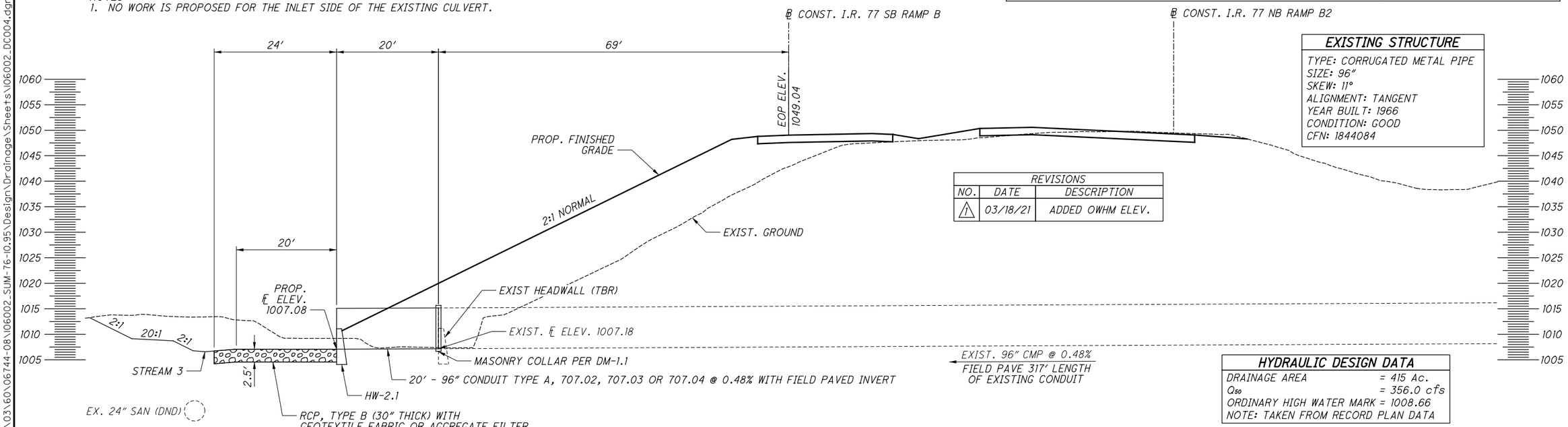


ESTIMATED QUANTITIES

ITEM	QUAN	UNIT	DESCRIPTION
202	1	EA	HEADWALL REMOVED
601	40	CY	RCP, TYPE B WITH FILTER
602	4.4	CY	CONCRETE MASONRY
611	20	FT	96" CONDUIT TYPE A, 707.02, 707.03 OR 707.04
611	317	FT	FIELD PAVING OF EXISTING PIPE, 96" 707.02, 707.03 OR 707.04
611	20	FT	CONDUIT, FIELD PAVING OF PIPE, 96" 707.02, 707.03 OR 707.04
QUANTITIES CARRIED TO DRAINAGE SUBSUMMARY, SHEET 410			



EXISTING STRUCTURE

TYPE: CORRUGATED METAL PIPE
SIZE: 96"
SKEW: 11°
ALIGNMENT: TANGENT
YEAR BUILT: 1966
CONDITION: GOOD
CFN: 1844084

REVISIONS		
NO.	DATE	DESCRIPTION
1	03/18/21	ADDED OWHM ELEV.

HYDRAULIC DESIGN DATA

DRAINAGE AREA	= 415 Ac.
Q_{50}	= 356.0 cfs
ORDINARY HIGH WATER MARK	= 1008.66
NOTE: TAKEN FROM RECORD PLAN DATA	

HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED SSR
CHECKED DLT

CULVERT DETAIL
RAMP B STA. 207+15

SUM-77/277/224
VARIOUS

916
1288

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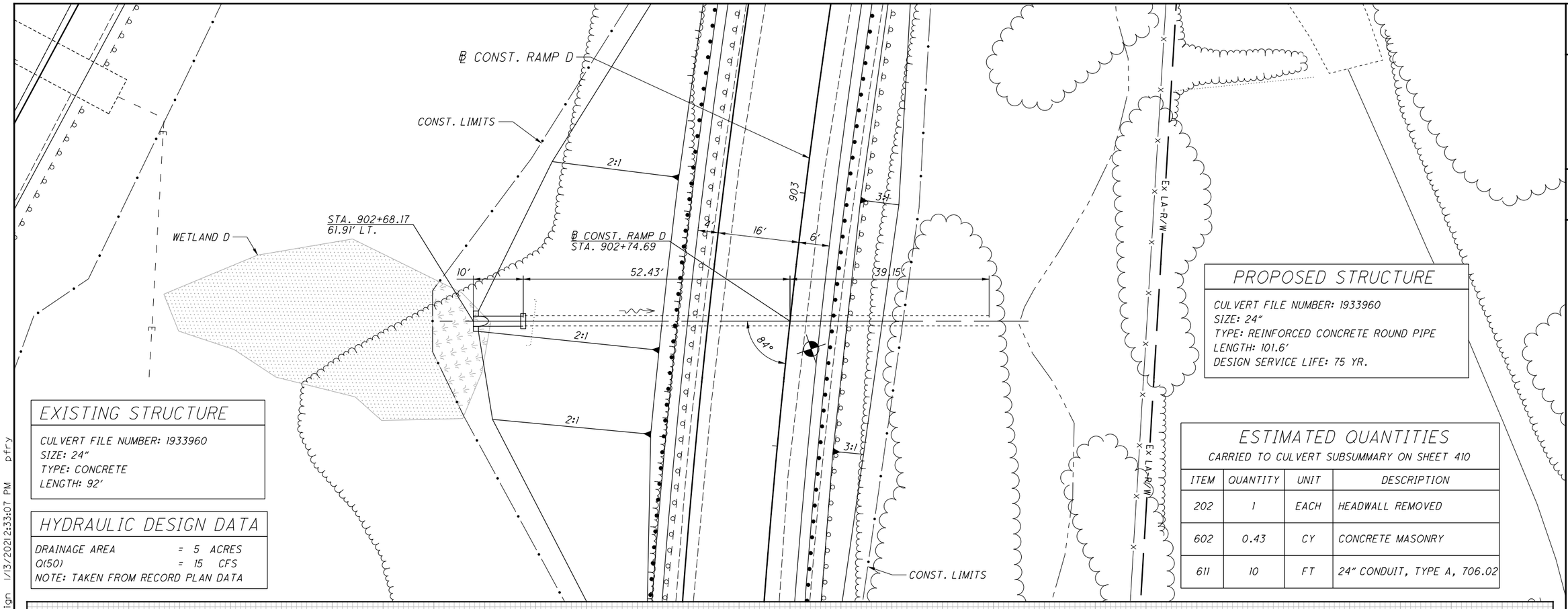


EXISTING STRUCTURE

CULVERT FILE NUMBER: 1933960
SIZE: 24"
TYPE: CONCRETE
LENGTH: 92'

HYDRAULIC DESIGN DATA

DRAINAGE AREA	= 5 ACRES
Q(50)	= 15 CFS

NOTE: TAKEN FROM RECORD PLAN DATA

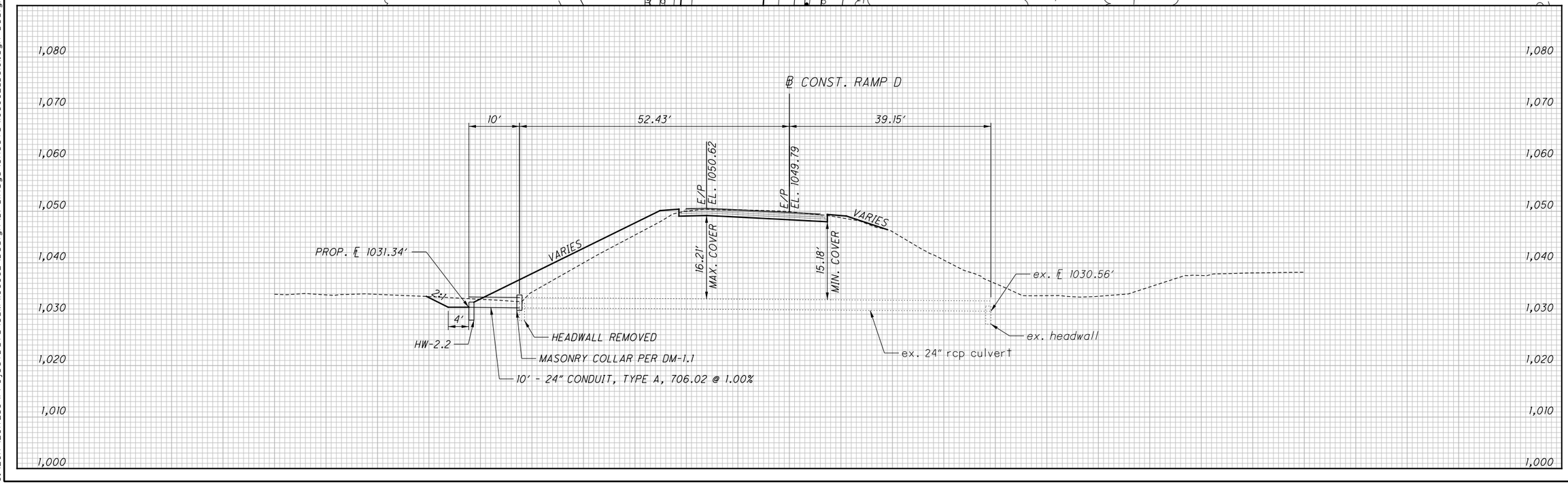
PROPOSED STRUCTURE

CULVERT FILE NUMBER: 1933960
SIZE: 24"
TYPE: REINFORCED CONCRETE ROUND PIPE
LENGTH: 101.6'
DESIGN SERVICE LIFE: 75 YR.

ESTIMATED QUANTITIES

CARRIED TO CULVERT SUBSUMMARY ON SHEET 410

ITEM	QUANTITY	UNIT	DESCRIPTION
202	1	EACH	HEADWALL REMOVED
602	0.43	CY	CONCRETE MASONRY
611	10	FT	24" CONDUIT, TYPE A, 706.02



HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED ATR
CHECKED PJF

CULVERT DETAIL
RAMP D STA. 902+74.69

SUM-77 / 277 / 224
VARIOUS

917
1288

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PROPOSED STRUCTURE

CULVERT FILE NUMBER: 1809348
SIZE: 18"
TYPE: REINFORCED CONCRETE ROUND PIPE
LENGTH: 151.6'
DESIGN SERVICE LIFE: 75 YR.

EXISTING STRUCTURE

CULVERT FILE NUMBER: 1809348
SIZE: 18"
TYPE: CONCRETE
LENGTH: 144'

HYDRAULIC DESIGN DATA

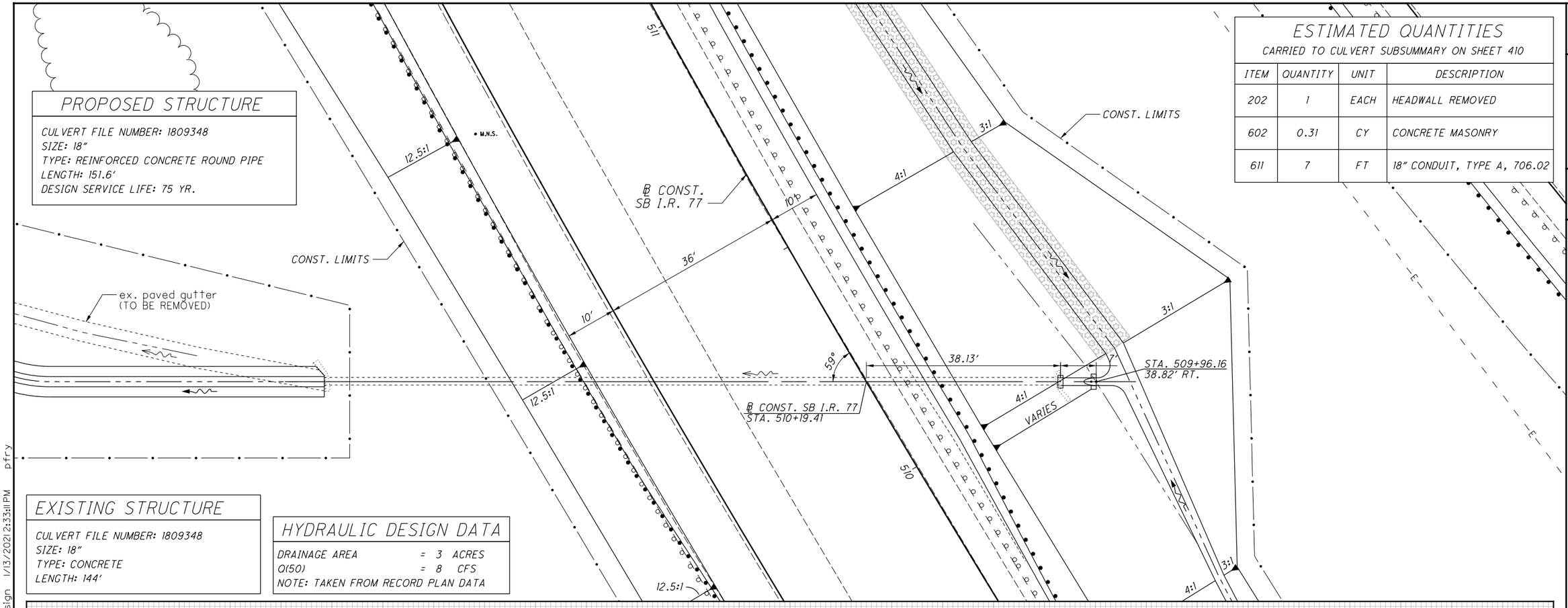
DRAINAGE AREA	= 3 ACRES
Q(50)	= 8 CFS

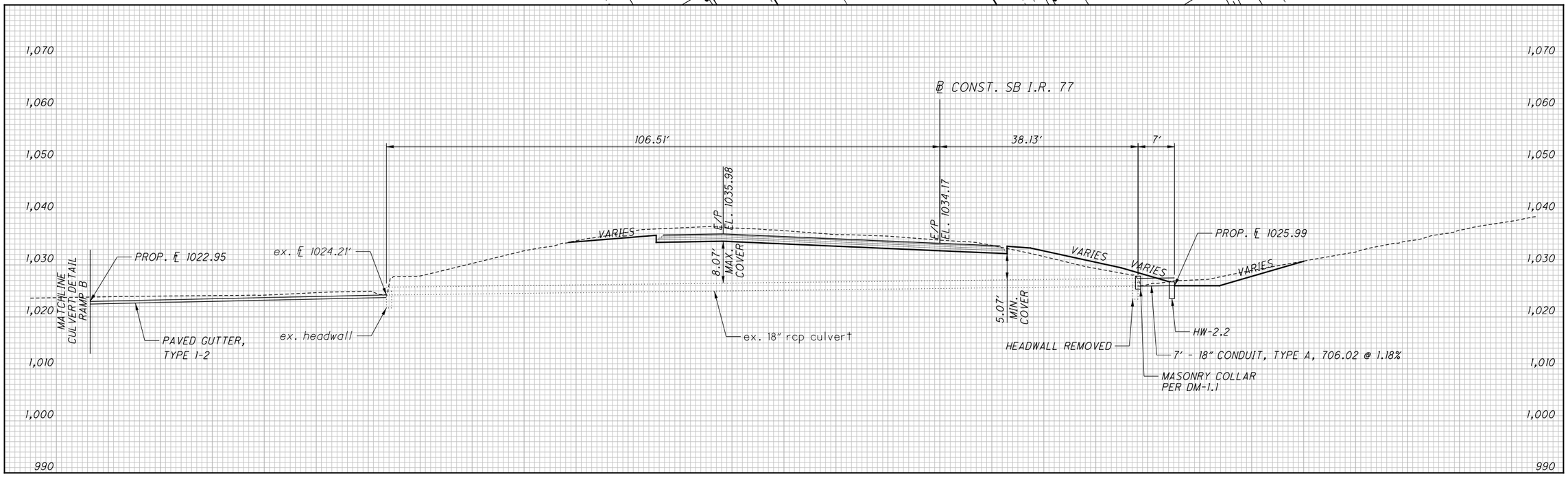
NOTE: TAKEN FROM RECORD PLAN DATA

ESTIMATED QUANTITIES

CARRIED TO CULVERT SUBSUMMARY ON SHEET 410

ITEM	QUANTITY	UNIT	DESCRIPTION
202	1	EACH	HEADWALL REMOVED
602	0.31	CY	CONCRETE MASONRY
611	7	FT	18" CONDUIT, TYPE A, 706.02





HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED ATR
CHECKED PJF

CULVERT DETAIL
SB I.R. 77 STA. 510+19.41

SUM-77 / 277 / 224
VARIOUS

918
1288

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HYDRAULIC DESIGN DATA

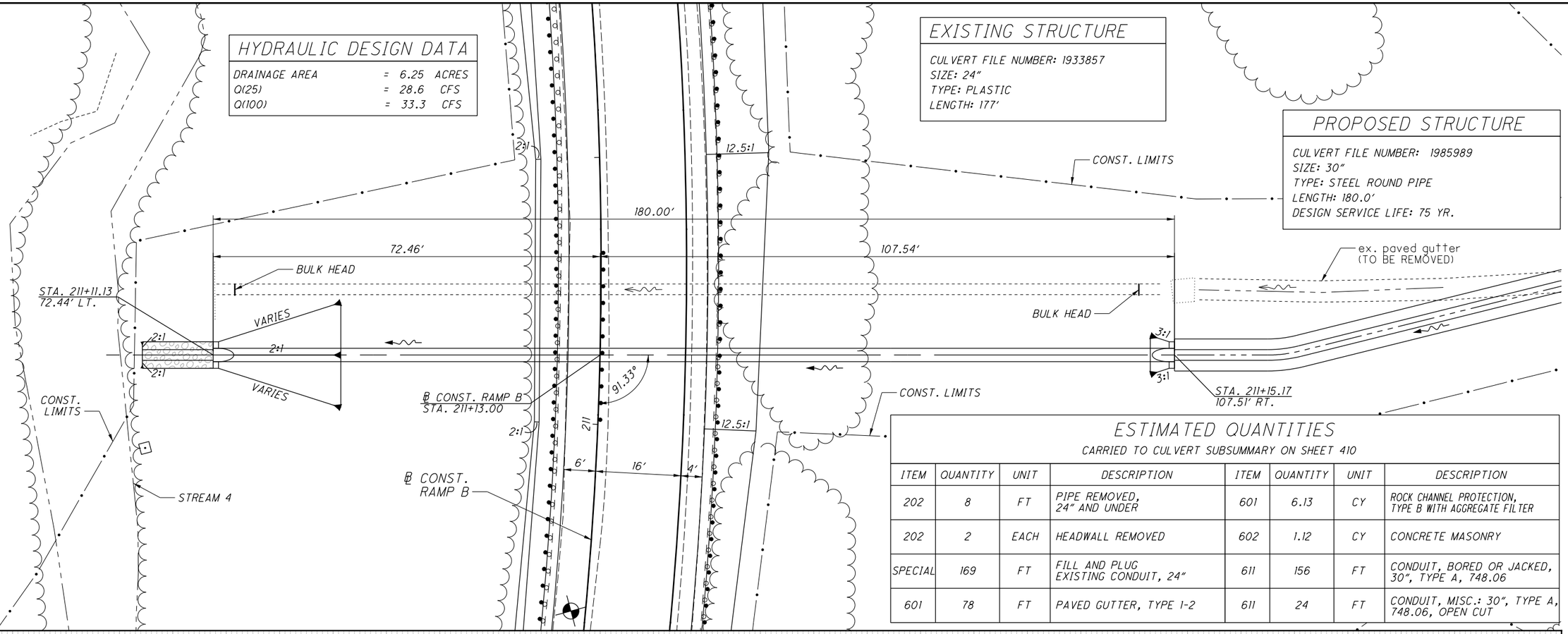
DRAINAGE AREA	=	6.25 ACRES
Q(25)	=	28.6 CFS
Q(100)	=	33.3 CFS

EXISTING STRUCTURE

CULVERT FILE NUMBER: 1933857
SIZE: 24"
TYPE: PLASTIC
LENGTH: 177'

PROPOSED STRUCTURE

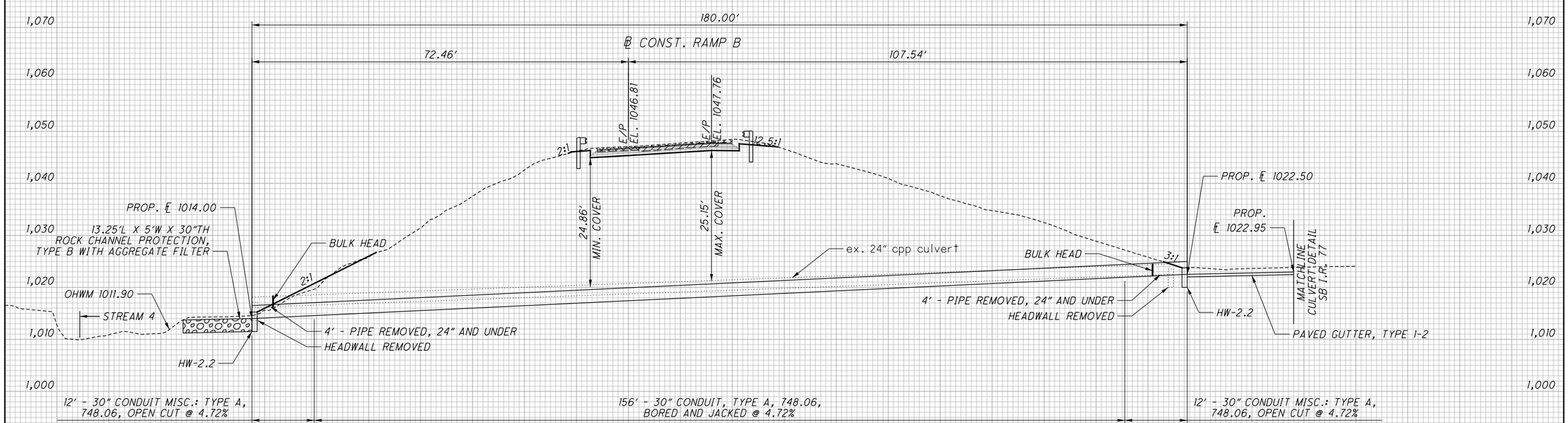
CULVERT FILE NUMBER: 1985989
SIZE: 30"
TYPE: STEEL ROUND PIPE
LENGTH: 180.0'
DESIGN SERVICE LIFE: 75 YR.



ESTIMATED QUANTITIES

CARRIED TO CULVERT SUBSUMMARY ON SHEET 410

ITEM	QUANTITY	UNIT	DESCRIPTION	ITEM	QUANTITY	UNIT	DESCRIPTION
202	8	FT	PIPE REMOVED, 24" AND UNDER	601	6.13	CY	ROCK CHANNEL PROTECTION, TYPE B WITH AGGREGATE FILTER
202	2	EACH	HEADWALL REMOVED	602	1.12	CY	CONCRETE MASONRY
SPECIAL	169	FT	FILL AND PLUG EXISTING CONDUIT, 24"	611	156	FT	CONDUIT, BORED OR JACKED, 30", TYPE A, 748.06
601	78	FT	PAVED GUTTER, TYPE 1-2	611	24	FT	CONDUIT, MISC.: 30", TYPE A, 748.06, OPEN CUT



HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED ATR
CHECKED PJF

CULVERT DETAIL
RAMP B STA. 211+13.00

SUM-77/277/224
VARIOUS

919
1288

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ESTIMATED QUANTITIES

CARRIED TO CULVERT SUBSUMMARY ON SHEET 410

ITEM	QUANTITY	UNIT	DESCRIPTION	ITEM	QUANTITY	UNIT	DESCRIPTION
202	8	FT	PIPE REMOVED, 24" AND UNDER	602	1.12	CY	CONCRETE MASONRY
202	2	EACH	HEADWALL REMOVED	611	138	FT	CONDUIT, BORED OR JACKED, 30", TYPE A, 748.06
SPECIAL	139	FT	FILL AND PLUG EXISTING CONDUIT, 24"	611	22	FT	CONDUIT, MISC.: 30", TYPE A, 748.06, OPEN CUT
601	2.22	CY	ROCK CHANNEL PROTECTION, TYPE C, WITH AGGREGATE FILTER				

EXISTING STRUCTURE

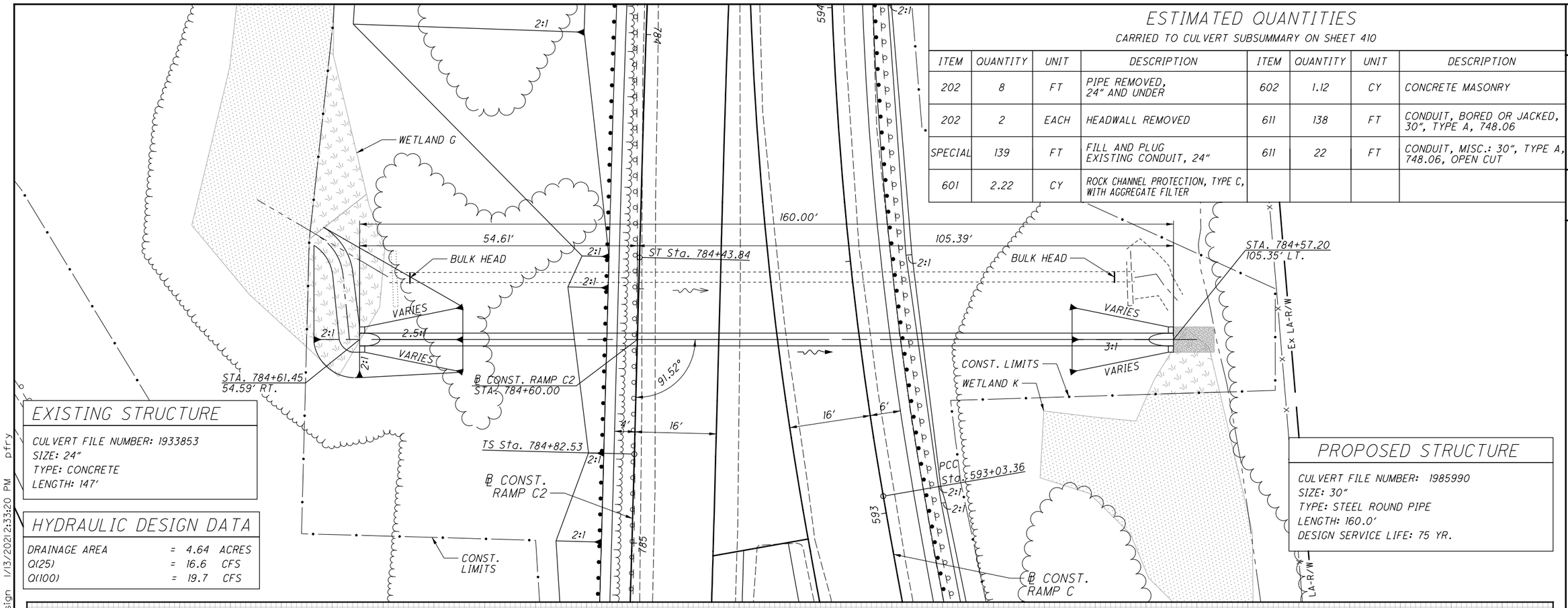
CULVERT FILE NUMBER: 1933853
SIZE: 24"
TYPE: CONCRETE
LENGTH: 147'

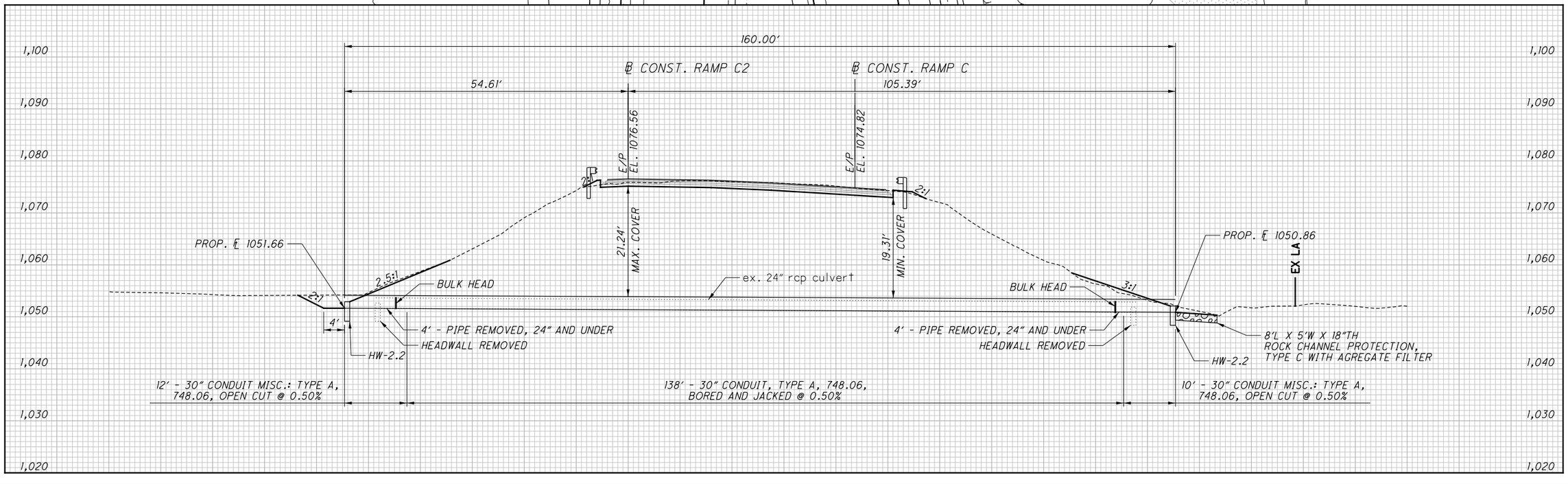
HYDRAULIC DESIGN DATA

DRAINAGE AREA	= 4.64	ACRES
Q(25)	= 16.6	CFS
Q(100)	= 19.7	CFS

PROPOSED STRUCTURE

CULVERT FILE NUMBER: 1985990
SIZE: 30"
TYPE: STEEL ROUND PIPE
LENGTH: 160.0'
DESIGN SERVICE LIFE: 75 YR.





HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED ATR
CHECKED PJF

CULVERT DETAIL
RAMP C-2 STA. 784+60.00

SUM-77 / 277 / 224
VARIOUS

920
1288

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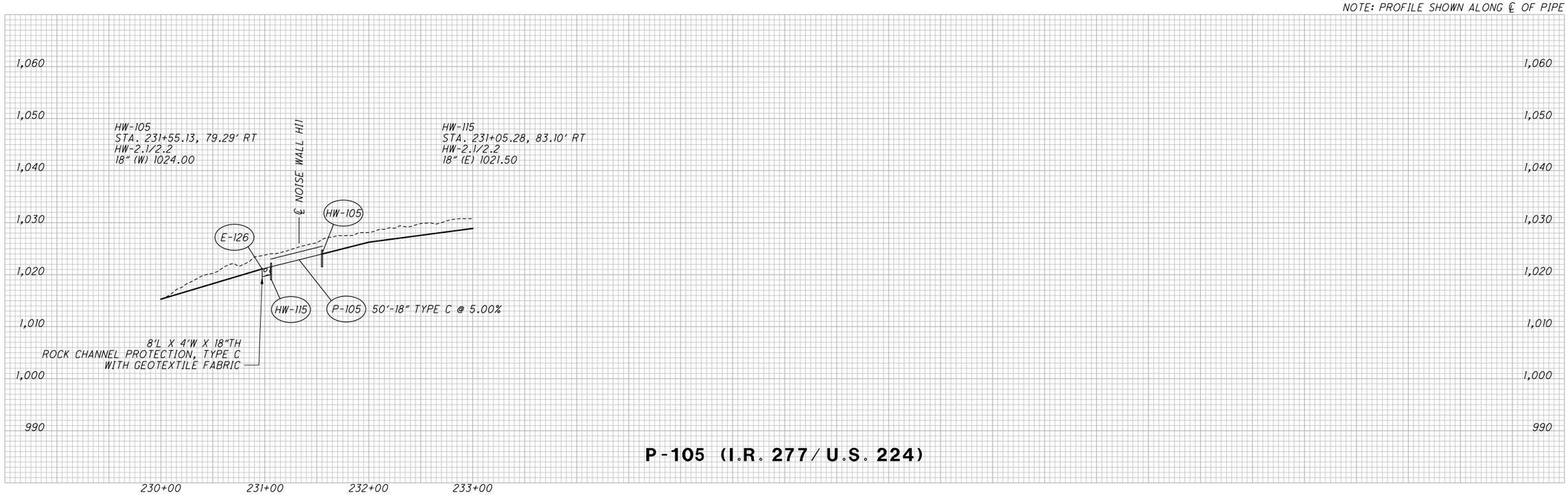
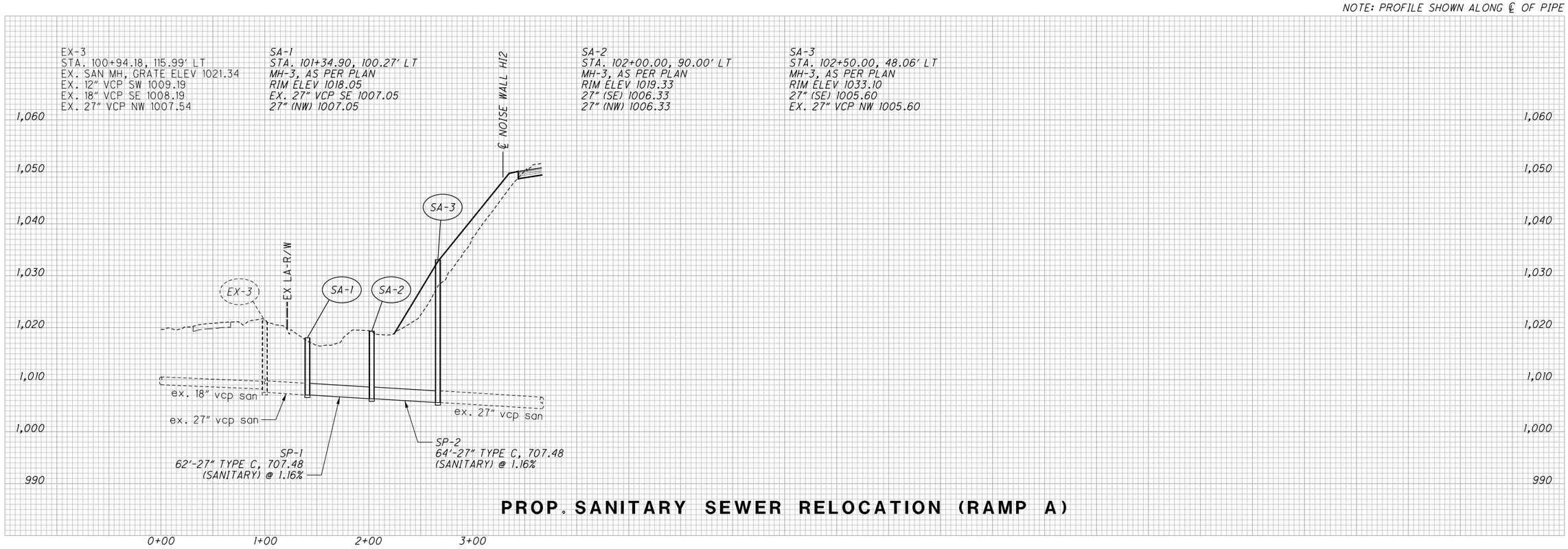
NOTE: PROFILE SHOWN ALONG ℄ OF PIPE



P-105 (I.R. 277/U.S. 224)

NOTE: PROFILE SHOWN ALONG ℄ OF PIPE



PROP. SANITARY SEWER RELOCATION (RAMP A)

CALCULATED CJC
CHECKED PJF

STORM AND SANITARY SEWER PROFILES

SUM-77/277/224
VARIOUS

921
1288

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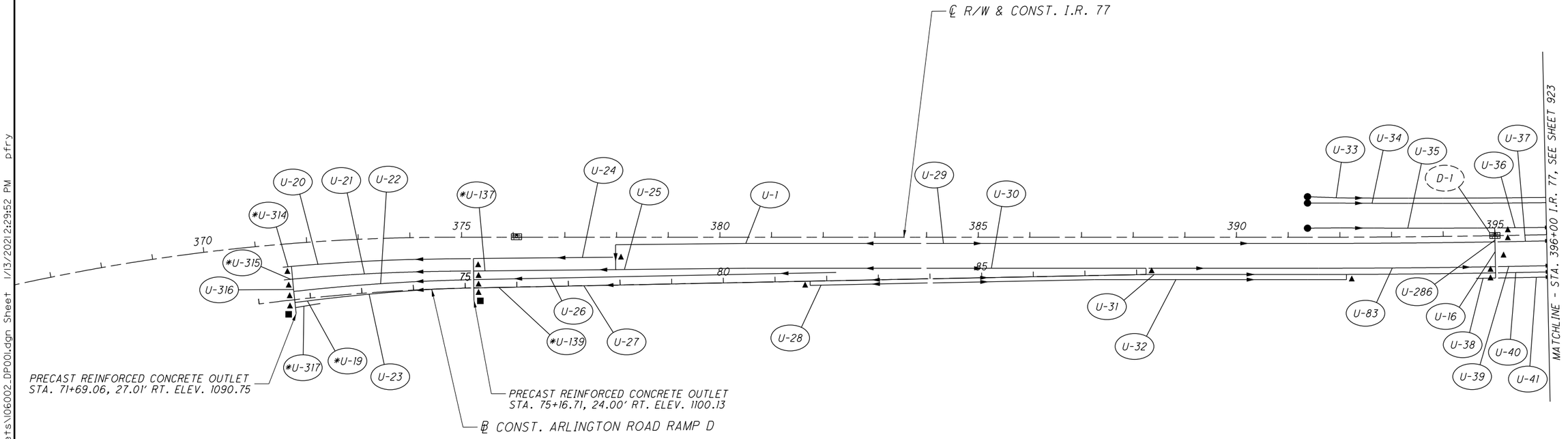
D-1
STA. 395+00.00, 3.17' LT
I-3-C1
GRATE LT
WINDOW ELEV LT 1100.12
WINDOW ELEV RT 1100.26
15" (N) 1094.79
6" UD (W) 1096.29
6" UD (E) 1096.29



(*U-#) SEE UNCLASSIFIED UNDERDRAIN TABLE FOR DATA ON THIS SHEET.

UNCLASSIFIED UNDERDRAIN TABLE

UD CODE	BEGIN			LENGTH	OUTLET			SLOPE
	STA.	OFFSET	ELEV.		STRUCT. NO.	STA.	ELEV.	
U-19	72+25.00	4.44	1091.36	55.87'	U-22	71+69.06	1090.85	0.91%
U-137	376+06.25	64.44	1101.80	83.12'	U-24	375+23.14	1101.06	0.88%
U-139	76+00.00	0.00	1101.16	83.29'	U-26	75+17.71	1100.20	1.16%
U-314	371+50.00	44.31	1094.01	16.72'	U-20	371+66.91	1093.72	1.73%
U-315	371+50.00	69.00	1091.69	16.80'	U-20	371+67.11	1091.43	1.55%
U-317	72+17.82	12.57	1091.97	48.67'	U-22	71+69.06	1090.80	2.40%

● CONNECT TO EXISTING UNDERDRAIN
▲ 6" TYPE B
■ 6" TYPE F

N

0 50 100 200
HORIZONTAL SCALE IN FEET

CALCULATED DRJ
CHECKED PJF

UNDERDRAIN PLAN
BEGIN TO STA. 396+00 I.R. 77

SUM-77 / 277 / 224
VARIOUS

922
1288

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D-2
STA. 397+50.00, 3.17' LT
I-3-C1
GRATE LT
WINDOW ELEV LT 1094.13
WINDOW ELEV RT 1094.15
15" (S) 1089.05
18" (N) 1088.80
6" UD (W) 1090.30
6" UD (E) 1090.30

D-3
STA. 400+00.00, 2.75' LT
I-3-B1
GRATE LT
WINDOW ELEV LT/RT 1087.86
18" (S) 1082.53
18" (N) 1082.53
6" UD (W) 1084.03
6" UD (E) 1084.03

D-4
STA. 402+50.00, 2.75' LT
I-3-B1
GRATE LT
WINDOW ELEV LT/RT 1081.57
18" (S) 1076.24
18" (N) 1076.24
6" UD (E) 1077.74
6" UD (W) 1077.74

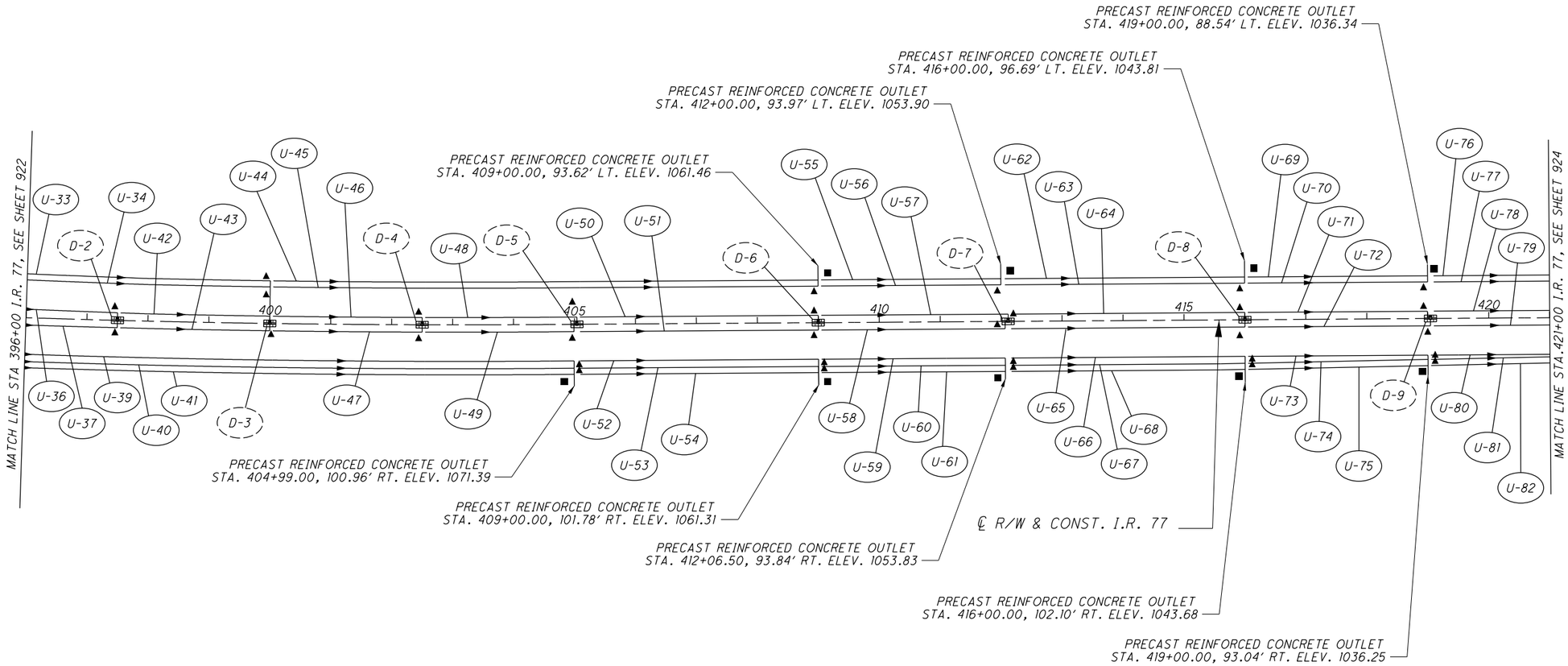
D-5
STA. 405+04.00, 2.75' LT
I-3-B1
GRATE LT
WINDOW ELEV LT/RT 1075.17
18" (S) 1070.09
21" (E) 1069.23
6" UD (W) 1071.34
6" UD (S) 1071.34

D-6
STA. 409+00.00, 2.75' LT
I-3-B1
GRATE ELEV LT/RT 1065.20
15" (N) 1059.87
6" UD (W) 1061.37
6" UD (E) 1061.37

D-7
STA. 412+11.50, 2.75' LT
I-3-B1
GRATE ELEV LT/RT 1057.36
15" (S) 1052.02
15" (E) 1049.00
6" UD (W) 1053.53
6" UD (S) 1053.53

D-8
STA. 416+00.00, 2.75' LT
I-3-B1
GRATE ELEV LT/RT 1047.58
15" (N) 1042.25
6" UD (W) 1043.75
6" UD (E) 1043.75

D-9
STA. 419+04.50, 2.75' LT
I-3-B1
GRATE ELEV LT/RT 1039.92
15" (S) 1035.09
15" (W) 1035.09
6" UD (S) 1036.09
6" UD (E) 1036.09



● CONNECT TO EXISTING UNDERDRAIN
▲ 6" TYPE B
■ 6" TYPE F

N

0 50 100 200 HORIZONTAL SCALE IN FEET

CALCULATED DRJ
CHECKED PJF

UNDERDRAIN PLAN
STA. 396+00 TO STA. 421+00

SUM-77 / 277 / 224
VARIOUS

923
1288

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D-10
STA. 422+00.00, 3.17' LT
I-3-C1
GRATE LT
WINDOW ELEV LT 1032.40
WINDOW ELEV RT 1032.32
15" (N) 1026.99
6" UD (W) 1028.57
6" UD (E) 1028.49

D-11
STA. 425+00.00, 3.17' LT
I-3-C1
GRATE LT
WINDOW ELEV LT 1024.66
WINDOW ELEV RT 1024.59
15" (S) 1019.09 "OFFSET"
15" (W) 1019.09
6" UD (N) 1020.67
6" UD (S) 1020.67
6" UD (E) 1020.59

D-12
STA. 428+50.00, 3.17' LT
I-3-C1
GRATE LT
WINDOW ELEV LT 1017.55
WINDOW ELEV RT 1017.52
15" (W) 1012.14
15" (S) 1012.14
6" UD (N) 1013.71
6" UD (S) 1013.71
6" UD (E) 1013.64

D-13
STA. 431+50.00, 3.17' RT
I-3-C1
GRATE RT
WINDOW ELEV LT 1015.06
WINDOW ELEV RT 1014.93
15" (N) 1009.49
6" UD (W) 1011.11
6" UD (E) 1010.99

D-14
STA. 432+50.00, 3.17' RT
I-3-C1
GRATE RT
WINDOW ELEV LT 1014.77
WINDOW ELEV RT 1014.62
15" (N) 1008.93
15" (S) 1008.93
15" (W) 1008.93
6" UD (N) 1010.94
6" UD (S) 1010.94
6" UD (E) 1010.79

D-15
STA. 433+50.00, 3.17' RT
I-3-C1
GRATE RT
WINDOW ELEV LT 1014.96
WINDOW ELEV RT 1014.76
15" (S) 1009.43
6" UD (W) 1011.13
6" UD (E) 1010.93

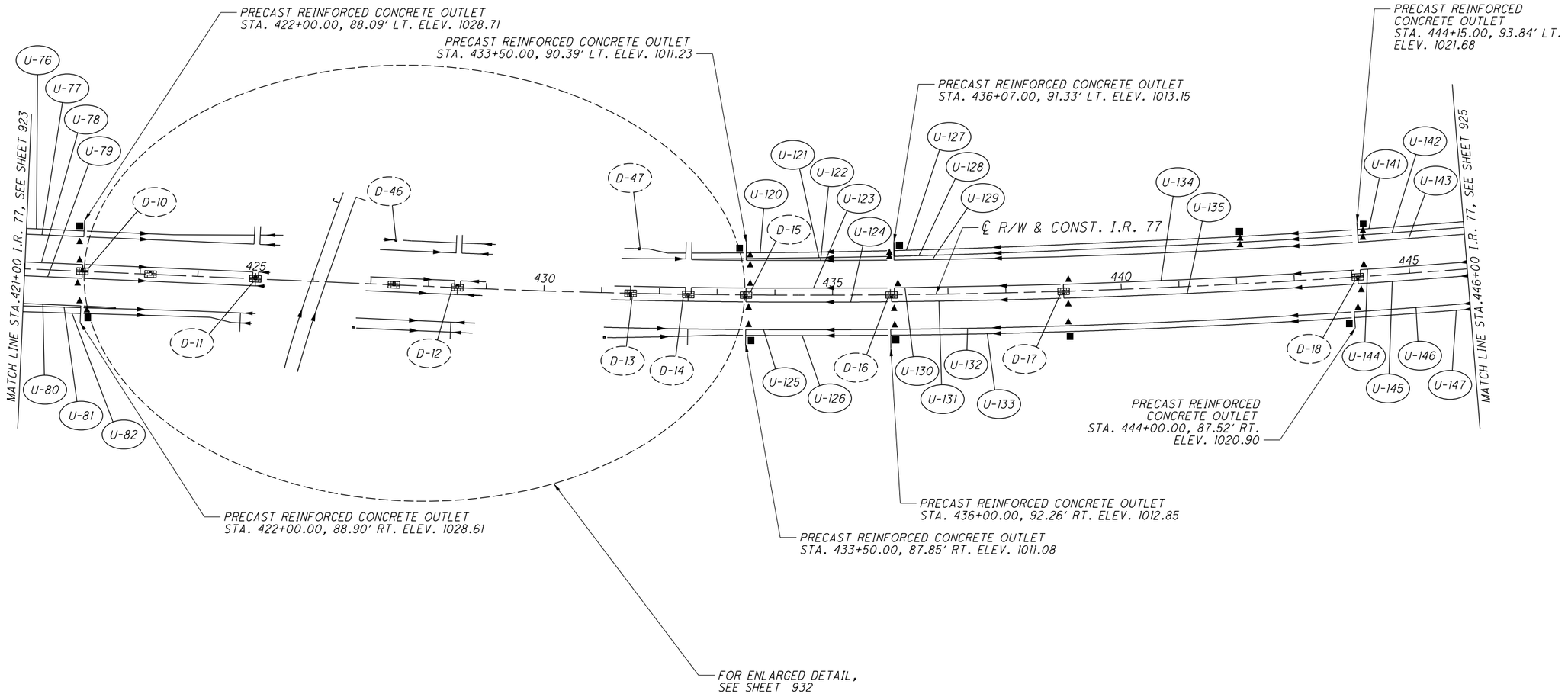
D-16
STA. 436+02.00, 3.17' RT
I-3-C1
GRATE RT
WINDOW ELEV LT 1016.93
WINDOW ELEV RT 1016.60
15" (N) 1011.52
15" (W) 1011.52
6" UD (N) 1013.10
6" UD (E) 1012.77

D-17
STA. 439+00.00, 3.17' RT
I-3-C1
GRATE RT
WINDOW ELEV LT 1020.09
WINDOW ELEV RT 1019.58
15" (S) 1014.25
6" UD (W) 1016.26
6" UD (E) 1015.75

D-18
STA. 444+10.00, 3.17' RT
I-3-C1
GRATE RT
WINDOW ELEV LT 1025.49
WINDOW ELEV RT 1024.68
15" (N) 1019.35
15" (W) 1019.35
6" UD (N) 1021.66
6" UD (E) 1020.85

D-46
STA 427+40.06, 77.78' LT
CB-3A, GRATE ELEV 1019.20
15" (W) 1014.87
6" UD (S) 1016.37

D-47
STA 431+63.18, 77.50' RT
CB-3A, GRATE ELEV 1014.84
15" (W) 1010.29
6" UD (S) 1012.01



● CONNECT TO EXISTING UNDERDRAIN
▲ 6" TYPE B
■ 6" TYPE F

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED DRJ
CHECKED PJF

UNDERDRAIN PLAN
STA. 421+00 TO STA. 446+00

SUM-77 / 277 / 224
VARIOUS

924
1288

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D-19
STA. 447+00.00, 3.17' RT
I-3-C1
GRATE RT
WINDOW ELEV LT 1028.57
WINDOW ELEV RT 1027.58
15" (S) 1022.25
6" UD (W) 1024.74
6" UD (E) 1023.75

D-20
STA. 450+02.00, 3.17' RT
I-3-C1
GRATE RT
WINDOW ELEV LT 1031.77
WINDOW ELEV RT 1030.61
15" (N) 1025.78
15" (E) 1025.78
6" UD (W) 1027.94
6" UD (N) 1026.77

D-21
STA. 453+00.00, 3.17' RT
I-3-C1
GRATE RT
WINDOW ELEV LT 1034.93
WINDOW ELEV RT 1033.48
15" (N) 1028.15
15" (S) 1028.15
6" UD (W) 1031.10
6" UD (E) 1029.65

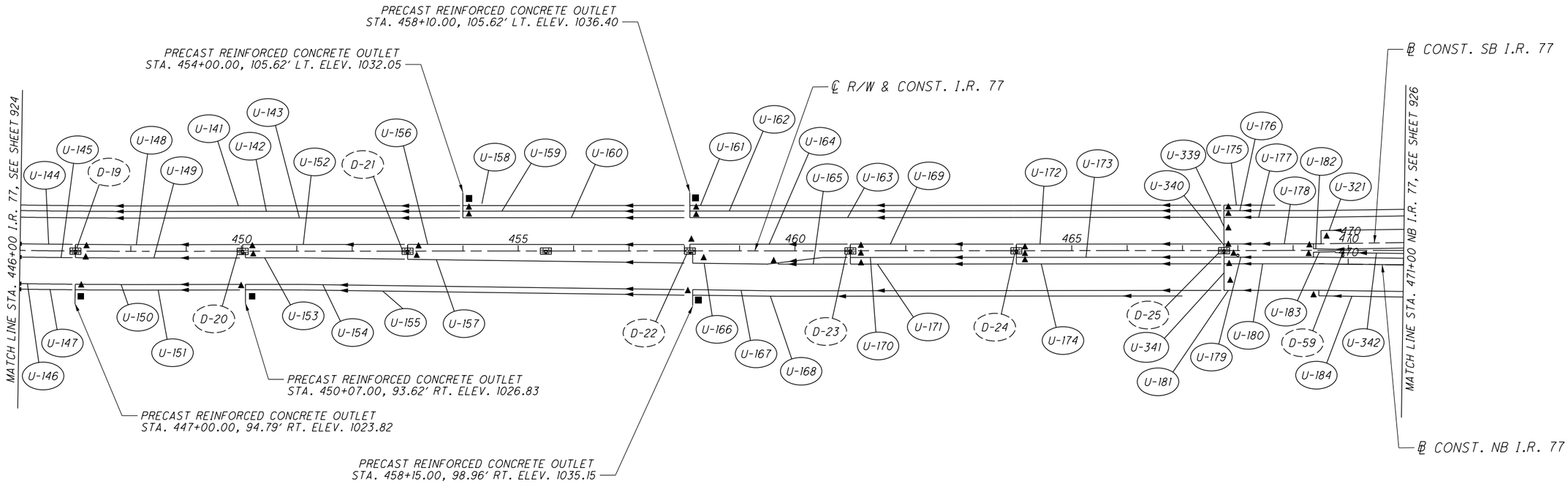
D-22
STA. 458+10.00, 3.17' RT
I-3-C1
GRATE RT
WINDOW ELEV LT 1040.33
WINDOW ELEV RT 1038.47
21" (N) 1033.89
24" (E) 1033.64
6" UD (W) 1036.50
6" UD (N) 1034.64

D-23
STA. 461+00.00, 3.17' RT
I-3-C1
GRATE LT
WINDOW ELEV LT 1043.41
WINDOW ELEV RT 1041.52
18" (N) 1036.44 "OFFSET"
21" (S) 1036.19
6" UD (W) 1039.58
6" UD (E) 1037.69

D-24
STA. 464+00.00, 3.17' RT
I-3-C1
GRATE RT
WINDOW LT ELEV 1046.33
WINDOW RT ELEV 1044.40
15" (N) 1039.32
18" (S) 1039.07 "OFFSET"
6" UD (W) 1042.50
6" UD (E) 1040.57

D-25
STA. 467+75.00, 3.17' RT
I-3-C1
GRATE RT
WINDOW LT ELEV 1048.94
WINDOW RT ELEV 1047.23
15" (N) 1042.40
15" (S) 1041.90
6" UD (W) 1045.11
6" UD (E) 1043.40

D-59
STA 469+90.00, 21.33' LT
CB-6, GRATE ELEV 1048.09
15" (E) 1044.44
6" UD (N) 1045.13



● CONNECT TO EXISTING UNDERDRAIN
▲ 6" TYPE B
■ 6" TYPE F

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED DRJ
CHECKED PJF

UNDERDRAIN PLAN
STA. 446+00 I.R. 77 TO STA. 471+00 NB I.R. 77

SUM-77 / 277 / 224
VARIOUS

925
1288

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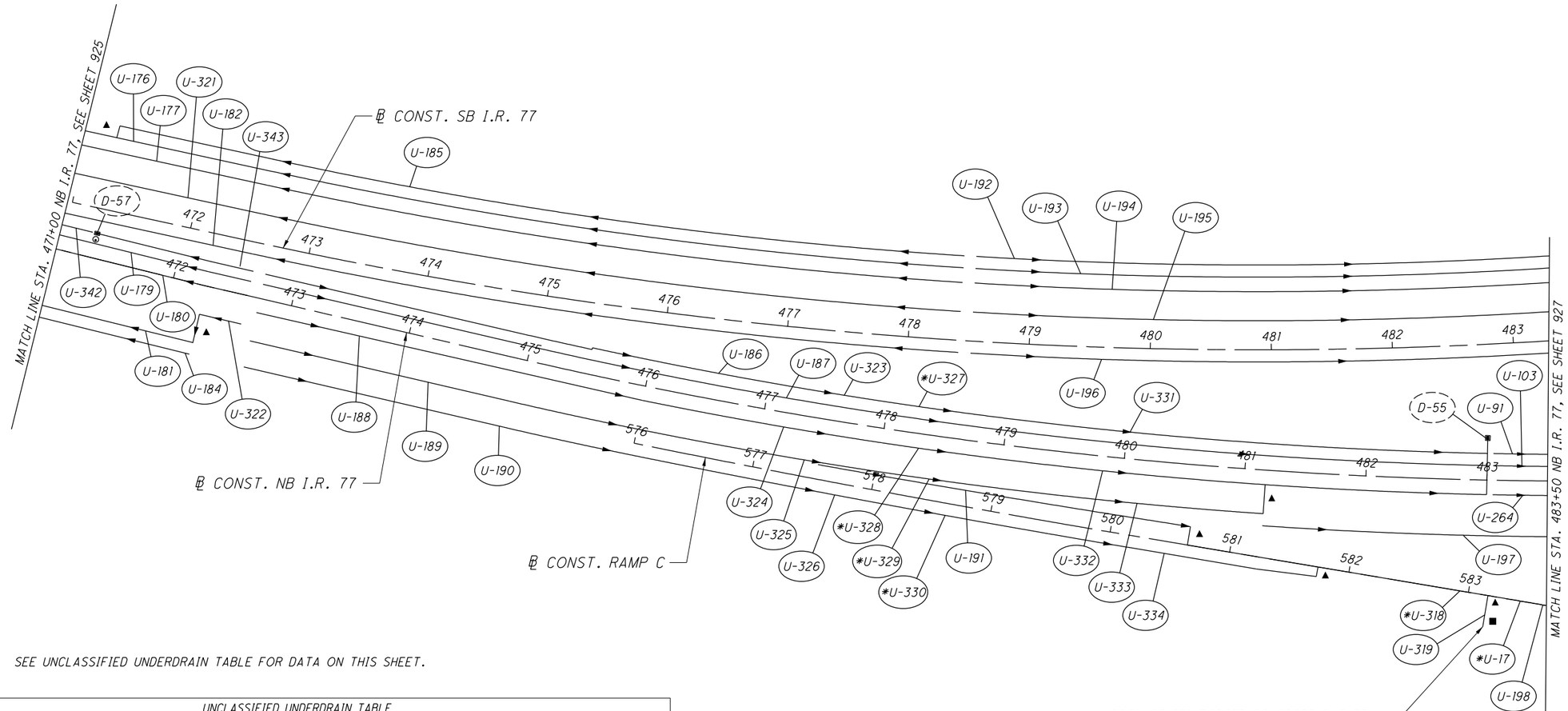
D-55
STA 483+00.00, 34.75' LT
CB-8, GRATE ELEV 1038.45
21" (N) 1035.45
6" UD (NE) 1036.67

D-57
STA 471+30.00, 21.33' LT
CB-6, GRATE ELEV 1048.52
15" (E) 1044.87
6" UD (N) 1045.56



*U-# SEE UNCLASSIFIED UNDERDRAIN TABLE FOR DATA ON THIS SHEET.

UNCLASSIFIED UNDERDRAIN TABLE

UD CODE	BEGIN			LENGTH	OUTLET			SLOPE
	STA.	OFFSET	ELEV.		STRUCT. NO.	STA.	ELEV.	
U-17	583+50.00	0.00	1040.67	33.60'	U-319	583+16.40	1040.27	1.19%
U-318	582+83.01	0.00	1040.47	33.39'	U-319	583+16.40	1040.27	0.60%
U-327	478+00.00	22.00	1042.15	149.15'	U-331	479+50.00	1041.73	0.28%
U-328	478+00.00	12.00	1043.69	150.46'	U-332	479+50.00	1043.27	0.28%
U-329	478+00.00	24.00	1044.77	151.38'	U-333	479+50.00	1044.35	0.28%
U-330	578+00.00	10.00	1044.68	150.12'	U-334	579+50.00	1044.48	0.13%

● CONNECT TO EXISTING UNDERDRAIN
▲ 6" TYPE B
■ 6" TYPE F

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DRJ
CHECKED PJF

UNDERDRAIN PLAN
STA. 471+00 TO STA. 483+50

SUM-77/277/224
VARIOUS

926
1288

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D-26
STA 286+00.00, 22.75' LT
CB-8, GRATE ELEV 1034.58
21" (N) 1031.58
21" (SE) 1031.58
6" UD (NE) 1032.58

D-40
STA 293+75.00, 12.00' LT
CB-3A, GRATE ELEV 1029.15
15" (NW) 1024.65
15" (SE) 1024.65
6" UD (NE) 1025.32
6" UD (NW) 1026.32
6" UD (SE) 1025.32

D-34
STA 495+00.30, 91.25' RT
CB-8, GRATE ELEV 1030.00
24" (SW) 1026.68
6" UD (NE) 1028.18
6" UD (SW) 1028.18

D-42
STA 494+00.00, 30.75' RT
CB-8, GRATE ELEV 1041.00
15" (SW) 1037.50
6" UD (SW) 1039.50

D-29
STA 493+16.33, 6.24' LT
MH-3, RIM ELEV 1031.40
21" (E) 1025.78
30" (NW) 1024.28
36" (SW) 1023.78
6" UD (NE) 1027.40

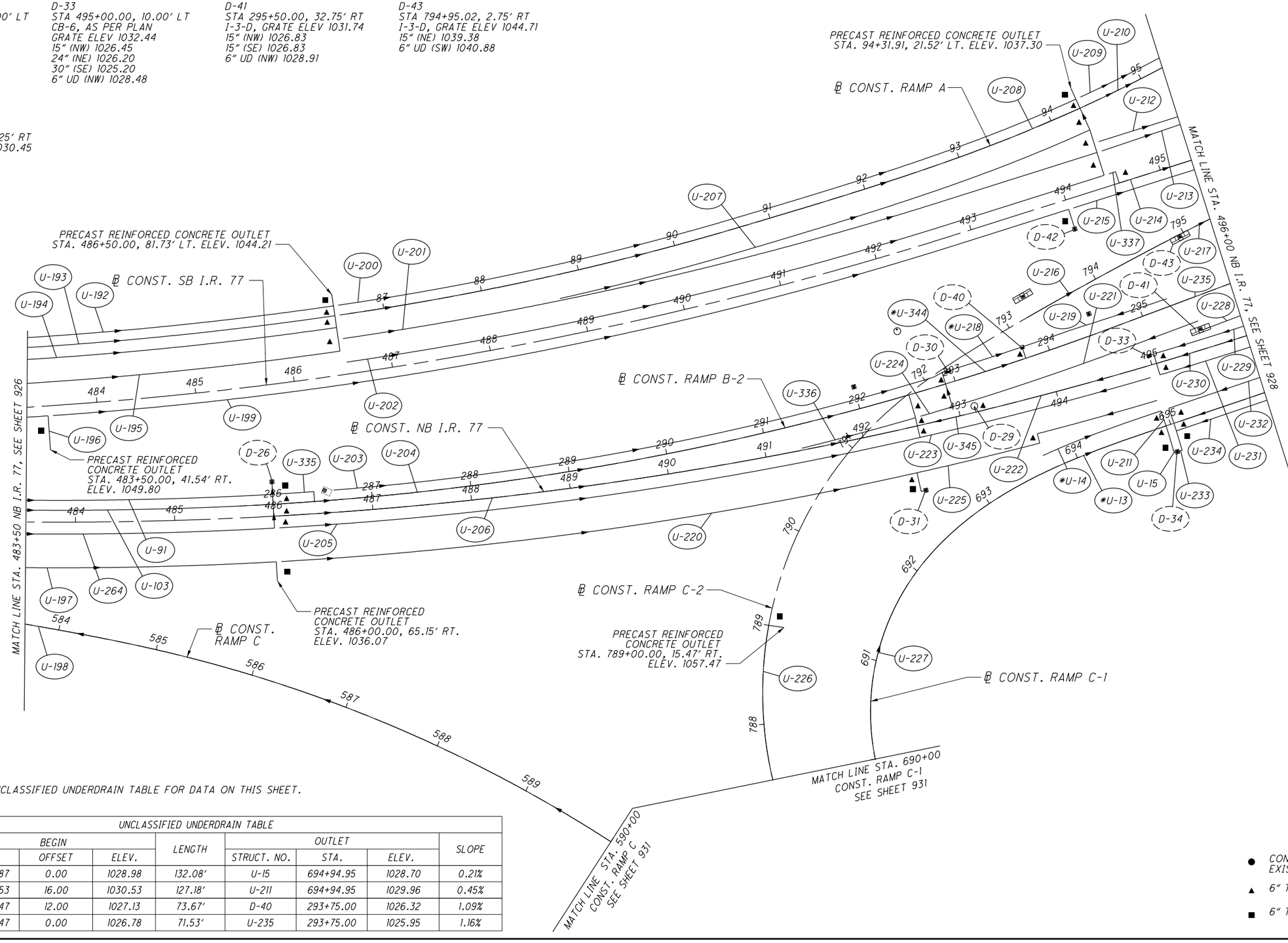
D-30
STA 292+96.00, 12.00' LT
CB-3, AS PER PLAN
GRATE ELEV 1028.95
15" (NW) 1024.15
36" (NE) 1023.65
36" (S) 1023.65
6" UD (SE) 1025.12

D-33
STA 495+00.00, 10.00' LT
CB-6, AS PER PLAN
GRATE ELEV 1032.44
15" (NW) 1026.45
24" (NE) 1026.20
30" (SE) 1025.20
6" UD (NW) 1028.48

D-41
STA 295+50.00, 32.75' RT
I-3-D, GRATE ELEV 1031.74
15" (NW) 1026.83
15" (SE) 1026.83
6" UD (NW) 1028.91

D-43
STA 794+95.02, 2.75' RT
I-3-D, GRATE ELEV 1044.71
15" (NE) 1039.38
6" UD (SW) 1040.88

D-31
STA 492+50.00, 65.25' RT
CB-8, GRATE ELEV 1030.45
21" (W) 1026.91
6" UD (SE) 1028.45



*U-# SEE UNCLASSIFIED UNDERDRAIN TABLE FOR DATA ON THIS SHEET.

UNCLASSIFIED UNDERDRAIN TABLE

UD CODE	BEGIN			LENGTH	OUTLET			SLOPE
	STA.	OFFSET	ELEV.		STRUCT. NO.	STA.	ELEV.	
U-13	693+62.87	0.00	1028.98	132.08'	U-15	694+94.95	1028.70	0.21%
U-14	693+69.53	16.00	1030.53	127.18'	U-211	694+94.95	1029.96	0.45%
U-218	293+03.47	12.00	1027.13	73.67'	D-40	293+75.00	1026.32	1.09%
U-344	293+03.47	0.00	1026.78	71.53'	U-235	293+75.00	1025.95	1.16%

● CONNECT TO EXISTING UNDERDRAIN
▲ 6" TYPE B
■ 6" TYPE F

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DRJ
CHECKED PJF

UNDERDRAIN PLAN
STA. 483+50 TO STA. 496+00

SUM-77 / 277 / 224
VARIOUS

927
1288

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D-36
STA 301+00.00, 45.64' RT
CB-8, GRATE ELEV 1035.24
15" (W) 1031.24
6" UD (NE) 1033.24
6" UD (SW) 1033.24

MATCH LINE STA. 101+50
CONST. RAMP A
SEE SHEET 930

℄ CONST. RAMP A

PRECAST REINFORCED
CONCRETE OUTLET
STA. 95+41.49, 21.52' LT.
ELEV. 1037.10

MATCH LINE STA. 250+00
CONST. I.R. 277
SEE SHEET 930

℄ CONST. RAMP B-1

PRECAST REINFORCED
CONCRETE OUTLET
STA. 406+97.01, 38.73' LT.
ELEV. 1031.62

PRECAST REINFORCED
CONCRETE OUTLET
STA. 498+00.00, 75.11' LT.
ELEV. 1036.93

℄ CONST. SB I.R 77

℄ CONST. RAMP C-2

PRECAST REINFORCED
CONCRETE OUTLET
STA. 503+00.00, 39.21' RT.
ELEV. 1032.83

℄ CONST. RAMP B-2

℄ CONST. NB I.R 77

℄ CONST. RAMP C-1

PRECAST REINFORCED
CONCRETE OUTLET
STA. 702+00.00, 26.45' RT.
ELEV. 1035.16

℄ CONST.
RAMP C-1

PRECAST REINFORCED
CONCRETE OUTLET
STA. 679+63.98, 21.66' LT.
ELEV. 1065.22

℄ R/W & CONST. I.R. 277/U.S. 224

PRECAST REINFORCED
CONCRETE OUTLET
STA. 257+05.96, 66.05' RT.
ELEV. 1064.00

PRECAST REINFORCED
CONCRETE OUTLET
STA. 906+88.49, 23.93' RT.
ELEV. 1038.83

℄ CONST. RAMP D

MATCH LINE STA. 496+00 NB I.R. 77, SEE SHEET 927

MATCH LINE STA. 508+50 NB I.R. 77, SEE SHEET 929

MATCH LINE STA. 258+00
CONST. I.R. 277
SEE SHEET 931

MATCH LINE STA. 899+50
CONST. RAMP D
SEE SHEET 931

U-209, U-210, U-212, U-213, U-214, U-215, U-217, U-231, U-232, U-233, U-234, U-235, U-236, U-237, U-238, U-239, U-240, U-241, U-242, U-243, U-244, U-245, U-246, U-247, U-248, U-249, U-250, U-251, U-252, U-252A, U-253, U-254, U-255, U-256, U-257, U-258, U-259, U-260, U-261, U-262, U-265, U-266, U-267, U-268, U-269, U-270, U-303

96, 97, 98, 99, 100, 104, 251, 252, 253, 254, 255, 256, 257, 679, 680, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 422, 423, 427, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 796, 797, 798, 799, 800, 801, 697, 698, 699, 700, 701, 702, 903, 904, 905, 906, 907, 908, 900, 901, 902

- ● CONNECT TO EXISTING UNDERDRAIN
- ▲ 6" TYPE B
- ■ 6" TYPE F

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DRJ
CHECKED PJF

UNDERDRAIN PLAN
STA. 496+00 TO STA. 508+50

SUM-77/277/224
VARIOUS

928
1288

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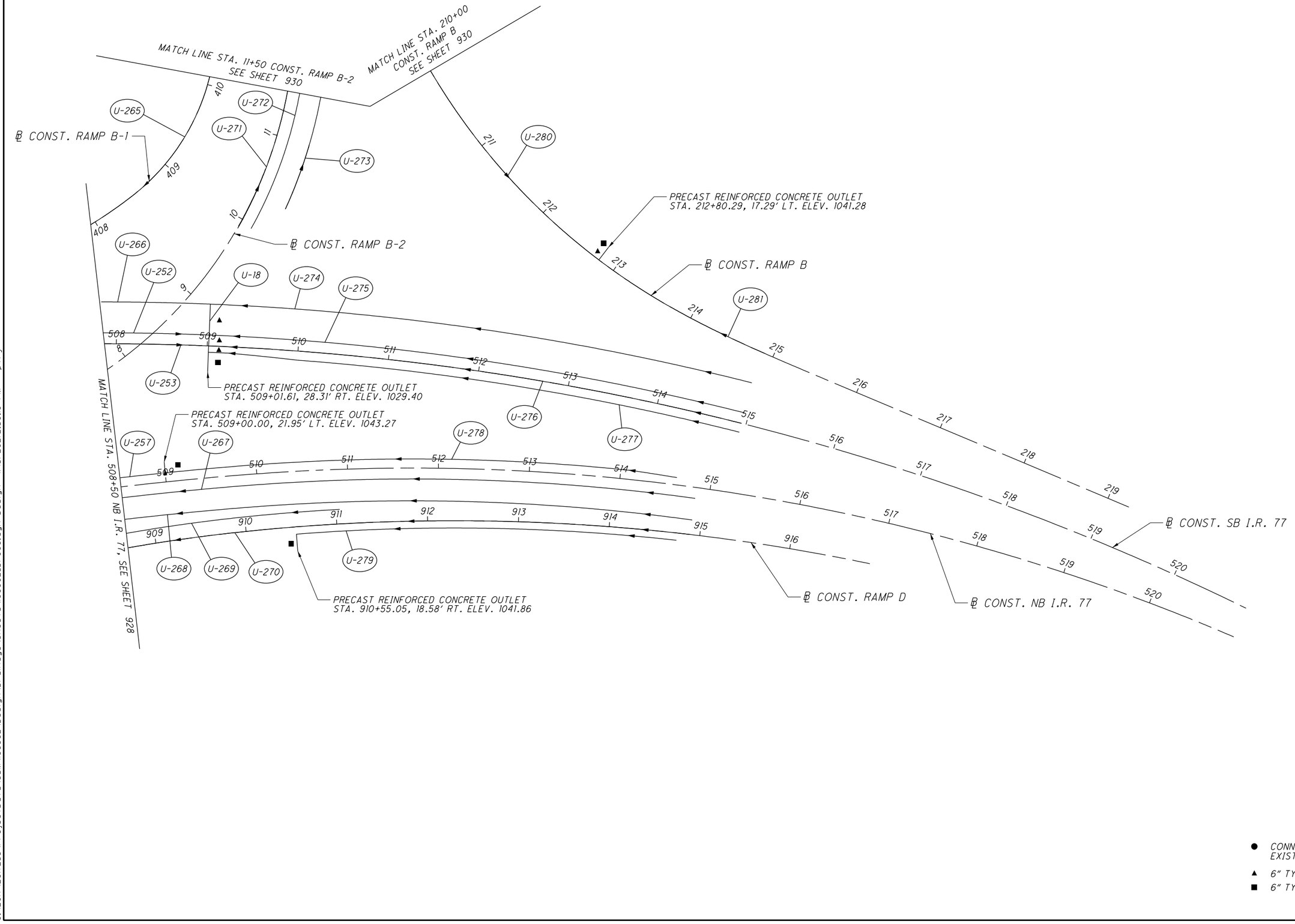

- ● CONNECT TO EXISTING UNDERDRAIN
- ▲ 6" TYPE B
- ■ 6" TYPE F

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DRJ
CHECKED PJF

UNDERDRAIN PLAN
STA. 508+50 TO END

SUM-77 / 277 / 224
VARIOUS

929
1288

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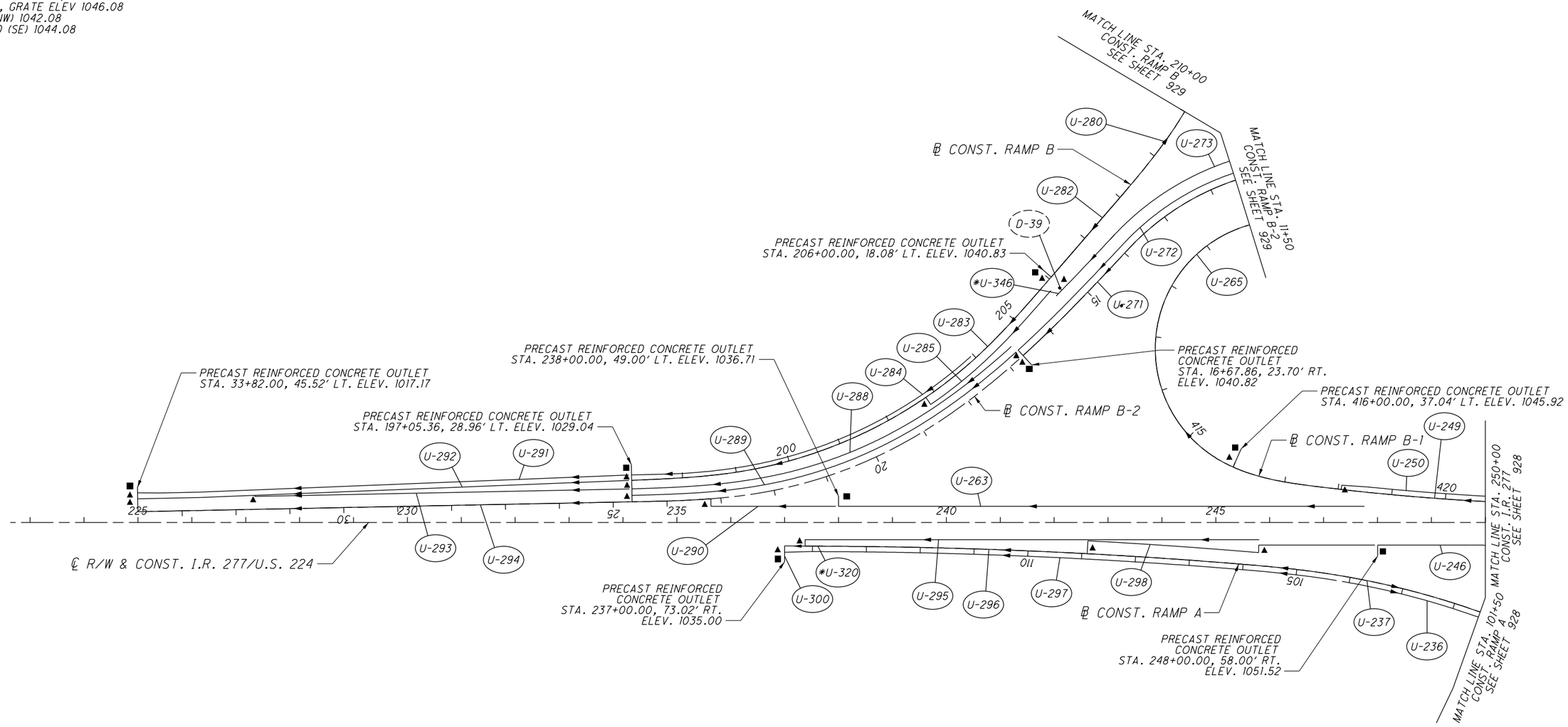
D-39
STA 206+00.00, 25.10' RT
CB-8, GRATE ELEV 1046.08
15" (NW) 1042.08
6" UD (SE) 1044.08



(*U-#) SEE UNCLASSIFIED UNDERDRAIN TABLE FOR DATA ON THIS SHEET.

UNCLASSIFIED UNDERDRAIN TABLE

UD CODE	BEGIN			LENGTH	OUTLET			SLOPE
	STA.	OFFSET	ELEV.		STRUCT. NO.	STA.	ELEV.	
U-320	113+50.00	0.00	1035.83	101.65'	U-300	237+00.00	1035.25	0.57%
U-346	15+45.66	37.00	1044.49	15.09'	U-273	15+30.60	1044.30	1.26%

● CONNECT TO EXISTING UNDERDRAIN
▲ 6" TYPE B
■ 6" TYPE F

N

HORIZONTAL SCALE IN FEET
0 25 100 100

CALCULATED DRJ
CHECKED PJF

UNDERDRAIN PLAN
BEGIN TO STA. 250+00 I.R. 277/U.S. 224

SUM-77/277/224
VARIOUS

930
1288

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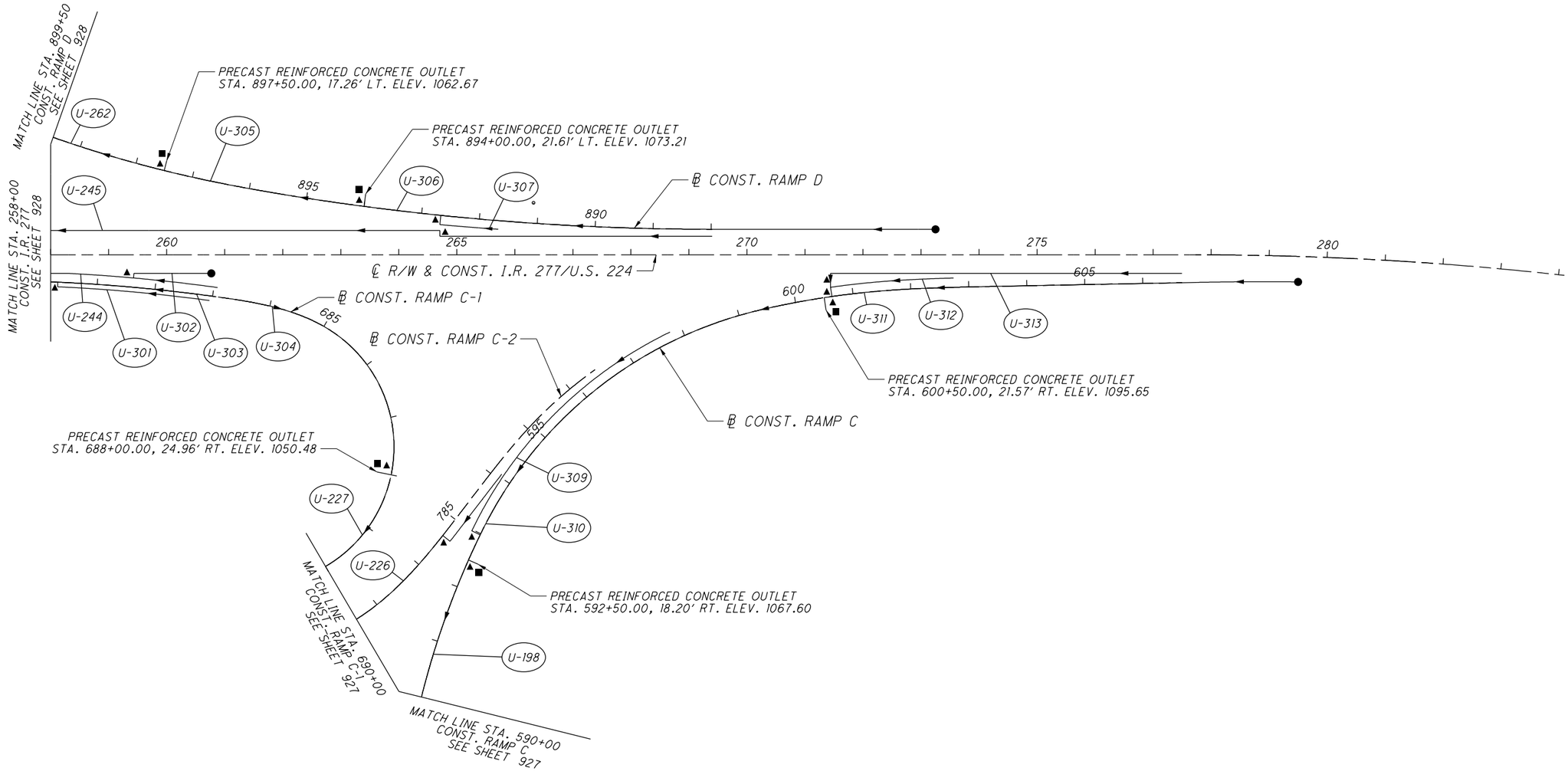

N

0 50 100 200
HORIZONTAL SCALE IN FEET

CALCULATED DRJ
CHECKED PJF

UNDERDRAIN PLAN
STA. 258+000 TO END

SUM-77 / 277 / 224
VARIOUS

931
1288

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D-10
STA. 422+00.00, 3.17' LT
I-3-C1
GRATE LT
WINDOW ELEV LT 1032.40
WINDOW ELEV RT 1032.32
15" (N) 1026.99
6" UD (W) 1028.57
6" UD (E) 1028.49

D-12
STA. 428+50.00, 3.17' LT
I-3-C1
GRATE LT
WINDOW ELEV LT 1017.55
WINDOW ELEV RT 1017.52
15" (W) 1012.14
15" (S) 1012.14
6" UD (N) 1013.71
6" UD (S) 1013.71
6" UD (E) 1013.64

D-14
STA. 432+50.00, 3.17' RT
I-3-C1
GRATE RT
WINDOW ELEV LT 1014.77
WINDOW ELEV RT 1014.62
15" (N) 1008.93
15" (S) 1008.93
15" (W) 1008.93
6" UD (N) 1010.94
6" UD (S) 1010.94
6" UD (E) 1010.79

D-15
STA. 433+50.00, 3.17' RT
I-3-C1
GRATE RT
WINDOW ELEV LT 1014.96
WINDOW ELEV RT 1014.76
15" (S) 1009.43
6" UD (W) 1011.13
6" UD (E) 1010.93

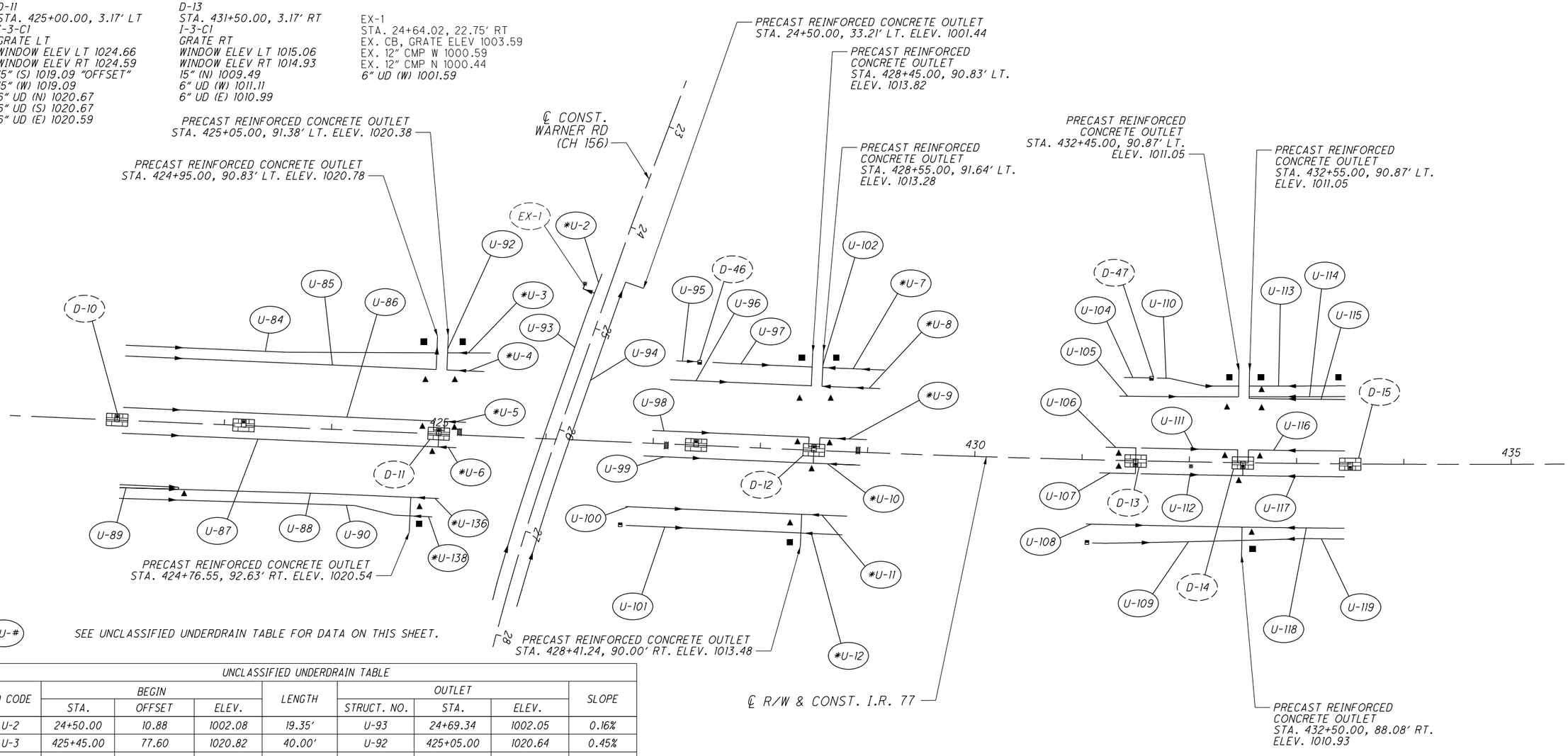
D-46
STA 427+40.06, 77.78' LT
CB-3A, GRATE ELEV 1019.20
15" (W) 1014.87
6" UD (S) 1016.37

D-47
STA 431+63.18, 77.50' RT
CB-3A, GRATE ELEV 1014.84
15" (W) 1010.29
6" UD (S) 1012.01

D-11
STA. 425+00.00, 3.17' LT
I-3-C1
GRATE LT
WINDOW ELEV LT 1024.66
WINDOW ELEV RT 1024.59
15" (S) 1019.09 "OFFSET"
15" (W) 1019.09
6" UD (N) 1020.67
6" UD (S) 1020.67
6" UD (E) 1020.59

D-13
STA. 431+50.00, 3.17' RT
I-3-C1
GRATE RT
WINDOW ELEV LT 1015.06
WINDOW ELEV RT 1014.93
15" (N) 1009.49
6" UD (W) 1011.11
6" UD (E) 1010.99

EX-1
STA. 24+64.02, 22.75' RT
EX. CB, GRATE ELEV 1003.59
EX. 12" CMP W 1000.59
EX. 12" CMP N 1000.44
6" UD (W) 1001.59



*U-# SEE UNCLASSIFIED UNDERDRAIN TABLE FOR DATA ON THIS SHEET.

UNCLASSIFIED UNDERDRAIN TABLE

UD CODE	BEGIN			LENGTH	OUTLET			SLOPE
	STA.	OFFSET	ELEV.		STRUCT. NO.	STA.	ELEV.	
U-2	24+50.00	10.88	1002.08	19.35'	U-93	24+69.34	1002.05	0.16%
U-3	425+45.00	77.60	1020.82	40.00'	U-92	425+05.00	1020.64	0.45%
U-4	425+40.00	60.00	1021.11	35.00'	U-92	425+05.00	1020.97	0.40%
U-5	425+25.00	12.00	1021.48	20.00'	D-11	425+05.00	1020.97	2.55%
U-6	425+17.00	12.00	1021.60	17.00'	U-87	425+00.00	1021.01	3.47%
U-7	429+13.26	77.50	1014.15	57.94'	U-102	428+55.00	1013.66	0.85%
U-8	42+09.41	60.00	1014.36	54.18'	U-102	428+55.00	1014.06	0.55%
U-9	428+98.93	12.00	1014.49	43.89'	D-12	428+55.00	1014.06	0.98%
U-10	428+95.87	12.00	1014.48	43.75'	U-99	428+50.00	1014.06	0.96%
U-11	428+83.33	60.00	1014.62	42.27'	U-100	428+41.24	1014.19	1.02%
U-12	428+79.56	77.50	1014.49	38.53'	U-100	428+41.24	1013.86	1.64%
U-136	425+02.71	60.00	1021.95	26.16'	U-88	424+76.55	1021.58	1.41%
U-138	424+97.21	77.33	1021.88	20.65'	U-88	424+76.55	1021.30	2.81%

● CONNECT TO EXISTING UNDERDRAIN
▲ 6" TYPE B
■ 6" TYPE F

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DRJ
CHECKED PJF

UNDERDRAIN PLAN AND ENLARGED DETAIL

SUM-77 / 277 / 224
VARIOUS

932
1288

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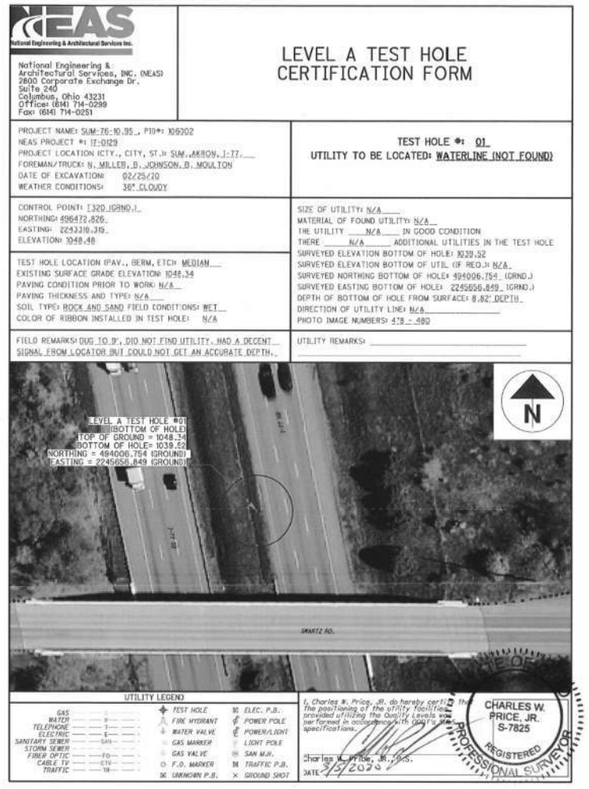
CALCULATED ATR
CHECKED PJF

HOLE CERTIFICATION*

TEST HO

SUM-77/277/224
VARIOUS

933
1288



National Engineering & Architectural Services Inc.

National Engineering & Architectural Services, INC. (NEAS)
2800 Corporate Exchange Dr.
Suite 240
Columbus, Ohio 43231
Office: (614) 714-0299
Fax: (614) 714-0251

LEVEL A TEST HOLE CERTIFICATION FORM

PROJECT NAME: SUM-76-10.95 , PID#: 106302
NEAS PROJECT #: 17-0129
PROJECT LOCATION (CITY, CITY, ST.): SUM.,AKRON, I-77
FOREMAN/TRUCK: N. MILLER, B. JOHNSON, D. MOULTON
DATE OF EXCAVATION: 02/25/20
WEATHER CONDITIONS: 36° CLOUDY

TEST HOLE #: 01
UTILITY TO BE LOCATED: WATERLINE (NOT FOUND)

CONTROL POINT: 1320 (GRND.)
NORTHING: 496472.826
EASTING: 2243318.319
ELEVATION: 1048.48

SIZE OF UTILITY: N/A
MATERIAL OF FOUND UTILITY: N/A
THE UTILITY N/A IN GOOD CONDITION
THERE N/A ADDITIONAL UTILITIES IN THE TEST HOLE
SURVEYED ELEVATION BOTTOM OF HOLE: 1039.52
SURVEYED ELEVATION BOTTOM OF UTIL. OF REQ.D: N/A
SURVEYED NORTHING BOTTOM OF HOLE: 494006.754 (GRND.)
SURVEYED EASTING BOTTOM OF HOLE: 2245656.849 (GRND.)
DEPTH OF BOTTOM OF HOLE FROM SURFACE: 8.82' DEPTH
DIRECTION OF UTILITY LINE: N/A
PHOTO IMAGE NUMBERS: 478 - 480

TEST HOLE LOCATION (PAV., BERM, ETC): MEDIAN
EXISTING SURFACE GRADE ELEVATION: 1048.34
PAVING CONDITION PRIOR TO WORK: N/A
PAVING THICKNESS AND TYPE: N/A
SOIL TYPE: ROCK AND SAND FIELD CONDITIONS: WET
COLOR OF RIBBON INSTALLED IN TEST HOLE: N/A

UTILITY REMARKS:

FIELD REMARKS: DUG TO 9', DID NOT FIND UTILITY. HAD A DECENT SIGNAL FROM LOCATOR BUT COULD NOT GET AN ACCURATE DEPTH.

LEVEL A TEST HOLE #01
@BOTTOM OF HOLE
TOP OF GROUND = 1048.34
BOTTOM OF HOLE= 1039.52
NORTHING = 494006.754 (GROUND)
EASTING = 2245656.849 (GROUND)

N

SMARTZ RD.

UTILITY LEGEND

GAS
WATER
TELEPHONE
ELECTRIC
SANITARY SEWER
STORM SEWER
FIBER OPTIC
CABLE TV
TRAFFIC

TEST HOLE
FIRE HYDRANT
WATER VALVE
GAS MARKER
GAS VALVE
F.O. MARKER
UNKNOWN P.B.

ELEC. P.B.
POWER POLE
POWER/LIGHT
LIGHT POLE
SAN M.H.
TRAFFIC P.B.
GROUND SHOT

I, Charles W. Price, JR. do hereby certify that the positioning of the utility facilities was provided utilizing the Quality Levels as performed in accordance with CI/ASCE 38-02 specifications.

Charles W. Price, JR. P.S.

DATE: 3/5/2020

CHARLES W. PRICE, JR. S-7825 REGISTERED PROFESSIONAL SURVEYOR

TRAFFIC CONTROL LEGEND	
→	TRAFFIC FLOW
◇	PROPOSED SIGN
◇	EXISTING SIGN TO BE REMOVED AND REERECTED
◇	EXISTING SIGN TO REMAIN
◇	EXISTING SIGN TO BE REMOVED
⊤	SIGN SUPPORT
▭▭	PROPOSED TRUSS SIGN SUPPORT
▭—	PROPOSED CANTILEVER SIGN SUPPORT
▭----▭	EXISTING TRUSS SIGN SUPPORT TO REMAIN
▭------	EXISTING CANTILEVER SIGN SUPPORT TO REMAIN
■	RPM (RAISED PAVEMENT MARKER)
R-#	EXISTING SIGN TO BE REMOVED
S-#	PROPOSED SIGN
OSS-#	OVERHEAD SIGN SUPPORT
CDS	CENTER LINE, DOUBLE SOLID
EW	EDGE LINE, WHITE
EY	EDGE LINE, YELLOW
LL	LANE LINE
CH	CHANNELIZING LINE
CV	CHEVRON MARKING, WHITE
LR	LANE REDUCTION ARROW

ITEM 630 - SIGN, FLAT SHEET, AS PER PLAN

THE "BRIDGE ICES BEFORE ROAD" SIGN (W8-13-48) SIGN SHALL BE HINGED.

PAYMENT FOR ITEM 630 - SIGN, FLAT SHEET, AS PER PLAN SHALL BE MADE AT THE CONTRACT UNIT PRICE BID PER SQUARE FOOT. PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND ALL PARTS NECESSARY FOR ONE SIGN.

ITEM 630 - REMOVAL OF MISCELLANEOUS TRAFFIC CONTROL ITEM, BARRIER MOUNTED SIGN SUPPORT BRACKET

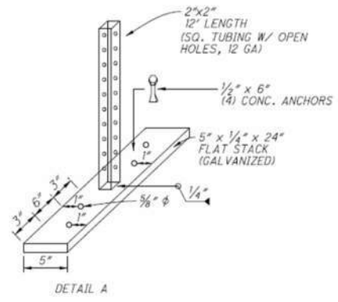
THE CONTRACTOR SHALL REMOVE THE EXISTING BRACKET CONNECTING THE POST TO THE MEDIAN BARRIER.

PAYMENT FOR ITEM 630 - REMOVAL OF MISCELLANEOUS TRAFFIC CONTROL ITEM, BARRIER MOUNTED SIGN SUPPORT BRACKET SHALL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH. PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND ALL PARTS NECESSARY FOR ONE BRACKET.

ITEM 630 - SIGN SUPPORT ASSEMBLY, BARRIER MOUNTED, AS PER PLAN

THE CONTRACTOR SHALL USE CONCRETE BARRIER MOUNTED SIGN SUPPORTS, AS PER THE DETAIL BELOW.

THE ABOVE WORK SHALL BE PAID FOR UNDER ITEM 630 - SIGN SUPPORT ASSEMBLY, BARRIER MOUNTED, AS PER PLAN AND SHALL INCLUDE ALL LABOR, BRACKETS AND MATERIALS REQUIRED TO COMPLETE THIS WORK.

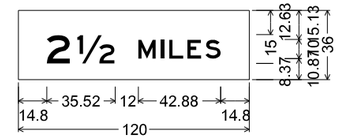


DETAIL A

ITEM 630 - SIGN, PERMANENT OVERLAY, AS PER PLAN

THE CONTRACTOR SHALL VERIFY THE OVERLAY SIGN SIZE PRIOR TO ORDERING THE SIGN TO ENSURE PROPER SIZE.

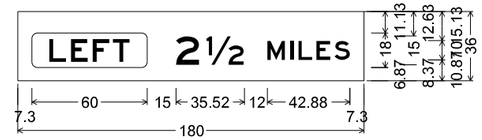
IN ADDITION TO THE OVERLAY SIGN, PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND ALL PARTS NECESSARY TO INSTALL THE SIGN OVERLAY ONTO THE EXISTING OVERHEAD SIGN.



No border, White on Green;
"2½", E; "MILES", E;
Table of letter and object lefts

2	½
14.80	30.62

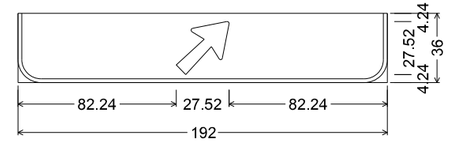
M	I	L	E	S
62.32	74.12	78.42	87.82	97.23

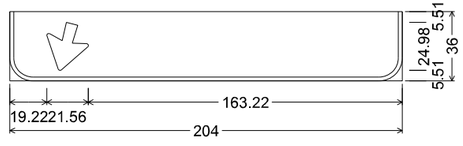


No border, White on Green;
Rounded Rectangle 3.00" Radius Yellow;
"2½", E; "MILES", E;
Table of letter and object lefts

▭	2	½
7.30	82.30	98.12

M	I	L	E	S
129.82	141.62	145.92	155.32	164.73





OVERLAY SIGN CAD DETAILS
NTS

REFERENCE LOCATION SIGNS

THE LOCATION OF REFERENCE LOCATION SIGNS ON THE PLANS ARE APPROXIMATE AND A 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 - REMOVAL OF MISCELLANEOUS TRAFFIC CONTROL ITEM, BEAM SUPPORT FOUNDATION

A CONTINGENCY QUANTITY HAS BEEN PROVIDED FOR THIS WORK TO BE USED FOR REMOVAL OF BEAM SUPPORT FOUNDATIONS, AS DIRECTED BY THE ENGINEER, WHEREVER NEEDED THROUGHOUT THE PROJECT.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 630 - REMOVAL OF MISCELLANEOUS TRAFFIC CONTROL ITEM, BEAM SUPPORT FOUNDATION, 16 EACH

CALCULATED DLS CHECKED AKF

TRAFFIC CONTROL NOTES

SUM-77 / 277 / 224
VARIOUS

934
1288

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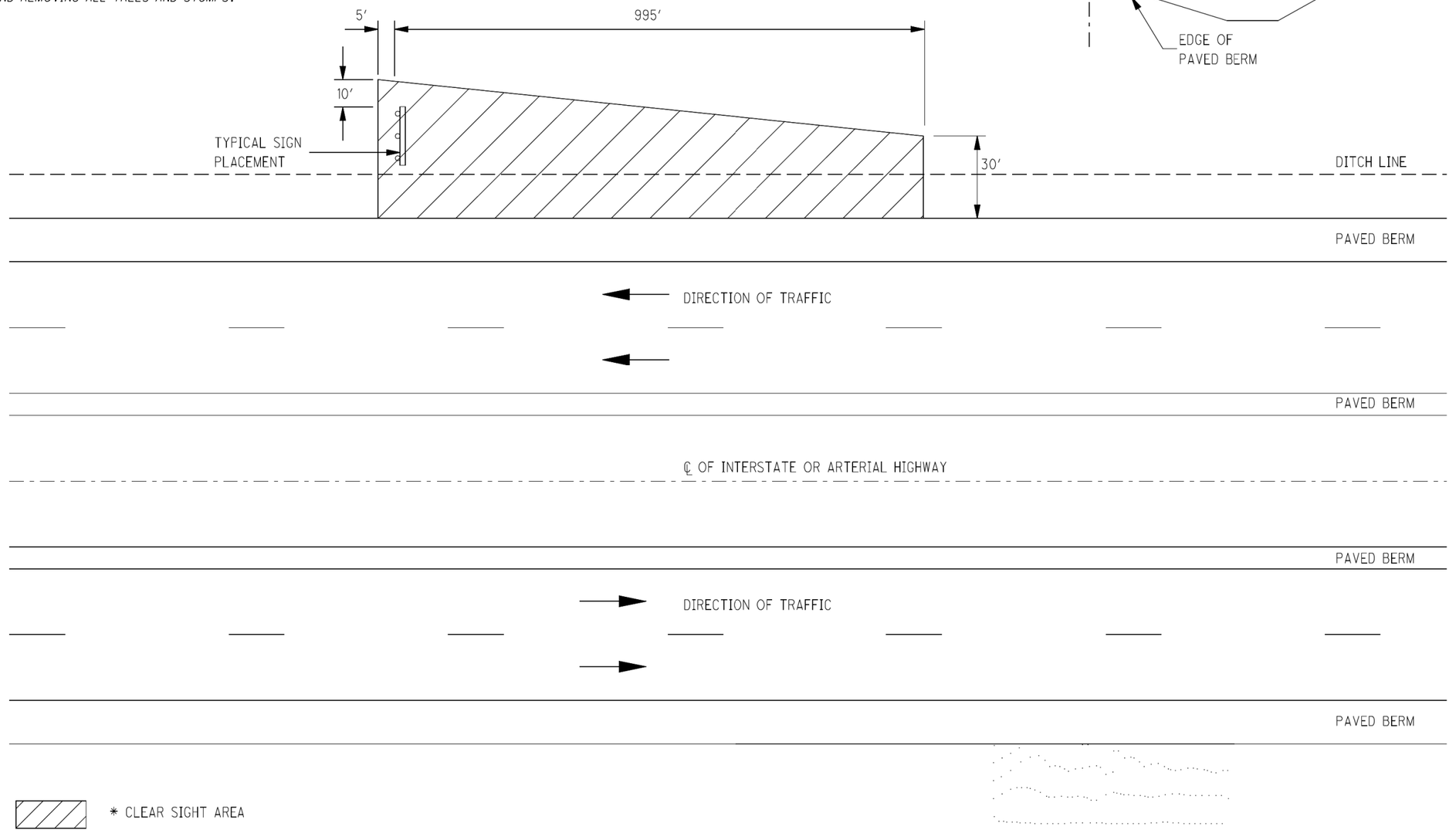
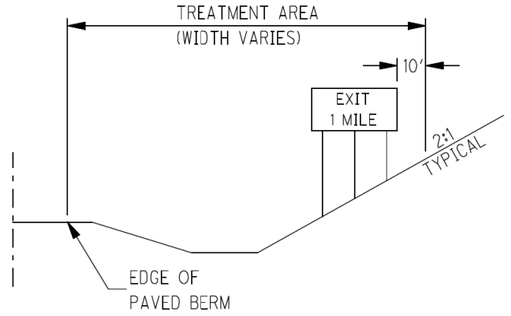
ITEM SPECIAL, CLEARING AND GRUBBING

THIS ITEM IS INTENDED TO BE USED TO CLEAR ALL GROWTH IN FRONT OF HIGHWAY SIGNS THAT MAY IMPEDE ITS VIEWING BY MOTORISTS. IN ADDITION TO THE REQUIREMENTS OF 201. THE CONTRACTOR WILL REMOVE STUMPS AT LEAST 6 INCHES BELOW GROUND SURFACE AND THE WORK NOT INCLUDE SCALPING. THE AREA TO BE CLEARED AND GRUBBED WILL BE DELINEATED IN THE WORK ORDER. PAYMENT WILL BE AT THE UNIT BID PRICE PER ACRE CLEARED AND GRUBBED AND WILL INCLUDE BACKFILLING HOLES AND REMOVING ALL TREES AND STUMPS.





* CLEAR SIGHT AREA

* PAY QUANTITY IS BASED ONLY ON ACTUAL AREAS MEASURED WHERE BRUSH CUTTING HAS BEEN PERFORMED WITHIN THE CLEAR SIGHT AREA.

BRUSH CUT AND TREATED DETAIL

CALCULATED
CHECKED

CALCULATED DLS
CHECKED AKF

TRAFFIC CONTROL NOTES

SUM-77/277/224
VARIOUS

935
1288

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W:\I-Drive_Stds\d04_Pref\clear_grub_app.dgn 07-NOV-2006 11:04AM tpowell2

SHEETS											PART.		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
407	934	935	938	939	947	953	957	959			01/IMS/PV	02/IMS/PV						
		LS									LS	LS	SPECIAL	201E99000	LS		CLEARING AND GRUBBING	935
			904	382							1157	129	621	00100	1286	EACH	RPM	
			904	382							1157	129	621	54000	1286	EACH	RAISED PAVEMENT MARKER REMOVED	
								19			17	2	625	32000	19	EACH	GROUND ROD	
266											239	27	626	00102	266	EACH	BARRIER REFLECTOR, TYPE 1, ONE-WAY	
4											4	0	626	00102	4	EACH	BARRIER REFLECTOR, TYPE 1, BI-DIRECTIONAL	
450											405	45	626	00112	450	EACH	BARRIER REFLECTOR, TYPE 3, ONE-WAY	
6											5	1	626	00112	6	EACH	BARRIER REFLECTOR, TYPE 3, BI-DIRECTIONAL	
							266.3				239.7	26.6	630	02100	266.3	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
							1923.1				1730.8	192.3	630	03100	1923.1	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
							219.0				197.1	21.9	630	04100	219.0	FT	GROUND MOUNTED SUPPORT, NO. 4 POST	
								144.6			130.1	14.5	630	06400	144.6	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, S4X7.7	
								364.9			328.4	36.5	630	06500	364.9	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W6X9	
								96.2			86.6	9.6	630	07500	96.2	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X22	
								126.7			114.0	12.7	630	07600	126.7	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X12	
							54				49	5	630	08600	54	EACH	SIGN POST REFLECTOR	
								38			34	4	630	09000	38	EACH	BREAKAWAY STRUCTURAL BEAM CONNECTION	
								2			2	0	630	72320	2	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.31, DESIGN 6	
								1			1	0	630	72330	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.31, DESIGN 10	
								2			2	0	630	72340	2	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.31, DESIGN 12	
								1			1	0	630	72410	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-15.116, DESIGN 1	
								3			3	0	630	72420	3	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-15.116, DESIGN 2	
								3			3	0	630	72430	3	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-15.116, DESIGN 3	
								62			56	6	630	75000	62	EACH	SIGN ATTACHMENT ASSEMBLY	
							3	8			10	1	630	79500	11	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
							12				11	1	630	79611	12	EACH	SIGN SUPPORT ASSEMBLY, BARRIER MOUNTED, AS PER PLAN	934
							1173.9	139.9			1182.4	131.4	630	80100	1313.8	SF	SIGN, FLAT SHEET	
							48.0				43.2	4.8	630	80101	48.0	SF	SIGN, FLAT SHEET, AS PER PLAN	934
							109.0	815.5			832.1	92.4	630	80200	924.5	SF	SIGN, GROUND MOUNTED EXTRUSHEET	
								8681.0			7812.9	868.1	630	80224	8681.0	SF	SIGN, OVERHEAD EXTRUSHEET	
								222.0			199.8	22.2	630	80401	222.0	SF	SIGN, PERMANENT OVERLAY, AS PER PLAN	934
								5			4	1	630	84010	5	EACH	CONCRETE BARRIER MEDIAN OVERHEAD SIGN SUPPORT FOUNDATION, TYPE TC-21.50	
								38			34	4	630	84500	38	EACH	GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION	
								14			13	1	630	84510	14	EACH	RIGID OVERHEAD SIGN SUPPORT FOUNDATION	
						139					125	14	630	84900	139	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
						10					9	1	630	85100	10	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
						19					17	2	630	85400	19	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL	
						2					2	0	630	85600	2	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION	
						166					149	17	630	86002	166	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
						30					27	3	630	86102	30	EACH	REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL	
						8					7	1	630	86292	8	EACH	REMOVAL OF GROUND MOUNTED WOODEN BOX BEAM SUPPORT AND DISPOSAL	
						3					3	0	630	87100	3	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION	
						58					52	6	630	87400	58	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	
						6					5	1	630	87500	6	EACH	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL	
						6					5	1	630	89706	6	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30	
						5					4	1	630	89802	5	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-7.65	
	16										14	2	630	89902	16	EACH	REMOVAL OF MISCELLANEOUS TRAFFIC CONTROL ITEM, BEAM SUPPORT FOUNDATION	934
						5					4	1	630	89902	5	EACH	REMOVAL OF MISCELLANEOUS TRAFFIC CONTROL ITEM, BARRIER MOUNTED SIGN SUPPORT BRACKET	934
					0.13						0.12	0.01	644	00100	0.13	MILE	EDGE LINE, 4"	
					0.07						0.06	0.01	644	00300	0.07	MILE	CENTER LINE	
					765						689	76	646	10620	765	FT	CHEVRON MARKING	
					4						4	0	646	20350	4	EACH	LANE REDUCTION ARROW	

CALCULATED DLS CHECKED AKF

TRAFFIC CONTROL GENERAL SUMMARY 1 OF 2

SUM-77 / 277 / 224
VARIOUS

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SHEETS												PART.			ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
					947							01/IMS/PV	02/IMS/PV							
					24.28							21.85	2.43		807	12010	24.28	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6"	
					24.70							22.23	2.47		807	12110	24.70	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6"	
					22788							20509	2279		807	12310	22788	FT	WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12"	
					11942							10748	1194		807	12410	11942	FT	WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 6"	
					48.97							44.07	4.90		850	10010	48.97	MILE	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)	
					22788							20509	2279		850	10110	22788	FT	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)	
					11942							10748	1194		850	10130	11942	FT	GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT)	

CALCULATED DLS
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TRAFFIC CONTROL GENERAL SUMMARY 2 OF 2

SUM-77/277/224
VARIOUS

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ITEM 621 - RAISED PAVEMENT MARKER SUBSUMMARY

ROADWAY	SHEET NO.	STATION TO STATION		SIDE	INTERVAL	1-WAY WHITE	2-WAY WH/RED	2-WAY YEL/RED	RAISED PAVEMENT MARKER REMOVED
I-77	962	371+50	379+50	RT	120	7			7
I-77	962	371+50	379+50	RT	120	7			7
I-77	962	371+50	379+50	RT	120	7			7
RAMP D	962	71+67	79+43	LT	40		20		20
I-77	963	379+50	390+50	RT	120	9			9
I-77	963	379+50	390+50	RT	120	9			9
I-77	963	379+50	390+50	RT	120	9			9
RAMP D	963	79+43	86+22	LT	40		17		17
I-77	963	386+22	390+50	RT	120	3			3
I-77	964	390+50	403+50	RT	120	11			11
I-77	964	390+50	403+50	RT	120	11			11
I-77	964	390+50	403+50	RT	120	11			11
I-77	964	390+50	403+50	RT	120	11			11
I-77	964	391+37	403+50	LT	120	11			11
I-77	964	391+37	403+50	LT	120	11			11
I-77	964	391+37	403+50	LT	120	11			11
I-77	965	403+50	415+50	RT	120	10			10
I-77	965	403+50	415+50	RT	120	10			10
I-77	965	403+50	415+50	RT	120	10			10
I-77	965	403+50	407+20	RT	120	3			3
I-77	965	403+50	415+50	LT	120	10			10
I-77	965	403+50	415+50	LT	120	10			10
I-77	965	403+50	415+50	LT	120	10			10
I-77	966	415+50	427+50	RT	120	10			10
I-77	966	415+50	427+50	RT	120	10			10
I-77	966	415+50	427+50	RT	120	10			10
I-77	966	415+50	427+50	LT	120	10			10
I-77	966	415+50	427+50	LT	120	10			10
I-77	966	415+50	427+50	LT	120	10			10
I-77	967	427+50	439+50	RT	120	10			10
I-77	967	427+50	439+50	RT	120	10			10
I-77	967	427+50	439+50	RT	120	10			10
I-77	967	427+50	439+50	LT	120	10			10
I-77	967	427+50	439+50	LT	120	10			10
I-77	967	427+50	439+50	LT	120	10			10
I-77	968	439+50	451+50	RT	120	10			10
I-77	968	439+50	451+50	RT	120	10			10
I-77	968	439+50	449+93	RT	120	9			9
I-77	968	439+50	451+50	LT	120	10			10
I-77	968	439+50	451+50	LT	120	10			10
I-77	968	439+50	451+50	LT	120	10			10
I-77	968	448+90	451+50	LT	120	3			3
I-77	969	451+50	463+50	RT	120	10			10
I-77	969	451+50	463+50	RT	120	10			10
I-77	969	460+50	463+50	RT	120	3			3
I-77	969	451+50	463+50	LT	120	10			10
I-77	969	451+50	463+50	LT	120	10			10
I-77	969	451+50	463+50	LT	120	10			10
I-77	969	451+50	463+50	LT	120	10			10
TOTALS						436	37		473
TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY							473		473

ITEM 621 - RAISED PAVEMENT MARKER SUBSUMMARY

ROADWAY	SHEET NO.	STATION TO STATION		SIDE	INTERVAL	1-WAY WHITE	2-WAY WH/RED	2-WAY YEL/RED	RAISED PAVEMENT MARKER REMOVED
I-77	970	463+50	475+00	RT	120	10			10
I-77	970	463+50	475+00	RT	120	10			10
I-77	970	463+50	475+00	RT	120	9			9
I-77	970	466+48	475+00	RT	40		22		22
I-77	970	463+50	475+00	LT	120	9			9
I-77	970	463+50	475+00	LT	120	9			9
I-77	970	463+50	475+00	LT	120	9			9
I-77	970	463+50	475+00	LT	120	9			9
I-77	971	475+00	487+00	RT	120	10			10
I-77	971	475+00	487+00	RT	120	10			10
I-77	971	475+00	487+00	RT	120	10			10
I-77	971	475+00	481+17	RT	40		16		16
RAMP C	971	576+42	581+24	LT	40		12		12
RAMP C	971	581+24	587+00	LT	80			7	7
I-77	971	475+00	487+00	LT	120	10			10
I-77	971	475+00	486+64	LT	120	10			10
I-77	971	486+64	487+00	LT	40		1		1
I-77	971	475+00	487+00	LT	120	10			10
I-77	971	475+00	487+00	LT	120	10			10
I-77	972	487+00	499+00	RT	120	10			10
I-77	972	487+00	499+00	RT	120	10			10
I-77	972	490+95	494+85	CEN	40		10		10
RAMP C-1	972	693+00	693+72	LT	80			1	1
RAMP C-1	972	693+72	699+00	LT	40		14		14
RAMP B-2	972	287+00	298+95	RT	120	10			10
I-77	972	490+95	494+85	LT	40		9		9
RAMP C-2	972	789+00	798+32	LT	80			12	12
I-77	972	496+95	499+00	LT	40		4		4
I-77	972	487+00	499+00	LT	120	10			10
I-77	972	487+00	499+00	LT	120	10			10
I-77	972	496+95	499+00	LT	40		4		4
RAMP A	972	86+73	95+00	RT	120	7			7
RAMP A	972	86+73	94+44	RT	40		19		19
RAMP A	972	94+44	95+00	RT	80			1	1
I-77	973	499+00	511+00	RT	120	10			10
I-77	973	499+00	511+00	RT	120	10			10
I-77	973	499+00	500+11	RT	40		3		3
RAMP D	973	904+00	907+55	LT	80			5	5
RAMP D	973	907+55	911+14	LT	40		7		7
RAMP B-2	973	298+95	10+00	RT	120	10			10
RAMP B-2	973	298+95	10+00	RT	80			12	12
I-77	973	499+00	511+00	LT	120	10			10
I-77	973	499+00	511+00	LT	120	10			10
I-77	973	499+00	499+75	LT	40		4		4
I-77	973	499+00	503+95	LT	80			9	9
RAMP C-2	973	798+33	799+74	LT	40		3		3
RAMP B-1	973	406+44	409+00	RT	80			3	3
RAMP B-1	973	402+03	406+44	RT	40		11		11
TOTALS						242	139	50	431
TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY						431			431

CALCULATED DLS
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RAISED PAVEMENT MARKING SUBSUMMARY 1 OF 2

SUM-77 / 277 / 224
VARIOUS

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ITEM 621 - RAISED PAVEMENT MARKER SUBSUMMARY

ROADWAY	SHEET NO.	STATION TO STATION		SIDE	INTERVAL	1-WAY WHITE	2-WAY WH/RED	2-WAY YEL/RED	RAISED PAVEMENT MARKER REMOVED
I-77	974	511+00	515+87	RT	120	4			4
I-77	974	511+00	515+87	RT	120	4			4
RAMP D	974	73+15	76+99	LT	40		10		10
I-77	974	510+51	515+94	LT	120	4			4
I-77	974	510+51	515+94	LT	120	4			4
I-77	974	515+36	515+94	LT	40		2		2
RAMP B	974	215+28	215+50	RT	40		1		1
RAMP B	974	212+00	215+28	RT	80			5	5
I-277	980	225+00	234+50	RT	40		24		24
I-277	980	225+00	234+50	RT	120	8			8
RAMP B-2	980	24+32	24+65	RT	40	1			1
I-277	981	237+66	246+50	RT	120	8			8
I-277	981	237+66	246+50	RT	120	8			8
I-277	981	242+24	245+80	RT	40		9		9
I-277	981	242+24	245+80	RT	40		8		8
I-277	981	245+80	246+50	RT	80			1	1
RAMP B-2	981	18+50	23+18	RT	80			6	6
RAMP B-2	981	23+18	24+65	RT	40		3		3
RAMP B-2	981	18+50	24+65	RT	120	5			5
RAMP B-2	981	18+50	24+65	RT	40		14		14
RAMP B-1	981	409+00	417+22	RT	80			11	11
I-277	982	246+50	258+50	RT	120	10			10
I-277	982	258+30	258+50	RT	40		1		1
I-277	982	252+14	258+50	LT	120	5			5
I-277	982	247+81	252+14	LT	40		11		11
I-277	982	247+81	252+14	LT	40		10		10
I-277	982	246+50	247+81	LT	80			2	2
I-277	983	258+50	270+50	RT	120	10			10
I-277	983	258+50	260+77	RT	40		6		6
I-277	983	258+50	260+77	RT	40		6		6
RAMP C-1	983	682+95	685+00	LT	80			2	2
I-277	983	258+50	270+50	LT	120	10			10
I-277	983	264+68	268+84	LT	40		10		10
I-277	983	264+68	270+50	LT	40		15		15
RAMP D	983	892+67	898+00	LT	80			7	7
RAMP C	983	598+00	599+66	RT	80			2	2
I-277	984	270+50	279+50	RT	120	7			7
I-277	984	277+50	279+50	RT	120	1			1
I-277	984	271+44	277+50	RT	40		16		16
I-277	984	270+50	271+44	RT	80			1	1
I-277	984	270+50	273+10	LT	120	2			2
I-277	984	270+50	275+34	LT	40		12		12
RAMP A	986	95+00	105+00	RT	120	8			8
RAMP A	986	95+00	105+00	RT	80			12	12
RAMP B	987	202+92	205+86	RT	40		8		8
RAMP B	987	205+86	212+00	RT	80			7	7
RAMP B-2	987	10+00	18+50	RT	120	7			7
RAMP B-2	987	10+00	18+50	RT	80			11	11
RAMP C	988	587+00	593+00	RT	80			7	7
RAMP C	988	593+00	594+94	RT	40		6		6
RAMP C-2	988	779+80	789+00	CEN	80			11	11
RAMP C-1	989	685+00	693+00	LT	80			11	11
RAMP D	990	898+00	904+00	LT	80			8	8
TOTALS						106	172	104	382
TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY							382		382

CALCULATED DLS
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RAISED PAVEMENT MARKING SUBSUMMARY 2 OF 2

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SHEET NO.	REF. NO.	LOCATION	STATION		SIDE	644 EDGE LINE, 4", WHITE	644 CENTER LINE, DOUBLE SOLID	646 CHEVRON MARKING, WHITE	646 LANE REDUCTION ARROW	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", WHITE	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", YELLOW	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6"	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12"	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 6", WHITE	850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)	850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)	850 GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT)
			FROM	TO		FT	FT	FT	EACH	FT	FT	FT	FT	FT	FT	FT	FT
960	EY	I-77	342+46	356+00	RT						1354				1354		
960	LL	I-77	342+46	356+00	RT							1354			1354		
960	LL	I-77	342+46	356+00	RT							1354			1354		
960	DW	I-77	342+46	344+31	RT									185			185
960	CH	I-77	344+31	348+12	RT								381			381	
960	CH	I-77	344+31	348+12	RT								381			381	
960	EW	I-77	348+12	354+61	RT					649					649		
960	CH	I-77	354+81	356+00	RT								119			119	
960	CH	I-77	354+81	356+00	RT								119			119	
960	EW	I-77	354+81	356+00	RT					119					119		
960	EW	I-77	342+46	348+12	RT					566					566		
961	EY	I-77	356+00	368+00	RT						1200				1200		
961	LL	I-77	356+00	368+00	RT							1200			1200		
961	LL	I-77	356+00	368+00	RT							1200			1200		
961	LL	I-77	356+46	368+00	RT							1154			1154		
961	CH	I-77	356+00	356+46	RT								46			46	
961	CH	I-77	356+00	356+46	RT								46			46	
961	EW	I-77	356+00	368+00	RT					1200					1200		
961	EY	I-77	356+83	368+00	LT						1117				1117		
961	LL	I-77	356+83	368+00	LT							1117			1117		
961	LL	I-77	356+83	368+00	LT							1117			1117		
961	EW	I-77	356+83	363+54	LT					671					671		
961	CH	I-77	363+54	366+82	LT								328			328	
961	CH	I-77	363+54	366+82	LT								328			328	
961	LL	I-77	363+54	368+00	LT							446			446		
961	EW	I-77	363+54	368+00	LT					446					446		
962	EY	I-77	368+00	379+50	RT						1150				1150		
962	LL	I-77	368+00	379+50	RT							1150			1150		
962	LL	I-77	368+00	379+50	RT							1150			1150		
962	LL	I-77	368+00	379+50	RT							1150			1150		
962	EW	I-77	368+00	371+67	RT					367					367		
962	CH	I-77	371+67	379+50	RT								783			783	
962	CH	I-77	371+67	379+50	RT								783			783	
962	EW	I-77	371+67	379+50	RT					783					783		
962	EY	I-77	368+00	379+50	LT						1150				1150		
962	LL	I-77	368+00	379+50	LT							1150			1150		
962	LL	I-77	368+00	379+50	LT							1150			1150		
962	LL	I-77	368+00	379+50	LT							1150			1150		
962	EW	I-77	368+00	379+50	LT					1150					1150		
963	EY	I-77	379+50	390+50	RT						1100				1100		
963	LL	I-77	379+50	390+50	RT							1100			1100		
963	LL	I-77	379+50	390+50	RT							1100			1100		
963	LL	I-77	379+50	390+50	RT							1100			1100		
963	CH	I-77	379+50	386+22	RT								672			672	
963	LL	I-77	386+22	390+50	RT							428			428		
963	CH	I-77	379+50	386+22	RT								672			672	
963	EW	I-77	379+50	390+50	RT					1100					1100		
963	EY	I-77	379+50	390+50	LT						1100				1100		
963	LL	I-77	379+50	390+50	LT							1100			1100		
963	LL	I-77	379+50	390+50	LT							1100			1100		
963	LL	I-77	379+50	390+50	LT							1100			1100		
963	EW	I-77	379+50	390+50	LT					1100					1100		
TOTALS CARRIED TO PAVEMENT MARKING SHEET 8 OF 8										16322		22870	4658	185	39192	4658	185

CALCULATED DLS
CHECKED AKF

PAVEMENT MARKING SUBSUMMARY SHEET 1 OF 8

SUM-77/277/224
VARIOUS

940
1288

0:\2017\2017258\ProjectData\SUM\106002\Design\Traffic\Sheets\106002_TS010.dgn 106002GN001 1/17/2021 7:13:42 AM aford

SHEET NO.	REF. NO.	LOCATION	STATION FROM	STATION TO	SIDE	644 EDGE LINE, 4", WHITE FT	644 CENTER LINE, DOUBLE SOLID FT	646 CHEVRON MARKING, WHITE FT	646 LANE REDUCTION ARROW EACH	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", WHITE FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", YELLOW FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6" FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12" FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 6", WHITE FT	850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT) FT	850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT) FT	850 GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT) FT
964	EY	I-77	390+50	403+50	RT						1300				1300		
964	LL	I-77	390+50	403+50	RT							1300			1300		
964	LL	I-77	390+50	403+50	RT							1300			1300		
964	LL	I-77	390+50	403+50	RT							1300			1300		
964	LL	I-77	390+50	403+50	RT							1300			1300		
964	EW	I-77	390+50	403+50	RT					1300					1300		
964	EY	I-77	390+50	403+50	LT						1300				1300		
964	LL	I-77	390+50	403+50	LT							1300			1300		
964	LL	I-77	390+50	403+50	LT							1300			1300		
964	LL	I-77	390+50	403+50	LT							1300			1300		
964	EW	I-77	390+50	403+50	LT					1300					1300		
965	EY	I-77	403+50	415+50	RT						1200				1200		
965	LL	I-77	403+50	415+50	RT							1200			1200		
965	LL	I-77	403+50	415+50	RT							1200			1200		
965	LL	I-77	403+50	415+50	RT							1200			1200		
965	LL	I-77	403+50	407+20	RT							370			370		
965	DW	I-77	407+20	415+50	RT									830			830
965	EW	I-77	403+50	415+50	RT					1200					1200		
965	LR	I-77	407+20		RT				1								
965	LR	I-77	415+20		RT				1								
965	EY	I-77	403+50	415+50	LT						1200				1200		
965	LL	I-77	403+50	415+50	LT							1200			1200		
965	LL	I-77	403+50	415+50	LT							1200			1200		
965	LL	I-77	403+50	415+50	LT							1200			1200		
965	EW	I-77	403+50	415+50	LT					1200					1200		
966	EY	I-77	415+50	427+50	RT						1200				1200		
966	LL	I-77	415+50	427+50	RT							1200			1200		
966	LL	I-77	415+50	427+50	RT							1200			1200		
966	LL	I-77	415+50	427+50	RT							1200			1200		
966	DW	I-77	415+50	424+00	RT									850			850
966	EW	I-77	415+50	427+50	RT					1200					1200		
966	EY	I-77	415+50	427+50	LT						1200				1200		
966	LL	I-77	415+50	427+50	LT							1200			1200		
966	LL	I-77	415+50	427+50	LT							1200			1200		
966	LL	I-77	415+50	427+50	LT							1200			1200		
966	EW	I-77	415+50	427+50	LT					1200					1200		
966	EW	WARNER ROAD	24+50	27+69	RT	319											
966	EW	WARNER ROAD	24+50	27+69	LT	319											
966	CDS	WARNER ROAD	24+50	27+69	LT		319										
967	EY	I-77	427+50	439+50	RT						1200				1200		
967	LL	I-77	427+50	439+50	RT							1200			1200		
967	LL	I-77	427+50	439+50	RT							1200			1200		
967	LL	I-77	427+50	439+50	RT							1200			1200		
967	EW	I-77	427+50	439+50	RT					1200					1200		
967	EY	I-77	427+50	439+50	LT						1200				1200		
967	LL	I-77	427+50	439+50	LT							1200			1200		
967	LL	I-77	427+50	439+50	LT							1200			1200		
967	LL	I-77	427+50	439+50	LT							1200			1200		
967	EW	I-77	427+50	439+50	LT					1200					1200		
967	DW	I-77	431+50	439+50	LT									800			800
TOTALS CARRIED TO PAVEMENT MARKING SHEET 8 OF 8						638	319		2	19600		31070		2480	50670		2480

CALCULATED DLS
CHECKED AKF

PAVEMENT MARKING SUBSUMMARY SHEET 2 OF 8

SUM-77 / 277 / 224
VARIOUS

941
1288

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SHEET NO.	REF. NO.	LOCATION	STATION FROM	STATION TO	SIDE	644 EDGE LINE, 4", WHITE FT	644 CENTER LINE, DOUBLE SOLID FT	646 CHEVRON MARKING, WHITE FT	646 LANE REDUCTION ARROW EACH	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", WHITE FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", YELLOW FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6" FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12" FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 6", WHITE FT	850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT) FT	850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT) FT	850 GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT) FT
968	EY	I-77	439+50	451+50	RT						1200				1200		
968	LL	I-77	439+50	451+50	RT							1200			1200		
968	LL	I-77	439+50	451+50	RT							1200			1200		
968	LL	I-77	439+50	449+93	RT							1043			1043		
968	DW	I-77	449+93	451+50	RT									157			157
968	EW	I-77	439+50	451+50	RT					1200					1200		
968	EY	I-77	439+50	451+50	LT						1200				1200		
968	LL	I-77	439+50	451+50	LT							1200			1200		
968	LL	I-77	439+50	451+50	LT							1200			1200		
968	LL	I-77	439+50	451+50	LT							1200			1200		
968	LL	I-77	448+90	451+50	LT							260			260		
968	EW	I-77	439+50	451+50	LT					1200					1200		
968	DW	I-77	439+50	448+90	LT									940			940
968	LR	I-77	440+90		LT				1								
968	LR	I-77	448+90		LT				1								
969	EY	I-77	451+50	463+50	RT						1200				1200		
969	LL	I-77	451+50	463+50	RT							1200			1200		
969	LL	I-77	451+50	463+50	RT							1200			1200		
969	LL	I-77	460+50	463+50	RT							300			300		
969	EW	I-77	451+50	463+50	RT					1200					1200		
969	DW	I-77	459+50	460+50	RT									100			100
969	DW	I-77	451+50	463+50	RT									1200			1200
969	EY	I-77	451+50	463+50	LT						1200				1200		
969	LL	I-77	451+50	463+50	LT							1200			1200		
969	LL	I-77	451+50	463+50	LT							1200			1200		
969	LL	I-77	451+50	463+50	LT							1200			1200		
969	LL	I-77	451+50	463+50	LT							1200			1200		
969	EW	I-77	451+50	463+50	LT					1200					1200		
970	EY	I-77	463+50	475+00	RT						1150				1150		
970	LL	I-77	463+50	475+00	RT							1150			1150		
970	LL	I-77	463+50	475+00	RT							1150			1150		
970	LL	I-77	463+50	475+00	RT							1150			1150		
970	EW	I-77	463+50	475+00	RT					1150					1150		
970	DW	I-77	463+50	466+48	RT									298			298
970	CH	I-77	466+48	475+00	RT								852			852	
970	EY	I-77	463+50	475+00	LT						1150				1150		
970	LL	I-77	463+50	475+00	LT							1150			1150		
970	LL	I-77	463+50	475+00	LT							1150			1150		
970	LL	I-77	463+50	475+00	LT							1150			1150		
970	LL	I-77	463+50	475+00	LT							1150			1150		
970	EW	I-77	463+50	475+00	LT					1150					1150		
TOTALS CARRIED TO PAVEMENT MARKING SHEET 8 OF 8									2	14200		22853	852	2695	37053	852	2695

CALCULATED DLS
CHECKED AKF

PAVEMENT MARKING SUBSUMMARY SHEET 3 OF 8

SUM-77/277/224
VARIOUS

942
1288

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SHEET NO.	REF. NO.	LOCATION	STATION FROM	STATION TO	SIDE	644 EDGE LINE, 4", WHITE FT	644 CENTER LINE, DOUBLE SOLID FT	646 CHEVRON MARKING, WHITE FT	646 LANE REDUCTION ARROW EACH	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", WHITE FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", YELLOW FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6" FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12" FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 6", WHITE FT	850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT) FT	850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT) FT	850 GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT) FT
971	EY	I-77	475+00	487+00	RT						1200				1200		
971	LL	I-77	475+00	487+00	RT							1200			1200		
971	LL	I-77	475+00	487+00	RT							1200			1200		
971	LL	I-77	475+00	487+00	RT							1200			1200		
971	EW	I-77	481+17	487+00	RT					583					583		
971	CH	I-77	475+00	481+17	RT					617					617		
971	EY	RAMP C	581+24	587+00	LT						576				576		
971	CH	I-77	476+42	481+17	RT								475			475	
971	EW	RAMP C	575+00	587+00	CEN					1200					1200		
971	CV	I-77	476+42	481+17	RT			101									
971	EY	I-77	475+00	486+68	LT						1168				1168		
971	LL	I-77	475+00	486+68	LT							1168			1168		
971	LL	I-77	475+00	486+68	LT							1168			1168		
971	LL	I-77	475+00	486+68	LT							1168			1168		
971	LL	I-77	475+00	486+64	LT							1164			1164		
971	EW	I-77	475+00	486+68	LT					1168					1168		
971	CH	I-77	486+64	486+68	LT								4			4	
972	EW	I-77	487+00	493+72	RT					672					672		
972	CH	I-77	493+72	499+00	RT								528			528	
972	LL	I-77	487+00	499+00	RT							1200			1200		
972	LL	I-77	487+00	499+00	RT							1200			1200		
972	LL	RAMP B-2	287+00	298+95	RT							1195			1195		
972	EY	I-77	494+85	499+00	RT						415				415		
972	EY	RAMP B-2	287+00	298+95	LT						1195				1195		
972	EW	RAMP B-2	294+85	298+95	RT					410					410		
972	CH	I-77	490+95	494+85	RT								390			390	
972	CH	I-77	490+95	494+85	RT								390			390	
972	CV	I-77	490+95	494+85	RT			128									
972	EY	RAMP C-1	693+00	693+72	RT						72				72		
972	CH	I-77	493+72	499+00	RT								528			528	
972	EW	RAMP C-1	693+00	699+00	CEN					600					600		
972	EY	RAMP C-2	789+00	798+33	CEN						933				933		
972	EW	RAMP C-2	789+00	796+95	LT					795					795		
972	CH	I-77	496+95	498+33	LT								138			138	
972	CV	I-77	496+95	498+33	LT			63									
972	EW	I-77	494+44	498+33	LT					389					389		
972	DW	I-77	494+44	498+33	LT									389			389
972	CH	I-77	496+95	498+33	LT								138			138	
972	CH	I-77	486+68	494+44	LT								776			776	
972	EY	I-77	486+68	496+95	LT						1027				1027		
972	LL	I-77	486+68	498+33	LT							1165			1165		
972	LL	I-77	486+68	498+33	LT							1165			1165		
972	EW	RAMP A	86+73	95+00	CEN					827					827		
972	LL	RAMP A	86+73	95+00	RT							827			827		
972	CH	RAMP A	86+73	94+44	RT								771			771	
972	EY	RAMP A	94+44	95+00	RT						56				56		
TOTALS CARRIED TO PAVEMENT MARKING SHEET 8 OF 8								292		13903		15020	4138	389	28923	4138	389

CALCULATED DLS
CHECKED AKF

PAVEMENT MARKING SUBSUMMARY SHEET 4 OF 8

SUM-77/277/224
VARIOUS

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SHEET NO.	REF. NO.	LOCATION	STATION FROM	STATION TO	SIDE	644 EDGE LINE, 4", WHITE FT	644 CENTER LINE, DOUBLE SOLID FT	646 CHEVRON MARKING, WHITE FT	646 LANE REDUCTION ARROW EACH	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", WHITE FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", YELLOW FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6" FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12" FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 6", WHITE FT	850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT) FT	850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT) FT	850 GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT) FT
973	EY	I-77	499+00	511+00	RT						1200				1200		
973	LL	I-77	499+00	511+00	RT							1200			1200		
973	LL	I-77	499+00	511+00	RT							1200			1200		
973	EW	I-77	499+00	508+11	RT					911					911		
973	CH	I-77	508+11	511+00	RT								289			289	
973	CH	I-77	499+00	500+11	RT								111			111	
973	CH	I-77	499+00	500+11	RT								111			111	
973	DW	I-77	500+11	508+11	RT									800			800
973	EW	RAMP D	904+00	911+14	LT					714					714		
973	EY	RAMP D	904+00	907+55	LT						355				355		
973	CH	RAMP D	907+55	911+14	CEN								359			359	
973	EY	RAMP B-2	298+95	10+00	CEN						1185				1185		
973	LL	RAMP B-2	298+95	10+00	RT							1185			1185		
973	EW	RAMP B-2	298+95	10+00	RT					1185					1185		
973	EY	I-77	498+33	510+51	LT						1218				1218		
973	LL	I-77	498+33	510+51	LT							1218			1218		
973	LL	I-77	498+33	510+51	LT							1218			1218		
973	DW	I-77	503+85	504+95	LT									110			110
973	CH	I-77	502+03	506+44	LT								441			441	
973	CV	I-77	498+33	499+74	LT			28									
973	CH	I-77	498+33	499+74	LT								141			141	
973	DW	I-77	498+33	502+03	LT									370			370
973	EW	I-77	506+44	510+51	LT					407					407		
973	CH	I-77	498+33	499+74	LT								141			141	
973	CH	RAMP B-1	402+03	406+44	LT								441			441	
973	DW	I-77	499+74	503+85	LT									411			411
973	EY	RAMP B-1	406+44	409+00	LT						256				256		
973	CV	RAMP B-1	398+33	409+00	CEN					1067					1067		
974	EY	I-77	511+00	523+00	RT						1200				1200		
974	LL	I-77	511+00	523+00	RT							1200			1200		
974	LL	I-77	511+00	523+00	RT							1200			1200		
974	CH	I-77	511+00	514+89	RT								389			389	
974	CH	I-77	511+00	514+89	RT								389			389	
974	EW	I-77	511+00	523+00	RT					1200					1200		
974	EY	I-77	510+51	522+89	LT						1238				1238		
974	LL	I-77	510+51	522+89	LT							1238			1238		
974	LL	I-77	510+51	522+89	LT							1238			1238		
974	CH	I-77	515+36	518+30	LT								294			294	
974	EW	I-77	510+51	515+36	LT					485					485		
974	EW	RAMP B	212+00	222+93	LT					1093					1093		
974	EY	RAMP B	212+00	215+28	LT						328				328		
974	CH	I-77	515+36	518+30	LT								294			294	
974	TW	I-77	514+99	518+30	LT			64									
974	DW	I-77	514+89	522+58	RT									769			769
974	DW	I-77	518+30	522+64	LT									434			434
975	EY	I-77	523+00	525+59	RT						259				259		
975	LL	I-77	523+00	525+59	RT							259			259		
975	LL	I-77	523+00	525+59	RT							259			259		
975	EW	I-77	523+00	525+59	RT					259					259		
975	EY	I-77	522+89	537+00	LT						1411				1411		
975	LL	I-77	522+89	537+00	LT							1411			1411		
975	LL	I-77	522+89	537+00	LT							1411			1411		
975	LL	I-77	528+50	537+00	LT							850			850		
975	CH	I-77	525+46	528+50	LT								304			304	
975	EW	I-77	522+89	525+46	LT					257					257		
975	EW	I-77	529+70	537+00	LT					730					730		
TOTALS CARRIED TO PAVEMENT MARKING SHEET 8 OF 8								92		16958		15087	3704	2894	32045	3704	2894

PAVEMENT MARKING SUBSUMMARY SHEET 5 OF 8

CALCULATED DLS
CHECKED AKF

SUM-77 / 277 / 224
VARIOUS

944
1288

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SHEET NO.	REF. NO.	LOCATION	STATION FROM	STATION TO	SIDE	644 EDGE LINE, 4", WHITE FT	644 CENTER LINE, DOUBLE SOLID FT	646 CHEVRON MARKING, WHITE FT	646 LANE REDUCTION ARROW EACH	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", WHITE FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", YELLOW FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6" FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12" FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 6", WHITE FT	850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT) FT	850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT) FT	850 GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT) FT
976	EY	I-77	537+00	544+62	LT						762				762		
976	LL	I-77	537+00	544+62	LT							762			762		
976	LL	I-77	537+00	544+62	LT							762			762		
976	LL	I-77	537+00	544+62	LT							762			762		
976	EW	I-77	537+00	544+62	LT					762					762		
979	EW	I-277	207+41	222+00	RT					1459					1459		
979	LL	I-277	207+41	222+00	RT							1459			1459		
979	LL	I-277	207+41	222+00	RT							1459			1459		
979	EY	I-277	207+41	222+00	RT						1459				1459		
979	EY	I-277	220+80	222+00	LT						120				120		
979	LL	I-277	220+80	222+00	LT							120			120		
979	LL	I-277	220+80	222+00	LT							120			120		
979	EW	I-277	220+80	222+00	LT					120					120		
980	EY	I-277	222+00	234+50	RT						1250				1250		
980	LL	I-277	222+00	234+50	RT							1250			1250		
980	LL	I-277	222+00	234+50	RT							1250			1250		
980	EW	I-277	222+00	234+50	RT					1250					1250		
980	EY	I-277	222+00	234+50	LT						1250				1250		
980	LL	I-277	222+00	225+00	LT							300			300		
980	CH	I-277	225+00	234+50	LT								950			950	
980	LL	I-277	222+00	234+50	LT							1250			1250		
980	EW	I-277	222+00	234+50	LT					1250					1250		
980	DW	I-277	226+17	234+50	LT									833			833
980	CH	I-277	225+00	234+50	LT								950			950	
981	EY	I-277	234+50	246+50	RT						1200				1200		
981	LL	I-277	234+50	246+50	RT							1200			1200		
981	CH	I-277	242+24	245+80	RT								356			356	
981	EW	I-277	234+50	246+50	RT					1200					1200		
981	LL	I-277	234+50	246+50	RT							1200			1200		
981	CH	I-277	242+24	245+80	RT								356			356	
981	CV	I-277	242+24	245+80	RT			132									
981	EY	I-277	245+80	246+50	RT						70				70		
981	EW	I-277	245+80	246+50	RT					70					70		
981	EY	I-277	234+50	246+50	LT						1200				1200		
981	EW	I-277	235+63	246+50	LT					1087					1087		
981	CH	I-277	234+50	235+63	LT								113			113	
981	CH	RAMP B-2	23+18	24+32	CEN								114			114	
981	EY	RAMP B-2	18+50	23+18	CEN						468				468		
981	LL	RAMP B-2	18+50	24+32	LT							582			582		
981	CH	RAMP B-2	18+50	24+32	LT								582			582	
981	EW	RAMP B-2	18+50	24+32	LT					582					582		
981	CH	RAMP B-2	18+50	24+32	LT								582			582	
981	EW	RAMP B-1	409+00	417+22	CEN					822					822		
981	EY	RAMP B-1	409+00	417+22	LT						822				822		
TOTALS CARRIED TO PAVEMENT MARKING SHEET 8 OF 8								132		17203		12476	4003	833	29679	4003	833

CALCULATED DLS
CHECKED AKF

PAVEMENT MARKING SUBSUMMARY SHEET 6 OF 8

SUM-77/277/224
VARIOUS

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SHEET NO.	REF. NO.	LOCATION	STATION FROM	STATION TO	SIDE	644 EDGE LINE, 4", WHITE FT	644 CENTER LINE, DOUBLE SOLID FT	646 CHEVRON MARKING, WHITE FT	646 LANE REDUCTION ARROW EACH	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", WHITE FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", YELLOW FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6" FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12" FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 6", WHITE FT	850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT) FT	850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT) FT	850 GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT) FT
982	EY	I-277	246+50	258+50	RT						1200				1200		
982	LL	I-277	246+50	258+50	RT							1200			1200		
982	EW	I-277	246+50	258+50	RT					1200					1200		
982	DW	I-277	249+94	258+30	RT									836			836
982	CH	I-277	258+30	258+50	RT								20			20	
982	CH	I-277	258+30	258+50	RT								20			20	
982	EY	I-277	246+50	258+50	LT						1200				1200		
982	EW	I-277	246+50	247+81	LT					131					131		
982	CH	I-277	247+81	252+14	LT								433			433	
982	LL	I-277	252+14	258+50	LT							636			636		
982	CV	I-277	247+81	252+14	LT			84									
982	EY	I-277	246+50	247+81	LT						131				131		
982	EW	I-277	246+50	258+50	LT					1200					1200		
982	CH	I-277	247+81	252+14	LT								433			433	
983	EY	I-277	258+50	270+50	RT						1200				1200		
983	LL	I-277	258+50	270+50	RT							1200			1200		
983	CH	I-277	258+50	260+77	RT								227			227	
983	CV	I-277	258+50	260+77	RT			78									
983	EW	I-277	260+77	270+50	RT					973					973		
983	CH	I-277	258+50	260+77	RT								227			227	
983	EY	RAMP C-1	682+98	685+00	LT						202				202		
983	EW	RAMP C-1	680+70	685+00	CEN					430					430		
983	EY	RAMP C	598+00	599+66	LT						166				166		
983	DW	RAMP C	598+00	599+66	LT									166			166
983	EW	RAMP C	598+00	599+66	CEN					166					166		
983	EY	I-277	258+50	270+50	LT						1200				1200		
983	LL	I-277	258+50	270+50	LT							1200			1200		
983	EW	I-277	258+50	264+68	LT					618					618		
983	CH	I-277	264+68	270+50	LT								582			582	
983	CV	I-277	264+68	268+84	LT			87									
983	EW	RAMP D	886+89	898+00	CEN					1111					1111		
983	CH	I-277	264+68	268+84	LT								416			416	
983	EY	RAMP D	892+68	898+00	LT						532				532		
984	EY	US 224	270+50	284+00	RT						1350				1350		
984	LL	US 224	270+50	284+00	RT							1350			1350		
984	EW	US 224	270+50	271+44	RT					94					94		
984	CH	US 224	271+44	277+50	RT								606			606	
984	LL	US 224	277+50	284+00	RT							650			650		
984	DW	RAMP C	599+65	600+60	LT									95			95
984	EW	US 224	270+50	284+00	RT					1350					1350		
984	EY	RAMP C	599+65	600+60	LT						95				95		
984	CH	US 224	271+44	277+50	RT								606			606	
984	EY	US 224	270+50	284+00	LT						1350				1350		
984	LL	US 224	270+50	284+00	LT							1350			1350		
984	CH	US 224	270+50	275+34	LT								484			484	
984	DW	US 224	275+34	284+00	LT									866			866
984	EW	US 224	270+50	284+00	LT					1350					1350		
TOTALS CARRIED TO PAVEMENT MARKING SHEET 8 OF 8								249		17249		7586	4054	1963	24835	4054	1963

CALCULATED DLS
CHECKED AKF

PAVEMENT MARKING SUBSUMMARY SHEET 7 OF 8

SUM-77/277/224
VARIOUS

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SHEET NO.	REF. NO.	LOCATION	STATION FROM	STATION TO	SIDE	644 EDGE LINE, 4", WHITE FT	644 CENTER LINE, DOUBLE SOLID FT	646 CHEVRON MARKING, WHITE FT	646 LANE REDUCTION ARROW EACH	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", WHITE FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", YELLOW FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6" FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12" FT	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 6", WHITE FT	850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT) FT	850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT) FT	850 GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT) FT
985	EY	US 224	284+00	290+00	RT						600				600		
985	LL	US 224	284+00	290+00	RT							600			600		
985	LL	US 224	284+00	290+00	RT							600			600		
985	EW	US 224	284+00	290+00	RT					600					600		
985	EY	US 224	284+00	287+90	LT						390				390		
985	LL	US 224	284+00	287+90	LT							390			390		
985	DW	US 224	284+00	285+97	LT									197			197
985	CH	US 224	285+97	287+90	LT								193			193	
985	CH	US 224	285+97	287+90	LT								193			193	
985	EW	US 224	284+00	287+90	LT					390					390		
986	EY	RAMP A	95+00	105+00	RT						1000				1000		
986	LL	RAMP A	95+00	105+00	RT							1000			1000		
986	EW	RAMP A	95+00	105+00	CEN					1000					1000		
987	EY	RAMP B	205+86	212+00	RT						614				614		
987	CH	RAMP B	202+92	205+86	RT								294			294	
987	EW	RAMP B	202+92	212+00	CEN					908					908		
987	EY	RAMP B-2	10+00	18+50	CEN						850				850		
987	LL	RAMP B-2	10+00	18+50	RT							850			850		
987	EW	RAMP B-2	10+00	15+46	RT					546					546		
987	CH	RAMP B	202+92	205+86	RT								294			294	
988	EY	RAMP C	587+00	593+00	LT						600				600		
988	CH	RAMP C	593+00	594+94	LT								194			194	
988	DW	RAMP C	594+94	598+00	LT									306			306
988	EW	RAMP C	587+00	598+00	CEN					1100					1100		
988	EW	RAMP C-2	785+05	789+00	LT					395					395		
988	CH	RAMP C-2	782+94	785+05	LT								211			211	
988	EY	RAMP C-2	779+80	789+00	CEN						920				920		
989	EY	RAMP C-1	685+00	693+00	LT						800				800		
989	EW	RAMP C-1	685+00	693+00	CEN					800					800		
990	EY	RAMP D	898+00	904+00	LT						600				600		
990	EW	RAMP D	898+00	904+00	CEN					600					600		
TOTALS FROM PAVEMENT MARKING SUBSUMMARY SHEET 1 OF 8										16322		22870	4658	185	39192	4658	185
TOTALS FROM PAVEMENT MARKING SUBSUMMARY SHEET 2 OF 8						638	319		2	19600	31070			2480	50670		2480
TOTALS FROM PAVEMENT MARKING SUBSUMMARY SHEET 3 OF 8									2	14200	22853	852	2695		37053	852	2695
TOTALS FROM PAVEMENT MARKING SUBSUMMARY SHEET 4 OF 8								292		13903	15020	4138	389		28923	4138	389
TOTALS FROM PAVEMENT MARKING SUBSUMMARY SHEET 5 OF 8								92		16958	15087	3704	2894		32045	3704	2894
TOTALS FROM PAVEMENT MARKING SUBSUMMARY SHEET 6 OF 8								132		17203	12476	4003	833		29679	4003	833
TOTALS FROM PAVEMENT MARKING SUBSUMMARY SHEET 7 OF 8								249		17249	7586	4054	1963		24835	4054	1963
TOTALS THIS SHEET										12713	3440	1379	503		16153	1379	503
TOTAL MILES						0.13	0.07			24.28	24.70				48.97		
TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY						0.13	0.07	765	4	24.28	24.70	22788	11942		48.97	22788	11942

CALCULATED DLS
CHECKED AKF

PAVEMENT MARKING SUBSUMMARY SHEET 8 OF 8

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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 SIGN AND REERECTION EACH	630 REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION 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 GROUND MOUNTED WOODEN BOX BEAM SUPPORT AND DISPOSAL EACH	630 REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION 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	630 REMOVAL OF MISCELLANEOUS TRAFFIC CONTROL ITEM, BARRIER MOUNTED SIGN SUPPORT BRACKET EACH	
962	R-1	I-77		LT	SPECIAL										1			1		
					E1-1H5P										1					
					SPECIAL										1					
962	R-2	I-77		RT	W4-1R		1				2									
963	R-3	I-77		CEN	D10-5		1				1								1	
					D10-5		1													
963	R-4	I-77		RT	D14-H4		1				2									
963	R-5	I-77		RT	M3-1			1			1									
					M1-1-2			1												
964	R-6	I-77		LT	D3-1									1						
964	R-7	I-77		LT	I-H25a		1				1									
964	R-8	I-77		CEN	D10-5		1				1									
					D10-5		1													
964	R-10	I-77		LT	R3-4		1				1									
					R5-H11		1													
964	R-11	I-77		CEN	D10-5		1				1								1	
					D10-5		1													
964	R-12	I-77		RT	I-H25a		1				1									
964	R-13	I-77		RT	R2-1			1			2									
964	R-14	I-77		RT	D10-3			1			1									
964	R-15	I-77		RT	R3-4		1				1									
					R5-H11		1													
964	R-16	I-77		RT	W9-H4R				1			2								
965	R-17	I-77		CEN	D10-5		1				1									
					D10-5		1													
965	R-18	I-77		RT	W4-2R			1			2									
966	R-19	I-77		LT	E1-H5P									1			1			
					SPECIAL									1						
966	R-20	I-77		CEN	D10-5		1				1									
966	R-21	I-77		CEN	OM-3L		1				1									
966	R-22	I-77		CEN	D3-1		1				2									
966	R-23	WARNER RD		RT	W3-3		1				1									
966	R-24	I-77		LT	OM-3R		1				1									
					I-H25a		1													
966	R-25	I-77		RT	E1-H5bP										1					
					SPECIAL										1					
966	R-26	I-77		RT	OM-3R		1				1									
					I-H25a		1													
966	R-27	WARNER RD		RT	D3-H6		1				2									
966	R-28	WARNER RD		LT	W12-2		1				1									
966	R-29	WARNER RD		LT	W11-3		1				1									
967	R-32	I-77		LT	OM-3L		1				1									
967	R-33	I-77		LT	OM-3R		1				1									
					I-H25a		1													
967	R-35	I-77		RT	OM-3R		1				1									
					I-H25a		1													
967	R-36	I-77		RT	OM-3L		1				1									
TOTALS CARRIED TO SIGNING REMOVAL SUBSUMMARY 6 OF 6							33	5	1		33	2		3	5		1	1	2	

CALCULATED DLS
CHECKED AKF

SIGNING REMOVAL SUBSUMMARY SHEET 1 OF 6

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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 SIGN AND REERECTION EACH	630 REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION 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 GROUND MOUNTED WOODEN BOX BEAM SUPPORT AND DISPOSAL EACH	630 REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION 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	630 REMOVAL OF MISCELLANEOUS TRAFFIC CONTROL ITEM, BARRIER MOUNTED SIGN SUPPORT BRACKET EACH	
968	R-37	I-77		CEN	D10-5		1				1									
					D10-5		1				1									
968	R-38	I-77		LT	E9-H1				1			2								
968	R-39	I-77		LT	R3-4		1				1									
					R5-H11		1													
968	R-40	I-77		RT	D12-H5b				1				2							
					D12-H5bP					1										
968	R-41	I-77		RT	R3-4		1				1									
					R5-H11		1													
969	R-42	I-77		CEN	D10-5		1				1									
					D10-5		1													
969	R-43	I-77		LT	D10-3		1				1									
969	R-44	I-77		LT	R25-H1				1				2							
969	R-45	I-77		RT	D12-H5b				1				2							
					D12-H5bP					1										
969	R-46	I-77		RT	E1-H5bP										1			1		
					SPECIAL										1					
					E1-H5P										1					
					SPECIAL										1					
					D10-3											1				
969	R-47	I-77		RT	E1-H5bP				1			2								
					SPECIAL				1											
970	R-48	I-77		CEN	R4-16		1				2									
970	R-49	I-77		LT	R2-1		1				2									
970	R-50	I-77		CEN	D3-1		1				2									
970	R-51	I-77		LT	D10-5		1				1									
					D10-5		1													
970	R-52	I-77		RT	D12-H22				1				2							
970	R-53	I-77		RT	I-H25a		1				1									
971	R-54	I-77		LT	M3-3		1				2									
					M1-1-2		1													
971	R-55	I-77		LT	D14-H4		1				2									
971	R-56	I-77		LT	D10-5		1				1									
971	R-57	I-77		RT	E1-H5bP										1			1		
					SPECIAL										1					
					SPECIAL										1					
971	R-58	I-77		RT	E1-H1a			1				2								
971	R-59	I-77		RT	D10-5		1				1									
971	R-61	I-77		RT	D10-H5a		1				1									
TOTALS CARRIED TO SIGNING REMOVAL SUBSUMMARY 6 OF 6							21	1	7	2	21	6	8		7	1		2		

CALCULATED DLS
CHECKED AKF

SIGNING REMOVAL SUBSUMMARY SHEET 2 OF 6

SUM-77/277/224
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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 SIGN AND REERECTION EACH	630 REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION 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 GROUND MOUNTED WOODEN BOX BEAM SUPPORT AND DISPOSAL EACH	630 REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION 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	630 REMOVAL OF MISCELLANEOUS TRAFFIC CONTROL ITEM, BARRIER MOUNTED SIGN SUPPORT BRACKET EACH	
972	R-62	RAMP C-2		LT	OM-3R		1				1									
					I-H25a		1													
972	R-63	RAMP C-2		LT	D10-H5a		1				1									
972	R-64	RAMP C-2		LT	OM-3L		1				1									
					I-H25a		1													
972	R-65	RAMP C-2		LT	W1-6L				1		2									
972	R-66	I-77		LT	D10-5		1				1									
972	R-67	I-77		LT	E1-H1a				1			2								
972	R-68	I-77		LT	R2-1		1				2									
972	R-69	I-77		LT	W3-5		1				2									
972	R-70	I-77		RT	W3-5		1				2									
972	R-71	I-77		RT	I-H25a		1				1									
972	R-72	I-77		RT	E1-H5bP										1		1			
					SPECIAL										1					
972	R-73	I-77		RT	W4-3R		1				2									
972	R-74	I-77		LT	D10-5		1				1									
972	R-75	I-77		LT	W13-7		1				2									
972	R-76	I-77		LT	R2-1		1				2									
973	R-77	I-77		LT	E1-H5bP										1		1			
					SPECIAL										1					
					W13-3											1				
973	R-78	I-77		LT	D10-5		1				1									
973	R-79	I-77		LT	D10-3		1				1									
973	R-80	I-77		LT	W4-1R		1				2									
973	R-81	RAMP B-1		LT	D10-H5a		1				1									
973	R-82	I-77		LT	I-H25a		1				1									
973	R-83	I-77		LT	E1-H5bP										1		1			
					SPECIAL										1					
973	R-85	I-77		RT	SPECIAL										1			1		
					E1-H5bP										1					
					SPECIAL										1					
973	R-86	I-77		RT	D10-3		1				1									
973	R-87	I-77		LT	E5-H1a				1			2								
973	R-88	I-77		RT	W4-1R		1				2									
973	R-89	RAMP B-2		LT	OM-3L		1				1									
973	R-90	RAMP B-2		RT	OM-3R		1				1									
					I-H25a		1				1									
973	R-90A	RAMP B-2		RT	W1-6		1				2									
					W1-H6P															
974	R-91	RAMP B		RT	D10-H5a		1				1									
974	R-92	I-77		LT	E5-H1a				1			2								
974	R-93	I-77		LT	SPECIAL		1				2									
974	R-94	I-77		LT	I-H2e		1					2								
974	R-95	I-77		LT	D10-5		1				1									
974	R-96	I-77		RT	R1-2		1				2									
974	R-97	I-77		RT	W8-13		1				2									
974	R-98	I-77		RT	I-H2a				1			2								
974	R-99	I-77		RT	I-H25a		1				1									
974	R-100	I-77		RT	OM-3R		1				1									
974	R-101	I-77		LT	D10-5		1				1									
974	R-95A	I-77		LT	M3-2		1				1									
					M1-4-3		1													
974	R-101A	I-77		RT	R2-4a		1				2									
974	R-101B	I-77		LT	R2-4a		1				2									
TOTALS CARRIED TO SIGNING REMOVAL SUBSUMMARY 6 OF 6							38		5		50	10			9	1	3	1		

CALCULATED DLS
CHECKED AKF

SIGNING REMOVAL SUBSUMMARY SHEET 3 OF 6

SUM-77 / 277 / 224
VARIOUS

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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 SIGN AND REERECTION EACH	630 REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION 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 GROUND MOUNTED WOODEN BOX BEAM SUPPORT AND DISPOSAL EACH	630 REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION 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	630 REMOVAL OF MISCELLANEOUS TRAFFIC CONTROL ITEM, BARRIER MOUNTED SIGN SUPPORT BRACKET EACH	
975	R-102	I-77		LT	E1-H5P										1					
					SPECIAL										1					
976	R-103	I-77		LT	E1-H5P										1					
					SPECIAL										1					
977	R-104	I-277		RT	SPECIAL										1					
					SPECIAL										1					
978	R-105	I-277		RT	SPECIAL										1					
					SPECIAL										1					
					E1-H5P										1					
					SPECIAL										1					
980	R-106	I-277		LT	M3-4		1				2									
					M1-1-3		1													
					M3-4		1				2									
					M1-4-3		1													
980	R-107	I-277		RT	R4-16											1				
					SPECIAL										1					
					E1-H5P										1					
					SPECIAL										1					
981	R-108	I-277		LT	W4-3R		1				2									
981	R-109	RAMP B		LT	I-H2a				1			2								
981	R-110	I-277		LT	SPECIAL		1				2									
981	R-111	RAMP B-1		RT	W1-8R		1				1									
981	R-112	RAMP B-1		RT	W1-8R		1				1									
981	R-113	RAMP B-1		RT	W1-8R		1				1									
981	R-114	RAMP B-1		RT	W1-8R		1				1									
981	R-115	RAMP B-1		RT	W1-8R		1				1									
981	R-116	RAMP B-1		RT	W1-8R		1				1									
981	R-117	RAMP B-1		LT	D10-H5a		1				1									
981	R-118	RAMP B-1		RT	W1-8R		1				1									
981	R-119	I-277		RT	W1-6R		1				2									
981	R-120	I-277		RT	M4-6											1				
					M1-1-3											1				
					SPECIAL										1		1			
981	R-122	I-277		RT	SPECIAL										1			1		
					SPECIAL										1					
					SPECIAL										1					
					E1-H5P										1					
					E1-H5P										1					
981	R-123	I-277		CEN	D10-5		1				1								1	
					D10-5		1													
TOTALS CARRIED TO SIGNING REMOVAL SUBSUMMARY 6 OF 6							17		1		19	2			19	3	1	1	1	

CALCULATED DLS CHECKED AKF

SIGNING REMOVAL SUBSUMMARY SHEET 4 OF 6

SUM-77/277/224
VARIOUS

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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 SIGN AND REERECTION EACH	630 REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION 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 GROUND MOUNTED WOODEN BOX BEAM SUPPORT AND DISPOSAL EACH	630 REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION 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	630 REMOVAL OF MISCELLANEOUS TRAFFIC CONTROL ITEM, BARRIER MOUNTED SIGN SUPPORT BRACKET EACH	
982	R-124	I-277		LT	E5-H1a				1			2								
982	R-125	I-277		LT	SPECIAL										1					
					SPECIAL										1					
					E1-H5P										1					
982	R-126	I-277		LT	OM-3R		1				1									
					I-H25a		1													
982	R-127	I-277		RT	E5-H1a				1			2								
982	R-128	I-277		RT	W8-13		1				2									
982	R-129	I-277		RT	SPECIAL				1			2								
982	R-130	I-277		RT	OM-3R		1				1									
					I-H25a		1													
982	R-131	I-277		CEN	D10-5		1				1								1	
					D10-5		1													
982	R-132	I-277		RT	SPECIAL										1					
					SPECIAL										1					
					E1-H5P										1					
					W13-7											1				
983	R-133	I-277		LT	W8-13		1				2									
983	R-134	I-277		LT	E5-H1a				1			2								
983	R-135	I-277		CEN	D10-5		1				1								1	
					D10-5		1													
983	R-136	I-277		LT	SPECIAL										1					
					SPECIAL										1					
					SPECIAL										1					
					E1-H5P										1					
					E1-H5P										1					
983	R-137	I-277		RT	E5-H1a				1			2								
983	R-138	I-277		RT	W1-6R		1				2									
983	R-139	I-277		RT	SPECIAL										1		1			
983	R-140	I-277		RT	W4-3R		1				2									
984	R-141	US 224		LT	SPECIAL										1					
					E1-H5P										1					
984	R-142	US 224		LT	SPECIAL										1					
					SPECIAL										1					
					E1-H5P										1					
985	R-143	US 224		LT	SPECIAL										1					
986	R-144	RAMP A		LT	D10-H5a		1				1									
986	R-145	RAMP A		RT	W4-1R		1				2									
987	R-146	RAMP B		LT	W3-2		1				2									
987	R-147	RAMP B		RT	R1-2		1				2									
987	R-147A	RAMP B-2		RT	W1-8L			1			2									
987	R-147B	RAMP B-2		RT	W1-8L			1			2									
987	R-147C	RAMP B-2		RT	W1-8L			1			2									
987	R-147D	RAMP B-2		RT	W1-8L			1			2									
988	R-148	RAMP C-2		LT	D10-H5a		1				1									
988	R-149	RAMP C-2		LT	W4-1R		1				2									
988	R-150	RAMP C		RT	D10-H5a		1				1									
988	R-151	RAMP B		RT	R1-2		1				2									
TOTALS CARRIED TO SIGNING REMOVAL SUBSUMMARY 6 OF 6							20	4	5		33	10			18	1	1		2	

CALCULATED DLS
CHECKED AKF

SIGNING REMOVAL SUBSUMMARY SHEET 5 OF 6

SUM-77 / 277 / 224
VARIOUS

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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 SIGN AND REERECTION EACH	630 REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION 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 GROUND MOUNTED WOODEN BOX BEAM SUPPORT AND DISPOSAL EACH	630 REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION 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	630 REMOVAL OF MISCELLANEOUS TRAFFIC CONTROL ITEM, BARRIER MOUNTED SIGN SUPPORT BRACKET EACH	
989	R-152	RAMP C-1		LT	W1-8R		1				1									
989	R-153	RAMP C-1		LT	W1-8R		1				1									
989	R-154	RAMP C-1		LT	W1-8R		1				1									
989	R-155	RAMP C-1		LT	W1-8R		1				1									
989	R-156	RAMP C-1		LT	W1-8R		1				1									
989	R-157	RAMP C-1		LT	W1-8R		1				1									
989	R-158	RAMP C-1		LT	W1-8R		1				1									
989	R-159	RAMP C-1		LT	W1-8R		1				1									
989	R-161	RAMP C-1		RT	D10-H5a		1				1									
990	R-160	RAMP D		RT	D10-H5a		1				1									
SIGNING REMOVAL SUBSUMMARY 1 OF 6							33	5	1		33	2		3	5		1	1	2	
SIGNING REMOVAL SUBSUMMARY 2 OF 6							21	1	7	2	21	6	8		7	1		2		
SIGNING REMOVAL SUBSUMMARY 3 OF 6							38		5		50	10			9	1	3	1		
SIGNING REMOVAL SUBSUMMARY 4 OF 6							17		1		19	2			19	3	1	1	1	
SIGNING REMOVAL SUBSUMMARY 5 OF 6							20	4	5		33	10			18	1	1		2	
THIS SHEET							10				10									
TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY							139	10	19	2	166	30	8	3	58	6	6	5	5	

CALCULATED DLS
CHECKED AKF

SIGNING REMOVAL SUBSUMMARY SHEET 6 OF 6

SUM-77 / 277 / 224
VARIOUS

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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	630 GROUND MOUNTED SUPPORT, NO. 2 POST FT	630 GROUND MOUNTED SUPPORT, NO. 3 POST FT	630 GROUND MOUNTED SUPPORT, NO. 4 POST FT	630 SIGN POST REFLECTOR (YELLOW) EACH	630 SIGN POST REFLECTOR (RED) EACH	630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED EACH	630 SIGN SUPPORT ASSEMBLY, BARRIER MOUNTED, AS PER PLAN EACH	630 SIGN, FLAT SHEET SF	630 SIGN, FLAT SHEET, AS PER PLAN SF	630 SIGN, GROUND MOUNTED EXTRUSHEET SF
961	S-1	I-77	366+53	LT	M3-3-36	36 X 18						1		4.5		
					M1-1-36-2	36 X 36						1		9.0		
962	S-2	RAMP D	71+60	LT	W4-3R-48	48 X 48		16.2/16.2						16.0		
963	S-3	I-77	380+38	CEN	D10-5-18	18 X 60							1	7.5		
					D10-5-18	18 X 60								7.5		
964	S-6	I-77	394+80	LT	D3-1-66	66 X 18		12.0/12.0						8.3		
					I-H25a-12	12 X 12								1.0		
964	S-7	I-77		CEN	D10-5-18	18 X 60							1	7.5		
				D10-5-18	D10-5-18	18 X 60								7.5		
964	S-9	I-77	390+76	CEN	D10-5-18	18 X 60							1	7.5		
					D10-5-18	18 X 60								7.5		
964	S-10	I-77	393+60	RT	D3-1-66	66 X 18		12.0/12.0						8.3		
					I-H25a-12	12 X 12								1.0		
964	S-12	I-77	399+60	RT	D10-3	12 X 48	11.5									
965	S-13	I-77	410+26	CEN	D10-5-18	18 X 60							1	7.5		
					D10-5-18	18 X 60								7.5		
965	S-14	I-77	404+20	RT	W4-2R			16.2/16.2								
966	S-16	I-77	420+74	CEN	D10-5-18	18 X 60							1	7.5		
					D10-5-18	18 X 60								7.5		
966	S-17	I-77	425+00	RT	OM-3L-12	12 X 36	10.5							3.0		
966	S-18	WARNER RD	25+09	RT	W3-3-30	30 X 30		14.1						6.3		
966	S-19	I-77	427+00	LT	D3-1-72	72 X 18		12.0/12.0						9.0		
966	S-20	I-77	427+00	LT	OM-3R-12	12 X 36	11.5							3.0		
					I-H25a-12	12 X 12								1.0		
966	S-21	I-77	424+78	RT	OM-3L-12	12 X 36	11.5							3.0		
					I-H25a-12	12 X 12								1.0		
966	S-22	I-77	425+00	RT	D3-1-72	72 X 18		12.0/12.0						9.0		
966	S-23	WARNER RD	72+06	LT	D3-H6-72	72 X 12		11.5/11.5						6.0		
966	S-24	WARNER RD	27+00	LT	W11-3-30	30 X 30		14.1						6.3		
966	S-25	I-77	427+15	CEN	OM-3L-12	12 X 36							1	3.0		
TOTALS CARRIED TO GROUND MOUNTED SIGNING SUBSUMMARY SHEET 4 OF 4							45.0	212.0				2	6	173.7		

CALCULATED DLS CHECKED AKF

GROUND MOUNTED SIGNING SUBSUMMARY SHEET 1 OF 4

SUM-77/277/224
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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	630 GROUND MOUNTED SUPPORT, NO. 2 POST FT	630 GROUND MOUNTED SUPPORT, NO. 3 POST FT	630 GROUND MOUNTED SUPPORT, NO. 4 POST FT	630 SIGN POST REFLECTOR (YELLOW) EACH	630 SIGN POST REFLECTOR (RED) EACH	630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED EACH	630 SIGN SUPPORT ASSEMBLY, BARRIER MOUNTED, AS PER PLAN EACH	630 SIGN, FLAT SHEET SF	630 SIGN, FLAT SHEET, AS PER PLAN SF	630 SIGN, GROUND MOUNTED EXTRUSHEET SF
967	S-26	I-77	431+38	CEN	OM-3L-12	12 X 36							1	3.0		
967	S-27	I-77	431+38	LT	OM-3L-12	12 X 36	10.5							3.0		
					I-H25a-12	12 X 12								1.0		
967	S-28	I-77	428+84	RT	OM-3R-12	12 X 36	11.5							3.0		
					I-H25a-12	12 X 12								1.0		
967	S-29	I-77	428+94	RT	OM-3L-12	12 X 36	10.5							3.0		
968	S-30	I-77	441+84	CEN	D10-5-18	18 X 60							1	7.5		
					D10-5-18	18 X 60								7.5		
969	S-32	I-77	451+90	LT	W4-2R-48	48 X 48		16.2/16.2						16.0		
969	S-33	I-77	452+73	CEN	D10-5-18	18 X 60							1	7.5		
					D10-5-18	18 X 60								7.5		
969	S-34	I-77	452+73	LT	D10-3-12	12 X 48	11.5							4.0		
969	S-37	I-77	452+73	RT	D10-3-12	12 X 48	11.5							4.0		
970	S-39	I-77	469+68	LT	R2-1-48	48 X 60			15.5/15.5							20.0
970	S-40	I-77	469+78	LT	D3-1-72	72 X 18		12.0/12.0						9.0		
970	S-41	I-77	473+96	LT	D10-5-18	18 X 60		15.5						7.5		
					D10-5-18	18 X 60								7.5		
970	S-43	I-77	468+49	RT	D3-1-72	72 X 18		12.0/12.0						9.0		
					I-H25a-12	12 X 12								1.0		
971	S-44	I-77	475+61	LT	M3-3-36	36 X 18		15.1/15.1						4.5		
					M1-1-36-2	36 X 36								9.0		
971	S-46	I-77	484+17	RT	D10-5-18	18 X 60		15.5						7.5		
971	S-48	I-77	484+17	LT	D10-5-18	18 X 60		15.5						7.5		
971	S-50	RAMP C	585+68	RT	D10-H5a-30	30 X 30		13.0						6.3		
972	S-51	RAMP C-2	792+28	LT	D10-H5a-30	30 X 30		13.0						6.3		
972	S-52	RAMP C-2	793+18	LT	OM-3R-12	12 X 36	11.5							3.0		
					I-H25a-12	12 X 12								1.0		
972	S-53	RAMP C-2	793+18	RT	OM-3L-12	12 X 36	10.5							3.0		
972	S-55	RAMP C-2	793+85	LT	W1-6L-72	72 x 36			15.5/15.5	2				18.0		
					W1-H6P-72	72 x 24								12.0		
972	S-56	I-77	494+44	LT	D10-5-18	18 X 60		15.5						7.5		
972	S-59	I-77	490+90	RT	I-H25a-12	12 X 12	8.5							1.0		
972	S-60	I-77	492+36	RT	W4-3R-48	48 X 48		16.2/16.2						16.0		
972	S-61	I-77	496+00	RT	D10-5-18	18 X 60		15.5						7.5		
972	S-63	I-77	498+43	LT	R2-1-48	48 X 60			15.5/15.5							20.0
972	S-64	I-77	498+48	RT	R2-1-48	48 X 60			15.5/15.5							20.0
972	S-116	RAMP A	94+50	RT	W4-3R-48	48 X 48		16.2/16.2						16.0		
TOTALS CARRIED TO GROUND MOUNTED SIGNING SUBSUMMARY SHEET 4 OF 4							86.0	278.9	124.0	2		3		228.1		60.0

CALCULATED DLS CHECKED AKF

GROUND MOUNTED SIGNING SUBSUMMARY SHEET 2 OF 4

SUM-77/277/224
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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	630 GROUND MOUNTED SUPPORT, NO. 2 POST FT	630 GROUND MOUNTED SUPPORT, NO. 3 POST FT	630 GROUND MOUNTED SUPPORT, NO. 4 POST FT	630 SIGN POST REFLECTOR (YELLOW) EACH	630 SIGN POST REFLECTOR (RED) EACH	630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED EACH	630 SIGN SUPPORT ASSEMBLY, BARRIER MOUNTED, AS PER PLAN EACH	630 SIGN, FLAT SHEET SF	630 SIGN, FLAT SHEET, AS PER PLAN SF	630 SIGN, GROUND MOUNTED EXTRUSHEET SF				
973	S-65	I-77	504+91	LT	D10-5-18	18 X 60		15.5						7.5						
973	S-66	RAMP B-1	404+92	LT	D10-3-12	12 X 48	11.5							4.0						
973	S-67	I-77	506+96	LT	W4-1R-48	48 X 48		16.2/16.2						16.0						
973	S-68	RAMP B-1	585+68	LT	D10-H5a-30	30 X 30		13.0						6.3						
973	S-69	I-77	509+16	LT	I-H25a-12	12 X 12	8.5							1.0						
973	S-70	I-77	504+73	RT	D10-3-12	12 X 48	11.5							4.0						
973	S-72	I-77	506+52	RT	W4-1R-48	48 X 48		16.2/16.2						16.0						
973	S-73	RAMP B-2	307+78	LT	OM-3L-12	12 X 36	10.5							3.0						
973	S-74	RAMP B-2	308+13	RT	OM-3R-12	12 X 36	11.5							3.0						
					I-H25a-12	12 X 12								1.0						
973	S-66A	I-77	502+03	LT	R1-2-60	60 X 60 X 60		16.1/16.1			2			10.9						
973	S-71B	RAMP B-2	306+75	RT	W1-6L-72	72 x 36			15.5/15.5	2				18.0						
					W1-H6P-72	72 x 24								12.0						
974	S-75	RAMP B	213+15	LT	D10-H5a-30	30 X 30		13.0						6.3						
974	S-77	RAMP B	214+81	LT	I-H2c-36	36 X 24		13.5						6.0						
974	S-78	I-77	515+08	LT	I-H2e-84	84 X 36		13.5/13.5								21.0				
974	S-79	I-77	515+37	LT	D10-5-18	18 X 60		15.5						7.5						
974	S-80	RAMP B	216+00	LT	W13-7-48	48 X 84			16.5/16.5					7.5		28.0				
974	S-81	I-77	511+25	RT	R1-2-60	60 X 60 X 60		16.1/16.1			2			10.9						
974	S-82	I-77	515+10	RT	W1-2R-48	48 X 48		16.2/16.2							16.0					
974	S-83	I-77	515+30	RT	I-H2a-72	72 X 36		13.5/13.5						18.0						
974	S-84	I-77	515+48	RT	OM-3R-12	12 X 36	11.5							3.0						
					I-H25a-12	12 X 12								1.0						
974	S-85	I-77	515+55	LT	D10-5-18	18 X 60		15.5						7.5						
974	S-85A	I-77	521+00	RT	M3-1-36	36 X 18		15.1/15.1						4.5						
					M1-1-36-2	36 X 36								9.0						
975	S-85B	I-77	535+00	RT	R2-1-48	48 X 60			15.5/15.5					20.0						
979	S-86	I-277	219+00	LT	M3-4-36	36 X 18		15.1/15.1						4.5						
					M1-1-3	45 X 36								11.3						
					M3-4-36	36 X 18		15.1/15.1						4.5						
					M1-4-3	45 X 36								11.3						
980	S-87	I-277	234+17	LT	R1-2-60	60 X 60 X 60		16.1/16.1			2			10.9						
980	S-87A	I-277	228+40	LT	W4-3R-48	48 X 48		16.2/16.2						16.0						
981	S-88	RAMP B	202+50	RT	W3-2-48	48 X 48		16.2/16.2						16.0						
981	S-89	I-277	238+00	LT	W4-3R-48	48 X 48		16.2/16.2						16.0						
981	S-90	RAMP B	201+18	LT	I-H2a-72	72 X 36		13.5/13.5						18.0						
981	S-91	I-277	241+88	LT	D6-H5-72	72 X 30		13.0/13.0						15.0						
981	S-92	RAMP B-1	409+23	RT	W1-8R-36	36 X 48		11.5/11.5		2				12.0						
981	S-93	RAMP B-1	410+02	RT	W1-8R-36	36 X 48		11.5/11.5		2				12.0						
981	S-94	RAMP B-1	410+82	RT	W1-8R-36	36 X 48		11.5/11.5		2				12.0						
981	S-95	RAMP B-1	411+62	RT	W1-8R-36	36 X 48		11.5/11.5		2				12.0						
981	S-96	RAMP B-1	412+42	RT	W1-8R-36	36 X 48		11.5/11.5		2				12.0						
981	S-97	RAMP B-1	413+22	RT	W1-8R-36	36 X 48		11.5/11.5		2				12.0						
981	S-98	RAMP B-1	414+02	RT	W1-8R-36	36 X 48		11.5/11.5		2				12.0						
981	S-99	RAMP B-1	414+05	LT	D10-H5a-30	30 X 30		13.0						6.3						
981	S-100	RAMP B-1	414+82	RT	W1-8R-36	36 X 48		11.5/11.5		2				12.0						
981	S-101	RAMP B-1	415+51	RT	W1-6R-60	60 X 30	10.0/10.0			2				12.5						
981	S-103	I-277/US 224	245+12	CEN	D10-5-18	18 X 60	7.3						1	7.5						
					D10-5-18	18 X 60								7.5						
TOTALS CARRIED TO GROUND MOUNTED SIGNING SUBSUMMARY SHEET 4 OF 4							92.3	771.6	95.0	26			1	457.2	16.0	49.0				

CALCULATED DLS
CHECKED AKF

GROUND MOUNTED SIGNING SUBSUMMARY SHEET 3 OF 4

SUM-77 / 277 / 224
VARIOUS

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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	630 GROUND MOUNTED SUPPORT, NO. 2 POST FT	630 GROUND MOUNTED SUPPORT, NO. 3 POST FT	630 GROUND MOUNTED SUPPORT, NO. 4 POST FT	630 SIGN POST REFLECTOR (YELLOW) EACH	630 SIGN POST REFLECTOR (RED) EACH	630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED EACH	630 SIGN SUPPORT ASSEMBLY, BARRIER MOUNTED, AS PER PLAN EACH	630 SIGN, FLAT SHEET SF	630 SIGN, FLAT SHEET, AS PER PLAN SF	630 SIGN, GROUND MOUNTED EXTRUSHEET SF				
982	S-105	I-277	256+59	LT	OM-3R-12	12 X 36	11.5							3.0						
					I-H25a-12	12 X 12								1.0						
982	S-106	I-277	249+06	RT	W8-13-48	48 X 48		16.2/16.2							16.0					
982	S-107	I-277	251+44	RT	OM-3R-12	12 X 36	11.5							3.0						
					I-H25a-12	12 X 12								1.0						
982	S-108	I-277	254+13	CEN	D10-5-18	18 X 60							1	7.5						
					D10-5-18	18 X 60								7.5						
983	S-109	I-277	259+50	LT	W8-13-48	48 X 48		16.2/16.2							16.0					
983	S-111	I-277	265+13	CEN	D10-5-18	18 X 60							1	7.5						
					D10-5-18	18 X 60								7.5						
983	S-113	RAMP C-1	684+05	LT	W1-6R-60	60 X 30	10.0/10.0			2				12.5						
983	S-114	I-277	270+37	RT	W4-3R-48	48 X 48		16.2/16.2						16.0						
985	S-114A	US 224	291+00	RT	R2-1-48	48 X 60						1		20.0						
986	S-115	RAMP A	99+29	LT	D10-H5a-30	30 X 30		13.0						6.3						
987	S-117	RAMP B	208+00	RT	W4-5R-48	48 X 48		16.2/16.2						16.0						
987	S-117A	RAMP B-2	10+05	RT	W1-8L			14.5/14.5												
987	S-117B	RAMP B-2	10+91	RT	W1-8L			14.5/14.5												
987	S-117C	RAMP B-2	11+85	RT	W1-8L			14.5/14.5												
987	S-117D	RAMP B-2	12+78	RT	W1-8L			14.5/14.5												
988	S-118	RAMP C-2	785+92	LT	D10-H5a-30	30 X 30		13.0						6.3						
988	S-119	RAMP C-2	785+54	LT	W4-1R-48	48 X 48		16.2/16.2						16.0						
988	S-120	RAMP C	589+86	RT	D10-H5a-30	30 X 30		13.0						6.3						
988	S-121	RAMP C	593+03	RT	W1-2R-48	48 X 48		16.2/16.2						16.0						
					W13-1P-30	30 X 30								6.3						
988	S-122	RAMP C	594+96	RT	R1-2-60	60 X 60 X 60		16.1/16.1			2			10.9						
988	S-122A	RAMP C-2	788+10	LT	W1-8L-36	36 X 48		11.5/11.5		2				12.0						
988	S-122B	RAMP C-2	788+90	LT	W1-8L-36	36 X 48		11.5/11.5		2				12.0						
989	S-123	RAMP C-1	685+18	LT	W1-8R-36	36 X 48		11.5/11.5		2				12.0						
989	S-124	RAMP C-1	685+98	LT	W1-8R-36	36 X 48		11.5/11.5		2				12.0						
989	S-125	RAMP C-1	686+78	LT	W1-8R-36	36 X 48		11.5/11.5		2				12.0						
989	S-126	RAMP C-1	687+58	LT	W1-8R-36	36 X 48		11.5/11.5		2				12.0						
989	S-127	RAMP C-1	688+38	LT	W1-8R-36	36 X 48		11.5/11.5		2				12.0						
989	S-128	RAMP C-1	689+18	LT	W1-8R-36	36 X 48		11.5/11.5		2				12.0						
989	S-129	RAMP C-1	689+98	LT	W1-8R-36	36 X 48		11.5/11.5		2				12.0						
989	S-130	RAMP C-1	690+78	LT	W1-8R-36	36 X 48		11.5/11.5		2				12.0						
989	S-131	RAMP C-1	691+58	LT	W1-8R-36	36 X 48		11.5/11.5		2				12.0						
989	S-133	RAMP C-1	686+17	RT	D10-H5a-30	30 X 30		13.0						6.3						
990	S-132	RAMP D	900+76	RT	D10-H5a-30	30 X 30		13.0						6.3						
GROUND MOUNTED SIGNING SUBSUMMARY 1 OF 4							45.0	212.0				2	6	173.7						
GROUND MOUNTED SIGNING SUBSUMMARY 2 OF 4							86.0	278.9	124.0	2			3	228.1		60.0				
GROUND MOUNTED SIGNING SUBSUMMARY 3 OF 4							92.3	771.6	95.0	26			1	457.2	16.0	49.0				
THIS SHEET							43.0	660.6		26		1	2	314.9	32.0					
TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY							266.3	1923.1	219.0	54		3	12	1173.9	48.0	109.0				

CALCULATED DLS
CHECKED AKF

GROUND MOUNTED SIGNING SUBSUMMARY SHEET 4 OF 4

SUM-77/277/224
VARIOUS

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SHEET NO.	REFERENCE NO.	LOCATION	SIDE	DETAIL PAGE	STATION	625 GROUND ROD EACH	630 GROUND MOUNTED STRUCTURAL BEAM SUPPORT, S4X7.7 FT	630 GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W6X9 FT	630 GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X22 FT	630 GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X12 FT	630 BREAKAWAY STRUCTURAL BEAM CONNECTION EACH	630 OVERHEAD SIGN SUPPORT, TYPE TC-12.31, DESIGN 6 EACH	630 OVERHEAD SIGN SUPPORT, TYPE TC-12.31, DESIGN 10 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 ATTACHMENT ASSEMBLY EACH	630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED EACH	630 SIGN, FLAT SHEET SF	630 SIGN, GROUND MOUNTED EXTRUSHEET SF	630 SIGN, OVERHEAD EXTRUSHEET SF	630 SIGN, PERMANENT OVERLAY, AS PER PLAN SF	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	
960	OSS-1B	I-77	RT	934	344+15																		75.0				
962	OSS-1A	I-77	LT	991	378+50	2										1						652.5		1		1	
963	OSS-1	I-77	RT	992	389+00	2										1				2		463.5		1		1	
963	OSS-1C	I-77	LT	934	390+00																		51.0				
964	S-11	I-77	RT	1014	401+00		17.3/17.7				2										20.0					2	
965	S-15	I-77	RT	1011	415+20			17.8/19.9			2											48.0				2	
966	OSS-2	I-77	LT	1008	417+00	1								1												1	
968	OSS-3	I-77	RT	993	440+00	2										1						446.5		1		1	
968	S-31	I-77	RT	1011	445+50					20.9/22.6	2											60.0				2	
969	S-35	I-77	LT	1012	455+89					22.4/22.2	2											50.0				2	
969	S-36	I-77	LT	1012	462+50					21.3/17.3	2											60.0				2	
969	S-38	I-77	RT	1013	459+50				23.6/22.6		2											161.5				2	
969	OSS-4	I-77	RT	994	463+00	2											1			1	20.0		943.5			1	
970	S-42	I-77	RT	1013	468+00			18.0/18.1			2											40.0				2	
971	OSS-5	I-77	RT	995	476+00	2											1						943.5			2	
971	S-47	I-77	RT	1014	481+75			18.4/17.5			2											45.0				2	
972	S-57	I-77	LT	1015	496+25			17.6/17.9			2											45.0				2	
972	S-58	I-77	LT	1019	498+25		16.1/16.2				2										20.0					2	
972	OSS-6	I-77	RT	996	490+00	2											1			1	16.0		753.5				2
972	S-62	I-77	LT	1015	496+60			18.8/17.7			2											45.0				2	
973	OSS-7	I-77	LT	1008	503+50	1							1							1	20.0		177.5				1
973	OSS-8	I-77	LT	1009	509+50	1								1									192.5				1
973	S-30A	I-77	LT	STE055	447+00				27.0/23.0		2															2	
973	S-71	RAMP B-2	LT	1019	304+00		19.2/19.9				2											28.0				2	
973	S-71A	RAMP B-2	RT	1019	304+00		19.0/19.2				2											28.0				2	
974	S-76	I-77	LT	1016	514+66			18.5/17.5			2											45.0				2	
974	OSS-8A	I-77	LT	934	518+00																			48.0			
975	OSS-10	I-77	LT	997	528+45													3					137.0	48.0			
976	OSS-11	I-77	LT	998	541+95													3					169.0				
977	OSS-12	I-277	RT	999														3					174.0				
978	OSS-13	I-277	RT	1000														10					495.0				
980	OSS-14	I-277	RT	1001	228+40													7					390.0				
TOTALS CARRIED TO OVERHEAD AND BEAM MOUNTED SUBSUMMARY 2 OF 2						15	144.6	217.7	96.2	126.7	30		1	2		3	3	26	5	96.0	655.5	5938.0	222.0	4	30	11	

CALCULATED DLS CHECKED AKF

OVERHEAD AND BEAM MOUNTED SUBSUMMARY SHEET 1 OF 2

SUM-77/277/224
VARIOUS

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SHEET NO.	REFERENCE NO.	LOCATION	SIDE	DETAIL PAGE	STATION	625 GROUND ROD EACH	630 GROUND MOUNTED STRUCTURAL BEAM SUPPORT, S4X7.7 FT	630 GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W6X9 FT	630 GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X22 FT	630 GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X12 FT	630 BREAKAWAY STRUCTURAL BEAM CONNECTION EACH	630 OVERHEAD SIGN SUPPORT, TYPE TC-12.31, DESIGN 6 EACH	630 OVERHEAD SIGN SUPPORT, TYPE TC-12.31, DESIGN 10 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 ATTACHMENT ASSEMBLY EACH	630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED EACH	630 SIGN, FLAT SHEET SF	630 SIGN, GROUND MOUNTED EXTRUSHEET SF	630 SIGN, OVERHEAD EXTRUSHEET SF	630 SIGN, PERMANENT OVERLAY, AS PER PLAN SF	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	
981	S-102	US 224	LT	1017	246+21			18.7/18.7			2										40.0					2		
981	OSS-15	I-277	RT	1002	242+00	2									1				2	15.9		470.0			1		1	
981	S-104	US 224	RT	1017	246+40			18.3/19.3			2										40.0					2		
982	OSS-16	US 224	LT	1003	248+70													6				341.00						
982	OSS-17	US 224	RT	1009	251+00	1						1										132.0					1	
982	OSS-18	US 224	RT	1004	258+21													6	1	28.0		310.00						
983	S-110	US 224	LT	1018	264+00			17.6/18.3			2										40.0					2		
983	OSS-19	US 224	LT	1005	266+54													9				526.00						
983	S-112	US 224	RT	1018	261+37			18.1/18.2			2										40.0					2		
983	OSS-22	US 224	RT	1010	266+50	1						1										128.0					1	
984	OSS-20	US 224	LT	1006	282+78													9				506.00						
985	OSS-21	US 224	LT	1007														6				330.00						
OVERHEAD AND BEAM MOUNTED SUBSUMMARY 1 OF 2						15	144.6	217.7	96.2	126.7	30		1	2		3	3	26	5	96.0	655.5	5938.0	222.0	4	30	11	
THIS SHEET						4		147.2			8	2			1			36	3	43.9	160.0	2743.0		1	8	3	
TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY						19	144.6	364.9	96.2	126.7	38	2	1	2	1	3	3	62	8	139.9	815.5	8681.0	222.0	5	38	14	

CALCULATED DLS CHECKED AKF

OVERHEAD AND BEAM MOUNTED SUBSUMMARY SHEET 2 OF 2

SUM-77/277/224
VARIOUS

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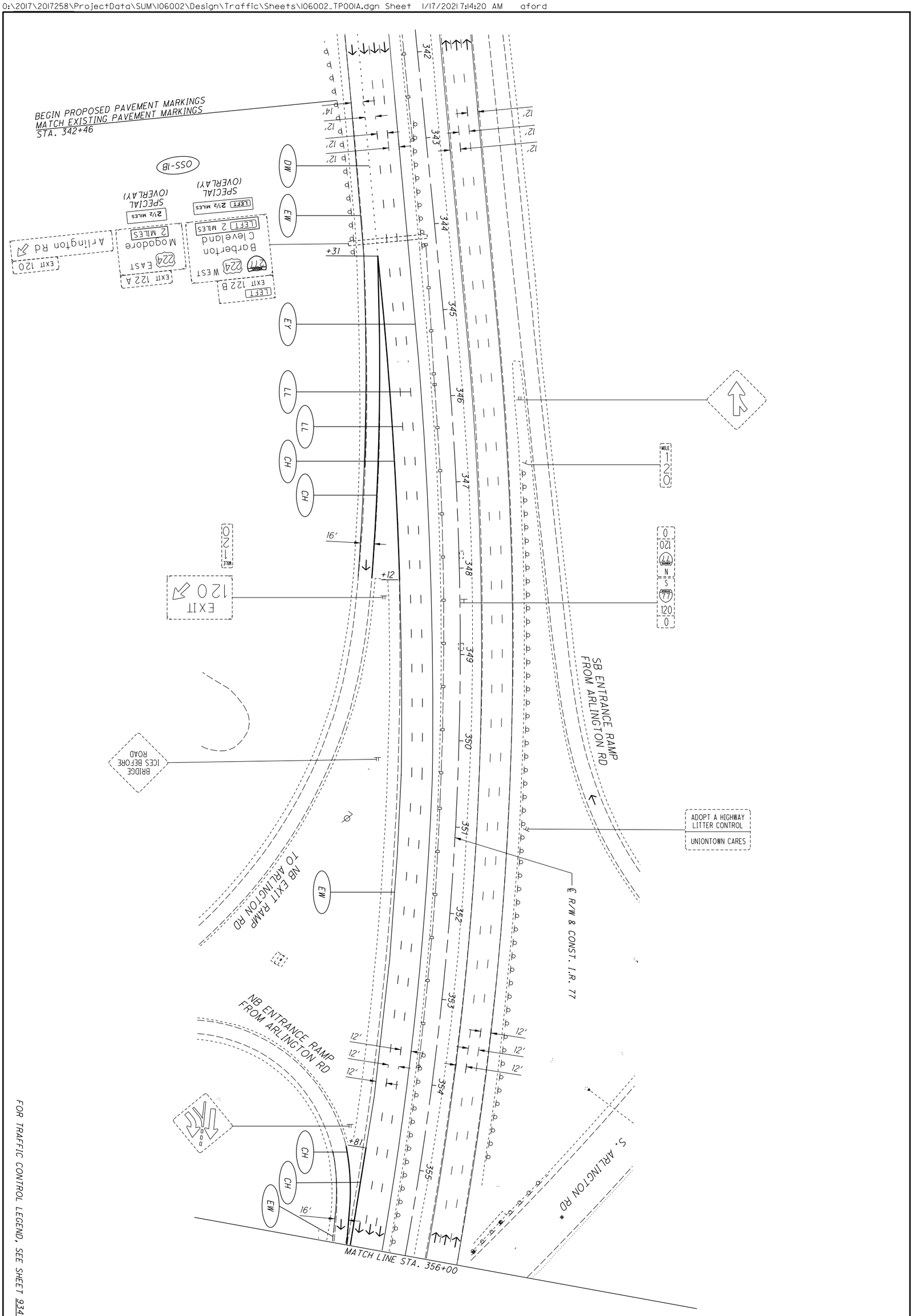
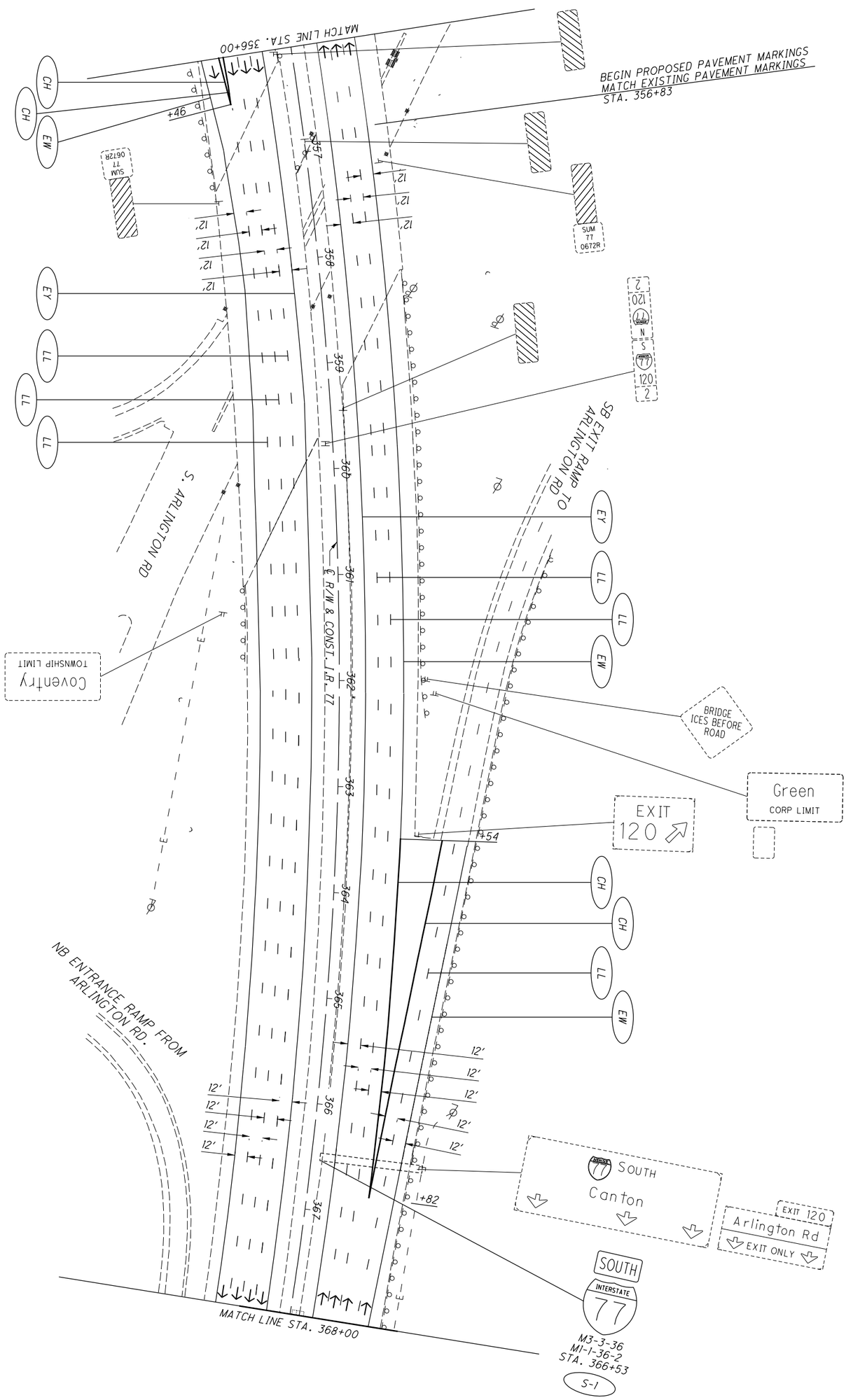


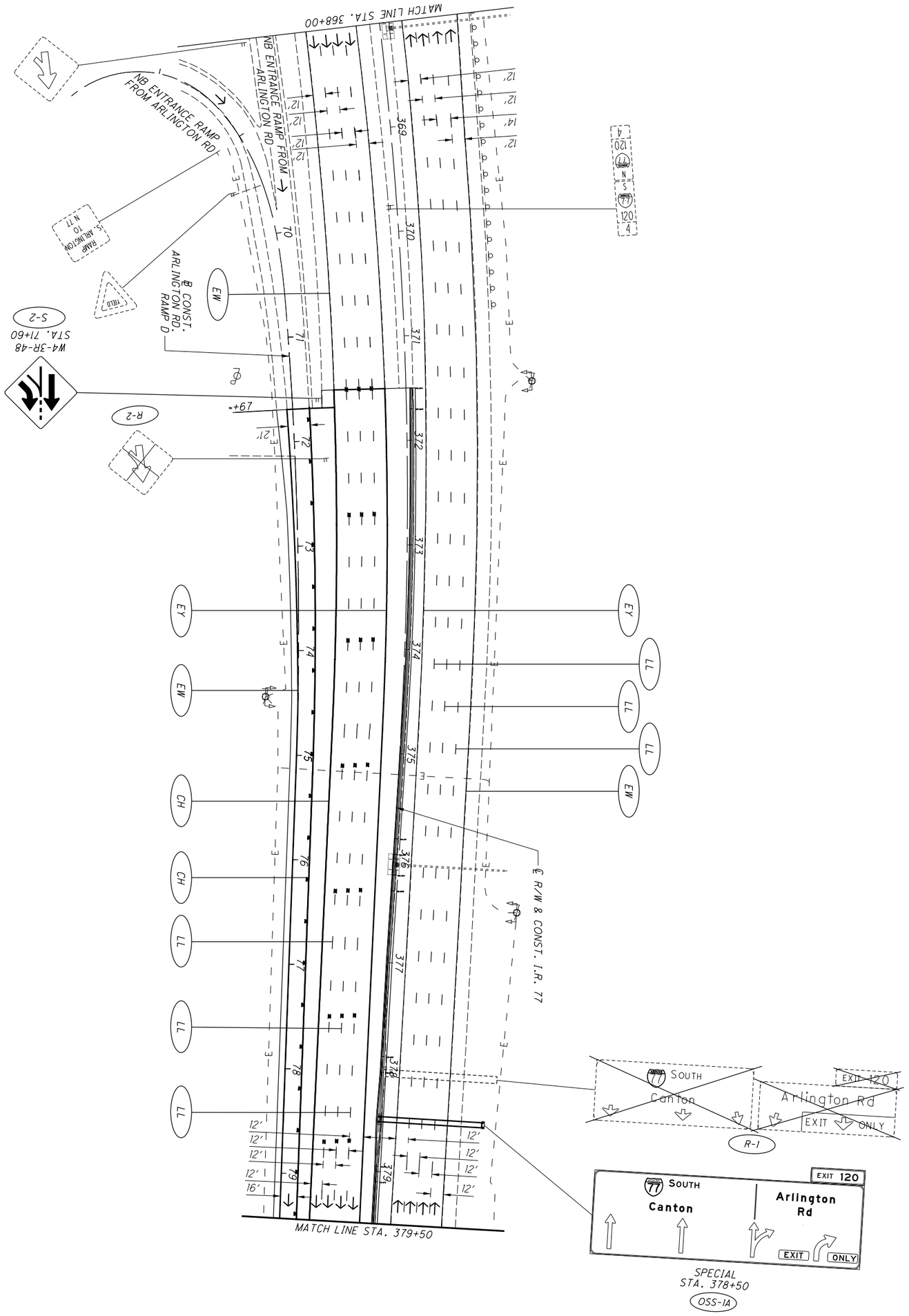
FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

960 / 1288	SUM-77/277/224 VARIOUS	TRAFFIC CONTROL PLAN - I.R. 77 BEGIN TO STA. 356+00	CALCULATED MBK CHECKED AKF	0 50 25 100 HORIZONTAL SCALE IN FEET



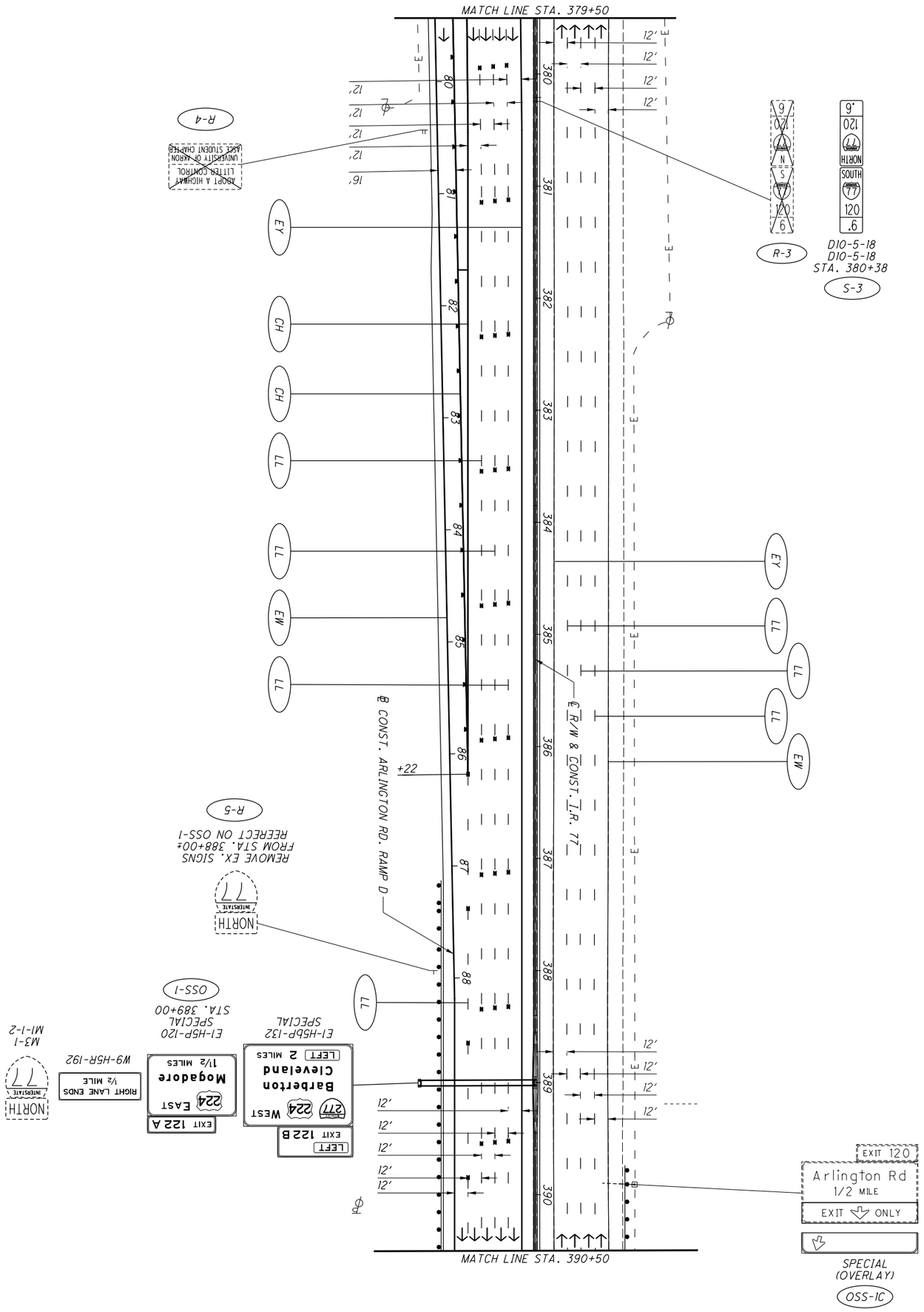
FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

196 / 1288	SUM-77/277/224 VARIOUS	TRAFFIC CONTROL PLAN - I.R. 77 STA. 356+00 TO STA. 368+00	CALCULATED MBK CHECKED AKF	0 50 25 100 HORIZONTAL SCALE IN FEET



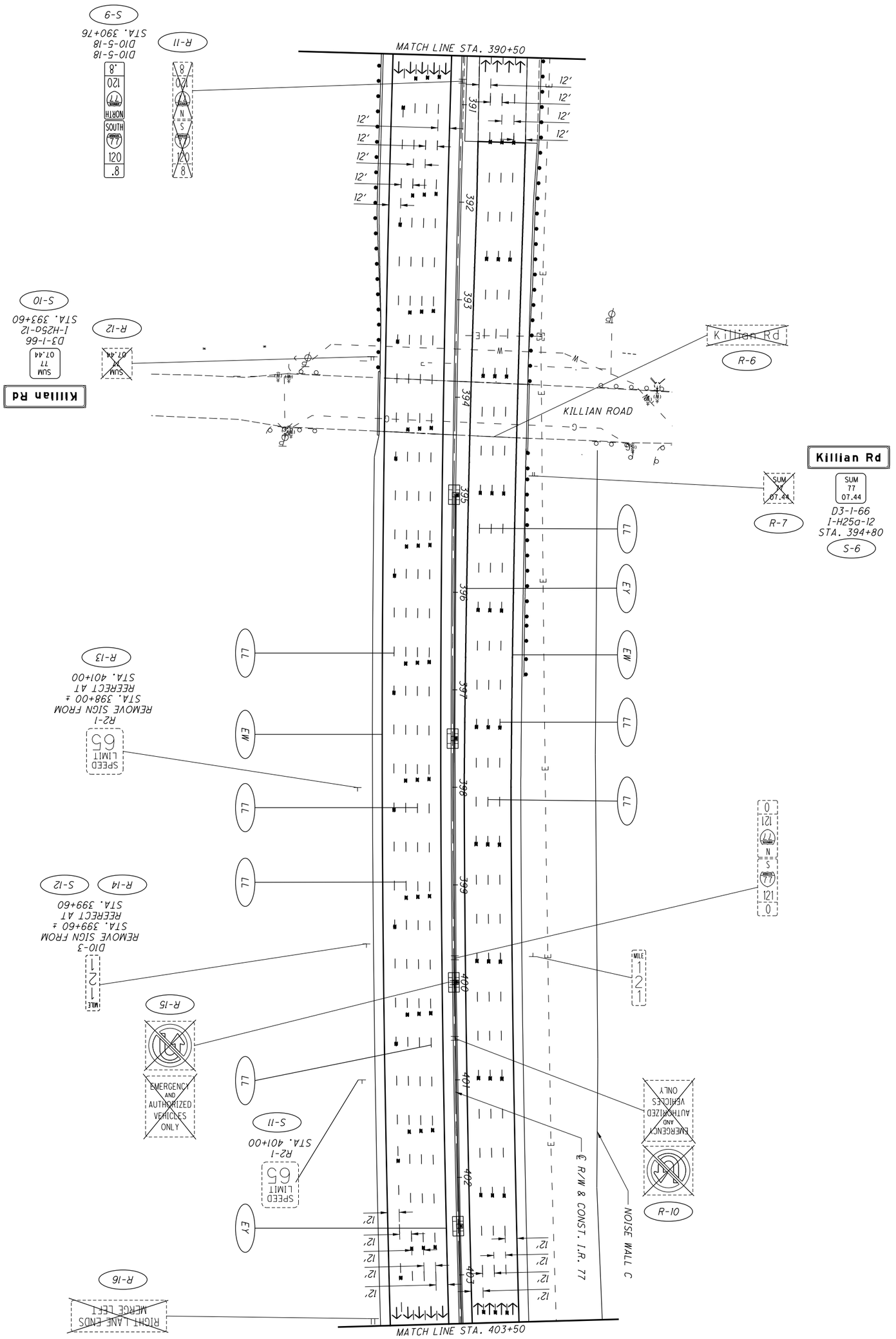
FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

962 / 1288	SUM-77/277/224 VARIOUS	TRAFFIC CONTROL PLAN - I.R. 77 STA. 368+00 TO STA. 379+50	CALCULATED MBK CHECKED AKF	0 50 25 100 HORIZONTAL SCALE IN FEET



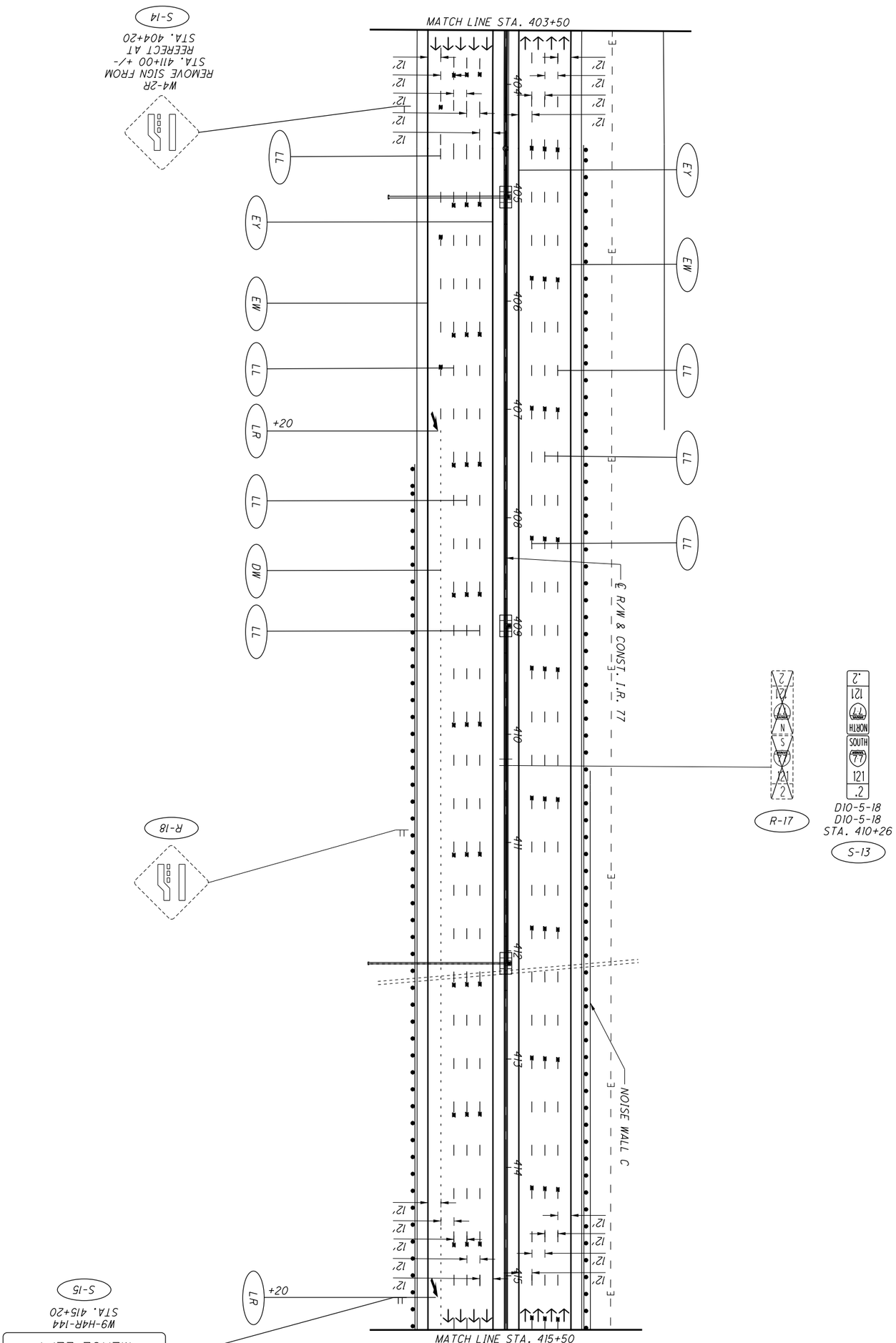
FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

963 / 1288	**SUM-77/277/224** **VARIOUS**	**TRAFFIC CONTROL PLAN - I.R. 77** **STA. 379+50 TO STA. 390+50**	CALCULATED MBK CHECKED AKF 0 50 25 100 HORIZONTAL SCALE IN FEET



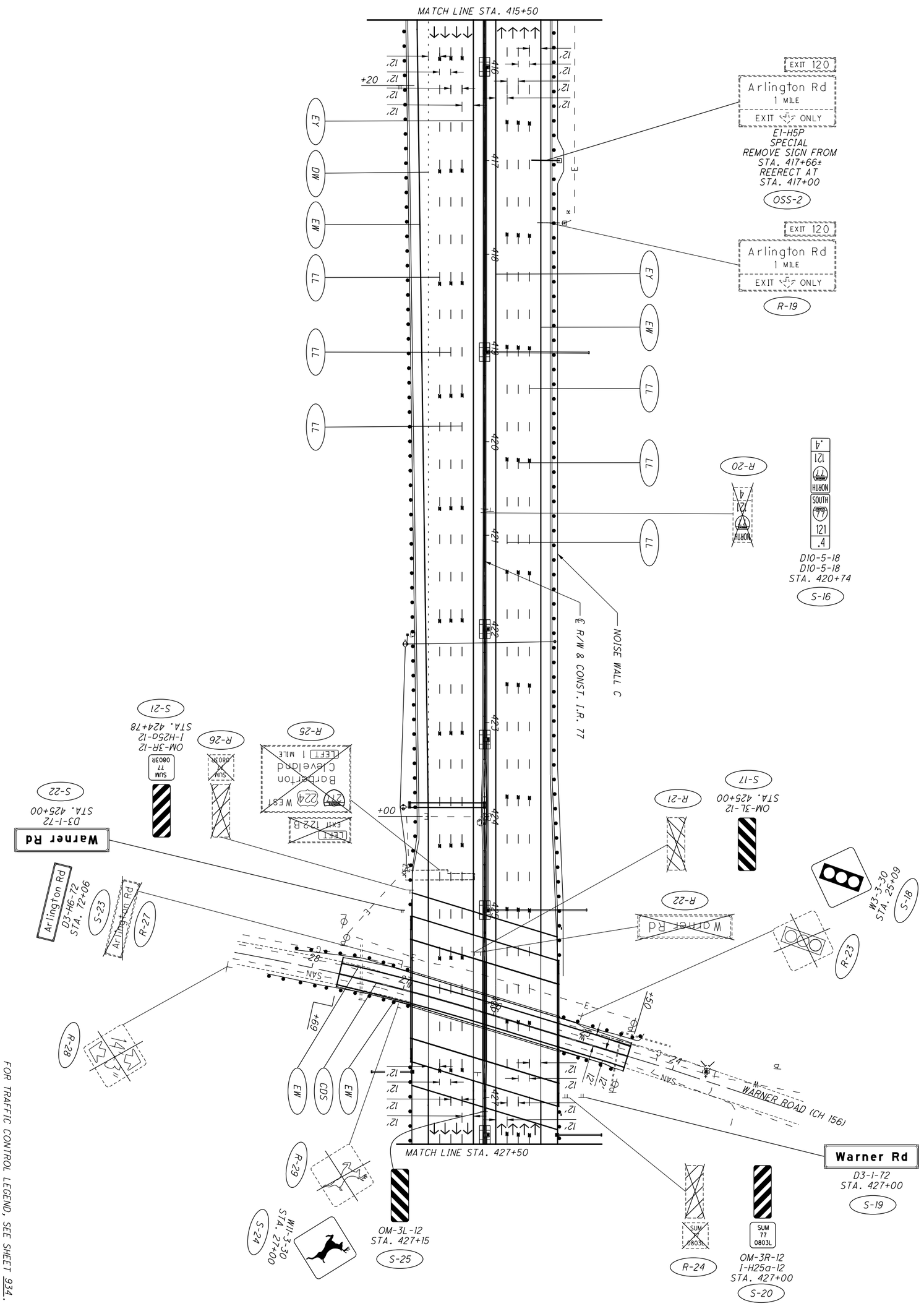
FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934

964 / 1288	SUM-77/277/224 VARIOUS	TRAFFIC CONTROL PLAN - I.R. 77 STA. 390+50 TO STA. 403+50	CALCULATED MBK CHECKED AKF	0 50 25 100 HORIZONTAL SCALE IN FEET



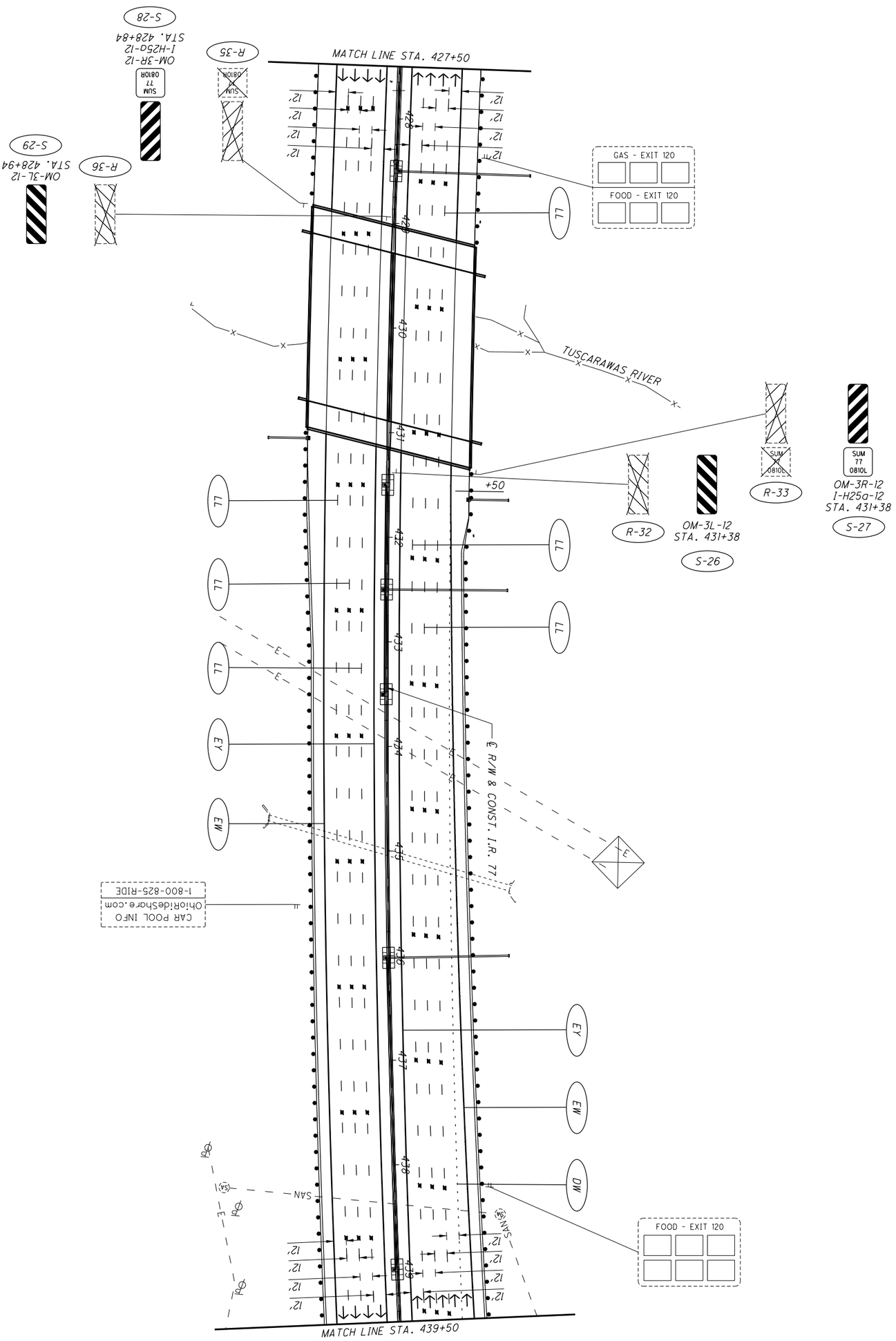
FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

965 / 1288	SUM-77 / 277 / 224 VARIOUS	TRAFFIC CONTROL PLAN - I.R. 77 STA. 403+50 TO STA. 415+50	CALCULATED MBK CHECKED AKF 0 50 100 25 HORIZONTAL SCALE IN FEET



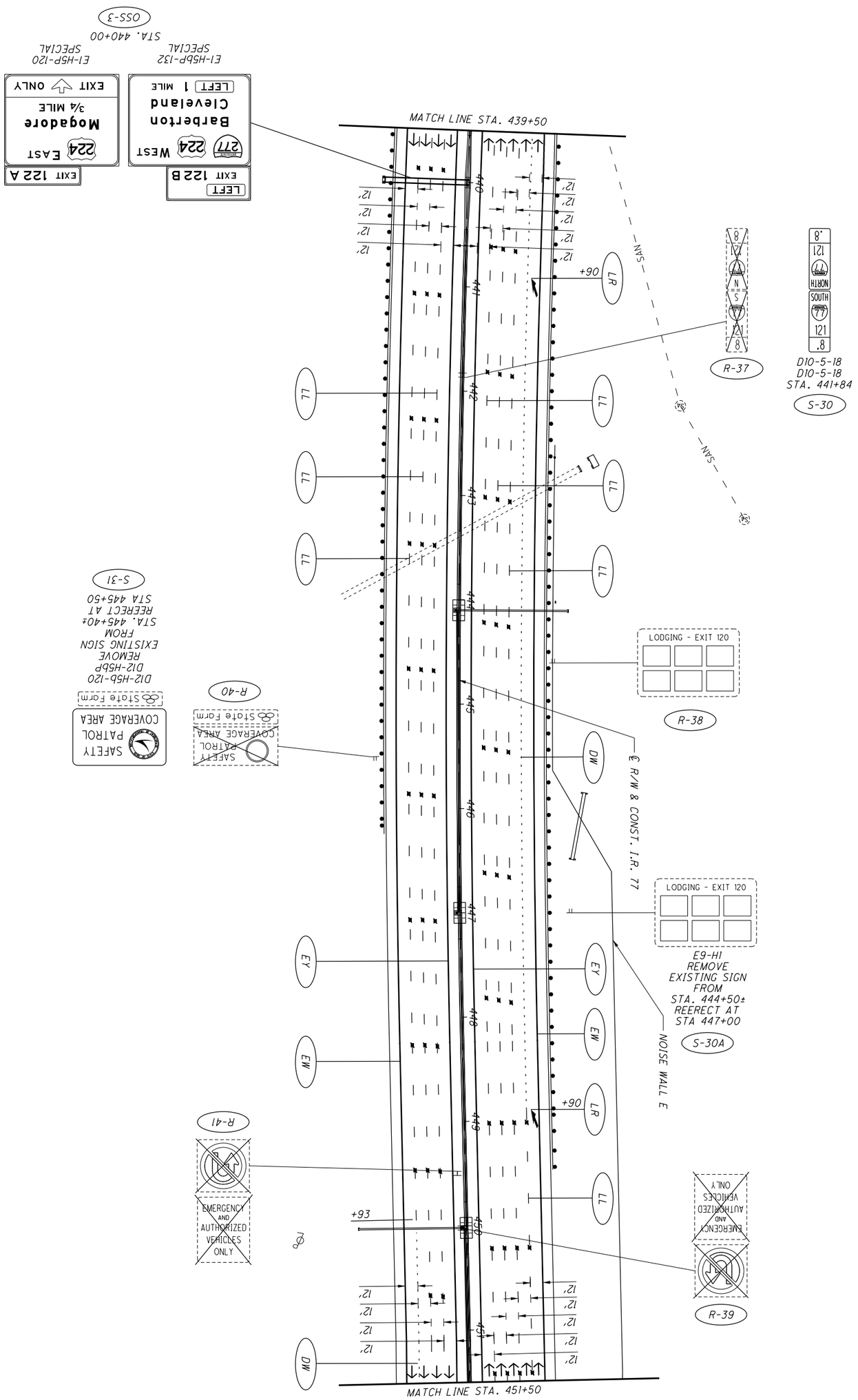
FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

966 / 1288	SUM-77 / 277 / 224 VARIOUS	TRAFFIC CONTROL PLAN - I.R. 77 STA. 415+50 TO STA. 427+50	CALCULATED MBK CHECKED AKF 0 50 25 100 HORIZONTAL SCALE IN FEET



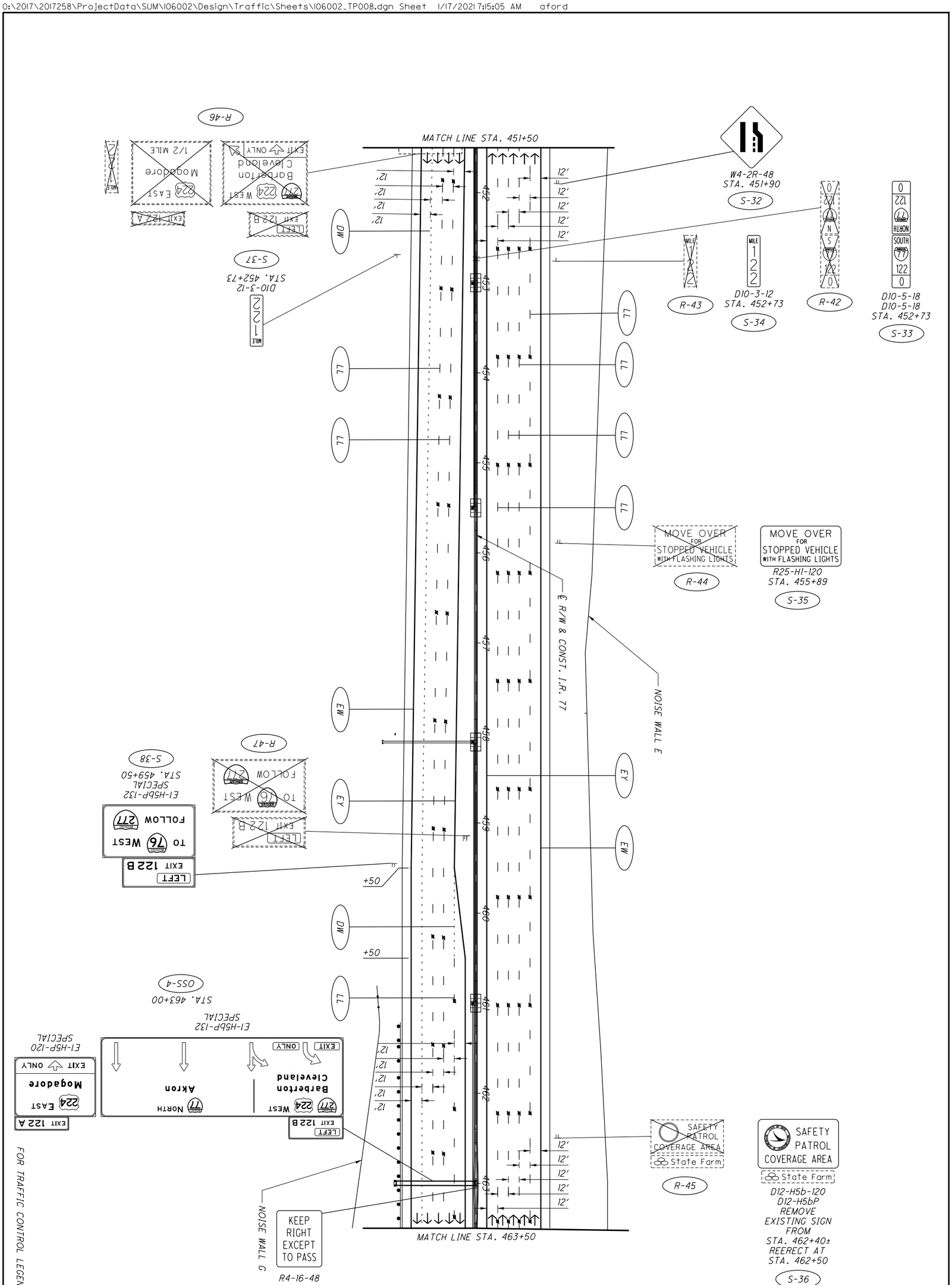
FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

967 / 1288	SUM-77/277/224 VARIOUS	TRAFFIC CONTROL PLAN - I.R. 77 STA. 427+50 TO STA. 439+50	CALCULATED MBK CHECKED AKF	0 50 25 100 HORIZONTAL SCALE IN FEET



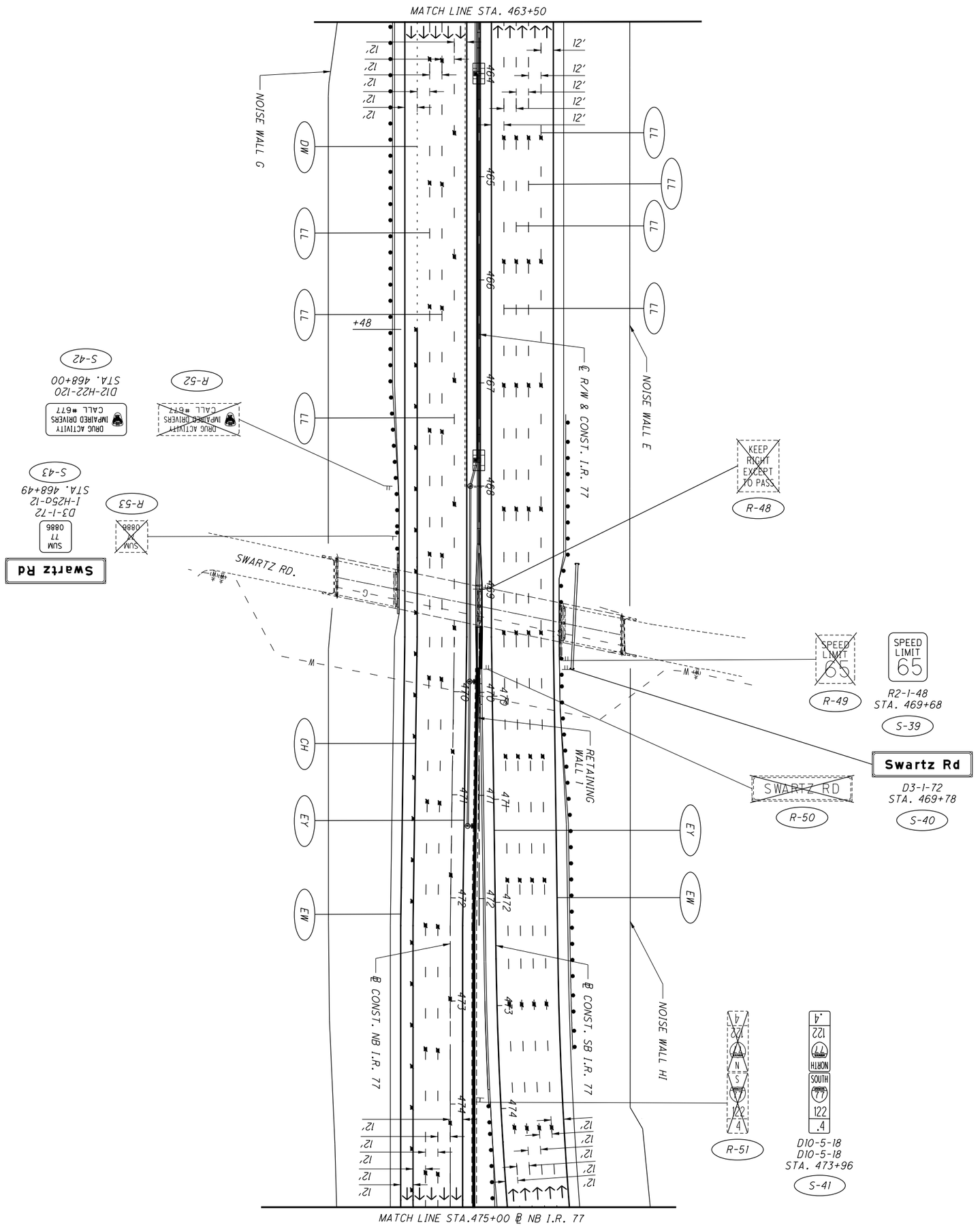
FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

968 / 1288	SUM-77/277/224 VARIOUS	TRAFFIC CONTROL PLAN - I.R. 77 STA. 439+50 TO STA. 451+50	CALCULATED MBK CHECKED AKF	0 50 25 100 HORIZONTAL SCALE IN FEET



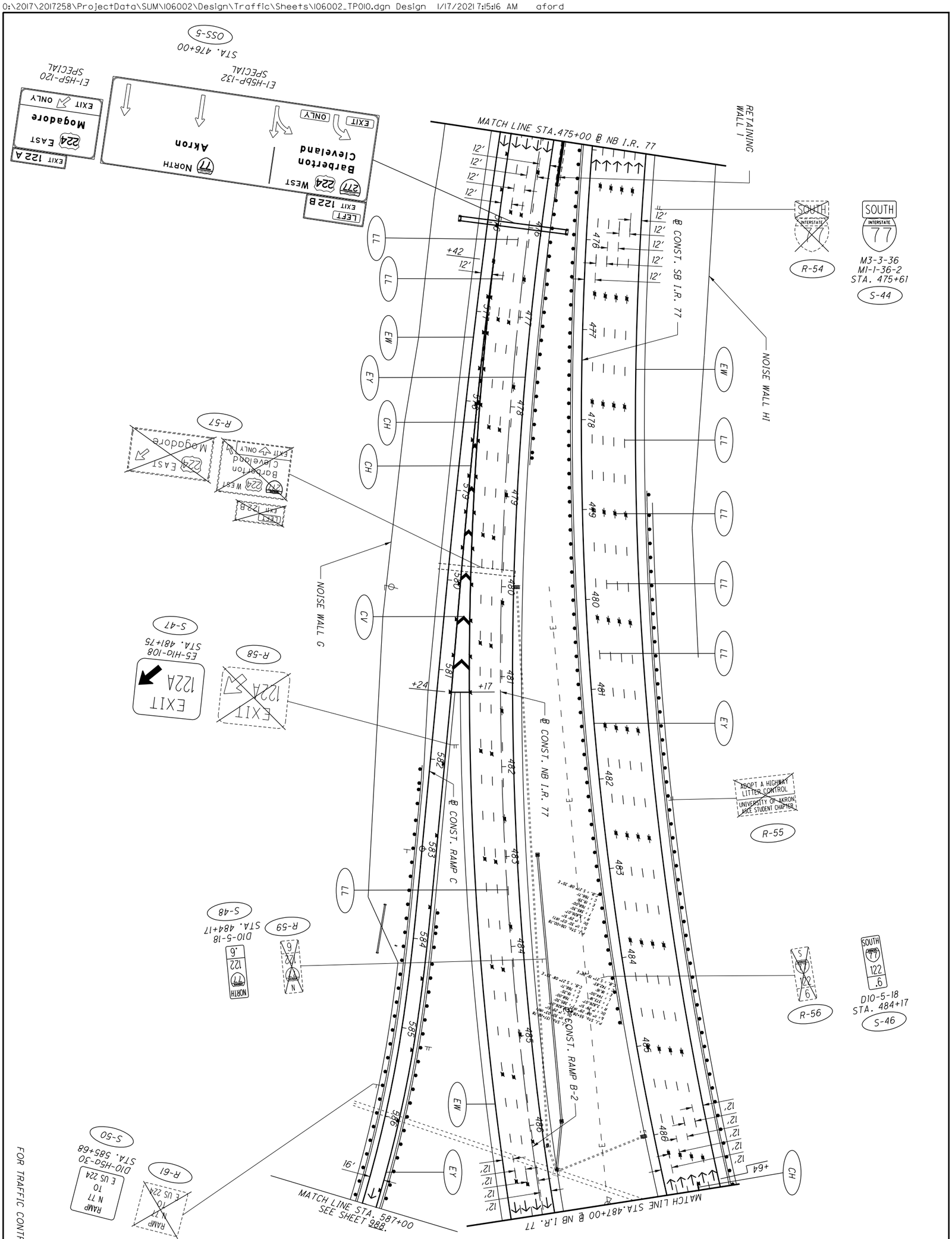
FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

969 / 1288	SUM-77/277/224 VARIOUS	TRAFFIC CONTROL PLAN - I.R. 77 STA. 451+50 TO STA. 463+50	CALCULATED MBK / CHECKED AKF	0 50 25 100 HORIZONTAL SCALE IN FEET	N



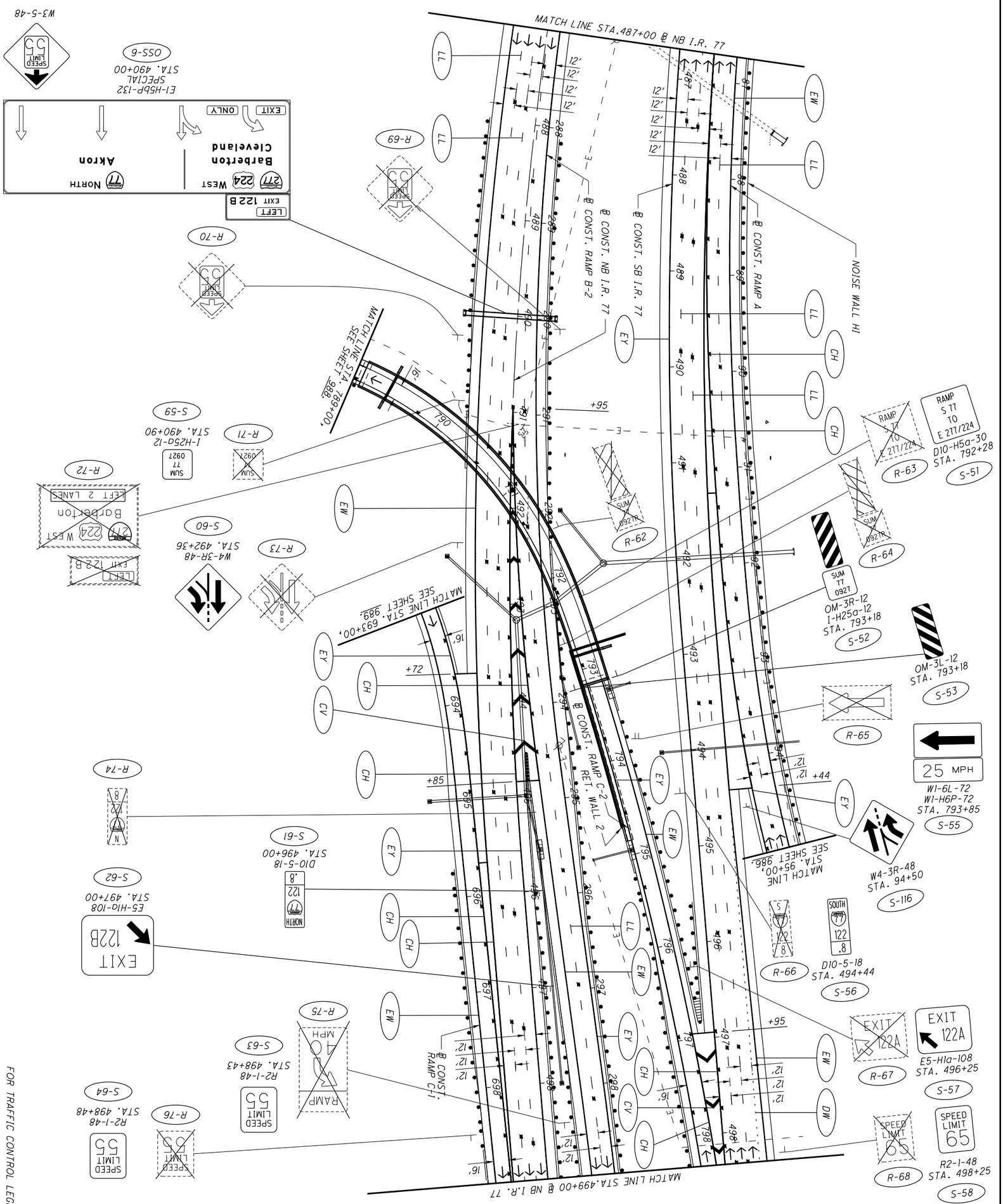
FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

970 / 1288	SUM-77/277/224 VARIOUS	TRAFFIC CONTROL PLAN - I.R. 77 STA. 463+50 TO STA. 475+00	CALCULATED MBK CHECKED AKF 0 50 25 100 HORIZONTAL SCALE IN FEET



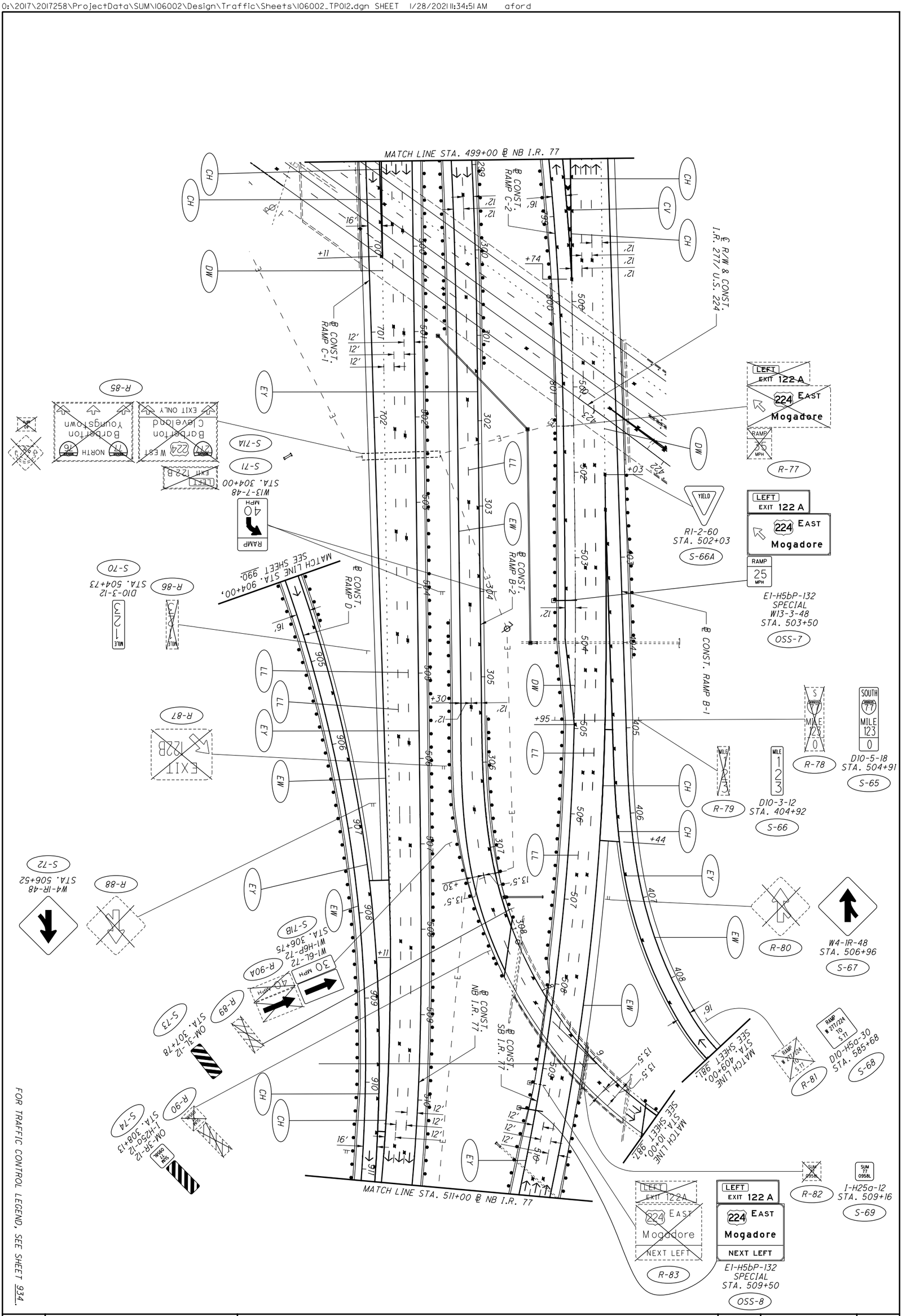
FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

971 / 1288	**SUM-77/277/224** **VARIOUS**	**TRAFFIC CONTROL PLAN - I.R. 77** **STA. 475+00 TO STA. 487+00**	CALCULATED MBK CHECKED AKF 0 50 25 100 HORIZONTAL SCALE IN FEET



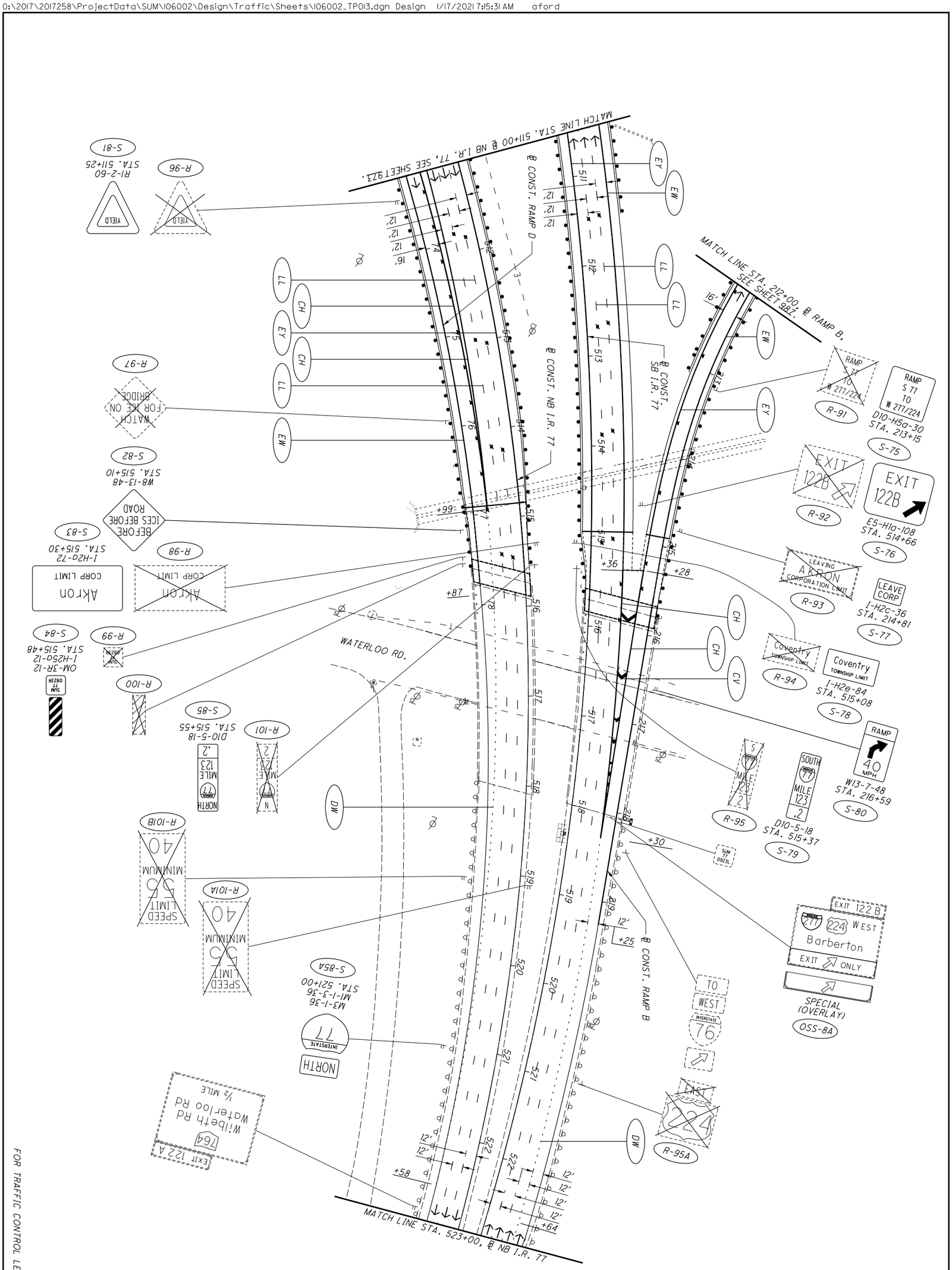
FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

1288 / 972	SUM-77/277/224 VARIOUS	TRAFFIC CONTROL PLAN - I.R. 77 STA. 487+00 TO STA. 499+00	CALCULATED MBK CHECKED AKF 0 50 25 100 HORIZONTAL SCALE IN FEET



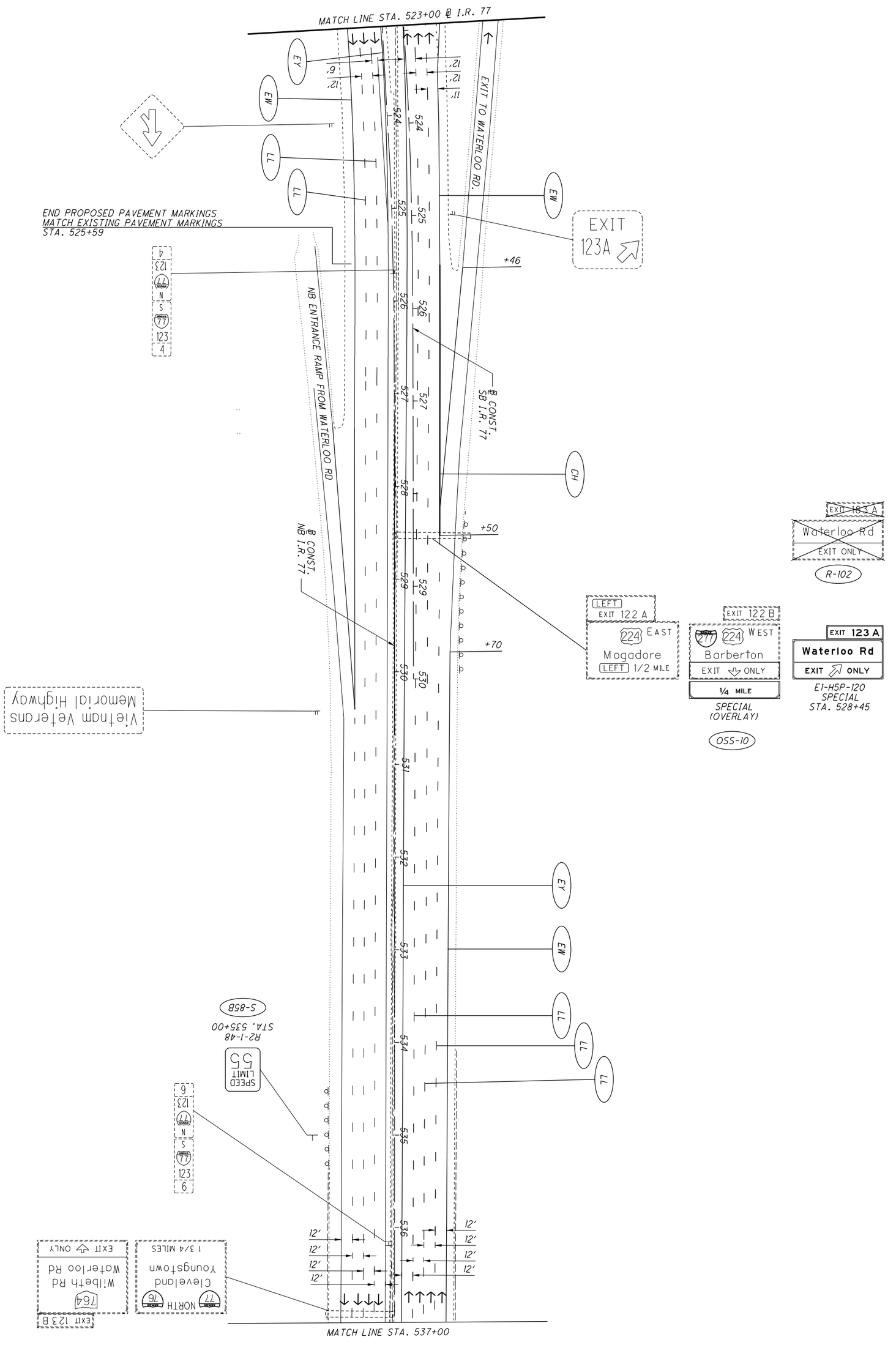
FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

973 / 1288	SUM-77/277/224 VARIOUS	TRAFFIC CONTROL PLAN - I.R. 77 STA. 499+00 TO STA. 511+00	CALCULATED MBK CHECKED AKF 0 50 25 100 HORIZONTAL SCALE IN FEET



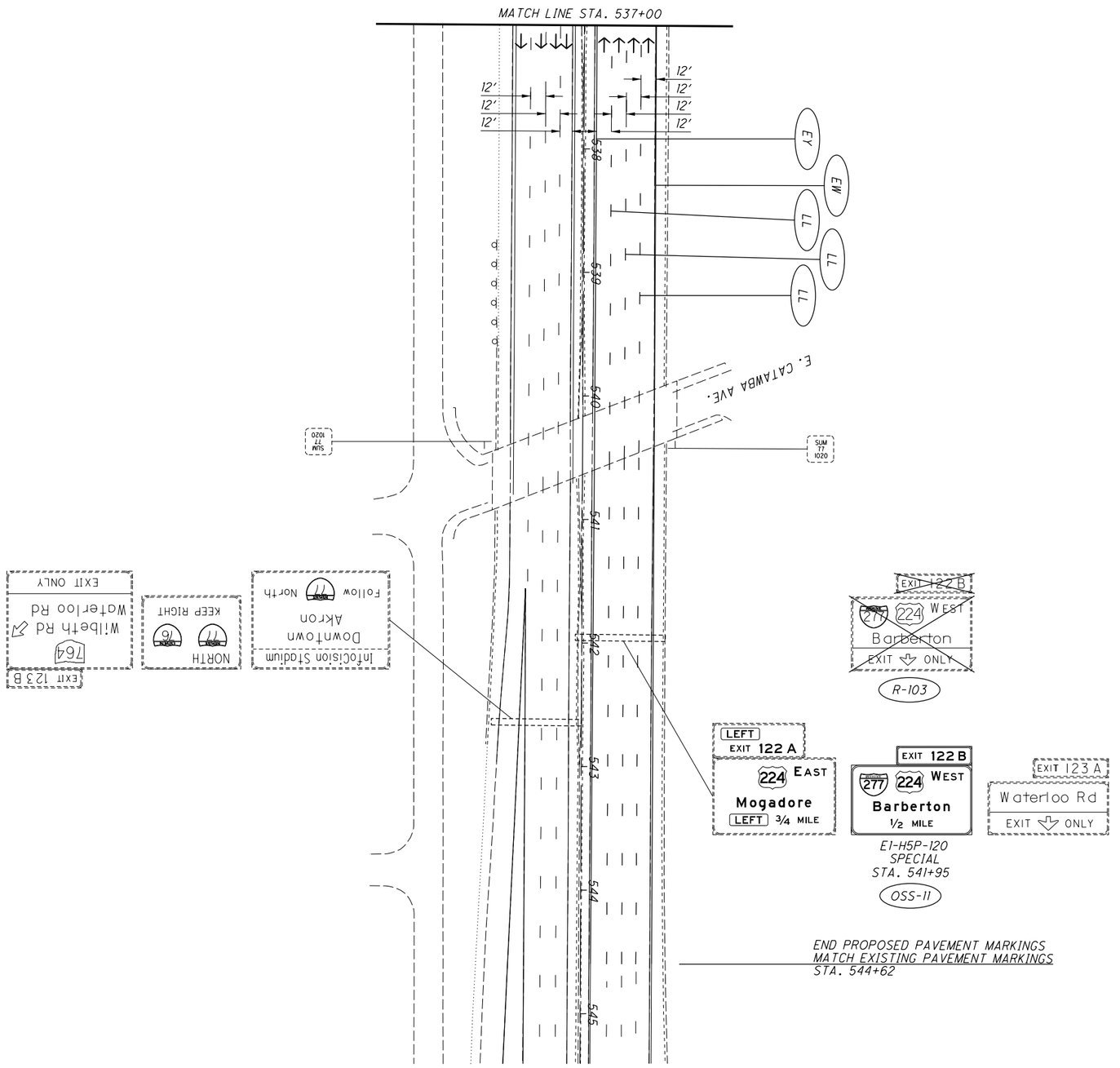
FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

974 / 1288	SUM-77/277/224 VARIOUS	TRAFFIC CONTROL PLAN - I.R. 77 STA. 511+00 TO 523+00	CALCULATED MBK CHECKED AKF	0 50 25 100 HORIZONTAL SCALE IN FEET



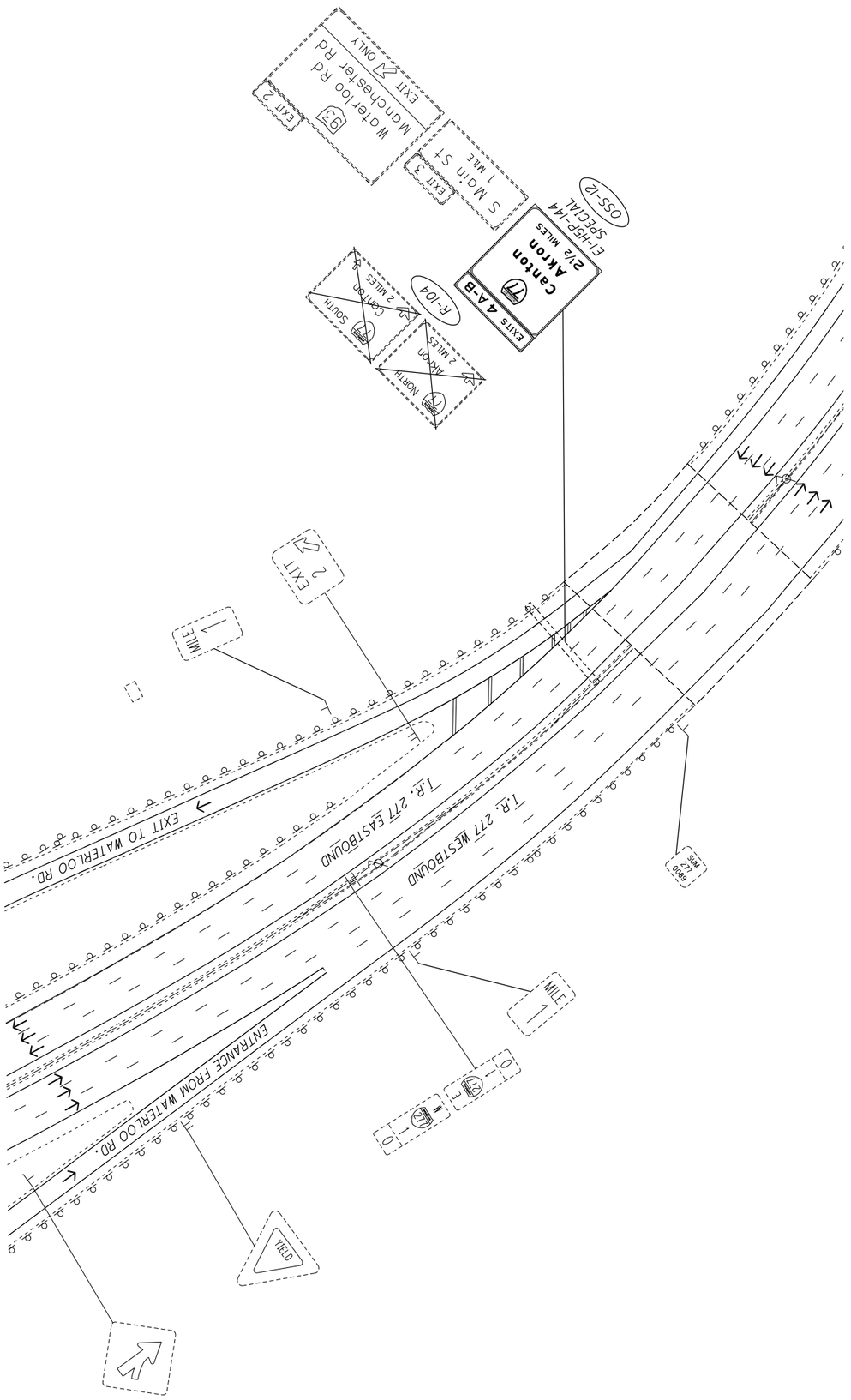
FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

975 / 1288	SUM-77/277/224 VARIOUS	TRAFFIC CONTROL PLAN - I.R. 77 STA. 523+00 TO STA. 537+00	CALCULATED MBK CHECKED AKF	0 50 25 100 HORIZONTAL SCALE IN FEET



FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

976 / 1288	SUM-77/277/224 VARIOUS	TRAFFIC CONTROL PLAN - I.R. 77 STA. 537+00 TO END	CALCULATED MBK CHECKED AKF	0 50 25 100 HORIZONTAL SCALE IN FEET



FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

977 / 1288	SUM-77/277/224 VARIOUS	TRAFFIC CONTROL PLAN I.R. 277	CALCULATED MBK CHECKED AKF	0 50 25 100 HORIZONTAL SCALE IN FEET

FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MBK
CHECKED AKF

TRAFFIC CONTROL PLAN
I.R. 277

SUM-77 / 277 / 224
VARIOUS

978
1288

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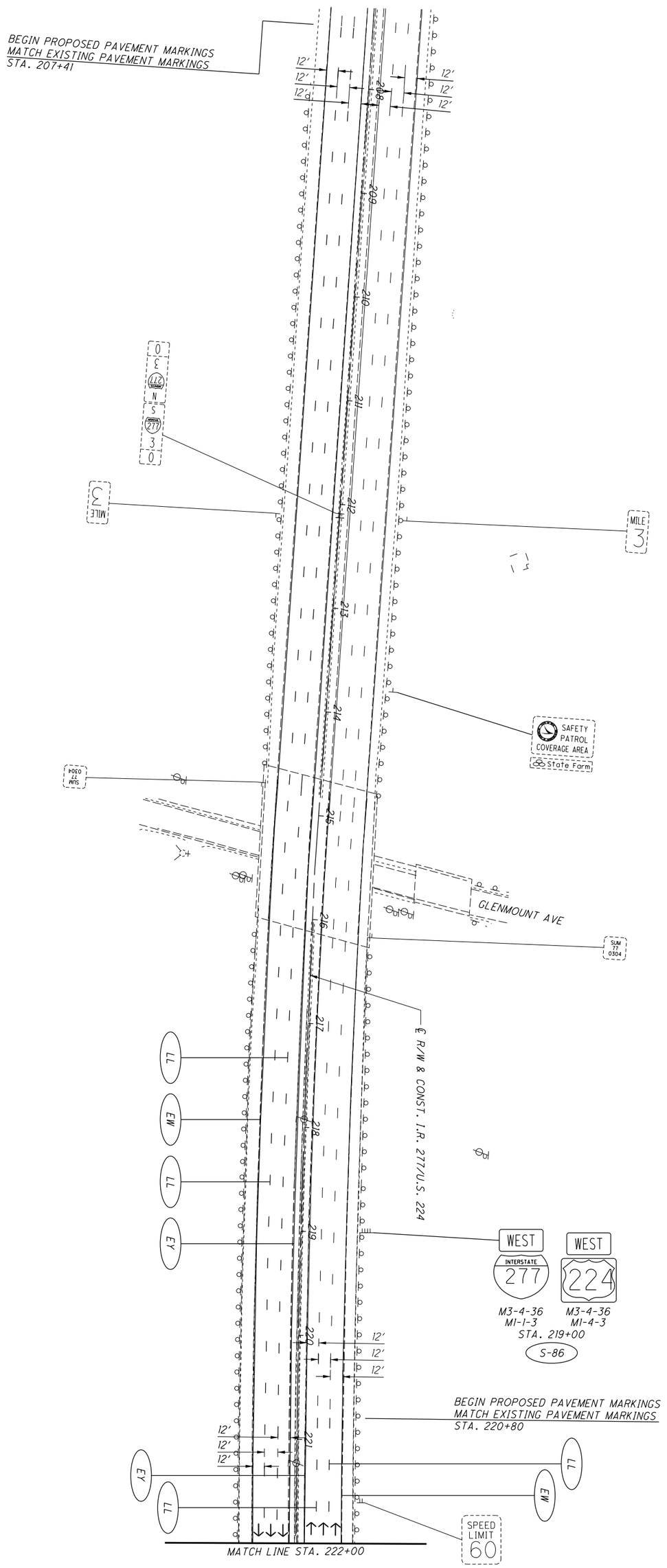
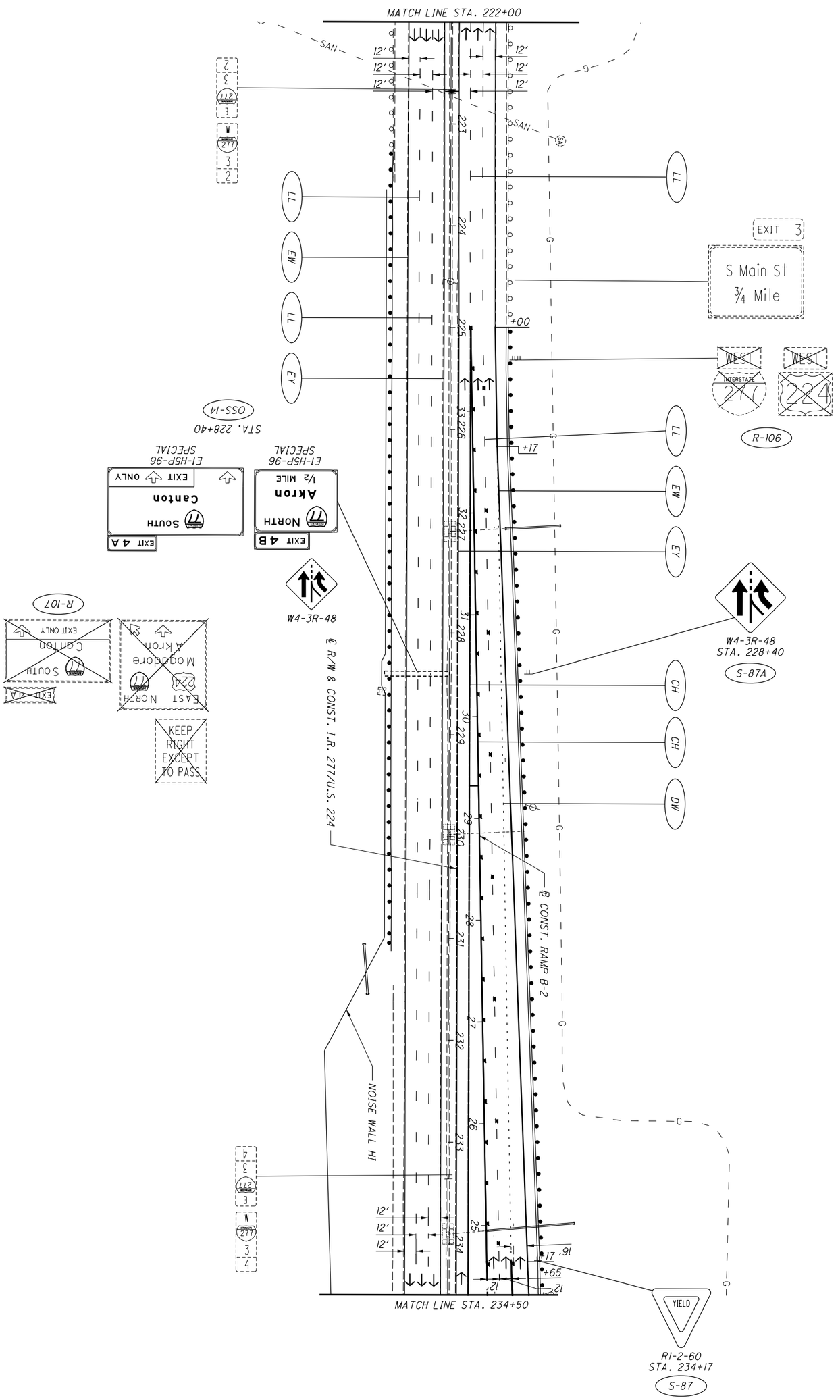


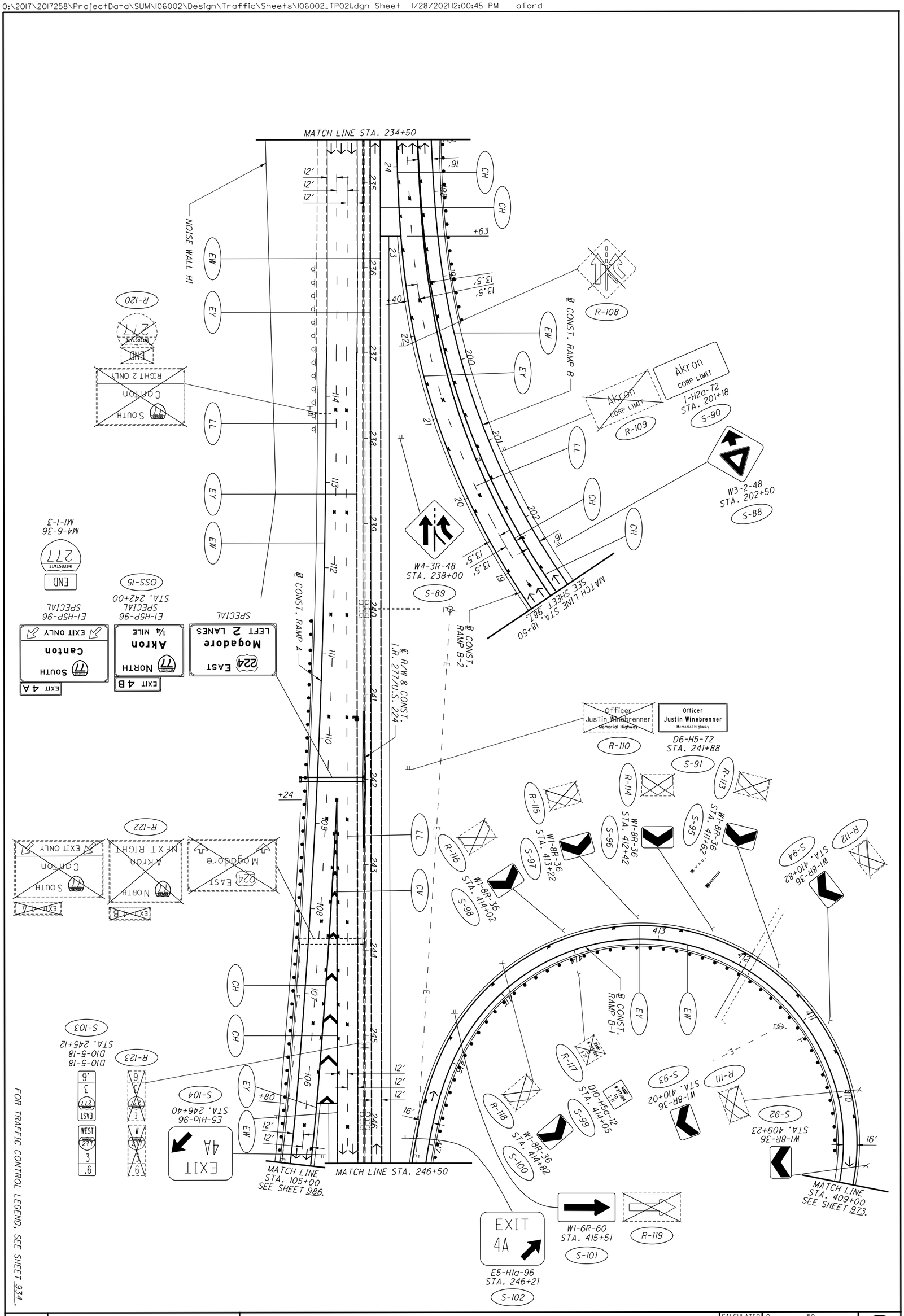
FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

979 / 1288	**SUM-77/277/224** **VARIOUS**	**TRAFFIC CONTROL PLAN - I.R. 277/U.S. 224** **BEGIN TO STA. 222+00**	CALCULATED MBK CHECKED AKF	0 50 25 100 HORIZONTAL SCALE IN FEET



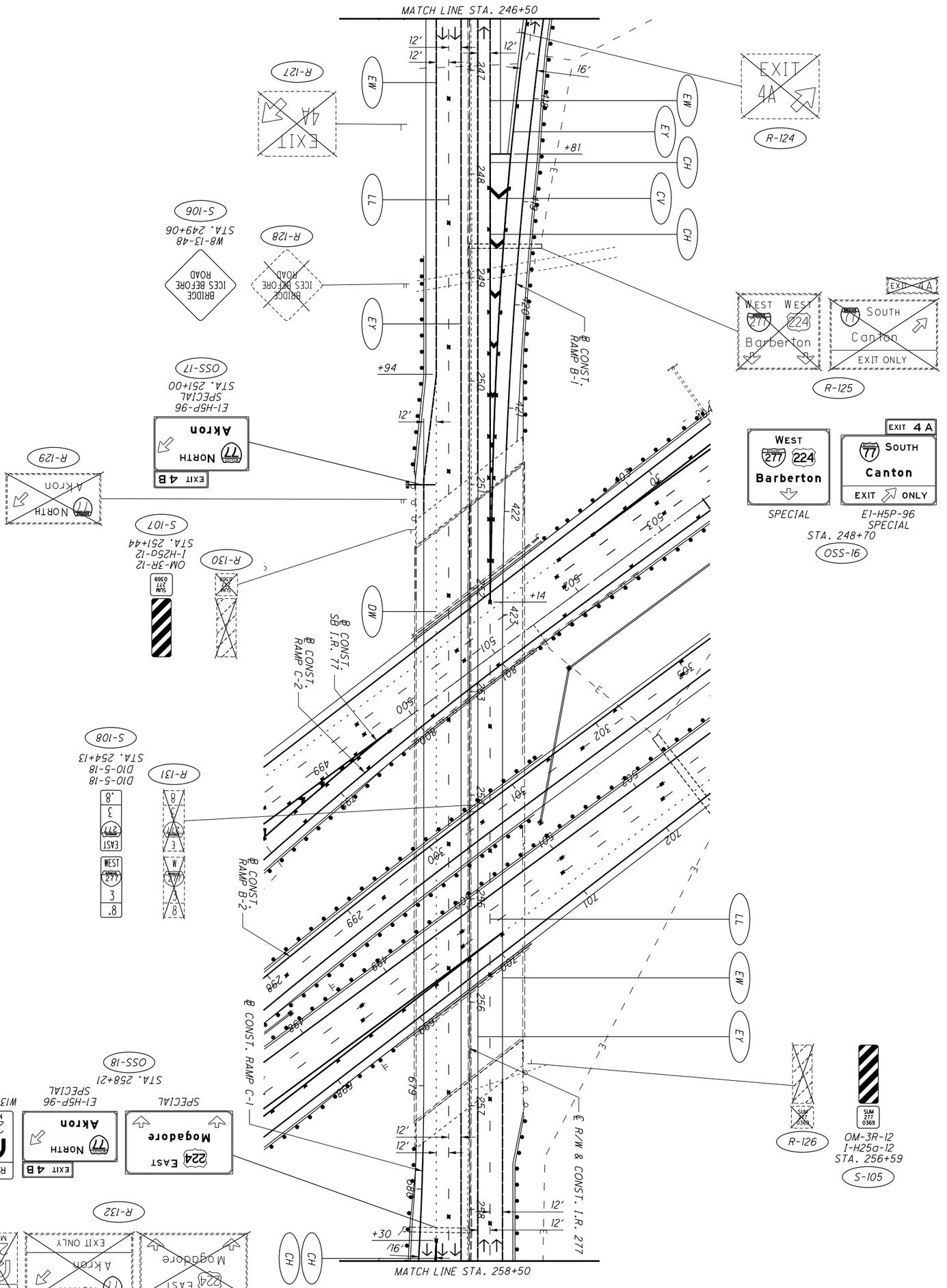
FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

980 / 1288	**SUM-77/277/224** **VARIOUS**	**TRAFFIC CONTROL PLAN - I.R. 277/U.S. 224** **STA. 222+00 TO STA. 234+50**	CALCULATED MBK CHECKED AKF 0 50 25 100 HORIZONTAL SCALE IN FEET



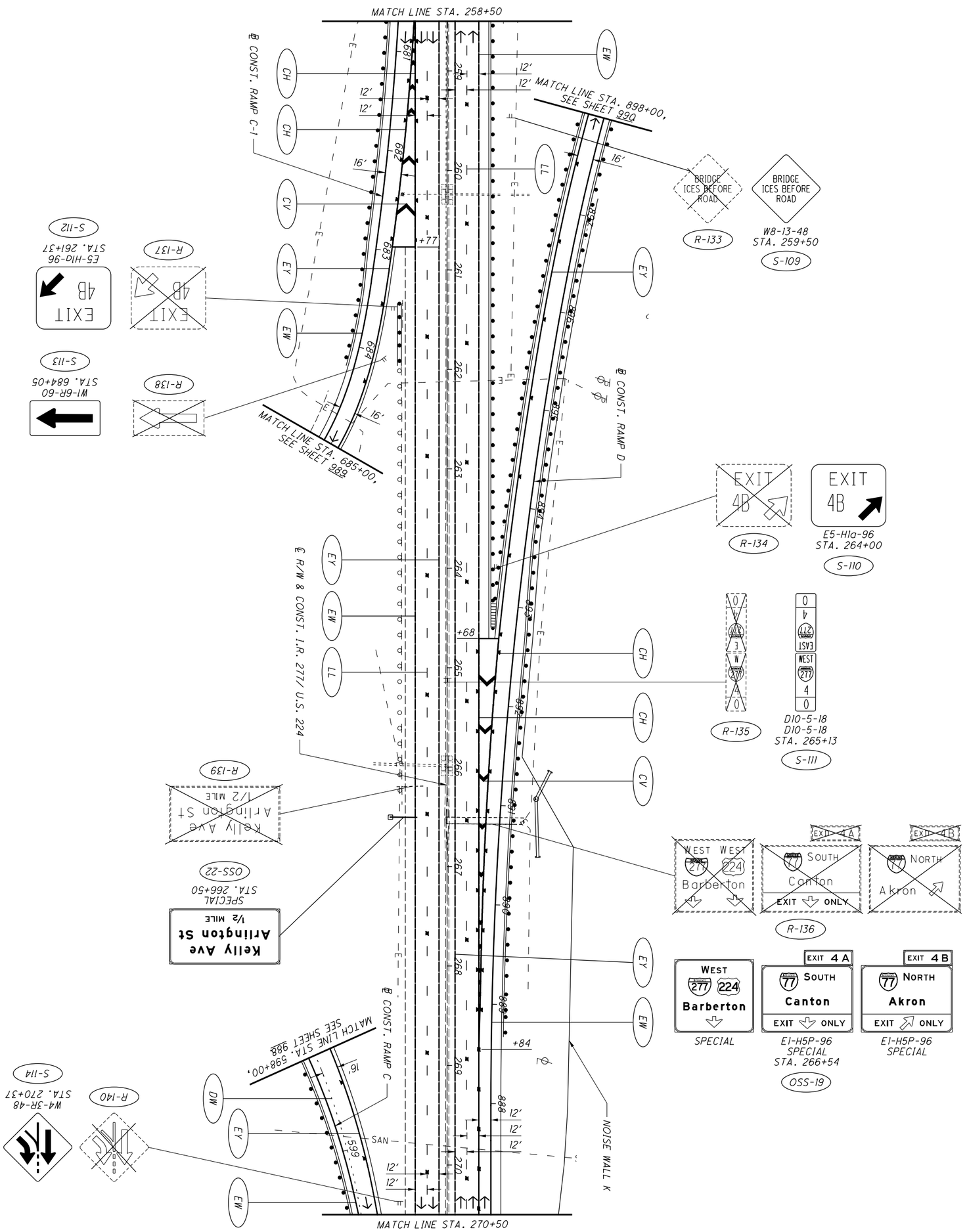
FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

981 / 1288	**SUM-77/277/224 VARIOUS**	**TRAFFIC CONTROL PLAN - I.R. 277/U.S. 224 STA. 234+50 TO STA. 246+50**	CALCULATED MBK / CHECKED AKF; 0 50 25 100 HORIZONTAL SCALE IN FEET; N



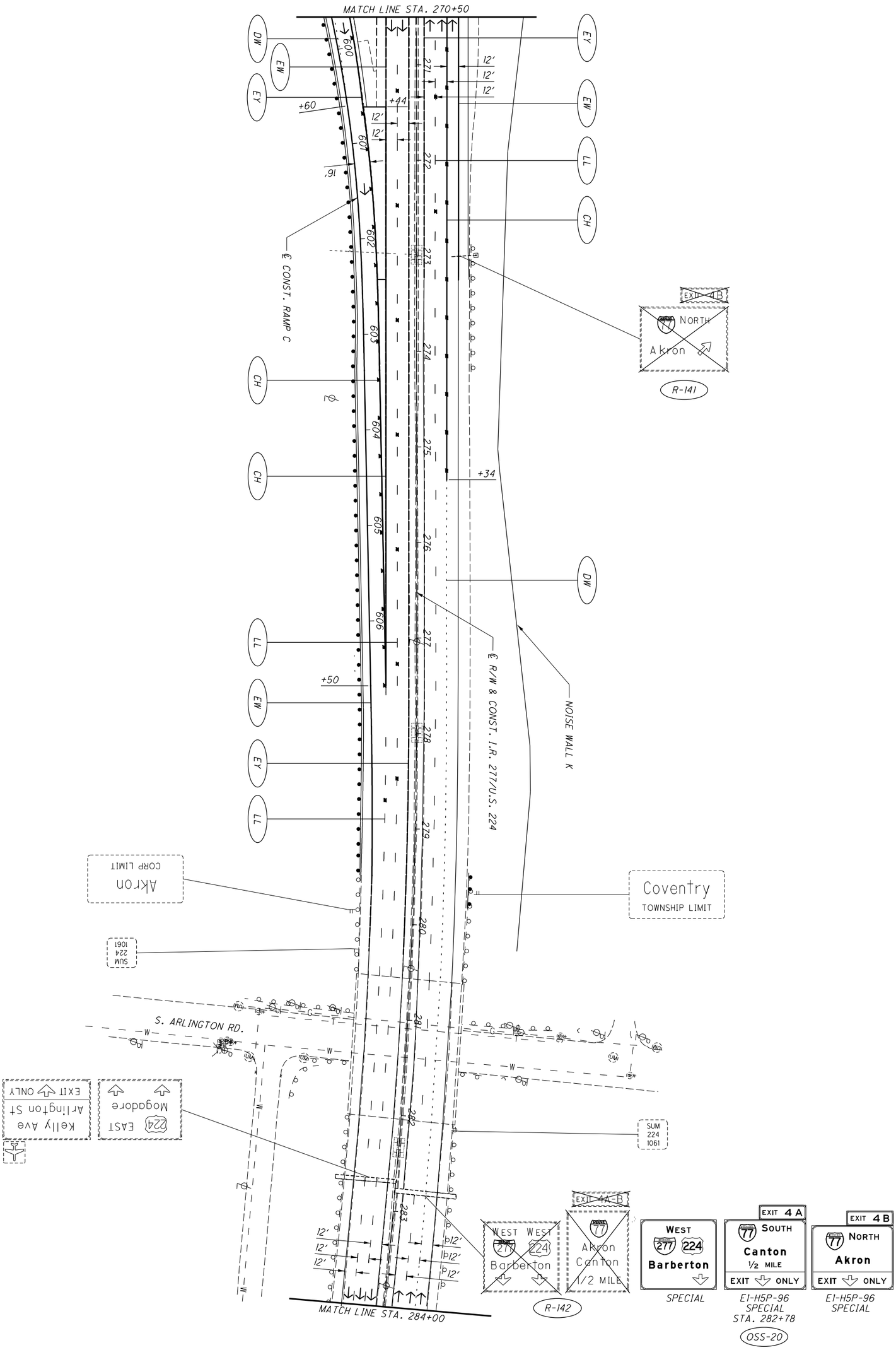
FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

982 / 1288	SUM-77/277/224 VARIOUS	TRAFFIC CONTROL PLAN - I.R. 277/U.S. 224 STA. 246+50 TO STA. 258+50	CALCULATED MBK CHECKED AKF	0 50 25 100 HORIZONTAL SCALE IN FEET



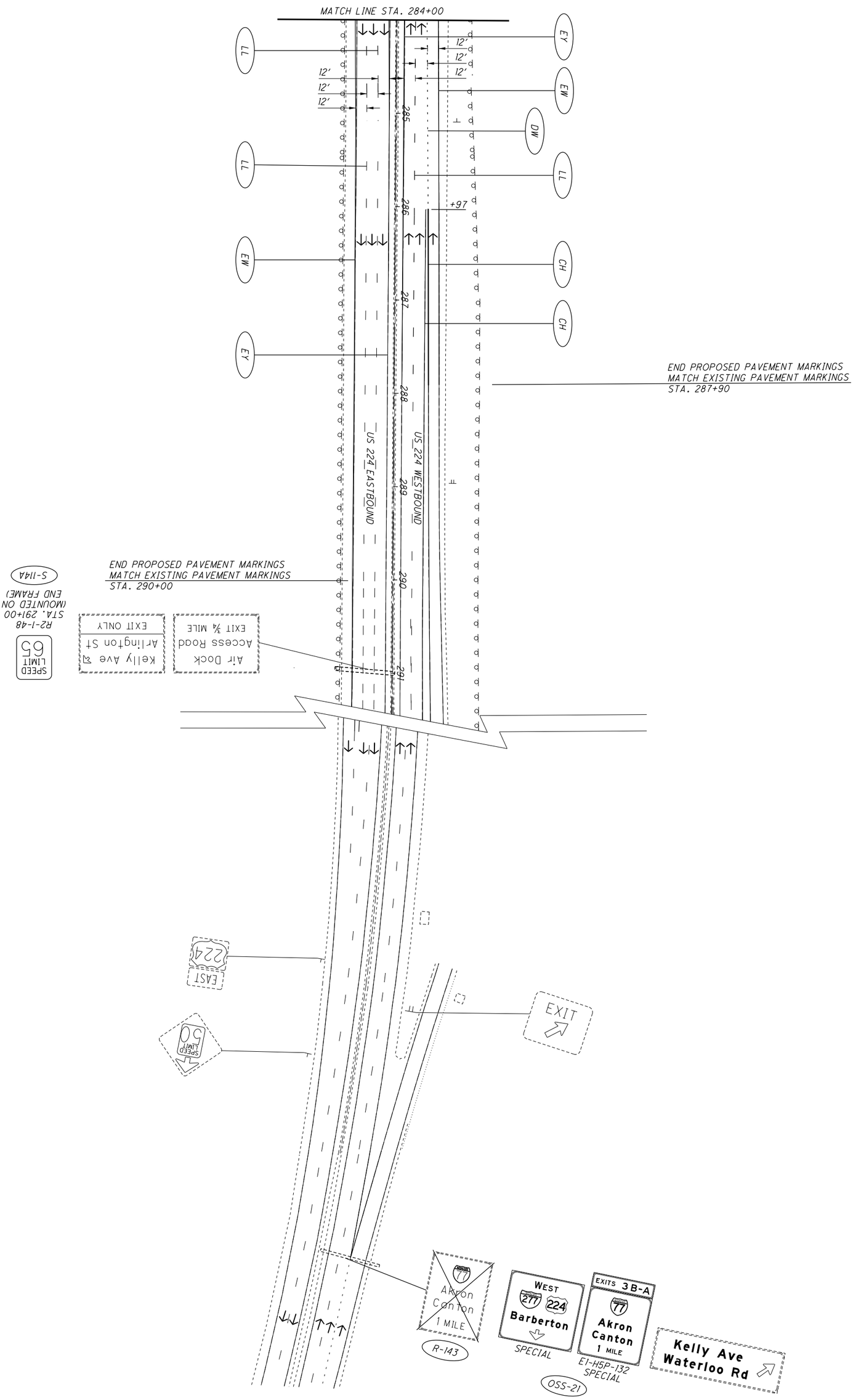
FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

983 / 1288	SUM-77/277/224 VARIOUS	TRAFFIC CONTROL PLAN - I.R. 277/U.S. 224 STA. 258+50 TO STA. 270+50	CALCULATED MBK CHECKED AKF	0 50 25 100 HORIZONTAL SCALE IN FEET



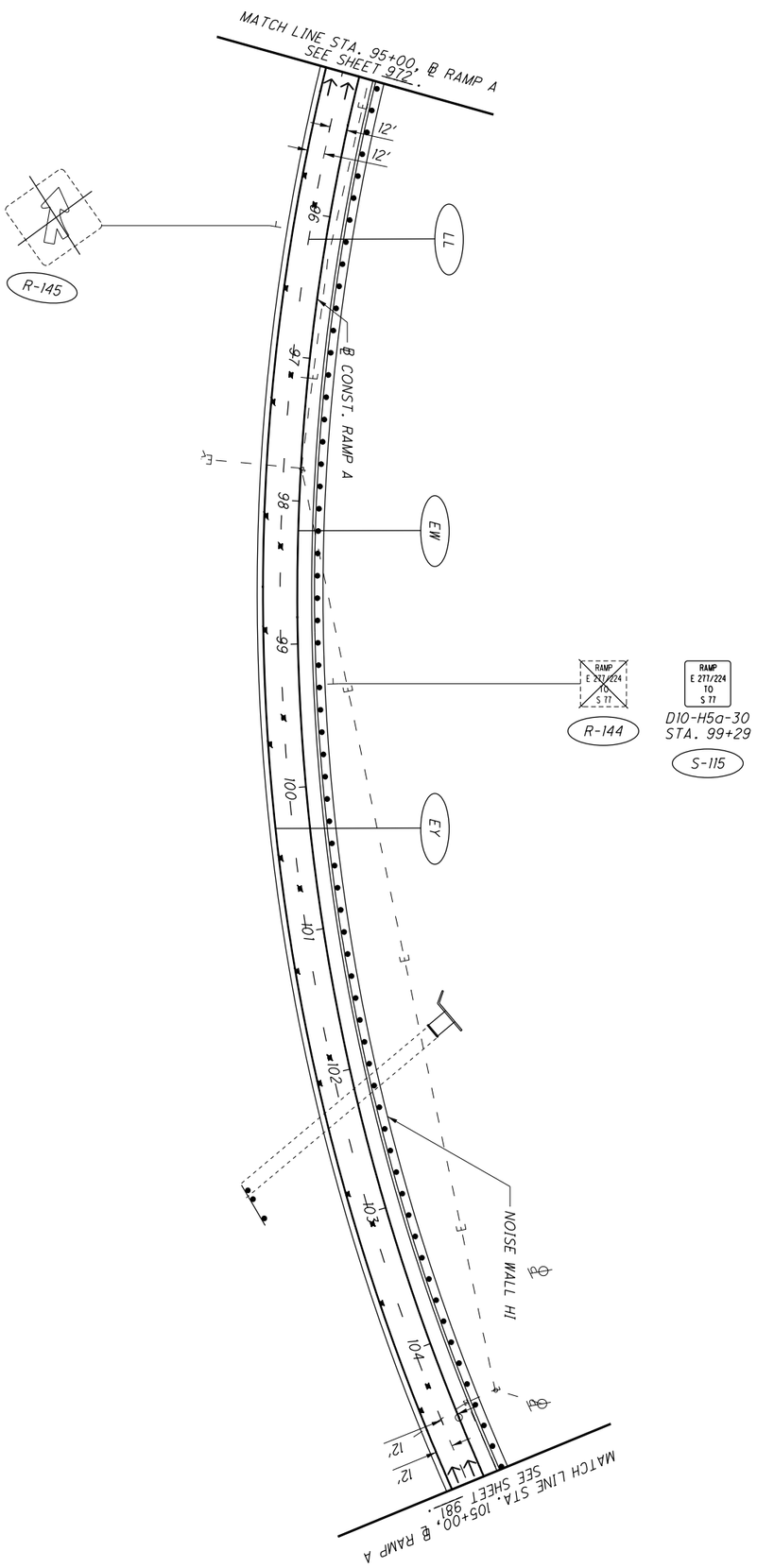
FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

984 / 1288	SUM-77/277/224 VARIOUS	TRAFFIC CONTROL PLAN - U.S. 224 STA. 270+50 TO STA. 284+00	CALCULATED MBK CHECKED AKF 0 50 25 100 HORIZONTAL SCALE IN FEET



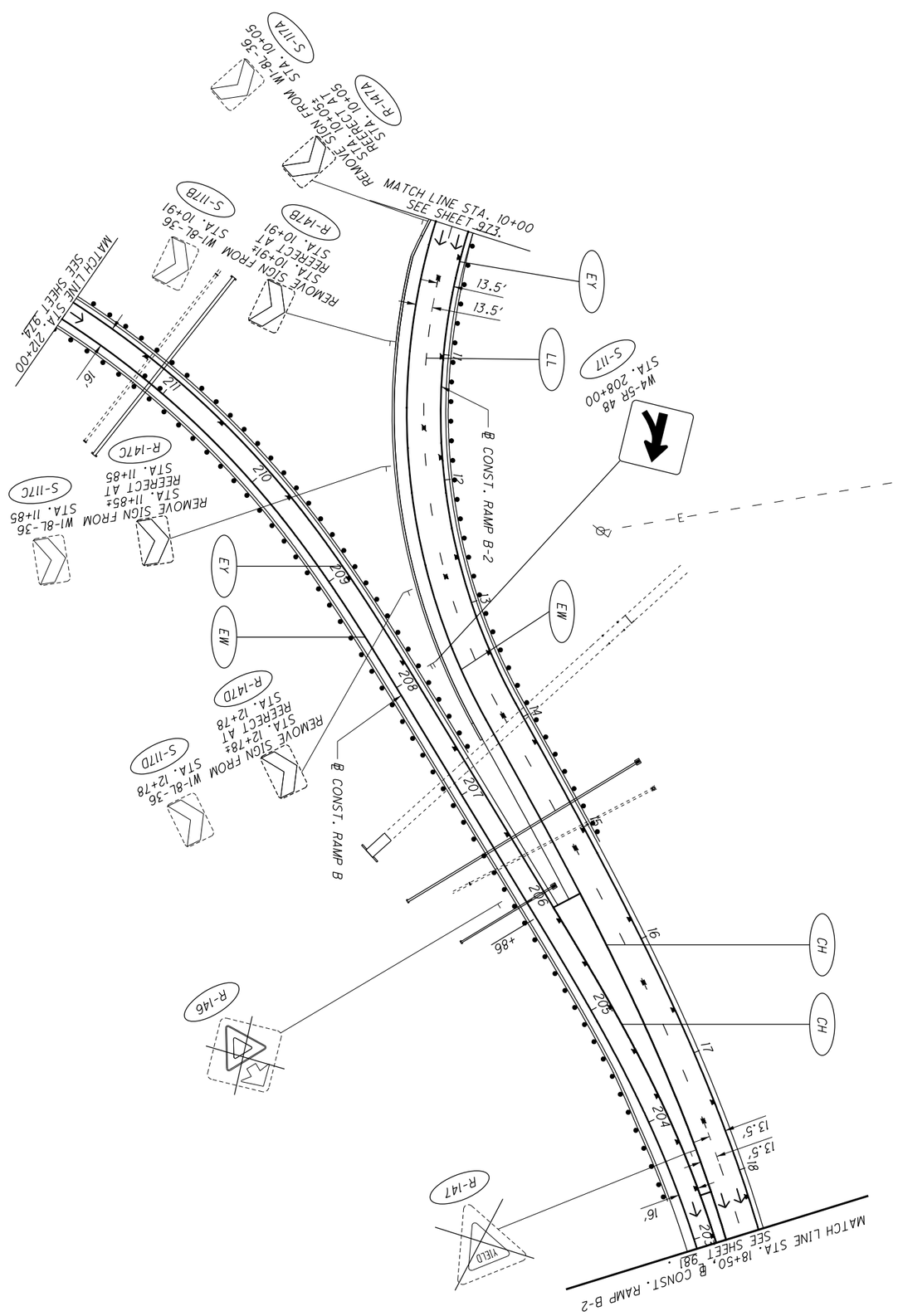
FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

985 / 1288	SUM-77/277/224 VARIOUS	TRAFFIC CONTROL PLAN - U.S. 224 STA. 284+00 TO END	CALCULATED MBK CHECKED AKF 0 50 25 100 HORIZONTAL SCALE IN FEET



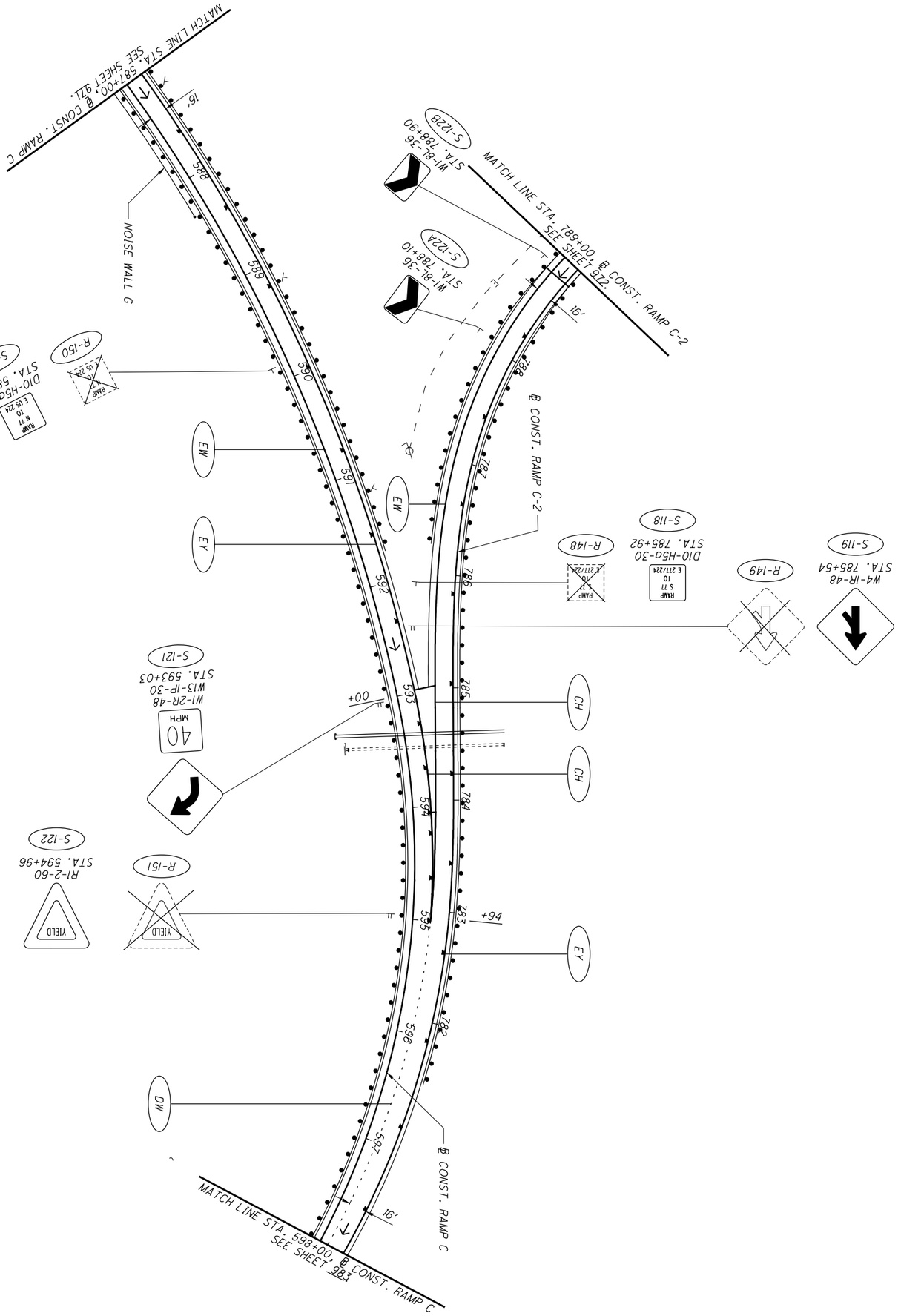
FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

986 / 1288	SUM-77/277/224 VARIOUS	TRAFFIC CONTROL PLAN - RAMP A STA. 95+00 TO STA. 105+00	CALCULATED MBK CHECKED AKF	0 50 25 100 HORIZONTAL SCALE IN FEET



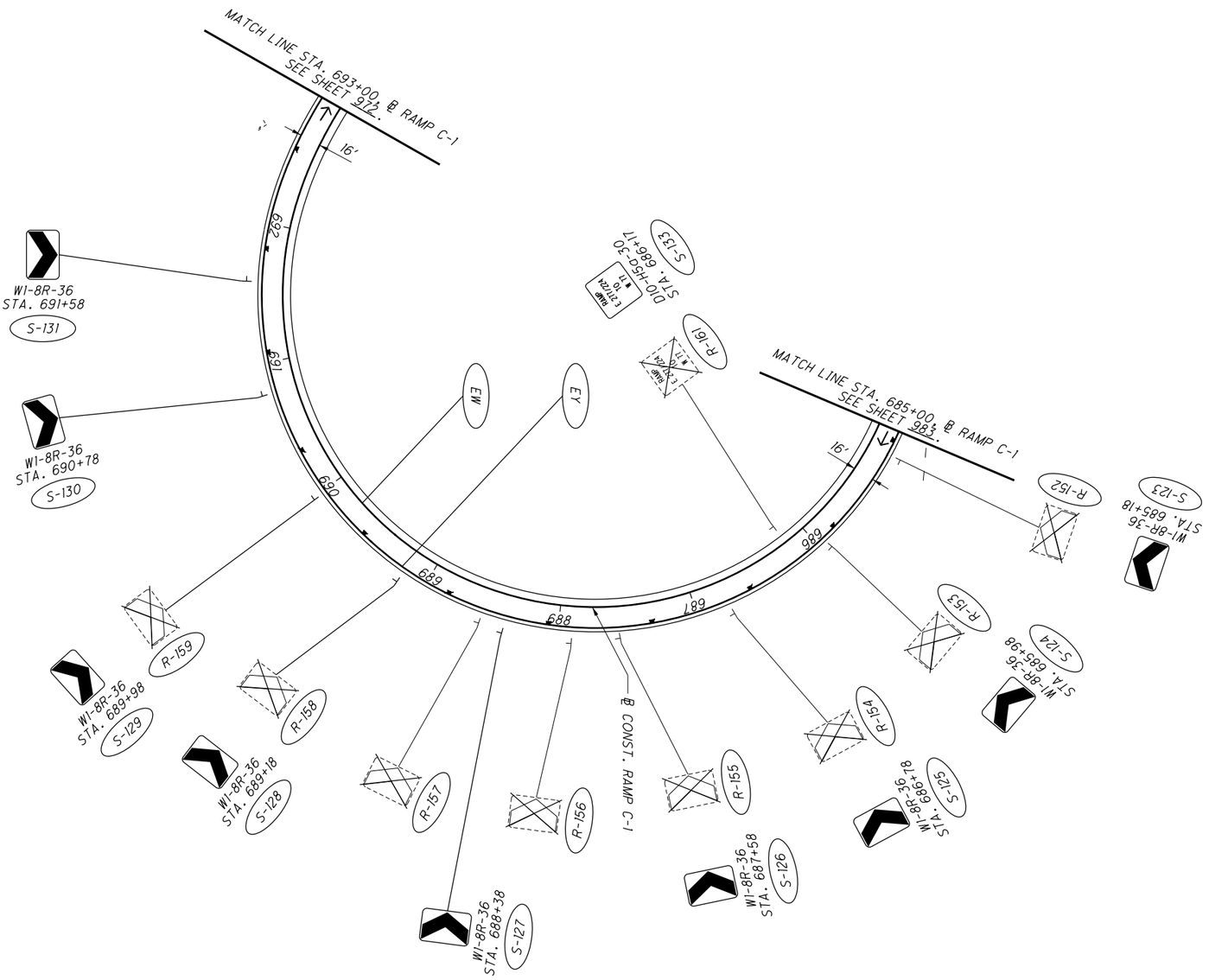
FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

987 / 1288	SUM-77 / 277 / 224 VARIOUS	TRAFFIC CONTROL PLAN - RAMP B-2 STA. 10+00 TO STA. 18+50	CALCULATED MBK CHECKED AKF	0 50 25 100 HORIZONTAL SCALE IN FEET



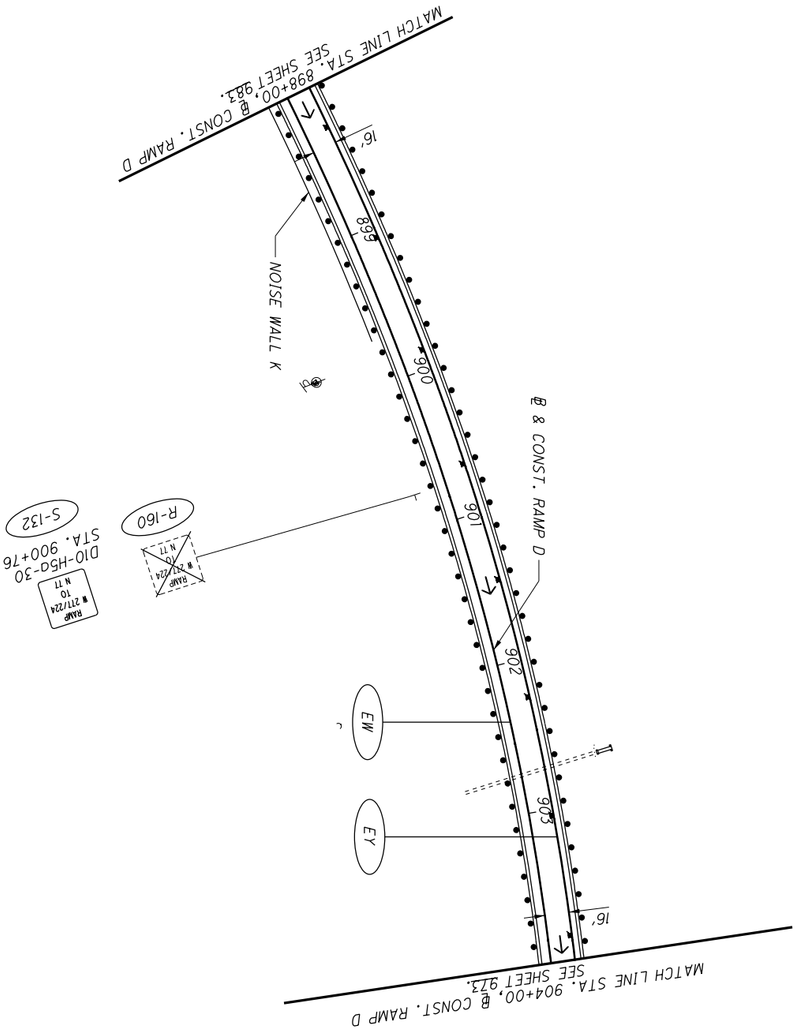
FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

988 / 1288	SUM-77/277/224 VARIOUS	TRAFFIC CONTROL PLAN - RAMP C STA. 587+00 TO STA. 598+00	CALCULATED MBK CHECKED AKF	0 50 25 100 HORIZONTAL SCALE IN FEET



FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

989 / 1288	SUM-77 / 277 / 224 VARIOUS	TRAFFIC CONTROL PLAN - RAMP C-1 STA. 685+00 TO STA. 693+00	CALCULATED MBK CHECKED AKF	0 50 25 100 HORIZONTAL SCALE IN FEET

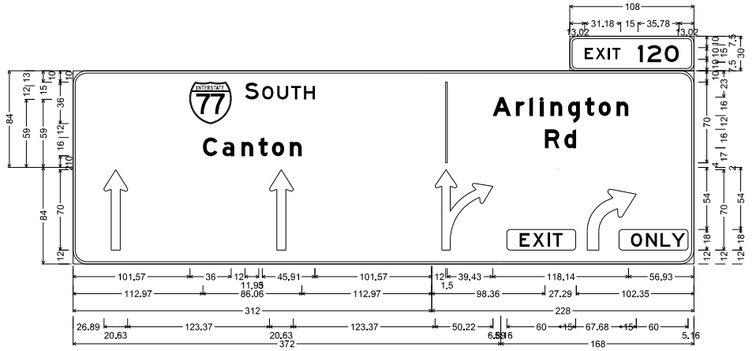


FOR TRAFFIC CONTROL LEGEND, SEE SHEET 934.

990 / 1288	SUM-77/277/224 VARIOUS	TRAFFIC CONTROL PLAN - RAMP D STA. 898+00 TO STA. 904+00	CALCULATED MBK CHECKED AKF	0 50 25 100 HORIZONTAL SCALE IN FEET

PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	45′ X 14′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	9′ X 2.5′
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
NUMBER OF BRACKETS:	7
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	652.5 SQ. FT.
TOTAL SPAN LENGTH:	95.0 FT.
DESIGN TYPE:	TC-15.116, DESIGN 2
SUPPORT FOUNDATION INFORMATION	

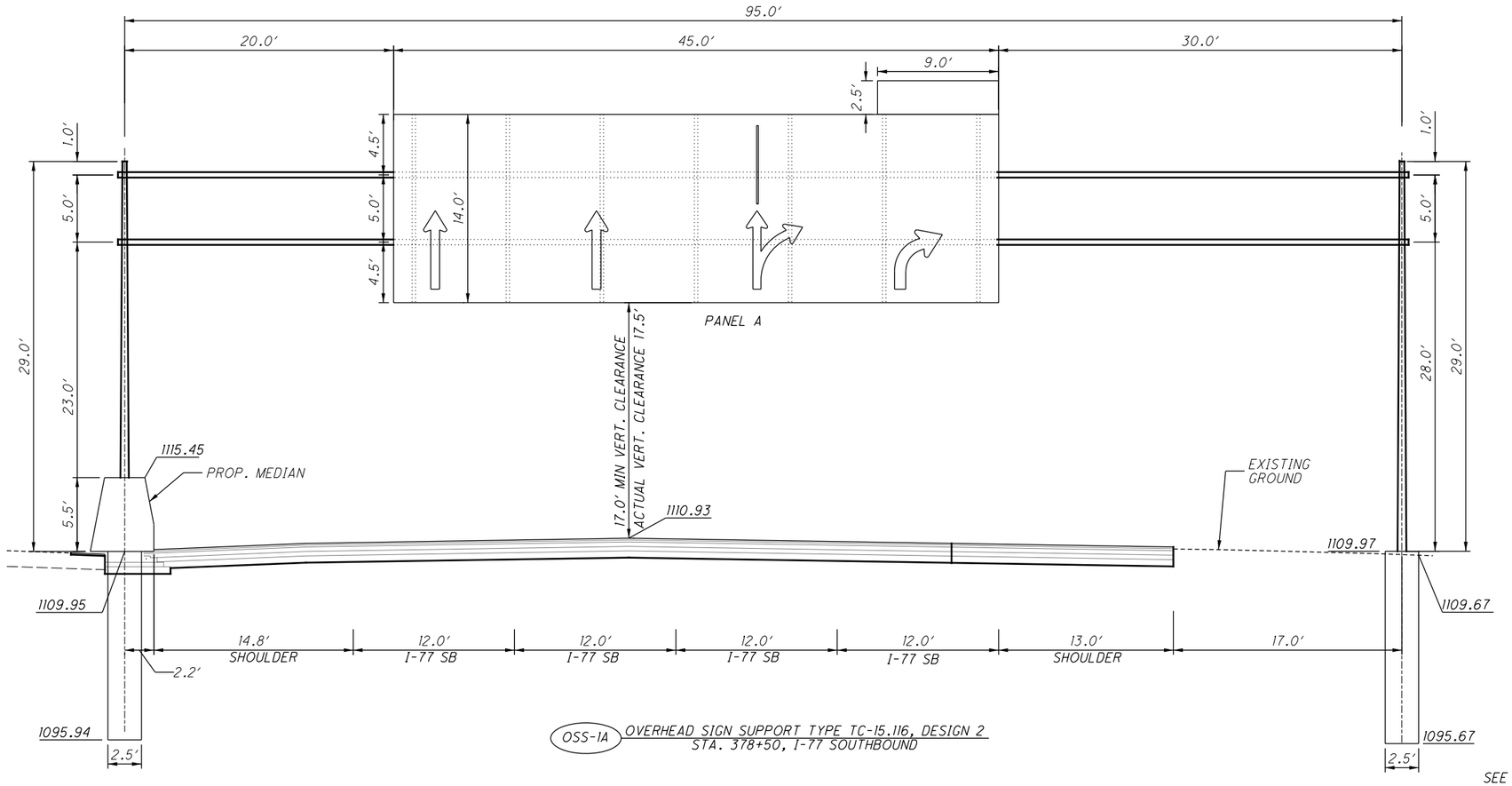
SUPPORT TYPE	DISTANCE BETWEEN FOUNDATIONS	FOUNDATION DEPTH
TYPE TC-15.116, DES. 2	7′-0″	14.0′



PANEL A
N.T.S.

NOTES:

1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



OSS-1A OVERHEAD SIGN SUPPORT TYPE TC-15.116, DESIGN 2
STA. 378+50, I-77 SOUTHBOUND

SEE SHEET 962 FOR PLAN VIEW.

0 2.5 5 10 HORIZONTAL SCALE IN FEET

CALCULATED DLS | CHECKED AKF

SIGN SUPPORT DETAILS
OSS-1A

OVERHEAD SIGN SUPPORT

SUM-77 / 277 / 224
VARIOUS

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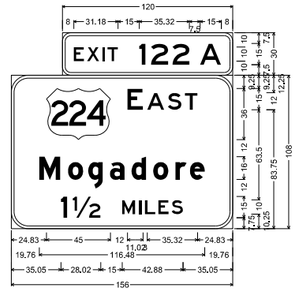
PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	16′ X 12′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	11′ X 4.5′
EXIST PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
PANEL B	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	13′ X 9′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	10′ X 2.5′
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
PANEL C	
SIGN DESIGNATION	W9-H5R-192
PANEL SIZE:	16′ X 5′
BACKGROUND:	YELLOW
FILL COLOR:	BLACK
NUMBER OF BRACKETS:	3
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	463.5 SQ. FT.
TOTAL SPAN LENGTH:	91.0 FT.
DESIGN TYPE:	TC-15.116, DESIGN 2

SUPPORT FOUNDATION INFORMATION		
SUPPORT TYPE	DISTANCE BETWEEN FOUNDATIONS	FOUNDATION DEPTH
TYPE TC-15.116, DES. 2	7′-0″	14.0′

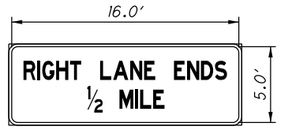
NOTES:

1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.

PANEL A
N.T.S.



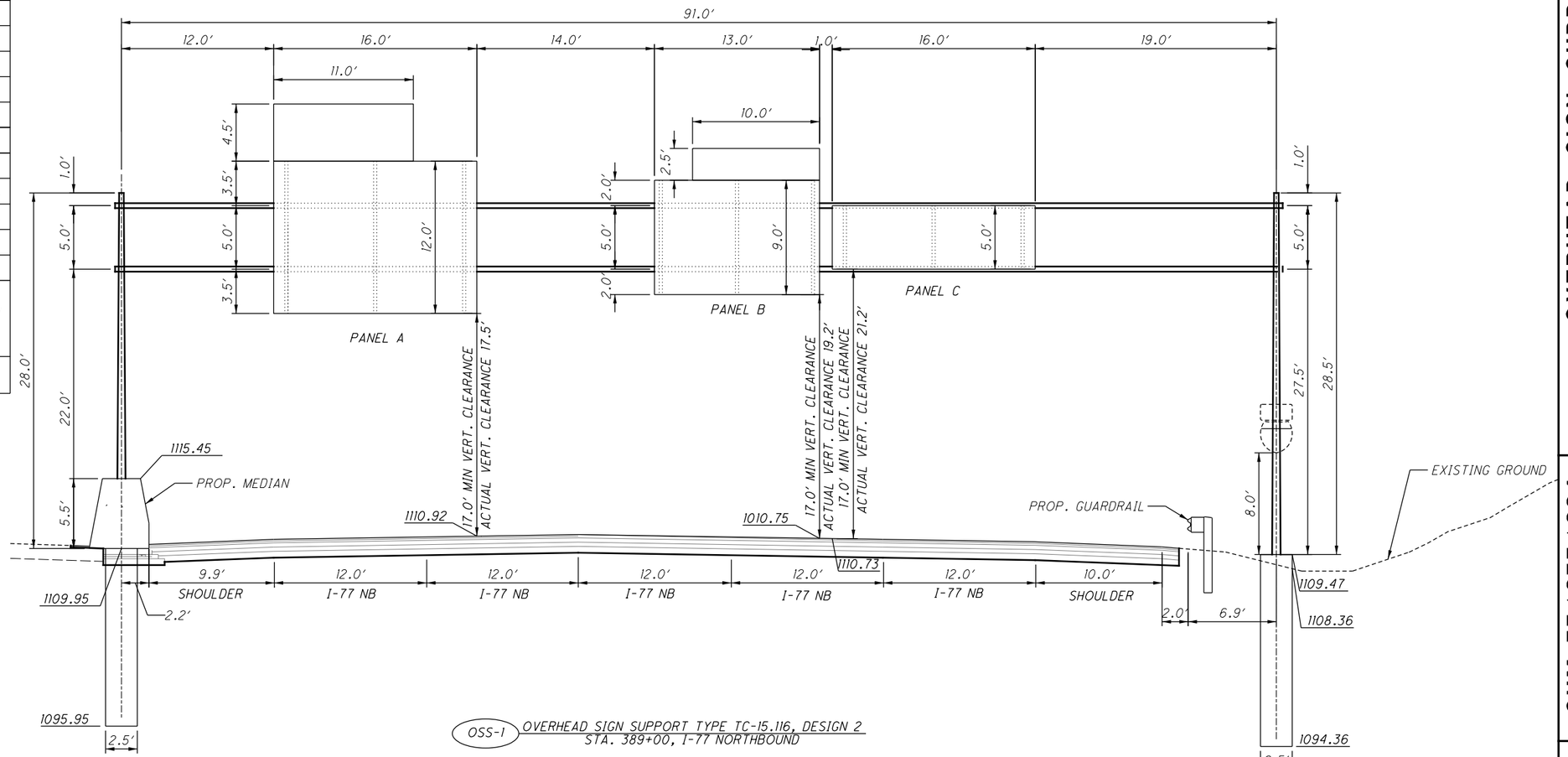
PANEL B
N.T.S.



W9-H5R-192

PANEL C
N.T.S.

M3-1
M1-1-2



OSS-1 OVERHEAD SIGN SUPPORT TYPE TC-15.116, DESIGN 2
STA. 389+00, I-77 NORTHBOUND

SEE SHEET 963 FOR PLAN VIEW.

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED DLS
CHECKED AKF

OVERHEAD SIGN SUPPORT DETAILS
OSS-1

SUM-77/277/224
VARIOUS

992
1288

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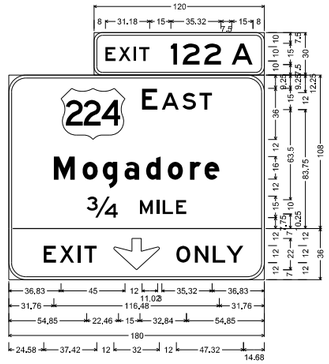
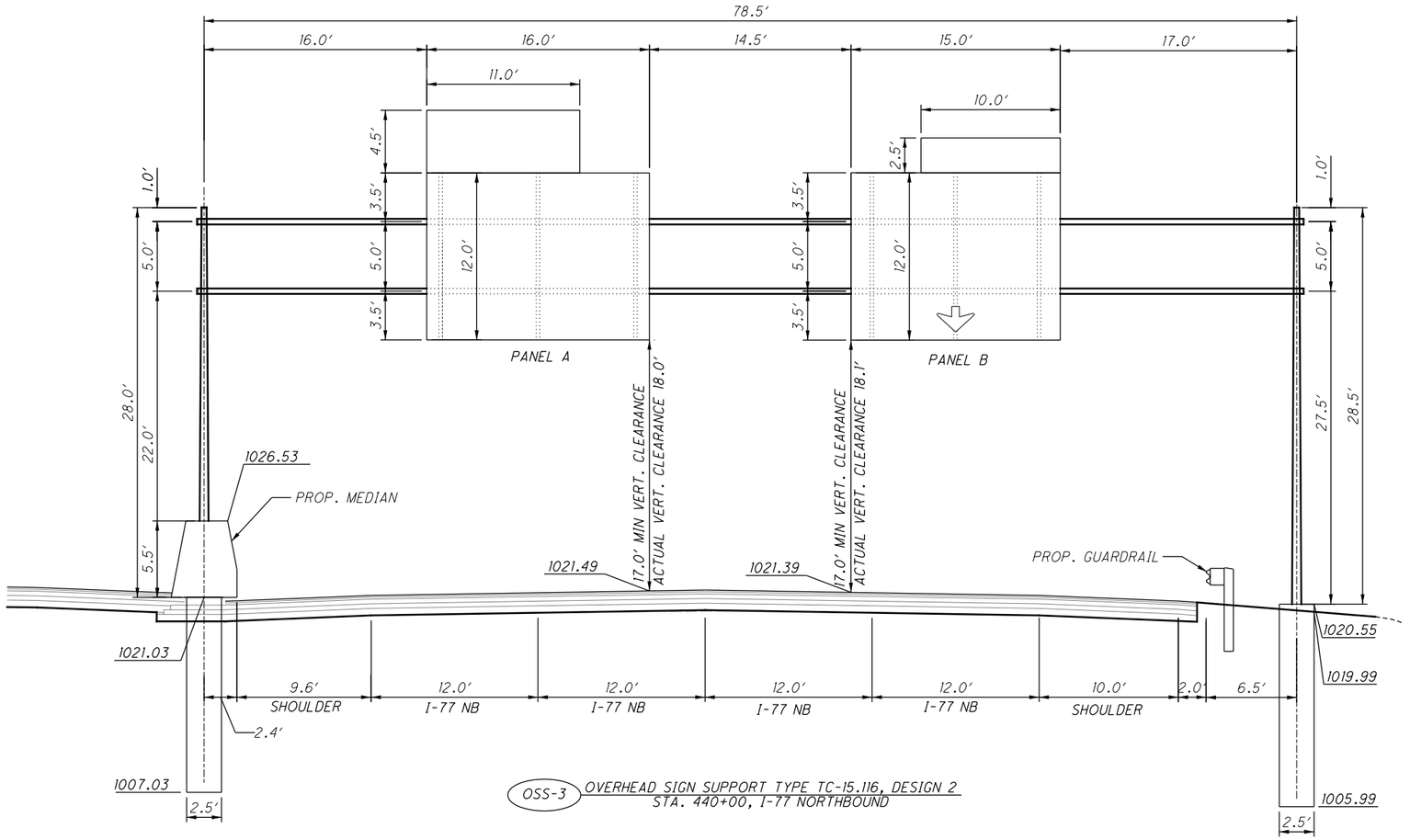
PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	16′ X 12′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	11′ X 4.5′
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
PANEL B	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	15′ X 9′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT ONLY PANEL TEXT FONT:	E
EXIT ONLY PANEL SIZE:	15′ X 3′
EXIT ONLY PANEL BACKGROUND:	YELLOW
EXIT ONLY PANEL FILL COLOR:	BLACK
EXIT PANEL SIZE:	10′ X 2.5′
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	446.5 SQ. FT.
TOTAL SPAN LENGTH:	78.5 FT.
DESIGN TYPE:	TC-15.116, DESIGN 2

SUPPORT FOUNDATION INFORMATION		
SUPPORT TYPE	DISTANCE BETWEEN FOUNDATIONS	FOUNDATION DEPTH
TYPE TC-15.116, DES. 2	7′-0″	14.0′

PANEL A
N.T.S.



PANEL B
N.T.S.



OSS-3 OVERHEAD SIGN SUPPORT TYPE TC-15.116, DESIGN 2
STA. 440+00, I-77 NORTHBOUND

SEE SHEET 968 FOR PLAN VIEW.

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.

0 2.5 5 10 HORIZONTAL SCALE IN FEET

CALCULATED DLS
CHECKED AKF

SIGN SUPPORT DETAILS
OSS-3

SUM-77/277/224
VARIOUS

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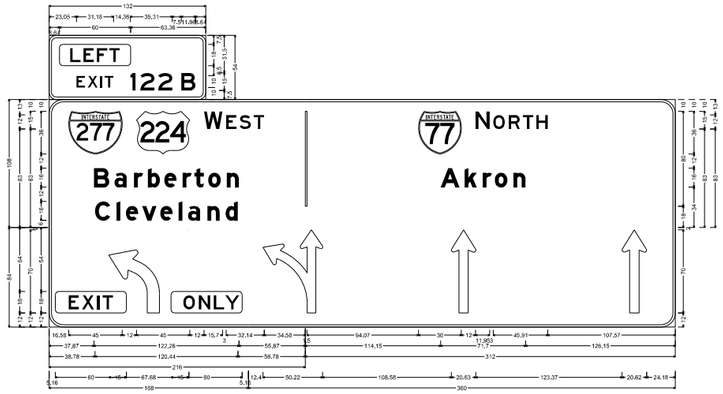
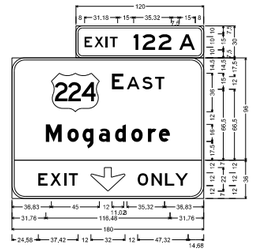
PANEL A	
DESIGN LEVEL:	
TEXT FONT:	E MOD / E
PANEL SIZE:	44′ X 16′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	11′ X 4.5′
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
NUMBER OF BRACKETS:	
PANEL B	
DESIGN LEVEL:	
TEXT FONT:	E MOD / E
PANEL SIZE:	15′ X 8′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	10′ X 2.5′
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
EXIT ONLY PANEL TEXT FONT:	E
EXIT ONLY PANEL SIZE:	15′ X 3′
EXIT ONLY PANEL BACKGROUND:	YELLOW
EXIT ONLY PANEL FILL COLOR:	BLACK
NUMBER OF BRACKETS:	3

SIGN SUPPORT INFORMATION		
TOTAL SIGN AREA:	943.5 SQ. FT.	
TOTAL SPAN LENGTH:	90.5 FT.	
DESIGN TYPE:	TC-15.116, DESIGN 3	
SUPPORT FOUNDATION INFORMATION		
SUPPORT TYPE	DISTANCE BETWEEN FOUNDATIONS	FOUNDATION DEPTH
TYPE TC-15.116, DES. 3	7′-0″	18.0′

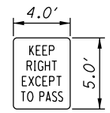
NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



PANEL A
N.T.S.

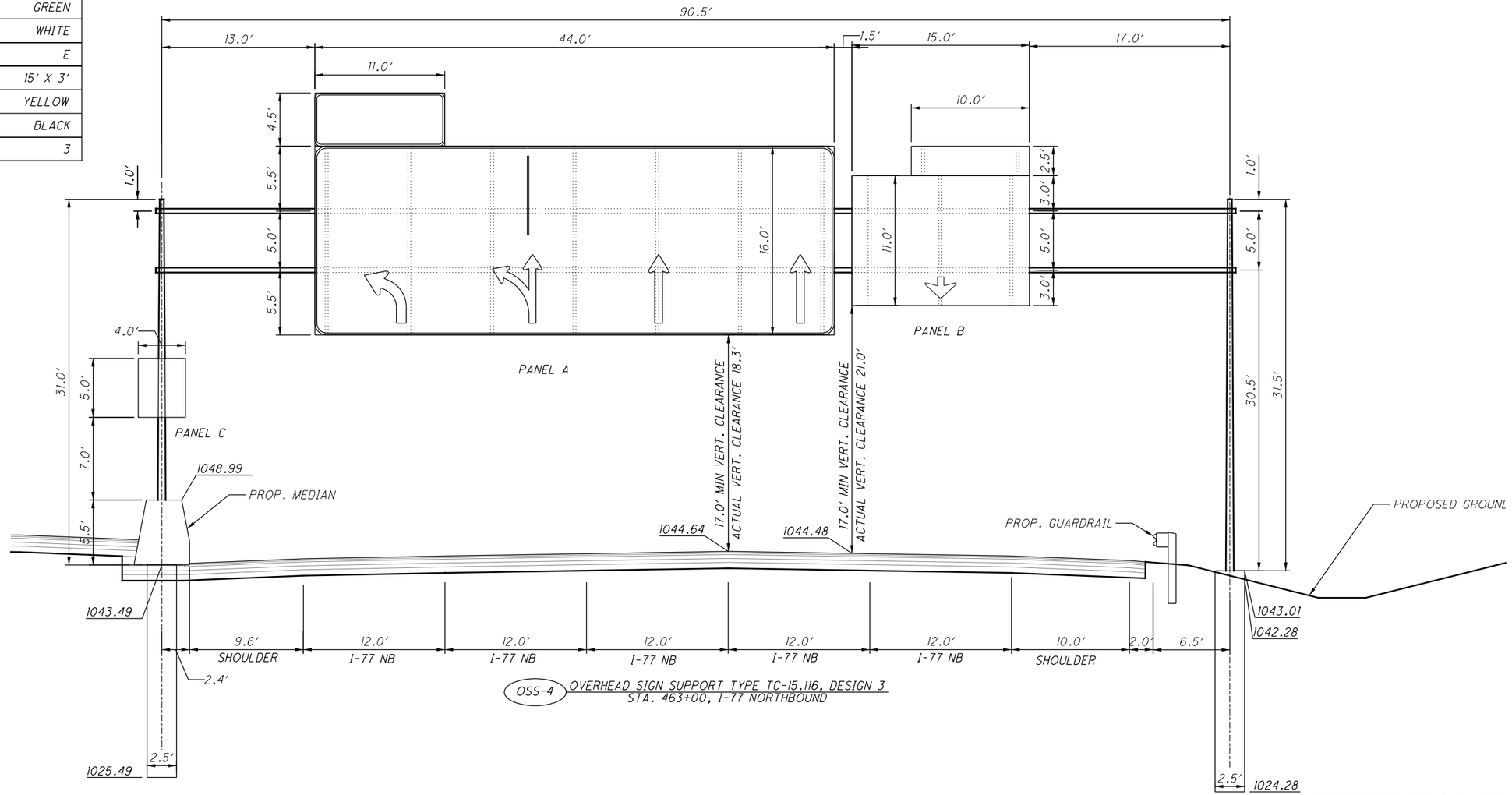


PANEL B
N.T.S.



R4-16-48

PANEL C
N.T.S.



OSS-4 OVERHEAD SIGN SUPPORT TYPE TC-15.116, DESIGN 3
STA. 463+00, I-77 NORTHBOUND

SEE SHEET 969 FOR PLAN VIEW.

0 2.5 5 10 HORIZONTAL SCALE IN FEET

CALCULATED DLS | CHECKED AKF

OVERHEAD SIGN SUPPORT DETAILS
OSS-4

SUM-77/277/224
VARIOUS

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PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	44′ X 16′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	11′ X 4.5′
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
NUMBER OF BRACKETS:	7

PANEL B	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	15′ X 8′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	10′ X 2.5′
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE

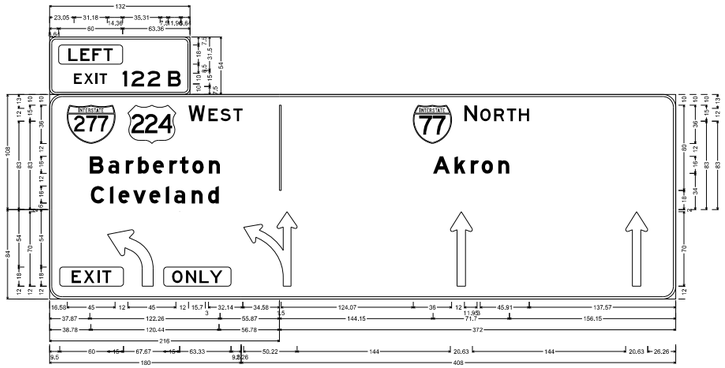
PANEL B (CONTINUED)	
EXIT ONLY PANEL TEXT FONT:	E
EXIT ONLY PANEL SIZE:	15′ X 3′
EXIT ONLY PANEL BACKGROUND:	YELLOW
EXIT ONLY PANEL FILL COLOR:	BLACK
NUMBER OF BRACKETS:	3

SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	943.5 SQ. FT.
TOTAL SPAN LENGTH:	129.0 FT.
DESIGN TYPE:	TC-15.116, DESIGN 3

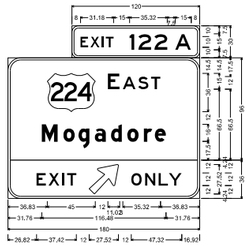
SUPPORT FOUNDATION INFORMATION

SUPPORT TYPE	DISTANCE BETWEEN FOUNDATIONS	FOUNDATION DEPTH
TYPE TC-15.116, DES. 3	7′-0″	18.0′

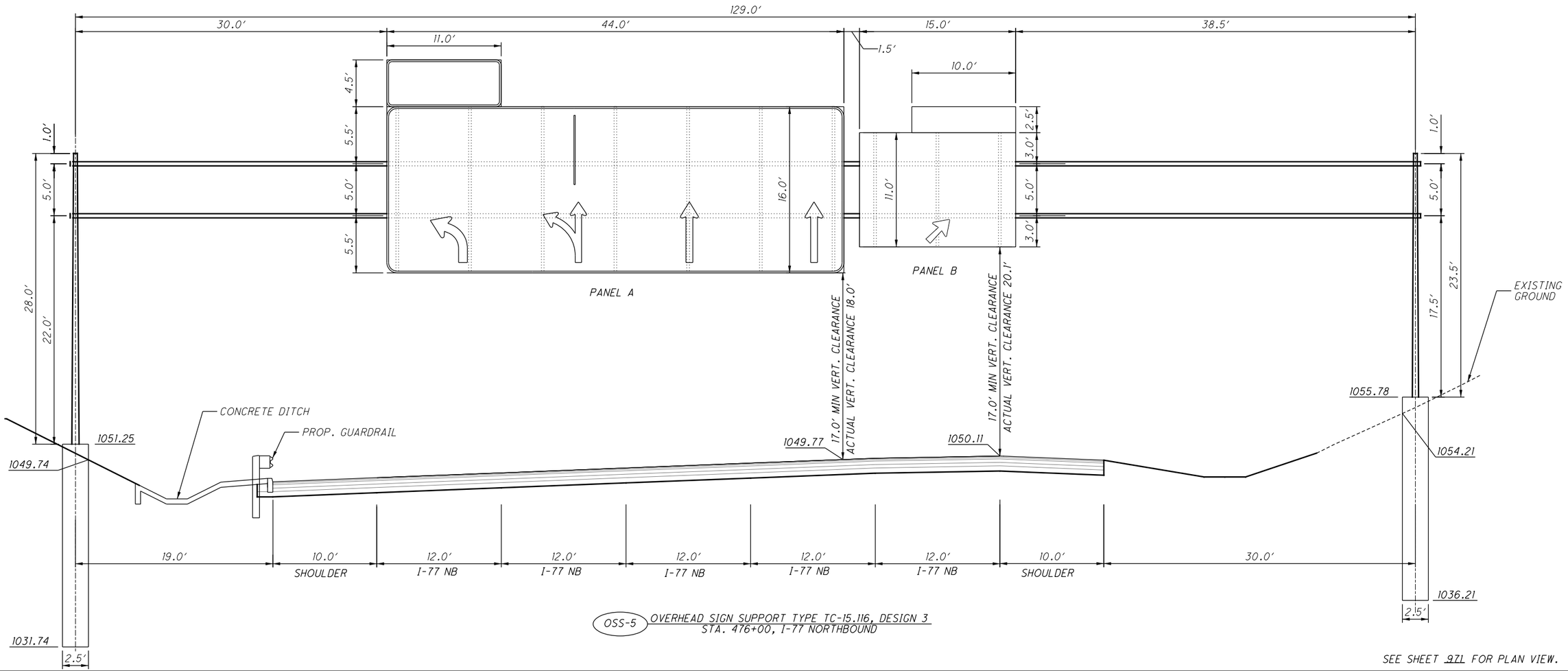
NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



PANEL A
N.T.S.



PANEL B
N.T.S.



OSS-5 OVERHEAD SIGN SUPPORT TYPE TC-15.116, DESIGN 3
STA. 476+00, I-77 NORTHBOUND

SEE SHEET 9ZL FOR PLAN VIEW.

0 2.5 5 10 HORIZONTAL SCALE IN FEET

CALCULATED DLS | CHECKED AKF

OVERHEAD SIGN SUPPORT DETAILS OSS-5

SUM-77/277/224 VARIOUS

995
1288

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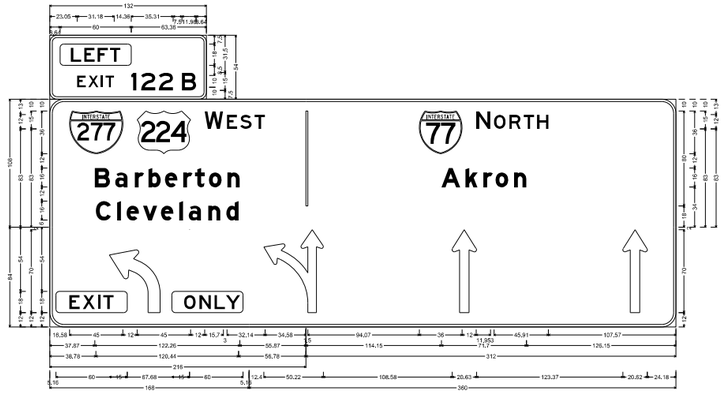
PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	44' X 16'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	11' X 4.5'
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
NUMBER OF BRACKETS:	7
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	753.5 SQ. FT.
TOTAL SPAN LENGTH:	93.2 FT.
DESIGN TYPE:	TC-15.116, DESIGN 3

SUPPORT FOUNDATION INFORMATION		
SUPPORT TYPE	DISTANCE BETWEEN FOUNDATIONS	FOUNDATION DEPTH
TYPE TC-15.116, DES. 3	7'-0"	18.0'

NOTES:

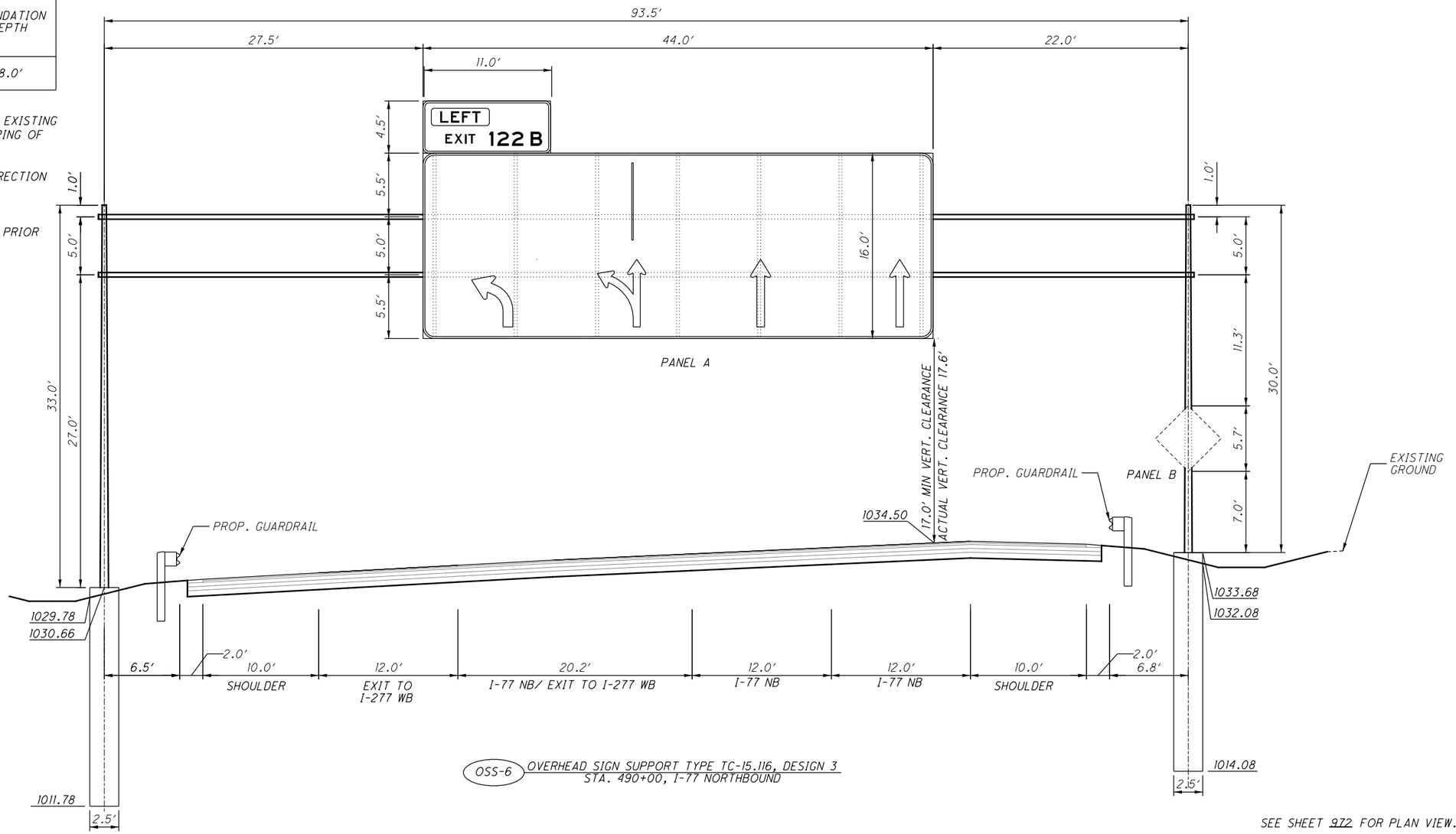
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



PANEL A
N.T.S.

W3-5-48

PANEL B
N.T.S.



OSS-6 OVERHEAD SIGN SUPPORT TYPE TC-15.116, DESIGN 3
STA. 490+00, I-77 NORTHBOUND

SEE SHEET 972 FOR PLAN VIEW.

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED DLS
CHECKED AKF

OVERHEAD SIGN SUPPORT DETAILS OSS-6

SUM-77/277/224
VARIOUS

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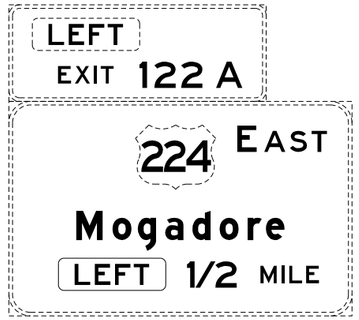
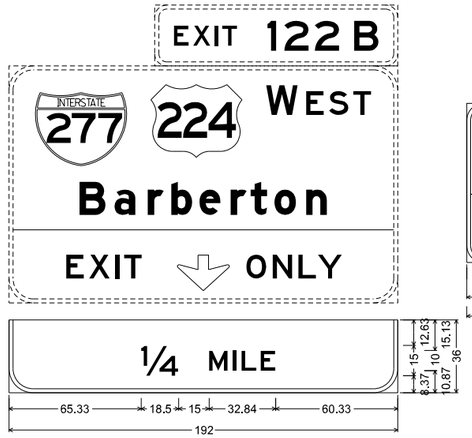
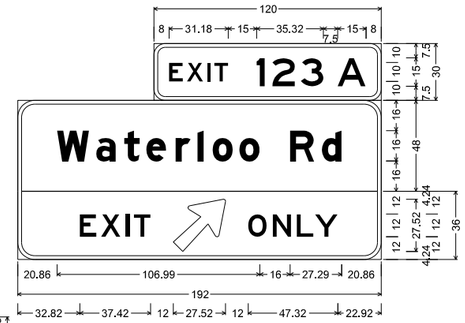
PANEL B	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	16' X 3'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
PANEL C	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	16' X 4'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	10' X 2.5'
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
EXIT ONLY PANEL TEXT FONT:	E
EXIT ONLY PANEL SIZE:	16' X 3'
EXIT ONLY PANEL BACKGROUND:	YELLOW
EXIT ONLY PANEL FILL COLOR:	BLACK
NUMBER OF BRACKETS:	3
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	531.5 SQ. FT.
TOTAL SPAN LENGTH:	80.0 FT.
DESIGN TYPE:	TC-7.65, DESIGN 8



PANEL A
N.T.S.

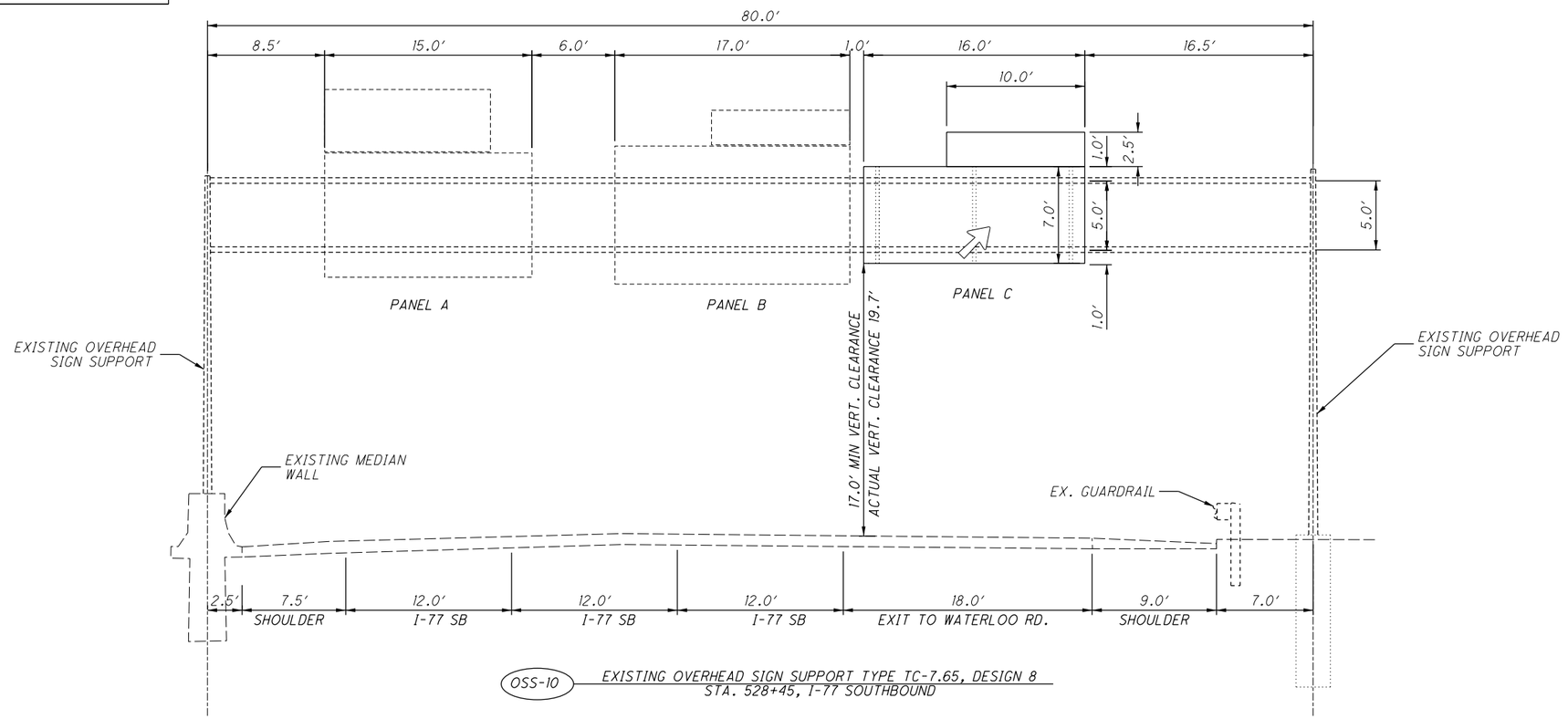


PANEL B
N.T.S.



PANEL C
N.T.S.

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



OSS-10 EXISTING OVERHEAD SIGN SUPPORT TYPE TC-7.65, DESIGN 8
STA. 528+45, I-77 SOUTHBOUND

SEE SHEET 975 FOR PLAN VIEW.

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED DLS
CHECKED AKF

OVERHEAD SIGN SUPPORT DETAILS OSS-10

SUM-77/277/224
VARIOUS

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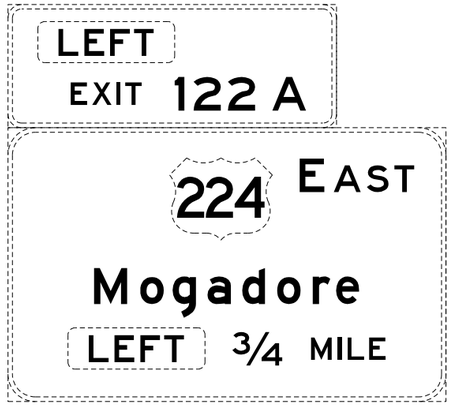
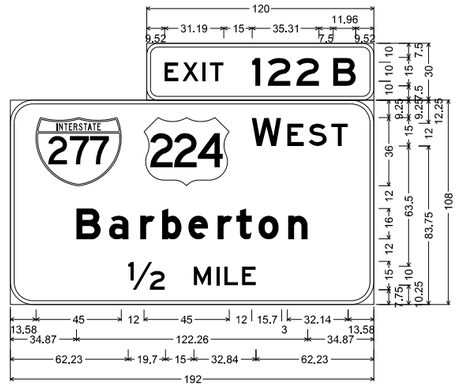
PANEL B	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	16' X 9'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	10' X 2.5'
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	497.5 SQ. FT.
TOTAL SPAN LENGTH:	72.0 FT.
DESIGN TYPE:	TC-7.65, DESIGN 8

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.

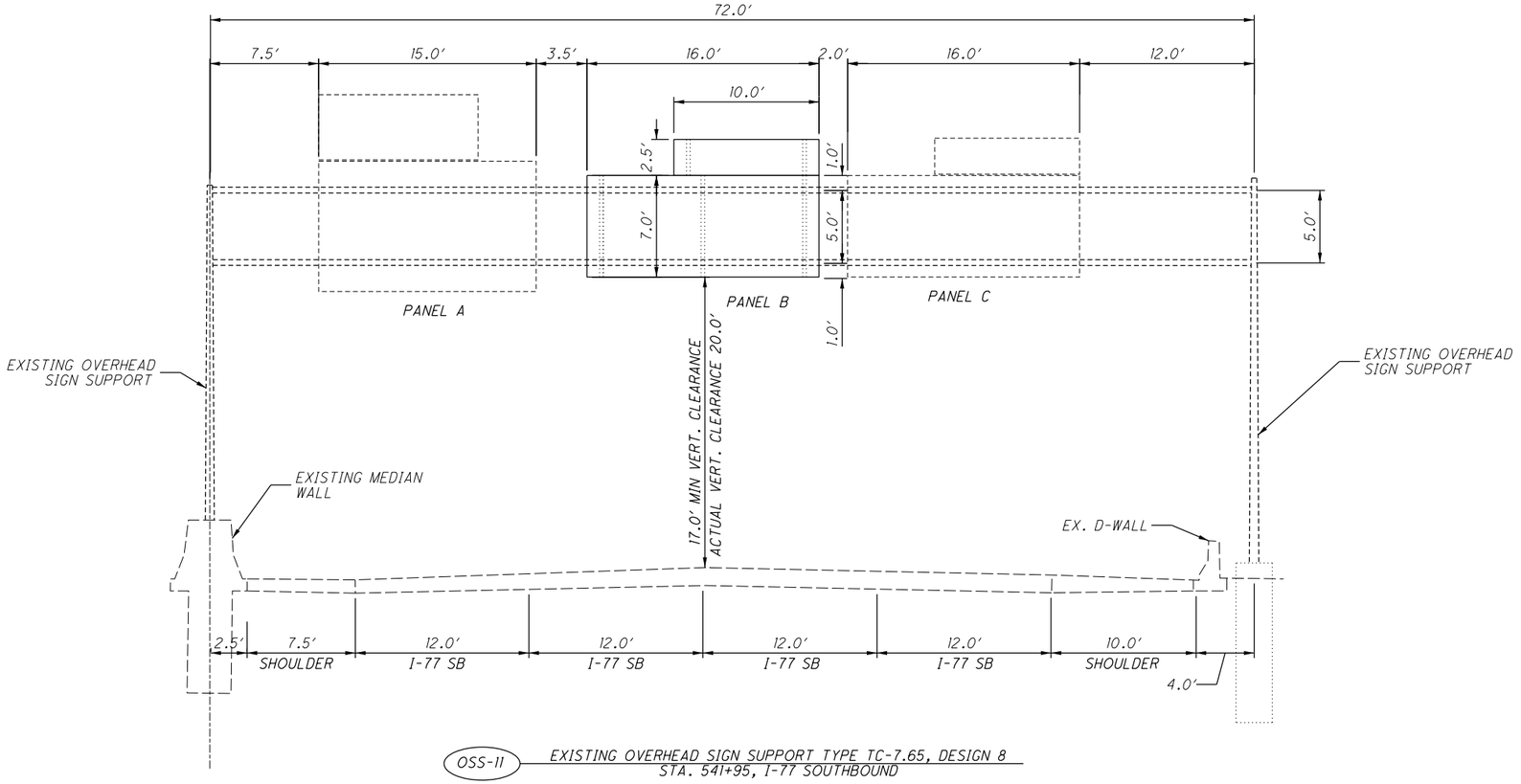


PANEL A
N.T.S.



PANEL B
N.T.S.

PANEL C
N.T.S.



OSS-11 EXISTING OVERHEAD SIGN SUPPORT TYPE TC-7.65, DESIGN 8
STA. 541+95, I-77 SOUTHBOUND

SEE SHEET 976 FOR PLAN VIEW.

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED DLS
CHECKED AKF

OVERHEAD SIGN SUPPORT DETAILS
OSS-11

SUM-77/277/224
VARIOUS

998
1288

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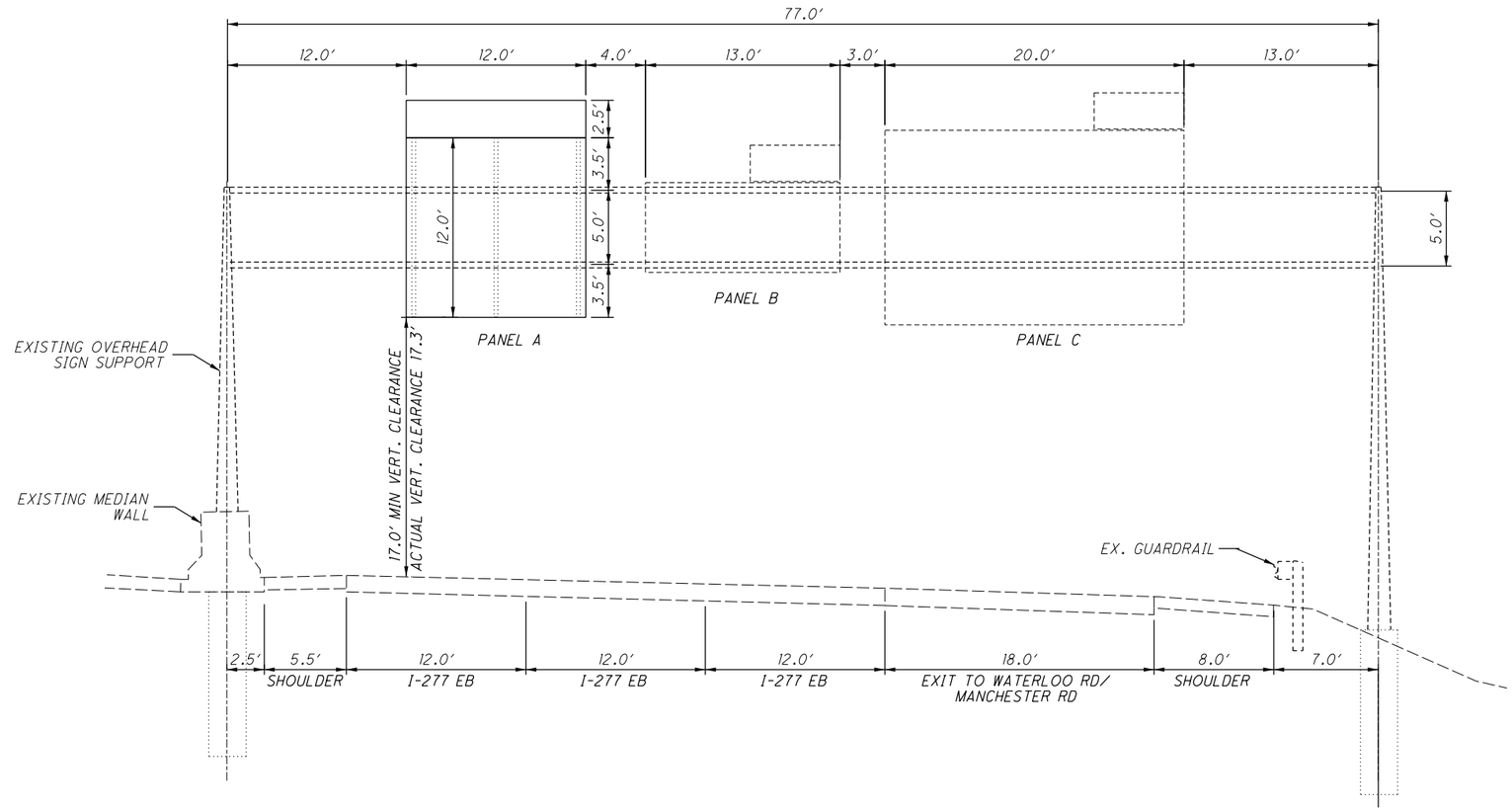
PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	12' X 12'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	12' X 2.5'
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	505.0 SQ. FT.
TOTAL SPAN LENGTH:	77.0 FT.
DESIGN TYPE:	TC-7.65, DESIGN 8

PANEL A
N.T.S.

PANEL B
N.T.S.

PANEL C
N.T.S.

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



OSS-12 EXISTING OVERHEAD SIGN SUPPORT TYPE TC-7.65, DESIGN 8
I-277 EASTBOUND

SEE SHEET 977 FOR PLAN VIEW.

HORIZONTAL SCALE IN FEET
0 2.5 5 10
CALCULATED DLS
CHECKED AKF

SIGN SUPPORT DETAILS
OSS-12

SUM-77/277/224
VARIOUS

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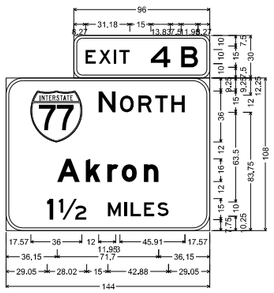
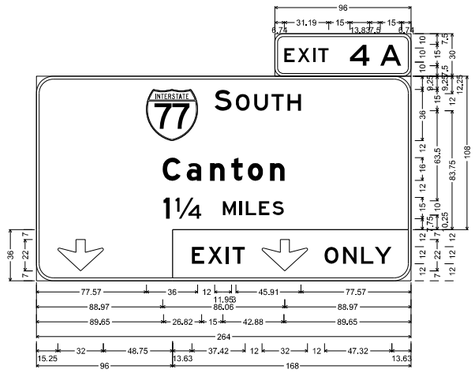
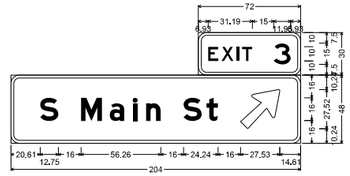
PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	12′ X 9′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	8′ X 2.5′
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
PANEL B	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	22′ X 12′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	8′ X 2.5′
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
EXIT ONLY PANEL TEXT FONT:	E
EXIT ONLY PANEL SIZE:	14′ X 3′
EXIT ONLY PANEL BACKGROUND:	YELLOW
EXIT ONLY PANEL FILL COLOR:	BLACK
NUMBER OF BRACKETS:	4
PANEL C	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	17′ X 4′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	6′ X 2.5′
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	495.0 SQ. FT.
TOTAL SPAN LENGTH:	77.0 FT.
DESIGN TYPE:	TC-7.65, DESIGN 8



PANEL A
N.T.S.



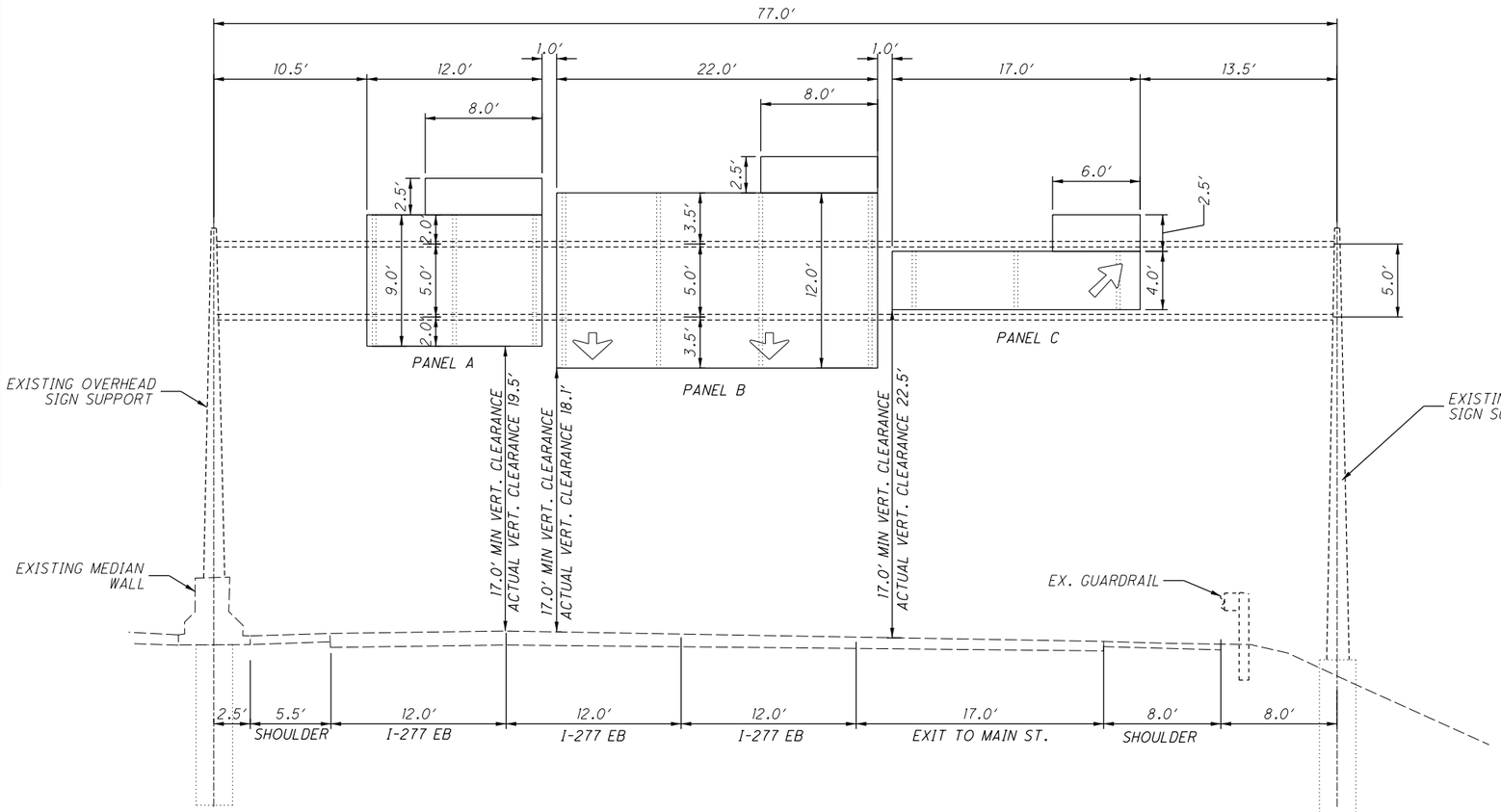
PANEL C
N.T.S.



PANEL C
N.T.S.

NOTES:

1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



OSS-13 EXISTING OVERHEAD SIGN SUPPORT TYPE TC-7.65, DESIGN 8
I-277 EASTBOUND

SEE SHEET 978 FOR PLAN VIEW.

0 2.5 5 10 HORIZONTAL SCALE IN FEET

CALCULATED DLS | CHECKED AKF

SIGN SUPPORT DETAILS OSS-13

SUM-77/277/224 VARIOUS

1000 / 1288

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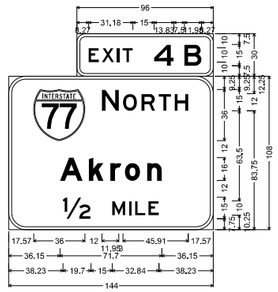
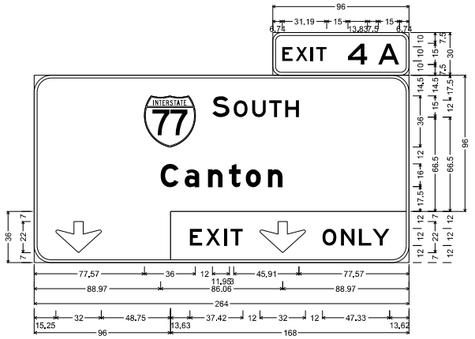
PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	12′ X 9′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	8′ X 2.5′
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
PANEL B	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	22′ X 11′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	8′ X 2.5′
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
EXIT ONLY PANEL TEXT FONT:	E
EXIT ONLY PANEL SIZE:	14′ X 3′
EXIT ONLY PANEL BACKGROUND:	YELLOW
EXIT ONLY PANEL FILL COLOR:	BLACK
NUMBER OF BRACKETS:	4
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	390.0 SQ. FT.
TOTAL SPAN LENGTH:	63.0 FT.
DESIGN TYPE:	TC-7.65, DESIGN 6

NOTES:

1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.

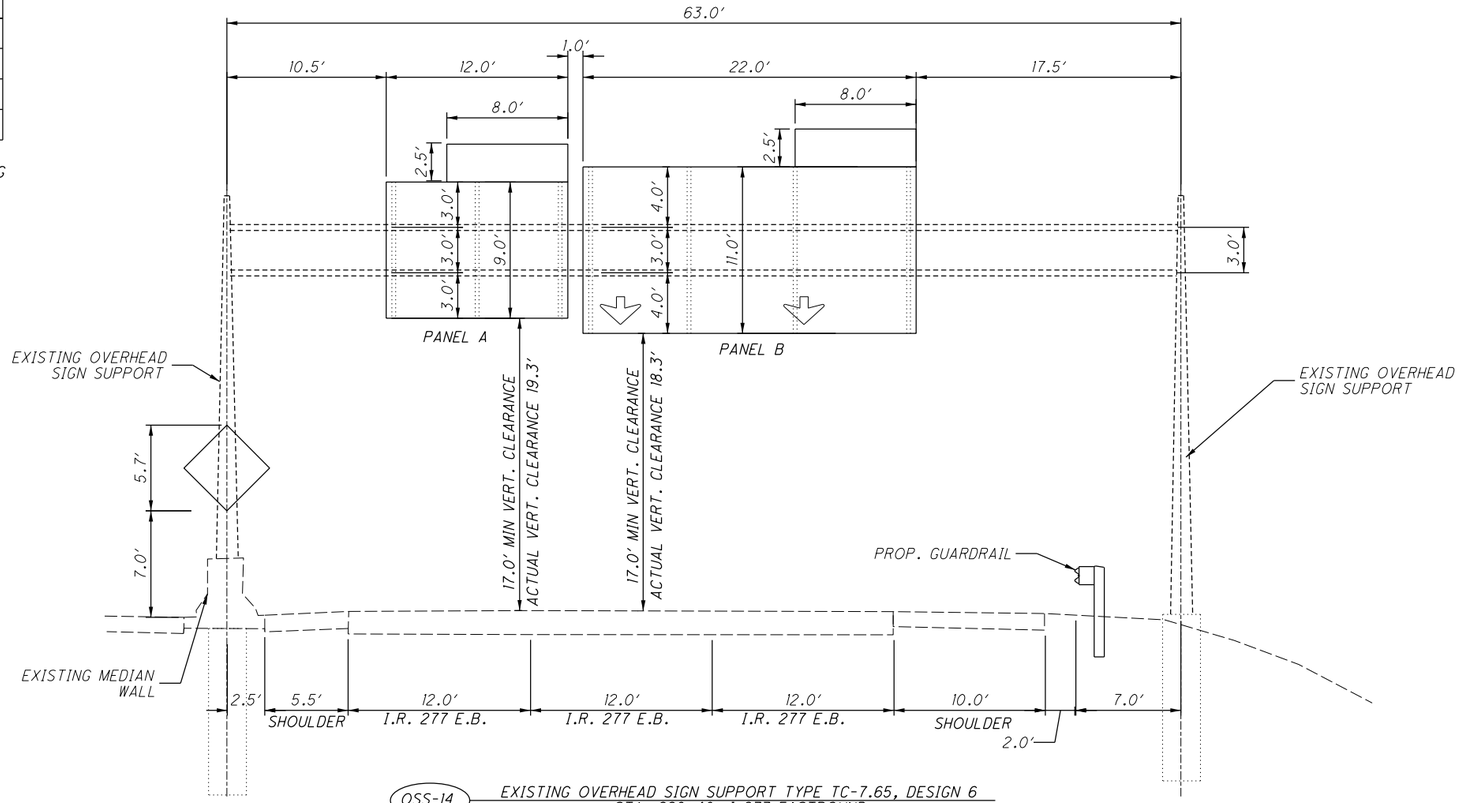


PANEL A
N.T.S.



PANEL B
N.T.S.

W4-3R-48



OSS-14 EXISTING OVERHEAD SIGN SUPPORT TYPE TC-7.65, DESIGN 6
STA. 228+40, I-277 EASTBOUND

SEE SHEET 980 FOR PLAN VIEW.

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED DLS
CHECKED AKF

OVERHEAD SIGN SUPPORT DETAILS OSS-14

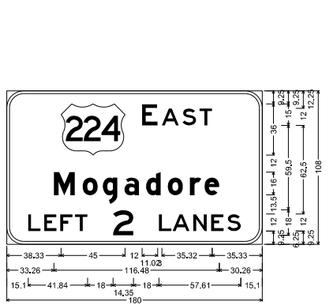
SUM-77/277/224
VARIOUS

1001
1288

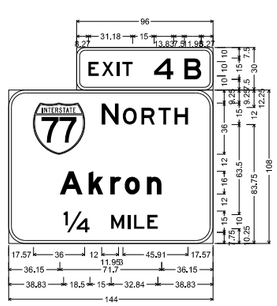
O:\2017\2017258\ProjectData\SUM\106002\Design\Traffic\Sheets\106002_TE011.dgn Default 1/28/2021 1:15:10 PM aford

PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	15′ X 9′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
PANEL B	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	12′ X 9′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	8′ X 2.5′
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
PANEL C	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	17′ X 8′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	8′ X 2.5′
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
EXIT ONLY PANEL TEXT FONT:	E
EXIT ONLY PANEL SIZE:	17′ X 3′
EXIT ONLY PANEL BACKGROUND:	YELLOW
EXIT ONLY PANEL FILL COLOR:	BLACK
NUMBER OF BRACKETS:	3
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	470.0 SQ. FT.
TOTAL SPAN LENGTH:	73.5 FT.
DESIGN TYPE:	TC-15.116, DESIGN 1

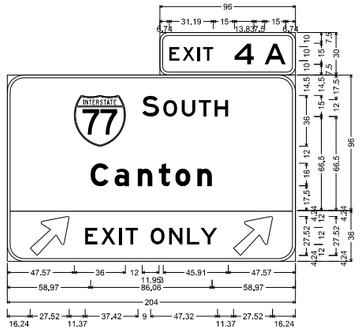
SUPPORT FOUNDATION INFORMATION		
SUPPORT TYPE	DISTANCE BETWEEN FOUNDATIONS	FOUNDATION DEPTH
TYPE TC-15.116, DES. 1	5′-0″	12.0′



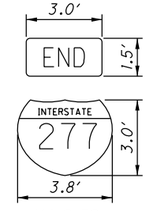
PANEL A
N.T.S.



PANEL B
N.T.S.



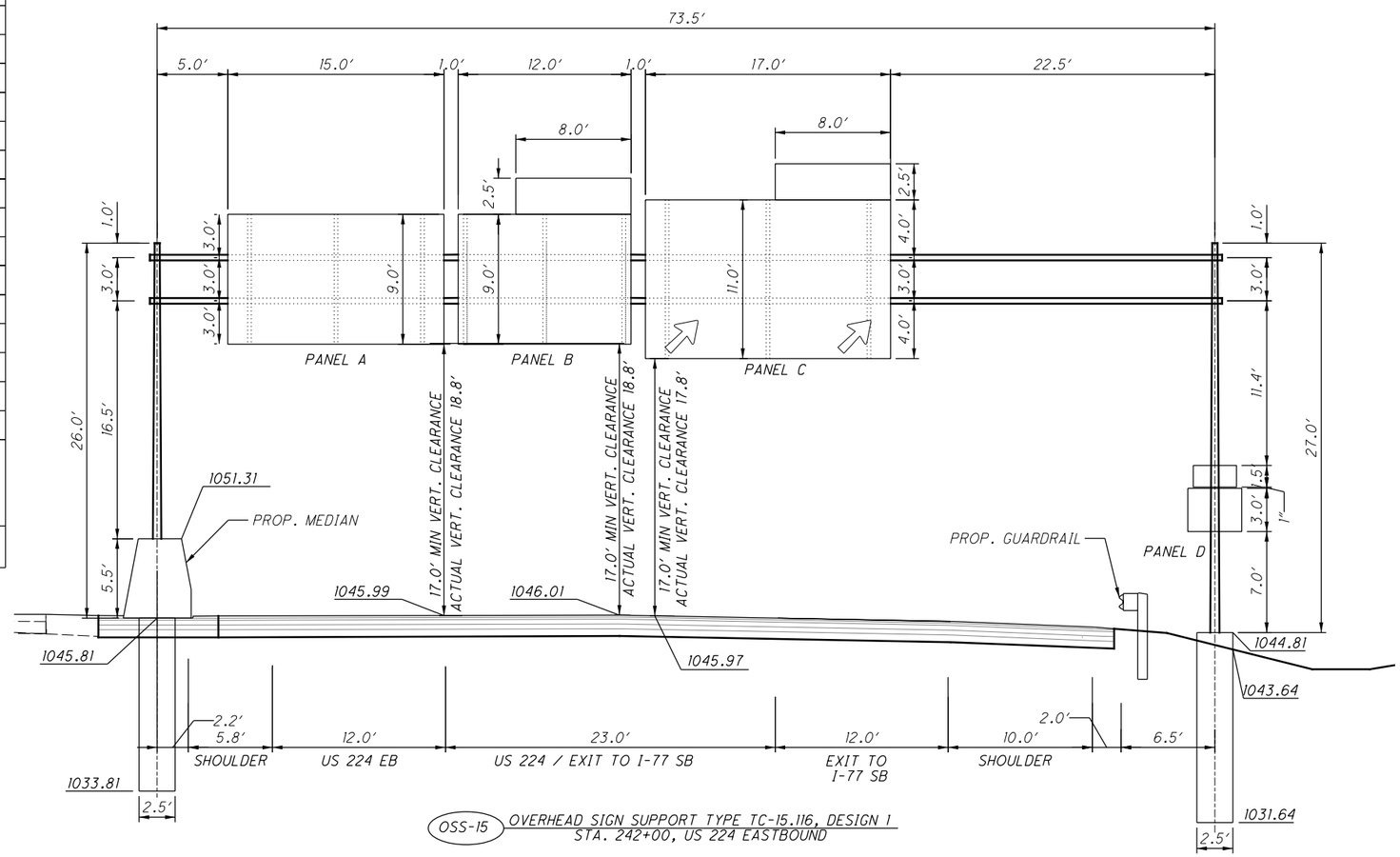
PANEL C
N.T.S.



M4-6-36
M1-1-3

PANEL D
N.T.S.

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



OSS-15 OVERHEAD SIGN SUPPORT TYPE TC-15.116, DESIGN 1
STA. 242+00, US 224 EASTBOUND

SEE SHEET 981 FOR PLAN VIEW.

0 2.5 5 10
HORIZONTAL SCALE IN FEET

CALCULATED DLS
CHECKED AKF

OVERHEAD SIGN SUPPORT DETAILS
OSS-15

SUM-77/277/224
VARIOUS

1002
1288

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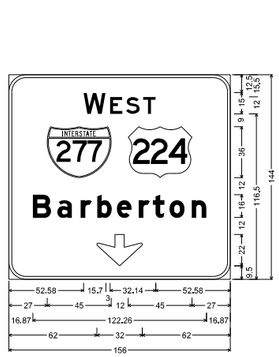
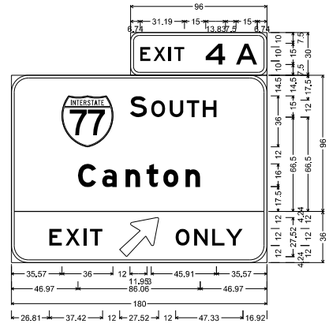
PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	13′ X 12′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
PANEL B	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	15′ X 8′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	8′ X 2.5′
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
EXIT ONLY PANEL TEXT FONT:	E
EXIT ONLY PANEL SIZE:	15′ X 3′
EXIT ONLY PANEL BACKGROUND:	YELLOW
EXIT ONLY PANEL FILL COLOR:	BLACK
NUMBER OF BRACKETS:	3
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	341.0 SQ. FT.
TOTAL SPAN LENGTH:	64.0 FT.
DESIGN TYPE:	TC-7.65, DESIGN 6

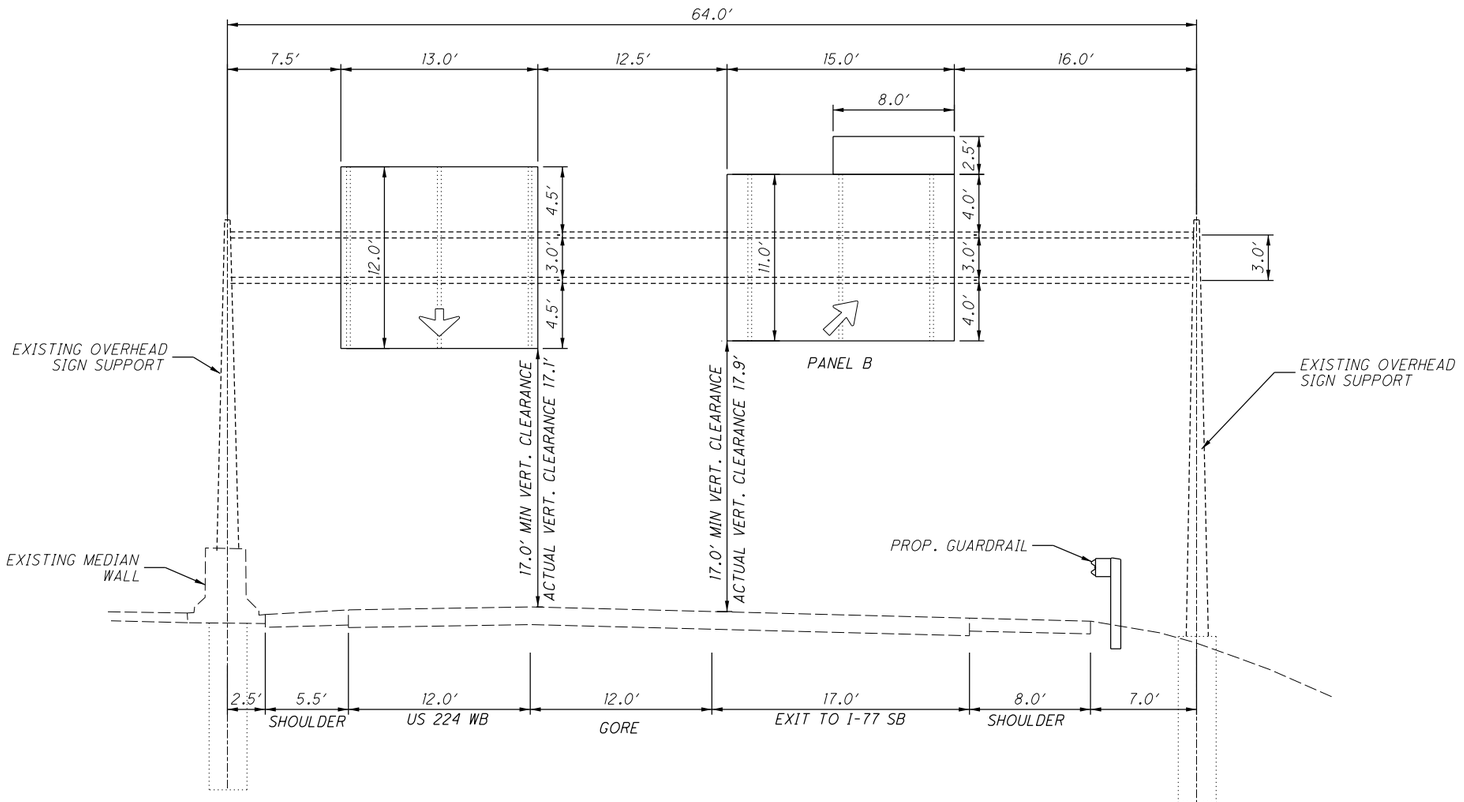


PANEL A
N.T.S.



PANEL B
N.T.S.

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



OSS-16 EXISTING OVERHEAD SIGN SUPPORT TYPE TC-7.65, DESIGN 6
STA. 248+70, US 224 WESTBOUND

SEE SHEET 982 FOR PLAN VIEW.

0 2.5 5 10 HORIZONTAL SCALE IN FEET

CALCULATED DLS
CHECKED AKF

SIGN SUPPORT DETAILS
OSS-16

OVERHEAD SIGN

SUM-77/277/224
VARIOUS

1003
1288

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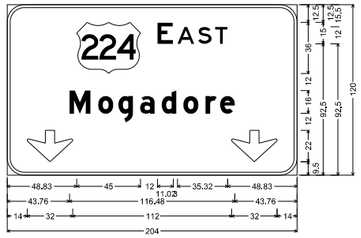
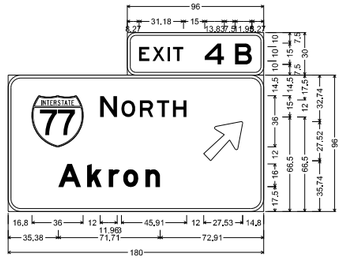
PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	17′ X 10′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
PANEL B	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	15′ X 8′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	8′ X 2.5′
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	310.0 SQ. FT.
TOTAL SPAN LENGTH:	64.0 FT.
DESIGN TYPE:	TC-7.65, DESIGN 6

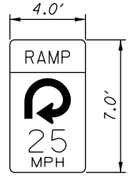
NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



PANEL A
N.T.S.

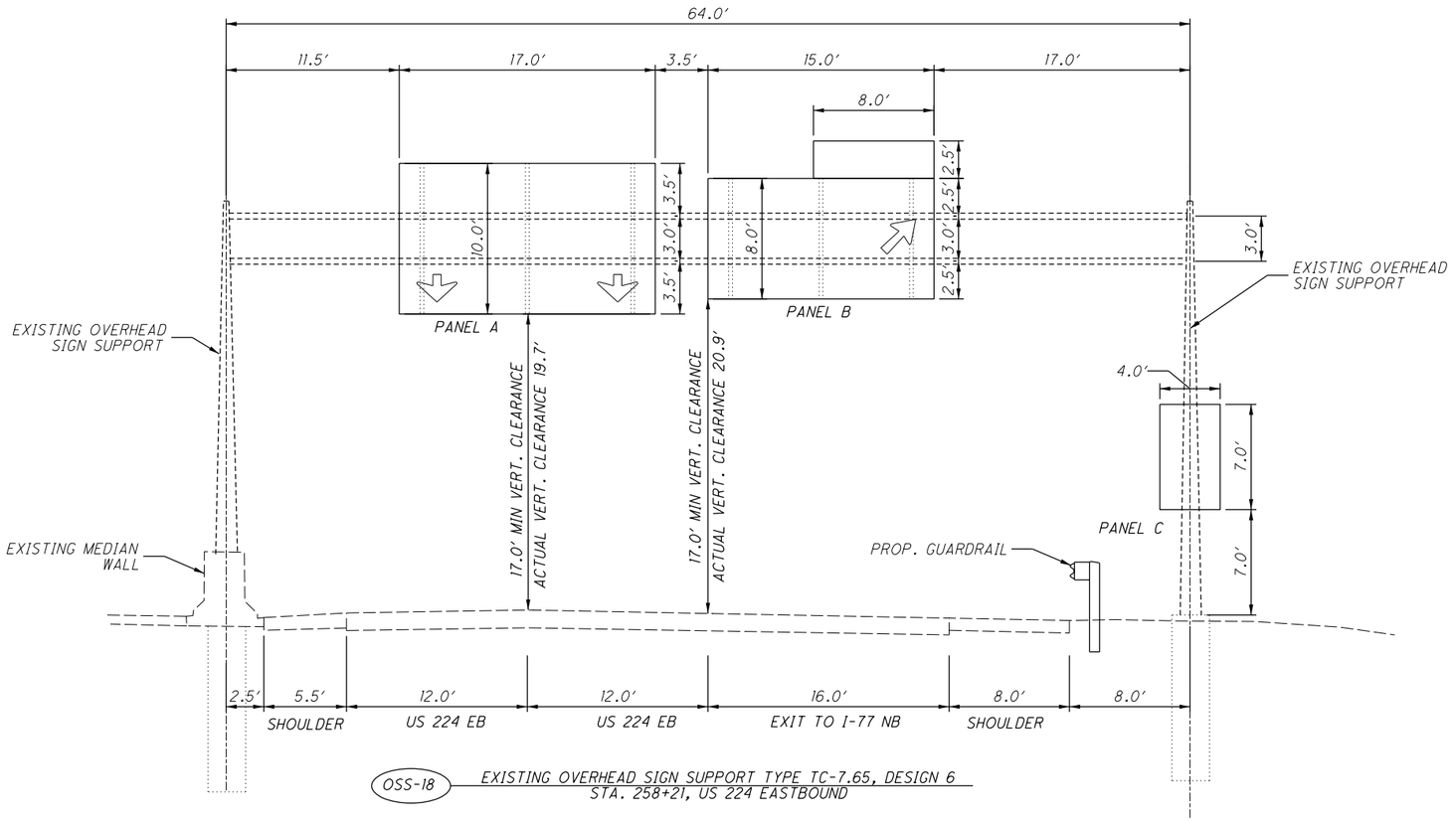


PANEL B
N.T.S.



W13-7-48

PANEL C
N.T.S.



OSS-18 EXISTING OVERHEAD SIGN SUPPORT TYPE TC-7.65, DESIGN 6
STA. 258+21, US 224 EASTBOUND

SEE SHEET 982 FOR PLAN VIEW.

0 2.5 5 10 HORIZONTAL SCALE IN FEET

CALCULATED DLS
CHECKED AKF

OVERHEAD SIGN SUPPORT DETAILS
OSS-18

SUM-77/277/224
VARIOUS

1004
1288

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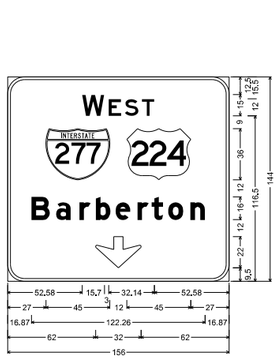
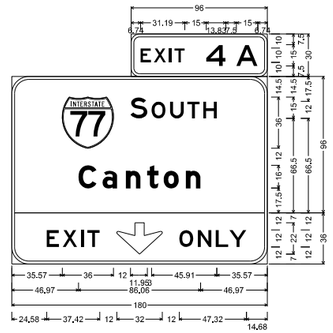
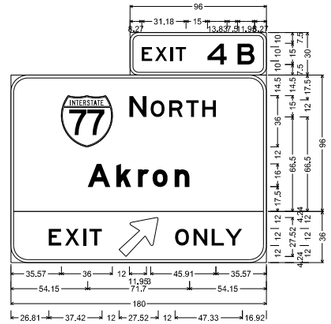
PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	13′ X 12′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
PANEL B	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	15′ X 8′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	8′ X 2.5′
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
EXIT ONLY PANEL TEXT FONT:	E
EXIT ONLY PANEL SIZE:	15′ X 3′
EXIT ONLY PANEL BACKGROUND:	YELLOW
EXIT ONLY PANEL FILL COLOR:	BLACK
NUMBER OF BRACKETS:	3
PANEL C	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	15′ X 8′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	8′ X 2.5′
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
EXIT ONLY PANEL TEXT FONT:	E
EXIT ONLY PANEL SIZE:	15′ X 3′
EXIT ONLY PANEL BACKGROUND:	YELLOW
EXIT ONLY PANEL FILL COLOR:	BLACK
NUMBER OF BRACKETS:	3
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	526.0 SQ. FT.
TOTAL SPAN LENGTH:	77.0 FT.
DESIGN TYPE:	TC-7.65, DESIGN 8



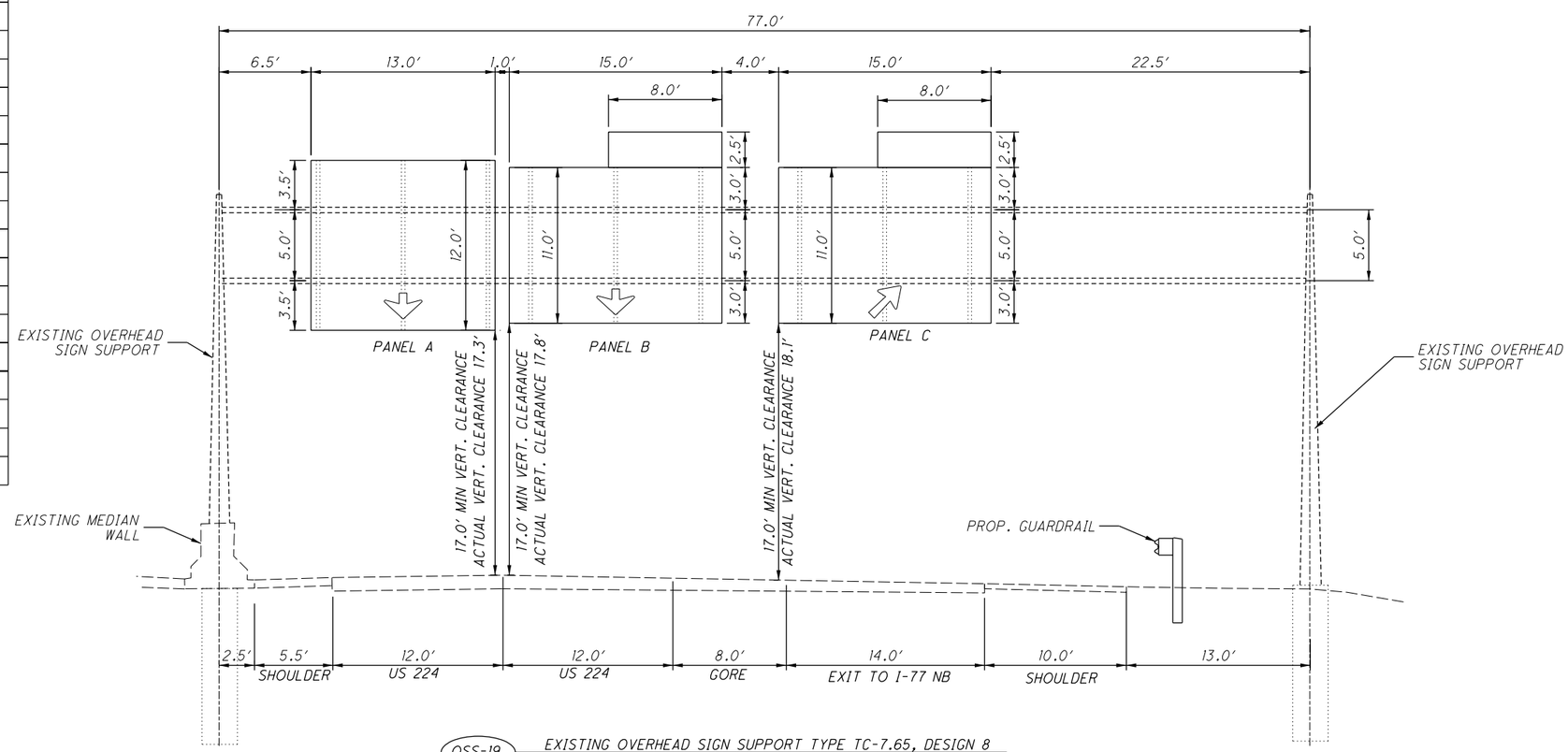
PANEL A
N.T.S.



PANEL B
N.T.S.



PANEL C
N.T.S.



OSS-19 EXISTING OVERHEAD SIGN SUPPORT TYPE TC-7.65, DESIGN 8
STA. 266+54, US 224 WESTBOUND

SEE SHEET 983 FOR PLAN VIEW.

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.

0 2.5 5 10 HORIZONTAL SCALE IN FEET

CALCULATED DLS | CHECKED AKF

OVERHEAD SIGN SUPPORT DETAILS OSS-19

SUM-77/277/224
VARIOUS

1005
1288

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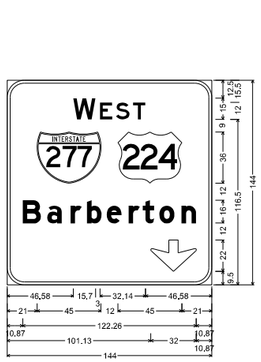
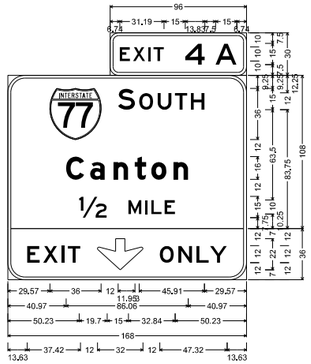
PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	12' X 12'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
PANEL B	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	14' X 9'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	8' X 2.5'
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
EXIT ONLY PANEL TEXT FONT:	E
EXIT ONLY PANEL SIZE:	14' X 3'
EXIT ONLY PANEL BACKGROUND:	YELLOW
EXIT ONLY PANEL FILL COLOR:	BLACK
NUMBER OF BRACKETS:	3
PANEL C	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	14' X 8'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	8' X 2.5'
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
EXIT ONLY PANEL TEXT FONT:	E
EXIT ONLY PANEL SIZE:	14' X 3'
EXIT ONLY PANEL BACKGROUND:	YELLOW
EXIT ONLY PANEL FILL COLOR:	BLACK
NUMBER OF BRACKETS:	3
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	506.0 SQ. FT.
TOTAL SPAN LENGTH:	63.0 FT.
DESIGN TYPE:	TC-7.65, DESIGN 6

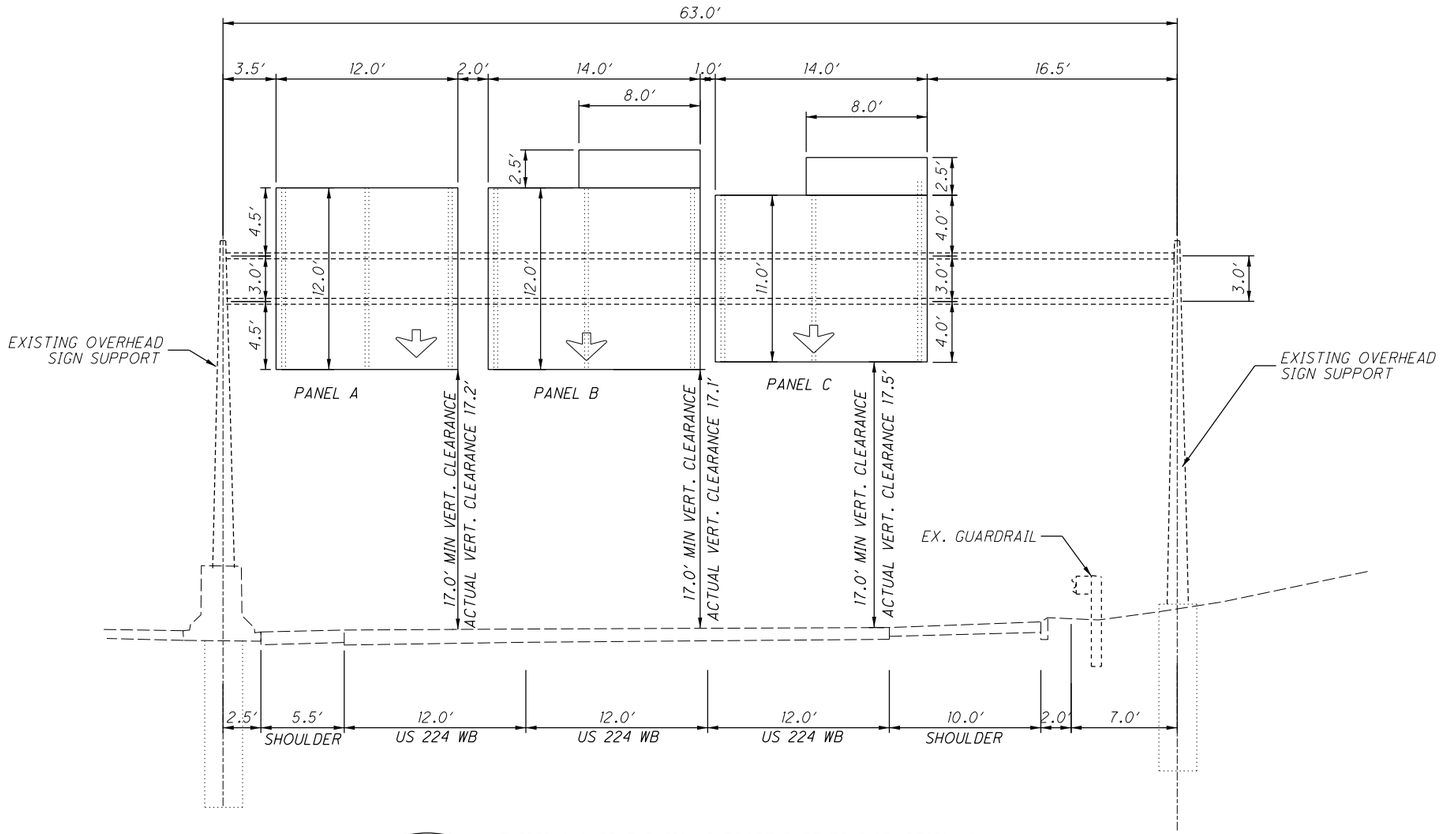


PANEL A
N.T.S.



PANEL B
N.T.S.

PANEL C
N.T.S.



OSS-20 EXISTING OVERHEAD SIGN SUPPORT TYPE TC-7.65, DESIGN 6
STA. 282+78, US 224 WESTBOUND

SEE SHEET 984 FOR PLAN VIEW.

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.

0 2.5 5 10 HORIZONTAL SCALE IN FEET

CALCULATED DLS | CHECKED AKF

OVERHEAD SIGN SUPPORT DETAILS OSS-20

SUM-77/277/224 VARIOUS

1006 / 1288

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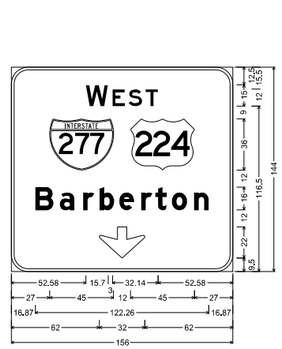
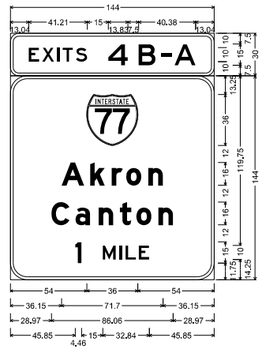
PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	13′ X 12′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
PANEL B	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	12′ X 12′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	12′ X 2.5′
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	463.0 SQ. FT.
TOTAL SPAN LENGTH:	66.0 FT.
DESIGN TYPE:	TC-7.65, DESIGN 6



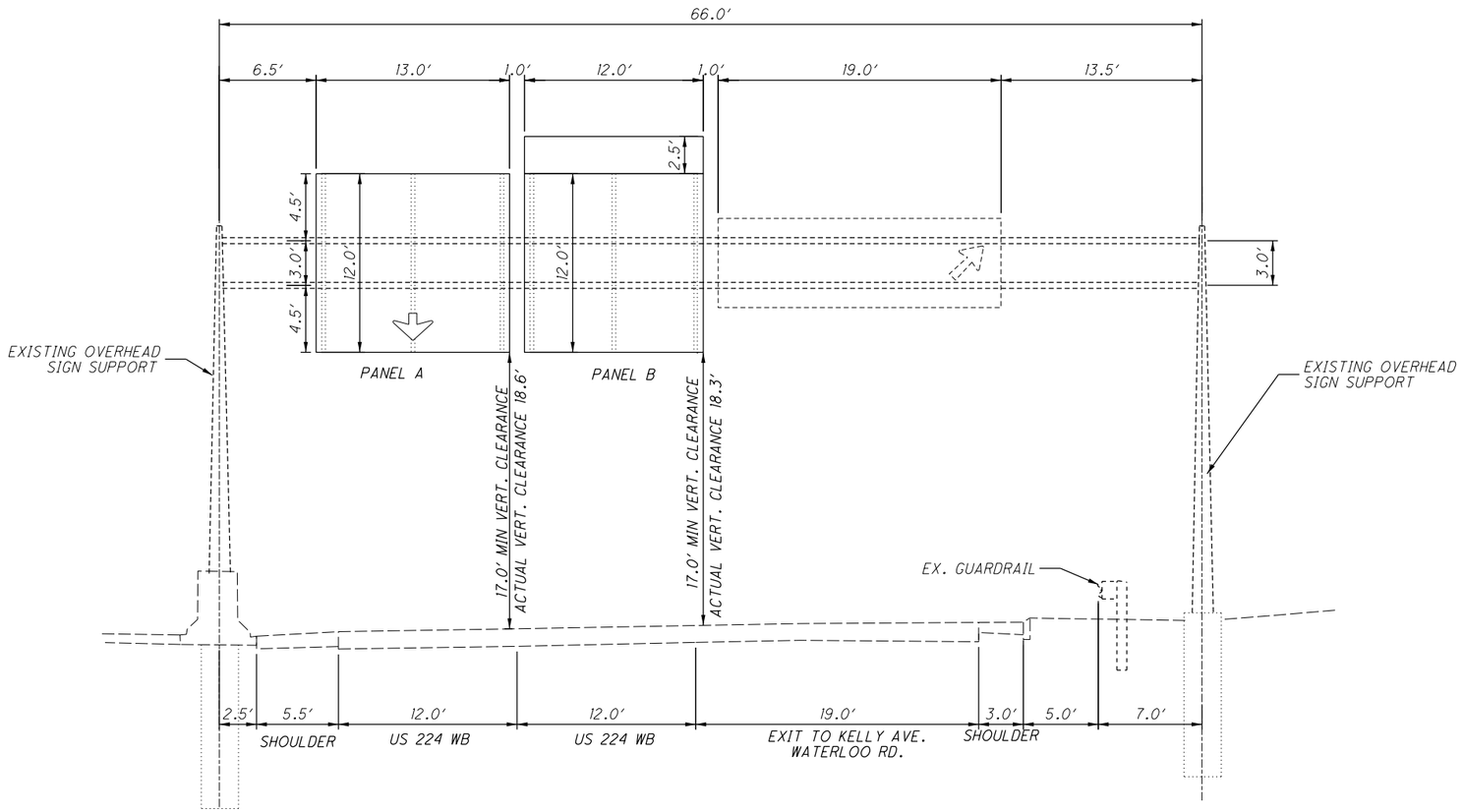
PANEL A
N.T.S.



PANEL B
N.T.S.

PANEL C
N.T.S.

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



OSS-21 EXISTING OVERHEAD SIGN SUPPORT TYPE TC-7.65, DESIGN 6
US 224 WESTBOUND

SEE SHEET 985 FOR PLAN VIEW.

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED DLS
CHECKED AKF

SIGN SUPPORT DETAILS
OSS-21

SUM-77/277/224
VARIOUS

1007
1288

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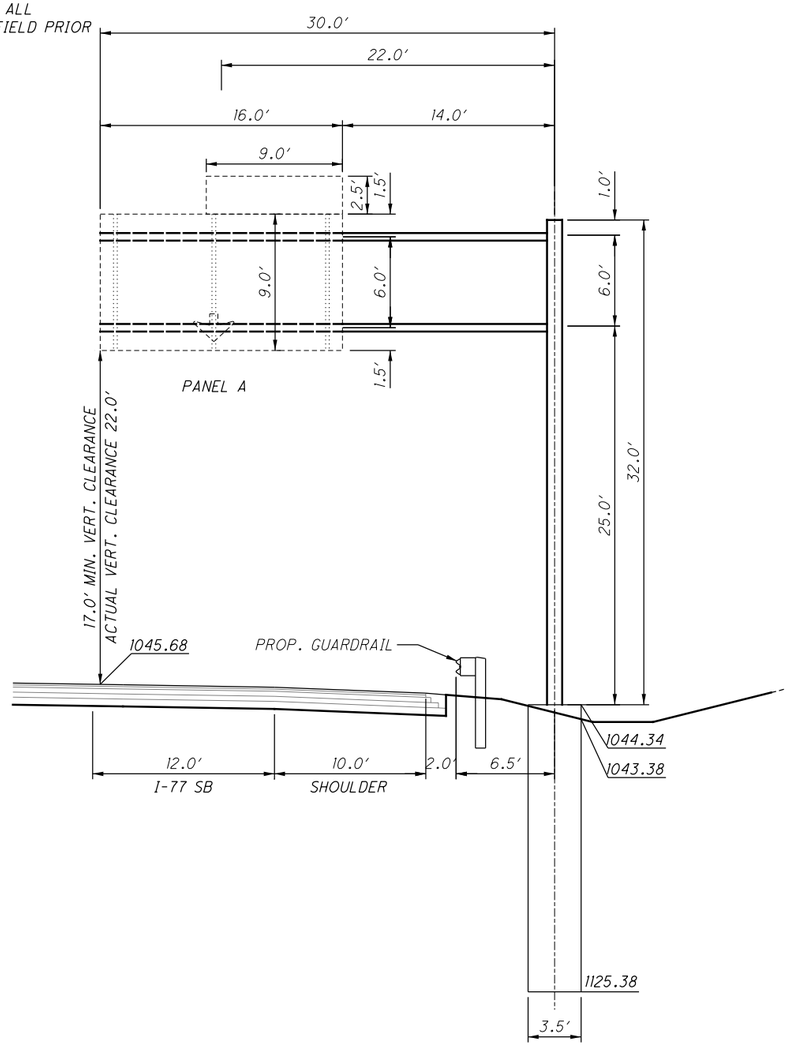
PANEL A			
SIGN SUPPORT INFORMATION			
TOTAL SIGN AREA:	166.5 SQ. FT.		
TOTAL ℄ TO ℄ LENGTH:	22.0 FT.		
DESIGN TYPE:	TC-12.31, DESIGN 12		
SUPPORT FOUNDATION INFORMATION			
SUPPORT TYPE	DES NO.	FOUNDATION DEPTH	FOUNDATION DIAMETER
12.31	12	18.0′	42″

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.

PANEL A
N.T.S.



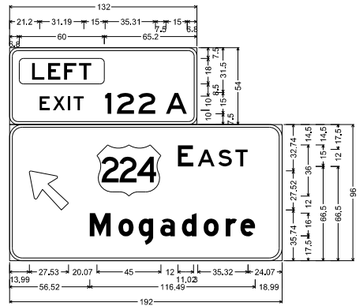
OSS-2 — OVERHEAD SIGN SUPPORT TYPE TC-12.31, DESIGN 12
STA. 417+00, I-77 SOUTHBOUND

SEE SHEET 966 FOR PLAN VIEW.

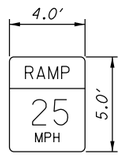
PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	16′ X 8′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	11′ X 4.5′
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	177.5 SQ. FT.
TOTAL ℄ TO ℄ LENGTH:	18.5 FT.
DESIGN TYPE:	TC-12.31, DESIGN 10
SUPPORT FOUNDATION INFORMATION	

SUPPORT TYPE	DES NO.	FOUNDATION DEPTH	FOUNDATION DIAMETER
12.31	10	17.0′	42″

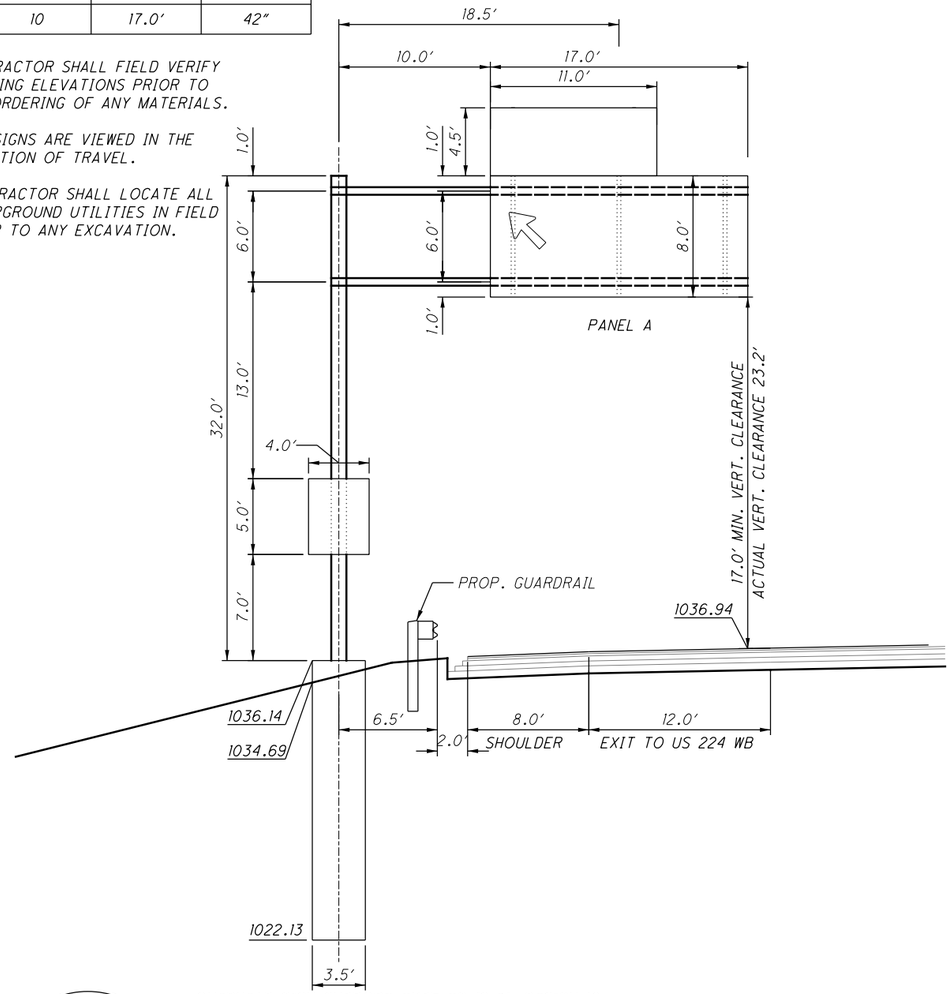
NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



PANEL A
N.T.S.



W13-3-48



OSS-7 — OVERHEAD SIGN SUPPORT TYPE TC-12.31, DESIGN 10
STA. 503+50, I-77 SOUTHBOUND

SEE SHEET 973 FOR PLAN VIEW.

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED DLS
CHECKED AKF

OVERHEAD SIGN SUPPORT DETAILS OSS-2 & OSS-7

SUM-77/277/224
VARIOUS

1008
1288

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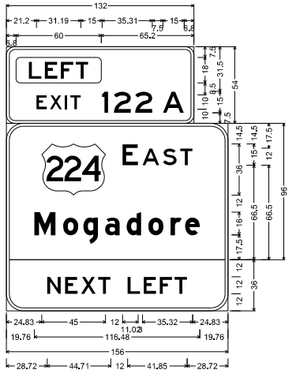
PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	13′ X 8′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	11′ X 4.5′
EXIT PANEL BACKGROUND:	YELLOW
EXIT PANEL FILL COLOR:	BLACK
EXIT PANEL SIZE:	13′ X 3′
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	192.5 SQ. FT.
TOTAL ℄ TO ℄ LENGTH:	22.0 FT.
DESIGN TYPE:	TC-12.31, DESIGN 12

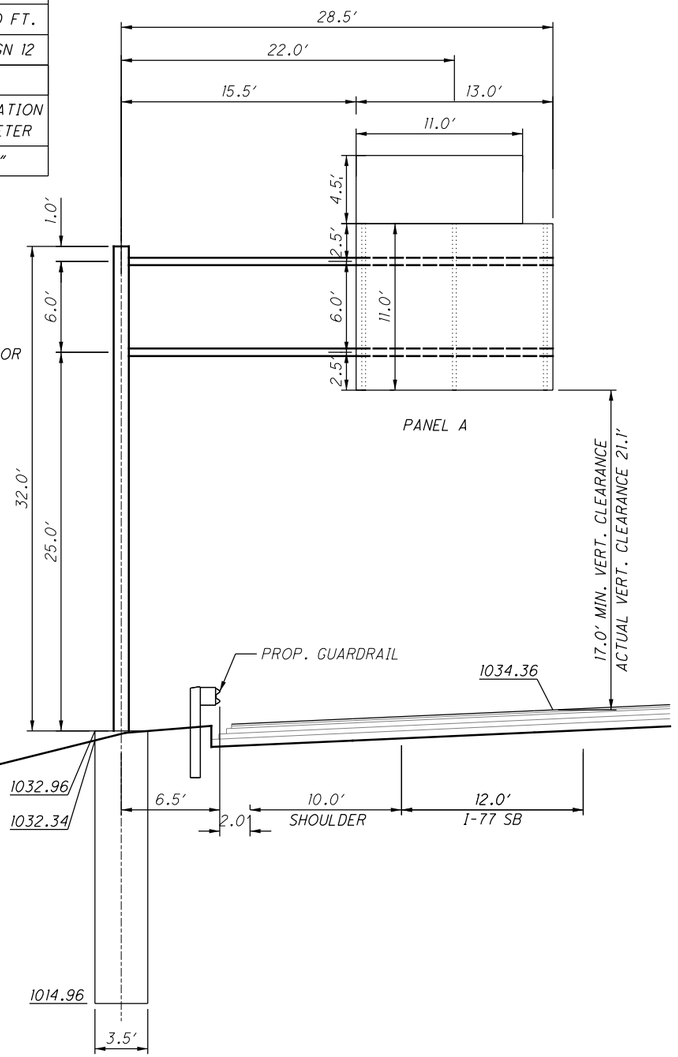
SUPPORT FOUNDATION INFORMATION

SUPPORT TYPE	DES NO.	FOUNDATION DEPTH	FOUNDATION DIAMETER
12.31	12	18.0′	42″

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



PANEL A
N.T.S.



OSS-8 — OVERHEAD SIGN SUPPORT TYPE TC-12.31, DESIGN 12
STA. 509+50 W.B.

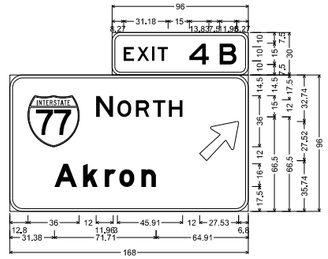
SEE SHEET 973 FOR PLAN VIEW.

PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	E MOD
PANEL SIZE:	14′ X 8′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	8′ X 2.5′
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	132.0 SQ. FT.
TOTAL ℄ TO ℄ LENGTH:	16.5 FT.
DESIGN TYPE:	TC-12.31, DESIGN 6

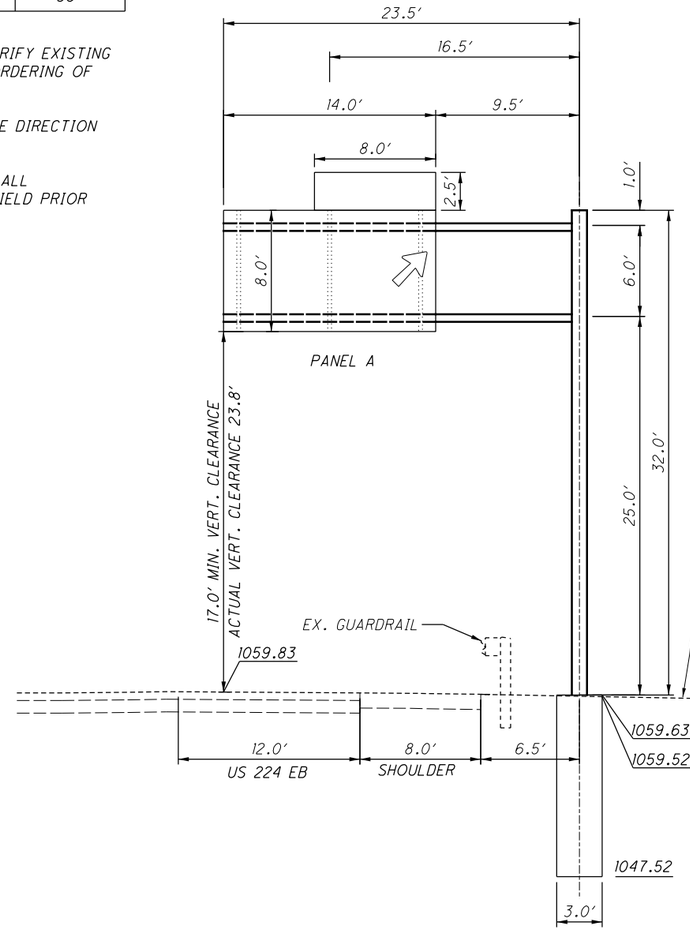
SUPPORT FOUNDATION INFORMATION

SUPPORT TYPE	DES NO.	FOUNDATION DEPTH	FOUNDATION DIAMETER
12.31	6	12.0′	36″

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



PANEL A
N.T.S.



OSS-17 — OVERHEAD SIGN SUPPORT TYPE TC-12.31, DESIGN 6
STA. 251+00, US 224 EASTBOUND

SEE SHEET 982 FOR PLAN VIEW.

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED DLS
CHECKED AKF

OVERHEAD SIGN SUPPORT DETAILS
OSS-8 & OSS-17

SUM-77/277/224
VARIOUS

1009
1288

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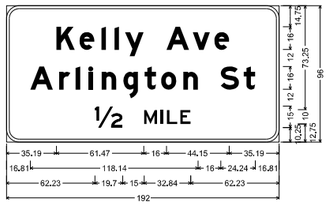
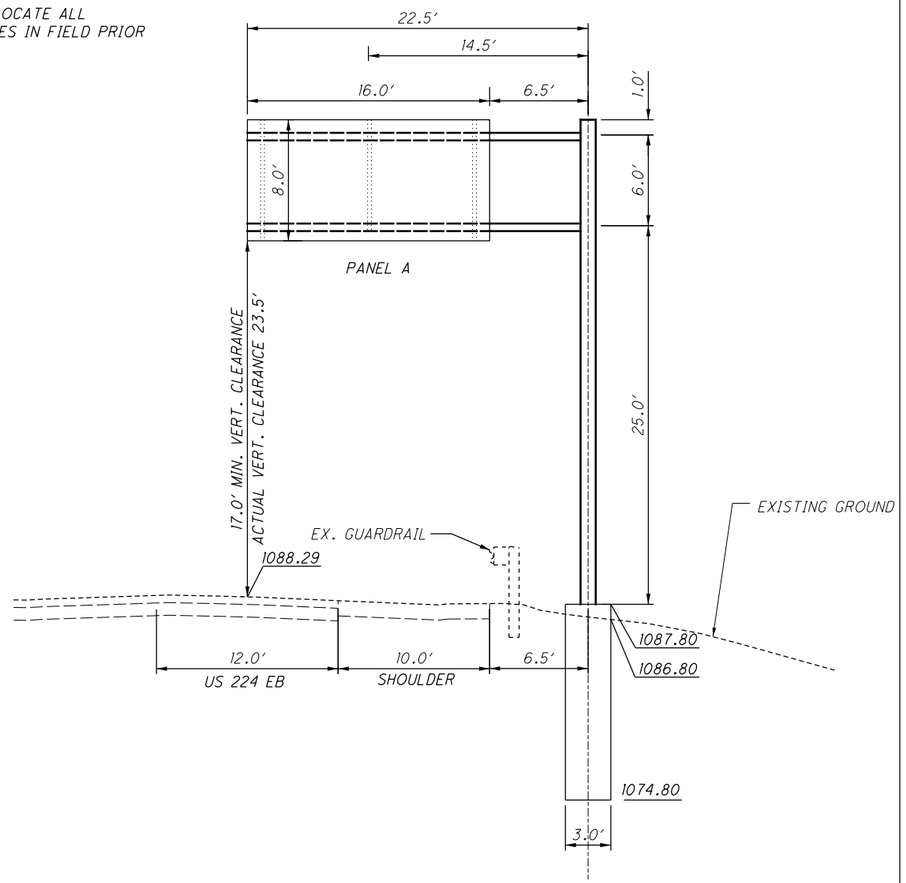
PANEL A	
DESIGN LEVEL:	1
TEXT FONT:	E MOD / E
PANEL SIZE:	16′ X 8′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
NUMBER OF BRACKETS:	3
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	128.0 SQ. FT.
TOTAL ℄ TO ℄ LENGTH:	14.5 FT.
DESIGN TYPE:	TC-12.31, DESIGN 6
SUPPORT FOUNDATION INFORMATION	

SUPPORT TYPE	DES NO.	FOUNDATION DEPTH	FOUNDATION DIAMETER
12.31	6	12.0′	36″

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



PANEL A
N.T.S.



OSS-22 OVERHEAD SIGN SUPPORT TYPE TC-12.31, DESIGN 6
STA. 266+50, US 224 EASTBOUND

SEE SHEET 983 FOR PLAN VIEW.

0 2.5 5 10 HORIZONTAL SCALE IN FEET

CALCULATED DLS
CHECKED AKF

OVERHEAD MOUNTED SIGN SUPPORT DETAILS
OSS-22

SUM-77/277/224
VARIOUS

1010
1288

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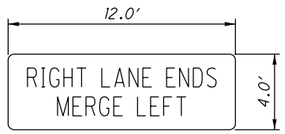
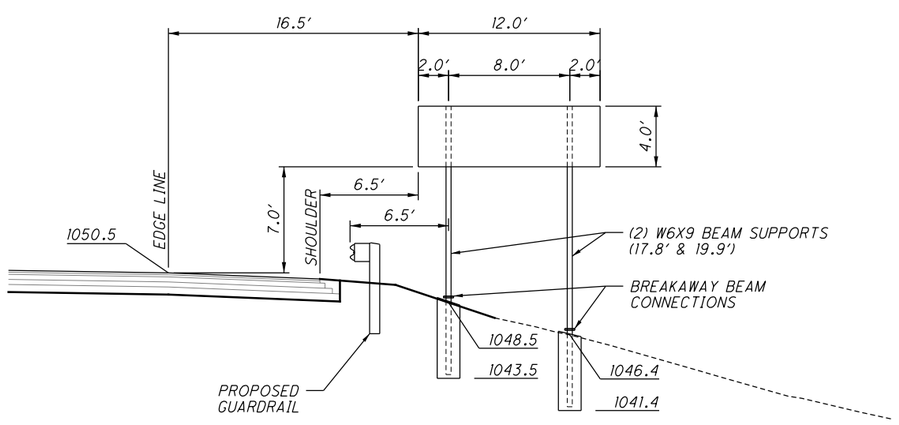
SIGN INFORMATION	
PANEL A	
SIGN DESIGNATION:	W9-H4R-144
PANEL SIZE:	12′ X 4′
BACKGROUND:	YELLOW
FILL COLOR:	BLACK
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	48.0 SQ. FT.
DESIGN TYPE:	W6X9
SIZE:	5-7/8″ X 4″
BEAM FOUNDATION INFORMATION	
DIAMETER:	18″
DEPTH:	5.0′

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



W9-H4R-144
PANEL A
N.T.S.

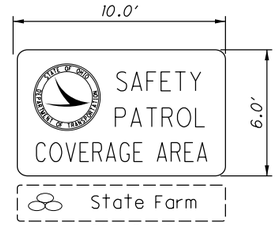


S-15 BEAM SUPPORT TYPE W6X9
STA. 415+20, I-77 NORTHBOUND

SEE SHEET 965 FOR PLAN VIEW.

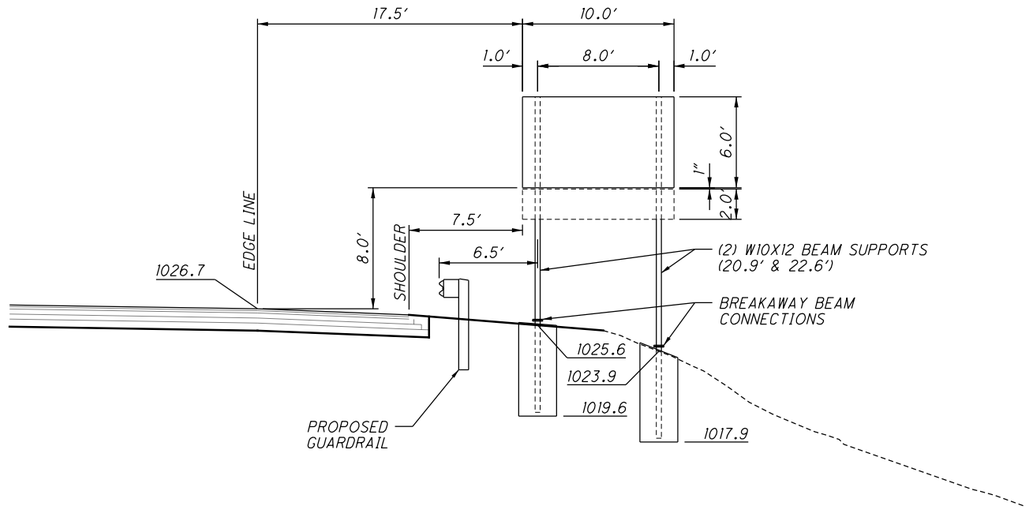
SIGN INFORMATION	
PANEL A	
SIGN DESIGNATION:	D12-H5b-120
PANEL SIZE:	10′ X 6′
BACKGROUND:	YELLOW
FILL COLOR:	BLACK
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	80.0 SQ. FT.
DESIGN TYPE:	W10X12
SIZE:	9-7/8″ X 4″
BEAM FOUNDATION INFORMATION	
DIAMETER:	30″
DEPTH:	6.0′

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



D12-H5b-120
D12-H5bP

PANEL A
N.T.S.



S-31 BEAM SUPPORT TYPE W6X9
STA. 445+50, I-77 NORTHBOUND

SEE SHEET 968 FOR PLAN VIEW.

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED DLS
CHECKED AKF

BEAM MOUNTED SIGN SUPPORT DETAILS S-15 & S-31

SUM-77/277/224
VARIOUS

1011
1288

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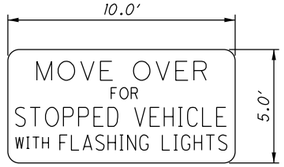
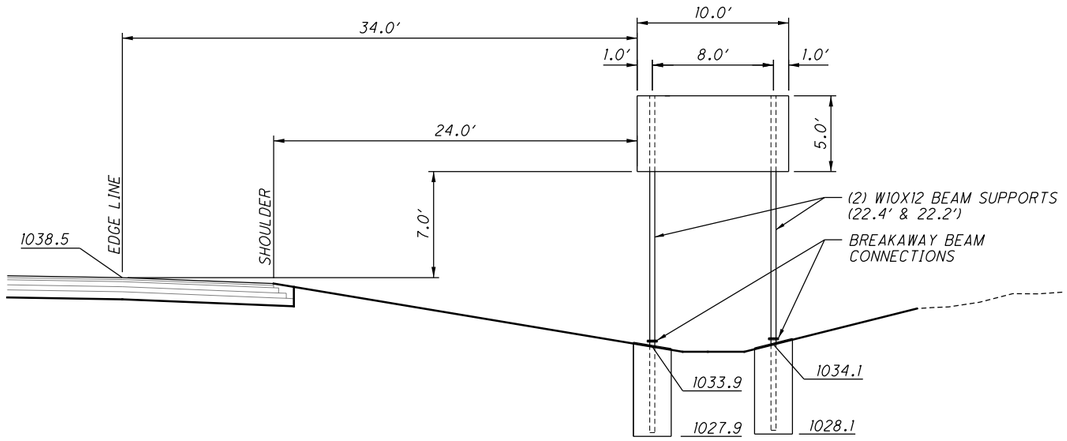
PANEL A	
SIGN DESIGNATION	R25-H1-120
PANEL SIZE:	10′ X 5′
BACKGROUND:	WHITE
FILL COLOR:	BLACK
PROPOSED BEAM INFORMATION	
TOTAL SIGN AREA:	50.0 SQ. FT.
DESIGN TYPE:	W10X12
SIZE:	9-7/8″ X 4″
BEAM FOUNDATION INFORMATION	
DIAMETER:	30″
DEPTH:	6.0′

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



R25-H1-120

PANEL A
N.T.S.

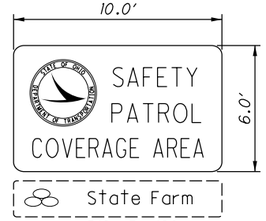


S-35 BEAM SUPPORT TYPE W10X12
STA. 455+89, I-77 SOUTHBOUND

SEE SHEET 969 FOR PLAN VIEW.

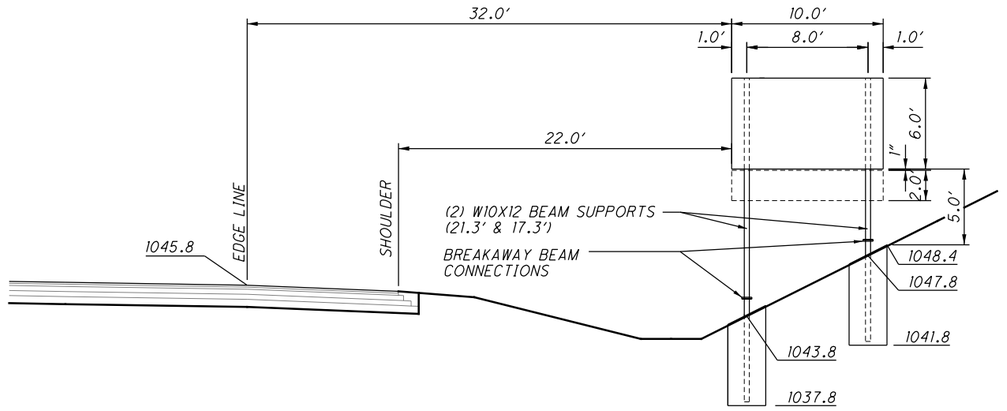
SIGN INFORMATION	
PANEL A	
SIGN DESIGNATION	D12-H5b-120
PANEL SIZE:	10′ X 6′
BACKGROUND:	BLUE
FILL COLOR:	WHITE
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	80.0 SQ. FT.
DESIGN TYPE:	W10X12
SIZE:	9-7/8″ X 4″
BEAM FOUNDATION INFORMATION	
DIAMETER:	30″
DEPTH:	6.0′

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



D12-H5b-120
D12-H5bP

PANEL A
N.T.S.



S-36 BEAM SUPPORT TYPE W10X12
STA. 462+50, I-77 SOUTHBOUND

SEE SHEET 969 FOR PLAN VIEW.

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED DLS
CHECKED AKF

BEAM MOUNTED SIGN SUPPORT DETAILS S-35 & S-36

SUM-77/277/224
VARIOUS

1012
1288

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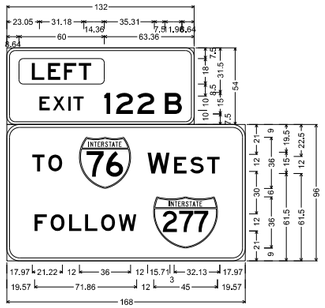
PANEL A	
DESIGN LEVEL:	2
TEXT FONT:	E MOD / E
PANEL SIZE:	14′ X 8′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
EXIT PANEL SIZE:	11′ X 4.5′
EXIT PANEL BACKGROUND:	GREEN
EXIT PANEL FILL COLOR:	WHITE
PROPOSED BEAM INFORMATION	
TOTAL SIGN AREA:	161.5 SQ. FT.
DESIGN TYPE:	W10X22
SIZE:	10-1/8″ X 5-3/4″
BEAM FOUNDATION INFORMATION	
DIAMETER:	30″
DEPTH:	6.75′

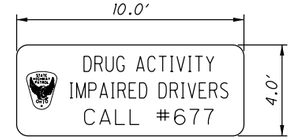
NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



PANEL A
N.T.S.

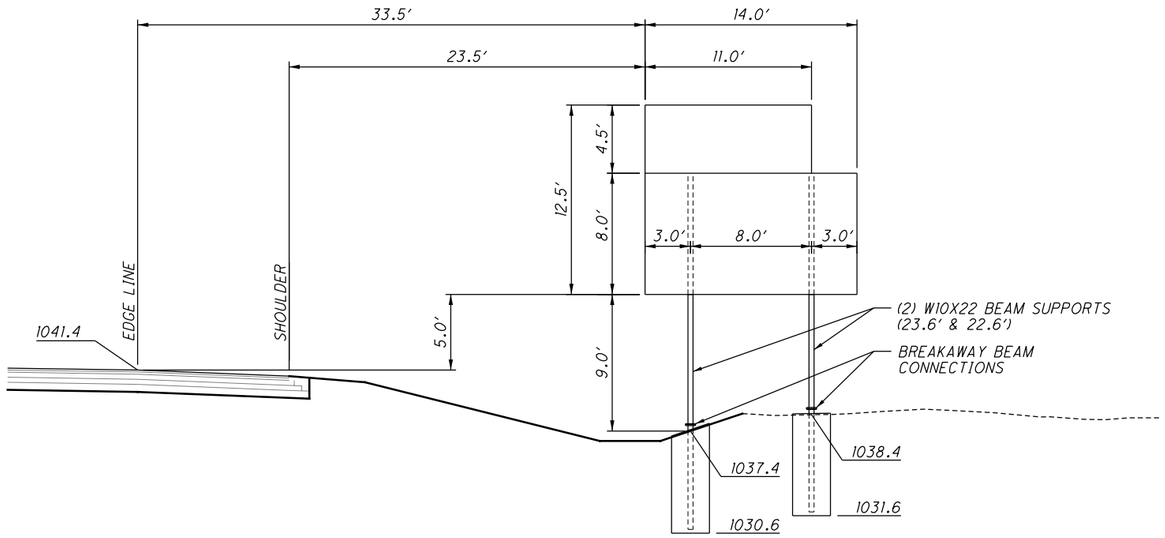
PANEL A	
SIGN DESIGNATION	D12-H22-120
PANEL SIZE:	10′ X 4′
BACKGROUND:	BLUE
FILL COLOR:	WHITE
PROPOSED BEAM INFORMATION	
TOTAL SIGN AREA:	40.0 SQ. FT.
DESIGN TYPE:	W6X9
SIZE:	5-7/8″ X 4″
BEAM FOUNDATION INFORMATION	
DIAMETER:	18″
DEPTH:	5.0′

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



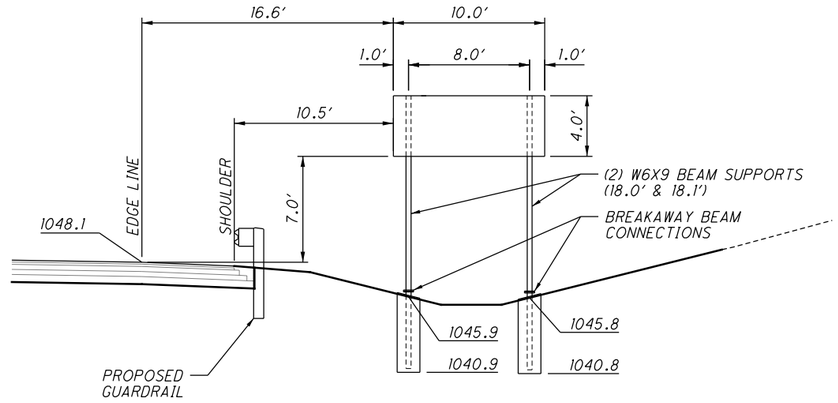
D12-H22-120

PANEL A
N.T.S.



S-38 BEAM SUPPORT TYPE W10X22
STA. 459+50, I-77 NORTHBOUND

SEE SHEET 969 FOR PLAN VIEW.



S-42 BEAM SUPPORT TYPE W6X9
STA. 468+00, I-77 NORTHBOUND

SEE SHEET 970 FOR PLAN VIEW.

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED DLS
CHECKED AKF

BEAM MOUNTED SIGN SUPPORT DETAILS S-38 & S-42

SUM-77/277/224
VARIOUS

1013
1288

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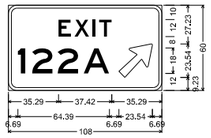
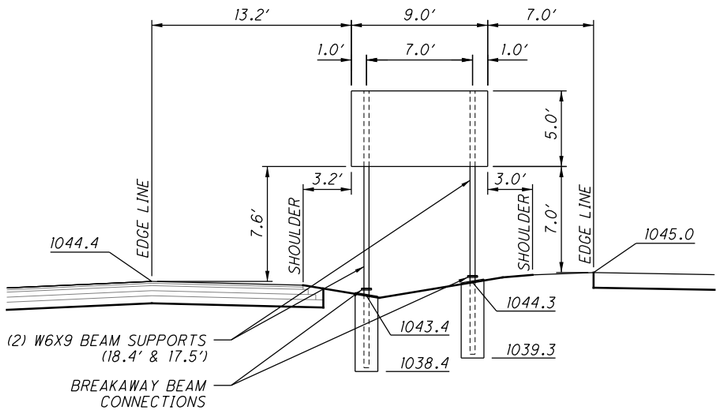
PANEL A	
SIGN DESIGNATION	E5-H1a-108
PANEL SIZE:	9′ X 5′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
PROPOSED BEAM INFORMATION	
TOTAL SIGN AREA:	45.0 SQ. FT.
DESIGN TYPE:	W6X9
SIZE:	5-7/8″ X 4″
BEAM FOUNDATION INFORMATION	
DIAMETER:	18″
DEPTH:	5.0′

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



PANEL A
N.T.S.

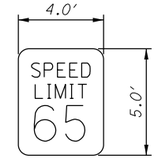


S-47 BEAM SUPPORT TYPE W6X9
STA. 481+75, I-77 NORTHBOUND

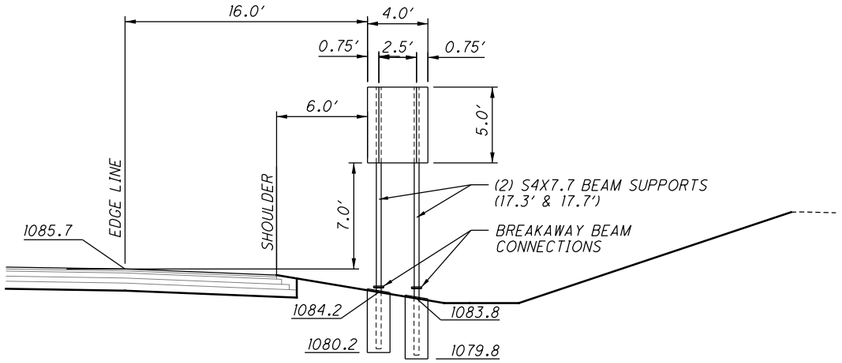
SEE SHEET 971 FOR PLAN VIEW.

PANEL A	
SIGN DESIGNATION:	R2-1-48
PANEL SIZE:	4′ X 5′
BACKGROUND:	WHITE
FILL COLOR:	BLACK
PROPOSED BEAM INFORMATION	
TOTAL SIGN AREA:	20.0 SQ. FT.
DESIGN TYPE:	S4X7.7
SIZE:	4″ X 2-5/8″
BEAM FOUNDATION INFORMATION	
DIAMETER:	18″
DEPTH:	4.0′

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



PANEL A
N.T.S



S-11 BEAM SUPPORT TYPE S4X7.7
STA. 401+00, I-77 NORTHBOUND

SEE SHEET 964 FOR PLAN VIEW.

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED DLS
CHECKED AKF

BEAM MOUNTED SIGN SUPPORT DETAILS S-47 & S-11

SUM-77/277/224
VARIOUS

1014
1288

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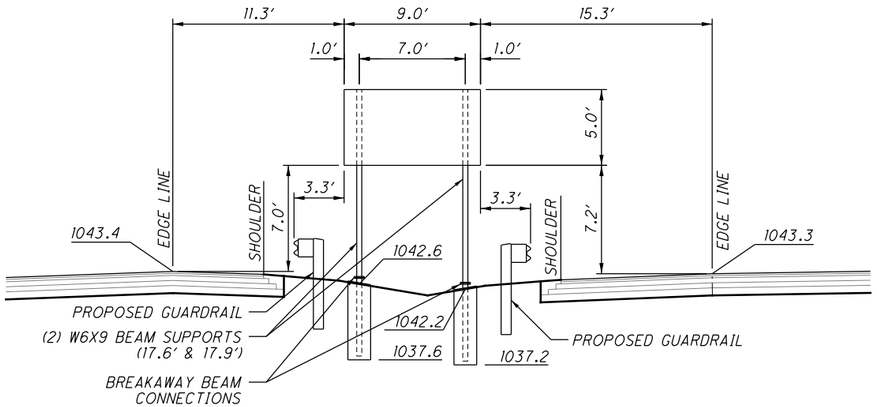
PANEL A	
SIGN DESIGNATION	E5-H1-108
PANEL SIZE:	9′ X 5′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
PROPOSED BEAM INFORMATION	
TOTAL SIGN AREA:	45.0 SQ. FT.
DESIGN TYPE:	W6X9
SIZE:	5-7/8″ X 4″
BEAM FOUNDATION INFORMATION	
DIAMETER:	18″
DEPTH:	5.0′

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.

PANEL A
N.T.S.



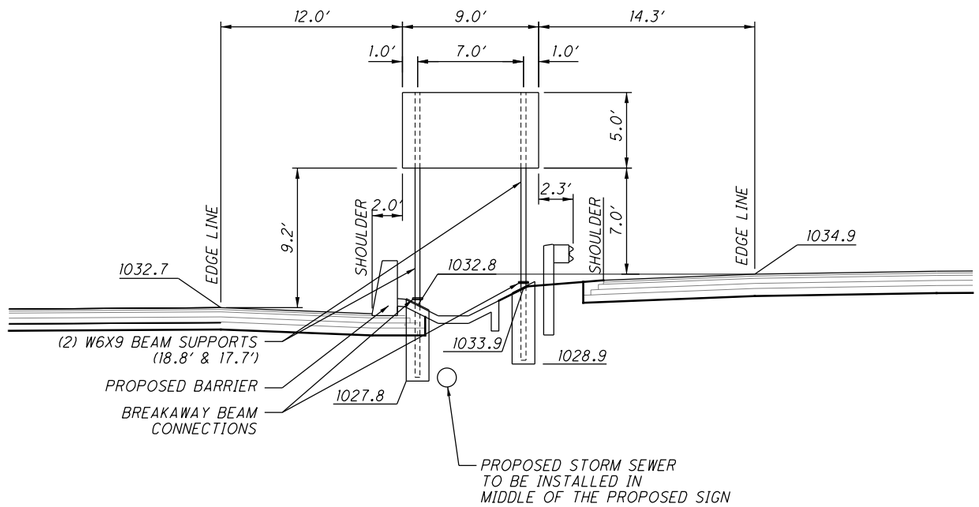
S-57 BEAM SUPPORT TYPE W6X9
STA. 496+25, I-77 SOUTHBOUND

SEE SHEET 972 FOR PLAN VIEW.

PANEL A	
SIGN DESIGNATION	E5-H1-108
PANEL SIZE:	9′ X 5′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
PROPOSED BEAM INFORMATION	
TOTAL SIGN AREA:	45.0 SQ. FT.
DESIGN TYPE:	W6X9
SIZE:	5-7/8″ X 4″
BEAM FOUNDATION INFORMATION	
DIAMETER:	18″
DEPTH:	5.0′

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.

PANEL A
N.T.S.



S-62 BEAM SUPPORT TYPE W6X9
STA. 497+00, I-77 NORTHBOUND

SEE SHEET 972 FOR PLAN VIEW.

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED DLS
CHECKED AKF

BEAM MOUNTED SIGN SUPPORT DETAILS
S-57 & S-62

SUM-77/277/224
VARIOUS

1015
1288

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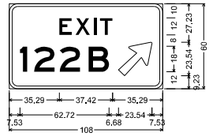
PANEL A	
SIGN DESIGNATION	E5-H1-108
PANEL SIZE:	9' X 5'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
PROPOSED BEAM INFORMATION	
TOTAL SIGN AREA:	45.0 SQ. FT.
DESIGN TYPE:	W6X9
SIZE:	5-7/8" X 4"
BEAM FOUNDATION INFORMATION	
DIAMETER:	18"
DEPTH:	5.0'

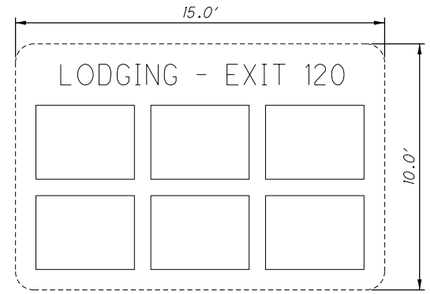
NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



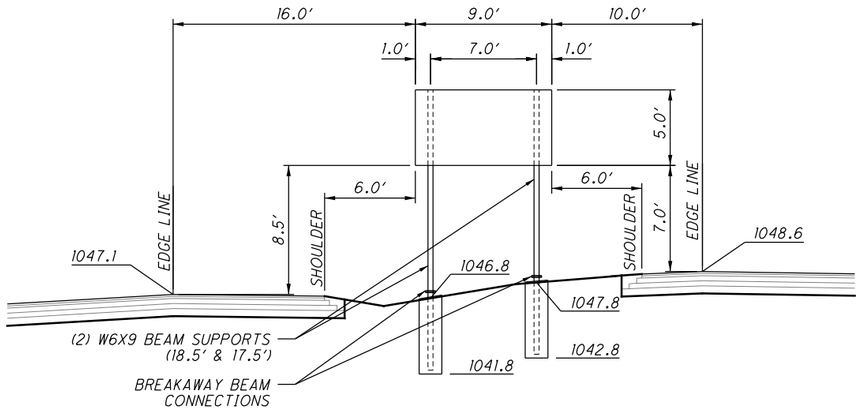
PANEL A
N.T.S.

PROPOSED BEAM INFORMATION	
TOTAL SIGN AREA:	150.0 SQ. FT.
DESIGN TYPE:	W10X22
SIZE:	10-1/8" X 5-3/4"
BEAM FOUNDATION INFORMATION	
DIAMETER:	30"
DEPTH:	6.75'

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.

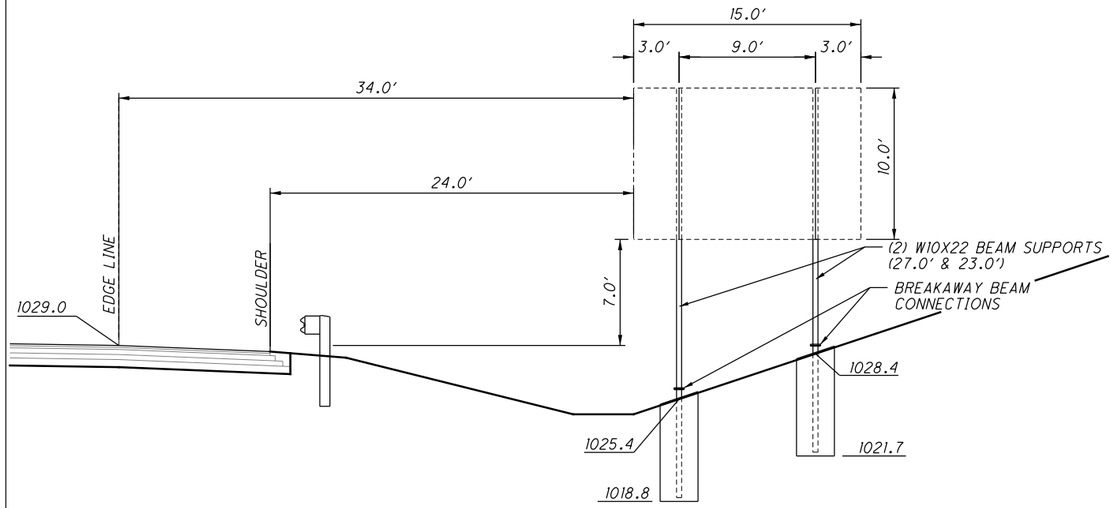


PANEL A
N.T.S.



S-76 BEAM SUPPORT TYPE W6X9
STA. 514+66, I-77 SOUTHBOUND

SEE SHEET 974 FOR PLAN VIEW.



S-30A BEAM SUPPORT TYPE W10X22
STA. 447+00, I-77 SOUTHBOUND

SEE SHEET 968 FOR PLAN VIEW.

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED DLS
CHECKED AKF

BEAM MOUNTED SIGN SUPPORT DETAILS S-76

SUM-77/277/224
VARIOUS

1016
1288

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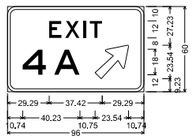
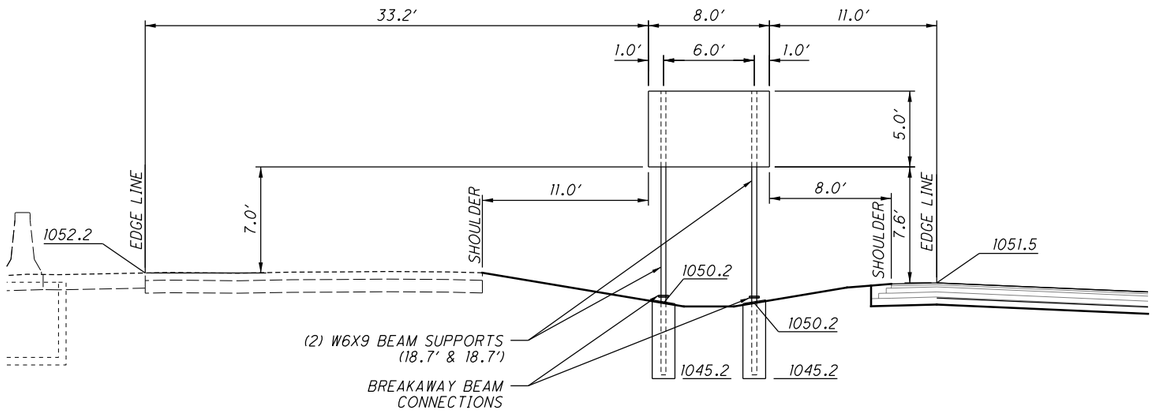
PANEL A	
SIGN DESIGNATION	E5-H1-96
PANEL SIZE:	8′ X 5′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
PROPOSED BEAM INFORMATION	
TOTAL SIGN AREA:	40.0 SQ. FT.
DESIGN TYPE:	W6X9
SIZE:	5-7/8″ X 4″
BEAM FOUNDATION INFORMATION	
DIAMETER:	18″
DEPTH:	5.0′

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



PANEL A
N.T.S.

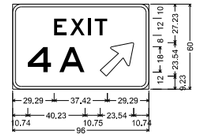


S-102 — BEAM SUPPORT TYPE W6X9
STA. 246+21, US 224 WESTBOUND

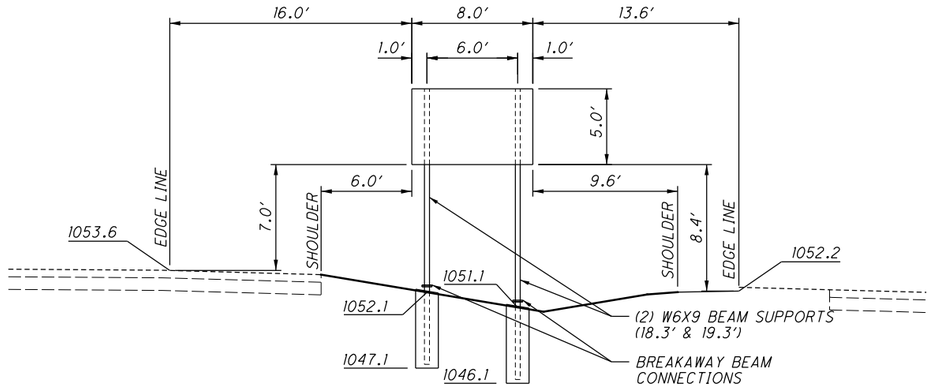
SEE SHEET 981 FOR PLAN VIEW.

PANEL A	
SIGN DESIGNATION	E5-H1-96
PANEL SIZE:	8′ X 5′
BACKGROUND:	GREEN
FILL COLOR:	WHITE
PROPOSED BEAM INFORMATION	
TOTAL SIGN AREA:	40.0 SQ. FT.
DESIGN TYPE:	W6X9
SIZE:	5-7/8″ X 4″
BEAM FOUNDATION INFORMATION	
DIAMETER:	18″
DEPTH:	5.0′

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



PANEL A
N.T.S.



S-104 — BEAM SUPPORT TYPE W6X9
STA. 246+40, US 224 EASTBOUND

SEE SHEET 981 FOR PLAN VIEW.

0 2.5 5 10 HORIZONTAL SCALE IN FEET

CALCULATED DLS | CHECKED AKF

BEAM MOUNTED SIGN SUPPORT DETAILS S-102 & S-104

SUM-77/277/224
VARIOUS

1017
1288

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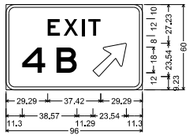
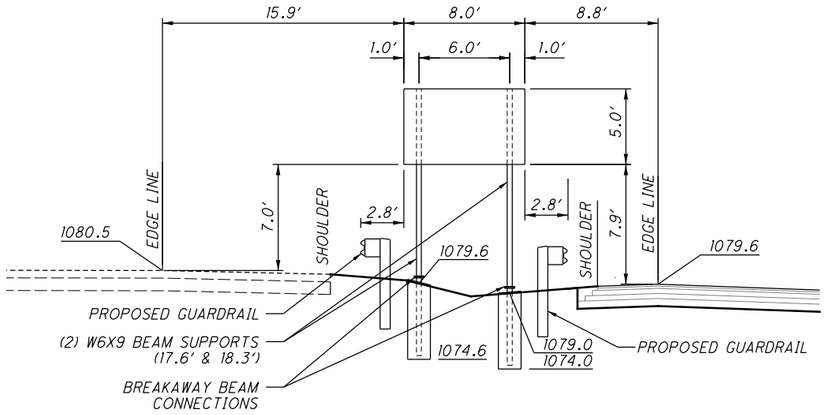
PANEL A	
SIGN DESIGNATION	E5-H1-96
PANEL SIZE:	8' X 5'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
PROPOSED BEAM INFORMATION	
TOTAL SIGN AREA:	40.0 SQ. FT.
DESIGN TYPE:	W6X9
SIZE:	5-7/8" X 4"
BEAM FOUNDATION INFORMATION	
DIAMETER:	18"
DEPTH:	5.0'



PANEL A
N.T.S.

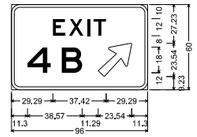
NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



S-110 BEAM SUPPORT TYPE W6X9
STA. 264+00, US 224 WESTBOUND

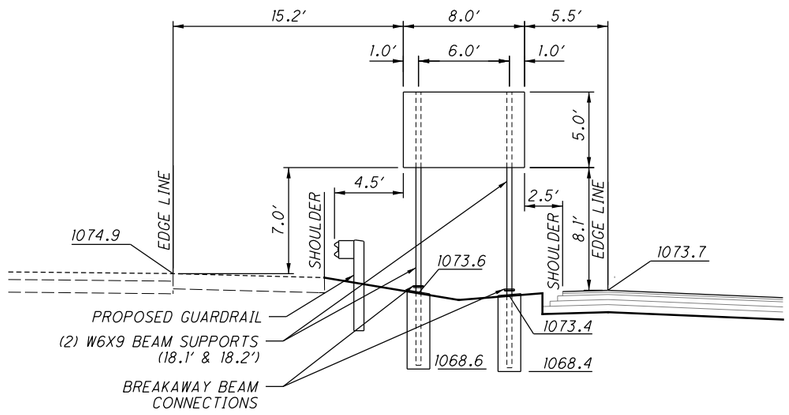
SEE SHEET 983 FOR PLAN VIEW.

PANEL A	
SIGN DESIGNATION	E5-H1-96
PANEL SIZE:	8' X 5'
BACKGROUND:	GREEN
FILL COLOR:	WHITE
PROPOSED BEAM INFORMATION	
TOTAL SIGN AREA:	40.0 SQ. FT.
DESIGN TYPE:	W6X9
SIZE:	5-7/8" X 4"
BEAM FOUNDATION INFORMATION	
DIAMETER:	18"
DEPTH:	5.0'



PANEL A
N.T.S.

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



S-112 BEAM SUPPORT TYPE W6X9
STA. 261+37, US 224 EASTBOUND

SEE SHEET 983 FOR PLAN VIEW.

0 2.5 5 10
HORIZONTAL SCALE IN FEET

CALCULATED DLS
CHECKED AKF

BEAM MOUNTED SIGN SUPPORT DETAILS S-110 & S-112

SUM-77/277/224
VARIOUS

1018
1288

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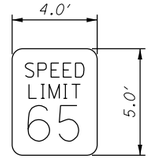
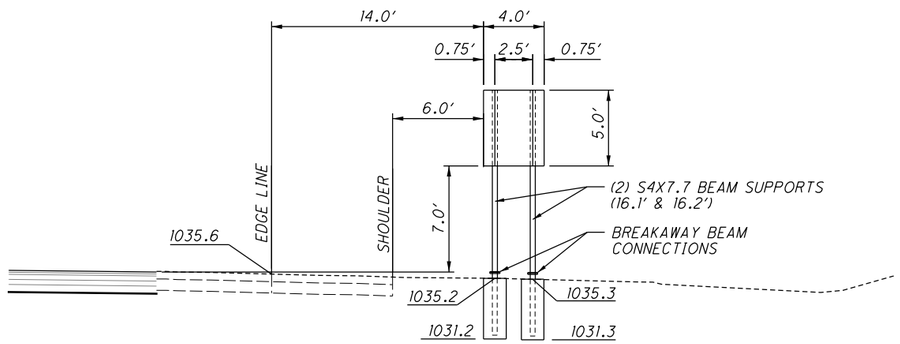
PANEL A	
SIGN DESIGNATION:	R2-1-48
PANEL SIZE:	4' X 5'
BACKGROUND:	WHITE
FILL COLOR:	BLACK
PROPOSED BEAM INFORMATION	
TOTAL SIGN AREA:	20.0 SQ. FT.
DESIGN TYPE:	S4X7.7
SIZE:	4" X 2-5/8"
BEAM FOUNDATION INFORMATION	
DIAMETER:	18"
DEPTH:	4.0'



PANEL A
N.T.S

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



S-58 BEAM SUPPORT TYPE S4X7.7
STA. 498+25, I-77 SOUTHBOUND

SEE SHEET 972 FOR PLAN VIEW.

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED DLS
CHECKED AKF

BEAM MOUNTED SIGN SUPPORT DETAILS
S-58

SUM-77/277/224
VARIOUS

1019
1288

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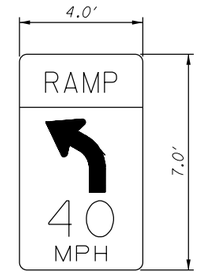
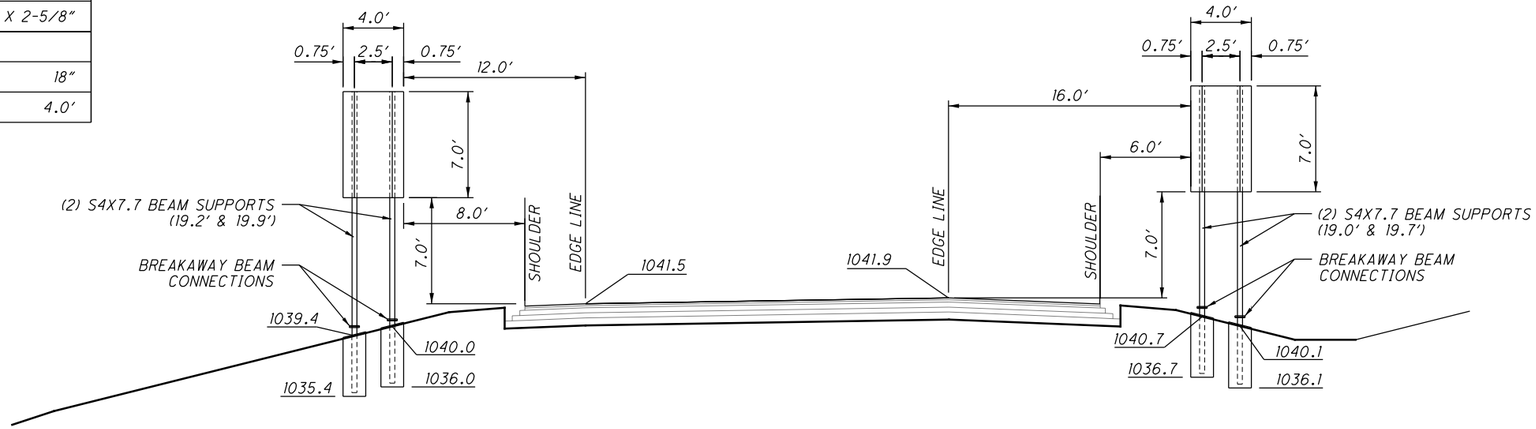
PANEL A	
SIGN DESIGNATION:	W13-7-48
PANEL SIZE:	4' X 8'
BACKGROUND:	YELLOW
FILL COLOR:	BLACK
PROPOSED BEAM INFORMATION	
TOTAL SIGN AREA:	28.0 SQ. FT.
DESIGN TYPE:	S4X7.7
SIZE:	4" X 2-5/8"
BEAM FOUNDATION INFORMATION	
DIAMETER:	18"
DEPTH:	4.0'
PANEL B	
SIGN DESIGNATION:	W13-7-48
PANEL SIZE:	4' X 8'
BACKGROUND:	YELLOW
FILL COLOR:	BLACK
PROPOSED BEAM INFORMATION	
TOTAL SIGN AREA:	28.0 SQ. FT.
DESIGN TYPE:	S4X7.7
SIZE:	4" X 2-5/8"
BEAM FOUNDATION INFORMATION	
DIAMETER:	18"
DEPTH:	4.0'



PANEL A & PANEL B
N.T.S

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS PRIOR TO THE ORDERING OF ANY MATERIALS.
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



S-71 — BEAM SUPPORT TYPE S4X7.7
STA. 304+00, RAMP B-2 WESTBOUND

S-71A — BEAM SUPPORT TYPE S4X7.7
STA. 304+00, RAMP B-2 WESTBOUND

SEE SHEET 973 FOR PLAN VIEW.

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED DLS
CHECKED AKF

BEAM MOUNTED SIGN SUPPORT DETAILS S-71 & S-71A

SUM-77/277/224
VARIOUS

1019A
1288

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ITEM 625 - POWER SERVICE, AS PER PLAN

THE CONTRACTOR SHALL DETERMINE THE EXISTING POWER SOURCE LOCATION. BEFORE REMOVING ANY OF THE EXISTING EQUIPMENT, THE CONTRACTOR SHALL DISCONNECT ALL POWER CABLES. UPON INSTALLING THE NEW AND/OR RELOCATED ITS EQUIPMENT AND CONDUIT WHERE NEEDED, THE POWER CABLE SHALL BE ROUTED TO THE NEW ITS INSTALLATION LOCATION.

THE CONTRACTOR WILL BE RESPONSIBLE FOR REQUESTING AND SCHEDULING ANY INSPECTIONS OHIO EDISON MAY REQUIRE FOR THE POWER SERVICE HOOK UP. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT OHIO EDISON FOR THE ELECTRICAL SERVICE CONNECTION. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR SPLICE THE POWER CABLE INTO OHIO EDISIONS 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 UNIL THE ITS EQUIPMENT IS APPROVED BY ODOT.

PAYMENT FOR ITEM 625 - POWER SERVICE, AS PER PLAN SHALL BE MADE AT THE CONTRACT UNIT PRICE PER EACH AND SHALL INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO PROVIDE POWER TO THE PROPOSED ITS CABINET.

TRACER WIRE

TRACER WIRE SHALL BE INSTALLED IN ONE OF THE MULTICELL INNERDUCTS IN ALL CONDUIT RUNS. TRACER WIRE SHALL BE NO SMALLER THAN #12 AWG WIRE. THE WIRE SHALL BE HDPE INSULATED, ORANGE IN COLOR, AND CONSTRUCTED OF COPPER CLAD STEEL. APPROXIMATELY 20 FEET OF SLACK OF THE TRACER WIRE SHALL BE LEFT INSIDE THE ADJACENT PULL BOXES CONNECTING THE CONDUIT RUNS.

PAYMENT FOR ALL TRACER WIRE SHALL BE INCLUDED IN THE BID ITEM FOR ITEM 625 - CONDUIT, MULTICELL, 4", 725.20 (BY SCHEDULE).

ITEM 625 - MEDIAN JUNCTION BOX, AS PER PLAN

THE CONTRACTOR SHALL SUPPLY THE MEDIAN PULL BOX THAT MEETS 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 WITH THE COVER ON THE WEST SIDE OF I.R. 77 USING DOWELS. (NON-SHRINK GROUT MAY BE USED WHEN NECESSARY). SEE DETAIL ON SHEET 1035.

ITEM 625 - CONDUIT, JACKED OR DRILLED, AS PER PLAN

THE CONTRACTOR SHALL JACK OR DRILL THE 4", MULTICELL, 725.20 CONDUIT AT THE PROPOSED LOCATIONS SPECIFIED IN THE DETAILED ITS PLANS IN ACCORDANCE WITH C&MS 625.14.

THE CONTRACTOR SHALL NOT FURNISH THE CONDUIT ASSOCIATED WITH ITEM 625 - CONDUIT, JACKED OR DRILLED, AS PER PLAN, AS THE CONDUIT WILL BE PAID FOR AS PART OF THE ITEM 625 - CONDUIT, MULTICELL, 4", 725.20, HDPE PAY ITEM.

PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO INSTALL THE 4" MULTICELL CONDUIT UNDER THE ROADWAY.

ITEM 809 - ITS DEVICE, MISC.: REMOVAL OF EXISTING ITS INSTALLATION

THE EXISTING CCTV CAMERA INSTALLATION, INCLUDING POLE, CAMERA, LOWERING UNIT, CABINET, ETC. SHALL BE REMOVED IN ITS ENTIRETY AS INDICATED ON THE PLANS. REMOVED ITEMS SHALL BE REUSED AS PART OF A NEW INSTALLATION ON THE PROJECT OR STORED ON THE PROJECT FOR SALVAGE BY ODOT. THE CONTRACTOR SHALL CONTACT THE CENTRAL OFFICE ITS DIVISION AT (614) 387-4113 TO ARRANGE A MUTUALLY AGREEABLE TIME TO DELIVER THE EQUIPMENT TO A LOCATION AS DIRECTED BY THE ITS DIVISION.

ITEMS TO BE REUSED:

CCTV IP-CAMERA, DOME TYPE
CCTV LOWERING UNIT
DIGITAL MESSAGE SIGN

ITEMS TO BE STORED:

ITS CABINET

ALL OTHER ITEMS SHALL BE DISPOSED OF BY THE CONTRACTOR.

IN THE EVENT THE ITEMS STORED ON THE PROJECT FOR DELIVERY TO ODOT ARE NOT ACCEPTED, THE CONTRACTOR SHALL, WHEN DIRECTED BY THE ENGINEER IN WRITING, REMOVE AND DISPOSE OF THE ITEMS AT NO ADDITIONAL COST TO THE PROJECT.

ITEM 809 - ITS DEVICE, MISC.: REUSE OF EXISTING ITS EQUIPMENT

WHILE REMOVING THE EXISTING ITS EQUIPMENT INSTALLATION, THE CONTRACTOR SHALL TAKE GREAT CARE AS TO NOT DAMAGE THE EXISTING ITS EQUIPMENT AS IT IS THE INTENT OF THE PROJECT TO REUSE THE ITS EQUIPEMENT. THE CONTRACTOR SHALL DOCUMENT, IN WRITING, ANY MALFUNCTIONING EQUIPMENT, PRIOR TO EQUIPMENT REMOVAL.

IF THE ENGINEER HAS DETERMINED THE ITS EQUIPMENT HAS BEEN DAMAGED, THE CONTRACTOR SHALL REPLACE THE EQUIPMENT IN LIKE KIND AS APPROVED BY THE ENGINEER, AT THE CONTRACTOR'S COST.

PAYMENT FOR ITEM 809 - ITS DEVICE, MISC.: REUSE OF EXISTING ITS EQUIPMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE PER EACH AND SHALL INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO RELOCATE THE ITS EQUIPMENT AND MAKE THE SYSTEM FULLY FUNCTIONAL.

COORDINATION BETWEEN CONTRACTORS

THE CONTRACTOR SHALL BE ADVISED THAT PROJECT D04 ITS MAINT FY2021 (PID 113833) MAY BE ONGOING DURING THE CONSTRUCTION OF THIS PROJECT. PID 113833 PROPOSES NEW CAMERAS AND LOWERING UNITS TO BE INSTALLED WITHIN THE PROJECT AREA. THE CONTRACTOR SHALL COORDINATE WITH THE PID 113833 CONTRACTOR TO EITHER OBTAIN THE NEW CAMERA AND LOWERING DEVICES TO BE INSTALLED WITH THIS PROJECT OR SCHEDULE A TIME FOR THE CONTRACTOR OF PID 113833 TO INSTALL THE NEW CAMERA AND LOWERING DEVICE ON THE RELOCATED CCTV POLE.

COMPENSATION FOR THE ABOVE COORDINATION SHALL BE INCIDENTAL TO THE VARIOUS PAY ITEMS INCLUDED WITHIN THIS PROJECT.

CCTV INSTALLATIONS

THE CONTRACTOR SHALL INSTALL THIS ITEM ACCORDING TO ODOT SUPPLEMENTAL SPECIFICATION 809, AS WELL AS ANY STANDARD CONSTRUCTION DRAWINGS NOTED IN THE PLANS.

ITEM 625 - CONDUIT, MULTICELL, 4", 725.20, HDPE

DESCRIPTION
THIS CONDUIT IS INTENDED FOR THE 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 ROAD SIDE CABINETS AND FOR RUNS OF CONDUIT FOR MULTIPLE PURPOSES, E.G., AT RAMP METER INSTALLATIONS, FOR 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 (4) INNERDUCTS ASSEMBLED WITHIN A PROTECTIVE OUTER DUCT, HIGH DENSITY POLYETHYLENE 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 INCHES.

THE HDPE CONDUIT SHALL BE COILABLE ON REELS.

WHERE INNERDUCT(S) WITHIN A MULTI-CELL DUCT ARE TO REMAIN EMPTY, ONE 1/4" 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.

INSTALLATION
INSTALLATION WILL BE IN 30" DEEP TRENCH, DRILLED OR PLOWED TO A MINIMUM OF 30" DEEP, BORED UNDER ROADWAYS, ENCASED INSIDE CONCRETE BARRIER WALL, OR AS NOTED ON THE PLANS.

THE HDPE CONDUIT SHALL BE INSTALLED IN CONTINOUS LENGTHS WITHOUT JOINTS/COUPLINGS BETWEEN PULL BOXES OR JUNCTION BOXES.

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, AND CONCRETE ENCASEMENT WHERE SPECIFIED.

BASIS OF PAYMENT
THE PAYMENT FOR THESE ITEMS WILL BE MADE FOR THE ACCEPTED LINER FOOT QUANTITIES AT THE CONTRACT BID PRICE.

ITEM 625 - PULL BOX, 725.08, 32" AS PER PLAN

PULL BOXES SHALL BE FURNISHED AND INSTALLED AS PER STANDARD CONSTRUCTION DRAWING ITS-14.11

ITEM 633 - CONTROLLER WORK PAD, AS PER PLAN

IN ADDITION TO C&MS 633.11, THE CONTRACTOR SHALL CONSTRUCT THE CONCRETE WORK PAD SUCH THAT THE SURFACE OF THE WORK PAD IS LARGE ENOUGH TO PLACE A LADDER SO THAT ACCESS TO THE CATWALK CAN BE ACHIEVED.

PAYMENT SHALL BE AT THE CONTRACT BID PRICE AND SHALL INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT TO INSTALL THE PROPOSED CONCRETE WORK PAD.

AT&T COORDINATION

THE CONTRACTOR SHALL COORDINATE WITH AT&T AND ODOT ITS TO REMOVE THE EXISTING AT&T EQUIPMENT. THE CONTRACTOR SHALL CONTACT BRYAN COMER AT (614) 387-1253 A MINIMUM OF 60 DAYS IN ADVANCE OF THE START OF WORK. ODOT WILL BE RESPONSIBLE FOR PLACING THE NECESSARY DISCONNECT ORDER TO AT&T.

ITEM 630 - OVERHEAD SIGN SUPPORT, DMS TRUSS, 80', AS PER PLAN

THE CONTRACTOR SHALL INSTALL THIS ITEM ACCORDING TO ODOT SUPPLEMENTAL SPECIFICATION 809, AS WELL AS ANY STANDARD CONSTRUCTION DRAWINGS NOTED ON THE PLANS.

THE DMS TRUSS TO BE ERECTED FOR THIS PROJECT SHALL BE OBTAINED FROM ODOT DISTRICT 4. THE CONTRACTOR SHALL CONTACT MICHELLE CHANEY AT (330) 786-2267 TO COORDINATE A TIME AND PLACE TO PICK-UP THE REQUIRED MATERIALS FROM ODOT DISTRICT 4 MAIN GARAGE, 2088 S. ARLINGTON ST. AKRON, OHIO 33406.

PAYMENT FOR ITEM 630 - OVERHEAD SIGN SUPPORT, DMS TRUSS, 80', AS PER PLAN SHALL BE MADE AT THE CONTRACT BID PRICE. PAYMENT SHALL INCLUDE ALL COORDINATION, MOVEMENT, LABOR, MATERIALS AND THE INSTALLATION OF THE PROPOSED DMS TRUSS COMPLETE AND IN PLACE.

ITS DOWN TIME

THE CONTRACTOR SHALL CONSTRUCT THE DMS TRUSS SUPPORT AND RELOCATE THE EXISTING ITS DEVICES AT THE BEGINNING OF THE PHASE 2 CONSTRUCTION PHASE TO LIMIT THE AMOUNT OF ITS DOWN TIME.

WHILE THE ITS EQUIPMENT IS OUT OF SERVICE, THE CONTRACTOR SHALL UTILIZE A PORTABLE CHANGEABLE MESSAGE SIGN TO DISPLAY THE INFORMATION RELAYED ON THE EXISTING DMS SIGN. THE CONTRACTOR SHALL COORDINATE WITH CENTRAL OFFICE (BRYAN COMER AT (614) 378-1253) TO OBTAIN A MODEM TO USE WITH THE PORTABLE CHANGEABLE MESSAGE SIGN. THE WORK ASSOCIATED WITH INSTALLING AND FURNISHING THE PORTABLE CHANGEABLE MESSAGE SIGN SHALL BE PAID FOR UNDER ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN.

THE DISINCENTIVES ASSOCIATED WITH SUPPLEMENTAL SPECIFICATION 809.14 SHALL NOT BE ENFORCED DUE TO THE LENGTH OF TIME THE DMS WILL BE OUT OF SERVICE.

CALCULATED BEB
CHECKED KMG

ITS NOTES

SUM-77 / 277 / 224
VARIOUS

1020
1288

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SHEET NUMBER						PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
1022		1026				01/IMS/PV	02/IMS/PV						
260						234	26	625	25600	260	FT	CONDUIT, 4", 725.04	
14,339						12,905	1,434	625	25740	14,339	FT	CONDUIT, MULTICELL, 4", 725.20, HDPE	1020
886						797	89	625	25901	886	FT	CONDUIT, JACKED OR DRILLED, AS PER PLAN, 4"	1020
3,128						2,815	313	625	29000	3,128	FT	TRENCH	
16						14	2	625	29931	16	EACH	MEDIAN JUNCTION BOX, AS PER PLAN	1020
2						2		625	30700	2	EACH	PULL BOX, 725.08, 18"	
18						16	2	625	30711	18	EACH	PULL BOX, 725.08, 32", AS PER PLAN	1020
8						7	1	625	32000	8	EACH	GROUND ROD	
1						1		625	34001	1	EACH	POWER SERVICE, AS PER PLAN	1020
3,128						2,815	313	625	36010	3,128	FT	UNDERGROUND WARNING/MARKING TAPE	
1						1		630	70001	1	EACH	OVERHEAD SIGN SUPPORT, DMS TRUSS, 80', AS PER PLAN	1020
1						1		630	70070	1	EACH	CONCRETE BARRIER MEDIAN OVERHEAD SIGN SUPPORT FOUNDATION, DMS TRUSS	
1						1		630	70080	1	EACH	OVERHEAD SIGN SUPPORT FOUNDATION, DMS TRUSS	
4						3	1	630	75000	4	EACH	SIGN ATTACHMENT ASSEMBLY	
1						1		630	89702	1	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL	
596		100				626	70	632	67400	696	FT	POWER CABLE, 4 CONDUCTOR, NO. 8 AWG	
1						1		633	67100	1	EACH	CABINET FOUNDATION	
1						1		633	67200	1	EACH	CONTROLLER WORK PAD	
1						1		633	67201	1	EACH	CONTROLLER WORK PAD, AS PER PLAN	1020
1						1		809	61002	1	EACH	CCTV CONCRETE POLE, 70 FEET	
438						394	44	809	64550	438	FT	ETHERNET CABLE, OUTDOOR-RATED	
1						1		809	65040	1	EACH	ITS CABINET - DMS	
1						1		809	65990	1	EACH	ITS DEVICE, MISC.: REMOVAL OF EXISTING ITS INSTALLATION	1020
1						1		809	65990	1	EACH	ITS DEVICE, MISC.: REUSE OF EXISTING ITS EQUIPMENT	1020

CALCULATED BEB
CHECKED KMG

ITS GENERAL SUMMARY

SUM-77 / 277 / 224
VARIOUS

1021
1288

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SHEET	LOCATION	625 CONDUIT, 4", 725.04 FT	625 CONDUIT, MULTICELL, 4", 725.20, HDPE FT	625 CONDUIT, JACKED OR DRILLED, AS PER PLAN, 4" 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 POWER SERVICE, AS PER PLAN EACH	625 UNDERGROUND WARNING/MARKING TAPE FT	630 OVERHEAD SIGN SUPPORT, DMS TRUSS, 80', AS PER PLAN EACH	630 CONCRETE BARRIER MEDIAN OVERHEAD SIGN SUPPORT FOUNDATION, DMS TRUSS EACH	630 OVERHEAD SIGN SUPPORT FOUNDATION, DMS TRUSS EACH	630 SIGN ATTACHMENT ASSEMBLY EACH	630 REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL EACH	632 POWER CABLE, 4 CONDUCTOR, NO. 8 AWG FT	633 CABINET FOUNDATION EACH	633 CONTROLLER WORK PAD EACH	633 CONTROLLER WORK PAD, AS PER PLAN EACH	809 CCTV CONCRETE POLE, 70 FEET EACH	809 ETHERNET CABLE, OUTDOOR-RATED FT	809 ITS CABINET - DMS EACH	809 ITS DEVICE, MISC.: REMOVAL OF EXISTING ITS INSTALLATION EACH
1023	BEGIN TO STA. 384+00		1331	80		3		1																	
1024	STA. 384+00 TO STA. 398+00		1564	163		1		2																	
1025	STA. 398+00 TO STA. 412+00		1401			1																			
1026	STA. 412+00 TO STA. 426+00		1561	159		3		1									112								
1027	DETAIL 'A'	260	199		283		2	2	8	1	283	1	1	1	4	1	484	1	1	1	1	438	1	1	
1028	STA. 426+00 TO STA. 438+00		1202			3																			
1029	STA. 438+00 TO STA. 452+00		1401			2																			
1030	STA. 452+00 TO STA. 462+00		1167	168		1		2																	
1031	STA. 462+00 TO STA. 472+00		1169	168		1		2																	
1032	STA. 472+00 TO STA. 482+00		1009		658	1		2			658														
1033	STA. 482+00 TO STA. 492+00		991		991			2			991														
1034	STA. 492+00 TO END		1344	148	1196			4			1196														
	TOTALS CARRIED TO ITS GENERAL SUMMARY	260	14339	886	3128	16	2	18	8	1	3128	1	1	1	4	1	596	1	1	1	1	438	1	1

SHEET	LOCATION	809 ITS DEVICE, MISC.: REUSE OF EXISTING ITS EQUIPMENT EACH
1023	BEGIN TO STA. 384+00	
1024	STA. 384+00 TO STA. 398+00	
1025	STA. 398+00 TO STA. 412+00	
1026	STA. 412+00 TO STA. 426+00	
1027	DETAIL 'A'	1
1028	STA. 426+00 TO STA. 438+00	
1029	STA. 438+00 TO STA. 452+00	
1030	STA. 452+00 TO STA. 462+00	
1031	STA. 462+00 TO STA. 472+00	
1032	STA. 472+00 TO STA. 482+00	
1033	STA. 482+00 TO STA. 492+00	
1034	STA. 492+00 TO END	
	TOTALS CARRIED TO ITS GENERAL SUMMARY	1

CALCULATED BEB
CHECKED KMG

ITS SUBSUMMARY

SUM-77 / 277 / 224
VARIOUS

1022
1288

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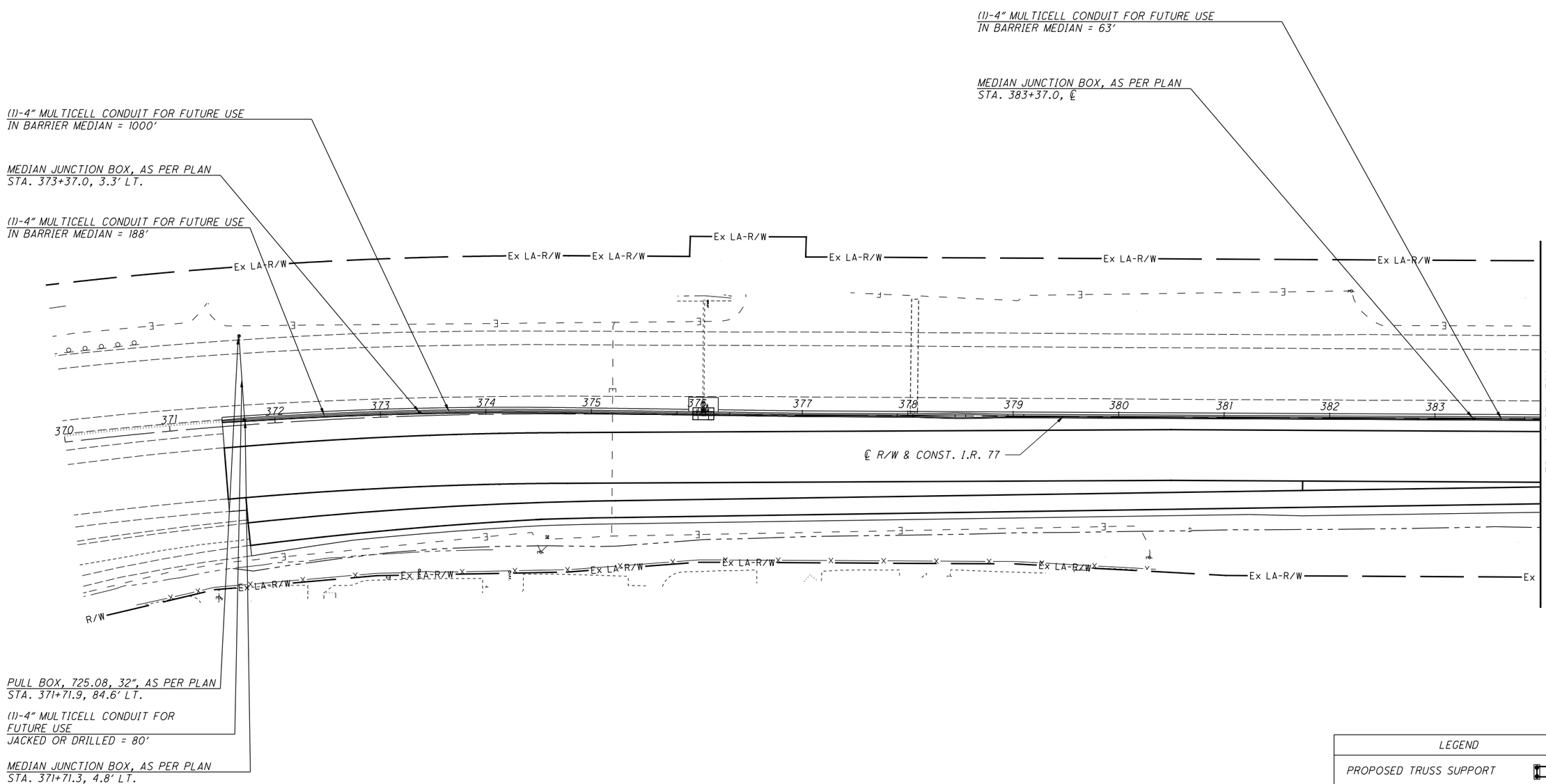

NOTE:

1. ALL ITS MEDIAN JUNCTION BOX COVERS SHALL BE LOCATED ON THE WEST SIDE OF THE I.R. 77 MAINLINE MEDIAN BARRIER UNLESS OTHERWISE NOTED.

LEGEND	
PROPOSED TRUSS SUPPORT	
EXISTING CCTV POLE	
PROPOSED CCTV POLE	
EXISTING CCTV CAMERA	
PROPOSED MEDIAN JUNCTION BOX	TR
EXISTING 32" PULL BOX	TR
PROPOSED 32" PULL BOX	TR
EXISTING ELECTRICAL PULL BOX	E
PROPOSED ELECTRICAL PULL BOX	E
PROPOSED ITS CONDUIT	

N

0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED BEB
CHECKED KMG

ITS PLAN
BEGIN TO STA. 384+00

SUM-77 / 277 / 224
VARIOUS

1023
1288

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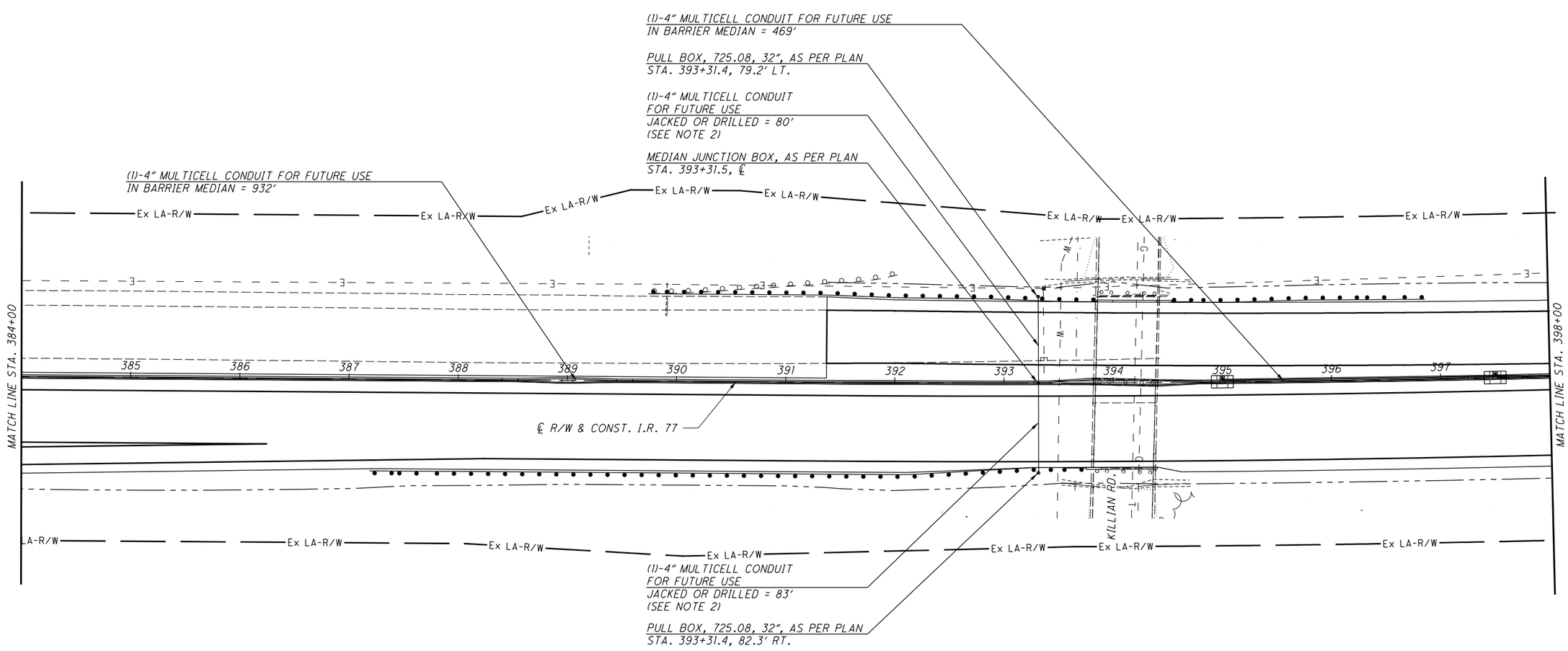

NOTE:

1. ALL ITS MEDIAN JUNCTION BOX COVERS SHALL BE LOCATED ON THE WEST SIDE OF THE I.R. 77 MAINLINE MEDIAN BARRIER UNLESS OTHERWISE NOTED.

2. CONDUIT WITHIN 6' OF THE PROPOSED GUARDRAIL SHALL BE ENCASED IN CONCRETE. PAYMENT FOR THE CONCRETE ENCASEMENT SHALL BE CONSIDERED INCIDENTAL TO ITEM 625 - CONDUIT, JACKED OR DRILLED, AS PER PLAN.

FOR ITS LEGEND, SEE SHEET 1023.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED BEB
CHECKED KMG

ITS PLAN
STA. 384+00 TO STA. 398+00

SUM-77 / 277 / 224
VARIOUS

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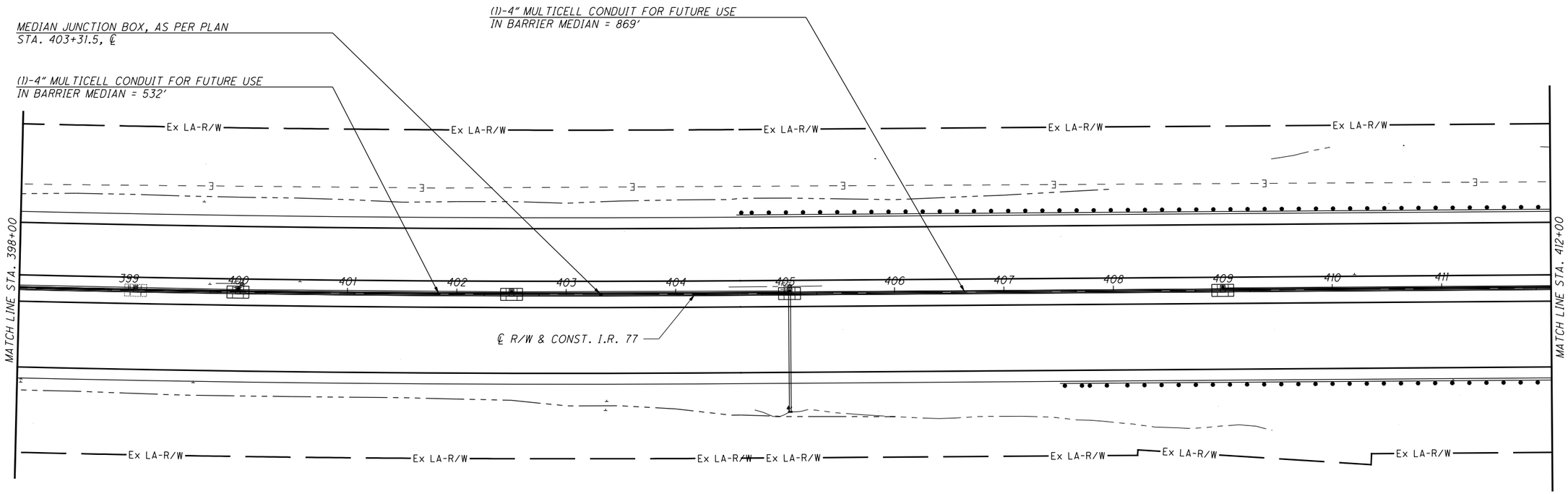

NOTE:

1. ALL ITS MEDIAN JUNCTION BOX COVERS SHALL BE LOCATED ON THE WEST SIDE OF THE I.R. 77 MAINLINE MEDIAN BARRIER UNLESS OTHERWISE NOTED.

FOR ITS LEGEND, SEE SHEET 1023.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED BEB
CHECKED KMG

ITS PLAN
STA. 398+00 TO STA. 412+00

SUM-77 / 277 / 224
VARIOUS

1025
1288

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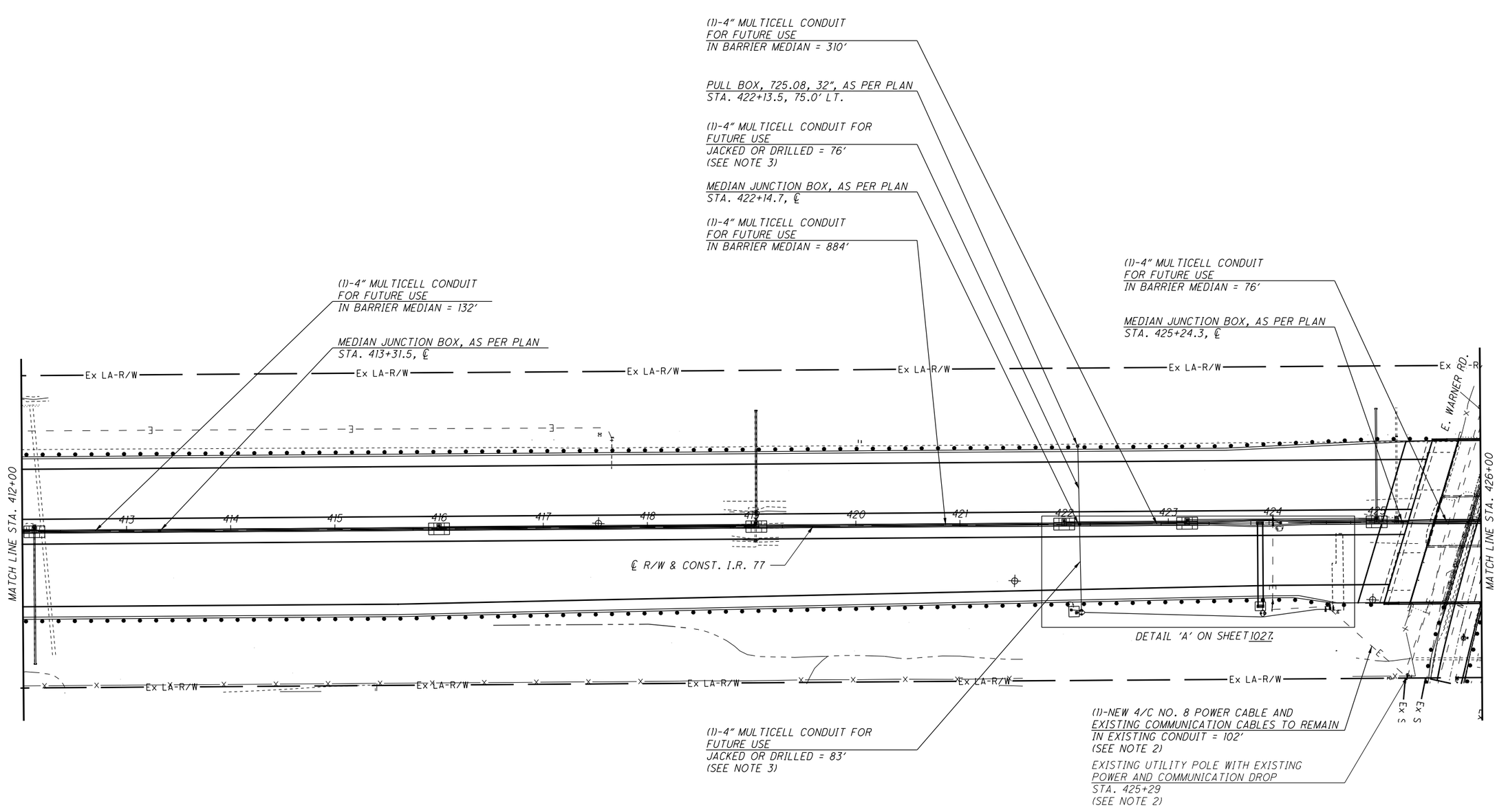

NOTE:

1. ALL ITS MEDIAN JUNCTION BOX COVERS SHALL BE LOCATED ON THE WEST SIDE OF THE I.R. 77 MAINLINE MEDIAN BARRIER UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL VERIFY THE EXISTING POWER SOURCE LOCATION. THE FOLLOWING CONTINGENCY QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO RUN POWER CABLE TO THE EXISTING POWER SOURCE LOCATION TO BE USED AS DIRECTED BY THE ENGINEER:

   ITEM 632 - POWER CABLE, 4 CONDUCTOR, NO. 8 AWG 100 FT

3. CONDUIT WITHIN 6' OF THE PROPOSED GUARDRAIL SHALL BE ENCASED IN CONCRETE. PAYMENT FOR THE CONCRETE ENCASEMENT SHALL BE CONSIDERED INCIDENTAL TO ITEM 625 - CONDUIT, JACKED OR DRILLED, AS PER PLAN.

FOR ITS LEGEND, SEE SHEET 1023.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED BEB
CHECKED KMG

ITS PLAN
STA. 412+00 TO STA. 426+00

SUM-77 / 277 / 224
VARIOUS

1026
1288

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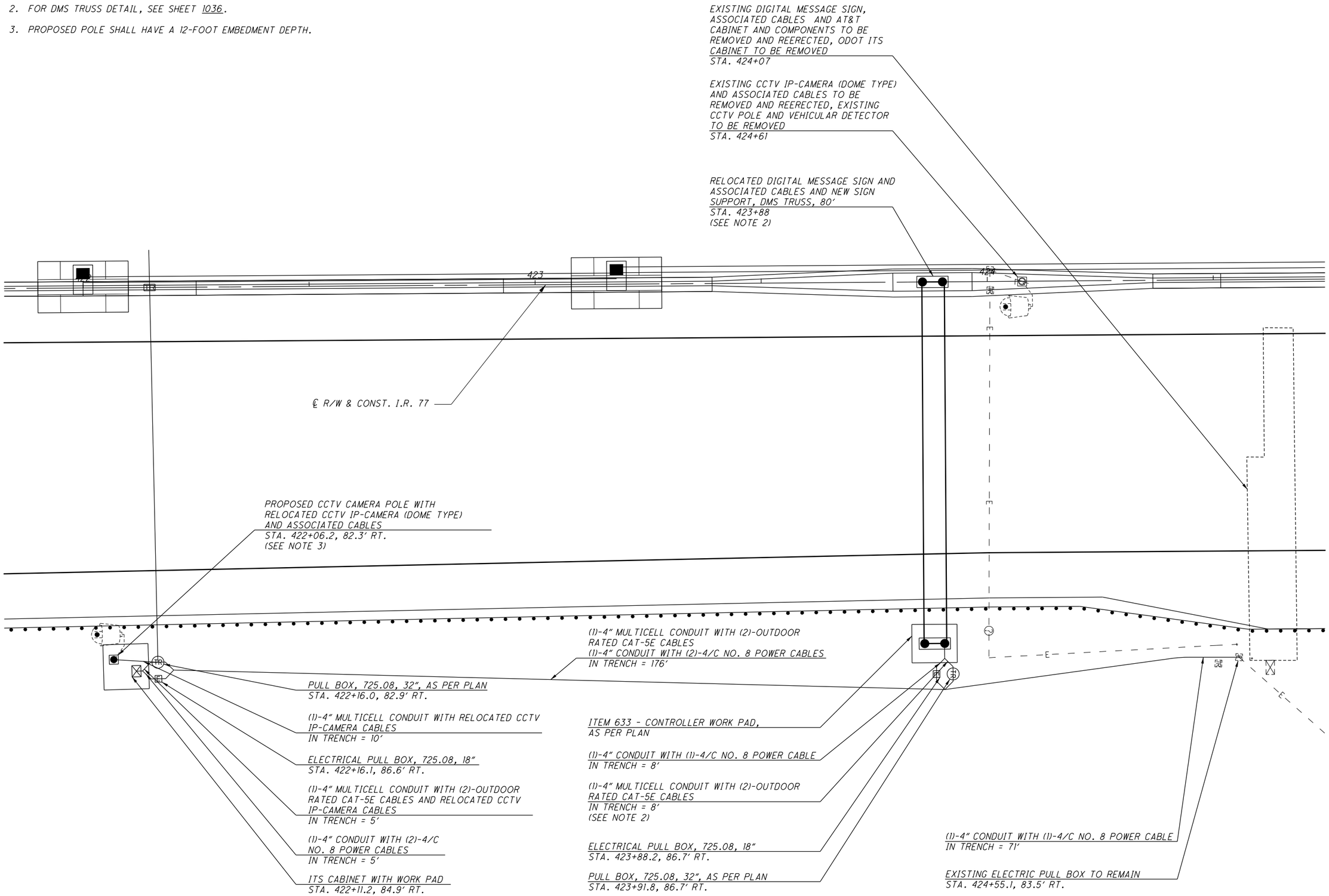
NOTES:

1. FOR ITS LEGEND, SEE SHEET 1023.
2. FOR DMS TRUSS DETAIL, SEE SHEET 1036.
3. PROPOSED POLE SHALL HAVE A 12-FOOT EMBEDMENT DEPTH.



0 5 10 20
HORIZONTAL SCALE IN FEET

CALCULATED BEB
CHECKED KMG

ITS PLAN DETAIL A

SUM-77 / 277 / 224
VARIOUS

1027
1288

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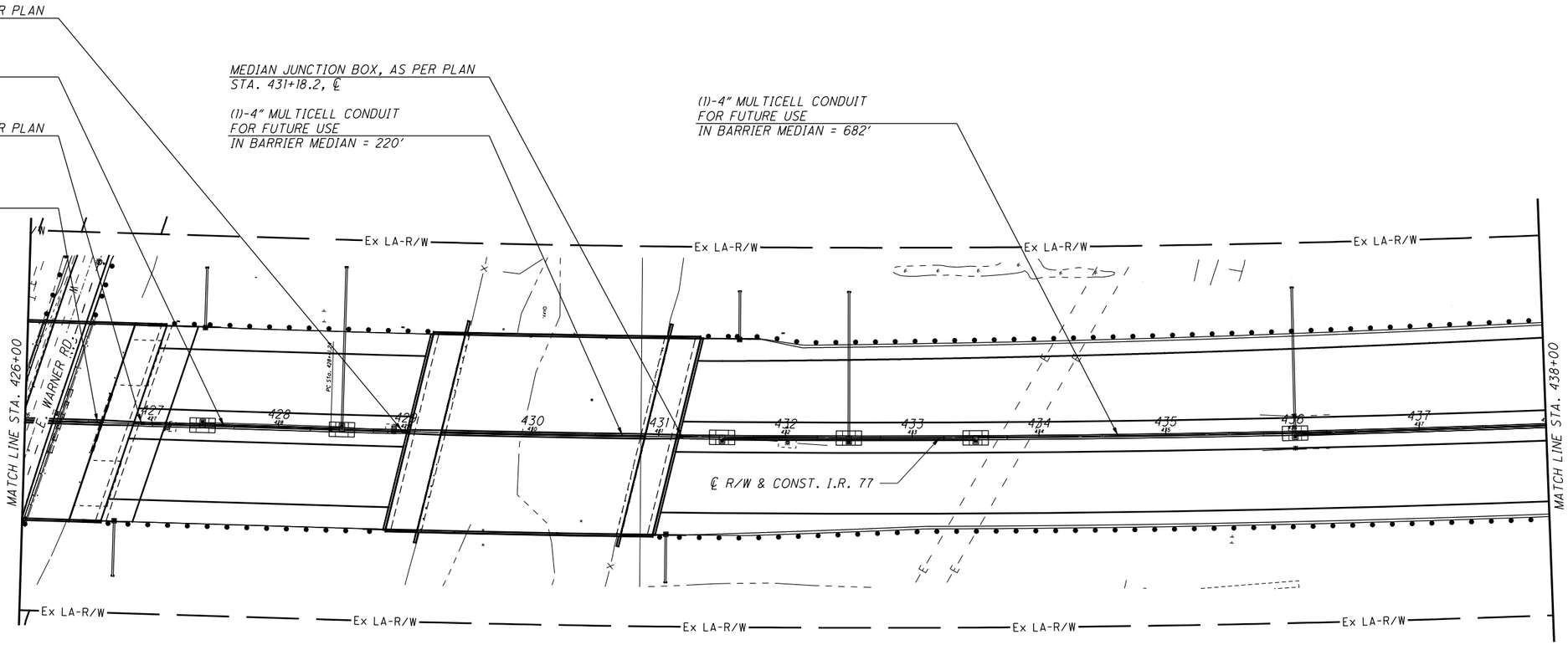

NOTE:

1. ALL ITS MEDIAN JUNCTION BOX COVERS SHALL BE LOCATED ON THE WEST SIDE OF THE I.R. 77 MAINLINE MEDIAN BARRIER UNLESS OTHERWISE NOTED.

FOR ITS LEGEND, SEE SHEET 1023.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED BEB
CHECKED KMG

ITS PLAN
STA. 426+00 TO STA. 438+00

SUM-77 / 277 / 224
VARIOUS

1028
1288

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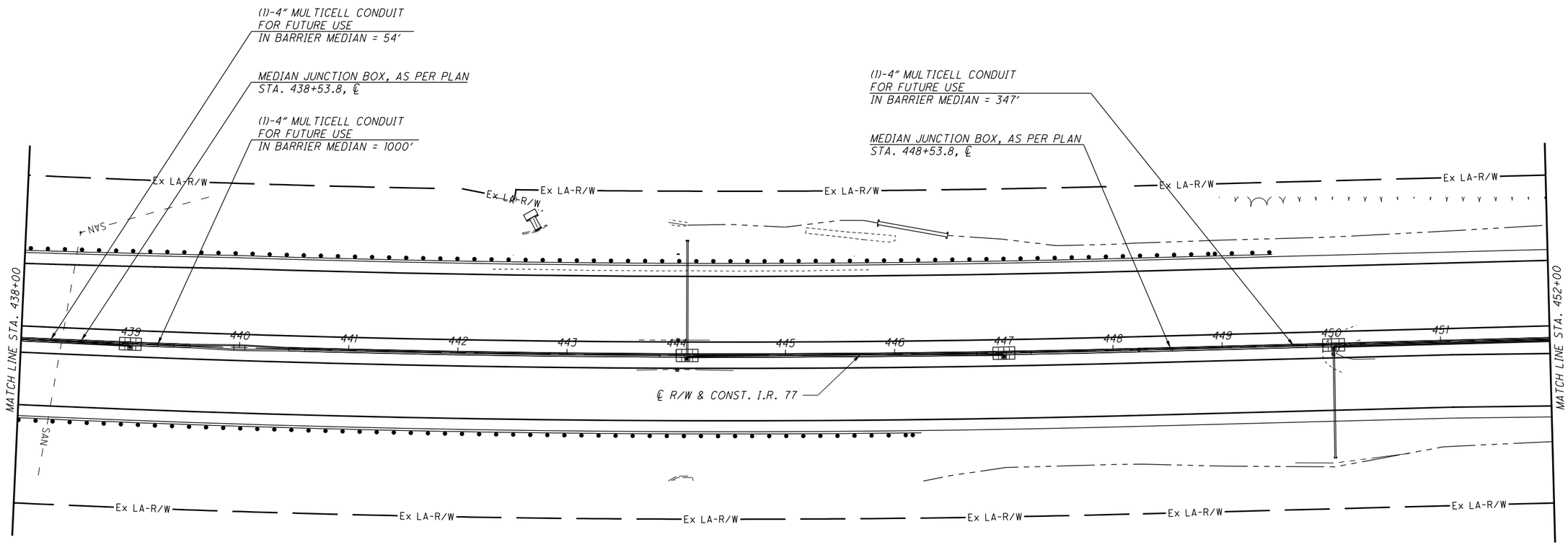

NOTE:

1. ALL ITS MEDIAN JUNCTION BOX COVERS SHALL BE LOCATED ON THE WEST SIDE OF THE I.R. 77 MAINLINE MEDIAN BARRIER UNLESS OTHERWISE NOTED.

FOR ITS LEGEND, SEE SHEET 1023.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED BEB
CHECKED KMG

ITS PLAN
STA. 438+00 TO STA. 452+00

SUM-77 / 277 / 224
VARIOUS

1029
1288

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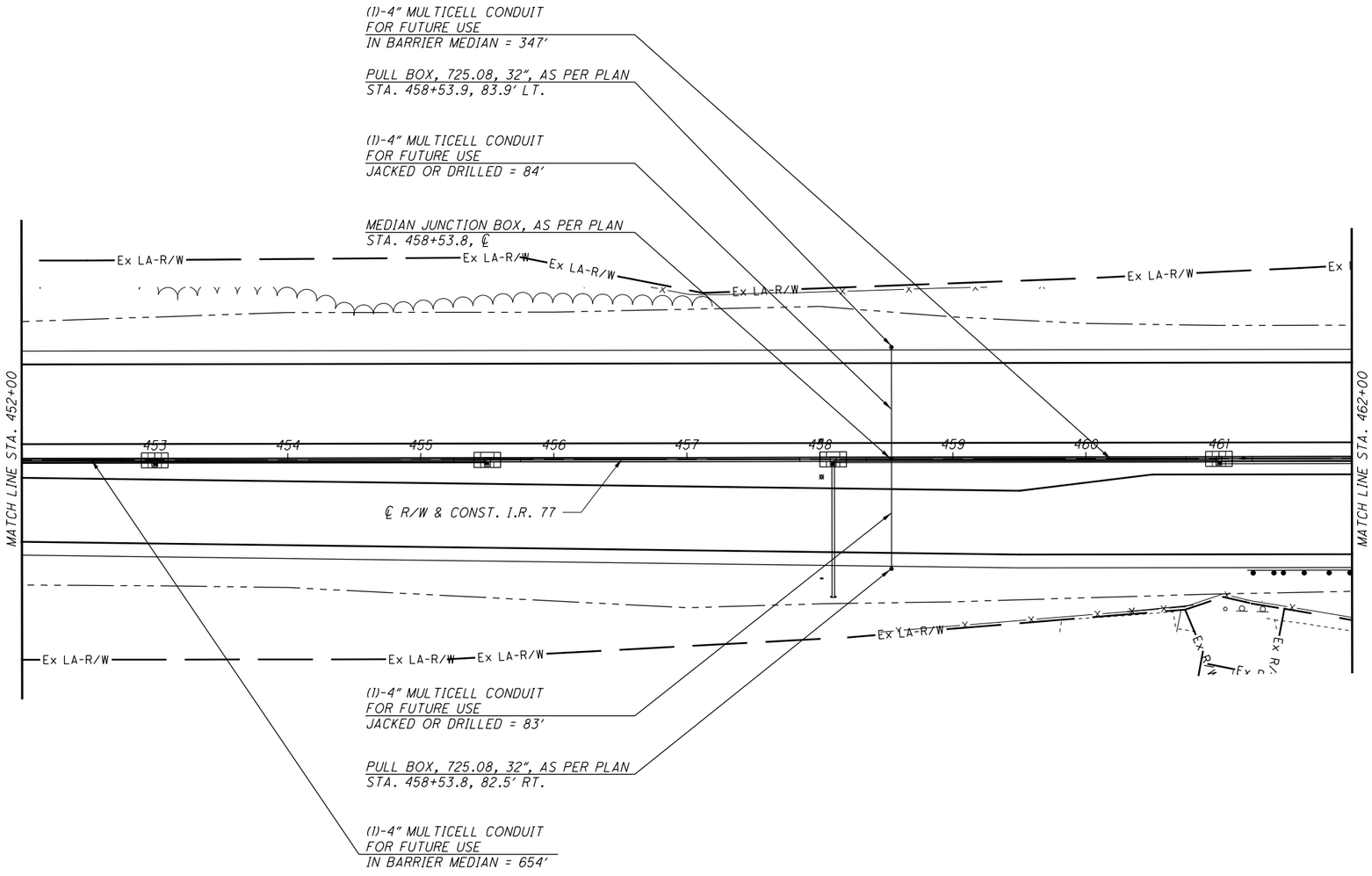

NOTE:

1. ALL ITS MEDIAN JUNCTION BOX COVERS SHALL BE LOCATED ON THE WEST SIDE OF THE I.R. 77 MAINLINE MEDIAN BARRIER UNLESS OTHERWISE NOTED.

FOR ITS LEGEND, SEE SHEET 1023.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED BEB
CHECKED KMG

ITS PLANS
STA. 452+00 TO STA. 462+00

SUM-77/277/224
VARIOUS

1030
1288

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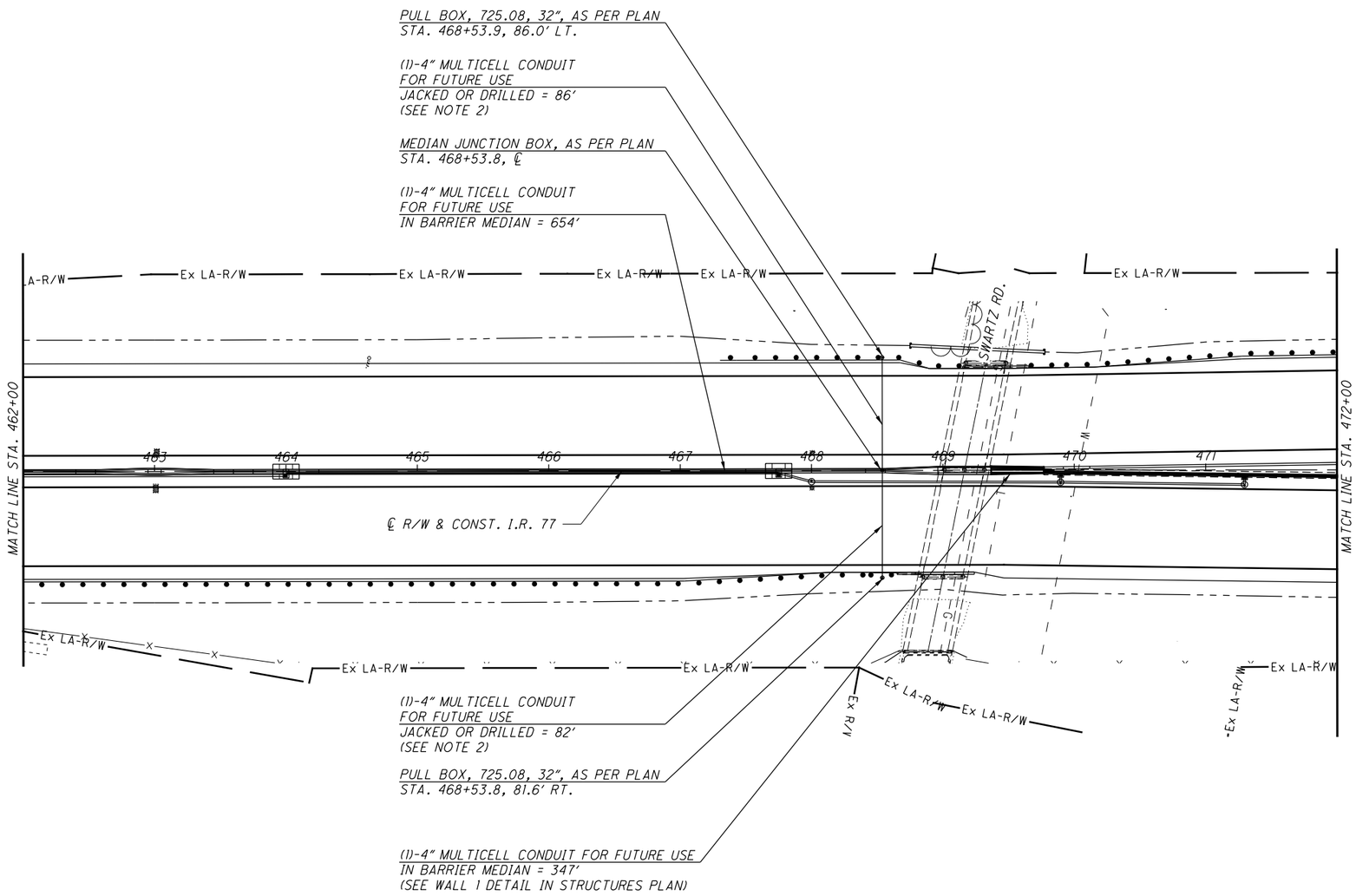

NOTE:

1. ALL ITS MEDIAN JUNCTION BOX COVERS SHALL BE LOCATED ON THE WEST SIDE OF THE I.R. 77 MAINLINE MEDIAN BARRIER UNLESS OTHERWISE NOTED.
2. CONDUIT WITHIN 6' OF THE PROPOSED GUARDRAIL SHALL BE ENCASED IN CONCRETE. PAYMENT FOR THE CONCRETE ENCASEMENT SHALL BE CONSIDERED INCIDENTAL TO ITEM 625 - CONDUIT, JACKED OR DRILLED, AS PER PLAN.

FOR ITS LEGEND, SEE SHEET 1023.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED BEB
CHECKED KMG

ITS PLANS
STA. 462+00 TO STA. 472+00

SUM-77 / 277 / 224
VARIOUS

1031
1288

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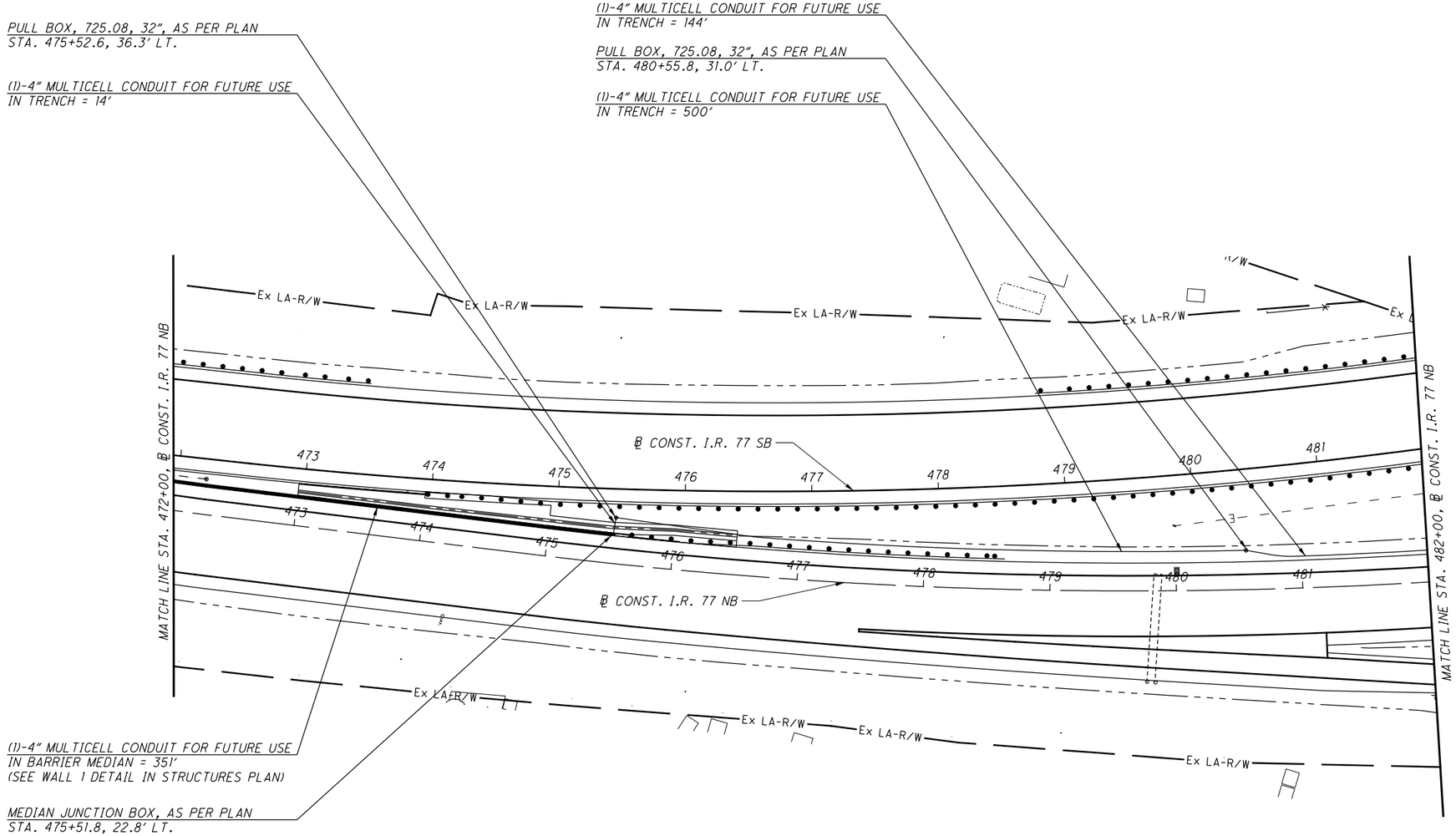

NOTE:

1. ALL ITS MEDIAN JUNCTION BOX COVERS SHALL BE LOCATED ON THE WEST SIDE OF THE I.R. 77 MAINLINE MEDIAN BARRIER UNLESS OTHERWISE NOTED.
2. ALL STATIONING IS BASED OFF OF ℄ CONST. I.R. 77 NB.

FOR ITS LEGEND, SEE SHEET 1023.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED BEB
CHECKED KMG

ITS PLANS
STA. 472+00 TO STA. 482+00

SUM-77/277/224
VARIOUS

1032
1288

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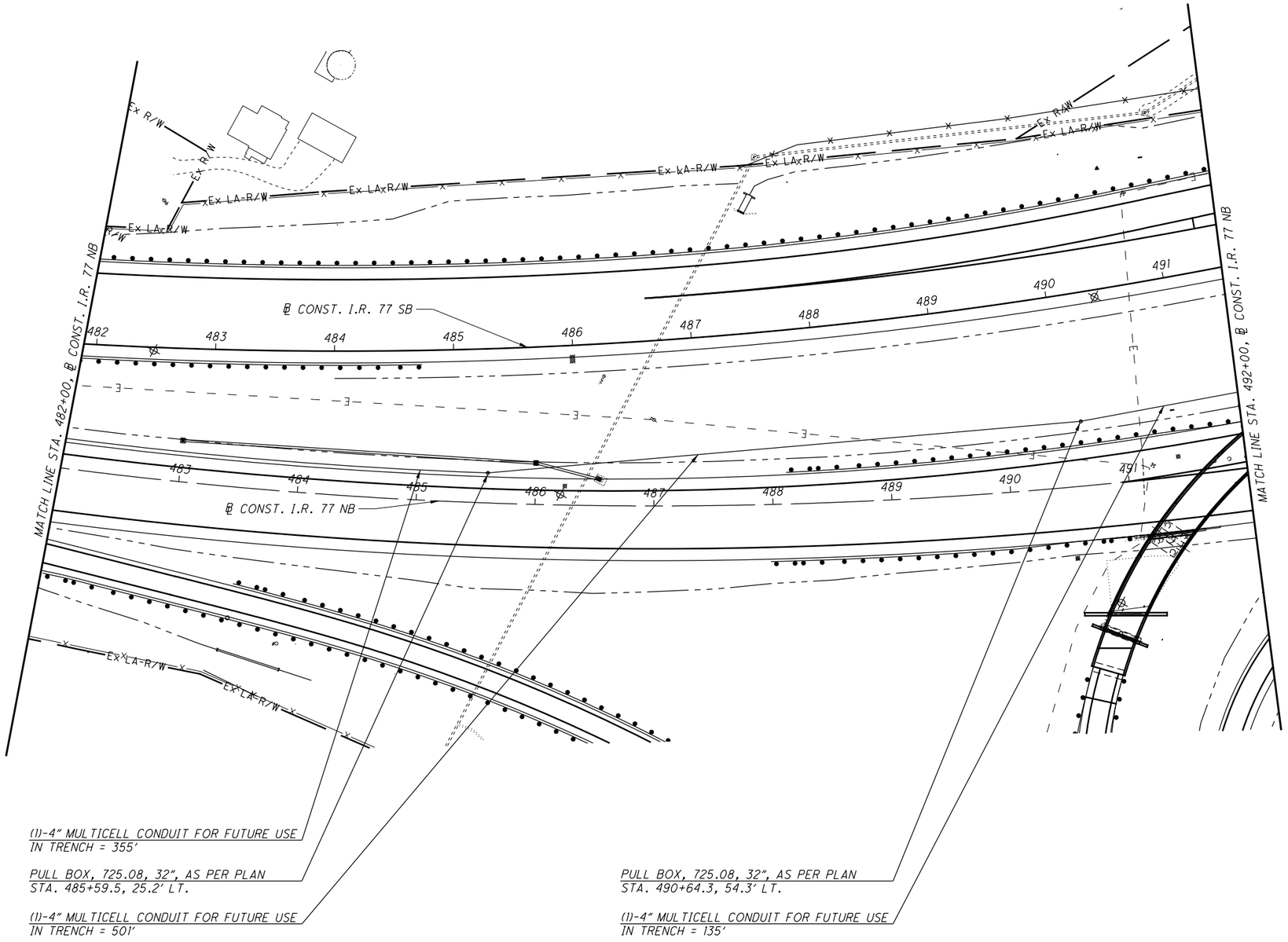

NOTE:

1. ALL STATIONING IS BASED OFF OF ℄ CONST. I.R. 77 NB.

FOR ITS LEGEND, SEE SHEET 1023.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED BEB
CHECKED KMG

ITS PLANS
STA. 482+00 TO STA. 492+00

SUM-77 / 277 / 224
VARIOUS

1033
1288

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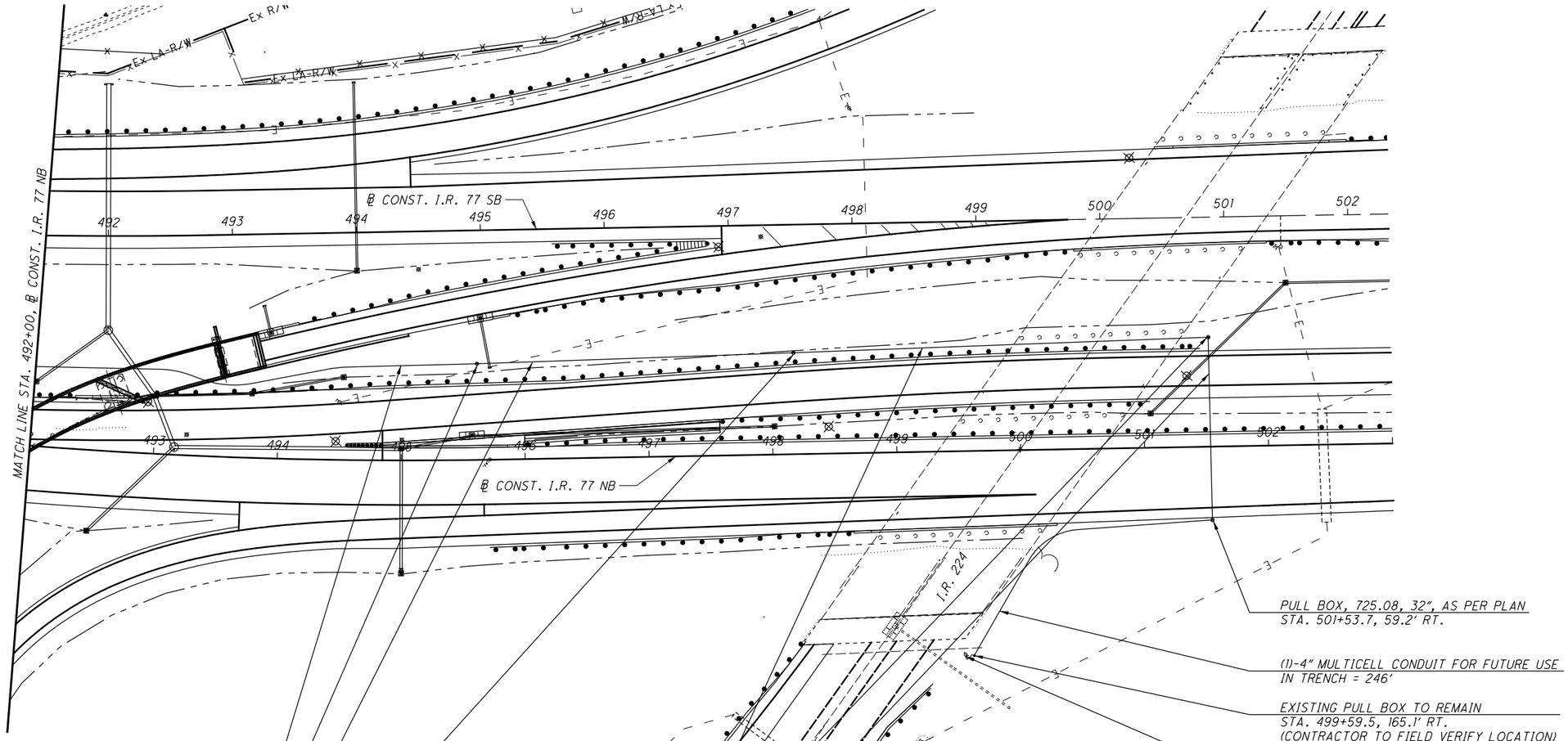

NOTE:

1. ALL STATIONING IS BASED OFF OF ℄ CONST. I.R. 77 NB.
2. CONDUIT WITHIN 6' OF THE PROPOSED GUARDRAIL SHALL BE ENCASED IN CONCRETE. PAYMENT FOR THE CONCRETE ENCASEMENT SHALL BE CONSIDERED INCIDENTAL TO ITEM 625 - CONDUIT, JACKED OR DRILLED, AS PER PLAN.

FOR ITS LEGEND, SEE SHEET 1023.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED BEB
CHECKED KMG

ITS PLANS
STA. 492+00 TO END

SUM-77 / 277 / 224
VARIOUS

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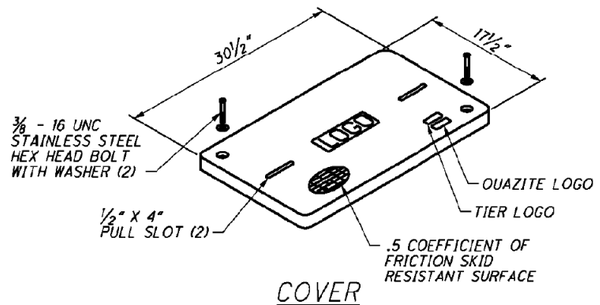
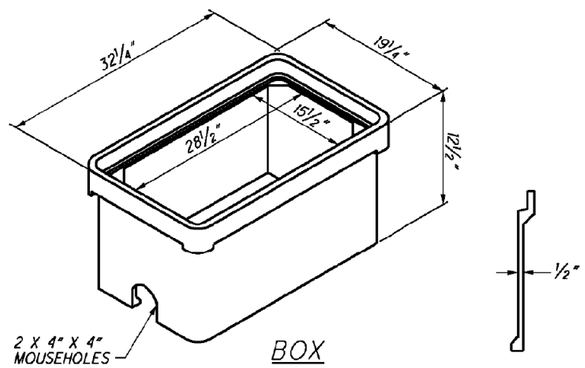


COVER



BOX

POLYMER CONCRETE ASSEMBLY

625-MEDIAN JUNCTION BOX, AS PER PLAN

NOTES:

1. ALL ITS CONDUIT SHALL BE ACCESSIBLE INSIDE THE PULL BOX.
2. EACH INNERDUCT OF MULTICELL CONDUITS SHALL HAVE PUSH-IN CAPS.
3. THE LID LOGO SHALL BE "TRAFFIC".
4. USE QUAZITE 17" X 30" STYLE POLYMERCONCRETE (STACKABLE) ASSEMBLY, PART NO. PG1730DA12 AND PG1730HH00.
5. SEE ITEM 625 - MEDIAN JUNCTION BOX, AS PER PLAN NOTE ON SHEET 1020 FOR ADDITIONAL DETAILS.

CALCULATED BEB
CHECKED KMG

ITS DETAILS

SUM-77 / 277 / 224
VARIOUS

1035
1288

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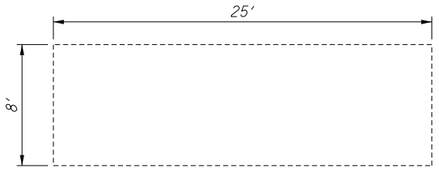
SIGN INFORMATION	
PANEL A	
PANEL SIZE:	25' X 8'
NUMBER OF BRACKETS:	5
SIGN SUPPORT INFORMATION	
TOTAL SIGN AREA:	200.0 SQ. FT.
TOTAL SPAN LENGTH:	80.0'
DESIGN TYPE	ITS-35.13

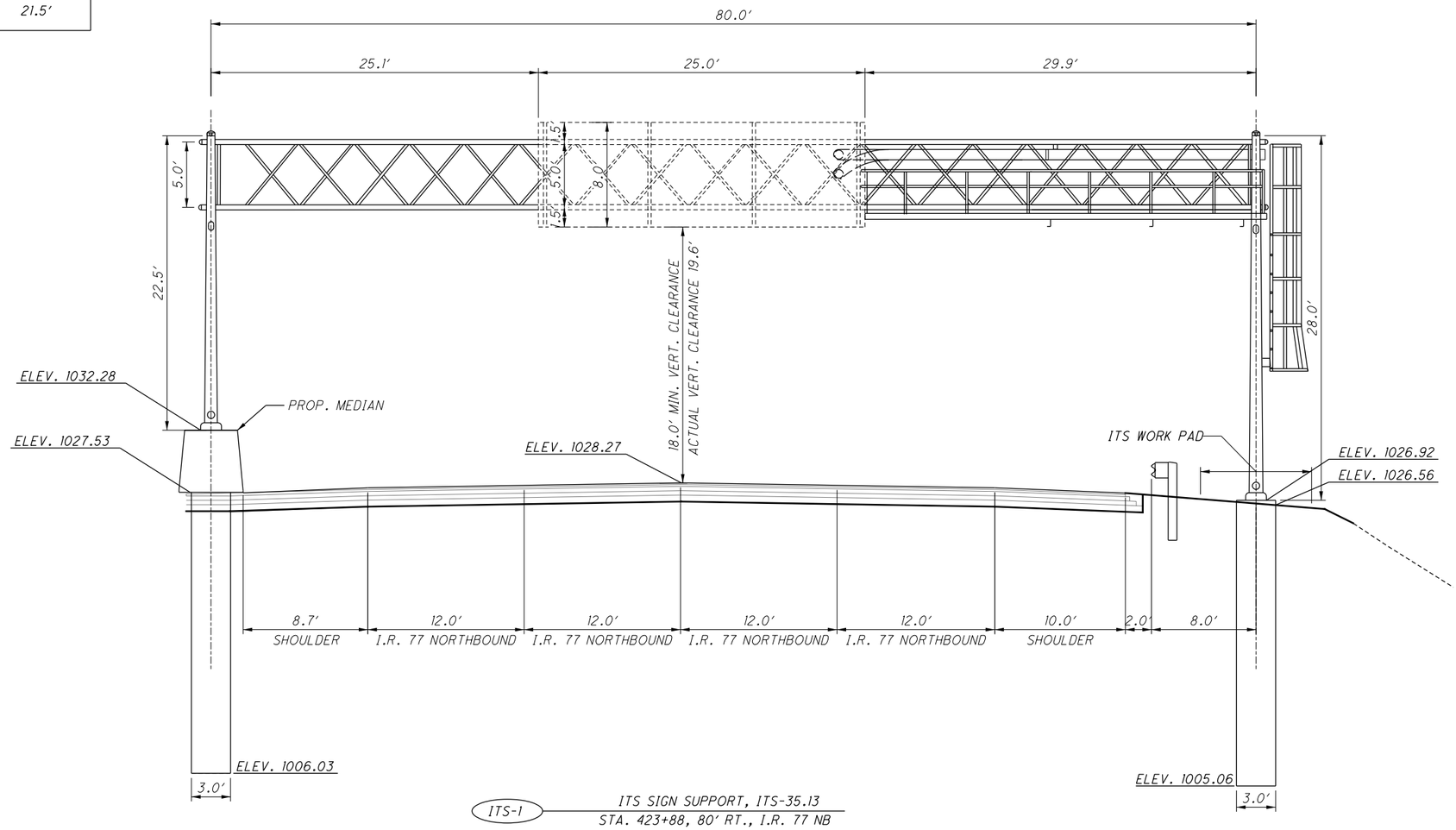
SUPPORT FOUNDATION INFORMATION		
SUPPORT TYPE	DISTANCE BETWEEN FOUNDATIONS	FOUNDATION DEPTH
ITS-35.13	7'-6"	21.5'



PANEL A
EXISTING DMS SIGN

NOTES:

1. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATION PRIOR TO THE ORDERING OF MATERIALS
2. ALL SIGNS ARE VIEWED IN THE DIRECTION OF TRAVEL.
3. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN FIELD PRIOR TO ANY EXCAVATION.



ITS-1 — ITS SIGN SUPPORT, ITS-35.13
STA. 423+88, 80' RT., I.R. 77 NB

CALCULATED BEB
CHECKED AKF

ITS SIGN SUPPORT DETAILS
ITS-1 - STA. 423+88, 80' RT., I.R. 77 NB

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UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.64 ORC. AT LEAST 48 HOURS BEFORE DIGGING, THE CONTRACTOR SHALL CALL THE OHIO UTILITIES PROTECTION SERVICE, TOLL-FREE, 800-362-2764. NON-MEMBER UTILITY COMPANIES MUST BE CALLED DIRECTLY. SEE SHEET 66 FOR ADDITIONAL UTILITY INFORMATION.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIAL OR PERFORM WORK FOR PLAN ITEMS SET UP TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER.

EXISTING LIGHTING ITEMS, DUCT CABLE AND CONDUIT

THE LOCATION OF EXISTING LIGHTING ITEMS, CONDUIT AND DUCT CABLE SHOWN ON THE PLANS HAVE BEEN OBTAINED BY SEARCHES OF AVAILABLE RECORDS AND FIELD CHECKS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, HOWEVER, THE STATE OF OHIO DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS. FIELD VERIFY ALL CIRCUITS.

EXISTING PLANS AND CONSTRUCTION PROJECT NO.

SUM-277/224-0.00/6.31-10.22

EXISTING ODOT CONTROL CENTERS

THE CONTRACTOR SHALL CONTACT ODOT DISTRICT 4 TO OBTAIN KEYS TO THE EXTERNAL DISCONNECT HANDLES OF EXISTING CONTROL CENTER ENCLOSURES. THE AFFECTED EXISTING CONTROL CENTERS AND THEIR LOCATIONS ARE AS FOLLOWS:

- CONTROL CENTER 'CH' (CKTS '1' & '2') STA. 895+35± RAMP D, RT.
- CONTROL CENTER 'WO' (CKTS '1', '2' & '3') STA. 104+70± RAMP A, LT.

CIRCUITS SHALL BE TURNED "OFF" AS NECESSARY TO SAFELY WORK ON THE AFFECTED CIRCUITS. THE ENCLOSURES SHALL REMAIN LOCKED. ALL REMAINING CIRCUITS SHALL REMAIN "ON" UNLESS OTHERWISE APPROVED BY THE ENGINEER. UPON COMPLETION OF A PARTICULAR CIRCUIT'S WORK, THE CONTRACTOR SHALL RESTORE POWER TO THAT CIRCUIT, UNLESS THE CIRCUIT HAS BEEN DEACTIVATED.

EXISTING CABLE AND CONDUIT

EXISTING CIRCUIT CABLES IN TRENCH WHICH HAVE BEEN REPLACED AS INDICATED IN THE PLANS (INCLUDING CONDUIT, DISTRIBUTION CABLE, AND DUCT CABLE) MAY BE ABANDONED IN PLACE OR REMOVED. THE REMOVAL OR ABANDONMENT OF THESE ITEMS WHICH ARE NOT ITEMIZED SEPARATELY SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS LIGHTING ITEMS IN THE PROJECT.

EXISTING CIRCUIT CABLE IN BARRIER WHICH HAVE BEEN REPLACED AS INDICATED IN THE PLANS SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR. THE REMOVAL OF THESE ITEMS WHICH ARE NOT ITEMIZED SEPARATELY SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS LIGHTING ITEMS IN THE PROJECT.

REMOVAL OF CIRCUITS IN EXISTING UNDERGROUND OR BARRIER CONDUITS TO BE REUSED: WORK IS INCLUDED UNDER C&MS ITEM 625, "CONDUIT CLEANED AND CABLES REMOVED".

ITEM 625 TRENCH

TRENCH SHALL BE AS PER 625.13. IN ADDITION, ALL TRENCHING IN PAVED AREAS AND AREAS TO BE PAVED SHALL BE PERFORMED PRIOR TO THE PLACEMENT OF PAVEMENT.

ITEM 625, POWER SERVICE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF THE SPECIFICATIONS, THE FOLLOWING SHALL APPLY.

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:

POWER COMPANY: FIRST ENERGY CORP. (OHIO EDISON CO.)
ADDRESS: 1910 W. MARKET ST. BLDG 3, AKRON, OH 44313
PHONE #: (330) 436-4055
CONTACT NAME: MR. DAVID MILLER

POWER SERVICE: 480 VOLT, 3-WIRE, SINGLE PHASE, GROUNDED NEUTRAL. THIS PROJECT HAS BEEN DESIGNED ON THE BASIS OF 5% VOLTAGE DROP WITH A MAXIMUM UNIFORMITY RATIO OF 4.0 TO 1.0 FOR CONVENTIONAL UNITS AND 3.0 TO 1.0 FOR HIGH MAST UNITS.

ALL POWER SERVICES SHALL BE METERED. THE METER BASE MOUNTING HEIGHT SHALL BE NO MORE THAN FIVE (5) FEET HIGH TO THE CENTER OF THE METER BASE FROM THE GROUND. A NON-FUSED DISCONNECT SHALL BE INSTALLED ON THE POWER SIDE OF THE METER BASE. THE CONTRACTOR SHALL SUPPLY THE NECESSARY METER BASES AND DISCONNECTS.

THE CONTRACTOR SHALL PAY ALL ELECTRICAL ENERGY CHARGES FOR NEW POWER SERVICES ESTABLISHED BY THIS PROJECT. UPON COMPLETION OF THIS PROJECT AND AFTER WRITTEN AUTHORIZATION FROM THE DISTRICT CONSTRUCTION ENGINEER, POWER SERVICE ELECTRICAL ENERGY ACCOUNTS SHALL BE TRANSFERRED TO THE MAINTAINING AGENCY. THIS SHALL INCLUDE NEW POWER SERVICE ESTABLISHED BY THIS PROJECT AS WELL AS REASSIGNMENT OF EXISTING SERVICE DUE TO WORK PERFORMED BY THIS PROJECT. IF POWER SERVICE IS TRANSFERRED PRIOR TO RECEIVING THE WRITTEN AUTHORIZATION, A DISINCENTIVE OF $100 PER DAY SHALL BE ASSESSED FOR EACH CALENDAR DAY OF NON-COMPLIANCE.

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.

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 C&MS 631.06. PAYMENT SHALL BE INCLUDED IN THE BID FOR THE ITEM(S) BEING LOCKED.

ITEM 625 SERVICE TO UNDERPASS LIGHTING

THIS ITEM SHALL CONSIST OF PROVIDING COMPLETE ELECTRICAL SERVICE, EXCEPT FOR LUMINAIRES AND STRUCTURE GROUNDING FOR AN UNDERPASS LIGHTING SYSTEM ON THE VARIOUS UNDERPASSES SHOWN IN THE PLANS.

THE INSTALLATION WORK SHALL INCLUDE DISCONNECT SWITCH WITH ENCLOSURE, CONDUITS, CONDUIT GROUNDING, MOUNTINGS, FITTINGS, JUNCTION BOXES, CABLES, AND ALL INCIDENTALS NECESSARY TO COMPLETE READY FOR USE, THE SERVICE AS SHOWN IN THE LIGHTING PLANS. ALL CONDUITS AND FITTINGS SHALL BE SCH-80 PVC. CABLE FOR UNDERPASS LIGHTING SHALL BE #10 AWG (MINIMUM).

PAYMENT WILL BE MADE AT THE UNIT PRICE BID FOR ITEM 625, "SERVICE TO UNDERPASS LIGHTING" AND 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 - CONDUIT CLEANED AND CABLES REMOVED

THIS ITEM SHALL CONSIST OF CLEANING AN EXISTING CONDUIT BY REMOVING EXISTING CABLES, MUD AND DEBRIS SO THAT NEW CABLE CAN BE INSTALLED. INCIDENTAL TO THE CLEANING IS THE INSTALLATION OF BUSHINGS AND/OR COUPLINGS ON THE ENDS OF EXISTING CONDUIT AS REQUIRED. MATERIALS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR FOR PROPER DISPOSAL OFF OF THE PROJECT SITE. DISTURBED AREAS SHALL BE PROPERLY RESTORED.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER C&MS ITEM 625, "CONDUIT CLEANED AND CABLES REMOVED" PER FOOT OF CONDUIT CLEANED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - PULL BOX CLEANED

THIS ITEM OF WORK SHALL CONSIST OF CLEANING AN EXISTING PULL BOX BY REMOVING ANY EXISTING CABLES NOT BEING RECONNECTED, AND DEBRIS SO THAT NEW CABLES CAN BE INSTALLED. ANY UNUSED OPENINGS SHALL BE CLOSED. DISTURBED AREAS NEAR THE PULL BOX SHALL BE CLEARED OF WEEDS OR DEBRIS AND SHALL BE FULLY RESTORED. MATERIAL REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF OF THE PROJECT SITE.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER C&MS ITEM 625, "PULL BOX CLEANED" FOR EACH PULL BOX CLEANED 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, INSTALLATION ONLY, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF INSTALLING AN EXISTING LUMINAIRE REMOVED FROM A PREVIOUS LOCATION ON THE PROJECT.

THE CONTRACTOR SHALL EXERCISE CARE WHEN INSTALLING THE LUMINAIRE TO ENSURE THAT THE PROPER LUMINAIRE (SYMMETRIC OR ASYMMETRIC) IS INSTALLED AS INDICATED IN THE PLANS.

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 IF THE LIGHT SOURCE IS A LAMP.

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 ARC FLASH CALCULATIONS AND LABEL, (BY LOCATION)

THE CONTRACTOR SHALL SATISFY THE REQUIREMENTS OF ODOT SUPPLEMENTAL SPECIFICATION 825 FOR EACH OF THE NEW LIGHTING CONTROL CENTERS INDICATED IN THE PLANS.

THE CONTRACTOR MAY BE ABLE TO OBTAIN LABELS FOR ODOT MAINTAINED INSTALLATIONS FROM THE ODOT SIGN SHOP, 1606 WEST BROAD STREET, COLUMBUS, OH 43223. FOR NON-ODOT MAINTAINED INSTALLATIONS, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE LABEL, MADE FROM "ENGINEER GRADE" SIGN SHEETING OR AN EQUIVALENT COMMERCIAL LABEL MATERIAL.

THE ODOT OFFICE OF ROADWAY ENGINEERING HAS AN EXCEL SPREADSHEET, AVAILABLE UPON REQUEST, TO ASSIST WITH MAKING AND DOCUMENTING THE REQUIRED CALCULATIONS.

METHOD OF MEASUREMENT SHALL BE PER 825.06.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ARC FLASH CALCULATIONS AND LABEL (CC-'WO')	1 EACH
ARC FLASH CALCULATIONS AND LABEL (CC-'CH')	1 EACH
ARC FLASH CALCULATIONS AND LABEL (CC-'FAA')	1 EACH

ITEM 625 - 1-½" DUCT CABLE WITH THREE NO. (BY SIZE) AWG 2400 VOLT CABLES

PROVIDE (#2 OR #4) AWG 725.02 WIRE, 2400 VOLT, ASSURING THE GROUNDING CABLE INSULATION IS GREEN OR BLACK WITH A GREEN STRIPE.

ITEM 625 - PORTABLE WINCH DRIVE POWER UNIT

THE CONTRACTOR SHALL SUPPLY A PORTABLE WINCH DRIVE POWER UNIT AS SPECIFIED IN THE ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS. A QUANTITY OF "1 EACH" OF ITEM 625, "PORTABLE WINCH DRIVE POWER UNIT", IS INCLUDED IN THE GENERAL SUMMARY FOR THIS PURPOSE.

REVISIONS		
NO.	DATE	DESCRIPTION
1	04/28/21	ADDED FAA FLASHING BEACON

CALCULATED DRB CHECKED KWR

LIGHTING GENERAL NOTES

SUM-77 / 277 / 224
VARIOUS

1037
1288

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ITEM 625 - LUMINAIRE, HIGH MAST, SOLID STATE (LED), IES-V, LED, 45,200-47,100 LUMENS, AS PER PLAN

IN ADDITON TO THE REQUIREMENTS OF ODOT'S CONSTRUCTION AND MATERIALS SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATION 813 AND 913, LUMINAIRES FOR HIGH MAST LIGHTING SHALL BE AS FOLLOWS:

LUMINAIRES SHALL BE COOPER LIGHTING CELESTEON SERIES, 325W, (CST-8-4-8-T5R-AP-7030-AP), GE EVOLVE, 365W, (ERHM-02-5-50-VW-30), OR EQUAL APPROVED BY THE ENGINEER.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH C&MS ITEM 625 "LUMINAIRE, HIGH MAST, SOLID STATE (LED), IES-V, LED, 45,200-47,100 LUMENS, 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), IES-III, LED, 3,100-4,100 LUMENS, AS PER PLAN

IN ADDITON TO THE REQUIREMENTS OF ODOT'S CONSTRUCTION AND MATERIALS SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATION 813 AND 913, LUMINAIRES FOR UNDERPASS LIGHTING SHALL BE AS FOLLOWS:

LUMINAIRES SHALL BE HOLOPHANE WALLPACK, 39W, (W4GLED-10C1000-30K-T3M), COOPER LIGHTING, GALLEON SERIES, 34W, (GWC-AF-01-LED-E1-T4FT-7030-600), OR EQUAL APPROVED BY THE ENGINEER.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH C&MS ITEM 625 "LUMINAIRE, UNDERPASS, SOLID STATE (LED), IES-III, LED, 3,100-4,100 LUMENS, 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 REMOVED FOR REUSE

THE CONTRACTOR WILL BE REMOVING 82 LED HIGH MAST LUMINAIRES (54 SYMMETRIC AND 28 ASYMMETRIC) AS PART OF THIS PROJECT. ALL LUMINAIRES ARE RATED 45,000 - 55,000 LUMENS. ALL 54 SYMMETRIC LUMINAIRES AND 20 OF THE 28 ASYMMETRIC LUMINAIRES WILL BE REUSED WITHIN THIS PROJECT. THE REMAINING EIGHT (8) ASYMMETRIC LUMINAIRES WILL BE REMOVED FOR REUSE BUT NOT WITHIN THIS PROJECT AND THUS SHALL BE CAREFULLY STORED ON THE PROJECT SITE FOR PICK UP BY ODOT DISTRICT 4 PERSONNEL (SEE NOTE ENTITLED 'LUMINAIRE REMOVED FOR STORAGE').

THE CONTRACTOR SHALL CLEARLY NOTE WHICH LUMINAIRES ARE SYMMETRIC AND WHICH ARE ASYMMETRIC SO THAT THEIR SUBSEQUENT INSTALLATION IS AS INDICATED IN THE PLANS.

ITEM 625 - LUMINAIRE REMOVED FOR STORAGE

THIS ITEM OF WORK SHALL BE PER C&MS 625.21(A). THE CONTRACTOR SHALL CONTACT ODOT DISTRICT 4 [MICHELLE CHANEY (330)-786-2267] 72 HOURS ADVANCE NOTICE OF WHEN THE LUMINAIRES WILL BE AVAILABLE FOR PICK UP AND THEIR LOCATION ON THE PROJECT SITE.

ITEM 625 - POWER SERVICE, AS PER PLAN (120V)

IN ADDITION TO THE REQUIREMENTS OF THE SPECIFICATIONS, THE FOLLOWING SHALL APPLY. THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:

POWER COMPANY: FIRST ENERGY CORP (OHIO EDISON CO)
ADDRESS: 1910 W. MARKET ST. BLDG 3, AKRON, OH 44313
PHONE #: (330) 436-4055
CONTACT NAME: MR. DAVID MILLER

POWER SERVICE: 120 VOLT, 3-WIRE, SINGLE PHASE, GROUNDED NEUTRAL.

ALL POWER SERVICES SHALL BE METERED. THE METER BASE MOUNTING HEIGHT SHALL BE NO MORE THAN FIVE (5) FEET HIGH TO THE CENTER OF THE METER BASE FROM THE GROUND. A NON-FUSED DISCONNECT SHALL BE INSTALLED ON THE POWER SIDE OF THE METER BASE. THE CONTRACTOR SHALL SUPPLY THE NECESSARY METER BASES AND DISCONNECTS

THE CONTRACTOR SHALL PAY ALL ELECTRICAL ENERGY CHARGES FOR NEW POWER SERVICES ESTABLISHED BY THIS PROJECT. UPON COMPLETION OF THIS PROJECT AND AFTER WRITTEN AUTHORIZATION FROM THE DISTRICT CONSTRUCTION ENGINEER, POWER SERVICE ELECTRICAL ENERGY ACCOUNTS SHALL BE TRANSFERRED TO THE MAINTAINING AGENCY. IF POWER SERVICE IS TRANSFERRED PRIOR TO RECEIVING THE WRITTEN AUTHORIZATION, A DISINCENTIVE OF $100 PER DAY SHALL BE ASSESSED FOR EACH CALENDAR DAY OF NON-COMPLIANCE.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH CMS ITEM 625, "POWER SERVICE, AS PER PLAN [120V]" WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - LIGHT POLE REMOVED, AS PER PLAN

THIS ITEM OF WORK SHALL BE PER C&MS 625.21(B) AND SHALL INCLUDE CUTTING THE ANCHOR BOLTS AND EXPOSED CONDUIT ELL(S) FLUSH WITH THE TOP OF THE MEDIAN BARRIER. THE CONTRACTOR SHALL ALSO FILL THE TOP 6 INCHES (MIN.) OF THE OPEN ELL(S) WITH CONCRETE MORTAR AND FINISH FLUSH WITH THE TOP OF THE MEDIAN BARRIER.

ITEM 625 - LIGHT TOWER MAINTENANCE PLATFORM, MISC.: PLATFORM REMOVED

THIS ITEM OF WORK INCLUDES THE REMOVAL OF AN EXISTING LIGHT TOWER MAINTENANCE PLATFORM AND THE LIGHT TOWER FOUNDATION IT ENCOMPASSES. THE PLATFORM AND FOUNDATION SHALL BE REMOVED PER C&MS 625.21(C). ALL REMOVED MATERIAL SHALL BE PROPERLY DISPOSED OF OFF THE PROJECT SITE.

LOCATIONS OF LIGHT TOWER MAINTENANCE PLATFORMS TO BE REMOVED ARE SHOWN AND QUANTIFIED ON LIGHTING REMOVAL PLAN SHEETS 858 & 859.

PAYMENT WILL BE MADE AT EACH SUCH PLATFORM LOCATION AT THE UNIT PRICE BID FOR EACH C&MS ITEM 625, "LIGHT TOWER MAINTENANCE PLATFORM, MISC.: PLATFORM REMOVED" 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, BBBB90, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF THE CMS, AND THE STANDARD CONSTRUCTION DRAWINGS, THE FOURTH ARM IS FOR THE INSTALLATION OF THE FAA OBSTRUCTION LIGHT. THE MANUFACTURER SHALL DETERMINE AND SUPPLY ANY COUNTERWEIGHTS.

ITEM 625 - UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN

UNDERGROUND WARNING/MARKING TAPE SHALL BE IN ACCORDANCE WITH CMS 725.22 EXCEPT THE TAPE SHALL NOT BE FURNISHED WITH TRACER WIRE.

ITEM 625 - LIGHTING, MISC.: FAA TYPE L-810 OBSTRUCTION LIGHTING, LED

THIS ITEM CONSISTS OF INSTALLATION AND TESTING OF FAA L-810 COMPLIANT OBSTRUCTION LIGHTING FOR MARKING OF STRUCTURES UNDER 150 FEET. THE LOCATION SHALL BE AS SHOWN IN THE LIGHTING PLANS. EACH OBSTRUCTION LAMP FIXTURE SHALL UTILIZE LIGHT EMITTING DIODES (LEDS). THE OBSTRUCTION LAMP SHALL HAVE A WRITTEN MINIMUM 5-YEAR MANUFACTURER WARRANTY. THE LAMP SHALL BE ETL VERIFIED TO FAA ADVISORY CIRCULAR AC150/5345-43F, TYPE L-810 AND SHALL BE ONE OF THE FOLLOWING OR APPROVED EQUAL:

1. FLIGHT LIGHT FL-810L
2. POINT LIGHTING MODEL POL-21006 DOUBLE OBSTRUCTION LIGHT

EACH OBSTRUCTION LAMP FIXTURE SHALL HAVE ITS OWN CONTROLLER, HOUSED IN ITS OWN METAL CABINET MOUNTED ON A 3' PEDESTAL, 4' FROM THE TOWER. THE CONTROLLER SHALL OPERATE AT 120VAC, 60HZ AND HAVE ITS OWN DEDICATED CIRCUIT BREAKER. THE OBSTRUCTION LAMP SHALL OPERATE IN A STEADY BURN OPERATION CONTINUOUSLY TWENTY-FOUR (24) HOURS PER DAY, WITH NO INTERVENING PHOTOCELL CONTROL.

THE CONTROLLER SHALL PROVIDE AT LEAST ONE UNUSED ALARM STATUS OUTPUT IN THE FORM OF A DRY-CONTACT OR SOLID-STATE RELAY CLOSURE THAT RESPONDS TO DEFECTIVE OR INOPERATIVE OBSTRUCTION LAMP CONDITIONS. AT LEAST ONE RELAY WITH COMPLETE CONTACTS (NORMALLY OPEN, NORMALLY CLOSED, AND COMMON) SHALL BE PROVIDED. ALARM RELAY CONTACT RATINGS SHALL BE AT LEAST 500 MA RESISTIVE AT 120VAC/30VDC. THE CONTROLLER SHALL PROVIDE AT LEAST ONE VISIBLE ALARM STATUS INDICATOR FOR LAMP FAILURE INDICATION. THIS INDICATOR SHALL BE IN THE FORM OF A PANEL MOUNTED RED DOME-TYPE LED VISIBLE FROM THE OUTSIDE OF THE ENCLOSURE.

THE CONTROLLER ENCLOSURE SHALL UTILIZE A VERTICALLY HINGED, SWING-OPEN DOOR, AND BE RATED NEMA 3R, MINIMUM. ENCLOSURE SHALL INCLUDE AT LEAST ONE COMMERCIAL GRADE NEMA 5-15 RECEPTACLE TO ACCOMMODATE WIRELESS COMMUNICATION EQUIPMENT TO BE INSTALLED LATER BY ODOT FOR ALARM STATUS MONITORING. AN INTEGRAL SHELF SHALL BE PROVIDED FOR THIS EQUIPMENT INSIDE THE ENCLOSURE, AND SHALL PROVIDE AN OPEN, ACCESSIBLE SPACE FOR EQUIPMENT MEASURING AT LEAST TWELVE (12) INCHES WIDE, EIGHT (8) INCHES DEEP, AND SIX (6) INCHES IN HEIGHT.

THE CONTRACTOR SHALL FULLY TEST THE SYSTEM AND ARRANGE FOR ACCEPTANCE INSPECTION OF THE OBSTRUCTION LIGHTING INSTALLATION BY ODOT DISTRICT SIGNAL MAINTENANCE PERSONNEL AFTER THE SYSTEM IS OPERATIONAL. DURING ACCEPTANCE INSPECTION, THE CONTRACTOR SHALL DEMONSTRATE THE PROPER OPERATION OF ALL LAMPS AND ALARMS. CONTRACTOR SHALL PROVIDE WRITTEN MANUFACTURER WARRANTY AND ALL OPERATING MANUALS FOR OBSTRUCTION LIGHTING CONTROLLER AND LAMP TO ODOT DISTRICT SIGNAL MAINTENANCE PERSONNEL AT THE TIME OF INSPECTION.

THE DEPARTMENT SHALL MEASURE FAA TYPE L-810 OBSTRUCTION LIGHTING, LED BY EACH INDIVIDUAL OBSTRUCTION LIGHT FIXTURE, COMPLETE AND INSTALLED INCLUDING ANY CONTROL DEVICES AND ALL WIRING AND CONDUITS FROM THE LIGHT TO THE CONTROLLER AND TO THE POWER SERVICE.

QUANTITIES CARRIED TO THE GENERAL SUMMARY:

625 LIGHTING, MISC.: FAA TYPE L-810 OBSTRUCTION LIGHTING, LED	1 EACH
625 TRENCH, 24"	260 FEET
625 UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN	260 FEET
625 GROUND ROD	1 EACH
632 PEDESTAL FOUNDATION	1 EACH
632 PEDESTAL, 3'	1 EACH

REVISIONS		
NO.	DATE	DESCRIPTION
1	04/28/21	ADDED FAA FLASHING BEACON

CALCULATED DRB CHECKED KWR

LIGHTING GENERAL NOTES

SUM-77/277/224
VARIOUS

1038
1288

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ITEM SPECIAL - MAINTAIN EXISTING LIGHTING

EXISTING ROADWAYS WHICH ARE TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OF THIS PROJECT AND ARE LIGHTED SHALL HAVE THE LIGHTING MAINTAINED AS DESCRIBED HEREIN.

BEFORE ANY WORK IS STARTED IN THE IMMEDIATE VICINITY OF ANY EXISTING LIGHTING CIRCUITS, REPRESENTATIVES OF THE STATE, 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 THE EXISTING LIGHTING SHALL BE MADE BY THE STATE'S REPRESENTATIVE. THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL LUMINAIRES WHICH ARE NOT OPERATIONAL, AND INDIVIDUAL CIRCUITS WHICH ARE NOT IN WORKING ORDER. THE COMPLETED REPORT SHALL BE SIGNED BY THE REPRESENTATIVES OF THE STATE, 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 REPAIRS NECESSARY TO RETURN THE SYSTEM TO AN ACCEPTABLE CONDITION. FOLLOWING THESE REPAIRS, THE SYSTEM SHALL AGAIN BE INSPECTED AND A REPORT MADE AND SIGNED AS OUTLINED HEREIN.

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. REPLACEMENTS 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 PER UNIT BASIS. BETTERMENTS SHALL BE COVERED IN ITEMS OF WORK PERTAINING TO THE CONSTRUCTION OF PERMANENT IMPROVEMENTS. THE MAINTAINING AGENCY SHALL GIVE THE CONTRACTOR ONE COPY OF THE EXISTING LIGHTING CIRCUITRY LAYOUT. WHEN THE CONTRACTOR HAS TAKEN OVER THE MAINTENANCE OF THE EXISTING SYSTEM, HE SHALL PROVIDE ALL REQUIRED LAYOUT AND LOCATING OF EXISTING LIGHTING CIRCUITS WITHIN THE PROJECT.

ITEM SPECIAL - MAINTAIN EXISTING LIGHTING (CONT.)

SHOULD THE CONTRACTOR DESIRE THE REMOVAL OF THE EXISTING LIGHTING BEFORE THE NEW LIGHTING IS OPERATIONAL, THE CONTRACTOR SHALL THEN BE RESPONSIBLE FOR ADEQUATE TEMPORARY LIGHTING OF THAT PORTION OF THE EXISTING ROADWAY AFFECTED BY THE REMOVAL OF THE EXISTING LIGHTING. TWO [2] WEEKS PRIOR TO INSTALLING SUCH LIGHTING, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOUR (4) SETS OF THE TEMPORARY LIGHTING PLANS TO THE ENGINEER FOR REVIEW AND APPROVAL. THIS PLAN SHALL SHOW LOCATION OF POLES, LENGTH OF BRACKET ARMS, STYLE OF LUMINAIRES, MOUNTING HEIGHT, 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 RATIO NOT TO EXCEED 4:1. MOUNTING HEIGHT FOR TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 27 FEET AND MINIMUM OVERHEAD CONDUCTOR CLEARANCE SHALL BE 20 FEET. TEMPORARY OVERHEAD CONSTRUCTION SHALL NOT BE LESS THAN GRADE "A" 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 THIS CRITERIA, THEN UNDERGROUND WIRING WILL 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. A SEPARATE POWER SERVICE WILL BE PROVIDED BY THE CONTRACTOR FOR THE TEMPORARY LIGHTING SYSTEM. THE TEMPORARY LIGHTING SHALL NOT BE SPLICED INTO EXISTING LIGHTING CIRCUITS. THE CONTRACTOR SHALL PAY ALL HOOK-UP FEES AND ELECTRICAL COSTS FOR THE TEMPORARY SYSTEM. THESE COSTS SHALL BE PAID FOR UNDER THE LUMP SUM ITEM SPECIAL MAINTAIN EXISTING LIGHTING. WHEN NO LONGER NEEDED THE TEMPORARY LIGHTING INSTALLATION SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

THE LUMP SUM BID FOR ITEM SPECIAL - MAINTAIN EXISTING LIGHTING, SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS, INCIDENTALS, AND TEMPORARY POWER SERVICES NECESSARY TO MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HEREIN. THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE LIGHTING GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

SPECIAL, MAINTAIN EXISTING LIGHTING	LUMP SUM

CALCULATED DRB
CHECKED KWR

LIGHTING GENERAL NOTES

SUM-77/277/224
VARIOUS

1039
1288

N:\03\60\06744-08\106002_SUM-76-10.95\Design\Lighting\Sheets\106002_LN003.dgn Sheet 1/14/2021 8:38:53 AM srifle

SHEET NUM.											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
1037	1038	1039	1041	1042	1043	1045					01/IMS/PV	02/IMS/PV							
																		LIGHTING	
			33	30	21						76	8		625	00480	84	EACH	CONNECTION, UNFUSED PERMANENT	
					1						1			625	12010	1	EACH	LIGHT TOWER, BBB90	
					1						1			625	13101	1	EACH	LIGHT TOWER, BBBB90, AS PER PLAN	1038
				3							3			625	13200	3	EACH	LIGHT TOWER, BBBB100	
			3	2	2						6	1		625	13400	7	EACH	LIGHT TOWER, BBBBBB100	
			5	1	1						6	1		625	13404	7	EACH	LIGHT TOWER, BBBBBB110	
				2							2			625	15000	2	EACH	LIGHT TOWER FOUNDATION, 36" X 15' DEEP	
			1	1	1						3			625	15100	3	EACH	LIGHT TOWER FOUNDATION, 36" X 20' DEEP	
			7	3	4						13	1		625	15200	14	EACH	LIGHT TOWER FOUNDATION, 36" X 25' DEEP	
1											1			625	20000	1	EACH	PORTABLE WINCH DRIVE POWER UNIT	
						4					4			625	21400	4	EACH	LIGHT TOWER MAINTENANCE PLATFORM, MISC. PLATFORM REMOVED	1038
			714	1,386	1,749						3,464	385		625	23200	3,849	FT	NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE	
			219	321							486	54		625	23300	540	FT	NO. 2 AWG 2400 VOLT DISTRIBUTION CABLE	
			1,534	3,234	2,490						6,532	726		625	24320	7,258	FT	1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES	
			2,938	178							2,804	312		625	24330	3,116	FT	1-1/2" DUCT CABLE WITH THREE NO. 2 AWG 2400 VOLT CABLES	
			271	387	161						737	82		625	25500	819	FT	CONDUIT, 3", 725.04	
					129						116	13		625	25900	129	FT	CONDUIT, JACKED OR DRILLED, 725.04, 3"	
					123						111	12		625	25910	123	FT	CONDUIT CLEANED AND CABLES REMOVED	
				12	18						27	3		625	26263	30	EACH	LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN (IES-V, LED, 45,200 - 47,100 LUMENS)	1038
			11								10	1		625	27503	11	EACH	LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN (IES-III, LED, 3,100 - 4,100 LUMENS)	1038
			48	18	6						65	7		625	27561	72	EACH	LUMINAIRE, INSTALLATION ONLY, AS PER PLAN	1037
	260		4,573	3,669	2,561						9,957	1,106		625	29002	11,063	FT	TRENCH, 24" DEEP	
			13	11	8						29	3		625	30700	32	EACH	PULL BOX, 725.08, 18"	
				3	1						4			625	30706	4	EACH	PULL BOX, 725.08, 24"	
				1	18						17	2		625	31510	19	EACH	PULL BOX REMOVED	
	1		16	12	10						35	4		625	32000	39	EACH	GROUND ROD	
			1								1			625	33000	1	EACH	STRUCTURE GROUNDING SYSTEM	
				1	1						2			625	34001	2	EACH	POWER SERVICE, AS PER PLAN	1037
	1										1			625	34001	1	EACH	POWER SERVICE, AS PER PLAN (120V)	1038
	260		4,573	3,669	2,561						9,957	1,106		625	36011	11,063	FT	UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN	1038
			4								4			625	37100	4	EACH	SERVICE TO UNDERPASS LIGHTING	
			1								1			625	39520	1	EACH	PULL BOX CLEANED	
		LS									LS			SPECIAL	62540000	LS		MAINTAIN EXISTING LIGHTING	1039
						16					14	2		625	75350	16	EACH	LIGHT TOWER REMOVED	
						2					2			625	75401	2	EACH	LIGHT POLE REMOVED, AS PER PLAN	1038
						10					9	1		625	75504	10	EACH	LUMINAIRE REMOVED FOR STORAGE	
						4					4			625	75506	4	EACH	LUMINAIRE REMOVED	
						72					65	7		625	75508	72	EACH	LUMINAIRE REMOVED FOR REUSE	
						2					2			625	75510	2	EACH	POWER SERVICE REMOVED	
						9					8	1		625	75540	9	EACH	LIGHT TOWER FOUNDATION REMOVED	
					595						536	59		625	75550	595	FT	DISTRIBUTION CABLE REMOVED	
1											1			625	76000	1	EACH	ARC FLASH CALCULATIONS AND LABEL (CC-'CH')	
1											1			625	76000	1	EACH	ARC FLASH CALCULATIONS AND LABEL (CC-'WO')	
1											1			625	76000	1	EACH	ARC FLASH CALCULATIONS AND LABEL (CC-'FAA')	
	1										1			625	98000	1	EACH	LIGHTING, MISC.: FAA TYPE L-810 OBSTRUCTION LIGHTING, LED	1038
	1										1			632	64020	1	EACH	PEDESTAL FOUNDATION	
	1										1			632	89500	1	EACH	PEDESTAL, 3'	

CALCULATED KWR CHECKED DRB

LIGHTING GENERAL SUMMARY

SUM-77 / 277 / 224
VARIOUS

REVISIONS		
NO.	DATE	DESCRIPTION
1	04/28/21	ADDED FAA FLASHING BEACON

1040
1288

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REVISIONS		
NO.	DATE	DESCRIPTION
7	04/28/21	ADDED FAA FLASHING BEACON

STATION

ML = MATCHLINE
'X' = RAMP X
'NB' = I-77 NB
'SB' = I-77 SB
'277' = I-277
'224' = U.S. 224

SHEET NO.	FROM STATION	TO STATION	SIDE	POLE/PULL BOX NO.	625 CONNECTION, UNFUSED PERMANENT EACH	625 LIGHT TOWER, BBB90 EACH	625 LIGHT TOWER, BBBB90, AS PER PLAN EACH	625 LIGHT TOWER, BBBB100 EACH	625 LIGHT TOWER, BBBBBB100 EACH	625 LIGHT TOWER, BBBBBB110 EACH	625 LIGHT TOWER FOUNDATION, 36" X 15' DEEP EACH	625 LIGHT TOWER FOUNDATION, 36" X 20' DEEP EACH	625 LIGHT TOWER FOUNDATION, 36" X 25' DEEP EACH	625 LUMINAIRE, INSTALLATION ONLY, AS PER PLAN EACH	625 LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN (IES-V, LED, 45,200 - 47,100 LUMENS) EACH	625 LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN (IES-III, LED, 3,100 - 4,100 LUMENS) EACH	625 NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE FT	625 NO. 2 AWG 2400 VOLT DISTRIBUTION CABLE FT	625 1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES FT	625 1-1/2" DUCT CABLE WITH THREE NO. 2 AWG 2400 VOLT CABLES FT	625 CONDUIT, JACKED OR DRILLED, 725.04, 3" FT	625 CONDUIT, 3", 725.04 FT	625 TRENCH, 24" DEEP FT	625 PULL BOX, 725.08, 18" EACH	625 PULL BOX, 725.08, 24" EACH	625 PULL BOX REMOVED EACH	625 GROUND ROD EACH	625 STRUCTURE GROUNDING SYSTEM EACH	625 POWER SERVICE, AS PER PLAN EACH	625 UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN FT	625 SERVICE TO UNDERPASS LIGHTING EACH	625 DISTRIBUTION CABLE REMOVED FT	625 CONDUIT CLEANED AND CABLES REMOVED FT	625 PULL BOX CLEANED EACH		
	CKT 'WO-2'																																				
1047	477+88 'NB'		LT	WO-2-5					1			1		6												2										
	477+88	480+11	LT	WO-2-5 - PB-1																	240			230							230					
	480+11		LT	PB-1																																1	
	480+11	484+17	LT	PB-1 - WO-2-4																	411			401							401					
	484+17		LT	WO-2-4						1			1	6												2										
	484+17	486+00	LT	WO-2-4 - ML																	188			183							183					
1048	486+00	289+15 'B2'	LT	ML - WO-2-3																	317			312							312					
	289+15		LT	WO-2-3						1			1	6												2										
	289+15	491+38 'SB'	L/R	WO-2-3 - PB-2																	286			276							276					
	491+38		RT	PB-2																					1											
	491+38	794+14 'C2'	R/L	PB-2 - WO-2-2																	286			276							276					
	794+14		LT	WO-2-2					1				1	6												2										
	794+14	495+00 'SB'	L/R	WO-2-2 - PB-3																	113			103							103					
	495+00		RT	PB-3	3																				1											
	495+00	495+00	R/L	PB-3 - PB-4														219					63	63							63					
	495+00		LT	PB-4	3																				1											
	495+00	497+00	LT	PB-4 - ML																	205			200							200					
	790+28 'C2'		BL	PIER 1																									1							
1049	497+00	500+42	LT	ML - PB-5																	347			342							342					
	500+42		LT	PB-5	3											2									1								1			
	500+42	99+39 'A'	L/R	PB-5 - WO-2-1																	133			123							123					
	99+39		RT	WO-2-1						1			1	6												2										
	99+39	103+00	RT	WO-2-1 - ML																	412			407							407					
	CKT 'CH-1'																																				
	259+50	257+69 '277'	LT	ML - CH-1-1																189				184							184					
	257+69		LT	CH-1-1					1				1	6												2										
	257+69	700+23 'C1'	RT	CH-1-1 - PB-9																246				236							236					
	700+23		RT	PB-9	3											3									1								1			
	700+23	700+89	RT	PB-9 - PB-10																76				66							66					
	700+89		RT	PB-10	3																				1											
	700+89	500+90 'NB'	R/L	PB-10 - PB-11														279					83	83							83					
	500+90		LT	PB-11	3											4									1								1			
	500+90	501+37	LT	PB-11 - PB-12																57				47							47					
	501+37		LT	PB-12	3																				1											
	501+37	301+32 'B2'	LT	PB-12 - PB-8														216					62	62							62					
	301+32		LT	PB-8	3																				1											
	301+32	801+21 'C2'	L/R	PB-8 - PB-6																100				90							90					
	801+21		RT	PB-6	3											2									1								1			
	501+37 'NB'	504+06	LT	PB-12 - PB-13																279				269							269					
	504+06		LT	PB-13	3																				1											
	504+06	304+00 'B2'	LT	PB-13 - PB-7														219					63	63							63					
	304+00		LT	PB-7	3																				1											
	304+00	304+00	LT	PB-7 - CH-1-2																33				23							23					
	304+00		LT	CH-1-2						1			1	6												2										
	504+06 'NB'	506+72	LT	PB-13 - PB-14																277				267							267					
	506+72		LT	PB-14																					1											
	506+72	509+29	LT	PB-14 - CH-1-3																277				267							267					
	509+29		LT	CH-1-3						1			1	6												2										
TOTALS CARRIED TO LIGHTING GENERAL SUMMARY					33				3	5		1	7	48		11	714	219	1534	2938		271	4573	13			16	1		4573	4			1		

CALCULATED KWR
CHECKED DRB

LIGHTING SUBSUMMARY

SUM-77 / 277 / 224
VARIOUS

10.41
12.88

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REVISIONS		
NO.	DATE	DESCRIPTION
7	04/28/21	ADDED FAA FLASHING BEACON

STATION

ML = MATCHLINE
'X' = RAMP X
'NB' = I-77 NB
'SB' = I-77 SB
'277' = I-277
'224' = U.S. 224

SHEET NO.	FROM	TO	SIDE	POLE/PULL BOX NO.	625 CONNECTION, UNFUSED PERMANENT EACH	625 LIGHT TOWER, BBB90 EACH	625 LIGHT TOWER, BBBB90, AS PER PLAN EACH	625 LIGHT TOWER, BBBB100 EACH	625 LIGHT TOWER, BBBBBB100 EACH	625 LIGHT TOWER, BBBBBB110 EACH	625 LIGHT TOWER FOUNDATION, 36" X 15' DEEP EACH	625 LIGHT TOWER FOUNDATION, 36" X 20' DEEP EACH	625 LIGHT TOWER FOUNDATION, 36" X 25' DEEP EACH	625 LUMINAIRE, INSTALLATION ONLY, AS PER PLAN EACH	625 LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN (IES-V, LED, 45,200 - 47,100 LUMENS) EACH	625 LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN (IES-III, LED, 3,100 - 4,100 LUMENS) EACH	625 NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE FT	625 NO. 2 AWG 2400 VOLT DISTRIBUTION CABLE FT	625 1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES FT	625 1-1/2" DUCT CABLE WITH THREE NO. 2 AWG 2400 VOLT CABLES FT	625 CONDUIT, JACKED OR DRILLED, 725.04, 3" FT	625 CONDUIT, 3", 725.04 FT	625 TRENCH, 24" DEEP FT	625 PULL BOX, 725.08, 18" EACH	625 PULL BOX, 725.08, 24" EACH	625 PULL BOX REMOVED EACH	625 GROUND ROD EACH	625 STRUCTURE GROUNDING SYSTEM EACH	625 POWER SERVICE, AS PER PLAN EACH	625 UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN FT	625 SERVICE TO UNDERPASS LIGHTING EACH	625 DISTRIBUTION CABLE REMOVED FT	625 CONDUIT CLEANED AND CABLES REMOVED FT	625 PULL BOX CLEANED EACH
	CKT 'WO-1'																																		
1050	209+00 'B'	513+12 'SB'	R/L	ML - WO-1-6																451				446							446					
	513+12		LT	WO-1-6					1				1	6																						
1051	28+90 'B2'		RT	WO-1-1				1					1	4													2									
	28+90	26+34	RT	WO-1-1 - PB-15																267				257							257					
	26+34		RT	PB-15																					1											
	26+34	197+93 'B'	R/L	PB-15 - WO-1-2																266				256							256					
	197+93		LT	WO-1-2				1					1	4													2									
	197+93	198+41	LT	WO-1-2 - ML																52				47							47					
1052	198+41 'B'	200+49	LT	ML - PB-18																211				206							206					
	200+49		LT	PB-18	3																				1											
	200+49	21+07 'B2'	LT	PB-18 - PB-19														231						67	67						67					
	21+07		LT	PB-19	3																				1											
	21+07	240+27 '277'	LT	PB-19 - WO-1-3																265				255							255					
	240+27		LT	WO-1-3					1			1			6												2									
	240+27	243+56	LT	WO-1-3 - PB-23																341				331							331					
	243+56		LT	PB-23																					1											
	243+56	417+62 'B1'	L/R	PB-23 - PB-28																341				331							331					
	417+62		RT	PB-28	3																				1											
	417+62	417+62	R/L	PB-28 - PB-27														156						42	42						42					
	417+62		LT	PB-27	3																				1											
	417+62	417+11	LT	PB-27 - WO-1-4																60				50							50					
	417+11		LT	WO-1-4				1			1			4													2									
	417+11	414+33	LT	WO-1-4 - PB-26																269				259							259					
	414+33		LT	PB-26																					1											
	414+33	411+50	LT	PB-26 - WO-1-5																269				259							259					
	411+50		LT	WO-1-5						1	1				6												2									
	411+50	411+31	LT	WO-1-5 - PB-25																28				18							18					
	411+31		LT	PB-25	3																				1											
	411+31	411+31	L/R	PB-25 - PB-22														150						40	40						40					
	411+31		RT	PB-22	3																				1											
	411+31	13+08 'B2'	R/L	PB-22 - PB-21																68				58							58					
	13+08		LT	PB-21	3																				1											
	13+08	13+08	L/R	PB-21 - PB-20														192						54	54						54					
	13+08		RT	PB-20	3																				1											
	13+08	209+00 'B'	RT	PB-20 - ML																79				74							74					
	417+62 'B1'	104+69 'A'	RT	PB-28 - PB-24														336						102	102						102					
	104+69		RT	PB-24	3																					1										
	CKTS 'WO-1' & 'WO-2'																																			
	104+69	104+69	R/L	PB-24 - PB-16														195	195					55	55						55					
	104+69		LT	PB-16																						1										
	104+69	104+80	LT	PB-16 - PB-17														126	126					27	27						27					
	104+81		LT	CC 'WO'																										1						
	CKT 'WO-2'																																			
	104+69	103+00	RT	PB-19 - ML																	178			173							173					
	CKT 'CH-1'																																			
1053	259+50 '224'	262+11	LT	ML - PB-30																267				262							262					
	262+11		LT	PB-30	3																					1	1								
	TOTALS CARRIED TO LIGHTING GENERAL SUMMARY				30			3	2	1	2	1	3	18	12			1386	321	3234	178		387	3669	11	3	1	12		1	3669					

CALCULATED KWR
CHECKED DRB

LIGHTING SUBSUMMARY

SUM-77 / 277 / 224
VARIOUS

10.42
1288

N:\03\60\06744-08\06002_SUM-76-10.95\Design\Lighting\Sheets\06002_LS002.dgn 4/28/2021 12:07:47 PM kryan

REVISIONS		
NO.	DATE	DESCRIPTION
7	04/28/21	ADDED FAA FLASHING BEACON

STATION

ML = MATCHLINE
'X' = RAMP X
'NB' = I-77 NB
'SB' = I-77 SB
'277' = I-277
'224' = U.S. 224

SHEET NO.	STATION FROM	STATION TO	SIDE	POLE/PULL BOX NO.	625 CONNECTION, UNFUSED PERMANENT EACH	625 LIGHT TOWER, BBB90 EACH	625 LIGHT TOWER, BBBB90, AS PER PLAN EACH	625 LIGHT TOWER, BBBB100 EACH	625 LIGHT TOWER, BBBBBB100 EACH	625 LIGHT TOWER, BBBBBB110 EACH	625 LIGHT TOWER FOUNDATION, 36" X 15' DEEP EACH	625 LIGHT TOWER FOUNDATION, 36" X 20' DEEP EACH	625 LIGHT TOWER FOUNDATION, 36" X 25' DEEP EACH	625 LUMINAIRE, INSTALLATION ONLY, AS PER PLAN EACH	625 LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN (IES-V, LED, 45,200 - 47,100 LUMENS) EACH	625 LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN (IES-III, LED, 3,100 - 4,100 LUMENS) EACH	625 NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE FT	625 NO. 2 AWG 2400 VOLT DISTRIBUTION CABLE FT	625 1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES FT	625 1-1/2" DUCT CABLE WITH THREE NO. 2 AWG 2400 VOLT CABLES FT	625 CONDUIT, JACKED OR DRILLED, 725.04, 3" FT	625 CONDUIT, 3", 725.04 FT	625 TRENCH, 24" DEEP FT	625 PULL BOX, 725.08, 18" EACH	625 PULL BOX, 725.08, 24" EACH	625 PULL BOX REMOVED EACH	625 GROUND ROD EACH	625 STRUCTURE GROUNDING SYSTEM EACH	625 POWER SERVICE, AS PER PLAN EACH	625 UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN FT	625 SERVICE TO UNDERPASS LIGHTING EACH	625 DISTRIBUTION CABLE REMOVED FT	625 CONDUIT CLEANED AND CABLES REMOVED FT	625 PULL BOX CLEANED EACH
	CKTS 'CH-1' & 'CH-2'																																	
1053	262+11	895+25 'D'	L/R	PB-30 - PB-35													408					58	58							58				
	895+25		RT	PB-35																					1									
	895+25	895+36	RT	PB-35 - PB-34													222					22	22							22				
	895+31		RT	CC 'CH'																								1						
	CKT 'CH-2'																																	
	262+11 '224'	262+14	L/R	PB-30 - PB-29													399															123		
	262+14		RT	PB-29	3																			1		1								
	262+14	685+28 'C1'	R/L	PB-29 - CH-2-1															142				132							132				
	685+28		LT	CH-2-1					1				1		6											2								
	685+28	785+29 'C2'	RT	CH-2-1 - PB-31															436				426							426				
	785+29		RT	PB-31	3																			1										
	785+29	785+29	R/L	PB-31 - PB-32													141					37	37							37				
	785+29		LT	PB-32	3																			1										
	786+29	786+80	LT	PB-32 - CH-2-2															190				180							180				
	786+80		LT	CH-2-2						1		1			6											2								
	262+14 '224'	268+74	RT	PB-29 - PB-33															344				334							334				
	265+47		RT	PB-33																				1										
	265+47	268+74	RT	PB-33 - CH-2-3															345				335							335				
	268+74		RT	CH-2-3					1				1		6											2								
	268+74	271+00	RT	CH-2-3 - ML															239				234							234				
1054	271+00	271+20	RT	ML - PB-29															25				20							20				
	271+20		RT	PB-29	3																			1										
	271+20	600+41 'C'	RT	PB-29 - PB-30													162					44	44							44				
	600+41		RT	PB-30	3																			1										
	600+41	603+27	RT	PB-30 - CH-2-4															294				284							284				
	603+27		RT	CH-2-4		1							1	3												2								
	603+27	603+89	RT	CH-2-4 - PB-32															72				62							62				
	603+89		RT	PB-32	3																			1										
	603+89	274+72 '224'	R/L	PB-32 - PB-31													417				129														
	274+72		LT	PB-31	3																			1										
	274+72	278+63	LT	PB-31 - CH-2-5															403				393							393				
	278+63		LT	CH-2-5			1						1	3												2								
	274+50	280+45	CL	MJ-1 - EX CH-1-1																											595			
	REMOVALS																																	
1048	491+03		RT	PB-R																					1									
	491+13		LT	PB-R																					1									
	90+70 'A'		LT	PB-R																					1									
1049	97+77		LT	PB-R																					1									
	307+29 'B2'		LT	PB-R																					1									
	307+35		RT	PB-R																					1									
	798+10 'C2'		RT	PB-R																					1									
	801+42		RT	PB-R																					1									
	502+44 'NB'		LT	PB-R																					1									
	502+47		RT	PB-R																					1									
1052	417+57 'B1'		RT	PB-R																					1									
	417+59		LT	PB-R																					1									
1053	684+73 'C1'		LT	PB-R																					1									
	890+86 'D'		RT	PB-R																					1									
	895+35		RT	PB-R																					1									
	599+52 'C'		RT	PB-R																					1									
	599+53		LT	PB-R																					1									
	TOTALS CARRIED TO LIGHTING GENERAL SUMMARY				21	1	1		2	1		1	4	6	18		1749		2490		129	161	2561	8	1	18	10		1	2561		595	123		

CALCULATED KWR
CHECKED DRB

LIGHTING SUBSUMMARY

SUM-77 / 277 / 224
VARIOUS

10.43
12.88

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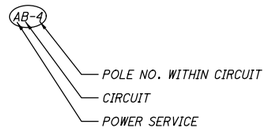
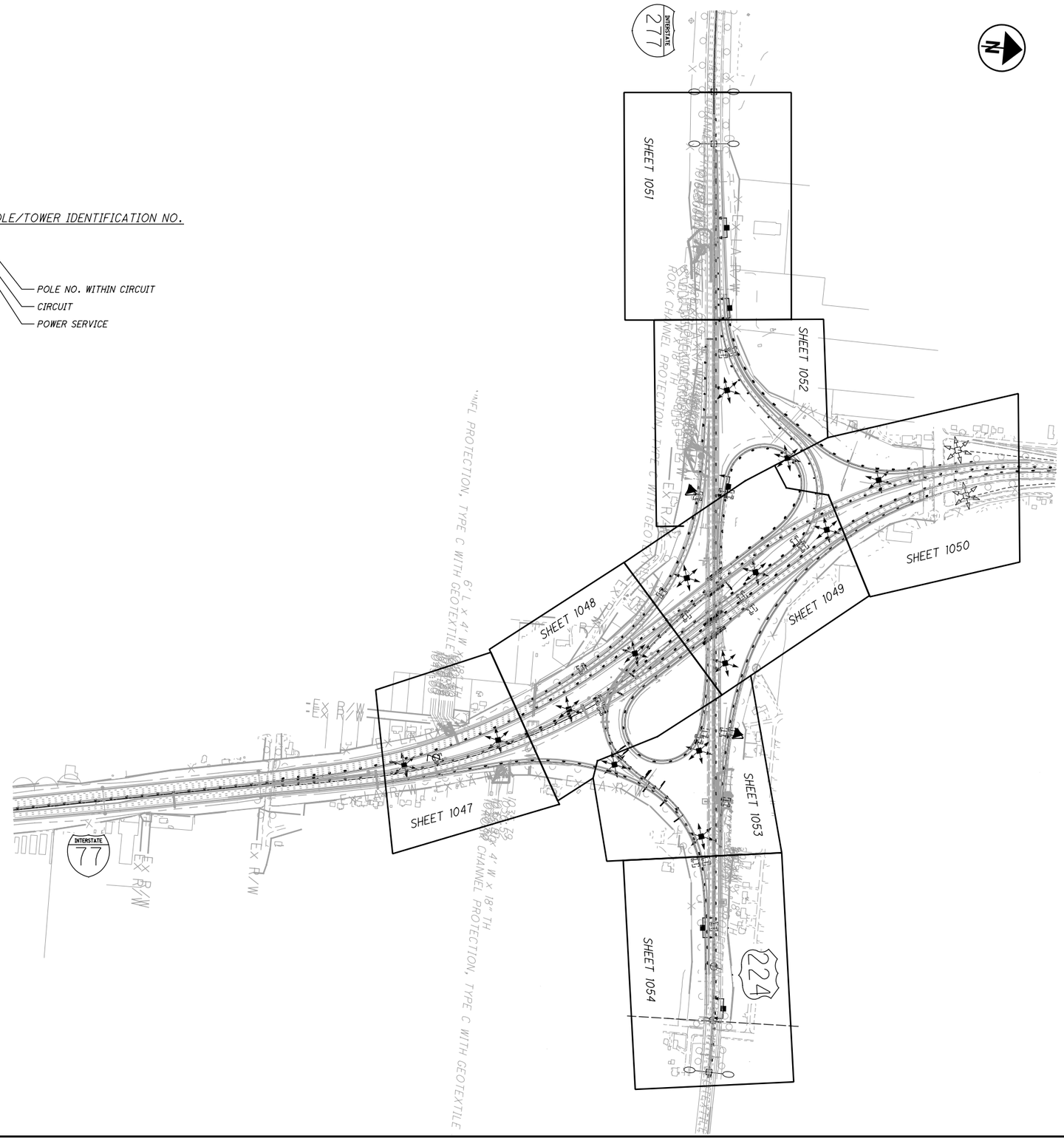
PLAN LEGEND (ODOT - MAINLINE & RAMPS)		
EXIST.	PROP.	ITEM
		LIGHT POLE, EXISTING TO REMAIN
		HIGH MAST UNIT, W/ 4-LED ASYMMETRIC LUMINAIRES
		HIGH MAST UNIT W/ 6-LED SYMMETRIC LUMINAIRES
		UNDERPASS LUMINAIRE, LED (3,100-4,100 LUMENS)
AB-4	AB-4	LIGHT POLE/TOWER, IDENTIFICATION NO.
		1 ½" DUCT CABLE IN 24" DEEP TRENCH
		POWER SERVICE
		INDICATES CIRCUIT & NO. OF SINGLE CONDUCTORS IN CABLE OR CONDUIT (CABLE SIZE INDICATED)
CKT X		ACTIVE EXIST. CIRCUIT
MJ-2	MJ-2	MEDIAN JUNCTION BOX
PB-2	PB-2	PULL BOX, IDENTIFICATION NO.
PB-R		PULL BOX, EXISTING TO BE REMOVED
		2" CONDUIT, 725.04
		3" CONDUIT, 725.04
		STUB AND CAP CONDUIT ELL
		STRUCTURE GROUND

LIGHT POLE/TOWER IDENTIFICATION NO.





CALCULATED . CHECKED .

LIGHTING SHEET INDEX

SUM-77 / 277 / 224
VARIOUS

1044
1288

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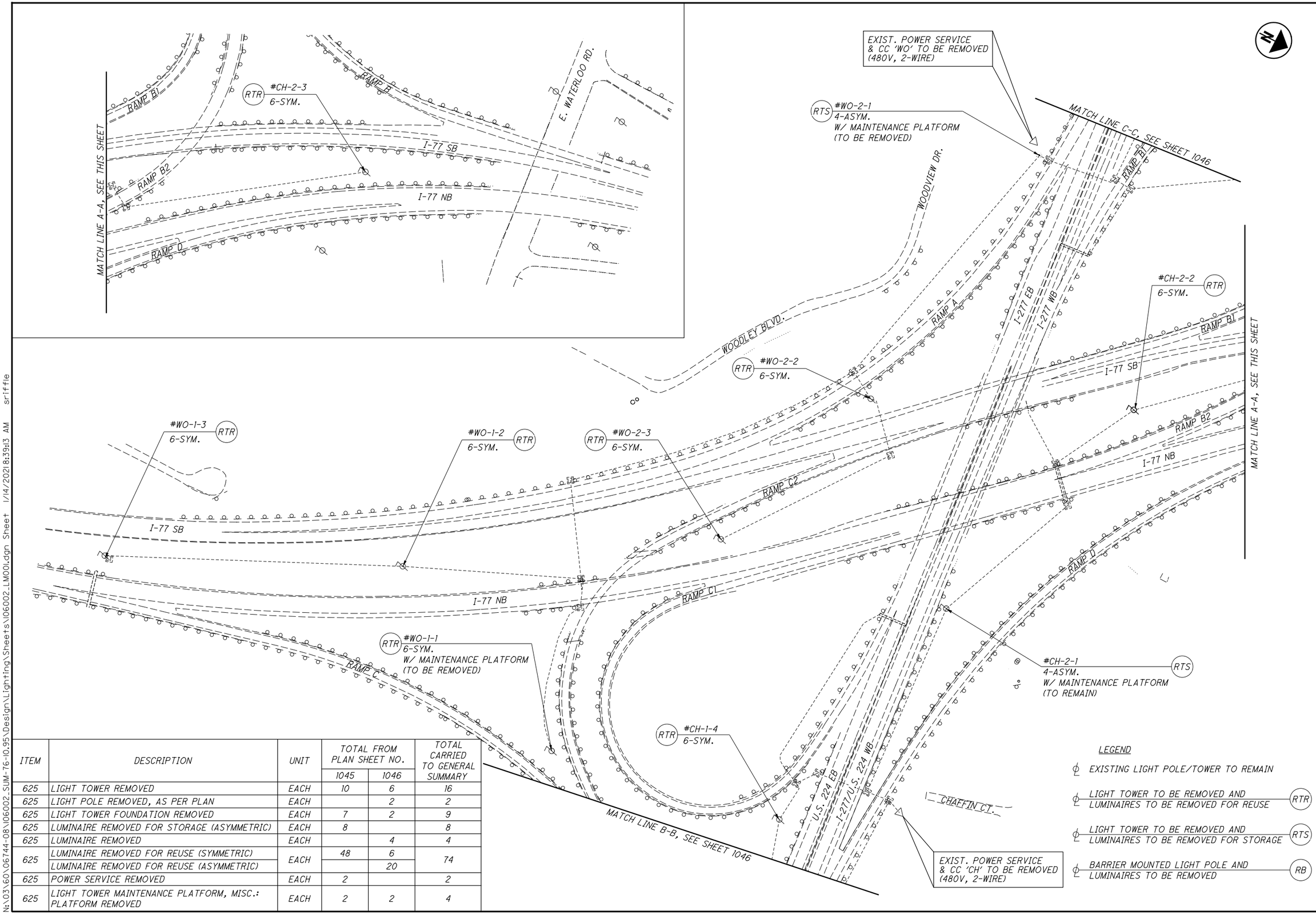
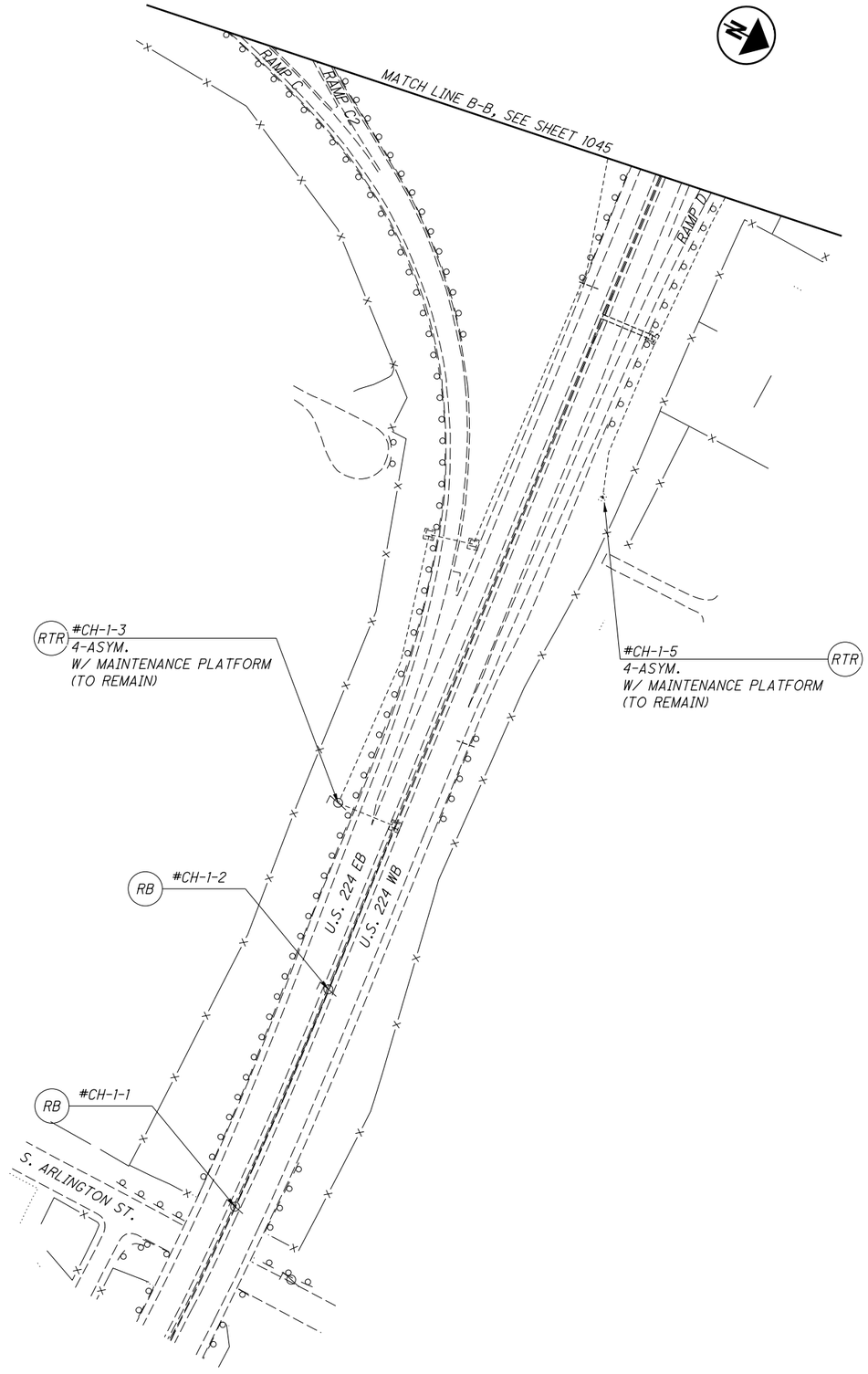


ITEM	DESCRIPTION	UNIT	TOTAL FROM PLAN SHEET NO.		TOTAL CARRIED TO GENERAL SUMMARY
			1045	1046	
625	LIGHT TOWER REMOVED	EACH	10	6	16
625	LIGHT POLE REMOVED, AS PER PLAN	EACH		2	2
625	LIGHT TOWER FOUNDATION REMOVED	EACH	7	2	9
625	LUMINAIRE REMOVED FOR STORAGE (ASYMMETRIC)	EACH	8		8
625	LUMINAIRE REMOVED	EACH		4	4
625	LUMINAIRE REMOVED FOR REUSE (SYMMETRIC)	EACH	48	6	74
	LUMINAIRE REMOVED FOR REUSE (ASYMMETRIC)			20	
625	POWER SERVICE REMOVED	EACH	2		2
625	LIGHT TOWER MAINTENANCE PLATFORM, MISC.: PLATFORM REMOVED	EACH	2	2	4

CALCULATED KWR
CHECKED DRB

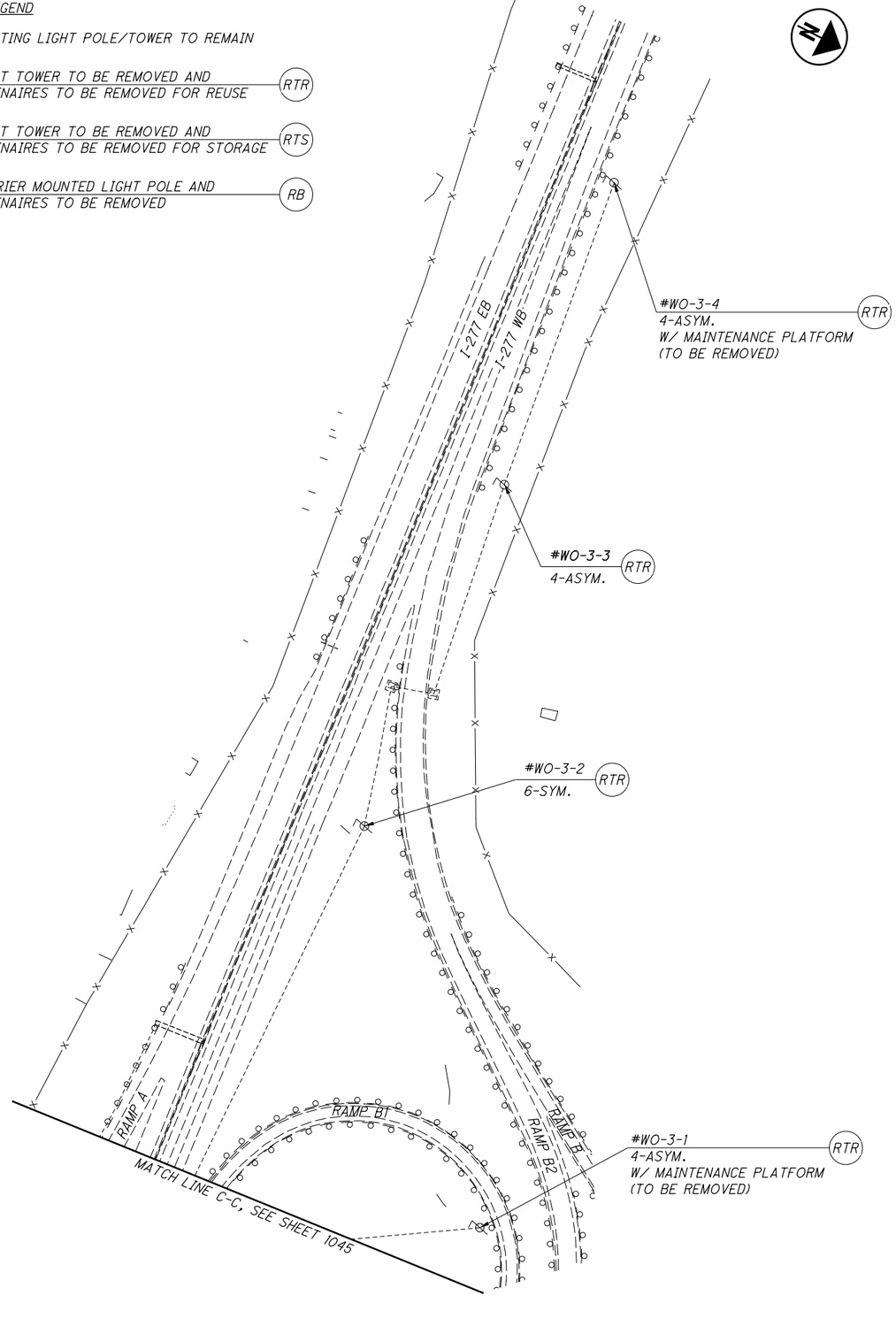
I-77 / I-277 / US 224 INTERCHANGE LIGHTING REMOVAL PLAN

SUM-77 / 277 / 224
VARIOUS



LEGEND

- EXISTING LIGHT POLE/TOWER TO REMAIN
- LIGHT TOWER TO BE REMOVED AND LUMINAIRES TO BE REMOVED FOR REUSE — RTR
- LIGHT TOWER TO BE REMOVED AND LUMINAIRES TO BE REMOVED FOR STORAGE — RTS
- BARRIER MOUNTED LIGHT POLE AND LUMINAIRES TO BE REMOVED — RB



CALCULATED KWR
CHECKED DRB

I-77 / I-277 / US 224 INTERCHANGE LIGHTING REMOVAL PLAN

SUM-77 / 277 / 224
VARIOUS

1046
1288

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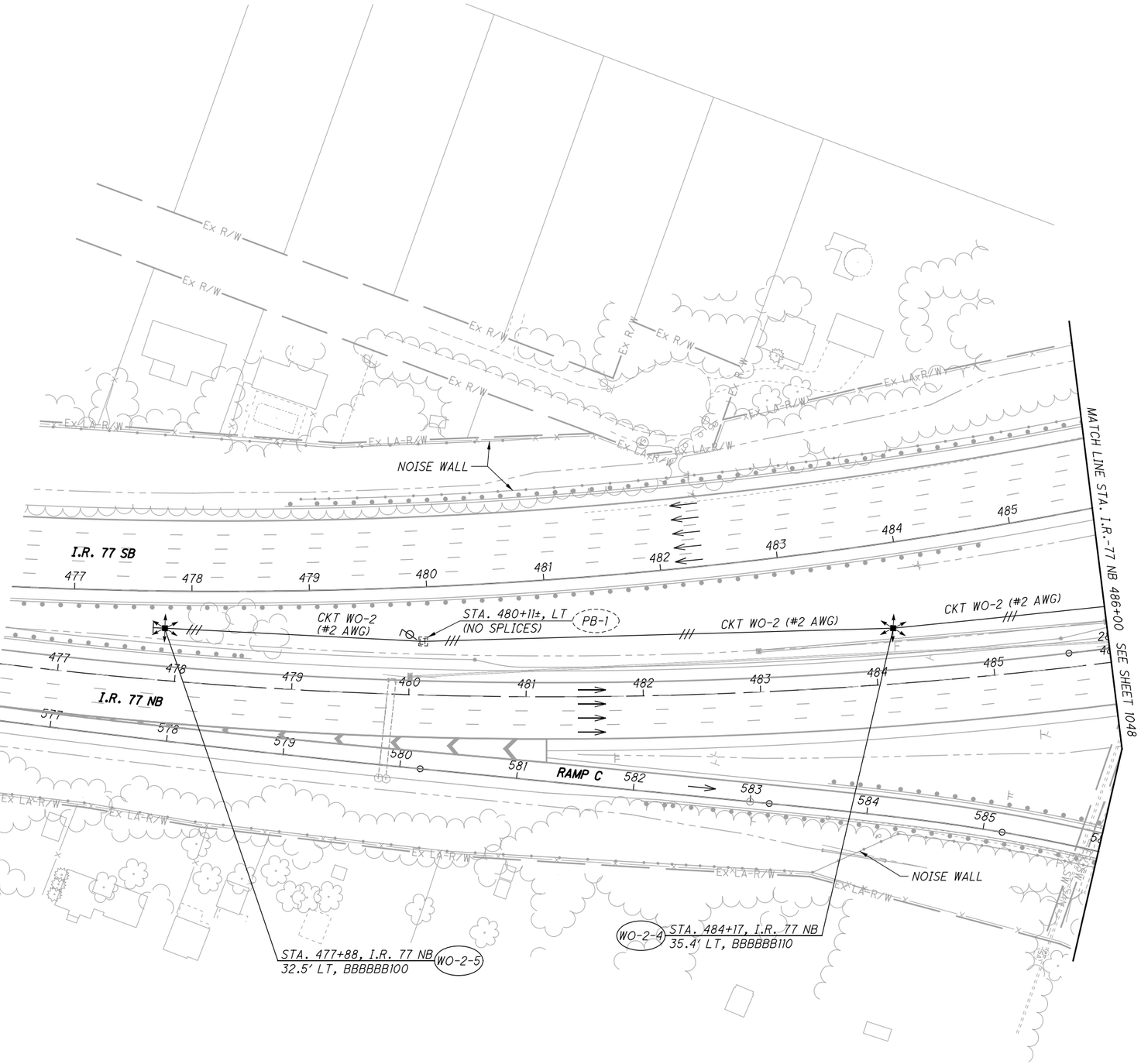

NOTES:

1. OFFSETS TO LIGHT POLES/TOWERS ARE FROM THE NEAREST EOP.
2. OFFSETS TO PULL BOXES ARE FROM ℄/℄.
3. SEE SHEET 1044 FOR LIGHTING LEGEND.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED . CHECKED .

LIGHTING PLAN
I.R.-77 NB STA. 476+50 TO I.R.-77 NB STA. 486+00

SUM-77/277/224
VARIOUS

1047
1288

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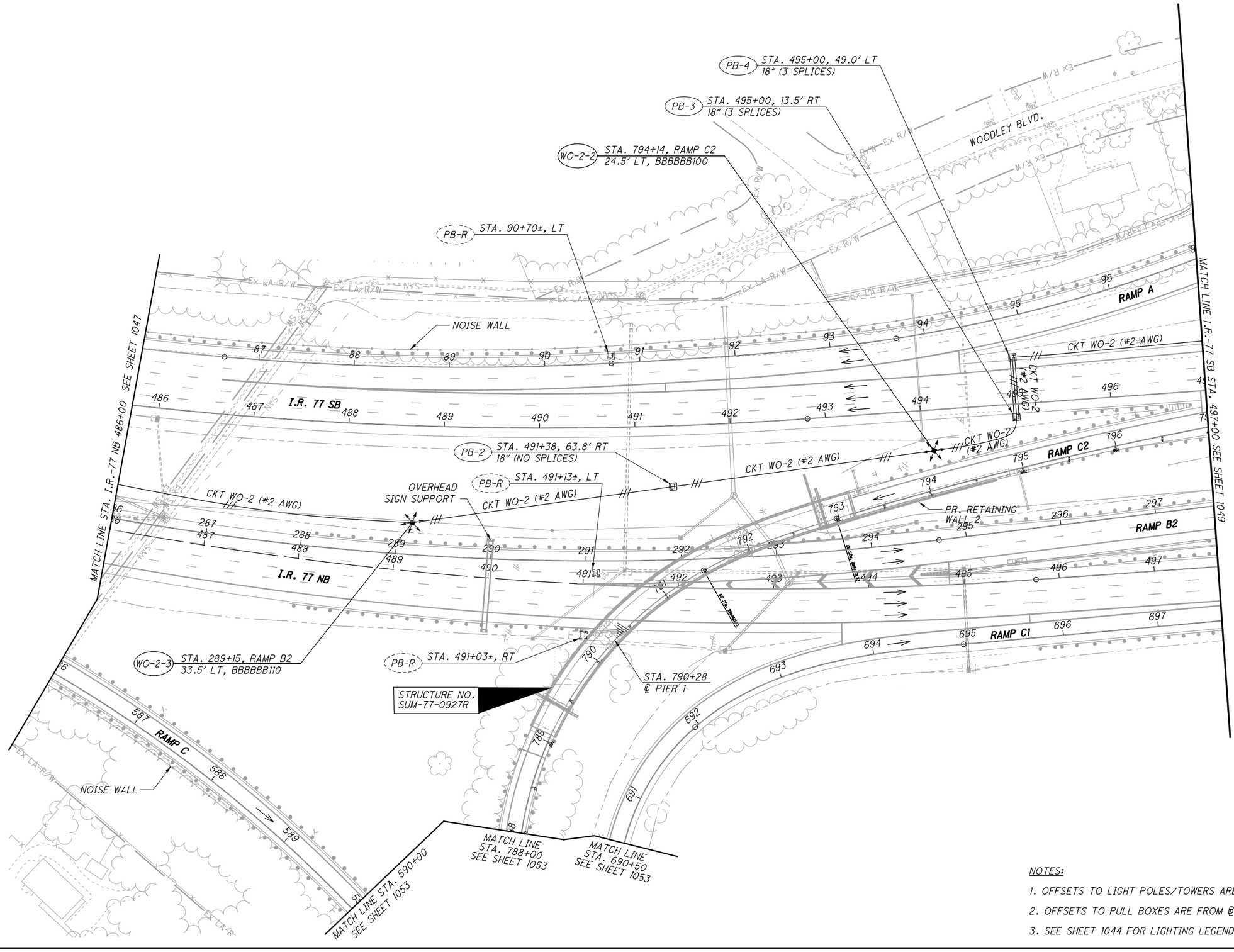

NOTES:

1. OFFSETS TO LIGHT POLES/TOWERS ARE FROM THE NEAREST EOP.
2. OFFSETS TO PULL BOXES ARE FROM ℄/℄.
3. SEE SHEET 1044 FOR LIGHTING LEGEND.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED . CHECKED .

LIGHTING PLAN
I.R.-77 NB STA. 486+00 TO I.R.-77 SB STA. 497+00

SUM-77 / 277 / 224
VARIOUS

1048
1288

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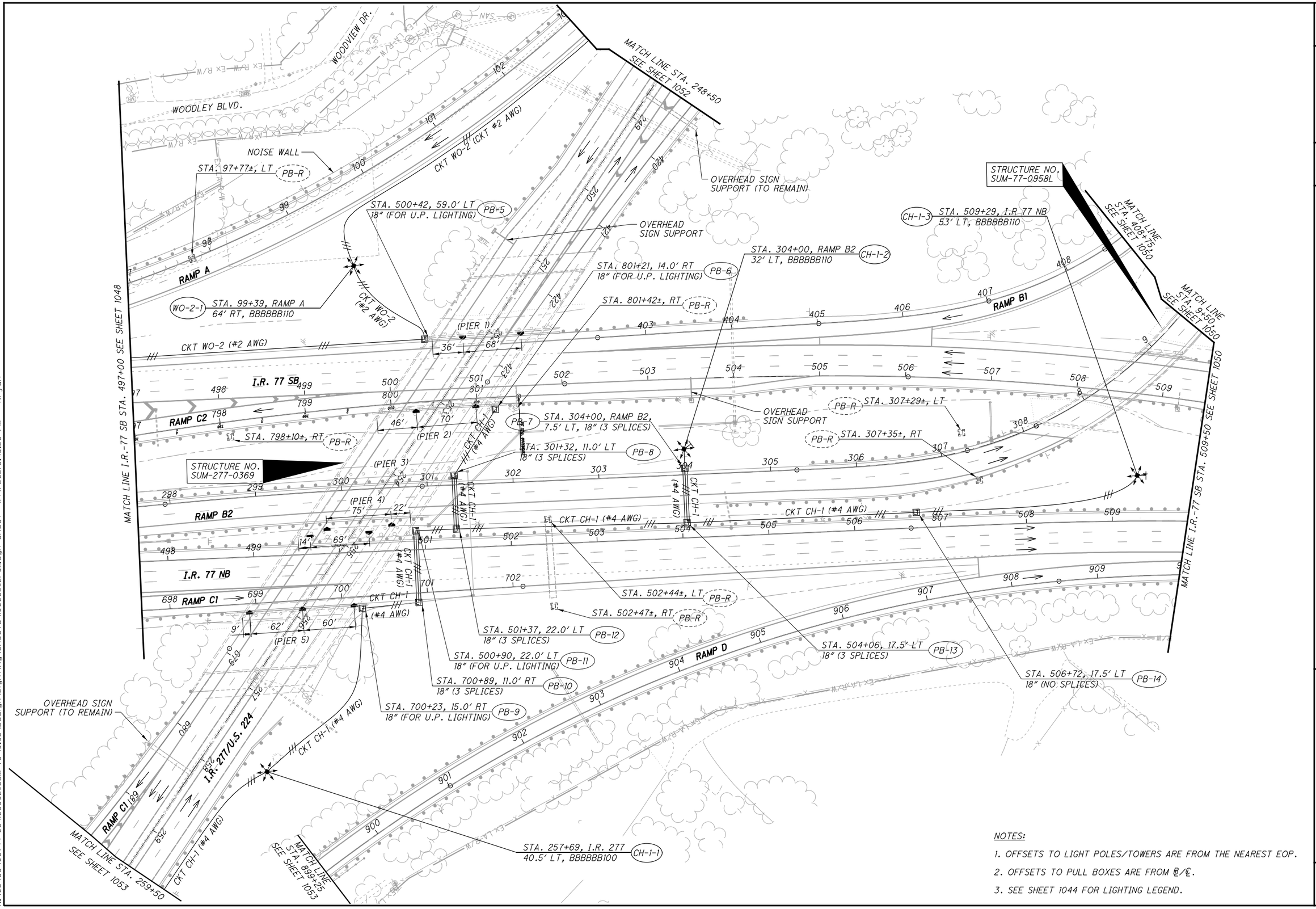

NOTES:

1. OFFSETS TO LIGHT POLES/TOWERS ARE FROM THE NEAREST EOP.
2. OFFSETS TO PULL BOXES ARE FROM ℄/℄.
3. SEE SHEET 1044 FOR LIGHTING LEGEND.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED . CHECKED .

LIGHTING PLAN
I.R.-77 SB STA. 497+00 TO I.R.-77 SB STA. 509+50

SUM-77 / 277 / 224
VARIOUS

1049
1288

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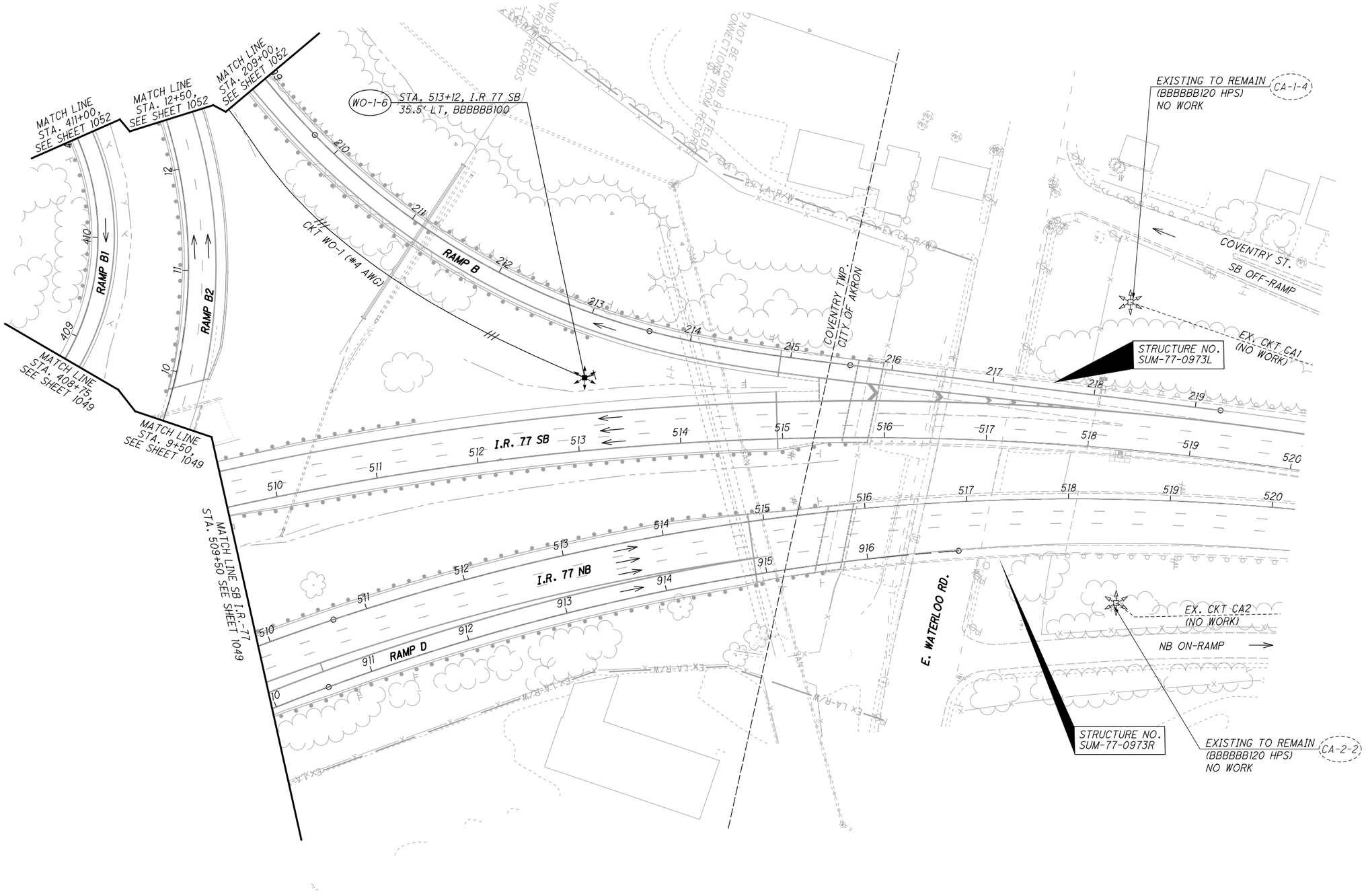

NOTES:

1. *OFFSETS TO LIGHT POLES/TOWERS ARE FROM THE NEAREST EOP.*
2. *OFFSETS TO PULL BOXES ARE FROM ℄/℄.*
3. *SEE SHEET 1044 FOR LIGHTING LEGEND.*

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED . CHECKED .

LIGHTING PLAN
I.R.-77 SB STA. 509+50 TO I.R.-77 SB STA. 520+00

SUM-77 / 277 / 224
VARIOUS

1050
1288

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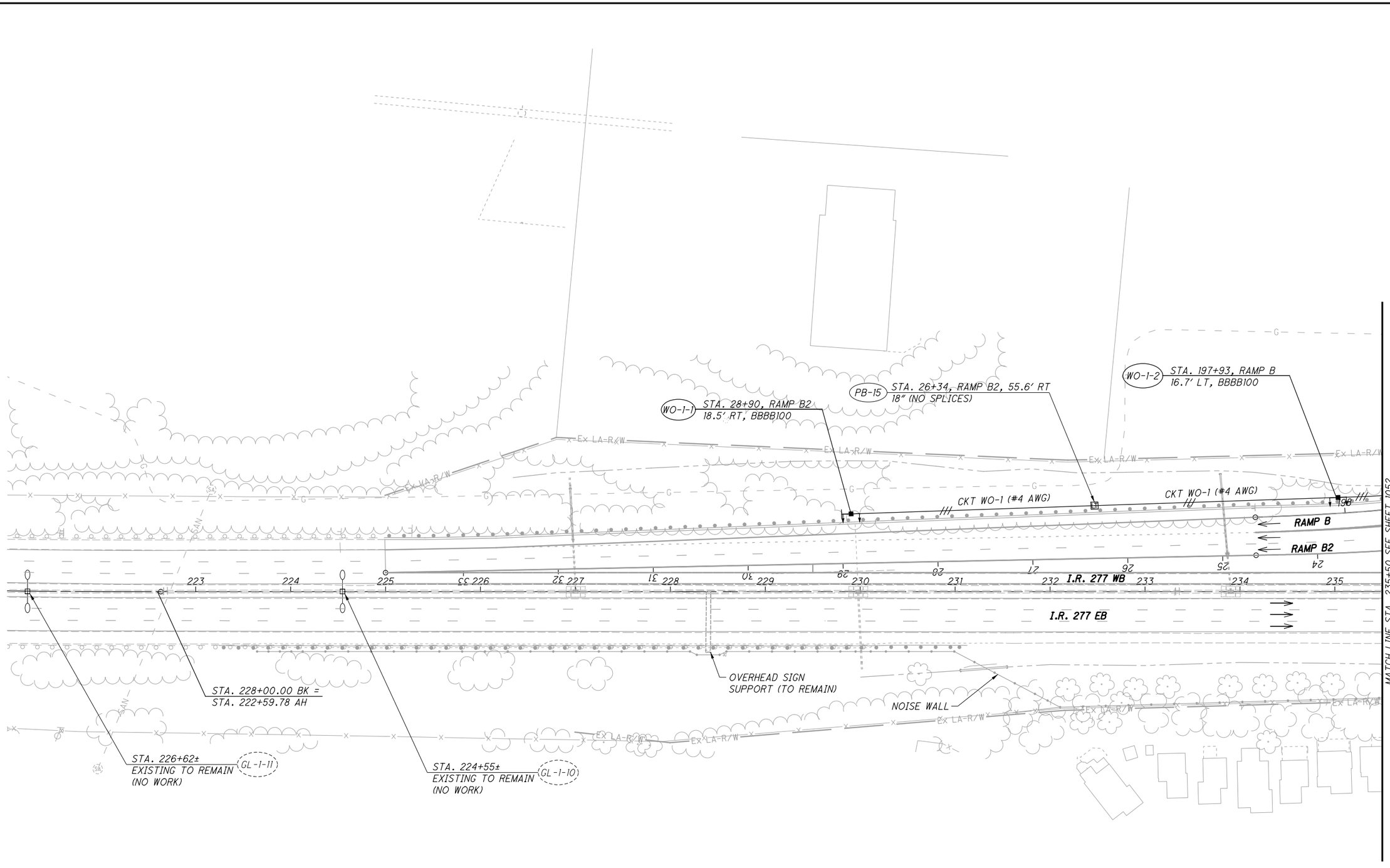

NOTES:

1. OFFSETS TO LIGHT POLES/TOWERS ARE FROM THE NEAREST EOP.
2. OFFSETS TO PULL BOXES ARE FROM ℄/℄.
3. SEE SHEET 1044 FOR LIGHTING LEGEND.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED .
CHECKED .

LIGHTING PLAN
I.R.-277 STA. 223+00 TO STA. 235+50

SUM-77 / 277 / 224
VARIOUS

1051
1288

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PB-16 STA. 104+69, RAMP A, 22.5' LT
24" (NO SPLICES)

3" CONDUIT W/ CKTS
WO-1 (#4 AWG)
WO-2 (#2 AWG)

3" CONDUIT W/ CKTS
WO-1 (#4 AWG)
WO-2 (#2 AWG)

PB-17 STA. 104+80, RAMP A, 46.5' LT
24" (INCIDENTAL TO POWER SERVICE)

INSTALL NEW POWER SERVICE 'WO'
ON NEW SERVICE POLE ADJACENT TO EXISTING
240/480V, 1ϕ, 3-WIRE W/ 2 CIRCUITS (1 AND 2)
STA. 104+81±, RAMP A, LT.

REMOVE EXISTING
POWER SERVICE 'WO'

DETAIL 'A'

PB-18 STA. 200+49, RAMP B, 11.5' LT
18" (3 SPLICES)

PB-19 STA. 21+07, RAMP B2, 7.5' LT
18" (3 SPLICES)

WO-1-3 STA. 240+27, I.R. 277
64' LT, BBBBBB100

PB-20 STA. 13+08, RAMP B2, 42.0' RT
18" (3 SPLICES)

PB-21 STA. 13+08, RAMP B2, 11.0' LT
18" (3 SPLICES)

PB-22 STA. 411+31, RAMP B1, 22.0' RT
18" (3 SPLICES)

MATCH LINE
STA. 209+00
SEE SHEET 1050

MATCH LINE
STA. 212+50
SEE SHEET 1050

MATCH LINE
STA. 411+00
SEE SHEET 1050

CKT WO-1
(#4 AWG)

PB-24 STA. 104+69, RAMP A, 31.5' RT
24" (3 SPLICES CKT WO-2)

PB-23 STA. 243+56, I-277, 45.7' LT
18" (NO SPLICES)

PB-25 STA. 411+31, RAMP B1, 17.0' LT
18" (3 SPLICES)

WO-1-5 STA. 411+50, RAMP B1
16.5' LT, BBBBBB110

PB-26 STA. 414+33, RAMP B1, 17.0' LT
18" (NO SPLICES)

WO-1-4 STA. 417+11, RAMP B1
18' LT, BBBB100

PB-R STA. 417+57±, RT

PB-R STA. 417+59±, LT

PB-27 STA. 417+62, RAMP B1, 14.0' LT
18" (3 SPLICES)

PB-28 STA. 417+62, RAMP B1, 22.5' RT
18" (3 SPLICES)

RAMP B
RAMP B1
RAMP B2
RAMP A

I.R. 277

Ex LA R/W

Ex R/W

OVERHEAD
SIGN SUPPORT

NOISE WALL

NOISE WALL

SEE DETAIL 'A'

MATCH LINE STA. 235+50
SEE SHEET 1051

MATCH LINE STA. 248+50
SEE SHEET 1049

NOTES:

1. OFFSETS TO LIGHT POLES/TOWERS ARE FROM THE NEAREST EOP.
2. OFFSETS TO PULL BOXES ARE FROM ℄/℄.
3. SEE SHEET 1044 FOR LIGHTING LEGEND.

HORIZONTAL
SCALE IN FEET
0 25 50 100

CALCULATED .
CHECKED .

LIGHTING PLAN
I.R.-277 / U.S. 224 STA. 235+50 TO STA. 248+50

SUM-77 / 277 / 224
VARIOUS

1052
1288

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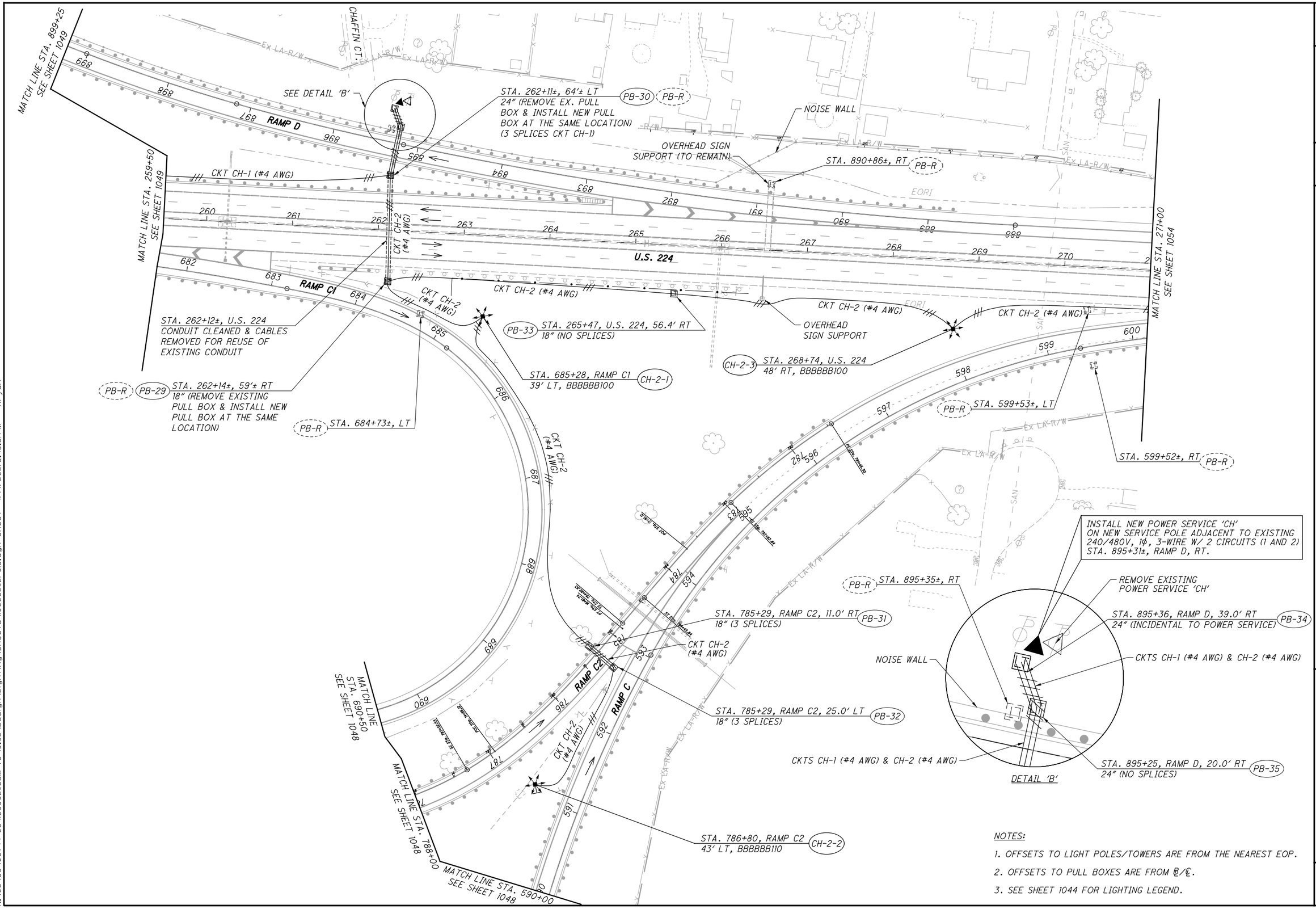

NOTES:

1. OFFSETS TO LIGHT POLES/TOWERS ARE FROM THE NEAREST EOP.
2. OFFSETS TO PULL BOXES ARE FROM ℄/℄.
3. SEE SHEET 1044 FOR LIGHTING LEGEND.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED . CHECKED .

LIGHTING PLAN
I.R.-277/U.S. 224 STA. 259+50 TO STA. 271+00
SUM-77/277/224
VARIOUS

1053
1288

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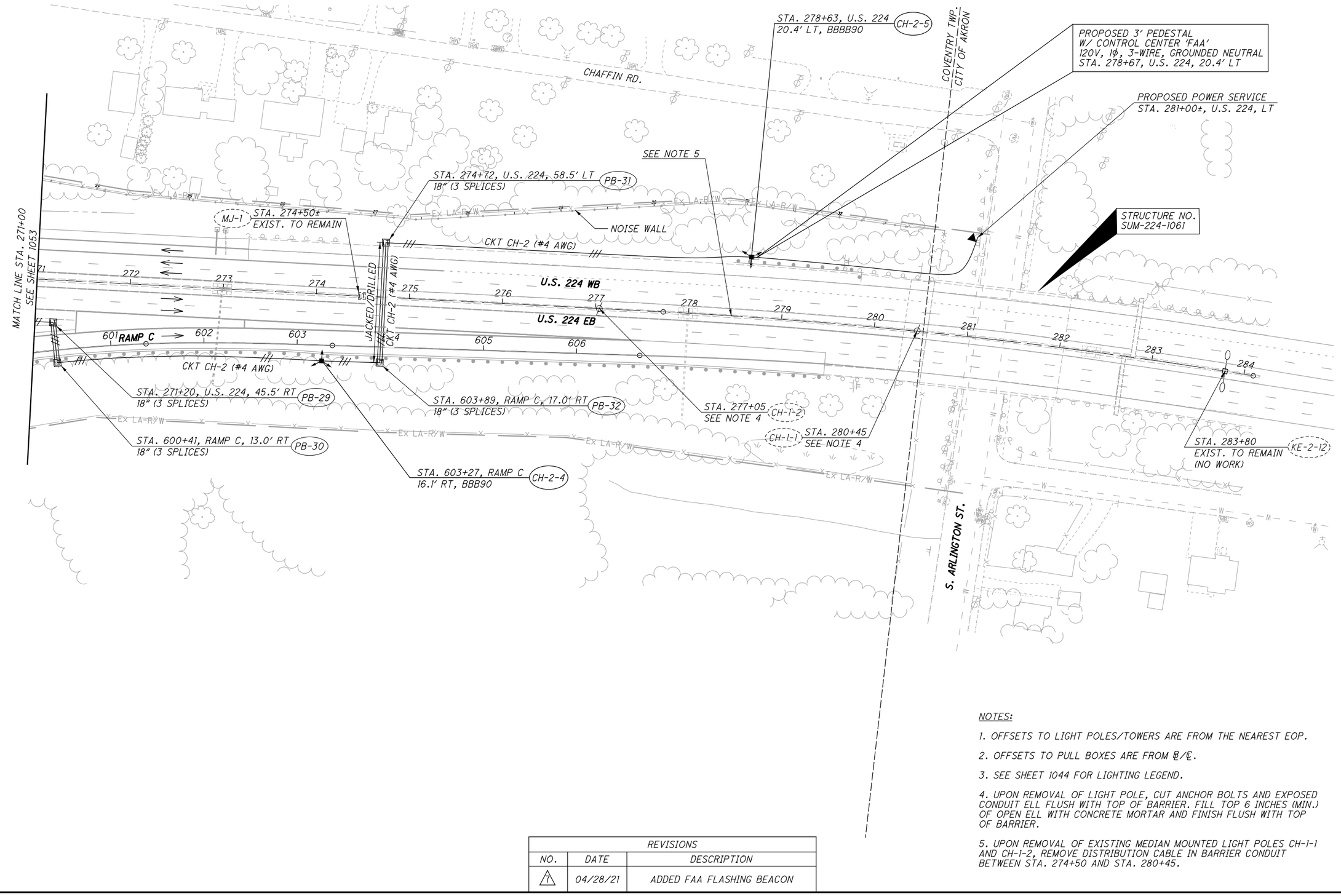

REVISIONS		
NO.	DATE	DESCRIPTION
1	04/28/21	ADDED FAA FLASHING BEACON

NOTES:

1. OFFSETS TO LIGHT POLES/TOWERS ARE FROM THE NEAREST EOP.
2. OFFSETS TO PULL BOXES ARE FROM ℄/℄.
3. SEE SHEET 1044 FOR LIGHTING LEGEND.
4. UPON REMOVAL OF LIGHT POLE, CUT ANCHOR BOLTS AND EXPOSED CONDUIT ELL FLUSH WITH TOP OF BARRIER. FILL TOP 6 INCHES (MIN.) OF OPEN ELL WITH CONCRETE MORTAR AND FINISH FLUSH WITH TOP OF BARRIER.
5. UPON REMOVAL OF EXISTING MEDIAN MOUNTED LIGHT POLES CH-1-1 AND CH-1-2, REMOVE DISTRIBUTION CABLE IN BARRIER CONDUIT BETWEEN STA. 274+50 AND STA. 280+45.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED . CHECKED .

LIGHTING PLAN
U.S. 224 STA. 271+00 TO STA. 284+00
SUM-77/277/224
VARIOUS

1054
1288

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LIGHT TOWER SCHEDULE											
TOWER				LOCATION			ELEV. (FT) (NOTE 2)	FOUNDATION			
NO.	HEIGHT (FT.)	NO. OF LUMINAIRES		ALIGNMENT	STATION	OFFSET (NOTE 1)		DIA. (IN.)	DEPTH (FT) (NOTE 3)	REFERENCE BORING(S) (NOTE 4)	COMMENTS
		SYMMETRIC	ASYMMETRIC								
WO-1-1	100		4	RAMP B2	28+90	18.5' RT	1024.5	36	25	B-097	
WO-1-2	100		4	RAMP B	197+93	16.7' LT	1032.3	36	25	B-011-0.14	
WO-1-3	100	6		I.R. 277	240+27	64.0' LT	1037.2	36	20		
WO-1-4	100		4	RAMP B1	417+11	18.0' LT	1050.9	36	15		
WO-1-5	110	6		RAMP B1	411+50	16.5' LT	1038.0	36	15		
WO-1-6	100	6		I.R. 77 SB	513+12	35.5' LT	1041.7	36	25	B-007-1.14	
WO-2-1	110	6		RAMP A	99+39	64.0' RT	1035.4	36	25		
WO-2-2	100	6		RAMP C2	794+14	24.5' LT	1044.2	36	25		
WO-2-3	110	6		RAMP B2	289+15	33.5' LT	1033.1	36	25		MAY ENCOUNTER ROCK AT 12.5'. SEE C&MS 625.10 FOR ADDITIONAL INFORMATION.
WO-2-4	110	6		I.R. 77 NB	484+17	35.4' LT	1040.4	36	25	B-076	
WO-2-5	100	6		I.R. 77 NB	477+88	32.5' LT	1050.8	36	20		
CH-1-1	100	6		I.R. 277	257+69	40.5' LT	1061.5	36	25		MAY ENCOUNTER ROCK AT 9'. SEE C&MS 625.10 FOR ADDITIONAL INFORMATION.
CH-1-2	110	6		RAMP B2	304+00	32.0' LT	1035.2	36	25		
CH-1-3	110	6		I.R. 77 NB	509+29	53.0' LT	1035.4	36	25		
CH-2-1	100	6		RAMP C1	685+28	39.0' LT	1067.1	36	25		MAY ENCOUNTER ROCK BETWEEN 10' AND 18'. SEE C&MS 625.10 FOR ADDITIONAL INFORMATION.
CH-2-2	110	6		RAMP C2	786+80	43.0' LT	1056.0	36	20		
CH-2-3	100	6		U.S. 224	268+74	48.0' RT	1092.1	36	25		
CH-2-4	90		3	RAMP C	603+27	16.1' RT	1107.0	36	25		
CH-2-5	90		3	U.S. 224	278+63	20.4' LT	1121.0	36	25	B-129	

NOTES:

1. OFFSETS TO LIGHT TOWERS ARE FROM THE NEAREST EOP.
2. ELEVATION IS FINISHED GRADE (EXISTING OR PROPOSED) AT TOWER FOUNDATION CENTERLINE. (NOTE: TOP OF FOUNDATION IS PER HL-20.21)
3. AT LOCATIONS WHERE THE SLOPE IS 6:1 OR GREATER, THE BURIED DEPTH OF FOUNDATION SHALL APPLY TO THE LOW SIDE OF THE SLOPE.
4. UNLESS INDICATED OTHERWISE, REFERENCE BORINGS ARE FROM 1979 HISTORIC BORINGS FOR HIGH MAST LIGHT TOWERS IDENTIFIED AS PROJECT 15115 IN TIMS.

CALCULATED KWR
CHECKED DRB

LIGHT TOWER SCHEDULE

SUM-77 / 277 / 224
VARIOUS

REVISIONS		
NO.	DATE	DESCRIPTION
1	04/28/21	ADDED FAA FLASHING BEACON

10155
1288

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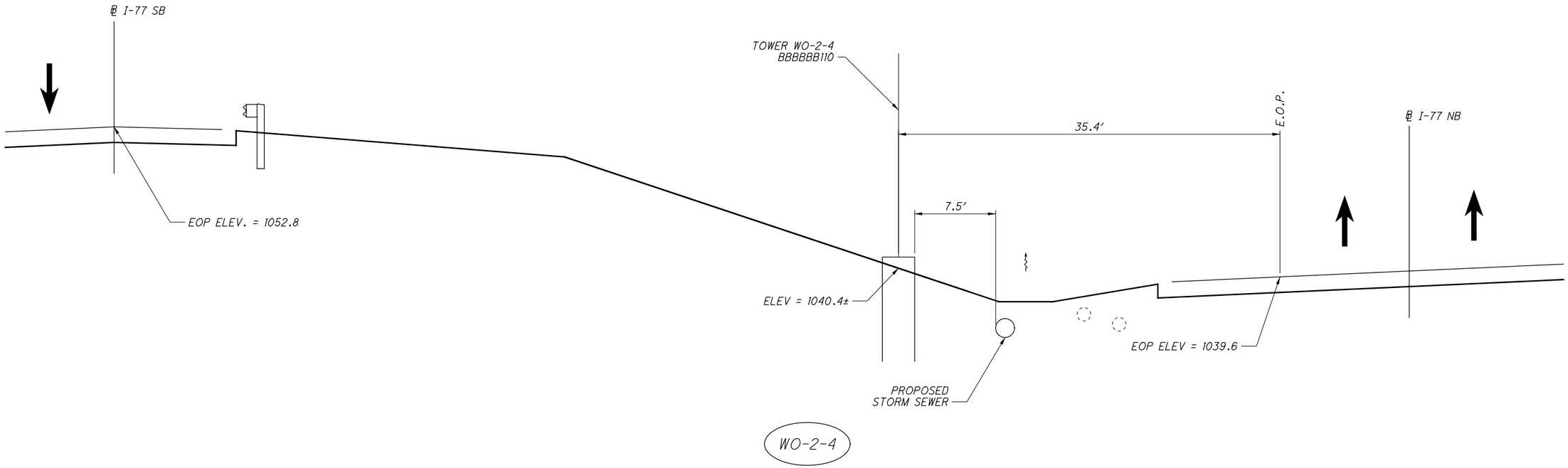
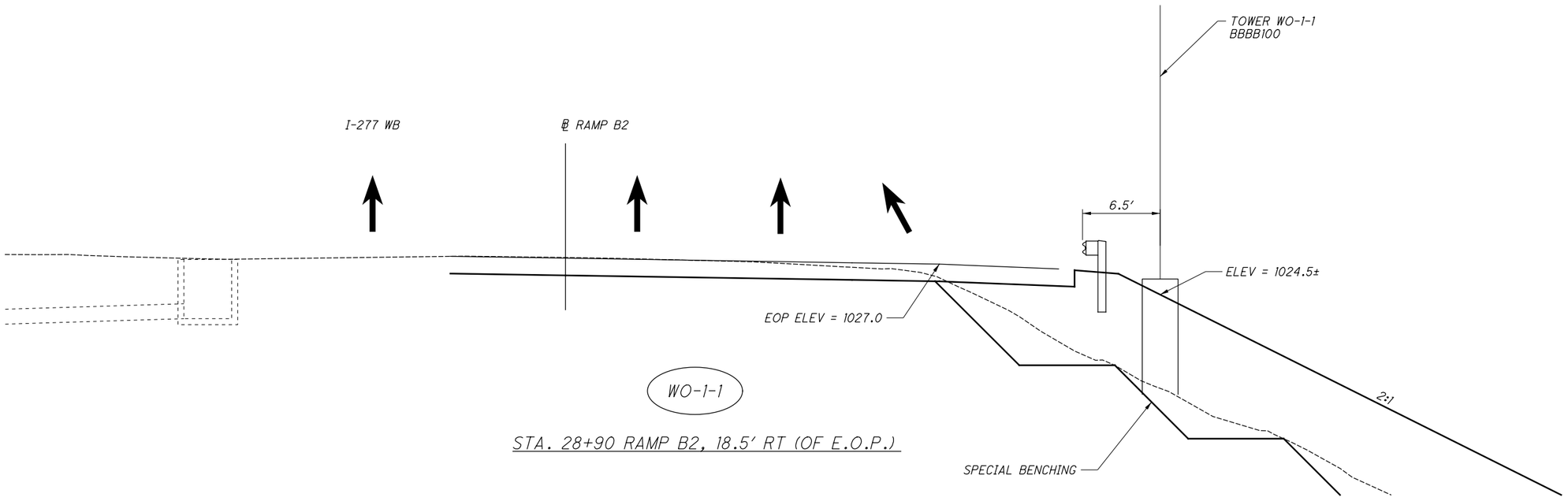


STA. 484+17 I-77 NB, 35.4' LT (OF E.O.P.)



STA. 28+90 RAMP B2, 18.5' RT (OF E.O.P.)

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED KWR
CHECKED DRB

LIGHTING DETAILS
TOWER WO-2-4 & WO-1-1 ELEVATIONS

SUM-77/277/224
VARIOUS

1056
1288

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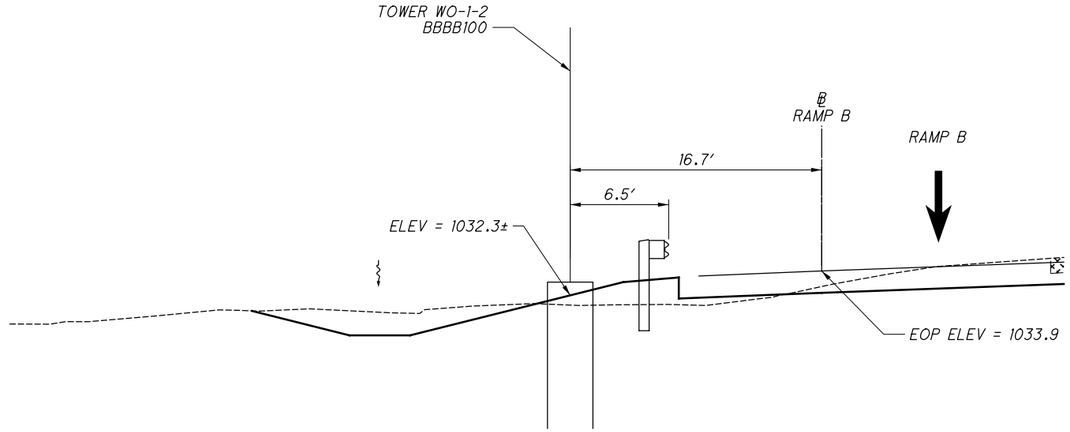
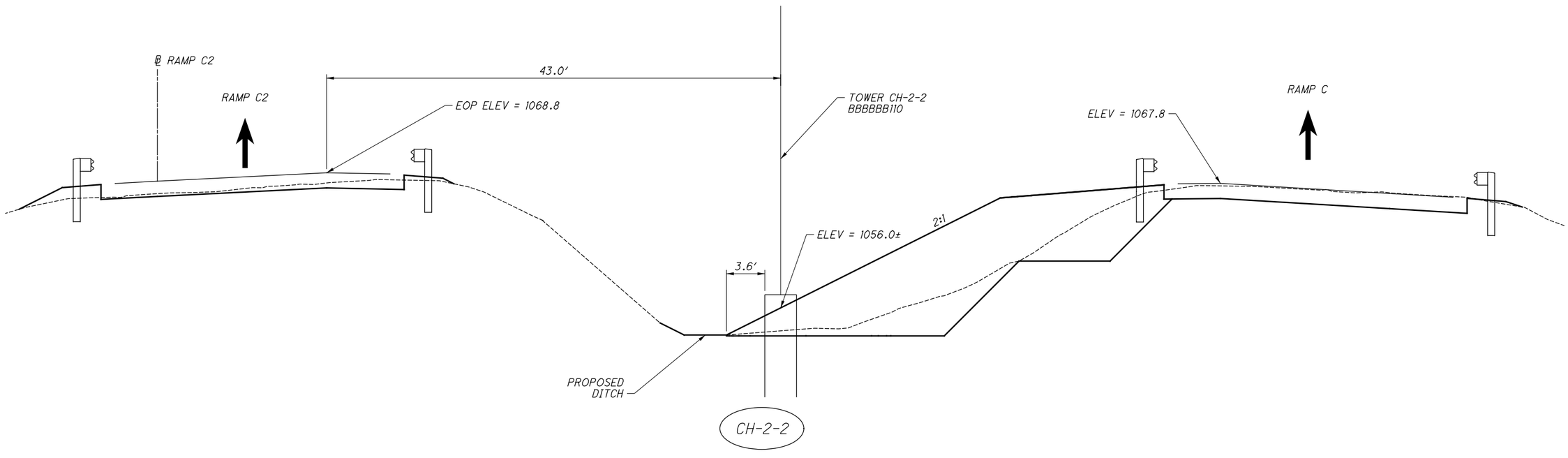


WO-1-2

STA. 197+93 RAMP B, 16.7′ LT (E.O.P.)



CH-2-2

STA. 786+80 RAMP C2, 43.0′ LT (E.O.P.)

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED KWR
CHECKED DRB

LIGHTING DETAILS
TOWER WO-1-2 & CH-2-2 ELEVATIONS

SUM-77-277-224
VARIOUS

1057
1288

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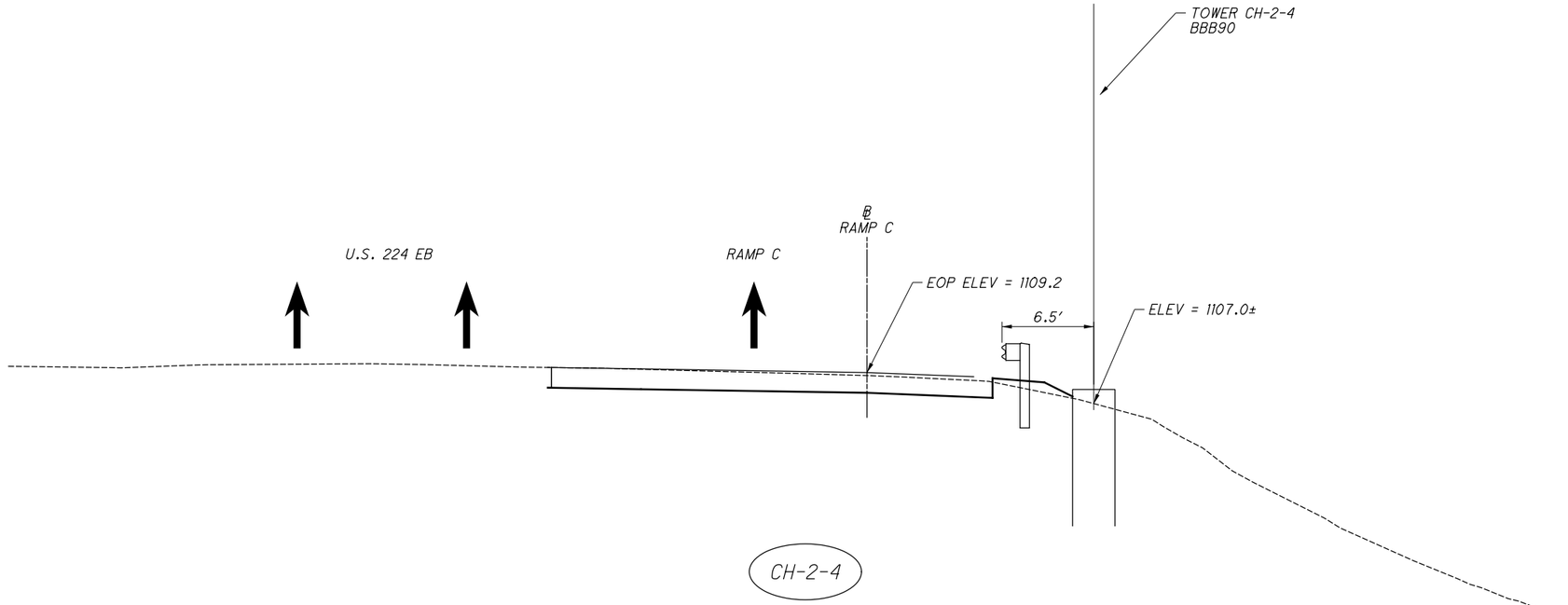
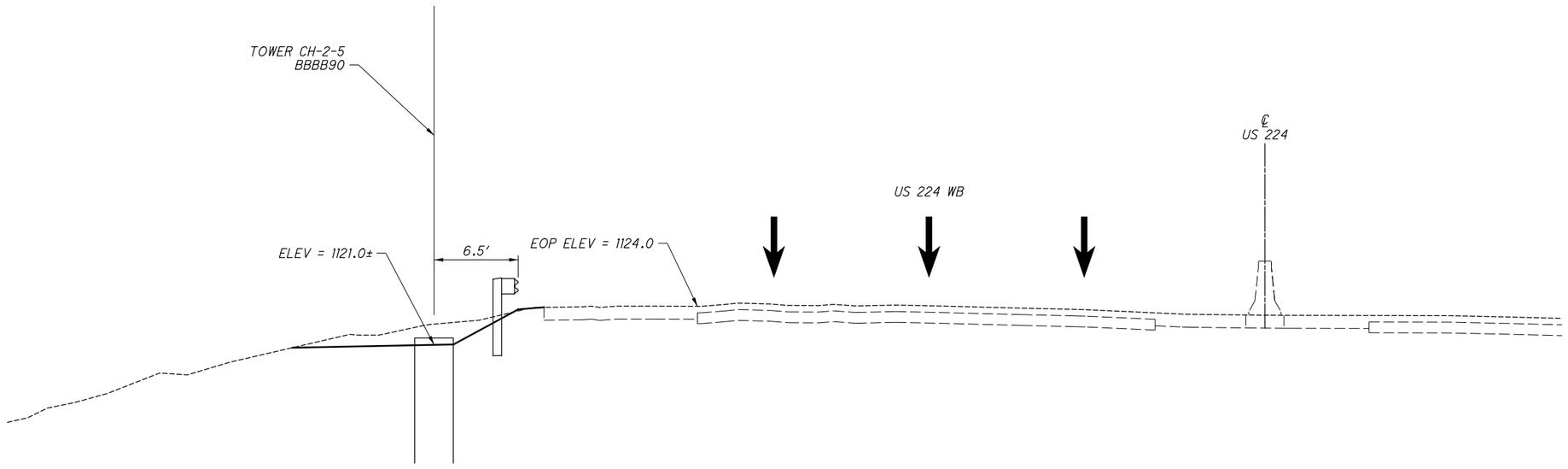


CH-2-4

STA. 603+27 RAMP C, 16.1′ RT (E.O.P.)



CH-2-5

STA. 278+63 US 224, 20.4′ LT (E.O.P.)

REVISIONS		
NO.	DATE	DESCRIPTION
7	04/28/21	ADDED FAA FLASHING BEACON

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED KWR
CHECKED DRB

LIGHTING DETAILS
TOWER CH-2-4 & CH-2-5 ELEVATION

SUM-77/277/224
VARIOUS

1058
1288

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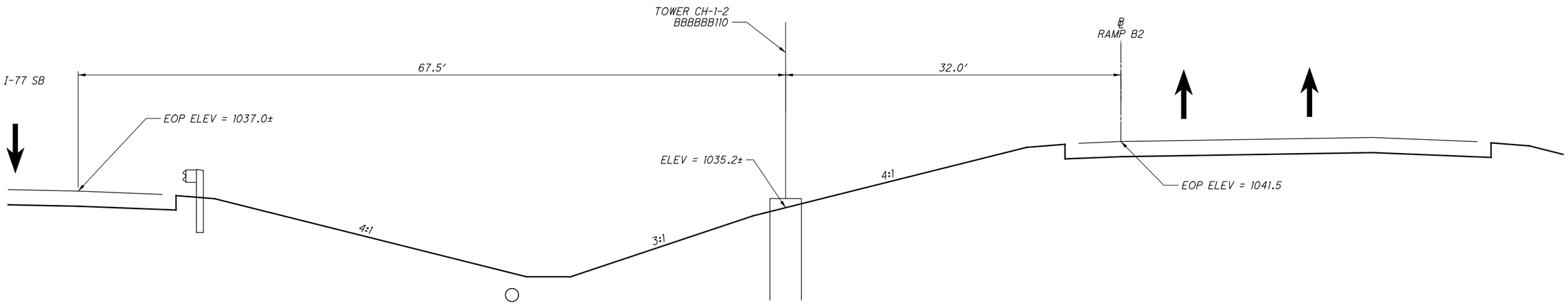

CH-1-2

STA. 304+00 RAMP B2, 32.0' LT (E.O.P.)

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED KWR
CHECKED DRB

LIGHTING DETAILS
TOWER CH-1-2 ELEVATION

SUM-77/277/224
VARIOUS

1059
1288

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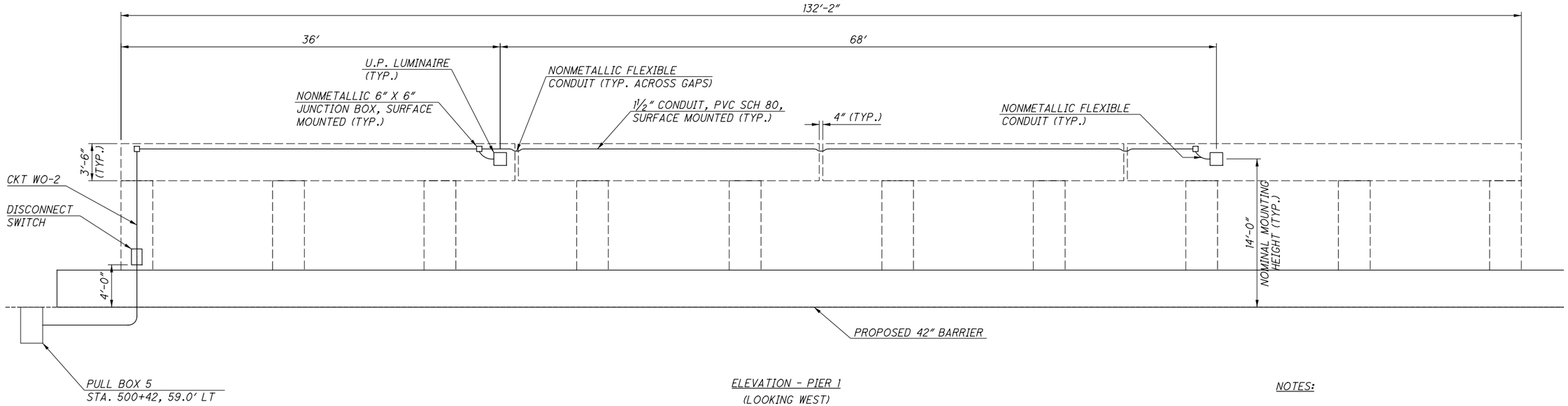
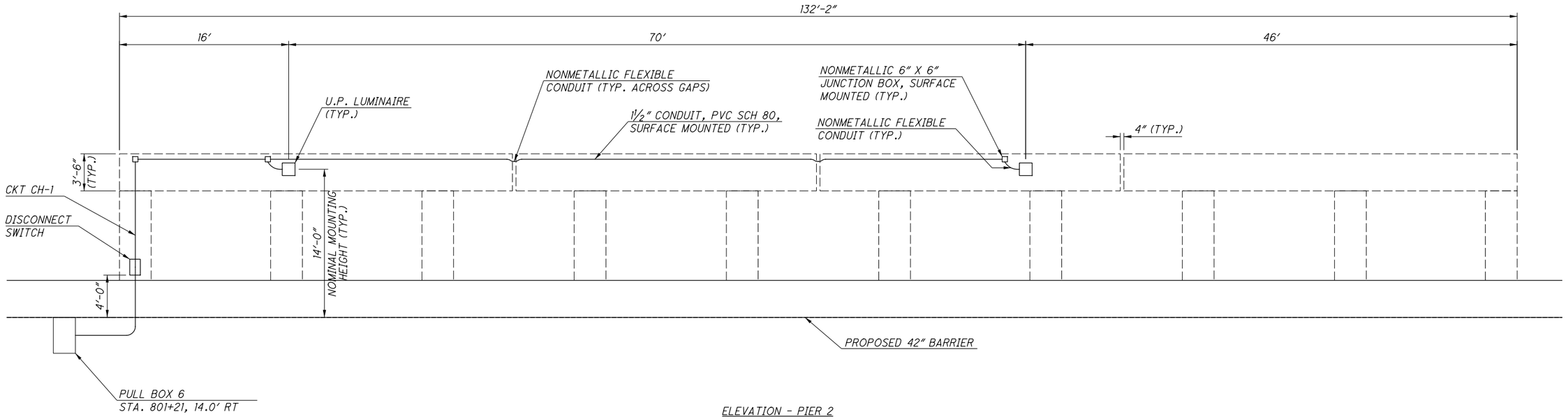


ELEVATION - PIER 1
(LOOKING WEST)
STA. 252+00

NOTES:

1. SECTIONS OF FLEXIBLE CONDUIT SHALL NOT EXCEED 30" IN LENGTH UNLESS OTHERWISE DIRECTED BY THE ENGINEER.



ELEVATION - PIER 2
(LOOKING EAST)
STA. 253+15

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED KWR
CHECKED DRB

LIGHTING DETAILS - UNDERPASS ELEVATIONS

SUM-277-0369 PIERS 1 & 2

SUM-77 / 277 / 224
VARIOUS

1060
1288

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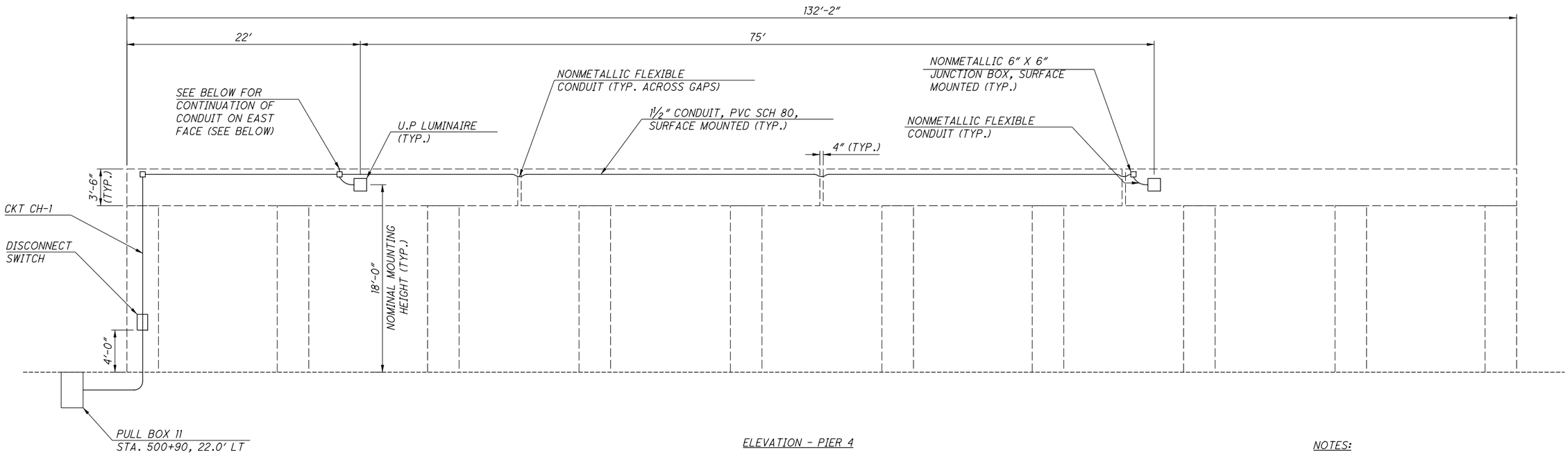
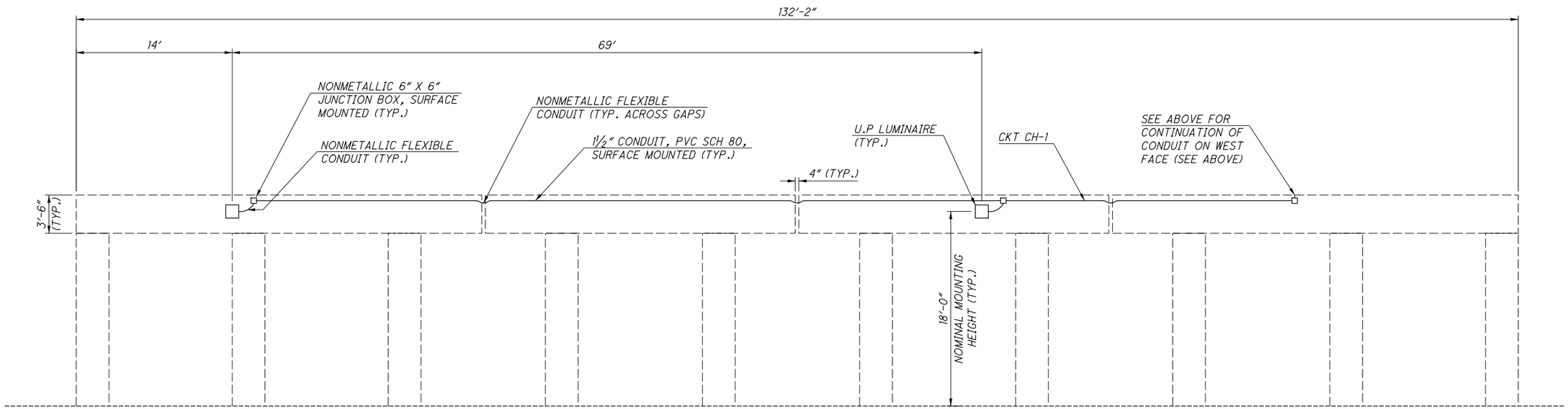


ELEVATION - PIER 4

(LOOKING EAST)
STA. 254+80

NOTES:

1. SECTIONS OF FLEXIBLE CONDUIT SHALL NOT EXCEED 30" IN LENGTH UNLESS OTHERWISE DIRECTED BY THE ENGINEER.



ELEVATION - PIER 4

(LOOKING WEST)
STA. 254+80

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED KWR
CHECKED DRB

LIGHTING DETAILS - UNDERPASS ELEVATIONS
SUM-277-0369 PIER 4

SUM-77 / 277 / 224
VARIOUS

1061
1288

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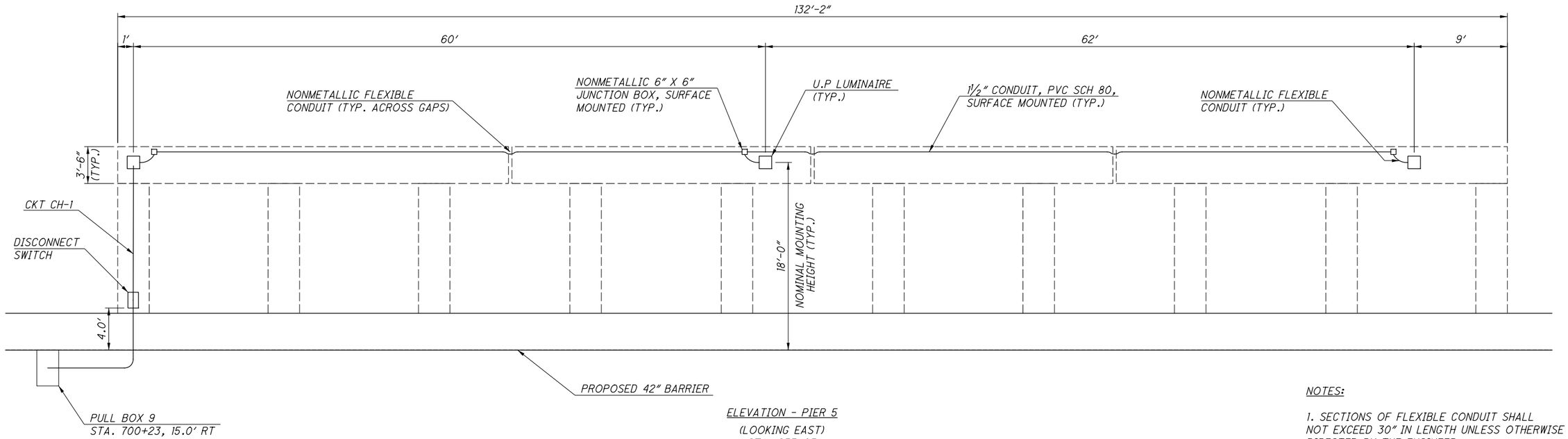

ELEVATION - PIER 5

(LOOKING EAST)
STA. 255+95

NOTES:

1. SECTIONS OF FLEXIBLE CONDUIT SHALL NOT EXCEED 30" IN LENGTH UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED KWR
CHECKED DRB

LIGHTING DETAILS - UNDERPASS ELEVATIONS
SUM-277-0369 PIER 5

SUM-77/277/224
VARIOUS

1062
1288

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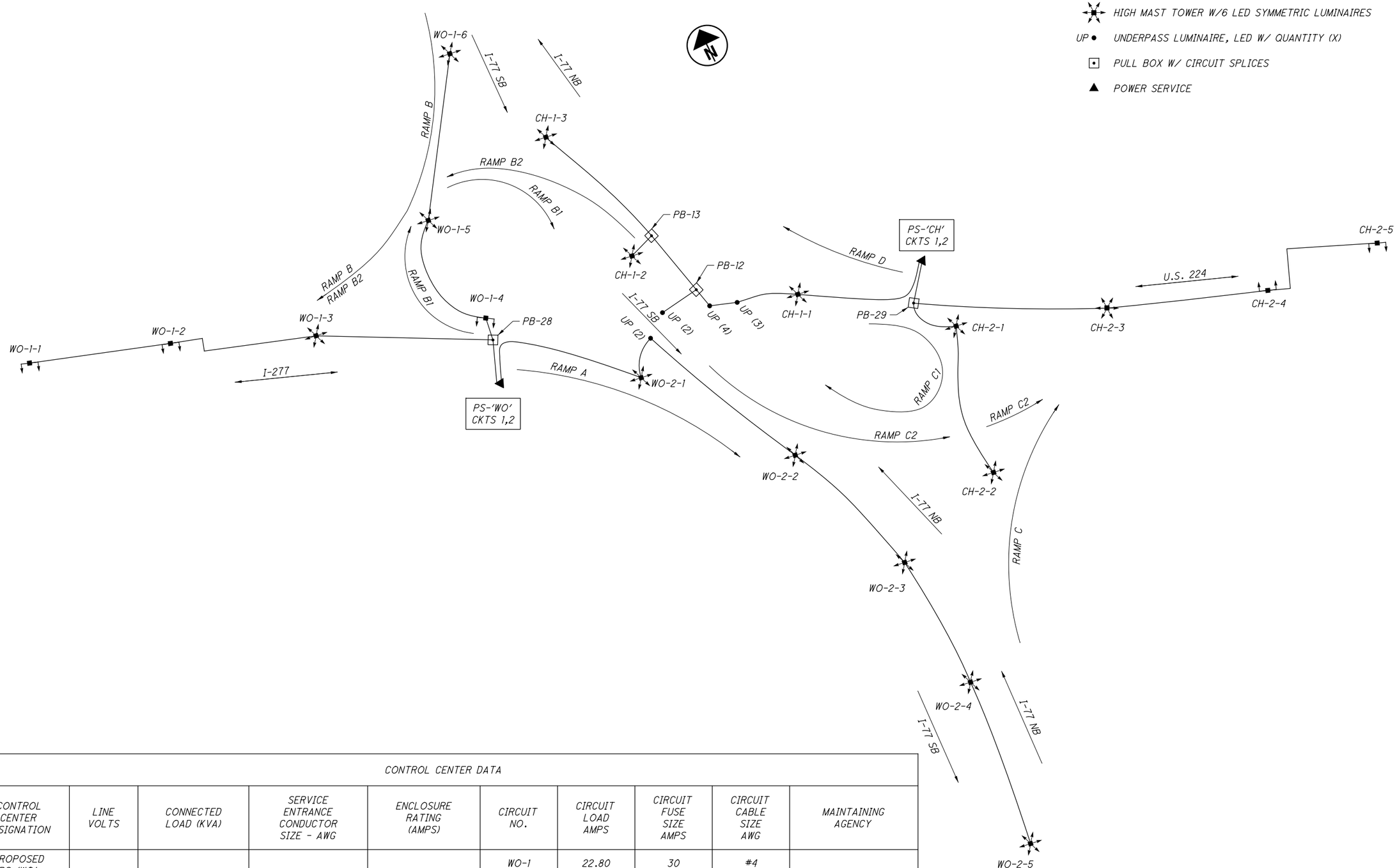
SCHEMATIC LEGEND

- HIGH MAST TOWER W/4 LED ASYMMETRIC LUMINAIRES
- HIGH MAST TOWER W/6 LED SYMMETRIC LUMINAIRES
- UP • UNDERPASS LUMINAIRE, LED W/ QUANTITY (X)
- PULL BOX W/ CIRCUIT SPLICES
- POWER SERVICE



CONTROL CENTER DATA

CONTROL CENTER DESIGNATION	LINE VOLTS	CONNECTED LOAD (KVA)	SERVICE ENTRANCE CONDUCTOR SIZE - AWG	ENCLOSURE RATING (AMPS)	CIRCUIT NO.	CIRCUIT LOAD AMPS	CIRCUIT FUSE SIZE AMPS	CIRCUIT CABLE SIZE AWG	MAINTAINING AGENCY
PROPOSED PS-'WO' 240/480V 1PH, 3-WIRE	480	22.0	#1/0	60	WO-1	22.80	30	#4	ODOT
					WO-2	22.96	30	#2	
PROPOSED PS-'CH' 240/480V 1PH, 3-WIRE	480	16.4	#1/0	60	CH-1	14.40	20	#4	ODOT
					CH-2	19.76	30	#4	

CALCULATED KWR
CHECKED DRB

CIRCUIT SCHEMATIC - PS 'WO' & PS 'CH'

SUM-77/277/224
VARIOUS

1063
1288

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CALCULATED KWR | CHECKED DRB

VOLTAGE DROP CALCULATIONS

SUM-77 / 277 / 224
VARIOUS

1064
1288

CIRCUIT 'WO-1'

VOLTAGE: 480V
WIRE FACTOR USED (TWO - NO. 4 AWG WIRES): 0.62 OHMS/MFT/1000

Section			Amperes		Ampere-Feet	AWG	Voltage Drop		% Drop	At Point
From	To	Design Feet	At Point	Accum.			In Section	Accum.		
WO-1-1	WO-1-2	523	3.04	3.04	1,590	4	0.99	10.56	2.20	WO-1-1
WO-1-2	WO-1-3	585	3.04	6.08	3,557	4	2.21	9.58	2.00	WO-1-2
WO-1-3	PB-22	672	4.56	10.64	7,150	4	4.43	7.37	1.54	WO-1-3
WO-1-6	WO-1-5	695	4.56	4.56	3,169	4	1.96	8.66	1.80	WO-1-6
WO-1-5	WO-1-4	528	4.56	9.12	4,815	4	2.99	6.69	1.39	WO-1-5
WO-1-4	PB-22	102	3.04	12.16	1,240	4	0.77	3.71	0.77	WO-1-4
PB-22	CC-WO	208	0.00	22.80	4,742	4	2.94	2.94	0.61	PB-22

CIRCUIT 'WO-2'

VOLTAGE: 480V
WIRE FACTOR USED (TWO - NO. 2 AWG WIRES): 0.38 OHMS/MFT/1000

Section			Amperes		Ampere-Feet	AWG	Voltage Drop		% Drop	At Point
From	To	Design Feet	At Point	Accum.			In Section	Accum.		
WO-2-5	WO-2-4	632	4.56	4.56	2,882	2	1.10	17.56	3.66	WO-2-5
WO-2-4	WO-2-3	503	4.56	9.12	4,587	2	1.74	16.46	3.43	WO-2-4
WO-2-3	WO-2-2	562	4.56	13.68	7,688	2	2.92	14.72	3.07	WO-2-3
WO-2-2	PB-3 (UP)	718	4.56	18.24	13,096	2	4.98	11.80	2.46	WO-2-2
PB-3 (UP)	WO-2-1	133	0.16	18.40	2,447	2	0.93	6.82	1.42	PB-3 (UP)
WO-2-1	CC-WO	675	4.56	22.96	15,498	2	5.89	5.89	1.23	WO-2-1

CIRCUIT 'CH-1'

VOLTAGE: 480V
WIRE FACTOR USED (TWO - NO. 4 AWG WIRES): 0.62 OHMS/MFT/1000

Section			Amperes		Ampere-Feet	AWG	Voltage Drop		% Drop	At Point
From	To	Design Feet	At Point	Accum.			In Section	Accum.		
CH-1-3	PB-11	544	4.56	4.56	2,481	4	1.54	10.72	2.23	CH-1-3
CH-1-2	PB-11	96	4.56	4.56	438	4	0.27	9.45	1.97	CH-1-2
PB-11	PB-10	279	0.00	9.12	2,544	4	1.58	9.18	1.91	PB-11
PB-4 (UP)	PB-10	162	0.16	0.16	26	4	0.02	7.62	1.59	PB-4 (UP)
PB-10	PB-9 (UP)	57	0.00	9.28	529	4	0.33	7.61	1.58	PB-10
PB-9 (UP)	PB-7 (UP)	159	0.32	9.60	1,526	4	0.95	7.28	1.52	PB-9 (UP)
PB-7 (UP)	CH-1-1	246	0.24	9.84	2,421	4	1.50	6.33	1.32	PB-7 (UP)
CH-1-1	CC-CH	541	4.56	14.40	7,790	4	4.83	4.83	1.01	CH-1-1

CIRCUIT 'CH-2'

VOLTAGE: 480V
WIRE FACTOR USED (TWO - NO. 4 AWG WIRES): 0.62 OHMS/MFT/1000

Section			Amperes		Ampere-Feet	AWG	Voltage Drop		% Drop	At Point
From	To	Design Feet	At Point	Accum.			In Section	Accum.		
CH-2-5	CH-2-4	655	3.04	3.04	1,991	4	1.23	10.77	2.24	CH-2-5
CH-2-4	CH-2-3	639	3.04	6.08	3,885	4	2.41	9.54	1.99	CH-2-4
CH-2-3	PB-23	676	4.56	10.64	7,193	4	4.46	7.13	1.49	CH-2-3
CH-2-2	CH-2-1	649	4.56	4.56	2,959	4	1.83	5.31	1.11	CH-2-2
CH-2-1	PB-23	142	4.56	9.12	1,295	4	0.80	3.47	0.72	CH-2-1
PB-23	CC-CH	218	0.00	19.76	4,308	4	2.67	2.67	0.56	PB-23

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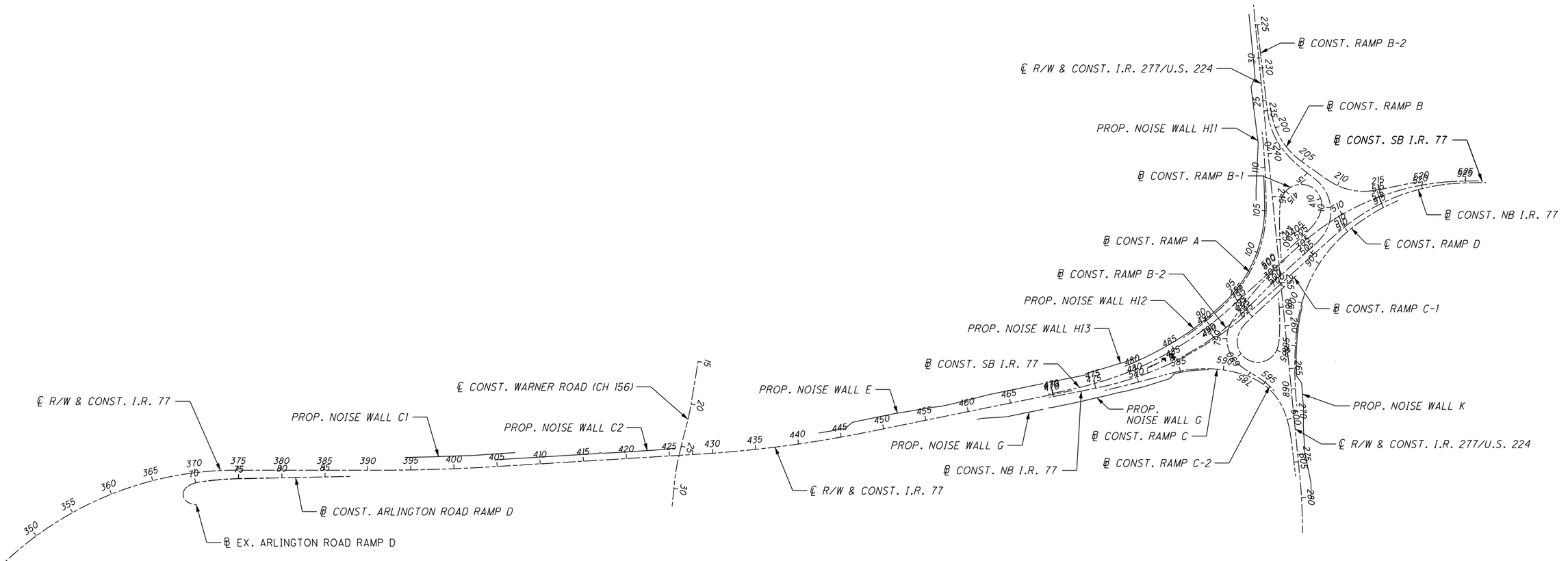

0 600 1200
HORIZONTAL SCALE IN FEET

CALCULATED ATR
CHECKED DGN

NOISE WALL SCHEMATIC PLAN

SUM-77 / 277 / 224
VARIOUS

1065
1288

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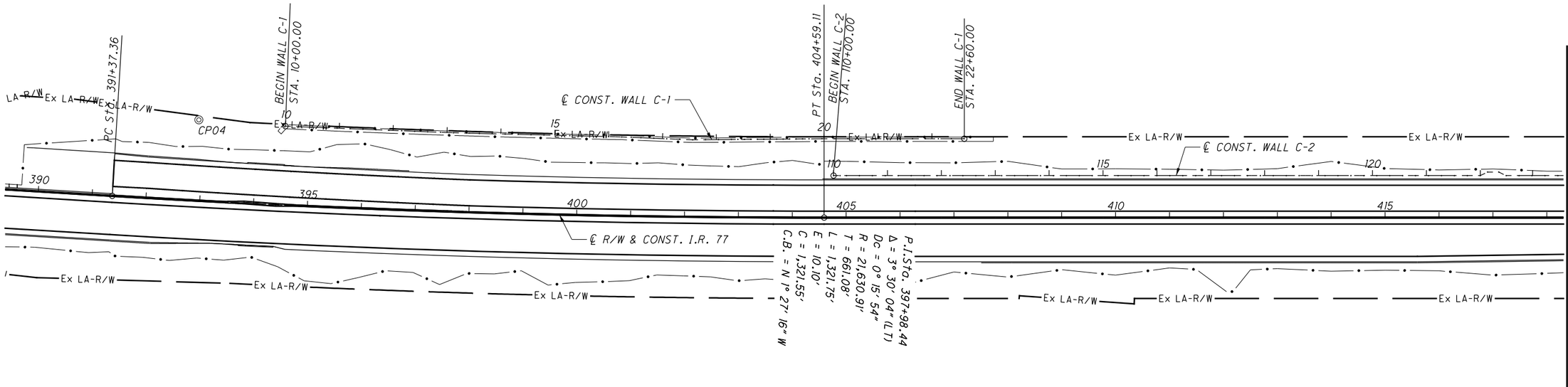

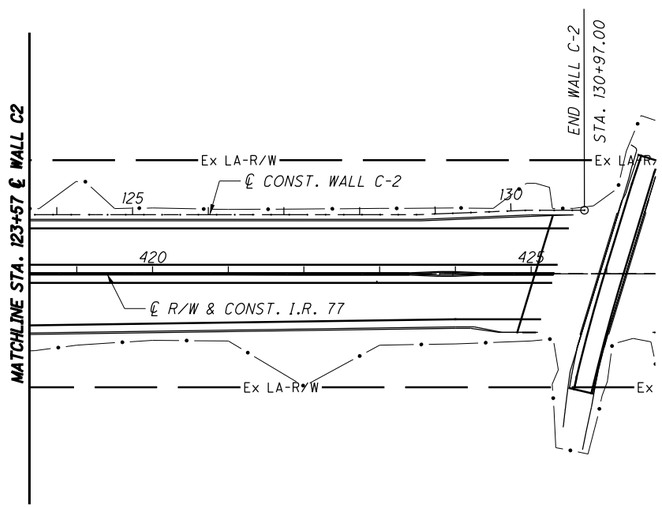

REFERENCE POINTS				
POINT NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP04	486357.9587	2246323.9152	1121.63	CONCRETE MONUMENT
CP05	493895.1420	2245390.8980	1073.53	CONCRETE MONUMENT
CP06	493906.9643	2244750.3816	1090.46	CONCRETE MONUMENT
CP07	498481.9448	2243140.4162	1064.39	CONCRETE MONUMENT
CP08	499070.7218	2243262.6440	1076.40	CONCRETE MONUMENT

NOTE: SEE SHEET 1070 / 1288 & 1071 / 1288 FOR NOISE BARRIER C BASELINE GEOMETRY

CALCULATED RFV
CHECKED TJW

0 50 100 200
HORIZONTAL SCALE IN FEET

SCHEMATIC PLAN & SURVERY CONTROL
WALL C

SUM-77 / 277 / 224

1065A / 1288

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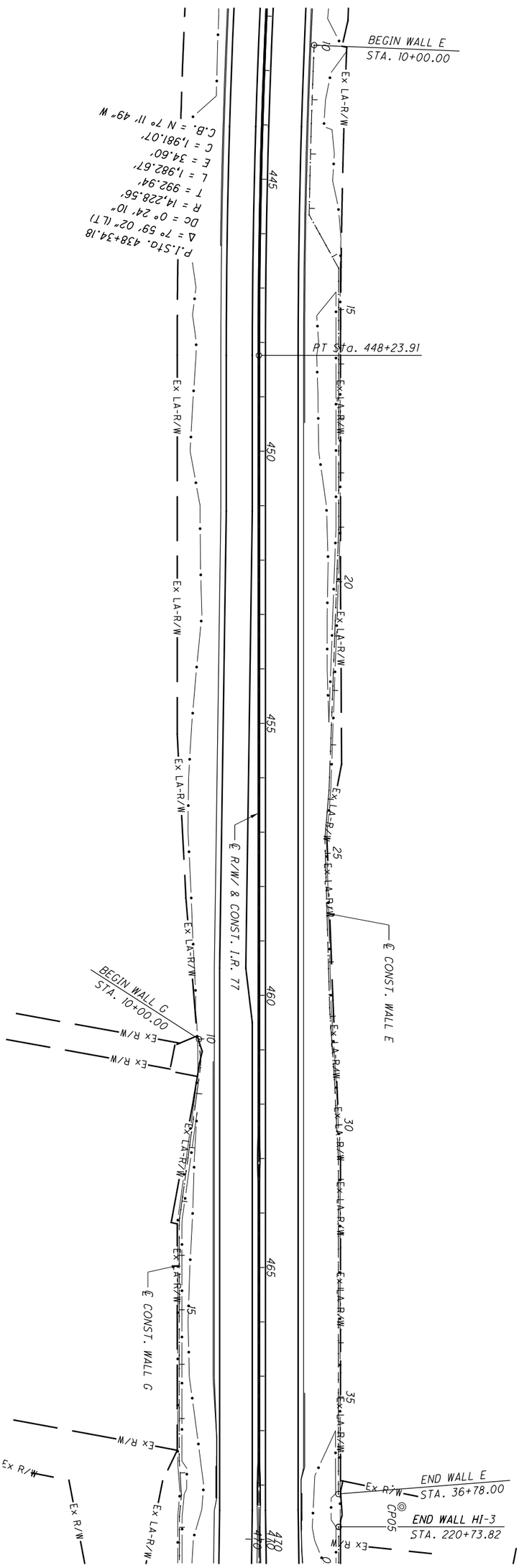
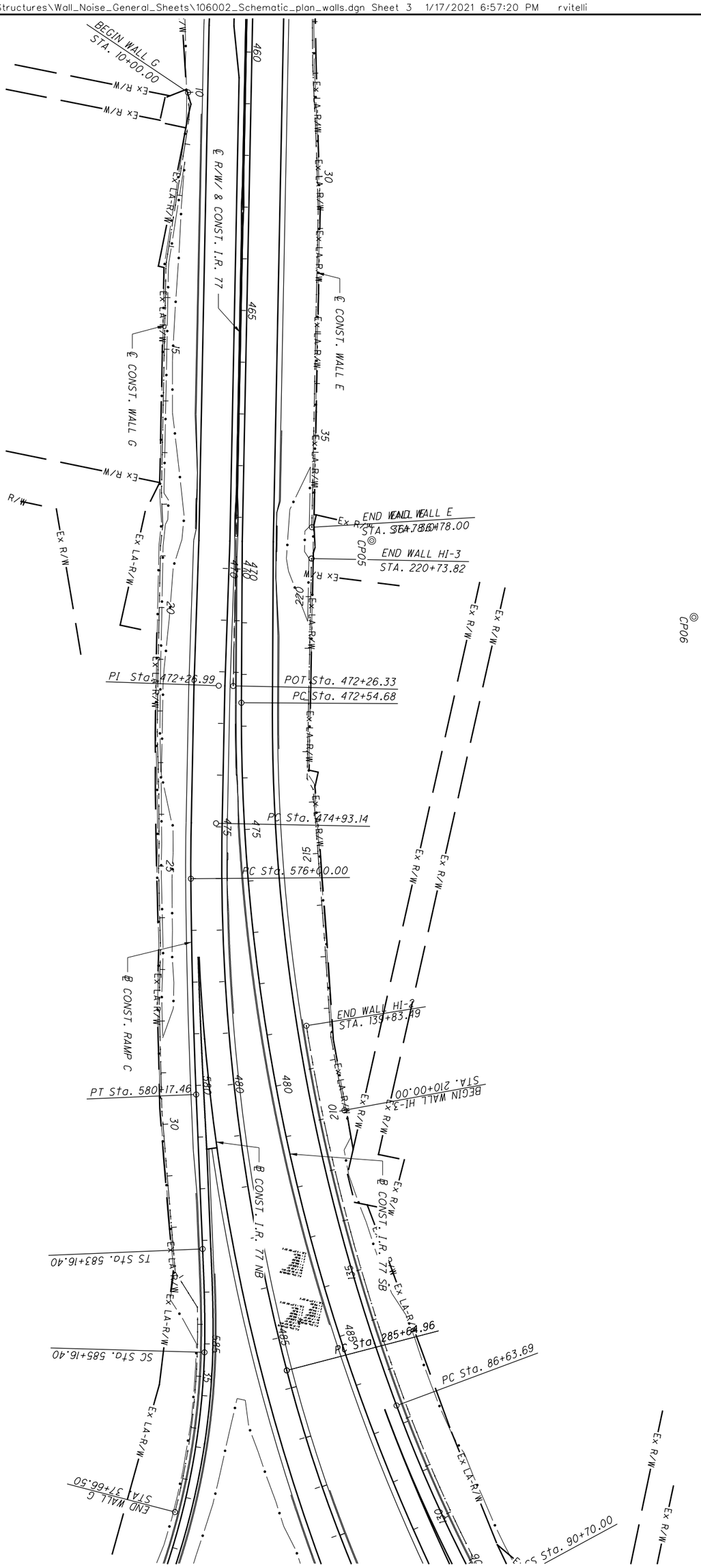


NOTE:
SEE SHEET 1072 1288 & 1073 1288 FOR NOISE BARRIER E BASELINE GEOMETRY

1066 1288	**SUM-77/277/224**	**SCHEMATIC PLAN & SURVEY CONTROL WALL E**	CALCULATED RFV / CHECKED TJW	0 100 50 200 HORIZONTAL SCALE IN FEET



NOTE:
SEE SHEET 107A (1288) & 107B (1288) FOR NOISE BARRIER G BASELINE GEOMETRY

1067 (1288)	**SUM-77/277/224**	**SCHEMATIC PLAN & SURVEY CONTROL WALL G**	CALCULATED RFV / CHECKED TJW	0 100 50 200 HORIZONTAL SCALE IN FEET

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POT Sta. 222+63.19
BEGIN WALL HI-1
STA. 10+00.00
Ex LA-R/W
℄ R/W & CONST. I.R. 277
ST Sta. 197+05.36
SC Sta. 199+05.36
CS Sta. 201+39.81
PCC Sta. 19+13.38
SC Sta. 19+62.73
CS Sta. 203+
℄ CONST. RAMP B
℄ CONST. RAMP B2
℄ CONST. WALL HI-1
ST Sta. 202+60.18
PT Sta. 114+13.78
BEGIN WALL HI-2
STA. 110+00.00
℄ CONST. WALL HI-2
℄ CONST. RAMP A
SC Sta. 104+55.37
END WALL HI-1
STA. 31+82.00
SC Sta. 106+55.37
Ex R/W
MATCHLINE STA. 118+60 ℄ WALL HI-2
POT Sta. 14+62.67
CS Sta. 415+62.17
CS Sta. 405+30.56
SC Sta. 405+01.68
PC Sta. 402+43.78

℄ CONST. RAMP C1
SC Sta. 495+35.90
PT Sta. 492+81.37
PT Sta. 294+71.35
SC Sta. 292+82.49
CS Sta. 290+82.49
℄ CONST. I.R. 77 NB
℄ CONST. RAMP B2
℄ CONST. RAMP C2
℄ CONST. I.R. 77 SB
PC Sta. 285+64.96
PC Sta. 86+63.69
℄ CONST. WALL HI-2
SC Sta. 90+70.00
SC Sta. 93+70.00
℄ CONST. RAMP A
℄ R/W & CONST. I.R. 77 SB
BEGIN WALL HI-3
STA. 210+00.00
END WALL HI-2
STA. 133+81.30
CS Sta. 576+40.00
PC Sta. 574+93.14
℄ CONST. RAMP C
℄ CONST. WALL G
℄ CONST. WALL HI-3
PC Sta. 472+54.68
PI Sta. 472+26.99
END WALL HI-3
STA. 220+73.82
MATCHLINE STA. 118+60 ℄ WALL HI-2

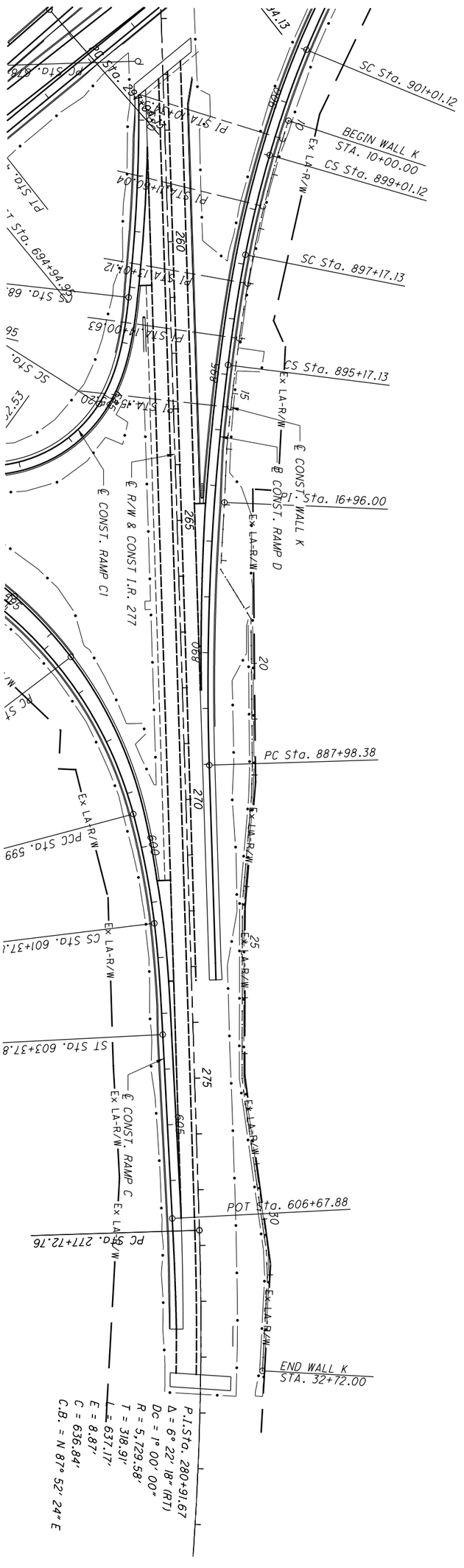
NOTE: SEE SHEET 1076/1288 THRU 1078/1288 FOR NOISE BARRIER HI BASELINE GEOMETRY

HORIZONTAL SCALE IN FEET
0 50 100 200
CALCULATED RFV
CHECKED TJW

SCHEMATIC PLAN & SURVEY CONTROL WALL HI

SUM-77 / 277 / 224

1068
1288



NOTE:
SEE SHEET 1078 (1288) FOR NOISE BARRIER K BASELINE GEOMETRY

1069 (1288)	SUM-77/277/224	SCHEMATIC PLAN & SURVEY CONTROL WALL K	CALCULATED RFV / CHECKED TJW	0 100 50 200 HORIZONTAL SCALE IN FEET

NOISE BARRIER WALL C1 BASELINE GEOMETRY

POINT	WALL STATION	NORTHING	EASTING	ALIGNMENT			BEARING
				NAME	STATION	OFFSET	
1	10+00.00	486518.99	2246326.68	CLXRWI77	394+52.39	-146.50	
2	10+24.00	486542.99	2246326.28	CLXRWI77	394+76.56	-146.66	
3	10+48.00	486566.99	2246325.88	CLXRWI77	395+00.72	-146.79	
4	10+72.00	486590.98	2246325.48	CLXRWI77	395+24.89	-146.90	
5	10+96.00	486614.98	2246325.08	CLXRWI77	395+49.05	-146.98	
6	11+20.00	486638.98	2246324.69	CLXRWI77	395+73.21	-147.04	
7	11+44.00	486662.97	2246324.29	CLXRWI77	395+97.38	-147.06	
8	11+68.00	486686.97	2246323.89	CLXRWI77	396+21.54	-147.06	N0°57'16"W
9	11+92.00	486710.97	2246323.49	CLXRWI77	396+45.71	-147.04	
10	12+16.00	486734.96	2246323.09	CLXRWI77	396+69.87	-146.98	
11	12+40.00	486758.96	2246322.69	CLXRWI77	396+94.03	-146.90	
12	12+64.00	486782.96	2246322.29	CLXRWI77	397+18.20	-146.79	
13	12+88.00	486806.95	2246321.89	CLXRWI77	397+42.36	-146.66	
14	13+12.00	486830.95	2246321.49	CLXRWI77	397+66.52	-146.50	
15	13+36.00	486854.94	2246320.74	CLXRWI77	397+90.69	-146.66	
16	13+60.00	486878.92	2246319.99	CLXRWI77	398+14.85	-146.79	
17	13+84.00	486902.91	2246319.24	CLXRWI77	398+39.01	-146.90	
18	14+08.00	486926.90	2246318.49	CLXRWI77	398+63.18	-146.98	
19	14+32.00	486950.89	2246317.75	CLXRWI77	398+87.34	-147.04	
20	14+56.00	486974.88	2246317.00	CLXRWI77	399+11.51	-147.06	N1°47'12"W
21	14+80.00	486998.87	2246316.25	CLXRWI77	399+35.67	-147.06	
22	15+04.00	487022.85	2246315.50	CLXRWI77	399+59.83	-147.04	
23	15+28.00	487046.84	2246314.75	CLXRWI77	399+84.00	-146.98	
24	15+52.00	487070.84	2246314.41	CLXRWI77	400+08.16	-146.50	
25	15+76.00	487094.82	2246313.26	CLXRWI77	400+32.33	-146.79	
26	16+00.00	487118.81	2246312.51	CLXRWI77	400+56.49	-146.66	
27	16+24.00	487142.80	2246311.76	CLXRWI77	400+80.65	-146.50	
28	16+42.00	487160.79	2246311.48	CLXRWI77	400+98.77	-146.08	
29	16+60.00	487178.79	2246311.19	CLXRWI77	401+16.89	-145.65	
30	16+84.00	487202.79	2246310.82	CLXRWI77	401+41.04	-145.05	N0°54'00"W
31	17+08.00	487226.78	2246310.44	CLXRWI77	401+65.20	-144.43	
32	17+32.00	487250.78	2246310.06	CLXRWI77	401+89.35	-143.77	
33	17+56.00	487274.78	2246309.69	CLXRWI77	402+13.50	-143.09	
34	17+80.00	487298.73	2246308.14	CLXRWI77	402+37.65	-143.56	
35	18+04.00	487322.68	2246306.60	CLXRWI77	402+61.81	-143.99	
36	18+28.00	487346.63	2246305.06	CLXRWI77	402+85.97	-144.40	
37	18+40.00	487358.61	2246304.28	CLXRWI77	402+98.05	-144.59	
38	18+52.00	487370.58	2246303.51	CLXRWI77	403+10.13	-144.78	
39	18+64.00	487382.56	2246302.74	CLXRWI77	403+22.21	-144.96	
40	18+76.00	487394.53	2246301.97	CLXRWI77	403+34.29	-145.13	
41	18+88.00	487406.51	2246301.20	CLXRWI77	403+46.37	-145.30	N3°41'15"W
42	19+00.00	487418.48	2246300.43	CLXRWI77	403+58.44	-145.46	
43	19+12.00	487430.46	2246299.65	CLXRWI77	403+70.53	-145.61	
44	19+24.00	487442.43	2246298.88	CLXRWI77	403+82.61	-145.76	
45	19+36.00	487454.41	2246298.11	CLXRWI77	403+94.69	-145.90	
46	19+48.00	487466.38	2246297.34	CLXRWI77	404+06.77	-146.03	
47	19+60.00	487478.36	2246296.57	CLXRWI77	404+18.85	-146.16	
48	19+72.00	487490.33	2246295.79	CLXRWI77	404+30.93	-146.28	
49	19+96.00	487514.28	2246294.25	CLXRWI77	404+55.09	-146.50	
50	20+20.00	487538.24	2246292.91	CLXRWI77	404+79.12	-146.50	

NOISE BARRIER WALL C1 BASELINE GEOMETRY

POINT	WALL STATION	NORTHING	EASTING	ALIGNMENT			BEARING
				NAME	STATION	OFFSET	
51	20+44.00	487562.21	2246291.57	CLXRWI77	405+03.12	-146.50	
52	20+68.00	487586.17	2246290.23	CLXRWI77	405+27.12	-146.50	
53	20+92.00	487610.13	2246288.88	CLXRWI77	405+51.12	-146.50	
54	21+16.00	487634.09	2246287.54	CLXRWI77	405+75.12	-146.50	
55	21+40.00	487658.06	2246286.20	CLXRWI77	405+99.12	-146.50	N3°12'18"W
56	21+64.00	487682.02	2246284.86	CLXRWI77	406+23.12	-146.50	
57	21+88.00	487705.98	2246283.52	CLXRWI77	406+47.12	-146.50	
58	22+12.00	487729.94	2246282.17	CLXRWI77	406+71.12	-146.50	
59	22+36.00	487753.91	2246280.83	CLXRWI77	406+95.12	-146.50	
60	22+60.00	487777.87	2246279.49	CLXRWI77	407+19.12	-146.50	

CALCULATED RFV
CHECKED TJW

SURVEY CONTROL

SUM-77 / 277 / 224

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NOISE BARRIER WALL C2 BASELINE GEOMETRY

POINT	WALL STATION	NORTHING	EASTING	ALIGNMENT			BEARING
				NAME	STATION	OFFSET	
61	110+00.00	487539.57	2246361.44	CLXRWI77	404+76.61	-78.00	
62	110+12.00	487551.55	2246360.77	CLXRWI77	404+88.61	-78.00	
63	110+24.00	487563.53	2246360.10	CLXRWI77	405+00.61	-78.00	
64	110+48.00	487587.49	2246358.76	CLXRWI77	405+24.61	-78.00	
65	110+72.00	487611.45	2246357.42	CLXRWI77	405+48.61	-78.00	
66	110+96.00	487635.42	2246356.08	CLXRWI77	405+72.61	-78.00	
67	111+20.00	487659.38	2246354.73	CLXRWI77	405+96.61	-78.00	
68	111+44.00	487683.34	2246353.39	CLXRWI77	406+20.61	-78.00	
69	111+68.00	487707.30	2246352.05	CLXRWI77	406+44.61	-78.00	
70	111+92.00	487731.27	2246350.71	CLXRWI77	406+68.61	-78.00	
71	112+16.00	487755.23	2246349.37	CLXRWI77	406+92.61	-78.00	
72	112+40.00	487779.19	2246348.02	CLXRWI77	407+16.61	-78.00	
73	112+64.00	487803.15	2246346.68	CLXRWI77	407+40.61	-78.00	
74	112+88.00	487827.12	2246345.34	CLXRWI77	407+64.61	-78.00	
75	113+12.00	487851.08	2246344.00	CLXRWI77	407+88.61	-78.00	
76	113+36.00	487875.04	2246342.66	CLXRWI77	408+12.61	-78.00	
77	113+60.00	487899.00	2246341.32	CLXRWI77	408+36.61	-78.00	
78	113+84.00	487922.97	2246339.97	CLXRWI77	408+60.61	-78.00	
79	114+08.00	487946.93	2246338.63	CLXRWI77	408+84.61	-78.00	
80	114+32.00	487970.89	2246337.29	CLXRWI77	409+08.61	-78.00	
81	114+56.00	487994.85	2246335.95	CLXRWI77	409+32.61	-78.00	
82	114+80.00	488018.82	2246334.61	CLXRWI77	409+56.61	-78.00	
83	115+04.00	488042.78	2246333.26	CLXRWI77	409+80.61	-78.00	
84	115+28.00	488066.74	2246331.92	CLXRWI77	410+04.61	-78.00	
85	115+52.00	488090.70	2246330.58	CLXRWI77	410+28.61	-78.00	
86	115+76.00	488114.67	2246329.24	CLXRWI77	410+52.61	-78.00	
87	116+00.00	488138.63	2246327.90	CLXRWI77	410+76.61	-78.00	N3°12'18''W
88	116+24.00	488162.59	2246326.55	CLXRWI77	411+00.61	-78.00	
89	116+48.00	488186.55	2246325.21	CLXRWI77	411+24.61	-78.00	
90	116+72.00	488210.52	2246323.87	CLXRWI77	411+48.61	-78.00	
91	116+96.00	488234.48	2246322.53	CLXRWI77	411+72.61	-78.00	
92	117+20.00	488258.44	2246321.19	CLXRWI77	411+96.61	-78.00	
93	117+44.00	488282.40	2246319.85	CLXRWI77	412+20.61	-78.00	
94	117+68.00	488306.37	2246318.50	CLXRWI77	412+44.61	-78.00	
95	117+92.00	488330.33	2246317.16	CLXRWI77	412+68.61	-78.00	
96	118+16.00	488354.29	2246315.82	CLXRWI77	412+92.61	-78.00	
97	118+40.00	488378.25	2246314.48	CLXRWI77	413+16.61	-78.00	
98	118+64.00	488402.22	2246313.14	CLXRWI77	413+40.61	-78.00	
99	118+88.00	488426.18	2246311.79	CLXRWI77	413+64.61	-78.00	
100	119+12.00	488450.14	2246310.45	CLXRWI77	413+88.61	-78.00	

NOISE BARRIER WALL C2 BASELINE GEOMETRY

POINT	WALL STATION	NORTHING	EASTING	ALIGNMENT			BEARING
				NAME	STATION	OFFSET	
101	119+36.00	488474.10	2246309.11	CLXRWI77	414+12.61	-78.00	
102	119+60.00	488498.07	2246307.77	CLXRWI77	414+36.61	-78.00	
103	119+84.00	488522.03	2246306.43	CLXRWI77	414+60.61	-78.00	
104	120+08.00	488545.99	2246305.09	CLXRWI77	414+84.61	-78.00	
105	120+32.00	488569.95	2246303.74	CLXRWI77	415+08.61	-78.00	
106	120+56.00	488593.92	2246302.40	CLXRWI77	415+32.61	-78.00	
107	120+80.00	488617.88	2246301.06	CLXRWI77	415+56.61	-78.00	
108	121+04.00	488641.84	2246299.72	CLXRWI77	415+80.61	-78.00	
109	121+28.00	488665.80	2246298.38	CLXRWI77	416+04.61	-78.00	
110	121+52.00	488689.77	2246297.03	CLXRWI77	416+28.61	-78.00	
111	121+76.00	488713.73	2246295.69	CLXRWI77	416+52.61	-78.00	
112	122+00.00	488737.69	2246294.35	CLXRWI77	416+76.61	-78.00	N29°2'47''W
113	122+15.00	488750.80	2246287.07	CLXRWI77	416+90.11	-84.54	N3°12'18''W
114	122+36.00	488771.77	2246285.89	CLXRWI77	417+11.11	-84.54	N22°38'11''E
115	122+51.00	488785.62	2246291.67	CLXRWI77	417+24.61	-78.00	
116	122+75.00	488809.58	2246290.33	CLXRWI77	417+48.61	-78.00	
117	122+99.00	488833.54	2246288.98	CLXRWI77	417+72.61	-78.00	
118	123+23.00	488857.50	2246287.64	CLXRWI77	417+96.61	-78.00	
119	123+47.00	488881.47	2246286.30	CLXRWI77	418+20.61	-78.00	
120	123+71.00	488905.43	2246284.96	CLXRWI77	418+44.61	-78.00	
121	123+95.00	488929.39	2246283.62	CLXRWI77	418+68.61	-78.00	
122	124+19.00	488953.35	2246282.27	CLXRWI77	418+92.61	-78.00	
123	124+43.00	488977.32	2246280.93	CLXRWI77	419+16.61	-78.00	
124	124+67.00	489001.28	2246279.59	CLXRWI77	419+40.61	-78.00	
125	124+91.00	489025.24	2246278.25	CLXRWI77	419+64.61	-78.00	
126	125+15.00	489049.20	2246276.91	CLXRWI77	419+88.61	-78.00	
127	125+39.00	489073.17	2246275.57	CLXRWI77	420+12.61	-78.00	
128	125+63.00	489097.13	2246274.22	CLXRWI77	420+36.61	-78.00	N3°12'18''W
129	125+87.00	489121.09	2246272.88	CLXRWI77	420+60.61	-78.00	
130	126+11.00	489145.05	2246271.54	CLXRWI77	420+84.61	-78.00	
131	126+35.00	489169.01	2246270.20	CLXRWI77	421+08.61	-78.00	
132	126+59.00	489192.98	2246268.86	CLXRWI77	421+32.61	-78.00	
133	126+83.00	489216.94	2246267.51	CLXRWI77	421+56.61	-78.00	
134	127+07.00	489240.90	2246266.17	CLXRWI77	421+80.61	-78.00	
135	127+31.00	489264.86	2246264.83	CLXRWI77	422+04.61	-78.00	
136	127+55.00	489288.83	2246263.49	CLXRWI77	422+28.61	-78.00	
137	127+79.00	489312.79	2246262.15	CLXRWI77	422+52.61	-78.00	
138	128+03.00	489336.75	2246260.81	CLXRWI77	422+76.61	-78.00	
139	128+27.00	489360.71	2246259.46	CLXRWI77	423+00.61	-78.00	
140	128+51.00	489384.68	2246258.12	CLXRWI77	423+24.61	-78.00	
141	128+75.00	489408.64	2246256.78	CLXRWI77	423+48.61	-78.00	
142	128+99.00	489432.53	2246254.48	CLXRWI77	423+72.59	-78.96	
143	129+23.00	489456.42	2246252.18	CLXRWI77	423+96.57	-79.92	
144	129+47.00	489480.31	2246249.88	CLXRWI77	424+20.55	-80.88	N5°29'44''W
145	129+71.00	489504.20	2246247.59	CLXRWI77	424+44.53	-81.84	
146	129+95.00	489528.09	2246245.29	CLXRWI77	424+68.51	-82.80	
147	130+19.00	489551.98	2246242.99	CLXRWI77	424+92.49	-83.76	
148	130+38.00	489570.95	2246241.88	CLXRWI77	425+11.49	-83.80	
149	130+57.00	489589.91	2246240.78	CLXRWI77	425+30.49	-83.84	N3°19'54"W
150	130+81.00	489613.87	2246239.39	CLXRWI77	425+54.49	-83.89	
151	130+97.00	489629.85	2246238.46	CLXRWI77	425+70.49	-83.93	

CALCULATED RFV
CHECKED TJW

SURVEY CONTROL

SUM-77 / 277 / 224

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1288

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NOISE BARRIER WALL E BASELINE GEOMETRY

POINT	WALL STATION	NORTHING	EASTING	ALIGNMENT			BEARING
				NAME	STATION	OFFSET	
1	10+00.00	491291.28	2246069.99	CLXRWI77	442+49.94	-90.00	
2	10+12.00	491303.13	2246068.14	CLXRWI77	442+62.02	-90.00	N8°54'6"W
3	10+24.00	491314.99	2246066.27	CLXRWI77	442+74.10	-90.00	N8°57'3"W
4	10+48.00	491338.70	2246062.50	CLXRWI77	442+98.25	-90.00	N9°1'24"W
5	10+72.00	491362.39	2246058.70	CLXRWI77	443+22.41	-90.00	N9°7'15"W
6	10+96.00	491386.08	2246054.86	CLXRWI77	443+46.56	-90.00	N9°13'6"W
7	11+20.00	491409.77	2246050.97	CLXRWI77	443+70.71	-90.00	N9°18'55"W
8	11+44.00	491433.44	2246047.05	CLXRWI77	443+94.87	-90.00	N9°24'45"W
9	11+68.00	491457.11	2246043.08	CLXRWI77	444+19.02	-90.00	N9°30'35"W
10	11+92.00	491480.78	2246039.07	CLXRWI77	444+43.17	-90.00	N9°36'26"W
11	12+16.00	491504.43	2246035.03	CLXRWI77	444+67.32	-90.00	N9°42'16"W
12	12+40.00	491528.08	2246030.94	CLXRWI77	444+91.48	-90.00	N9°48'6"W
13	12+64.00	491551.73	2246026.82	CLXRWI77	445+15.63	-90.00	N9°53'56"W
14	12+88.00	491575.36	2246022.65	CLXRWI77	445+39.78	-90.00	N9°59'47"W
15	13+12.00	491598.99	2246018.45	CLXRWI77	445+63.93	-90.00	N10°5'36"W
16	13+28.00	491611.23	2246008.14	CLXRWI77	445+77.89	-97.98	
17	13+40.00	491620.41	2246000.41	CLXRWI77	445+88.37	-103.96	
18	13+52.00	491629.59	2245992.68	CLXRWI77	445+98.86	-109.93	
19	13+76.00	491647.95	2245977.22	CLXRWI77	446+19.86	-121.85	N40°5'46"W
20	13+88.00	491657.13	2245969.50	CLXRWI77	446+30.38	-127.79	
21	14+00.00	491666.31	2245961.77	CLXRWI77	446+40.90	-133.73	
22	14+24.00	491684.67	2245946.31	CLXRWI77	446+61.98	-145.59	
23	14+48.00	491708.21	2245941.65	CLXRWI77	446+86.23	-145.84	
24	14+72.00	491731.75	2245937.00	CLXRWI77	447+10.47	-146.05	
25	14+96.00	491755.30	2245932.34	CLXRWI77	447+34.72	-146.22	
26	15+20.00	491778.84	2245927.68	CLXRWI77	447+58.97	-146.35	
27	15+44.00	491802.39	2245923.02	CLXRWI77	447+83.22	-146.44	
28	15+68.00	491825.93	2245918.37	CLXRWI77	448+07.47	-146.49	
29	15+92.00	491849.47	2245913.71	CLXRWI77	448+31.64	-146.50	
30	16+16.00	491873.02	2245909.05	CLXRWI77	448+55.64	-146.50	
31	16+40.00	491896.56	2245904.40	CLXRWI77	448+79.64	-146.50	
32	16+64.00	491920.10	2245899.74	CLXRWI77	449+03.64	-146.50	N11°11'20"W
33	16+88.00	491943.65	2245895.08	CLXRWI77	449+27.64	-146.50	
34	17+12.00	491967.19	2245890.42	CLXRWI77	449+51.64	-146.50	
35	17+36.00	491990.74	2245885.77	CLXRWI77	449+75.64	-146.50	
36	17+60.00	492014.28	2245881.11	CLXRWI77	449+99.64	-146.50	
37	17+84.00	492037.82	2245876.45	CLXRWI77	450+23.64	-146.50	
38	18+08.00	492061.37	2245871.80	CLXRWI77	450+47.64	-146.50	
39	18+32.00	492084.91	2245867.14	CLXRWI77	450+71.64	-146.50	
40	18+56.00	492108.45	2245862.48	CLXRWI77	450+95.64	-146.50	
41	18+80.00	492132.00	2245857.83	CLXRWI77	451+19.64	-146.50	
42	19+04.00	492155.54	2245853.17	CLXRWI77	451+43.64	-146.50	
43	19+28.00	492179.24	2245849.38	CLXRWI77	451+67.62	-145.62	
44	19+52.00	492202.94	2245845.59	CLXRWI77	451+91.61	-144.74	
45	19+76.00	492226.64	2245841.80	CLXRWI77	452+15.59	-143.86	
46	20+00.00	492250.34	2245838.01	CLXRWI77	452+39.57	-142.98	
47	20+24.00	492274.04	2245834.22	CLXRWI77	452+63.56	-142.09	
48	20+48.00	492297.74	2245830.43	CLXRWI77	452+87.54	-141.21	
49	20+72.00	492321.44	2245826.64	CLXRWI77	453+11.53	-140.33	
50	20+96.00	492345.13	2245822.85	CLXRWI77	453+35.51	-139.45	
51	21+20.00	492368.83	2245819.06	CLXRWI77	453+59.49	-138.57	
52	21+44.00	492392.53	2245815.27	CLXRWI77	453+83.48	-137.69	N9°05'05"W
53	21+68.00	492416.23	2245811.48	CLXRWI77	454+07.46	-136.81	
54	21+92.00	492439.93	2245807.69	CLXRWI77	454+31.44	-135.93	
55	22+16.00	492463.63	2245803.90	CLXRWI77	454+55.43	-135.05	

NOISE BARRIER WALL E BASELINE GEOMETRY

POINT	WALL STATION	NORTHING	EASTING	ALIGNMENT			BEARING
				NAME	STATION	OFFSET	
56	22+40.00	492487.33	2245800.11	CLXRWI77	454+79.41	-134.16	
57	22+64.00	492511.03	2245796.33	CLXRWI77	455+03.40	-133.28	
58	22+88.00	492534.73	2245792.54	CLXRWI77	455+27.38	-132.40	
59	23+12.00	492558.42	2245788.75	CLXRWI77	455+51.36	-131.52	
60	23+36.00	492582.12	2245784.96	CLXRWI77	455+75.35	-130.64	
61	23+60.00	492605.82	2245781.17	CLXRWI77	455+99.33	-129.76	
62	23+84.00	492629.52	2245777.38	CLXRWI77	456+23.32	-128.88	
63	24+00.00	492645.43	2245775.64	CLXRWI77	456+39.26	-127.50	
64	24+24.00	492669.28	2245773.02	CLXRWI77	456+63.17	-125.43	N6°14'59"W
65	24+48.00	492693.14	2245770.41	CLXRWI77	456+87.08	-123.37	
66	24+72.00	492717.00	2245767.80	CLXRWI77	457+10.99	-121.30	
67	24+96.00	492740.40	2245762.49	CLXRWI77	457+34.98	-121.96	
68	25+20.00	492763.81	2245757.19	CLXRWI77	457+58.97	-122.62	
69	25+44.00	492787.22	2245751.89	CLXRWI77	457+82.96	-123.28	
70	25+68.00	492810.62	2245746.58	CLXRWI77	458+06.95	-123.95	
71	25+92.00	492834.03	2245741.28	CLXRWI77	458+30.94	-124.61	
72	26+16.00	492857.44	2245735.97	CLXRWI77	458+54.93	-125.27	
73	26+40.00	492880.84	2245730.67	CLXRWI77	458+78.92	-125.93	
74	26+64.00	492904.25	2245725.37	CLXRWI77	459+02.92	-126.59	
75	26+88.00	492927.66	2245720.06	CLXRWI77	459+26.91	-127.25	
76	27+12.00	492951.06	2245714.76	CLXRWI77	459+50.90	-127.91	
77	27+36.00	492974.47	2245709.45	CLXRWI77	459+74.89	-128.58	
78	27+60.00	492997.88	2245704.15	CLXRWI77	459+98.88	-129.24	
79	27+84.00	493021.28	2245698.84	CLXRWI77	460+22.87	-129.90	
80	27+96.00	493032.87	2245695.74	CLXRWI77	460+34.84	-130.70	
81	28+08.00	493044.46	2245692.63	CLXRWI77	460+46.81	-131.50	
82	28+20.00	493056.05	2245689.51	CLXRWI77	460+58.79	-132.30	
83	28+32.00	493067.64	2245686.41	CLXRWI77	460+70.76	-133.11	
84	28+44.00	493079.23	2245683.29	CLXRWI77	460+82.74	-133.91	N15°1'14"W
85	28+56.00	493090.82	2245680.19	CLXRWI77	460+94.70	-134.71	
86	28+68.00	493102.41	2245677.07	CLXRWI77	461+06.68	-135.51	
87	28+92.00	493125.59	2245670.85	CLXRWI77	461+30.63	-137.12	
88	29+16.00	493148.77	2245664.63	CLXRWI77	461+54.57	-138.72	
89	29+40.00	493172.05	2245658.79	CLXRWI77	461+78.54	-139.94	
90	29+64.00	493195.33	2245652.94	CLXRWI77	462+02.51	-141.16	
91	29+88.00	493218.60	2245647.09	CLXRWI77	462+26.48	-142.38	N14°06'12"W
92	30+12.00	493241.88	2245641.24	CLXRWI77	462+50.45	-143.60	
93	30+36.00	493265.16	2245635.39	CLXRWI77	462+74.42	-144.82	
94	30+60.00	493288.43	2245629.55	CLXRWI77	462+98.39	-146.04	
95	30+84.00	493311.98	2245624.89	CLXRWI77	463+22.39	-146.04	
96	31+08.00	493335.52	2245620.23	CLXRWI77	463+46.39	-146.04	
97	31+32.00	493359.06	2245615.58	CLXRWI77	463+70.39	-146.04	
98	31+56.00	493382.61	2245610.92	CLXRWI77	463+94.39	-146.04	
99	31+80.00	493406.15	2245606.26	CLXRWI77	464+18.39	-146.04	
100	32+04.00	493429.70	2245601.60	CLXRWI77	464+42.39	-146.04	
101	32+28.00	493453.24	2245596.95	CLXRWI77	464+66.39	-146.04	
102	32+52.00	493476.78	2245592.29	CLXRWI77	464+90.39	-146.04	
103	32+76.00	493500.33	2245587.63	CLXRWI77	465+14.39	-146.04	
104	33+00.00	493523.87	2245582.98	CLXRWI77	465+38.38	-146.04	
105	33+24.00	493547.42	2245578.32	CLXRWI77	465+62.39	-146.04	
106	33+48.00	493570.96	2245573.66	CLXRWI77	465+86.39	-146.04	
107	33+72.00	493594.50	2245569.00	CLXRWI77	466+10.39	-146.04	
108	33+96.00	493618.05	2245564.35	CLXRWI77	466+34.39	-146.04	N11°11'20"W
109	34+20.00	493641.59	2245559.69	CLXRWI77	466+58.39	-146.04	
110	34+44.00	493665.13	2245555.03	CLXRWI77	466+82.39	-146.04	
111	34+68.00	493688.68	2245550.38	CLXRWI77	467+06.39	-146.04	
112	34+92.00	493712.22	2245545.72	CLXRWI77	467+30.39	-146.04	

CALCULATED RFV
CHECKED TJW

SURVEY CONTROL

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NOISE BARRIER WALL E BASELINE GEOMETRY							
POINT	WALL STATION	NORTHING	EASTING	ALIGNMENT			BEARING
				NAME	STATION	OFFSET	
113	35+16.00	493735.77	2245541.06	CLXRW177	467+54.39	-146.04	N11°11'20"E
114	35+40.00	493759.31	2245536.40	CLXRW177	467+78.39	-146.04	
115	35+64.00	493782.85	2245531.75	CLXRW177	468+02.39	-146.04	
116	35+88.00	493806.40	2245527.09	CLXRW177	468+26.39	-146.04	
117	36+12.00	493829.94	2245522.43	CLXRW177	468+50.39	-146.04	
118	36+36.00	493853.48	2245517.78	CLXRW177	468+74.39	-146.04	
119	36+60.00	493877.03	2245513.12	CLXRW177	468+98.39	-146.04	
120	36+78.00	493894.69	2245509.63	CLXRW177	469+16.39	-146.04	

CALCULATED RFV
CHECKED TJW

SURVEY CONTROL

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NOISE BARRIER WALL G BASELINE GEOMETRY

POINT	WALL STATION	NORTHING	EASTING	ALIGNMENT			BEARING
				NAME	STATION	OFFSET	
1	10+00.00	493124.48	2245923.09	CLXRWI77	460+80.59	110.11	
2	10+12.00	493136.04	2245919.85	CLXRWI77	460+92.56	109.18	N15°39'47"W
3	10+24.00	493147.59	2245916.61	CLXRWI77	461+04.52	108.24	
4	10+40.00	493163.00	2245912.29	CLXRWI77	461+20.47	106.99	N9°29'31"W
5	10+52.00	493174.83	2245910.31	CLXRWI77	461+32.47	107.35	
6	10+76.00	493198.79	2245908.92	CLXRWI77	461+56.24	110.63	
7	11+00.00	493222.75	2245907.53	CLXRWI77	461+80.02	113.92	
8	11+24.00	493246.71	2245906.14	CLXRWI77	462+03.79	117.20	
9	11+48.00	493270.67	2245904.75	CLXRWI77	462+27.56	120.49	
10	11+72.00	493294.63	2245903.36	CLXRWI77	462+51.34	123.77	
11	11+96.00	493318.59	2245901.97	CLXRWI77	462+75.11	127.06	N3°19'15"W
12	12+20.00	493342.55	2245900.58	CLXRWI77	462+98.89	130.34	
13	12+44.00	493366.51	2245899.19	CLXRWI77	463+22.66	133.63	
14	12+68.00	493390.47	2245897.80	CLXRWI77	463+46.43	136.92	
15	12+92.00	493414.43	2245896.41	CLXRWI77	463+70.21	140.20	
16	13+16.00	493438.39	2245895.02	CLXRWI77	463+93.98	143.49	
17	13+32.00	493454.36	2245894.09	CLXRWI77	464+09.83	145.68	N8°27'02"W
18	13+44.00	493466.23	2245892.33	CLXRWI77	464+21.82	146.25	
19	13+68.00	493489.78	2245887.67	CLXRWI77	464+45.82	146.25	
20	13+92.00	493513.32	2245883.02	CLXRWI77	464+69.82	146.25	
21	14+16.00	493536.86	2245878.36	CLXRWI77	464+93.82	146.25	
22	14+40.00	493560.41	2245873.70	CLXRWI77	465+17.82	146.25	
23	14+64.00	493583.95	2245869.04	CLXRWI77	465+41.82	146.25	
24	14+88.00	493607.50	2245864.39	CLXRWI77	465+65.82	146.25	
25	15+12.00	493631.04	2245859.73	CLXRWI77	465+89.82	146.25	
26	15+36.00	493654.58	2245855.07	CLXRWI77	466+13.82	146.25	
27	15+60.00	493678.13	2245850.42	CLXRWI77	466+37.82	146.25	
28	15+84.00	493701.67	2245845.76	CLXRWI77	466+61.82	146.25	
29	16+08.00	493725.22	2245841.10	CLXRWI77	466+85.82	146.25	
30	16+32.00	493748.76	2245836.45	CLXRWI77	467+09.82	146.25	
31	16+56.00	493772.30	2245831.79	CLXRWI77	467+33.82	146.25	
32	16+80.00	493795.85	2245827.13	CLXRWI77	467+57.82	146.25	
33	17+04.00	493819.39	2245822.47	CLXRWI77	467+81.82	146.25	
34	17+28.00	493842.93	2245817.82	CLXRWI77	468+05.82	146.25	
35	17+52.00	493866.48	2245813.16	CLXRWI77	468+29.82	146.25	
36	17+65.00	493879.23	2245810.64	CLXRWI77	468+42.82	146.25	
37	17+78.00	493891.98	2245808.11	CLXRWI77	468+55.82	146.25	N11°11'20"W
38	18+40.50	493952.44	2245792.22	CLXRWI77	469+18.21	142.39	
39	18+60.50	493972.33	2245790.13	CLXRWI77	469+38.13	144.20	N6°00'52"W
40	18+80.50	493992.22	2245788.03	CLXRWI77	469+58.05	146.00	
41	19+04.50	494015.76	2245783.38	CLXRWI77	469+82.05	146.00	
42	19+28.50	494039.31	2245778.72	CLXRWI77	470+06.05	146.00	
43	19+52.50	494062.85	2245774.06	CLXRWI77	470+30.05	146.00	
44	19+76.50	494086.40	2245769.40	CLXRWI77	470+54.05	146.00	
45	20+00.50	494109.94	2245764.75	CLXRWI77	470+78.05	146.00	
46	20+24.50	494133.48	2245760.09	CLXRWI77	471+02.05	146.00	
47	20+48.50	494157.03	2245755.43	CLXRWI77	471+26.05	146.00	
48	20+72.50	494180.57	2245750.78	CLXRWI77	471+50.05	146.00	
49	20+96.50	494204.12	2245746.12	CLXRWI77	471+74.05	146.00	
50	21+20.50	494227.66	2245741.46	CLXRWI77	471+98.05	146.00	N11°11'20"W

NOISE BARRIER WALL G BASELINE GEOMETRY

POINT	WALL STATION	NORTHING	EASTING	ALIGNMENT			BEARING
				NAME	STATION	OFFSET	
51	21+44.50	494251.20	2245736.80	CLXRWI77	472+22.05	146.00	N11°11'20"W
52	21+68.50	494274.70	2245731.91	BLPSBI77	472+39.92	162.0239	
53	21+92.50	494298.19	2245727.02	BLPSBI77	472+63.55	162.1361	N11°45'53"W
54	22+16.50	494321.69	2245722.12	BLPSBI77	472+86.59	162.3631	
55	22+40.50	494345.19	2245717.23	BLPSBI77	473+09.63	162.7317	
56	22+64.50	494368.51	2245711.55	BLPSBI77	473+32.67	162.4388	
57	22+88.50	494391.82	2245705.88	BLPSBI77	473+55.71	162.2875	N13°40'56"W
58	23+12.50	494415.14	2245700.20	BLPSBI77	473+78.75	162.2779	
59	23+36.50	494438.46	2245694.52	BLPSBI77	474+01.80	162.4099	
60	23+60.50	494461.78	2245688.85	BLPSBI77	474+24.84	162.6836	
61	23+84.50	494485.19	2245683.57	BLPSBI77	474+47.86	163.5109	
62	24+08.50	494508.61	2245678.30	BLPSBI77	474+70.87	164.4797	N12°41'53"W
63	24+32.50	494532.02	2245673.02	BLPSBI77	474+93.88	165.5897	
64	24+56.50	494555.43	2245667.75	BLPSBI77	475+16.86	166.8409	
65	24+80.50	494578.99	2245663.17	BLPSBI77	475+39.79	168.9425	N11°00'00"W
66	25+04.50	494602.55	2245658.59	BLPSBI77	475+62.68	171.1843	
67	25+28.50	494625.87	2245652.90	BLPR77C	576+03.52	61.9898	N13°42'43"W
68	25+52.50	494649.18	2245647.21	BLPR77C	576+27.39	61.6202	
69	25+76.50	494672.50	2245641.52	BLPR77C	576+51.27	61.2973	
70	26+00.50	494695.81	2245635.81	BLPR77C	576+75.15	60.9994	
71	26+24.50	494719.12	2245630.10	BLPR77C	576+99.03	60.7483	N13°45'50"W
72	26+48.50	494742.43	2245624.39	BLPR77C	577+22.91	60.5440	
73	26+62.50	494756.03	2245621.06	BLPR77C	577+36.84	60.4464	
74	26+86.50	494779.61	2245616.60	BLPR77C	577+60.70	61.5979	
75	27+10.50	494803.19	2245612.14	BLPR77C	577+84.55	62.7961	N10°42'10"W
76	27+34.50	494826.78	2245607.69	BLPR77C	578+08.39	64.0409	
77	27+58.50	494850.36	2245603.23	BLPR77C	578+32.23	65.3324	
78	27+82.50	494873.67	2245597.53	BLPR77C	578+56.10	65.4043	
79	28+06.50	494896.99	2245591.84	BLPR77C	578+79.97	65.5230	
80	28+30.50	494920.30	2245586.14	BLPR77C	579+03.85	65.6884	
81	28+54.50	494943.62	2245580.45	BLPR77C	579+27.72	65.9006	N13°43'38"W
82	28+78.50	494966.93	2245574.75	BLPR77C	579+51.59	66.1596	
83	29+02.50	494990.25	2245569.06	BLPR77C	579+75.46	66.4652	
84	29+26.50	495013.56	2245563.36	BLPR77C	579+99.32	66.8177	
85	29+50.50	495036.88	2245557.67	BLPR77C	580+23.22	67.2155	
86	29+74.50	495060.19	2245551.97	BLPR77C	580+47.22	67.6268	
87	29+98.50	495083.13	2245544.92	BLPR77C	580+71.20	66.6310	
88	30+22.50	495106.07	2245537.87	BLPR77C	580+95.18	65.6353	
89	30+46.50	495129.01	2245530.82	BLPR77C	581+19.16	64.6395	
90	30+70.50	495151.95	2245523.77	BLPR77C	581+43.14	63.6437	
91	30+94.50	495174.89	2245516.71	BLPR77C	581+67.11	62.6479	
92	31+18.50	495197.83	2245509.66	BLPR77C	581+91.09	61.6521	
93	31+42.50	495220.77	2245502.61	BLPR77C	582+15.07	60.6563	
94	31+54.50	495232.24	2245499.08	BLPR77C	582+27.06	60.1585	
95	31+66.50	495243.72	2245495.56	BLPR77C	582+39.05	59.6606	N17°5'14"W
96	31+78.50	495255.19	2245492.03	BLPR77C	582+51.04	59.1627	
97	31+90.50	495266.66	2245488.51	BLPR77C	582+63.03	58.6648	
98	32+02.50	495278.13	2245484.98	BLPR77C	582+75.02	58.1669	
99	32+14.50	495289.60	2245481.46	BLPR77C	582+87.01	57.6690	
100	32+26.50	495301.07	2245477.93	BLPR77C	582+99.00	57.1711	

CALCULATED RFV
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SURVEY CONTROL

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NOISE BARRIER WALL G BASELINE GEOMETRY

POINT	WALL STATION	NORTHING	EASTING	ALIGNMENT			BEARING
				NAME	STATION	OFFSET	
101	32+38.50	495312.54	2245474.40	BLPR77C	583+10.99	56.6732	N17°5'14"W
102	32+50.50	495324.01	2245470.88	BLPR77C	583+22.98	56.1752	
103	32+62.50	495335.48	2245467.35	BLPR77C	583+35.00	55.6737	
104	32+86.50	495358.42	2245460.30	BLPR77C	583+59.12	54.6366	
105	33+10.50	495375.51	2245443.45	BLPR77C	583+80.06	42.5738	N44°35'45"W
106	33+34.50	495392.60	2245426.60	BLPR77C	584+00.95	30.4148	
107	33+50.50	495403.99	2245415.37	BLPR77C	584+14.82	22.2400	
108	33+66.50	495415.38	2245404.13	BLPR77C	584+28.62	14.0000	N13°9'33"W
109	33+90.50	495438.75	2245398.67	BLPR77C	584+52.77	14.0000	N12°30'1"W
110	34+14.50	495462.19	2245393.47	BLPR77C	584+76.95	14.0000	N11°43'25"W
111	34+38.50	495485.68	2245388.60	BLPR77C	585+01.15	14.0000	N10°49'47"W
112	34+62.50	495509.26	2245384.09	BLPR77C	585+25.38	14.0000	N9°51'54"W
113	34+86.50	495532.90	2245379.98	BLPR77C	585+49.62	14.0000	N8°53'44"W
114	35+10.50	495556.61	2245376.26	BLPR77C	585+73.86	14.0000	N8°5'16"W
115	35+26.50	495572.45	2245374.01	BLPR77C	585+90.01	14.0000	N7°16'47"W
116	35+50.50	495596.26	2245370.97	BLPR77C	586+14.25	14.0000	N6°18'38"W
117	35+74.50	495620.12	2245368.33	BLPR77C	586+38.49	14.0000	N5°20'27"W
118	35+98.50	495644.01	2245366.10	BLPR77C	586+62.73	14.0000	N4°22'17"W
119	36+22.50	495667.94	2245364.27	BLPR77C	586+86.96	14.0000	N3°24'6"W
120	36+46.50	495691.90	2245362.85	BLPR77C	587+11.20	14.0000	N2°25'57"W
121	36+70.50	495715.88	2245361.83	BLPR77C	587+35.44	14.0000	N1°27'46"W
122	36+94.50	495739.87	2245361.22	BLPR77C	587+59.67	14.0000	N0°29'36"W
123	37+18.50	495763.87	2245361.01	BLPR77C	587+83.91	14.0000	N0°28'34"E
124	37+42.50	495787.87	2245361.21	BLPR77C	588+08.15	14.0000	N1°26'44"E
125	37+66.50	495811.86	2245361.81	BLPR77C	588+32.39	14.0000	

CALCULATED RFV
CHECKED TJW

SURVEY CONTROL

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NOISE BARRIER WALL HI BASELINE GEOMETRY

POINT	WALL STATION	NORTHING	EASTING	ALIGNMENT			BEARING
				NAME	STATION	OFFSET	
1	10+00.00	496297.92	2241241.60	CLXRWI277	223+64.69	63.00	
2	10+12.00	496299.03	2241253.55	CLXRWI277	223+76.69	63.00	
3	10+24.00	496300.14	2241265.50	CLXRWI277	223+88.69	63.00	
4	10+36.00	496301.26	2241277.45	CLXRWI277	224+00.69	63.00	
5	10+48.00	496302.37	2241289.39	CLXRWI277	224+12.69	63.00	
6	10+72.00	496304.59	2241313.29	CLXRWI277	224+36.69	63.00	
7	10+96.00	496306.81	2241337.19	CLXRWI277	224+60.69	63.00	
8	11+20.00	496309.03	2241361.08	CLXRWI277	224+84.69	63.00	
9	11+44.00	496311.25	2241384.98	CLXRWI277	225+08.69	63.00	
10	11+68.00	496313.48	2241408.88	CLXRWI277	225+32.69	63.00	
11	11+92.00	496315.70	2241432.78	CLXRWI277	225+56.69	63.00	
12	12+16.00	496317.92	2241456.67	CLXRWI277	225+80.69	63.00	
13	12+40.00	496320.14	2241480.57	CLXRWI277	226+04.69	63.00	
14	12+64.00	496322.36	2241504.47	CLXRWI277	226+28.69	63.00	
15	12+88.00	496324.59	2241528.36	CLXRWI277	226+52.69	63.00	
16	13+12.00	496326.81	2241552.26	CLXRWI277	226+76.69	63.00	
17	13+36.00	496329.03	2241576.16	CLXRWI277	227+00.69	63.00	
18	13+60.00	496331.25	2241600.05	CLXRWI277	227+24.69	63.00	
19	13+84.00	496333.48	2241623.95	CLXRWI277	227+48.69	63.00	
20	14+08.00	496335.70	2241647.85	CLXRWI277	227+72.69	63.00	
21	14+32.00	496337.92	2241671.74	CLXRWI277	227+96.69	63.00	
22	14+56.00	496340.14	2241695.64	CLXRWI277	228+20.69	63.00	S69°22'5"E
23	14+64.00	496337.32	2241703.13	CLXRWI277	228+27.89	66.50	N84°41'15"E
24	14+88.00	496339.54	2241727.02	CLXRWI277	228+51.89	66.50	N58°44'35"E
25	14+96.00	496343.70	2241733.86	CLXRWI277	228+59.08	63.00	
26	15+20.00	496345.92	2241757.76	CLXRWI277	228+83.08	63.00	
27	15+44.00	496348.14	2241781.66	CLXRWI277	229+07.08	63.00	
28	15+68.00	496350.36	2241805.55	CLXRWI277	229+31.08	63.00	
29	15+92.00	496352.58	2241829.45	CLXRWI277	229+55.08	63.00	
30	16+16.00	496354.81	2241853.35	CLXRWI277	229+79.08	63.00	
31	16+32.00	496356.29	2241869.28	CLXRWI277	229+95.08	63.00	N84°41'15"E
32	16+48.00	496357.77	2241885.21	CLXRWI277	230+11.08	63.00	
33	16+64.00	496359.25	2241901.14	CLXRWI277	230+27.08	63.00	
34	16+88.00	496361.47	2241925.04	CLXRWI277	230+51.08	63.00	
35	17+12.00	496363.69	2241948.93	CLXRWI277	230+75.08	63.00	
36	17+36.00	496365.92	2241972.83	CLXRWI277	230+99.08	63.00	
37	17+60.00	496356.76	2241995.02	CLXRWI277	231+20.32	74.17	
38	17+84.00	496347.61	2242017.20	CLXRWI277	231+41.57	85.33	S67°35'1"E
39	18+08.00	496338.46	2242039.39	CLXRWI277	231+62.81	96.50	
40	18+32.00	496329.31	2242061.58	CLXRWI277	231+84.05	107.67	
41	18+47.00	496323.59	2242075.44	CLXRWI277	231+97.33	114.65	
42	18+62.00	496317.87	2242089.31	CLXRWI277	232+10.61	121.63	
43	18+86.00	496320.78	2242113.13	CLXRWI277	232+34.60	120.94	
44	19+10.00	496323.68	2242136.96	CLXRWI277	232+58.59	120.25	
45	19+34.00	496326.59	2242160.78	CLXRWI277	232+82.58	119.56	
46	19+58.00	496329.50	2242184.60	CLXRWI277	233+06.57	118.87	
47	19+82.00	496332.41	2242208.43	CLXRWI277	233+30.56	118.18	N83°2'31"E
48	20+06.00	496335.31	2242232.25	CLXRWI277	233+54.55	117.49	
49	20+30.00	496338.22	2242256.07	CLXRWI277	233+78.54	116.80	
50	20+54.00	496341.13	2242279.90	CLXRWI277	234+02.53	116.11	

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NOISE BARRIER WALL HI BASELINE GEOMETRY

POINT	WALL STATION	NORTHING	EASTING	ALIGNMENT			BEARING
				NAME	STATION	OFFSET	
51	20+78.00	496344.03	2242303.72	CLXRWI277	234+26.52	115.42	
52	21+02.00	496346.94	2242327.54	CLXRWI277	234+50.51	114.73	
53	21+26.00	496349.85	2242351.37	CLXRWI277	234+74.50	114.05	
54	21+50.00	496352.76	2242375.19	CLXRWI277	234+98.49	113.36	
55	21+74.00	496355.66	2242399.01	CLXRWI277	235+22.48	112.67	
56	21+98.00	496358.57	2242422.84	CLXRWI277	235+46.47	111.98	N83°2'31"E
57	22+22.00	496361.48	2242446.66	CLXRWI277	235+70.46	111.29	
58	22+46.00	496364.39	2242470.48	CLXRWI277	235+94.45	110.60	
59	22+70.00	496367.29	2242494.31	CLXRWI277	236+18.44	109.91	
60	22+94.00	496370.20	2242518.13	CLXRWI277	236+42.43	109.22	
61	23+18.00	496373.11	2242541.95	CLXRWI277	236+66.42	108.53	
62	23+42.00	496376.02	2242565.78	CLXRWI277	236+90.41	107.84	
63	23+66.00	496378.92	2242589.60	CLXRWI277	237+14.40	107.15	
64	23+90.00	496381.83	2242613.42	BLPR77A	114+13.24	-62.4649	
65	24+14.00	496384.74	2242637.25	BLPR77A	113+89.10	-61.7450	
66	24+38.00	496387.64	2242661.07	BLPR77A	113+64.96	-60.9660	
67	24+62.00	496390.55	2242684.89	BLPR77A	113+40.82	-60.1282	
68	24+86.00	496393.46	2242708.72	BLPR77A	113+16.70	-59.2314	
69	25+10.00	496396.37	2242732.54	BLPR77A	112+92.57	-58.2756	
70	25+34.00	496396.37	2242756.54	BLPR77A	112+68.50	-60.1734	DUE EAST
71	25+58.00	496395.11	2242780.51	BLPR77A	112+44.55	-63.2598	
72	25+82.00	496393.86	2242804.47	BLPR77A	112+20.58	-66.2882	
73	26+06.00	496392.61	2242828.44	BLPR77A	111+96.60	-69.2584	
74	26+30.00	496391.35	2242852.41	BLPR77A	111+72.61	-72.1705	
75	26+54.00	496390.10	2242876.37	BLPR77A	111+48.60	-75.0244	
76	26+78.00	496388.85	2242900.34	BLPR77A	111+24.57	-77.8200	
77	27+02.00	496387.59	2242924.31	BLPR77A	111+00.54	-80.5572	
78	27+26.00	496386.34	2242948.28	BLPR77A	110+76.49	-83.2361	
79	27+50.00	496385.09	2242972.24	BLPR77A	110+52.42	-85.8566	
80	27+74.00	496383.83	2242996.21	BLPR77A	110+28.34	-88.4186	
81	27+98.00	496382.58	2243020.18	BLPR77A	110+04.26	-90.9221	S87°0'23"E
82	28+22.00	496381.33	2243044.15	BLPR77A	109+80.15	-93.3670	
83	28+46.00	496380.07	2243068.11	BLPR77A	109+56.04	-95.7533	
84	28+70.00	496378.82	2243092.08	BLPR77A	109+31.92	-98.0809	
85	28+94.00	496377.57	2243116.05	BLPR77A	109+07.78	-100.3499	
86	29+18.00	496376.31	2243140.01	BLPR77A	108+83.63	-102.5602	
87	29+42.00	496375.06	2243163.98	BLPR77A	108+59.47	-104.7116	
88	29+66.00	496373.81	2243187.95	BLPR77A	108+35.31	-106.8043	
89	29+90.00	496372.55	2243211.92	BLPR77A	108+11.13	-108.8381	
90	30+14.00	496371.30	2243235.88	BLPR77A	107+86.94	-110.8130	
91	30+38.00	496370.05	2243259.85	BLPR77A	107+62.74	-112.7290	
92	30+62.00	496369.93	2243283.85	BLPR77A	107+38.47	-113.4488	
93	30+86.00	496369.81	2243307.85	BLPR77A	107+14.20	-114.1093	
94	31+10.00	496369.70	2243331.85	BLPR77A	106+89.92	-114.7106	
95	31+34.00	496369.58	2243355.85	BLPR77A	106+65.64	-115.2525	
96	31+58.00	496369.47	2243379.85	BLPR77A	106+41.49	-115.7436	S89°43'31"E
97	31+82.00	496369.35	2243403.85	BLPR77A	106+17.26	-116.2023	
98	110+00.00	496459.68	2243108.59	BLPR77A	109+11.85	-18.0000	
99	110+12.00	496460.17	2243120.58	BLPR77A	108+99.83	-18.0000	N87°39'2"E
100	110+24.00	496460.65	2243132.58	BLPR77A	108+87.81	-18.0000	N87°43'14"E
101	110+48.00	496461.56	2243156.56	BLPR77A	108+63.76	-18.0000	N87°49'33"E
102	110+72.00	496462.41	2243180.54	BLPR77A	108+39.72	-18.0000	N87°57'59"E
103	110+96.00	496463.20	2243204.53	BLPR77A	108+15.67	-18.0000	N88°6'23"E
104	111+20.00	496463.94	2243228.52	BLPR77A	107+91.63	-18.0000	N88°14'48"E
105	111+44.00	496464.61	2243252.51	BLPR77A	107+67.59	-18.0000	N88°23'13"E
							N88°31'38"E

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CALCULATED RFV
CHECKED TJW

SURVEY CONTROL

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NOISE BARRIER WALL HI BASELINE GEOMETRY

POINT	WALL STATION	NORTHING	EASTING	ALIGNMENT			BEARING
				NAME	STATION	OFFSET	
106	111+68.00	496465.23	2243276.50	BLPR77A	107+43.54	-18.0000	
107	111+92.00	496465.47	2243300.50	BLPR77A	107+19.50	-18.3151	
108	112+16.00	496465.71	2243324.50	BLPR77A	106+95.46	-18.5714	
109	112+40.00	496465.96	2243348.50	BLPR77A	106+71.41	-18.7689	
110	112+64.00	496466.20	2243372.50	BLPR77A	106+47.38	-18.9107	
111	112+84.00	496466.40	2243392.50	BLPR77A	106+27.36	-19.0065	
112	113+04.00	496466.61	2243412.49	BLPR77A	106+07.31	-19.0655	
113	113+24.00	496466.81	2243432.49	BLPR77A	105+87.24	-19.0615	
114	113+48.00	496467.05	2243456.49	BLPR77A	105+63.12	-18.9361	
115	113+72.00	496467.30	2243480.49	BLPR77A	105+38.96	-18.6358	
116	113+96.00	496467.54	2243504.48	BLPR77A	105+14.79	-18.1148	N89°25'10"E
117	114+20.00	496467.08	2243528.48	BLPR77A	104+90.57	-18.0238	S88°54'55"E
118	114+44.00	496466.25	2243552.46	BLPR77A	104+66.32	-18.0007	S88°0'16"E
119	114+68.00	496465.03	2243576.43	BLPR77A	104+42.04	-18.0000	S87°5'38"E
120	114+92.00	496463.43	2243600.38	BLPR77A	104+17.75	-18.0000	S86°10'59"E
121	115+16.00	496461.46	2243624.30	BLPR77A	103+93.46	-18.0000	S85°16'21"E
122	115+40.00	496459.10	2243648.18	BLPR77A	103+69.18	-18.0000	S84°21'42"E
123	115+64.00	496456.36	2243672.02	BLPR77A	103+44.89	-18.0000	S83°27'3"E
124	115+88.00	496453.24	2243695.82	BLPR77A	103+20.60	-18.0000	S82°32'24"E
125	116+12.00	496449.75	2243719.56	BLPR77A	102+96.32	-18.0000	S81°37'47"E
126	116+36.00	496445.88	2243743.25	BLPR77A	102+72.03	-18.0000	S80°43'7"E
127	116+60.00	496441.63	2243766.87	BLPR77A	102+47.75	-18.0000	S79°48'28"E
128	116+84.00	496437.01	2243790.42	BLPR77A	102+23.46	-18.0000	S78°53'51"E
129	117+08.00	496432.02	2243813.90	BLPR77A	101+99.17	-18.0000	S77°59'11"E
130	117+32.00	496426.65	2243837.29	BLPR77A	101+74.89	-18.0000	S77°4'33"E
131	117+56.00	496420.91	2243860.59	BLPR77A	101+50.60	-18.0000	S76°9'54"E
132	117+80.00	496414.80	2243883.80	BLPR77A	101+26.31	-18.0000	S75°15'16"E
133	118+04.00	496408.32	2243906.91	BLPR77A	101+02.03	-18.0000	S74°20'36"E
134	118+28.00	496401.48	2243929.92	BLPR77A	100+77.74	-18.0000	S73°25'58"E
135	118+52.00	496394.27	2243952.81	BLPR77A	100+53.45	-18.0000	S72°31'19"E
136	118+76.00	496386.70	2243975.58	BLPR77A	100+29.17	-18.0000	S71°36'42"E
137	119+00.00	496378.77	2243998.23	BLPR77A	100+04.88	-18.0000	S70°42'1"E
138	119+24.00	496370.48	2244020.76	BLPR77A	99+80.60	-18.0000	S69°47'24"E
139	119+48.00	496361.83	2244043.14	BLPR77A	99+56.31	-18.0000	S68°52'45"E
140	119+72.00	496352.83	2244065.39	BLPR77A	99+32.02	-18.0000	S67°58'6"E
141	119+96.00	496343.47	2244087.49	BLPR77A	99+07.74	-18.0000	S67°3'28"E
142	120+20.00	496333.77	2244109.44	BLPR77A	98+83.45	-18.0000	S66°8'49"E
143	120+44.00	496323.71	2244131.24	BLPR77A	98+59.16	-18.0000	S65°14'10"E
144	120+68.00	496313.31	2244152.87	BLPR77A	98+34.88	-18.0000	S64°19'31"E
145	120+92.00	496302.57	2244174.33	BLPR77A	98+10.59	-18.0000	S63°24'53"E
146	121+16.00	496291.49	2244195.62	BLPR77A	97+86.30	-18.0000	S62°30'14"E
147	121+40.00	496280.08	2244216.73	BLPR77A	97+62.02	-18.0000	S61°35'35"E
148	121+64.00	496268.32	2244237.65	BLPR77A	97+37.73	-18.0000	S60°40'57"E
149	121+88.00	496256.24	2244258.39	BLPR77A	97+13.45	-18.0000	S59°46'18"E
150	122+12.00	496243.83	2244278.93	BLPR77A	96+89.16	-18.0000	S58°51'40"E
151	122+36.00	496231.10	2244299.27	BLPR77A	96+64.87	-18.0000	S57°57'1"E
152	122+60.00	496218.04	2244319.41	BLPR77A	96+40.59	-18.0000	S57°2'22"E
153	122+84.00	496204.66	2244339.34	BLPR77A	96+16.30	-18.0000	S56°7'43"E
154	123+08.00	496190.97	2244359.05	BLPR77A	95+92.01	-18.0000	S55°13'5"E
155	123+32.00	496176.97	2244378.54	BLPR77A	95+67.73	-18.0000	S54°18'26"E

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NOISE BARRIER WALL HI BASELINE GEOMETRY

POINT	WALL STATION	NORTHING	EASTING	ALIGNMENT			BEARING
				NAME	STATION	OFFSET	
156	123+56.00	496162.66	2244397.81	BLPR77A	95+43.44	-18.0000	S53°23'48"E
157	123+80.00	496148.04	2244416.85	BLPR77A	95+19.15	-18.0000	S52°29'9"E
158	124+04.00	496133.13	2244435.65	BLPR77A	94+94.87	-18.0000	S51°34'31"E
159	124+28.00	496117.91	2244454.21	BLPR77A	94+70.58	-18.0000	S50°39'52"E
160	124+52.00	496102.41	2244472.53	BLPR77A	94+46.30	-18.0000	S49°45'12"E
161	124+76.00	496086.61	2244490.60	BLPR77A	94+22.01	-18.0000	S48°50'35"E
162	125+00.00	496070.53	2244508.42	BLPR77A	93+97.72	-18.0000	S47°55'55"E
163	125+24.00	496054.17	2244525.97	BLPR77A	93+73.44	-18.0000	S47°1'17"E
164	125+48.00	496037.53	2244543.27	BLPR77A	93+49.16	-18.0033	S46°6'38"E
165	125+72.00	496020.62	2244560.30	BLPR77A	93+24.90	-18.0334	S45°11'60"E
166	125+96.00	496003.44	2244577.06	BLPR77A	93+00.67	-18.1214	S44°17'21"E
167	126+20.00	495986.00	2244593.54	BLPR77A	92+76.46	-18.2983	S43°22'42"E
168	126+44.00	495968.12	2244609.55	BLPR77A	92+52.28	-18.8579	
169	126+68.00	495950.24	2244625.56	BLPR77A	92+28.11	-19.1867	
170	126+92.00	495932.36	2244641.57	BLPR77A	92+03.96	-19.3155	
171	127+16.00	495914.48	2244657.58	BLPR77A	91+79.84	-19.2751	S41°50'25"E
172	127+40.00	495896.60	2244673.59	BLPR77A	91+55.74	-19.0959	
173	127+64.00	495878.72	2244689.60	BLPR77A	91+31.67	-18.8086	
174	127+88.00	495860.84	2244705.61	BLPR77A	91+07.62	-18.4437	
175	128+12.00	495842.97	2244721.61	BLPR77A	90+83.62	-18.0317	
176	128+36.00	495824.81	2244737.30	BLPR77A	90+59.55	-18.0000	S40°50'40"E
177	128+60.00	495806.53	2244752.84	BLPR77A	90+35.40	-18.0000	S40°21'41"E
178	128+84.00	495788.11	2244768.23	BLPR77A	90+11.25	-18.0000	S39°52'43"E
179	129+08.00	495769.56	2244783.46	BLPR77A	89+87.09	-18.0000	S39°23'44"E
180	129+32.00	495750.89	2244798.54	BLPR77A	89+62.94	-18.0000	S38°54'44"E
181	129+56.00	495732.09	2244813.46	BLPR77A	89+38.79	-18.0000	S38°25'46"E
182	129+80.00	495713.16	2244828.22	BLPR77A	89+14.64	-18.0000	S37°56'47"E
183	130+04.00	495694.11	2244842.81	BLPSBI77	488+93.69	-80.2828	S37°27'48"E
184	130+28.00	495674.94	2244857.25	BLPSBI77	488+69.19	-79.8226	S36°58'49"E
185	130+52.00	495655.65	2244871.52	BLPSBI77	488+44.70	-79.4141	S36°29'50"E
186	130+76.00	495636.23	2244885.64	BLPSBI77	488+20.20	-79.0573	S36°0'51"E
187	131+00.00	495616.70	2244899.58	BLPSBI77	487+95.71	-78.7523	S35°31'51"E
188	131+24.00	495597.05	2244913.37	BLPSBI77	487+71.22	-78.4991	S35°2'54"E
189	131+48.00	495577.29	2244926.98	BLPSBI77	487+46.72	-78.2976	S34°33'54"E
190	131+67.50	495561.15	2244937.92	BLPSBI77	487+26.83	-78.1721	S34°7'38"E
191	131+91.50	495541.18	2244951.24	BLPSBI77	487+02.34	-78.0645	S33°41'23"E
192	132+15.50	495521.10	2244964.39	BLPSBI77	486+77.85	-78.0000	S33°13'38"E
193	132+39.50	495500.91	2244977.36	BLPSBI77	486+53.36	-78.0000	S32°42'50"E
194	132+63.50	495480.64	2244990.20	BLPSBI77	486+28.87	-78.0000	S32°21'16"E
195	132+87.50	495460.28	2245002.92	BLPSBI77	486+04.38	-78.0000	S31°59'42"E
196	133+11.50	495439.85	2245015.51	BLPSBI77	485+79.89	-78.0000	S31°38'9"E
197	133+35.50	495419.34	2245027.97	BLPSBI77	485+55.40	-78.0000	S31°16'35"E
198	133+59.50	495398.75	2245040.30	BLPSBI77	485+30.91	-78.0000	S30°55'0"E
199	133+83.50	495378.08	2245052.50	BLPSBI77	485+06.42	-78.0000	S30°33'27"E
200	134+07.50	495357.34	2245064.57	BLPSBI77	484+81.93	-78.0000	S30°11'52"E
201	134+31.50	495336.52	2245076.51	BLPSBI77	484+57.44	-78.0000	S29°50'19"E
202	134+55.50	495315.62	2245088.32	BLPSBI77	484+32.95	-78.0000	S29°28'45"E
203	134+79.50	495294.66	2245100.00	BLPSBI77	484+08.46	-78.0000	S29°7'11"E
204	135+03.50	495273.62	2245111.55	BLPSBI77	483+83.98	-78.0000	S28°45'38"E
205	135+27.50	495252.51	2245122.96	BLPSBI77	483+59.49	-78.0000	S28°24'4"E
206	135+51.50	495231.32	2245134.25	BLPSBI77	483+35.00	-78.0000	S28°2'30"E

HI-2

CALCULATED RFV
CHECKED TJW

SURVEY CONTROL

SUM-77 / 277 / 224

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NOISE BARRIER WALL HI BASELINE GEOMETRY

POINT	WALL STATION	NORTHING	EASTING	ALIGNMENT			BEARING	
				NAME	STATION	OFFSET		
207	135+75.50	495210.07	2245145.40	BLPSBI77	483+10.51	-78.0000	S27°40'56"E	HI-2
208	135+99.50	495188.75	2245156.41	BLPSBI77	482+86.02	-78.0000	S27°19'22"E	
209	136+23.50	495167.36	2245167.29	BLPSBI77	482+61.53	-78.0000	S26°57'48"E	
210	136+47.50	495145.90	2245178.04	BLPSBI77	482+37.04	-78.0000	S26°36'14"E	
211	136+71.50	495124.37	2245188.66	BLPSBI77	482+12.55	-78.0000	S26°14'41"E	
212	136+95.50	495102.78	2245199.13	BLPSBI77	481+88.06	-78.0000	S25°53'7"E	
213	137+19.50	495081.12	2245209.47	BLPSBI77	481+63.57	-78.0000	S25°31'33"E	
214	137+43.50	495059.40	2245219.68	BLPSBI77	481+39.08	-78.0000	S25°9'59"E	
215	137+67.50	495037.62	2245229.75	BLPSBI77	481+14.59	-78.0000	S24°48'25"E	
216	137+91.50	495015.77	2245239.68	BLPSBI77	480+90.10	-78.0000	S24°26'52"E	
217	138+15.50	494993.86	2245249.48	BLPSBI77	480+65.61	-78.0000	S24°5'18"E	
218	138+39.50	494971.89	2245259.14	BLPSBI77	480+41.13	-78.0000	S23°43'44"E	
219	138+63.50	494949.86	2245268.66	BLPSBI77	480+16.64	-78.0000	S23°22'9"E	
220	138+87.50	494927.77	2245278.04	BLPSBI77	479+92.15	-78.0000	S23°0'36"E	
221	139+11.50	494905.62	2245287.28	BLPSBI77	479+67.66	-78.0000	S22°39'3"E	
222	139+35.50	494883.41	2245296.38	BLPSBI77	479+43.17	-78.0000	S22°17'28"E	
223	139+59.50	494861.15	2245305.35	BLPSBI77	479+18.68	-78.0000	S21°55'55"E	
224	139+71.50	494849.99	2245309.78	BLPSBI77	479+06.43	-78.0000	S21°39'44"E	
225	139+83.50	494838.83	2245314.17	BLPSBI77	478+94.19	-78.0000	S21°28'57"E	
226	210+00.00	494982.75	2245207.40	BLPSBI77	480+72.73	-120.9628		
227	210+24.00	494960.62	2245216.69	BLPSBI77	480+47.97	-121.4048		
228	210+48.00	494938.49	2245225.98	BLPSBI77	480+23.20	-121.6946		
229	210+72.00	494916.37	2245235.27	BLPSBI77	479+98.43	-121.8321	S22°46'34"E	
230	210+96.00	494894.24	2245244.56	BLPSBI77	479+73.65	-121.8173		
231	211+20.00	494872.11	2245253.86	BLPSBI77	479+48.88	-121.6502		
232	211+44.00	494849.98	2245263.15	BLPSBI77	479+24.11	-121.3309		
233	211+68.00	494826.92	2245269.79	BLPSBI77	478+99.45	-123.6702	S16°3'26"E	
234	211+92.00	494803.85	2245276.42	BLPSBI77	478+74.77	-125.8585		
235	212+16.00	494780.79	2245283.06	BLPSBI77	478+50.05	-127.8955		
236	212+40.00	494757.72	2245289.70	BLPSBI77	478+25.31	-129.7811		
237	212+64.00	494734.62	2245296.37	BLPSBI77	478+00.49	-131.4995	S16°06'34"E	
238	212+88.00	494711.56	2245303.03	BLPSBI77	477+75.70	-133.0581		
239	213+12.00	494688.50	2245309.69	BLPSBI77	477+50.89	-134.4645		
240	213+36.00	494665.49	2245316.34	BLPSBI77	477+26.12	-135.7166		HI-3
241	213+60.00	494642.50	2245323.22	BLPSBI77	477+01.26	-136.5890		
242	213+84.00	494619.51	2245330.10	BLPSBI77	476+76.40	-137.3087		
243	214+08.00	494596.52	2245336.98	BLPSBI77	476+51.53	-137.8756		
244	214+32.00	494573.52	2245343.86	BLPSBI77	476+26.66	-138.2896		
245	214+56.00	494550.53	2245350.74	BLPSBI77	476+01.78	-138.5507		
246	214+80.00	494527.54	2245357.62	BLPSBI77	475+76.89	-138.6589	S16°39'38"E	
247	215+04.00	494504.55	2245364.50	BLPSBI77	475+52.01	-138.6140		
248	215+28.00	494481.55	2245371.38	BLPSBI77	475+27.13	-138.4162		
249	215+52.00	494458.56	2245378.27	BLPSBI77	475+02.25	-138.0655		
250	215+76.00	494435.57	2245385.15	BLPSBI77	474+77.38	-137.5619		
251	216+00.00	494412.58	2245392.03	BLPSBI77	474+52.51	-136.9054		
252	216+24.00	494389.58	2245398.91	BLPSBI77	474+27.66	-136.0962	S41°33'38"E	
253	216+48.00	494371.63	2245414.83	BLPSBI77	474+05.57	-125.1344		
254	216+72.00	494348.08	2245419.48	BLPSBI77	473+80.80	-126.3317		
255	216+96.00	494324.54	2245424.14	BLPSBI77	473+56.02	-127.3767	S11°10'50"W	
256	217+20.00	494300.99	2245428.79	BLPSBI77	473+31.22	-128.2696		
257	217+44.00	494277.45	2245433.44	BLPSBI77	473+06.41	-129.0100		

NOISE BARRIER WALL HI BASELINE GEOMETRY

POINT	WALL STATION	NORTHING	EASTING	ALIGNMENT			BEARING	
				NAME	STATION	OFFSET		
258	217+68.00	494253.90	2245438.10	BLPSBI77	472+81.60	-129.5980	S11°10'50"E	HI-3
259	217+92.00	494230.36	2245442.75	BLPSBI77	472+56.78	-130.0335		
260	218+16.00	494206.81	2245447.40	BLPSBI77	472+32.71	-130.3803		
261	218+40.00	494183.27	2245452.06	BLPSBI77	472+08.71	-130.7266		
262	218+64.00	494159.73	2245456.71	BLPSBI77	471+84.72	-131.0729		
263	218+88.00	494136.18	2245461.37	BLPSBI77	471+60.72	-131.4192		
264	219+12.00	494112.64	2245466.02	BLPSBI77	471+36.72	-131.7655		
265	219+36.00	494089.09	2245470.67	BLPSBI77	471+12.72	-132.1118		
266	219+60.00	494065.55	2245475.33	BLPSBI77	470+88.73	-132.4581		
267	219+84.00	494042.00	2245479.98	BLPSBI77	470+64.73	-132.8044		
268	220+08.00	494018.46	2245484.63	BLPSBI77	470+40.73	-133.1507		
269	220+32.00	493994.91	2245489.29	BLPSBI77	470+16.73	-133.4970		
270	220+56.00	493971.37	2245493.94	BLPSBI77	469+92.74	-133.8433		
271	220+73.82	493953.89	2245497.40	BLPSBI77	469+74.92	-134.1003		

CALCULATED RFV
CHECKED TJW

SURVEY CONTROL

SUM-77/277/224

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NOISE BARRIER WALL K BASELINE GEOMETRY

POINT	WALL STATION	NORTHING	EASTING	ALIGNMENT			BEARING
				NAME	STATION	OFFSET	
1	10+00.00	496899.19	2244625.75	BLPR77D	899+70.21	14.00	S75°28'5"E
2	10+12.00	496896.17	2244637.37	BLPR77D	899+58.13	14.00	S75°48'37"E
3	10+24.00	496893.23	2244649.01	BLPR77D	899+46.04	14.00	S76°10'11"E
4	10+36.00	496890.36	2244660.66	BLPR77D	899+33.95	14.00	S76°41'9"E
5	10+60.00	496884.84	2244684.01	BLPR77D	899+09.79	14.00	S77°21'57"E
6	10+84.00	496879.59	2244707.43	BLPR77D	898+85.62	14.00	S78°1'37"E
7	11+08.00	496874.61	2244730.91	BLPR77D	898+61.46	14.00	S78°41'28"E
8	11+32.00	496869.90	2244754.44	BLPR77D	898+37.30	14.00	S79°21'20"E
9	11+56.00	496865.47	2244778.03	BLPR77D	898+13.14	14.00	S80°1'13"E
10	11+80.00	496861.31	2244801.67	BLPR77D	897+88.97	14.00	S80°41'5"E
11	12+04.00	496857.42	2244825.35	BLPR77D	897+64.81	14.00	S81°20'56"E
12	12+28.00	496853.81	2244849.08	BLPR77D	897+40.65	14.00	S82°0'54"E
13	12+52.00	496850.48	2244872.85	BLPR77D	897+16.49	14.00	S82°41'17"E
14	12+76.00	496847.43	2244896.65	BLPR77D	896+92.33	14.01	S83°15'53"E
15	13+00.00	496844.61	2244920.48	BLPR77D	896+68.18	14.00	S83°50'27"E
16	13+24.00	496842.04	2244944.35	BLPR77D	896+44.05	13.99	S84°25'3"E
17	13+48.00	496839.70	2244968.23	BLPR77D	896+19.92	14.00	S84°55'16"E
18	13+72.00	496837.58	2244992.14	BLPR77D	895+95.81	14.01	S85°18'37"E
19	13+96.00	496835.62	2245016.06	BLPR77D	895+71.71	14.01	S85°41'54"E
20	14+20.00	496833.81	2245039.99	BLPR77D	895+47.61	13.99	S86°5'11"E
21	14+44.00	496832.18	2245063.93	BLPR77D	895+23.53	14.00	S86°23'39"E
22	14+65.00	496830.86	2245084.89	BLPR77D	895+02.47	14.00	S86°38'32"E
23	14+86.00	496829.63	2245105.86	BLPR77D	894+81.40	14.00	S86°54'26"E
24	15+07.00	496828.49	2245126.83	BLPR77D	894+60.34	14.00	S87°10'6"E
25	15+28.00	496827.46	2245147.80	BLPR77D	894+39.27	14.00	S87°27'6"E
26	15+52.00	496826.39	2245171.78	BLPR77D	894+15.20	14.00	S87°45'10"E
27	15+76.00	496825.45	2245195.76	BLPR77D	893+91.13	14.00	S88°3'13"E
28	16+00.00	496824.63	2245219.74	BLPR77D	893+67.05	14.00	
29	16+24.00	496825.10	2245243.74	BLPR77D	893+43.01	15.16	N88°52'37"E
30	16+48.00	496825.57	2245267.73	BLPR77D	893+18.95	16.19	
31	16+72.00	496826.04	2245291.73	BLPR77D	892+94.88	17.10	
32	16+96.00	496826.51	2245315.73	BLPR77D	892+70.80	17.88	
33	17+20.00	496826.60	2245339.73	BLPR77D	892+46.70	18.16	N89°47'0"E
34	17+44.00	496826.70	2245363.73	BLPR77D	892+22.61	18.31	
35	17+68.00	496826.79	2245387.73	BLPR77D	891+98.51	18.33	
36	17+92.00	496826.88	2245411.72	BLPR77D	891+74.42	18.23	
37	18+16.00	496826.97	2245435.72	BLPR77D	891+50.32	18.00	
38	18+32.00	496836.14	2245448.83	BLPR77D	891+36.99	26.94	
39	18+48.00	496845.31	2245461.94	BLPR77D	891+23.60	35.85	
40	18+60.00	496852.19	2245471.78	BLPR77D	891+13.53	42.50	
41	18+72.00	496859.07	2245481.61	BLPR77D	891+03.43	49.13	N55°1'7"E
42	18+84.00	496865.95	2245491.44	BLPR77D	890+93.30	55.74	
43	18+96.00	496872.83	2245501.27	BLPR77D	890+83.14	62.33	
44	19+08.00	496879.71	2245511.10	BLPR77D	890+72.95	68.89	
45	19+20.00	496886.59	2245520.94	BLPR77D	890+62.72	75.44	
46	19+44.00	496888.29	2245544.88	BLPR77D	890+38.33	76.23	
47	19+68.00	496889.99	2245568.81	BLPR77D	890+13.94	76.90	
48	19+92.00	496891.69	2245592.75	BLPR77D	889+89.53	77.44	N85°56'19"E
49	20+16.00	496893.39	2245616.69	BLPR77D	889+65.12	77.85	
50	20+40.00	496895.09	2245640.63	BLPR77D	889+40.71	78.14	

NOISE BARRIER WALL K BASELINE GEOMETRY

POINT	WALL STATION	NORTHING	EASTING	ALIGNMENT			BEARING
				NAME	STATION	OFFSET	
51	20+64.00	496896.79	2245664.57	BLPR77D	889+16.29	78.30	N85°56'19"E
52	20+88.00	496898.49	2245688.51	BLPR77D	888+91.87	78.33	
53	21+12.00	496900.19	2245712.45	BLPR77D	888+67.46	78.23	
54	21+36.00	496901.89	2245736.39	CLXRW1277	268+96.10	-122.21	
55	21+60.00	496903.59	2245760.33	CLXRW1277	269+20.09	-121.69	
56	21+84.00	496905.29	2245784.27	CLXRW1277	269+44.09	-121.17	N88°9'37"E
57	22+00.00	496905.80	2245800.26	CLXRW1277	269+60.06	-120.20	
58	22+16.00	496906.32	2245816.26	CLXRW1277	269+76.03	-119.23	
59	22+40.00	496907.09	2245840.24	CLXRW1277	269+99.98	-117.78	
60	22+64.00	496906.53	2245864.24	CLXRW1277	270+23.82	-115.00	
61	22+88.00	496905.97	2245888.23	CLXRW1277	270+47.66	-112.22	
62	23+12.00	496905.41	2245912.22	CLXRW1277	270+71.50	-109.44	S88°40'4"E
63	23+36.00	496904.86	2245936.22	CLXRW1277	270+95.34	-106.67	
64	23+60.00	496904.30	2245960.21	CLXRW1277	271+19.18	-103.89	
65	23+84.00	496903.74	2245984.20	CLXRW1277	271+43.02	-101.11	
66	24+08.00	496903.18	2246008.20	CLXRW1277	271+66.86	-98.34	
67	24+32.00	496902.62	2246032.19	CLXRW1277	271+90.69	-95.56	
68	24+56.00	496904.05	2246056.15	CLXRW1277	272+14.68	-94.76	
69	24+80.00	496905.47	2246080.11	CLXRW1277	272+38.67	-93.96	
70	25+04.00	496906.90	2246104.06	CLXRW1277	272+62.65	-93.16	
71	25+28.00	496908.33	2246128.02	CLXRW1277	272+86.64	-92.36	
72	25+52.00	496909.75	2246151.98	CLXRW1277	273+10.63	-91.56	
73	25+76.00	496911.18	2246175.94	CLXRW1277	273+34.61	-90.77	
74	26+00.00	496912.60	2246199.90	CLXRW1277	273+58.60	-89.97	N86°35'41"E
75	26+24.00	496914.03	2246223.85	CLXRW1277	273+82.59	-89.17	
76	26+48.00	496915.45	2246247.81	CLXRW1277	274+06.57	-88.37	
77	26+72.00	496916.88	2246271.77	CLXRW1277	274+30.56	-87.57	
78	26+96.00	496918.30	2246295.73	CLXRW1277	274+54.55	-86.77	
79	27+20.00	496919.73	2246319.68	CLXRW1277	274+78.54	-85.97	
80	27+44.00	496921.16	2246343.64	CLXRW1277	275+02.52	-85.17	
81	27+68.00	496925.49	2246367.25	CLXRW1277	275+26.43	-87.30	N79°35'41"E
82	27+92.00	496930.31	2246390.76	CLXRW1277	275+50.28	-89.93	
83	28+16.00	496935.13	2246414.27	CLXRW1277	275+74.14	-92.55	
84	28+40.00	496939.95	2246437.78	CLXRW1277	275+98.00	-95.17	
85	28+64.00	496944.77	2246461.29	CLXRW1277	276+21.85	-97.80	
86	28+88.00	496949.59	2246484.80	CLXRW1277	276+45.71	-100.42	
87	29+12.00	496954.41	2246508.31	CLXRW1277	276+69.56	-103.04	N78°24'47"E
88	29+36.00	496959.23	2246531.82	CLXRW1277	276+93.42	-105.67	
89	29+60.00	496964.05	2246555.33	CLXRW1277	277+17.28	-108.29	
90	29+84.00	496968.87	2246578.84	CLXRW1277	277+41.13	-110.91	
91	30+08.00	496973.69	2246602.36	CLXRW1277	277+64.99	-113.53	
92	30+32.00	496978.52	2246625.87	CLXRW1277	277+88.53	-116.18	
93	30+56.00	496983.34	2246649.38	CLXRW1277	278+11.89	-118.92	
94	30+80.00	496985.84	2246673.25	CLXRW1277	278+35.40	-119.41	N84°1'5"E
95	31+04.00	496988.34	2246697.12	CLXRW1277	278+58.90	-120.00	
96	31+28.00	496988.52	2246721.11	CLXRW1277	278+82.35	-118.37	
97	31+52.00	496988.70	2246745.11	CLXRW1277	279+05.82	-116.83	
98	31+76.00	496988.88	2246769.11	CLXRW1277	279+29.30	-115.40	
99	32+00.00	496989.06	2246793.11	CLXRW1277	279+52.80	-114.06	N89°34'12"E
100	32+24.00	496989.24	2246817.11	CLXRW1277	279+76.30	-112.81	
101	32+48.00	496989.42	2246841.11	CLXRW1277	279+99.81	-111.67	
102	32+72.00	496989.60	2246865.11	CLXRW1277	280+23.33	-110.63	

CALCULATED RFV
CHECKED TJW

SURVEY CONTROL

SUM-77 / 277 / 224

1078
1288

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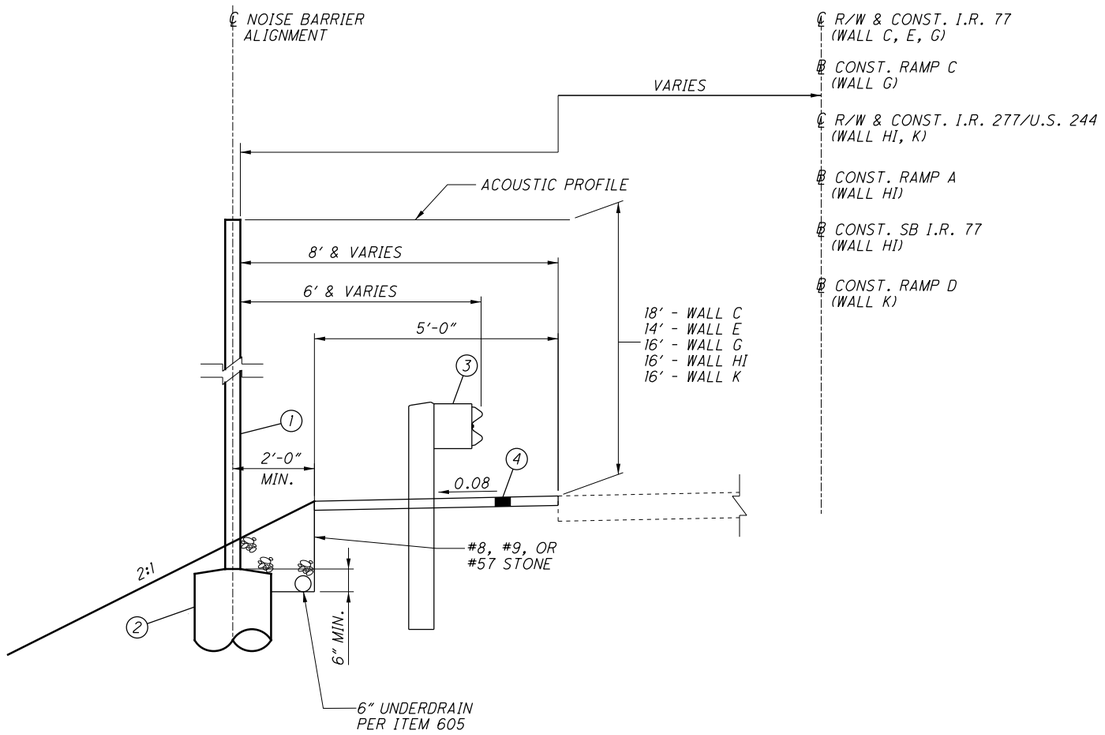
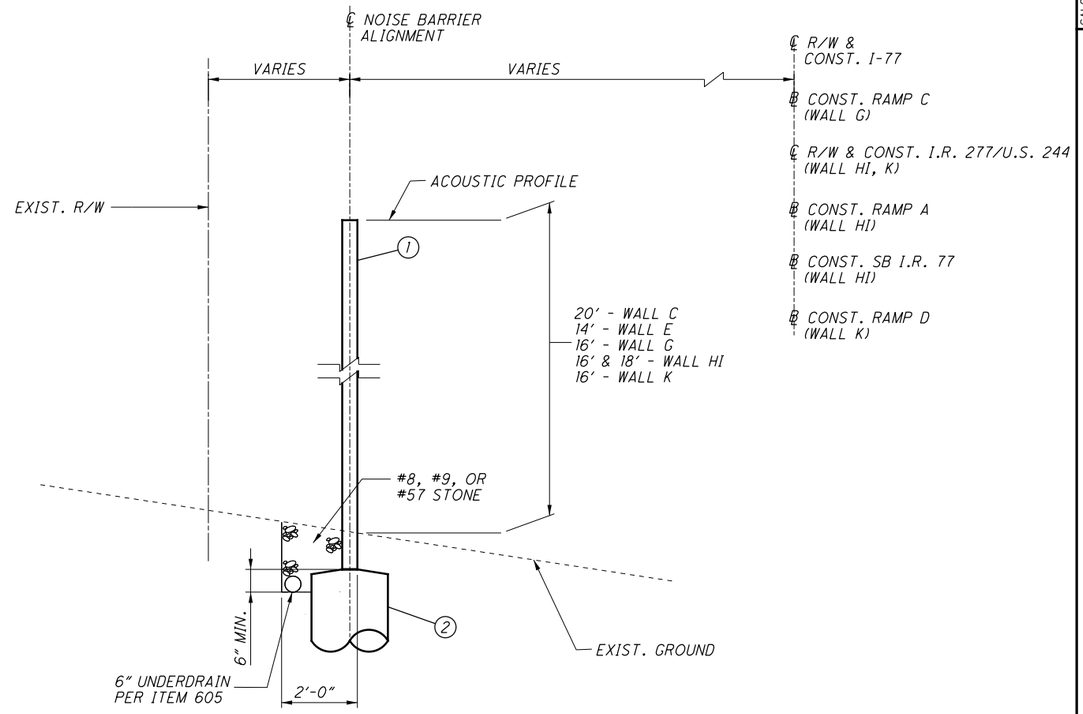


TYPICAL NOISE WALL

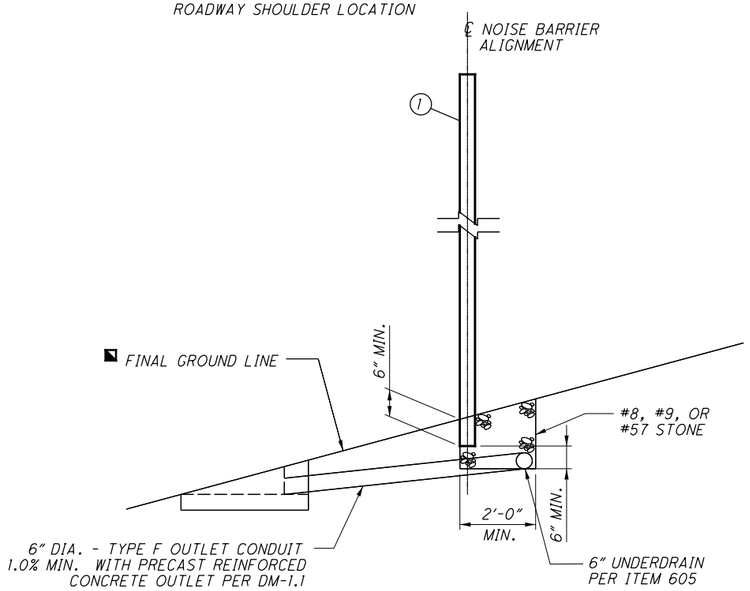


TYPICAL NOISE WALL

RIGHT-OF-WAY LOCATION

TYPICAL NOISE WALL

ROADWAY SHOULDER LOCATION



TYPICAL NOISE BARRIER DRAINAGE OUTLET DETAIL

◪ MINOR GRADING ADJUSTMENT MAY BE NECESSARY TO PROVIDE 6″ MINIMUM BURIED WALL.

LEGEND:

(1) ITEM SPECIAL - NOISE BARRIER (REFLECTIVE)

(2) ITEM 524 - DRILLED SHAFT

(3) ITEM 606 - GUARDRAIL, TYPE MGS

(4) ITEM 441 - 2″ ASPHALT CONCRETE INTERMEDIATE COURSE, (448), (UNDER GUARDRAIL), AS PER PLAN

TYPICAL NOISE BARRIER DRAINAGE NOTES:

1. CONSTRUCT A TRENCH WITH A MINIMUM LONGITUDINAL SLOPE OF 1.0% UNDER THE NOISE BARRIER PANELS AS SHOWN IN THE TYPICAL ELEVATION.
2. PROVIDE UNDERDRAIN SLOPE OF 1.0% MINIMUM OR AS SPECIFIED IN PROJECT PLANS. INSTALL IN ACCORDANCE WITH ITEM 605.
3. OUTLET CONDUIT TO BE SPACED AT 500′ MAX.; INSTALL IN ACCORDANCE WITH ITEM 605.

NOTES:

1. SEE ROADWAY TYPICAL SECTIONS FOR DETAILS AND ITEMS NOT SHOWN.
2. DRILLED SHAFTS AND ALL NOISE WALL DRAINAGE APPURTENANCES INCLUDING 6″ PIPE, STONE AND PRECAST OUTLETS ARE INCLUDED WITH NOISE WALL FOR PAYMENT. SEE STD. DWG. NBS-1-09 FOR MORE INFORMATION.

CALCULATED RFV
CHECKED TJW

NOISE BARRIER TYPICAL SECTIONS

SUM-77 / 277 / 224

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ITEM 606 - SPECIAL - NOISE WALL BARRIER (REFLECTIVE)

NOISE WALL CONSTRUCTION SHALL ADHERE TO ODOT STANDARD DRAWING NBS-1-09. UNLESS OTHERWISE NOTED HEREIN, ALL GENERAL NOTES LISTED IN THE STANDARD SHALL APPLY FOR THE DESIGN SPECIFICATIONS, DESIGN LOADS, MATERIALS, ETC. FOR THESE WALLS. THOSE ITEMS THAT DEVIATE FROM THE NOTES LISTED IN THE STANDARD ARE DESCRIBED BELOW.

MATERIAL SPECIFICATIONS:

FOAM BACKER ROD:
THE BACKER ROD SHALL BE AN EXPANDED, CLOSED CELL POLYETHYLENE FOAM. THE BACKER ROD DIAMETER SHALL BE 1-¼" ϕ. OTHER BACKUP MATERIALS (PAPER, ROPE AND OPEN CELL FOAM) ARE NOT ACCEPTABLE. FURNISH FOAM BACKER ROD MEETING ASTM D5249 TYPE I OR TYPE 3.

SHOP DRAWINGS:

PROVIDE SHOP DRAWINGS FOR ALL NOISE WALL COMPONENTS THAT REQUIRE SHOP FABRICATION. INCLUDE THE FABRICATION SCHEDULE FOR ALL NOISE BARRIER WALL COMPONENTS IN THE PROJECT PROGRESS SCHEDULE AS REQUIRED BY C&MS 108.02.

THE SHOP DRAWINGS SHALL BE SIGNED, SEALED AND DATED BY AN OHIO REGISTERED ENGINEER. ALL MODIFICATIONS TO THE STRUCTURAL DESIGN OF THE PANELS, POSTS, BASE PLATES OR ANCHORAGES PROVIDED BY THIS STANDARD DRAWING SHALL BE CLEARLY NOTED ON THE SHOP DRAWINGS AND BE ACCOMPANIED WITH SUPPORTING CALCULATIONS STAMPED BY TWO OHIO REGISTERED ENGINEERS. DEPARTMENT ACCEPTANCE OF THE SHOP DRAWINGS AND SUPPORTING CALCULATIONS DOES NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS AND OMISSIONS FOUND AFTER ACCEPTANCE OF THE SUBMITTAL.

THE CONTRACTOR SHALL PROVIDE AN ELECTRONINC COPY OF A WRITTEN ACCEPTANCE LETTER THAT DOCUMENTS ACCEPTANCE OF THE SHOP DRAWINGS INCLUDING CONFIRMATION OF FIELD VERIFICATION, AS REQUIRED, AND DESCRIPTIONS OF ISSUES RESOLVED BETWEEN THE CONTRACTOR, THE FABRICATOR AND THE DEPARTMENT. BY ACCEPTING THESE DRAWINGS, THE CONTRACTOR REPRESENTS TO THE DEPARTMENT THAT ALL DIMENSIONS AND ELEVATIONS OF CONDITIONS SHOWN ON THE PLANS HAVE BEEN FIELD MEASURED AND VERIFIED, AND THAT THESE SHOP DRAWINGS COMPLY WITH ALL THE MATERIALS REQUIREMENTS, CONSTRUCTION REQUIREMENTS AND CONTRACT REQUIREMENTS. THE CONTRACTOR FURTHER REPRESENTS THAT THESE DRAWINGS HAVE BEEN COORDINATED AND VERIFIED WITH THE DETAILS OF THE WORK TO BE PERFORMED BY OTHER FABRICATORS AND ENTITIES ON THE PROJECT. DELAYS TO THE CONTRACTOR FOR INCORRECT FABRICATION AS A RESULT OF FAILURE TO COORDINATE OR PERFORM THIS ACCEPTANCE ARE NON-EXCUSABLE ACCORDING TO C&MS 108.06.E.

ALL ELECTRONIC DOCUMENTS SHALL BE IN PORTABLE DOCUMENT FORMAT (PDF). SHOP DRAWINGS SHALL BE SUBMITTED IN 11' X 17" SHEET SIZE AND ACCEPTANCE LETTERS SHALL BE SUBMITTED IN 8 ½" X 11" SHEET SIZE.

CONCRETE NOISE BARRIER PANELS AND POSTS:

EVERY PRODUCER OF PRECAST CONCRETE NOISE BARRIER COMPONENTS SUPPLIED TO THE PROJECT SHALL BE CERTIFIED IN ACCORDANCE WITH SUPPLEMENT 1073. THE DEPARTMENT WILL NOT ACCEPT PRECAST COMPONENTS FROM NON-CERTIFIED PLANTS. THE CONCRETE SUPPLIED FOR CONCRETE POSTS AND PANELS SHALL MEET THE REQUIREMENTS SPECIFIED ABOVE UNDER SECTION 6, MATERIAL SPECIFICATIONS.

NOISE BARRIERS REQUIRE A REINFORCED INTEGRAL CAP (COPING) ON THE TOP OF THE TOP PANELS AND INTEGRAL REINFORCED CONCRETE CAP ON TOP OF THE POSTS.

REMOVE LEACHING OR EFFLORESCENCE THAT OCCURS PRIOR TO FINAL ACCEPTANCE OF THE ENTIRE PROJECT AND RESEAL THE AREA AT NO EXPENSE TO THE DEPARTMENT. THIS SHALL ALSO APPLY IN AREAS WHERE A PARTIAL ACCEPTANCE OF THE COMPLETED WALLS MAY HAVE BEEN GRANTED.

THE FOLLOWING REQUIREMENTS FOR THE CONCRETE MIX DESIGN FOR POSTS AND FINIALS IS REQUIRED:

a. IN ADDITION TO THE SECTION 6. MATERIAL SPECIFICATIONS, CONCRETE, OF THE GENERAL NOTES FOR ITEM SPECIAL - NOISE BARRIERS, FROM THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION, OFFICE OF STRUCTURAL ENGINEERING STANDARD DRAWING NBS-1-09 - NOISE BARRIER SPECIFICATIONS FOR GROUND MOUNTED APPLICATIONS, THE CONCRETE MIX DESIGN FOR POSTS, AND FINIALS SHALL CONTAIN A PERMANENT, NON-SOLUBLE CRYSTALLINE CAPILLARY WATERPROOFING ADMIXTURE. PENETRON, BASF MASTERLITE 300D, SIKA WT-240P AND SIKA MIX AE-6 ARE ODOT APPROVED CONCRETE WATERPROOFING ADMIXTURES.

ITEM 606 - SPECIAL - NOISE BARRIER (REFLECTIVE), INFINITY WALL

PANEL IDS 1-14 OF NOISE BARRIER E SHALL BE MANUFACTURED AND DELIVERED TO THE PROJECT SITE BY NOISE WALL BARRIER (NWB) LLC. THE CONTRACTOR IS DIRECTED TO CONTACT JIM THOMPSON OF NWB AT 614-429-7635 TO COORDINATE PROJECT SCHEDULES INCLUDING, BUT NOT LIMITED TO, MANUFACTURE AND DELIVERY OF NOISE BARRIER PANELS. NWB SHALL PROVIDE THE INFINITY NOISE BARRIER PANELS AT THE SAME COST AS ITEM - 606 NOISE BARRIER (REFLECTIVE). THE PROVIDED NOISE BARRIER PANELS SHALL MATCH DETAILS IN NBS-1-09. THE PANELS SHALL MATCH THE PANEL SIZES IN THE NOISE WALL SHOP DRAWINGS AND SHALL MATCH COLOR AND TEXTURE OF CONCRETE PANELS IN THE REMAINDER OF THE WALL SECTION. INSTALLATION OF THESE PANELS WILL BE PERFORMED BY THE PRIME CONTRACTOR. THE POSTS SHALL BE PROVIDED BY THE CONRETE NOISE WALL SUPPLIER, NOT NWB.

PAYMENT FOR THESE SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE FOOT ITEM 606 - SPECIAL - NOISE BARRIER (RELECTIVE), INFINITY WALL, UNLESS OTHERWISE NOTED, AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

CALCULATED RFV | CHECKED DGN

NOISE BARRIER GENERAL NOTES

SUM-77/277/224

1080
1288

REVISIONS		
NO.	DATE	DESCRIPTION
1	03/23/21	PHONE NUMBER REVISED

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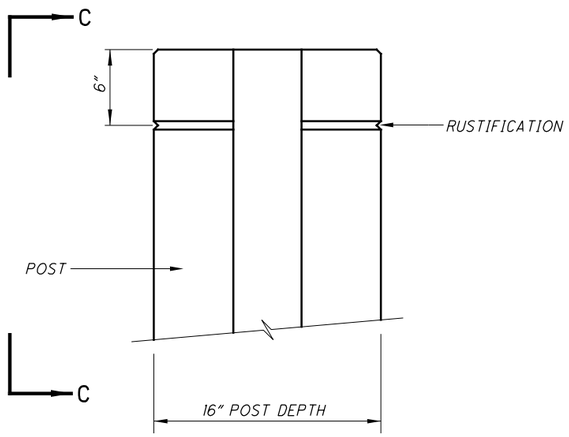
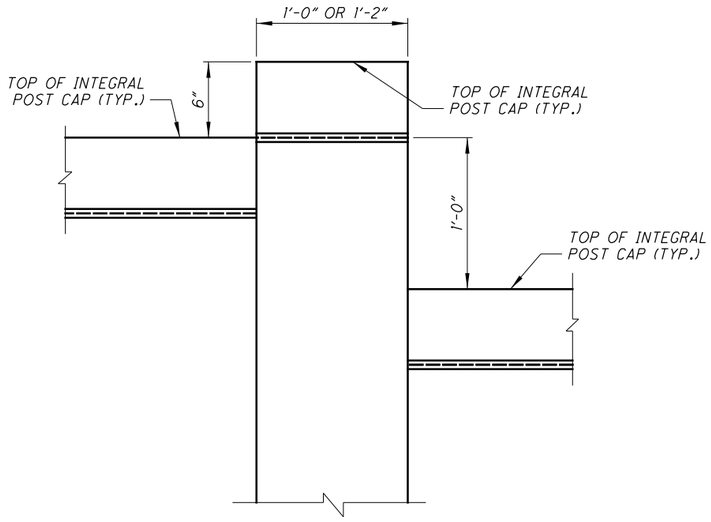
NOTE:

REFER TO NOISE BARRIER SPECIFICATIONS AND STANDARD DRAWINGS NBS-1-09. INTEGRAL POST CAPS AND INTEGRAL COPING SHALL BE UTILIZED FOR ALL NOISE BARRIERS. INTEGRAL CAP AND PANEL DETAIL TO BE APPROVED BY ENGINEER PRIOR TO USE.



SECTION B-B



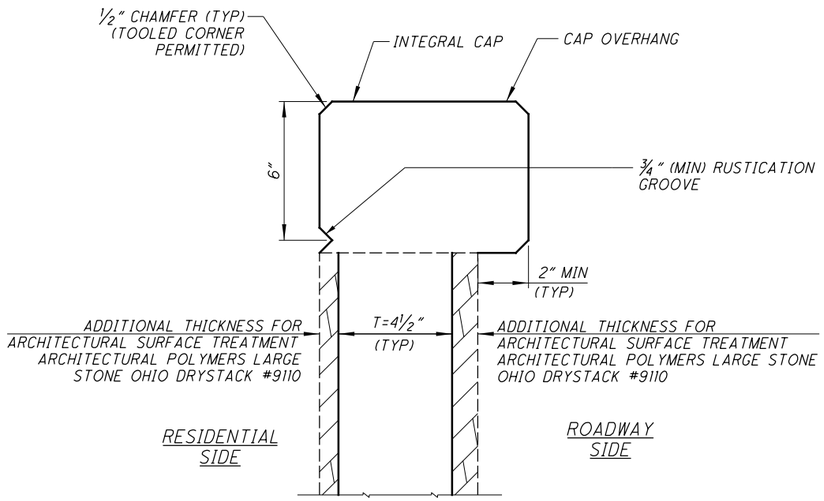
VIEW C-C

COLOR SCHEDULE

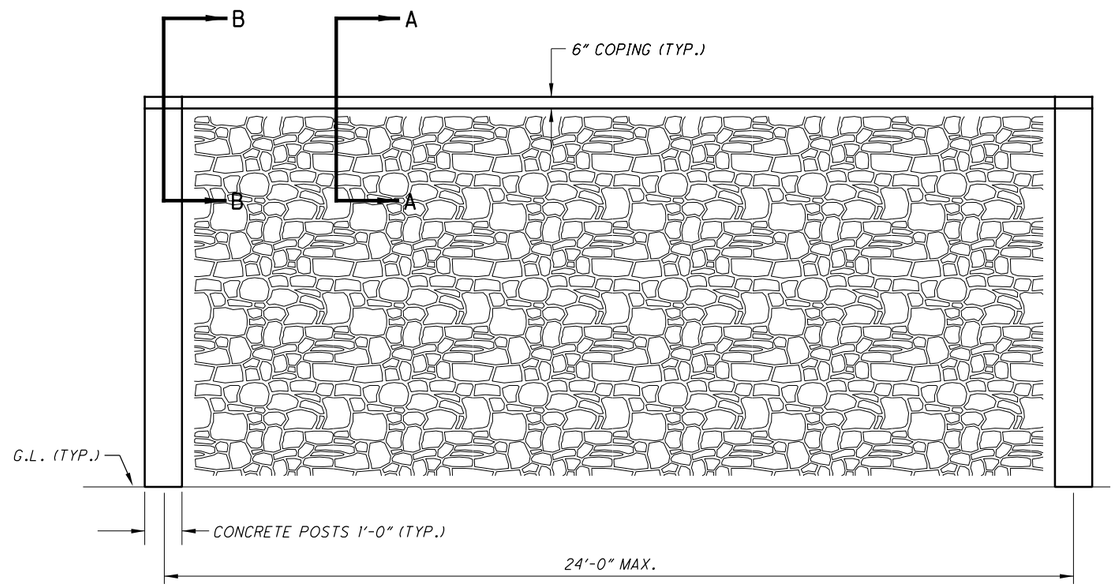
NON-HIGHWAY SIDE OF NOISE WALL COLOR SCHEDULE		
NSA	COLOR	FEDERAL COLOR ID #
C	BEIGE	17778
E	TAN	23522
G	TAN	23522
HI	TAN	23522
K	BEIGE	17778

HIGHWAY SIDE OF NOISE WALL COLOR SCHEDULE		
NSA	COLOR	FEDERAL COLOR ID #
C	GENERAL/TAN	23522
E	GENERAL/TAN	23522
G	GENERAL/TAN	23522
HI	GENERAL/TAN	23522
K	GENERAL/TAN	23522

CONCRETE SEALER TREATMENT SHALL BE LIMITED TO ENTIRE PANEL AND INTEGRAL CAP SURFACES ONLY. NOISE WALL POSTS AND POST CAPS SHALL REMAIN UNTREATED.



SECTION A-A REFLECTIVE PANEL WITH INTEGRAL CAP



NOISE BARRIER DETAIL - ARCHITECTURAL POLYMERS LARGE STONE OHIO DRYSTACK #9110

BOTH SIDES
(OR ENGINEER APPROVED EQUAL)

CALCULATED RF V
CHECKED DGN

NOISE BARRIER DETAILS

SUM-77/277/224

1081
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NOISE BARRIER C1

PANEL NO.	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	TOP OF WALL	BOTTOM OF WALL	LENGTH OF PANEL (LFT)	HEIGHT OF PANEL (LFT)	606 SPECIAL - NOISE BARRIER (REFLECTIVE) SF
1	1	B-16"	10+00.00	2	A-20"	10+24.00	1130.0	1115.00	24.00	15.0	360
2	2	A-20"	10+24.00	3	A-20"	10+48.00	1130.0	1109.00	24.00	21.0	504
3	3	A-20"	10+48.00	4	A-20"	10+72.00	1130.0	1107.00	24.00	23.0	552
4	4	A-20"	10+72.00	5	A-20"	10+96.00	1129.0	1106.00	24.00	23.0	552
5	5	A-20"	10+96.00	6	A-20"	11+20.00	1128.0	1106.00	24.00	22.0	528
6	6	A-20"	11+20.00	7	A-20"	11+44.00	1128.0	1106.00	24.00	22.0	528
7	7	A-20"	11+44.00	8	A-20"	11+68.00	1128.0	1105.50	24.00	22.5	540
8	8	A-20"	11+68.00	9	A-20"	11+92.00	1127.0	1105.00	24.00	22.0	528
9	9	A-20"	11+92.00	10	A-20"	12+16.00	1126.0	1104.50	24.00	21.5	516
10	10	A-20"	12+16.00	11	A-20"	12+40.00	1126.0	1104.00	24.00	22.0	528
11	11	A-20"	12+40.00	12	A-20"	12+64.00	1125.0	1103.00	24.00	22.0	528
12	12	A-20"	12+64.00	13	A-20"	12+88.00	1124.0	1102.50	24.00	21.5	516
13	13	A-20"	12+88.00	14	A-20"	13+12.00	1124.0	1102.00	24.00	22.0	528
14	14	A-20"	13+12.00	15	A-20"	13+36.00	1123.0	1101.00	24.00	22.0	528
15	15	A-20"	13+36.00	16	A-20"	13+60.00	1122.0	1099.50	24.00	22.5	540
16	16	A-20"	13+60.00	17	A-20"	13+84.00	1121.0	1098.50	24.00	22.5	540
17	17	A-20"	13+84.00	18	A-20"	14+08.00	1121.0	1098.50	24.00	22.5	540
18	18	A-20"	14+08.00	19	A-20"	14+32.00	1122.0	1099.00	24.00	23.0	552
19	19	A-20"	14+32.00	20	A-20"	14+56.00	1123.0	1100.50	24.00	22.5	540
20	20	A-20"	14+56.00	21	A-20"	14+80.00	1123.0	1102.00	24.00	21.0	504
21	21	A-20"	14+80.00	22	A-20"	15+04.00	1123.0	1103.00	24.00	20.0	480
22	22	A-20"	15+04.00	23	A-20"	15+28.00	1123.0	1103.00	24.00	20.0	480
23	23	A-20"	15+28.00	24	A-20"	15+52.00	1123.0	1103.00	24.00	20.0	480
24	24	A-20"	15+52.00	25	A-20"	15+76.00	1123.0	1103.00	24.00	20.0	480
25	25	A-20"	15+76.00	26	A-20"	16+00.00	1123.0	1101.00	24.00	22.0	528
26	26	A-20"	16+00.00	27	A-20"	16+24.00	1122.0	1100.50	24.00	21.5	516
27	27	A-20"	16+24.00	28	A-20"	16+42.00	1122.0	1100.50	18.00	21.5	387
28	28	A-20"	16+42.00	29	A-20"	16+60.00	1122.0	1100.50	18.00	21.5	387
29	29	A-20"	16+60.00	30	A-20"	16+84.00	1122.0	1100.00	24.00	22.0	528
30	30	A-20"	16+84.00	31	A-20"	17+08.00	1122.0	1100.50	24.00	21.5	516
31	31	A-20"	17+08.00	32	A-20"	17+32.00	1122.0	1100.50	24.00	21.5	516
32	32	A-20"	17+32.00	33	A-20"	17+56.00	1122.0	1100.50	24.00	21.5	516
33	33	A-20"	17+56.00	34	A-20"	17+80.00	1122.0	1100.50	24.00	21.5	516
34	34	A-20"	17+80.00	35	A-20"	18+04.00	1121.0	1099.50	24.00	21.5	516
35	35	A-20"	18+04.00	36	A-20"	18+28.00	1120.0	1098.50	24.00	21.5	516
36	36	A-20"	18+28.00	37	A-20"	18+40.00	1119.0	1097.00	12.00	22.0	264
37	37	A-20"	18+40.00	38	A-20"	18+52.00	1118.0	1096.00	12.00	22.0	264
38	38	A-20"	18+52.00	39	A-20"	18+64.00	1117.0	1095.00	12.00	22.0	264
39	39	A-20"	18+64.00	40	A-20"	18+76.00	1116.0	1094.00	12.00	22.0	264
40	40	A-20"	18+76.00	41	A-20"	18+88.00	1115.0	1093.00	12.00	22.0	264
41	41	A-20"	18+88.00	42	A-20"	19+00.00	1114.0	1091.50	12.00	22.5	270
42	42	A-20"	19+00.00	43	A-20"	19+12.00	1113.0	1090.50	12.00	22.5	270
43	43	A-20"	19+12.00	44	A-20"	19+24.00	1112.0	1089.50	12.00	22.5	270
44	44	A-20"	19+24.00	45	A-20"	19+36.00	1111.0	1088.50	12.00	22.5	270
45	45	A-20"	19+36.00	46	A-20"	19+48.00	1110.0	1087.50	12.00	22.5	270
46	46	A-20"	19+48.00	47	A-20"	19+60.00	1109.0	1086.50	12.00	22.5	270
47	47	A-20"	19+60.00	48	A-20"	19+72.00	1108.0	1085.50	12.00	22.5	270
48	48	A-20"	19+72.00	49	A-20"	19+96.00	1107.0	1084.00	24.00	23.0	552
49	49	A-20"	19+96.00	50	A-20"	20+20.00	1106.0	1083.00	24.00	23.0	552
50	50	A-20"	20+20.00	51	A-20"	20+44.00	1105.0	1082.00	24.00	23.0	552

NOISE BARRIER C1

PANEL NO.	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	TOP OF WALL	BOTTOM OF WALL	LENGTH OF PANEL (LFT)	HEIGHT OF PANEL (LFT)	606 SPECIAL - NOISE BARRIER (REFLECTIVE) SF
51	51	A-20"	20+44.00	52	A-20"	20+68.00	1105.0	1082.50	24.00	22.5	540
52	52	A-20"	20+68.00	53	A-20"	20+92.00	1105.0	1082.50	24.00	22.5	540
53	53	A-20"	20+92.00	54	A-20"	21+16.00	1105.0	1084.00	24.00	21.0	504
54	54	A-20"	21+16.00	55	A-20"	21+40.00	1105.0	1084.50	24.00	20.5	492
55	55	A-20"	21+40.00	56	A-20"	21+64.00	1105.0	1084.50	24.00	20.5	492
56	56	A-20"	21+64.00	57	A-20"	21+88.00	1105.0	1084.50	24.00	20.5	492
57	57	A-20"	21+88.00	58	A-20"	22+12.00	1105.0	1083.50	24.00	21.5	516
58	58	A-20"	22+12.00	59	B-20"	22+36.00	1104.0	1082.00	24.00	22.0	528
59	59	B-20"	22+36.00	60	B-20"	22+60.00	1103.0	1080.50	24.00	22.5	540

NOISE BARRIER C2

PANEL NO.	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	TOP OF WALL	BOTTOM OF WALL	LENGTH OF PANEL (LFT)	HEIGHT OF PANEL (LFT)	606 SPECIAL - NOISE BARRIER (REFLECTIVE) SF
60	61	B-16"	110+00.00	62	A-16"	110+12.00	1084.0	1074.50	12.00	9.5	114
61	62	A-16"	110+12.00	63	A-20"	110+24.00	1088.0	1074.50	12.00	13.5	162
62	63	A-20"	110+24.00	64	A-20"	110+48.00	1092.0	1073.50	24.00	18.5	444
63	64	A-20"	110+48.00	65	A-20"	110+72.00	1092.0	1073.00	24.00	19.0	456
64	65	A-20"	110+72.00	66	A-20"	110+96.00	1092.0	1072.50	24.00	19.5	468
65	66	A-20"	110+96.00	67	A-20"	111+20.00	1091.0	1072.00	24.00	19.0	456
66	67	A-20"	111+20.00	68	A-20"	111+44.00	1091.0	1071.00	24.00	20.0	480
67	68	A-20"	111+44.00	69	A-20"	111+68.00	1090.0	1070.50	24.00	19.5	468
68	69	A-20"	111+68.00	70	A-20"	111+92.00	1090.0	1070.00	24.00	20.0	480
69	70	A-20"	111+92.00	71	A-20"	112+16.00	1089.0	1069.50	24.00	19.5	468
70	71	A-20"	112+16.00	72	A-20"	112+40.00	1088.0	1068.50	24.00	19.5	468
71	72	A-20"	112+40.00	73	A-20"	112+64.00	1088.0	1068.00	24.00	20.0	480
72	73	A-20"	112+64.00	74	A-20"	112+88.00	1087.0	1067.50	24.00	19.5	468
73	74	A-20"	112+88.00	75	A-20"	113+12.00	1086.0	1067.00	24.00	19.0	456
74	75	A-20"	113+12.00	76	A-20"	113+36.00	1086.0	1066.50	24.00	19.5	468
75	76	A-20"	113+36.00	77	A-20"	113+60.00	1085.0	1065.50	24.00	19.5	468
76	77	A-20"	113+60.00	78	A-20"	113+84.00	1085.0	1065.00	24.00	20.0	480
77	78	A-20"	113+84.00	79	A-20"	114+08.00	1084.0	1064.50	24.00	19.5	468
78	79	A-20"	114+08.00	80	A-20"	114+32.00	1084.0	1064.00	24.00	20.0	480
79	80	A-20"	114+32.00	81	A-20"	114+56.00	1083.0	1063.50	24.00	19.5	468
80	81	A-20"	114+56.00	82	A-20"	114+80.00	1083.0	1063.00	24.00	20.0	480

CALCULATED RFV
CHECKED TJW

CALCULATIONS & SUBSUMMARY - NOISE WALL C

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NOISE BARRIER C2

PANEL NO.	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	TOP OF WALL	BOTTOM OF WALL	LENGTH OF PANEL (LFT)	HEIGHT OF PANEL (LFT)	606 SPECIAL - NOISE BARRIER (REFLECTIVE) SF
81	82	A-20"	114+80.00	83	A-20"	115+04.00	1082.0	1062.50	24.00	19.5	468
82	83	A-20"	115+04.00	84	A-20"	115+28.00	1081.0	1061.50	24.00	19.5	468
83	84	A-20"	115+28.00	85	A-20"	115+52.00	1081.0	1061.00	24.00	20.0	480
84	85	A-20"	115+52.00	86	A-20"	115+76.00	1081.0	1060.50	24.00	20.5	492
85	86	A-20"	115+76.00	87	A-20"	116+00.00	1080.0	1060.00	24.00	20.0	480
86	87	A-20"	116+00.00	88	A-20"	116+24.00	1079.0	1059.50	24.00	19.5	468
87	88	A-20"	116+24.00	89	A-20"	116+48.00	1079.0	1059.00	24.00	20.0	480
88	89	A-20"	116+48.00	90	A-20"	116+72.00	1078.0	1058.50	24.00	19.5	468
89	90	A-20"	116+72.00	91	A-20"	116+96.00	1078.0	1058.00	24.00	20.0	480
90	91	A-20"	116+96.00	92	A-20"	117+20.00	1077.0	1057.00	24.00	20.0	480
91	92	A-20"	117+20.00	93	A-20"	117+44.00	1076.0	1056.50	24.00	19.5	468
92	93	A-20"	117+44.00	94	A-20"	117+68.00	1076.0	1056.00	24.00	20.0	480
93	94	A-20"	117+68.00	95	A-20"	117+92.00	1075.0	1055.50	24.00	19.5	468
94	95	A-20"	117+92.00	96	A-20"	118+16.00	1075.0	1054.50	24.00	20.5	492
95	96	A-20"	118+16.00	97	A-20"	118+40.00	1074.0	1054.00	24.00	20.0	480
96	97	A-20"	118+40.00	98	A-20"	118+64.00	1073.0	1053.50	24.00	19.5	468
97	98	A-20"	118+64.00	99	A-20"	118+88.00	1073.0	1053.00	24.00	20.0	480
98	99	A-20"	118+88.00	100	A-20"	119+12.00	1072.0	1052.50	24.00	19.5	468
99	100	A-20"	119+12.00	101	A-20"	119+36.00	1071.0	1051.50	24.00	19.5	468
100	101	A-20"	119+36.00	102	D-20"	119+60.00	1071.0	1051.00	24.00	20.0	480
101	102	D-20"	119+60.00	103	D-20"	119+84.00	1070.0	1050.50	24.00	19.5	468
102	103	D-20"	119+84.00	104	D-20"	120+08.00	1070.0	1050.00	24.00	20.0	480
103	104	D-20"	120+08.00	105	D-20"	120+32.00	1069.0	1049.50	24.00	19.5	468
104	105	D-20"	120+32.00	106	A-20"	120+56.00	1068.0	1048.50	24.00	19.5	468
105	106	A-20"	120+56.00	107	A-20"	120+80.00	1068.0	1048.00	24.00	20.0	480
106	107	A-20"	120+80.00	108	A-20"	121+04.00	1067.0	1047.50	24.00	19.5	468
107	108	A-20"	121+04.00	109	A-20"	121+28.00	1067.0	1047.00	24.00	20.0	480
108	109	A-20"	121+28.00	110	A-20"	121+52.00	1066.0	1046.00	24.00	20.0	480
109	110	A-20"	121+52.00	111	A-20"	121+76.00	1065.0	1045.50	24.00	19.5	468
110	111	A-20"	121+76.00	112	A-20"	122+00.00	1065.0	1045.00	24.00	20.0	480
111	112	A-20"	122+00.00	113	A-20"	122+15.00	1064.0	1044.00	15.00	20.0	300
112	113	A-20"	122+15.00	114	A-20"	122+36.00	1064.0	1044.00	21.00	20.0	420
113	114	A-20"	122+36.00	115	A-20"	122+51.00	1063.0	1043.00	15.00	20.0	300
114	115	A-20"	122+51.00	116	A-20"	122+75.00	1063.0	1043.00	24.00	20.0	480
115	116	A-20"	122+75.00	117	A-20"	122+99.00	1062.0	1042.50	24.00	19.5	468
116	117	A-20"	122+99.00	118	A-20"	123+23.00	1062.0	1042.00	24.00	20.0	480
117	118	A-20"	123+23.00	119	A-20"	123+47.00	1061.0	1041.50	24.00	19.5	468
118	119	A-20"	123+47.00	120	A-20"	123+71.00	1060.0	1041.00	24.00	19.0	456
119	120	A-20"	123+71.00	121	A-20"	123+95.00	1060.0	1040.00	24.00	20.0	480
120	121	A-20"	123+95.00	122	A-20"	124+19.00	1060.0	1039.50	24.00	20.5	492

NOISE BARRIER C2

PANEL NO.	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	TOP OF WALL	BOTTOM OF WALL	LENGTH OF PANEL (LFT)	HEIGHT OF PANEL (LFT)	606 SPECIAL - NOISE BARRIER (REFLECTIVE) SF
121	122	A-20"	124+19.00	123	A-20"	124+43.00	1059.0	1039.00	24.00	20.0	480
122	123	A-20"	124+43.00	124	A-20"	124+67.00	1058.0	1038.50	24.00	19.5	468
123	124	A-20"	124+67.00	125	A-20"	124+91.00	1057.0	1037.50	24.00	19.5	468
124	125	A-20"	124+91.00	126	A-20"	125+15.00	1057.0	1037.00	24.00	20.0	480
125	126	A-20"	125+15.00	127	A-20"	125+39.00	1056.0	1036.50	24.00	19.5	468
126	127	A-20"	125+39.00	128	A-20"	125+63.00	1056.0	1036.00	24.00	20.0	480
127	128	A-20"	125+63.00	129	A-20"	125+87.00	1055.0	1035.50	24.00	19.5	468
128	129	A-20"	125+87.00	130	A-20"	126+11.00	1055.0	1035.00	24.00	20.0	480
129	130	A-20"	126+11.00	131	A-20"	126+35.00	1054.0	1034.00	24.00	20.0	480
130	131	A-20"	126+35.00	132	A-20"	126+59.00	1053.0	1033.50	24.00	19.5	468
131	132	A-20"	126+59.00	133	A-20"	126+83.00	1053.0	1033.00	24.00	20.0	480
132	133	A-20"	126+83.00	134	A-20"	127+07.00	1052.0	1032.00	24.00	20.0	480
133	134	A-20"	127+07.00	135	A-20"	127+31.00	1051.0	1031.50	24.00	19.5	468
134	135	A-20"	127+31.00	136	A-20"	127+55.00	1051.0	1031.00	24.00	20.0	480
135	136	A-20"	127+55.00	137	A-20"	127+79.00	1050.0	1030.50	24.00	19.5	468
136	137	A-20"	127+79.00	138	A-20"	128+03.00	1049.0	1029.50	24.00	19.5	468
137	138	A-20"	128+03.00	139	A-20"	128+27.00	1049.0	1029.00	24.00	20.0	480
138	139	A-20"	128+27.00	140	A-20"	128+51.00	1048.0	1028.50	24.00	19.5	468
139	140	A-20"	128+51.00	141	A-20"	128+75.00	1047.0	1027.50	24.00	19.5	468
140	141	A-20"	128+75.00	142	A-20"	128+99.00	1047.0	1027.00	24.00	20.0	480
141	142	A-20"	128+99.00	143	A-20"	129+23.00	1046.0	1026.00	24.00	20.0	480
142	143	A-20"	129+23.00	144	A-20"	129+47.00	1045.0	1025.50	24.00	19.5	468
143	144	A-20"	129+47.00	145	A-20"	129+71.00	1045.0	1025.00	24.00	20.0	480
144	145	A-20"	129+71.00	146	A-20"	129+95.00	1044.0	1024.50	24.00	19.5	468
145	146	A-20"	129+95.00	147	A-20"	130+19.00	1044.0	1024.00	24.00	20.0	480
146	147	A-20"	130+19.00	148	A-20"	130+38.00	1043.0	1023.50	19.00	19.5	370.5
147	148	A-20"	130+38.00	149	A-20"	130+57.00	1043.0	1023.00	19.00	20.0	380
148	149	A-20"	130+57.00	150	A-20"	130+81.00	1042.0	1022.00	24.00	20.0	480
149	150	A-20"	130+81.00	151	B-20"	130+97.00	1041.0	1020.00	16.00	21.0	336
										TOTAL	64584

CALCULATED RF V
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CALCULATIONS & SUBSUMMARY - NOISE WALL C

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NOISE WALL C1			
DRILLED SHAFT NO.	WORKPOINT STATION	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)
1	10+00.00	1114.77	24
2	10+24.00	1108.58	22
3	10+48.00	1106.58	22
4	10+72.00	1105.58	19
5	10+96.00	1105.58	14
6	11+20.00	1105.58	14
7	11+44.00	1105.08	14
8	11+68.00	1104.55	14
9	11+92.00	1104.05	14
10	12+16.00	1103.55	14
11	12+40.00	1102.55	14
12	12+64.00	1102.05	14
13	12+88.00	1101.55	14
14	13+12.00	1100.55	14
15	13+36.00	1099.05	14
16	13+60.00	1098.05	14
17	13+84.00	1098.05	14
18	14+08.00	1098.05	14
19	14+32.00	1098.55	14
20	14+56.00	1100.05	14
21	14+80.00	1101.55	12
22	15+04.00	1102.55	12
23	15+28.00	1102.55	12
24	15+52.00	1102.55	12
25	15+76.00	1100.55	12
26	16+00.00	1100.05	12
27	16+24.00	1100.05	12
28	16+42.00	1100.05	12
29	16+60.00	1099.55	12
30	16+84.00	1099.55	12
31	17+08.00	1100.05	14
32	17+32.00	1100.05	19
33	17+56.00	1100.05	19
34	17+80.00	1099.05	19
35	18+04.00	1098.05	19
36	18+28.00	1096.55	19
37	18+40.00	1095.55	14
38	18+52.00	1094.55	14
39	18+64.00	1093.55	14
40	18+76.00	1092.55	14
41	18+88.00	1091.05	14
42	19+00.00	1090.05	14
43	19+12.00	1089.05	14
44	19+24.00	1088.05	14
45	19+36.00	1087.05	14
46	19+48.00	1086.05	14
47	19+60.00	1085.05	14
48	19+72.00	1083.55	14
49	19+96.00	1082.55	16
50	20+20.00	1081.55	16

NOISE WALL C1			
DRILLED SHAFT NO.	WORKPOINT STATION	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)
51	20+44.00	1081.55	16
52	20+68.00	1082.05	16
53	20+92.00	1082.05	14
54	21+16.00	1083.55	14
55	21+40.00	1084.05	14
56	21+64.00	1084.05	14
57	21+88.00	1083.05	14
58	22+12.00	1081.55	14
59	22+36.00	1080.05	14
60	22+60.00	1080.05	14

NOISE WALL C2			
DRILLED SHAFT NO.	WORKPOINT STATION	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)
61	110+00.00	1074.05	8
62	110+12.00	1074.05	11.5
63	110+24.00	1073.05	16
64	110+48.00	1072.55	16
65	110+72.00	1072.05	13.5
66	110+96.00	1071.55	13.5
67	111+20.00	1070.55	13.5
68	111+44.00	1070.05	13.5
69	111+68.00	1069.55	13.5
70	111+92.00	1069.05	13.5
71	112+16.00	1068.05	13.5
72	112+40.00	1067.55	13.5
73	112+64.00	1067.07	13.5
74	112+88.00	1066.55	13.5
75	113+12.00	1066.05	13.5
76	113+36.00	1065.05	13.5
77	113+60.00	1064.55	13.5
78	113+84.00	1064.05	13.5
79	114+08.00	1063.55	10
80	114+32.00	1063.10	10
81	114+56.00	1062.55	10
82	114+80.00	1062.05	10
83	115+04.00	1061.05	10
84	115+28.00	1060.55	10
85	115+52.00	1060.05	10
86	115+76.00	1059.55	10
87	116+00.00	1059.05	10
88	116+24.00	1058.55	10
89	116+48.00	1058.05	10
90	116+72.00	1057.55	10
91	116+96.00	1056.55	10
92	117+20.00	1056.05	10
93	117+44.00	1055.55	10
94	117+68.00	1055.05	10
95	117+92.00	1054.05	10
96	118+16.00	1053.55	10
97	118+40.00	1053.05	10
98	118+64.00	1052.55	10
99	118+88.00	1052.05	10
100	119+12.00	1051.05	10

NOISE WALL C2			
DRILLED SHAFT NO.	WORKPOINT STATION	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)
101	119+36.00	1050.55	10
102	119+60.00	1050.05	10
103	119+84.00	1049.55	21
104	120+08.00	1049.05	21
105	120+32.00	1048.05	21
106	120+56.00	1047.57	21
107	120+80.00	1047.07	21
108	121+04.00	1046.57	21
109	121+28.00	1045.57	21
110	121+52.00	1045.05	21
111	121+76.00	1044.55	21
112	122+00.00	1043.55	17.5
113	122+15.00	1043.55	14
114	122+36.00	1042.55	14
115	122+51.00	1042.55	19.5
116	122+75.00	1042.05	16
117	122+99.00	1041.55	16
118	123+23.00	1041.05	30
119	123+47.00	1040.55	30
120	123+71.00	1039.55	30
121	123+95.00	1039.05	16
122	124+19.00	1038.55	16
123	124+43.00	1038.05	16
124	124+67.00	1037.05	16
125	124+91.00	1036.55	16
126	125+15.00	1036.05	16
127	125+39.00	1035.55	19
128	125+63.00	1035.05	19
129	125+87.00	1034.55	30
130	126+11.00	1033.55	30
131	126+35.00	1033.05	30
132	126+59.00	1032.55	30
133	126+83.00	1031.55	30
134	127+07.00	1031.05	30
135	127+31.00	1030.55	30
136	127+55.00	1030.05	30
137	127+79.00	1029.05	30
138	128+03.00	1028.55	10
139	128+27.00	1028.05	10
140	128+51.00	1027.05	10
141	128+75.00	1026.55	10
142	128+99.00	1025.55	10
143	129+23.00	1025.05	10
144	129+47.00	1024.55	10
145	129+71.00	1024.05	10
146	129+95.00	1023.55	24
147	130+19.00	1023.05	24
148	130+38.00	1022.55	24
149	130+57.00	1021.55	24
150	130+81.00	1019.55	24
151	130+97.00	1019.55	24

CALCULATED RFV
CHECKED TJW

DATA TABLES - NOISE WALL C

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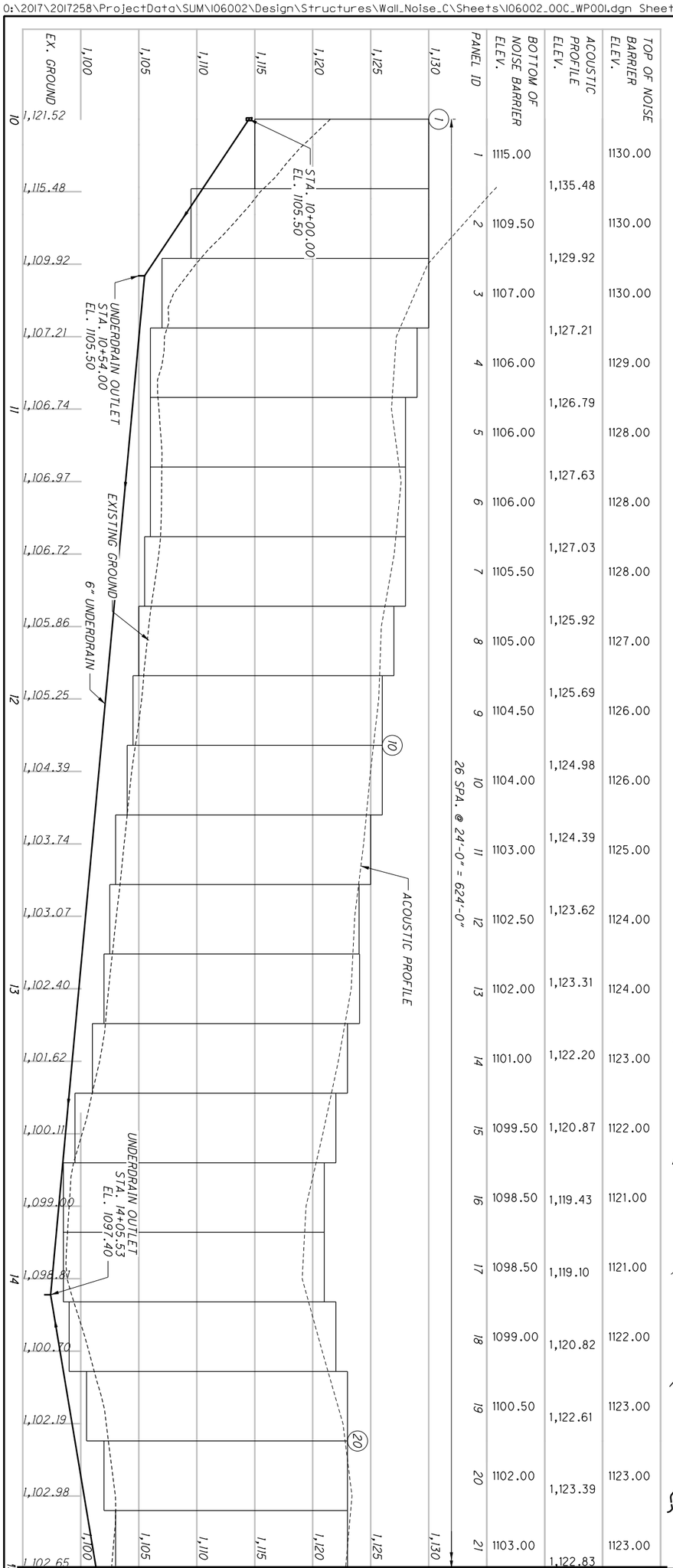
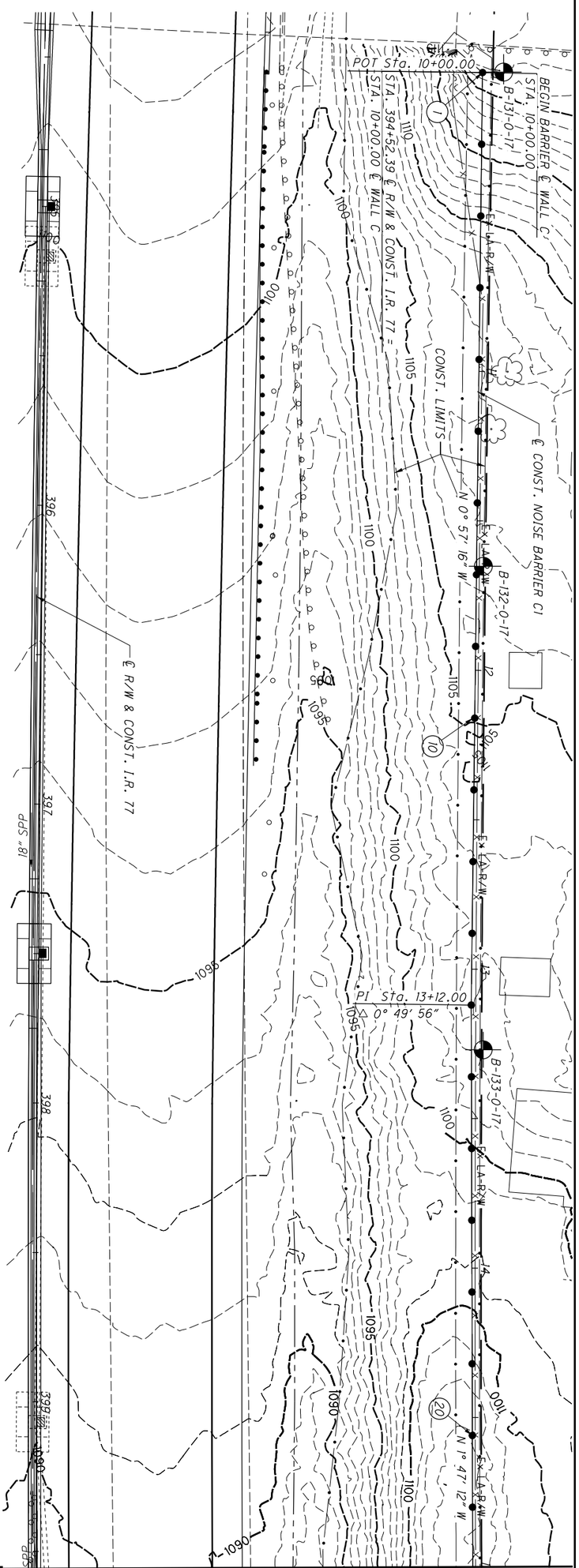
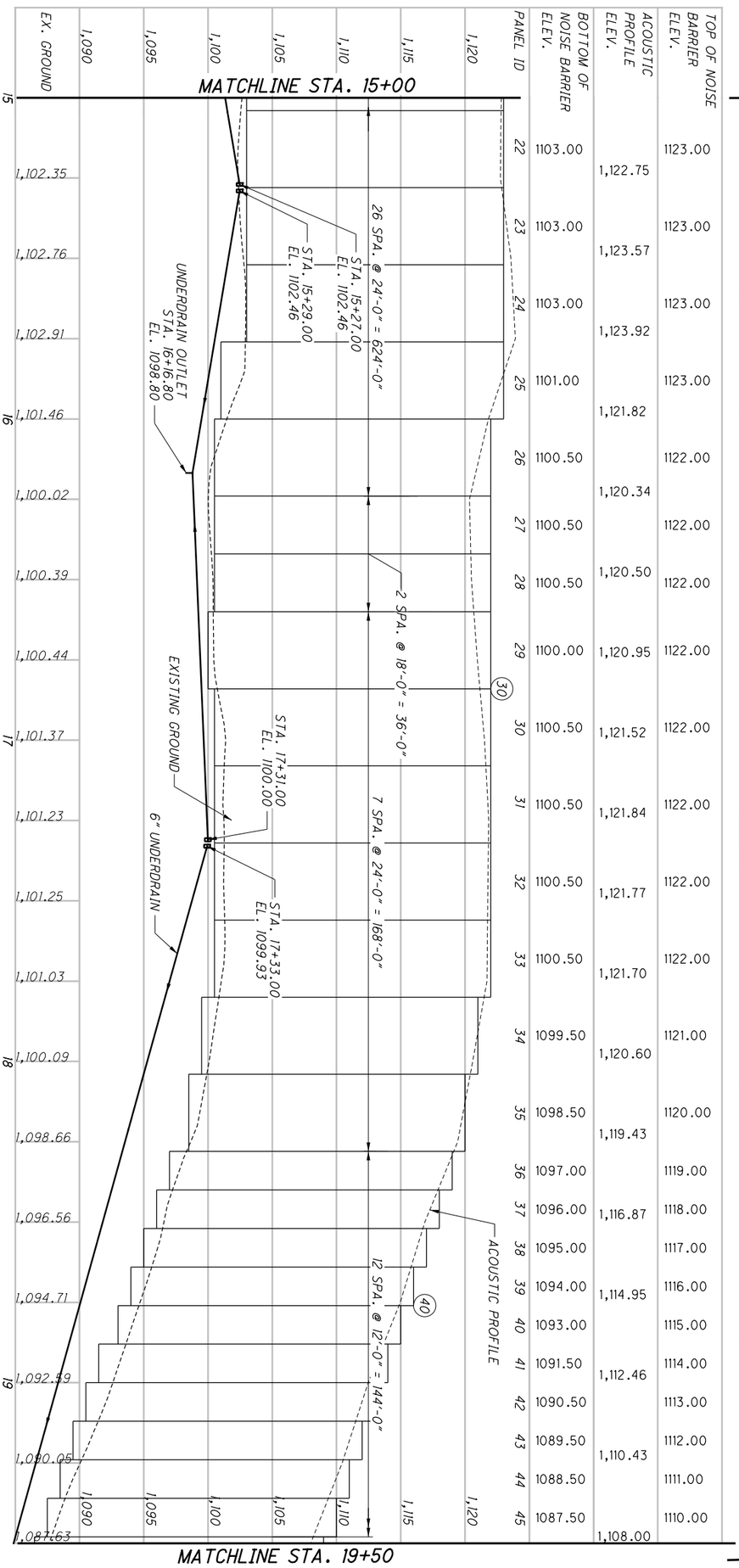


PANEL ID	BOTTOM OF NOISE BARRIER ELEV.	ACOUSTIC PROFILE ELEV.	TOP OF NOISE BARRIER ELEV.
1	1115.00	1,135.48	1130.00
2	1109.50	1,129.92	1130.00
3	1107.00	1,127.21	1130.00
4	1106.00	1,126.79	1129.00
5	1106.00	1,127.63	1128.00
6	1106.00	1,127.03	1128.00
7	1105.50	1,125.92	1128.00
8	1105.00	1,125.69	1127.00
9	1104.50	1,124.98	1126.00
10	1104.00	1,124.39	1126.00
11	1103.00	1,123.62	1125.00
12	1102.50	1,123.31	1124.00
13	1102.00	1,122.20	1124.00
14	1101.00	1,120.87	1123.00
15	1099.50	1,119.43	1122.00
16	1098.50	1,119.10	1121.00
17	1098.50	1,120.82	1121.00
18	1099.00	1,122.61	1122.00
19	1100.50	1,123.39	1123.00
20	1102.00	1,122.83	1123.00
21	1103.00		1123.00

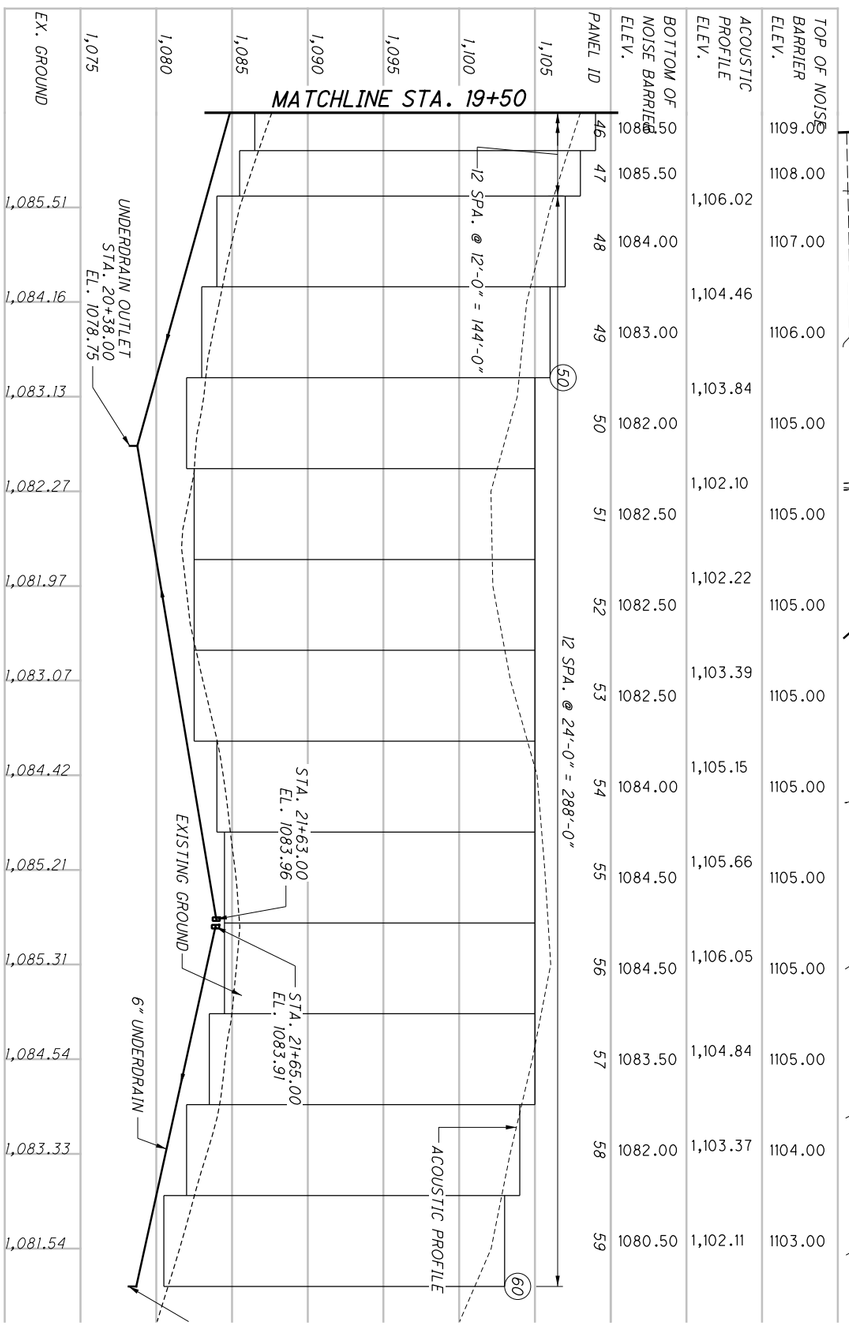


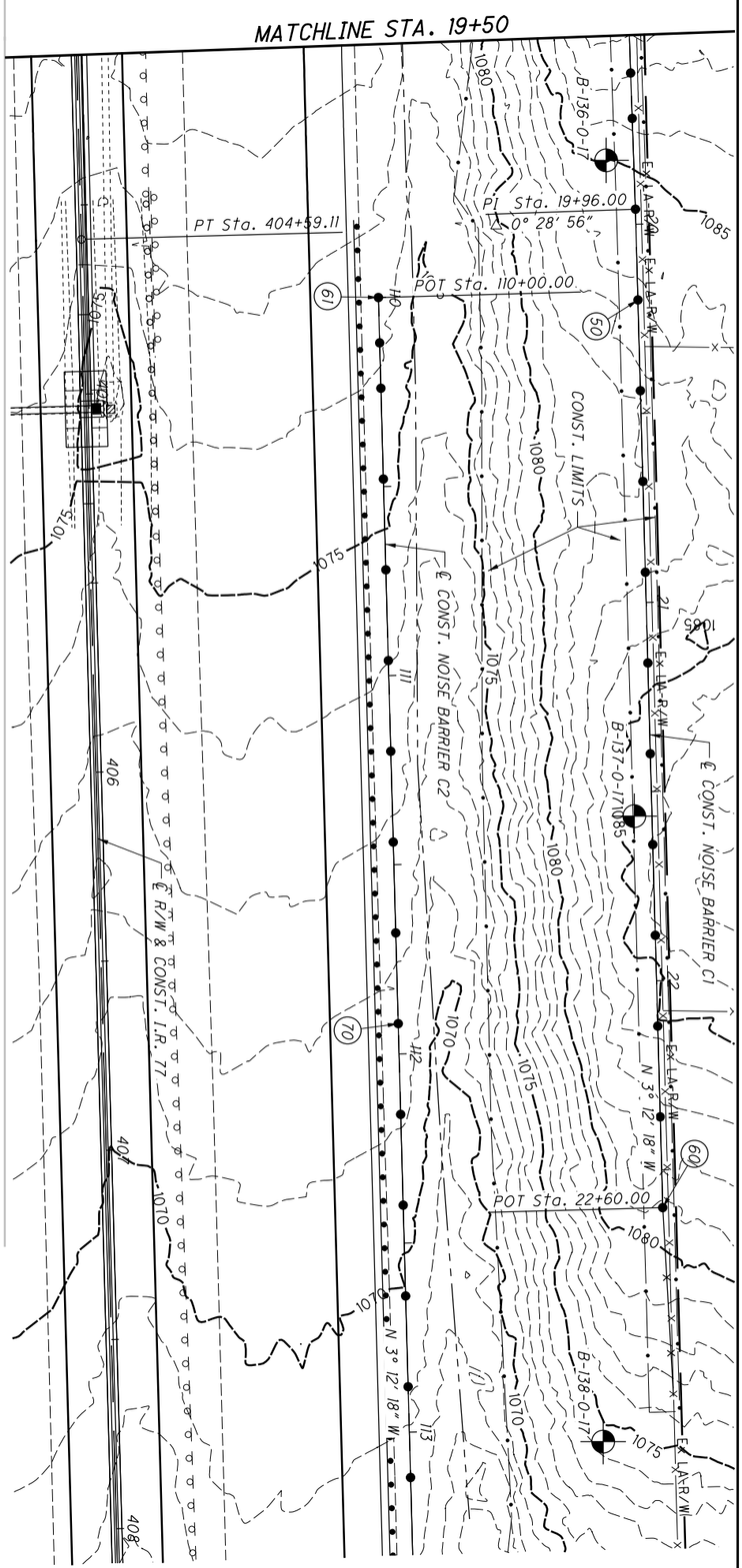
NOTE: BEDROCK WAS NOT DISCOVERED IN ANY BORING FOR THIS WALL.

1085 / 1288	SUM-77 / 277 / 224	PLAN AND PROFILE - NOISE BARRIER C1 BEGIN TO STA. 15+00.00	CALCULATED RHC CHECKED DJC	0 20 10 40 HORIZONTAL SCALE IN FEET

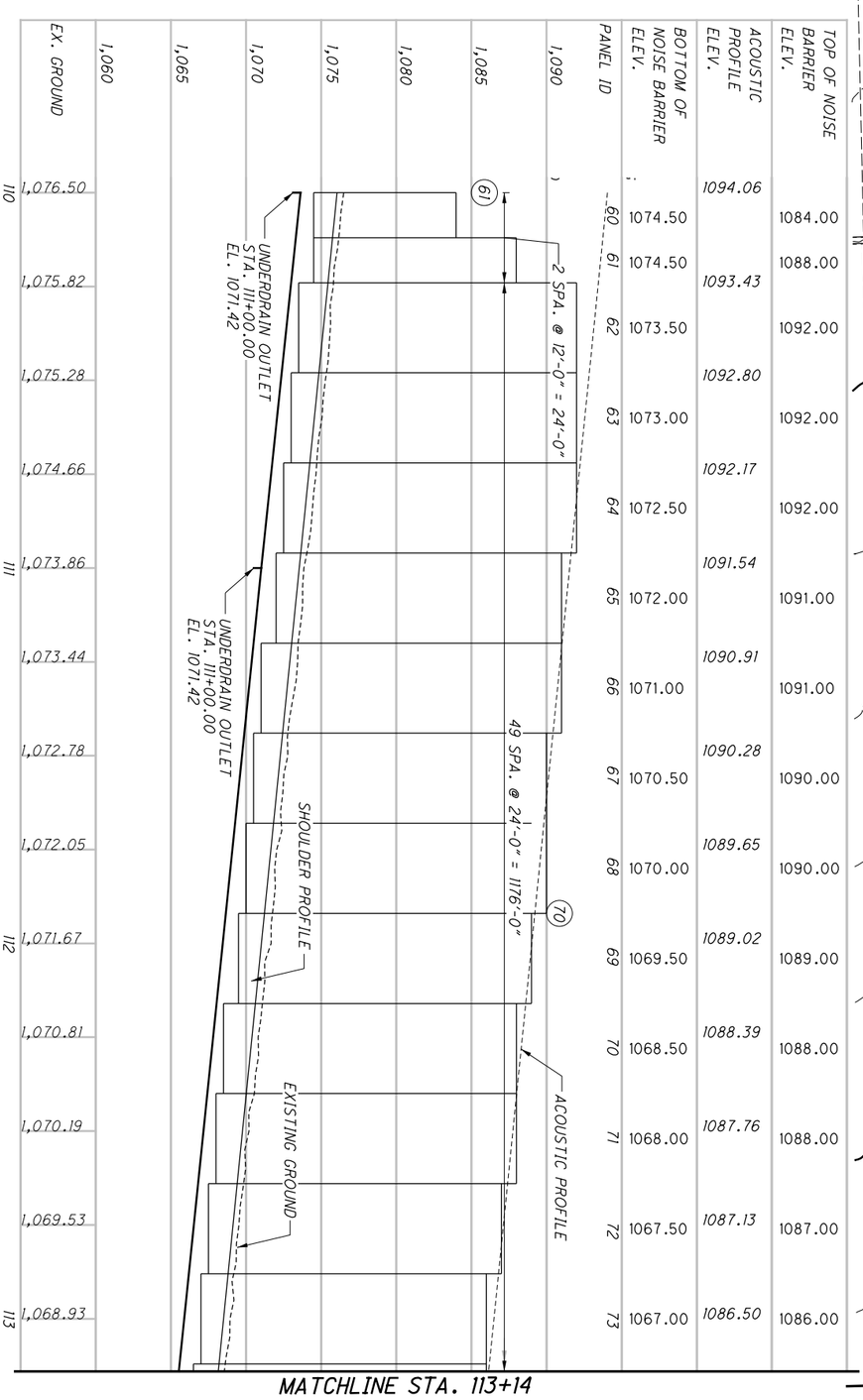


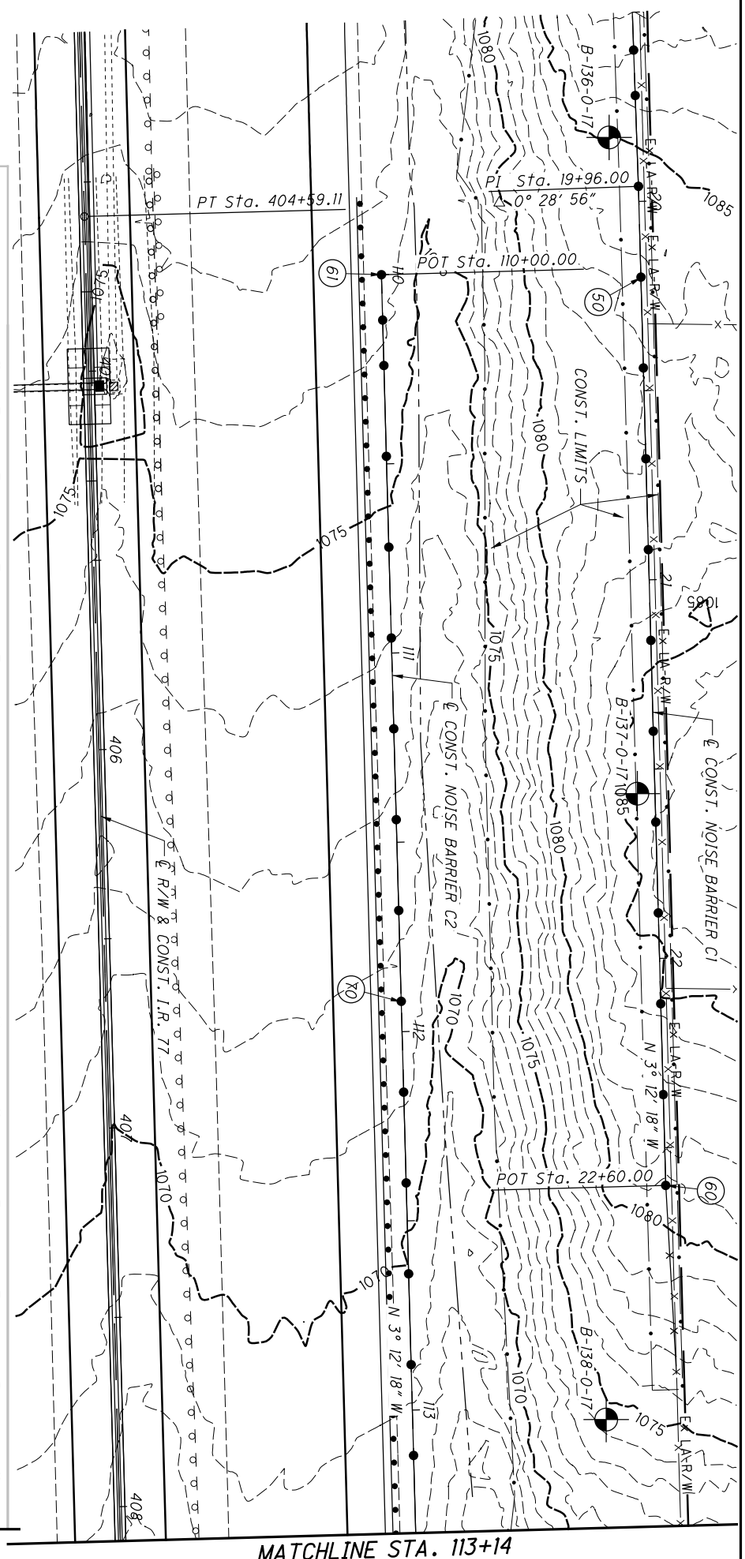
1086 / 1288	SUM-77 / 277 / 224	PLAN AND PROFILE - NOISE BARRIER C1 STA. 15+00.00 TO STA. 19+50.00	CALCULATED RHC CHECKED DJC	0 10 20 40 HORIZONTAL SCALE IN FEET



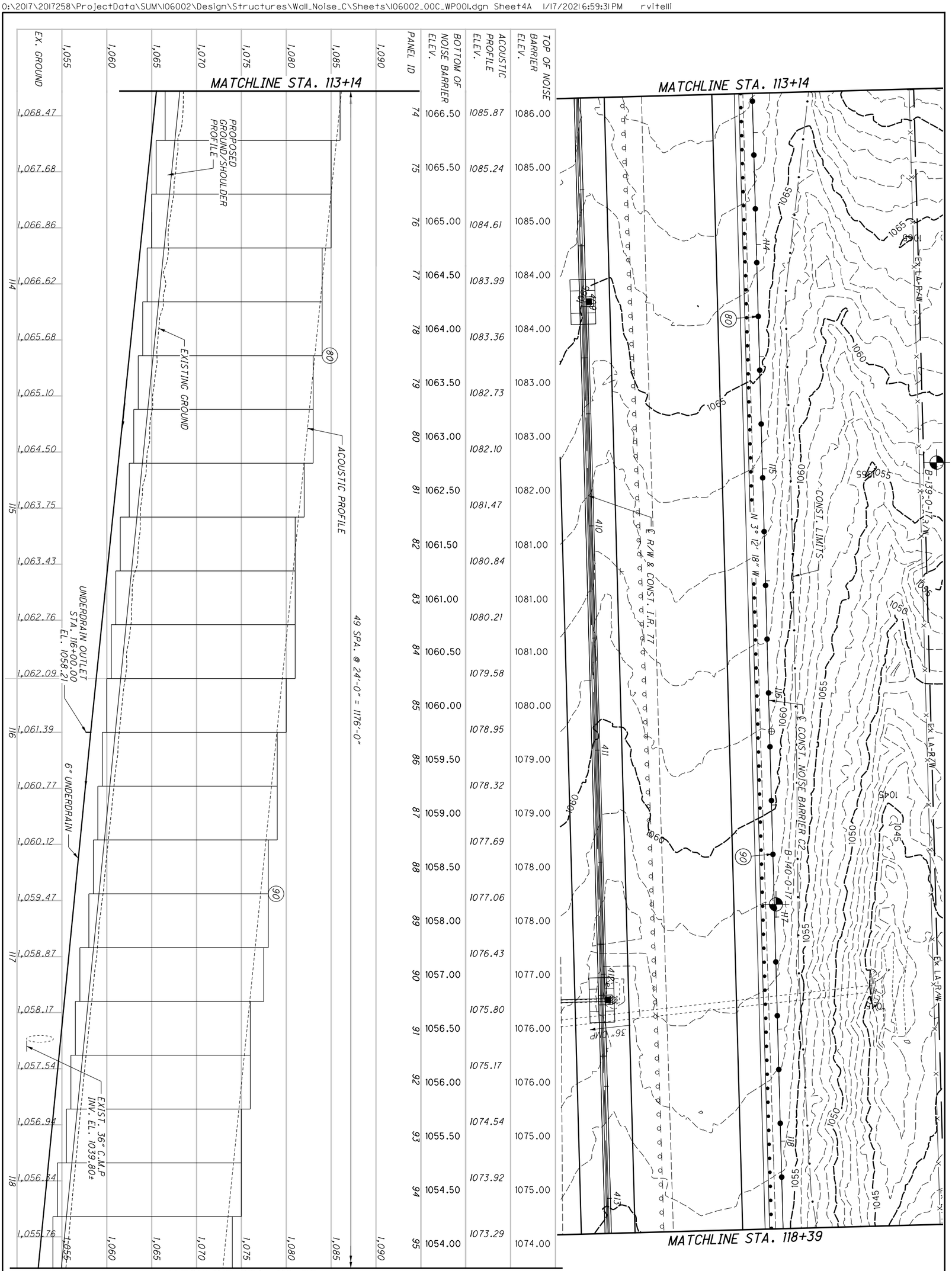


1087 / 1288	SUM-77 / 277 / 224	PLAN AND PROFILE - NOISE BARRIER C1 STA. 19+50.00 TO END	CALCULATED RHC CHECKED DJC	0 20 10 40 HORIZONTAL SCALE IN FEET





1288 / 087A	SUM-77 / 277 / 224	PLAN AND PROFILE - NOISE BARRIER C2 BEGIN TO STA. 113+14.00	CALCULATED RHC CHECKED DJC	0 20 10 40 HORIZONTAL SCALE IN FEET

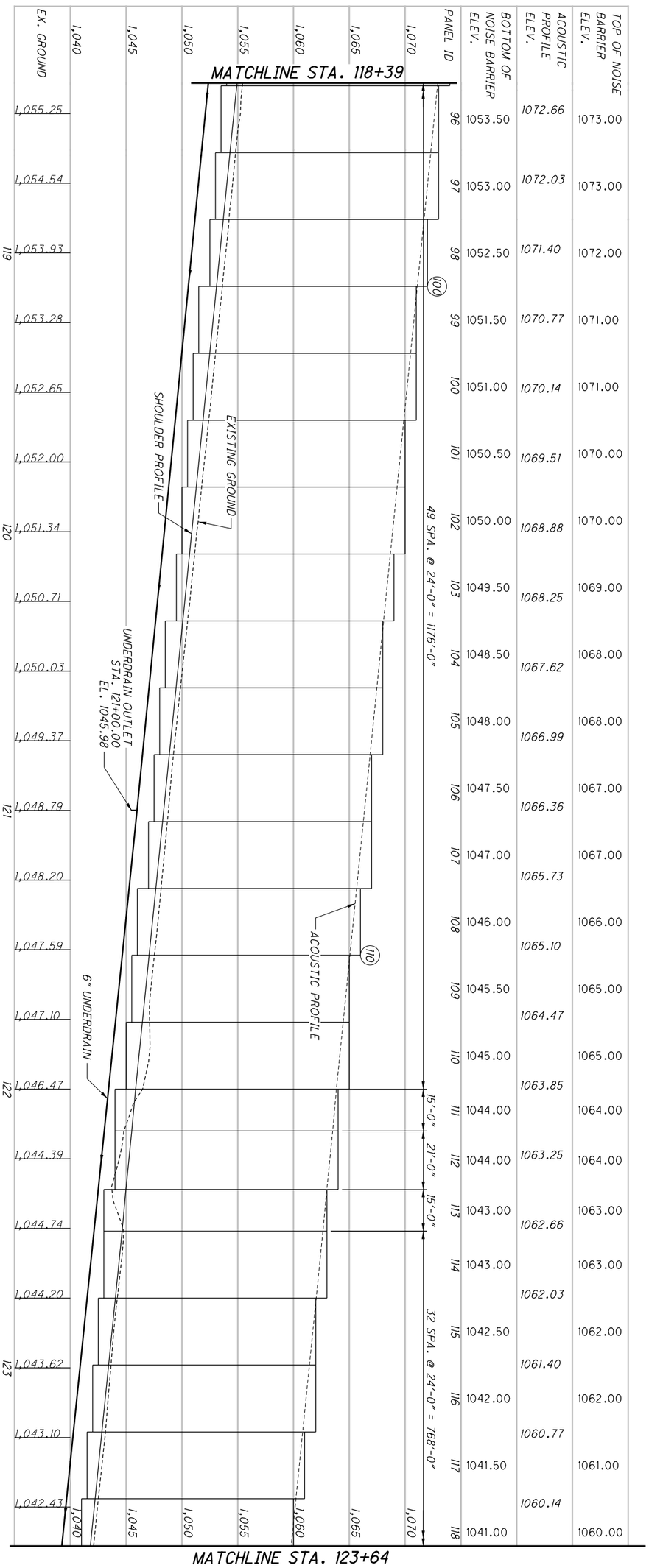


PANEL ID	BOTTOM OF NOISE BARRIER ELEV.	ACOUSTIC PROFILE ELEV.	TOP OF NOISE BARRIER ELEV.
74	1066.50	1085.87	1086.00
75	1065.50	1085.24	1085.00
76	1065.00	1084.61	1085.00
77	1064.50	1083.99	1084.00
78	1064.00	1083.36	1084.00
79	1063.50	1082.73	1083.00
80	1063.00	1082.10	1083.00
81	1062.50	1081.47	1082.00
82	1061.50	1080.84	1081.00
83	1061.00	1080.21	1081.00
84	1060.50	1079.58	1081.00
85	1060.00	1078.95	1080.00
86	1059.50	1078.32	1079.00
87	1059.00	1077.69	1079.00
88	1058.50	1077.06	1078.00
89	1058.00	1076.43	1078.00
90	1057.00	1075.80	1077.00
91	1056.50	1075.17	1076.00
92	1056.00	1074.54	1076.00
93	1055.50	1073.92	1075.00
94	1054.50	1073.29	1075.00
95	1054.00		1074.00

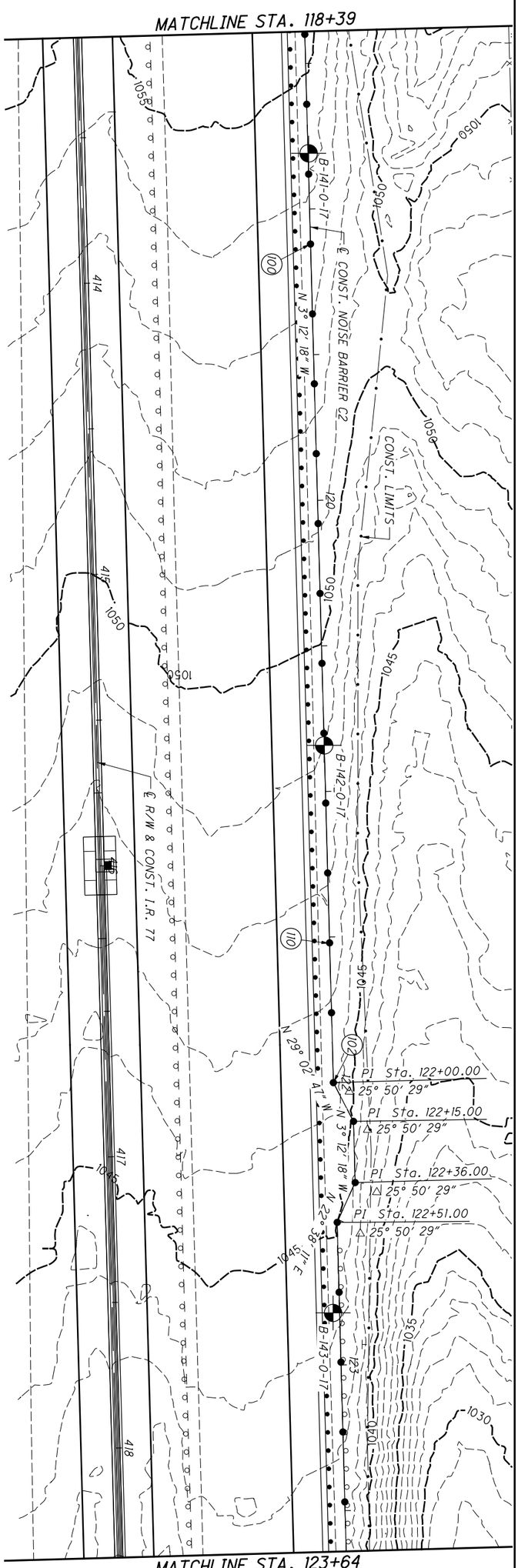
EX. GROUND
1,068.47
1,067.68
1,066.86
1,066.62
1,065.68
1,065.10
1,064.50
1,063.75
1,063.43
1,062.76
1,062.09
1,061.39
1,060.77
1,060.12
1,059.47
1,058.87
1,058.17
1,057.54
1,056.94
1,056.34
1,055.76

SUM-77/277/224	PLAN AND PROFILE - NOISE BARRIER C2 STA. 113+14.00 TO STA. 118+39.00

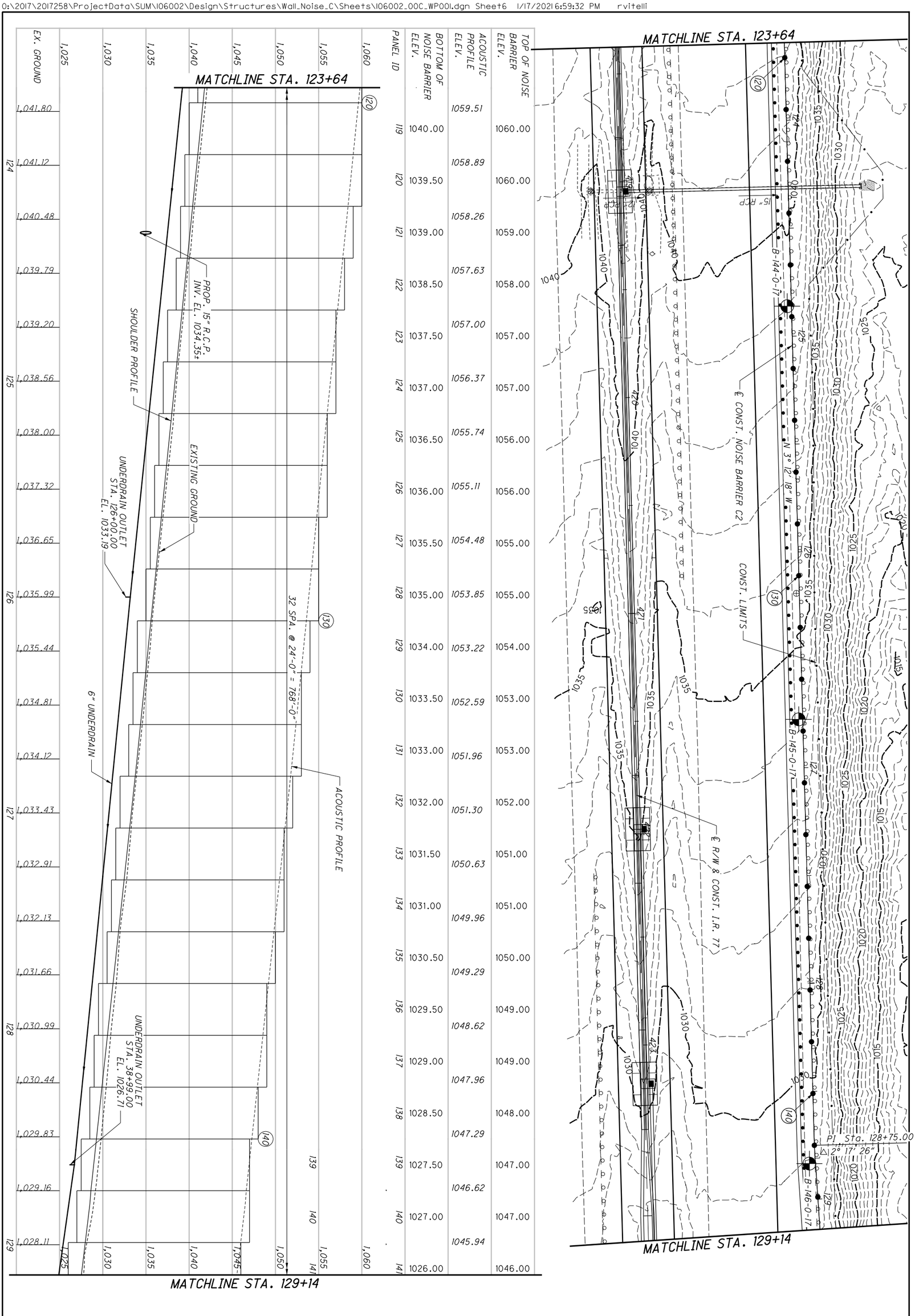
CALCULATED RHC
CHECKED DJC
HORIZONTAL SCALE IN FEET



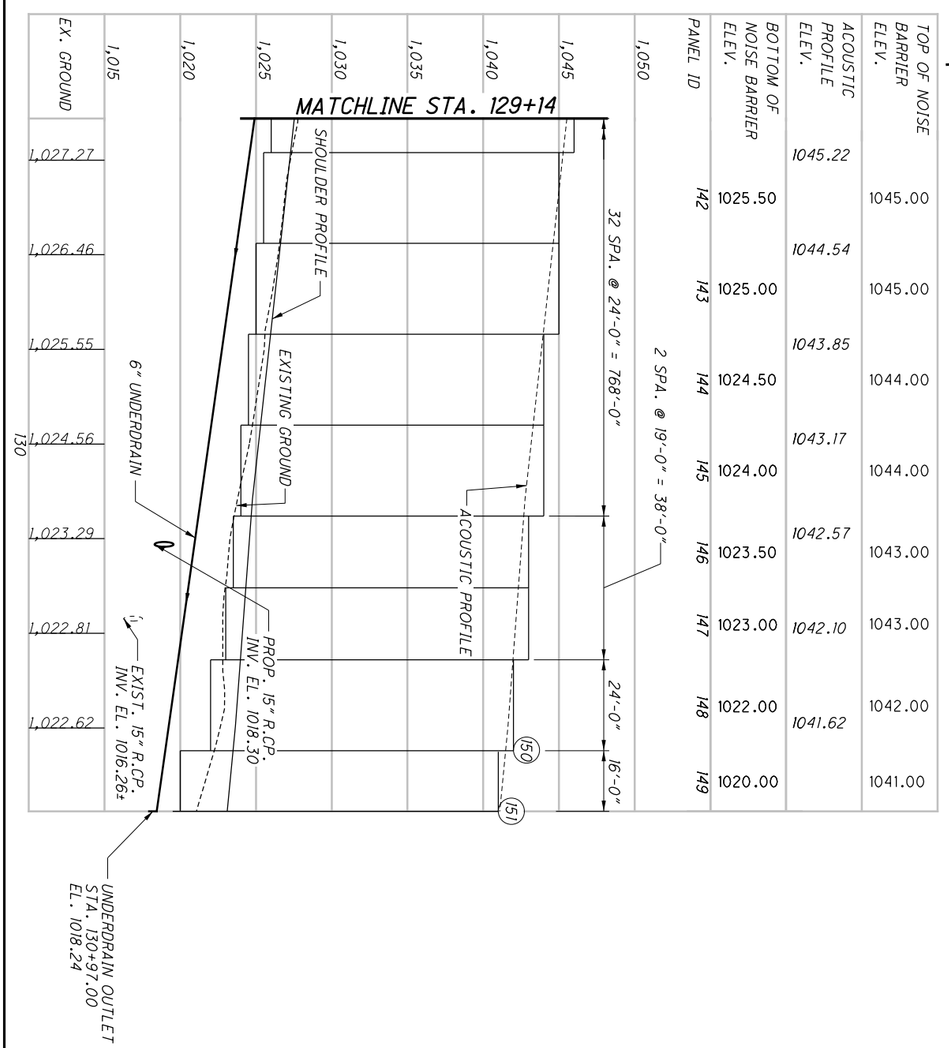
PANEL ID	BOTTOM OF NOISE BARRIER ELEV.	ACOUSTIC PROFILE ELEV.	TOP OF NOISE BARRIER ELEV.
96	1053.50	1072.66	1073.00
97	1053.00	1072.03	1073.00
98	1052.50	1071.40	1072.00
99	1051.50	1070.77	1071.00
100	1051.00	1070.14	1071.00
101	1050.50	1069.51	1070.00
102	1050.00	1068.88	1070.00
103	1049.50	1068.25	1069.00
104	1048.50	1067.62	1068.00
105	1048.00	1066.99	1068.00
106	1047.50	1066.36	1067.00
107	1047.00	1065.73	1067.00
108	1046.00	1065.10	1066.00
109	1045.50	1064.47	1065.00
110	1045.00	1063.85	1065.00
111	1044.00	1063.25	1064.00
112	1044.00	1062.66	1064.00
113	1043.00	1062.03	1063.00
114	1043.00	1061.40	1063.00
115	1042.50	1060.77	1062.00
116	1042.00	1060.14	1062.00
117	1041.50		1061.00
118	1041.00		1060.00



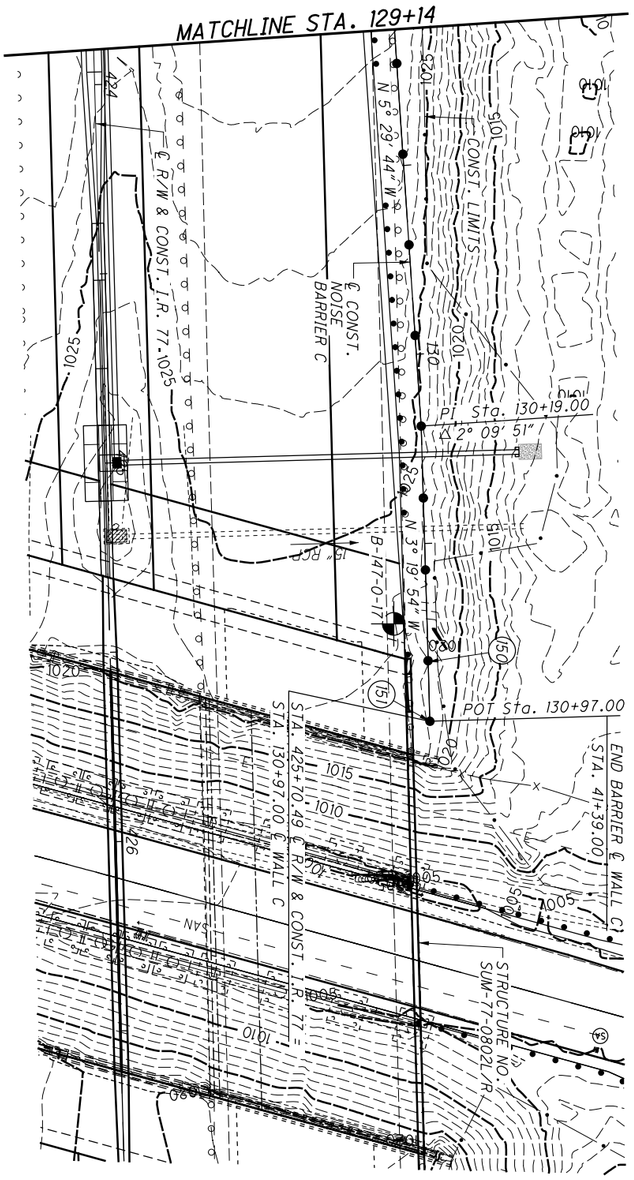
1089 / 1288	SUM-77 / 277 / 224	PLAN AND PROFILE - NOISE BARRIER C2 STA. 118+39.00 TO STA. 123+64.00	CALCULATED RHC CHECKED DJC	0 20 10 40 HORIZONTAL SCALE IN FEET	N



1090 / 1288	SUM-77 / 277 / 224	PLAN AND PROFILE - NOISE BARRIER C2 STA. 34+00.00 123+64.00 TO STA. 129+14.00	CALCULATED RHC CHECKED DJC	0 20 10 40 HORIZONTAL SCALE IN FEET



PANEL ID	BOTTOM OF NOISE BARRIER ELEV.	ACOUSTIC PROFILE ELEV.	TOP OF NOISE BARRIER ELEV.
		1045.22	
142	1025.50		1045.00
		1044.54	
143	1025.00		1045.00
		1043.85	
144	1024.50		1044.00
		1043.17	
145	1024.00		1044.00
		1042.57	
146	1023.50		1043.00
		1042.10	
147	1023.00		1043.00
		1041.62	
148	1022.00		1042.00
149	1020.00		1041.00



1091 / 1288	SUM-77 / 277 / 224	PLAN AND PROFILE - NOISE BARRIER C2 STA. 129+14.00 TO END	CALCULATED RHC CHECKED DJC	0 20 10 40 HORIZONTAL SCALE IN FEET	N

PANEL NO.	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	TOP OF WALL	BOTTOM OF WALL	LENGTH OF PANEL (LFT)	HEIGHT OF PANEL (LFT)	606 SPECIAL - NOISE BARRIER (REFLECTIVE) SF
1	1	B-16"	10+00.00	2	A-16"	10+12.00	1031.0	1021.0	12.00	10.0	120
2	2	A-16"	10+12.00	3	A-20"	10+24.00	1035.0	1021.0	12.00	14.0	168
3	3	A-20"	10+24.00	4	A-20"	10+48.00	1039.0	1021.5	24.00	17.5	420
4	4	A-20"	10+48.00	5	A-20"	10+72.00	1039.0	1021.5	24.00	17.5	420
5	5	A-20"	10+72.00	6	A-20"	10+96.00	1040.0	1022.0	24.00	18.0	432
6	6	A-20"	10+96.00	7	A-20"	11+20.00	1040.0	1022.0	24.00	18.0	432
7	7	A-20"	11+20.00	8	A-20"	11+44.00	1040.0	1022.5	24.00	17.5	420
8	8	A-20"	11+44.00	9	A-20"	11+68.00	1040.0	1022.5	24.00	17.5	420
9	9	A-20"	11+68.00	10	A-20"	11+92.00	1041.0	1023.0	24.00	18.0	432
10	10	A-20"	11+92.00	11	A-20"	12+16.00	1041.0	1023.5	24.00	17.5	420
11	11	A-20"	12+16.00	12	A-20"	12+40.00	1041.0	1024.0	24.00	17.0	408
12	12	A-20"	12+40.00	13	A-20"	12+64.00	1042.0	1024.0	24.00	18.0	432
13	13	A-20"	12+64.00	14	A-20"	12+88.00	1042.0	1024.5	24.00	17.5	420
14	14	A-20"	12+88.00	15	D-20"	13+12.00	1043.0	1025.0	24.00	18.0	432
15	15	D-20"	13+12.00	16	A-20"	13+28.00	1043.0	1024.5	16.00	18.5	296
16	16	A-20"	13+28.00	17	A-16"	13+40.00	1044.0	1024.5	12.00	19.5	234
17	17	A-16"	13+40.00	18	A-20"	13+52.00	1045.0	1024.5	12.00	20.5	246
18	18	A-20"	13+52.00	19	A-20"	13+76.00	1046.0	1024.5	24.00	21.5	516
19	19	A-20"	13+76.00	20	A-16"	13+88.00	1047.0	1028.5	12.00	18.5	222
20	20	A-16"	13+88.00	21	A-20"	14+00.00	1048.0	1028.5	12.00	19.5	234
21	21	A-20"	14+00.00	22	D-20"	14+24.00	1049.0	1032.5	24.00	16.5	396
22	22	D-20"	14+24.00	23	A-20"	14+48.00	1050.0	1035.5	24.00	14.5	348
23	23	A-20"	14+48.00	24	A-20"	14+72.00	1051.0	1036.5	24.00	14.5	348
24	24	A-20"	14+72.00	25	A-20"	14+96.00	1052.0	1037.0	24.00	15.0	360
25	25	A-20"	14+96.00	26	A-20"	15+20.00	1052.0	1037.5	24.00	14.5	348
26	26	A-20"	15+20.00	27	A-20"	15+44.00	1052.0	1037.5	24.00	14.5	348
27	27	A-20"	15+44.00	28	A-20"	15+68.00	1052.0	1038.0	24.00	14.0	336
28	28	A-20"	15+68.00	29	A-20"	15+92.00	1052.0	1038.0	24.00	14.0	336
29	29	A-20"	15+92.00	30	A-20"	16+16.00	1052.0	1037.5	24.00	14.5	348
30	30	A-20"	16+16.00	31	A-20"	16+40.00	1051.0	1036.5	24.00	14.5	348
31	31	A-20"	16+40.00	32	A-20"	16+64.00	1051.0	1035.5	24.00	15.5	372
32	32	A-20"	16+64.00	33	A-20"	16+88.00	1050.0	1035.0	24.00	15.0	360
33	33	A-20"	16+88.00	34	A-20"	17+12.00	1050.0	1035.0	24.00	15.0	360
34	34	A-20"	17+12.00	35	A-20"	17+36.00	1049.0	1034.5	24.00	14.5	348
35	35	A-20"	17+36.00	36	A-20"	17+60.00	1049.0	1034.5	24.00	14.5	348
36	36	A-20"	17+60.00	37	A-20"	17+84.00	1049.0	1034.5	24.00	14.5	348
37	37	A-20"	17+84.00	38	A-20"	18+08.00	1049.0	1034.5	24.00	14.5	348
38	38	A-20"	18+08.00	39	A-20"	18+32.00	1049.0	1034.5	24.00	14.5	348
39	39	A-20"	18+32.00	40	A-20"	18+56.00	1049.0	1034.5	24.00	14.5	348
40	40	A-20"	18+56.00	41	A-20"	18+80.00	1049.0	1034.5	24.00	14.5	348
41	41	A-20"	18+80.00	42	A-20"	19+04.00	1049.0	1034.5	24.00	14.5	348
42	42	A-20"	19+04.00	43	A-20"	19+28.00	1049.0	1034.5	24.00	14.5	348
43	43	A-20"	19+28.00	44	A-20"	19+52.00	1049.0	1034.5	24.00	14.5	348
44	44	A-20"	19+52.00	45	A-20"	19+76.00	1049.0	1034.5	24.00	14.5	348
45	45	A-20"	19+76.00	46	A-20"	20+00.00	1049.0	1034.5	24.00	14.5	348
46	46	A-20"	20+00.00	47	A-20"	20+24.00	1049.0	1034.0	24.00	15.0	360
47	47	A-20"	20+24.00	48	A-20"	20+48.00	1050.0	1034.0	24.00	16.0	384
48	48	A-20"	20+48.00	49	A-20"	20+72.00	1050.0	1034.0	24.00	16.0	384
49	49	A-20"	20+72.00	50	A-20"	20+96.00	1050.0	1034.0	24.00	16.0	384
50	50	A-20"	20+96.00	51	A-20"	21+20.00	1050.0	1034.0	24.00	16.0	384

PANEL NO.	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	TOP OF WALL	BOTTOM OF WALL	LENGTH OF PANEL (LFT)	HEIGHT OF PANEL (LFT)	606 SPECIAL - NOISE BARRIER (REFLECTIVE) SF
51	51	A-20"	21+20.00	52	A-20"	21+44.00	1051.0	1033.5	24.00	17.5	420
52	52	A-20"	21+44.00	53	A-20"	21+68.00	1051.0	1033.5	24.00	17.5	420
53	53	A-20"	21+68.00	54	A-20"	21+92.00	1051.0	1034.0	24.00	17.0	408
54	54	A-20"	21+92.00	55	A-20"	22+16.00	1051.0	1034.0	24.00	17.0	408
55	55	A-20"	22+16.00	56	A-20"	22+40.00	1052.0	1034.5	24.00	17.5	420
56	56	A-20"	22+40.00	57	A-20"	22+64.00	1052.0	1035.0	24.00	17.0	408
57	57	A-20"	22+64.00	58	A-20"	22+88.00	1052.0	1035.0	24.00	17.0	408
58	58	A-20"	22+88.00	59	A-20"	23+12.00	1052.0	1035.5	24.00	16.5	396
59	59	A-20"	23+12.00	60	A-20"	23+36.00	1053.0	1036.0	24.00	17.0	408
60	60	A-20"	23+36.00	61	A-20"	23+60.00	1053.0	1036.0	24.00	17.0	408
61	61	A-20"	23+60.00	62	A-20"	23+84.00	1053.0	1036.0	24.00	17.0	408
62	62	A-20"	23+84.00	63	A-20"	24+00.00	1053.0	1036.0	16.00	17.0	272
63	63	A-20"	24+00.00	64	A-20"	24+24.00	1054.0	1036.0	24.00	18.0	432
64	64	A-20"	24+24.00	65	A-20"	24+48.00	1054.0	1036.0	24.00	18.0	432
65	65	A-20"	24+48.00	66	A-20"	24+72.00	1054.0	1036.0	24.00	18.0	432
66	66	A-20"	24+72.00	67	A-20"	24+96.00	1054.0	1036.0	24.00	18.0	432
67	67	A-20"	24+96.00	68	A-20"	25+20.00	1055.0	1036.0	24.00	19.0	456
68	68	A-20"	25+20.00	69	A-20"	25+44.00	1055.0	1036.0	24.00	19.0	456
69	69	A-20"	25+44.00	70	A-20"	25+68.00	1055.0	1036.0	24.00	19.0	456
70	70	A-20"	25+68.00	71	A-20"	25+92.00	1055.0	1036.0	24.00	19.0	456
71	71	A-20"	25+92.00	72	A-20"	26+16.00	1056.0	1037.0	24.00	19.0	456
72	72	A-20"	26+16.00	73	A-20"	26+40.00	1056.0	1037.5	24.00	18.5	444
73	73	A-20"	26+40.00	74	A-20"	26+64.00	1056.0	1038.0	24.00	18.0	432
74	74	A-20"	26+64.00	75	A-20"	26+88.00	1056.0	1038.5	24.00	17.5	420
75	75	A-20"	26+88.00	76	A-20"	27+12.00	1057.0	1040.0	24.00	17.0	408
76	76	A-20"	27+12.00	77	A-20"	27+36.00	1058.0	1041.0	24.00	17.0	408
77	77	A-20"	27+36.00	78	A-20"	27+60.00	1059.0	1042.5	24.00	16.5	396
78	78	A-20"	27+60.00	79	A-20"	27+84.00	1060.0	1043.5	24.00	16.5	396
79	79	A-20"	27+84.00	80	A-16"	27+96.00	1061.0	1045.0	12.00	16.0	192
80	80	A-16"	27+96.00	81	A-16"	28+08.00	1062.0	1046.0	12.00	16.0	192
81	81	A-16"	28+08.00	82	A-16"	28+20.00	1063.0	1046.0	12.00	17.0	204
82	82	A-16"	28+20.00	83	A-16"	28+32.00	1064.0	1047.5	12.00	16.5	198
83	83	A-16"	28+32.00	84	A-16"	28+44.00	1065.0	1047.5	12.00	17.5	210
84	84	A-16"	28+44.00	85	A-16"	28+56.00	1066.0	1049.5	12.00	16.5	198
85	85	A-16"	28+56.00	86	A-20"	28+68.00	1067.0	1049.5	12.00	17.5	210
86	86	A-20"	28+68.00	87	A-20"	28+92.00	1068.0	1051.0	24.00	17.0	408
87	87	A-20"	28+92.00	88	A-20"	29+16.00	1069.0	1052.5	24.00	16.5	396
88	88	A-20"	29+16.00	89	A-20"	29+40.00	1070.0	1053.5	24.00	16.5	396
89	89	A-20"	29+40.00	90	A-20"	29+64.00	1071.0	1055.0	24.00	16.0	384
90	90	A-20"	29+64.00	91	A-20"	29+88.00	1072.0	1056.5	24.00	15.5	372
91	91	A-20"	29+88.00	92	A-20"	30+12.00	1073.0	1057.5	24.00	15.5	372
92	92	A-20"	30+12.00	93	A-20"	30+36.00	1074.0	1058.0	24.00	16.0	384
93	93	A-20"	30+36.00	94	A-20"	30+60.00	1075.0	1059.0	24.00	16.0	384
94	94	A-20"	30+60.00	95	A-20"	30+84.00	1075.0	1060.0	24.00	15.0	360
95	95	A-20"	30+84.00	96	A-20"	31+08.00	1076.0	1061.0	24.00	15.0	360
96	96	A-20"	31+08.00	97	A-20"	31+32.00	1076.0	1061.5	24.00	14.5	348
97	97	A-20"	31+32.00	98	A-20"	31+56.00	1077.0	1062.0	24.00	15.0	360
98	98	A-20"	31+56.00	99	A-20"	31+80.00	1077.0	1062.0	24.00	15.0	360
99	99	A-20"	31+80.00	100	A-20"	32+04.00	1077.0	1062.0	24.00	15.0	360
100	100	A-20"	32+04.00	101	A-20"	32+28.00	1077.0	1062.0	24.00	15.0	360

CALCULATED MOJ
CHECKED DGN

CALCULATIONS & SUBSUMMARY - NOISE WALL E

SUM-77 / 277 / 224

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PANEL NO.	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	TOP OF WALL	BOTTOM OF WALL	LENGTH OF PANEL (LFT)	HEIGHT OF PANEL (LFT)	606 SPECIAL - NOISE BARRIER (REFLECTIVE) SF
101	101	A-20"	32+28.00	102	A-20"	32+52.00	1077.0	1061.5	24.00	15.5	372
102	102	A-20"	32+52.00	103	A-20"	32+76.00	1077.0	1061.0	24.00	16.0	384
103	103	A-20"	32+76.00	104	A-20"	33+00.00	1077.0	1060.5	24.00	16.5	396
104	104	A-20"	33+00.00	105	A-20"	33+24.00	1077.0	1059.5	24.00	17.5	420
105	105	A-20"	33+24.00	106	A-20"	33+48.00	1077.0	1059.5	24.00	17.5	420
106	106	A-20"	33+48.00	107	A-20"	33+72.00	1077.0	1059.5	24.00	17.5	420
107	107	A-20"	33+72.00	108	A-20"	33+96.00	1077.0	1059.5	24.00	17.5	420
108	108	A-20"	33+96.00	109	A-20"	34+20.00	1077.0	1060.5	24.00	16.5	396
109	109	A-20"	34+20.00	110	A-20"	34+44.00	1077.0	1061.0	24.00	16.0	384
110	110	A-20"	34+44.00	111	A-20"	34+68.00	1077.0	1062.0	24.00	15.0	360
111	111	A-20"	34+68.00	112	A-20"	34+92.00	1078.0	1062.5	24.00	15.5	372
112	112	A-20"	34+92.00	113	A-20"	35+16.00	1078.0	1063.0	24.00	15.0	360
113	113	A-20"	35+16.00	114	A-20"	35+40.00	1079.0	1063.5	24.00	15.5	372
114	114	A-20"	35+40.00	115	A-20"	35+64.00	1079.0	1064.0	24.00	15.0	360
115	115	A-20"	35+64.00	116	A-20"	35+88.00	1079.0	1064.5	24.00	14.5	348
116	116	A-20"	35+88.00	117	A-20"	36+12.00	1080.0	1065.0	24.00	15.0	360
117	117	A-20"	36+12.00	118	A-20"	36+36.00	1080.0	1065.5	24.00	14.5	348
118	118	A-20"	36+36.00	119	A-20"	36+60.00	1080.0	1065.5	24.00	14.5	348
119	119	A-20"	36+60.00	120	B-16"	36+78.00	1080.0	1066.0	18.00	14.0	252
										TOTAL	43600

CALCULATED MOJ
CHECKED DGN

CALCULATIONS & SUBSUMMARY - NOISE WALL E

SUM-77 / 277 / 224

1093
1288

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NOISE WALL E			
DRILLED SHAFT NO.	WORKPOINT STATION	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)
1	10+00.00	1020.77	8
2	10+12.00	1020.72	10
3	10+24.00	1020.55	19
4	10+48.00	1021.05	19
5	10+72.00	1021.05	19
6	10+96.00	1021.55	19
7	11+20.00	1021.55	19
8	11+44.00	1022.05	19
9	11+68.00	1022.05	19
10	11+92.00	1022.55	19
11	12+16.00	1023.05	19
12	12+40.00	1023.55	19
13	12+64.00	1023.55	19
14	12+88.00	1024.05	19
15	13+12.00	1024.05	19
16	13+28.00	1024.05	14
17	13+40.00	1024.05	14
18	13+52.00	1024.05	14
19	13+76.00	1024.05	14
20	13+88.00	1028.05	10.5
21	14+00.00	1028.05	14
22	14+24.00	1032.05	14
23	14+48.00	1035.05	14
24	14+72.00	1036.05	14
25	14+96.00	1036.55	14
26	15+20.00	1037.05	14
27	15+44.00	1037.05	16
28	15+68.00	1037.55	14
29	15+92.00	1037.05	18
30	16+16.00	1036.05	18
31	16+40.00	1035.05	18
32	16+64.00	1034.55	18
33	16+88.00	1034.55	18
34	17+12.00	1034.05	18
35	17+36.00	1034.05	11
36	17+60.00	1034.05	11
37	17+84.00	1034.05	11
38	18+08.00	1034.05	11
39	18+32.00	1034.05	11
40	18+56.00	1034.05	11
41	18+80.00	1034.05	11
42	19+04.00	1034.05	12.5
43	19+28.00	1034.05	12.5
44	19+52.00	1034.05	12.5
45	19+76.00	1034.05	12.5
46	20+00.00	1033.55	12.5
47	20+24.00	1033.55	12.5
48	20+48.00	1033.55	12.5
49	20+72.00	1033.55	12.5
50	20+96.00	1033.55	12.5

NOISE WALL E			
DRILLED SHAFT NO.	WORKPOINT STATION	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)
51	21+20.00	1033.05	14.5
52	21+44.00	1033.05	14.5
53	21+68.00	1033.05	14.5
54	21+92.00	1033.55	14.5
55	22+16.00	1033.55	14.5
56	22+40.00	1034.05	14.5
57	22+64.00	1034.55	14.5
58	22+88.00	1034.55	14.5
59	23+12.00	1035.05	12
60	23+36.00	1035.55	12
61	23+60.00	1035.55	12
62	23+84.00	1035.55	12
63	24+00.00	1035.55	12
64	24+24.00	1035.55	12
65	24+48.00	1035.55	12
66	24+72.00	1035.55	12
67	24+96.00	1035.55	12
68	25+20.00	1035.55	12
69	25+44.00	1035.55	12
70	25+68.00	1035.55	12
71	25+92.00	1035.55	12
72	26+16.00	1036.55	12
73	26+40.00	1037.05	12
74	26+64.00	1037.55	12
75	26+88.00	1038.05	14
76	27+12.00	1039.55	14
77	27+36.00	1040.55	14
78	27+60.00	1042.05	14
79	27+84.00	1043.05	14
80	27+96.00	1044.55	11
81	28+08.00	1045.55	11
82	28+20.00	1045.55	11
83	28+32.00	1047.05	11
84	28+44.00	1047.05	11
85	28+56.00	1049.05	11
86	28+68.00	1049.05	22*
87	28+92.00	1050.55	22*
88	29+16.00	1052.05	22*
89	29+40.00	1053.05	22*
90	29+64.00	1054.55	22*
91	29+88.00	1056.05	22*
92	30+12.00	1057.05	22*
93	30+36.00	1057.55	22*
94	30+60.00	1058.55	22*
95	30+84.00	1059.55	22*
96	31+08.00	1060.55	10*
97	31+32.00	1061.05	10*
98	31+56.00	1061.55	10*
99	31+80.00	1061.55	10*
100	32+04.00	1061.55	10*

NOISE WALL E			
DRILLED SHAFT NO.	WORKPOINT STATION	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)
101	32+28.00	1061.05	10*
102	32+52.00	1060.55	10*
103	32+76.00	1060.05	17*
104	33+00.00	1059.05	17*
105	33+24.00	1059.05	17*
106	33+48.00	1059.05	17*
107	33+72.00	1059.05	17*
108	33+96.00	1059.05	15.5*
109	34+20.00	1060.05	15.5*
110	34+44.00	1060.55	17.5*
111	34+68.00	1061.55	17.5*
112	34+92.00	1062.05	18*
113	35+16.00	1062.55	18*
114	35+40.00	1063.05	18*
115	35+64.00	1063.55	21*
116	35+88.00	1064.05	21*
117	36+12.00	1064.55	21*
118	36+36.00	1065.05	21*
119	36+60.00	1065.05	21*
120	36+78.00	1065.72	15

LEGEND:

* INCLUDES 5' ROCK SOCKET

CALCULATED MOJ
CHECKED DGN

DATA TABLES - NOISE WALL E

SUM-77/277/224

1094
1288

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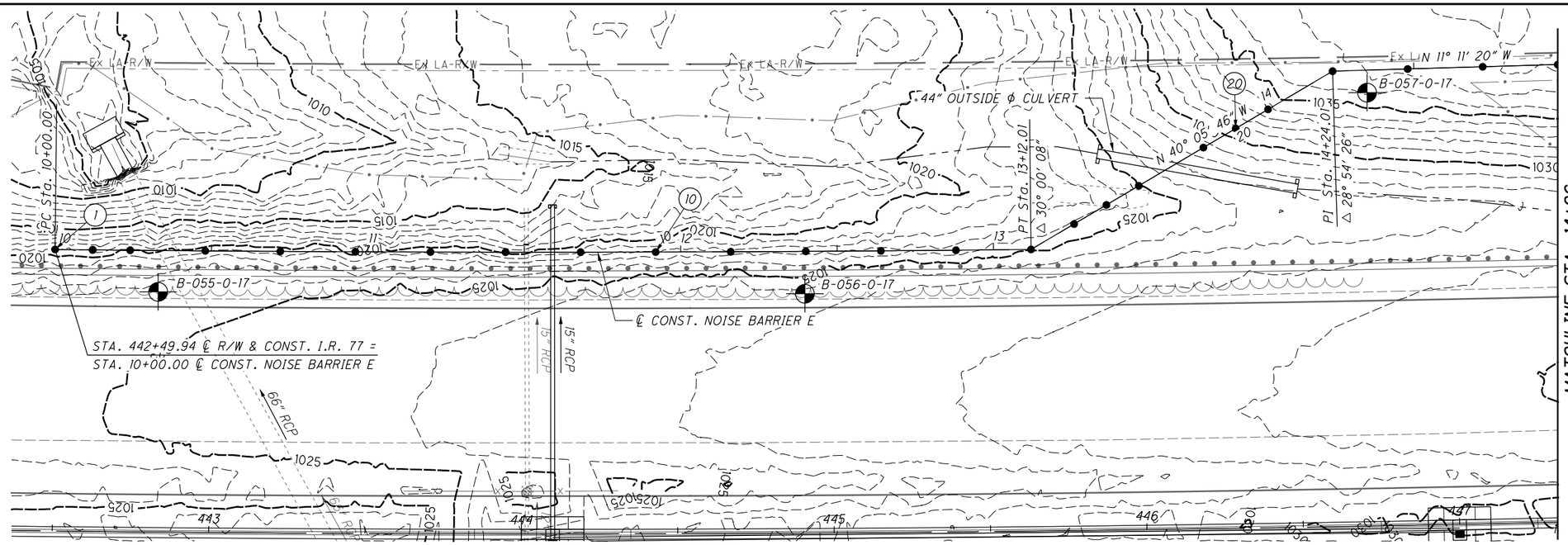
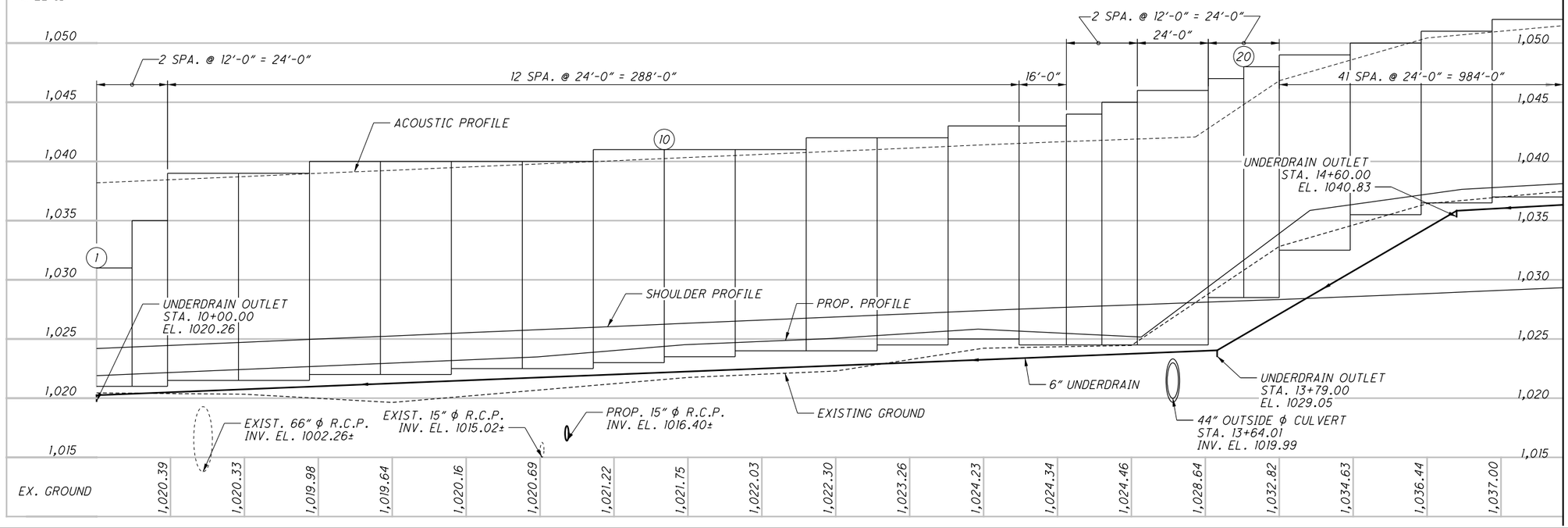


APPROX. TOP OF ROCK ELEV.	
BORING I.D. NO.	T/ROCK ELEV.
B-055-0-17	N/A
B-056-0-17	N/A
B-057-0-17	N/A
B-058-0-17	N/A
B-059-0-17	N/A
B-060-0-17	N/A
B-061-0-17	N/A
B-062-0-17	N/A
B-063-0-17	N/A
B-064-0-17	N/A
B-065-0-17	1037.3±
B-066-0-17	1056.7±
B-067-0-17	1047.1±
B-068-0-17	1049.6±
B-069-0-17	1048.5±

TOP OF NOISE BARRIER ELEV.	1031.00	1035.00	1039.00	1039.00	1040.00	1040.00	1040.00	1040.00	1041.00	1041.00	1041.00	1042.00	1042.00	1043.00	1043.00	1044.00	1045.00	1046.00	1047.00	1048.00	1049.00	1050.00	1051.00	1052.00
ACOUSTIC PROFILE ELEV.		1038.46	1038.73	1039.00	1039.26	1039.53	1039.53	1040.06	1040.33	1040.60	1040.86	1041.13	1041.40	1041.65	1041.88	1042.26	1046.45	1048.47	1050.27	1050.95				
BOTTOM OF NOISE BARRIER ELEV.	1021.00	1021.00	1021.50	1021.50	1022.00	1022.00	1022.50	1022.50	1023.00	1023.50	1024.00	1024.00	1024.50	1025.00	1024.50	1024.50	1024.50	1024.50	1028.50	1028.50	1032.50	1035.50	1036.50	1037.00
PANEL ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24



EX. GROUND	1,020.39	1,020.33	1,019.98	1,019.64	1,020.16	1,020.69	1,021.22	1,021.75	1,022.03	1,022.30	1,023.26	1,024.23	1,024.34	1,024.46	1,028.64	1,032.82	1,034.63	1,036.44	1,037.00					

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MOJ
CHECKED DGN

PLAN AND PROFILE - NOISE BARRIER E
BEGIN TO STA. 14+96

SUM-77 / 277 / 224

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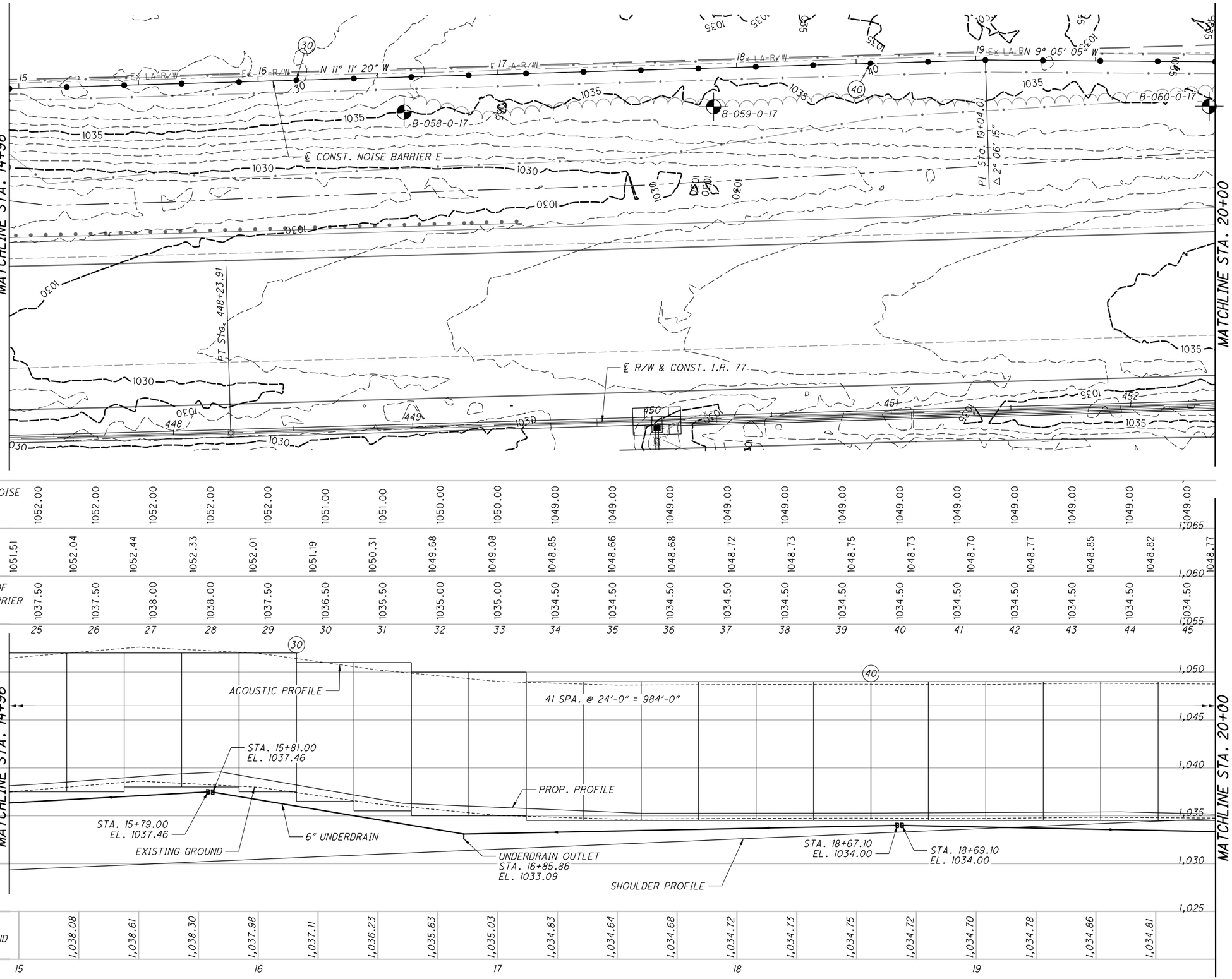

TOP OF NOISE BARRIER ELEV.	1052.00	1052.00	1052.00	1052.00	1052.00	1051.00	1051.00	1050.00	1050.00	1049.00	1049.00	1049.00	1049.00	1049.00	1049.00	1049.00	1049.00	1049.00	1049.00	1049.00	1049.00	1049.00
ACOUSTIC PROFILE ELEV.	1051.51	1052.04	1052.44	1052.33	1052.01	1051.19	1050.31	1049.68	1049.08	1048.85	1048.66	1048.68	1048.72	1048.73	1048.75	1048.73	1048.70	1048.77	1048.85	1048.82	1048.77	
BOTTOM OF NOISE BARRIER ELEV.	1037.50	1037.50	1038.00	1038.00	1037.50	1036.50	1035.50	1035.00	1035.00	1034.50	1034.50	1034.50	1034.50	1034.50	1034.50	1034.50	1034.50	1034.50	1034.50	1034.50	1034.50	
PANEL ID	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	
EX. GROUND	1,038.08	1,038.61	1,038.30	1,037.98	1,037.11	1,036.23	1,035.63	1,035.03	1,034.83	1,034.64	1,034.68	1,034.72	1,034.73	1,034.75	1,034.72	1,034.70	1,034.78	1,034.86	1,034.81			
	15				16				17				18				19					

PLAN AND PROFILE - NOISE BARRIER E
STA. 14+96 TO STA. 20+00

SUM-77 / 277 / 224

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1288

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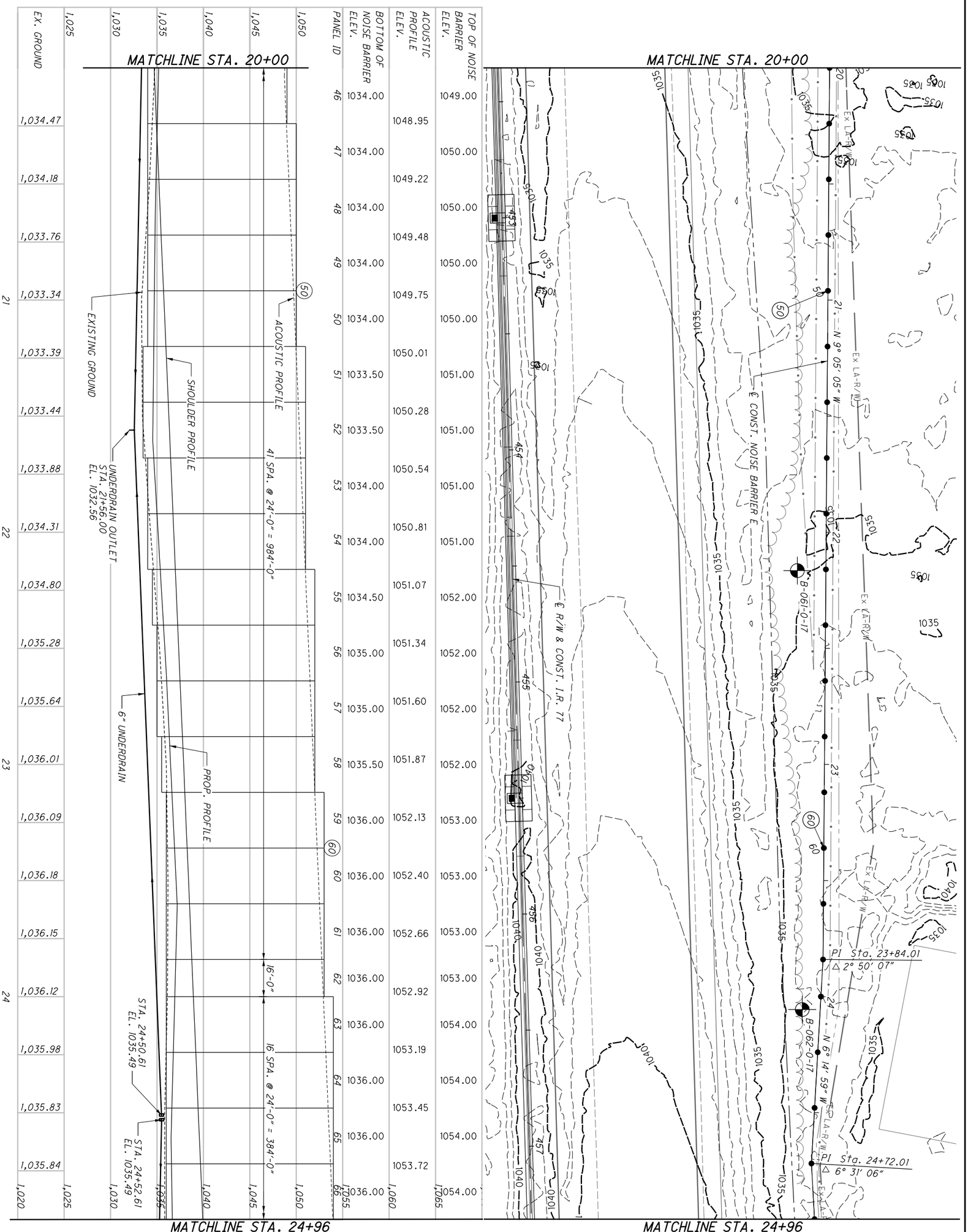
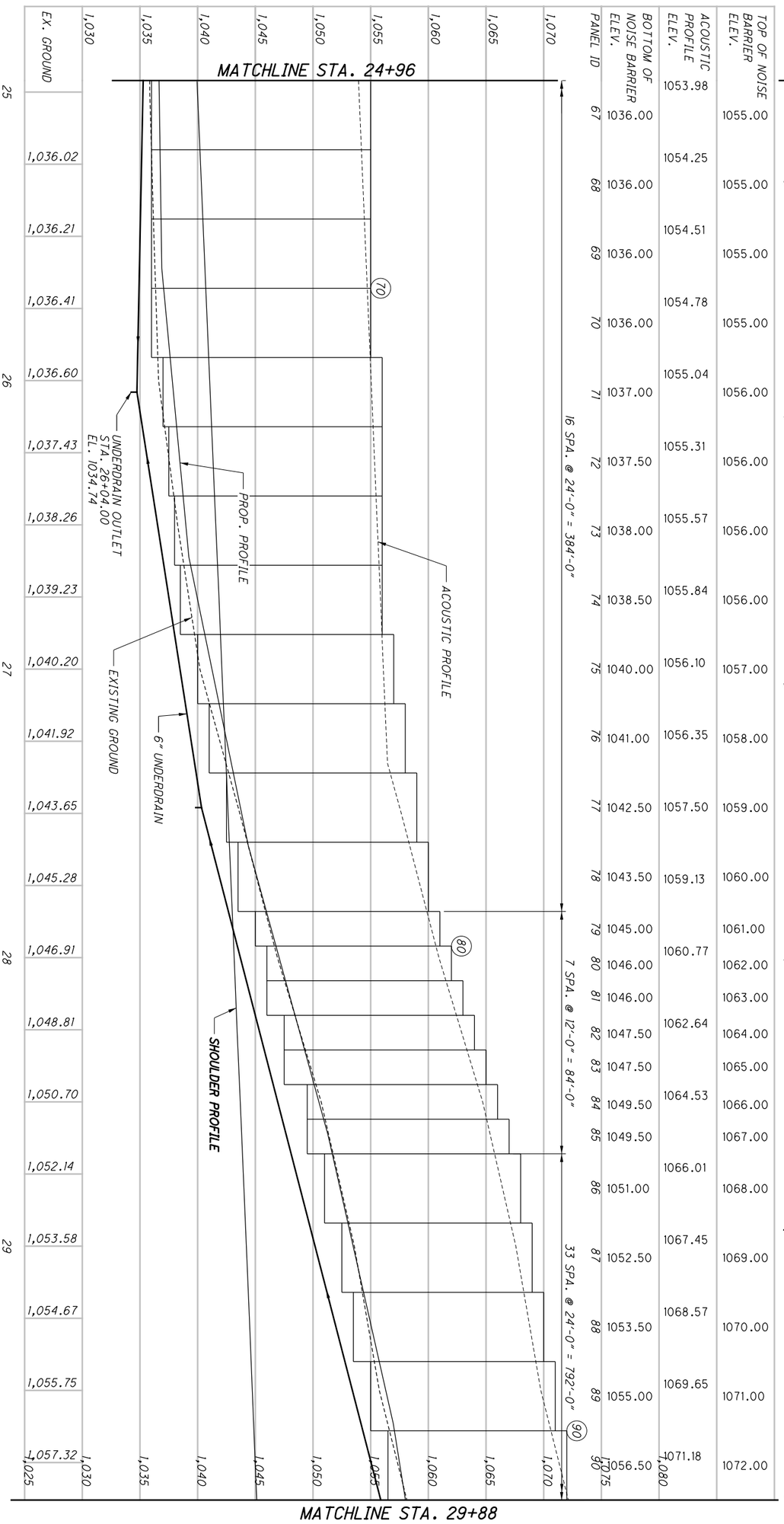
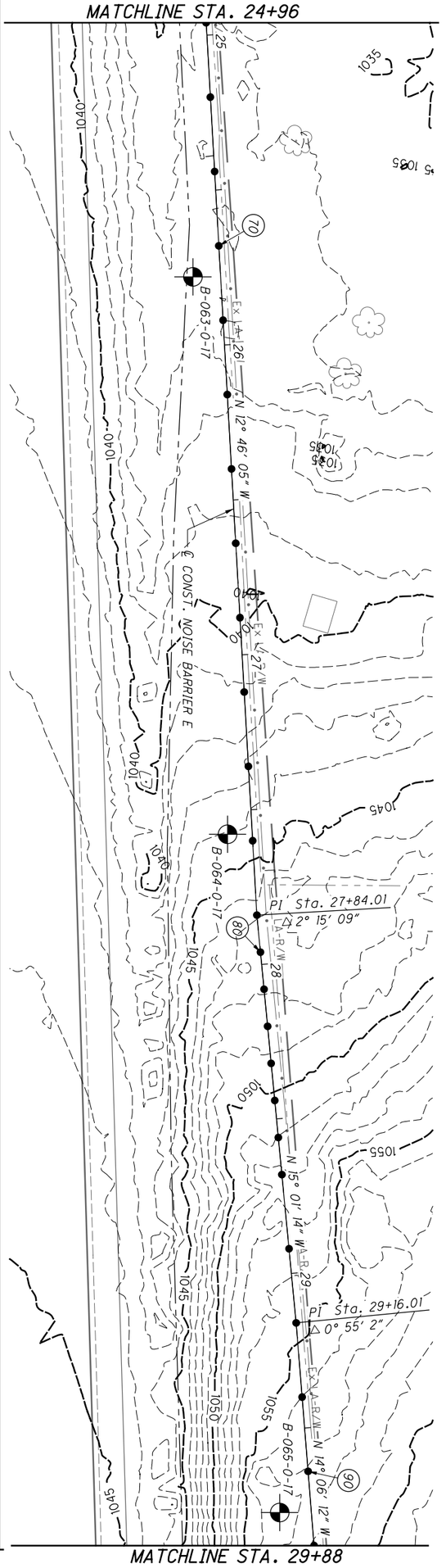
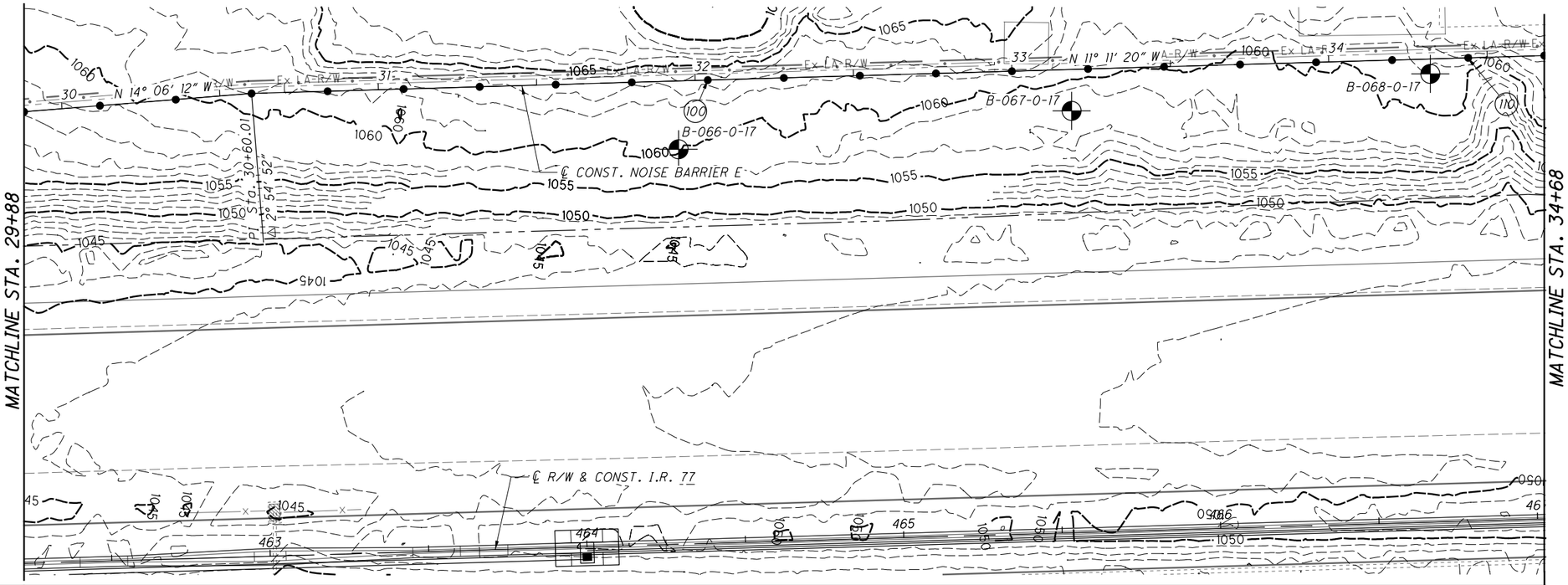


1097 / 1288	SUM-77 / 277 / 224	PLAN AND PROFILE - NOISE BARRIER E STA. 20+00 TO STA. 24+96	CALCULATED MOJ CHECKED DGN	0 20 10 40 HORIZONTAL SCALE IN FEET

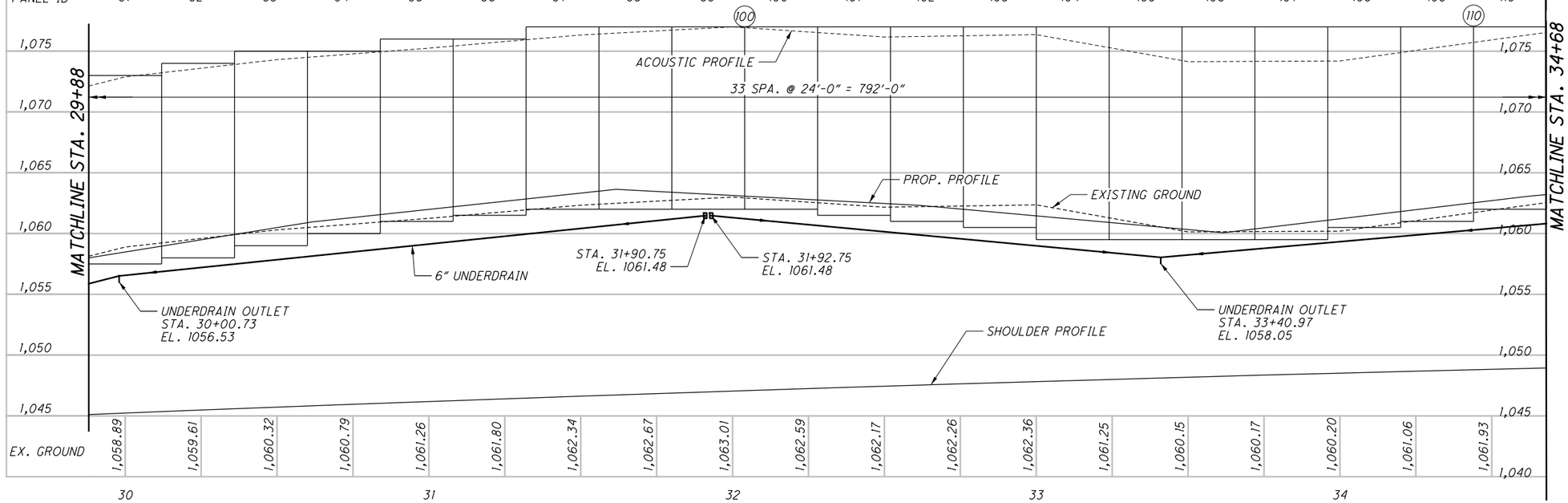




1098 / 1288	SUM-77/277/224	PLAN AND PROFILE - NOISE BARRIER E STA. 24+96 TO STA. 29+88	CALCULATED MOJ CHECKED DGN	0 20 10 40 HORIZONTAL SCALE IN FEET



TOP OF NOISE BARRIER ELEV.	1073.00	1074.00	1075.00	1075.00	1076.00	1076.00	1077.00	1077.00	1077.00	1077.00	1077.00	1077.00	1077.00	1077.00	1077.00	1077.00	1077.00	1077.00	1077.00	1077.00	1077.00
ACOUSTIC PROFILE ELEV.	1072.75	1073.54	1074.25	1074.75	1075.22	1075.75	1076.29	1076.64	1076.98	1076.63	1076.21	1076.26	1076.35	1075.35	1074.25	1074.17	1074.20	1074.99	1075.85		
BOTTOM OF NOISE BARRIER ELEV.	1057.50	1058.00	1059.00	1060.00	1061.00	1061.50	1062.00	1062.00	1062.00	1062.00	1061.50	1061.00	1060.50	1059.50	1059.50	1059.50	1059.50	1060.50	1061.00	1062.00	1062.00
PANEL ID	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	



EX. GROUND	1,058.89	1,059.61	1,060.32	1,060.79	1,061.26	1,061.80	1,062.34	1,062.67	1,063.01	1,062.59	1,062.17	1,062.26	1,062.36	1,061.25	1,060.15	1,060.17	1,060.20	1,061.06	1,061.93		
	30				31				32				33				34				

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MOJ
CHECKED DGN

PLAN AND PROFILE - NOISE BARRIER E
STA. 29+88 TO STA. 34+68

SUM-77/277/224

1099
1288

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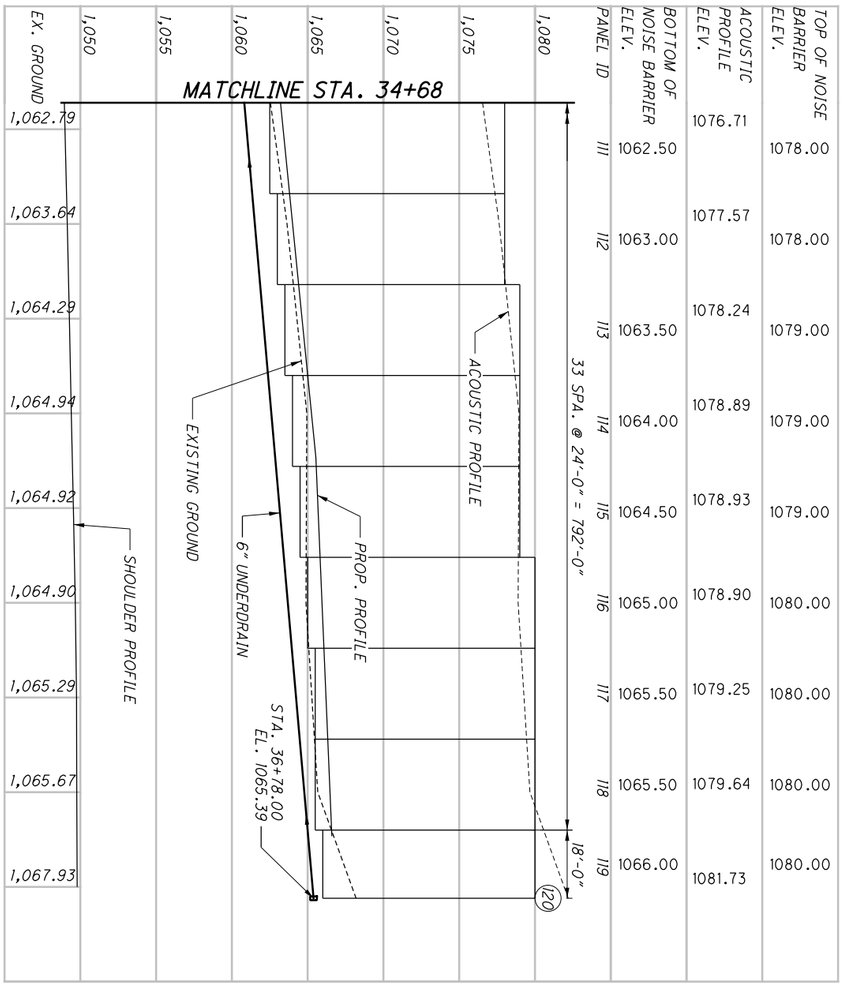
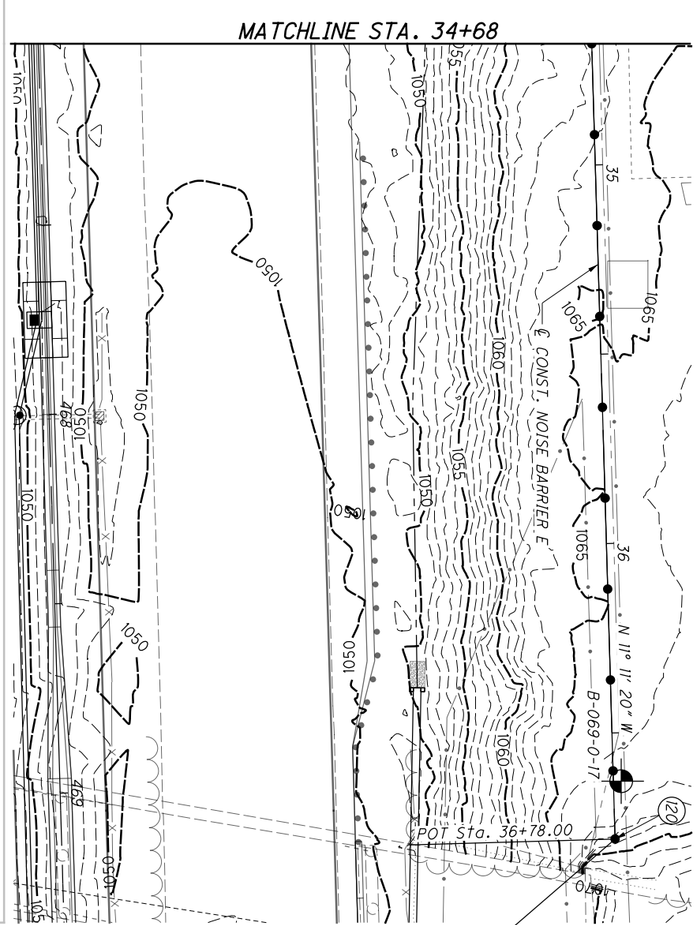


PANEL ID	BOTTOM OF NOISE BARRIER ELEV.	ACOUSTIC PROFILE ELEV.	TOP OF NOISE BARRIER ELEV.
111	1062.50	1076.71	1078.00
112	1063.00	1077.57	1078.00
113	1063.50	1078.24	1079.00
114	1064.00	1078.89	1079.00
115	1064.50	1078.93	1079.00
116	1065.00	1078.90	1080.00
117	1065.50	1079.25	1080.00
118	1065.50	1079.64	1080.00
119	1066.00	1081.73	1080.00



PANEL NO.	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	TOP OF WALL	BOTTOM OF WALL	LENGTH OF PANEL (LFT)	HEIGHT OF PANEL (LFT)	606 SPECIAL - NOISE BARRIER (REFLECTIVE) SF
1	1	B-16"	10+00.00	2	A-16"	10+12.00	1046.5	1038.50	12.00	8.0	96
2	2	A-16"	10+12.00	3	A-16"	10+24.00	1050.5	1039.00	12.00	11.5	138
3	3	A-16"	10+24.00	4	A-16"	10+40.00	1054.5	1039.50	16.00	15.0	240
4	4	A-16"	10+40.00	5	A-20"	10+52.00	1058.5	1040.00	12.00	18.5	222
5	5	A-20"	10+52.00	6	A-20"	10+76.00	1058.5	1040.50	24.00	18.0	432
6	6	A-20"	10+76.00	7	A-20"	11+00.00	1059.5	1041.50	24.00	18.0	432
7	7	A-20"	11+00.00	8	A-20"	11+24.00	1059.5	1042.50	24.00	17.0	408
8	8	A-20"	11+24.00	9	A-20"	11+48.00	1060.5	1043.00	24.00	17.5	420
9	9	A-20"	11+48.00	10	A-20"	11+72.00	1060.5	1043.50	24.00	17.0	408
10	10	A-20"	11+72.00	11	A-20"	11+96.00	1061.5	1044.00	24.00	17.5	420
11	11	A-20"	11+96.00	12	A-20"	12+20.00	1061.5	1044.50	24.00	17.0	408
12	12	A-20"	12+20.00	13	A-20"	12+44.00	1062.5	1044.50	24.00	18.0	432
13	13	A-20"	12+44.00	14	A-20"	12+68.00	1062.5	1045.00	24.00	17.5	420
14	14	A-20"	12+68.00	15	A-20"	12+92.00	1062.5	1045.00	24.00	17.5	420
15	15	A-20"	12+92.00	16	A-20"	13+16.00	1062.5	1045.00	24.00	17.5	420
16	16	A-20"	13+16.00	17	A-16"	13+32.00	1063.5	1045.50	16.00	18.0	288
17	17	A-16"	13+32.00	18	A-20"	13+44.00	1063.5	1045.50	12.00	18.0	216
18	18	A-20"	13+44.00	19	A-20"	13+68.00	1064.5	1046.50	24.00	18.0	432
19	19	A-20"	13+68.00	20	A-20"	13+92.00	1064.5	1047.50	24.00	17.0	408
20	20	A-20"	13+92.00	21	A-20"	14+16.00	1065.5	1048.00	24.00	17.5	420
21	21	A-20"	14+16.00	22	A-20"	14+40.00	1065.5	1048.50	24.00	17.0	408
22	22	A-20"	14+40.00	23	A-20"	14+64.00	1066.5	1048.50	24.00	18.0	432
23	23	A-20"	14+64.00	24	A-20"	14+88.00	1066.5	1049.00	24.00	17.5	420
24	24	A-20"	14+88.00	25	A-20"	15+12.00	1066.5	1049.00	24.00	17.5	420
25	25	A-20"	15+12.00	26	A-20"	15+36.00	1066.5	1049.00	24.00	17.5	420
26	26	A-20"	15+36.00	27	A-20"	15+60.00	1066.5	1049.50	24.00	17.0	408
27	27	A-20"	15+60.00	28	A-20"	15+84.00	1067.5	1049.50	24.00	18.0	432
28	28	A-20"	15+84.00	29	A-20"	16+08.00	1067.5	1050.00	24.00	17.5	420
29	29	A-20"	16+08.00	30	A-20"	16+32.00	1067.5	1050.00	24.00	17.5	420
30	30	A-20"	16+32.00	31	A-20"	16+56.00	1067.5	1050.00	24.00	17.5	420
31	31	A-20"	16+56.00	32	A-20"	16+80.00	1067.5	1050.50	24.00	17.0	408
32	32	A-20"	16+80.00	33	A-20"	17+04.00	1068.5	1050.50	24.00	18.0	432
33	33	A-20"	17+04.00	34	A-20"	17+28.00	1068.5	1051.00	24.00	17.5	420
34	34	A-20"	17+28.00	35	A-20"	17+52.00	1069.5	1051.50	24.00	18.0	432
35	35	A-20"	17+52.00	36	A-16"	17+65.00	1069.5	1053.00	13.00	16.5	214.5
36	36	A-16"	17+65.00	37	B-16"	17+78.00	1069.5	1056.50	13.00	13.0	169
37	38	B-16"	18+40.50	39	A-20"	18+60.50	1070.5	1054.50	20.00	16.0	320
38	39	A-20"	18+60.50	40	A-20"	18+80.50	1070.5	1053.50	20.00	17.0	340
39	40	A-20"	18+80.50	41	A-20"	19+04.50	1070.5	1053.50	24.00	17.0	408
40	41	A-20"	19+04.50	42	A-20"	19+28.50	1071.5	1053.00	24.00	18.5	444
41	42	A-20"	19+28.50	43	A-20"	19+52.50	1072.5	1053.00	24.00	19.5	468
42	43	A-20"	19+52.50	44	A-20"	19+76.50	1073.5	1053.50	24.00	20.0	480
43	44	A-20"	19+76.50	45	A-20"	20+00.50	1074.5	1055.00	24.00	19.5	468
44	45	A-20"	20+00.50	46	A-20"	20+24.50	1075.5	1057.00	24.00	18.5	444
45	46	A-20"	20+24.50	47	A-20"	20+48.50	1076.5	1059.00	24.00	17.5	420
46	47	A-20"	20+48.50	48	A-20"	20+72.50	1077.5	1061.00	24.00	16.5	396
47	48	A-20"	20+72.50	49	A-20"	20+96.50	1078.5	1061.50	24.00	17.0	408
48	49	A-20"	20+96.50	50	A-20"	21+20.50	1079.5	1061.50	24.00	18.0	432
49	50	A-20"	21+20.50	51	A-20"	21+44.50	1079.5	1062.00	24.00	17.5	420
50	51	A-20"	21+44.50	52	A-20"	21+68.50	1079.5	1062.00	24.00	17.5	420

PANEL NO.	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	TOP OF WALL	BOTTOM OF WALL	LENGTH OF PANEL (LFT)	HEIGHT OF PANEL (LFT)	606 SPECIAL - NOISE BARRIER (REFLECTIVE) SF
51	52	A-20"	21+68.50	53	A-20"	21+92.50	1080.5	1063.00	24.00	17.5	420
52	53	A-20"	21+92.50	54	A-20"	22+16.50	1080.5	1063.00	24.00	17.5	420
53	54	A-20"	22+16.50	55	A-20"	22+40.50	1080.5	1063.50	24.00	17.0	408
54	55	A-20"	22+40.50	56	A-20"	22+64.50	1080.5	1063.50	24.00	17.0	408
55	56	A-20"	22+64.50	57	A-20"	22+88.50	1080.5	1063.00	24.00	17.5	420
56	57	A-20"	22+88.50	58	A-20"	23+12.50	1080.5	1063.00	24.00	17.5	420
57	58	A-20"	23+12.50	59	A-20"	23+36.50	1080.5	1063.00	24.00	17.5	420
58	59	A-20"	23+36.50	60	A-20"	23+60.50	1080.5	1062.50	24.00	18.0	432
59	60	A-20"	23+60.50	61	A-20"	23+84.50	1080.5	1062.50	24.00	18.0	432
60	61	A-20"	23+84.50	62	A-20"	24+08.50	1080.5	1062.50	24.00	18.0	432
61	62	A-20"	24+08.50	63	A-20"	24+32.50	1080.5	1062.50	24.00	18.0	432
62	63	A-20"	24+32.50	64	A-20"	24+56.50	1080.5	1062.50	24.00	18.0	432
63	64	A-20"	24+56.50	65	A-20"	24+80.50	1080.5	1063.00	24.00	17.5	420
64	65	A-20"	24+80.50	66	A-20"	25+04.50	1080.5	1063.00	24.00	17.5	420
65	66	A-20"	25+04.50	67	A-20"	25+28.50	1080.5	1063.00	24.00	17.5	420
66	67	A-20"	25+28.50	68	A-20"	25+52.50	1079.5	1062.50	24.00	17.0	408
67	68	A-20"	25+52.50	69	A-20"	25+76.50	1079.5	1062.00	24.00	17.5	420
68	69	A-20"	25+76.50	70	A-20"	26+00.50	1079.5	1061.50	24.00	18.0	432
69	70	A-20"	26+00.50	71	A-20"	26+24.50	1079.5	1061.50	24.00	18.0	432
70	71	A-20"	26+24.50	72	A-20"	26+48.50	1079.5	1061.50	24.00	18.0	432
71	72	A-20"	26+48.50	73	A-20"	26+62.50	1079.5	1061.50	14.00	18.0	252
72	73	A-20"	26+62.50	74	A-20"	26+86.50	1079.5	1062.00	24.00	17.5	420
73	74	A-20"	26+86.50	75	A-20"	27+10.50	1079.5	1062.00	24.00	17.5	420
74	75	A-20"	27+10.50	76	A-20"	27+34.50	1079.5	1062.00	24.00	17.5	420
75	76	A-20"	27+34.50	77	A-20"	27+58.50	1079.5	1062.50	24.00	17.0	408
76	77	A-20"	27+58.50	78	A-20"	27+82.50	1079.5	1062.00	24.00	17.5	420
77	78	A-20"	27+82.50	79	A-20"	28+06.50	1078.5	1062.00	24.00	16.5	396
78	79	A-20"	28+06.50	80	A-20"	28+30.50	1078.5	1061.50	24.00	17.0	408
79	80	A-20"	28+30.50	81	A-20"	28+54.50	1078.5	1061.00	24.00	17.5	420
80	81	A-20"	28+54.50	82	A-20"	28+78.50	1078.5	1061.00	24.00	17.5	420
81	82	A-20"	28+78.50	83	A-20"	29+02.50	1077.5	1060.50	24.00	17.0	408
82	83	A-20"	29+02.50	84	A-20"	29+26.50	1077.5	1060.00	24.00	17.5	420
83	84	A-20"	29+26.50	85	A-20"	29+50.50	1076.5	1058.50	24.00	18.0	432
84	85	A-20"	29+50.50	86	A-20"	29+74.50	1075.5	1057.50	24.00	18.0	432
85	86	A-20"	29+74.50	87	A-20"	29+98.50	1074.5	1056.00	24.00	18.5	444
86	87	A-20"	29+98.50	88	A-20"	30+22.50	1073.5	1056.00	24.00	17.5	420
87	88	A-20"	30+22.50	89	A-20"	30+46.50	1073.5	1056.00	24.00	17.5	420
88	89	A-20"	30+46.50	90	A-20"	30+70.50	1073.5	1056.00	24.00	17.5	420
89	90	A-20"	30+70.50	91	A-20"	30+94.50	1073.5	1056.00	24.00	17.5	420
90	91	A-20"	30+94.50	92	A-20"	31+18.50	1073.5	1056.50	24.00	17.0	408
91	92	A-20"	31+18.50	93	A-20"	31+42.50	1072.5	1056.00	24.00	16.5	396
92	93	A-20"	31+42.50	94	A-20"	31+54.50	1071.5	1053.00	12.00	18.5	222
93	94	A-20"	31+54.50	95	A-20"	31+66.50	1070.5	1053.00	12.00	17.5	210
94	95	A-20"	31+66.50	96	A-20"	31+78.50	1069.5	1050.50	12.00	19.0	228
95	96	A-20"	31+78.50	97	A-20"	31+90.50	1068.5	1050.00	12.00	18.5	222
96	97	A-20"	31+90.50	98	A-20"	32+02.50	1067.5	1048.00	12.00	19.5	234
97	98	A-20"	32+02.50	99	A-20"	32+14.50	1066.5	1047.00	12.00	19.5	234
98	99	A-20"	32+14.50	100	A-20"	32+26.50	1065.5	1045.50	12.00	20.0	240
99	100	A-20"	32+26.50	101	A-20"	32+38.50	1064.5	1045.00	12.00	19.5	234
100	101	A-20"	32+38.50	102	A-20"	32+50.50	1063.5	1043.50	12.00	20.0	240

CALCULATED RFV
CHECKED TJW

CALCULATIONS & SUBSUMMARY - NOISE WALL G

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PANEL NO.	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	TOP OF WALL	BOTTOM OF WALL	LENGTH OF PANEL (LFT)	HEIGHT OF PANEL (LFT)	606 SPECIAL - NOISE BARRIER (REFLECTIVE) SF
101	102	A-20"	32+50.50	103	A-20"	32+62.50	1062.5	1043.50	12.00	19.0	228
102	103	A-20"	32+62.50	104	D-20"	32+86.50	1062.5	1043.00	24.00	19.5	468
103	104	D-20"	32+86.50	105	A-20"	33+10.50	1062.5	1042.50	24.00	20.0	480
104	105	A-20"	33+10.50	106	A-20"	33+34.50	1062.5	1042.50	24.00	20.0	480
105	106	A-20"	33+34.50	107	A-20"	33+50.50	1062.5	1042.50	16.00	20.0	320
106	107	A-20"	33+50.50	108	D-20"	33+66.50	1062.5	1042.50	16.00	20.0	320
107	108	D-20"	33+66.50	109	A-20"	33+90.50	1062.5	1042.50	24.00	20.0	480
108	109	A-20"	33+90.50	110	A-20"	34+14.50	1062.5	1043.00	24.00	19.5	468
109	110	A-20"	34+14.50	111	A-20"	34+38.50	1062.5	1043.00	24.00	19.5	468
110	111	A-20"	34+38.50	112	A-20"	34+62.50	1063.5	1043.50	24.00	20.0	480
111	112	A-20"	34+62.50	113	A-20"	34+86.50	1063.5	1044.00	24.00	19.5	468
112	113	A-20"	34+86.50	114	A-20"	35+10.50	1063.5	1044.00	24.00	19.5	468
113	114	A-20"	35+10.50	115	A-20"	35+26.50	1064.5	1044.50	16.00	20.0	320
114	115	A-20"	35+26.50	116	A-20"	35+50.50	1064.5	1044.50	24.00	20.0	480
115	116	A-20"	35+50.50	117	A-20"	35+74.50	1065.5	1045.50	24.00	20.0	480
116	117	A-20"	35+74.50	118	A-20"	35+98.50	1066.5	1047.00	24.00	19.5	468
117	118	A-20"	35+98.50	119	A-20"	36+22.50	1067.5	1048.00	24.00	19.5	468
118	119	A-20"	36+22.50	120	A-20"	36+46.50	1068.5	1049.00	24.00	19.5	468
119	120	A-20"	36+46.50	121	A-20"	36+70.50	1069.5	1050.00	24.00	19.5	468
120	121	A-20"	36+70.50	122	A-20"	36+94.50	1070.5	1050.50	24.00	20.0	480
121	122	A-20"	36+94.50	123	A-20"	37+18.50	1070.5	1051.50	24.00	19.0	456
122	123	A-20"	37+18.50	124	A-20"	37+42.50	1071.5	1052.00	24.00	19.5	468
123	124	A-20"	37+42.50	125	B-20"	37+66.50	1072.5	1053.00	24.00	19.5	468
										TOTAL	48504

CALCULATED RFV
CHECKED TJW

CALCULATIONS & SUBSUMMARY - NOISE WALL G

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NOISE WALL G			
DRILLED SHAFT NO.	WORKPOINT STATION	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)
1	10+00.00	1038.27	6
2	10+12.00	1038.08	9
3	10+24.00	1038.58	9
4	10+40.00	1039.08	12
5	10+52.00	1039.55	12
6	10+76.00	1040.05	12
7	11+00.00	1041.05	12
8	11+24.00	1042.05	12
9	11+48.00	1042.55	12
10	11+72.00	1043.05	16
11	11+96.00	1043.55	18
12	12+20.00	1044.05	16
13	12+44.00	1044.05	16
14	12+68.00	1044.55	16
15	12+92.00	1044.55	14
16	13+16.00	1044.55	14
17	13+32.00	1045.08	14
18	13+44.00	1045.05	14
19	13+68.00	1046.05	14
20	13+92.00	1047.05	14
21	14+16.00	1047.55	12
22	14+40.00	1048.05	12
23	14+64.00	1048.05	12
24	14+88.00	1048.55	12
25	15+12.00	1048.55	12
26	15+36.00	1048.55	12
27	15+60.00	1049.05	12
28	15+84.00	1049.05	12
29	16+08.00	1049.55	12
30	16+32.00	1049.55	12
31	16+56.00	1049.55	12
32	16+80.00	1050.05	12
33	17+04.00	1050.05	12
34	17+28.00	1050.55	14
35	17+52.00	1051.05	14
36	17+65.00	1052.58	12
37	17+78.00	1054.27	12
38	18+40.50	1056.27	14
39	18+60.50	1053.05	14
40	18+80.50	1053.05	14
41	19+04.50	1052.55	14
42	19+28.50	1052.55	19.5
43	19+52.50	1052.55	14
44	19+76.50	1053.05	14
45	20+00.50	1054.55	14
46	20+24.50	1056.55	14
47	20+48.50	1058.55	14
48	20+72.50	1060.55	14
49	20+96.50	1061.05	14
50	21+20.50	1061.05	14

NOISE WALL G			
DRILLED SHAFT NO.	WORKPOINT STATION	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)
51	21+44.50	1061.55	14
52	21+68.50	1061.55	14
53	21+92.50	1062.55	14
54	22+16.50	1062.55	16
55	22+40.50	1063.05	16
56	22+64.50	1062.55	16
57	22+88.50	1062.55	19.5*
58	23+12.50	1062.55	19.5*
59	23+36.50	1062.05	19.5*
60	23+60.50	1062.05	19.5*
61	23+84.50	1062.05	19.5*
62	24+08.50	1062.05	19.5*
63	24+32.50	1062.05	19.5*
64	24+56.50	1062.05	19.5*
65	24+80.50	1062.55	19.5*
66	25+04.50	1062.55	19.5*
67	25+28.50	1062.05	19.5*
68	25+52.50	1061.55	17.5*
69	25+76.50	1061.10	17.5*
70	26+00.50	1061.05	17.5*
71	26+24.50	1061.05	17.5*
72	26+48.50	1061.05	17.5*
73	26+62.50	1061.05	17.5*
74	26+86.50	1061.55	17.5*
75	27+10.50	1061.55	17.5*
76	27+34.50	1061.60	17.5*
77	27+58.50	1061.55	11*
78	27+82.50	1061.55	11*
79	28+06.50	1061.05	11*
80	28+30.50	1060.55	11*
81	28+54.50	1060.55	11*
82	28+78.50	1060.05	11*
83	29+02.50	1059.55	11*
84	29+26.50	1058.05	11*
85	29+50.50	1057.05	15
86	29+74.50	1055.55	19
87	29+98.50	1055.55	15
88	30+22.50	1055.55	19
89	30+46.50	1055.55	16
90	30+70.50	1055.55	14
91	30+94.50	1055.55	16
92	31+18.50	1055.55	14
93	31+42.50	1052.55	16
94	31+54.50	1052.55	16
95	31+66.50	1050.05	16
96	31+78.50	1049.55	10.5
97	31+90.50	1047.55	10.5
98	32+02.50	1046.55	10.5
99	32+14.50	1045.05	10.5
100	32+26.50	1044.55	10.5

NOISE WALL G			
DRILLED SHAFT NO.	WORKPOINT STATION	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)
101	32+38.50	1043.05	10.5
102	32+50.50	1043.05	8
103	32+62.50	1042.55	12
104	32+86.50	1042.05	12
105	33+10.50	1042.05	14
106	33+34.50	1042.05	14
107	33+50.50	1042.05	14
108	33+66.50	1042.05	14
109	33+90.50	1042.05	14
110	34+14.50	1042.55	16
111	34+38.50	1042.55	16
112	34+62.50	1043.05	16
113	34+86.50	1043.55	10
114	35+10.50	1043.55	10
115	35+26.50	1044.05	10
116	35+50.50	1044.05	10
117	35+74.50	1045.05	10
118	35+98.50	1046.55	10
119	36+22.50	1047.55	10
120	36+46.50	1048.55	15
121	36+70.50	1049.55	15
122	36+94.50	1050.05	15
123	37+18.50	1051.05	15
124	37+42.50	1051.55	15
125	37+66.50	1052.72	15

LEGEND:

* INCLUDES 5' ROCK SOCKET

CALCULATED RFV
CHECKED TJW

DATA TABLES - NOISE WALL G

SUM-77 / 277 / 224

1103
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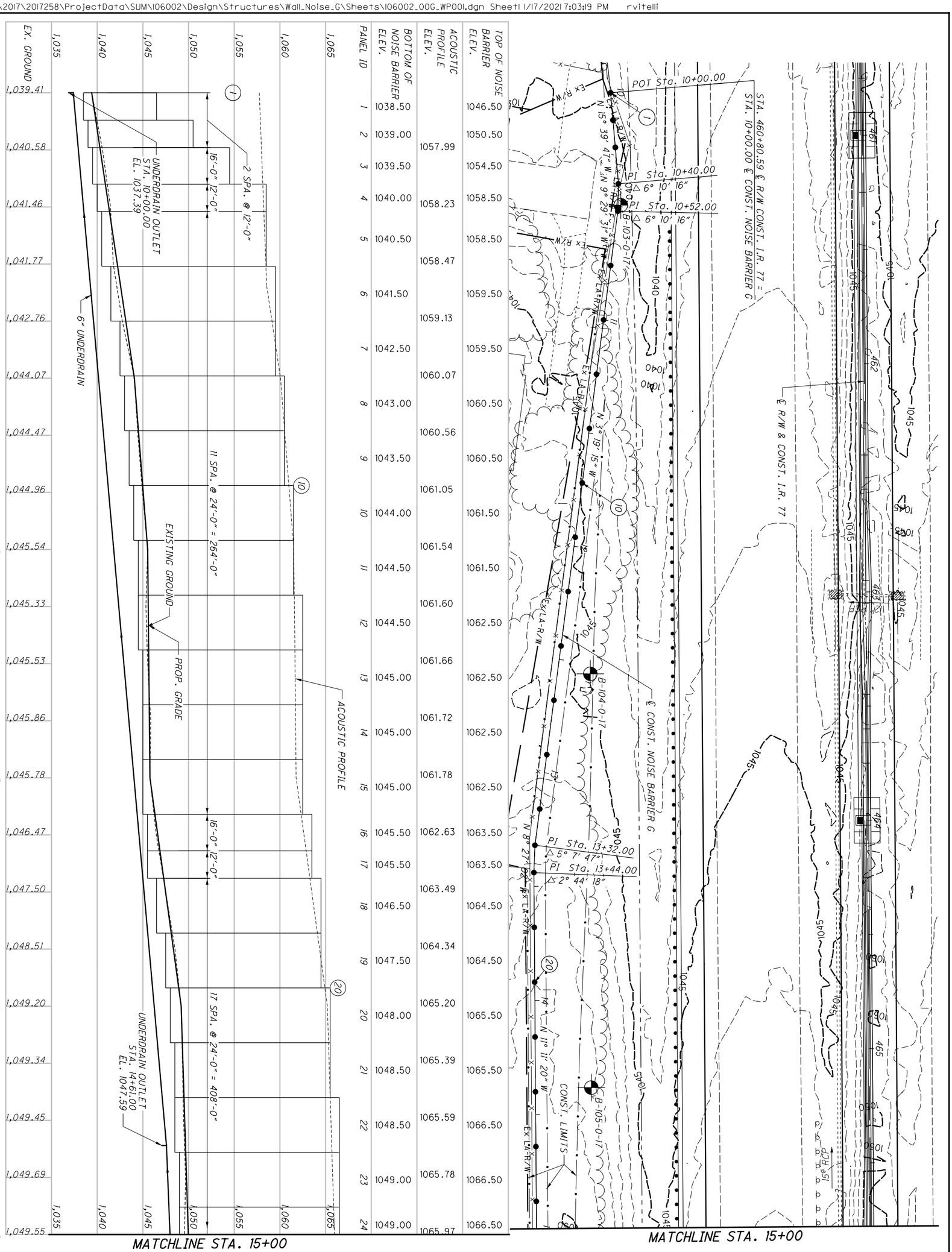

BORING I.D. NO.	APPROX. TOP OF ROCK ELEV. T/ROCK ELEV.
B-103-0-17	N/A
B-104-0-17	1023.9±
B-105-0-17	1026.8±
B-106-0-17	1034.7±
B-107-0-17	1030.7±
B-108-0-17	1030.5±
B-109-0-17	1037.7
B-110-0-17	1048.1±
B-111-0-17	1048.7±
B-112-0-17	1055.1±
B-113-0-17	N/A
B-114-0-17	N/A
B-115-0-17	N/A
B-116-0-17	N/A
B-117-0-17	N/A

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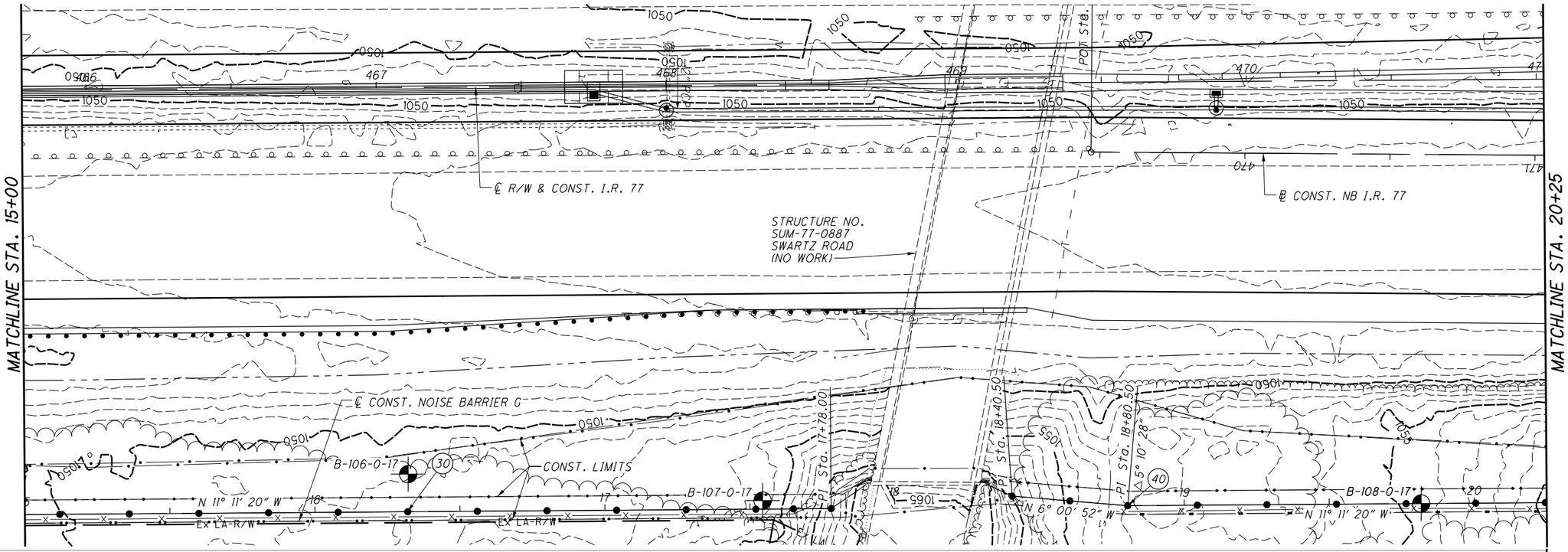
SUM-77/277/224

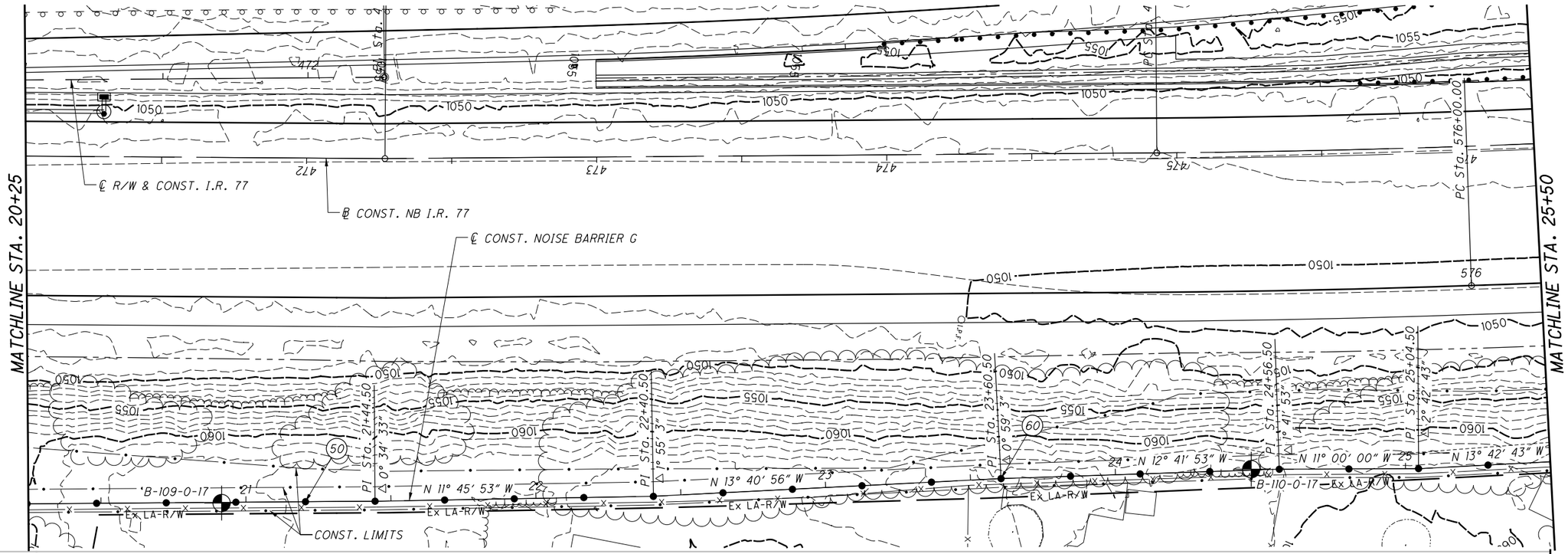
PLAN AND PROFILE - NOISE BARRIER G
BEGIN TO STA. 15+00.00

CALCULATED RHC
CHECKED DJC

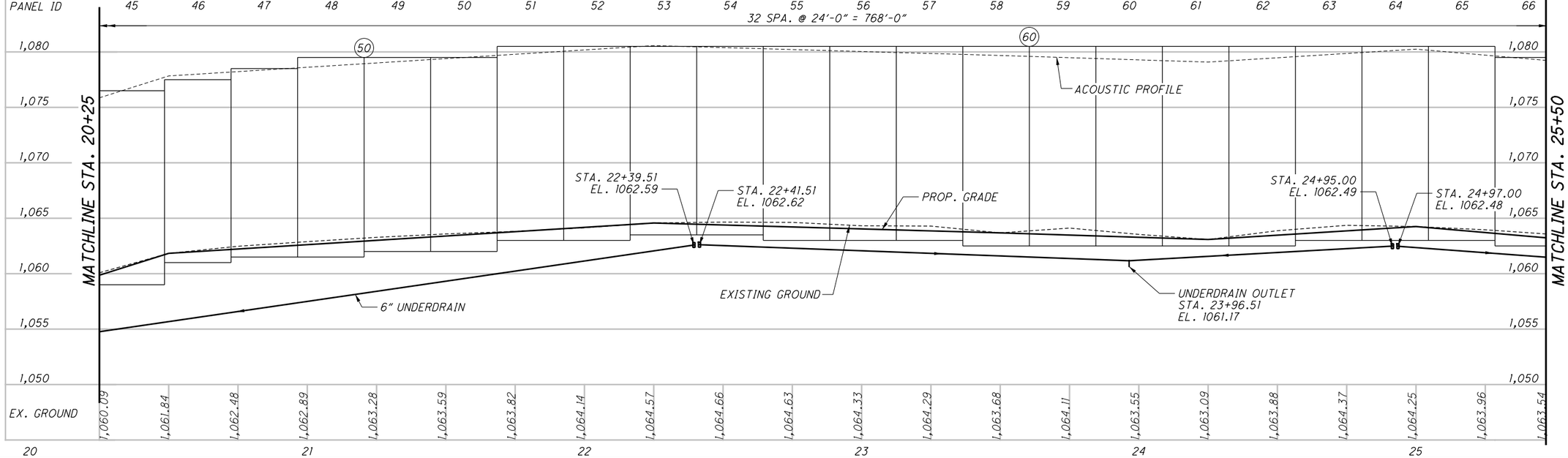
0 10 20 40
HORIZONTAL SCALE IN FEET


MATCHLINE STA. 15+00
MATCHLINE STA. 20+25
℄ R/W & CONST. I.R. 77
℄ CONST. NB I.R. 77
STRUCTURE NO.
SUM-77-0887
SWARTZ ROAD
(NO WORK)
POI Sta.
℄ CONST. NOISE BARRIER G
B-106-0-17
B-107-0-17
B-108-0-17
CONST. LIMITS
EX. LA-R/W
N 11° 11' 20" W
N 6° 00' 52" W
PI Sta. 17+78.00
PI Sta. 18+40.50
PI Sta. 18+80.50
Δ 5° 10' 28"

| | | |



TOP OF NOISE BARRIER ELEV.	1076.50	1077.50	1078.50	1079.50	1079.50	1079.50	1080.50	1080.50	1080.50	1080.50	1080.50	1080.50	1080.50	1080.50	1080.50	1080.50	1080.50	1080.50	1080.50	1080.50	1080.50	1080.50	1079.50
ACOUSTIC PROFILE ELEV.		1077.84		1078.23		1078.62		1079.01		1079.40		1079.79		1080.18		1080.57		1080.39		1080.21		1080.03		1079.86		1079.68		1079.48		1079.29		1079.09		1079.48		1079.86		1080.25		1079.71	
BOTTOM OF NOISE BARRIER ELEV.	1059.00	1061.00	1061.50	1061.50	1062.00	1062.00	1063.00	1063.00	1063.50	1063.50	1063.00	1063.00	1063.00	1062.50	1062.50	1062.50	1062.50	1062.50	1063.00	1063.00	1063.00	1062.50																		
PANEL ID	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66																		



EX. GROUND	1,060.09	1,061.84	1,062.48	1,062.89	1,063.28	1,063.59	1,063.82	1,064.14	1,064.57	1,064.66	1,064.63	1,064.33	1,064.29	1,063.68	1,064.11	1,063.55	1,063.09	1,063.88	1,064.37	1,064.25	1,063.96	1,063.54	
	20			21			22			23			24			25							

PLAN AND PROFILE - NOISE BARRIER G
STA. 20+25.00 TO STA. 25+50.00

HORIZONTAL SCALE IN FEET: 0, 10, 20, 40

CALCULATED RHC
CHECKED DJC

SUM-77 / 277 / 224

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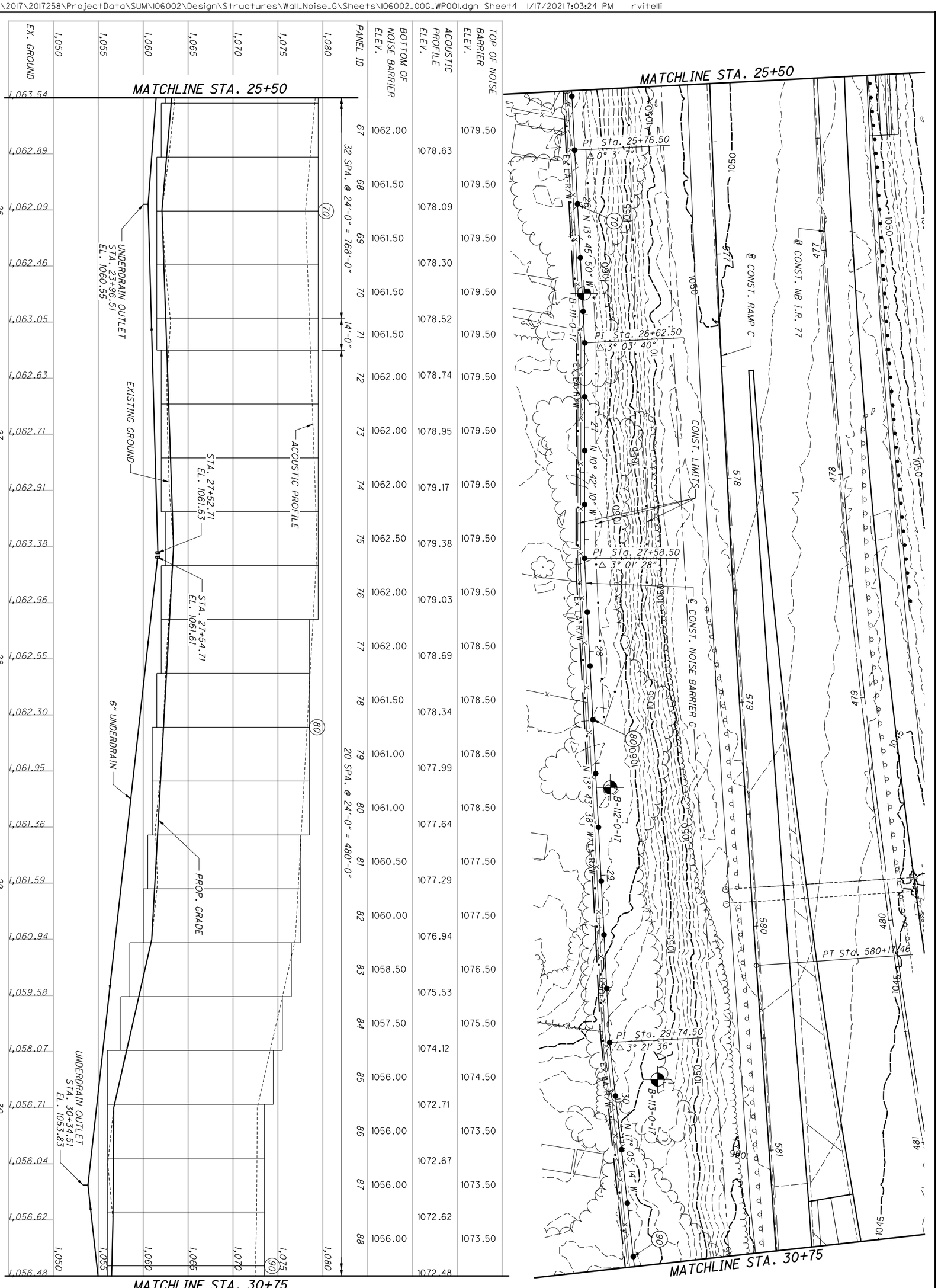
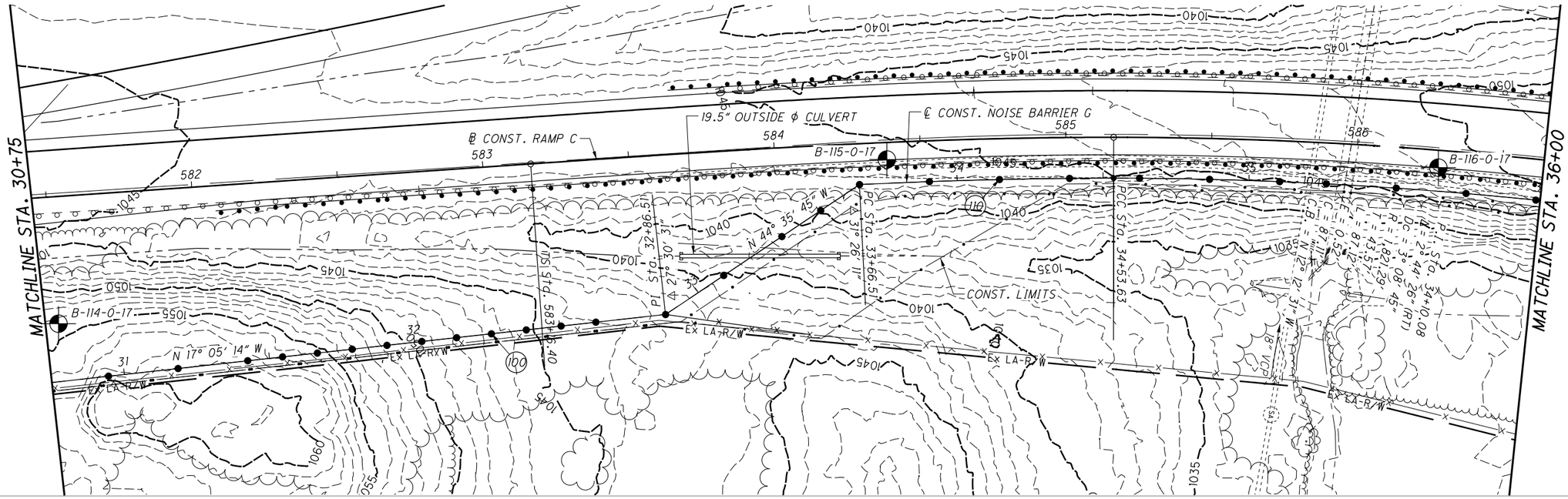
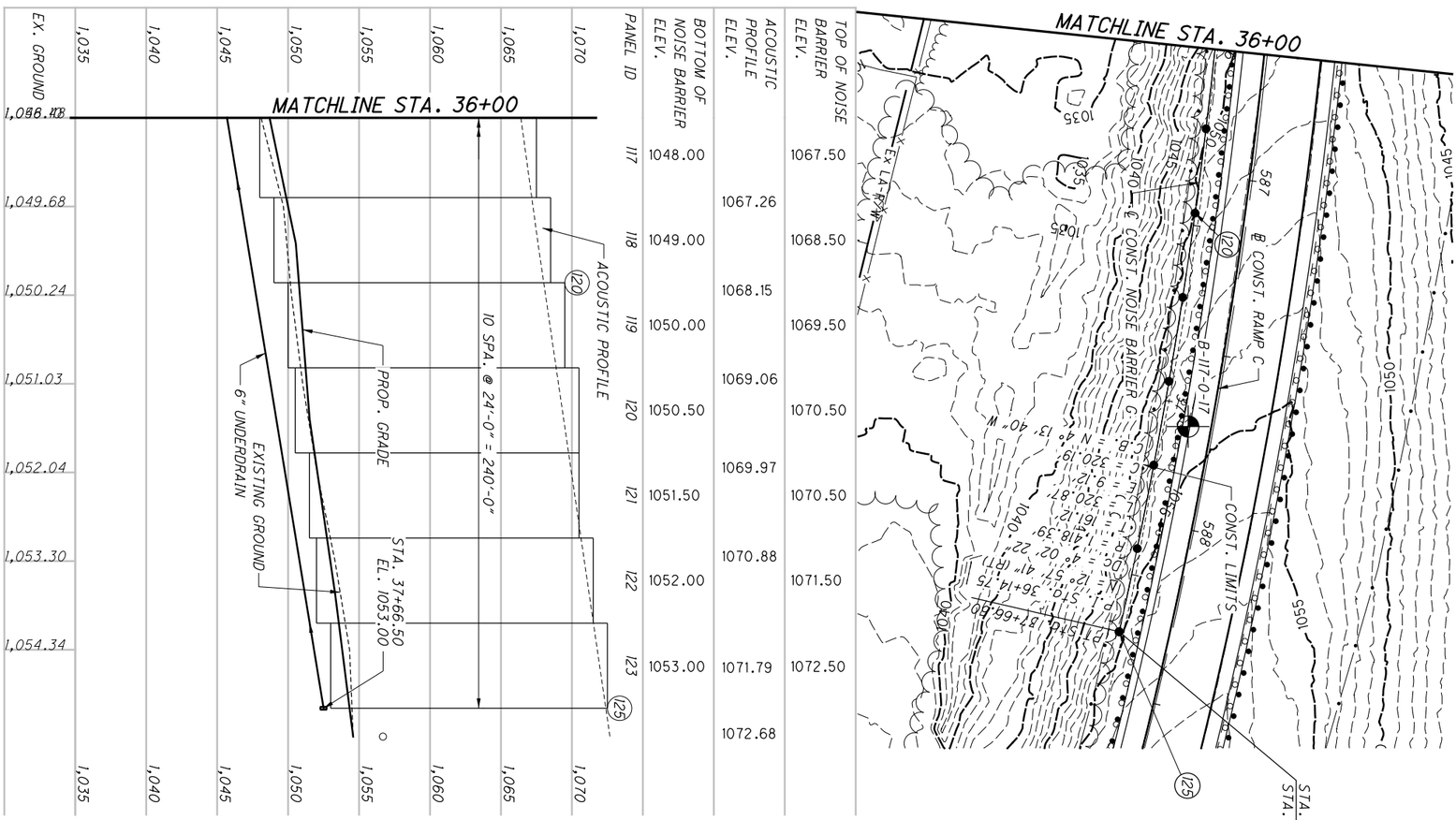


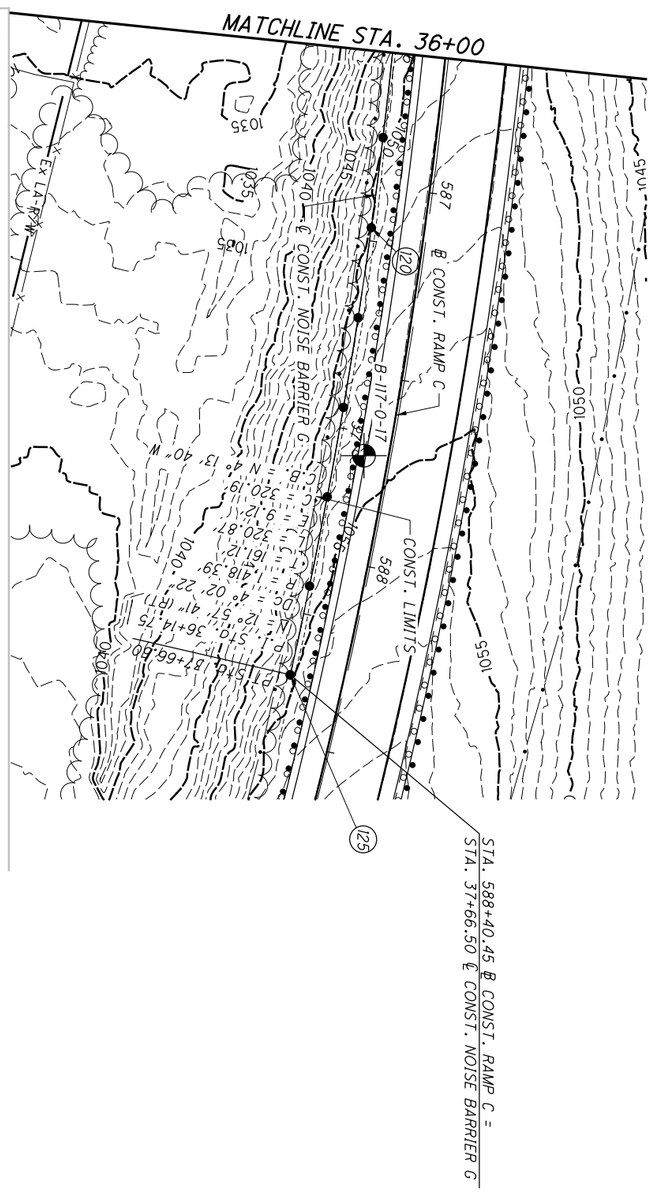
PANEL ID	BOTTOM OF NOISE BARRIER ELEV.	ACOUSTIC PROFILE ELEV.	TOP OF NOISE BARRIER ELEV.
67	1062.00	1078.63	1079.50
68	1061.50	1078.09	1079.50
69	1061.50	1078.30	1079.50
70	1061.50	1078.52	1079.50
71	1061.50	1078.74	1079.50
72	1062.00	1078.95	1079.50
73	1062.00	1079.17	1079.50
74	1062.00	1079.38	1079.50
75	1062.50	1079.03	1079.50
76	1062.00	1078.69	1079.50
77	1062.00	1078.34	1078.50
78	1061.50	1077.99	1078.50
79	1061.00	1077.64	1078.50
80	1061.00	1077.29	1077.50
81	1060.50	1076.94	1077.50
82	1060.00	1075.53	1076.50
83	1058.50	1074.12	1075.50
84	1057.50	1072.71	1074.50
85	1056.00	1072.67	1073.50
86	1056.00	1072.62	1073.50
87	1056.00	1072.48	1073.50
88	1056.00		

1107 / 1288	SUM-77 / 277 / 224	PLAN AND PROFILE - NOISE BARRIER G STA. 25+50.00 TO STA. 30+75.00	CALCULATED RHC CHECKED DJC	0 20 10 40 HORIZONTAL SCALE IN FEET	N


MATCHLINE STA. 30+75
MATCHLINE STA. 36+00
℄ CONST. RAMP C
℄ CONST. NOISE BARRIER G
19.5" OUTSIDE ϕ CULVERT
B-114-0-17
B-115-0-17
B-116-0-17
CONST. LIMITS
Ex LA-R/W
N 17° 05' 14" W
N 44° 35' 45" W
PI Sta. 32+86.51
Δ 27° 30' 31"
PC Sta. 33+66.51
PCC Sta. 34+53.63
PCC Sta. 34+10.08
Δ = 8° 43' 57"
R = 1,310.00'
T = 101.58'
L = 199.62'
Δ = 12° 27' 37"
R = 1,310.00'
T = 142.98'
L = 284.80'
Δ = 18° 27' 45"
R = 1,310.00'
T = 213.26'
L = 422.07'
18" VCP
60" RCP

| | | |





1109 / 12888	SUM-77 / 277 / 224	PLAN AND PROFILE - NOISE BARRIER G STA. 36+00.00 TO END	CALCULATED RHC CHECKED DJC	0 20 10 40 HORIZONTAL SCALE IN FEET

HI-1											606
PANEL NO.	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	TOP OF WALL	BOTTOM OF WALL	LENGTH OF PANEL (LFT)	HEIGHT OF PANEL (LFT)	SPECIAL - NOISE BARRIER (REFLECTIVE) SF
1	1	B-16"	10+00.00	2	A-16"	10+12.00	1025.0	1016.50	12.00	8.5	102
2	2	A-16"	10+12.00	3	A-16"	10+24.00	1029.0	1016.50	12.00	12.5	150
3	3	A-16"	10+24.00	4	A-20"	10+36.00	1033.0	1016.50	12.00	16.5	198
4	4	A-20"	10+36.00	5	A-20"	10+48.00	1037.0	1016.50	12.00	20.5	246
5	5	A-20"	10+48.00	6	A-20"	10+72.00	1037.0	1017.00	24.00	20.0	480
6	6	A-20"	10+72.00	7	A-20"	10+96.00	1037.0	1017.00	24.00	20.0	480
7	7	A-20"	10+96.00	8	A-20"	11+20.00	1037.0	1017.50	24.00	19.5	468
8	8	A-20"	11+20.00	9	A-20"	11+44.00	1038.0	1018.00	24.00	20.0	480
9	9	A-20"	11+44.00	10	A-20"	11+68.00	1038.0	1018.00	24.00	20.0	480
10	10	A-20"	11+68.00	11	A-20"	11+92.00	1038.0	1018.50	24.00	19.5	468
11	11	A-20"	11+92.00	12	A-20"	12+16.00	1038.0	1018.50	24.00	19.5	468
12	12	A-20"	12+16.00	13	A-20"	12+40.00	1039.0	1018.50	24.00	20.5	492
13	13	A-20"	12+40.00	14	A-20"	12+64.00	1039.0	1019.00	24.00	20.0	480
14	14	A-20"	12+64.00	15	A-20"	12+88.00	1039.0	1019.00	24.00	20.0	480
15	15	A-20"	12+88.00	16	A-20"	13+12.00	1039.0	1019.50	24.00	19.5	468
16	16	A-20"	13+12.00	17	A-20"	13+36.00	1040.0	1020.00	24.00	20.0	480
17	17	A-20"	13+36.00	18	A-20"	13+60.00	1040.0	1020.50	24.00	19.5	468
18	18	A-20"	13+60.00	19	A-20"	13+84.00	1040.0	1021.00	24.00	19.0	456
19	19	A-20"	13+84.00	20	A-20"	14+08.00	1040.0	1021.50	24.00	18.5	444
20	20	A-20"	14+08.00	21	A-20"	14+32.00	1041.0	1022.00	24.00	19.0	456
21	21	A-20"	14+32.00	22	D-20"	14+56.00	1041.0	1021.00	24.00	20.0	480
22	22	D-20"	14+56.00	23	D-20"	14+64.00	1041.0	1020.50	8.00	20.5	164
23	23	D-20"	14+64.00	24	D-20"	14+88.00	1041.0	1020.50	24.00	20.5	492
24	24	D-20"	14+88.00	25	D-20"	14+96.00	1041.0	1020.50	8.00	20.5	164
25	25	D-20"	14+96.00	26	A-20"	15+20.00	1041.0	1021.00	24.00	20.0	480
26	26	A-20"	15+20.00	27	A-20"	15+44.00	1042.0	1021.50	24.00	20.5	492
27	27	A-20"	15+44.00	28	A-20"	15+68.00	1042.0	1022.00	24.00	20.0	480
28	28	A-20"	15+68.00	29	A-20"	15+92.00	1043.0	1022.50	24.00	20.5	492
29	29	A-20"	15+92.00	30	A-20"	16+16.00	1043.0	1023.00	24.00	20.0	480
30	30	A-20"	16+16.00	31	A-20"	16+32.00	1044.0	1023.50	16.00	20.5	328
31	31	A-20"	16+32.00	32	A-20"	16+48.00	1044.0	1024.00	16.00	20.0	320
32	32	A-20"	16+48.00	33	A-20"	16+64.00	1044.0	1024.50	16.00	19.5	312
33	33	A-20"	16+64.00	34	A-20"	16+88.00	1044.0	1025.00	24.00	19.0	456
34	34	A-20"	16+88.00	35	A-20"	17+12.00	1045.0	1025.50	24.00	19.5	468
35	35	A-20"	17+12.00	36	D-20"	17+36.00	1045.0	1026.00	24.00	19.0	456
36	36	D-20"	17+36.00	37	A-20"	17+60.00	1046.0	1026.50	24.00	19.5	468
37	37	A-20"	17+60.00	38	A-20"	17+84.00	1047.0	1027.00	24.00	20.0	480
38	38	A-20"	17+84.00	39	A-20"	18+08.00	1048.0	1027.50	24.00	20.5	492
39	39	A-20"	18+08.00	40	A-20"	18+32.00	1049.0	1028.50	24.00	20.5	492
40	40	A-20"	18+32.00	41	A-20"	18+47.00	1050.0	1029.50	15.00	20.5	307.5
41	41	A-20"	18+47.00	42	D-20"	18+62.00	1050.0	1029.50	15.00	20.5	307.5
42	42	D-20"	18+62.00	43	A-20"	18+86.00	1051.0	1031.00	24.00	20.0	480
43	43	A-20"	18+86.00	44	A-20"	19+10.00	1052.0	1032.00	24.00	20.0	480
44	44	A-20"	19+10.00	45	A-20"	19+34.00	1052.0	1032.00	24.00	20.0	480
45	45	A-20"	19+34.00	46	A-20"	19+58.00	1052.0	1033.00	24.00	19.0	456
46	46	A-20"	19+58.00	47	A-20"	19+82.00	1053.0	1033.00	24.00	20.0	480
47	47	A-20"	19+82.00	48	A-20"	20+06.00	1053.0	1033.50	24.00	19.5	468
48	48	A-20"	20+06.00	49	A-20"	20+30.00	1053.0	1034.00	24.00	19.0	456
49	49	A-20"	20+30.00	50	A-20"	20+54.00	1054.0	1034.00	24.00	20.0	480
50	50	A-20"	20+54.00	51	A-20"	20+78.00	1054.0	1034.50	24.00	19.5	468
51	51	A-20"	20+78.00	52	A-20"	21+02.00	1054.0	1034.50	24.00	19.5	468
52	52	A-20"	21+02.00	53	A-20"	21+26.00	1055.0	1035.00	24.00	20.0	480

HI-1											606
PANEL NO.	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	TOP OF WALL	BOTTOM OF WALL	LENGTH OF PANEL (LFT)	HEIGHT OF PANEL (LFT)	SPECIAL - NOISE BARRIER (REFLECTIVE) SF
53	53	A-20"	21+26.00	54	A-20"	21+50.00	1055.0	1035.50	24.00	19.5	468
54	54	A-20"	21+50.00	55	A-20"	21+74.00	1055.0	1035.50	24.00	19.5	468
55	55	A-20"	21+74.00	56	A-20"	21+98.00	1056.0	1036.00	24.00	20.0	480
56	56	A-20"	21+98.00	57	A-20"	22+22.00	1056.0	1036.50	24.00	19.5	468
57	57	A-20"	22+22.00	58	A-20"	22+46.00	1056.0	1036.50	24.00	19.5	468
58	58	A-20"	22+46.00	59	A-20"	22+70.00	1057.0	1037.00	24.00	20.0	480
59	59	A-20"	22+70.00	60	A-20"	22+94.00	1057.0	1037.50	24.00	19.5	468
60	60	A-20"	22+94.00	61	A-20"	23+18.00	1057.0	1037.50	24.00	19.5	468
61	61	A-20"	23+18.00	62	A-20"	23+42.00	1058.0	1038.00	24.00	20.0	480
62	62	A-20"	23+42.00	63	A-20"	23+66.00	1058.0	1038.00	24.00	20.0	480
63	63	A-20"	23+66.00	64	A-20"	23+90.00	1058.0	1038.50	24.00	19.5	468
64	64	A-20"	23+90.00	65	A-20"	24+14.00	1059.0	1039.00	24.00	20.0	480
65	65	A-20"	24+14.00	66	A-20"	24+38.00	1059.0	1039.00	24.00	20.0	480
66	66	A-20"	24+38.00	67	A-20"	24+62.00	1059.0	1039.50	24.00	19.5	468
67	67	A-20"	24+62.00	68	A-20"	24+86.00	1059.0	1040.00	24.00	19.0	456
68	68	A-20"	24+86.00	69	A-20"	25+10.00	1060.0	1040.00	24.00	20.0	480
69	69	A-20"	25+10.00	70	A-20"	25+34.00	1060.0	1040.50	24.00	19.5	468
70	70	A-20"	25+34.00	71	A-20"	25+58.00	1060.0	1040.50	24.00	19.5	468
71	71	A-20"	25+58.00	72	A-20"	25+82.00	1060.0	1041.00	24.00	19.0	456
72	72	A-20"	25+82.00	73	A-20"	26+06.00	1061.0	1041.00	24.00	20.0	480
73	73	A-20"	26+06.00	74	A-20"	26+30.00	1061.0	1041.00	24.00	20.0	480
74	74	A-20"	26+30.00	75	A-20"	26+54.00	1061.0	1041.50	24.00	19.5	468
75	75	A-20"	26+54.00	76	A-20"	26+78.00	1061.0	1041.50	24.00	19.5	468
76	76	A-20"	26+78.00	77	A-20"	27+02.00	1061.0	1042.00	24.00	19.0	456
77	77	A-20"	27+02.00	78	A-20"	27+26.00	1062.0	1042.00	24.00	20.0	480
78	78	A-20"	27+26.00	79	A-20"	27+50.00	1062.0	1042.50	24.00	19.5	468
79	79	A-20"	27+50.00	80	A-20"	27+74.00	1062.0	1042.50	24.00	19.5	468
80	80	A-20"	27+74.00	81	A-20"	27+98.00	1062.0	1043.00	24.00	19.0	456
81	81	A-20"	27+98.00	82	A-20"	28+22.00	1062.0	1043.00	24.00	19.0	456
82	82	A-20"	28+22.00	83	A-20"	28+46.00	1062.0	1043.00	24.00	19.0	456
83	83	A-20"	28+46.00	84	A-20"	28+70.00	1062.0	1043.00	24.00	19.0	456
84	84	A-20"	28+70.00	85	A-20"	28+94.00	1062.0	1042.50	24.00	19.5	468
85	85	A-20"	28+94.00	86	A-20"	29+18.00	1062.0	1042.50	24.00	19.5	468
86	86	A-20"	29+18.00	87	A-20"	29+42.00	1062.0	1042.50	24.00	19.5	468
87	87	A-20"	29+42.00	88	A-20"	29+66.00	1062.0	1042.50	24.00	19.5	468
88	88	A-20"	29+66.00	89	A-20"	29+90.00	1062.0	1042.50	24.00	19.5	468
89	89	A-20"	29+90.00	90	A-20"	30+14.00	1062.0	1042.50	24.00	19.5	468
90	90	A-20"	30+14.00	91	A-20"	30+38.00	1062.0	1042.50	24.00	19.5	468
91	91	A-20"	30+38.00	92	A-20"	30+62.00	1062.0	1042.00	24.00	20.0	480
92	92	A-20"	30+62.00	93	A-20"	30+86.00	1062.0	1042.00	24.00	20.0	480
93	93	A-20"	30+86.00	94	A-20"	31+10.00	1062.0	1042.00	24.00	20.0	480
94	94	A-20"	31+10.00	95	A-20"	31+34.00	1061.0	1042.00	24.00	19.0	456
95	95	A-20"	31+34.00	96	A-20"	31+58.00	1060.0	1040.50	24.00	19.5	468
96	96	A-20"	31+58.00	97	B-20"	31+82.00	1059.0	1039.00	24.00	20.0	480
										TOTAL	42715

CALCULATED RFV
CHECKED TJW

CALCULATIONS & SUBSUMMARY - NOISE WALL HI

SUM-77 / 277 / 224

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HI-2											
PANEL NO.	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	TOP OF WALL	BOTTOM OF WALL	LENGTH OF PANEL (LFT)	HEIGHT OF PANEL (LFT)	606 SPECIAL - NOISE BARRIER (REFLECTIVE) SF
97	98	B-16"	110+00.00	99	A-20"	110+12.00	1055.0	1043.50	12.00	11.5	138
98	99	A-20"	110+12.00	100	A-20"	110+24.00	1059.0	1044.00	12.00	15.0	180
99	100	A-20"	110+24.00	101	A-20"	110+48.00	1063.0	1044.00	24.00	19.0	456
100	101	A-20"	110+48.00	102	A-20"	110+72.00	1064.0	1044.50	24.00	19.5	468
101	102	A-20"	110+72.00	103	A-20"	110+96.00	1064.0	1044.50	24.00	19.5	468
102	103	A-20"	110+96.00	104	A-20"	111+20.00	1064.0	1044.50	24.00	19.5	468
103	104	A-20"	111+20.00	105	A-20"	111+44.00	1064.0	1045.00	24.00	19.0	456
104	105	A-20"	111+44.00	106	A-20"	111+68.00	1065.0	1045.00	24.00	20.0	480
105	106	A-20"	111+68.00	107	A-20"	111+92.00	1065.0	1045.00	24.00	20.0	480
106	107	A-20"	111+92.00	108	A-20"	112+16.00	1065.0	1045.50	24.00	19.5	468
107	108	A-20"	112+16.00	109	A-20"	112+40.00	1065.0	1046.00	24.00	19.0	456
108	109	A-20"	112+40.00	110	A-20"	112+64.00	1065.5	1046.00	24.00	19.5	468
109	110	A-20"	112+64.00	111	A-20"	112+84.00	1066.0	1046.50	20.00	19.5	390
110	111	A-20"	112+84.00	112	A-20"	113+04.00	1066.0	1046.50	20.00	19.5	390
111	112	A-20"	113+04.00	113	A-20"	113+24.00	1066.0	1047.00	20.00	19.0	380
112	113	A-20"	113+24.00	114	A-20"	113+48.00	1066.0	1047.00	24.00	19.0	456
113	114	A-20"	113+48.00	115	A-20"	113+72.00	1067.0	1047.00	24.00	20.0	480
114	115	A-20"	113+72.00	116	A-20"	113+96.00	1067.0	1047.00	24.00	20.0	480
115	116	A-20"	113+96.00	117	A-20"	114+20.00	1067.0	1047.50	24.00	19.5	468
116	117	A-20"	114+20.00	118	A-20"	114+44.00	1067.0	1047.50	24.00	19.5	468
117	118	A-20"	114+44.00	119	A-20"	114+68.00	1067.0	1047.50	24.00	19.5	468
118	119	A-20"	114+68.00	120	A-20"	114+92.00	1067.0	1047.50	24.00	19.5	468
119	120	A-20"	114+92.00	121	A-20"	115+16.00	1067.0	1047.50	24.00	19.5	468
120	121	A-20"	115+16.00	122	A-20"	115+40.00	1067.0	1047.50	24.00	19.5	468
121	122	A-20"	115+40.00	123	A-20"	115+64.00	1067.0	1047.50	24.00	19.5	468
122	123	A-20"	115+64.00	124	A-20"	115+88.00	1067.0	1047.50	24.00	19.5	468
123	124	A-20"	115+88.00	125	A-20"	116+12.00	1067.0	1047.00	24.00	20.0	480
124	125	A-20"	116+12.00	126	A-20"	116+36.00	1066.0	1047.00	24.00	19.0	456
125	126	A-20"	116+36.00	127	A-20"	116+60.00	1066.0	1047.00	24.00	19.0	456
126	127	A-20"	116+60.00	128	A-20"	116+84.00	1066.0	1046.50	24.00	19.5	468
127	128	A-20"	116+84.00	129	A-20"	117+08.00	1066.0	1046.50	24.00	19.5	468
128	129	A-20"	117+08.00	130	A-20"	117+32.00	1065.0	1046.00	24.00	19.0	456
129	130	A-20"	117+32.00	131	A-20"	117+56.00	1065.0	1046.00	24.00	19.0	456
130	131	A-20"	117+56.00	132	A-20"	117+80.00	1065.0	1045.50	24.00	19.5	468
131	132	A-20"	117+80.00	133	A-20"	118+04.00	1065.0	1045.00	24.00	20.0	480
132	133	A-20"	118+04.00	134	A-20"	118+28.00	1064.0	1045.00	24.00	19.0	456
133	134	A-20"	118+28.00	135	A-20"	118+52.00	1064.0	1044.50	24.00	19.5	468
134	135	A-20"	118+52.00	136	A-20"	118+76.00	1063.0	1044.00	24.00	19.0	456
135	136	A-20"	118+76.00	137	A-20"	119+00.00	1063.0	1043.50	24.00	19.5	468
136	137	A-20"	119+00.00	138	A-20"	119+24.00	1062.0	1043.00	24.00	19.0	456
137	138	A-20"	119+24.00	139	A-20"	119+48.00	1062.0	1042.50	24.00	19.5	468
138	139	A-20"	119+48.00	140	A-20"	119+72.00	1062.0	1042.50	24.00	19.5	468
139	140	A-20"	119+72.00	141	A-20"	119+96.00	1061.0	1042.00	24.00	19.0	456
140	141	A-20"	119+96.00	142	A-20"	120+20.00	1061.0	1041.50	24.00	19.5	468
141	142	A-20"	120+20.00	143	A-20"	120+44.00	1060.0	1041.00	24.00	19.0	456
142	143	A-20"	120+44.00	144	A-20"	120+68.00	1060.0	1040.50	24.00	19.5	468
143	144	A-20"	120+68.00	145	A-20"	120+92.00	1059.0	1040.00	24.00	19.0	456
144	145	A-20"	120+92.00	146	A-20"	121+16.00	1059.0	1040.00	24.00	19.0	456
145	146	A-20"	121+16.00	147	A-20"	121+40.00	1059.0	1039.50	24.00	19.5	468
146	147	A-20"	121+40.00	148	A-20"	121+64.00	1058.0	1039.00	24.00	19.0	456
147	148	A-20"	121+64.00	149	A-20"	121+88.00	1058.0	1039.00	24.00	19.0	456
148	149	A-20"	121+88.00	150	A-20"	122+12.00	1058.0	1038.50	24.00	19.5	468
149	150	A-20"	122+12.00	151	A-20"	122+36.00	1058.0	1038.50	24.00	19.5	468
150	151	A-20"	122+36.00	152	A-20"	122+60.00	1058.0	1038.50	24.00	19.5	468

HI-2											
PANEL NO.	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	TOP OF WALL	BOTTOM OF WALL	LENGTH OF PANEL (LFT)	HEIGHT OF PANEL (LFT)	606 SPECIAL - NOISE BARRIER (REFLECTIVE) SF
151	152	A-20"	122+60.00	153	A-20"	122+84.00	1058.0	1038.00	24.00	20.0	480
152	153	A-20"	122+84.00	154	A-20"	123+08.00	1058.0	1038.00	24.00	20.0	480
153	154	A-20"	123+08.00	155	A-20"	123+32.00	1058.0	1038.00	24.00	20.0	480
154	155	A-20"	123+32.00	156	A-20"	123+56.00	1058.0	1038.00	24.00	20.0	480
155	156	A-20"	123+56.00	157	A-20"	123+80.00	1058.0	1038.00	24.00	20.0	480
156	157	A-20"	123+80.00	158	A-20"	124+04.00	1058.0	1038.00	24.00	20.0	480
157	158	A-20"	124+04.00	159	A-20"	124+28.00	1058.0	1038.00	24.00	20.0	480
158	159	A-20"	124+28.00	160	A-20"	124+52.00	1058.0	1038.00	24.00	20.0	480
159	160	A-20"	124+52.00	161	A-20"	124+76.00	1058.0	1038.50	24.00	19.5	468
160	161	A-20"	124+76.00	162	A-20"	125+00.00	1058.0	1038.50	24.00	19.5	468
161	162	A-20"	125+00.00	163	A-20"	125+24.00	1058.0	1038.50	24.00	19.5	468
162	163	A-20"	125+24.00	164	A-20"	125+48.00	1058.0	1039.00	24.00	19.0	456
163	164	A-20"	125+48.00	165	A-20"	125+72.00	1058.0	1039.00	24.00	19.0	456
164	165	A-20"	125+72.00	166	A-20"	125+96.00	1059.0	1039.00	24.00	20.0	480
165	166	A-20"	125+96.00	167	A-20"	126+20.00	1059.0	1039.50	24.00	19.5	468
166	167	A-20"	126+20.00	168	A-20"	126+44.00	1059.0	1039.50	24.00	19.5	468
167	168	A-20"	126+44.00	169	A-20"	126+68.00	1059.0	1039.50	24.00	19.5	468
168	169	A-20"	126+68.00	170	A-20"	126+92.00	1059.0	1040.00	24.00	19.0	456
169	170	A-20"	126+92.00	171	A-20"	127+16.00	1059.0	1040.00	24.00	19.0	456
170	171	A-20"	127+16.00	172	A-20"	127+40.00	1060.0	1040.00	24.00	20.0	480
171	172	A-20"	127+40.00	173	A-20"	127+64.00	1060.0	1040.50	24.00	19.5	468
172	173	A-20"	127+64.00	174	A-20"	127+88.00	1060.0	1040.50	24.00	19.5	468
173	174	A-20"	127+88.00	175	A-20"	128+12.00	1060.0	1041.00	24.00	19.0	456
174	175	A-20"	128+12.00	176	A-20"	128+36.00	1060.0	1041.00	24.00	19.0	456
175	176	A-20"	128+36.00	177	A-20"	128+60.00	1061.0	1041.50	24.00	19.5	468
176	177	A-20"	128+60.00	178	A-20"	128+84.00	1061.0	1041.50	24.00	19.5	468
177	178	A-20"	128+84.00	179	A-20"	129+08.00	1061.0	1042.00	24.00	19.0	456
178	179	A-20"	129+08.00	180	A-20"	129+32.00	1061.0	1042.00	24.00	19.0	456
179	180	A-20"	129+32.00	181	A-20"	129+56.00	1062.0	1042.00	24.00	20.0	480
180	181	A-20"	129+56.00	182	A-20"	129+80.00	1062.0	1042.50	24.00	19.5	468
181	182	A-20"	129+80.00	183	A-20"	130+04.00	1062.0	1042.50	24.00	19.5	468
182	183	A-20"	130+04.00	184	A-20"	130+28.00	1062.0	1043.00	24.00	19.0	456
183	184	A-20"	130+28.00	185	A-20"	130+52.00	1062.0	1043.00	24.00	19.0	456
184	185	A-20"	130+52.00	186	A-20"	130+76.00	1063.0	1043.50	24.00	19.5	468
185	186	A-20"	130+76.00	187	A-20"	131+00.00	1063.0	1043.50	24.00	19.5	468
186	187	A-20"	131+00.00	188	A-20"	131+24.00	1063.0	1043.50	24.00	19.5	468
187	188	A-20"	131+24.00	189	A-20"	131+48.00	1063.0	1044.00	24.00	19.0	456
188	189	A-20"	131+48.00	190	A-20"	131+67.50	1063.0	1044.00	19.50	19.0	370.5
189	190	A-20"	131+67.50	191	A-20"	131+91.50	1064.0	1044.50	24.00	19.5	468
190	191	A-20"	131+91.50	192	A-20"	132+15.50	1064.0	1044.50	24.00	19.5	468
191	192	A-20"	132+15.50	193	A-20"	132+39.50	1064.0	1044.50	24.00	19.5	468
192	193	A-20"	132+39.50	194	A-20"	132+63.50	1064.0	1045.00	24.00	19.0	456
193	194	A-20"	132+63.50	195	A-20"	132+87.50	1064.0	1045.00	24.00	19.0	456
194	195	A-20"	132+87.50	196	A-20"	133+11.50	1065.0	1045.50	24.00	19.5	468
195	196	A-20"	133+11.50	197	A-20"	133+35.50	1065.0	1045.50	24.00	19.5	468
196	197	A-20"	133+35.50	198	A-20"	133+59.50	1065.0	1045.50	24.00	19.5	468
197	198	A-20"	133+59.50	199	A-20"	133+83.50	1065.0	1046.00	24.00	19.0	456
198	199	A-20"	133+83.50	200	A-20"	134+07.50	1065.0	1046.00	24.00	19.0	456
199	200	A-20"	134+07.50	201	A-20"	134+31.50	1066.0	1046.00	24.00	20.0	480
200	201	A-20"	134+31.50	202	A-20"	134+55.50	1066.0	1046.50	24.00	19.5	468
201	202	A-20"	134+55.50	203	A-20"	134+79.50	1066.0	1046.50	24.00	19.5	468
202	203	A-20"	134+79.50	204	A-20"	135+03.50	1066.0	1047.00	24.00	19.0	456
203	204	A-20"	135+03.50	205	A-20"	135+27.50	1066.0	1047.00	24.00	19.0	456
204	205	A-20"	135+27.50	206	A-20"	135+51.50	1066.0	1047.00	24.00	19.0	456

CALCULATED RFV
CHECKED TJW

CALCULATIONS & SUBSUMMARY - NOISE WALL HI

SUM-77/277/224

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HI-2

PANEL NO.	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	TOP OF WALL	BOTTOM OF WALL	LENGTH OF PANEL (LFT)	HEIGHT OF PANEL (LFT)	606 SPECIAL - NOISE BARRIER (REFLECTIVE) SF
205	206	A-20"	135+51.50	207	A-20"	135+75.50	1067.0	1047.50	24.00	19.5	468
206	207	A-20"	135+75.50	208	A-20"	135+99.50	1067.0	1047.50	24.00	19.5	468
207	208	A-20"	135+99.50	209	A-20"	136+23.50	1067.0	1047.50	24.00	19.5	468
208	209	A-20"	136+23.50	210	A-20"	136+47.50	1067.0	1047.50	24.00	19.5	468
209	210	A-20"	136+47.50	211	A-20"	136+71.50	1067.0	1048.00	24.00	19.0	456
210	211	A-20"	136+71.50	212	A-20"	136+95.50	1067.0	1048.00	24.00	19.0	456
211	212	A-20"	136+95.50	213	A-20"	137+19.50	1067.0	1048.00	24.00	19.0	456
212	213	A-20"	137+19.50	214	A-20"	137+43.50	1067.0	1048.00	24.00	19.0	456
213	214	A-20"	137+43.50	215	A-20"	137+67.50	1068.0	1048.00	24.00	20.0	480
214	215	A-20"	137+67.50	216	A-20"	137+91.50	1068.0	1048.00	24.00	20.0	480
215	216	A-20"	137+91.50	217	A-20"	138+15.50	1068.0	1048.00	24.00	20.0	480
216	217	A-20"	138+15.50	218	A-20"	138+39.50	1068.0	1048.00	24.00	20.0	480
217	218	A-20"	138+39.50	219	A-20"	138+63.50	1068.0	1048.00	24.00	20.0	480
218	219	A-20"	138+63.50	220	A-20"	138+87.50	1068.0	1048.00	24.00	20.0	480
219	220	A-20"	138+87.50	221	A-20"	139+11.50	1068.0	1048.00	24.00	20.0	480
220	221	A-20"	139+11.50	222	A-20"	139+35.50	1068.0	1048.00	24.00	20.0	480
221	222	A-20"	139+35.50	223	A-20"	139+59.50	1068.0	1048.00	24.00	20.0	480
222	223	A-20"	139+59.50	224	A-20"	139+71.50	1064.0	1049.00	12.00	15.0	180
223	224	A-20"	139+71.50	225	B-16"	139+83.50	1060.0	1049.00	12.00	11.0	132
										TOTAL	57709

HI-3

PANEL NO.	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	TOP OF WALL	BOTTOM OF WALL	LENGTH OF PANEL (LFT)	HEIGHT OF PANEL (LFT)	606 SPECIAL - NOISE BARRIER (REFLECTIVE) SF
224	226	B-20"	210+00.00	227	A-20"	210+24.00	1069.0	1051.50	24.00	17.5	420
225	227	A-20"	210+24.00	228	A-20"	210+48.00	1070.0	1052.00	24.00	18.0	432
226	228	A-20"	210+48.00	229	A-20"	210+72.00	1071.0	1052.50	24.00	18.5	444
227	229	A-20"	210+72.00	230	A-20"	210+96.00	1072.0	1053.50	24.00	18.5	444
228	230	A-20"	210+96.00	231	A-20"	211+20.00	1072.0	1054.50	24.00	17.5	420
229	231	A-20"	211+20.00	232	A-20"	211+44.00	1073.0	1055.00	24.00	18.0	432
230	232	A-20"	211+44.00	233	A-20"	211+68.00	1073.0	1055.50	24.00	17.5	420
231	233	A-20"	211+68.00	234	A-20"	211+92.00	1074.0	1056.00	24.00	18.0	432
232	234	A-20"	211+92.00	235	A-20"	212+16.00	1074.0	1056.50	24.00	17.5	420
233	235	A-20"	212+16.00	236	A-20"	212+40.00	1075.0	1057.00	24.00	18.0	432
234	236	A-20"	212+40.00	237	A-20"	212+64.00	1075.0	1057.50	24.00	17.5	420
235	237	A-20"	212+64.00	238	A-20"	212+88.00	1076.0	1058.00	24.00	18.0	432
236	238	A-20"	212+88.00	239	A-20"	213+12.00	1076.0	1058.50	24.00	17.5	420
237	239	A-20"	213+12.00	240	A-20"	213+36.00	1077.0	1059.00	24.00	18.0	432
238	240	A-20"	213+36.00	241	A-20"	213+60.00	1077.0	1060.00	24.00	17.0	408
239	241	A-20"	213+60.00	242	A-20"	213+84.00	1078.0	1060.50	24.00	17.5	420
240	242	A-20"	213+84.00	243	A-20"	214+08.00	1079.0	1061.00	24.00	18.0	432
241	243	A-20"	214+08.00	244	A-20"	214+32.00	1079.0	1061.50	24.00	17.5	420
242	244	A-20"	214+32.00	245	A-20"	214+56.00	1079.0	1062.00	24.00	17.0	408
243	245	A-20"	214+56.00	246	A-20"	214+80.00	1080.0	1062.50	24.00	17.5	420
244	246	A-20"	214+80.00	247	A-20"	215+04.00	1080.0	1063.00	24.00	17.0	408
245	247	A-20"	215+04.00	248	A-20"	215+28.00	1081.0	1063.00	24.00	18.0	432
246	248	A-20"	215+28.00	249	A-20"	215+52.00	1081.0	1063.00	24.00	18.0	432
247	249	A-20"	215+52.00	250	A-20"	215+76.00	1081.0	1063.50	24.00	17.5	420
248	250	A-20"	215+76.00	251	A-20"	216+00.00	1081.0	1063.50	24.00	17.5	420
249	251	A-20"	216+00.00	252	D-20"	216+24.00	1081.0	1063.50	24.00	17.5	420
250	252	D-20"	216+24.00	253	D-20"	216+48.00	1081.0	1063.50	24.00	17.5	420
251	253	D-20"	216+48.00	254	A-20"	216+72.00	1081.0	1063.50	24.00	17.5	420
252	254	A-20"	216+72.00	255	A-20"	216+96.00	1081.0	1063.00	24.00	18.0	432
253	255	A-20"	216+96.00	256	A-20"	217+20.00	1081.0	1063.00	24.00	18.0	432
254	256	A-20"	217+20.00	257	A-20"	217+44.00	1081.0	1062.50	24.00	18.5	444
255	257	A-20"	217+44.00	258	A-20"	217+68.00	1081.0	1062.50	24.00	18.5	444
256	258	A-20"	217+68.00	259	A-20"	217+92.00	1081.0	1062.50	24.00	18.5	444
257	259	A-20"	217+92.00	260	A-20"	218+16.00	1081.0	1062.50	24.00	18.5	444
258	260	A-20"	218+16.00	261	A-20"	218+40.00	1081.0	1063.00	24.00	18.0	432
259	261	A-20"	218+40.00	262	A-20"	218+64.00	1082.0	1064.00	24.00	18.0	432
260	262	A-20"	218+64.00	263	A-20"	218+88.00	1082.0	1064.50	24.00	17.5	420
261	263	A-20"	218+88.00	264	A-20"	219+12.00	1083.0	1065.00	24.00	18.0	432
262	264	A-20"	219+12.00	265	A-20"	219+36.00	1083.0	1066.00	24.00	17.0	408
263	265	A-20"	219+36.00	266	A-20"	219+60.00	1084.0	1066.50	24.00	17.5	420
264	266	A-20"	219+60.00	267	A-20"	219+84.00	1085.0	1067.00	24.00	18.0	432
265	267	A-20"	219+84.00	268	A-20"	220+08.00	1086.0	1067.50	24.00	18.5	444
266	268	A-20"	220+08.00	269	A-20"	220+32.00	1086.0	1068.00	24.00	18.0	432
267	269	A-20"	220+32.00	270	A-20"	220+56.00	1086.0	1067.50	24.00	18.5	444
268	270	A-20"	220+56.00	271	B-20"	220+73.82	1086.0	1067.50	17.82	18.5	329.67
										TOTAL	19146

CALCULATED RFV
CHECKED TJW

CALCULATIONS & SUBSUMMARY - NOISE WALL HI

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NOISE WALL HI-1			
DRILLED SHAFT NO.	WORKPOINT STATION	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)
1	10+00.00	1016.27	8
2	10+12.00	1016.23	10
3	10+24.00	1016.08	14.5
4	10+36.00	1016.05	30
5	10+48.00	1016.05	30
6	10+72.00	1016.55	30
7	10+96.00	1016.55	30
8	11+20.00	1017.05	30
9	11+44.00	1017.55	30
10	11+68.00	1017.55	30
11	11+92.00	1018.05	30
12	12+16.00	1018.05	30
13	12+40.00	1018.05	30
14	12+64.00	1018.55	30
15	12+88.00	1018.55	30
16	13+12.00	1019.05	30
17	13+36.00	1019.55	30
18	13+60.00	1020.05	30
19	13+84.00	1020.55	30
20	14+08.00	1021.05	30
21	14+32.00	1020.55	30
22	14+56.00	1020.07	30
23	14+64.00	1020.07	30
24	14+88.00	1020.07	30
25	14+96.00	1020.07	30
26	15+20.00	1020.55	30
27	15+44.00	1021.05	30
28	15+68.00	1021.55	30
29	15+92.00	1022.05	30
30	16+16.00	1022.55	30
31	16+32.00	1023.05	30
32	16+48.00	1023.55	30
33	16+64.00	1024.05	30
34	16+88.00	1024.55	30
35	17+12.00	1025.05	30
36	17+36.00	1025.57	19
37	17+60.00	1026.05	19
38	17+84.00	1026.55	19
39	18+08.00	1027.05	19
40	18+32.00	1028.05	19
41	18+47.00	1029.05	19
42	18+62.00	1029.07	19
43	18+86.00	1030.55	19
44	19+10.00	1031.55	19
45	19+34.00	1031.55	19
46	19+58.00	1032.55	19
47	19+82.00	1032.55	19
48	20+06.00	1033.05	19
49	20+30.00	1033.55	19
50	20+54.00	1033.55	19
51	20+78.00	1034.05	19
52	21+02.00	1034.05	19

NOISE WALL HI-1			
DRILLED SHAFT NO.	WORKPOINT STATION	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)
53	21+26.00	1034.55	19
54	21+50.00	1035.05	19
55	21+74.00	1035.05	19
56	21+98.00	1035.55	19
57	22+22.00	1036.05	19
58	22+46.00	1036.05	19
59	22+70.00	1036.55	19
60	22+94.00	1037.05	19
61	23+18.00	1037.05	19
62	23+42.00	1037.55	17.5*
63	23+66.00	1037.55	17.5*
64	23+90.00	1038.05	17.5*
65	24+14.00	1038.55	17.5*
66	24+38.00	1038.55	17.5*
67	24+62.00	1039.05	17.5*
68	24+86.00	1039.55	17.5*
69	25+10.00	1039.55	17.5*
70	25+34.00	1040.05	19*
71	25+58.00	1040.05	19*
72	25+82.00	1040.55	19*
73	26+06.00	1040.55	19*
74	26+30.00	1040.55	19*
75	26+54.00	1041.05	19*
76	26+78.00	1041.05	19*
77	27+02.00	1041.55	19*
78	27+26.00	1041.55	19*
79	27+50.00	1042.05	19*
80	27+74.00	1042.05	19*
81	27+98.00	1042.55	19*
82	28+22.00	1042.55	19*
83	28+46.00	1042.55	19*
84	28+70.00	1042.05	19*
85	28+94.00	1042.05	19*
86	29+18.00	1042.05	14*
87	29+42.00	1042.05	14*
88	29+66.00	1042.05	14*
89	29+90.00	1042.05	14*
90	30+14.00	1042.05	14*
91	30+38.00	1041.55	14*
92	30+62.00	1041.55	14*
93	30+86.00	1041.55	14*
94	31+10.00	1041.55	14*
95	31+34.00	1040.05	14*
96	31+58.00	1038.55	14*
97	31+82.00	1038.69	14*

NOISE WALL HI-2			
DRILLED SHAFT NO.	WORKPOINT STATION	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)
98	110+00.00	1043.19	17*
99	110+12.00	1043.05	17*
100	110+24.00	1043.55	17*
101	110+48.00	1043.55	17*
102	110+72.00	1044.05	17*
103	110+96.00	1044.05	17*
104	111+20.00	1044.05	17*
105	111+44.00	1044.55	17*
106	111+68.00	1044.55	17*
107	111+92.00	1044.55	17*
108	112+16.00	1045.05	13
109	112+40.00	1045.55	13
110	112+64.00	1045.55	15
111	112+84.00	1046.05	15
112	113+04.00	1046.05	15
113	113+24.00	1046.55	15
114	113+48.00	1046.55	15
115	113+72.00	1046.55	15
116	113+96.00	1046.55	15
117	114+20.00	1047.05	15
118	114+44.00	1047.05	30
119	114+68.00	1047.05	30
120	114+92.00	1047.05	30
121	115+16.00	1047.05	30
122	115+40.00	1047.05	30
123	115+64.00	1047.05	30
124	115+88.00	1046.55	30
125	116+12.00	1046.55	30
126	116+36.00	1046.55	30
127	116+60.00	1046.05	19
128	116+84.00	1046.05	19
129	117+08.00	1045.55	19
130	117+32.00	1045.55	19
131	117+56.00	1045.05	19
132	117+80.00	1044.55	19
133	118+04.00	1044.55	19
134	118+28.00	1044.05	19
135	118+52.00	1043.55	19
136	118+76.00	1043.05	30
137	119+00.00	1042.55	30
138	119+24.00	1042.05	30
139	119+48.00	1042.05	30
140	119+72.00	1041.55	30
141	119+96.00	1041.05	30
142	120+20.00	1040.55	30
143	120+44.00	1040.05	30
144	120+68.00	1039.55	30
145	120+92.00	1039.55	30
146	121+16.00	1039.05	30
147	121+40.00	1038.55	30
148	121+64.00	1038.55	30
149	121+88.00	1038.05	30
150	122+12.00	1038.05	30

NOISE WALL HI-2			
DRILLED SHAFT NO.	WORKPOINT STATION	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)
151	122+36.00	1038.05	30
152	122+60.00	1037.55	19
153	122+84.00	1037.55	19
154	123+08.00	1037.55	19
155	123+32.00	1037.55	19
156	123+56.00	1037.55	19
157	123+80.00	1037.55	19
158	124+04.00	1037.55	19
159	124+28.00	1037.55	19
160	124+52.00	1037.55	30
161	124+76.00	1038.05	30
162	125+00.00	1038.05	30
163	125+24.00	1038.05	30
164	125+48.00	1038.55	30
165	125+72.00	1038.55	30
166	125+96.00	1038.55	30
167	126+20.00	1039.05	30
168	126+44.00	1039.05	30
169	126+68.00	1039.05	30
170	126+92.00	1039.55	30
171	127+16.00	1039.55	30
172	127+40.00	1039.55	30
173	127+64.00	1040.05	15
174	127+88.00	1040.05	15
175	128+12.00	1040.55	15
176	128+36.00	1040.55	15
177	128+60.00	1041.05	15
178	128+84.00	1041.05	15
179	129+08.00	1041.55	30
180	129+32.00	1041.55	30
181	129+56.00	1041.55	30
182	129+80.00	1042.05	30
183	130+04.00	1042.05	30
184	130+28.00	1042.55	30
185	130+52.00	1042.55	30
186	130+76.00	1043.05	30
187	131+00.00	1043.05	30
188	131+24.00	1043.05	30
189	131+48.00	1043.55	30
190	131+67.50	1043.55	30
191	131+91.50	1044.05	30
192	132+15.50	1044.05	30
193	132+39.50	1044.05	30
194	132+63.50	1044.55	30
195	132+87.50	1044.55	30
196	133+11.50	1045.05	30
197	133+35.50	1045.05	30
198	133+59.50	1045.05	30
199	133+83.50	1045.55	30
200	134+07.50	1045.55	30
201	134+31.50	1045.55	30
202	134+55.50	1046.05	30
203	134+79.50	1046.05	30
204	135+03.50	1046.55	30

NOISE WALL HI-2			
DRILLED SHAFT NO.	WORKPOINT STATION	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)
205	135+27.50	1046.55	30
206	135+51.50	1046.55	30
207	135+75.50	1047.05	30
208	135+99.50	1047.05	30
209	136+23.50	1047.05	30
210	136+47.50	1047.05	30
211	136+71.50	1047.55	20*
212	136+95.50	1047.55	20*
213	137+19.50	1047.55	20*
214	137+43.50	1047.55	20*
215	137+67.50	1047.55	20*
216	137+91.50	1047.55	20*
217	138+15.50	1047.55	20*
218	138+39.50	1047.55	20*
219	138+63.50	1047.55	20*
220	138+87.50	1047.55	11*
221	139+11.50	1047.55	11*
222	139+35.50	1047.55	11*
223	139+59.50	1047.55	11*
224	139+71.50	1048.55	11*
225	139+83.50	1048.55	11*

NOISE WALL HI-3			
DRILLED SHAFT NO.	WORKPOINT STATION	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)
226	210+00.00	1051.19	16*
227	210+24.00	1051.05	16*
228	210+48.00	1051.55	16*
229	210+72.00	1052.05	16*
230	210+96.00	1053.05	16*
231	211+20.00	1054.05	16*
232	211+44.00	1054.55	16*
233	211+68.00	1055.05	16*
234	211+92.00	1055.55	16*
235	212+16.00	1056.05	16*
236	212+40.00	1056.55	12
237	212+64.00	1057.05	12
238	212+88.00	1057.55	12
239	213+12.00	1058.05	12
240	213+36.00	1058.55	12
241	213+60.00	1059.55	12
242	213+84.00	1060.05	12
243	214+08.00	1060.55	12
244	214+32.00	1061.05	12
245	214+56.00	1061.55	12
246	214+80.00	1062.05	12
247	215+04.00	1062.55	12
248	215+28.00	1062.55	12
249	215+52.00	1062.55	12
250	215+76.00	1063.05	12
251	216+00.00	1063.05	12
252	216+24.00	1063.07	12
253	216+48.00	1063.07	12
254	216+72.00	1062.55	12
255	216+96.00	1062.55	12
256	217+20.00	1062.05	12
257	217+44.00	1062.05	12
258	217+68.00	1062.05	14
259	217+92.00	1062.05	14
260	218+16.00	1062.05	14
261	218+40.00	1062.55	14
262	218+64.00	1063.55	14
263	218+88.00	1064.05	14
264	219+12.00	1064.55	14
265	219+36.00	1065.55	14
266	219+60.00	1066.05	14
267	219+84.00	1066.55	14
268	220+08.00	1067.05	14
269	220+32.00	1067.05	16
270	220+56.00	1067.05	16
271	220+73.82	1067.19	16

LEGEND:

* INCLUDES 5' ROCK SOCKET

CALCULATED RFV
CHECKED TJW

DATA TABLES - NOISE WALL HI

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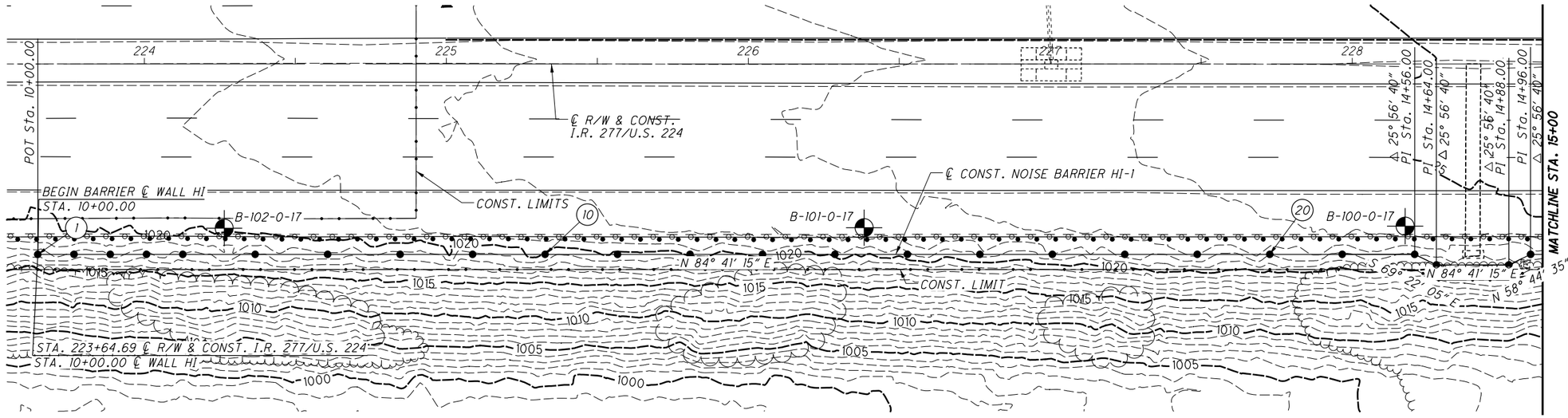
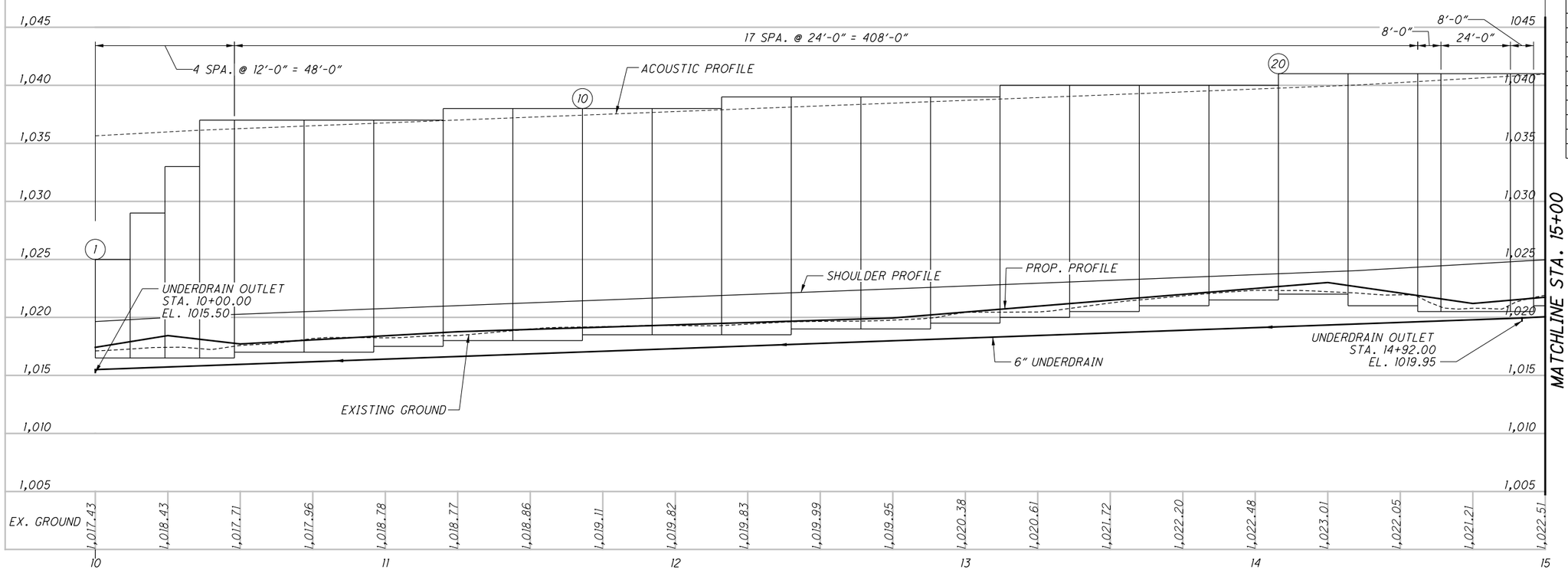


TOP OF NOISE BARRIER ELEV.	1025.00	1029.00	1033.00	1037.00	1037.00	1037.00	1037.00	1038.00	1038.00	1038.00	1038.00	1039.00	1039.00	1039.00	1040.00	1040.00	1040.00	1040.00	1041.00	1041.00	1041.00	1041.00	1041.00	
ACOUSTIC PROFILE ELEV.		1035.99		1036.27		1036.52	1036.76	1037.01	1037.25	1037.49	1037.74	1037.98	1038.22	1038.46	1038.71	1038.95	1039.19	1039.44	1039.68	1039.93	1040.24	1040.60	1040.97	
BOTTOM OF NOISE BARRIER ELEV.	1016.50	1016.50	1016.50	1016.50	1017.00	1017.00	1017.50	1018.00	1018.00	1018.50	1018.50	1018.50	1019.00	1019.00	1019.50	1020.00	1020.50	1021.00	1021.50	1022.00	1021.00	1020.50	1020.50	1020.50
PANEL ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24



APPROX. TOP OF ROCK ELEV.	
BORING I.D. NO.	T/ROCK ELEV.
B-070-0-17	1048.9±
B-071-0-17	1048.4±
B-072-0-17	1044.1±
B-073-0-17	1049.7±
B-074-0-17	1039.8±
B-075-0-17	1042.8±
B-076-0-17	1032.7±
B-077-0-17	N/A
B-078-0-17	N/A
B-079-0-17	N/A
B-080-0-17	N/A
B-081-0-17	N/A
B-082-0-17	N/A
B-083-0-17	N/A
B-084-0-17	N/A
B-085-0-17	N/A
B-086-0-17	1018.1±
B-087-0-17	N/A
B-089-0-17	N/A
B-090-0-17	N/A
B-091-0-17	N/A
B-092-0-17	1032.1±
B-093-0-17	1028.0±
B-094-0-17	1026.4±
B-095-0-17	1026.4±
B-096-0-17	N/A
B-097-0-17	N/A
B-098-0-17	N/A
B-099-0-17	N/A
B-100-0-17	N/A
B-101-0-17	N/A
B-102-0-17	N/A

N

0 10 20 40 HORIZONTAL SCALE IN FEET

CALCULATED RHC
CHECKED DJC

PLAN AND PROFILE - NOISE BARRIER HI-1
BEGIN TO STA. 15+00.00

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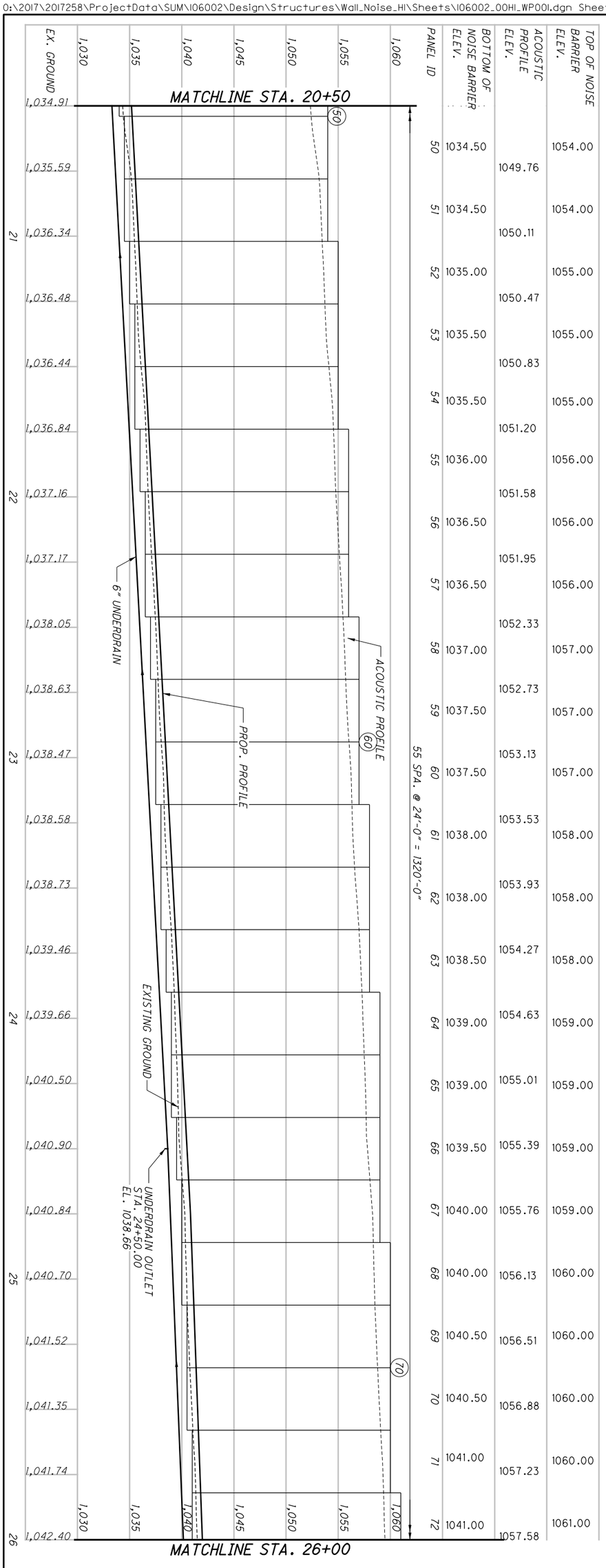
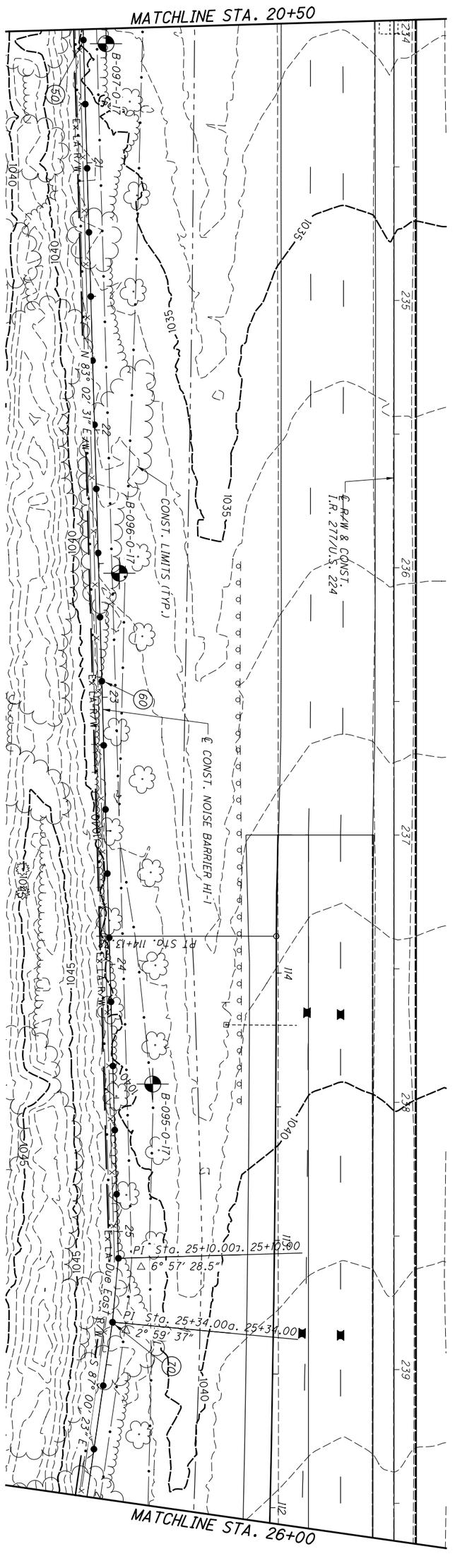
MATCHLINE STA. 15+00
MATCHLINE STA. 20+50
POT Sta. 2+97.76
PI Sta. 17+36.00
Δ 27° 43' 44"
℄ CONST. NOISE BARRIER HI-1
23" OUTSIDE ϕ CULVERT
PI Sta. 18+62.00
Δ 29° 22' 28"
B-099-0-17
B-098-0-17
N 84° 41' 15" E
S 67° 35' 01" E
N 83° 02' 31" E
CONST. LIMITS
Ex LA-R/W
15' STM.
229
230
231
232
233

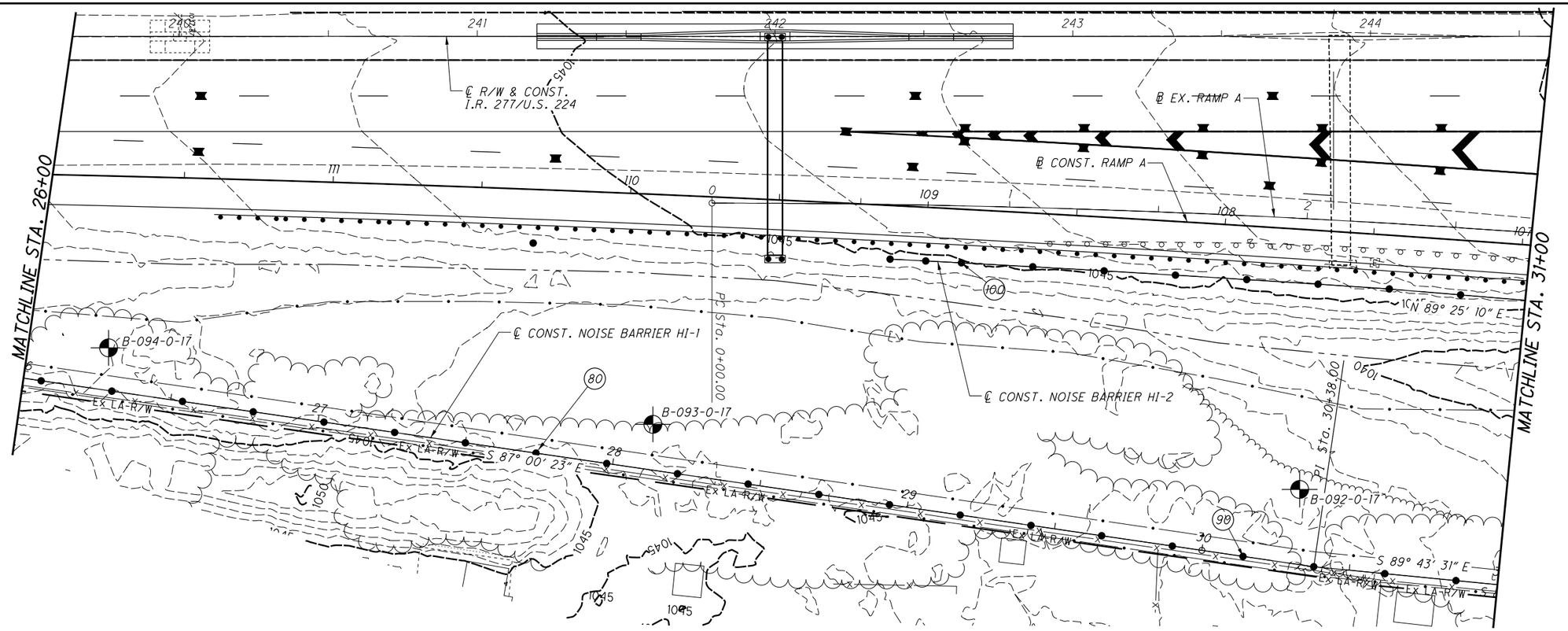
| | | |



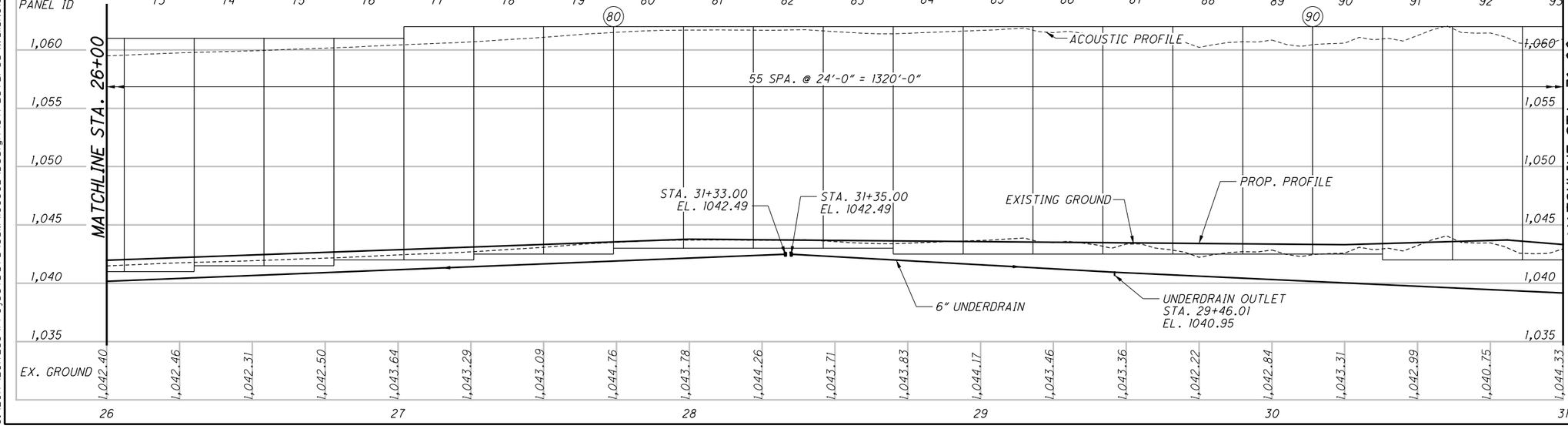
PANEL ID	BOTTOM OF NOISE BARRIER ELEV.	ACOUSTIC PROFILE ELEV.	TOP OF NOISE BARRIER ELEV.
50	1034.50	1049.76	1054.00
51	1034.50	1050.11	1054.00
52	1035.00	1050.47	1055.00
53	1035.50	1050.83	1055.00
54	1035.50	1051.20	1055.00
55	1036.00	1051.58	1056.00
56	1036.50	1051.95	1056.00
57	1036.50	1052.33	1056.00
58	1037.00	1052.73	1057.00
59	1037.50	1053.13	1057.00
60	1037.50	1053.53	1057.00
61	1038.00	1053.93	1058.00
62	1038.00	1054.27	1058.00
63	1038.50	1054.63	1058.00
64	1039.00	1055.01	1059.00
65	1039.00	1055.39	1059.00
66	1039.50	1055.76	1059.00
67	1040.00	1056.13	1060.00
68	1040.00	1056.51	1060.00
69	1040.50	1056.88	1060.00
70	1040.50	1057.23	1060.00
71	1041.00	1057.58	1061.00
72	1041.00		



1116 / 1288	SUM-77/277/224	PLAN AND PROFILE - NOISE BARRIER HI-1 STA. 20+50.00 TO STA. 26+00.00	CALCULATED RHC CHECKED DJC	0 20 10 40 HORIZONTAL SCALE IN FEET



TOP OF NOISE BARRIER ELEV.	1061.00	1061.00	1061.00	1061.00	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00
ACOUSTIC PROFILE ELEV.	1057.96	1058.35	1058.73	1059.10	1059.46	1059.82	1060.18	1060.54	1060.89	1061.24	1061.60	1061.96	1061.49	1061.37	1060.22	1060.84	1060.59	1061.23	1061.46	1060.95				
BOTTOM OF NOISE BARRIER ELEV.	1041.00	1041.50	1041.50	1042.00	1042.00	1042.50	1042.50	1043.00	1043.00	1043.00	1043.00	1042.50	1042.50	1042.50	1042.50	1042.50	1042.50	1042.00	1042.00	1042.00				
PANEL ID	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93			



EX. GROUND	1042.40	1042.46	1042.31	1042.50	1043.64	1043.29	1043.09	1044.76	1043.78	1044.26	1043.71	1043.83	1044.17	1043.46	1043.36	1042.22	1042.84	1043.31	1042.99	1040.75	1044.33			
	26				27				28				29				30				31			

HORIZONTAL SCALE IN FEET
0 10 20 40

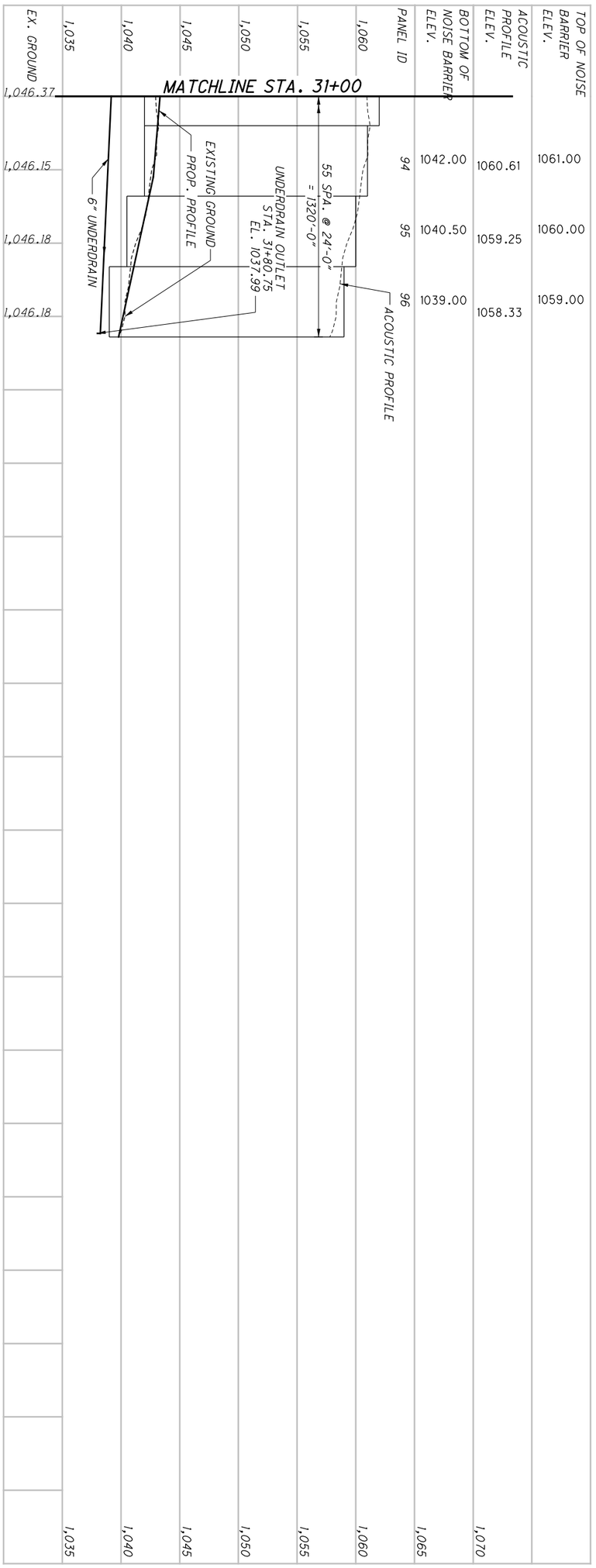
CALCULATED RHC
CHECKED DJC

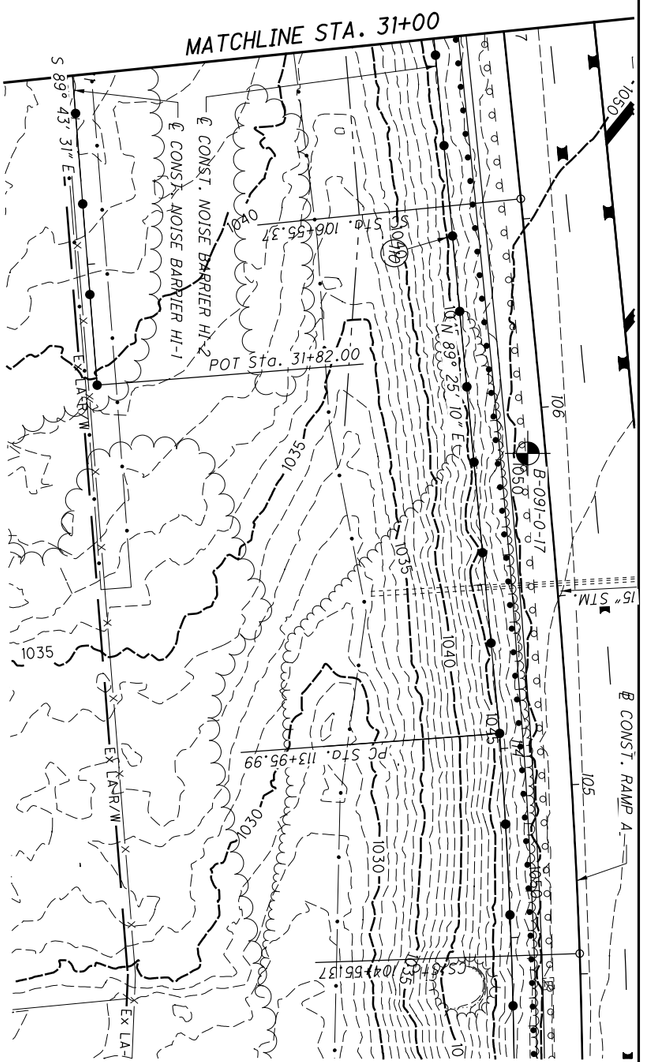
PLAN AND PROFILE - NOISE BARRIER HI-1
STA. 26+00.00 TO STA. 31+50.00

SUM-77 / 277 / 224

1117
1288

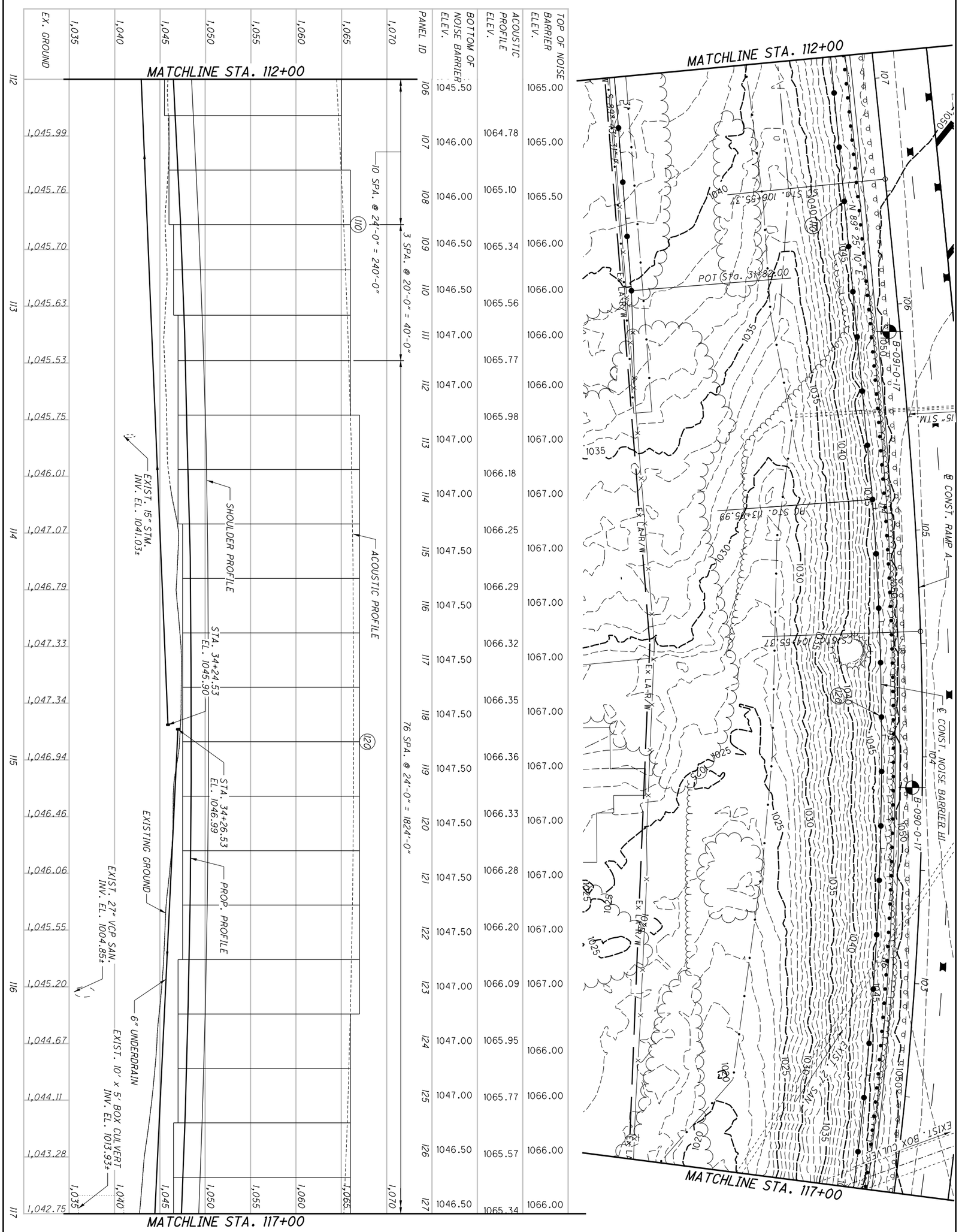
O:\2017\20172581Project Data\SUM\106002\Design\Structures\Wall_Noise_HI\Sheets\106002_00HI_WP001.dgn Sheet4 1/17/2021 7:05:20 PM rvitelli



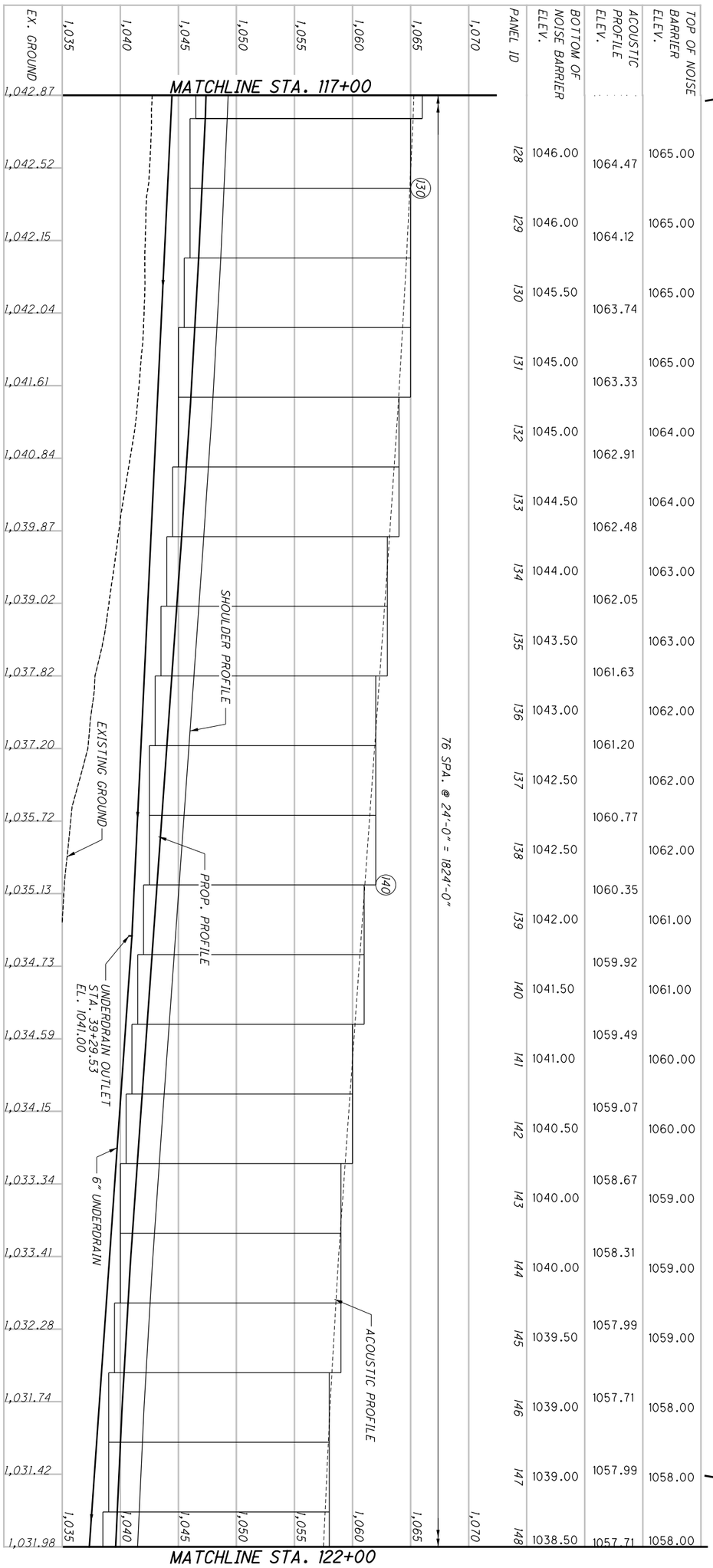


1117A (1288)	SUM-77/277/224	PLAN AND PROFILE - NOISE BARRIER HI-1 STA. 31+00.00 TO END WALL HI-1	CALCULATED RHC CHECKED DJC	0 20 10 40 HORIZONTAL SCALE IN FEET

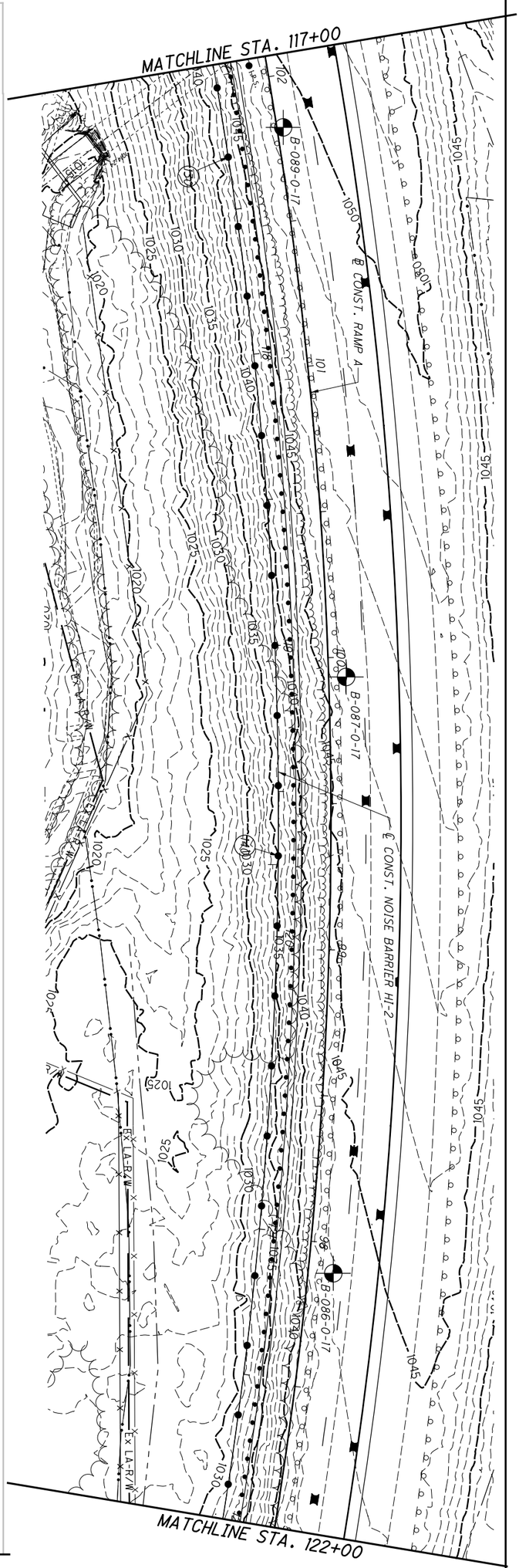
1288 / 1117B	SUM-77 / 277 / 224	PLAN AND PROFILE - NOISE BARRIER HI-2 BEGIN WALL TO STA. 112+00.00	CALCULATED RHC CHECKED DJC	0 20 10 40 HORIZONTAL SCALE IN FEET



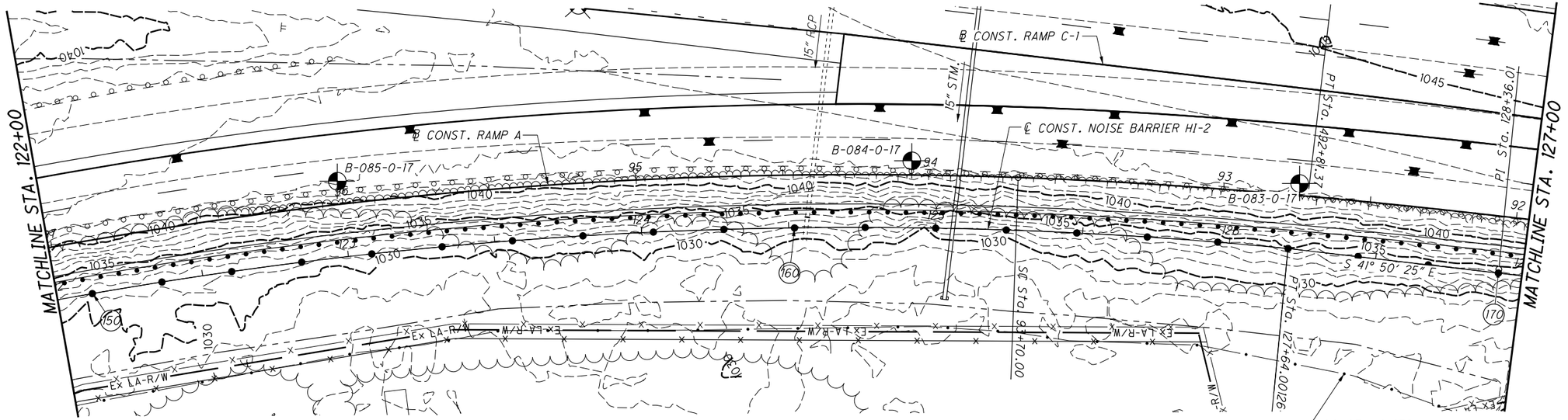
1288	SUM-77/277/224	PLAN AND PROFILE - NOISE BARRIER HI-2 STA. 112+00.00 TO STA. 117+00.00	CALCULATED RHC CHECKED DJC	0 20 10 40 HORIZONTAL SCALE IN FEET



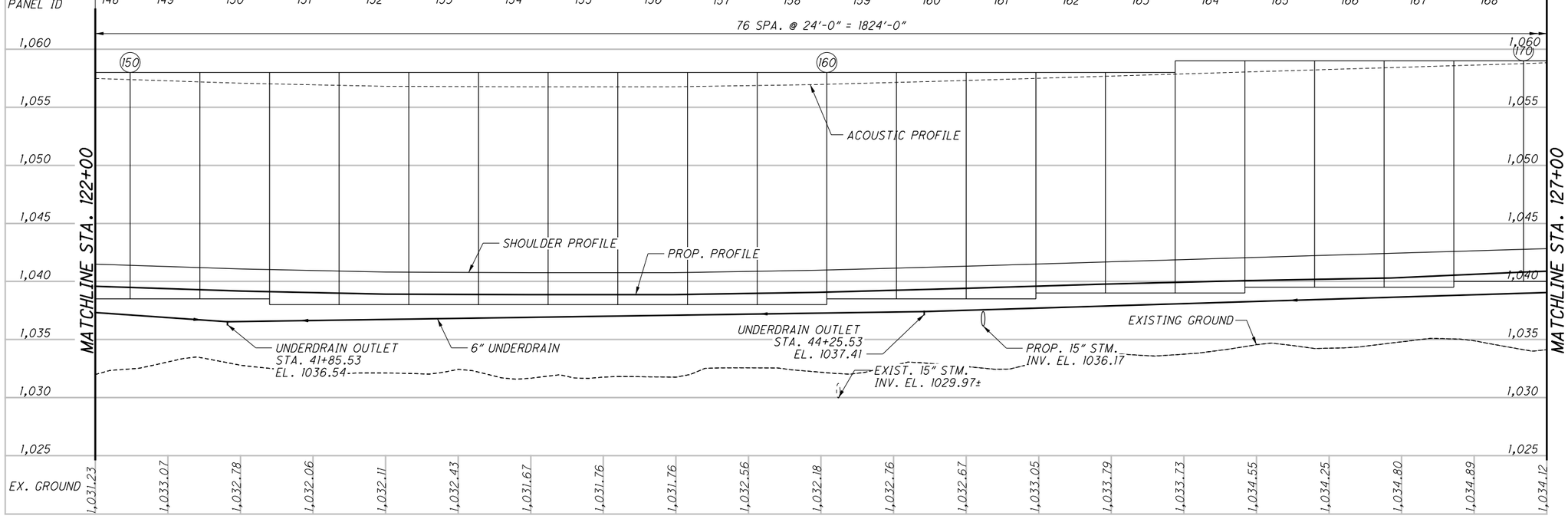
PANEL ID	BOTTOM OF NOISE BARRIER ELEV.	ACOUSTIC PROFILE ELEV.	TOP OF NOISE BARRIER ELEV.
128	1046.00	1064.47	1065.00
129	1046.00	1064.12	1065.00
130	1045.50	1063.74	1065.00
131	1045.00	1063.33	1065.00
132	1045.00	1062.91	1064.00
133	1044.50	1062.48	1064.00
134	1044.00	1062.05	1063.00
135	1043.50	1061.63	1063.00
136	1043.00	1061.20	1062.00
137	1042.50	1060.77	1062.00
138	1042.50	1060.35	1062.00
139	1042.00	1059.92	1061.00
140	1041.50	1059.49	1061.00
141	1041.00	1059.07	1060.00
142	1040.50	1058.67	1060.00
143	1040.00	1058.31	1059.00
144	1040.00	1057.99	1059.00
145	1039.50	1057.71	1059.00
146	1039.00	1057.99	1058.00
147	1039.00	1057.71	1058.00
148	1038.50		1058.00



1119 / 1288	SUM-77 / 277 / 224	PLAN AND PROFILE - NOISE BARRIER HI-2 STA. 117+00.00 TO STA. 122+00.00	CALCULATED RHC CHECKED DJC	0 20 10 40 HORIZONTAL SCALE IN FEET	N



TOP OF NOISE BARRIER ELEV.	1058.00	1058.00	1058.00	1058.00	1058.00	1058.00	1058.00	1058.00	1058.00	1058.00	1058.00	1058.00	1058.00	1058.00	1058.00	1058.00	1059.00	1059.00	1059.00	1059.00	1059.00	
ACOUSTIC PROFILE ELEV.	1057.46	1057.26	1057.09	1056.96	1056.87	1056.82	1056.81	1056.84	1056.90	1057.01	1057.15	1057.32	1057.50	1057.69	1057.88	1058.07	1058.26	1058.46	1058.65	1058.85		
BOTTOM OF NOISE BARRIER ELEV.	1038.50	1038.50	1038.50	1038.00	1038.00	1038.00	1038.00	1038.00	1038.00	1038.00	1038.00	1038.50	1038.50	1038.50	1039.00	1039.00	1039.00	1039.50	1039.50	1039.50	1040.00	
PANEL ID	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	



EX. GROUND	1,031.23	1,033.07	1,032.78	1,032.06	1,032.11	1,032.43	1,031.67	1,031.76	1,031.76	1,032.56	1,032.18	1,032.76	1,032.67	1,033.05	1,033.79	1,033.73	1,034.55	1,034.25	1,034.80	1,034.89	1,034.12	
	122																					127

HORIZONTAL SCALE IN FEET: 0, 10, 20, 40

CALCULATED RHC
CHECKED DJC

PLAN AND PROFILE - NOISE BARRIER HI-2
STA. 122+00.00 TO STA. 127+00.00

SUM-77/277/224

1120
1288

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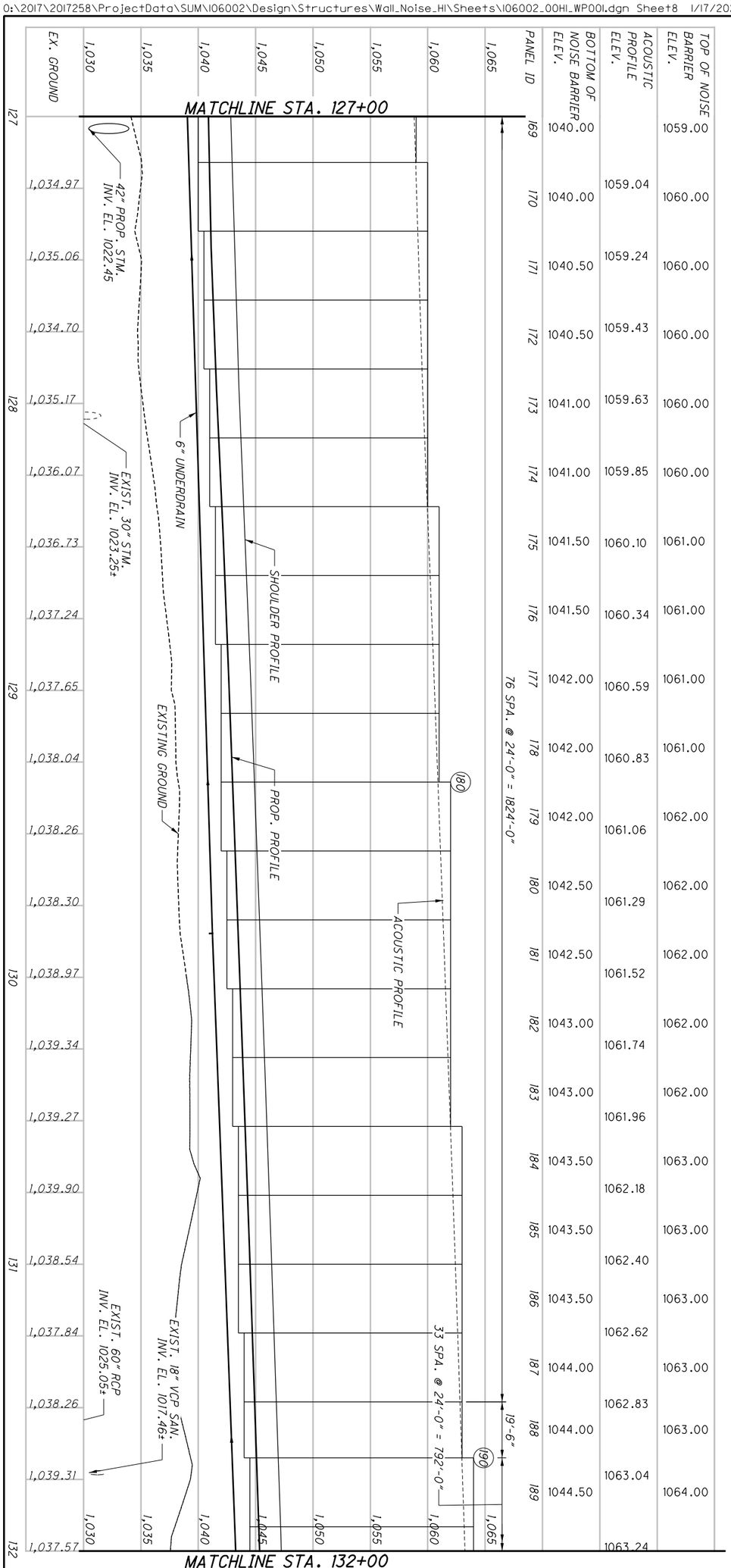
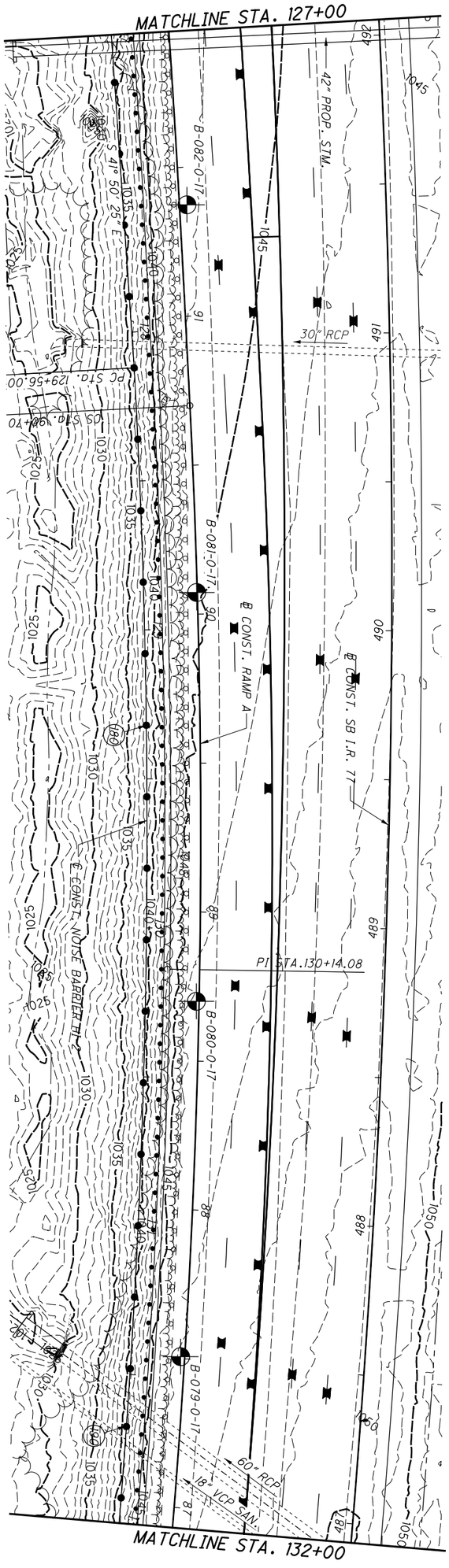
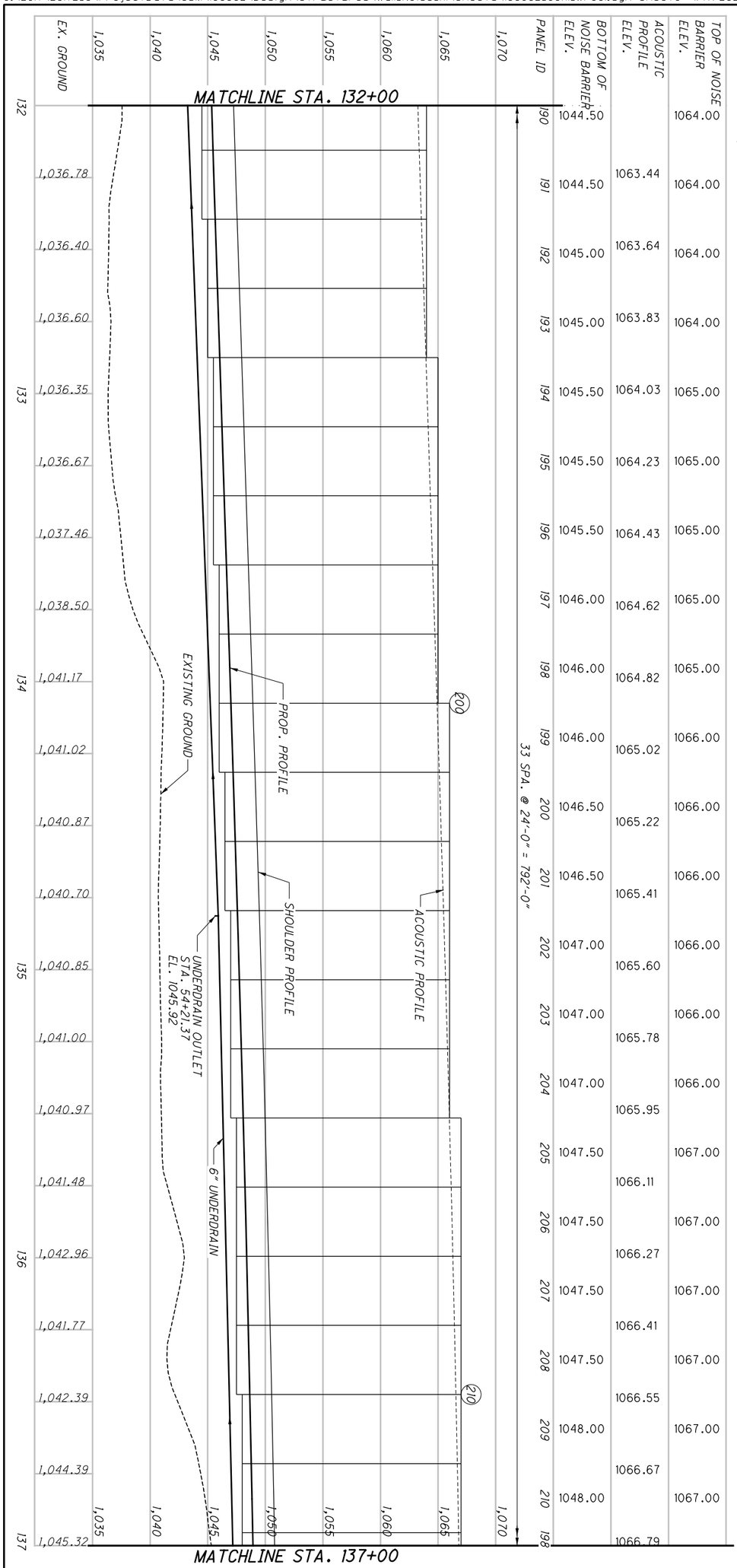
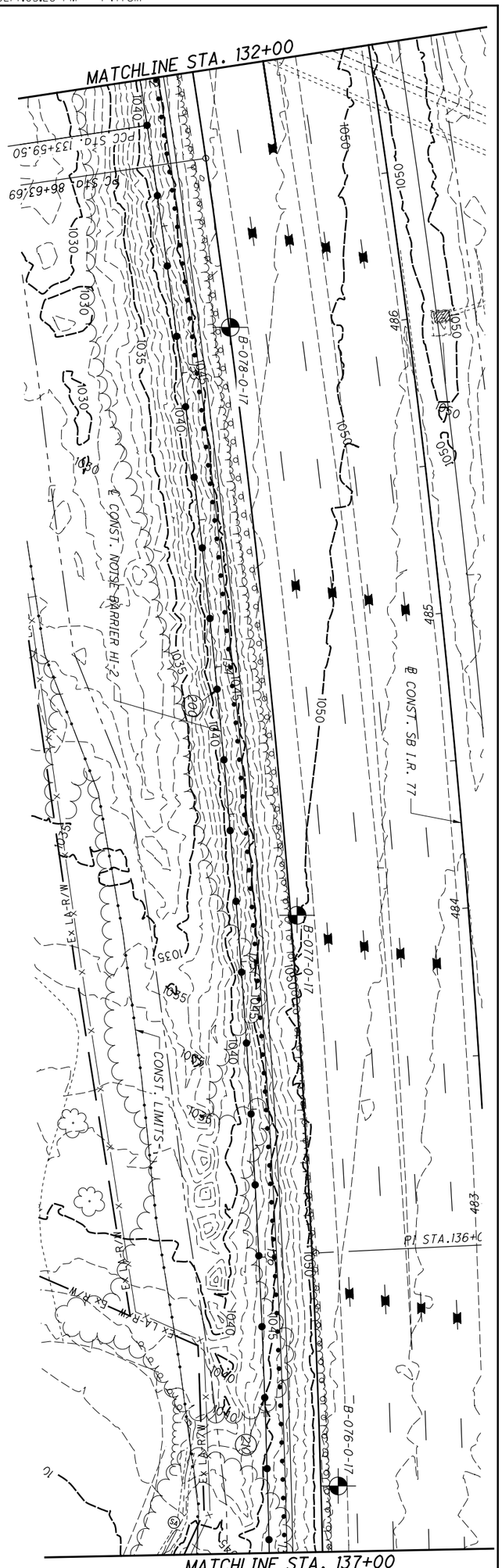


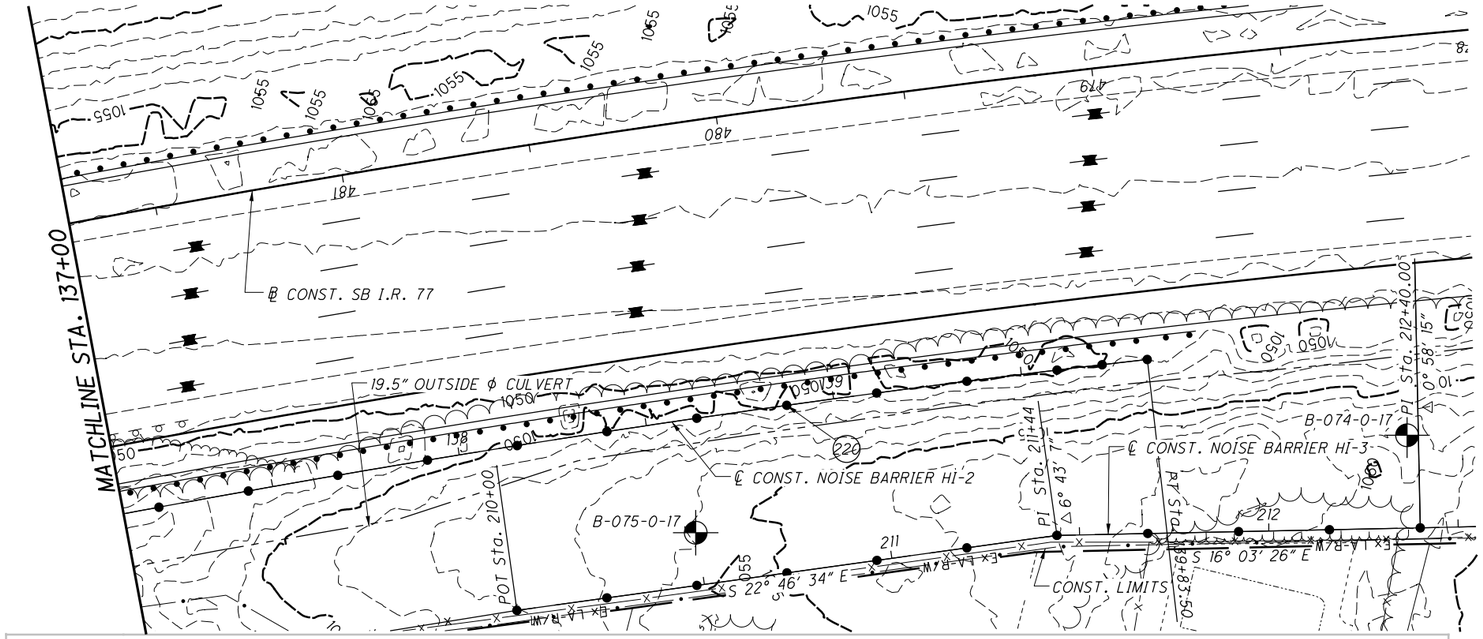


1121 / 1288	SUM-77 / 277 / 224	PLAN AND PROFILE - NOISE BARRIER HI-2 STA. 127+00.00 TO STA. 132+00.00	CALCULATED RHC CHECKED DJC	0 20 10 40 HORIZONTAL SCALE IN FEET

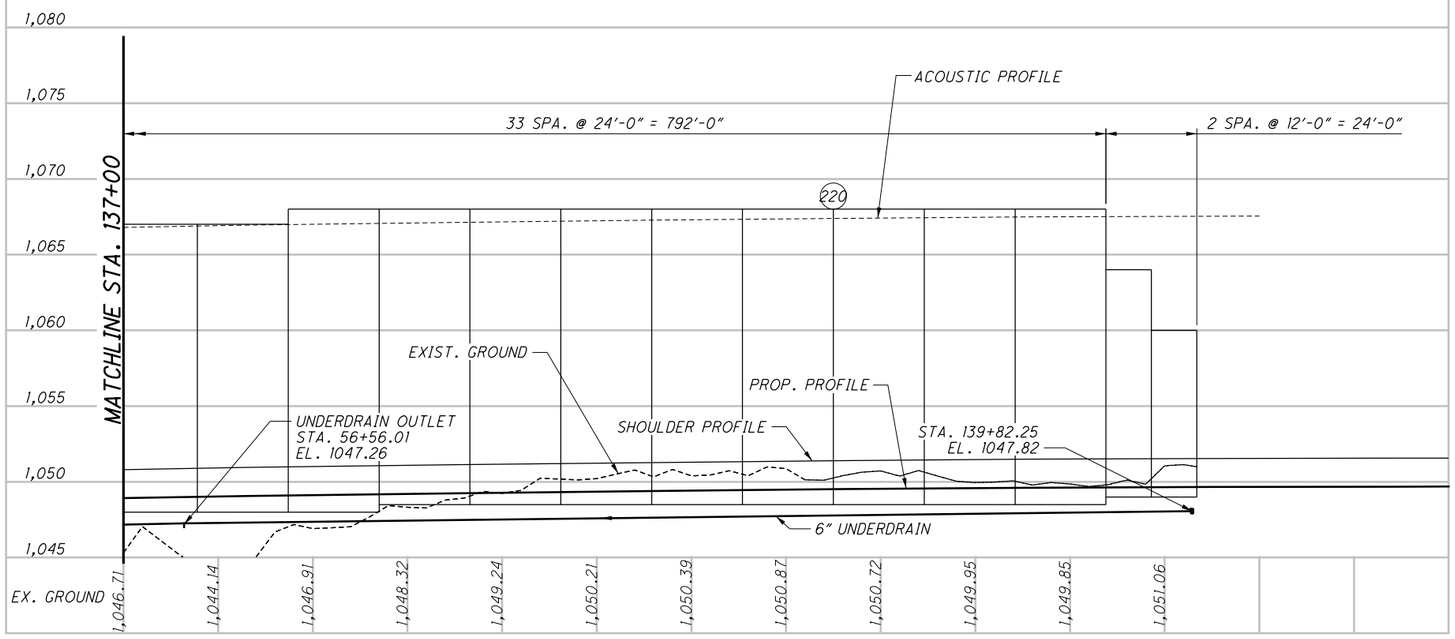




1122 / 1288	SUM-77 / 277 / 224	PLAN AND PROFILE - NOISE BARRIER HI-2 STA. 132+00.00 TO STA. 137+00.00	CALCULATED RHC CHECKED DJC	0 20 10 40 HORIZONTAL SCALE IN FEET



TOP OF NOISE BARRIER ELEV.	1067.00	1067.00	1068.00	1068.00	1068.00	1068.00	1068.00	1068.00	1068.00	1068.00	1068.00	1064.00	1060.00
ACOUSTIC PROFILE ELEV.		1066.90	1067.01	1067.10	1067.18	1067.26	1067.33	1067.39	1067.44	1067.48	1067.51	1067.54	
BOTTOM OF NOISE BARRIER ELEV.	1048.00	1048.00	1048.00	1048.00	1048.00	1048.00	1048.00	1048.00	1048.00	1048.00	1048.00	1049.00	1049.00
PANEL ID	211	212	213	214	215	216	217	218	219	220	221	222	223



PLAN AND PROFILE - NOISE BARRIER HI
STA. 137+00.00 TO STA. END WALL HI-2

CALCULATED RHC
CHECKED DJC

HORIZONTAL SCALE IN FEET
0 10 20 40

SUM-77/277/224

1123
1288

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TOP OF NOISE BARRIER ELEV.				1069.00	1070.00	1071.00	1072.00	1072.00	1073.00	1073.00	1074.00	1074.00	1075.00	1075.00	1076.00	1076.00	1077.00	1077.00	1078.00	1079.00		
ACOUSTIC PROFILE ELEV.				1068.16	1068.91	1069.66	1070.58	1071.33	1072.07	1072.73	1073.26	1073.79	1074.31	1074.84	1075.22	1075.75	1076.28	1076.81	1077.34	1077.87		
BOTTOM OF NOISE BARRIER ELEV.				1051.50	1052.00	1052.50	1053.50	1054.50	1055.00	1055.50	1056.00	1056.50	1057.00	1057.50	1058.00	1058.50	1059.00	1060.00	1060.50	1061.00		
PANEL ID				224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240		

EX. GROUND				1051.69	1052.92	1054.00	1054.88	1055.33	1056.03	1057.02	1057.46	1057.97	1058.33	1058.39	1058.64	1059.05	1059.61	1060.30	1060.96	1061.51		
				210				211				212				213				214		

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED RHC
CHECKED DJC

PLAN AND PROFILE - NOISE BARRIER HI-3
BEGIN WALL TO STA. 214+00.00

SUM-77 / 277 / 224

1123A
1288

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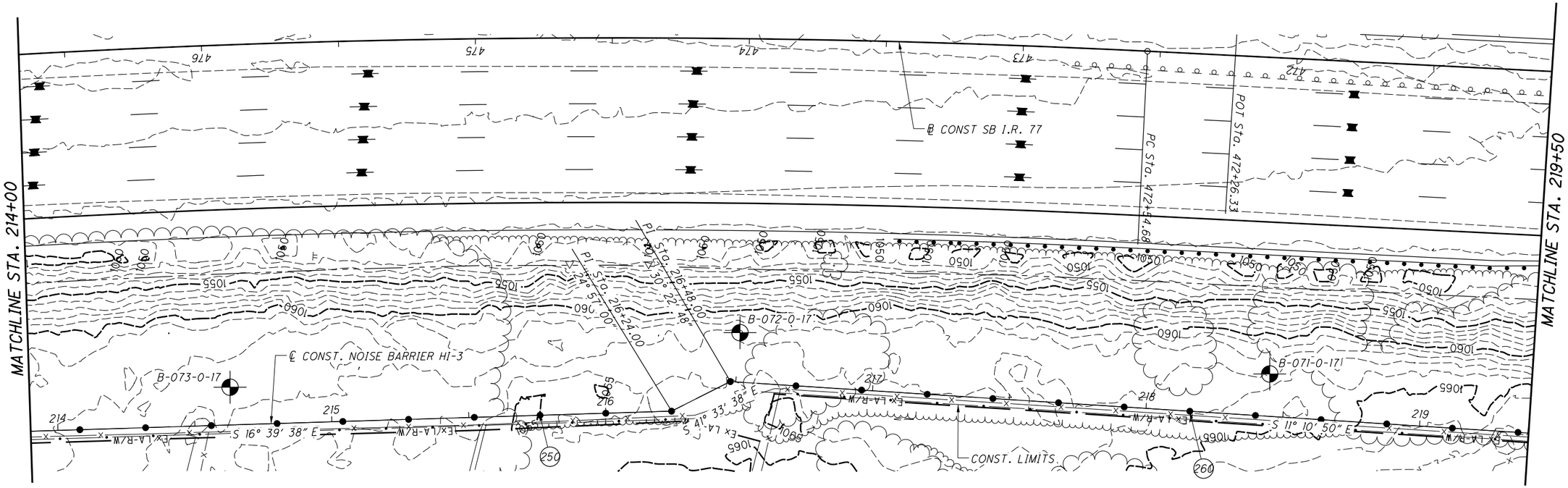
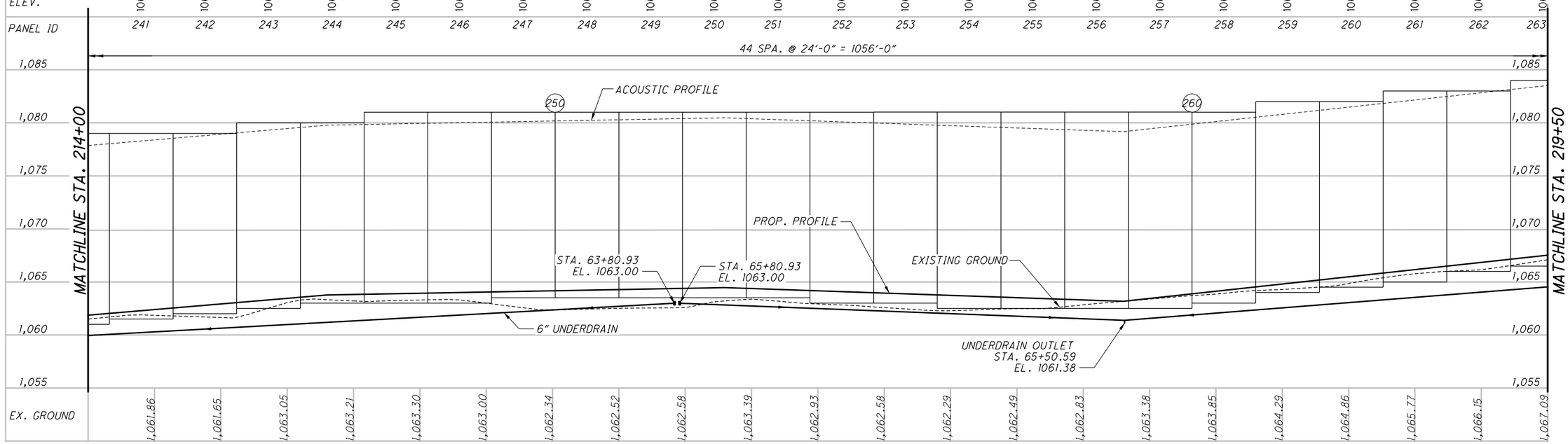


TOP OF NOISE BARRIER ELEV.	1079.00	1079.00	1080.00	1080.00	1081.00	1081.00	1081.00	1081.00	1081.00	1081.00	1081.00	1081.00	1081.00	1081.00	1081.00	1081.00	1081.00	1081.00	1082.00	1082.00	1083.00	1083.00	1084.00	
ACOUSTIC PROFILE ELEV.	1078.40	1078.93	1079.46	1079.82	1079.94	1080.05	1080.17	1080.29	1080.40	1080.38	1080.17	1079.95	1079.74	1079.52	1079.30	1079.44	1080.12	1080.80	1081.48	1082.16	1082.84	1083.52		
BOTTOM OF NOISE BARRIER ELEV.	1061.50	1062.00	1062.50	1063.00	1063.00	1063.00	1063.50	1063.50	1063.50	1063.50	1063.50	1063.00	1063.00	1062.50	1062.50	1062.50	1062.50	1063.00	1064.00	1064.50	1065.00	1066.00	1066.50	
PANEL ID	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	



EX. GROUND	1,061.86	1,061.65	1,063.05	1,063.21	1,063.30	1,063.00	1,062.34	1,062.52	1,062.58	1,063.39	1,062.93	1,062.58	1,062.29	1,062.49	1,062.83	1,063.38	1,063.85	1,064.29	1,064.86	1,065.77	1,066.15	1,067.09		
	214			215			216			217			218			219								

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED RHC
CHECKED DJC

PLAN AND PROFILE - NOISE BARRIER HI-3
STA. 214+00.00 TO STA. 219+50.00

SUM-77/277/224

1124
1288

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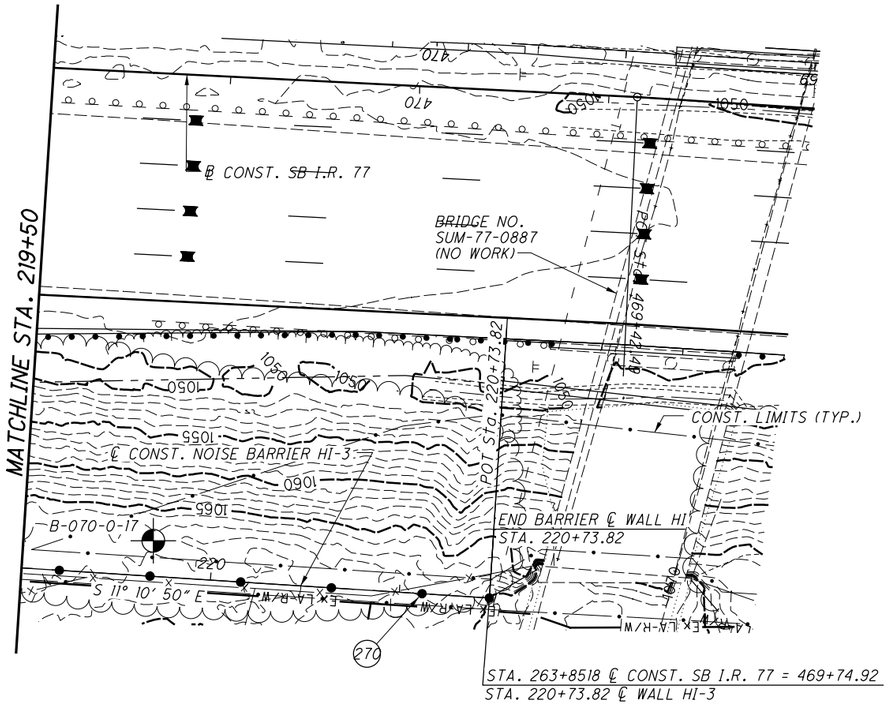
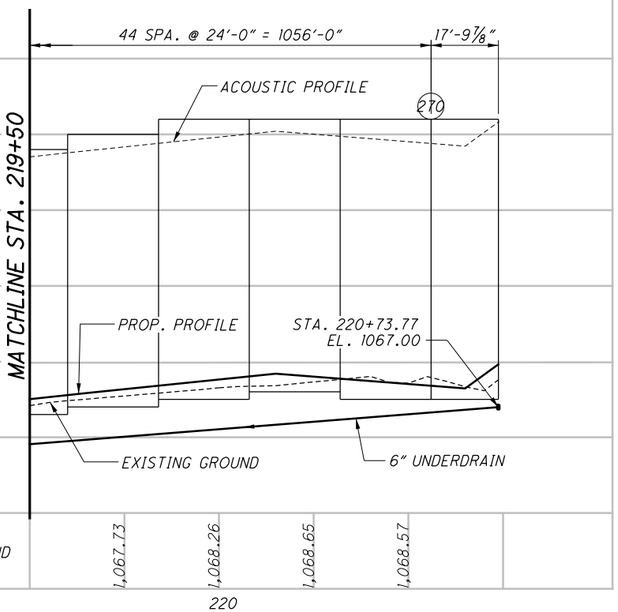


TOP OF NOISE BARRIER ELEV.	1085.00	1086.00	1086.00	1086.00	1086.00
ACOUSTIC PROFILE ELEV.	1084.18	1084.82	1085.01	1084.52	
BOTTOM OF NOISE BARRIER ELEV.	1067.00	1067.50	1068.00	1067.50	1067.50
PANEL ID	264	265	266	267	268



EX. GROUND	1,067.73	1,068.26	1,068.65	1,068.57	

220

PLAN AND PROFILE - NOISE BARRIER HI-3
STA. 219+50.00 TO END WALL HI-3

CALCULATED RHC
CHECKED DJC

HORIZONTAL SCALE IN FEET
0 10 20 40

SUM-77 / 277 / 224

1125
1288

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PANEL NO.	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	TOP OF WALL	BOTTOM OF WALL	LENGTH OF PANEL (LFT)	HEIGHT OF PANEL (LFT)	606 SPECIAL - NOISE BARRIER (REFLECTIVE) SF
1	1	B-16"	10+00.00	2	A-16"	10+12.00	1065.0	1056.50	12.00	8.5	102
2	2	A-16"	10+12.00	3	A-16"	10+24.00	1069.0	1057.00	12.00	12.0	144
3	3	A-16"	10+24.00	4	A-20"	10+36.00	1073.0	1057.50	12.00	15.5	186
4	4	A-20"	10+36.00	5	A-20"	10+60.00	1077.0	1058.00	24.00	19.0	456
5	5	A-20"	10+60.00	6	A-20"	10+84.00	1078.0	1058.50	24.00	19.5	468
6	6	A-20"	10+84.00	7	A-20"	11+08.00	1079.0	1059.50	24.00	19.5	468
7	7	A-20"	11+08.00	8	A-20"	11+32.00	1080.0	1060.00	24.00	20.0	480
8	8	A-20"	11+32.00	9	A-20"	11+56.00	1081.0	1061.00	24.00	20.0	480
9	9	A-20"	11+56.00	10	A-20"	11+80.00	1082.0	1062.00	24.00	20.0	480
10	10	A-20"	11+80.00	11	A-20"	12+04.00	1082.0	1062.50	24.00	19.5	468
11	11	A-20"	12+04.00	12	A-20"	12+28.00	1083.0	1063.50	24.00	19.5	468
12	12	A-20"	12+28.00	13	A-20"	12+52.00	1084.0	1064.00	24.00	20.0	480
13	13	A-20"	12+52.00	14	A-20"	12+76.00	1085.0	1065.00	24.00	20.0	480
14	14	A-20"	12+76.00	15	A-20"	13+00.00	1086.0	1066.00	24.00	20.0	480
15	15	A-20"	13+00.00	16	A-20"	13+24.00	1086.0	1067.00	24.00	19.0	456
16	16	A-20"	13+24.00	17	A-20"	13+48.00	1087.0	1067.50	24.00	19.5	468
17	17	A-20"	13+48.00	18	A-20"	13+72.00	1088.0	1068.50	24.00	19.5	468
18	18	A-20"	13+72.00	19	A-20"	13+96.00	1088.0	1069.50	24.00	18.5	444
19	19	A-20"	13+96.00	20	A-20"	14+20.00	1089.0	1070.50	24.00	18.5	444
20	20	A-20"	14+20.00	21	A-20"	14+44.00	1090.0	1071.50	24.00	18.5	444
21	21	A-20"	14+44.00	22	A-20"	14+65.00	1091.0	1072.00	21.00	19.0	399
22	22	A-20"	14+65.00	23	A-20"	14+86.00	1091.0	1072.50	21.00	18.5	388.5
23	23	A-20"	14+86.00	24	A-20"	15+07.00	1092.0	1073.00	21.00	19.0	399
24	24	A-20"	15+07.00	25	A-20"	15+28.00	1093.0	1074.00	21.00	19.0	399
25	25	A-20"	15+28.00	26	A-20"	15+52.00	1093.0	1074.50	24.00	18.5	444
26	26	A-20"	15+52.00	27	A-20"	15+76.00	1094.0	1075.50	24.00	18.5	444
27	27	A-20"	15+76.00	28	A-20"	16+00.00	1094.0	1076.00	24.00	18.0	432
28	28	A-20"	16+00.00	29	A-20"	16+24.00	1095.0	1076.50	24.00	18.5	444
29	29	A-20"	16+24.00	30	A-20"	16+48.00	1096.0	1077.00	24.00	19.0	456
30	30	A-20"	16+48.00	31	A-20"	16+72.00	1096.0	1078.00	24.00	18.0	432
31	31	A-20"	16+72.00	32	A-20"	16+96.00	1097.0	1078.50	24.00	18.5	444
32	32	A-20"	16+96.00	33	A-20"	17+20.00	1097.0	1079.00	24.00	18.0	432
33	33	A-20"	17+20.00	34	A-20"	17+44.00	1098.0	1079.50	24.00	18.5	444
34	34	A-20"	17+44.00	35	A-20"	17+68.00	1099.0	1080.50	24.00	18.5	444
35	35	A-20"	17+68.00	36	A-20"	17+92.00	1100.0	1081.00	24.00	19.0	456
36	36	A-20"	17+92.00	37	D-20"	18+16.00	1101.0	1081.50	24.00	19.5	468
37	37	D-20"	18+16.00	38	A-16"	18+32.00	1102.0	1082.00	16.00	20.0	320
38	38	A-16"	18+32.00	39	A-16"	18+48.00	1103.0	1083.50	16.00	19.5	312
39	39	A-16"	18+48.00	40	A-16"	18+60.00	1104.0	1085.00	12.00	19.0	228
40	40	A-16"	18+60.00	41	A-16"	18+72.00	1105.0	1086.00	12.00	19.0	228
41	41	A-16"	18+72.00	42	A-16"	18+84.00	1106.0	1087.00	12.00	19.0	228
42	42	A-16"	18+84.00	43	A-16"	18+96.00	1107.0	1088.50	12.00	18.5	222
43	43	A-16"	18+96.00	44	A-16"	19+08.00	1108.0	1089.50	12.00	18.5	222
44	44	A-16"	19+08.00	45	D-20"	19+20.00	1109.0	1091.00	12.00	18.0	216
45	45	D-20"	19+20.00	46	A-20"	19+44.00	1110.0	1092.00	24.00	18.0	432
46	46	A-20"	19+44.00	47	A-20"	19+68.00	1111.0	1093.50	24.00	17.5	420
47	47	A-20"	19+68.00	48	A-20"	19+92.00	1112.0	1094.00	24.00	18.0	432
48	48	A-20"	19+92.00	49	A-20"	20+16.00	1113.0	1095.00	24.00	18.0	432
49	49	A-20"	20+16.00	50	A-20"	20+40.00	1114.0	1096.00	24.00	18.0	432
50	50	A-20"	20+40.00	51	A-20"	20+64.00	1115.0	1097.00	24.00	18.0	432

PANEL NO.	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	DRILLED SHAFT NO.	POST TYPE	WORKPOINT STATION	TOP OF WALL	BOTTOM OF WALL	LENGTH OF PANEL (LFT)	HEIGHT OF PANEL (LFT)	606 SPECIAL - NOISE BARRIER (REFLECTIVE) SF
51	51	A-20"	20+64.00	52	A-20"	20+88.00	1116.0	1097.50	24.00	18.5	444
52	52	A-20"	20+88.00	53	A-20"	21+12.00	1117.0	1098.50	24.00	18.5	444
53	53	A-20"	21+12.00	54	A-20"	21+36.00	1117.0	1099.50	24.00	17.5	420
54	54	A-20"	21+36.00	55	A-20"	21+60.00	1118.0	1100.00	24.00	18.0	432
55	55	A-20"	21+60.00	56	A-20"	21+84.00	1118.0	1100.50	24.00	17.5	420
56	56	A-20"	21+84.00	57	A-16"	22+00.00	1118.0	1100.50	16.00	17.5	280
57	57	A-16"	22+00.00	58	A-20"	22+16.00	1119.0	1101.00	16.00	18.0	288
58	58	A-20"	22+16.00	59	A-20"	22+40.00	1119.0	1101.50	24.00	17.5	420
59	59	A-20"	22+40.00	60	A-20"	22+64.00	1119.0	1101.50	24.00	17.5	420
60	60	A-20"	22+64.00	61	A-20"	22+88.00	1119.0	1101.50	24.00	17.5	420
61	61	A-20"	22+88.00	62	A-20"	23+12.00	1119.0	1101.50	24.00	17.5	420
62	62	A-20"	23+12.00	63	A-20"	23+36.00	1119.0	1101.50	24.00	17.5	420
63	63	A-20"	23+36.00	64	A-20"	23+60.00	1119.0	1101.50	24.00	17.5	420
64	64	A-20"	23+60.00	65	A-20"	23+84.00	1120.0	1102.00	24.00	18.0	432
65	65	A-20"	23+84.00	66	A-20"	24+08.00	1120.0	1102.50	24.00	17.5	420
66	66	A-20"	24+08.00	67	A-20"	24+32.00	1120.0	1103.00	24.00	17.0	408
67	67	A-20"	24+32.00	68	A-20"	24+56.00	1121.0	1103.00	24.00	18.0	432
68	68	A-20"	24+56.00	69	A-20"	24+80.00	1122.0	1103.50	24.00	18.5	444
69	69	A-20"	24+80.00	70	A-20"	25+04.00	1123.0	1104.00	24.00	19.0	456
70	70	A-20"	25+04.00	71	A-20"	25+28.00	1124.0	1105.50	24.00	18.5	444
71	71	A-20"	25+28.00	72	A-20"	25+52.00	1125.0	1106.50	24.00	18.5	444
72	72	A-20"	25+52.00	73	A-20"	25+76.00	1126.0	1108.00	24.00	18.0	432
73	73	A-20"	25+76.00	74	A-20"	26+00.00	1127.0	1109.00	24.00	18.0	432
74	74	A-20"	26+00.00	75	A-20"	26+24.00	1127.0	1109.50	24.00	17.5	420
75	75	A-20"	26+24.00	76	A-20"	26+48.00	1128.0	1110.00	24.00	18.0	432
76	76	A-20"	26+48.00	77	A-20"	26+72.00	1128.0	1110.50	24.00	17.5	420
77	77	A-20"	26+72.00	78	A-20"	26+96.00	1128.0	1110.50	24.00	17.5	420
78	78	A-20"	26+96.00	79	A-20"	27+20.00	1129.0	1111.00	24.00	18.0	432
79	79	A-20"	27+20.00	80	A-20"	27+44.00	1129.0	1111.50	24.00	17.5	420
80	80	A-20"	27+44.00	81	A-20"	27+68.00	1129.0	1111.50	24.00	17.5	420
81	81	A-20"	27+68.00	82	A-20"	27+92.00	1129.0	1112.00	24.00	17.0	408
82	82	A-20"	27+92.00	83	A-20"	28+16.00	1130.0	1112.50	24.00	17.5	420
83	83	A-20"	28+16.00	84	A-20"	28+40.00	1130.0	1112.50	24.00	17.5	420
84	84	A-20"	28+40.00	85	A-20"	28+64.00	1130.0	1112.50	24.00	17.5	420
85	85	A-20"	28+64.00	86	A-20"	28+88.00	1130.0	1112.50	24.00	17.5	420
86	86	A-20"	28+88.00	87	A-20"	29+12.00	1130.0	1112.50	24.00	17.5	420
87	87	A-20"	29+12.00	88	A-20"	29+36.00	1131.0	1113.00	24.00	18.0	432
88	88	A-20"	29+36.00	89	A-20"	29+60.00	1131.0	1113.50	24.00	17.5	420
89	89	A-20"	29+60.00	90	A-20"	29+84.00	1132.0	1114.00	24.00	18.0	432
90	90	A-20"	29+84.00	91	A-20"	30+08.00	1132.0	1114.50	24.00	17.5	420
91	91	A-20"	30+08.00	92	A-20"	30+32.00	1133.0	1115.00	24.00	18.0	432
92	92	A-20"	30+32.00	93	A-20"	30+56.00	1133.0	1115.50	24.00	17.5	420
93	93	A-20"	30+56.00	94	A-20"	30+80.00	1133.0	1115.50	24.00	17.5	420
94	94	A-20"	30+80.00	95	A-20"	31+04.00	1133.0	1115.50	24.00	17.5	420
95	95	A-20"	31+04.00	96	A-20"	31+28.00	1133.0	1115.50	24.00	17.5	420
96	96	A-20"	31+28.00	97	A-20"	31+52.00	1133.0	1115.50	24.00	17.5	420
97	97	A-20"	31+52.00	98	A-20"	31+76.00	1133.0	1115.00	24.00	18.0	432
98	98	A-20"	31+76.00	99	A-20"	32+00.00	1133.0	1115.00	24.00	18.0	432
99	99	A-20"	32+00.00	100	A-20"	32+24.00	1134.0	1116.00	24.00	18.0	432
100	100	A-20"	32+24.00	101	A-20"	32+48.00	1134.0	1116.50	24.00	17.5	420
101	101	A-20"	32+48.00	102	B-20"	32+72.00	1134.0	1116.50	24.00	17.5	420
										TOTAL	41282

CALCULATED RFV
CHECKED TJW

SUMMARY - NOISE WALL K

CALCULATIONS

SUM-77 / 277 / 224

1126
1288

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NOISE WALL K			
DRILLED SHAFT NO.	WORKPOINT STATION	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)
1	10+00.00	1056.27	7
2	10+12.00	1056.22	7
3	10+24.00	1056.69	7
4	10+36.00	1057.07	10
5	10+60.00	1057.57	10
6	10+84.00	1058.07	10
7	11+08.00	1059.07	10
8	11+32.00	1059.57	10
9	11+56.00	1060.57	10
10	11+80.00	1061.57	10
11	12+04.00	1062.07	10
12	12+28.00	1063.07	10
13	12+52.00	1063.57	10
14	12+76.00	1064.57	10
15	13+00.00	1065.55	10
16	13+24.00	1066.57	10
17	13+48.00	1067.07	10
18	13+72.00	1068.07	15
19	13+96.00	1069.07	15
20	14+20.00	1070.05	15
21	14+44.00	1071.07	15
22	14+65.00	1071.57	15
23	14+86.00	1072.07	15
24	15+07.00	1072.57	15
25	15+28.00	1073.57	15
26	15+52.00	1074.07	15
27	15+76.00	1075.07	15
28	16+00.00	1075.57	15
29	16+24.00	1076.07	15
30	16+48.00	1076.57	15
31	16+72.00	1077.57	15
32	16+96.00	1078.07	15
33	17+20.00	1078.57	15
34	17+44.00	1079.07	15
35	17+68.00	1080.07	15
36	17+92.00	1080.57	15
37	18+16.00	1081.07	15
38	18+32.00	1081.57	15
39	18+48.00	1083.07	15
40	18+60.00	1084.57	10.5
41	18+72.00	1085.57	10.5
42	18+84.00	1086.57	10.5
43	18+96.00	1088.07	10.5
44	19+08.00	1089.07	10.5
45	19+20.00	1090.57	14*
46	19+44.00	1091.57	14*
47	19+68.00	1093.07	14*
48	19+92.00	1093.57	16*
49	20+16.00	1094.57	16*
50	20+40.00	1095.57	16*

NOISE WALL K			
DRILLED SHAFT NO.	WORKPOINT STATION	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)
51	20+64.00	1096.57	18*
52	20+88.00	1097.07	18*
53	21+12.00	1098.07	14*
54	21+36.00	1099.07	14*
55	21+60.00	1099.57	14*
56	21+84.00	1100.07	14*
57	22+00.00	1100.07	14*
58	22+16.00	1100.57	14*
59	22+40.00	1101.07	14*
60	22+64.00	1101.07	14*
61	22+88.00	1101.07	14*
62	23+12.00	1101.07	14*
63	23+36.00	1101.07	14*
64	23+60.00	1101.07	14*
65	23+84.00	1101.57	14*
66	24+08.00	1102.07	14*
67	24+32.00	1102.57	14*
68	24+56.00	1102.57	14*
69	24+80.00	1103.07	14*
70	25+04.00	1103.57	14*
71	25+28.00	1105.07	19.5*
72	25+52.00	1106.07	19.5*
73	25+76.00	1107.57	19.5*
74	26+00.00	1108.57	19.5*
75	26+24.00	1109.07	19.5*
76	26+48.00	1109.57	14.5
77	26+72.00	1110.07	14.5
78	26+96.00	1110.07	9.5
79	27+20.00	1110.57	9.5
80	27+44.00	1111.07	9.5
81	27+68.00	1111.07	9.5
82	27+92.00	1111.57	9.5
83	28+16.00	1112.07	9.5
84	28+40.00	1112.07	13
85	28+64.00	1112.07	13
86	28+88.00	1112.07	13
87	29+12.00	1112.07	13
88	29+36.00	1112.57	13
89	29+60.00	1113.07	13
90	29+84.00	1113.57	13
91	30+08.00	1114.07	9
92	30+32.00	1114.57	9
93	30+56.00	1115.07	9
94	30+80.00	1115.07	9
95	31+04.00	1115.07	9
96	31+28.00	1115.07	9
97	31+52.00	1114.57	9
98	31+76.00	1114.57	21*
99	32+00.00	1114.57	21*
100	32+24.00	1115.57	21*
101	32+48.00	1116.19	21*
102	32+72.00	1116.26	21*

LEGEND:

* INCLUDES 5' ROCK SOCKET

CALCULATED RFV
CHECKED TJW

DATA TABLES - NOISE WALL K

SUM-77/277/224

1127
1288

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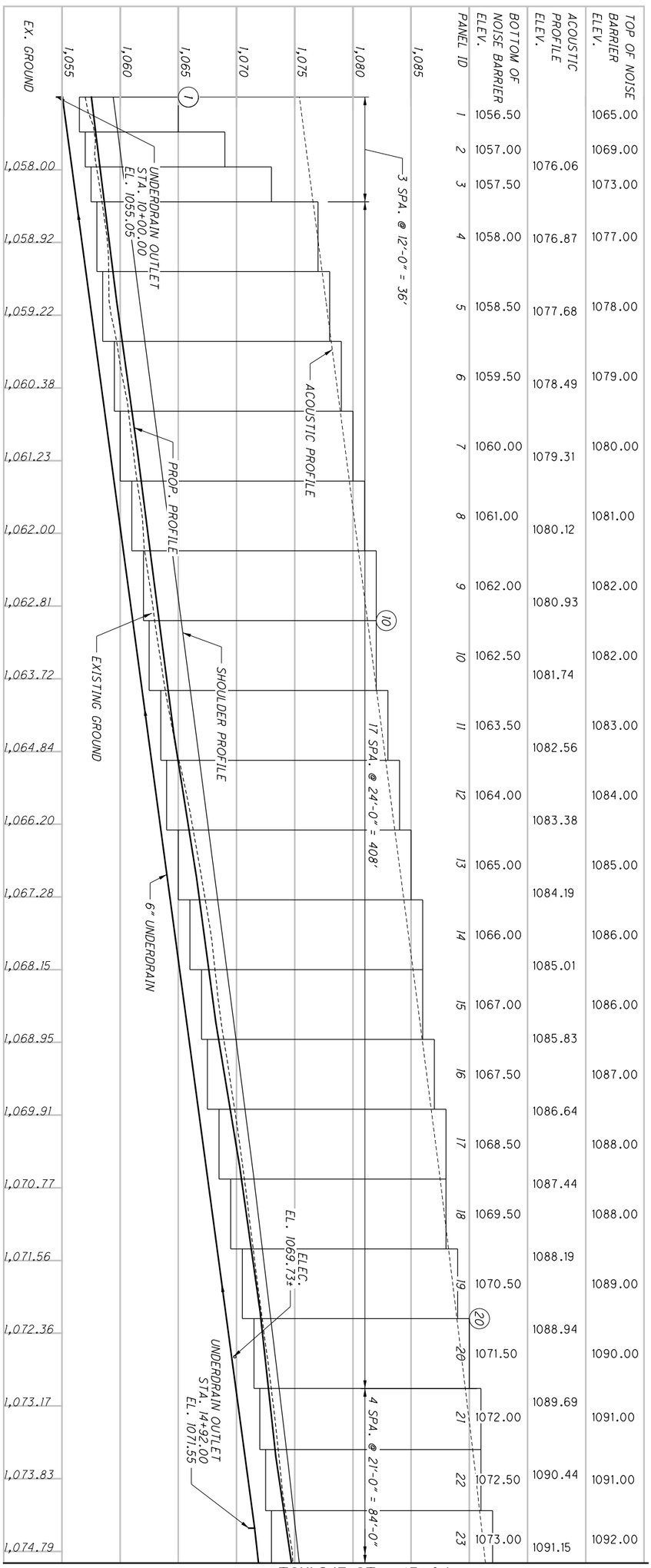
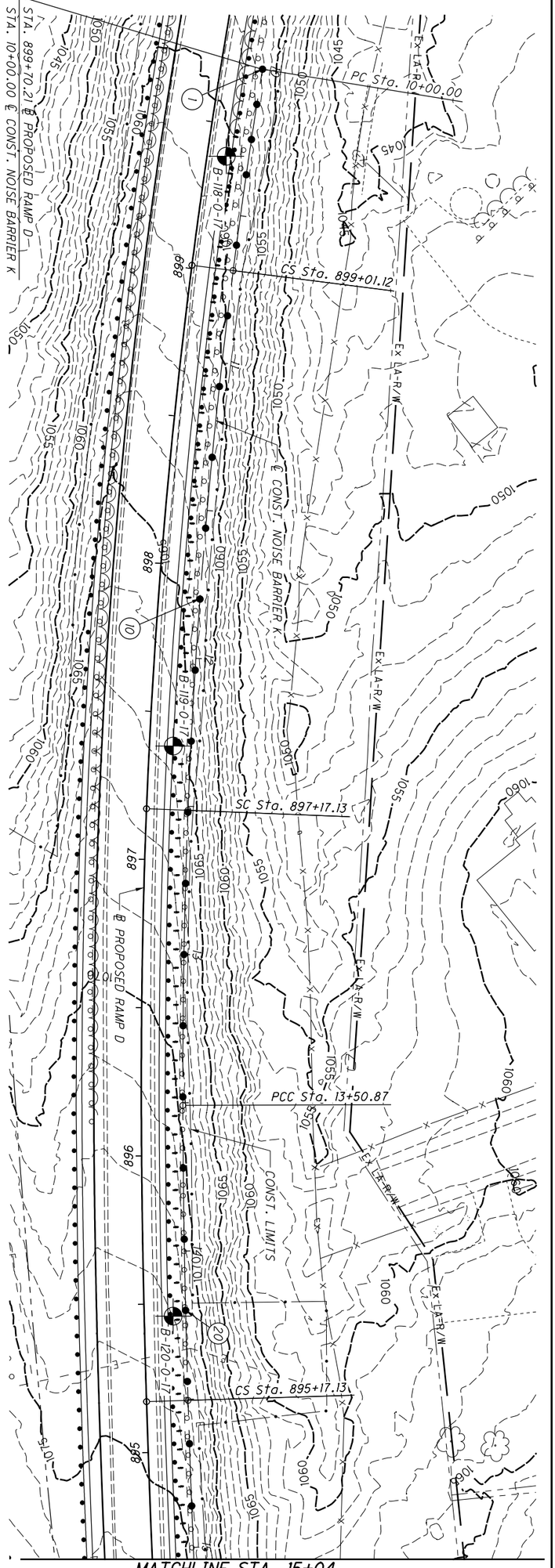


PANEL ID	BOTTOM OF NOISE BARRIER ELEV.	ACOUSTIC PROFILE ELEV.	TOP OF NOISE BARRIER ELEV.
1	1056.50		1065.00
2	1057.00	1076.06	1069.00
3	1057.50		1073.00
4	1058.00	1076.87	1077.00
5	1058.50	1077.68	1078.00
6	1059.50	1078.49	1079.00
7	1060.00	1079.31	1080.00
8	1061.00	1080.12	1081.00
9	1062.00	1080.93	1082.00
10	1062.50	1081.74	1082.00
11	1063.50	1082.56	1083.00
12	1064.00	1083.38	1084.00
13	1065.00	1084.19	1085.00
14	1066.00	1085.01	1086.00
15	1067.00	1085.83	1086.00
16	1067.50	1086.64	1087.00
17	1068.50	1087.44	1088.00
18	1069.50	1088.19	1088.00
19	1070.50	1088.94	1089.00
20	1071.50	1089.69	1090.00
21	1072.00	1090.44	1091.00
22	1072.50	1091.15	1091.00
23	1073.00		1092.00



BORING I.D. NO.	APPROX. TOP OF ROCK ELEV. T/ROCK ELEV.
B-118-0-17	N/A
B-119-0-17	N/A
B-120-0-17	N/A
B-121-0-17	N/A
B-122-0-17	N/A
B-123-0-17	1084.2±
B-124-0-17	1092.2±
B-125-0-17	1095.4±
B-126-0-17	1094.3±
B-127-0-17	1096.9±
B-128-0-17	1110.2±
B-129-0-17	N/A
B-130-0-17	1099.9±

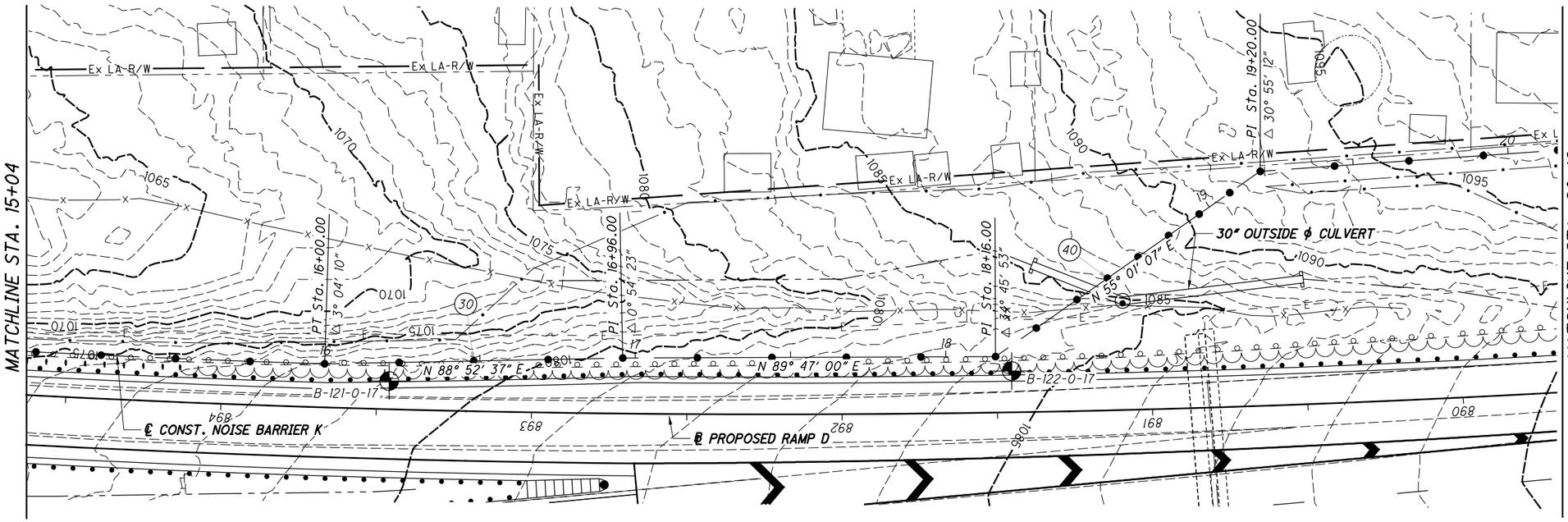
1128
1288

SUM-77/277/224

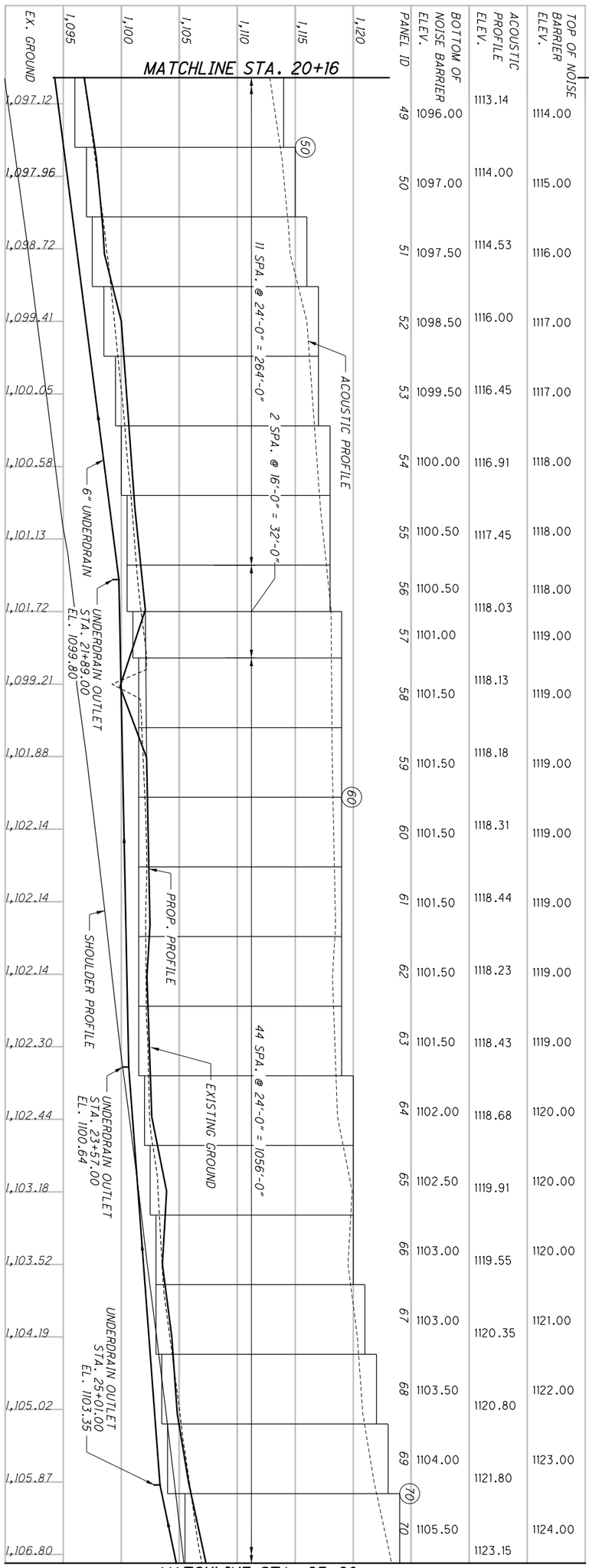
PLAN AND PROFILE - NOISE BARRIER K
BEGIN TO STA. 15+04

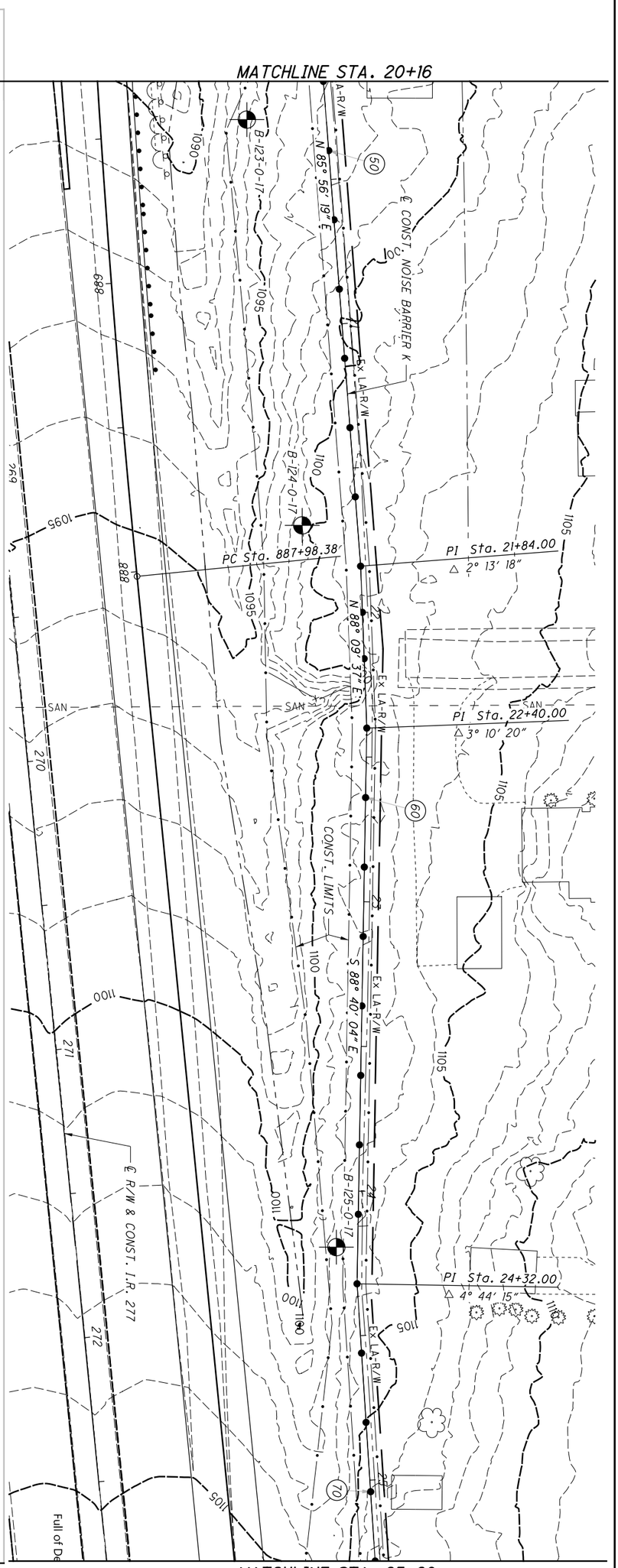
CALCULATED RHC
CHECKED DGN

0 20
10 40
HORIZONTAL SCALE IN FEET

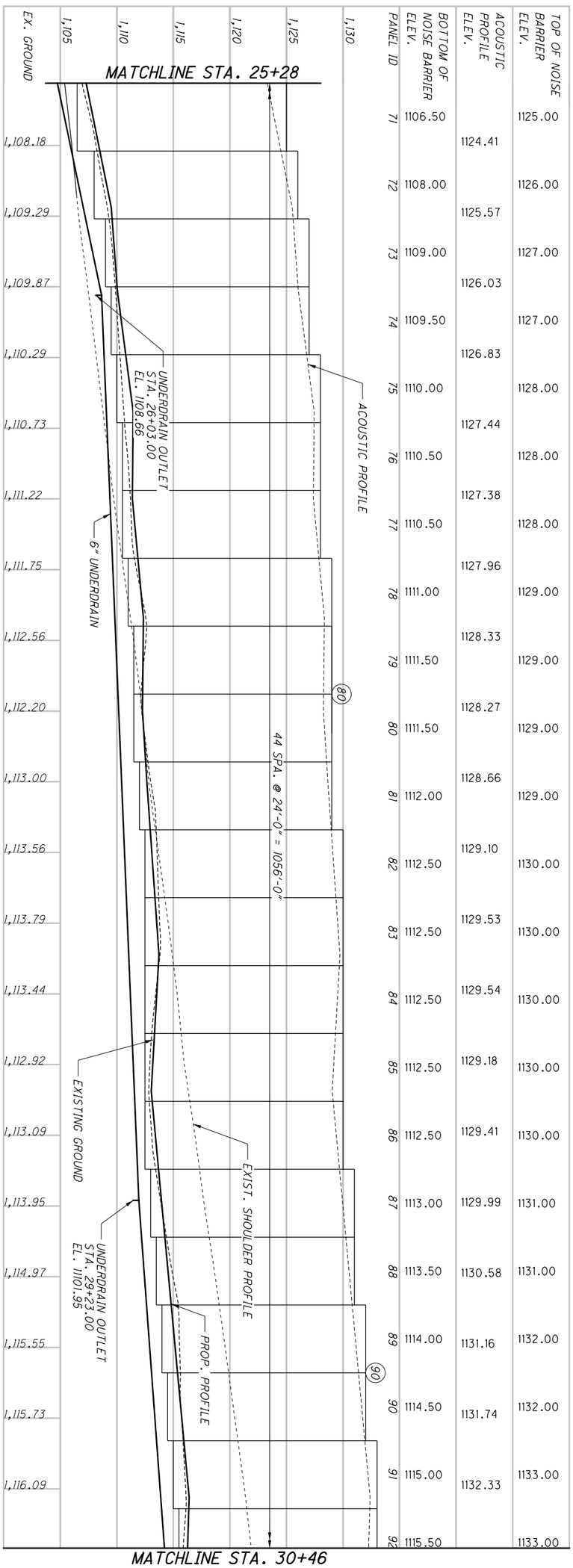

MATCHLINE STA. 15+04
MATCHLINE STA. 20+16
Ex LA-R/W
PT Sta. 16+00.00
Δ 3° 04' 10"
PI Sta. 16+96.00
Δ 10° 54' 23"
PI Sta. 18+16.00
Δ 34° 45' 53"
PI Sta. 19+20.00
Δ 30° 55' 12"
N 88° 52' 37" E
N 89° 47' 00" E
N 55° 01' 07" E
30" OUTSIDE ϕ CULVERT
℄ CONST. NOISE BARRIER K
℄ PROPOSED RAMP D
B-121-0-17
B-122-0-17

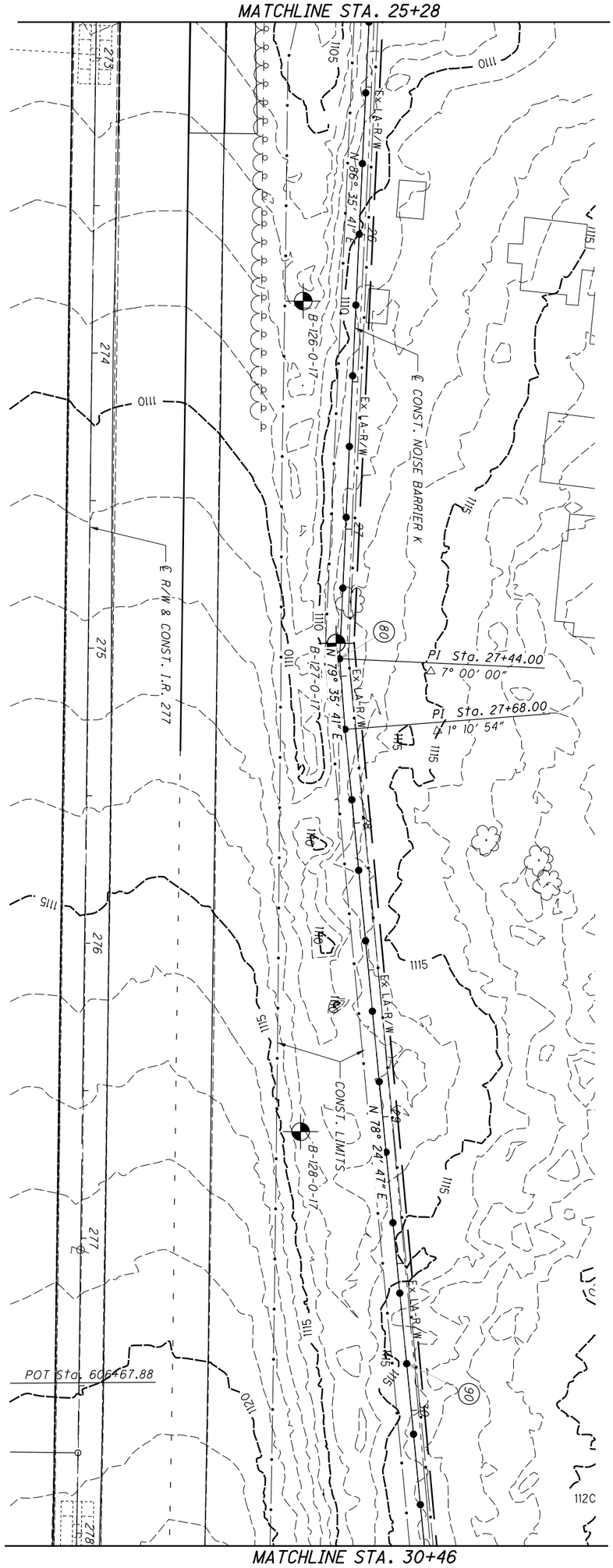
| | | |



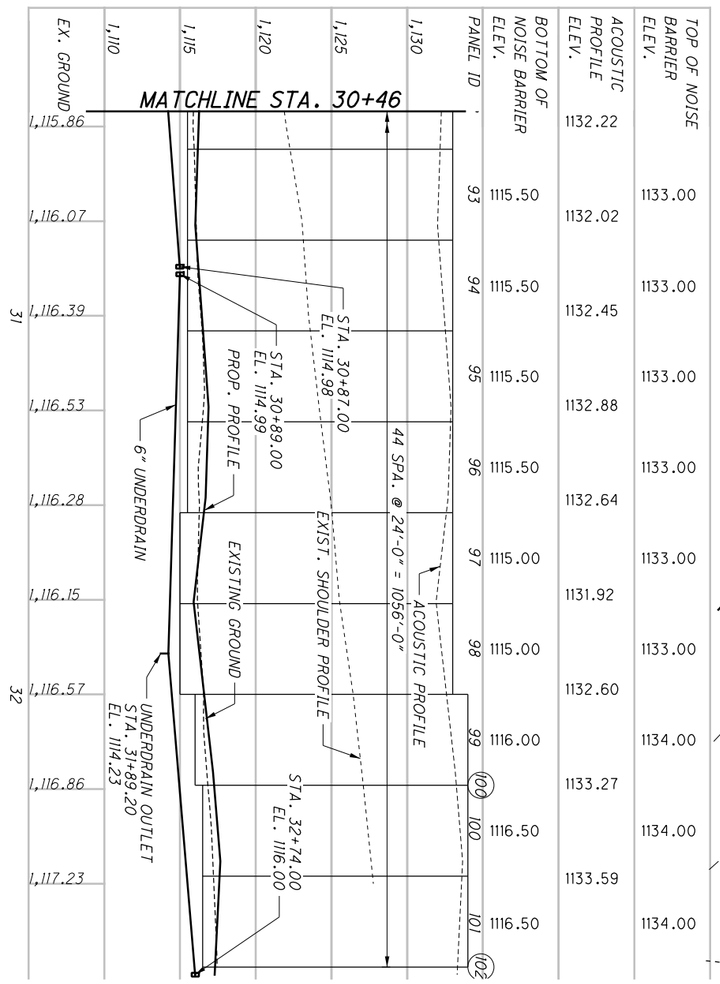


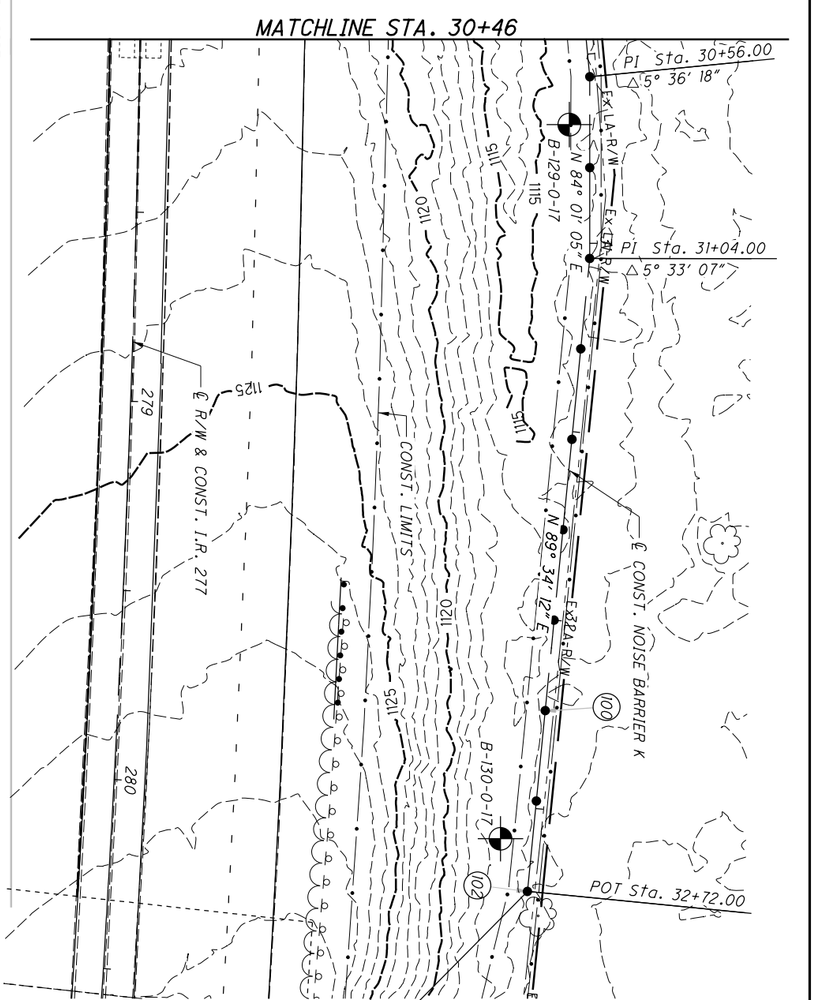
1130 / 1288	SUM-77/277/224	PLAN AND PROFILE - NOISE BARRIER K STA. 20+16 TO STA. 25+28	CALCULATED RHC CHECKED DGN	0 20 10 40 HORIZONTAL SCALE IN FEET

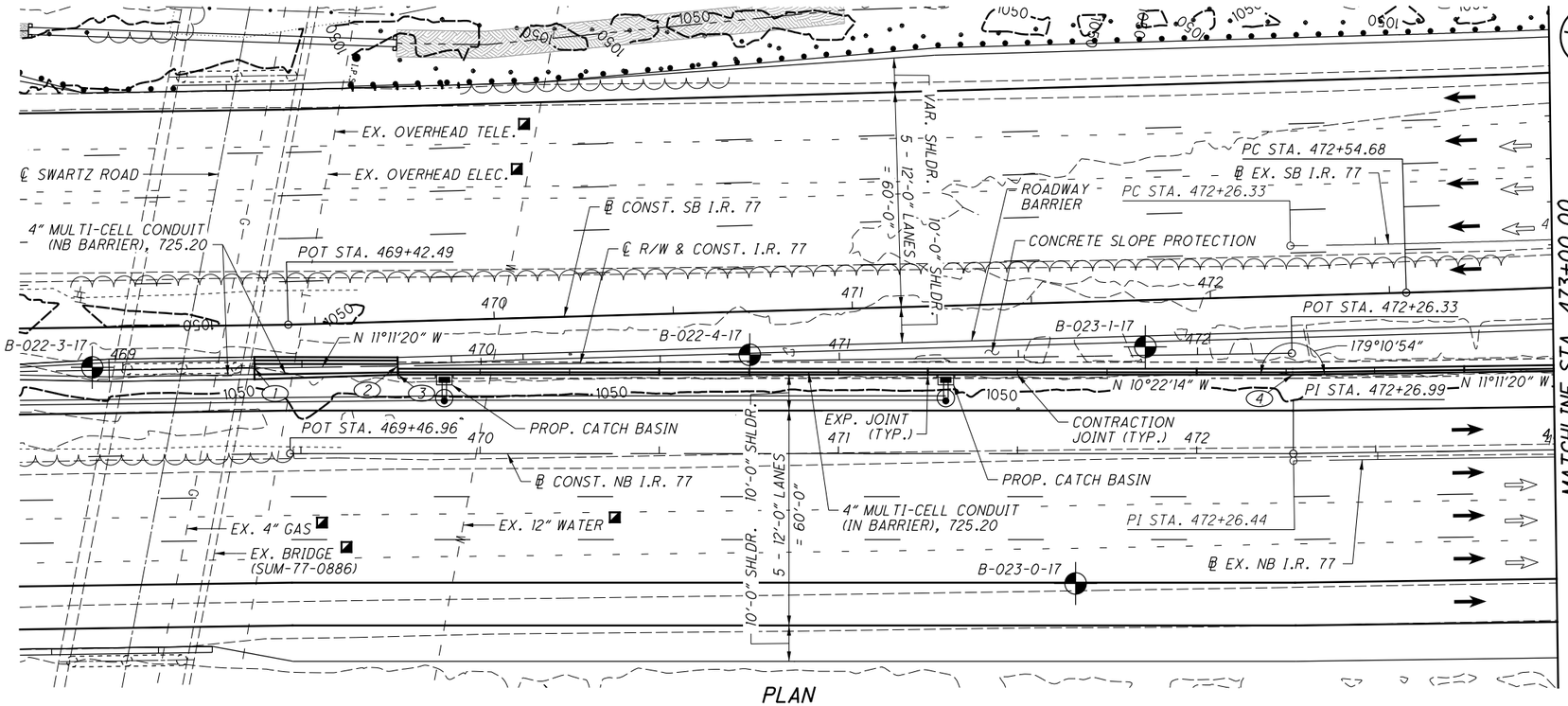




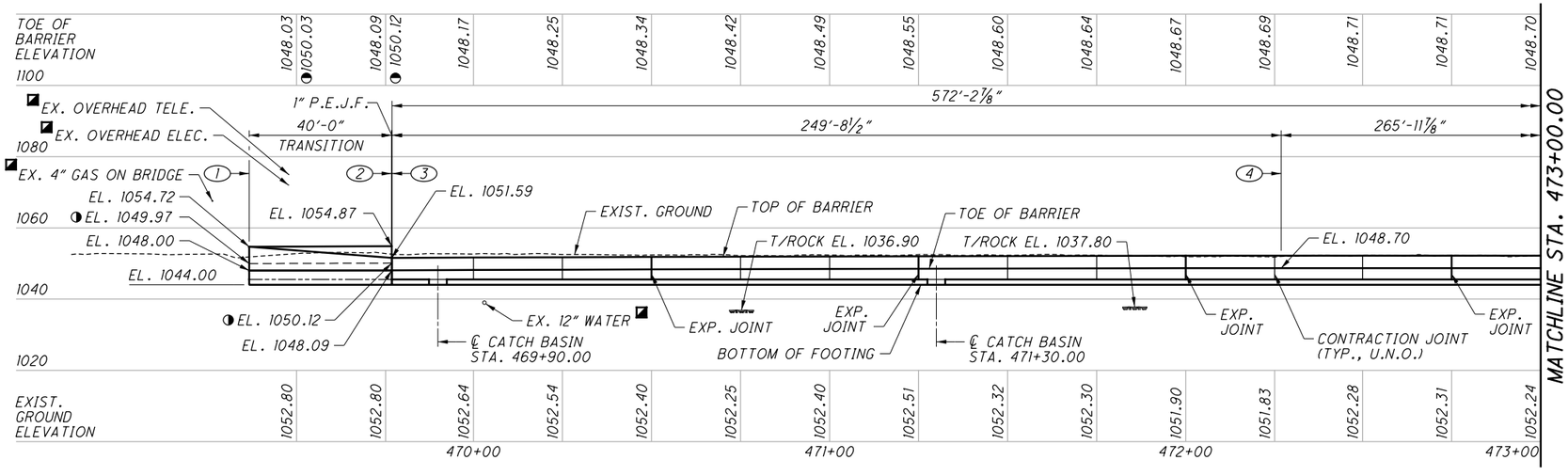
1131 / 1288	SUM-77/277/224	PLAN AND PROFILE - NOISE BARRIER K STA. 125+28 TO STA. 130+46	CALCULATED RHC CHECKED DGN	0 20 10 40 HORIZONTAL SCALE IN FEET


MATCHLINE STA. 30+46
EX. GROUND
1,110
1,115
1,120
1,125
1,130
PANEL ID
BOTTOM OF NOISE BARRIER ELEV.
ACOUSTIC PROFILE ELEV.
TOP OF NOISE BARRIER ELEV.
1,115.86
1,116.07
1,116.39
1,116.53
1,116.28
1,116.15
1,116.57
1,116.86
1,117.23
31
32
93 1115.50 1132.22 1133.00
94 1115.50 1132.02 1133.00
95 1115.50 1132.45 1133.00
96 1115.50 1132.88 1133.00
97 1115.00 1132.64 1133.00
98 1115.00 1131.92 1133.00
99 1116.00 1132.60 1134.00
100 100 1116.50 1133.27 1134.00
101 1116.50 1133.59 1134.00
102
6" UNDERDRAIN
UNDERDRAIN OUTLET STA. 31+89.20 EL. 1114.23
STA. 30+87.00 EL. 1114.98
STA. 30+89.00 EL. 1114.99
PROP. PROFILE
EXISTING GROUND
EXIST. SHOULDER PROFILE
STA. 32+74.00 EL. 1116.00
44 SPA. @ 24'-0" = 1056'-0"
ACOUSTIC PROFILE


MATCHLINE STA. 30+46
PI Sta. 30+56.00
5° 36' 18"
PI Sta. 31+04.00
5° 33' 07"
Ex LA R/W
Ex ORR R/W
N 84° 01' 05" E
N 89° 34' 12" E
B-129-0-17
B-130-0-17
1115
1120
1125
279
280
℄ R/W & CONST. I.R. 277
CONST. LIMITS
℄ CONST. NOISE BARRIER K
100
102
POT Sta. 32+72.00
STA. 280+25.13 ℄ R/W & CONST. I.R. 277 =
STA. 32+72.00 ℄ CONST. NOISE BARRIER K



PLAN



ELEVATION ALONG WALL REFERENCE LINE

BRIDGE AND ADJACENT BARRIERS NOT SHOWN FOR CLARITY

BENCHMARK DATA

POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
CP05	493895.1420	2245390.8980	1073.53	CONC. MONUMENT
CP06	493906.9643	2244750.3816	1090.46	CONC. MONUMENT
CP07	498481.9448	2243140.4162	1064.39	CONC. MONUMENT
CP08	499070.7218	2243262.6440	1076.40	CONC. MONUMENT

FOR ADDITIONAL BENCHMARK INFORMATION, SEE ROADWAY SHEETS.

WALL REFERENCE POINT	STATION	OFFSET	NOTES
(1)	STA. 469+36.72 ▲	0.00' ▲	BEGIN TRANSITION
(2)	STA. 469+76.72 ▲	0.00' ▲	END TRANSITION
(3)	STA. 469+77.12	22.00' LT.	BEGIN WALL SECTION
(4)	STA. 472+26.83	22.00' LT.	ANGLE POINT

LEGEND:

(#) WALL REFERENCE POINT

▲ STATION & OFFSET GIVEN TO ℄ R/W & CONST. I.R. 77

◑ SB I.R. 77 TOE OF BARRIER ELEVATION

◪ TO REMAIN

PROJECT BORING LOCATION

NOTES:

1. STATIONS AND OFFSETS ARE GIVEN TO ℄ CONST. NB I.R. 77 UNLESS NOTED OTHERWISE.
2. ALL TOE OF BARRIER ELEVATIONS ARE FOR NB I.R. 77 UNLESS NOTED OTHERWISE.
3. TRANSITION DIMENSIONS ARE GIVEN ALONG ℄ R/W & CONST. I.R. 77. WALL DIMENSIONS ARE GIVEN ALONG TOE OF BARRIER.
4. FOR MATCHLINE, SEE SHEET 2/12.
5. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

DESIGN AGENCY
GPD GROUP
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DESIGNED	DRAWN	REVIEWED	DATE
MOJ	MOJ	DGN	1-19-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RHC			

SITE PLAN - 1

CAST-IN-PLACE REINFORCED CONCRETE RETAINING WALL 1
I-77 MEDIAN BARRIER BETWEEN SWARTZ ROAD AND I-77/I-277/US-224 INTERCHANGE

SUM-77/277/224
VARIOUS
PID No. 106002

1 / 12

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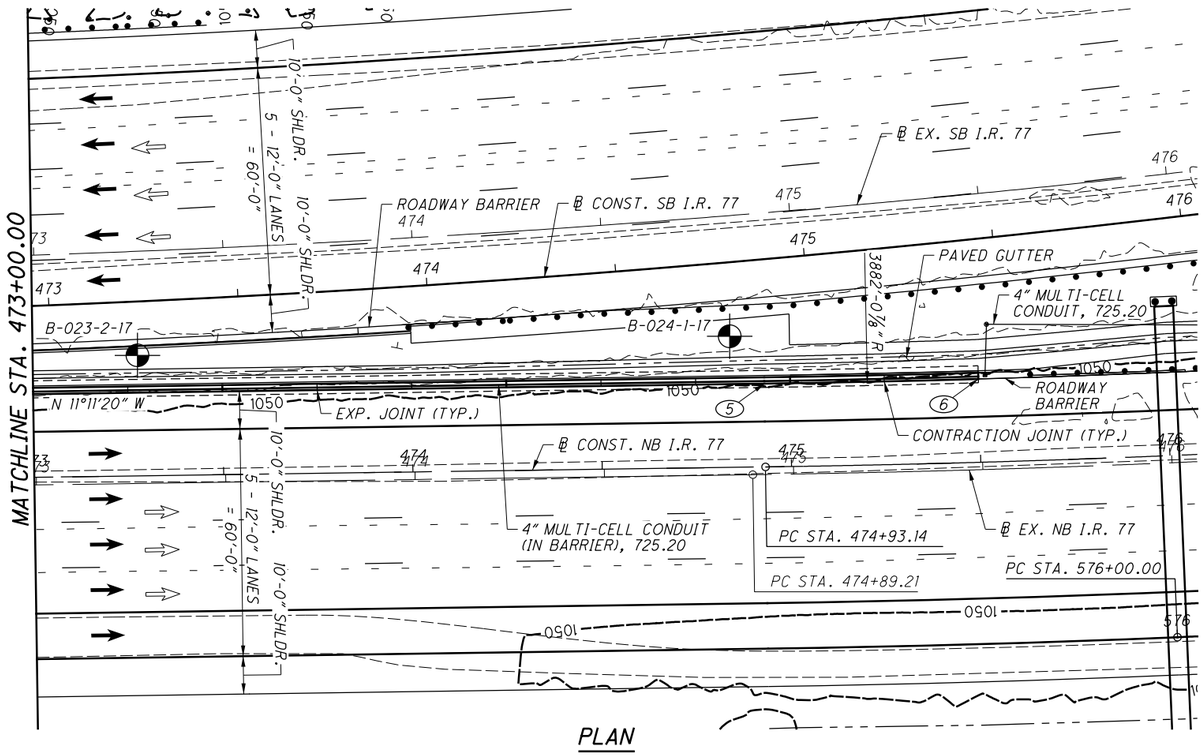
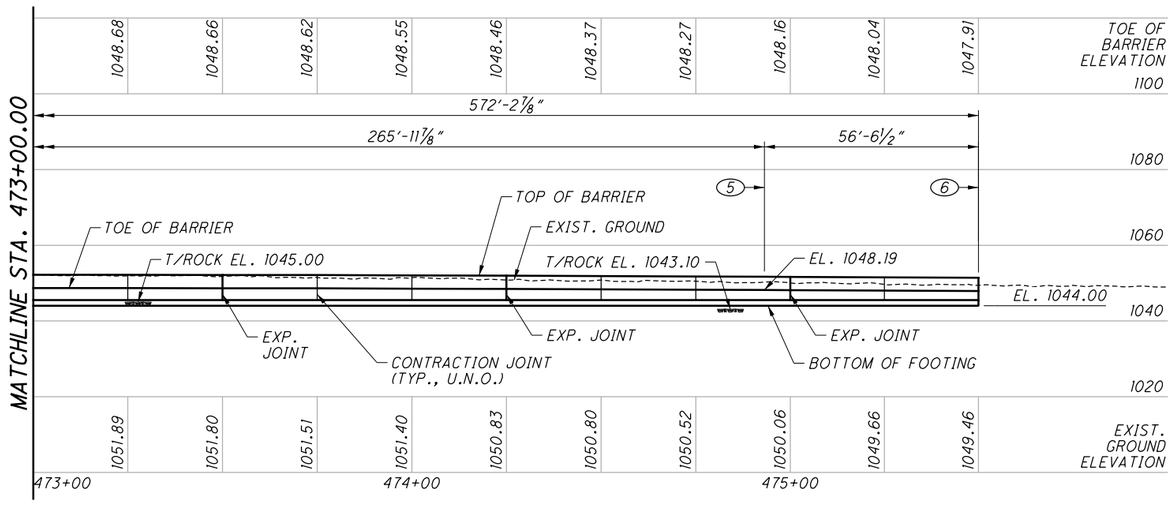


PLAN



ELEVATION ALONG WALL REFERENCE LINE

ADJACENT BARRIER NOT SHOWN FOR CLARITY

WALL REFERENCE POINT	STATION	OFFSET	NOTES
(5)	STA. 474+93.14	22.00' LT.	BEGIN CURVE
(6)	STA. 475+50.00	22.00' LT.	END CURVE & END WALL

LEGEND:

(#) WALL REFERENCE POINT

PROJECT BORING LOCATION

NOTES:

1. STATIONS AND OFFSETS ARE GIVEN TO ℄ CONST. NB I.R. 77.
2. WALL DIMENSIONS ARE GIVEN ALONG TOE OF BARRIER.
4. FOR MATCHLINE, SEE SHEET 1/12.
5. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

DESIGN AGENCY
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
RHC			

SITE PLAN - 2
CAST-IN-PLACE REINFORCED CONCRETE RETAINING WALL 1
I-77 MEDIAN BARRIER BETWEEN SWARTZ ROAD AND I-77/I-277/US-224 INTERCHANGE

SUM-77/277/224
VARIOUS
PID No. 106002

2 / 12

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DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 8TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

STANDARD DRAWINGS AND STANDARD SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD DRAWING:

SBR-1-20 REVISED 7-17-20

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION:

SS800 DATED 1-15-21

OPERATIONAL IMPORTANCE:

A LOAD MODIFIER OF 1.00 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 DATA:

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (WALL)
CONCRETE CLASS QC4 - COMPRESSIVE STRENGTH 4.0 KSI (WALL)
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

FOUNDATION BEARING RESISTANCE:

WALL FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM SERVICE LIMIT STATE BEARING PRESSURE OF 1.0 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LIMIT STATE BEARING PRESSURE OF 1.3 KIPS PER SQUARE FOOT. THE MINIMUM FACTORED BEARING RESISTANCE IS 10.2 KIPS PER SQUARE FOOT.

ITEM 511 - CLASS QC1 CONCRETE WITH QC/QA, FOOTING, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ITEM 511, INSTALL REFERENCE MONUMENTS IN THE RETAINING WALL FOOTING AT THE LOCATIONS SHOWN IN THE TABLE ON THIS SHEET. THE REFERENCE MONUMENT SHALL CONSIST OF A #8, OR LARGER, EPOXY COATED REBAR EMBEDDED AT LEAST 6" INTO THE FOOTING AND EXTENDED VERTICALLY 4 TO 6 INCHES ABOVE THE TOP OF THE FOOTING. INSTALL A SIX-INCH DIAMETER, SCHEDULE 40, PLASTIC PIPE AROUND THE REFERENCE MONUMENT. CENTER THE PIPE ON THE REFERENCE MONUMENT AND PLACE THE PIPE VERTICAL WITH ITS TOP AT THE FINISHED GRADE. THE PIPE SHALL HAVE A REMOVABLE, SCHEDULE 40, PLASTIC CAP. PERMANENTLY ATTACH THE BOTTOM OF THE PIPE TO THE TOP OF THE FOOTING.

ESTABLISH A BENCHMARK TO DETERMINE THE ELEVATIONS OF THE REFERENCE MONUMENTS AT VARIOUS MONITORING PERIODS THROUGHOUT THE LENGTH OF THE CONSTRUCTION PROJECT. THE BENCHMARK SHALL BE THE SAME THROUGHOUT THE PROJECT AND SHALL BE INDEPENDENT OF ALL STRUCTURES.

RECORD THE ELEVATION OF EACH REFERENCE MONUMENT AT EACH MONITORING PERIOD SHOWN IN THE TABLE.

THE ORIGINAL COMPLETED TABLES WILL BECOME PART OF THE DISTRICT'S PROJECT PLAN RECORDS.

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

THE URETHANE TOP COAT SHALL BE TINTED TO MEET AMS-STD-595A COLOR No. 17778 - LIGHT NEUTRAL.

ABBREVIATIONS:

BOT.	BOTTOM
B.S.	BOTH SIDES
BTWN.	BETWEEN
C.J.	CONSTRUCTION JOINT
CLR.	CLEAR
CONST.	CONSTRUCTION
DIA.	DIAMETER
EL.	ELEVATION
EQ.	EQUAL
EX. OR EXIST.	EXISTING
F.S.	FAR SIDE
GFRP	GLASS FIBER REINFORCED POLYMER
MAX.	MAXIMUM
MIN.	MINIMUM
NB	NORTHBOUND
NO.	NUMBER
N.S.	NEAR SIDE
P.E.J.F.	PREFORMED EXPANSION JONT FILLER
SB	SOUTHBOUND
SER.	SERIES
SPA.	SPACES OR SPACING
STA.	STATION
STD. DWG.	STANDARD DRAWING
T&B	TOP AND BOTTOM
TYP.	TYPICAL

PROJECT NUMBER:					SUM-77/277/224-VARIOUS, PID: 106002
BENCHMARK LOCATION:					
C.I.P. RETAINING WALL 1:	4'-6" WIDE FOOTING				
MAX. FACTORED BEARING PRESSURE:	1.3 KIPS PER SQUARE FOOT				
MONITORING PERIOD:	MONUMENT #1 ALIGNMENT: C/L R/W & CONST. I.R. 77 STA. 469+78.12 OFFSET: 24.58' LT.	MONUMENT #2 ALIGNMENT: C/L R/W & CONST. I.R. 77 STA. 470+49.00 OFFSET: 24.58' LT.	MONUMENT #3 ALIGNMENT: C/L R/W & CONST. I.R. 77 STA. 471+24.00 OFFSET: 24.58' LT.	MONUMENT #4 ALIGNMENT: C/L R/W & CONST. I.R. 77 STA. 471+99.00 OFFSET: 24.58' LT.	MONUMENT #5 ALIGNMENT: C/L R/W & CONST. I.R. 77 STA. 472+74.00 OFFSET: 24.58' LT.
AFTER FOOTING CONCRETE IS PLACED:					
AFTER STEM CONCRETE IS PLACED:					
AFTER BARRIER CONCRETE IS PLACED:					
PROJECT COMPLETION:					

PROJECT NUMBER:				SUM-77/277/224-VARIOUS, PID: 106002
BENCHMARK LOCATION:				
C.I.P. RETAINING WALL 1:	4'-6" WIDE FOOTING			
MAX. FACTORED BEARING PRESSURE:	1.3 KIPS PER SQUARE FOOT			
MONITORING PERIOD:	MONUMENT #6 ALIGNMENT: C/L R/W & CONST. I.R. 77 STA. 473+49.00 OFFSET: 24.58' LT.	MONUMENT #7 ALIGNMENT: C/L R/W & CONST. I.R. 77 STA. 474+24.00 OFFSET: 24.58' LT.	MONUMENT #8 ALIGNMENT: C/L R/W & CONST. I.R. 77 STA. 474+98.99 OFFSET: 24.58' LT.	MONUMENT #9 ALIGNMENT: C/L R/W & CONST. I.R. 77 STA. 475+48.99 OFFSET: 24.58' LT.
AFTER FOOTING CONCRETE IS PLACED:				
AFTER STEM CONCRETE IS PLACED:				
AFTER BARRIER CONCRETE IS PLACED:				
PROJECT COMPLETION:				

DESIGN AGENCY
GPD GROUP
Glaus, Pyle, Schomer, Burns & DeHaven, Inc.
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DESIGNED MOJ | DRAWN MOJ | REVIEWED DGN | DATE 1-19-21
CHECKED RHC | REVISED | STRUCTURE FILE NUMBER

GENERAL NOTES

CAST-IN-PLACE REINFORCED CONCRETE RETAINING WALL 1
I-77 MEDIAN BARRIER BETWEEN SWARTZ ROAD AND I-77/I-277/US-224 INTERCHANGE

SUM-77/277/224
VARIOUS
PID No. 106002

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ESTIMATED QUANTITIES

CALCULATED BY: MOJ DATE: 12-28-2020
CHECKED BY: JJB DATE: 1-12-2020

ITEM	EXT.	TOTAL 02/IMS/PV	UNIT	DESCRIPTION	AS PER PLAN REFERENCE SHEET
503	21100	651	CY	UNCLASSIFIED EXCAVATION	
503	31100	13	CY	ROCK EXCAVATION	
509	10000	43,590	LB	EPOXY COATED REINFORCING STEEL	
509	30020	8,703	FT	NO. 4 GFRP DEFORMED BARS	
511	45600	62	CY	CLASS QC4 MASS CONCRETE, SUBSTRUCTURE	
511	46012	205	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING	
511	46513	155	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING, AS PER PLAN	3
512	10100	410	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
512	33000	40	SY	TYPE 2 WATERPROOFING	
516	13600	78	SF	1" PREFORMED EXPANSION JOINT FILLER	

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REVIEWED	DATE	
DGN	1-19-21	STRUCTURE FILE NUMBER
DRAWN		REVISED
MOJ		
DESIGNED		CHECKED
MOJ		JJB

ESTIMATED QUANTITIES
CAST-IN-PLACE REINFORCED CONCRETE RETAINING WALL 1
I-77 MEDIAN BARRIER BETWEEN SWARTZ ROAD AND I-77/I-277/US-224 INTERCHANGE

SUM-77/277/224
VARIOUS
PID No. 106002

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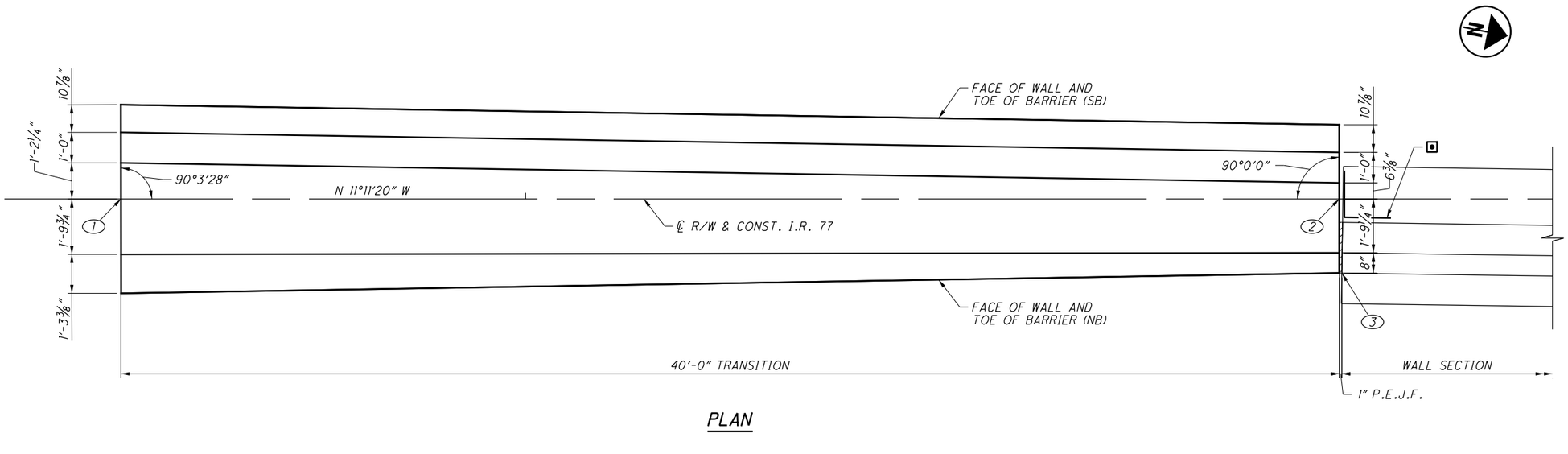
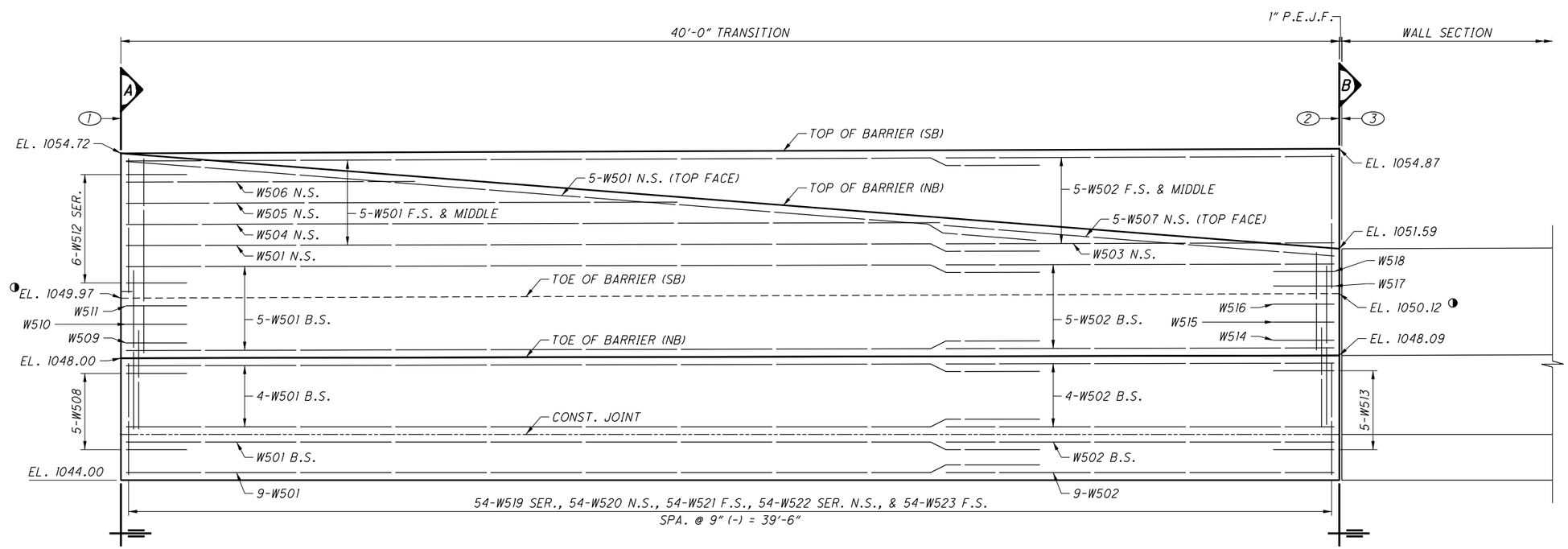


PLAN



ELEVATION

LEGEND:

- (#) WALL REFERENCE POINT (SEE SITE PLAN FOR ADDITIONAL DETAILS)
- ⊡ TYPE 2 WATERPROOFING: 3'-0" WIDE STRIP CENTERED ON JOINT AND EXTENDING VERTICALLY FROM THE TOP OF FOOTING TO 6" BELOW GRADE
- ◑ SB I.R.77 TOE OF BARRIER ELEVATION

NOTES:

1. FOR WALL SECTION DETAILS, SEE SHEET 6/12.
2. FOR SECTIONS A AND B, SEE SHEET 10/12.
3. MINIMUM HORIZONTAL REINFORCING LAP LENGTHS ARE AS FOLLOWS:

NO. 5 BARS	3'-1"

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MOJ	MOJ	DGN	1-19-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RHC			

TRANSITION PLAN & ELEVATION
CAST-IN-PLACE REINFORCED CONCRETE RETAINING WALL 1
I-77 MEDIAN BARRIER BETWEEN SWARTZ ROAD AND I-77/I-277/US-224 INTERCHANGE

SUM-77/277/224
VARIOUS
PID No. 106002

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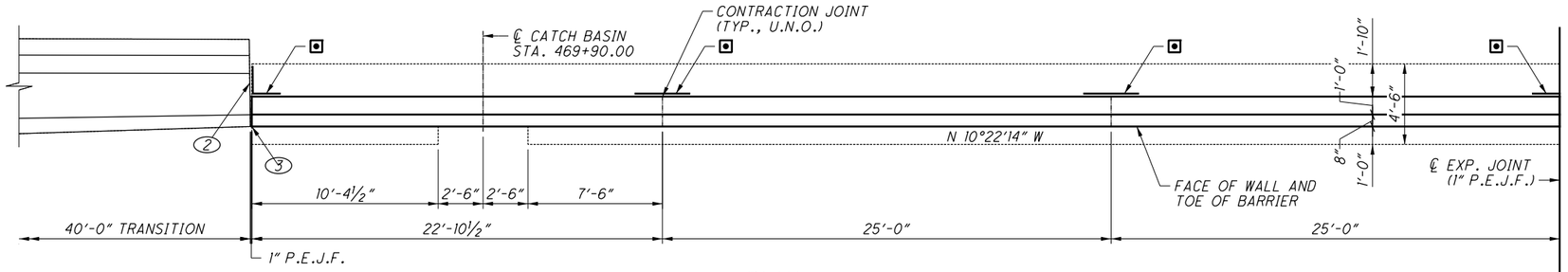

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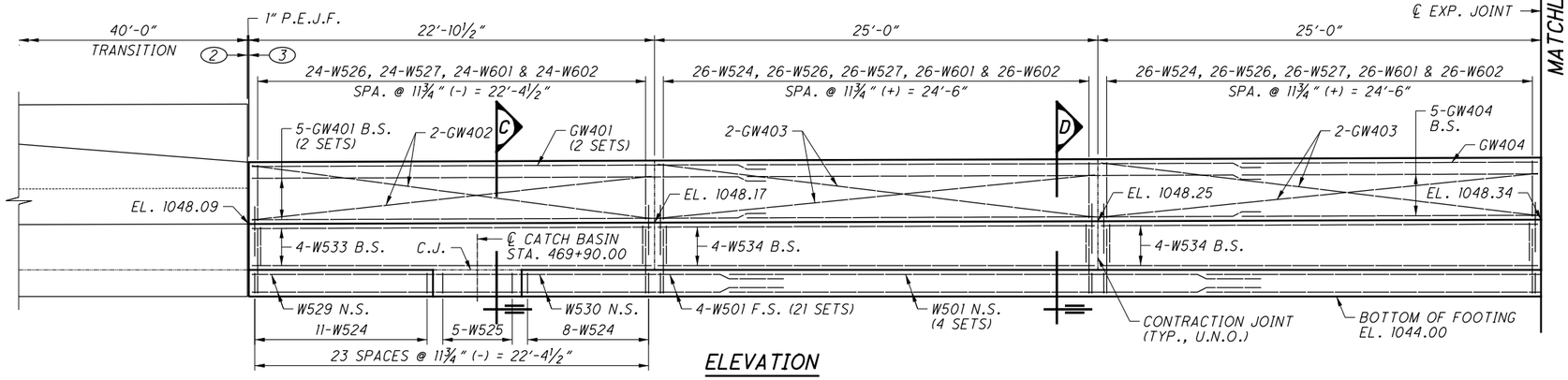
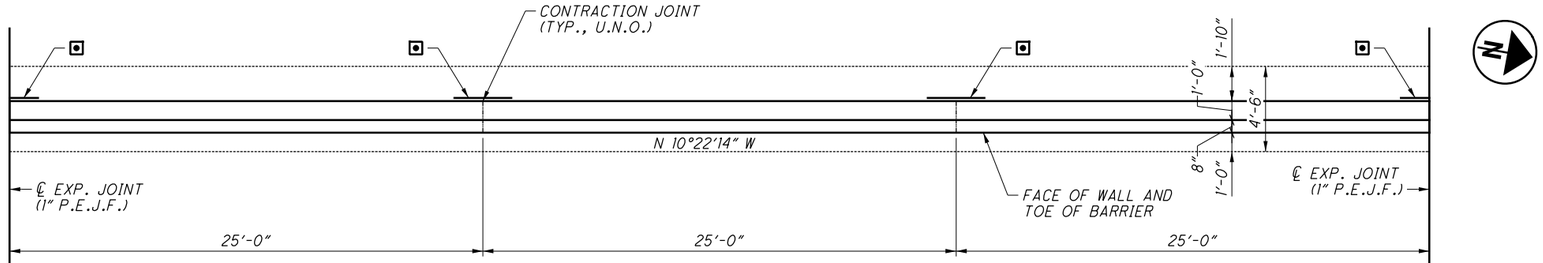
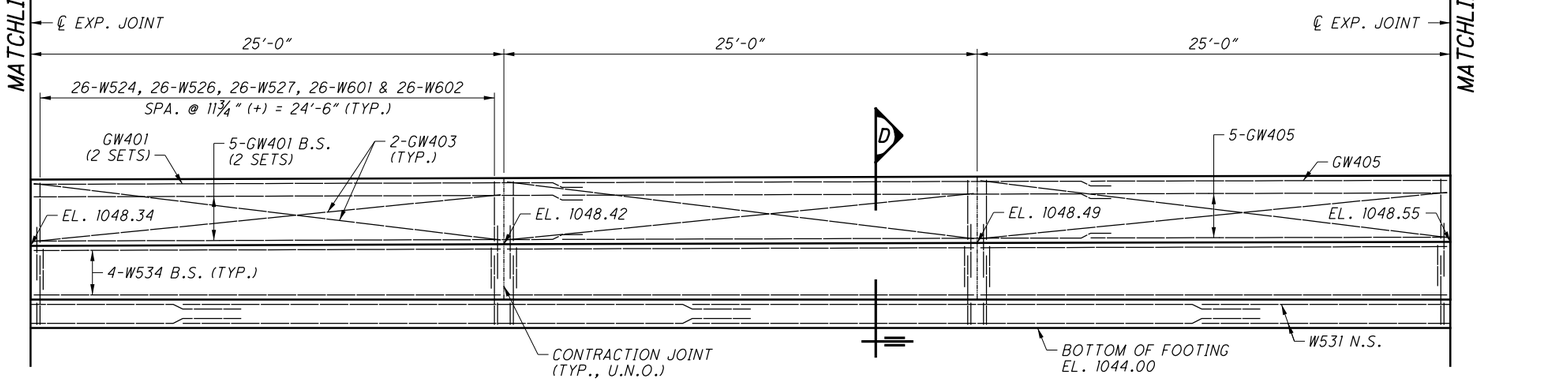


ELEVATION



PLAN



ELEVATION

LEGEND:

(#) WALL REFERENCE POINT
(SEE SITE PLAN FOR ADDITIONAL DETAILS)

▣ TYPE 2 WATERPROOFING: 3'-0" WIDE STRIP CENTERED ON JOINT AND EXTENDING VERTICALLY FROM THE TOP OF FOOTING TO 6" BELOW GRADE

NOTES:

1. STATIONS ARE GIVEN TO ℄ CONST. NB I.R. 77.
2. FOR 40'-0" TRANSITION DETAILS, SEE SHEET 5/12.
3. FOR MATCHLINE B, SEE SHEET 7/12.
4. FOR SECTIONS C AND D, SEE SHEET 11/12.
5. MINIMUM HORIZONTAL REINFORCING LAP LENGTHS ARE AS FOLLOWS:

NO. 5 BARS	3'-1"
ALL GFRP BARS	1'-1"

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
RHC			

WALL PLAN & ELEVATION (1 OF 4)
CAST-IN-PLACE REINFORCED CONCRETE RETAINING WALL 1
I-77 MEDIAN BARRIER BETWEEN SWARTZ ROAD AND I-77/I-277/US-224 INTERCHANGE

SUM-77/277/224
VARIOUS
PID No. 106002

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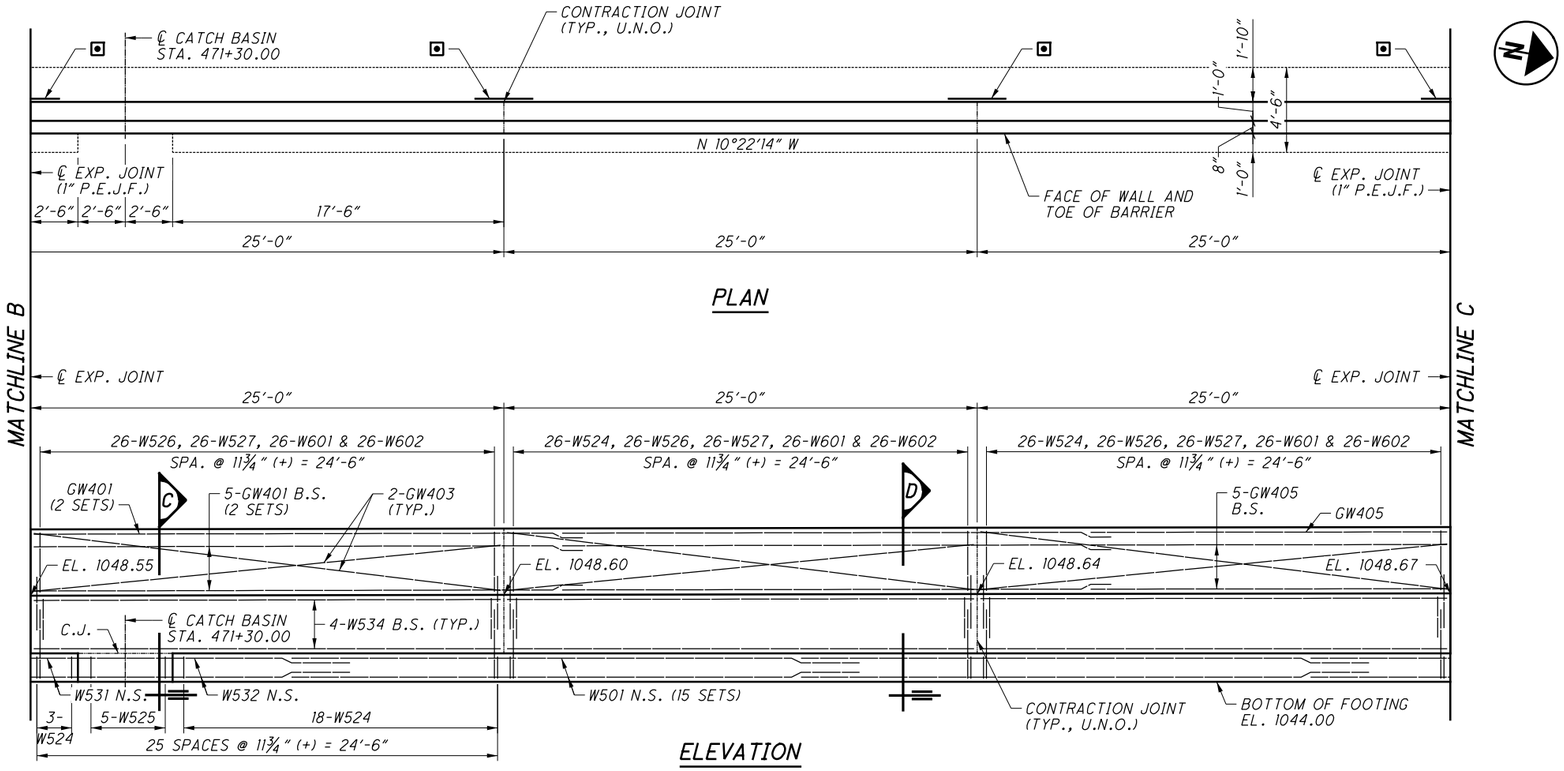

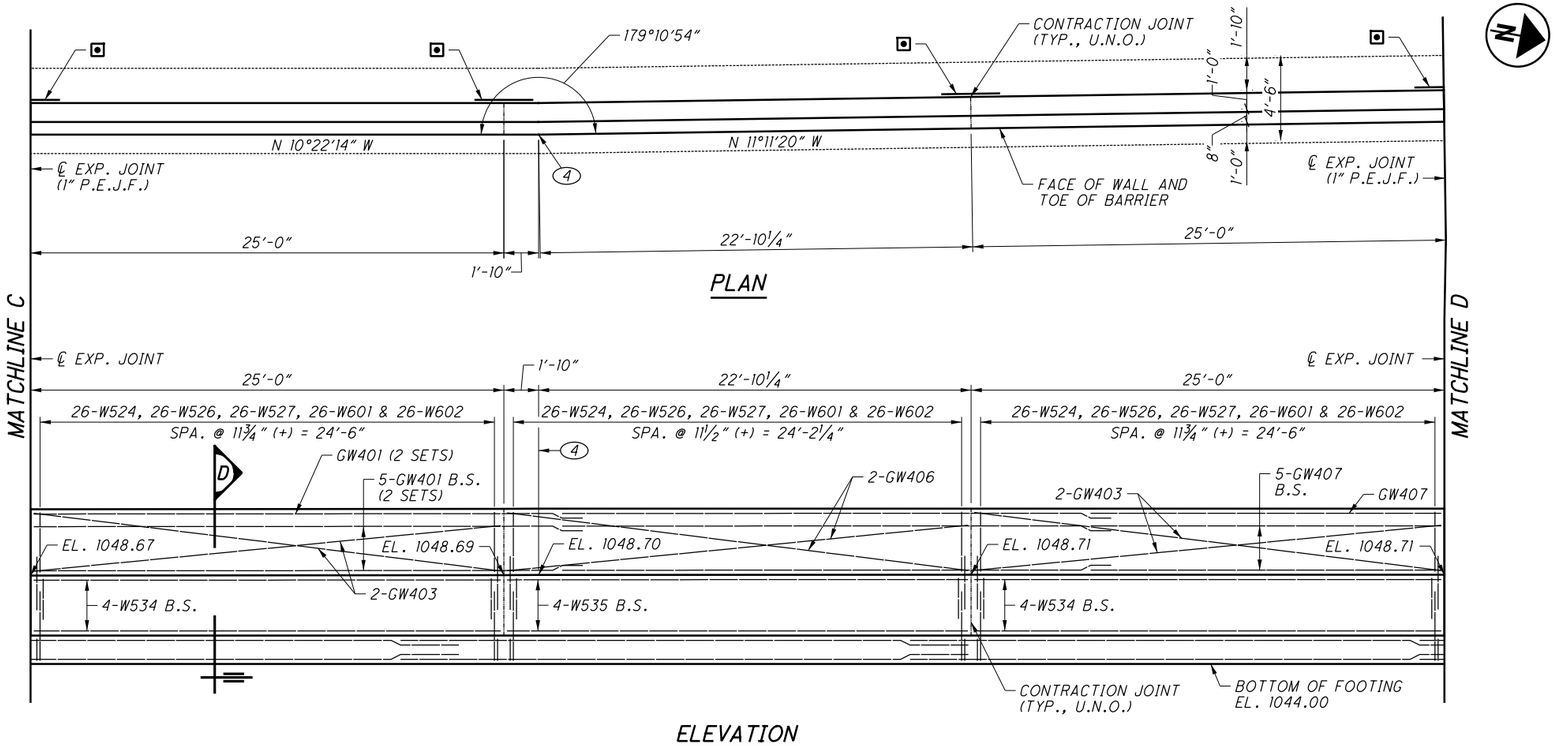

LEGEND:

(#) WALL REFERENCE POINT
(SEE SITE PLAN FOR ADDITIONAL DETAILS)

▣ TYPE 2 WATERPROOFING: 3'-0" WIDE STRIP CENTERED ON JOINT AND EXTENDING VERTICALLY FROM THE TOP OF FOOTING TO 6" BELOW GRADE

NOTES:

1. STATIONS ARE GIVEN TO ℄ CONST. NB I.R. 77.
2. FOR MATCHLINE B, SEE SHEET 6/12.
3. FOR MATCHLINE D, SEE SHEET 8/12.
4. FOR SECTIONS C AND D, SEE SHEET 11/12.
5. MINIMUM HORIZONTAL REINFORCING LAP LENGTHS ARE AS FOLLOWS:

NO. 5 BARS	3'-1"
ALL GFRP BARS	1'-1"

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WALL PLAN & ELEVATION (2 OF 4)

CAST-IN-PLACE REINFORCED CONCRETE RETAINING WALL 1
I-77 MEDIAN BARRIER BETWEEN SWARTZ ROAD AND I-77/I-277/US-224 INTERCHANGE

SUM-77/277/224
VARIOUS
PID No. 106002

7 / 12

1139
1288

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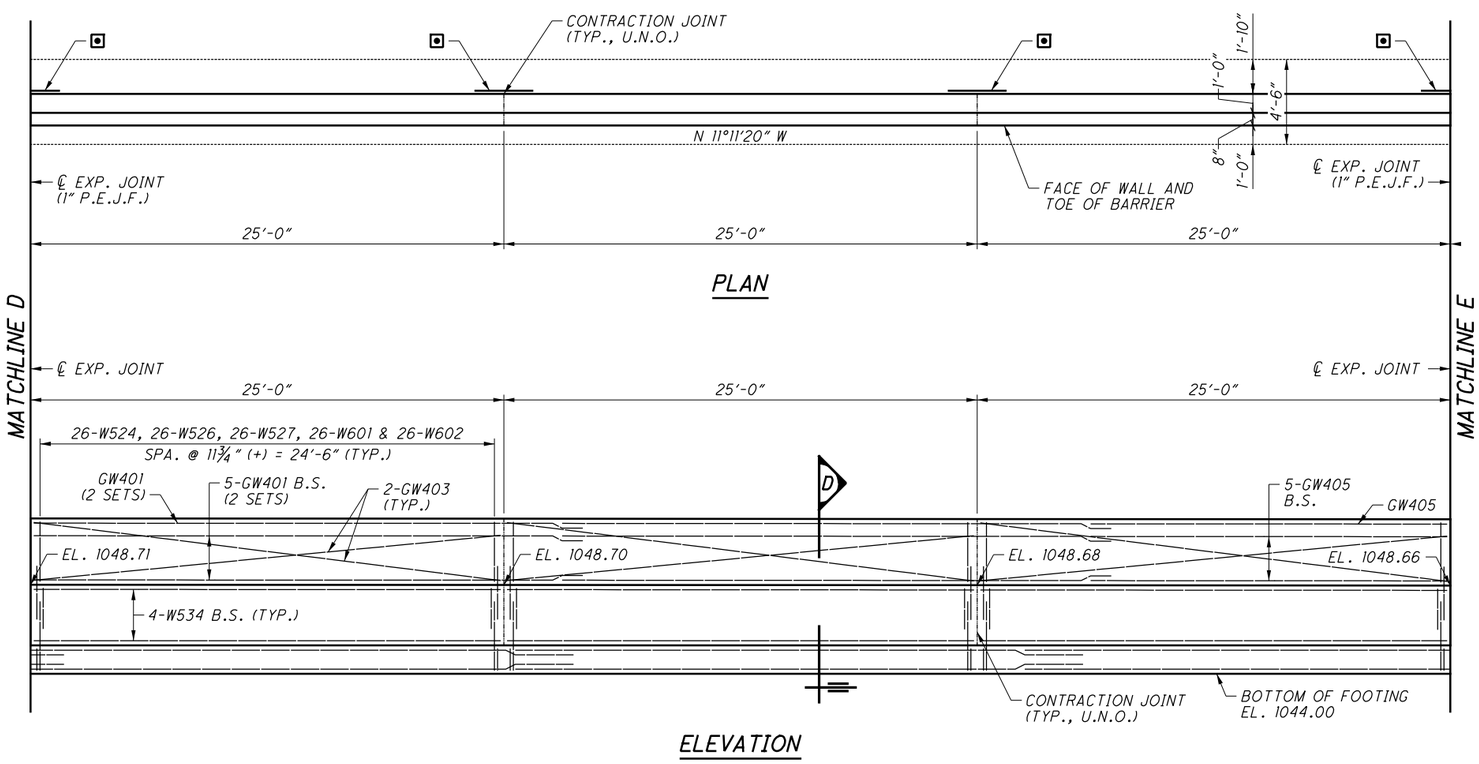

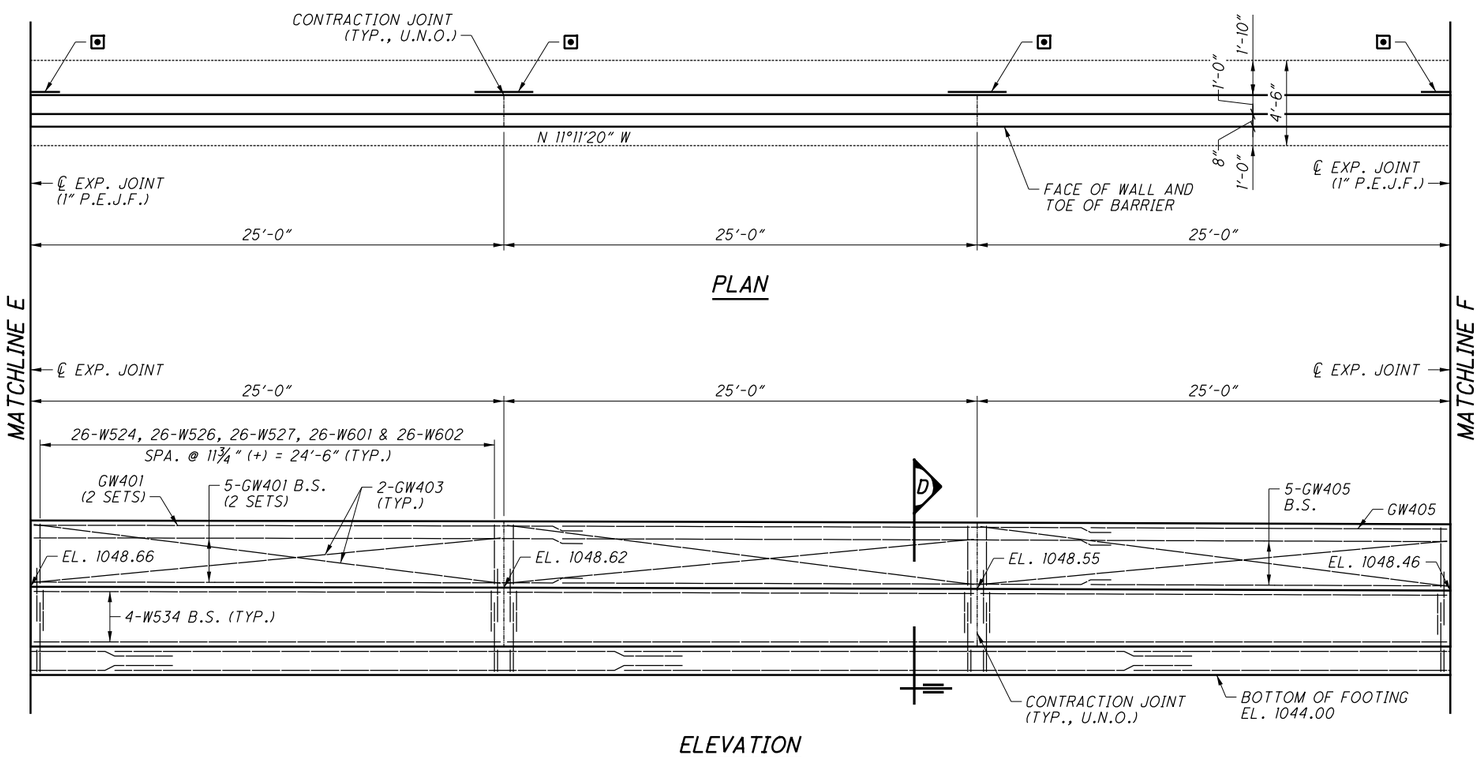

LEGEND:

▣ TYPE 2 WATERPROOFING: 3'-0" WIDE STRIP CENTERED ON JOINT AND EXTENDING VERTICALLY FROM THE TOP OF FOOTING TO 6" BELOW GRADE

NOTES:

1. STATIONS ARE GIVEN TO ℄ CONST. NB I.R. 77.
2. FOR MATCHLINE D, SEE SHEET 7/12.
3. FOR MATCHLINE F, SEE SHEET 9/12.
4. FOR SECTIONS C AND D, SEE SHEET 11/12.
5. MINIMUM HORIZONTAL REINFORCING LAP LENGTHS ARE AS FOLLOWS:

NO. 5 BARS	3'-1"
ALL GFRP BARS	1'-1"

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WALL PLAN & ELEVATION (3 OF 4)
CAST-IN-PLACE REINFORCED CONCRETE RETAINING WALL 1
I-77 MEDIAN BARRIER BETWEEN SWARTZ ROAD AND I-77/I-277/US-224 INTERCHANGE

SUM-77/277/224
VARIOUS
PID No. 106002

8 / 12

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1288

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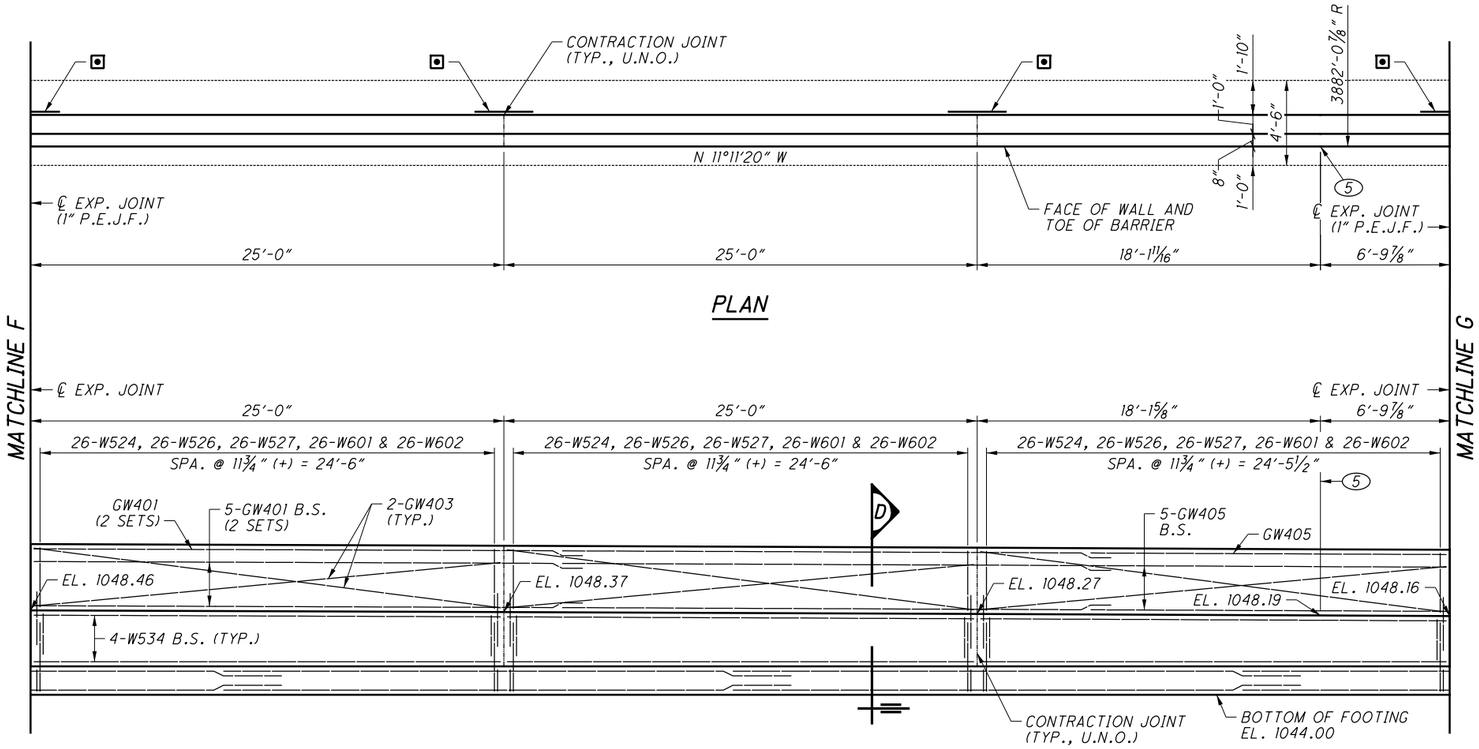

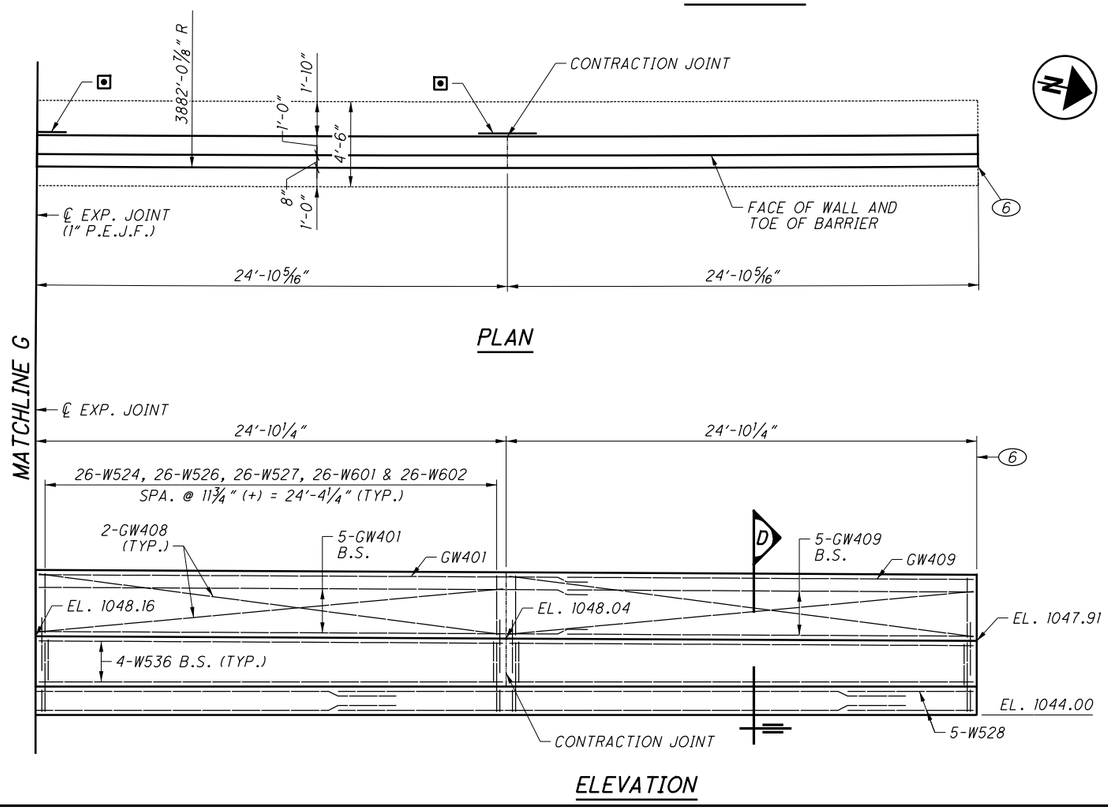

LEGEND:

(#) WALL REFERENCE POINT
(SEE SITE PLAN FOR ADDITIONAL DETAILS)

TYPE 2 WATERPROOFING: 3'-0" WIDE STRIP CENTERED ON JOINT AND EXTENDING VERTICALLY FROM THE TOP OF FOOTING TO 6" BELOW GRADE

NOTES:

1. FOR MATCHLINE F, SEE SHEET 8/12.
3. FOR SECTIONS C AND D, SEE SHEET 11/12.
4. MINIMUM HORIZONTAL REINFORCING LAP LENGTHS ARE AS FOLLOWS:

NO. 5 BARS	3'-1"
ALL GFRP BARS	1'-1"

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WALL PLAN & ELEVATION (4 OF 4)
CAST-IN-PLACE REINFORCED CONCRETE RETAINING WALL 1
I-77 MEDIAN BARRIER BETWEEN SWARTZ ROAD AND I-77/I-277/US-224 INTERCHANGE

SUM-77/277/224
VARIOUS
PID No. 106002

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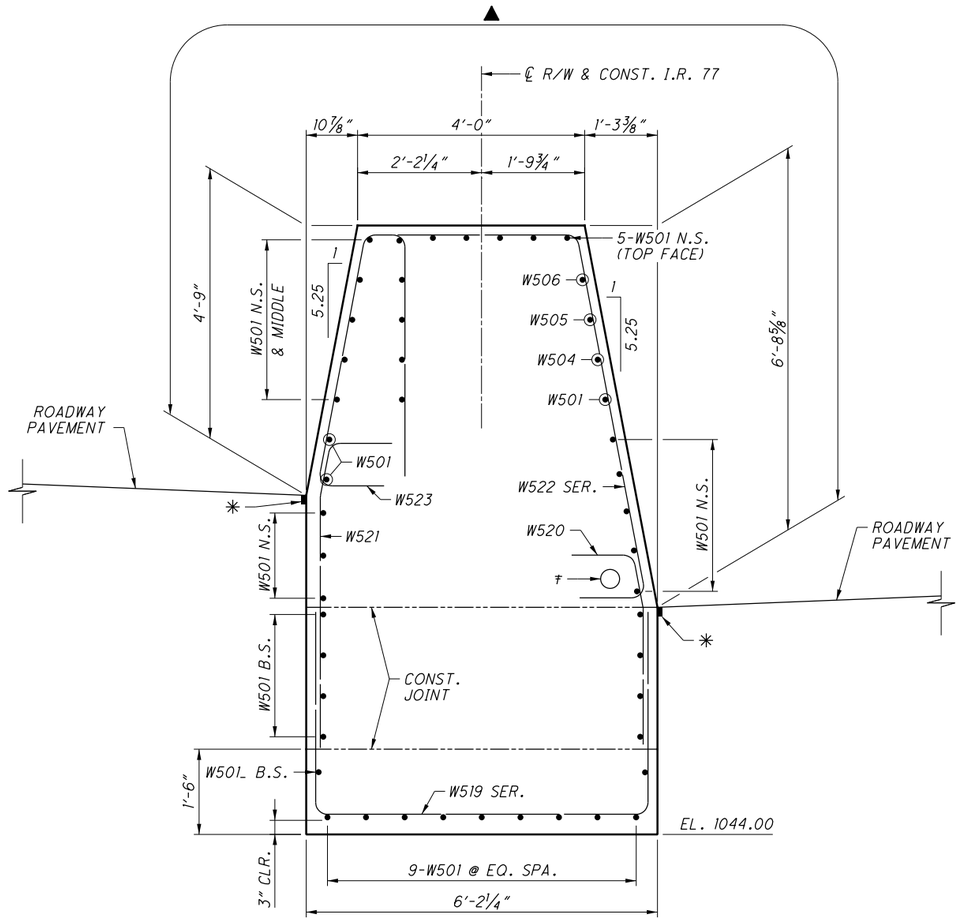
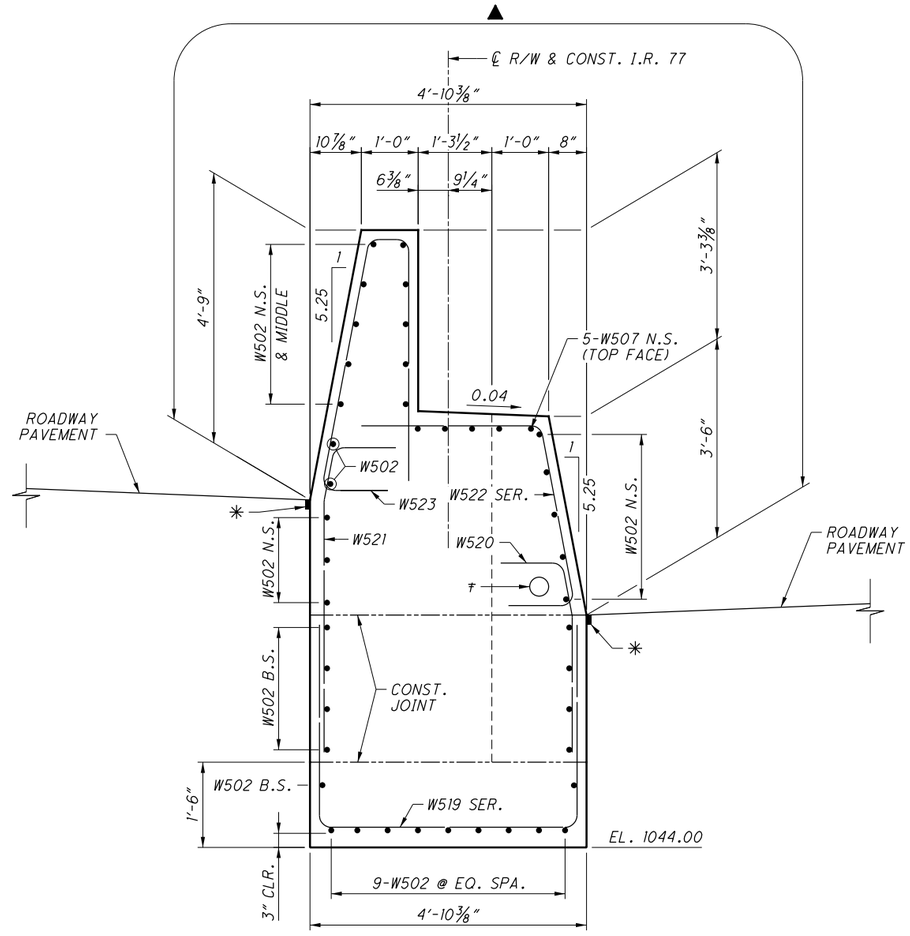


SECTION A



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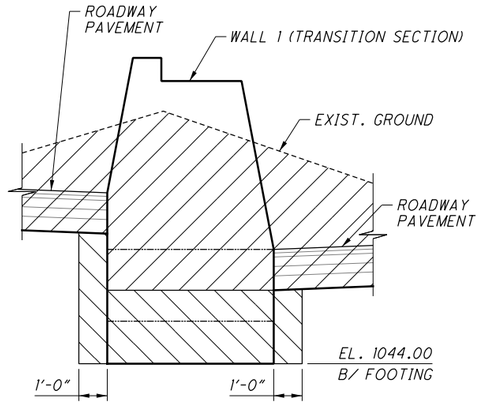

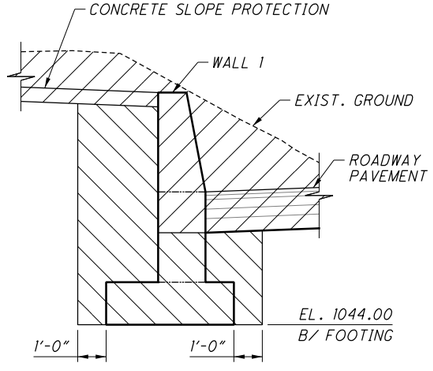

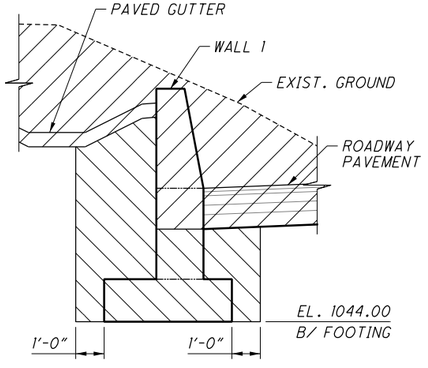

TYPICAL EXCAVATION LIMITS

LEGEND:

▲	ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
✳	HOT APPLIED JOINT SEAL, CMS 705.04 (TO BE INCLUDED WITH WALL CONCRETE)
∓	4″ MULTI-CELL CONDUIT, 725.20 (TO BE INCLUDED WITH THE ITS QUANTITIES FOR PAYMENT)
	ITEM 203 - EXCAVATION (TO BE INCLUDED WITH ROADWAY QUANTITIES)
	ITEM 203 - UNCLASSIFIED EXCAVATION OR ITEM 203 - ROCK EXCAVATION

NOTES:

1. FOR THE LOCATION OF SECTIONS A AND B, SEE SHEET 5/12.
2. FOR PAVEMENT BUILDUP, SEE ROADWAY TYPICAL SECTIONS.

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WALL DETAILS
CAST-IN-PLACE REINFORCED CONCRETE RETAINING WALL 1
I-77 MEDIAN BARRIER BETWEEN SWARTZ ROAD AND I-77/I-277/US-224 INTERCHANGE

SUM-77/277/224
VARIOUS
PID No. 106002

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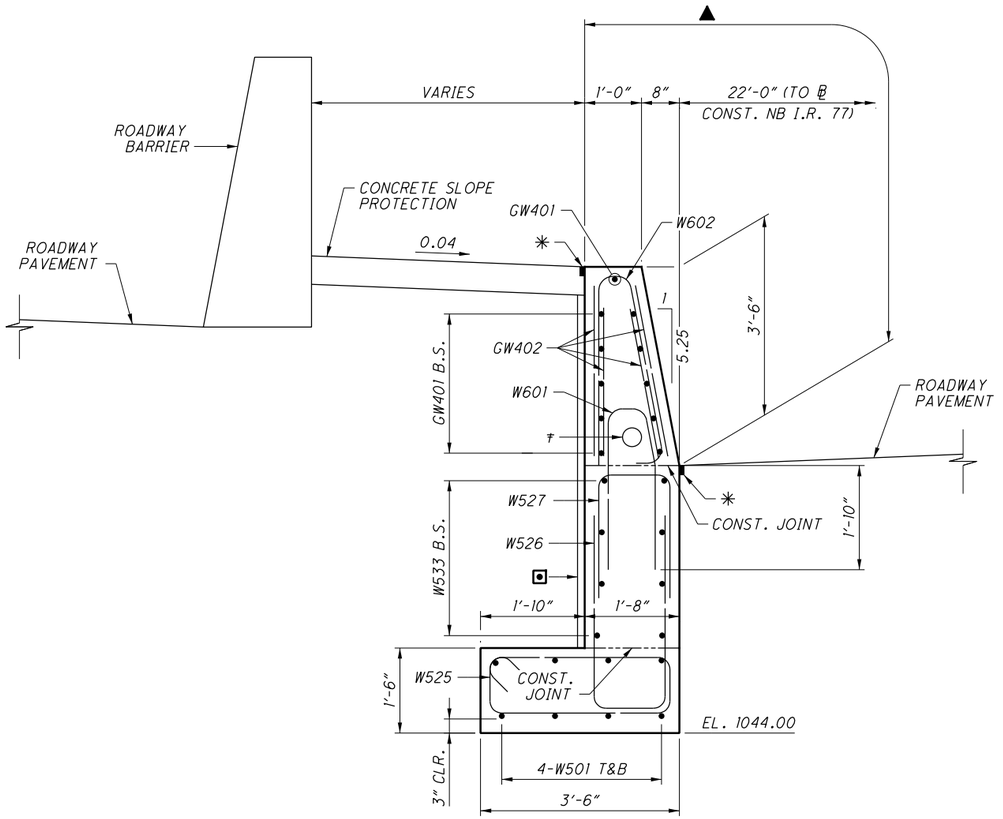
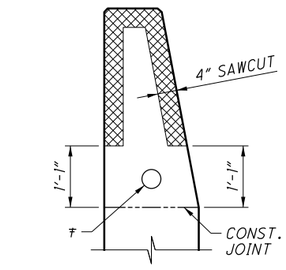


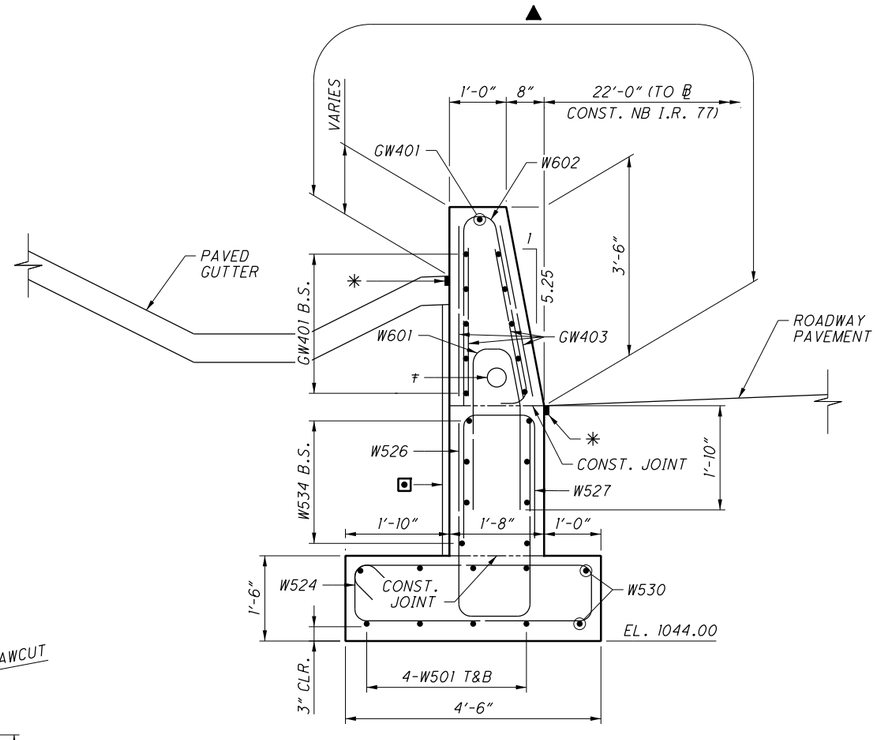
SECTION C

CONCRETE SLOPE PROTECTION IS TYPICAL FROM STA. 469+77.04 TO STA. 473+00.00



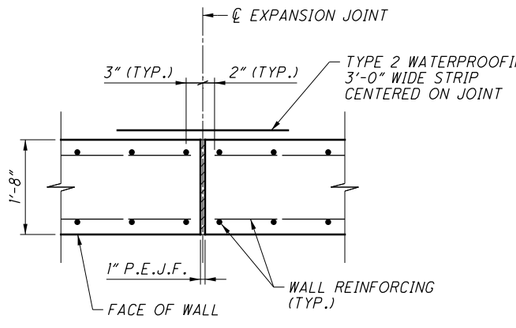
SAWCUT DETAIL

TYPICAL AT ALL CONTRACTION JOINTS

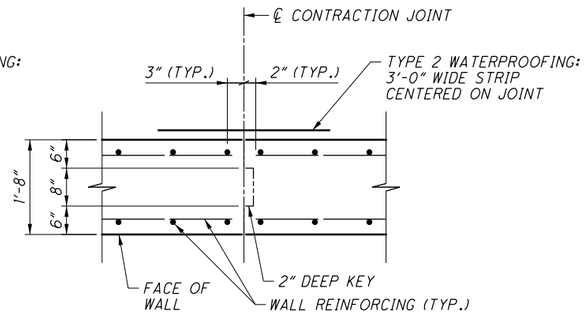


SECTION D

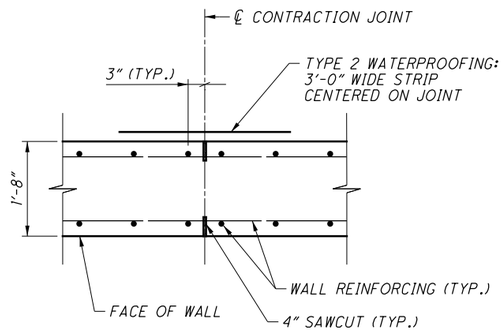
PAVED GUTTER IS TYPICAL FROM STA. 473+00.00 TO STA. 475+50.00



EXPANSION JOINT DETAIL



CONTRACTION JOINT DETAIL



SAWCUT DETAIL

LEGEND:

▲ ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

⊡ TYPE 2 WATERPROOFING: 3'-0" WIDE STRIP CENTERED ON JOINTS

✳ HOT APPLIED JOINT SEAL, CMS 705.04 (TO BE INCLUDED WITH WALL CONCRETE)

∓ 4" MULTI-CELL CONDUIT, 725.20 (TO BE INCLUDED WITH THE ITS QUANTITIES FOR PAYMENT)

NOTES:

1. FOR THE LOCATION OF SECTIONS C AND D, SEE SHEETS 6/12 THROUGH 9/12.
2. FOR PAVEMENT BUILDUP, SEE ROADWAY TYPICAL SECTIONS.
3. FOR DETAILS AND PAYMENT FOR CONCRETE SLOPE PROTECTION AND PAVED GUTTER, SEE ROADWAY PLANS.
4. FOR ADDITIONAL SAWCUT DETAILS, SEE STD. DWG. SBR-1-20.

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RHC			

WALL DETAILS

CAST-IN-PLACE REINFORCED CONCRETE RETAINING WALL 1
I-77 MEDIAN BARRIER BETWEEN SWARTZ ROAD AND I-77/I-277/US-224 INTERCHANGE

SUM-77/277/224
VARIOUS
PID No. 106002

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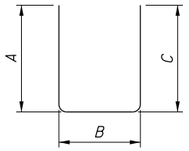
MARK	TOTAL	LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS					
					A	B	C	D	E	INC.
RETAINING WALL BARS										
W501	251	30'-0"	7,854	ST						
W502	39	12'-9"	519	ST						
W503	1	8'-6"	9	ST						
W504	1	26'-9"	28	ST						
W505	1	18'-1"	19	ST						
W506	1	9'-6"	10	ST						
W507	5	12'-10"	67	ST						
W508	5	10'-4"	54	2	2'-5"	5'-9"	2'-5"			
W509	1	10'-3"	11	2	2'-5"	5'-8"	2'-5"			
W510	1	10'-2"	11	2	2'-5"	5'-7"	2'-5"			
W511	1	10'-0"	10	2	2'-5"	5'-5"	2'-5"			
W512	1 SER. OF 6	8'-6" TO 9'-10"	57	2	2'-5"	3'-11" TO 5'-3"	2'-5"			3 3/16"
W513	5	9'-0"	47	2	2'-5"	4'-5"	2'-5"			
W514	1	8'-11"	9	2	2'-5"	4'-4"	2'-5"			
W515	1	8'-10"	9	2	2'-5"	4'-3"	2'-5"			
W516	1	8'-8"	9	2	2'-5"	4'-1"	2'-5"			
W517	1	8'-5"	9	2	2'-5"	3'-10"	2'-5"			
W518	1	8'-2"	9	2	2'-5"	3'-7"	2'-5"			
W519	1 SER. OF 54	11'-0" TO 12'-4"	657	2	3'-5"	4'-5" TO 5'-9"	3'-5"			5/16"
W520	54	4'-1"	230	13	2'-4"	11"	2"	11"		
W521	54	6'-1"	343	13	4'-4"	11"	2"	11"		
W522	1 SER. OF 54	7'-7" TO 10'-9"	516	42	3'-2" TO 6'-4"	3'-7"	1'-0"			11/16"
W523	54	10'-1"	568	60	11"	4'-6"	8"	4'-3"		
W524	586	10'-11"	6,672	3	4'-2"	1'-0"				
W525	10	8'-11"	93	3	3'-2"	1'-0"				
W526	596	8'-1"	5,025	2	3'-6"	1'-4"	3'-6"			
W527	596	5'-3"	3,264	2	2'-1"	1'-4"	2'-1"			
W528	10	6'-8"	70	ST						
W529	2	10'-0"	21	ST						
W530	2	14'-8"	31	ST						
W531	2	15'-8"	33	ST						
W532	2	9'-3"	19	ST						
W533	8	22'-6"	188	ST						
W534	152	24'-7"	3,897	ST						
W535	8	24'-8"	206	ST						
W536	16	24'-6"	409	ST						
W601	596	6'-5"	5,744	14	2'-9"	1'-2"	2"	11"	1'-10"	
W602	596	7'-8"	6,863	60	11"	3'-3"	8"	3'-3"		
TOTAL			43,590							

MARK	TOTAL	LENGTH (EACH)	LENGTH (TOTAL)	TYPE	DIMENSIONS			
					A	B	C	INC.
RETAINING WALL BARS - GFRP REINFORCING								
GW401	165	30'-0"	4,950	ST				
GW402	4	22'-8"	91	ST				
GW403	76	24'-9"	1,881	ST				
GW404	11	14'-9"	162	ST				
GW405	55	16'-8"	917	ST				
GW406	4	24'-5"	98	ST				
GW407	11	16'-7"	182	ST				
GW408	8	24'-7"	197	ST				
GW409	11	20'-6"	226	ST				
TOTAL			8,703					

BAR BENDING DIAGRAMS



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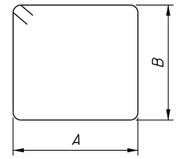

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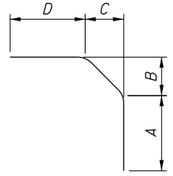

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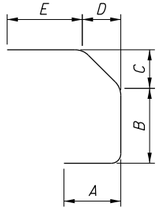

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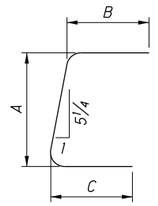

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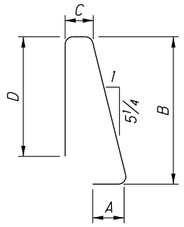

TYPE-60

NOTES:

1. BAR DIMENSIONS ARE OUT-TO-OUT UNLESS NOTED OTHERWISE.
2. ALL BARS ARE EPOXY COATED.
3. WHEN NO BAR LEG DIMENSIONS ARE SHOWN, IT INDICATES A STANDARD BEND.
4. BAR SIZE AND LOCATION ARE INDICATED IN THE BAR MARK. THE FIRST ALPHABETICAL LETTER(S) INDICATES LOCATION. THE NEXT DIGIT OF THE THREE DIGIT SERIES AND THE NEXT TWO DIGITS OF THE FOUR DIGIT SERIES INDICATE BAR SIZE NUMBER.

EXAMPLES: W501
- NO. 5 SIZE BAR
- WALL BAR

GW401
- NO. 4 SIZE BAR
- GFRP WALL BAR

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REINFORCING BAR LISTS

CAST-IN-PLACE REINFORCED CONCRETE RETAINING WALL 1
I-77 MEDIAN BARRIER BETWEEN SWARTZ ROAD AND I-77/I-277/US-224 INTERCHANGE

SUM-77/277/224
VARIOUS
PID No. 106002

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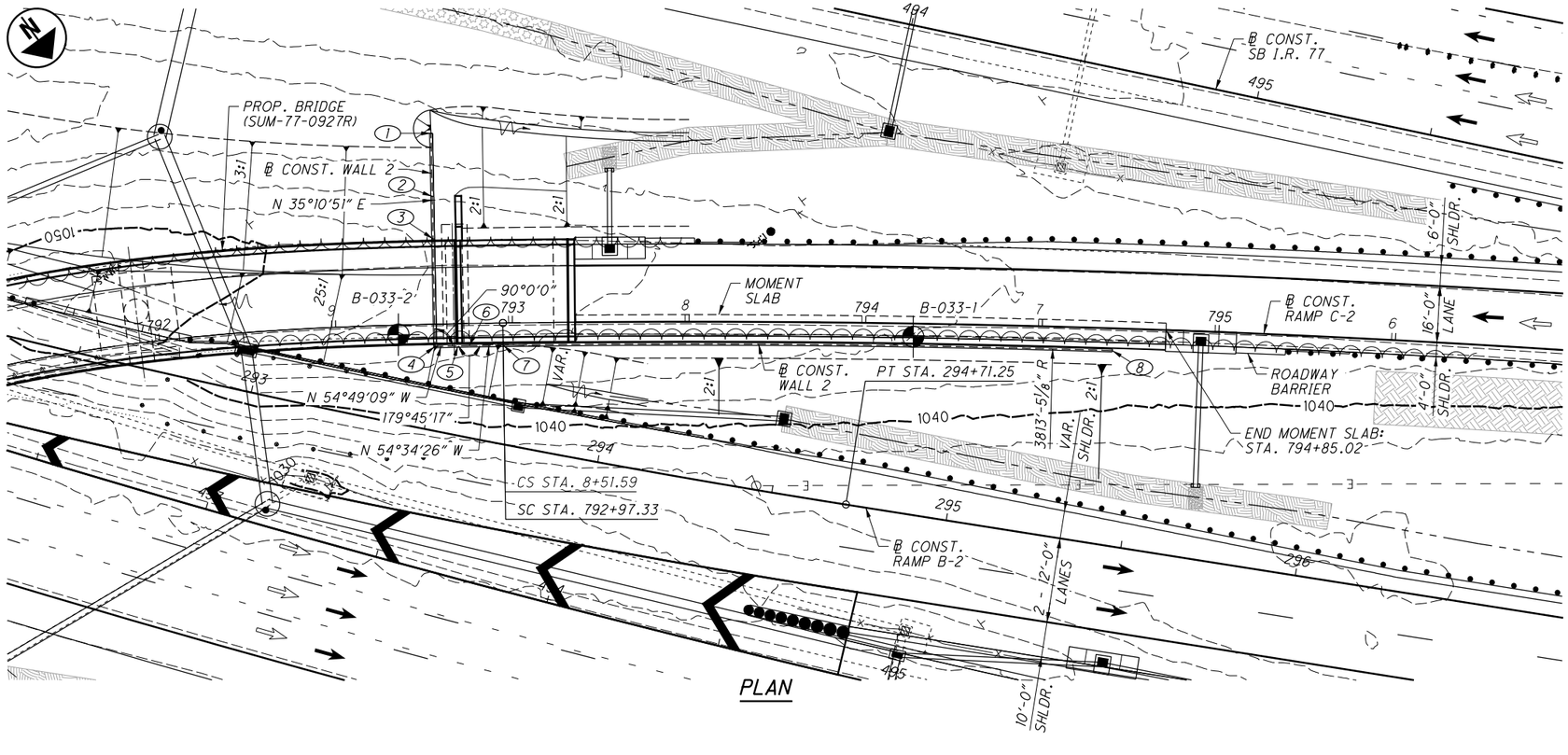
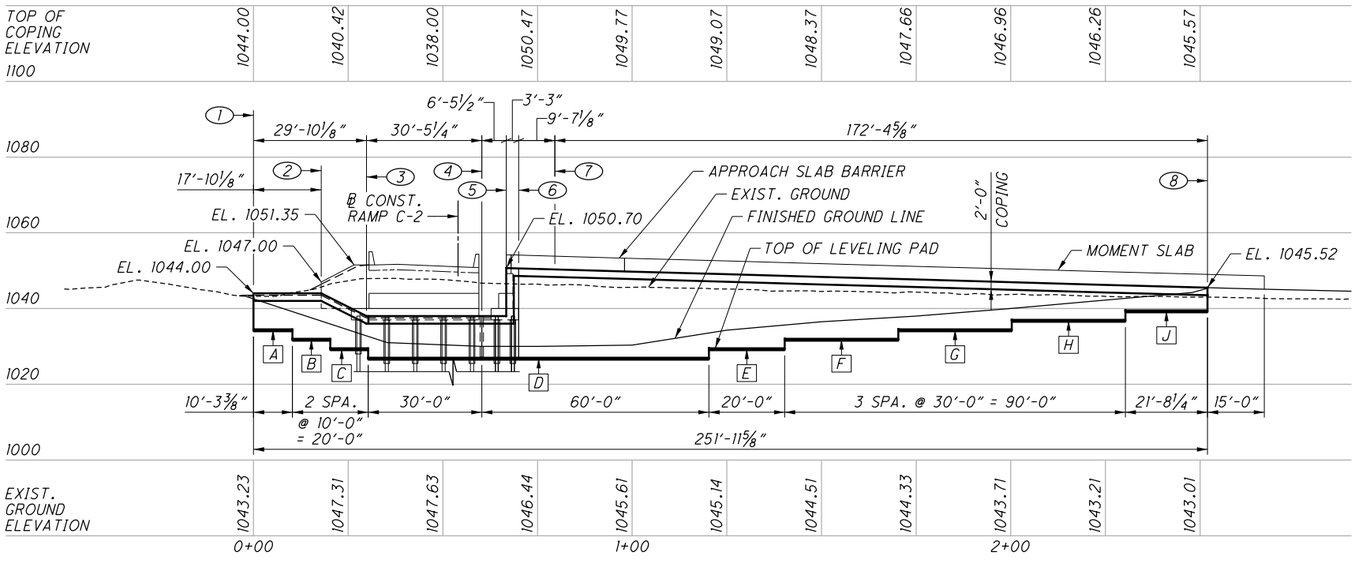


PLAN



ELEVATION ALONG ℄ CONST. WALL 2

BENCHMARK DATA				
POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
CP05	493895.1420	2245390.8980	1073.53	CONC. MONUMENT
CP06	493906.9643	2244750.3816	1090.46	CONC. MONUMENT
CP07	498481.9448	2243140.4162	1064.39	CONC. MONUMENT
CP08	499070.7218	2243262.6440	1076.40	CONC. MONUMENT

FOR ADDITIONAL BENCHMARK INFORMATION, SEE ROADWAY SHEETS.

REVISIONS		
NO.	DATE	DESCRIPTION
2	04/2/21	UPDATED WINGWALL CORNER

RETAINING WALL 2 DATA			
LOCATION	STATION	OFFSET	NOTES
1	STA. 792+78.14	54.00' LT.	BEGIN WALL
	STA. 0+00.00 ◑	0.00' ◑	
2	STA. 792+78.10	36.16' LT.	COPING ELEV. CHANGE
	STA. 0+17.84 ◑	0.00' ◑	
3	STA. 792+78.06	24.16' LT.	COPING ELEV. CHANGE
	STA. 0+29.84 ◑	0.00' ◑	
4	STA. 792+77.98	6.28' RT.	ANGLE POINT
	STA. 0+60.28 ◑	0.00' ◑	
5	STA. 792+84.45	6.29' RT.	COPING ELEV. CHANGE
	STA. 0+66.74 ◑	0.00' ◑	
6	STA. 792+87.71	6.29' RT.	ANGLE POINT
	STA. 0+69.99 ◑	0.00' ◑	
7	STA. 792+97.33	6.29' RT.	BEGIN CURVE
	STA. 0+79.58 ◑	0.00' ◑	
8	STA. 794+70.00	6.29' RT.	END CURVE & END WALL
	STA. 2+51.97 ◑	0.00' ◑	

LEVELING PAD DATA	
LOCATION	ELEVATION
A	1034.50
B	1032.00
C	1029.50
D	1027.00
E	1029.50
F	1032.00
G	1034.50
H	1037.00
J	1039.50

LEGEND:

(#) ℄ CONST. WALL 2 POINT

X TOP OF LEVELING PAD ELEVATION LOCATION

◑ STATION & OFFSET GIVEN TO ℄ CONST. WALL 2

PROJECT BORING LOCATION

NOTES:

1. ALL WALL STATIONS AND OFFSETS ARE MEASURED FROM THE FRONT FACE OF THE WALL AND GIVEN TO ℄ CONST. RAMP C-2 UNLESS NOTED OTHERWISE.
2. ALL DIMENSIONS ARE GIVEN ALONG ℄ CONST. WALL 2.
3. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

DESIGN AGENCY
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DESIGNED	DRAWN	REVIEWED	DATE
MOJ	MOJ	DGN	1-18-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RHC			

SITE PLAN
RETAINING WALL 2
MSE WALL BELOW SUM-77-0927R FORWARD ABUTMENT

SUM-77/277/224
VARIOUS
PID No. 106002

1 / 10

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DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 8TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

REFER TO THE FOLLOWING STANDARD DRAWINGS:

SBR-1-20 DATED 7-17-20

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

800 DATED 1-15-21
840 DATED 1-15-21
878 DATED 1-17-20

OPERATIONAL IMPORTANCE:

A LOAD MODIFIER OF 1.00 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 DATA:

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUBSTRUCTURE)
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

DESIGN LOADING

LIVE LOAD SURCHARGE OF 0.240 KSF
FUTURE WEARING SURFACE (FWS) OF 0.060 KSF

PROPRIETARY RETAINING WALL DATA:

THE PROPRIETARY WALL SUPPLIER SHALL DESIGN THE INTERNAL STABILITY OF A MECHANICALLY STABILIZED EARTH (MSE) WALL IN ACCORDANCE WITH SS840 TO SUPPORT THE ABUTMENT. THE DESIGN FOR INTERNAL STABILITY SHALL INCLUDE A NOMINAL (I.E. UNFACTORED) HORIZONTAL STRIP LOAD DUE TO FRICTION (FR) FROM THE SUPERSTRUCTURE OF 2.65 K/FT APPLIED PERPENDICULAR TO THE FACE OF WALL AT THE BASE OF THE CONCRETE FOOTING. THIS STRIP LOAD DOES NOT 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.

FOUNDATION BEARING RESISTANCE

THE WALL 2 REINFORCED SOIL MASS, AS DESIGNED, PRODUCES A MAXIMUM SERVICE LIMIT STATE BEARING PRESSURE OF 4.05 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LIMIT STATE BEARING PRESSURE OF 6.06 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 14.8 KIPS PER SQUARE FOOT.

MINIMUM SOIL REINFORCEMENT LENGTH

PROVIDE MINIMUM SOIL REINFORCEMENT LENGTHS EQUAL TO THE GREATER OF 8 FEET OR A LENGTH EQUAL TO 70% OF THE WALL HEIGHT ACCORDING TO SUPPLEMENTAL SPECIFICATION 840.04.

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

THE URETHANE TOP COAT SHALL BE TINTED TO MEET AMS-STD-595A COLOR No. 17778 - LIGHT NEUTRAL.

ABBREVIATIONS:

BOT.	BOTTOM
B.S.	BOTH SIDES
BTWN.	BETWEEN
C.J.	CONSTRUCTION JOINT
CLR.	CLEAR
CONST.	CONSTRUCTION
DIA.	DIAMETER
EL.	ELEVATION
EQ.	EQUAL
EX. OR EXIST.	EXISTING
F.S.	FAR SIDE
GFRP	GLASS FIBER REINFORCED POLYMER
MAX.	MAXIMUM
MIN.	MINIMUM
NB	NORTHBOUND
NO.	NUMBER
N.S.	NEAR SIDE
P.E.J.F.	PREFORMED EXPANSION JONT FILLER
SB	SOUTHBOUND
SER.	SERIES
SPA.	SPACES OR SPACING
STA.	STATION
STD. DWG.	STANDARD DRAWING
T&B	TOP AND BOTTOM
TYP.	TYPICAL

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DJC	DJC	DGN	1-18-21
CHECKED	REVISED		STRUCTURE FILE NUMBER
RHC			

GENERAL NOTES

RETAINING WALL 2
MSE WALL BELOW SUM-77-0927R FORWARD ABUTMENT

SUM-77/277/224
VARIOUS
PID No. 106002

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ESTIMATED QUANTITIES

CALCULATED BY: DJC DATE: 1-14-2021
CHECKED BY: DGN DATE: 1-15-2021

ITEM	EXT.	TOTAL 05/IMS/BR	UNIT	DESCRIPTION	AS PER PLAN REF. SHEET
203	35110	167	CY	GRANULAR MATERIAL, TYPE B	
509	10000	13,478	LB	EPOXY COATED REINFORCING STEEL	
509	30030	669	FT	NO. 5 GFRP DEFORMED BARS	
509	30040	1,925	FT	NO. 6 GFRP DEFORMED BARS	
511	53012	90	CY	CLASS QC2 CONCRETE, MISC.: PARAPET INCLUDING MOMENT SLAB	
512	10100	412	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
516	13900	322	SF	2" PREFORMED EXPANSION JOINT FILLER	
601	21000	14	SY	CONCRETE SLOPE PROTECTION	
840	20000	3,640	SF	MECHANICALLY STABILIZED EARTH WALL	
840	21000	2,321	CY	WALL EXCAVATION	
840	22000	442	SY	FOUNDATION PREPARATION	
840	23000	1,896	CY	SELECT GRANULAR BACKFILL	
840	23050	37	CY	NATURAL SOIL	
840	25010	500	FT	6" DRAINAGE PIPE, PERFORATED	
840	25020	20	FT	6" DRAINAGE PIPE, NON-PERFORATED	
840	26000	263	FT	CONCRETE COPING	
840	27000	5	DAY	ON-SITE ASSISTANCE	
840	28000		LS	SGB INSPECTION AND COMPACTION TESTING	

REVISIONS		
NO.	DATE	DESCRIPTION
2	04/2/21	ITEM ADDED/QUANTITY UPDATED

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
RHC			

SUM-77/277/224
VARIOUS
PID No. 106002

ESTIMATED QUANTITIES
RETAINING WALL 2
MSE WALL BELOW SUM-77-0927R FORWARD ABUTMENT

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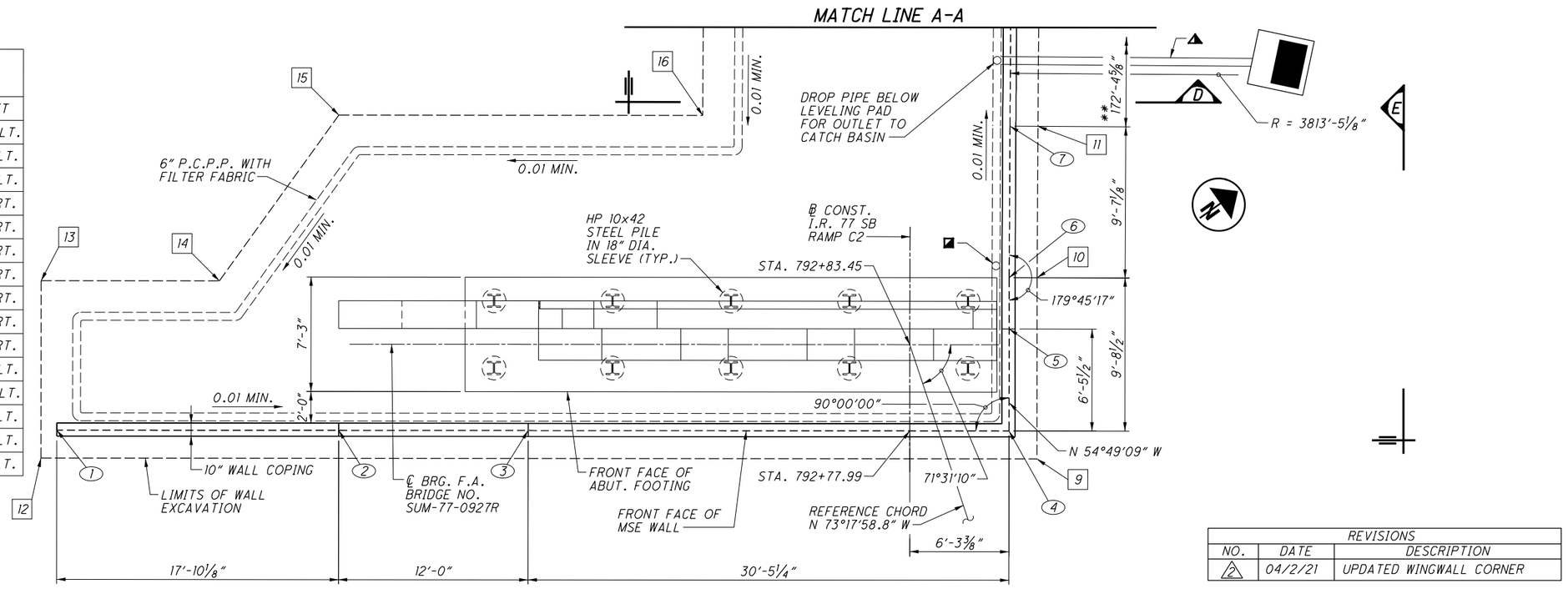
POINT	℄ CONST. WALL 2		℄ CONST. RAMP C-2	
	STATION	OFFSET	STATION	OFFSET
1	0+00.00	00.00'	792+78.14	54.00' LT.
2	0+17.84	00.00'	792+78.10	36.16' LT.
3	0+29.84	00.00'	792+78.06	24.16' LT.
4	0+60.28	00.00'	792+77.98	6.28' RT.
5	0+66.74	00.00'	792+84.45	6.29' RT.
6	0+69.99	00.00'	792+87.71	6.29' RT.
7	0+79.58	00.00'	792+97.33	6.29' RT.
9			792+76.19	8.05' RT.
10	0+69.99	1.77' RT.	792+87.71	8.06' RT.
11	0+79.58	1.77' RT.	792+97.33	8.06' RT.
12			792+76.43	55.01' LT.
13			792+87.36	55.00' LT.
14	0+10.28	9.46' LT.	792+87.38	43.71' LT.
15	0+17.84	19.96' LT.	792+97.76	36.19' LT.
16	0+40.87	19.96' LT.	792+97.88	13.17' LT.

LEGEND

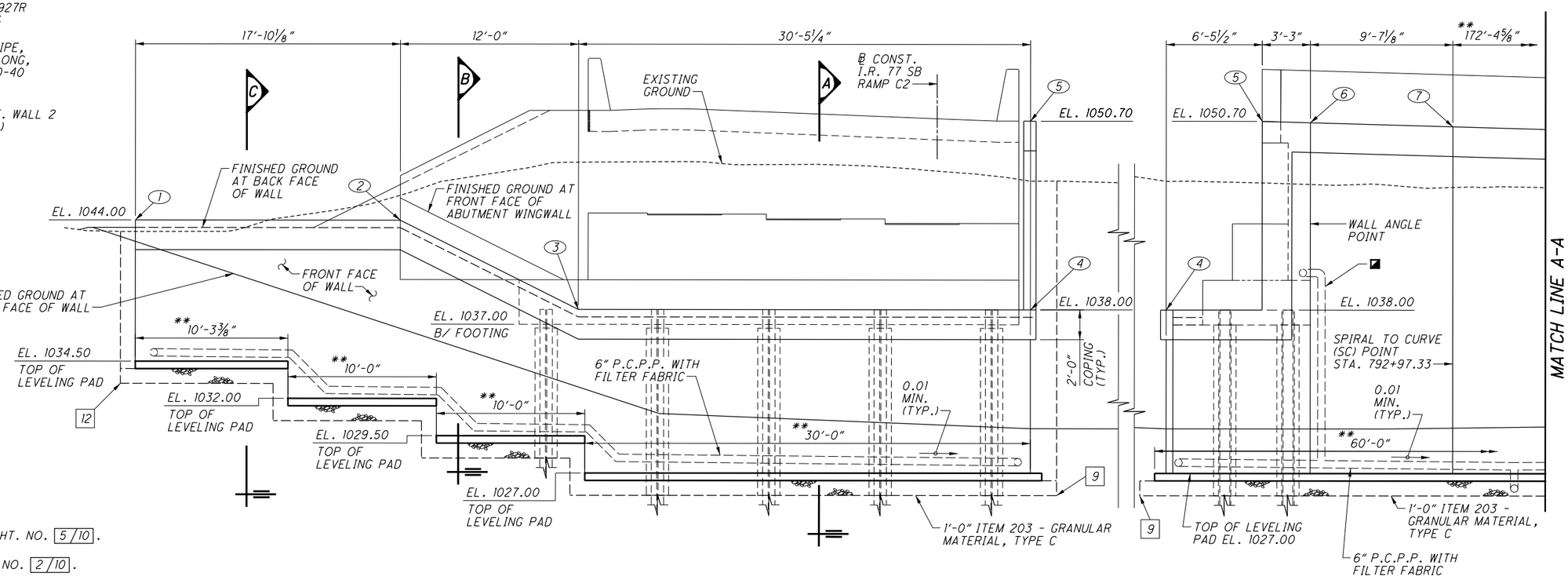
◪ PIPE DROP FROM ABUTMENT BACKWALL DRAINAGE TO BE CONNECTED TO THE WALL DRAINAGE COLLECTION SYSTEM SEE BRIDGE NO. SUM-77-0927R FORWARD ABUTMENT PLANS

▲ ITEM 840 - 6" DRAINAGE PIPE, NON-PERFORATED, 19'-0" LONG, OUTLET TO CATCH BASIN D-40 AT INVERT EL. 1025.50

** MEASURED ALONG ℄ CONST. WALL 2 (FRONT FACE OF THE WALL)



PLAN



ELEVATION ALONG ℄ CONST. WALL 2

VIEW E

ELEVATION ALONG ℄ CONST. WALL 2

NOTES:

1. FOR MATCH LINE A-A, SEE SHT. NO. 5/10.
2. FOR WALL NOTES, SEE SHT. NO. 2/10.
3. FOR SECTIONS A & D, SEE SHT. NO. 7/10.
4. FOR SECTIONS B & C, SEE SHT. NO. 8/10.

REVISIONS		
NO.	DATE	DESCRIPTION
2	04/2/21	UPDATED WINGWALL CORNER

DESIGN AGENCY
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DESIGNED	DRAWN	REVIEWED	DATE
DJC	DJC	DGN	1-18-21

STRUCTURE FILE NUMBER

REVISED

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WALL PLAN & ELEVATION (1 OF 3)
RETAINING WALL 2
MSE WALL BELOW SUM-77-0927R FORWARD ABUTMENT

SUM-77/277/224
VARIOUS
PID No. 106002

4 / 10

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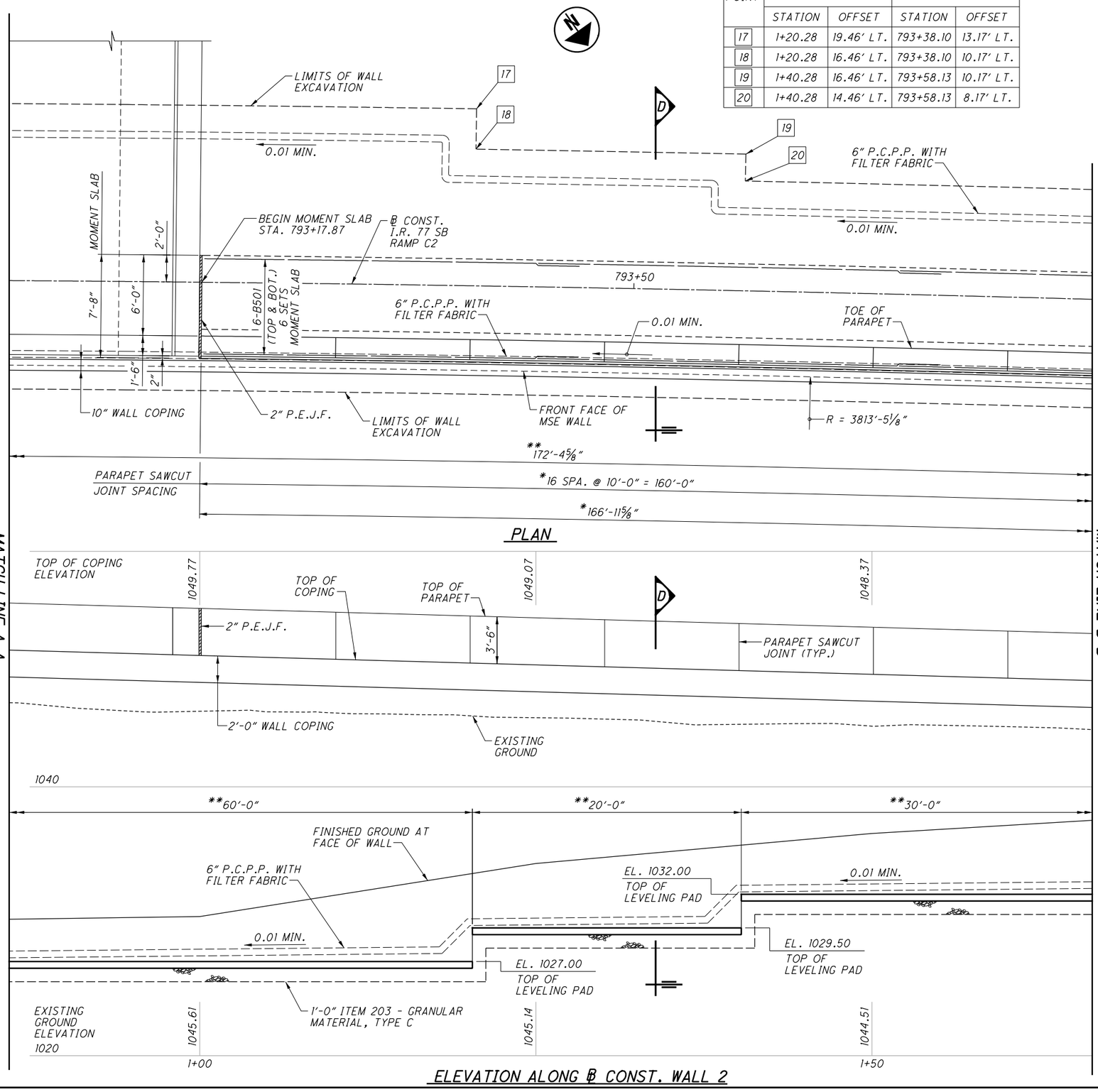
POINT	℄ CONST. WALL 2		℄ CONST. RAMP C-2	
	STATION	OFFSET	STATION	OFFSET
17	1+20.28	19.46' LT.	793+38.10	13.17' LT.
18	1+20.28	16.46' LT.	793+38.10	10.17' LT.
19	1+40.28	16.46' LT.	793+58.13	10.17' LT.
20	1+40.28	14.46' LT.	793+58.13	8.17' LT.



ELEVATION ALONG ℄ CONST. WALL 2

REVISIONS		
NO.	DATE	DESCRIPTION
2	04/2/21	UPDATED LEVELING PAD ELEV.

LEGEND

* MEASURED ALONG THE TOE OF PARAPET

** MEASURED ALONG ℄ WALL 2 (FRONT FACE OF WALL)

NOTES:

1. FOR MATCH LINE A-A, SEE SHT. NO. 4/10.
2. FOR MATCH LINE B-B, SEE SHT. NO. 6/10.
3. FOR WALL NOTES, SEE SHT. NO. 2/10.
4. FOR SECTION D, SEE SHT. NO. 7/10.
5. MINIMUM LAP SPLICE LENGTH FOR #5 LONGITUDINAL BARS IN MOMENT SLAB = 3'-1"
6. FOR ADDITIONAL MOMENT SLAB AND PARAPET DETAILS AND REINFORCING, SEE SHT. NO. 9/10.

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RHC			

WALL PLAN & ELEVATION (2 OF 3)
RETAINING WALL 2
MSE WALL BELOW SUM-77-0927R FORWARD ABUTMENT

SUM-77/277/224
VARIOUS
PID No. 106002

5 / 10

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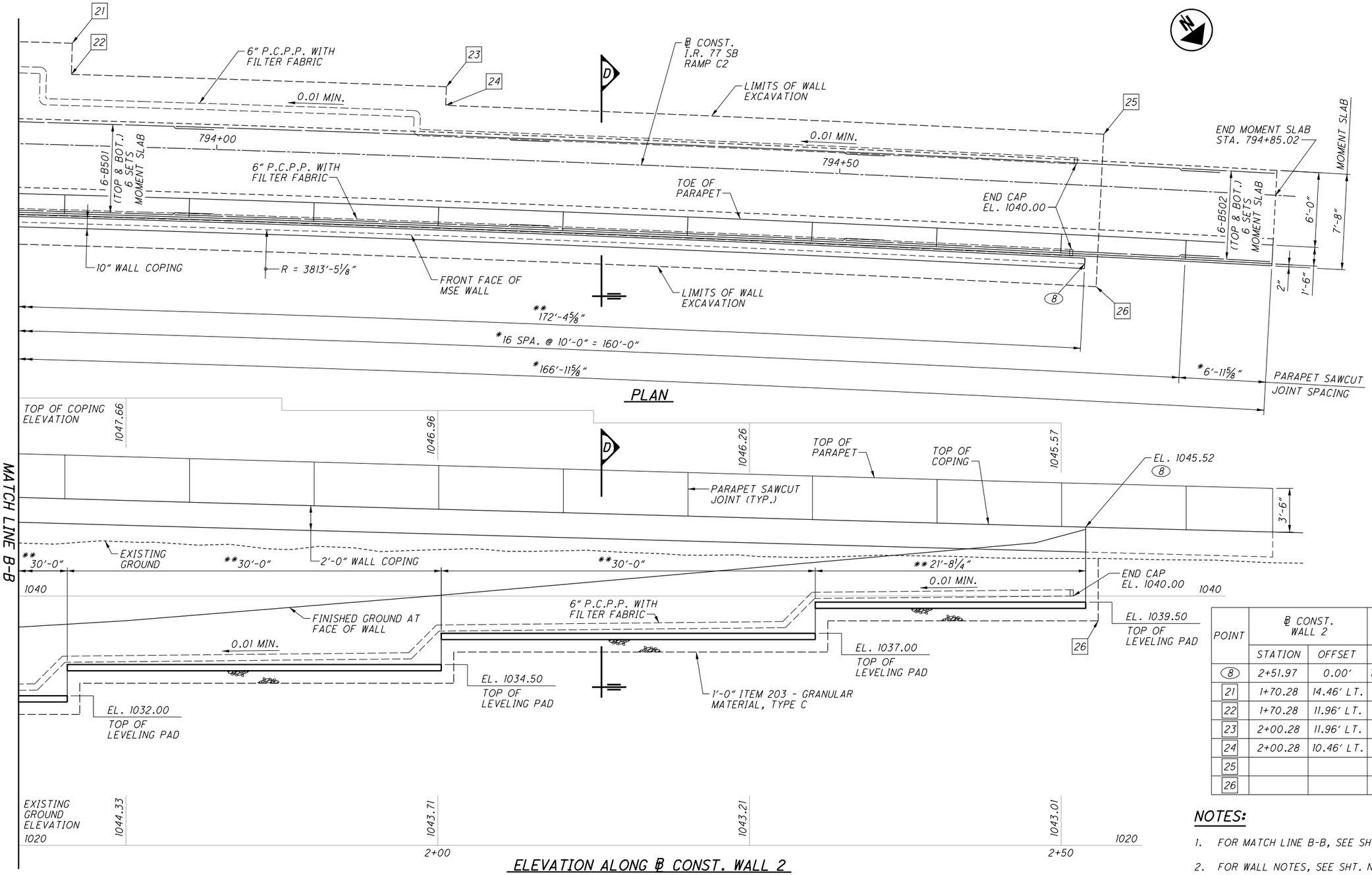

POINT	℄ CONST. WALL 2		℄ CONST. RAMP C-2	
	STATION	OFFSET	STATION	OFFSET
(8)	2+51.97	0.00'	794+70.00	6.29' RT.
21	1+70.28	14.46' LT.	793+88.18	8.17' LT.
22	1+70.28	11.96' LT.	793+88.18	5.67' LT.
23	2+00.28	11.96' LT.	794+18.23	5.67' LT.
24	2+00.28	10.46' LT.	794+18.23	4.17' LT.
25			794+71.00	4.17' LT.
26			794+71.00	8.06' RT.

LEGEND

* MEASURED ALONG THE TOE OF PARAPET

** MEASURED ALONG ℄ WALL 2 (FRONT FACE OF WALL)

NOTES:

1. FOR MATCH LINE B-B, SEE SHT. NO. 5/10.
2. FOR WALL NOTES, SEE SHT. NO. 2/10.
3. FOR SECTION D, SEE SHT. NO. 7/10.
4. MINIMUM LAP SPLICE LENGTH FOR #5 LONGITUDINAL BARS = 3'-1".
5. FOR ADDITIONAL MOMENT SLAB AND PARAPET DETAILS AND REINFORCING, SEE SHT. NO. 9/10.

DESIGN AGENCY
GPD GROUP
320 South Main Street, Akron, OH 44311 330.572.2100
(Graphic Glitch: Ink, Schmee, Kuna & Brewers, Inc. 2020)

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DJC	DJC	DGN	1-18-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RHC			

WALL PLAN & ELEVATION (3 OF 3)
RETAINING WALL 2
MSE WALL BELOW SUM-77-0927R FORWARD ABUTMENT

SUM-77/277/224
VARIOUS
PID No. 106002

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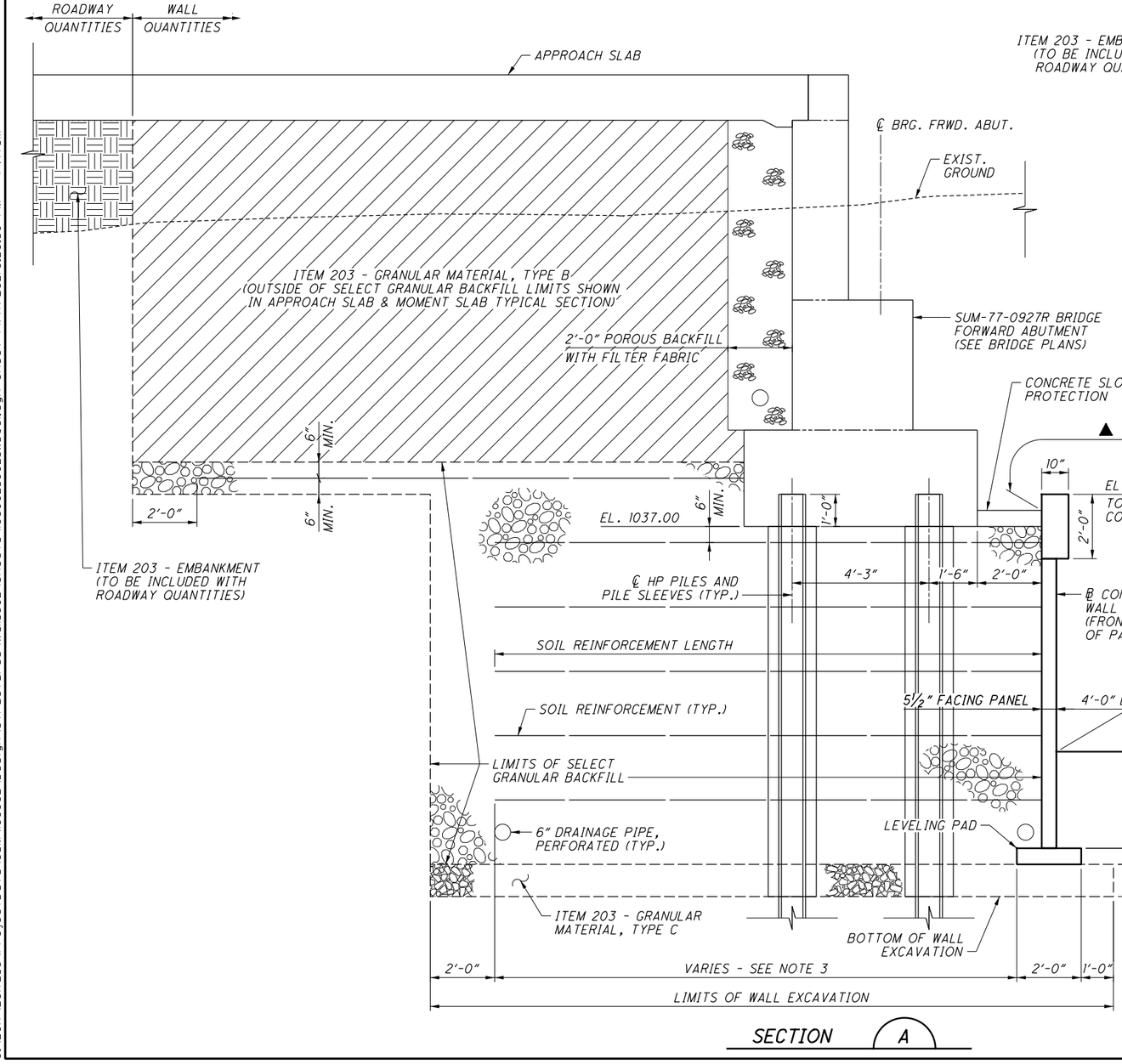
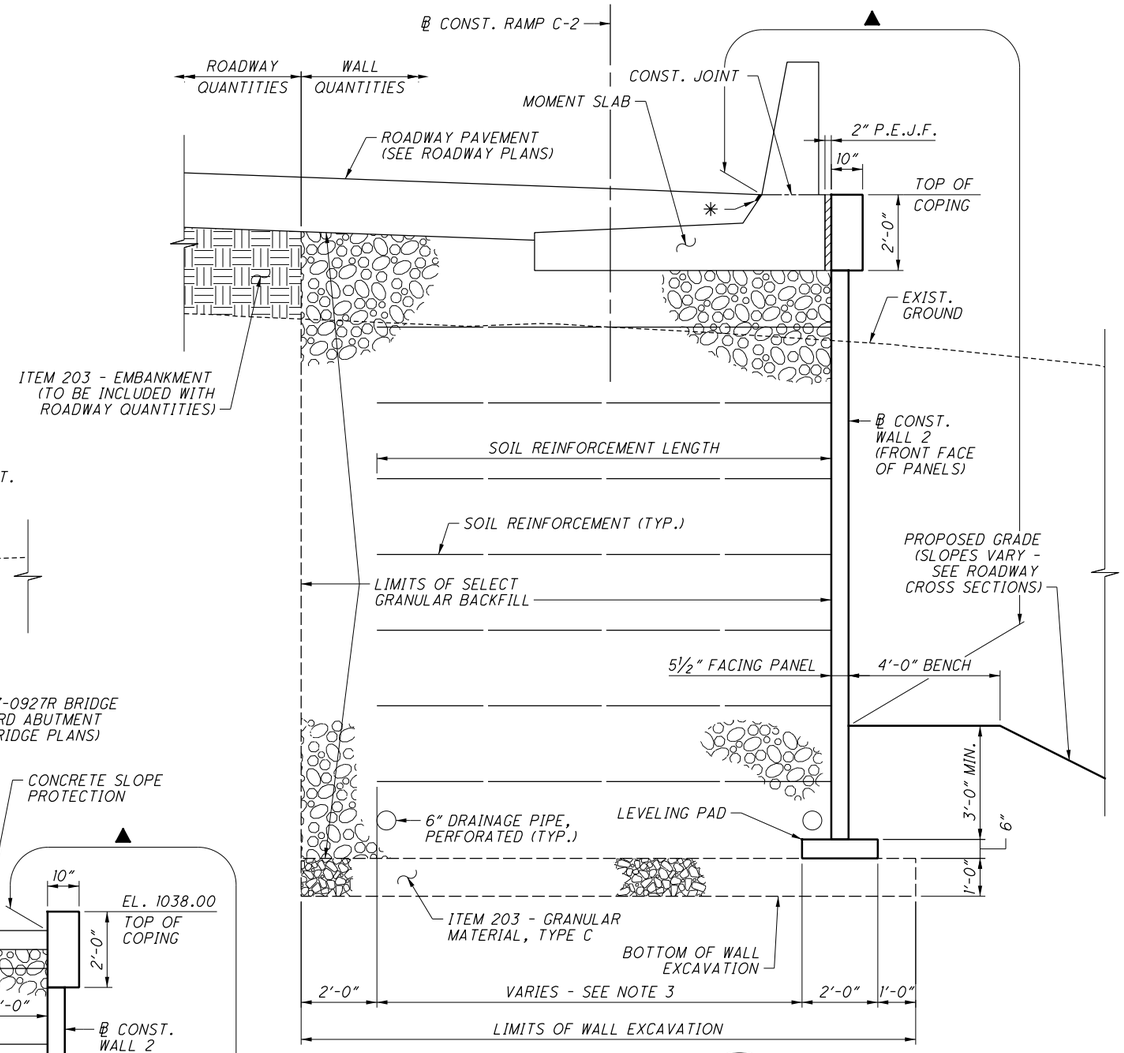


SECTION A



SECTION D

STA. 793+15.79 TO STA. 794+70.00
(STA. 0+98.01 TO STA. 2+51.97 ◑)
SECTION SHOWN AT MOMENT SLAB
SECTION AT APPROACH SLAB SIMILAR

LEGEND:

◑ STATION GIVEN TO ℄ CONST. WALL 2

▲ ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

✳ HOT APPLIED JOINT SEAL, CMS 705.04 (TO BE INCLUDED WITH MOMENT SLAB CONCRETE)

NOTES:

1. STATIONS ARE GIVEN TO ℄ CONST. RAMP C-2 UNLESS NOTED OTHERWISE.
2. FOR WALL NOTES, SEE SHT. NO. 2/10.
3. ACTUAL DIMENSIONS DEPEND ON THE DESIGN BY THE MSE WALL MANUFACTURER. FOR ESTIMATING PURPOSES, SEE THE TABLES ON SHT. NOS. 4/10 THRU 6/10.

DESIGN AGENCY
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MOJ	MOJ	DGN	1-18-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RHC			

WALL SECTIONS
RETAINING WALL 2
MSE WALL BELOW SUM-77-0927R FORWARD ABUTMENT

SUM-77/277/224
VARIOUS
PID No. 106002

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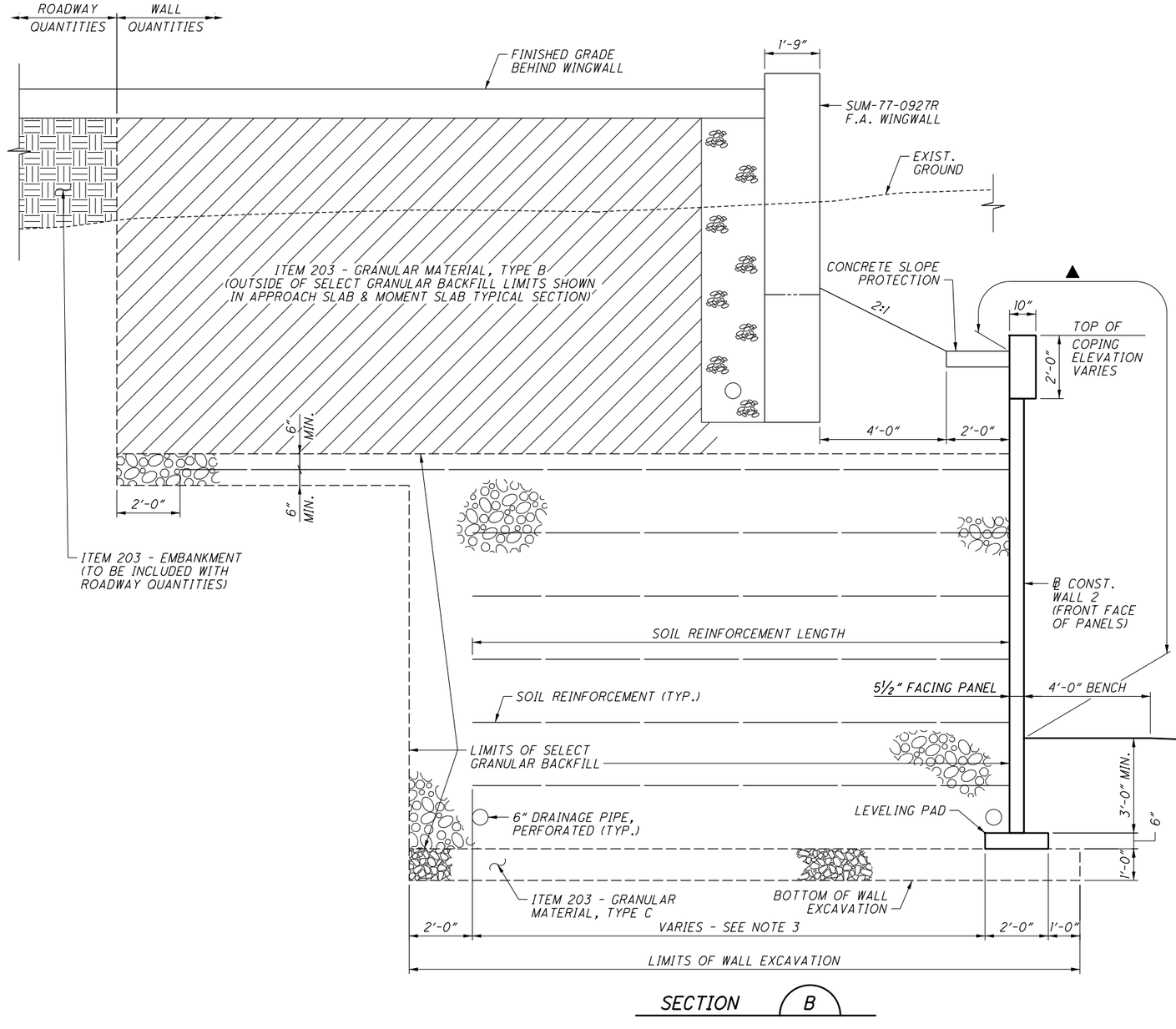

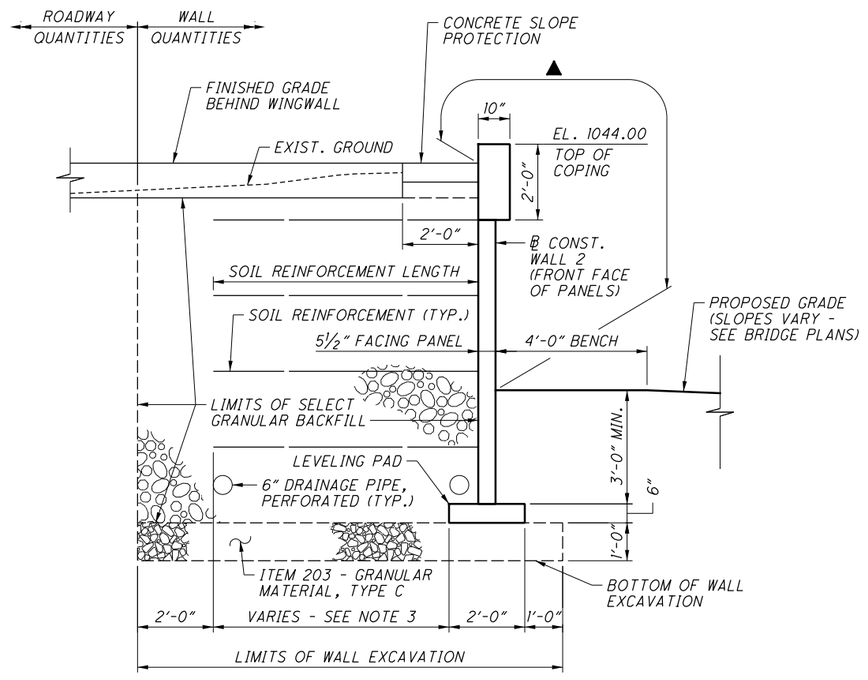

LEGEND:

▲ ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

NOTES:

1. STATIONS ARE GIVEN TO ℄ CONST. RAMP C-2 UNLESS NOTED OTHERWISE.
2. FOR WALL NOTES, SEE SHT. NO. 2/10.
3. ACTUAL DIMENSIONS DEPEND ON THE DESIGN BY THE MSE WALL MANUFACTURER. FOR ESTIMATING PURPOSES, SEE THE TABLES ON SHT. NOS. 4/10 THRU 6/10.

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DESIGNED MOJ | DRAWN MOJ | REVIEWED DGN | DATE 1-18-21
CHECKED RHC | REVISED | STRUCTURE FILE NUMBER

WALL SECTIONS
RETAINING WALL 2
MSE WALL BELOW SUM-77-0927R FORWARD ABUTMENT

SUM-77/277/224
VARIOUS
PID No. 106002

8 / 10

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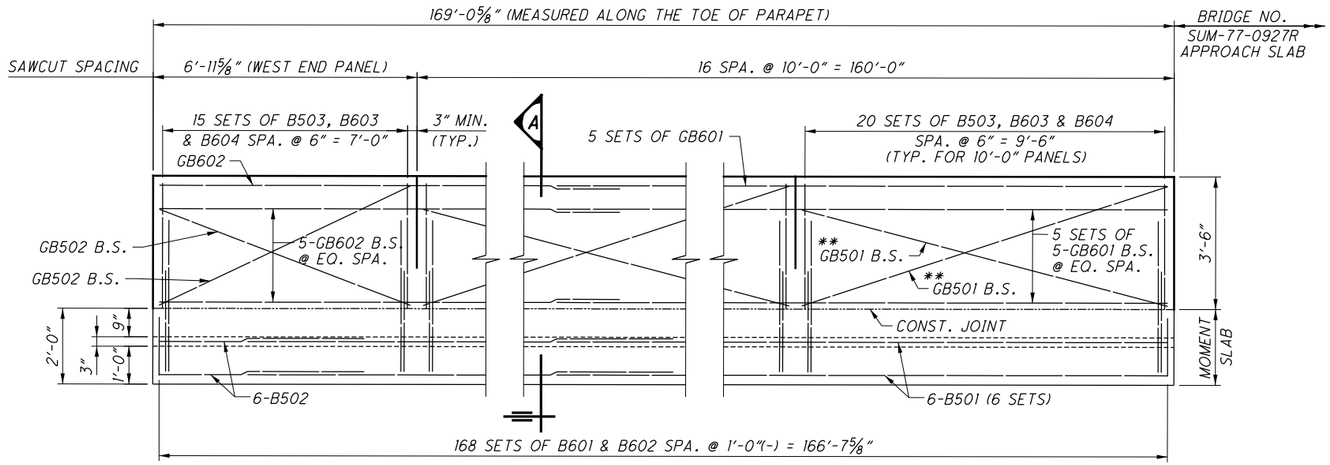
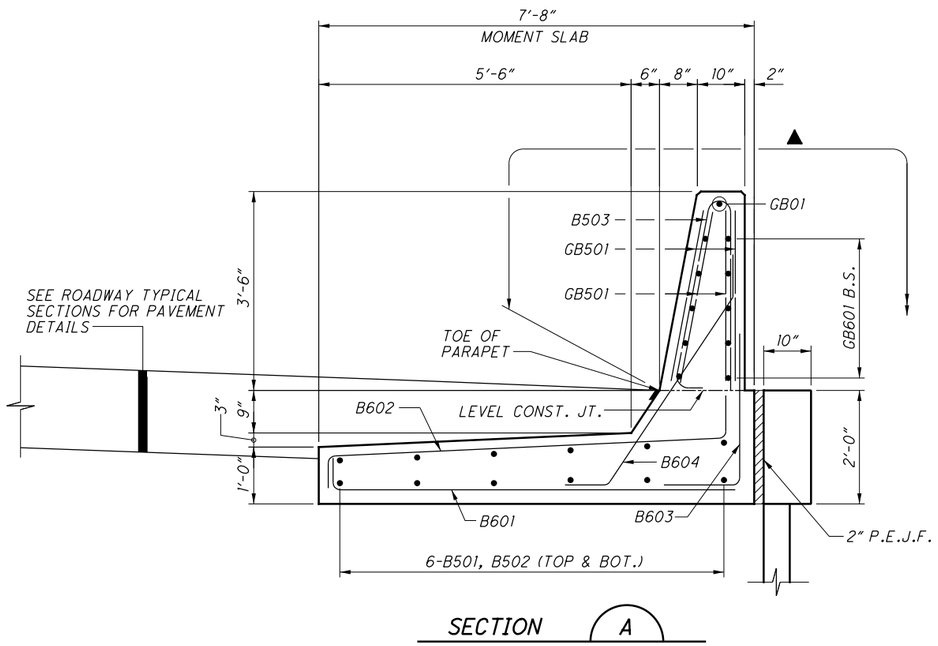
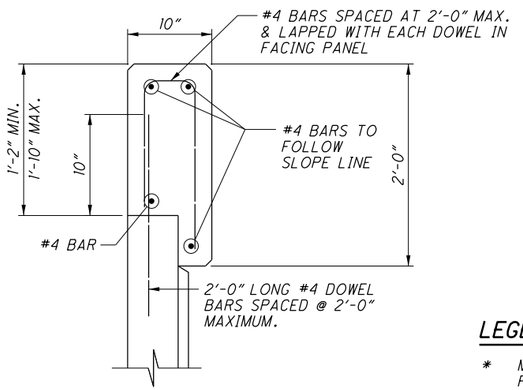


SBR-1-20 PARAPET ELEVATION ON MOMENT SLAB



SECTION A



MSE WALL COPING DETAIL

LEGEND:

* MEASURED ALONG THE TOE OF THE PARAPET

** TYPICAL FOR 10'-0 PANELS

▲ ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

NOTES:

1. FOR ADDITIONAL INFORMATION, SEE STANDARD DRAWINGS SBR-1-20.
2. REINFORCEMENT DESIGNATED WITH A "GB" PREFIX ARE GFRP BARS.
3. LAP B601 & B602 BARS WITH B603 & B604 BARS IN THE MOMENT SLAB. ADJUST SPACING AS NEEDED TO MAINTAIN 3" MIN. CLEAR TO SAWCUT JOINTS.
4. MINIMUM HORIZONTAL REINFORCING LAP LENGTHS ARE AS FOLLOWS:

NO. 5 BARS	3'-1"
ALL GFRP BARS	1'-8"

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DESIGNED	DRAWN	REVIEWED	DATE
DJC	DJC	DGN	1-18-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RHC			

MOMENT SLAB & PARAPET DETAILS
RETAINING WALL 2
MSE WALL BELOW SUM-77-0927R FORWARD ABUTMENT

SUM-77/277/224
VARIOUS
PID No. 106002

9 / 10

1153
1288

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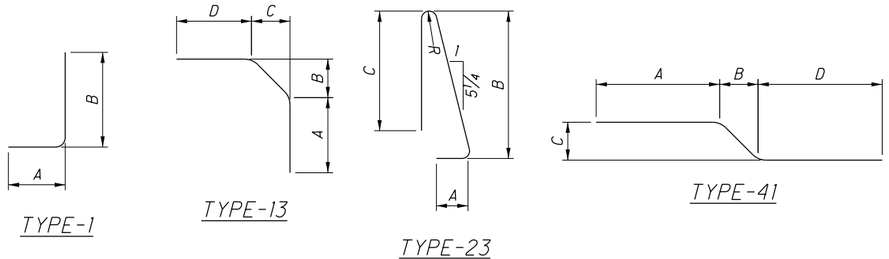
MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						INC.
					A	B	C	D	E	R	
STEEL REINFORCEMENT											
B501	72	30'-0"	2253	STR							
B502	12	5'-2'	65	STR							
B503	335	7'-0"	2446	23	0'-6"	3'-3"	3'-3"			0'-2"	
B601	168	7'-8"	1935	1	0'-7"	7'-3"					
B602	168	8'-3"	2082	41	0'-9"	0'-4"	7'-0"	0'-7"			
B603	335	3'-11"	1971	1	1'-4"	2'-9"					
B604	335	5'-5"	2726	13	0'-9"	2'-3"	3'-3"	0'-9"			
TOTAL STEEL REINFORCEMENT			13,478	LBS							

MARK	NUMBER	LENGTH	TOTAL FEET	TYPE	DIMENSIONS						INC.
					A	B	C	D	E	R	
GFRP REINFORCEMENT											
GB501	64	10'-0"	640	STR							
GB502	4	7'-4"	29	STR							
TOTAL NO. 5 GFRP			669	FT							
GB601	55	30'-0"	1650	STR							
GB602	11	25'-0"	275	STR							
TOTAL NO. 6 GFRP			1925	FT							

BAR BENDING DIAGRAMS



NOTES:

1. BAR DIMENSIONS ARE OUT-TO-OUT UNLESS NOTED OTHERWISE.
2. ALL BARS ARE EPOXY COATED.
3. WHEN NO BAR LEG DIMENSIONS ARE SHOWN, IT INDICATES A STANDARD BEND.
4. BAR SIZE AND LOCATION ARE INDICATED IN THE BAR MARK. THE FIRST ALPHABETICAL LETTER(S) INDICATES LOCATION. THE NEXT DIGIT OF THE THREE DIGIT SERIES AND THE NEXT TWO DIGITS OF THE FOUR DIGIT SERIES INDICATE BAR SIZE NUMBER.

EXAMPLES: B501 — NO. 5 SIZE BAR, WALL BAR

GB601 — NO. 6 SIZE BAR, GFRP WALL BAR

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STRUCTURE FILE NUMBER

REVISED

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REINFORCING BAR LISTS
RETAINING WALL 2
MSE WALL BELOW SUM-77-0927R FORWARD ABUTMENT

SUM-77/277/224
VARIOUS
PID No. 106002

10 / 10

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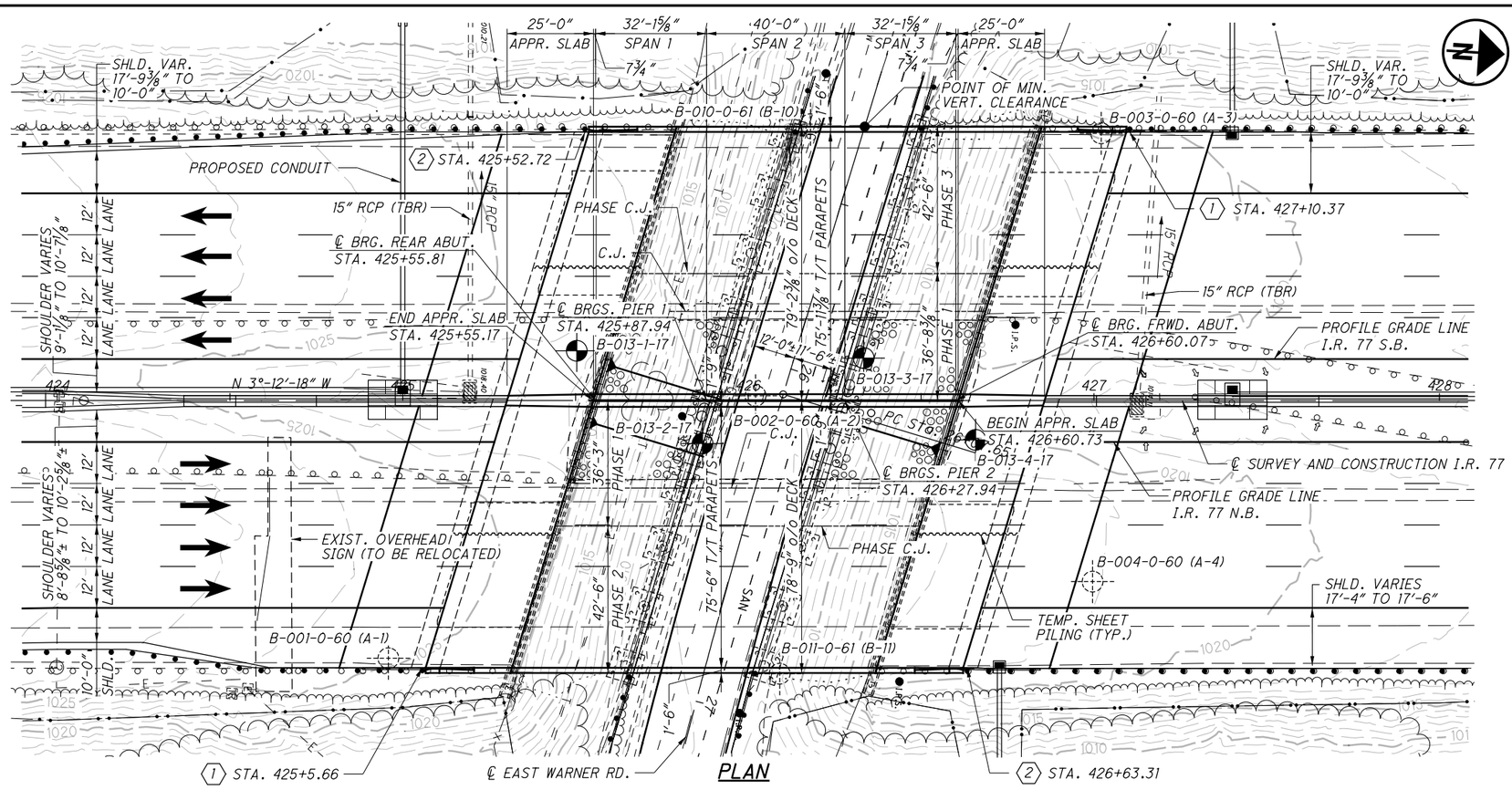
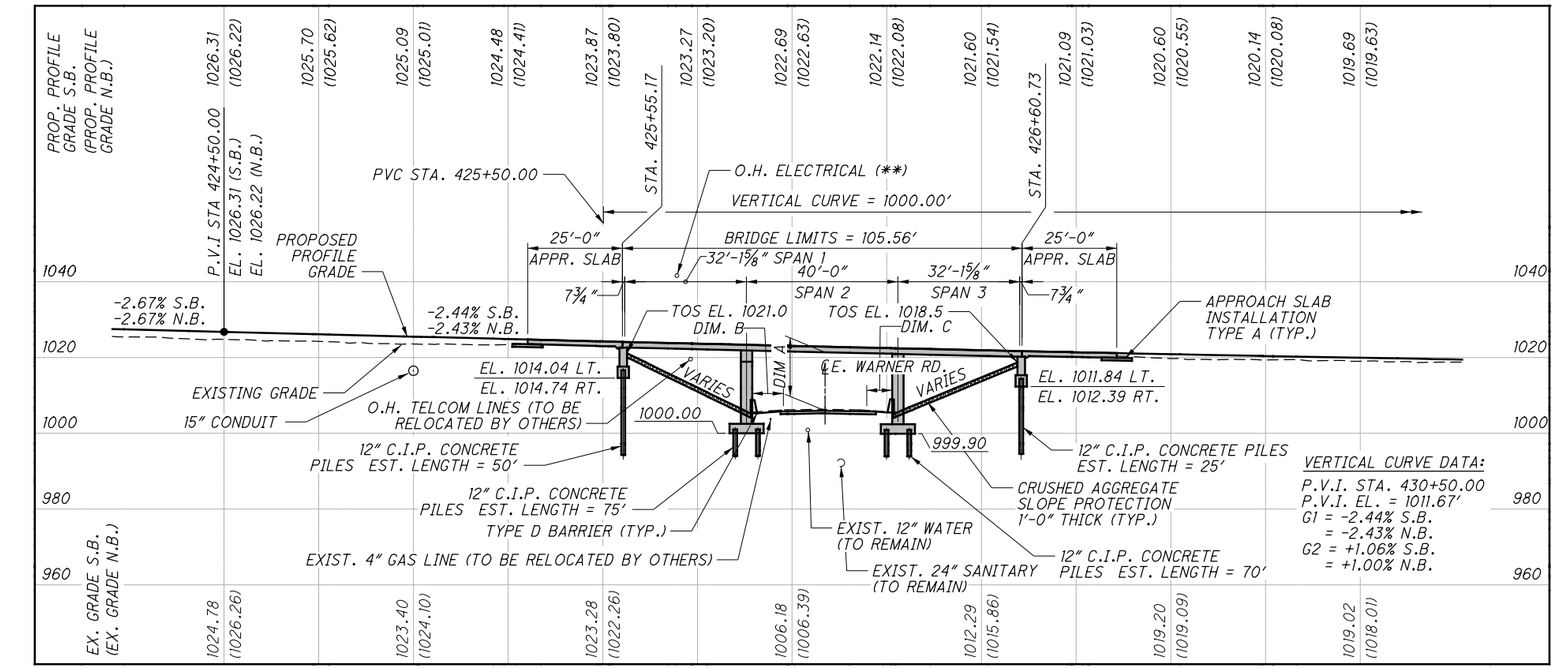


PLAN



PROFILE ALONG ℄ SURVEY & CONSTRUCTION I.R. 77

EXISTING GRADE ELEVATIONS ARE GIVEN ALONG THE NEW PROPOSED PROFILE GRADE LINES

BENCHMARK DATA

POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
CP03	485566.6495	2246336.2535	1117.76	CONC. MONUMENT
CP04	486357.9587	2246323.9152	1121.63	CONC. MONUMENT
CP05	493895.1420	2245390.8980	1073.53	CONC. MONUMENT
CP06	493906.9643	2244750.3816	1090.46	CONC. MONUMENT

FOR ADDITIONAL BENCHMARK INFORMATION, SEE ROADWAY PLANS.

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

DESIGN TRAFFIC:
2020 ADT = 118,630 2020 ADTT = 10,680
2040 ADT = 141,010 2040 ADTT = 12,690
DIRECTIONAL DISTRIBUTION = 57%

MINIMUM VERTICAL CLEARANCE (DIM. A)

EXIST.	14.20' ±
ACTUAL	14.55'
REQUIRED	14.50'

MINIMUM HORIZONTAL CLEARANCE

	DIM. B	DIM. C
ACTUAL	8.15'	3.86'
REQUIRED	5.67'	5.67'

* THIS BRIDGE RECEIVED AN APPROVED DESIGN EXCEPTION FOR SHOULDER WIDTH

LEGEND

- PROJECT BORING LOCATION
- HISTORIC BORING LOCATION
- (1) MGS BTA, TYPE 1 FIRST POST LOCATION (SEE STD. DWG. MGS-3.1)
- (2) MGS BTA, TYPE 2 FIRST POST LOCATION (SEE STD. DWG. MGS-3.2)
- ** UTILITY DISPOSITION PENDING

EXISTING STRUCTURE

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB WITH CAPPED PILE ABUTMENTS AND REINFORCED CONCRETE PIERS ON C.I.P. PILES
SPANS: 32'-1⅝"±, 40'-0"±, 32'-1⅝"±
ROADWAY: 53'-0"± T/T PARAPETS
LOADING: CF = 2000 (57)
SKEW: 16°-56'-07" L.F.
WEARING SURFACE: 4"± ASPHALT
APPROACH SLABS: AS-1-54 (25'-0" LONG)
ALIGNMENT: TANGENT
CROWN: 0.0156 FT/FT
STRUCTURAL FILE NUMBER: 7702493 (LT) & 7702523 (RT)
DATE BUILT: 1965
DISPOSITION: TO BE REHABILITATED

PROPOSED STRUCTURE

PROPOSED WORK: WIDEN CONTINUOUS REINFORCED CONCRETE SLAB ON EXTENDED CAPPED PILE ABUTMENTS AND REINFORCED CONCRETE PIERS ON C.I.P. PILES AND TREAT EXISTING DECK SURFACE WITH MICRO-SILICA OVERLAY
SPANS: 32'-1⅝", 40'-0", 32'-1⅝"
ROADWAY: 75'-11⅜" TOE/TOE PARAPETS (SB)
75'-6" TOE/TOE PARAPETS (NB)
VEHICULAR LIVE LOAD: (SEE GENERAL NOTES)
FUTURE WEARING SURFACE: (SEE GENERAL NOTES)
SKEW: 16°-56'-07" L.F.
WEARING SURFACE: 1" MONOLITHIC CONCRETE AND 1½" MICRO-SILICA OVERLAY
DECK AREA: 8,361 SQ. FT. (NB), 8,318 SQ. FT. (SB)
APPROACH SLABS: 25'-0" LONG (AS-1-15) TYPE A INSTALL. (AS-2-15)
ALIGNMENT: TANGENT
CROWN: 0.0156 FT/FT
COORDINATES: LATITUDE 41°-00'-21.87" (SB) 41°-00'-21.69" (NB)
LONGITUDE 81°-29'-39.84" (SB) 81°-29'-38.19" (NB)

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REVIEWED TJW DATE 1-18-21
STRUCTURE FILE NUMBER 7702493/7702523
DRAWN RFV REVISED
DESIGNED RFV CHECKED RHC
COUNTY
STA. 425+55.17
STA. 426+60.73

SITE PLAN
BRIDGE NO. SUM-77-0802 L/R
OVER EAST WARNER ROAD

SUM-77/277/224
VARIOUS
PID No. 106002

1 / 26

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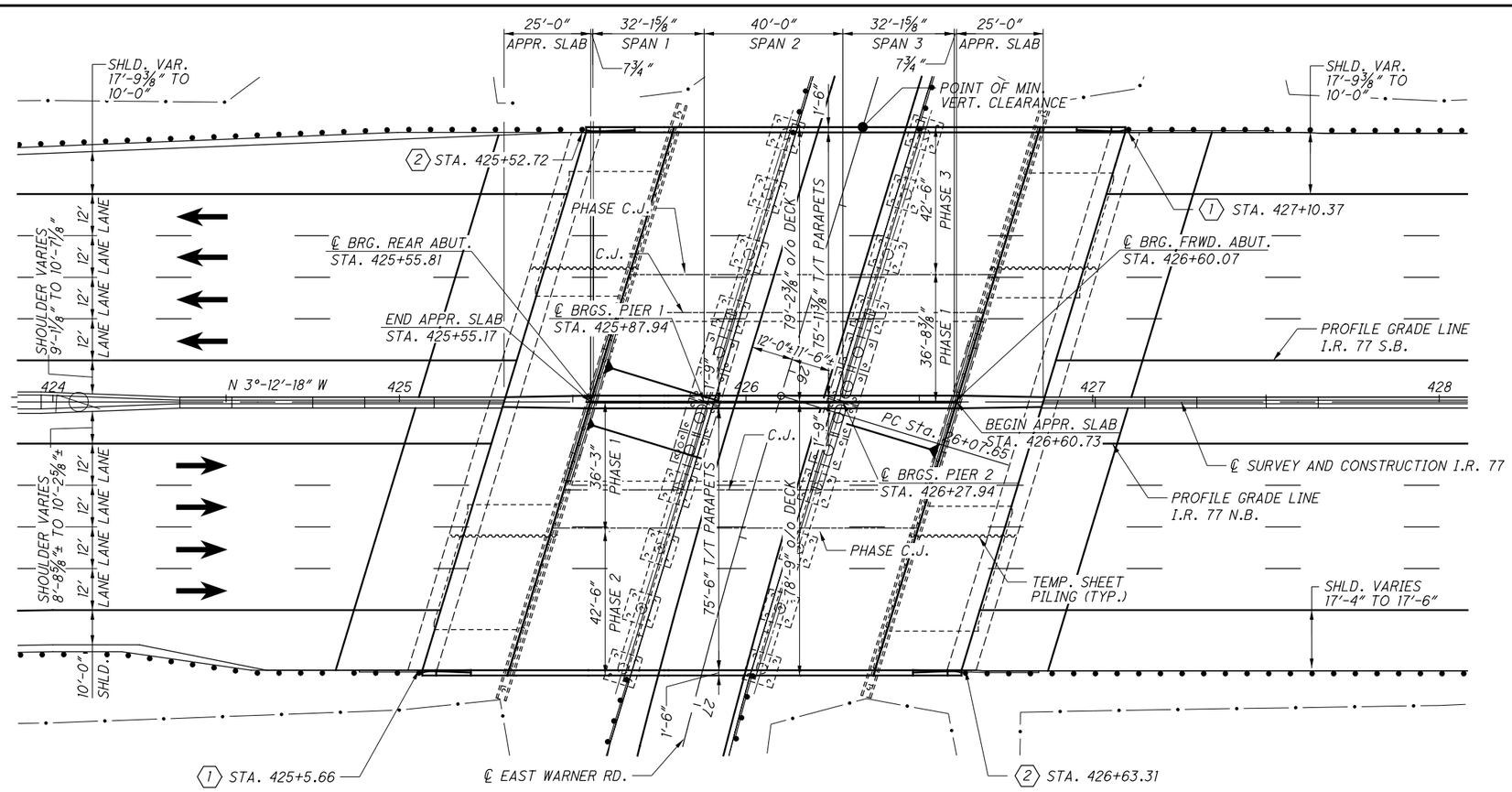

PLAN

LEGEND:

1 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1
FIRST POST LOCATION (SEE STD. DWG. MGS-3.1)

2 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2
FIRST POST LOCATION (SEE STD. DWG. MGS-3.2)

NOTES:

THE BRIDGE DECKS, CONSTRUCT JOINTS, CROWNS, AND PROFILE GRADES ARE OFFSETS FROM THE ℄ SURVEY & CONSTRUCTION I.R. 77

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RFV	RFV	TJW	1-18-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RHC		77002493/77002523	

COUNTY
STA. 425+55.17
STA. 426+60.73

GENERAL PLAN
BRIDGE NO. SUM-77-0802 L/R
OVER EAST WARNER ROAD

SUM-77/277/224
VARIOUS
PID No. 106002

2 / 26

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DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 8TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED	7-17-15
AS-2-15	REVISED	1-18-19
CPP-1-08	REVISED	7-21-17
CS-1-08	DATED	1-15-21
PCB-91	REVISED	7-17-20
SBR-1-20	REVISED	7-17-20
SBR-2-20	DATED	1-15-21

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION:

SS800	DATED	01-15-21

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:

VEHICULAR LIVE LOAD/FUTURE WEARING SURFACE:
WIDENED SLAB: HL-93 / FWS = 0.060 KSF
EX. SLAB & OVERLAY: 70% HL-93 / FWS = 0.000 SF*
WIDENED SUBSTRUCTURE & FOUNDATION: HL-93 / FWS = 0.060 KSF
EX. SUBSTRUCTURE & FOUNDATION: CF-2000 (57)
* - THIS BRIDGE RECEIVED AN APPROVED DESIGN EXCEPTION FOR DESIGN LOADING STRUCTURAL CAPACITY.

DESIGN DATA:

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI
CIP REINF. CONC. PILE STEEL - ASTM A252 GRADE 3 - YIELD STRENGTH 35 KSI (MIN.)

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

PILE DESIGN LOADS (ULTIMATE BEARING VALUE):

THE ULTIMATE BEARING VALUE IS 167 KIPS PER PILE FOR THE ABUTMENT PILES. THE ULTIMATE BEARING VALUE IS 272 KIPS PER PILE FOR THE PIER PILES.

ABUTMENT PILES:
12" DIA. PILES 55 FEET LONG, ORDER LENGTH (REAR)
12" DIA. PILES 30 FEET LONG, ORDER LENGTH (FORWARD)
1 DYNAMIC LOAD TESTING ITEM

PIER PILES:
12" DIA. PILES 80 FEET LONG, ORDER LENGTH (PIER 1)
12" DIA. PILES 75 FEET LONG, ORDER LENGTH (PIER 2)
1 DYNAMIC LOAD TESTING ITEM

PILE DRIVING:

THE MINIMUM RATED ENERGY OF THE HAMMER USED TO INSTALL THE PILES SHALL BE 43,000 FOOT-POUNDS. ENSURE THAT STRESSES IN THE PILES DURING DRIVING DO NOT EXCEED 31,500 POUNDS PER SQUARE INCH. THE MINIMUM PILE WALL THICKNESS SHALL BE 0.25 INCHES FOR THE ABUTMENT PILES AND 0.30 INCHES FOR THE PIER PILES.

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 C&MS SECTIONS 102.05 AND 105.02 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.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20' SPAN, AS PER PLAN

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20' SPAN, AS PER PLAN

DESCRIPTION: THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 501.05.

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

SUBSTRUCTURE CONCRETE REMOVAL: REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. 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 THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20' SPAN, AS PER PLAN.

ITEM 509 - REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN:

REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE. REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE DEEMED BY THE ENGINEER TO BE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE DEPARTMENT.

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN

PRIOR TO THE SURFACE CLEANING SPECIFIED IN CMS 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTALE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASSIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

ALL UNSOUND AREAS OF CONCRETE TO REMAIN SHALL BE PATCHED UNDER THIS ITEM. ESTIMATED AREAS SHOWN IN THE TABLE BELOW HAVE BEEN INCLUDED IN THE ESTIMATED QUANTITIES ALONG WITH A CONTINGENCY QUANTITY OF 20 SQUARE FEET.

REPAIR ITEMS	ITEM 519 - PATCHING CONCRETE STRUCTURE (SF)
NORTHBOUND	
REAR ABUTMENT	0
PIER 1	0
PIER 2	5
FORWARD ABUTMENT	25
SOUTHBOUND	
REAR ABUTMENT	5
PIER 1	0
PIER 2	0
FORWARD ABUTMENT	35

ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM

THE EXISTING COLUMNS OF ALL PIERS SHALL BE WRAPPED WITH A COMPOSITE FIBER WRAP SYSTEM CAPABLE OF PROVIDING A CONFINING STRESS OF 0.150 KSI FOR THE ENTIRE LENGTH OF THE COLUMN FROM TOP OF FOOTING TO BOTTOM OF PIER CAP. ALL DESIGN AND INSTALLATION WORK SHALL BE IN ACCORDANCE WITH PROPOSAL NOTE 519.

EXISTING COATING ON THE PIER COLUMNS SHALL BE COMPLETELY REMOVED PRIOR TO THE INSTALLATION OF A COMPOSITE FIBER WRAP SYSTEM.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID PER SQUARE FOOT OF COLUMN SURFACE TREATED FOR ITEM SPECIAL COMPOSITE FIBER WRAP SYSTEM AND SHALL INCLUDE ALL DESIGN, LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS TO COMPLETE THE WORK.

ABBREVIATIONS:

ABUT.	ABUTMENT
BOT.	BOTTOM
BRG.	BEARING
B.S.	BOTH SIDES
BTWN.	BETWEEN
C.I.P.	CAST-IN-PLACE
C.J.	CONSTRUCTION JOINT
CLR.	CLEAR
CONST.	CONSTRUCTION
DIA.	DIAMETER
DIM.	DIMENSION
EL.	ELEVATION
EQ.	EQUAL
EX. OR EXIST.	EXISTING
F.A.	FORWARD ABUTMENT
FRWD.	FORWARD
F.S.	FAR SIDE
GFRP	GLASS FIBER REINFORCED POLYMER
LT.	LEFT
MAX.	MAXIMUM
MIN.	MINIMUM
NB	NORTHBOUND
N.P.C.P.P.	NON-PERFORATED CORRUGATED PLASTIC PIPE
NO.	NUMBER
N.S.	NEAR SIDE
P.C.P.P.	PERFORATED CORRUGATED PLASTIC PIPE
P.E.J.F.	PREFORMED EXPANSION JONT FILLER
R.A.	REAR ABUTMENT
RT.	RIGHT
SB	SOUTHBOUND
SER.	SERIES
SPA.	SPACES OR SPACING
STA.	STATION
STD. DWG.	STANDARD DRAWING
T&B	TOP AND BOTTOM
TBR	TO BE REMOVED
TYP.	TYPICAL

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RFV	RFV	TJW	1-18-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RHC		77102493/77102523	

GENERAL NOTES
BRIDGE NO. SUM-77-0802 L/R
OVER EAST WARNER ROAD

SUM-77/277/224
VARIOUS
PID No. 106002

1157
1288

ESTIMATED QUANTITIES

CALCULATED BY: RFV DATE: 1-14-21
CHECKED BY: DJC DATE: 1-15-21

ESTIMATED QUANTITIES

ITEM	EXT.	TOTAL	PARTICIPATION 03/IMS/BR	PARTICIPATION 04/IMS/BR	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPER-STRUCTURE	GENERAL	AS PER PLAN REFERENCE SHEET
202	11203	LS	LS	LS	LS	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					3
202	22900	400	260	140	SY	APPROACH SLAB REMOVED				400	
202	23500	400	260	140	SY	WEARING COURSE REMOVED				400	
503	11100	LS	LS	LS	LS	COFFERDAMS AND EXCAVATION BRACING					
503	21100	278	181	97	CY	UNCLASSIFIED EXCAVATION	88	190			
505	11100	LS	LS	LS	LS	PILE DRIVING EQUIPMENT MOBILIZATION					
507	00500	2770	1800	970	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	450	2320			
507	00550	2990	1944	1046	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	510	2480			
509	10000	130236	84653	45583	LB	EPOXY COATED REINFORCING STEEL	9997	28796	91443		
509	20001	100	65	35	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN				100	3
509	30020	4171	2711	1460	FT	NO. 4 GFRP DEFORMED BARS			4171		
509	30040	3310	2152	1158	FT	NO. 6 GFRP DEFORMED BARS			3310		
510	10000	282	183	99	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	282				
511	34446	368	239	129	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK			368		
511	34450	115	75	40	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)			115		
511	41010	70	45	25	CY	CLASS QC1 CONCRETE, PIER ABOVE FOOTINGS		70			
511	44112	32	21	11	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	32				
511	46512	81	53	28	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	21	60			
512	10100	1217	791	426	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	61	636	520		
512	33000	10	7	3	SY	TYPE 2 WATERPROOFING	10				
512	74000	473	307	166	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	40	433			
516	13600	50	33	17	SF	1" PREFORMED EXPANSION JOINT FILLER	8		42		
516	13900	37	24	13	SF	2" PREFORMED EXPANSION JOINT FILLER	37				
518	21200	125	81	44	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	125				
518	40000	360	234	126	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	360				
518	40010	60	39	21	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	60				
519	00100	2199	1429	770	SF	SPECIAL - COMPOSITE FIBER WRAP SYSTEM		2199			3
519	11101	90	59	31	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	65	5		20	3
523	20000	2	1	1	EACH	DYNAMIC LOAD TESTING	1	1			
526	25011	879	571	308	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN				879	22-24
526	90011	325	211	114	FT	TYPE A INSTALLATION, AS PER PLAN				325	22-23
✳ 601	20000	310	202	108	SY	CRUSHED AGGREGATE SLOPE PROTECTION	310				
846	00110	136	88	48	CF	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM				136	
848	10000	1220	793	427	SY	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, 1 1/2 " THICK. AND VARIES			1220		
848	20000	1197	778	419	SY	SURFACE PREPARATION USING HYDRODEMOLITION			1197		
848	30000	60	39	21	CY	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY			60		
848	50000	12	8	4	SY	HAND CHIPPING			12		
848	50100	LS	LS	LS	LS	TEST SLAB					
848	50200	2	1	1	CY	FULL-DEPTH REPAIR			2		
848	50300	1220	793	427	SY	WEARING COURSE REMOVED, ASPHALT			1,220		

✳ INCLUDED FOR PAYMENT WITH THE EROSION CONTROL QUANTITIES - SEE THE GENERAL SUMMARY.

REVISIONS		
NO.	DATE	DESCRIPTION
6	04/30/21	ADDED ITEM 512 - REMOVAL OF EXISTING COATINGS

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STRUCTURE FILE NUMBER 7702493/7702523

REVISED

ESTIMATED QUANTITIES
BRIDGE NO. SUM-77-0802 L/R
OVER EAST WARNER ROAD

SUM-77/277/224
VARIOUS
PID No. 106002

4 / 26

1158
1288

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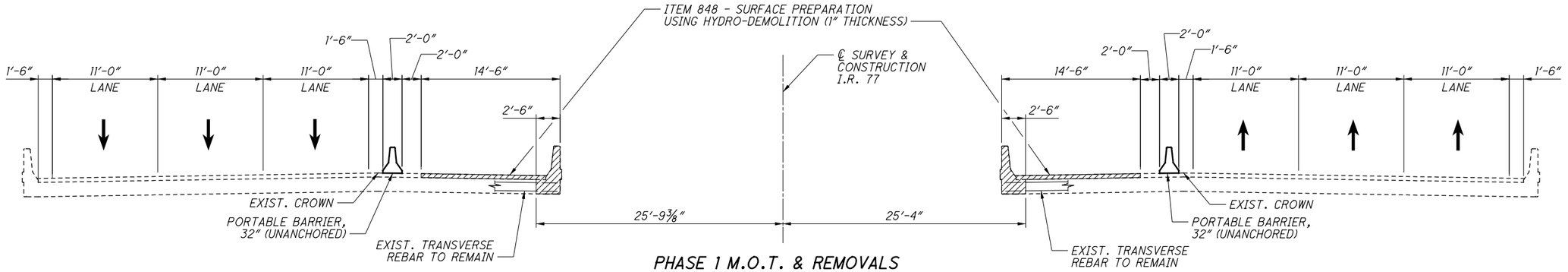
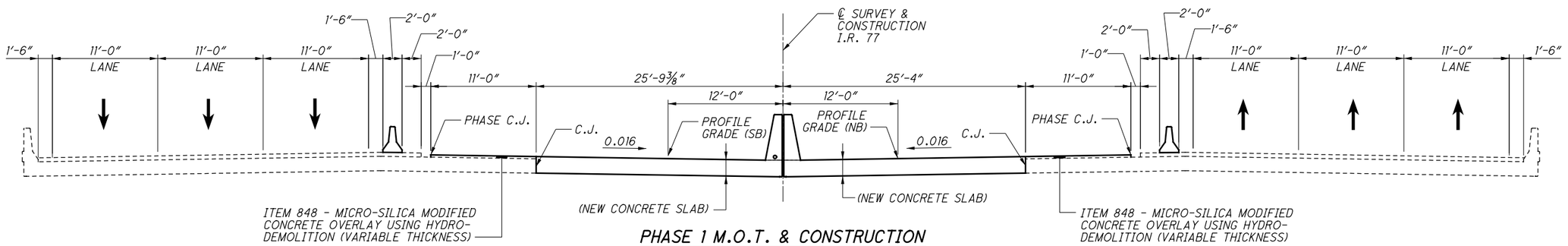
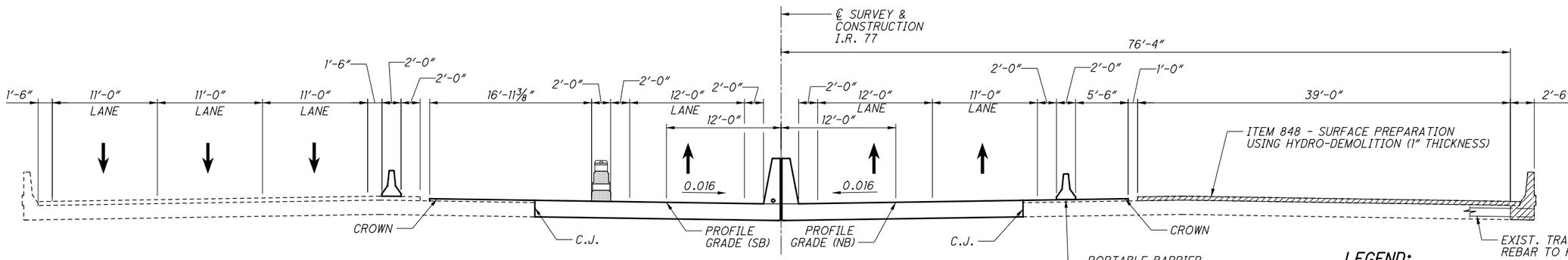


PHASE 1 M.O.T. & REMOVALS



PHASE 1 M.O.T. & CONSTRUCTION



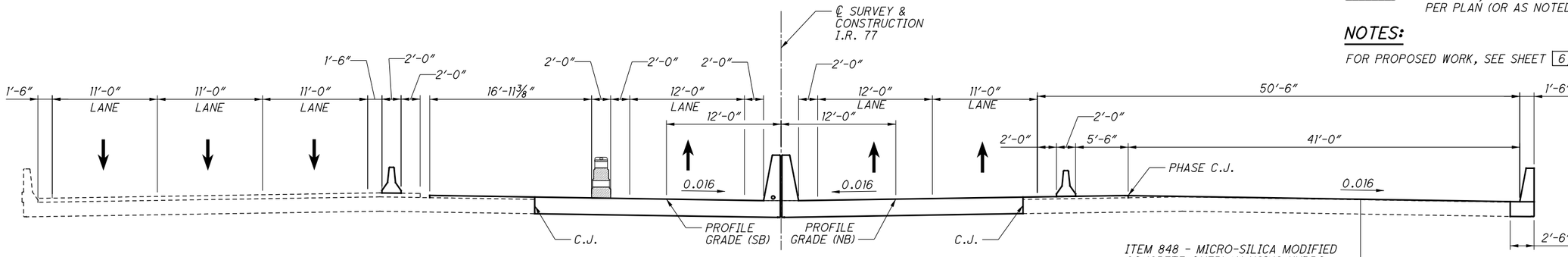
PHASE 2 M.O.T. & REMOVALS

LEGEND:

▨ - INDICATES PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN (OR AS NOTED)

NOTES:

FOR PROPOSED WORK, SEE SHEET 6/26.



PHASE 2 M.O.T. & CONSTRUCTION

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RFV	RFV	TJW	1-18-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RHC		77002493/77002523	

STAGE CONSTRUCTION DETAILS
BRIDGE NO. SUM-77-0802 L/R
OVER EAST WARNER ROAD

SUM-77/277/224
VARIOUS
PID No. 106002

1159
1288

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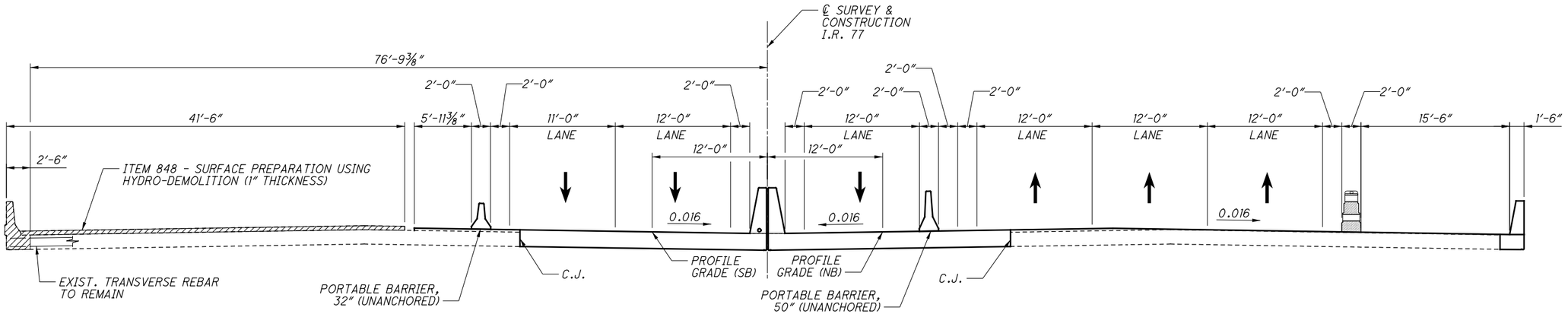
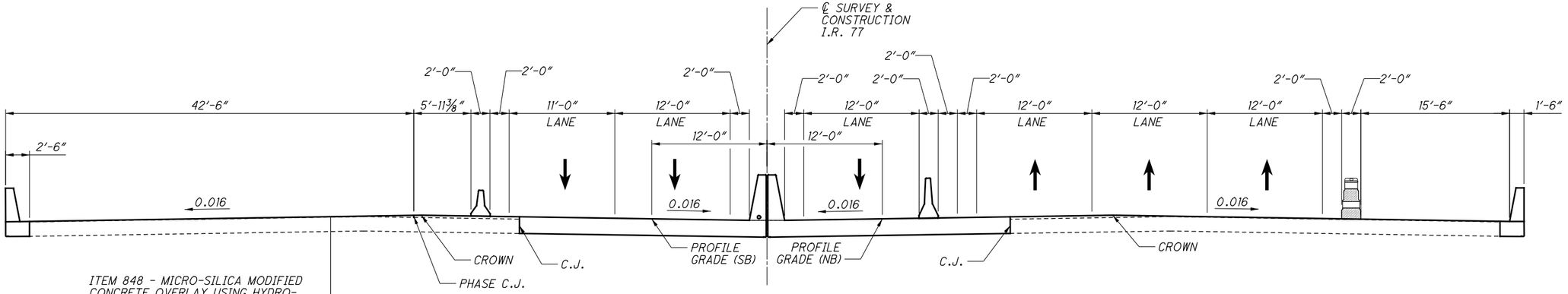


PHASE 3 M.O.T. & REMOVALS



PHASE 3 M.O.T. & CONSTRUCTION

LEGEND:

▨ - INDICATES PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN (OR AS NOTED)

PROPOSED WORK:

PHASE 1 REMOVALS AND CONTRUCTION (NORTHBOUND & SOUTHBOUND)

1. PLACE PORTABLE BARRIER AND TEMPORARY STRIPING.
2. DIVERT AND MAINTAIN THREE LANES OF TRAFFIC IN EACH DIRECTION.
3. REMOVE PORTION OF ASPHALT.
4. PERFORM ITEM 848, SURFACE PREPARATION USING HYDRODEMOLITION.
5. REMOVE PORTION OF DECK SLAB, PARAPET AND APPROACH SLABS.
6. INSTALL TEMPORARY SHEETING AT ABUTMENTS.
7. CONSTRUCT NEW WIDENED ABUTMENT AND PIER CONCRETE.
8. PLACE CONCRETE DECK SLAB, PARAPETS AND APPROACH SLABS.
9. PLACE ITEM 848, MICROSILICA CONCRETE OVERLAY.
10. PATCH AND SEAL CONCRETE SURFACES.
11. PLACE CRUSHED AGGREGATE SLOPE PROTECTION.

PHASE 2 REMOVALS AND CONTRUCTION (NORTHBOUND)

1. PLACE PORTABLE BARRIER AND TEMPORARY STRIPING.
2. DIVERT AND MAINTAIN THREE LANES OF TRAFFIC IN EACH DIRECTION.
3. REMOVE PORTION OF ASPHALT.
4. PERFORM ITEM 848, SURFACE PREPARATION USING HYDRODEMOLITION.
5. REMOVE PORTION OF DECK SLAB, PARAPET AND APPROACH SLABS.
6. CONSTRUCT NEW ABUTMENT WINGWALL CONCRETE.
7. PLACE CONCRETE DECK SLAB, PARAPETS AND APPROACH SLABS.
8. PLACE ITEM 848, MICROSILICA CONCRETE OVERLAY.
9. PATCH AND SEAL CONCRETE SURFACES.

PHASE 3 REMOVALS AND CONTRUCTION (SOUTHBOUND)

1. PLACE PORTABLE BARRIER AND TEMPORARY STRIPING.
2. DIVERT AND MAINTAIN THREE LANES OF TRAFFIC IN EACH DIRECTION.
3. REMOVE PORTION OF ASPHALT.
4. PERFORM ITEM 848, SURFACE PREPARATION USING HYDRODEMOLITION.
5. REMOVE PORTION OF DECK SLAB, PARAPET AND APPROACH SLABS.
6. CONSTRUCT NEW ABUTMENT WINGWALL CONCRETE.
7. PLACE CONCRETE DECK SLAB, PARAPETS AND APPROACH SLABS.
8. PLACE ITEM 848, MICROSILICA CONCRETE OVERLAY.
9. PATCH AND SEAL CONCRETE SURFACES.
10. AFTER ALL CONSTRUCTION IS COMPLETE, REMOVE TRAFFIC CONTROL AND OPEN BRIDGES TO NORMAL TRAFFIC.

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DESIGN AGENCY
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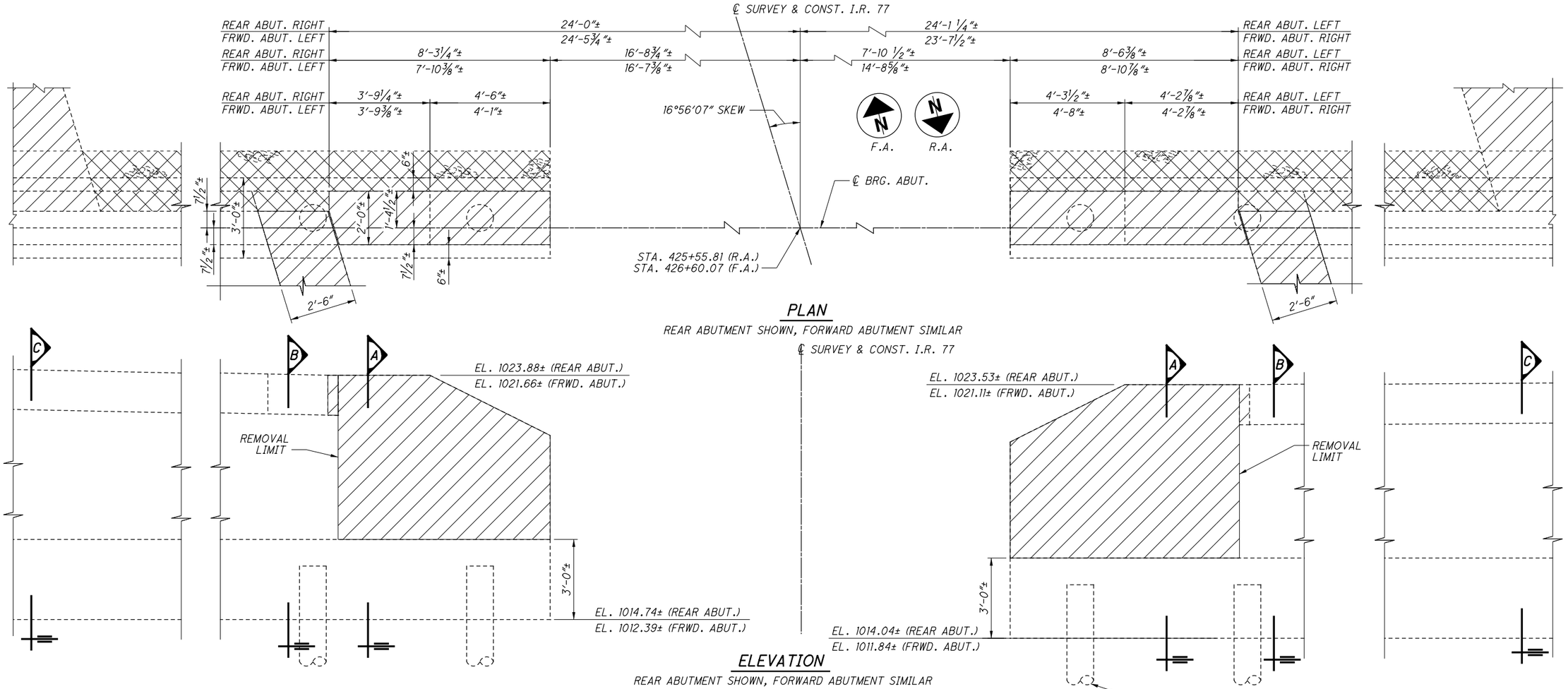
DESIGNED	DRAWN	REVIEWED	DATE
RFV	RFV	TJW	1-18-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RHC		77002493/77002523	

STAGE CONSTRUCTION DETAILS
BRIDGE NO. SUM-77-0802 L/R
OVER EAST WARNER ROAD

SUM-77/277/224
VARIOUS
PID No. 106002

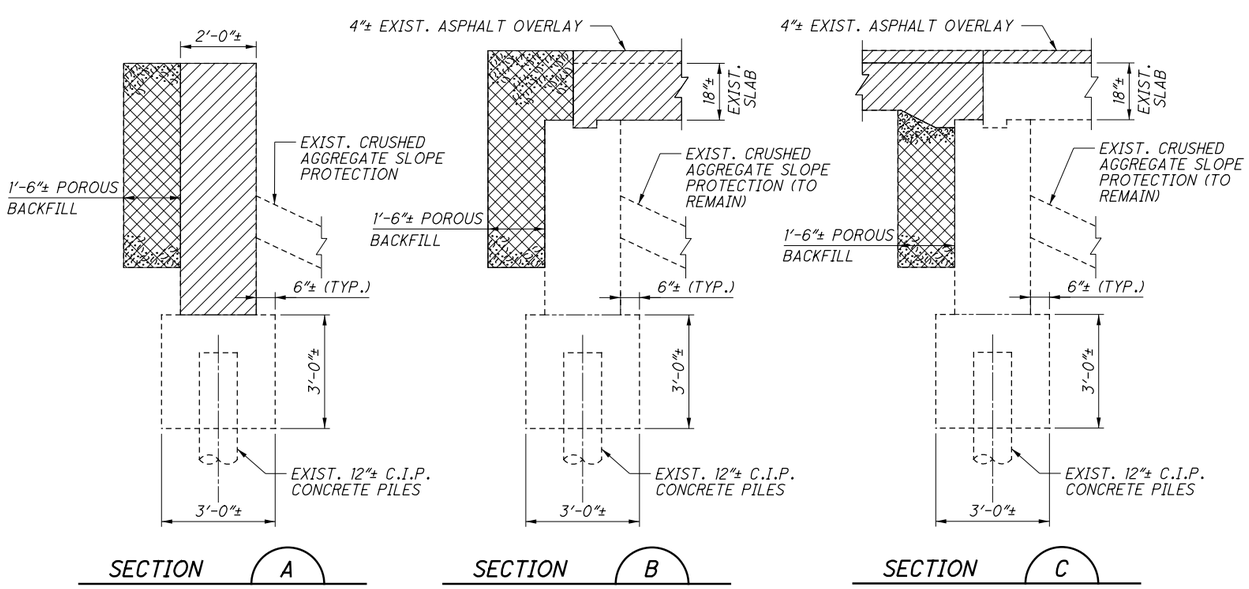


PLAN

REAR ABUTMENT SHOWN, FORWARD ABUTMENT SIMILAR

ELEVATION

REAR ABUTMENT SHOWN, FORWARD ABUTMENT SIMILAR



REVISIONS		
NO.	DATE	DESCRIPTION
3	04/9/21	NOTE 3 REMOVED

LEGEND:

- – INDICATES PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN, PER ITEM 202
- – INDICATES WEARING COURSE REMOVED, PER ITEM 848
- – INDICATES POROUS BACKFILL REMOVED, PER ITEM 518
- – EXIST. 12" DIA. C.I.P. CONCRETE PILE

NOTES:

1. FOR EXISTING SLAB REMOVAL DETAIL USING HYDRODEMOLITION, SEE SHEET 15/26.
2. ALL UNSOUND AREAS OF CONCRETE TO REMAIN SHALL BE PATCHED UNDER ITEM 519 - PATCHING CONRETE STRUCTURE. ESTIMATED AREAS ARE SHOWN IN THE TABLES IN THE GENERAL NOTES HAVE BEEN INCLUDED IN THE ESTIMATED QUANTITIES.

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CHECKED RHC | REVISED | STRUCTURE FILE NUMBER 77002493/77702523

ABUTMENT REMOVAL DETAILS
BRIDGE NO. SUM-77-0802 L/R
OVER EAST WARNER ROAD

SUM-77/277/224
VARIOUS
PID No. 106002

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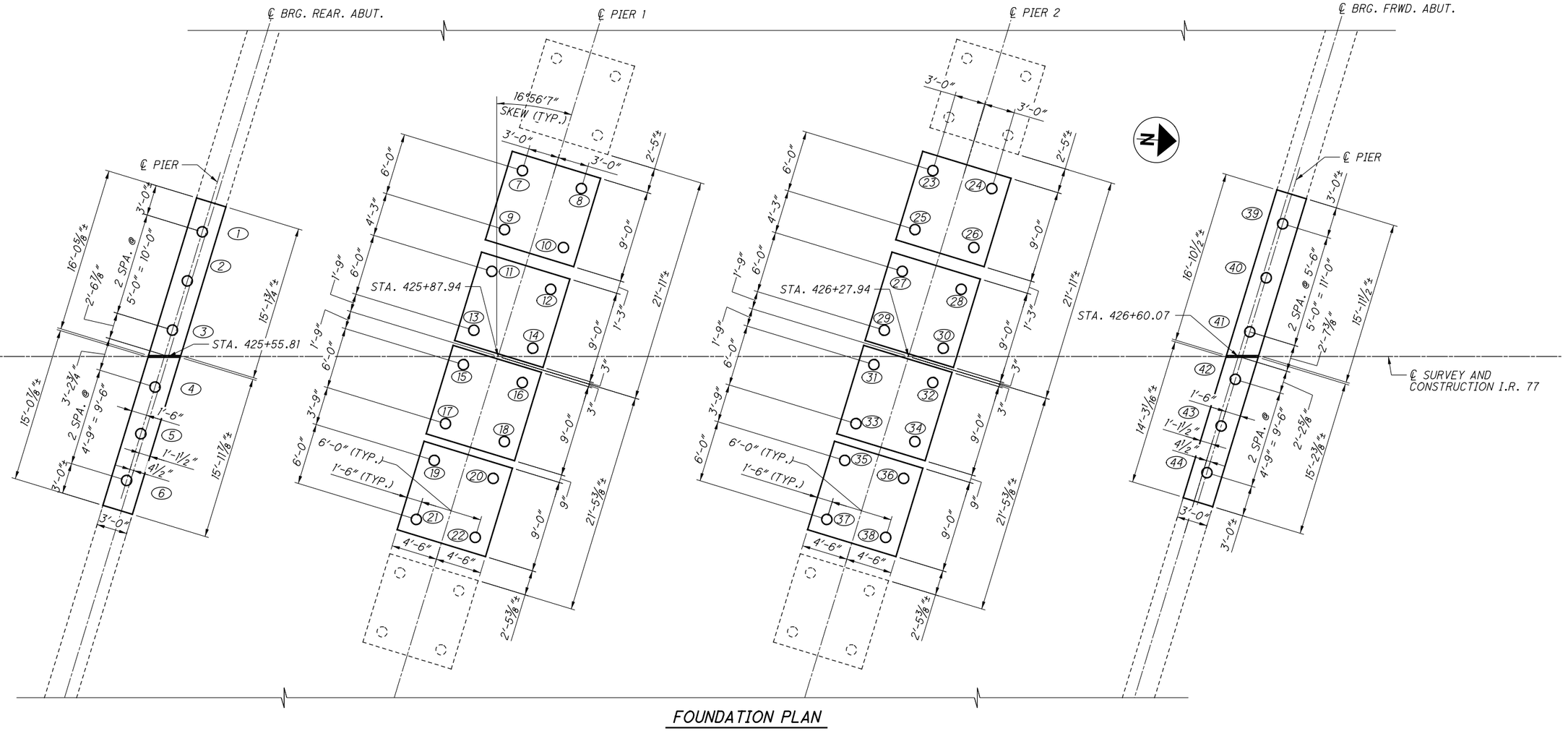

FOUNDATION PLAN

LEGEND:

- (#) PILE NUMBER
- O INDICATES PROPOSED 12" C.I.P. PILE
- ◌ INDICATES EXISTING 12" C.I.P. PILE

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RHC		77702493/77702523	

FOUNDATION PLAN
BRIDGE NO. SUM-77-0802 L/R
OVER EAST WARNER ROAD

SUM-77/277/224
VARIOUS
PID No. 106002

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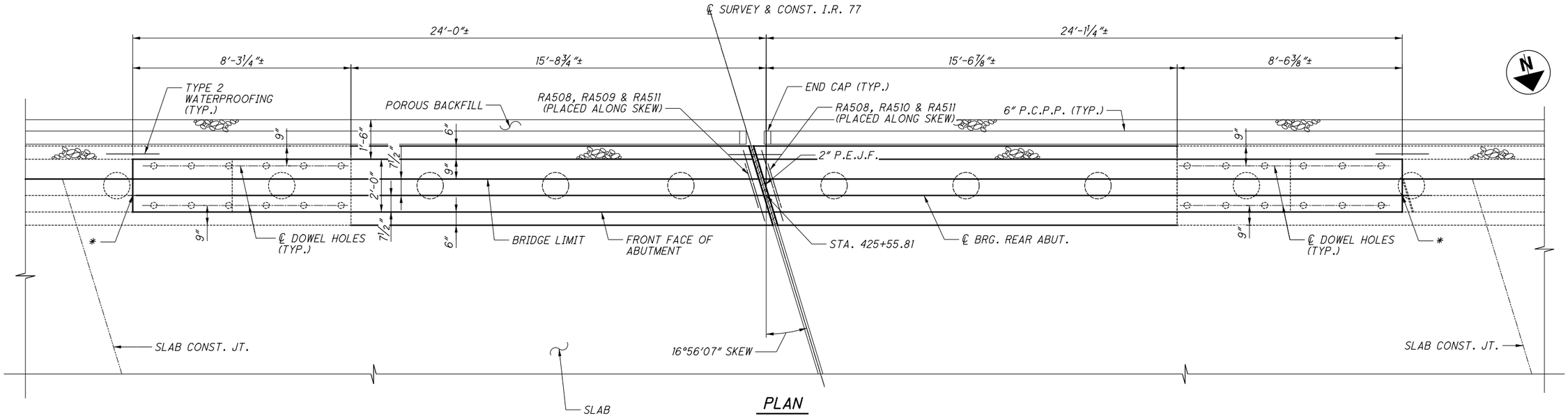
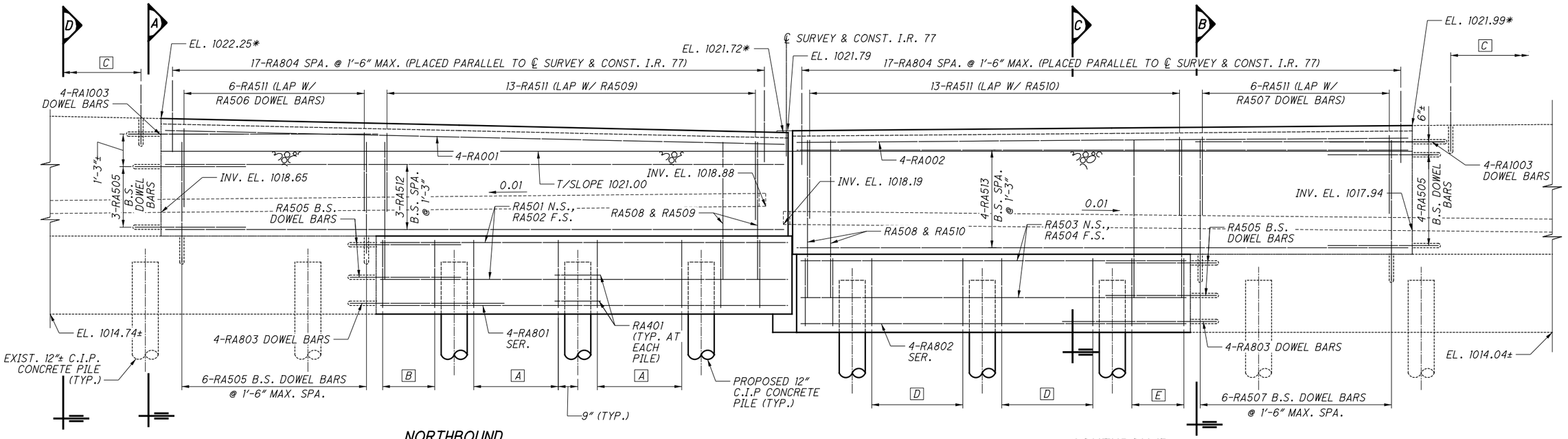


PLAN



NORTHBOUND

ELEVATION

SOUTHBOUND

LEGEND:

- [A] 4 SETS OF RA508 & RA509 @ EQ. SPA.
- [B] 3 SETS OF RA508 & RA509 @ EQ. SPA.
- [C] 40-RA805 DOWELS SPA. @ 1'-6" MAX. (PLACED PARALLEL TO ℄ SURVEY & CONST. I.R. 77)
- [D] 4 SETS OF RA508 & RA510 @ EQ. SPA.
- [E] 3 SETS OF RA508 & RA510 @ EQ. SPA.
- * - ELEVATION GIVEN AT TOP FRONT EDGE OF KEY (SEE PLAN AND SECTION VIEW)

NOTES:

1. FOR SECTIONS A THROUGH D, SEE SHEET [11/26].
2. DOWEL HOLES DEPTHS ARE AS FOLLOWS:
   # 5 BARS = 12"
   # 8 BARS = 12"
   # 10 BARS = 15"
3. MINIMUM LAP LENGTHS:
   # 5 BARS = 3'-1"
   # 8 BARS = 4'-9"
   # 10 BARS = 8'-2"

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
RHC		77002493/77002523	

REAR ABUTMENT PLAN & ELEVATION
BRIDGE NO. SUM-77-0802 L/R
OVER EAST WARNER ROAD

SUM-77/277/224
VARIOUS
PID No. 106002

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1163
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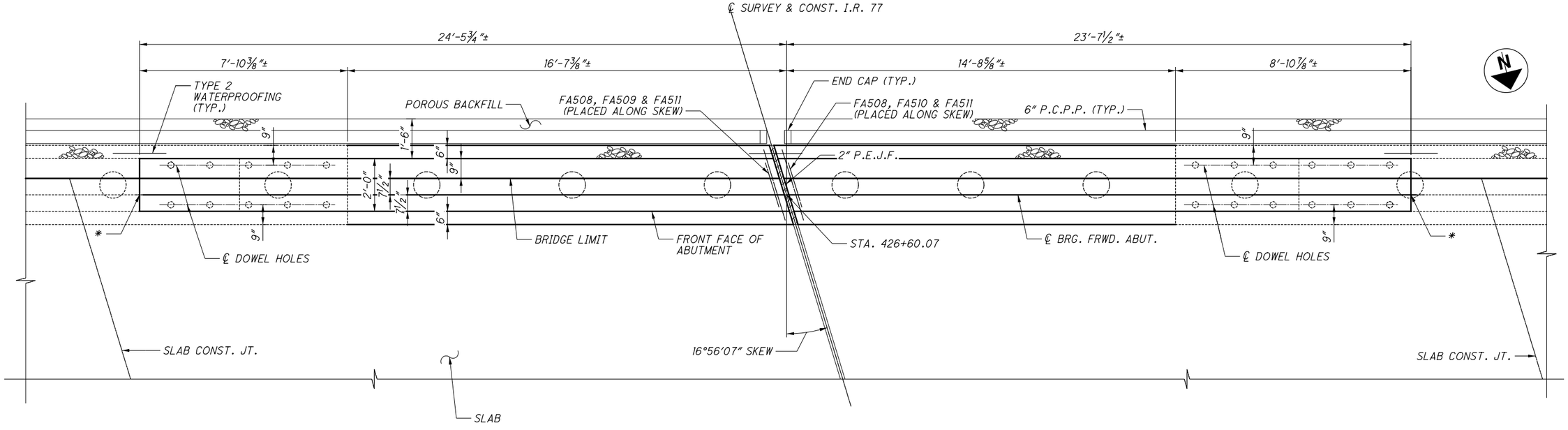
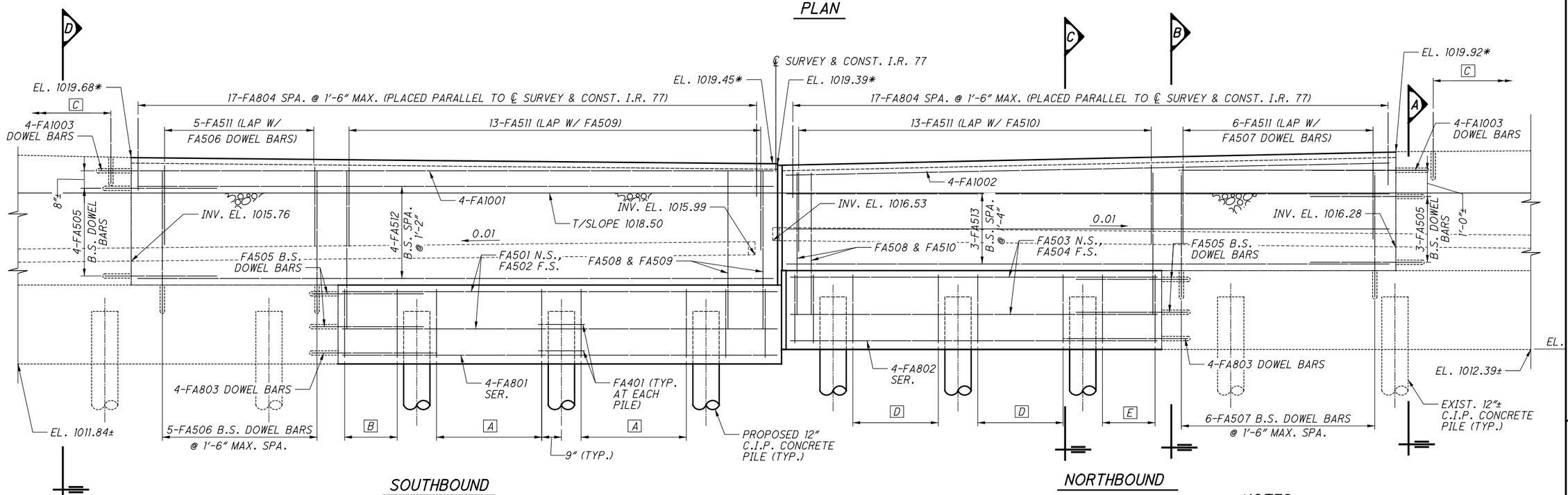


PLAN



SOUTHBOUND NORTHBOUND

ELEVATION

LEGEND:

- A — 4 SETS OF FA508 & FA509 @ EQ. SPA.
- B — 3 SETS OF FA508 & FA509 @ EQ. SPA.
- C — 40-FA805 DOWELS SPA. @ 1′-6″ MAX. (PLACED PARALLEL TO ℄ SURVEY & CONST. I.R. 77)
- D — 4 SETS OF FA508 & FA510 @ EQ. SPA.
- E — 3 SETS OF FA508 & FA510 @ EQ. SPA.
- * — ELEVATION GIVEN AT TOP FRONT EDGE OF KEY (SEE PLAN AND SECTION VIEW)

NOTES:

1. FOR SECTIONS A THROUGH D, SEE SHEET 11/26.
2. DOWEL HOLES DEPTHS ARE AS FOLLOWS:
   # 5 BARS = 12″
   # 8 BARS = 12″
   # 10 BARS = 15″
3. MINIMUM LAP LENGTHS:
   # 5 BARS = 3′-1″
   # 8 BARS = 4′-9″
   # 10 BARS = 8′-2″

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RHC		77002493/77002523	

FORWARD ABUTMENT PLAN & ELEVATION

BRIDGE NO. SUM-77-0802 L/R
OVER EAST WARNER ROAD

SUM-77/277/224
VARIOUS
PID No. 106002

10 / 26

1164
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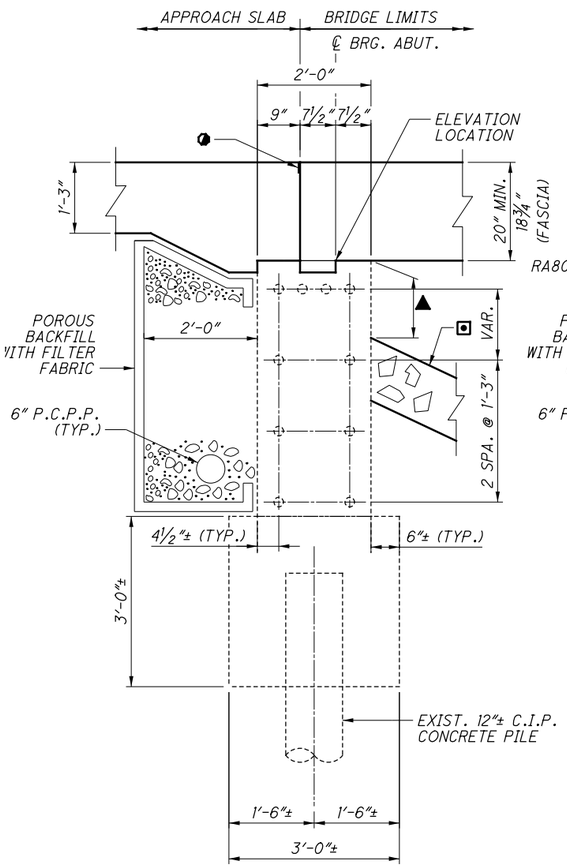
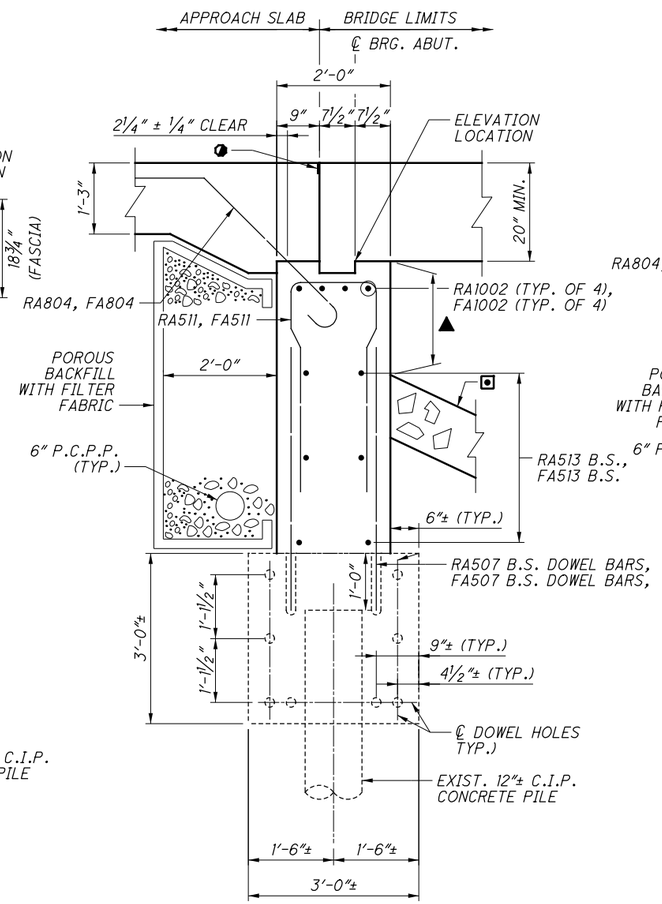
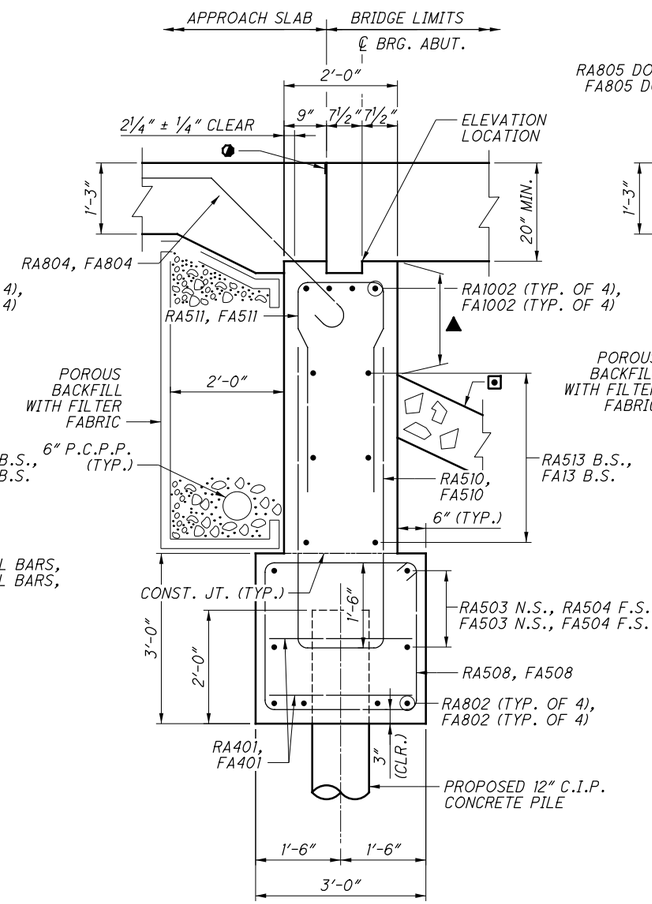


SECTION A

REHABILITATION WITH PROPOSED SLAB (AT WIDENING AND FASCIA)



SECTION B



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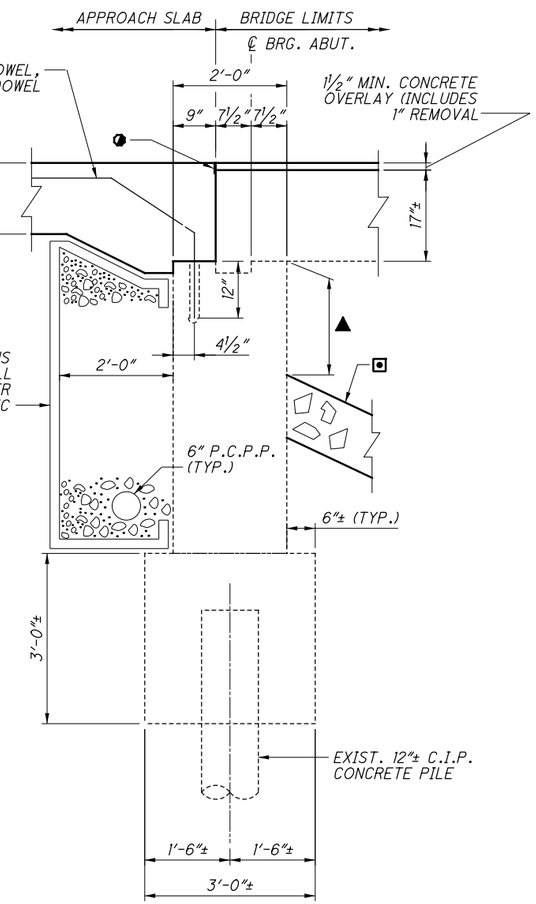
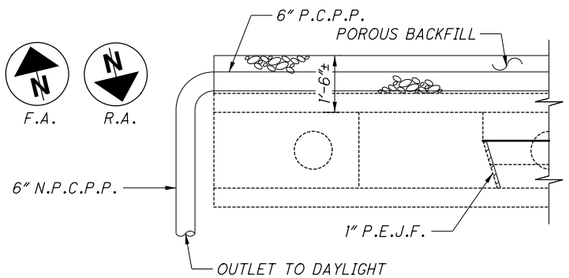


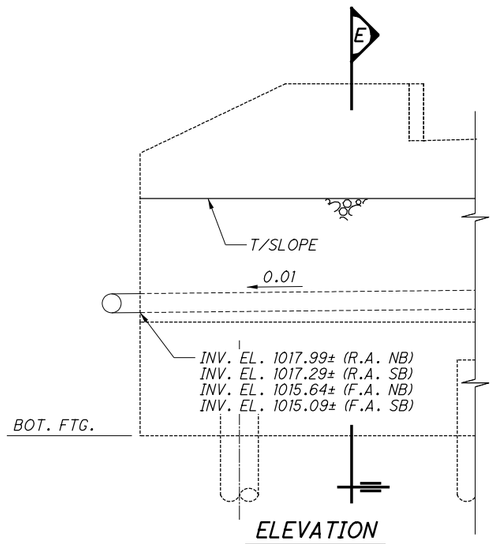
SECTION D

REHABILITATION WITH EXISTING SLAB



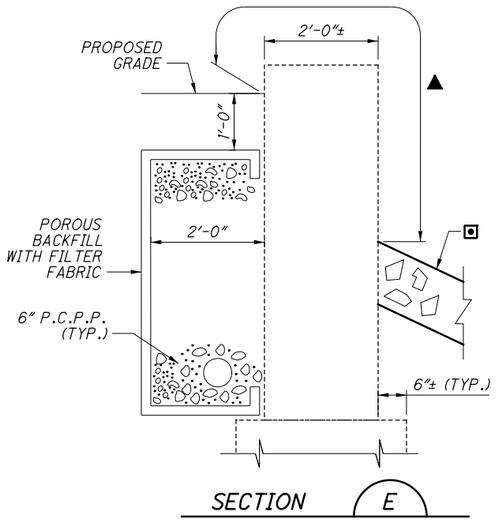
WINGWALL PLAN

REAR ABUTMENT (NORTHBOUND) WINGWALL SHOWN, OTHERS SIMILAR



ELEVATION

REAR ABUTMENT (NORTHBOUND) WINGWALL SHOWN, OTHERS SIMILAR



SECTION E

LEGEND:

- ▲ INDICATES LIMITS OF "ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)"
- ⊡ CRUSHED AGGREGATE SLOPE PROTECTION (1'-0" THICK)
- ◕ SEE DETAIL B FROM STANDARD DRAWING AS-1-15, SHEET 2/2

NOTE:

FOR THE LOCATION OF SECTION A THRU D, SEE SHEETS 9/26 & 10/26.

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RFV	RFV	TJW	1-18-21
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RHC		77102493/77102523	

ABUTMENT DETAILS
BRIDGE NO. SUM-77-0802 L/R
OVER EAST WARNER ROAD

SUM-77/277/224
VARIOUS
PID No. 106002

11 / 26

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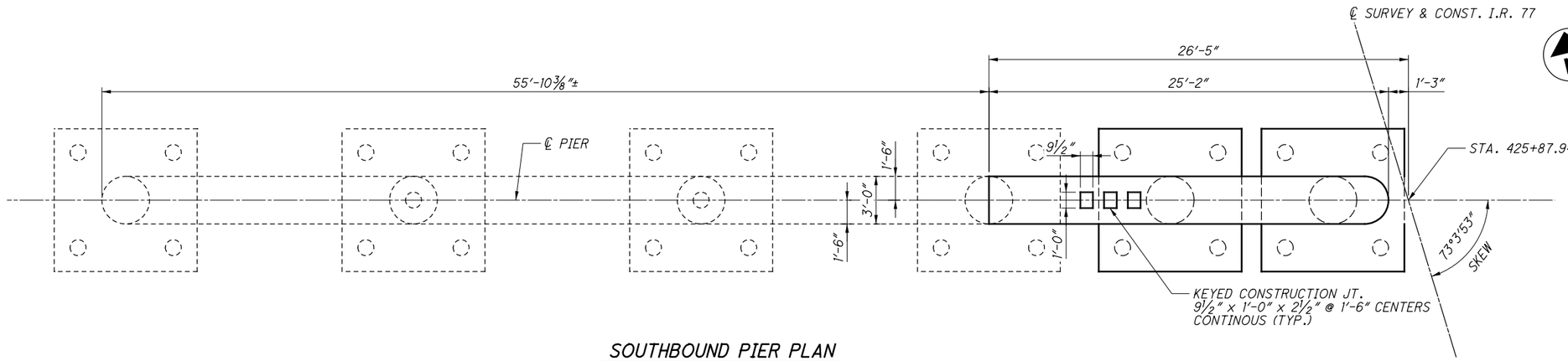
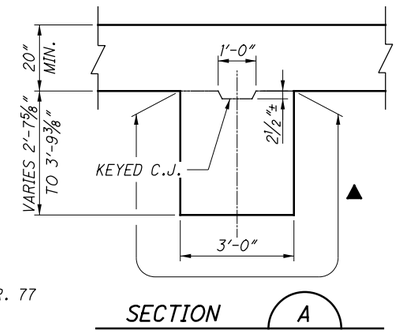
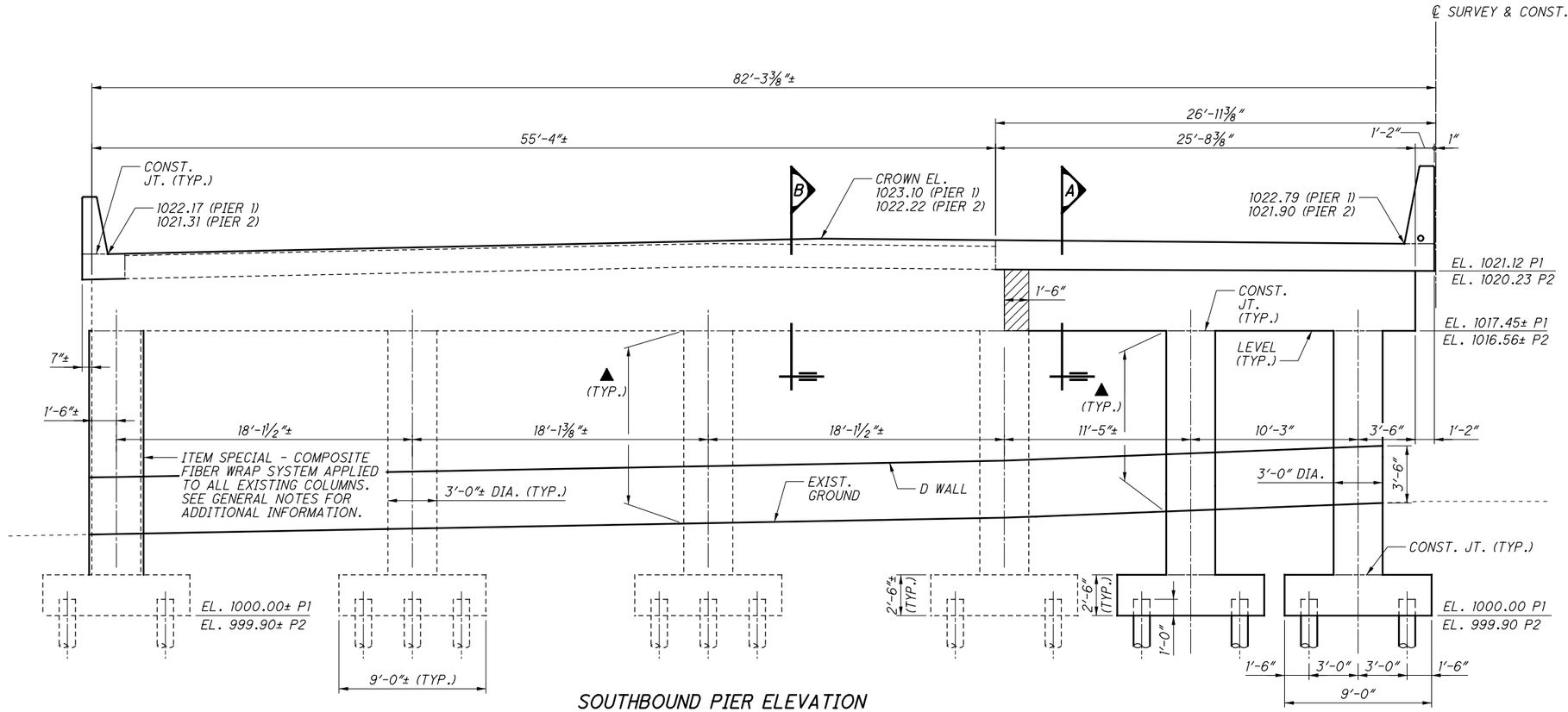


SOUTHBOUND PIER PLAN

PIER 1 SHOWN, PIER 2 SIMILAR

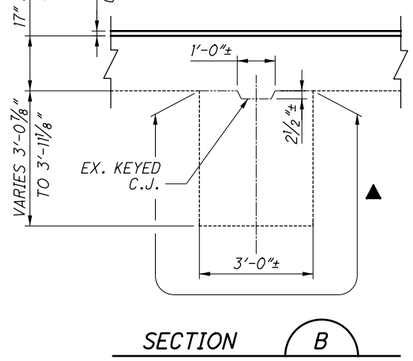


SECTION A



SOUTHBOUND PIER ELEVATION

PIER 1 SHOWN, PIER 2 SIMILAR
BRIDGE TERMINAL ASSEMBLY NOT SHOWN



SECTION B

LEGEND:

▲ LIMITS OF "ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)"

▨ INDICATES PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN, PER ITEM 202

NOTES:

1. FOR NORTHBOUND PIER PLAN AND ELEVATIONS, SEE SHEET 13/26 .
2. FOR PIER REINFORCING DETAILS, SEE SHEET 14/26 .
3. SALVAGE ALL VERTICAL COLUMN REINFORCING STEEL AND HORIZONTAL CAP REINFORCING STEEL.

DESIGN AGENCY
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RFV	RFV	TJW	1-18-21
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RHC		77102493/77102523	

SOUTHBOUND PIER PLAN & ELEVATION
BRIDGE NO. SUM-77-0802 L/R
OVER EAST WARNER ROAD

SUM-77/277/224
VARIOUS
PID No. 106002

12/26

1166
1288

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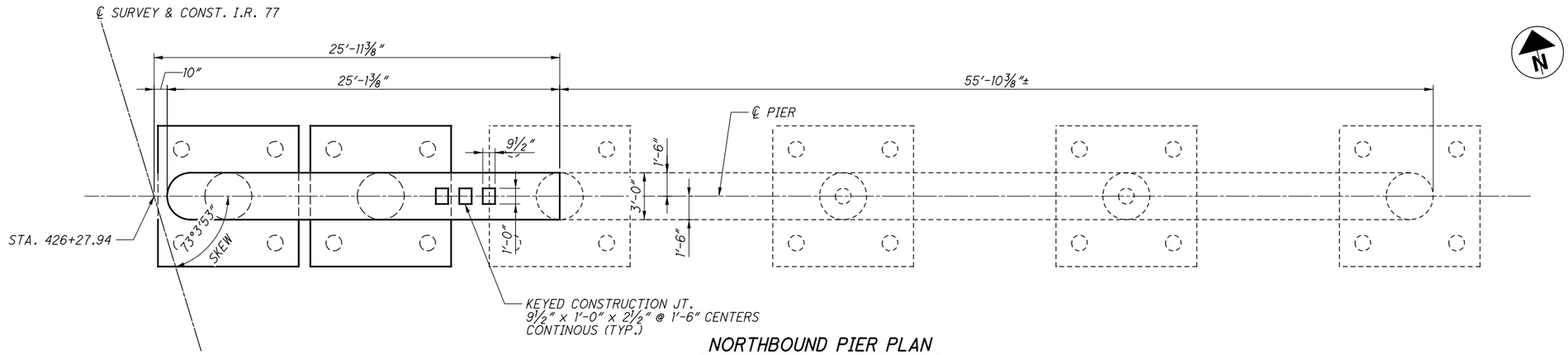
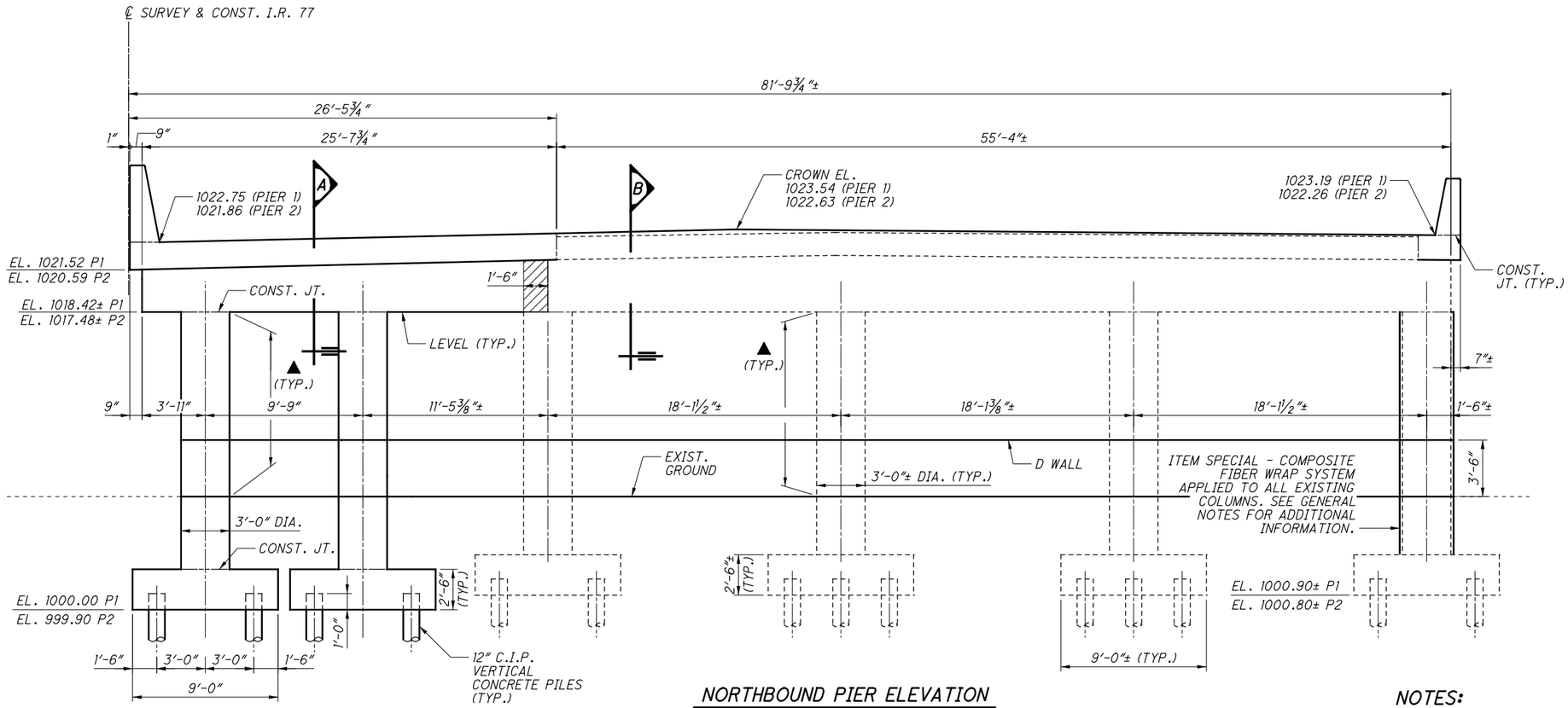


NORTHBOUND PIER PLAN

PIER 1 SHOWN, PIER 2 SIMILAR



NORTHBOUND PIER ELEVATION

PIER 1 SHOWN, PIER 2 SIMILAR
BRIDGE TERMINAL ASSEMBLY NOT SHOWN

LEGEND:

▲ INDICATES LIMITS OF "ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)"

▨ INDICATES PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN, PER ITEM 202

NOTES:

1. FOR SOUTHBOUND PIER PLAN AND ELEVATIONS, SEE SHEET 12/26.
2. FOR SECTIONS A & B, SEE SHEET 12/26.
3. FOR PIER REINFORCING DETAILS, SEE SHEET 14/26.
4. SALVAGE ALL VERTICAL COLUMN REINFORCING STEEL AND HORIZONTAL CAP REINFORCING STEEL.

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NORTHBOUND PIER PLAN & ELEVATION
BRIDGE NO. SUM-77-0802 L/R
OVER EAST WARNER ROAD

SUM-77/277/224
VARIOUS
PID No. 106002

13 / 26

1167
1288

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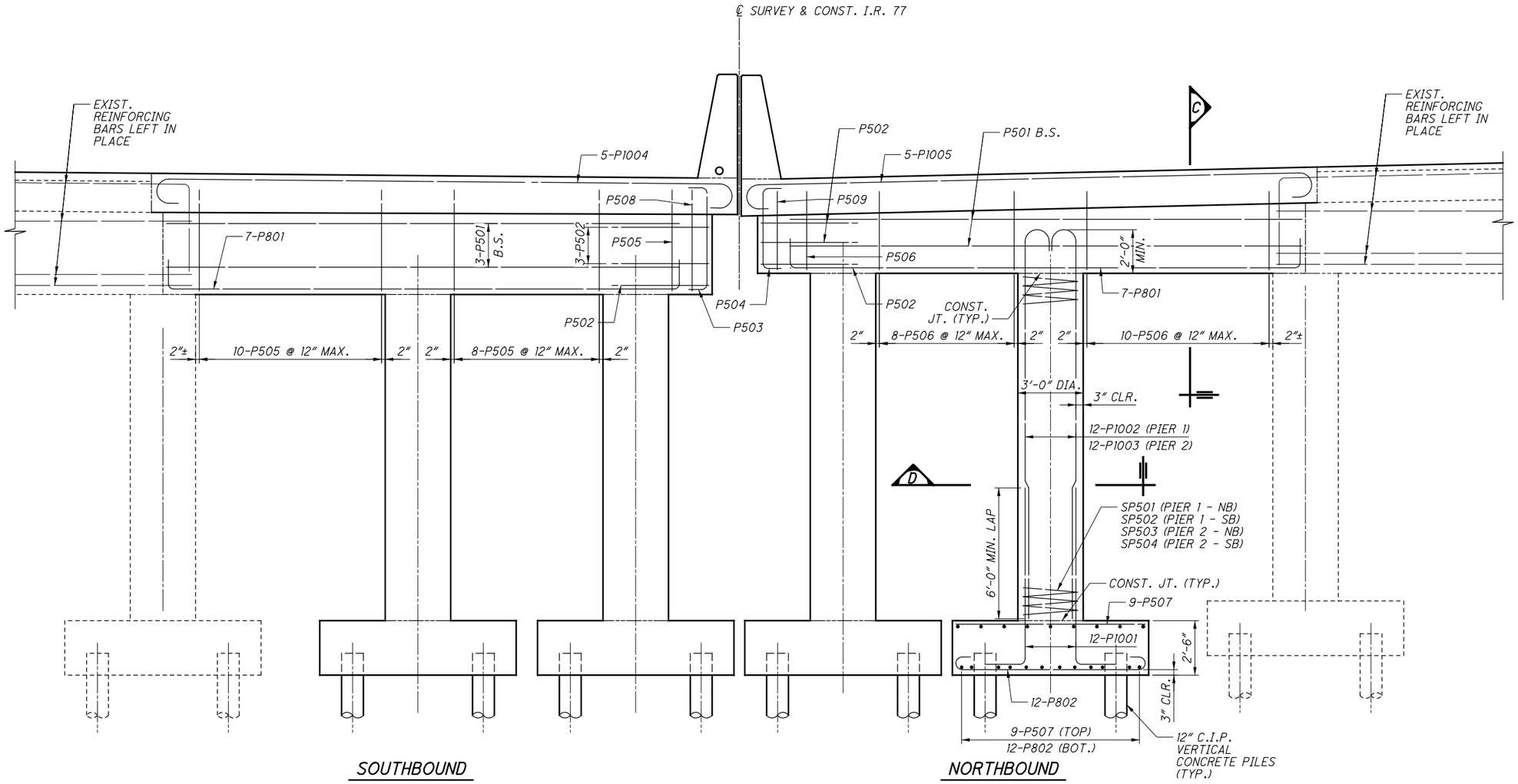
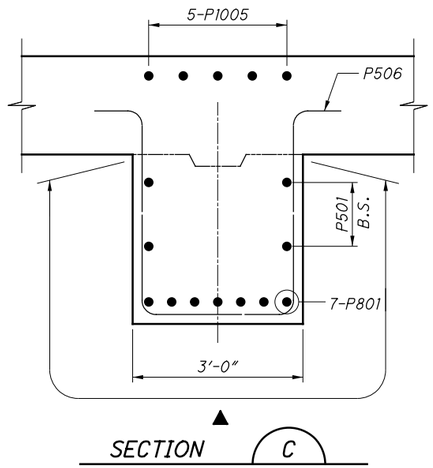
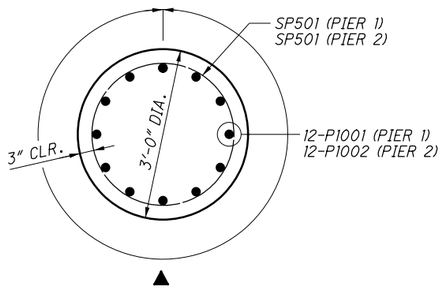


PIER REINFORCING ELEVATIONS

PIER 1 SHOWN, PIER 2 SIMILAR



SECTION C



SECTION D

MIN. LAP LENGTHS:

#5 BAR = 3'-1"
#8 BAR = 5'-11"
#10 BAR = 7'-2"

LEGEND:

▲ INDICATES LIMITS OF "ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)"

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PIER REINFORCING DETAILS
BRIDGE NO. SUM-77-0802 L/R
OVER EAST WARNER ROAD

SUM-77/277/224
VARIOUS
PID No. 106002

14 / 26

1168
1288

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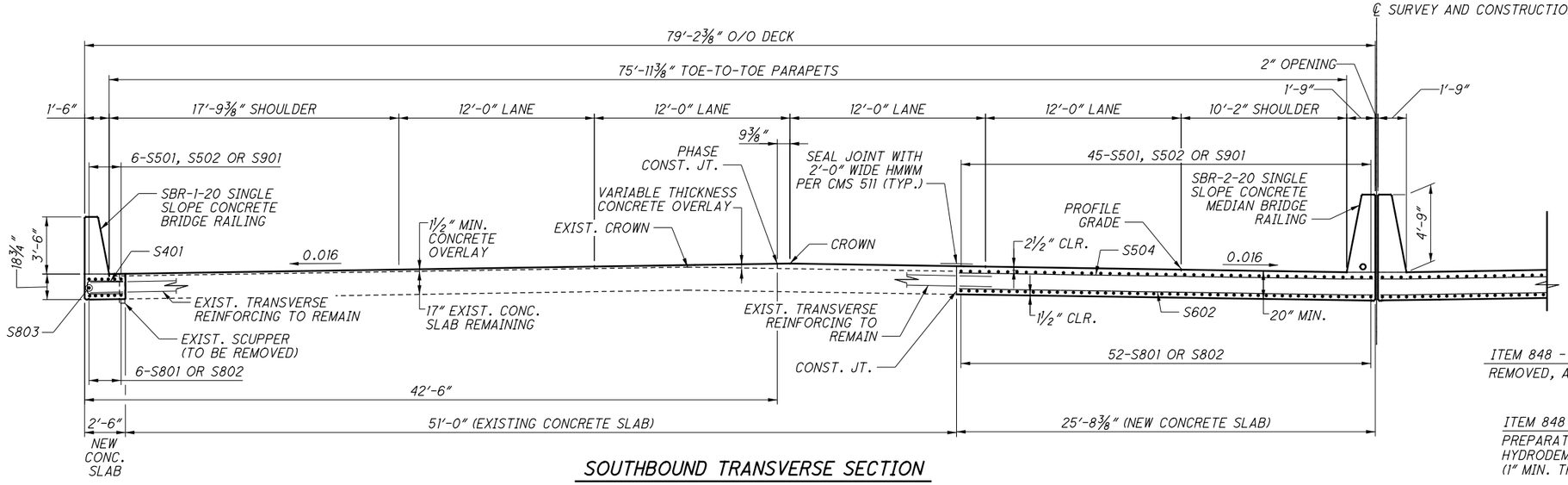
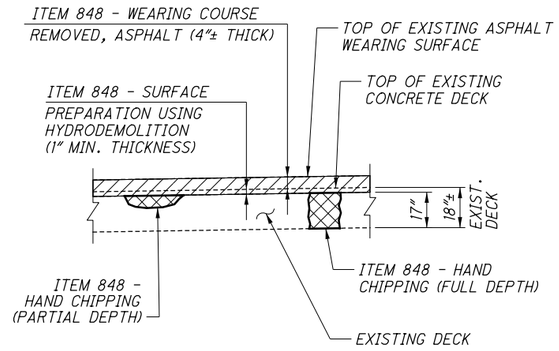
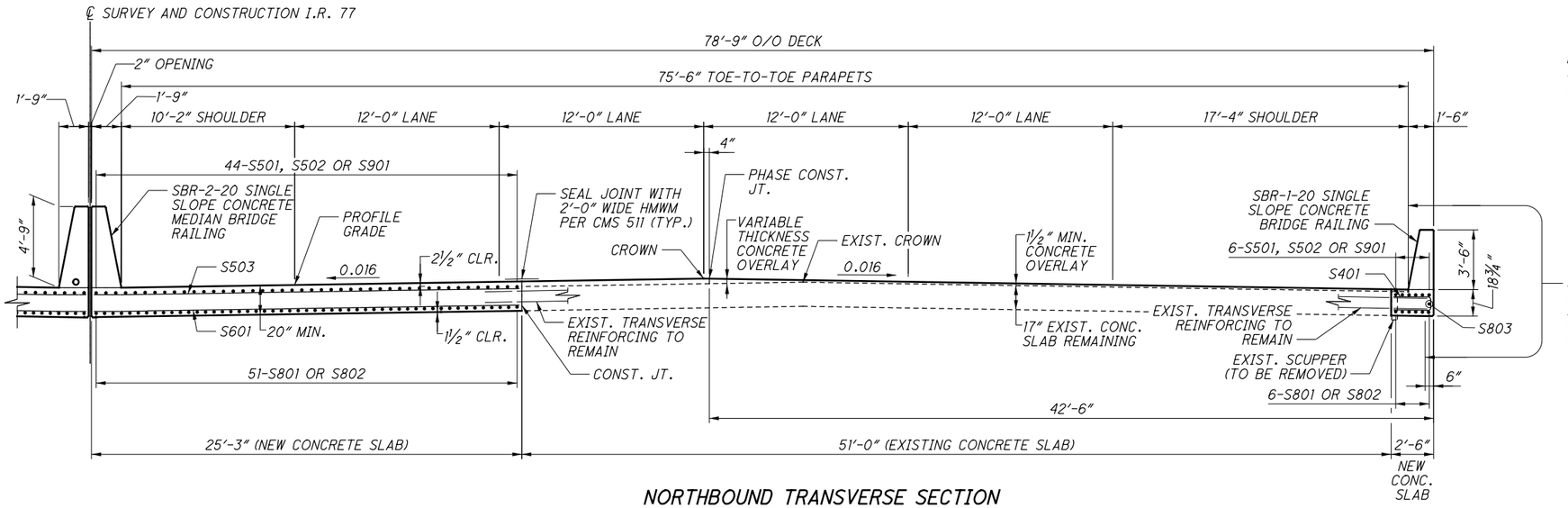


SOUTHBOUND TRANSVERSE SECTION

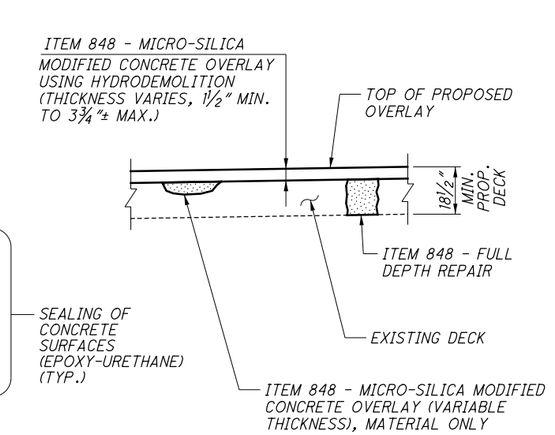


OVERLAY REMOVAL DETAIL

(AT EXISTING DECK SLAB)



NORTHBOUND TRANSVERSE SECTION



OVERLAY REPLACEMENT DETAIL

(AT EXISTING DECK SLAB)

NOTES:

1. FOR PARAPET DETAILS SEE SHEET 18/26 .
2. FOR MEDIAN BARRIER DETAILS SEE SHEET 19/26 .
3. FOR SLAB PLANS SEE SHEETS 16/26 & 17/26 .

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RHC		77002493/77002523	

TRANSVERSE SECTION
BRIDGE NO. SUM-77-0802 L/R
OVER EAST WARNER ROAD

SUM-77/277/224
VARIOUS
PID No. 106002

15 / 26

1169
1288

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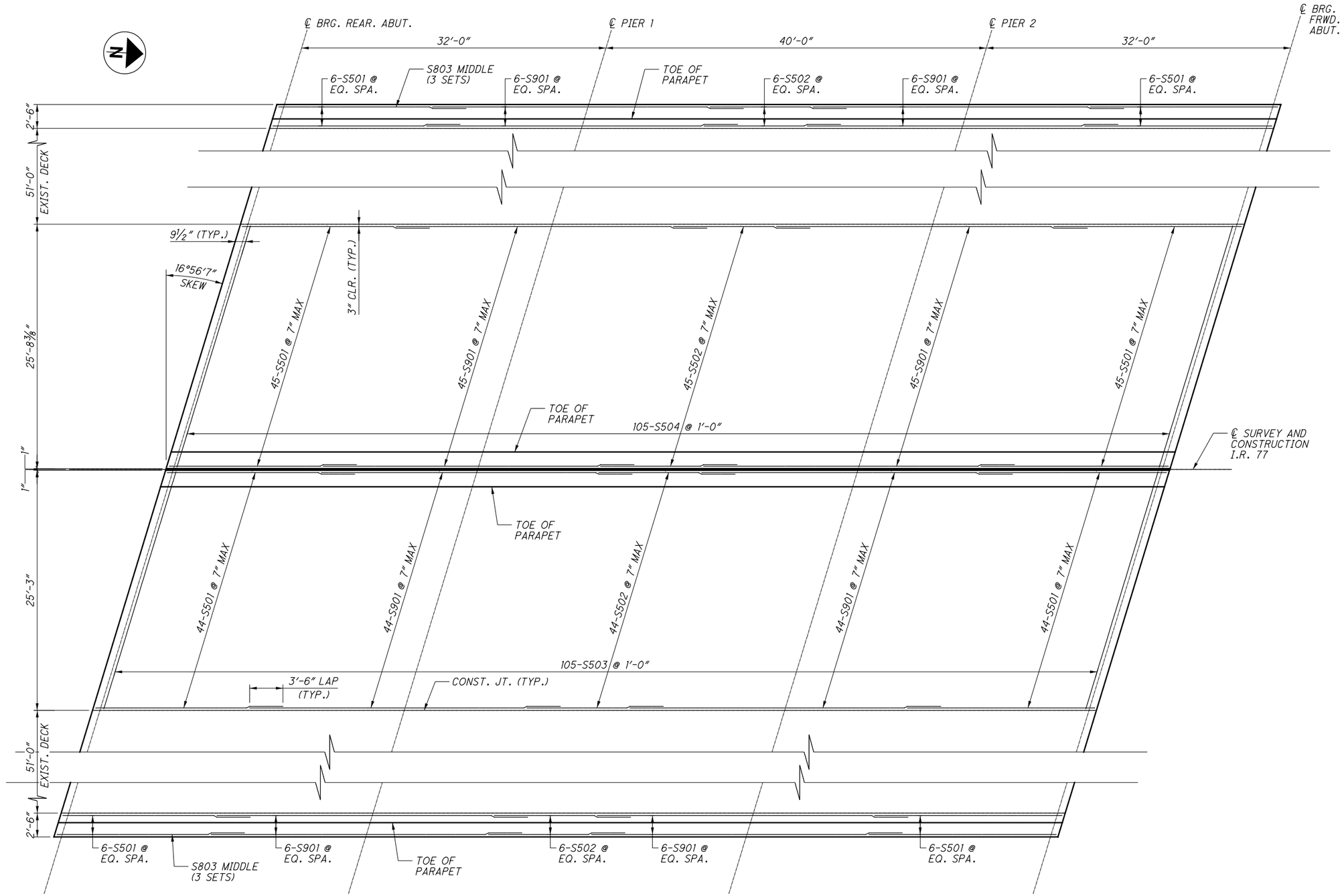

SLAB PLAN - TOP MAT

NOTES:

1. FOR TRANSVERSE SECTION, SEE SHEET 15/26 .
2. FOR ELEVATION LINE LOCATIONS AND TABLES SEE SHEETS 20/26 & 21/26 .
3. UNLESS NOTED OTHERWISE, MINIMUM REINFORCING STEEL LAP LENGTHS ARE AS FOLLOWS:

   NO. 8 BARS 6′-9″

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SLAB PLAN - TOP
BRIDGE NO. SUM-77-0802 L/R
OVER EAST WARNER ROAD

SUM-77/277/224
VARIOUS
PID No. 106002

16 / 26

1170
1288

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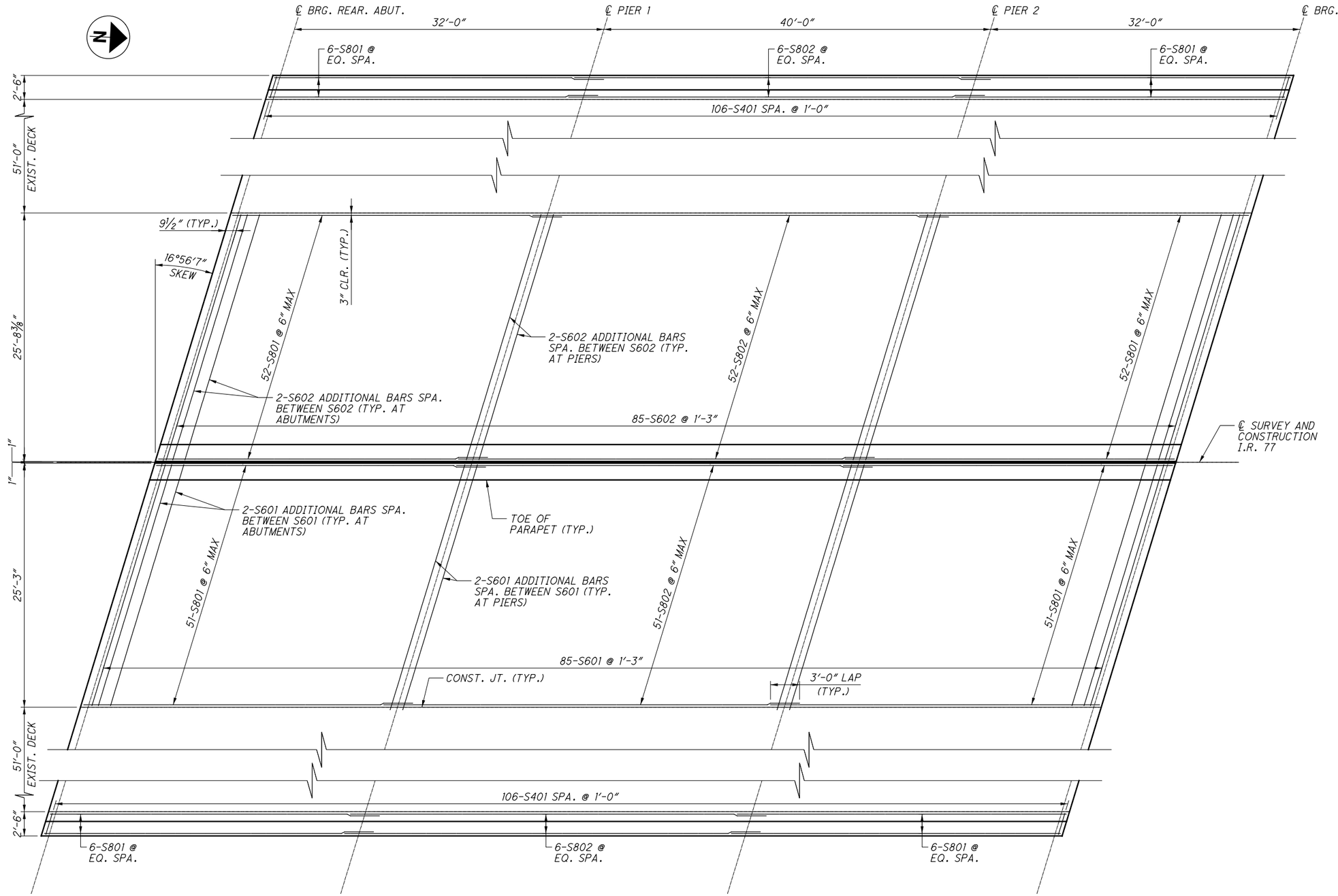

SLAB PLAN - BOTTOM MAT

NOTES:

1. FOR TRANSVERSE SECTION, SEE SHEET 15/26.
2. FOR ELEVATION LINE LOCATIONS AND TABLES SEE SHEETS 20/26 & 21/26.

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SLAB PLAN - BOTTOM
BRIDGE NO. SUM-77-0802 L/R
OVER EAST WARNER ROAD

SUM-77/277/224
VARIOUS
PID No. 106002

1171
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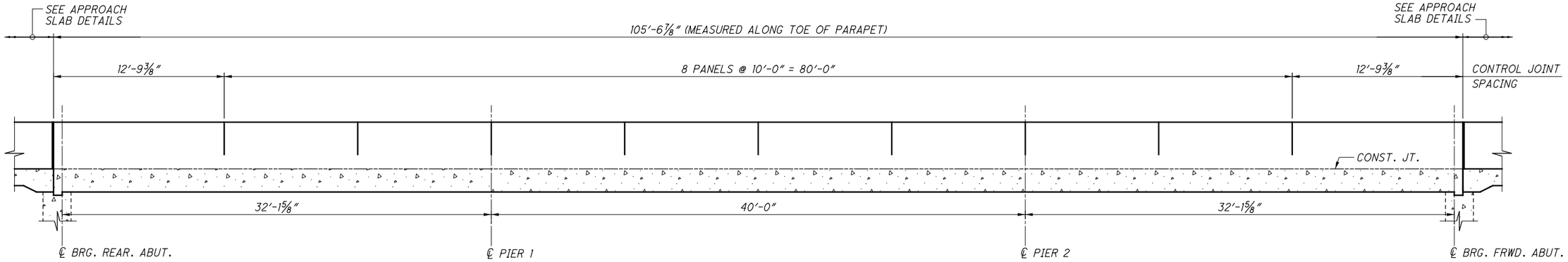
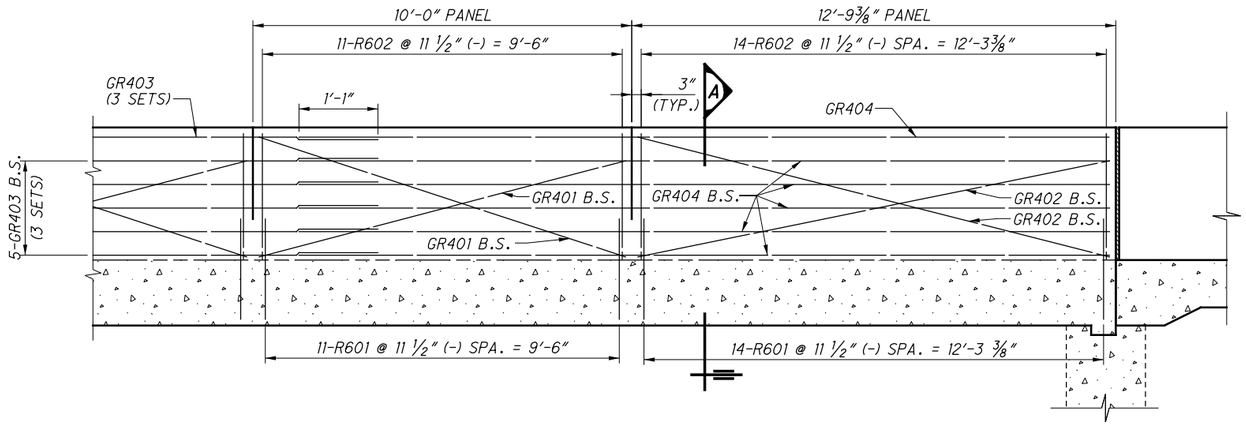
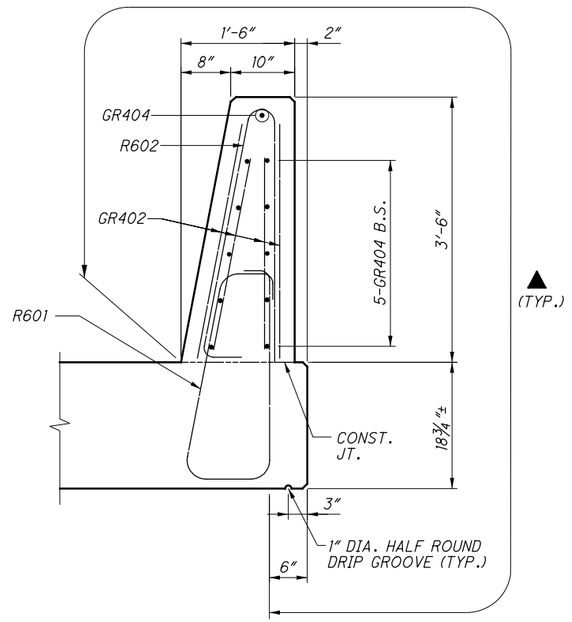


PARAPET ELEVATION

SOUTHBOUND PARAPET SHOWN, NORTHBOUND SIMILAR



PARAPET REINFORCING DETAILS



SECTION A

DECK SLAB REINFORCING NOT SHOWN

LEGEND:

▲ LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY- URETHANE)

NOTES:

1. FOR ADDITIONAL INFORMATION, SEE STANDARD DRAWINGS SBR-1-20.
2. FOR RAILING TRANSITION DETAILS, SEE SHEET 24 26 .
3. REINFORCEMENT DESIGNATED WITH A "GR" PREFIX ARE GFRP BARS.
5. GR6 BARS MAY BE PROVIDED AS EPOXY COATED STEEL REINFORCEMENT IF A GFRP FABRICATED SHAPE IS NOT AVAILABLE.
6. MINIMUM LAP LENGTHS FOR #4 GFRP BARS TO BE 1'-1"

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GPD GROUP
Glenn P.M. Schiesz, P.E., Daniel R. DeHaven, Inc.
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PARAPET ELEVATION & DETAILS
BRIDGE NO. SUM-77-0802 L/R
OVER EAST WARNER ROAD

SUM-77/277/224
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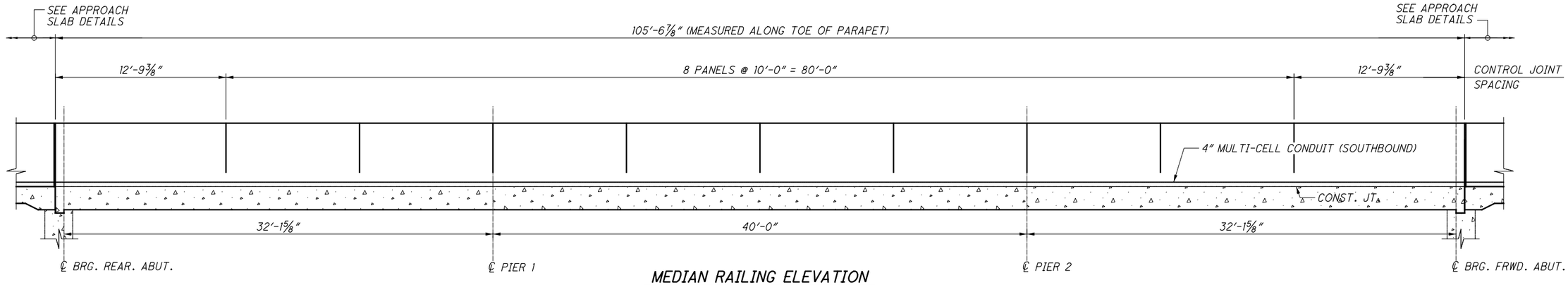
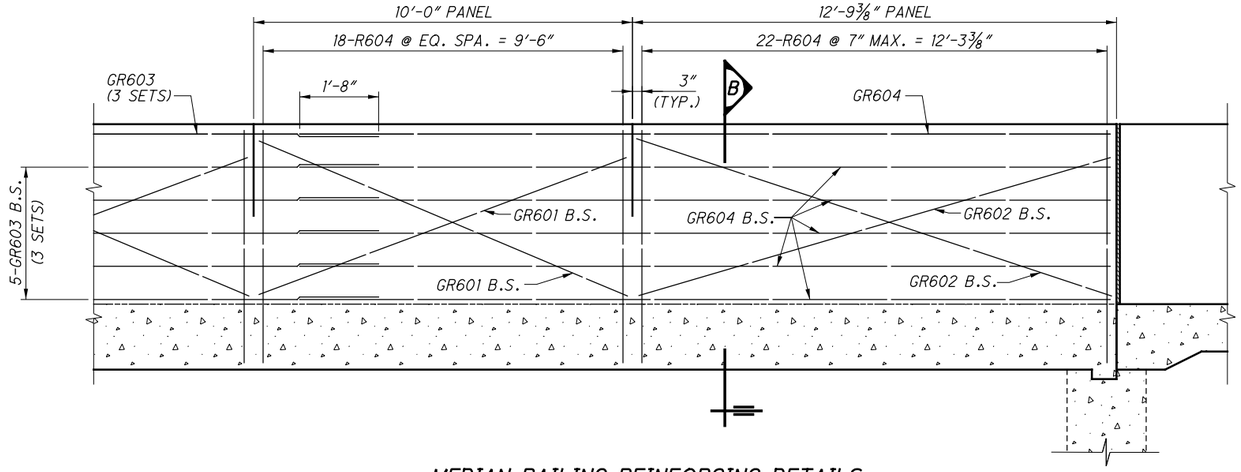
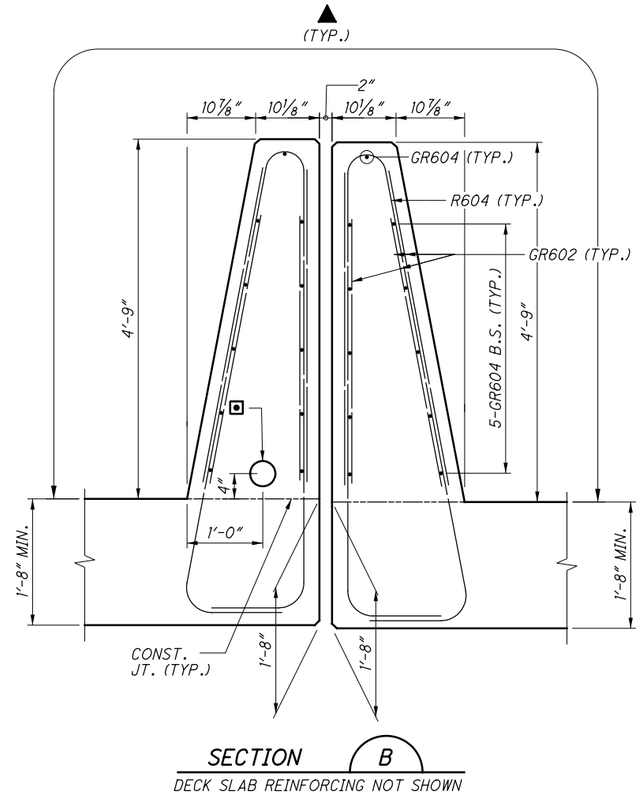


MEDIAN RAILING ELEVATION

NORTHBOUND MEDIAN RAILING SHOWN, SOUTHBOUND SIMILAR



MEDIAN RAILING REINFORCING DETAILS



SECTION B

DECK SLAB REINFORCING NOT SHOWN

LEGENDS:

- ⊡ 4" MULTI-CELL CONDUIT (SB RAILING) 725.20 (TO BE INCLUDED WITH THE ITS QUANTITIES FOR PAYMENT
- ▲ LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY- URETHANE)

NOTES:

1. FOR ADDITIONAL INFORMATION, SEE STANDARD DRAWINGS SBR-2-20.
2. FOR RAILING TRANSITION DETAILS, SEE SHEET 24,26 .
3. REINFORCEMENT DESIGNATED WITH A "GR" PREFIX ARE GFRP BARS.
4. MINIMUM LAP LENGTHS FOR ALL #6 GFRP BARS TO BE 1'-8".

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MEDIAN RAILING ELEVATION & DETAILS
BRIDGE NO. SUM-77-0802 L/R
OVER EAST WARNER ROAD

SUM-77/277/224
VARIOUS
PID No. 106002

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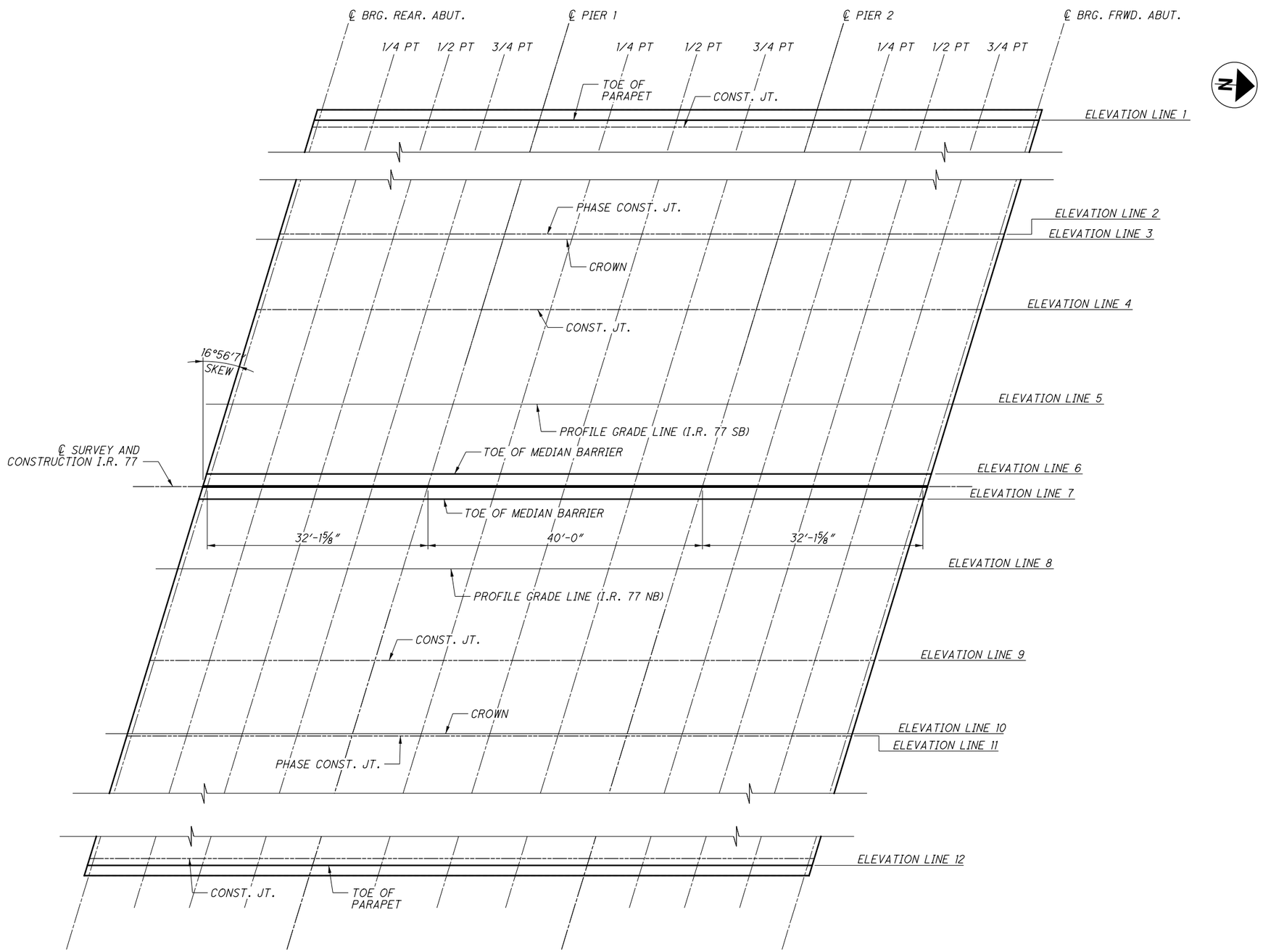

PLAN - ELEVATION LINE LOCATION

NOTES:

1. ALL ELEVATION LINES ARE OFFSET FORM THE ℄ SURVEY AND CONST. I.R. 77.
2. FOR ELEVATION LINE LOCATION SECTION AND ELEVATION TABLES, SEE SHEET 21/26.

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ELEVATION LINE LOCATION - PLAN
BRIDGE NO. SUM-77-0802 L/R
OVER EAST WARNER ROAD

SUM-77/277/224
VARIOUS
PID No. 106002

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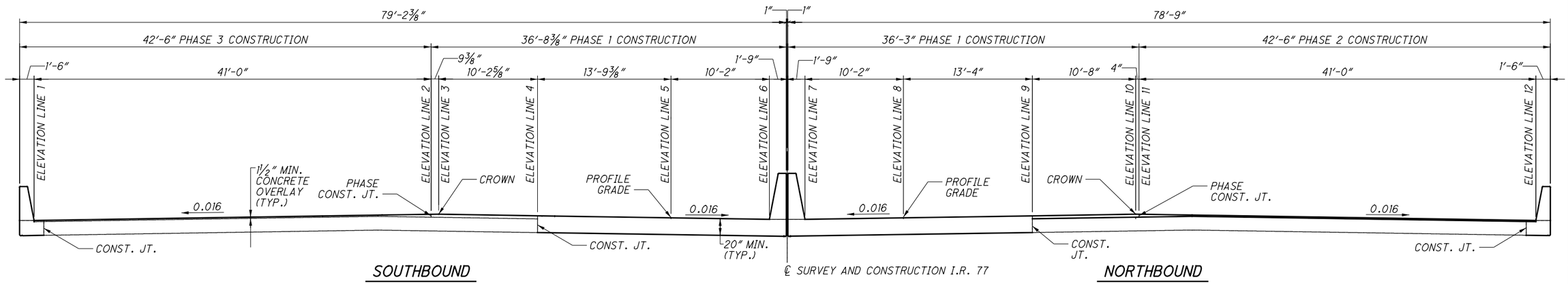

TRANSVERSE - ELEVATION LINE LOCATION

SOUTHBOUND FINISHED ELEVATIONS

	ELEVATION LINE 1		ELEVATION LINE 2		ELEVATION LINE 3		ELEVATION LINE 4		ELEVATION LINE 5		ELEVATION LINE 6	
LOCATION	STATION	FINISHED ELEVATIONS	STATION	FINISHED ELEVATIONS	STATION	FINISHED ELEVATIONS	STATION	FINISHED ELEVATIONS	STATION	FINISHED ELEVATIONS	STATION	FINISHED ELEVATIONS
CL BRG. REAR ABUT.	425+79.49	1022.88	425+67.01	1023.83	425+66.77	1023.85	425+63.66	1023.76	425+59.46	1023.64	425+56.37	1023.55
1/4 SPAN 1	425+87.53	1022.69	425+75.04	1023.64	425+74.80	1023.66	425+71.69	1023.57	425+67.50	1023.45	425+64.40	1023.36
1/2 SPAN 1	425+95.56	1022.51	425+83.07	1023.45	425+82.84	1023.47	425+79.73	1023.38	425+75.53	1023.26	425+72.43	1023.17
3/4 SPAN 1	426+03.59	1022.33	425+91.11	1023.27	425+90.87	1023.29	425+87.76	1023.19	425+83.56	1023.07	425+80.47	1022.98
CL PIER 1	426+11.62	1022.15	425+99.14	1023.08	425+98.90	1023.10	425+95.79	1023.01	425+91.59	1022.89	425+88.50	1022.79
1/4 SPAN 2	426+21.62	1021.93	426+09.14	1022.86	426+08.90	1022.88	426+05.79	1022.78	426+01.59	1022.66	425+98.50	1022.57
1/2 SPAN 2	426+31.62	1021.71	426+19.14	1022.64	426+18.90	1022.66	426+15.79	1022.56	426+11.59	1022.43	426+08.50	1022.34
3/4 SPAN 2	426+41.62	1021.50	426+29.14	1022.42	426+28.90	1022.44	426+25.79	1022.34	426+21.59	1022.21	426+18.50	1022.12
CL PIER 2	426+51.62	1021.29	426+39.14	1022.21	426+38.90	1022.22	426+35.79	1022.13	426+31.59	1022.00	426+28.50	1021.90
1/4 SPAN 3	426+59.66	1021.12	426+47.17	1022.04	426+46.93	1022.05	426+43.82	1021.96	426+39.63	1021.82	426+36.53	1021.73
1/2 SPAN 3	426+67.69	1020.96	426+55.20	1021.87	426+54.97	1021.89	426+51.86	1021.79	426+47.66	1021.65	426+44.56	1021.56
3/4 SPAN 3	426+75.72	1020.79	426+63.24	1021.70	426+63.00	1021.72	426+59.89	1021.62	426+55.69	1021.49	426+52.60	1021.39
CL BRG. FRWD. ABUT.	426+83.75	1020.63	426+71.27	1021.54	426+71.03	1021.56	426+67.92	1021.46	426+63.72	1021.32	426+60.63	1021.22

NORTHBOUND FINISHED ELEVATIONS

	ELEVATION LINE 7		ELEVATION LINE 8		ELEVATION LINE 9		ELEVATION LINE 10		ELEVATION LINE 11		ELEVATION LINE 12	
LOCATION	STATION	FINISHED ELEVATIONS	STATION	FINISHED ELEVATIONS	STATION	FINISHED ELEVATIONS	STATION	FINISHED ELEVATIONS	STATION	FINISHED ELEVATIONS	STATION	FINISHED ELEVATIONS
CL BRG. REAR ABUT.	425+55.25	1023.51	425+52.16	1023.75	425+48.10	1024.06	425+44.85	1024.31	425+44.75	1024.30	425+32.26	1023.96
1/4 SPAN 1	425+63.28	1023.32	425+60.19	1023.55	425+56.13	1023.86	425+52.88	1024.11	425+52.78	1024.11	425+40.29	1023.77
1/2 SPAN 1	425+71.32	1023.13	425+68.22	1023.36	425+64.16	1023.67	425+60.91	1023.92	425+60.81	1023.92	425+48.33	1023.57
3/4 SPAN 1	425+79.35	1022.94	425+76.25	1023.17	425+72.19	1023.48	425+68.95	1023.73	425+68.84	1023.73	425+56.36	1023.38
CL PIER 1	425+87.38	1022.75	425+84.29	1022.99	425+80.23	1023.29	425+76.98	1023.54	425+76.88	1023.54	425+64.39	1023.19
1/4 SPAN 2	425+97.38	1022.53	425+94.29	1022.76	425+90.23	1023.06	425+86.98	1023.31	425+86.88	1023.31	425+74.39	1022.95
1/2 SPAN 2	426+07.38	1022.30	426+04.29	1022.53	426+00.23	1022.84	425+96.98	1023.08	425+96.88	1023.08	425+84.39	1022.72
3/4 SPAN 2	426+17.38	1022.08	426+14.29	1022.31	426+10.23	1022.61	426+06.98	1022.86	426+06.88	1022.85	425+94.39	1022.49
CL PIER 2	426+27.38	1021.86	426+24.29	1022.09	426+20.23	1022.39	426+16.98	1022.63	426+16.88	1022.63	426+04.39	1022.26
1/4 SPAN 3	426+35.41	1021.69	426+32.32	1021.92	426+28.26	1022.22	426+25.01	1022.46	426+24.91	1022.46	426+12.42	1022.08
1/2 SPAN 3	426+43.45	1021.52	426+40.35	1021.75	426+36.29	1022.05	426+33.04	1022.29	426+32.94	1022.28	426+20.46	1021.91
3/4 SPAN 3	426+51.48	1021.35	426+48.38	1021.58	426+44.32	1021.88	426+41.08	1022.12	426+40.97	1022.11	426+28.49	1021.73
CL BRG. FRWD. ABUT.	426+59.51	1021.18	426+56.42	1021.41	426+52.36	1021.71	426+49.11	1021.95	426+49.01	1021.94	426+36.52	1021.56

NOTES:

FOR ELEVATION LINE LOCATION PLAN, SEE SHEET 20/26 .

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STRUCTURE FILE NUMBER 77002493/77002523

TRANSVERSE ELEVATION LINE LOCATION & ELEVATION TABLES
BRIDGE NO. SUM-77-0802 L/R
OVER EAST WARNER ROAD

SUM-77/277/224
VARIOUS
PID No. 106002

21/26

1175
1288

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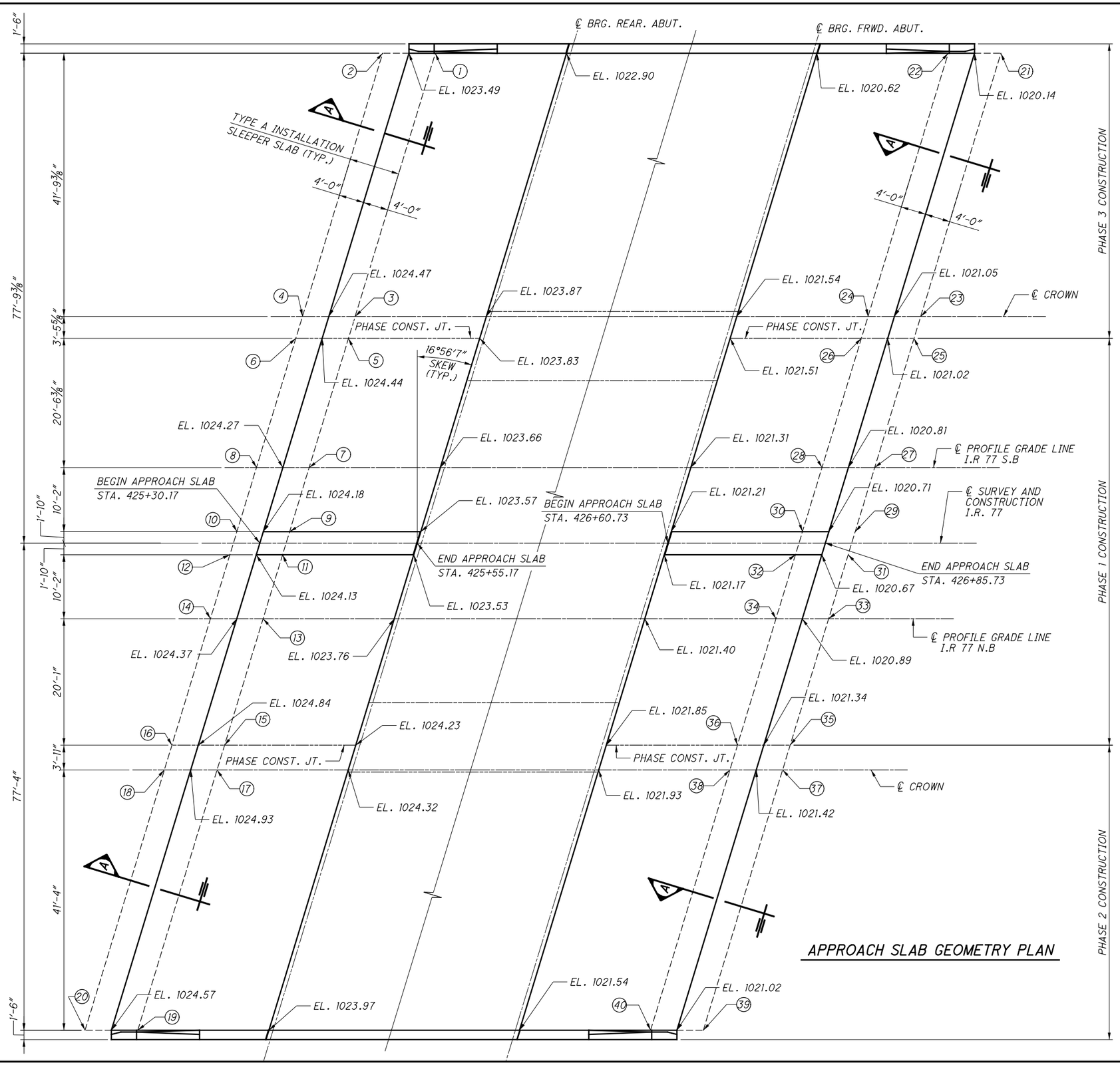
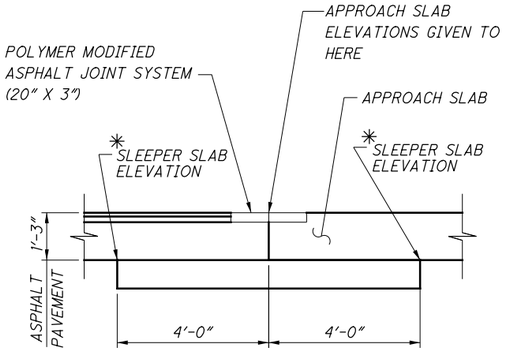


APPROACH SLAB GEOMETRY PLAN

SLEEPER SLAB ELEVATION TABLE			
REAR APPROACH		FRWD. APPROACH	
(#)	*ELEV.	(#)	*ELEV.
1	1022.14	21	1018.80
2	1022.34	22	1018.97
3	1023.12	23	1019.72
4	1023.32	24	1019.88
5	1023.09	25	1019.69
6	1023.29	26	1019.85
7	1022.91	27	1019.48
8	1023.12	28	1019.64
9	1022.83	29	1019.37
10	1023.02	30	1019.54
11	1022.78	31	1019.33
12	1022.98	32	1019.50
13	1023.02	33	1019.56
14	1023.22	34	1019.73
15	1023.49	35	1020.00
16	1023.69	36	1020.17
17	1023.58	37	1020.09
18	1023.78	38	1020.26
19	1023.22	39	1019.68
20	1023.41	40	1019.85

* GIVEN TO TOP OF SLEEPER SLAB



SECTION A

NOTES:

1. FOR TYPE A INSTALLATION REINFORCING AND ADDITIONAL DETAILS, SEE STD. DWG. AS-1-15 & AS-2-15.
2. FOR APPROACH SLAB REINFORCING DETAILS, SEE SHEET 23/26 .
3. REINFORCING STEEL AND CONCRETE FOR RAILING TRANSITIONS SHALL BE PAID FOR UNDER SEPARATE ITEMS. FOR DETAILS, SEE SHEET 24/26 .

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STRUCTURE FILE NUMBER 77102493/77102523

APPROACH SLAB GEOMETRY PLAN
BRIDGE NO. SUM-77-0802 L/R
OVER EAST WARNER ROAD

SUM-77/277/224
VARIOUS
PID No. 106002

22 / 26

1176
1288

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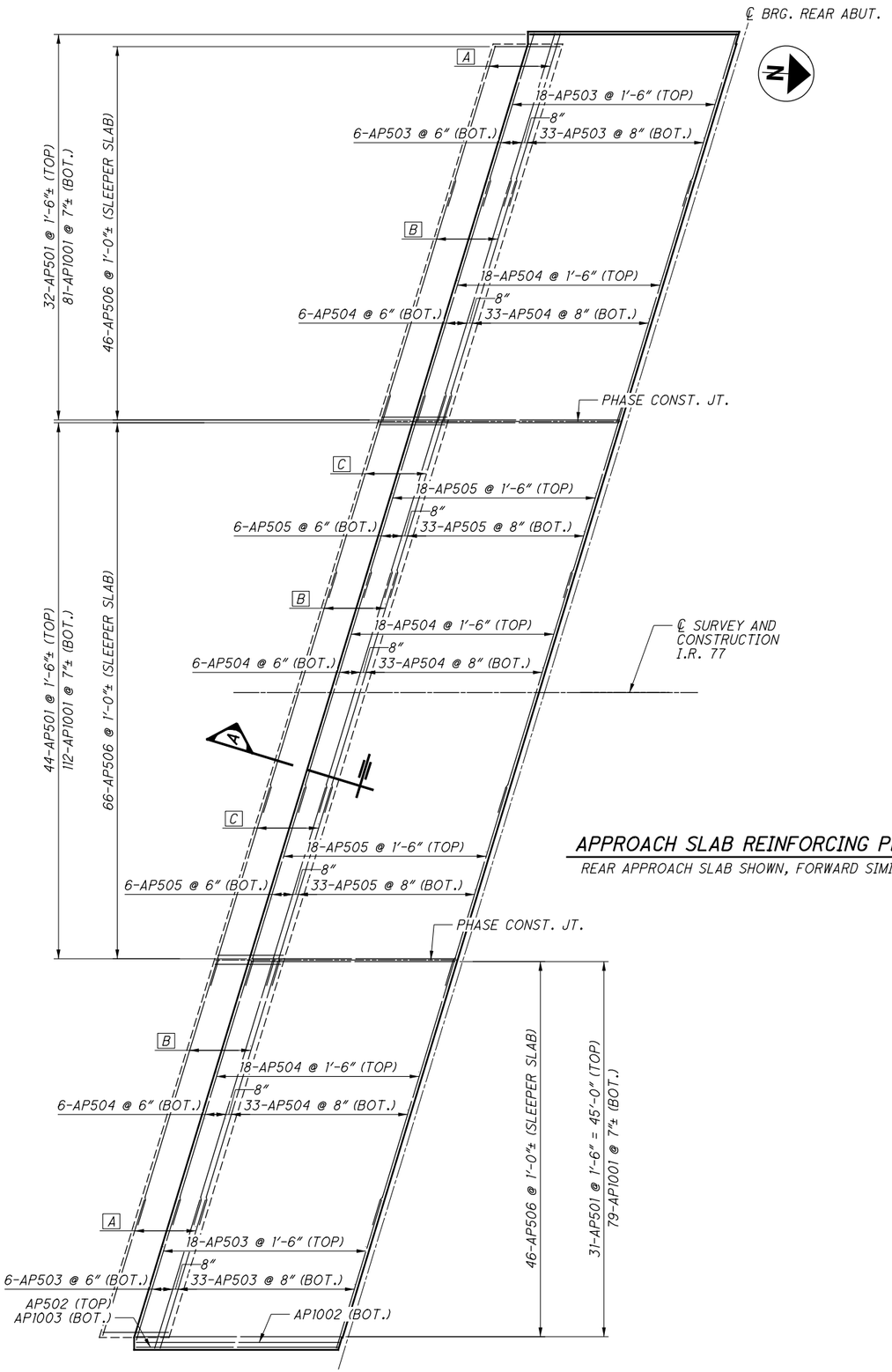
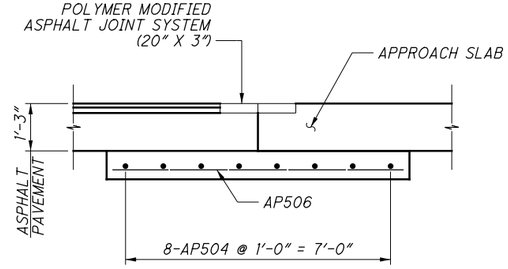


APPROACH SLAB REINFORCING PLAN

REAR APPROACH SLAB SHOWN, FORWARD SIMILAR



SECTION A

LEGEND:

- A 8-AP503 @ 1'-0" = 7'-0" (SLEEPER SLAB)
- B 8-AP504 @ 1'-0" = 7'-0" (SLEEPER SLAB)
- C 8-AP505 @ 1'-0" = 7'-0" (SLEEPER SLAB)
- D 8-AP506 @ 1'-0" = 7'-0" (SLEEPER SLAB)

NOTES:

1. FOR APPROACH SLAB GEOMETRY PLAN AND SLEEPER SLAB DETAILS, SEE SHEET 22/26.
2. FORWARD APPROACH SLAB REINFORCING IS SIMILAR EXCEPT AP5XX AND AP10XX BARS AT THE EXTERIOR EDGE ARE OPPOSITE HAND.
3. REINFORCING STEEL AND CONCRETE FOR RAILING TRANSITIONS SHALL BE PAID FOR UNDER SEPARATE ITEMS. FOR DETAILS, SEE SHEET 24/26.
4. FOR ADDITIONAL DETAILS SEE STD. DWG. AS-1-15 & AS-2-15.
5. MINIMUM REINFORCING STEEL LAP LENGTHS ARE AS FOLLOWS:

   # 5 BARS = 3'-1"

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RHC		77102493/77102523	

APPROACH SLAB REINFORCING PLAN
BRIDGE NO. SUM-77-0802 L/R
OVER EAST WARNER ROAD

SUM-77/277/224
VARIOUS
PID No. 106002

23/26

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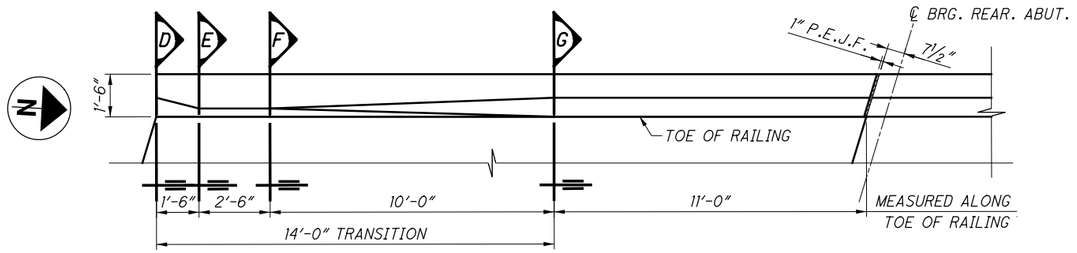
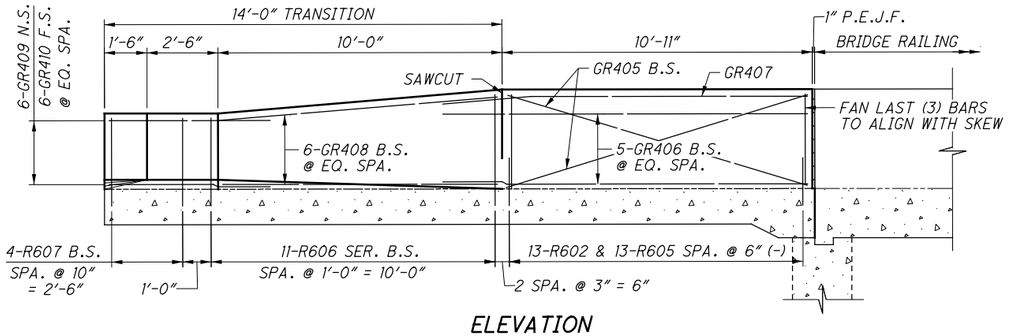
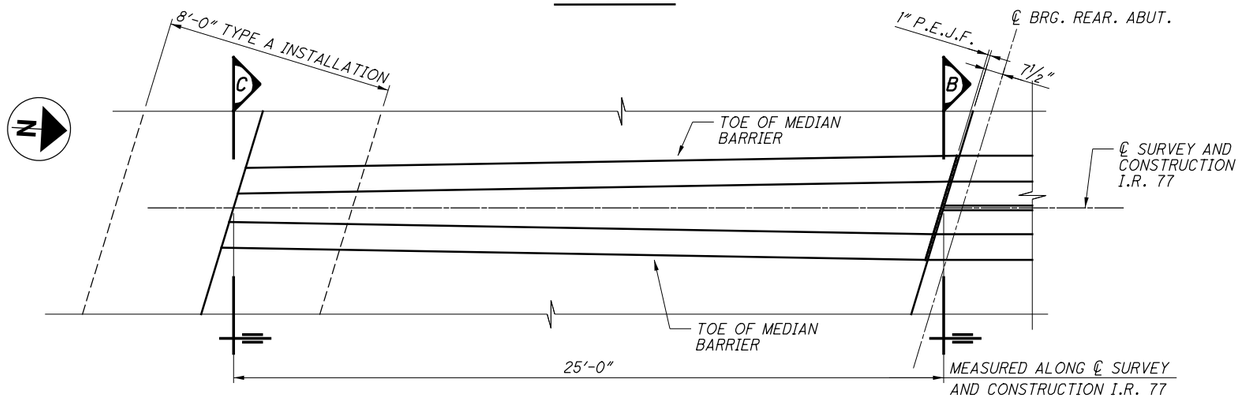


PARAPET PLAN - REAR APPROACH SLAB (SOUTHBOUND)

REAR APPROACH SLAB PARAPET ON SOUTHBOUND SIDE SHOWN, OTHERS SIMILAR

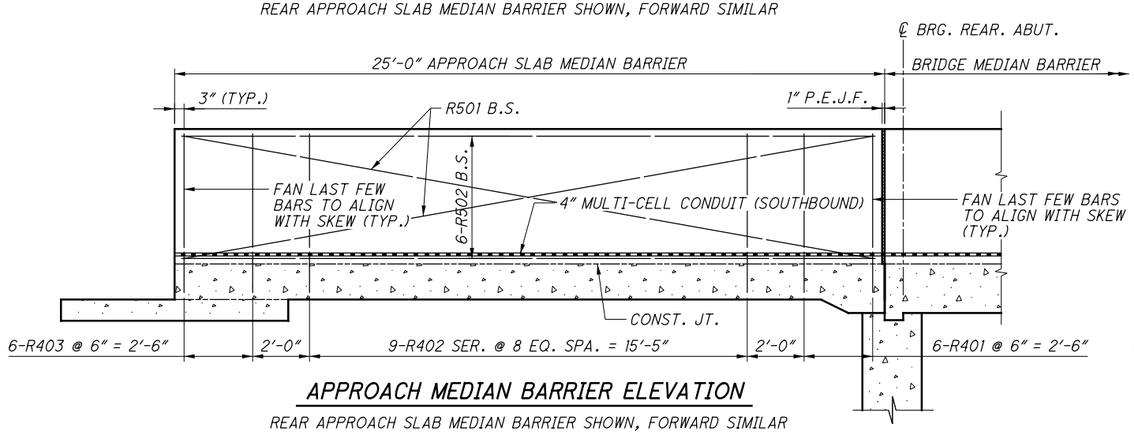


ELEVATION



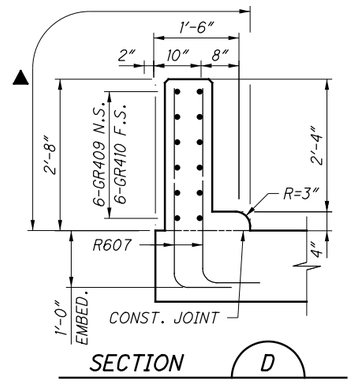
APPROACH MEDIAN BARRIER PLAN

REAR APPROACH SLAB MEDIAN BARRIER SHOWN, FORWARD SIMILAR

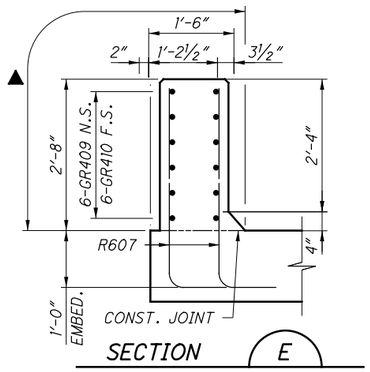


APPROACH MEDIAN BARRIER ELEVATION

REAR APPROACH SLAB MEDIAN BARRIER SHOWN, FORWARD SIMILAR



SECTION D



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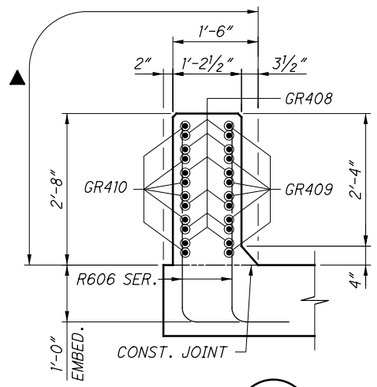

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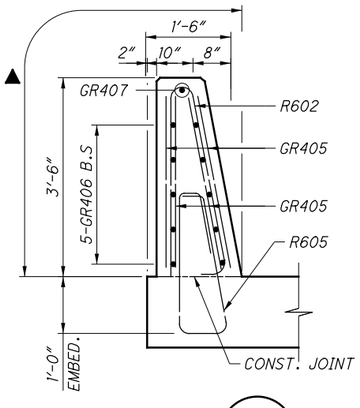
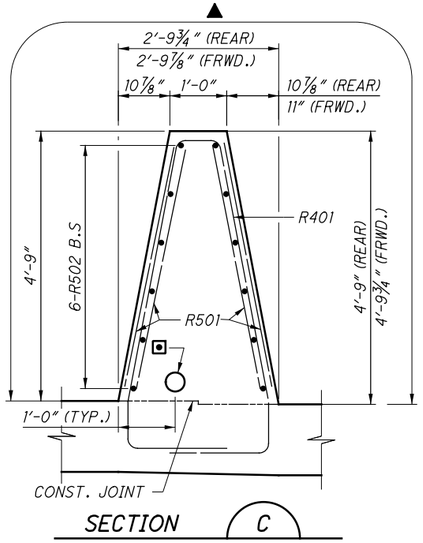
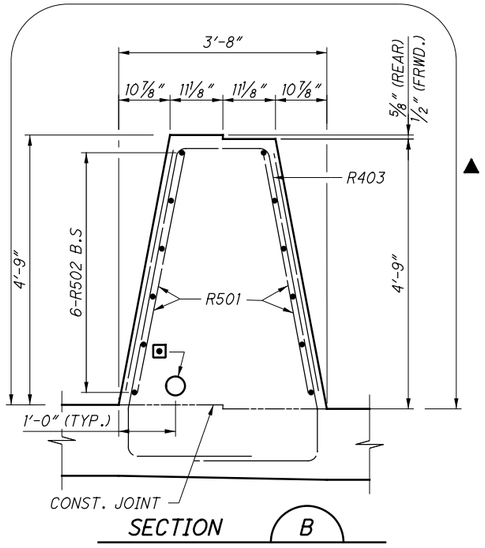


SECTION G



SECTION C



SECTION B

LEGEND:

▲ ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

⊡ 4" MULTI-CELL CONDUIT (SB RAILING) 725.20 (TO BE INCLUDED WITH THE ITS QUANTITIES FOR PAYMENT

NOTES:

1. FOR ADDITIONAL INFORMATION, SEE STANDARD DRAWINGS AS-1-15, AS-2-15, SBR-1-20 & SBR-2-20.
2. MINIMUM HORIZONTAL #4 GFRP REINFORCING LAP LENGTHS ARE 1'-1" FOR ALL GFRP BARS.

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RFV	RFV	TJW	1-18-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RHC		77002493/77002523	

APPROACH SLAB REINFORCING DETAILS
BRIDGE NO. SUM-77-0802 L/R
OVER EAST WARNER ROAD

SUM-77/277/224
VARIOUS
PID No. 106002

24/26

1178
1288

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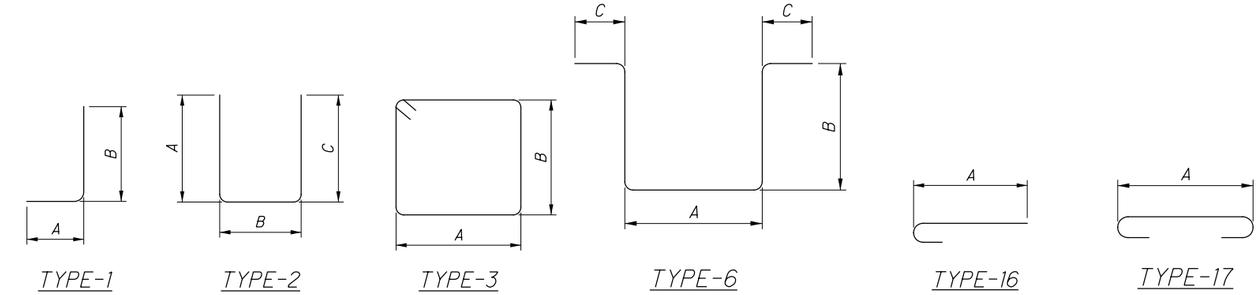
MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						INC.
					A	B	C	D	E	R	
REAR ABUTMENT											
RA401	12	8'-11"	71	3	1'-9"	2'-6"					
RA501	2	15'-7"	33	STR							
RA502	2	14'-8"	31	STR							
RA503	2	14'-10"	31	STR							
RA504	2	15'-8"	33	STR							
RA505	22	4'-3"	98	STR							
RA506	12	4'-4"	54	STR							
RA507	12	5'-1"	64	STR							
RA508	28	11'-2"	439	3	2'-7"	2'-8"					
RA509	14	12'-1"	176	2	5'-4"	1'-8"	5'-4"				
RA510	14	13'-7"	198	2	6'-1"	1'-8"	6'-1"				
RA511	40	8'-3"	344	2	3'-5"	1'-8"	3'-5"				
RA512	6	23'-2"	145	STR							
RA513	8	23'-6"	196	STR							
RA801	1 SR OF 4	14'-9" TO 15'-7"	162	STR							0'-3 1/4"
RA802	1 SR OF 4	14'-10" TO 15'-8"	163	STR							0'-3 1/4"
RA803	8	5'-11"	126	STR							
RA804	34	5'-7"	507	18	3'-5"	1'-0"	1'-0"				
RA805	80	4'-7"	979	20	1'-3"	0'-11"	1'-9"	1'-2"	0'-9"		
RA1001	4	23'-2"	399	STR							
RA1002	4	23'-6"	404	STR							
RA1003	8	9'-7"	330	STR							
		TOTAL	4,983	LBS							

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						INC.
					A	B	C	D	E	R	
FORWARD ABUTMENT											
FA401	12	8'-11"	71	3	1'-9"	2'-6"					
FA501	2	16'-5"	34	STR							
FA502	2	15'-8"	32	STR							
FA503	2	14'-0"	39	STR							
FA504	2	14'-9"	31	STR							
FA505	22	4'-3"	98	STR							
FA506	10	5'-0"	52	STR							
FA507	12	4'-5"	55	STR							
FA508	28	11'-2"	439	3	2'-7"	2'-8"					
FA509	14	13'-5"	196	2	6'-0"	1'-8"	6'-0"				
FA510	14	12'-3"	179	2	5'-5"	1'-8"	5'-5"				
FA511	39	8'-1"	329	2	3'-4"	1'-8"	3'-4"				
FA512	8	23'-8"	197	STR							
FA513	8	23'-0"	192	STR							
FA801	1 SR OF 4	15'-8" TO 16'-5"	171	STR							0'-3"
FA802	1 SR OF 4	14'-0" TO 14'-9"	154	STR							0'-3"
FA803	8	5'-11"	126	STR							
FA804	34	5'-7"	507	18	3'-5"	1'-0"	1'-0"				
FA805	80	4'-7"	979	20	1'-3"	0'-11"	1'-9"	1'-2"	0'-9"		
FA1001	4	23'-8"	407	STR							
FA1002	4	23'-0"	396	STR							
FA1003	8	9'-7"	330	STR							
		TOTAL	5,014	LBS							



BAR BENDING DIAGRAMS

NOTES:

1. BAR DIMENSIONS ARE OUT TO OUT UNLESS NOTED OTHERWISE.
2. ALL BARS ARE EPOXY COATED.
3. I.R. DENOTES INNER RADIUS.
4. WHEN NO BAR LEG DIMENSIONS ARE SHOWN, IT INDICATES STANDARD BEND.
5. BAR SIZE AND LOCATION ARE INDICATED IN THE BAR MARK. THE FIRST ALPHABETICAL LETTER INDICATES LOCATION. THE NEXT DIGIT OF THE THREE DIGIT SERIES AND THE NEXT TWO DIGITS OF THE FOUR DIGIT SERIES INDICATE BAR SIZE NUMBER.

EXAMPLES:

S 501 — NO. 5 SIZE BAR, SLAB

A 801 — NO. 8 SIZE BAR, ABUTMENT

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DRAWN RFV
REVIEWED TJW
DATE 1-18-21
CHECKED RHC
REVISED
STRUCTURE FILE NUMBER 77002493/77002523

REINFORCING STEEL LIST
BRIDGE NO. SUM-77-0802 L/R
OVER EAST WARNER ROAD

SUM-77/277/224
VARIOUS
PID No. 106002

25/26

1179
1288

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MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						INC.
	PIER 1	PIER 2	TOTAL				A	B	C	D	E	R	
PIERS													
P501	10	10	20	23′-3″	485	STR							
P502	7	7	14	12′-10″	187	24	2′-8″	4′-4″				1′-3″	
P503	1	1	2	6′-1″	13	2	0′-10″	4′-8″	0′-10″				
P504	1	1	2	5′-1″	11	2	0′-10″	3′-8″	0′-10″				
P505	19	19	38	13′-2″	522	6	2′-8″	4′-8″	0′-10″				
P506	19	19	38	11′-2″	443	6	2′-8″	3′-8″	0′-10″				
P507	72	72	144	8′-8″	1302	STR							
P508	1	1	2	12′-3″	26	6	1′-9″	4′-8″	0′-10″				
P509	1	1	2	10′-3″	21	6	1′-9″	3′-8″	0′-10″				
P801	14	14	28	25′-7″	1913	2	1′-4″	23′-4″	1′-4″				
P802	96	96	192	10′-4″	5297	17	8′-8″						
P1001	48	48	96	9′-9″	4028	1	1′-10″	8′-3″					
P1002	48		48	19′-4″	3993	16	17′-11″						
P1003		48	48	18′-6″	3821	16	17′-1″						
P1004	5	5	10	29′-2″	1255	17	26′-4″						
P1005	5	5	10	28′-8″	1234	17	25′-10″						
SP501	2		2	16′-8″	1,119	27	0′-3″	2′-6″					
SP502		2	2	15′-10″	1,065	27	0′-3″	2′-6″					
SP503	2		2	15′-8″	1,055	27	0′-3″	2′-6″					
SP504		2	2	14′-11″	1,006	27	0′-3″	2′-6″					
				TOTAL	28,796	LBS							

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						INC.
	REAR	FORWARD	TOTAL				A	B	C	D	E	R	
APPROACH SLABS													
AP501	107	107	214	24′-6″	5468	STR							
AP502	1	1	2	24′-1″	50	STR							
AP503	130	130	260	21′-8″	2938	STR							
AP504	195	195	390	30′-0″	12203	STR							
AP505	130	130	260	25′-3″	6847	STR							
AP506	158	158	316	7′-8″	2527	STR							
AP1001	272	272	544	25′-11″	60667	16	24′-6″						
AP1002	1	1	2	25′-8″	221	16	24′-3″						
AP1003	1	1	2	25′-6″	219	16	24′-1″						
				TOTAL	91,140	LBS							

MARK	NUMBER	LENGTH	TOTAL FEET	TYPE	DIMENSIONS						INC.
					A	B	C	D	E	R	
RAILING (GFRP)											
GR401	64	10′-0″	64′-0″	STR							
GR402	16	12′-9″	204′-0″	STR							
GR403	66	30′-0″	1980′-0″	STR							
GR404	22	18′-6″	407′-0″	STR							
GR405	16	11′-0″	176′-0″	STR							
GR406	40	12′-10″	514′-0″	STR							
GR407	4	12′-10″	52′-0″	19	10′-9″	2′-1″	0′-2″				
GR408	48	10′-0″	480′-0″	STR							
GR409	24	6′-4″	152′-0″	25	2′-6″	2′-5″	1′-4 1/4″	0′-1 1/2″	0′-5″		
GR410	24	5′-11″	142′-0″	STR							
TOTAL #4 GFRP			4,171	FT							
GR601	64	10′-6″	672′-0″	STR							
GR602	16	13′-3″	212′-0″	STR							
GR603	66	30′-0″	1980′-0″	STR							
GR604	22	20′-3″	446′-0″	STR							
TOTAL #6 GFRP			3,310	FT							

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						INC.
					A	B	C	D	E	R	
SLAB											
S401	212	5′-2″	732	2	2′-2″	1′-0″	2′-2″				
S501	202	19′-9″	4161	STR							
S502	101	14′-3″	1501	STR							
S503	105	26′-0″	2847	STR							
S504	105	26′-6″	2902	STR							
S601	93	26′-0″	3632	STR							
S602	93	26′-6″	3702	STR							
S801	230	34′-10″	21391	16	34′-0″						
S802	115	43′-0″	13203	STR							
S803	6	37′-3″	597	STR							
S901	202	32′-8″	22435	STR							
		TOTAL	77,103	LBS							

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						INC.
					A	B	C	D	E	R	
RAILING											
R401	12	16′-6″	132	36	1′-0″	1′-0″	3′-2″	1′-4″	4′-7″		
R402	2 SR OF 9	15′-5″ TO 15′-7″	186	36	1′-0″	1′-0″	2′-7″ TO 3′-2″	0′-9″ TO 1′-4″	4′-7″		0′-1″ (-)
R403	12	15′-3″	122	36	1′-0″	1′-0″	2′-6″	0′-8″	4′-7″		
R501	8	24′-7″	205	STR							
R502	24	24′-5″	611	STR							
R601	232	8′-5″	2933	200	0′-9 1/2″	2′-9″	0′-7″	1′-0″			
R602	280	7′-0″	2940	201	0′-6″	3′-3″				0′-2″	
R604	376	14′-9″	5784	35	1′-6″	1′-5″	1′-0″	4′-7″		0′-3″	
R605	48	8′-0″	576	200	0′-9 1/2″	2′-5″	0′-7″	1′-0″			
R606	8 SR OF 11	4′-5″ TO 5′-2″	639	1	1′-0″	3′-7″ TO 4′-4″					0′-1″
R607	32	4′-5″	212	1	1′-0″	3′-7″					
		TOTAL	14,340	LBS							

DESIGN AGENCY
CPD GROUP
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DESIGNED RFV
DRAWN RFV
REVIEWED TJW
DATE 1-18-21
CHECKED RHC
REVISED
STRUCTURE FILE NUMBER 77002493/77002523

REINFORCING STEEL LIST

BRIDGE NO. SUM-77-0802 L/R
OVER EAST WARNER ROAD

SUM-77/277/224
VARIOUS
PID No. 106002

26/26

1180
1288

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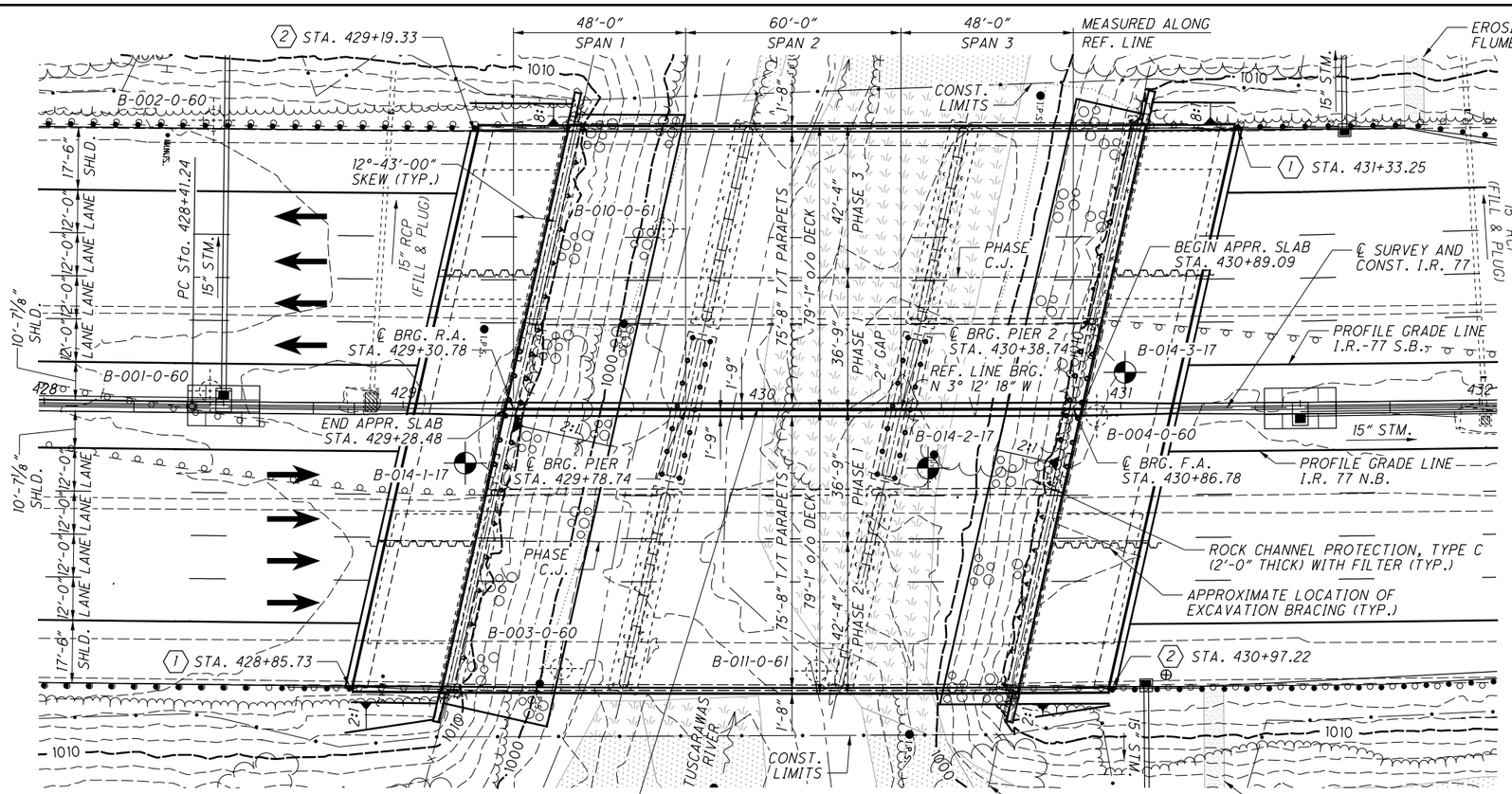
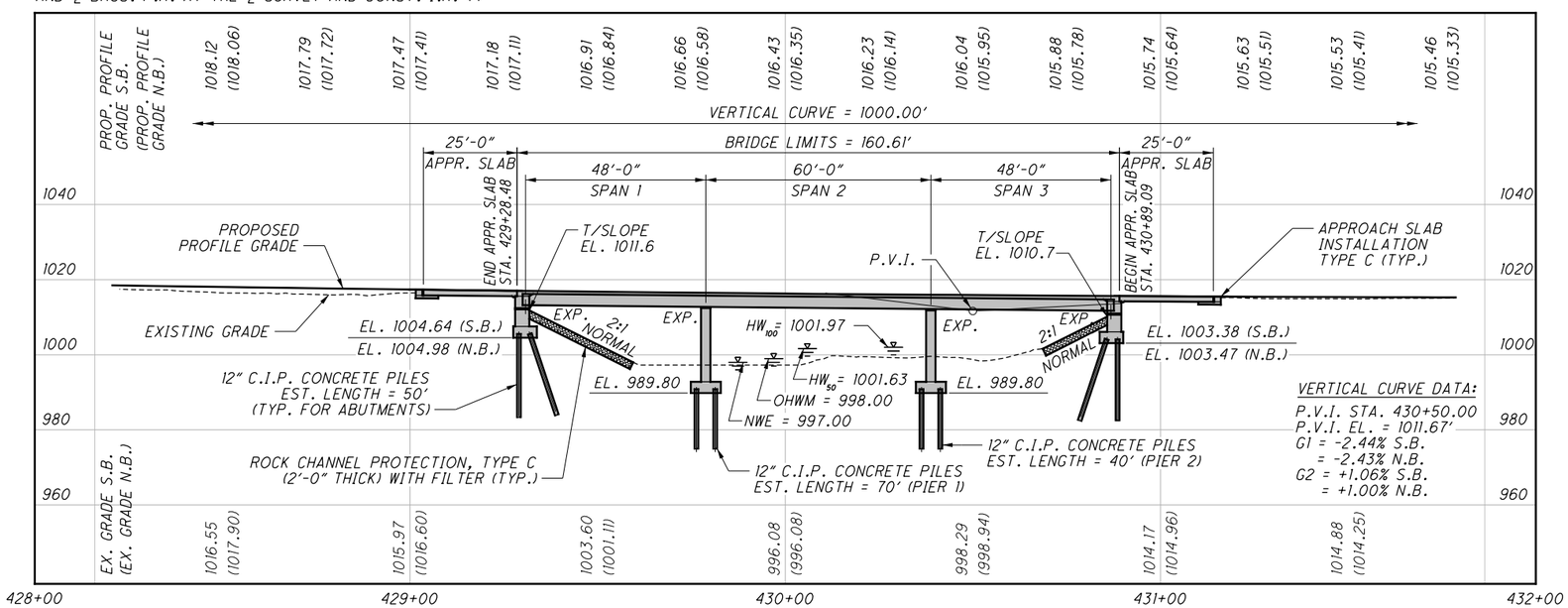


PLAN

REFERENCE LINE:

THE REFERENCE LINE IS A LINE CONNECTING ℄ BRGS. R.A. AND ℄ BRGS. F.A. AT THE ℄ SURVEY AND CONST. I.R. 77



PROFILE ALONG ℄ SURVEY AND CONSTRUCTION I.R. 77

EXISTING GRADE ELEVATIONS ARE GIVEN ALONG THE NEW, PROPOSED PROFILE GRADE LINES

BENCHMARK DATA

POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
CP03	485566.6495	2246336.2535	1117.76	CONC. MONUMENT
CP04	486357.9587	2246323.9152	1121.63	CONC. MONUMENT
CP05	493895.1420	2245390.8980	1073.53	CONC. MONUMENT
CP06	493906.9643	2244750.3816	1090.46	CONC. MONUMENT

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLANS.

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

DESIGN TRAFFIC:
2020 ADT = 118,630 2020 ADTT = 10,680
2040 ADT = 141,010 2040 ADTT = 12,690
DIRECTIONAL DISTRIBUTION = 57%

HORIZONTAL CURVE DATA:

P.I. STA. 438+34.18
Δ = 7° 59' 02" (LT)
Dc = 0° 24' 10"
R = 14,228.56'
T = 992.94'
L = 1982.67'
E = 34.60'
C = 1,981.07'

LEGEND:

- PROJECT BORING LOCATION
- HISTORIC BORING LOCATION
- (1) MGS BTA, TYPE 1 FIRST POST LOCATION (SEE STD. DWG. MGS-3.1)
- (2) MGS BTA, TYPE 2 FIRST POST LOCATION (SEE STD. DWG. MGS-3.2)

HYDRAULIC DATA

DRAINAGE AREA = 32.90 SQ. MILES
FIS Q (50) = 2,519 CFS V (50) = 7.17 FT/S
FIS Q (100) = 2,914 CFS V (100) = 7.79 FT/S
STRUCTURE CLEARS THE 50 YEAR DESIGN HW BY 10.9 FEET.

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAMS WITH REINFORCED CONCRETE DECK, STUB ABUTMENTS AND WALL TYPE PIERS.
SPANS: 48'-0"±, 60'-0"±, 48'-0"± C/C BRGS. ALONG REF. LINE
ROADWAY: 53'-0"± F/F CURBS
LOADING: CF = 2000 (57)
SKEW: 12°-43'-00"± L.F.
WEARING SURFACE: 4"± ASPHALT
APPROACH SLABS: AS-1-54 (25'-0" LONG)
ALIGNMENT: CURVE LEFT
CROWN: 0.016 FT/FT
STRUCTURAL FILE NUMBER: 7702558 (LT) & 7702582 (RT)
DATE BUILT: 1965
DISPOSITION: TO BE REHABILITATED

PROPOSED STRUCTURE

PROPOSED WORK: 3-SPAN EXIST. CONTINUOUS STEEL BEAM (A7) & NEW CONTINUOUS STEEL BEAM (A709 GRADE 50, PAINTED) BRIDGE W/ NEW COMPOSITE REINF. CONC. DECK ON WIDENED SEMI-INTEGRAL ABUTS. & WALL TYPE PIERS
SPANS: 48'-0", 60'-0", 48'-0" C/C BRGS. ALONG REF. LINE
ROADWAY: 75'-8" TOE/TOE PARAPET (S.B. AND N.B.)
VEHICULAR LIVE LOAD: (SEE GENERAL NOTES)
FUTURE WEARING SURFACE: (SEE GENERAL NOTES)
SKEW: 12°-43'-00" L.F. (TO REFERENCE CHORD)
WEARING SURFACE: 1" MONOLITHIC CONCRETE
DECK AREA: 12,702 SQ. FT. (N.B.), 12,702 SQ. FT. (S.B.)
APPROACH SLABS: 25'-0" LONG (MODIFIED) (AS-1-15)
TYPE C INSTALLATION (AS-2-15)
ALIGNMENT: 0°-24'-10" CURVE LEFT
CROWN: 0.016 FT/FT
COORDINATES: LATITUDE 41°-00'-25.56" (SB) 41°-00'-25.42" (NB)
LONGITUDE 81°-29'-40.05" (SB) 81°-29'-38.40" (NB)

DESIGN AGENCY
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DESIGNED MOJ | DRAWN MOJ | REVIEWED DGN | DATE 1-19-21
CHECKED RHC | REVISED | STRUCTURE FILE NUMBER 7702558/7702582

SUMMIT COUNTY
STA. 429+28.48
STA. 430+89.09

SITE PLAN
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

1 / 44

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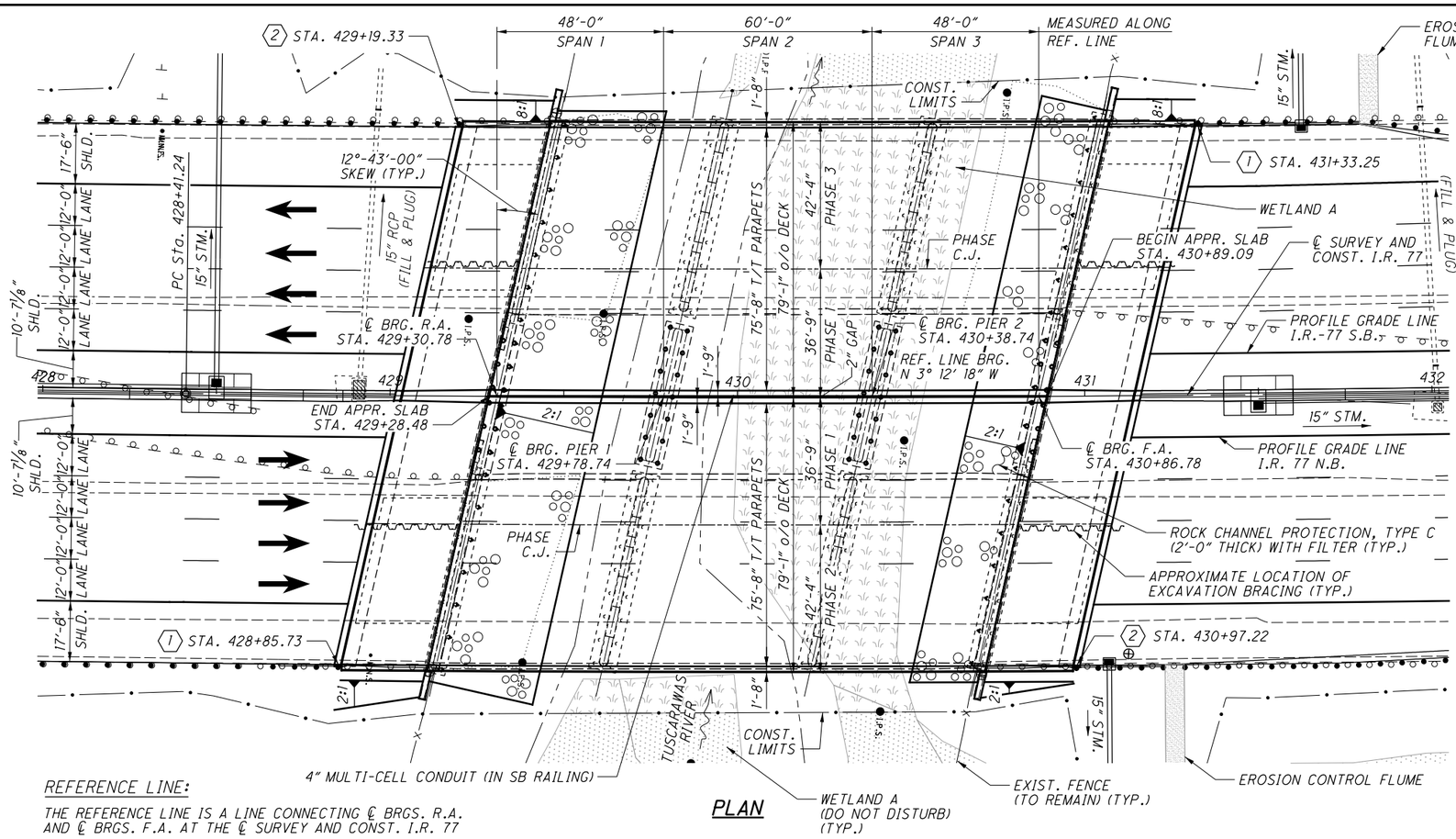
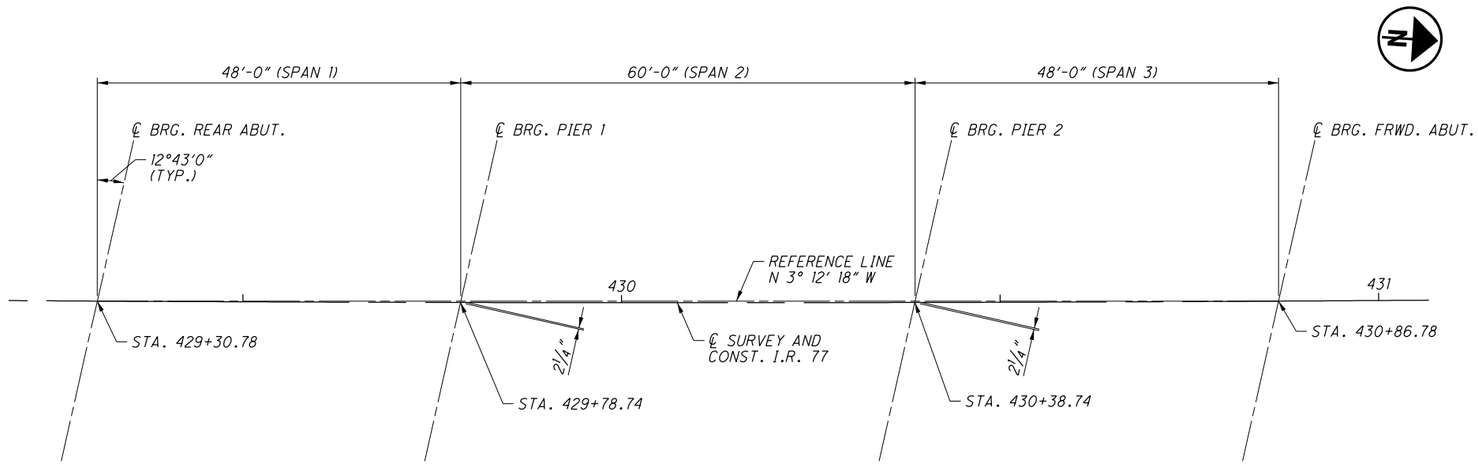


PLAN

REFERENCE LINE:

THE REFERENCE LINE IS A LINE CONNECTING ℄ BRGS. R.A. AND ℄ BRGS. F.A. AT THE ℄ SURVEY AND CONST. I.R. 77



GEOMETRY PLAN

HORIZONTAL CURVE DATA:

P.I. STA. 438+34.18
Δ = 7° 59' 02" (LT)
Dc = 0° 24' 10"
R = 14,228.56'
T = 992.94'
L = 1982.67'
E = 34.60'
C = 1,981.07'

LEGEND:

- WETLAND
- WETLAND AREA NOT TO BE DISTURBED
- (1) MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 FIRST POST LOCATION (SEE STD. DWG. MGS-3.1)
- (2) MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2 FIRST POST LOCATION (SEE STD. DWG. MGS-3.2)

NOTES:

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. THE EXISTING AND PROPOSED BEAMS ARE PARALLEL TO THE REFERENCE LINE. SPAN LENGTHS AND SUBSTRUCTURE SKEWS ARE MEASURED TO THE REFERENCE LINE.
3. THE BRIDGE DECKS, CONSTRUCTION JOINTS, CROWNS, AND PROFILE GRADES ARE OFFSETS FROM THE ℄ SURVEY AND CONST. I.R. 77.

DESIGN AGENCY
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DESIGNED	DRAWN	REVIEWED	DATE
MOJ	MOJ	DGN	1-19-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RHC		7702558/7702582	

GENERAL PLAN
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

2 / 44

1182
1288

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DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 8TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED	7-17-15
AS-2-15	REVISED	1-18-19
GSD-1-19	DATED	1-15-21
PCB-91	REVISED	7-17-20
SBR-1-20	REVISED	7-17-20
SBR-2-20	DATED	1-15-21
SCID-1-21	DATED	1-15-21
SCID-2-14	DATED	1-15-21

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION:

SS800	DATED	1-15-21

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:

EXISTING BEAMS, SUBSTRUCTURE, & FOUNDATION:
CF-2000 (57)

DECK, PROPOSED BEAMS, AND WIDENED SUBSTRUCTURE & FOUNDATION:
HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KSF

DESIGN DATA:

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI
STRUCTURAL STEEL - ASTM A709 GRADE 50 - YIELD STRENGTH 50 KSI
CIP REINF. CONC. PILE STEEL - ASTM A252 GRADE 3 - YIELD STRENGTH 45 KSI (MIN.)

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 C&MS 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.

INSPECTION OF EXISTING STRUCTURAL STEEL:

THE ENGINEER WILL VISUALLY INSPECT ALL EXISTING BUTT-WELDED SPLICES AND TOP FLANGE COVERPLATE FILLET WELDS TO ENSURE THE WELDS, PLATES, AND BEAMS OR GIRDERS ARE FREE OF DEFECTS AND CRACKS. IF NECESSARY, REMOVE ALL DECK SLAB HAUNCH FORMS IMMEDIATELY ADJACENT TO SUCH WELDS THAT MAY INTERFERE WITH THE ENGINEER'S INSPECTION. THE INSPECTION WILL NOT TAKE PLACE UNTIL THE TOP FLANGES ARE CLEANED ACCORDING TO C&MS 511.10, BUT IT WILL BE DONE BEFORE THE DECK SLAB REINFORCEMENT IS INSTALLED. THE DEPARTMENT WILL PAY FOR THE COST ASSOCIATED WITH THIS INSPECTION WITH ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK. THE ENGINEER WILL REPORT ALL CRACKS FOUND TO THE OFFICE OF CONSTRUCTION ADMINISTRATION, BRIDGE CONSTRUCTION SPECIALIST, ALONG WITH SPECIFIC INFORMATION ON LOCATION OF THE CRACKS, LENGTH, AND DEPTH SO AN EVALUATION AND REPAIR OR REPLACEMENT RECOMMENDATION CAN BE MADE.

PAINTING OF STRUCTURAL STEEL:

EXISTING STEEL: AREAS AT ENDS OF BEAMS DISTURBED BY PROPOSED WORK, TOP FLANGE VERTICAL EDGES, AND AREAS DISTURBED BY PROPOSED CROSS FRAME WORK SHALL BE PAINTED WITH A FIELD APPLIED THREE-COAT OZEU PAINT SYSTEM. ADDITIONAL NOTES AND DETAILS CAN BE FOUND ON THE BEAM DETAIL SHEETS. QUANTITIES OF 753 SF FOR THE PRIME, THE EPOXY INTERMEDIATE, AND THE URETHANE FINISH COATS HAVE BEEN INCLUDED IN THE ESTIMATED QUANTITIES TABLE FOR THIS WORK.

PROPOSED STEEL: ALL EXPOSED PROPOSED STEEL SURFACES SHALL BE PAINTED WITH A THREE-COAT IZEU PAINT SYSTEM. THE INORGANIC ZINC PRIME COAT SHALL BE SHOP APPLIED AND INCLUDED WITH ITEM 513 FOR PAYMENT. EPOXY INTERMEDIATE AND URETHANE FINISH COATS SHALL BE APPLIED IN THE FIELD. QUANTITIES OF 13,004 SF FOR THE EPOXY INTERMEDIATE AND URETHANE FINISH COATS HAVE BEEN INCLUDED IN THE ESTIMATED QUANTITIES TABLE FOR THIS WORK.

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 2.30 KIPS (PHASE 1) AND 2.37 KIPS (PHASE 2 & 3).
- A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".
- A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48".
- A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA BEAM TO THE FACE OF THE SAFETY HANDRAIL OF 65".

PILE DESIGN LOADS (ULTIMATE BEARING VALUE):

THE ULTIMATE BEARING VALUE IS 270.0 KIPS PER PILE FOR THE ABUTMENT PILES. THE ULTIMATE BEARING VALUE IS 242.9 KIPS PER PILE FOR THE PIER PILES.

ABUTMENT PILES:
12" DIA. C.I.P. REINFORCED CONCRETE PILES: 55 FEET LONG, ORDER LENGTH
1 DYNAMIC LOAD TESTING ITEM

PIER PILES:
12" DIA. C.I.P. REINFORCED CONCRETE PILES: 75 FEET LONG, PIER 1 ORDER LENGTH
12" DIA. C.I.P. REINFORCED CONCRETE PILES: 45 FEET LONG, PIER 2 ORDER LENGTH
1 DYNAMIC LOAD TESTING ITEM

PILE DRIVING:

THE MINIMUM RATED ENERGY OF THE HAMMER USED TO INSTALL THE PILES SHALL BE 43,000 FOOT-POUNDS. ENSURE THAT STRESSES IN THE PILES DURING DRIVING DO NOT EXCEED 40,500 POUNDS PER SQUARE INCH. THE MINIMUM PILE WALL THICKNESS SHALL BE 0.30 INCHES FOR THE ABUTMENT PILES AND 0.27 INCHES FOR THE PIER PILES.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

DESCRIPTION: THIS WORK CONSISTS OF THE REMOVAL OF CONCRETE DECKS INCLUDING CONCRETE BRIDGE RAILINGS, DECK JOINTS AND OTHER APPURTENANCES FROM STEEL SUPPORTING SYSTEMS (BEAMS, CROSSFRAMES, ETC.). THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

REMOVAL METHODS: THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS OVER STRUCTURAL MEMBERS (STEEL BEAMS), THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO EXCEED 90 POUNDS UNLESS APPROVED BY THE ENGINEER. REMOVAL METHODS OVER STRUCTURAL MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STRUCTURAL MEMBERS. DUE TO THE POSSIBLE PRESENCE OF ATTACHMENTS (E.G., FINISHING MACHINE, SCUPPER AND FORM SUPPORTS, ETC.) TO EXISTING STRUCTURAL MEMBERS, PERFORM WORK CAREFULLY DURING DECK REMOVAL TO AVOID DAMAGING STRUCTURAL MEMBERS THAT ARE TO REMAIN. REPLACE OR REPAIR STRUCTURAL MEMBERS DAMAGED BY THE REMOVAL OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE ENGINEER. OBTAIN THE ENGINEER'S APPROVAL BEFORE PERFORMING REPAIR.

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

SUBSTRUCTURE CONCRETE REMOVAL: REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. 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 THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, 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 CMS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN. THE DEPARTMENT WILL NOT MAKE ADDITIONAL PAYMENT FOR PROVIDING AN ALTERNATE DESIGN.

ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 511, ALL EXPOSED HANGERS FOR DECK FORMING AT HAUNCHES SHALL BE GALVANIZED.

ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL 3, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 513, THIS ITEM SHALL INCLUDE THE COPING OF THE EXISTING BEAMS AT THE ABUTMENTS AS SHOWN IN THE PLANS. ALL REMOVAL SHALL BE IN ACCORDANCE WITH CMS 202.

ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, FINISH COAT

ALL EXISTING STRUCTURAL STEEL MEMBERS DESIGNATED IN THE PLANS AND ALL NEW STRUCTURAL STEEL MEMBERS SHALL BE PAINTED USING A THREE-COAT PAINT SYSTEM. THE URETHANE TOP COAT SHALL BE TINTED TO MEET AMS-STD-595A COLOR No. 15526 - BLUE.

ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS. SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH C&MS 501.05. IF, DURING THE JACKING OPERATIONS, DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. THE DEPARTMENT WILL NOT PAY FOR THE COST OF REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS. THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

PERMITS FOR SECTION 401 AND 404 (TEMPORARY ACCESS FILLS):

THE TEMPORARY ACCESS FILL (TAF) INFORMATION USED FOR THE PERMIT APPLICATION IS AVAILABLE FOR INFORMATIONAL PURPOSES ONLY AND IS PROVIDED AS PART OF THE DESIGNER CALCULATIONS. THE CONTRACTOR IS RESPONSIBLE FOR DESIGNING THEIR OWN TAF AND THE DESIGN SHOULD CORRESPOND WITH REQUIREMENTS OF SS 832 AND THOSE FOUND IN THE SPECIAL PROVISIONS.

FOR THIS PROJECT, PERMITS FOR SECTION 401 AD 404 OF THE CLEAN WATER ACT ARE BASED ON THE LIMITS OF TEMPORARY CONSTRUCTION FILL PLACED IN THE "WATERS OF THE UNITED STATES" AS SHOWN BELOW. SHOULD THE CONTRACTOR CHOOSE TO DEVIATE FROM THE PROPOSED TAF, THE CONTRACTOR IS REQUIRED TO COORDINATE THE REQUEST FOR THE CAUSEWAY AND ACCESS FILL(S) WITH THE PROJECT ENGINEER AND OES. IF A PERMIT MODIFICATION IS REQUIRED, REFER TO SUPPLEMENTAL SPECIFICATION 832.06 FOR THE APPLICATION REQUIREMENTS AND TIME FRAMES.

TOTAL AREA OF TAF MATERIAL = 0.10 ACRES
TOTAL VOLUME OF TAF MATERIAL = 323 C.Y.
CHANNEL DISTURBED DUE TO TEMPORARY CROSSING = 92 FT.
TOTAL VOLUME OF TAF BELOW ORDINARY HIGH WATER MARK (OHWM) = 204 C.Y.

THE TEMPORARY ACCESS FILL SHALL ACCOMMODATE A FLOW RATE (Q) EQUAL TO TWICE THE HIGHEST MEAN MONTHLY FLOW SUCH THAT THE BACKWATER ELEVATION DOES NOT EXCEED THE OHWM. Q FOR THIS LOCATION IS 70.0 CFS.

TAF SHALL CONSIST OF CLEAN ROCK (FREE OF ANY TOXIC OR FINE MATERIAL) THAT IS A MINIMUM OF THREE INCHES IN DIAMETER. ALL TEMPORARY INSTREAM FILL MUST BE REMOVED TO THE EXISTING CONDITION PRIOR TO PROJECT COMPLETION.

ABBREVIATIONS:

ABUT.	ABUTMENT
BOT.	BOTTOM
BRG.	BEARING
B.S.	BOTH SIDES
BTA	BRIDGE TERMINAL ASSEMBLY
BTWN.	BETWEEN
C.I.P.	CAST-IN-PLACE
C.J.	CONSTRUCTION JOINT
CLR.	CLEAR
CONST.	CONSTRUCTION
DIA.	DIAMETER
DIM.	DIMENSION
EL.	ELEVATION
EQ.	EQUAL
EX./EXIST.	EXISTING
FRWD.	FORWARD
F.S.	FAR SIDE
GFRP	GLASS FIBER REINFORCED POLYMER
LT.	LEFT
MAX.	MAXIMUM
MGS	MIDWEST GUARDRAIL SYSTEM
MIN.	MINIMUM
NB	NORTHBOUND
NO.	NUMBER
N.S.	NEAR SIDE
P.E.J.F.	PREFORMED EXPANSION JONT FILLER
REF.	REFERENCE
RT.	RIGHT
SB	SOUTHBOUND
SER.	SERIES
SPA.	SPACES OR SPACING
STA.	STATION
STD. DWG.	STANDARD DRAWING
T&B	TOP AND BOTTOM
TYP.	TYPICAL

DESIGN AGENCY
GPD GROUP
Glaus, Pyle, Schomer, Burns & DeHaven, Inc.
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DESIGNED	DRAWN	REVIEWED	DATE
MOJ	MOJ	DGN	1-19-21

CHECKED: RHC
REVISED:
STRUCTURE FILE NUMBER 7702558/7702582

GENERAL NOTES
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

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ESTIMATED QUANTITIES

CALCULATED BY: MOJ DATE: 1-11-2021
CHECKED BY: RHC DATE: 1-12-2021

	ITEM	EXT.	TOTAL	PARTICIPATION 03/IMS/BR	PARTICIPATION 04/IMS/BR	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPER-STRUCTURE	GENERAL	AS PER PLAN REFERENCE SHEET
	202	11203	LS	LS	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LS	3
	202	22900	400	260	140	SY	APPROACH SLAB REMOVED				400	
	202	23500	2,450	1,593	857	SY	WEARING COURSE REMOVED				2,450	
	503	11101	LS	LS	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN				LS	3
	503	21100	421	274	147	CY	UNCLASSIFIED EXCAVATION	192	229			
	505	11100	LS	LS	LS		PILE DRIVING EQUIPMENT MOBILIZATION				LS	
	507	00500	2,740	1,781	959	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	1,200	1,540			
	507	00550	3,000	1,950	1,050	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	1,320	1,680			
	509	10000	293,392	190,705	102,687	LB	EPOXY COATED REINFORCING STEEL	7,408	40,021	245,963		
	509	30020	6,400	4,160	2,240	FT	NO. 4 GFRP DEFORMED BARS			6,400		
	509	30040	5,020	3,263	1,757	FT	NO. 6 GFRP DEFORMED BARS			5,020		
	510	10000	170	111	59	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	170				
	511	33500	4	3	1	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE	4				
	511	34447	847	551	296	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN			847		3
	511	34450	151	98	53	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)			151		39
	511	40512	141	92	49	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS		141			
	511	44112	67	44	23	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	67				
	511	46512	135	88	47	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	60	75			
	512	10100	1,998	1,299	699	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	59	1,132	807		
	512	10600	10	7	3	FT	CONCRETE REPAIR BY EPOXY INJECTION	6	4			
	512	33000	19	12	7	SY	TYPE 2 WATERPROOFING	19				
	512	74000	867	564	303	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	34	833			
	513	10261	194,393	126,355	68,038	LB	STRUCTURAL STEEL MEMBERS, LEVEL 3, AS PER PLAN			194,393		3
	513	20000	13,050	8,483	4,567	EACH	WELDED STUD SHEAR CONNECTORS			13,050		
	514	00050	753	489	264	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			753		
	514	00056	753	489	264	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			753		
	514	00060	13,757	8,942	4,815	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			13,757		
	514	00066	13,757	8,942	4,815	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			13,757		
	514	00504	3	2	1	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			3		
	514	10000	13	8	5	EACH	FINAL INSPECTION REPAIR			13		
	516	10010	318	207	111	FT	ARMORLESS PREFORMED JOINT SEAL				318	
	516	13600	41	27	14	SF	1" PREFORMED EXPANSION JOINT FILLER			41		
	516	13900	64	42	22	SF	2" PREFORMED EXPANSION JOINT FILLER	64				
	516	14020	354	230	124	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	354				
	516	44001	40	26	14	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (9" X 1'-1" X 1.85" THICK), AS PER PLAN	40				17
	516	44101	40	26	14	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (11" X 1'-5" X 2.25" THICK), AS PER PLAN		40			17
	516	47001	LS	LS	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LS		3
	518	21200	192	125	67	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	192				
	518	40000	360	234	126	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	360				
	518	40010	32	21	11	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	32				
	519	11100	125	81	44	SF	PATCHING CONCRETE STRUCTURE	97	28			
	523	20000	2	1	1	EACH	DYNAMIC LOAD TESTING				2	
	526	25011	880	572	308	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN				880	38
	526	90031	318	207	111	FT	TYPE C INSTALLATION, AS PER PLAN				318	39
✳	601	32200	637	414	223	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER				637	

✳ INCLUDED FOR PAYMENT WITH THE EROSION CONTROL QUANTITIES - SEE THE GENERAL SUMMARY.

REVISIONS		
NO.	DATE	DESCRIPTION
8	04/27/21	REVISED ITEM 511 - BRIDGE DECK CONCRETE QUANTITY
8	04/30/21	ADDED ITEM 512 - REMOVAL OF EXISTING COATINGS

DESIGN AGENCY
GPD GROUP
Gillan, Polk, Schorr, Bland & DeNavorn, Inc.
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ESTIMATED QUANTITIES
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

1184
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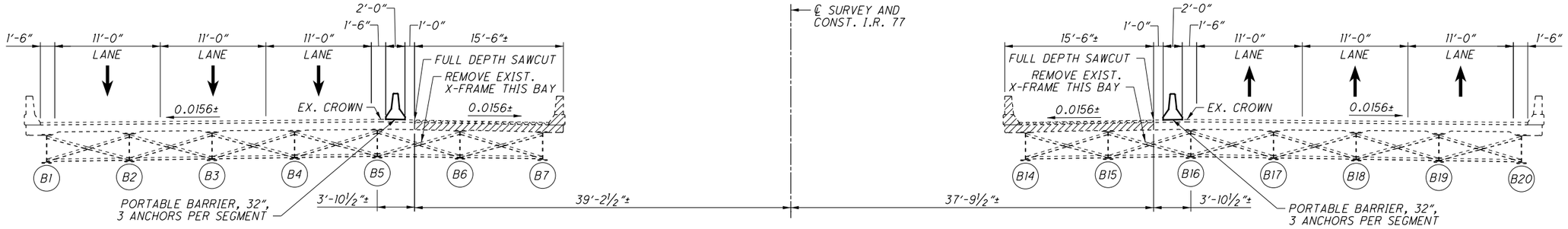
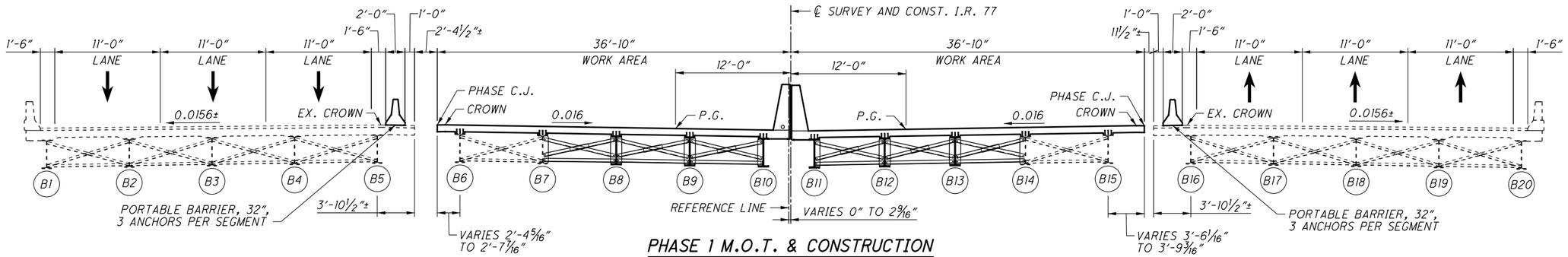
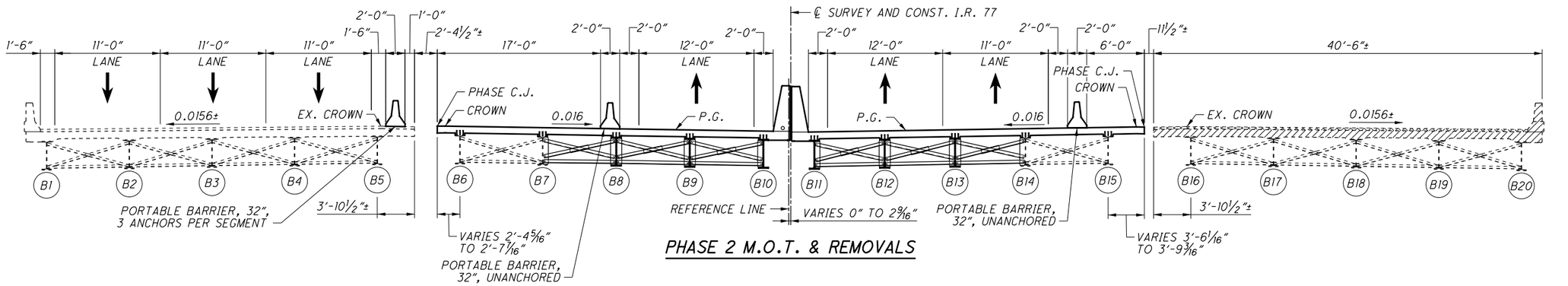


PHASE 1 M.O.T. & REMOVALS



PHASE 1 M.O.T. & CONSTRUCTION



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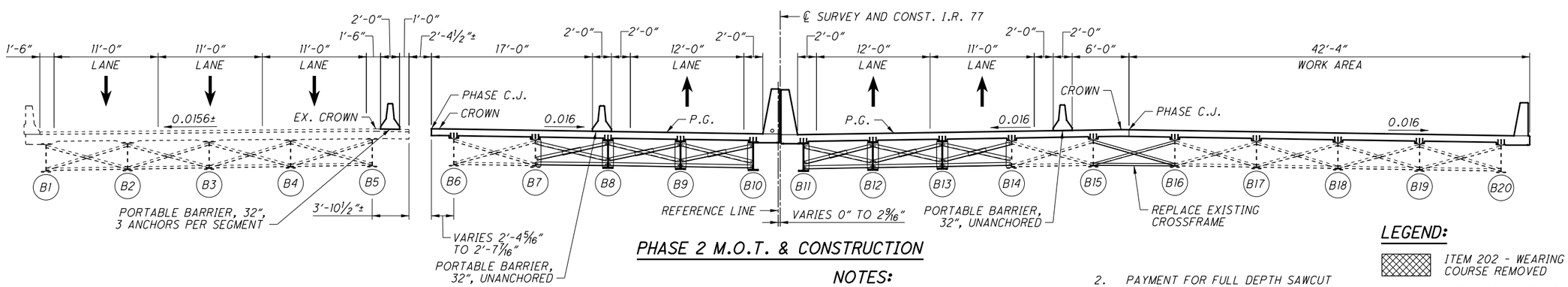

PHASE 2 M.O.T. & CONSTRUCTION

NOTES:

1. FOR PORTABLE BARRIER DETAILS, SEE STD. DWG. PCB-91.
2. PAYMENT FOR FULL DEPTH SAWCUT IS INCLUDED WITH ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

LEGEND:

- ITEM 202 - WEARING COURSE REMOVED
- ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

DESIGN AGENCY
GPD GROUP
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MOJ	MOJ	DGN	1-19-21
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RHC		7702558/7702582	

PHASE 1 AND 2 CONSTRUCTION DETAILS
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

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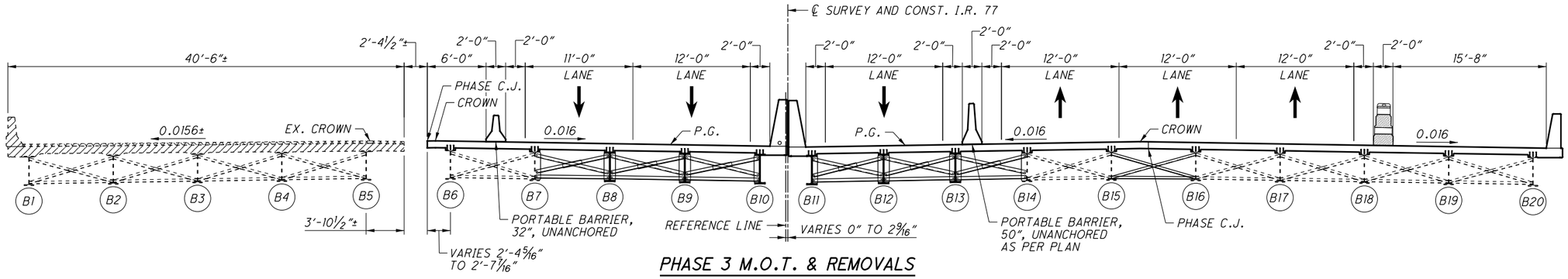
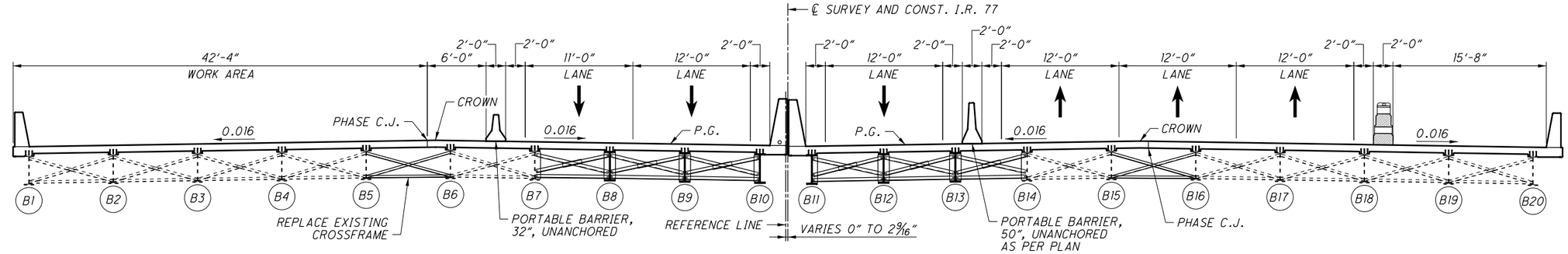


PHASE 3 M.O.T. & REMOVALS



PHASE 3 M.O.T. & CONSTRUCTION

LEGEND:

- ITEM 202 - WEARING COURSE REMOVED
- ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

NOTES:

1. FOR PORTABLE BARRIER DETAILS, SEE STD. DWG. PCB-91.

PROPOSED WORK:

PHASE 1 REMOVALS AND CONSTRUCTION (NORTHBOUND & SOUTHBOUND)

1. PLACE PORTABLE BARRIER AND TEMPORARY STRIPING.
2. DIVERT AND MAINTAIN THREE LANES OF TRAFFIC IN EACH DIRECTION.
3. REMOVE PORTION OF WEARING SURFACE, DECK, PARAPET, AND APPROACH SLABS.
4. INSTALL TEMPORARY SHEETING AT ABUTMENTS.
5. REMOVE EXISTING CROSSFRAMES AS NOTED.
6. REMOVE PORTIONS OF EXISTING BACKWALL.
7. JACK AND SUPPORT EXISTING BEAMS 6-7 & 14-15 AND REMOVE EXISTING BEARINGS AT ABUTMENTS AND PIERS.
8. REMOVE EXISTING END CROSSFRAMES AND COPE BEAM ENDS.
9. CONSTRUCT NEW WIDENED ABUTMENT AND PIER CONCRETE.
10. INSTALL NEW ELASTOMERIC BEARINGS, STEEL BEAMS, STUD SHEAR CONNECTORS, AND INTERMEDIATE CROSSFRAMES. PAINT EXISTING BEAM ENDS WITH PRIME COAT.
11. PLACE NEW CONCRETE DIAPHRAGMS, DECKS, PARAPETS, AND APPROACH SLABS. DIAPHRAGM CONCRETE AT ABUTMENTS SHALL BE PLACED DURING DECK PLACEMENT.
12. PATCH AND SEAL CONCRETE SURFACES.
13. PLACE ROCK CHANNEL PROTECTION.

PHASE 2 REMOVALS AND CONSTRUCTION (NORTHBOUND)

1. PLACE PORTABLE BARRIER AND TEMPORARY STRIPING.
2. DIVERT AND MAINTAIN THREE LANES OF TRAFFIC IN EACH DIRECTION.
3. REMOVE REMAINING PORTION OF WEARING SURFACE, DECK, PARAPET, AND APPROACH SLABS.
4. REMOVE REMAINING PORTION OF EXISTING BACKWALLS AND WINGWALLS AS NOTED.
5. JACK AND SUPPORT EXISTING BEAMS 16-20 AND REMOVE EXISTING BEARINGS AT ABUTMENTS AND PIERS.
6. REMOVE EXISTING END CROSSFRAMES AND COPE BEAM ENDS.
7. INSTALL NEW ELASTOMERIC BEARINGS AND STUD SHEAR CONNECTORS. PAINT EXISTING BEAM ENDS WITH PRIME COAT.
8. PLACE NEW CONCRETE DIAPHRAGMS, DECK, PARAPET, AND APPROACH SLABS. DIAPHRAGM CONCRETE AT ABUTMENTS SHALL BE PLACED DURING DECK PLACEMENT.
9. REPLACE EXISTING CROSSFRAMES AS NOTED.
10. CONSTRUCT NEW WINGWALL CONCRETE.
11. SEAL CONCRETE SURFACES.

PHASE 3 REMOVALS AND CONSTRUCTION (SOUTHBOUND)

1. PLACE PORTABLE BARRIER AND TEMPORARY STRIPING.
2. DIVERT AND MAINTAIN THREE LANES OF TRAFFIC IN EACH DIRECTION.
3. REMOVE REMAINING PORTION OF WEARING SURFACE, DECK, PARAPET, AND APPROACH SLABS.
4. REMOVE REMAINING PORTION OF EXISTING BACKWALLS AND WINGWALLS AS NOTED.
5. JACK AND SUPPORT EXISTING BEAMS 1-5 AND REMOVE EXISTING BEARINGS AT ABUTMENTS AND PIERS.
6. REMOVE EXISTING END CROSSFRAMES AND COPE BEAM ENDS.
7. INSTALL NEW ELASTOMERIC BEARINGS AND STUD SHEAR CONNECTORS. PAINT EXISTING BEAM ENDS WITH PRIME COAT.
8. PLACE NEW CONCRETE DIAPHRAGMS, DECK, PARAPET, AND APPROACH SLABS. DIAPHRAGM CONCRETE AT ABUTMENTS SHALL BE PLACED DURING DECK PLACEMENT.
9. REPLACE EXISTING CROSSFRAMES AS NOTED.
10. CONSTRUCT NEW WINGWALL CONCRETE.
11. PAINT PROPOSED STEEL AND DESIGNATED EXISTING STEEL AREAS WITH INTERMEDIATE AND FINISH COATS. SEAL CONCRETE SURFACES.
12. AFTER ALL CONSTRUCTION IS COMPLETE, REMOVE TRAFFIC CONTROL AND OPEN BRIDGES TO NORMAL TRAFFIC.

DESIGN AGENCY
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RHC		7702558/7702582	

PHASE 3 CONSTRUCTION DETAILS AND NOTES
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

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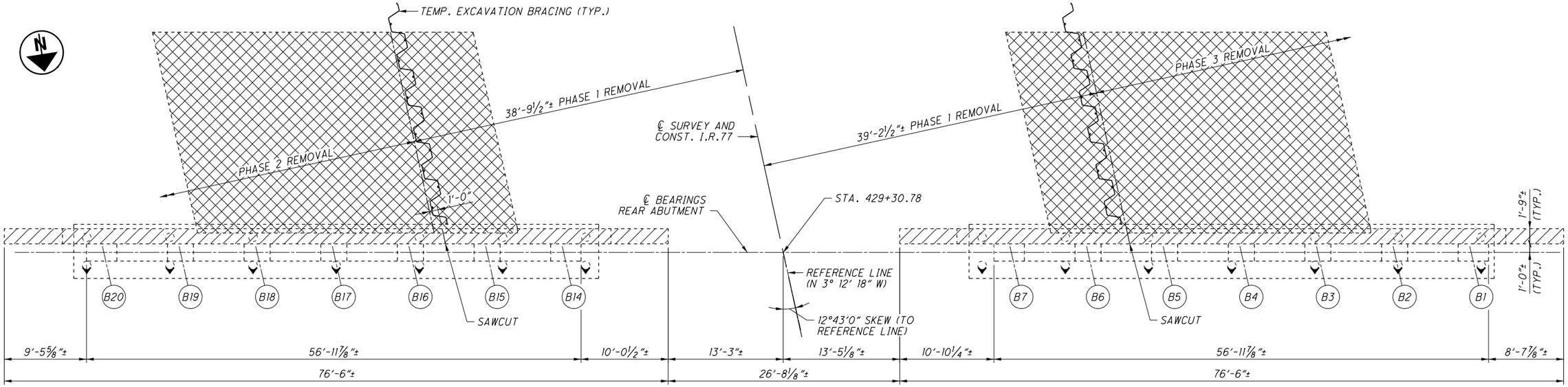

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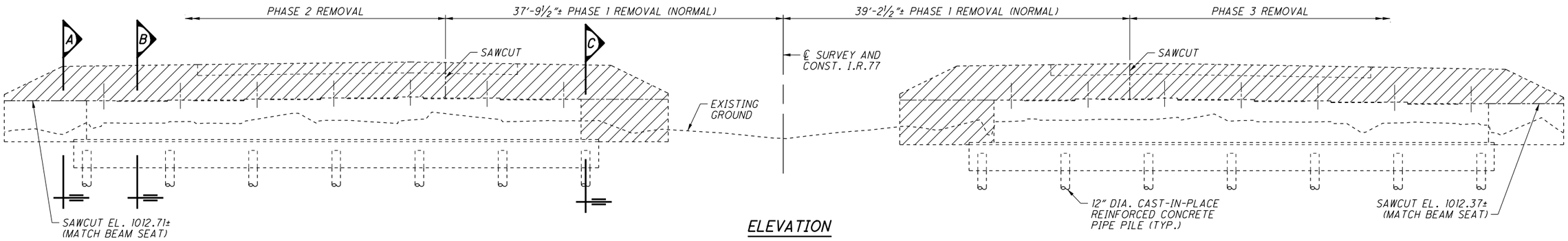

ELEVATION

REAR ABUTMENT REPAIRS		
REPAIR ITEM	SOUTHBOUND	NORTHBOUND
ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION (FT)	0	0
ITEM 519 - PATCHING CONCRETE STRUCTURE (SF)	20	15

PIER 1 REPAIRS		
REPAIR ITEM	SOUTHBOUND	NORTHBOUND
ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION (FT)	0	0
ITEM 519 - PATCHING CONCRETE STRUCTURE (SF)	15	0

PIER 2 REPAIRS		
REPAIR ITEM	SOUTHBOUND	NORTHBOUND
ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION (FT)	0	0
ITEM 519 - PATCHING CONCRETE STRUCTURE (SF)	2	0

FORWARD ABUTMENT REPAIRS		
REPAIR ITEM	SOUTHBOUND	NORTHBOUND
ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION (FT)	0	2
ITEM 519 - PATCHING CONCRETE STRUCTURE (SF)	30	20

LEGEND:

- (B#) BEAM NUMBER
- ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- ITEM 202 - APPROACH SLAB REMOVED
- ITEM 202 - WEARING COURSE REMOVED
- EXISTING VERTICAL 12" DIA. CAST-IN-PLACE REINFORCED CONCRETE PIPE PILE
- EXISTING BATTERED 12" DIA. CAST-IN-PLACE REINFORCED CONCRETE PIPE PILE WITH DIRECTION OF BATTER (1:4)

NOTES:

1. STATIONS AND DIMENSIONS ARE GIVEN TO ℄ SURVEY AND CONST. I.R.77.
2. FOR SECTIONS A THROUGH C, SEE SHEET 8/44.
3. ALL PORTIONS OF THE EXISTING PIERS SHALL REMAIN.
4. ALL UNSOUND AREAS OF CONCRETE TO REMAIN SHALL BE PATCHED UNDER ITEM 519 - PATCHING CONCRETE STRUCTURE, AND ALL STRUCTURAL CRACKS WIDER THAN ⅛" SHALL BE REPAIRED UNDER ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION. ESTIMATED AREAS AND LENGTHS SHOWN IN THE TABLES ON THIS SHEET HAVE BEEN INCLUDED IN THE ESTIMATED QUANTITIES ALONG WITH CONTINGENCY QUANTITIES OF 23 SQUARE FEET FOR ITEM 519 AND 8 FEET FOR ITEM 512.
5. STEEL SHEET PILING SHALL HAVE A MINIMUM SECTION MODULUS OF 18.1 CUBIC INCHES PER FOOT OF WALL AND BE DRIVEN TO EL. 991.00 AT THE REAR ABUTMENT AND EL. 990.00 AT THE FORWARD ABUTMENT OR DEEPER. THE TOP OF SHEET PILING SHALL BE ABOVE THE FINISHED PAVEMENT ELEVATIONS. LATERALLY, IT SHALL START AT THE BACK OF ABUTMENTS AND EXTEND ALONG THE APPROACH SLAB PHASE CONSTRUCTION JOINTS FOR APPROXIMATELY 18 FEET OR AS NECESSARY TO CONSTRUCT THE APPROACH SLABS IN PHASES.

DESIGN AGENCY
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
RHC		7702558/7702582	

REAR ABUTMENT AND PIER REMOVAL AND REPAIR DETAILS
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

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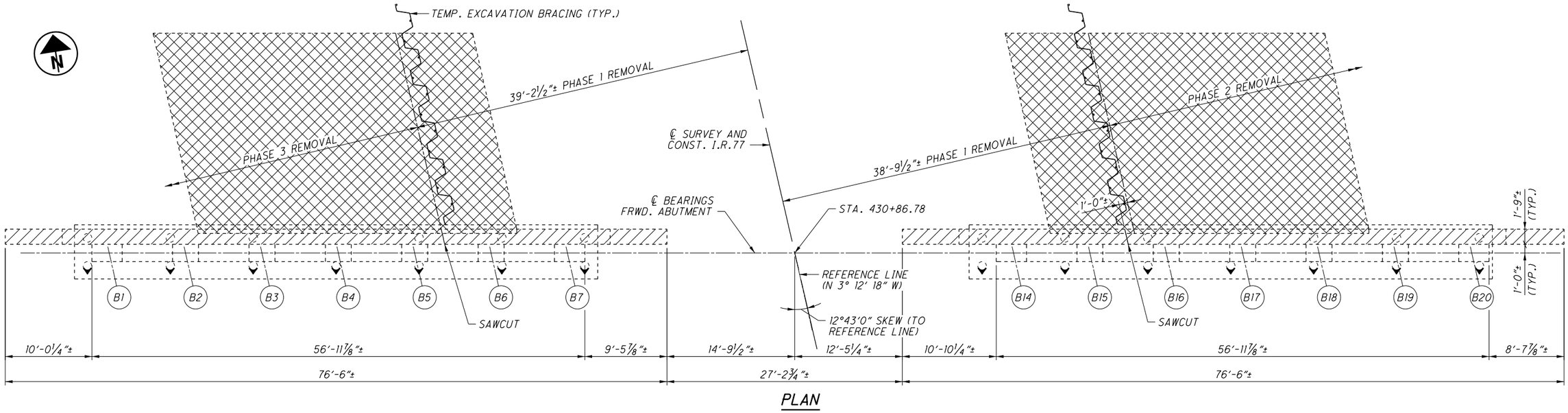
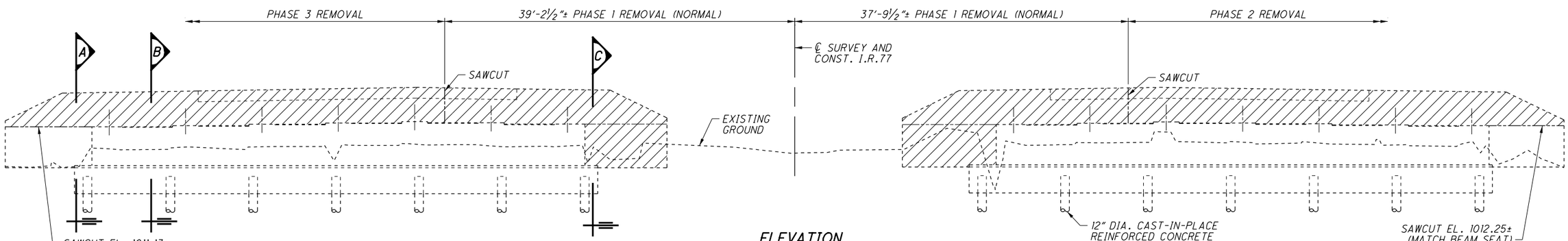
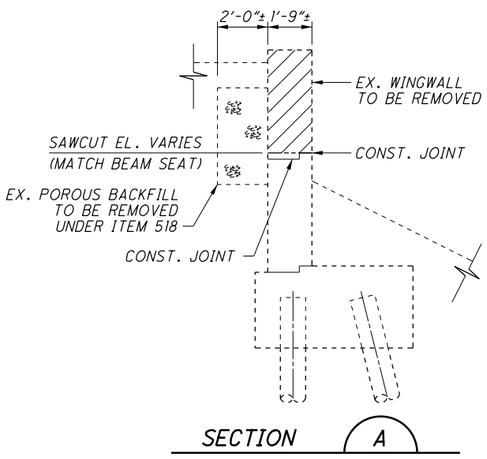


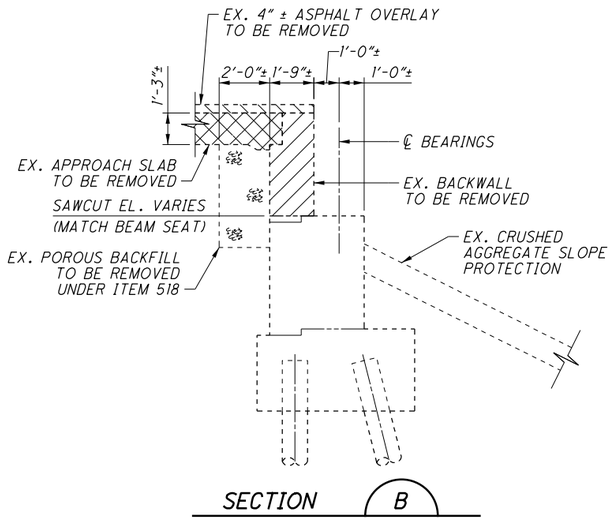
PLAN



ELEVATION



SECTION A



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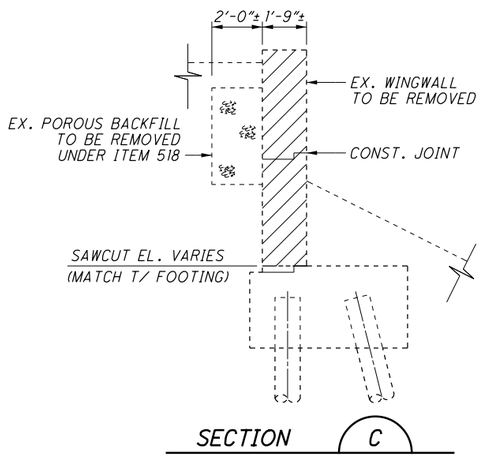

SECTION C

NOTES:

1. FOR ADDITIONAL NOTES & DETAILS AND LOCATIONS OF SECTIONS A THROUGH C, SEE SHEET 7/44.

DESIGN AGENCY
GPD GROUP
520 South Main Street, Akron, OH 44311 330.572.2100

DESIGNED MOJ | DRAWN MOJ | CHECKED RHC | REVIEWED DGN | DATE 1-19-21
STRUCTURE FILE NUMBER 7702558/7702582
REVISED

FORWARD ABUTMENT REMOVAL AND REPAIR DETAILS
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

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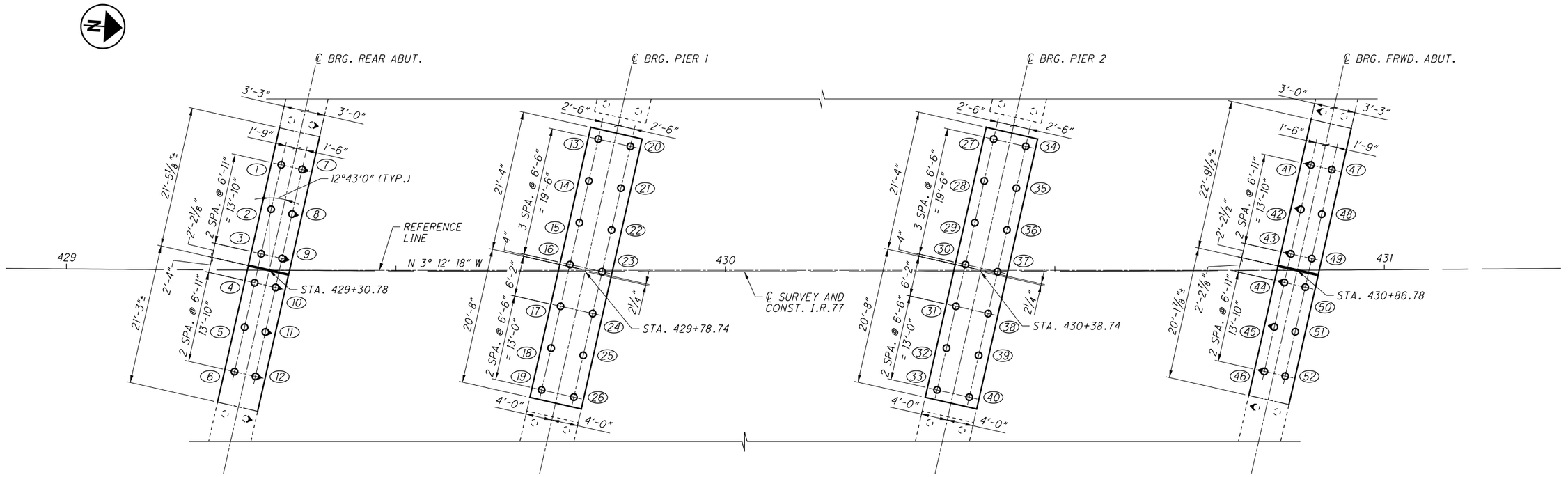

PLAN

LEGEND:

(##) PILE NUMBER

○ PROPOSED VERTICAL 12" DIA. CAST-IN-PLACE REINFORCED CONCRETE PIPE PILE

PROPOSED BATTERED 12" DIA. CAST-IN-PLACE REINFORCED CONCRETE PIPE PILE WITH DIRECTION OF BATTER (1:3)

EXISTING VERTICAL 12" DIA. CAST-IN-PLACE REINFORCED CONCRETE PIPE PILE

EXISTING BATTERED 12" DIA. CAST-IN-PLACE REINFORCED CONCRETE PIPE PILE WITH DIRECTION OF BATTER (1:4)

NOTES:

1. STATIONS ARE GIVEN TO ℄ SURVEY AND CONST. I.R.77.
2. ALL DIMENSIONS ARE GIVEN TO THE REFERENCE LINE.

DESIGN AGENCY
GPD GROUP
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MOJ	MOJ	DGN	1-19-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RHC		7702558/7702582	

SUM-77/277/224
VARIOUS
PID No. 106002

FOUNDATION PLAN
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

9 / 44

1189
1288

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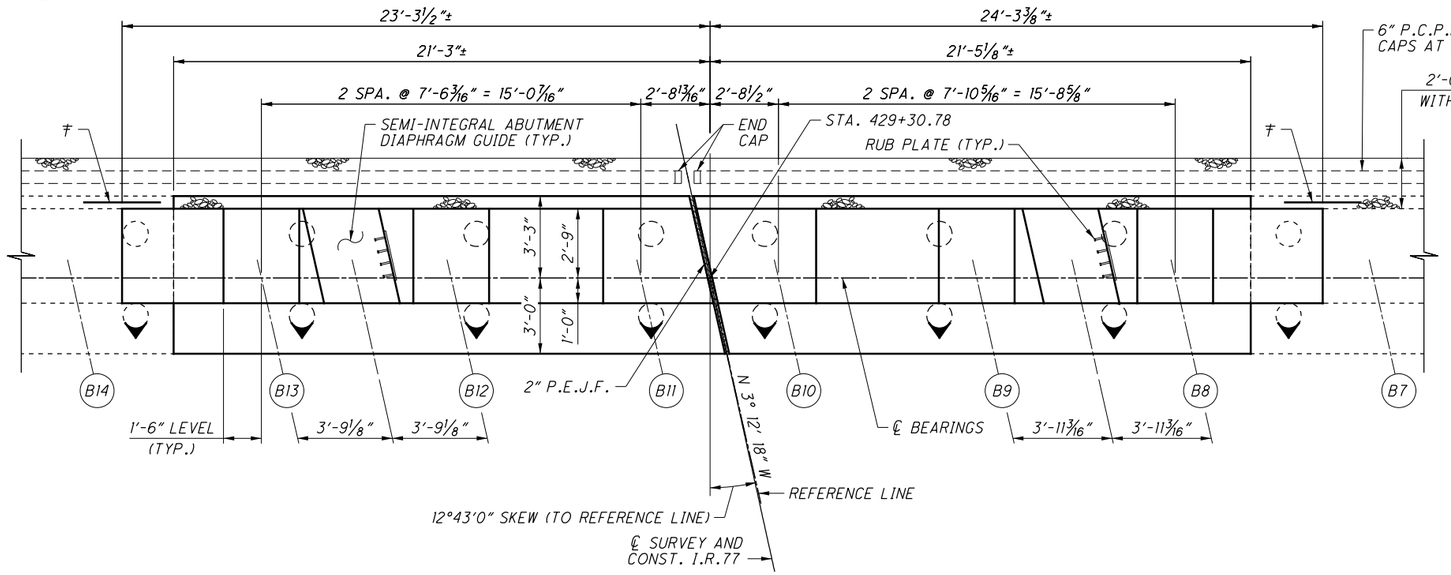
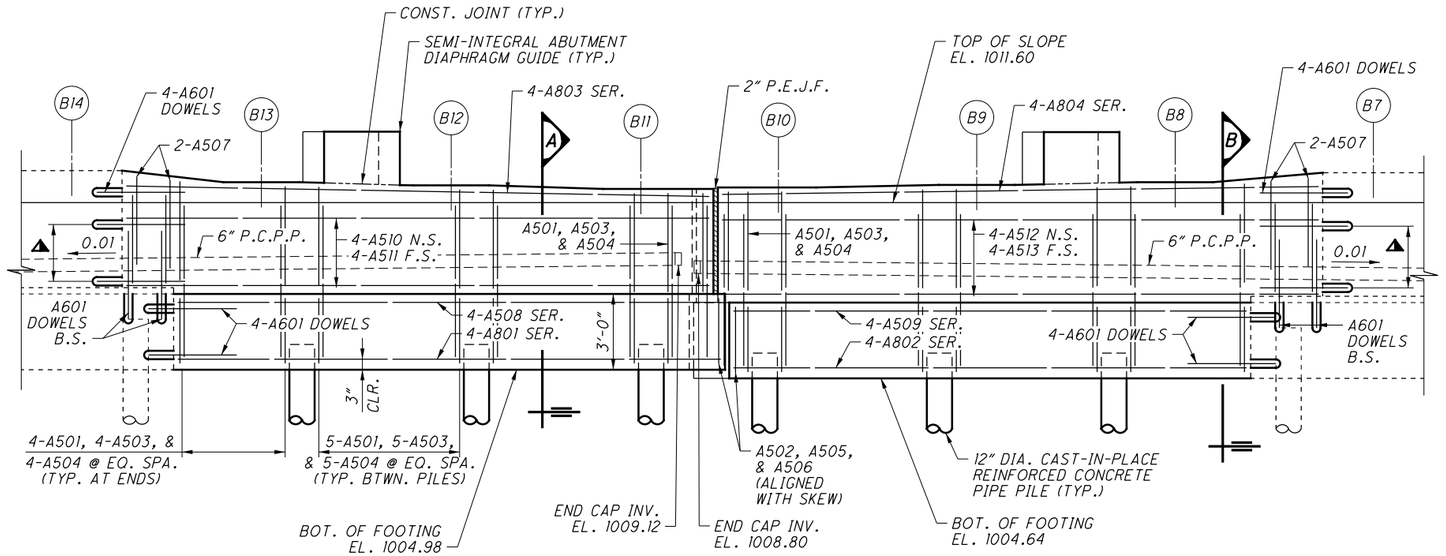


PLAN



ELEVATION

BEAM SEAT ELEVATIONS	
BEAM	REAR ABUTMENT
B8	1012.41
B9	1012.30
B10	1012.20
B11	1012.14
B12	1012.28
B13	1012.41

LEGEND:

- (B#) BEAM NUMBER
- PROPOSED VERTICAL 12" DIA. CAST-IN-PLACE REINFORCED CONCRETE PIPE PILE
- PROPOSED BATTERED 12" DIA. CAST-IN-PLACE REINFORCED CONCRETE PIPE PILE WITH DIRECTION OF BATTER (1:3)
- EXISTING VERTICAL 12" DIA. CAST-IN-PLACE REINFORCED CONCRETE PIPE PILE
- EXISTING BATTERED 12" DIA. CAST-IN-PLACE REINFORCED CONCRETE PIPE PILE WITH DIRECTION OF BATTER (1:4)
- ▲ 4-A601 DOWELS B.S.
- ∓ TYPE 2 WATERPROOFING: 3'-0" WIDE STRIP CENTERED ON JOINT AND EXTENDING VERTICALLY FROM THE TOP OF FOOTING TO THE TOP OF BEAM SEAT

NOTES:

1. STATIONS ARE GIVEN TO ℄ SURVEY AND CONST. I.R.77.
2. ALL DIMENSIONS ARE GIVEN TO THE REFERENCE LINE.
3. FOR SECTION A, VIEW B, AND SEMI-INTEGRAL ABUTMENT DIAPHRAGM GUIDE DETAILS, SEE SHEET 14/44.
4. FOR ABUTMENT DIAPHRAGM DETAILS, SEE SHEETS 24/44, 25/44, AND 28/44.
5. ALL DOWEL BARS SHALL BE EMBEDDED 1'-0" MINIMUM INTO EXISTING CONCRETE.

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REAR ABUTMENT PLAN AND ELEVATION

BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

10 / 44

1190
1288

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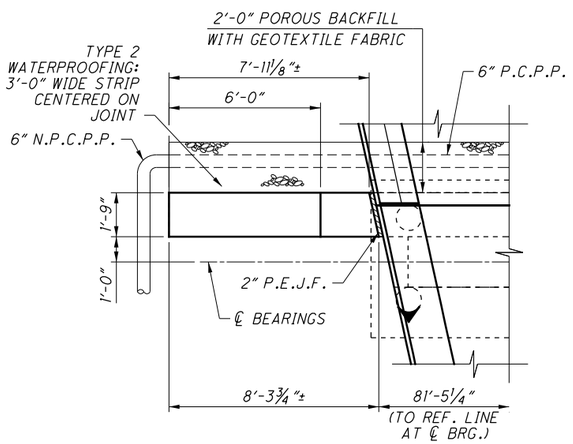
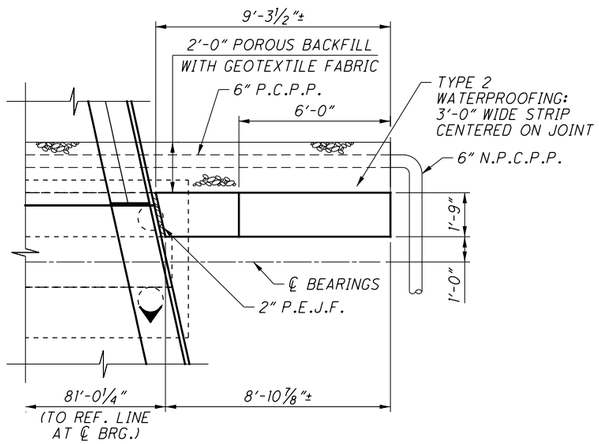


PLAN



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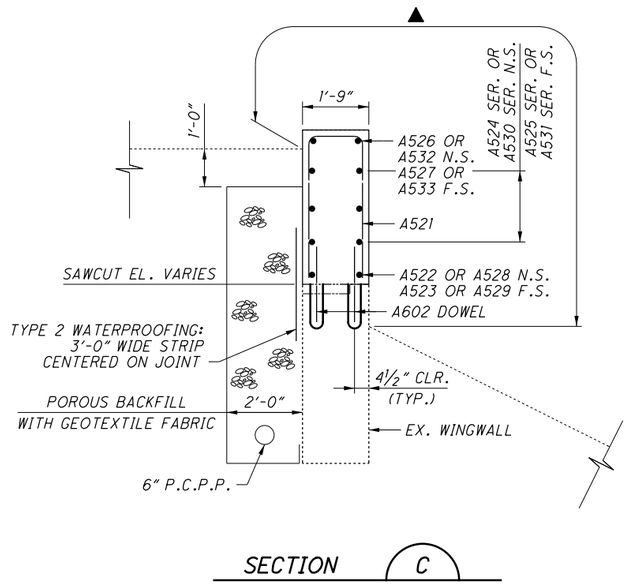
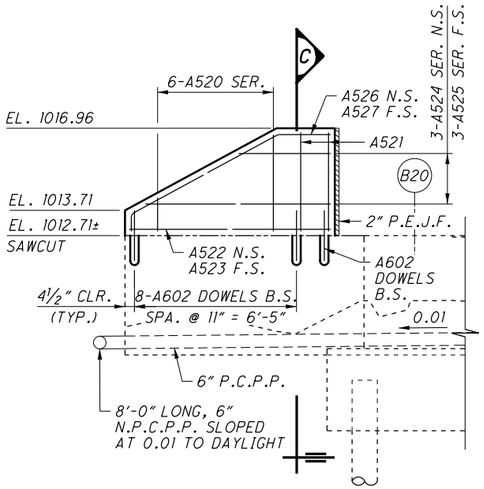
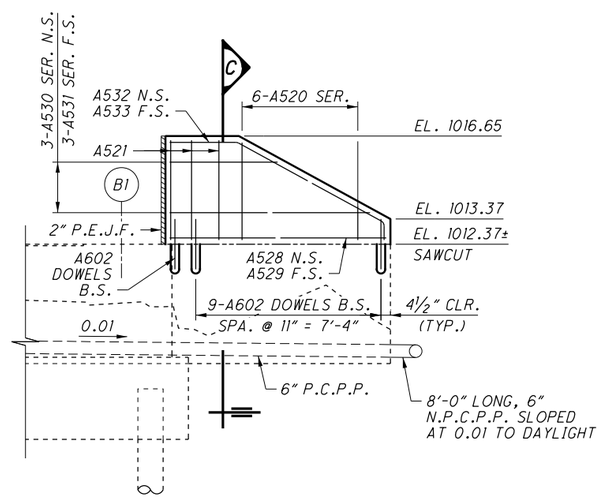


SECTION C



ELEVATION



ELEVATION

LEGEND:

▲ ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

NOTES:

1. ALL DOWEL BARS SHALL BE EMBEDDED 1'-0" MINIMUM INTO EXISTING CONCRETE.

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REAR ABUTMENT WINGWALL DETAILS
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

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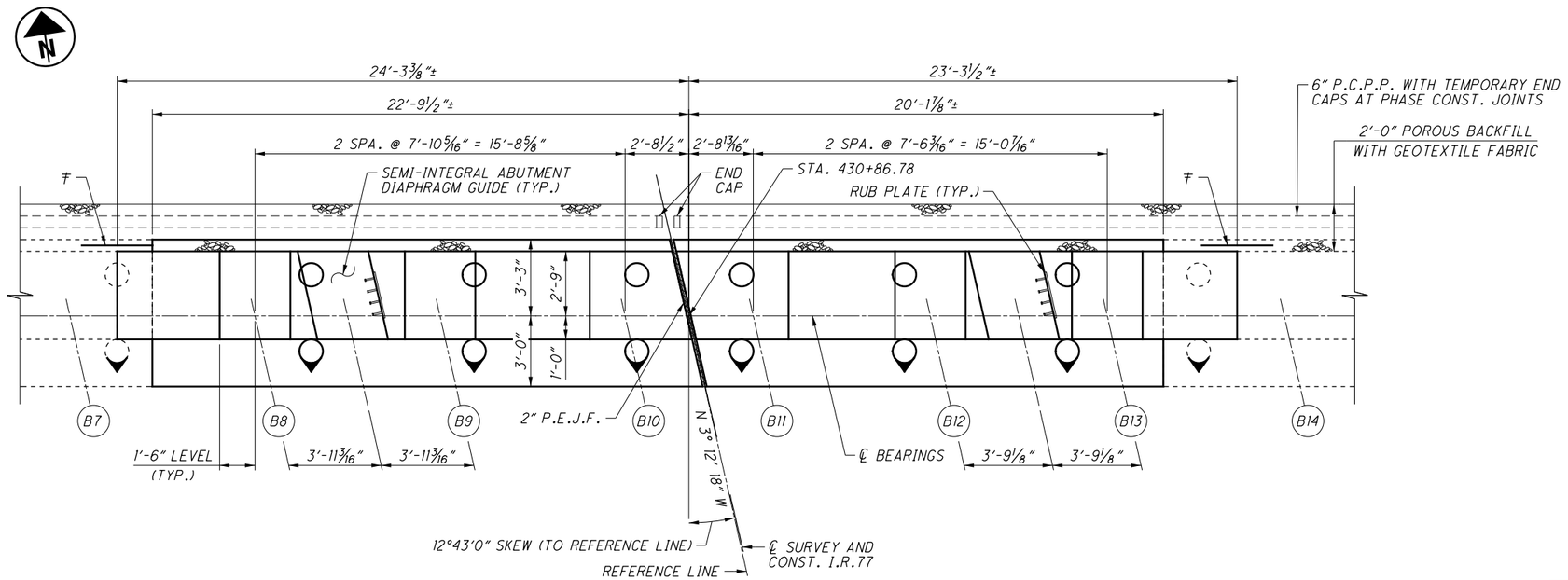
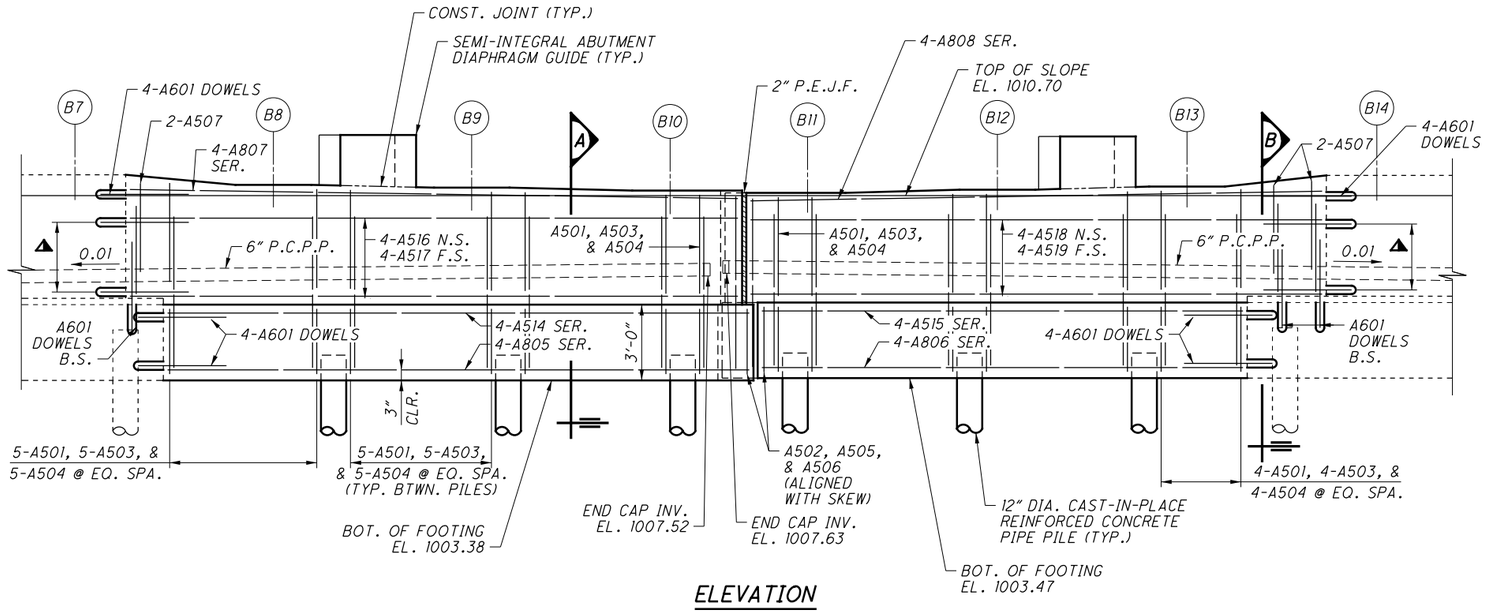


PLAN



ELEVATION

BEAM SEAT ELEVATIONS	
BEAM	FRWD. ABUTMENT
B8	1011.13
B9	1011.02
B10	1010.90
B11	1010.81
B12	1010.94
B13	1011.06

LEGEND:

- (B#) BEAM NUMBER
- PROPOSED VERTICAL 12" DIA. CAST-IN-PLACE REINFORCED CONCRETE PIPE PILE
- PROPOSED BATTERED 12" DIA. CAST-IN-PLACE REINFORCED CONCRETE PIPE PILE WITH DIRECTION OF BATTER (1:3)
- EXISTING VERTICAL 12" DIA. CAST-IN-PLACE REINFORCED CONCRETE PIPE PILE
- EXISTING BATTERED 12" DIA. CAST-IN-PLACE REINFORCED CONCRETE PIPE PILE WITH DIRECTION OF BATTER (1:4)
- ▲ 4-A601 DOWELS B.S.
- ∓ TYPE 2 WATERPROOFING: 3'-0" WIDE STRIP CENTERED ON JOINT AND EXTENDING VERTICALLY FROM THE TOP OF FOOTING TO THE TOP OF BEAM SEAT

NOTES:

1. STATIONS ARE GIVEN TO ℄ SURVEY AND CONST. I.R.77.
2. ALL DIMENSIONS ARE GIVEN TO THE REFERENCE LINE.
3. FOR SECTION A, VIEW B, AND SEMI-INTEGRAL ABUTMENT DIAPHRAGM GUIDE DETAILS, SEE SHEET 14/44.
4. FOR ABUTMENT DIAPHRAGM DETAILS, SEE SHEETS 26/44 THROUGH 28/44.
5. ALL DOWEL BARS SHALL BE EMBEDDED 1'-0" MINIMUM INTO EXISTING CONCRETE.

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FORWARD ABUTMENT PLAN AND ELEVATION
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

12 / 44

1192
1288

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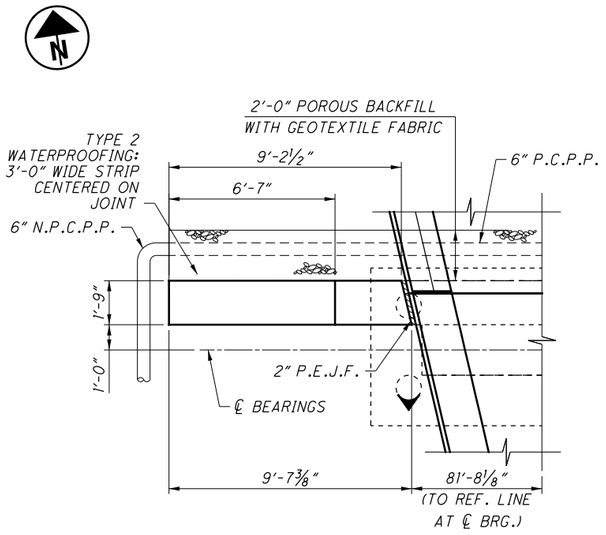
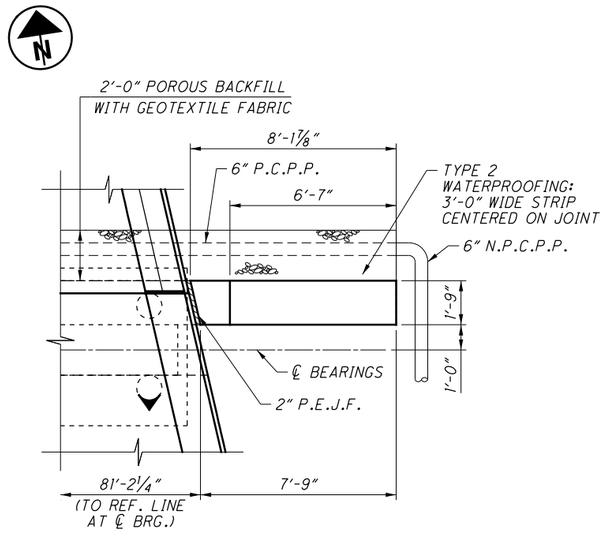


PLAN



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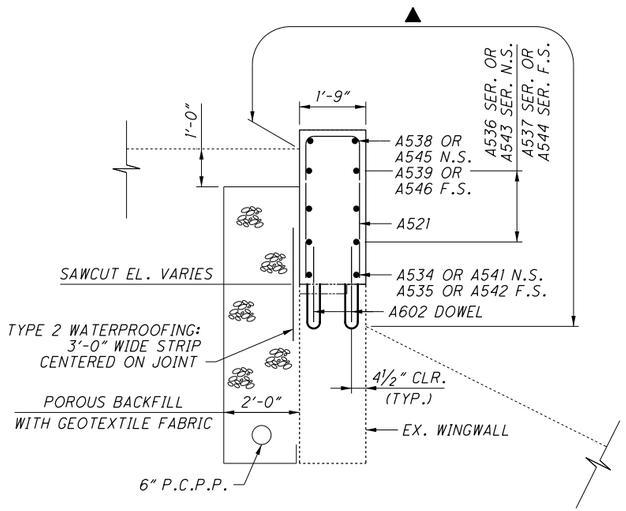
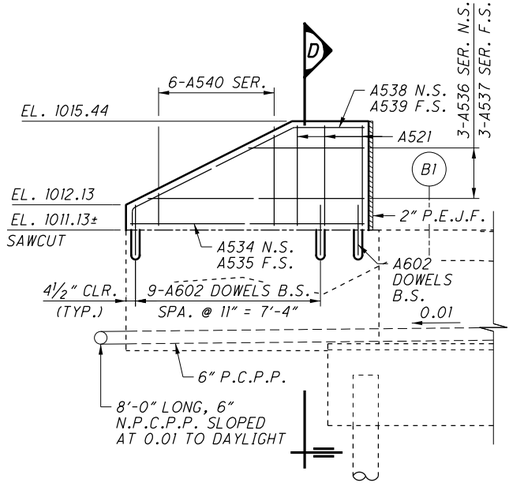
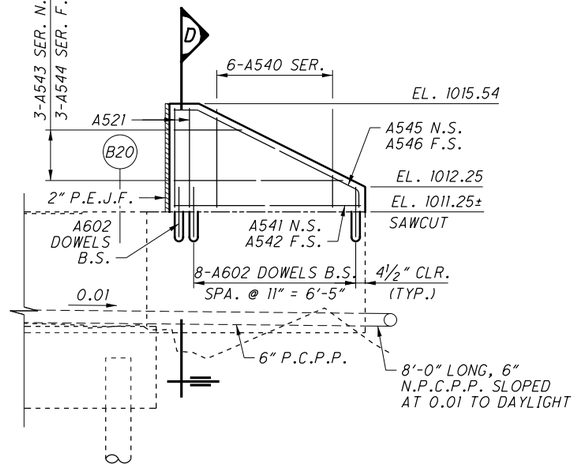


SECTION D



ELEVATION



ELEVATION

LEGEND:

▲ ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

NOTES:

1. ALL DOWEL BARS SHALL BE EMBEDDED 1'-0" MINIMUM INTO EXISTING CONCRETE.

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FORWARD ABUTMENT WINGWALL DETAILS
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

13 / 44

1193
1288

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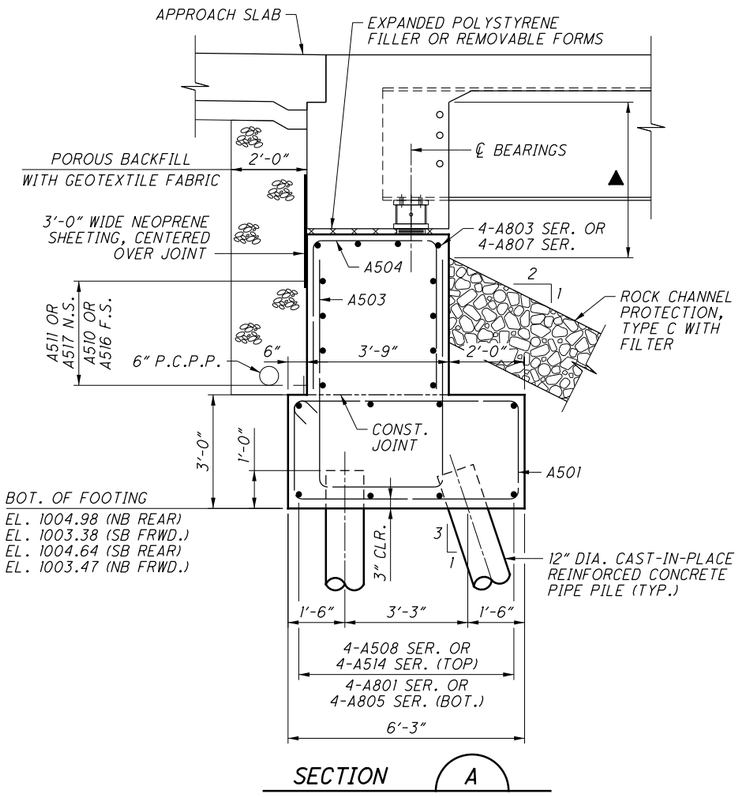
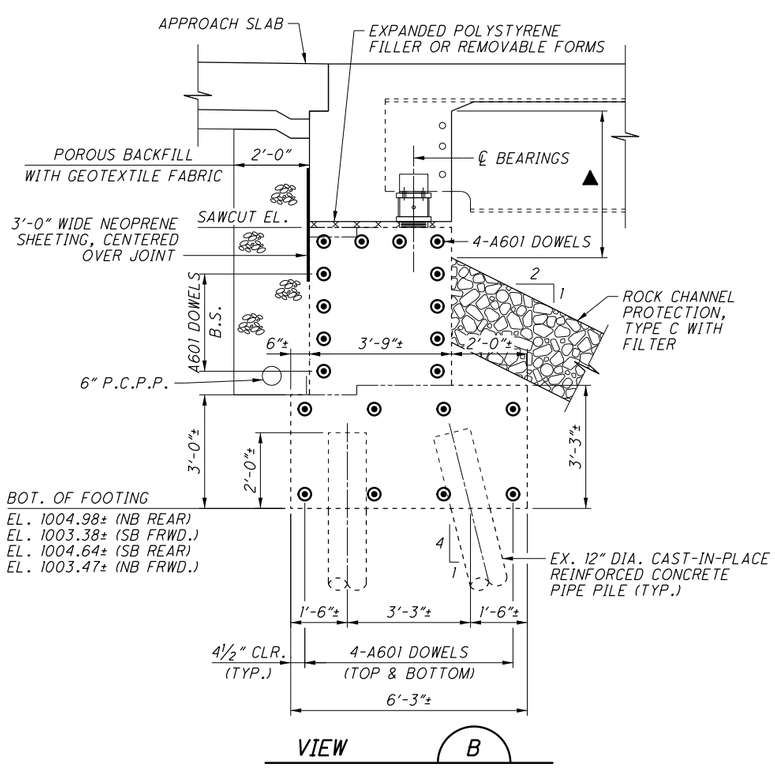
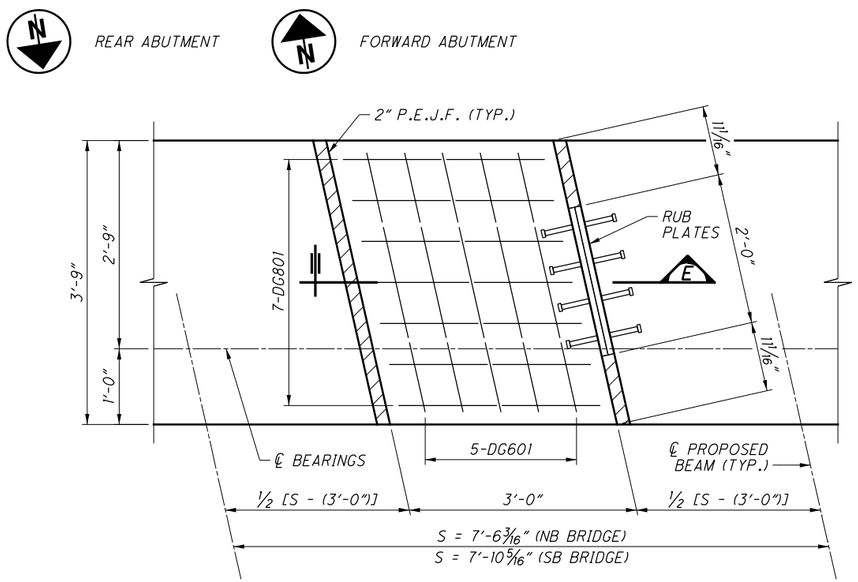
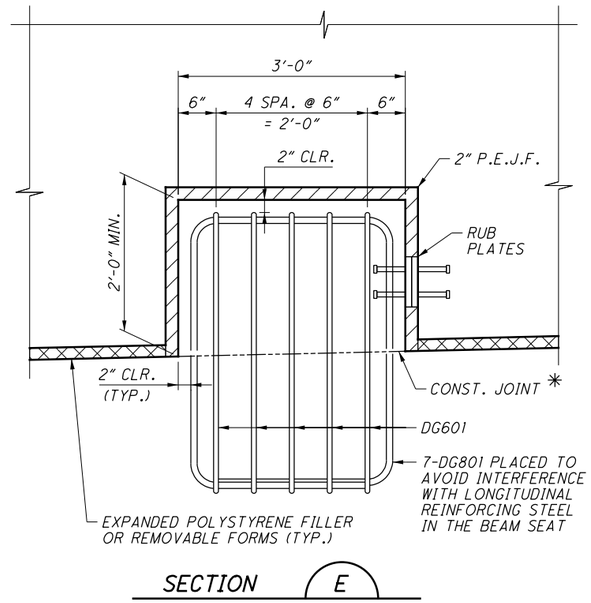






TYPICAL SEMI-INTEGRAL ABUTMENT DIAPHRAGM GUIDE PLAN



LEGEND:

▲ ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

✱ THE SURFACE OF THE BEAM SEAT IN THIS AREA SHALL BE FINISHED WITH A SERRATED TROWEL. THE SERRATIONS SHALL BE ¼" DEEP MINIMUM.

NOTES:

1. FOR THE LOCATION OF SECTION A AND VIEW B, SEE SHEET 10/44 AND 12/44.
2. FOR ADDITIONAL SEMI-INTEGRAL ABUTMENT DIAPHRAGM GUIDE DETAILS, SEE STANDARD DRAWING SCID-2-14.
3. ALL DOWEL BARS SHALL BE EMBEDDED 1'-0" MINIMUM INTO EXISTING CONCRETE.
4. THE EXISTING BEAMS SHALL BE RAISED TO ACCOMODATE THE PROPOSED BEARINGS.

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ABUTMENT DETAILS
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

14 / 44

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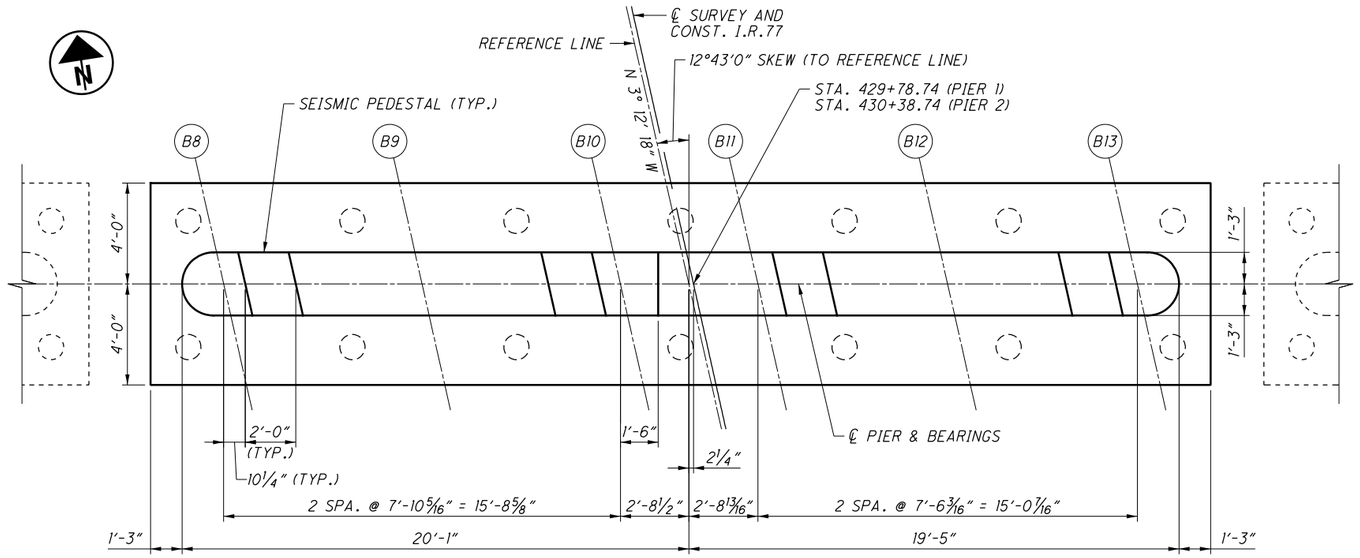
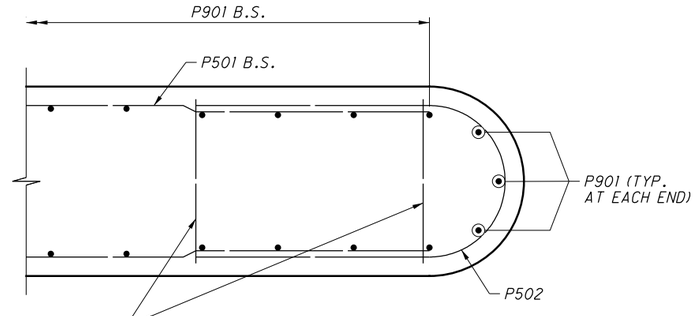
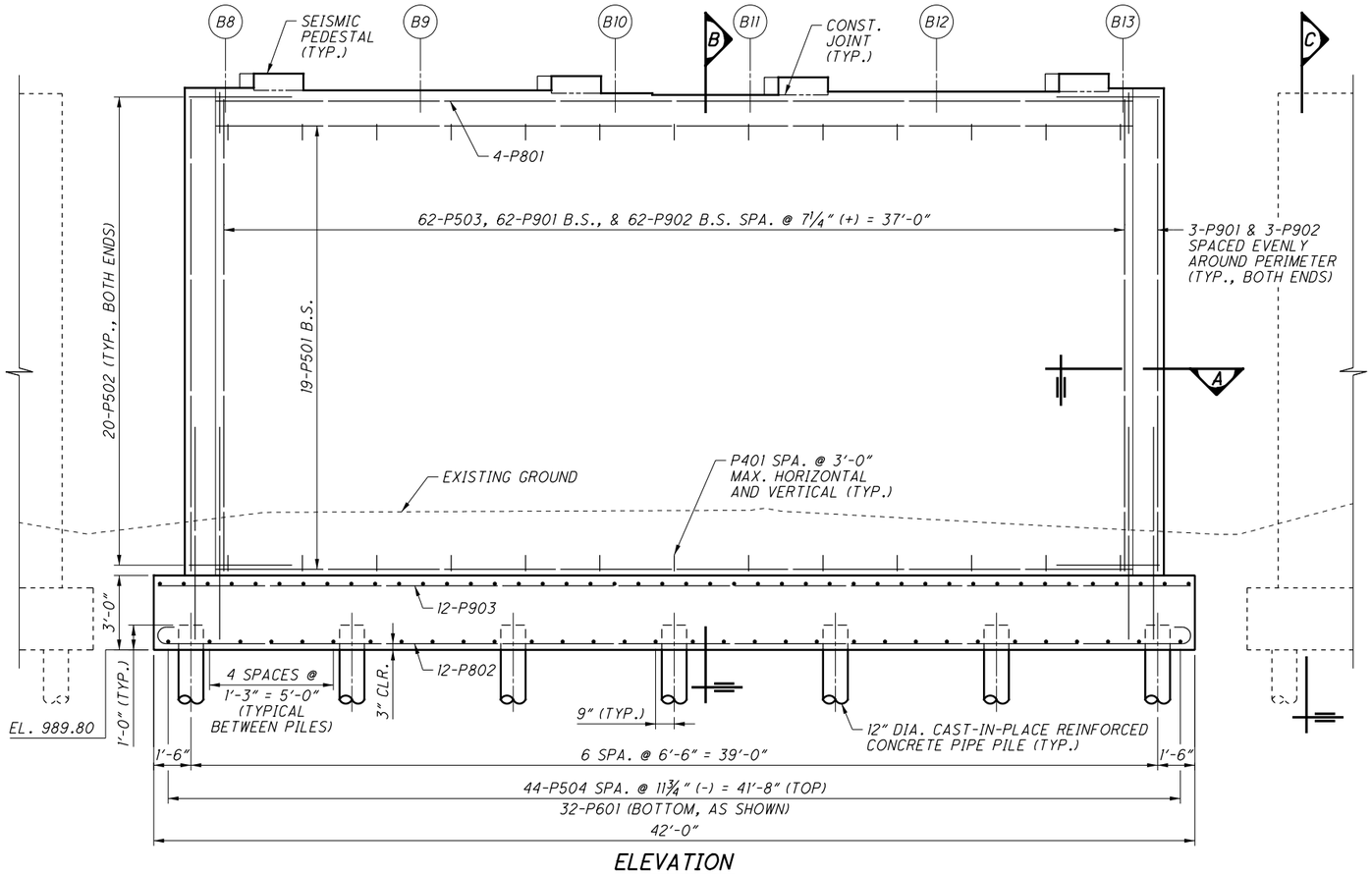


PLAN

PIER 1 SHOWN. PIER 2 SIMILAR.



SECTION A



ELEVATION

BEAM SEAT ELEVATIONS		
BEAM	PIER 1	PIER 2
B8	1012.47	1011.98
B9	1012.37	1011.87
B10	1012.26	1011.76
B11	1012.19	1011.68
B12	1012.32	1011.81
B13	1012.46	1011.94

LEGEND:

(B#) BEAM NUMBER

PROPOSED VERTICAL 12" DIA. CAST-IN-PLACE REINFORCED CONCRETE PIPE PILE

EXISTING VERTICAL 12" DIA. CAST-IN-PLACE REINFORCED CONCRETE PIPE PILE

NOTES:

1. STATIONS ARE GIVEN TO ℄ SURVEY AND CONST. I.R.77.
2. ALL DIMENSIONS ARE GIVEN TO THE REFERENCE LINE.
3. FOR SECTIONS B & C AND SEISMIC PEDESTAL DETAILS, SEE SHEET 16/44.
4. MINIMUM REINFORCING STEEL LAP LENGTHS ARE AS FOLLOWS UNLESS NOTED OTHERWISE:

NO. 5 HORIZONTAL	3'-1"
NO. 9 VERTICAL	5'-10"

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RHC		7702558/7702582	

PIER PLAN AND ELEVATION
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

15 / 44

1195
1288

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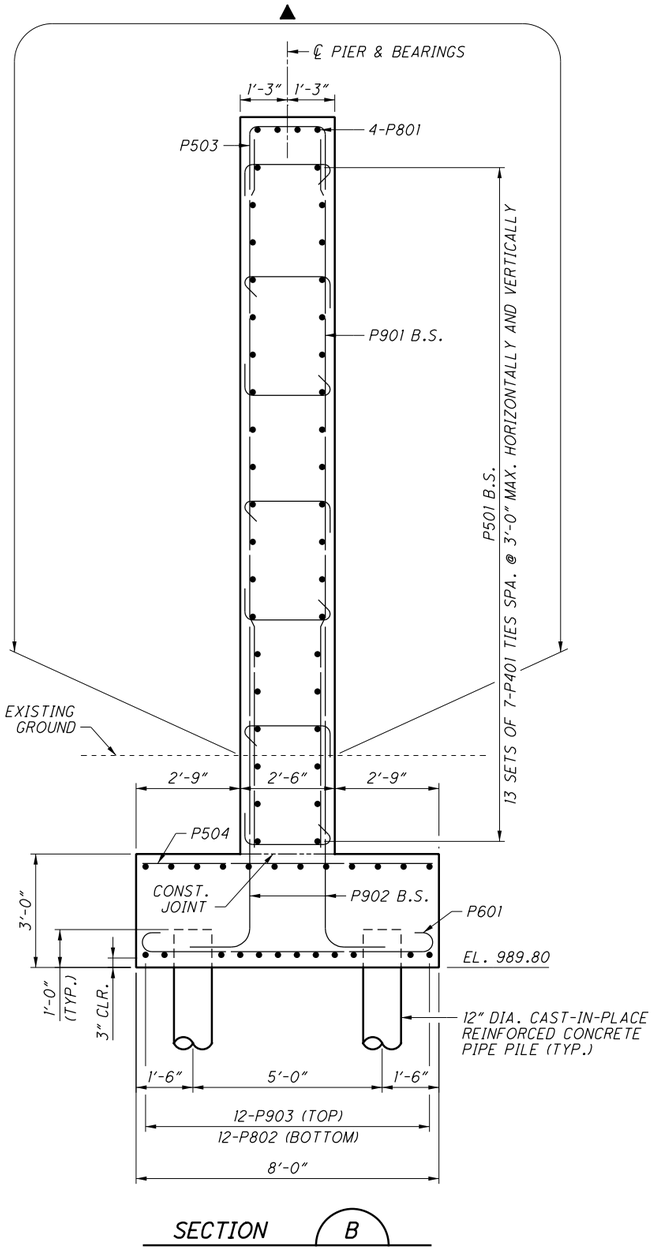

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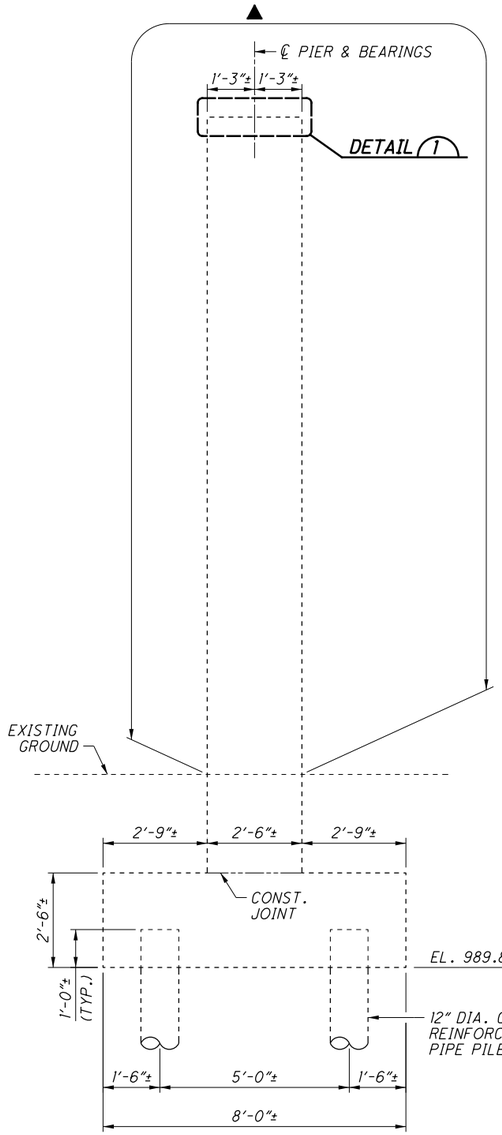
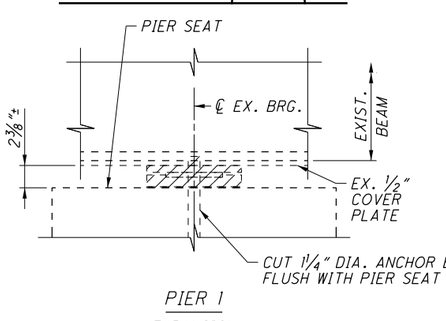
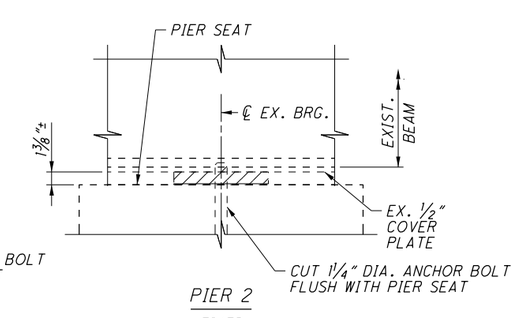


SECTION C

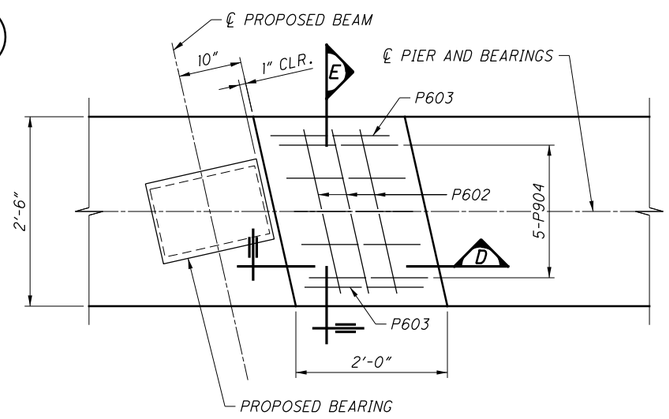


PIER 1
EXPANSION

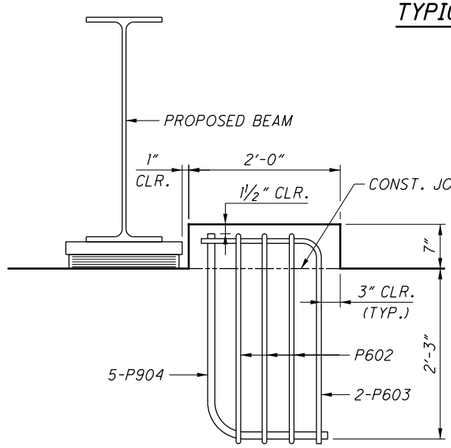


PIER 2
FIXED

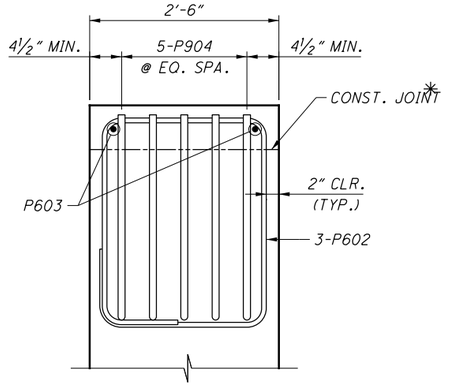
DETAIL 1



TYPICAL SEISMIC PEDESTAL PLAN



SECTION D



SECTION E

LEGEND:

▲ ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

* THE SURFACE OF THE BEAM SEAT IN THIS AREA SHALL BE FINISHED WITH A SERRATED TROWEL. THE SERRATIONS SHALL BE 1/4" DEEP MINIMUM.

NOTES:

1. FOR THE LOCATION OF SECTIONS B AND C, SEE SHEET 15/44.
2. THE EXISTING BEAMS SHALL BE RAISED TO ACCOMODATE THE PROPOSED BEARINGS.

DESIGN AGENCY
GPD GROUP
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PIER DETAILS
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

16/44

1196
1288

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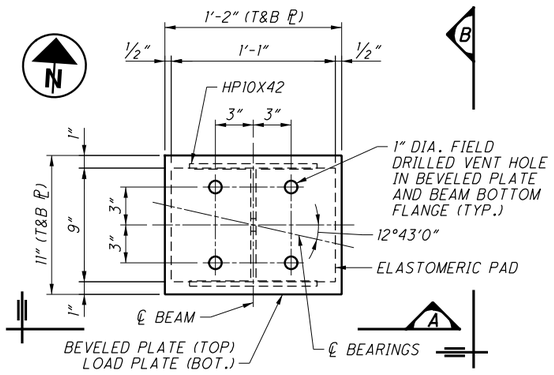
LOCATION		LOAD PLATE	BEVELED PLATE			ELASTOMERIC PAD						STEEL LAMINATES		TYPE	DEAD LOAD (K)	* LIVE LOAD (K)	TOTAL LOAD (K)
SUBSTRUCTURE UNIT	BEAM	DIMENSIONS	DIMENSIONS	G	H	DIMENSIONS	T	NO. OF INTERNAL LAYERS	NO. OF EXTERNAL LAYERS	ti	te	NO.	THICK-NESS				
REAR ABUT.	ALL BEAMS	11" x 1'-2" x 1.5"	11" x 1'-2"	1 5/8 "	1 1/2 "	9" x 1'-1"	1.85"	5	1	0.26"	0.18"	5	0.0747"	EXP.	79.6	59.3	138.9
PIER 1	1-5, 8-13, & 16-20	-	1'-1" x 1'-6"	2 1/8 "	2"	11" x 1'-5"	2.25"	5	1	0.33"	0.23"	5	0.0747"	EXP.	103.5	109.9	213.4
	6-7 & 14-15	1'-1" x 1'-6" x 2"	1'-1" x 1'-3 1/2"	2 1/8 "	2"	11" x 1'-5"	2.25"	5	1	0.33"	0.23"	5	0.0747"	EXP.	103.5	109.9	213.4
PIER 2	1-5 & 8-10	-	1'-1" x 1'-6"	2 1/16"	2"	11" x 1'-5"	2.25"	5	1	0.33"	0.23"	5	0.0747"	EXP.	103.5	109.9	213.4
	6 & 7	1'-1" x 1'-6" x 2"	1'-1" x 1'-3 1/2"	2 1/16"	2"	11" x 1'-5"	2.25"	5	1	0.33"	0.23"	5	0.0747"	EXP.	103.5	109.9	213.4
	11-13 & 16-20	-	1'-1" x 1'-6"	2 1/8 "	2"	11" x 1'-5"	2.25"	5	1	0.33"	0.23"	5	0.0747"	EXP.	103.5	109.9	213.4
	14 & 15	1'-1" x 1'-6" x 2"	1'-1" x 1'-3 1/2"	2 1/8 "	2"	11" x 1'-5"	2.25"	5	1	0.33"	0.23"	5	0.0747"	EXP.	103.5	109.9	213.4
FRWD. ABUT.	ALL BEAMS	11" x 1'-2" x 1.5"	11" x 1'-2"	1 9/16"	1 1/2 "	9" x 1'-1"	1.85"	5	1	0.26"	0.18"	5	0.0747"	EXP.	79.6	59.3	138.9

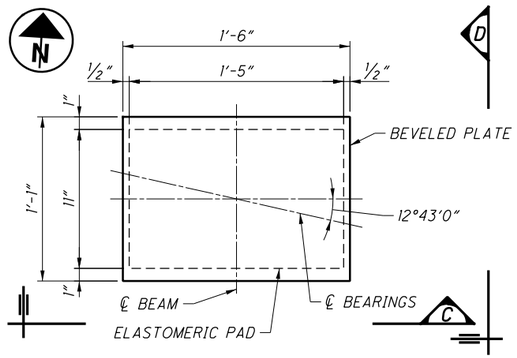
* WITHOUT IMPACT

HP SHAPE HEIGHT		
BEAM	REAR ABUT.	FRWD. ABUT.
1	5 5/8 "	6 13/16"
2	5 1/2 "	6 11/16"
3	5 7/8 "	6 7/16"
4	6 1/8 "	6 3/4 "
5	6 1/16"	6 1/2 "
6	7 13/16"	8 13/16"
7	7 15/16"	8 3/4 "
8-13	6"	6"
14	7 13/16"	9 11/16"
15	8 1/16"	9 9/16"
16	6"	7 1/16"
17	6 1/8 "	7 7/16"
18	6 1/16"	7 1/4 "
19	6 3/8 "	6 13/16"
20	5 1/2 "	6 1/2 "



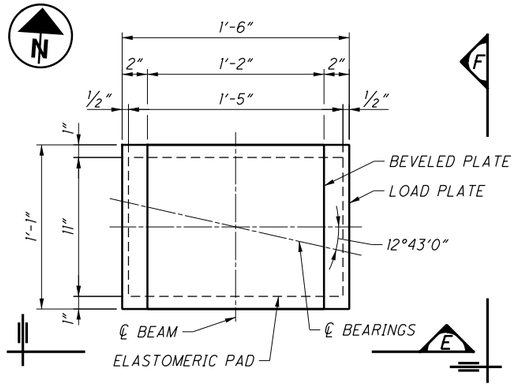
PLAN

ALL ABUTMENT BEARINGS



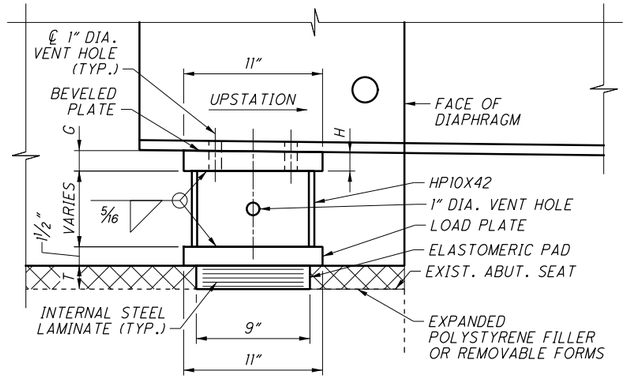
PLAN

PIER BEARINGS: PROPOSED BEAMS 8-13 AND EXISTING BEAMS 1-5 & 16-20



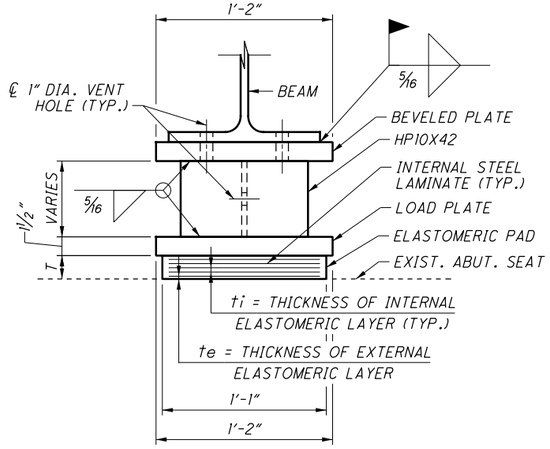
PLAN

PIER BEARINGS: EXISTING BEAMS 6-7 & 14-15



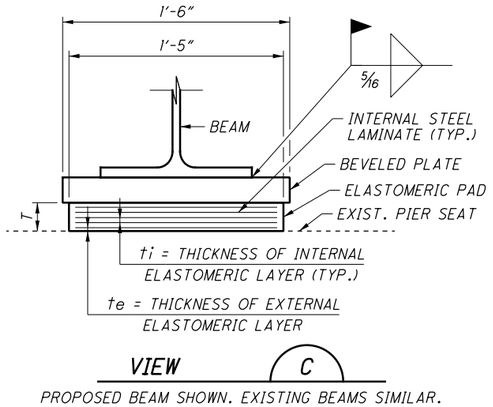
VIEW B

REAR ABUTMENT AND PROPOSED BEAM SHOWN. FORWARD ABUTMENT AND EXISTING BEAMS SIMILAR. DIMENSION H IS ALWAYS UPSTATION.



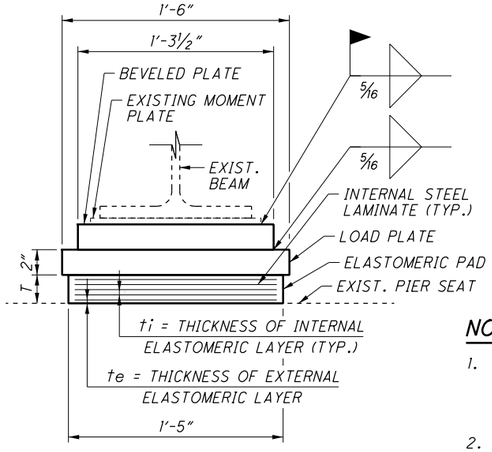
VIEW A

PROPOSED BEAM SHOWN. EXISTING BEAM SIMILAR.

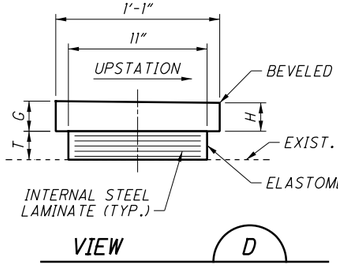


VIEW C

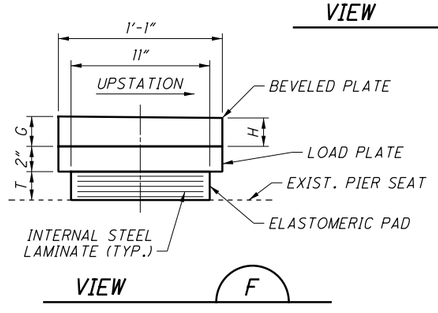
PROPOSED BEAM SHOWN. EXISTING BEAMS SIMILAR.



VIEW E



VIEW D



VIEW F

NOTES:

1. EXISTING BEARINGS SHALL BE REMOVED AND ANCHOR BARS SHALL BE CUT FLUSH WITH THE BEAM SEAT IN ACCORDANCE WITH CMS 202. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202 - PORTIONS OF STRUCTURES REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.
2. ELASTOMERIC BEARINGS: 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.
3. STEEL SHAPES AND PLATES SHALL BE ASTM A709, GRADE 50 STEEL (PAINTED). STEEL PLATES SHALL BE BONDED BY VULCANIZATION TO THE LAMINATED ELASTOMERIC BEARINGS DURING THE MOLDING PROCESS.
4. ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER THE BEARING IS INSTALLED.
5. BASIS OF PAYMENT: THE UNIT PRICE BID SHALL INCLUDE ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL THE LAMINATED ELASTOMERIC BEARINGS, STEEL LOAD & BEVELED PLATES, AND HP SHAPES. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516 - ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN.

DESIGN AGENCY
GPD GROUP
Glaus, Pyle, Schomer, Burns & DeHaven, Inc.
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CHECKED RHC | REVISED | STRUCTURE FILE NUMBER 7702558/7702582

BEARING DETAILS
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

17 / 44

1197
1288

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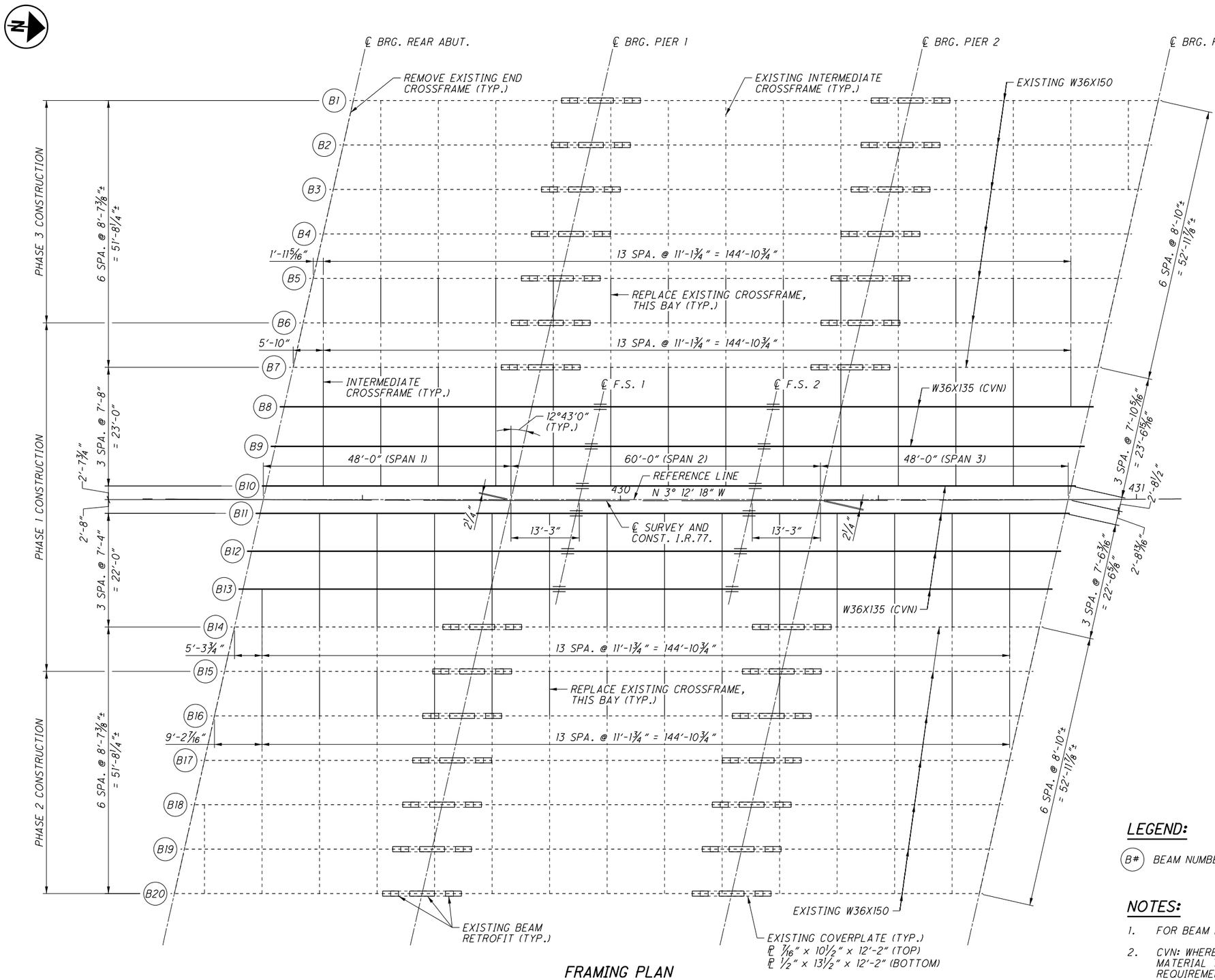

FRAMING PLAN

LEGEND:

(B#) BEAM NUMBER

NOTES:

1. FOR BEAM DETAILS, SEE SHEETS 19/44 THROUGH 22/44.
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. EXISTING CROSSFRAMES TO BE REPLACED SHALL BE REMOVED IN PHASE 1. THEY SHALL BE REPLACED IN PHASE 2 (NORTHBOUND) AND PHASE 3 (SOUTHBOUND).

DESIGN AGENCY
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320 South Main Street, Akron, OH 44311 330.572.2100

DESIGNED	DRAWN	REVIEWED	DATE
MOJ	MOJ	DGN	1-19-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RHC		7702558/7702582	

FRAMING PLAN
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

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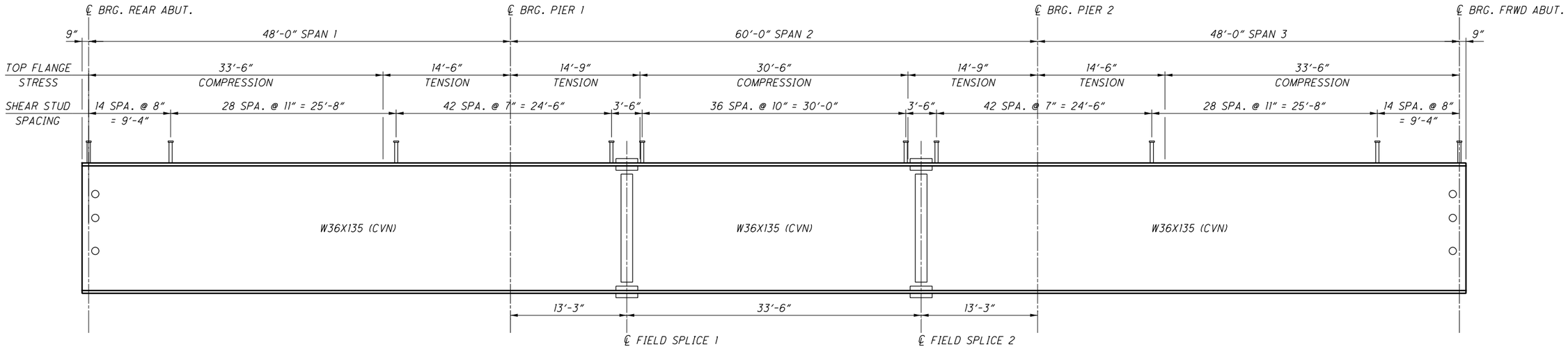
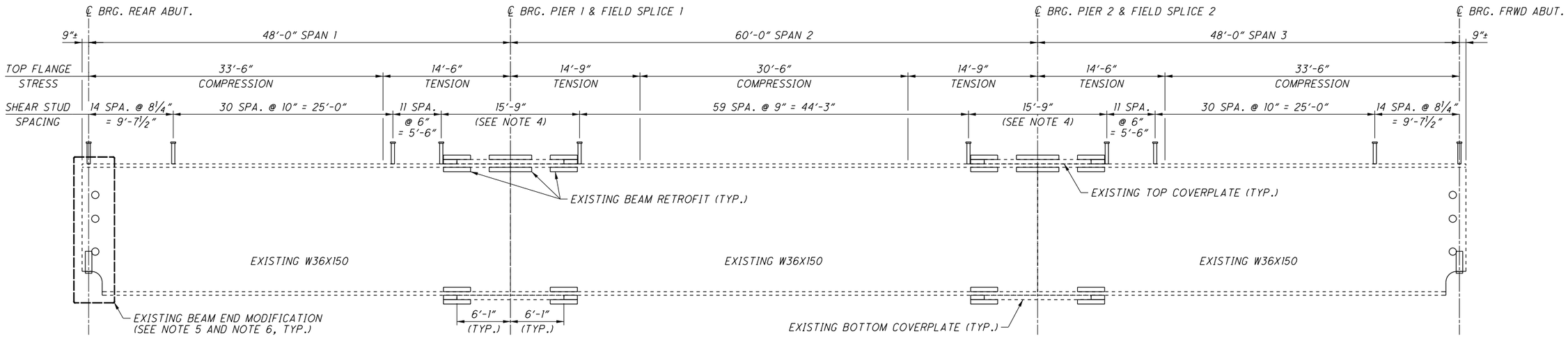
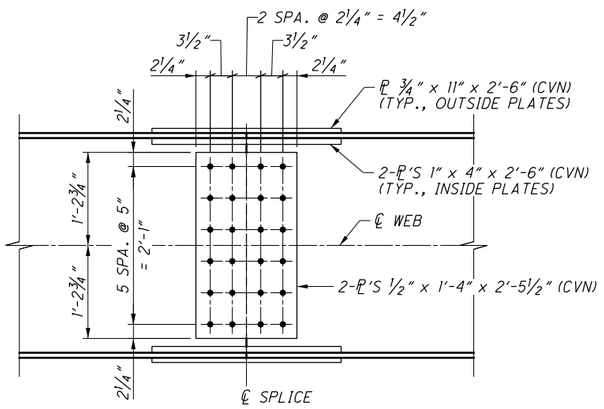


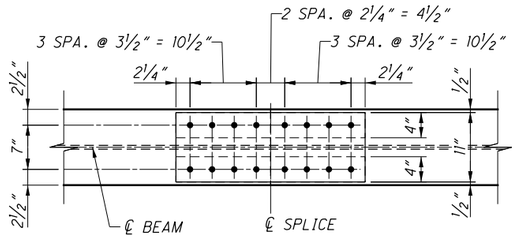
PROPOSED BEAM ELEVATION



EXISTING BEAM ELEVATION

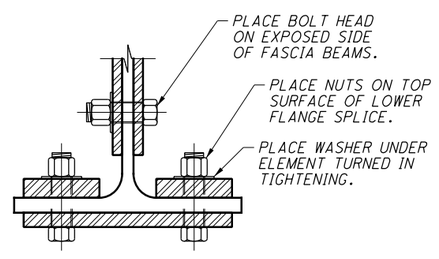


SPLICE ELEVATION



SPLICE PLAN

TOP AND BOTTOM FLANGE SPLICES



PARTIAL SECTION

AT ℄ OF BEAM SPLICE

NOTES:

1. 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.
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 5/16" THICK.
3. HIGH STRENGTH BOLTS SHALL BE 1" DIAMETER ASTM F3125, GRADE A325, TYPE 1 WITH STANDARD HOLES UNLESS OTHERWISE NOTED.
4. FOR EXISTING BEAM RETROFIT DETAILS AND SHEAR STUD LAYOUT & SPACING OVER THEM, SEE SHEET 21/44.
5. FOR EXISTING BEAM END MODIFICATION DETAILS, SEE SHEET 20/44.
6. AFTER ALL EXISTING BEAM END MODIFICATIONS HAVE BEEN COMPLETED AND BEFORE ENCASEMENT IN SEMI-INTEGRAL END DIAPHRAGMS, AREAS AT THE ENDS OF EXISTING BEAMS THAT WERE DISTURBED BY THE PROPOSED WORK SHALL BE FIELD PAINTED WITH A THREE-COAT PAINT SYSTEM CONSISTING OF AN ORGANIC ZINC PRIME COAT, AN EPOXY INTERMEDIATE COAT, AND A URETHANE FINISH COAT.

DESIGN AGENCY
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BEAM DETAILS
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

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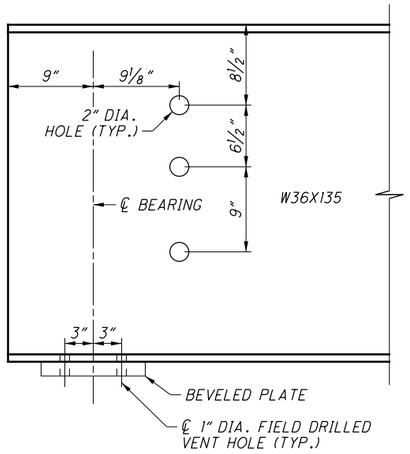
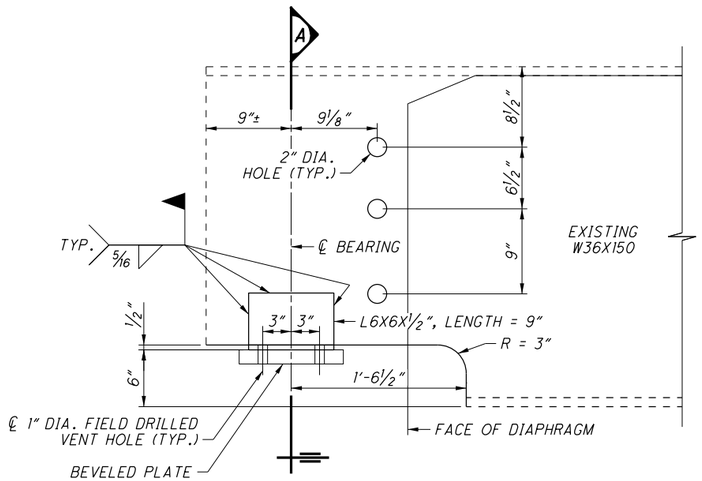
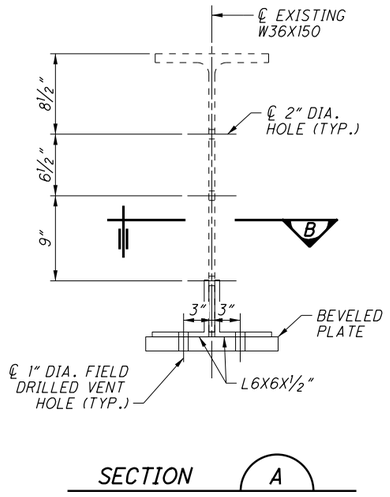


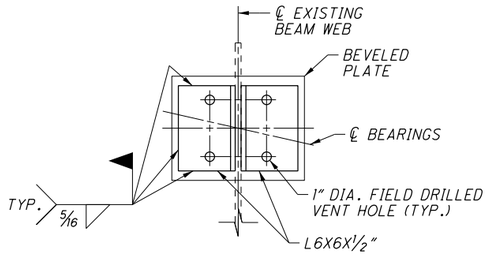
PROPOSED BEAM END DEATILS



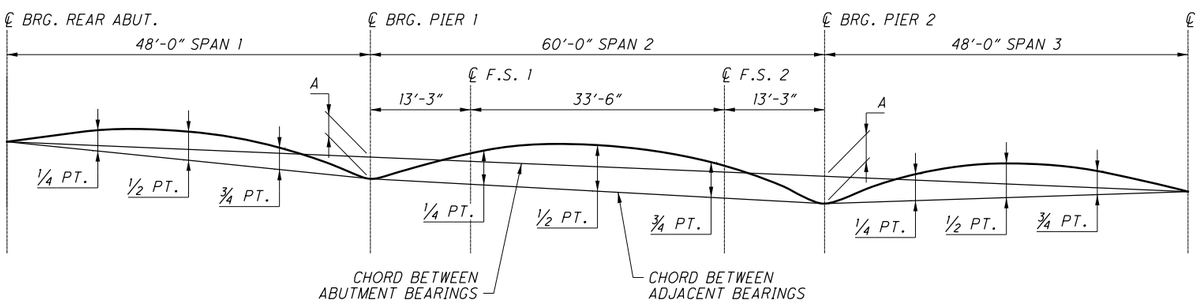
EXISTING BEAM END MODIFICATIONS



SECTION A

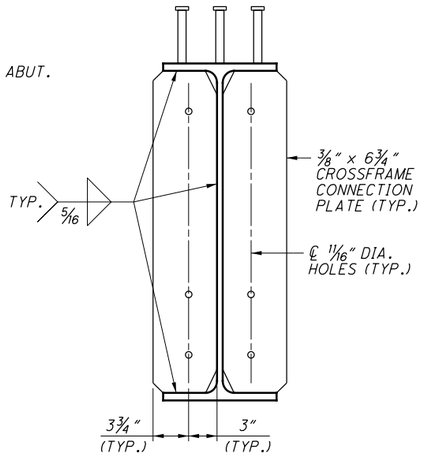


SECTION B

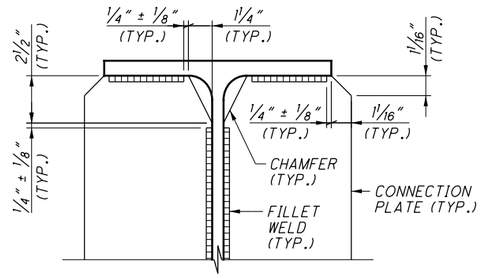


CAMBER DIAGRAM

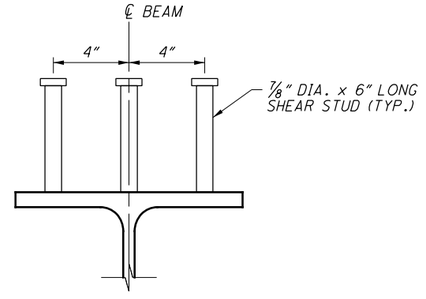
BLOCKING (DIM. "A")		
LOCATION	PIER 1	PIER 2
BEAM 8	1 1/16	1 1/16
BEAM 9	1 1/16	1 1/16
BEAM 10	1 1/16	1 1/16
BEAM 11	1 1/8	1 1/8
BEAM 12	1 1/8	1 1/8
BEAM 13	1 1/8	1 1/8



CROSSFRAME CONNECTION PLATE DETAILS



CONNECTION PLATE WELD DETAILS



SHEAR STUD DETAIL

PROPOSED BEAM SHOWN. EXISTING BEAM SIMILAR UNLESS NOTED OTHERWISE.

BEAM NO.	CAMBER DESCRIPTION	REAR ABUT.	SPAN 1			PIER 1	SPAN 2					PIER 2	SPAN 3			FRWD. ABUT.
			1/4 PT.	1/2 PT.	3/4 PT.		F.S. 1	1/4 PT.	1/2 PT.	3/4 PT.	F.S. 2		1/4 PT.	1/2 PT.	3/4 PT.	
ALL PROPOSED BEAMS	DEFLECTION DUE TO WEIGHT OF STEEL	0	0	0	0	0	0	0	1/16	0	0	0	0	0	0	0
	DEFLECTION DUE TO REMAINING DEAD LOAD	0	1/8	3/16	1/16	0	1/8	1/8	1/4	1/8	1/8	0	1/16	3/16	1/8	0
	ADJUSTMENT DUE TO VERTICAL GEOMETRY	0	- 1/16	- 1/8	- 1/16	0	- 1/8	- 1/8	- 3/16	- 1/8	- 1/8	0	- 1/16	- 1/8	- 1/16	0
	ADJUSTMENT DUE TO HORIZONTAL GEOMETRY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	REQUIRED SHOP CAMBER	0	1/16	1/16	0	0	0	0	1/8	0	0	0	0	1/16	1/16	0

NOTES:

1. FOR ADDITIONAL EXISTING BEAM END MODIFICATION NOTES, SEE SHEET 3/44.
2. THE BEVELED PLATE IS PART OF THE BEARING ASSEMBLY. NOT ALL BEARING DETAILS SHOWN. FOR ADDITIONAL BEARING DETAILS, SEE SHEET 17/44.
3. FOR ADDITIONAL CROSSFRAME DETAILS, SEE STD. DWG. GSD-1-19 AND SHEET 21/44.

DESIGN AGENCY
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BEAM DETAILS
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

20/44

1200
1288

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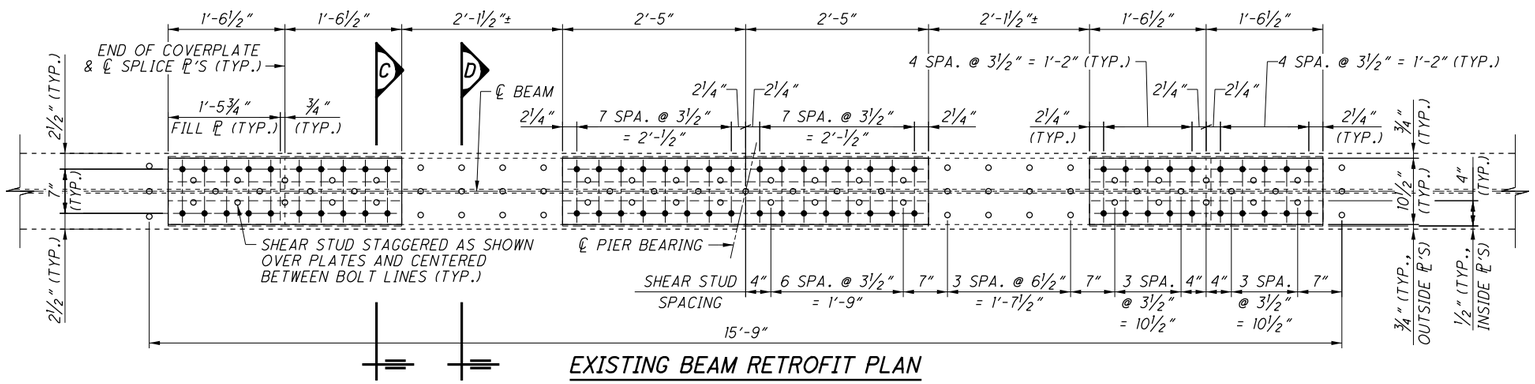
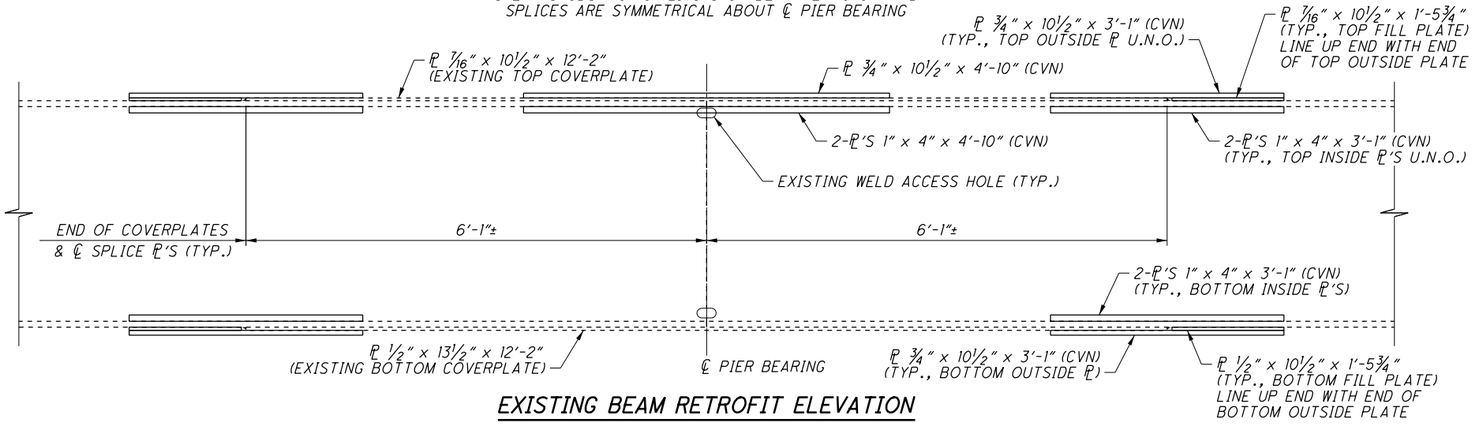
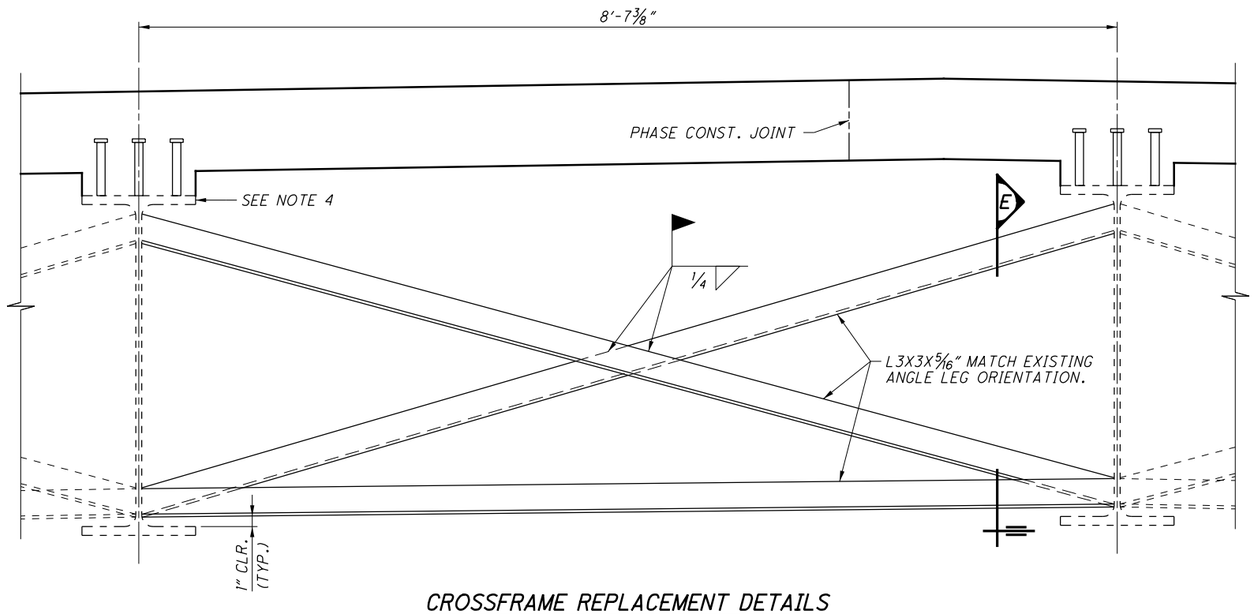


EXISTING BEAM RETROFIT PLAN

TOP PLATES SHOWN. BOTTOM PLATES SIMILAR.
SHEAR STUDS (WITHIN LIMITS OF BEAM RETROFIT) AND SPLICES ARE SYMMETRICAL ABOUT ℄ PIER BEARING

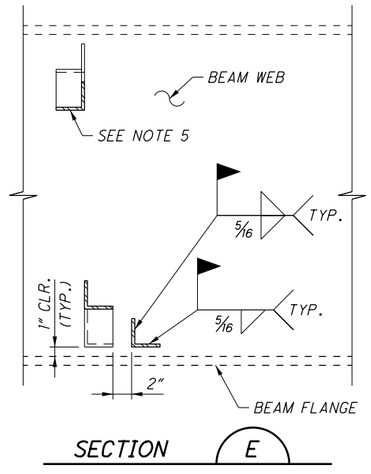


EXISTING BEAM RETROFIT ELEVATION

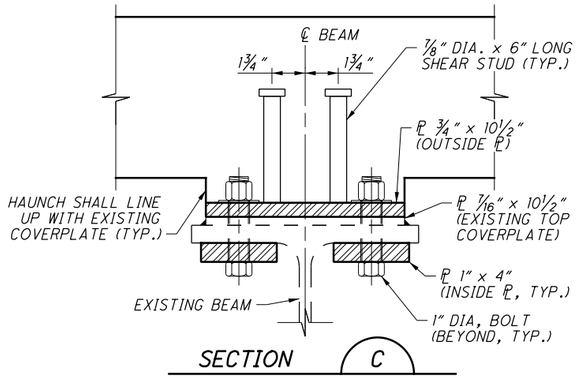


CROSSFRAME REPLACEMENT DETAILS

SOUTHBOUND SHOWN. NORTHBOUND SIMILAR.

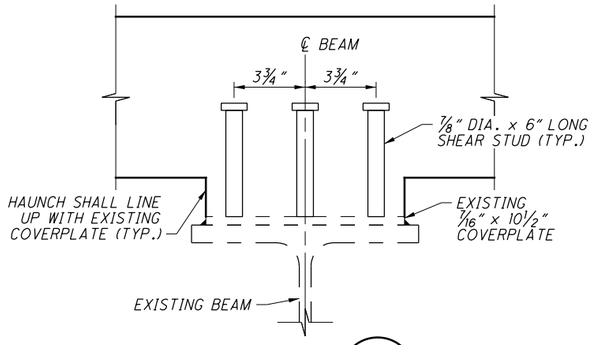


SECTION E



SECTION C

TWO SHEAR STUD CONFIGURATION SHOWN.
ONE SHEAR STUD CONFIGURATION SIMILAR (CENTERED ON BEAM).



SECTION D

SHEAR STUDS SHALL BE SHIFTED TOWARDS THE ℄ BEAM AS SHOWN WHEN WELDED TO THE TOP OF EXISTING COVERPLATE.

NOTES:

1. 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.
2. HIGH STRENGTH BOLTS SHALL BE 1" DIAMETER ASTM F3125, GRADE A325, TYPE 1 WITH STANDARD HOLES UNLESS OTHERWISE NOTED.
3. ONE BOLT PER SIDE OF EXISTING BEAM RETROFIT PLATES MAY BE OMITTED WHERE AN EXISTING CROSSFRAME ANGLE PREVENTS INSTALLATION.
4. EDGES OF EXISTING BEAM TOP FLANGES SHALL BE FIELD PAINTED WITH A THREE-COAT PAINT SYSTEM CONSISTING OF AN ORGANIC ZINC PRIME COAT, AN EPOXY INTERMEDIATE COAT, AND A URETHANE FINISH COAT.
5. PORTIONS OF THE EXISTING BEAM PROTECTIVE COATING SYSTEM THAT BECOME DAMAGED FROM CONNECTION OF NEW OR REPLACEMENT CROSSFRAME MEMBERS SHALL BE FIELD PAINTED WITH A THREE-COAT PAINT SYSTEM CONSISTING OF AN ORGANIC ZINC PRIME COAT, AN EPOXY INTERMEDIATE COAT, AND A URETHANE FINISH COAT.

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CHECKED RHC | REVISED | STRUCTURE FILE NUMBER 7702558/7702582

BEAM DETAILS
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

21 / 44

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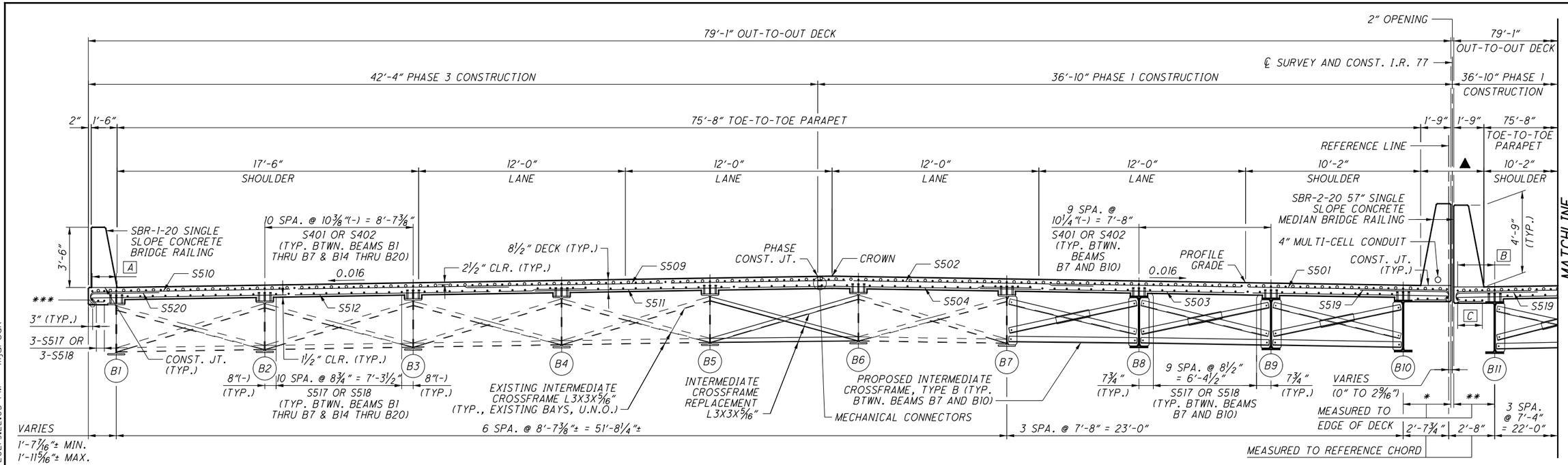

TRANSVERSE SECTION

LEGEND:

- ▲ ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) (TYP.)
- ✳ VARIES: 2'-6 1/16" MIN. TO 2'-9 5/16" MAX.
- ✳✳ VARIES: 2'-4 7/16" MIN. TO 2'-7 1/16" MAX.
- ✳✳✳ 1" DIA. HALF-ROUND DRIP GROOVE (TYP.)
- [A] 2 EQ. SPA. OF S401 OR S402 (TOP EDGE)
- [B] 3 EQ. SPA. OF S401 OR S402 (TYP. TOP EDGE)
- [C] 3 EQ. SPA. OF S517 OR S518 (TYP. BOT. EDGE)
- [D] 4 EQ. SPA. OF S401 OR S402 (TOP EDGE)
- [E] 3 EQ. SPA. OF S517 OR S518 (BOT. EDGE)

NOTES:

1. FOR RAILING DETAILS, SEE SHEET [36/44].
2. FOR ADDITIONAL CROSSFRAME DETAILS, SEE STD. DWG. GSD-1-19, SHEET [20/44], AND SHEET [21/44].
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 BEAM HAUNCH. THE ESTIMATE ASSUMES AN AVERAGE HAUNCH THICKNESS OF 2⅝" OVER THE EXISTING BEAMS, A CONSTANT HAUNCH THICKNESS OF 2 ⅛" OVER THE PROPOSED BEAMS, AND A HAUNCH WIDTH EQUAL TO THE TOP FLANGE WIDTH. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE.

THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE BEAM, FROM THE SURFACE OF THE DECK TO THE TOP OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.23.

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SUM-77/277/224
VARIOUS
PID No. 106002

22 / 44

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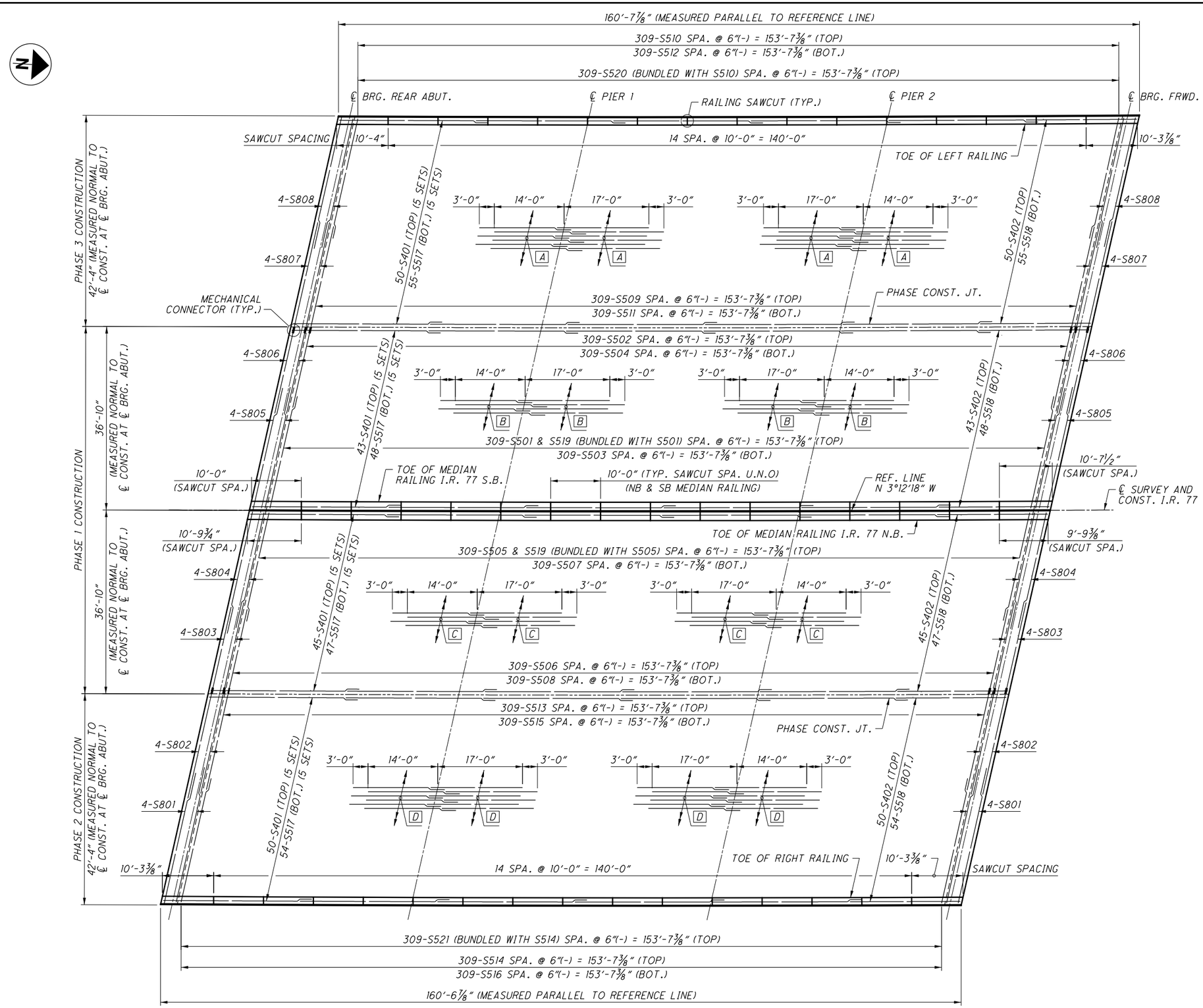

DECK PLAN

DIAPHRAGM REINFORCING NOT SHOWN FOR CLARITY.

LEGEND:

- A — 49-S601 (BTWN. S401 OVER PIER)
- B — 42-S601 (BTWN. S401 OVER PIER)
- C — 44-S601 (BTWN. S401 OVER PIER)
- D — 49-S601 (BTWN. S401 OVER PIER)

NOTES:

1. MINIMUM REFORCING STEEL LAP LENGTHS ARE AS FOLLOWS:

TRANSVERSE BARS	
TOP NO. 5 BARS	2'-5"
BOT. NO. 5 BARS	3'-0"
TOP NO. 8 BARS	5'-4"

LONGITUDINAL BARS	
TOP NO. 4 BARS	1'-11"
BOT. NO. 5 BARS	2'-5"
TOP NO. 6 BARS	2'-10"

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SLAB PLAN
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

23/44

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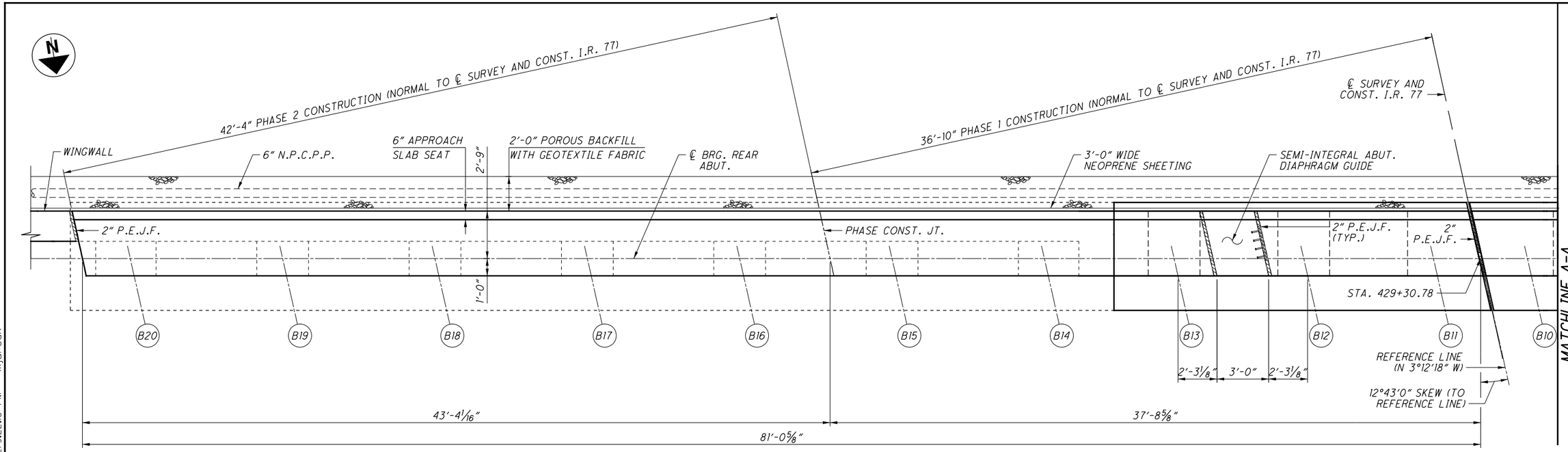
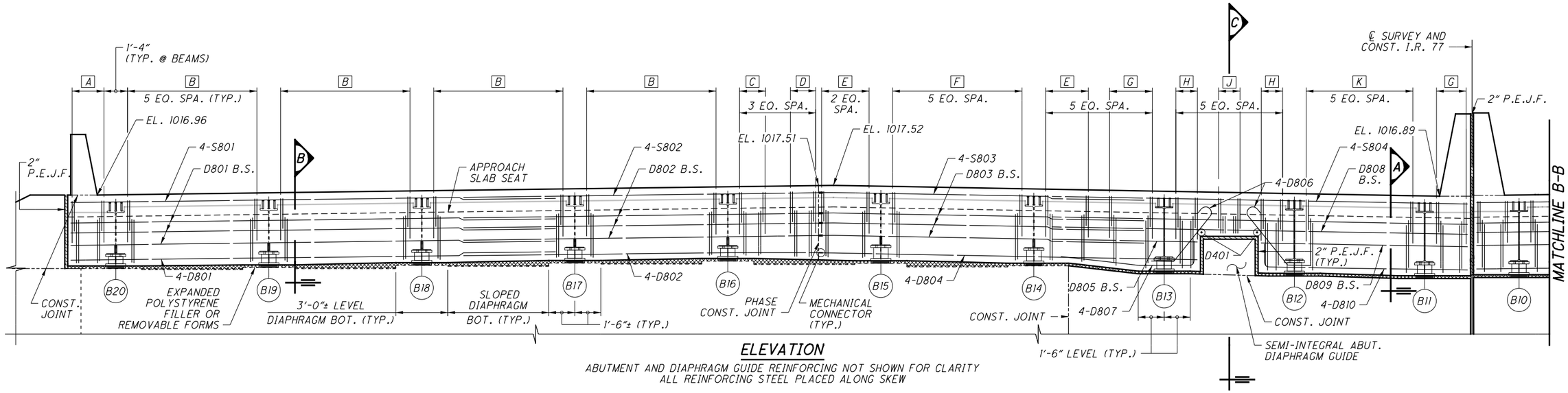


PLAN

PARTIAL SOUTHBOUND PLAN SHOWN FOR REFERENCE PURPOSES



ELEVATION

ABUTMENT AND DIAPHRAGM GUIDE REINFORCING NOT SHOWN FOR CLARITY
ALL REINFORCING STEEL PLACED ALONG SKEW

LEGEND:

(B#) BEAM NUMBER

NOTES:

1. STATIONS AND DIMENSIONS ARE GIVEN TO ℄ SURVEY AND CONST. I.R. 77.
2. FOR REINFORCING CALLOUT LEGEND AND SOUTHBOUND ABUTMENT DIAPHRAGM DETAILS, SEE SHEET 25/44.
3. FOR SECTIONS A THROUGH C, SEE SHEET 28/44.
4. ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE.
5. FOR SEMI-INTEGRAL ABUTMENT DIAPHRAGM GUIDE DETAILS, SEE SHEET 14/44.
6. FOR ADDITIONAL DETAILS AND NOTES, SEE STD. DWG. SICD-1-96.
7. MINIMUM REINFORCING STEEL LAP LENGTHS FOR #8 BARS SHALL BE 5'-4".
8. ELEVATIONS ARE GIVEN AT THE CENTERLINE OF ABUTMENT BEARING.

MATCHLINE A-A

MATCHLINE B-B

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REAR ABUTMENT DIAPHRAGM DETAILS - NORTHBOUND
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

24/44

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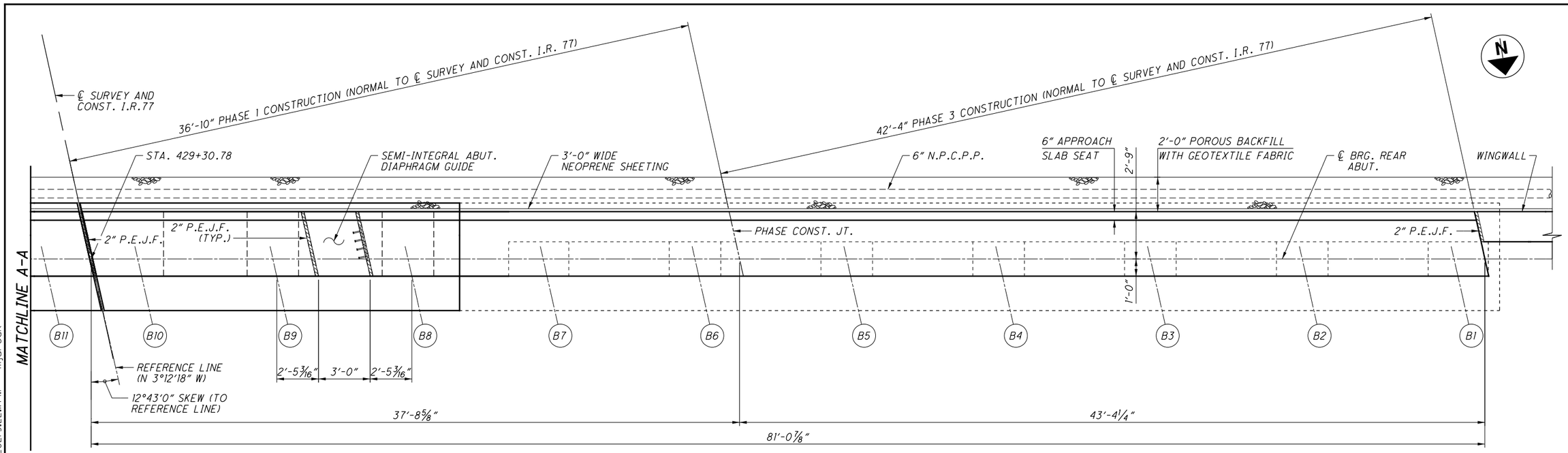
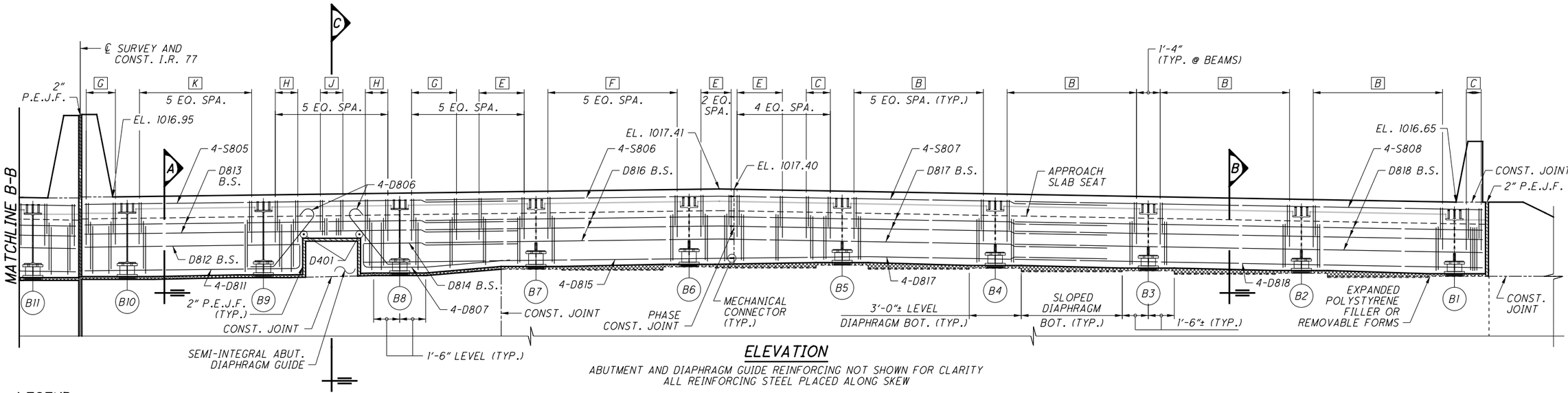


PLAN

PARTIAL NORTHBOUND PLAN SHOWN FOR REFERENCE PURPOSES



ELEVATION

ABUTMENT AND DIAPHRAGM GUIDE REINFORCING NOT SHOWN FOR CLARITY
ALL REINFORCING STEEL PLACED ALONG SKEW

LEGEND:

- (B#) BEAM NUMBER
- [A] 3 SETS OF D819, D501 & 2-D502
- [B] 6 SETS OF D819, D501 & 2-D502
- [C] 2 SETS OF D819, D501 & 2-D502
- [D] 2 SETS OF D819, D501 & 2-D503
- [E] 3 SETS OF D819, D501 & 2-D503
- [F] 6 SETS OF D819, D501 & 2-D503
- [G] 3 SETS OF D819, D501 & 2-D504
- [H] 2 SETS OF D819, D501 & 2-D504
- [J] 2 SETS OF D819, D505 & 2-D506
- [K] 6 SETS OF D819, D501 & 2-D504

NOTES:

1. STATIONS AND DIMENSIONS ARE GIVEN TO ℄ SURVEY AND CONST. I.R. 77.
2. FOR NORTHBOUND ABUTMENT DIAPHRAGM DETAILS, SEE SHEET 24/44.
3. FOR SECTIONS A THROUGH C, SEE SHEET 28/44.
4. ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE.
5. FOR SEMI-INTEGRAL ABUTMENT DIAPHRAGM GUIDE DETAILS, SEE SHEET 14/44.
6. FOR ADDITIONAL DETAILS AND NOTES, SEE STD. DWG. SICD-1-96.
7. MINIMUM REINFORCING STEEL LAP LENGTHS FOR #8 BARS SHALL BE 5'-4".
8. ELEVATIONS ARE GIVEN AT THE CENTERLINE OF ABUTMENT BEARING.

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REAR ABUTMENT DIAPHRAGM DETAILS - SOUTHBOUND
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

25/44

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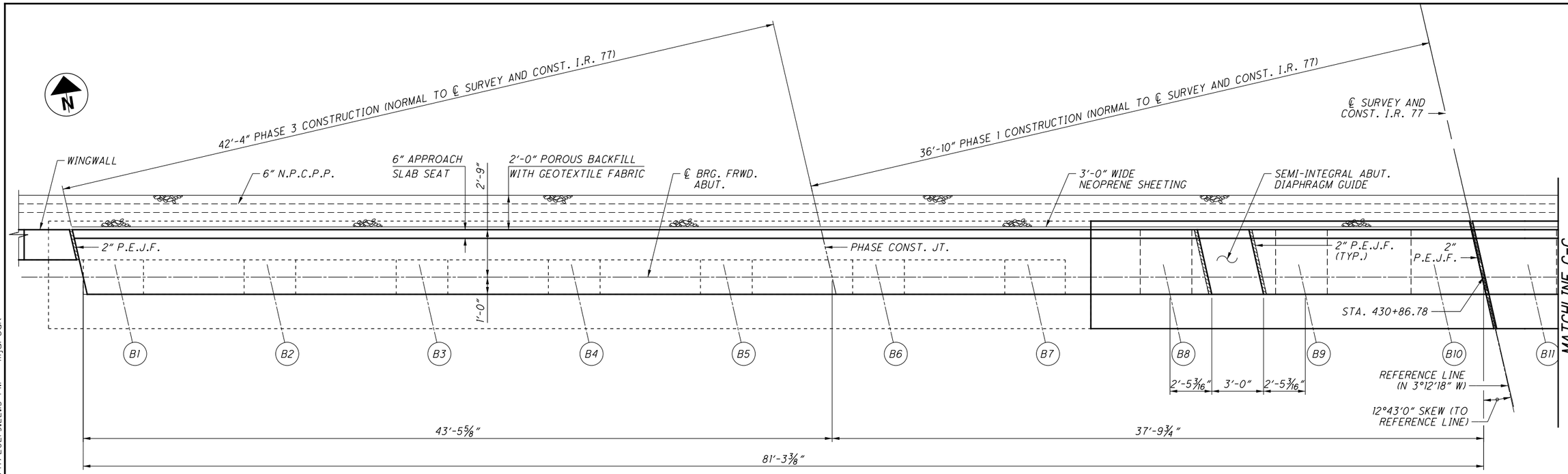
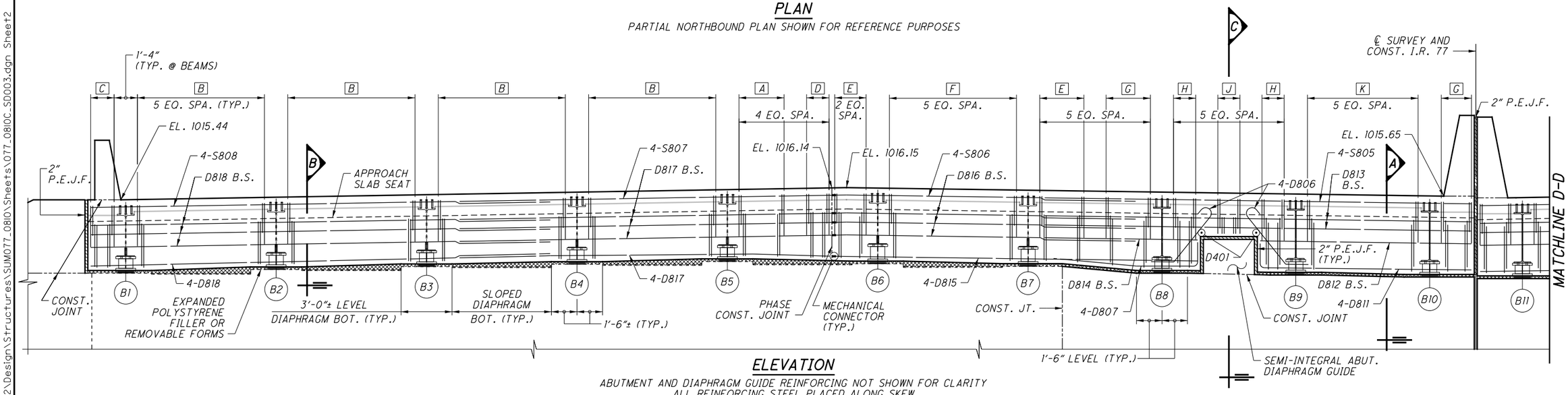


PLAN

PARTIAL NORTHBOUND PLAN SHOWN FOR REFERENCE PURPOSES



ELEVATION

ABUTMENT AND DIAPHRAGM GUIDE REINFORCING NOT SHOWN FOR CLARITY
ALL REINFORCING STEEL PLACED ALONG SKEW

LEGEND:

- (B#) BEAM NUMBER
- [A] 3 SETS OF D819, D501 & 2-D502
- [B] 6 SETS OF D819, D501 & 2-D502
- [C] 2 SETS OF D819, D501 & 2-D502
- [D] 2 SETS OF D819, D501 & 2-D503
- [E] 3 SETS OF D819, D501 & 2-D503
- [F] 6 SETS OF D819, D501 & 2-D503
- [G] 3 SETS OF D819, D501 & 2-D504
- [H] 2 SETS OF D819, D501 & 2-D504
- [J] 2 SETS OF D819, D505 & 2-D506
- [K] 6 SETS OF D819, D501 & 2-D504

NOTES:

1. STATIONS AND DIMENSIONS ARE GIVEN TO ℄ SURVEY AND CONST. I.R. 77.
2. FOR NORTHBOUND ABUTMENT DIAPHRAGM DETAILS, SEE SHEET 27/44.
3. FOR SECTIONS A THROUGH C, SEE SHEET 28/44.
4. ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE.
5. FOR SEMI-INTEGRAL ABUTMENT DIAPHRAGM GUIDE DETAILS, SEE SHEET 14/44.
6. FOR ADDITIONAL DETAILS AND NOTES, SEE STD. DWG. SICD-1-96.
7. MINIMUM REINFORCING STEEL LAP LENGTHS FOR #8 BARS SHALL BE 5'-4".
8. ELEVATIONS ARE GIVEN AT THE CENTERLINE OF ABUTMENT BEARING.

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FORWARD ABUTMENT DIAPHRAGM DETAILS
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

26 / 44

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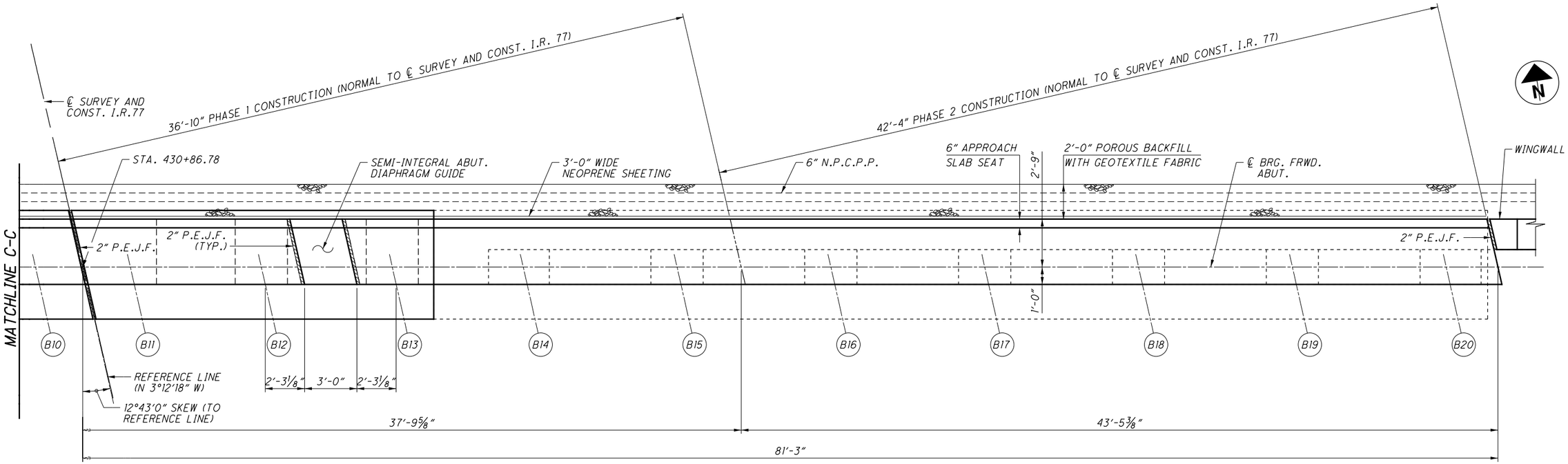
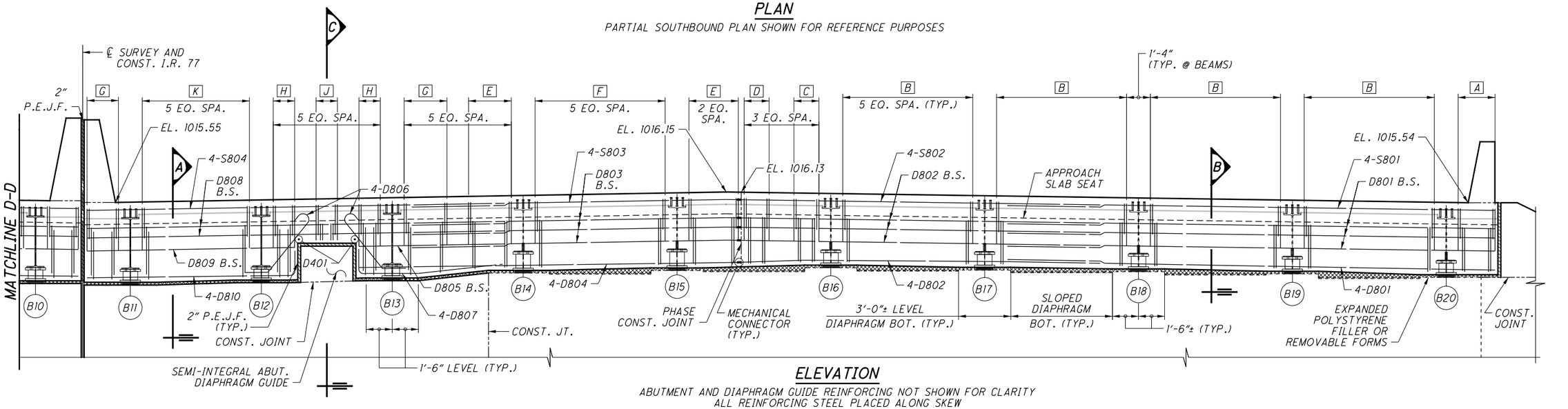


PLAN

PARTIAL SOUTHBOUND PLAN SHOWN FOR REFERENCE PURPOSES



ELEVATION

ABUTMENT AND DIAPHRAGM GUIDE REINFORCING NOT SHOWN FOR CLARITY
ALL REINFORCING STEEL PLACED ALONG SKEW

LEGEND:

(B#) BEAM NUMBER

NOTES:

1. STATIONS AND DIMENSIONS ARE GIVEN TO ℄ SURVEY AND CONST. I.R. 77.
2. FOR REINFORCING CALLOUT LEGEND AND SOUTHBOUND ABUTMENT DIAPHRAGM DETAILS, SEE SHEET 26/44.
3. FOR SECTIONS A THROUGH C, SEE SHEET 28/44.
4. ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE.
5. FOR SEMI-INTEGRAL ABUTMENT DIAPHRAGM GUIDE DETAILS, SEE SHEET 14/44.
6. FOR ADDITIONAL DETAILS AND NOTES, SEE STD. DWG. SICD-1-96.
7. MINIMUM REINFORCING STEEL LAP LENGTHS FOR #8 BARS SHALL BE 5'-4".
8. ELEVATIONS ARE GIVEN AT THE CENTERLINE OF ABUTMENT BEARING.

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FORWARD ABUTMENT DIAPHRAGM DETAILS

BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

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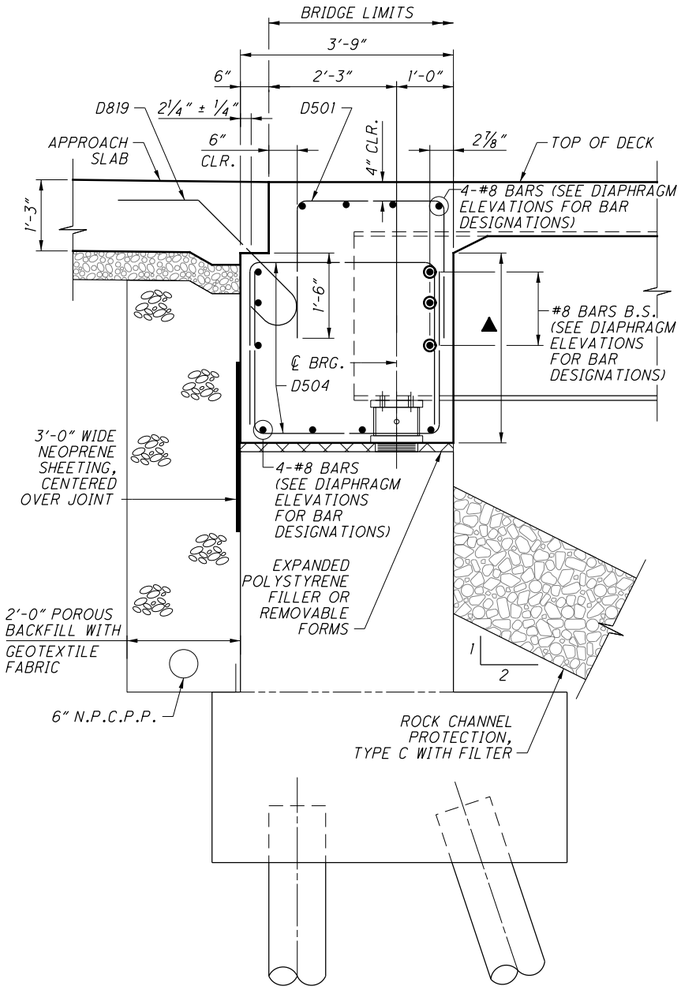
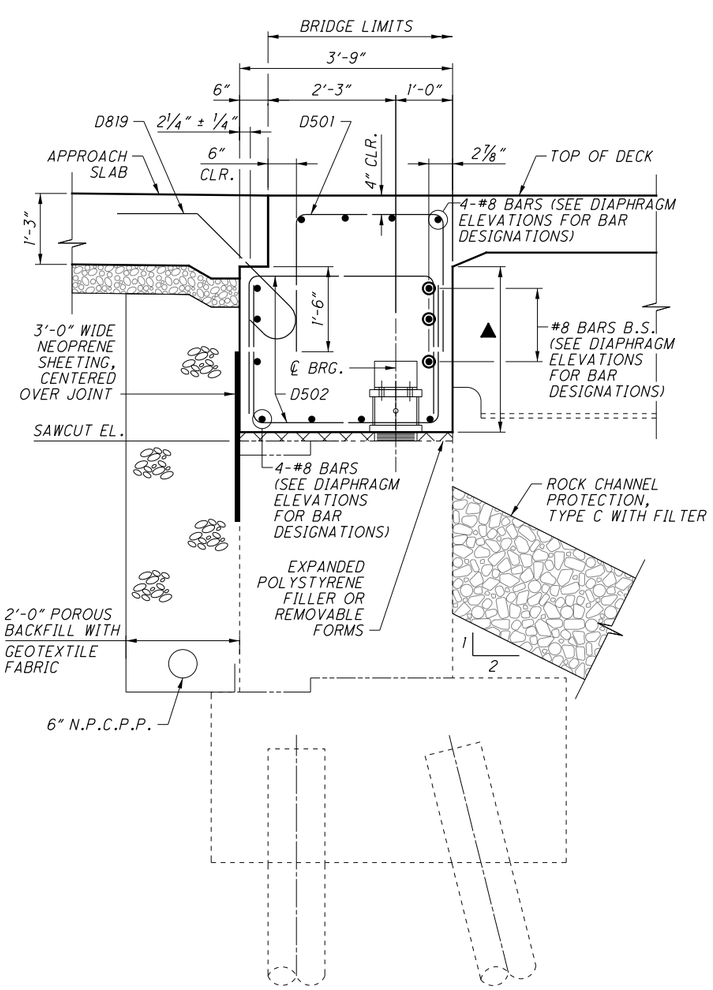


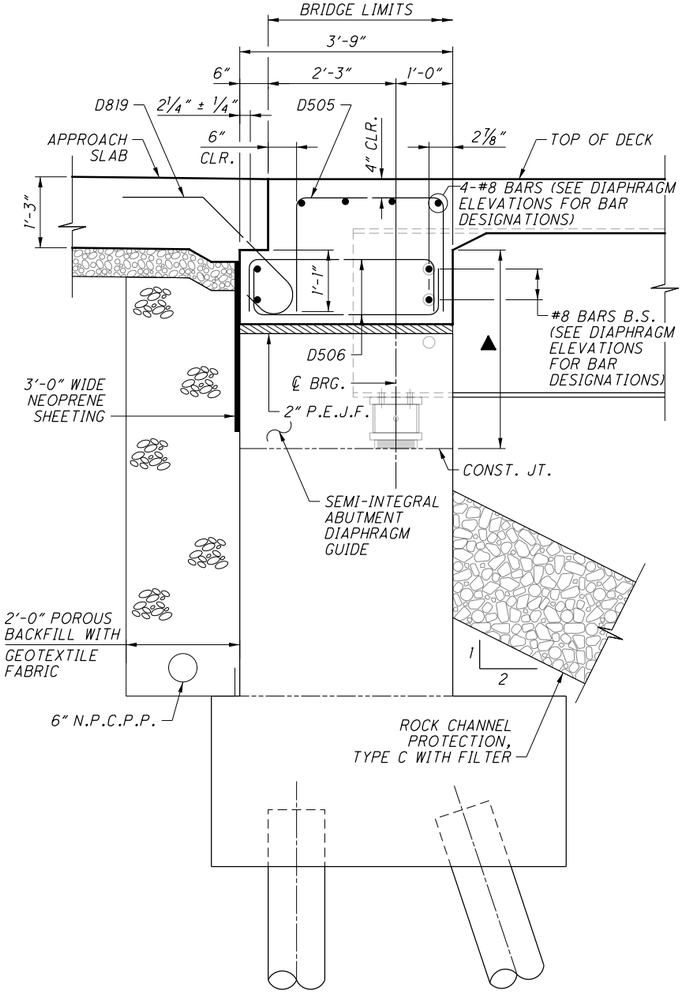
SECTION A

ABUTMENT REINFORCING AND DIMENSIONS NOT SHOWN FOR CLARITY



SECTION B

ABUTMENT REINFORCING AND DIMENSIONS NOT SHOWN FOR CLARITY



SECTION C

ABUTMENT REINFORCING AND DIMENSIONS NOT SHOWN FOR CLARITY

LEGEND:

▲ ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

NOTES:

1. FOR LOCATIONS OF SECTIONS A THROUGH C, SEE SHEETS 24/44 THROUGH 27/44.
2. FOR ADDITIONAL DETAILS AND NOTES, SEE STD. DWG. SICD-1-96.

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ABUTMENT DIAPHRAGM DETAILS
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

28/44

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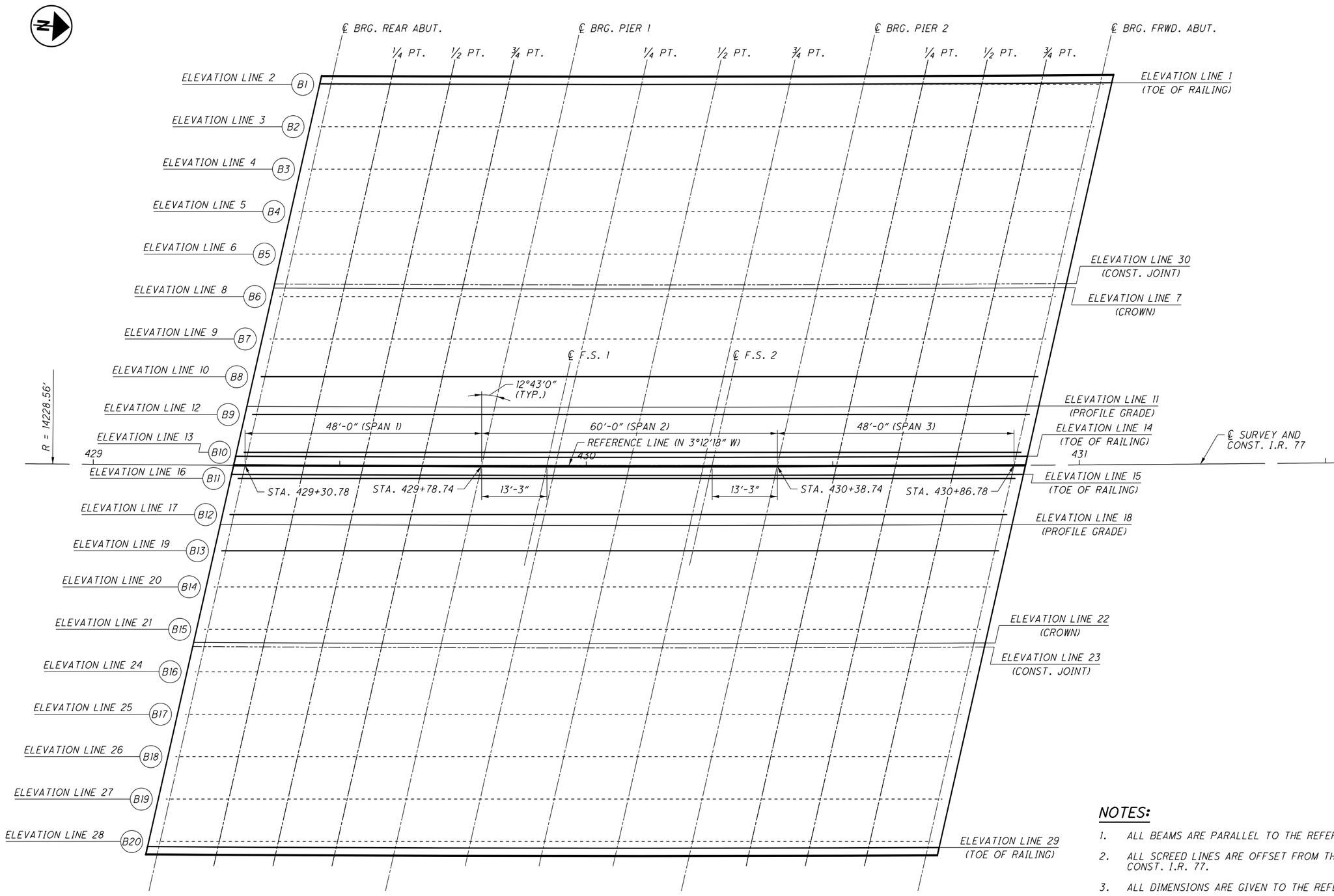

ELEVATION LINE LOCATION PLAN

NOTES:

1. ALL BEAMS ARE PARALLEL TO THE REFERENCE LINE.
2. ALL SCREED LINES ARE OFFSET FROM THE ℄ SURVEY AND CONST. I.R. 77.
3. ALL DIMENSIONS ARE GIVEN TO THE REFERENCE LINE.
4. FOR ELEVATION LINE LOCATION SECTION AND SCREED ELEVATIONS, SEE SHEET 30/44.
5. FOR TOP OF HAUNCH ELEVATIONS, SEE SHEET 31/44.
6. FOR FINAL DECK SURFACE ELEVATIONS, SEE SHEET 32/44.

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RHC		7702558/7702582	

ELEVATION LINE LOCATION PLAN
BRIDGE NO. SUM-77-0810
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

29/44

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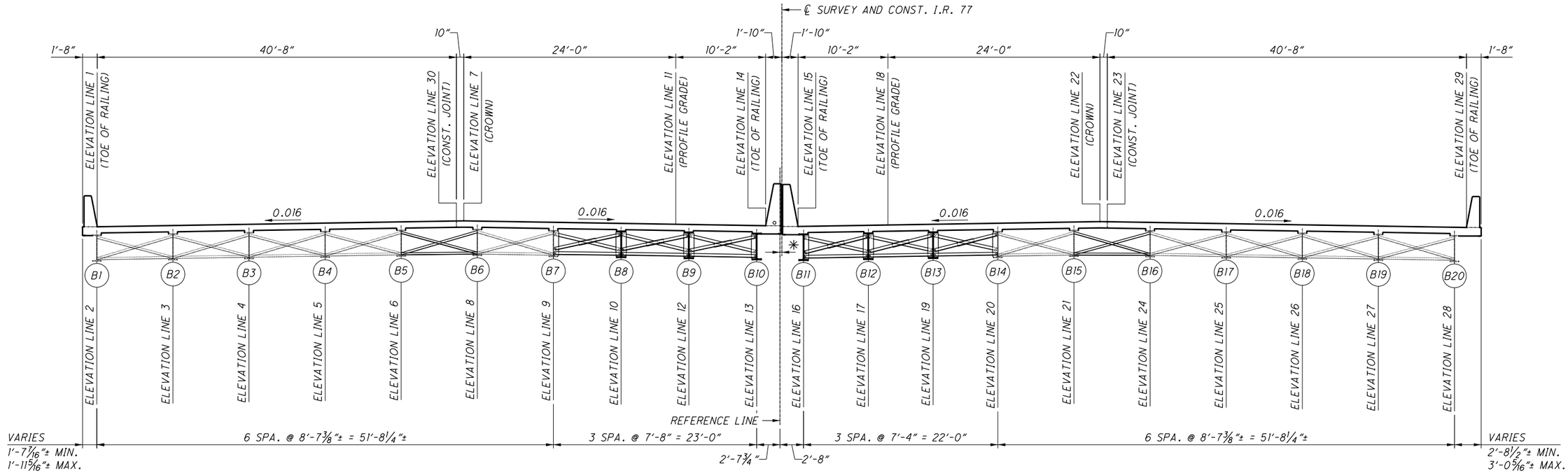

ELEVATION LINE LOCATION SECTION

SCREED ELEVATIONS

LOCATION	ELEVATION LINE 1		ELEVATION LINE 30		ELEVATION LINE 7		ELEVATION LINE 11		ELEVATION LINE 14	
	STATION	SCREED ELEVATION	STATION	SCREED ELEVATION	STATION	SCREED ELEVATION	STATION	SCREED ELEVATION	STATION	SCREED ELEVATION
CL BRG. REAR ABUT.	429+47.92	1016.65	429+38.90	1017.40	429+38.72	1017.41	429+33.42	1017.09	429+31.19	1016.95
1/4 SPAN 1	429+59.98	1016.54	429+50.92	1017.28	429+50.74	1017.30	429+45.42	1016.97	429+43.17	1016.83
1/2 SPAN 1	429+72.03	1016.42	429+62.94	1017.16	429+62.76	1017.18	429+57.42	1016.85	429+55.16	1016.71
3/4 SPAN 1	429+84.09	1016.30	429+74.97	1017.04	429+74.78	1017.05	429+69.42	1016.72	429+67.16	1016.58
CL BRG. PIER 1	429+96.16	1016.19	429+86.99	1016.92	429+86.81	1016.93	429+81.43	1016.60	429+79.15	1016.46
FIELD SPLICE 1	-	-	-	-	-	-	429+94.68	1016.49	429+92.40	1016.35
1/4 SPAN 2	430+11.24	1016.07	430+02.03	1016.80	430+01.84	1016.81	429+96.43	1016.48	429+94.15	1016.33
1/2 SPAN 2	430+26.32	1015.95	430+17.07	1016.68	430+16.88	1016.69	430+11.45	1016.36	430+09.15	1016.21
3/4 SPAN 2	430+41.41	1015.83	430+32.11	1016.55	430+31.92	1016.57	430+26.46	1016.23	430+24.15	1016.08
FIELD SPLICE 2	-	-	-	-	-	-	430+28.21	1016.21	430+25.90	1016.07
CL BRG. PIER 2	430+56.50	1015.72	430+47.16	1016.44	430+46.97	1016.45	430+41.48	1016.11	430+39.16	1015.96
1/4 SPAN 3	430+68.58	1015.65	430+59.20	1016.36	430+59.01	1016.37	430+53.50	1016.03	430+51.17	1015.88
1/2 SPAN 3	430+80.66	1015.58	430+71.24	1016.29	430+71.05	1016.30	430+65.52	1015.96	430+63.18	1015.81
3/4 SPAN 3	430+92.74	1015.51	430+83.28	1016.22	430+83.09	1016.23	430+77.54	1015.88	430+75.19	1015.73
CL BRG. FRWD. ABUT.	431+04.82	1015.44	430+95.33	1016.14	430+95.14	1016.15	430+89.56	1015.80	430+87.21	1015.65

SCREED ELEVATIONS (CONTINUED)

LOCATION	ELEVATION LINE 15		ELEVATION LINE 18		ELEVATION LINE 22		ELEVATION LINE 23		ELEVATION LINE 29	
	STATION	SCREED ELEVATION	STATION	SCREED ELEVATION	STATION	SCREED ELEVATION	STATION	SCREED ELEVATION	STATION	SCREED ELEVATION
CL BRG. REAR ABUT.	429+30.38	1016.89	429+28.15	1017.08	429+22.89	1017.52	429+22.70	1017.51	429+13.83	1016.96
1/4 SPAN 1	429+42.36	1016.77	429+40.12	1016.95	429+34.84	1017.39	429+34.66	1017.38	429+25.75	1016.83
1/2 SPAN 1	429+54.35	1016.64	429+52.10	1016.83	429+46.80	1017.27	429+46.61	1017.25	429+37.67	1016.70
3/4 SPAN 1	429+66.34	1016.51	429+64.08	1016.70	429+58.76	1017.13	429+58.57	1017.12	429+49.60	1016.57
CL BRG. PIER 1	429+78.33	1016.39	429+76.06	1016.57	429+70.72	1017.01	429+70.53	1017.00	429+61.52	1016.44
FIELD SPLICE 1	429+91.58	1016.28	429+89.30	1016.46	-	-	-	-	-	-
1/4 SPAN 2	429+93.33	1016.26	429+91.04	1016.44	429+85.67	1016.87	429+85.49	1016.86	429+76.43	1016.30
1/2 SPAN 2	430+08.32	1016.13	430+06.03	1016.32	430+00.63	1016.75	430+00.45	1016.73	429+91.34	1016.17
3/4 SPAN 2	430+23.32	1016.00	430+21.02	1016.18	430+15.59	1016.61	430+15.41	1016.60	430+06.26	1016.03
FIELD SPLICE 2	430+25.07	1015.99	430+22.77	1016.17	-	-	-	-	-	-
CL BRG. PIER 2	430+38.32	1015.88	430+36.01	1016.06	430+30.56	1016.48	430+30.37	1016.47	430+21.18	1015.89
1/4 SPAN 3	430+50.33	1015.79	430+48.01	1015.97	430+42.53	1016.40	430+42.35	1016.38	430+33.12	1015.80
1/2 SPAN 3	430+62.34	1015.72	430+60.00	1015.90	430+54.51	1016.32	430+54.32	1016.30	430+45.06	1015.72
3/4 SPAN 3	430+74.35	1015.64	430+72.01	1015.82	430+66.49	1016.23	430+66.30	1016.22	430+57.00	1015.63
CL BRG. FRWD. ABUT.	430+86.36	1015.55	430+84.01	1015.73	430+78.47	1016.15	430+78.28	1016.13	430+68.95	1015.54

LEGEND:

✳ VARIES 0 TO 2 9/16" (REFERENCE LINE TO ℄ SURVEY AND CONST. I.R. 77)

NOTES:

1. FOR ELEVATION LINE LOCATION PLAN, SEE SHEET 29/44.
2. FOR TOP OF HAUNCH ELEVATIONS, SEE SHEET 31/44.
3. FOR FINAL DECK SURFACE ELEVATIONS, SEE SHEET 32/44.
4. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
5. THE SCREED ELEVATIONS SHOWN ON THIS SHEET FOR POINTS ADJACENT TO EXISTING BEAMS (ELEVATION LINES 1, 30, 7, 22, 23, & 29) ARE BASED ON THEORETICAL EXISTING BEAM DEFLECTIONS AND ARE FOR REFERENCE ONLY. ACTUAL SCREED ELEVATIONS FOR POINTS ADJACENT TO EXISTING BEAMS SHALL BE BASED ON EXISTING BEAM REBOUND AS CALCULATED BY THE CONTRACTOR IN THE TABLES ON SHEETS 33/44 THROUGH 35/44.

DESIGN AGENCY
GPD GROUP
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DESIGNED	DRAWN	REVIEWED	DATE
MOJ	MOJ	DGN	1-19-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RHC		7702558/7702582	

ELEVATION LINE LOCATION SECTION & SCREED ELEVATIONS

BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

30/44

1210
1288

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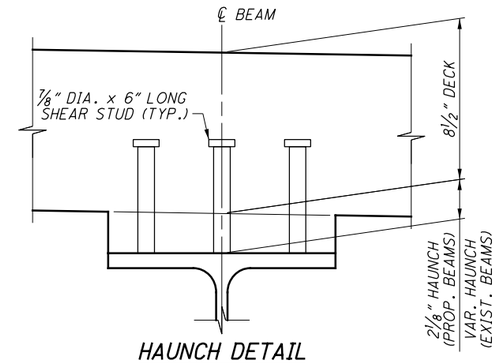
TOP OF HAUNCH ELEVATIONS

LOCATION	ELEVATION LINE 10		ELEVATION LINE 12		ELEVATION LINE 13		ELEVATION LINE 16		ELEVATION LINE 17		ELEVATION LINE 19	
	STATION	TOH ELEVATION	STATION	TOH ELEVATION	STATION	TOH ELEVATION	STATION	TOH ELEVATION	STATION	TOH ELEVATION	STATION	TOH ELEVATION
CL BRG. REAR ABUT.	429+34.75	1016.46	429+33.05	1016.36	429+31.36	1016.25	429+30.20	1016.19	429+28.58	1016.33	429+26.97	1016.47
1/4 SPAN 1	429+46.76	1016.34	429+45.06	1016.24	429+43.37	1016.13	429+42.19	1016.07	429+40.57	1016.21	429+38.96	1016.34
1/2 SPAN 1	429+58.78	1016.22	429+57.07	1016.12	429+55.37	1016.01	429+54.19	1015.95	429+52.56	1016.08	429+50.94	1016.22
3/4 SPAN 1	429+70.79	1016.10	429+69.08	1015.99	429+67.37	1015.89	429+66.19	1015.82	429+64.56	1015.95	429+62.93	1016.08
CL BRG. PIER 1	429+82.81	1015.98	429+81.09	1015.87	429+79.37	1015.76	429+78.19	1015.69	429+76.55	1015.83	429+74.91	1015.96
FIELD SPLICE 1	429+96.07	1015.87	429+94.35	1015.76	429+92.63	1015.65	429+91.43	1015.58	429+89.79	1015.71	429+88.15	1015.84
1/4 SPAN 2	429+97.83	1015.85	429+96.10	1015.75	429+94.38	1015.64	429+93.18	1015.56	429+91.54	1015.69	429+89.89	1015.83
1/2 SPAN 2	430+12.85	1015.73	430+11.11	1015.63	430+09.38	1015.52	430+08.18	1015.44	430+06.53	1015.57	430+04.88	1015.70
3/4 SPAN 2	430+27.86	1015.61	430+26.12	1015.50	430+24.38	1015.39	430+23.18	1015.31	430+21.52	1015.44	430+19.86	1015.57
FIELD SPLICE 2	430+29.62	1015.59	430+27.87	1015.48	430+26.13	1015.38	430+24.93	1015.29	430+23.27	1015.42	430+21.61	1015.55
CL BRG. PIER 2	430+42.88	1015.49	430+41.13	1015.38	430+39.39	1015.27	430+38.18	1015.18	430+36.51	1015.31	430+34.84	1015.44
1/4 SPAN 3	430+54.90	1015.41	430+53.14	1015.30	430+51.39	1015.19	430+50.17	1015.10	430+48.50	1015.23	430+46.83	1015.36
1/2 SPAN 3	430+66.91	1015.34	430+65.15	1015.22	430+63.39	1015.11	430+62.17	1015.02	430+60.49	1015.15	430+58.81	1015.28
3/4 SPAN 3	430+78.93	1015.26	430+77.16	1015.15	430+75.39	1015.04	430+74.17	1014.94	430+72.48	1015.07	430+70.80	1015.20
CL BRG. FRWD. ABUT.	430+90.94	1015.18	430+89.17	1015.07	430+87.39	1014.95	430+86.17	1014.86	430+84.47	1014.99	430+82.78	1015.11



HAUNCH DETAIL

PROPOSED BEAM SHOWN. EXISTING BEAM SIMILAR.

NOTES:

1. FOR ELEVATION LINE LOCATION PLAN, SEE SHEET 29/44.
2. FOR ELEVATION LINE LOCATION SECTION AND SCREED ELEVATIONS, SEE SHEET 30/44.
3. FOR FINAL DECK SURFACE ELEVATIONS, SEE SHEET 32/44.
4. 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.

DESIGN AGENCY
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REVIEWED DGN | DATE 1-19-21 | STRUCTURE FILE NUMBER 7702558/7702582
DRAWN MOJ | REVISED
DESIGNED MOJ | CHECKED RHC

TOP OF HAUNCH ELEVATIONS (PROPOSED BEAMS)
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

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FINAL DECK SURFACE (FDS) ELEVATIONS

LOCATION	ELEVATION LINE 1		ELEVATION LINE 2		ELEVATION LINE 3		ELEVATION LINE 4		ELEVATION LINE 5		ELEVATION LINE 6		ELEVATION LINE 30		ELEVATION LINE 7	
	STATION	FDS ELEVATION	STATION	FDS ELEVATION	STATION	FDS ELEVATION	STATION	FDS ELEVATION	STATION	FDS ELEVATION	STATION	FDS ELEVATION	STATION	FDS ELEVATION	STATION	FDS ELEVATION
CL BRG. REAR ABUT.	429+47.92	1016.65	429+47.90	1016.65	429+45.99	1016.81	429+44.07	1016.97	429+42.16	1017.13	429+40.25	1017.29	429+38.90	1017.40	429+38.72	1017.41
1/4 SPAN 1	429+59.98	1016.53	429+59.97	1016.53	429+58.04	1016.69	429+56.12	1016.84	429+54.20	1017.00	429+52.29	1017.16	429+50.92	1017.27	429+50.74	1017.29
1/2 SPAN 1	429+72.03	1016.41	429+72.03	1016.41	429+70.10	1016.57	429+68.17	1016.72	429+66.25	1016.88	429+64.32	1017.04	429+62.94	1017.15	429+62.76	1017.16
3/4 SPAN 1	429+84.09	1016.30	429+84.10	1016.30	429+82.16	1016.45	429+80.23	1016.61	429+78.29	1016.76	429+76.36	1016.92	429+74.97	1017.03	429+74.78	1017.05
CL BRG. PIER 1	429+96.16	1016.19	429+96.17	1016.19	429+94.22	1016.34	429+92.28	1016.50	429+90.34	1016.65	429+88.40	1016.81	429+86.99	1016.92	429+86.81	1016.93
FIELD SPLICE 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1/4 SPAN 2	430+11.24	1016.06	430+11.25	1016.06	430+09.29	1016.21	430+07.34	1016.37	430+05.39	1016.52	430+03.44	1016.67	430+02.03	1016.79	430+01.84	1016.80
1/2 SPAN 2	430+26.32	1015.94	430+26.33	1015.94	430+24.37	1016.09	430+22.40	1016.24	430+20.44	1016.40	430+18.49	1016.55	430+17.07	1016.66	430+16.88	1016.68
3/4 SPAN 2	430+41.41	1015.83	430+41.41	1015.83	430+39.44	1015.98	430+37.47	1016.13	430+35.50	1016.28	430+33.53	1016.43	430+32.11	1016.54	430+31.92	1016.56
FIELD SPLICE 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL BRG. PIER 2	430+56.50	1015.72	430+56.49	1015.72	430+54.51	1015.87	430+52.53	1016.02	430+50.55	1016.17	430+48.58	1016.33	430+47.16	1016.44	430+46.97	1016.45
1/4 SPAN 3	430+68.58	1015.64	430+68.56	1015.64	430+66.57	1015.79	430+64.58	1015.94	430+62.60	1016.10	430+60.61	1016.25	430+59.20	1016.35	430+59.01	1016.37
1/2 SPAN 3	430+80.66	1015.57	430+80.63	1015.57	430+78.63	1015.72	430+76.63	1015.87	430+74.64	1016.02	430+72.65	1016.17	430+71.24	1016.28	430+71.05	1016.29
3/4 SPAN 3	430+92.74	1015.50	430+92.69	1015.51	430+90.69	1015.65	430+88.68	1015.80	430+86.68	1015.95	430+84.69	1016.10	430+83.28	1016.21	430+83.09	1016.22
CL BRG. FRWD. ABUT.	431+04.82	1015.44	431+04.76	1015.44	431+02.74	1015.59	431+00.73	1015.74	430+98.73	1015.89	430+96.72	1016.04	430+95.33	1016.14	430+95.14	1016.15

FINAL DECK SURFACE (FDS) ELEVATIONS (CONTINUED)

LOCATION	ELEVATION LINE 8		ELEVATION LINE 9		ELEVATION LINE 10		ELEVATION LINE 11		ELEVATION LINE 12		ELEVATION LINE 13		ELEVATION LINE 14		ELEVATION LINE 15	
	STATION	FDS ELEVATION	STATION	FDS ELEVATION	STATION	FDS ELEVATION	STATION	FDS ELEVATION	STATION	FDS ELEVATION	STATION	FDS ELEVATION	STATION	FDS ELEVATION	STATION	FDS ELEVATION
CL BRG. REAR ABUT.	429+38.34	1017.39	429+36.44	1017.27	429+34.75	1017.17	429+33.42	1017.09	429+33.05	1017.06	429+31.36	1016.96	429+31.19	1016.95	429+30.38	1016.89
1/4 SPAN 1	429+50.37	1017.26	429+48.46	1017.15	429+46.76	1017.04	429+45.42	1016.96	429+45.06	1016.94	429+43.37	1016.83	429+43.17	1016.82	429+42.36	1016.76
1/2 SPAN 1	429+62.40	1017.14	429+60.48	1017.02	429+58.78	1016.92	429+57.42	1016.83	429+57.07	1016.81	429+55.37	1016.71	429+55.16	1016.69	429+54.35	1016.63
3/4 SPAN 1	429+74.43	1017.03	429+72.50	1016.91	429+70.79	1016.80	429+69.42	1016.71	429+69.08	1016.69	429+67.37	1016.59	429+67.16	1016.57	429+66.34	1016.51
CL BRG. PIER 1	429+86.46	1016.91	429+84.53	1016.79	429+82.81	1016.69	429+81.43	1016.60	429+81.09	1016.58	429+79.37	1016.47	429+79.15	1016.46	429+78.33	1016.39
FIELD SPLICE 1	-	-	-	-	429+96.07	1016.57	429+94.68	1016.48	429+94.35	1016.46	429+92.63	1016.35	429+92.40	1016.34	429+91.58	1016.26
1/4 SPAN 2	430+01.50	1016.78	429+99.55	1016.66	429+97.83	1016.55	429+96.43	1016.46	429+96.10	1016.44	429+94.38	1016.34	429+94.15	1016.32	429+93.33	1016.25
1/2 SPAN 2	430+16.53	1016.66	430+14.58	1016.53	430+12.85	1016.42	430+11.45	1016.34	430+11.11	1016.32	430+09.38	1016.21	430+09.15	1016.19	430+08.32	1016.12
3/4 SPAN 2	430+31.57	1016.54	430+29.61	1016.41	430+27.86	1016.31	430+26.46	1016.22	430+26.12	1016.20	430+24.38	1016.09	430+24.15	1016.07	430+23.32	1015.99
FIELD SPLICE 2	-	-	-	-	430+29.62	1016.29	430+28.21	1016.20	430+27.87	1016.18	430+26.13	1016.07	430+25.90	1016.06	430+25.07	1015.98
CL BRG. PIER 2	430+46.61	1016.43	430+44.64	1016.30	430+42.88	1016.19	430+41.48	1016.11	430+41.13	1016.08	430+39.39	1015.97	430+39.16	1015.96	430+38.32	1015.88
1/4 SPAN 3	430+58.63	1016.34	430+56.66	1016.22	430+54.90	1016.11	430+53.50	1016.02	430+53.14	1016.00	430+51.39	1015.89	430+51.17	1015.87	430+50.33	1015.79
1/2 SPAN 3	430+70.66	1016.27	430+68.68	1016.14	430+66.91	1016.03	430+65.52	1015.94	430+65.15	1015.92	430+63.39	1015.81	430+63.18	1015.79	430+62.34	1015.70
3/4 SPAN 3	430+82.69	1016.19	430+80.70	1016.07	430+78.93	1015.96	430+77.54	1015.87	430+77.16	1015.84	430+75.39	1015.73	430+75.19	1015.72	430+74.35	1015.63
CL BRG. FRWD. ABUT.	430+94.72	1016.13	430+92.72	1016.00	430+90.94	1015.89	430+89.56	1015.80	430+89.17	1015.77	430+87.39	1015.66	430+87.21	1015.65	430+86.36	1015.55

FINAL DECK SURFACE (FDS) ELEVATIONS (CONTINUED)

LOCATION	ELEVATION LINE 16		ELEVATION LINE 17		ELEVATION LINE 18		ELEVATION LINE 19		ELEVATION LINE 20		ELEVATION LINE 21		ELEVATION LINE 22		ELEVATION LINE 23	
	STATION	FDS ELEVATION	STATION	FDS ELEVATION	STATION	FDS ELEVATION	STATION	FDS ELEVATION	STATION	FDS ELEVATION	STATION	FDS ELEVATION	STATION	FDS ELEVATION	STATION	FDS ELEVATION
CL BRG. REAR ABUT.	429+30.20	1016.90	429+28.58	1017.04	429+28.15	1017.08	429+26.97	1017.17	429+25.36	1017.31	429+23.47	1017.47	429+22.89	1017.52	429+22.70	1017.51
1/4 SPAN 1	429+42.19	1016.77	429+40.57	1016.90	429+40.12	1016.94	429+38.96	1017.04	429+37.34	1017.17	429+35.44	1017.33	429+34.84	1017.38	429+34.66	1017.37
1/2 SPAN 1	429+54.19	1016.64	429+52.56	1016.78	429+52.10	1016.81	429+50.94	1016.91	429+49.32	1017.04	429+47.42	1017.20	429+46.80	1017.25	429+46.61	1017.24
3/4 SPAN 1	429+66.19	1016.52	429+64.56	1016.65	429+64.08	1016.69	429+62.93	1016.79	429+61.30	1016.92	429+59.39	1017.08	429+58.76	1017.13	429+58.57	1017.12
CL BRG. PIER 1	429+78.19	1016.40	429+76.55	1016.53	429+76.06	1016.57	429+74.91	1016.67	429+73.28	1016.80	429+71.36	1016.96	429+70.72	1017.01	429+70.53	1017.00
FIELD SPLICE 1	429+91.43	1016.28	429+89.79	1016.41	429+89.30	1016.45	429+88.15	1016.54	-	-	-	-	-	-	-	-
1/4 SPAN 2	429+93.18	1016.26	429+91.54	1016.39	429+91.04	1016.43	429+89.89	1016.52	429+88.25	1016.66	429+86.32	1016.81	429+85.67	1016.87	429+85.49	1016.85
1/2 SPAN 2	430+08.18	1016.13	430+06.53	1016.26	430+06.03	1016.30	430+04.88	1016.39	430+03.23	1016.52	430+01.29	1016.68	430+00.63	1016.73	430+00.45	1016.72
3/4 SPAN 2	430+23.18	1016.00	430+21.52	1016.13	430+21.02	1016.17	430+19.86	1016.26	430+18.20	1016.40	430+16.25	1016.55	430+15.59	1016.60	430+15.41	1016.59
FIELD SPLICE 2	430+24.93	1015.99	430+23.27	1016.12	430+22.77	1016.16	430+21.61	1016.25	-	-	-	-	-	-	-	-
CL BRG. PIER 2	430+38.18	1015.89	430+36.51	1016.02	430+36.01	1016.06	430+34.84	1016.15	430+33.17	1016.28	430+31.22	1016.43	430+30.56	1016.48	430+30.37	1016.47
1/4 SPAN 3	430+50.17	1015.80	430+48.50	1015.93	430+48.01	1015.97	430+46.83	1016.06	430+45.15	1016.19	430+43.19	1016.34	430+42.53	1016.39	430+42.35	1016.38
1/2 SPAN 3	430+62.17	1015.72	430+60.49	1015.85	430+60.00	1015.88	430+58.81	1015.97	430+57.13	1016.10	430+55.16	1016.25	430+54.51	1016.30	430+54.32	1016.29
3/4 SPAN 3	430+74.17	1015.64	430+72.48	1015.77	430+72.01	1015.80	430+70.80	1015.90	430+69.11	1016.02	430+67.14	1016.17	430+66.49	1016.22	430+66.30	1016.21
CL BRG. FRWD. ABUT.	430+86.17	1015.57	430+84.47	1015.69	430+84.01	1015.73	430+82.78	1015.82	430+81.09	1015.95	430+79.11	1016.10	430+78.47	1016.15	430+78.28	1016.13

FINAL DECK SURFACE (FDS) ELEVATIONS (CONTINUED)

LOCATION	ELEVATION LINE 24		ELEVATION LINE 25		ELEVATION LINE 26		ELEVATION LINE 27		ELEVATION LINE 28		ELEVATION LINE 29	
	STATION	FDS ELEVATION	STATION	FDS ELEVATION	STATION	FDS ELEVATION	STATION	FDS ELEVATION	STATION	FDS ELEVATION	STATION	FDS ELEVATION
CL BRG. REAR ABUT.	429+21.58	1017.44	429+19.70	1017.32	429+17.82	1017.21	429+15.94	1017.09	429+14.06	1016.97	429+13.83	1016.96
1/4 SPAN 1	429+33.55	1017.30	429+31.66	1017.19	429+29.77	1017.07	429+27.88	1016.95	429+26.00	1016.84	429+25.75	1016.82
1/2 SPAN 1	429+45.51	1017.17	429+43.62	1017.06	429+41.72	1016.94	429+39.82	1016.82	429+37.93	1016.71	429+37.67	1016.69
3/4 SPAN 1	429+57.48	1017.05	429+55.57	1016.93	429+53.67	1016.81	429+51.77	1016.70	429+49.87	1016.58	429+49.60	1016.56
CL BRG. PIER 1	429+69.44	1016.93	429+67.53	1016.81	429+65.62	1016.69	429+63.71	1016.57	429+61.80	1016.45	429+61.52	1016.44
FIELD SPLICE 1	-	-	-	-	-	-	-	-	-	-	-	-
1/4 SPAN 2	429+84.40	1016.79	429+82.48	1016.67	429+80.56	1016.55	429+78.64	1016.43	429+76.72	1016.31	429+76.43	1016.29
1/2 SPAN 2	429+99.36	1016.65	429+97.42	1016.53	429+95.50	1016.41	429+93.57	1016.29	429+91.64	1016.17	429+91.34	1016.15
3/4 SPAN 2	430+14.31	1016.52	430+12.37	1016.40	430+10.43	1016.28	430+08.50	1016.16	430+06.56	1016.04	430+06.26	1016.02
FIELD SPLICE 2	-	-	-	-	-	-	-	-	-	-	-	-
CL BRG. PIER 2	430+29.27	1016.40	430+27.32	1016.28	430+25.37	1016.16	430+23.43	1016.03	430+21.48	1015.91	430+21.18	1015.89
1/4 SPAN 3	430+41.23	1016.31	430+39.28	1016.19	430+37.32	1016.06	430+35.37	1015.94	430+33.42	1015.82	430+33.12	1015.80
1/2 SPAN 3	430+53.20	1016.22	430+51.23	1016.10	430+49.27	1015.97	430+47.31	1015.85	430+45.36	1015.73	430+45.06	1015.71
3/4 SPAN 3	430+65.16	1016.14	430+63.19	1016.01	430+61.22	1015.89	430+59.26	1015.77	430+57.29	1015.64	430+57.00	1015.62
CL BRG. FRWD. ABUT.	430+77.13	1016.06	430+75.15	1015.94	430+73.17	1015.81	430+71.20	1015.69	430+69.23	1015.56	430+68.95	1015.54

NOTES:

1. FOR ELEVATION LINE LOCATION PLAN, SEE SHEET 29/44.
2. FOR ELEVATION LINE LOCATION SECTION AND SCREED ELEVATIONS, SEE SHEET 30/44.
3. FOR TOP OF HAUNCH ELEVATIONS, SEE SHEET 31/44.
4. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.

DESIGN AGENCY
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FINAL DECK SURFACE ELEVATIONS
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

1212
1288

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SCREED & TOP OF HAUNCH ELEVATION CALCULATIONS (EXIST. BEAMS)

		LOCATION	REAR ABUT.	SPAN 1			PIER 1	SPAN 2			PIER 2	SPAN 3			FRWD. ABUT.
				1/4 PT.	1/2 PT.	3/4 PT.		1/4 PT.	1/2 PT.	3/4 PT.		1/4 PT.	1/2 PT.	3/4 PT.	
ELEVATION LINE 1	-	STATION	429+47.92	429+59.98	429+72.03	429+84.09	429+96.16	430+11.24	430+26.32	430+41.41	430+56.50	430+68.58	430+80.66	430+92.74	431+04.82
	A	FINAL DECK ELEVATION	1016.65	1016.53	1016.41	1016.30	1016.19	1016.06	1015.94	1015.83	1015.72	1015.64	1015.57	1015.50	1015.44
	B	* BOTTOM OF FLANGE ELEVATION (BEFORE REMOVAL)													
	C	* BOTTOM OF FLANGE ELEVATION (AFTER REMOVAL)													
	D	* REBOUND (FT)													
	E	WEIGHT OF EXISTING DECK (KLF/BEAM)	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34
	F	WEIGHT OF PROPOSED DECK (KLF/BEAM)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
	G	* DECK DEFLECTION (FT)													
	H	DECK THICKNESS (FT)	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
	J	* SCREED ELEVATION													
	K	* TOP OF HAUNCH ELEVATION	-	-	-	-	-	-	-	-	-	-	-	-	-
ELEVATION LINE 2	-	STATION	429+47.90	429+59.97	429+72.03	429+84.10	429+96.17	430+11.25	430+26.33	430+41.41	430+56.49	430+68.56	430+80.63	430+92.69	431+04.76
	A	FINAL DECK ELEVATION	1016.65	1016.53	1016.41	1016.30	1016.19	1016.06	1015.94	1015.83	1015.72	1015.64	1015.57	1015.51	1015.44
	B	* BOTTOM OF FLANGE ELEVATION (BEFORE REMOVAL)													
	C	* BOTTOM OF FLANGE ELEVATION (AFTER REMOVAL)													
	D	* REBOUND (FT)													
	E	WEIGHT OF EXISTING DECK (KLF/BEAM)	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34
	F	WEIGHT OF PROPOSED DECK (KLF/BEAM)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
	G	* DECK DEFLECTION (FT)													
	H	DECK THICKNESS (FT)	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
	J	* SCREED ELEVATION	-	-	-	-	-	-	-	-	-	-	-	-	-
	K	* TOP OF HAUNCH ELEVATION													
ELEVATION LINE 3	-	STATION	429+45.99	429+58.04	429+70.10	429+82.16	429+94.22	430+09.29	430+24.37	430+39.44	430+54.51	430+66.57	430+78.63	430+90.69	431+02.74
	A	FINAL DECK ELEVATION	1016.81	1016.69	1016.57	1016.45	1016.34	1016.21	1016.09	1015.98	1015.87	1015.79	1015.72	1015.65	1015.59
	B	* BOTTOM OF FLANGE ELEVATION (BEFORE REMOVAL)													
	C	* BOTTOM OF FLANGE ELEVATION (AFTER REMOVAL)													
	D	* REBOUND (FT)													
	E	WEIGHT OF EXISTING DECK (KLF/BEAM)	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34
	F	WEIGHT OF PROPOSED DECK (KLF/BEAM)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
	G	* DECK DEFLECTION (FT)													
	H	DECK THICKNESS (FT)	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
	J	* SCREED ELEVATION	-	-	-	-	-	-	-	-	-	-	-	-	-
	K	* TOP OF HAUNCH ELEVATION													
ELEVATION LINE 4	-	STATION	429+44.07	429+56.12	429+68.17	429+80.23	429+92.28	430+07.34	430+22.40	430+37.47	430+52.53	430+64.58	430+76.63	430+88.68	431+00.73
	A	FINAL DECK ELEVATION	1016.97	1016.84	1016.72	1016.61	1016.50	1016.37	1016.24	1016.13	1016.02	1015.94	1015.87	1015.80	1015.74
	B	* BOTTOM OF FLANGE ELEVATION (BEFORE REMOVAL)													
	C	* BOTTOM OF FLANGE ELEVATION (AFTER REMOVAL)													
	D	* REBOUND (FT)													
	E	WEIGHT OF EXISTING DECK (KLF/BEAM)	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34
	F	WEIGHT OF PROPOSED DECK (KLF/BEAM)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
	G	* DECK DEFLECTION (FT)													
	H	DECK THICKNESS (FT)	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
	J	* SCREED ELEVATION	-	-	-	-	-	-	-	-	-	-	-	-	-
	K	* TOP OF HAUNCH ELEVATION													
ELEVATION LINE 5	-	STATION	429+42.16	429+54.20	429+66.25	429+78.29	429+90.34	430+05.39	430+20.44	430+35.50	430+50.55	430+62.60	430+74.64	430+86.68	430+98.73
	A	FINAL DECK ELEVATION	1017.13	1017.00	1016.88	1016.76	1016.65	1016.52	1016.40	1016.28	1016.17	1016.10	1016.02	1015.95	1015.89
	B	* BOTTOM OF FLANGE ELEVATION (BEFORE REMOVAL)													
	C	* BOTTOM OF FLANGE ELEVATION (AFTER REMOVAL)													
	D	* REBOUND (FT)													
	E	WEIGHT OF EXISTING DECK (KLF/BEAM)	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34
	F	WEIGHT OF PROPOSED DECK (KLF/BEAM)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
	G	* DECK DEFLECTION (FT)													
	H	DECK THICKNESS (FT)	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
	J	* SCREED ELEVATION	-	-	-	-	-	-	-	-	-	-	-	-	-
	K	* TOP OF HAUNCH ELEVATION													
ELEVATION LINE 6	-	STATION	429+40.25	429+52.29	429+64.32	429+76.36	429+88.40	430+03.44	430+18.49	430+33.53	430+48.58	430+60.61	430+72.65	430+84.69	430+96.72
	A	FINAL DECK ELEVATION	1017.29	1017.16	1017.04	1016.92	1016.81	1016.67	1016.55	1016.43	1016.33	1016.25	1016.17	1016.10	1016.04
	B	* BOTTOM OF FLANGE ELEVATION (BEFORE REMOVAL)													
	C	* BOTTOM OF FLANGE ELEVATION (AFTER REMOVAL)													
	D	* REBOUND (FT)													
	E	WEIGHT OF EXISTING DECK (KLF/BEAM)	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34
	F	WEIGHT OF PROPOSED DECK (KLF/BEAM)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
	G	* DECK DEFLECTION (FT)													
	H	DECK THICKNESS (FT)	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
	J	* SCREED ELEVATION	-	-	-	-	-	-	-	-	-	-	-	-	-
	K	* TOP OF HAUNCH ELEVATION													
ELEVATION LINE 30	-	STATION	429+38.90	429+50.92	429+62.94	429+74.97	429+86.99	430+02.03	430+17.07	430+32.11	430+47.16	430+59.20	430+71.24	430+83.28	430+95.33
	A	FINAL DECK ELEVATION	1017.40	1017.27	1017.15	1017.03	1016.92	1016.79	1016.66	1016.54	1016.44	1016.35	1016.28	1016.21	1016.14
	B	* BOTTOM OF FLANGE ELEVATION (BEFORE REMOVAL)													
	C	* BOTTOM OF FLANGE ELEVATION (AFTER REMOVAL)													
	D	* REBOUND (FT)													
	E	WEIGHT OF EXISTING DECK (KLF/BEAM)	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34
	F	WEIGHT OF PROPOSED DECK (KLF/BEAM)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
	G	* DECK DEFLECTION (FT)													
	H	DECK THICKNESS (FT)	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
	J	* SCREED ELEVATION													
	K	* TOP OF HAUNCH ELEVATION	-	-	-	-	-	-	-	-	-	-	-	-	-

LEGEND:

* TO BE COMPLETED BY THE CONTRACTOR AS FOLLOWS:
D=C-B
G=Dx(F/E)
J=A+G
K=A+G-H

NOTES:

1. FOR ELEVATION LINE LOCATION PLAN, SEE SHEET 29/44.
2. FOR ELEVATION LINE LOCATION SECTION, SEE SHEET 30/44.
3. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.
4. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
5. 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.
6. SCREED ELEVATION CALCULATIONS SHALL USE DATA FROM THE NEAREST EXISTING BEAM.

DESIGN AGENCY
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SCREED & TOP OF HAUNCH ELEV. CALCULATIONS (EXIST. BEAMS)
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

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SCREED & TOP OF HAUNCH ELEVATION CALCULATIONS (EXIST. BEAMS)

		LOCATION	REAR ABUT.	SPAN 1			PIER 1	SPAN 2			PIER 2	SPAN 3			FRWD. ABUT.
				1/4 PT.	1/2 PT.	3/4 PT.		1/4 PT.	1/2 PT.	3/4 PT.		1/4 PT.	1/2 PT.	3/4 PT.	
ELEVATION LINE 7	-	STATION	429+38.72	429+50.74	429+62.76	429+74.78	429+86.81	430+01.84	430+16.88	430+31.92	430+46.97	430+59.01	430+71.05	430+83.09	430+95.14
	A	FINAL DECK ELEVATION	1017.41	1017.29	1017.16	1017.05	1016.93	1016.80	1016.68	1016.56	1016.45	1016.37	1016.29	1016.22	1016.15
	B	* BOTTOM OF FLANGE ELEVATION (BEFORE REMOVAL)													
	C	* BOTTOM OF FLANGE ELEVATION (AFTER REMOVAL)													
	D	* REBOUND (FT)													
	E	WEIGHT OF EXISTING DECK (KLF/BEAM)	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34
	F	WEIGHT OF PROPOSED DECK (KLF/BEAM)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
	G	* DECK DEFLECTION (FT)													
	H	DECK THICKNESS (FT)	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
	J	* SCREED ELEVATION													
	K	* TOP OF HAUNCH ELEVATION	-	-	-	-	-	-	-	-	-	-	-	-	-
ELEVATION LINE 8	-	STATION	429+38.34	429+50.37	429+62.40	429+74.43	429+86.46	430+01.50	430+16.53	430+31.57	430+46.61	430+58.63	430+70.66	430+82.69	430+94.72
	A	FINAL DECK ELEVATION	1017.39	1017.26	1017.14	1017.03	1016.91	1016.78	1016.66	1016.54	1016.43	1016.34	1016.27	1016.19	1016.13
	B	* BOTTOM OF FLANGE ELEVATION (BEFORE REMOVAL)													
	C	* BOTTOM OF FLANGE ELEVATION (AFTER REMOVAL)													
	D	* REBOUND (FT)													
	E	WEIGHT OF EXISTING DECK (KLF/BEAM)	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34
	F	WEIGHT OF PROPOSED DECK (KLF/BEAM)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
	G	* DECK DEFLECTION (FT)													
	H	DECK THICKNESS (FT)	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
	J	* SCREED ELEVATION	-	-	-	-	-	-	-	-	-	-	-	-	-
	K	* TOP OF HAUNCH ELEVATION													
ELEVATION LINE 9	-	STATION	429+36.44	429+48.46	429+60.48	429+72.50	429+84.53	429+99.55	430+14.58	430+29.61	430+44.64	430+56.66	430+68.68	430+80.70	430+92.72
	A	FINAL DECK ELEVATION	1017.27	1017.15	1017.02	1016.91	1016.79	1016.66	1016.53	1016.41	1016.30	1016.22	1016.14	1016.07	1016.00
	B	* BOTTOM OF FLANGE ELEVATION (BEFORE REMOVAL)													
	C	* BOTTOM OF FLANGE ELEVATION (AFTER REMOVAL)													
	D	* REBOUND (FT)													
	E	WEIGHT OF EXISTING DECK (KLF/BEAM)	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34
	F	WEIGHT OF PROPOSED DECK (KLF/BEAM)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
	G	* DECK DEFLECTION (FT)													
	H	DECK THICKNESS (FT)	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
	J	* SCREED ELEVATION	-	-	-	-	-	-	-	-	-	-	-	-	-
	K	* TOP OF HAUNCH ELEVATION													
ELEVATION LINE 20	-	STATION	429+25.36	429+37.34	429+49.32	429+61.30	429+73.28	429+88.25	430+03.23	430+18.20	430+33.17	430+45.15	430+57.13	430+69.11	430+81.09
	A	FINAL DECK ELEVATION	1017.31	1017.17	1017.04	1016.92	1016.80	1016.66	1016.52	1016.40	1016.28	1016.19	1016.10	1016.02	1015.95
	B	* BOTTOM OF FLANGE ELEVATION (BEFORE REMOVAL)													
	C	* BOTTOM OF FLANGE ELEVATION (AFTER REMOVAL)													
	D	* REBOUND (FT)													
	E	WEIGHT OF EXISTING DECK (KLF/BEAM)	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36
	F	WEIGHT OF PROPOSED DECK (KLF/BEAM)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
	G	* DECK DEFLECTION (FT)													
	H	DECK THICKNESS (FT)	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
	J	* SCREED ELEVATION	-	-	-	-	-	-	-	-	-	-	-	-	-
	K	* TOP OF HAUNCH ELEVATION													
ELEVATION LINE 21	-	STATION	429+23.47	429+35.44	429+47.42	429+59.39	429+71.36	429+86.32	430+01.29	430+16.25	430+31.22	430+43.19	430+55.16	430+67.14	430+79.11
	A	FINAL DECK ELEVATION	1017.47	1017.33	1017.20	1017.08	1016.96	1016.81	1016.68	1016.55	1016.43	1016.34	1016.25	1016.17	1016.10
	B	* BOTTOM OF FLANGE ELEVATION (BEFORE REMOVAL)													
	C	* BOTTOM OF FLANGE ELEVATION (AFTER REMOVAL)													
	D	* REBOUND (FT)													
	E	WEIGHT OF EXISTING DECK (KLF/BEAM)	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36
	F	WEIGHT OF PROPOSED DECK (KLF/BEAM)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
	G	* DECK DEFLECTION (FT)													
	H	DECK THICKNESS (FT)	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
	J	* SCREED ELEVATION	-	-	-	-	-	-	-	-	-	-	-	-	-
	K	* TOP OF HAUNCH ELEVATION													
ELEVATION LINE 22	-	STATION	429+22.89	429+34.84	429+46.80	429+58.76	429+70.72	429+85.67	430+00.63	430+15.59	430+30.56	430+42.53	430+54.51	430+66.49	430+78.47
	A	FINAL DECK ELEVATION	1017.52	1017.38	1017.25	1017.13	1017.01	1016.87	1016.73	1016.60	1016.48	1016.39	1016.30	1016.22	1016.15
	B	* BOTTOM OF FLANGE ELEVATION (BEFORE REMOVAL)													
	C	* BOTTOM OF FLANGE ELEVATION (AFTER REMOVAL)													
	D	* REBOUND (FT)													
	E	WEIGHT OF EXISTING DECK (KLF/BEAM)	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36
	F	WEIGHT OF PROPOSED DECK (KLF/BEAM)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
	G	* DECK DEFLECTION (FT)													
	H	DECK THICKNESS (FT)	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
	J	* SCREED ELEVATION													
	K	* TOP OF HAUNCH ELEVATION	-	-	-	-	-	-	-	-	-	-	-	-	-
ELEVATION LINE 23	-	STATION	429+22.70	429+34.66	429+46.61	429+58.57	429+70.53	429+85.49	430+00.45	430+15.41	430+30.37	430+42.35	430+54.32	430+66.30	430+78.28
	A	FINAL DECK ELEVATION	1017.51	1017.37	1017.24	1017.12	1017.00	1016.85	1016.72	1016.59	1016.47	1016.38	1016.29	1016.21	1016.13
	B	* BOTTOM OF FLANGE ELEVATION (BEFORE REMOVAL)													
	C	* BOTTOM OF FLANGE ELEVATION (AFTER REMOVAL)													
	D	* REBOUND (FT)													
	E	WEIGHT OF EXISTING DECK (KLF/BEAM)	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36
	F	WEIGHT OF PROPOSED DECK (KLF/BEAM)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
	G	* DECK DEFLECTION (FT)													
	H	DECK THICKNESS (FT)	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
	J	* SCREED ELEVATION													
	K	* TOP OF HAUNCH ELEVATION	-	-	-	-	-	-	-	-	-	-	-	-	-

LEGEND:

* TO BE COMPLETED BY THE CONTRACTOR AS FOLLOWS:
D=C-B
G=Dx(F/E)
J=A+G
K=A+G-H

NOTES:

1. FOR ELEVATION LINE LOCATION PLAN, SEE SHEET 29/44.
2. FOR ELEVATION LINE LOCATION SECTION, SEE SHEET 30/44.
3. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.
4. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
5. 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.
6. SCREED ELEVATION CALCULATIONS SHALL USE DATA FROM THE NEAREST EXISTING BEAM.

DESIGN AGENCY
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DESIGNED MOJ | DRAWN MOJ | REVIEWED DGN | DATE 1-19-21
CHECKED RHC | REVISED | STRUCTURE FILE NUMBER 7702558/7702582

SCREED & TOP OF HAUNCH ELEV. CALCULATIONS (EXIST. BEAMS)
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

34/44

1214
1288

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SCREED & TOP OF HAUNCH ELEVATION CALCULATIONS (EXIST. BEAMS)

		LOCATION	REAR ABUT.	SPAN 1			PIER 1	SPAN 2			PIER 2	SPAN 3			FRWD. ABUT.
				1/4 PT.	1/2 PT.	3/4 PT.		1/4 PT.	1/2 PT.	3/4 PT.		1/4 PT.	1/2 PT.	3/4 PT.	
ELEVATION LINE 24	-	STATION	429+21.58	429+33.55	429+45.51	429+57.48	429+69.44	429+84.40	429+99.36	430+14.31	430+29.27	430+41.23	430+53.20	430+65.16	430+77.13
	A	FINAL DECK ELEVATION	1017.44	1017.30	1017.17	1017.05	1016.93	1016.79	1016.65	1016.52	1016.40	1016.31	1016.22	1016.14	1016.06
	B	* BOTTOM OF FLANGE ELEVATION (BEFORE REMOVAL)													
	C	* BOTTOM OF FLANGE ELEVATION (AFTER REMOVAL)													
	D	* REBOUND (FT)													
	E	WEIGHT OF EXISTING DECK (KLF/BEAM)	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36
	F	WEIGHT OF PROPOSED DECK (KLF/BEAM)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
	G	* DECK DEFLECTION (FT)													
	H	DECK THICKNESS (FT)	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
	J	* SCREED ELEVATION	-	-	-	-	-	-	-	-	-	-	-	-	-
	K	* TOP OF HAUNCH ELEVATION													
ELEVATION LINE 25	-	STATION	429+19.70	429+31.66	429+43.62	429+55.57	429+67.53	429+82.48	429+97.42	430+12.37	430+27.32	430+39.28	430+51.23	430+63.19	430+75.15
	A	FINAL DECK ELEVATION	1017.32	1017.19	1017.06	1016.93	1016.81	1016.67	1016.53	1016.40	1016.28	1016.19	1016.10	1016.01	1015.94
	B	* BOTTOM OF FLANGE ELEVATION (BEFORE REMOVAL)													
	C	* BOTTOM OF FLANGE ELEVATION (AFTER REMOVAL)													
	D	* REBOUND (FT)													
	E	WEIGHT OF EXISTING DECK (KLF/BEAM)	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36
	F	WEIGHT OF PROPOSED DECK (KLF/BEAM)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
	G	* DECK DEFLECTION (FT)													
	H	DECK THICKNESS (FT)	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
	J	* SCREED ELEVATION	-	-	-	-	-	-	-	-	-	-	-	-	-
	K	* TOP OF HAUNCH ELEVATION													
ELEVATION LINE 26	-	STATION	429+17.82	429+29.77	429+41.72	429+53.67	429+65.62	429+80.56	429+95.50	430+10.43	430+25.37	430+37.32	430+49.27	430+61.22	430+73.17
	A	FINAL DECK ELEVATION	1017.21	1017.07	1016.94	1016.81	1016.69	1016.55	1016.41	1016.28	1016.16	1016.06	1015.97	1015.89	1015.81
	B	* BOTTOM OF FLANGE ELEVATION (BEFORE REMOVAL)													
	C	* BOTTOM OF FLANGE ELEVATION (AFTER REMOVAL)													
	D	* REBOUND (FT)													
	E	WEIGHT OF EXISTING DECK (KLF/BEAM)	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36
	F	WEIGHT OF PROPOSED DECK (KLF/BEAM)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
	G	* DECK DEFLECTION (FT)													
	H	DECK THICKNESS (FT)	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
	J	* SCREED ELEVATION	-	-	-	-	-	-	-	-	-	-	-	-	-
	K	* TOP OF HAUNCH ELEVATION													
ELEVATION LINE 27	-	STATION	429+15.94	429+27.88	429+39.82	429+51.77	429+63.71	429+78.64	429+93.57	430+08.50	430+23.43	430+35.37	430+47.31	430+59.26	430+71.20
	A	FINAL DECK ELEVATION	1017.09	1016.95	1016.82	1016.70	1016.57	1016.43	1016.29	1016.16	1016.03	1015.94	1015.85	1015.77	1015.69
	B	* BOTTOM OF FLANGE ELEVATION (BEFORE REMOVAL)													
	C	* BOTTOM OF FLANGE ELEVATION (AFTER REMOVAL)													
	D	* REBOUND (FT)													
	E	WEIGHT OF EXISTING DECK (KLF/BEAM)	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36
	F	WEIGHT OF PROPOSED DECK (KLF/BEAM)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
	G	* DECK DEFLECTION (FT)													
	H	DECK THICKNESS (FT)	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
	J	* SCREED ELEVATION	-	-	-	-	-	-	-	-	-	-	-	-	-
	K	* TOP OF HAUNCH ELEVATION													
ELEVATION LINE 28	-	STATION	429+14.06	429+26.00	429+37.93	429+49.87	429+61.80	429+76.72	429+91.64	430+06.56	430+21.48	430+33.42	430+45.36	430+57.29	430+69.23
	A	FINAL DECK ELEVATION	1016.97	1016.84	1016.71	1016.58	1016.45	1016.31	1016.17	1016.04	1015.91	1015.82	1015.73	1015.64	1015.56
	B	* BOTTOM OF FLANGE ELEVATION (BEFORE REMOVAL)													
	C	* BOTTOM OF FLANGE ELEVATION (AFTER REMOVAL)													
	D	* REBOUND (FT)													
	E	WEIGHT OF EXISTING DECK (KLF/BEAM)	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36
	F	WEIGHT OF PROPOSED DECK (KLF/BEAM)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
	G	* DECK DEFLECTION (FT)													
	H	DECK THICKNESS (FT)	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
	J	* SCREED ELEVATION	-	-	-	-	-	-	-	-	-	-	-	-	-
	K	* TOP OF HAUNCH ELEVATION													
ELEVATION LINE 29	-	STATION	429+13.83	429+25.75	429+37.67	429+49.60	429+61.52	429+76.43	429+91.34	430+06.26	430+21.18	430+33.12	430+45.06	430+57.00	430+68.95
	A	FINAL DECK ELEVATION	1016.96	1016.82	1016.69	1016.56	1016.44	1016.29	1016.15	1016.02	1015.89	1015.80	1015.71	1015.62	1015.54
	B	* BOTTOM OF FLANGE ELEVATION (BEFORE REMOVAL)													
	C	* BOTTOM OF FLANGE ELEVATION (AFTER REMOVAL)													
	D	* REBOUND (FT)													
	E	WEIGHT OF EXISTING DECK (KLF/BEAM)	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36
	F	WEIGHT OF PROPOSED DECK (KLF/BEAM)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
	G	* DECK DEFLECTION (FT)													
	H	DECK THICKNESS (FT)	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
	J	* SCREED ELEVATION													
	K	* TOP OF HAUNCH ELEVATION	-	-	-	-	-	-	-	-	-	-	-	-	-

LEGEND:

* TO BE COMPLETED BY THE CONTRACTOR AS FOLLOWS:
D=C-B
G=Dx(F/E)
J=A+G
K=A+G-H

NOTES:

1. FOR ELEVATION LINE LOCATION PLAN, SEE SHEET 29/44.
2. FOR ELEVATION LINE LOCATION SECTION, SEE SHEET 30/44.
3. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.
4. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
5. 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.
6. SCREED ELEVATION CALCULATIONS SHALL USE DATA FROM THE NEAREST EXISTING BEAM.

DESIGN AGENCY
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520 South Main Street, Akron, OH 44311 330.572.2100
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DESIGNED MOJ | DRAWN MOJ | REVIEWED DGN | DATE 1-19-21
CHECKED RHC | REVISED | STRUCTURE FILE NUMBER 7702558/7702582

SCREED & TOP OF HAUNCH ELEV. CALCULATIONS (EXIST. BEAMS)
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

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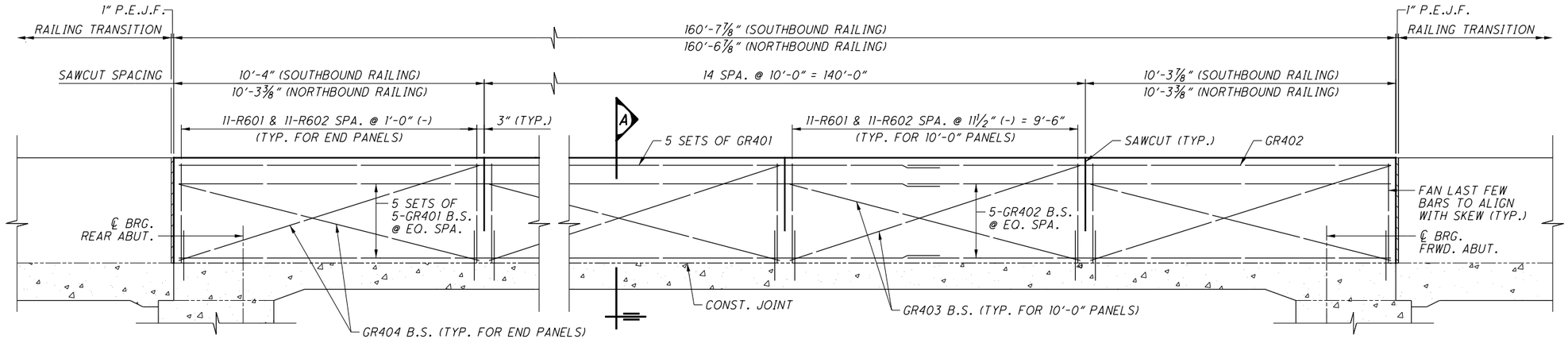
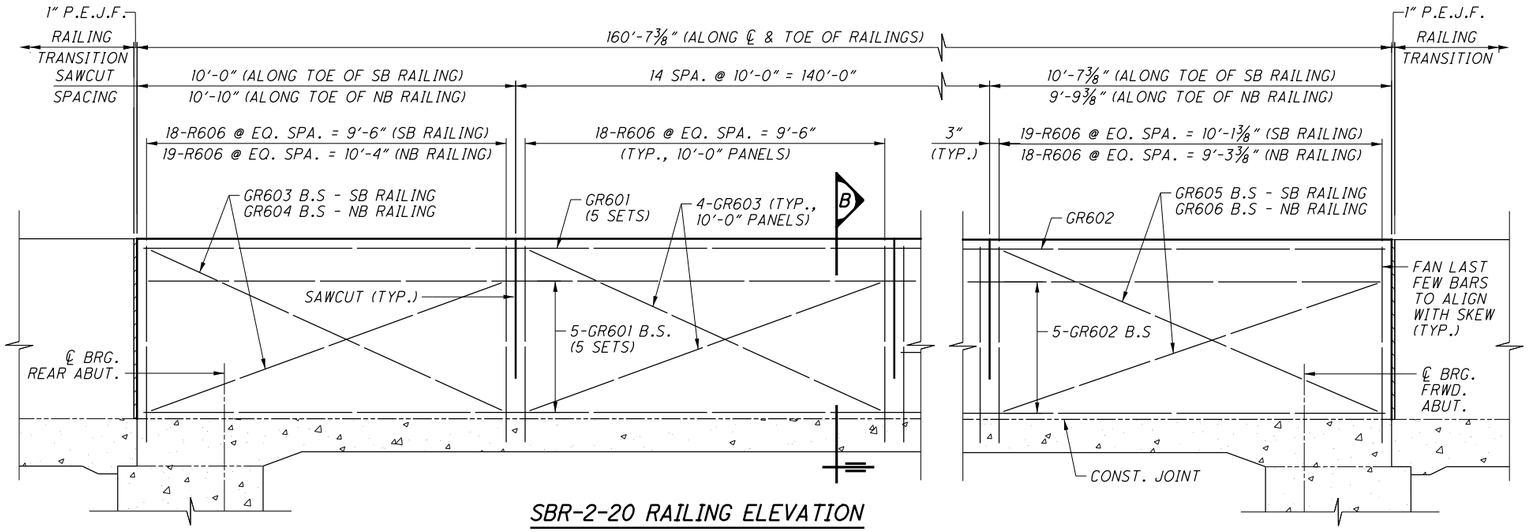
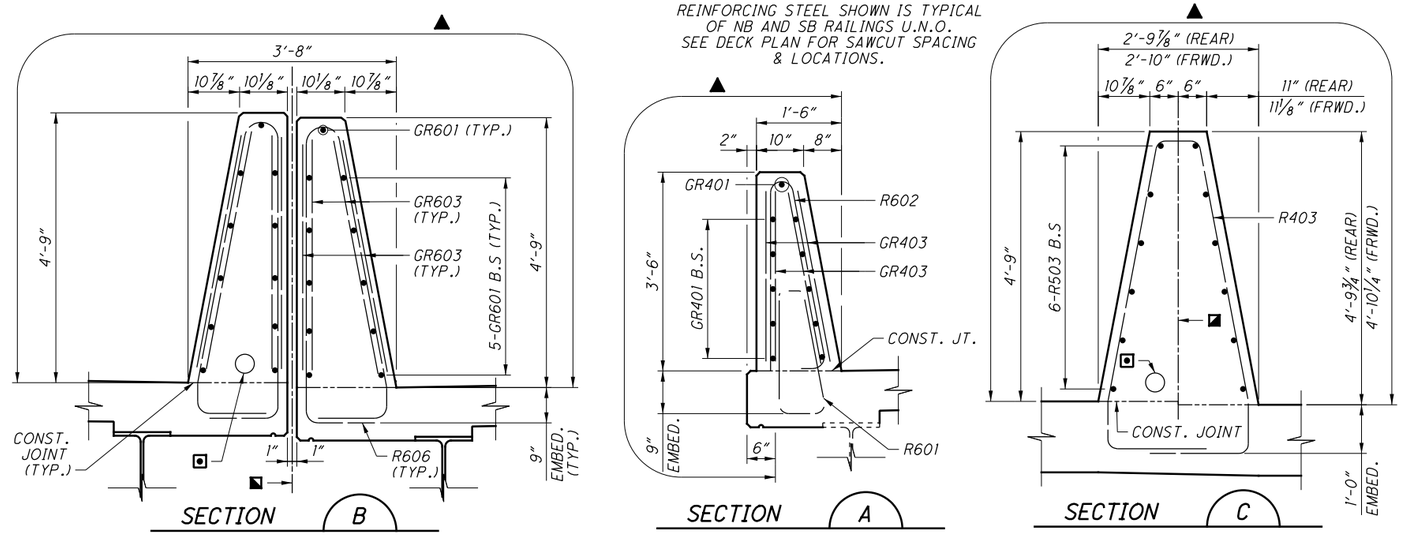


SBR-1-20 RAILING ELEVATION



SBR-2-20 RAILING ELEVATION

REINFORCING STEEL SHOWN IS TYPICAL OF NB AND SB RAILINGS U.N.O. SEE DECK PLAN FOR SAWCUT SPACING & LOCATIONS.



LEGEND:

- ◪ ℄ SURVEY AND CONST. I.R. 77
- ▲ ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
- ⊡ 4" MULTI-CELL CONDUIT (SB RAILING), 725.20 (TO BE INCLUDED WITH THE ITS QUANTITIES FOR PAYMENT)

NOTES:

1. FOR ADDITIONAL INFORMATION, SEE STANDARD DRAWINGS AS-2-15, SBR-1-20, & SBR-2-20.
2. FOR RAILING TRANSITION DETAILS AND LOCATION OF SECTION C, SEE SHEET 37/44.
3. REINFORCEMENT DESIGNATED WITH A "GR" PREFIX ARE GFRP RAILING BARS.
4. MINIMUM HORIZONTAL REINFORCING LAP LENGTHS ARE AS FOLLOWS:

NO. 4 GFRP BARS	1'-1"
NO. 6 GFRP BARS	1'-8"

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DESIGNED MOJ | DRAWN MOJ | CHECKED RHC | REVIEWED DGN | DATE 1-19-21 | REVISED | STRUCTURE FILE NUMBER 7702558/7702582

BRIDGE RAILING DETAILS
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

36/44

1216
1288

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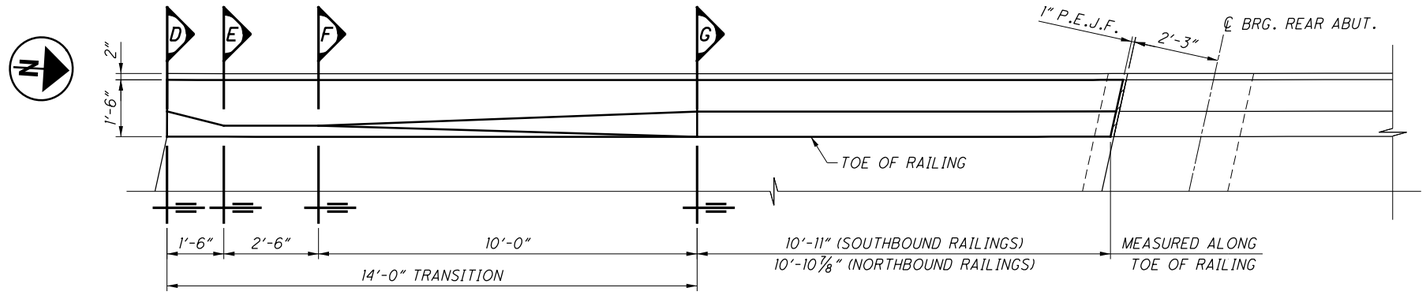
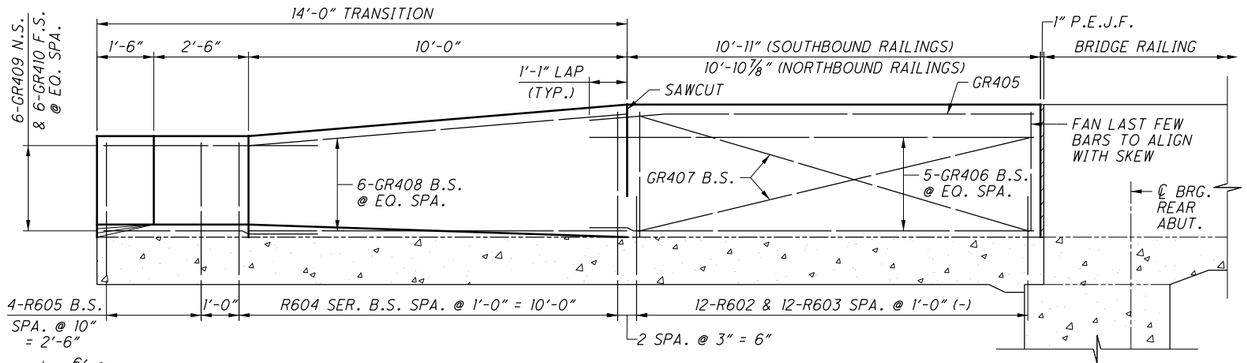
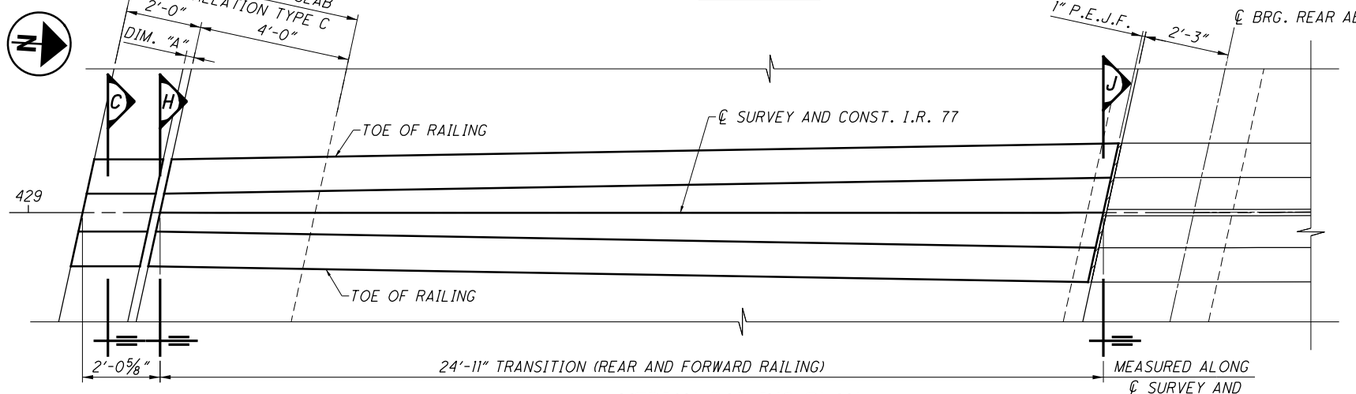


EXTERIOR RAILING PLAN

SOUTHBOUND REAR RAILING SHOWN. OTHERS SIMILAR.

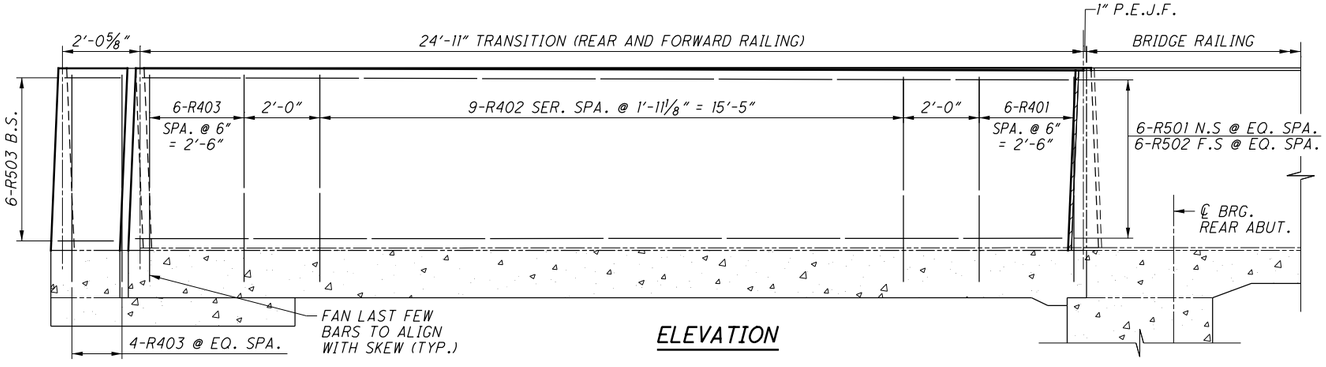


ELEVATION

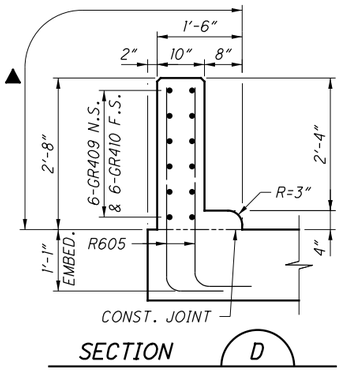


MEDIAN RAILING PLAN

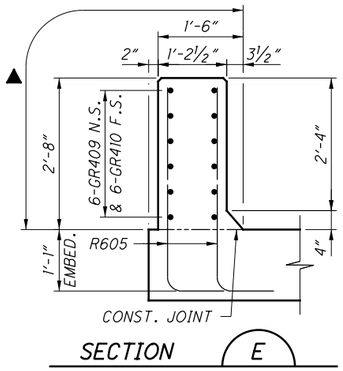
REAR RAILING SHOWN. FORWARD RAILING SIMILAR.



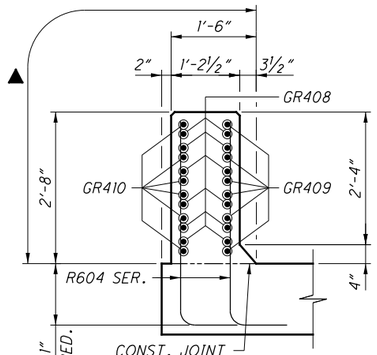
ELEVATION



SECTION D



SECTION E



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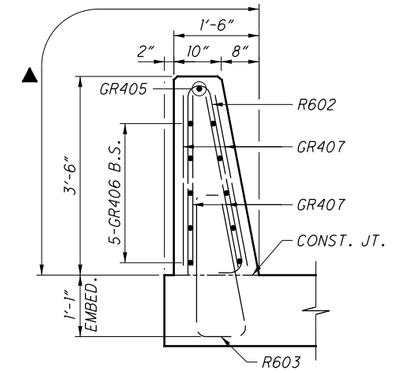

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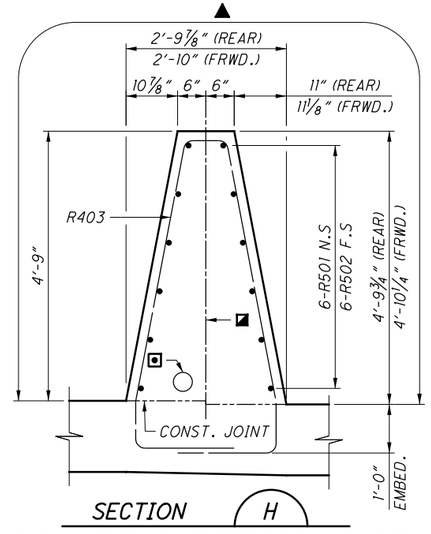
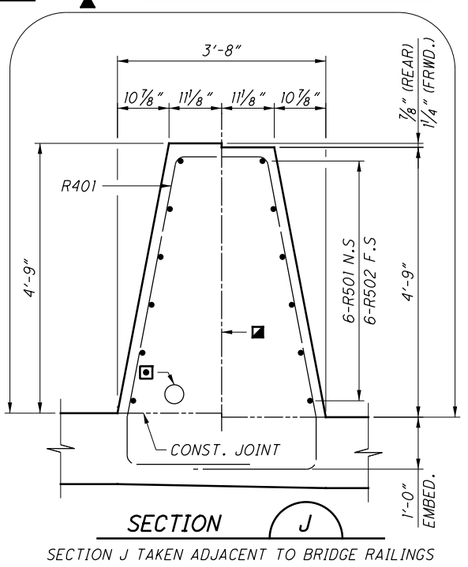


SECTION H

SECTION H TAKEN ADJACENT TO ROADWAY BARRIER



SECTION J

SECTION J TAKEN ADJACENT TO BRIDGE RAILINGS

NOTES:

1. FOR ADDITIONAL NOTES & DETAILS AND SECTION C, SEE SHEET 36/44.
2. FOR DIM. "A", SEE STANDARD DRAWING AS-2-15.
3. THE CONTRACTOR SHALL TRANSITION THE HORIZONTAL AND VERTICAL LOCATION OF THE CONDUITS THROUGHOUT THE TRANSITION SECTION TO MATCH THE LOCATION IN THE ADJACENT ROADWAY BARRIER.
4. GR409 BARS MAY BE PROVIDED AS EPOXY COATED STEEL REINFORCEMENT IF A GFRP FABRICATED SHAPE IS NOT AVAILABLE.

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MOJ	MOJ	DGN	1-19-21

CHECKED	REVISED	STRUCTURE FILE NUMBER
RHC		7702558/7702582

RAILING TRANSITION DETAILS
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

37 / 44

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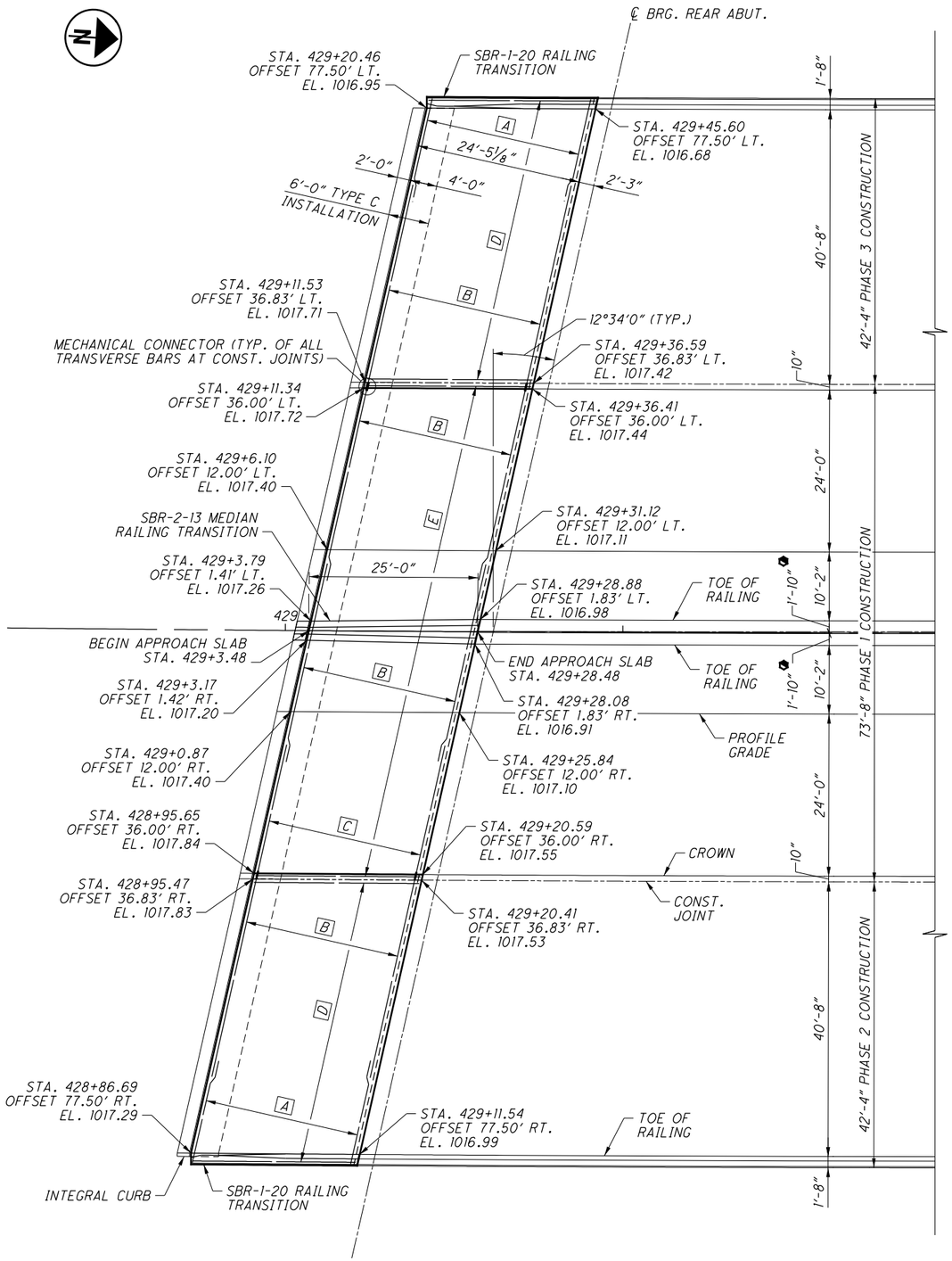

PLAN

LEGEND:

◆ MEASURED TO ℄ SURVEY AND CONST. I.R. 77

A 18-AS502 SPA. @ 1'-5" (-) (TOP)
39-AS502 SPA. @ 7½" (+) (BOT.)

B 18-AS501 SPA. @ 1'-5" (-) (TOP)
39-AS501 SPA. @ 7½" (+) (BOT.)

C 18-AS503 SPA. @ 1'-5" (-) (TOP)
39-AS503 SPA. @ 7½" (+) (BOT.)

D 29-AS504 SPA. @ 1'-5¾" (±) (TOP)
74-AS1001 SPA. @ 7" (-) (BOT.)

E 50-AS504 SPA. @ 1'-6" (±) (TOP)
129-AS1001 SPA. @ 7" (-) (BOT.)

NOTES:

1. STATIONS AND OFFSETS ARE GIVEN TO ℄ SURVEY AND CONST. I.R. 77 UNLESS NOTED OTHERWISE.
2. FOR ADDITIONAL INFORMATION, SEE STANDARD DRAWINGS AS-1-15 AND AS-2-15.
3. REINFORCING STEEL AND CONCRETE FOR RAILING TRANSITIONS SHALL BE PAID FOR UNDER SEPARATE ITEMS. FOR DETAILS, SEE SHEET 37/44.
4. TRANSVERSE REINFORCING STEEL SHALL PROTRUDE A MINIMUM OF 2'-6" FROM PHASE 1 CONSTRUCTION.
5. MINIMUM REINFORCING STEEL LAP LENGTHS ARE AS FOLLOWS:

NO. 5 BARS 2'-6"

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APPROACH SLAB DETAILS
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

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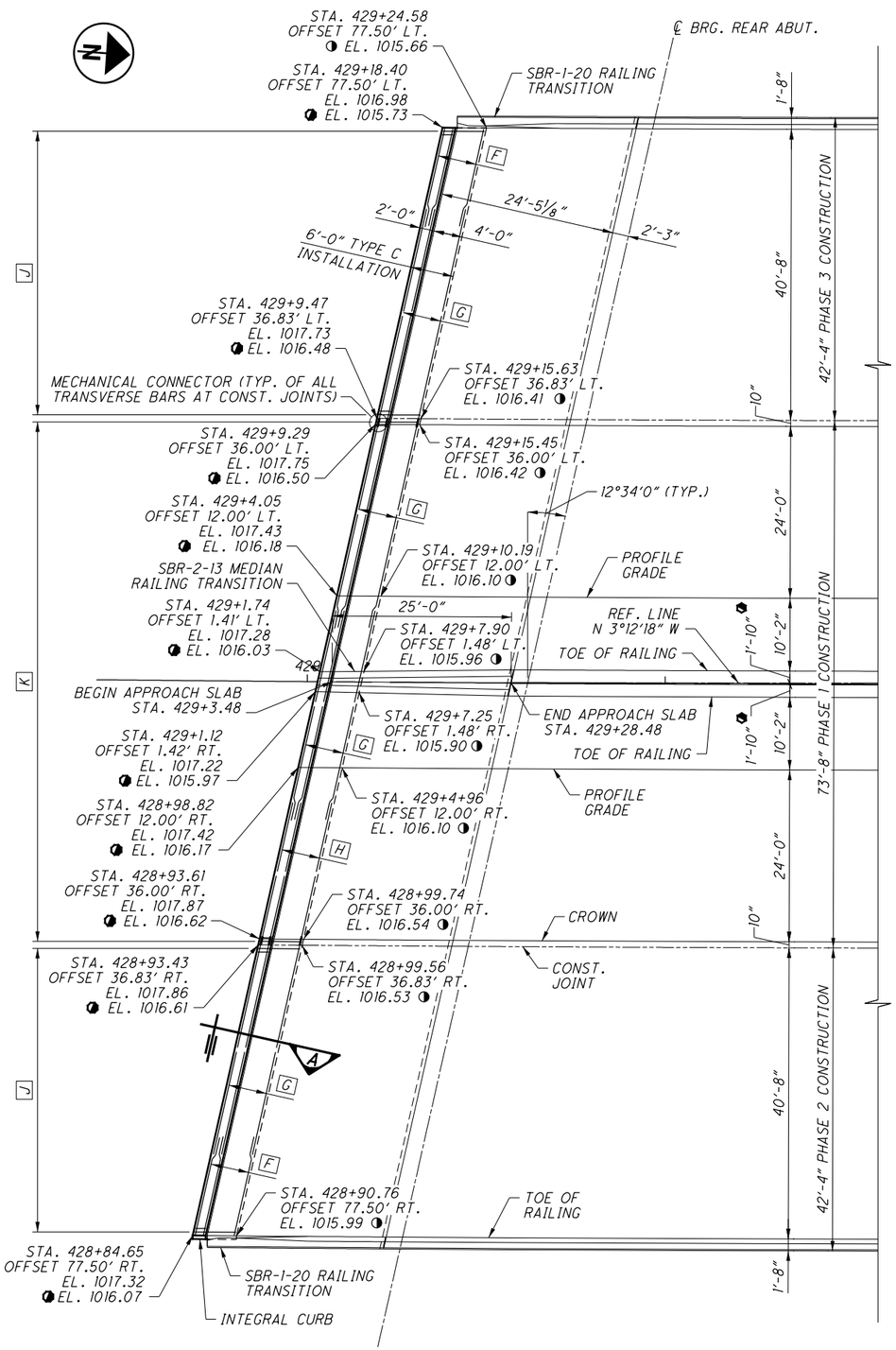
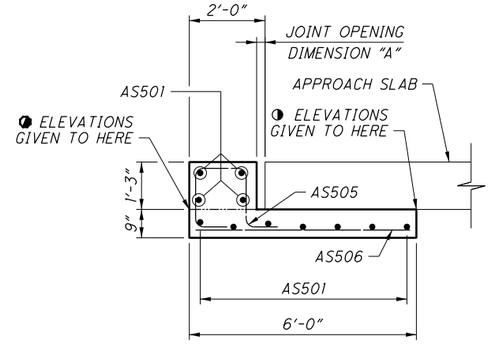


PLAN



SECTION A

ARMORLESS PREFORMED JOINT SEAL NOT SHOWN

LEGEND:

- ◖ MEASURED TO ℄ SURVEY AND CONST. I.R. 77
- F 2-AS507 (TOP & MIDDLE) 7-AS507 @ EQUAL SPA. (BOT.)
- G 2-AS501 (TOP & MIDDLE) 7-AS501 @ EQUAL SPA. (BOT.)
- H 2-AS503 (TOP & MIDDLE) 7-AS503 @ EQUAL SPA. (BOT.)
- J 41-AS505 SPA. @ 11¾" (+) (TOP) 41-AS506 SPA. @ 11¾" (+) (BOT.)
- K 75-AS505 SPA. @ 1'-0" (-) (TOP) 75-AS506 SPA. @ 1'-0" (-) (BOT.)

NOTES:

1. STATIONS AND OFFSETS ARE GIVEN TO ℄ SURVEY AND CONST. I.R. 77 UNLESS NOTED OTHERWISE.
2. FOR ADDITIONAL INFORMATION AND JOINT OPENING DIMENSION "A", SEE STANDARD DRAWING AS-2-15.
3. FOR THE RAILING TRANSITIONS, REINFORCING STEEL SHALL BE PAID FOR UNDER ITEM 509 - EPOXY COATED REINFORCING STEEL AND CONCRETE SHALL BE PAID FOR UNDER ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET). FOR DETAILS, SEE SHEET 37/44.
4. TRANSVERSE REINFORCING STEEL SHALL PROTRUDE A MINIMUM OF 2'-6" FROM PHASE I CONSTRUCTION.
5. MINIMUM REINFORCING STEEL LAP LENGTHS ARE AS FOLLOWS:

   NO. 5 BARS 2'-6"

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DESIGNED	CHECKED	
MOJ	RHC	

APPROACH SLAB INSTALLATION DETAILS

BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

39/44

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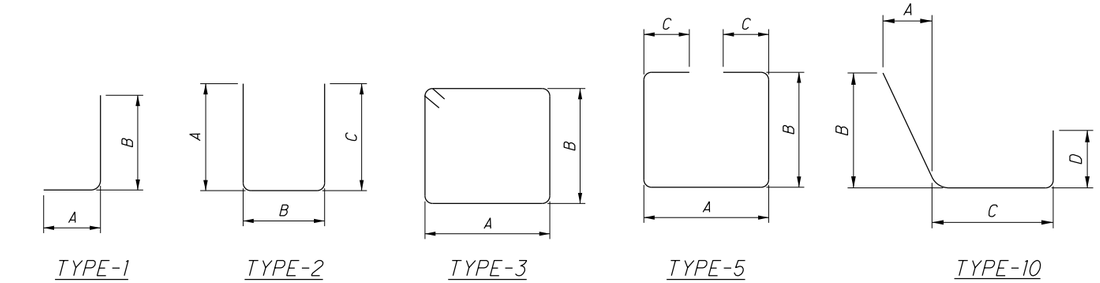
MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS				
	REAR	FORWARD	TOTAL				A	B	C	D	INC.
ABUTMENT BARS											
A501	30	31	61	17'-7"	1,119	3	5'-11"	2'-7"			
A502	2	2	4	17'-11"	75	3	6'-1"	2'-7"			
A503	30	31	61	15'-2"	965	2	6'-0"	3'-5"	6'-0"		
A504	30	31	61	11'-0"	700	2	3'-11"	3'-5"	3'-11"		
A505	2	2	4	15'-3"	64	2	6'-0"	3'-6"	6'-0"		
A506	2	2	4	11'-1"	46	2	3'-11"	3'-6"	3'-11"		
A507	8	6	14	10'-4"	151	2	3'-7"	3'-5"	3'-7"		
A508	1 SER. OF 4		1 SER. OF 4	20'-1" TO 21'-5"	87	ST					0'-5 3/8"
A509	1 SER. OF 4		1 SER. OF 4	20'-4" TO 21'-8"	88	ST					0'-5 3/8"
A510	4		4	23'-0"	96	ST					
A511	4		4	22'-3"	93	ST					
A512	4		4	23'-8"	99	ST					
A513	4		4	24'-5"	102	ST					
A514		1 SER. OF 4	1 SER. OF 4	21'-8" TO 23'-0"	93	ST					0'-5 3/8"
A515		1 SER. OF 4	1 SER. OF 4	19'-1" TO 20'-5"	82	ST					0'-5 3/8"
A516		4	4	24'-0"	100	ST					
A517		4	4	23'-3"	97	ST					
A518		4	4	22'-9"	95	ST					
A519		4	4	23'-5"	98	ST					
A520	2 SER. OF 6		2 SER. OF 6	3'-10" TO 8'-10"	79	2	1'-4" TO 3'-10"	1'-5"	1'-4" TO 3'-10"		1'-0"
A521	5	5	10	9'-2"	96	2	4'-0"	1'-5"	4'-0"		
A522	1		1	7'-11"	8	ST					
A523	1		1	7'-8"	8	ST					
A524	1 SER. OF 3		1 SER. OF 3	3'-7" TO 7'-3"	17	ST					1'-10"
A525	1 SER. OF 3		1 SER. OF 3	3'-4" TO 7'-0"	16	ST					1'-10"
A526	1		1	9'-3"	10	13	8"	3'-2"	5'-10"	2'-0"	
A527	1		1	9'-0"	9	13	8"	3'-2"	5'-10"	1'-9"	
A528	1		1	8'-7"	9	ST					
A529	1		1	8'-10"	9	ST					
A530	1 SER. OF 3		1 SER. OF 3	4'-3" TO 7'-11"	19	ST					1'-10"
A531	1 SER. OF 3		1 SER. OF 3	4'-6" TO 8'-2"	20	ST					1'-11"
A532	1		1	9'-11"	10	13	8"	3'-2"	5'-10"	2'-8"	
A533	1		1	10'-2"	11	13	8"	3'-2"	5'-10"	2'-11"	
A534		1	1	9'-2"	10	ST					

BAR BENDING DIAGRAMS



NOTES:

1. BAR DIMENSIONS ARE OUT-TO-OUT UNLESS NOTED OTHERWISE.
2. ALL BARS ARE EPOXY COATED.
3. WHEN NO BAR LEG DIMENSIONS ARE SHOWN, IT INDICATES A STANDARD BEND.
4. BAR SIZE AND LOCATION ARE INDICATED IN THE BAR MARK. THE FIRST ALPHABETICAL LETTER(S) INDICATES LOCATION. THE NEXT DIGIT OF THE THREE DIGIT SERIES AND THE NEXT TWO DIGITS OF THE FOUR DIGIT SERIES INDICATE BAR SIZE NUMBER.

EXAMPLES: GR401 — NO. 4 SIZE BAR, GFRP RAILING

AS1001 — NO. 10 SIZE BAR, APPROACH SLAB

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REINFORCING BAR LISTS
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

40/44

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MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS				
	REAR	FORWARD	TOTAL				A	B	C	D	INC.
ABUTMENT BARS (CONTINUED)											
A535		1	1	8'-11"	9	ST					
A536		1 SER. OF 3	1 SER. OF 3	4'-7" TO 8'-6"	20	ST					1'-11 1/2"
A537		1 SER. OF 3	1 SER. OF 3	4'-3" TO 8'-3"	20	ST					2'-0"
A538		1	1	10'-7"	11	13	8"	3'-3"	6'-5"	2'-9"	
A539		1	1	10'-3"	11	13	8"	3'-3"	6'-5"	2'-5"	
A540		2 SER. OF 6	2 SER. OF 6	3'-10" TO 8'-4"	76	2	1'-4" TO 3'-7"	1'-5"	1'-4" TO 3'-7"		0'-10 3/4"
A541		1	1	7'-5"	8	ST					
A542		1	1	7'-9"	8	ST					
A543		1 SER. OF 3	1 SER. OF 3	2'-9" TO 6'-9"	15	ST					2'-0"
A544		1 SER. OF 3	1 SER. OF 3	3'-1" TO 7'-1"	16	ST					2'-0"
A545		1	1	8'-8"	9	13	8"	3'-3"	6'-4"	11"	
A546		1	1	9'-0"	9	13	8"	3'-3"	6'-4"	1'-3"	
A601	48	46	94	3'-6"	494	ST					
A602	38	38	76	2'-0"	228	ST					
A801	1 SER. OF 4		1 SER. OF 4	20'-1" TO 21'-5"	222	ST					0'-5 3/8"
A802	1 SER. OF 4		1 SER. OF 4	20'-4" TO 21'-8"	224	ST					0'-5 3/8"
A803	1 SER. OF 4		1 SER. OF 4	22'-3" TO 23'-0"	242	ST					0'-3"
A804	1 SER. OF 4		1 SER. OF 4	23'-8" TO 24'-5"	257	ST					0'-3"
A805		1 SER. OF 4	1 SER. OF 4	21'-8" TO 23'-0"	239	ST					0'-5 3/8"
A806		1 SER. OF 4	1 SER. OF 4	19'-1" TO 20'-5"	211	ST					0'-5 3/8"
A807		1 SER. OF 4	1 SER. OF 4	23'-3" TO 24'-0"	252	ST					0'-3"
A808		1 SER. OF 4	1 SER. OF 4	22'-8" TO 23'-5"	246	ST					0'-3"
TOTAL					7,408	LBS					

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS		
	REAR	FORWARD	TOTAL				A	B	C
DIAPHRAGM GUIDE BARS									
DG601	10	10	20	15'-0"	451	3	3'-6"	3'-8 1/2"	
DG801	14	14	28	13'-8"	1,022	5	2'-8"	3'-7"	2'-4"
TOTAL					1,473	LBS			

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS				
	PIER 1	PIER 2	TOTAL				A	B	C	D	R
PIER BARS											
P401	91	91	182	3'-6"	426	9	6"	6"	2'-2"	10"	
P501	38	38	76	37'-0"	2,933	ST					
P502	40	40	80	9'-7"	800	24	2'-2"	3'-1"			1'-1"
P503	62	62	124	8'-5"	1,089	2	3'-3"	2'-2"	3'-3"		
P504	44	44	88	7'-8"	704	ST					
P601	32	32	64	9'-0"	865	17	7'-8"				
P602	12	12	24	10'-10"	391	33	2'-2"	2'-8"	1'-0"		
P603	8	8	16	4'-1"	98	1	1'-7"	2'-8"			
P801	4	4	8	37'-0"	790	ST					
P802	12	12	24	43'-6"	2,787	17	41'-8"				
P901	130	130	260	18'-8"	16,501	ST					
P902	130	130	260	9'-10"	8,693	1	1'-7"	8'-6"			
P903	12	12	24	41'-8"	3,400	ST					
P904	20	20	40	4'-0"	544	1	1'-7"	2'-8"			
TOTAL					40,021	LBS					

NOTES:

1. DIAPHRAGM GUIDE BARS ARE SHOWN FOR REFERENCE ONLY. PAYMENT FOR THESE BARS SHALL BE INCLUDED IN ITEM 511 - SEMI-INTEGRAL DIAPHRAGM GUIDE.
2. FOR ADDITIONAL NOTES AND BAR BENDING DIAGRAMS, SEE SHEET 40/44.

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REINFORCING BAR LISTS
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

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MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS					
					A	B	C	D	E	INC.
DECK SLAB BARS										
S401	940	30'-0"	18,838	ST						
S402	188	20'-0"	2,512	ST						
S501	309	24'-2"	7,789	16	23'-7"					
◑ S502	309	16'-6"	5,318	ST						
S503	309	27'-10"	8,970	ST						
◑ S504	309	13'-1"	4,217	ST						
S505	309	22'-11"	7,386	16	22'-4"					
◑ S506	309	17'-8"	5,694	ST						
S507	309	26'-5"	8,514	ST						
◑ S508	309	14'-3"	4,593	ST						
◑ S509	309	20'-11"	6,741	ST						
S510	309	25'-5"	8,191	16	24'-10"					
◑ S511	309	16'-9"	5,398	ST						
S512	309	29'-10"	9,615	ST						
◑ S513	309	19'-6"	6,285	ST						
S514	309	26'-10"	8,648	16	26'-3"					
◑ S515	309	24'-5"	7,869	ST						
S516	309	22'-2"	7,144	ST						
S517	1,020	30'-0"	31,916	ST						
S518	204	22'-6"	4,787	ST						
S519	618	7'-9"	4,995	16	7'-2"					
S520	309	6'-10"	2,202	16	6'-3"					
S521	309	7'-11"	2,551	16	7'-4"					
S601	736	18'-5"	20,359	ST						
S801	8	28'-0"	598	ST						
◑ S802	8	20'-10"	445	ST						
◑ S803	8	19'-0"	406	ST						
S804	8	24'-0"	513	ST						
S805	8	24'-9"	529	ST						
◑ S806	8	18'-3"	390	ST						
◑ S807	8	22'-2"	473	ST						
S808	8	26'-10"	573	ST						
TOTAL			204,459	LBS						

MARK	NUMBER			LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS				
	REAR	FORWARD	TOTAL				A	B	C	D	INC.
END DIAPHRAGM BARS											
D401	4	4	8	3'-5"	18	ST					
D501	118	118	236	7'-3"	1,785	2	2'-5"	2'-8"	2'-5"		
D502	114	116	230	8'-3"	1,979	2	2'-6"	3'-6"	2'-6"		
D503	58	56	114	8'-7"	1,021	2	2'-8"	3'-6"	2'-8"		
D504	64	64	128	9'-1"	1,213	2	2'-11"	3'-6"	2'-11"		
D505	4	4	8	6'-5"	54	2	2'-0"	2'-8"	2'-0"		
D506	8	8	16	5'-1"	85	2	11"	3'-6"	11"		
D801	10	10	20	28'-0"	1,495	ST					
◑ D802	10	10	20	20'-10"	1,113	ST					
◑ D803	6	6	12	19'-0"	609	ST					
◑ D804	4	4	8	21'-7"	461	ST					
D805	2	2	4	8'-5"	90	ST					
D806	8	8	16	6'-0"	256	18	3'-9"	11"	1'-0"		
D807	8	8	16	9'-6"	406	10	4'-10"	6"	3'-7"	1'-4"	
D808	4	4	8	24'-0"	513	ST					
D809	2	2	4	12'-1"	129	ST					
D810	4	4	8	13'-3"	283	1	1'-5"	12'-1"			
D811	4	4	8	13'-7"	290	1	1'-5"	12'-5"			
D812	2	2	4	12'-5"	133	ST					
D813	4	4	8	24'-9"	529	ST					
D814	2	2	4	9'-0"	96	ST					
◑ D815	4	4	8	21'-4"	456	ST					
◑ D816	6	6	12	18'-3"	585	ST					
◑ D817	10	10	20	22'-2"	1,184	ST					
D818	10	10	20	26'-10"	1,433	ST					
D819	118	118	236	4'-11"	3,098	18	2'-8"	1'-0"	1'-0"		
TOTAL					19,314	FT					

LEGEND:

◑ BARS THAT REQUIRE MECHANICAL CONNECTORS

NOTES:

1. FOR NOTES AND BAR BENDING DIAGRAMS, SEE SHEET 40/44.

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REINFORCING BAR LISTS
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MARK	TOTAL	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC.
RAILING BARS											
R401	12	16'-6"	132	36	1'-0"	1'-2"	3'-3"	1'-4"	4'-6"		
R402	2 SER. OF 9	15'-5" TO 16'-7"	192	36	1'-0"	1'-0"	2'-7" TO 3'-2"	9" TO 1'-4"	4'-6"		1 3/4"
R403	16	15'-3"	163	36	1'-0"	1'-0"	2'-6"	8"	4'-6"		
R501	12	24'-5"	306	ST							
R502	12	24'-8"	309	ST							
R503	24	1'-5"	35	ST							
R601	352	7'-8"	4,053	200	9 1/2"	2'-2"	7"	1'-0"			
R602	400	7'-1"	4,256	23	6"	3'-3"	3'-3"			2"	
R603	48	8'-5"	607	200	9 1/2"	2'-6"	7"	1'-0"			
R604	8 SER. OF 11	4'-5" TO 5'-3"	639	1	1'-0"	3'-7" TO 4'-5"					1"
R605	32	4'-5"	212	1	1'-0"	3'-7"					
R606	578	13'-0"	11,286	201	10"	10"	5'-4"			2"	
TOTAL			22,190	LBS							

MARK	TOTAL	LENGTH (EACH)	LENGTH (TOTAL) (FEET)	TYPE	DIMENSIONS				
					A	B	C	D	E
RAILING BARS - GFRP REINFORCING									
GR401	110	30'-0"	3,300	ST					
GR402	22	15'-10"	348	ST					
GR403	112	10'-2"	1,139	ST					
GR404	16	10'-5"	167	ST					
GR405	4	11'-10"	47	19	10'-9"	1'-1"	1"		
GR406	40	11'-10"	473	ST					
GR407	16	10'-9"	172	ST					
GR408	48	10'-0"	480	ST					
GR409	24	6'-4"	152	25	2'-6"	2'-5"	1'-4 1/4"	1 1/2"	5"
GR410	24	5'-1"	122	ST					
TOTAL NO. 4 GFRP BARS			6,400	FT					
GR601	110	30'-0"	3,300	ST					
GR602	22	18'-8"	411	ST					
GR603	116	10'-2"	1,179	ST					
GR604	4	11'-2"	45	ST					
GR605	4	11'-0"	44	ST					
GR606	4	10'-4"	41	ST					
TOTAL NO. 6 GFRP BARS			5,020	FT					

NOTES:

1. FOR NOTES AND BAR BENDING DIAGRAMS, SEE SHEET 40/44.

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DESIGNED MOJ | DRAWN MOJ | REVIEWED DGN | DATE 1-19-21
CHECKED JJB | REVISED | STRUCTURE FILE NUMBER 7702558/7702582

REINFORCING BAR LISTS
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

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MARK	NUMBER			LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS			
	REAR	FORWARD	TOTAL				A	B	C	D
APPROACH SLAB BARS										
◑ AS501	272	272	544	30'-0"	17,022	ST				
AS502	114	114	228	15'-9"	3,745	ST				
◑ AS503	68	68	136	20'-8"	2,932	ST				
AS504	108	108	216	24'-6"	5,520	ST				
AS505	157	157	314	5'-8"	1,856	30	10"	1'-4"	1'-7"	1'-7"
AS506	157	157	314	5'-7"	1,829	ST				
AS507	22	22	44	14'-4"	658	ST				
AS1001	277	277	554	25'-11"	61,782	16	24'-6"			
TOTAL					95,344	LBS				

◑ 408 OF 544 AS501 BARS AND ALL 136 AS503 BARS REQUIRE MECHANICAL CONNECTORS

NOTES:

1. APPROACH SLAB BARS ARE SHOWN FOR REFERENCE ONLY. PAYMENT FOR THESE BARS SHALL BE INCLUDED IN ITEM 526 - REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN AND ITEM 526 - TYPE C INSTALLATION, AS PER PLAN.
2. FOR ADDITIONAL NOTES AND BAR BENDING DIAGRAMS, SEE SHEET 40/44.

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DGN	1-19-21
STRUCTURE FILE NUMBER	
7702558/7702582	

DESIGNED	DRAWN
MOJ	MOJ
CHECKED	REVISED
JJB	

REINFORCING BAR LISTS
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS
PID No. 106002

44/44

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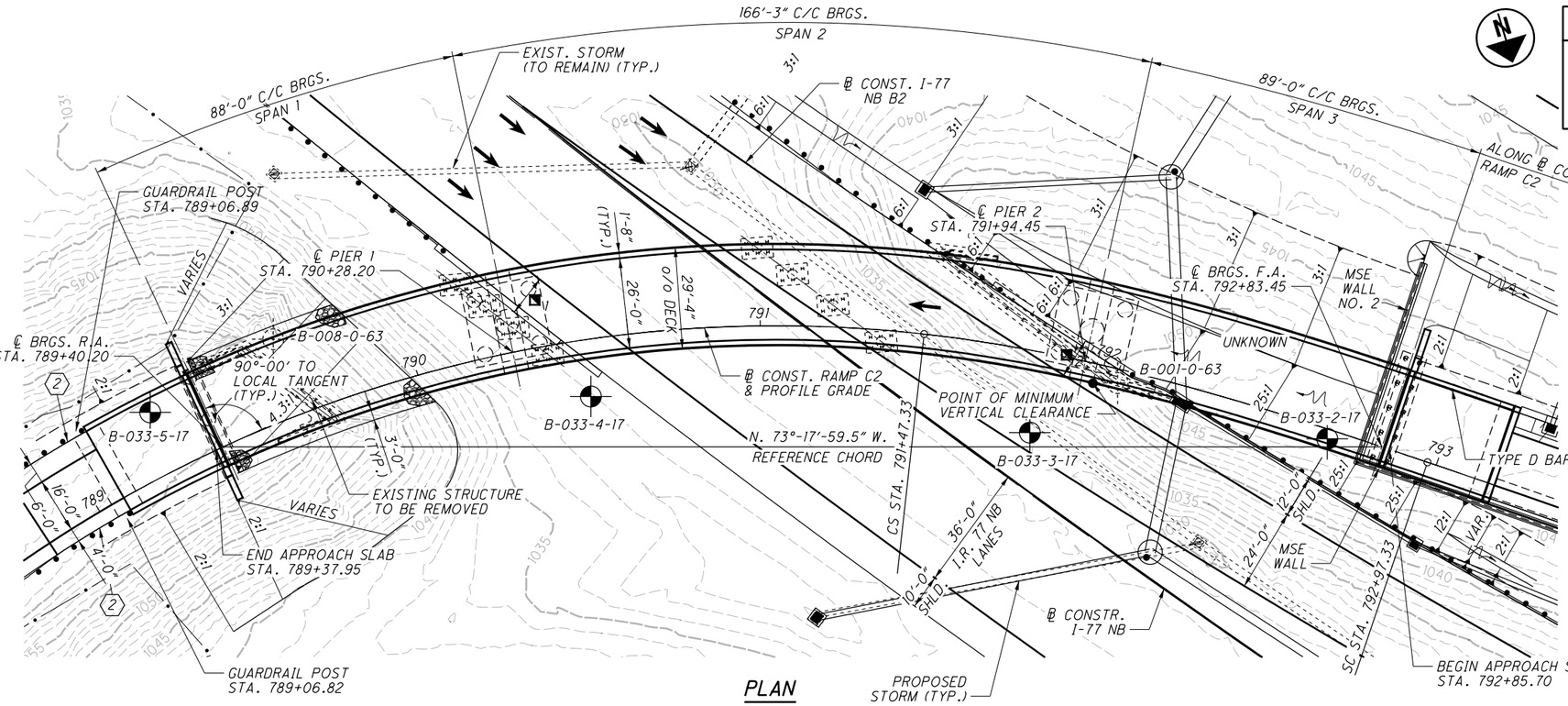


PLAN

BENCHMARK DATA

POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
CP05	493895.1420	2245390.8980	1073.53	CONC. MONUMENT
CP06	493906.9643	244750.3816	1090.46	CONC. MONUMENT
CP07	498481.9448	2243140.4162	1064.39	CONC. MONUMENT
CP08	499070.7218	2243262.6440	1076.40	CONC. MONUMENT

FOR ADDITIONAL BENCHMARK INFORMATION, SEE ROADWAY PLANS.

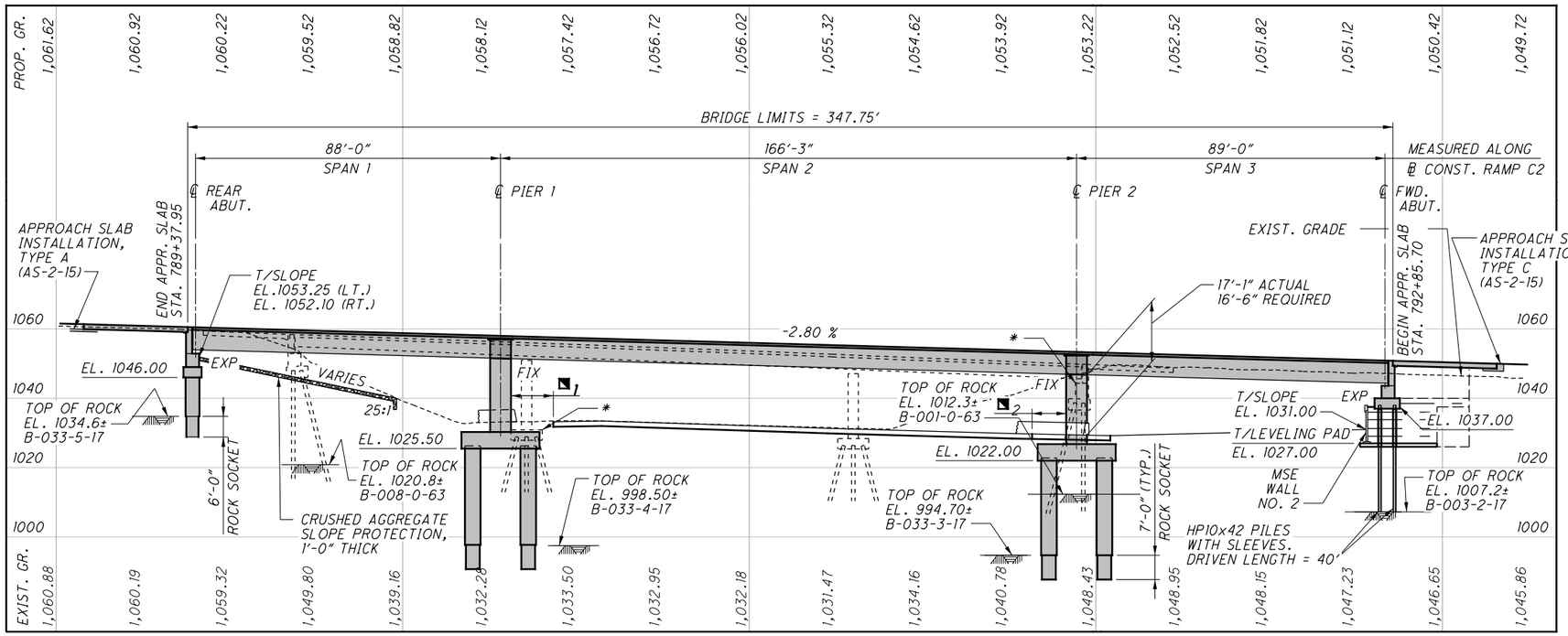
NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. FOR GEOMETRIC LAYOUT AND HORIZONTAL CURVE DATA, SEE SHEET 2/33.

DESIGN TRAFFIC:
2020 ADT = 6030 2020 ADTT = 241
2040 ADT = 6240 2040 ADTT = 250
DIRECTIONAL DISTRIBUTION = 100 %

LEGEND

- PROJECT BORING LOCATION
- (2) - MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2
- HISTORIC BORING LOCATION (APPROXIMATE BASED ON EXISTING PLANS)
- * THE FOUNDATION OF EXISTING PIER 1 AND FORWARD ABUTMENT TO BE REMOVED



PROFILE ALONG ℄ CONSTRUCTION RAMP C2

EXISTING GRADE ELEVATION ARE GIVEN ALONG THE NEW PROPOSED PROFILE GRADE LINE

HORIZONTAL CLEARANCE:
1 11.97' ACTUAL 10.00' REQUIRED
2 11.71' ACTUAL 10.00' REQUIRED

EXISTING STRUCTURE

TYPE: THREE-SPAN CONTINUOUS STEEL GIRDER WITH NON-COMPOSITE REINFORCED CONCRETE DECK ON STUB ABUTMENTS AND CAP AND COLUMN PIERS
SPANS: 65'-1"±, 84'-3"±, 66'-1"± C/C BEARINGS
ROADWAY: 28'-0"± F/F PARAPETS
LOADING: CF2000 ADEQUATE FOR AASHO ALTERNATE LOADING
SKEW: 54°-10'-51"± R.F. TO LOCAL TANGENT
WEARING SURFACE: MONOLITHIC CONCRETE
APPROACH SLABS: 25'-0" LONG (AS-1-54)
ALIGNMENT: 15°-00'-00" LT. (EXIST ALIGNMENT)
SUPERELEVATION: 0.0833 FT/FT
STRUCTURAL FILE NUMBER: 7702647
DATE BUILT: 1968
DISPOSITION: TO BE REMOVED

PROPOSED STRUCTURE

TYPE: THREE-SPAN CONTINUOUS STEEL CURVED GIRDER BRIDGE ASTM A709 GRADE 50 STEEL (PAINTED) WITH REINFORCED COMPOSITE CONCRETE DECK, STUB ABUTMENTS ON REAR SPILL-THRU SLOPE AND FORWARD MSE WALL EMBANKMENT, AND SINGLE COLUMN POST-TENSIONED PIERS
SPANS: 88'-0", 166'-3", 89'-0" C/C BEARINGS ALONG ℄ CONSTRUCTION RAMP C2
ROADWAY: 26'-0" TOE/TOE PARAPET
LOADING: HL93 AND 0.060 KSF FUTURE WEARING SURFACE
SKEW: RADIAL
WEARING SURFACE: 1" MONOLITHIC CONCRETE
APPROACH SLABS: 30'-0" LONG (AS-1-15) TYPE A & C INSTALLATION (AS-2-15)
ALIGNMENT: 15°-00'-00" CURVE RIGHT
SUPERELEVATION: VARIES
DECK AREA: 10,300 SQ. FT.
COORDINATES: LATITUDE 41°-01'-25.15"
LONGITUDE 81°-29'-56.13"

DESIGN AGENCY
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DESIGNED	DRAWN	REVIEWED	DATE
RHC	RHC	TJW	1-18-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DGN		7702648	

SUMMIT COUNTY
STA. 789+37.95
STA. 792+85.70

SITE PLAN
BRIDGE NO. SUM-77-0927R
RAMP C2 OVER I.R. 77 NB

SUM-077/277/224-VAR
PID No. 106002

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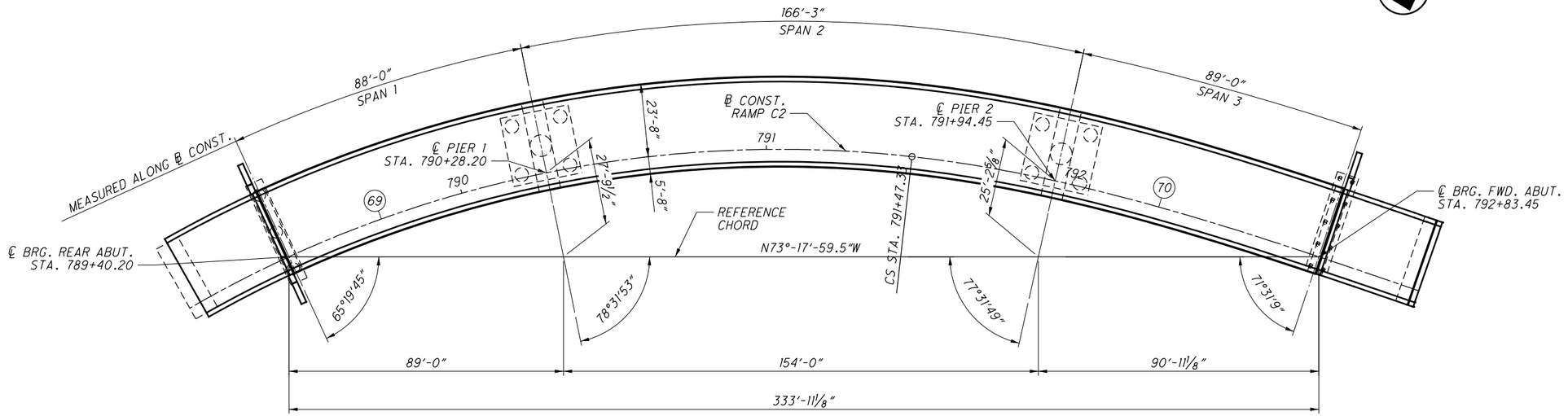

GEOMETRIC LAYOUT

HORIZONTAL CURVE DATA

(69) ℄ CONST. RAMP C-2

P.I. Sta. 789+63.04
Δ = 62° 13' 11" (RT)
Dc = 15° 00' 00"
R = 381.97'
T = 230.51'
L = 414.80'
E = 64.16'
C = 394.72'
C.B. = S 81° 59' 26" W
D.S. = 35 MPH
e_{max} = 0.06
P.C. STA. 787+32.53
P.T. STA. 791+47.33

(70) ℄ CONST. RAMP C-2

P.I. STA. 792+02.11
Ls = 150.00'
θs = 12° 22' 30"
LT = 95.72'
ST = 54.79'
x = 149.23'
y = 11.74'
k = 74.88'
p = 2.21'
D.S. = 35 MPH
e_{max} = 0.06
C.S. STA. 791+47.33
S.C. STA. 792+97.33

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RHC	RHC	TJW	1-18-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DGN		7702648	

GEOMETRY PLAN
BRIDGE NO. SUM-77-0927R
RAMP C2 OVER I.R.77 NB

SUM-077/277/224-VAR
PID No. 106002

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DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 8TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

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	1-18-19
GSD-1-19	DATED	1-15-21
SBR-1-20	REVISED	7-17-20

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

800	DATED	1-15-21
840	DATED	1-15-21
846	DATED	4-17-15
855	DATED	4-20-18
869	DATED	10-17-14

SPECIAL DESIGN SPECIFICATIONS:

THIS BRIDGE REQUIRED THE USE OF A THREE DIMENSIONAL MODEL USING THE FINITE ELEMENT METHOD TO ANALYZE THE STRUCTURE. THE COMPUTER PROGRAM USED FOR STRUCTURAL ANALYSIS WAS MIDAS CIVIL 2020 (v 1.2). THE BRIDGE COMPONENTS DESIGNED BY THIS METHOD WERE THE STEEL GIRDERS, INTERMEDIATE CROSSFRAMES, CAST-IN-PLACE POST-TENSIONED INTEGRAL PIER CAPS AND CAST-IN-PLACE PIER COLUMNS.

DEAD LOAD DISTRIBUTION: WEIGHT OF DECK AND STRUCTURAL STEEL WERE USED FOR THE NON-COMPOSITE LOAD BASED ON TRIBUTARY AREA. THE WEIGHT OF THE PARAPETS WERE APPLIED TO THE DECK AND FUTURE WEARING SURFACE COURSE WAS BASED ON TRIBUTARY AREA FOR THE COMPOSITE LOAD.

LIVE LOAD DISTRIBUTION FACTORS: DISTRIBUTION FACTORS FOR LIVE LOAD MOMENT AND SHEAR AT INTERIOR AND EXTERIOR MEMBERS VARIED ACROSS THE STRUCTURE AND WERE BASED ON AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 4.

REDUNDANCY:

THE PIER COLUMNS WERE CONSIDERED NON-REDUNDANT AND INCLUDE A LOAD MODIFIER OF 1.05 IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.4.

OPERATIONAL IMPORTANCE:

A LOAD MODIFIER OF 1.00 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 KSF

DESIGN DATA:

CONCRETE CLASS QC5, WITH ⅜" MAX. AGGREGATE SIZE - COMPRESSIVE STRENGTH 4.5 KSI (DRILLED SHAFTS)
CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QC4 - COMPRESSIVE STRENGTH 7.0 KSI (INTEGRAL PIER CAPS)
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI
STRUCTURAL STEEL - ASTM A709 GRADE 50 - YIELD STRENGTH 50 KSI
STEEL H-PILES - ASTM A572 - YIELD STRENGTH 50 KSI

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

POST-TENSIONING DESIGN DATA:

DIAMETER: 0.60" (AREA<= 0.217 SQ IN)
WOBBLE COEFFICIENT: = 0.0002
FRICTION COEFFICIENT: = 0.25
ANCHOR SET: 0.25"
MAXIMUM STRESS AT ANCOHARAGE AFTER SEATING: 179 KSI
MAXIMUM STESS OTHER LOCATIONS AFTER SEATING: 181 KSI
APPARENT MODULUS OF ELASTICITY: 28500 KSI

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 2.20 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".
- A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

PILES TO BEDROCK:

DRIVE PILES TO REFUSAL ON BEDROCK. THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECEIVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 267 KIPS FOR THE FORWARD ABUTMENT PILES.

FORWARD ABUTMENT PILES:

10 PILES 40 FEET LONG, ORDER LENGTH

ROCK SOCKETED DRILLED SHAFTS

THE MAXIMUM FACTORED LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 567 KIPS AT THE REAR ABUTMENT AND 1278 KIPS AT THE PIERS. THIS LOAD IS RESISTED BY SIDE RESISTANCE WITHIN A PORTION OF THE BEDROCK SOCKET AND BY TIP RESISTANCE. AT THE REAR ABUTMENT, THE FACTORED SIDE RESISTANCE IS 845 KIPS ASSUMED TO ACT ALONG THE BOTTOM 4.0 FEET OF THE DRILLED SHAFT SOCKET, AND THE FACTORED TIP RESISTANCE IS 8330 KIPS. AT THE PIERS, THE FACTORED SIDE RESISTANCE IS 289 KIPS AT PIER 1 AND 1073 KIPS AT PIER 2 ASSUMED TO ACT ALONG THE BOTTOM 5 FEET OF THE DRILLED SHAFT, AND THE FACTORED TIP RESISTANCE IS 16002 KIPS AT PIER 1 AND 7152 KIPS AT PIER 2.

ITEM 202-STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN:

THIS STRUCTURE SHALL BE REMOVED IN ACCORDANCE WITH CMS 202, AND AS SHOWN IN THE SITE PLAN AND SHALL BE COORDINATED WITH MAINTENANCE OF TRAFFIC PLANS. THE EXISTING STRUCTURE SHALL BE COMPLETELY REMOVED UPON RECEIVING PERMISSION FROM THE ENGINEER. THE CONTRACTOR MUST REVIEW THE STRUCTURE WHEN PREPARING THE BID.

ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL 5, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 513, THIS ITEM SHALL INCLUDE THE WELDED SHEAR STUDS AND THE PREDRILLING OF HOLES IN THE GIRDER WEB AT THE LOCATIONS OF THE PIERS AS DETAILED IN THE PLANS.

ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, FINISH COAT

ALL NEW STRUCTURAL STEEL SHALL BE PAINTED USING THE IZEU COATING SYSTEM. THE URETHANE TOP COAT SHALL BE TINTED TO MEET AMS-STD-595A COLOR No. 15526 - BLUE.

ITEM 524 - DRILLED SHAFTS, 42", 48" AND 54" DIAMETER, INTO OR ABOVE BEDROCK WITH OC/QA, AS PER PLAN

IN ADDITION TO THE PROVISIONS OF CMS 524.10, FOR ALL DRILLED SHAFTS, USE CONCRETE THAT CONFORMS TO ODOT SUPPLEMENTAL SPECIFICATION 1126 (11206.02D) AND THE MAXIMUM AGGREGATE SIZE SHALL BE ⅜ INCHES

ITEM SPECIAL - STRUCTURES: TEMPORARY SUPPORT OF STEEL GIRDERS

THIS ITEM SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED FOR THE TEMPORARY SUPPORT OF THE PROPOSED STEEL GIRDERS DURING ERECTION AND WHILE THE INTEGRAL PIER CAPS ARE BEING CONSTRUCTED.

THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE TEMPORARY SUPPORT. THE CONTRACTOR'S DESIGN MUST BE SUFFICIENT ENOUGH TO SUPPORT THE LOADS DESIGNATED IN THE PLANS. THE CONTRACTOR'S DESIGN SHALL BE PREPARED AND SUBMITTED IN ACCORDANCE WITH CMS 501.05.

PAYMENT FOR THE DESIGN AND CONSTRUCTION OF THE TEMPORARY SUPPORTS FOR PROPOSED STEEL GIRDERS SHALL BE INCLUDED WITH ITEM SPECIAL - STRUCTURES: TEMPORARY SUPPORT OF STEEL GIRDERS.

ITEM 869 - HIGH LOAD MULTI-ROTATIONAL (HLMR) BEARINGS, AS PER PLAN:

THIS ITEM OF WORK SHALL CONFORM TO SUPPLEMENTAL SPECIFICATION 869, THE DETAILS ON THE PLANS AND THE REQUIREMENTS HEREIN.

BEVELED LOAD PLATES AND MASONRY PLATES SHALL BE ASTM A709 GRADE 50, WITH CORROSION PROTECTION PER SS 869.13. BEVELED LOAD PLATES AND MASONRY PLATES SHALL BE INCLUDED WITH THE BEARINGS FOR PAYMENT.

ANCHOR RODS SHALL BE ASTM F1554 GRADE 105, GALVANIZED ACCORDING TO 711.02.

ACCOUNT FOR DIFFERENCES BETWEEN THE BEARING HEIGHT DETAILED IN THE PLANS AND THE BEARING HEIGHT SUPPLIED BY THE FABRICATOR PER SS 869.06. IF BEAM SEAT ELEVATIONS ARE ADJUSTED IN ORDER TO ACCOUNT FOR THESE DIFFERENCES, THEN ADJUST THE LOCATION OF REINFORCING STEEL AS NECESSARY TO AVOID INTERFERENCE WITH THE BEARING ANCHORS AND TO MAINTAIN MINIMUM CONCRETE COVER AND MINIMUM SPACING AS REQUIRED IN THE PROJECT PLANS. OBTAIN WRITTEN APPROVAL FROM THE ENGINEER FOR ANY ADJUSTMENTS TO THE ABUTMENT BEAM SEAT ELEVATIONS.

ABBREVIATIONS:

ABUT.	ABUTMENT
BOT.	BOTTOM
BRG.	BEARING
B.S.	BOTH SIDES
BTWN.	BETWEEN
C.I.P.	CAST-IN-PLACE
C.J.	CONSTRUCTION JOINT
CLR.	CLEAR
CONST.	CONSTRUCTION
DIA.	DIAMETER
DIM.	DIMENSION
EL.	ELEVATION
EQ.	EQUAL
EX. OR EXIST.	EXISTING
FRWD.	FORWARD
F.S.	FAR SIDE
GFRP	GLASS FIBER REINFORCED POLYMER
LT.	LEFT
MAX.	MAXIMUM
MIN.	MINIMUM
NB	NORTHBOUND
NO.	NUMBER
N.S.	NEAR SIDE
P.E.J.F.	PREFORMED EXPANSION JONT FILLER
RT.	RIGHT
SB	SOUTHBOUND
SER.	SERIES
SPA.	SPACES OR SPACING
STA.	STATION
STD. DWG.	STANDARD DRAWING
T&B	TOP AND BOTTOM
TYP.	TYPICAL

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GENERAL NOTES
BRIDGE NO. SUM-77-0927R
RAMP C2 OVER I.R.77 NB

SUM-077/277/224-VAR
PID No. 106002

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ESTIMATED QUANTITIES

CALCULATED BY: RHC DATE: 1-15-21
CHECKED BY: DGN DATE: 1-15-21

ITEM	EXT.	TOTAL	PARTICIPATION 05/IMR/BR	UNITS	DESCRIPTION	ABUTMENT	PIER	SUPER-STRUCTURE	GENERAL	REFERENCE SHEET NO.
202	11003	LS	LS		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					3
202	22900	156	156	SY	APPROACH SLAB REMOVED				156	
503	21100	502	502	CY	UNCLASSIFIED EXCAVATION	213	289			
505	11100	LS	LS		PILE DRIVING EQUIPMENT MOBILIZATION					
507	00100	400	400	FT	STEEL PILES HP10X42, FURNISHED	400				
507	00150	350	350	FT	STEEL PILES HP10X42, DRIVEN	350				
509	10000	223,559	223,559	LB	EPOXY COATED REINFORCING STEEL	13,190	97,512	112,857		
509	30020	12,353	12,353	FT	NO. 4 GFRP DEFORMED BARS			12,353		
511	34446	315	315	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK			315		
511	34450	126	126	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)			126		
511	44112	94	94	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	94				
511	45600	45	45	CY	CLASS QC4 MASS CONCRETE, SUBSTRUCTURE (PIER COLUMNS)		45			
511	46512	228	228	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	50	178			
511	53016	79	79	CY	CLASS QC4 CONCRETE, MISC.: INTEGRAL POST-TENSIONED PIER CAPS		79			
512	10100	1,213	1,213	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	112	198	903		
513	10301	658,400	658,400	LB	STRUCTURAL STEEL MEMBERS, LEVEL 5, AS PER PLAN			658,400		3
513	20000	5,001	5,001	EACH	WELDED STUD SHEAR CONNECTORS			5,001		
514	00060	27,500	27,500	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			27,500		
514	00066	27,500	27,500	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			27,500		
514	10000	42	42	EACH	FINAL INSPECTION REPAIR			42		
516	10010	29	29	FT	ARMORLESS PREFORMED JOINT SEAL				29	
516	11210	57	57	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL				57	
518	21200	61	61	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	61				
518	40000	91	91	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	91				
518	40010	10	10	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE INCLUDING SPECIALS	10				
524	95445	18	18	FT	DRILLED SHAFTS, 42" DIAMETER, INTO BEDROCK WITH QC/QA, AS PER PLAN	18				3
524	95453	34	34	FT	DRILLED SHAFTS, 48" DIAMETER, ABOVE BEDROCK WITH QC/QA, AS PER PLAN	34				3
524	95455	56	56	FT	DRILLED SHAFTS, 48" DIAMETER, INTO BEDROCK WITH QC/QA, AS PER PLAN		56			3
524	95463	218	218	FT	DRILLED SHAFTS, 54" DIAMETER, ABOVE BEDROCK WITH QC/QA, AS PER PLAN		218			3
526	30010	194	194	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17")				194	
526	90010	26	26	FT	TYPE A INSTALLATION				26	
526	90030	29	29	FT	TYPE C INSTALLATION				29	
SPECIAL	53000200	LS	LS		STRUCTURES: TEMPORARY SUPPORT OF STEEL GIRDERS					3
◑ 601	20000	210	210	SY	CRUSHED AGGREGATE SLOPE PROTECTION				210	
846	00110	8	8	CF	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM				8	
855	00010	4,665	4,665	LB	POST-TENSIONING STRAND TENDON		4,665			
869	00101	8	8	EACH	HIGH LOAD MUTLI-ROTATIONAL (HLMR) BEARINGS, AS PER PLAN			8		3

◑ INCLUDED FOR PAYMENT WITH THE EROSION CONTROL QUANTITIES - SEE THE GENERAL SUMMARY.

REVISIONS		
NO.	DATE	DESCRIPTION
7	04/28/21	REVISED ITEM 511 - BRIDGE DECK CONCRETE QUANTITY

DESIGN AGENCY
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CHECKED DGN | REVISED | STRUCTURE FILE NUMBER 7702648

ESTIMATED QUANTITIES
BRIDGE NO. SUM-77-0927R
RAMP C2 OVER I.R.77 NB

SUM-077/277/224-VAR
PID No. 106002

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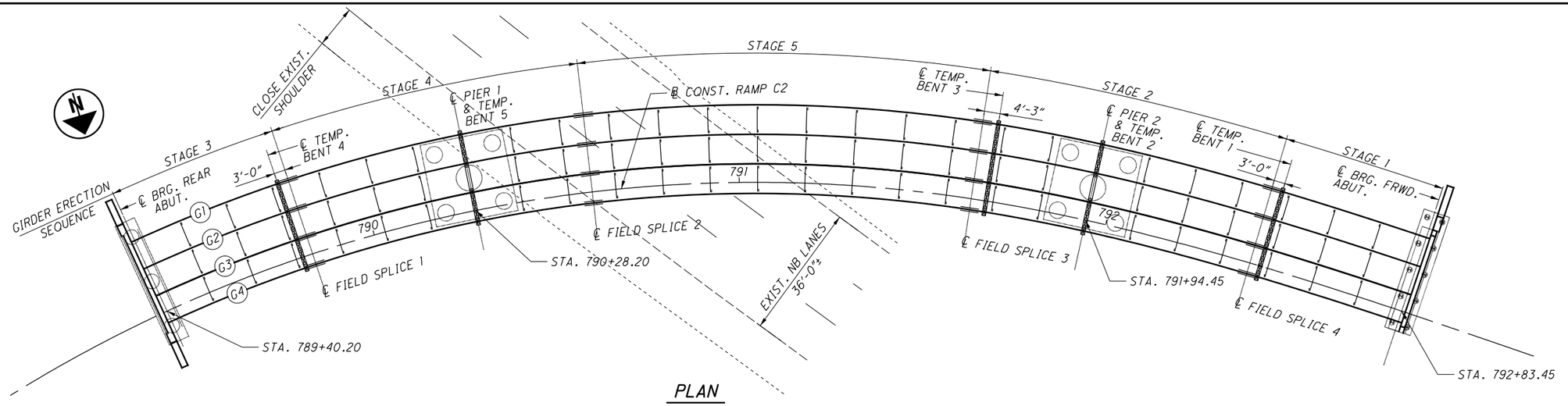


PLAN

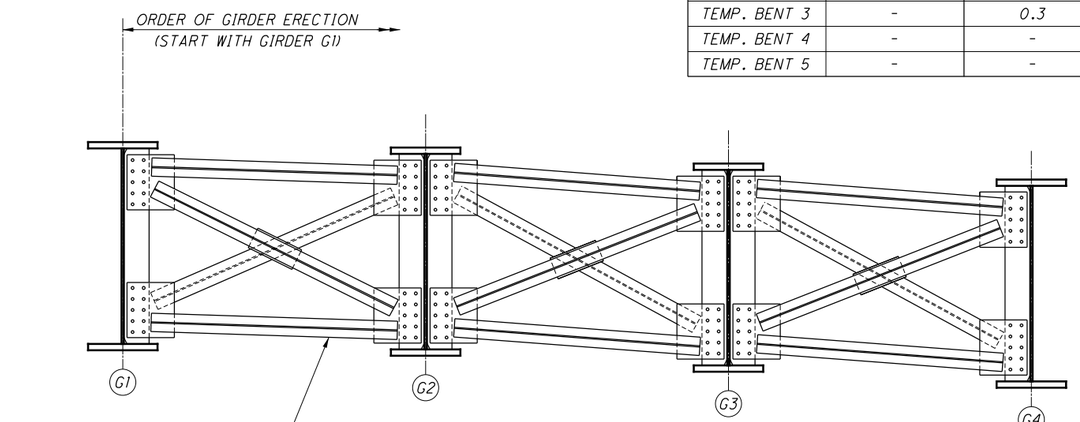
MAXIMUM TEMPORARY BENT GIRDER DEAD LOAD REACTIONS (KIPS):

LOCATION	STAGE 1	STAGE 2	STAGE 3	STAGE 4	STAGE 5
TEMP. BENT 1	6.7	19.7	19.7	19.7	19.6
TEMP. BENT 2	-	25.1	25.1	25.1	80.4*
TEMP. BENT 3	-	6.9	6.9	6.9	21.0
TEMP. BENT 4	-	-	6.9	14.3	5.8
TEMP. BENT 5	-	-	-	38.7	108.3*

* INCLUDES WET CONCRETE LOAD FROM PIER CAPS

MAXIMUM TEMPORARY BENT GIRDER TRANSVERSE WIND LOAD REACTIONS (KIPS):

LOCATION	STAGE 1	STAGE 2	STAGE 3	STAGE 4	STAGE 5
TEMP. BENT 1	1.0	1.7	1.7	1.7	1.7
TEMP. BENT 2	-	2.4	2.4	2.4	2.1
TEMP. BENT 3	-	0.3	0.3	0.3	1.4
TEMP. BENT 4	-	-	1.0	1.5	1.4
TEMP. BENT 5	-	-	-	3.4	2.4



ERECTION TRANSVERSE SECTION

ERECTION GENERAL NOTES:

1. 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.
2. THE CONTRACTOR'S ATTENTION IS DIRECTED TO REQUIREMENTS FOR STABILITY OF STEEL GIRDERS DURING ERECTION (CMS 513.26) AND THE SUBMITTAL REQUIREMENTS OF 501.05.B.4.
3. THIS BRIDGE SHALL BE STABILIZED DURING ERECTION USING FALSE WORK, TEMPORARY BRACING, COMPRESSION FLANGE STIFFENING TRUSS, EXISTING SUBSTRUCTURES OR USING A HOLDING CRANE UNTIL A SUFFICIENT NUMBER OF GIRDERS HAVE BEEN ERECTED AND CRASSFRAMES INSTALLED.
4. WIND LOADING ON THE PARTIALLY ERECTED STRUCTURE SHALL BE CONSIDERED IN THE DEVELOPMENT OF ERECTION PLANS AND ANY SHORING TOWERS. ERECTION PLANS SHALL CONVEY WIND SPEED WORK LIMITATIONS AND ANY PROCEDURES FOR HIGH WIND EVENTS. THE FOLLOWING LOADS ARE RECOMMENDED AS THE MINIMUM GUIDELINES FOR ERECTION WIND LOADING:

   A. FOR THE FIRST LIFT IN EACH STEP AND GROUND- BASED ERECTION BLOCKING REQUIREMENTS, DETERMINE PRESSURES BASED UPON A DESIGN WIND VELOCITY OF 60 MPH.

   B. ONCE A GIRDER PAIR ARE FULLY SPLICED AND FULLY CONNECTED TOGETHER WITH CROSSFRAMES (WITH 100% OF BOLTS FULLY TENSIONED), DETERMINE PRESSURES BASED UPON A DESIGN WIND VELOCITY OF 100 MPH.
5. ERECTION SCHEMES THAT PLACE SINGLE GIRDERS SECTIONS AT A TIME SHALL DOCUMENT THEIR STABILITY DURING EACH STEP OF ERECTION. THE MINIMUM DESIGN WIND VELOCITY TO VERIFY STABILITY OF ERECTION STEPS ANTICIPATED TO EXPOSED FOR LONG DURATIONS (MORE THAN 2 DAYS) SHALL VERIFY STABILITY USING A DESIGN WIND VELOCITY OF 100 MPH.
6. GROUND ERECTION WILL INCLUDE 100% OF CONNECTION BOLTS (EXCEPT SPLICES) TO BE FULLY INSTALLED AND PRE TENSIONED.
7. REFERENCE SHALL BE MADE TO "FHWA-NHI-15-044 ENGINEERING FOR STRUCTURAL STABILITY IN BRIDGE CONSTRUCTION" FOR THE DESIGN OF THE ERECTION PLAN.

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GIRDER ERECTION PLAN AND NOTES
BRIDGE NO. SUM-77-0927R
RAMP C2 OVER I.R.77 NB

SUM-077/277/224-VAR
PID No. 106002

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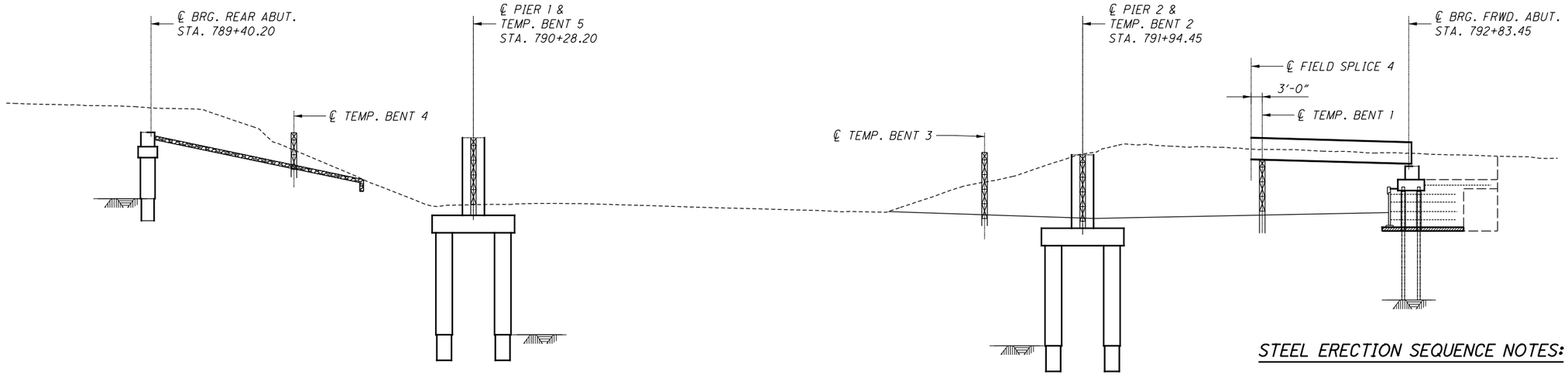

STAGE 1 NOTES:

CONSTRUCT ABUTMENTS AND PIERS (EXCEPT POST-TENSIONED PIER CAPS) AND ALL TEMPORARY BENTS. SET BEARINGS AT ABUTMENTS AND BLOCK ALL BEARINGS AT THE ABUTMENTS TO PREVENT TRANSLATION AND MOVEMENT IN THE LONGITUDINAL DIRECTION. ERECT STAGE 1 GIRDERS AND CROSSFRAMES AND FULLY TIGHTEN ALL BOLTS.

STAGE 1

STEEL ERECTION SEQUENCE NOTES:

THE ERECTION STAGES SHOWN ON THIS SHEET THROUGH SHEET 8/37 ARE PRESENTED AS CONCEPTUAL ERECTION PROCEDURE. THE CONTRACTOR IS TO SUBMIT THE ERECTION PROCEDURE FOR APPROVAL. THIS PROCEDURE MAY INCLUDE MODIFICATION OF THE THIS CONCEPTUAL ERECTION PROCEDURE. THE CONTRACTOR MUST SUBMIT FOR APPROVAL A FULLY DEVELOPED SET OF DRAWINGS AND CALCULATIONS PREPARED, SIGNED, SEALED AND DATED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF OHIO, INDICATING THE PROPOSED ERECTION PROCEDURE WHICH INCLUDES ALL ASSUMPTION, CRANE PLACEMENTS AND TEMPORARY BENT LOCATIONS INCLUDING DESIGN OF TEMPORARY BENTS, TEMPORARY BENT FOUNDATIONS AND NECESSARY TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEMS REQUIRED TO CONSTRUCT TEMPORARY BENT FOUNDATIONS. THE PREPARER AND CHECKER SHALL BE TWO DIFFERENT ENGINEERS. REFER TO 501.05(B)(4) IN THE ODOT CMS.

THE CONTRACTOR MUST ENSURE STABILITY OF THE GIRDERS AND TEMPORARY BENTS AT ALL TIMES.

SEE THE ERECTION PLAN VIEW AND ERECTION TRANSVERSE SECTION ON SHEET 5/37 FOR ADDITIONAL INFORMATION PERTAINING TO THE LOCATION OF EACH ERECTION STAGE AND THE SEQUENCE OF GIRDER ERECTION IN EACH STAGE.

TO FACILITATE CONSTRUCTION OF TMEPORARY BENT 5 AND PIER 1 FOUNDATION, THE RIGHT SHOULDER OF THE NB LANES SHALL BE PERMANENTLY CLOSED TO TRAFFIC. ONE LANE OF THE NB LANES MAY BE CLOSED DAILY BETWEEN THE HOURS OF 10PM TO 5AM.

TEMPORARY BENTS:

THE DESIGN OF TEMPORARY BENTS AND FOUNDATIONS FOR TEMPORARY BENTS SHALL BE PREPARED, SIGNED, SEALED AND DATED BY AN OHIO REGISTERED ENGINEER AND SHALL BE SUBMITTED TO THE STATE FOR REVIEW. THE PREPARER AND CHECKER SHALL BE TWO DIFFERENT ENGINEERS. REFER TO 501.05(B)(4) IN THE ODOT CMS.

DESIGN THE FOUNDATIONS FOR TEMPORARY BENTS IN ACCORDANCE WITH MOST CURRENT AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND DESIGN MANUAL, PART 5 SPECIFICATION, CURRENT FHWA GUIDELINES AND AASHTO GUIDE SPECIFICATIONS. DESIGN THE FOUNDATIONS FOR THE TEMPORARY BENTS FOR FINAL CONDITIONS AND ALL CONSTRUCTION STAGES. WHERE APPROPRIATE, INCLUDE SURCHARGE LOADS DUE TO VEHICLE TRAFFIC AND SURCHARGE DUE TO CONSTRUCTION EQUIPMENT IN THE DESIGN. SUBMIT DESIGN CALCULATIONS AND DETAILED DRAWINGS, SIGNED AND SEALED, BY A PROFESSIONAL ENGINEER IN THE STATE OF OHIO, TO THE STATE FOR REVIEW. INCLUDE IN THE DESIGN CALCULATIONS ALL MATERIAL PROPERTIES, DESIGN LOADS AND DESIGN ASSUMPTIONS. INCLUDE THE COMPLETED DETAILED DRAWINGS OF THE FOUNDATIONS. ALL DESIGN DIMENSIONS, LIMIT OF WORK, ELEVATIONS AND MATERIAL SPECIFIC CONSTRUCTION PROCEDURES AND TESTING REQUIREMENTS ARE TO BE INCLUDED AS PART OF THE SUBMITTAL. ALLOW 14 DAYS FOR REVIEW OF THE SUBMISSION BY THE DEPARTMENT.

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GIRDER ERECTION SEQUENCE - 1
BRIDGE NO. SUM-77-0927R
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SUM-077/277/224-VAR
PID No. 106002

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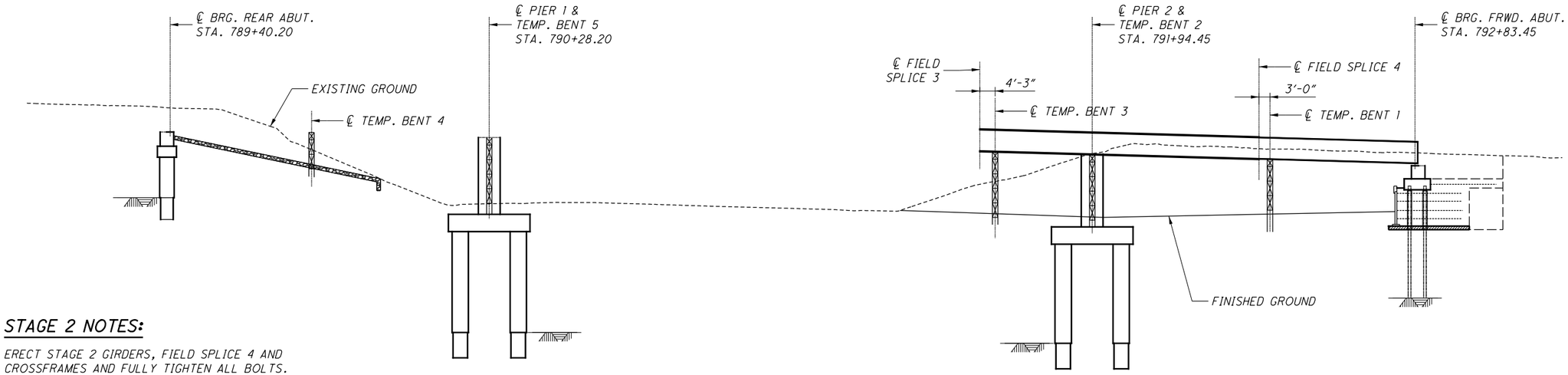
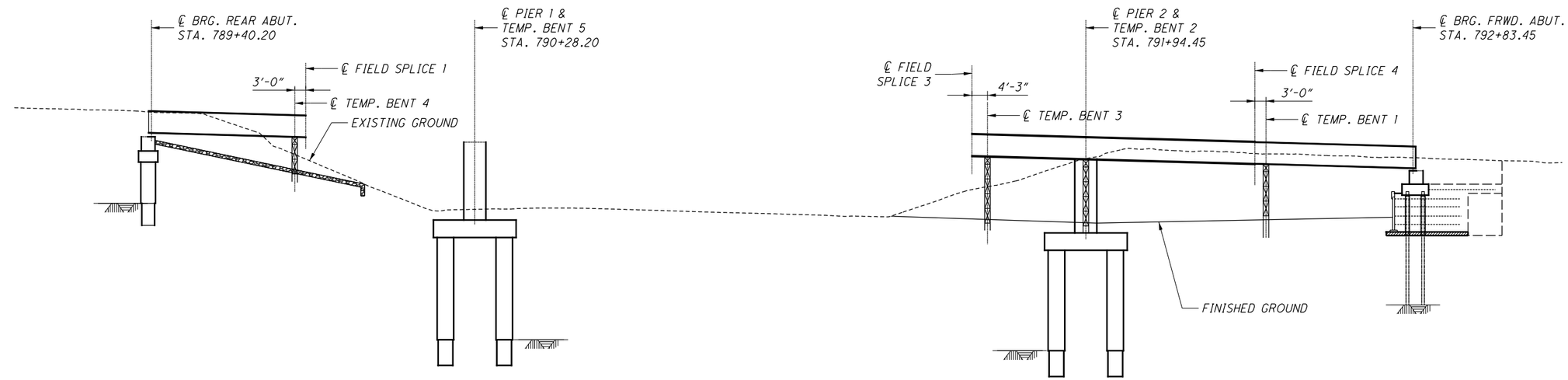


STAGE 2 NOTES:

ERECT STAGE 2 GIRDERS, FIELD SPLICE 4 AND CROSSFRAMES AND FULLY TIGHTEN ALL BOLTS.

STAGE 2



STAGE 3 NOTES:

ERECT STAGE 3 GIRDERS AND CROSSFRAMES AND FULLY TIGHTEN ALL BOLTS.

STAGE 3

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RHC/DGN	RHC	TJW	1-18-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MOJ		7702648	

GIRDER ERECTION SEQUENCE - 2
BRIDGE NO. SUM-77-0927R
RAMP C2 OVER I.R.77 NB

SUM-077/277/224-VAR
PID No. 106002

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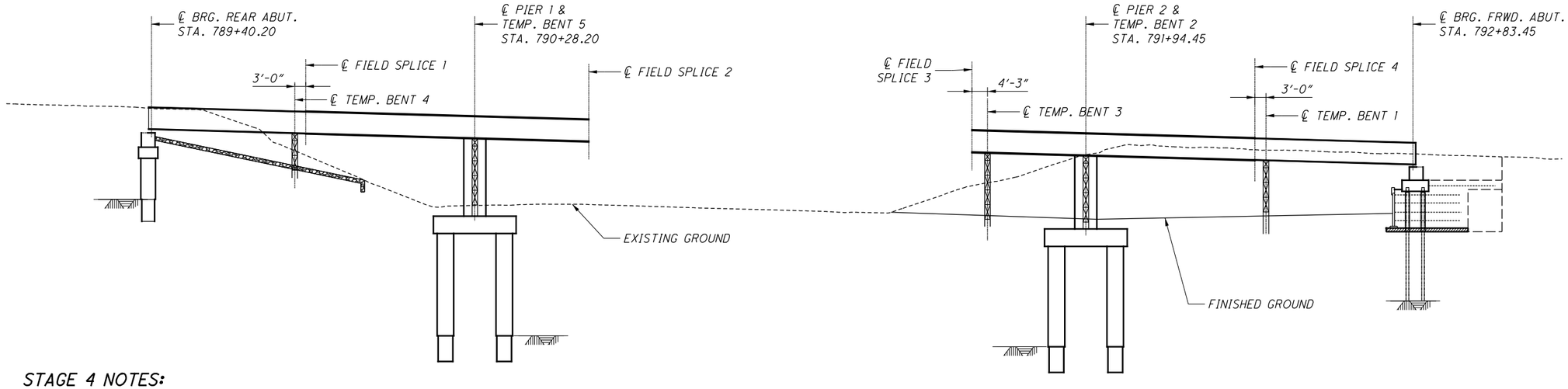
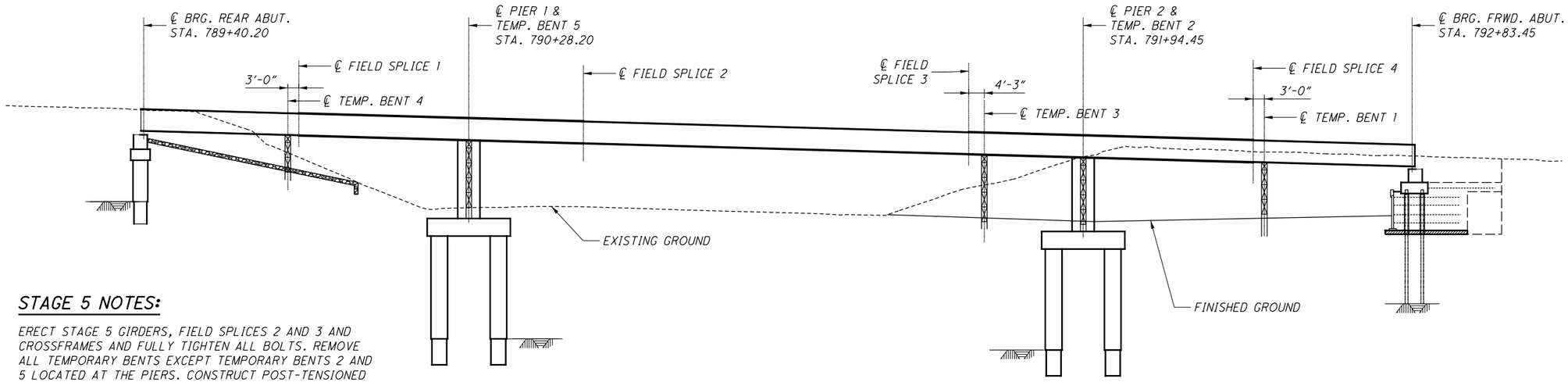


STAGE 4 NOTES:

ERECT STAGE 4 GIRDERS, FIELD SPLICE 1 AND CROSSFRAMES AND FULLY TIGHTEN ALL BOLTS.

STAGE 4



STAGE 5 NOTES:

ERECT STAGE 5 GIRDERS, FIELD SPLICES 2 AND 3 AND CROSSFRAMES AND FULLY TIGHTEN ALL BOLTS. REMOVE ALL TEMPORARY BENTS EXCEPT TEMPORARY BENTS 2 AND 5 LOCATED AT THE PIERS. CONSTRUCT POST-TENSIONED PIER CAPS AS PER THE PIER DETAILS AND NOTES AND THEN REMOVE BLOCKING AT ABUTMENT BEARINGS AND TEMPORARY BENTS 2 AND 5.

STAGE 5

GIRDER ERECTION SEQUENCE - 3

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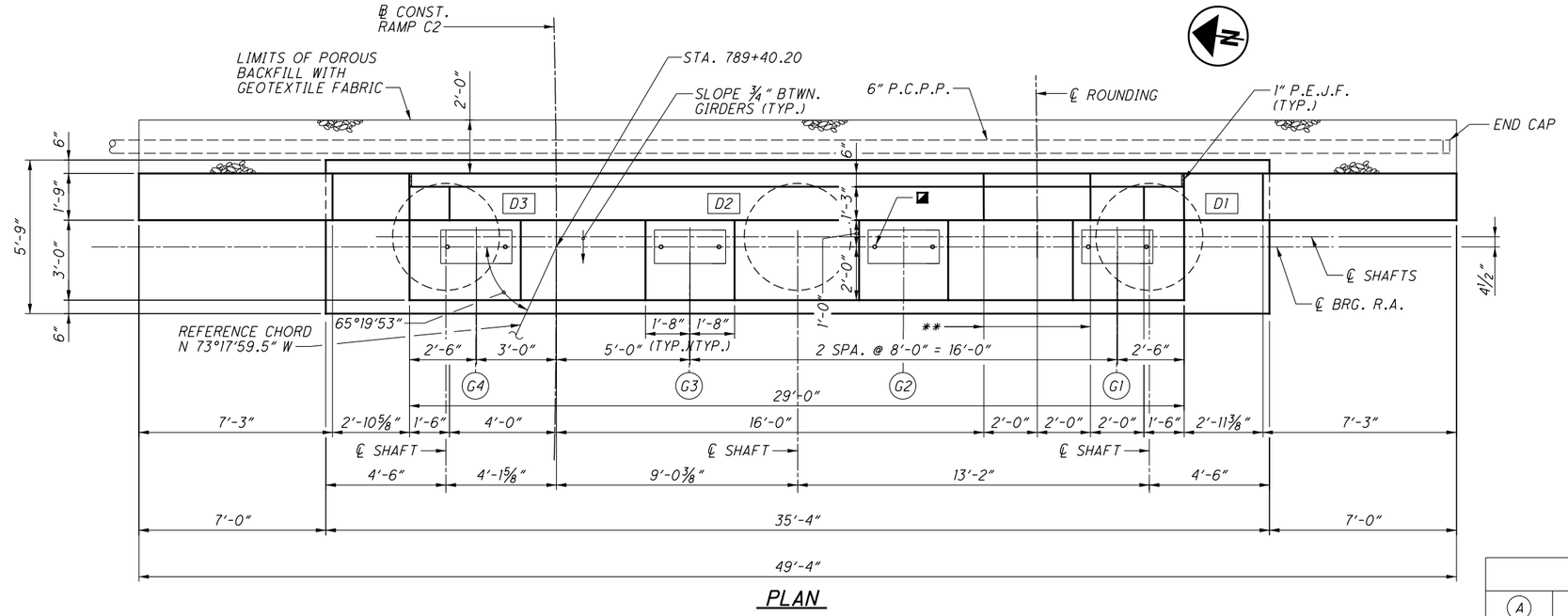
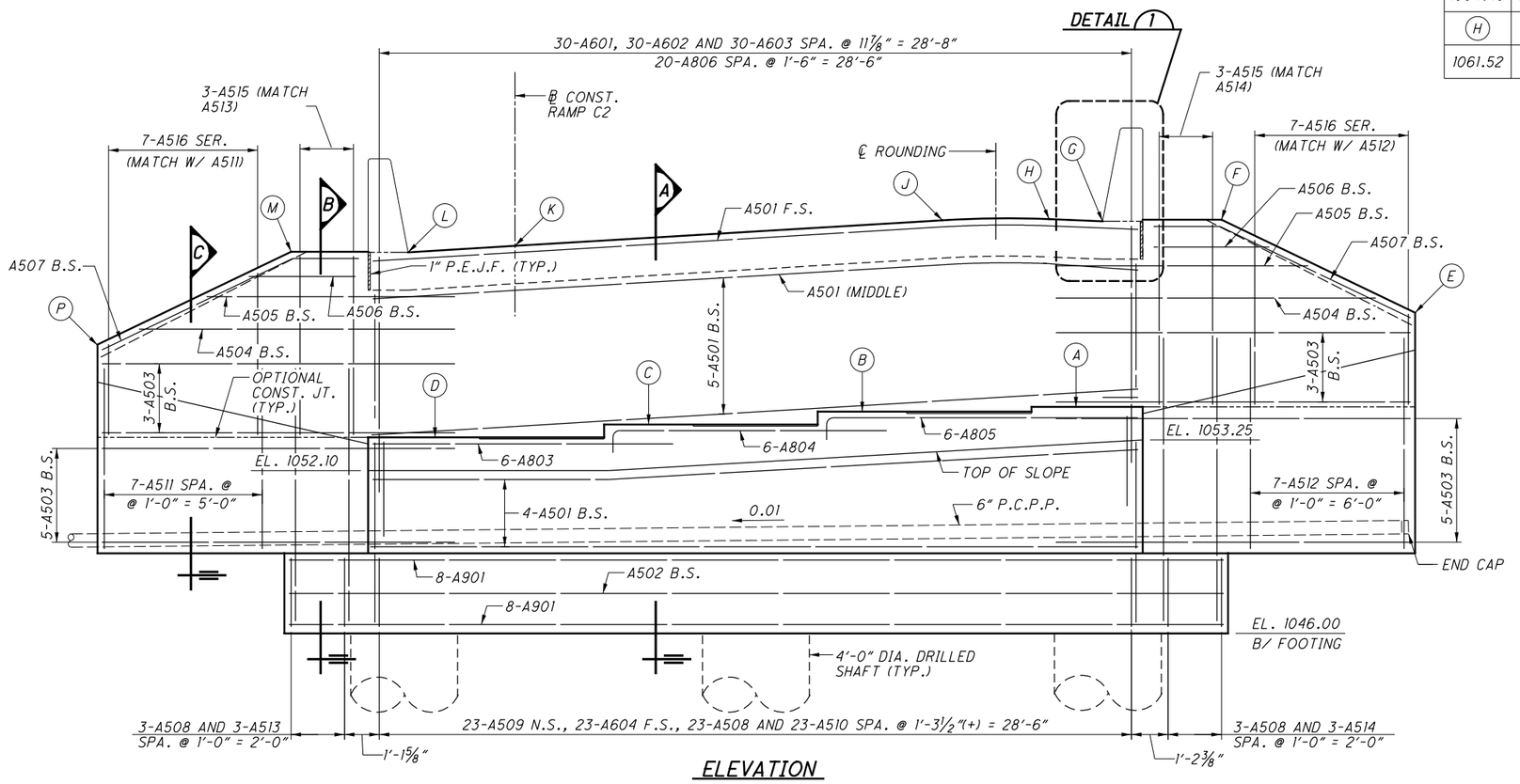


PLAN

ELEVATIONS						
(A)	(B)	(C)	(D)	(E)	(F)	(G)
1054.49	1054.31	1053.83	1053.35	1058.00	1061.50	1061.44
(H)	(J)	(K)	(L)	(M)	(P)	
1061.52	1061.48	1060.52	1060.28	1060.30	1056.80	



ELEVATION

LEGEND

D#	DRILLED SHAFT NUMBER DESIGNATION (4'-0" DIAMETER AT REAR ABUTMENT)
◪	BEARING ANCHOR RODS - SEE NOTE 1 (TYP.)
**	ROUNDING LIMITS

NOTES:

1. FOR BEARING ANCHOR ROD DETAILS, SEE SHT. NO. 19/37.
2. FOR SECTIONS A, B & C, SEE SHT. NO. 10/37.
3. ACCURATELY PLACE REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES OR THE PRE-SETTING OF BEARING ANCHORS.
4. FOR DRILLED SHAFT DETAILS, SEE SHT. NO. 10/37.
5. FOR DETAIL 1, SEE SHT. NO. 13/37.
6. MINIMUM LAP SPLICE LENGTHS ARE AS FOLLOWS:
   #5 BARS (HORIZONTAL) = 3'-1"
   #5 BARS (VERTICAL) = 2'-5"
   #6 BARS = 3'-7"

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REAR ABUTMENT PLAN & ELEVATION
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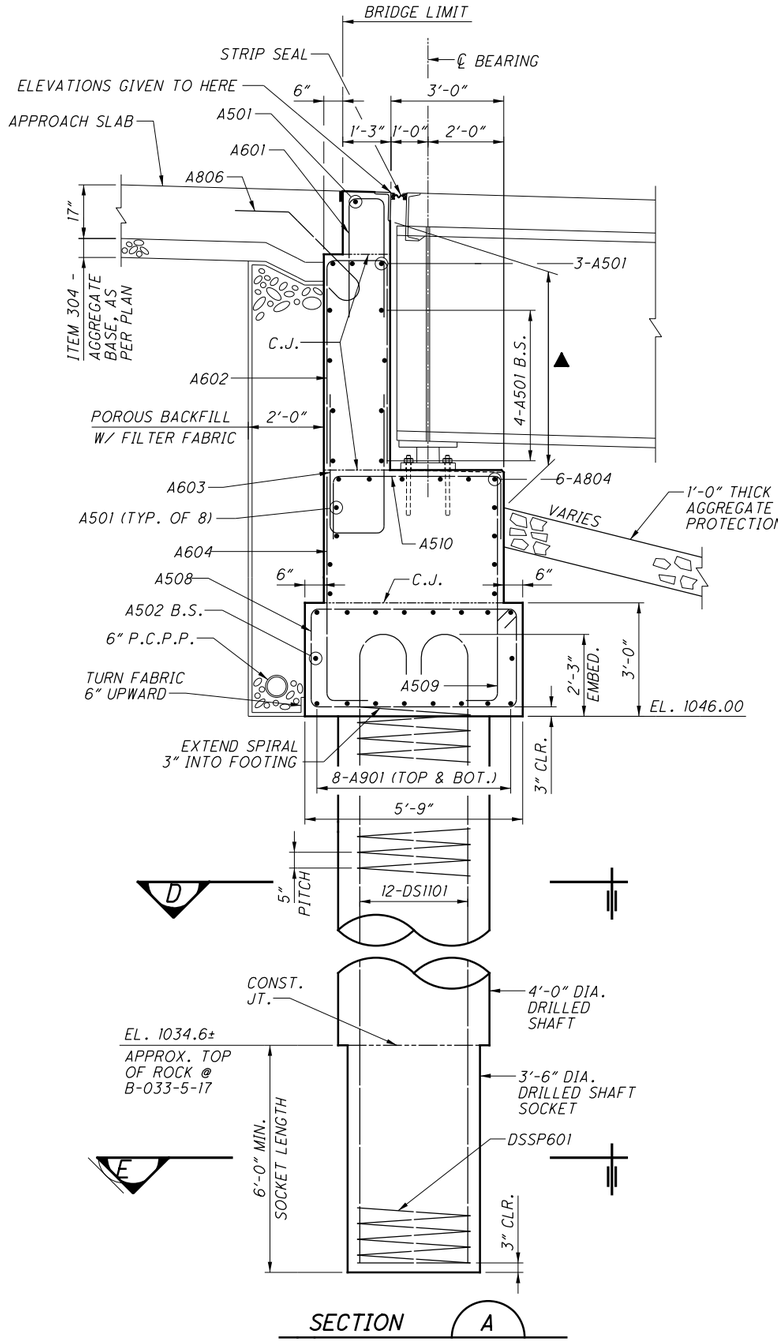

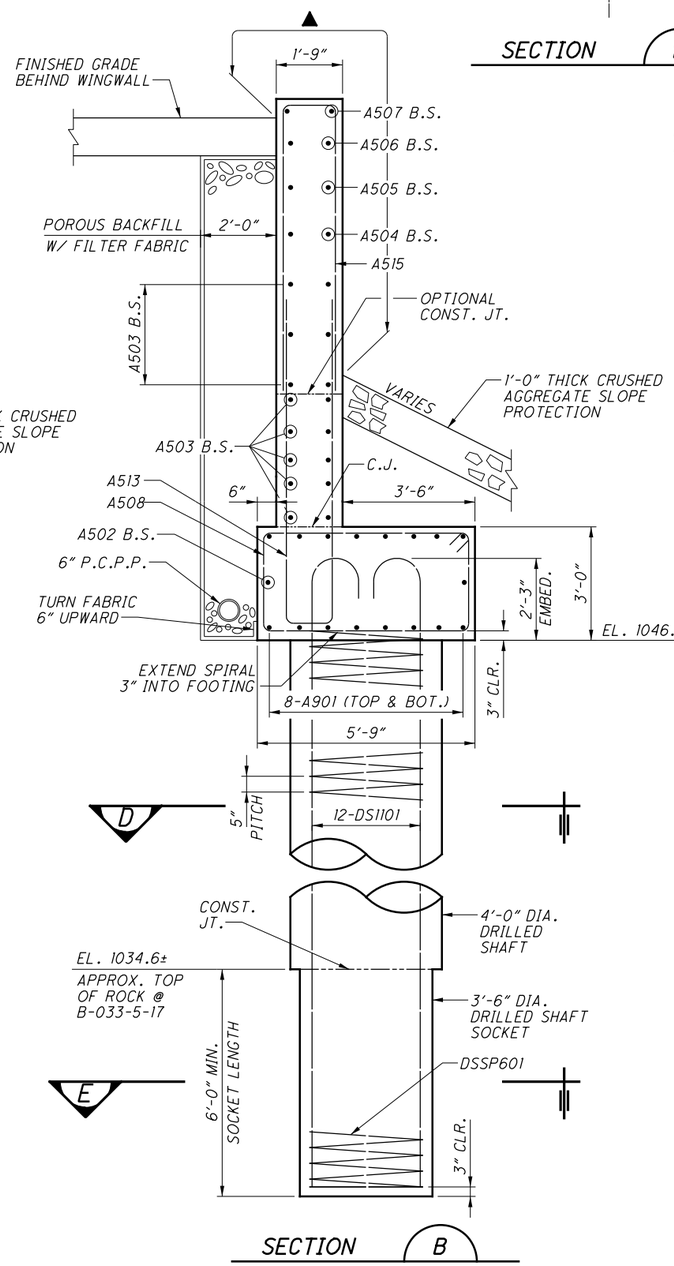

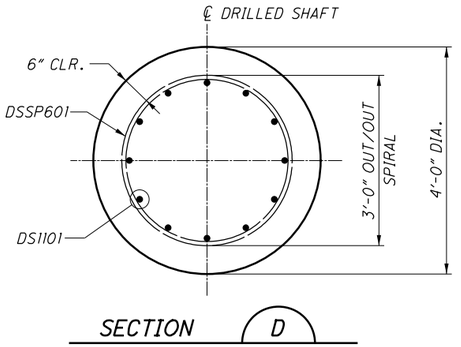

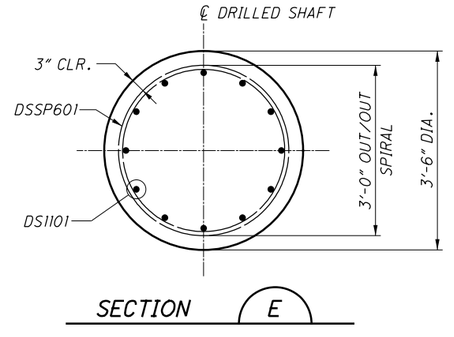

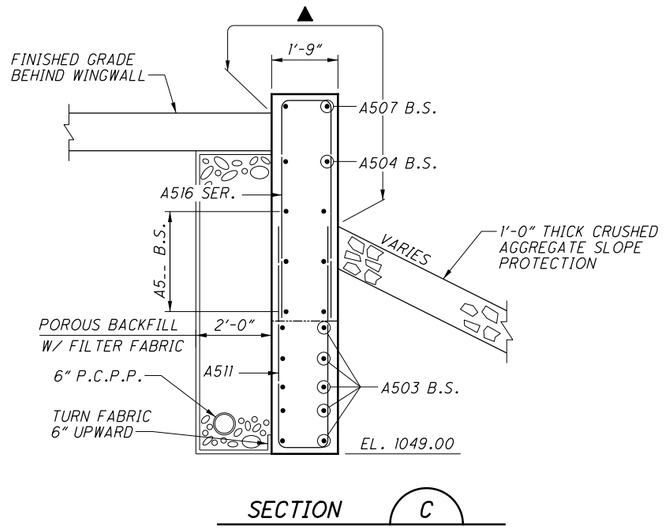

LEGEND

▲ ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

NOTES:

1. FOR ADDITIONAL NOTES, SEE SHT. NO. 9/37.

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
RHC		7702648	

REAR ABUTMENT DETAILS
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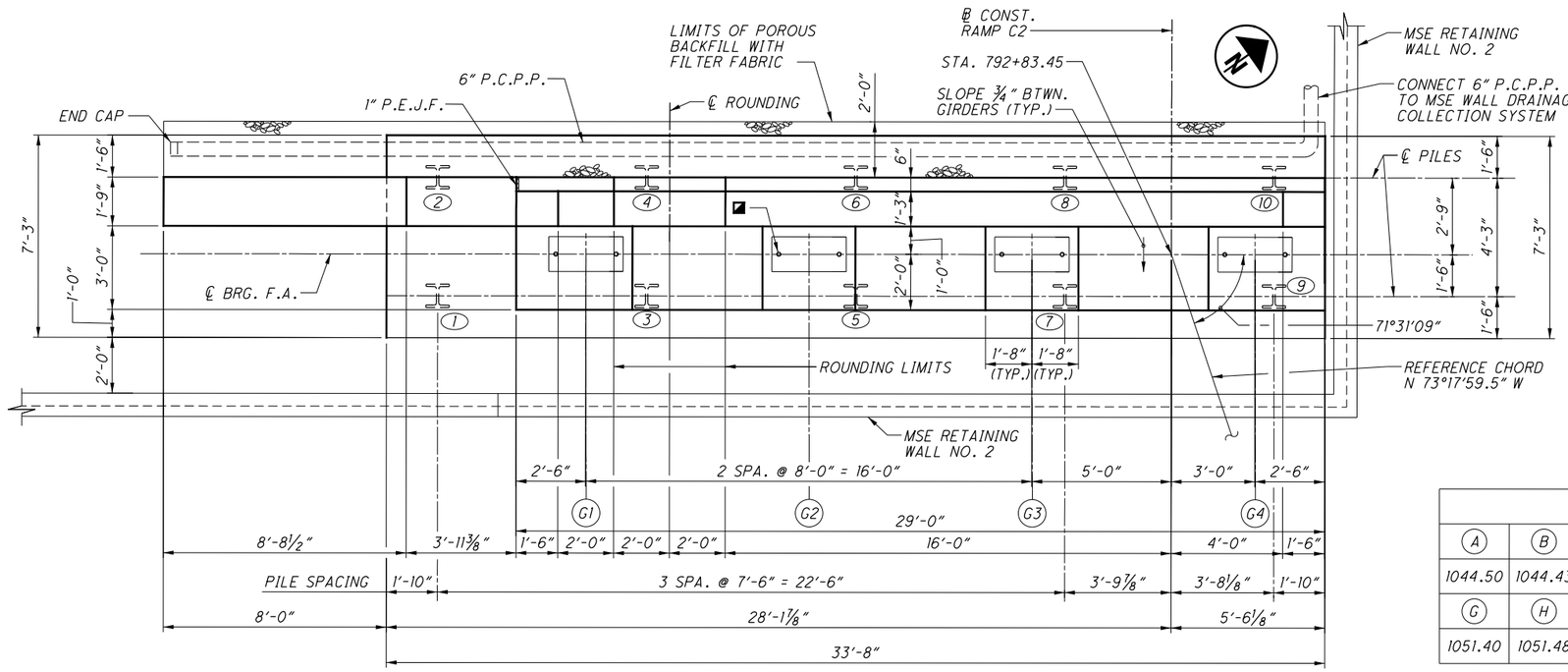
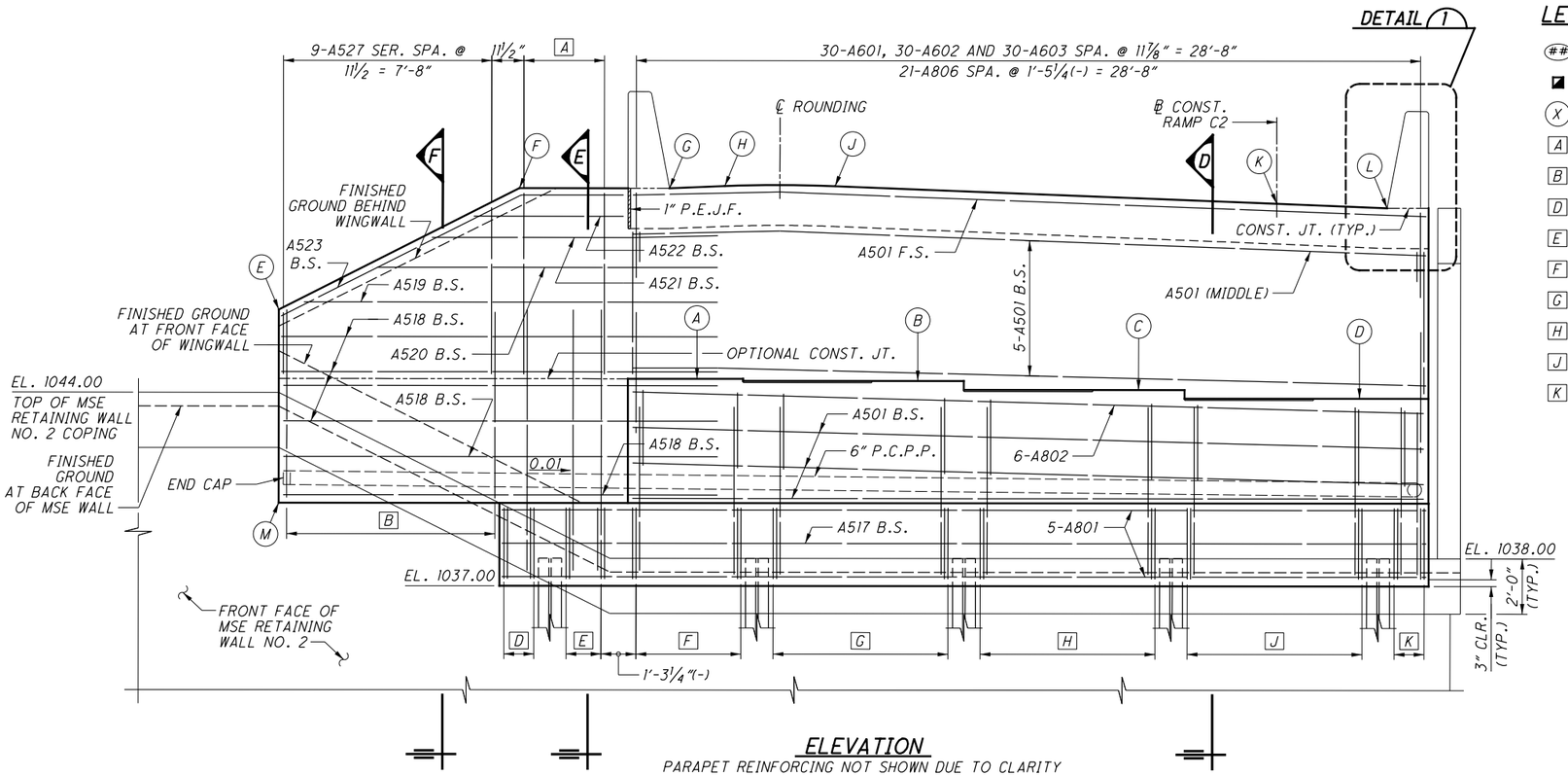


PLAN



ELEVATION

PARAPET REINFORCING NOT SHOWN DUE TO CLARITY

ELEVATIONS					
(A)	(B)	(C)	(D)	(E)	(F)
1044.50	1044.43	1044.11	1043.80	1047.00	1051.40
(G)	(H)	(J)	(K)	(L)	(M)
1051.40	1051.48	1051.48	1050.86	1050.70	1040.00

LEGEND

- (##) HP 10x42 PILE NUMBER
- ◪ BEARING ANCHOR RODS - SEE NOTE 1 (TYP.)
- (X) ELEVATION CALLOUTS
- [A] 3 SETS OF A524, A525 N.S. & A606 F.S. SPA. WITH A528 & A607
- [B] 9-A526 SPA. @ 11½" = 2'-10½"
- [D] 2 SETS OF A528 & A607 SPA. @ 1'-1"
- [E] 2 SETS OF A528 & A607 SPA. @ 1'-3¼"(-)
- [F] 4 SETS OF A528, A607, A529 N.S., A605 F.S. @ A510 SPA. @ 1'-3¼"(-) = 3'-9⅝(-)"
- [G] 6 SETS OF A528, A607, A529 N.S., A605 F.S. @ A510 SPA. @ 1'-3¼"(-) = 6'-4"
- [H] 6 SETS OF A528, A607, A529 N.S., A605 F.S. @ A510 SPA. @ 1'-31#4"(-) = 6'-4"
- [J] 6 SETS OF A528, A607, A529 N.S., A605 F.S. @ A510 SPA. @ 1'-31#4"(-) = 6'-4"
- [K] 2 SETS OF A528, A607, A529 N.S., A605 F.S. @ A510 SPA. @ 1'-1"

NOTES:

1. FOR BEARING ANCHOR ROD DETAILS, SEE SHT. NO. [19/37].
2. FOR SECTION D, SEE SHT. NO. [12/37].
3. FOR SECTIONS E & F & DETAIL 1, SEE SHT. NO. [13/37].
4. ACCURATELY PLACE REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES OR THE PRE-SETTING OF BEARING ANCHORS.
5. MINIMUM LAP SPLICE LENGTHS ARE AS FOLLOWS:
   #5 BARS (HORIZONTAL) = 3'-1"
   #5 BARS (VERTICAL) = 2'-5"
   #6 BARS = 3'-7"

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RHC		7702648	

FORWARD ABUTMENT PLAN & ELEVATION
BRIDGE NO. SUM-77-0927R
RAMP C2 OVER I.R.77 NB

SUM-077/277/224-VAR
PID No. 106002

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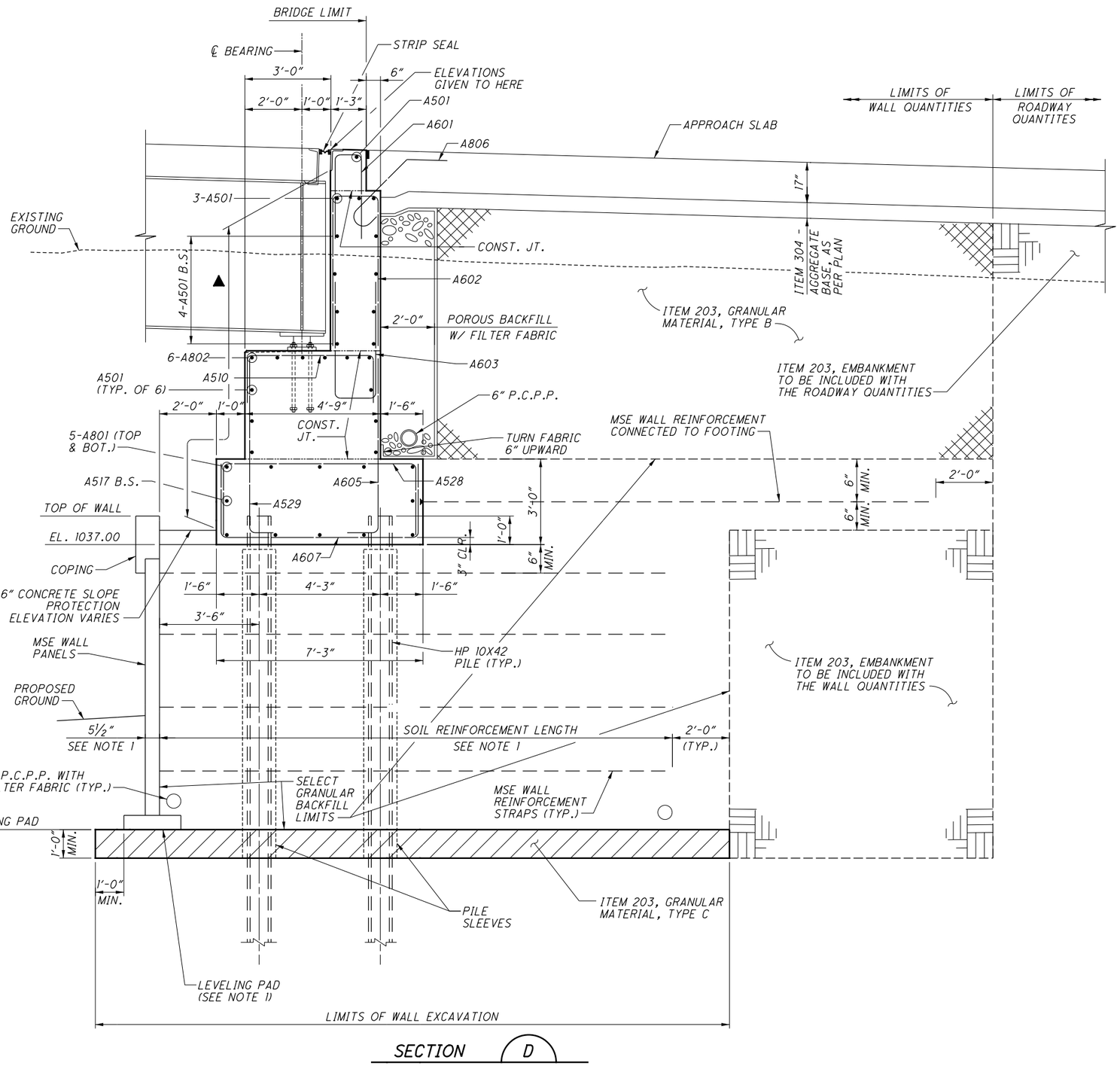

SECTION D

LEGEND

▲ ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

NOTES:

1. ALL DETAILS SHOWN HERE FOR THE MSE WALL, INCLUDING THE WALL COMPONENTS, WALL REINFORCEMENT, WALL BACKFILL, AND WALL FOUNDATION, ARE FOR REFERENCE ONLY. DETAILS OF THESE MSE WALL COMPONENTS ARE INCLUDED IN THE RETAINING WALL NO. 2 PLANS.

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FORWARD ABUTMENT DETAILS
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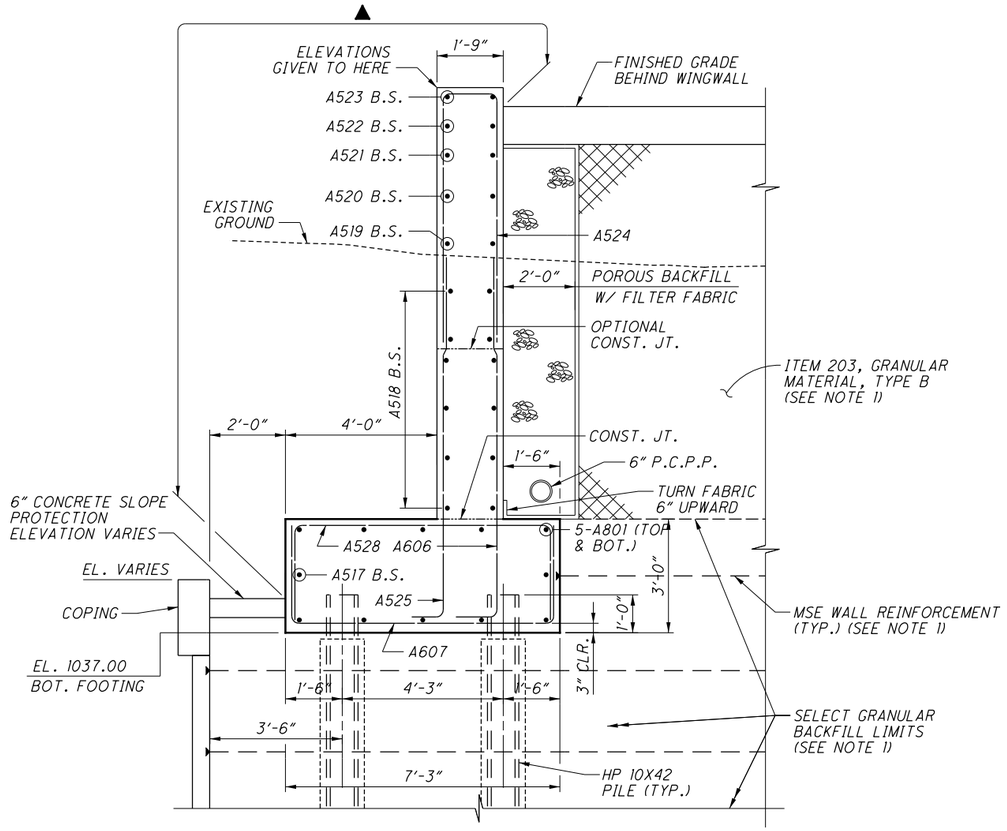
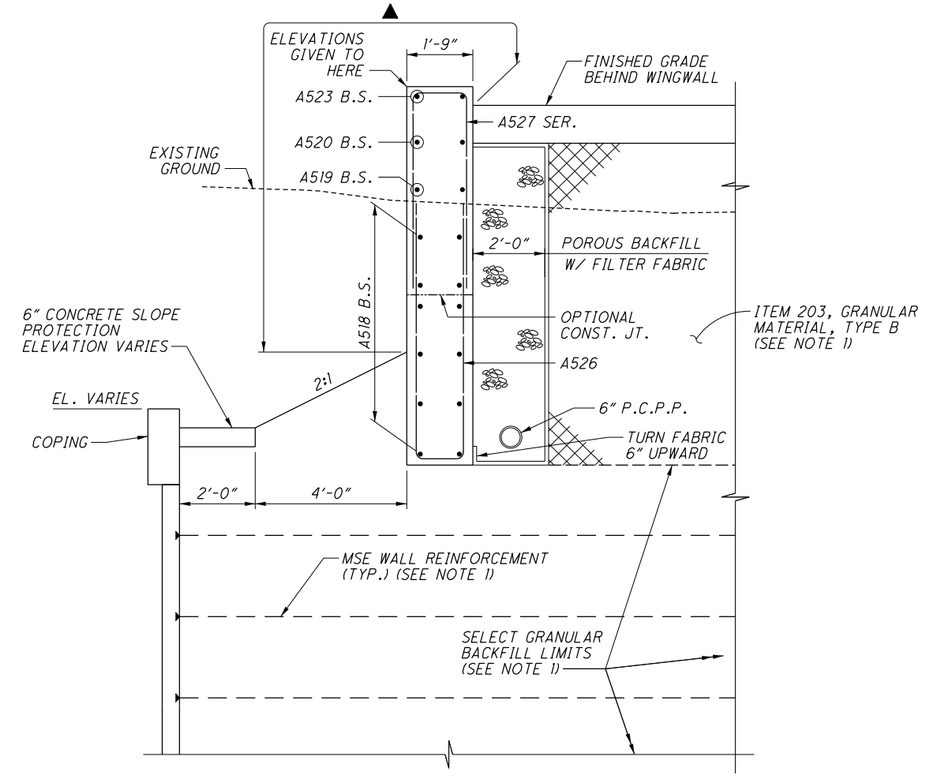
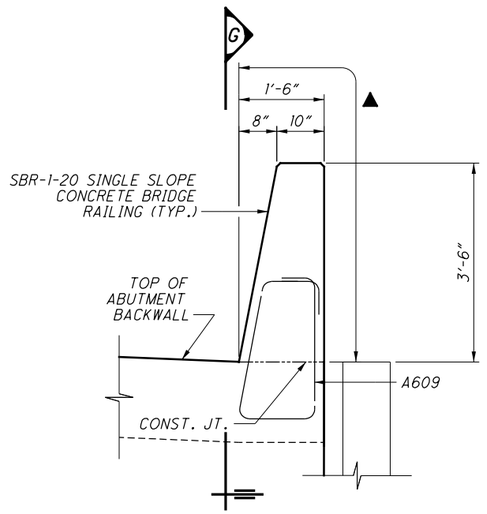


SECTION E

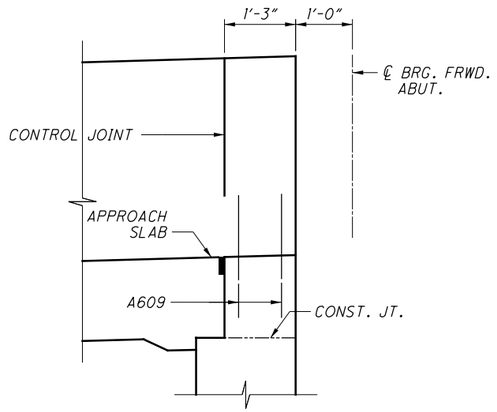


SECTION F



DETAIL 1

ABUTMENT AND PARAPET REINFORCING NOT SHOWN FOR CLARITY.FORWARD ABUTMENT SHOWN, REAR ABUTMENT SIMILAR.RIGHT PARAPET SHOWN, LEFT PARRAPET SIMILAR.



SECTION G

APPROACH SLAB, ABUTMENT AND PARAPET REINFORCING NOT SHOWN FOR CLARITY.

LEGEND

▲ ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

NOTES:

1. ALL DETAILS SHOWN HERE FOR THE MSE WALL, INCLUDING THE WALL COMPONENTS, WALL REINFORCEMENT, WALL BACKFILL, AND WALL FOUNDATION, ARE FOR REFERENCE ONLY. DETAILS OF THESE MSE WALL COMPONENTS ARE INCLUDED IN THE RETAINING WALL NO. 2 PLANS. FOR MORE INFORMATION, SEE SHEETS 1/10 THRU 10/10 .

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FORWARD ABUTMENT DETAILS
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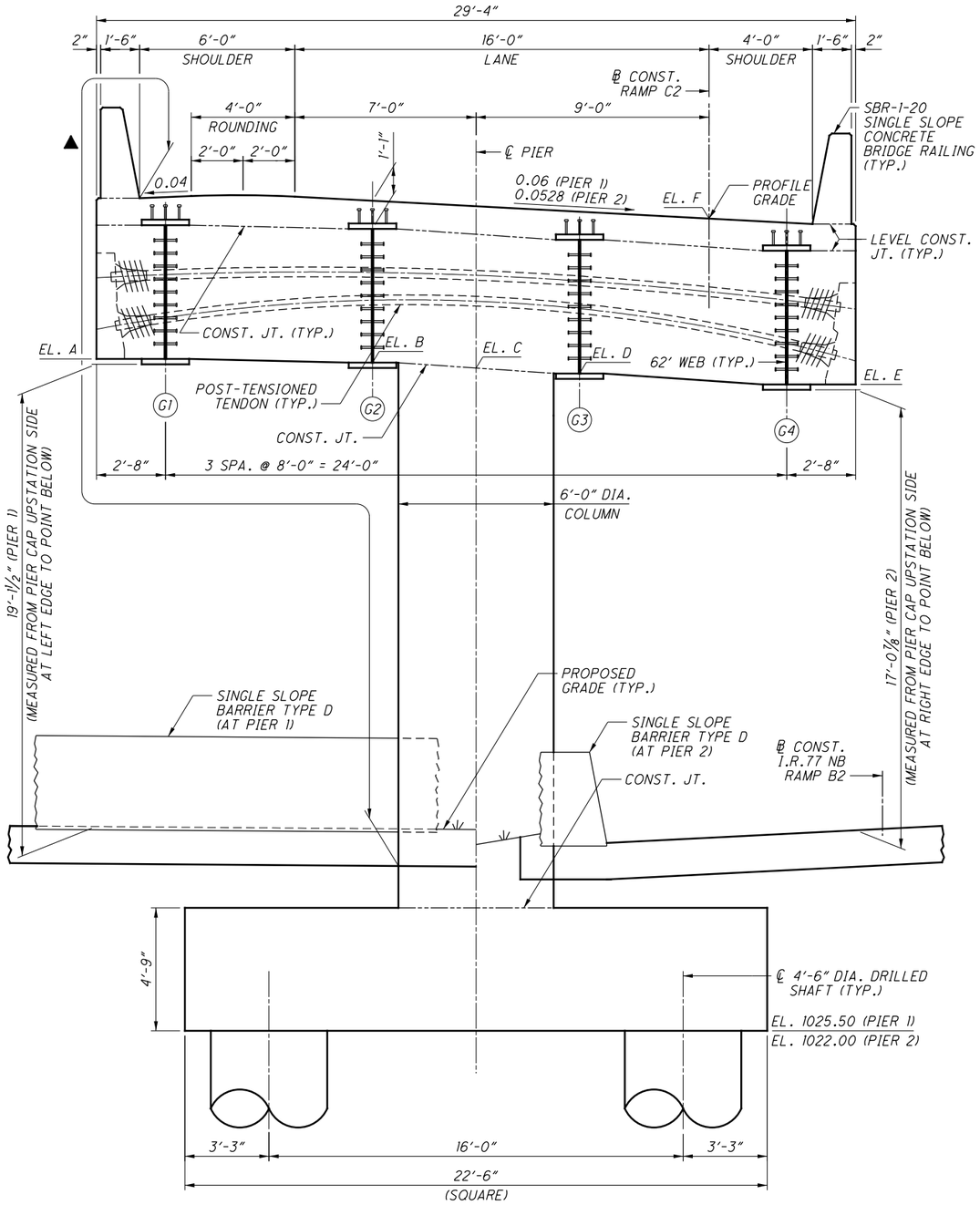
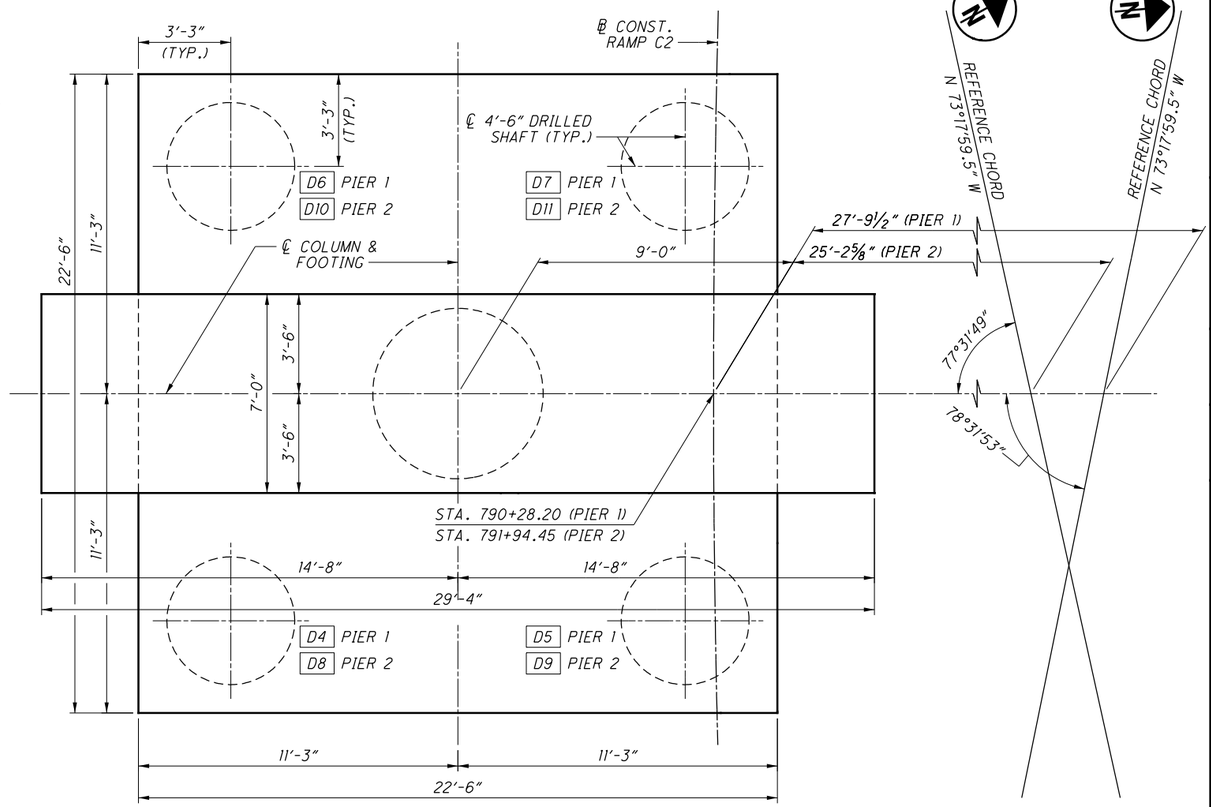


ELEVATION

PIER 2 SHOWN, LOOKING UPSTATION. PIER 1 SIMILAR, UNLESS NOTED OTHERWISE.
TRANSVERSE DIMENSIONS AND PIER CAP ELEVATIONS ARE TAKEN ALONG ℄ PIER CAP.
DRILLED SHAFT REINFORCING NOT SHOWN FOR CLARITY.



PLAN

PIER CAP ELEVATION @ ℄ PIER/COLUMN		
ELEVATION	PIER 1	PIER 2
A	1052.74	1047.96
B	1052.56	1047.82
C	1052.32	1047.60
D	1052.08	1047.39
E	1051.60	1046.97
F	1058.03	1053.38

LEGEND:

- (G#) GIRDER NUMBER
- [D#] DRILLED SHAFT NUMBER
- ▲ INDICATES LIMITS OF "ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)" (TYP.)

NOTES:

1. FOR CONSTRUCTION SEQUENCE NOTES, SEE SHT. NO. [18/37].
2. FOR PIER REINFORCING, SEE SHT. NO. [15/37] THRU [17/37].

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PIER PLAN AND ELEVATION
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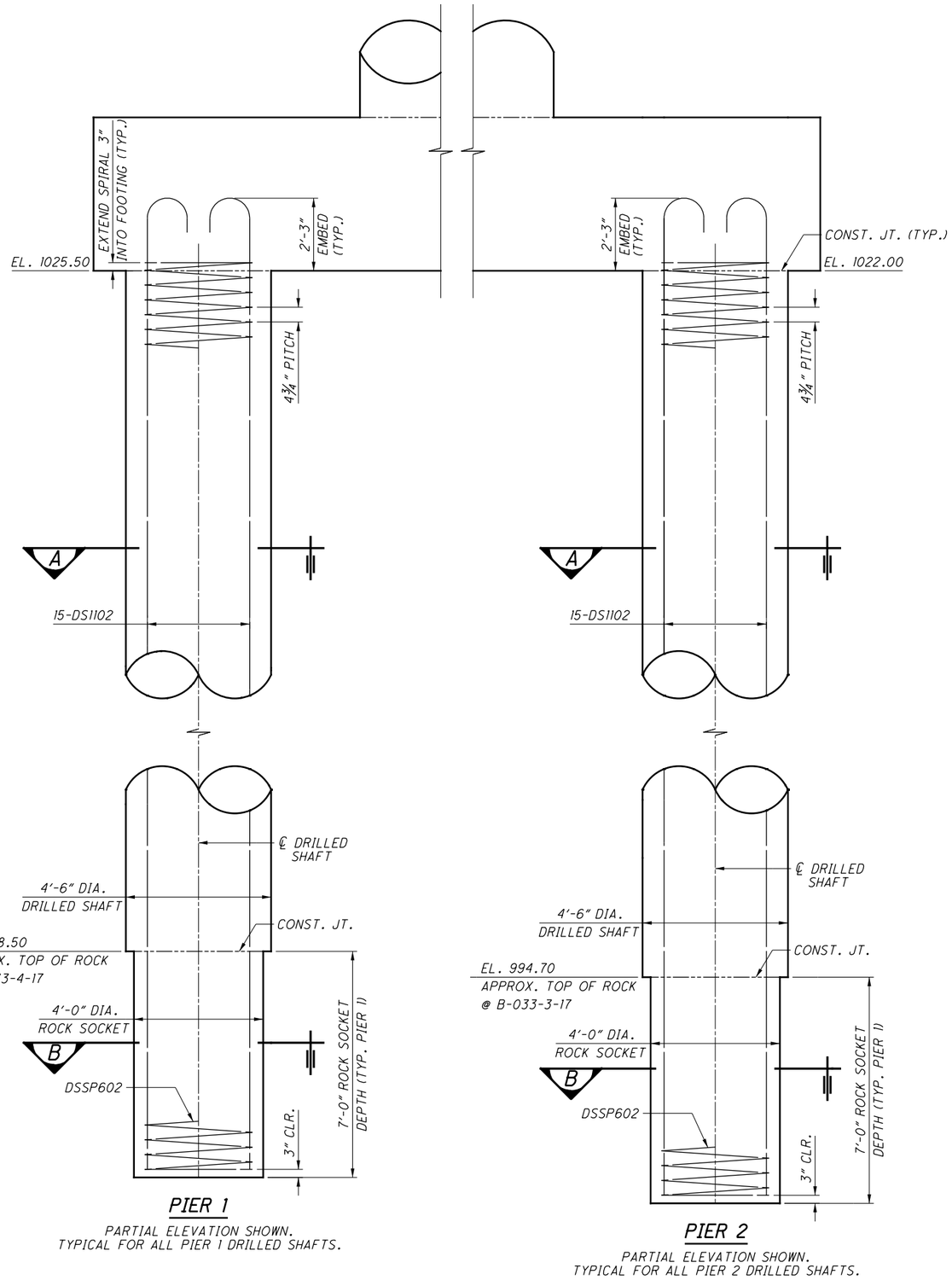


PIER 1

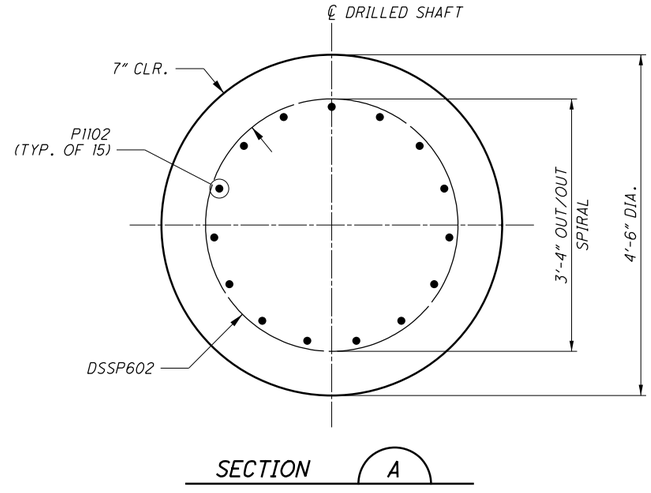
PARTIAL ELEVATION SHOWN.
TYPICAL FOR ALL PIER 1 DRILLED SHAFTS.

PIER 2

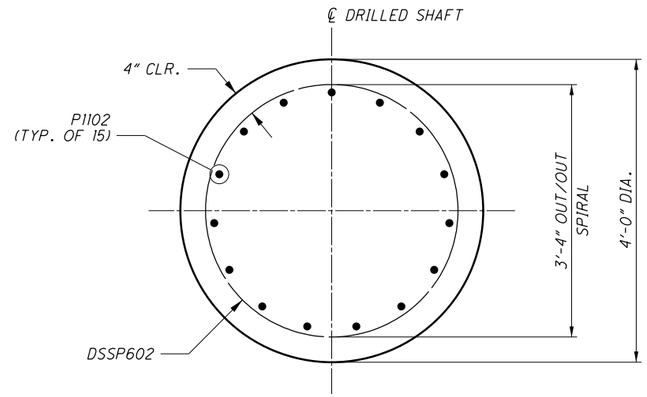
PARTIAL ELEVATION SHOWN.
TYPICAL FOR ALL PIER 2 DRILLED SHAFTS.

ELEVATION

PIER FOOTING AND COLUMN REINFORCING NOT SHOWN FOR CLARITY.



SECTION A



SECTION B

NOTES:

1. FOR PIER PLAN AND ELEVATION, SEE SHT. NO. 14/37.
2. FOR PIER REINFORCING, SEE SHT. NO. 16/37 AND 17/37.
3. MINIMUM REINFORCING LAP SPLICE ARE AS FOLLOWS:
   NO. 10 BARS 6'-0"

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PIER DRILLED SHAFT DETAILS
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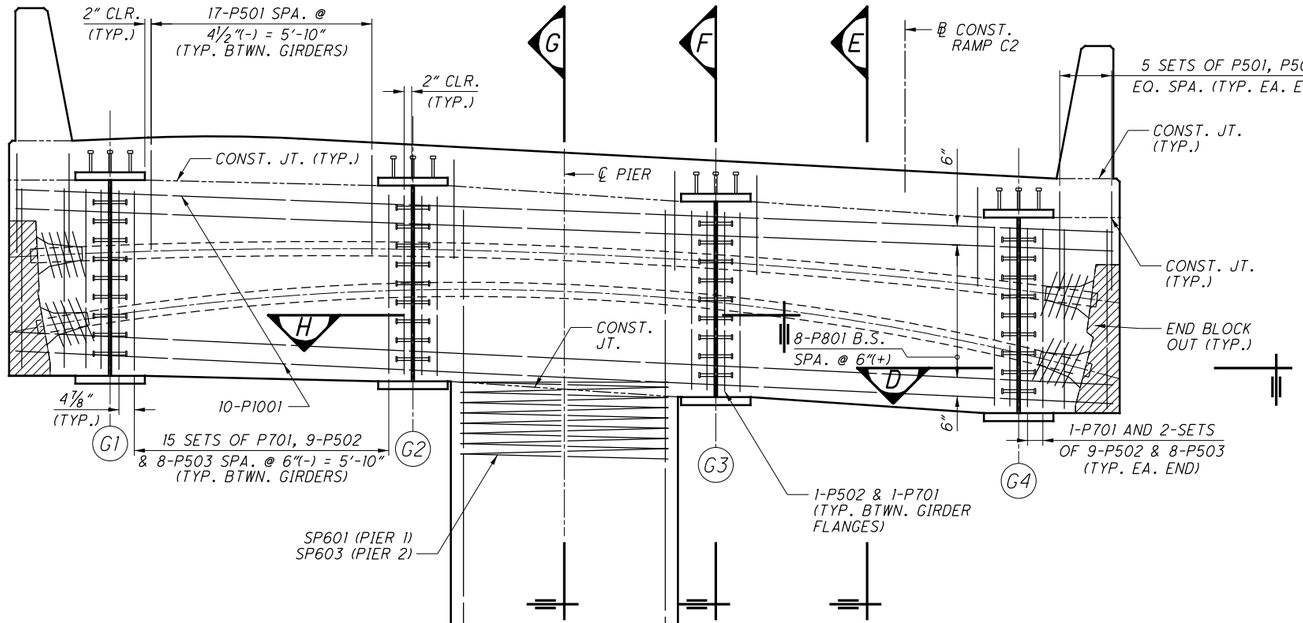
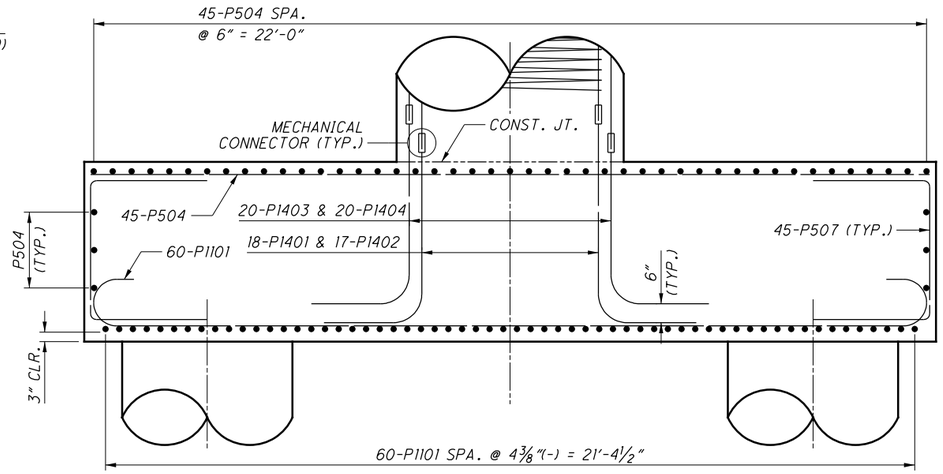


ELEVATION

TYPICAL FOR PIERS 1 & 2 UNLESS NOTED OTHERWISE
DRILLED SHAFT AND END CLOSURE POUR REINFORCING NOT SHOWN FOR CLARITY.



VIEW C

SINGLE SLOPE BARRIER TYPE D NOT SHOWN FOR CLARITY

SECTION A

SECTION B

LEGEND:

(G#) GIRDER NUMBER

NOTES:

1. COLUMN SPIRAL REINFORCING MAY BE DISCONTINUED AT 2" ABOVE BOTTOM OF PIER CAP AT LOWEST POINT.
2. FOR CONSTRUCTION SEQUENCE NOTES, SEE SHT. NO. 18/37.
3. FOR SECTIONS E, F, G AND H, SEE SHT. NO. 17/37.
4. FOR END BLOCK OUT DETAIL, SEE SHT. NO. 17/37.

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PIER DETAILS
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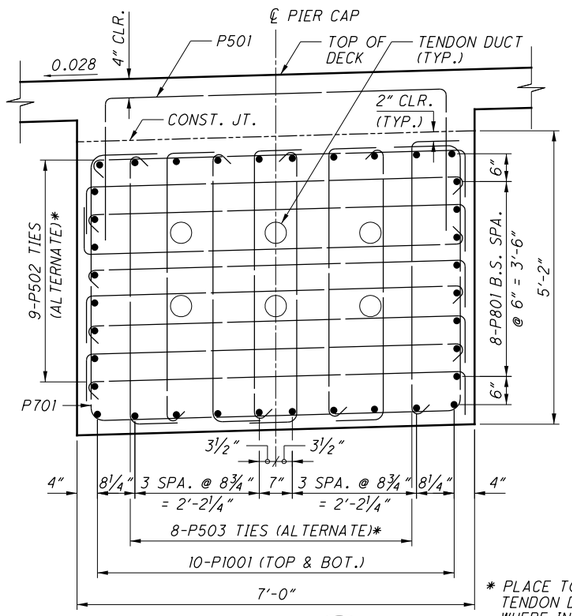
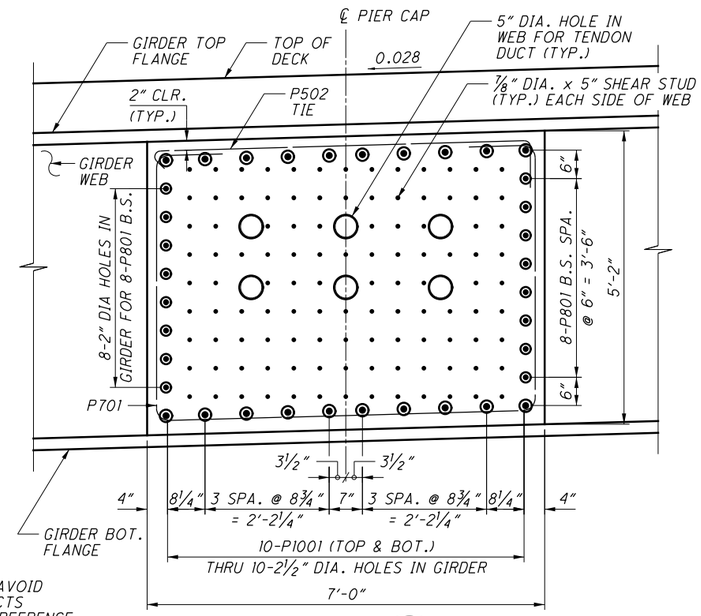


SECTION E

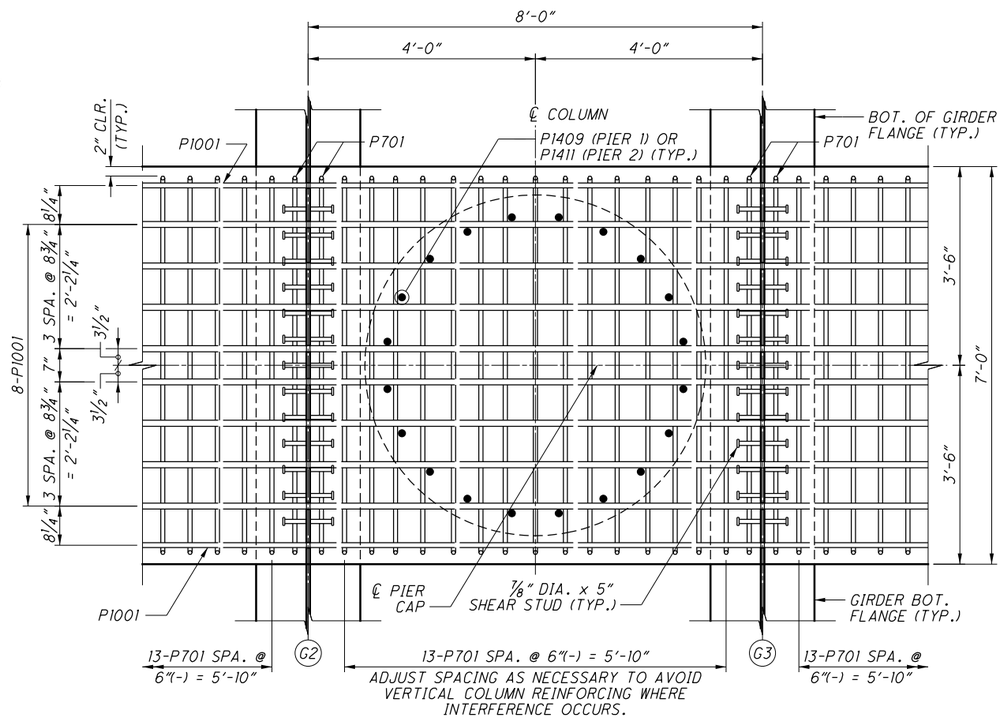
PIER 1 SHOWN, PIER 2 SIMILAR.
DECK REINFORCING NOT SHOWN FOR CLARITY.

* PLACE TO AVOID TENDON DUCTS WHERE INTERFERENCE OCCURS.



SECTION F

PIER 1 SHOWN, PIER 2 SIMILAR.
GIRDER 3 SHOWN, REMAINING GIRDERS SIMILAR.
SHEAR STUDS ON TOP OF GIRDER AND DECK REINFORCING NOT SHOWN FOR CLARITY.



ADJUST SPACING AS NECESSARY TO AVOID VERTICAL COLUMN REINFORCING WHERE INTERFERENCE OCCURS.

SECTION H

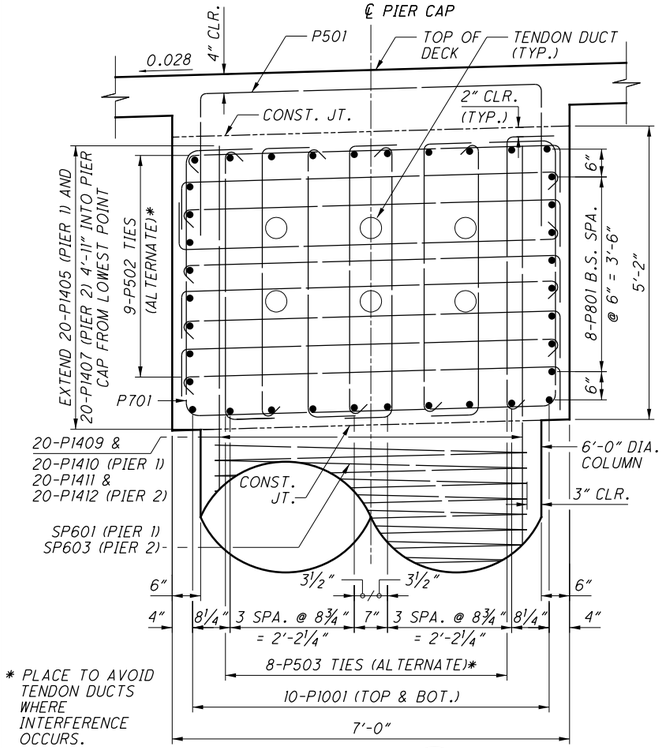
BAR TIES NOT SHOWN FOR CLARITY.

LEGEND:

(G#) GIRDER NUMBER

NOTES:

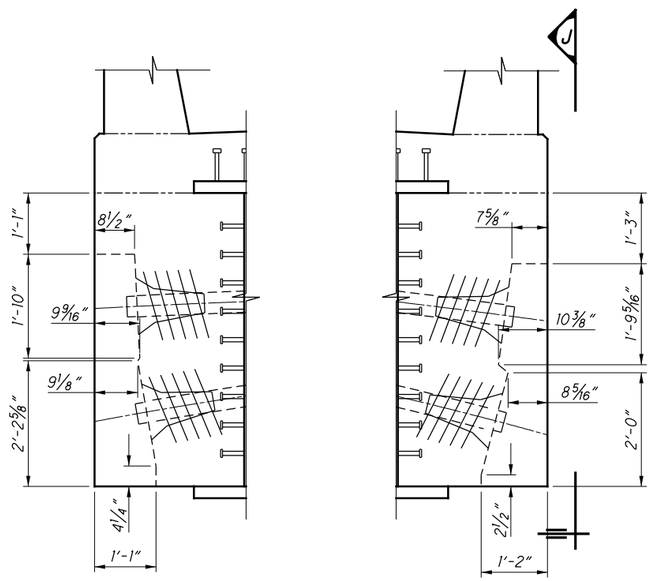
1. TYPICAL SHEAR STUD QUANTITY FOR EACH GIRDER = 111 STUDS ON EACH SIDE OF THE WEB, FOR A TOTAL OF 222 STUDS FOR EACH GIRDER (TYP. FOR BOTH PIERS).
2. FOR CONSTRUCTION SEQUENCE NOTES, SEE SHT. NO. 18/37.



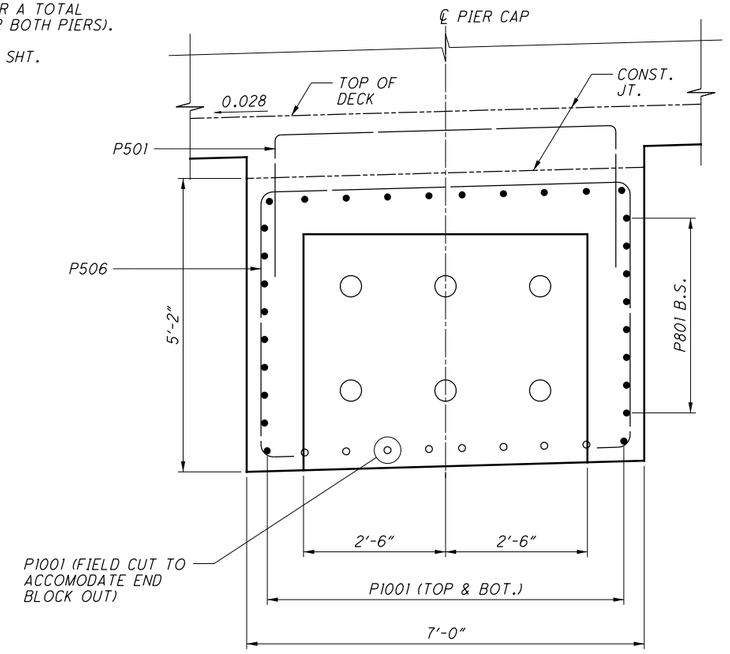
* PLACE TO AVOID TENDON DUCTS WHERE INTERFERENCE OCCURS.

SECTION G

PIER 1 SHOWN, PIER 2 SIMILAR, UNLESS NOTED OTHERWISE.
COLUMN SPIRAL EXTENDING INTO PIER CAP NOT SHOWN FOR CLARITY.



END BLOCK OUT DETAIL



VIEW J

PIER 1 SHOWN, PIER 2 SIMILAR BUT MIRRORED.

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PIER DETAILS

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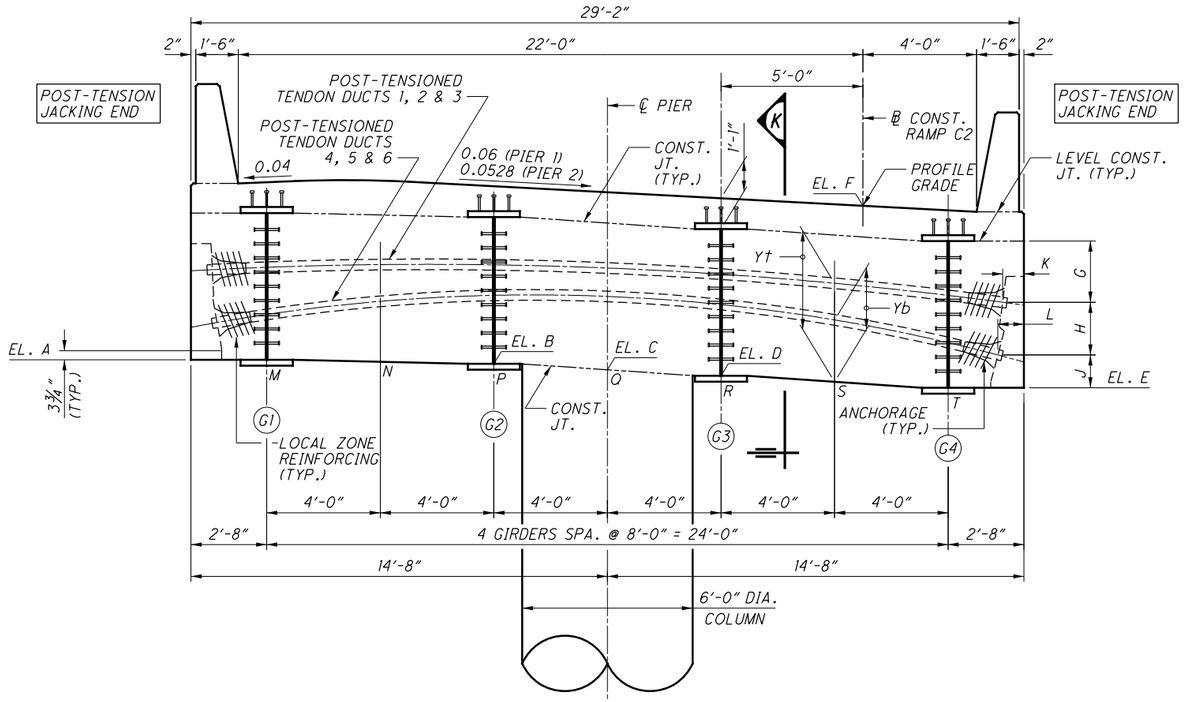
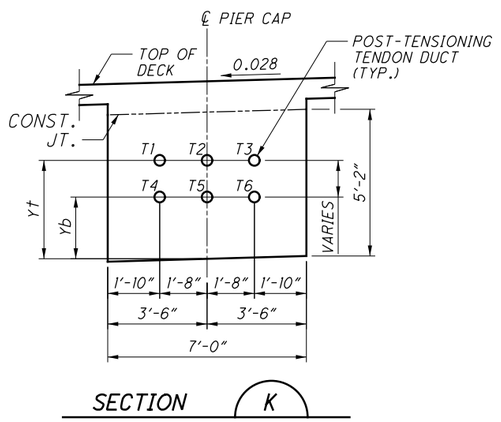


POST TENSIONING PIER CAP ELEVATION

PIER 2 SHOWN, LOOKING UPSTATION. PIER 1 SIMILAR, UNLESS NOTED OTHERWISE.
TRANSVERSE AND VERTICAL DIMENSIONS AND PIER CAP ELEVATIONS ARE TAKEN ALONG ℄ PIER CAP.



SECTION K

DIMENSIONS TO POST-TENSIONING TENDON DUCTS

	PIER 1		PIER 2	
DIM.	LEFT	RIGHT	LEFT	RIGHT
G	1'-11⅞"	2'-2"	2'-0"	2'-1⅞"
H	1'-10"	1'-9¾"	1'-10"	1'-9¾"
J	1'-4⅛"	1'-2¼"	1'-4"	1'-2⅜"
K	8⅝"	9"	8⅝"	9"
L	1'-0⅝"	1'-1"	1'-0⅝"	1'-0⅞"

STRESSING SEQUENCE

T2, T5, T1, T3, T4, T6

POST-TENSIONING TENDON DUCT PROFILE POINTS

POINT	M	N	P	Q	R	S	T	
Yt	3'-3"	3'-5"	3'-5¾"	3'-7"	3'-7"	3'-5⅝"	3'-3"	DUCTS 1, 2 & 3
Yb	1'-7⅛"	2'-1½"	2'-4⅛"	2'-7"	2'-6⅛"	2'-2⅛"	1'-7⅛"	DUCTS 4, 5 & 6

CONSTRUCTION SEQUENCE

POST-TENIONED PIER CAP

1. CONSTRUCT TEMPORARY BENTS FOR SUPERSTRUCTURE STEEL FRAMING AND PIER CAPS. LOCATION OF THE BENTS FOR THE SUPERSTRUCTURE SHALL BE ON BOTH SIDE OF THE CAP AS CLOSE AS CONSTRUCTION OF THE CAP WILL ALLOW AND NOT BEYOND THE NEAREST CROSS FRAME CONNECTION POINT.

   DETAILS OF THE TEMPORARY BENTS SHALL BE DESIGNED, PREPAIRED AND STAMPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER AND SUBMITTED TO THE DIRECTOR FOR APPROVAL AT LEAST THIRTY (30) DAYS BEFORE ACTUAL WORK IS TO BEGIN. FOR OVERALL CONSTRUCTION SEQUENCE, TEMPORARY BENT REACTIONS, AND ALLOWABLE LANE/SHOULDER CLOSURES FOR CONSTRUCTION, SEE SHEETS 5/37 THRU 8/37.
2. ERECT SUPERSTRUCTURE GIRDERS AND CROSS FRAMES.
3. CONSTRUCT PIER CAP FORMS.
4. INSTALL PIER CAP REINFORCEMENT, TENDON DUCTS, AND ANCHORAGE AND PLACE PIER CAP CONCRETE.
5. AFTER 7 DAYS, PLACEMENT OF BRIDGE DECK FORMS AND DECK REINFORCING MAY BEGIN.
6. WHEN THE PIER CAP CONCRETE STRENGTH REACHES 7000 PSI, COMPLETE POST-TENSIONING INCLUDING GROUTING OF THE DUCTS. TAILS CANNOT BE CUT OFF NOR DUCT GROUTING BEGIN UNTIL STRESSING RECORDS AS PER SS 855.
7. PRIOR TO BEGINNING THE FINAL SEQUENCE, ALL TENDONS ARE TO BE STESSED TO A PRELIMINARY FORCE OF 10% OF THE TOTAL JACKING FORCE.
8. REMOVE TEMPORARY FALSEWORK AND PEIR CAP FORMWORK.
9. PLACE THE DECK CONCRETE ACCORDING TO POURING SEQUENCE SHOWN ON SHT. NO. 27/37.
10. FILL IN POST-TENSIONING BLOCK OUTS AT ENDS OF PIER CAPS.
11. PLACE DECK PARAPETS AND SEAL CONCRETE SURFACES.

LEGEND:

(G#) GIRDER NUMBER

NOTES:

1. PRESTRESSING STEEL SHALL BE 0.60" DIAMETER UNCOATED 7-WIRE, LOW RELAXATION, GRADE 270 KSI, CONFORMING TO ASTM A416. TENDONS SHALL BE 19 STRAND TENDONS WITH AREA = 4.123 SQ IN.
2. TENDON DUCTS SHALL BE CORRUGATED PLASTIC PIPE AS PER SS 855:
   FRICTION COEFFICIENT, $\mu = 0.25$
   WOBBLE COEFFICIENT, $\kappa = 0.0002$
3. THE MAXIMUM REQUIRED TENSIONING FORCE AT THE JACK IS 834 KIPS PER TENDON. COMPUTATIONS OF GAUGE PRESSURE AND ELONGATION SHALL BE SUPPLIED BY THE CONTRACTOR IN THE SHOP DRAWING SUBMITTAL FOR REVIEW AS PER SS 855.
4. THE TENDONS SHALL BE STRESSED AT BOTH ENDS WITH A MAXIMUM TEMPORARY JACK FORCE OF 75% OF THE SPECIFIED MINIMUM ULTIMATE TENSILE STRENGTH OF THE PRESTRESSING STEEL ANCHOR SET = 0.25".
5. LOCAL ZONE ANCHORAGE AND REINFORCING SHALL BE THE RESPONSIBILITY OF THE SUPPLIER. SHOP DRAWINGS OF THE ANCHORAGE, REINFORCING, TENDONS, DUCTS AND ALL POST-TENSIONING HARDWARE SHALL BE SUBMITTED IN ACCORDANCE WITH SS 855 PRIOR TO FABRICATION.
6. NO CAMBER OF THE PIER CAP IS REQUIRED.
7. FOR ELEVATIONS A THRU F, SEE SHT. NO. 14/37.
8. FOR COLUMN AND FOOTING DETAILS, SEE SHT. NO. 16/37.

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PIER DETAILS
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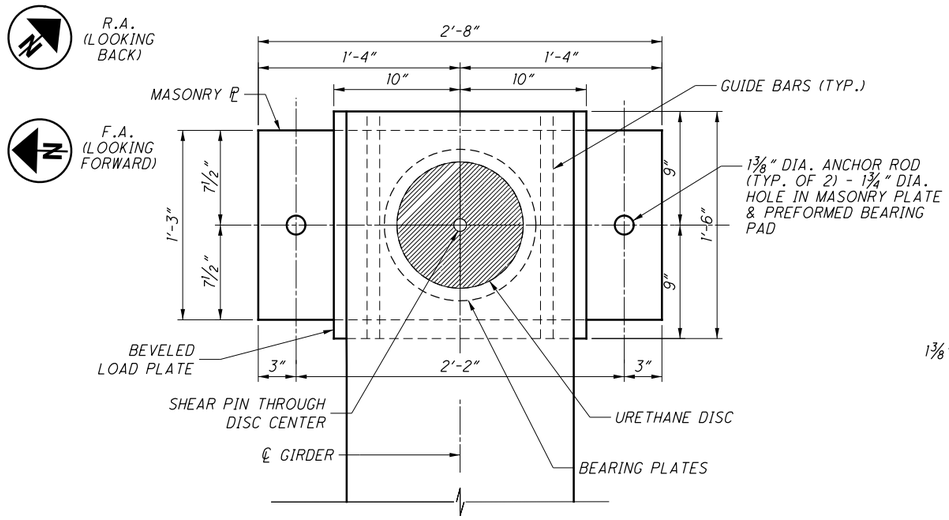
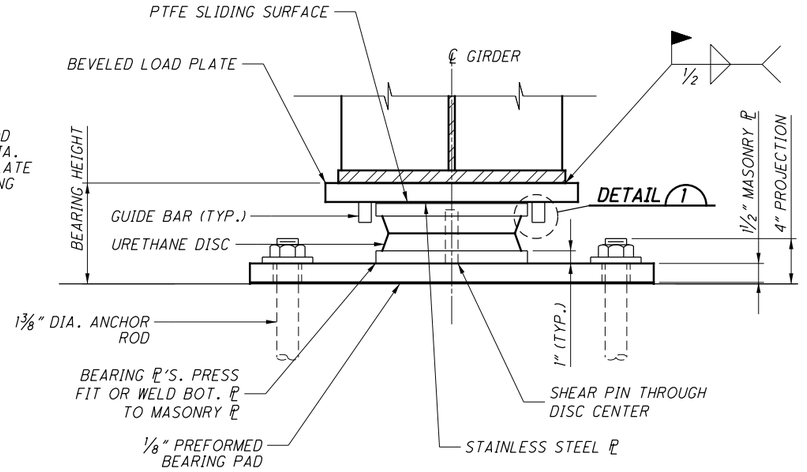
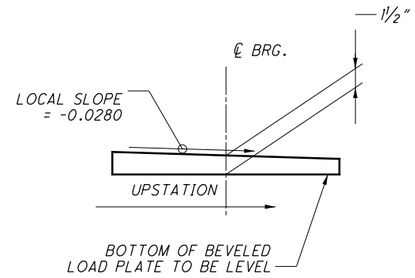


ABUTMENT EXPANSION BEARING PLAN

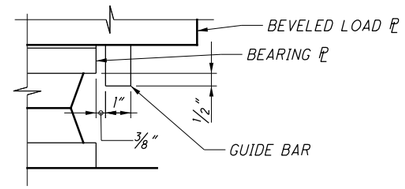


ABUTMENT EXPANSION BEARING ELEVATION



BEVELED LOAD PLATE DETAIL

GIRDER AND BEARING ASSEMBLY NOT SHOWN



DETAIL 1

HLMR BEARING DATA TABLE

LOCATION		QUANTITY	BEARING TYPE	ASSUMED BRG. HEIGHT (IN.)	DIM "W" (IN.) (SEE NOTE 7)	DIM "T" (IN.) (SEE NOTE 8)	SERVICE LIMIT STATE					STRENGTH LIMIT STATE							
							VERTICAL LOAD (KIPS)			HORIZ. LOAD (KIPS)		VERTICAL LOAD (KIPS)			HORIZ. LOAD (KIPS)		MOVEMENT (IN.)		ROTATION
ABUT.	GIRDERS						DEAD	LIVE	TOTAL	LONG.	TRANS.	DEAD	LIVE	TOTAL	LONG.	TRANS.	LONG.	TRANS.	(RADS)
REAR	G1	1	LG	7.625	20.00	0.15	56.4	71.0	127.4	2.3	12.7	70.5	124.3	194.8	2.8	16.5	1.39	-	0.012
	G2	1	LG	7.625	20.00	0.15	26.8	77.1	103.9	1.1	28.6	33.5	134.9	168.4	1.3	36.9	1.36	-	0.012
	G3	1	LG	7.625	20.00	0.15	20.9	72.2	93.1	0.8	35.6	26.1	126.4	152.5	1.0	45.6	1.32	-	0.011
	G4	1	LG	7.625	20.00	0.14	22.3	62.2	84.5	0.9	24.1	27.9	108.9	136.8	1.1	30.6	1.28	-	0.011
FRWD.	G1	1	LG	7.625	20.00	0.15	57.7	70.5	128.2	2.3	13.0	72.1	123.4	195.5	2.9	16.9	1.31	-	0.012
	G2	1	LG	7.625	20.00	0.14	28.6	83.4	112.0	1.1	29.1	35.8	146.0	181.8	1.4	37.5	1.29	-	0.011
	G3	1	LG	7.625	20.00	0.14	23.3	82.5	105.8	0.9	35.7	29.1	144.4	173.5	1.2	45.7	1.26	-	0.011
	G4	1	LG	7.625	20.00	0.14	25.1	67.7	92.8	1.0	23.7	31.4	118.5	149.9	1.3	30.1	1.23	-	0.011

NOTES:

1. DEAD LOAD INCLUDES FUTURE WEARING SURFACE.
2. PER AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 14.4.1, LIVE LOAD DOES NOT INCLUDE DYNAMIC LOAD ALLOWANCE.
3. ROTATION IS FOR LIVE LOAD ONLY AND INCLUDES A FABRICATION/INSTALLATION TOLERANCE OF 0.005 RADS, AND AN ALLOWANCE FOR UNCERTAINTIES OF 0.005 RADS, FOR A TOTAL TOLERANCE OF 0.010 RADS. PER THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 14.4.2.2.1.
4. FOR HORIZONTAL LOADS, THE ASSUMED FRICTION IS 4% OF THE SERVICE LIMIT STATE VERTICAL DEAD LOAD.
5. BEARING HEIGHT IS THE TOTAL VERTICAL DIMENSION OF THE PREFORMED BEARING PAD, MASONRY PLATE, BEARING ASSEMBLY AND BEVELED LOAD PLATE AT THE CENTERLINE OF THE BEARING.
6. HORIZONTAL LONGITUDINAL MOVEMENT GIVEN IS THE MAXIMUM CONTRACTION OR EXPANSION WHEN GIRDER IS PLACED AT 60°AND INCLUDES A FACTOR OF 1.20 PER THE AASHTO LRFD BRIDGEDESIGN SPECIFICATIONS TABLE 3.4.1-1.
7. THE MASONRY PLATE DIMENSIONS AND ANCHOR ROD LOCATIONS SHOWN ASSUME A MAXIMUM WIDTH (IN THE TRANSVERSE DIRECTION) OF THE UPPER PLATE OF THE BEARING ASSEMBLY EQUALTO THE DIMENSION "W" AS SHOWN IN THE HLMR BEARING DATA TABLE. THE CONTRACTOR SHALL ENSURE THAT THE UPPER PLATE OF THE BEARING ASSEMBLY DOES NOT INTERFERE WITH THE ANCHOR BOLTS AT ALL EXPECTED EXPANSION POSITIONS. ADJUST THE MASONRY PLATE LENGTH AND ANCHOR ROD LOCATIONS TO PROVIDE ADEQUATE CLEARANCES TO THE ANCHOR RODS. SHOW THE FINAL MASONRY PLATE DIMENSIONS AND ANCHOR ROD LOCATIONS ON THE SHOP DRAWINGS.
8. THE POSITION OF THE LOAD PLATE IS TEMPERATURE DEPENDENT. PRIOR TO (AND WITHIN 2 HOURS OF) ERECTING GIRDERS, ADJUST LOAD PLATE POSITION BY DIM. "T", AS SHOWN IN THE HLMR BEARING DATA TABLE, FOR EACH 10°F FALL OR RISE (FROM 60°F) AT TIME OF GIRDER ERECTION. FOR BEARINGS AT THE REAR ABUTMENT, MOVE LOAD PLATE UPSTATION FOR TEMPERATURES LESS THAN 60°F AND DOWNSTATION FOR TEMPERATURES GREATER THAN 60°F. FOR BEARINGS AT THE FORWARD ABUTMENT, MOVE LOAD PLATE DOWNSTATION FOR TEMPERATURES LESS THAN 60°F AND UPSTATION FOR TEMPERATURES GREATER THAN 60°F. TO PREVENT CONTAMINATION OF THE SLIDING SURFACE, ADJUST LOAD PLATE POSITION BY SLIDING THE LOAD PLATE HORIZONTALLY. DO NOT LIFT THE LOAD PLATE.
9. THE LONGITUDINAL DIRECTION IS DEFINED AS PARALLEL TO THE DIRECTION OF MOVEMENT INDICATED ON THE PLANS. THE TRANSVERSE DIRECTION IS DEFINED AS PERPENDICULAR TO THE DIRECTION OF MOVEMENT.
10. ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE, AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER THE BEARING IS INSTALLED.
11. THE ABUTMENT BEAM SEAT ELEVATIONS ARE BASED ON OVERALL BEARING HEIGHTS PROVIDED IN THE HLMR BEARING DATA TABLE ABOVE. IF THE CONTRACTOR'S SELECTED BEARING MANUFACTURER HAS A DESIGN THAT DOES NOT CONFORM TO THE HEIGHTS PROVIDED IN THE TABLE, ADJUST THE BEARING SEAT ELEVATIONS AT NO ADDITIONAL COST TO THE STATE. ADJUST THE LOCATION OF REINFORCING STEEL HORIZONTALLY AS NECESSARY TO AVOID INTERFERENCE WITH THE BEARING ANCHOR BOLTS. MAINTAIN THE MINIMUM CONCRETE COVER AND MINIMUM SPACING REQUIRED BY THE PROJECT PLANS. IF THE REINFORCING STEEL CANNOT BE MOVED TO PROVIDE THE REQUIRED POSITION FOR THE ANCHOR BOLTS, THE CONTRACTOR'S BEARING MANUFACTURER SHALL REDESIGN THE BEARINGS TO ACCOMMODATE AN ACCEPTABLE ANCHOR BOLT CONFIGURATION.
12. SEE GENERAL NOTES FOR ADDITIONAL HLMR BEARING REQUIREMENTS.

LEGEND:

G# - GIRDER NUMBER DESIGNATION

LG - LONGITUDINALLY EDGE GUIDED BEARINGS ARE RESTRAINED TRANSVERSELY AND ALLOW FOR LONGITUDINAL MOVEMENT AND ROTATION ABOUT BOTH AXES

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CHECKED TJW | REVISED | STRUCTURE FILE NUMBER 7702648

HLMR BEARING DATA TABLE
BRIDGE NO. SUM-77-0927R
RAMP C2 OVER I.R.77 NB

SUM-077/277/
224-VAR
PID No. 106002

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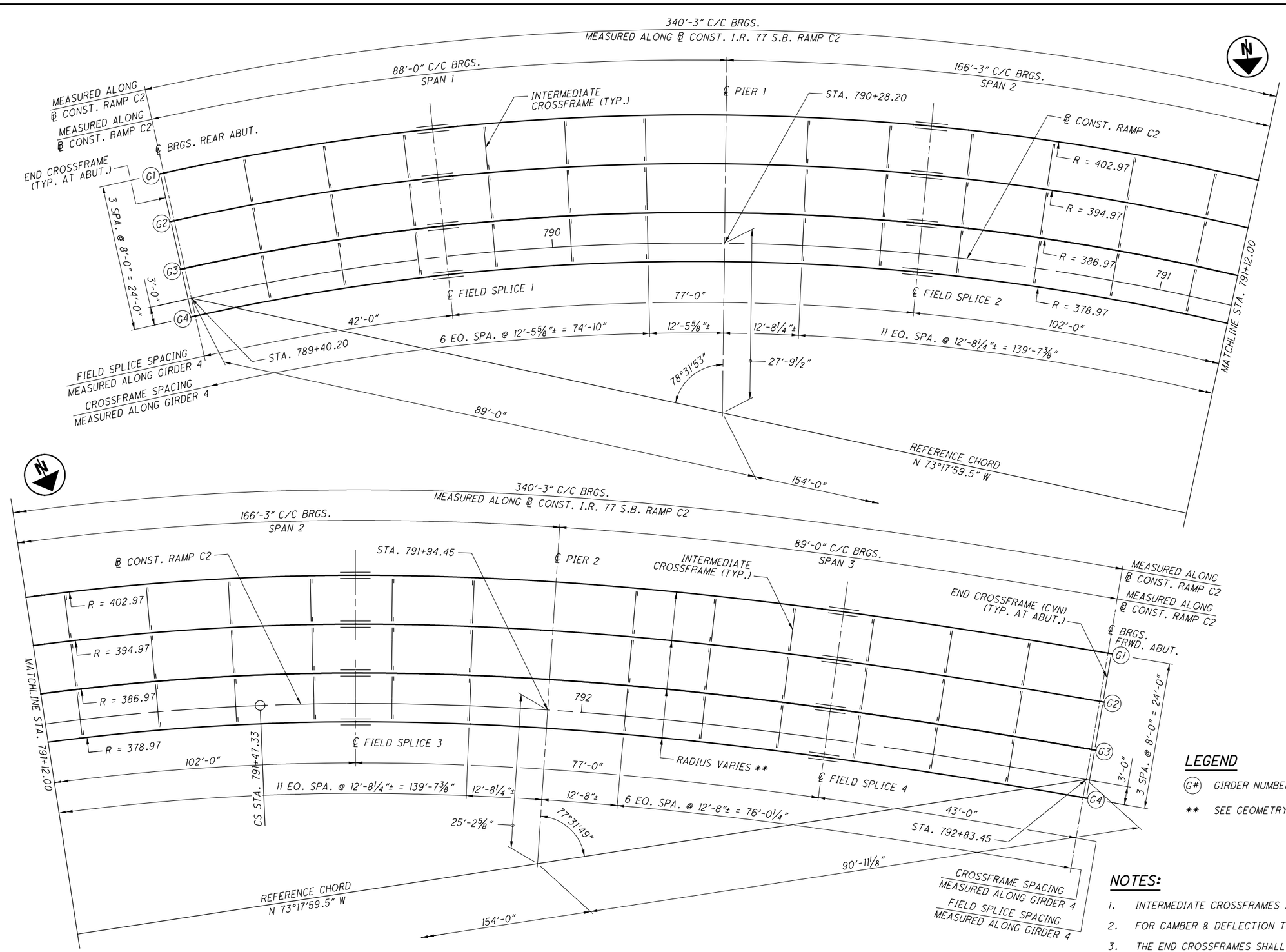

GIRDER FRAMING PLAN

LEGEND

(G#) GIRDER NUMBER

** SEE GEOMETRY PLAN FOR SPIRAL INFORMATION

NOTES:

1. INTERMEDIATE CROSSFRAMES SHALL USE WT5X15 (CVN) TEES.
2. FOR CAMBER & DEFLECTION TABLE, SEE SHT. NO. 25/37 .
3. THE END CROSSFRAMES SHALL BE AS PER STANDARD DRAWING GSD-1-19 EXCEPT THE ANGLES AND GUSSET PLATES SHALL BE DESIGNATED (CVN).
4. GIRDERS SHALL BE DETAILED FOR NO-LOAD FIT (NLF) SUCH THAT THE CROSSFRAMES AND SPLICES ARE DETAILED TO FIT TO THE GIRDERS IN THEIR FABRICATED, PLUMB, FULLY-CAMBERED POSITION UNDER ZERO DEAD LOAD.

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FRAMING PLAN
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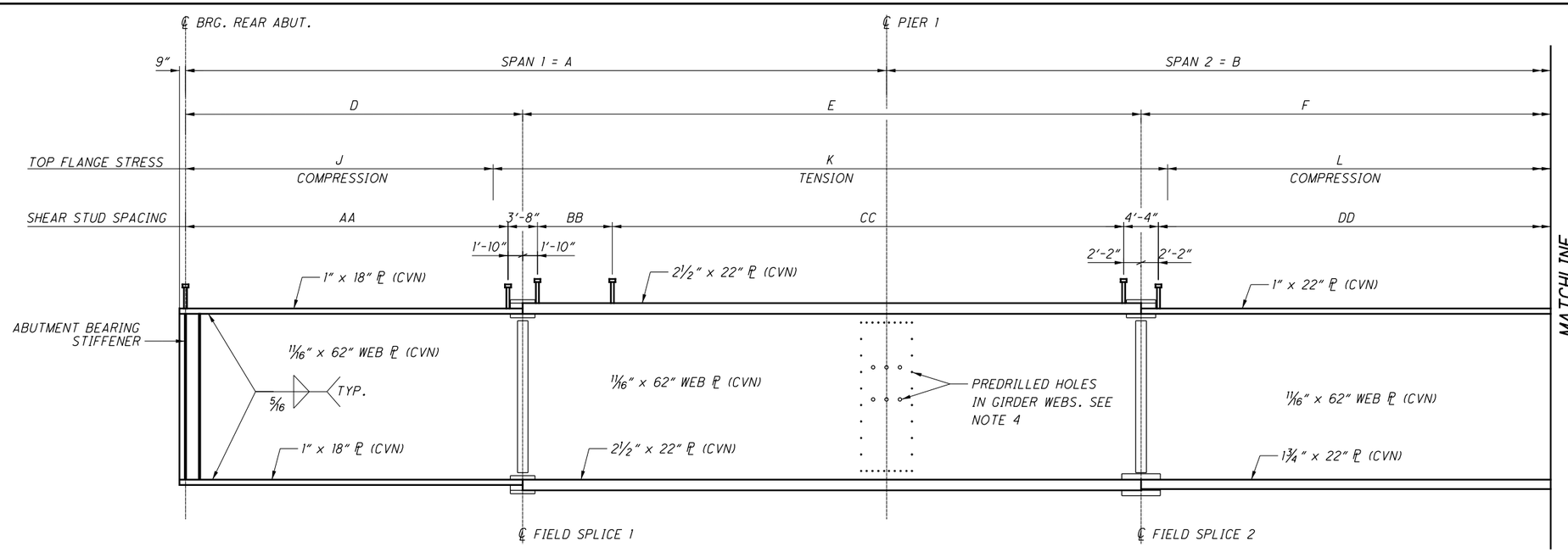
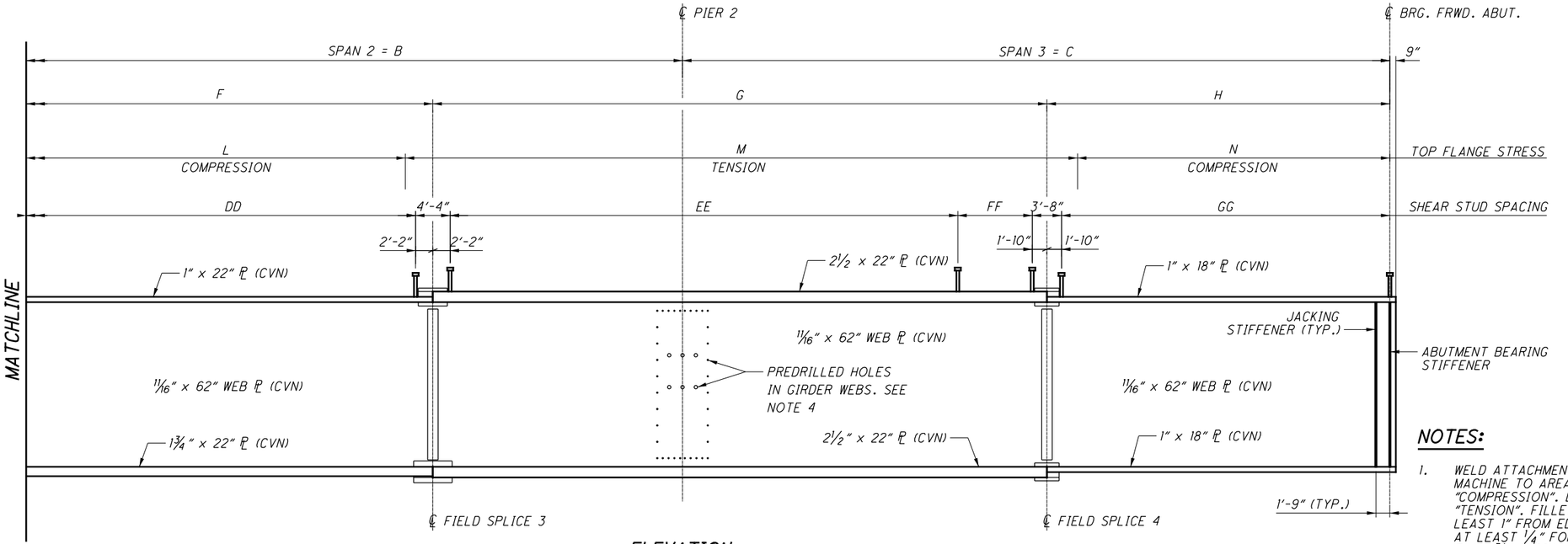


ELEVATION



ELEVATION

LEGEND

CP COMPLETE PENETRATION GROOVE WELD

CS FLANGE BUTT WELD SUBJECTED ONLY TO COMPRESSIVE STRESSES

NOTES:

1. WELD ATTACHMENTS 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 THICKNESS UP TO ¾" OR 5/16" FOR GREATER THAN ¾" THICK.
2. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN CMS 711.01.
3. FOR GIRDER ELEVATION DIMENSION TABLES AND FIELD SPLICE DETAILS, SEE SHT. NO. 24/37 .
4. FOR PREDRILLED HOLES DETAILS, SEE SHT. NO. 23/37 .
5. FOR ADDITIONAL GIRDER DETAILS, SEE SHT. NO. 22/37 .

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GIRDER ELEVATION
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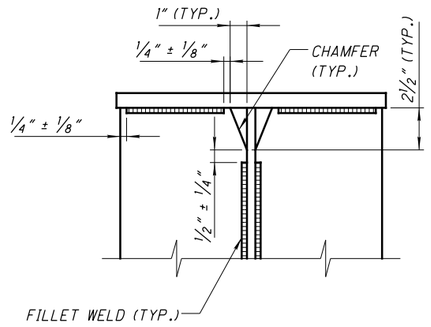
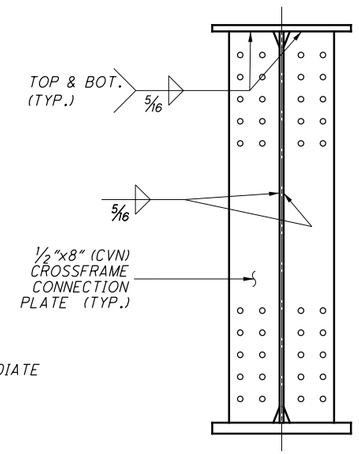
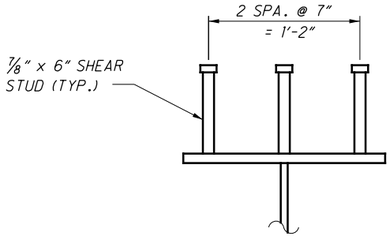


STIFFENER WELD DETAIL

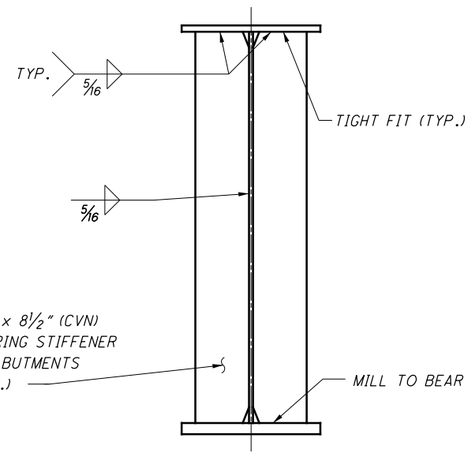
TYPICAL FOR BOTH BEARING STIFFENERS AND INTERMEDIATE CROSSFRAME CONNECTION PLATES



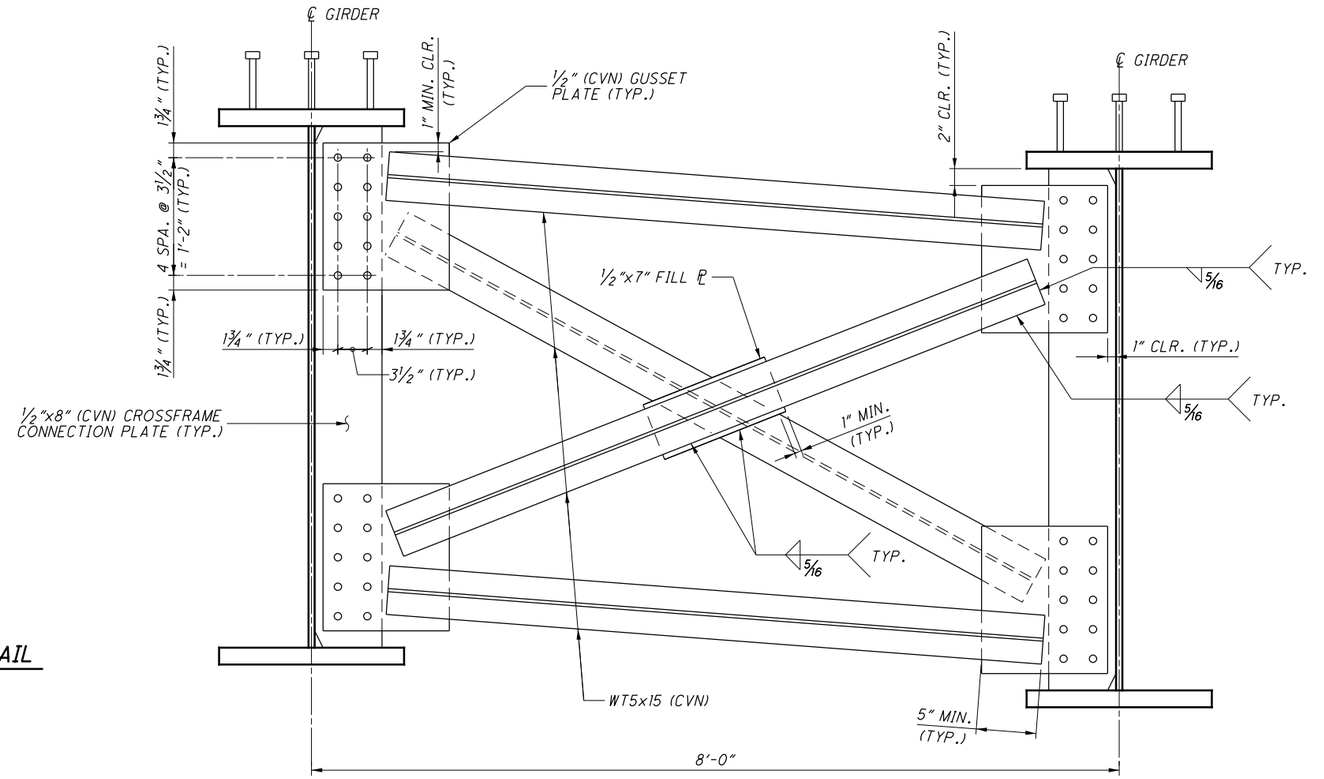
CROSSFRAME CONNECTION PLATE DETAIL



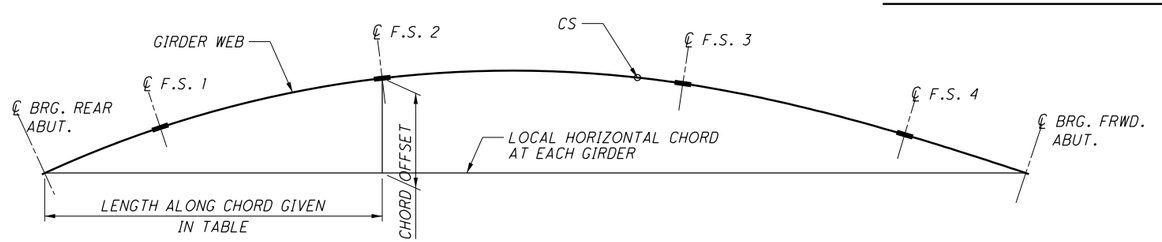
SHEAR STUD CONNECTION LAYOUT



BEARING & JACKING STIFFENER DETAIL



INTERMEDIATE CROSSFRAME DETAIL



SCHEMATIC HORIZONTAL OFFSET DIAGRAM

LOCATION	FIELD SPLICE 1 (F.S. 1)		FIELD SPLICE 2 (F.S. 2)		CURVE TO SPIRAL (CS)		FIELD SPLICE 3 (F.S. 3)		FIELD SPLICE 4 (F.S. 4)	
	LENGTH ALONG CHORD	OFFSET TO CHORD	LENGTH ALONG CHORD	OFFSET TO CHORD	LENGTH ALONG CHORD	OFFSET TO CHORD	LENGTH ALONG CHORD	OFFSET TO CHORD	LENGTH ALONG CHORD	OFFSET TO CHORD
GIRDER 1	41'-6 7/8"	16'-3 1/16"	121'-4 15/16"	33'-9 1/16"	213'-2 15/16"	33'-9"	229'-5 3/4"	31'-6 3/4"	307'-7 3/16"	13'-4 5/16"
GIRDER 2	40'-8 13/16"	15'-11 5/8"	118'-11 1/16"	33'-2 1/4"	208'-11 3/16"	33'-3 3/16	224'-10 7/8"	31'-1 5/8"	301'-11 13/16"	13'-2 7/8"
GIRDER 3	39'-10 11/16"	15'-8 3/16"	116'-6 3/8"	32'-7 1/2"	204'-8 3/4"	32'-9 5/16"	220'-3 5/8"	30'-8 7/16"	296'-4 3/8"	13'-1 3/8"
GIRDER 4	39'-0 5/8"	15'-4 3/4"	114'-1 1/8"	32'-0 1/16	200'-4 13/16"	32'-3 3/16	215'-9 1/4"	30'-3 1/4"	209'-8 15/16"	12'-11 7/8"

NOTES:

1. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL AHAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01
2. HIGH STRENGTH BOLTS FOR CROSSFRAMES SHALL BE "1" DIA. ASTM F3125, GRADE A325, TYPE 1 WITH 1 1/4" DIA. HOLES. BOLT HOLES IN CROSSFRAME CONNECTION PLATES SHALL BE 1 1/8"

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GIRDER DETAILS
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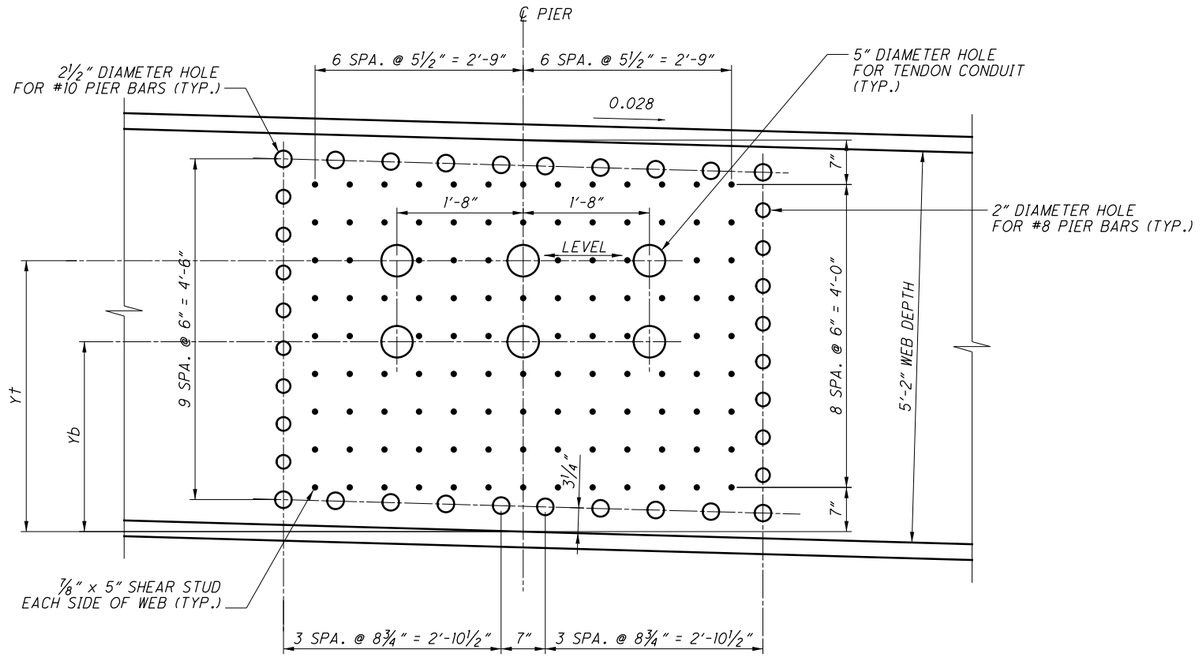
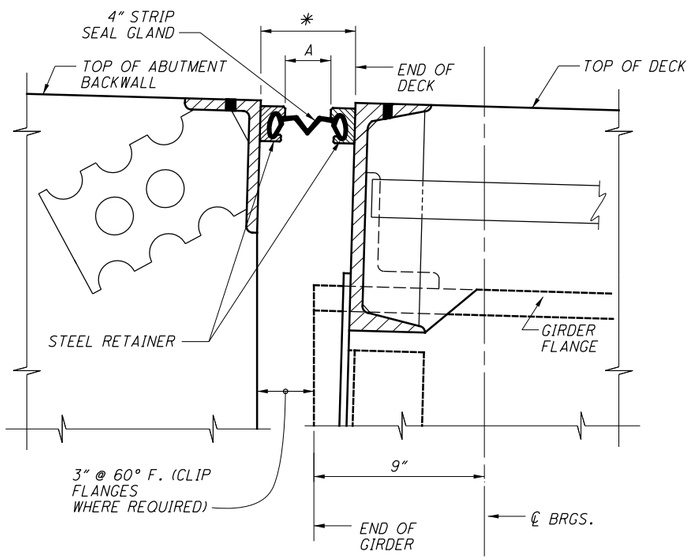


GIRDER WEB PREDRILLED HOLE DETAIL



EXPANSION JOINT DETAIL

REAR ABUTMENT SHOWN, FORWARD ABUTMENT SIMILAR.

4" STRIP SEAL JOINT WIDTH	
AMBIENT TEMPERATURE	DIMENSION "A"
90°	1⅝"
80°	1¾"
70°	1⅞"
60°	2"
50°	2⅛"
40°	2¼"
30°	2⅜"

LEGEND:

* REPRESENTS THE SUM OF 2 STEEL RETAINER WIDTHS + DIM. "A"

NOTES:

1. FOR DIMENSIONS "Yb" AND "Yt" SEE SHT. NO. 18/37.
2. SLIGHTLY SHIFT SPACING OR OMIT SHEAR STUDS WHICH INTERFERE WITH HOLE LOCATIONS. MINIMUM REQUIRED CLEARANCE FROM EDGE OF STUD TO HOLE IS 1 INCH.

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MISC. GIRDER DETAILS
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GIRDER DIMENSION TABLE

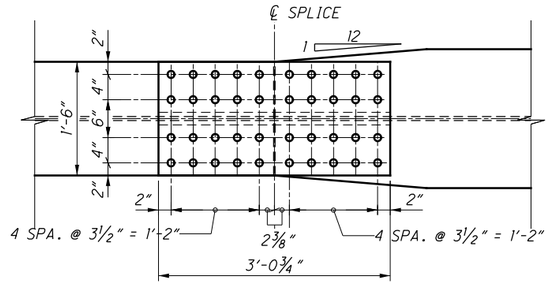
LOCATION	A	B	C	D	E	F	G	H
GIRDER 1	92'-10 1/16"	175'-0 1/4"	91'-2 3/8"	44'-7 15/16"	81'-10 9/16"	108'-4 15/16"	80'-3 3/8"	43'-10 1/16"
GIRDER 2	91'-0"	171'-8 3/16"	90'-4 5/16"	43'-9 1/4"	80'-3"	106'-3 3/8"	79'-2 1/4"	43'-6 3/4"
GIRDER 3	89'-1 13/16"	168'-4 1/16"	89'-6 3/8"	42'-10 11/16"	78'-7 9/16"	104'-1 11/16"	78'-1 1/16"	43'-3 1/4"
GIRDER 4	87'-3 3/4"	165'-0"	88'-8 1/4"	42'-0"	77'-0"	102'-0"	77'-0"	42'-11 7/8"

TOP FLANGE STRESS TABLE

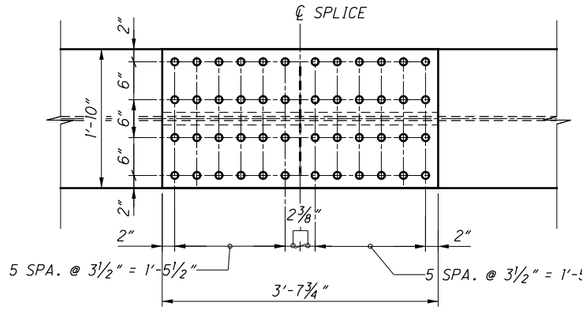
LOCATION	J	K	L	M	N
GIRDER 1	47'-5 7/8"	84'-3 3/4"	95'-7 11/16"	82'-2 3/8"	49'-5 1/16"
GIRDER 2	46'-6 3/8"	82'-8 1/4"	93'-10 3/16"	81'-0 3/4"	48'-10 15/16"
GIRDER 3	45'-7 1/16"	81'-0 1/2"	91'-11 5/8"	79'-1 11/16"	49'-3 1/2"
GIRDER 4	44'-7 11/16"	75'-8 1/16"	93'-6"	78'-4 7/16"	48'-9 13/16"

SHEAR STUD DIMENSION TABLE

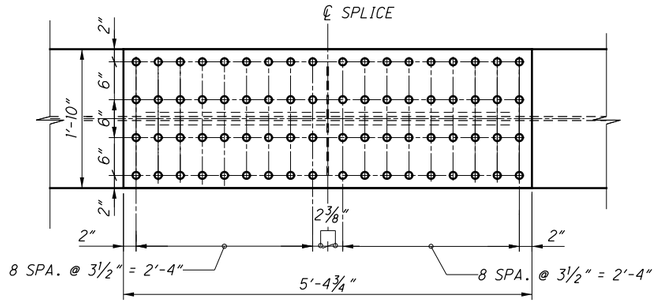
LOCATION	GIRDER 1	GIRDER 2	GIRDER 3	GIRDER 4
AA	64 SPA. @ 8"(+) = 42'-9 15/16"	71 SPA. @ 7"(+) = 41'-11 1/4"	70 SPA. 7"(+) = 41'-0 5/8"	60 SPA. @ 8"(+) = 40'-2"
BB	14 SPA. @ 8" = 9'-4"	16 SPA. @ 7" = 9'-4"	16 SPA. @ 7" = 9'-4"	14 SPA. @ 8" = 9'-4"
CC	75 SPA. @ 11"(-) = 68'-6 1/2"	89 SPA. @ 9"(+) = 66'-11"	87 SPA. @ 9"(+) = 65'-3 1/2"	76 SPA. @ 10"(+) = 63'-8"
DD	83 SPA. @ 15"(+) = 104'-0 15/16"	94 SPA. @ 13"(+) = 101'-11 5/16"	92 SPA. @ 13"(+) = 99'-9 5/8"	78 SPA. @ 15"(+) = 97'-8"
EE	73 SPA. @ 11"(+) = 66'-11 5/16"	87 SPA. @ 9"(+) = 65'-10 1/4"	86 SPA. @ 9"(+) = 64'-9 1/8"	76 SPA. @ 10"(+) = 63'-8"
FF	14 SPA. @ 8" = 9'-4"	16 SPA. @ 7" = 9'-4"	16 SPA. @ 7" = 9'-4"	14 SPA. @ 8" = 9'-4"
GG	63 SPA. @ 8"(+) = 42'-0 1/16"	71 SPA. @ 7"(+) = 41'-8 11/16"	71 SPA. @ 7"(+) = 41'-5 5/16"	61 SPA. @ 8"(+) = 41'-1 7/8"



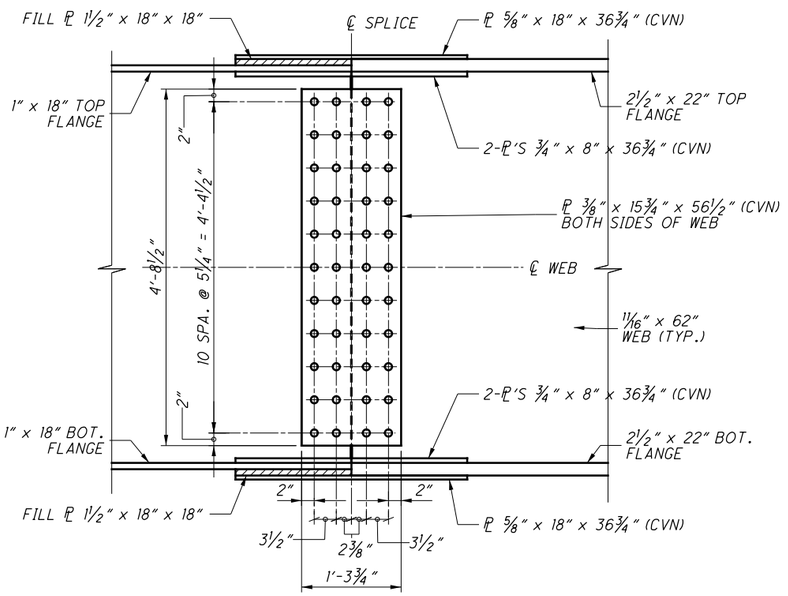
TOP & BOT. FLANGE SPLICE PLAN
FIELD SPLICES 1 AND 4



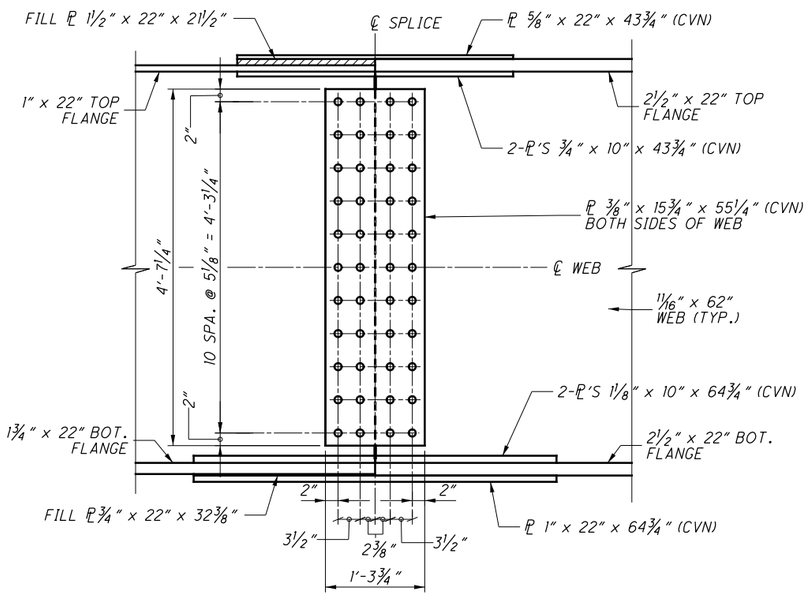
TOP FLANGE SPLICE PLAN
FIELD SPLICES 2 AND 3



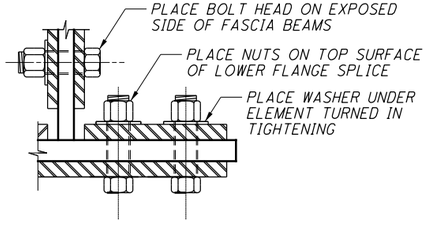
BOT. FLANGE SPLICE PLAN
FIELD SPLICES 2 AND 3



SPLICE ELEVATION
FIELD SPLICES 1 AND 4



SPLICE ELEVATION
FIELD SPLICES 2 AND 3



PARTIAL SECTION
AT ℄ OF BEAM SPLICE

NOTES:

1. HIGH STRENGTH BOLTS FOR SPLICES SHALL BE "1" DIA. ASTM F3125, GRADE A325, TYPE 1 WITH 1 1/16" DIA. HOLES

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DESIGNED RHC/DGN | DRAWN RHC | REVIEWED TJW | DATE 1-18-21
CHECKED MOJ | REVISED | STRUCTURE FILE NUMBER 7702648

GIRDER DIMENSION TABLES & SPLICE DETAILS
BRIDGE NO. SUM-77-0927R
RAMP C2 OVER I.R.77 NB

SUM-077/277/224-VAR
PID No. 106002

1248
1288

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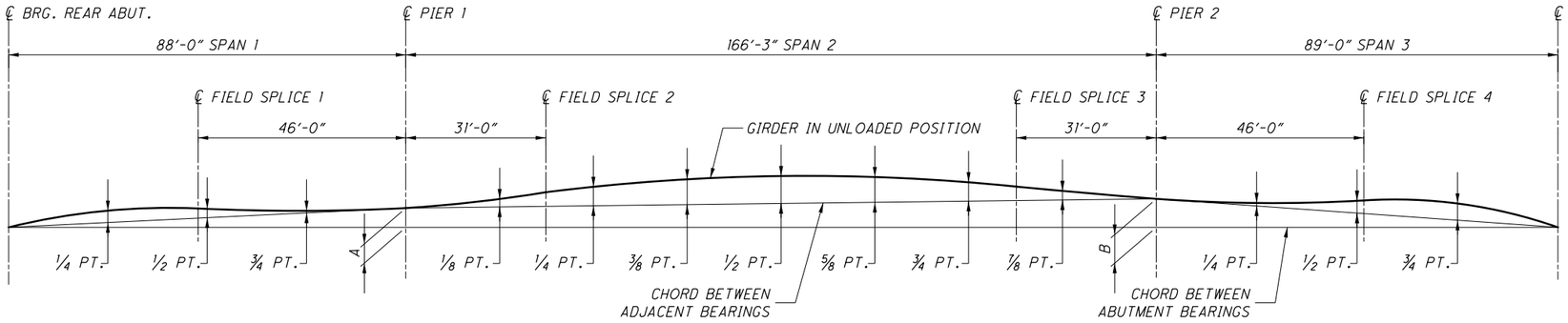

CAMBER DIAGRAM

BLOCKING (DIM. "A")

LOCATION	PIER 1	PIER 2
GIRDER 1	0'-1 1/8"	0'-1 3/4"
GIRDER 2	0'-0 13/16"	0'-1 5/16"
GIRDER 3	0'-0 5/16"	0'-0 1/2"
GIRDER 4	-0'-0 3/16"	-0'-0 5/16"

GIRDER NO.	CAMBER DESCRIPTION	REAR ABUT.	SPAN NO. 1				PIER 1	SPAN NO. 2									PIER 2	SPAN NO. 3				FRWD. ABUT.
			1/4	1/2	FS 1	3/4		1/8	FS 2	1/4	3/8	1/2	5/8	3/4	FS 3	7/8		1/4	1/2	FS 1	3/4	
1	DEFLECTION DUE TO WEIGHT OF STEEL	0	-1/8"	-1/4"	-1/4"	-3/16"	0"	7/16"	13/16"	15/16"	1 3/8"	1 9/16"	1 3/8"	15/16"	11/16"	7/16"	0"	-1/8"	-3/16"	-3/16"	-1/16"	0"
	DEFLECTION DUE TO REMAINING DEAD LOAD	0	1/8"	1/16"	0"	-1/16"	0"	1/16"	1 5/16"	1 13/16"	2 11/16"	3 1/16"	2 11/16"	1 13/16"	1 5/16"	13/16"	0"	-1/16"	0"	0"	1/16"	0"
	ADJUSTMENT DUE TO VERTICAL GEOMETRY	0	0"	0"	0"	0"	0"	3/16"	5/16"	3/8"	9/16"	3/4"	1"	1"	3/4"	1/2"	0"	0"	0"	0"	0"	0"
	REQUIRED SHOP CAMBER	0	0"	-3/16"	-1/4"	-1/4"	0"	11/16"	2 7/16"	3 1/8"	4 5/8"	5 3/8"	5 1/16"	3 3/4"	2 3/4"	1 3/4"	0"	-3/16"	-3/16"	-3/16"	0"	0"
2	DEFLECTION DUE TO WEIGHT OF STEEL	0	-1/16"	-1/8"	-1/8"	-1/8"	0"	3/8"	11/16"	3/4"	1 1/8"	1 1/4"	1 1/8"	3/4"	9/16"	3/8"	0"	-1/8"	-1/8"	-1/8"	-1/16"	0"
	DEFLECTION DUE TO REMAINING DEAD LOAD	0	1/16"	0"	0"	-1/16"	0"	1/16"	1 1/8"	1 9/16"	2 1/4"	2 9/16"	2 1/4"	1 9/16"	1 1/8"	11/16"	0"	-1/8"	0"	0"	1/16"	0"
	ADJUSTMENT DUE TO VERTICAL GEOMETRY	0	0"	0"	0"	0"	0"	1/8"	3/16"	5/16"	7/16"	9/16"	11/16"	11/16"	9/16"	3/8"	0"	0"	0"	0"	0"	0"
	REQUIRED SHOP CAMBER	0	0"	-1/8"	-1/8"	-3/16"	0"	9/16"	2"	2 5/8"	3 13/16"	4 3/8"	4 1/16"	3"	2 1/4"	1 7/16"	0"	-1/4"	-1/8"	-1/8"	0"	0"
3	DEFLECTION DUE TO WEIGHT OF STEEL	0	0"	-1/16"	-1/16"	-1/16"	0"	5/16"	9/16"	5/8"	7/8"	15/16"	7/8"	5/8"	7/16"	5/16"	0"	-1/16"	-1/16"	-1/16"	0"	0"
	DEFLECTION DUE TO REMAINING DEAD LOAD	0	1/16"	0"	0"	-1/16"	0"	1/16"	1"	1 5/16"	1 7/8"	2 3/16"	1 15/16"	1 5/16"	15/16"	9/16"	0"	-1/8"	0"	0"	1/16"	0"
	ADJUSTMENT DUE TO VERTICAL GEOMETRY	0	0"	0"	0"	0"	0"	1/16"	1/16"	1/8"	3/16"	3/16"	1/4"	1/4"	3/16"	1/8"	0"	0"	0"	0"	0"	0"
	REQUIRED SHOP CAMBER	0	1/16"	-1/16"	-1/16"	-1/8"	0"	7/16"	1 5/8"	2 1/16"	2 15/16"	3 5/16"	3 1/16"	2 3/16"	1 9/16"	1"	0"	-3/16"	-1/16"	-1/16"	1/16"	0"
4	DEFLECTION DUE TO WEIGHT OF STEEL	0	0"	0"	0"	0"	0"	1/4"	7/16"	7/16"	5/8"	11/16"	5/8"	7/16"	5/16"	3/16"	0"	0"	0"	0"	0"	0"
	DEFLECTION DUE TO REMAINING DEAD LOAD	0	1/16"	0"	0"	-1/16"	0"	1/16"	13/16"	1 1/8"	1 9/16"	1 3/4"	1 9/16"	1 1/16"	13/16"	1/2"	0"	-1/16"	0"	0"	1/16"	0"
	ADJUSTMENT DUE TO VERTICAL GEOMETRY	0	0"	0"	0"	0"	0"	-1/16"	-1/16"	-1/16"	-1/8"	-1/8"	-3/16"	-3/16"	-1/8"	-1/16"	0"	0"	0"	0"	0"	0"
	REQUIRED SHOP CAMBER	0	1/16"	0"	0"	-1/16"	0"	1/4"	1 3/16"	1 1/2"	2 1/16"	2 5/16"	2"	1 5/16"	1"	5/8"	0"	-1/16"	0"	0"	1/16"	0"

NOTES:

1. DIMENSIONS SHOWN IN CAMBER DIAGRAM ARE TAKEN ALONG THE ℄ CONST. FOR INDIVIDUAL GIRDER SPAN LENGTHS AND DIMENSIONS, SEE SHT. NO. 24/37.
2. GIRDERS MAY BE HEAT CURVED PER CMS 513.15. IF HEAT CURVING IS USED, THE FABRICATOR SHALL ACCOUNT FOR EXPECTED LOSS OF CAMBER PER THE "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS", CURRENT EDITION. CAMBER ADDED TO ACCOUNT FOR EXPECTED LOSS OF CAMBER DUE TO HEAT CURVING SHALL BE ADDED TO THE SCREED AND TOP OF HAUNCH TABLES.
3. BLOCKING DIMENSIONS ARE FROM THE LEVEL BASELINE TO THE BOTTOM OF BOTTOM FLANGE STEEL.

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DATE 1-18-21
REVIEWED TJW
STRUCTURE FILE NUMBER 7702648
DRAWN RHC
REVISED
DESIGNED RHC/DGN
CHECKED MOJ

CAMBER DIAGRAM AND TABLES
BRIDGE NO. SUM-77-0927R
RAMP C2 OVER I.R.77 NB

SUM-077/277/224-VAR
PID No. 106002

25/37

1249
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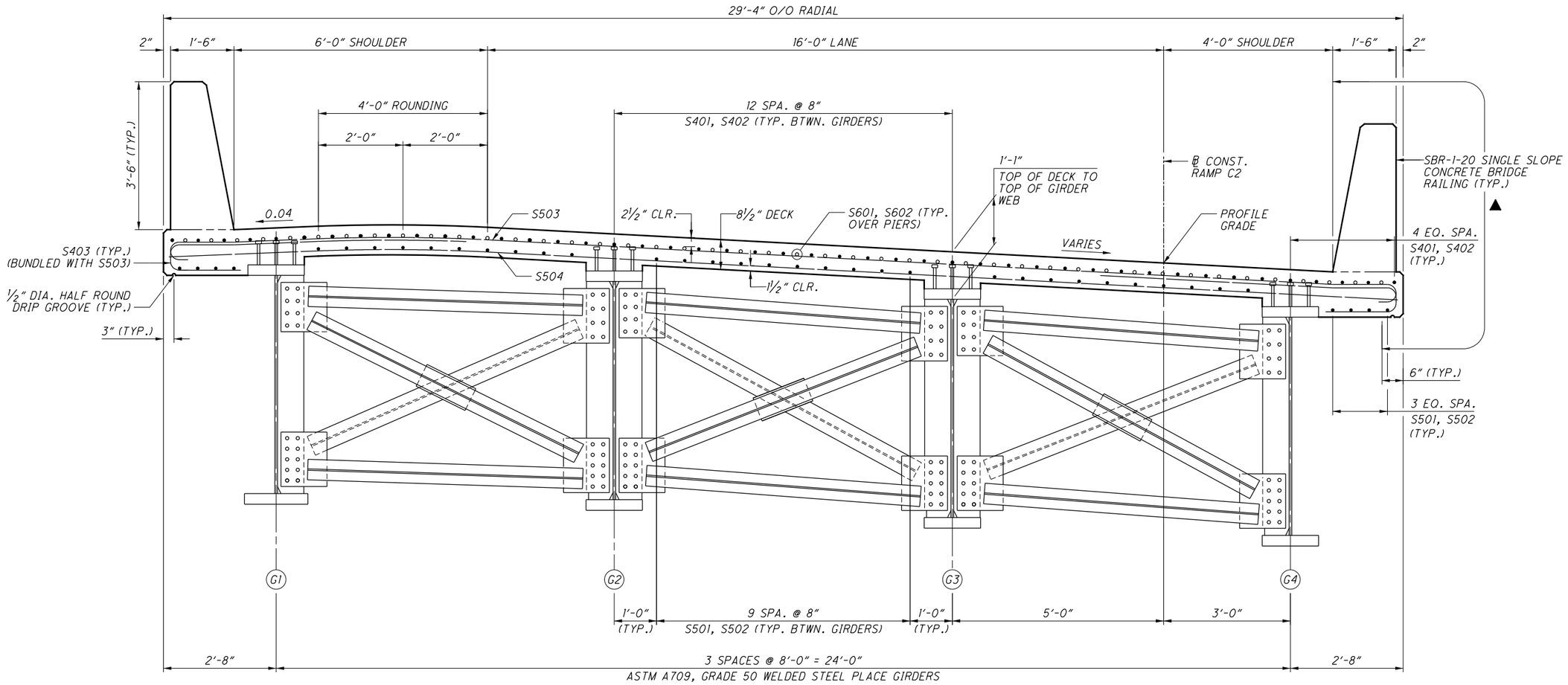
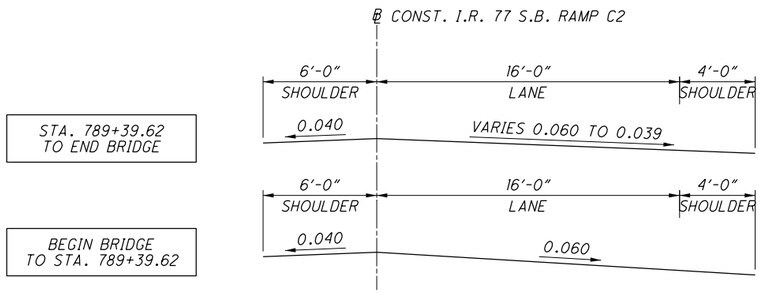
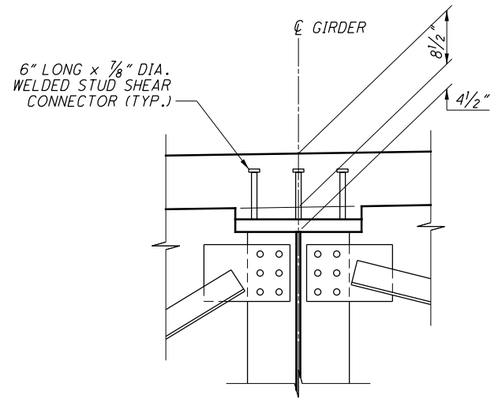


TRANSVERSE SECTION



SUPERELEVATION TRANSITION DIAGRAM



DETAIL 1

DECK SLAB REINFORCING NOT SHOWN

LEGEND:

▲ INDICATES LIMITS OF "ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)"

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 GIRDER HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF 2" AND A HAUNCH WIDTH EQUAL TO THE TOP FLANGE WIDTH. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE.

   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 STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH CMS 511.23.

2. FOR DECK SLAB PLAN, SEE SHT. NO. 27/37 .
3. FOR PARAPET REINFORCING, SEE SHT. NO. 31/37 THRU 33/37 .
4. FOR SCREED, TOP OF HAUNCH, AND FINISHED ELEVATIONS, SEE SHT. NO. 28/37 THRU 30/37 .

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RHC	RFV	TJW	1-18-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DGN		7702648	

TRANSVERSE SECTION
BRIDGE NO. SUM-77-0927R
RAMP C2 OVER I.R.77 NB

SUM-077/277/224-VAR
PID No. 106002

26/37

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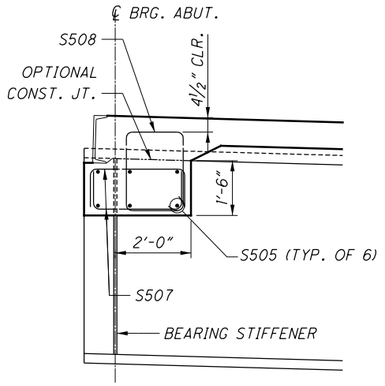
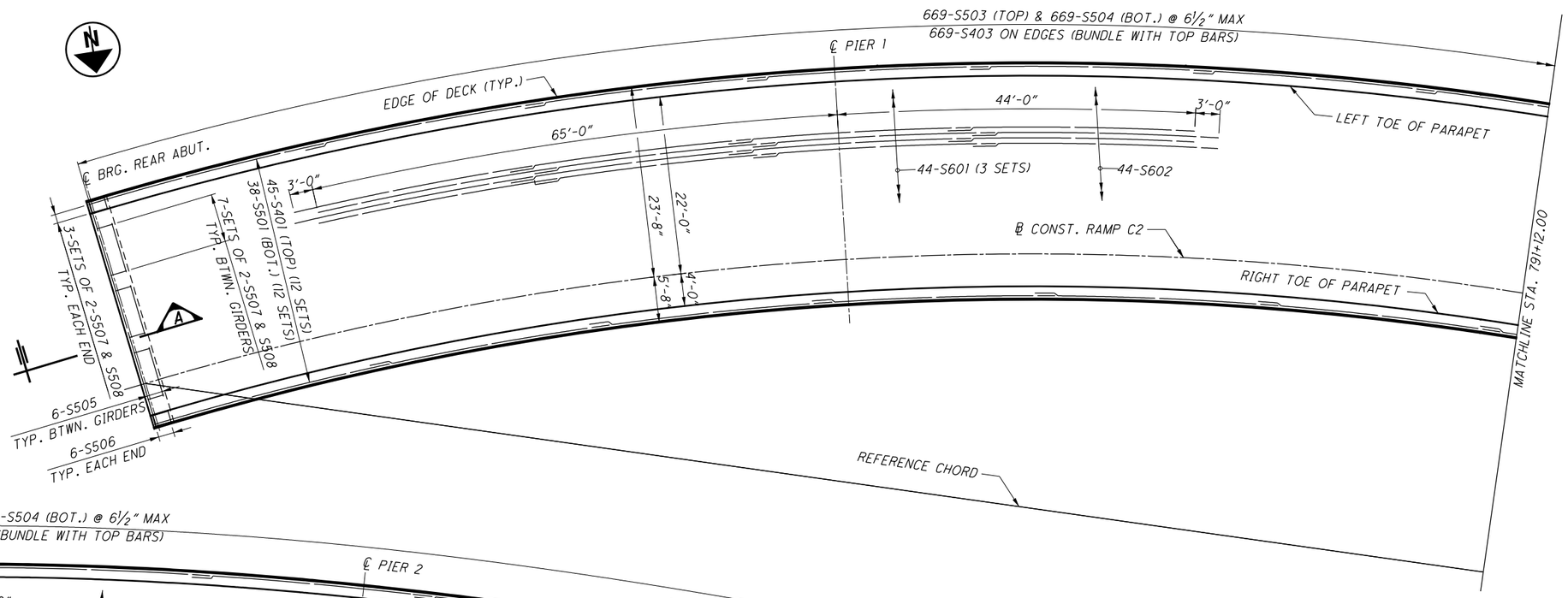
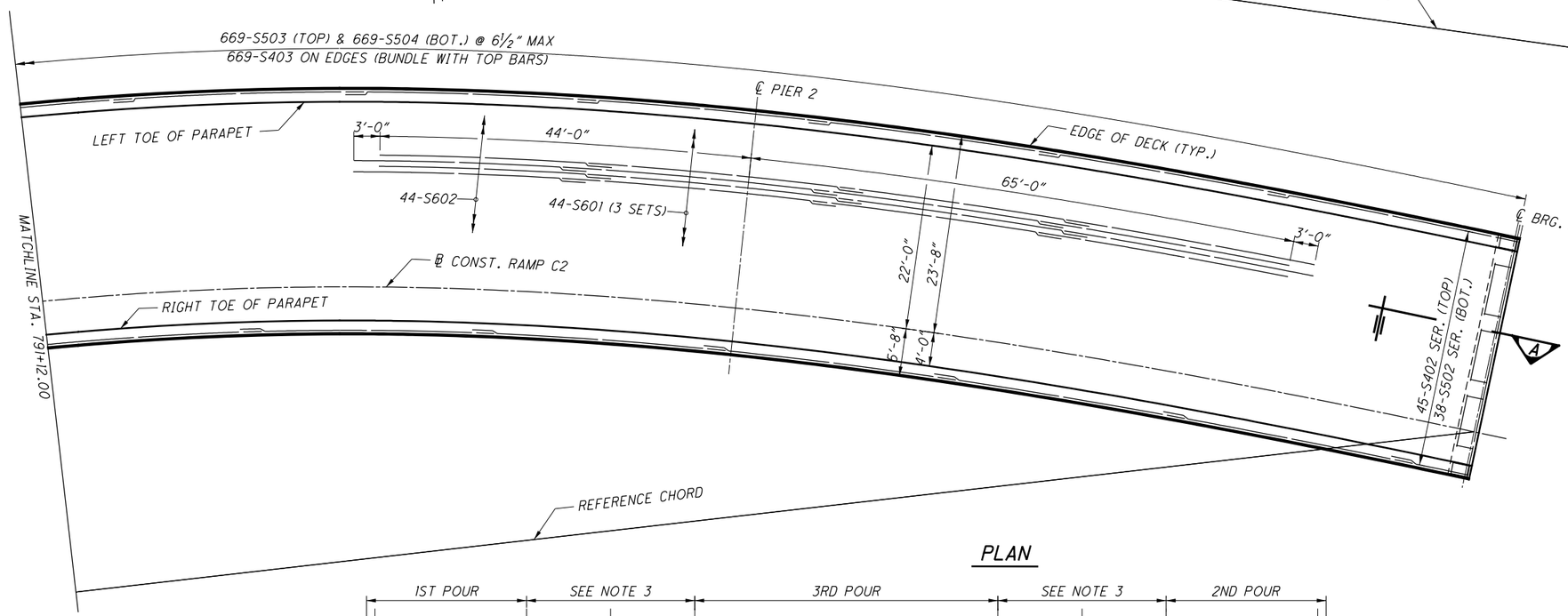
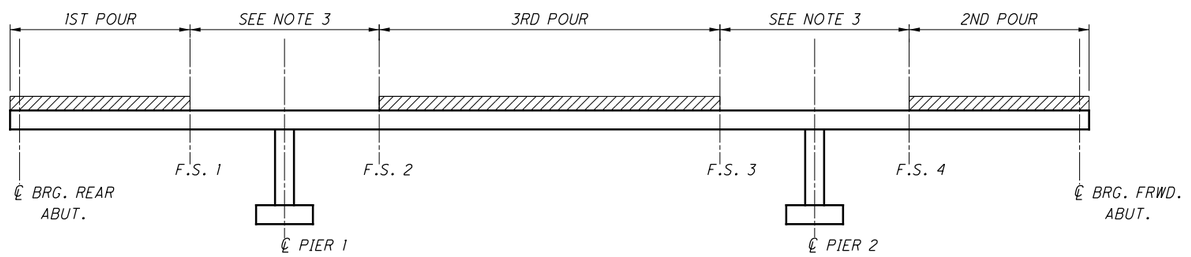


SECTION A
COUNTER WEIGHT DETAIL





PLAN



DECK POUR SEQUENCE

NOTES:

1. PLACE TRANSVERSE REINFORCING STEEL NORMAL TO ℄ CONST. RAMP C2, AND SPACE IS ALONG THE SOUTH EDGE OF DECK
2. PLACE LONGITUDINAL REINFORCING STEEL PARALLEL TO ℄ CONST. RAMP C2.
3. AFTER A MINIMUM 48 HOUR CURE TIME, POUR THE REMAINING PORTION OF THE DECK SLAB OVER THE PIERS
4. MINIMUM LAPS LENGTHS ARE AS FOLLOWS:
   - # 4 BAR LONGITUDINAL: 1'-11"
   - # 5 BAR LONGITUDINAL: 2'-5"
   - # 6 BAR LONGITUDINAL: 2'-10"

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DESIGNED	DRAWN	REVIEWED	DATE
RHC	RFV	TJW	1-18-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DGN		7702648	

DECK PLAN
BRIDGE NO. SUM-77-0927R
RAMP C2 OVER I.R.77 NB

SUM-077/277/224-VAR
PID No. 106002

27 / 37

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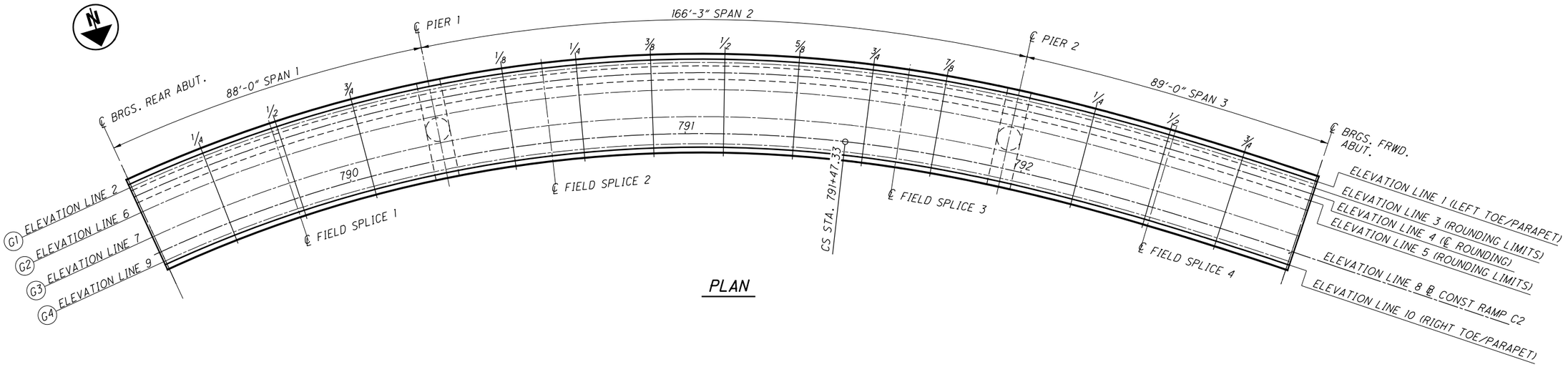
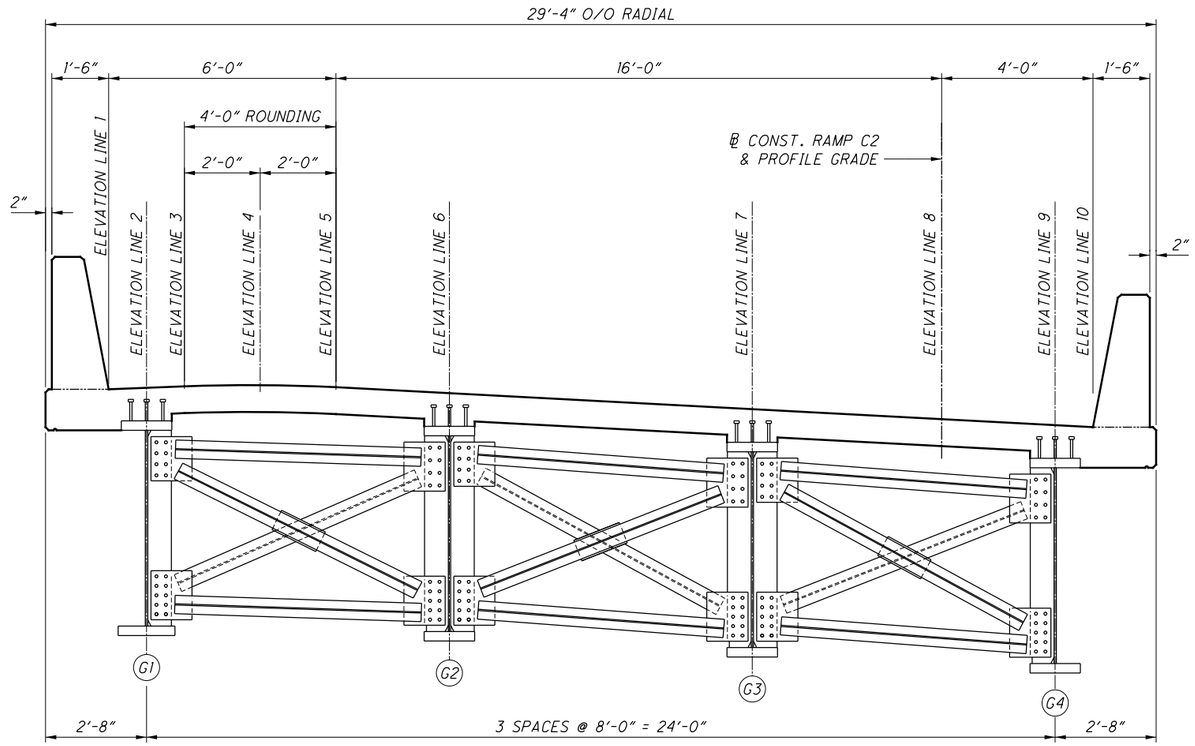


PLAN



TRANSVERSE SECTION

NOTES:

1. FOR SCREED AND TOP OF HAUNCH ELEVATIONS, SEE SHT. NO. 29/37 .
2. FOR FINISHED ELEVATIONS, SEE SHT. NO. 30/37 .

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MOJ		7702648	

ELEVATION LINE PLAN AND LOCATION
BRIDGE NO. SUM-77-0927R
RAMP C2 OVER I.R.77 NB

SUM-077/277/224-VAR
PID No. 106002

28 / 37

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1288

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SCREED ELEVATIONS

LOCATION	ELEVATION LINE 1		ELEVATION LINE 3		ELEVATION LINE 4		ELEVATION LINE 5		ELEVATION LINE 8		ELEVATION LINE 10	
	STATION	FINISHED ELEVATIONS	STATION	FINISHED ELEVATIONS	STATION	FINISHED ELEVATIONS	STATION	FINISHED ELEVATIONS	STATION	FINISHED ELEVATIONS	STATION	FINISHED ELEVATIONS
CL BRG. REAR ABUT.	789+40.20	1061.41	789+40.20	1061.49	789+40.20	1061.52	789+40.20	1061.49	789+40.20	1060.49	789+40.20	1060.25
1/4 SPAN 1	789+62.20	1060.81	789+62.20	1060.89	789+62.20	1060.92	789+62.20	1060.89	789+62.20	1059.89	789+62.20	1059.65
F.S. 1	789+82.53	1060.23	789+82.53	1060.31	789+82.53	1060.34	789+82.53	1060.31	789+82.53	1059.31	789+82.53	1059.07
1/2 SPAN 1	789+84.20	1060.19	789+84.20	1060.27	789+84.20	1060.30	789+84.20	1060.27	789+84.20	1059.26	789+84.20	1059.03
3/4 SPAN 1	790+06.20	1059.56	790+06.20	1059.64	790+06.20	1059.67	790+06.20	1059.64	790+06.20	1058.64	790+06.20	1058.40
CL PIER 1	790+28.20	1058.95	790+28.20	1059.03	790+28.20	1059.06	790+28.20	1059.03	790+28.20	1058.03	790+28.20	1057.79
1/8 SPAN 2	790+48.98	1058.38	790+48.98	1058.46	790+48.98	1058.49	790+48.98	1058.46	790+48.98	1057.45	790+48.98	1057.21
F.S. 2	790+60.14	1058.17	790+60.14	1058.25	790+60.14	1058.27	790+60.14	1058.24	790+60.14	1057.21	790+60.14	1056.97
1/4 SPAN 2	790+69.76	1057.94	790+69.76	1058.02	790+69.76	1058.04	790+69.76	1058.01	790+69.76	1056.97	790+69.76	1056.72
3/8 SPAN 2	790+90.54	1057.43	790+90.54	1057.51	790+90.54	1057.53	790+90.54	1057.49	790+90.54	1056.43	790+90.54	1056.18
1/2 SPAN 2	791+11.33	1056.88	791+11.33	1056.96	791+11.33	1056.98	791+11.33	1056.94	791+11.33	1055.86	791+11.33	1055.61
5/8 SPAN 2	791+32.11	1056.27	791+32.11	1056.34	791+32.11	1056.36	791+32.11	1056.33	791+32.11	1055.26	791+32.11	1055.01
3/4 SPAN 2	791+52.89	1055.60	791+52.89	1055.67	791+52.89	1055.70	791+52.89	1055.66	791+52.89	1054.64	791+52.89	1054.40
F.S. 3	791+62.94	1055.25	791+62.94	1055.32	791+62.94	1055.35	791+62.94	1055.32	791+62.94	1054.33	791+62.94	1054.10
7/8 SPAN 2	791+73.67	1054.87	791+73.67	1054.95	791+73.67	1054.98	791+73.67	1054.95	791+73.67	1054.01	791+73.67	1053.78
CL PIER 2	791+94.45	1054.17	791+94.45	1054.25	791+94.45	1054.28	791+94.45	1054.25	791+94.45	1053.38	791+94.45	1053.17
1/4 SPAN 3	792+16.70	1053.48	792+16.70	1053.56	792+16.70	1053.59	792+16.70	1053.56	792+16.70	1052.75	792+16.70	1052.55
1/2 SPAN 3	792+38.95	1052.80	792+38.95	1052.88	792+38.95	1052.91	792+38.95	1052.88	792+38.95	1052.13	792+38.95	1051.95
F.S. 4	792+40.36	1052.76	792+40.36	1052.84	792+40.36	1052.87	792+40.36	1052.84	792+40.36	1052.09	792+40.36	1051.91
3/4 SPAN 3	792+61.20	1052.12	792+61.20	1052.20	792+61.20	1052.23	792+61.20	1052.20	792+61.20	1051.52	792+61.20	1051.35
CL BRG. FRWD. ABUT.	792+83.45	1051.43	792+83.45	1051.51	792+83.45	1051.54	792+83.45	1051.51	792+83.45	1050.89	792+83.45	1050.73

TOP OF HAUNCH (TOH) ELEVATIONS

LOCATION	ELEVATION LINE 2		ELEVATION LINE 6		ELEVATION LINE 7		ELEVATION LINE 9	
	STATION	FINISHED ELEVATIONS	STATION	FINISHED ELEVATIONS	STATION	FINISHED ELEVATIONS	STATION	FINISHED ELEVATIONS
CL BRG. REAR ABUT.	789+40.20	1060.75	789+40.20	1060.57	789+40.20	1060.09	789+40.20	1059.61
1/4 SPAN 1	789+62.20	1060.14	789+62.20	1059.96	789+62.20	1059.48	789+62.20	1059.00
F.S. 1	789+82.53	1059.57	789+82.53	1059.38	789+82.53	1058.90	789+82.53	1058.42
1/2 SPAN 1	789+84.20	1059.52	789+84.20	1059.34	789+84.20	1058.86	789+84.20	1058.38
3/4 SPAN 1	790+06.20	1058.89	790+06.20	1058.71	790+06.20	1058.23	790+06.20	1057.75
CL PIER 1	790+28.20	1058.28	790+28.20	1058.10	790+28.20	1057.62	790+28.20	1057.14
1/8 SPAN 2	790+48.98	1057.71	790+48.98	1057.53	790+48.98	1057.05	790+48.98	1056.57
F.S. 2	790+60.14	1057.50	790+60.14	1057.30	790+60.14	1056.81	790+60.14	1056.32
1/4 SPAN 2	790+69.76	1057.27	790+69.76	1057.07	790+69.76	1056.57	790+69.76	1056.07
3/8 SPAN 2	790+90.54	1056.76	790+90.54	1056.55	790+90.54	1056.04	790+90.54	1055.53
1/2 SPAN 2	791+11.33	1056.21	791+11.33	1055.99	791+11.33	1055.48	791+11.33	1054.96
5/8 SPAN 2	791+32.11	1055.60	791+32.11	1055.38	791+32.11	1054.87	791+32.11	1054.36
3/4 SPAN 2	791+52.89	1054.93	791+52.89	1054.73	791+52.89	1054.24	791+52.89	1053.75
F.S. 3	791+62.94	1054.58	791+62.94	1054.40	791+62.94	1053.92	791+62.94	1053.45
7/8 SPAN 2	791+73.67	1054.21	791+73.67	1054.04	791+73.67	1053.58	791+73.67	1053.13
CL PIER 2	791+94.45	1053.50	791+94.45	1053.36	791+94.45	1052.93	791+94.45	1052.51
1/4 SPAN 3	792+16.70	1052.81	792+16.70	1052.68	792+16.70	1052.29	792+16.70	1051.89
1/2 SPAN 3	792+38.95	1052.13	792+38.95	1052.02	792+38.95	1051.65	792+38.95	1051.29
F.S. 4	792+40.36	1052.09	792+40.36	1051.98	792+40.36	1051.61	792+40.36	1051.25
3/4 SPAN 3	792+61.20	1051.45	792+61.20	1051.36	792+61.20	1051.02	792+61.20	1050.68
CL BRG. FRWD. ABUT.	792+83.45	1050.76	792+83.45	1050.69	792+83.45	1050.38	792+83.45	1050.06

NOTES:

1. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
2. FOR LOCATION OF ELEVATION LINES, SEE SHT. NO. 28/37.
3. TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE GIRDER HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.

DESIGN AGENCY
GPD GROUP
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DESIGNED RHC | DRAWN JJB | REVIEWED DGN | DATE 1-18-21 | CHECKED MOJ | REVISED | STRUCTURE FILE NUMBER 7702648

SCREED AND TOP OF HAUNCH ELEVATIONS
BRIDGE NO. SUM-77-0927R
RAMP C2 OVER I.R.77 NB

SUM-077/277/224-VAR
PID No. 106002

1253/1288

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FINISHED ELEVATIONS

LOCATION	ELEVATION LINE 1		ELEVATION LINE 2		ELEVATION LINE 3		ELEVATION LINE 4		ELEVATION LINE 5		ELEVATION LINE 6		ELEVATION LINE 7		ELEVATION LINE 8	
	STATION	FINISHED ELEVATIONS	STATION	FINISHED ELEVATIONS	STATION	FINISHED ELEVATIONS	STATION	FINISHED ELEVATIONS	STATION	FINISHED ELEVATIONS	STATION	FINISHED ELEVATIONS	STATION	FINISHED ELEVATIONS	STATION	FINISHED ELEVATIONS
CL BRG. REAR ABUT.	789+40.20	1061.41	789+40.20	1061.45	789+40.20	1061.49	789+40.20	1061.52	789+40.20	1061.49	789+40.20	1061.27	789+40.20	1060.79	789+40.20	1060.49
1/4 SPAN 1	789+62.20	1060.80	789+62.20	1060.84	789+62.20	1060.88	789+62.20	1060.91	789+62.20	1060.88	789+62.20	1060.66	789+62.20	1060.18	789+62.20	1059.88
F.S. 1	789+82.53	1060.23	789+82.53	1060.27	789+82.53	1060.31	789+82.53	1060.34	789+82.53	1060.31	789+82.53	1060.09	789+82.53	1059.61	789+82.53	1059.31
1/2 SPAN 1	789+84.20	1060.18	789+84.20	1060.22	789+84.20	1060.26	789+84.20	1060.29	789+84.20	1060.26	789+84.20	1060.04	789+84.20	1059.56	789+84.20	1059.26
3/4 SPAN 1	790+06.20	1059.57	790+06.20	1059.61	790+06.20	1059.65	790+06.20	1059.68	790+06.20	1059.65	790+06.20	1059.43	790+06.20	1058.95	790+06.20	1058.65
CL PIER 1	790+28.20	1058.95	790+28.20	1058.99	790+28.20	1059.03	790+28.20	1059.06	790+28.20	1059.03	790+28.20	1058.81	790+28.20	1058.33	790+28.20	1058.03
1/8 SPAN 2	790+48.98	1058.37	790+48.98	1058.41	790+48.98	1058.45	790+48.98	1058.48	790+48.98	1058.45	790+48.98	1058.23	790+48.98	1057.75	790+48.98	1057.45
F.S. 2	790+60.14	1058.06	790+60.14	1058.10	790+60.14	1058.14	790+60.14	1058.17	790+60.14	1058.14	790+60.14	1057.92	790+60.14	1057.44	790+60.14	1057.14
1/4 SPAN 2	790+69.76	1057.79	790+69.76	1057.83	790+69.76	1057.87	790+69.76	1057.90	790+69.76	1057.87	790+69.76	1057.65	790+69.76	1057.17	790+69.76	1056.87
3/8 SPAN 2	790+90.54	1057.21	790+90.54	1057.25	790+90.54	1057.29	790+90.54	1057.32	790+90.54	1057.29	790+90.54	1057.07	790+90.54	1056.59	790+90.54	1056.29
1/2 SPAN 2	791+11.33	1056.63	791+11.33	1056.67	791+11.33	1056.71	791+11.33	1056.74	791+11.33	1056.71	791+11.33	1056.49	791+11.33	1056.01	791+11.33	1055.71
5/8 SPAN 2	791+32.11	1056.04	791+32.11	1056.08	791+32.11	1056.12	791+32.11	1056.15	791+32.11	1056.12	791+32.11	1055.90	791+32.11	1055.42	791+32.11	1055.12
3/4 SPAN 2	791+52.89	1055.45	791+52.89	1055.49	791+52.89	1055.53	791+52.89	1055.56	791+52.89	1055.53	791+52.89	1055.31	791+52.89	1054.84	791+52.89	1054.54
F.S. 3	791+62.94	1055.14	791+62.94	1055.18	791+62.94	1055.22	791+62.94	1055.25	791+62.94	1055.22	791+62.94	1055.01	791+62.94	1054.55	791+62.94	1054.26
7/8 SPAN 2	791+73.67	1054.81	791+73.67	1054.85	791+73.67	1054.89	791+73.67	1054.92	791+73.67	1054.89	791+73.67	1054.69	791+73.67	1054.24	791+73.67	1053.96
CL PIER 2	791+94.45	1054.17	791+94.45	1054.21	791+94.45	1054.25	791+94.45	1054.28	791+94.45	1054.25	791+94.45	1054.06	791+94.45	1053.64	791+94.45	1053.38
1/4 SPAN 3	792+16.70	1053.48	792+16.70	1053.52	792+16.70	1053.56	792+16.70	1053.59	792+16.70	1053.56	792+16.70	1053.40	792+16.70	1053.00	792+16.70	1052.76
1/2 SPAN 3	792+38.95	1052.80	792+38.95	1052.84	792+38.95	1052.88	792+38.95	1052.91	792+38.95	1052.88	792+38.95	1052.73	792+38.95	1052.36	792+38.95	1052.13
F.S. 4	792+40.36	1052.76	792+40.36	1052.80	792+40.36	1052.84	792+40.36	1052.87	792+40.36	1052.84	792+40.36	1052.69	792+40.36	1052.32	792+40.36	1052.09
3/4 SPAN 3	792+61.20	1052.12	792+61.20	1052.16	792+61.20	1052.20	792+61.20	1052.23	792+61.20	1052.20	792+61.20	1052.06	792+61.20	1051.72	792+61.20	1051.51
CL BRG. FRWD. ABUT.	792+83.45	1051.43	792+83.45	1051.47	792+83.45	1051.51	792+83.45	1051.54	792+83.45	1051.51	792+83.45	1051.40	792+83.45	1051.08	792+83.45	1050.89

FINISHED ELEVATIONS (CONT.)

LOCATION	ELEVATION LINE 9		ELEVATION LINE 10	
	STATION	FINISHED ELEVATIONS	STATION	FINISHED ELEVATIONS
CL BRG. REAR ABUT.	789+40.20	1060.31	789+40.20	1060.25
1/4 SPAN 1	789+62.20	1059.70	789+62.20	1059.64
F.S. 1	789+82.53	1059.13	789+82.53	1059.07
1/2 SPAN 1	789+84.20	1059.08	789+84.20	1059.02
3/4 SPAN 1	790+06.20	1058.47	790+06.20	1058.41
CL PIER 1	790+28.20	1057.85	790+28.20	1057.79
1/8 SPAN 2	790+48.98	1057.27	790+48.98	1057.21
F.S. 2	790+60.14	1056.96	790+60.14	1056.90
1/4 SPAN 2	790+69.76	1056.69	790+69.76	1056.63
3/8 SPAN 2	790+90.54	1056.11	790+90.54	1056.05
1/2 SPAN 2	791+11.33	1055.53	791+11.33	1055.47
5/8 SPAN 2	791+32.11	1054.94	791+32.11	1054.88
3/4 SPAN 2	791+52.89	1054.36	791+52.89	1054.31
F.S. 3	791+62.94	1054.09	791+62.94	1054.03
7/8 SPAN 2	791+73.67	1053.79	791+73.67	1053.74
CL PIER 2	791+94.45	1053.22	791+94.45	1053.17
1/4 SPAN 3	792+16.70	1052.61	792+16.70	1052.56
1/2 SPAN 3	792+38.95	1052.00	792+38.95	1051.95
F.S. 4	792+40.36	1051.96	792+40.36	1051.91
3/4 SPAN 3	792+61.20	1051.38	792+61.20	1051.34
CL BRG. FRWD. ABUT.	792+83.45	1050.77	792+83.45	1050.73

NOTES:

1. FOR LOCATION OF ELEVATION LINES, SEE SHT. NO. 28/37 .
2. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURED.

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DESIGNED RHC | DRAWN JJB | REVIEWED DGN | DATE 1-18-21
CHECKED MOJ | REVISED | STRUCTURE FILE NUMBER 7702648

FININSHED ELEVATIONS
BRIDGE NO. SUM-77-0927R
RAMP C2 OVER I.R.77 NB

SUM-077/277/224-VAR
PID No. 106002

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1254/1288

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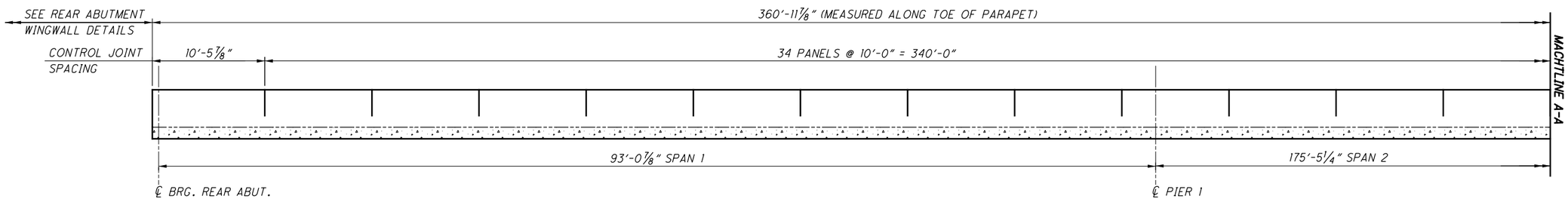

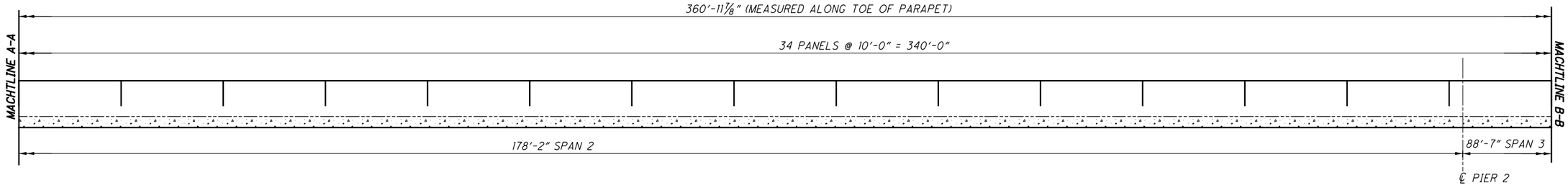

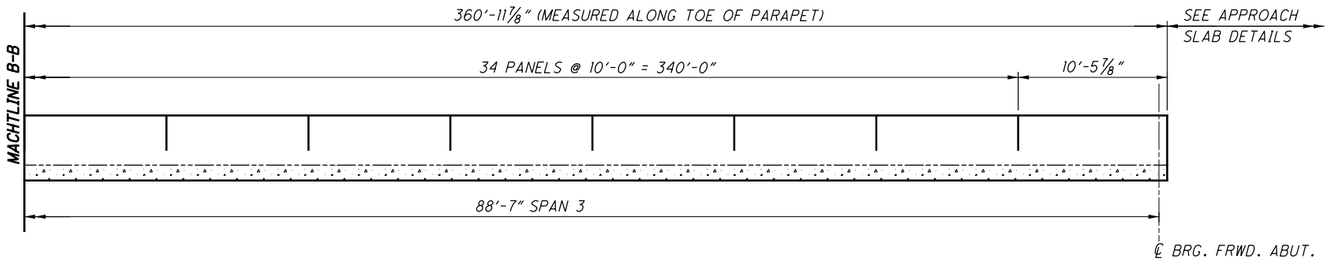

LEFT PARAPET ELEVATION

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RFV	RFV	T.JW	1-18-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DGN		7702648	

LEFT PARAPET ELEVATION
BRIDGE NO. SUM-77-0927R
RAMP C2 OVER I.R.77 NB

SUM-077/277/224-VAR
PID No. 106002

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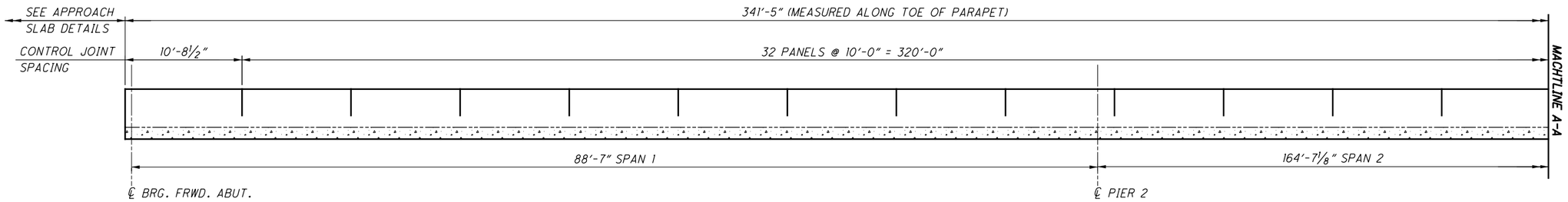

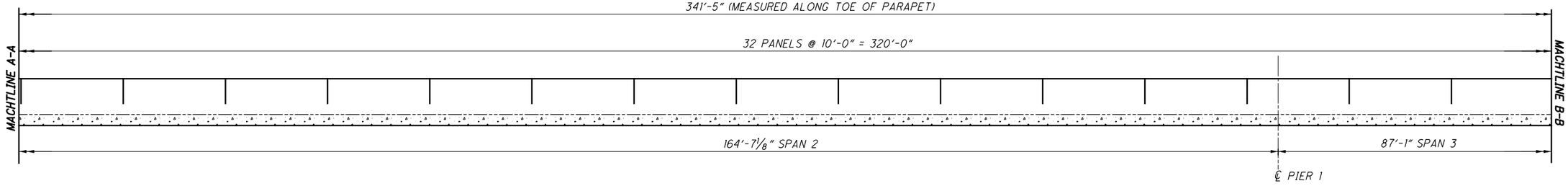

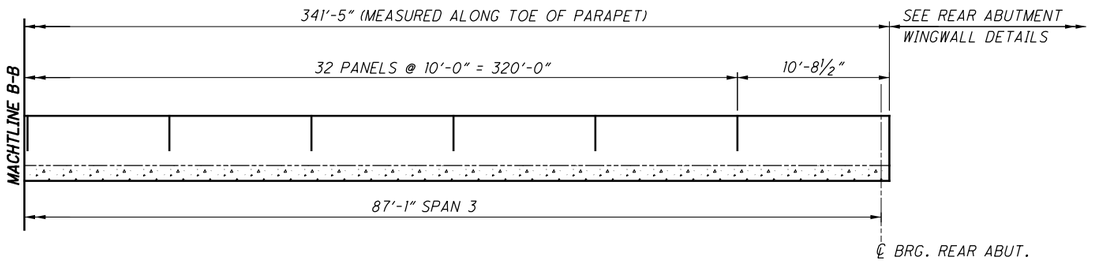

RIGHT PARAPET ELEVATION

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320 South Main Street, Akron, OH 44311 330.572.2100

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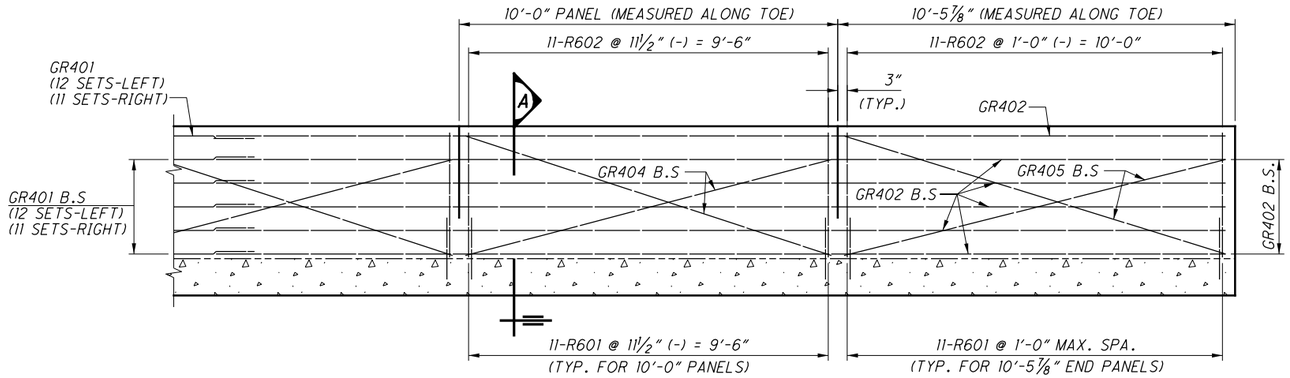
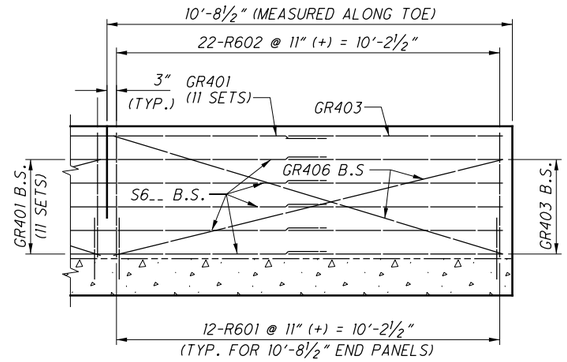
RFV	RFV	TJW	1-18-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DGN		7702648	

RIGHT PARAPET ELEVATION
BRIDGE NO. SUM-77-0927R
RAMP C2 OVER I.R.77 NB

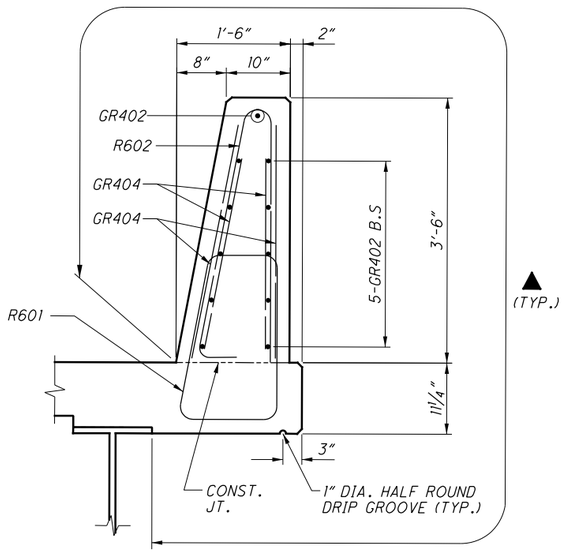
SUM-077/277/224-VAR
PID No. 106002





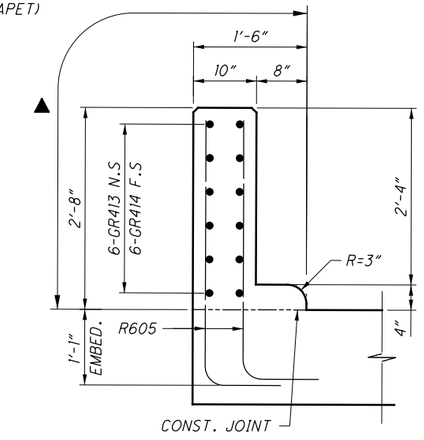
PARAPET DETAILS

(LEFT DENOTES LEFT PARAPET & RIGHT DENOTES RIGHT PARAPET)



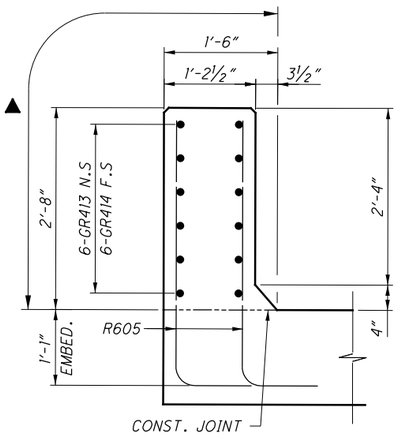
SECTION A

DECK SLAB REINFORCING NOT SHOWN



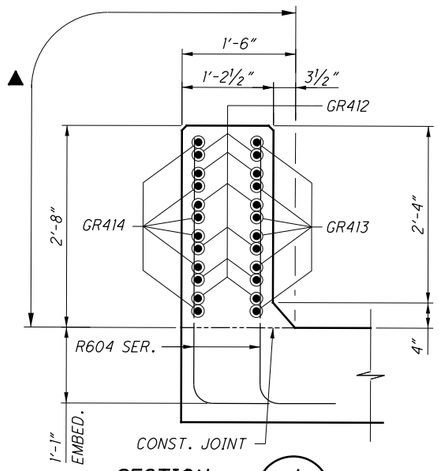
SECTION H

APPROACH SLAB REINFORCING NOT SHOWN



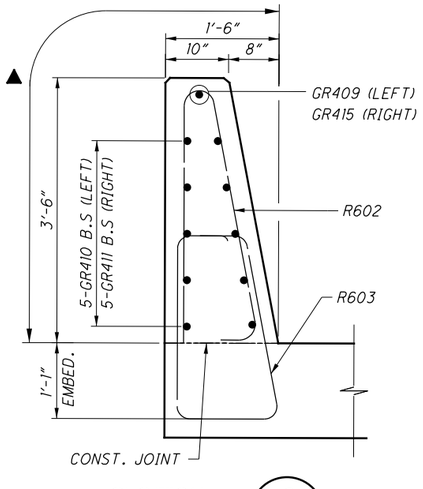
SECTION I

APPROACH SLAB REINFORCING NOT SHOWN



SECTION J

APPROACH SLAB REINFORCING NOT SHOWN



SECTION G

APPROACH SLAB REINFORCING NOT SHOWN

NOTES:

1. LAP SPLICE LENGTH FOR ALL HORIZONTAL GFRP REBAR = 1'-1" MINIMUM.
2. FOR DETAILS, SECTIONS & NOTES NOT SHOWN, SEE STANDARD DRAWING SBR-1-20.
3. FOR LOCATION OF SECTIONS G, H, I & J, SEE SHT. 35/37 .

DESIGN AGENCY
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RFV	RFV	RHC	1-18-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DGN		7702648	

PARAPET DETAILS
BRIDGE NO. SUM-77-0927R
RAMP C2 OVER I.R.77 NB

SUM-077/277/224-VAR
PID No. 106002

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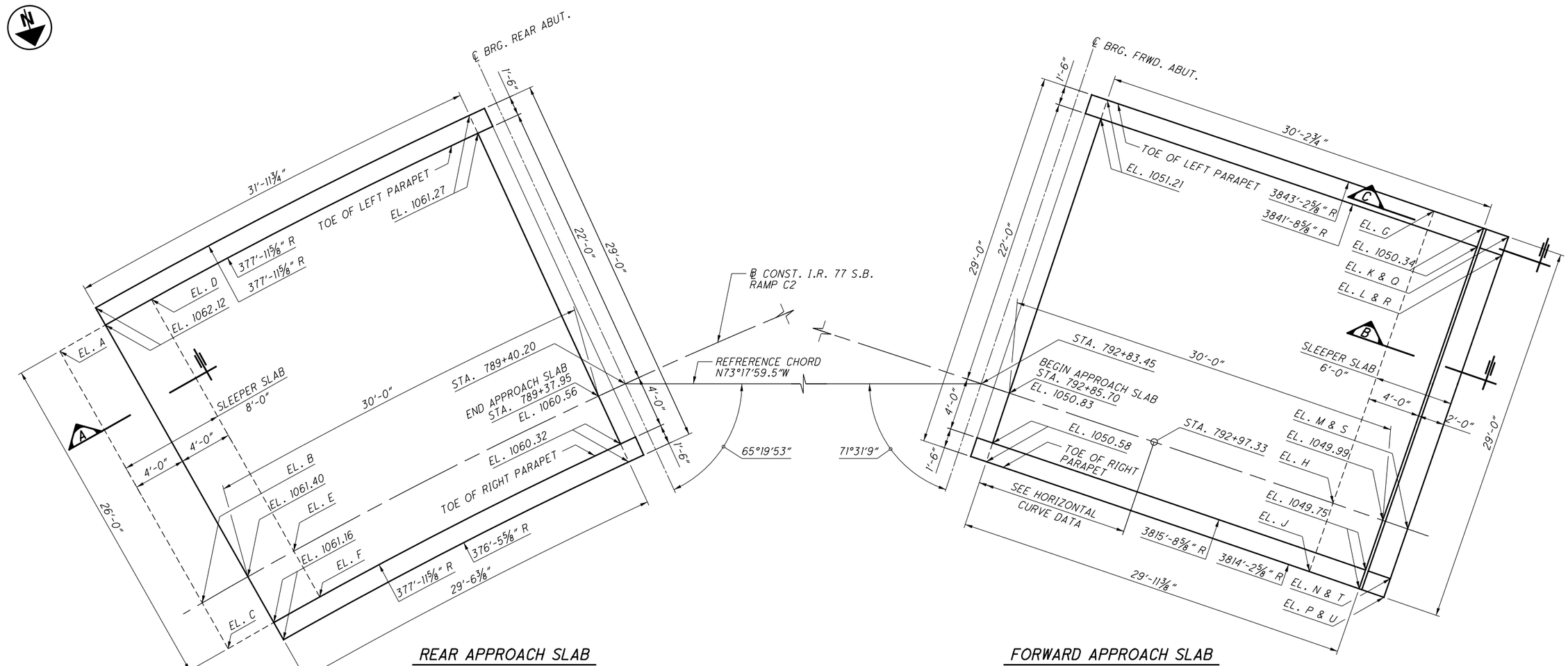
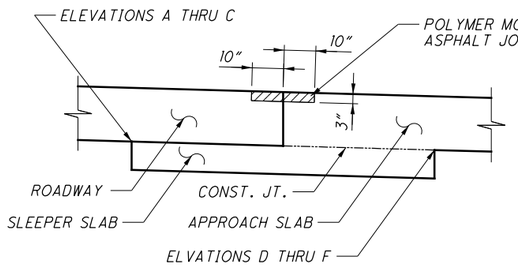


REAR APPROACH SLAB

FORWARD APPROACH SLAB



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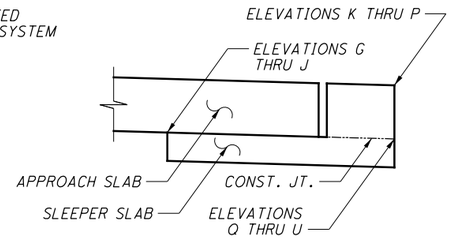
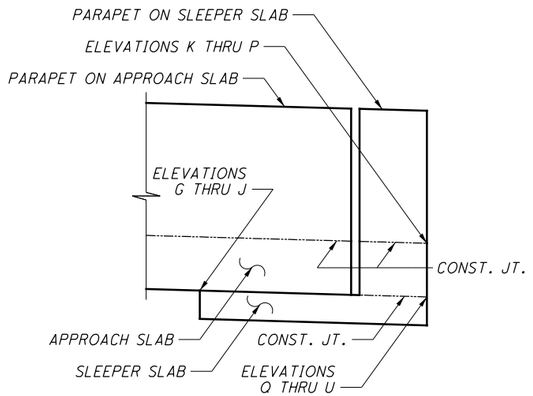


SECTION B



SECTION C

SLEEPER SLAB ELEVATIONS			
CALLOUT	ELEVATION	CALLOUT	ELEVATION
A	1060.81	L	1050.28
B	1060.09	M	1049.93
C	1059.85	N	1049.69
D	1059.60	P	1049.60
E	1059.87	Q	1048.80
F	1059.63	R	1048.86
G	1048.97	S	1048.51
H	1048.68	T	1048.27
J	1048.35	U	1048.18
K	1050.22		

NOTE:

FOR REINFORCING, SEE SHT. NO. 35/37 .

DESIGN AGENCY
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DESIGNED	DRAWN	REVIEWED	DATE
RHC	JJB	DGN	1-18-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MOJ		7702648	

APPROACH SLAB PLAN
BRIDGE NO. SUM-77-0927R
RAMP C2 OVER I.R.77 NB

SUM-077/277/224-VAR
PID No. 106002

34/37

1258
1288

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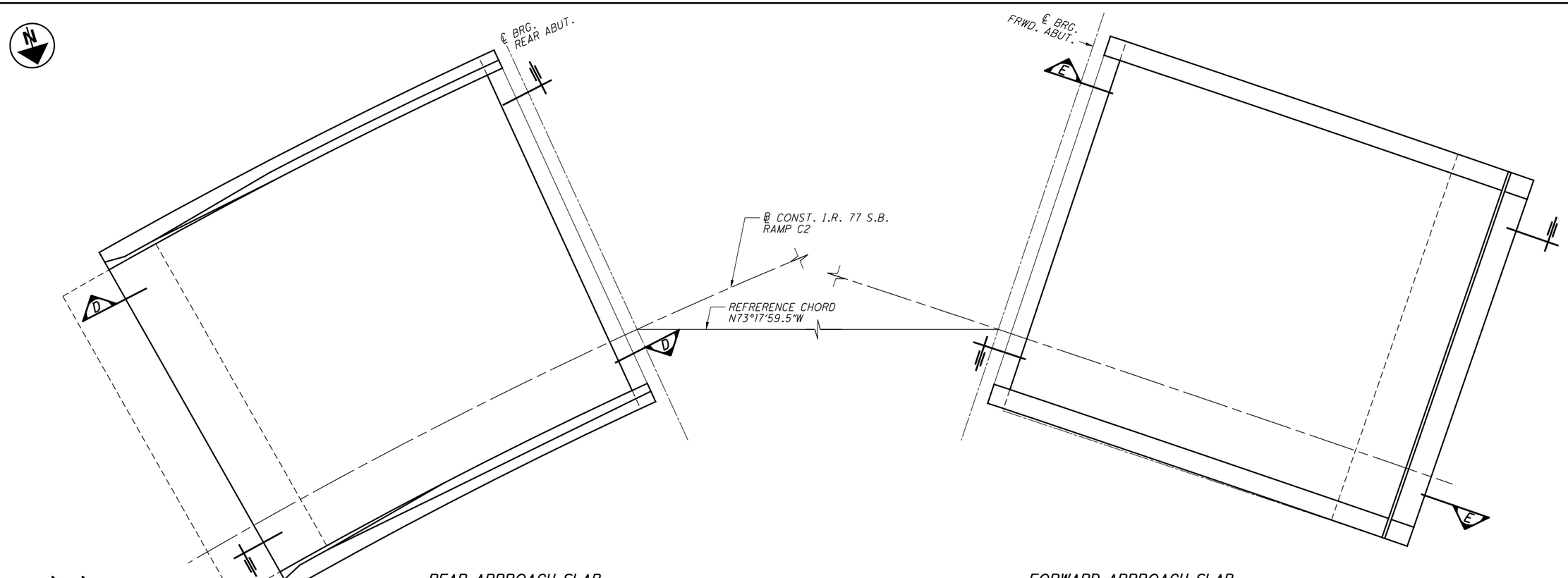
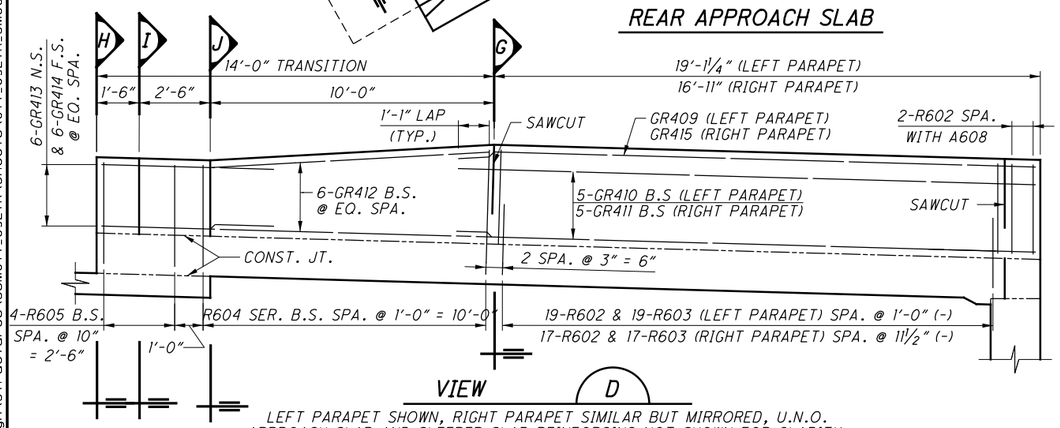
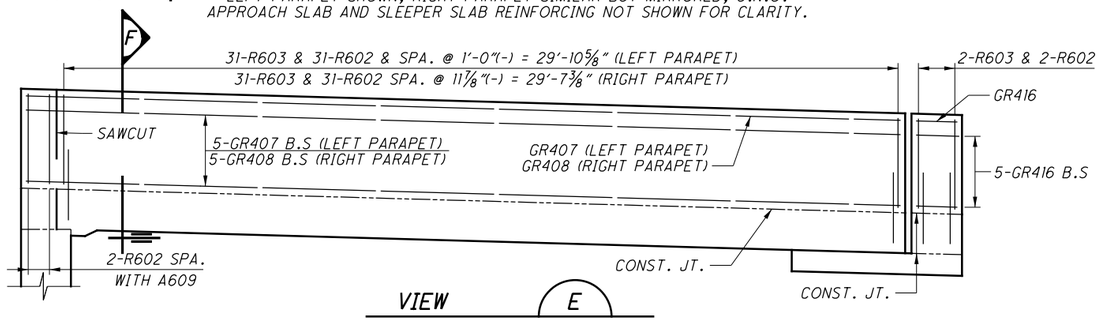


REAR APPROACH SLAB



VIEW D

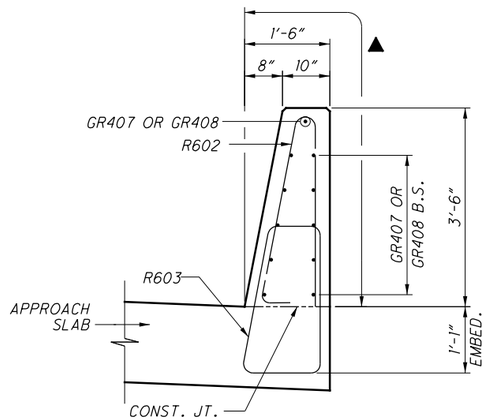
LEFT PARAPET SHOWN, RIGHT PARAPET SIMILAR BUT MIRRORED, U.N.O.
APPROACH SLAB AND SLEEPER SLAB REINFORCING NOT SHOWN FOR CLARITY.



VIEW E

LEFT PARAPET SHOWN, RIGHT PARAPET SIMILAR BUT MIRRORED, U.N.O.
APPROACH SLAB AND SLEEPER SLAB REINFORCING NOT SHOWN FOR CLARITY.

FORWARD APPROACH SLAB



SECTION F

APPROACH SLAB REINFORCING NOT SHOWN

LEGEND:

▲ INDICATES LIMITS OF "ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)"

NOTE:

1. REINFORCEMENT STEEL SHOWN IS IN ADDITION TO STANDARD REINFORCEMENT. FOR STANDARD APPROACH SLAB REINFORCEMENT AND DETAILS, SEE STD. DWGS. AS-1-15 AND AS-2-15.
2. FOR SLEEPER SLAB NOTES AND DETAILS, SEE STD. DWG. AS-2-15. PAYMENT FOR THE SLEEPER SLABS SHALL BE INCLUDED WITH ITEM 526 - TYPE C INSTALLATION, AND ITEM 526 - TYPE A INSTALLATION.
3. THE FOLLOWING ARE INCLUDED WITH THE QUANTITY FOR ITEM 526 - REINFORCED CONCRETE APPROACH SLABS WITH OC/OA (T=17):
   - CONCRETE FOR APPROACH SLABS.
   - ALL ASSOCIATED REINFORCING STEEL.
   - ALL PREFORMED EXPANSION JOINT FILLERS AND SEALERS.
4. THE FOLLOWING ARE INCLUDED WITH THE QUANTITIES FOR ITEM 526 - TYPE C INSTALLATION AND ITEM 526 - TYPE A INSTALLATION:
   - CONCRETE FOR SLEEPER SLABS.
   - ALL ASSOCIATED REINFORCING STEEL.
   - ALL PREFORMED EXPANSION JOINT FILLERS AND SEALERS.
5. FOR SECTIONS G, H, I & J, SEE SHT. 33/37 .

DESIGN AGENCY
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DESIGNED	DRAWN	REVIEWED	DATE
RHC	JJB	DGN	1-18-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MOJ		7702648	

APPROACH SLAB DETAILS
BRIDGE NO. SUM-77-0927R
RAMP C2 OVER I.R.77 NB

SUM-077/277/224-VAR
PID No. 106002

35/37

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1288

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MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS				
	REAR	FORWARD	TOTAL				A	B	C	INC.	R
ABUTMENT BARS											
A501	20	18	38	28'-8"	1,136	ST					
A502	2		2	35'-0"	73	ST					
A503	32		32	13'-4"	445	ST					
A504	4		4	12'-0"	50	ST					
A505	4		4	9'-5"	39	ST					
A506	4		4	4'-3"	18	ST					
A507	4		4	10'-3"	43	19	7'-10"	2'-3"	1'-0"		
A508	29		29	16'-7"	502	3	2'-7"	5'-5"			
A509	23		23	7'-5"	178	1	10"	6'-8"			
A510	23	24	47	11'-6"	564	2	3'-8"	4'-5"	3'-8"		
A511	7		7	14'-8"	107	2	6'-9"	1'-5"	6'-9"		
A512	7		7	17'-0"	124	2	7'-11"	1'-5"	7'-11"		
A513	3		3	20'-3"	63	2	9'-6"	1'-5"	9'-6"		
A514	3		3	22'-6"	70	2	10'-8"	1'-5"	10'-8"		
A515	3		3	14'-7"	46	2	6'-8"	1'-5"	6'-8"		
A516	2 7		2 SER. OF 7	7'-6" TO 13'-4"	152	2	3'-2" TO 6'-1"	1'-5"	3'-2" TO 6'-1"	0'-11 5/8"	
A517		2	2	33'-4"	70	ST					
A518		12	12	15'-9"	197	ST					
A519		2	2	15'-0"	31	ST					
A520		2	2	12'-6"	26	ST					
A521		2	2	10'-5"	22	ST					
A522		2	2	5'-5"	11	ST					
A523		2	2	13'-3"	28	19	9'-7"	3'-4"	1'-8"		
A524		3	3	14'-6"	45	2	6'-8"	1'-5"	6'-8"		
A525		3	3	10'-4"	32	1	10"	9'-7"			
A526		9	9	14'-8"	138	2	6'-9"	1'-5"	6'-9"		
A527		1 9	1 SER. OF 9	5'-8" TO 13'-2"	88	2	2'-3" TO 6'-0"	1'-5"	2'-3" TO 6'-0"	0'-11 1/4"	
A528		28	28	11'-10"	346	2	2'-7"	6'-11"	2'-7"		
A529		24	24	6'-8"	167	1	10"	5'-11"			
A601	30	30	60	6'-1"	548	2	2'-9"	11"	2'-9"		
A602	30	30	60	11'-5"	1,029	2	5'-2"	1'-5"	5'-2"		
A603	30	30	60	14'-3"	1,284	2	6'-7"	1'-5"	6'-7"		
A604	23		23	7'-6"	259	1	6'-8"	1'-0"			
A605		24	24	6'-11"	249	1	6'-1"	1'-0"			
A606		3	3	11'-6"	52	1	10'-8"	1'-0"			
A607		28	28	11'-9"	494	2	2'-7"	6'-11"	2'-7"		
A609	4	4	8	8'-5"	101	200	1'-5"	1'-0"			
A801		10	10	33'-4"	890	ST					
A802		6	6	28'-8"	459	ST					
A803	6		6	11'-3"	180	ST					
A804	6		6	11'-5"	183	1	1'-4"	10'-3"			
A805	6		6	12'-9"	204	1	1'-4"	11'-7"			
A806	20	20	40	5'-1"	543	18	2'-10"	1'-0"	1'-0"		
A901	16		16	35'-0"	1,904	ST					
TOTAL					13,190	LBS					

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS			
	PIER 1	PIER 2	TOTAL				A	B	C	D
PIER BARS										
P501	61	61	122	12'-1"	1,538	202	3'-1"	6'-2"	3'-1"	0'-2.25"
P502	441	441	882	7'-9"	7,129	38	6'-7"	10"		
P503	392	392	784	5'-10"	4,770	38	4'-8"	10"		
P504	102	102	204	22'-2"	4,716	ST				
P505	90	90	180	10'-3"	1,924	2	3'-1"	4'-4"	3'-1"	
P506	10	10	20	16'-9"	349	203	6'-7"	4'-9"	7"	2"
P507	90	90	180	9'-9"	1,830	2		3'-10"	3'-1"	
SP601	1		1	22'-4"	2,233	27	0'-3.25"	5'-6"	22'-4"	
SP602	1		1	11'-1"	1,143	27	0'-3.25"	4'-7"	11'-1"	
SP603		1	1	21'-1"	2,155	27	0'-3.25"	5'-6"	21'-1"	
SP604		1	1	10'-6"	1,091	27	0'-3.25"	4'-7"	10'-6"	
P701	55	55	110	17'-9"	3,991	203	6'-7"	4'-9"	1'-2"	0'-2.25"
P801	16	16	32	29'-0"	2,478	ST				
P1001	20	20	40	29'-0"	4,991	ST				
P1101	120	120	240	25'-4"	32,303	17	22'-2"			
P1401	18	18	36	9'-10"	2,708	1	2'-7"	7'-9"		
P1402	17	17	34	8'-10"	2,298	1	2'-7"	6'-9"		
P1403	20	20	40	2'-7"	791	ST		5'-3"		
P1404	20	20	40	2'-7"	791	ST		4'-3"		
P1405	18		18	7'-11"	1,090	ST				
P1406	17		17	6'-11"	900	ST				
P1407		18	18	7'-4"	1,010	ST				
P1408		17	17	6'-4"	824	ST				
P1409	20		20	26'-2"	4,004	ST				
P1410	20		20	20'-8"	3,162	ST				
P1411		20	20	25'-0"	3,825	ST				
P1412		20	20	22'-8"	3,468	ST				
TOTAL					97,512	LBS				

NOTES:

1. FOR BAR BENDING DIAGRAGMS, SEE SHT. NO. 37/37.
2. BAR DIMENSIONS ARE OUT-TO-OUT UNLESS NOTED OTHERWISE.
3. ALL BARS ARE EPOXY COATED.
4. WHEN NO BAR LEG DIMENSIONS ARE SHOWN, IT INDICATES A STANDARD BEND.
5. BAR SIZE AND LOCATION ARE INDICATED IN THE BAR MARK. THE FIRST ALPHABETICAL LETTER(S) INDICATES LOCATION. THE NEXT DIGIT OF THE THREE DIGIT SERIES AND THE NEXT TWO DIGITS OF THE FOUR DIGIT SERIES INDICATE BAR SIZE NUMBER.

EXAMPLES: S501 — NO. 5 SIZE BAR, SUPERSTRUCTURE; GR401 — NO. 5 SIZE BAR, SUPERSTRUCTURE

DESIGN AGENCY
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DESIGNED MOJ | DRAWN MOJ | CHECKED RHC | REVIEWED DGN | DATE 1-18-21 | REVISED | STRUCTURE FILE NUMBER 7702648

REINFORCING BAR LISTS
BRIDGE NO. SUM-77-0927R
RAMP C2 OVER I.R.77 NB

SUM-077/277/224-VAR
PID No. 106002

1260
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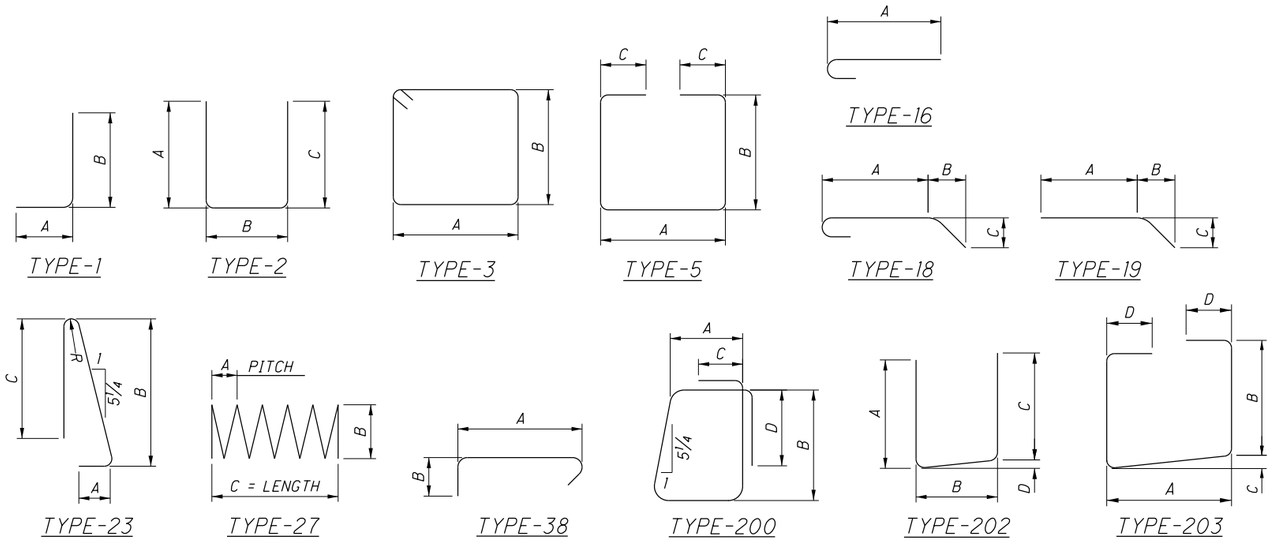
MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS					
					A	B	C	D	E	INC.
SUPERSTRUCTURE BARS										
S401	540	30'-0"	10,822	ST						
S402	1 SER. OF 45	3'-0" TO 24'-9"	417	ST						0'-5 7/8"
S403	1,338	9'-2"	8,193	2	7'-0"	8"	1'-8"			
S501	456	30'-0"	14,268	ST						
S502	1 SER. OF 38	8'-7" TO 30'-9"	779	ST						0'-7 1/4"
S503	669	30'-2"	21,049	17	29'-0"					
S504	669	29'-0"	20,235	ST						
S505	36	7'-8"	288	ST						
S506	24	2'-3"	56	ST						
S507	108	4'-2"	469	2	1'-1"	2'-3"	1'-1"			
S508	54	8'-0"	451	3	1'-8"	2'-1"				
S601	264	30'-0"	11,896	ST						
S602	88	30'-6"	4,031	ST						
TOTAL			92,954	LBS						

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC.
RAILING BARS											
R601	772	7'-8"	8,890	200	9 1/2"	2'-2"	7"	1'-0"			
R602	874	7'-1"	9,299	23	6"	3'-3"	3'-3"			2"	
R603	102	8'-5"	1,289	200	9 1/2"	2'-6"	7"	1'-0"			
R604	4 SER. OF 11	4'-5" TO 5'-3"	319	1	1'-0"	3'-7" TO 4'-5"					0'-1"
R605	16	4'-5"	106	1	1'-0"	3'-7"					
TOTAL			19,903	LBS							

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS					
					A	B	C	D	E	INC.
DRILLED SHAFT BARS										
DSSP601	3	17'-5"	1,913	27	0'-5"	3'-0"	17'-5"			
DSSP602	8	34'-2"	11,333	27	0'-4.75"	3'-4"	34'-2"			
DS1101	36	21'-0"	4,017	16	19'-5"					
DS1102	120	37'-9"	24,068	16	36'-2"					
TOTAL			41,331	LBS						

MARK	TOTAL	LENGTH (EACH)	LENGTH (TOTAL) (FEET)	TYPE	DIMENSIONS				
					A	B	C	D	E
RAILING BARS - GFRP REINFORCING									
GR401	253	30'-0"	7,590	ST					
GR402	11	15'-0"	165	ST					
GR403	11	22'-0"	242	ST					
GR404	264	10'-2"	2,684	ST					
GR405	8	10'-6"	84	ST					
GR406	8	10'-9"	86	ST					
GR407	11	31'-1"	342	ST					
GR408	11	30'-10"	339	ST					
GR409	1	18'-11"	19	19	17'-10"	1'-1"	3"		
GR410	10	20'-1"	201	ST					
GR411	10	17'-10"	178	ST					
GR412	24	10'-0"	240	ST					
GR413	12	6'-4"	76	25	2'-6"	2'-5"	1'-4 1/2"	1 1/2"	5"
GR414	12	4'-11"	59	ST					
GR415	1	16'-6"	17	19	15'-5"	1'-1"	3"		
GR416	22	1'-5"	31	ST					
TOTAL NO. 4 GFRP BARS			12,353	FT					

BAR BENDING DIAGRAMS



NOTE:

1. FOR ADDITIONAL NOTES, SEE SHT. NO. 36/37 .

DESIGN AGENCY
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CHECKED RHC | REVISED | STRUCTURE FILE NUMBER 7702648

REINFORCING BAR LISTS
BRIDGE NO. SUM-77-0927R
RAMP C2 OVER I.R.77 NB

SUM-077/277/224-VAR
PID No. 106002

37/37

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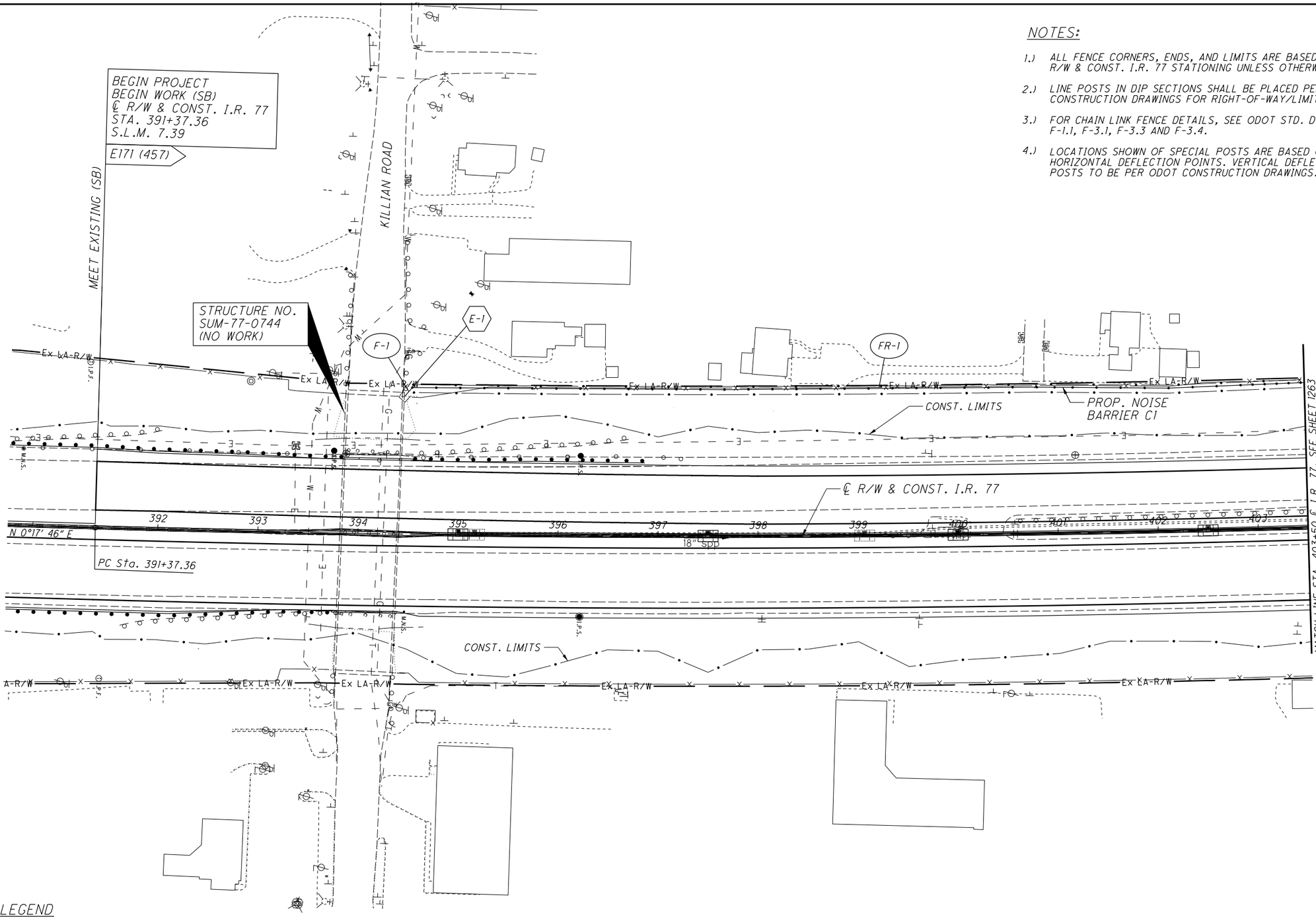

NOTES:

1.) ALL FENCE CORNERS, ENDS, AND LIMITS ARE BASED ON ℄ R/W & CONST. I.R. 77 STATIONING UNLESS OTHERWISE NOTED.

2.) LINE POSTS IN DIP SECTIONS SHALL BE PLACED PER ODOT CONSTRUCTION DRAWINGS FOR RIGHT-OF-WAY/LIMITED ACCESS FENCE.

3.) FOR CHAIN LINK FENCE DETAILS, SEE ODOT STD. DWGS. F-1.1, F-3.1, F-3.3 AND F-3.4.

4.) LOCATIONS SHOWN OF SPECIAL POSTS ARE BASED ON HORIZONTAL DEFLECTION POINTS. VERTICAL DEFLECTION POSTS TO BE PER ODOT CONSTRUCTION DRAWINGS.

FENCE LEGEND

E-# END POST ASSEMBLY

I-# INTERMEDIATE POST ASSEMBLY

EXISTING FENCE

PROPOSED FENCE

FENCE LEGEND TABLE

E-1	STA. 394+52.39 146.50' LT. I.R. 77 PLACED NEXT TO NOISE WALL

FOR ESTIMATED QUANTITIES, SEE SHEET 423

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED KRM
CHECKED PJF

FENCE PLAN - I.R. 77
STA. 390+50 TO STA. 403+50

SUM-77 / 277 / 224
VARIOUS

1262
1288

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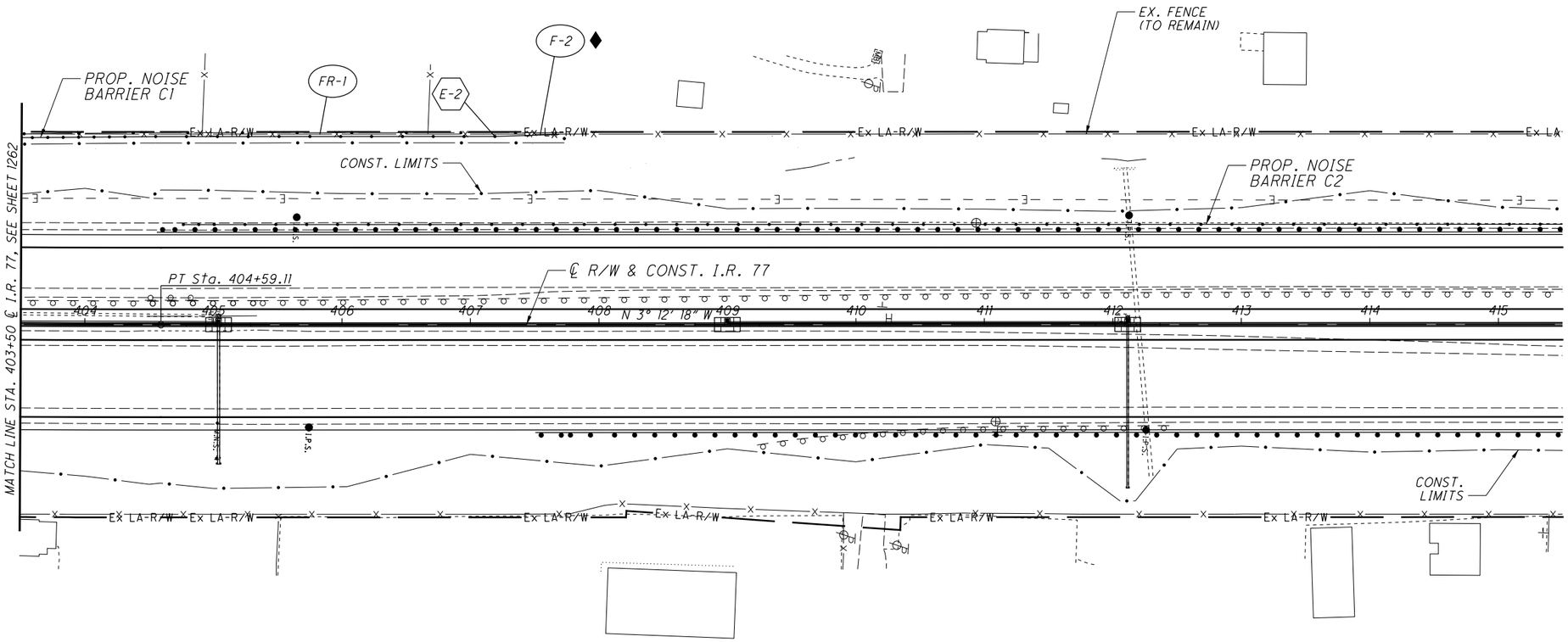
NOTES:

1.) ALL FENCE CORNERS, ENDS, AND LIMITS ARE BASED ON ℄ R/W & CONST. I.R. 77 STATIONING UNLESS OTHERWISE NOTED.

2.) LINE POSTS IN DIP SECTIONS SHALL BE PLACED PER ODOT CONSTRUCTION DRAWINGS FOR RIGHT-OF-WAY/LIMITED ACCESS FENCE.

3.) FOR CHAIN LINK FENCE DETAILS, SEE ODOT STD. DWGS. F-1.1, F-3.1, F-3.3 AND F-3.4.

4.) LOCATIONS SHOWN OF SPECIAL POSTS ARE BASED ON HORIZONTAL DEFLECTION POINTS. VERTICAL DEFLECTION POSTS TO BE PER ODOT CONSTRUCTION DRAWINGS.



FENCE LEGEND

- E-# — END POST ASSEMBLY
- I-# — INTERMEDIATE POST ASSEMBLY
- EXISTING FENCE
- PROPOSED FENCE

♦ = CUT AND REATTACH EXISTNG FENCE TO NEW LINE POST. MAINTAIN TENSION ON EXISTING FENCE.

FENCE LEGEND TABLE

E-2	STA. 407+19.12 146.50' LT. I.R. 77 PLACED NEXT TO NOISE WALL

FOR ESTIMATED QUANTITIES, SEE SHEET 423

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED KRM
CHECKED PJF

FENCE PLAN - I.R. 77
STA. 403+50 TO STA. 415+50

SUM-77 / 277 / 224
VARIOUS

1263
1288

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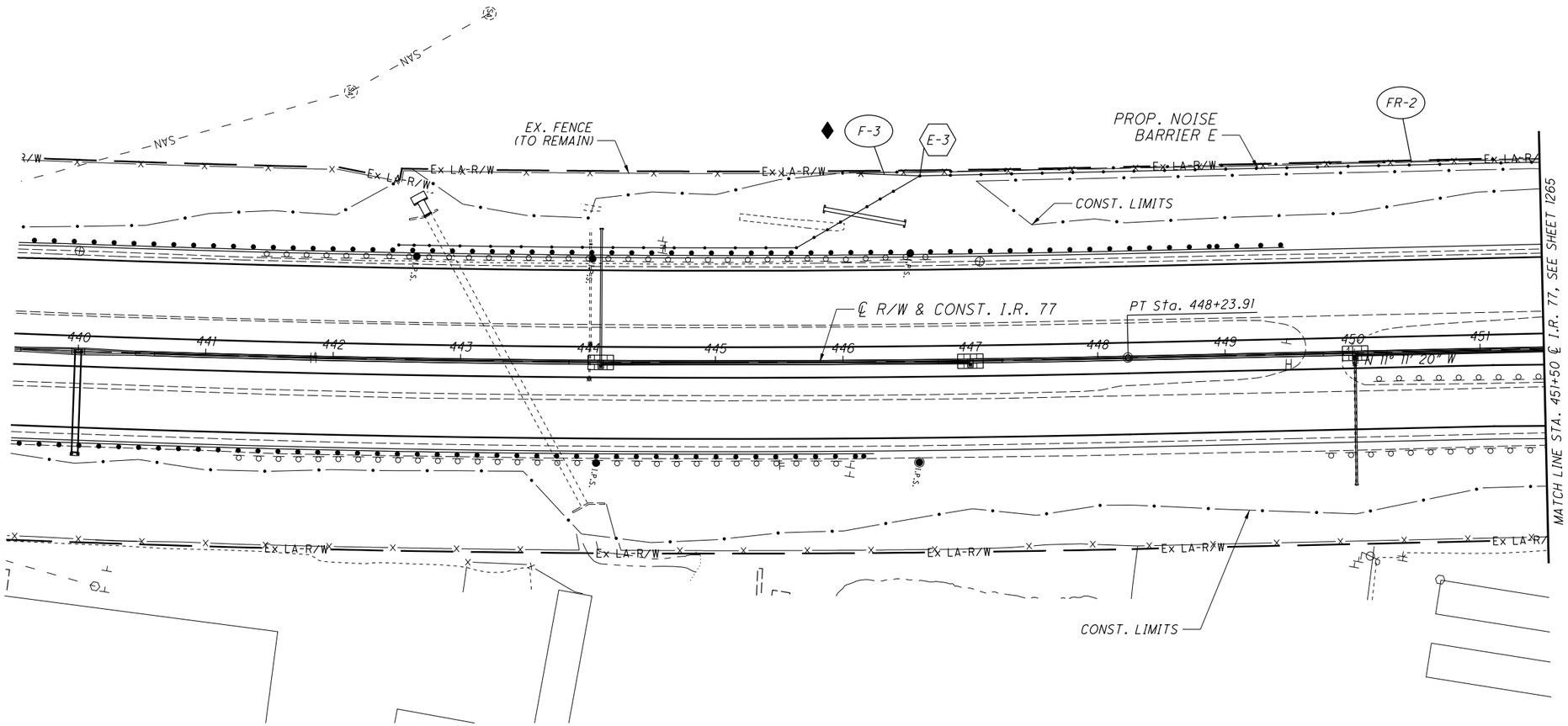
NOTES:

1.) ALL FENCE CORNERS, ENDS, AND LIMITS ARE BASED ON ℄ R/W & CONST. I.R. 77 STATIONING UNLESS OTHERWISE NOTED.

2.) LINE POSTS IN DIP SECTIONS SHALL BE PLACED PER ODOT CONSTRUCTION DRAWINGS FOR RIGHT-OF-WAY/LIMITED ACCESS FENCE.

3.) FOR CHAIN LINK FENCE DETAILS, SEE ODOT STD. DWGS. F-1.1, F-3.1, F-3.3 AND F-3.4.

4.) LOCATIONS SHOWN OF SPECIAL POSTS ARE BASED ON HORIZONTAL DEFLECTION POINTS. VERTICAL DEFLECTION POSTS TO BE PER ODOT CONSTRUCTION DRAWINGS.



FENCE LEGEND

- E-# — END POST ASSEMBLY
- I-# — INTERMEDIATE POST ASSEMBLY
- EXISTING FENCE
- PROPOSED FENCE

♦ = CUT AND REATTACH EXISTNG FENCE TO NEW LINE POST. MAINTAIN TENSION ON EXISTING FENCE.

FENCE LEGEND TABLE	
E-3	STA. 446+61.98 145.59' LT. I.R. 77 PLACED NEXT TO NOISE WALL

FOR ESTIMATED QUANTITIES, SEE SHEET 423

N

0 25 50 100 HORIZONTAL SCALE IN FEET

CALCULATED KRM | CHECKED PJF

FENCE PLAN - I.R. 77
STA. 439+50 TO STA. 451+50

SUM-77/277/224
VARIOUS

1264
1288

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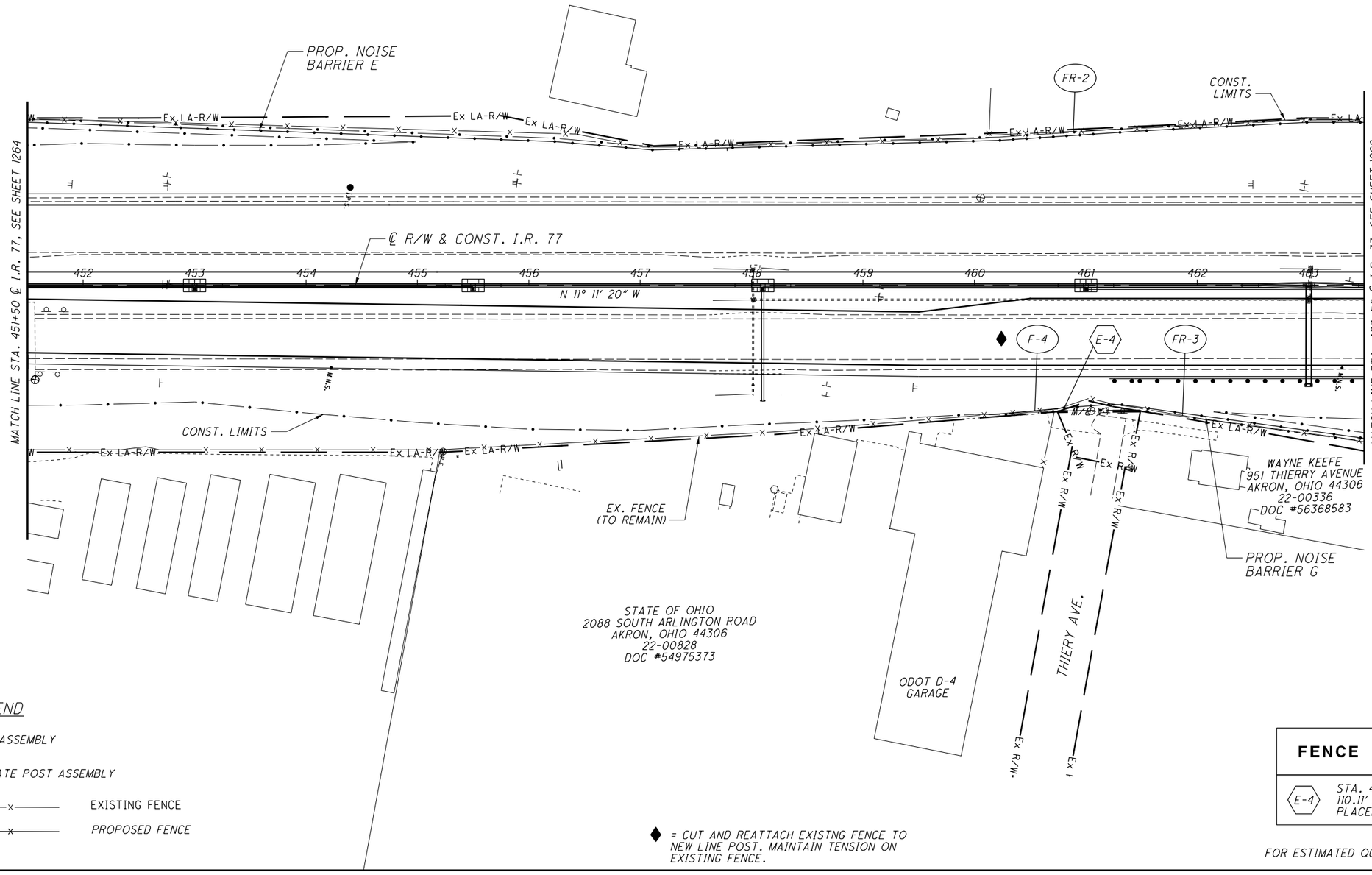
NOTES:

1.) ALL FENCE CORNERS, ENDS, AND LIMITS ARE BASED ON ℄ R/W & CONST. I.R. 77 STATIONING UNLESS OTHERWISE NOTED.

2.) LINE POSTS IN DIP SECTIONS SHALL BE PLACED PER ODOT CONSTRUCTION DRAWINGS FOR RIGHT-OF-WAY/LIMITED ACCESS FENCE.

3.) FOR CHAIN LINK FENCE DETAILS, SEE ODOT STD. DWGS. F-1.1, F-3.1, F-3.3 AND F-3.4.

4.) LOCATIONS SHOWN OF SPECIAL POSTS ARE BASED ON HORIZONTAL DEFLECTION POINTS. VERTICAL DEFLECTION POSTS TO BE PER ODOT CONSTRUCTION DRAWINGS.



FENCE LEGEND

- E-# — END POST ASSEMBLY
- I-# — INTERMEDIATE POST ASSEMBLY
- EXISTING FENCE
- PROPOSED FENCE

♦ = CUT AND REATTACH EXISTNG FENCE TO NEW LINE POST. MAINTAIN TENSION ON EXISTING FENCE.

FENCE LEGEND TABLE	
E-4	STA. 460+80.59 110.11' RT. I.R. 77 PLACED NEXT TO NOISE WALL

FOR ESTIMATED QUANTITIES, SEE SHEET 423

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED KRM
CHECKED PJF

FENCE PLAN - I.R. 77
STA. 451+50 TO STA. 463+50

SUM-77/277/224
VARIOUS

1265
1288

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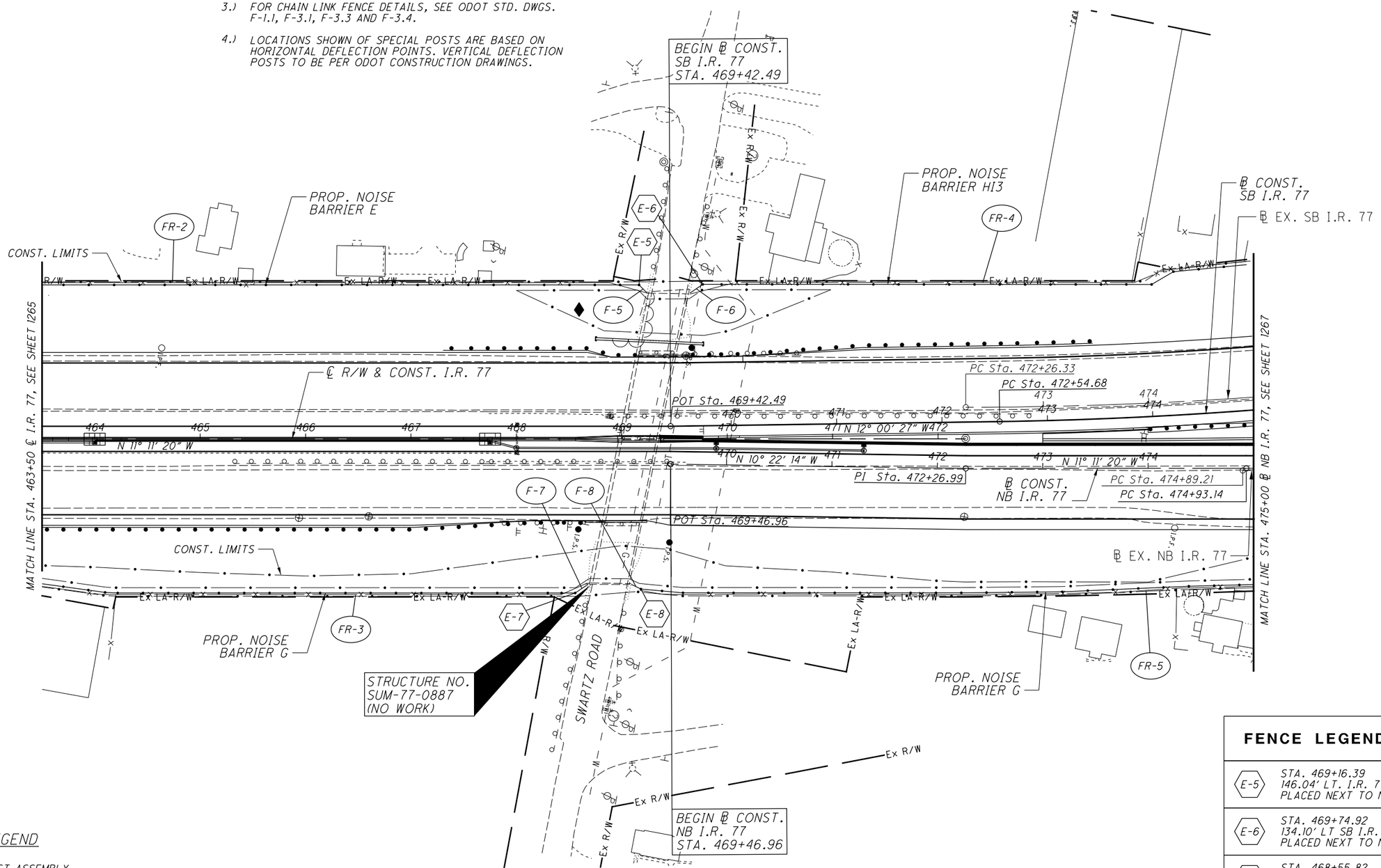
NOTES:

1.) ALL FENCE CORNERS, ENDS, AND LIMITS ARE BASED ON ℄ R/W & CONST. I.R. 77 STATIONING UNLESS OTHERWISE NOTED.

2.) LINE POSTS IN DIP SECTIONS SHALL BE PLACED PER ODOT CONSTRUCTION DRAWINGS FOR RIGHT-OF-WAY/LIMITED ACCESS FENCE.

3.) FOR CHAIN LINK FENCE DETAILS, SEE ODOT STD. DWGS. F-1.1, F-3.1, F-3.3 AND F-3.4.

4.) LOCATIONS SHOWN OF SPECIAL POSTS ARE BASED ON HORIZONTAL DEFLECTION POINTS. VERTICAL DEFLECTION POSTS TO BE PER ODOT CONSTRUCTION DRAWINGS.



FENCE LEGEND

E-# END POST ASSEMBLY

I-# INTERMEDIATE POST ASSEMBLY

EXISTING FENCE

PROPOSED FENCE

FENCE LEGEND TABLE	
E-5	STA. 469+16.39 146.04' LT. I.R. 77 PLACED NEXT TO NOISE WALL
E-6	STA. 469+74.92 134.10' LT SB I.R. 77 PLACED NEXT TO NOISE WALL
E-7	STA. 468+55.82 146.25' RT. I.R. 77 PLACED NEXT TO NOISE WALL
E-8	STA. 469+18.21 142.39' RT. I.R. 77 PLACED NEXT TO NOISE WALL

FOR ESTIMATED QUANTITIES, SEE SHEET 423

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED KRM CHECKED PJF

FENCE PLAN - I.R. 77/NB I.R. 77/SB I.R. 77 STA. 463+50 TO STA. 475+00

SUM-77/277/224 VARIOUS

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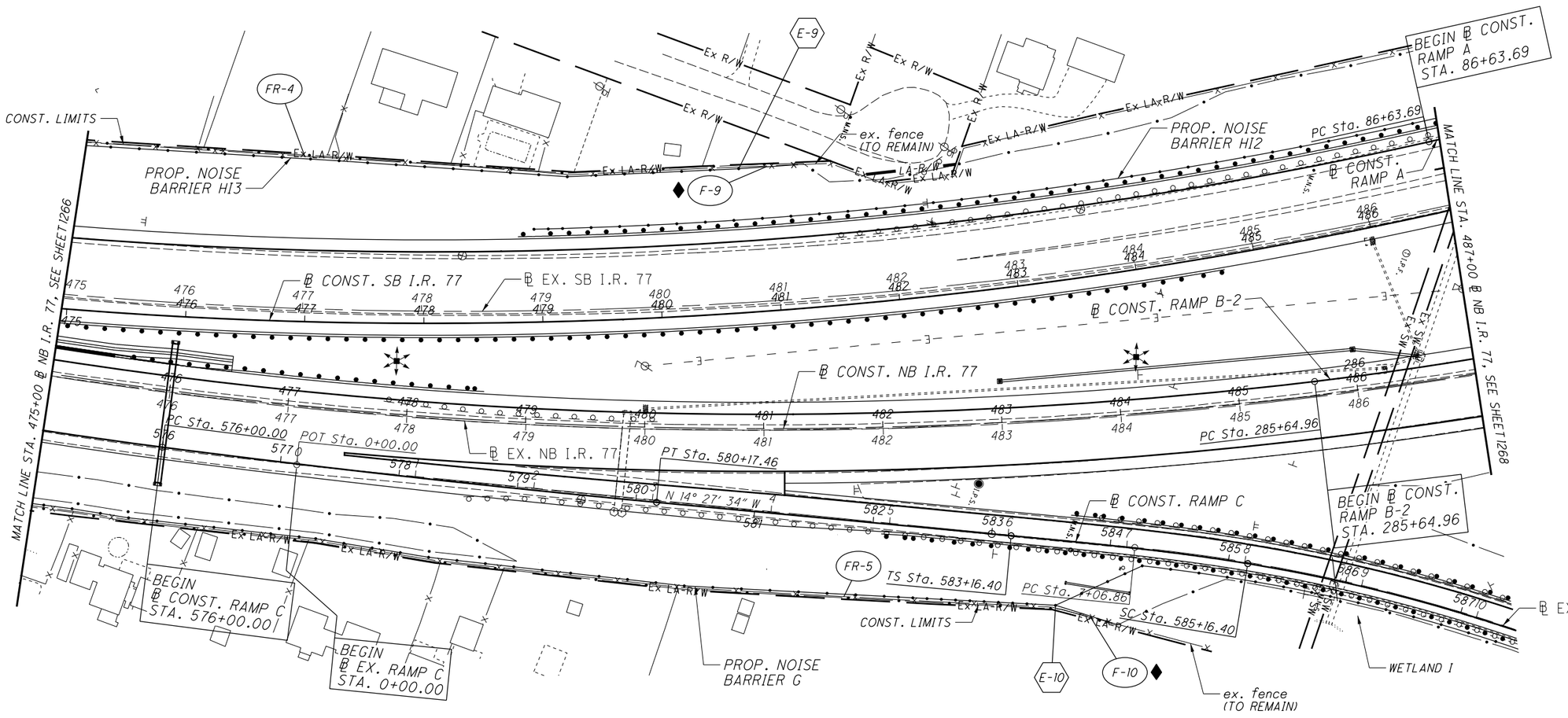
NOTES:

1.) ALL FENCE CORNERS, ENDS, AND LIMITS ARE BASED ON ℄ CONST. SB I.R. 77 STATIONING UNLESS OTHERWISE NOTED.

2.) LINE POSTS IN DIP SECTIONS SHALL BE PLACED PER ODOT CONSTRUCTION DRAWINGS FOR RIGHT-OF-WAY/LIMITED ACCESS FENCE.

3.) FOR CHAIN LINK FENCE DETAILS, SEE ODOT STD. DWGS. F-1.1, F-3.1, F-3.3 AND F-3.4.

4.) LOCATIONS SHOWN OF SPECIAL POSTS ARE BASED ON HORIZONTAL DEFLECTION POINTS. VERTICAL DEFLECTION POSTS TO BE PER ODOT CONSTRUCTION DRAWINGS.



FENCE LEGEND

E-# END POST ASSEMBLY

I-# INTERMEDIATE POST ASSEMBLY

EXISTING FENCE

PROPOSED FENCE

♦ = CUT AND REATTACH EXISTNG FENCE TO NEW LINE POST. MAINTAIN TENSION ON EXISTING FENCE.

FENCE LEGEND TABLE	
E-9	STA. 480+72.73 120.96' LT. SB I.R. 77 PLACED NEXT TO NOISE WALL
E-10	STA. 583+59.12 54.64' RT. RAMP C PLACED NEXT TO NOISE WALL

FOR ESTIMATED QUANTITIES, SEE SHEET 423

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED KRM
CHECKED PJF

SUM-77/277/224 VARIOUS

FENCE PLAN - I.R. 77/NB I.R. 77/SB I.R. 77 STA. 475+00 TO STA. 487+00

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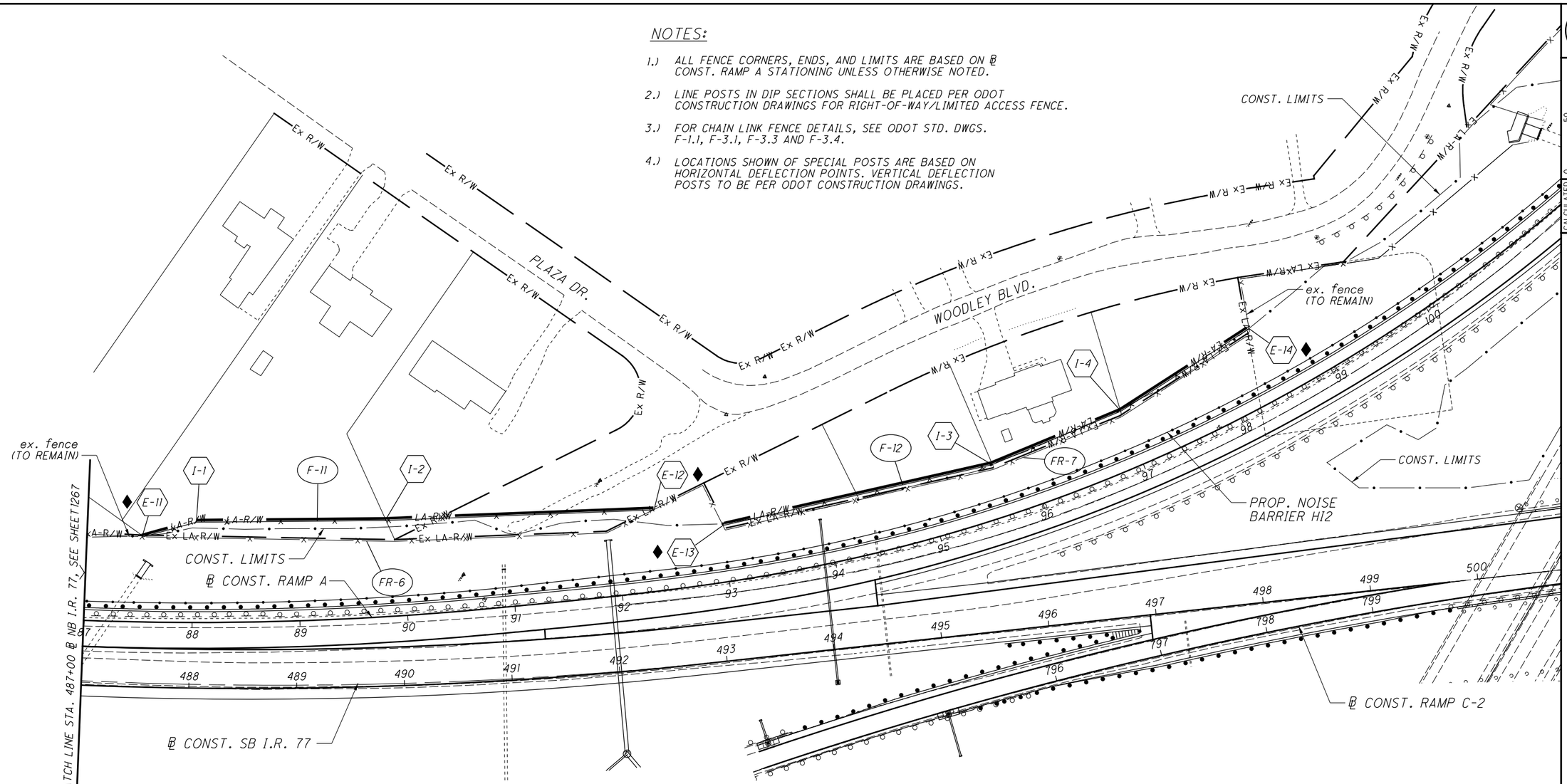
NOTES:

1.) ALL FENCE CORNERS, ENDS, AND LIMITS ARE BASED ON ℄ CONST. RAMP A STATIONING UNLESS OTHERWISE NOTED.

2.) LINE POSTS IN DIP SECTIONS SHALL BE PLACED PER ODOT CONSTRUCTION DRAWINGS FOR RIGHT-OF-WAY/LIMITED ACCESS FENCE.

3.) FOR CHAIN LINK FENCE DETAILS, SEE ODOT STD. DWGS. F-1.1, F-3.1, F-3.3 AND F-3.4.

4.) LOCATIONS SHOWN OF SPECIAL POSTS ARE BASED ON HORIZONTAL DEFLECTION POINTS. VERTICAL DEFLECTION POSTS TO BE PER ODOT CONSTRUCTION DRAWINGS.



FENCE LEGEND

- E-# END POST ASSEMBLY
- I-# INTERMEDIATE POST ASSEMBLY
- EXISTING FENCE
- PROPOSED FENCE

♦ = CUT AND REATTACH EXISTNG FENCE TO NEW END POST. MAINTAIN TENSION ON EXISTING FENCE.

FENCE LEGEND TABLE

I-1	STA. 88+04.01 92.95' LT. RAMP A	E-11	STA. 87+52.08 78.60' LT. RAMP A MEET EXISTING FENCE
I-2	STA. 89+84.65 89.03' LT. RAMP A	E-12	STA. 92+38.86 75.22' LT. RAMP A MEET EXISTING FENCE
I-3	STA. 95+66.50 49.45' RT. RAMP A	E-13	STA. 93+01.79 52.27' LT. RAMP A MEET EXISTING FENCE
I-4	STA. 97+00.44 53.32' RT. RAMP A	E-14	STA. 98+46.73 69.82' LT. RAMP A MEET EXISTING FENCE

FOR ESTIMATED QUANTITIES, SEE SHEET 423

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

CALCULATED KRM
CHECKED PJF

FENCE PLAN
STA. 487+00 TO STA. 500+00
I.R. 77 - SB
SUM-77/277/224
VARIOUS

1268
1288

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NOTES:

1.) ALL FENCE CORNERS, ENDS, AND LIMITS ARE BASED ON ℄ R/W & CONST. I.R. 277/U.S. 224 STATIONING UNLESS OTHERWISE NOTED.

2.) LINE POSTS IN DIP SECTIONS SHALL BE PLACED PER ODOT CONSTRUCTION DRAWINGS FOR RIGHT-OF-WAY/LIMITED ACCESS FENCE.

3.) FOR CHAIN LINK FENCE DETAILS, SEE ODOT STD. DWGS. F-1.1, F-3.1, F-3.3 AND F-3.4.

4.) LOCATIONS SHOWN OF SPECIAL POSTS ARE BASED ON HORIZONTAL DEFLECTION POINTS. VERTICAL DEFLECTION POSTS TO BE PER ODOT CONSTRUCTION DRAWINGS.

END WORK
RAMP B-2
STA. 33+82.00

END ℄ EX. RAMP B
STA. 27+97.76

BEGIN ℄ CONST.
RAMP B
STA. 197+05.36

CONST. LIMITS

EX. FENCE
(TO REMAIN)

Ex LA-R/W

℄ CONST. RAMP B-2

℄ EX. RAMP B

ST Sta. 197+05.36

ST Sta. 24+64.81

POT Sta. 27+97.76

S 83° 32' 30" W

28 S 83° 15' 20" W 27

N 84° 41' 15" E

POT Sta. 33+82.00

℄ R/W & CONST. I.R. 277/U.S. 224

MATCH LINE STA. 234+50 ℄ I.R. 277/U.S. 224, SEE SHEET 1270

I.P.S.

E-15

F-13

FR-8

PROP. NOISE BARRIER HII

BEGIN WORK (WB)
I.R. 277/U.S. 224
STA. 225+00.00

FENCE LEGEND

E-# END POST ASSEMBLY

I-# INTERMEDIATE POST ASSEMBLY

EXISTING FENCE

PROPOSED FENCE

♦ = CUT AND REATTACH EXISTNG FENCE TO NEW LINE POST. MAINTAIN TENSION ON EXISTING FENCE.

FENCE LEGEND TABLE

E-15	STA. 232+10.61 121.63' RT. I.R. 277/U.S. 224 PLACED NEXT TO NOISE WALL

FOR ESTIMATED QUANTITIES, SEE SHEET 423

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED KRM
CHECKED PJF

FENCE PLAN - I.R. 277 / U.S. 224
BEGIN TO STA. 234+50

SUM-77 / 277 / 224
VARIOUS

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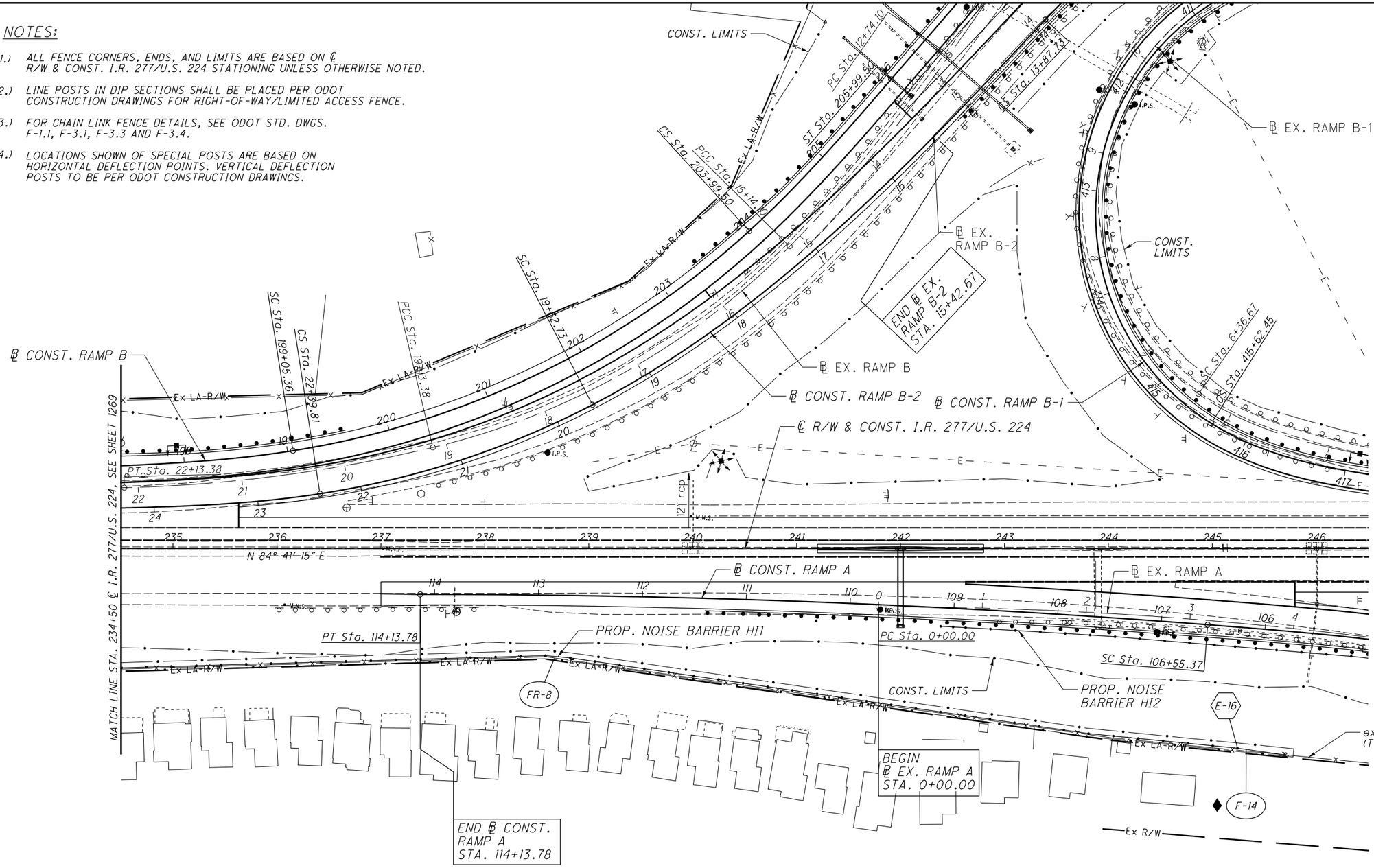
NOTES:

1.) ALL FENCE CORNERS, ENDS, AND LIMITS ARE BASED ON ℄ R/W & CONST. I.R. 277/U.S. 224 STATIONING UNLESS OTHERWISE NOTED.

2.) LINE POSTS IN DIP SECTIONS SHALL BE PLACED PER ODOT CONSTRUCTION DRAWINGS FOR RIGHT-OF-WAY/LIMITED ACCESS FENCE.

3.) FOR CHAIN LINK FENCE DETAILS, SEE ODOT STD. DWGS. F-1.1, F-3.1, F-3.3 AND F-3.4.

4.) LOCATIONS SHOWN OF SPECIAL POSTS ARE BASED ON HORIZONTAL DEFLECTION POINTS. VERTICAL DEFLECTION POSTS TO BE PER ODOT CONSTRUCTION DRAWINGS.



FENCE LEGEND

- E-# — END POST ASSEMBLY
- I-# — INTERMEDIATE POST ASSEMBLY
- EXISTING FENCE
- PROPOSED FENCE

♦ = CUT AND REATTACH EXISTNG FENCE TO NEW LINE POST. MAINTAIN TENSION ON EXISTING FENCE.

FENCE LEGEND TABLE	
E-16	STA. 106+17.26 116.20' LT. RAMP A PLACED NEXT TO NOISE WALL

FOR ESTIMATED QUANTITIES, SEE SHEET 423

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

CALCULATED KRM
CHECKED PJF

FENCE PLAN - I.R. 277 / U.S. 224
STA. 234+50 TO STA. 246+50

SUM-77 / 277 / 224
VARIOUS

1270
1288

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NOTES:

1.) ALL FENCE CORNERS, ENDS, AND LIMITS ARE BASED ON ℄ R/W & CONST. I.R. 277/U.S. 224 STATIONING UNLESS OTHERWISE NOTED.

2.) LINE POSTS IN DIP SECTIONS SHALL BE PLACED PER ODOT CONSTRUCTION DRAWINGS FOR RIGHT-OF-WAY/LIMITED ACCESS FENCE.

3.) FOR CHAIN LINK FENCE DETAILS, SEE ODOT STD. DWGS. F-1.1, F-3.1, F-3.3 AND F-3.4.

4.) LOCATIONS SHOWN OF SPECIAL POSTS ARE BASED ON HORIZONTAL DEFLECTION POINTS. VERTICAL DEFLECTION POSTS TO BE PER ODOT CONSTRUCTION DRAWINGS.

PROP. NOISE BARRIER K

℄ EX. RAMP D

CONST. LIMITS

ex. fence (TO REMAIN)

BEGIN ℄ EX. RAMP D STA. 0+00.00

BEGIN ℄ CONST. RAMP D STA. 887+98.38

℄ CONST. RAMP D

PC Sta. 0+00.00

PC Sta. 887+98.38

F-15

E-17

FR-9

SAWCUT

TYPE E

℄ R/W & CONST. I.R. 277/U.S. 224

N 84° 41' 15" E

MATCH LINE STA. 270+50 ℄ I.R. 277/U.S. 224, SEE SHEET 1272

CS Sta. 899+01.12

SC Sta. 897+17.13

CS Sta. 895+17.13

CS Sta. 9+43.78

CS Sta. 7+53.78

Ex LA-R/W

PT Sta. 4+23.08

TS Sta. 4+39.07

CS Sta. 683+18.39

SC Sta. 685+18.39

SC Sta. 6+39.07

℄ EX. RAMP C-1

BEGIN ℄ CONST. RAMP C-2 STA. 781+45.30

END ℄ EX. RAMP C-2 STA. 17+81.12

℄ CONST. RAMP C-2

POT Sta. 17+81.12

℄ EX. RAMP C-2

TS Sta. 784+82.55

PT Sta. 16+61.74

℄ CONST. RAMP C-1

CST Sta. 694+94.95

CST Sta. 15+62.36

PCC Sta. 22+23.50

PCC Sta. 599+38.22

℄ EX. RAMP C

PC Sta. 781+45.30

℄ CONST. RAMP C

CS Sta. 782+93.84

Ex LA-R/W

I.P.S.

M.N.S.

SAN

FENCE LEGEND

E-# END POST ASSEMBLY

I-# INTERMEDIATE POST ASSEMBLY

EXISTING FENCE

PROPOSED FENCE

FENCE LEGEND TABLE

E-17	STA. 890+62.72 75.44' RT. RAMP D PLACED NEXT TO NOISE WALL

♦ = CUT AND REATTACH EXISTNG FENCE TO NEW LINE POST. MAINTAIN TENSION ON EXISTING FENCE.

FOR ESTIMATED QUANTITIES, SEE SHEET 423

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED KRM
CHECKED PJF

FENCE PLAN - I.R. 277/U.S. 224
STA. 258+50 TO STA. 270+50

SUM-77/277/224
VARIOUS

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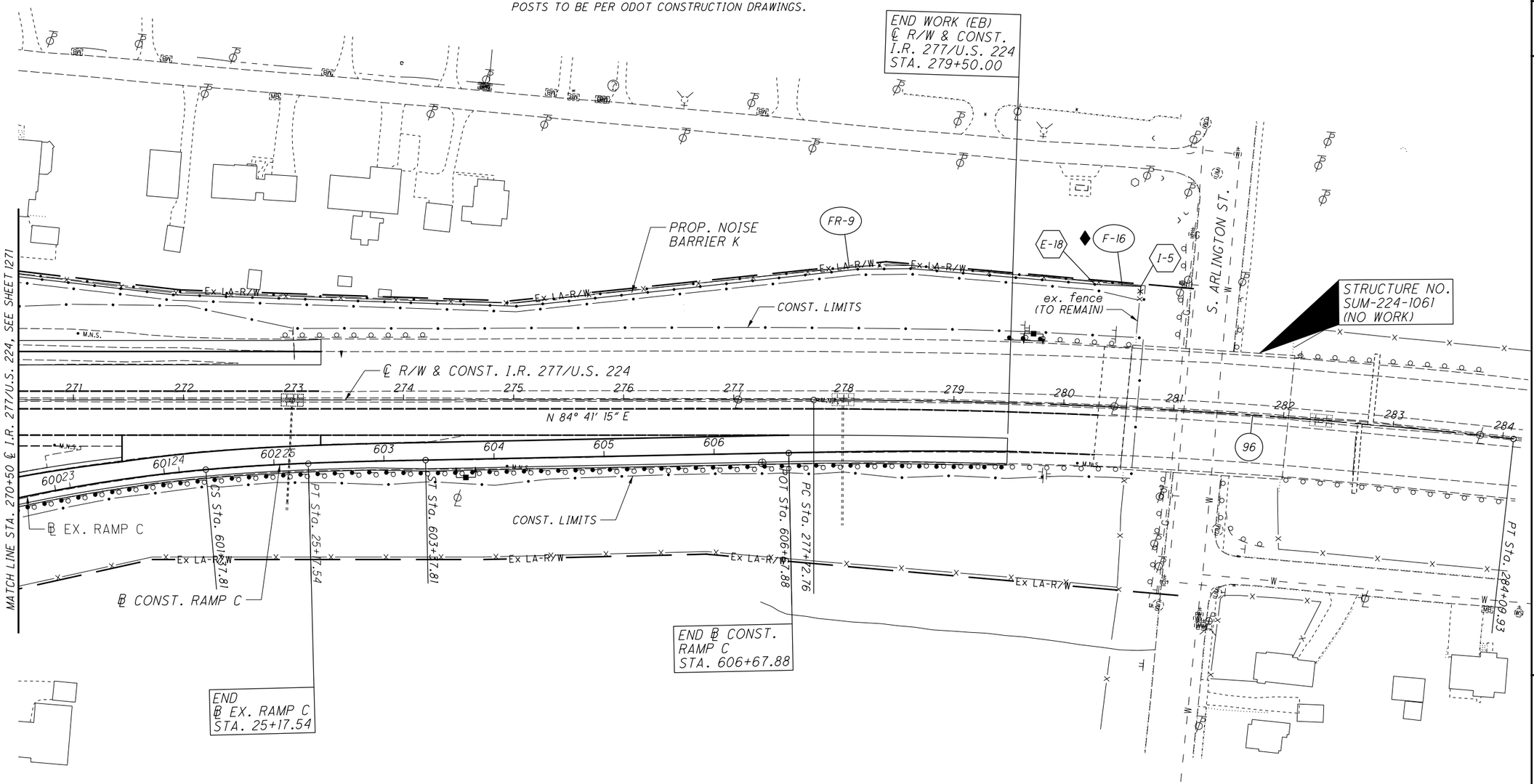
NOTES:

1.) ALL FENCE CORNERS, ENDS, AND LIMITS ARE BASED ON ℄ R/W & CONST. I.R. 277/U.S. 224 STATIONING UNLESS OTHERWISE NOTED.

2.) LINE POSTS IN DIP SECTIONS SHALL BE PLACED PER ODOT CONSTRUCTION DRAWINGS FOR RIGHT-OF-WAY/LIMITED ACCESS FENCE.

3.) FOR CHAIN LINK FENCE DETAILS, SEE ODOT STD. DWGS. F-1.1, F-3.1, F-3.3 AND F-3.4.

4.) LOCATIONS SHOWN OF SPECIAL POSTS ARE BASED ON HORIZONTAL DEFLECTION POINTS. VERTICAL DEFLECTION POSTS TO BE PER ODOT CONSTRUCTION DRAWINGS.



FENCE LEGEND

- E-# — END POST ASSEMBLY
- I-# — INTERMEDIATE POST ASSEMBLY
- EXISTING FENCE
- PROPOSED FENCE

♦ = CUT AND REATTACH EXISTNG FENCE TO NEW LINE POST. MAINTAIN TENSION ON EXISTING FENCE.

FENCE LEGEND TABLE	
E-18	STA. 280+23.33 110.63' LT. I.R. 277/U.S. 224 PLACED NEXT TO NOISE WALL
I-5	STA. 280+64.43 110.64' LT. I.R. 277/U.S. 224 MEET EXISTING FENCE

FOR ESTIMATED QUANTITIES, SEE SHEET 423

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED KRM
CHECKED PJF

FENCE PLAN - I.R. 277/U.S. 224 STA. 270+50 TO END

SUM-77/277/224
VARIOUS

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RIGHT OF WAY LEGEND SHEET SUM-77/277/224

SUMMIT COUNTY
COVENTRY TOWNSHIP
R-11, T-1, TRACT 11

PROJECT DESCRIPTION

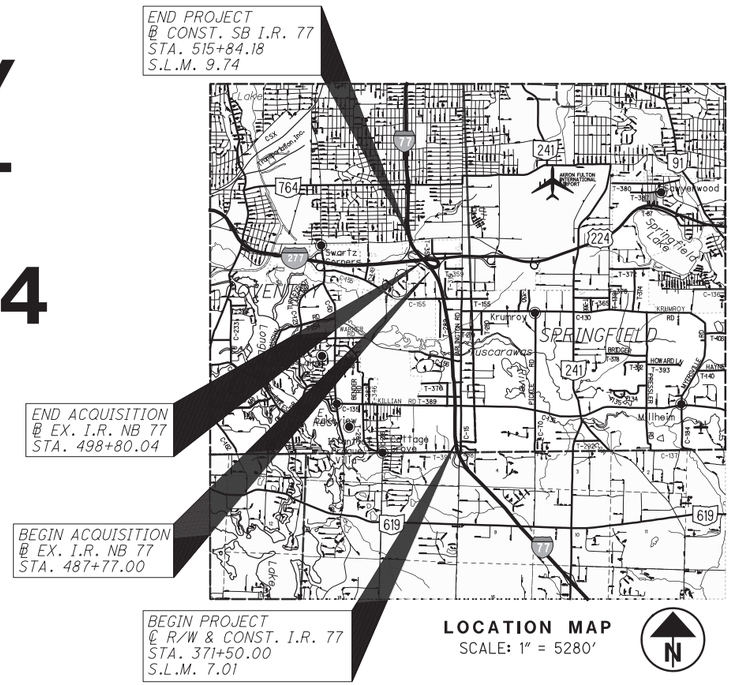
PROJECT CONSISTS OF FULL DEPTH RECONSTRUCTION OF 2.7 MILES OF I-77, INCLUDING AN ADDITIONAL THROUGH LANE, AND RECONSTRUCTION OF THE I-77/I-277/US-224 INTERCHANGE IN SUMMIT COUNTY. PROJECT ALSO INCLUDES THE RECONSTRUCITON OF THE RAMP C-2 BRIDGES OVER WARNER ROAD AND WIDENING AND REDECKING OF THE I-77 BRIDGES OVER THE TUSCARAWAS RIVER.

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.

TYPES OF TITLE LEGEND:
WL = FEE SIMPLE WITH LIMITATION OF ACCESS

NOTES: 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.

UTILITY OWNERS			
Type	Name and Address	Type	Name and Address
Comm.	AT&T - Ohio 50 W. Bowery St., 6th floor Akron, OH 44313	Comm.	Everstream 1228 Euclid Ave., Suite 250 Cleveland, OH 44115
Comm.	Charter Communication (Spectrum/TimeWarner) 1200 Brownstone Ave. Akron, OH 44310	Electric	First Energy (Ohio Edison) 1910 W. Market St. Bldg. 3 Akron, OH 44313
Water	Akron Water Distribution 1420 Triplett Blvd. Akron, OH 44306	Gas	G & O Resources LTD 96 E. Crosier St. Akron, OH 44311
Sewer	Akron Sewer Maintenance 2460 Akron Peninsula Rd. Akron, OH 44313	Gas	Knox Energy Coop 5940 S.R. 7 Kinsman, OH 44428
Traffic	City of Akron Traffic 1420 Triplett Blvd., Bldg #2 Akron, OH 44306	Comm.	Lightower Fiber Networks (Crown Castle) 15565 Neo Parkway Garfield Heights, OH 44128
Comm.	Crown Castle (Lightower) 15565 Neo Parkway Garfield Heights, OH 44128	Comm.	MCI (Verizon) 120 Ravine St. Akron, OH 44303
Gas	Dominion Energy Ohio 320 Springside Dr., Suite 320 Akron, OH 44333	Traffic	Odot District 4 (Traffic) 2088 S. Arlington Rd. Akron, OH 44306
Gas	Everflow Eastern Partners LP 29093 S.R. 62 Salem, OH 44460	Sewer	Summit County Sanitary Department 1180 S. Main St, Suite 201 Akron, OH 44301



LOCATION MAP
SCALE: 1" = 5280'

INDEX OF SHEETS:

LEGEND SHEET	1
CENTERLINE PLAT	2-12
PROPERTY MAP	13
SUMMARY OF ADDITIONAL R/W	14
R/W TOPOGRAPHIC SHEET	15
R/W BOUNDARY SHEET	16

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)

PLANS PREPARED BY:

FIRM NAME : NEAS Inc.
R/W DESIGNER: WEBSTER STOWE
R/W REVIEWER: CHARLES W. PRICE JR.
FIELD REVIEWER: DANIEL G. LOSONCY
PRELIMINARY FIELD REVIEW DATE:
TRACINGS FIELD REVIEW DATE: 02/20/2020
OWNERSHIP UPDATED BY: WEBSTER STOWE
DATE COMPLETED: 04/09/2020
PLAN COMPLETION DATE: 04/10/2020

STRUCTURE KEY
RESIDENTIAL
COMMERCIAL
OUT-BUILDING

SURVEYORS SEAL

STATE OF OHIO · JOSHUA R. MIHELCIC · 04-09-2020 · REGISTERED PROFESSIONAL SURVEYOR

I, Joshua R. Mihelcic, P. S. have conducted a survey of the existing conditions for the Ohio Department of Transportation between the months of November 2017 through January 2020. The results of that survey are contained herein. The horizontal coordinates expressed herein are based on the Ohio State Plane Coordinates System, North Zone, NAD 83(2011). Coordinates are ground coordinates and distances are ground distances. Scale the ground coordinates about point 0,0,0 by the project adjustment factor of 0.99989474882 to obtain grid coordinates. Topographic features shown herein are a combination of conventional ground survey and aerial survey. The aerial survey was collected during the winter/spring of 2018. 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. 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.

04-09-2020
Joshua R. Mihelcic, Professional Land Surveyor of Ohio, No. 8453 — Date

SURVEYORS SEAL

STATE OF OHIO · CHARLES W. PRICE, JR. · S-7825 · REGISTERED PROFESSIONAL SURVEYOR

I, Charles W. Price, Jr., P. S. 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 these parcels as shown herein. As a part of this work I have set right of way monuments at the property corners, property line intersections, 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.

4-14-2020
Charles W. Price Jr., Professional Land Surveyor of Ohio, No. 7825 — Date

CONVENTIONAL SYMBOLS

County Line
Township Line
Section Line
Corporation Line or
Fence Line (Ex) —x—x— (Pr) —x—x—
Center Line
Right of Way (Ex) Ex R/W
Right of Way (Pr) R/W
Limited Access (Ex) Ex LA-R/W
Limited Access (Pr) LA-R/W
Standard Highway Ease.(Ex) Ex SH
Standard Highway Ease.(Pr) 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) MB , Mailbox (Pr) MB
Light (Ex) , Telephone Marker (Ex) HTEL
Fire Hydrant (Ex) , Water Meter (Ex) W
Water Valve (Ex) , Utility Valve Unknown (Ex.)
Telephone Pole (Ex) , Power Pole (Ex)
Light Pole (Ex)

FEDERAL PROJECT NO. E171(457)
PID NO. 106002
CALCULATED WWS CHECKED CWP
RIGHT OF WAY LEGEND SHEET
SUM-77/277/224 VARIOUS
1 / 16
1273 1288

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SETTING OF ALL MONUMENTS SHALL BE PERFORMED BY A SURVEYOR REGISTERED IN THE STATE OF OHIO. THE MONUMENT ASSEMBLIES AND REFERENCE MONUMENTS WILL BE INSTALLED BY THE CONTRACTOR AT THE TIME OF CONSTRUCTION. THE IRON PIN AND CAP (WHEN REQUIRED) ARE TO BE INSTALLED BY THE CONTRACTOR'S SURVEYOR.

CHANGES OR ALTERATIONS TO THE LOCATION OF ANY MONUMENTS SHOWN IN THIS TABLE, REQUIRE PRIOR APPROVAL FROM THE DISTRICT REAL ESTATE ADMINISTRATOR OF THE OHIO DEPARTMENT OF TRANSPORTATION. IN THE EVENT THAT CHANGES OR ALTERATIONS ARE APPROVED, A REVISED CENTERLINE PLAT WITH THE NEW LOCATIONS SHALL BE RECORDED IN THE SUMMIT COUNTY FISCAL OFFICE RECORDING DIVISION RECORDS AND THE OHIO DEPARTMENT OF TRANSPORTATION. SPECIFICATIONS FOR MONUMENT ASSEMBLIES, REFERENCE MONUMENTS AND RIGHT OF WAY MONUMENTS ARE SHOWN ON STANDARD CONSTRUCTION DRAWING RM-1.1.

SUM-77/277/224
SUMMIT COUNTY
CONVENTRY TOWNSHIP
R-11, T-1, TRACT 13

BASIS FOR BEARINGS:

ALL BEARINGS SHOWN ARE FOR PROJECT USE ONLY. THE BEARINGS REFERRED TO HEREIN ARE RELATING TO GRID NORTH OF THE OHIO STATE PLANE COORDINATE SYSTEM, NORTH ZONE NAD 83(2011) DATUM AND ARE FOR THE PURPOSE OF DEFINING ANGULAR MEASUREMENTS.

BASIS OF EXISTING R/W:

- ODOT RESOLVED ℄ INFORMATION FOR INTERSTATE 77 & INTERSTATE 277 INTERCHANGE PER SUM-77-9.58 PID 98061 HOLDING STATIONING.
- ODOT R/W PLAN SUM-8-6.72 1961.
- ODOT R/W PLAN SUM-77-3.97 1997.
- ADDITIONAL PLATS, SURVEY RECORDS, AND DEEDS LISTED WITHIN THE R/W PLANS.
- ALL RECORDS LISTED ARE FROM THE RECORDS OF SUMMIT COUNTY, OHIO.

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

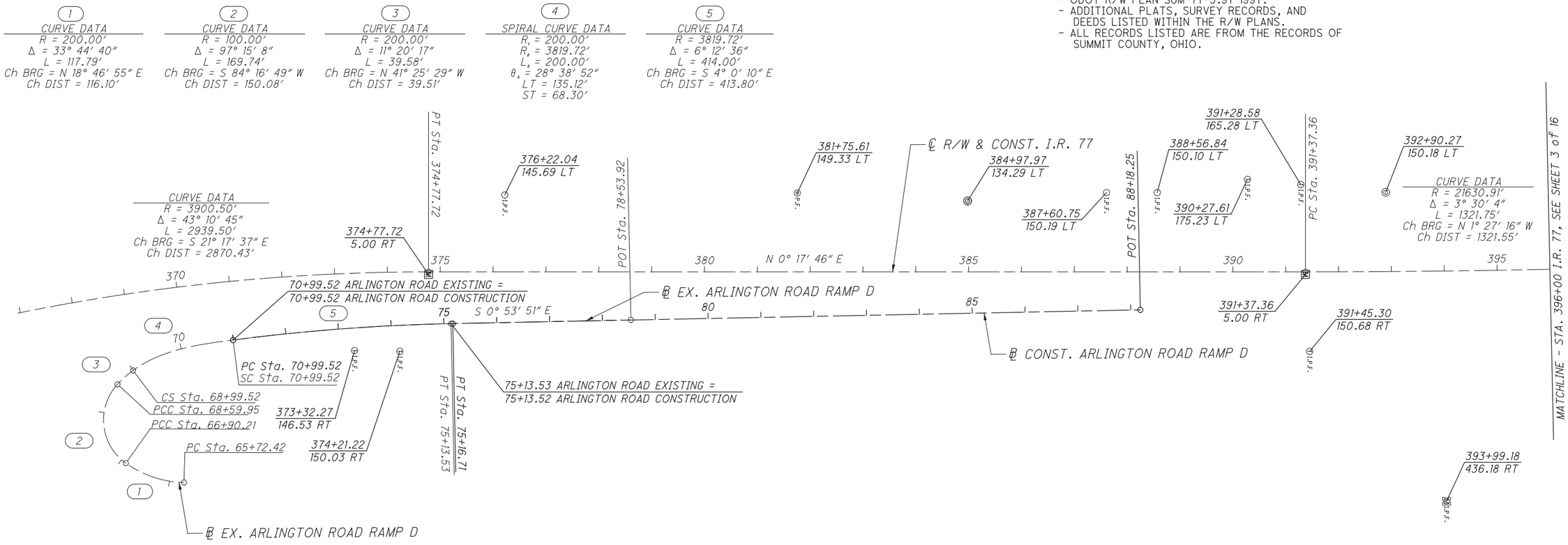
(1) CURVE DATA
R = 200.00'
Δ = 33° 44' 40"
L = 117.79'
Ch BRG = N 18° 46' 55" E
Ch DIST = 116.10'

(2) CURVE DATA
R = 100.00'
Δ = 97° 15' 8"
L = 169.74'
Ch BRG = S 84° 16' 49" W
Ch DIST = 150.08'

(3) CURVE DATA
R = 200.00'
Δ = 11° 20' 17"
L = 39.58'
Ch BRG = N 41° 25' 29" W
Ch DIST = 39.51'

(4) SPIRAL CURVE DATA
R_s = 200.00'
R_e = 3819.72'
L_s = 200.00'
θ_s = 28° 38' 52"
LT = 135.12'
ST = 68.30'

(5) CURVE DATA
R = 3819.72'
Δ = 6° 12' 36"
L = 414.00'
Ch BRG = S 4° 0' 10" E
Ch DIST = 413.80'



NOTES:
1. ALL STATIONS AND OFFSETS ARE REFERENCED TO THE ℄ R/W & CONST. I.R. 77.
2. SEE SHEET 11 of 16 FOR EXISTING AND PROPOSED MONUMENTS.

RECEIVED _____, 20____
RECORDED _____, 20____
BOOK _____ PAGE _____
COUNTY RECORDER

SURVEYORS SEAL

STATE OF OHIO
JOSHUA R. MIHELCIC
8453
REGISTERED PROFESSIONAL SURVEYOR
04-09-2020

SURVEYORS SEAL

STATE OF OHIO
CHARLES W. PRICE, JR.
S-7825
REGISTERED PROFESSIONAL SURVEYOR

I, Joshua R. Mihelcic, P. S. have conducted a survey of the existing conditions for the Ohio Department of Transportation between the months of November 2017 through January 2020. The results of that survey are contained herein. The horizontal coordinates expressed herein are based on the Ohio State Plane Coordinates System, North Zone, NAD 83(2011). Coordinates are ground coordinates and distances are ground distances. Scale the ground coordinates about point 0,0,0 by the project adjustment factor of 0.99989474882 to obtain grid coordinates. Topographic features shown herein are a combination of conventional ground survey and aerial survey. The aerial survey was collected during the winter/spring of 2018. 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. 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.

Joshua R. Mihelcic, Professional Land Surveyor of Ohio, No. 8453 — Date 04-09-2020

I, Charles W. Price, Jr., P. S. 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 these parcels as shown herein. As a part of this work I have set right of way monuments at the property corners, property line intersections, 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.

Charles W. Price Jr., Professional Land Surveyor of Ohio, No. 7825 — Date 4-14-2020

HORIZONTAL SCALE IN FEET: 0, 50, 100, 200

PID NO. 106002

R/W DESIGNER WWS
R/W REVIEWER CWP

CENTERLINE PLAT
1 OF 1

SUM-77/277/224
VARIOUS

2 / 16

1274
1288

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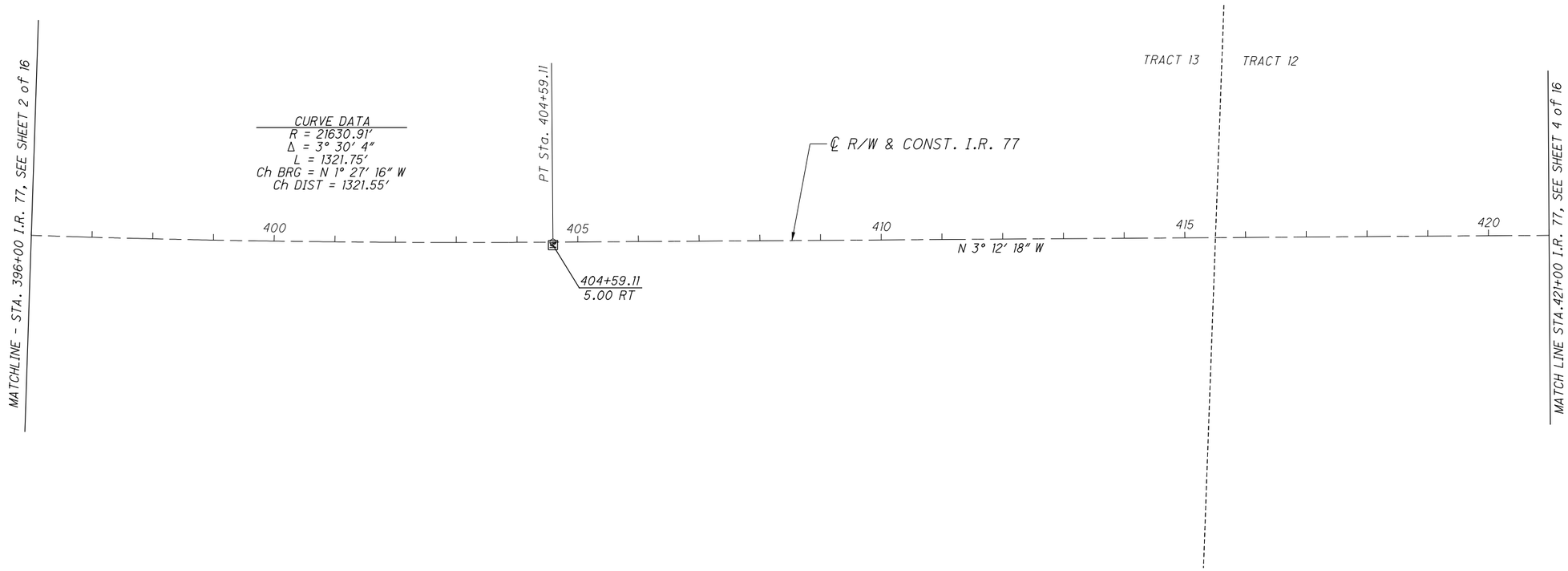
SUM-77/277/224
SUMMIT COUNTY
CONVENTRY TOWNSHIP
R-11, T-1, TRACTS 12 & 13

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.F. IRON PIPE FOUND
- P.S. IRON PIPE SET
- P.K.F. P.K. NAIL FOUND
- P.K.S. P.K. NAIL SET



NOTES:

1. ALL STATIONS AND OFFSETS ARE REFERENCED TO THE ℄ R/W & CONST. I.R. 77.
2. SEE SHEET 11 of 16 FOR EXISTING AND PROPOSED MONUMENTS.
3. SEE SHEET 2 OF 16 FOR BASIS OF BEARINGS.
4. SEE SHEET 2 OF 16 FOR BASIS OF EXISITNG R/W WIDTH AND LOCATION.
5. SEE SHEET 2 OF 16 FOR NOTE REGARDING THE SETTING OF PROPOSED MONUMENTS.
6. TRACT LINES ARE SHOWN FOR GRAPHICAL PURPOSES ONLY.

RECEIVED _____, 20___
RECORDED _____, 20___
BOOK _____ PAGE _____
COUNTY RECORDER

HORIZONTAL SCALE IN FEET
0 50 100 200

PID NO. 106002

R/W DESIGNER WWS
R/W REVIEWER CWP

CENTERLINE PLAT
2 OF 11

SUM-77/277/224
VARIOUS

3 / 16

1275
1288

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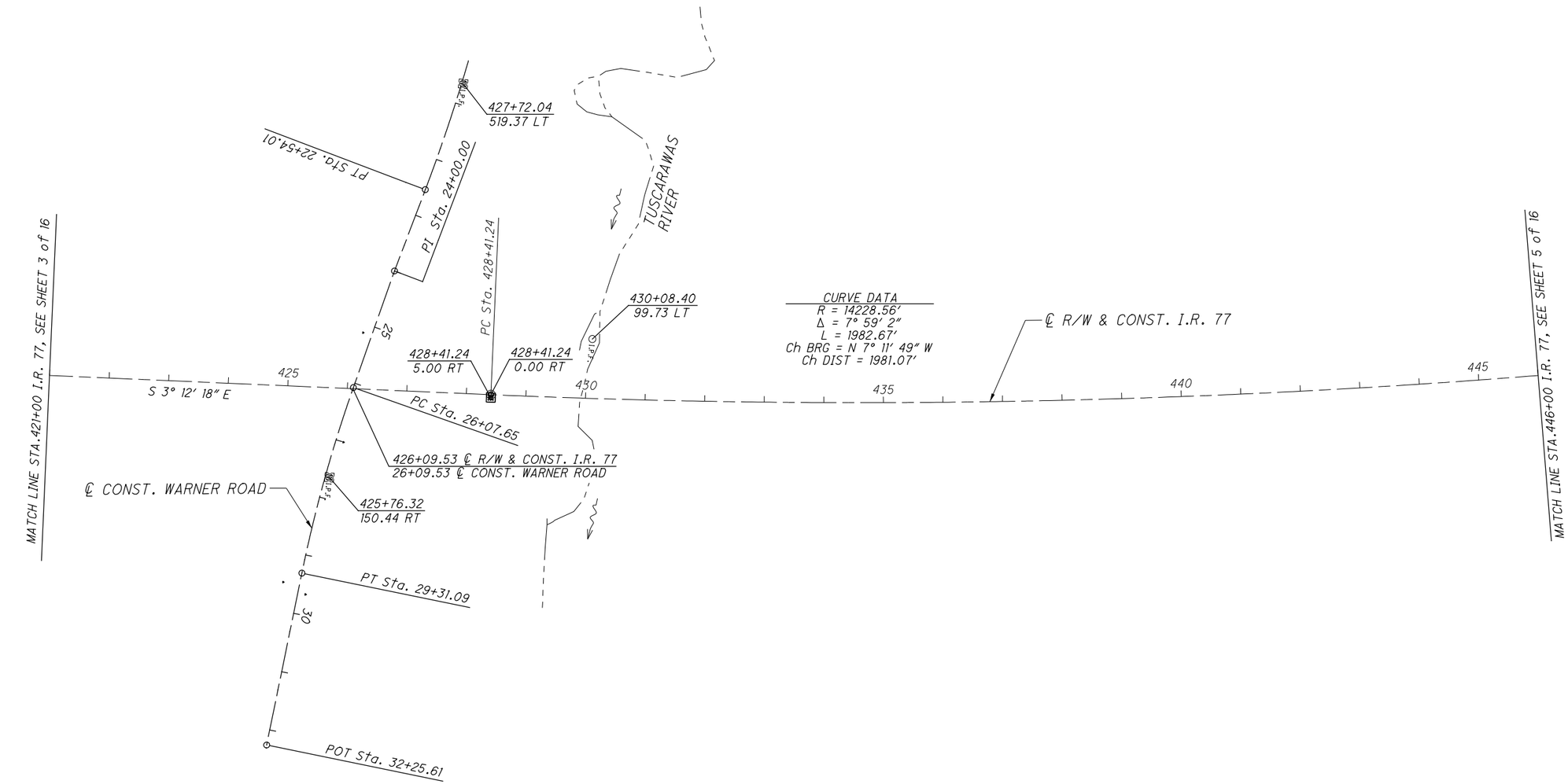
SUM-77/277/224
SUMMIT COUNTY
CONVENTRY TOWNSHIP
R-11, T-1, TRACT 12

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.F. IRON PIPE FOUND
- P.S. IRON PIPE SET
- P.K.F. P.K. NAIL FOUND
- P.K.S. P.K. NAIL SET

HORIZONTAL SCALE IN FEET: 0, 50, 100, 200



NOTES:

1. ALL STATIONS AND OFFSETS ARE REFERENCED TO THE ℄ R/W & CONST. I.R. 77.
2. SEE SHEET 11 of 16 FOR EXISTING AND PROPOSED MONUMENTS.
3. SEE SHEET 2 OF 16 FOR BASIS OF BEARINGS.
4. SEE SHEET 2 OF 16 FOR BASIS OF EXISITNG R/W WIDTH AND LOCATION.
5. SEE SHEET 2 OF 16 FOR NOTE REGARDING THE SETTING OF PROPOSED MONUMENTS.

RECEIVED _____, 20____
RECORDED _____, 20____
BOOK _____ PAGE _____
COUNTY RECORDER

R/W DESIGNER WWS
R/W REVIEWER CWP

PID NO. 106002

CENTERLINE PLAT
3 OF 11

SUM-77/277/224
VARIOUS

4 / 16

1276
1288

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SUM-77/277/224
SUMMIT COUNTY
CONVENTRY TOWNSHIP
R-11, T-1, TRACT 11 & 12

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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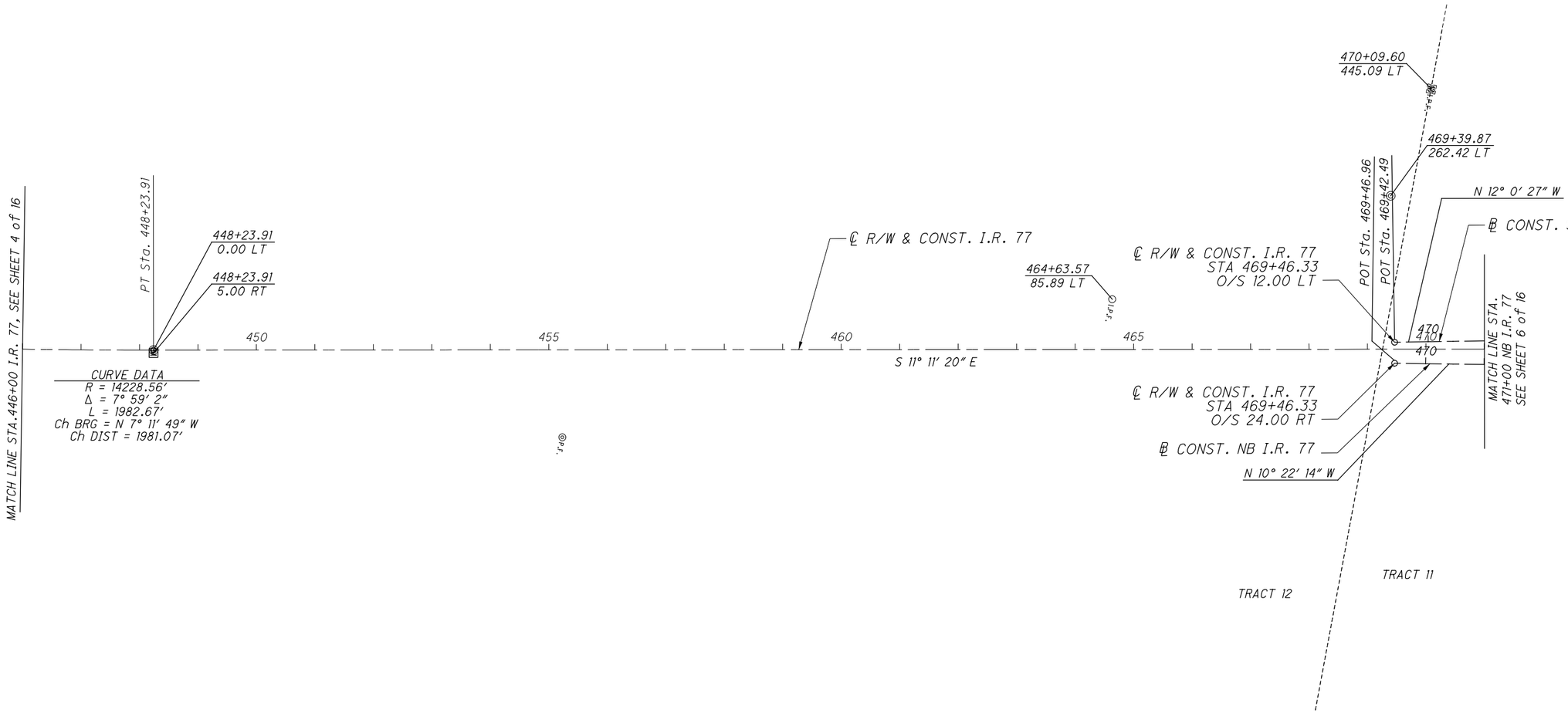
- P.F. IRON PIPE FOUND
- P.S. IRON PIPE SET
- P.K.F. P.K. NAIL FOUND
- P.K.S. P.K. NAIL SET



NOTES:

1. ALL STATIONS AND OFFSETS ARE REFERENCED TO THE ℄ R/W & CONST. I.R. 77.
2. SEE SHEET 11 of 16 FOR EXISTING AND PROPOSED MONUMENTS.
3. SEE SHEET 2 OF 16 FOR BASIS OF BEARINGS.
4. SEE SHEET 2 OF 16 FOR BASIS OF EXISITNG R/W WIDTH AND LOCATION.
5. SEE SHEET 2 OF 16 FOR NOTE REGARDING THE SETTING OF PROPOSED MONUMENTS.
6. TRACT LINES ARE SHOWN FOR GRAPHICAL PURPOSES ONLY.

RECEIVED _____, 20___
RECORDED _____, 20___
BOOK _____ PAGE _____
COUNTY RECORDER

HORIZONTAL SCALE IN FEET
0 50 100 200

PID NO. 106002

R/W DESIGNER WWS
R/W REVIEWER CWP

CENTERLINE PLAT
4 OF 11

SUM-77/277/224
VARIOUS

5 / 16

1277
1288

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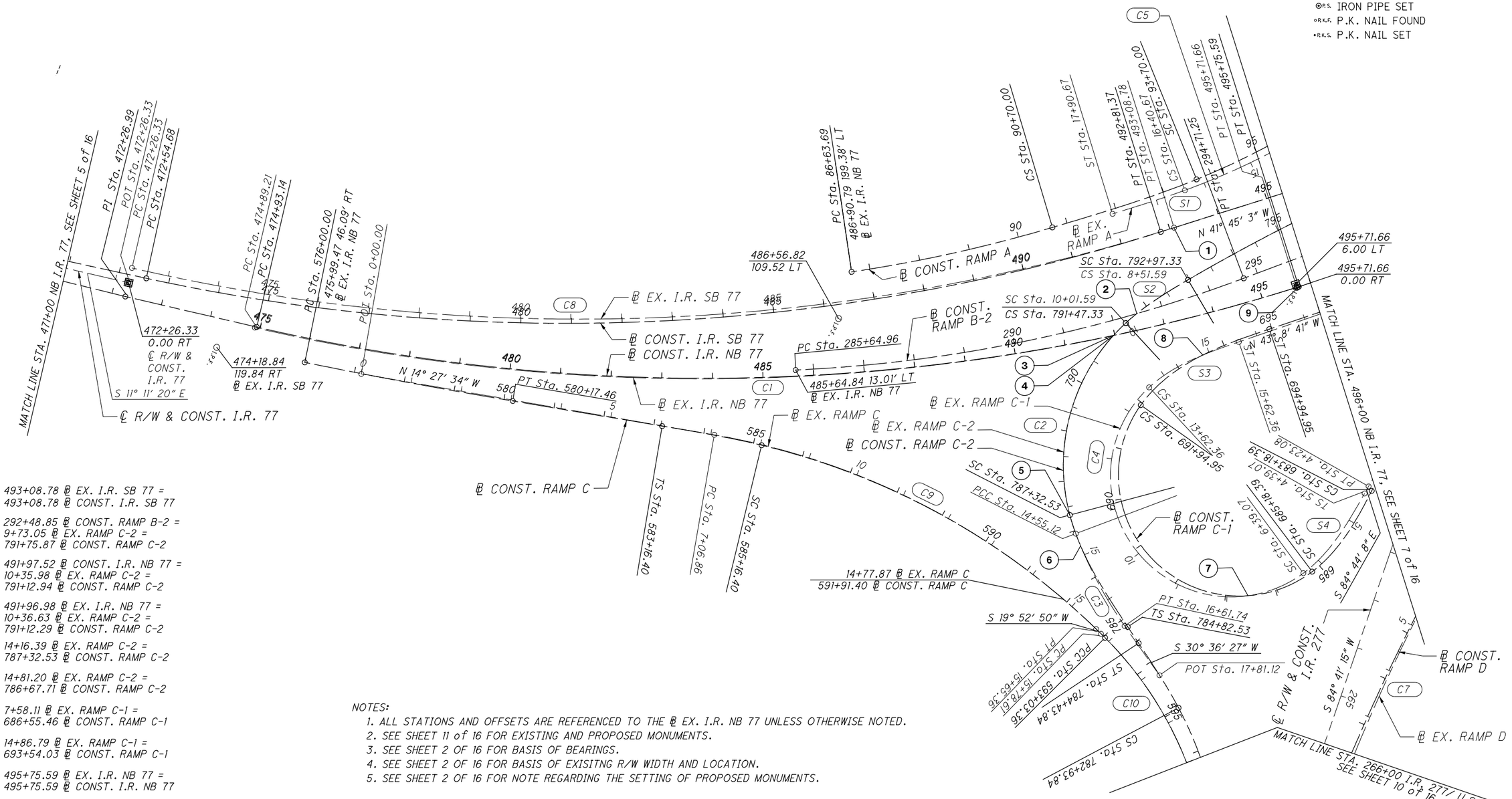
SUM-77/277/224
SUMMIT COUNTY
CONVENTRY TOWNSHIP
R-11, T-1, TRACT 11

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

HORIZONTAL SCALE IN FEET: 0, 50, 100, 200



1. 493+08.78 ℄ EX. I.R. SB 77 = 493+08.78 ℄ CONST. I.R. SB 77
2. 292+48.85 ℄ CONST. RAMP B-2 = 9+73.05 ℄ EX. RAMP C-2 = 791+75.87 ℄ CONST. RAMP C-2
3. 491+97.52 ℄ CONST. I.R. NB 77 = 10+35.98 ℄ EX. RAMP C-2 = 791+12.94 ℄ CONST. RAMP C-2
4. 491+96.98 ℄ EX. I.R. NB 77 = 10+36.63 ℄ EX. RAMP C-2 = 791+12.29 ℄ CONST. RAMP C-2
5. 14+16.39 ℄ EX. RAMP C-2 = 787+32.53 ℄ CONST. RAMP C-2
6. 14+81.20 ℄ EX. RAMP C-2 = 786+67.71 ℄ CONST. RAMP C-2
7. 7+58.11 ℄ EX. RAMP C-1 = 686+55.46 ℄ CONST. RAMP C-1
8. 14+86.79 ℄ EX. RAMP C-1 = 693+54.03 ℄ CONST. RAMP C-1
9. 495+75.59 ℄ EX. I.R. NB 77 = 495+75.59 ℄ CONST. I.R. NB 77

NOTES:

1. ALL STATIONS AND OFFSETS ARE REFERENCED TO THE ℄ EX. I.R. NB 77 UNLESS OTHERWISE NOTED.
2. SEE SHEET 11 of 16 FOR EXISTING AND PROPOSED MONUMENTS.
3. SEE SHEET 2 OF 16 FOR BASIS OF BEARINGS.
4. SEE SHEET 2 OF 16 FOR BASIS OF EXISITNG R/W WIDTH AND LOCATION.
5. SEE SHEET 2 OF 16 FOR NOTE REGARDING THE SETTING OF PROPOSED MONUMENTS.

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RECORDED _____, 20___
BOOK _____ PAGE _____
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COUNTY RECORDER

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R/W DESIGNER WWS
R/W REVIEWER CWP

PID NO. 106002

CENTERLINE PLAT
5 OF 11

SUM-77/277/224
VARIOUS

6 / 16

1278
1288

SUM-77/277/224
SUMMIT COUNTY
CONVENTRY TOWNSHIP
R-11, T-1, TRACT 11

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

MATCH LINE STA. 243+00 I.R. 277/ U.S. 224, SEE SHEET 9 of 16

℄ CONST. RAMP B
ST Sta. 205+99.50
PC Sta. 12+74.10
N 37° 50' 46" E
TS Sta. 207+73.39
ST Sta. 10+78.65
N 29° 42' 47" E
SC Sta. 209+73.39
CS Sta. 8+78.65
℄ EX. RAMP B
℄ EX. RAMP B-2
℄ CONST. RAMP B1
POT Sta. 14+42.67
ST Sta. 14+62.67
CS Sta. 13+87.73
CS Sta. 13+12.67
CS Sta. 415+62.45
SC Sta. 415+36.67
TS Sta. 4+36.67
PT Sta. 4+20.64
SC Sta. 417+62.45
CS Sta. 408+50.17
CS Sta. 12+73.07
PCC Sta. 14+73.07
SC Sta. 407+01.68
PT Sta. 16+86.91
TS Sta. 405+01.68
SC Sta. 7+36.18
PCC Sta. 7+36.18
℄ CONST. RAMP B-2
℄ EX. RAMP A
℄ R/W & CONST. I.R. 277
PC Sta. 0+00.00
N 43° 8' 41" W
POT Sta. 402+43.78
℄ CONST. RAMP A
℄ CONST. RAMP C-2
S 41° 45' 3" E
POT Sta. 17+90.88
TS Sta. 502+03.04
SC Sta. 506+03.04
EQUATION:
Sta 308+15.76 BK =
Sta 7+36.18 AH
℄ R/W & CONST. I.R. SB 77
℄ R/W & CONST. I.R. NB 77
SC Sta. 510+65.75
510+65.75
6.00 LT
℄ EX. RAMP C-2
PC Sta. 297+94.13
PT Sta. 423+24.13
PC Sta. 0+00.00
PT Sta. 801+48.92
℄ CONST. RAMP D
℄ EX. RAMP D
POT Sta. 18+62.36
S 43° 8' 41" E
℄ EX. RAMP C-1
PC Sta. 0+00.00
PC Sta. 678+94.49
257+02.17
0.25 LT
℄ R/W
I.R. 277
℄ CONST. RAMP C-1
PT Sta. 300+94.13
SC Sta. 901+01.12
CS Sta. 899+01.12
SC Sta. 9+03.78
SC Sta. 897+17.13
CS Sta. 7+53.78
CS Sta. 17+10.12
TS Sta. 506+65.75
SC Sta. 18+60.12
CS Sta. 908+55.05
SC Sta. 910+55.05
PT Sta. 21+60.12
PT Sta. 916+89.75
POT Sta. 0+00.00
POT Sta. 219+25.00
MATCH LINE STA. 521+00 NB I.R. 77, SEE SHEET 8 of 16
506+65.75
6.00 LT
PROPOSED MON.
506+65.75
0.00 RT
EXISTING MON.
499+99.53
6.00 LT
PROPOSED MON.
499+99.45
0.03 LT
EXISTING MON.
MATCH LINE STA. 496+00, NB I.R. 77, SEE SHEET 6 of 16
SC Sta. 106+55.37
CS Sta. 104+55.37
CS Sta. 5+09.70
SC Sta. 6+59.70
℄ R/W
I.R. 277
247+02.24
0.19 LT
S 84° 47' 47" E
℄ EX. R/W
I.R. 277
COVENTRY TOWNSHIP
CITY OF AKRON
CS Sta. 213+58.80
SC Sta. 5+66.20
SI Sta. 215+58.80
TS Sta. 3+66.20

(11) 0+55.27 ℄ EX. RAMP C-1 = 679+45.38 ℄ CONST. RAMP C-1
(11) 9+16.81 ℄ EX. RAMP D = 898+34.76 ℄ CONST. RAMP D
(12) 11+29.57 ℄ EX. RAMP D = 900+47.48 ℄ CONST. RAMP D
(13) 255+77.38 ℄ R/W & CONST. I.R. 277 = 699+60.33 ℄ CONST. RAMP C-1
(14) 255+11.48 ℄ R/W & CONST. I.R. 277 = 499+99.53 ℄ R/W & CONST. I.R. NB 77
(15) 254+20.47 ℄ R/W & CONST. I.R. 277 = 300+48.31 ℄ CONST. RAMP B-2
(16) 252+97.40 ℄ R/W & CONST. I.R. 277 = 0+89.37 ℄ EX. RAMP C-2 = 800+59.55 ℄ CONST. RAMP C-2
(17) 252+81.18 ℄ R/W & CONST. I.R. 277 = 500+69.19 ℄ R/W & CONST. I.R. SB 77
(18) 9+04.29 ℄ EX. RAMP B-1 = 412+58.78 ℄ CONST. RAMP B-1
(19) 13+12.67 ℄ EX. RAMP B-2 = 13+12.67 ℄ CONST. RAMP B-2
(20) 13+15.71 ℄ EX. RAMP B-1 = 408+53.19 ℄ CONST. RAMP B-1
(21) 508+26.71 ℄ R/W & CONST. I.R. SB 77 = 8+21.85 ℄ EX. RAMP B-2 = 8+21.85 ℄ CONST. RAMP B-2
(22) 7+36.18 ℄ EX. RAMP B-2 = 308+15.76 BK ℄ CONST. RAMP B-2 = 7+36.18 AH ℄ CONST. RAMP B-2

NOTES:
1. ALL STATIONS AND OFFSETS ARE REFERENCED TO THE ℄ R/W & CONST. I.R. NB 77 UNLESS OTHERWISE NOTED.
2. SEE SHEET 11 of 16 FOR EXISTING AND PROPOSED MONUMENTS.
3. SEE SHEET 2 OF 16 FOR BASIS OF BEARINGS.
4. SEE SHEET 2 OF 16 FOR BASIS OF EXISITNG R/W WIDTH AND LOCATION.
5. SEE SHEET 2 OF 16 FOR NOTE REGARDING THE SETTING OF PROPOSED MONUMENTS.

RECEIVED _____, 20___
RECORDED _____, 20___
BOOK _____ PAGE _____
_____
COUNTY RECORDER

HORIZONTAL SCALE IN FEET
0 50 100 200

PID NO. 106002

R/W DESIGNER WWS
R/W REVIEWER CWP

CENTERLINE PLAT
6 OF 11

SUM-77/277/224
VARIOUS

7 / 16

1279
1288

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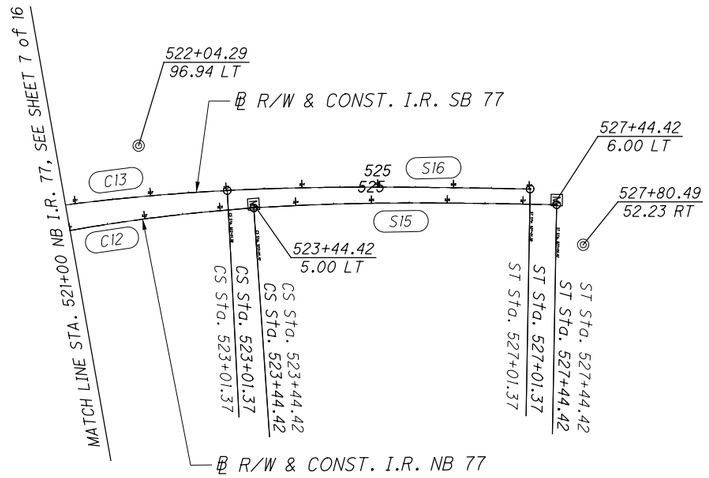
SUM-77/277/224
SUMMIT COUNTY
CITY OF AKRON

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.P.F. IRON PIPE FOUND
- R.P.S. IRON PIPE SET
- P.K.F. P.K. NAIL FOUND
- P.K.S. P.K. NAIL SET



NOTES:

1. ALL STATIONS AND OFFSETS ARE REFERENCED TO THE ℄ R/W & CONST. I.R. NB 77 UNLESS OTHERWISE NOTED.
2. SEE SHEET 11 of 16 FOR EXISTING AND PROPOSED MONUMENTS.
3. SEE SHEET 2 OF 16 FOR BASIS OF BEARINGS.
4. SEE SHEET 2 OF 16 FOR BASIS OF EXISITNG R/W WIDTH AND LOCATION.
5. SEE SHEET 2 OF 16 FOR NOTE REGARDING THE SETTING OF PROPOSED MONUMENTS.

RECEIVED _____, 20___
RECORDED _____, 20___
BOOK _____ PAGE _____
COUNTY RECORDER

HORIZONTAL SCALE IN FEET
0 50 100 200

PID NO. 106002

R/W DESIGNER WWS
R/W REVIEWER CWP

CENTERLINE PLAT
7 OF 11

SUM-77/277/224
VARIOUS

8 / 16

1280
1288

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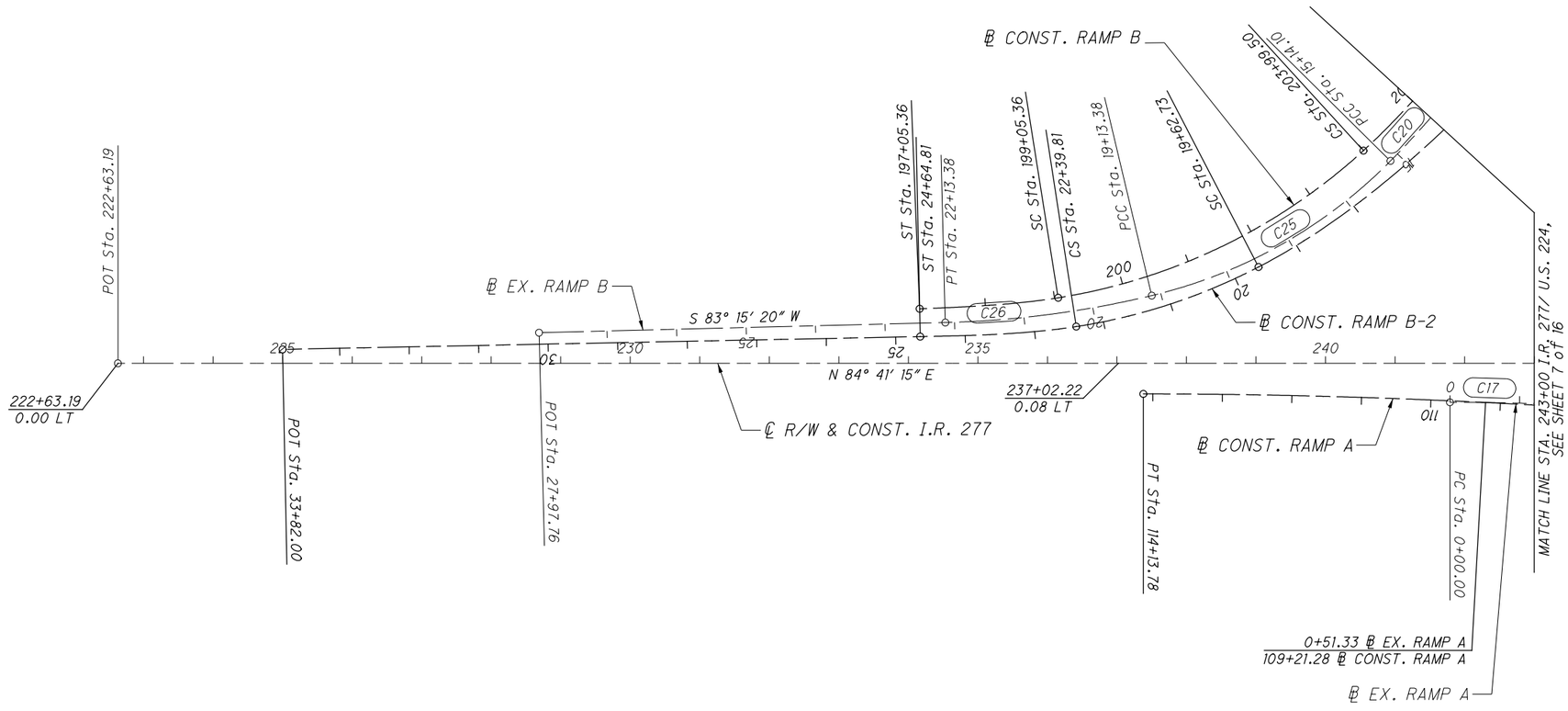
SUM-77/277/224
SUMMIT COUNTY
CONVENTRY TOWNSHIP
R-11, T-1, TRACT 11

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



NOTES:

1. ALL STATIONS AND OFFSETS ARE REFERENCED TO THE ℄ R/W & CONST. I.R. 277.
2. SEE SHEET 11 of 16 FOR EXISTING AND PROPOSED MONUMENTS.
3. SEE SHEET 2 OF 16 FOR BASIS OF BEARINGS.
4. SEE SHEET 2 OF 16 FOR BASIS OF EXISITNG R/W WIDTH AND LOCATION.
5. SEE SHEET 2 OF 16 FOR NOTE REGARDING THE SETTING OF PROPOSED MONUMENTS.

RECEIVED _____, 20___
RECORDED _____, 20___
BOOK _____ PAGE _____

COUNTY RECORDER

HORIZONTAL SCALE IN FEET
0 50 100 200

PID NO. 106002

R/W DESIGNER WWS
R/W REVIEWER CWP

CENTERLINE PLAT
8 OF 16

SUM-77/277/224
VARIOUS

9 / 16

1281
1288

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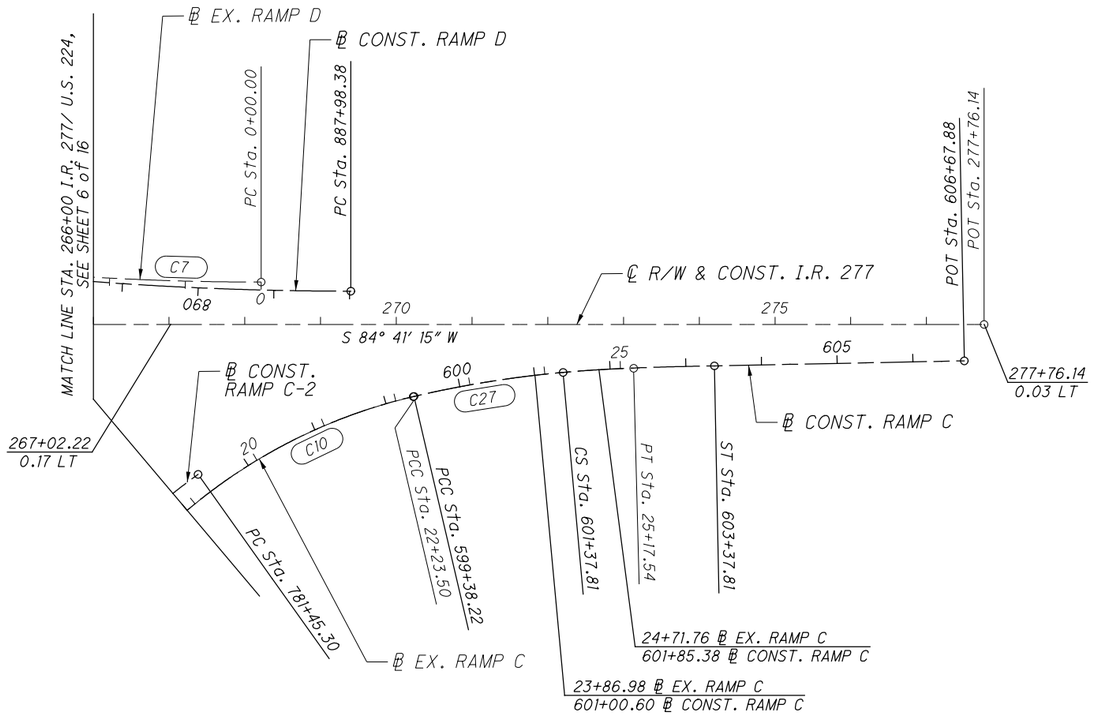
SUM-77/277/224
SUMMIT COUNTY
CONVENTRY TOWNSHIP
R-11, T-1, TRACT 11



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

HORIZONTAL SCALE IN FEET
0 50 100 200

PID NO. 106002

R/W DESIGNER WWS
R/W REVIEWER CWP

CENTERLINE PLAT
9 OF 11

SUM-77/277/224
VARIOUS

10 / 16

1282
1288

NOTES:

1. *ALL STATIONS AND OFFSETS ARE REFERENCED TO THE ℄ R/W & CONST. I.R. 277.*
2. *SEE SHEET 11 of 16 FOR EXISTING AND PROPOSED MONUMENTS.*
3. *SEE SHEET 2 OF 16 FOR BASIS OF BEARINGS.*
4. *SEE SHEET 2 OF 16 FOR BASIS OF EXISITNG R/W WIDTH AND LOCATION.*
5. *SEE SHEET 2 OF 16 FOR NOTE REGARDING THE SETTING OF PROPOSED MONUMENTS.*

RECEIVED _____, 20___
RECORDED _____, 20___
BOOK _____ PAGE _____

COUNTY RECORDER

P:\ODOTcadd\ProjectData\17-0129\SUM77_277_224\106002_SUM_77_277_224\Design\RW\Sheets\106002_RC009.dgn Sheet 4/14/2020 10:11:25 PM Wstowe

SUM-77/277/224
SUMMIT COUNTY
CONVENTRY TOWNSHIP
R-11, T-1, TRACT 11, 12, & 13

EXISTING MONUMENTS TABLE

REFERENCE ALIGNMENT	STATION	OFFSET	PROJECT COORDINATES SEE SURVEY CERTIFICATION		NAD83(2011), OHIO STATE PLANE, NORTH ZONE, US SURVEY FEET		R/W MON. EXPECTED TO BE DISTURBED	DESCRIPTION
			NORTH (Y)	EAST (X)	NORTH (Y)	EAST (X)	R/W MON.	
CL of R/W & CONST. I.R. 77	373+32.39	146.53 RT	484405.1100	2246613.6809	484354.1269	2246377.2272		IRON PIN FOUND W/ ID CAP
CL of R/W & CONST. I.R. 77	374+21.35	150.04 RT	484490.7397	2246615.4149	484439.7476	2246378.9611		IRON PIN FOUND W/ ID CAP
CL of R/W & CONST. I.R. 77	376+22.04	145.69 LT	484690.7916	2246319.5506	484639.7784	2246083.1279		IRON PIN FOUND
CL of R/W & CONST. I.R. 77	384+97.97	134.29 LT	485566.6495	2246336.2535	485515.5441	2246099.8290		IRON PIPE FOUND
CL of R/W & CONST. I.R. 77	387+60.75	150.19 LT	485829.5077	2246321.7072	485778.3747	2246085.2843		IRON PIN FOUND
CL of R/W & CONST. I.R. 77	388+56.84	150.10 LT	485925.5950	2246322.2996	485874.4519	2246085.8766		IRON PIN FOUND
CL of R/W & CONST. I.R. 77	390+27.73	175.23 LT	486096.6118	2246298.0464	486045.4507	2246061.6260		IRON PIN FOUND W/ ID CAP
CL of R/W & CONST. I.R. 77	391+28.58	165.28 LT	486197.4128	2246308.5180	486146.2410	2246072.0965		IRON PIN FOUND W/ ID CAP
CL of R/W & CONST. I.R. 77	391+45.42	150.67 RT	486212.6740	2246624.5571	486161.5006	2246388.1023		IRON PIN FOUND W/ ID CAP
CL of R/W & CONST. I.R. 77	392+90.27	150.18 LT	486357.9587	2246323.9150	486306.7700	2246087.4918		IRON PIPE FOUND
CL of R/W & CONST. I.R. 77	393+99.18	436.18 RT	486470.1808	2246909.7798	486418.9803	2246673.2950		IRON PIN FOUND IN MON. BOX
CL of R/W & CONST. I.R. 77	425+76.32	150.44 RT	489648.7680	2246472.1339	489597.2330	2246235.6951	1	IRON PIN FOUND W/ ID CAP IN MON. BOX
CL of R/W & CONST. I.R. 77	427.72.04	519.37 LT	489806.7342	2245792.4284	489755.1826	2245556.0612		IRON PIN FOUND W/ ID CAP IN MON. BOX
CL of R/W & CONST. I.R. 77	428+41.24	0.00 RT	489904.8574	2246307.1152	489853.2954	2246070.6938	1	EXISTING CONCRETE MONUMENT
CL of R/W & CONST. I.R. 77	430+08.40	99.73 LT	490064.9579	2246197.2846	490013.3791	2245960.8748		IRON PIN FOUND
CL of R/W & CONST. I.R. 77	448+23.91	0.00 LT	491870.3195	2246058.9248	491818.5507	2245822.5295	1	EXISITNG CONCRETE MONUMENT
CL of R/W & CONST. I.R. 77	464+63.57	85.89 LT	493462.1455	2245656.5030	493410.2091	2245420.1501	1	IRON PIN FOUND
CL of R/W & CONST. I.R. 77	466+62.96	1278.15 RT	493922.4297	2246955.9279	493870.4449	2246719.4382		IRON PIN FOUND IN MON.BOX
CL of R/W & CONST. I.R. 77	469+39.87	262.42 LT	493895.1420	2245390.8980	493843.1601	2245154.5730		EXISTING CONCRETE MONUMENT
CL of R/W & CONST. I.R. 77	470+09.60	445.09 LT	493928.0934	2245198.1757	493876.1080	2244961.8710		IRON PIN FOUND W/ CAP IN MON. BOX
CL of R/W & CONST. I.R. 77	470+75.76	888.47 LT	493906.9643	2244750.3816	493854.9811	2244514.1240		EXISTING CONCRETE MONUMENT
CL of R/W & CONST. I.R. 77	472+26.33	0.00 RT	494227.0752	2245592.7486	494175.0583	2245356.4024	1	EXISITNG CONCRETE MONUMENT
BL EX I.R. SB 77	474+18.84	119.84 RT	494438.1242	2245637.5940	494386.0851	2245401.2431	1	IRON PIN FOUND
BL EX I.R. NB 77	486+56.82	109.52 LT	495533.4979	2245081.5661	495481.3435	2244845.2737	1	IRON PIN FOUND W/ ID CAP
BL EX I.R. NB 77	495+71.66	0.00 RT	496332.7896	2244653.9519	496280.5511	2244417.7045	1	IRON PIN FOUND
BL R/W & CONST. I.R. 77 NB	499+99.45	0.03 LT	496651.9183	2244369.0644	496599.6462	2244132.8470	1	MON. IN MON. BOX FND
BL R/W & CONST. I.R. 77 NB	506+65.75	0.00 RT	497149.0356	2243925.4052	497096.7112	2243689.2345	1	MON. IN MON. BOX FND
BL R/W & CONST. I.R. 77 NB	522+04.29	96.94 LT	498481.9448	2243140.4160	498429.4801	2242904.3279		EXISITNG CONCRETE MONUMENT
CL of R/W & CONST. I.R. 277	222+63.19	0.00 LT	496351.2535	2241134.7009	496299.0131	2240898.8239		MAG NAIL FOUND
CL of R/W & CONST. I.R. 277	237+02.22	0.08 LT	496484.5661	2242567.5366	496432.3116	2242331.5088		MAG NAIL FOUND
CL of R/W & CONST. I.R. 277	247+02.24	0.19 LT	496577.2672	2243563.2532	496525.0030	2243327.1206		MAG NAIL FOUND
CL of R/W & CONST. I.R. 277	257+02.17	0.25 LT	496669.9038	2244558.8819	496617.6298	2244322.6445		MAG NAIL FOUND
CL of R/W & CONST. I.R. 277	267+02.22	0.17 LT	496762.4175	2245554.6466	496710.1338	2245318.3044		MAG NAIL FOUND
CL of R/W & CONST. I.R. 277	277+76.14	0.03 LT	496861.7122	2246624.0163	496809.4180	2246387.5615		MAG NAIL FOUND

TOTAL = 10

PROPOSED MONUMENT TABLE

REFERENCE ALIGNMENT	STATION	OFFSET	PROJECT COORDINATES SEE SURVEY CERTIFICATION		NAD83(2011), OHIO STATE PLANE, NORTH ZONE, US SURVEY FEET		MONUMENTS TO BE SET DURING CONSTRUCTION		MONUMENTS TO BE ADJUSTED TO GRADE	DESCRIPTION
			NORTH (Y)	EAST (X)	NORTH (Y)	EAST (X)	MON. ASSY.	REF. MON.		
CL of R/W & CONST. I.R. 77	374+77.72	5.00 RT	484545.6938	2246470.2701	484494.6959	2246233.8315	1			PROPOSED MON. AND BOX
CL of R/W & CONST. I.R. 77	391+37.36	5.00 RT	486205.3094	2246478.8441	486154.1368	2246242.4046	1			PROPOSED MON. AND BOX
CL of R/W & CONST. I.R. 77	404+59.11	5.00 RT	487526.7383	2246445.2908	487475.4266	2246208.8549	1			PROPOSED MON. AND BOX
CL of R/W & CONST. I.R. 77	425+76.32	150.44 RT	489648.7680	2246472.1339	489597.2330	2246235.6951			1	IRON PIN FOUND W/ ID CAP IN MON. BOX MON. BOX TO BE ADJUSTED
CL of R/W & CONST. I.R. 77	428+41.24	5.00 RT	489905.1369	2246312.1074	489853.5749	2246075.6855	1			PROPOSED MON. AND BOX
CL of R/W & CONST. I.R. 77	448+23.91	5.00 RT	491871.2897	2246063.8298	491819.5208	2245827.4340	1			PROPOSED MON. AND BOX
CL of R/W & CONST. I.R. 77	472+26.33	0.00 RT	494227.0752	2245592.7486	494175.0583	2245356.4024	1		1	PROPOSED MON. AND BOX
BL EX I.R. 77 NB	495+71.66	6.00 LT	496328.7943	2244649.4756	496276.5562	2244413.2287	1			PROPOSED MON. AND BOX
BL of R/W & CONST. I.R. 77 NB	499+99.53	6.00 LT	496648.0073	2244364.5596	496595.7356	2244128.3427	1			PROPOSED MON. AND BOX
BL of R/W & CONST. I.R. 77 NB	506+65.75	6.00 LT	497145.0403	2243920.9289	497092.7163	2243684.7586	1			PROPOSED MON. AND BOX
BL of R/W & CONST. I.R. 77 NB	510+65.75	6.00 LT	497451.3816	2243663.1199	497399.0254	2243426.9768	1			PROPOSED MON. AND BOX
BL of R/W & CONST. I.R. 77 NB	523+44.42	5.00 LT	498634.6959	2243215.4189	498582.2151	2242979.3229	1			PROPOSED MON. AND BOX
BL of R/W & CONST. I.R. 77 NB	527+44.42	6.00 LT	499034.8720	2243204.2787	498982.3491	2242968.1839	1			PROPOSED MON. AND BOX

TOTAL = 12 TOTAL = 2

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BOOK _____ PAGE _____
COUNTY RECORDER

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R/W DESIGNER WWS
R/W REVIEWER CWP

PID NO. 106002

CENTERLINE PLAT
10 OF 11

SUM-77/277/224
VARIOUS

11 / 16

1283
1288

SUM-77/277/224
SUMMIT COUNTY
CONVENTRY TOWNSHIP
R-11, T-1, TRACTS 11, 12, & 13

C1
CURVE DATA
R = 3904.07'
Δ = 30° 33' 43"
L = 2082.45'
Ch BRG = N 26° 28' 11" W
Ch DIST = 2057.85'

C2
CURVE DATA
R = 381.97'
Δ = 68° 1' 46"
L = 453.53'
Ch BRG = N 79° 5' 8" E
Ch DIST = 427.35'

C3
CURVE DATA
R = 818.51'
Δ = 14° 27' 48"
L = 206.62'
Ch BRG = N 37° 50' 21" E
Ch DIST = 206.07'

C4
CURVE DATA
R = 238.73'
Δ = 173° 35' 27"
L = 723.30'
Ch BRG = S 26° 3' 36" W
Ch DIST = 476.72'

C5
CURVE DATA
R = 1432.39'
Δ = 39° 14' 19"
L = 980.96'
Ch BRG = S 63° 55' 21" E
Ch DIST = 961.90'

C6
CURVE DATA
R = 3819.72'
Δ = 12° 46' 26"
L = 851.59'
Ch BRG = N 48° 8' 16" W
Ch DIST = 849.83'

C7
CURVE DATA
R = 3819.72'
Δ = 11° 18' 24"
L = 753.78'
Ch BRG = N 89° 39' 33" W
Ch DIST = 752.56'

C8
CURVE DATA
R = 3904.07'
Δ = 30° 33' 43"
L = 2082.45'
Ch BRG = N 26° 28' 11" W
Ch DIST = 2057.85'

C9
CURVE DATA
R = 1432.39'
Δ = 34° 20' 24"
L = 858.50'
Ch BRG = S 2° 42' 38" W
Ch DIST = 845.71'

C10
CURVE DATA
R = 716.20'
Δ = 51° 35' 29"
L = 644.89'
Ch BRG = N 45° 40' 34" E
Ch DIST = 623.33'

C11
CURVE DATA
R = 3819.72'
Δ = 12° 46' 26"
L = 851.59'
Ch BRG = N 48° 8' 16" W
Ch DIST = 849.83'

C12
CURVE DATA
R = 2291.83'
Δ = 31° 58' 0"
L = 1278.67'
Ch BRG = N 20° 46' 3" W
Ch DIST = 1262.15'

C13
CURVE DATA
R = 2864.79'
Δ = 33° 58' 0"
L = 1698.33'
Ch BRG = N 20° 46' 3" W
Ch DIST = 1673.57'

C14
CURVE DATA
R = 1432.39'
Δ = 8° 33' 13"
L = 213.84'
Ch BRG = S 47° 25' 17" E
Ch DIST = 213.64'

C15
CURVE DATA
R = 229.18'
Δ = 159° 5' 53"
L = 636.39'
Ch BRG = N 19° 45' 10" E
Ch DIST = 450.76'

C16
CURVE DATA
R = 2291.83'
Δ = 10° 30' 58"
L = 420.64'
Ch BRG = S 89° 56' 44" W
Ch DIST = 420.05'

C17
CURVE DATA
R = 3819.72'
Δ = 7° 38' 44"
L = 509.70'
Ch BRG = N 88° 30' 37" E
Ch DIST = 509.33'

C18
CURVE DATA
R = 2864.79'
Δ = 11° 43' 25"
L = 586.18'
Ch BRG = N 47° 36' 45" W
Ch DIST = 585.16'

C19
CURVE DATA
R = 477.46'
Δ = 78° 11' 12"
L = 651.55'
Ch BRG = S 76° 55' 56" W
Ch DIST = 602.16'

C20
CURVE DATA
R = 1432.39'
Δ = 9° 36' 0"
L = 240.00'
Ch BRG = S 34° 30' 47" W
Ch DIST = 239.72'

C21
CURVE DATA
R = 716.20'
Δ = 24° 59' 46"
L = 312.45'
Ch BRG = S 9° 12' 54" W
Ch DIST = 309.98'

C22
CURVE DATA
R = 1637.02'
Δ = 28° 13' 19"
L = 806.34'
Ch BRG = N 66° 8' 41" W
Ch DIST = 798.21'

C23
CURVE DATA
R = 2083.48'
Δ = 8° 15' 0"
L = 300.00'
Ch BRG = N 43° 13' 17" W
Ch DIST = 299.74'

C24
CURVE DATA
R = 2291.83'
Δ = 10° 34' 37"
L = 423.08'
Ch BRG = N 89° 58' 34" E
Ch DIST = 422.48'

C25
CURVE DATA
R = 716.19'
Δ = 31° 56' 33"
L = 399.28'
Ch BRG = N 55° 17' 3" E
Ch DIST = 394.13'

C26
CURVE DATA
R = 1432.43'
Δ = 12° 0' 0"
L = 300.01'
Ch BRG = N 77° 15' 20" E
Ch DIST = 299.46'

C27
CURVE DATA
R = 1432.39'
Δ = 11° 45' 41"
L = 294.03'
Ch BRG = N 77° 21' 9" E
Ch DIST = 293.52'

S1
SPIRAL CURVE DATA
R = 1432.39'
L_s = 150.00'
θ_s = 3° 00' 00"
LT = 100.01'
ST = 50.01'

S2
SPIRAL CURVE DATA
R_1 = 3819.72'
R_2 = 381.97'
L_s = 150.00'
θ_s = 12° 22' 30"
LT = 95.72'
ST = 54.79'

S3
SPIRAL CURVE DATA
R = 238.73'
L_s = 200.00'
θ_s = 24° 00' 00"
LT = 134.58'
ST = 67.80'

S4
SPIRAL CURVE DATA
R = 238.73'
L_s = 200.00'
θ_s = 24° 00' 00"
LT = 134.58'
ST = 67.80'

S5
SPIRAL CURVE DATA
R_1 = 3819.72'
R_2 = 1637.02
L_s = 150.00'
θ_s = 3° 45' 00"
LT = 85.03'
ST = 65.03'

S6
SPIRAL CURVE DATA
R_1 = 1637.02'
R_2 = 2083.48'
L_s = 150.00'
θ_s = 4° 41' 15"
LT = 78.04'
ST = 72.04'

S7
SPIRAL CURVE DATA
R = 2864.79'
L_s = 400.00'
θ_s = 4° 00' 00"
LT = 266.73'
ST = 133.40

S8
SPIRAL CURVE DATA
R_1 = 229.18'
R_2 = 1432.39
L_s = 200.00'
θ_s = 29° 00' 00"
LT = 126.18'
ST = 77.74'

S9
SPIRAL CURVE DATA
R = 229.18'
L_s = 200.00'
θ_s = 25° 00' 00"
LT = 134.69'
ST = 67.90'

S10
SPIRAL CURVE DATA
R_1 = 3819.72
R_2 = 1432.39
L_s = 150.00'
θ_s = 4° 07' 30"
LT = 86.40'
ST = 63.67'

S11
SPIRAL CURVE DATA
R = 716.20'
L_s = 200.00'
θ_s = 8° 00' 00"
LT = 133.47'
ST = 66.79'

S12
SPIRAL CURVE DATA
R = 716.20'
L_s = 200.00'
θ_s = 8° 00' 00"
LT = 133.47'
ST = 66.79'

S13
SPIRAL CURVE DATA
R = 477.46'
L_s = 150.00'
θ_s = 9° 00' 00"
LT = 100.13'
ST = 50.12'

S14
SPIRAL CURVE DATA
R = 2291.83'
L_s = 400.00'
θ_s = 5° 00' 00"
LT = 266.77'
ST = 133.43'

S15
SPIRAL CURVE DATA
R = 2291.83'
L_s = 400.00'
θ_s = 5° 00' 00"
LT = 266.77'
ST = 133.43'

S16
SPIRAL CURVE DATA
R = 2864.79'
L_s = 400.00'
θ_s = 4° 00' 00"
LT = 266.73'
ST = 133.40'

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BOOK _____ PAGE _____
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COUNTY RECORDER

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FEDERAL PROJECT NO.

PID NO. 106002

CALCULATED WWS
CHECKED CWP

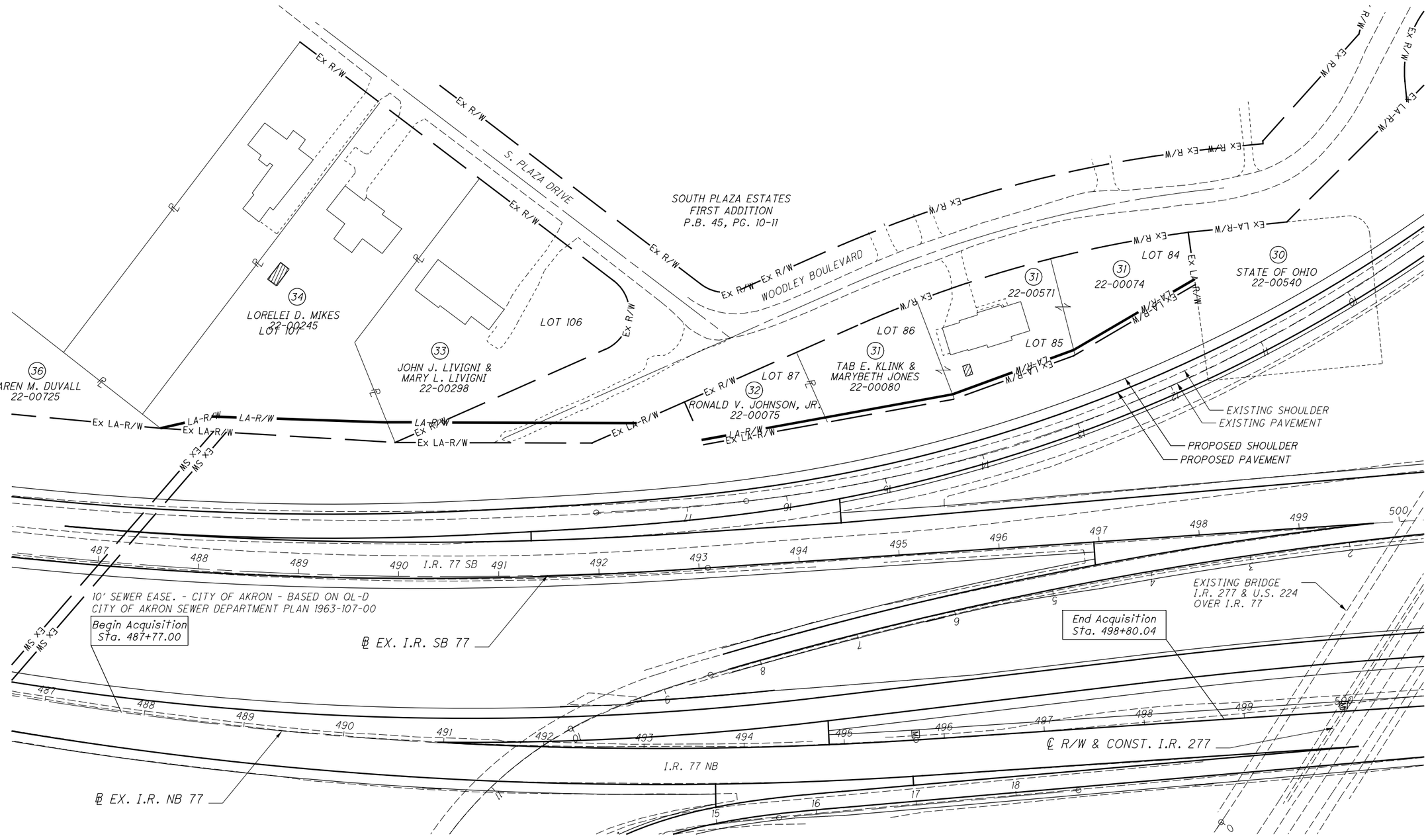
CENTERLINE PLAT
11 OF 11

SUM-77/277/224
VARIOUS

12 / 16

1284
1288

SUM-77/277/224
SUMMIT COUNTY
CONVENTRY TOWNSHIP
R-11, T-1, TRACT 11



REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

HORIZONTAL SCALE IN FEET
0 25 50 100

PID NO. 106002

R/W DESIGNER WWS
R/W REVIEWER CWP

PROPERTY MAP

SUM-77/277/224
VARIOUS

13 / 16

1285
1288

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TOTAL NUMBER OF :

4 OWNERSHIPS 0 TOTAL TAKES

4 PARCELS 0 OWNERSHIPS W/ STRUCTURES INVOLVED

GRANTEE:

ALL RIGHT OF WAY ACQUIRED IN THE NAME OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION UNLESS OTHERWISE SHOWN.

ALL AREAS IN ACRES

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	AUDITOR'S 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
1-29	NOT USED													100% STATE			
30	STATE OF OHIO	15, 16			2200540	0.6100									NO TAKE		
31-WL	TAB E. KLINK AND MARYBETH JONES	15, 16	54250969		2200074	0.2300	0.0000	0.0160	0.0000	0.0160		0.2140					
		15, 16	54250969		2200571	0.3100	0.0000	0.0155	0.0000	0.0155		0.2945					
		15, 16	54250969		2200080	0.2400	0.0000	0.0148	0.0000	0.0148		0.2252					
	TOTAL					0.7800	0.0000	0.0463	0.0000	0.0463		0.7337					
32-WL	RONALD V. JOHNSON, JR.	15, 16	55200146		2200075	0.1500	0.0000	0.0144	0.0000	0.0144		0.1356					
33-WL	JOHN J. LIVIGNI AND MARY L. LIVIGNI	15, 16	55310703		2200298	1.2800	0.0000	0.0121	0.0000	0.0121		1.2679					
34-WL	LORELEI D. MIKES	15, 16	56529187		2200245	1.0600	0.0000	0.0795	0.0000	0.0795		0.9805					
35	NOT USED																
36	KAREN M. DUVALL HTTA KAREN M. CULP	15, 16	56106610		2200725	0.6700									NO TAKE		

TYPES OF TITLE LEGEND:
WL = FEE SIMPLE WITH LIMITATION OF ACCESS

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE
NET TAKE = GROSS TAKE - PRO IN TAKE

REV. BY	DATE	DESCRIPTION

FIELD REVIEW BY DATE:

OWNERSHIP VERIFIED BY WWS DATE: 2/14/2020

DATE COMPLETED

FEDERAL PROJECT NO. E171(457)

PID NO. 106002

STATE JOB NO. 442107

R/W DESIGNER WWS

R/W REVIEWER CWP

SUMMARY OF ADDITIONAL RIGHT OF WAY

SUM-77/277/224

VARIOUS

14 / 16

1286
1288

P:\ODOTcadd\Project Data\17-0129(SUM77-277-224)\106002_SUM_77_277_224\Design\RW\Sheets\106002_RS001.dgn Sheet 4/14/2020 10:16:41 PM Wstowe

SUM-77/277/224
SUMMIT COUNTY
CONVENTRY TOWNSHIP
R-11, T-1, TRACT 11

RESIDENTIAL
(31-1)
TAB E. KLINK &
MARYBETH JONES
WOODLEY BOULEVARD
AKRON, OHIO 44319
22-00074, 22-00571, 22-00080
DOC #54250969

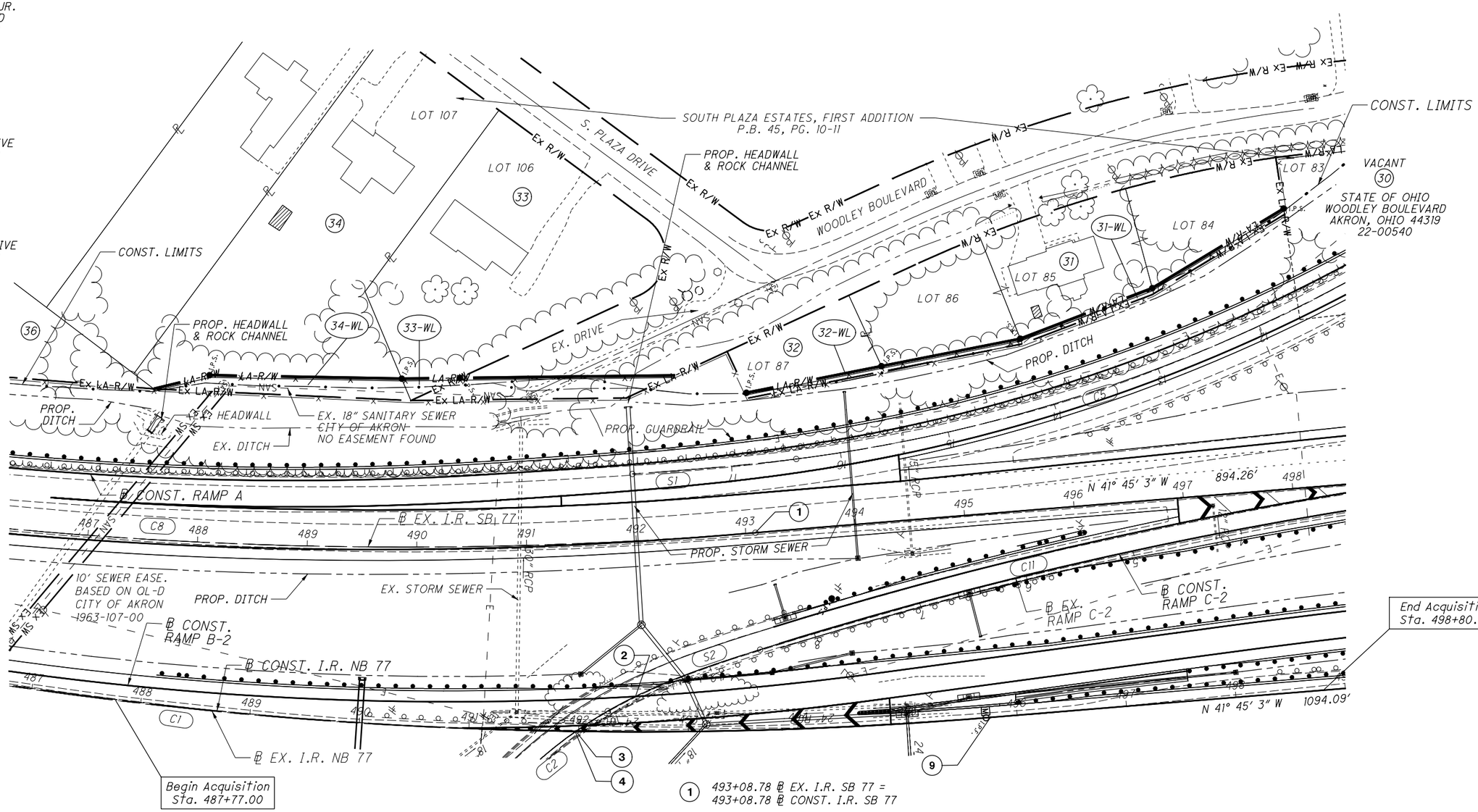
RESIDENTIAL
(32)
RONALD V. JOHNSON, JR.
WOODLEY BOULEVARD
AKRON, OHIO 44319
22-00075
DOC #55200146

RESIDENTIAL
(33)
JOHN J. LIVIGNI &
MARY L. LIVIGNI
2011 SOUTH PLAZA DRIVE
AKRON, OHIO 44319
22-00298
DOC #55310703

RESIDENTIAL
(34)
LORELEI D. MIKES
2025 SOUTH PLAZA DRIVE
AKRON, OHIO 44319
22-00245
DOC #56529187

RESIDENTIAL
(36)
KAREN M. DUVALL
2008 DARNELL DRIVE
AKRON, OHIO 44319
22-00725
DOC #56106610
BLOCK B - GREGG
SUBDIVISION

VACANT
(30)
STATE OF OHIO
WOODLEY BOULEVARD
AKRON, OHIO 44319
22-00540



C1
CURVE DATA
R = 3904.07'
Δ = 30° 33' 43"
L = 2082.45'
Ch BRG = N 26° 28' 11" W
Ch DIST = 2057.85'

C2
CURVE DATA
R = 381.97'
Δ = 68° 1' 46"
L = 453.53'
Ch BRG = N 79° 5' 8" E
Ch DIST = 427.35'

C5
CURVE DATA
R = 1432.39'
Δ = 39° 14' 19"
L = 980.96'
Ch BRG = S 63° 55' 21" E
Ch DIST = 961.90'

C8
CURVE DATA
R = 3904.07'
Δ = 30° 33' 43"
L = 2082.45'
Ch BRG = N 26° 28' 11" W
Ch DIST = 2057.85'

C11
CURVE DATA
R = 3819.72'
Δ = 12° 46' 26"
L = 851.59'
Ch BRG = N 48° 8' 16" W
Ch DIST = 849.83'

S1
SPIRAL CURVE DATA
R = 1432.39'
L_s = 150.00'
θ_s = 3° 00' 00"
LT = 100.01'
ST = 50.01'

S2
SPIRAL CURVE DATA
R_1 = 3819.72'
R_2 = 381.97'
L_s = 150.00'
θ_s = 12° 22' 30"
LT = 95.72'
ST = 54.79'

1 493+08.78 ℄ EX. I.R. SB 77 =
493+08.78 ℄ CONST. I.R. SB 77

2 292+48.85 ℄ CONST. RAMP B-2 =
9+73.05 ℄ EX. RAMP C-2 =
791+75.87 ℄ CONST. RAMP C-2

3 491+97.52 ℄ CONST. I.R. NB 77 =
10+35.98 ℄ EX. RAMP C-2 =
791+12.94 ℄ CONST. RAMP C-2

4 491+96.98 ℄ EX. I.R. NB 77 =
10+36.63 ℄ EX. RAMP C-2 =
791+12.29 ℄ CONST. RAMP C-2

9 495+75.59 ℄ EX. I.R. NB 77 =
495+75.59 ℄ CONST. I.R. NB 77

REV. BY	DATE	DESCRIPTION

DATE COMPLETED

HORIZONTAL SCALE IN FEET
0 25 50 100

PID NO. 106002

R/W DESIGNER WWS
R/W REVIEWER CWP

RIGHT OF WAY TOPO SHEET

SUM-77 / 277 / 224
VARIOUS

15 / 16

1287
1288

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SUM-77/277/224
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DOC #56529187

VACANT (30)
STATE OF OHIO
WOODLEY BOULEVARD
AKRON, OHIO 44319
22-00540

SOUTH PLAZA ESTATES, FIRST ADDITION
P.B. 45, PG. 10-11

S. PLAZA DRIVE 50' WIDE

WOODLEY BOULEVARD 80' WIDE

LOT 107 | LOT 106 | LOT 87 | LOT 86 | LOT 85 | LOT 84 | LOT 83

BLOCK B GREGG SUBDIVISION

P.O.C. INTERSECTION OF ℄ WOODLEY BLVD & ℄ S. PLAZA DRIVE STA. 493+94.83 409.15 LT

487+77.00 286.00 LT

488+30.08 304.24 LT

490+19.94 315.71 LT

490+30.27 296.33 LT P.O.B. 33-WL P.O.B. 34-WL

490+77.42 319.10 LT

492+43.19 304.51 LT

492+91.17 324.87 LT

493+25.69 382.57 LT

493+43.32 345.90 LT

493+63.71 303.07 LT P.O.B. 32-WL

493+61.48 307.80 LT

494+96.55 326.51 LT

494+98.57 321.71 LT P.O.B. 31-WL

496+30.86 341.76 LT

496+31.63 336.77 LT

496+32.33 336.97 LT

497+53.97 372.00 LT

497+54.58 377.89 LT

497+55.52 372.77 LT

498+79.66 440.30 LT

498+80.04 434.90 LT

N 50° 52′ 26″ W 52.35

N 36° 00′ 51″ W 175.15

234.56

S 34° 28′ 13″ E

N 37° 45′ 00″ W 196.18

S 37° 45′ 00″ E 196.69

98.09′

258.28′

67.58′

S 61° 48′ 59″ E

N 48° 13′ 58″ W 125.49

S 48° 13′ 58″ E 125.46

N 48° 14′ 56″ W 128.86

S 48° 13′ 58″ E 127.85

N 58° 01′ 54″ W 128.88

S 57° 48′ 45″ E 126.59

N 68° 16′ 12″ W 139.79

S 68° 16′ 12″ E 139.16

N 41° 45′ 3″ W 894.26′

N 41° 45′ 3″ W 1094.09′

℄ CONST. RAMP A

℄ EX. I.R. SB 77

℄ CONST. I.R. SB 77

℄ CONST. RAMP B-2

℄ CONST. I.R. NB 77

℄ EX. I.R. NB 77

℄ EX. RAMP A

℄ EX. RAMP C-2

℄ CONST. RAMP C-2

10′ SEWER EASE. BASED ON OL-D CITY OF AKRON 1963-107-00

Ex R/W

Ex LA-R/W

LA-R/W

Ex MS

I.P.S.

TIE LINE

33-WL

34-WL

31-WL

32-WL

Begin Acquisition Sta. 487+77.00

End Acquisition Sta. 498+80.04

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(2) 292+48.85 ℄ CONST. RAMP B-2 = 9+73.05 ℄ EX. RAMP C-2 = 791+75.87 ℄ CONST. RAMP C-2

(3) 491+97.52 ℄ CONST. I.R. NB 77 = 10+35.98 ℄ EX. RAMP C-2 = 791+12.94 ℄ CONST. RAMP C-2

(4) 491+96.98 ℄ EX. I.R. NB 77 = 10+36.63 ℄ EX. RAMP C-2 = 791+12.29 ℄ CONST. RAMP C-2

(9) 495+75.59 ℄ EX. I.R. NB 77 = 495+75.59 ℄ CONST. I.R. NB 77

LINE TABLE		
	BEARING	DISTANCE
L1	N 30° 07′ 01″ E	21.59
L2	N 37° 45′ 00″ W	52.92
L3	S 61° 48′ 59″ E	49.04
L4	S 62° 03′ 40″ E	48.58
L5	S 27° 51′ 58″ W	5.15
L6	N 28° 11′ 01″ E	5.14
L7	S 31° 13′ 42″ W	5.00
L8	N 37° 53′ 25″ E	5.21
L9	S 68° 16′ 12″ E	1.72
L10	N 44° 17′ 16″ E	5.41
L11	S 57° 48′ 45″ E	0.72
L12	N 28° 11′ 01″ E	40.00
L13	N 27° 51′ 58″ E	46.73

NOTE:
ALL STATIONS AND OFFSETS ARE REFERENCED TO THE ℄ EX. I.R. 77 NB

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

PID NO. 106002

R/W DESIGNER WWS
R/W REVIEWER CWP

SUM-77/277/224
VARIOUS

RIGHT OF WAY BOUNDARY SHEET

16 / 16

1288
1288

P:\ODOTcadd\Projects\07-0129\SUM77_277_224\106002_SUM_77_277_224\Design\RW\Sheets\106002_RB001.dgn Sheet 4/16/2020 1:56:36 PM Wstowe

PROJECT DESCRIPTION

THE SUM-77/277/224 (PID 106002) PROJECT IS PROPOSED TO REDUCE THE CONGESTION ALONG THE IR-77 CORRIDOR BETWEEN THE IR-77, IR-277 AND US-224 INTERCHANGE AND ARLINGTON RD, AS WELL AS IMPROVE BOTH SAFETY AND THE INFRASTRUCTURE CONDITION WITHIN THE PROJECT LIMITS. THE PROJECT INCLUDES THE REPLACEMENT OF BRIDGES SUM-76-0927R AND SUM-77-0887, THE WIDENING OF BRIDGES SUM-77-0801 L&R AND SUM-77-0802 L&R, THE WIDENING OF THE IR-77 AND IR-277 FREEWAY SEGMENTS WITHIN THE PROJECT LIMITS, THE WIDENING AND RECONFIGURATION OF EXISTING IR-77 AND IR-277 INTERCHANGE RAMPS (RAMP A, RAMP B, RAMP B-1, RAMP B-2, RAMP C, RAMP C-1 AND RAMP C-2), THE RECONSTRUCTION OF PROJECT CULVERTS, THE CONSTRUCTION OF NEW RETAINING WALLS TO FACILITATE THE PROPOSED WIDENING AND THE CONSTRUCTION OF FIVE (5) NOISE WALLS (NOISE WALL HI, NOISE WALL E, NOISE WALL C, NOISE WALL G, AND NOISE WALL K).

HISTORIC RECORDS

HISTORIC CONSTRUCTION PLAN SETS AND SOIL PROFILES FOR THE SUM-8-6.72 PROJECT DATED 1961, THE SUM-224-9.55 PROJECT DATED 1963, THE SUM-8-9.07 PROJECT DATED 1964, THE SUM-277-0.00 PROJECT DATED 1969, THE SUM-76/277-5.19/0.00 PROJECT DATED 1980, THE SUM-277-0.00 PROJECT DATED 1990, AND THE SUM-77-3.97 PROJECT DATED 1996 WERE REVIEWED FOR THIS PROJECT. THE RECORDS DID NOT PROVIDE ADEQUATE INFORMATION FOR USE ON THE DESIGN OF THIS PROJECT THEREFORE NO HISTORIC DATA FROM THESE PROJECTS HAVE BEEN PRESENTED ON THIS SOIL PROFILE.

IN 1961, AN EXPLORATION WAS PERFORMED FOR THE STRUCTURE SUM-77-0810 L&R AS PART OF THE SUM-8-6.70 PROJECT AT THAT TIME. ONE BORING, B-010-0-61, HAS BEEN USED FOR DESIGN OF THE CURRENT PROJECT AND IS PRESENTED HERE AS B-010-1-61 TO AVOID DUPLICATE BORING LABELS.

IN 1963, AN EXPLORATION WAS PERFORMED FOR THE STRUCTURE SUM-8-0930 AS PART OF THE SUM-224-9.55 PROJECT AT THAT TIME. TWO BORINGS, B-001-0-63 AND B-008-0-63, HAVE BEEN USED FOR DESIGN OF THE CURRENT PROJECT AND ARE PRESENTED HERE.

IN 2014, AN EXPLORATION WAS PERFORMED FOR DESIGN BUILD PROJECT SUM-77-0958L (PID 98061) AT THAT TIME. SEVENTEEN BORINGS, B-001-0-14 THROUGH B-004-0-14, B-007-0-14 THROUGH B-011-0-14 AND OFFSET BORINGS B-003-1-14, B-009-1-14, B-009-2-14, AND B-010-1-14, HAVE BEEN USED FOR DESIGN OF THE CURRENT PROJECT AND ARE PRESENTED HERE.

ADDITIONAL HISTORICAL SUBSURFACE INVESTIGATION INFORMATION INCLUDING BORINGS FROM THE REFERENCED EXPLORATIONS NOT SHOWN WITHIN THESE PROJECT SOIL PROFILE SHEETS, IS AVAILABLE FROM ODOT TRANSPORTATION INFORMATION SYSTEM (TIMS) HTTPS://GIS.DOT.STATE.OH.US/TIMS.

GEOLOGY

THE PROJECT SITE IS LOCATED WITHIN THE AKRON-CANTON INTERLOBATE PLATEAU, PART OF THE GLACIATED ALLEGHENY PLATEAUS. THIS IS A MODERATE RELIEF, HUMMOCKY AREA BETWEEN TWO CONVERGING GLACIAL LOBES DOMINATED BY KAMES, KAME TERRACES, ESKERS, KETTLES, KETTLE LAKES, AND BOGS/FENS. SOILS IN THIS REGION ARE CHARACTERISTICALLY SANDY WISCONSINAN-AGE CLAY TO LOAM TILL OVER MISSISSIPPIAN AND PENNSYLVANIAN-AGE SHALES, SANDSTONES, CONGLOMERATES AND COALS.

THE GEOLOGY IN THE NORTHERN PART OF THE PROJECT SITE (NORTHERN PROJECT LIMITS TO ABOUT A QUARTER MILE SOUTH OF SWARTZ ROAD) IS MAPPED AS UP TO 30 FT OF TILL OVER PENNSYLVANIAN-AGE SANDSTONE OR CONGLOMERATE BEDROCK WITH SUBORDINATE AMOUNTS OF SHALE, SILTSTONE, CLAY AND COAL BEDROCK. WITHIN THE SOUTHERN PART OF THE PROJECT SITE, THE GEOLOGY IS MAPPED AS UP TO 60 FT OF ICE CONTACT DEPOSITS, FOLLOWED BY UP TO 30 FT OF TILL UNDERLAIN BY UP TO 290 FT OF SAND AND GRAVEL ALL OVER MISSISSIPPIAN-AGE SANDSTONE AND SHALE BEDROCK. THE TILL MAPPED WITHIN BOTH THE NORTHERN AND SOUTHERN PORTIONS OF THE PROJECT IS DESCRIBED AS CONSISTING OF AN UNSORTED MIX OF CLAY, SILT, GRAVEL AND BOULDERS WITH POSSIBLE SILT, SAND AND GRAVEL LENSES. THE ICE-CONTACT DEPOSITS, MAPPED IN THE SOUTHERN PORTION OF THE PROJECT, ARE GENERALLY DESCRIBED AS HIGHLY VARIABLE DEPOSITS OF POORLY SORTED GRAVEL AND SAND WITH INCLUSIONS OF SILT, CLAY AND TILL LENSES, WHILE THE SAND AND GRAVEL SOILS ARE DESCRIBED AS CONSISTING OF WELL-SORTED, INTERBEDDED SAND AND GRAVEL COMMONLY CONTAINING THIN, DISCONTINUOUS LAYERS OF SILT AND CLAY.

BASED ON THE BEDROCK GEOLOGIC UNITS MAP OF OHIO, BEDROCK WITHIN MOST OF THE PROJECT AREA (WITH THE EXCEPTION OF A SEGMENT OF IR-77 STARTING NEAR THE EAST WARNER ROAD (RD) OVERPASS AND EXTENDING ABOUT A 0.5 MILE NORTH) CONSISTS OF THE ALLEGHENY AND POTTSVILLE GROUPS WHICH CONSIST OF UNDIVIDED PENNSYLVANIAN-AGED SHALE, SILTSTONE, AND UNDERCLAY WHICH ARE CALCAREOUS IN PART AND LOCALLY CONTAIN MARINE FOSSILS. THE PRIMARY AND SECONDARY ROCK TYPES ARE SHALE AND SILTSTONE, RESPECTIVELY, WITH OTHER ROCK TYPES INCLUDING CLAYSTONE, SANDSTONE, LIMESTONE, AND COAL. THE REMAINDER OF THE SITE LIES WITHIN THE UNDIVIDED MAXVILLE LIMESTONE; RUSHVILLE, LOGAN, AND CUYAHOGA FORMATIONS. THIS GROUP IS VERY CLOSE TO THE ALLEGHENY AND POTTSVILLE GROUPS WITH RESPECT TO ROCK TYPES, COMPOSITION, AND LITHOLOGICAL DESCRIPTION, THOUGH THE MAXVILLE LIMESTONE GROUP IS IDENTIFIED AS MISSISSIPPIAN-AGED. ACCORDING TO THE ODNR BEDROCK TOPOGRAPHY MAP OF OHIO, BEDROCK ELEVATIONS AT THE PROJECT SITE CAN BE EXPECTED TO RANGE FROM 1050 FT ABOVE MEAN SEA LEVEL (AMSL) IN NORTHERN AND SOUTHERN PARTS OF THE PROJECT SITE TO 750 FT AMSL AT THE TUSCARAWAS RIVER

LEGEND

		ODOT CLASS	CLASSIFIED MECH./VISUAL	
	GRAVEL AND/OR STONE FRAGMENTS	A-1-a	9	26
	GRAVEL AND/OR STONE FRAGMENTS WITH SAND	A-1-b	41	244
	GRAVEL AND/OR ST. FRAGS. WITH SAND AND SILT	A-2-4	38	108
	FINE SAND	A-3	0	3
	COARSE AND FINE SAND	A-3a	36	215
	SANDY SILT	A-4a	275	422
	SILT	A-4b	41	37
	SILT AND CLAY	A-6a	27	40
	SILTY CLAY	A-6b	2	3
	ELASTIC CLAY	A-7-5	1	2
	CLAY	A-7-6	2	3
		TOTAL	474	1110
	SANDSTONE	VISUAL		
	SHALE	VISUAL		
	SOD AND TOPSOIL = X = APPROXIMATE THICKNESS	VISUAL		
	PAVEMENT OR BASE = 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.			
N_{60}	INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.			
X/Y/D"	NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT): X= NUMBER OF BLOWS FOR 6 INCHES (UNCORRECTED). Y/D"= NUMBER OF BLOWS (UNCORRECTED) FOR D" OF PENETRATION AT REFUSAL.			
SS	INDICATES A SPLIT-SPOON SAMPLE.			
NP	INDICATES A NON-PLASTIC SAMPLE.			
TR	INDICATES THE TOP OF ROCK.			
SO4	INDICATES SULFATE CONTENT IN SOIL			

GEOLOGY (CONTINUED)

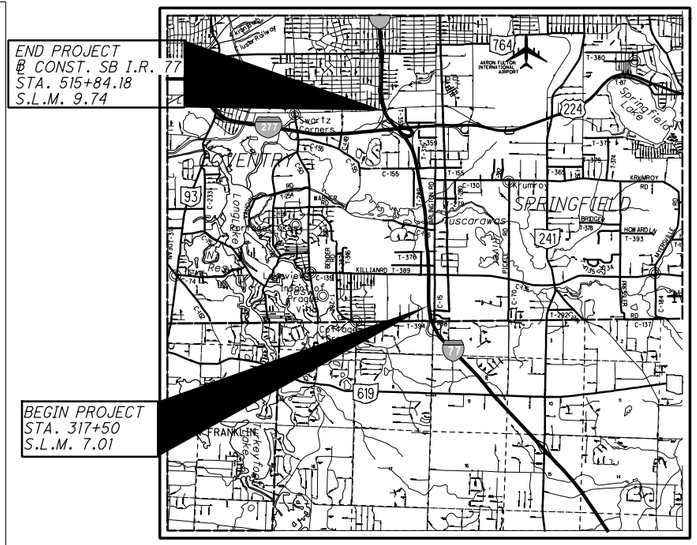
THE MAJORITY OF SOILS DIRECTLY UNDERLYING PROJECT SITE HAVE BEEN MAPPED (WEB SOIL SURVEY) BY THE NATURAL RESOURCES CONSERVATION SERVICE AS BEING UDORTHENTS. UDORTHENTS ARE SOILS THAT HAVE BEEN DISTURBED BY CUTTING OR FILLING AND ARE NOT RATED FOR LOCAL ROADS. THOUGH UDORTHENTS WAS MAPPED AS THE DOMINANT UNIT UNDERLYING THE PROJECT SITE, VARIOUS OTHER SOIL SERIES WERE MAPPED ADJACENT TO THE PROJECT BOUNDARIES. OF THESE UNITS, THE MOST DOMINANT INCLUDED THE CHILI, WOOSTER, AND CANFIELD SERIES. THE CHILI SERIES IS DESCRIBED AS VERY DEEP, WELL DRAINED SOILS ON OUTWASH PLAINS, TERRACES, KAMES AND BEACH RIDGES, AND CLASSIFIES AS NON-COHESIVE A-1, A-2 AND A-4 SOILS (AASHTO METHOD OF SOIL CLASSIFICATION). THE WOOSTER SERIES IS DESCRIBED AS DEEP, WELL DRAINED SOILS FORMED IN LOW-LIME LOAMY GLACIAL TILL WITH THIN LOESS MANTLE IN SOME PLACES, AND CLASSIFIES AS BOTH COHESIVE AND NON-COHESIVE A-4 SOILS (AASHTO METHOD OF SOIL CLASSIFICATION). THE CANFIELD SERIES IS DESCRIBED AS VERY DEEP, MODERATELY WELL DRAINED SOILS FORMED IN WISCONSINAN-AGE TILL ON PLAINS WITH A THIN LOESS MANTLE IN SOME PLACES, AND CLASSIFIES AS COHESIVE A-4, A-6 AND A-7-5 SOILS OR NON-COHESIVE A-1-B, A-2-4, A-2-6 AND A-4 SOILS ACCORDING TO THE AASHTO METHOD OF SOIL CLASSIFICATION.

RECON. - EB 09/26/2019

DRILLING - CA, JH 06/19/2019 - 08/07/2020

DRAWN - EB, KA, MJ, ZM 11/2020 - 01/2021

REVIEWED - BPA, 11/16/2020



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		

	HISTORIC BORING DESCRIPTION	ODOT CLASS	CLASSIFIED MECH./VISUAL	
	GRAVEL AND/OR STONE FRAGMENTS	A-1-a	25	1
	GRAVEL AND/OR STONE FRAGMENTS WITH SAND	A-1-b	41	16
	GRAVEL AND/OR ST. FRAGS. WITH SAND AND SILT	A-2-4	8	0
	GRAVEL AND/OR ST. FRAGS. WITH SAND, SILT AND CLAY	A-2-6	1	0
	FINE SAND	A-3	2	0
	COARSE AND FINE SAND	A-3a	16	2
	SANDY SILT	A-4a	43	34
	SILT	A-4b	7	2
	SILT AND CLAY	A-6a	6	13
	SILTY CLAY	A-6b	3	0
	ELASTIC CLAY	A-7-5	1	0
	CLAY	A-7-6	1	0
		TOTAL	154	68
	UNCONTROLLED FILL	VISUAL		
	WEATHERED SHALE	VISUAL		
	WEATHERED SANDSTONE	VISUAL		
	LIMESTONE	VISUAL		
	SILTSTONE	VISUAL		

DESIGN AGENCY
NEAS, INC.
2800 CORPORATE EXCHANGE DR., STE 240
COLUMBUS, OH 43231
(614) 714-0270 FAX (614) 714-0323

PID NO. 106002

SOIL PROFILE

SUM-77/277/224
VARIOUS

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002IC001.dgn Sheet 1/7/2021 11:11:20 PM karens

SUBSURFACE EXPLORATION

THE SUBSURFACE EXPLORATIONS WERE CONDUCTED BETWEEN NOVEMBER 28, 2017 AND AUGUST 07, 2020 AND INCLUDED 201 BORINGS DRILLED BETWEEN 5.5 FT AND 100.0 FT BELOW GROUND SURFACE.

BORINGS WERE DRILLED USING EITHER A CME 55T TRUCK OR CME 55X TRACK MOUNTED DRILLING RIG EACH UTILIZING 3.25-INCH DIAMETER HOLLOW STEM AUGERS AND NQ2 CORING EQUIPMENT. ST ANDA RD PENETRATION TESTS CSPT) WERE CONDUCTED USING A CALIBRATED CME AUTO-HAMMER. THE AUTO-HAMMERS WERE CA LIBRA TED TO RANGE FROM BEING 68.4% AND 85.4% EFFICIENT DEPENDING ON THE RIG AND CALIBRATED DATE.

IN GENERAL, SOIL SAMPLES WERE RECOVERED AT INTERVALS OF 2.5-FT TO A DEPTH OF 30 FT BGS AND AT 5.0-FT INTERVALS UNTIL BEDROCK WAS ENCOUNTERED USING AN 18-INCH SPLIT SPOON SAMPLER (AASHTO T206 "STANDARD METHOD FOR PENETRATION TEST AND SPLIT BARREL SAMPLING OF SOILS."). SAMPLES COLLECTED FROM SUBGRADE BORINGS AND THE TOP 7.5 FT OF BRIDGE BORINGS WERE SAMPLED CONTINUOUSLY FOR SUBGRADE EVALUATION PURPOSES.

SPLIT SPOON SAMPLES COLLECTED AS PART OF THE SPT WERE PLACED IN SEALED GLASS CONTAINERS AND TRANSPORTED TO NEAS'S GEOTECHNICAL LABO RA TORY IN COLUMBUS, OH. AFTER COMPLETING THE BORINGS, THE BOREHOLES WERE BACKFILLED WITH EITHER AUGER CUTTINGS, BENTONITE CHIPS, OR A COMBINATION OF THESE MATERIALS AND PATCHED ACCORDINGLY WITH THE COLD PATCH ASPHALT AND/OR CEMENT WHEN DRILLING THROUGH THE ROADWAY. FIELD BORING LOGS WERE PREPARED BY DRILLING PERSONNEL, LITHOLOGICAL DESCRIPTION, SPT RESULTS RECORDED AS BLOWS PER 6-INCH INCREMENT OF PENETRATION AND ESTIMATED UNCONFINED SHEAR STRENGTH VALUES ON SPECIMENS EXHIBITING COHESION (USING A HAND-PENETROMETER). GROUNDWATER RELATED OBSERVATIONS WERE RECORDED AS APPROPRIATE.

RECONNAISSANCE

A FIELD RECONNAISSANCE WAS COMPLETED FOR THE PROJECT ROADWAY SEGMENTS AS WELL AS EACH PROPOSED STRUCTURE BETWEEN SEPTEMBER 2019 AND JANUARY OF 2020. DURING THE VISITS SITE CONDITIONS, INCLUDING THE EXISTING PAVEMENT AND STRUCTURE CONDITIONS, WERE NOTED AND PHOTOGRAPHED.

ROADWAY SUBGRADE

THE PAVEMENT CONDITION ALONG IR-277/US-224 WAS OBSERVED TO BE FAIR TO GOOD WITH MINOR SIGNS OF WEATHERING AND SURFACE WEAR. LOW TO MODERATE SEVERITY LONGITUDINAL AND TRANSVERSE CRACKING WAS COMMON ALONG THESE SECTIONS, AS WELL AS OCCASIONAL LOW SEVERITY POTHOLES AND LOW SEVERITY CRACK SEALING DEFICIENCIES.
THE CONDITION OF THE PAVEMENT ALONG IR-77 CAN BE CATEGORIZED INTO TWO SECTIONS: 1) THE PAVEMENT BETWEEN APPROXIMATE STA. 372+50 AND STA. 395+00; AND, 2) THE PAVEMENT BETWEEN APPROXIMATE STA. 395+00 AND STA. 516+00. THE PAVEMENT CONDITION OF IR 77 BETWEEN APPROXIMATE STA. 372+50 AND STA. 395+00 WAS OBSERVED TO BE GOOD WITH MINOR SIGNS OF WEATHERING AND SURFACE WEAR. LOW TO MODERATE SEVERITY LONGITUDINAL AND TRANSVERSE CRACKING WAS COMMON AS WELL AS LOW SEVERITY CRACK SEALING DEFICIENCIES. THE PAVEMENT CONDITION ALONG IR-77 BETWEEN APPROXIMATE STA. 395+00 AND STA. 516+00 WAS FAIR WITH MODERATE SIGNS OF WEATHERING AND SURFACE WEAR. LOW TO MODERATE SEVERITY LONGITUDINAL AND TRANSVERSE CRACKING WAS COMMON AS WELL AS FREQUENT TO EXTENSIVE MODERATE SEVERITY PAVEMENT PATCHING.

THE PAVEMENT CONDITION ALONG CONNECTING RAMP A, RAMP B, RAMP B-2, RAMP C, RAMP C-1, RAMP C-2 AND RAMP D WERE GENERALLY OBSERVED TO BE IN FAIR TO GOOD CONDITION WITH LOW SEVERITY TRANSVERSE CRACKING, LONGITUDINAL CRACKING, EDGE CRACKING, AND CRACK SEALING DEFICIENCIES. RAMP B-1 WAS OBSERVED TO BE IN FAIR CONDITION WITH LOW TO MODERATE SEVERITY LONGITUDINAL, EDGE, TRANSVERSE, AND MAP CRACKING.

SUM-77-0802 L&R (OVER E WARNER RD.)

THE EXISTING BRIDGE CARRYING IR-77 OVER WARNER RD IS A THREE-SPAN REINFORCED CONCRETE CONTINUOUS SLAB BRIDGE SUPPORTED ON CAP AND COLUMN PIERS AND STUB ABUTMENTS. IN THE AREA OF THE REFERENCED BRIDGE, IR-77 IS SUPPORTED ON AN EMBANKMENT CONSTRUCTED ABOUT 15 FT ABOVE THE SURROUNDING AREA. EXISTING EMBANKMENT SLOPES AND ABUTMENT SLOPES BENEATH THE STRUCTURES EACH APPEARED TO BE APPROXIMATELY 2 HORIZONTAL TO 1 VERTICAL (2H:1V) WITH NO SIGNS OF INSTABILITY OBSERVED DURING OUR SITE VISIT. THE SLOPES IN FRONT OF THE ABUTMENTS ARE RIPRAP COVERED, WHILE THE SLOPES IN BETWEEN THE L AND R BRIDGES ARE HEAVILY VEGETATED. OVERALL, THE BRIDGE APPEARED TO BE IN GOOD CONDITION WITH FEW SIGNS OF DISTRESS OBSERVED. OCCASIONAL SIGNS OF CORROSION WERE OBSERVED ON THE UNDERSIDE OF THE BRIDGE DECK. NO APPARENT SIGNS OF STRUCTURAL DISTRESS DUE TO GEOTECHNICAL CONCERNS WERE NOTED DURING OUR FIELD RECONNAISSANCE VISIT.

THE ASPHALT WEARING COURSE A TOP THE BRIDGE DECK AND APPROACH SLAB WERE OBSERVED TO BE IN FAIR CONDITION WITH MODERATE HIGH SEVERITY LATERAL AND LONGITUDINAL CRACKING AND CRACK SEALING DEFICIENCIES. IN GENERAL, THE ASPHALT PAVEMENT LEADING TO THE BRIDGE APPROACHES APPEARED BE IN SIMILAR CONDITION TO THE WEARING COURSE WITH MODERATE SEVERITY PATCHING OBSERVED IN THE PAVEMENT LEADING UP TO THE APPROACH SLABS. PAVEMENT AT THE BRIDGE SITE APPEARED TO BE GENERALL y WELL DRAINED, WITH NO SIGNS OF PONDING OR DRAINAGE ISSUES OBSERVED DURING OUR FIELD VISIT. DRAINAGE WAS CONVEYED BY OPEN DITCHES LOCATED EITHER IN THE MEDIAN OR ALONG THE EDGES OF THE ROADWAY FOR IR-77 AND WARNER RD, RESPECTIVELY.

RECONNAISSANCE (CONTINUED)

SUM-77-0810 L&R (OVER THE TUSCARAWAS RIVER)

THE EXISTING BRIDGE CARRYING IR-77 OVER THE TUSCARAWAS RIVER CONSISTS OF TWIN, THREE-SPAN, CONTINUOUS STEEL BEAM BRIDGES EACH WITH A REINFORCED CONCRETE BRIDGE DECK ATOP STUB ABUTMENTS AND SOLID WALL TYPE PIERS. IN THE AREA OF THE REFERENCED BRIDGE, IR-77 IS SUPPORTED ON AN EMBANKMENT CONSTRUCTED ABOUT 15 FT ABOVE THE SURROUNDING AREA. EXISTING EMBANKMENT SLOPES AND BRIDGE SPILL THROUGH SLOPES EACH APPEARED TO BE APPROXIMATELY 2H:1V WITH NO SIGNS OF INSTABILITY OBSERVED DURING OUR SITE VISIT. THE EXISTING SPILL THROUGH SLOPES AT THE BRIDGE SITE ARE CONTINUOUS BETWEEN BOTH THE LEFT AND RIGHT BRIDGES WITH THE SLOPES IN FRONT OF THE ABUTMENTS BEING RIPRAP COVERED, WHILE SPILL THROUGH SLOPES BETWEEN THE LEFT AND RIGHT STRUCTURES WERE VEGETATION COVERED. THE OVERALL BRIDGE STRUCTURE APPEARED TO BE IN GOOD CONDITION WITH FEW SIGNS OF DISTRESS OBSERVED. THE OUTER BEARINGS ATOP THE PIERS AND ABUTMENTS WERE OBSERVED TO HAVE EXPERIENCED SOME CORROSION. NO APPARENT SIGNS OF DISTRESS DUE TO GEOTECHNICAL CONCERNS WERE NOTED DURING OUR FIELD RECONNAISSANCE VISIT.

THE BRIDGE DECK AND APPROACH SLAB'S ASPHALT WEARING COURSE WAS OBSERVED TO BE IN FAIR TO GOOD CONDITION WITH OCCASIONAL LOW TO HIGH SEVERITY TRANSVERSE AND LONGITUDINAL CRACKING, CRACK SEALING DEFICIENCIES AS WELL AS MEDIUM SEVERITY PATCHING IN THE PAVEMENT LEADING UP TO THE APPROACH SLABS. WITH RESPECT TO DRAINAGE, THE BRIDGE DECK AND ADJACENT PAVEMENT APPEARED TO BE WELL DRAINED, WITH NO SIGNS OF PONDING OR DRAINAGE ISSUES OBSERVED DURING OUR FIELD VISIT. THE ADJACENT IR-77 ROADWAY APPEARED TO DRAIN TO A GRASSY DRAINAGE SWALE LOCATED IN THE MEDIAN, WHILE THE BRIDGE DECK DRAINED TO SCUPPERS LOCATED ON EITHER SIDE OF THE STRUCTURE WHICH OUTLETS DIRECTLY BELOW THE BRIDGE.

SUM-77-0927R (OVER I-77 NB)

THE EXISTING BRIDGE CARRYING RAMP C-2 OVER IR-77 NB IS A THREE SPAN, CONTINUOUS WELDED PLATE GIRDER BRIDGE WITH A REINFORCED CONCRETE BRIDGE DECK SUPPORTED ON STUB ABUTMENTS AND COLUMN TYPE PIERS. IN THE AREA DIRECTLY ADJACENT TO THE REFERENCED BRIDGE, RAMP C-2 IS SUPPORTED ON EMBANKMENTS CONSTRUCTED ABOUT 20 FT AND 30 FT ABOVE THE SURROUNDING AREA ON AT THE REAR AND FORWARD ABUTMENT LOCATIONS, RESPECTIVELY. EXISTING EMBANKMENT SLOPES APPEARED TO BE APPROXIMATELY 2H:1V AND ARE HEAVILY VEGETATED WITH BOTH BRUSH AND GRASSES. NO SIGNS OF GEOTECHNICAL INST ABILITY WERE OBSERVED ALONG THE EMBANKMENTS DURING OUR SITE VISIT. OVERALL, THE BRIDGE APPEARED TO BE IN GOOD CONDITION WITH FEW SIGNS OF DISTRESS OBSERVED. OCCASIONAL RUST STAINING ON THE BRIDGE GIRDERS AS WELL AS BOLT CORROSION WAS OBSERVED. NO APPARENT SIGNS OF STRUCTURAL DISTRESS DUE TO GEOTECHNICAL CONCERNS WERE NOTED DURING OUR FIELD RECONNAISSANCE VISIT.

THE BRIDGE DECK AND APPROACH SLAB WERE OBSERVED TO BE IN GOOD CONDITION WITH OCCASIONAL LOW SEVERITY POTHOLING AND MODERATE SEVERITY SPALLING AT THE EXPANSION JOINTS. ASPHALT PAVEMENT LEADING TO THE BRIDGE APPROACHES APPEARED BE IN GOOD CONDITION WITH OCCASIONAL MODERATE TO LOW SEVERITY LATERAL AND LONGITUDINAL CRACKING. PAVEMENT AT THE BRIDGE SITE APPEARED TO BE GENERALLY WELL DRAINED, WITH NO SIGNS OF PONDING OR DRAINAGE ISSUES OBSERVED DURING OUR FIELD VISIT.

RETAINING WALL 1

THE PROPOSED WALL ALIGNMENT IS LOCATED ALONG THE MEDIAN SEPARATING IR-77 NB AND SB JUST NORTH OF THE SWARTZ RD OVERPASS. THIS PORTION OF THE MEDIAN CONSISTS OF DRAINAGE DITCHES ALONG EACH INTERIOR SHOULDER OF IR-77 NB AND SB WHICH ARE SEPARATED BY A MOUND OR SMALL HILL. THE MOUND WITHIN THE MEDIAN IS SLOPED FROM THE APPROXIMATE CENTER AT ABOUT 2H:1V ON THE EAST FACE AND AT ABOUT 3H:1V ON THE WEST FACE. THE OVERALL GROUND SURF ACE ALONG THE LENGTH OF THE RETAINING WALL ALIGNMENT GRADUALLY SLOPES UPWARD FROM SOUTH TO NORTH. THE INDICATED MOUND AND DRAINAGE DITCHES WERE VEGETATED MAINLY WITH GRASSES AND WEEDS WITH NO VISIBLE SIGNS OF EROSION OBSERVED DURING OUR VISIT. THE SITE APPEARED TO BE GENERALLY WELL DRAINED WITH FEW SIGNS OF PONDING AND MINOR DRAINAGE ISSUES OBSERVED DURING OUR FIELD RECONNAISSANCE VISIT.

ASPHALT PAVEMENT ON IR-77 NB AND SB IN THE AREA OF THE PROPOSED RETAINING WALL WAS OBSERVED TO BE IN FAIR CONDITION WITH SOME SIGNS OF WEAR AND DISTRESS. MODERATE LIGHT SEVERITY LATERAL AND TRANSVERSE CRACKING WAS OBSERVED. EXTENSIVE HIGH SEVERITY PATCHING WAS ALSO NOTED. PAVEMENT IN THE AREA OF THE PROPOSED RETAINING WALL APPEARED TO BE GENERALLY WELL DRAINED, WITH NO SIGNS OF PONDING OR OTHER DRAINAGE ISSUES OBSERVED DURING OUR FIELD VISIT.

IR-277 EB RAMP A CULVERT (STA. 102+19)

THE PROPOSED CULVERT EXTENSION RUNS PERPENDICULAR TO THE RAMP A ALIGNMENT AT STA. 102+19 AND THE EXISTING CULVERT RUNS UNDERNEATH THE EXISTING EMBANKMENT THAT SUPPORTS RAMP A. THE EMBANKMENT LOCATED TO THE EAST AND WEST OF THE EXISTING CULVERT AND CULVERT HEADWALL SLOPES DOWN TO THE SURROUNDING LAND AT AN APPROXIMATE 2H:1V SLOPE, WHILE THE EMBANKMENT DIRECTLY ABOVE THE CULVERT APPEARED TO SLOPES DOWN TO THE HEADWALL OFTHE CULVERT AT AN APPROXIMATE 2 .5H:1V SLOPE. THE EXISTING EMBANKMENT SLOPES APPEARED TO SHOW NO SIGNS OF INSTABILITY DURING OUR SITE VISIT.

THE SURROUNDING AREA APPEARED TO BE RELATIVELY WELL DRAINED TO THE CHANNEL THAT FEEDS INTO THE CULVERT INLET. THE CULVERT AND HEADWALL APPEARED TO BE IN GOOD CONDITION WITH FEW SIGNS OF WEAR OR DAMAGE. THE CONCRETE CHANNEL PROTECTION LEADING TO THE CULVERT INLET WAS NOTED TO HAVE CONCRETE CRACKING AND APPARENT DISPLACEMENT WAS OBSERVED.

RECONNAISSANCE (CONTINUED)

NOISE WALLS HI & E

THE PROPOSED NOISE WALLS HI & E RUN ALONG 3 ALIGNMENTS STARTING WITH THE WESTERN RIGHT-OF-WAY (ROW) OF IR-77 FROM APPROXIMATE STA. 442+75 TO STA. 487+00, CONTINUING ALONG RAMP A FROM APPROXIMATE STA. 86+60 TO STA. 114+13, THEN ALONG THE SOUTHERN ROW OF IR-277 FROM STA. 237+50 TO STA. 224+00. ALONG IR-77 FROM ABOUT STA. 446+00 TO STA. 460+00 THE GRADES BETWEEN THE PROPOSED NOISE WALL AND ROADWAY GRADES (WEST TO EAST) ARE RELATIVELY CONSISTENT WITH THE EXCEPTION OF THE DRAINAGE SWALE LOCATED BETWEEN THE TWO LOCATIONS. FROM ABOUT STA. 460+00 TO STA. 480+00 THE NOISE WALL IS PROPOSED ATOP AN EMBANKMENT WHICH EXTENDS UP FROM THE ROADWAY ELEVATION ON SLOPES RANGING FROM FLATTER THAN 3 HORIZONTAL TO 1 VERTICAL (3H:1V) TO SLIGHTLY STEEPER THAN ABOUT 2H:1V. FROM IR-77 STA. 480+00 TO RAMP A STA. 107+00 THE PROPOSED NOISE WALL IS LOCATED NEAR THE SOUTH WESTERN SHOULDER OF THE ROADWAY AND SITS A TOP AN EMBANKMENT WHICH SLOPES DOWN TO THE SURROUNDING AREA AT A 2H:1V. ALONG RAMP A FROM STA. 107+00 TO STA. 114+00 AND CONTINUING ALONG IR-277 FROM STA. 237+50 TO STA. 33+00 THE PROPOSED NOISE WALL AND ROADWAY GRADES (NORTH TO SOUTH) ARE RELATIVELY CONSISTENT WITH THE EXCEPTION OF THE DRAINAGE SWALE LOCATED BETWEEN THE TWO LOCATIONS. ALONG IR-277 FROM STA. 230+00 TO STA. 224+00 THE NOISE WALL RUNS ALONG THE SOUTHERN EDGE OF THE ROADWAY WHICH SITS ATOP AN EMBANKMENT THAT SLOPES DOWN TO THE SURROUNDING AREA AT A 2H:1V. THE SLOPES APPEARED TO BE STABLE WITH NO SIGNS OF GEOTECHNICAL INSTABILITY. MINOR SIGNS OF EROSION WERE OBSERVED DUE TO WATER RUNOFF. THE EMBANKMENTS APPEARED TO BE WELL DRAINED WITH NO STANDING WATER OBSERVED.

NOISE WALL G

THE PROPOSED NW-G RUNS ALONG 2 ALIGNMENTS, STARTING WITH THE EASTERN ROW OF IR-77 FROM STA. 461+00 TO STA. 476+00 CONTINUING ALONG RAMP C FROM STA. 576+00 TO STA. 587+75. ALONG IR-77 FROM STA. 461+00 TO STA. 469+00 THE PROPOSED NOISE WALL AND ROADWAY GRADES (EAST TO WEST) ARE RELATIVELY CONSISTENT WITH THE EXCEPTION OF THE DRAINAGE SWALE LOCATED BETWEEN THE TWO LOCATIONS. FROM IR-77 STA. 469+00 TO RAMP C STA. 583+00 THE NOISE WALL IS PROPOSED ATOP AN EMBANKMENT WHICH EXTENDS UP FROM THE ROADWAY ELEVATION ON SLOPES RANGING FROM FLATTER THAN 3 HORIZONTAL TO 1 VERTICAL (3H:1V) TO SLIGHTLY STEEPER THAN ABOUT 2H:1V. FROM RAMP C STA. 583+00 TO STA. 587+75 THE NOISE WALL RUNS ALONG THE EASTERN EDGE OF THE ROADWAY WHICH SITS ATOP AN EMBANKMENT WITH 2H:1V SLOPES DOWN TO THE SURROUNDING AREA. THE SLOPES APPEARED TO BE STABLE WITH NO SIGNS OF GEOTECHNICAL INSTABILITY. THE EMBANKMENTS APPEARED TO BE WELL DRAINED WITH NO STANDING WATER OBSERVED WITH THE EXCEPTION OF THE AREA EAST OF THE EMBANKMENT NEAR STA. 588+00 WHERE CATTAILS WERE OBSERVED.

NOISE WALL K

THE PROPOSED NW-K RUNS ALONG 2 ALIGNMENTS STARTING WITH THE NORTHERN ROW OF RAMP D FROM STA. 899+50 TO STA. 888+00 CONTINUING ALONG US-224 FROM STA. 269+50 TO STA. 280+00. ALONG RAMP D FROM STA. 899+50 TO STA. 892+00 THE NOISE WALL RUNS ALONG THE NORTHERN EDGE OF THE RAMP WHICH AND SITS ATOP AN EMBANKMENT THAT SLOPES DOWN AT 2H:1V TO THE SURROUNDING AREA. FROM RAMP D STA. 892+00 TO US-224 STA. 276+00 THE NOISE WALL RUNS ALONG THE NORTHERN ROW OF THE AFOREMENTIONED ROAD SEGMENTS AND IS PROPOSED ATOP AN EMBANKMENT THAT EXTEND UP FROM THE ROADWAY ELEVATION AT SLOPE GRADES LESS THAN 3H:1V. ALONG US-224 FROM STA. 276+00 TO STA. 280+00 THE NOISE WALL IS PROPOSED DOWN SLOPE (2H:1V) FROM ROADWAY ELEVATION NEAR THE BOTTOM OF THE ROADWAY EMBANKMENT AND ALONG THE ROW LIMITS. THE SLOPES APPEARED TO BE STABLE WITH NO SIGNS OF GEOTECHNICAL INSTABILITY. THE EMBANKMENTS APPEARED TO BE MODERATELY DRAINED WITH MINOR SIGNS OF PONDING WATER SUCH AS CATTAILS ALONG THE BOTTOM OF THE EMBANKMENTS.

NOISE WALL C

THE PROPOSED NW-C RUNS ALONG THE IR-77 ALIGNMENT NEAR THE WESTERN ROW OF IR-77 FROM STA. 394+00 TO STA. 425+00. ALONG IR-77 FROM STA. 394+00 TO STA. 409+00 THE NOISE WALL IS PROPOSED NEAR THE ROW EDGE THAT IS LOCATED CLOSE TO THE CREST OF A SLOPE THAT EXTENDS UP FROM THE ROADWAY ELEVATION AT 2.5H:1V. EXTENDING NORTH AT APPROXIMATELY STA. 409+00, NW-C TRANSITIONS FROM BEING LOCATED UPSLOPE OF IR-77 TO DOWNSLOPE OF IR-77. FROM BOUT STA. 409+00 TO 425+00, NW-C IS PROPOSED WITHIN THE EXISTING ROADWAY EMBANKMENT THAT SLOPE DOWN TO THE SURROUNDING AREA AT 2H:1V. THE SLOPES APPEARED TO BE ST ABLE WITH NO SIGNS OF GEOTECHNICAL INSTABILITY. THE EMBANKMENTS APPEARED TO BE WELL DRAINED WITH FEW SIGNS OF PONDING WATER.

EXPLORATION FINDINGS

ROADWAY SUBGRADE

THE SUBGRADE CONDITIONS IN THE PROJECT AREA ARE RELATIVELY CONSISTENT AND ARE GENERALLY COMPRISED OF EITHER FILL SOILS (I.E., EMBANKMENT FILL, HISTORICAL/URBAN FILL, ETC.) OR NATURAL SOILS CONSISTING OF GRAVEL, SAND AND SILT, OR LOW TO MODERATELY PLASTIC SANDY SILT AND SILT/CLAY COMBINATIONS. THE SUBGRADE SOILS ENCOUNTERED WITHIN THE PROJECT LIMITS ARE GENERALLY CLASSIFIED AS EITHER A-1-a, A-1-b, A-2-4, A-2-6, A-3a, A-4a, A-4b, OR A-6a TYPE SOILS.

SUM-77-0802 L&R (OVER E WARNER RD.)

THE SUBSURFACE PROFILE AT THE SUM-77-0802 L&R BRIDGE SITE GENERALLY CONSISTS OF SURFICIAL MATERIALS COMPRISED OF EITHER TOPSOIL OR AN EXISTING PAVEMENT SECTION WHICH IS GENERALLY UNDERLAIN BY EITHER "MAN-MADE" FILL SOILS AND/OR NATURAL GLACIAL DEPOSITED SOIL. THE BORINGS PERFORMED WITHIN THE IR-77 MEDIAN ADJACENT TO THE EXISTING ABUTMENTS (B-013-1-17 AND B-013-4-17) WERE EXTENDED THROUGH THE IR-77 EMBANKMENT AND ENCOUNTERED 17 TO 22 FT OF FILL. THE REFERENCED FILL SOILS CONSISTED OF BOTH STIFF TO VERY STIFF, MODERATELY PLASTIC COHESIVE MATERIAL AND MEDIUM DENSE TO DENSE NON-COHESIVE MATERIAL. THE NATURAL GLACIAL SOILS (ICE-CONTACT DEPOSITS AND/OR GLACIAL TILL) ENCOUNTERED EITHER UNDERLYING THE EMBANKMENT FILL OR IMMEDIATELY AT THE GROUND SURFACE (B-013-2-17 AND B-013-3-17) CAN BE DESCRIBED AS PREDOMINANTLY LOOSE TO DENSE NON-COHESIVE GRANULAR MATERIAL. BEDROCK WAS NOT ENCOUNTERED WITHIN DEPTHS OF THE FOUR BORINGS PERFORMED AT THE BRIDGE SITE.

DRAWN EB | CHECKED KCA

SOIL PROFILE EXPLORATION NOTES (CONT.)

SUM-77/277/224
VARIOUS

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EXPLORATION FINDINGS (CONTINUED)

SUM-77-0810 L&R (OVER THE TUSCARAWAS RIVER)

THE SUBSURFACE PROFILE AT THE SUM-77-0810 L&R BRIDGE SITE GENERALLY CONSISTS OF NON-COHESIVE NATURAL GLACIAL ICE-CONTACT DEPOSITS OVERLAIN BY EITHER "MAN-MADE" FILL SOILS (ABUTMENTS) OR NATURAL ALLUVIAL SOILS (PIER). THE BORINGS PERFORMED WITHIN THE IR-77 MEDIAN ADJACENT TO THE EXISTING ABUTMENTS (B 014-1-17 AND B-014-3-17) WERE EXTENDED THROUGH THE IR 77 EMBANKMENT AND ENCOUNTERED 17 TO 19 FT OF FILL. THE REFERENCED FILL SOILS CONSISTED PREDOMINANTLY OF NON-COHESIVE GRANULAR MATERIAL. THE BORING PERFORMED IN THE MEDIAN AND ADJACENT TO THE EXISTING FORWARD PIER LOCATION (B-014-2-17) ENCOUNTERED APPROXIMATELY 14.5 FT OF ALLUVIAL SOILS ALSO CONSISTING OF NON-COHESIVE GRANULAR MATERIAL. THE NATURAL GLACIAL ICE-CONTACT DEPOSITS ENCOUNTERED UNDERLYING EITHER THE FILL SOILS OR ALLUVIAL SOILS CAN BE DESCRIBED AS PREDOMINANTLY MEDIUM DENSE TO VERY DENSE NON-COHESIVE, GRANULAR MATERIAL. BEDROCK WAS NOT ENCOUNTERED WITHIN DEPTHS OF THE THREE BORINGS PERFORMED AT THE BRIDGE SITE.

SUM-77-0927R (OVER I-77 NB)

THE SUBSURFACE PROFILE AT THE SUM-77-0927R SITE CONSISTS OF AN EXISTING PAVEMENT SECTION (WITHIN RAMP C-2 AND IR-77 ROADWAYS) UNDERLAIN BY EITHER EMBANKMENT FILL (ABUTMENTS) AND/OR NATURAL GLACIAL TILL SOILS, ALL OVER INTERBEDDED SHALE AND SANDSTONE BEDROCK. THE EMBANKMENT FILLS AT THE SITE GENERALLY CONSISTED OF MEDIUM DENSE TO VERY DENSE NONCOHESIVE GRANULAR MATERIALS AT THE REAR ABUTMENT AND STIFF TO HARD COHESIVE MATERIALS AT THE FORWARD ABUTMENT. THE NATURAL MATERIAL AT THE SITE CONSISTED OF BOTH VERY STIFF TO HARD COHESIVE SOILS AND MEDIUM DENSE TO VERY DENSE NONCOHESIVE GRANULAR SOILS. BEDROCK WAS ENCOUNTERED WITHIN THE BORINGS PERFORMED AT THE BRIDGE SITE BETWEEN DEPTHS 17.2 FT AND 40.3 FT BGS (ELEVATIONS 1034.8 FT AND 994.7 FT AMSL).

RETAINING WALL 1

THE SUBSURFACE PROFILE ALONG THE PROPOSED RETAINING WALL 1 ALIGNMENT, CONSISTS OF 7 TO 18 INCHES OF TOPSOIL UNDERLAIN BY EITHER SANDSTONE BEDROCK OR UP TO 17 FT OF NATURAL, NON-COHESIVE GLACIAL TILL OVER SANDSTONE BEDROCK. THE TILL AT THE SITE CAN GENERALLY BE DESCRIBED AS LOOSE TO VERY DENSE NON-COHESIVE SOIL CONSISTING OF SAND, SILT AND GRAVEL MIXTURES. BEDROCK WAS ENCOUNTERED IN THE SIX BORINGS PERFORMED ALONG THE RETAINING WALL ALIGNMENT AT DEPTHS RANGING FROM 10 TO 17 FT BGS (APPROXIMATE ELEVATIONS 1037 TO 1045 FT AMSL).

IR-277 EB RAMP A CULVERT (STA. 102+19)

THE SUBSURFACE AT THE CULVERT SITE CONSISTED OF TWO DIFFERENT PROFILES BASED ON THE TWO BORINGS PERFORMED AT THE SITE. THE SOIL PROFILE AT THE INLET (B-088-0-17) CONSISTED OF 9.5 FT OF NON-COHESIVE, GRANULAR FILL OVER NATURAL NON-COHESIVE, GRANULAR TILL ALL ATOP SANDSTONE BEDROCK. THE SOIL PROFILE NEAR THE RAMP A SHOULDER PAVEMENT (B-089-0-17), UPSLOPE OF THE CULVERT INLET, CONSISTED OF 25 TO 30 FT OF COHESIVE EMBANKMENT FILL ATOP NATURAL COHESIVE TILL. THE GRANULAR FILL CAN BE DESCRIBED AS VERY LOOSE TO LOOSE IN COMPACTNESS WHILE THE COHESIVE FILL CAN BE DESCRIBED AS VERY STIFF TO HARD IN CONSISTENCY. THE NATURAL GRANULAR TILL AT THE SITE CAN BE DESCRIBED AS MEDIUM DENSE TO VERY DENSE IN COMPACTNESS WHILE THE COHESIVE TILL CAN BE DESCRIBED AS VERY STIFF TO HARD IN CONSISTENCY. BEDROCK WAS ENCOUNTERED AT A DEPTH OF 23.6 FT (ELEVATION 998.4 FT AMSL) AT THE CULVERT INLET (B-088-0-17) AND WAS DESCRIBED AS INTERBEDDED SANDSTONE AND SHALE.

NOISE WALL HI

THE SUBSURFACE ALONG THE PROPOSED NOISE WALL HI ALIGNMENT FROM BORING B-070-0-17 TO B-075-0-17 GENERALLY CONSISTED OF 11 TO 18.5 FT OF NATURAL GLACIAL TILL SOIL OVERBURDENING SANDSTONE OR SHALE BEDROCK. THE NATURAL SOILS CONSISTED OF INTERMIXED GRANULAR AND LOW TO MODERATE PLASTICITY FINE-GRAINED SOILS. BEDROCK VISUALLY CLASSIFIED AS HIGHLY WEATHERED SANDSTONE WAS ENCOUNTERED BENEATH THE OVERBURDEN SOILS AT DEPTHS RANGING FROM 11 TO 18.5 FT BGS (ELEVATIONS 1049.7 TO 1039.8 FT AMSL).
THE SOIL PROFILE ALONG THE NW-HI ALIGNMENT FROM BORING B-076-0-17 TO B-102-0-17 GENERALLY CONSISTED OF 0 TO 25 FT OF EMBANKMENT FILL FOLLOWED BY 0 TO 22 FT OF NATURAL GLACIAL TILL SOIL OVERBURDENING SANDSTONE OR SHALE BEDROCK. FILL SOIL CONSISTED OF EITHER LOW TO MODERATE PLASTICITY, FINE-GRAINED SOILS AND/OR GRANULAR SOILS WITH THE NATURAL SOILS CONSISTING OF SIMILAR SOIL COMBINATIONS. BEDROCK WITHIN THIS RANGE WAS VISUALLY CLASSIFIED AS SLIGHTLY TO SEVERELY WEATHERED SANDSTONE OR SHALE AND WAS ENCOUNTERED BENEATH THE OVERBURDEN SOILS AT DEPTHS RANGING FROM 11 TO 26 FT BGS (ELEVATIONS 1032.1 TO 1018.1 FT AMSL).

NOISE WALL E

THE SUBSURFACE ALONG THE PROPOSED NOISE WALL E ALIGNMENT (B-055-0-17 TO B-069-0-17) GENERALLY CONSISTED OF 3 TO 25 FT OF NATURAL GLACIAL TILL SOIL OVERBURDENING SANDSTONE OR SHALE BEDROCK. THE NATURAL SOILS CONSISTED OF INTERMIXED GRANULAR AND LOW TO MODERATE PLASTICITY FINE-GRAINED SOILS (B-055-0-17, B-056-0-17, B-057-0-17, B-059-0-17 TO B-062-0-17, AND B-066-0-17 TO B-068-0-17) OR GRANULAR SOILS (B-058-0-17, B-064-0-17, AND B-069-0-17). THE EXCEPTION BEING BORING B-065-0-17, IN WHICH ELASTIC CLAYS WERE PRESENT FROM 10.5 TO 18.5 FT BGS (1045.3 TO 1037.3 FT AMSL). BEDROCK VISUALLY CLASSIFIED AS HIGHLY WEATHERED SANDSTONE WAS ENCOUNTERED BENEATH THE OVERBURDEN SOILS AT DEPTHS RANGING FROM 3 TO 18.5 FT BGS (ELEVATIONS 1056.7 TO 1037.3 FT AMSL).

EXPLORATION FINDINGS (CONTINUED)

NOISE WALL G

THE SUBSURFACE ALONG THE PROPOSED NOISE WALL G ALIGNMENT (B-103-0-17 TO B-114-0-17) GENERALLY CONSISTED OF 6 TO 25 FT OF NATURAL GLACIAL TILL SOILS COMPRISED OF INTERMIXED GRANULAR AND LOW TO MODERATE PLASTICITY FINE-GRAINED SOILS (B-103-0-17, B-105-0-17, B-106-0-17, AND B-107-0-17 TO B-109-0-17) OR GRANULAR SOILS (B-104-0-17, B108-1-17 AND B-110-0-17 TO B-114-0-17) OVERBURDENING SANDSTONE OR SHALE BEDROCK.
BEDROCK VISUALLY CLASSIFIED AS SLIGHTLY TO MODERATELY WEATHERED SANDSTONE OR SHALE WAS ENCOUNTERED BENEATH THE OVERBURDEN SOILS AT DEPTHS RANGING FROM 6 TO 25 FT BGS (ELEVATIONS 1055.1 TO 1028.6 FT AMSL).

NOISE WALL K

THE SUBSURFACE ALONG THE PROPOSED NOISE WALL K ALIGNMENT FROM BORING B-118-0-17 TO B-122-0-17 GENERALLY CONSISTED OF 3 TO 15 FT OF EMBANKMENT FILL FOLLOWED BY 10 TO 21 FT OF NATURAL GLACIAL TILL SOIL OVERBURDENING SANDSTONE OR SHALE BEDROCK. THE FILL AND NATURAL SOILS GENERALLY CONSISTED OF LOW TO MODERATE PLASTICITY, FINE-GRAINED SOILS. WITHIN THIS PORTION OF NW-K, BEDROCK WAS VISUALLY CLASSIFIED AS MODERATELY TO SEVERELY WEATHERED SANDSTONE OR SHALE AND WAS ENCOUNTERED BENEATH THE OVERBURDEN SOILS AT A DEPTH OF 27.5FT BGS (ELEVATION 1044.9 FT).
THE SOIL PROFILE ALONG THE NW-K ALIGNMENT FROM BORING B-123-0-17 TO B-130-17 GENERALLY CONSISTED OF 6 TO 16.5 FT OF NATURAL GLACIAL TILL SOIL OVERBURDENING SANDSTONE OR SHALE BEDROCK. THE NATURAL SOILS CONSISTED OF LOW TO MODERATE PLASTICITY, FINE-GRAINED SOILS AND/OR GRANULAR SOILS. WITHIN THIS PORTION OF NW-K, BEDROCK WAS VISUALLY CLASSIFIED AS HIGHLY TO SEVERELY WEATHERED SANDSTONE OR SHALE AND WAS ENCOUNTERED BENEATH THE OVERBURDEN SOILS AT DEPTHS RANGING FROM 6.3 TO 16.5 FT BGS (ELEVATIONS 1110.2 TO 1084.2 FT).

NOISE WALL C

THE SUBSURFACE ALONG THE PROPOSED NOISE WALL C ALIGNMENT FROM BORING B-131-0-17 TO B-139-0-17 GENERALLY CONSISTED OF 24 TO 25 FT OF NATURAL GLACIAL TILL SOILS CONSISTING OF INTERMIXED GRANULAR AND LOW TO MODERATE PLASTICITY FINE-GRAINED SOILS (B-131-0-17 TO B-133-0-17 AND B-135-17 TO B-139-0-17) OR GRANULAR SOILS (B-134-0-17). BEDROCK WAS NOT ENCOUNTERED WITHIN THE REFERENCED RANGE OF BORINGS.
THE SOIL PROFILE ALONG THE NW-C ALIGNMENT FROM BORING B-140-0-17 TO B-147-0-17 GENERALLY CONSISTED OF 5 TO 14 FT OF EMBANKMENT FILL FOLLOWED BY 16 TO 20 FT OF NATURAL GLACIAL TILL SOIL OVERBURDENING SANDSTONE OR SHALE BEDROCK. THE FILL AND NATURAL SOILS ALSO CONSISTED OF INTERMIXED GRANULAR AND LOW TO MODERATE PLASTICITY FINE-GRAINED SOILS. THE EXCEPTION TO THIS IS B-145-0-17 WHICH IS GRANULAR THROUGHOUT THE DEPTH OF THE BORING. BEDROCK WAS NOT ENCOUNTERED WITHIN THE REFERENCED RANGE OF BORINGS.

SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION OFFICE OF GEOTECHNICAL ENGINEERING SPECIFICATIONS FOR GEOTECHNICAL EXPLORATION DATED JANUARY 2019.

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 DIRECTORS OFFICE, THE OFFICE OF GEOTECHNICAL ENGINEERING AT 1600 WEST BROAD STREET OR THE OFFICE OF STRUCTURAL ENGINEERING AT 1980 WEST BROAD STREET.

INDEX OF SHEETS

SUMMARY OF SOIL TEST DATA, SHEETS 4-9

LOCATION FROM STA.	LOCATION TO STA.	PLAN VIEW SHEET	PROFILE SHEET	CROSS-SECTION SHEET	CUT MAX.	FILL EMB. MAX.
SOIL PROFILES						
I.R. 77						
371+00	385+00	12	13	-	<1 FT	<1 FT
385+00	399+00	14	15	-	<1 FT	<1 FT
399+00	413+00	16	17	-	<1 FT	<1 FT
413+00	427+00	18	19	-	<1 FT	<1 FT
427+00	441+00	20	21	-	<1 FT	<1 FT
441+00	454+00	22	23	-	<1 FT	<2 FT
454+00	467+00	24	25	-	<1 FT	<1 FT
467+00	472+00	26	27	-	<1 FT	<1 FT
NB I.R. 77						
470+00	483+00	28	28	-	<1 FT	<1 FT
483+00	498+00	29	29	-	<1 FT	<1 FT
498+00	512+50	30	30	-	<1 FT	<1 FT
512+50	527+00	31	31	-	<1 FT	<1 FT
SB I.R. 77						
470+00	483+00	32	32	-	<1 FT	<1 FT
483+00	498+00	33	33	-	<1 FT	<1 FT
498+00	513+00	34	34	-	<1 FT	<1 FT
513+00	527+00	35	35	-	<1 FT	<1 FT
I.R. 277/U.S. 224						
223+00	237+00	36	36	-	<1 FT	<1 FT
237+00	251+00	37	37	-	<1 FT	<1 FT
251+00	264+00	38	38	-	<1 FT	<1 FT
264+00	277+00	39	39	-	<1 FT	<1 FT
RAMP A						
87+00	100+00	40	40	-	<1 FT	<2 FT
100+00	114+00	41	41	-	<1 FT	<1 FT
RAMP B						
197+00	209+00	42	42	-	3 FT	12 FT
209+00	219+00	43	43	-	<1 FT	<1 FT
RAMP B-1						
402+50	413+00	44	45	-	<1 FT	<1 FT
RAMP B-2						
285+50	298+00	46	46	-	12 FT	<1 FT
298+00	10+00	47	47	-	4 FT	12 FT
10+00	23+00	48	48	-	<1 FT	<1 FT
307+50 & 16+50		-	-	62	5 FT	2 FT
23+00	34+00	49	49	-	<1 FT	<1 FT
RAMP C						
576+00	589+00	50	50	-	<1 FT	<1 FT
589+00	602+00	51	51	-	<1 FT	<1 FT
602+00	606+50	52	52	-	<1 FT	<1 FT
RAMP C-1						
679+00	703+00	53	54	-	<1 FT	<1 FT
RAMP C-2						
781+50	791+00	55	55	-	<1 FT	<1 FT
791+00	801+50	56	56	-	<1 FT	4 FT
RAMP D						
887+50	897+00	57	57	-	<1 FT	<1 FT
897+00	907+00	58	58	-	<1 FT	<1 FT
907+00	917+00	59	59	-	<1 FT	<1 FT
ARLINGTON ROAD RAMP D						
71+00	79+00	60	60	-	<1 FT	<1 FT
79+00	88+50	61	61	-	<1 FT	<1 FT

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SOIL PROFILE
EXPLORATION NOTES (CONT.)

SUM-77/277/224
VARIOUS

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INDEX OF SHEETS (CONTINUED)						
LOCATION FROM STA.	TO STA.	PLAN VIEW SHEET	PROFILE SHEET	CROSS-SECTION SHEET	CUT MAX.	FILL EMB. MAX.
SFE						
SUM-77-0802 L & R						
424+00	428+00	63	64	-	<1 FT	<1 FT
SUM-77-0810 L & R						
428+00	432+00	65	66	-	<1 FT	<1 FT
SUM-77-0927R						
789+00	793+50	67	68	-	<1 FT	<1 FT
RETAINING WALL 1						
467+00	478+00	69	69	-	<1 FT	<1 FT
RETAINING WALL 2						
791+50	795+50	70	70	-	17 FT	<1 FT
CULVERT AT RAMP A STA. 102+19						
19+00	24+50	71	71	-	<1 FT	<1 FT
NOISE WALL C						
10+00	14+50	72	72	-	-	-
14+50	19+50	73	73	-	-	-
19+50	24+50	74	74	-	-	-
24+50	29+50	75	75	-	-	-
29+50	34+50	76	76	-	-	-
34+50	39+50	77	77	-	-	-
39+50	END	78	78	-	-	-
NOISE WALL E						
10+00	15+00	79	79	-	-	-
15+00	20+00	80	80	-	-	-
20+00	25+00	81	81	-	-	-
25+00	30+00	82	82	-	-	-
30+00	35+00	83	83	-	-	-
35+00	END	84	84	-	-	-
NOISE WALL G						
10+00	14+00	85	85	-	-	-
14+00	19+00	86	86	-	-	-
19+00	24+00	87	87	-	-	-
24+00	29+00	88	88	-	-	-
29+00	34+00	89	89	-	-	-
34+00	END	90	90	-	-	-
NOISE WALL HI						
10+00	15+00	91	91	-	-	-
15+00	20+00	92	92	-	-	-
20+00	25+00	93	93	-	-	-
25+00	30+00	94	94	-	-	-
30+00	35+00	95	95	-	-	-
35+00	40+00	96	96	-	-	-
40+00	45+00	97	97	-	-	-
45+00	50+00	98	98	-	-	-
50+00	55+00	99	99	-	-	-
55+00	60+00	100	100	-	-	-
60+00	65+00	101	101	-	-	-
65+00	END	102	102	-	-	-
NOISE WALL K						
10+00	15+00	103	103	-	-	-
15+00	20+00	104	104	-	-	-
20+00	25+00	105	105	-	-	-
25+00	30+00	106	106	-	-	-
30+00	END	107	107	-	-	-
CCTV POLE						
IR-77 STA. 422+00		-	-	108	4 FT	<1 FT
BORING LOGS, SHEETS 109-204						
ROCK TESTING, SHEETS 205-209						

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SOIL PROFILE EXPLORATION NOTES (CONT.)

SUM-77/277/224
VARIOUS

SUM-77/277/224 VARIOUS		
BORING ID	PLAN VIEW SHEETS	PROFILE SHEET
B-001-0-14	29, 33, 46, 53, 56, 66, 69	46
B-001-0-17	12, 60	60
B-001-0-63	33, 53, 56, 66, 69	67
B-002-0-14	30, 33, 38, 47, 53, 56	47
B-002-0-17	12, 60	60
B-003-0-14	30, 34, 44, 47, 58	47
B-003-0-17	12, 61	61
B-003-1-14	30, 34, 44, 47, 59	62
B-004-0-14	30, 34, 44, 47, 59	47, 62
B-004-0-17	14, 61	15
B-005-0-17	14, 61	15
B-006-0-17	14, 61	15
B-007-0-14	30, 34, 43, 44, 47	47
B-007-0-17	14	15
B-008-0-14	42, 44, 48	48
B-008-0-17	16	17
B-008-0-63	29, 33, 46, 53, 55, 66	67
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B-009-0-17	16	17
B-009-1-14	37, 42, 44, 48	62
B-009-2-14	37, 42, 48	42
B-010-0-14	37, 41, 42, 48	48
B-010-0-17	16	17
B-010-1-61	20, 64	65
B-010-1-14	36, 42, 48	42
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B-011-0-17	18, 74	19
B-012-0-17	18, 75	19
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B-013-2-17	18, 62, 77	63
B-013-3-17	18, 62, 77	63
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B-014-1-17	20, 64	65
B-014-2-17	20, 64	65
B-014-3-17	20, 64	65
B-015-0-17	20	21
B-016-0-17	20	21
B-017-0-17	22, 78	23
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B-019-0-17	22	23
B-019-1-17	22	23
B-019-2-17	24	25
B-019-3-17	24	25
B-020-0-17	24	25
B-020-1-17	24	25
B-020-2-17	24	25
B-021-0-17	24	25
B-021-1-17	24	25
B-021-2-17	24	25
B-021-3-17	24	25
B-022-0-17	24, 82	25
B-022-1-17	24	25
B-022-2-17	26, 68	68
B-022-3-17	26, 32, 68	68
B-022-4-17	26, 28, 32, 68	68
B-023-0-17	26, 28, 32, 68, 86	28
B-023-1-17	26, 28, 32, 68	68
B-023-2-17	26, 28, 32, 68	68
B-024-0-17	26, 28, 32, 68	32
B-024-1-17	26, 28, 32, 50, 68	68
B-024-2-17	26, 28, 32, 50, 68	68
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B-031-0-17	29, 33, 40, 46, 98	40
B-032-0-17	29, 33, 46, 53, 66	29
B-033-0-17	29, 33, 40, 46, 56, 66, 97	33
B-033-1-17	29, 33, 40, 46, 53, 56, 66, 69	56, 69
B-033-2-17	29, 33, 46, 53, 56, 66, 69	56, 67, 69
B-033-3-17	29, 33, 46, 53, 56, 66, 69	67
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B-033-5-17	29, 46, 51, 53, 55, 66	55, 67
B-034-0-17	29, 33, 46, 53, 56, 66	54
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B-034-3-17	51, 53, 55	54
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B-036-0-17	29, 33, 38, 46, 53, 56	54
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B-037-0-17	30, 34, 38, 44, 47, 53, 56	47
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B-047-2-17	30, 34, 44, 47	45
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B-143-0-17	18, 75	75
B-144-0-17	18, 76	76
B-145-0-17	18, 76	76, 108
B-145-1-17	18	108
B-146-0-17	18, 62, 76	76
B-147-0-17	18, 62, 77	77

DRAWN EB | CHECKED BPA

SOIL PROFILE EXPLORATION NOTES (CONT.)

SUM-77/277/224 VARIOUS

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P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002IC005.dgn Sheet 1/7/2021 11:11:25 PM karens

SUMMARY OF SOIL TEST DATA
PROJECT BORINGS - IR-77

EXPLORATION NO., STATION & OFFSET	FROM		TO	SAMPLE ID	N60	% REC	HP tsf	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)	ppm SO4 <100
B-001-0-17	01.50	-	03.00	SS-1	36	89	3.5				SAME AS SS-2					13	A-4a (VISUAL)	<100
STA. 374+25, 76' RT	03.00	-	04.50	SS-2	31	89	2.5	14	17	33	25	11	19	14	5	10	A-4a (0)	
LATITUDE = 40.991784	04.50	-	06.00	SS-3	12	78	1.5	16	18	24	27	15	23	14	9	12	A-4a (1)	
LONGITUDE = -81.493625	06.00	-	07.50	SS-4	17	89	1.5				SAME AS SS-3					8	A-4a (VISUAL)	
B-002-0-17	01.50	-	03.00	SS-1	17	67	3.5				SAME AS SS-2					14	A-4a (VISUAL)	333
STA. 378+16, 70' RT	03.00	-	04.50	SS-2	21	100	4.5	2	4	29	48	17	19	15	4	14	A-4a (6)	
LATITUDE = 40.993046	04.50	-	06.00	SS-3	14	100	4	2	4	26	51	17	21	16	5	16	A-4b (7)	
LONGITUDE = -81.493544	06.00	-	07.50	SS-4	18	100	2.5				SAME AS SS-3					17	A-4b (VISUAL)	
B-003-0-17	01.50	-	03.00	SS-1	27	67	4.5+				SAME AS SS-2					11	A-4a (VISUAL)	573
STA. 381+55, 86' RT	03.00	-	04.50	SS-2	53	89	4.5+	8	11	37	32	12	15	12	3	7	A-4a (2)	
LATITUDE = 40.993976	04.50	-	06.00	SS-3	38	100	4.5+	7	10	35	34	14	14	11	3	7	A-4a (3)	
LONGITUDE = -81.493564	06.00	-	07.50	SS-4	25	100	3.0 - 4.5+				SAME AS SS-3					9	A-4a (VISUAL)	
B-004-0-17	01.50	-	03.00	SS-1	13	83	-				SAME AS SS-2					9	A-2-4 (VISUAL)	107
STA. 385+14, 9' RT	03.00	-	04.50	SS-2	21	67	-	27	11	30	23	9	14	12	2	9	A-2-4 (0)	
LATITUDE = 40.994963	04.50	-	06.00	SS-3	21	100	3.25 - 4.5+	7	9	30	39	15	20	16	4	14	A-4a (4)	
LONGITUDE = -81.493802	06.00	-	07.50	SS-4	29	100	2.0 - 4.5+				SAME AS SS-3					15	A-4a (VISUAL)	
B-005-0-17	01.50	-	03.00	SS-1	9	78	3.1				SAME AS SS-2					19	A-4a (VISUAL)	<100
STA. 389+59, 82' RT	03.00	-	04.50	SS-2	42	100	4.5+	9	15	32	32	12	18	14	4	8	A-4a (2)	
LATITUDE = 40.996180	04.50	-	06.00	SS-3	20	100	4.25	4	7	19	50	20	21	14	7	16	A-4b (7)	
LONGITUDE = -81.493508	06.00	-	07.50	SS-4	39	100	4.5+				SAME AS SS-3					13	A-4b (VISUAL)	
B-006-0-17	01.50	-	03.00	SS-1	27	56	-				BROWN, GRAVEL WITH SAND					6	A-1-b (VISUAL)	1480
STA. 390+24, 62' LT	03.00	-	04.50	SS-2	26	89	4.5+	7	12	23	40	18	21	14	7	10	A-4a (5)	
LATITUDE = 40.996365	04.50	-	06.00	SS-3	17	100	4.5+	6	10	31	38	15	18	14	4	11	A-4a (4)	
LONGITUDE = -81.494028	06.00	-	07.50	SS-4	21	100	4.5+				SAME AS SS-3					9	A-4a (VISUAL)	
B-007-0-17	02.50	-	04.00	SS-1	43	44	-	50	23	14	10	3	NP	NP	NP	4	A-1-a (0)	
STA. 397+54, 23' LT	05.00	-	06.50	SS-2	30	56	-				SAME AS SS-1					5	A-1-a (VISUAL)	<100
LATITUDE = 40.998365	07.50	-	09.00	SS-3	26	89	4.5+	11	10	33	34	12	NP	NP	NP	12	A-4a (2)	
LONGITUDE = -81.493875	09.00	-	10.50	SS-4	29	100	4.5+				SAME AS SS-3					12	A-4a (VISUAL)	
B-008-0-17	00.00	-	01.50	SS-1	9	100	-	22	40	28	6	4	NP	NP	NP	7	A-1-b (0)	
STA. 401+53, 7' LT	01.50	-	03.00	SS-2	10	100	-				SAME AS SS-1					7	A-1-b (VISUAL)	<100
LATITUDE = 40.999461	03.00	-	04.00	SS-3A	6	100	-	52	23	15	7	3	NP	NP	NP	9	A-1-a (0)	
LONGITUDE = -81.493844	04.00	-	04.50	SS-3B	-	-	2				SAME AS SS-4					21	A-4a (VISUAL)	
	04.50	-	06.00	SS-4	10	100	2	1	4	28	47	20	24	17	7	20	A-4a (6)	
	06.00	-	07.50	SS-5	10	0	-											
	07.50	-	09.00	SS-6	11	100	3				SAME AS SS-4					21	A-4a (VISUAL)	
	09.00	-	10.50	SS-7	44	100	4.5+				SAME AS SS-4					10	A-4a (VISUAL)	
B-009-0-17	01.50	-	03.00	SS-1	30	56	4.5+				SAME AS SS-2					11	A-4a (VISUAL)	120
STA. 405+54, 12' RT	03.00	-	04.50	SS-2	16	39	4.5+	20	12	27	29	12	19	14	5	9	A-4a (1)	
LATITUDE = 41.000562	04.50	-	06.00	SS-3	23	33	4.5+				SAME AS SS-2					11	A-4a (VISUAL)	
LONGITUDE = -81.493832	06.00	-	07.50	SS-4	21	100	-	9	4	44	34	9	NP	NP	NP	11	A-4a (2)	
B-010-0-17	00.00	-	01.50	SS-1	20	0	-											
STA. 409+54, 12' LT	01.50	-	03.00	SS-2	36	100	4.5+	6	10	30	37	17	22	15	7	13	A-4a (4)	
LATITUDE = 41.001656	03.00	-	04.50	SS-3	63	100	4.5+				SAME AS SS-2					10	A-4a (VISUAL)	400
LONGITUDE = -81.493985	04.50	-	06.00	SS-4	20	100	4.5+				SAME AS SS-2					14	A-4a (VISUAL)	
	06.00	-	07.50	SS-5	31	100	4.5+	12	11	28	34	15	24	16	8	12	A-4a (3)	
	07.50	-	09.00	SS-6	24	100	4				SAME AS SS-5					12	A-4a (VISUAL)	
	09.00	-	10.50	SS-7	27	100	4.5+				SAME AS SS-5					13	A-4a (VISUAL)	
B-011-0-17	01.50	-	03.00	SS-1	20	100	4.5+	8	9	29	40	14	19	15	4	15	A-4a (4)	
STA. 413+58, 73' LT	03.00	-	04.50	SS-2	20	100	4.5+				SAME AS SS-1					11	A-4a (VISUAL)	<100
LATITUDE = 41.002756	04.50	-	06.00	SS-3	23	100	4.5+	7	6	29	42	16	20	15	5	12	A-4a (5)	
LONGITUDE = -81.494271	06.00	-	07.50	SS-4	25	100	4.5+				SAME AS SS-3					13	A-4a (VISUAL)	
B-012-0-17	00.00	-	01.50	SS-1	21	100	3.5	9	12	36	29	14	20	16	4	13	A-4a (2)	
STA. 417+53, 4' LT	01.50	-	03.00	SS-2	24	100	3				SAME AS SS-1					9	A-4a (VISUAL)	540
LATITUDE = 41.003848	03.00	-	04.50	SS-3	7	100	2	7	13	33	34	13	22	17	5	15	A-4a (2)	
LONGITUDE = -81.494084	04.50	-	06.00	SS-4	16	100	4.5+				SAME AS SS-3					11	A-4a (VISUAL)	
	06.00	-	07.50	SS-5	46	100	4.5+				SAME AS SS-3					13	A-4a (VISUAL)	
	07.50	-	09.00	SS-6	20	100	4.5+	5	5	16	44	30	35	20	15	16	A-6a (10)	
	09.00	-	10.50	SS-7	30	100	4.5+				SAME AS SS-6					15	A-6a (VISUAL)	
B-013-0-17	01.50	-	03.00	SS-1	22	78	-				SAME AS SS-2					11	A-3a (VISUAL)	167
STA. 421+52, 54' RT	03.00	-	04.50	SS-2	34	89	-	20	19	32	21	8	NP	NP	NP	8	A-3a (0)	
LATITUDE = 41.004950	04.50	-	06.00	SS-3	30	83	-	20	20	33	20	7	NP	NP	NP	10	A-3a (0)	
LONGITUDE = -81.493938	06.00	-	07.50	SS-4	22	94	-				SAME AS SS-3					14	A-3a (VISUAL)	
B-014-0-17	01.50	-	02.30	SS-1A	21	67	2.5 - 4.5+	12	18	32	25	13	20	14	6	11	A-4a (1)	
STA. 432+92, 73' LT	02.30	-	03.00	SS-1B	-	-	-				SAME AS SS-3					8	A-2-4 (VISUAL)	
LATITUDE = 41.008050	03.00	-	04.50	SS-2	22	89	-				SAME AS SS-3					10	A-2-4 (VISUAL)	<100
LONGITUDE = -81.494605	04.50	-	06.00	SS-3	34	78	-	25	18	29	21	7	NP	NP	NP	12	A-2-4 (0)	
	06.00	-	07.50	SS-4	23	83	-	LT BROWN, GRAVEL AND STONE FRAG. WITH SAND & SILT								15	A-1-b (VISUAL)	
B-015-0-17	00.00	-	01.50	SS-1	10	100	-	7	12	41	30	10	NP	NP	NP	15	A-4a (1)	
STA. 436+85, 2' LT	01.50	-	03.00	SS-2	6	100	1				SAME AS SS-1					18	A-4a (VISUAL)	<100
LATITUDE = 41.009140	03.00	-	04.50	SS-3	3	100	0.75				SAME AS SS-1					18	A-4a (VISUAL)	
LONGITUDE = -81.494477	04.50	-	06.00	SS-4	3	100	-	6	11	54	20	9	NP	NP	NP	17	A-3a (0)	
	06.00	-	07.50	SS-5	21	100	-	BROWN & GRAY, GRAVEL & STONE FRAG WITH SAND & SILT								17	A-2-4 (VISUAL)	
	07.50	-	09.00	SS-6	21	100	-	BROWN & GRAY, GRAVEL & STONE FRAG WITH SAND & SILT								12	A-2-4 (VISUAL)	
	09.00	-	10.50	SS-7	26	100	4.5+	9	15	29	28	19	24	15	9	13	A-4a (2)	
B-016-0-17	01.50	-	03.00	SS-1	12	11					DARK BROWN, GRAVEL WITH SAND					6	A-1-b (VISUAL)	<100
STA. 440+91, 70' RT	03.00	-	04.50	SS-2	30	89					SAME AS SS-2					9	A-3a (VISUAL)	
LATITUDE = 41.010271	04.50	-	06.00	SS-3	12	100	-	5	10	56	18	11	NP	NP	NP	11	A-3a (0)	
LONGITUDE = -81.494393	06.00	-	07.50	SS-4	16	89	-	8	23	31	30	8	NP	NP	NP	14	A-4a (1)	

SUMMARY OF SOIL TEST DATA
PROJECT BORINGS - IR-77 (CONTINUED)

EXPLORATION NO., STATION & OFFSET	FROM		TO	SAMPLE ID	N60	% REC	HP tsf	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)	ppm SO4
B-017-0-17	00.00	-	01.50	SS-1	17	100	2	7	10	27	41	15	23	17	6	16	A-4a (4)	
STA. 444+92, 3' LT	01.50	-	03.00	SS-2	38	100	4.25				SAME AS SS-2					11	A-4a (VISUAL)	153
LATITUDE = 41.011334	03.00	-	04.50	SS-3	26	100	2.5	16	18	29	26	11	28	22	6	17	A-4a (0)	
LONGITUDE = -81.494868	04.50	-	06.00	SS-4	16	89	2.5				SAME AS SS-3					14	A-4a (VISUAL)	
	06.00	-	07.50	SS-5	28	100	4.25				SAME AS SS-3					16	A-4a (VISUAL)	
	07.50	-	09.00	SS-6	21	100	4.5+				SAME AS SS-7					11	A-4a (VISUAL)	
	09.00	-	10.50	SS-7	36	100	4.5+	4	7	34	37	18	21	15	6	12	A-4a (4)	
B-018-0-17	01.50	-	03.00	SS-1	16	100	2.5 - 4.5+	8	7	23	41	21	26	16	10	14	A-4a (5)	
STA. 448+88, 39' LT	03.00	-	04.50	SS-2	18	100	4.5+				SAME AS SS-1					19	A-4a (VISUAL)	<100
LATITUDE = 41.012386	04.50	-	06.00	SS-3	25	100	-	20	21	29	19	11	23	17	6	10	A-2-4 (0)	
LONGITUDE = -81.495243	06.00	-	07.50	SS-4	27	100	-				SAME AS SS-3					10	A-2-4 (VISUAL)	
B-019-0-17	00.00	-	01.50	SS-1	16	100	-				SAME AS SS-2					15	A-2-4 (VISUAL)	<100
STA. 452+86, 2' LT	01.50	-	03.00	SS-2	17	89	-	26	24	20	18	12	32	23	9	16	A-2-4 (0)	
LATITUDE = 41.013478	03.00	-	04.50	SS-3	28	67	-	27	17	37	10	9	NP	NP	NP	12	A-3a (0)	
LONGITUDE = -81.495376	04.50	-	06.00	SS-4	21	83	-				SAME AS SS-3					20	A-3a (VISUAL)	
	06.00	-	07.50	SS-5	30	56	-	33	27	16	17	7	NP	NP	NP	14	A-1-b (0)	
	07.50	-	09.00	SS-6	24	50	-				SAME AS SS-5					12	A-1-b (VISUAL)	
	09.00	-	10.50	SS-7	11	33	-				SAME AS SS-5					11	A-1-b (VISUAL)	
B-020-0-17	01.50	-	03.00	SS-1	56	83					SAME AS SS-2					8	A-2-6 (VISUAL)	227
STA. 457+03, 35' RT	03.00	-	04.50	SS-2	33	78	-	26	21	20	18	15	31	17	14	11	A-2-6 (1)	
LATITUDE = 41.014623	04.50	-	06.00	SS-3	17	89					SAME AS SS-2					10	A-2-6 (VISUAL)	
LONGITUDE = -81.495520	06.00	-	07.50	SS-4	20	56	-	23	36	20	13	8	NP	NP	NP	9	A-1-b (0)	
B-021-0-17	00.00	-	01.50	SS-1	24	100	-	16	19	31	23	11	24	17	7	13	A-2-4 (0)	
STA. 460+99, 0' CL	01.50	-	03.00	SS-2	37	100	-				SAME AS SS-1					11	A-2-4 (VISUAL)	200
LATITUDE = 41.015674	03.00	-	03.50	SS-3A	30	100	-				SAME AS SS-2					12	A-2-4 (VISUAL)	
LONGITUDE = -81.495905	03.50	-	04.50	SS-3B	-	-	-	1	10	57	22	10	NP	NP	NP	11	A-3a (0)	
	04.50	-	06.00	SS-4	46	100	-	6	14	59	13	8	NP	NP	NP	10	A-3a (0)	
	06.00	-	07.50	SS-5	57	44	-				SAME AS SS-4					11	A-3a (VISUAL)	
	07.50	-	09.00	SS-6	33	89	-				SAME AS SS-4					8	A-3a (VISUAL)	
	09.00	-	10.50	SS-7	46	100	-				SAME AS SS-4					8	A-3a (VISUAL)	
B-022-0-17	01.50	-	02.50	SS-1A	60	56	-	51	24	10	11	4	25	20	5	7	A-1-a (0)	
STA. 464+91, 72' LT	02.50	-	03.00	SS-1B	-	-	-				SAME AS SS-2					15	A-4a (VISUAL)	<100
LATITUDE = 41.016696	03.00	-	04.50	SS-2	44	33	-	18	34	12	22	14	30	21	9	12	A-4a (0)	
LONGITUDE = -81.496422	04.50	-	04.92	SS-3	50/5"	40	-				SAME AS SS-2					13	A-4a (VISUAL)	
	06.00	-	07.50	SS-4	46	56	-	BROWN & GRAY, GRAVEL & STONE FRAG WITH SAND & SILT								10	A-2-4 (VISUAL)	
B-023-0-17	01.50	-	03.00	SS-1	25	78	-				SAME AS SS-2					7	A-1-b (VISUAL)	320
STA. 471+65, 63' RT	03.00	-	04.50	SS-2	20	89	-	46	17	18	14	5	NP	NP	NP	11	A-1-b (0)	
LATITUDE = 41.018582	04.50	-	06.00	SS-3	12	67	-	51	14	16	13	6	NP	NP	NP	11	A-1-b (0)	
LONGITUDE = -81.496386	06.00	-	07.50	SS-4	12	28	-				SAME AS SS-3					12	A-1-b (VISUAL)	

SUMMARY OF SOIL TEST DATA
PROJECT BORINGS - IR-77 NB

EXPLORATION NO., STATION & OFFSET	FROM		TO	SAMPLE ID	N60	% REC	HP tsf	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)	ppm SO4
B-025-0-17	01.50	-	03.00	SS-1	20	83	-				SAME AS SS-2					6	A-4a (VISUAL)	<100
STA. 477+81, 8' LT	03.00	-	04.50	SS-2	77	89	-	16	11	26	39	8	NP	NP	NP	7	A-4a (2)	
LATITUDE = 41.020214	04.50	-	05.50	SS-3	17/50/6"	67	-	32	12	30	20	6	NP	NP	NP	8	A-2-4 (0)	
LONGITUDE = -81.496984	06.00	-	06.33	SS-4	50/4"	25	-				SAME AS SS-3					8	A-2-4 (VISUAL)	
B-027-0-17	01.50	-	03.00	SS-1	20	89	4.25				SAME AS SS-2					16	A-4a (VISUAL)	247
STA. 481+74, 50' RT	03.00	-	04.50	SS-2	18	78	3.25	10	10	22	36	22	26	16	10	15	A-4a (5)	
LATITUDE = 41.021295	04.50	-	06.00	SS-3	29	89	4.5+	18	12	27	29	14	22	15	7	11	A-4a (2)	
LONGITUDE = -81.497219	06.00	-	07.50	SS-4	21	83	4.5+				SAME AS SS-3					17	A-4a (VISUAL)	
B-030-0-17	01.50	-	03.00	SS-1	22	28	-	22	19	19	27	13	27	19	8	8	A-4a (1)	
STA. 486+21, 9' LT	03.00	-	04.50	SS-2	23	89	4.5+				SAME AS SS-1					11	A-4a (VISUAL)	127
LATITUDE = 41.022357	04.50	-	06.00	SS-3	18	89	4.25	12	9	25	38	16	25	17	8	14	A-4a (4)	
LONGITUDE = -81.498070	06.00	-	07.50	SS-4	25	28	3				SAME AS SS-3					10	A-4a (VISUAL)	
B-032-0-17	01.50	-	03.00	SS-1	21	44	3.25				SAME AS SS-2					13	A-4a (VISUAL)	493
STA. 490+50, 43' RT	03.00	-	04.50	SS-2	26	100	3.25 - 4.5+	20	14	24	26	16	27	17	10	14	A-4a (1)	
LATITUDE = 41.023449	04.50	-	06.00	SS-3	42	89	4.25 - 4.5+				SAME AS SS-2					14	A-4a (VISUAL)	
LONGITUDE = -81.498693	06.00	-	07.50	SS-4	65	89	-	6	10	59	17	8	NP	NP	NP	11	A-3a (0)	
B-036-1-17	01.50	-	03.00	SS-1	6	17	-	BROWN & GRAY, COARSE AND FINE SAND								11	A-3a (VISUAL)	1273
STA.503+17, 51' RT	03.00	-	04.50	SS-2	10	50	2.5	4	11	28	35	22	22	16	6	17	A-4a (4)	
LATITUDE = 41.026158	04.50	-	06.00	SS-3	12	39	1				SAME AS SS-2					16	A-4a (VISUAL)	
LONGITUDE = -81.501601	06.00	-	06.50	SS-4A	26	44	1.75				SAME AS SS-2					16	A-4a (VISUAL)	
B-001-0-14	01.00	-	02.50	SS-1	25	67	3.5-4.5+	13	9	22	33	23	26	16	10	12	A-4a (4)	
STA. 494+41, 15' LT	02.50	-	04.00	SS-2	27	100	3.5-4.5+	8	8	25	39	20	23	16	7	14	A-4a (5)	
LATITUDE = 41.024237	04.00	-	05.50	SS-3	13	94	2.5-4.5+				SAME AS SS-2					17	A-4a (VISUAL)	
LONGITUDE = -81.499717	05.50	-	07.00	SS-4	13	67	3.5-4.5+	20	7	20	38	15	18	15	3	12	A-4a (4)	
	08.50	-	10.00	SS-5	14	100	4.0-4.5+				SAME AS SS-4					9	A-4a (VISUAL)	
B-002-0-14	01.00	-	02.50	SS-1	8	67	1.5-2.5	12	14	31	30	13	20	15	4	14	A-4a (2)	
STA. 498+45.63, 22' LT	02.50	-	04.00	SS-2	6	100	1.5-2.8				SAME AS SS-1					14	A-4a (VISUAL)	
LATITUDE = 41.025052	04.00	-	05.50	SS-3	22	100	4.0-4.5+	41	3	15	26	15	22	16	6	11	A-4a (1)	
LONGITUDE = -81.500678	05.50	-	07.00	SS-4	56	100	4.0-4.5+				SAME AS SS-3					13	A-4a (VISUAL)	
	08.50	-	10.00	SS-5	18	100	3.5-4.5+	27	9	6	31	27	30	17	13	9	A-6a (6)	
B-039-0-17	01.50	-	03.00	SS-1	21	78		BROWN AND GRAY, GRAVEL WITH SAND								16	A-1-b (VISUAL)	2133
STA. 508+17, 43' RT	03.00	-	04.50	SS-2	18	89	4.5+	9	14	24	36	17	25	16	9	13	A-4a (4)	
LATITUDE = 41.027178	04.50	-	06.00	SS-3	13	0	-											
LONGITUDE = -81.502811	06.00	-	06.40	SS-4A	18	39	3.00				SAME AS SS-2					15	A-4a (VISUAL)	
	06.40	-	07.50	SS-4B	-	-	-	BROWN AND GRAY, GRAVEL AND STONE FRAG. WITH SAND								14	A-1-b (VISUAL)	

SUMMARY OF SOIL TEST DATA
PROJECT BORINGS - IR-77 SB

EXPLORATION NO., STATION & OFFSET	FROM	TO	SAMPLE ID	N60	% REC	HP tsf	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)	ppm SO4 <100
B-024-0-17	00.00	01.50	SS-1	24	100	-	28	37	26	7	2	NP	NP	NP	9	A-1-b (0)	
STA. 474+52, 7' LT	01.50	03.00	SS-2	34	89	-				SAME AS SS-1					7	A-1-b (VISUAL)	<100
LATITUDE = 41.019318	03.00	04.50	SS-3	20	50	-	44	6	20	21	9	20	17	3	8	A-2-4 (0)	
LONGITUDE = -81.496916	04.50	06.00	SS-4	48	56	-				SAME AS SS-3					8	A-2-4 (VISUAL)	
	06.00	07.50	SS-5	90	100	-				SAME AS SS-3					5	A-2-4 (VISUAL)	
	07.50	09.00	SS-6	44	100	-				SAME AS SS-3					7	A-2-4 (VISUAL)	
	09.00	09.33	SS-7	50/4"	100	-				SAME AS SS-3					8	A-2-4 (VISUAL)	
B-026-0-17	01.50	03.00	SS-1	18	83	-	12	33	40	11	4	NP	NP	NP	11	A-3a (0)	
STA. 478+56, 55' LT	03.00	04.50	SS-2	20	78	-	5	8	52	26	9	NP	NP	NP	10	A-3a (0)	180
LATITUDE = 41.020331	04.50	06.00	SS-3	29	89	-	GRAYISH & LT BROWN, GRAVEL & STONE FRAG WITH SAND								12	A-1-b (VISUAL)	
LONGITUDE = -81.497510	06.00	07.50	SS-4	38	100	-	GRAYISH & LT BROWN, GRAVEL & STONE FRAG WITH SAND								11	A-1-b (VISUAL)	
B-028-0-17	00.00	01.50	SS-1	14	56	-				SAME AS SS-2					11	A-2-4 (VISUAL)	<100
STA. 482+48, 3' RT	01.50	03.00	SS-2	40	100	-	23	6	40	21	10	19	14	5	10	A-2-4 (0)	
LATITUDE = 41.021374	03.00	04.50	SS-3	40	78	-	33	8	30	20	9	20	15	5	14	A-2-4 (0)	
LONGITUDE = -81.497870	04.50	06.00	SS-4	46	100	-				SAME AS SS-3					9	A-2-4 (VISUAL)	
	06.00	07.50	SS-5	16	56	1.75				SAME AS SS-6					19	A-4a (VISUAL)	
	07.50	09.00	SS-6	40	78	3.0 - 4.5+	12	8	37	30	13	21	13	8	12	A-4a (2)	
	09.00	10.50	SS-7	17	100	2.25				SAME AS SS-6					16	A-4a (VISUAL)	
B-031-0-17	01.50	03.00	SS-1	12	56	-	21	25	23	20	11	21	15	6	13	A-2-4 (0)	
STA. 486+49, 56' LT	03.00	04.50	SS-2	8	67	-				SAME AS SS-1					16	A-2-4 (VISUAL)	107
LATITUDE = 41.022253	04.50	06.00	SS-3	13	56	-				SAME AS SS-1					15	A-2-4 (VISUAL)	
LONGITUDE = -81.498752	06.00	07.50	SS-4	17	89	-	21	11	33	24	11	19	15	4	9	A-2-4 (0)	
B-033-0-17	00.00	01.50	SS-1	17	100	0.5	BROWN & DARK BROWN, SILT AND CLAY								20	A-6a (VISUAL)	<100
STA. 490+40, 6' RT	01.50	03.00	SS-2	11	89	4.0 - 4.5+	20	8	33	26	13	20	13	7	10	A-4a (1)	
LATITUDE = 41.023227	03.00	04.50	SS-3	34	44	-	17	20	43	13	7	NP	NP	NP	11	A-3a (0)	
LONGITUDE = -81.499369	04.50	06.00	SS-4	68	100	-				SAME AS SS-3					8	A-3a (VISUAL)	
	06.00	07.50	SS-5	68	100	-	5	14	44	27	10	17	13	4	11	A-4a (0)	
	07.50	09.00	SS-6	58	100	-				SAME AS SS-5					11	A-4a (VISUAL)	
	09.00	10.50	SS-7	51	100	-				SAME AS SS-5					12	A-4a (VISUAL)	
B-035-0-17	01.50	02.50	SS-1A	14	67	-	26	30	34	7	3	NP	NP	NP	7	A-1-b (0)	
STA. 495+35, 37' LT	02.50	03.00	SS-1B	-	-	2.00				SAME AS SS-3					15	A-4a (VISUAL)	
LATITUDE = 41.024187	03.00	04.50	SS-2	18	89	4.5+				SAME AS SS-3					12	A-4a (VISUAL)	193
LONGITUDE = -81.500647	04.50	06.00	SS-3	31	100	4.5+	11	9	41	25	14	21	15	6	10	A-4a (1)	
	06.00	07.50	SS-4	38	100	4.5+				SAME AS SS-3					13	A-4a (VISUAL)	
B-050-1-17	01.50	03.00	SS-1	17	56	-				SAME AS SS-2					13	A-1-b (VISUAL)	<100
STA. 500+26, 54' LT	03.00	04.50	SS-2	18	83	-	17	43	33	4	3	NP	NP	NP	14	A-1-b (0)	
LATITUDE = 41.025171	04.50	06.00	SS-3	9	33	-	38	26	23	9	4	NP	NP	NP	19	A-1-b (0)	
LONGITUDE = -81.496312	06.00	07.50	SS-4	12	44	-				SAME AS SS-3					16	A-1-b (VISUAL)	
B-050-2-17	1.50	3.00	SS-1	21	33	4.25	15	18	22	29	16	24	17	7	10	A-4a (2)	
STA. 504+51, 9' RT	3.00	4.50	SS-2	12	67	4.25	11	11	22	36	20	26	18	8	14	A-4a (4)	273
LATITUDE = 41.026168	4.50	6.00	SS-3	20	89	3				SAME AS SS-2					11	A-4a (VISUAL)	
LONGITUDE = -81.502304	6.00	7.50	SS-4	30	72	2.25	BROWN MOTTLED WITH ORANGISH BROWN, SILT & CLAY								22	A-6a (VISUAL)	
B-050-3-17	1.50	3.00	SS-1	10	56	1.5				SAME AS SS-2					16	A-4a (VISUAL)	
STA. 503+22, 40' LT	3.00	4.50	SS-2	10	56	2	13	7	30	31	19	23	16	7	13	A-4a (3)	
LATITUDE = 41.028141	4.50	6.00	SS-3	12	89	2.25	10	10	30	31	19	24	17	7	14	A-4a (3)	153
LONGITUDE = -81.504493	6.00	7.50	SS-4	16	100	4.5+				SAME AS SS-3					17	A-4a (VISUAL)	

SUMMARY OF SOIL TEST DATA
PROJECT BORINGS - IR-277

EXPLORATION NO., STATION & OFFSET	FROM	TO	SAMPLE ID	N60	% REC	HP tsf	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)	ppm SO4 <100
B-054-3-17	1.50	3.00	SS-1	10	56	4.5+	14	7	25	31	23	25	16	9	12	A-4a (4)	127
STA. 279+39, 52' LT	3.00	4.50	SS-2	18	67	4.5+	18	18	23	24	17	25	17	8	11	A-4a (1)	
LATITUDE = 41.026085	4.50	6.00	SS-3	21	89	3.5				SAME AS SS-2					13	A-4a (VISUAL)	
LONGITUDE = -81.492233	6.00	7.50	SS-4	27	100	4.25				SAME AS SS-3					13	A-4a (VISUAL)	

SUMMARY OF SOIL TEST DATA
PROJECT BORINGS - RAMP A

EXPLORATION NO., STATION & OFFSET	FROM	TO	SAMPLE ID	N60	% REC	HP tsf	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)	ppm SO4 <100
B-045-0-17	01.50	03.00	SS-1	17	83	-	43	16	23	14	4	NP	NP	NP	7	A-1-b (0)	
STA. 98+26, 11' RT	03.00	04.50	SS-2	16	100	4.5+				SAME AS SS-3					12	A-4a (VISUAL)	300
LATITUDE = 41.024547	04.50	06.00	SS-3	20	100	4.5+	8	9	24	41	18	23	15	8	13	A-4a (5)	
LONGITUDE = -81.501708	06.00	07.50	SS-4	16	100	2.75 - 4.5+				SAME AS SS-3					11	A-4a (VISUAL)	
B-046-0-17	01.50	02.00	SS-1A	17	94	3.10	5	12	30	36	17	21	14	7	12	A-4a (4)	
STA. 102+20, 5' RT	02.00	03.00	SS-1B	-	-	-	BROWN , GRAVEL WITH SAND (FILL)								6	A-1-b (VISUAL)	100
LATITUDE = 41.024897	03.00	04.50	SS-2	21	89	-	BROWN , GRAVEL WITH SAND (FILL)								7	A-1-b (VISUAL)	
LONGITUDE = -81.503063	04.50	05.20	SS-3A	9	83	-	BROWN , GRAVEL WITH SAND (FILL)								7	A-1-b (VISUAL)	
	05.20	06.00	SS-3B	-	-	0.25	13	17	29	25	16	26	15	11	15	A-6a (1)	
	06.00	07.50	SS-4	16	94	4.5+	BROWN AND GRAY, SANDY SILT								10	A-4a (VISUAL)	
B-047-0-17	01.50	02.50	SS-1A	12	67	-	17	23	45	12	3	NP	NP	NP	11	A-3a (0)	
STA. 106+13, 5' RT	02.50	03.00	SS-1B	-	-	3.5 - 4.5+	BROWN AND GRAYISH BROWN, SANDY SILT								13	A-4a (VISUAL)	133
LATITUDE = 41024997	03.00	04.50	SS-2	14	78	1.75	BROWN AND GRAYISH BROWN, SANDY SILT								15	A-4a (VISUAL)	
LONGITUDE = -81.504478	04.50	06.00	SS-3	20	100	-	25	27	30	11	7	21	18	3	11	A-1-b (0)	
	06.00	07.50	SS-4	17	100	-				SAME AS SS-3					11	A-1-b (VISUAL)	

SUMMARY OF SOIL TEST DATA
PROJECT BORINGS - RAMP A (CONTINUED)

EXPLORATION NO., STATION & OFFSET	FROM		TO	SAMPLE ID	N60	% REC	HP tsf	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)	ppm SO4 <100
B-048-0-17	01.50	-	03.00	SS-1	10	83	-	5	11	55	21	8	NP	NP	NP	13	A-3a (0)	
STA. 110+04, 7' LT	03.00	-	04.50	SS-2	12	94				SAME AS SS-3						23	A-4b (VISUAL)	293
LATITUDE = 41.024941	04.50	-	06.00	SS-3	14	89	-	3	3	7	64	23	28	20	8	20	A-4b (8)	
LONGITUDE = -81.505897	06.00	-	07.50	SS-4	14	100				SAME AS SS-3						18	A-4b (VISUAL)	
B-049-0-17	01.50	-	03.00	SS-1	13	89	-	42	13	14	20	11	20	14	6	8	A-2-4 (0)	
STA. 114+07, 4' LT	03.00	-	04.50	SS-2	14	83	-				SAME AS SS-1					12	A-2-4 (VISUAL)	300
LATITUDE = 41.024883	04.50	-	06.00	SS-3	17	11	-	40	10	16	22	12	21	14	7	9	A-2-4 (0)	
LONGITUDE = -81.507352	06.00	-	07.50	SS-4	18	17	-				SAME AS SS-3					11	A-2-4 (VISUAL)	

SUMMARY OF SOIL TEST DATA
PROJECT BORINGS - RAMP B

EXPLORATION NO., STATION & OFFSET	FROM		TO	SAMPLE ID	N60	% REC	HP tsf	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)	ppm SO4 <100
B-011-0-14	01.00	-	02.50	SS-1	11	67	4.0-4.5+	9	8	19	46	18	22	17	5	15	A-4a (6)	
STA. 197+05, 15' RT	02.50	-	04.00	SS-2	11	33	2.5-4.5+				SAME AS SS-1					12	A-4a (VISUAL)	
LATITUDE = 41.025112	04.00	-	04.50	SS-3A		100	3.5-4.5+	5	8	32	36	19	29	21	8	19	A-4a (4)	
LONGITUDE = -81.508598	04.50	-	05.50	SS-3B	14	100	1.00				SAME AS SS-3A					19	A-4a (VISUAL)	
	05.50	-	07.00	SS-4	6	67	1.60				SAME AS SS-3A					14	A-4a (VISUAL)	
B-010-1-14	01.00	-	02.50	SS-1	14	33	4.0-4.5+				SAME AS SS-2					15	A-6a (VISUAL)	
STA. 198+89, 17' LT	03.50	-	05.00	SS-2	22	78	4.5+	8	5	22	41	24	27	16	11	14	A-6a (6)	
LATITUDE = 41.025282	07.50	-	08.00	SS-3	18	100	1.6-2.5				SAME AS SS-2					15	A-6a (VISUAL)	
LONGITUDE = -81.507161	08.50	-	10.00	SS-4	9	89	2.0-3.0				SAME AS SS-2					15	A-6a (VISUAL)	
B-010-0-14	01.50	-	03.00	SS-1	19	100	4.5+	11	11	26	29	23	24	16	8	11	A-4a (3)	
STA. 200+87, 53' RT	03.00	-	04.50	SS-2	76	100	4.5+				SAME AS SS-1					12	A-4a (VISUAL)	
LATITUDE = 41.025282	04.50	-	06.00	SS-3	66	100	4.5+	12	10	24	31	23	24	15	9	11	A-4a (4)	
LONGITUDE = -81.507161	06.00	-	07.50	SS-4	38	100	4.5+				SAME AS SS-3					10	A-4a (VISUAL)	
B-009-2-17	01.00	-	02.50	SS-1	14	89	4.5+				SAME AS SS-2					13	A-4a (VISUAL)	
STA. 202+71, 16' RT	3.5	-	5	SS-2	15	100	3.0-4.5+	11	9	22	34	24	24	16	8	12	A-4a (5)	
LATITUDE = 41.025648	6.00	-	7.50	SS-3	37	100	4.5+				SAME AS SS-2					11	A-4a (VISUAL)	
LONGITUDE = -81.506644	8.50	-	10.00	SS-4	46	100	4.5+				SAME AS SS-2					11	A-4a (VISUAL)	
B-009-0-14	1.50	-	3.00	SS-1	27	100	4.5+	10	8	24	39	19	23	16	7	11	A-4a (5)	
STA. 204+58, 64' RT	3.00	-	4.50	SS-2	47	100	4.5+				SAME AS SS-1					8	A-4a (VISUAL)	
LATITUDE = 41.025929	4.50	-	6.00	SS-3	30	67	3.0-4.5+	3	5	25	46	21	22	16	6	11	A-4a (6)	
LONGITUDE = -81.506019	6.00	-	7.50	SS-4	10	100	3.0-4.5+				SAME AS SS-3					15	A-4a (VISUAL)	
B-042-0-17	2.50	-	4.00	SS-1	11	100	1.75	8	9	28	42	13	21	14	7	15	A-4a (4)	
STA. 204+77, 6' RT	5.00	-	6.50	SS-2	19	100	1.5				SAME AS SS-1					15	A-4a (VISUAL)	
LATITUDE = 41.026071	7.50	-	9.00	SS-3	26	100	3.75 - 4.5+	9	8	29	37	17	22	14	8	14	A-4a (4)	
LONGITUDE = -81.506139	10.00	-	11.50	SS-4	33	100	4.5+				SAME AS SS-3					12	A-4a (VISUAL)	
	12.50	-	14.00	SS-5	21	100	3				SAME AS SS-3					15	A-4a (VISUAL)	
	15.00	-	15.42	SS-6	50/5"	100	-	REDDISH BROWN, STONE FRAGMENTS WITH SAND								9	A-1-b (VISUAL)	
B-041-0-17	1.50	-	3.00	SS-1	9	56	4.5+	16	9	25	35	15	20	14	6	11	A-4a (3)	
STA. 206+95, 18' RT	3.00	-	4.50	SS-2	16	44	4.5+				SAME AS SS-3					14	A-4a (VISUAL)	293
LATITUDE = 41.026666	4.50	-	6.00	SS-3	17	67	2.5	11	7	18	45	19	23	17	6	15	A-4a (6)	
LONGITUDE = -81.505542	6.00	-	7.50	SS-4	22	100	-				SAME AS SS-3					13	A-4a (VISUAL)	
B-040-0-17	1.50	-	2.60	SS-1A	12	39	-	BROWN AND BLACK, GRAVEL WITH SAND								6	A-1-b (VISUAL)	127
STA. 211+19, 7' LT	2.60	-	3.00	SS-1B	-	-	2.0 - 4.5+				SAME AS SS-2					13	A-4a (VISUAL)	
LATITUDE = 41.027567	3.00	-	4.50	SS-2	16	44	4.5+	8	10	20	43	19	22	16	6	12	A-4a (5)	
LONGITUDE = -81.504938	4.50	-	6.00	SS-3	9	89	4.25	6	4	25	48	17	22	16	6	16	A-4a (6)	
	6.00	-	7.50	SS-4	12	83	4.5+				SAME AS SS-3					17	A-4a (VISUAL)	

SUMMARY OF SOIL TEST DATA
PROJECT BORINGS - RAMP B-1

EXPLORATION NO., STATION & OFFSET	FROM		TO	SAMPLE ID	N60	% REC	HP tsf	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)	ppm SO4 <100
B-047-2-17	1.50	-	3.00	SS-1	14	6				SAME AS SS-3						6	A-1-b (VISUAL)	
STA.407+02, 13' LT	3.00	-	4.50	SS-2	8	44				SAME AS SS-3						7	A-1-b (VISUAL)	320
LATITUDE = 41.026500	4.50	-	6.00	SS-3	6	50	-	59	12	11	13	5	NP	NP	NP	8	A-1-b (0)	
LONGITUDE = -81.503555	6.00	-	7.10	SS-4A	8	78				SAME AS SS-3						8	A-1-b (VISUAL)	
	7.10	-	7.50	SS-4B	-	-		BROWN, GRAVEL WITH SAND AND SILT								12	A-2-4 (VISUAL)	
B-047-1-17	1.50	-	3.00	SS-1	21	67	4.5+	14	8	20	42	16	21	16	5	12	A-4a (5)	127
STA. 416+26, 23' LT	3.00	-	4.50	SS-2	29	89	4.5+	2	1	36	47	14	21	16	5	13	A-4a (5)	
LATITUDE = 41.025514	4.50	-	6.00	SS-3	17	78	4.5+				SAME AS SS-2					12	A-4a (VISUAL)	
LONGITUDE = -81.504432	6.00	-	7.50	SS-4	18	89	4.25				SAME AS SS-2					18	A-4a (VISUAL)	

SUMMARY OF SOIL TEST DATA
PROJECT BORINGS - RAMP B-2

EXPLORATION NO., STATION & OFFSET	FROM		TO	SAMPLE ID	N60	% REC	HP tsf	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)	ppm SO4 <100
B-037-0-17	0	-	1.5	SS-1	28	100	-				SAME AS SS-2					14	A-2-4 (VISUAL)	<100
STA. 301+30, 16' RT	1.5	-	3	SS-2	80	56	-	34	5	30	23	8	19	13	6	8	A-2-4 (0)	
LATITUDE = 41.025586	3	-	4.5	SS-3	21	100	-				SAME AS SS-2					16	A-2-4 (VISUAL)	
LONGITUDE = -81.501465	4.5	-	6	SS-4	56	100	-				SAME AS SS-2					12	A-2-4 (VISUAL)	
	6	-	7.5	SS-5	91	100	-	34	12	20	26	8	21	19	2	9	A-2-4 (0)	
	7.5	-	9	SS-6	68	100	-				SAME AS SS-5					11	A-2-4 (VISUAL)	
	9	-	10.5	SS-7	19	100	4.0 - 4.5+	REDDISH BROWN & ORANGISH BROWN, SANDY SILT								13	A-4a (VISUAL)	
B-038-0-17	0	-	1.5	SS-1	9	100	2	22	8	18	35	17	33	21	12	18	A-6a (4)	
STA. 304+37, 5' RT	1.5	-	3	SS-2	14	100	1.5				SAME AS SS-1					18	A-6a (VISUAL)	
LATITUDE = 41.026203	3	-	4.5	SS-3	7	100	0.5	11	8	24	32	25	43	21	22	32	A-7-6 (10)	
LONGITUDE = -81.502227	4.5	-	6	SS-4	10	56	0.5				SAME AS SS-3					25	A-7-6 (VISUAL)	
	6	-	7.5	SS-5	10	0	-											
	7.5	-	9	SS-6	9	100	1	20	12	26	34	8	20	14	6	16	A-4a (1)	
	9	-	10.5	SS-7	27	100	2.25				SAME AS SS-6					17	A-4a (VISUAL)	
B-003-0-14	02.00	-	03.50	SS-1	18	67	3.5-4.5+	11	8	30	31	20	25	14	11	12	A-6a (4)	
STA. 305+51, 39' RT	03.50	-	05.00	SS-2	20	100	2.5-4.5+				SAME AS SS-1					14	A-6a (VISUAL)	
LATITUDE = 41.022357	05.00	-	06.50	SS-3	65	100		30	7	48	9	6	NP	NP	NP	6	A-3a (0)	
LONGITUDE = -81.498070	06.50	-	08.00	SS-4	46	67					BROWN, SANDY SILT					9	A-4a (VISUAL)	
	08.50	-	10.00	SS-5	39	10		46	7	27	12	8	NP	NP	NP	6	A-1-b (0)	
	11.00	-	12.50	SS-6	25	100					BROWN, SANDY SILT					9	A-4a (VISUAL)	
	13.50		15.00	SS-7	16	67	3-3.5				BROWN, SANDY SILT					14	A-4a (VISUAL)	
B-004-0-14	02.50	-	04.00	SS-1	6	33	2.1-3.0	11	9	29	29	22	26	17	9	17	A-4a (3)	
STA. 7+58, 18' RT	04.00	-	05.50	SS-2	5	67	2.5-3.0	14	9	27	31	19	23	15	8	14	A-4a (3)	
LATITUDE = 41.026965	05.50	-	07.00	SS-3	3	100	0.6-1.0				SAME AS SS-2					20	A-4a (VISUAL)	
LONGITUDE = -81.503282	07.00	-	08.50	SS-4	4	67	0.7-1.0	12	9	30	29	20	24	16	8	15	A-4a (3)	
	08.50	-	10.00	SS-5	3	33	1.0-1.6				SAME AS SS-4					15	A-4a (VISUAL)	
B-007-0-14	01.50	-	03.00	SS-1	15	67		13	11	46	17	13	NP	NP	NP	10	A-3a (0)	
STA. 9+95, 18' RT	03.00	-	04.50	SS-2	15	100	3.5-4.5				SAME AS SS-3					12	A-4a (VISUAL)	
LATITUDE = 41.027080	04.50	-	06.00	SS-3	13	67	4.0-4.5+	18	7	33	25	17	23	14	9	11	A-4a (1)	
LONGITUDE = -81.504150	06.00	-	07.50	SS-4	14	100	3.0-4.5				BROWN, SILT AND CLAY					12	A-6a (VISUAL)	
B-008-0-14	01.00	-	02.50	SS-1	14	100	2.0-3.0	3	4	19	51	23	26	17	9	22	A-4b (8)	
STA. 12+81, 18' RT	02.50	-	04.00	SS-2	41	100		34	24	25	11	6	NP	NP	NP	8	A-1-b (0)	
LATITUDE = 41.026786	04.00	-	05.50	SS-3	19	67	1.0-2.0				BROWN, SANDY SILT					15	A-4a (VISUAL)	
LONGITUDE = -81.505137	05.50	-	07.00	SS-4	18	67					BROWN, GRAVEL WITH SAND					12	A-1-b (VISUAL)	
B-043-0-17	1.50	-	3.00	SS-1	13	78	4.5+	5	6	21	48	20	23	16	7	15	A-4a (7)	
STA. 29+35, 15' LT	3.00	-	4.50	SS-2	17	83	4.5+				SAME AS SS-1					15	A-4a (VISUAL)	240
LATITUDE = 41.024876	4.50	-	6.00	SS-3	16	100	3.75	5	8	23	44	20	24	17	7	15	A-4a (6)	
LONGITUDE = -81.510252	6.00	-	7.50	SS-4	21	100	4.5+				SAME AS SS-3					18	A-4a (VISUAL)	
B-044-0-17	1.50	-	3.00	SS-1	30	78	-	31	21	28	15	5	NP	NP	NP	7	A-1-b (0)	
STA. 32+34, 29' RT	3.00	-	4.50	SS-2	17	89	SAME AS SS-1									9	A-1-b (VISUAL)	<100
LATITUDE = 41.024912	4.50	-	6.00	SS-3	22	100	-	12	22	49	11	6	NP	NP	NP	8	A-3a (0)	
LONGITUDE = -81.511345	6.00	-	7.50	SS-4	27	100	-				SAME AS SS-3					12	A-3a (VISUAL)	

SUMMARY OF SOIL TEST DATA
PROJECT BORINGS - RAMP C

EXPLORATION NO., STATION & OFFSET	FROM		TO	SAMPLE ID	N60	% REC	HP tsf	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)	ppm SO4 <100
B-029-0-17	01.50	-	03.00	SS-1	9	78	-	73	11	8	6	2	NP	NP	NP	6	A-1-a (0)	160
STA. 584+65, 1' RT	03.00	-	04.50	SS-2	8	22	4				SAME AS SS-3					11	A-4a (VISUAL)	
LATITUDE = 41.022082	04.50	-	06.00	SS-3	22	67	4.5+	8	7	24	35	26	26	16	10	14	A-4a (5)	
LONGITUDE = -81.497363	06.00	-	07.50	SS-4	21	89	4.5+				SAME AS SS-3					13	A-4a (VISUAL)	
B-029-3-17	01.50	-	03.00	SS-1	13	56	-	36	26	17	15	6	NP	NP	NP	5	A-1-b (0)	353
STA. 588+74, 2' RT	03.00	-	03.80	SS-2A	5	56	-				SAME AS SS-1					6	A-1-b (VISUAL)	
LATITUDE = 41.023188	03.80	-	04.50	SS-2B	-	-	4.00				SAME AS SS-3					17	A-4a (VISUAL)	
LONGITUDE = -81.497457	04.50	-	06.00	SS-3	16	67	4.25	22	7	16	36	19	28	18	10	16	A-4a (4)	
	06.00	-	07.50	SS-4	18	72	4.50				SAME AS SS-3					14	A-4a (VISUAL)	
B-051-1-17	1.50	-	3.00	SS-1	9	56	3.00	12	10	29	29	20	22	14	8	13	A-4a (3)	
STA. 596+80, 3' RT	3.00	-	4.50	SS-2	13	78	4.5+	11	9	26	33	21	22	15	7	11	A-4a (4)	193
LATITUDE = 41.025149	4.50	-	6.00	SS-3	26	83	4.5+				SAME AS SS-2					13	A-4a (VISUAL)	
LONGITUDE = -81.496312	6.00	-	7.50	SS-4	26	89	4.5+				SAME AS SS-2					11	A-4a (VISUAL)	
B-054-1-17	1.50	-	2.00	SS-1A	10	67	3.25				BROWN, SANDY SILT					16	A-4a (VISUAL)	
STA. 600+79, 3' RT	2.00	-	3.00	SS-1B	-	-	-				SAME AS SS-2					8	A-1-a (VISUAL)	<100
LATITUDE = 41.025577	3.00	-	4.50	SS-2	14	78	-	65	13	12	7	3	NP	NP	NP	7	A-1-a (0)	
LONGITUDE = -81.495003	4.50	-	6.00	SS-3	8	83	2.25	21	8	16	38	17	25	18	7	16	A-4a (4)	
	6.00	-	7.50	SS-4	12	83	4.5+				SAME AS SS-3					13	A-4a (VISUAL)	
B-054-2-17	1.50	-	3.00	SS-1	12	33					BROWN, COARSE AND FINE SAND					12	A-3a (VISUAL)	807
STA. 604+80, 6' RT	3.00	-	4.10	SS-2A	18	67	-	43	21	17	12	7	NP	NP	NP	10	A-1-b (0)	
LATITUDE = 41.025707	4.10	-	4.50	SS-2B	-	-	1.75				SAME AS SS-3					17	A-4a (VISUAL)	
LONGITUDE = -81.493562	4.50	-	6.00	SS-3	16	72	4.5+	11	10	22	33	24	26	16	10	13	A-4a (4)	
	6.00	-	7.50	SS-4	18	89	4.25				SAME AS SS-3					14	A-4a (VISUAL)	

SUMMARY OF SOIL TEST DATA
PROJECT BORINGS - RAMP C-1

EXPLORATION NO., STATION & OFFSET	FROM		TO	SAMPLE ID	N60	% REC	HP tsf	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)	ppm SO4 <100
B-034-0-17	01.50	-	03.00	SS-1	20	89	-	17	19	24	27	13	22	16	6	10	A-4a (1)	
STA. 692+91, 6' LT	03.00	-	04.50	SS-2	22	100	4.5+				SAME AS SS-1					14	A-4a (VISUAL)	113
LATITUDE = 41.024089	04.50	-	06.00	SS-3	25	100	4.5+	1	6	9	63	21	28	20	8	13	A-4b (8)	
LONGITUDE = -81.499080	06.00	-	07.50	SS-4	35	89	4.5+				SAME AS SS-3					11	A-4b (VISUAL)	
B-034-1-17	01.80	-	03.00	SS-1B	-	-	2.25				SAME AS SS-2					14	A-6a (VISUAL)	<100
STA. 680+91, 4' RT	03.00	-	04.50	SS-2	16	100	3.00	6	6	23	38	27	27	15	12	16	A-6a (7)	
LATITUDE = 41.025349	04.50	-	06.00	SS-3	10	33	2.75	5	10	31	30	24	21	14	7	14	A-4a (4)	
LONGITUDE = -81.499674	06.00	-	07.50	SS-4	16	28	1.50				SAME AS SS-4					16	A-4a (VISUAL)	
B-034-2-17	01.70	-	03.00	SS-1B	-	-	4.5+	15	10	27	28	20	19	13	6	11	A-4a (3)	140
STA. 684+89, 16' RT	03.00	-	04.50	SS-2	14	44	-	19	19	27	20	15	19	13	6	10	A-2-4 (0)	
LATITUDE = 41.025213	04.50	-	06.00	SS-3	17	39	4.5+				BROWNISH GRAY, SANDY SILT					15	A-4a (VISUAL)	
LONGITUDE = -81.498263	06.00	-	07.50	SS-4	17	100	4.25				BROWNISH GRAY, SANDY SILT					14	A-4a (VISUAL)	
B-034-3-17	01.50	-	03.00	SS-1	21	100	-	17	17	45	11	10	NP	NP	NP	9	A-3a (0)	<100
STA. 688+91, 7' LT	03.00	-	04.50	SS-2	17	44	-	14	17	47	12	10	NP	NP	NP	10	A-3a (0)	
LATITUDE = 41.024321	04.50	-	06.00	SS-3	17	39	-				SAME AS SS-2					13	A-3a (VISUAL)	
LONGITUDE = -81.497791	06.00	-	07.50	SS-4	25	100	-				SAME AS SS-2					14	A-3a (VISUAL)	
B-036-0-17	01.50	-	03.00	SS-1	27	89	-				SAME AS SS-2					7	A-1-b (VISUAL)	480
STA. 696+87, 4' RT	03.00	-	04.50	SS-2	18	78	-	18	33	38	9	2	NP	NP	NP	7	A-1-b (0)	
LATITUDE = 41.024876	04.50	-	06.00	SS-3	8	44	-	64	9	14	10	3	NP	NP	NP	11	A-1-a (0)	
LONGITUDE = -81.500072	06.00	-	07.50	SS-4	23	100	-				SAME AS SS-3					13	A-1-a (VISUAL)	

SUMMARY OF SOIL TEST DATA
PROJECT BORINGS - RAMP C-2

EXPLORATION NO., STATION & OFFSET	FROM		TO	SAMPLE ID	N60	% REC	HP tsf	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)	ppm SO4 <100
B-050-0-17	01.50	-	03.00	SS-1	12	67	3.25	23	11	20	29	17	25	16	9	12	A-4a (2)	
STA. 796+94, 22' LT	03.00	-	04.50	SS-2	20	100	4.5+				SAME AS SS-1					13	A-4a (VISUAL)	<100
LATITUDE = 41.024609	04.50	-	05.00	SS-3A	33	89	4.00				SAME AS SS-1					14	A-4a (VISUAL)	
LONGITUDE = -81.500873	05.00	-	06.00	SS-3B	-	-	-	8	13	60	12	7	NP	NP	NP	7	A-3a (0)	
	06.00	-	07.50	SS-4	36	78	-				SAME AS SS-3B					9	A-3a (VISUAL)	
B-051-0-17	00.00	-	01.50	SS-1	12	78	4.5+	9	10	32	34	15	30	20	10	10	A-4a (3)	
STA. 785+15, 22' LT	01.50	-	03.00	SS-2	16	100	4.5+				SAME AS SS-1					9	A-4a (VISUAL)	<100
LATITUDE = 41.024313	03.00	-	04.50	SS-3	22	83	4.5+	10	8	33	32	17	22	14	8	4	A-4a (3)	
LONGITUDE = -81.497254	04.50	-	06.00	SS-4	21	94	4.5+				SAME AS SS-3					12	A-4a (VISUAL)	
	06.00	-	07.50	SS-5	23	89	4.5+				SAME AS SS-3					17	A-4a (VISUAL)	
	07.50	-	09.00	SS-6	17	89	3.75	2	6	24	42	26	28	18	10	16	A-4a (7)	
	09.00	-	10.50	SS-7	25	100	4.25				SAME AS SS-6					13	A-4a (VISUAL)	

SUMMARY OF SOIL TEST DATA
PROJECT BORINGS - RAMP D

EXPLORATION NO., STATION & OFFSET	FROM		TO	SAMPLE ID	N60	% REC	HP tsf	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)	ppm SO4 <100
B-054-0-17	01.50	-	02.50	SS-1A	23	67	4.5+				BROWN, SANDY SILT					13	A-4a (VISUAL)	167
STA. 891+79, 19' LT	02.50	-	03.00	SS-1B	-	-	-				SAME AS SS-2					8	A-2-4 (VISUAL)	
LATITUDE = 41.025755	03.00	-	04.50	SS-2	16	78	-	36	12	17	24	11	21	17	4	9	A-2-4 (0)	
LONGITUDE = -81.497216	04.50	-	06.00	SS-3	22	100	4.5+	4	8	24	38	26	26	16	10	11	A-4a (6)	
	06.00	-	07.50	SS-4	26	89	4.5+				SAME AS SS-3					13	A-4a (VISUAL)	
B-053-0-17	01.50	-	03.00	SS-1	13	89	3.75	6	7	23	44	20	24	17	7	15	A-4a (6)	
STA. 895+33, 27' LT	03.00	-	04.50	SS-2	12	83	2.00				SAME AS SS-1					15	A-4a (VISUAL)	287
LATITUDE = 41.025773	04.50	-	06.00	SS-3	20	89	4.0 - 4.5+	10	8	27	34	21	25	15	10	13	A-4a (4)	
LONGITUDE = -81.498507	06.00	-	07.50	SS-4	20	94	4.5+				SAME AS SS-3					12	A-4a (VISUAL)	
	07.50	-	09.00	SS-5	22	89	4.5+				SAME AS SS-6					12	A-4a (VISUAL)	
	09.00	-	10.50	SS-6	27	89	4.5+	7	7	30	33	23	24	15	9	11	A-4a (4)	
B-052-0-17	01.50	-	03.00	SS-1	14	67	4.5+	11	14	33	28	14	18	13	5	9	A-4a (1)	
STA. 899+01, 4' RT	03.00	-	04.50	SS-2	18	56	4.5+				SAME AS SS-1					10	A-4a (VISUAL)	240
LATITUDE = 41.026005	04.50	-	06.00	SS-3	22	56	4.5+	11	8	27	32	22	24	15	9	11	A-4a (4)	
LONGITUDE = -81.499812	06.00	-	07.50	SS-4	18	33	4.5+				SAME AS SS-3					11	A-4a (VISUAL)	
B-052-1-17	01.50	-	03.00	SS-1	14	33	-				SAME AS SS-2					6	A-1-a (VISUAL)	<100
STA. 902+70, 5' RT	03.00	-	04.50	SS-2	10	44	-	69	13	8	7	3	NP	NP	NP	6	A-1-a (0)	
LATITUDE = 41.026351	04.50	-	05.30	SS-3A	21	78	-				SAME AS SS-2					5	A-1-a (VISUAL)	
LONGITUDE = -81.501083	05.30	-	06.00	SS-3B	-	-	4.5+				SAME AS SS-4					13	A-4a (VISUAL)	
	06.00	-	07.50	SS-4	23	83	4.5+	8	8	27	33	24	24	16	8	12	A-4a (4)	
B-052-2-17	03.00	-	04.50	SS-2	10	44					BROWN, COARSE AND FINE SAND					11	A-3a (VISUAL)	273
STA. 906+79, 7' RT	04.50	-	06.00	SS-3	12	56	-	35	20	28	10	7	NP	NP	NP	9	A-1-b (0)	
LATITUDE =41.026903	06.00	-	07.50	SS-4	13	72					SAME AS SS-3					10	A-1-b (VISUAL)	
LONGITUDE = -81.503303																		
B-052-3-17	01.50	-	03.00	SS-1	10	100	-	33	39	21	4	3	NP	NP	NP	8	A-1-b (0)	2640
STA. 910+78, 2' RT	03.00	-	04.50	SS-2	10	67	1.50	12	20	29	23	16	22	15	7	13	A-4a (1)	
LATITUDE = 41.027731	04.50	-	06.00	SS-3	14	78	2.25				SAME AS SS-2					16	A-4a (VISUAL)	
LONGITUDE = -81.502349	06.00	-	07.50	SS-4	17	56	-				SAME AS SS-2					13	A-2-4 (VISUAL)	

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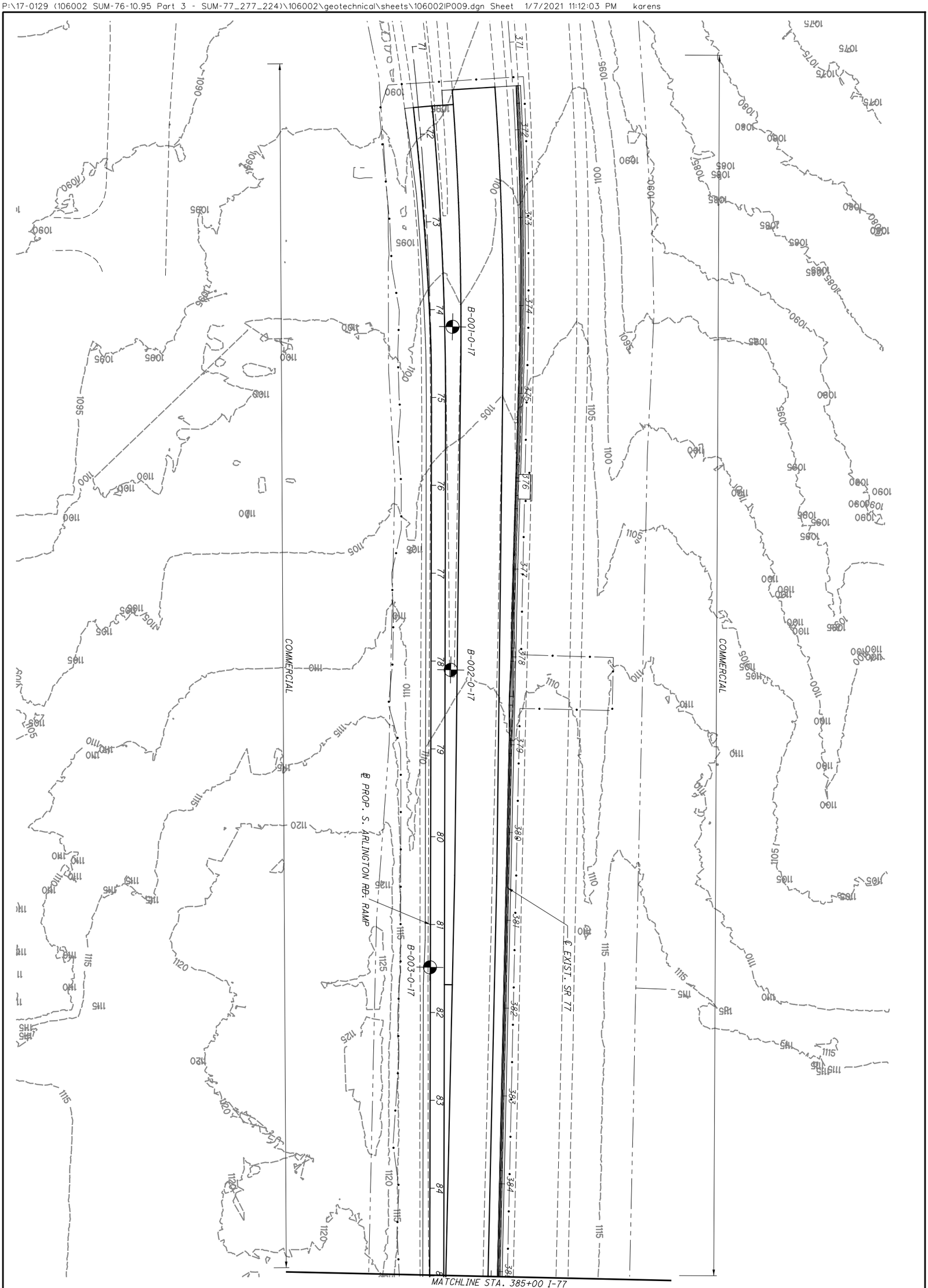

12/209	SUM-77/277/224 VARIOUS	SOIL PROFILE I-77 BEGIN TO STA. 385+00	DRAWN MJ CHECKED BPA	0 50 25 100 HORIZONTAL SCALE IN FEET	N

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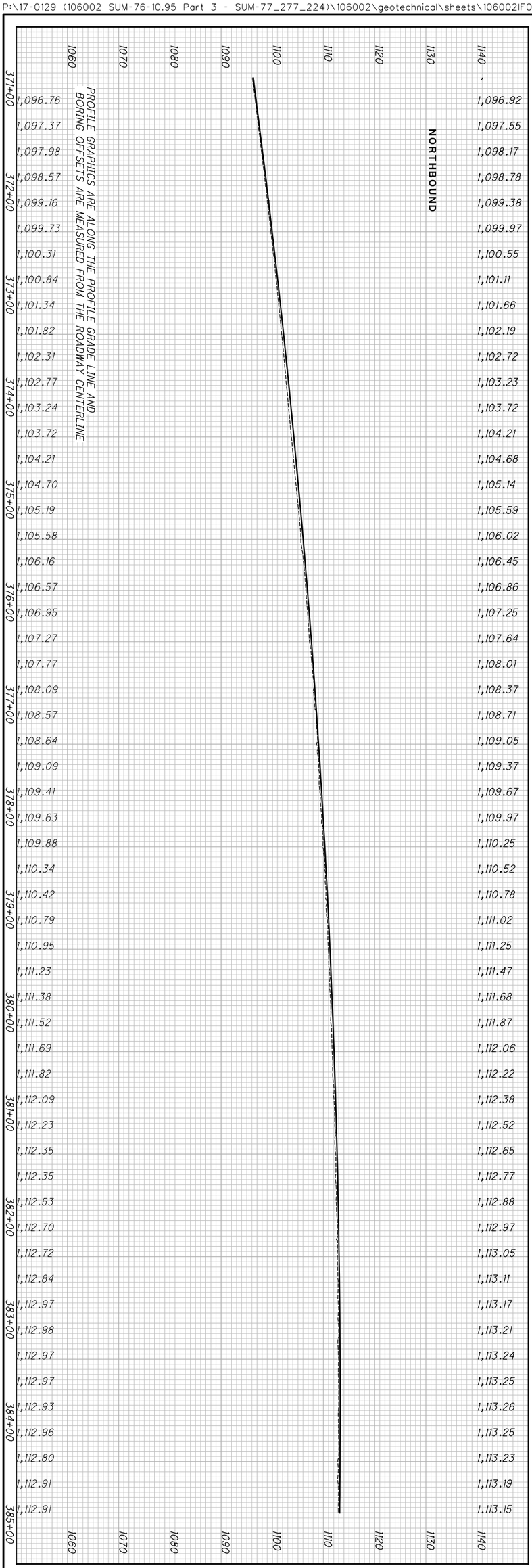

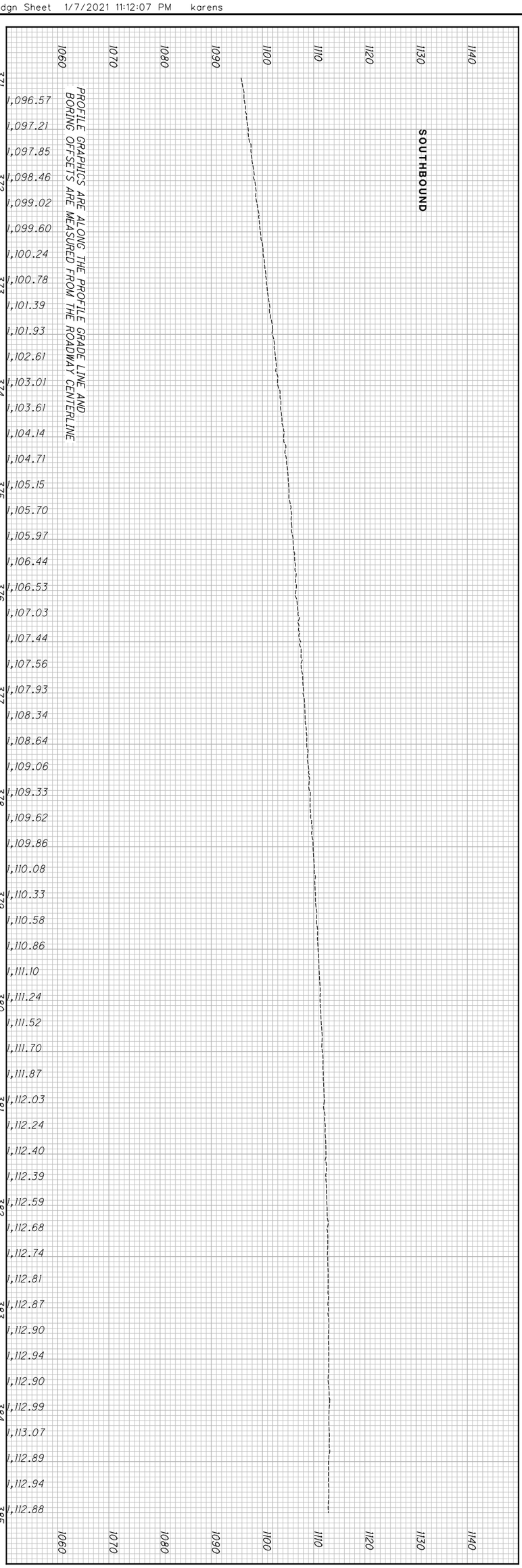

13/209	SUM-77/277/224 VARIOUS	SOIL PROFILE I-77 BEGIN TO STA. 385+00	DRAWN ZM CHECKED BPA	0 25 50 100 HORIZONTAL SCALE IN FEET

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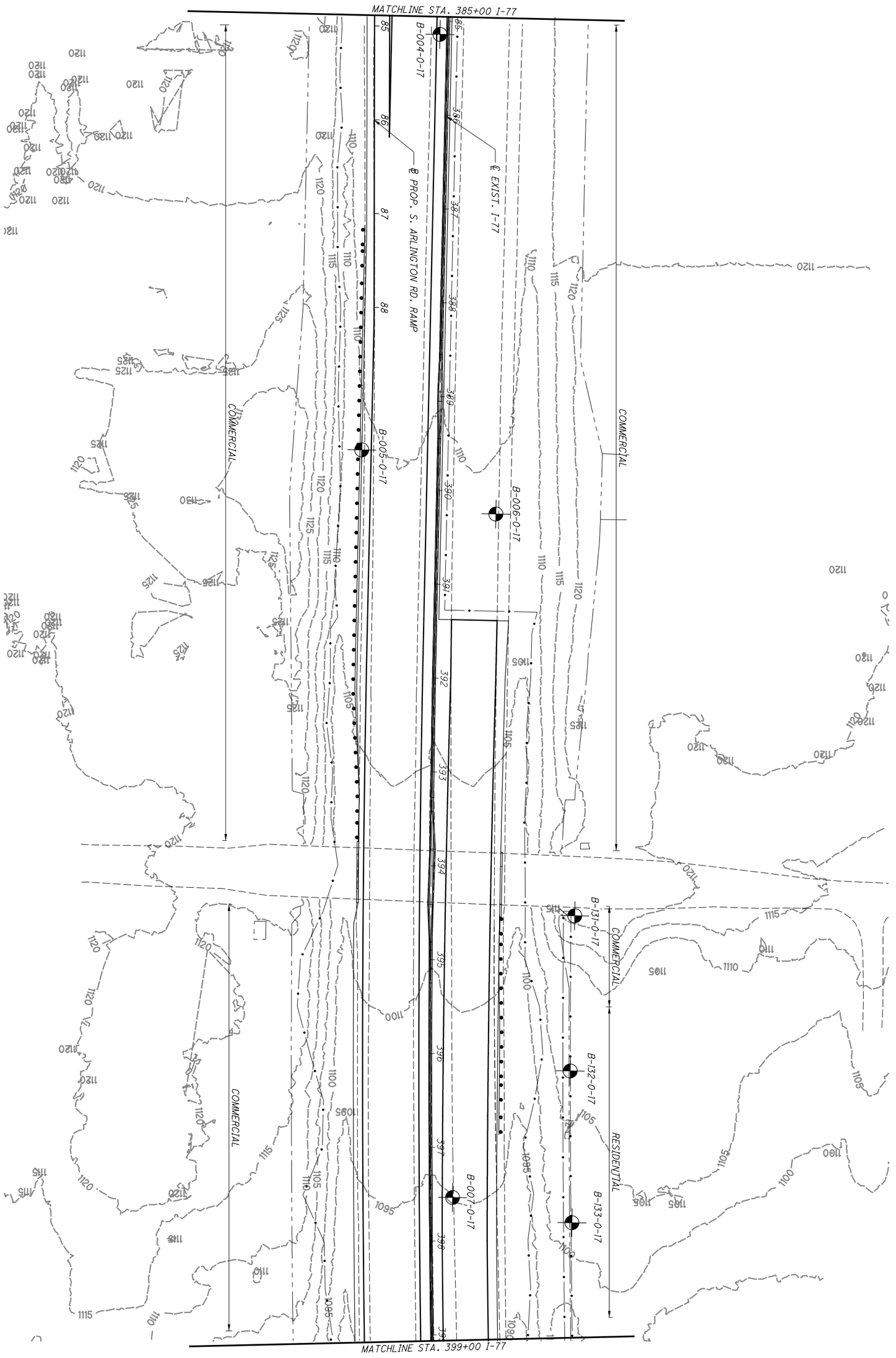
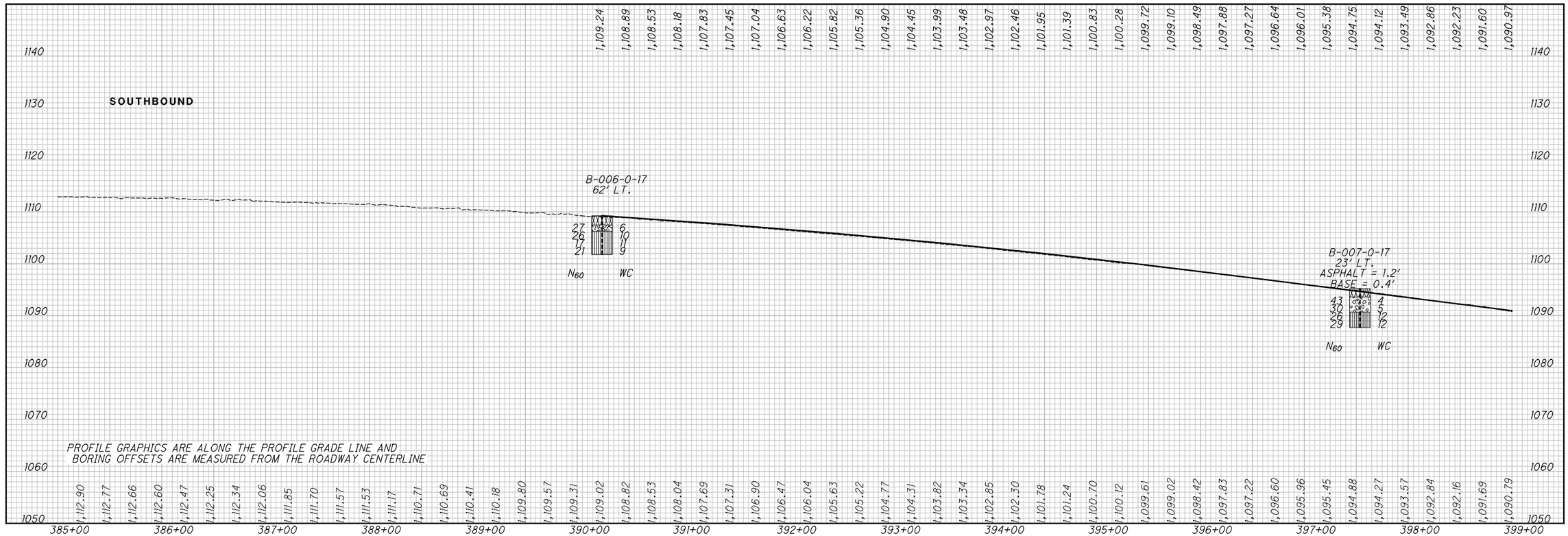


	14/209	**SUM-77/277/224** **VARIOUS**	**SOIL PROFILE** **I-77 STA. 385+00 TO STA. 399+00**	DRAWN MJ CHECKED BPA	0 50 25 100 HORIZONTAL SCALE IN FEET



HORIZONTAL SCALE IN FEET
0 25 50 100

DRAWN ZM
CHECKED BPA

SOIL PROFILE
I-77 STA. 385+00 TO STA. 399+00

SUM-77/277/224
VARIOUS

15 / 209

1

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002IF010.dgn karens 1/7/2021 11:12:39 PM Sheet

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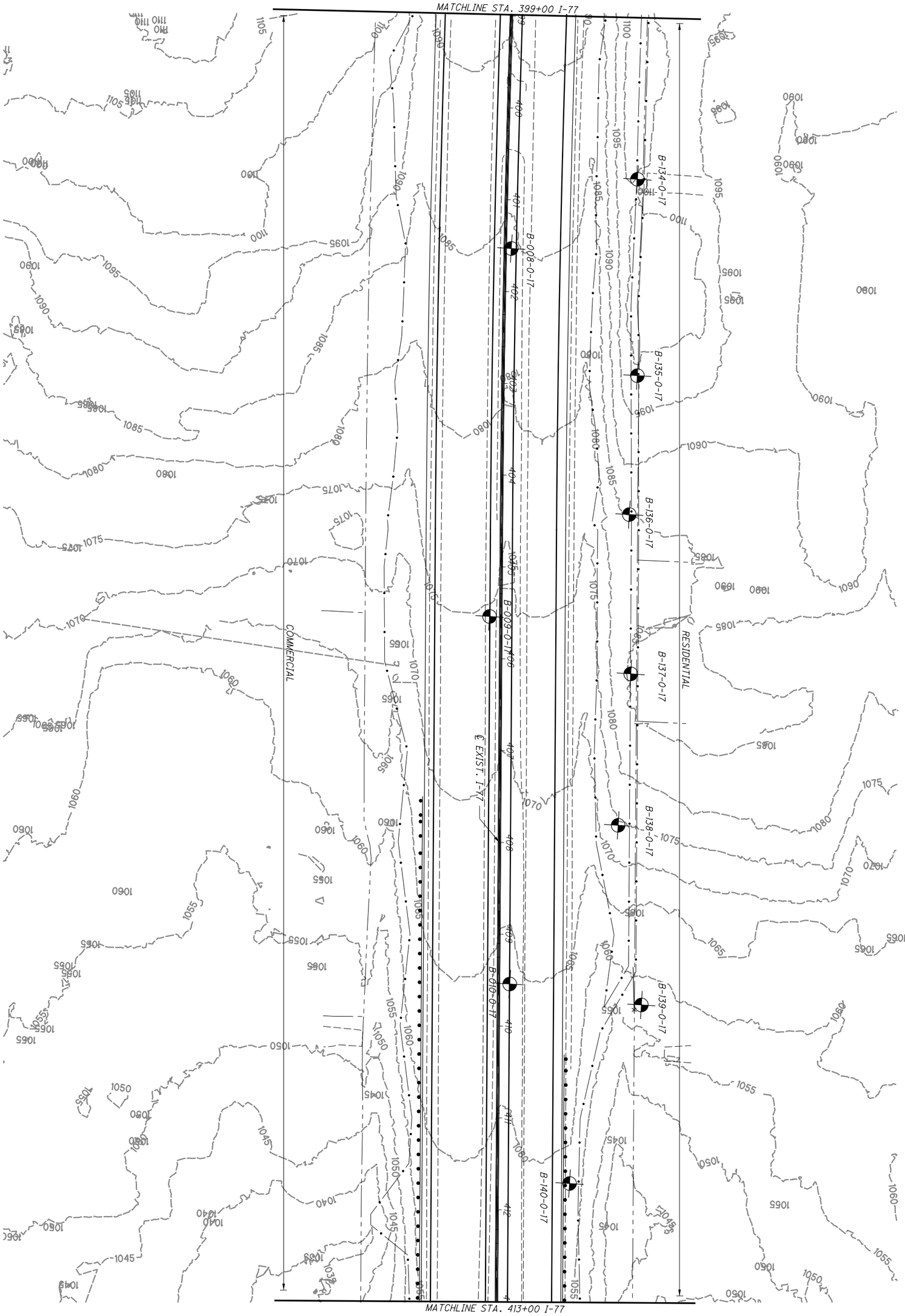
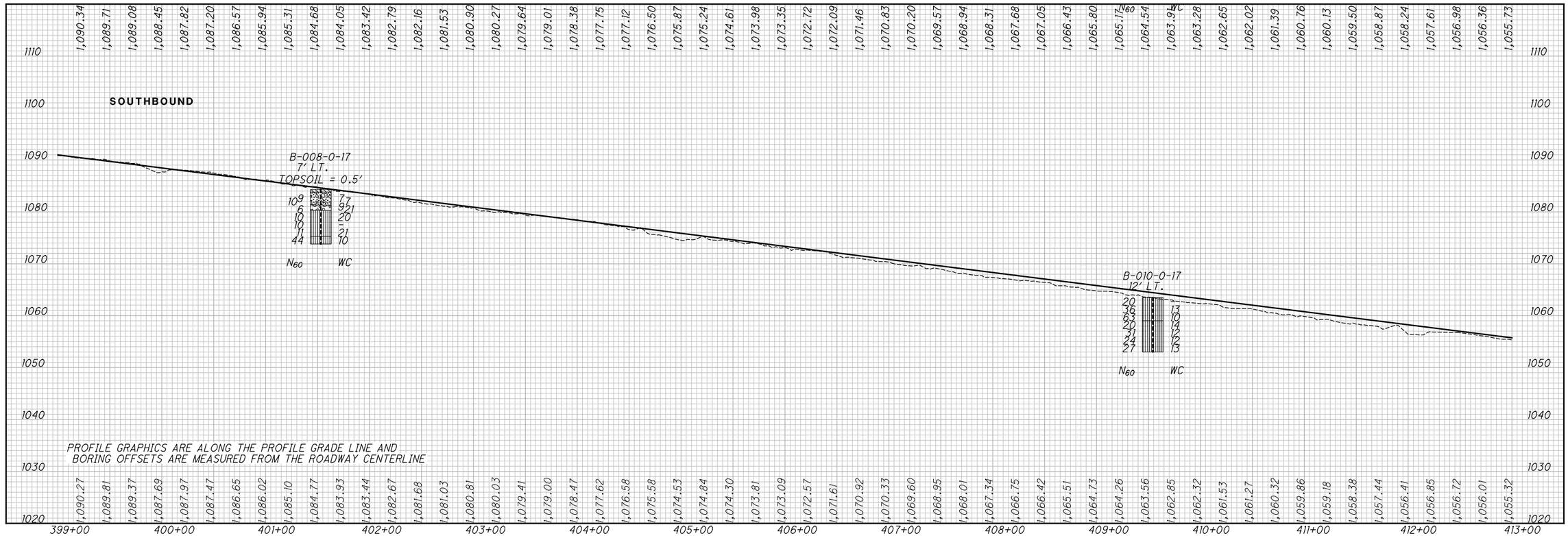
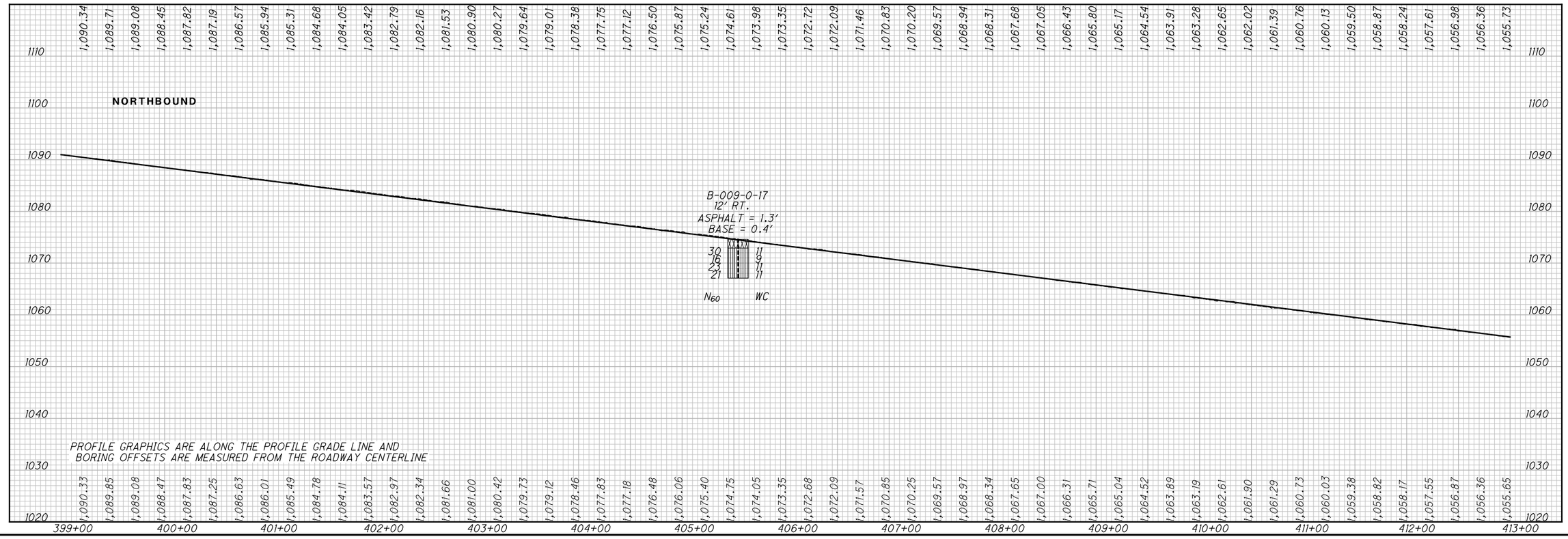


16 / 209	SUM-77 / 277 / 224 VARIOUS	SOIL PROFILE I-77 STA. 399+00 TO 413+00	DRAWN MJ CHECKED BPA	0 50 25 100 HORIZONTAL SCALE IN FEET	N





0 25 50 100
HORIZONTAL SCALE IN FEET

DRAWN ZM
CHECKED BPA

SOIL PROFILE
I-77 STA. 399+00 TO STA. 413+00

SUM-77/277/224
VARIOUS

17 / 209

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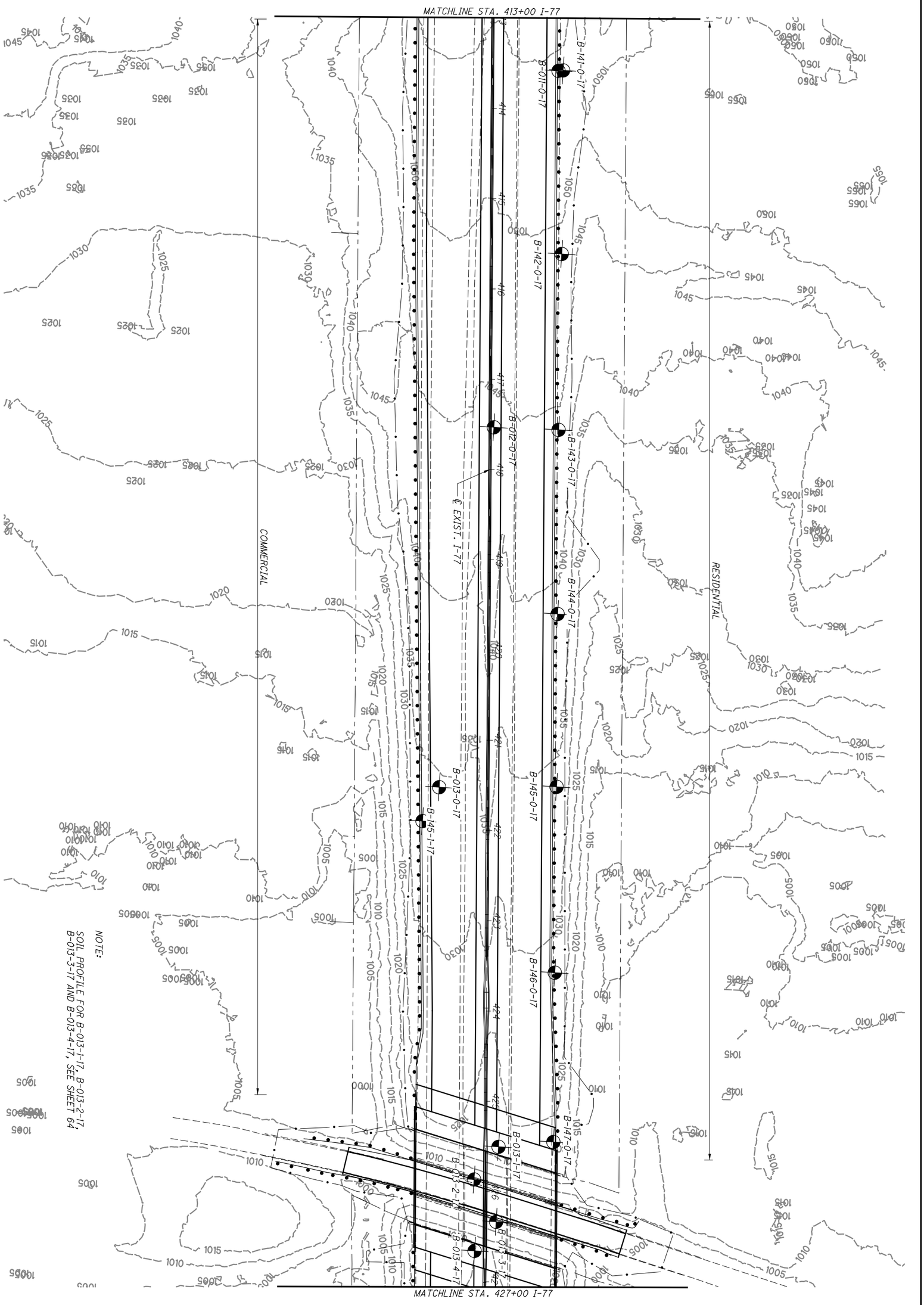
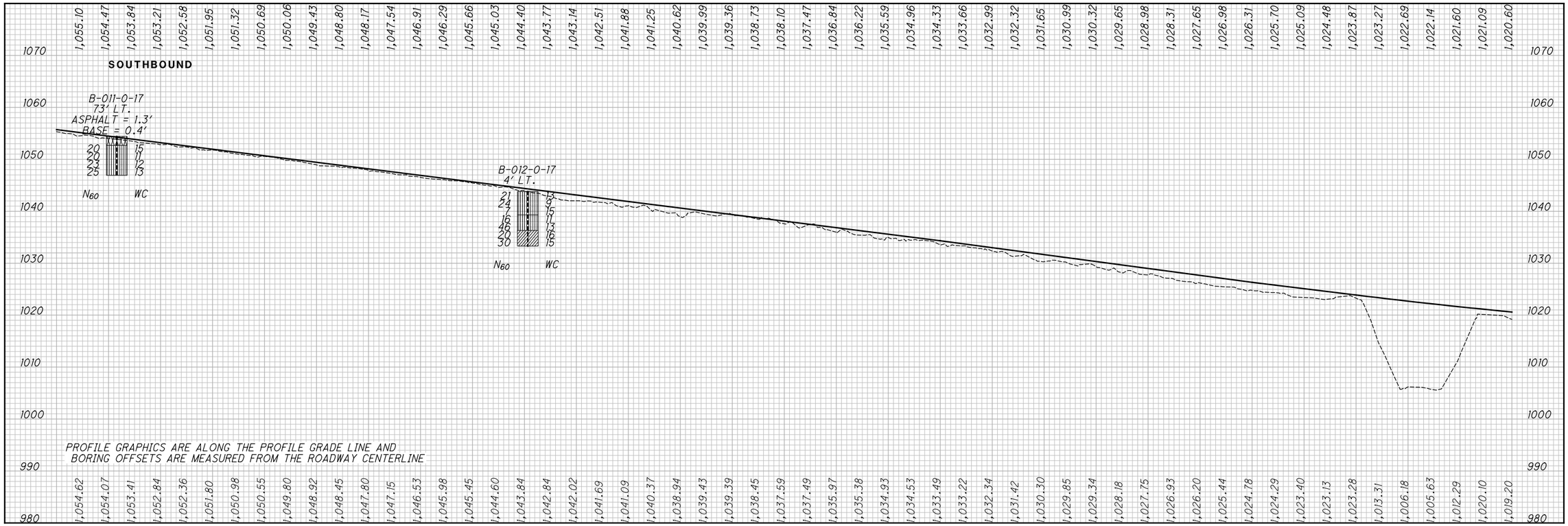


18 / 209	SUM-77 / 277 / 224 VARIOUS	SOIL PROFILE I-77 STA. 413+00 TO STA. 427+00	DRAWN MJ CHECKED BPA	0 50 25 100 HORIZONTAL SCALE IN FEET	N



HORIZONTAL SCALE IN FEET
0 25 50 100

DRAWN ZM
CHECKED BPA

SOIL PROFILE
I-77 STA. 413+00 TO STA. 427+00

SUM-77/277/224
VARIOUS

19 / 209

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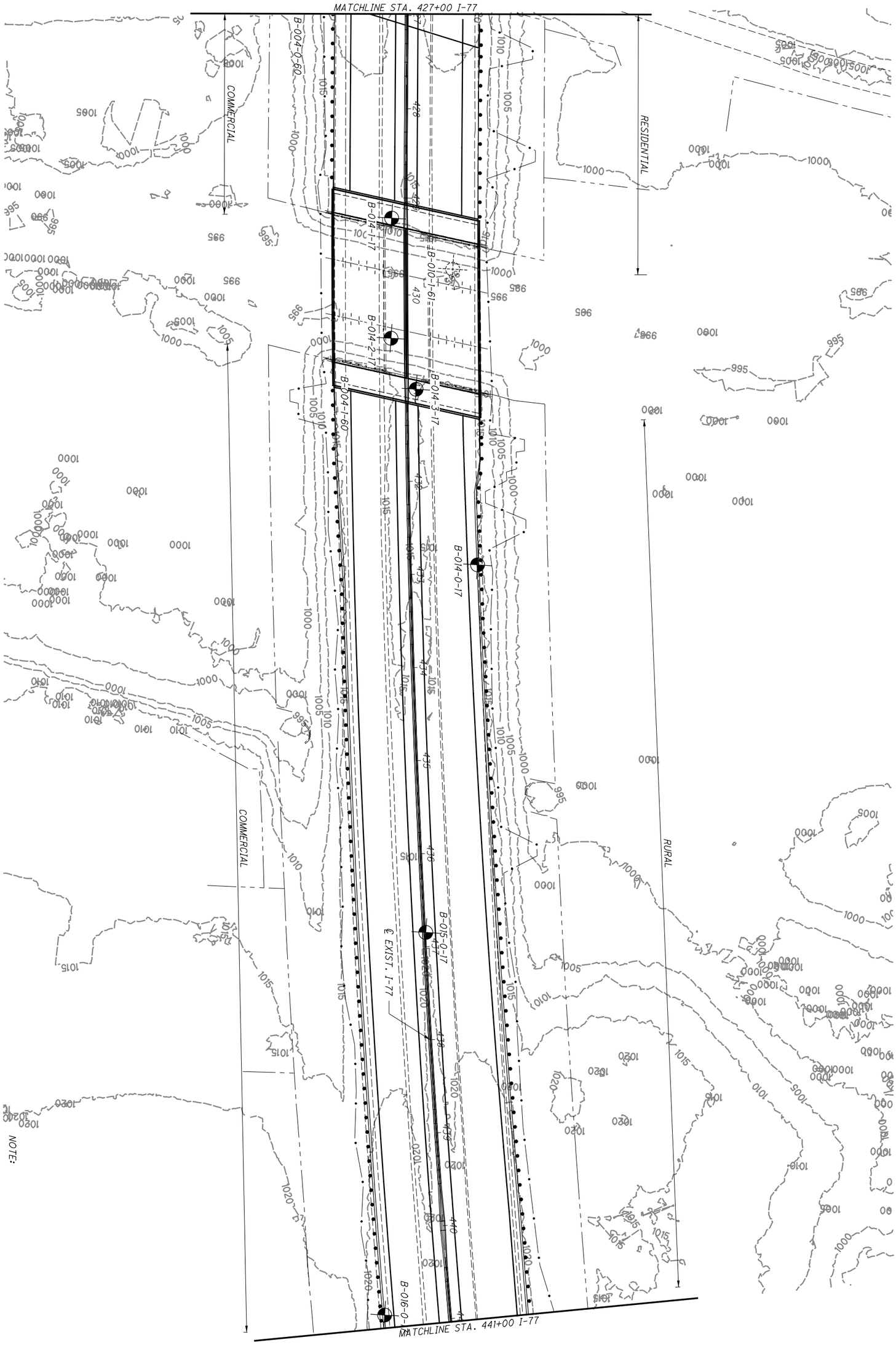
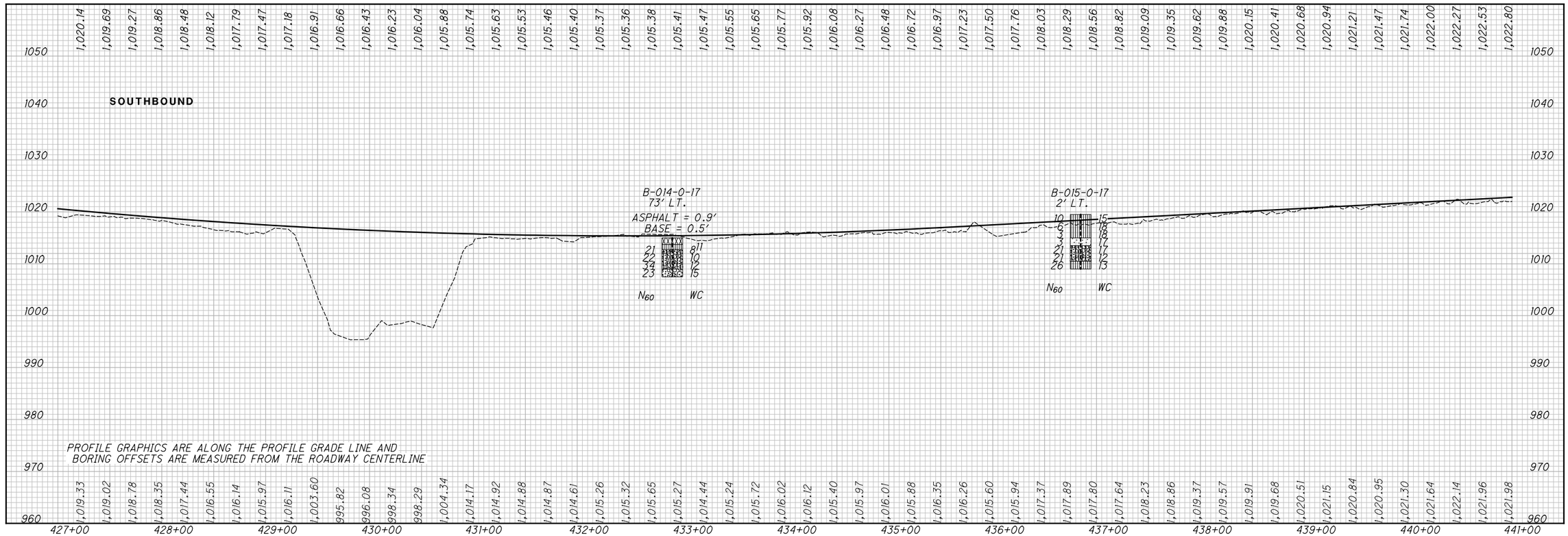
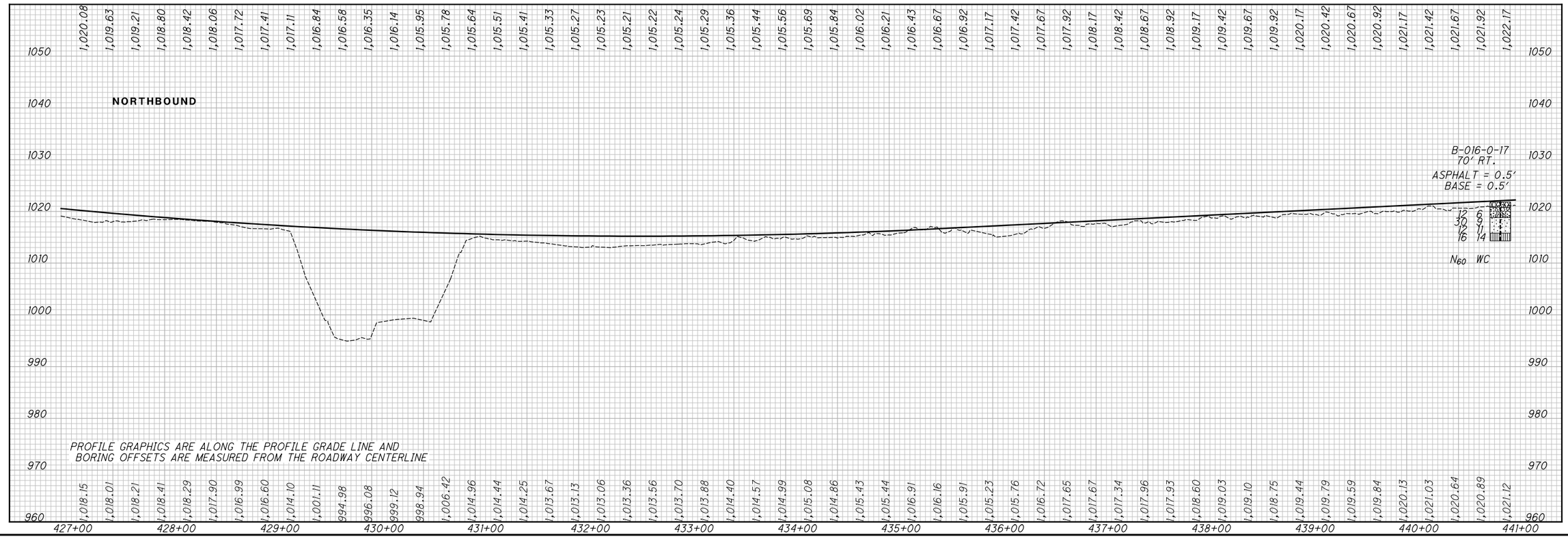


NOTE:
SOIL PROFILE FOR B-014-1-17, B-014-2-17, B-014-3-17 AND B-010-1-61, SEE SHEET 66.

	20/209	SUM-77/277/224 VARIOUS	SOIL PROFILE I-77 STA. 427+00 TO STA. 441+00	DRAWN MJ CHECKED BPA	0 50 25 100 HORIZONTAL SCALE IN FEET





HORIZONTAL SCALE IN FEET
0 25 50 100

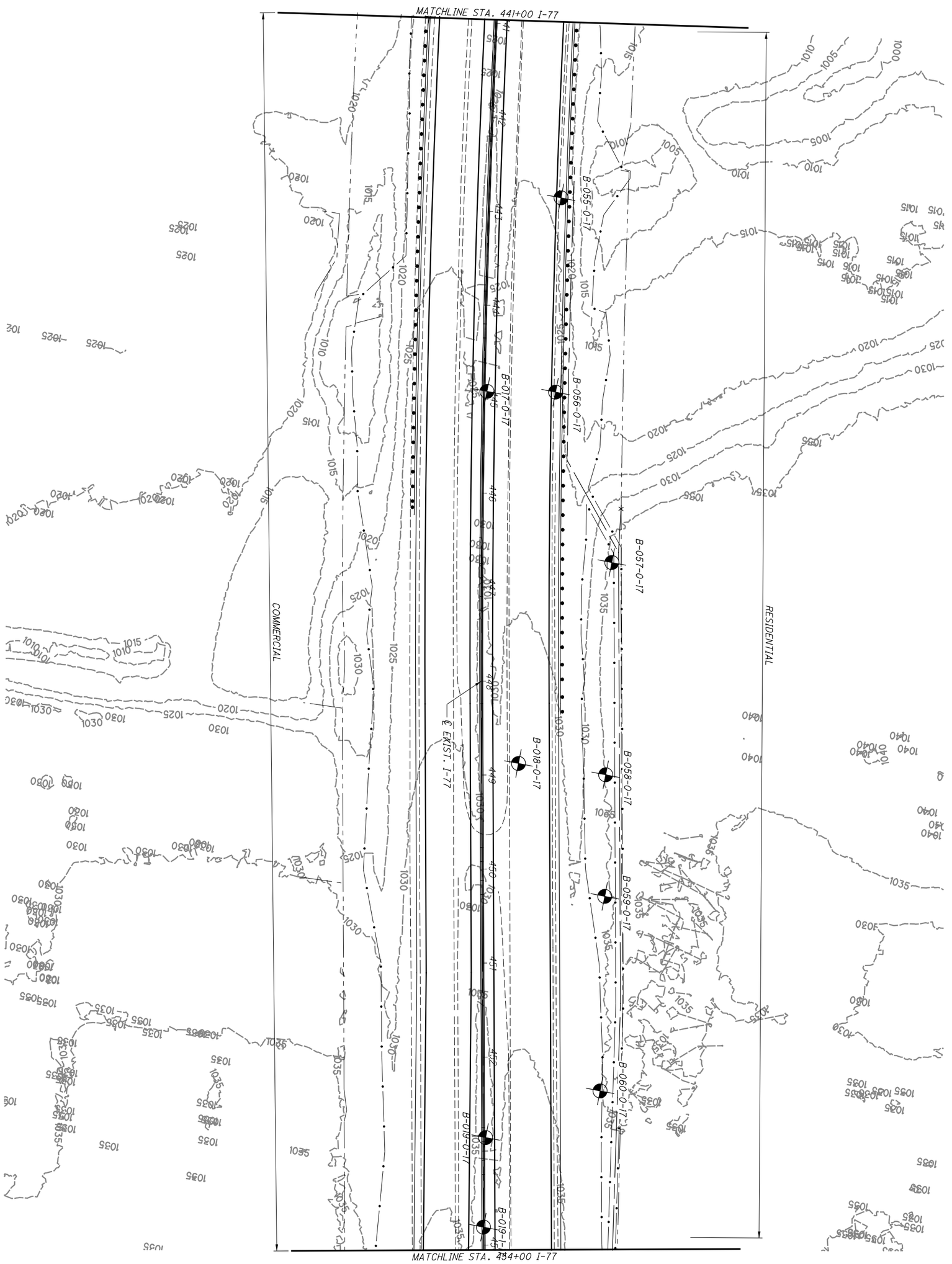
DRAWN ZM
CHECKED BPA

SOIL PROFILE
I-77 STA. 427+00 TO STA. 441+00

SUM-77/277/224
VARIOUS

21 / 209

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002IF013.dgn Sheet 1/7/2021 11:14:14 PM karens



	22/209	SUM-77/277/224 VARIOUS	SOIL PROFILE I-77 STA. 441+00 TO STA. 454+00	DRAWN MJ CHECKED BPA	0 50 25 100 HORIZONTAL SCALE IN FEET

HORIZONTAL SCALE IN FEET
0 25 50 100

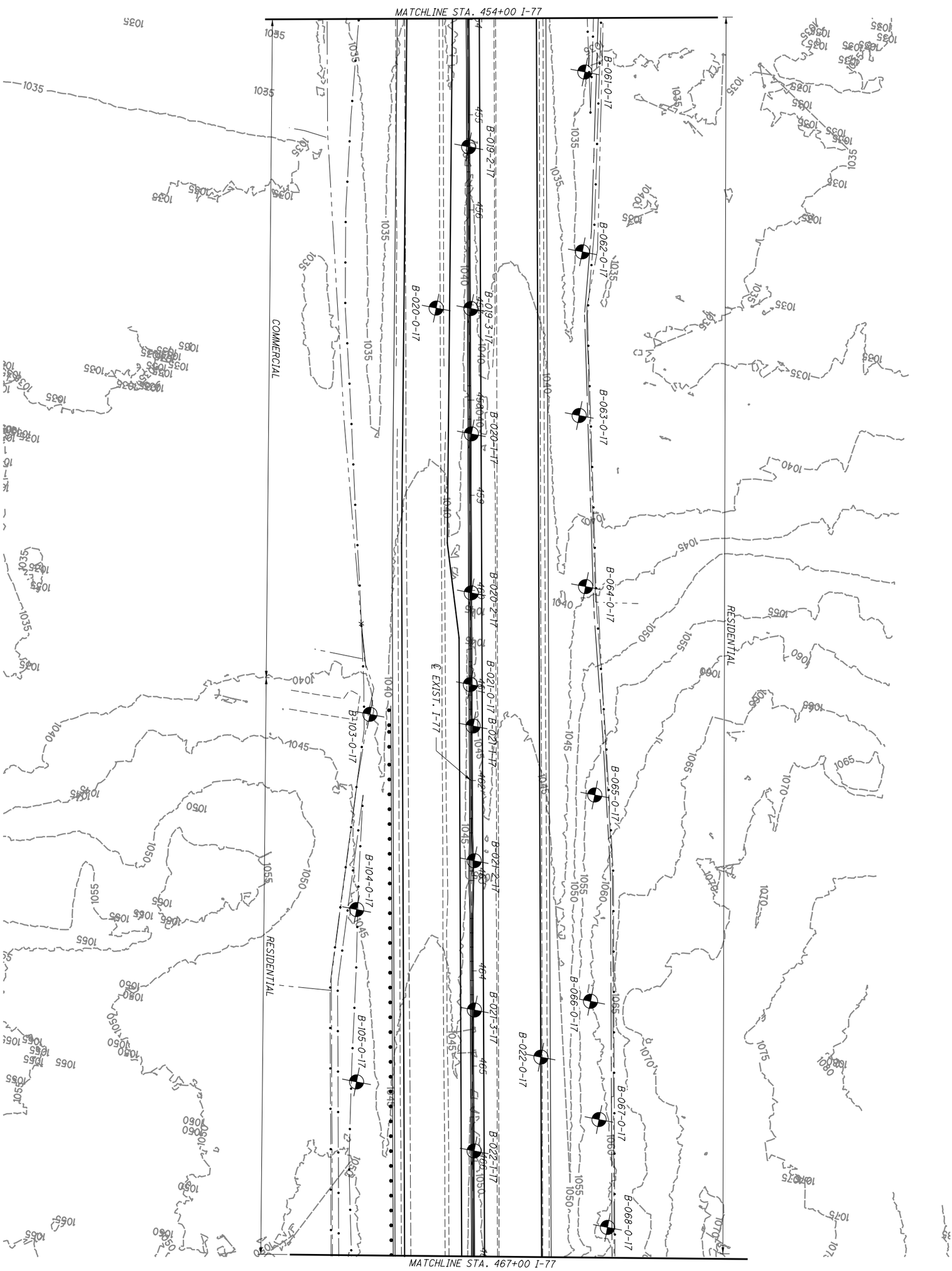
DRAWN ZM
CHECKED BPA

SOIL PROFILE
I-77 STA. 441+00 TO STA. 454+00

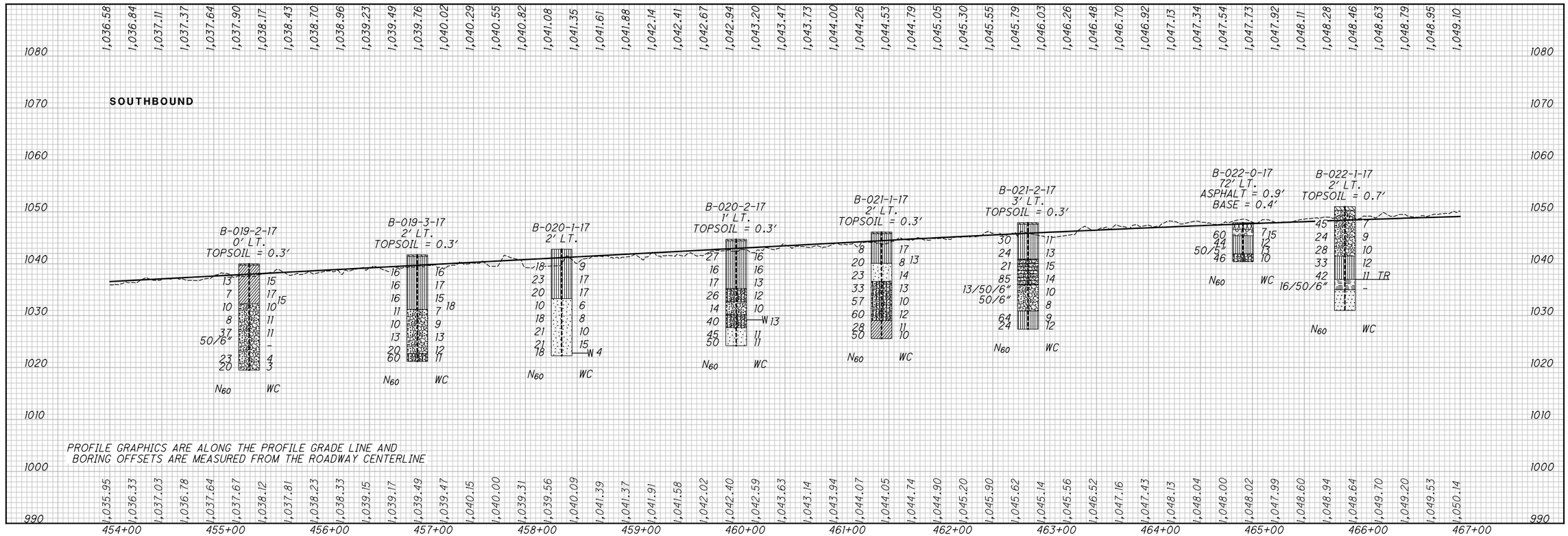
SUM-77/277/224
VARIOUS

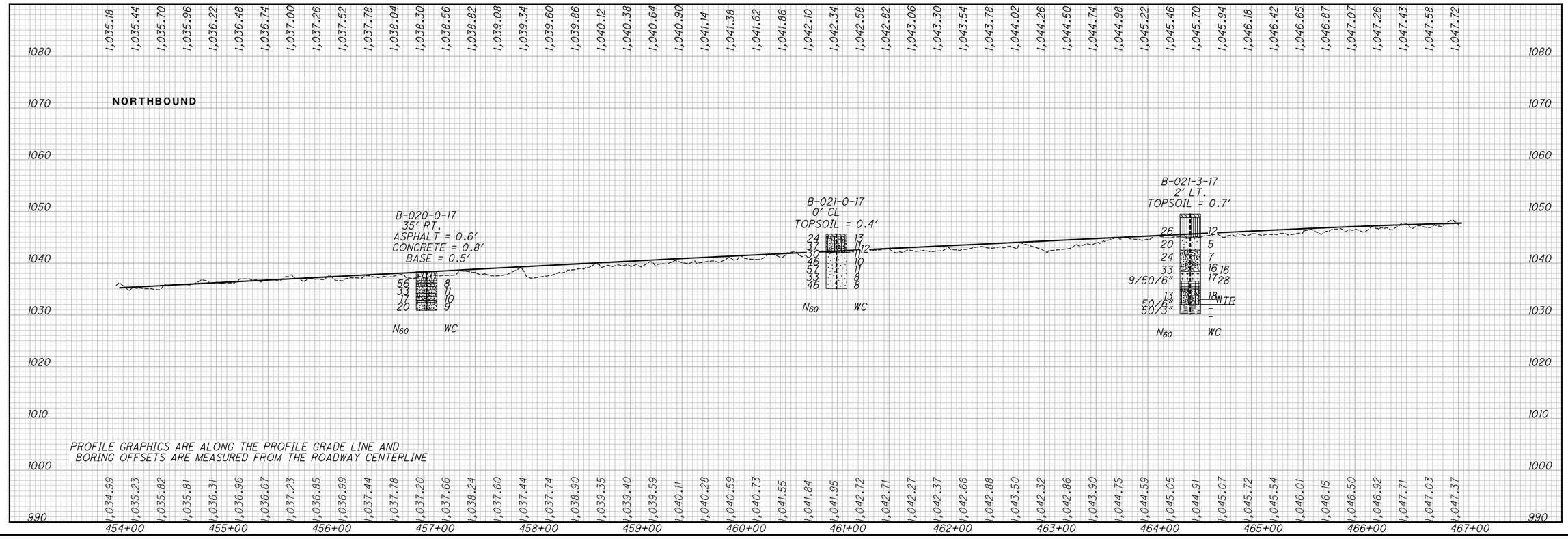
23 / 209

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002IF014.dgn Sheet 1/7/2021 11:14:45 PM korens



24/209	SUM-77/277/224 VARIOUS	SOIL PROFILE I-77 STA.454+00 TO STA.467+00	DRAWN EB CHECKED CH	0 50 25 100 HORIZONTAL SCALE IN FEET	N





HORIZONTAL SCALE IN FEET
0 25 50 100

DRAWN ZM
CHECKED BPA

SOIL PROFILE
I-77 STA. 454+00 TO STA. 467+00

SUM-77/277/224
VARIOUS

25/209

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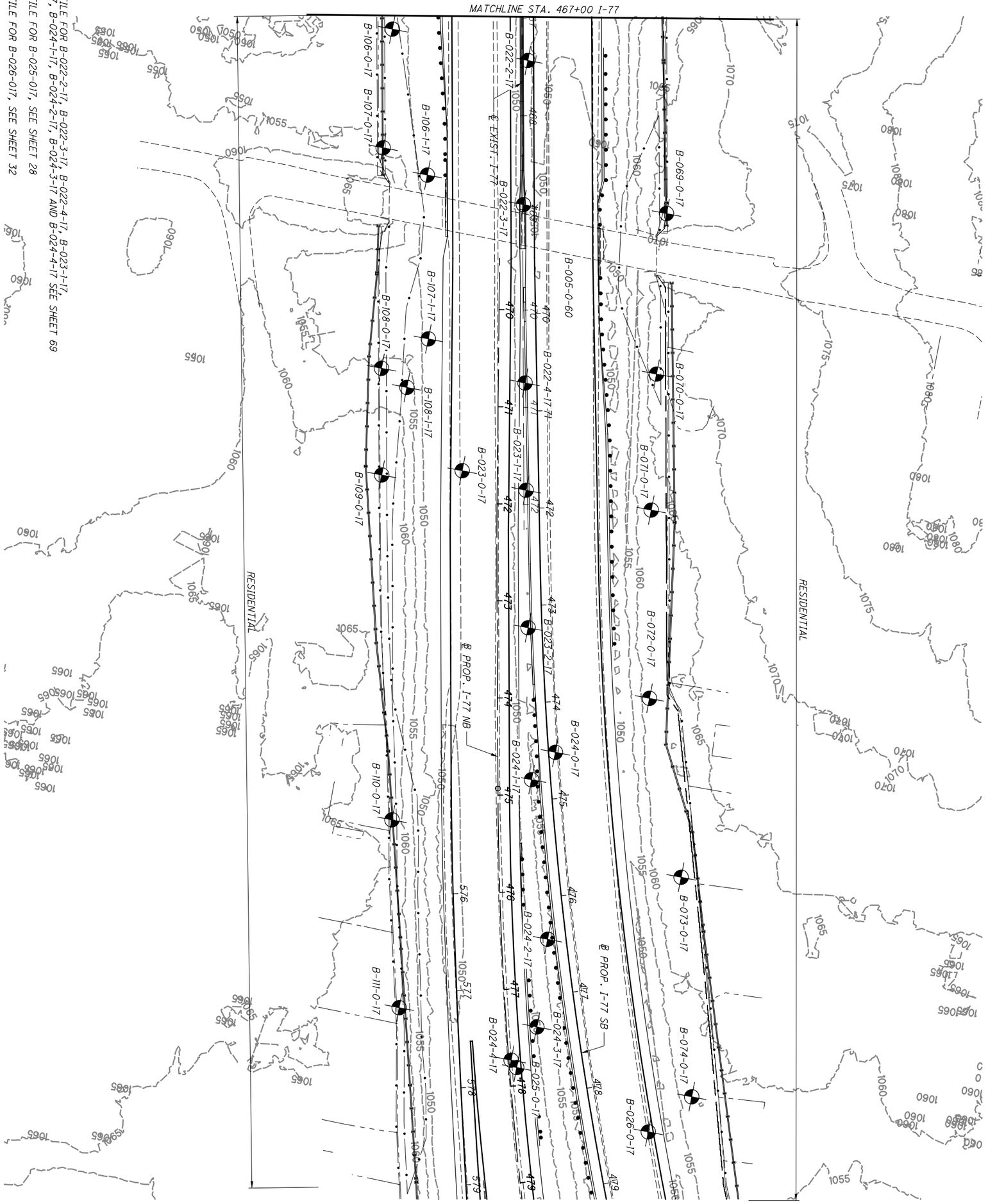
NOTE:

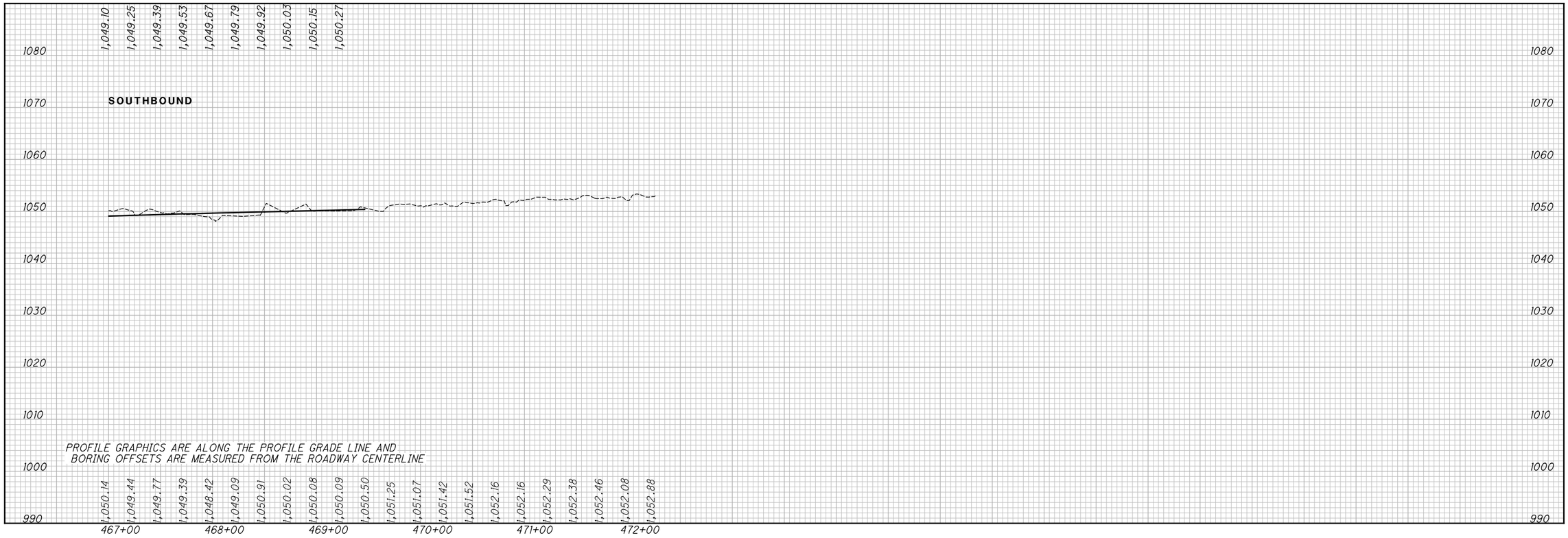
SOIL PROFILE FOR B-022-2-17, B-022-3-17, B-022-4-17, B-023-I-17, B-023-2-17, B-024-I-17, B-024-2-17, B-024-3-17 AND B-024-4-17 SEE SHEET 69

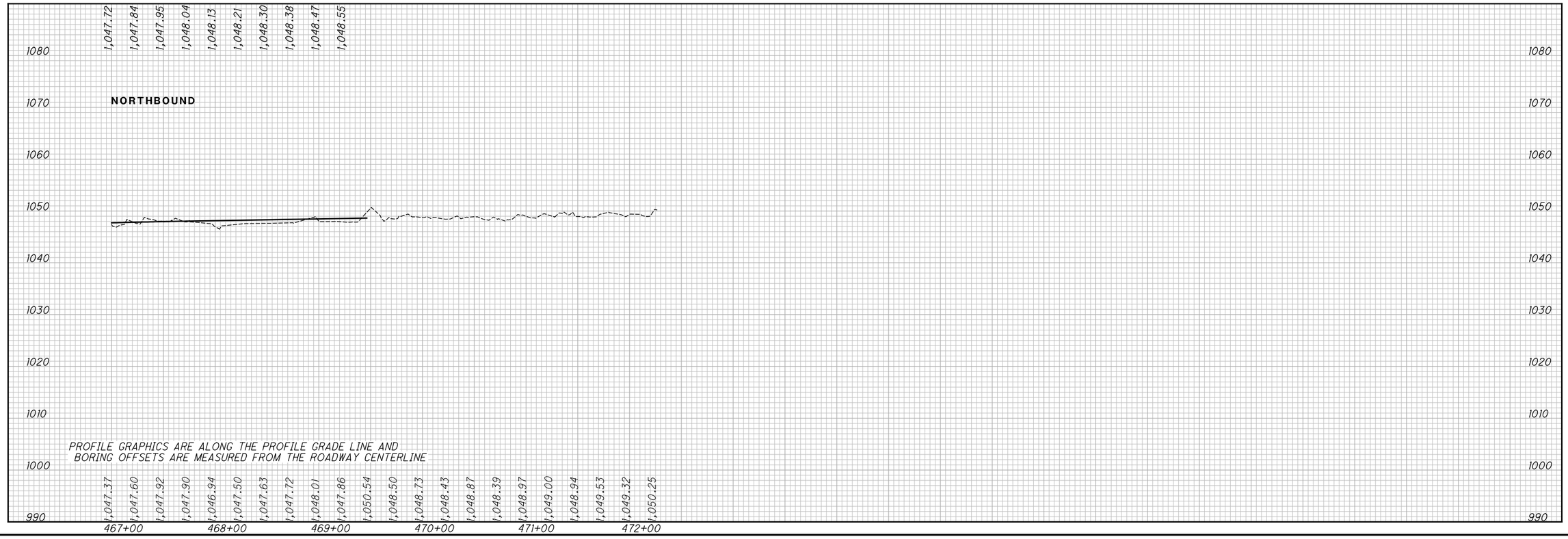
SOIL PROFILE FOR B-025-017, SEE SHEET 28

SOIL PROFILE FOR B-026-017, SEE SHEET 32



	26/209	SUM-77/277/224 VARIOUS	SOIL PROFILE I-77 STA.467+00 TO END	DRAWN MJ / CHECKED BPA	0 50 / 25 100 HORIZONTAL SCALE IN FEET





0 25 50 100
HORIZONTAL SCALE IN FEET

DRAWN ZM
CHECKED BPA

SOIL PROFILE
I-77 STA. 467+00 TO END

SUM-77/277/224
VARIOUS

27 209

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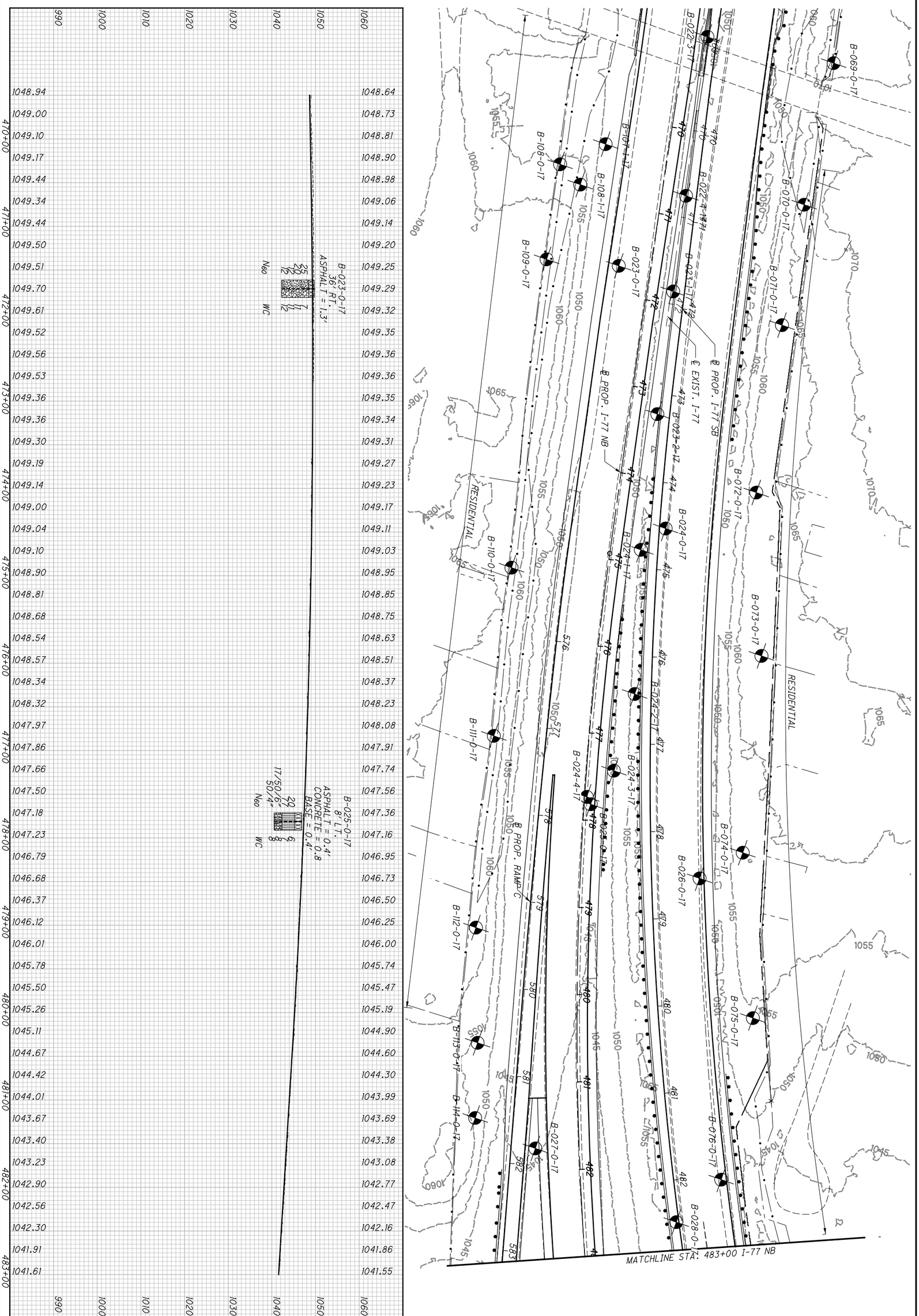

28 / 209	SUM-77 / 277 / 224 VARIOUS	SOIL PROFILE I-77 NB BEGIN TO STA. 483+00	DRAWN MJ CHECKED BPA	0 50 25 100 HORIZONTAL SCALE IN FEET	N

SOIL PROFILE
I-77 NB STA. 483+00 TO STA. 498+00

SUM-77/277/224
VARIOUS

HORIZONTAL SCALE IN FEET
0 25 50 100

DRAWN MJ
CHECKED BPA

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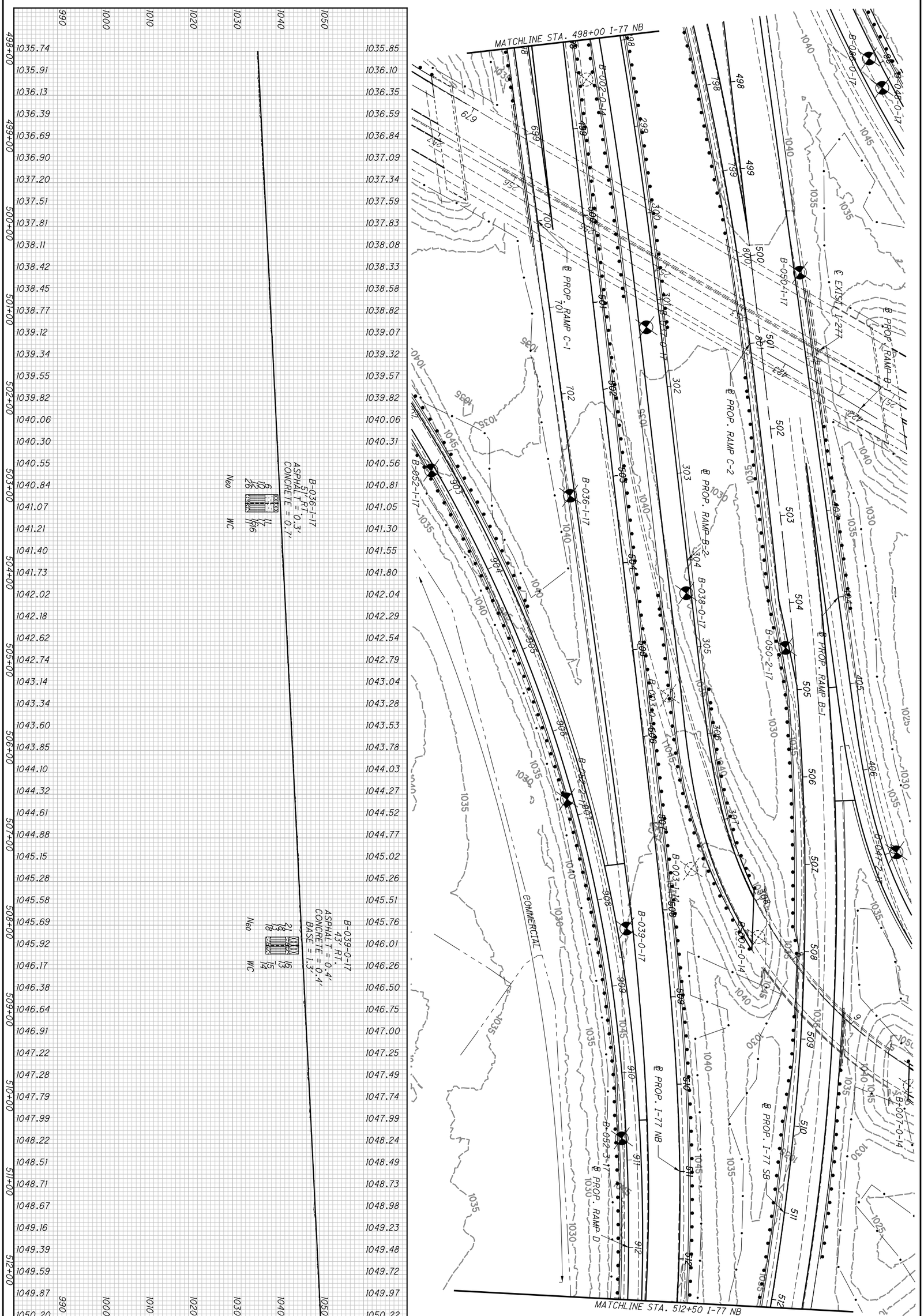
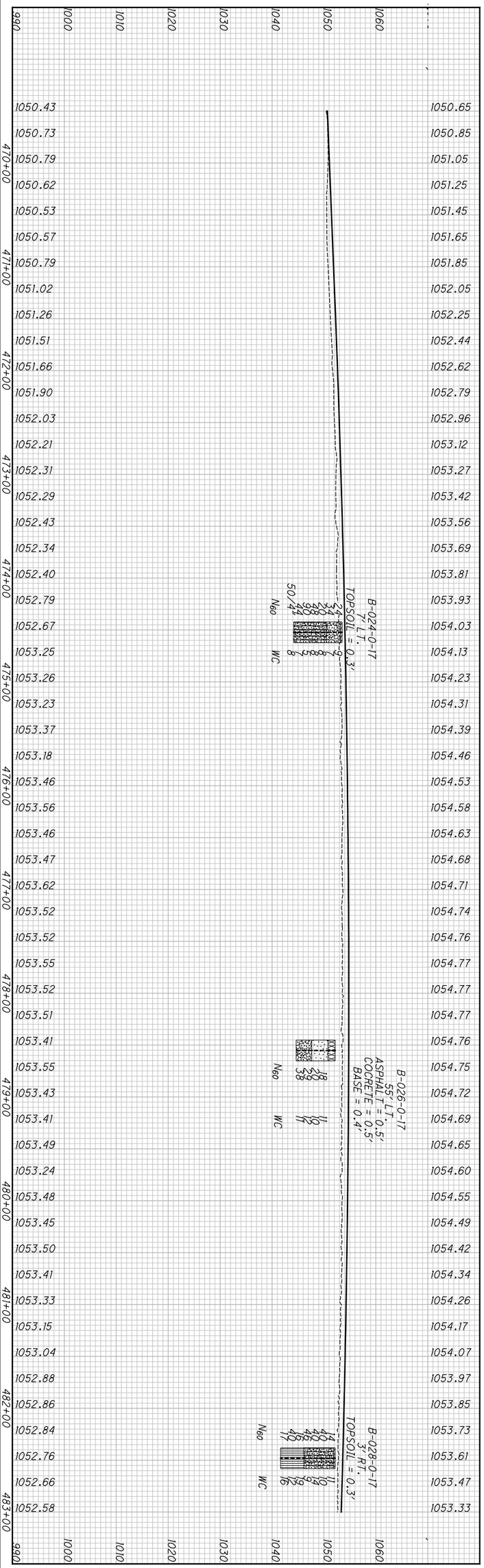
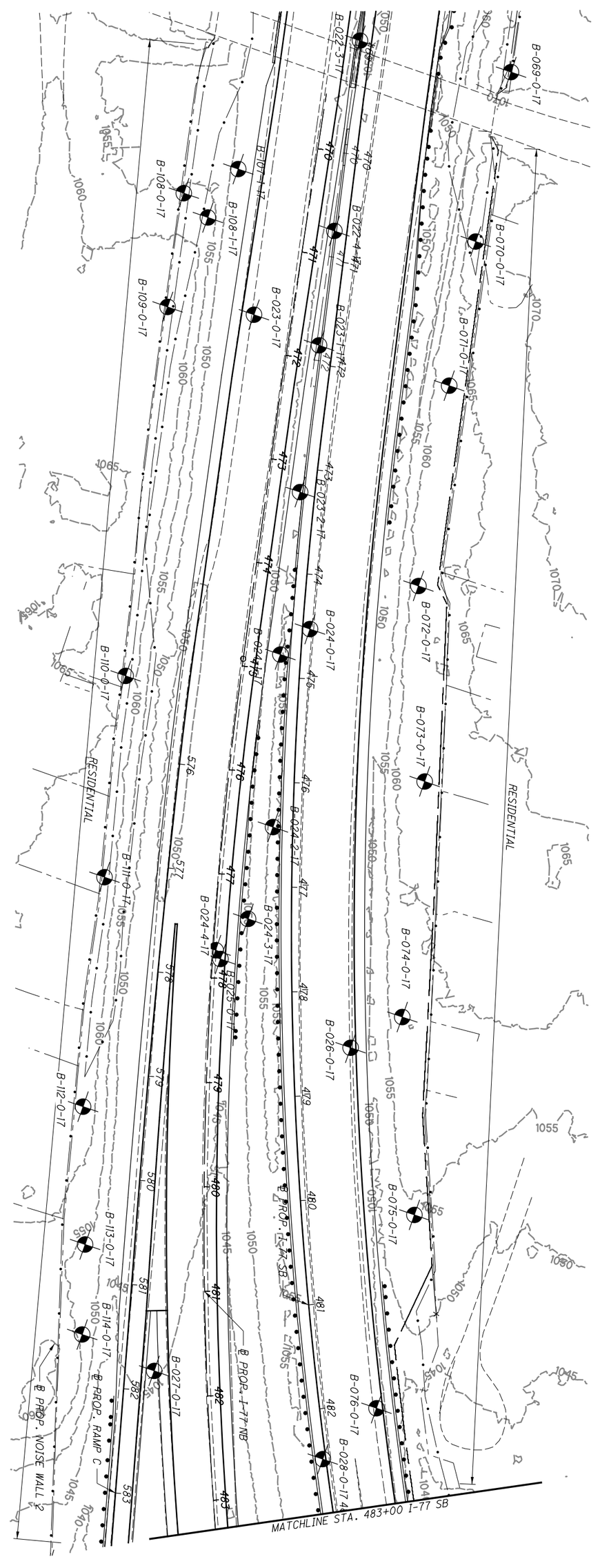


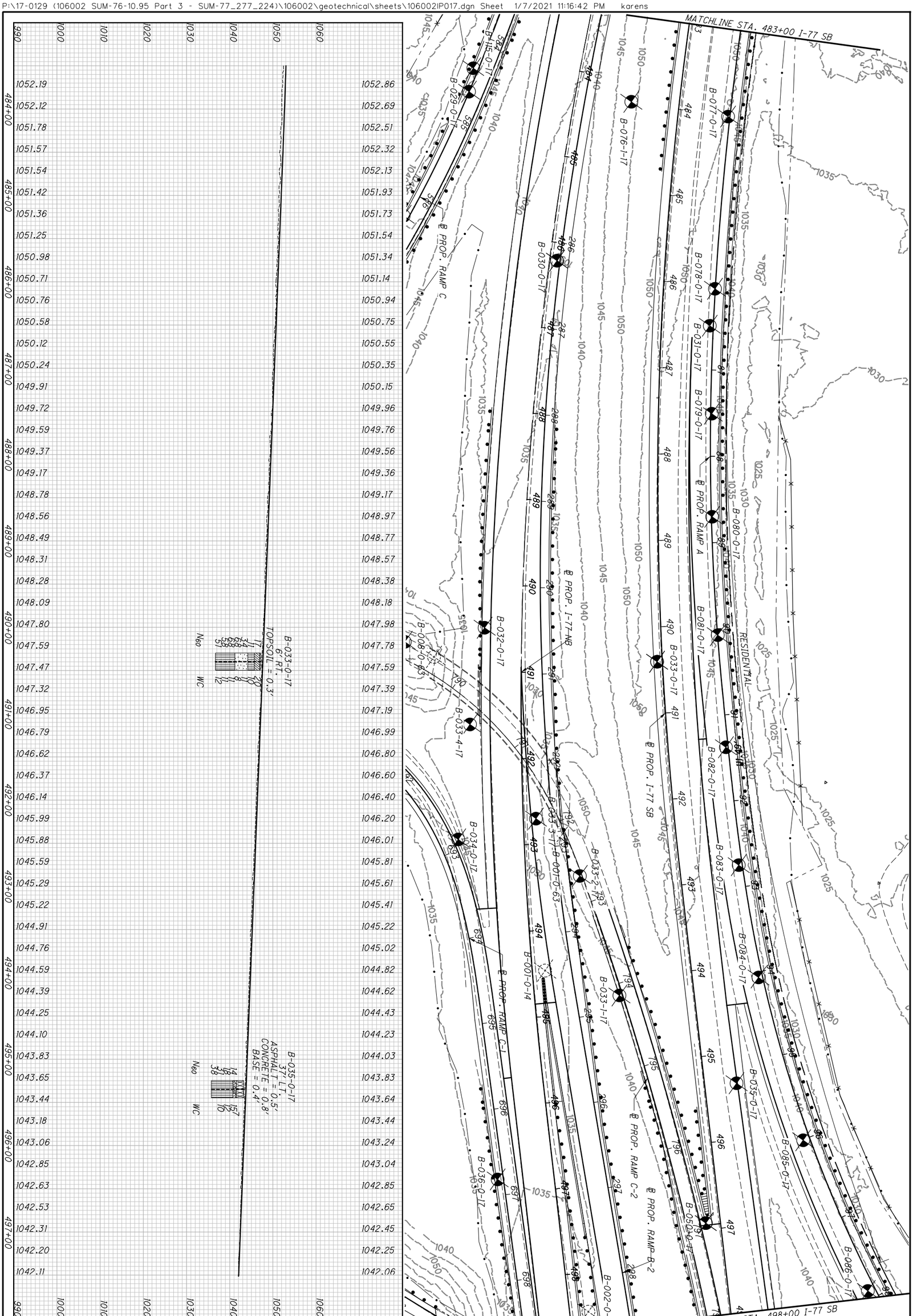
30 / 209	SUM-77 / 277 / 224 VARIOUS	SOIL PROFILE I-77 NB STA. 498+00 TO STA. 512+50	DRAWN MJ CHECKED BPA	0 50 25 100 HORIZONTAL SCALE IN FEET	

	31 / 209	**SUM-77 / 277 / 224** **VARIOUS**	**SOIL PROFILE** **I-77 NB STA. 512+50 TO END**	DRAWN MJ CHECKED BPA	0 50 25 100 HORIZONTAL SCALE IN FEET





32 / 209	SUM-77 / 277 / 224 VARIOUS	SOIL PROFILE I-77 SB BEGIN TO STA. 483+00	DRAWN MJ CHECKED BPA	0 50 25 100 HORIZONTAL SCALE IN FEET	N



33/209	SUM-77/277/224 VARIOUS	SOIL PROFILE I-77 SB STA. 483+00 TO STA. 498+00	DRAWN MJ CHECKED BPA	0 50 25 100 HORIZONTAL SCALE IN FEET	

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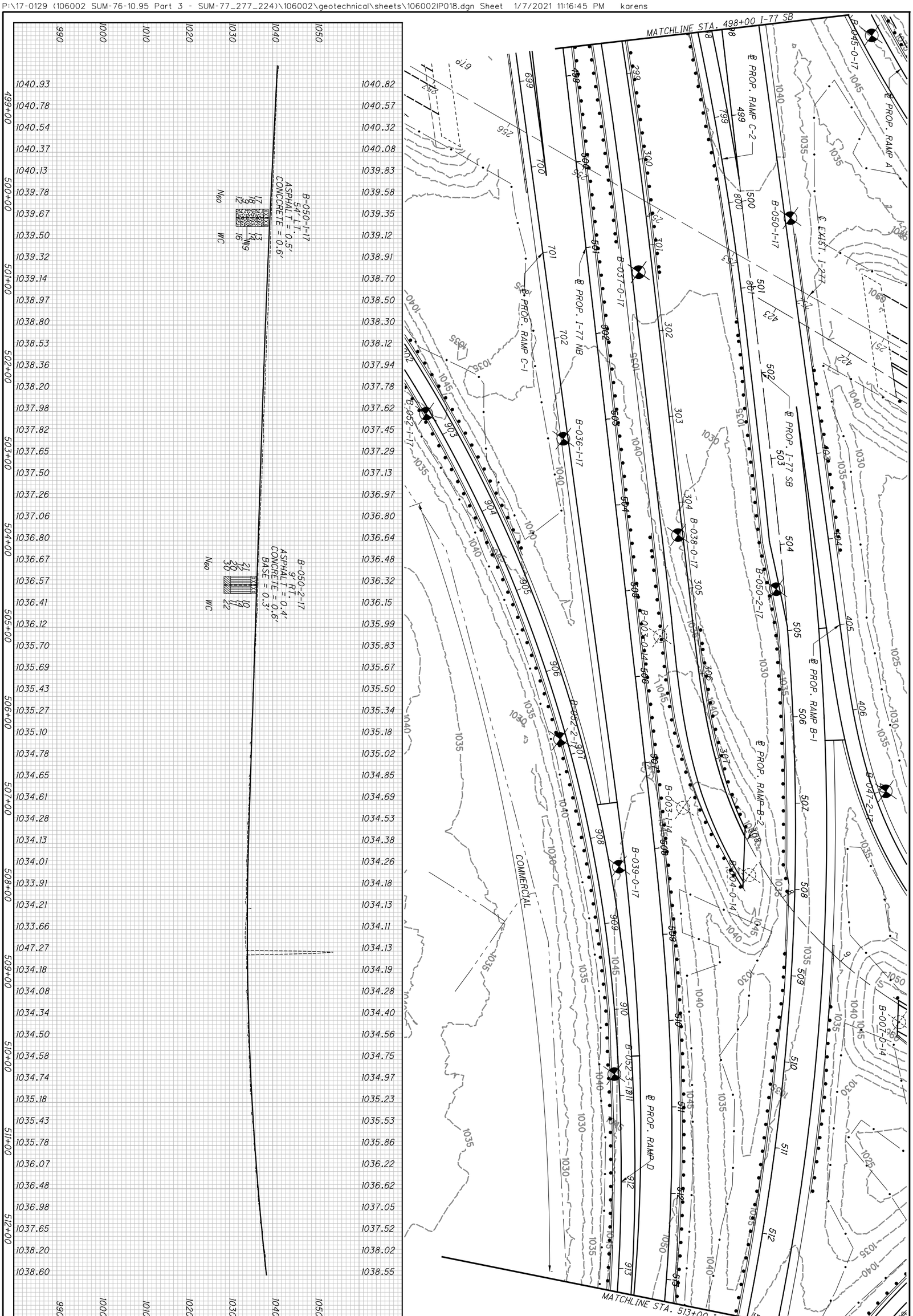
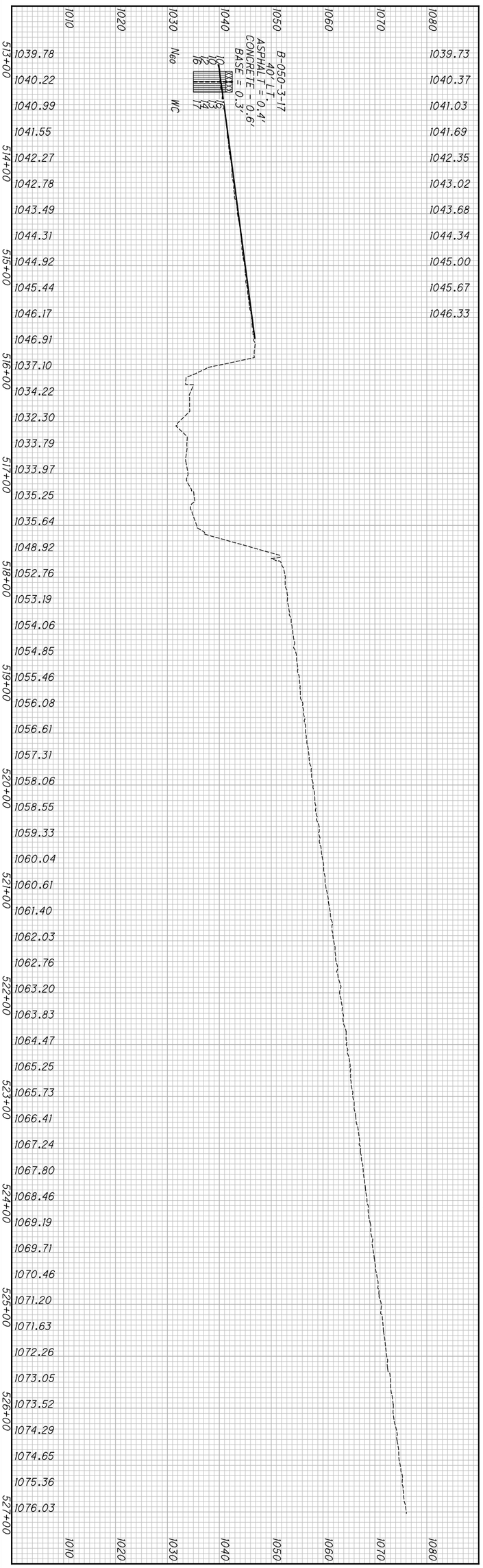
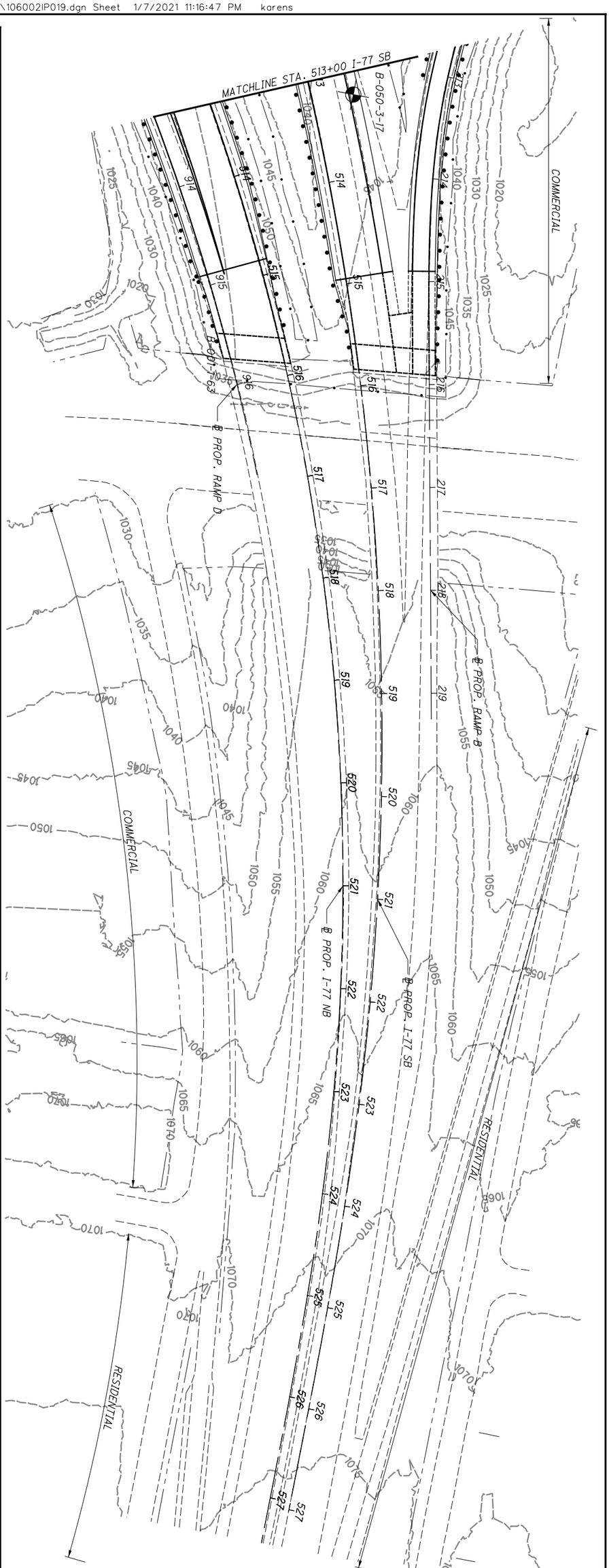


34/209	SUM-77/277/224 VARIOUS	SOIL PROFILE I-77 SB STA. 498+00 TO STA. 513+00	DRAWN EB CHECKED BPA	0 50 25 100 HORIZONTAL SCALE IN FEET	





SUM-77/277/224
VARIOUS

SOIL PROFILE
I-77 SB STA. 513+00 TO END

DRAWN MJ
CHECKED BPA

0 25 50 100
HORIZONTAL SCALE IN FEET

COMMERCIAL

RESIDENTIAL

B-102-0-17
B-101-0-17
B-100-0-17
B-099-0-17
B-098-0-17
B-097-0-17
B-096-0-17
B-044-0-17
B-099-1-17
B-043-0-17
B-010-1-14
B-011-0-14

℄ PROP. RAMP B
℄ PROP. RAMP B-2
℄ EXIST. I-277

MATCHLINE STA. 237+00 I-277

223+00 224+00 225+00 226+00 227+00 228+00 229+00 230+00 231+00 232+00 233+00 234+00 235+00 236+00

1019.77 1020.07 1020.19 1020.38 1020.50 1020.74 1020.75 1021.16 1021.48 1021.81 1022.04 1022.27 1022.54 1022.67 1022.88 1023.07 1023.28 1023.52 1023.73 1024.09 1024.32 1024.69 1025.10 1025.55 1025.71 1026.10 1026.50 1026.86 1027.26 1027.47 1028.09 1028.57 1028.98 1029.28 1029.67 1030.09 1030.43 1030.79 1031.25 1031.64 1032.02 1032.40 1032.73 1033.17 1033.52 1033.87 1034.27 1034.69 1035.14 1035.49 1035.84 1036.18 1036.63 1037.03 1037.33 1037.73 1038.13 1038.53

HORIZONTAL SCALE IN FEET
0 25 50 100

DRAWN MJ
CHECKED CH

SOIL PROFILE
I-277 BEGIN TO STA. 237+00

SUM-77/277/224
VARIOUS

36 209

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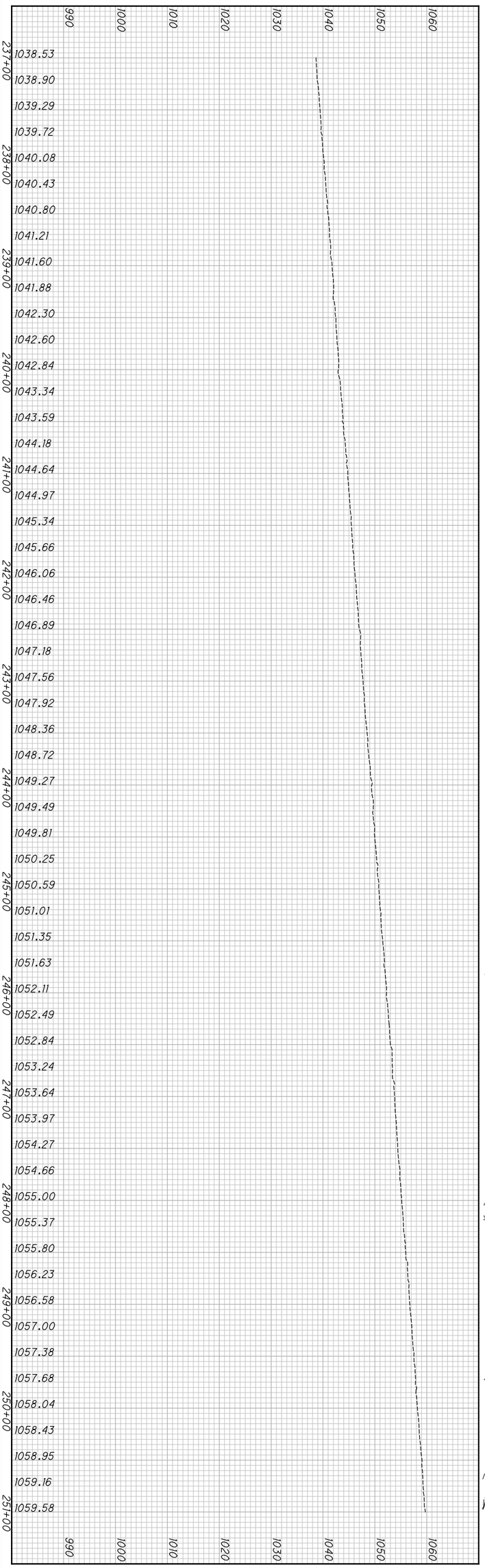
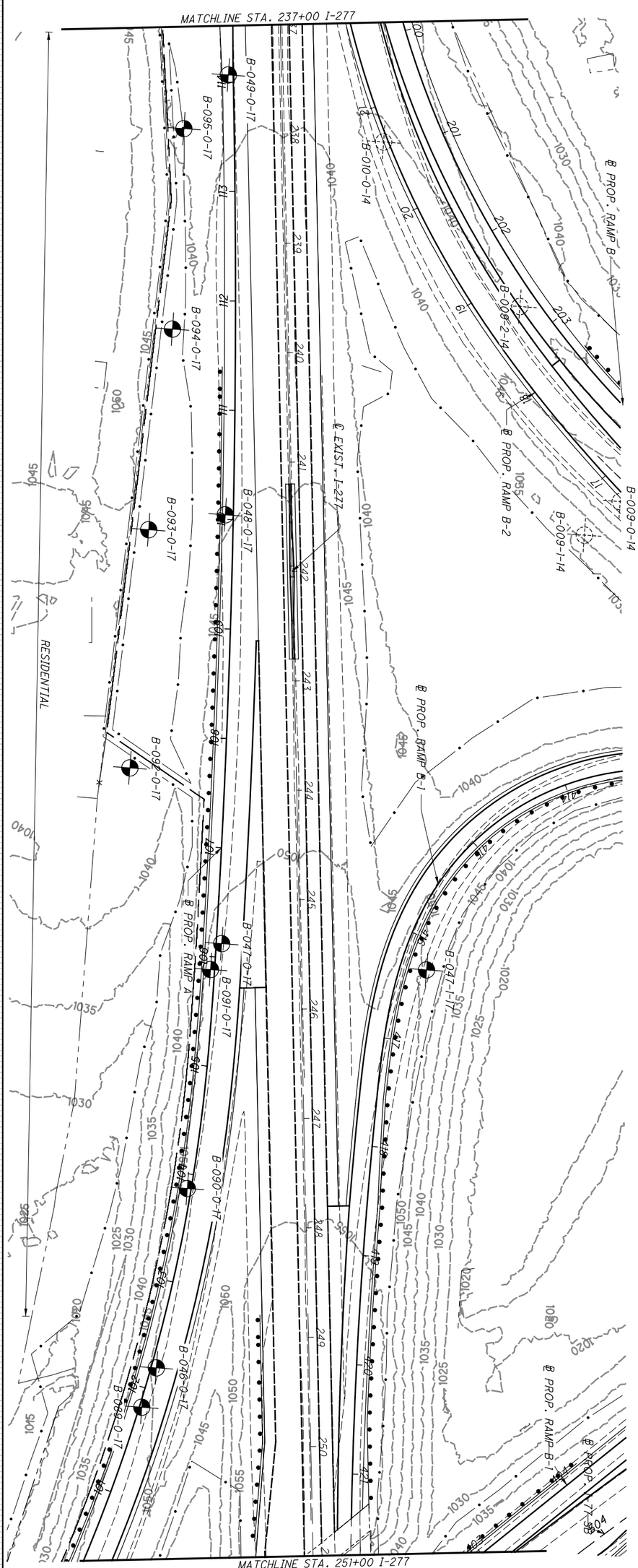
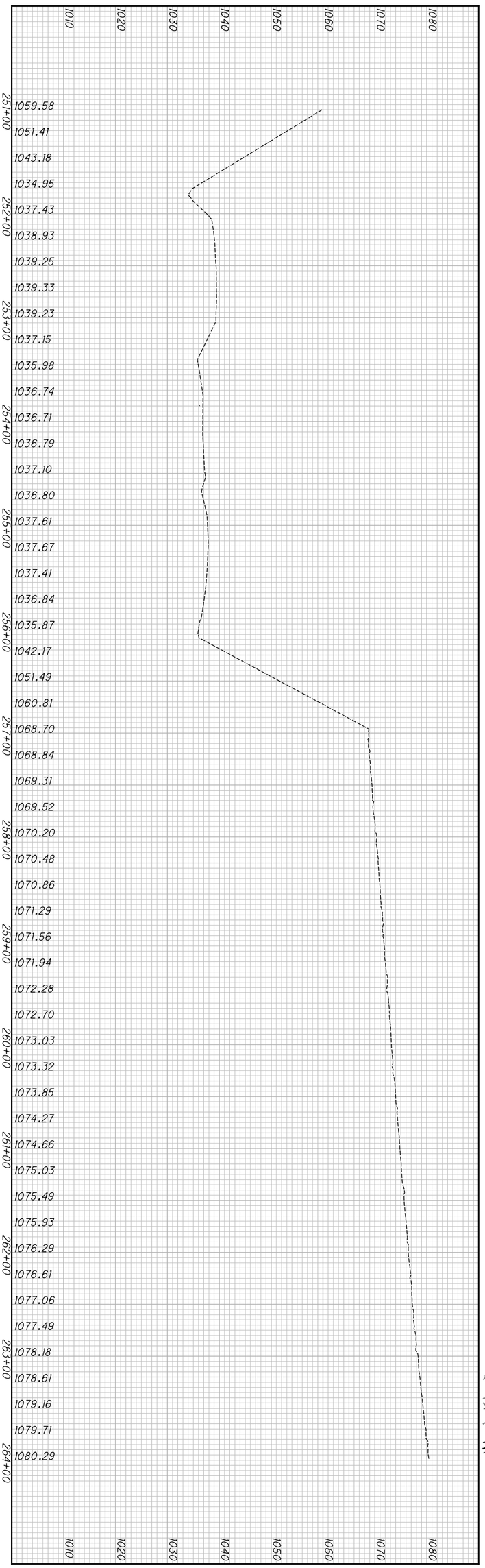
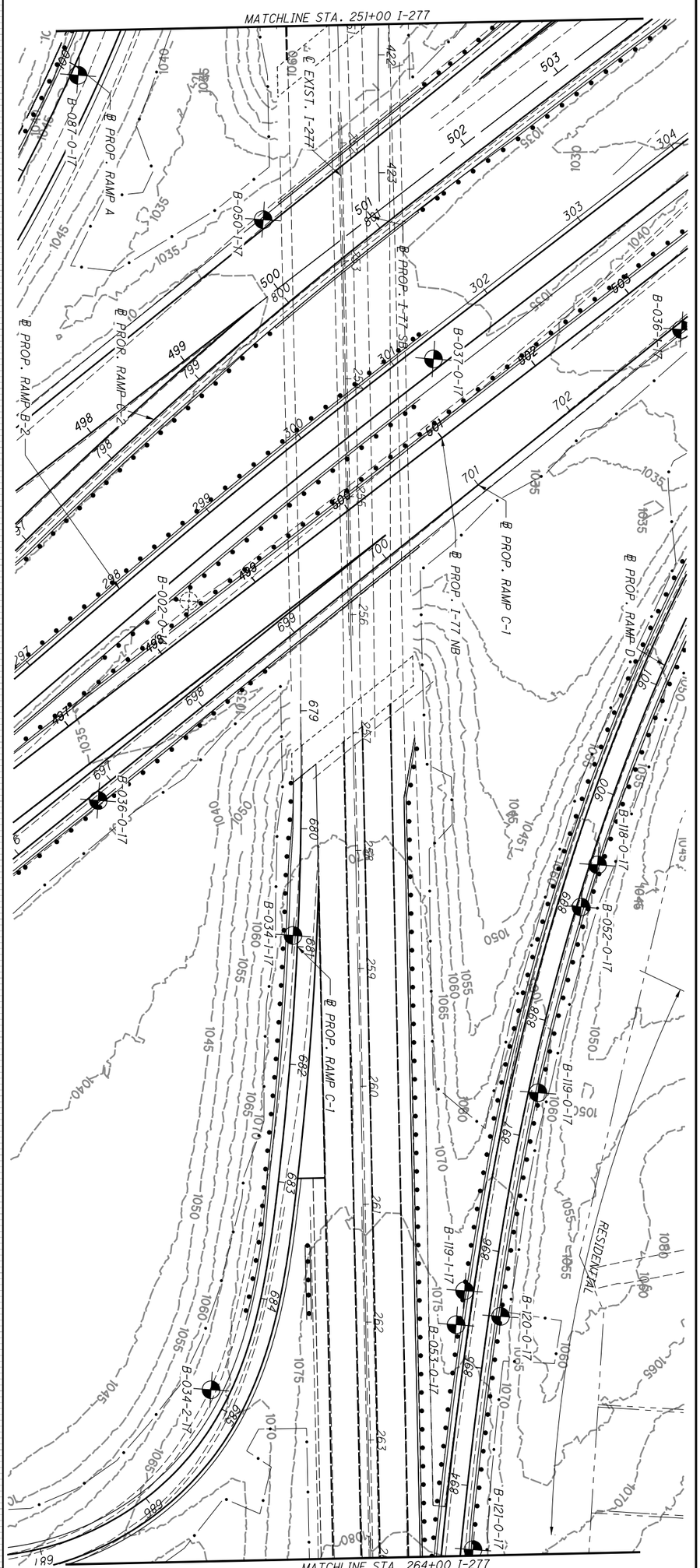




37/209	SUM-77/277/224 VARIOUS	SOIL PROFILE I-277 STA. 237+00 TO STA. 251+00	DRAWN MJ CHECKED BPA	0 50 25 100 HORIZONTAL SCALE IN FEET	N





38/209	SUM-77/277/224 VARIOUS	SOIL PROFILE I-277 STA. 251+00 TO STA. 264+00	DRAWN MJ CHECKED CH	0 50 25 100 HORIZONTAL SCALE IN FEET	N

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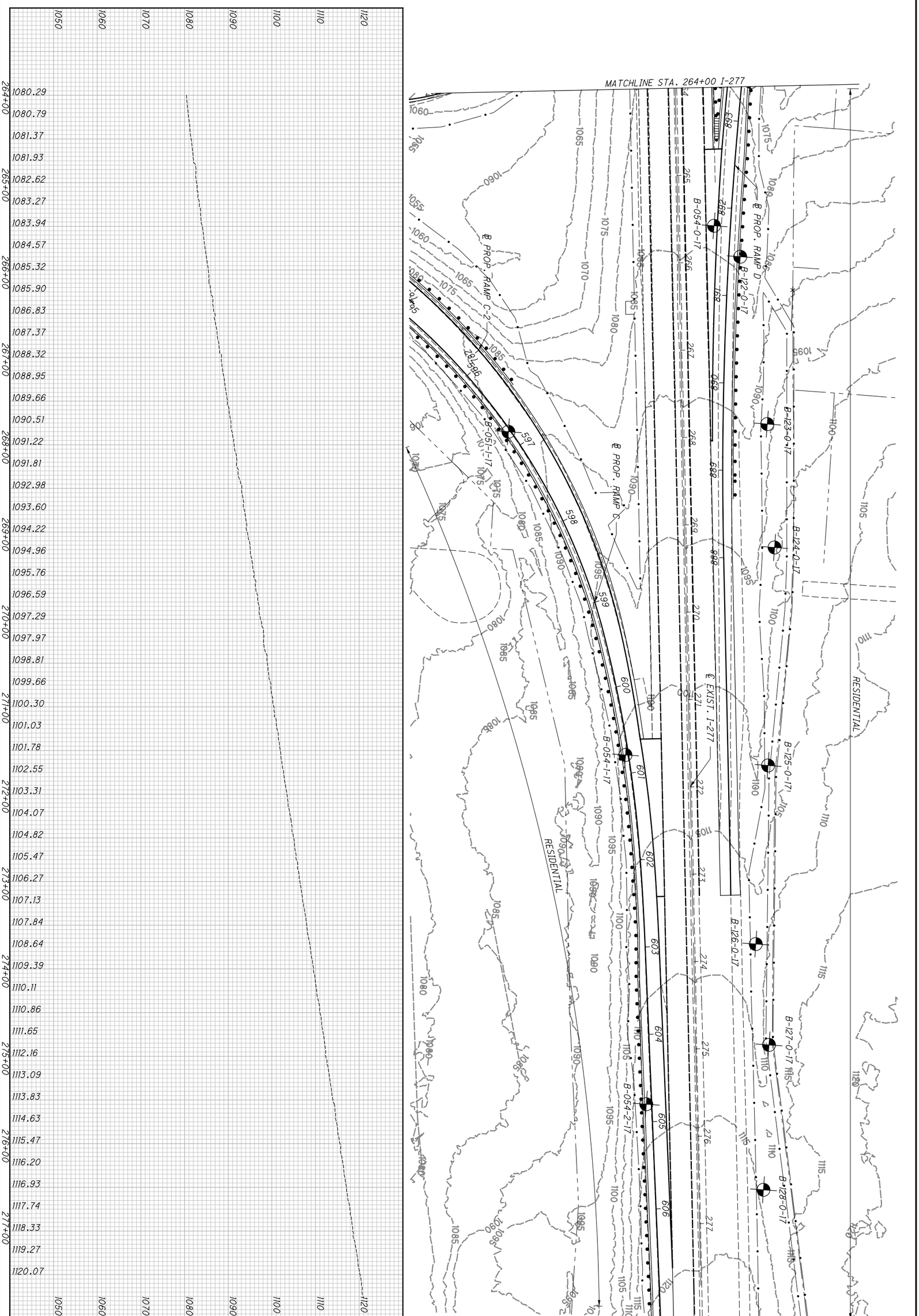

39/209	SUM-77/277/224 VARIOUS	SOIL PROFILE I-277 STA. 264+00 TO END	DRAWN MJ CHECKED CH	0 50 25 100 HORIZONTAL SCALE IN FEET	N

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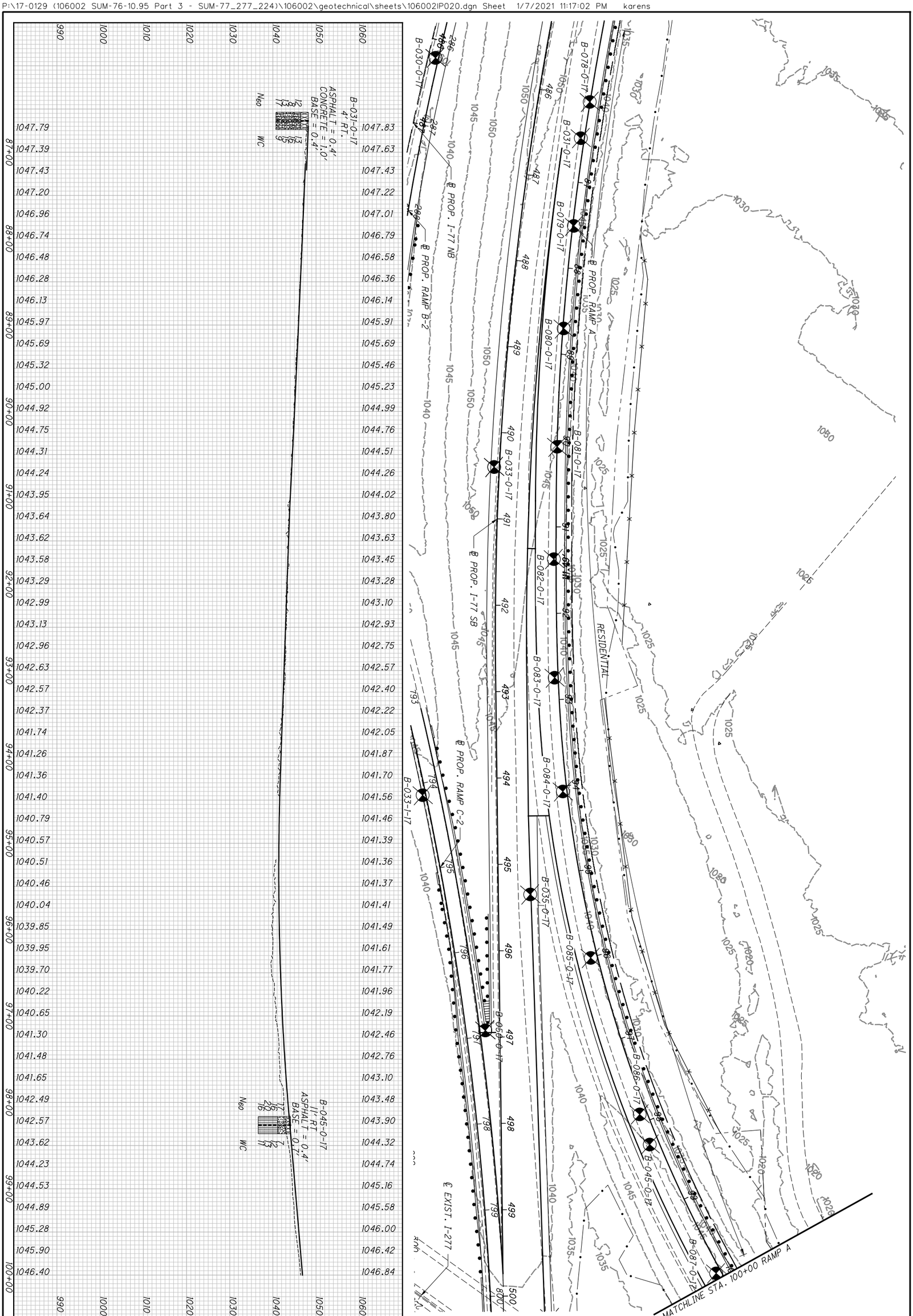

40 / 209	SUM-77 / 277 / 224 VARIOUS	SOIL PROFILE RAMP A BEGIN TO STA. 100+00	DRAWN MJ CHECKED BPA	0 50 25 100 HORIZONTAL SCALE IN FEET	

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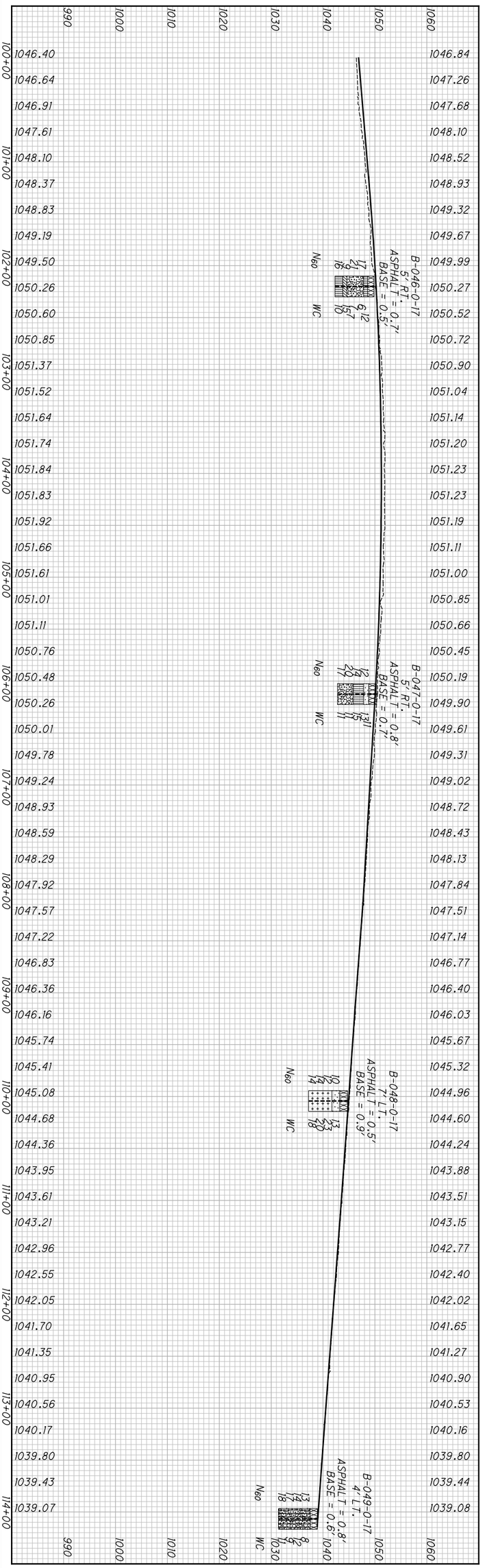
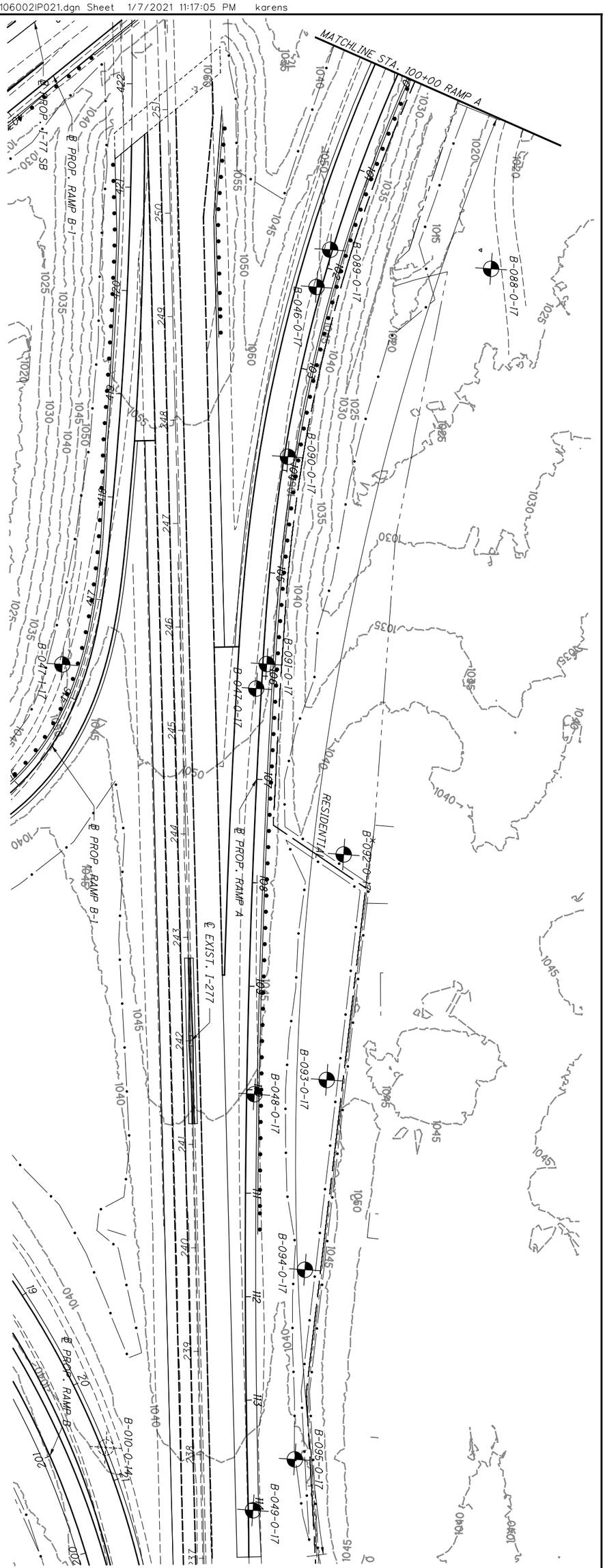
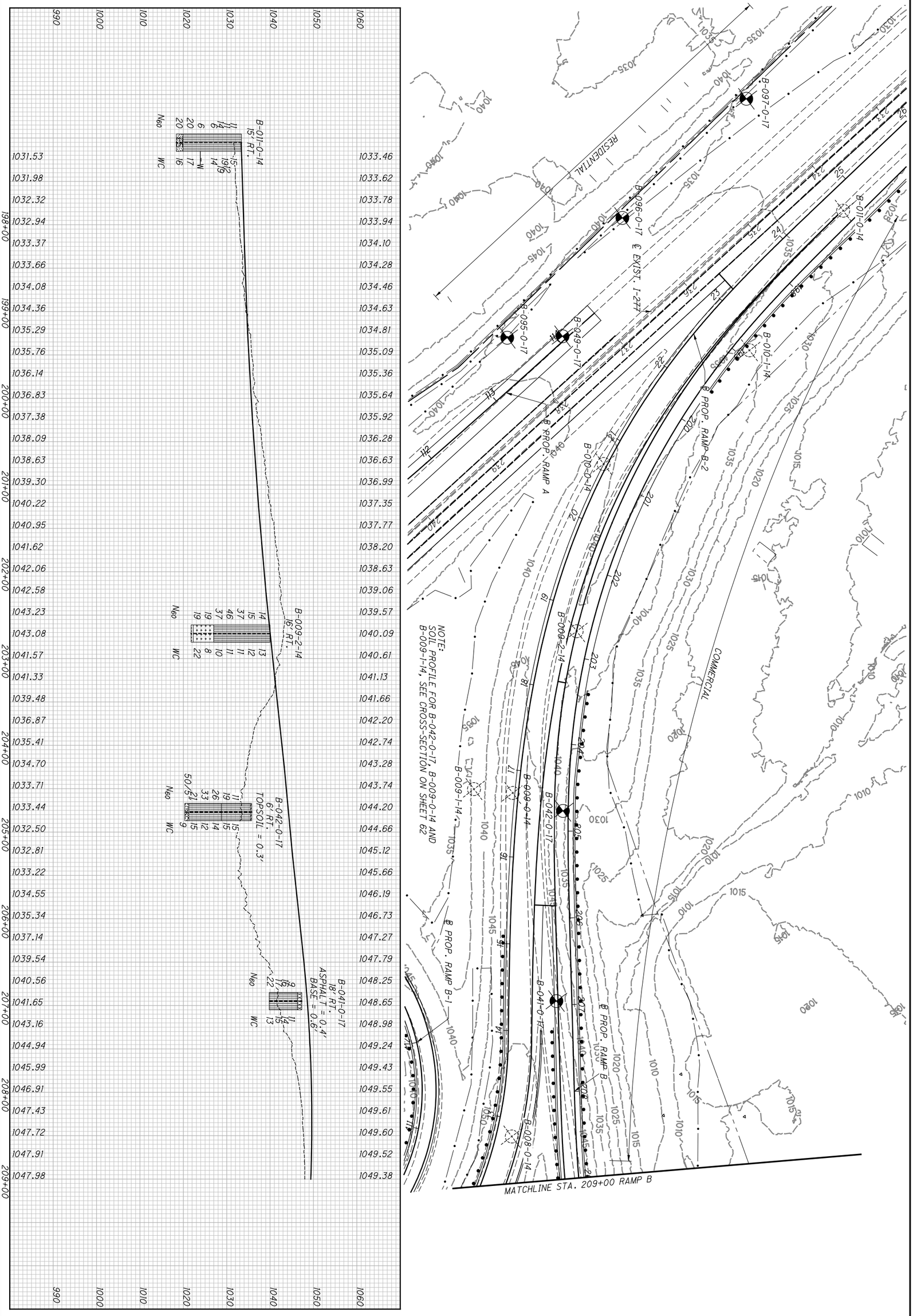
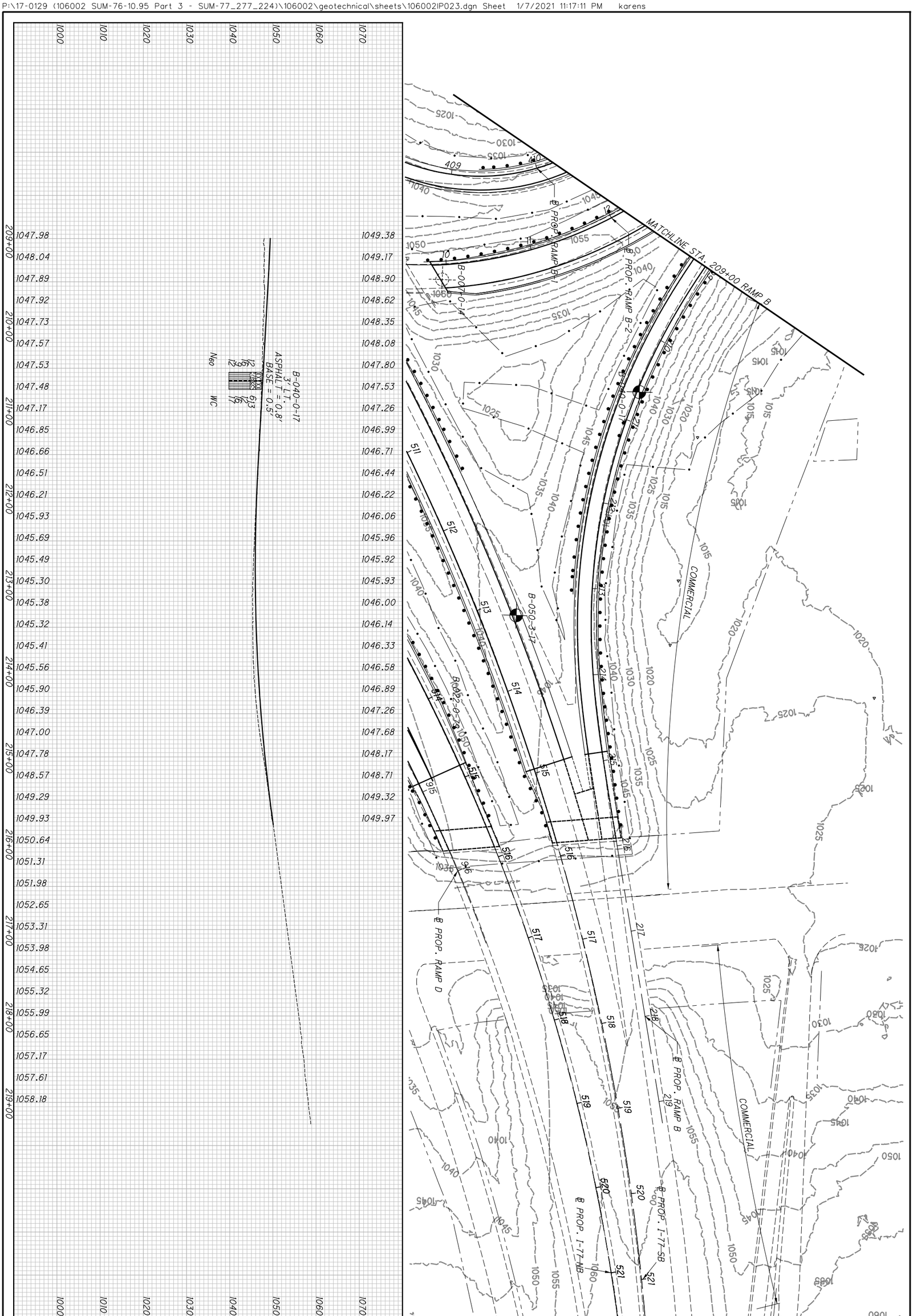




	41 / 209	SUM-77 / 277 / 224 VARIOUS	SOIL PROFILE RAMP A STA. 100+00 TO END	DRAWN MJ CHECKED BPA	0 50 25 100 HORIZONTAL SCALE IN FEET



42/209	SUM-77/277/224 VARIOUS	SOIL PROFILE RAMP B BEGIN TO STA. 209+00	DRAWN MJ CHECKED BPA	0 50 25 100 HORIZONTAL SCALE IN FEET	



	43/209	SUM-77/277/224 VARIOUS	SOIL PROFILE RAMP B STA. 209+00 TO END	DRAWN MJ CHECKED BPA	0 50 25 100 HORIZONTAL SCALE IN FEET

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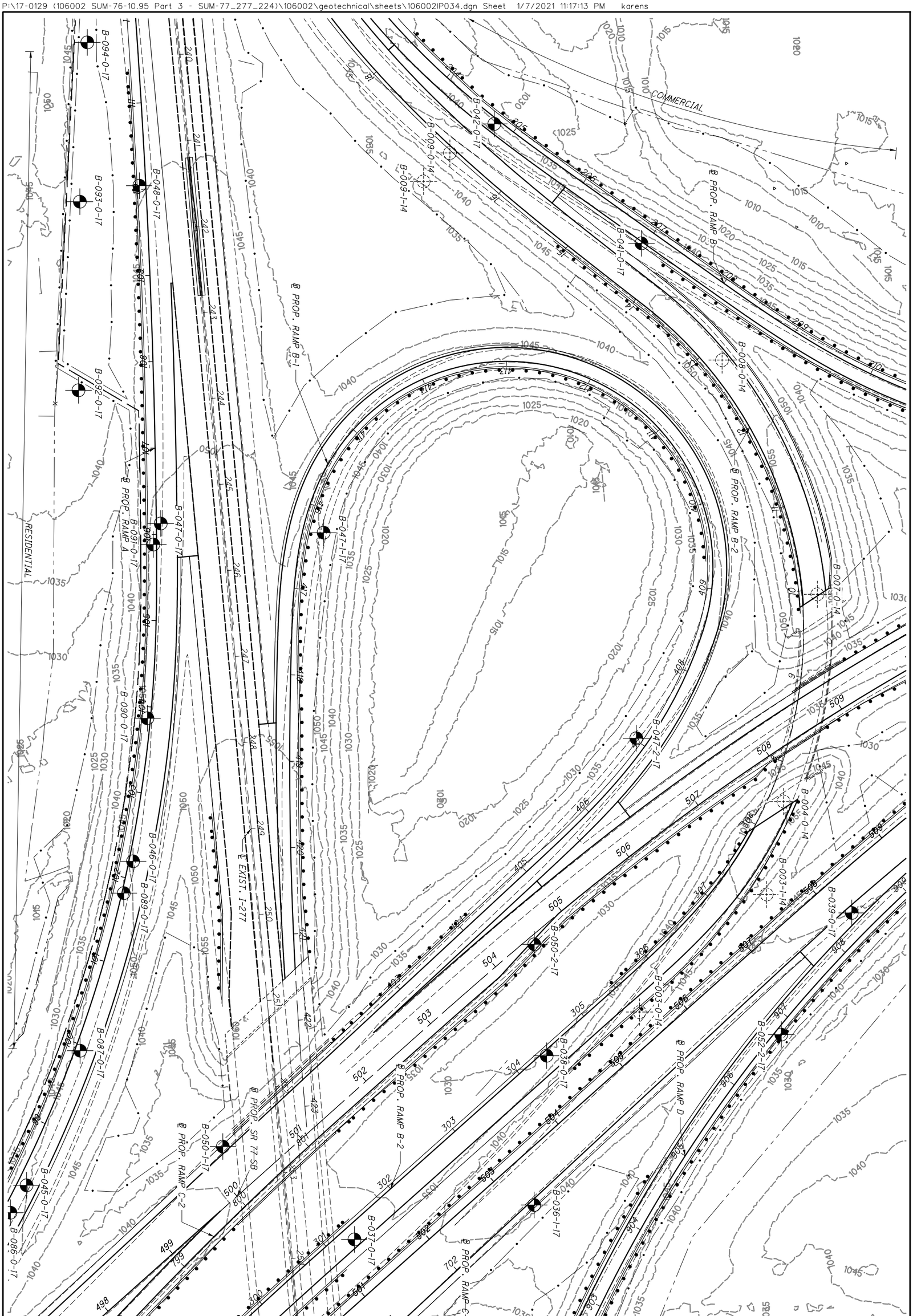
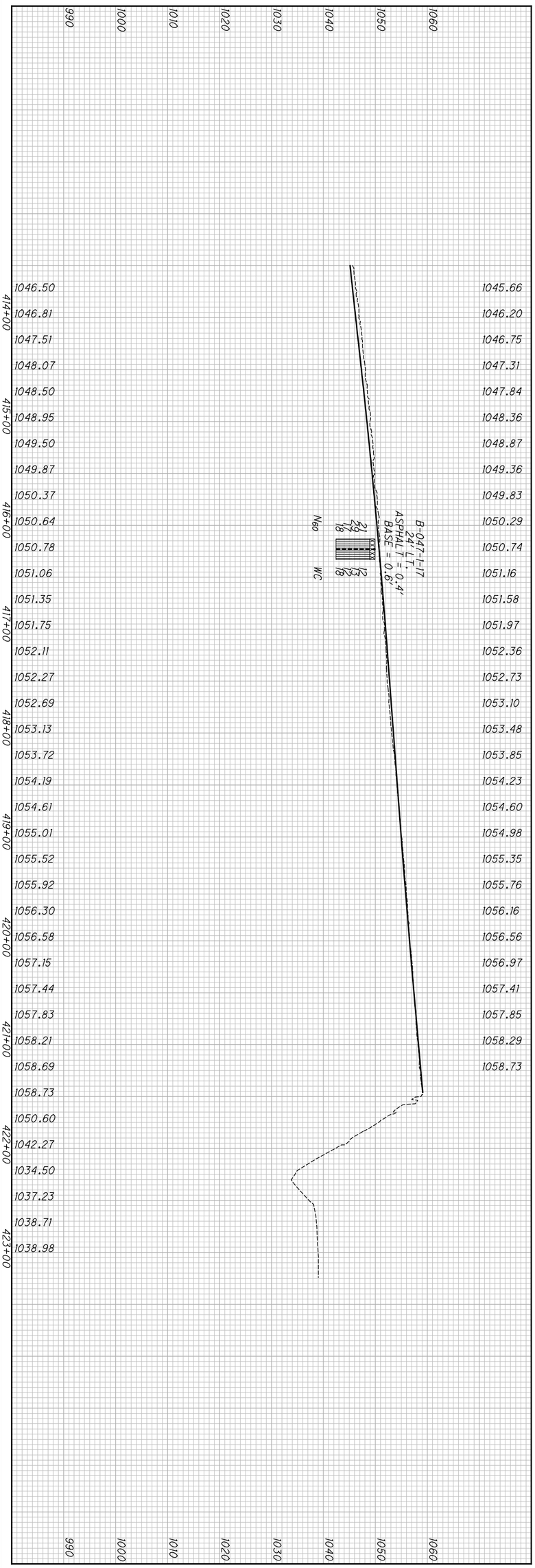
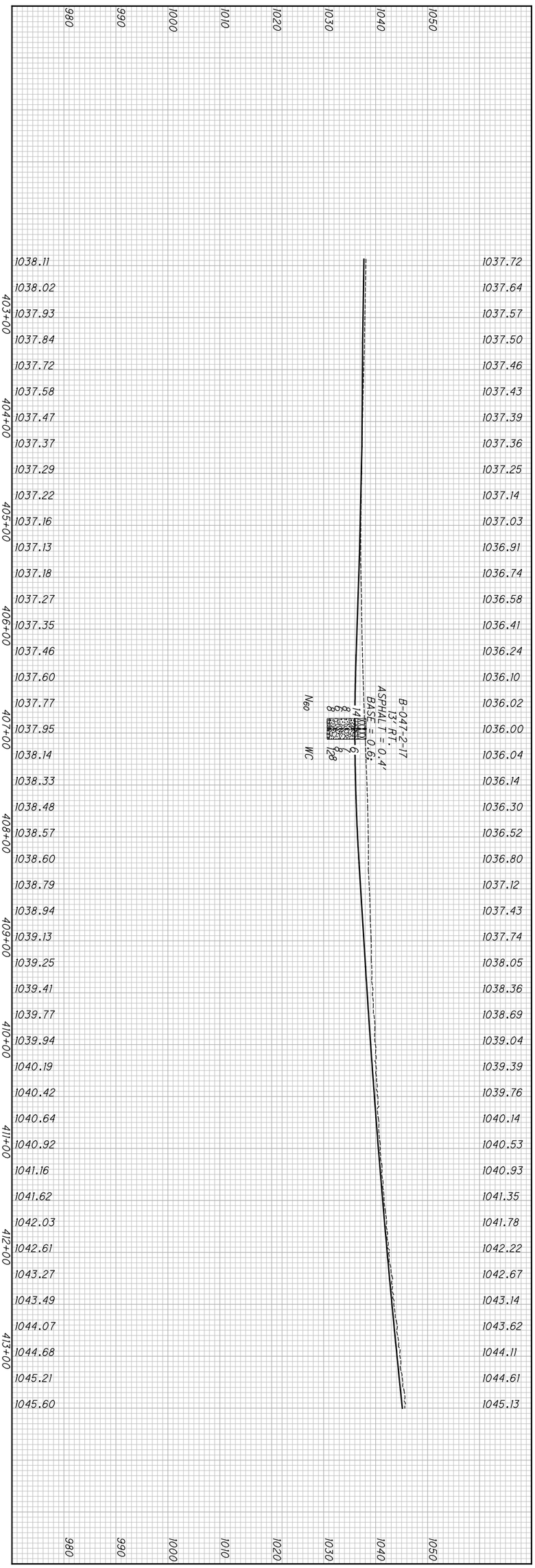
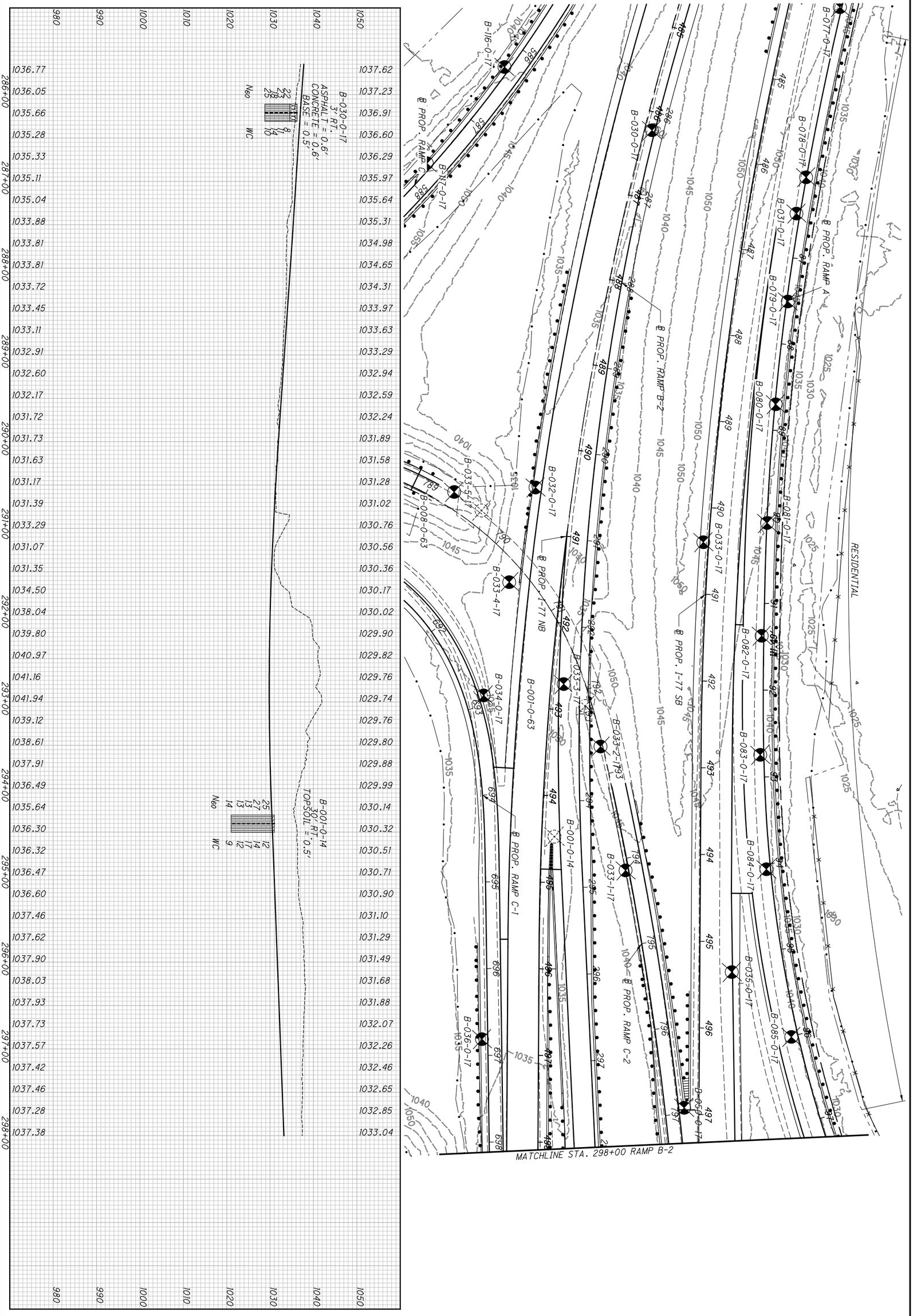


	44 / 209	SUM-77 / 277 / 224 VARIOUS	SOIL PROFILE RAMP B-1 BEGIN TO END	DRAWN MJ CHECKED BPA	0 50 25 100 HORIZONTAL SCALE IN FEET





45/209	SUM-77/277/224 VARIOUS	SOIL PROFILE RAMP B-1 BEGIN TO END	DRAWN MJ CHECKED CH	0 50 25 100 HORIZONTAL SCALE IN FEET

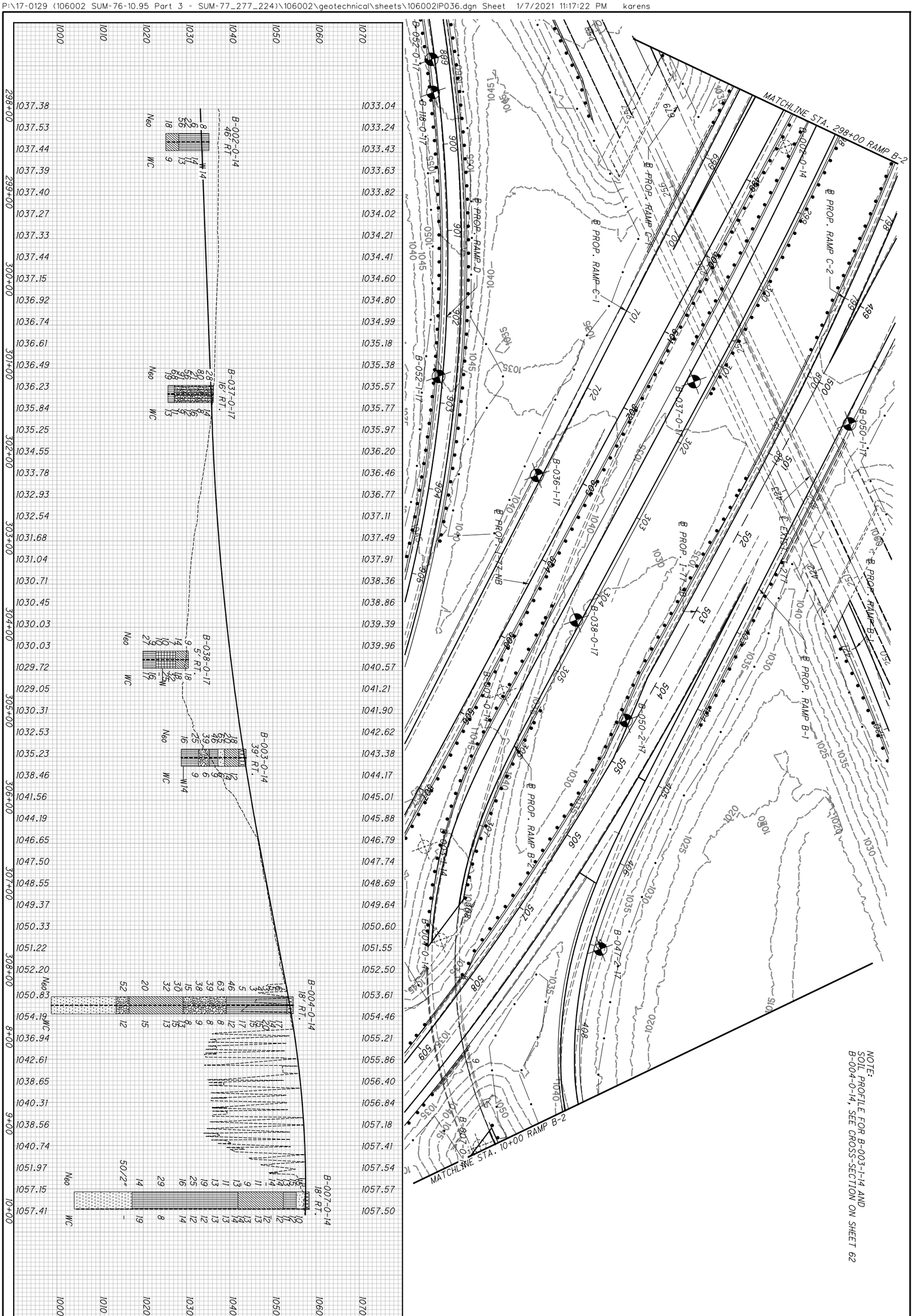


SUM-77/277/224
VARIOUS

SOIL PROFILE
RAMP B-2 BEGIN TO STA. 298+00

DRAWN MJ
CHECKED BPA

0 50
25 100
HORIZONTAL SCALE IN FEET

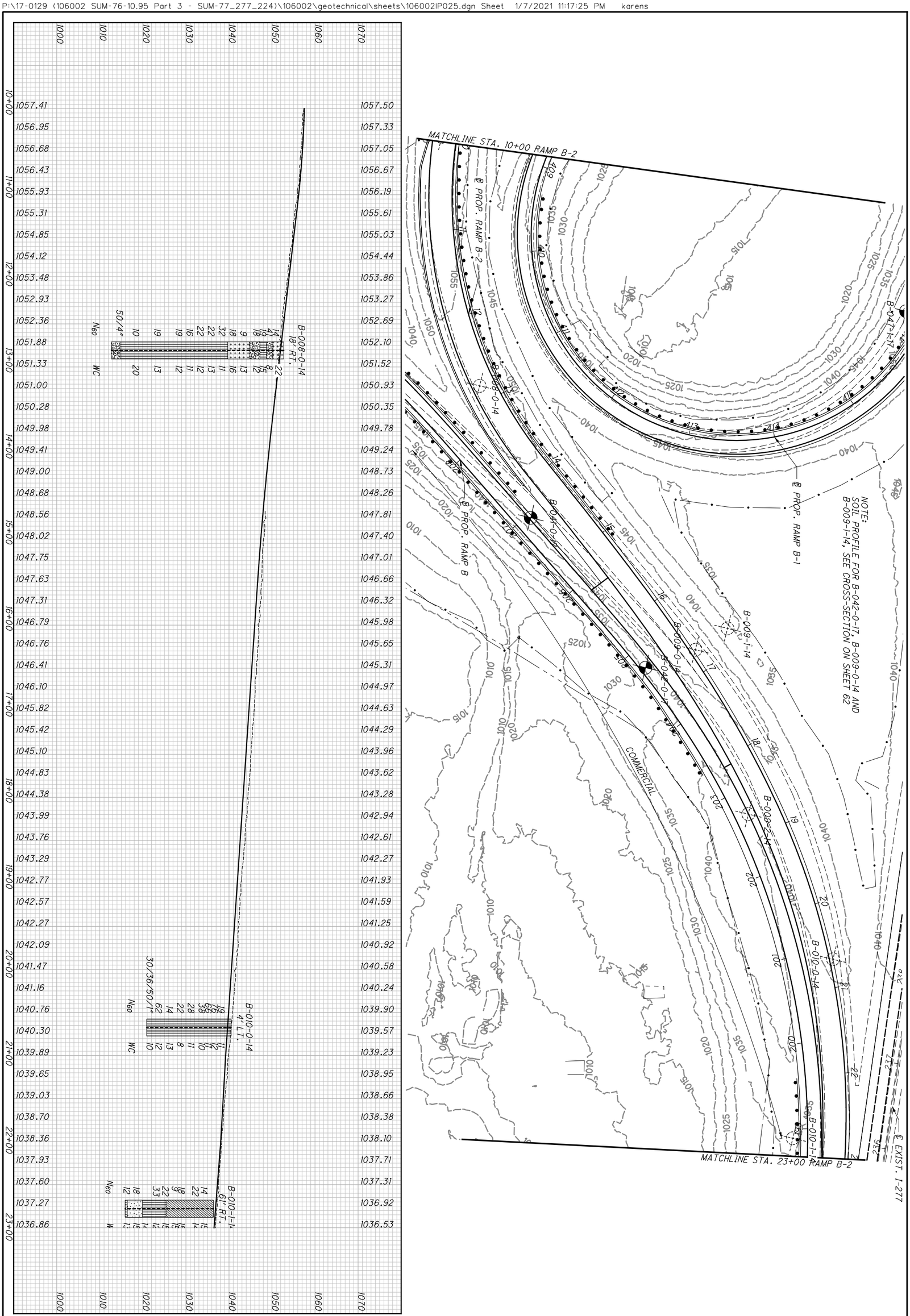


SUM-77/277/224
VARIOUS

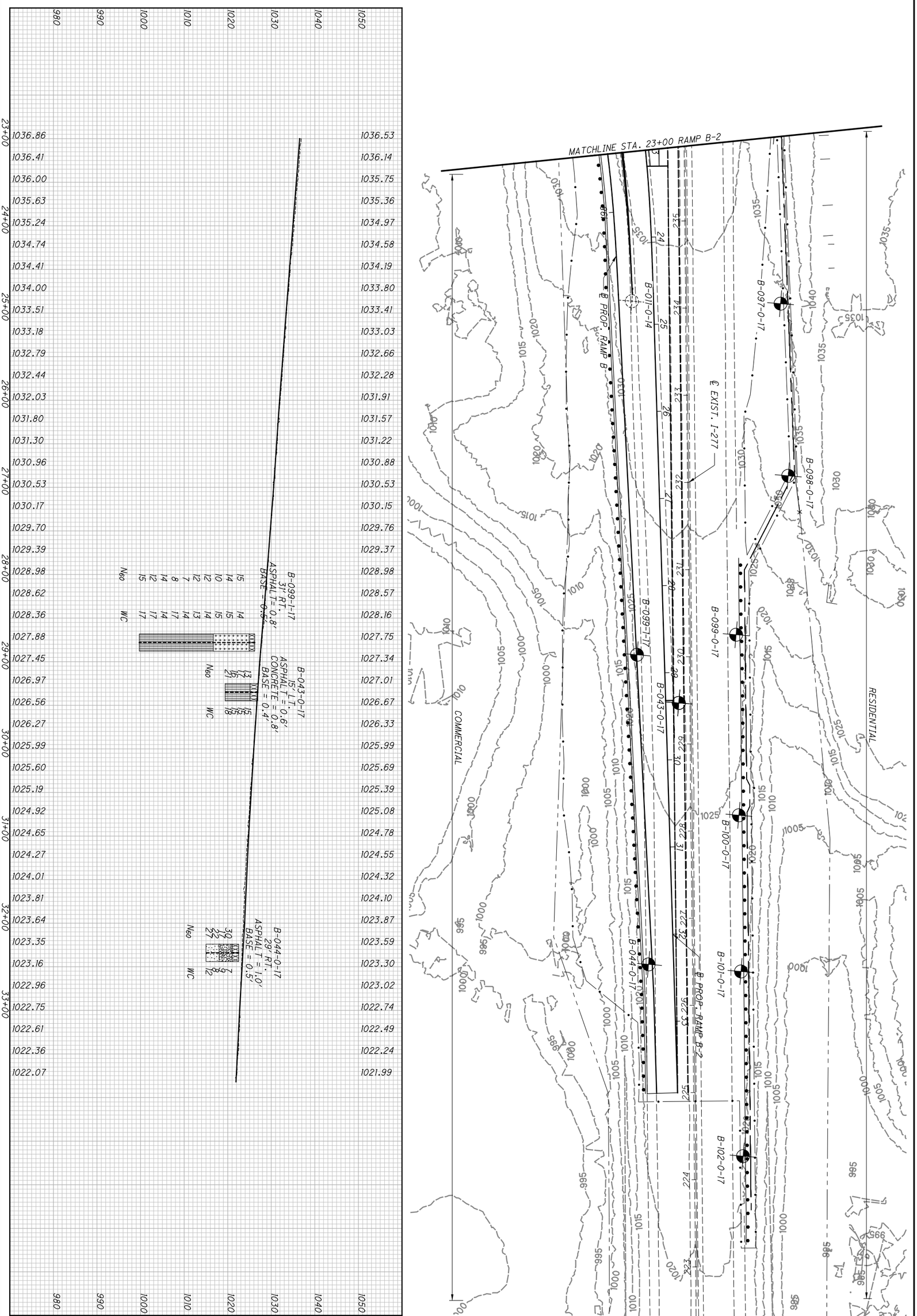
SOIL PROFILE
RAMP B-2 STA. 298+00 TO STA. 10+00

DRAWN MJ
CHECKED BPA

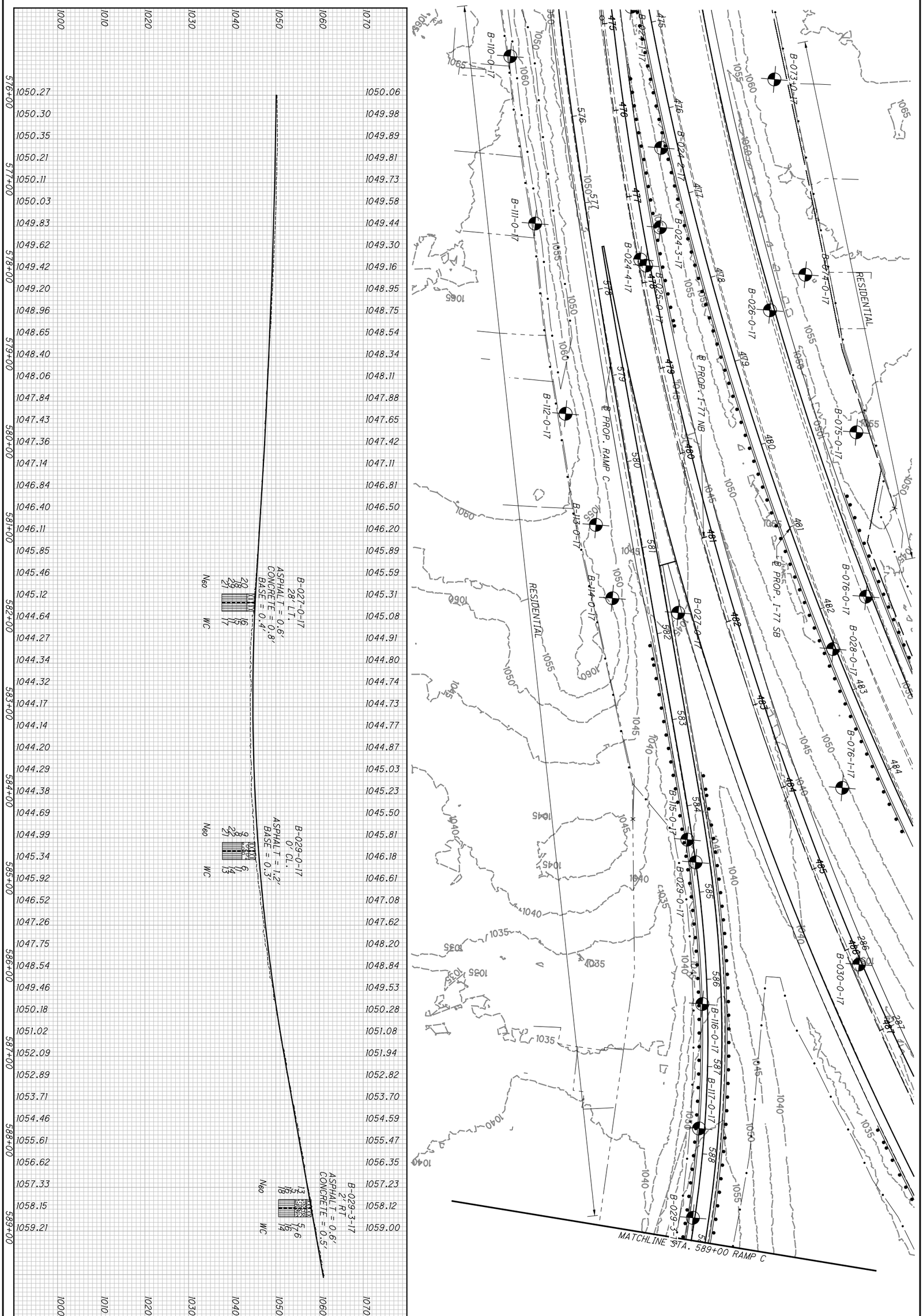
0 50
25 100
HORIZONTAL SCALE IN FEET



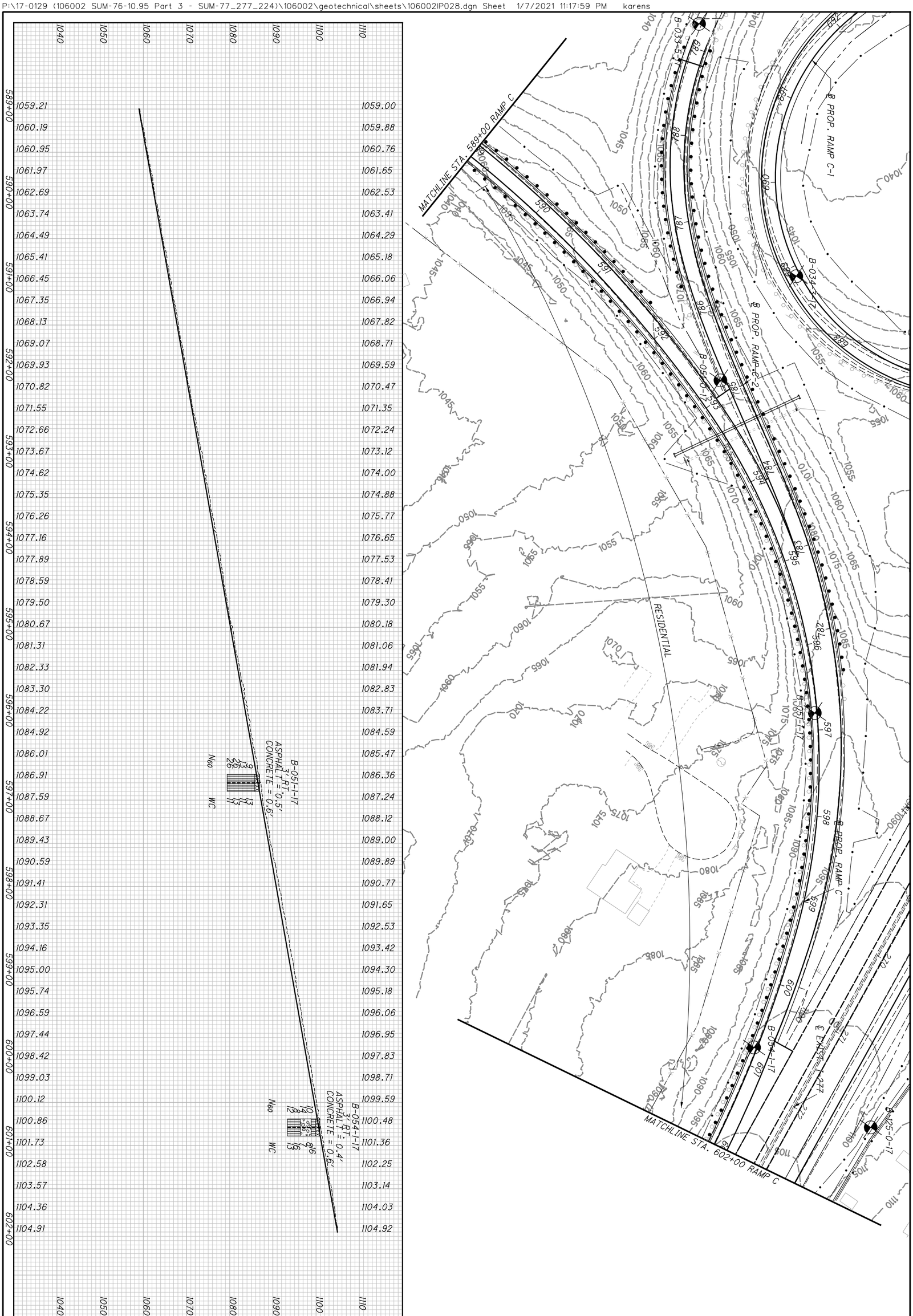
	48 / 209	SUM-77 / 277 / 224 VARIOUS	SOIL PROFILE RAMP B-2 STA. 10+00 TO STA. 23+00	DRAWN MJ CHECKED BPA	0 50 25 100 HORIZONTAL SCALE IN FEET



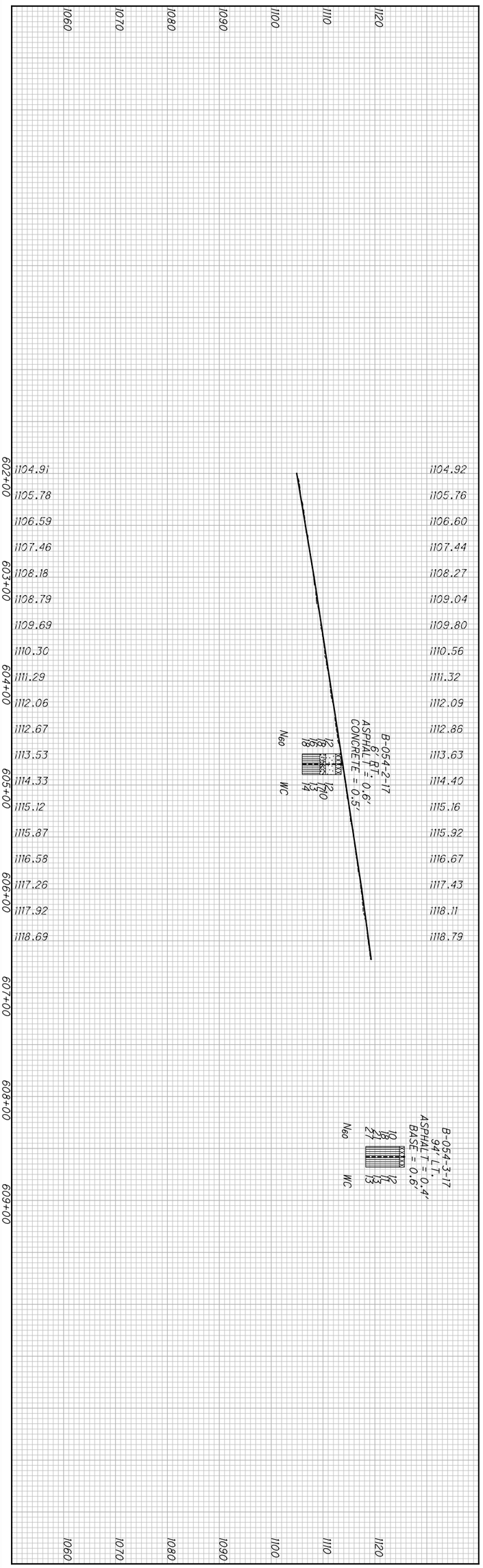
49/209	SUM-77/277/224 VARIOUS	SOIL PROFILE RAMP B-2 STA. 23+00 TO END	DRAWN MJ CHECKED BPA	0 50 25 100 HORIZONTAL SCALE IN FEET	N

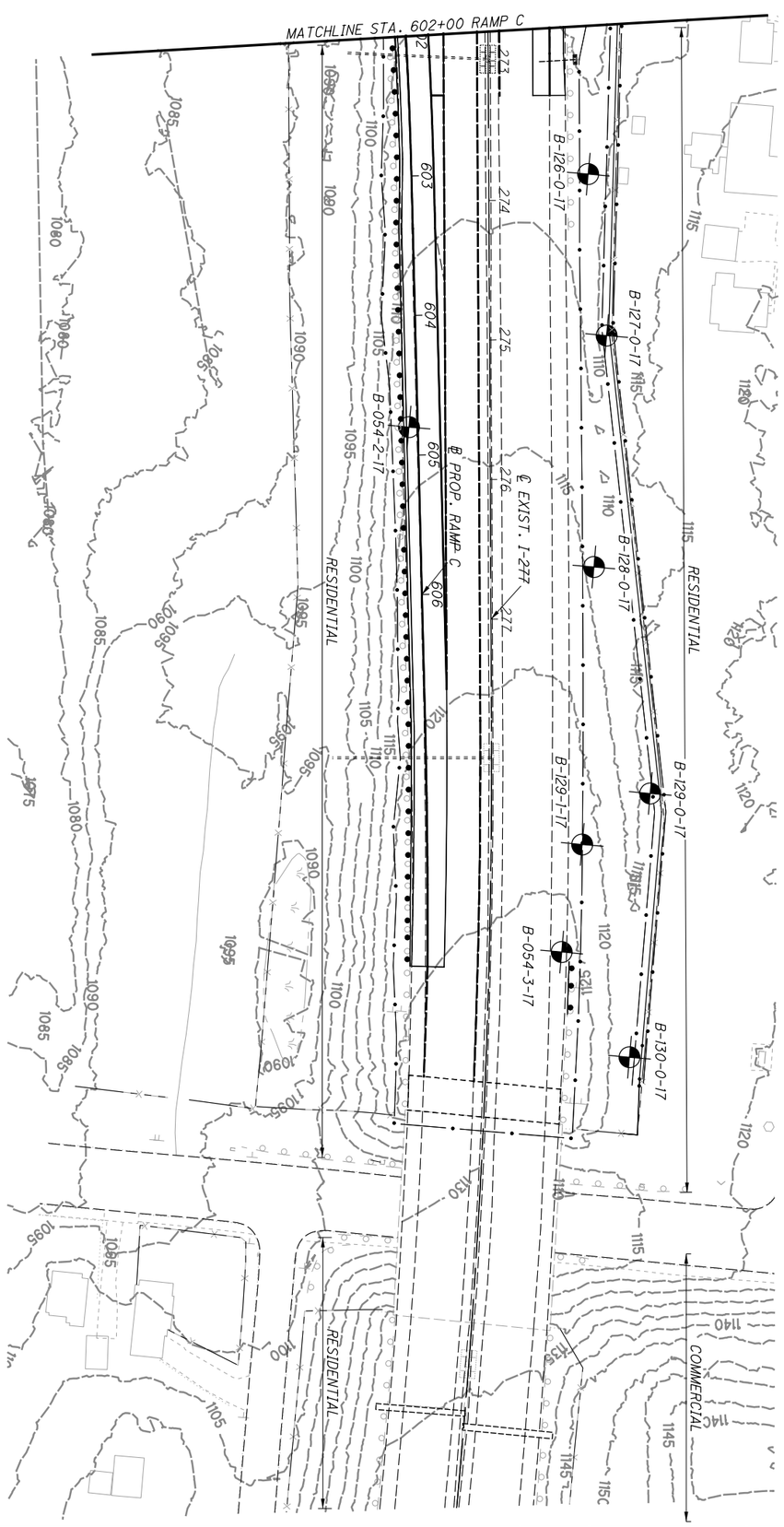


50 / 209	SUM-77 / 277 / 224 VARIOUS	SOIL PROFILE RAMP C BEGIN TO STA. 589+00	DRAWN MJ CHECKED BPA	0 50 25 100 HORIZONTAL SCALE IN FEET	N



51/209	SUM-77/277/224 VARIOUS	SOIL PROFILE RAMP C STA. 589+00 TO STA. 602+00	DRAWN MJ CHECKED CH	0 50 25 100 HORIZONTAL SCALE IN FEET	





SUM-77/277/224
VARIOUS

SOIL PROFILE
RAMP C STA. 602+00 TO END

DRAWN MJ
CHECKED BPA

0 25 50 100
HORIZONTAL SCALE IN FEET

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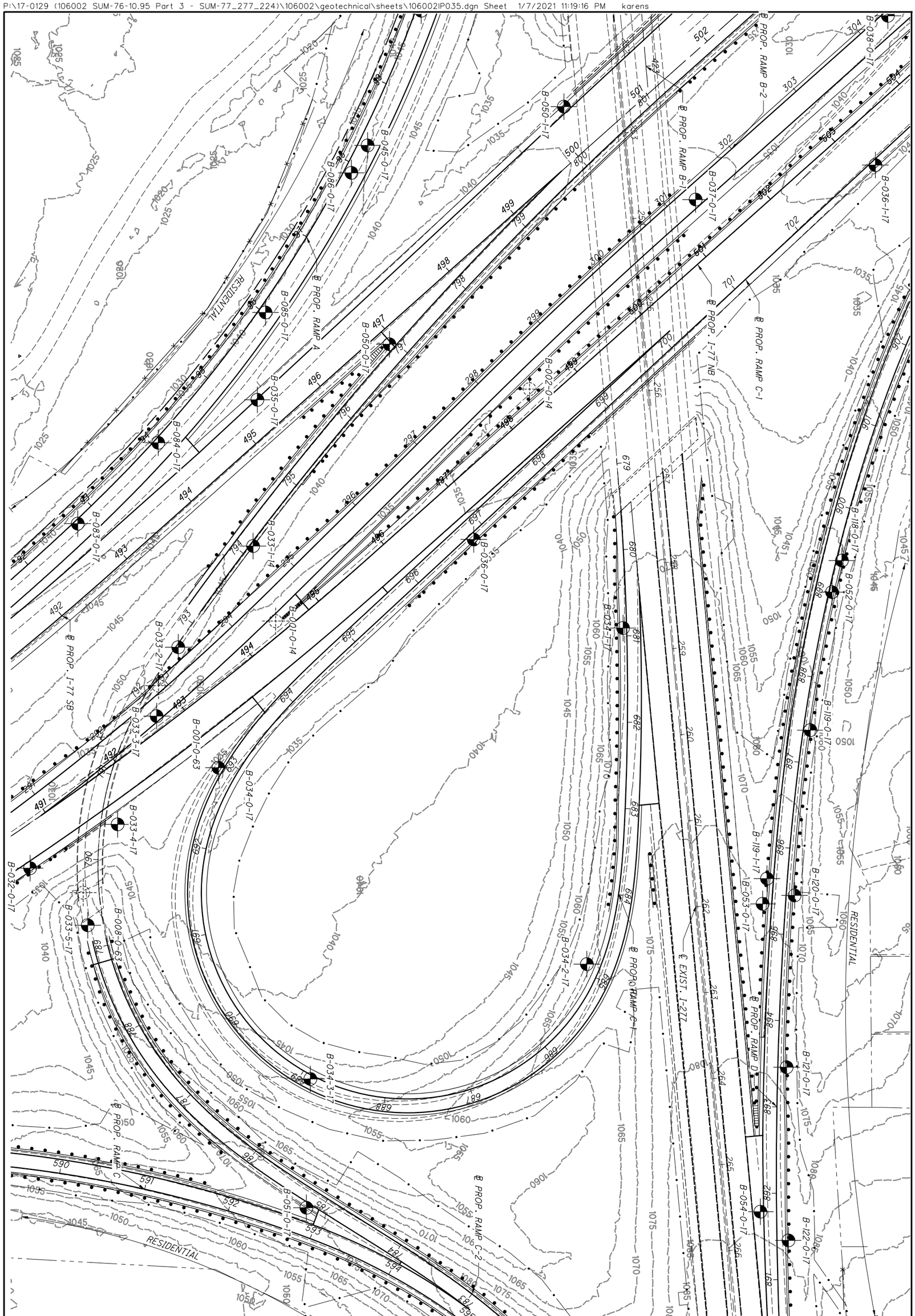
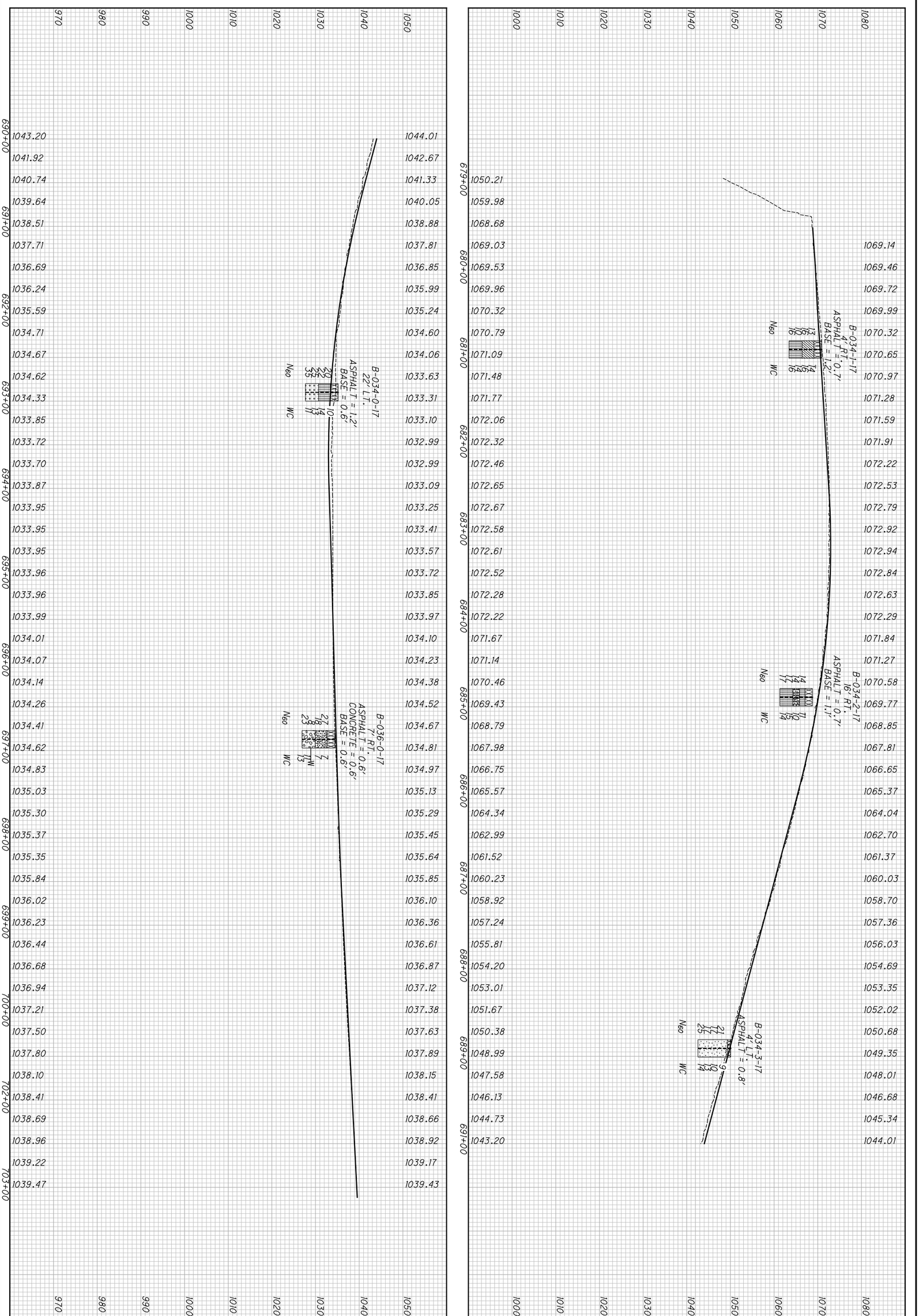


53/209	SUM-77/277/224 VARIOUS	SOIL PROFILE RAMP C-1 BEGIN TO END	DRAWN MJ CHECKED BPA	0 50 25 100 HORIZONTAL SCALE IN FEET	N



SUM-77/277/224
VARIOUS

SOIL PROFILE
RAMP C-1 BEGIN TO END

DRAWN MJ
CHECKED CH

0 50
25 100
HORIZONTAL SCALE IN FEET

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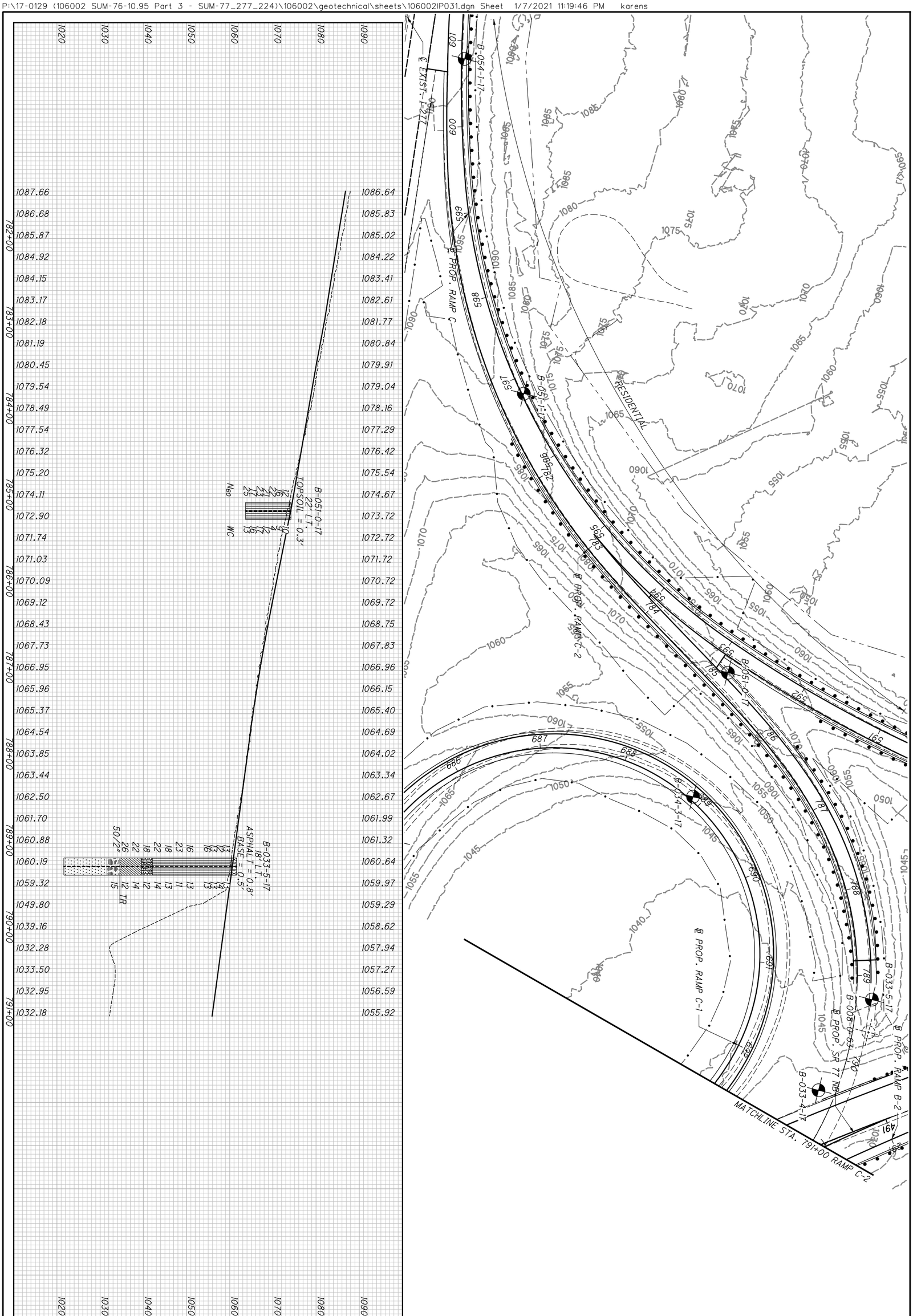
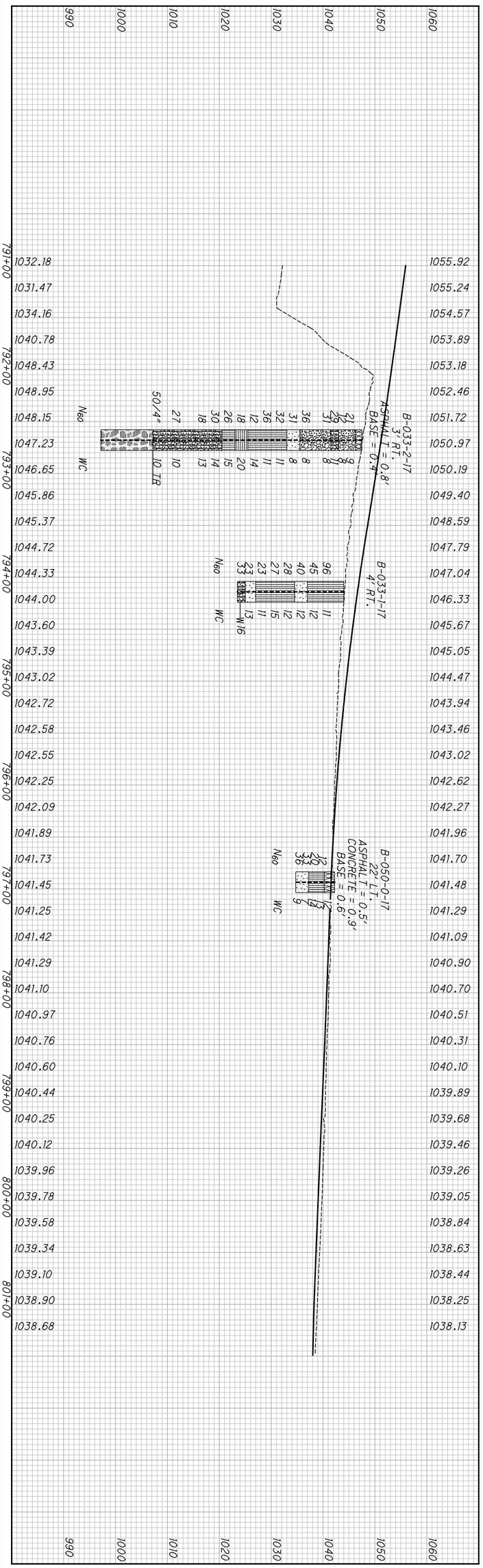
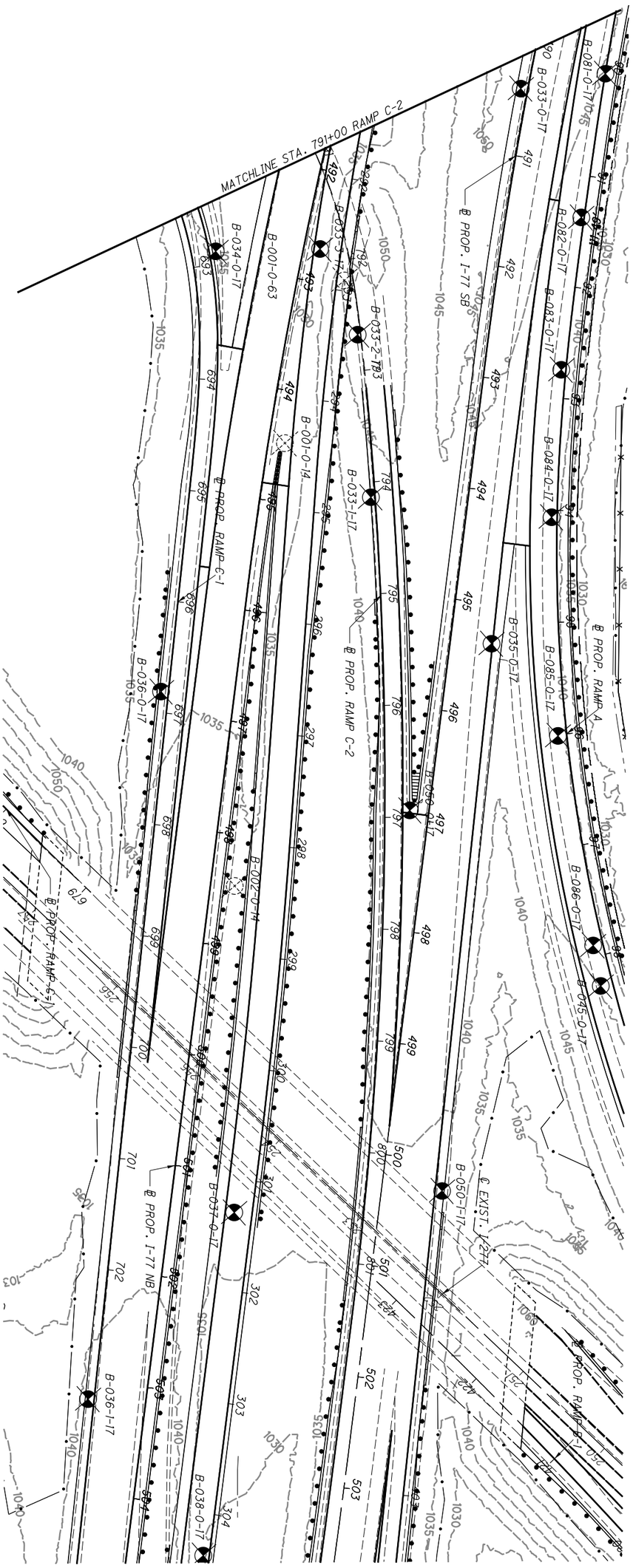


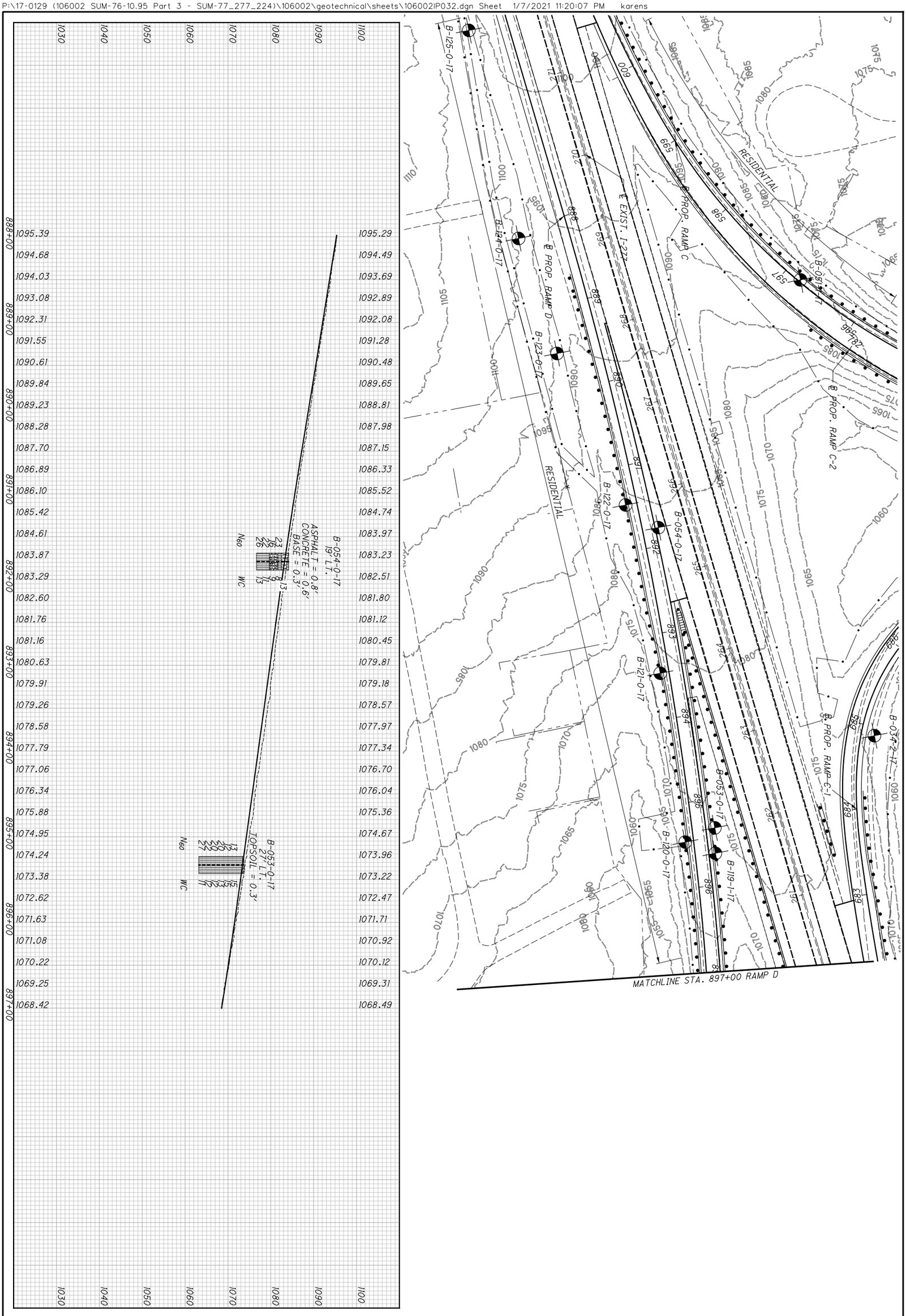
55/209	SUM-77/277/224 VARIOUS	SOIL PROFILE RAMP C-2 BEGIN TO STA. 791+00	DRAWN MJ CHECKED BPA	0 50 25 100 HORIZONTAL SCALE IN FEET	N





56 / 209	SUM-77 / 277 / 224 VARIOUS	SOIL PROFILE RAMP C-2 STA. 791+00 TO END	DRAWN MJ CHECKED CH	0 50 25 100 HORIZONTAL SCALE IN FEET	

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002IP032.dgn Sheet 1/7/2021 11:20:07 PM karens



57/209	SUM-77/277/224 VARIOUS	SOIL PROFILE RAMP D BEGIN TO STA. 897+00	DRAWN MJ CHECKED BPA	0 50 25 100 HORIZONTAL SCALE IN FEET	N

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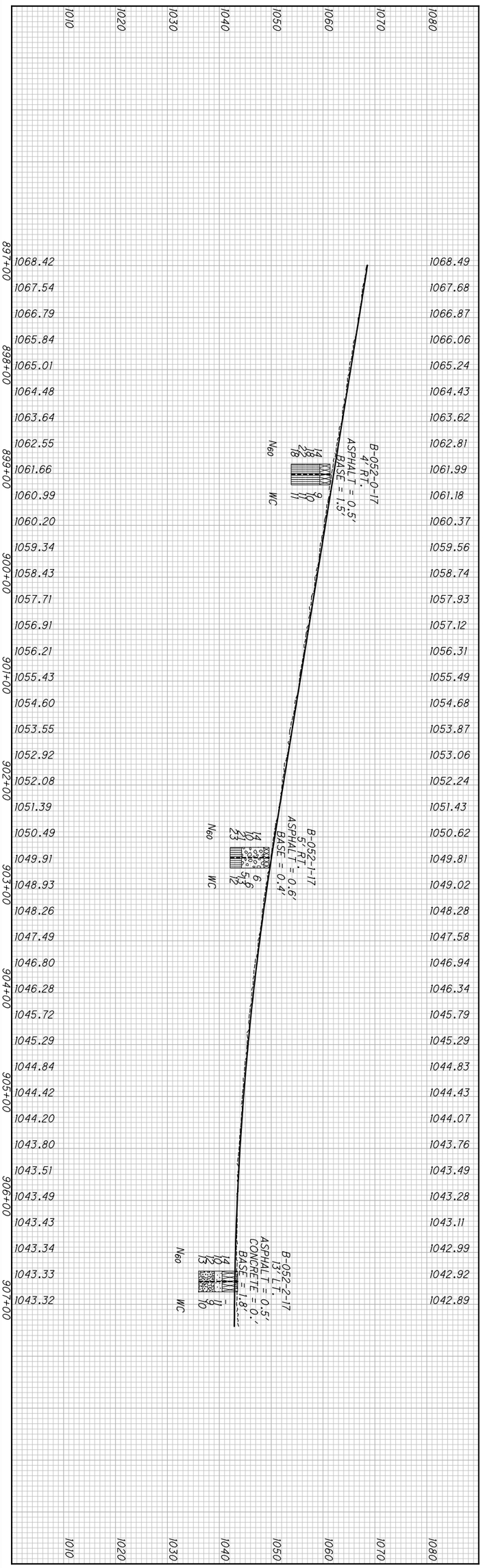
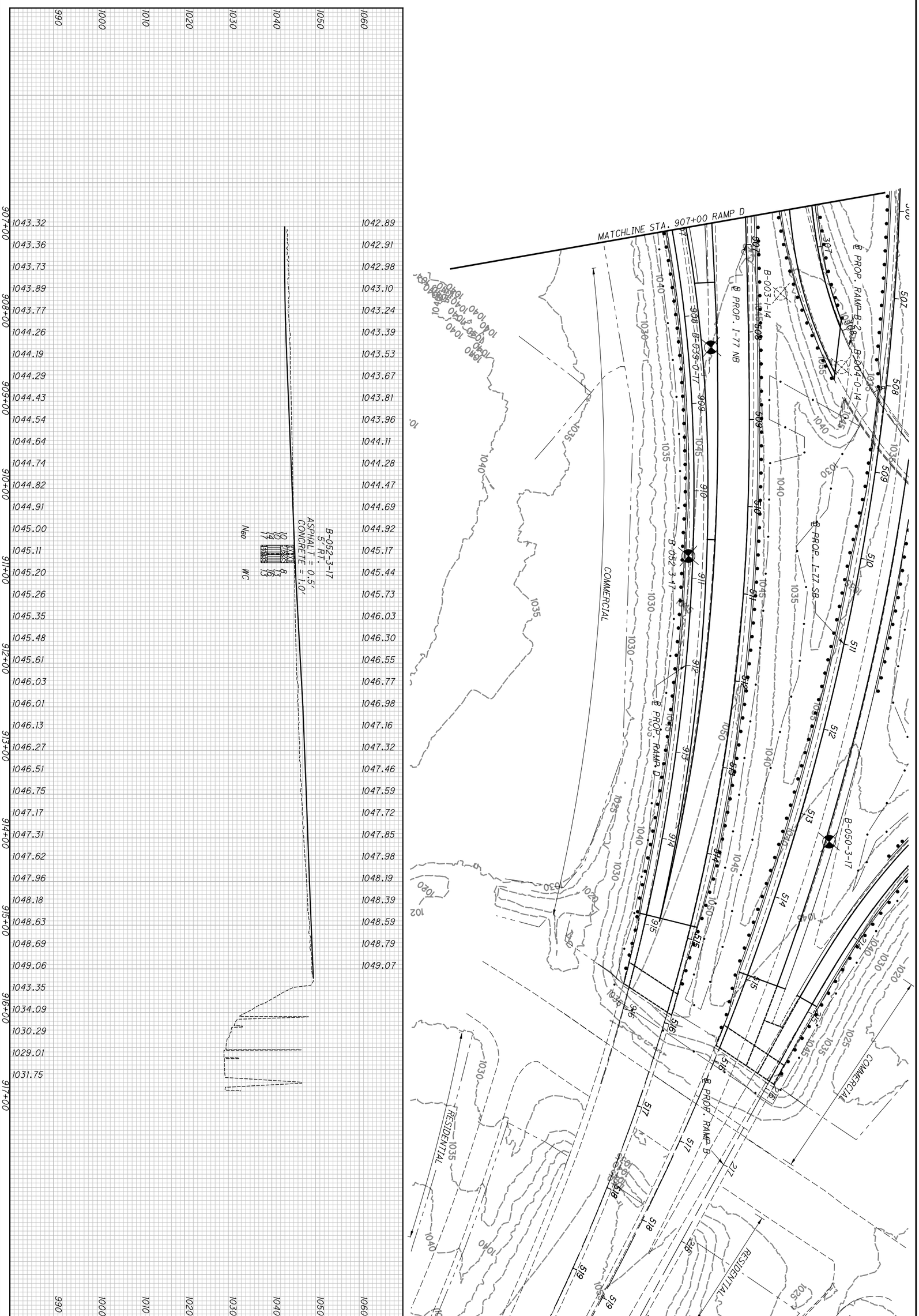
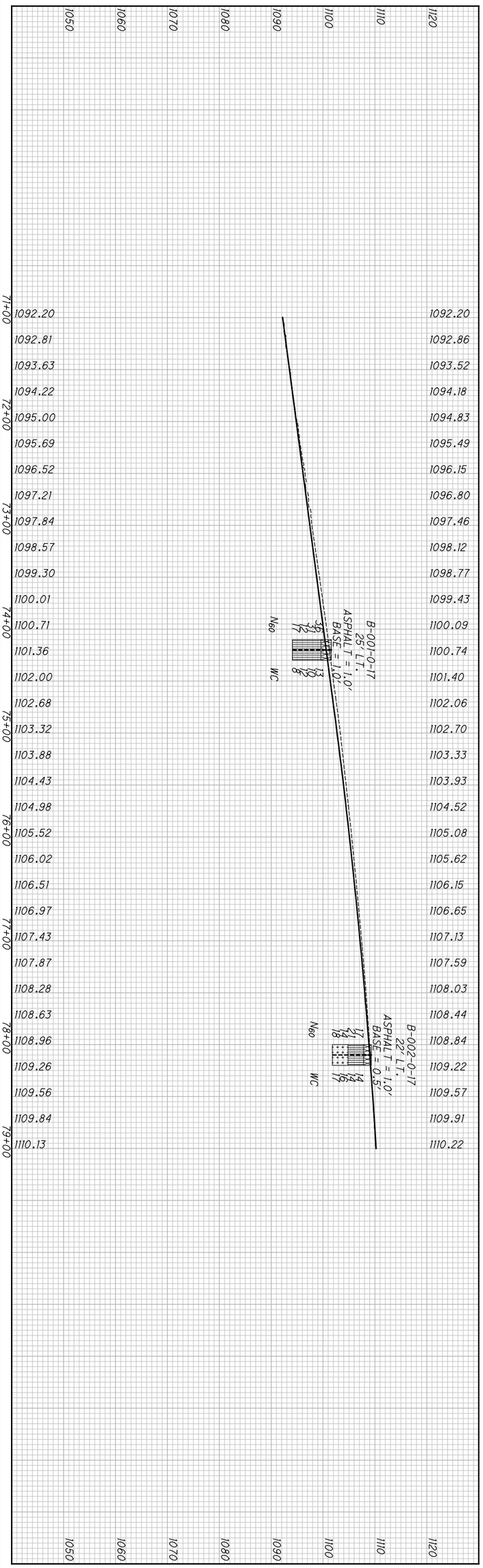
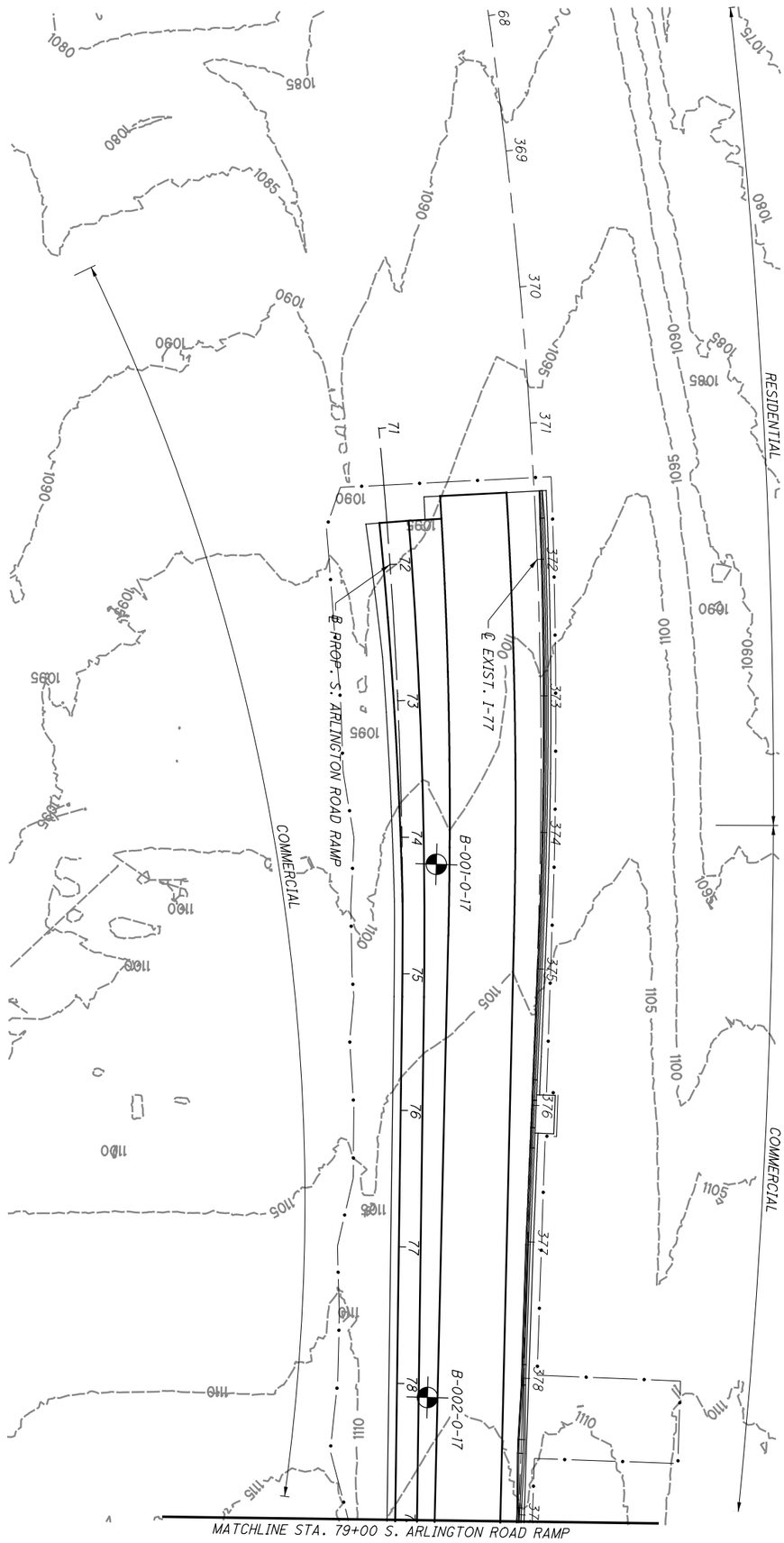


58/209	SUM-77/277/224 VARIOUS	SOIL PROFILE RAMP D STA. 897+00 TO STA. 907+00	DRAWN MJ CHECKED BPA	0 50 25 100 HORIZONTAL SCALE IN FEET	N

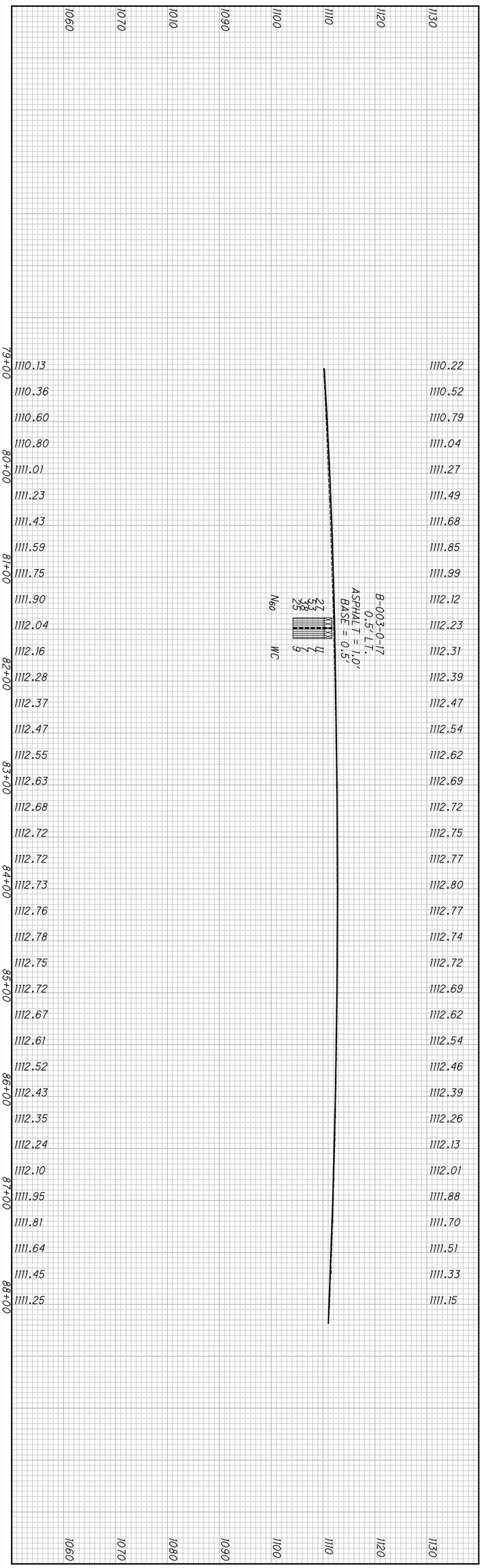


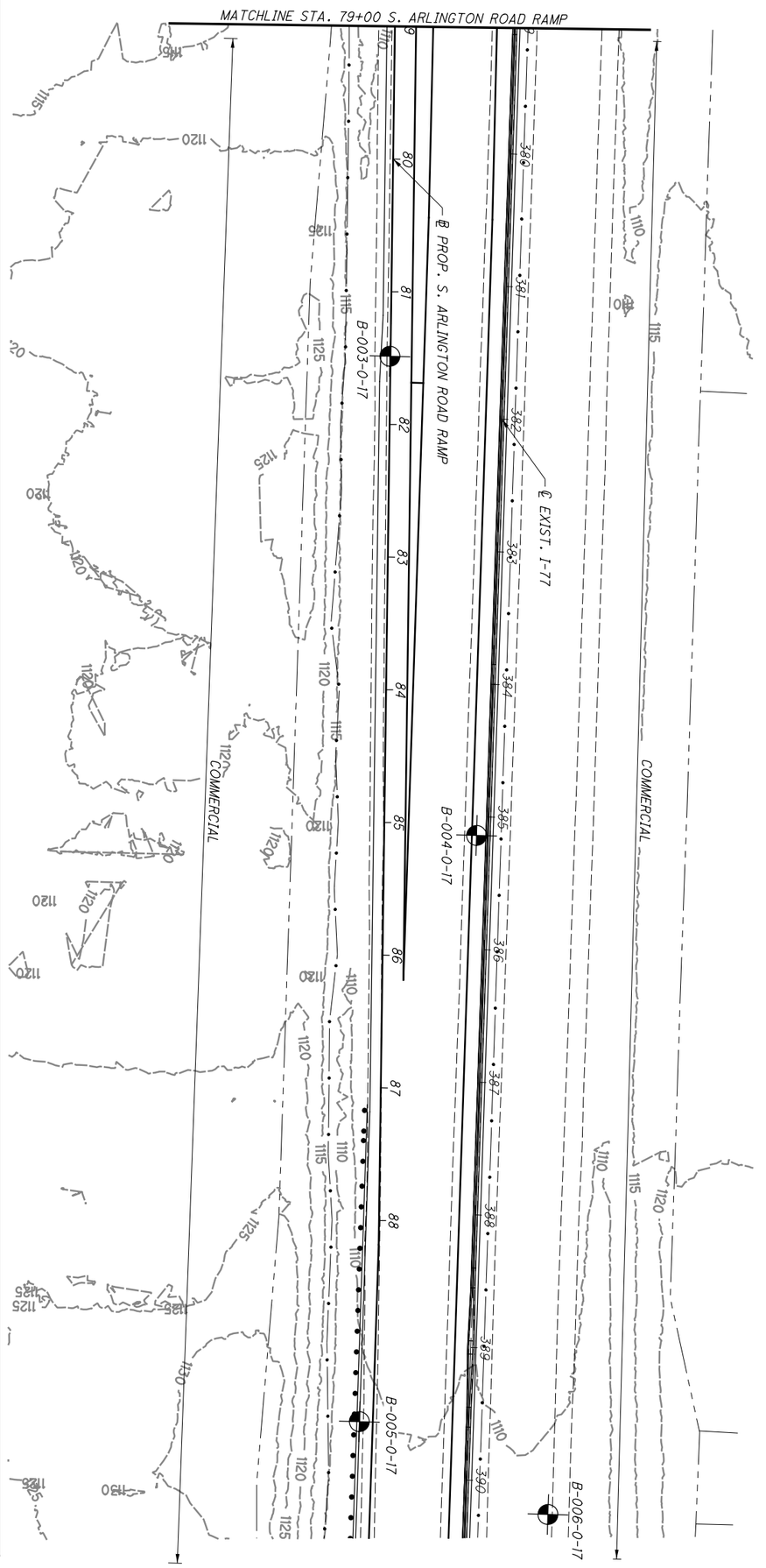
59 / 209	SUM-77 / 277 / 224 VARIOUS	SOIL PROFILE RAMP D STA. 907+00 TO END	DRAWN MJ CHECKED BPA	0 50 25 100 HORIZONTAL SCALE IN FEET	



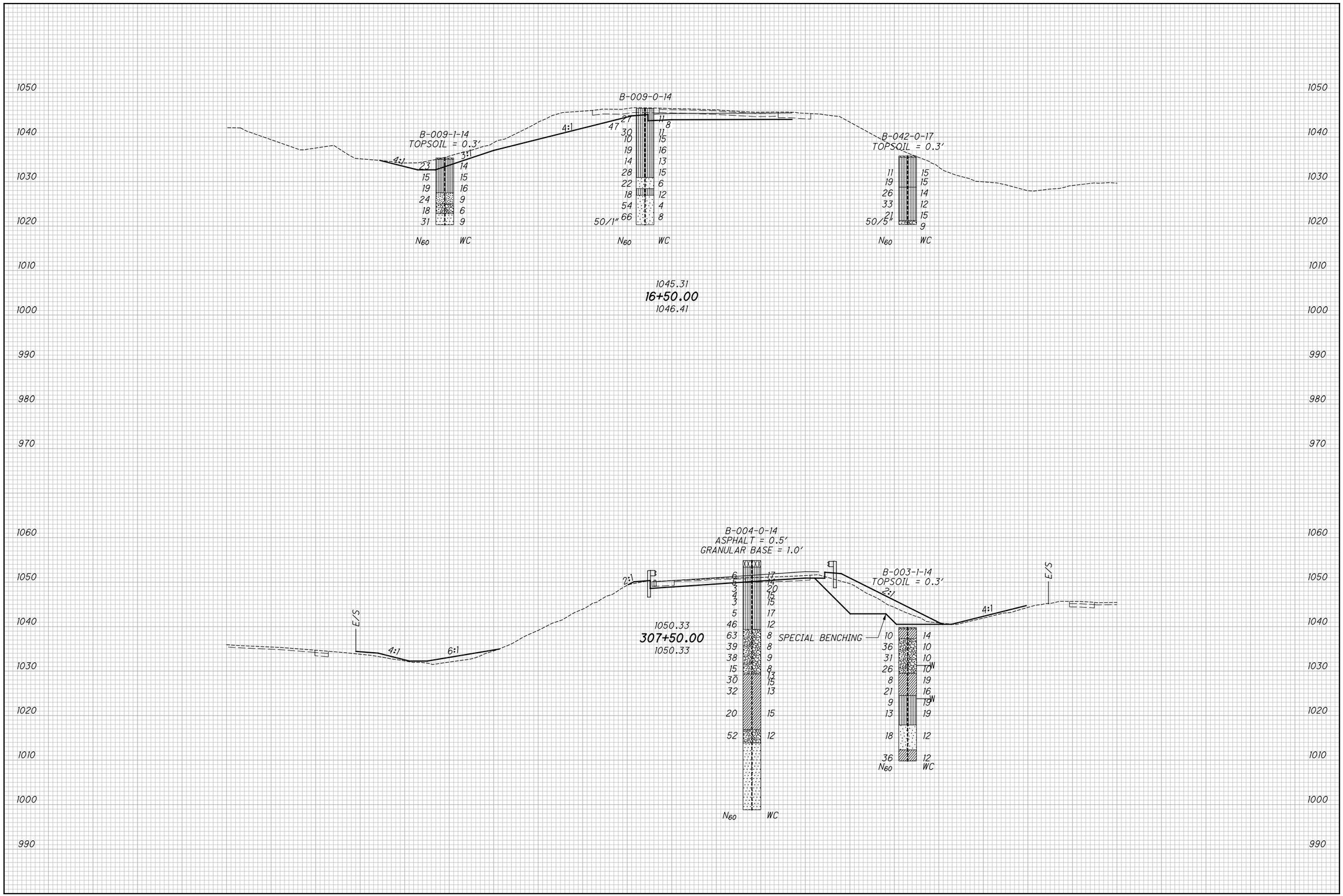


	60 209	SUM-77/277/224 VARIOUS	SOIL PROFILE S. ARLINGTON RD. RAMP START TO STA. 79+00	DRAWN MJ	0 50 25 100 HORIZONTAL SCALE IN FEET	N
				CHECKED BPA		





	61 / 209	SUM-77/277/224 VARIOUS	SOIL PROFILE S. ARLINGTON RD. RAMP STA. 79+00 TO END	DRAWN MJ CHECKED BPA	0 50 25 100 HORIZONTAL SCALE IN FEET



HORIZONTAL SCALE IN FEET
0 10 20 40

DRAWN KCA
CHECKED BPA

SOIL PROFILE
CROSS SECTIONS STA. 16+50 & STA. 307+50
RAMP B-2

SUM-77 / 277 / 224
VARIOUS

62 / 209

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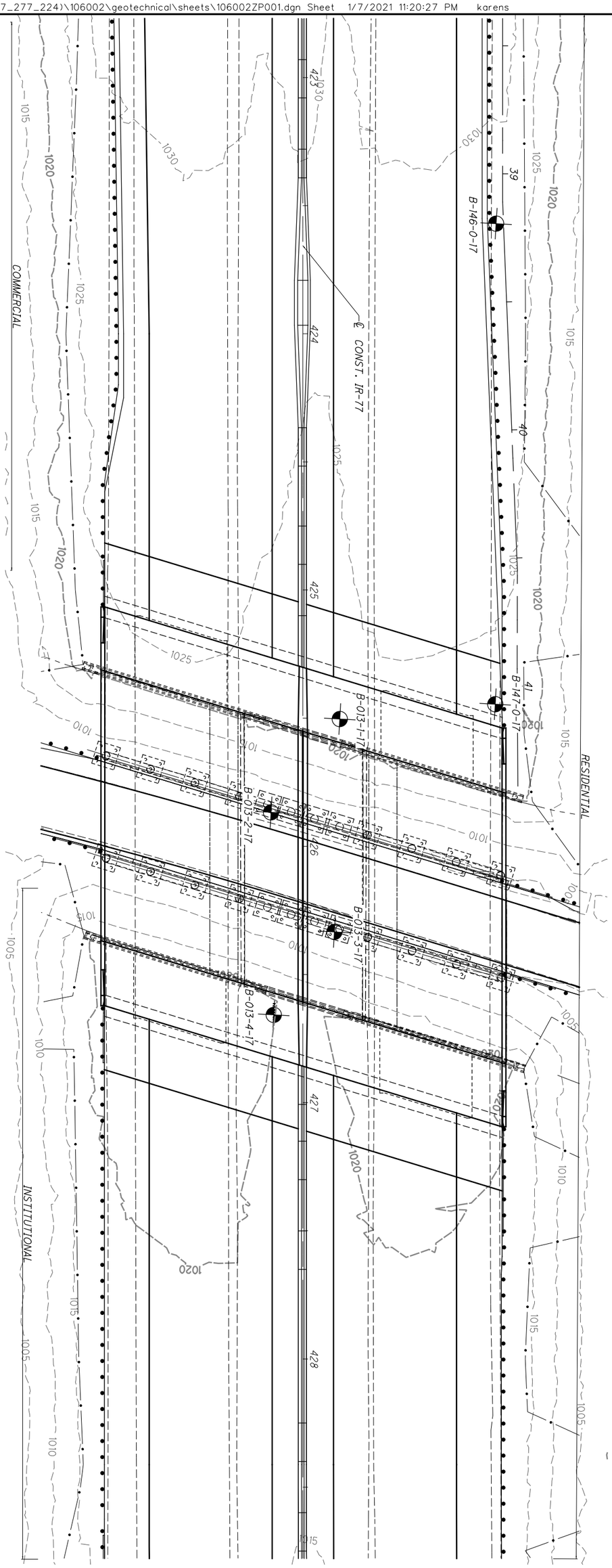

	63/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION BRIDGE SUM-77-0802 L&R OVER E WARNER RD	DRAWN EB CHECKED BPA	0 10 20 40 HORIZONTAL SCALE IN FEET

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HORIZONTAL SCALE IN FEET
0 10 20 40

DRAWN EB
CHECKED BPA

STRUCTURE FOUNDATION EXPLORATION
BRIDGE SUM-77-0802 L&R OVER E WARNER RD

SUM-77/277/224
VARIOUS

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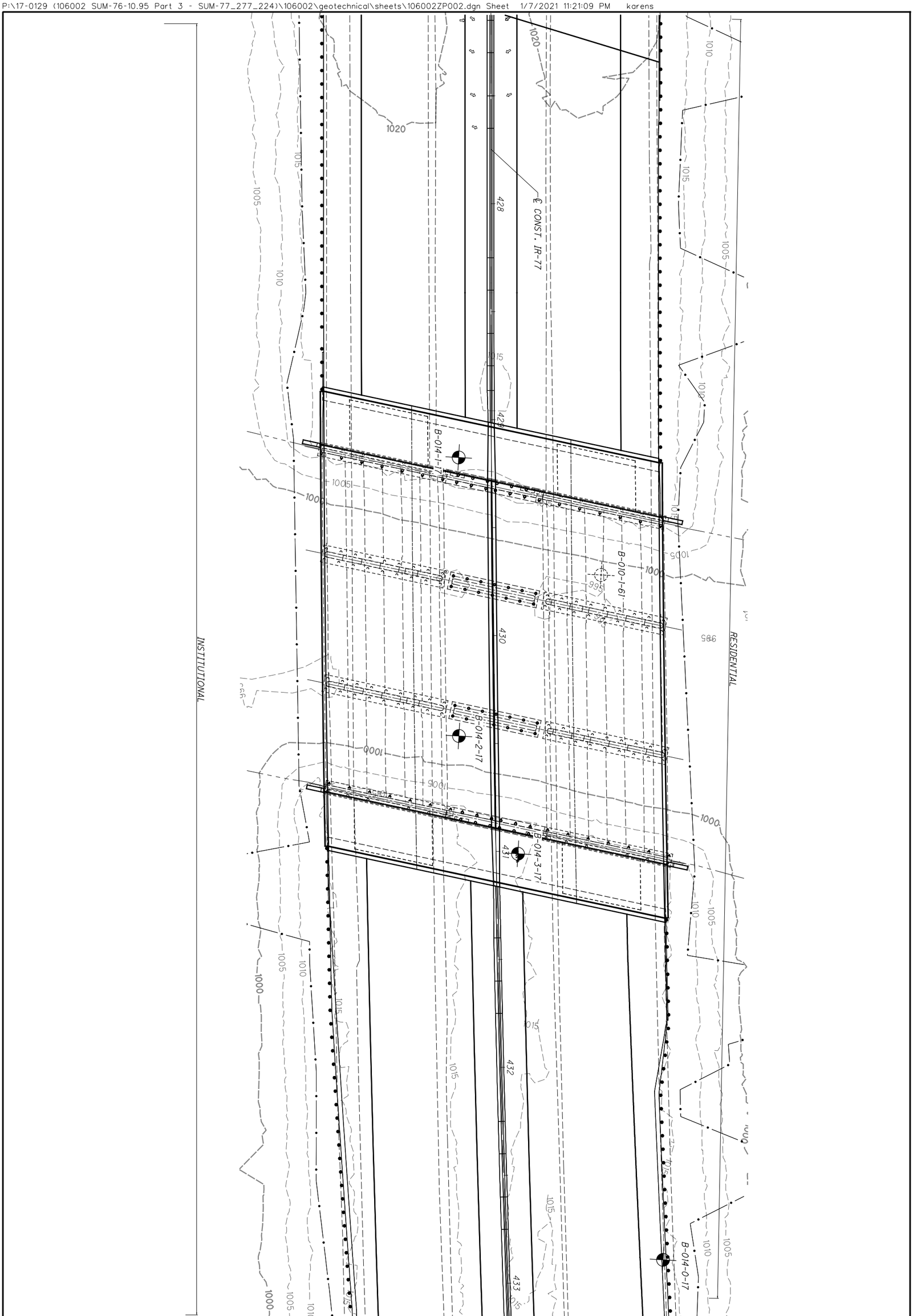
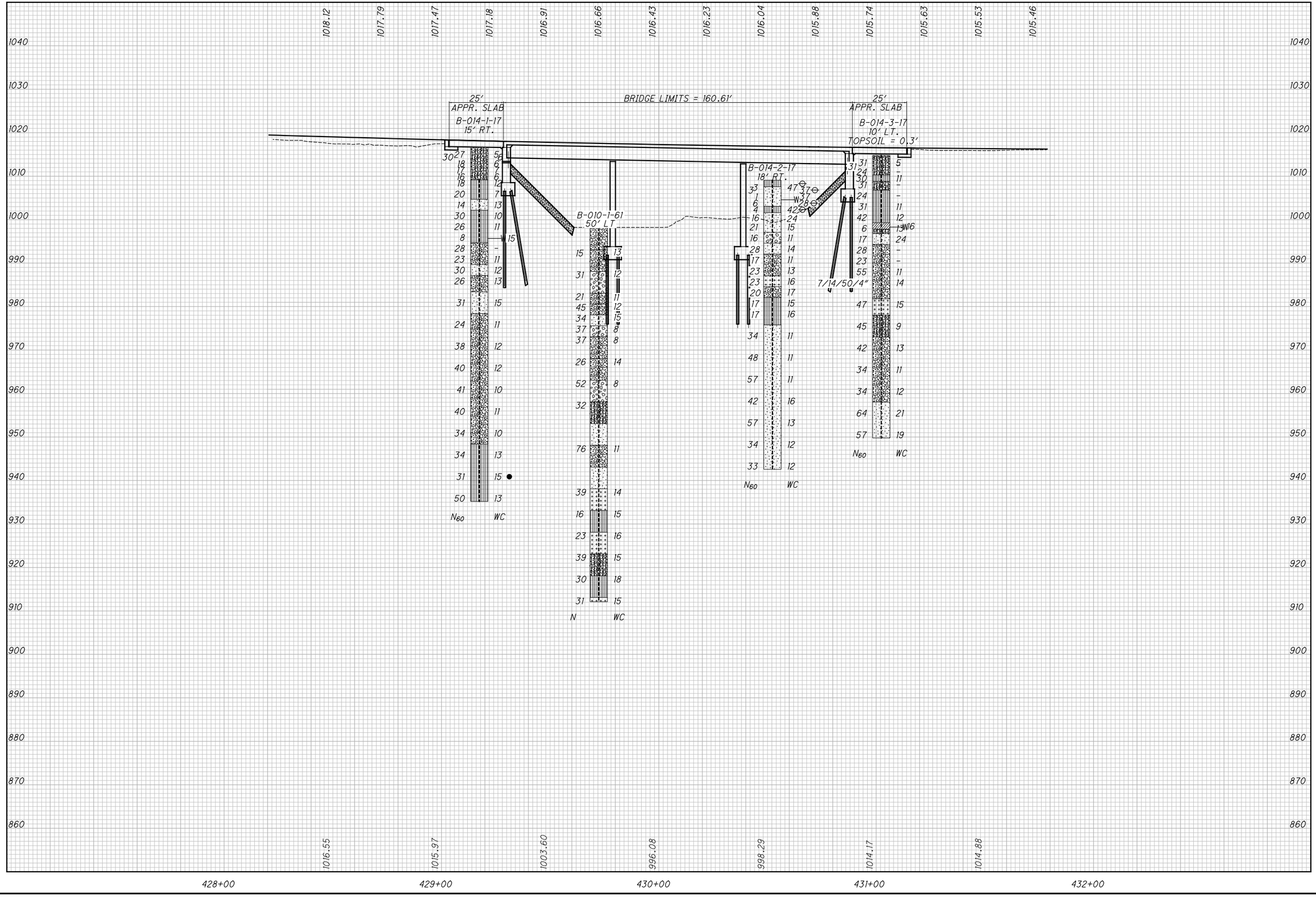


	65/209	**SUM-77/277/224** **VARIOUS**	**STRUCTURE FOUNDATION EXPLORATION** **BRIDGE SUM-77-0810 L&R OVER THE TUSCARAWAS RIVER**	DRAWN EB CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET



HORIZONTAL SCALE IN FEET
0 10 20 40

DRAWN EB
CHECKED BPA

STRUCTURE FOUNDATION EXPLORATION
BRIDGE SUM-77-0810 L&R OVER THE TUSCARAWAS RIVER

SUM-77/277/224
VARIOUS

66/209

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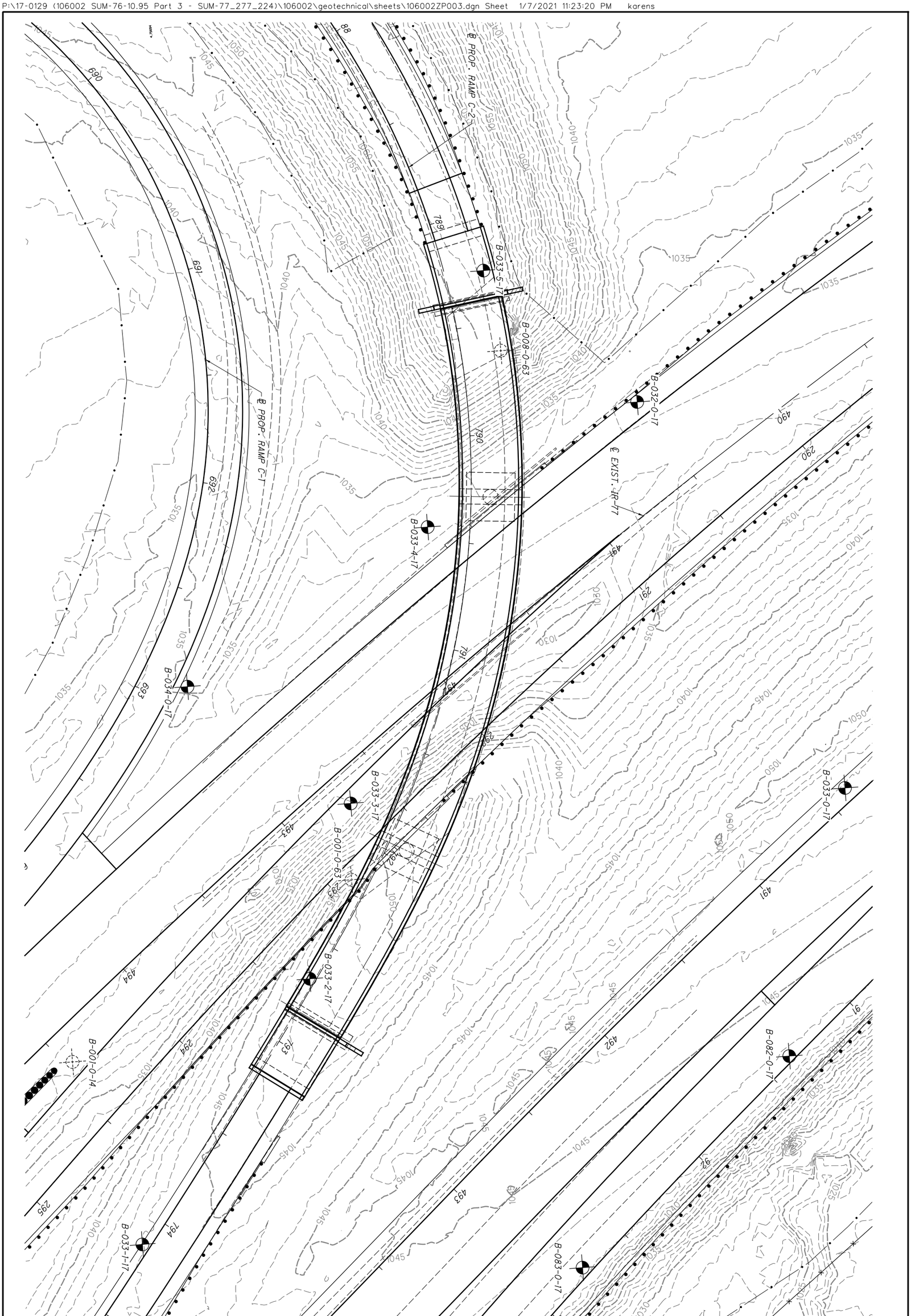
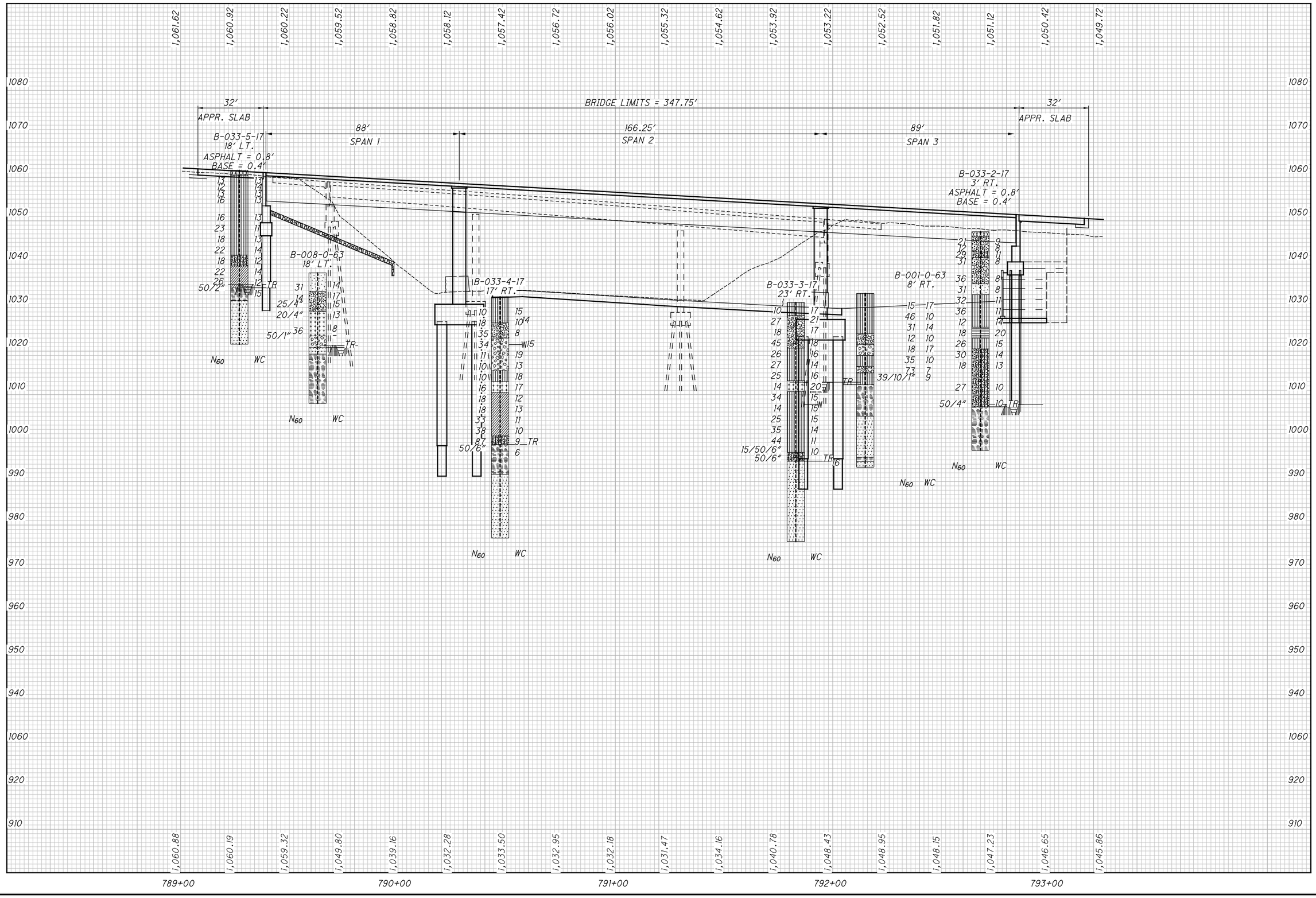


67/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION BRIDGE SUM-77-0927R NB IR-77 UNDER SB IR-77 RAMP C2	DRAWN EB CHECKED BPA	0 10 20 40 HORIZONTAL SCALE IN FEET	N



HORIZONTAL SCALE IN FEET
0 10 20 40

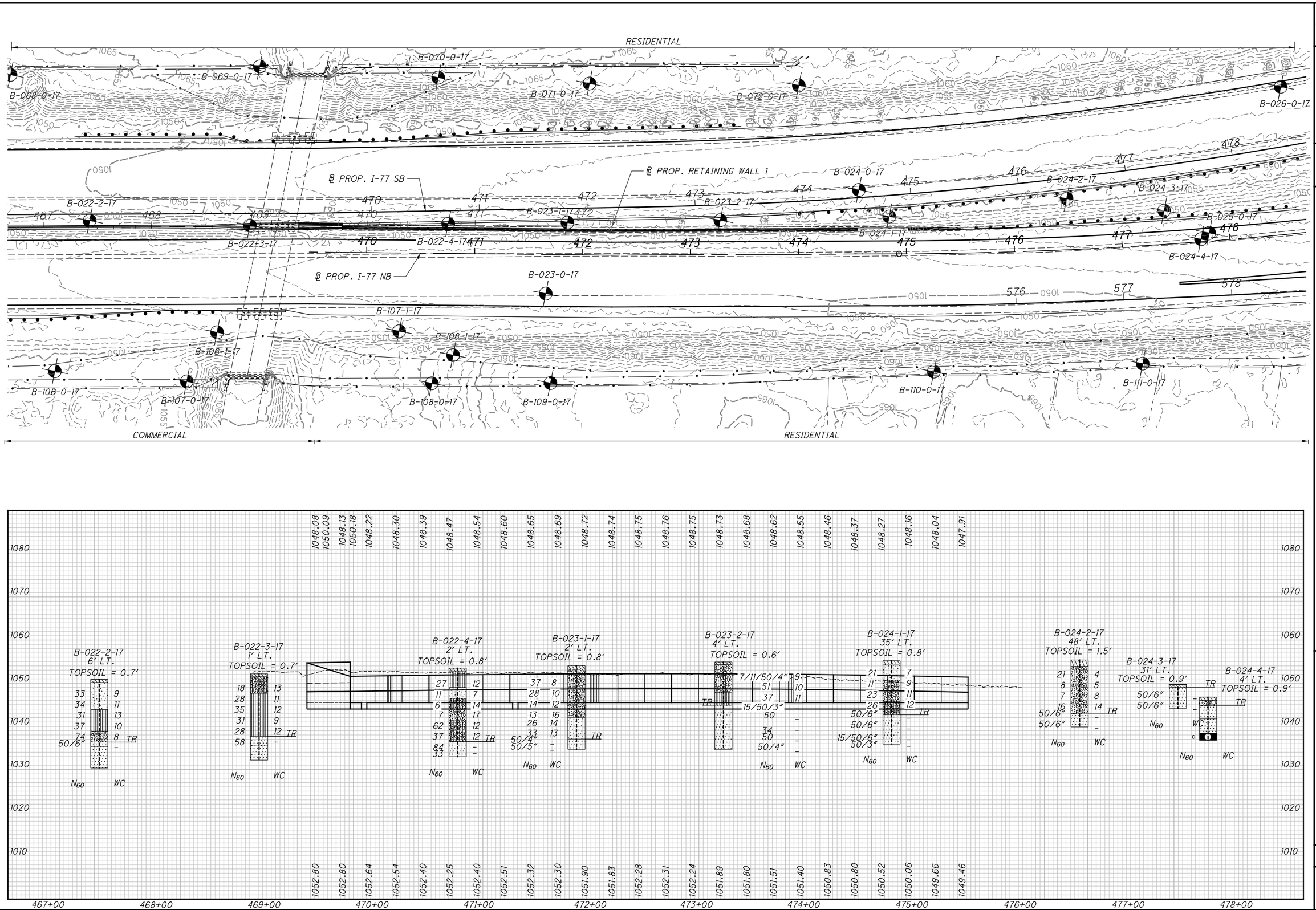
DRAWN EB
CHECKED BPA

STRUCTURE FOUNDATION EXPLORATION
BRIDGE SUM-77-0927R

SUM-77 / 277 / 224
VARIOUS

68 | 209

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224\106002\geotechnical\sheets\106002ZF103.dgn Sheet 1/8/2021 10:29:42 AM karens



HORIZONTAL SCALE IN FEET
0 20 40 80

DRAWN EB
CHECKED BPA

STRUCTURE FOUNDATION EXPLORATION
RETAINING WALL 1

SUM-77/277/224
VARIOUS

69/209

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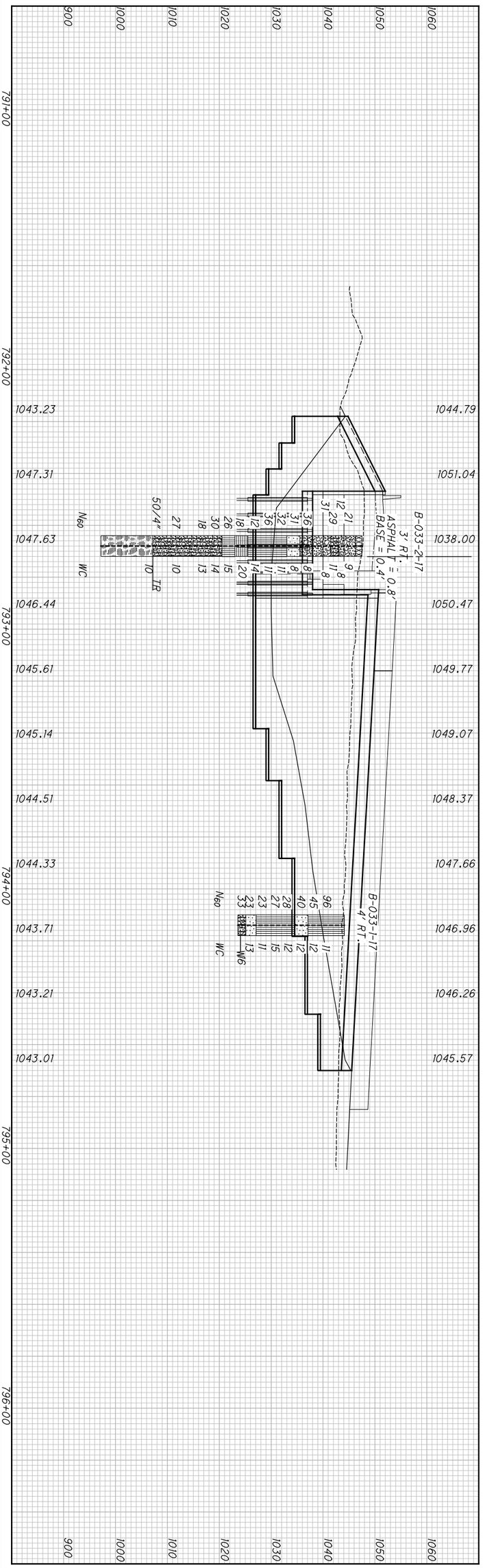
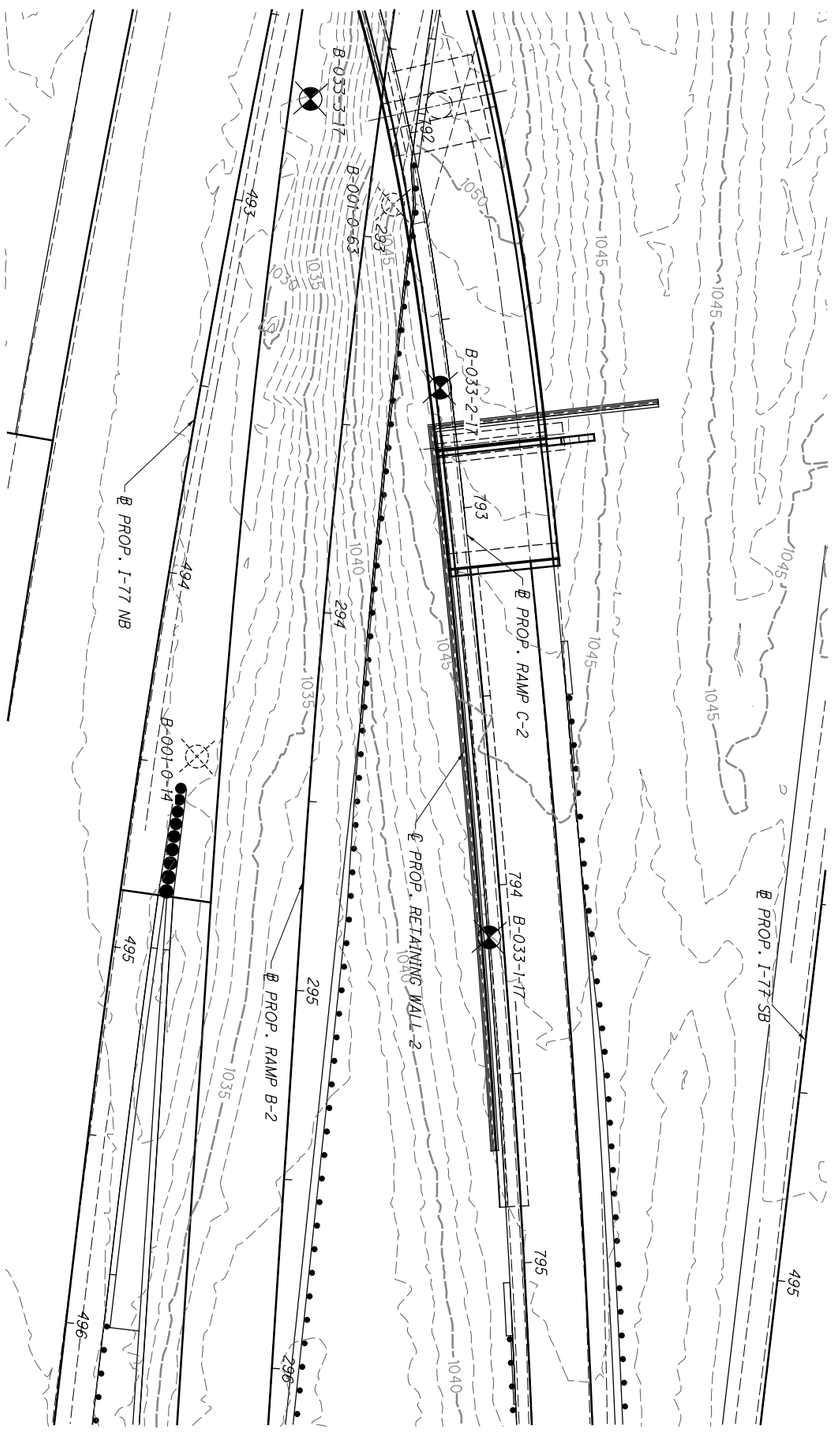
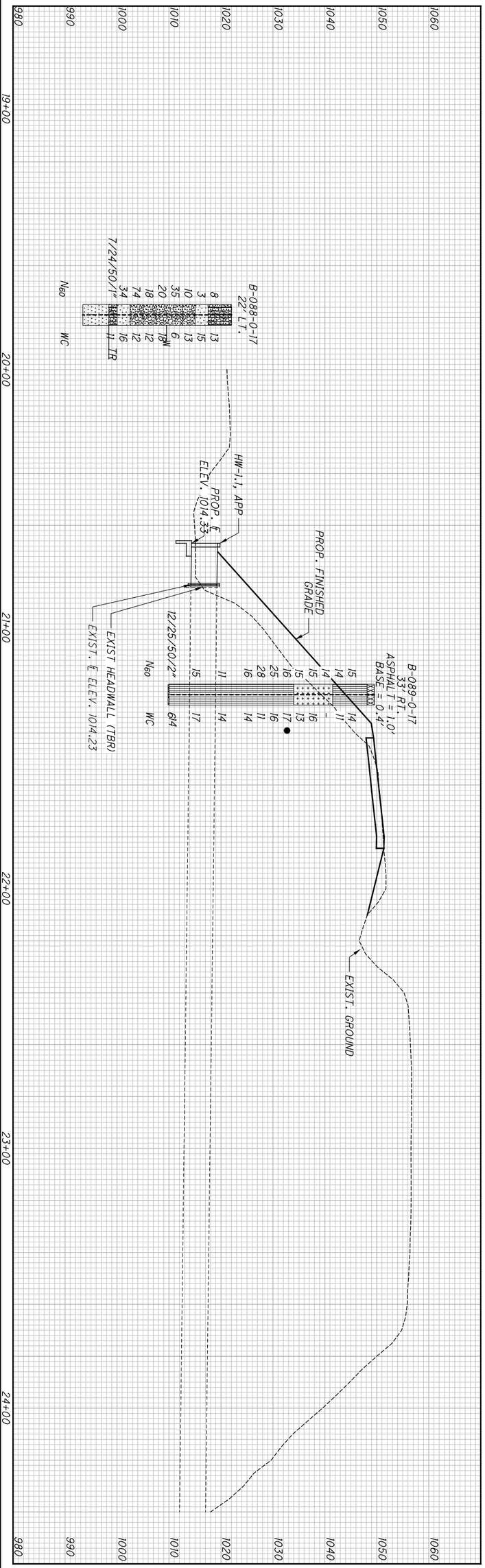
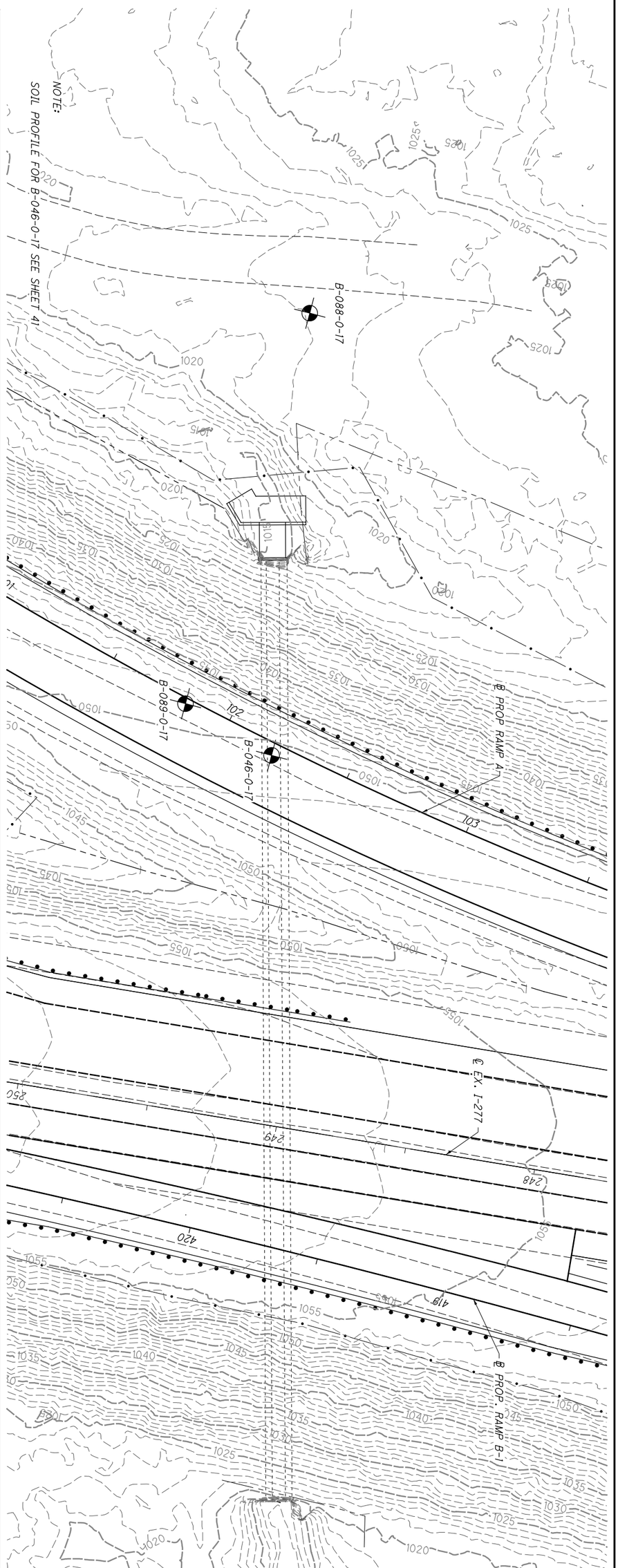




	70/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION RETAINING WALL 2	DRAWN EB CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET	

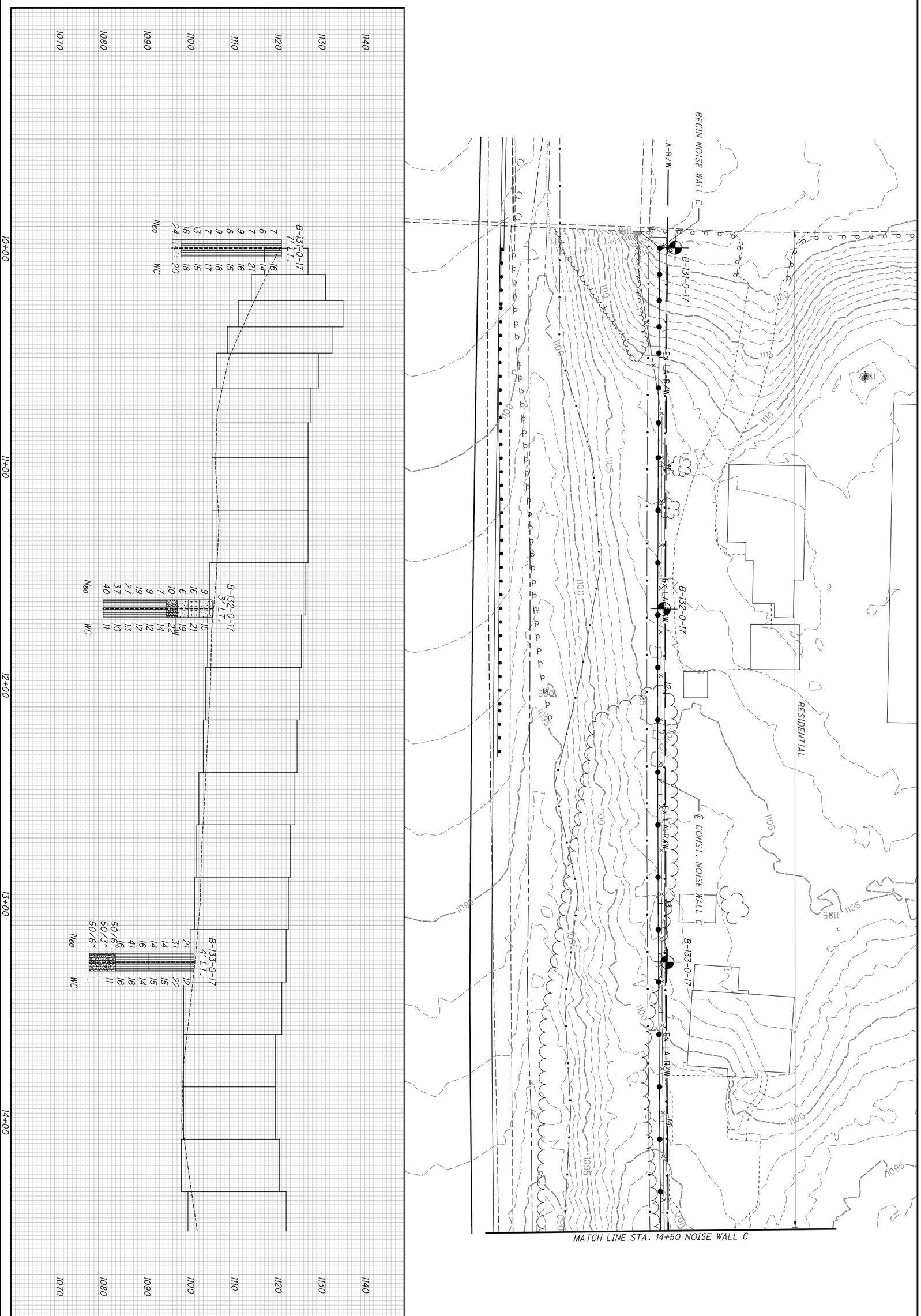
P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZP007.dgn Sheet 1/7/2021 11:29:32 PM karens





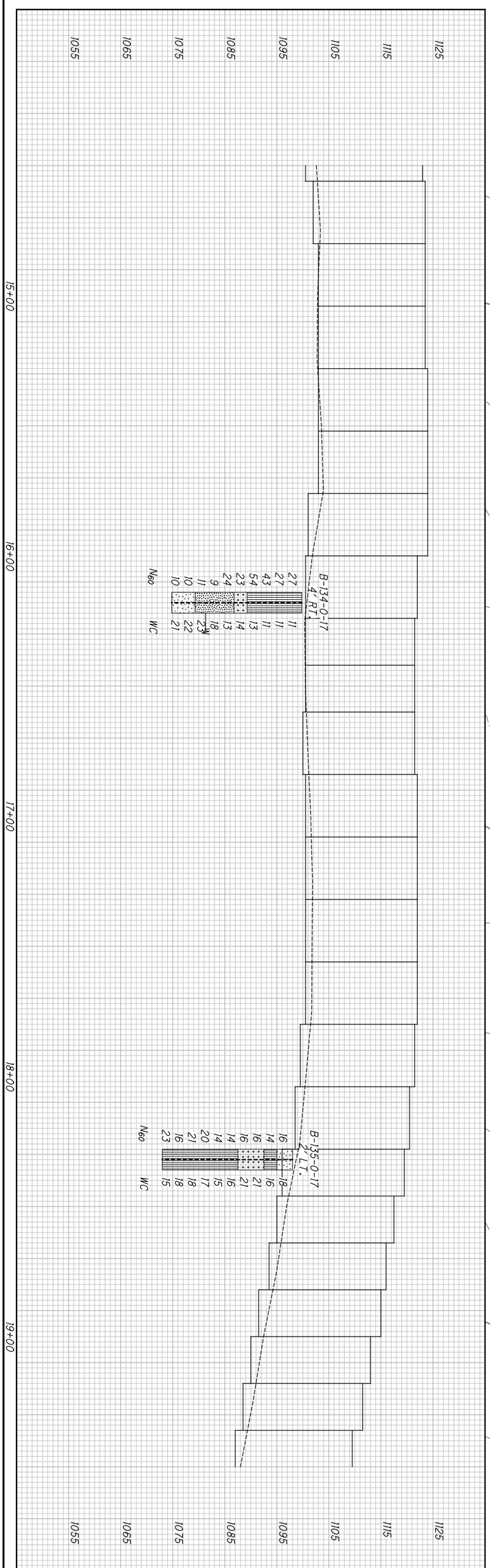
	71/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION I.R. 277 EB RAMP A STA. 102+19 CULVERT	DRAWN EB CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET

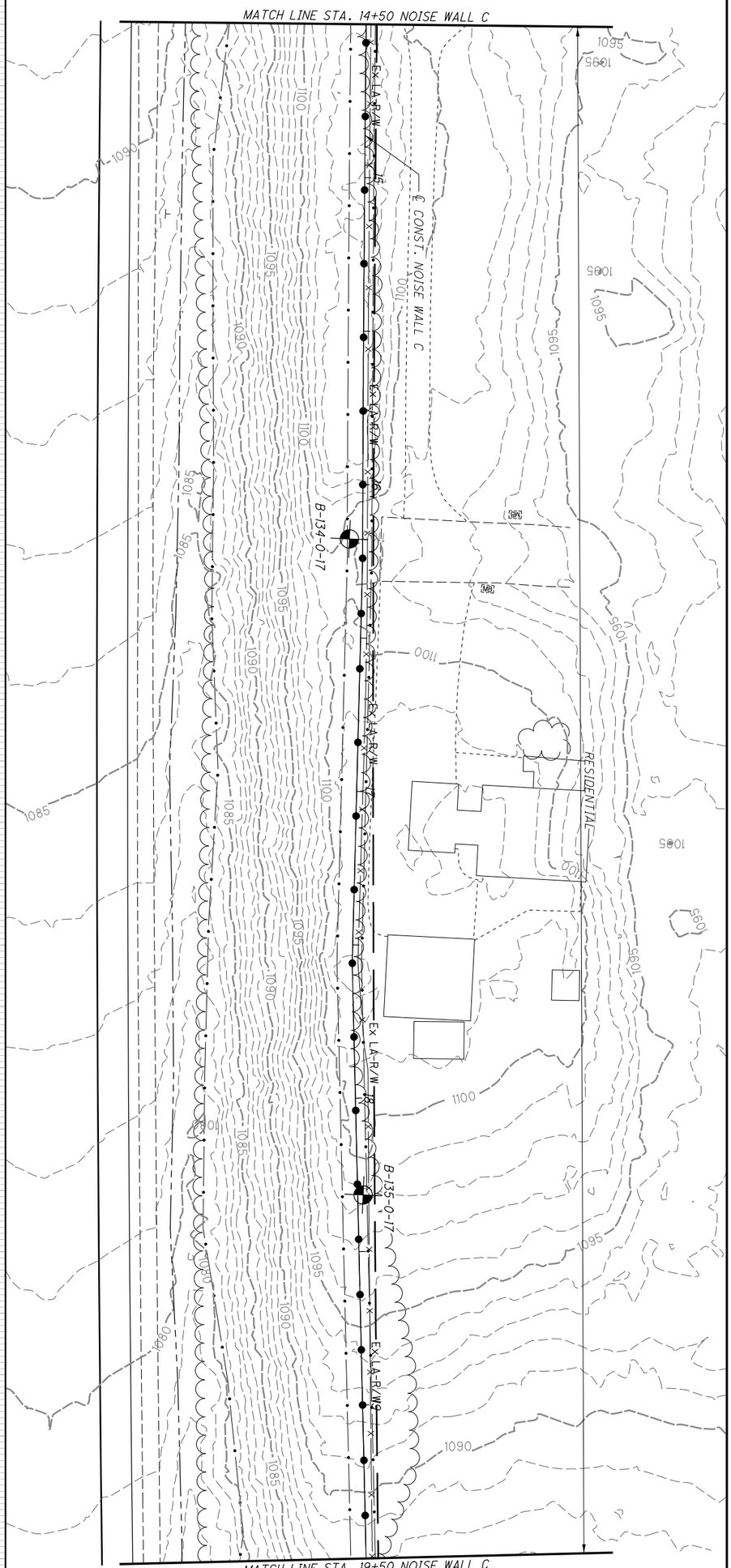
P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZP101.dgn Sheet 1/7/2021 11:31:38 PM karens



	72/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION NOISE WALL C BEGIN TO STA. 14+50	DRAWN KCA CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET

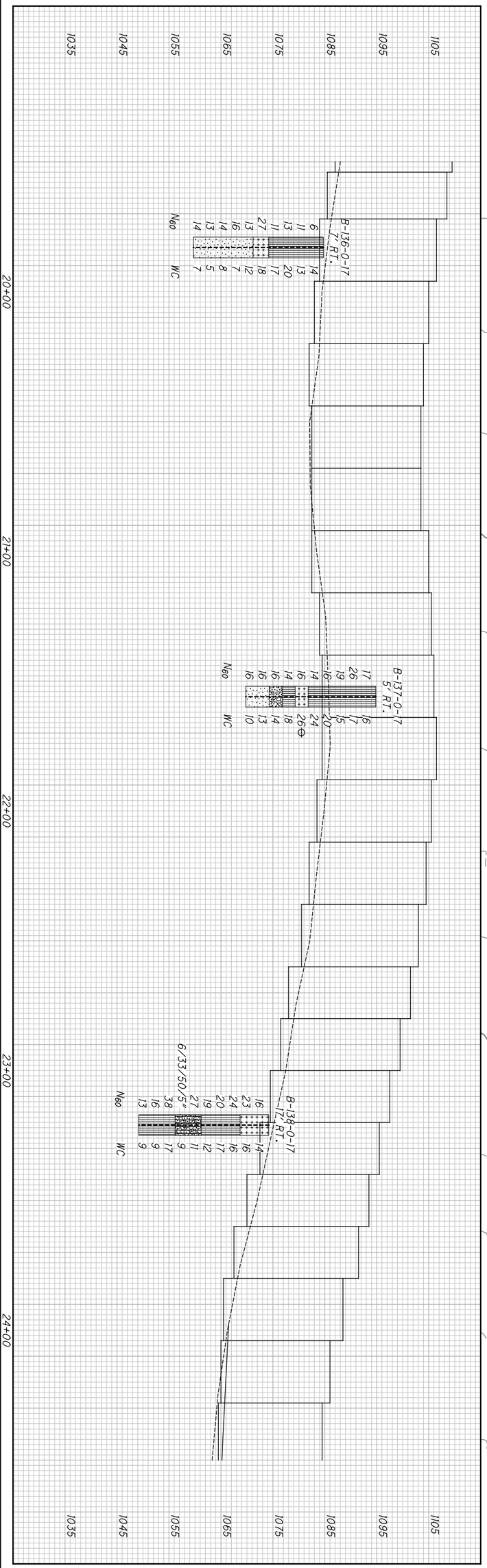
P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZP102.dgn Sheet 1/7/2021 11:33:43 PM karens

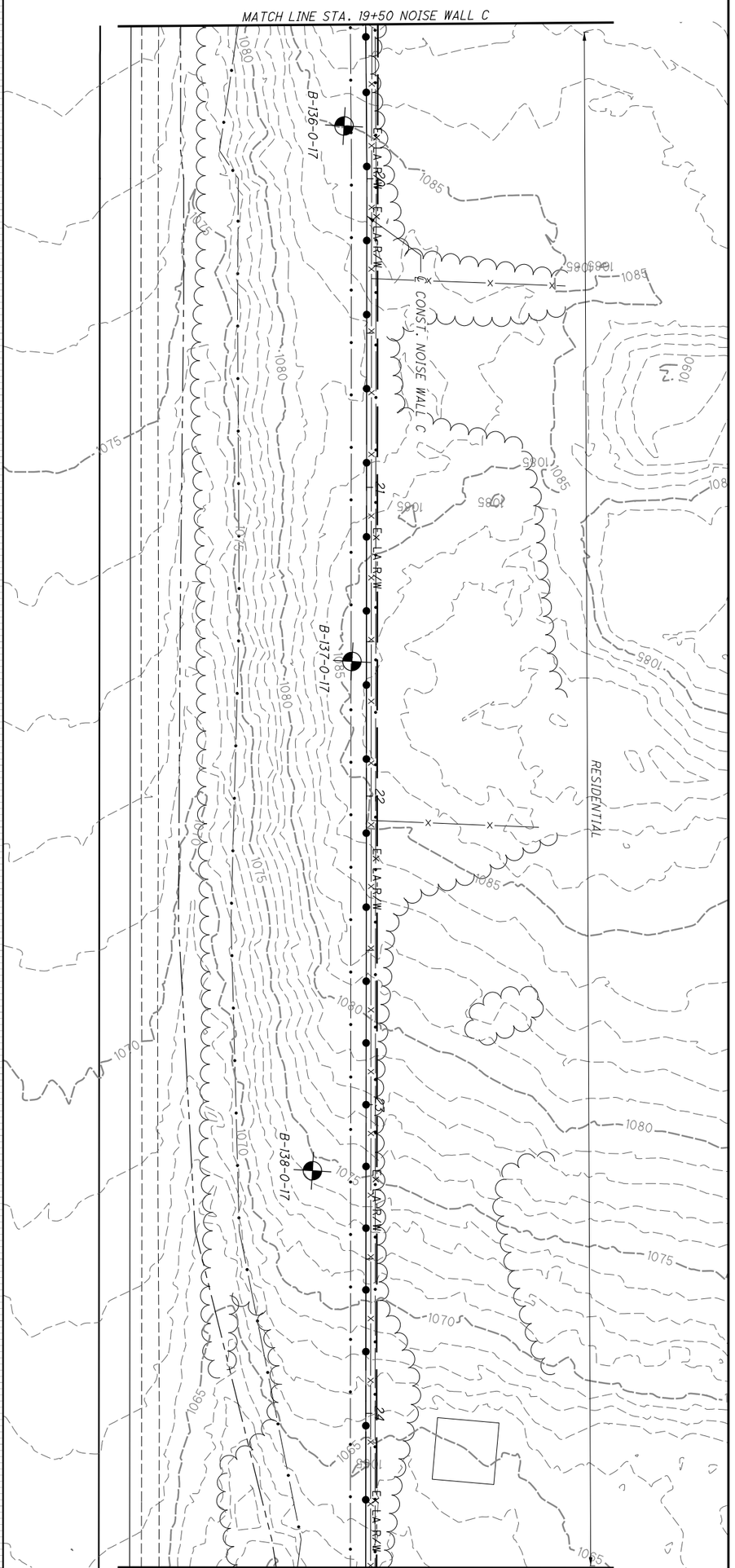




1	73/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION NOISE WALL C STA. 14+50 TO STA. 19+50	DRAWN KCA CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET

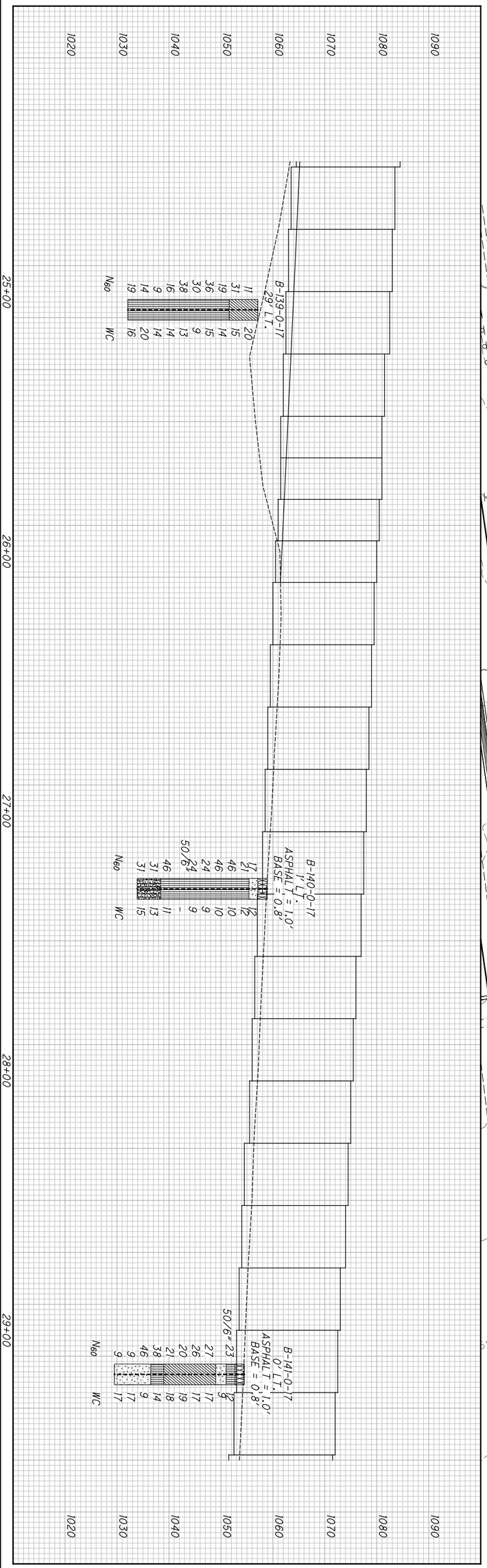
P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZP103.dgn Sheet 1/7/2021 11:35:47 PM karens

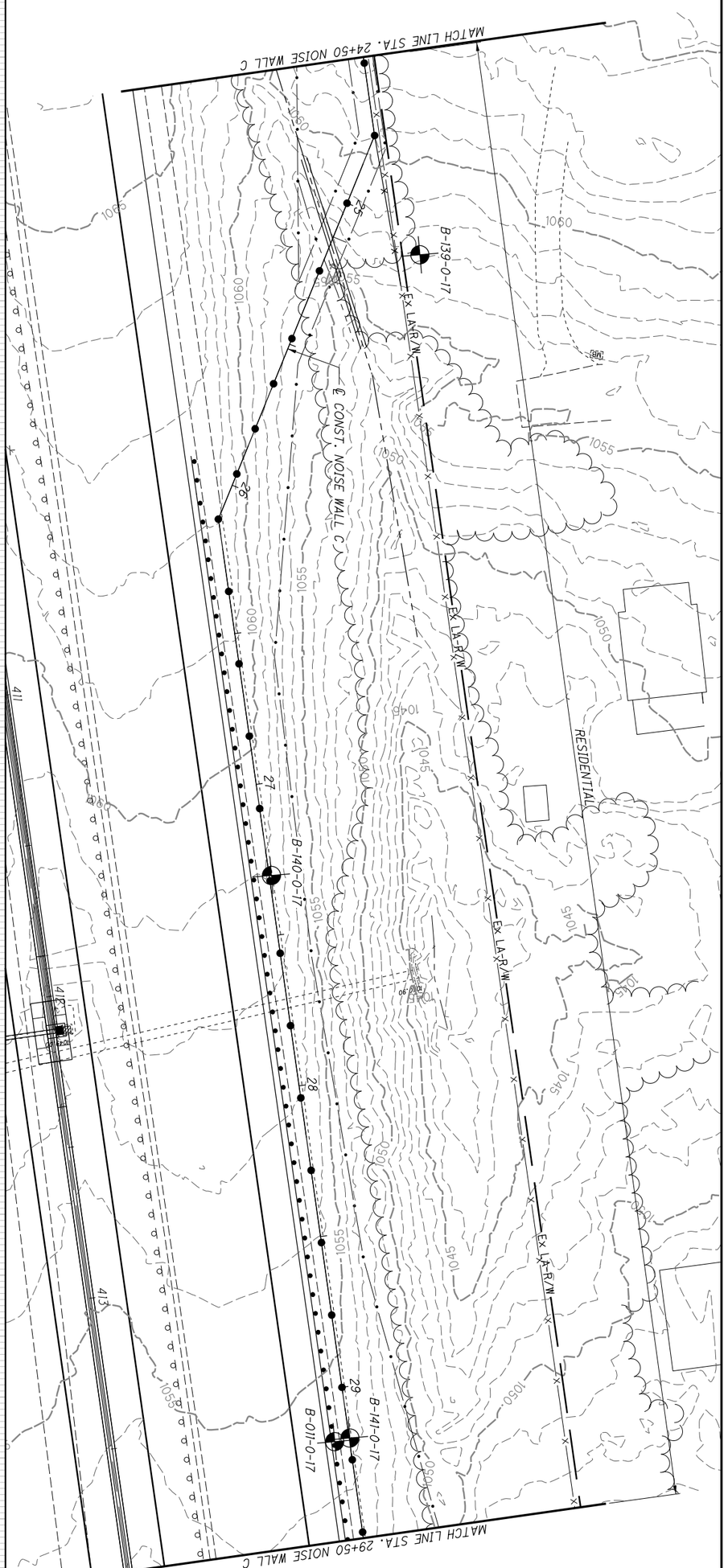




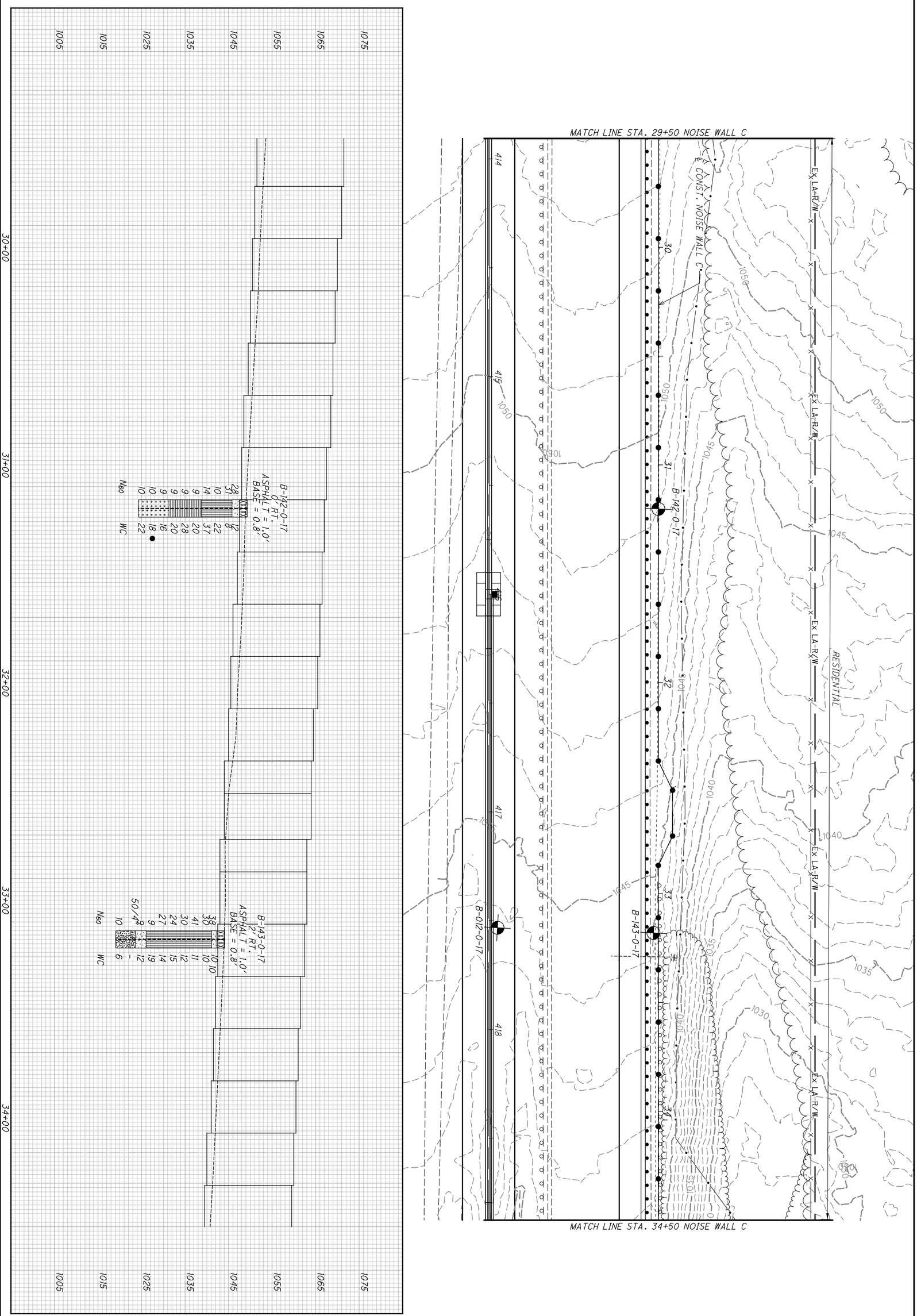
74/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION NOISE WALL C STA. 19+50 TO STA. 24+50	DRAWN KCA CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET	N

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZP104.dgn Sheet 1/7/2021 11:37:52 PM karens



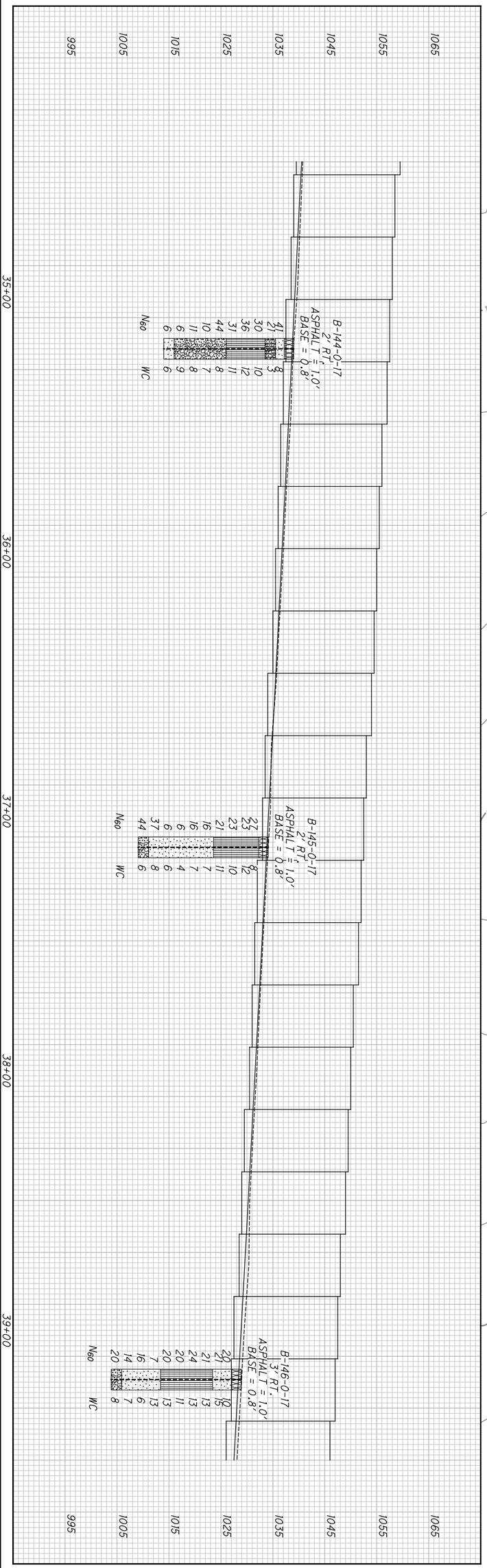


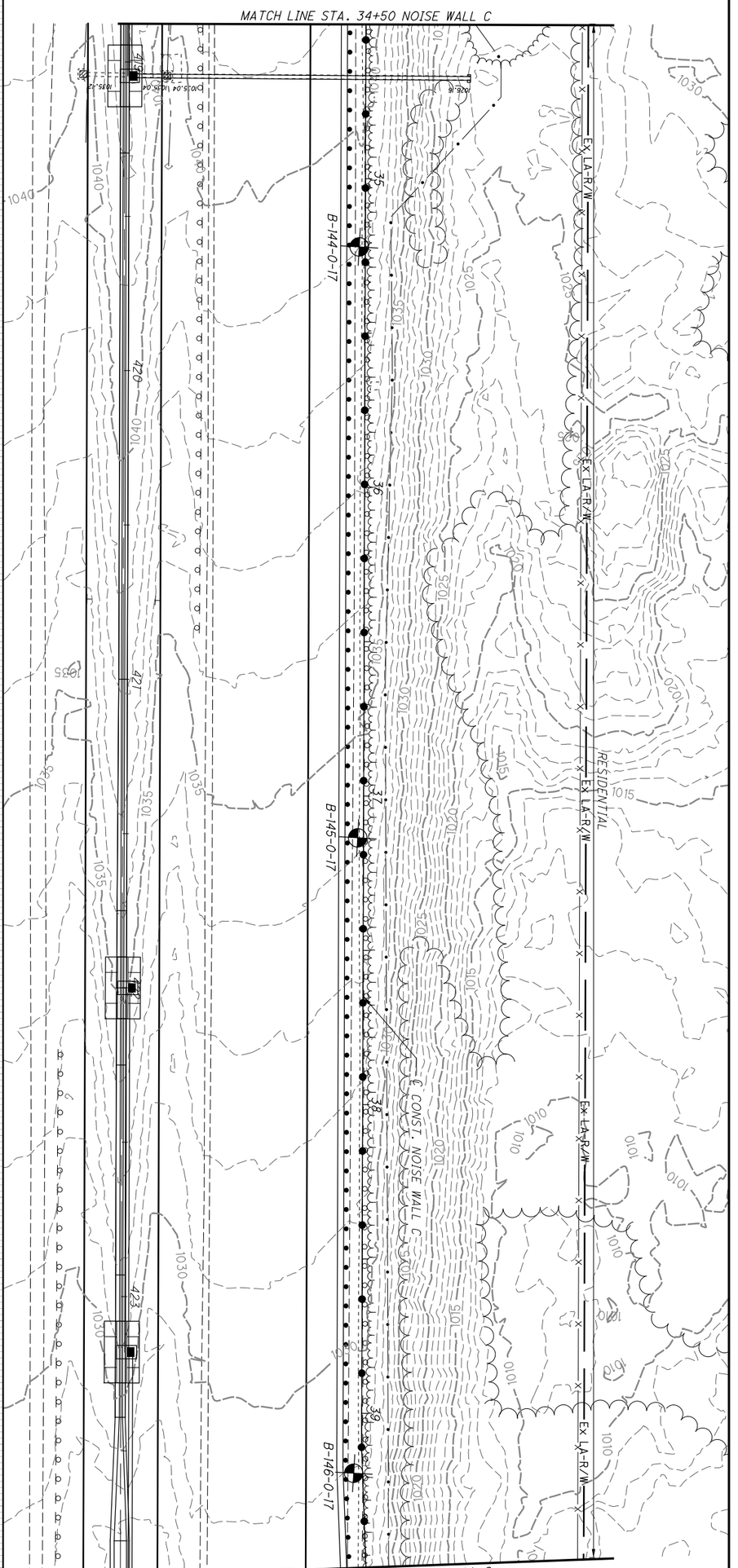
	75/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION NOISE WALL C STA. 24+50 TO STA. 29+50	DRAWN KCA CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET



76/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION NOISE WALL C STA. 29+50 TO STA. 34+50	DRAWN KCA	0 20	N
			CHECKED BPA	10 40 HORIZONTAL SCALE IN FEET	

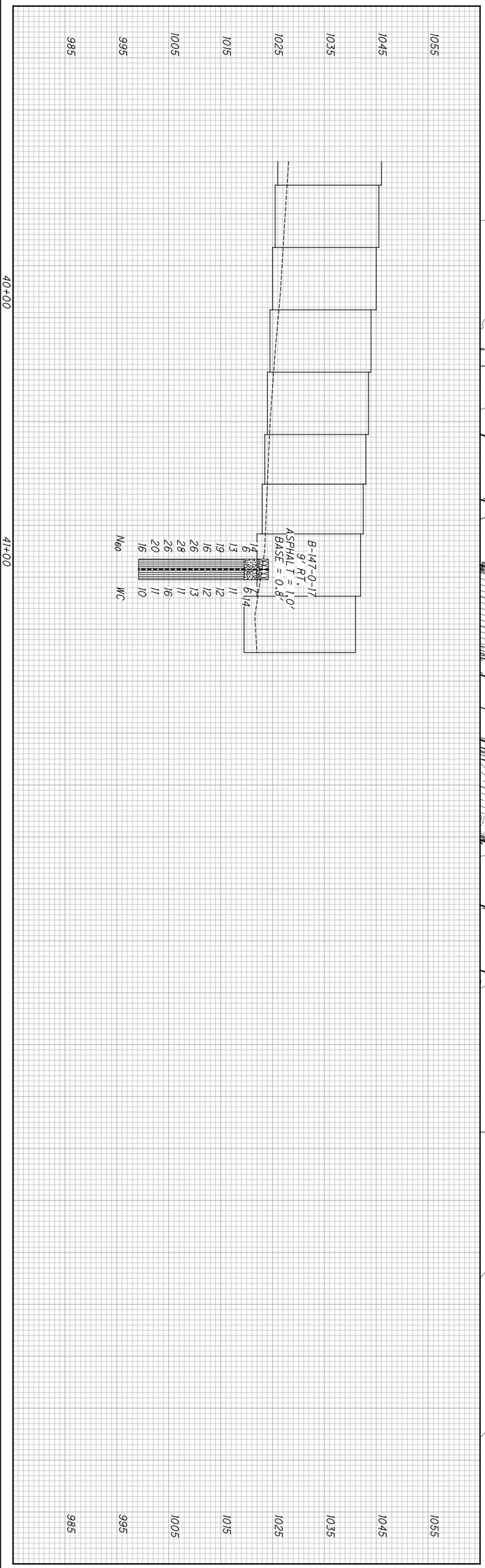
P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZP106.dgn Sheet 1/7/2021 11:42:01 PM karens

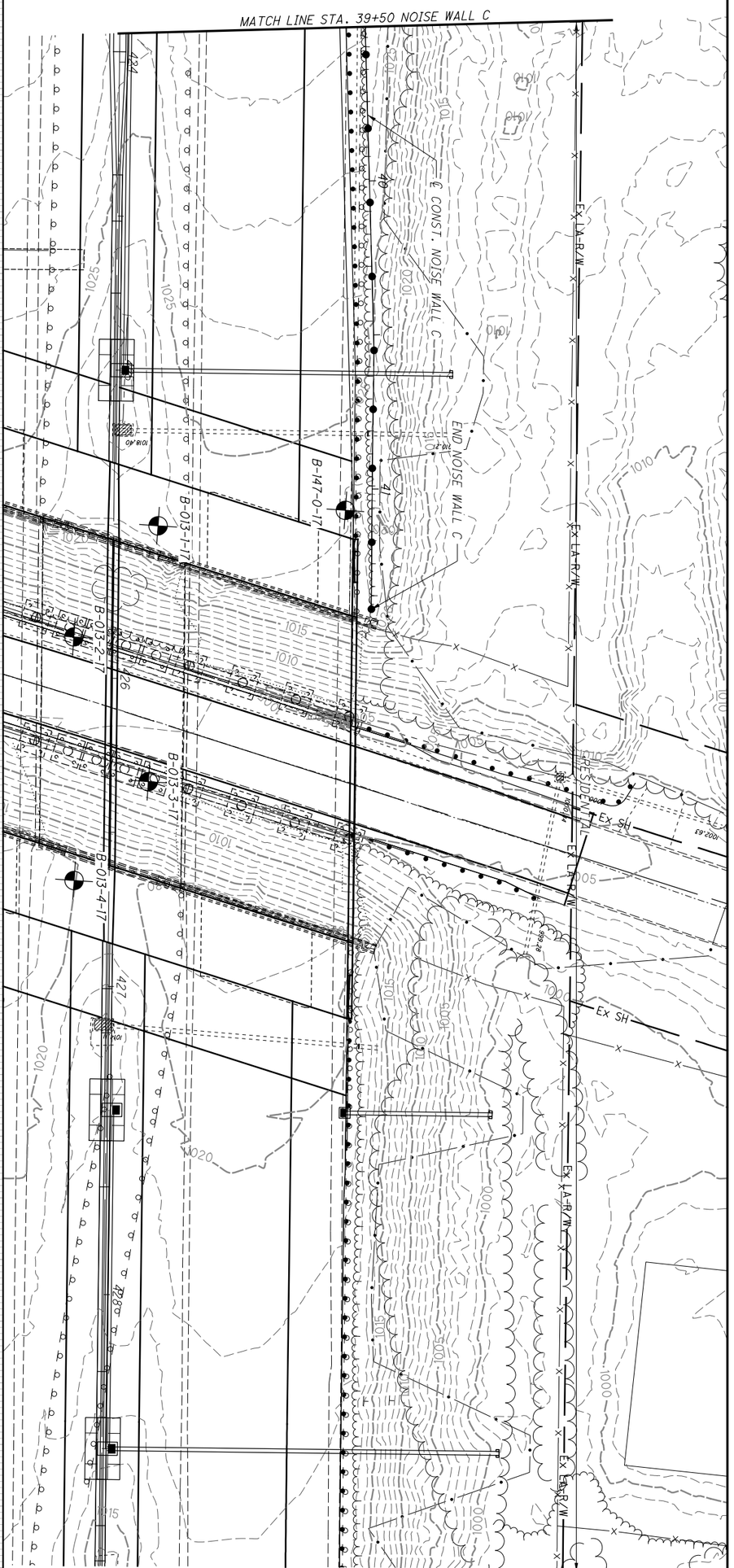




77/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION NOISE WALL C STA. 34+50 TO STA. 39+50	DRAWN KCA CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET	N

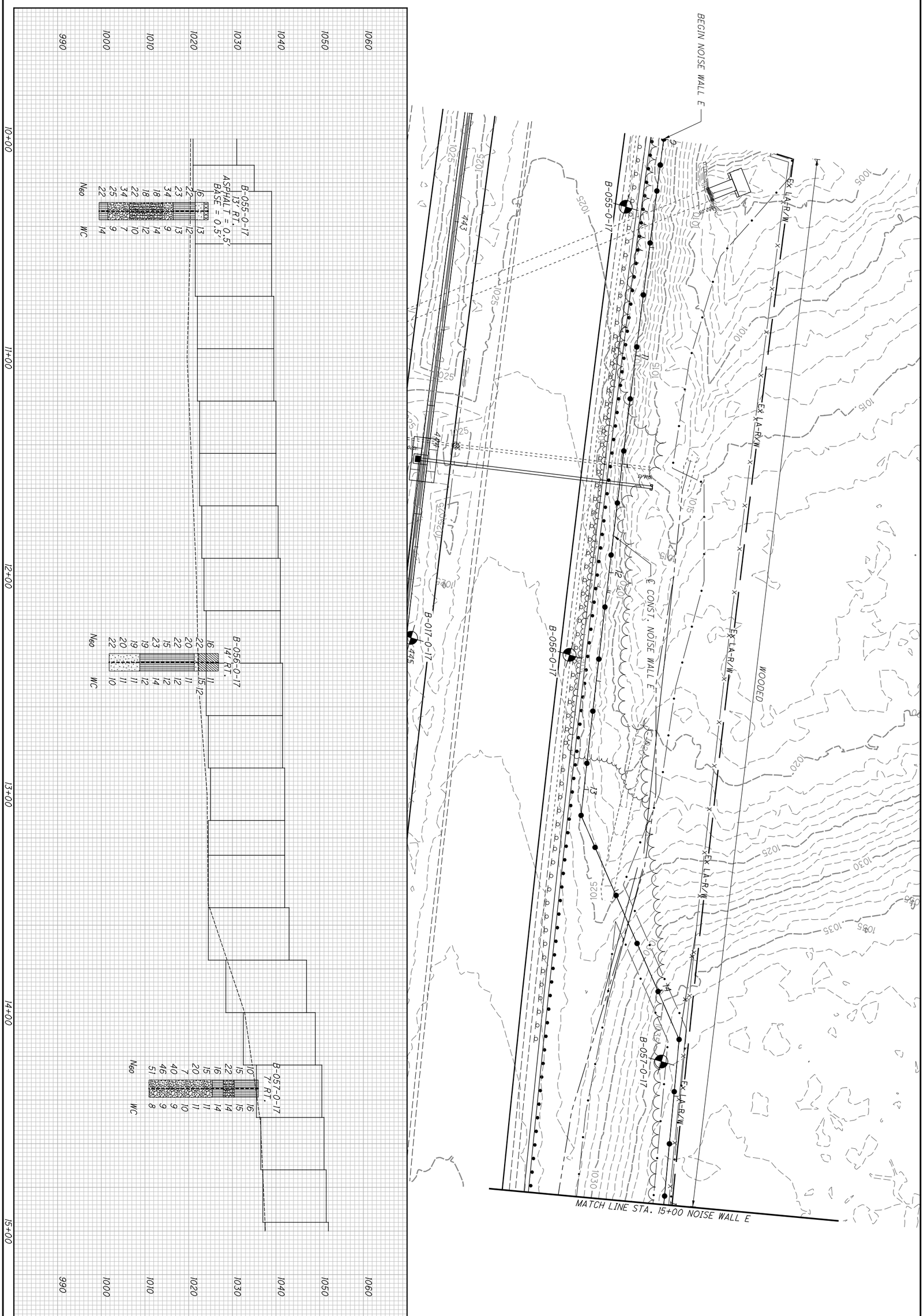
P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZP107.dgn Sheet 1/7/2021 11:44:06 PM karens





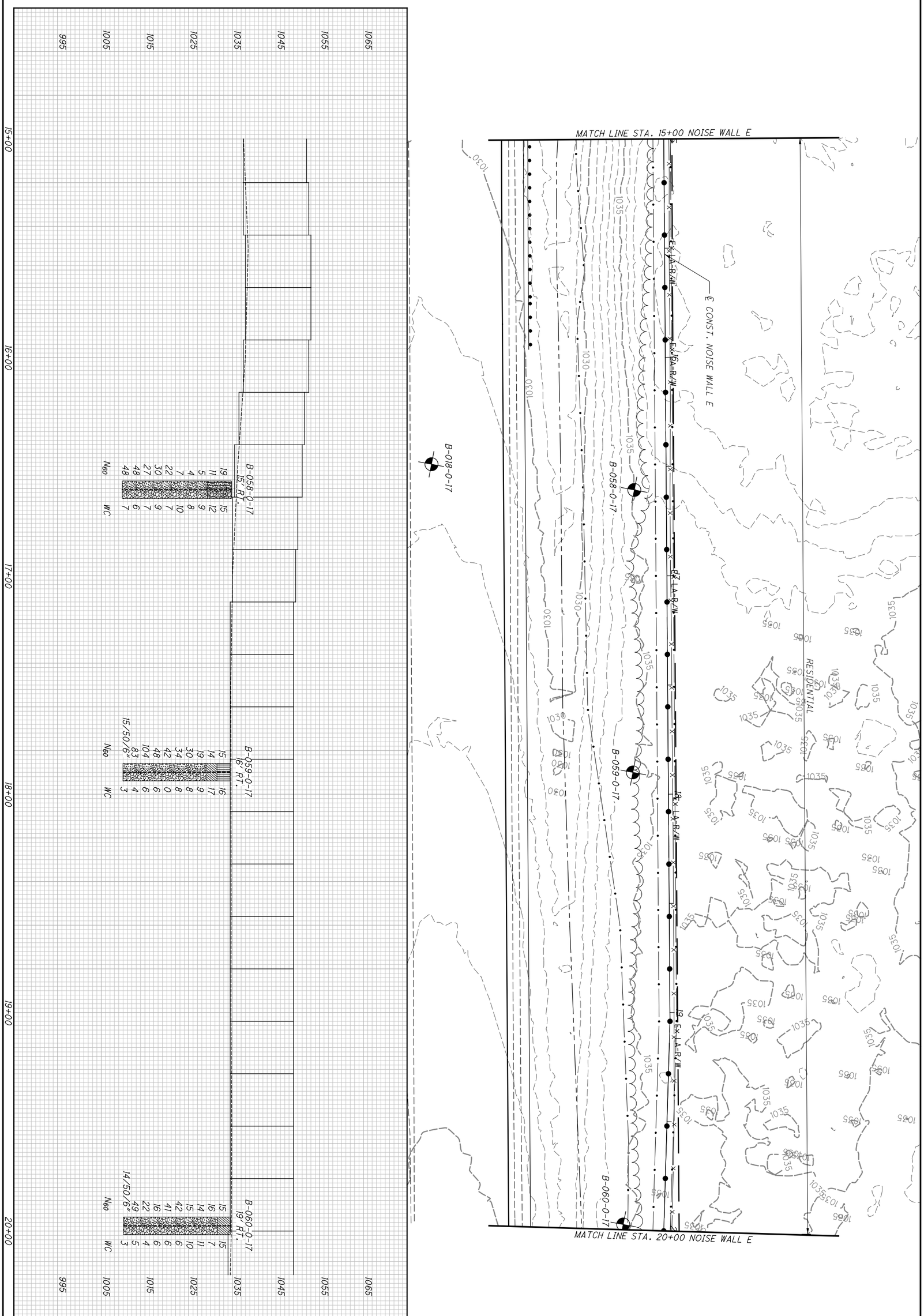
78/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION NOISE WALL C STA. 39+50 TO END	DRAWN KCA CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET	N

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZP201.dgn Sheet 1/7/2021 11:46:10 PM karens



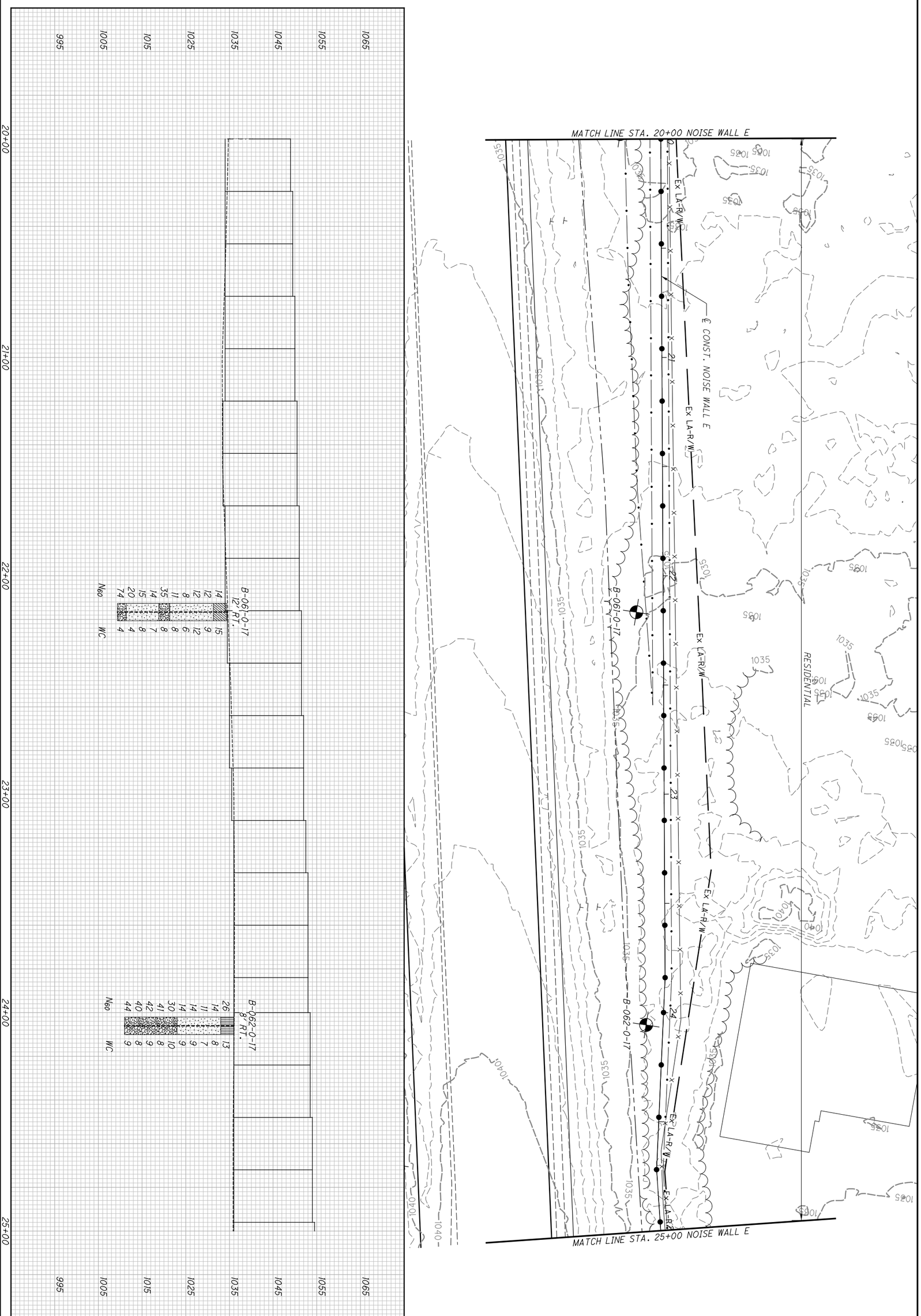
1	79/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION NOISE WALL E BEGIN TO STA. 15+00	DRAWN KCA CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZP202.dgn Sheet 1/7/2021 11:48:13 PM karens



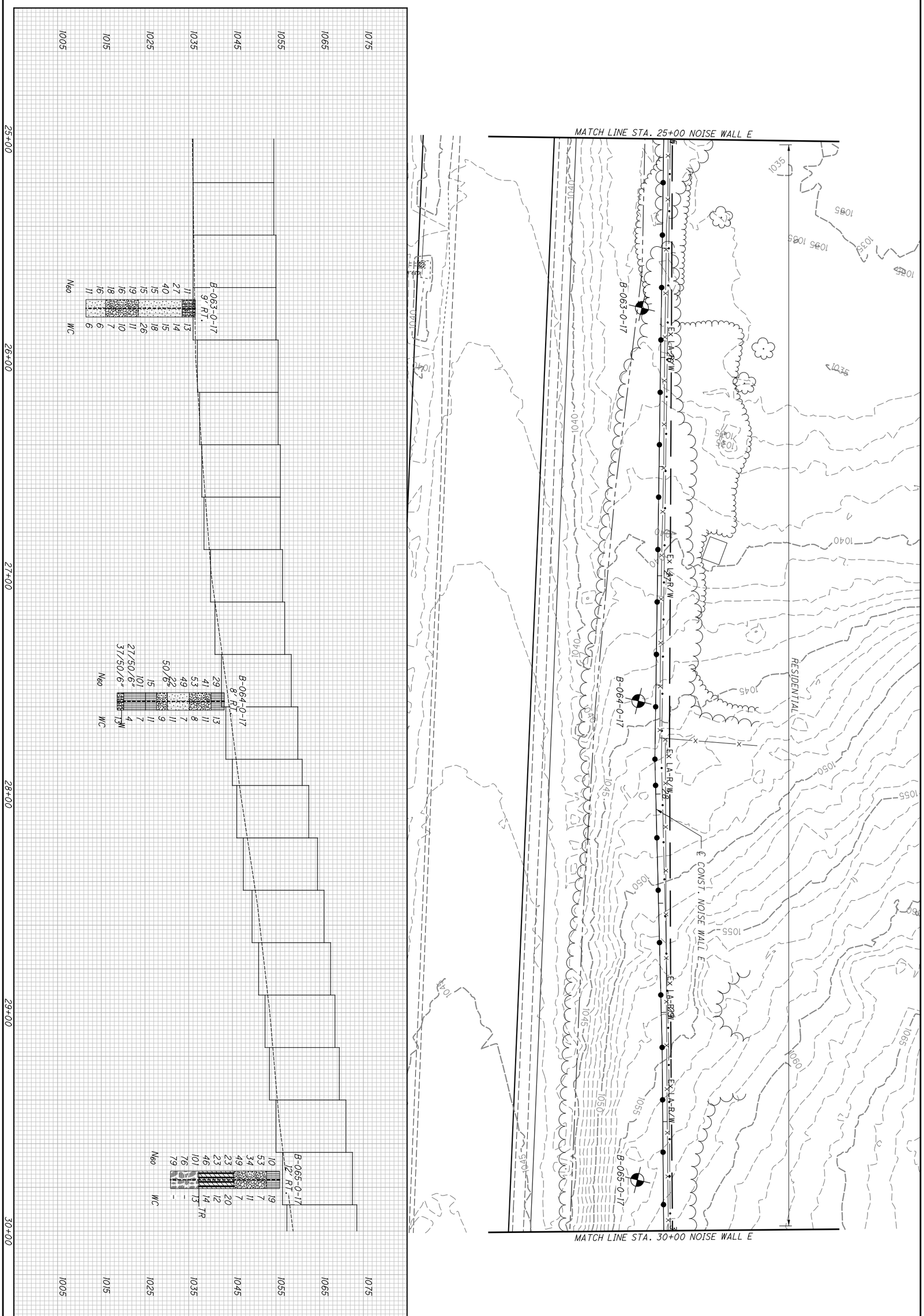
	80/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION NOISE WALL E STA. 15+00 TO STA. 20+00	DRAWN KCA / CHECKED BPA	0 20 / 10 40 HORIZONTAL SCALE IN FEET

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZP203.dgn Sheet 1/7/2021 11:50:18 PM karens

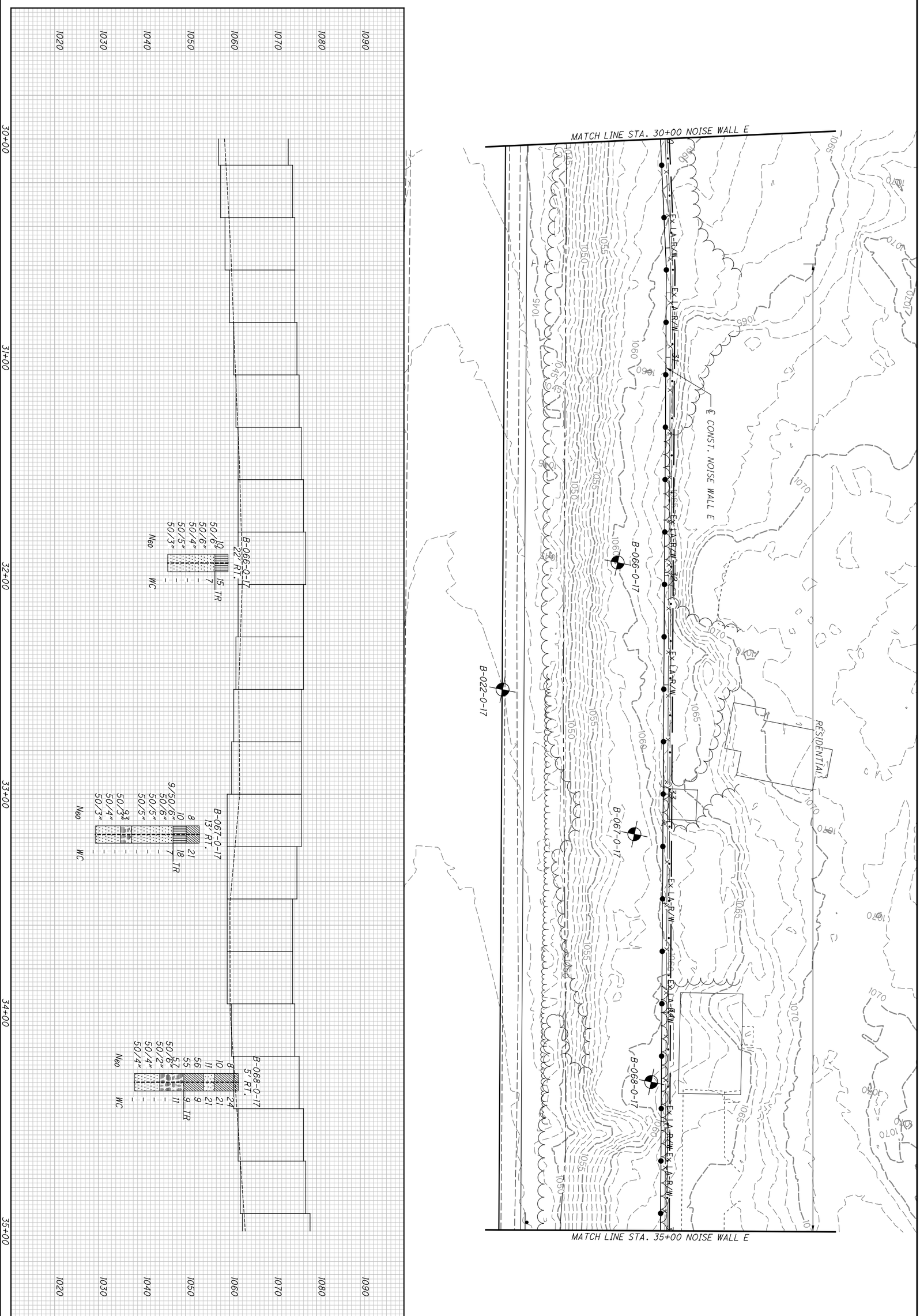


	81/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION NOISE WALL E STA. 25+00 TO STA. 30+00	DRAWN KCA CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZP204.dgn Sheet 1/7/2021 11:52:21 PM karens

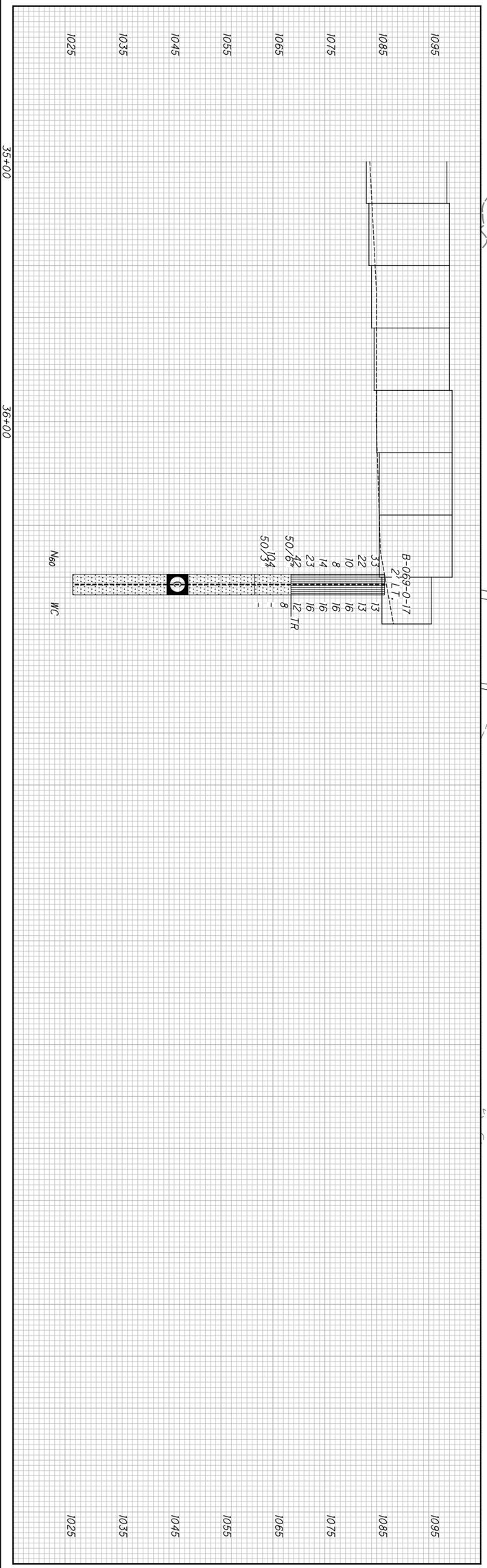


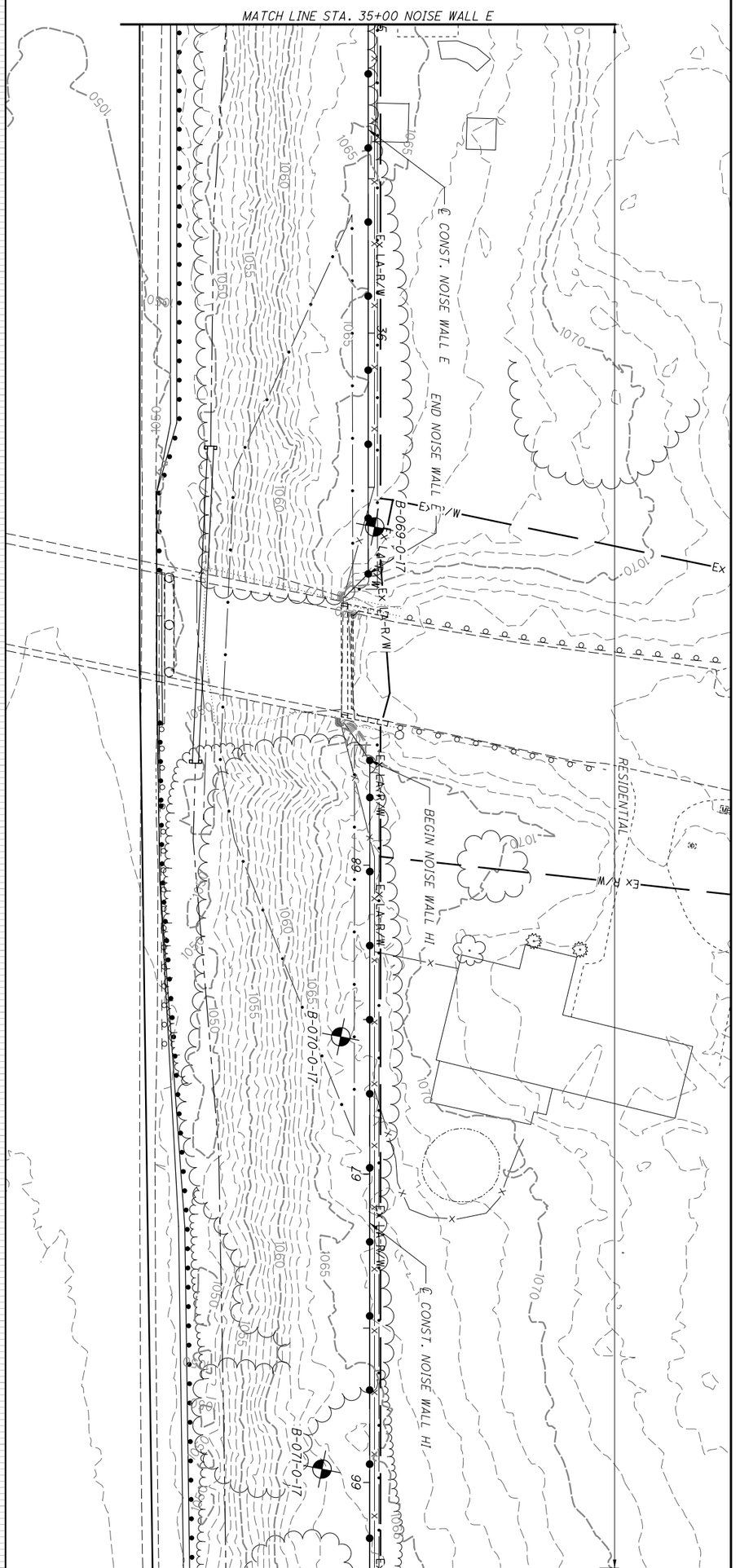
82/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION NOISE WALL E STA. 25+00 TO STA. 30+00	DRAWN KCA CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET	N



	83/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION NOISE WALL E STA. 30+00 TO STA. 35+00	DRAWN KCA / CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET

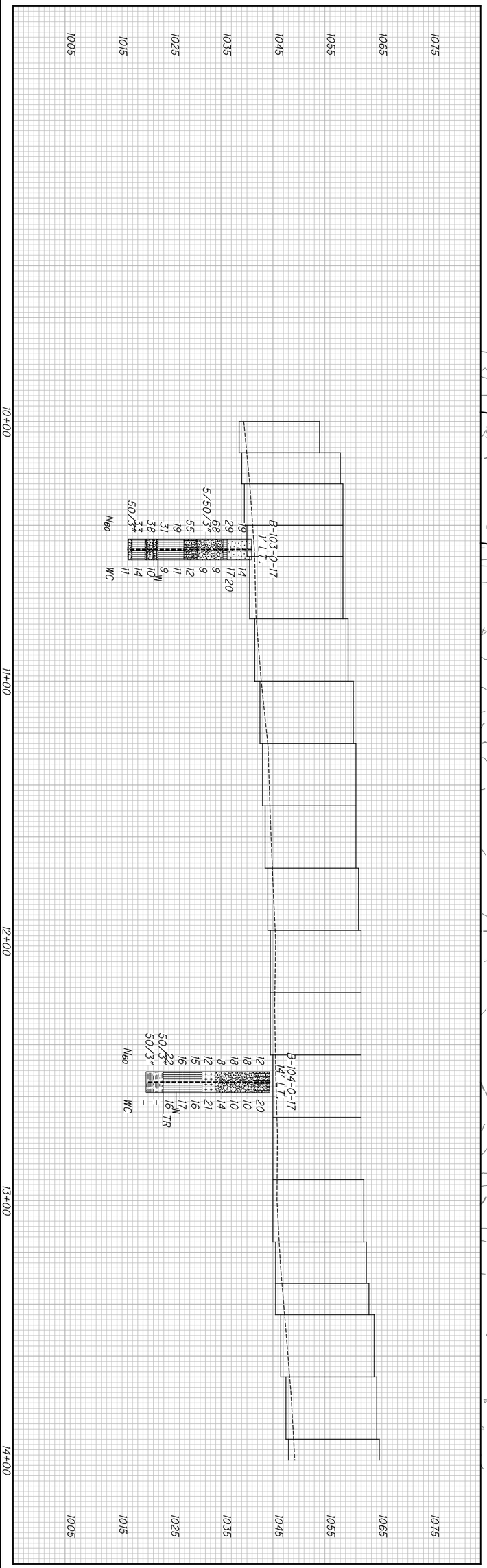
P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZP206.dgn Sheet 1/7/2021 11:56:31 PM karens

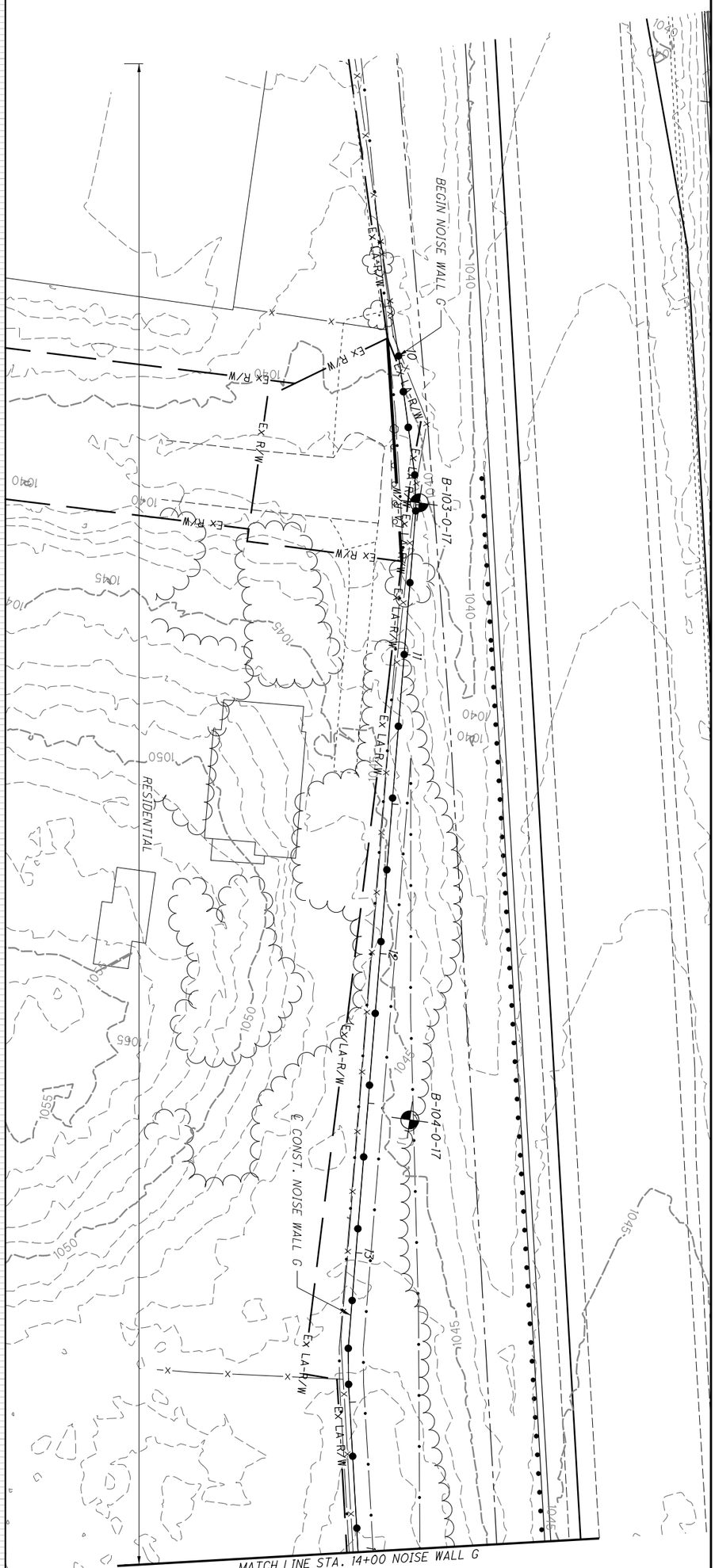




	84/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION NOISE WALL E STA. 35+00 TO END	DRAWN KCA CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET

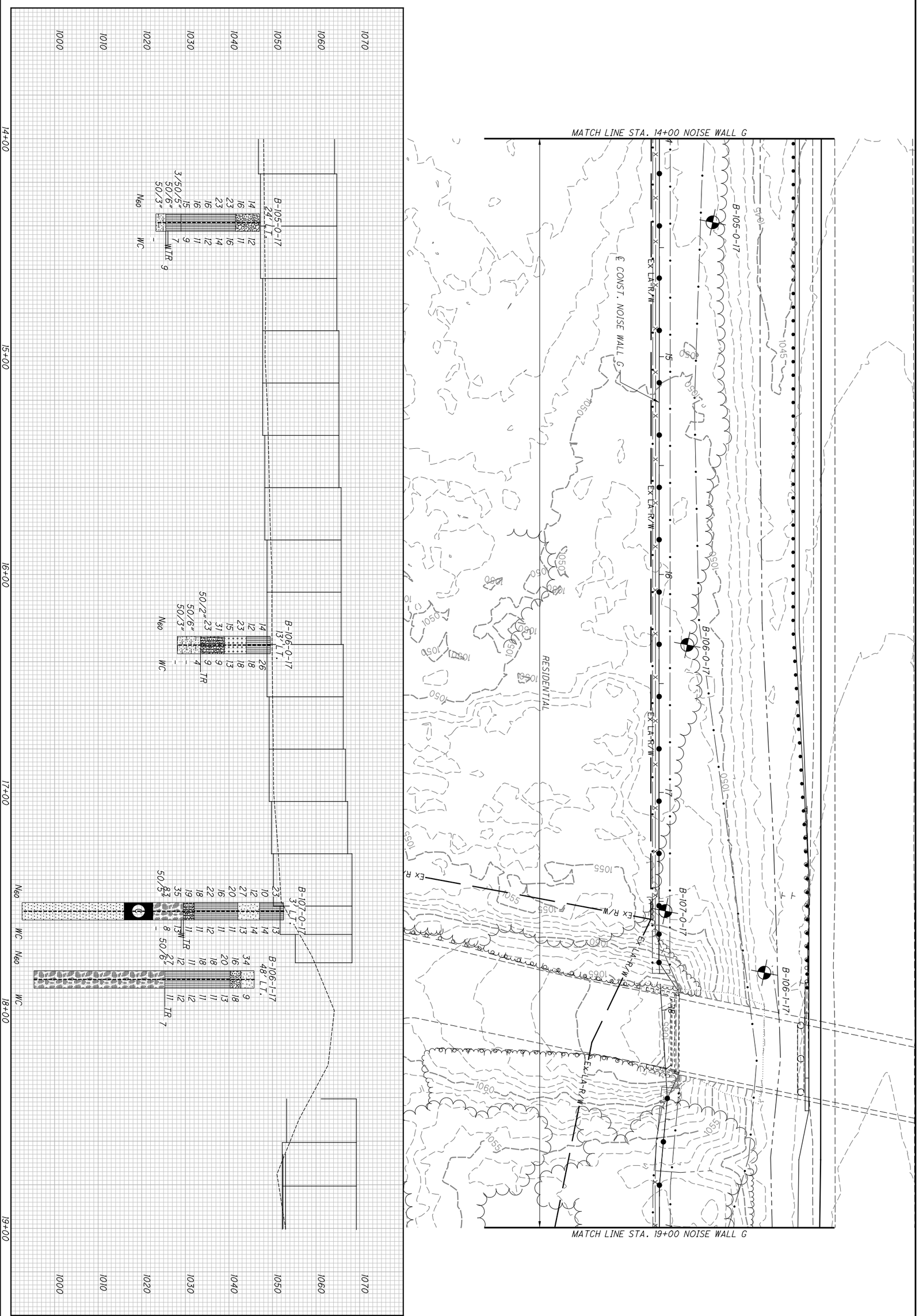
P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZP301.dgn Sheet 1/7/2021 11:58:36 PM karens



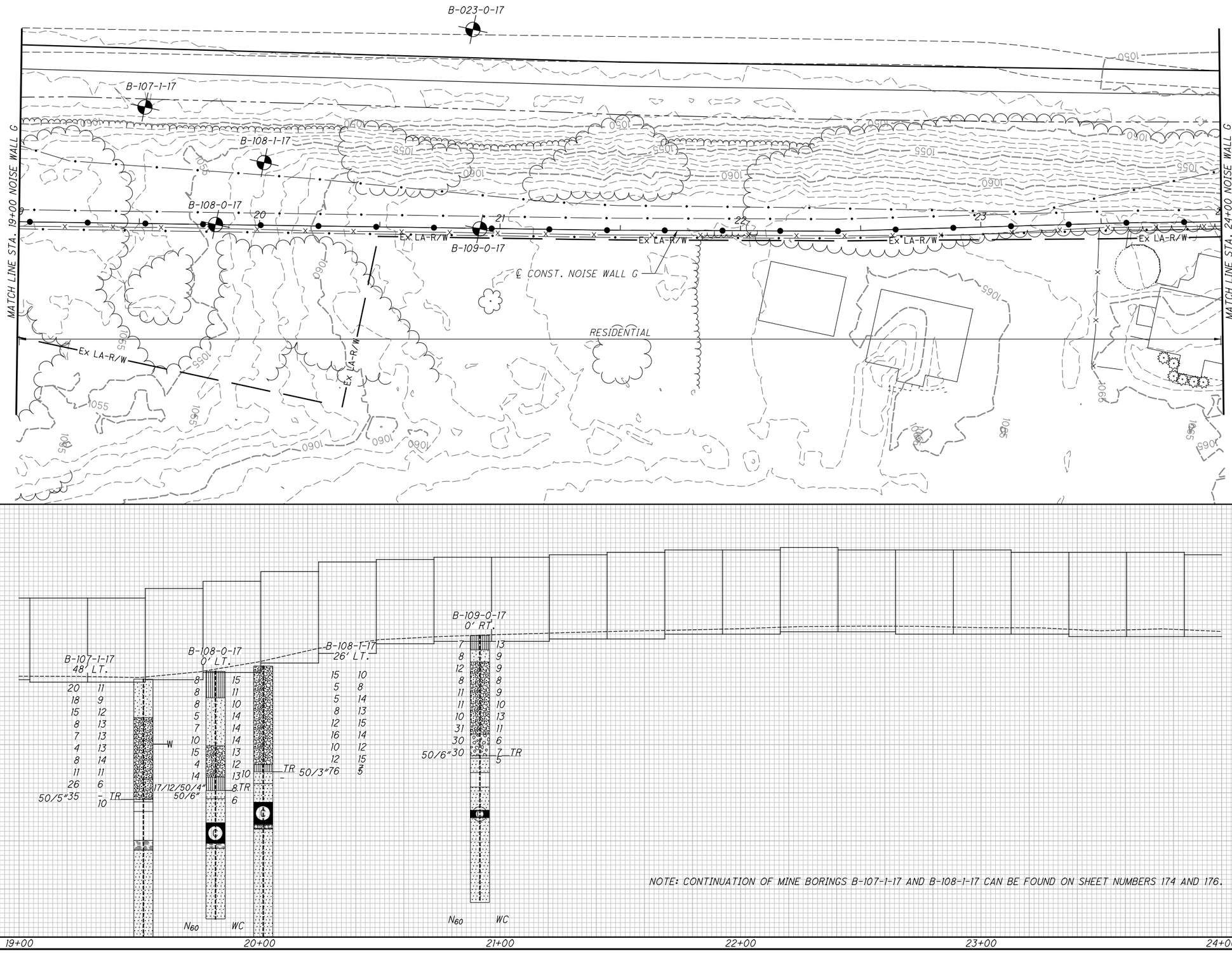


	85/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION NOISE WALL G BEGIN TO STA. 14+00	DRAWN KCA CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZP302.dgn Sheet 1/8/2021 12:00:43 AM karens



86/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION NOISE WALL G STA. 14+00 TO STA. 19+00	DRAWN KCA	0 20	N
			CHECKED BPA	10 40 HORIZONTAL SCALE IN FEET	



HORIZONTAL SCALE IN FEET
0 10 20 40

DRAWN KCA
CHECKED BPA

STRUCTURE FOUNDATION EXPLORATION
NOISE WALL G STA. 19+00 TO STA. 24+00

SUM-77/277/224
VARIOUS

87/209

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002FP303.dgn Sheet 1/8/2021 12:02:46 AM karens

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZP304.dgn Sheet 1/8/2021 12:04:50 AM karens

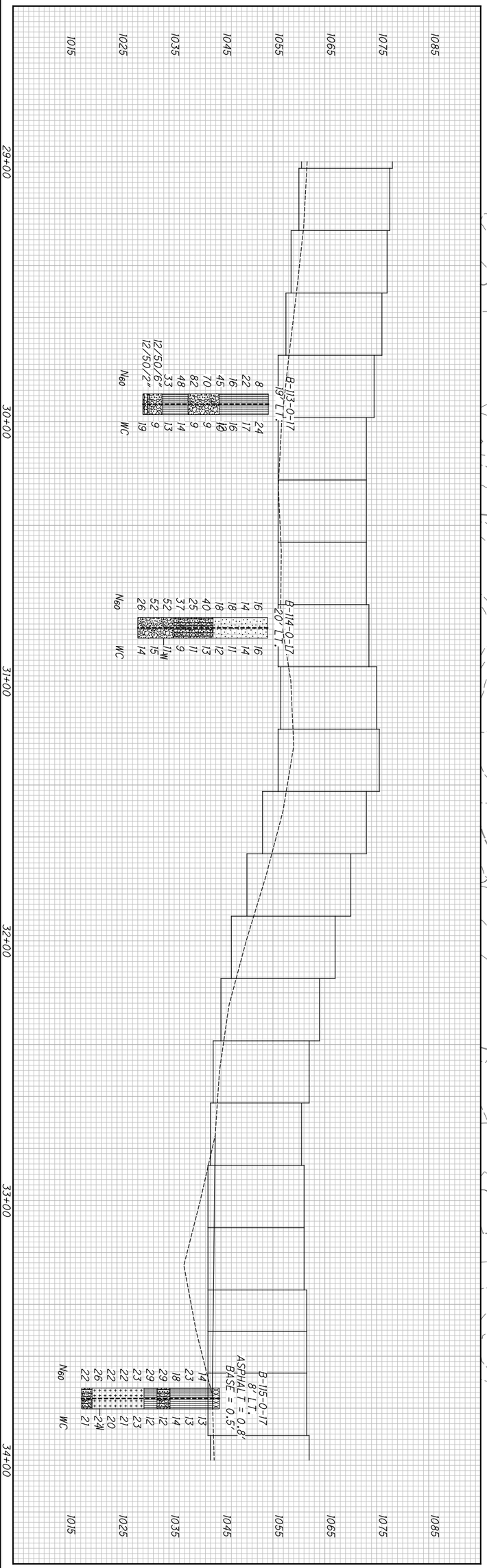
SUM-77/277/224
VARIOUS

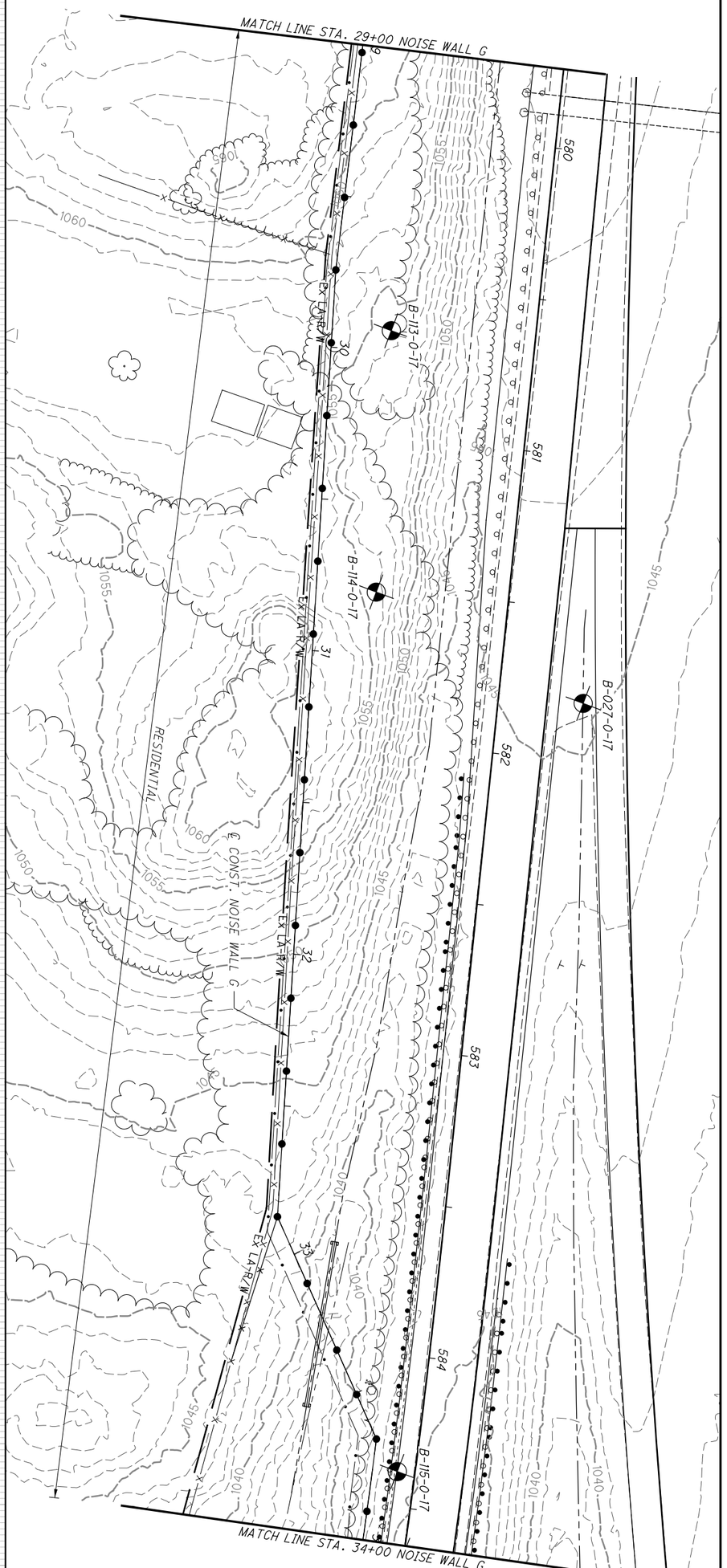
STRUCTURE FOUNDATION EXPLORATION
NOISE WALL G STA. 24+00 TO STA. 29+00

DRAWN KCA
CHECKED BPA

0 20
10 40
HORIZONTAL SCALE IN FEET

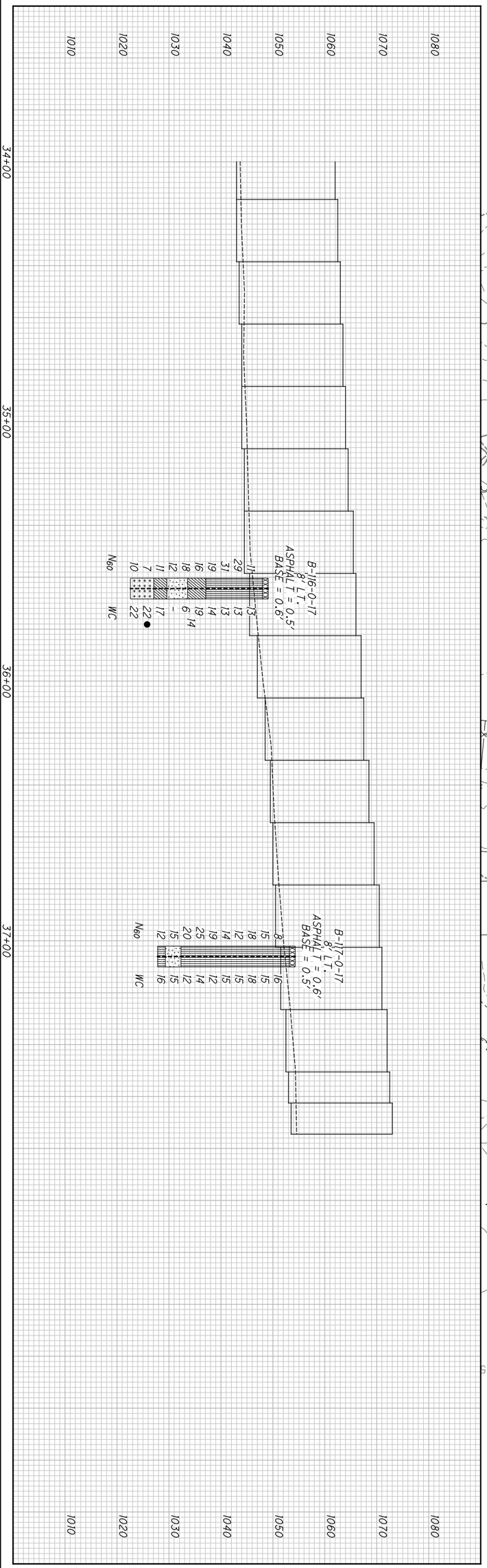
P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZP305.dgn Sheet 1/8/2021 12:06:53 AM karens

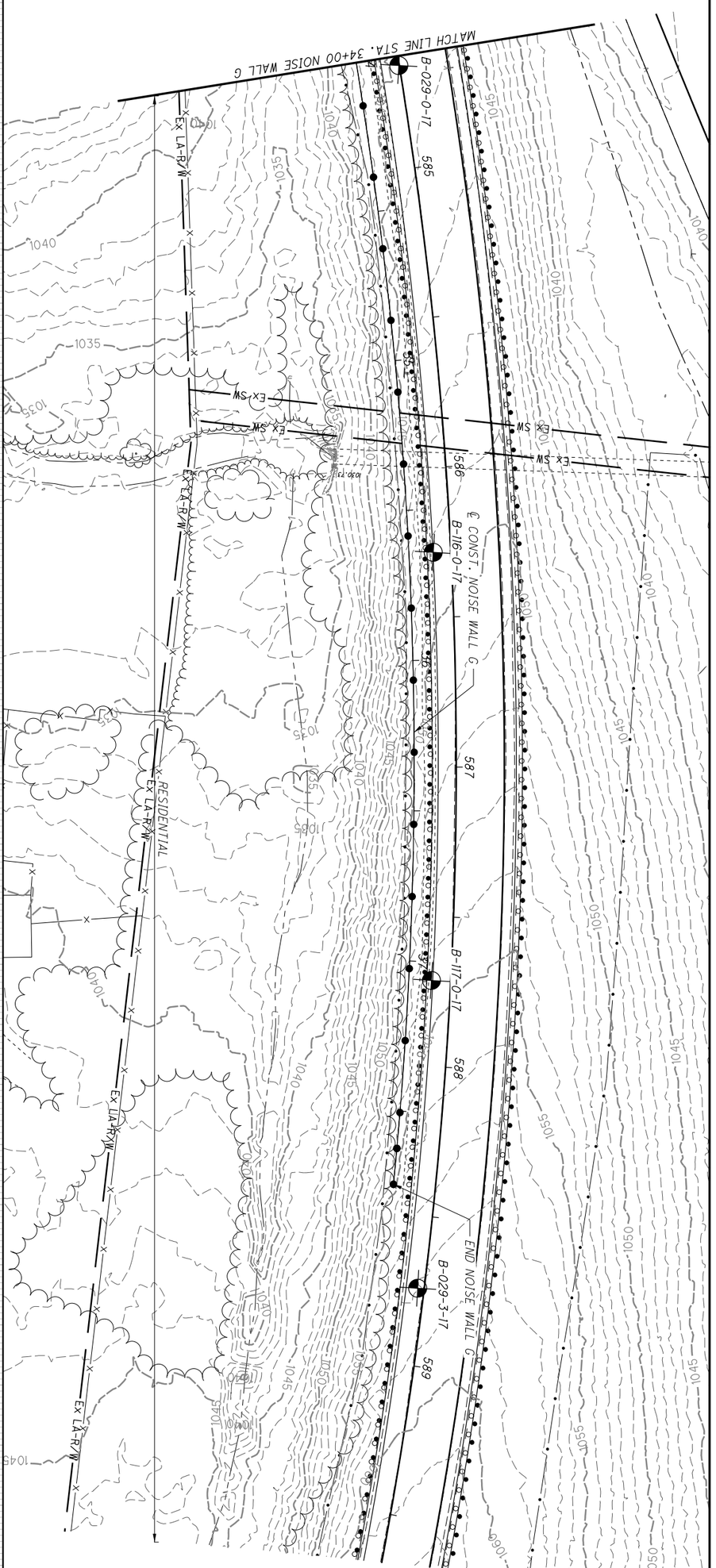




	89/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION NOISE WALL G STA. 29+00 TO STA. 34+00	DRAWN KCA / CHECKED BPA	0 10 20 40 HORIZONTAL SCALE IN FEET

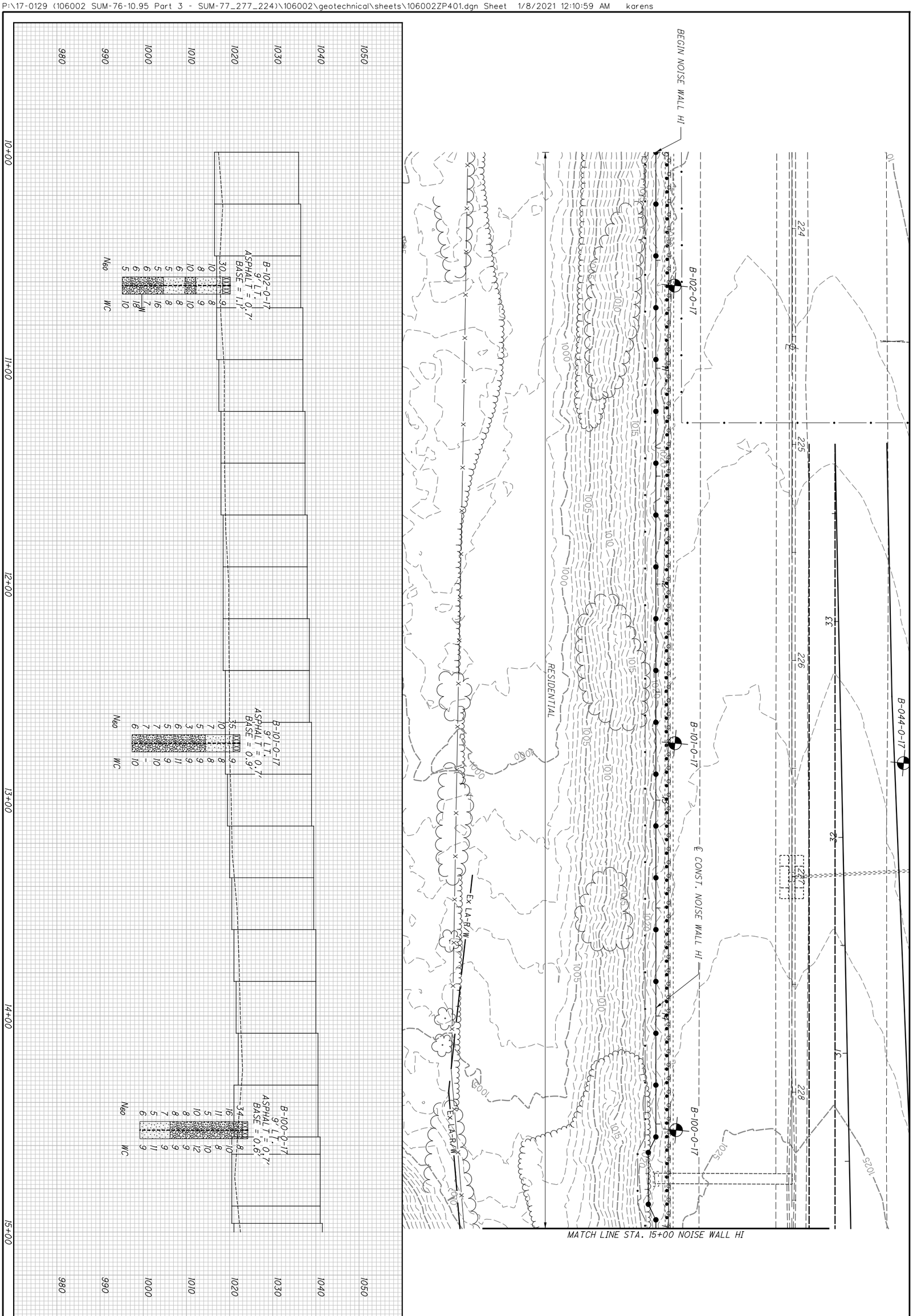
P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZP306.dgn Sheet 1/8/2021 12:08:55 AM karens





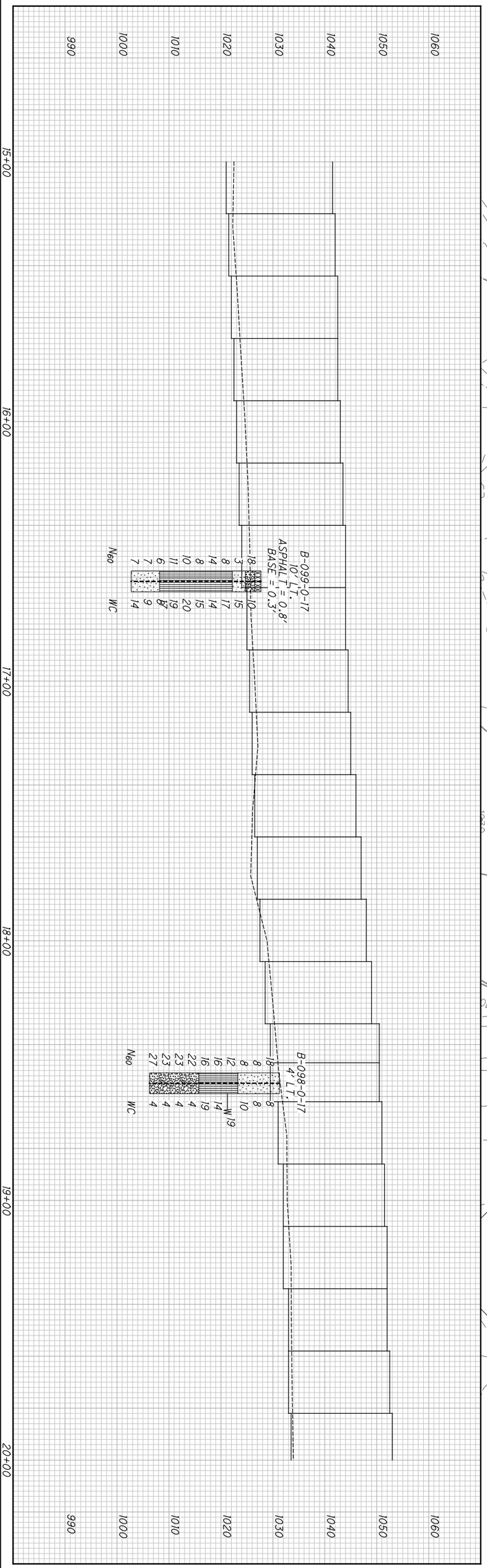
	90/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION NOISE WALL G STA. 34+00 TO END	DRAWN KCA CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET

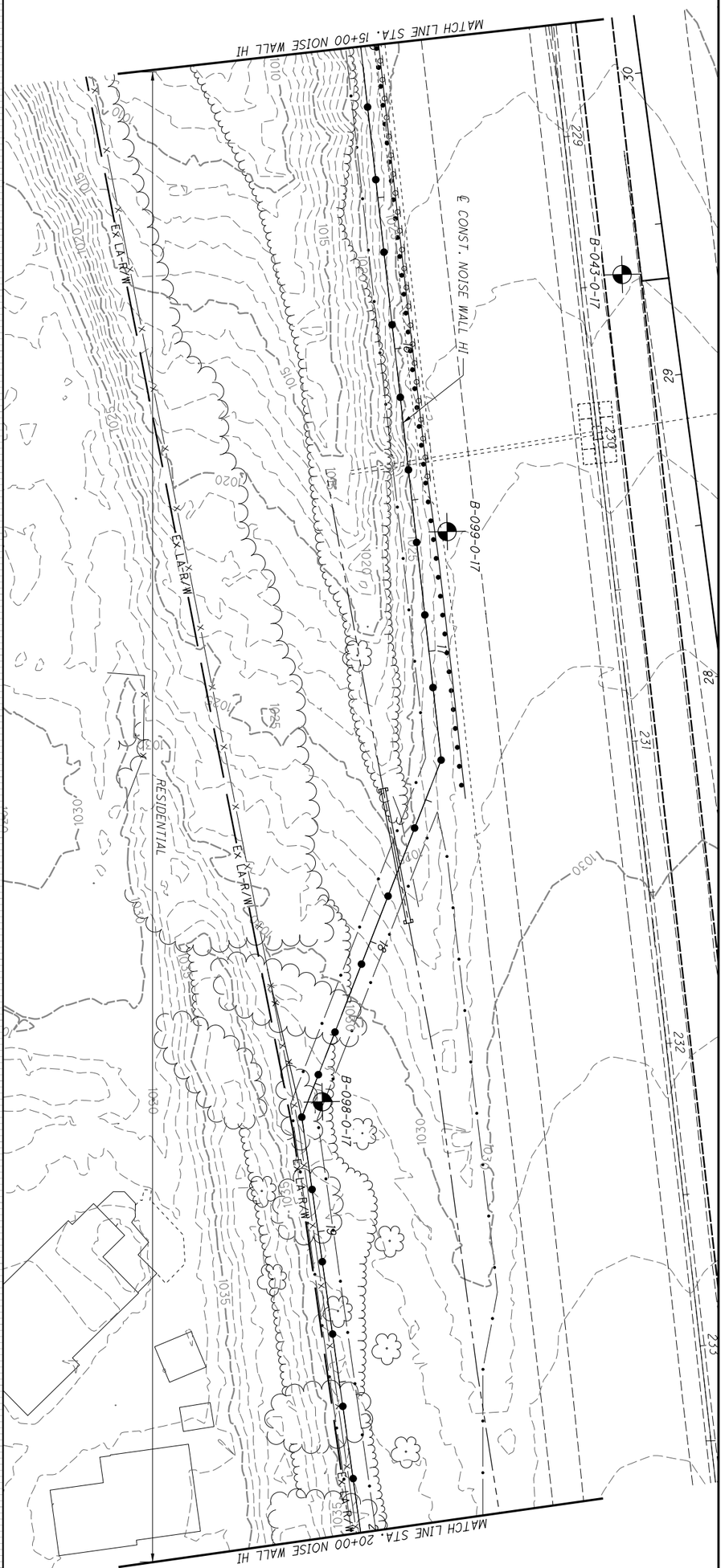
P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZP401.dgn Sheet 1/8/2021 12:10:59 AM karens



	91/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION NOISE WALL HI BEGIN TO STA. 15+00	DRAWN KCA / CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZP402.dgn Sheet 1/8/2021 12:13:03 AM karens





92/209

SUM-77/277/224
VARIOUS

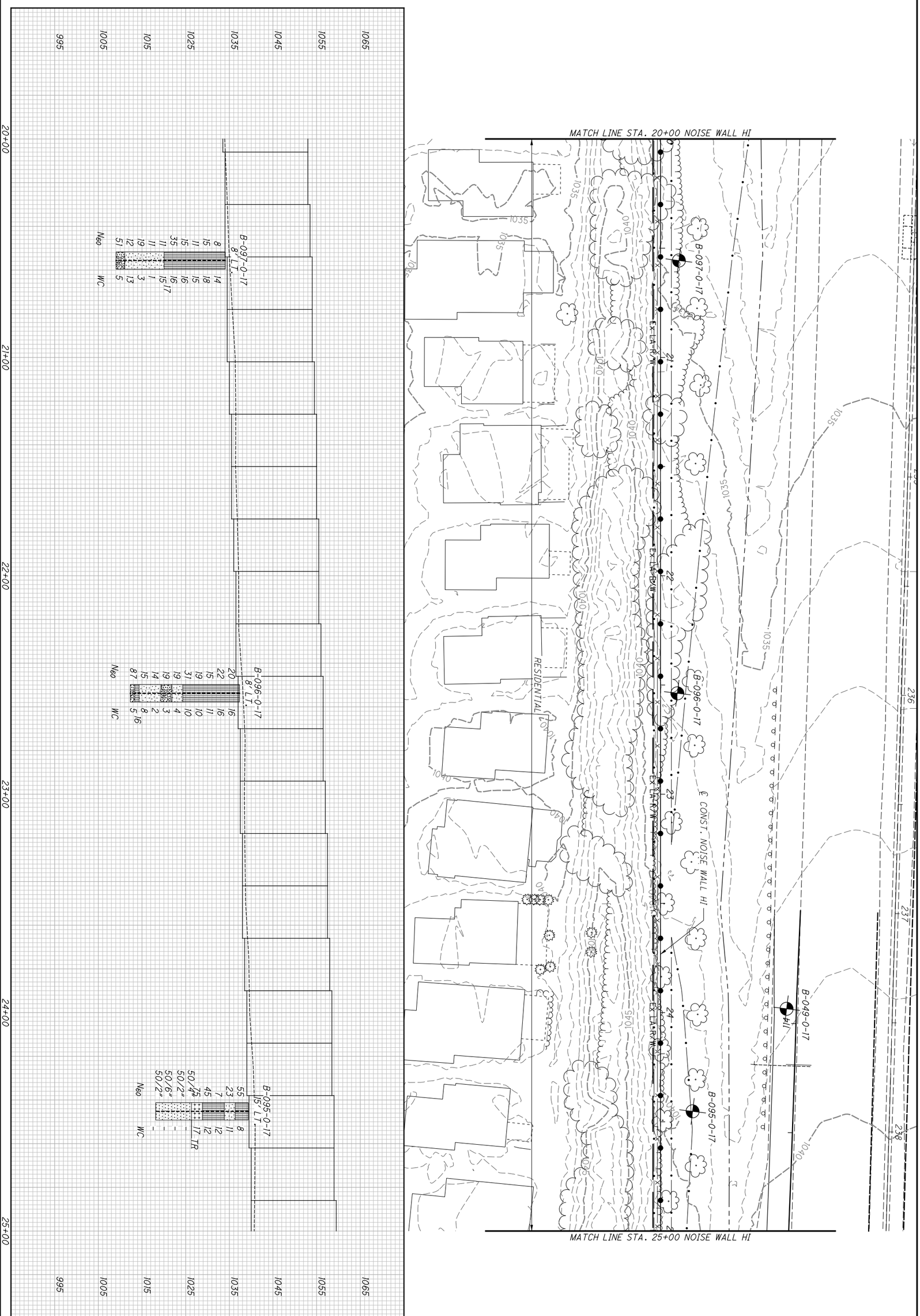
STRUCTURE FOUNDATION EXPLORATION
NOISE WALL HI STA. 15+00 TO STA. 20+00

DRAWN KCA
CHECKED BPA

0 10 20 40
HORIZONTAL SCALE IN FEET

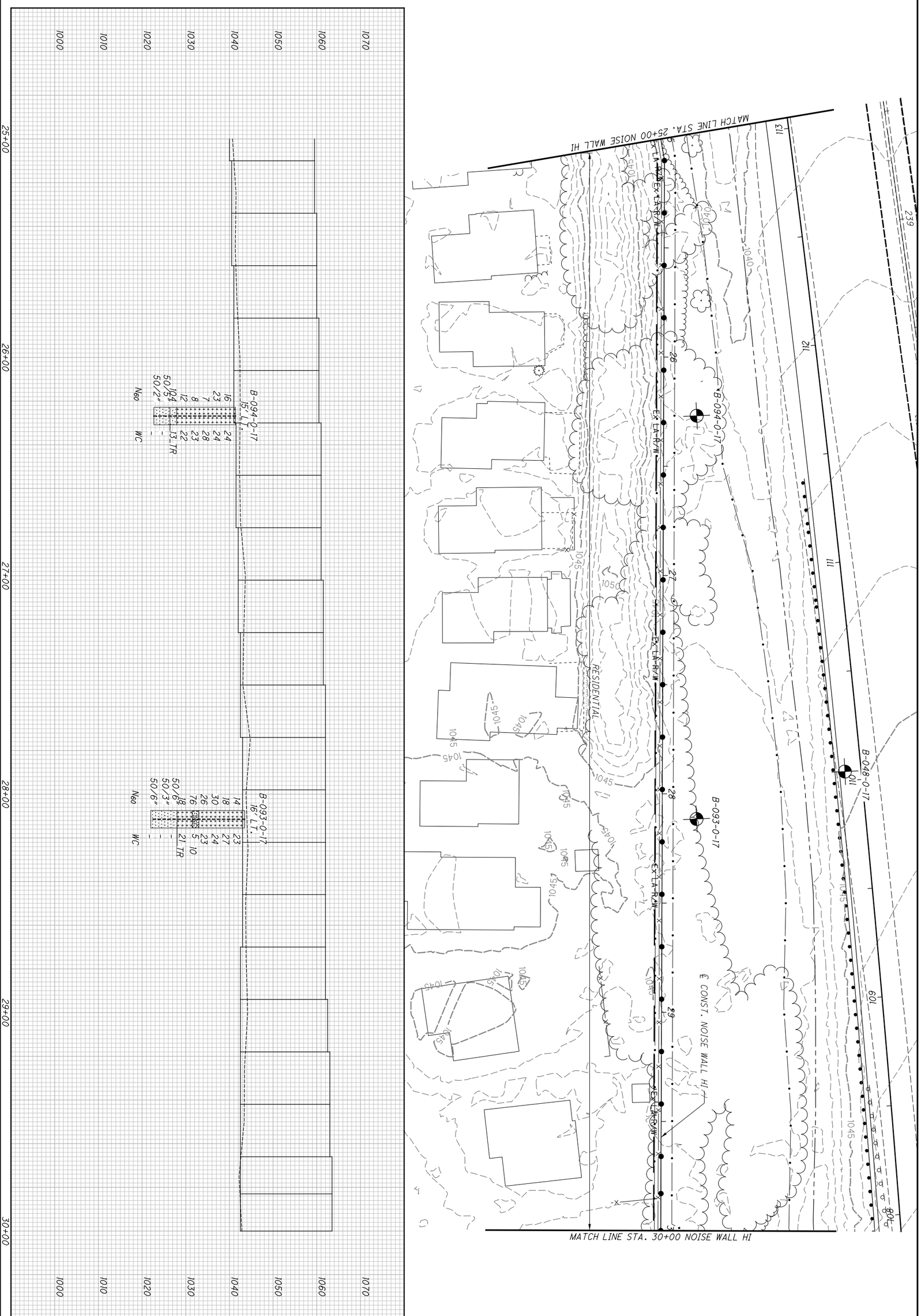
N

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZP403.dgn Sheet 1/8/2021 12:15:05 AM karens



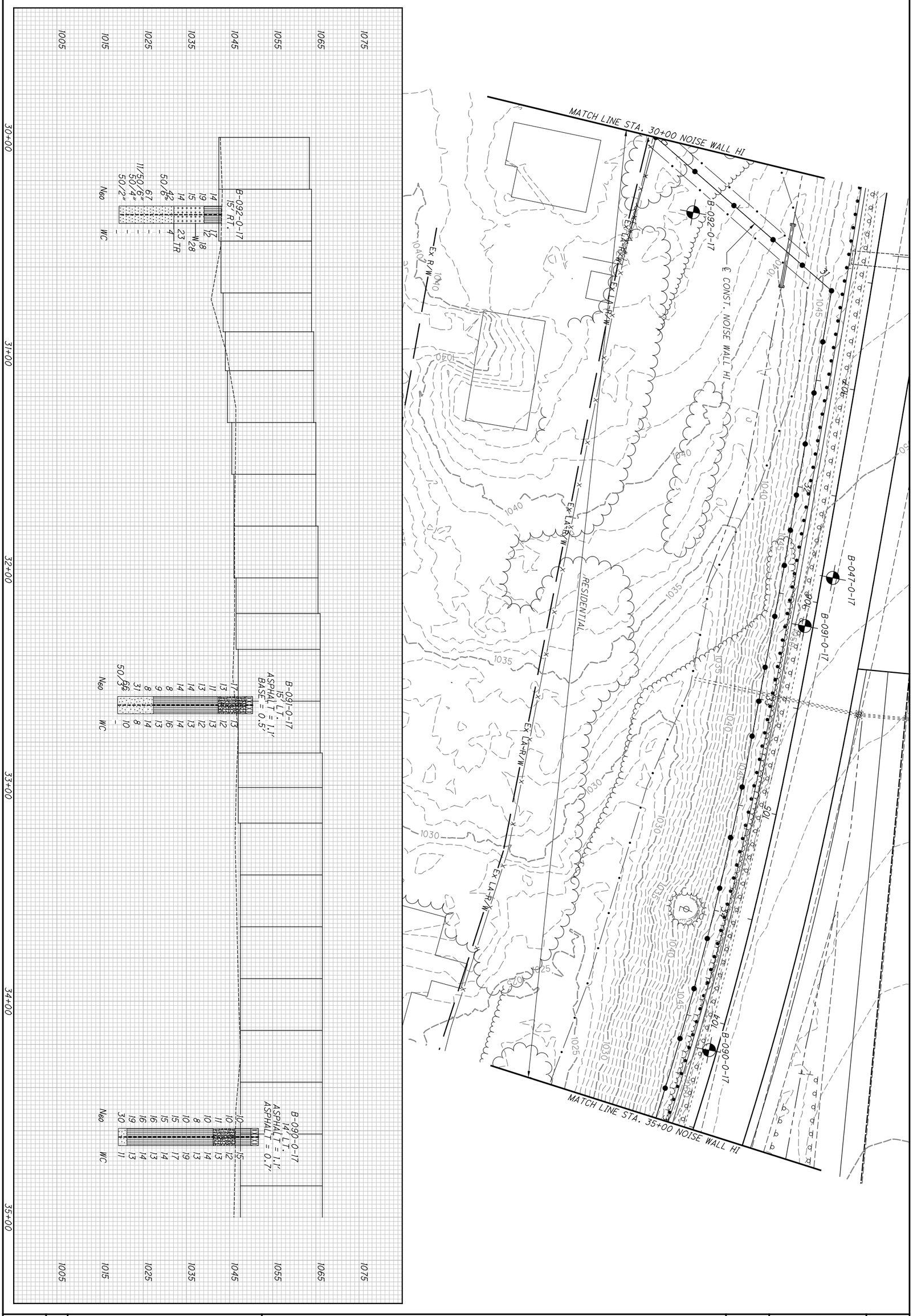
	93/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION NOISE WALL HI STA. 20+00 TO STA. 25+00	DRAWN KCA CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZP404.dgn Sheet 1/8/2021 12:17:09 AM karens



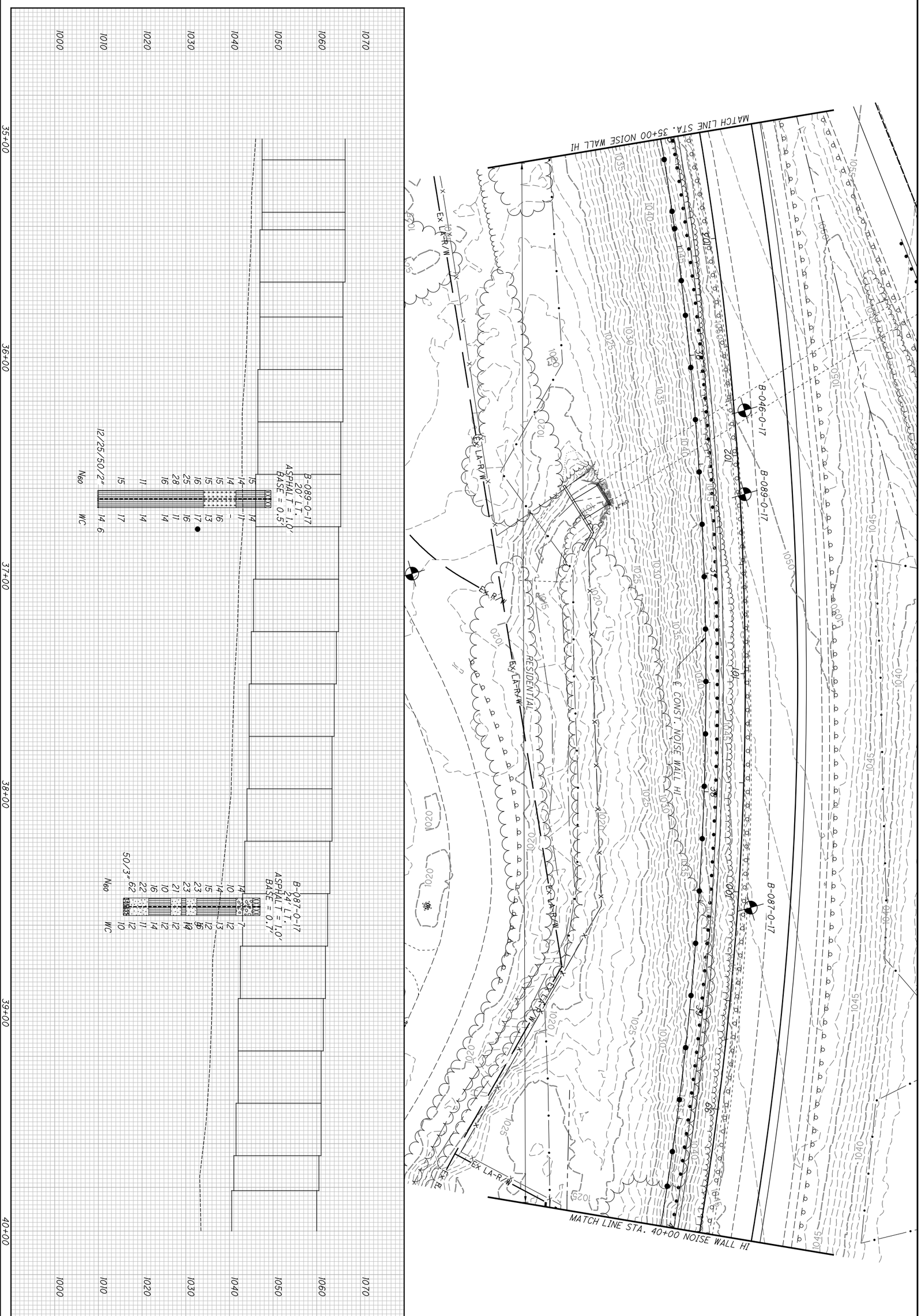
94/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION NOISE WALL HI STA. 25+00 TO STA. 30+00	DRAWN KCA CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET	N

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZP405.dgn Sheet 1/8/2021 12:19:13 AM karens



	95/209	**SUM-77/277/224** **VARIOUS**	**STRUCTURE FOUNDATION EXPLORATION** **NOISE WALL HI STA. 30+00 TO STA. 35+00**	DRAWN KCA CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZP406.dgn Sheet 1/8/2021 12:21:18 AM karens



	96/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION NOISE WALL HI STA. 35+00 TO STA. 40+00	DRAWN KCA CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET

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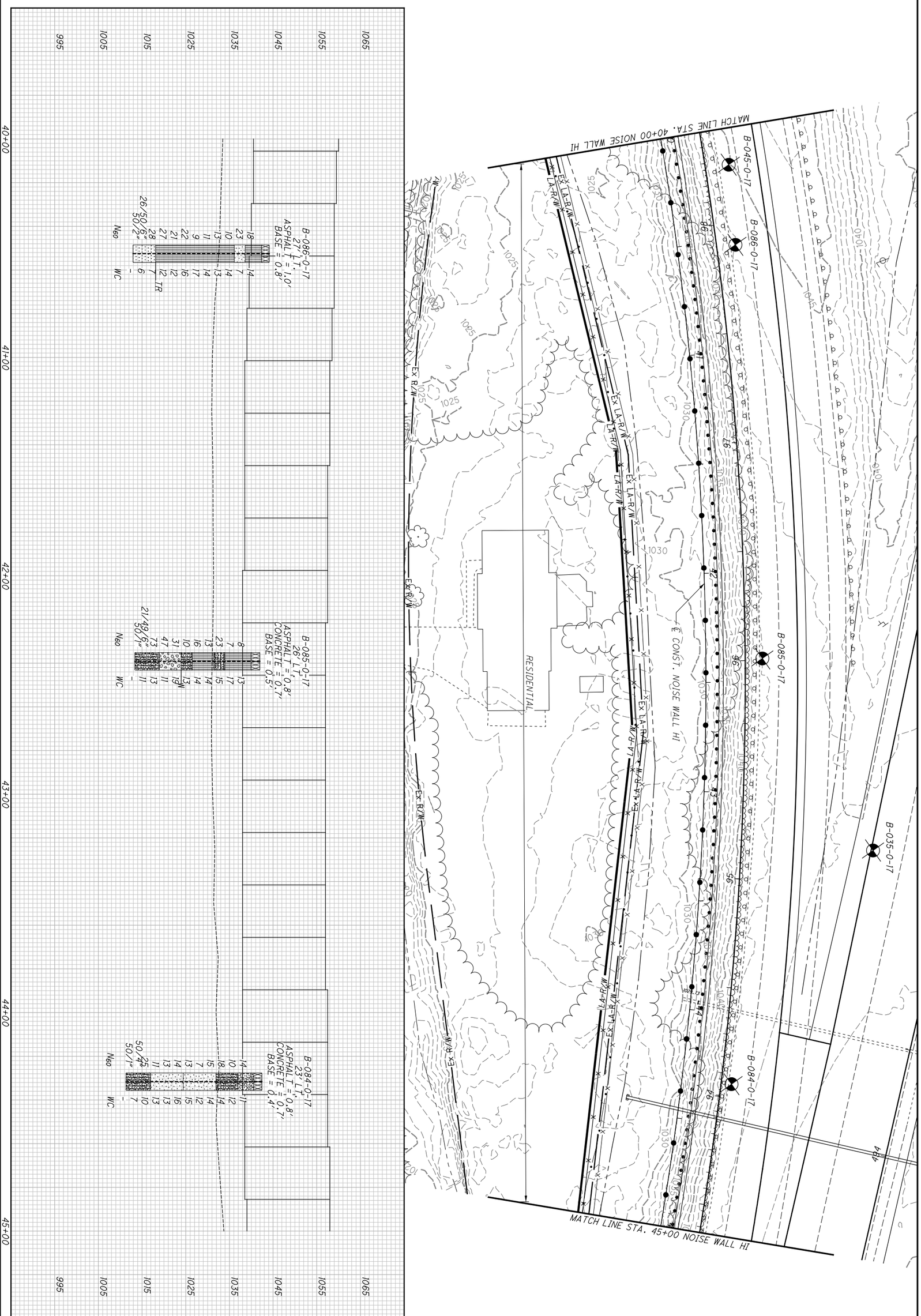

	97/209	**SUM-77/277/224** **VARIOUS**	**STRUCTURE FOUNDATION EXPLORATION** **NOISE WALL HI STA. 40+00 TO STA. 45+00**	DRAWN KCA CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET

HORIZONTAL SCALE IN FEET
0 10 20 40

DRAWN KCA
CHECKED BPA

STRUCTURE FOUNDATION EXPLORATION
NOISE WALL HI STA. 45+00 TO STA. 50+00

SUM-77/277/224
VARIOUS

98/209

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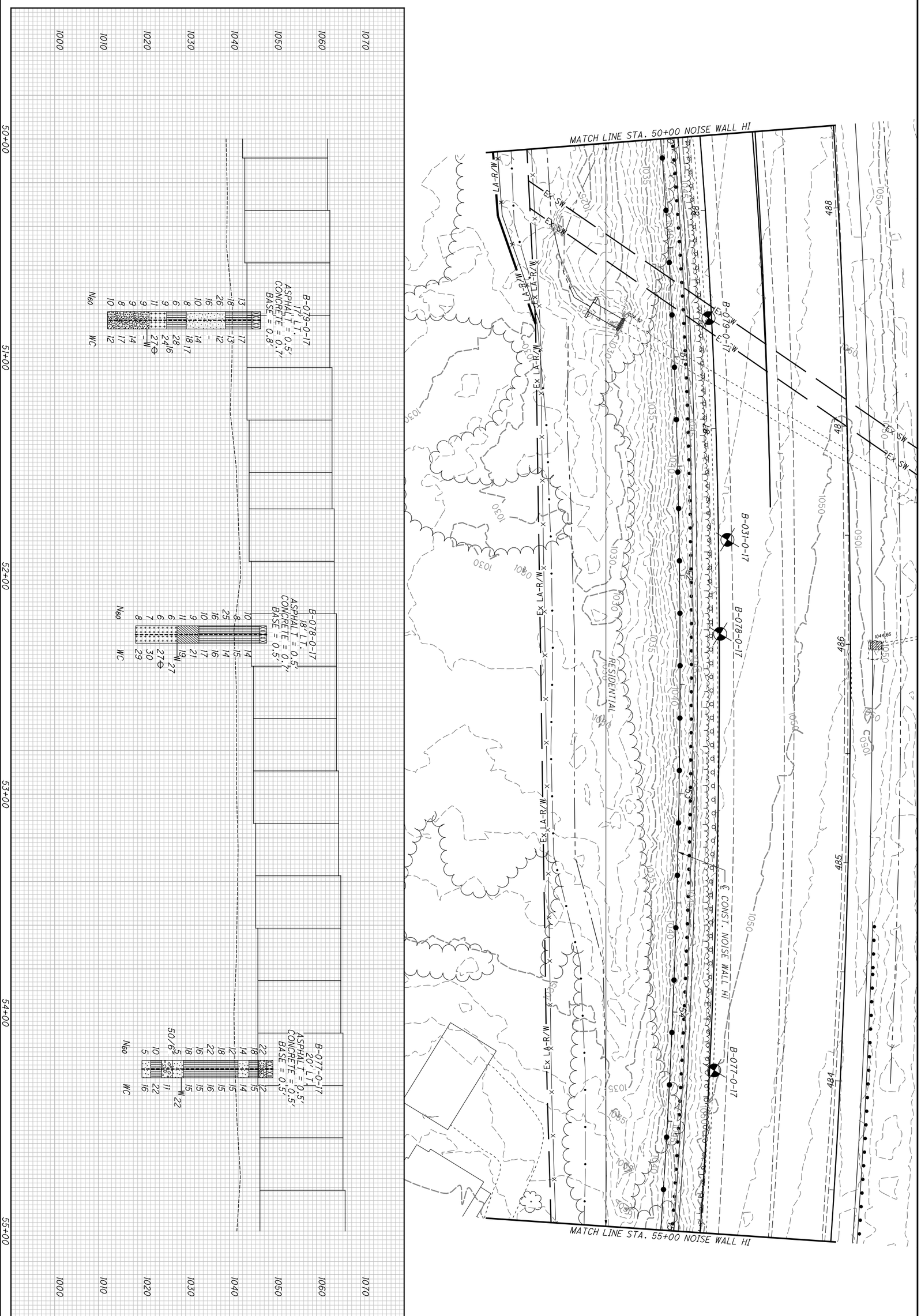
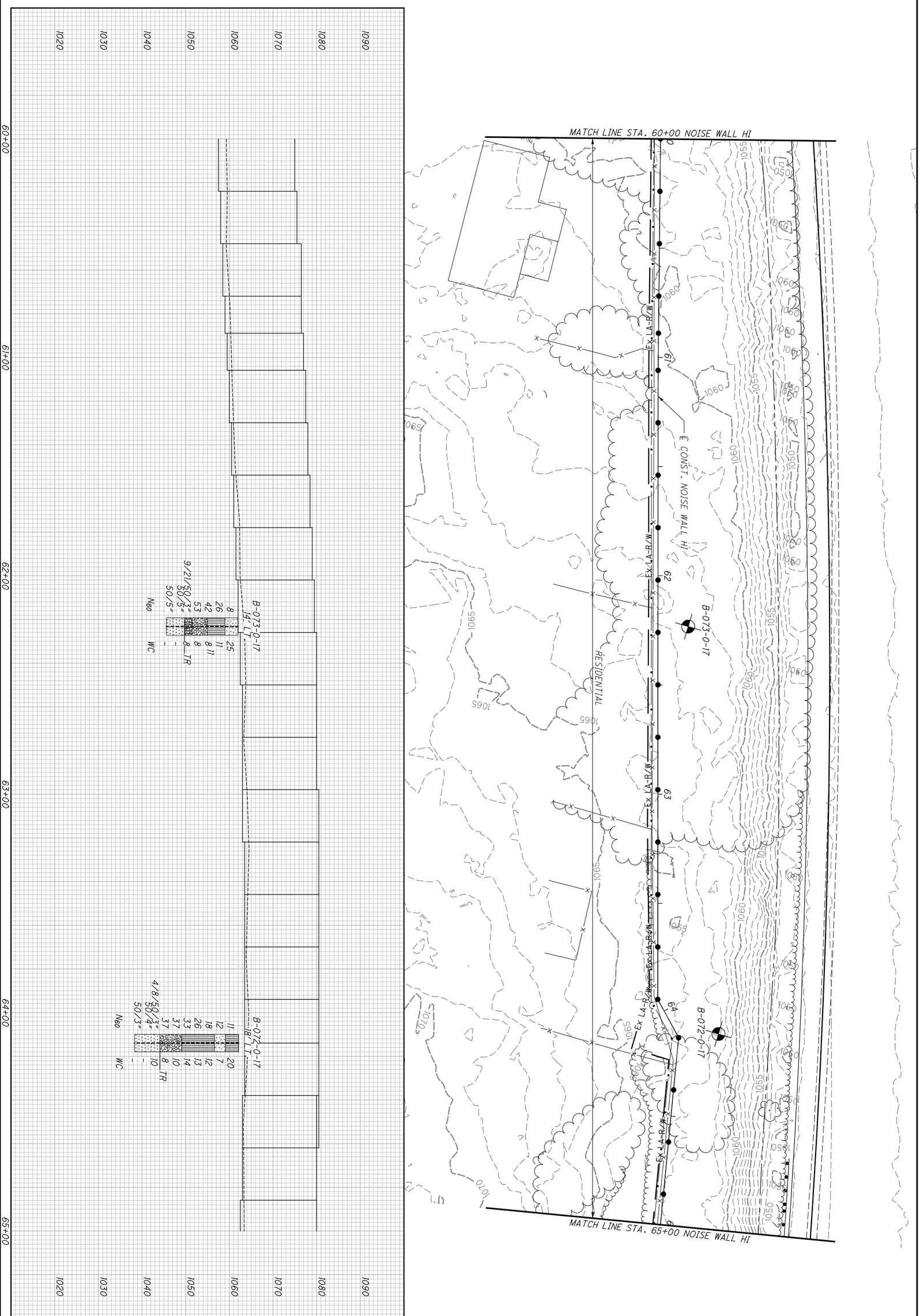


	99/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION NOISE WALL HI STA. 50+00 TO STA. 55+00	DRAWN KCA CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET	N

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZP410.dgn Sheet 1/8/2021 12:29:48 AM karens

	100/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION NOISE WALL HI STA. 55+00 TO STA. 60+00	DRAWN KCA CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET



101/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION NOISE WALL HI STA. 60+00 TO STA. 65+00	DRAWN KCA CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET	N

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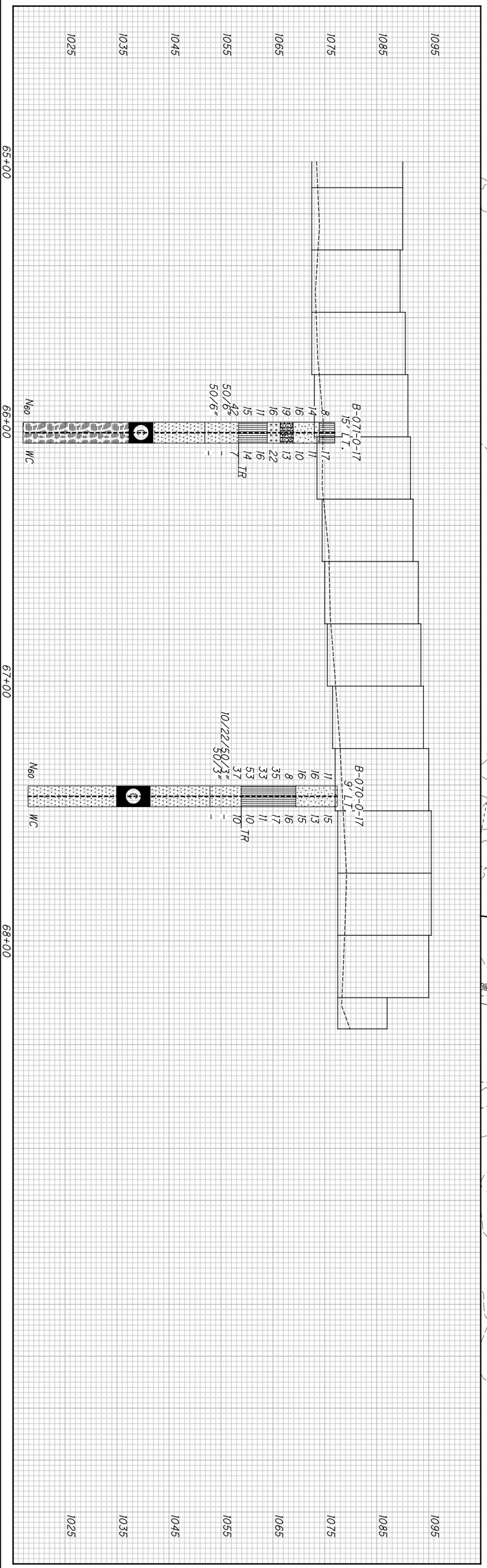

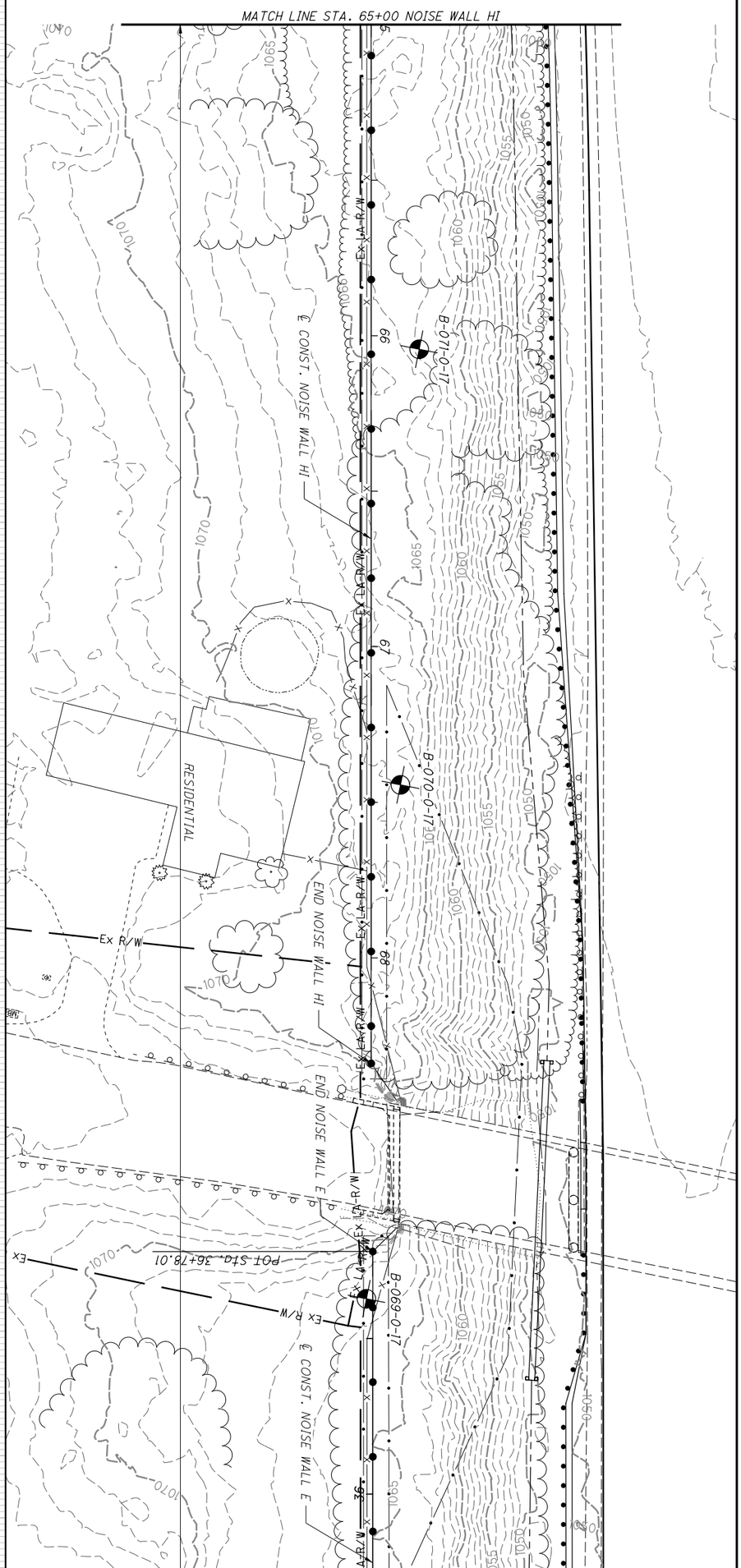

102/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION NOISE WALL HI STA. 65+00 TO END	DRAWN KCA CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET	N

STRUCTURE FOUNDATION EXPLORATION
NOISE WALL K BEGIN TO STA. 15+00

SUM-77/277/224
VARIOUS

DRAWN KCA
CHECKED BPA

HORIZONTAL SCALE IN FEET
0 10 20 40

103/209

BEGIN NOISE WALL K

MATCH LINE STA. 15+00 NOISE WALL K

℄ CONST. NOISE WALL K

RESIDENTIAL

Ex LA R/W

B-052-0-17
B-118-0-17
B-119-0-17
B-120-0-17
B-119-1-17
B-053-0-17

B-118-0-17
8' RT.
ASPHALT = 0.5'
BASE = 0.5'

N_{60}	WC
12	7
23	15
26	12
23	15
26	13
23	17
11	20
8	18
10	21
20	23

B-119-0-17
6' RT.
ASPHALT = 0.5'
BASE = 0.5'

N_{60}	WC
12	6
27	11
25	14
27	13
25	14
23	16
15	13
18	21
10	17
10	15
14	16
29	15

30

B-119-1-17
38' RT.

N60	WC
27	15
22	16
25	15
16	13
33	15
18	14
8	15
14	14
10/50/6"	13
25	12
50/6"	4
63	10

TR

B-120-0-17
4' RT.
ASPHALT = 0.8'
BASE = 0.3'

N_{60}	WC
10	15
9	15
10	13
10	14
15	13
15	13
11	14
11	17
11	13
33	8

1085 1075 1065 1055 1045 1035 1025 1015

10+00 11+00 12+00 13+00 14+00 15+00

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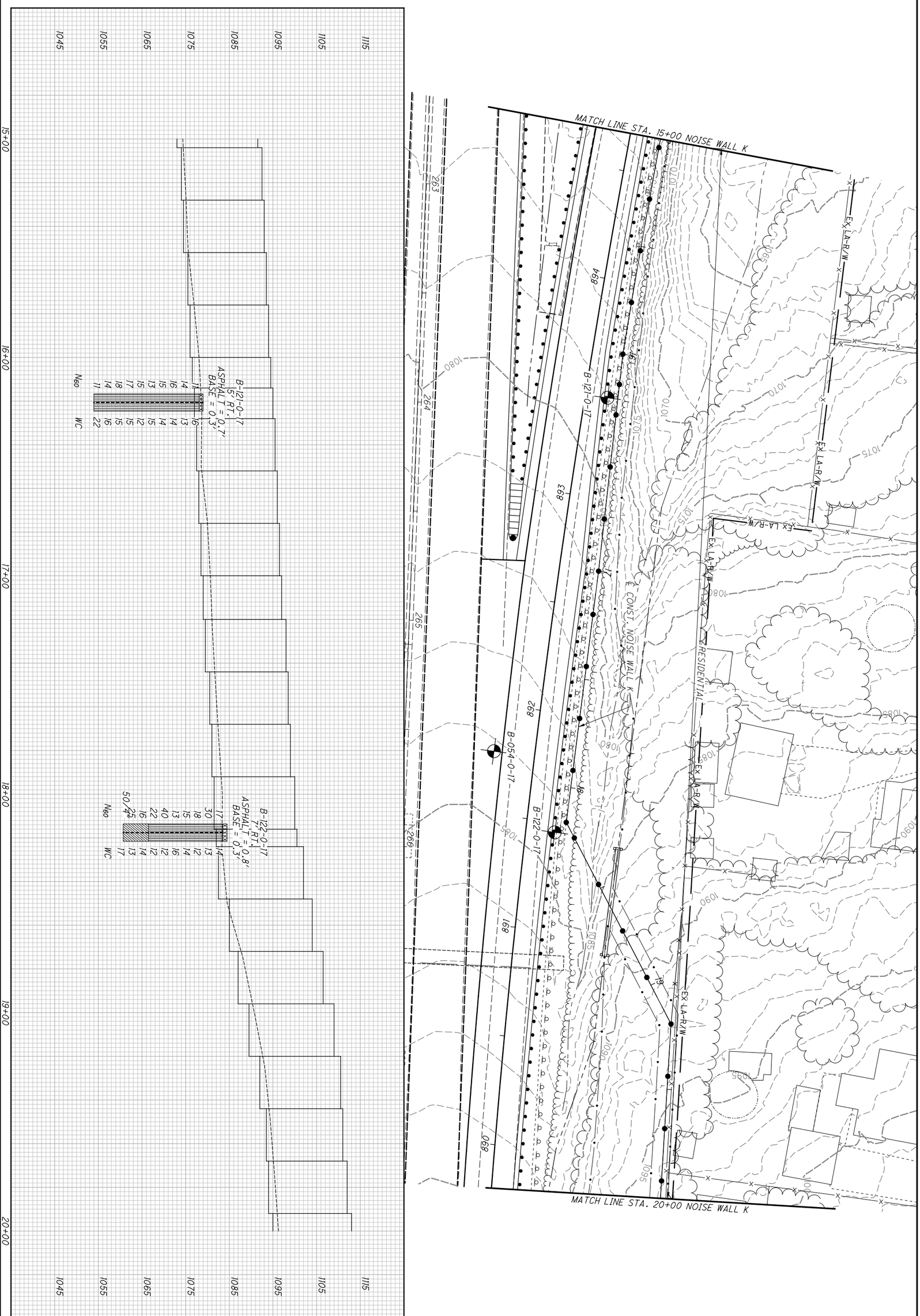
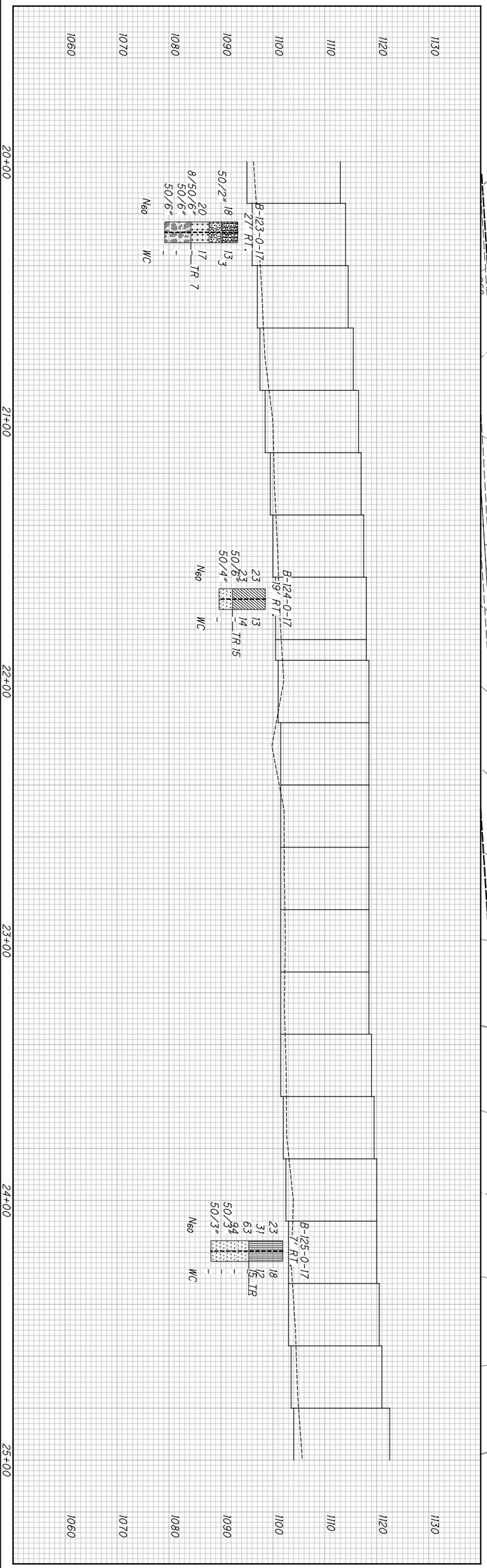
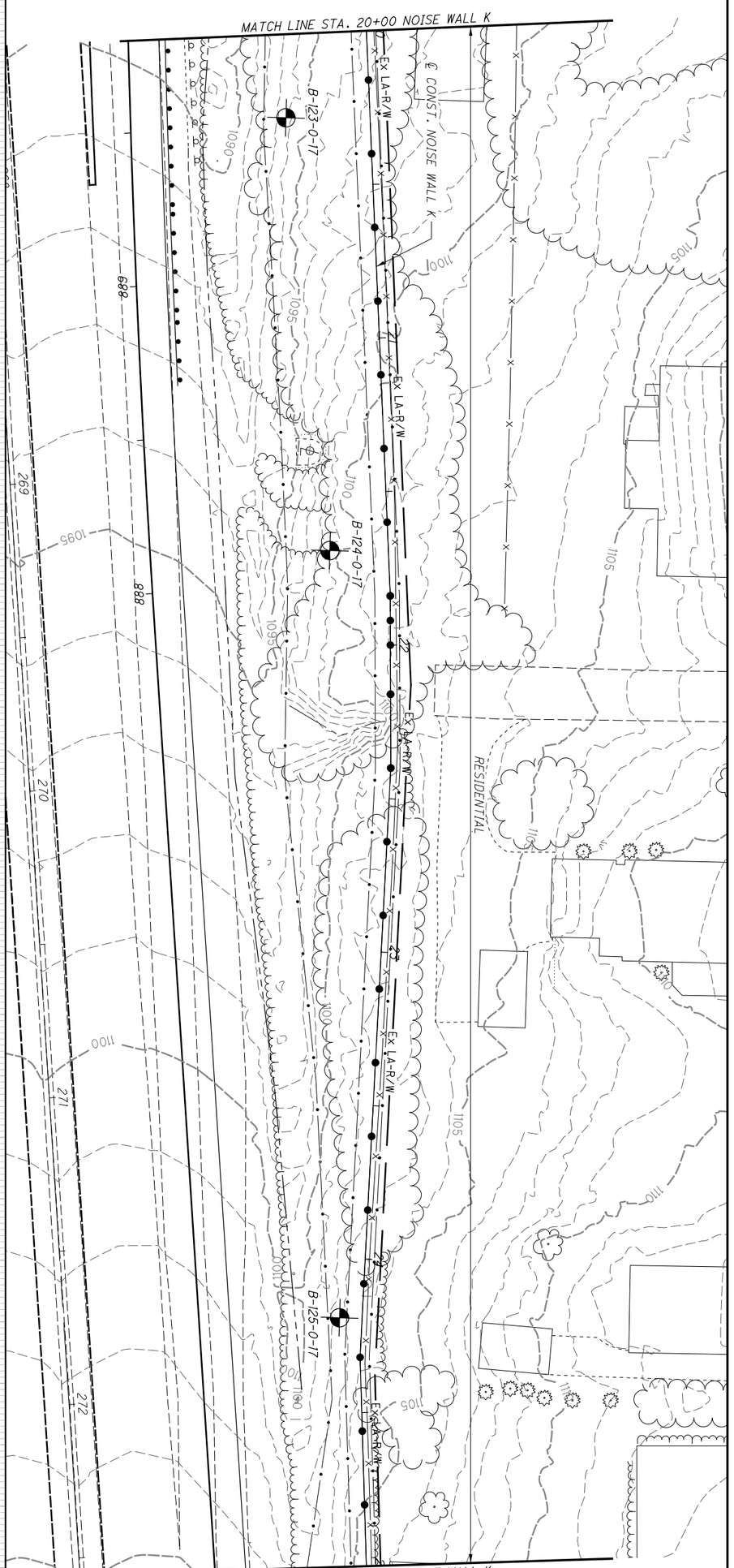


104/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION NOISE WALL K STA. 15+00 TO STA. 20+00	DRAWN KCA CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET	N

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZP503.dgn Sheet 1/8/2021 12:40:10 AM karens





105/209

SUM-77/277/224
VARIOUS

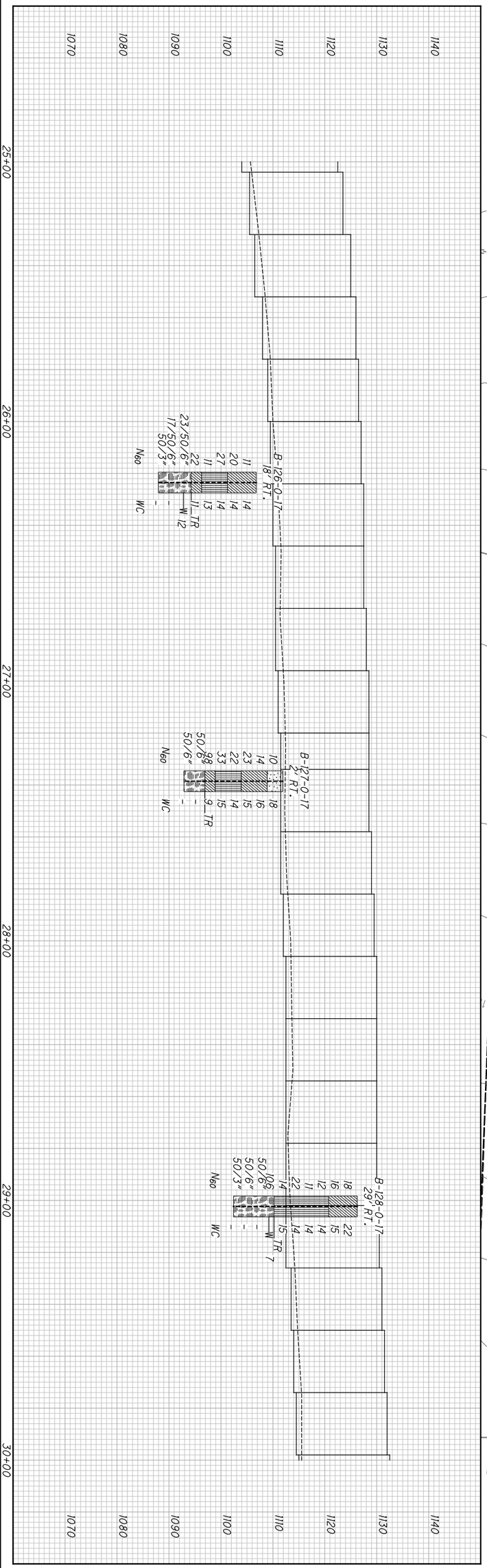
STRUCTURE FOUNDATION EXPLORATION
NOISE WALL K STA. 20+00 TO STA. 25+00

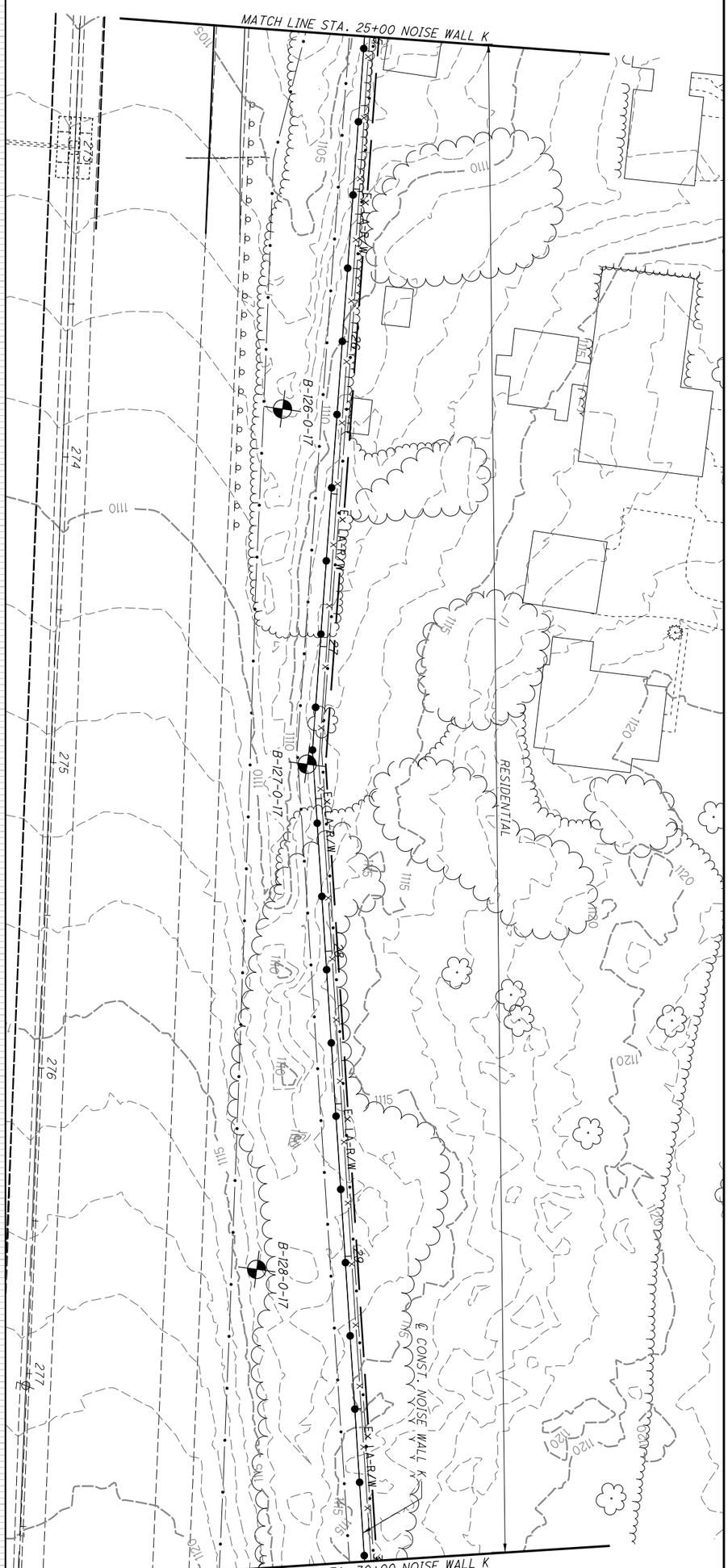
DRAWN KCA
CHECKED BPA

0 10 20 40
HORIZONTAL SCALE IN FEET

N

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZP504.dgn Sheet 1/8/2021 12:42:15 AM karens





106/209

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
NOISE WALL K STA. 25+00 TO STA. 30+00

DRAWN KCA
CHECKED BPA

0 10 20 40
HORIZONTAL SCALE IN FEET

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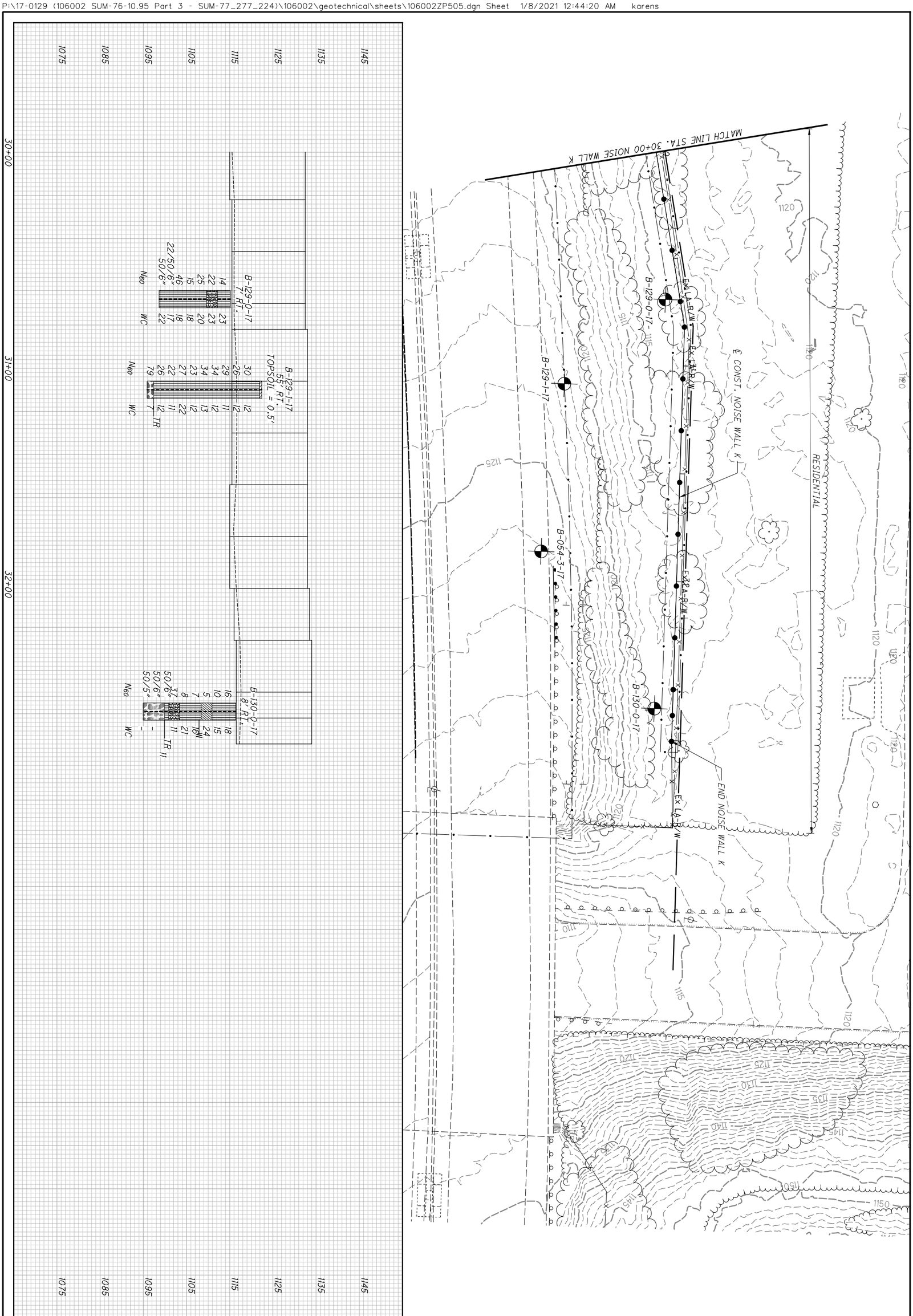

107/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION NOISE WALL K STA. 30+00 TO END	DRAWN KCA CHECKED BPA	0 20 10 40 HORIZONTAL SCALE IN FEET	N

HORIZONTAL SCALE IN FEET
0 10 20 40

DRAWN KCA
CHECKED BPA

STRUCTURE FOUNDATION EXPLORATION
CCTV POLE CROSS SECTION AT I-77 STA. 422+00

SUM-77/277/224
VARIOUS

108/209

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PROJECT: SUM-77-277/224	DRILLING FIRM / OPERATOR: NEAS / J. HODGES	DRILL RIG: CME 55X	STATION / OFFSET: 425+50, 14' LT.	EXPLORATION ID B-013-1-17
TYPE: BRIDGE	SAMPLING FIRM / LOGGER: NEAS / J.HODGES	HAMMER: CME AUTOMATIC	ALIGNMENT: IR-77	
PID: 106002 SFN: 7702493	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 11/21/17	ELEVATION: 1023.6 (MSL) EOB: 100.0 ft.	PAGE 1 OF 2
START: 7/24/19 END: 7/25/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85.4	LAT / LONG: 41.006033, -81.494250	

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
6.0" TOPSOIL (DRILLERS DESCRIPTION)	1023.6																	
STIFF TO HARD, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE TO LITTLE GRAVEL, SS-1 CONTAINS ROOTS, DAMP	1023.1		1 2 4	9	100	SS-1	4.25	-	-	-	-	-	-	-	-	12	A-4a (V)	
			3 5 6	16	100	SS-2	3.25	-	-	-	-	-	-	-	-	11	A-4a (V)	
			2 2 2	6	100	SS-3	1.75	10	12	36	28	14	24	18	6	16	A-4a (1)	
			2 3 4	10	100	SS-4	4.5+	-	-	-	-	-	-	-	-	13	A-4a (V)	
@6.0' TO 7.5'; SS-5 NO INTACT SOIL FOR HP READINGS, CONTAINS IRON STAINING			2 5 7	17	17	SS-5	-	-	-	-	-	-	-	-	-	13	A-4a (V)	
			3 4 6	14	100	SS-6	4.5+	-	-	-	-	-	-	-	-	12	A-4a (V)	
			2 4 7	16	100	SS-7	4.5+	-	-	-	-	-	-	-	-	12	A-4a (V)	
			2 4 9	19	100	SS-8	4.50	10	9	29	35	17	22	16	6	11	A-4a (3)	
			4 7 7	20	100	SS-9	4.25	-	-	-	-	-	-	-	-	13	A-4a (V)	
			4 11 13	34	100	SS-10	4.5+	-	-	-	-	-	-	-	-	9	A-4a (V)	
	1001.6																	
MEDIUM DENSE TO DENSE, DARK BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, LITTLE TO SOME CLAY, CONTAINS TRACE IRON STAINING, DAMP TO MOIST			7 10 16	37	100	SS-11	-	-	-	-	-	-	-	-	-	11	A-2-4 (V)	
		W 997.6	4 9 10	27	44	SS-12	-	-	-	-	-	-	-	-	-	16	A-2-4 (V)	
	996.6																	
MEDIUM DENSE, BROWN, **STONE FRAGMENTS**, LITTLE SAND, TRACE SILT, TRACE CLAY, WET @27.5' TO 100.0'; ADDED WATER AS CUTTINGS CIRCULATION FLUID			4 4 4	11	44	SS-13	-	-	-	-	-	-	-	-	-	22	A-1-a (V)	
	994.1																	
VERY STIFF, GRAY, **SANDY SILT**, SOME CLAY, TRACE GRAVEL, MOIST			3 4 5	13	50	SS-14	3.00	5	5	16	49	25	21	15	6	16	A-4a (8)	
	990.3																	
MEDIUM DENSE, GRAY, **COARSE AND FINE SAND**, SOME SILT, LITTLE CLAY, LITTLE GRAVEL, MOIST			4 5 5	14	100	SS-15	-	-	-	-	-	-	-	-	-	15	A-3a (V)	
			3 6 3	13	100	SS-16	-	-	-	-	-	-	-	-	-	16	A-3a (V)	
	980.3																	
VERY STIFF, GRAY, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, MOIST			2 3 3	9	100	SS-17	3.00	5	6	32	39	18	17	12	5	14	A-4a (4)	
			2 5 5	14	44	SS-18	3.00	-	-	-	-	-	-	-	-	13	A-4a (V)	
	970.3																	
MEDIUM DENSE TO DENSE, GRAY, **GRAVEL**, SOME TO "AND" SAND, TRACE SILT, TRACE CLAY, GRAVEL IS ROUNDED TO SUBROUNDED, MOIST TO WET			5 6 6	17	44	SS-19	-	-	-	-	-	-	-	-	-	14	A-1-a (V)	

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 11/19/20 18:32 - C:\USERS\KARENS\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

PID: 106002	SFN:	PROJECT: SUM-77-277/224	STATION / OFFSET: 425+50, 14' LT.	START: 7/24/19	END: 7/25/19	PG 2 OF 2	B-013-1-17

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
MEDIUM DENSE TO DENSE, GRAY, **GRAVEL**, SOME TO "AND" SAND, TRACE SILT, TRACE CLAY, GRAVEL IS ROUNDED TO SUBROUNDED, MOIST TO WET *(continued)*	963.6	61	7 7 7	20	100	SS-20	-	-	-	-	-	-	-	-	-	13	A-1-a (V)	
		62																
		63																
		64																
		65																
		66	5 6 6	17	100	SS-21	-	-	-	-	-	-	-	-	-	12	A-1-a (V)	
		67																
		68																
		69																
		70																
		71	7 9 7	23	100	SS-22	-	-	-	-	-	-	-	-	-	12	A-1-a (V)	
		72																
		73																
		74																
		75																
		76	7 9 10	27	100	SS-23	-	-	-	-	-	-	-	-	-	12	A-1-a (V)	
		77																
		78																
		79																
		80																
		81	7 7 8	21	100	SS-24	-	59	24	13	2	2	NP	NP	NP	11	A-1-a (0)	
		82																
		83																
		84																
		85																
		86	6 6 8	20	100	SS-25	-	-	-	-	-	-	-	-	-	13	A-1-a (V)	
		87																
		88																
		89																
		90																
		91	11 12 20	46	100	SS-26	-	-	-	-	-	-	-	-	-	15	A-1-a (V)	
		92																
		93																
		94																
		95																
		96	11 13 19	46	100	SS-27	-	-	-	-	-	-	-	-	-	15	A-1-a (V)	
		97																
		98																
	923.6	99 EOB 100	11 11 14	36	100	SS-28	-	-	-	-	-	-	-	-	-	10	A-1-a (V)	

NOTES: GROUNDWATER ENCOUNTERED AT 26.0' DURING DRILLING. HOLE DID NOT CAVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 150 GAL. BENTONITE GROUT

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 11/19/20 18:32 - C:\USERS\KARENS\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

10/2009	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION BRIDGE SUM-77-08.02 BORING LOG B-013-1-17	DRAWN EB / CHECKED BPA

PROJECT: SUM-77-277/224
TYPE: BRIDGE
PID: 106002 SFN: 7702523
START: 10/9/19 END: 10/9/19

DRILLING FIRM / OPERATOR: NEAS / ASHBAUGH
SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH
DRILLING METHOD: 3.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: CME 55T
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 11/21/17
ENERGY RATIO (%): 78.2

STATION / OFFSET: 425+87, 12' RT.
ALIGNMENT: IR-77
ELEVATION: 1005.9 (MSL) EOB: 91.5 ft.
LAT / LONG: 41.006136, -81.494159

EXPLORATION ID B-013-2-17
PAGE 1 OF 2

MATERIAL DESCRIPTION AND NOTES	ELEV. 1005.9	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
10.0" ASPHALT AND 6.0" BASE (DRILLERS DESCRIPTION)	1004.6																	
LOOSE, BLACK AND BROWN, **GRAVEL WITH SAND**, LITTLE SILT, TRACE CLAY, DRY TO DAMP			8 4 4	10	11	SS-1	-	-	-	-	-	-	-	-	-	2	A-1-b (V)	
@5.0' TO 6.5'; BECOMES VERY DENSE	998.9		18 21 32	69	78	SS-2	-	26	24	27	16	7	NP	NP	NP	7	A-1-b (0)	
STIFF, DARK BROWN AND BLACK, **SANDY SILT**, SOME CLAY, SOME GRAVEL, CONTAINS A STRONG PETROLIFEROUS ODOR, WET	996.4		10 3 3	8	56	SS-3	1.50	-	-	-	-	-	-	-	-	19	A-4a (V)	
LOOSE, GRAY, **GRAVEL WITH SAND AND SILT**, TRACE CLAY, CONTAINS A STRONG PETROLIFEROUS ODOR, DAMP	993.9	W 993.9	3 5 3	10	50	SS-4	-	24	22	25	21	8	21	19	2	12	A-2-4 (0)	
MEDIUM DENSE, GRAY, **COARSE AND FINE SAND**, SOME GRAVEL, LITTLE SILT, LITTLE CLAY, CONTAINS A STRONG PETROLIFEROUS ODOR, MOIST	991.4		3 5 7	16	56	SS-5	-	-	-	-	-	-	-	-	-	13	A-3a (V)	
LOOSE, GRAY, **GRAVEL WITH SAND**, LITTLE SILT, TRACE CLAY, CONTAINS A STRONG PETROLIFEROUS ODOR, WET @15.0'; HOLE BEGAN TO HEAVE	988.9		3 2 3	7	67	SS-6	-	-	-	-	-	-	-	-	-	15	A-1-b (V)	
LOOSE TO DENSE, BROWN, **COARSE AND FINE SAND**, LITTLE GRAVEL, TRACE SILT, TRACE CLAY, CONTAINS A STRONG PETROLIFEROUS ODOR, WET TO MOIST			5 6 6	16	56	SS-7	-	-	-	-	-	-	-	-	-	19	A-3a (V)	
			6 3 5	10	100	SS-8	-	-	-	-	-	-	-	-	-	12	A-3a (V)	
			10 12 16	36	28	SS-9	-	-	-	-	-	-	-	-	-	21	A-3a (V)	
			1 3 4	9	78	SS-10	-	-	-	-	-	-	-	-	-	19	A-3a (V)	
MEDIUM DENSE TO DENSE, GRAY, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, CONTAINS A STRONG PETROLIFEROUS ODOR, DAMP TO MOIST	978.9		9 12 12	31	50	SS-11	-	-	-	-	-	-	-	-	-	13	A-4a (V)	
			10 7 9	21	100	SS-12	-	0	4	31	48	17	NP	NP	NP	15	A-4a (6)	
SOFT TO VERY STIFF, GRAY, **SILT**, SOME SAND, SOME CLAY, TRACE GRAVEL, CONTAINS A STRONG PETROLIFEROUS ODOR, DAMP TO MOIST	972.6		7 10 8	23	89	SS-13	2.50	-	-	-	-	-	-	-	-	14	A-4b (V)	
			4 6 7	17	100	SS-14	0.30	0	2	24	53	21	19	15	4	16	A-4b (8)	
@45.0' TO 51.5'; BECOMES MEDIUM DENSE, LITTLE CLAY			5 6 7	17	100	SS-15	-	-	-	-	-	-	-	-	-	14	A-4b (V)	
			3 4 7	14	100	SS-16	-	2	3	27	52	16	NP	NP	NP	15	A-4b (7)	
MEDIUM DENSE, GRAY, **SANDY SILT**, LITTLE GRAVEL, TRACE TO LITTLE CLAY, CONTAINS A STRONG PETROLIFEROUS ODOR, DAMP	952.6		3 5 6	14	100	SS-17	-	20	26	18	27	9	NP	NP	NP	13	A-4a (0)	

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 11/19/20 18:32 - C:\USERS\KARENS\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

11/209	**SUM-77/277/224 VARIOUS**	**STRUCTURE FOUNDATION EXPLORATION BRIDGE SUM-77-08.02 BORING LOG B-013-2-17**	DRAWN EB CHECKED BPA

PID: 106002 | SFN: | PROJECT: SUM-77-277/224 | STATION / OFFSET: 425+87, 12' RT. | START: 10/9/19 | END: 10/9/19 | PG 2 OF 2 | B-013-2-17

MATERIAL DESCRIPTION AND NOTES	ELEV. 945.9	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
MEDIUM DENSE, GRAY, **SANDY SILT**, LITTLE GRAVEL, TRACE TO LITTLE CLAY, CONTAINS A STRONG PETROLIFEROUS ODOR, DAMP *(continued)*		61	5 7 8	20	100	SS-18	-	-	-	-	-	-	-	-	-	13	A-4a (V)	
		62																
		63																
		64																
@65.0' TO 71.5'; BECOMES STIFF TO VERY STIFF		65																
		66	5 7 10	22	100	SS-19	2.75	-	-	-	-	-	-	-	-	12	A-4a (V)	
		67																
		68																
		69																
		70																
		71	4 6 7	17	100	SS-20	2.00	19	14	26	28	13	16	14	2	9	A-4a (1)	
	932.6	72																
MEDIUM DENSE, GRAY AND BROWN, **COARSE AND FINE SAND**, LITTLE SILT, LITTLE GRAVEL, TRACE CLAY, CONTAINS A STRONG PETROLIFEROUS ODOR, MOIST		73																
		74																
		75																
		76	7 5 6	14	100	SS-21	-	-	-	-	-	-	-	-	-	13	A-3a (V)	
		77																
		78																
		79																
		80																
		81	6 6 7	17	100	SS-22	-	-	-	-	-	-	-	-	-	12	A-3a (V)	
	922.6	82																
DENSE, GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, LITTLE CLAY, CONTAINS A STRONG PETROLIFEROUS ODOR, MOIST		83																
		84																
		85																
		86	10 13 11	31	100	SS-23	-	-	-	-	-	-	-	-	-	10	A-2-4 (V)	
	917.6	87																
DENSE, GRAY, **SANDY SILT**, SOME CLAY, TRACE GRAVEL, CONTAINS A STRONG PETROLIFEROUS ODOR, WET		88																
		89																
		90																
		91	12 10 16	34	100	SS-24	-	-	-	-	-	-	-	-	-	16	A-4a (V)	
	914.4	EOB																

NOTES: GROUNDWATER ENCOUNTERED AT 12.0' DURING DRILLING, 22.0' AFTER DRILLING. HOLE DID NOT CAVE. HEAVE FROM 15.0' TO TD.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; PUMPED 135 GAL. BENTONITE GROUT

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 11/19/20 18:32 - C:\USERS\KARENS\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

PROJECT: SUM-77-277/224
TYPE: BRIDGE
PID: 106002 SFN: 7702493
START: 10/10/19 END: 10/10/19

DRILLING FIRM / OPERATOR: NEAS / ASHBAUGH
SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH
DRILLING METHOD: 3.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: CME 55T
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 11/21/17
ENERGY RATIO (%): 78.2

STATION / OFFSET: 426+33, 12' LT.
ALIGNMENT: IR-77
ELEVATION: 1005.9 (MSL) EOB: 91.5 ft.
LAT / LONG: 41.006261, -81.494256

EXPLORATION ID B-013-3-17
PAGE 1 OF 2

MATERIAL DESCRIPTION AND NOTES	ELEV. 1005.9	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
7.0" TOPSOIL (DRILLERS DESCRIPTION)	1005.3																	
STIFF, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, MOIST	1001.4		4 3 2	7	100	SS-1	1.50	-	-	-	-	-	-	-	-	15	A-4a (V)	
MEDIUM DENSE, BROWN AND GRAY, **GRAVEL WITH SAND**, LITTLE SILT, TRACE CLAY, CONTAINS A STRONG PETROLIFEROUS ODOR, DAMP	998.9		12 12 10	29	89	SS-2	-	32	21	24	16	7	NP	NP	NP	9	A-1-b (0)	
VERY STIFF, BLACK AND GRAY, **SILTY CLAY**, SOME SAND, TRACE GRAVEL, SLIGHTLY ORGANIC, CONTAINS TRACE IRON STAINING AND A STRONG PETROLIFEROUS ODOR, MOIST	996.4		3 3 3	8	100	SS-3	2.25	-	-	-	-	-	-	-	-	26	A-6b (V)	
LOOSE, GRAY, **GRAVEL WITH SAND AND SILT**, TRACE TO LITTLE CLAY, CONTAINS A STRONG PETROLIFEROUS ODOR, WET	991.4	W 993.4	2 3 5	10	67	SS-4	-	-	-	-	-	-	-	-	-	18	A-2-4 (V)	
			7 5 2	9	67	SS-5	-	-	-	-	-	-	-	-	-	18	A-2-4 (V)	
LOOSE TO MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, SOME GRAVEL, TRACE SILT, TRACE CLAY, CONTAINS A STRONG PETROLIFEROUS ODOR, SS-8 BECOMES TRACE GRAVEL, MOIST TO WET @15.0'; ADDED MUD TO ASSIST WITH CIRCULATION	983.9		2 3 6	12	56	SS-6	-	-	-	-	-	-	-	-	-	15	A-3a (V)	
			8 6 5	14	56	SS-7	-	-	-	-	-	-	-	-	-	16	A-3a (V)	
			3 4 4	10	50	SS-8	-	-	-	-	-	-	-	-	-	20	A-3a (V)	
STIFF TO HARD, GRAY, **SANDY SILT**, LITTLE TO SOME CLAY, TRACE GRAVEL, CONTAINS A STRONG PETROLIFEROUS ODOR, DAMP TO MOIST		▼	4 6 7	17	78	SS-9	4.5+	-	-	-	-	-	-	-	-	14	A-4a (V)	
			5 5 8	17	89	SS-10	4.5+	3	8	23	45	21	19	14	5	13	A-4a (6)	
			5 4 5	12	100	SS-11	2.75	5	9	22	46	18	19	15	4	14	A-4a (6)	
@30.0'; HOLE BEGAN TO HEAVE	975.4		3 3 5	10	100	SS-12A	1.50	-	-	-	-	-	-	-	-	15	A-4a (V)	
LOOSE TO MEDIUM DENSE, BROWN AND GRAY BECOMING GRAY, **COARSE AND FINE SAND**, LITTLE TO SOME GRAVEL, LITTLE SILT, TRACE CLAY, CONTAINS A STRONG PETROLIFEROUS ODOR, WET						SS-12B	-	-	-	-	-	-	-	-	-	21	A-3a (V)	
			8 11 10	27	100	SS-13	-	-	-	-	-	-	-	-	-	18	A-3a (V)	
			5 6 8	18	100	SS-14	-	-	-	-	-	-	-	-	-	17	A-3a (V)	
			6 7 7	18	100	SS-15	-	23	30	21	18	8	20	16	4	16	A-3a (0)	
			4 5 8	17	100	SS-16	-	-	-	-	-	-	-	-	-	18	A-3a (V)	
			4 5 9	18	100	SS-17	-	-	-	-	-	-	-	-	-	21	A-3a (V)	
	947.6																	
MEDIUM DENSE, GRAY, **GRAVEL WITH SAND AND SILT**, TRACE TO LITTLE CLAY, CONTAINS A STRONG PETROLIFEROUS ODOR, WET TO MOIST																		

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 11/19/20 18:32 - C:\USERS\KARENS\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

PID: 106002 | SFN: | PROJECT: SUM-77-277/224 | STATION / OFFSET: 426+33, 12' LT. | START: 10/10/19 | END: 10/10/19 | PG 2 OF 2 | B-013-3-17

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
MEDIUM DENSE, GRAY, **GRAVEL WITH SAND AND SILT**, TRACE TO LITTLE CLAY, CONTAINS A STRONG PETROLIFEROUS ODOR, WET TO MOIST *(continued)*	945.9	61	6 8 8	21	100	SS-18	-	19	26	23	22	10	20	15	5	17	A-2-4 (0)	
		65	7 7 11	23	100	SS-19	-	-	-	-	-	-	-	-	-	22	A-2-4 (V)	
		70	5 7 9	21	100	SS-20	-	26	18	24	20	12	24	16	8	20	A-2-4 (0)	
		75	7 7 6	17	100	SS-21	-	-	-	-	-	-	-	-	-	21	A-2-4 (V)	
		80	7 8 8	21	100	SS-22	-	27	21	22	19	11	23	16	7	16	A-2-4 (0)	
DENSE, BROWN, **GRAVEL WITH SAND**, LITTLE SILT, TRACE CLAY, CONTAINS A STRONG PETROLIFEROUS ODOR, MOIST	922.6	85	10 14 13	35	100	SS-23	-	-	-	-	-	-	-	-	-	12	A-1-b (V)	
	914.4	90	12 12 18	39	100	SS-24	-	-	-	-	-	-	-	-	-	11	A-1-b (V)	
		EOB																

NOTES: GROUNDWATER ENCOUNTERED AT 12.5' DURING DRILLING, 24.0' AFTER DRILLING. HOLE DID NOT CAVE. HEAVE FROM 30.0' TO TD.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 135 GAL. BENTONITE GROUT

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 11/19/20 18:32 - C:\USERS\KARENS\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

PROJECT: SUM-77-277/224
TYPE: BRIDGE
PID: 106002 SFN: 7702523
START: 10/16/19 END: 10/17/19

DRILLING FIRM / OPERATOR: NEAS / J. HODGES
SAMPLING FIRM / LOGGER: NEAS / J.HODGES
DRILLING METHOD: 3.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: CME 55X
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 11/21/17
ENERGY RATIO (%): 85.4

STATION / OFFSET: 426+66, 11' RT.
ALIGNMENT: IR-77
ELEVATION: 1020.5 (MSL) EOB: 66.5 ft.
LAT / LONG: 41.006352, -81.494175

EXPLORATION ID B-013-4-17
PAGE 1 OF 2

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
MEDIUM DENSE TO DENSE, BROWN, **COARSE AND FINE SAND**, LITTLE TO SOME SILT, LITTLE GRAVEL, TRACE TO LITTLE CLAY, SS-1 AND SS-2 CONTAIN TRACE ROOT HAIRS, DAMP	1020.5		2 9 15	34	67	SS-1	-	-	-	-	-	-	-	-	-	7	A-3a (V)	
			10 10 11	30	67	SS-2	-	-	-	-	-	-	-	-	-	5	A-3a (V)	
			9 10 10	28	100	SS-3	-	14	26	34	16	10	NP	NP	NP	6	A-3a (0)	
			2 4 6	14	67	SS-4	-	-	-	-	-	-	-	-	-	8	A-3a (V)	
	1014.0					SS-5A	-	-	-	-	-	-	-	-	-	9	A-3a (V)	
VERY STIFF, BROWN, **SANDY SILT**, SOME CLAY, LITTLE GRAVEL, DAMP	1013.0		5 9 12	30	100	SS-5B	3.25	-	-	-	-	-	-	-	-	14	A-4a (V)	
MEDIUM DENSE TO DENSE, BROWN, **COARSE AND FINE SAND**, LITTLE TO SOME GRAVEL, LITTLE TO SOME SILT, LITTLE CLAY, DAMP TO MOIST			5 10 8	26	67	SS-6	-	23	18	32	16	11	19	15	4	9	A-3a (0)	
			5 13 13	37	100	SS-7	-	-	-	-	-	-	-	-	-	11	A-3a (V)	
			3 7 6	19	67	SS-8	-	-	-	-	-	-	-	-	-	9	A-3a (V)	
	1003.5		2 2 7	13	100	SS-9	-	15	20	32	21	12	21	15	6	12	A-3a (0)	
HARD, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE TO LITTLE GRAVEL, DAMP			2 5 10	21	67	SS-10	4.25	-	-	-	-	-	-	-	-	11	A-4a (V)	
			3 17 16	47	33	SS-11	4.5+	9	13	25	34	19	24	16	8	12	A-4a (4)	
			2 8 10	26	17	SS-12	4.5+	-	-	-	-	-	-	-	-	12	A-4a (V)	
		W 995.5																
@25.0' TO 26.5'; SS-13 BECOMES STIFF, DARK BROWN, WET			2 8 8	23	17	SS-13	1.25	-	-	-	-	-	-	-	-	23	A-4a (V)	
	993.5																	
MEDIUM DENSE TO DENSE, DARK GRAY, **GRAVEL WITH SAND AND SILT**, TRACE TO LITTLE CLAY, GRAVEL IS WELL ROUNDED, MOIST			3 6 6	17	33	SS-14	-	-	-	-	-	-	-	-	-	15	A-2-4 (V)	
			5 8 14	31	67	SS-15	-	-	-	-	-	-	-	-	-	15	A-2-4 (V)	
	987.2																	
DENSE, BROWN AND GRAY, **GRAVEL WITH SAND**, LITTLE SILT, TRACE CLAY, GRAVEL IS WELL ROUNDED, MOIST			18 13 16	41	100	SS-16	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	
@40.0' TO 41.5'; SS-17 NO WC TESTING DUE TO BROKEN SAMPLE JAR			8 12 11	33	67	SS-17	-	-	-	-	-	-	-	-	-	-	A-1-b (V)	
	977.2																	
DENSE, BROWN AND GRAY, **GRAVEL**, SOME SAND, TRACE TO LITTLE SILT, TRACE CLAY, GRAVEL IS WELL ROUNDED, MOIST			7 11 11	31	100	SS-18	-	-	-	-	-	-	-	-	-	9	A-1-a (V)	
			6 10 15	36	100	SS-19	-	-	-	-	-	-	-	-	-	10	A-1-a (V)	
	967.2																	
DENSE, GRAY, **SILT**, SOME SAND, LITTLE CLAY, TRACE GRAVEL, DAMP			8 11 14	36	100	SS-20	-	1	2	25	53	19	NP	NP	NP	14	A-4b (7)	
	962.2																	
DENSE, GRAY, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, DAMP																		

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 11/19/20 18:32 - C:\USERS\KARENS\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
BRIDGE SUM-77-08.02
BORING LOG B-013-4-17

DRAWN EB
CHECKED BPA

PID: 106002	SFN:	PROJECT: SUM-77-277/224	STATION / OFFSET: 426+66, 11' RT.	START: 10/16/19	END: 10/17/19	PG 2 OF 2	B-013-4-17

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
DENSE, GRAY, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, DAMP *(continued)*	960.5	61	9 10 12	31	100	SS-21	-	-	-	-	-	-	-	-	-	13	A-4a (V)	
		62																
		63																
		64																
		65																
	954.0	66 EOB	7 9 13	31	100	SS-22	-	3	5	33	42	17	17	14	3	13	A-4a (5)	

NOTES: GROUNDWATER ENCOUNTERED AT 25.0' DURING DRILLING. HOLE DID NOT CAVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 100 GAL. BENTONITE GROUT

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 11/19/20 18:32 - C:\USERS\KARENS\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

PROJECT: SUM-77-277/224	DRILLING FIRM / OPERATOR: NEAS / J. HODGES	DRILL RIG: CME 55X	STATION / OFFSET: 429+17, 15' RT.	EXPLORATION ID B-014-1-17
TYPE: BRIDGE	SAMPLING FIRM / LOGGER: NEAS / J.HODGES	HAMMER: CME AUTOMATIC	ALIGNMENT: IR-77	
PID: 106002 SFN: 7702582	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 11/21/17	ELEVATION: 1016.7 (MSL) EOB: 81.5 ft.	PAGE 1 OF 2
START: 10/15/19 END: 10/16/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85.4	LAT / LONG: 41.007043, -81.494203	

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
MEDIUM DENSE, LIGHT BROWN BECOMING BROWN, **GRAVEL WITH SAND AND SILT**, LITTLE CLAY, SS-2 TO SS-5 CONTAINS TRACE ROOT HAIRS, DAMP	1016.7		5 10 9	27	67	SS-1	-	-	-	-	-	-	-	-	-	5	A-2-4 (V)	
			5 10 11	30	67	SS-2	-	-	-	-	-	-	-	-	-	6	A-2-4 (V)	
			6 7 6	19	67	SS-3	-	18	20	29	20	13	21	15	6	6	A-2-4 (0)	
			2 7 5	17	89	SS-4	-	-	-	-	-	-	-	-	-	7	A-2-4 (V)	
	1009.2		4 5 6	16	44	SS-5	-	-	-	-	-	-	-	-	-	6	A-2-4 (V)	
HARD, BROWN AND DARK BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, DAMP			5 5 8	19	67	SS-6	4.5+	-	-	-	-	-	-	-	-	12	A-4a (V)	
	1004.7		2 5 9	20	100	SS-7	4.5+	10	13	28	30	19	25	17	8	7	A-4a (3)	
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, LITTLE SILT, LITTLE GRAVEL, LITTLE CLAY, DAMP	1002.2		4 3 7	14	67	SS-8	-	-	-	-	-	-	-	-	-	13	A-3a (V)	
HARD, BROWN BECOMING BROWN AND GRAY, **SANDY SILT**, LITTLE GRAVEL, LITTLE CLAY, CONTAINS IRON STAINING, DAMP			5 9 12	30	100	SS-9	4.25	-	-	-	-	-	-	-	-	10	A-4a (V)	
			6 9 9	26	56	SS-10	4.5+	19	13	25	28	15	24	17	7	11	A-4a (2)	
		W 995.7	2 4 2	9	100	SS-11	4.25	12	12	28	31	17	23	16	7	15	A-4a (3)	
	994.7																	
MEDIUM DENSE, GRAY, **GRAVEL WITH SAND**, LITTLE SILT, TRACE CLAY, MOIST @22.5' TO 24.0'; SS-12 HAS NO RECOVERY			5 5 15	28	0	SS-12	-	-	-	-	-	-	-	-	-	-		
			10 10 6	23	39	SS-13	-	-	-	-	-	-	-	-	-	11	A-1-b (V)	
	989.7																	
MEDIUM DENSE, GRAY, **COARSE AND FINE SAND**, SOME GRAVEL, TRACE SILT, TRACE CLAY, MOIST			15 10 11	30	44	SS-14	-	-	-	-	-	-	-	-	-	12	A-3a (V)	
	987.2																	
MEDIUM DENSE, GRAY, **GRAVEL WITH SAND**, LITTLE SILT, TRACE CLAY, MOIST			8 10 8	26	100	SS-15	-	-	-	-	-	-	-	-	-	13	A-1-b (V)	
	983.4																	
DENSE, GRAY, **COARSE AND FINE SAND**, SOME GRAVEL, TRACE SILT, TRACE CLAY, MOIST			7 9 13	31	100	SS-16	-	-	-	-	-	-	-	-	-	15	A-3a (V)	
	978.4																	
MEDIUM DENSE TO DENSE, GRAY, **GRAVEL WITH SAND**, TRACE SILT, TRACE CLAY, MOIST			11 9 8	24	67	SS-17	-	-	-	-	-	-	-	-	-	11	A-1-b (V)	
			11 12 15	38	72	SS-18	-	-	-	-	-	-	-	-	-	12	A-1-b (V)	
			9 11 17	40	100	SS-19	-	-	-	-	-	-	-	-	-	12	A-1-b (V)	
			12 13 16	41	67	SS-20	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 11/19/20 18:32 - C:\USERS\KARENS\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

117/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION BRIDGE SUM-77-08.01 BORING LOG B-014-1-17	DRAWN EB / CHECKED BPA

PID: 106002 | SFN: | PROJECT: SUM-77-277/224 | STATION / OFFSET: 429+17, 15' RT. | START: 10/15/19 | END: 10/16/19 | PG 2 OF 2 | B-014-1-17

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
MEDIUM DENSE TO DENSE, GRAY, **GRAVEL WITH SAND**, TRACE SILT, TRACE CLAY, MOIST *(continued)*	956.7	61	10 13 15	40	100	SS-21	-	-	-	-	-	-	-	-	-	11	A-1-b (V)	
		62																
		63																
		64																
		65																
		66	11 11 13	34	72	SS-22	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	
		67																
	948.4	68																
VERY STIFF, GRAY, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, MOIST TO WET		69																
		70																
		71	10 12 12	34	67	SS-23	3.75	-	-	-	-	-	-	-	-	13	A-4a (V)	
		72																
		73																
		74																
		75																
		76	7 10 12	31	100	SS-24	3.50	0	4	43	39	14	15	13	2	15	A-4a (4)	
		77																
		78																
		79																
		80																
	935.2	81 EOB	7 10 25	50	100	SS-25	3.50	-	-	-	-	-	-	-	-	13	A-4a (V)	

NOTES: GROUNDWATER ENCOUNTERED AT 21.0' DURING DRILLING. HOLE DID NOT CAVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 120 GAL. BENTONITE GROUT

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 11/19/20 18:32 - C:\USERS\KARENS\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

PROJECT: SUM-77-277/224	DRILLING FIRM / OPERATOR: NEAS / J. HODGES	DRILL RIG: CME 55X	STATION / OFFSET: 430+47, 8' RT.	EXPLORATION ID B-014-2-17
TYPE: BRIDGE	SAMPLING FIRM / LOGGER: NEAS / J.HODGES	HAMMER: CME AUTOMATIC	ALIGNMENT: IR-77	
PID: 106002 SFN: 7702582	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 11/21/17	ELEVATION: 999.0 (MSL) EOB: 66.5 ft.	PAGE 1 OF 2
START: 10/14/19 END: 10/15/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85.4	LAT / LONG: 41.007396, -81.494224	

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
VERY LOOSE, DARK BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, SLIGHTLY ORGANIC, CONTAINS A SLIGHT PETROLEUM ODOR AND TRACE ROOTS, WET	999.0		WOH 1 1	3	33	SS-1	-	1	1	54	32	12	NP	NP	NP	47	A-4a (2)	
	997.5	1																
VERY LOOSE TO LOOSE, DARK BROWN, **COARSE AND FINE SAND**, LITTLE SILT, TRACE CLAY, TRACE GRAVEL, SLIGHTLY ORGANIC, CONTAINS A SLIGHT PETROLEUM ODOR AND TRACE ROOTS, WET		2	WOH 1 1	3	56	SS-2	-	1	5	64	20	10	NP	NP	NP	37	A-3a (0)	
		3	WOH WOH 1	1	17	SS-3	-	-	-	-	-	-	-	-	-	37	A-3a (V)	
		4																
	W 994.5	5	2 2 2	6	78	SS-4	-	0	19	64	11	6	NP	NP	NP	28	A-3a (0)	
	993.0	6																
VERY LOOSE, BROWN AND BLACK, **SANDY SILT**, LITTLE GRAVEL, LITTLE CLAY, SLIGHTLY ORGANIC, WET		7	2 1 2	4	100	SS-5	-	13	15	34	27	11	NP	NP	NP	42	A-4a (1)	
	991.5	8																
MEDIUM DENSE, BROWN AND BLACK, **COARSE AND FINE SAND**, SOME GRAVEL, LITTLE SILT, TRACE CLAY, CONTAINS A SLIGHT PETROLEUM ODOR, WET TO MOIST		9	2 4 7	16	67	SS-6	-	-	-	-	-	-	-	-	-	24	A-3a (V)	
		10																
		11	4 7 8	21	100	SS-7	-	-	-	-	-	-	-	-	-	15	A-3a (V)	
	987.0	12																
MEDIUM DENSE, BROWN AND GRAY, **GRAVEL**, SOME SAND, TRACE SILT, TRACE CLAY, MOIST		13	3 4 7	16	33	SS-8	-	68	22	7	2	1	NP	NP	NP	11	A-1-a (0)	
	984.5	14																
MEDIUM DENSE, BROWN AND GRAY, **COARSE AND FINE SAND**, SOME GRAVEL, TRACE SILT, TRACE CLAY, MOIST		15																
		16	7 10 10	28	67	SS-9	-	-	-	-	-	-	-	-	-	14	A-3a (V)	
	982.0	17																
MEDIUM DENSE, BROWN, **GRAVEL WITH SAND**, TRACE SILT, TRACE CLAY, MOIST		18	7 5 7	17	33	SS-10	-	-	-	-	-	-	-	-	-	11	A-1-b (V)	
		19																
		20																
		21	5 7 9	23	33	SS-11	-	-	-	-	-	-	-	-	-	13	A-1-b (V)	
	977.0	22																
MEDIUM DENSE, GRAY, **SILT**, SOME SAND, LITTLE CLAY, TRACE GRAVEL, MOIST		23	7 7 9	23	33	SS-12	-	10	8	16	52	14	NP	NP	NP	16	A-4b (6)	
	974.5	24																
MEDIUM DENSE, GRAY, **GRAVEL WITH SAND**, TRACE SILT, TRACE CLAY, WET		25																
		26	7 7 7	20	6	SS-13	-	-	-	-	-	-	-	-	-	17	A-1-b (V)	
	972.0	27																
MEDIUM DENSE, GRAY, **SANDY SILT**, LITTLE GRAVEL, TRACE CLAY, MOIST		28	4 6 6	17	44	SS-14	-	-	-	-	-	-	-	-	-	15	A-4a (V)	
		29																
		30																
		31	4 5 7	17	100	SS-15	-	18	11	29	32	10	NP	NP	NP	16	A-4a (1)	
	965.7	32																
DENSE TO VERY DENSE, GRAY, **COARSE AND FINE SAND**, LITTLE TO SOME GRAVEL, TRACE TO LITTLE SILT, TRACE CLAY, MOIST		33																
		34																
		35																
		36	7 12 12	34	100	SS-16	-	-	-	-	-	-	-	-	-	11	A-3a (V)	
		37																
		38																
		39																
		40																
		41	10 19 15	48	100	SS-17	-	-	-	-	-	-	-	-	-	11	A-3a (V)	
		42																
		43																
		44																
		45																
		46	17 18 22	57	100	SS-18	-	-	-	-	-	-	-	-	-	11	A-3a (V)	
		47																
		48																
		49																
		50																
		51	9 12 18	43	100	SS-19	-	-	-	-	-	-	-	-	-	16	A-3a (V)	
		52																
		53																
		54																
		55																
		56	9 18 22	57	100	SS-20	-	-	-	-	-	-	-	-	-	13	A-3a (V)	
		57																
		58																
		59																

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 11/19/20 18:32 - C:\USERS\KARENS\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

PID: 106002	SFN:	PROJECT: SUM-77-277/224	STATION / OFFSET: 430+47, 8' RT.	START: 10/14/19	END: 10/15/19	PG 2 OF 2	B-014-2-17

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
DENSE TO VERY DENSE, GRAY, **COARSE AND FINE SAND**, LITTLE TO SOME GRAVEL, TRACE TO LITTLE SILT, TRACE CLAY, MOIST *(continued)*	939.0	61	10 13 11	34	33	SS-21	-	-	-	-	-	-	-	-	-	12	A-3a (V)	
		62																
		63																
		64																
		65																
	932.5	66 EOB	9 10 13	33	28	SS-22	-	-	-	-	-	-	-	-	-	12	A-3a (V)	

NOTES: GROUNDWATER ENCOUNTERED AT 4.5' DURING DRILLING. HOLE DID NOT CAVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 100 GAL. BENTONITE GROUT

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 11/19/20 18:32 - C:\USERS\KARENS\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

PROJECT: SUM-77-277/224
TYPE: BRIDGE
PID: 106002 SFN: 7702582
START: 7/8/19 END: 7/9/19

DRILLING FIRM / OPERATOR: NEAS / J. HODGES
SAMPLING FIRM / LOGGER: NEAS / J. LITTERAL
DRILLING METHOD: 3.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: CME 55X
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 11/21/17
ENERGY RATIO (%): 85.4

STATION / OFFSET: 431+01, 10' LT.
ALIGNMENT: IR-77
ELEVATION: 1014.6 (MSL) EOB: 65.0 ft.
LAT / LONG: 41.007543, -81.494332

EXPLORATION ID B-014-3-17

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" TOPSOIL (DRILLERS DESRIPTION)	1014.6																	
MEDIUM DENSE TO DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, TRACE CLAY, CONTAINS TRACE ROOTS AND ASPHALT FRAGMENTS, DAMP @1.5' TO 4.5'; SS-2 AND SS-3 SAMPLE JARS BROKE DURING TRANSPORT. NO WC TESTED.	1010.1		3 10 12	31	44	SS-1	-	-	-	-	-	-	-	-	-	5	A-2-4 (V)	
			8 12 10	31	78	SS-2	-	-	-	-	-	-	-	-	-	-	A-2-4 (V)	
			5 10 7	24	33	SS-3	-	-	-	-	-	-	-	-	-	-	A-2-4 (V)	
HARD, BROWN AND ORANGISH BROWN, **SANDY SILT**, SOME GRAVEL, LITTLE CLAY, CONTAINS IRON STAINING, DAMP	1008.6		7 10 11	30	78	SS-4	4.25	-	-	-	-	-	-	-	-	11	A-4a (V)	
DENSE, BROWN, **STONE FRAGMENTS WITH SAND AND SILT**, TRACE CLAY, DAMP @6.0' TO 7.5'; SS-5 SAMPLE JAR BROKE DURING TRANSPORT. NO WC TESTED.	1006.6		14 12 10	31	78	SS-5	-	-	-	-	-	-	-	-	-	-	A-2-4 (V)	
VERY STIFF TO HARD, BROWN MOTTLED WITH ORANGISH BROWN AND BLACK, **SANDY SILT**, LITTLE CLAY, TRACE TO LITTLE GRAVEL, SLIGHTLY ORGANIC, CONTAINS A PETROLIFEROUS ODOR AND TRACE IRON STAINING, DAMP @8.5' TO 10.0'; SS-6 SAMPLE JAR BROKE DURING TRANSPORT. NO WC TESTED.	999.1		3 6 11	24	78	SS-6	4.5+	-	-	-	-	-	-	-	-	-	A-4a (V)	
			4 8 14	31	67	SS-7	4.50	10	15	39	22	14	18	14	4	11	A-4a (0)	
			4 15 15	43	33	SS-8	2.50	-	-	-	-	-	-	-	-	12	A-4a (V)	
STIFF, DARK GRAY AND ORANGISH BROWN, **SILT AND CLAY**, "AND" SAND, TRACE GRAVEL, SLIGHTLY ORGANIC, CONTAINS A PETROLIFEROUS ODOR AND TRACE IRON STAINING, DAMP	997.6	W 998.1	4 2 2	6	78	SS-9A	1.25	5	6	30	39	20	31	18	13	16	A-6a (6)	
						SS-9B	-	-	-	-	-	-	-	-	-	13	A-2-4 (V)	
LOOSE, BROWN WITH ORANGISH BROWN AND DARK GRAY, **GRAVEL WITH SAND AND SILT**, TRACE CLAY, CONTAINS IRON STAINING, MOIST	996.6																	
MEDIUM DENSE, DARK GRAY AND ORANGISH BROWN, **COARSE AND FINE SAND**, LITTLE GRAVEL, TRACE SILT, TRACE CLAY, CONTAINS IRON STAINING AND A PETROLIFEROUS ODOR, WET	994.1		3 6 6	17	67	SS-10	-	-	-	-	-	-	-	-	-	24	A-3a (V)	
MEDIUM DENSE TO VERY DENSE, GRAY AND BROWN, **GRAVEL WITH SAND**, TRACE TO LITTLE SILT, TRACE CLAY, DAMP TO MOIST @21.0' TO 25.0'; SS-11 AND SS-12 SAMPLE JARS BROKE DURING TRANSPORT. NO WC TESTED.	981.6		6 7 13	28	33	SS-11	-	-	-	-	-	-	-	-	-	-	A-1-b (V)	
			3 6 10	23	78	SS-12	-	-	-	-	-	-	-	-	-	-	A-1-b (V)	
			8 19 20	56	100	SS-13	-	-	-	-	-	-	-	-	-	11	A-1-b (V)	
			7 14 50/4"	-	100	SS-14	-	-	-	-	-	-	-	-	-	14	A-1-b (V)	
DENSE, GRAY, **SILT**, SOME SAND, LITTLE CLAY, TRACE GRAVEL, DAMP	977.9		7 12 21	47	78	SS-15	4.5+	8	8	21	50	13	NP	NP	NP	15	A-4b (6)	
DENSE, GRAY, **GRAVEL WITH SAND AND SILT**, LITTLE CLAY, DAMP	972.9		7 14 18	46	100	SS-16	-	20	10	37	20	13	16	12	4	9	A-2-4 (0)	
DENSE, GRAY, **GRAVEL WITH SAND**, TRACE SILT, TRACE CLAY, MOIST			11 14 16	43	67	SS-17	-	-	-	-	-	-	-	-	-	13	A-1-b (V)	
			9 7 17	34	100	SS-18	-	-	-	-	-	-	-	-	-	11	A-1-b (V)	
			7 12 12	34	100	SS-19	-	34	27	30	6	3	NP	NP	NP	12	A-1-b (0)	
VERY DENSE, LIGHT BROWNISH GRAY, **COARSE AND FINE SAND**, TRACE GRAVEL, TRACE SILT, TRACE CLAY, WET	957.9		12 22 23	64	56	SS-20	-	-	-	-	-	-	-	-	-	21	A-3a (V)	

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 11/19/20 18:32 - C:\USERS\KARENS\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

PID: 106002	SFN:	PROJECT: SUM-77-277/224	STATION / OFFSET: 431+01, 10' LT.	START: 7/8/19	END: 7/9/19	PG 2 OF 2	B-014-3-17

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
VERY DENSE, LIGHT BROWNISH GRAY, **COARSE AND FINE SAND**, TRACE GRAVEL, TRACE SILT, TRACE CLAY, WET *(continued)*	954.6	61																
		62																
		63																
		64	7 14 26	57	56	SS-21	-	-	-	-	-	-	-	-	-	19	A-3a (V)	
	949.6	EOB 65																

NOTES: GROUNDWATER ENCOUNTERED AT 16.5' DURING DRILLING. HOLE DID NOT CAVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 100 GAL. BENTONITE GROUT

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 11/19/20 18:32 - C:\USERS\KARENS\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

PID: 106002	SFN:	PROJECT: SUM-77-277/224	STATION / OFFSET: 431+01, 10' LT.	START: 7/8/19	END: 7/9/19	PG 2 OF 2	B-014-3-17

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
VERY DENSE, LIGHT BROWNISH GRAY, **COARSE AND FINE SAND**, TRACE GRAVEL, TRACE SILT, TRACE CLAY, WET *(continued)*	954.6	61																
		62																
		63																
		64	7 14 26	57	56	SS-21	-	-	-	-	-	-	-	-	-	19	A-3a (V)	
	949.6	EOB 65																

NOTES: GROUNDWATER ENCOUNTERED AT 16.5' DURING DRILLING. HOLE DID NOT CAVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 100 GAL. BENTONITE GROUT

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 11/19/20 18:32 - C:\USERS\KARENS\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 453+81, RT. | EXPLORATION ID B-019-1-17
TYPE: RETAINING WALL | SAMPLING FIRM / LOGGER: NEAS / J. LITTERAL | HAMMER: CME AUTOMATIC | ALIGNMENT: IR-77
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 11/21/17 | ELEVATION: 1038.2 (MSL) EOB: 20.5 ft. | PAGE 1 OF 1
START: 7/9/19 END: 7/9/19 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 85.4 | LAT / LONG: 41.013737, -81.495429

MATERIAL DESCRIPTION AND NOTES	ELEV. 1038.2	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
4.0" TOPSOIL (DRILLERS DESRIPTION)	1037.9																		
VERY STIFF, BROWN AND LIGHT BROWN, **SILT**, SOME SAND, SOME CLAY, TRACE GRAVEL, DAMP	1033.7		3 3 3	9	67	SS-1	3.50	4	7	18	50	21	28	20	8	18	A-4b (7)	-	
VERY STIFF, BROWN AND LIGHT BROWN, **SANDY SILT**, SOME CLAY, TRACE GRAVEL, DAMP	1030.2		2 2 3	7	67	SS-2	3.25	4	7	16	49	24	29	19	10	18	A-4a (8)	-	
MEDIUM DENSE, ORANGISH BROWN, **GRAVEL WITH SAND**, TRACE SILT, TRACE CLAY, CONTAINS IRON STAINING, DAMP	1028.7		3 5 7	17	67	SS-3A SS-3B	2.50 -	- -	- -	- -	- -	- -	- -	- -	- -	18 8	A-4a (V) A-1-b (V)	- -	
MEDIUM DENSE, BROWN WITH LIGHT BROWN AND ORANGISH BROWN, **STONE FRAGMENTS WITH SAND AND SILT**, LITTLE CLAY, CONTAINS IRON STAINING, STONE FRAGMENTS ARE SANDSTONE, MOIST	1026.2		4 8 9	24	67	SS-4	-	-	-	-	-	-	-	-	-	13	A-2-4 (V)	-	
MEDIUM DENSE TO DENSE, BROWN AND ORANGISH BROWN, **GRAVEL WITH SAND**, TRACE SILT, TRACE CLAY, SS-6 AND SS-7 CONTAIN IRON STAINING, DAMP			7 10 12	31	67	SS-5	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	-	
			5 5 5	14	56	SS-6	-	7	46	39	6	2	NP	NP	NP	7	A-1-b (0)	-	
			7 7 7	20	56	SS-7	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	-	
	1017.7	EOB	7 7 7	20	56	SS-8	-	-	-	-	-	-	-	-	-	5	A-1-b (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 455+34, LT. | EXPLORATION ID B-019-2-17
TYPE: RETAINING WALL | SAMPLING FIRM / LOGGER: NEAS / J. LITTERAL | HAMMER: CME AUTOMATIC | ALIGNMENT: IR-77
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 11/21/17 | ELEVATION: 1040.0 (MSL) EOB: 20.5 ft. | PAGE 1 OF 1
START: 7/10/19 END: 7/10/19 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 85.4 | LAT / LONG: 41.014149, -81.495533

MATERIAL DESCRIPTION AND NOTES	ELEV. 1040.0	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
4.0" TOPSOIL (DRILLERS DESRIPTION)	1039.7																		
VERY STIFF, BROWN, **SILT AND CLAY**, SOME SAND, TRACE GRAVEL, CONTAINS TRACE ROOTS, DAMP	1032.3		4 5 4	13	56	SS-1	3.50	-	-	-	-	-	-	-	-	15	A-6a (V)	-	
			2 2 3	7	67	SS-2	3.00	3	8	23	42	24	30	18	12	17	A-6a (7)	-	
LOOSE TO VERY DENSE, BROWN AND ORANGISH BROWN, **GRAVEL WITH SAND**, LITTLE SILT, TRACE CLAY, CONTAINS IRON STAINING, MOIST TO DAMP			3 3 4	10	67	SS-3A SS-3B	2.50 -	- -	- -	- -	- -	- -	- -	- -	- -	15 10	A-6a (V) A-1-b (V)	- -	
			2 3 3	9	67	SS-4	-	20	39	21	13	7	NP	NP	NP	11	A-1-b (0)	-	
			4 6 20	37	100	SS-5	-	-	-	-	-	-	-	-	-	11	A-1-b (V)	-	
@15.0' TO 15.5'; SS-6 HAS NO RECOVERY (ENCOUNTERED POSSIBLE BOULDER)			50	-	0	SS-6	-	-	-	-	-	-	-	-	-	-		-	
			4 6 10	23	67	SS-7	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	-	
	1019.5	EOB	5 5 9	20	78	SS-8	-	-	-	-	-	-	-	-	-	3	A-1-b (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 16:44 - C:\USERS\KAREN\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 457+04, 2' LT. | EXPLORATION ID B-019-3-17
TYPE: RETAINING WALL | SAMPLING FIRM / LOGGER: NEAS / J. LITTERAL | HAMMER: CME AUTOMATIC | ALIGNMENT: IR-77 | PAGE 1 OF 1
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 11/21/17 | ELEVATION: 1041.7 (MSL) EOB: 20.5 ft.
START: 7/10/19 END: 7/10/19 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 85.4 | LAT / LONG: 41.014607, -81.495651

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)	SO4 ppm	BACK FILL
4.0" TOPSOIL (DRILLERS DESRIPTION)	1041.4																		
VERY STIFF TO HARD, BROWN, **SANDY SILT**, LITTLE TO SOME CLAY, TRACE TO LITTLE GRAVEL, CONTAINS IRON STAINING, DAMP			4 5 6	16	78	SS-1	4.5+	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
			2 4 7	16	100	SS-2	4.00	6	9	21	44	20	28	20	8	17	A-4a (6)	-	
			4 5 6	16	100	SS-3	2.50	-	-	-	-	-	-	-	-	15	A-4a (V)	-	
@10.0' TO 10.5'; SS-4A BECOMES MEDIUM STIFF TO STIFF	1031.2		5 4 4	11	100	SS-4A	1.00	-	-	-	-	-	-	-	-	18	A-4a (V)	-	
						SS-4B	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	-	
LOOSE TO MEDIUM DENSE, BROWN, **GRAVEL WITH SAND**, TRACE SILT, TRACE CLAY, SS-4B CONTAINS IRON STAINING, DAMP TO MOIST			3 3 4	10	67	SS-5	-	18	54	19	5	4	NP	NP	NP	9	A-1-b (0)	-	
			4 4 5	13	78	SS-6	-	-	-	-	-	-	-	-	-	13	A-1-b (V)	-	
	1022.7		3 3 11	20	100	SS-7	-	-	-	-	-	-	-	-	-	12	A-1-b (V)	-	
VERY DENSE, BROWN AND GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, TRACE CLAY, STONE FRAGMENTS ARE SHALE AND SANDSTONE, DAMP	1021.2	EOB	14 22 20	60	67	SS-8	-	-	-	-	-	-	-	-	-	11	A-2-4 (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 16:44 - C:\USERS\KAREN\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. LITTERAL | DRILL RIG: CME 55X | STATION / OFFSET: 458+35, 2' LT. | EXPLORATION ID B-020-1-17
TYPE: RETAINING WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: IR-77 | PAGE 1 OF 1
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 11/21/17 | ELEVATION: 1042.6 (MSL) EOB: 20.5 ft.
START: 7/10/19 END: 7/10/19 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 85.4 | LAT / LONG: 41.014962, -81.495738

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)	SO4 ppm	BACK FILL
HARD, BROWN BECOMING DARK BROWN, **SANDY SILT**, LITTLE CLAY, LITTLE GRAVEL, CONTAINS IRON STAINING, DAMP			6 6 7	19	100	SS-1	4.5+	-	-	-	-	-	-	-	-	9	A-4a (V)	-	
			3 7 9	23	100	SS-2	4.5+	-	-	-	-	-	-	-	-	17	A-4a (V)	-	
			5 7 7	20	100	SS-3	4.5+	11	12	22	37	18	30	22	8	17	A-4a (4)	-	
	1033.1																		
LOOSE TO MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, TRACE GRAVEL, TRACE SILT, TRACE CLAY, DAMP TO MOIST			5 4 3	10	100	SS-4	-	-	-	-	-	-	-	-	-	6	A-3a (V)	-	
			5 6 7	19	100	SS-5	-	9	17	62	7	5	NP	NP	NP	8	A-3a (0)	-	
			4 7 8	21	100	SS-6	-	-	-	-	-	-	-	-	-	10	A-3a (V)	-	
@17.5' TO 19.0'; SS-7 BECOMES SOME GRAVEL			4 8 7	21	100	SS-7	-	-	-	-	-	-	-	-	-	15	A-3a (V)	-	
	1022.1	▼ 1022.6 EOB	6 5 8	19	100	SS-8	-	-	-	-	-	-	-	-	-	4	A-3a (V)	-	

NOTES: GROUNDWATER ENCOUNTERED AT 20.0' DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 460+03, 1' LT. | EXPLORATION ID B-020-2-17
TYPE: RETAINING WALL | SAMPLING FIRM / LOGGER: NEAS / J. LITTERAL | HAMMER: CME AUTOMATIC | ALIGNMENT: IR-77
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 11/21/17 | ELEVATION: 1044.8 (MSL) EOB: 20.5 ft. | PAGE 1 OF 1
START: 7/11/19 END: 7/11/19 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 85.4 | LAT / LONG: 41.015414, -81.495846

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)	SO4 ppm	BACK FILL
4.0" TOPSOIL (DRILLERS DESRIPTION)	1044.5																		
HARD, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, CONTAINS IRON STAINING, DAMP			4 10 9	27	67	SS-1	4.5+	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
			5 6 5	16	100	SS-2	4.5+	9	18	22	35	16	28	20	8	16	A-4a (3)	-	
			3 5 7	17	67	SS-3	4.5+	-	-	-	-	-	-	-	-	13	A-4a (V)	-	
	1035.3																		
MEDIUM DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, TRACE CLAY, CONTAINS TRACE IRON STAINING, DAMP			4 9 9	26	67	SS-4	-	-	-	-	-	-	-	-	-	12	A-2-4 (V)	-	
	1032.8																		
MEDIUM DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE CLAY, CONTAINS TRACE IRON STAINING, DAMP			3 5 5	14	78	SS-5	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	-	
	1030.3																		
DENSE, BROWN AND GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, LITTLE CLAY, CONTAINS TRACE IRON STAINING, DAMP		▼ 1029.3	4 13 15	40	56	SS-6	-	-	-	-	-	-	-	-	-	13	A-2-4 (V)	-	
	1027.8																		
DENSE, BROWN, **COARSE AND FINE SAND**, LITTLE SILT, LITTLE GRAVEL, TRACE CLAY, CONTAINS TRACE IRON STAINING, MOIST			4 16 16	46	78	SS-7	-	13	9	50	18	10	NP	NP	NP	11	A-3a (0)	-	
			4 16 19	50	78	SS-8	-	-	-	-	-	-	-	-	-	11	A-3a (V)	-	
	1024.3	EOB																	

NOTES: GROUNDWATER ENCOUNTERED AT 15.5' DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 16:44 - C:\USERS\KAREN\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 461+43, 2' LT. | EXPLORATION ID B-021-1-17
TYPE: RETAINING WALL | SAMPLING FIRM / LOGGER: NEAS / J. LITTERAL | HAMMER: CME AUTOMATIC | ALIGNMENT: IR-77
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 11/21/17 | ELEVATION: 1046.1 (MSL) EOB: 20.5 ft. | PAGE 1 OF 1
START: 7/11/19 END: 7/11/19 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 85.4 | LAT / LONG: 41.015791, -81.495943

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)	SO4 ppm	BACK FILL
4.0" TOPSOIL (DRILLERS DESRIPTION)	1045.8																		
VERY STIFF TO HARD, BROWN, **SANDY SILT**, LITTLE CLAY, LITTLE GRAVEL, DAMP			5 3 3	9	67	SS-1	2.75	11	9	17	43	20	28	19	9	17	A-4a (6)	-	
	1040.1		6 7 7	20	89	SS-2A	4.5+	-	-	-	-	-	-	-	-	13	A-4a (V)	-	
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, SOME SILT, LITTLE CLAY, TRACE GRAVEL, DAMP TO WET						SS-2B	-	-	-	-	-	-	-	-	-	8	A-3a (V)	-	
			4 7 9	23	89	SS-3	-	0	9	56	22	13	NP	NP	NP	14	A-3a (0)	-	
	1036.6																		
DENSE TO VERY DENSE, BROWN BECOMING LIGHT BROWN AND DARK GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, TRACE TO LITTLE CLAY, DAMP TO MOIST			6 10 13	33	89	SS-4	-	-	-	-	-	-	-	-	-	13	A-2-4 (V)	-	
			5 21 19	57	89	SS-5	-	-	-	-	-	-	-	-	-	10	A-2-4 (V)	-	
			4 21 21	60	89	SS-6	-	-	-	-	-	-	-	-	-	12	A-2-4 (V)	-	
	1029.1																		
HARD, GRAY, **SILT AND CLAY**, LITTLE SAND, LITTLE STONE FRAGMENTS, RELIC ROCK STRUCTURE, CONTAINS IRON STAINING, DAMP			4 10 10	28	78	SS-7	4.5+	14	5	9	50	22	35	24	11	11	A-6a (8)	-	
			8 15 20	50	56	SS-8	4.5+	-	-	-	-	-	-	-	-	10	A-6a (V)	-	
	1025.6	EOB																	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 16:44 - C:\USERS\KAREN\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
RETAINING WALL 1
BORING LOGS B-020-2-17 & B-021-1-17

DRAWN EB
CHECKED BPA

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZL019.dgn Sheet 1/8/2021 12:54:17 AM karens

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 462+84, 3' LT. | EXPLORATION ID B-021-2-17
TYPE: RETAINING WALL | SAMPLING FIRM / LOGGER: NEAS / J. LITTERAL | HAMMER: CME AUTOMATIC | ALIGNMENT: IR-77
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 11/21/17 | ELEVATION: 1047.9 (MSL) EOB: 20.5 ft. | PAGE 1 OF 1
START: 7/11/19 END: 7/11/19 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 85.4 | LAT / LONG: 41.016173, -81.496039

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)	SO4 ppm	BACK FILL
4.0" TOPSOIL (DRILLERS DESRIPTION)	1047.6																		
VERY STIFF TO HARD, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE TO LITTLE GRAVEL, SS-1 CONTAINS NO INTACT SOIL FOR HP READINGS, CONTAINS IRON STAINING, DAMP	1040.9		5 13 8	30	33	SS-1	-	-	-	-	-	-	-	-	-	11	A-4a (V)	-	
			4 9 8	24	78	SS-2	4.00	-	-	-	-	-	-	-	-	13	A-4a (V)	-	
MEDIUM DENSE TO VERY DENSE, BROWN, **GRAVEL WITH SAND, SILT, AND CLAY**, CONTAINS IRON STAINING, MOIST	1035.9		5 7 8	21	67	SS-3	-	26	19	20	22	13	28	17	11	15	A-2-6 (0)	-	
			5 28 32	85	33	SS-4	-	-	-	-	-	-	-	-	-	14	A-2-6 (V)	-	
VERY DENSE, LIGHT BROWN AND GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE CLAY, STONE FRAGMENTS ARE SANDSTONE, DAMP TO MOIST	1030.9		13 50	-	50	SS-5	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	-	
			50	-	50	SS-6	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	-	
VERY STIFF, GRAY, **SANDY SILT**, SOME STONE FRAGMENTS, LITTLE CLAY, SS-7 CONTAINS NO INTACT SOIL FOR HP READINGS, RELIC ROCK STRUCTURE, CONTAINS IRON STAINING, DAMP			13 15 30	64	67	SS-7	-	-	-	-	-	-	-	-	-	9	A-4a (V)	-	
	1027.4	EOB	9 8 9	24	44	SS-8	2.25	32	5	9	36	18	27	18	9	12	A-4a (4)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 16:44 - C:\USERS\KAREN\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 464+41, 2' LT. | EXPLORATION ID B-021-3-17
TYPE: RETAINING WALL | SAMPLING FIRM / LOGGER: NEAS / J. LITTERAL | HAMMER: CME AUTOMATIC | ALIGNMENT: IR-77
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 11/21/17 | ELEVATION: 1049.5 (MSL) EOB: 19.3 ft. | PAGE 1 OF 1
START: 7/16/19 END: 7/16/19 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 85.4 | LAT / LONG: 41.016596, -81.496141

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)	SO4 ppm	BACK FILL
8.0" TOPSOIL (DRILLERS DESCRIPTION)	1048.8																		
HARD, BROWN, **SANDY SILT**, SOME GRAVEL, LITTLE CLAY, CONTAINS TRACE IRON STAINING, DAMP	1045.0		8 11 7	26	78	SS-1	4.50	28	13	15	27	17	28	18	10	12	A-4a (2)	-	
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, SOME GRAVEL, TRACE SILT, TRACE CLAY, DAMP	1042.5		6 7 7	20	67	SS-2	-	-	-	-	-	-	-	-	-	5	A-3a (V)	-	
MEDIUM DENSE TO DENSE, BROWN, **GRAVEL WITH SAND**, TRACE SILT, TRACE CLAY, DAMP TO WET	1038.4		9 7 10	24	11	SS-3	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	-	
MEDIUM DENSE, BROWN, **SILT**, "AND" SAND, TRACE CLAY, TRACE GRAVEL, MOIST	1036.5		8 15 8	33	67	SS-4A	-	-	-	-	-	-	-	-	-	16	A-1-b (V)	-	
						SS-4B	-	-	-	-	-	-	-	-	-	16	A-4b (V)	-	
STIFF, BROWNISH GRAY, **CLAY**, SOME SILT, LITTLE SAND, TRACE GRAVEL, MOIST	1035.0		9 50	-	100	SS-5A	-	1	2	37	50	10	NP	NP	NP	17	A-4b (5)	-	
						SS-5B	1.25	-	-	-	-	-	-	-	-	28	A-7-6 (V)	-	
MEDIUM DENSE, GRAY AND ORANGISH BROWN, **GRAVEL WITH SAND AND SILT**, LITTLE CLAY, CONTAINS IRON STAINING, MOIST	1033.0 W		8 5 4	13	67	SS-6	-	-	-	-	-	-	-	-	-	18	A-2-4 (V)	-	
	1032.0	TR																	
SHALE, DARK GRAY, HIGHLY WEATHERED, VERY WEAK TO WEAK, FISSILE.	1030.2		50	-	100	SS-7	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
		EOB	50/3"	-	33	SS-8	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER ENCOUNTERED AT 16.5' DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 16:44 - C:\USERS\KAREN\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 465+89, 2' LT. | EXPLORATION ID B-022-1-17
TYPE: RETAINING WALL | SAMPLING FIRM / LOGGER: NEAS / J. LITTERAL | HAMMER: CME AUTOMATIC | ALIGNMENT: IR-77
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA / NQ2 | CALIBRATION DATE: 11/21/17 | ELEVATION: 1051.0 (MSL) EOB: 20.0 ft. | PAGE 1 OF 1
START: 7/15/19 END: 7/15/19 | SAMPLING METHOD: SPT / NQ2 | ENERGY RATIO (%): 85.4 | LAT / LONG: 41.016996, -81.496236

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)	SO4 ppm	BACK FILL
8.0" TOPSOIL (DRILLERS DESCRIPTION)	1050.3																		
MEDIUM DENSE TO DENSE, BROWN, **GRAVEL WITH SAND**, TRACE SILT, TRACE CLAY, CONTAINS IRON STAINING, DAMP			9 14 18	46	33	SS-1	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	-	
			2 8 9	24	44	SS-2	-	34	36	19	6	5	NP	NP	NP	9	A-1-b (0)	-	
			13 10 10	28	56	SS-3	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	-	
	1041.5																		
HARD, GRAY, **SANDY SILT**, SOME CLAY, LITTLE GRAVEL, RELIC ROCK STRUCTURE, DAMP			7 10 13	33	89	SS-4	4.5+	18	9	11	37	25	30	20	10	12	A-4a (5)	-	
			7 10 20	43	89	SS-5	4.5+	-	-	-	-	-	-	-	-	11	A-4a (V)	-	
	1037.0	TR																	
SHALE, GRAY, HIGHLY WEATHERED, VERY WEAK, FISSILE.	1035.0		16 50	-	50	SS-6	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
INTERBEDDED SANDSTONE (60%) AND SHALE (40%), BEDDING DISCONTINUITIES: LOW ANGLE, HIGHLY FRACTURED TO MODERATELY FRACTURED, OPEN TO TIGHT, SLIGHTLY ROUGH, BLOCKY/DISTURBED/SEAMY, GOOD SURFACE CONDITION, RQD 23%, REC. 98%; **SANDSTONE**, GRAY AND BROWN, SLIGHTLY WEATHERED, STRONG WITH VERY WEAK LAYERS, VERY FINE TO FINE GRAINED, VERY THIN TO LAMINATED, CONTAINS VERY WEAK CLAYSTONE LAYERS; **SHALE**, BLACK, MODERATELY WEATHERED, WEAK, LAMINATED, FISSILE. @16.9' TO 17.3'; Qu = 87 PSI	1031.0	EOB	23		98	NQ2-1											CORE		

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 16:44 - C:\USERS\KAREN\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 467+43, 6' LT. | EXPLORATION ID B-022-2-17
TYPE: RETAINING WALL | SAMPLING FIRM / LOGGER: NEAS / J.HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: IR-77
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA / NQ2 | CALIBRATION DATE: 11/21/17 | ELEVATION: 1051.3 (MSL) EOB: 20.5 ft. | PAGE 1 OF 1
START: 7/15/19 END: 7/15/19 | SAMPLING METHOD: SPT / NQ2 | ENERGY RATIO (%): 85.4 | LAT / LONG: 41.017409, -81.496354

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)	SO4 ppm	BACK FILL
8.0" TOPSOIL (DRILLERS DESCRIPTION)	1050.6																		
DENSE, BROWN, **COARSE AND FINE SAND**, SOME SILT, LITTLE GRAVEL, LITTLE CLAY, CONTAINS IRON STAINING, DAMP			5 10 13	33	44	SS-1	-	14	19	34	22	11	20	16	4	9	A-3a (0)	-	
			9 13 11	34	100	SS-2	-	-	-	-	-	-	-	-	-	11	A-3a (V)	-	
	1044.3																		
HARD, BROWN BECOMING GRAY, **SANDY SILT**, SOME GRAVEL, LITTLE CLAY, DAMP			5 10 12	31	78	SS-3	4.25	21	16	21	28	14	24	18	6	13	A-4a (1)	-	
			5 13 13	37	56	SS-4	4.5+	-	-	-	-	-	-	-	-	10	A-4a (V)	-	
	1039.3																		
VERY DENSE, BROWN AND GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE CLAY, DAMP			13 33 19	74	67	SS-5	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	-	
	1036.8	TR																	
SANDSTONE, BROWN AND GRAY, HIGHLY WEATHERED, SLIGHTLY STRONG.	1035.8		50	-	83	SS-6	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
@15.8' TO 16.3'; COARSE AND FINE SAND SEAM, POSSIBLY SEVERELY WEATHERED SANDSTONE **INTERBEDDED SANDSTONE (84%) AND SHALE (16%)**, BEDDING DISCONTINUITIES: LOW ANGLE, HIGHLY FRACTURED TO FRACTURED, NARROW TO TIGHT, SLIGHTLY ROUGH, BLOCKY/DISTURBED/SEAMY, FAIR SURFACE CONDITION, RQD 0%, REC. 100%; **SANDSTONE**, GRAY, MODERATELY WEATHERED, MODERATELY STRONG, VERY FINE TO FINE GRAINED, THINLY LAMINATED TO LAMINATED; **SHALE**, DARK GRAY TO BLACK, WEAK, FISSILE. @19.9' TO 20.2'; Qu = 4156 PSI	1030.8	EOB	0		100	NQ2-1											CORE		

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 16:44 - C:\USERS\KAREN\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
RETAINING WALL 1
BORING LOGS B-022-1-17 & B-022-2-17

DRAWN EB
CHECKED BPA

PROJECT: SUM-77-277/224
TYPE: RETAINING WALL
PID: 106002 SFN:
START: 7/15/19 END: 7/15/19

DRILLING FIRM / OPERATOR: NEAS / J. HODGES
SAMPLING FIRM / LOGGER: NEAS / J. LITTERAL
DRILLING METHOD: 3.25" HSA / NQ2
SAMPLING METHOD: SPT / NQ2

DRILL RIG: CME 55X
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 11/21/17
ENERGY RATIO (%): 85.4

STATION / OFFSET: 468+91, 1' LT.
ALIGNMENT: IR-77
ELEVATION: 1052.6 (MSL) EOB: 20.0 ft.
LAT / LONG: 41.017812, -81.496434

EXPLORATION ID B-022-3-17
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)	SO4 ppm	BACK FILL
8.0" TOPSOIL (DRILLERS DESCRIPTION)	1051.9																		
MEDIUM DENSE, BROWN, **GRAVEL WITH SAND AND SILT**, TRACE CLAY, CONTAINS TRACE IRON STAINING, DAMP	1048.1		6 6 7	19	56	SS-1	-	23	21	25	21	10	21	15	6	13	A-2-4 (0)	-	
HARD, BROWN BECOMING GRAY, **SANDY SILT**, LITTLE CLAY, LITTLE GRAVEL, DAMP			5 8 12	28	28	SS-2	4.25	-	-	-	-	-	-	-	-	11	A-4a (V)	-	
			6 9 16	36	100	SS-3	4.5+	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
			5 10 12	31	67	SS-4	4.5+	14	9	30	31	16	17	13	4	9	A-4a (2)	-	
	1038.1		5 10 10	28	67	SS-5	4.5+	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
SANDSTONE, GRAY, HIGHLY WEATHERED, MODERATELY STRONG.	1036.1	TR	5 20 21	58	39	SS-6	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
SANDSTONE, GRAY AND BROWN, MODERATELY TO HIGHLY WEATHERED, STRONG WITH WEAK LAYERS, VERY FINE TO MEDIUM GRAINED, VERY THIN BEDDED, CONTAINS INTERBEDDED SHALE LAMINATIONS, BEDDING DISCONTINUITIES: LOW ANGLE, HIGHLY FRACTURED, OPEN TO NARROW, SLIGHTLY ROUGH, BLOCKY/DISTURBED/SEAMY TO DISINTIGRATED, FAIR TO POOR SURFACE CONDITION; RQD 0%, REC 55%.	1032.6	EOB	0		55	NQ2-1											CORE		

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 16:45 - C:\USERS\KAREN\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

PROJECT: SUM-77-277/224
TYPE: RETAINING WALL
PID: 106002 SFN:
START: 7/16/19 END: 7/16/19

DRILLING FIRM / OPERATOR: NEAS / J. HODGES
SAMPLING FIRM / LOGGER: NEAS / J.HODGES
DRILLING METHOD: 3.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: CME 55X
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 11/21/17
ENERGY RATIO (%): 85.4

STATION / OFFSET: 470+75, 2' LT.
ALIGNMENT: IR-77
ELEVATION: 1053.9 (MSL) EOB: 20.5 ft.
LAT / LONG: 41.018307, -81.496558

EXPLORATION ID B-022-4-17
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)	SO4 ppm	BACK FILL
9.0" TOPSOIL (DRILLERS DESCRIPTION)	1053.1																		
HARD, BROWN, **SANDY SILT**, LITTLE CLAY, LITTLE GRAVEL, DAMP	1049.4		2 8 11	27	100	SS-1	4.5+	13	20	24	29	14	22	16	6	12	A-4a (2)	-	
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, TRACE GRAVEL, TRACE SILT, TRACE CLAY, DAMP	1046.9		2 4 4	11	78	SS-2	-	-	-	-	-	-	-	-	-	7	A-3a (V)	-	
LOOSE, BROWN, **GRAVEL WITH SAND AND SILT**, TRACE CLAY, DAMP	1044.4		2 2 2	6	33	SS-3	-	35	20	24	12	9	23	16	7	14	A-2-4 (0)	-	
LOOSE, BROWN, **GRAVEL WITH SAND**, LITTLE SILT, TRACE CLAY, WET	1041.9		1 2 3	7	33	SS-4	-	-	-	-	-	-	-	-	-	17	A-1-b (V)	-	
DENSE TO VERY DENSE, BROWN AND GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, TRACE TO LITTLE CLAY, CONTAINS IRON STAINING, DAMP	1036.9		4 34 10	63	78	SS-5	-	-	-	-	-	-	-	-	-	12	A-2-4 (V)	-	
			5 11 15	37	89	SS-6	-	-	-	-	-	-	-	-	-	12	A-2-4 (V)	-	
SANDSTONE, LIGHT BROWN, HIGHLY WEATHERED, SLIGHTLY STRONG, VERY FINE TO MEDIUM GRAINED, SS-8 CONTAINS INTERBEDDED DARK GRAY SEVERELY WEATHERED VERY WEAK SHALE.	1033.4	TR EOB	17 34 25	84	89	SS-7	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
			15 8 15	33	100	SS-8	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 16:45 - C:\USERS\KAREN\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 471+85, 2' LT. | EXPLORATION ID B-023-1-17
TYPE: RETAINING WALL | SAMPLING FIRM / LOGGER: NEAS / J.HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: IR-77
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 11/21/17 | ELEVATION: 1054.5 (MSL) EOB: 19.4 ft. | PAGE 1 OF 1
START: 7/17/19 END: 7/17/19 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 85.4 | LAT / LONG: 41.018605, -81.496634

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)	SO4 ppm	BACK FILL
9.0" TOPSOIL (DRILLERS DESCRIPTION)	1053.7																		
MEDIUM DENSE TO DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND**, TRACE TO LITTLE SILT, TRACE CLAY, CONTAINS TRACE IRON STAINING, DAMP TO MOIST			2 14 12	37	67	SS-1	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	-	
			1 6 14	28	100	SS-2	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	-	
			4 4 6	14	78	SS-3	-	41	24	17	10	8	NP	NP	NP	12	A-1-b (0)	-	
			2 4 5	13	100	SS-4	-	-	-	-	-	-	-	-	-	16	A-1-b (V)	-	
	1042.5																		
MEDIUM DENSE TO DENSE, BROWN AND ORANGISH BROWN, **COARSE AND FINE SAND**, SOME GRAVEL, LITTLE SILT, TRACE CLAY, CONTAINS IRON STAINING, WET			9 9 9	26	100	SS-5	-	30	11	39	14	6	NP	NP	NP	14	A-3a (0)	-	
			4 11 12	33	78	SS-6	-	-	-	-	-	-	-	-	-	13	A-3a (V)	-	
	1037.5	TR																	
SANDSTONE, LIGHT BROWN AND GRAY, HIGHLY WEATHERED, MODERATELY STRONG.			50/4"	-	75	SS-7	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
	1035.1	EOB	50/5"	-	60	SS-8	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 473+23, 27' RT. | EXPLORATION ID B-023-2-17
TYPE: RETAINING WALL | SAMPLING FIRM / LOGGER: NEAS / J.HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: IR-77 SB
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 11/21/17 | ELEVATION: 1054.9 (MSL) EOB: 20.3 ft. | PAGE 1 OF 1
START: 7/17/19 END: 7/17/19 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 85.4 | LAT / LONG: 41.018986, -81.496733

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)	SO4 ppm	BACK FILL
7.0" TOPSOIL (DRILLERS DESCRIPTION)	1054.3																		
VERY DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE CLAY, CONTAINS TRACE IRON STAINING, DAMP			7 11 50/4"	-	75	SS-1	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	-	
			8 15 21	51	100	SS-2	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	-	
	1047.9																		
DENSE, DARK GRAY AND BROWN, **SANDY SILT**, SOME GRAVEL, SOME CLAY, CONTAINS IRON STAINING, DAMP			9 13 13	37	100	SS-3	-	27	5	13	34	21	27	19	8	11	A-4a (4)	-	
	1044.9	TR																	
SANDSTONE, BROWN AND GRAY, HIGHLY TO MODERATELY WEATHERED, SLIGHTLY TO MODERATELY STRONG.			15 50/3"	-	89	SS-4	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
			50	-	50	SS-5	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
@15.0' TO 16.5'; SS-6 CONTAINS SEVERELY WEATHERED, VERY WEAK SHALE LAYERS			17 12 12	34	100	SS-6	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
			50	-	50	SS-7	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
	1034.6	EOB	50/4"	-	25	SS-8	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 16:45 - C:\USERS\KAREN\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 474+79, 19' RT. | EXPLORATION ID B-024-1-17
TYPE: RETAINING WALL | SAMPLING FIRM / LOGGER: NEAS / J.HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: IR-77 SB
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 11/21/17 | ELEVATION: 1055.2 (MSL) EOB: 19.3 ft. | PAGE 1 OF 1
START: 7/18/19 END: 7/18/19 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 85.4 | LAT / LONG: 41.019407, -81.496846

MATERIAL DESCRIPTION AND NOTES	ELEV. 1055.2	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
9.0" TOPSOIL (DRILLERS DESCRIPTION)	1054.4																		
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, SOME GRAVEL, TRACE SILT, TRACE CLAY, CONTAINS IRON STAINING, DAMP	1050.7		4 7 8	21	44	SS-1	-	-	-	-	-	-	-	-	-	7	A-3a (V)	-	
MEDIUM DENSE, BROWN AND LIGHT BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE CLAY, CONTAINS IRON STAINING, DAMP TO MOIST	1045.7		3 3 5	11	67	SS-2	-	46	21	15	13	5	NP	NP	NP	9	A-1-b (0)	-	
			4 8 8	23	100	SS-3	-	-	-	-	-	-	-	-	-	11	A-1-b (V)	-	
MEDIUM DENSE, GRAY AND ORANGISH BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, LITTLE CLAY, CONTAINS IRON STAINING, DAMP	1042.7		3 9 9	26	78	SS-4	-	-	-	-	-	-	-	-	-	12	A-2-4 (V)	-	
SANDSTONE, LIGHT BROWN, MODERATELY TO HIGHLY WEATHERED, SLIGHTLY TO MODERATELY STRONG.		TR	50	-	50	SS-5	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
			50	-	50	SS-6	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
			15 50	-	17	SS-7	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
	1035.9	EOB	50/3"	-	67	SS-8	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - C:\USERS\KAREN\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ - 11/13/20 16:45 - OH DOT.GDT

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 476+43, 19' RT. | EXPLORATION ID B-024-2-17
TYPE: RETAINING WALL | SAMPLING FIRM / LOGGER: NEAS / J.HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: IR-77 SB
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 11/21/17 | ELEVATION: 1055.9 (MSL) EOB: 15.5 ft. | PAGE 1 OF 1
START: 7/22/19 END: 7/22/19 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 85.4 | LAT / LONG: 41.019842, -81.497012

MATERIAL DESCRIPTION AND NOTES	ELEV. 1055.9	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
18.0" TOPSOIL (DRILLERS DESCRIPTION)	1054.4																		
LOOSE TO MEDIUM DENSE, BROWN AND ORANGISH BROWN, **GRAVEL WITH SAND**, TRACE SILT, TRACE CLAY, CONTAINS IRON STAINING, DAMP TO MOIST	1043.4		3 7 8	21	100	SS-1	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	-	
			2 3 3	9	100	SS-2	-	-	-	-	-	-	-	-	-	5	A-1-b (V)	-	
			2 2 3	7	100	SS-3	-	16	52	24	5	3	NP	NP	NP	8	A-1-b (0)	-	
			3 5 6	16	100	SS-4	-	-	-	-	-	-	-	-	-	14	A-1-b (V)	-	
SANDSTONE, BROWN, MODERATELY WEATHERED, MODERATELY STRONG, FINE GRAINED.		TR	50	-	50	SS-5	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
	1040.4	EOB	50	-	67	SS-6	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - C:\USERS\KAREN\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ - 11/13/20 16:45 - OH DOT.GDT

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
RETAINING WALL 1
BORING LOGS B-024-1-17 & B-024-2-17

DRAWN EB
CHECKED BPA

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZL024.dgn Sheet 1/8/2021 12:56:58 AM karens

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 477+41, 31' LT. | EXPLORATION ID B-024-3-17
TYPE: RETAINING WALL | SAMPLING FIRM / LOGGER: NEAS / J.HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: IR-77 NB
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 11/21/17 | ELEVATION: 1050.1 (MSL) EOB: 5.5 ft. | PAGE 1 OF 1
START: 7/22/19 END: 7/22/19 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 85.4 | LAT / LONG: 41.020092, -81.497031

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)	SO4 ppm	BACK FILL
8.0" TOPSOIL (DRILLERS DESCRIPTION)	1049.4	TR																	
SANDSTONE, BROWN BECOMING GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG, FINE TO COARSE GRAINED.		1–5	50	-	50	SS-1	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
	1044.6	EOB	50	-	50	SS-2	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 477+73, 2' LT. | EXPLORATION ID B-024-4-17
TYPE: RETAINING WALL | SAMPLING FIRM / LOGGER: NEAS / J.HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: IR-77 NB
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA / NQ2 | CALIBRATION DATE: 11/21/17 | ELEVATION: 1047.3 (MSL) EOB: 10.0 ft. | PAGE 1 OF 1
START: 7/23/19 END: 7/23/19 | SAMPLING METHOD: SPT / NQ2 | ENERGY RATIO (%): 85.4 | LAT / LONG: 41.020197, -81.496958

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)	SO4 ppm	BACK FILL
10.0" TOPSOIL (DRILLERS DESCRIPTION)	1046.5																		
BROWN, **STONE FRAGMENTS WITH SAND**, TRACE SILT, TRACE CLAY, **(DRILLERS DESCRIPTION OF CUTTINGS)**	1045.3	TR																	
SANDSTONE, BROWN, HIGHLY WEATHERED, MODERATELY STRONG, VERY FINE TO MEDIUM GRAINED, **(DRILLERS DESCRIPTION OF CUTTINGS)**.	1042.3	1–5																	
SANDSTONE, BROWN, SLIGHTLY WEATHERED, MODERATELY STRONG, VERY FINE TO MEDIUM GRAINED, THIN TO MEDIUM BEDDED, BEDDING DISCONTINUITIES: LOW ANGLE, FRACTURED TO SLIGHTLY FRACTURED, OPEN TO TIGHT, SLIGHTLY ROUGH, BLOCKY, INTACT FROM 6.4' TO 7.8', GOOD SURFACE CONDITION; RQD 42%, REC 100%. @7.4' TO 7.8'; Qu = 5734 PSI	1038.9	5–8	28		87	NQ2-1											CORE		
C																			
COAL, BLACK, MODERATELY TO HIGHLY WEATHERED, VERY WEAK, LAMINATED, FOSSILIFEROUS, BEDDING DISCONTINUITIES: LOW ANGLE, JOINT DISCONTINUITIES: HIGH ANGLE FROM 9.6' TO 10.0', HIGHLY FRACTURED TO FRACTURED, NARROW, SLIGHTLY ROUGH, BLOCKY/DISTURBED/SEAMY, FAIR TO POOR SURFACE CONDITION; RQD 0%, REC 63%.	1037.3	EOB 10																	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 16:45 - C:\USERS\KAREN\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
RETAINING WALL 1
BORING LOGS B-024-3-17 & B-024-4-17

DRAWN EB
CHECKED BPA

PROJECT: SUM-77-277/224
TYPE: RETAINING WALL
PID: 106002 SFN:
START: 10/17/19 END: 10/17/19

DRILLING FIRM / OPERATOR: NEAS / J. HODGES
SAMPLING FIRM / LOGGER: NEAS / J. HODGES
DRILLING METHOD: 3.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: CME 55X
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 11/21/17
ENERGY RATIO (%): 85.4

STATION / OFFSET: 794+14, 4' RT.
ALIGNMENT: RAMP C2
ELEVATION: 1044.1 (MSL) EOB: 20.5 ft.
LAT / LONG: 41.024168, -81.500033

EXPLORATION ID B-033-1-17
PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV. 1044.1	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
VERY STIFF, BROWN AND GRAY, **SANDY SILT**, LITTLE GRAVEL, LITTLE CLAY, CONTAINS TRACE BRICK FRAGMENTS AND TRACE ROOTS, DAMP **(FILL)**			19 32 36	97	100	SS-1	2.25	15	11	37	23	14	19	15	4	11	A-4a (0)	-	
			9 14 18	46	67	SS-2	2.50	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
	1037.1																		
DENSE, BROWN, **COARSE AND FINE SAND**, LITTLE GRAVEL, TRACE SILT, TRACE CLAY, DAMP			8 12 16	40	100	SS-3	-	-	-	-	-	-	-	-	-	12	A-3a (V)	-	
	1034.6																		
HARD, BROWN WITH TRACE GRAY MOTTLES, **SANDY SILT**, SOME CLAY, TRACE TO LITTLE GRAVEL, CONTAINS TRACE IRON STAINING, DAMP TO MOIST			5 7 13	28	100	SS-4	4.5+	2	10	35	32	21	23	14	9	12	A-4a (4)	-	
			3 9 10	27	67	SS-5	4.5+	-	-	-	-	-	-	-	-	15	A-4a (V)	-	
			3 7 9	23	56	SS-6	4.25	-	-	-	-	-	-	-	-	11	A-4a (V)	-	
	1027.1																		
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, SOME SILT, TRACE CLAY, TRACE GRAVEL, DAMP			4 8 8	23	100	SS-7	-	-	-	-	-	-	-	-	-	13	A-3a (V)	-	
	1025.1																		
DENSE, GRAY AND BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, LITTLE CLAY, MOIST	1023.6	▼ 1024.1 EOB	8 13 10	33	100	SS-8	-	-	-	-	-	-	-	-	-	16	A-2-4 (V)	-	

NOTES: GROUNDWATER ENCOUNTERED AT 20.0' DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 16:45 - C:\USERS\KAREN\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
BRIDGE SUM-77-0927R
BORING LOG B-033-1-17

DRAWN EB
CHECKED BPA

PROJECT: SUM-77-277/224
TYPE: BRIDGE
PID: 106002 SFN: 7702649
START: 10/17/19 END: 10/18/19

DRILLING FIRM / OPERATOR: NEAS / ASHBAUGH
SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH
DRILLING METHOD: 3.25" HSA / NQ2
SAMPLING METHOD: SPT / NQ2

DRILL RIG: CME 55T
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 11/21/17
ENERGY RATIO (%): 78.2

STATION / OFFSET: 792+68, 3' RT.
ALIGNMENT: RAMP C2
ELEVATION: 1047.5 (MSL) EOB: 50.3 ft.
LAT / LONG: 41.023927, -81.499612

EXPLORATION ID B-033-2-17
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)	HOLE SEALED
9.0" ASPHALT AND 5.0" BASE (DRILLERS DESCRIPTION)	1047.5																	
MEDIUM DENSE, BROWN, **GRAVEL WITH SAND**, LITTLE SILT, TRACE CLAY, CONTAINS IRON STAINING AND TRACE ASPHALT FRAGMENTS, DAMP **(FILL)**	1046.3		4 7 9	21	56	SS-1	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	
	1043.0		6 4 5	12	67	SS-2	-	39	12	28	13	8	NP	NP	NP	8	A-1-b (0)	
MEDIUM DENSE, BROWN MOTTLED WITH ORANGISH BROWN AND BLACK, **GRAVEL WITH SAND AND SILT**, LITTLE CLAY, CONTAINS IRON STAINING, DAMP	1041.5		9 12 10	29	89	SS-3	-	23	7	41	16	13	NP	NP	NP	11	A-2-4 (0)	
DENSE, BROWN AND GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE CLAY, CONTAINS IRON STAINING, DAMP			10 11 13	31	83	SS-4	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	
	1035.5		9 12 16	36	100	SS-5	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	
DENSE, BROWN, **COARSE AND FINE SAND**, SOME SILT, LITTLE GRAVEL, TRACE CLAY, DAMP	1033.0		10 10 14	31	100	SS-6	-	-	-	-	-	-	-	-	-	8	A-3a (V)	
MEDIUM DENSE TO DENSE, BROWN, **SANDY SILT**, LITTLE GRAVEL, LITTLE CLAY, CONTAINS IRON STAINING, DAMP TO MOIST			10 12 13	33	100	SS-7	-	-	-	-	-	-	-	-	-	11	A-4a (V)	
			11 13 15	36	100	SS-8	-	17	8	33	26	16	NP	NP	NP	11	A-4a (1)	
	1025.5		7 4 5	12	100	SS-9	-	-	-	-	-	-	-	-	-	14	A-4a (V)	
VERY STIFF, GRAY MOTTLED WITH ORANGISH BROWN, **SILTY CLAY**, "AND" SAND, TRACE GRAVEL, CONTAINS IRON STAINING, MOIST	1023.0		5 7 7	18	100	SS-10	2.50	3	7	30	32	28	36	17	19	20	A-6b (9)	
VERY STIFF, BROWN, **SANDY SILT**, LITTLE GRAVEL, LITTLE CLAY, MOIST	1020.5		6 7 13	26	100	SS-11	3.25	-	-	-	-	-	-	-	-	15	A-4a (V)	
MEDIUM DENSE, GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, TRACE TO LITTLE CLAY, DAMP			8 10 13	30	100	SS-12	-	-	-	-	-	-	-	-	-	14	A-2-4 (V)	
			4 7 7	18	56	SS-13	-	30	14	25	21	10	19	16	3	13	A-2-4 (0)	
			6 9 12	27	56	SS-14	-	-	-	-	-	-	-	-	-	10	A-2-4 (V)	
@40.0' TO 40.3'; SS-15 BECOMES VERY DENSE, CONTAINS A RELIC SHALE ROCK STRUCTURE	1007.2	TR	50/4"	-	100	SS-15	-	-	-	-	-	-	-	-	-	10	A-2-4 (V)	
INTERBEDDED SHALE (59%) AND SANDSTONE (41%), BEDDING DISCONTINUITIES: LOW ANGLE, JOINT DISCONTINUITIES: HIGH ANGLE FROM 40.3' - 41.3', 42.7' - 44.8', HIGHLY FRACTURED TO FRACTURED, OPEN TO NARROW, SLIGHTLY ROUGH, BLOCKY/DISTURBED/SEAMY TO DISINTIGRATED, FAIR TO POOR SURFACE CONDITION, RQD 25%, REC. 88%; **SHALE**, DARK GRAY, MODERATELY TO HIGHLY WEATHERED, WEAK TO SLIGHTLY STRONG, LAMINATED, FISSILE; **SANDSTONE**, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG TO STRONG, VERY FINE TO FINE GRAINED, THIN BEDDED, FRACTURED TO SLIGHTLY FRACTURED, SLIGHTLY ROUGH, INTACT, GOOD SURFACE CONDITION. @46.2' TO 46.6'; Qu = 4062 PSI (SANDSTONE)			25		88	NQ2-1											CORE	
	997.2	EOB																

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; PUMPED 70 GAL. BENTONITE GROUT

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 11/19/20 18:33 - C:\USERS\KARENS\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

PROJECT: SUM-77-277/224	DRILLING FIRM / OPERATOR: NEAS / J. HODGES	DRILL RIG: CME 55X	STATION / OFFSET: 791+83, 23' RT.	EXPLORATION ID B-033-3-17
TYPE: BRIDGE	SAMPLING FIRM / LOGGER: NEAS / J. HODGES	HAMMER: CME AUTOMATIC	ALIGNMENT: RAMP C2	
PID: 95831 SFN: 7702649	DRILLING METHOD: 3.25" HSA / NQ2	CALIBRATION DATE: 12/5/19	ELEVATION: 1031.2 (MSL) EOB: 55.0 ft.	PAGE 1 OF 1
START: 3/19/20 END: 3/19/20	SAMPLING METHOD: SPT / NQ2	ENERGY RATIO (%): 81.9	LAT / LONG: 41.023852, -81.499317	

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
STIFF, BROWN, **SANDY SILT**, LITTLE CLAY, LITTLE GRAVEL, DAMP	1031.2		2 3 4	10	100	SS-1	1.50	11	11	23	36	19	25	17	8	17	A-4a (4)	
MEDIUM DENSE TO DENSE, BROWN, **STONE FRAGMENTS WITH SAND** TRACE TO LITTLE SILT, TRACE CLAY, STONE FRAGMENTS ARE FRIABLE SANDSTONE, WET TO MOIST	1028.2		12 13 7	27	17	SS-2	-	-	-	-	-	-	-	-	-	21	A-1-b (V)	
			5 6 7	18	67	SS-3	-	-	-	-	-	-	-	-	-	17	A-1-b (V)	
			6 11 22	45	100	SS-4	-	-	-	-	-	-	-	-	-	18	A-1-b (V)	
MEDIUM DENSE, BROWN AND GRAY, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, DAMP	1020.7		5 8 11	26	50	SS-5	-	-	-	-	-	-	-	-	-	16	A-4a (V)	
			5 12 8	27	100	SS-6	-	4	6	49	29	12	NP	NP	NP	14	A-4a (1)	
			5 8 10	25	100	SS-7	-	-	-	-	-	-	-	-	-	16	A-4a (V)	
HARD, BROWN MOTTLED WITH GRAY AND ORANGISH BROWN, **SILT**, LITTLE SAND, LITTLE CLAY, TRACE GRAVEL, CONTAINS IRON STAINING, DAMP	1013.2		5 5 5	14	100	SS-8	4.50	3	7	13	58	19	27	22	5	20	A-4b (8)	
MEDIUM DENSE TO VERY DENSE, BROWN AND GRAY, **SANDY SILT**, LITTLE TO SOME GRAVEL AND STONE FRAGMENTS, TRACE TO LITTLE CLAY, DAMP	1010.7		3 8 17	34	67	SS-9	-	14	11	33	36	6	NP	NP	NP	15	A-4a (1)	
		W 1007.7	9 6 4	14	22	SS-10	-	-	-	-	-	-	-	-	-	15	A-4a (V)	
			3 5 13	25	33	SS-11	-	-	-	-	-	-	-	-	-	15	A-4a (V)	
@28.5'; BECOMES GRAY			7 9 17	35	56	SS-12	-	-	-	-	-	-	-	-	-	14	A-4a (V)	
			7 13 19	44	100	SS-13	-	-	-	-	-	-	-	-	-	11	A-4a (V)	
	996.7		15 50	-	100	SS-14	-	-	-	-	-	-	-	-	-	10	A-4a (V)	
VERY DENSE, GRAY, **STONE FRAGMENTS WITH SAND AND SILT**, LITTLE CLAY, STONE FRAGMENTS ARE SANDSTONE, MOIST	994.7	TR	50	-	50	SS-15	-	-	-	-	-	-	-	-	-	16	A-2-4 (V)	
INTERBEDDED SANDSTONE (69%) AND SHALE (31%) THICK BEDDED FROM 47.1' - 49.7' AND 53.0' - 55.0', FRIABLE, SILTY FROM 36.5' - 45.0', BEDDING DISCONTINUITIES: LOW ANGLE, JOINT DISCONTINUITIES: HIGH ANGLE FROM 36.8' - 37.4', 37.8', 39.5', 40.2' - 40.8' AND 41.3', MODERATELY FRACTURED TO SLIGHTLY FRACTURED, HIGHLY FRACTURED TO MODERATELY FRACTURED FROM 36.5' - 41.6', OPEN TO NARROW, SLIGHTLY ROUGH, DISINTIGRATED FROM 36.5' - 41.6', INTACT FROM 41.6' - 50.4', BLOCKY/DISTURBED/SEAMY FROM 50.4' - 53.0', INTACT FROM 53.0' - 55.0', FAIR TO GOOD SURFACE CONDITION, RQD 58.8%, REC. 92.8%; **SANDSTONE**, GRAY TO LIGHT GRAY, SLIGHTLY TO MODERATELY WEATHERED, MODERATELY STRONG, VERY FINE TO MEDIUM GRAINED, VERY THIN TO THIN BEDDED; **SHALE**, GRAY TO DARK GRAY, HIGHLY WEATHERED, VERY WEAK, LAMINATED, FISSILE. @37.4' TO 37.8'; Qu = 4548 PSI (SANDSTONE) @42.3' TO 42.7'; Qu = 77 PSI (SHALE)			13		62	NQ2-1											CORE	
			72		100	NQ2-2											CORE	
			77		100	NQ2-3											CORE	
	976.2	EOB	60		100	NQ2-4											CORE	

NOTES: GROUNDWATER ENCOUNTERED AT 23.5' DURING DRILLING. HOLE DID NOT CAVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 150 GAL. BENTONITE GROUT

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 5/8/20 16:31 - X:\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\SUM-77-277-224 (FORMERLY SUM-76-10.95)\GINT FILES\PHASE 2\SUM-77-277-224 PHASE 2.GPJ

NO.	DATE	REVISIONS DESCRIPTION
A	04/27/21	REVISED BORING LOG

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
BRIDGE SUM-77-0927R
BORING LOG B-033-3-17

DRAWN EB
CHECKED BPA

PROJECT: SUM-77-277/224	DRILLING FIRM / OPERATOR: NEAS / J. HODGES	DRILL RIG: CME 55X	STATION / OFFSET: 790+47, 17' RT.	EXPLORATION ID B-033-4-17
TYPE: BRIDGE	SAMPLING FIRM / LOGGER: NEAS / J. HODGES	HAMMER: CME AUTOMATIC	ALIGNMENT: RAMP C2	
PID: 95831 SFN: 7702649	DRILLING METHOD: 3.25" HSA / NQ2	CALIBRATION DATE: 12/5/19	ELEVATION: 1032.5 (MSL) EOB: 55.5 ft.	PAGE 1 OF 1
START: 4/6/20 END: 4/6/20	SAMPLING METHOD: SPT / NQ2	ENERGY RATIO (%): 81.9	LAT / LONG: 41.023721, -81.498886	

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
MEDIUM STIFF TO VERY STIFF, BROWN AND GRAY, **SANDY SILT**, LITTLE GRAVEL, LITTLE CLAY, CONTAINS IRON STAINING, DAMP	1032.5		1 3 4	10	22	SS-1	2.50	-	-	-	-	-	-	-	-	15	A-4a (V)	
	1026.5		2 5 8	18	100	SS-2A	1.00	16	10	33	27	14	21	16	5	14	A-4a (1)	
MEDIUM DENSE TO DENSE, BROWN, **STONE FRAGMENTS WITH SAND** TRACE TO LITTLE SILT, TRACE CLAY, STONE FRAGMENTS ARE FRIABLE SANDSTONE, CONTAINS IRON STAINING, DAMP						SS-2B	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	
	1023.0		5 17 9	35	100	SS-3	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	
LOOSE TO DENSE, BROWN, **STONE FRAGMENTS** SOME SAND, TRACE SILT, TRACE CLAY, STONE FRAGMENTS ARE FRIABLE SANDSTONE, CONTAINS IRON STAINING, MOIST TO WET		▼1021.5	4 9 16	34	100	SS-4	-	-	-	-	-	-	-	-	-	15	A-1-a (V)	
			4 4 4	11	28	SS-5	-	-	-	-	-	-	-	-	-	19	A-1-a (V)	
	1015.5		5 3 4	10	6	SS-6	-	-	-	-	-	-	-	-	-	13	A-1-a (V)	
VERY STIFF, BROWN MOTTLED WITH GRAY AND ORANGISH BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, CONTAINS IRON STAINING, MOIST	1013.0		2 2 5	10	100	SS-7	3.75	7	12	28	34	19	25	15	10	18	A-4a (4)	
MEDIUM DENSE, GRAY AND BROWN, **SILT**, SOME SAND, LITTLE CLAY, TRACE GRAVEL, MOIST	1010.5		2 6 6	16	100	SS-8	-	4	7	18	55	16	NP	NP	NP	17	A-4b (7)	
VERY STIFF TO HARD, GRAY, **SILT AND CLAY**, SOME SAND, TRACE TO LITTLE GRAVEL AND STONE FRAGMENTS, DAMP			4 6 7	18	100	SS-9	4.00	-	-	-	-	-	-	-	-	12	A-6a (V)	
			4 6 7	18	100	SS-10	4.25	14	15	14	36	21	29	18	11	13	A-6a (5)	
			5 8 16	33	100	SS-11	4.50	-	-	-	-	-	-	-	-	11	A-6a (V)	
	1000.5		5 11 17	38	100	SS-12	4.50	-	-	-	-	-	-	-	-	10	A-6a (V)	
VERY DENSE, GRAY, **STONE FRAGMENTS WITH SAND AND SILT**, LITTLE CLAY, STONE FRAGMENTS ARE SILTY SHALE, DAMP	998.5		6 26 38	87	100	SS-13	-	-	-	-	-	-	-	-	-	9	A-2-4 (V)	
SHALE, GRAY, HIGHLY WEATHERED, VERY WEAK TO WEAK, SILTY.	997.0	TR	50	-	33	SS-14	-	-	-	-	-	-	-	-	-	6	Rock (V)	
SHALE, GRAY, MODERATELY WEATHERED, VERY WEAK TO WEAK, THINLY LAMINATED TO VERY THIN, SILTY, FISSILE, BEDDING DISCONTINUITIES: LOW ANGLE, JOINT DISCONTINUITIES: HIGH ANGLE FROM 37.8' - 38.0' AND 38.2' - 38.6', HIGHLY FRACTURED TO MODERATELY FRACTURED, NARROW TO TIGHT, SLIGHTLY ROUGH, BLOCKY, FAIR SURFACE CONDITION; RQD 54.8%, REC 100%. @39.4' TO 39.8'; Qu = 230 PSI	991.6		59		100	NQ2-1											CORE	
INTERBEDDED SANDSTONE (76%) AND SHALE (24%) BEDDING DISCONTINUITIES: LOW ANGLE FROM 40.9' - 48.2', BEDDING DISCONTINUITIES: HIGH ANGLE FROM 48.2' - 55.2', JOINT DISCONTINUITIES: HIGH ANGLE FROM 42.8' - 44.3', HIGHLY FRACTURED TO MODERATELY FRACTURED FROM 40.9' - 51.5', FRACTURED TO SLIGHTLY FRACTURED FROM 51.5' - 55.5', NARROW TO TIGHT, SLIGHTLY ROUGH, BLOCKY, GOOD SURFACE CONDITION, RQD 42%, REC. 98.2%; **SANDSTONE**, LIGHT GRAY AND ORANGISH BROWN, SLIGHTLY WEATHERED, STRONG, FINE TO MEDIUM GRAINED, MEDIUM TO LAMINATED BEDDING, FRIABLE; **SHALE**, GRAY, MODERATELY WEATHERED, VERY WEAK TO WEAK, FISSILE. @44.9' TO 45.3'; Qu = 9236 PSI (SANDSTONE)			20		95	NQ2-2											CORE	
			35		100	NQ2-3											CORE	
			68		100	NQ2-4											CORE	
	977.0	EOB																

NOTES: GROUNDWATER ENCOUNTERED AT 11.0' DURING DRILLING. HOLE DID NOT CAVE. NO WATER CIRCULATION DURING CORING OPERATIONS.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 85 GAL. BENTONITE GROUT

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT GDT - 5/8/20 16:31 - X:\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\SUM-77-277-224 (FORMERLY SUM-76-10.95)\GINT FILES\PHASE 2\SUM-77-277-224 PHASE 2.GPJ

NO.	DATE	REVISIONS DESCRIPTION
A	04/27/21	REVISED BORING LOG

136/209

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
BRIDGE SUM-77-0927R
BORING LOG B-033-4-17

DRAWN EB
CHECKED BPA

PROJECT: SUM-77-277/224	DRILLING FIRM / OPERATOR: NEAS / ASHBAUGH	DRILL RIG: CME 55T	STATION / OFFSET: 789+27, 18' LT.	EXPLORATION ID B-033-5-17
TYPE: BRIDGE	SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH	HAMMER: CME AUTOMATIC	ALIGNMENT: RAMP C2	
PID: 106002 SFN: 7702649	DRILLING METHOD: 3.25" HSA / NQ2	CALIBRATION DATE: 11/21/17	ELEVATION: 1061.6 (MSL) EOB: 40.0 ft.	PAGE 1 OF 1
START: 10/17/19 END: 10/22/19	SAMPLING METHOD: SPT / NQ2	ENERGY RATIO (%): 78.2	LAT / LONG: 41.023629, -81.498450	

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
9.0" ASPHALT AND 5.0" BASE (DRILLERS DESCRIPTION)	1061.6																	
	1060.4																	
VERY STIFF TO HARD, BROWN BECOMING BROWN AND GRAY, **SANDY SILT**, LITTLE TO SOME CLAY, TRACE TO LITTLE GRAVEL, DAMP			6 5 5	13	78	SS-1	4.5+	9	7	26	34	24	24	16	8	13	A-4a (5)	
			5 4 5	12	89	SS-2	4.50	14	6	24	36	20	23	16	7	14	A-4a (4)	
			5 5 5	13	67	SS-3	4.50	-	-	-	-	-	-	-	-	13	A-4a (V)	
@6.0' TO 7.5'; SS-4 BECOMES GRAY, SOME GRAVEL AND STONE FRAGMENTS			5 6 6	16	78	SS-4	2.25	-	-	-	-	-	-	-	-	13	A-4a (V)	
			5 7 5	16	72	SS-5	3.50	15	6	28	30	21	23	15	8	13	A-4a (3)	
			8 8 10	23	83	SS-6	4.5+	-	-	-	-	-	-	-	-	11	A-4a (V)	
			5 6 8	18	89	SS-7	3.00	14	8	23	33	22	25	16	9	13	A-4a (4)	
@17.5' TO 19.0'; SS-8 BECOMES GRAY MOTTLED WITH BLACK, CONTAINS TRACE COAL FRAGMENTS			6 7 10	22	78	SS-8	3.25	-	-	-	-	-	-	-	-	14	A-4a (V)	
	1042.1																	
MEDIUM DENSE, GRAY AND BLACK, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, LITTLE CLAY, CONTAINS TRACE COAL FRAGMENTS, DAMP			5 7 7	18	33	SS-9	-	-	-	-	-	-	-	-	-	12	A-2-4 (V)	
	1039.6																	
HARD, ORANGISH BROWN MOTTLED WITH GRAY, **SILT AND CLAY**, SOME SAND, TRACE GRAVEL, CONTAINS IRON STAINING AND ROOTS, DAMP			6 7 10	22	78	SS-10	4.5+	5	10	25	35	25	28	17	11	14	A-6a (5)	
			8 10 10	26	89	SS-11	4.5+	-	-	-	-	-	-	-	-	12	A-6a (V)	
	1034.6	TR																
SHALE, DARK GRAY, HIGHLY WEATHERED, SLIGHTLY STRONG.			50/2"	-	100	SS-12	-	-	-	-	-	-	-	-	-	15	Rock (V)	
	1031.6																	
INTERBEDDED SANDSTONE (60%) AND SHALE (40%), BEDDING DISCONTINUITIES: LOW ANGLE, HIGHLY FRACTURED TO MODERATELY FRACTURED, MODERATELY FRACTURED TO SLIGHTLY FRACTURED FROM 30.3' - 35.2', OPEN TO NARROW, SLIGHTLY ROUGH, INTACT TO BLOCKY, DISINTIGRATED FROM 30.0' - 30.3', GOOD SURFACE CONDITION, RQD 54%, REC. 96%; **SANDSTONE**, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG TO STRONG, VERY FINE TO FINE GRAINED, THIN TO MEDIUM BEDDED; **SHALE**, DARK GRAY, MODERATELY WEATHERED, EXTREMELY WEAK TO WEAK, LAMINATED, FISSILE. @30.4' TO 30.8'; Qu = 7991 PSI (SANDSTONE) @34.8' TO 35.2'; Qu = 38 PSI (SHALE)			54		96	NQ2-1											CORE	
	1021.6	EOB																

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; PUMPED 45 GAL. BENTONITE GROUT; POURED 1 BAG HOLE PLUG

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 11/19/20 18:33 - C:\USERS\KARENS\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

137/209	**SUM-77/277/224 VARIOUS**	**STRUCTURE FOUNDATION EXPLORATION BRIDGE SUM-77-0927R BORING LOG B-033-5-17**	DRAWN EB / CHECKED BPA

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 10+33, 13' RT. | EXPLORATION ID B-055-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL E
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1024.5 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 3/17/20 END: 3/17/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.010739, -81.495015

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)	SO4 ppm	BACK FILL
6.0" ASPHALT AND 6.0" BASE (DRILLERS DESCRIPTION)	1024.5																		
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, SOME GRAVEL, LITTLE SILT, TRACE CLAY, CONTAINS IRON STAINING, DAMP	1023.5		3 5 7	16	100	SS-1	-	-	-	-	-	-	-	-	-	13	A-3a (V)	-	
HARD, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, CONTAINS IRON STAINING, DAMP	1021.5		4 9 7	22	67	SS-2	4.50	6	13	30	37	14	20	14	6	12	A-4a (3)	-	
			4 8 9	23	33	SS-3	4.50	-	-	-	-	-	-	-	-	13	A-4a (V)	-	
DENSE, BROWN, **GRAVEL WITH SAND**, LITTLE SILT, TRACE CLAY, CONTAINS IRON STAINING, DAMP	1016.5		3 12 13	34	22	SS-4	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	-	
MEDIUM DENSE, DARK GRAYISH BROWN AND BROWN, **GRAVEL WITH SAND AND SILT**, LITTLE CLAY, CONTAINS IRON STAINING, DAMP	1014.0		4 5 8	18	33	SS-5	-	-	-	-	-	-	-	-	-	14	A-2-4 (V)	-	
			2 7 6	18	100	SS-6	-	24	18	26	20	12	NP	NP	NP	12	A-2-4 (0)	-	
	1006.5		5 7 9	22	56	SS-7	-	-	-	-	-	-	-	-	-	10	A-2-4 (V)	-	
MEDIUM DENSE TO DENSE, BROWN, **STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE CLAY, CONTAINS IRON STAINING, DAMP			8 12 13	34	33	SS-8	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	-	
	1001.5		8 10 8	25	33	SS-9	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	-	
HARD, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, CONTAINS IRON STAINING, DAMP	999.5	EOB	6 8 8	22	39	SS-10	4.50	2	6	26	46	20	21	15	6	14	A-4a (6)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 12+40, 14' RT. | EXPLORATION ID B-056-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL E
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1026.8 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 3/17/20 END: 3/17/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.011300, -81.495128

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)	SO4 ppm	BACK FILL
MEDIUM STIFF TO STIFF, BROWN AND DARK GRAY, **SILT AND CLAY**, "AND" SAND, TRACE GRAVEL, SS-1 CONTAINS ASPHALT FRAGMENTS, DAMP	1026.8		2 4 8	16	22	SS-1	1.00	-	-	-	-	-	-	-	-	11	A-6a (V)	-	
	1022.3		3 8 8	22	67	SS-2A	1.25	10	12	28	32	18	27	16	11	15	A-6a (3)	-	
MEDIUM DENSE, ORANGISH BROWN, **COARSE AND FINE SAND**, LITTLE GRAVEL AND STONE FRAGMENTS, TRACE SILT, TRACE CLAY, CONTAINS IRON STAINING, MOIST	1021.3					SS-2B	-	-	-	-	-	-	-	-	-	12	A-3a (V)	-	
HARD, BROWN, **SANDY SILT**, LITTLE TO SOME GRAVEL AND STONE FRAGMENTS, LITTLE CLAY, CONTAINS IRON STAINING, DAMP			3 7 8	20	100	SS-3	4.50	-	-	-	-	-	-	-	-	11	A-4a (V)	-	
			3 8 8	22	33	SS-4	4.25	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
			4 5 6	15	100	SS-5	4.50	11	12	31	30	16	21	15	6	12	A-4a (2)	-	
			5 5 12	23	100	SS-6	4.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
	1008.8		4 6 8	19	56	SS-7	4.50	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
MEDIUM DENSE, BROWN AND ORANGISH BROWN, **COARSE AND FINE SAND**, SOME GRAVEL AND STONE FRAGMENTS, LITTLE SILT, TRACE CLAY, CONTAINS IRON STAINING, DAMP			7 6 8	19	100	SS-8	-	-	-	-	-	-	-	-	-	11	A-3a (V)	-	
			7 9 6	20	67	SS-9	-	-	-	-	-	-	-	-	-	11	A-3a (V)	-	
	1001.8	EOB	4 7 9	22	50	SS-10	-	-	-	-	-	-	-	-	-	10	A-3a (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:36 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
BARRIER E
BORING LOGS B-055-0-17 & B-056-0-17

DRAWN EB
CHECKED BPA

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 14+35, 7' RT. | EXPLORATION ID B-057-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL E
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1035.9 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 3/25/20 END: 3/25/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.011760, -81.495459

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)	SO4 ppm	BACK FILL
VERY STIFF, BROWN, **SANDY SILT**, LITTLE TO SOME GRAVEL, TRACE TO LITTLE CLAY, CONTAINS IRON STAINING, DAMP	1035.9	0	2 3 4	10	100	SS-1	2.50	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
		5	2 6 5	15	56	SS-2	3.00	34	13	16	27	10	31	21	10	15	A-4a (0)	-	
MEDIUM DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, LITTLE CLAY, CONTAINS IRON STAINING, DAMP	1030.4	10	4 11 5	22	78	SS-3	-	-	-	-	-	-	-	-	-	14	A-2-4 (V)	-	
STIFF TO VERY STIFF, BROWN, **SANDY SILT**, SOME GRAVEL, LITTLE CLAY, CONTAINS IRON STAINING, DAMP	1027.9	15	3 6 6	16	22	SS-4	2.00	23	21	19	25	12	25	18	7	14	A-4a (0)	-	
LOOSE TO MEDIUM DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE CLAY, CONTAINS IRON STAINING, DAMP	1025.4	20	7 6 5	15	67	SS-5	-	-	-	-	-	-	-	-	-	11	A-1-b (V)	-	
		25	2 7 8	20	33	SS-6	-	-	-	-	-	-	-	-	-	11	A-1-b (V)	-	
		30	2 2 3	7	44	SS-7	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	-	
@18.5' TO 25.0'; SS-8 TO SS-9 BECOME DENSE TO VERY DENSE		35	11 12 17	40	67	SS-8	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	-	
		40	8 15 19	46	100	SS-9	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	-	
	1010.9	EOB 45	10 17 20	51	50	SS-10	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:36 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 16+61, 15' RT. | EXPLORATION ID B-058-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL E
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1034.8 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 3/25/20 END: 3/25/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.012373, -81.495582

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)	SO4 ppm	BACK FILL
MEDIUM DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, TRACE CLAY, CONTAINS IRON STAINING, DAMP	1034.8	0	3 6 8	19	28	SS-1	-	-	-	-	-	-	-	-	-	15	A-2-4 (V)	-	
		5	3 5 3	11	39	SS-2	-	45	17	20	12	6	29	19	10	12	A-2-4 (0)	-	
VERY LOOSE TO LOOSE, BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE CLAY, CONTAINS IRON STAINING, DAMP	1029.3	10	3 2 2	5	44	SS-3	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	-	
		15	2 2 1	4	67	SS-4	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	-	
		20	2 2 3	7	44	SS-5	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	-	
@13.5' TO 20.0'; SS-6 TO SS-8 BECOME MEDIUM DENSE		25	2 6 10	22	100	SS-6	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	-	
		30	8 11 11	30	78	SS-7	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	-	
		35	10 10 10	27	100	SS-8	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	-	
@21.0' TO 25.0'; SS-9 AND SS-10 BECOME DENSE		40	10 15 20	48	94	SS-9	-	-	-	-	-	-	-	-	-	6	A-1-b (V)	-	
	1009.8	EOB 45	5 19 16	48	33	SS-10	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:36 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
BARRIER E
BORING LOGS B-057-0-17 & B-058-0-17

DRAWN EB
CHECKED BPA

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 17+90, 16' RT. | EXPLORATION ID B-059-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL E
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1034.5 (MSL) EOB: 24.5 ft. | PAGE 1 OF 1
START: 3/25/20 END: 3/25/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.012723, -81.495662

MATERIAL DESCRIPTION AND NOTES	ELEV. 1034.5	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
VERY STIFF, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, CONTAINS TRACE ROOTS, DAMP		1	5 5 6	15	44	SS-1	2.25	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
	1031.5	2																	
MEDIUM STIFF TO STIFF, BROWN, **SILT AND CLAY**, "AND" SAND, TRACE GRAVEL, DAMP		3																	
	1029.0	4	3 4 6	14	44	SS-2	1.00	9	11	30	34	16	30	17	13	17	A-6a (4)	-	
MEDIUM DENSE TO DENSE, BROWN AND GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND**, TRACE TO LITTLE SILT, TRACE CLAY, ENCOUNTERED COBBLES DURING DRILLING, DAMP		5																	
		6	4 7 7	19	44	SS-3	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	-	
		7																	
		8																	
		9	6 10 12	30	33	SS-4	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	-	
		10																	
		11																	
		12	7 11 14	34	28	SS-5	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	-	
		13																	
@13.5'; SS-6 CONTAINS STONE FRAGMENTS GREATER THAN 1.25"		14	11 12 19	42	11	SS-6	-	-	-	-	-	-	-	-	-	0	A-1-b (V)	-	
		15																	
		16																	
		17	10 16 19	48	100	SS-7	-	-	-	-	-	-	-	-	-	6	A-1-b (V)	-	
		18																	
@18.5' TO 24.5'; SS-8 TO SS-10 BECOME VERY DENSE		19	10 26 50	104	67	SS-8	-	-	-	-	-	-	-	-	-	6	A-1-b (V)	-	
		20																	
		21																	
		22	15 29 32	83	39	SS-9	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	-	
		23																	
	1010.0	24	15 50	-	75	SS-10	-	-	-	-	-	-	-	-	-	3	A-1-b (V)	-	
		EOB																	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:36 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 19+98, 19' RT. | EXPLORATION ID B-060-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL E
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1034.6 (MSL) EOB: 24.5 ft. | PAGE 1 OF 1
START: 3/25/20 END: 3/25/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.013285, -81.495778

MATERIAL DESCRIPTION AND NOTES	ELEV. 1034.6	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
HARD, BROWN, **SILT AND CLAY**, SOME SAND, LITTLE GRAVEL, CONTAINS IRON STAINING, DAMP		1	5 5 6	15	100	SS-1	4.50	14	8	21	37	20	33	18	15	15	A-6a (6)	-	
	1031.6	2																	
MEDIUM DENSE TO DENSE, BROWN AND GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND**, TRACE TO LITTLE SILT, TRACE CLAY, CONTAINS IRON STAINING, ENCOUNTERED COBBLES DURING DRILLING, DAMP		3																	
		4	8 6 6	16	67	SS-2	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	-	
		5																	
		6																	
		7	5 5 5	14	100	SS-3	-	-	-	-	-	-	-	-	-	11	A-1-b (V)	-	
		8																	
		9	5 6 5	15	33	SS-4	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	-	
		10																	
		11																	
		12	12 14 17	42	39	SS-5	-	-	-	-	-	-	-	-	-	6	A-1-b (V)	-	
		13																	
		14	19 15 15	41	50	SS-6	-	49	14	24	11	2	NP	NP	NP	6	A-1-b (0)	-	
		15																	
		16																	
		17	3 6 6	16	44	SS-7	-	-	-	-	-	-	-	-	-	6	A-1-b (V)	-	
		18																	
		19	4 8 8	22	11	SS-8	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	-	
		20																	
		21																	
		22	12 17 19	49	56	SS-9	-	-	-	-	-	-	-	-	-	5	A-1-b (V)	-	
		23																	
23.5'; SS-10 BECOMES VERY DENSE	1010.1	24	14 50	-	17	SS-10	-	-	-	-	-	-	-	-	-	3	A-1-b (V)	-	
		EOB																	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:36 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
BARRIER E
BORING LOGS B-059-0-17 & B-060-0-17

DRAWN EB
CHECKED BPA

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 22+17, 12' RT. | EXPLORATION ID B-061-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL E
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1034.4 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 3/24/20 END: 3/24/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.013876, -81.495917

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)	SO4 ppm	BACK FILL
STIFF, BROWN, **SILT AND CLAY**, SOME SAND, SOME GRAVEL, CONTAINS IRON STAINING AND TRACE ROOTS, DAMP	1034.4		5 5 5	14	56	SS-1	1.75	22	13	21	28	16	30	17	13	15	A-6a (3)	-	
LOOSE TO MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, SOME GRAVEL, TRACE TO LITTLE SILT, TRACE CLAY, DAMP TO MOIST	1031.4		3 4 5	12	33	SS-2	-	-	-	-	-	-	-	-	-	9	A-3a (V)	-	
			4 4 5	12	56	SS-3	-	-	-	-	-	-	-	-	-	12	A-3a (V)	-	
			5 3 3	8	39	SS-4	-	-	-	-	-	-	-	-	-	6	A-3a (V)	-	
			6 5 3	11	56	SS-5	-	-	-	-	-	-	-	-	-	8	A-3a (V)	-	
DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE CLAY, DAMP	1021.4		5 7 19	35	100	SS-6	-	43	15	21	15	6	NP	NP	NP	8	A-1-b (0)	-	
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, TRACE SILT, TRACE GRAVEL, TRACE CLAY, DAMP	1018.9		5 5 5	14	100	SS-7	-	-	-	-	-	-	-	-	-	7	A-3a (V)	-	
			6 6 5	15	100	SS-8	-	-	-	-	-	-	-	-	-	8	A-3a (V)	-	
			6 5 10	20	100	SS-9	-	-	-	-	-	-	-	-	-	4	A-3a (V)	-	
VERY DENSE, BROWN AND GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE CLAY, DAMP	1011.4		16 26 28	74	44	SS-10	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	-	
	1009.4	EOB																	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:36 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 24+06, 8' RT. | EXPLORATION ID B-062-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL E
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1036.0 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 3/24/20 END: 3/24/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.014388, -81.496030

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)	SO4 ppm	BACK FILL
VERY STIFF, BROWN, **SANDY SILT**, "AND" GRAVEL, TRACE CLAY, DAMP	1036.0		7 10 9	26	78	SS-1	3.00	36	10	18	26	10	30	21	9	13	A-4a (0)	-	
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, LITTLE TO SOME GRAVEL, TRACE SILT, TRACE CLAY, DAMP	1033.0		4 6 4	14	22	SS-2	-	-	-	-	-	-	-	-	-	8	A-3a (V)	-	
			3 4 4	11	33	SS-3	-	-	-	-	-	-	-	-	-	7	A-3a (V)	-	
			3 4 6	14	56	SS-4	-	-	-	-	-	-	-	-	-	9	A-3a (V)	-	
			4 4 6	14	100	SS-5	-	-	-	-	-	-	-	-	-	9	A-3a (V)	-	
MEDIUM DENSE TO DENSE, BROWN AND GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND**, TRACE TO LITTLE SILT, TRACE CLAY, CONTAINS IRON STAINING, DAMP	1023.0		20 10 12	30	100	SS-6	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	-	
			10 15 15	41	56	SS-7	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	-	
			18 12 19	42	67	SS-8	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	-	
			9 16 13	40	39	SS-9	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	-	
			14 17 15	44	100	SS-10	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	-	
	1011.0	EOB																	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:36 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 25+77, 9' RT. | EXPLORATION ID B-063-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL E
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1036.5 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 3/24/20 END: 3/24/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.014855, -81.496130

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)	SO4 ppm	BACK FILL
MEDIUM DENSE, BROWN, **GRAVEL WITH SAND AND SILT**, LITTLE CLAY, CONTAINS ROOT HAIRS AND TRACE IRON STAINING, DAMP	1036.5		3 4 4	11	78	SS-1	-	16	16	38	19	11	22	15	7	13	A-2-4 (0)	-	
MEDIUM DENSE TO DENSE, BROWN, **COARSE AND FINE SAND**, LITTLE TO SOME SILT, TRACE GRAVEL, TRACE CLAY, MOIST TO WET	1033.5		3 9 11	27	22	SS-2	-	-	-	-	-	-	-	-	-	14	A-3a (V)	-	
			5 11 18	40	33	SS-3	-	-	-	-	-	-	-	-	-	15	A-3a (V)	-	
			4 5 6	15	56	SS-4	-	-	-	-	-	-	-	-	-	18	A-3a (V)	-	
			4 5 6	15	100	SS-5	-	-	-	-	-	-	-	-	-	26	A-3a (V)	-	
MEDIUM DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE CLAY, CONTAINS IRON STAINING, DAMP	1023.5		2 8 6	19	100	SS-6	-	-	-	-	-	-	-	-	-	11	A-1-b (V)	-	
			4 6 6	16	56	SS-7	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	-	
			8 7 6	18	67	SS-8	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	-	
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, TRACE SILT, TRACE GRAVEL, TRACE CLAY, DAMP	1016.0		12 6 6	16	39	SS-9	-	-	-	-	-	-	-	-	-	6	A-3a (V)	-	
	1011.5	EOB	4 4 4	11	100	SS-10	-	-	-	-	-	-	-	-	-	6	A-3a (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 27+57, 8' RT. | EXPLORATION ID B-064-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL E
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1043.2 (MSL) EOB: 24.5 ft. | PAGE 1 OF 1
START: 3/25/20 END: 3/25/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.015337, -81.496270

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)	SO4 ppm	BACK FILL
VERY STIFF, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, CONTAINS IRON STAINING, DAMP	1043.2		4 8 13	29	67	SS-1	2.75	10	5	48	26	11	21	16	5	13	A-4a (0)	-	
DENSE TO VERY DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE CLAY, DAMP	1040.2		7 15 15	41	100	SS-2	-	-	-	-	-	-	-	-	-	11	A-1-b (V)	-	
			2 20 19	53	33	SS-3	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	-	
MEDIUM DENSE TO DENSE, BROWN, **COARSE AND FINE SAND**, SOME SILT, LITTLE GRAVEL, TRACE CLAY, DAMP TO MOIST	1035.2		4 19 17	49	22	SS-4	-	-	-	-	-	-	-	-	-	7	A-3a (V)	-	
			4 7 9	22	28	SS-5	-	15	6	47	22	10	NP	NP	NP	11	A-3a (0)	-	
VERY DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE CLAY, STONE FRAGMENTS ARE FRIABLE SANDSTONE, DAMP	1030.2		50	-	83	SS-6	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	-	
MEDIUM DENSE, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, CONTAINS TRACE ROOT HAIRS, DAMP	1027.7		3 4 7	15	22	SS-7	-	-	-	-	-	-	-	-	-	11	A-4a (V)	-	
VERY DENSE, GRAY, **SANDY SILT**, LITTLE CLAY, LITTLE GRAVEL AND STONE FRAGMENTS, CONTAINS A RELIC SHALE ROCK STRUCTURE, DAMP	1025.2		9 24 50	101	67	SS-8	-	15	6	10	49	20	NP	NP	NP	7	A-4a (7)	-	
			27 50	-	33	SS-9	-	-	-	-	-	-	-	-	-	4	A-4a (V)	-	
VERY DENSE, BROWN AND GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, LITTLE CLAY, MOIST	1020.2 1018.7	▼ 1019.7 EOB	37 50	-	75	SS-10	-	-	-	-	-	-	-	-	-	13	A-2-4 (V)	-	

NOTES: GROUNDWATER ENCOUNTERED AT 23.5' DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:36 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 29+77, 12' RT. | EXPLORATION ID B-065-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL E
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1055.8 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 4/17/20 END: 4/17/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.015924, -81.496446

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)	SO4 ppm	BACK FILL
STIFF TO VERY STIFF, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, CONTAINS ROOTS, MOIST	1055.8		2 3 4	10	67	SS-1	2.00	2	3	30	49	16	23	18	5	19	A-4a (6)	-	
DENSE TO VERY DENSE, LIGHT BROWN, **STONE FRAGMENTS WITH SAND**, TRACE SILT, TRACE CLAY, STONE FRAGMENTS ARE FRIABLE SANDSTONE, DAMP	1052.8		12 15 24	53	100	SS-2	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	-	
			7 11 14	34	67	SS-3	-	-	-	-	-	-	-	-	-	11	A-1-b (V)	-	
			8 19 17	49	100	SS-4	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	-	
HARD, BLACK WITH DARK BROWN AND ORANGISH BROWN, **ELASTIC CLAY**, SOME SILT, SOME SAND, LITTLE STONE FRAGMENTS, CONTAINS A RELIC SHALE ROCK STRUCTURE, CONTAINS IRON STAINING, DAMP	1045.3		4 7 10	23	78	SS-5	4.50	14	17	15	32	22	43	30	13	20	A-7-5 (5)	-	
			4 7 10	23	56	SS-6	4.50	-	-	-	-	-	-	-	-	12	A-7-5 (V)	-	
	1037.3		6 11 23	46	67	SS-7	4.50	-	-	-	-	-	-	-	-	14	A-7-5 (V)	-	
SHALE, GRAY, SEVERELY WEATHERED, VERY WEAK TO WEAK, FISSILE.		TR	18 24 50	101	83	SS-8	-	-	-	-	-	-	-	-	-	13	Rock (V)	-	
			10 24 32	76	78	SS-9	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
@23.5'; SS-10 CONTAINS NO RECOVERY	1030.8	EOB	14 30 28	79	0	SS-10	-	-	-	-	-	-	-	-	-	-		-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:36 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 31+94, 22' RT. | EXPLORATION ID B-066-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL E
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1059.7 (MSL) EOB: 13.8 ft. | PAGE 1 OF 1
START: 4/17/20 END: 4/20/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.016512, -81.496570

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)	SO4 ppm	BACK FILL
VERY STIFF, GRAY, **SANDY SILT**, LITTLE CLAY, TRACE STONE FRAGMENTS, CONTAINS A RELIC SHALE ROCK STRUCTURE, CONTAINS ROOTS, DAMP	1059.7		2 3 4	10	89	SS-1	2.50	9	9	19	46	17	35	25	10	15	A-4a (6)	-	
SANDSTONE, BROWN BECOMING LIGHT GRAY, HIGHLY WEATHERED, SLIGHTLY TO MODERATELY STRONG, FINE TO MEDIUM GRAINED, FRIABLE.	1056.7	TR	50	-	67	SS-2	-	-	-	-	-	-	-	-	-	7	Rock (V)	-	
			50	-	67	SS-3	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
			50/4"	-	75	SS-4	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
			50/5"	-	80	SS-5	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
	1045.9	EOB	50/3"	-	67	SS-6	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:36 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
BARRIER E
BORING LOGS B-065-0-17 & B-066-0-17

DRAWN EB
CHECKED BPA

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 33+18, 13' RT. | EXPLORATION ID B-067-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL E
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1053.1 (MSL) EOB: 23.8 ft. | PAGE 1 OF 1
START: 4/20/20 END: 4/20/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.016843, -81.496683

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)	SO4 ppm	BACK FILL
STIFF, BROWN, **SILT AND CLAY**, SOME SAND, TRACE GRAVEL, CONTAINS TRACE ROOT HAIRS, MOIST	1053.1		2 2 4	8	100	SS-1	1.50	0	4	17	53	26	33	20	13	21	A-6a (9)	-	
VERY STIFF, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, CONTAINS TRACE ROOT HAIRS, MOIST	1050.1		2 3 4	10	100	SS-2	2.25	0	4	37	43	16	25	17	8	18	A-4a (5)	-	
SANDSTONE, BROWN, HIGHLY WEATHERED, MODERATELY STRONG, VERY FINE TO MEDIUM GRAINED, CONTAINS INTERBEDDED SHALE LAYERS.	1047.1	TR	9 50	-	83	SS-3	-	-	-	-	-	-	-	-	-	7	Rock (V)	-	
			50	-	67	SS-4	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
			50/5"	-	80	SS-5	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
			50/5"	-	80	SS-6	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
SHALE, DARK GRAY, HIGHLY WEATHERED, WEAK, FISSILE.	1037.6		6 18 50	93	67	SS-7	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
SANDSTONE, GRAY, HIGHLY WEATHERED, SLIGHTLY STRONG TO STRONG, VERY FINE TO MEDIUM GRAINED, CONTAINS INTERBEDDED SHALE LAYERS.	1035.1		50/3"	-	67	SS-8	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
			50/4"	-	0	SS-9	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
	1029.3	EOB	50/3"	-	67	SS-10	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE. BORING OFFSET 4' EAST DUE TO OVERHEAD OBSTRUCTION.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:36 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 34+32, 5' RT. | EXPLORATION ID B-068-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL E
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1062.1 (MSL) EOB: 23.8 ft. | PAGE 1 OF 1
START: 4/20/20 END: 4/20/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.017304, -81.496787

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)	SO4 ppm	BACK FILL
STIFF TO VERY STIFF, BROWN MOTTLED WITH GRAY AND ORANGISH BROWN, **SILT AND CLAY**, "AND" SAND, TRACE GRAVEL, CONTAINS IRON STAINING AND ROOTS, MOIST	1062.1		2 3 3	8	100	SS-1	2.50	-	-	-	-	-	-	-	-	24	A-6a (V)	-	
MEDIUM DENSE, BROWN WITH GRAY AND ORANGISH BROWN, **COARSE AND FINE SAND**, SOME SILT, TRACE CLAY, TRACE GRAVEL, CONTAINS IRON STAINING, WET	1056.6		2 4 3	10	100	SS-2	1.75	0	5	33	40	22	31	16	15	21	A-6a (7)	-	
	1054.1		2 4 4	11	100	SS-3	-	-	-	-	-	-	-	-	-	21	A-3a (V)	-	
HARD, BROWN AND GRAY, **SILT AND CLAY**, SOME SAND, TRACE GRAVEL AND STONE FRAGMENTS, CONTAINS IRON STAINING, DAMP	1049.6	TR	5 16 25	56	100	SS-4	4.50	-	-	-	-	-	-	-	-	9	A-6a (V)	-	
			9 19 21	55	100	SS-5	4.50	2	12	11	54	21	32	21	11	9	A-6a (8)	-	
SHALE, DARK GRAY, SEVERELY TO HIGHLY WEATHERED, WEAK, FISSILE.	1044.1		7 17 25	57	78	SS-6	-	-	-	-	-	-	-	-	-	11	Rock (V)	-	
			50	-	33	SS-7	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
SANDSTONE, GRAY, MODERATELY WEATHERED, MODERATELY STRONG TO STRONG. @18.5'; SS-8 CONTAINS NO RECOVERY			50/2"	-	0	SS-8	-	-	-	-	-	-	-	-	-	-		-	
			50/4"	-	50	SS-9	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
	1038.3	EOB	50/4"	-	25	SS-10	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE. BORING OFFSET 54' SOUTH DUE TO DRAINAGE DITCH.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:36 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
BARRIER E
BORING LOGS B-067-0-17 & B-068-0-17

DRAWN EB
CHECKED BPA

PROJECT: SUM-77-277/224	DRILLING FIRM / OPERATOR: NEAS / J. HODGES	DRILL RIG: CME 55X	STATION / OFFSET: 36+63, 2' LT.	EXPLORATION ID B-069-0-17
TYPE: UNDERGROUND MINE	SAMPLING FIRM / LOGGER: NEAS / J. HODGES	HAMMER: CME AUTOMATIC	ALIGNMENT: NOISE WALL E	
PID: 106002 SFN:	DRILLING METHOD: 3.25" HSA / NQ2	CALIBRATION DATE: 12/5/19	ELEVATION: 1066.5 (MSL) EOB: 60.0 ft.	PAGE 1 OF 1
START: 4/30/20 END: 4/30/20	SAMPLING METHOD: SPT / NQ2	ENERGY RATIO (%): 81.9	LAT / LONG: 41.017764, -81.496965	

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)	SO4 ppm	HOLE SEALED
VERY STIFF TO HARD, BROWN BECOMING BROWN AND GRAY, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL AND STONE FRAGMENTS, CONTAINS TRACE IRON STAINING, DAMP TO MOIST	1066.5		6 12 12	33	100	SS-1	4.50	-	-	-	-	-	-	-	-	13	A-4a (V)	-	
			8 8 8	22	100	SS-2	4.50	7	11	35	34	13	21	15	6	13	A-4a (2)	-	
			3 3 4	10	89	SS-3	2.50	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
			2 3 3	8	100	SS-4	2.75	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
@11.0' TO 17.5'; SS-5 TO SS-7 BECOME MEDIUM DENSE TO DENSE			4 4 6	14	100	SS-5	-	4	10	30	42	14	NP	NP	NP	16	A-4a (4)	-	
			5 8 9	23	100	SS-6	-	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
			5 11 20	42	100	SS-7	-	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
	1048.5	TR																	
SANDSTONE, BROWN AND ORANGISH BROWN, HIGHLY WEATHERED, SLIGHTLY TO MODERATELY STRONG, FINE TO MEDIUM GRAINED.			50	-	67	SS-8	-	-	-	-	-	-	-	-	-	8	Rock (V)	-	
			25 26 50	104	78	SS-9	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
			50/3"	-	67	SS-10	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
	1041.5																		
INTERBEDDED SANDSTONE (83%) AND SHALE (17%), BEDDING DISCONTINUITIES: LOW ANGLE, JOINT DISCONTINUITIES: HIGH ANGLE FROM 26.1' - 26.3', 26.6' - 27.0', 27.6' - 27.7', 28.0' - 28.3', AND 29.5' - 30.0', HIGHLY FRACTURED TO MODERATELY FRACTURED, NARROW TO TIGHT, SLIGHTLY ROUGH TO VERY ROUGH, BLOCKY/DISTURBED/SEAMY, GOOD TO FAIR SURFACE CONDITION, RQD 29%, REC. 96%; **SANDSTONE**, GRAY AND LIGHT GRAY, SLIGHTLY TO MODERATELY WEATHERED, MODERATELY STRONG TO STRONG, VERY FINE TO MEDIUM GRAINED, LAMINATED TO THIN BEDDED, CONTAINS ARGILLACEOUS LENSES AND LAMINATIONS; **SHALE**, GRAY AND DARK GRAY, MODERATELY WEATHERED, WEAK TO SLIGHTLY STRONG, FISSILE. **@32.5' TO 37.0'; LOSS OF CIRCULATION**			18		99	NQ2-1											CORE		
			35		92	NQ2-2											CORE		
			21		78	NQ2-3											CORE		
	1028.7																		
COAL, BLACK, HIGHLY WEATHERED, VERY WEAK TO WEAK, THINLY LAMINATED TO LAMINATED, FISSILE, PYRITIC, FOSSILIFEROUS, BEDDING DISCONTINUITIES: LOW ANGLE, JOINT DISCONTINUITIES: HIGH ANGLE THROUGHOUT, HIGHLY FRACTURED, OPEN, SLIGHTLY ROUGH TO VERY ROUGH, DISINTIGRATED, FAIR TO POOR SURFACE CONDITION; RQD 0%, REC 55%.	1024.6																		
INTERBEDDED SANDSTONE (85%) AND SHALE (15%), BEDDING DISCONTINUITIES: LOW ANGLE, HIGHLY FRACTURED TO SLIGHTLY FRACTURED, NARROW TO TIGHT, SLIGHTLY ROUGH TO VERY ROUGH, BLOCKY TO INTACT, GOOD TO VERY GOOD SURFACE CONDITION, RQD 66%, REC. 99%; **SANDSTONE**, LIGHT GRAY AND GRAY, UNWEATHERED TO SLIGHTLY WEATHERED, STRONG, VERY FINE TO FINE GRAINED, LAMINATED TO MEDIUM BEDDED, CONTAINS ARGILLACEOUS LENSES AND LAMINATIONS; **SHALE**, GRAY AND DARK GRAY, SLIGHTLY TO MODERATELY WEATHERED, WEAK TO SLIGHTLY STRONG, FISSILE.			46		84	NQ2-4											CORE		
			73		99	NQ2-5											CORE		
			74		98	NQ2-6											CORE		
	1006.5	EOB	46		97	NQ2-7											CORE		

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE. NO DISCERNABLE VOIDS DURING CORING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 150 GAL. BENTONITE GROUT

STANDARD ODOT LOG W/ SULFATES (11 X 17) - OH DOT GDT - 11/13/20 22:54 - C:\USERS\KARENS\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
BARRIER E
BORING LOG B-069-0-17

DRAWN EB
CHECKED BPA

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZL038.dgn Sheet 1/8/2021 1:03:46 AM karens

PROJECT: SUM-77-277/224
TYPE: UNDERGROUND MINE
PID: 106002 SFN:
START: 4/21/20 END: 4/22/20

DRILLING FIRM / OPERATOR: NEAS / J. HODGES
SAMPLING FIRM / LOGGER: NEAS / J. HODGES
DRILLING METHOD: 3.25" HSA / NQ2
SAMPLING METHOD: SPT / NQ2

DRILL RIG: CME 55X
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 12/5/19
ENERGY RATIO (%): 81.9

STATION / OFFSET: 67+44, 9' LT.
ALIGNMENT: NOISE WALL HI
ELEVATION: 1067.4 (MSL) EOB: 59.5 ft.
LAT / LONG: 41.018216, -81.497035

EXPLORATION ID B-070-0-17
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)	SO4 ppm	HOLE SEALED
MEDIUM DENSE, BROWN AND ORANGISH BROWN, **COARSE AND FINE SAND**, SOME SILT, TRACE CLAY, TRACE GRAVEL, CONTAINS IRON STAINING, DAMP TO MOIST	1067.4		2 4 4	11	100	SS-1	-	-	-	-	-	-	-	-	-	15	A-3a (V)	-	
			4 6 6	16	100	SS-2	-	-	-	-	-	-	-	-	-	13	A-3a (V)	-	
			4 6 6	16	100	SS-3	-	-	-	-	-	-	-	-	-	15	A-3a (V)	-	
VERY STIFF TO HARD, BROWN AND ORANGISH BROWN, **SANDY SILT**, TRACE TO LITTLE CLAY, TRACE TO LITTLE GRAVEL, CONTAINS IRON STAINING, DAMP	1059.4		4 3 3	8	100	SS-4	4.00	6	7	26	42	19	24	17	7	16	A-4a (5)	-	
			8 12 14	35	100	SS-5	4.25	-	-	-	-	-	-	-	-	17	A-4a (V)	-	
			3 8 16	33	100	SS-6	4.50	-	-	-	-	-	-	-	-	11	A-4a (V)	-	
			15 16 23	53	100	SS-7	4.50	15	8	39	29	9	17	14	3	10	A-4a (1)	-	
SANDSTONE, LIGHT BROWN AND LIGHT GRAY, HIGHLY WEATHERED, MODERATELY STRONG, VERY FINE TO FINE GRAINED.	1048.9	TR	6 13 14	37	100	SS-8	-	-	-	-	-	-	-	-	-	10	Rock (V)	-	
			10 22 50/3"	-	67	SS-9	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
			50/3"	-	33	SS-10	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
SANDSTONE, LIGHT GRAY AND ORANGISH BROWN, MODERATELY TO SLIGHTLY WEATHERED, MODERATELY STRONG TO STRONG, VERY FINE TO FINE GRAINED. VERY THIN TO THIN BEDDED, BEDDING DISCONTINUITIES: LOW ANGLE, JOINT DISCONTINUITIES: HIGH ANGLE FROM 27.8' - 28.2', 28.3' - 28.6', AND 30.0' - 30.6', HIGHLY FRACTURED TO MODERATELY FRACTURED, NARROW TO TIGHT, SLIGHTLY ROUGH, BLOCKY, FAIR TO GOOD SURFACE CONDITION; RQD 31%, REC 97%.	1042.9		18		95	NQ2-1											CORE		
			47		98	NQ2-2											CORE		
	1031.4		17		65	NQ2-3											CORE		
INTERBEDDED COAL (87%) AND SANDSTONE (13%), BEDDING DISCONTINUITIES: LOW ANGLE, JOINT DISCONTINUITIES THROUGHOUT, HIGHLY FRACTURED, OPEN, SLIGHTLY ROUGH, DISINTIGRATED, POOR SURFACE CONDITION, RQD 8%, REC. 49%; **COAL**, BLACK, HIGHLY WEATHERED, VERY WEAK TO WEAK, THINLY LAMINATED TO LAMINATED, FOSSILIFEROUS, PYRITIC, FISSILE; **SANDSTONE**, GRAY, SLIGHTLY WEATHERED, STRONG, VERY FINE TO MEDIUM GRAINED.	1024.9		30		68	NQ2-4											CORE		
INTERBEDDED SANDSTONE (57%) AND SHALE (43%), BEDDING DISCONTINUITIES: LOW ANGLE, HIGHLY TO MODERATELY FRACTURED, NARROW TO TIGHT, SLIGHTLY TO VERY ROUGH, BLOCKY, FAIR TO GOOD SURFACE CONDITION, RQD 53%, REC. 98%; **SANDSTONE**, GRAY AND LIGHT GRAY, UNWEATHERED TO SLIGHTLY WEATHERED, STRONG, VERY FINE TO MEDIUM GRAINED, LAMINATED TO THIN BEDDED, CONTAINS COAL AND ARGILLACEOUS LENSES AND LAMINATIONS, SILTY; **SHALE**, DARK GRAY AND GRAY, MODERATELY WEATHERED, WEAK TO SLIGHTLY STRONG, LAMINATED, FISSILE, FOSSILIFEROUS.			42		94	NQ2-5											CORE		
			45		100	NQ2-6											CORE		
	1007.9	EOB	62		100	NQ2-7											CORE		

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE. NO DISCERNABLE VOIDS DURING CORING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 150 GAL. BENTONITE GROUT

STANDARD ODOT LOG W/ SULFATES (11 X 17) - OH DOT GDT - 11/13/20 22:54 - C:\USERS\KARENS\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
BARRIER HI
BORING LOG B-070-0-17

DRAWN EB
CHECKED BPA

PROJECT: SUM-77-277/224	DRILLING FIRM / OPERATOR: NEAS / J. HODGES	DRILL RIG: CME 55X	STATION / OFFSET: 66+04, 15' LT.	EXPLORATION ID B-071-0-17
TYPE: UNDERGROUND MINE	SAMPLING FIRM / LOGGER: NEAS / J. HODGES	HAMMER: CME AUTOMATIC	ALIGNMENT: NOISE WALL HI	
PID: 106002 SFN:	DRILLING METHOD: 3.25" HSA / NQ2	CALIBRATION DATE: 12/5/19	ELEVATION: 1066.9 (MSL) EOB: 60.0 ft.	PAGE 1 OF 1
START: 4/23/20 END: 4/23/20	SAMPLING METHOD: SPT / NQ2	ENERGY RATIO (%): 81.9	LAT / LONG: 41.018607, -81.497013	

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)	SO4 ppm	HOLE SEALED
VERY STIFF, ORANGISH BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, CONTAINS IRON STAINING, MOIST	1066.9		3 3 3	8	100	SS-1	3.25	0	5	35	43	17	22	16	6	17	A-4a (5)	-	
MEDIUM DENSE, ORANGISH BROWN, **COARSE AND FINE SAND**, TRACE SILT, TRACE GRAVEL, TRACE CLAY, CONTAINS IRON STAINING, DAMP	1063.9		3 4 6	14	100	SS-2	-	-	-	-	-	-	-	-	-	11	A-3a (V)	-	
@6.0'; SS-3 BECOMES SOME GRAVEL	1058.9		3 5 7	16	100	SS-3	-	-	-	-	-	-	-	-	-	10	A-3a (V)	-	
MEDIUM DENSE, BROWN AND ORANGISH BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, TRACE CLAY, CONTAINS IRON STAINING, DAMP	1056.4		5 7 7	19	67	SS-4	-	-	-	-	-	-	-	-	-	13	A-2-4 (V)	-	
MEDIUM DENSE, BROWN AND ORANGISH BROWN, **SILT**, SOME SAND, LITTLE CLAY, TRACE GRAVEL, CONTAINS IRON STAINING, WET	1053.9		4 5 7	16	100	SS-5	-	1	1	24	58	16	NP	NP	NP	22	A-4b (8)	-	
VERY STIFF TO HARD, BROWN BECOMING GRAYISH BROWN, **SANDY SILT**, LITTLE GRAVEL, LITTLE CLAY, CONTAINS IRON STAINING, MOIST TO DAMP			2 3 5	11	78	SS-6	4.50	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
			4 4 7	15	89	SS-7	3.50	20	9	28	29	14	21	15	6	14	A-4a (2)	-	
	1048.4	TR																	
SANDSTONE, LIGHT BROWN AND GRAY, HIGHLY WEATHERED, MODERATELY STRONG, VERY FINE TO MEDIUM GRAINED.			5 14 17	42	56	SS-8	-	-	-	-	-	-	-	-	-	7	Rock (V)	-	
			50	-	67	SS-9	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
			50	-	33	SS-10	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
	1041.9																		
INTERBEDDED SANDSTONE (88%) AND SHALE (12%), BEDDING DISCONTINUITIES: LOW ANGLE, JOINT DISCONTINUITIES: HIGH ANGLE FROM 25.0' - 25.5', 25.9' - 26.1', 26.7' - 27.5', AND 28.3' - 28.8', HIGHLY FRACTURED TO MODERATELY FRACTURED, OPEN TO NARROW, SLIGHTLY ROUGH TO VERY ROUGH, BLOCKY, DISINTIGRATED FROM 27.8' - 28.3', GOOD TO FAIR SURFACE CONDITION, RQD 32%, REC. 93%; **SANDSTONE**, LIGHT GRAY, SLIGHTLY TO MODERATELY WEATHERED, MODERATELY STRONG TO STRONG, VERY FINE TO FINE GRAINED, LAMINATED TO THIN BEDDED, CONTAINS ARGILLACEOUS LENSES AND THIN LAMINATIONS; **SHALE**, DARK GRAY AND GRAY, HIGHLY TO MODERATELY WEATHERED, WEAK, FISSILE, SILTY.			10		89	NQ2-1											CORE		
			54		96	NQ2-2											CORE		
	1031.9																		
INTERBEDDED COAL (78%) AND SANDSTONE (22%), BEDDING DISCONTINUITIES: LOW ANGLE, JOINT DISCONTINUITIES THROUGHOUT, HIGHLY FRACTURED TO MODERATELY FRACTURED, OPEN TO NARROW, SLIGHTLY ROUGH, BLOCKY/DISTURBED/SEAMY, GOOD TO FAIR SURFACE CONDITION, RQD 10%, REC. 91%; **COAL**, BLACK, MODERATELY WEATHERED, VERY WEAK TO WEAK, THINLY LAMINATED TO THIN BEDDED, FOSSILIFEROUS, FISSILE, PYRITIC; **SANDSTONE**, GRAY, SLIGHTLY WEATHERED, STRONG, VERY FINE TO FINE GRAINED, CONTAINS ARGILLACEOUS LENSES AND LAMINATIONS.			9		92	NQ2-3											CORE		
	1027.3																		
INTERBEDDED SHALE (59%) AND SANDSTONE (41%), BEDDING DISCONTINUITIES: LOW TO MODERATE ANGLE, JOINT DISCONTINUITIES: HIGH ANGLE FROM 45.8' - 46.2', 50.9' - 51.3', HIGHLY FRACTURED TO MODERATELY FRACTURED, NARROW TO TIGHT, SLIGHTLY ROUGH, BLOCKY, FAIR TO GOOD SURFACE CONDITION, RQD 44%, REC. 97%; **SHALE**, DARK GRAY AND GRAY, SLIGHTLY TO MODERATELY WEATHERED, WEAK TO SLIGHTLY STRONG, LAMINATED TO THIN BEDDED, FISSILE, SILTY; **SANDSTONE**, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG TO STRONG, VERY FINE TO FINE GRAINED, CONTAINS COAL AND ARGILLACEOUS LENSES AND LAMINATIONS.			48		99	NQ2-4											CORE		
			32		100	NQ2-5											CORE		
			50		95	NQ2-6											CORE		
			48		92	NQ2-7											CORE		
	1006.9	EOB																	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE. NO DISCERNABLE VOIDS DURING CORING. NO WATER CIRCULATION DURING CORING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 200 GAL. BENTONITE GROUT

STANDARD ODOT LOG W/ SULFATES (11 X 17) - OH DOT GDT - 11/13/20 22:54 - C:\USERS\KARENS\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 64+14, 18' LT. | EXPLORATION ID B-072-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL HI
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1062.1 (MSL) EOB: 23.8 ft. | PAGE 1 OF 1
START: 4/24/20 END: 4/24/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.019121, -81.497225

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)	SO4 ppm	BACK FILL
VERY STIFF, DARK BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, DAMP	1062.1		3 4 4	11	100	SS-1	3.00	2	12	29	42	15	29	22	7	20	A-4a (4)	-	
MEDIUM DENSE, ORANGISH BROWN, **COARSE AND FINE SAND**, LITTLE GRAVEL, TRACE SILT, TRACE CLAY, CONTAINS IRON STAINING, DAMP	1059.1		3 4 5	12	100	SS-2	-	-	-	-	-	-	-	-	-	7	A-3a (V)	-	
VERY STIFF TO HARD, BROWN AND GRAY, **SANDY SILT**, LITTLE CLAY, LITTLE GRAVEL, CONTAINS IRON STAINING, DAMP	1056.6		5 6 7	18	100	SS-3	4.25	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
	1049.1		6 9 10	26	100	SS-4	3.25	13	10	31	31	15	21	16	5	13	A-4a (2)	-	
			4 10 14	33	44	SS-5	2.25	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE CLAY, CONTAINS IRON STAINING, DAMP	1044.1	TR	3 12 15	37	44	SS-6	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	-	
			8 11 16	37	44	SS-7	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	-	
SANDSTONE, BROWN AND LIGHT GRAY, HIGHLY WEATHERED, MODERATELY STRONG, VERY FINE TO MEDIUM GRAINED.	1038.3	EOB	4 8 50/3"	-	33	SS-8	-	-	-	-	-	-	-	-	-	10	Rock (V)	-	
			50/4"	-	50	SS-9	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
			50/3"	-	33	SS-10	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:36 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 62+23, 14' LT. | EXPLORATION ID B-073-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL HI
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1062.0 (MSL) EOB: 16.4 ft. | PAGE 1 OF 1
START: 4/24/20 END: 4/24/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.019603, -81.497460

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)	SO4 ppm	BACK FILL
LOOSE, DARK BROWN, **COARSE AND FINE SAND**, SOME SILT, TRACE CLAY, TRACE GRAVEL, CONTAINS MANY ROOTS UP TO 0.5" IN DIAMETER, WET	1062.0		3 3 3	8	78	SS-1	-	-	-	-	-	-	-	-	-	25	A-3a (V)	-	
HARD, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL AND STONE FRAGMENTS, CONTAINS IRON STAINING, DAMP	1059.0		7 9 10	26	100	SS-2	4.50	7	15	26	37	15	22	15	7	11	A-4a (3)	-	
DENSE TO VERY DENSE, BROWN AND GRAY, **STONE FRAGMENTS WITH SAND**, TRACE TO LITTLE SILT, TRACE CLAY, STONE FRAGMENTS ARE FRIABLE SANDSTONE, DAMP	1055.0		4 11 20	42	78	SS-3A	4.50	-	-	-	-	-	-	-	-	11	A-4a (V)	-	
						SS-3B	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	-	
	1051.5		9 19 20	53	67	SS-4	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	-	
VERY DENSE, BROWN, **STONE FRAGMENTS WITH SAND AND SILT**, TRACE CLAY, STONE FRAGMENTS ARE FRIABLE SANDSTONE, DAMP	1049.7	TR	9 21 50/3"	-	67	SS-5	-	-	-	-	-	-	-	-	-	8	A-2-4 (V)	-	
SANDSTONE, BROWN AND GRAY, HIGHLY WEATHERED, MODERATELY STRONG TO STRONG, VERY FINE TO MEDIUM GRAINED, FRIABLE.	1045.6	EOB	50/5"	-	60	SS-6	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
			50/5"	-	60	SS-7	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:36 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
BARRIER HI
BORING LOGS B-072-0-17 & B-073-0-17

DRAWN EB
CHECKED BPA

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 59+97, 24' LT. | EXPLORATION ID B-074-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL HI
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1058.3 (MSL) EOB: 23.7 ft. | PAGE 1 OF 1
START: 4/24/20 END: 4/24/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.020208, -81.497646

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)	SO4 ppm	BACK FILL
STIFF, BROWN AND ORANGISH BROWN, **SILT AND CLAY**, SOME SAND, TRACE GRAVEL, CONTAINS ROOTS AND IRON STAINING, MOIST	1058.3		2 3 3	8	100	SS-1	1.50	-	-	-	-	-	-	-	-	20	A-6a (V)	-	
STIFF TO HARD, BROWN AND ORANGISH BROWN, **SANDY SILT**, LITTLE GRAVEL AND STONE FRAGMENTS, LITTLE CLAY, CONTAINS IRON STAINING, DAMP	1055.3		6 9 9	25	33	SS-2	1.75	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
HARD, BROWN, **SILT**, SOME CLAY, LITTLE SAND, TRACE GRAVEL, DAMP	1050.3		5 7 12	26	100	SS-3	4.50	15	15	25	31	14	22	15	7	13	A-4a (2)	-	
MEDIUM DENSE, BROWNISH GRAY, **STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE CLAY, STONE FRAGMENTS ARE FRIABLE SANDSTONE, DAMP	1047.8		2 4 6	14	100	SS-4	4.50	2	6	11	53	28	27	20	7	20	A-4b (8)	-	
MEDIUM DENSE TO DENSE, BROWN AND LIGHT BROWN BECOMING BROWNISH GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, LITTLE CLAY, STONE FRAGMENTS ARE FRIABLE SANDSTONE, DAMP	1045.3		7 10 10	27	100	SS-5	-	-	-	-	-	-	-	-	-	14	A-1-b (V)	-	
	1039.8	W 1043.3	8 11 14	34	83	SS-6	-	-	-	-	-	-	-	-	-	12	A-2-4 (V)	-	
			5 7 7	19	89	SS-7	-	-	-	-	-	-	-	-	-	12	A-2-4 (V)	-	
SANDSTONE, BROWN AND LIGHT GRAY, HIGHLY WEATHERED, MODERATELY STRONG TO STRONG, VERY FINE TO MEDIUM GRAINED, FRIABLE.	1034.6	TR	3 7 50/2"	-	86	SS-8	-	-	-	-	-	-	-	-	-	15	Rock (V)	-	
			50/5"	-	40	SS-9	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
		EOB	60/2"	-	100	SS-10	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER ENCOUNTERED AT 15.0' DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 58+10, 14' LT. | EXPLORATION ID B-075-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL HI
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1053.8 (MSL) EOB: 23.8 ft. | PAGE 1 OF 1
START: 4/24/20 END: 4/24/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.020690, -81.497903

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)	SO4 ppm	BACK FILL
VERY STIFF TO HARD, BROWN BECOMING BROWN MOTTLED WITH ORANGISH BROWN DARK BROWN AND GRAY, **SANDY SILT**, LITTLE CLAY, TRACE TO LITTLE GRAVEL AND STONE FRAGMENTS, CONTAINS IRON STAINING AND ROOTS, DAMP	1053.8		4 5 6	15	100	SS-1	3.00	-	-	-	-	-	-	-	-	17	A-4a (V)	-	
MEDIUM DENSE TO DENSE, BROWN AND LIGHT BROWN, **STONE FRAGMENTS WITH SAND AND SILT**, TRACE CLAY, CONTAINS >1.25" STONE FRAGMENTS, STONE FRAGMENTS ARE FRIABLE SANDSTONE, DAMP	1048.3		6 8 10	25	67	SS-2	4.50	18	7	27	32	16	25	19	6	13	A-4a (3)	-	
			6 7 8	20	100	SS-3	-	-	-	-	-	-	-	-	-	11	A-2-4 (V)	-	
	1042.8	W 1042.8 TR	4 14 9	31	61	SS-4	-	-	-	-	-	-	-	-	-	11	A-2-4 (V)	-	
SANDSTONE, BROWN AND LIGHT GRAY, SEVERELY TO HIGHLY WEATHERED, SLIGHTLY STRONG TO STRONG, VERY FINE TO MEDIUM GRAINED, FRIABLE.	1038.8		5 15 20	48	89	SS-5	-	-	-	-	-	-	-	-	-	14	Rock (V)	-	
			50	-	50	SS-6	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
COAL, BLACK, SEVERELY WEATHERED, VERY WEAK.	1035.8		8 26 25	70	56	SS-7	-	-	-	-	-	-	-	-	-	18	Rock (V)	-	
SHALE, GRAY, SEVERELY TO HIGHLY WEATHERED, VERY WEAK TO WEAK, FISSILE, ARENACEOUS.	1030.0		17 50	-	100	SS-8	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
			50/4"	-	50	SS-9	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
		EOB	50/4"	-	75	SS-10	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER ENCOUNTERED AT 11.0' DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:36 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
BARRIER HI
BORING LOGS B-074-0-17 & B-075-0-17

DRAWN EB
CHECKED BPA

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 56+18, 24' LT. | EXPLORATION ID B-076-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL HI | PAGE 1 OF 1
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1051.2 (MSL) EOB: 23.6 ft.
START: 3/16/20 END: 3/16/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.021203, -81.497991

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)	SO4 ppm	BACK FILL
6.0" ASPHALT AND 6.0" CONCRETE AND 6.0" BASE (DRILLERS DESCRIPTION)	1051.2																		
	1049.7																		
MEDIUM DENSE, BROWN, **STONE FRAGMENTS WITH SAND**, TRACE SILT, TRACE CLAY, STONE FRAGMENTS ARE SANDSTONE, DAMP	1047.9		3 6 12	25	22	SS-1	-	-	-	-	-	-	-	-	-	13	A-1-b (V)	-	
MEDIUM DENSE, GRAYISH BROWN, **COARSE AND FINE SAND**, SOME GRAVEL, LITTLE SILT, TRACE CLAY, DAMP	1045.7		2 4 7	15	100	SS-2	-	-	-	-	-	-	-	-	-	12	A-3a (V)	-	
VERY STIFF TO HARD, BROWN WITH ORANGISH BROWN AND GRAY, **SANDY SILT**, LITTLE CLAY, LITTLE GRAVEL AND STONE FRAGMENTS, CONTAINS IRON STAINING, DAMP	1037.9		4 5 6	15	100	SS-3	3.75	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
			5 6 8	19	67	SS-4	4.25	13	11	32	27	17	26	16	10	14	A-4a (2)	-	
			3 4 4	11	67	SS-5	2.50	-	-	-	-	-	-	-	-	15	A-4a (V)	-	
VERY DENSE, LIGHT BROWN, **STONE FRAGMENTS WITH SAND**, TRACE SILT, TRACE CLAY, STONE FRAGMENTS ARE SANDSTONE, DAMP	1035.7		8 50	-	50	SS-6	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	-	
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, SOME SILT, TRACE CLAY, TRACE GRAVEL, DAMP	1032.7		6 7 8	20	100	SS-7	-	-	-	-	-	-	-	-	-	10	A-3a (V)	-	
SANDSTONE, GRAY, HIGHLY WEATHERED, SLIGHTLY TO MODERATELY STRONG, FRIABLE.	1027.6	TR	50/3"	-	67	SS-8	-	-	-	-	-	-	-	-	-	9	Rock (V)	-	
			50/3"	-	67	SS-9	-	-	-	-	-	-	-	-	-	11	Rock (V)	-	
		EOB	50/1"	-	100	SS-10	-	-	-	-	-	-	-	-	-	12	Rock (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:36 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 54+26, 20' LT. | EXPLORATION ID B-077-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL HI | PAGE 1 OF 1
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1050.0 (MSL) EOB: 30.0 ft.
START: 3/16/20 END: 3/16/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.021672, -81.498318

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)	SO4 ppm	BACK FILL
6.0" ASPHALT AND 6.0" CONCRETE AND 6.0" BASE (DRILLERS DESCRIPTION)	1050.0																		
	1048.5																		
MEDIUM DENSE, BROWN, **STONE FRAGMENTS WITH SAND**, TRACE SILT, TRACE CLAY, DAMP	1046.7		4 6 10	22	17	SS-1	-	-	-	-	-	-	-	-	-	12	A-1-b (V)	-	
VERY STIFF, BROWN, **SANDY SILT**, LITTLE CLAY, LITTLE STONE FRAGMENTS, STONE FRAGMENTS ARE SANDSTONE, DAMP	1044.5		3 6 7	18	22	SS-2	2.50	-	-	-	-	-	-	-	-	15	A-4a (V)	-	
MEDIUM DENSE, ORANGISH BROWN, **COARSE AND FINE SAND**, LITTLE SILT, LITTLE STONE FRAGMENTS, TRACE CLAY, CONTAINS IRON STAINING, STONE FRAGMENTS ARE SANDSTONE, MOIST	1042.0		3 4 6	14	56	SS-3	-	-	-	-	-	-	-	-	-	14	A-3a (V)	-	
VERY STIFF TO HARD, BROWN BECOMING DARK GRAYISH BROWN, **SANDY SILT**, LITTLE TO SOME CLAY, TRACE GRAVEL, SS-4 CONTAINS IRON STAINING, DAMP TO MOIST	1029.5		3 4 5	12	67	SS-4	4.25	8	7	25	38	22	25	16	9	15	A-4a (5)	-	
			3 6 7	18	67	SS-5	3.50	-	-	-	-	-	-	-	-	15	A-4a (V)	-	
			3 8 8	22	100	SS-6	4.25	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
			3 5 7	16	56	SS-7	4.25	4	9	31	37	19	23	15	8	15	A-4a (4)	-	
			4 8 5	18	56	SS-8	4.50	-	-	-	-	-	-	-	-	15	A-4a (V)	-	
LOOSE, BROWN, **COARSE AND FINE SAND**, SOME SILT, TRACE CLAY, TRACE GRAVEL, WET	1027.0	▼1029.0	2 2 2	5	100	SS-9	-	-	-	-	-	-	-	-	-	22	A-3a (V)	-	
VERY DENSE, GRAY, **STONE FRAGMENTS**, TRACE SAND, TRACE SILT, TRACE CLAY, STONE FRAGMENTS ARE SANDSTONE, MOIST	1024.5		50	-	33	SS-10	-	-	-	-	-	-	-	-	-	11	A-1-a (V)	-	
VERY SOFT TO SOFT, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, MOIST	1022.0		2 3 4	10	56	SS-11	0.25	5	8	33	34	20	26	16	10	22	A-4a (4)	-	
LOOSE, GRAY, **COARSE AND FINE SAND**, LITTLE GRAVEL, TRACE SILT, TRACE CLAY, MOIST	1020.0	EOB	2 2 2	5	67	SS-12	-	-	-	-	-	-	-	-	-	16	A-3a (V)	-	

NOTES: GROUNDWATER ENCOUNTERED AT 21.0' DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; POURED 1 BAG BENTONITE CHIPS; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:36 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

150/209	**SUM-77/277/224 VARIOUS**	**STRUCTURE FOUNDATION EXPLORATION BARRIER HI BORING LOGS B-076-0-17 & B-077-0-17**	DRAWN EB / CHECKED BPA

PROJECT: SUM-77-277/224
TYPE: LIGHT TOWER
PID: 106002 SFN:
START: 8/7/20 END: 8/7/20

DRILLING FIRM / OPERATOR: NEAS / J. HODGES
SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH
DRILLING METHOD: 3.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: CME 55X
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 11/21/17
ENERGY RATIO (%): 85.4

STATION / OFFSET: 483+97, 55' RT.
ALIGNMENT: IR-77 SB
ELEVATION: 1026.2 (MSL) EOB: 26.5 ft.
LAT / LONG: 41.021808, -81.497949

EXPLORATION ID B-076-1-17
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
5.0" TOPSOIL (DRILLERS DESCRIPTION)	1025.8																	
HARD, BROWN BECOMING BROWN AND GRAY, **SANDY SILT**, SOME GRAVEL AND STONE FRAGMENTS, LITTLE CLAY, SS-1 AND SS-2 CONTAIN TRACE ROOTS, DAMP		1																
		2																
		3	12 14 10	34	56	SS-1	4.50	-	-	-	-	-	-	-	-	8	A-4a (V)	
		4																
@5.0'; BECOMES TRACE GRAVEL		5	9 11 12	33	72	SS-2	4.50	10	16	22	34	18	26	18	8	10	A-4a (3)	
		6																
		7																
		8	4 7 7	20	56	SS-3	4.50	-	-	-	-	-	-	-	-	11	A-4a (V)	
		9																
		10																
		11	9 21 16	53	44	SS-4	4.25	-	-	-	-	-	-	-	-	13	A-4a (V)	
	1014.2	12																
DENSE, ORANGISH BROWN, **STONE FRAGMENTS WITH SAND AND SILT**, TRACE CLAY, CONTAINS IRON STAINING, DAMP	1011.7	13	10 12 12	34	78	SS-5	-	25	13	33	20	9	NP	NP	NP	10	A-2-4 (0)	
		14																
HARD, GRAY MOTTLED WITH ORANGISH BROWN, **SANDY SILT**, LITTLE CLAY, TRACE TO LITTLE GRAVEL AND STONE FRAGMENTS, CONTAINS TRACE IRON STAINING, DAMP		15																
		16	4 7 9	23	67	SS-6	4.50	-	-	-	-	-	-	-	-	16	A-4a (V)	
		17																
		18	7 8 11	27	89	SS-7	4.50	-	-	-	-	-	-	-	-	13	A-4a (V)	
		19																
		20																
		21	5 4 6	14	94	SS-8	4.50	8	9	30	36	17	26	17	9	16	A-4a (4)	
		22																
		23	6 6 7	19	72	SS-9	4.50	-	-	-	-	-	-	-	-	16	A-4a (V)	
	1001.7	24																
VERY STIFF, DARK GRAY AND BROWN, **SILT AND CLAY**, SOME SAND, TRACE GRAVEL, MOIST	999.7	25																
		26	5 6 7	19	100	SS-10	2.75	-	-	-	-	-	-	-	-	26	A-6a (V)	
		EOB																

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 11/19/20 18:38 - C:\USERS\KAREN\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

PROJECT: SUM-77-277/224	DRILLING FIRM / OPERATOR: NEAS / ASHBAUGH	DRILL RIG: CME 55T	STATION / OFFSET: 52+27, 18' LT.
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH	HAMMER: CME AUTOMATIC	ALIGNMENT: NOISE WALL HI
PID: 106002 SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 12/5/19	ELEVATION: 1048.5 (MSL) EOB: 30.0 ft.
START: 3/11/20 END: 3/11/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 68.4	LAT / LONG: 41.022146, -81.498682

EXPLORATION ID B-078-0-17

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)	SO4 ppm	BACK FILL
5.5" ASPHALT AND 8.5" CONCRETE AND 6.0" BASE (DRILLERS DESCRIPTION)	1048.5																		
	1046.8																		
VERY STIFF, BROWN AND ORANGISH BROWN, **SANDY SILT**, LITTLE CLAY, TRACE TO LITTLE GRAVEL AND STONE FRAGMENTS, CONTAINS IRON STAINING, DAMP TO MOIST			3 5 4	10	56	SS-1	2.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
			4 3 4	8	72	SS-2	2.75	-	-	-	-	-	-	-	-	15	A-4a (V)	-	
@8.5' TO 15.0'; SS-3 TO SS-5 BECOME BROWN MOTTLED WITH GRAY AND ORANGISH BROWN			10 10 12	25	83	SS-3	2.25	13	10	40	22	15	21	15	6	14	A-4a (0)	-	
			7 7 7	16	94	SS-4	2.50	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
			5 4 5	10	100	SS-5	2.50	-	-	-	-	-	-	-	-	17	A-4a (V)	-	
	1033.0																		
VERY STIFF TO HARD, DARK GRAY, **SILT AND CLAY**, LITTLE SAND, TRACE GRAVEL, DAMP			5 4 4	9	100	SS-6	3.50	1	5	15	56	23	35	21	14	21	A-6a (10)	-	
			3 4 6	11	100	SS-7	4.50	-	-	-	-	-	-	-	-	19	A-6a (V)	-	
	1028.0	1028.0																	
STIFF, GRAY AND ORANGISH BROWN, **SILT**, LITTLE CLAY, TRACE SAND, TRACE GRAVEL, CONTAINS IRON STAINING, WET			2 2 3	6	100	SS-8	1.50	-	-	-	-	-	-	-	-	27	A-4b (V)	-	
@23.5' TO 30.0'; SS-9 TO SS-11 BECOME LOOSE, GRAY, TRACE CLAY			3 2 3	6	100	SS-9	-	1	0	6	85	8	NP	NP	NP	27	A-4b (8)	-	
			3 2 4	7	89	SS-10	-	-	-	-	-	-	-	-	-	30	A-4b (V)	-	
	1018.5	EOB	2 4 3	8	44	SS-11	-	-	-	-	-	-	-	-	-	29	A-4b (V)	-	

NOTES: GROUNDWATER ENCOUNTERED AT 20.5' DURING DRILLING. HOLE CAVED IN AT 23.0'.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (11 X 17) - OH DOT GDT - 11/13/20 22:54 - C:\USERS\KARENS\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

152/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION BARRIER HI BORING LOG B-078-0-17	DRAWN EB / CHECKED BPA

PROJECT: SUM-77-277/224	DRILLING FIRM / OPERATOR: NEAS / ASHBAUGH	DRILL RIG: CME 55T	STATION / OFFSET: 50+83, 17' LT.	EXPLORATION ID B-079-0-17
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH	HAMMER: CME AUTOMATIC	ALIGNMENT: NOISE WALL HI	
PID: 106002 SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 12/5/19	ELEVATION: 1047.1 (MSL) EOB: 35.0 ft.	PAGE 1 OF 1
START: 3/11/20 END: 3/11/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 68.4	LAT / LONG: 41.022479, -81.498968	

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)	SO4 ppm	BACK FILL
6.0" ASPHALT AND 8.0" CONCRETE AND 10.0" BASE (DRILLERS DESCRIPTION)	1047.1																		
	1045.1																		
VERY STIFF, BROWN CHANGING TO BROWN AND ORANGISH BROWN, **SANDY SILT**, LITTLE CLAY, TRACE TO LITTLE GRAVEL AND STONE FRAGMENTS, CONTAINS CONCRETE AND ASPHALT FRAGMENTS, STONE FRAGMENTS ARE FRIABLE SANDSTONE, SS-2 CONTAINS IRON STAINING, MOIST TO DAMP **(FILL)**			8 6 5	13	11	SS-1	2.75	-	-	-	-	-	-	-	-	17	A-4a (V)	-	
			13 10 6	18	39	SS-2	2.50	10	12	30	32	16	20	15	5	13	A-4a (3)	-	
	1039.1																		
LOOSE TO MEDIUM DENSE, ORANGISH BROWN, **COARSE AND FINE SAND**, SOME STONE FRAGMENTS, LITTLE SILT, TRACE CLAY, STONE FRAGMENTS ARE FRIABLE SANDSTONE, CONTAINS IRON STAINING, DAMP TO MOIST			9 11 12	26	56	SS-3	-	-	-	-	-	-	-	-	-	12	A-3a (V)	-	
@11.0'; SS-4 CONTAINS NO RECOVERY			5 7 7	16	0	SS-4	-	-	-	-	-	-	-	-	-	-		-	
			10 6 3	10	17	SS-5	-	-	-	-	-	-	-	-	-	14	A-3a (V)	-	
	1030.1																		
MEDIUM STIFF TO STIFF, DARK GRAY AND BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, SLIGHTLY ORGANIC, DAMP TO MOIST			3 4 3	8	28	SS-6A	-	-	-	-	-	-	-	-	-	18	A-3a (V)	-	
						SS-6B	0.75	-	-	-	-	-	-	-	-	17	A-4a (V)	-	
			2 2 3	6	39	SS-7	1.00	5	14	34	31	16	32	23	9	28	A-4a (2)	-	
	1025.6																		
LOOSE TO MEDIUM DENSE, BROWN BECOMING GRAY, **SILT**, TRACE CLAY, TRACE SAND, TRACE GRAVEL, WET			3 4 4	9	56	SS-8A	1.25	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
						SS-8B	-	-	-	-	-	-	-	-	-	24	A-4b (V)	-	
			3 5 5	11	78	SS-9	-	0	0	1	92	7	NP	NP	NP	27	A-4b (8)	-	
	1021.6																		
LOOSE, GRAY, **GRAVEL WITH SAND**, LITTLE SILT, TRACE CLAY, MOIST TO WET @26.0'; SS-10 CONTAINS NO RECOVERY		▼ 1021.1	3 3 5	9	0	SS-10	-	-	-	-	-	-	-	-	-	-		-	
			4 3 5	9	28	SS-11	-	-	-	-	-	-	-	-	-	14	A-1-b (V)	-	
			2 3 4	8	22	SS-12	-	-	-	-	-	-	-	-	-	17	A-1-b (V)	-	
	1012.1	EOB	6 4 5	10	28	SS-13	-	-	-	-	-	-	-	-	-	12	A-1-b (V)	-	

NOTES: GROUNDWATER ENCOUNTERED AT 26.0' DURING DRILLING. HOLE CAVED IN AT 21.0'.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (11 X 17) - OH DOT GDT - 11/13/20 22:54 - C:\USERS\KARENS\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

153/209	**SUM-77/277/224 VARIOUS**	**STRUCTURE FOUNDATION EXPLORATION BARRIER HI BORING LOG B-079-0-17**	DRAWN EB CHECKED BPA

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZL046.dgn Sheet 1/8/2021 1:07:51 AM karens

PROJECT: SUM-77-277/224	DRILLING FIRM / OPERATOR: NEAS / ASHBAUGH	DRILL RIG: CME 55T	STATION / OFFSET: 49+64, 17' LT.
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH	HAMMER: CME AUTOMATIC	ALIGNMENT: NOISE WALL HI
PID: 106002 SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 12/5/19	ELEVATION: 1046.1 (MSL) EOB: 35.0 ft.
START: 3/11/20 END: 3/11/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 68.4	LAT / LONG: 41.022748, -81.499215

EXPLORATION ID B-080-0-17

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)	SO4 ppm	BACK FILL
6.0" ASPHALT AND 8.0" CONCRETE AND 7.0" BASE (DRILLERS DESCRIPTION)	1046.1																		
	1044.3																		
MEDIUM DENSE, BROWN AND ORANGISH BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE CLAY, STONE FRAGMENTS ARE FRIABLE SANDSTONE, CONTAINS IRON STAINING, DAMP TO MOIST			4 10 13	26	39	SS-1	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	-	
			5 9 8	19	56	SS-2	-	-	-	-	-	-	-	-	-	12	A-1-b (V)	-	
			4 6 11	19	67	SS-3	-	-	-	-	-	-	-	-	-	16	A-1-b (V)	-	
	1035.6																		
HARD, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, DAMP			7 8 7	17	72	SS-4	4.50	8	12	40	26	14	19	14	5	11	A-4a (1)	-	
	1033.1																		
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, LITTLE STONE FRAGMENTS, TRACE SILT, TRACE CLAY, DAMP	1031.6		7 9 10	22	89	SS-5A	-	-	-	-	-	-	-	-	-	8	A-3a (V)	-	
						SS-5B	2.50	-	-	-	-	-	-	-	-	24	A-2-4 (V)	-	
STIFF TO VERY STIFF, DARK GRAY AND BROWN, **GRAVEL WITH SAND AND SILT**, LITTLE CLAY, MOIST			4 5 3	9	50	SS-6	1.50	26	14	26	23	11	27	20	7	21	A-2-4 (0)	-	
		▼1028.1																	
			5 3 3	7	56	SS-7	2.00	-	-	-	-	-	-	-	-	21	A-2-4 (V)	-	
	1025.6																		
LOOSE, BROWN BECOMING GRAY, **SILT**, TRACE TO LITTLE SAND, TRACE TO LITTLE CLAY, TRACE GRAVEL, MOIST TO WET			4 4 3	8	100	SS-8	-	-	-	-	-	-	-	-	-	22	A-4b (V)	-	
			3 3 4	8	100	SS-9	-	0	1	12	75	12	NP	NP	NP	25	A-4b (8)	-	
			3 3 3	7	100	SS-10	-	-	-	-	-	-	-	-	-	25	A-4b (V)	-	
			3 3 2	6	100	SS-11	-	-	-	-	-	-	-	-	-	30	A-4b (V)	-	
			3 3 2	6	100	SS-12	-	0	0	6	89	5	NP	NP	NP	28	A-4b (8)	-	
			2 2 3	6	100	SS-13	-	-	-	-	-	-	-	-	-	30	A-4b (V)	-	
	1011.1	EOB																	

NOTES: GROUNDWATER ENCOUNTERED AT 18.0' DURING DRILLING. HOLE CAVED IN AT 16.0'.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (11 X 17) - OH DOT GDT - 11/13/20 22:54 - C:\USERS\KARENS\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

154/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION BARRIER HI BORING LOG B-080-0-17	DRAWN EB / CHECKED BPA

PROJECT: SUM-77-277/224	DRILLING FIRM / OPERATOR: NEAS / ASHBAUGH	DRILL RIG: CME 55T	STATION / OFFSET: 48+28, 18' LT.	EXPLORATION ID B-081-0-17
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH	HAMMER: CME AUTOMATIC	ALIGNMENT: NOISE WALL HI	
PID: 106002 SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 12/5/19	ELEVATION: 1044.9 (MSL) EOB: 35.0 ft.	PAGE 1 OF 1
START: 3/10/20 END: 3/10/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 68.4	LAT / LONG: 41.023048, -81.499516	

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)	SO4 ppm	BACK FILL
6.0" ASPHALT AND 8.0" CONCRETE AND 8.0" BASE (DRILLERS DESCRIPTION)	1044.9																		
	1043.1																		
MEDIUM DENSE, BROWN, **SANDY SILT**, LITTLE TO SOME GRAVEL AND STONE FRAGMENTS, LITTLE CLAY, CONTAINS IRON STAINING, MOIST TO DAMP			5 3 7	11	56	SS-1	-	15	12	36	24	13	NP	NP	NP	15	A-4a (0)	-	
			6 5 6	13	11	SS-2	-	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
			4 7 9	18	39	SS-3	-	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
	1034.4																		
VERY DENSE, BROWN AND ORANGISH BROWN, **STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE TO LITTLE CLAY, POSSIBLY PUSHED ON SANDSTONE COBBLE, CONTAINS IRON STAINING, DAMP			50	-	50	SS-4	-	-	-	-	-	-	-	-	-	11	A-1-b (V)	-	
			50/5"	-	20	SS-5	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	-	
	1029.4																		
LOOSE, BROWN, **COARSE AND FINE SAND**, LITTLE SILT, TRACE GRAVEL, TRACE CLAY, CONTAINS IRON STAINING, MOIST	1027.9		5 3 5	9	61	SS-6A	-	-	-	-	-	-	-	-	-	16	A-3a (V)	-	
STIFF, BROWN MOTTLED WITH ORANGISH BROWN AND GRAY, **SILT AND CLAY**, SOME SAND, TRACE GRAVEL, CONTAINS IRON STAINING, MOIST	1026.2					SS-6B	1.25	-	-	-	-	-	-	-	-	24	A-6a (V)	-	
MEDIUM DENSE, BROWN AND ORANGISH BROWN, **COARSE AND FINE SAND**, SOME STONE FRAGMENTS, LITTLE SILT, TRACE CLAY, CONTAINS IRON STAINING, DAMP			5 8 11	22	56	SS-7A	1.50	-	-	-	-	-	-	-	-	24	A-6a (V)	-	
						SS-7B	-	-	-	-	-	-	-	-	-	14	A-3a (V)	-	
			6 8 10	21	50	SS-8	-	-	-	-	-	-	-	-	-	13	A-3a (V)	-	
	1021.9																		
LOOSE TO MEDIUM DENSE, BROWN AND GRAY, **STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE CLAY, DAMP			13 11 8	22	22	SS-9	-	-	-	-	-	-	-	-	-	11	A-1-b (V)	-	
			4 4 5	10	17	SS-10	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	-	
			6 8 8	18	28	SS-11	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	-	
	1014.4																		
MEDIUM DENSE, GRAY, **COARSE AND FINE SAND**, SOME SILT, LITTLE GRAVEL, TRACE CLAY, WET			5 7 6	15	33	SS-12	-	-	-	-	-	-	-	-	-	18	A-3a (V)	-	
			7 5 9	16	50	SS-13	-	-	-	-	-	-	-	-	-	21	A-3a (V)	-	
	1009.9	EOB																	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE CAVED IN AT 23.0'.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (11 X 17) - OH DOT GDT - 11/13/20 22:54 - C:\USERS\KARENS\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

155/209	**SUM-77/277/224 VARIOUS**	**STRUCTURE FOUNDATION EXPLORATION BARRIER HI BORING LOG B-081-0-17**	DRAWN EB / CHECKED BPA

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / ASHBAUGH | DRILL RIG: CME 55T | STATION / OFFSET: 46+98, 21' LT. | EXPLORATION ID B-082-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL HI
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1043.8 (MSL) EOB: 30.0 ft. | PAGE 1 OF 1
START: 3/10/20 END: 3/10/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 68.4 | LAT / LONG: 41.023327, -81.499811

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)	SO4 ppm	BACK FILL
6.5" ASPHALT AND 7.5" CONCRETE AND 6.0" BASE (DRILLERS DESCRIPTION)	1043.8																		
	1042.1																		
VERY STIFF TO HARD, BROWN, **SANDY SILT**, LITTLE TO SOME GRAVEL AND STONE FRAGMENTS, LITTLE CLAY, CONTAINS TRACE IRON STAINING, DAMP TO MOIST			13 5 6	13	56	SS-1	4.50	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
			4 7 8	17	56	SS-2	4.25	-	-	-	-	-	-	-	-	13	A-4a (V)	-	
			7 8 6	16	67	SS-3	3.50	16	10	32	27	15	22	15	7	13	A-4a (1)	-	
			7 7 9	18	78	SS-4	2.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
			3 5 7	14	50	SS-5	2.50	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
	1028.3																		
VERY STIFF, DARK GRAY, **SILT AND CLAY**, SOME SAND, TRACE GRAVEL, CONTAINS TRACE IRON STAINING, MOIST			5 5 6	13	72	SS-6	2.25	3	7	23	38	29	36	21	15	26	A-6a (8)	-	
	1025.8																		
HARD, BROWN MOTTLED WITH GRAY AND ORANGISH BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, CONTAINS IRON STAINING, DAMP			7 5 6	13	100	SS-7	4.50	-	-	-	-	-	-	-	-	17	A-4a (V)	-	
			6 7 8	17	100	SS-8	4.25	5	7	24	49	15	23	18	5	16	A-4a (6)	-	
			7 10 11	24	78	SS-9	4.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
	1018.3																		
MEDIUM DENSE, GRAY, **COARSE AND FINE SAND**, SOME GRAVEL AND STONE FRAGMENTS, LITTLE SILT, TRACE CLAY, DAMP			9 11 12	26	100	SS-10	-	-	-	-	-	-	-	-	-	12	A-3a (V)	-	
			10 14 9	26	100	SS-11	-	-	-	-	-	-	-	-	-	10	A-3a (V)	-	
	1013.8	EOB																	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE CAVED IN AT 20.0'.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / ASHBAUGH | DRILL RIG: CME 55T | STATION / OFFSET: 45+62, 22' LT. | EXPLORATION ID B-083-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL HI
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1043.3 (MSL) EOB: 28.9 ft. | PAGE 1 OF 1
START: 3/6/20 END: 3/6/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 68.4 | LAT / LONG: 41.023612, -81.500135

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)	SO4 ppm	BACK FILL
10.0" ASPHALT AND 6.0" CONCRETE AND 5.0" BASE (DRILLERS DESCRIPTION)	1043.3																		
	1041.5																		
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, SOME GRAVEL AND STONE FRAGMENTS, LITTLE SILT, TRACE CLAY, CONTAINS CONCRETE FRAGMENTS, DAMP **(FILL)**			6 7 13	23	44	SS-1	-	-	-	-	-	-	-	-	-	9	A-3a (V)	-	
	1037.8																		
VERY STIFF TO HARD, BROWNISH GRAY AND BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, SS-2 IS SLIGHTLY ORGANIC, DAMP TO MOIST			3 5 5	11	28	SS-2	4.25	-	-	-	-	-	-	-	-	15	A-4a (V)	-	
			4 5 7	14	94	SS-3	4.50	10	6	30	35	19	23	16	7	15	A-4a (4)	-	
			4 3 4	8	100	SS-4	3.00	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
			5 4 3	8	100	SS-5	2.75	-	-	-	-	-	-	-	-	24	A-4a (V)	-	
@16.0' TO 20.0'; SS-6 AND SS-7 BECOME BROWN MOTTLED WITH GRAY AND ORANGISH BROWN, CONTAINS IRON STAINING			4 6 5	13	67	SS-6	3.25	7	7	20	46	20	29	19	10	17	A-4a (6)	-	
	1022.8																		
			6 5 7	14	78	SS-7	4.25	-	-	-	-	-	-	-	-	22	A-4a (V)	-	
MEDIUM DENSE, BROWN AND GRAY, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, MOIST			7 9 9	21	78	SS-8	-	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
			7 8 11	22	89	SS-9	-	7	10	27	45	11	NP	NP	NP	15	A-4a (4)	-	
	1017.8																		
STIFF TO VERY STIFF, BROWN MOTTLED WITH ORANGISH BROWN AND GRAY, **SILT AND CLAY**, SOME SAND, TRACE GRAVEL, CONTAINS IRON STAINING, MOIST			10 12 46	66	78	SS-10	2.00	-	-	-	-	-	-	-	-	22	A-6a (V)	-	
	1015.8																		
VERY DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, LITTLE CLAY, MOIST	1014.4	EOB	50/5"	-	60	SS-11	-	-	-	-	-	-	-	-	-	14	A-2-4 (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE CAVED IN AT 19.0'.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:37 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
BARRIER HI
BORING LOGS B-082-0-17 & B-083-0-17

DRAWN EB
CHECKED BPA

PROJECT: SUM-77-277/224	DRILLING FIRM / OPERATOR: NEAS / ASHBAUGH	DRILL RIG: CME 55T	STATION / OFFSET: 44+32, 23' LT.	EXPLORATION ID B-084-0-17
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH	HAMMER: CME AUTOMATIC	ALIGNMENT: NOISE WALL HI	
PID: 106002 SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 12/5/19	ELEVATION: 1042.4 (MSL) EOB: 31.1 ft.	PAGE 1 OF 1
START: 3/6/20 END: 3/6/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 68.4	LAT / LONG: 41.023871, -81.500471	

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)	SO4 ppm	BACK FILL
10.0" ASPHALT AND 8.0" CONCRETE AND 5.0" BASE (DRILLERS DESCRIPTION)	1042.4																		
	1040.5																		
MEDIUM DENSE, BROWN, **STONE FRAGMENTS WITH SAND**, TRACE SILT, TRACE CLAY, STONE FRAGMENTS ARE FRIABLE SANDSTONE, CONTAINS TRACE BRICK FRAGMENTS, MOIST **(FILL)**		1	4 5 7	14	17	SS-1	-	-	-	-	-	-	-	-	-	11	A-1-b (V)	-	
	1036.9	2 3 4 5																	
LOOSE TO MEDIUM DENSE, GRAY AND BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, LITTLE CLAY, STONE FRAGMENTS ARE FRIABLE SANDSTONE, DAMP TO MOIST		6	4 4 5	10	33	SS-2	-	-	-	-	-	-	-	-	-	12	A-2-4 (V)	-	
		7 8 9	5 8 8	18	56	SS-3	-	-	-	-	-	-	-	-	-	14	A-2-4 (V)	-	
	1031.9	10																	
LOOSE TO MEDIUM DENSE, BROWN MOTTLED WITH GRAY AND ORANGISH BROWN, **COARSE AND FINE SAND**, SOME SILT, LITTLE CLAY, TRACE GRAVEL, CONTAINS IRON STAINING, MOIST		11 12	4 6 7	15	100	SS-4	-	-	-	-	-	-	-	-	-	14	A-3a (V)	-	
		13 14 15	5 3 3	7	100	SS-5	-	0	11	57	21	11	NP	NP	NP	12	A-3a (0)	-	
		16 17	5 5 6	13	100	SS-6	-	-	-	-	-	-	-	-	-	15	A-3a (V)	-	
	1024.4	18																	
MEDIUM DENSE, BROWN MOTTLED WITH GRAY AND ORANGISH BROWN, **COARSE AND FINE SAND**, LITTLE TO SOME SILT, TRACE TO LITTLE CLAY, LITTLE GRAVEL, CONTAINS IRON STAINING, MOIST		19	4 5 7	14	100	SS-7	-	-	-	-	-	-	-	-	-	16	A-3a (V)	-	
		20 21 22	6 5 6	13	100	SS-8	-	20	24	27	20	9	NP	NP	NP	13	A-3a (0)	-	
		23 24 25	5 4 6	11	100	SS-9	-	-	-	-	-	-	-	-	-	13	A-3a (V)	-	
	1016.9	26																	
MEDIUM DENSE TO VERY DENSE, GRAY, **GRAVEL WITH SAND AND SILT**, LITTLE CLAY, DAMP		27	7 9 13	25	56	SS-10	-	-	-	-	-	-	-	-	-	10	A-2-4 (V)	-	
		28 29	50/4"	-	50	SS-11	-	-	-	-	-	-	-	-	-	7	A-2-4 (V)	-	
	1011.3	30																	
@31.0'; SS-12 CONTAINS NO RECOVERY		EOB 31	50/1"	-	0	SS-12	-	-	-	-	-	-	-	-	-	-		-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE CAVED IN AT 20.0'.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (11 X 17) - OH DOT GDT - 11/13/20 22:54 - C:\USERS\KARENS\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

157/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION BARRIER HI BORING LOG B-084-0-17	DRAWN EB / CHECKED BPA

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZL050.dgn Sheet 1/8/2021 1:10:03 AM karens

PROJECT: SUM-77-277/224	DRILLING FIRM / OPERATOR: NEAS / ASHBAUGH	DRILL RIG: CME 55T	STATION / OFFSET: 42+39, 26' LT.	EXPLORATION ID B-085-0-17
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH	HAMMER: CME AUTOMATIC	ALIGNMENT: NOISE WALL HI	
PID: 106002 SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 12/5/19	ELEVATION: 1042.0 (MSL) EOB: 28.6 ft.	PAGE 1 OF 1
START: 3/5/20 END: 3/5/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 68.4	LAT / LONG: 41.024216, -81.501012	

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)	SO4 ppm	BACK FILL
10.0" ASPHALT AND 8.0" CONCRETE AND 6.0" BASE (DRILLERS DESCRIPTION)	1042.0																		
VERY STIFF TO HARD, BROWN AND GRAY, **SANDY SILT**, SOME CLAY, LITTLE GRAVEL, SS-2 CONTAINS TRACE IRON STAINING, DAMP TO MOIST	1040.0		4 4 3	8	56	SS-1	4.50	-	-	-	-	-	-	-	-	13	A-4a (V)	-	
			2 2 4	7	44	SS-2	2.75	-	-	-	-	-	-	-	-	17	A-4a (V)	-	
MEDIUM DENSE, BROWN, **STONE FRAGMENTS WITH SAND, SILT, AND CLAY**, DAMP	1034.0		8 9 11	23	50	SS-3	-	-	-	-	-	-	-	-	-	15	A-2-6 (V)	-	
VERY STIFF TO HARD, BROWN AND ORANGISH BROWN, **SANDY SILT**, LITTLE GRAVEL AND STONE FRAGMENTS, LITTLE CLAY, CONTAINS IRON STAINING, DAMP	1031.5		4 5 6	13	100	SS-4	4.50	16	11	25	37	11	21	17	4	14	A-4a (3)	-	
			3 6 8	16	100	SS-5	2.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
LOOSE, BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, LITTLE CLAY, MOIST	1026.5		4 5 4	10	39	SS-6	-	-	-	-	-	-	-	-	-	13	A-2-4 (V)	-	
DENSE, BROWN, **STONE FRAGMENTS**, LITTLE SAND, TRACE SILT, TRACE CLAY, WET TO MOIST	1024.0	▼1024.0	4 7 20	31	56	SS-7	-	-	-	-	-	-	-	-	-	19	A-1-a (V)	-	
			8 11 30	47	61	SS-8	-	-	-	-	-	-	-	-	-	11	A-1-a (V)	-	
VERY DENSE, BROWN AND GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, LITTLE CLAY, MOIST	1019.0		4 20 44	73	78	SS-9	-	-	-	-	-	-	-	-	-	13	A-2-4 (V)	-	
			21 49	-	25	SS-10	-	-	-	-	-	-	-	-	-	11	A-2-4 (V)	-	
@28.5'; SS-11 CONTAINS NO RECOVERY	1013.4	EOB	50/1"	-	0	SS-11	-	-	-	-	-	-	-	-	-	-		-	

NOTES: GROUNDWATER ENCOUNTERED AT 18.0' DURING DRILLING. HOLE CAVED IN AT 16.0'.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:37 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
BARRIER HI
BORING LOG B-085-0-17

DRAWN EB
CHECKED BPA

PROJECT: SUM-77-277/224	DRILLING FIRM / OPERATOR: NEAS / ASHBAUGH	DRILL RIG: CME 55T	STATION / OFFSET: 40+53, 27' LT.	EXPLORATION ID B-086-0-17
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH	HAMMER: CME AUTOMATIC	ALIGNMENT: NOISE WALL HI	
PID: 106002 SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 12/5/19	ELEVATION: 1044.1 (MSL) EOB: 31.2 ft.	PAGE 1 OF 1
START: 3/4/20 END: 3/4/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 68.4	LAT / LONG: 41.024494, -81.501594	

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)	SO4 ppm	BACK FILL
12.0" ASPHALT AND 9.0" BASE (DRILLERS DESCRIPTION)	1044.1																		
	1042.3																		
HARD, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, DAMP			7 7 9	18	67	SS-1	4.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
	1038.6																		
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, LITTLE SILT, TRACE GRAVEL, TRACE CLAY, DAMP			5 8 12	23	78	SS-2	-	-	-	-	-	-	-	-	-	7	A-3a (V)	-	
	1036.1																		
VERY STIFF TO HARD, BROWN BECOMING GRAY, **SANDY SILT**, TRACE TO LITTLE GRAVEL AND STONE FRAGMENTS, TRACE TO LITTLE CLAY, DAMP			5 4 5	10	56	SS-3	4.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
			5 5 6	13	56	SS-4	4.50	9	10	29	37	15	21	15	6	13	A-4a (3)	-	
			3 4 6	11	67	SS-5	4.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
			5 4 4	9	72	SS-6	4.50	6	10	32	37	15	24	18	6	17	A-4a (3)	-	
@18.5' TO 25.0'; SS-7 TO SS-9 BECOME BROWN			5 7 12	22	89	SS-7	4.50	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
			5 8 10	21	78	SS-8	3.50	17	14	33	26	10	20	15	5	12	A-4a (0)	-	
			6 10 14	27	100	SS-9	4.50	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
	1018.1	TR																	
SANDSTONE, GRAY, HIGHLY WEATHERED, SLIGHTLY TO MODERATELY STRONG, FINE TO COARSE GRAINED, FRIABLE.			10 11 14	29	44	SS-10	-	-	-	-	-	-	-	-	-	7	Rock (V)	-	
			26 50	-	50	SS-11	-	-	-	-	-	-	-	-	-	6	Rock (V)	-	
@31.0'; SS-12 CONTAINS NO RECOVERY	1012.9	EOB	50/2"	-	0	SS-12	-	-	-	-	-	-	-	-	-	-		-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE CAVED IN AT 19.0'.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (11 X 17) - OH DOT GDT - 11/13/20 22:54 - C:\USERS\KARENS\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224	DRILLING FIRM / OPERATOR: NEAS / ASHBAUGH	DRILL RIG: CME 55T	STATION / OFFSET: 38+52, 24' LT.	EXPLORATION ID B-087-0-17
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH	HAMMER: CME AUTOMATIC	ALIGNMENT: NOISE WALL HI	
PID: 106002 SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 12/5/19	ELEVATION: 1047.0 (MSL) EOB: 31.3 ft.	PAGE 1 OF 1
START: 3/4/20 END: 3/4/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 68.4	LAT / LONG: 41.024721, -81.502271	

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)	SO4 ppm	BACK FILL
12.0" ASPHALT AND 8.5" BASE (DRILLERS DESCRIPTION)	1047.0																		
	1045.3																		
MEDIUM DENSE, BLACK, **STONE FRAGMENTS**, TRACE SAND, TRACE SILT, TRACE CLAY, STONE FRAGMENTS ARE ASPHALT, DAMP **(FILL)**			4 6 6	14	11	SS-1	-	-	-	-	-	-	-	-	-	7	A-1-a (V)	-	
	1041.5																		
HARD, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE TO LITTLE GRAVEL AND STONE FRAGMENTS, DAMP			4 5 4	10	44	SS-2	4.25	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
			4 5 7	14	67	SS-3	4.50	8	8	21	46	17	24	18	6	13	A-4a (6)	-	
			5 7 6	15	67	SS-4	4.50	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
	1032.5		6 8 12	23	78	SS-5A	4.50	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, TRACE SILT, TRACE CLAY, TRACE GRAVEL, DAMP						SS-5B	-	-	-	-	-	-	-	-	-	9	A-3a (V)	-	
	1030.0		4 9 11	23	89	SS-6A	-	-	-	-	-	-	-	-	-	10	A-3a (V)	-	
HARD, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, DAMP	1029.0					SS-6B	4.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, LITTLE SILT, TRACE CLAY, TRACE GRAVEL, MOIST			5 8 10	21	83	SS-7	-	-	-	-	-	-	-	-	-	12	A-3a (V)	-	
	1026.5																		
VERY STIFF TO HARD, BROWN AND GRAY, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, DAMP			6 4 5	10	50	SS-8	4.50	8	12	32	34	14	21	15	6	12	A-4a (3)	-	
			5 5 9	16	28	SS-9	3.25	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
	1021.5																		
MEDIUM DENSE TO VERY DENSE, BROWN, **COARSE AND FINE SAND**, SOME GRAVEL, LITTLE SILT, TRACE CLAY, MOIST			7 8 11	22	56	SS-10	-	-	-	-	-	-	-	-	-	11	A-3a (V)	-	
	1017.0		9 21 33	62	67	SS-11	-	-	-	-	-	-	-	-	-	12	A-3a (V)	-	
VERY DENSE, BROWN, **STONE FRAGMENTS WITH SAND AND SILT**, TRACE CLAY, MOIST	1015.7	EOB	50/3"	-	100	SS-12	-	-	-	-	-	-	-	-	-	10	A-2-4 (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE CAVED IN AT 16.0'.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (11 X 17) - OH DOT GDT - 11/13/20 22:54 - C:\USERS\KARENS\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

160/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION BARRIER HI BORING LOG B-087-0-17	DRAWN EB CHECKED BPA

PROJECT: SUM-77-277/224	DRILLING FIRM / OPERATOR: NEAS / J. HODGES	DRILL RIG: CME 55X	STATION / OFFSET: 36+95, 134' RT.	EXPLORATION ID B-088-0-17
TYPE: CULVERT	SAMPLING FIRM / LOGGER: NEAS / J. HODGES	HAMMER: CME AUTOMATIC	ALIGNMENT: NOISE WALL HI	
PID: 106002 SFN: 7709781	DRILLING METHOD: 3.25" HSA / NQ2	CALIBRATION DATE: 12/5/19	ELEVATION: 1022.0 (MSL) EOB: 28.6 ft.	PAGE 1 OF 1
START: 4/7/20 END: 4/7/20	SAMPLING METHOD: SPT / NQ2	ENERGY RATIO (%): 81.9	LAT / LONG: 41.024437, -81.502965	

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)	SO4 ppm	BACK FILL
LOOSE, BROWN, **GRAVEL WITH SAND AND SILT**, TRACE CLAY, CONTAINS IRON STAINING, DAMP **(FILL)**	1022.0																		
	1017.5		4 3 3	8	100	SS-1	-	17	6	43	25	9	NP	NP	NP	13	A-2-4 (0)	-	
VERY LOOSE, BROWN, **COARSE AND FINE SAND**, LITTLE SILT, LITTLE CLAY, TRACE GRAVEL, CONTAINS IRON STAINING, MOIST **(FILL)**	1015.0		1 1 1	3	44	SS-2	-	-	-	-	-	-	-	-	-	15	A-3a (V)	-	
LOOSE, BROWN AND GRAY, **GRAVEL WITH SAND**, LITTLE SILT ,TRACE CLAY, CONTAINS SLAG AND IRON STAINING, MOIST **(FILL)**	1012.5		2 3 4	10	67	SS-3	-	-	-	-	-	-	-	-	-	13	A-1-b (V)	-	
MEDIUM DENSE TO DENSE, GRAY AND LIGHT BROWN, **STONE FRAGMENTS WITH SAND**, TRACE TO LITTLE SILT, TRACE CLAY, DAMP			9 14 12	35	56	SS-4	-	-	-	-	-	-	-	-	-	6	A-1-b (V)	-	
@12.5' TO 14.0'; SS-5 BECOMES WET	1007.5	1009.5	14 10 5	20	56	SS-5	-	51	13	17	14	5	NP	NP	NP	18	A-1-b (0)	-	
MEDIUM DENSE, GRAY, **GRAVEL WITH SAND**, TRACE SILT, TRACE CLAY, MOIST	1005.0		7 6 7	18	33	SS-6	-	-	-	-	-	-	-	-	-	12	A-1-b (V)	-	
VERY DENSE, LIGHT GRAY AND DARK GRAY, **STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE CLAY, CONTAINS A RELIC ROCK STRUCTURE, MOIST	1002.5		11 40 14	74	67	SS-7	-	-	-	-	-	-	-	-	-	12	A-1-b (V)	-	
DENSE, GRAY, **COARSE AND FINE SAND**, SOME GRAVEL AND STONE FRAGMENTS, TRACE SILT, TRACE CLAY, WET	1000.0		14 13 12	34	100	SS-8	-	-	-	-	-	-	-	-	-	16	A-3a (V)	-	
VERY DENSE, GRAY, **STONE FRAGMENTS WITH SAND AND SILT**, LITTLE CLAY, CONTAINS A RELIC ROCK STRUCTURE, MOIST	998.4	TR	7 24 50/1"	-	100	SS-9	-	-	-	-	-	-	-	-	-	11	A-2-4 (V)	-	
INTERBEDDED SANDSTONE (83%) AND SHALE (17%), MEDIUM BEDDED FROM 27.1' - 28.6', BEDDING DISCONTINUITIES: LOW ANGLE, HIGHLY FRACTURED TO FRACTURED, INTACT FROM 27.1' - 28.6', OPEN TO NARROW, SLIGHTLY ROUGH, BLOCKY/DISTURBED/SEAMY, INTACT FROM 27.1' - 28.6', GOOD TO FAIR SURFACE CONDITION, RQD 29.6%, REC. 100%; **SANDSTONE**, LIGHT GRAY AND ORANGISH BROWN, SLIGHTLY TO MODERATELY WEATHERED, STRONG, FINE TO MEDIUM GRAINED, THINLY LAMINATED TO VERY THIN; **SHALE**, GRAY, MODERATELY WEATHERED, VERY WEAK TO WEAK, FISSILE.	993.4	EOB	30		100	NQ2-1											CORE		

NOTES: GROUNDWATER ENCOUNTERED AT 12.5' DURING DRILLING. HOLE DID NOT CAVE. BORING OFFSET 35.0' SOUTH DUE TO OVERHEAD UTILITIES.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 5 GAL. BENTONITE GROUT; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (11 X 17) - OH DOT GDT - 11/13/20 22:54 - C:\USERS\KARENS\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

602 191	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION CULVERT SNF: 7709781 BORING LOG B-088-0-17	DRAWN EB CHECKED BPA

PROJECT: SUM-77-277/224	DRILLING FIRM / OPERATOR: NEAS / ASHBAUGH	DRILL RIG: CME 55T	STATION / OFFSET: 36+65, 20' LT.
TYPE: CULVERT	SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH	HAMMER: CME AUTOMATIC	ALIGNMENT: NOISE WALL HI
PID: 106002 SFN: 7709781	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 12/5/19	ELEVATION: 1049.5 (MSL) EOB: 39.7 ft.
START: 3/4/20 END: 3/4/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 68.4	LAT / LONG: 41.024866, -81.502930

EXPLORATION ID B-089-0-17

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)	SO4 ppm	BACK FILL
12.0" ASPHALT AND 5.0" BASE (DRILLERS DESCRIPTION)	1049.5																		
	1048.1																		
HARD, BROWN AND GRAY, **SANDY SILT**, LITTLE CLAY, LITTLE GRAVEL, DAMP			7 6 7	15	56	SS-1	4.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
			5 6 6	14	100	SS-2	4.50	-	-	-	-	-	-	-	-	11	A-4a (V)	-	
	1041.5																		
HARD, BROWN, **SILT**, SOME SAND, LITTLE CLAY, TRACE GRAVEL, DAMP @8.5' TO 10.0'; SS-3 CONTAINS NO RECOVERY			4 4 8	14	0	SS-3	-	-	-	-	-	-	-	-	-	-		-	
			5 7 6	15	89	SS-4	4.50	5	5	19	54	17	24	19	5	16	A-4b (7)	-	
			6 6 7	15	78	SS-5	4.50	-	-	-	-	-	-	-	-	13	A-4b (V)	-	
	1034.0																		
VERY STIFF TO HARD, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE TO LITTLE GRAVEL AND STONE FRAGMENTS, WET TO MOIST @16.0' TO 17.5'; SS-6 CONTAINS A 2.0" COARSE AND FINE SAND SEAM			6 7 7	16	67	SS-6	3.50	4	7	40	37	12	18	14	4	17	A-4a (3)	-	
			9 10 12	25	56	SS-7	4.50	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
@21.0' TO 39.5'; SS-8 TO SS-12A BECOME DAMP			10 11 14	29	83	SS-8	4.50	18	10	24	36	12	23	17	6	11	A-4a (3)	-	
			5 8 6	16	89	SS-9	4.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
@28.5'; BECOMES BROWNISH GRAY, CONTAINS TRACE IRON STAINING			5 4 6	11	100	SS-10	4.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
			7 6 7	15	67	SS-11	2.50	4	8	31	41	16	23	17	6	17	A-4a (4)	-	
	1010.0		12 25 50/2"	-	50	SS-12A	4.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
VERY DENSE, GRAY, **STONE FRAGMENTS WITH SAND**, TRACE SILT, TRACE CLAY, STONE FRAGMENTS ARE SILTSTONE, DAMP	1009.8	EOB				SS-12B	-	-	-	-	-	-	-	-	-	6	A-1-b (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE CAVED IN AT 18.2'.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (11 X 17) - OH DOT GDT - 11/13/20 22:54 - C:\USERS\KARENS\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

162/209	**SUM-77/277/224 VARIOUS**	**STRUCTURE FOUNDATION EXPLORATION CULVERT SNF: 7709781 & BARRIER HI BORING LOG B-089-0-17**	DRAWN EB CHECKED BPA

PROJECT: SUM-77-277/224	DRILLING FIRM / OPERATOR: NEAS / ASHBAUGH	DRILL RIG: CME 55T	STATION / OFFSET: 34+63, 14' LT.	EXPLORATION ID B-090-0-17
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH	HAMMER: CME AUTOMATIC	ALIGNMENT: NOISE WALL HI	
PID: 106002 SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 12/5/19	ELEVATION: 1051.7 (MSL) EOB: 32.5 ft.	PAGE 1 OF 1
START: 3/4/20 END: 3/4/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 68.4	LAT / LONG: 41.024947, -81.503662	

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)	SO4 ppm	BACK FILL
13.0" ASPHALT AND 8.0" BASE (DRILLERS DESCRIPTION)	1051.7																		
	1049.9																		
HARD, BROWN AND GRAYISH BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, DAMP			2 4 5	10	56	SS-1	4.50	-	-	-	-	-	-	-	-	15	A-4a (V)	-	
	1046.2																		
LOOSE TO MEDIUM DENSE, BROWN AND GRAYISH BROWN, **GRAVEL WITH SAND AND SILT**, TRACE CLAY, DAMP			5 4 5	10	83	SS-2	-	27	15	33	17	8	NP	NP	NP	12	A-2-4 (0)	-	
			6 5 5	11	78	SS-3	-	-	-	-	-	-	-	-	-	13	A-2-4 (V)	-	
	1041.2																		
VERY STIFF TO HARD, BROWN AND GRAYISH BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, DAMP TO MOIST			2 4 5	10	89	SS-4	4.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
			3 4 3	8	67	SS-5	3.50	9	12	32	32	15	21	15	6	13	A-4a (2)	-	
@16.0' TO 25.0'; SS-6 TO SS-9 CONTAIN INTERBEDDED SILT LENSES			4 4 5	10	83	SS-6	2.25	-	-	-	-	-	-	-	-	19	A-4a (V)	-	
@18.5' TO 20.0'; SS-7 BECOMES BROWN AND DARK GRAY, CONTAINS TRACE ROOTS			4 5 8	15	100	SS-7	3.50	-	-	-	-	-	-	-	-	17	A-4a (V)	-	
			6 6 7	15	100	SS-8	4.00	10	13	28	35	14	22	16	6	14	A-4a (3)	-	
			5 6 8	16	100	SS-9	4.50	-	-	-	-	-	-	-	-	13	A-4a (V)	-	
@26.0' TO 27.5'; SS-10 BECOMES STIFF, CONTAINS IRON STAINING			3 5 9	16	100	SS-10	1.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
@28.5' TO 30.0'; SS-11 BECOMES MEDIUM DENSE			5 7 10	19	100	SS-11	-	6	10	42	31	11	NP	NP	NP	13	A-4a (1)	-	
	1021.2																		
MEDIUM DENSE, BROWN AND ORANGISH BROWN, **COARSE AND FINE SAND**, LITTLE SILT, TRACE GRAVEL, TRACE CLAY, CONTAINS IRON STAINING, MOIST	1019.2	EOB	10 11 15	30	100	SS-12	-	-	-	-	-	-	-	-	-	11	A-3a (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE CAVED IN AT 17.0'.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (11 X 17) - OH DOT GDT - 11/13/20 22:54 - C:\USERS\KARENS\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZL056.dgn Sheet 1/8/2021 1:13:04 AM karens

PROJECT: SUM-77-277/224	DRILLING FIRM / OPERATOR: NEAS / ASHBAUGH	DRILL RIG: CME 55T	STATION / OFFSET: 32+63, 15' LT.
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH	HAMMER: CME AUTOMATIC	ALIGNMENT: NOISE WALL HI
PID: 106002 SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 12/5/19	ELEVATION: 1050.4 (MSL) EOB: 31.3 ft.
START: 3/4/20 END: 3/4/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 68.4	LAT / LONG: 41.024972, -81.504391

EXPLORATION ID B-091-0-17

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)	SO4 ppm	BACK FILL
13.0" ASPHALT AND 6.0" BASE (DRILLERS DESCRIPTION)	1050.4																		
MEDIUM DENSE, BROWN, **GRAVEL WITH SAND AND SILT**, TRACE CLAY, MOIST	1048.8		7 9 6	17	56	SS-1	-	-	-	-	-	-	-	-	-	13	A-2-4 (V)	-	
			5 6 5	13	50	SS-2	-	-	-	-	-	-	-	-	-	12	A-2-4 (V)	-	
VERY STIFF TO HARD, BROWN BECOMING BROWNISH GRAY, **SANDY SILT**, LITTLE TO SOME CLAY, TRACE GRAVEL, DAMP	1042.4		4 4 6	11	78	SS-3	4.50	-	-	-	-	-	-	-	-	13	A-4a (V)	-	
			5 6 5	13	100	SS-4	4.50	9	10	23	40	18	22	15	7	12	A-4a (5)	-	
			3 5 7	14	89	SS-5	4.25	-	-	-	-	-	-	-	-	13	A-4a (V)	-	
			4 5 7	14	100	SS-6	3.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
@18.5' TO 22.5'; SS-7 AND SS-8 CONTAIN INTERBEDDED SILT LENSES			4 3 4	8	78	SS-7	3.25	4	5	20	49	22	26	18	8	16	A-4a (7)	-	
			4 4 4	9	83	SS-8	3.50	-	-	-	-	-	-	-	-	13	A-4a (V)	-	
LOOSE, BROWN, **COARSE AND FINE SAND**, LITTLE SILT, TRACE CLAY, TRACE GRAVEL AND STONE FRAGMENTS, MOIST TO DAMP	1027.4		3 4 3	8	100	SS-9	-	-	-	-	-	-	-	-	-	14	A-3a (V)	-	
@26.0' TO 31.3'; SS-10 TO SS-11 BECOME DENSE TO VERY DENSE, SOME GRAVEL AND STONE FRAGMENTS			10 13 14	31	56	SS-10	-	-	-	-	-	-	-	-	-	8	A-3a (V)	-	
			13 15 43	66	56	SS-11	-	-	-	-	-	-	-	-	-	10	A-3a (V)	-	
@31.0'; SS-12 BECOMES VERY DENSE, CONTAINS NO RECOVERY	1019.1	EOB	50/3"	-	0	SS-12	-	-	-	-	-	-	-	-	-	-		-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE CAVED IN AT 17.1'.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (11 X 17) - OH DOT.GDT - 11/13/20 22:54 - C:\USERS\KARENS\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
BARRIER HI
BORING LOG B-091-0-17

DRAWN EB
CHECKED BPA

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 30+36, 15' RT. | EXPLORATION ID B-092-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL HI
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1043.1 (MSL) EOB: 23.7 ft. | PAGE 1 OF 1
START: 3/3/20 END: 3/3/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.024740, -81.505041

MATERIAL DESCRIPTION AND NOTES	ELEV. 1043.1	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
VERY STIFF TO HARD, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, CONTAINS TRACE IRON STAINING AND ROOTS, DAMP			4 4 6	14	100	SS-1	4.50	1	9	31	41	18	23	19	4	17	A-4a (5)	-	
	1039.1					SS-2A	3.50	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
VERY STIFF TO HARD, BROWN, **SILT**, LITTLE TO SOME CLAY, TRACE TO LITTLE SAND, TRACE GRAVEL, DAMP			4 6 8	19	100	SS-2B	4.25	1	3	13	64	19	25	20	5	18	A-4b (8)	-	
@6.0' TO 10.0'; SS-3 TO SS-4 BECOME WET TO MOIST		▼ 1037.1	4 5 6	15	67	SS-3	4.50	-	-	-	-	-	-	-	-	28	A-4b (V)	-	
			2 3 7	14	44	SS-4	2.25	0	1	8	69	22	27	21	6	23	A-4b (8)	-	
	1032.1	TR																	
SANDSTONE, LIGHT TAN AND BROWN, HIGHLY WEATHERED, WEAK TO MODERATELY STRONG, FINE TO COARSE GRAINED, FRIABLE.			12 15 16	42	56	SS-5	-	-	-	-	-	-	-	-	-	4	Rock (V)	-	
			50	-	100	SS-6	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
			12 24 25	67	100	SS-7	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
			11 50	-	100	SS-8	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
@21.0'; SS-9 CONTAINS NO RECOVERY			50/4"	-	0	SS-9	-	-	-	-	-	-	-	-	-	-		-	
	1019.4	EOB	50/2"	-	100	SS-10	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER ENCOUNTERED AT 6.0' DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 28+11, 16' LT. | EXPLORATION ID B-093-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL HI
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1043.5 (MSL) EOB: 21.5 ft. | PAGE 1 OF 1
START: 3/3/20 END: 3/3/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.024752, -81.505832

MATERIAL DESCRIPTION AND NOTES	ELEV. 1043.5	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
VERY STIFF, BROWN AND GRAY, **SILT**, SOME CLAY, TRACE SAND, TRACE GRAVEL, CONTAINS IRON STAINING, DAMP TO MOIST			5 5 5	14	100	SS-1	3.75	-	-	-	-	-	-	-	-	23	A-4b (V)	-	
			5 6 7	18	100	SS-2	3.75	-	-	-	-	-	-	-	-	27	A-4b (V)	-	
			5 9 13	30	100	SS-3	4.00	0	2	6	70	22	31	25	6	24	A-4b (8)	-	
	1033.0		4 9 10	26	100	SS-4	3.50	-	-	-	-	-	-	-	-	23	A-4b (V)	-	
DENSE, LIGHT BROWN AND TAN, **STONE FRAGMENTS WITH SAND**, TRACE SILT, TRACE CLAY, STONE FRAGMENTS ARE SANDSTONE, DAMP	1031.5		13 26 30	76	44	SS-5A	-	-	-	-	-	-	-	-	-	5	A-1-b (V)	-	
						SS-5B	4.25	-	-	-	-	-	-	-	-	10	A-4b (V)	-	
STIFF TO HARD, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, DAMP TO MOIST			7 8 5	18	100	SS-6	2.00	2	2	17	61	18	26	19	7	21	A-4b (8)	-	
	1028.0	TR																	
SANDSTONE, LIGHT TAN, HIGHLY WEATHERED, SLIGHTLY STRONG, FINE TO COARSE GRAINED.			50	-	100	SS-7	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
			50/3"	-	100	SS-8	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
	1022.0	EOB	50	-	100	SS-9	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:37 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
BARRIER HI
BORING LOGS B-092-0-17 & B-093-0-17

DRAWN EB
CHECKED BPA

PROJECT: SUM-77-277/224
TYPE: NOISE WALL
PID: 106002 SFN:
START: 3/2/20 END: 3/2/20

DRILLING FIRM / OPERATOR: NEAS / J. HODGES
SAMPLING FIRM / LOGGER: NEAS / J. HODGES
DRILLING METHOD: 3.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: CME 55X
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 12/5/19
ENERGY RATIO (%): 81.9

STATION / OFFSET: 26+27, 15' LT.
ALIGNMENT: NOISE WALL HI
ELEVATION: 1041.4 (MSL) EOB: 18.7 ft.
LAT / LONG: 41.024781, -81.506500

EXPLORATION ID B-094-0-17
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)	SO4 ppm	BACK FILL
LOOSE TO MEDIUM DENSE, BROWN, **SILT**, TRACE CLAY, TRACE SAND, TRACE GRAVEL, SS-1 CONTAINS TRACE ROOTS, MOIST TO WET			5 5 7	16	67	SS-1	-	-	-	-	-	-	-	-	-	24	A-4b (V)	-	
			5 8 9	23	100	SS-2	-	0	0	3	88	9	NP	NP	NP	24	A-4b (8)	-	
@6.0' TO 12.5'; SS-3 TO SS-5 BECOME ORANGISH BROWN AND GRAY, SOME CLAY, CONTAINS IRON STAINING			2 2 3	7	100	SS-3	-	-	-	-	-	-	-	-	-	28	A-4b (V)	-	
			2 3 3	8	100	SS-4	-	1	2	3	70	24	NP	NP	NP	23	A-4b (8)	-	
			3 3 6	12	100	SS-5	-	1	1	2	75	21	NP	NP	NP	22	A-4b (8)	-	
	1027.9																		
VERY DENSE, BROWN, **COARSE AND FINE SAND**, SOME SILT, LITTLE GRAVEL, TRACE CLAY, DAMP	1026.4		7 26 50	104	100	SS-6	-	-	-	-	-	-	-	-	-	13	A-3a (V)	-	
SANDSTONE, LIGHT BROWN AND LIGHT GRAY, HIGHLY WEATHERED, SLIGHTLY STRONG, FINE TO COARSE GRAINED.		TR	50/5"	-	40	SS-7	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
	1022.7	EOB	50/2"	-	100	SS-8	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

PROJECT: SUM-77-277/224
TYPE: NOISE WALL
PID: 106002 SFN:
START: 3/2/20 END: 3/2/20

DRILLING FIRM / OPERATOR: NEAS / J. HODGES
SAMPLING FIRM / LOGGER: NEAS / J. HODGES
DRILLING METHOD: 3.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: CME 55X
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 12/5/19
ENERGY RATIO (%): 81.9

STATION / OFFSET: 24+45, 15' LT.
ALIGNMENT: NOISE WALL HI
ELEVATION: 1039.4 (MSL) EOB: 21.2 ft.
LAT / LONG: 41.024780, -81.507166

EXPLORATION ID B-095-0-17
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)	SO4 ppm	BACK FILL
HARD, GRAY, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, DAMP	1036.4		10 20 20	55	67	SS-1	4.50	-	-	-	-	-	-	-	-	8	A-4a (V)	-	
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, SOME SILT, SOME GRAVEL, TRACE CLAY, DAMP	1033.9		4 8 9	23	100	SS-2	-	-	-	-	-	-	-	-	-	11	A-3a (V)	-	
STIFF TO HARD, GRAY BECOMING BROWN AND ORANGISH BROWN, **SANDY SILT**, LITTLE CLAY, TRACE TO LITTLE GRAVEL, CONTAINS IRON STAINING, DAMP	1028.9		2 2 3	7	100	SS-3	1.50	7	9	28	38	18	19	14	5	12	A-4a (4)	-	
			10 16 17	45	100	SS-4	4.50	11	12	32	32	13	21	15	6	12	A-4a (2)	-	
HARD, ORANGISH BROWN AND GRAY, **SILT**, SOME CLAY, TRACE SAND, TRACE GRAVEL, CONTAINS IRON STAINING, DAMP	1026.4		6 25 30	75	67	SS-5	4.50	1	1	6	71	21	26	21	5	17	A-4b (8)	-	
SANDSTONE, LIGHT TAN, HIGHLY WEATHERED, SLIGHTLY STRONG, FINE TO COARSE GRAINED, FRIABLE.		TR	50/4"	-	100	SS-6	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
			50/2"	-	100	SS-7	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
			50	-	100	SS-8	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
	1018.2	EOB	50/2"	-	100	SS-9	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:37 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 22+54, 8' LT. | EXPLORATION ID B-096-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL HI
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1037.3 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 2/27/20 END: 2/27/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.024703, -81.507852

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)	SO4 ppm	BACK FILL
VERY STIFF TO HARD, BROWN BECOMING GRAY, **SANDY SILT**, LITTLE TO SOME CLAY, TRACE GRAVEL, SS-1 AND SS-2 CONTAIN IRON STAINING, DAMP	1037.3		6 7 8	20	67	SS-1	4.50	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
			3 7 9	22	100	SS-2	2.75	7	8	21	42	22	25	16	9	16	A-4a (6)	-	
@6.0' TO 7.5'; SS-3 CONTAINS NO INTACT SOIL FOR HP READINGS			3 6 5	15	50	SS-3	-	-	-	-	-	-	-	-	-	11	A-4a (V)	-	
			4 8 6	19	28	SS-4	4.50	-	-	-	-	-	-	-	-	10	A-4a (V)	-	
@11.0' TO 12.5'; SS-5 BECOMES LITTLE GRAVEL AND STONE FRAGMENTS			7 14 9	31	44	SS-5	4.50	18	10	18	37	17	21	14	7	10	A-4a (4)	-	
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, TRACE SILT, TRACE CLAY, TRACE GRAVEL, DAMP	1024.3		3 8 6	19	100	SS-6	-	-	-	-	-	-	-	-	-	4	A-3a (V)	-	
MEDIUM DENSE, BROWN, **GRAVEL WITH SAND**, TRACE SILT, TRACE CLAY, DAMP	1021.8		3 7 7	19	39	SS-7	-	-	-	-	-	-	-	-	-	3	A-1-b (V)	-	
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, TRACE SILT, TRACE CLAY, TRACE GRAVEL, DAMP	1019.3		3 4 6	14	100	SS-8	-	-	-	-	-	-	-	-	-	2	A-3a (V)	-	
@21.0' TO 22.5'; SS-9 BECOMES SOME SILT			3 4 7	15	100	SS-9	-	-	-	-	-	-	-	-	-	8	A-3a (V)	-	
HARD, BROWN, **SANDY SILT**, LITTLE CLAY, LITTLE GRAVEL AND STONE FRAGMENTS, MOIST	1014.3		17 29 35	87	100	SS-10A	4.50	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
VERY DENSE, LIGHT BROWN, **STONE FRAGMENTS WITH SAND**, TRACE SILT, TRACE CLAY, STONE FRAGMENTS ARE SANDSTONE, DAMP	1013.3					SS-10B	-	-	-	-	-	-	-	-	-	5	A-1-b (V)	-	
	1012.3	EOB																	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:37 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 20+56, 8' LT. | EXPLORATION ID B-097-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL HI
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1034.1 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 2/27/20 END: 2/27/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.024645, -81.508566

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)	SO4 ppm	BACK FILL
MEDIUM STIFF TO VERY STIFF, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE TO LITTLE GRAVEL, CONTAINS TRACE IRON STAINING, DAMP	1034.1		2 3 3	8	67	SS-1	0.75	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
			3 4 7	15	100	SS-2	3.00	11	10	20	40	19	25	18	7	18	A-4a (5)	-	
@6.0' TO 7.5'; SS-3 CONTAINS NO INTACT SOIL FOR HP READINGS			3 4 4	11	100	SS-3	-	-	-	-	-	-	-	-	-	15	A-4a (V)	-	
@8.5' TO 14.0'; SS-4 TO SS-6A BECOME HARD			3 4 7	15	67	SS-4	4.50	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
			7 12 14	35	100	SS-5	4.50	7	9	24	48	12	21	17	4	16	A-4a (5)	-	
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, TRACE SILT, TRACE CLAY, TRACE GRAVEL, MOIST	1020.1		3 3 5	11	100	SS-6A	4.50	-	-	-	-	-	-	-	-	17	A-4a (V)	-	
@16.0' TO 17.5'; SS-7 BECOMES DRY						SS-6B	-	-	-	-	-	-	-	-	-	15	A-3a (V)	-	
			2 4 4	11	67	SS-7	-	-	-	-	-	-	-	-	-	1	A-3a (V)	-	
@18.5' TO 20.0'; SS-8 BECOMES DAMP			6 6 8	19	50	SS-8	-	-	-	-	-	-	-	-	-	3	A-3a (V)	-	
			3 5 4	12	39	SS-9	-	-	-	-	-	-	-	-	-	13	A-3a (V)	-	
VERY DENSE, BROWN, **STONE FRAGMENTS WITH SAND**, TRACE SILT, TRACE CLAY, STONE FRAGMENTS ARE SANDSTONE, DAMP	1011.1		5 14 23	51	50	SS-10	-	-	-	-	-	-	-	-	-	5	A-1-b (V)	-	
	1009.1	EOB																	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:37 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
BARRIER HI
BORING LOGS B-096-0-17 & B-097-0-17

DRAWN EB
CHECKED BPA

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 18+55, 4' LT. | EXPLORATION ID B-098-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL HI
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1031.3 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 2/26/20 END: 2/26/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.024583, -81.509278

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)	SO4 ppm	BACK FILL
LOOSE TO MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, TRACE TO LITTLE SILT, TRACE GRAVEL, TRACE CLAY, DAMP	1031.3	1	6 6 7	18	67	SS-1	-	-	-	-	-	-	-	-	-	8	A-3a (V)	-	
		2																	
		3	4 3 3	8	100	SS-2	-	-	-	-	-	-	-	-	-	8	A-3a (V)	-	
		4																	
		5	2 3 3	8	67	SS-3	-	-	-	-	-	-	-	-	-	10	A-3a (V)	-	
	1023.3	6																	
MEDIUM DENSE, BROWN, **SANDY SILT**, TRACE TO LITTLE GRAVEL, TRACE TO LITTLE CLAY, CONTAINS IRON STAINING, DAMP TO MOIST		7	2 3 6	12	100	SS-4	-	-	-	-	-	-	-	-	-	19	A-4a (V)	-	
		8																	
		9																	
	▼1021.3	10																	
		11	5 6 6	16	100	SS-5	-	20	13	31	27	9	NP	NP	NP	14	A-4a (0)	-	
		12																	
		13																	
		14	3 5 7	16	17	SS-6	-	-	-	-	-	-	-	-	-	19	A-4a (V)	-	
	1015.8	15																	
MEDIUM DENSE, BROWN, **GRAVEL WITH SAND**, TRACE SILT, TRACE CLAY, DAMP		16																	
		17	4 6 10	22	67	SS-7	-	31	39	21	8	1	NP	NP	NP	4	A-1-b (0)	-	
		18																	
		19	7 8 9	23	100	SS-8	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	-	
		20																	
		21																	
		22	3 8 9	23	67	SS-9	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	-	
		23																	
	1006.3	24	8 10 10	27	100	SS-10	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	-	
	EOB	25																	

NOTES: GROUNDWATER ENCOUNTERED AT 10.0' DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:37 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / ASHBAUGH | DRILL RIG: CME 55T | STATION / OFFSET: 16+62, 10' LT. | EXPLORATION ID B-099-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL HI
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1027.7 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 3/3/20 END: 3/3/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 68.4 | LAT / LONG: 41.024711, -81.509952

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)	SO4 ppm	BACK FILL
10.0" ASPHALT AND 4.0" BASE (DRILLERS DESCRIPTION)	1026.5	1	12 7 9	18	50	SS-1	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	-	
MEDIUM DENSE, BROWN, **GRAVEL WITH SAND**, TRACE SILT, TRACE CLAY, CONTAINS ASPHALT FRAGMENTS, DAMP	1024.7	2																	
VERY LOOSE, BROWN, **COARSE AND FINE SAND**, SOME SILT, LITTLE CLAY, LITTLE GRAVEL, CONTAINS IRON STAINING, MOIST	1022.2	3																	
		4	1 1 2	3	50	SS-2	-	-	-	-	-	-	-	-	-	15	A-3a (V)	-	
STIFF TO HARD, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, CONTAINS IRON STAINING, DAMP TO MOIST		5																	
		6	3 3 4	8	89	SS-3	1.25	-	-	-	-	-	-	-	-	17	A-4a (V)	-	
		7																	
		8	4 5 7	14	100	SS-4	2.50	5	10	31	37	17	23	16	7	14	A-4a (4)	-	
		9																	
		10	3 3 4	8	100	SS-5	3.00	-	-	-	-	-	-	-	-	15	A-4a (V)	-	
		11																	
		12	3 4 5	10	100	SS-6	3.25	-	-	-	-	-	-	-	-	20	A-4a (V)	-	
		13																	
		14	7 6 4	11	78	SS-7	1.25	8	6	20	47	19	25	17	8	19	A-4a (6)	-	
	1008.2	15																	
LOOSE, BROWN, **COARSE AND FINE SAND**, LITTLE SILT, TRACE GRAVEL, TRACE CLAY, DAMP TO MOIST		16	3 2 3	6	78	SS-8A	4.25	-	-	-	-	-	-	-	-	17	A-4a (V)	-	
		17				SS-8B	-	-	-	-	-	-	-	-	-	8	A-3a (V)	-	
		18	3 4 2	7	67	SS-9	-	-	-	-	-	-	-	-	-	9	A-3a (V)	-	
		19																	
		20																	
	1002.7	21	2 3 3	7	72	SS-10	-	-	-	-	-	-	-	-	-	14	A-3a (V)	-	
	EOB	22																	
		23																	
		24																	
		25																	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE CAVED IN AT 20.0'.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:37 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
BARRIER HI
BORING LOGS B-098-0-17 & B-099-0-17

DRAWN EB
CHECKED BPA

PROJECT: SUM-77-277/224	DRILLING FIRM / OPERATOR: NEAS / J. HODGES	DRILL RIG: CME 55X	STATION / OFFSET: 28+78, 31' RT.	EXPLORATION ID B-099-1-17
TYPE: LIGHT TOWER	SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH	HAMMER: CME AUTOMATIC	ALIGNMENT: RAMP B-2	
PID: 106002 SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 12/5/19	ELEVATION: 1026.2 (MSL) EOB: 26.5 ft.	PAGE 1 OF 1
START: 8/7/20 END: 8/7/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.025050, -81.510097	

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
10.0" ASPHALT AND 6.0" BASE (DRILLERS DESCRIPTION)	1026.2																	
	1024.9																	
HARD, BROWN, **SILT**, SOME SAND, LITTLE CLAY, TRACE GRAVEL, DAMP		1																
		2																
		3	6 6 5	15	56	SS-1	4.50	-	-	-	-	-	-	-	-	14	A-4b (V)	
		4																
		5	8 4 6	14	67	SS-2	4.50	2	5	18	55	20	25	18	7	15	A-4b (8)	
		6																
		7																
		8	3 3 4	10	78	SS-3	4.50	-	-	-	-	-	-	-	-	15	A-4b (V)	
	1016.7	9																
VERY STIFF TO HARD, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, DAMP TO MOIST		10																
		11	3 4 5	12	100	SS-4	4.50	-	-	-	-	-	-	-	-	14	A-4a (V)	
		12																
		13	5 4 5	12	100	SS-5	4.50	-	-	-	-	-	-	-	-	13	A-4a (V)	
		14																
		15																
		16	3 2 3	7	44	SS-6	3.25	-	-	-	-	-	-	-	-	14	A-4a (V)	
		17																
		18	3 3 3	8	56	SS-7	2.25	2	11	30	38	19	23	15	8	17	A-4a (4)	
		19																
		20																
		21	3 5 5	14	56	SS-8	4.25	-	-	-	-	-	-	-	-	14	A-4a (V)	
		22																
@22.5'; BECOMES BROWN AND GRAY		23	4 5 4	12	50	SS-9	2.25	-	-	-	-	-	-	-	-	17	A-4a (V)	
		24																
		25																
	999.7	26	5 5 6	15	78	SS-10	4.25	-	-	-	-	-	-	-	-	17	A-4a (V)	
		EOB																

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 11/19/20 18:03 - C:\USERS\BANDREWS\DESKTOP\277-224\SUM-77-277 LIGHT POLES.GPJ

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
LIGHT TOWER
BORING LOG B-099-1-17

DRAWN EB
CHECKED BPA

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / ASHBAUGH | DRILL RIG: CME 55T | STATION / OFFSET: 14+53, 9' LT. | EXPLORATION ID B-100-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL HI
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1024.2 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 3/3/20 END: 3/3/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 68.4 | LAT / LONG: 41.024662, -81.510700

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)	SO4 ppm	BACK FILL
8.5" ASPHALT AND 7.0" BASE (DRILLERS DESCRIPTION)	1022.9																		
MEDIUM DENSE TO DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND**, TRACE TO LITTLE SILT, TRACE CLAY, DAMP TO MOIST			12 13 17	34	67	SS-1	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	-	
			10 7 7	16	56	SS-2	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	-	
			6 5 5	11	61	SS-3	-	28	23	31	12	6	NP	NP	NP	8	A-1-b (0)	-	
@8.5' TO 17.5'; SS-4 TO SS-7 BECOME LOOSE			5 2 2	5	17	SS-4	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	-	
			4 4 5	10	33	SS-5	-	-	-	-	-	-	-	-	-	12	A-1-b (V)	-	
			7 4 3	8	39	SS-6	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	-	
	1006.2		4 3 4	8	28	SS-7	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	-	
LOOSE, BROWN, **COARSE AND FINE SAND**, LITTLE GRAVEL, LITTLE SILT, TRACE CLAY, DAMP TO MOIST			3 3 3	7	50	SS-8	-	-	-	-	-	-	-	-	-	9	A-3a (V)	-	
			2 2 2	5	67	SS-9	-	19	29	31	15	6	NP	NP	NP	11	A-3a (0)	-	
	999.2	EOB	3 2 3	6	56	SS-10	-	-	-	-	-	-	-	-	-	9	A-3a (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE CAVED IN AT 16.0'.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:37 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / ASHBAUGH | DRILL RIG: CME 55T | STATION / OFFSET: 12+74, 9' LT. | EXPLORATION ID B-101-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL HI
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1022.4 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 3/3/20 END: 3/3/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 68.4 | LAT / LONG: 41.024620, -81.511347

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)	SO4 ppm	BACK FILL
8.0" ASPHALT AND 11.0" BASE (DRILLERS DESCRIPTION)	1020.8																		
DENSE, BROWN, **COARSE AND FINE SAND**, SOME GRAVEL, TRACE TO LITTLE SILT, TRACE CLAY, DAMP			12 14 17	35	56	SS-1	-	-	-	-	-	-	-	-	-	9	A-3a (V)	-	
@3.5' TO 7.5'; SS-2 TO SS-3 BECOME LOOSE			10 5 4	10	33	SS-2	-	-	-	-	-	-	-	-	-	8	A-3a (V)	-	
	1014.4		4 3 3	7	50	SS-3	-	-	-	-	-	-	-	-	-	8	A-3a (V)	-	
VERY LOOSE TO LOOSE, BROWN, **GRAVEL WITH SAND**, TRACE TO LITTLE SILT, TRACE CLAY, DAMP			3 2 2	5	28	SS-4	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	-	
			2 1 2	3	39	SS-5	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	-	
			3 2 3	6	33	SS-6	-	-	-	-	-	-	-	-	-	11	A-1-b (V)	-	
			2 2 2	5	50	SS-7	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	-	
			2 3 3	7	56	SS-8	-	34	27	24	10	5	NP	NP	NP	10	A-1-b (0)	-	
@21.0' TO 22.5'; SS-9 CONTAINS NO RECOVERY			3 3 3	7	0	SS-9	-	-	-	-	-	-	-	-	-	-		-	
	997.4	EOB	3 2 3	6	11	SS-10	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE CAVED IN AT 18.0'.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:37 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / ASHBAUGH | DRILL RIG: CME 55T | STATION / OFFSET: 10+62, 9' LT. | EXPLORATION ID B-102-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL HI
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1020.2 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 3/3/20 END: 3/3/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 68.4 | LAT / LONG: 41.024573, -81.512113

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)	SO4 ppm	BACK FILL
8.0" ASPHALT AND 13.5" BASE (DRILLERS DESCRIPTION)	1020.2																		
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, LITTLE TO SOME GRAVEL, TRACE SILT, TRACE CLAY, DAMP @3.5' TO 7.5'; SS-2 TO SS-3 BECOME LOOSE	1018.4		7 12 14	30	78	SS-1	-	-	-	-	-	-	-	-	-	9	A-3a (V)	-	
			8 5 4	10	67	SS-2	-	-	-	-	-	-	-	-	-	8	A-3a (V)	-	
			4 3 4	8	67	SS-3	-	-	-	-	-	-	-	-	-	9	A-3a (V)	-	
LOOSE, BROWN, **GRAVEL WITH SAND**, LITTLE SILT, TRACE CLAY, DAMP	1012.2		3 4 5	10	83	SS-4	-	23	32	23	16	6	NP	NP	NP	10	A-1-b (0)	-	
LOOSE, BROWN, **COARSE AND FINE SAND**, LITTLE GRAVEL, TRACE SILT, TRACE CLAY, DAMP	1009.7		3 3 2	6	50	SS-5	-	-	-	-	-	-	-	-	-	8	A-3a (V)	-	
			2 2 2	5	39	SS-6	-	-	-	-	-	-	-	-	-	8	A-3a (V)	-	
LOOSE, BROWN, **GRAVEL WITH SAND**, TRACE SILT, TRACE CLAY, DAMP TO MOIST	1004.7		1 2 2	5	50	SS-7	-	-	-	-	-	-	-	-	-	16	A-1-b (V)	-	
			2 3 2	6	72	SS-8	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	-	
	W 999.7		1 2 3	6	39	SS-9	-	-	-	-	-	-	-	-	-	18	A-1-b (V)	-	
	995.2	EOB	2 2 2	5	67	SS-10	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	-	

NOTES: GROUNDWATER ENCOUNTERED AT 20.5' DURING DRILLING. HOLE CAVED IN AT 18.0'.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 10+49, 1' LT. | EXPLORATION ID B-103-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL G
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1040.9 (MSL) EOB: 23.8 ft. | PAGE 1 OF 1
START: 3/4/20 END: 3/4/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.015811, -81.495548

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)	SO4 ppm	BACK FILL
MEDIUM DENSE, ORANGISH BROWN, **COARSE AND FINE SAND**, SOME SILT, TRACE GRAVEL, TRACE CLAY, CONTAINS IRON STAINING, MOIST	1040.9		3 7 7	19	67	SS-1	-	-	-	-	-	-	-	-	-	14	A-3a (V)	-	
	1036.2		5 10 11	29	100	SS-2A	-	-	-	-	-	-	-	-	-	17	A-3a (V)	-	
HARD, BROWN AND ORANGISH BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, CONTAINS IRON STAINING, MOIST	1035.4					SS-2B	4.50	-	-	-	-	-	-	-	-	20	A-4a (V)	-	
VERY DENSE, BROWN AND LIGHT BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE CLAY, DAMP			5 19 31	68	56	SS-3	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	-	
			5 50/3"	-	100	SS-4	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	-	
VERY DENSE, BROWN AND LIGHT BROWN, **STONE FRAGMENTS WITH SAND AND SILT**, TRACE CLAY, MOIST	1030.4		20 19 21	55	67	SS-5	-	-	-	-	-	-	-	-	-	12	A-2-4 (V)	-	
HARD, DARK GRAY, **SANDY SILT**, LITTLE STONE FRAGMENTS, LITTLE CLAY, CONTAINS A RELIC SHALE ROCK STRUCTURE, DAMP	1027.9		6 6 8	19	100	SS-6	4.25	17	21	15	32	15	27	20	7	11	A-4a (2)	-	
			8 6 17	31	67	SS-7	4.50	-	-	-	-	-	-	-	-	9	A-4a (V)	-	
DENSE, LIGHT GRAY, **STONE FRAGMENTS WITH SAND, SILT, AND CLAY**, STONE FRAGMENTS ARE SHALE, MOIST	1022.9	W 1022.9	7 17 11	38	100	SS-8	-	-	-	-	-	-	-	-	-	10	A-2-6 (V)	-	
VERY SOFT, GRAY AND DARK GRAY, **SANDY SILT**, SOME STONE FRAGMENTS, LITTLE CLAY, STONE FRAGMENTS ARE SHALE, DAMP	1020.4		4 7 17	33	28	SS-9	0.25	27	13	16	26	18	25	17	8	14	A-4a (2)	-	
VERY DENSE, GRAY, **STONE FRAGMENTS WITH SAND, SILT, AND CLAY**, STONE FRAGMENTS ARE SHALE, MOIST	1017.9																		
	1017.1	EOB	50/3"	-	100	SS-10	-	-	-	-	-	-	-	-	-	11	A-2-6 (V)	-	

NOTES: GROUNDWATER ENCOUNTERED AT 18.0' DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:37 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 12+54, 14' LT. | EXPLORATION ID B-104-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL G | PAGE 1 OF 1
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1044.4 (MSL) EOB: 23.8 ft.
START: 3/4/20 END: 3/4/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.016371, -81.495631

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)	SO4 ppm	BACK FILL
MEDIUM DENSE, BROWN, **STONE FRAGMENTS WITH SAND AND SILT**, LITTLE CLAY, CONTAINS ROOTS, MOIST	1044.4		3 3 6	12	67	SS-1	-	-	-	-	-	-	-	-	-	20	A-2-4 (V)	-	
LOOSE TO MEDIUM DENSE, BROWN, **GRAVEL WITH SAND**, LITTLE SILT, TRACE CLAY, DAMP TO MOIST	1041.4		4 7 6	18	44	SS-2	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	-	
			6 8 5	18	67	SS-3	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	-	
	1033.9		3 3 3	8	67	SS-4	-	-	-	-	-	-	-	-	-	14	A-1-b (V)	-	
MEDIUM DENSE, GRAY, **SILT**, LITTLE SAND, LITTLE CLAY, TRACE GRAVEL, WET	1031.4		3 4 5	12	56	SS-5	-	-	-	-	-	-	-	-	-	21	A-4b (V)	-	
MEDIUM DENSE, GRAY AND ORANGISH BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, CONTAINS IRON STAINING, MOIST			5 5 6	15	100	SS-6	-	4	9	23	49	15	NP	NP	NP	16	A-4a (6)	-	
			4 6 6	16	100	SS-7	-	-	-	-	-	-	-	-	-	17	A-4a (V)	-	
		▼1026.4																	
			5 8 8	22	50	SS-8	-	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
	1023.9	TR																	
SHALE, DARK GRAY, SEVERELY WEATHERED, VERY WEAK TO WEAK, FISSILE.			50/3"	-	100	SS-9	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
	1020.6	EOB	50/3"	-	100	SS-10	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER ENCOUNTERED AT 18.0' DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:38 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 14+38, 24' LT. | EXPLORATION ID B-105-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL G | PAGE 1 OF 1
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1048.3 (MSL) EOB: 23.8 ft.
START: 3/4/20 END: 3/4/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.016861, -81.495748

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)	SO4 ppm	BACK FILL
MEDIUM DENSE, BROWN, **GRAVEL WITH SAND**, LITTLE TO SOME SILT, TRACE CLAY, SS-1 CONTAINS TRACE ROOT HAIRS, DAMP	1048.3		5 5 5	14	100	SS-1	-	-	-	-	-	-	-	-	-	12	A-1-b (V)	-	
			3 6 6	16	100	SS-2	-	-	-	-	-	-	-	-	-	11	A-1-b (V)	-	
VERY STIFF TO HARD, BROWN AND GRAYISH BROWN, **SANDY SILT**, LITTLE CLAY, TRACE TO LITTLE GRAVEL, SS-3 CONTAINS ROOTS, DAMP	1042.8		5 6 11	23	67	SS-3	2.50	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
			3 7 10	23	100	SS-4	4.50	5	9	27	45	14	21	17	4	14	A-4a (5)	-	
@11.0'; BECOMES GRAY			3 4 8	16	100	SS-5	4.50	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
			4 5 7	16	44	SS-6	4.25	-	-	-	-	-	-	-	-	11	A-4a (V)	-	
@16.0'; SS-7 BECOMES SOME GRAVEL, TRACE CLAY			3 4 7	15	100	SS-7	4.25	31	12	18	29	10	20	15	5	9	A-4a (1)	-	
	1030.3																		
HARD, GRAY, **SANDY SILT**, LITTLE CLAY, LITTLE STONE FRAGMENTS, CONTAINS A RELIC SHALE ROCK STRUCTURE, DAMP			3 50/5"	-	55	SS-8	4.50	-	-	-	-	-	-	-	-	7	A-4a (V)	-	
	1026.8	▼1027.3 TR	50	-	83	SS-9	4.50	-	-	-	-	-	-	-	-	9	A-4a (V)	-	
SILTSTONE, GRAY, MODERATELY WEATHERED, STRONG.	1024.5	EOB	50/3"	-	100	SS-10	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER ENCOUNTERED AT 21.0' DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:38 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
BARRIER G
BORING LOGS B-104-0-17 & B-105-0-17

DRAWN EB
CHECKED BPA

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZL065.dgn Sheet 1/8/2021 1:17:40 AM karens

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 16+32, 13' LT. | EXPLORATION ID B-106-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL G
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1050.7 (MSL) EOB: 21.3 ft. | PAGE 1 OF 1
START: 3/3/20 END: 3/3/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.017390, -81.495835

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)	SO4 ppm	BACK FILL
HARD, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, SS-1 CONTAINS MANY ROOTS AND NO INTACT SOIL FOR HP READINGS, MOIST TO DAMP	1050.7		3 5 5	14	44	SS-1	-	-	-	-	-	-	-	-	-	26	A-4a (V)	-	
@3.5' TO 5.0'; SS-2 BECOMES BROWN MOTTLED WITH GRAY AND ORANGISH BROWN, SOME CLAY, CONTAINS IRON STAINING	1045.2		3 4 5	12	100	SS-2	4.25	6	4	19	45	26	28	19	9	18	A-4a (7)	-	
MEDIUM DENSE, BROWN BECOMING GRAY, **SILT**, SOME SAND, SOME CLAY, TRACE GRAVEL, MOIST TO DAMP	1040.2		4 6 11	23	78	SS-3	-	-	-	-	-	-	-	-	-	18	A-4b (V)	-	
			2 4 7	15	100	SS-4	-	5	8	15	51	21	NP	NP	NP	13	A-4b (7)	-	
HARD, GRAY AND DARK GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, LITTLE CLAY, DAMP	1034.7		4 11 12	31	100	SS-5	4.50	-	-	-	-	-	-	-	-	9	A-2-4 (V)	-	
			7 9 8	23	100	SS-6	4.50	38	13	14	23	12	23	17	6	9	A-2-4 (0)	-	
SILTSTONE, GRAY, HIGHLY WEATHERED, SLIGHTLY STRONG.	1029.4	TR	50/2"	-	150	SS-7	-	-	-	-	-	-	-	-	-	4	Rock (V)	-	
			50	-	83	SS-8	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
		EOB	50/3"	-	100	SS-9	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:38 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224	DRILLING FIRM / OPERATOR: NEAS / J. HODGES	DRILL RIG: CME 55X	STATION / OFFSET: 17+86, 48' LT.	EXPLORATION ID B-106-1-17
TYPE: UNDERGROUND MINE	SAMPLING FIRM / LOGGER: NEAS / J. HODGES	HAMMER: CME AUTOMATIC	ALIGNMENT: NOISE WALL G	
PID: 106002 SFN:	DRILLING METHOD: 3.25" HSA / NQ2	CALIBRATION DATE: 12/5/19	ELEVATION: 1047.0 (MSL) EOB: 50.5 ft.	PAGE 1 OF 1
START: 4/14/20 END: 4/14/20	SAMPLING METHOD: SPT / NQ2	ENERGY RATIO (%): 81.9	LAT / LONG: 41.017780, -81.496100	

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)	SO4 ppm	HOLE SEALED
DENSE, BROWN, **COARSE AND FINE SAND**, SOME GRAVEL AND STONE FRAGMENTS, LITTLE SILT, TRACE CLAY, CONTAINS IRON STAINING, DAMP	1047.0		8 12 13	34	78	SS-1	-	22	18	37	15	8	NP	NP	NP	9	A-3a (0)	-	
MEDIUM DENSE, BROWN, **GRAVEL WITH SAND**, LITTLE SILT, TRACE CLAY, WET	1044.0		7 7 5	16	100	SS-2	-	-	-	-	-	-	-	-	-	18	A-1-b (V)	-	
MEDIUM DENSE, GRAY, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL AND STONE FRAGMENTS, DAMP	1041.5		5 7 8	20	89	SS-3	-	7	7	22	48	16	NP	NP	NP	13	A-4a (6)	-	
			4 6 7	18	56	SS-4	-	-	-	-	-	-	-	-	-	11	A-4a (V)	-	
			4 6 7	18	67	SS-5	-	-	-	-	-	-	-	-	-	11	A-4a (V)	-	
@13.5' TO 20.5'; SS-6 TO SS-9 BECOME VERY STIFF			2 4 4	11	100	SS-6	3.25	10	10	29	36	15	17	13	4	12	A-4a (3)	-	
			2 3 6	12	56	SS-7	3.00	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
			7 8 12	27	33	SS-8	2.50	-	-	-	-	-	-	-	-	11	A-4a (V)	-	
	1026.5	TR	50	-	33	SS-9	3.50	-	-	-	-	-	-	-	-	7	A-4a (V)	-	
INTERBEDDED SHALE (73%) AND SANDSTONE (27%), CONTAINS ANTHRACITE COAL LAMINATIONS, BEDDING DISCONTINUITIES: LOW ANGLE, JOINT DISCONTINUITIES: HIGH ANGLE FROM 20.8' - 21.4' AND 25.3' - 25.5', HIGHLY FRACTURED TO MODERATELY FRACTURED, OPEN TO NARROW, SLIGHTLY ROUGH TO VERY ROUGH, BLOCKY/DISTURBED/SEAMY, FAIR TO POOR SURFACE CONDITION, RQD 5%, REC. 38%; **SHALE**, DARK GRAY AND BLACK, MODERATELY WEATHERED, WEAK TO SLIGHTLY STRONG, LAMINATED TO THIN BEDDED, FISSILE, PYRITIC, SILTY; **SANDSTONE**, LIGHT GRAY AND GRAY, SLIGHTLY WEATHERED, SEVERELY WEATHERED FROM 20.5' - 21.5', VERY FINE TO MEDIUM GRAINED, MODERATELY STRONG TO STRONG, CONTAINS ARGILLACEOUS LENSES.			28		98	NQ2-1											CORE		
@30.5' TO 35.5'; NQ2-3 CONTAINS NO RECOVERY, IT WAS NOTED THAT CORING OPERATIONS FELT NORMAL WITH NO DISCERNABLE VOIDS			0		55	NQ2-2											CORE		
			0		0	NQ2-3											CORE		
			0		19	NQ2-4											CORE		
			0		23	NQ2-5											CORE		
	996.5	EOB	0		31	NQ2-6											CORE		

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE. NO DISCERNABLE VOIDS DURING CORING. NO WATER CIRCULATION DURING CORING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 200 GAL. BENTONITE GROUT

STANDARD ODOT LOG W/ SULFATES (11 X 17) - OH DOT GDT - 11/13/20 22:54 - C:\USERS\KARENS\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

174/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION UNDERGROUND MINE BORING LOG B-106-1-17	DRAWN EB CHECKED BPA

P:\17-0129 (106002 SUM-76-10.95 Part 3 - SUM-77_277_224)\106002\geotechnical\sheets\106002ZL067.dgn Sheet 1/8/2021 1:18:29 AM karens

PROJECT: SUM-77-277/224
TYPE: UNDERGROUND MINE
PID: 106002 SFN:
START: 4/28/20 END: 4/29/20

DRILLING FIRM / OPERATOR: NEAS / J. HODGES
SAMPLING FIRM / LOGGER: NEAS / J. HODGES
DRILLING METHOD: 3.25" HSA / NQ2
SAMPLING METHOD: SPT / NQ2

DRILL RIG: CME 55X
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 12/5/19
ENERGY RATIO (%): 81.9

STATION / OFFSET: 17+54, 3' LT.
ALIGNMENT: NOISE WALL G
ELEVATION: 1053.8 (MSL) EOB: 60.0 ft.
LAT / LONG: 41.017724, -81.495881

EXPLORATION ID B-107-0-17
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)	SO4 ppm	HOLE SEALED
STIFF TO HARD, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, CONTAINS TRACE ROOT HAIRS AND IRON STAINING, DAMP	1053.8		5 8 9	23	100	SS-1	4.50	-	-	-	-	-	-	-	-	13	A-4a (V)	-	
			3 3 4	10	100	SS-2	1.75	2	31	28	28	11	24	17	7	14	A-4a (1)	-	
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, LITTLE TO SOME GRAVEL, LITTLE SILT, TRACE CLAY, MOIST	1048.3		3 3 6	12	78	SS-3	-	-	-	-	-	-	-	-	-	14	A-3a (V)	-	
	1043.3		6 9 11	27	22	SS-4	-	-	-	-	-	-	-	-	-	13	A-3a (V)	-	
VERY STIFF TO HARD, GRAY, **SANDY SILT**, LITTLE CLAY, LITTLE GRAVEL, CONTAINS TRACE IRON STAINING, DAMP			4 6 9	20	78	SS-5	4.50	-	-	-	-	-	-	-	-	11	A-4a (V)	-	
			3 5 7	16	100	SS-6	4.50	16	6	22	38	18	21	16	5	11	A-4a (4)	-	
			4 7 9	22	89	SS-7	4.50	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
	1033.3		4 5 8	18	83	SS-8	3.50	-	-	-	-	-	-	-	-	11	A-4a (V)	-	
MEDIUM DENSE, GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, LITTLE CLAY, DAMP	1030.8		2 5 9	19	56	SS-9	-	-	-	-	-	-	-	-	-	11	A-2-4 (V)	-	
SHALE, DARK GRAY AND BLACK, HIGHLY WEATHERED, WEAK, FISSILE.		TR 1030.3	5 12 14	35	61	SS-10	-	-	-	-	-	-	-	-	-	13	Rock (V)	-	
			9 11 50	83	78	SS-11	-	-	-	-	-	-	-	-	-	8	Rock (V)	-	
	1023.8		50/5"	-	60	SS-12	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
INTERBEDDED COAL (57%) AND SHALE (43%), BEDDING DISCONTINUITIES: LOW ANGLE, JOINT DISCONTINUITIES: HIGH ANGLE THROUGHOUT, HIGHLY FRACTURED TO FRACTURED, OPEN TO NARROW, SLIGHTLY ROUGH TO VERY ROUGH, BLOCKY/DISTURBED/SEAMY TO DISINTIGRATED, FAIR TO POOR SURFACE CONDITION, RQD 5%, REC. 98%; **COAL**, BLACK, HIGHLY TO MODERATELY WEATHERED, VERY WEAK TO WEAK, THINLY LAMINATED TO LAMINATED, FISSILE, FOSSILIFEROUS, PYRITIC; **SHALE**, DARK GRAY AND GRAY, MODERATELY WEATHERED, WEAK TO SLIGHTLY STRONG, FISSILE.			0		98	NQ2-1											CORE		
	1017.2		25		98	NQ2-2											CORE		
INTERBEDDED SANDSTONE (88%) AND SHALE (12%), BEDDING DISCONTINUITIES: LOW ANGLE, HIGHLY FRACTURED TO MODERATELY FRACTURED, FRACTURED TO SLIGHTLY FRACTURED FROM 50.2' - 60.0', NARROW TO TIGHT, SLIGHTLY ROUGH TO VERY ROUGH, RQD 51%, REC. 97%; **SANDSTONE**, LIGHT GRAY AND GRAY, UNWEATHERED TO SLIGHTLY WEATHERED, MODERATELY STRONG TO STRONG, VERY FINE TO MEDIUM GRAINED, LAMINATED TO THIN BEDDED, VERY THIN TO THICK BEDDED FROM 50.2' - 60.0', CONTAINS COAL AND ARGILLACEOUS LENSES AND LAMINATIONS; **SHALE**, DARK GRAY, SLIGHTLY WEATHERED, WEAK TO SLIGHTLY STRONG, FISSILE.			37		95	NQ2-3											CORE		
			45		96	NQ2-4											CORE		
			66		98	NQ2-5											CORE		
	993.8	EOB	71		99	NQ2-6											CORE		

NOTES: GROUNDWATER ENCOUNTERED AT 23.5' DURING DRILLING. HOLE DID NOT CAVE. NO DISCERNABLE VOIDS DURING CORING. BORING WAS OFFSET.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 150 GAL. BENTONITE GROUT

STANDARD ODOT LOG W/ SULFATES (11 X 17) - OH DOT GDT - 11/13/20 22:54 - C:\USERS\KARENS\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

175/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION UNDERGROUND MINE BORING LOG B-107-0-17	DRAWN EB / CHECKED BPA

PROJECT: SUM-77-277/224	DRILLING FIRM / OPERATOR: NEAS / J. HODGES	DRILL RIG: CME 55X	STATION / OFFSET: 19+52, 48' LT.	EXPLORATION ID B-107-1-17
TYPE: UNDERGROUND MINE	SAMPLING FIRM / LOGGER: NEAS / J. HODGES	HAMMER: CME AUTOMATIC	ALIGNMENT: NOISE WALL G	
PID: 106002 SFN:	DRILLING METHOD: 3.25" HSA / NQ2	CALIBRATION DATE: 12/5/19	ELEVATION: 1053.6 (MSL) EOB: 55.5 ft.	PAGE 1 OF 1
START: 4/13/20 END: 4/13/20	SAMPLING METHOD: SPT / NQ2	ENERGY RATIO (%): 81.9	LAT / LONG: 41.018250, -81.496100	

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)	SO4 ppm	HOLE SEALED
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, LITTLE GRAVEL, LITTLE SILT, TRACE CLAY, DAMP TO MOIST	1053.6		3 6 9	20	100	SS-1	-	20	24	28	19	9	NP	NP	NP	11	A-3a (0)	-	
			4 7 6	18	39	SS-2	-	-	-	-	-	-	-	-	-	9	A-3a (V)	-	
			4 4 7	15	67	SS-3	-	-	-	-	-	-	-	-	-	12	A-3a (V)	-	
VERY LOOSE TO LOOSE, BROWN BECOMING LIGHT BROWNISH GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE CLAY, STONE FRAGMENTS ARE FRIABLE SANDSTONE, DAMP TO MOIST	1045.6		2 3 3	8	44	SS-4	-	28	29	22	15	6	NP	NP	NP	13	A-1-b (0)	-	
			3 2 3	7	17	SS-5	-	-	-	-	-	-	-	-	-	13	A-1-b (V)	-	
		W 1040.1	2 1 2	4	67	SS-6	-	-	-	-	-	-	-	-	-	13	A-1-b (V)	-	
			2 3 3	8	44	SS-7	-	-	-	-	-	-	-	-	-	14	A-1-b (V)	-	
@18.5' TO 25.0'; SS-8 TO SS-10 BECOME MEDIUM DENSE TO DENSE			4 5 3	11	33	SS-8	-	-	-	-	-	-	-	-	-	11	A-1-b (V)	-	
			5 9 10	26	56	SS-9	-	-	-	-	-	-	-	-	-	6	A-1-b (V)	-	
@23.5'; SS-10 CONTAINS NO RECOVERY	1028.6		5 12 14	35	0	SS-10	-	-	-	-	-	-	-	-	-	-		-	
SANDSTONE, LIGHT GRAY AND BROWN, HIGHLY WEATHERED, MODERATELY STRONG.	1028.1	TR	50/5"	-	60	SS-11	-	-	-	-	-	-	-	-	-	10	Rock (V)	-	
INTERBEDDED SHALE (82%) AND SANDSTONE (18%), BEDDING DISCONTINUITIES: LOW ANGLE, JOINT DISCONTINUITIES: HIGH ANGLE FROM 26.0' - 26.2' AND 26.7' - 26.8', HIGHLY FRACTURED, OPEN TO NARROW, SLIGHTLY ROUGH, BLOCKY/DISTURBED/SEAMY, DISINTIGRATED FROM 33.9' - 34.9', FAIR TO POOR SURFACE CONDITION, RQD 0%, REC. 44%; **SHALE**, GRAY AND BLACK, MODERATELY TO HIGHLY WEATHERED, WEAK, LAMINATED, FISSILE; **SANDSTONE**, LIGHT GRAY AND GRAY, SLIGHTLY TO MODERATELY WEATHERED, SLIGHTLY TO MODERATELY STRONG, CONTAINS ARGILLACEOUS LAMINATIONS AND LENSES.	1026.1		0		48	NQ2-1											CORE		
@27.5' TO 33.5'; DRILLER NOTED VOID ENCOUNTERED	1020.1		0		39	NQ2-2											CORE		
SANDSTONE, LIGHT GRAY AND GRAY, UNWEATHERED TO SLIGHTLY WEATHERED, MODERATELY STRONG TO STRONG, VERY FINE TO MEDIUM GRAINED, LAMINATED TO THIN FROM 35.5' - 46.5', VERY THIN TO MEDIUM BEDDED FROM 46.5' - 55.5', CONTAINS ARGILLACEOUS LAMINATIONS AND LENSES, BEDDING DISCONTINUITIES: LOW ANGLE, JOINT DISCONTINUITIES: HIGH ANGLE FROM 54.6 - 55.1', HIGHLY FRACTURED TO MODERATELY FRACTURED FROM 35.5' - 46.5', FRACTURED TO SLIGHTLY FRACTURED FROM 46.5' - 55.5', NARROW TO TIGHT, SLIGHTLY ROUGH TO VERY ROUGH, BLOCKY TO INTACT, GOOD TO VERY GOOD SURFACE CONDITION; RQD 52%, REC 96%.	1018.1		24		100	NQ2-3											CORE		
			48		98	NQ2-4											CORE		
			66		87	NQ2-5											CORE		
	998.1	EOB	70		100	NQ2-6											CORE		

NOTES: GROUNDWATER ENCOUNTERED AT 13.5' DURING DRILLING. HOLE DID NOT CAVE. VOIDS ENCOUNTERED DURING DRILLING. NO WATER CIRCULATION DURING CORING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 200 GAL. BENTONITE GROUT

STANDARD ODOT LOG W/ SULFATES (11 X 17) - OH DOT GDT - 11/13/20 22:55 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

176/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION UNDERGROUND MINE BORING LOG B-107-1-17	DRAWN EB	CHECKED BPA

PROJECT: SUM-77-277/224	DRILLING FIRM / OPERATOR: NEAS / J. HODGES	DRILL RIG: CME 55X	STATION / OFFSET: 19+82, 0' LT.	EXPLORATION ID B-108-0-17
TYPE: UNDERGROUND MINE	SAMPLING FIRM / LOGGER: NEAS / J. HODGES	HAMMER: CME AUTOMATIC	ALIGNMENT: NOISE WALL G	
PID: 106002 SFN:	DRILLING METHOD: 3.25" HSA / NQ2	CALIBRATION DATE: 12/5/19	ELEVATION: 1055.3 (MSL) EOB: 51.5 ft.	PAGE 1 OF 1
START: 4/8/20 END: 4/9/20	SAMPLING METHOD: SPT / NQ2	ENERGY RATIO (%): 81.9	LAT / LONG: 41.018338, -81.496022	

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)	SO4 ppm	HOLE SEALED
STIFF TO VERY STIFF, BROWN, **SANDY SILT**, LITTLE CLAY, LITTLE GRAVEL. CONTAINS ROOT HAIRS AND IRON STAINING, DAMP	1055.3		3 3 3	8	100	SS-1	3.50	11	22	22	32	13	25	19	6	15	A-4a (2)	-	
	1049.8		4 3 3	8	100	SS-2	1.75	-	-	-	-	-	-	-	-	11	A-4a (V)	-	
LOOSE, BROWN AND ORANGISH BROWN, **COARSE AND FINE SAND**, LITTLE TO SOME GRAVEL, LITTLE SILT, TRACE CLAY, CONTAINS IRON STAINING, DAMP TO MOIST			3 4 2	8	78	SS-3	-	-	-	-	-	-	-	-	-	10	A-3a (V)	-	
	1039.8		2 2 2	5	100	SS-4	-	-	-	-	-	-	-	-	-	14	A-3a (V)	-	
			1 2 3	7	44	SS-5	-	-	-	-	-	-	-	-	-	14	A-3a (V)	-	
			2 5 2	10	83	SS-6	-	-	-	-	-	-	-	-	-	14	A-3a (V)	-	
VERY LOOSE TO MEDIUM DENSE, BROWN AND ORANGISH BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE CLAY, CONTAINS IRON STAINING, MOIST	1033.3		2 6 5	15	44	SS-7	-	-	-	-	-	-	-	-	-	13	A-1-b (V)	-	
			2 2 1	4	33	SS-8	-	-	-	-	-	-	-	-	-	12	A-1-b (V)	-	
			1 5 5	14	33	SS-9A	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	-	
						SS-9B	2.50	-	-	-	-	-	-	-	-	13	A-4a (V)	-	
VERY STIFF TO HARD, BROWN AND GRAY, **SANDY SILT**, LITTLE CLAY, LITTLE GRAVEL AND STONE FRAGMENTS, CONTAINS TRACE IRON STAINING, DAMP	1030.5		17 12 50/4"	-	81	SS-10	4.25	12	8	14	49	17	25	16	9	8	A-4a (6)	-	
SANDSTONE, GRAY, HIGHLY WEATHERED, STRONG.	1028.8	TR	50	-	50	SS-11	-	-	-	-	-	-	-	-	-	6	Rock (V)	-	
NO DISCERNABLE VOIDS DURING DRILLING INTERBEDDED SANDSTONE (64%) AND SHALE (36%), BEDDING DISCONTINUITIES: LOW ANGLE, JOINT DISCONTINUITIES: HIGH ANGLE FROM 28.2' - 28.4', HIGHLY FRACTURED TO MODERATELY FRACTURED, OPEN TO NARROW, SLIGHTLY ROUGH, BLOCKY/DISTURBED/SEAMY, FAIR SURFACE CONDITION, RQD 8%, REC. 63%; **SANDSTONE**, GRAY, MODERATELY WEATHERED, SLIGHTLY STRONG TO STRONG, VERY FINE TO FINE GRAINED, LAMINATED TO VERY THIN BEDDED, SILTY; **SHALE**, DARK GRAY, HIGHLY WEATHERED, WEAK, FISSILE.	1023.8		8		63	NQ2-1											CORE		
COAL, BLACK, HIGHLY WEATHERED, WEAK, THINLY LAMINATED, PYRITIC, BEDDING DISCONTINUITIES: LOW ANGLE, HIGHLY FRACTURED, OPEN, SLIGHTLY ROUGH, LAMINATED, FAIR TO POOR SURFACE CONDITION; RQD 0%, REC 29%.	1019.5		8		39	NQ2-2											CORE		
@35.3'; 4.0" BLACK WOOD FRAGMENT	1018.5																		
SHALE, GRAY AND DARK GRAY, HIGHLY WEATHERED, VERY WEAK TO WEAK, LAMINATED, FISSILE, BEDDING DISCONTINUITIES: LOW ANGLE, HIGHLY FRACTURED TO MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH, BLOCKY/DISTURBED/SEAMY, POOR SURFACE CONDITION; RQD 42%, REC 100%.			18		100	NQ2-3											CORE		
SANDSTONE, GRAY AND LIGHT GRAY, SLIGHTLY WEATHERED, SLIGHTLY STRONG TO STRONG, VERY FINE TO MEDIUM GRAINED, LAMINATED TO THIN BEDDED FROM 36.8' - 41.8', VERY THIN TO MEDIUM BEDDED FROM 41.8' - 51.5', VERY SILTY FROM 36.8' - 38.6', CONTAINS COAL AND ARGILLACEOUS LENSES AND LAMINATIONS, BEDDING DISCONTINUITIES: LOW TO MODERATELY HIGH ANGLE, JOINT DISCONTINUITIES: HIGH ANGLE FROM 36.8' - 37.4', 39.7' - 40.5', AND 46.8' - 47.0', HIGHLY FRACTURED TO MODERATELY FRACTURED FROM 36.8' - 41.8', HIGHLY FRACTURED TO SLIGHTLY FRACTURED FROM 41.8' - 51.5', NARROW TO TIGHT, SLIGHTLY ROUGH TO VERY ROUGH, BLOCKY TO INTACT, GOOD SURFACE CONDITION; RQD 41%, REC 98%.			61		98	NQ2-4											CORE		
	1003.8	EOB	41		94	NQ2-5											CORE		

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE. NO DISCERNABLE VOIDS DURING CORING. NO WATER CIRCULATION DURING CORING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 200 GAL. BENTONITE GROUT

STANDARD ODOT LOG W/ SULFATES (11 X 17) - OH DOT GDT - 11/13/20 22:55 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

177/209	**SUM-77/277/224 VARIOUS**	**STRUCTURE FOUNDATION EXPLORATION UNDERGROUND MINE BORING LOG B-108-0-17**

DRAWN EB

CHECKED BPA

PROJECT: SUM-77-277/224
TYPE: UNDERGROUND MINE
PID: 106002 SFN:
START: 4/9/20 END: 4/10/20

DRILLING FIRM / OPERATOR: NEAS / J. HODGES
SAMPLING FIRM / LOGGER: NEAS / J. HODGES
DRILLING METHOD: 3.25" HSA / NQ2
SAMPLING METHOD: SPT / NQ2

DRILL RIG: CME 55X
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 12/5/19
ENERGY RATIO (%): 81.9

STATION / OFFSET: 20+02, 26' LT.
ALIGNMENT: NOISE WALL G
ELEVATION: 1056.4 (MSL) EOB: 59.5 ft.
LAT / LONG: 41.018380, -81.496100

EXPLORATION ID B-108-1-17
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)	SO4 ppm	HOLE SEALED
LOOSE TO MEDIUM DENSE, BROWN AND ORANGISH BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND**, TRACE TO LITTLE SILT, TRACE CLAY, CONTAINS IRON STAINING, MOIST TO WET	1056.4		4 6 5	15	100	SS-1	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	-	
			2 2 2	5	39	SS-2	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	-	
			2 2 2	5	67	SS-3	-	24	52	15	5	4	NP	NP	NP	14	A-1-b (0)	-	
			3 3 3	8	56	SS-4	-	-	-	-	-	-	-	-	-	13	A-1-b (V)	-	
			3 3 6	12	44	SS-5	-	-	-	-	-	-	-	-	-	15	A-1-b (V)	-	
			3 6 6	16	44	SS-6	-	-	-	-	-	-	-	-	-	14	A-1-b (V)	-	
			4 4 3	10	33	SS-7	-	-	-	-	-	-	-	-	-	12	A-1-b (V)	-	
			3 3 6	12	67	SS-8	-	-	-	-	-	-	-	-	-	15	A-1-b (V)	-	
VERY DENSE, GRAY, **SANDY SILT**, LITTLE CLAY, LITTLE STONE FRAGMENTS, CONTAINS A RELIC ROCK STRUCTURE, DAMP	1035.9																		
SANDSTONE, GRAY, HIGHLY WEATHERED, STRONG, VERY FINE TO FINE GRAINED.	1034.4	TR	4 6 50	76	56	SS-9A	-	-	-	-	-	-	-	-	-	7	A-4a (V)	-	
						SS-9B	-	-	-	-	-	-	-	-	-	5	Rock (V)	-	
			50/3"	-	67	SS-10	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
NO DISCERNABLE VOIDS DURING DRILLING **SANDSTONE**, GRAY AND BROWNISH GRAY, HIGHLY TO MODERATELY WEATHERED, MODERATELY STRONG TO STRONG, VERY FINE TO FINE GRAINED, LAMINATED TO VERY THIN BEDDED, SILTY, CONTAINS ARGILLACEOUS LENSES, BEDDING DISCONTINUITIES: LOW ANGLE, HIGHLY FRACTURED TO FRACTURED, OPEN TO NARROW, SLIGHTLY ROUGH, BLOCKY/DISTURBED/SEAMY, FAIR SURFACE CONDITION; RQD 0%, REC 99%.	1031.9		0		93	NQ2-1											CORE		
COAL, BLACK, SLIGHTLY WEATHERED, VERY WEAK TO WEAK, LAMINATED, FOSSILIFEROUS, PYRITIC, BEDDING DISCONTINUITIES: LOW ANGLE, JOINT DISCONTINUITIES: HIGH ANGLE FROM 29.5' - 31.2', HIGHLY FRACTURED, OPEN TO NARROW, SLIGHTLY ROUGH TO VERY ROUGH, BLOCKY/DISTURBED/SEAMY, GOOD SURFACE CONDITION; RQD 0%, REC 65%.	1028.1		16		74	NQ2-2											CORE		
UNDERCLAY, DARK GRAY, SEVERELY WEATHERED, VERY WEAK, FOSSILIFEROUS, BEDDING DISCONTINUITIES: LOW ANGLE, FRACTURED, OPEN, SLIGHTLY ROUGH, INTACT, POOR SURFACE CONDITION; RQD 38%, REC 100%.	1023.5		48		98	NQ2-3											CORE		
SANDSTONE, GRAY AND DARK GRAY, UNWEATHERED TO SLIGHTLY WEATHERED, STRONG, VERY FINE TO MEDIUM GRAINED, THINLY LAMINATED TO VERY THIN FROM 33.9' - 36.1', LAMINATED TO THIN FROM 36.1' - 59.5', CONTAINS ARGILLACEOUS LENSES AND LAMINATIONS, BEDDING DISCONTINUITIES: LOW ANGLE, HIGHLY FRACTURED TO SLIGHTLY FRACTURED, NARROW TO TIGHT, SLIGHTLY ROUGH TO VERY ROUGH, BLOCKY TO INTACT, GOOD TO VERY GOOD SURFACE CONDITION; RQD 49%, REC 91%.	1022.5		53		99	NQ2-4											CORE		
@48.0'; GAINED CIRCULATION DURING CORING			0		58	NQ2-5											CORE		
			72		97	NQ2-6											CORE		
	996.9	EOB	72		100	NQ2-7											CORE		

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE. NO DISCERNABLE VOIDS DURING CORING. NO WATER CIRCULATION UNTIL 48.0'.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 150 GAL. BENTONITE GROUT

STANDARD ODOT LOG W/ SULFATES (11 X 17) - OH DOT GDT - 11/13/20 22:55 - C:\USERS\KARENS\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

178/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION UNDERGROUND MINE BORING LOG B-108-1-17	DRAWN EB CHECKED BPA

PROJECT: SUM-77-277/224	DRILLING FIRM / OPERATOR: NEAS / J. HODGES	DRILL RIG: CME 55X	STATION / OFFSET: 20+92, 0' RT.	EXPLORATION ID B-109-0-17
TYPE: UNDERGROUND MINE	SAMPLING FIRM / LOGGER: NEAS / J. HODGES	HAMMER: CME AUTOMATIC	ALIGNMENT: NOISE WALL G	
PID: 106002 SFN:	DRILLING METHOD: 3.25" HSA / NQ2	CALIBRATION DATE: 12/5/19	ELEVATION: 1062.7 (MSL) EOB: 55.5 ft.	PAGE 1 OF 1
START: 3/11/20 END: 3/11/20	SAMPLING METHOD: SPT / NQ2	ENERGY RATIO (%): 81.9	LAT / LONG: 41.018635, -81.496093	

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)	SO4 ppm	HOLE SEALED
STIFF, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, CONTAINS ROOT HAIRS AND IRON STAINING, DAMP	1062.7		2 2 3	7	67	SS-1	1.50	10	26	21	30	13	26	19	7	13	A-4a (2)	-	
LOOSE, BROWN, **COARSE AND FINE SAND**, SOME GRAVEL AND STONE FRAGMENTS, TRACE SILT, TRACE CLAY, CONTAINS TRACE IRON STAINING, DAMP	1059.7		2 3 3	8	67	SS-2	-	-	-	-	-	-	-	-	-	9	A-3a (V)	-	
LOOSE TO MEDIUM DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND**, TRACE SILT, TRACE CLAY, CONTAINS TRACE IRON STAINING, DAMP	1057.2		2 3 6	12	67	SS-3	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	-	
			3 3 3	8	56	SS-4	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	-	
			4 4 4	11	28	SS-5	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	-	
@13.5' TO 20.0'; SS-6 TO SS-8 BECOME BROWN AND GRAY, LITTLE SILT			4 4 4	11	56	SS-6	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	-	
			3 4 3	10	56	SS-7	-	-	-	-	-	-	-	-	-	13	A-1-b (V)	-	
@18.5'; SS-8 BECOMES DENSE	1042.2		3 9 14	31	100	SS-8	-	-	-	-	-	-	-	-	-	11	A-1-b (V)	-	
MEDIUM DENSE, LIGHT BROWNISH GRAY, **STONE FRAGMENTS**, SOME SAND, TRACE SILT, TRACE CLAY, DAMP	1037.7		10 15 7	30	67	SS-9	-	-	-	-	-	-	-	-	-	6	A-1-a (V)	-	
			6 6 16	30	56	SS-10	-	-	-	-	-	-	-	-	-	7	A-1-a (V)	-	
SANDSTONE, LIGHT GRAY, MODERATELY WEATHERED, MODERATELY STRONG, VERY FINE TO FINE GRAINED, FRIABLE. **@25.5' TO 40.5'; 4.0" TO 6.0" VOIDS ENCOUNTERED DURING DRILLING**	1037.2	TR	50	-	67	SS-11	-	-	-	-	-	-	-	-	-	5	Rock (V)	-	
SANDSTONE, GRAY AND ORANGISH BROWN, MODERATELY WEATHERED, MODERATELY STRONG TO STRONG, VERY FINE TO FINE GRAINED, LAMINATED TO VERY THIN BEDDED, CONTAINS ARGILLACEOUS LENSES AND LAMINATIONS, BEDDING DISCONTINUITIES: LOW ANGLE, HIGHLY FRACTURED TO FRACTURED, OPEN TO NARROW, SLIGHTLY ROUGH TO VERY ROUGH, BLOCKY/DISTURBED/SEAMY, FAIR TO GOOD SURFACE CONDITION; RQD 0%, REC 38%. **3.0' VOID ENCOUNTERED DURING DRILLING.**	1034.2		0		66	NQ2-1												CORE		
	1031.2		0		40	NQ2-2												CORE		
COAL, BLACK, HIGHLY WEATHERED, WEAK, LAMINATED, PYRITIC, BEDDING DISCONTINUITIES: LOW ANGLE, HIGHLY FRACTURED, OPEN, SLIGHTLY ROUGH, BLOCKY/DISTURBED/SEAMY, POOR SURFACE CONDITION; RQD 0%, REC 42%.	1026.4		25		80	NQ2-3												CORE		
SANDSTONE, GRAY AND LIGHT GRAY, UNWEATHERED TO SLIGHTLY WEATHERED, MODERATELY STRONG TO STRONG, VERY FINE TO MEDIUM GRAINED, LAMINATED TO THIN BEDDED FROM 37.9' - 46.3', VERY THIN TO MEDIUM BEDDED FROM 46.3' - 55.5', CONTAINS ARGILLACEOUS LENSES AND LAMINATIONS, BEDDING DISCONTINUITIES: LOW ANGLE, JOINT DISCONTINUITIES: HIGH ANGLE FROM 38.5' - 39.4', HIGHLY FRACTURED TO MODERATELY FRACTURED FROM 37.9' - 46.3', HIGHLY FRACTURED TO SLIGHTLY FRACTURED FROM 46.3' - 55.5', NARROW TO TIGHT, SLIGHTLY ROUGH TO VERY ROUGH, BLOCKY TO INTACT, GOOD TO VERY GOOD SURFACE CONDITION; RQD 41%, REC 80%.	1024.8		47		83	NQ2-4												CORE		
			42		97	NQ2-5												CORE		
	1007.2	EOB	29		52	NQ2-6												CORE		

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE. VOIDS ENCOUNTERED DURING DRILLING. NO WATER CIRCULATION DURING CORING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 200 GAL. BENTONITE GROUT

STANDARD ODOT LOG W/ SULFATES (11 X 17) - OH DOT GDT - 11/13/20 22:55 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

179/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION UNDERGROUND MINE BORING LOG B-109-0-17	DRAWN EB CHECKED BPA

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 24+47, 0' LT. | EXPLORATION ID B-110-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL G
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1064.1 (MSL) EOB: 24.0 ft. | PAGE 1 OF 1
START: 3/11/20 END: 3/11/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.019589, -81.496361

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)	SO4 ppm	BACK FILL
LOOSE TO MEDIUM DENSE, BROWN, **GRAVEL WITH SAND**, TRACE SILT, TRACE CLAY, DAMP	1064.1	1	2 3 3	8	100	SS-1	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	-	
		2																	
		3	4 2 3	7	100	SS-2	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	-	
		4																	
		5	2 2 3	7	67	SS-3	-	25	41	23	7	4	NP	NP	NP	7	A-1-b (0)	-	
		6																	
		7	2 4 4	11	33	SS-4	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	-	
	1053.6	8																	
MEDIUM DENSE, BROWN BECOMING LIGHT BROWNISH GRAY, **STONE FRAGMENTS WITH SAND**, TRACE SILT, TRACE CLAY, SS-5 CONTAINS IRON STAINING, DAMP		9	5 10 5	20	44	SS-5	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	-	
		10																	
		11	4 8 8	22	44	SS-6	-	-	-	-	-	-	-	-	-	5	A-1-b (V)	-	
	1048.1	12																	
SANDSTONE, GRAY, MODERATELY WEATHERED, MODERATELY STRONG, FINE TO MEDIUM GRAINED, FRIABLE.		TR 13	4 24 50/5"	-	59	SS-7	-	-	-	-	-	-	-	-	-	7	Rock (V)	-	
		14																	
		15	15 14 31	61	100	SS-8	-	-	-	-	-	-	-	-	-	7	Rock (V)	-	
		16																	
		17	50/4"	-	100	SS-9	-	-	-	-	-	-	-	-	-	6	Rock (V)	-	
		18																	
	1040.1	19 EOB	50	-	67	SS-10	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
		20																	
		21																	
		22																	
		23																	
		24																	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:38 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 26+41, 1' LT. | EXPLORATION ID B-111-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL G
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1062.2 (MSL) EOB: 21.1 ft. | PAGE 1 OF 1
START: 3/6/20 END: 3/6/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.020107, -81.496512

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)	SO4 ppm	BACK FILL
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, LITTLE TO SOME GRAVEL AND STONE FRAGMENTS, LITTLE SILT, TRACE CLAY, CONTAINS ROOTS, DAMP	1062.2	1	2 4 5	12	100	SS-1	-	-	-	-	-	-	-	-	-	12	A-3a (V)	-	
		2																	
		3	7 9 6	20	100	SS-2	-	-	-	-	-	-	-	-	-	12	A-3a (V)	-	
	1056.7	4																	
MEDIUM DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE CLAY, SS-3 CONTAINS ROOTS, DAMP		5	2 5 5	14	100	SS-3	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	-	
		6																	
		7	3 6 9	20	100	SS-4	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	-	
		8																	
		9	4 9 12	29	67	SS-5	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	-	
	1048.7	10																	
SANDSTONE, LIGHT GRAY, MODERATELY WEATHERED, MODERATELY STRONG, FINE TO COARSE GRAINED, FRIABLE.		TR 11	6 12 22	46	100	SS-6	-	-	-	-	-	-	-	-	-	8	Rock (V)	-	
		12																	
		13	50/3"	-	67	SS-7	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
		14																	
		15	50/2"	-	50	SS-8	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
		16																	
	1041.1	17 EOB	50/1"	-	100	SS-9	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
		18																	
		19																	
		20																	
		21																	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:38 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 28+61, 6' LT. | EXPLORATION ID B-112-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL G | PAGE 1 OF 1
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1061.1 (MSL) EOB: 21.1 ft.
START: 3/6/20 END: 3/6/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.020697, -81.496694

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)	SO4 ppm	BACK FILL
MEDIUM DENSE, BROWN, **GRAVEL WITH SAND**, LITTLE SILT, TRACE CLAY, DAMP	1061.1		2 3 5	11	100	SS-1	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	-	
MEDIUM DENSE, BROWN, **STONE FRAGMENTS WITH SAND AND SILT**, TRACE CLAY, DAMP	1058.1		4 6 10	22	100	SS-2	-	23	9	33	26	9	NP	NP	NP	10	A-2-4 (0)	-	
SANDSTONE, LIGHT GRAY AND LIGHT BROWN, MODERATELY WEATHERED, MODERATELY STRONG, FINE TO MEDIUM GRAINED, FRIABLE.	1055.1	TR	9 19 23	57	67	SS-3	-	-	-	-	-	-	-	-	-	5	Rock (V)	-	
			2 24 30	74	100	SS-4	-	-	-	-	-	-	-	-	-	5	Rock (V)	-	
			50	-	67	SS-5	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
			25 50	-	75	SS-6	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
			50/2"	-	50	SS-7	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
			50/4"	-	50	SS-8	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
@21.0'; SS-9 CONTAINS NO RECOVERY	1040.0	EOB	50/1"	-	0	SS-9	-	-	-	-	-	-	-	-	-	-		-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:38 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 29+93, 19' LT. | EXPLORATION ID B-113-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL G | PAGE 1 OF 1
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1054.2 (MSL) EOB: 24.2 ft.
START: 3/5/20 END: 3/5/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.021038, -81.496852

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)	SO4 ppm	BACK FILL
LOOSE TO MEDIUM DENSE, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, WET TO MOIST	1054.2		3 3 3	8	100	SS-1	-	-	-	-	-	-	-	-	-	24	A-4a (V)	-	
			4 8 8	22	100	SS-2	-	-	-	-	-	-	-	-	-	17	A-4a (V)	-	
			4 5 7	16	67	SS-3	-	1	4	43	37	15	NP	NP	NP	16	A-4a (3)	-	
			8 11 22	45	100	SS-4A	-	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
						SS-4B	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	-	
DENSE TO VERY DENSE, BROWN AND GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE CLAY, DAMP	1044.7		4 23 28	70	100	SS-5	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	-	
			4 30 30	82	100	SS-6	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	-	
DENSE, BROWN AND GRAY, **SANDY SILT**, LITTLE GRAVEL AND STONE FRAGMENTS, LITTLE CLAY, DAMP	1038.7		5 13 22	48	67	SS-7	-	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
			4 10 14	33	100	SS-8	-	16	6	38	29	11	NP	NP	NP	13	A-4a (1)	-	
VERY DENSE, BROWN, **STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE CLAY, STONE FRAGMENTS ARE FRIABLE SANDSTONE, DAMP	1033.7		12 50	-	100	SS-9	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	-	
VERY DENSE, BROWN, **STONE FRAGMENTS WITH SAND, SILT, AND CLAY**, MOIST	1031.2		12 50/2"	-	75	SS-10	-	-	-	-	-	-	-	-	-	19	A-2-6 (V)	-	
	1030.0	EOB																	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:38 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

18 / 209	**SUM-77/277/224 VARIOUS**	**STRUCTURE FOUNDATION EXPLORATION BARRIER G BORING LOGS B-112-0-17 & B-113-0-17**	DRAWN EB / CHECKED BPA

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 30+79, 20' LT. | EXPLORATION ID B-114-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL G
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1054.0 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 3/5/20 END: 3/5/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.021265, -81.496942

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)	SO4 ppm	BACK FILL
MEDIUM DENSE, ORANGISH BROWN BECOMING BROWN, **COARSE AND FINE SAND**, LITTLE SILT, TRACE GRAVEL, TRACE CLAY, SS-1 CONTAINS IRON STAINING, DAMP TO MOIST	1054.0	1	4 4 8	16	100	SS-1	-	-	-	-	-	-	-	-	-	16	A-3a (V)	-	
		2																	
		3	4 4 6	14	100	SS-2	-	-	-	-	-	-	-	-	-	14	A-3a (V)	-	
		4																	
		5	4 6 7	18	100	SS-3	-	-	-	-	-	-	-	-	-	11	A-3a (V)	-	
		6																	
		7	3 6 7	18	67	SS-4	-	-	-	-	-	-	-	-	-	12	A-3a (V)	-	
	1043.5	8																	
MEDIUM DENSE TO DENSE, BROWN BECOMING GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, TRACE CLAY, CONTAINS IRON STAINING AND 1.5" SANDSTONE STONE FRAGMENTS, DAMP		9	9 12 17	40	67	SS-5	-	-	-	-	-	-	-	-	-	13	A-2-4 (V)	-	
		10																	
		11	7 7 11	25	100	SS-6	-	25	11	29	26	9	NP	NP	NP	11	A-2-4 (0)	-	
		12																	
		13	4 14 13	37	67	SS-7	-	-	-	-	-	-	-	-	-	9	A-2-4 (V)	-	
	1036.0	14																	
MEDIUM DENSE TO VERY DENSE, GRAY, **STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE CLAY, CONTAINS 1.5" SANDSTONE STONE FRAGMENTS, DAMP TO MOIST		15	14 10 28	52	67	SS-8	-	-	-	-	-	-	-	-	-	11	A-1-b (V)	-	
		16																	
		17	14 10 28	52	67	SS-9	-	-	-	-	-	-	-	-	-	15	A-1-b (V)	-	
		18																	
		19																	
		20																	
		21																	
		22																	
		23																	
		24	4 9 10	26	100	SS-10	-	-	-	-	-	-	-	-	-	14	A-1-b (V)	-	
	1029.0	25																	

▼ 1034.0

EOB

NOTES: GROUNDWATER ENCOUNTERED AT 20.0' DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:38 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / ASHBAUGH | DRILL RIG: CME 45B | STATION / OFFSET: 33+76, 8' LT. | EXPLORATION ID B-115-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL G
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1044.7 (MSL) EOB: 26.5 ft. | PAGE 1 OF 1
START: 10/8/20 END: 10/8/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.7 | LAT / LONG: 41.022004, -81.497323

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)	SO4 ppm	BACK FILL
10.0" ASPHALT AND 6.0" BASE (DRILLERS DESCRIPTION)	1043.4	1																	
HARD, BROWN AND ORANGISH BROWN, **SANDY SILT**, LITTLE TO SOME CLAY, TRACE TO LITTLE GRAVEL, CONTAINS IRON STAINING AND PLASTIC TRASH FRAGMENTS, DAMP **(FILL)**		2																	
		3	3 4 6	14	67	SS-1	4.50	20	7	23	32	18	24	15	9	13	A-4a (3)	-	
		4																	
		5	8 7 10	23	56	SS-2	4.50	10	7	24	36	23	25	16	9	13	A-4a (5)	-	
		6																	
		7																	
		8	4 3 10	18	72	SS-3	4.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
	1035.2	9																	
MEDIUM DENSE, BROWNISH GRAY AND ORANGISH BROWN, **STONE FRAGMENTS WITH SAND AND SILT**, TRACE CLAY, CONTAINS IRON STAINING, DAMP		10	7 10 11	29	67	SS-4	-	-	-	-	-	-	-	-	-	12	A-2-4 (V)	-	
	1032.7	11																	
MEDIUM DENSE, BROWN AND ORANGISH BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, CONTAINS IRON STAINING, DAMP		12																	
		13	7 9 12	29	89	SS-5	-	3	10	38	33	16	NP	NP	NP	12	A-4a (3)	-	
	1030.2	14																	
MEDIUM DENSE, GRAY, **SILT**, LITTLE CLAY, TRACE TO LITTLE SAND, TRACE GRAVEL, WET		15																	
		16	6 6 11	23	78	SS-6	-	-	-	-	-	-	-	-	-	23	A-4b (V)	-	
		17																	
		18	6 7 9	22	83	SS-7	-	1	2	8	77	12	NP	NP	NP	21	A-4b (8)	-	
		19																	
		20	5 9 7	22	100	SS-8	-	-	-	-	-	-	-	-	-	20	A-4b (V)	-	
		21																	
		22																	
		23	8 8 11	26	56	SS-9	-	-	-	-	-	-	-	-	-	24	A-4b (V)	-	
	1020.2	24																	
MEDIUM DENSE, GRAY, **STONE FRAGMENTS WITH SAND AND SILT**, TRACE CLAY, WET		25																	
		26	7 10 6	22	67	SS-10	-	-	-	-	-	-	-	-	-	21	A-2-4 (V)	-	
	1018.2																		

▼ 1021.7

EOB

NOTES: GROUNDWATER ENCOUNTERED AT 23.0' DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:38 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
BARRIER G
BORING LOGS B-114-0-17 & B-115-0-17

DRAWN EB
CHECKED BPA

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / ASHBAUGH | DRILL RIG: CME 45B | STATION / OFFSET: 35+64, 8' LT. | EXPLORATION ID B-116-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL G | PAGE 1 OF 1
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1049.1 (MSL) EOB: 26.5 ft.
START: 10/8/20 END: 10/9/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.7 | LAT / LONG: 41.022516, -81.497433

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)	SO4 ppm	BACK FILL
6.0" ASPHALT AND 7.0" BASE (DRILLERS DESCRIPTION)	1048.0																		
VERY STIFF TO HARD, BROWN WITH ORANGISH BROWN AND GRAY, **SANDY SILT**, LITTLE TO SOME CLAY, TRACE TO SOME GRAVEL, CONTAINS IRON STAINING, DAMP			4 4 4	11	56	SS-1	4.50	22	8	19	34	17	26	17	9	13	A-4a (3)	-	
			8 10 11	29	67	SS-2	4.50	-	-	-	-	-	-	-	-	13	A-4a (V)	-	
			10 10 13	31	78	SS-3	4.50	8	6	27	39	20	25	16	9	13	A-4a (5)	-	
			5 7 7	19	17	SS-4	3.00	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
	1037.1																		
HARD, BROWN AND DARK BROWNISH GRAY, **SILT AND CLAY**, "AND" SAND, TRACE GRAVEL, DAMP			5 6 6	16	56	SS-5	4.25	5	7	31	37	20	31	20	11	19	A-6a (5)	-	
	1033.6																		
MEDIUM DENSE, ORANGISH BROWN, **COARSE AND FINE SAND**, LITTLE GRAVEL, LITTLE SILT, TRACE CLAY, CONTAINS IRON STAINING, DAMP			5 7 6	18	78	SS-6A	4.50	-	-	-	-	-	-	-	-	14	A-6a (V)	-	
						SS-6B	-	-	-	-	-	-	-	-	-	6	A-3a (V)	-	
@17.5' TO 19.0'; SS-7 CONTAINS NO RECOVERY			5 4 5	12	0	SS-7	-	-	-	-	-	-	-	-	-	-		-	
	1029.6																		
STIFF, DARK GRAY AND BLACK, **SILT AND CLAY**, "AND" SAND, TRACE GRAVEL, MODERATELY ORGANIC, DAMP			5 4 4	11	33	SS-8	1.75	-	-	-	-	-	-	-	-	17	A-6a (V)	-	
	1027.1																		
LOOSE, GRAY, **SILT**, LITTLE CLAY, LITTLE SAND, TRACE GRAVEL, MOIST			3 2 3	7	56	SS-9	-	1	0	14	66	19	21	17	4	22	A-4b (8)	-	
	1022.6	EOB	3 3 4	10	72	SS-10	-	-	-	-	-	-	-	-	-	22	A-4b (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / ASHBAUGH | DRILL RIG: CME 45B | STATION / OFFSET: 37+06, 8' LT. | EXPLORATION ID B-117-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL G | PAGE 1 OF 1
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1054.3 (MSL) EOB: 26.5 ft.
START: 10/9/20 END: 10/9/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.7 | LAT / LONG: 41.022907, -81.497456

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)	SO4 ppm	BACK FILL
7.0" ASPHALT AND 6.0" BASE (DRILLERS DESCRIPTION)	1053.2																		
HARD, BROWNISH GRAY AND GRAY, **SANDY SILT**, LITTLE TO SOME CLAY, TRACE TO LITTLE GRAVEL, CONTAINS IRON STAINING, DAMP TO MOIST			4 3 3	8	56	SS-1	4.50	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
			4 5 6	15	67	SS-2	4.50	10	6	23	43	18	24	16	8	15	A-4a (5)	-	
			7 6 7	18	72	SS-3	4.50	-	-	-	-	-	-	-	-	18	A-4a (V)	-	
			4 4 5	12	83	SS-4	4.50	-	-	-	-	-	-	-	-	15	A-4a (V)	-	
			6 5 5	14	67	SS-5	4.50	-	-	-	-	-	-	-	-	15	A-4a (V)	-	
			7 7 7	19	83	SS-6	4.50	9	8	25	35	23	26	16	10	12	A-4a (5)	-	
			5 8 10	25	89	SS-7	4.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
			7 6 9	20	72	SS-8	4.50	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
	1032.3																		
MEDIUM DENSE, BROWN AND BLACK, **COARSE AND FINE SAND**, SOME STONE FRAGMENTS, LITTLE SILT, TRACE CLAY, CONTAINS ROOTS AND IRON STAINING, MOIST			10 5 6	15	61	SS-9	-	-	-	-	-	-	-	-	-	15	A-3a (V)	-	
	1029.3																		
MEDIUM DENSE, BROWN AND GREENISH GRAY, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, CONTAINS ROOTS AND IRON STAINING, MOIST	1027.8	EOB	7 4 5	12	72	SS-10	-	3	11	41	30	15	NP	NP	NP	16	A-4a (2)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:38 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 10+31, 8' RT. | EXPLORATION ID B-118-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL K
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1060.3 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 3/16/20 END: 3/16/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.026038, -81.499944

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)	SO4 ppm	BACK FILL
6.0" ASPHALT AND 6.0" BASE (DRILLERS DESCRIPTION)	1059.3																		
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, SOME GRAVEL, LITTLE SILT, TRACE CLAY, DAMP	1057.3		2 4 5	12	100	SS-1	-	-	-	-	-	-	-	-	-	7	A-3a (V)	-	
HARD, BROWN AND GRAYISH BROWN, **SANDY SILT**, LITTLE TO SOME CLAY, TRACE TO LITTLE GRAVEL, CONTAINS TRACE IRON STAINING AND ROOT HAIRS, DAMP TO MOIST			6 8 9	23	67	SS-2	4.50	9	9	25	35	22	27	17	10	15	A-4a (4)	-	
			7 9 10	26	100	SS-3	4.50	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
			5 7 10	23	100	SS-4	4.50	-	-	-	-	-	-	-	-	15	A-4a (V)	-	
			4 7 12	26	50	SS-5	4.50	11	7	19	40	23	27	18	9	13	A-4a (6)	-	
@13.5' TO 15.0'; SS-6 CONTAINS TRACE ANTHRACITE COAL FRAGMENTS @13.5' TO 22.5'; SS-6 TO SS-9 BECOME MEDIUM STIFF TO VERY STIFF, GRAY			4 8 9	23	100	SS-6	2.75	-	-	-	-	-	-	-	-	17	A-4a (V)	-	
			2 3 5	11	56	SS-7	1.00	-	-	-	-	-	-	-	-	20	A-4a (V)	-	
			3 3 3	8	100	SS-8	0.50	5	14	41	26	14	24	15	9	18	A-4a (1)	-	
	1037.3		3 3 4	10	67	SS-9	2.75	-	-	-	-	-	-	-	-	21	A-4a (V)	-	
MEDIUM DENSE, BROWN, **SILT**, SOME CLAY, TRACE SAND, TRACE GRAVEL, WET	1035.3	EOB	4 7 8	20	100	SS-10	-	0	0	5	74	21	NP	NP	NP	23	A-4b (8)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:38 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 12+30, 6' RT. | EXPLORATION ID B-119-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL K
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1066.7 (MSL) EOB: 30.0 ft. | PAGE 1 OF 1
START: 3/17/20 END: 3/17/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.025931, -81.499234

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)	SO4 ppm	BACK FILL
6.0" ASPHALT AND 6.0" BASE (DRILLERS DESCRIPTION)	1065.7																		
MEDIUM DENSE, BROWN, **GRAVEL WITH SAND**, TRACE SILT, TRACE CLAY, DAMP	1063.7		2 4 5	12	100	SS-1	-	-	-	-	-	-	-	-	-	6	A-1-b (V)	-	
HARD, BROWN BECOMING GRAYISH BROWN, **SANDY SILT**, SOME CLAY, TRACE GRAVEL, DAMP			7 10 10	27	100	SS-2	4.50	9	8	26	35	22	24	16	8	11	A-4a (4)	-	
			6 9 9	25	33	SS-3	4.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
			7 8 12	27	67	SS-4	4.50	-	-	-	-	-	-	-	-	13	A-4a (V)	-	
			5 9 9	25	100	SS-5	4.50	9	9	21	37	24	29	19	10	14	A-4a (5)	-	
			5 8 9	23	100	SS-6	4.50	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
	1049.7		3 4 7	15	39	SS-7A	4.50	-	-	-	-	-	-	-	-	13	A-4a (V)	-	
STIFF TO VERY STIFF, GRAY MOTTLED WITH ORANGISH BROWN, **CLAY**, SOME SILT, SOME SAND, TRACE GRAVEL, CONTAINS IRON STAINING, MOIST	1046.2					SS-7B	2.00	-	-	-	-	-	-	-	-	30	A-7-6 (V)	-	
			4 4 9	18	67	SS-8	2.75	3	8	25	33	31	42	17	25	21	A-7-6 (12)	-	
STIFF TO HARD, BROWN, **SANDY SILT**, LITTLE GRAVEL AND STONE FRAGMENTS, LITTLE CLAY, DAMP TO MOIST			3 3 4	10	67	SS-9	2.25	-	-	-	-	-	-	-	-	17	A-4a (V)	-	
			2 3 4	10	100	SS-10	1.50	14	12	28	34	12	20	15	5	15	A-4a (2)	-	
			4 4 6	14	39	SS-11	4.50	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
	1036.7	EOB	8 8 13	29	100	SS-12	4.50	-	-	-	-	-	-	-	-	15	A-4a (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:38 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224	DRILLING FIRM / OPERATOR: NEAS / J. HODGES	DRILL RIG: CME 55X	STATION / OFFSET: 895+63, 24' LT.	EXPLORATION ID B-119-1-17
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: NEAS / J. HODGES	HAMMER: CME AUTOMATIC	ALIGNMENT: RAMP D	
PID: 106002 SFN:	DRILLING METHOD: 3.25" HSA / NQ2	CALIBRATION DATE: 11/21/17	ELEVATION: 1071.8 (MSL) EOB: 48.0 ft.	PAGE 1 OF 1
START: 4/16/20 END: 4/16/20	SAMPLING METHOD: SPT / NQ2	ENERGY RATIO (%): 85.4	LAT / LONG: 41.025790, -81.498600	

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
HARD, BROWN WITH GRAY AND ORANGISH BROWN, **SANDY SILT**, SOME CLAY, TRACE GRAVEL, CONTAINS IRON STAINING AND TRACE ROOTS, DAMP	1071.8																	
			6 7 13	28	67	SS-1	4.50	7	6	21	44	22	26	18	8	15	A-4a (6)	
			4 6 10	23	100	SS-2	4.25	-	-	-	-	-	-	-	-	16	A-4a (V)	
			6 8 10	26	78	SS-3	4.50	-	-	-	-	-	-	-	-	15	A-4a (V)	
			3 5 7	17	100	SS-4	4.50	8	7	24	38	23	26	17	9	13	A-4a (5)	
			4 12 12	34	67	SS-5	4.25	-	-	-	-	-	-	-	-	15	A-4a (V)	
HARD, GRAYISH BROWN AND BROWN, **SILT AND CLAY**, SOME SAND, TRACE GRAVEL, CONTAINS IRON STAINING AND TRACE ROOTS, DAMP	1057.3																	
			5 6 7	19	100	SS-6	4.50	7	6	25	40	22	27	16	11	14	A-6a (6)	
			2 3 3	9	44	SS-7	4.25	-	-	-	-	-	-	-	-	15	A-6a (V)	
VERY STIFF TO HARD, BROWN AND GRAY, **SANDY SILT**, LITTLE CLAY, LITTLE GRAVEL AND STONE FRAGMENTS, DAMP	1051.8																	
			3 4 6	14	67	SS-8	4.00	16	8	26	34	16	24	17	7	14	A-4a (3)	
VERY DENSE, ORANGISH BROWN AND GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, LITTLE CLAY, POSSIBLE SANDSTONE COBBLE, CONTAINS IRON STAINING, DAMP	1049.8																	
			10 50	-	42	SS-9	-	-	-	-	-	-	-	-	-	13	A-2-4 (V)	
HARD, GRAY, **SILT AND CLAY**, SOME SAND, LITTLE GRAVEL, DAMP	1047.3																	
			4 9 9	26	100	SS-10	4.50	-	-	-	-	-	-	-	-	12	A-6a (V)	
	1044.3	TR																
SANDSTONE, LIGHT GRAY, MODERATELY WEATHERED, MODERATELY STRONG, VERY FINE TO FINE GRAINED.	1042.8		50	-	33	SS-11	-	-	-	-	-	-	-	-	-	4	Rock (V)	
SHALE, GRAY, SEVERELY WEATHERED, VERY WEAK, FISSILE.	1040.3																	
			6 19 27	65	67	SS-12	-	-	-	-	-	-	-	-	-	10	Rock (V)	
INTERBEDDED SHALE (77%) AND SANDSTONE (23%), BEDDING DISCONTINUITIES: LOW ANGLE, HIGHLY FRACTURED TO MODERATELY FRACTURED, OPEN TO NARROW, SLIGHTLY ROUGH, BLOCKY/DISTURBED/SEAMY, FAIR TO POOR SURFACE CONDITION, RQD 15%, REC. 78%; **SHALE**, GRAY AND DARK GRAY, MODERATELY TO HIGHLY WEATHERED, VERY WEAK TO WEAK, LAMINATED, FISSILE, FOSSILIFEROUS; **SANDSTONE**, GRAY AND LIGHT GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG TO STRONG, VERY FINE TO FINE GRAINED, CONTAINS ARGILLACEOUS LAMINATIONS AND LENSES.			34		57	NQ2-1											CORE	
			17		91	NQ2-2											CORE	
			0		80	NQ2-3											CORE	
	1023.8	EOB	0		100	NQ2-4											CORE	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE. NO DISCERNABLE VOIDS DURING CORING. NO LOSS OF WATER CIRCULATION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 100 GAL. BENTONITE GROUT

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 11/19/20 18:43 - C:\USERS\KARENS\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

185/209	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION BARRIER K BORING LOG B-119-1-17	DRAWN EB CHECKED BPA

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / ASHBAUGH | DRILL RIG: CME 55T | STATION / OFFSET: 14+22, 4' RT. | EXPLORATION ID B-120-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL K
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1073.1 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 3/2/20 END: 3/2/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 68.4 | LAT / LONG: 41.025875, -81.498541

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)	SO4 ppm	BACK FILL
9.0" ASPHALT AND 3.0" BASE (DRILLERS DESCRIPTION)	1073.1 / 1072.1																		
VERY STIFF TO HARD, BROWN AND BROWNISH GRAY, **SANDY SILT**, SOME CLAY, TRACE TO LITTLE GRAVEL, SS-1 TO SS-4 CONTAIN IRON STAINING, DAMP		1–4	6 4 5	10	56	SS-1	3.00	-	-	-	-	-	-	-	-	15	A-4a (V)	-	
		4–7	3 3 5	9	67	SS-2	3.25	11	7	22	37	23	26	17	9	15	A-4a (5)	-	
		6–9	5 4 5	10	89	SS-3	4.25	-	-	-	-	-	-	-	-	13	A-4a (V)	-	
		8–11	4 4 5	10	67	SS-4	4.25	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
		11–14	5 6 7	15	89	SS-5	4.50	11	7	25	35	22	25	16	9	13	A-4a (4)	-	
		13–16	5 5 8	15	100	SS-6	4.50	-	-	-	-	-	-	-	-	13	A-4a (V)	-	
	1055.1	16–18	5 4 6	11	100	SS-7	4.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
STIFF TO VERY STIFF, GRAY AND BROWN, **SILT AND CLAY**, "AND" SAND, TRACE GRAVEL, DAMP	1052.6	18–20	3 4 6	11	89	SS-8	2.00	8	8	28	34	22	28	17	11	17	A-6a (5)	-	
HARD, BROWN AND BROWNISH GRAY, **SANDY SILT**, LITTLE CLAY, LITTLE GRAVEL, DAMP	1050.1	20–22	4 5 5	11	56	SS-9	4.50	12	10	19	39	20	24	17	7	13	A-4a (5)	-	
DENSE, ORANGISH BROWN AND GRAY, **STONE FRAGMENTS WITH SAND**, TRACE SILT, TRACE CLAY, CONTAINS IRON STAINING, DAMP	1048.1	23–25	8 13 16	33	28	SS-10	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	-	
	EOB																		

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE CAVED IN AT 21.2'.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / ASHBAUGH | DRILL RIG: CME 55T | STATION / OFFSET: 16+21, 5' RT. | EXPLORATION ID B-121-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL K
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1079.0 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 3/2/20 END: 3/2/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 68.4 | LAT / LONG: 41.025844, -81.497821

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)	SO4 ppm	BACK FILL
8.0" ASPHALT AND 3.0" BASE (DRILLERS DESCRIPTION)	1079.0 / 1078.1																		
VERY STIFF TO HARD, BROWN AND BROWNISH GRAY, **SANDY SILT**, LITTLE TO SOME CLAY, TRACE TO LITTLE GRAVEL, DAMP		1–4	4 5 5	11	50	SS-1	3.00	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
		3–6	4 5 7	14	56	SS-2	4.50	-	-	-	-	-	-	-	-	13	A-4a (V)	-	
		5–8	5 5 9	16	78	SS-3	4.00	6	9	24	37	24	25	16	9	14	A-4a (5)	-	
		8–11	7 6 7	15	72	SS-4	4.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
		10–13	5 5 6	13	89	SS-5	4.50	5	6	24	44	21	26	17	9	15	A-4a (6)	-	
		13–15	4 5 8	15	100	SS-6	4.50	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
		15–18	4 6 9	17	100	SS-7	4.50	-	-	-	-	-	-	-	-	15	A-4a (V)	-	
		18–20	5 7 9	18	100	SS-8	4.50	11	6	21	42	20	26	18	8	15	A-4a (5)	-	
		20–22	4 5 7	14	100	SS-9	4.50	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
@23.5' TO 25.0'; SS-10 BECOMES BLACK, LITTLE CLAY, CONTAINS ANTHRACITE COAL FRAGMENTS, MOIST	1054.0	23–25	4 5 5	11	100	SS-10	4.50	-	-	-	-	-	-	-	-	22	A-4a (V)	-	
	EOB																		

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE CAVED IN AT 16.5'.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:38 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224
TYPE: NOISE WALL
PID: 106002 SFN:
START: 3/2/20 END: 3/2/20

DRILLING FIRM / OPERATOR: NEAS / ASHBAUGH
SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH
DRILLING METHOD: 3.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: CME 55T
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 12/5/19
ENERGY RATIO (%): 68.4

STATION / OFFSET: 18+18, 7' RT.
ALIGNMENT: NOISE WALL K
ELEVATION: 1084.5 (MSL) EOB: 23.8 ft.
LAT / LONG: 41.025843, -81.497094

EXPLORATION ID B-122-0-17
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)	SO4 ppm	BACK FILL
9.0" ASPHALT AND 3.0" BASE (DRILLERS DESCRIPTION)	1083.5																		
HARD, BROWNISH GRAY AND BROWN, **SANDY SILT**, SOME CLAY, TRACE TO LITTLE GRAVEL, DAMP		1	4 4 11	17	67	SS-1	4.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
		4	4 9 17	30	89	SS-2	4.50	11	8	23	36	22	26	16	10	13	A-4a (5)	-	
		7	7 7 9	18	78	SS-3	4.50	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
		9	5 6 7	15	56	SS-4	4.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
		12	5 5 6	13	78	SS-5	4.50	4	7	22	44	23	27	17	10	16	A-4a (6)	-	
		14	9 12 23	40	89	SS-6	4.50	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
		17	8 7 12	22	89	SS-7	4.50	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
	1066.5																		
HARD, BROWNISH GRAY, **SILT AND CLAY**, LITTLE SAND, TRACE GRAVEL, DAMP		19	5 8 6	16	56	SS-8	4.50	6	4	16	59	15	27	16	11	14	A-6a (8)	-	
		22	8 10 12	25	56	SS-9	4.50	-	-	-	-	-	-	-	-	13	A-6a (V)	-	
	1060.7	EOB																	
@23.5'; SS-10 BECOMES SOFT TO MEDIUM STIFF, GRAY, SOME STONE FRAGMENTS, MOIST			50/4"	-	100	SS-10	0.50	-	-	-	-	-	-	-	-	17	A-6a (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE CAVED IN AT 20.7'.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:38 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224
TYPE: NOISE WALL
PID: 106002 SFN:
START: 2/26/20 END: 2/26/20

DRILLING FIRM / OPERATOR: NEAS / J. HODGES
SAMPLING FIRM / LOGGER: NEAS / J. HODGES
DRILLING METHOD: 3.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: CME 55X
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 12/5/19
ENERGY RATIO (%): 81.9

STATION / OFFSET: 20+27, 27' RT.
ALIGNMENT: NOISE WALL K
ELEVATION: 1093.2 (MSL) EOB: 14.0 ft.
LAT / LONG: 41.025959, -81.496408

EXPLORATION ID B-123-0-17
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)	SO4 ppm	BACK FILL
MEDIUM DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, LITTLE CLAY, CONTAINS IRON STAINING, DAMP	1093.2																		
		1	5 5 8	18	67	SS-1	-	-	-	-	-	-	-	-	-	13	A-2-4 (V)	-	
	1090.2																		
VERY DENSE, LIGHT BROWN, **STONE FRAGMENTS WITH SAND**, TRACE SILT, TRACE CLAY, (POSSIBLE SANDSTONE BOULDER OR COBBLE), DAMP		4	60/2"	-	100	SS-2	-	-	-	-	-	-	-	-	-	3	A-1-b (V)	-	
	1087.7																		
HARD, BROWN, **SILT**, SOME CLAY, LITTLE SAND, TRACE GRAVEL, DAMP		6	6 7 8	20	100	SS-3	4.50	3	5	12	57	23	27	21	6	17	A-4b (8)	-	
	1084.2																		
@8.5'; SS-4A CONTAINS A RELIC ROCK STRUCTURE		TR 9	8 50	-	100	SS-4A SS-5B	4.50 -	-	-	-	-	-	-	-	-	7 -	A-4b (V) Rock (V)	-	
SHALE, GRAY, SEVERELY WEATHERED, VERY WEAK.		11	50	-	100	SS-5	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
	1079.2	EOB																	
		14	50	-	33	SS-6	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:38 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 21+68, 19' RT. | EXPLORATION ID B-124-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL K
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1098.5 (MSL) EOB: 8.9 ft. | PAGE 1 OF 1
START: 2/26/20 END: 2/26/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.026005, -81.495899

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)	SO4 ppm	BACK FILL
VERY STIFF TO HARD, BROWN MOTTLED WITH GRAY AND ORANGISH BROWN, **SILT AND CLAY**, TRACE TO LITTLE SAND, TRACE GRAVEL, CONTAINS IRON STAINING, DAMP	1098.5		3 8 9	23	67	SS-1	4.50	-	-	-	-	-	-	-	-	13	A-6a (V)	-	
			5 7 10	23	100	SS-2	4.50	0	1	5	53	41	31	19	12	14	A-6a (9)	-	
	1092.2	TR	50	-	67	SS-3A	3.75	-	-	-	-	-	-	-	-	15	A-6a (V)	-	
SANDSTONE, LIGHT BROWN, MODERATELY WEATHERED, STRONG, FINE TO MEDIUM GRAINED.						SS-3B	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
	1089.6	EOB	50/4"	-	150	SS-4	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 24+19, 7' RT. | EXPLORATION ID B-125-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL K
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1101.9 (MSL) EOB: 13.8 ft. | PAGE 1 OF 1
START: 2/26/20 END: 2/26/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.026026, -81.494995

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)	SO4 ppm	BACK FILL
STIFF TO VERY STIFF, BROWN, **SANDY SILT**, LITTLE TO SOME CLAY, TRACE GRAVEL, CONTAINS IRON STAINING, MOIST TO DAMP	1101.9		3 4 13	23	67	SS-1	2.00	3	11	34	30	22	25	17	8	18	A-4a (3)	-	
@3.5' TO 6.5'; SS-2 AND SS-3A BECOME SOME GRAVEL			3 8 15	31	100	SS-2	3.00	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
	1095.4	TR	8			SS-3A	1.50	32	8	22	25	13	22	15	7	15	A-4a (1)	-	
SANDSTONE, LIGHT BROWN AND GRAY, HIGHLY WEATHERED, STRONG, FINE TO MEDIUM GRAINED.			15 31	63	33	SS-3B	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
			12 19 50	94	100	SS-4	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
			50/3"	-	100	SS-5	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
	1088.1	EOB	50/3"	-	100	SS-6	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:38 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

188/209	**SUM-77/277/224 VARIOUS**	**STRUCTURE FOUNDATION EXPLORATION BARRIER K BORING LOGS B-124-0-17 & B-125-0-17**	DRAWN EB / CHECKED BPA

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 26+24, 18' RT. | EXPLORATION ID B-126-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL K
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1106.8 (MSL) EOB: 18.8 ft. | PAGE 1 OF 1
START: 2/25/20 END: 2/25/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.026021, -81.494252

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)	SO4 ppm	BACK FILL
VERY STIFF TO HARD, BROWN, **SILT AND CLAY**, LITTLE TO SOME GRAVEL, SOME SAND, CONTAINS IRON STAINING, DAMP	1106.8		2, 3, 5	11	44	SS-1	2.75	-	-	-	-	-	-	-	-	14	A-6a (V)	-	
			5, 7, 8	20	100	SS-2	4.50	25	7	16	26	26	29	18	11	14	A-6a (4)	-	
VERY STIFF TO HARD, BROWN, **SANDY SILT**, SOME CLAY, TRACE GRAVEL, CONTAINS IRON STAINING, DAMP	1101.3		6, 10, 10	27	56	SS-3	4.25	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
	1096.3		3, 4, 4	11	100	SS-4	2.50	9	9	25	36	21	22	15	7	13	A-4a (4)	-	
HARD, DARK GRAY, **SILT AND CLAY**, SOME SAND, TRACE GRAVEL, RELIC ROCK STRUCTURE, DAMP	1094.3		5, 6, 10	22	67	SS-5	4.50	-	-	-	-	-	-	-	-	11	A-6a (V)	-	
SHALE, GRAY, SEVERELY WEATHERED, VERY WEAK.		TR																	
		1092.8	23, 50	-	67	SS-6	-	-	-	-	-	-	-	-	-	12	Rock (V)	-	
			17, 50	-	100	SS-7	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
	1088.0	EOB	50/3"	-	100	SS-8	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER ENCOUNTERED AT 14.0' DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 27+39, 2' RT. | EXPLORATION ID B-127-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL K
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1111.9 (MSL) EOB: 19.0 ft. | PAGE 1 OF 1
START: 2/25/20 END: 2/25/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.026081, -81.493837

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)	SO4 ppm	BACK FILL
LOOSE, ORANGISH BROWN AND DARK BROWN, **COARSE AND FINE SAND**, SOME SILT, LITTLE GRAVEL, TRACE CLAY, CONTAINS TRACE ROOTS AND IRON STAINING, WET	1111.9		3, 4, 3	10	67	SS-1	-	16	14	40	23	7	NP	NP	NP	18	A-3a (0)	-	
	1108.9		3, 4, 6	14	100	SS-2	2.50	-	-	-	-	-	-	-	-	16	A-6a (V)	-	
STIFF TO VERY STIFF, BROWN MOTTLED WITH GRAY AND ORANGISH BROWN, **SILT AND CLAY**, SOME SAND, TRACE GRAVEL, CONTAINS IRON STAINING, DAMP	1103.9		3, 7, 10	23	56	SS-3	1.25	-	-	-	-	-	-	-	-	15	A-6a (V)	-	
VERY STIFF, BROWN, **SANDY SILT**, SOME GRAVEL, LITTLE CLAY, CONTAINS TRACE IRON STAINING, DAMP	1098.9		3, 8, 8	22	100	SS-4	3.50	24	16	17	25	18	28	20	8	14	A-4a (2)	-	
			3, 12, 12	33	67	SS-5	3.75	-	-	-	-	-	-	-	-	15	A-4a (V)	-	
HARD, GRAYISH BROWN, **SILT AND CLAY**, LITTLE SAND, TRACE STONE FRAGMENTS, RELIC ROCK STRUCTURE, DAMP	1096.9		6, 22, 50	98	100	SS-6	4.50	-	-	-	-	-	-	-	-	9	A-6a (V)	-	
SHALE, GRAY, SEVERELY WEATHERED, VERY WEAK.		TR																	
			50	-	200	SS-7	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
	1092.9	EOB	50	-	100	SS-8	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE. OFFSET 27' SOUTH TO AVOID DITCH.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:39 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

189/602	**SUM-77/277/224 VARIOUS**	**STRUCTURE FOUNDATION EXPLORATION BARRIER K BORING LOGS B-126-0-17 & B-127-0-17**	DRAWN EB	CHECKED BPA

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 29+02, 29' RT. | EXPLORATION ID B-128-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL K
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1126.2 (MSL) EOB: 23.8 ft. | PAGE 1 OF 1
START: 2/25/20 END: 2/25/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.026091, -81.493236

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)	SO4 ppm	BACK FILL
STIFF TO HARD, BROWN MOTTLED WITH GRAY AND ORANGISH BROWN, **SILT AND CLAY**, SOME SAND, TRACE TO LITTLE GRAVEL AND STONE FRAGMENTS, CONTAINS TRACE ROOTS AND IRON STAINING, MOIST TO DAMP	1126.2		3 6 7	18	67	SS-1	1.25	-	-	-	-	-	-	-	-	22	A-6a (V)	-	
			3 5 7	16	100	SS-2	4.25	-	-	-	-	-	-	-	-	15	A-6a (V)	-	
STIFF TO HARD, BROWN MOTTLED WITH ORANGISH BROWN, **SANDY SILT**, LITTLE GRAVEL AND STONE FRAGMENTS, LITTLE CLAY, CONTAINS IRON STAINING, DAMP	1120.7		2 5 4	12	67	SS-3	2.25	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
			2 3 5	11	67	SS-4	2.00	20	9	24	32	15	21	15	6	14	A-4a (2)	-	
			5 7 9	22	56	SS-5	4.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
@13.5'; SS-6 BECOMES BROWNISH GRAY MOTTLED WITH DARK GRAY AND ORANGISH BROWN	1110.2		3 4 6	14	44	SS-6	3.75	11	21	18	31	19	30	21	9	15	A-4a (3)	-	
SHALE, GRAY, SEVERELY WEATHERED, VERY WEAK TO WEAK.		TR 1109.2	15 28 50	106	100	SS-7	-	-	-	-	-	-	-	-	-	7	Rock (V)	-	
			50	-	100	SS-8	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
			50	-	133	SS-9	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
	1102.4	EOB	50/3"	-	100	SS-10	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER ENCOUNTERED AT 17.0' DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:39 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 30+68, 7' RT. | EXPLORATION ID B-129-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL K
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1115.1 (MSL) EOB: 16.5 ft. | PAGE 1 OF 1
START: 2/24/20 END: 2/24/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.026235, -81.492661

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)	SO4 ppm	BACK FILL
SOFT TO MEDIUM STIFF, BROWN AND DARK GRAY, **SANDY SILT**, LITTLE GRAVEL AND STONE FRAGMENTS, LITTLE CLAY, CONTAINS A PETROLIFEROUS ODOR, TRACE ROOTS AND IRON STAINING, MOIST	1115.1		3 5 5	14	67	SS-1	0.50	14	9	32	32	13	27	21	6	23	A-4a (2)	-	
MEDIUM DENSE, BROWN AND BLACK WITH ORANGISH BROWN MOTTLES, **STONE FRAGMENTS WITH SAND AND SILT**, LITTLE CLAY, CONTAINS A STRONG PETROLIFEROUS ODOR, WET	1112.1		4 4 12	22	33	SS-2	-	-	-	-	-	-	-	-	-	23	A-2-4 (V)	-	
SOFT TO VERY STIFF, BROWNISH GRAY, **SANDY SILT**, SOME CLAY, TRACE TO LITTLE GRAVEL AND STONE FRAGMENTS, CONTAINS A STRONG PETROLIFEROUS ODOR, TRACE IRON STAINING AND ROOTS, DAMP TO MOIST	1109.6		6 8 10	25	44	SS-3	0.50	-	-	-	-	-	-	-	-	20	A-4a (V)	-	
			2 5 6	15	100	SS-4	2.00	8	8	20	41	23	26	17	9	18	A-4a (6)	-	
			3 12 22	46	44	SS-5	1.00	-	-	-	-	-	-	-	-	18	A-4a (V)	-	
			22 50	-	100	SS-6	1.00	-	-	-	-	-	-	-	-	17	A-4a (V)	-	
@16.0' TO 16.5'; SS-7 CONTAINS NO INTACT SOIL FOR HP READINGS, BECOMES GRAY, CONTAINS A RELIC ROCK STRUCTURE	1098.6	EOB	50	-	100	SS-7	-	-	-	-	-	-	-	-	-	22	A-4a (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:39 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224
TYPE: LIGHT TOWER
PID: 106002 SFN:
START: 8/7/20 END: 8/7/20

DRILLING FIRM / OPERATOR: NEAS / J. HODGES
SAMPLING FIRM / LOGGER: NEAS / ASHBAUGH
DRILLING METHOD: 3.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: CME 55X
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 11/21/17
ENERGY RATIO (%): 85.4

STATION / OFFSET: 31+10, 55' RT.
ALIGNMENT: NOISE WALL K
ELEVATION: 1122.4 (MSL) EOB: 26.5 ft.
LAT / LONG: 41.026109, -81.492515

EXPLORATION ID B-129-1-17
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
6.0" TOPSOIL (DRILLERS DESCRIPTION)	1121.9																	
HARD, BROWN, **SANDY SILT**, LITTLE TO SOME CLAY, TRACE TO LITTLE GRAVEL, CONTAINS TRACE IRON STAINING, DAMP		3	15 12 10	31	67	SS-1	4.50	-	-	-	-	-	-	-	-	12	A-4a (V)	
		6	14 9 10	27	78	SS-2	4.50	11	11	27	32	19	26	18	8	12	A-4a (3)	
		8	10 10 11	30	100	SS-3	4.50	-	-	-	-	-	-	-	-	11	A-4a (V)	
		11	13 12 13	36	100	SS-4	4.50	-	-	-	-	-	-	-	-	12	A-4a (V)	
		13	12 14 11	36	100	SS-5	4.50	6	6	23	42	23	26	16	10	13	A-4a (6)	
		16	12 7 10	24	100	SS-6	4.50	-	-	-	-	-	-	-	-	12	A-4a (V)	
@17.5' TO 19.0'; SS-7 BECOMES MOIST		18	9 9 11	28	100	SS-7	4.25	-	-	-	-	-	-	-	-	22	A-4a (V)	
		21	12 7 9	23	100	SS-8	4.50	-	-	-	-	-	-	-	-	11	A-4a (V)	
		23	10 8 11	27	100	SS-9	4.50	10	14	19	37	20	27	17	10	12	A-4a (4)	
	1097.4																	
SHALE, GRAY, SEVERELY WEATHERED, VERY WEAK TO WEAK, FISSILE.		TR 26	12 18 40	83	89	SS-10	-	-	-	-	-	-	-	-	-	7	Rock (V)	
	1095.9	EOB																

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 11/19/20 18:44 - C:\USERS\KAREN\DESKTOP\SUM-77-277-224 MOD 8 COMBINED WITH 2017 ARCHIVE.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 32+59, 8' RT. | EXPLORATION ID B-130-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL K
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1116.4 (MSL) EOB: 21.4 ft. | PAGE 1 OF 1
START: 2/24/20 END: 2/24/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.026234, -81.491974

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)	SO4 ppm	BACK FILL
VERY STIFF, BROWN AND GRAY, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL AND STONE FRAGMENTS, CONTAINS TRACE ROOTS AND IRON STAINING, DAMP	1116.4		10 6 6	16	67	SS-1	3.50	10	8	26	37	19	27	19	8	18	A-4a (4)	-	
@3.5' TO 5.0'; SS-2 BECOMES BROWN AND BLACK, CONTAINS 1.0" WOOD FRAGMENTS, SLIGHTLY ORGANIC	1110.9		2 3 4	10	44	SS-2	3.25	-	-	-	-	-	-	-	-	15	A-4a (V)	-	
STIFF, BROWN AND BLACK, **SILT AND CLAY**, SOME SAND, TRACE GRAVEL, CONTAINS TRACE ROOTS, SLIGHTLY ORGANIC, MOIST	1108.4		1 2 2	5	44	SS-3	1.25	-	-	-	-	-	-	-	-	24	A-6a (V)	-	
SOFT TO STIFF, GRAY, **SANDY SILT**, LITTLE CLAY, LITTLE GRAVEL AND STONE FRAGMENTS, CONTAINS TRACE ROOTS, MOIST TO WET	1103.4	W 1107.9	2 2 3	7	100	SS-4	1.00	11	13	32	32	12	21	15	6	16	A-4a (2)	-	
			1 4 2	8	33	SS-5	0.50	-	-	-	-	-	-	-	-	21	A-4a (V)	-	
DENSE, BROWN AND GRAY, **STONE FRAGMENTS WITH SAND AND SILT**, LITTLE CLAY, DAMP	1100.9		1 10 17	37	100	SS-6	-	-	-	-	-	-	-	-	-	11	A-2-4 (V)	-	
VERY STIFF, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE STONE FRAGMENTS, DAMP	1099.9	TR	50	-	100	SS-7	2.50	4	7	27	46	16	24	19	5	11	A-4a (5)	-	
SHALE, BROWN AND BROWNISH GRAY, SEVERELY TO HIGHLY WEATHERED, VERY WEAK TO WEAK.			50	-	100	SS-8	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	
	1095.0	EOB	50/5"	-	100	SS-9	-	-	-	-	-	-	-	-	-	-	Rock (V)	-	

NOTES: GROUNDWATER ENCOUNTERED AT 8.5' DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:39 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 10+00, 7' LT. | EXPLORATION ID B-131-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL C
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1121.9 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 6/10/20 END: 6/10/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 40.997539, -81.494341

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)	SO4 ppm	BACK FILL
MEDIUM STIFF TO VERY STIFF, BROWN AND GRAYISH BROWN, **SANDY SILT**, LITTLE CLAY, TRACE TO LITTLE GRAVEL, SS-1 CONTAINS ROOTS, DAMP TO MOIST	1121.9		3 2 3	7	100	SS-1	3.75	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
			2 2 2	5	44	SS-2	1.25	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
			2 2 3	7	67	SS-3	0.75	5	10	24	42	19	26	18	8	21	A-4a (5)	-	
			2 3 3	8	100	SS-4	1.00	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
			2 2 2	5	100	SS-5	2.50	-	-	-	-	-	-	-	-	15	A-4a (V)	-	
			2 3 3	8	100	SS-6	1.00	9	13	42	24	12	22	16	6	18	A-4a (0)	-	
			2 2 3	7	44	SS-7	1.00	-	-	-	-	-	-	-	-	17	A-4a (V)	-	
			3 4 5	12	67	SS-8	1.25	-	-	-	-	-	-	-	-	15	A-4a (V)	-	
@21.0'; SS-9 BECOMES BROWN MOTTLED WITH GRAY AND ORANGISH BROWN	1098.9		3 4 7	15	100	SS-9	1.50	2	11	38	32	17	24	14	10	18	A-4a (3)	-	
MEDIUM DENSE, ORANGISH BROWN AND GRAY, **COARSE AND FINE SAND**, LITTLE SILT, LITTLE GRAVEL, TRACE CLAY, CONTAINS IRON STAINING, WET	1096.9	EOB	4 7 10	23	100	SS-10	-	-	-	-	-	-	-	-	-	20	A-3a (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE. OFFSET 30' WEST DUE TO UTILITIES.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:39 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 11+65, 3' LT. | EXPLORATION ID B-132-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL C
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1106.1 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 6/10/20 END: 6/10/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 40.997993, -81.494326

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)	SO4 ppm	BACK FILL
LOOSE, BROWN, **COARSE AND FINE SAND**, SOME SILT, TRACE GRAVEL, TRACE CLAY, CONTAINS IRON STAINING, DAMP	1106.1		3 3 3	8	67	SS-1	-	-	-	-	-	-	-	-	-	15	A-3a (V)	-	
VERY STIFF, ORANGISH BROWN AND GRAY, **SILT**, SOME SAND, LITTLE CLAY, TRACE GRAVEL, CONTAINS IRON STAINING, DAMP	1103.1		4 4 7	15	100	SS-2	3.50	5	14	13	50	18	29	21	8	21	A-4b (7)	-	
LOOSE, ORANGISH BROWN, **COARSE AND FINE SAND**, LITTLE SILT, TRACE GRAVEL, TRACE CLAY, CONTAINS IRON STAINING, MOIST	1100.6		2 2 2	5	100	SS-3	-	-	-	-	-	-	-	-	-	19	A-3a (V)	-	
LOOSE, ORANGISH BROWN AND GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, TRACE CLAY, CONTAINS IRON STAINING, WET	1098.1	▼ 1097.6	2 4 3	10	67	SS-4	-	-	-	-	-	-	-	-	-	22	A-2-4 (V)	-	
LOOSE TO MEDIUM DENSE, GRAY, **SANDY SILT**, LITTLE GRAVEL, TRACE TO LITTLE CLAY, DAMP TO MOIST	1095.6		2 2 3	7	100	SS-5	-	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
			2 3 3	8	100	SS-6	-	16	15	27	32	10	NP	NP	NP	12	A-4a (1)	-	
			3 6 7	18	50	SS-7	-	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
			5 9 10	26	33	SS-8	-	-	-	-	-	-	-	-	-	13	A-4a (V)	-	
@21.0'; SS-9 AND SS-10 BECOME DENSE			7 12 14	35	56	SS-9	-	12	10	38	30	10	NP	NP	NP	10	A-4a (1)	-	
	1081.1	EOB	10 12 16	38	100	SS-10	-	-	-	-	-	-	-	-	-	11	A-4a (V)	-	

NOTES: GROUNDWATER ENCOUNTERED AT 8.5' DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:39 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 13+27, 4' LT. | EXPLORATION ID B-133-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL C
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1101.9 (MSL) EOB: 24.0 ft. | PAGE 1 OF 1
START: 6/9/20 END: 6/9/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 40.998437, -81.494336

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)	SO4 ppm	BACK FILL
STIFF TO HARD, ORANGISH BROWN AND GRAY, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, CONTAINS IRON STAINING, DAMP TO MOIST	1101.9		4 7 8	20	100	SS-1	4.50	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
@3.5'; SS-2 CONTAINS ROOTS, BECOMES WET			4 11 11	30	33	SS-2	1.25	-	-	-	-	-	-	-	-	22	A-4a (V)	-	
			1 5 5	14	100	SS-3	4.50	4	10	34	39	13	20	15	5	15	A-4a (3)	-	
	1091.4		4 5 5	14	100	SS-4	4.50	-	-	-	-	-	-	-	-	15	A-4a (V)	-	
MEDIUM DENSE TO DENSE, BROWN AND ORANGISH BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, CONTAINS TRACE IRON STAINING, DAMP TO MOIST			3 5 6	15	44	SS-5	-	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
			11 11 18	40	22	SS-6	-	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
@16.0' TO 17.5'; SS-7 BECOMES GRAY AND BROWN	1083.9		3 3 8	15	33	SS-7	-	8	7	28	44	13	NP	NP	NP	16	A-4a (4)	-	
VERY DENSE, GRAY, **STONE FRAGMENTS WITH SAND AND SILT**, TRACE CLAY, STONE FRAGMENTS ARE SANDSTONE, DAMP @18.5' TO 24.0'; DRILLER NOTED POSSIBLE BOULDER AND/OR COBBLES			50	-	67	SS-8	-	-	-	-	-	-	-	-	-	11	A-2-4 (V)	-	
@21.0'; NO RECOVERY			50/3"	-	0	SS-9	-	-	-	-	-	-	-	-	-	-		-	
@23.5'; NO RECOVERY	1077.9	EOB	50	-	0	SS-10	-	-	-	-	-	-	-	-	-	-		-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:39 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
BARRIER C
BORING LOGS B-132-0-17 & B-133-0-17

DRAWN EB
CHECKED BPA

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 16+18, 4' RT. | EXPLORATION ID B-134-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL C
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1099.8 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 6/9/20 END: 6/9/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 40.999235, -81.494327

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)	SO4 ppm	BACK FILL
MEDIUM DENSE TO VERY DENSE, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE TO LITTLE GRAVEL, SS-1 CONTAINS IRON STAINING AND MANY ROOTS, DAMP	1099.8		13 10 9	26	33	SS-1	-	-	-	-	-	-	-	-	-	11	A-4a (V)	-	
			10 10 9	26	50	SS-2	-	3	8	41	36	12	NP	NP	NP	11	A-4a (3)	-	
			8 12 18	41	78	SS-3	-	-	-	-	-	-	-	-	-	11	A-4a (V)	-	
			5 17 21	52	100	SS-4	-	-	-	-	-	-	-	-	-	13	A-4a (V)	-	
MEDIUM DENSE, BROWN, **SILT**, SOME SAND, TRACE CLAY, TRACE GRAVEL, DAMP	1089.3		3 8 8	22	100	SS-5	-	1	2	33	56	8	NP	NP	NP	14	A-4b (6)	-	
LOOSE TO MEDIUM DENSE, BROWN, **FINE SAND**, LITTLE COARSE SAND, LITTLE SILT, TRACE CLAY, TRACE GRAVEL, DAMP TO WET	1086.8		5 8 9	23	100	SS-6	-	-	-	-	-	-	-	-	-	13	A-3 (V)	-	
F S			2 3 3	8	67	SS-7	-	-	-	-	-	-	-	-	-	18	A-3 (V)	-	
		▼1081.3	3 3 5	11	100	SS-8	-	-	-	-	-	-	-	-	-	23	A-3 (V)	-	
LOOSE, BROWN, **COARSE AND FINE SAND**, TRACE SILT, TRACE GRAVEL, TRACE CLAY, WET	1079.3		2 3 4	10	100	SS-9	-	-	-	-	-	-	-	-	-	22	A-3a (V)	-	
	1074.8	EOB	2 3 4	10	89	SS-10	-	-	-	-	-	-	-	-	-	21	A-3a (V)	-	

NOTES: GROUNDWATER ENCOUNTERED AT 18.5' DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:39 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 18+32, 2' LT. | EXPLORATION ID B-135-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL C
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1098.0 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 6/5/20 END: 6/5/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 40.999821, -81.494366

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)	SO4 ppm	BACK FILL
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, LITTLE SILT, LITTLE GRAVEL, TRACE CLAY, TRACE ROOTS, WET	1098.0		3 5 6	15	89	SS-1	-	-	-	-	-	-	-	-	-	18	A-3a (V)	-	
HARD, BROWN, **SANDY SILT**, SOME CLAY, LITTLE GRAVEL, DAMP	1095.0		5 5 5	14	100	SS-2	4.50	12	6	14	43	25	28	19	9	16	A-4a (7)	-	
HARD, BROWN, **SILT**, SOME CLAY, LITTLE SAND, TRACE GRAVEL, MOIST	1092.5		2 5 6	15	100	SS-3	4.50	2	6	11	57	24	29	20	9	21	A-4b (8)	-	
	1087.5		3 4 7	15	100	SS-4	4.50	-	-	-	-	-	-	-	-	21	A-4b (V)	-	
MEDIUM DENSE, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, DAMP TO WET			2 4 6	14	100	SS-5	-	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
			3 4 6	14	100	SS-6	-	0	9	37	43	11	NP	NP	NP	15	A-4a (4)	-	
			4 6 8	19	100	SS-7	-	-	-	-	-	-	-	-	-	17	A-4a (V)	-	
			3 6 9	20	100	SS-8	-	-	-	-	-	-	-	-	-	18	A-4a (V)	-	
			3 5 6	15	100	SS-9	-	2	7	31	48	12	NP	NP	NP	18	A-4a (5)	-	
	1073.0	EOB	3 7 9	22	100	SS-10	-	-	-	-	-	-	-	-	-	15	A-4a (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:39 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 19+83, 7' RT. | EXPLORATION ID B-136-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL C
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1084.7 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 6/5/20 END: 6/5/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.000237, -81.494362

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)	SO4 ppm	BACK FILL
LOOSE TO MEDIUM DENSE, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE TO LITTLE GRAVEL, SS-1 AND SS-2 CONTAIN ROOTS, DAMP TO MOIST	1084.7		2 2 2	5	100	SS-1	-	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
			2 4 4	11	100	SS-2	-	6	11	39	32	12	NP	NP	NP	13	A-4a (2)	-	
			2 3 6	12	100	SS-3	-	-	-	-	-	-	-	-	-	20	A-4a (V)	-	
			2 4 4	11	100	SS-4	-	-	-	-	-	-	-	-	-	17	A-4a (V)	-	
VERY STIFF, BROWN, **SILT**, SOME SAND, LITTLE CLAY, TRACE GRAVEL, DAMP	1074.2		4 6 13	26	100	SS-5	2.25	2	7	19	56	16	24	19	5	18	A-4b (7)	-	
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, LITTLE SILT, TRACE GRAVEL, MOIST TO DAMP	1071.2		3 4 5	12	56	SS-6	-	-	-	-	-	-	-	-	-	12	A-3a (V)	-	
			4 5 6	15	67	SS-7	-	-	-	-	-	-	-	-	-	7	A-3a (V)	-	
			4 5 5	14	89	SS-8	-	-	-	-	-	-	-	-	-	8	A-3a (V)	-	
			3 4 5	12	100	SS-9	-	-	-	-	-	-	-	-	-	5	A-3a (V)	-	
	1059.7	EOB	3 4 6	14	100	SS-10	-	-	-	-	-	-	-	-	-	7	A-3a (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 21+56, 5' RT. | EXPLORATION ID B-137-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL C
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1094.8 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 6/5/20 END: 6/5/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.000712, -81.494400

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)	SO4 ppm	BACK FILL
VERY STIFF TO HARD, BROWN AND ORANGISH BROWN WITH GRAY, **SANDY SILT**, LITTLE TO SOME GRAVEL, LITTLE CLAY, CONTAINS IRON STAINING AND TRACE ROOTS, DAMP TO MOIST	1094.8		3 5 7	16	100	SS-1	3.50	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
			4 5 13	25	100	SS-2	2.50	-	-	-	-	-	-	-	-	17	A-4a (V)	-	
			3 6 7	18	44	SS-3	2.25	21	14	15	37	13	27	19	8	15	A-4a (3)	-	
			3 5 6	15	100	SS-4	4.50	-	-	-	-	-	-	-	-	20	A-4a (V)	-	
	1081.8		4 4 6	14	67	SS-5	2.50	-	-	-	-	-	-	-	-	24	A-4a (V)	-	
MEDIUM DENSE, BROWN, **SILT**, LITTLE CLAY, TRACE SAND, TRACE GRAVEL, WET	1079.3		3 4 7	15	50	SS-6	-	1	1	8	75	15	NP	NP	NP	26	A-4b (8)	-	
VERY STIFF, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, CONTAINS IRON STAINING, DAMP	1076.8		3 5 5	14	50	SS-7	3.00	9	14	21	42	14	25	18	7	18	A-4a (4)	-	
MEDIUM DENSE, BROWN, **GRAVEL WITH SAND**, TRACE SILT, TRACE CLAY, CONTAINS IRON STAINING, MOIST	1074.3		5 5 6	15	100	SS-8	-	-	-	-	-	-	-	-	-	14	A-1-b (V)	-	
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, TRACE SILT, TRACE CLAY, TRACE GRAVEL, MOIST TO DAMP	1069.8	EOB	5 5 6	15	44	SS-9	-	-	-	-	-	-	-	-	-	13	A-3a (V)	-	
			3 5 6	15	56	SS-10	-	-	-	-	-	-	-	-	-	10	A-3a (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:39 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 23+21, 17' RT. | EXPLORATION ID B-138-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL C
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1074.2 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 6/4/20 END: 6/4/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.001166, -81.494380

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)	SO4 ppm	BACK FILL
HARD, BROWN, **SILT**, SOME CLAY, LITTLE SAND, TRACE GRAVEL, SS-1 CONTAINS ROOTS AND IRON STAINING, DAMP	1074.2		2 4 7	15	100	SS-1	4.50	-	-	-	-	-	-	-	-	14	A-4b (V)	-	
	1068.7		3 7 9	22	100	SS-2	4.50	3	4	13	50	30	30	20	10	16	A-4b (8)	-	
MEDIUM DENSE, BROWN, **SANDY SILT**, TRACE TO LITTLE CLAY, TRACE GRAVEL, MOIST TO DAMP			5 7 10	23	100	SS-3	-	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
			3 6 8	19	100	SS-4	-	-	-	-	-	-	-	-	-	17	A-4a (V)	-	
	1061.2		4 6 7	18	100	SS-5	-	9	13	32	36	10	NP	NP	NP	12	A-4a (2)	-	
MEDIUM DENSE TO VERY DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, TRACE CLAY, CONTAINS IRON STAINING, DAMP			7 8 11	26	100	SS-6	-	-	-	-	-	-	-	-	-	11	A-2-4 (V)	-	
	1056.2		6 33 50/5"	-	94	SS-7	-	-	-	-	-	-	-	-	-	9	A-2-4 (V)	-	
DENSE, BROWN AND DARK BROWN, **SANDY SILT**, TRACE TO LITTLE GRAVEL, TRACE TO LITTLE CLAY, WET			9 11 16	37	33	SS-8	-	-	-	-	-	-	-	-	-	17	A-4a (V)	-	
@21.0'; BECOMES MEDIUM DENSE, GRAY, DAMP			4 5 6	15	100	SS-9	-	18	12	30	30	10	NP	NP	NP	9	A-4a (1)	-	
	1049.2	EOB	3 4 5	12	100	SS-10	-	-	-	-	-	-	-	-	-	9	A-4a (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 25+07, 29' LT. | EXPLORATION ID B-139-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL C
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1057.1 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 6/4/20 END: 6/4/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.001699, -81.494508

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)	SO4 ppm	BACK FILL
HARD, BROWN, **SILT AND CLAY**, LITTLE SAND, TRACE GRAVEL, MOIST TO DAMP	1057.1		4 4 4	11	89	SS-1	4.25	-	-	-	-	-	-	-	-	20	A-6a (V)	-	
	1051.6		4 10 12	30	100	SS-2	4.50	1	3	10	50	36	31	19	12	15	A-6a (9)	-	
HARD, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE TO LITTLE GRAVEL, DAMP TO MOIST			3 6 7	18	100	SS-3	4.25	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
			4 8 17	34	100	SS-4	4.50	-	-	-	-	-	-	-	-	15	A-4a (V)	-	
@11.0' TO 12.5'; BECOMES MEDIUM DENSE, GRAY, SOME GRAVEL			2 11 10	29	89	SS-5	-	-	-	-	-	-	-	-	-	9	A-4a (V)	-	
@13.5' TO 15.0'; BECOMES BROWN AND ORANGISH BROWN, CONTAINS IRON STAINING			2 12 15	37	100	SS-6	4.50	4	10	33	39	14	22	17	5	13	A-4a (4)	-	
@16.0' TO 25.0'; BECOMES LOOSE TO MEDIUM DENSE, GRAY			2 5 6	15	100	SS-7	-	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
			2 3 3	8	100	SS-8	-	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
			3 4 6	14	67	SS-9	-	-	-	-	-	-	-	-	-	20	A-4a (V)	-	
	1032.1	EOB	3 4 9	18	78	SS-10	-	15	5	18	46	16	NP	NP	NP	16	A-4a (5)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:39 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 27+30, 1' LT. | EXPLORATION ID B-140-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL C
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1058.9 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 6/2/20 END: 6/2/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.002243, -81.494261

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)	SO4 ppm	BACK FILL
12.0" ASPHALT AND 10.0" BASE (DRILLERS DESCRIPTION)	1058.9																		
	1057.1																		
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, SOME SILT, LITTLE GRAVEL, TRACE CLAY, DAMP	1055.4		5 7 5	16	56	SS-1	-	-	-	-	-	-	-	-	-	12	A-3a (V)	-	
HARD, BROWN AND GRAY, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, DAMP			5 5 10	20	100	SS-2	4.50	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
			3 12 20	44	89	SS-3	4.50	5	12	28	36	19	23	15	8	10	A-4a (4)	-	
			4 14 18	44	100	SS-4	4.50	-	-	-	-	-	-	-	-	10	A-4a (V)	-	
			2 7 10	23	56	SS-5	4.50	-	-	-	-	-	-	-	-	9	A-4a (V)	-	
@13.5' TO 20.0'; BECOMES SOME GRAVEL			3 6 11	23	67	SS-6	4.50	21	16	22	27	14	24	15	9	9	A-4a (1)	-	
@16.0'; NO RECOVERY			50	-	0	SS-7	-	-	-	-	-	-	-	-	-	-		-	
			2 10 22	44	100	SS-8	4.50	-	-	-	-	-	-	-	-	11	A-4a (V)	-	
	1038.4																		
MEDIUM DENSE, BROWN WITH GRAY AND ORANGISH BROWN, **GRAVEL WITH SAND AND SILT**, LITTLE CLAY, CONTAINS IRON STAINING, DAMP			9 10 12	30	89	SS-9	-	24	15	33	16	12	NP	NP	NP	13	A-2-4 (0)	-	
	1033.9	EOB	10 10 12	30	78	SS-10	-	-	-	-	-	-	-	-	-	15	A-2-4 (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 29+17, 0' LT. | EXPLORATION ID B-141-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL C
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1054.5 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 6/2/20 END: 6/2/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.002754, -81.494289

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)	SO4 ppm	BACK FILL
12.0" ASPHALT AND 10.0" BASE (DRILLERS DESCRIPTION)	1054.5																		
	1052.7																		
HARD, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, DAMP	1051.0		5 6 10	22	67	SS-1	4.50	6	9	28	42	15	20	15	5	12	A-4a (4)	-	
VERY DENSE, DARK BROWN, **COARSE AND FINE SAND**, SOME GRAVEL, LITTLE SILT, TRACE CLAY, DAMP	1049.0		50	-	83	SS-2	-	-	-	-	-	-	-	-	-	9	A-3a (V)	-	
HARD, BROWN, **SILT AND CLAY**, TRACE TO LITTLE SAND, TRACE GRAVEL, DAMP			3 7 12	26	100	SS-3	4.50	2	3	10	52	33	32	21	11	17	A-6a (8)	-	
			4 8 10	25	100	SS-4	4.50	-	-	-	-	-	-	-	-	17	A-6a (V)	-	
			4 7 7	19	100	SS-5	4.50	0	2	8	52	38	35	22	13	19	A-6a (9)	-	
	1039.0		4 6 9	20	67	SS-6	4.50	-	-	-	-	-	-	-	-	18	A-6a (V)	-	
HARD, BROWN, **SANDY SILT**, SOME CLAY, LITTLE GRAVEL, DAMP	1036.5		5 12 15	37	89	SS-7	4.50	18	14	17	28	23	27	18	9	14	A-4a (3)	-	
DENSE, BROWN, **COARSE AND FINE SAND**, LITTLE TO SOME SILT, TRACE CLAY, TRACE GRAVEL, DAMP			5 15 17	44	56	SS-8	-	-	-	-	-	-	-	-	-	9	A-3a (V)	-	
@21.0'; BECOMES LOOSE, WET			2 3 3	8	67	SS-9	-	-	-	-	-	-	-	-	-	17	A-3a (V)	-	
	1029.5	EOB	3 3 3	8	78	SS-10	-	-	-	-	-	-	-	-	-	17	A-3a (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:39 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
BARRIER C
BORING LOGS B-140-0-17 & B-141-0-17

DRAWN EB
CHECKED BPA

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 31+20, 0' RT. | EXPLORATION ID B-142-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL C
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1049.3 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 6/2/20 END: 6/2/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.003312, -81.494321

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)	SO4 ppm	BACK FILL
12.0" ASPHALT AND 10.0" BASE (DRILLERS DESCRIPTION)	1049.3																		
	1047.5																		
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, SOME SILT, TRACE CLAY, TRACE GRAVEL, MOIST	1045.8		5 7 13	27	100	SS-1	-	-	-	-	-	-	-	-	-	12	A-3a (V)	-	
HARD, BROWN AND DARK BROWN, **SANDY SILT**, SOME CLAY, TRACE GRAVEL, DAMP			5 8 14	30	67	SS-2	4.50	-	-	-	-	-	-	-	-	8	A-4a (V)	-	
@6.0' TO 10.0'; SS-3 AND SS-4 BECOME MOIST TO WET, SLIGHTLY TO MODERATELY ORGANIC			2 3 4	10	100	SS-3	4.50	2	6	16	47	29	31	21	10	22	A-4a (8)	-	
			3 4 6	14	100	SS-4	4.50	-	-	-	-	-	-	-	-	37	A-4a (V)	-	
	1038.8																		
SOFT TO STIFF, DARK GRAY AND DARK BROWN, **SILTY CLAY**, LITTLE SAND, TRACE GRAVEL, DAMP TO MOIST			2 3 3	8	100	SS-5	0.50	-	-	-	-	-	-	-	-	20	A-6b (V)	-	
			3 3 3	8	100	SS-6	1.00	1	2	15	50	32	37	20	17	28	A-6b (11)	-	
			3 3 3	8	100	SS-7	1.75	-	-	-	-	-	-	-	-	20	A-6b (V)	-	
	1031.3																		
VERY STIFF, GRAY, **SILT**, SOME SAND, SOME CLAY, TRACE GRAVEL, MOIST TO WET			3 3 3	8	100	SS-8	2.25	-	-	-	-	-	-	-	-	16	A-4b (V)	-	
			3 3 4	10	100	SS-9	2.50	1	4	21	52	22	21	16	5	18	A-4b (8)	-	
	1024.3	EOB	2 3 4	10	100	SS-10	2.50	-	-	-	-	-	-	-	-	22	A-4b (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 33+18, 2' RT. | EXPLORATION ID B-143-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL C
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1044.1 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 6/2/20 END: 6/2/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.003846, -81.494344

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)	SO4 ppm	BACK FILL
12.0" ASPHALT AND 10.0" BASE (DRILLERS DESCRIPTION)	1044.1																		
	1042.3																		
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, TRACE SILT, TRACE GRAVEL, TRACE CLAY, DAMP	1041.1		7 12 15	37	89	SS-1A	-	-	-	-	-	-	-	-	-	10	A-3a (V)	-	
						SS-1B	-	-	-	-	-	-	-	-	-	10	A-4a (V)	-	
MEDIUM DENSE TO DENSE, BROWN, **SANDY SILT**, TRACE TO LITTLE GRAVEL, TRACE TO LITTLE CLAY, DAMP TO MOIST			5 7 14	29	100	SS-2	-	-	-	-	-	-	-	-	-	10	A-4a (V)	-	
			12 14 15	40	67	SS-3	-	15	16	26	32	11	NP	NP	NP	11	A-4a (2)	-	
			8 9 12	29	56	SS-4	-	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
@11.0' TO 17.5'; SS-5 TO SS-7 BECOMES VERY STIFF TO HARD, BROWN MOTTLED WITH GRAY AND ORANGISH BROWN, CONTAINS IRON STAINING			3 8 9	23	67	SS-5	4.50	-	-	-	-	-	-	-	-	15	A-4a (V)	-	
			4 7 12	26	100	SS-6	4.50	12	8	29	36	15	23	17	6	14	A-4a (3)	-	
			3 3 3	8	44	SS-7	3.50	-	-	-	-	-	-	-	-	19	A-4a (V)	-	
	1026.1																		
LOOSE, BROWN, **COARSE AND FINE SAND**, LITTLE GRAVEL, LITTLE SILT, TRACE CLAY, MOIST	1023.6		2 3 3	8	39	SS-8	-	-	-	-	-	-	-	-	-	12	A-3a (V)	-	
LOOSE, BROWN, **GRAVEL WITH SAND**, TRACE SILT, TRACE CLAY, DAMP @21.0' TO 22.5'; NO RECOVERY, VERY DENSE, POSSIBLE COBBLE			50/4"	-	0	SS-9	-	-	-	-	-	-	-	-	-	-		-	
	1019.1	EOB	3 3 4	10	67	SS-10	-	-	-	-	-	-	-	-	-	6	A-1-b (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:39 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
BARRIER C
BORING LOGS B-142-0-17 & B-143-0-17

DRAWN EB
CHECKED BPA

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 35+22, 2' RT. | EXPLORATION ID B-144-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL C
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1039.0 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 6/1/20 END: 6/1/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.004406, -81.494378

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)	SO4 ppm	BACK FILL
12.0" ASPHALT AND 10.0" BASE (DRILLERS DESCRIPTION)	1039.0																		
	1037.2																		
DENSE, BROWN, **COARSE AND FINE SAND**, SOME GRAVEL, LITTLE SILT, TRACE CLAY, CONTAINS IRON STAINING, DAMP	1035.5		8 13 16	40	67	SS-1	-	-	-	-	-	-	-	-	-	8	A-3a (V)	-	
MEDIUM DENSE, LIGHT BROWN, **STONE FRAGMENTS WITH SAND AND SILT**, TRACE CLAY, DAMP	1033.5		9 6 9	20	11	SS-2	-	-	-	-	-	-	-	-	-	3	A-2-4 (V)	-	
VERY STIFF TO HARD, BROWN, **SANDY SILT**, LITTLE CLAY, LITTLE GRAVEL, DAMP	1026.0		14 9 12	29	67	SS-3	3.50	-	-	-	-	-	-	-	-	10	A-4a (V)	-	
			6 10 15	34	83	SS-4	4.50	11	8	25	38	18	25	16	9	12	A-4a (4)	-	
			6 10 12	30	50	SS-5	4.25	-	-	-	-	-	-	-	-	11	A-4a (V)	-	
DENSE, BROWN, **GRAVEL WITH SAND**, TRACE SILT, TRACE CLAY, DAMP	1016.0		12 15 16	42	39	SS-6	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	-	
@16.0' - 20.0'; BECOMES LOOSE TO MEDIUM DENSE			2 3 4	10	33	SS-7	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	-	
			4 4 4	11	33	SS-8	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	-	
			2 2 2	5	44	SS-9	-	38	32	16	9	5	NP	NP	NP	9	A-1-b (0)	-	
LOOSE, BROWN, **COARSE AND FINE SAND**, TRACE SILT, TRACE CLAY, TRACE GRAVEL, DAMP	1014.0		2 2 2	5	33	SS-10	-	-	-	-	-	-	-	-	-	6	A-3a (V)	-	
		EOB																	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:39 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 37+14, 2' RT. | EXPLORATION ID B-145-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL C
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1034.1 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 6/1/20 END: 6/1/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.004931, -81.494409

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)	SO4 ppm	BACK FILL
12.0" ASPHALT AND 10.0" BASE (DRILLERS DESCRIPTION)	1034.1																		
	1032.3																		
MEDIUM DENSE, BROWN, **SANDY SILT**, TRACE TO LITTLE GRAVEL, TRACE TO LITTLE CLAY, DAMP			6 7 12	26	39	SS-1	-	15	19	28	28	10	NP	NP	NP	8	A-4a (1)	-	
			8 7 9	22	100	SS-2	-	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
			5 6 10	22	67	SS-3	-	-	-	-	-	-	-	-	-	10	A-4a (V)	-	
	1023.6		6 6 9	20	78	SS-4	-	10	14	37	28	11	NP	NP	NP	11	A-4a (1)	-	
LOOSE TO DENSE, ORANGISH BROWN AND LIGHT BROWN, **COARSE AND FINE SAND**, TRACE SILT, TRACE GRAVEL, TRACE GRAVEL, CONTAINS IRON STAINING, DAMP			4 5 6	15	100	SS-5	-	-	-	-	-	-	-	-	-	7	A-3a (V)	-	
			5 5 6	15	100	SS-6	-	-	-	-	-	-	-	-	-	7	A-3a (V)	-	
			2 2 2	5	67	SS-7	-	-	-	-	-	-	-	-	-	4	A-3a (V)	-	
			2 2 2	5	67	SS-8	-	-	-	-	-	-	-	-	-	6	A-3a (V)	-	
	1011.1		6 11 15	35	78	SS-9	-	-	-	-	-	-	-	-	-	8	A-3a (V)	-	
DENSE, BROWN, **STONE FRAGMENTS WITH SAND**, LITTLE SILT, TRACE CLAY, DAMP	1009.1		7 13 18	42	56	SS-10	-	-	-	-	-	-	-	-	-	6	A-1-b (V)	-	
		EOB																	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:39 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
BARRIER C
BORING LOGS B-144-0-17 & B-145-0-17

DRAWN EB
CHECKED BPA

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: GPD / J. TETER | DRILL RIG: B54 | STATION / OFFSET: 421+90, 72' RT. | EXPLORATION ID B-145-1-17
TYPE: CCTV POLE | SAMPLING FIRM / LOGGER: NEAS / J. TETER | HAMMER: CME AUTOMATIC | ALIGNMENT: IR-77
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 9/11/20 | ELEVATION: 1033.2 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 12/3/20 END: 12/4/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 80.9 | LAT / LONG: 41.005055, -81.493878

MATERIAL DESCRIPTION AND NOTES	ELEV. 1033.2	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
9.5" ASPHALT (DRILLERS DESCRIPTION)	1032.4																	
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, TRACE GRAVEL, TRACE SILT, TRACE CLAY, DAMP	1031.2		4 4 6	13	72	SS-1A	-	-	-	-	-	-	-	-	-	8	A-3a (V)	
HARD, BROWN, **SANDY SILT**, SOME CLAY, LITTLE GRAVEL, DAMP	1030.2					SS-1B	4.50	-	-	-	-	-	-	-	-	9	A-4a (V)	
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, SOME SILT, LITTLE GRAVEL, TRACE CLAY, DAMP	1027.7		7 6 8	19	78	SS-2	-	-	-	-	-	-	-	-	-	11	A-3a (V)	
VERY STIFF TO HARD, BROWN AND GRAYISH BROWN, **SANDY SILT**, LITTLE TO SOME CLAY, TRACE TO LITTLE GRAVEL, DAMP		▽ 1025.2	4 3 3	8	67	SS-3	3.25	8	11	31	35	15	21	15	6	12	A-4a (3)	
			3 2 4	8	78	SS-4	2.50	-	-	-	-	-	-	-	-	15	A-4a (V)	
			6 10 9	26	94	SS-5	4.50	6	7	23	42	22	27	17	10	12	A-4a (6)	
			8 7 8	20	100	SS-6	4.50	-	-	-	-	-	-	-	-	14	A-4a (V)	
			6 6 5	15	100	SS-7	4.50	-	-	-	-	-	-	-	-	14	A-4a (V)	
	1012.7		2 6 8	19	100	SS-8	4.50	15	19	24	28	14	24	15	9	10	A-4a (1)	
LOOSE TO MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, TRACE SILT, TRACE GRAVEL, TRACE CLAY, DAMP			5 4 4	11	67	SS-9	-	-	-	-	-	-	-	-	-	3	A-3a (V)	
	1008.2	EOB	3 4 3	9	86	SS-10	-	-	-	-	-	-	-	-	-	4	A-3a (V)	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING, 8.0' AT END OF DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 1/7/21 11:01 - X:\ACTIVE PROJECTS\ACTIVE SOIL PROJECTS\SUM-77-277 LIGHT POLES\GINT FILES\SUM-77-277 LIGHT POLES.(

PROJECT: SUM-77-277/224 | DRILLING FIRM / OPERATOR: NEAS / J. HODGES | DRILL RIG: CME 55X | STATION / OFFSET: 39+19, 3' RT. | EXPLORATION ID B-146-0-17
TYPE: NOISE WALL | SAMPLING FIRM / LOGGER: NEAS / J. HODGES | HAMMER: CME AUTOMATIC | ALIGNMENT: NOISE WALL C
PID: 106002 SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 12/5/19 | ELEVATION: 1028.9 (MSL) EOB: 25.0 ft. | PAGE 1 OF 1
START: 6/1/20 END: 6/1/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 81.9 | LAT / LONG: 41.005495, -81.494440

MATERIAL DESCRIPTION AND NOTES	ELEV. 1028.9	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
12.0" ASPHALT AND 10.0" BASE (DRILLERS DESCRIPTION)	1027.1																		
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, SOME SILT, LITTLE GRAVEL, TRACE CLAY, DAMP TO MOIST	1023.4		7 7 7	19	67	SS-1	-	15	17	34	25	9	NP	NP	NP	10	A-3a (0)	-	
			4 6 9	20	100	SS-2	-	-	-	-	-	-	-	-	-	15	A-3a (V)	-	
HARD, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, DAMP	1013.4		3 7 8	20	100	SS-3	4.50	-	-	-	-	-	-	-	-	13	A-4a (V)	-	
			4 8 9	23	100	SS-4	4.50	6	8	27	43	16	23	16	7	13	A-4a (5)	-	
			3 7 7	19	44	SS-5	4.50	-	-	-	-	-	-	-	-	11	A-4a (V)	-	
			4 6 8	19	56	SS-6	4.50	-	-	-	-	-	-	-	-	13	A-4a (V)	-	
LOOSE TO MEDIUM DENSE, BROWN AND ORANGISH BROWN, **COARSE AND FINE SAND**, SOME SILT, TRACE GRAVEL, TRACE CLAY, CONTAINS IRON STAINING, DAMP TO MOIST	1005.9		2 2 3	7	44	SS-7	-	-	-	-	-	-	-	-	-	13	A-3a (V)	-	
			2 5 6	15	67	SS-8	-	-	-	-	-	-	-	-	-	6	A-3a (V)	-	
			4 4 6	14	56	SS-9	-	-	-	-	-	-	-	-	-	7	A-3a (V)	-	
MEDIUM DENSE, BROWN AND ORANGISH BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND**, TRACE SILT, TRACE CLAY, CONTAINS IRON STAINING, DAMP	1003.9	EOB	5 6 8	19	56	SS-10	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:39 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

2020/09/02	**SUM-77/277/224 VARIOUS**	**STRUCTURE FOUNDATION EXPLORATION CCTV POLE & BARRIER C BORING LOGS B-145-1-17 & B-146-0-17**	DRAWN EB	CHECKED BPA

PROJECT: SUM-77-277/224	DRILLING FIRM / OPERATOR: NEAS / J. HODGES	DRILL RIG: CME 55X	STATION / OFFSET: 41+07, 9' RT.	EXPLORATION ID B-147-0-17
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: NEAS / J. HODGES	HAMMER: CME AUTOMATIC	ALIGNMENT: NOISE WALL C	
PID: 106002 SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 12/5/19	ELEVATION: 1024.2 (MSL) EOB: 25.0 ft.	PAGE 1 OF 1
START: 6/1/20 END: 6/1/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.006009, -81.494469	

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)	SO4 ppm	BACK FILL
12.0" ASPHALT AND 10.0" BASE (DRILLERS DESCRIPTION)	1024.2																		
LOOSE TO MEDIUM DENSE, BROWN, **GRAVEL WITH SAND**, TRACE SILT, TRACE CLAY, DAMP	1022.4		5 5 5	14	44	SS-1	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	-	
			2 2 2	5	33	SS-2A	-	-	-	-	-	-	-	-	-	6	A-1-b (V)	-	
	1019.5					SS-2B	1.00	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
MEDIUM STIFF TO HARD, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE TO LITTLE GRAVEL, DAMP TO MOIST			2 5 4	12	56	SS-3	4.25	-	-	-	-	-	-	-	-	11	A-4a (V)	-	
			6 6 7	18	50	SS-4	4.50	7	9	35	34	15	20	14	6	12	A-4a (3)	-	
			4 5 6	15	44	SS-5	4.50	-	-	-	-	-	-	-	-	12	A-4a (V)	-	
@13.5' TO 17.5'; SS-6 AND SS-7 BECOME MEDIUM DENSE			6 8 10	25	67	SS-6	-	-	-	-	-	-	-	-	-	13	A-4a (V)	-	
			5 9 11	27	67	SS-7	-	9	8	34	36	13	NP	NP	NP	11	A-4a (3)	-	
			5 8 10	25	100	SS-8	4.50	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
			4 6 8	19	50	SS-9	4.25	-	-	-	-	-	-	-	-	11	A-4a (V)	-	
	999.2	EOB	2 3 8	15	56	SS-10	4.00	15	12	29	32	12	22	16	6	10	A-4a (2)	-	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; SHOVELED SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 11/13/20 22:39 - C:\USERS\KAREN\DESKTOP\GINT FILES\SUM-77-277-224 PHASE 2.GPJ

2017 2009	SUM-77/277/224 VARIOUS	STRUCTURE FOUNDATION EXPLORATION BARRIER C BORING LOG B-147-0-17	DRAWN EB CHECKED BPA

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State of Ohio
Department of Highways
Testing Laboratory

LOG OF BORING

Date Started 2-15-61 Sampler: Type SS Dia. 1 3/8" Water Elev: Immediate
Date Completed 2-17-61 Casing: Length 60' Dia. 3 1/2" After ___ Hours

Project Identification: SUMMIT
SUM-8-6.72
SUM-8-0814
OVER TUSCARAWAS RIVER

Boring No. B-10 Station & Offset 429+77, 48'LT. (REAR PIER) Surface Elev. 998.1

Elev.	Depth	Std. Pen. (N)	Description	Field No.	Lab. Nos. So.	Physical Characteristics % Agg.	% C.S.	% F.S.	% Silt	% Clay	LL.	PI.	W.C.	SHTL Class.
998.1	0													
	2													
	4													
993.1	6	8/7	Dark Gray Gravelly Sand	1	98008	39	37	19	-5-		NP	NP	13	
	8													
988.1	10	12/19	Gray Sandy Gravel	2	98009	57	19	18	-6-		NP	NP	12	
	12													
	14													
983.1	16	9/12	Gray Sandy Gravel	3	98010	54	21	17	-8-		NP	NP	11	
980.6	18	19/26	Gray Sandy Gravel	4	98011	55	16	21	-8-		NP	NP	12	
978.1	20	14/20	Gray Gravelly Sand	5	98012	26	26	39	-9-		NP	NP	15	
975.6	22													
	24	15/22	Gray Sandy Gravel	6	98013	60	17	17	-6-		NP	NP	8	
973.1	26	18/19	Gray Sandy Gravel	7	98014	54	15	25	-6-		NP	NP	8	
	28													
968.1	30	11/15	Gray Gravelly Sand	8	98015	37	35	20	-8-		NP	NP	14	
	32													
	34													
963.1	36	27/25	Gray Sandy Gravel	9	98016	67	15	13	-5-		NP	NP	8	

Particle Sizes: Agg. = >2.00mm , Coarse Sand = 2.00 - 0.42mm, Fine Sand = 0.42 - 0.074mm, Silt = 0.074 - 0.005mm , Clay = < 0.005 mm

SHEET 7 of 33 Sheets

Boring No. B-10 Station & Offset 429+77, 48' LT Surface Elev. 998.1 Project: SUM-8-0814

Elev.	Depth	Std. Pen. (N)	Description	Field No.	Lab. Nos. So.	Physical Characteristics % Agg.	% C.S.	% F.S.	% Silt	% Clay	LL.	PI.	W.C.	SHTL Class.
	38													
958.1	40	17/15	Sand and Gravel	10			V	I	S	U	A	L		
	42													
	44													
953.1	46		Gray Gravelly Sand (Wash Sample)(Heaved 4')	11	98017		U	I	S	U	A	L		
	48													
948.1	50	30/46	Brownish-Gray Silty Sandy Gravel	12	98018	60	17	13	-10-		NP	NP	11	
	52													
	54													
943.1	56		Gray Gravelly Sand (Wash Sample)(Heaved 4')	13	98019		V	I	S	U	A	L		
	58													
938.1	60	19/20	Gray Sandy Silt	14	98020	4	16	10	57	13	NP	NP	14	
	62													
	64													
933.1	66	8/8	Gray Silty Sand	15	98021	0	15	46	19	20	NP	NP	15	
	68													
928.1	70	11/12	Gray Sandy Silt	16	98022	0	1	33	54	12	NP	NP	16	
	72													
923.1	74													
	76	17/22	Gray Silty Gravelly Sand	17	98023	24	6	40	14	16	NP	NP	15	
	78													
918.1	80													

SHEET 8 of 33 Sheets

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
BRIDGE SUM-77-0810
HISTORICAL BORING LOG B-010-1-61

DRAWN EB
CHECKED BPA

Boring No. B-10 Station 8 Offset 429+77, 48' LT. Surface Elev. 998.1 Project SUM-8-0814

Elev. 918.1	Depth	Std. Pen. (N)	Rec ft	Loss ft	Description	Field No.	Lab. Nos. So.	Physical Characteristics % Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	P.I.	W.C.	SHTL Class.
	82	13/17			Gray Gravelly Sandy Silt	18	98024	17	4	21	41	17	NP	NP	18	
913.1 912.1	84 86	12/19			Gray Sandy Silt	19	98025	0	2	22	54	22	NP	NP	15	
					BOTTOM OF BORING											
	88															
	90															
	92															
	94															
	96															
	98															
	100															
	102															
	104															
	106															
	108															
	110															
	112															
	114															
	116															
	118															
	120															
	122															
	124															

SHEET 9 of 33 Sheets

Form FE-2m

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LOG OF BORING

Date Started 10-2-63 Sampler Type SS Dia. 1 3/8"
Date Completed 10-2-63 Casing: Length 20' Dia. 3 1/2"
Boring No. B-1 Station & Offset 944, 4' Lt (REAR ABUTMENT)
Water Elev. ____ Surface Elev. 1033.9'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W. C.	SHTL Class.
1033.9	0														
1031.4	2														
	4	7/8			Brown and Gray Sandy Gravelly Silt	1	22	1	17	45	15	20	4	17	
1028.9	6	27/19			Brown Broken Sandstone with Soil	2		V	I	S	U	A	L	10	
1026.4	8	22/9			Brown Silty Sandy Gravel	3	36	4	20	28	12	NP	NP	14	
1023.9	10	7/5			Gray Silty Sandy Gravel	4	56	6	18	13	7	NP	NP	10	
1021.4	12														
	14	9/9			Gray Sandy Gravel	5	53	29	13	-5	-	NP	NP	17	
1018.9	16	15/20			Gray Gravelly Silt	6	46	1	6	31	16	NP	NP	10	
1016.4	18	27/46			Gray Silty Gravel	7	66	8	2	16	8			7	
1013.9	20	39/10*													
1012.9		(0.6')			Gray Silt with Shale Fragments	8	52	1	2	30	15	25	8	9	
					← TOP OF ROCK										
	22														
	24				Clay shale, dark-gray, soft, very moist. Core loss 96%.										
	26		2.0	3.0											
1005.6	28														
	30				Sandstone, gray, firm, fine-grained, with argillaceous, carbonaceous cross-bedded laminae; sandstone is porous and damp throughout. Few frequent intervals of thin dark-gray carbonaceous, clay shale (comprises 5% of interval); an interval of clay shale, dark-gray, firm, carbonaceous, very arenaceous, between 37.7' and 38.7'. Core loss 6%.										
	32		4.6	0.4											
	34														
	36														
	38		4.8	0.2											
993.9	40														

*REFUSAL ← BOTTOM OF BORING

LOG OF BORING

Date Started 10-2-63 Sampler Type SS Dia. 1 3/8"
Date Completed 10-3-63 Casing: Length 18' Dia. 3 1/2"
Boring No. B-8 Station & Offset 11+84, 23' Rt (FORWARD ABUTMENT)
Water Elev. ____ Surface Elev. 1038.6'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W. C.	SHTL Class.
1038.6	0														
1036.1	2														
	4	15/16			Brownish-Gray Silty Sandy Gravel	1	47	6	14	17	16	24	4	14	
1033.6	6	5/9			Brown Silty Sandy Gravel	2	57	3	20	12	8	NP	NP	17	
1031.1	8	25*			Brown Silty Sandy Gravel	3	45	6	34	-1	5-	NP	NP	15	
		(0.3')													
1028.6	10	20*			Gray Silt with Stone Fragments	4	V	I	S	U	A L	25	6	13	
		(0.3')													
1026.1	12														
	14	16/20			Gray Silt	5	0	1	3	66	30	26	6	8	
1023.6	16	*			No Sample Recovered - Gravel			V	I	S	U	A	L		
1021.4					← TOP OF ROCK										
1019.9	18		2.8	2.2	Sandstone, light-gray, firm, with carbonaceous laminae (comprising 80% of interval) **										
	20														
	22		2.8	2.2	Shale, dark-gray, soft to firm, carbonaceous, arenaceous, very broken throughout. Core loss 24%.										
	24														
	26														
	28		5.0	0.0											
1008.6	30														

← BOTTOM OF BORING

*REFUSAL

** interbedded with dark-gray, broken arenaceous, shale (comprising 20% of interval). Core loss 50%.

SUM-77/277/224
VARIOUS

STRUCTURE FOUNDATION EXPLORATION
BRIDGE SUM-77-09.27R
HISTORICAL BORING LOGS B-001-0-63 & B-008-0-63

DRAWN EB
CHECKED BPA

NEAS
National Engineering & Architectural Services Inc.
5710 Westbourne Avenue
Columbus, OH 43213
614-892-0162

Unconfined Compressive Strength of Rock Core (ASTM D7012 Method C)

(Project: SUM-77/277/224, Boring Location: B-022-1-17, NQ2-1, Depth: 16.9 - 17.3ft)

Tested Date: 8/29/2019

Specimen Properties

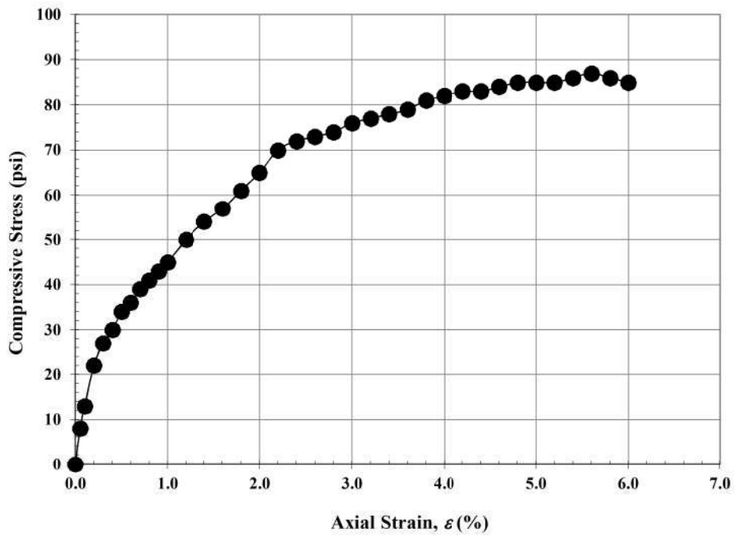
Average Dia., D_{avg} (in):	2.00
Average Height, H_{avg} (in):	4.31
Length to Diameter Ratio:	2.15
Area, A (in^2):	3.15
Volume, V (in^3):	13.58
Wet Mass of Specimen (lb):	1.1
Moisture Content (%):	6.3
Dry Mass of Specimen (lb):	1.1
Wet Unit Weight, γ (lb/ft^3):	144.4
Dry Unit Weight, γ_d (lb/ft^3):	135.9

Final Specimen Figure

Results

Unconfined Compressive Strength (psi): **87** **1** (MPa)

Strain (%): **5.6**



Notes: SANDSTONE, brown, slightly weathered, strong, very fine grained. Top 1.25" is CLAYSTONE, gray, highly weathered, very weak. Sandstone layer was unaffected from testing.

Sample trimming procedure does not conform to ASTM D4543 and the results reported may differ from the results obtained from a test specimen that meets the requirements of Practice D4543.

NEAS
National Engineering & Architectural Services Inc.
5710 Westbourne Avenue
Columbus, OH 43213
614-892-0162

Unconfined Compressive Strength of Rock Core (ASTM D7012 Method C)

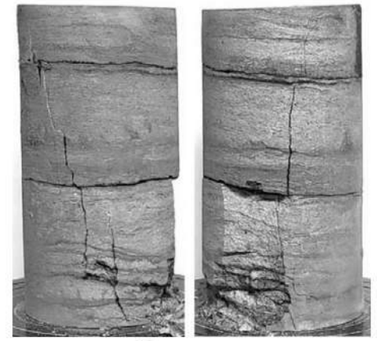
(Project: SUM-77/277/224, Boring Location: B-022-2-17, NQ2-1, Depth: 19.9 - 20.2ft)

Tested Date: 8/29/2019

Specimen Properties

Average Dia., D_{avg} (in):	1.99
Average Height, H_{avg} (in):	4.08
Length to Diameter Ratio:	2.06
Area, A (in^2):	3.10
Volume, V (in^3):	12.63
Wet Mass of Specimen (lb):	1.1
Moisture Content (%):	2.0
Dry Mass of Specimen (lb):	1.1
Wet Unit Weight, γ (lb/ft^3):	152.9
Dry Unit Weight, γ_d (lb/ft^3):	149.9

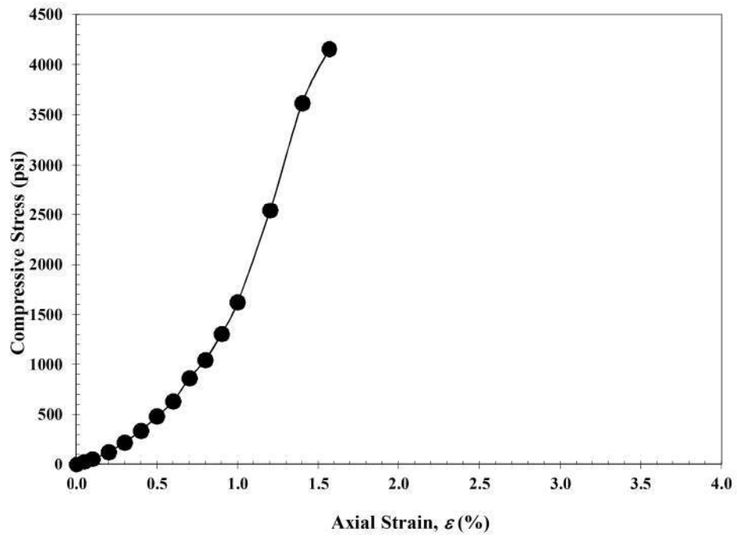
Final Specimen Figure



Results

Unconfined Compressive Strength (psi): **4156** **29** (MPa)

Strain (%): **1.6**



Notes: SANDSTONE INTERBEDDED WITH SHALE, brown and gray, moderately weathered, moderately strong.

Sample trimming procedure does not conform to ASTM D4543 and the results reported may differ from the results obtained from a test specimen that meets the requirements of Practice D4543.

DRAWN EB CHECKED BPA

STRUCTURE FOUNDATION EXPLORATION
UNCONFINED COMPRESSIVE STRENGTH TEST RESULTS
BORINGS B-022-1-17 & B-022-2-17

SUM-77/277/224
VARIOUS

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NEAS
National Engineering & Architectural Services Inc.
5710 Westbourne Avenue
Columbus, OH 43213
614-892-0162

Unconfined Compressive Strength of Rock Core (ASTM D7012 Method C)

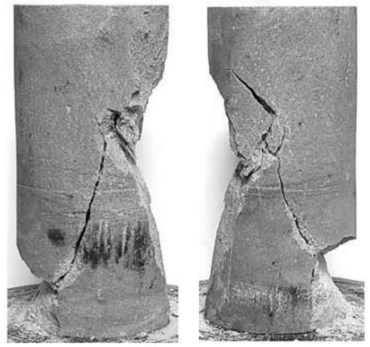
(Project: SUM-77/277/224, Boring Location: B-024-4-17, NQ2-1, Depth: 7.4 - 7.8ft)

Tested Date: 8/29/2019

Specimen Properties

Average Dia., D_{avg} (in):	1.98
Average Height, H_{avg} (in):	4.41
Length to Diameter Ratio:	2.23
Area, A (in^2):	3.08
Volume, V (in^3):	13.60
Wet Mass of Specimen (lb):	1.1
Moisture Content (%):	2.3
Dry Mass of Specimen (lb):	1.1
Wet Unit Weight, γ (lb/ft^3):	140.2
Dry Unit Weight, γ_d (lb/ft^3):	137.1

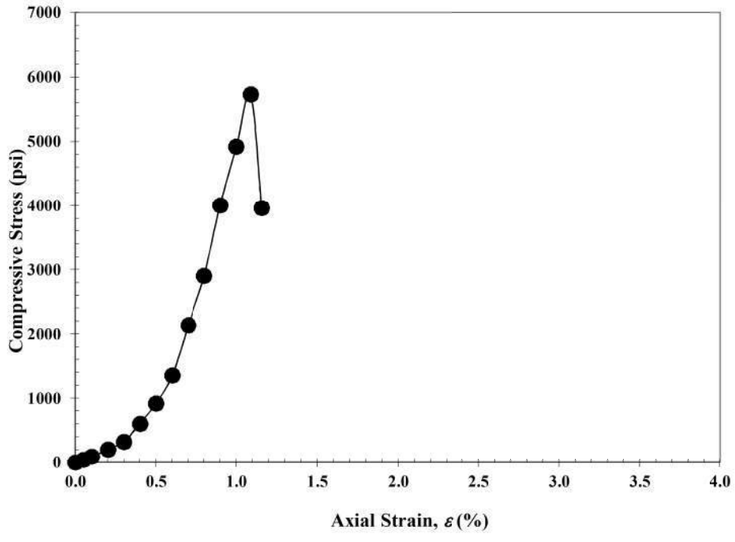
Final Specimen Figure



Results

Unconfined Compressive Strength (psi): **5734** **40** (MPa)

Strain (%): **1.1**



Notes: SANDSTONE, brown, slightly weathered, moderately strong, very fine to medium grained.

Sample trimming procedure does not conform to ASTM D4543 and the results reported may differ from the results obtained from a test specimen that meets the requirements of Practice D4543.

NEAS
National Engineering & Architectural Services Inc.
5710 Westbourne Avenue
Columbus, OH 43213
614-892-0162

Unconfined Compressive Strength of Rock Core (ASTM D7012 Method C)

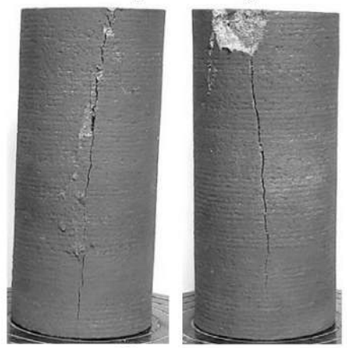
(Project: SUM-77-277/224 , Boring Location: B-033-2-17, NQ2-1, Depth: 46.2 - 46.6ft)

Tested Date: 11/12/2019

Specimen Properties

Average Dia., D_{avg} (in):	1.98
Average Height, H_{avg} (in):	4.66
Length to Diameter Ratio:	2.35
Area, A (in^2):	3.09
Volume, V (in^3):	14.42
Wet Mass of Specimen (lb):	1.2
Moisture Content (%):	6.3
Dry Mass of Specimen (lb):	1.1
Wet Unit Weight, γ (lb/ft^3):	145.2
Dry Unit Weight, γ_d (lb/ft^3):	136.6

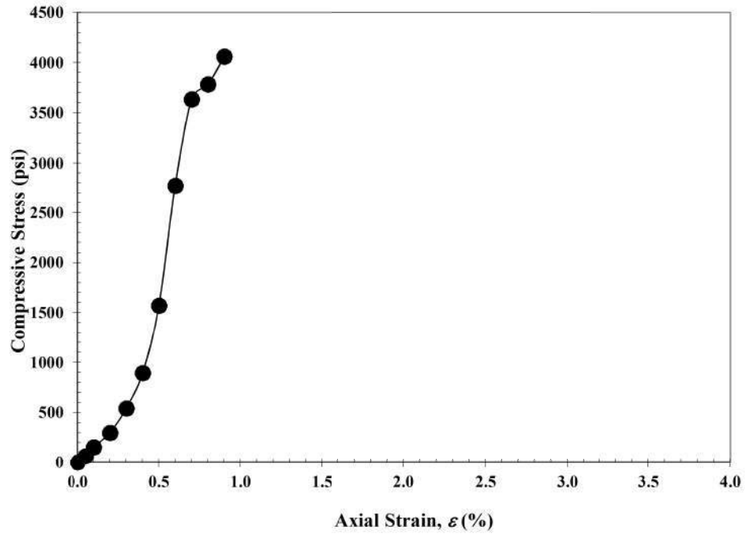
Final Specimen Figure



Results

Unconfined Compressive Strength (psi): **4062** **28** (MPa)

Strain (%): **0.9**



Notes: SANDSTONE, gray, slightly weathered, very fine to fine grained, moderately strong.

Sample trimming procedure does not conform to ASTM D4543 and the results reported may differ from the results obtained from a test specimen that meets the requirements of Practice D4543.

DRAWN EB CHECKED BPA

STRUCTURE FOUNDATION EXPLORATION
UNCONFINED COMPRESSIVE STRENGTH TEST RESULTS
BORINGS B-024-4-17 & B-033-2-17

SUM-77/277/224
VARIOUS

206/209

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Columbus, OH 43213
614-892-0162

Unconfined Compressive Strength of Rock Core (ASTM D7012 Method C)

(Project: SUM-77-277/224 , Boring Location: B-033-3-17, NQ2-1, Depth: 37.4 - 37.8ft)

Tested Date: 3/26/2020

Specimen Properties

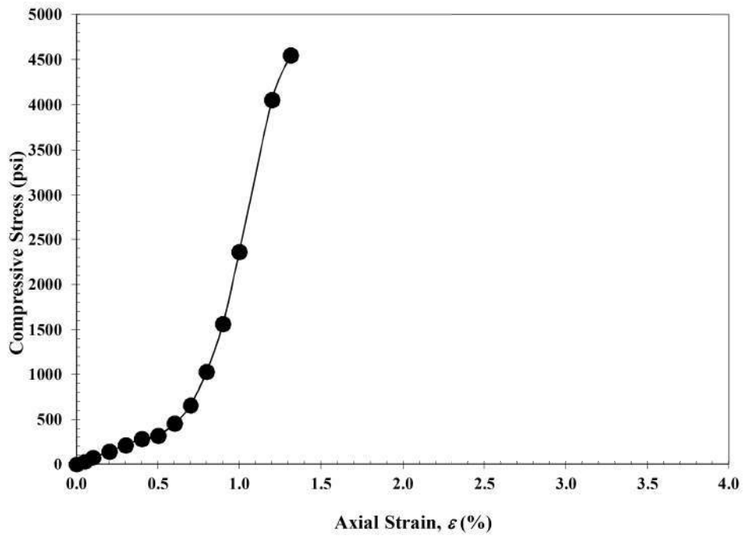
Average Dia., D_{avg} (in):	1.96
Average Height, H_{avg} (in):	4.57
Length to Diameter Ratio:	2.33
Area, A (in^2):	3.01
Volume, V (in^3):	13.77
Wet Mass of Specimen (lb):	1.2
Moisture Content (%):	3.4
Dry Mass of Specimen (lb):	1.2
Wet Unit Weight, γ (lb/ft^3):	153.4
Dry Unit Weight, γ_d (lb/ft^3):	148.4

Final Specimen Figure

Results

Unconfined Compressive Strength (psi): **4548** **31** (MPa)

Strain (%): **1.3**



Notes: Sandstone, gray, slightly weathered, very fine to medium grained, moderately strong, moderately friable.

Sample trimming procedure does not conform to ASTM D4543 and the results reported may differ from the results obtained from a test specimen that meets the requirements of Practice D4543.

NEAS
National Engineering & Architectural Services Inc.
5710 Westbourne Avenue
Columbus, OH 43213
614-892-0162

Unconfined Compressive Strength of Rock Core (ASTM D7012 Method C)

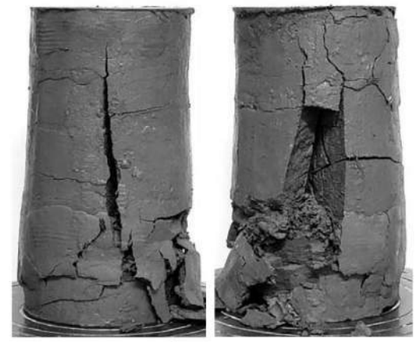
(Project: SUM-77-277/224 , Boring Location: B-033-3-17, NQ2-2, Depth: 42.3 - 42.7ft)

Tested Date: 3/26/2020

Specimen Properties

Average Dia., D_{avg} (in):	1.99
Average Height, H_{avg} (in):	4.24
Length to Diameter Ratio:	2.12
Area, A (in^2):	3.12
Volume, V (in^3):	13.23
Wet Mass of Specimen (lb):	1.1
Moisture Content (%):	5.8
Dry Mass of Specimen (lb):	1.1
Wet Unit Weight, γ (lb/ft^3):	147.9
Dry Unit Weight, γ_d (lb/ft^3):	139.8

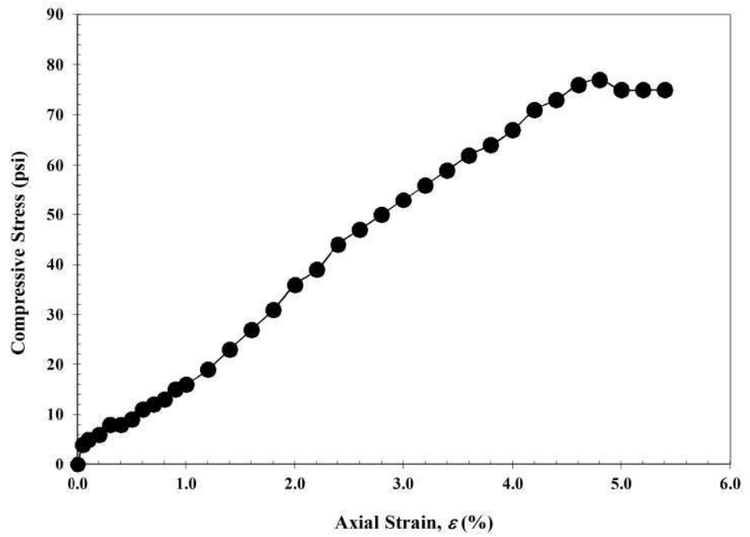
Final Specimen Figure



Results

Unconfined Compressive Strength (psi): **77** **1** (MPa)

Strain (%): **4.8**



Notes: Shale, dark gray, highly weathered, very weak.

Sample trimming procedure does not conform to ASTM D4543 and the results reported may differ from the results obtained from a test specimen that meets the requirements of Practice D4543.

DRAWN EB CHECKED BPA

STRUCTURE FOUNDATION EXPLORATION
UNCONFINED COMPRESSIVE STRENGTH TEST RESULTS
BORING B-033-3-17

SUM-77/277/224
VARIOUS

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National Engineering & Architectural Services Inc.
5710 Westbourne Avenue
Columbus, OH 43213
614-892-0162

Unconfined Compressive Strength of Rock Core (ASTM D7012 Method C)

(Project: SUM-77-277/224 , Boring Location: B-033-4-17, NQ2-1, Depth: 39.4 - 39.8ft)

Tested Date: 4/13/2020

Specimen Properties

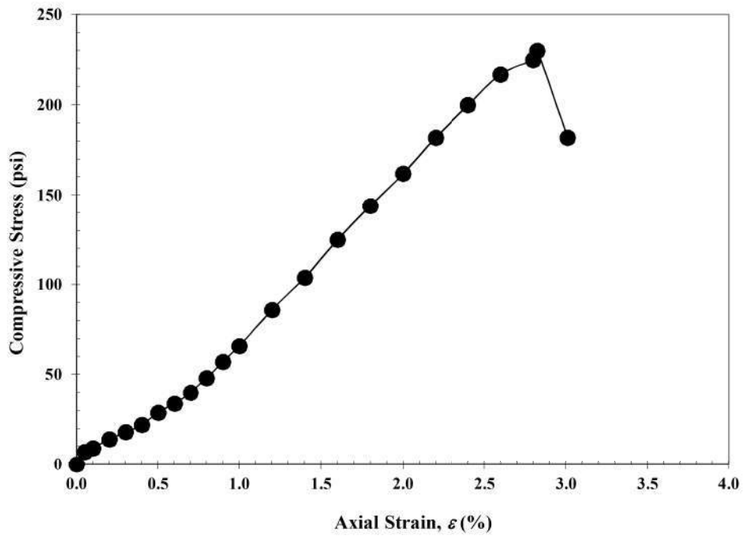
Average Dia., D_{avg} (in):	1.98
Average Height, H_{avg} (in):	4.32
Length to Diameter Ratio:	2.19
Area, A (in^2):	3.06
Volume, V (in^3):	13.23
Wet Mass of Specimen (lb):	1.2
Moisture Content (%):	5.1
Dry Mass of Specimen (lb):	1.1
Wet Unit Weight, γ (lb/ft^3):	152.6
Dry Unit Weight, γ_d (lb/ft^3):	145.2

Final Specimen Figure

Results

Unconfined Compressive Strength (psi): **230** **2** (MPa)

Strain (%): **2.8**



Notes: Shale, gray, moderately weathered, very weak.

Sample trimming procedure does not conform to ASTM D4543 and the results reported may differ from the results obtained from a test specimen that meets the requirements of Practice D4543.

NEAS
National Engineering & Architectural Services Inc.
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614-892-0162

Unconfined Compressive Strength of Rock Core (ASTM D7012 Method C)

(Project: SUM-77-277/224 , Boring Location: B-033-4-17, NQ2-2, Depth: 44.9 - 45.3ft)

Tested Date: 4/13/2020

Specimen Properties

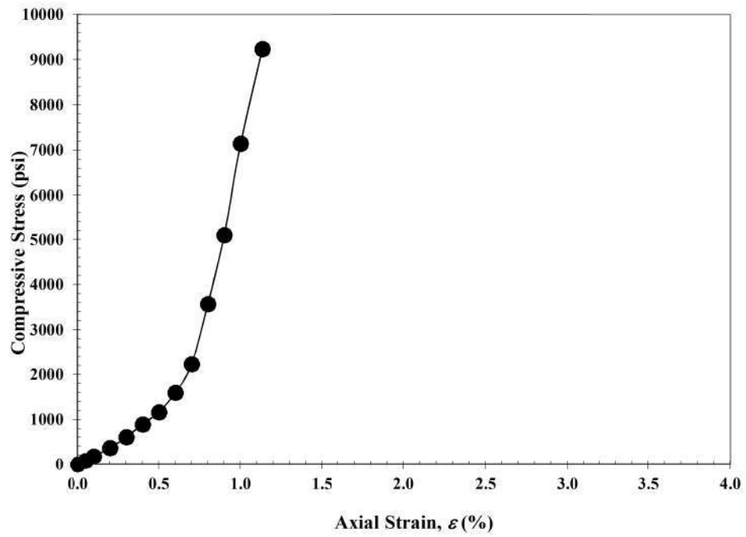
Average Dia., D_{avg} (in):	1.97
Average Height, H_{avg} (in):	4.59
Length to Diameter Ratio:	2.33
Area, A (in^2):	3.04
Volume, V (in^3):	13.97
Wet Mass of Specimen (lb):	1.1
Moisture Content (%):	2.5
Dry Mass of Specimen (lb):	1.1
Wet Unit Weight, γ (lb/ft^3):	142.2
Dry Unit Weight, γ_d (lb/ft^3):	138.8

Final Specimen Figure

Results

Unconfined Compressive Strength (psi): **9236** **64** (MPa)

Strain (%): **1.1**



Notes: Sandstone, light gray, slightly weathered, strong, friable.

Sample trimming procedure does not conform to ASTM D4543 and the results reported may differ from the results obtained from a test specimen that meets the requirements of Practice D4543.

DRAWN EB CHECKED BPA

STRUCTURE FOUNDATION EXPLORATION
UNCONFINED COMPRESSIVE STRENGTH TEST RESULTS
BORING B-033-4-17

SUM-77/277/224
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NEAS
National Engineering & Architectural Services Inc.
5710 Westbourne Avenue
Columbus, OH 43213
614-892-0162

Unconfined Compressive Strength of Rock Core (ASTM D7012 Method C)

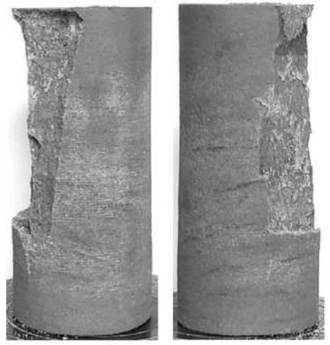
(Project: SUM-77-277/224 , Boring Location: B-033-5-17, NQ2-1, Depth: 30.4 - 30.8ft)

Tested Date: 11/13/2019

Specimen Properties

Average Dia., D_{avg} (in):	1.98
Average Height, H_{avg} (in):	4.66
Length to Diameter Ratio:	2.35
Area, A (in^2):	3.09
Volume, V (in^3):	14.39
Wet Mass of Specimen (lb):	1.3
Moisture Content (%):	4.1
Dry Mass of Specimen (lb):	1.2
Wet Unit Weight, γ (lb/ft^3):	151.5
Dry Unit Weight, γ_d (lb/ft^3):	145.5

Final Specimen Figure

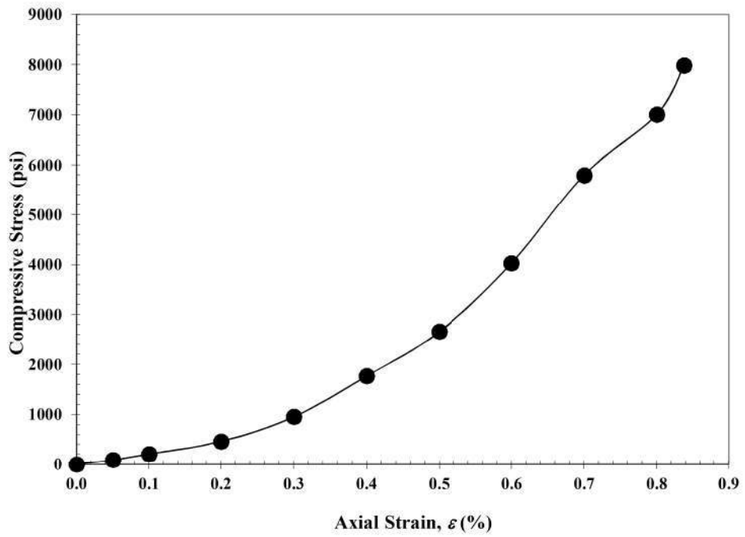


Results

Unconfined Compressive Strength (psi): **7991**

55.1 (MPa)

Strain (%): **0.8**



Notes: SANDSTONE, gray, slightly weathered, very fine to fine grained, strong.

Sample trimming procedure does not conform to ASTM D4543 and the results reported may differ from the results obtained from a test specimen that meets the requirements of Practice D4543.

NEAS
National Engineering & Architectural Services Inc.
5710 Westbourne Avenue
Columbus, OH 43213
614-892-0162

Unconfined Compressive Strength of Rock Core (ASTM D7012 Method C)

(Project: SUM-77-277/224 , Boring Location: B-033-5-17, NQ2-1, Depth: 34.8 - 35.2ft)

Tested Date: 11/12/2019

Specimen Properties

Average Dia., D_{avg} (in):	2.01
Average Height, H_{avg} (in):	4.60
Length to Diameter Ratio:	2.29
Area, A (in^2):	3.16
Volume, V (in^3):	14.53
Wet Mass of Specimen (lb):	1.2
Moisture Content (%):	5.7
Dry Mass of Specimen (lb):	1.2
Wet Unit Weight, γ (lb/ft^3):	147.9
Dry Unit Weight, γ_d (lb/ft^3):	139.9

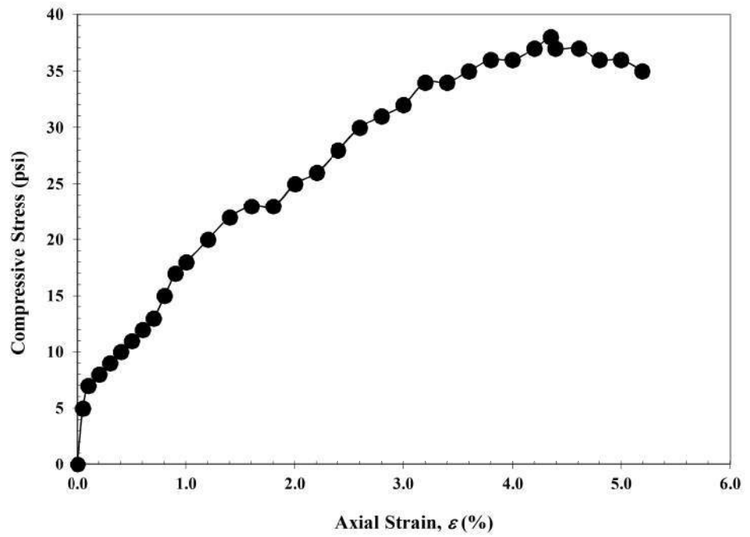
Final Specimen Figure

Results

Unconfined Compressive Strength (psi): **38**

0.3 (MPa)

Strain (%): **4.3**



Notes: SHALE, dark gray, moderately weathered, extremely weak.

Sample trimming procedure does not conform to ASTM D4543 and the results reported may differ from the results obtained from a test specimen that meets the requirements of Practice D4543.

DRAWN EB CHECKED BPA

STRUCTURE FOUNDATION EXPLORATION
UNCONFINED COMPRESSIVE STRENGTH TEST RESULTS
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SPECIAL PROVISIONS

WATERWAY PERMITS CONDITIONS

C-R-S: SUM-77/277/224/Various

PID: 106002

Date: April 22, 2021

Special Provisions: SUM-77/277/224/Various, PID 106002

1. Waterway Permits Time Restrictions:

Section 404 Regional General Permit A – Linear Transportation (RGP A) is authorized for SUM-77/277/224/Various, PID 106002. A copy of the RGP A and United States Army Corps of Engineers (USACE) authorization letter (USACE ID #LRH-2020-00204-TUS) shall be kept at the work site at all times and made available to all contractors and subcontractors. The permit is effective starting: April 22, 2021. The permit expires: October 24, 2024.

Section 404 Nationwide Permit 23 – Approved Categorical Exclusions (NWP 23) is authorized for SUM-77/277/224/Various, PID 106002. A copy of the NWP 23 and United States Army Corps of Engineers (USACE) authorization letter (USACE ID #LRH-2020-00204-TUS) shall be kept at the work site at all times and made available to all contractors and subcontractors. The permit is effective starting: April 22, 2021. The permit expires: March 18, 2022.

For authorized work in aquatic resources (including streams, wetlands, jurisdictional ditches, captured streams, lakes, ponds), the Department will consider the Contractor's submission of a reauthorization to the waterway permit expiration date based on project constraints. If more than one permit is authorized for the project, then all permits become invalid once the first permit expires. In order for the request to be considered, the Contractor must submit a justification to the Engineer at least 90 days prior to the waterway permit expiration date. The Engineer will submit the request for a time extension to the Ohio Department of Transportation, Office of Environmental Services, Waterway Permits Unit (ODOT-OES-WPU) for consideration and coordination with the U.S. Army Corps of Engineers (USACE), Ohio Environmental Protection Agency (OEPA), U.S. Coast Guard (USCG), U.S. Fish and Wildlife Service (USFWS), and Ohio Department of Natural Resources (ODNR) as appropriate.

2. Deviations From Permitted Construction Activities:

No deviation from the requirements for work in aquatic resources depicted in the plans, Special Provisions, and/or Working Drawings may be made unless a modification has been submitted to ODOT-OES-WPU and approved by the appropriate agencies (i.e., USACE, OEPA, USCG, ODNR, and USFWS).

NOTE: Plan sheets approved by the USACE with the Pre-Construction Notification are included in these Special Provisions.

For emergency situations resulting in unanticipated impacts to aquatic resources, provide notification (verbal or written) to the Engineer as soon as possible following discovery of the situation. Written notification to the Engineer and notification to the ODOT-OES-WPU (614-466-2159) must be made within 24 hours.

For non-emergency situations, notify the Engineer in writing for submission to the ODOT-OES-WPU (614-466-2159) for consideration and coordination with the appropriate agencies. Notification must be made at least 90 days prior to planned, non-permitted activities. Consideration of the requested deviation is at the discretion of the Director and must be coordinated with the appropriate regulatory agencies.

3. In-Stream Work Restrictions:

Work in the following aquatic resources is further restricted as follows:

Stream Name /Description	Location (Station)	Work restriction dates (No in-stream work permitted)
Tuscarawas River	430+50	April 15 – June 30
Stream 2	443+36.5	None
Stream 3	207+00, 102+19, and 87+50	None
Stream 4	206+00	None

*Restriction dates do not apply if the stream has been dewatered prior to April 15.

In-stream work has been defined as the placement and/or removal of fill materials (temporary or permanent) below ordinary high water of a stream. Examples of "fill" include, but are not limited to: bridge piers, abutments, culverts, rock channel protection, scour protection, and temporary access fills.

Fills placed within a stream identified in the above table (outside of the work restriction dates) can continue to be worked from during the work restriction dates, but cannot be expanded, removed, or otherwise modified (below ordinary high water) until once again outside of the work restriction dates.

4. Materials:

Materials utilized in or adjacent to aquatic resources for temporary or permanent fill or bank protection shall consist of suitable material free from toxic contaminants in other than trace quantities. Asphalt products are specifically excluded for use as fill. Chromated Copper Arsenate (CCA), creosote, and other pressure treated lumber shall not be used in structures that are placed in aquatic resources.

5. Cultural Resources:

Per CMS 107.10, if archeological sites, historical sites, or human remains are discovered, cease all work in the immediate area and notify the Engineer who will immediately contact the ODOT-District Environmental Coordinator and ODOT-OES-Cultural Resource Section at 614-466-2159. In the event of human remains are identified by OES-Cultural Resources Section, the Engineer shall also contact the Summit County Sheriff's Office at (330) 643-2122.

6. Aquatic Resource Demarcation:

Attached Tables A and B include detailed fill quantities authorized within the aquatic resources. Aquatic resources and proposed impacts included in these Special Provisions shall be demarcated in the field as per SS 832 prior to site disturbance. The fence shall remain in place and be maintained throughout the construction process. Following the completion of the project, the fence and posts shall be removed.

7. Spill containment:

Provide and Maintain an Oil Spill Kit with a minimum capacity of 65 gallons. The Spill Kit shall contain:
- 6 - 3 in. X 8 ft. Oil only socks
- 4 - 18 in. X18 in. Oil only pillows
- 2 - 5 in. X 10ft. Booms
- 50 - 16in. X 20 in. Oil only pads
- 10- Disposable Bags
- 1 - 65 Gallon drum with lid
- 25 pounds of Granular Oil Absorbent

The Oil Spill Kit shall be located within 150 feet of any equipment working in a stream or wetland. The oil Spill Kit shall be maintained for the life of the contract. Any materials utilized during the project will be replaced within 48 hours. All costs associated with furnishing and maintaining the above referenced spill containment kit is incidental to work.

8. Blasting:

State law requires notification to the Ohio Department of Natural Resources should blasting be required within or near stream channels (See ORC 1533.58 & CMS 107.09). Notify the Engineer, in writing, a minimum of 30 days in advance of blasting, for submission to ODOT-OES-WPU (614-466-2159) for coordination with ODNR.

9. Project Inspection:

Inspection of Work may include inspection by representatives of other government agencies or railroad corporations that pay a portion of the cost of the Work or regulate the Work through State and Federal law. Comments from the representatives of these agencies shall be directed to the Engineer who will immediately contact the ODOT-District Environmental Coordinator and ODOT-OES-WPU at 614-466-2159.

10. Temporary Access Fills:

Special Provisions Notes:

Definitions:

Hydraulic Opening
The cross-sectional area allowing an unimpeded discharge equal to twice the highest monthly flow without producing a rise in the backwater above the Ordinary High Water Mark (OHWM).

Standard Temporary Discharge
Discharge equal to twice the *highest monthly flow* without producing a rise in the backwater above the OHWM. The U.S. Geologic Service publication "Techniques for estimating Selected Streamflow Characteristics of Rural Unregulated Streams in Ohio" provides equations that estimate monthly flow for Ohio Waterways These flows are also available in a web application by USGS StreamStats, (https://water.usgs.gov/osw/streamstats/ohio.html). The highest monthly flow is the highest monthly mean discharge occurring in a 12-month period from January to December.

Average Monthly Flow
The average monthly flow represents the estimated "normal" flow.

Temporary Access Fills (TAFs)
Include, but are not limited to, dewatering fills, causeways, cofferdams, access pads, temporary bridges, etc. below the OHWM.

Requirements

21 calendar days prior to the initiation of any in-stream work, provide the Engineer with Working Drawings that include:

- Plan view drawing (50 scale or less) showing the location of all TAFs proposed for use on the project
- Scaled cross section and profile drawing showing the OHWM and the proposed hydraulic opening.
- Identify the minimum diameter size, placement location and thickness of non-erodible Dumped Rock Fill material on the plan and profile.
- Calculations analyzing the hydraulic impacts of the TAF on the waterway. Include in the calculations an analysis of the hydraulic opening sized adequately to pass the Standard Temporary Discharge without producing a rise in backwater above the OHWM. Include, in the analysis, calculated channel velocities adjacent to the TAF, culvert exit velocities, calculated headwater and tailwater elevations, and any additional appropriate calculations to assess potential impacts to the waterway during normal and anticipated high flow (twice the highest monthly flow) events.
- A description of all temporary material to be placed below the OHWM elevation.
- A description of the installation and staging of all temporary fill over the life of the contract.
- Identify the protection methods and/or structural Best Management Practices for minimizing impacts to the waterway.
- Volume of temporary fill below the OHWM elevation.
- A description of the diversion ditches, equipment, conduits or means for maintaining normal flows in the waterway.
- A description of the removal of all temporary fill and restoration of the channel and all areas impacted by the TAFs.
- A schedule outlining the timing of the placement and removal of all temporary fill.
- Have competent individuals prepare and check the Working Drawings and hydraulic calculations. Provide a cover sheet containing the preparer(s) and checker(s): First Name, Last Name and Initials. The preparer(s) and checker(s) shall not be the same individual. Have an Ohio Registered Engineer review, approve, sign, seal and date the Working Drawings and hydraulic calculations according to ORC 4733 and OAC 4733-35. Include the following statement on the Working Drawings:

"These Working Drawings were prepared in compliance with the terms of these Special Provisions and all contract documents."

Do not begin in-stream work until the Engineer has accepted the Working Drawings and hydraulic calculations.

The design and construction of the Contractor's TAF must minimize impacts to water bodies, stream banks, stream beds, and riparian zones to the maximum extent practicable.

Fording of waterways and other aquatic resources is prohibited.

Construct TAFs in such a manner that will maintain flows, minimize upstream flooding, and avoid overtopping the TAF on a regular basis. ***TAFs shall be designed and constructed so that the hydraulic opening provides capacity for a discharge equal to twice the highest monthly flow without producing a rise in the backwater above the (OHWM)***.

If the Contractor proposes a TAF which does not meet all the requirements of these Special Provisions, the Contractor must submit a request in writing for a modified TAF to the Engineer. The request must include all Working Drawings and hydraulic calculations required by these Special Provisions. The

Department makes no guarantee to grant the request. The Contractor's proposed TAF request will be coordinated by OES with the USACE and the OEPA, as appropriate. The time frame allowed for the coordination of the contractor's proposed TAF will be a minimum of 60 days.

Installation of any temporary fill without appropriate authorization is strictly prohibited. All direct coordination with the USACE and/or OEPA will be performed through OES.

TAFs Construction and Payment

Begin planning and installing causeways and access fills as early in construction as possible to avoid conflicts with these Special Provisions or other environmental commitments that have been included in the construction plans.

TAFs in Streams and Rivers may include, but are not limited to, causeways, cofferdams, access pads, sheet piling, temporary bridges, etc. The Contractor must make every attempt to minimize disturbance to waterbodies, stream banks, stream beds and riparian zones during the construction, maintenance, and removal of the TAF. Construct the TAFs as narrow as practical. Install in-stream conduits parallel to the stream banks. Make the TAFs in shallow areas rather than deep pools where possible. Minimize clearing, grubbing, and excavation of stream banks, and approach sections. Construct the TAFs as to not cause erosion or allow sediment deposits in the waterway.

Prior to the initiation of any in-stream work, establish a monument upstream of the proposed TAF to visually monitor the water elevation in the waterway where the fill is permitted. Maintain the monument throughout the project. Provide a visual mark on the monument that identifies the elevation 1 foot above the OHWM. Ensure that the monument can be read from the bank of the waterway. Have this elevation set and certified by an Ohio Registered Surveyor. All costs associated with furnishing and maintaining the above referenced monument is incidental to the work.

Should the surface water elevation exceed the elevation 1 foot above OHWM, the Department will compensate the Contractor for repair of any resulting damage to the TAF up to the elevation of 1 foot above the OHWM, except as noted. The Department will recognize this event as an excusable, non-compensable delay in accordance with Section 108.06 B. of the Construction & Materials Specifications.

Follow the requirements in Item 502 for Structures for Maintaining Traffic and in Item 503 for Cofferdams and Excavation Bracing and any modifications to these items as shown in the plans. The Department will not pay for repair and maintenance of TAFs associated with Items 502 and 503 as a result of surface water elevation exceeding 1 foot above the OHWM. Compensation for damages associated with waterway flows will be provided as described in Items 502 and 503.

Construct the TAFs, not including Items 502 and 503, to a water elevation at least 1 foot (0.3 m) above the OHWM. If more than one-third the width of the stream is filled, then use culvert pipes to allow the movement of aquatic life. Ensure that any ponding of water behind the TAF will not damage property, flood roadways, or threaten human health and safety.

The following minimum requirements apply to TAFs where culverts are used.

A. Furnish culverts on the existing stream bottom.
B. Avoid a drop in water elevation at the downstream end of the culvert that would result in an adverse impact to the waterway.
C. Furnish a sufficient number of culverts in addition to stream openings to provide a discharge equal to twice the highest monthly flow without producing a rise in the backwater above the OHWM.
D. Furnish culverts with a minimum diameter of 18 inches (0.5 m).

All TAFs must be constructed of suitable materials. Causeways and access fills must be encapsulated with clean, non-erodible, nontoxic Dumped Rock Fill, Type A, B, C, or D, meeting the requirements of C&MS 703.19.B. Utilize appropriately sized Dumped Rock Fill determined by the Contractor's engineer for encapsulating the sides of the TAF. Encapsulate all sides of the TAF with the non-erodible material.

For causeways, contractors may use clean aggregate meeting C&MS 703.01 Size Number 1 and 2 for creating a working surface above the OHWM. Extend the non-erodible encapsulating material to at least the elevation of the top of the working surface. Extend clean aggregate up the slope from the original stream bank for 50 feet (10 m) to remove erodible material and prevent tracking from equipment onto the TAF.

When the work requiring TAF is complete, all portions of the TAF (including all rock and culverts) will be removed in its entirety. Do not dispose of TAF material in other aquatic resources or where erosion into another aquatic resource is possible. The stream bottom affected by the TAFs will be restored to its pre-construction elevations. The TAFs will not be paid as a separate item but will be included by the Contractor as part of the total project cost.

Unless specific TAF compensation is included in the plans, all environmental protection and control associated with the authorized activities, are incidental to the work within the boundaries of the aquatic resources.

11. Excavation Activities:

Excavated material will be placed at an upland site and disposed of in such a manner that sediment and runoff to streams and other aquatic resources is controlled and minimized. Additionally, no more than incidental fallback into jurisdictional waters of the U.S. is permitted during the excavation process. If any changes to the proposed work are deemed necessary, notify the Engineer who will immediately contact the ODOT-District Environmental Coordinator and ODOT-OES-WPU at 614-466-2159

12. Temporary Fill Activities:

Temporary fill into Wetlands C, D, E, F, G, J, and K is not authorized for this project. Temporary fill includes, but is not limited to, causeways, work pads, cofferdams, sheet piling, temporary bridges, and construction equipment. Any unauthorized temporary impacts that occur will be in violation of Section 404 and 401 of the Clean Water Act.

13. Construction Completion Certification:

Upon completion of the work, notify the Engineer. The USACE Construction Completion Certification must be completed and signed by the Engineer then provided via US mail or email to:

Waterway Permits Program Manager
ODOT - Office of Environmental Services
1980 West Broad Street, Mail Stop 4170
Columbus, Ohio 43223
Adrienne.Earley@dot.ohio.gov

A copy of the certification form is attached to these Special Provisions.

14. Demolition Debris:

The intentional discharge of demolition debris from any structure (including but not limited to bridges, culverts, abutments, wing walls, piers) is not authorized for this project. If any demolition debris inadvertently falls into aquatic resources, it must be removed immediately. Notify the Engineer immediately in writing of any inadvertent fill discharged into aquatic resources. The Engineer will immediately contact ODOT-OES-WPU at 614-466-2159 if any unintentional discharge occurs.

15. Wetland A Restoration:

Restoration of temporary impacts to Wetland A is required per the Section 404 permit. Restoration specifications are outlined in the environmental plan note Temporary Wetland Impacts.

Version: July 2020

Special Provisions: SUM-77/277/224/Various, PID 106002

Table A. Detailed Fill and Discharge Quantities into Streams

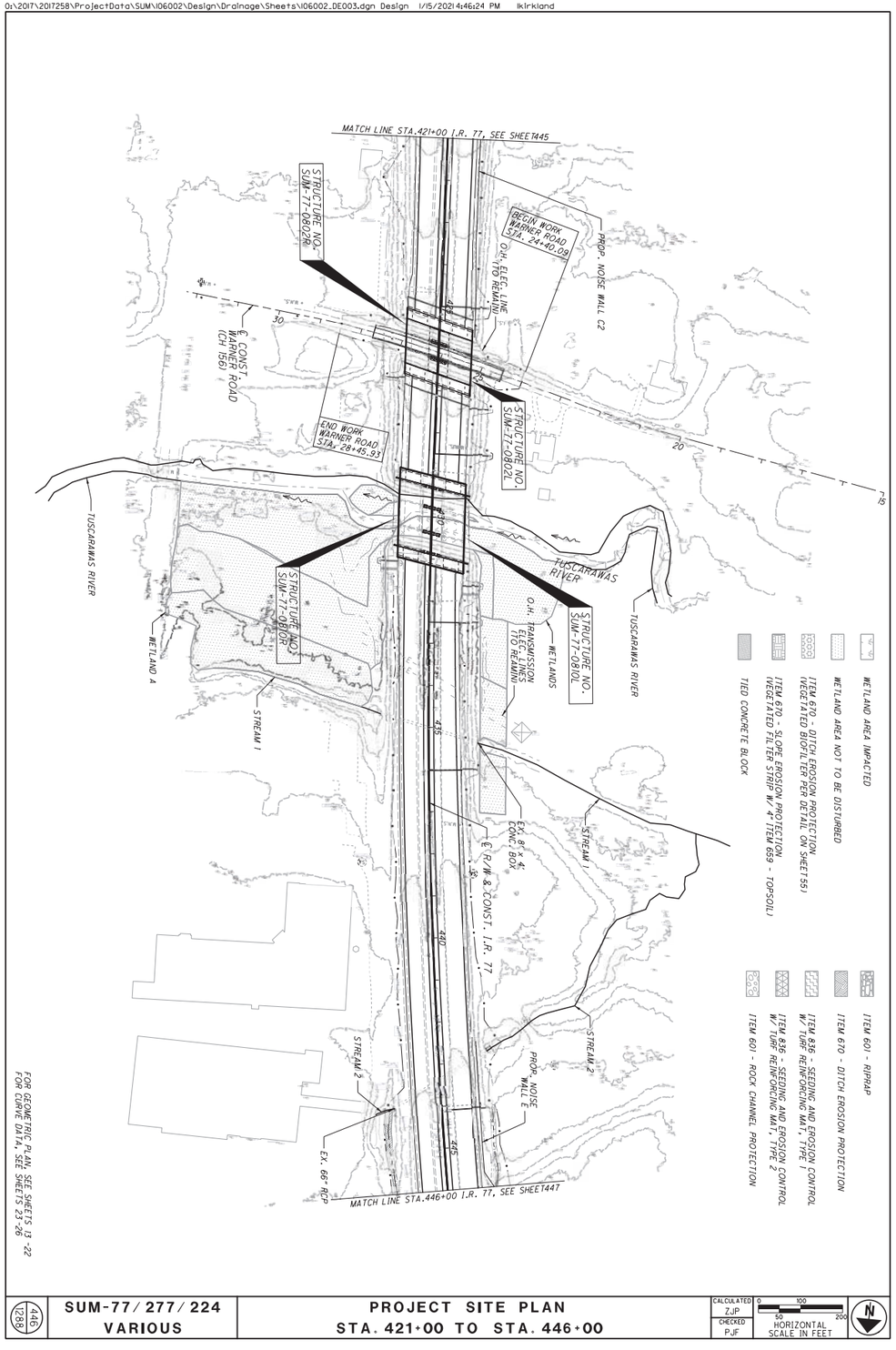
STREAMS				Permanent Fill Within/Below OHWM						Total Permanent Fill Within OHWM			Total Temporary Fill Within OHWM			TOTAL IMPACT (Upstream to Downstream)
Aquatic Resource ID	Station	Description of Impacts/Activities Within OHWM	Total Length Within Project Area	Proposed Concrete (Includes Culvert, Piers, Walls, Abutments, etc.)			Proposed RCP									
				Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)
Tuscarawas River	430+50	Concrete Pier Widening /Sheet Pile Cofferdam & TAF	367	52	0.024	77.0	0.0	0.000	0.0	52	0.024	77.0	92	0.063	204.4	92
Stream 2	443+36.5	Culvert extension/Concrete Pipe & RCP / Clean, Non-Erodible Materials (Sheeting, Rock/Fabric, Sandbags)	482	18	0.003	2.3	22.0	0.004	2.9	40	0.006	5.2	10	0.000	0.0	40
Stream 3	207+00	Culvert extension/Concrete Pipe & RCP / Clean, Non-Erodible Materials (Sheeting, Rock/Fabric, Sandbags)	2613	20	0.002	3.0	24.0	0.002	3.6	44	0.004	6.5	10	0.000	0.0	44
	102+19	Culvert extension/Concrete Pipe & RCP / Clean, Non-Erodible Materials (Sheeting, Rock/Fabric, Sandbags)		26	0.002	3.9	8.0	0.001	1.2	34	0.003	5.0	10	0.001	1.5	44
	87+50	Culvert extension Bank stabilization, & Stream Relocation /Concrete Pipe & RCP / Clean, Non-Erodible Materials (Sheeting, Rock/Fabric, Sandbags)		16	0.001	2.4	453.0	0.042	67.1	469	0.043	69.5	7	0.001	1.0	476
Stream 4	206+00	Bank stabilization, & Stream Relocation/RCP / Clean, Non Erodible Materials (Sheeting, Rock/Fabric, Sandbags)	1060	0	0.000	0.0	434.0	0.149	60.3	434	0.149	60.3	10	0.003	1.4	444
			SUM:	132	0.032	88.6	941.0	0.198	135.0	1,073	0.229	223.5	139	0.068	208.3	1,140

Special Provisions: SUM-77/277/224/Various, PID 106002

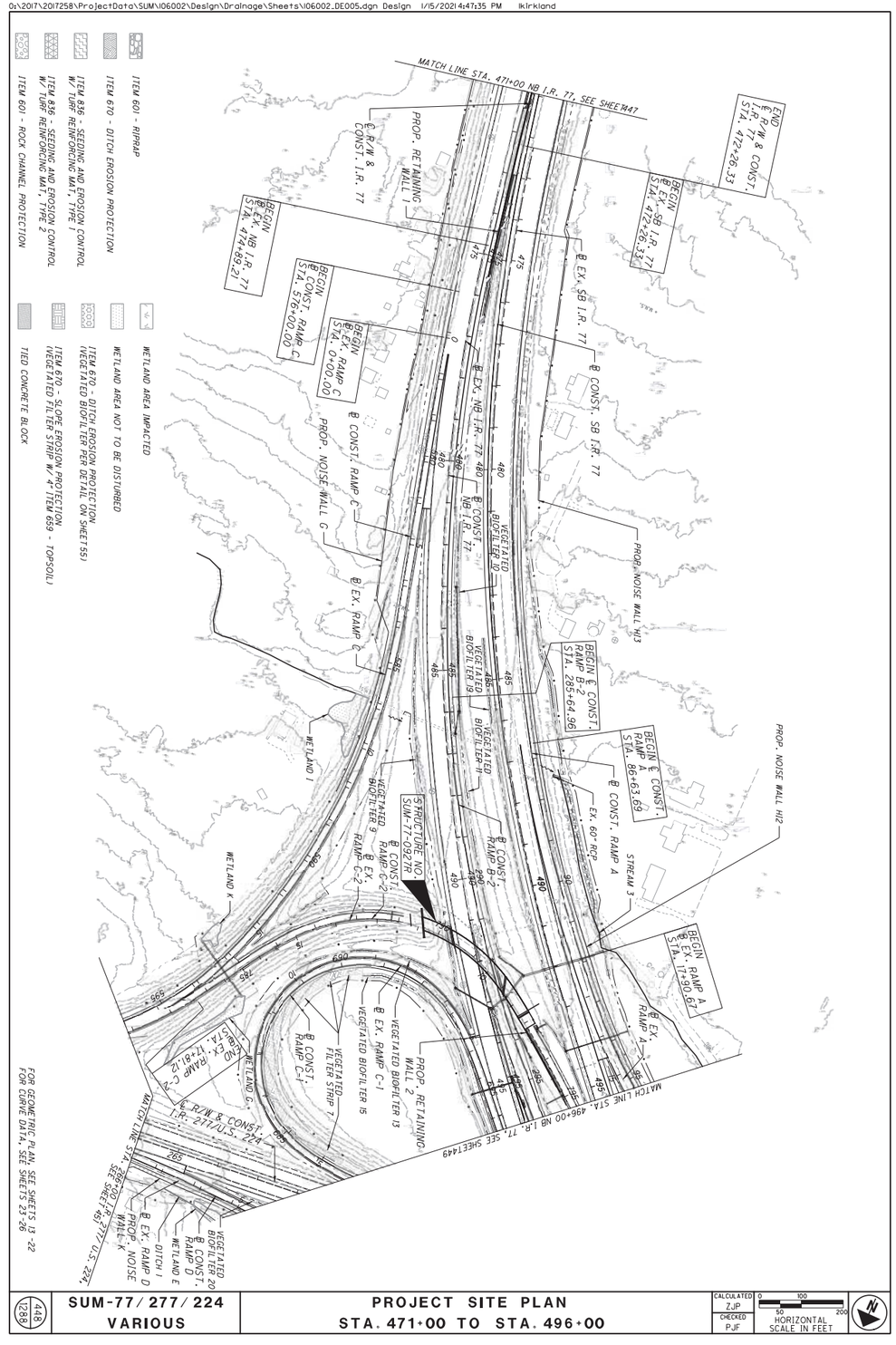
Table B. Detailed Fill and Discharge Quantities into Wetlands

WETLANDS, JURISDICTIONAL DITCHES, PONDS				Permanent Fill Within Wetland Boundary									Total Permanent Fill Within Wetland Boundary			Total Temporary Fill Within Wetland Boundary			TOTAL IMPACT
Aquatic Resource ID	Station	Description of Impacts/Activities within Wetland Boundary	Total Acreage Within Project Area	Proposed Concrete (Includes Culvert, Piers, Walls, Abutments, etc.)			Proposed RCP			Proposed Earthen, Granular, or Embankment Fill									
				Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Area (AC)
Wetland A	430+50	Concrete Pier Widening/Access Fill - Granular	6.68	45	0.007	11.3	0	0.000	0.0	7	0.048	77.4	52	0.055	88.7	160	0.210	338.8	0.055
	431+25	Culvert installation /Pipe, RCP, Earthen Fill		15	0.001	1.6	10	0.001	0.0	10	0.009	14.5	35	0.011	16.1	0	0.000	0.0	0.011
	431+50	Culvert installation /RCP & Earthen Fill		0	0.000	0.0	5	0.001	0.0	10	0.001	1.6	15	0.002	1.6	0	0.000	0.0	0.002
	432+50	Culvert installation /Earthen Fill		0	0.000	0.0	0	0.000	0.0	10	0.001	1.6	10	0.001	1.6	0	0.000	0.0	0.001
	436+00	Culvert installation /Earthen Fill		0	0.000	0.0	0	0.000	0.0	10	0.001	1.6	10	0.001	1.6	0	0.000	0.0	0.001
Wetland C	504+00	Grading (ramp reconfiguration, embankment slope)/Earthen Fill	0.11	0	0.000	0.0	0	0.000	0.0	30	0.110	177.5	30	0.110	177.5	0	0.000	0.0	0.110
Wetland D	502+50	Culvert extension /Earthen Fill	0.03	0	0.000	0.0	0	0.000	0.0	10	0.004	6.5	10	0.004	6.5	0	0.000	0.0	0.004
Wetland E	894+00	Overhead sign power connection/ Earthen Fill	0.11	0	0.000	0.0	0	0.000	0.0	15	0.007	11.3	15	0.007	11.3	0	0.000	0.0	0.007
Wetland F	500+00	Grading (ramp reconfiguration, embankment slope)/Earthen Fill	0.12	0	0.000	0.0	0	0.000	0.0	10	0.021	33.9	10	0.021	33.9	0	0.000	0.0	0.021
Wetland G	783+00	Grading (ramp reconfiguration, embankment slope)/Earthen Fill	0.11	0	0.000	0.0	0	0.000	0.0	10	0.019	30.7	10	0.019	30.7	0	0.000	0.0	0.019
Wetland J	274+00	Noise Wall/Fill - Earthen	0.03	0	0.000	0.0	0	0.000	0.0	12	0.030	48.4	12	0.030	48.4	0	0.000	0.0	0.030
Wetland K	593+00	Culvert extension /RCP & Earthen Fill	0.03	0	0.000	0.0	10	0.001	1.613	27	0.002	3.2	37	0.003	4.8	0	0.000	0.0	0.003
			SUM:	60	0.008	12.9	25	0.003	1.6	161	0.253	408.2	246	0.264	422.7	160	0.210	338.8	0.264

LF = linear feet; AC = acres; CY = cubic yards; RCP = rock channel protection or the like (specify if different, ie. concrete block matting); NA = Not Applicable



446 / 288	SUM-77/277/224 VARIOUS	PROJECT SITE PLAN STA. 421+00 TO STA. 446+00	CALCULATED ZJP CHECKED PJF; 0 50 100 200 HORIZONTAL SCALE IN FEET



446 / 288	SUM-77/277/224 VARIOUS	PROJECT SITE PLAN STA. 471+00 TO STA. 496+00	CALCULATED ZJP CHECKED PJF; 0 50 100 200 HORIZONTAL SCALE IN FEET

PROJECT SITE PLAN
STA. 496+00 TO STA. 521+00
SUM-77/277/224
VARIOUS
449
1288
CALCULATED
CHECKED
HORIZONTAL
SCALE IN FEET
TIED CONCRETE BLOCK
WETLAND AREA NOT TO BE DISTURBED
ITEM 670 - DITCH EROSION PROTECTION
ITEM 670 - SLOPE EROSION PROTECTION
PROP. NOISE WALL H11
PROP. NOISE WALL H12
PROP. NOISE WALL K
STREAM 4
STREAM 3
STREAM 2
WETLAND A
WETLAND B
WETLAND D
WETLAND E
DITCH I
E. WATERLOO RD
℄ R/W & CONST. I.R. 277/ U.S. 224
℄ EX. RAMP B-2
℄ EX. RAMP B
℄ EX. RAMP A
℄ CONST. RAMP B
℄ CONST. RAMP B1
℄ CONST. RAMP A
℄ CONST. RAMP C-1
℄ CONST. RAMP C-2
℄ EX. RAMP C-2
℄ EX. RAMP C-1
℄ EX. RAMP D
℄ CONST. RAMP D
℄ CONST. SB I.R. 77
℄ CONST. NB I.R. 77
℄ EX. SB I.R. 77
℄ EX. NB I.R. 77
END ℄ EX. RAMP B-2 STA. 15+42.67
END WORK RAMP B STA. 214+90.00
BEGIN PROJECT SUM-76/77-8.42 (PID 92329) 17+00.00 LT
END PROJECT END WORK ℄ CONST. SB I.R. 77 STA. 514+85.00 L.M. 9.74
END ℄ EX. RAMP C-2 STA. 0+00.00
BEGIN ℄ EX. RAMP B-2 STA. 0+00.00
BEGIN ℄ CONST. RAMP B-2 STA. 801+48.32
END ℄ CONST. RAMP B-2 STA. 802+43.18
BEGIN ℄ CONST. RAMP B STA. 402+43.18
END ℄ EX. RAMP B-1 STA. 17+90.88
BEGIN ℄ CONST. RAMP C-1 STA. 702+11.45
END ℄ CONST. RAMP C-1 STA. 818+94.49
END ℄ RAMP C-1 EX. STA. 18+62.36
END ℄ EX. RAMP C STA. 21+60.12
END WORK ℄ CONST. NB I.R. 77 STA. 514+85.00
END WORK RAMP D STA. 914+89.43
END ℄ CONST. RAMP D STA. 916+89.79
BEGIN ℄ EX. RAMP A STA. 0+00.00
BEGIN ℄ EX. RAMP C-1 STA. 0+00.00
BEGIN ℄ CONST. RAMP C-1 STA. 0+00.00
STRUCTURE NO. SUM-77-0373L (NO WORK)
STRUCTURE NO. SUM-77-0373R (NO WORK)
STRUCTURE NO. SUM-77-0358L
STRUCTURE NO. SUM-77-0369 (NO WORK)
STRUCTURE NO. SUM-247-0369
EX. 84" TWIN CMP
EX. 96" CMP
EX. 10' x 5' CONC. BOX
EX. 42" CMP
EX. 24" CMP
EX. 18" CMP
EX. 12" CMP
VEGETATED BIOFILTER 1
VEGETATED BIOFILTER 4
VEGETATED BIOFILTER 6
VEGETATED BIOFILTER 12
VEGETATED BIOFILTER 22
VEGETATED BIOFILTER 24
VEGETATED FILTER STRIP 5
VEGETATED FILTER STRIP 6
VEGETATED FILTER STRIP 8
WETLAND B (DO NOT DISTURB)
STA. 243+00, NB I.R. 77, SEE SHEET 13
MATCH LINE STA. 496+00, NB I.R. 77, SEE SHEET448
FOR GEOMETRIC PLAN, SEE SHEETS 13 -22
FOR CURVE DATA, SEE SHEETS 23 -26
ITEM 601 - RIPRAP
ITEM 670 - DITCH EROSION PROTECTION
ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE I
ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 2
ITEM 601 - ROCK CHANNEL PROTECTION
WETLAND AREA IMPACTED
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PROJECT SITE PLAN
BEGIN TO STA. 243+00 I.R. 277/ U.S. 224
SUM-77/277/224
VARIOUS
450
1288
CALCULATED
CHECKED
HORIZONTAL
SCALE IN FEET
MATCH LINE STA. 243+00 I.R. 277/ U.S. 224, SEE SHEET449
WETLAND AREA IMPACTED
WETLAND AREA NOT TO BE DISTURBED
TIED CONCRETE BLOCK
ITEM 670 - DITCH EROSION PROTECTION
ITEM 670 - SLOPE EROSION PROTECTION
PROP. NOISE WALL H11
STREAM 4
STREAM 3
℄ R/W & CONST. I.R. 277/ U.S. 224
℄ EX. RAMP B
℄ EX. RAMP A
℄ CONST. RAMP B-2
℄ CONST. RAMP B
℄ CONST. RAMP A
BEGIN ℄ EX. RAMP A STA. 0+00.00
END ℄ CONST. RAMP A STA. 114+13.78
BEGIN ℄ CONST. RAMP B STA. 197+05.36
END ℄ EX. RAMP B STA. 27+97.16
END RAMP B2 STA. 33+82.00
BEGIN WORK ℄ R/W & CONST. I.R. 277/ U.S. 224 STA. 225+00.00
VEGETATED FILTER STRIP 6
VEGETATED BIOFILTER 6
VEGETATED BIOFILTER 16
ITEM 601 - RIPRAP
ITEM 670 - DITCH EROSION PROTECTION
ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE I
ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 2
ITEM 601 - ROCK CHANNEL PROTECTION
FOR GEOMETRIC PLAN, SEE SHEETS 13 -22
FOR CURVE DATA, SEE SHEETS 23 -26
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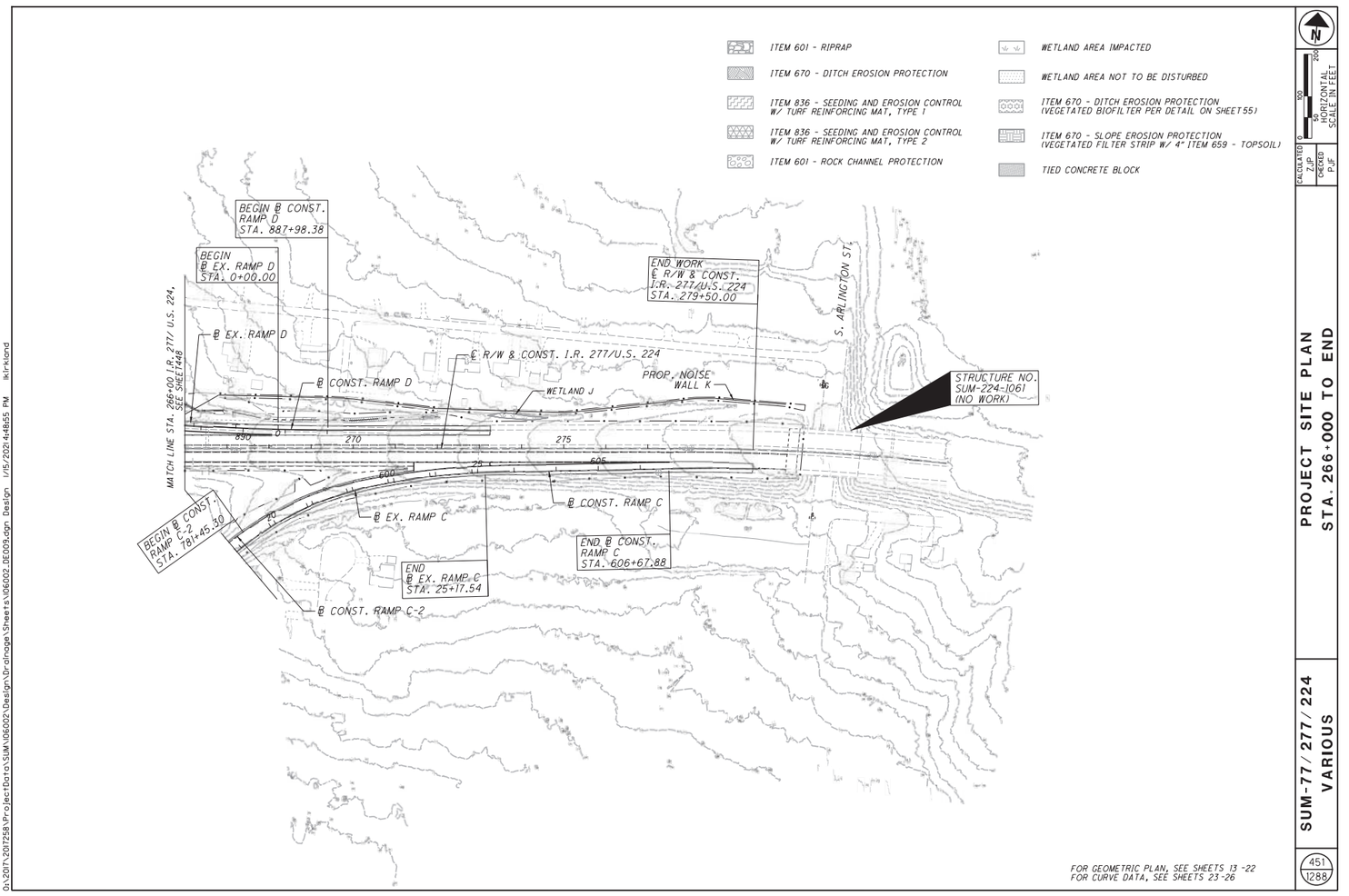
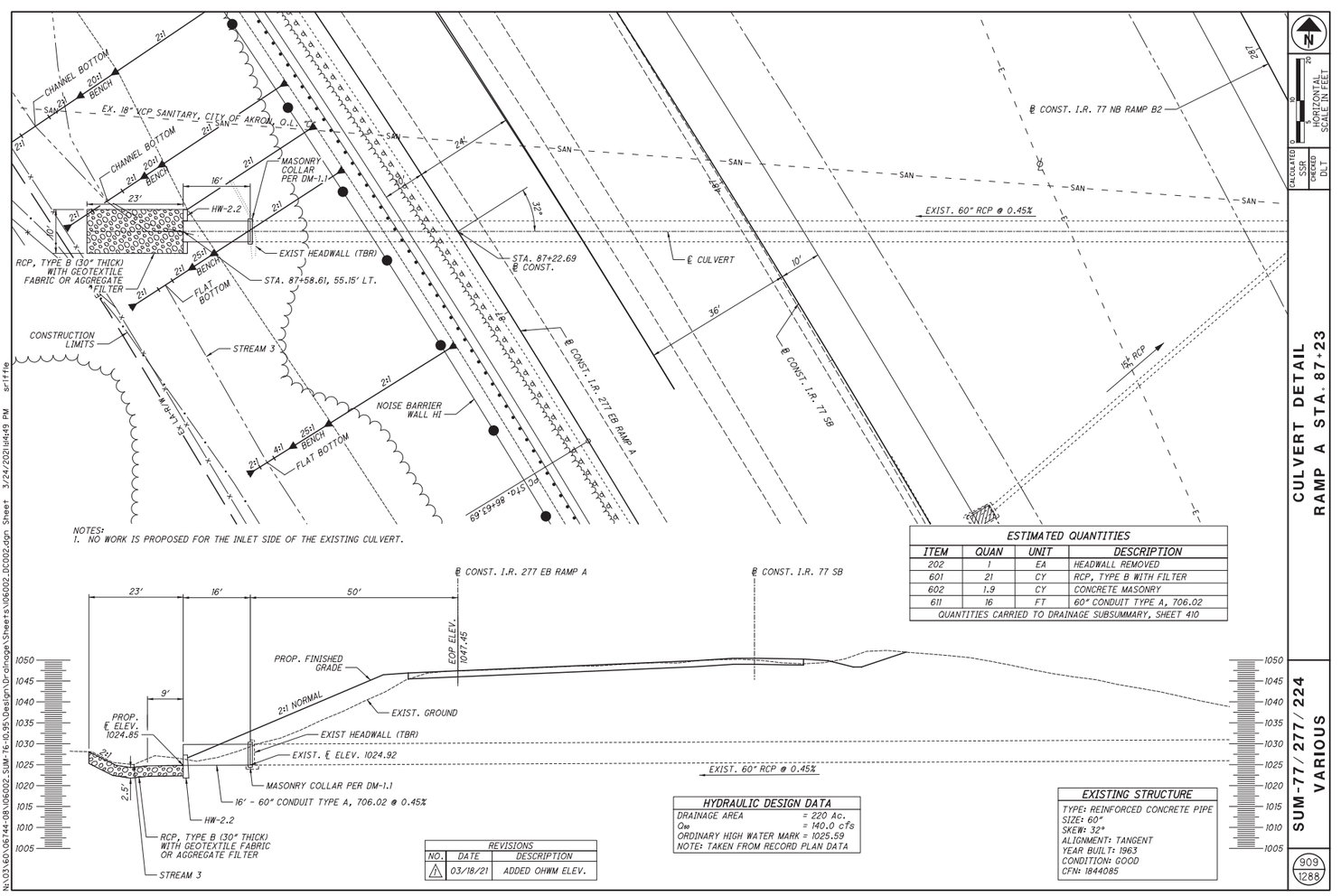
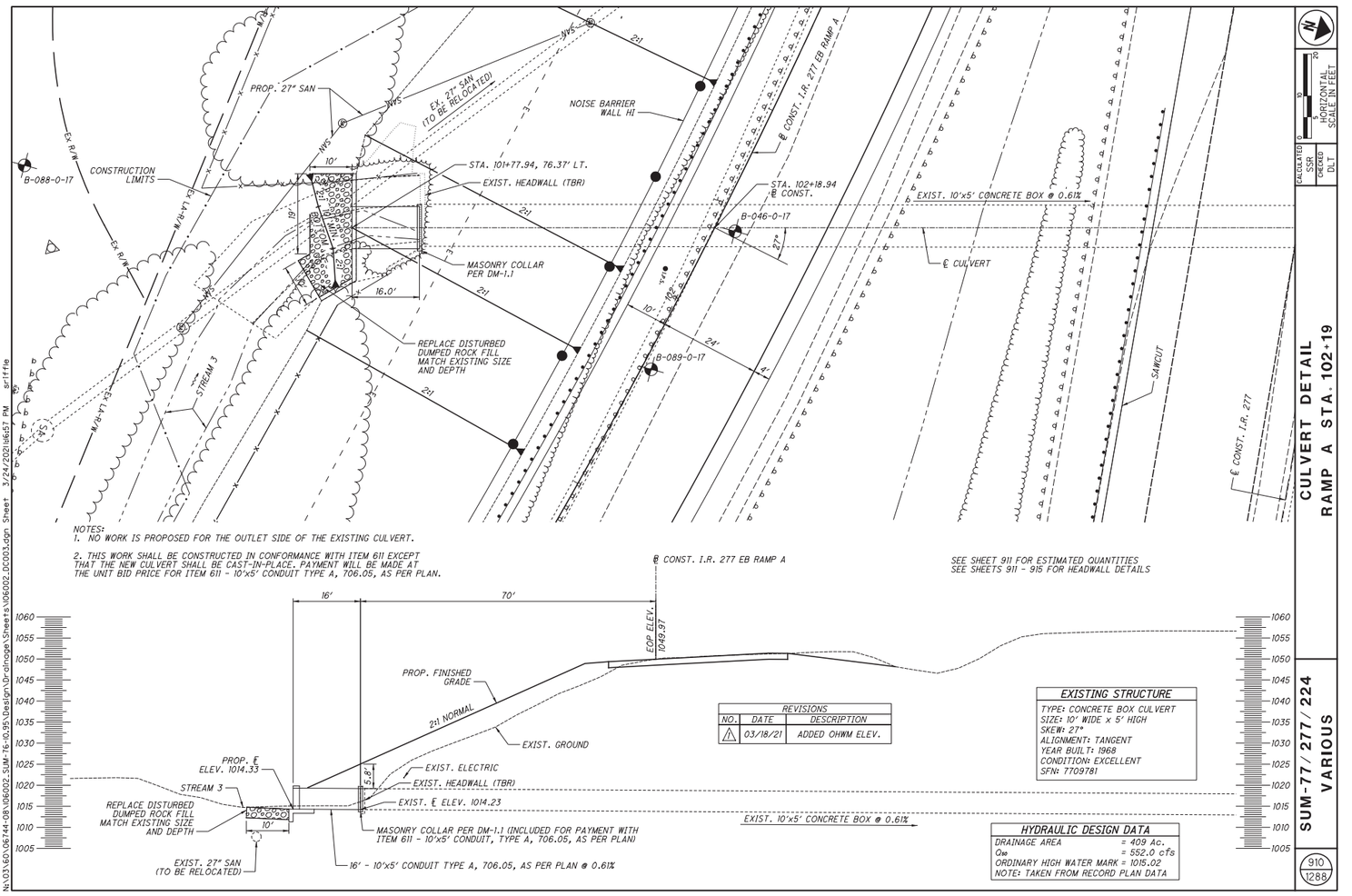
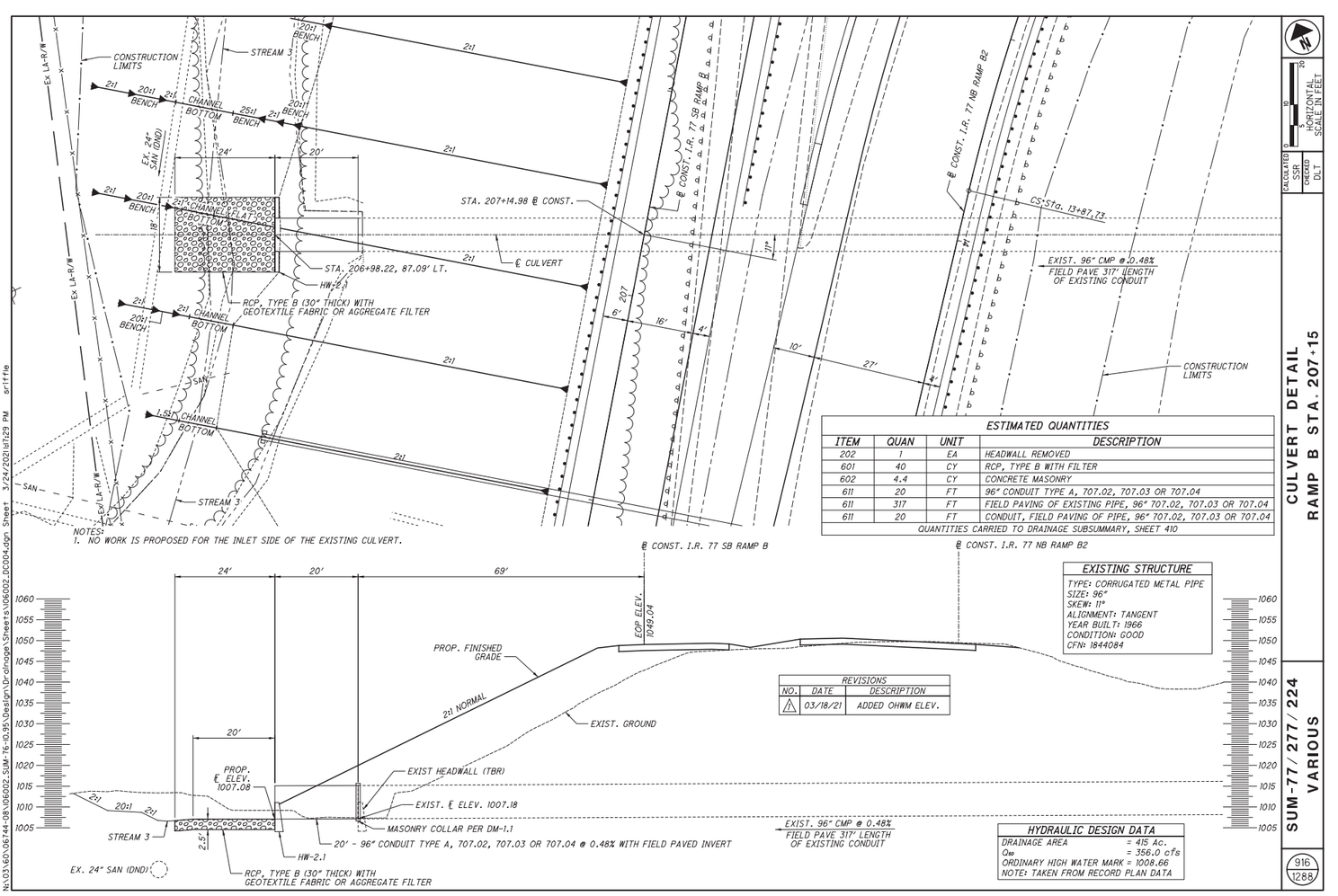
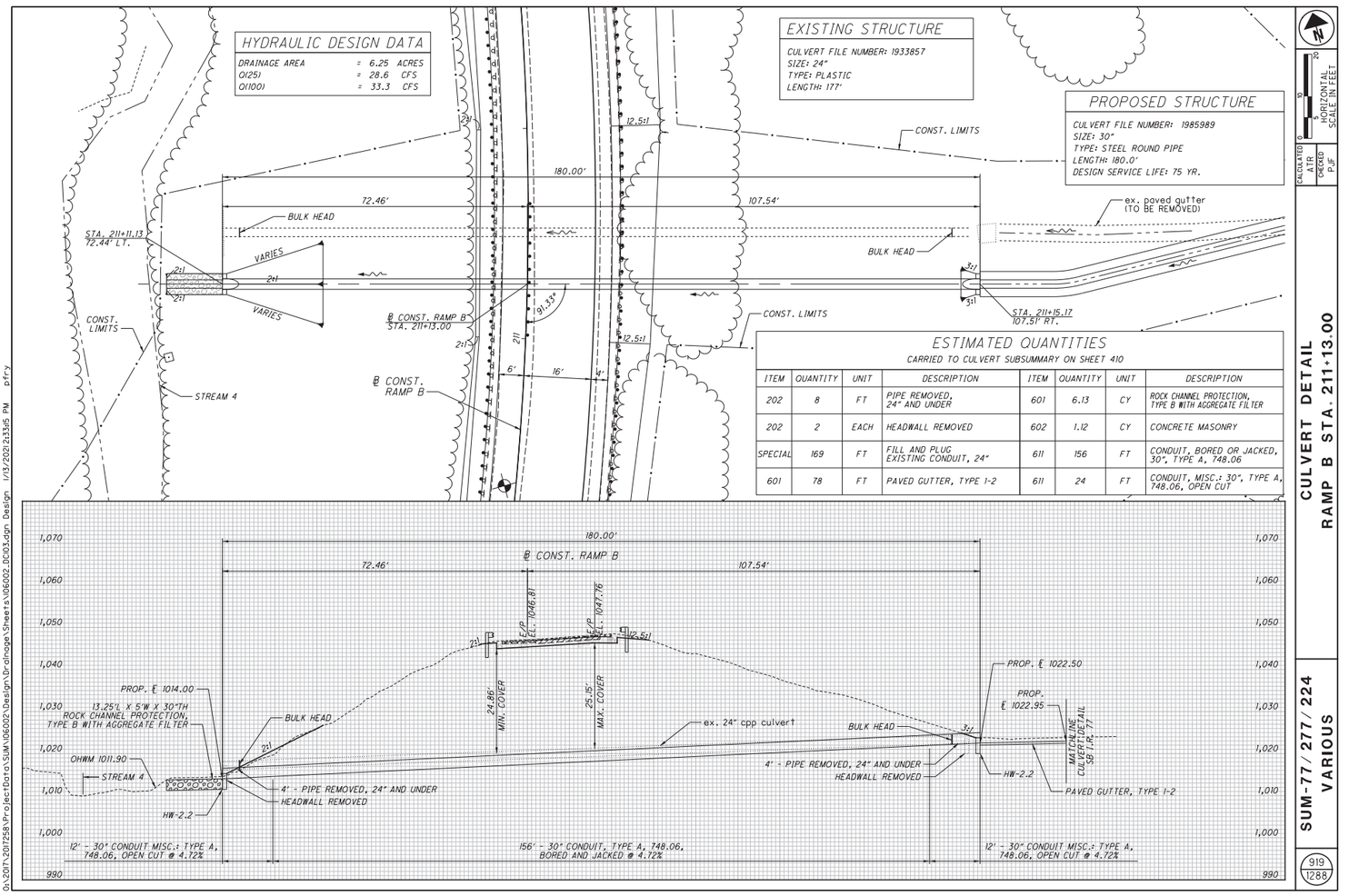
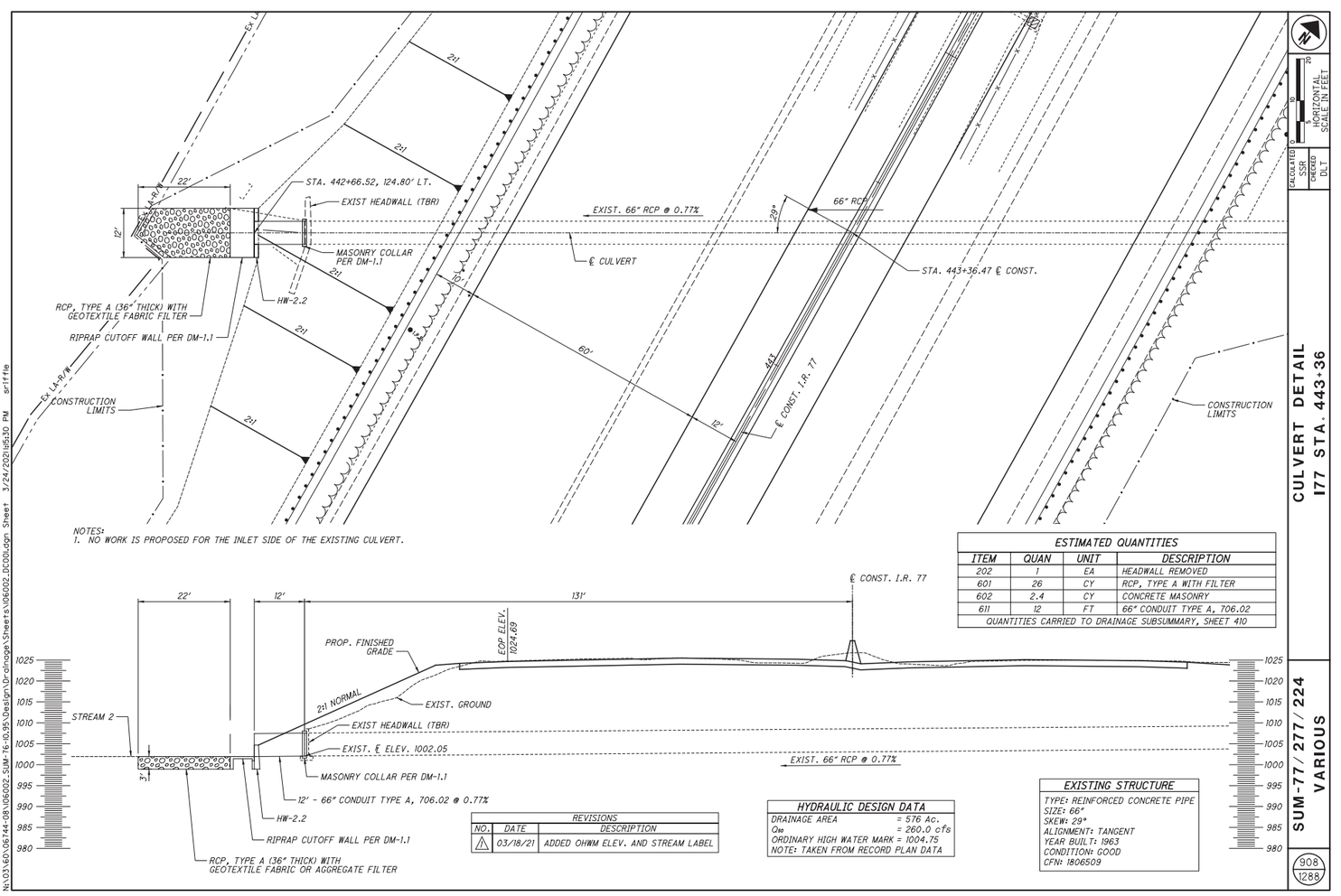

ITEM 601 - RIPRAP
ITEM 670 - DITCH EROSION PROTECTION
ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 1
ITEM 836 - SEEDING AND EROSION CONTROL W/ TURF REINFORCING MAT, TYPE 2
ITEM 601 - ROCK CHANNEL PROTECTION
WETLAND AREA IMPACTED
WETLAND AREA NOT TO BE DISTURBED
ITEM 670 - DITCH EROSION PROTECTION (VEGETATED BIOFILTER PER DETAIL ON SHEET 55)
ITEM 670 - SLOPE EROSION PROTECTION (VEGETATED FILTER STRIP W/ 4" ITEM 659 - TOPSOIL)
TIED CONCRETE BLOCK
BEGIN ℄ CONST. RAMP D STA. 887+98.38
BEGIN ℄ EX. RAMP D STA. 0+00.00
℄ EX. RAMP D
℄ CONST. RAMP D
MATCH LINE STA. 266+00 I.R. 277/ U.S. 224, SEE SHEET 448
℄ R/W & CONST. I.R. 277/U.S. 224
WETLAND J
PROP. NOISE WALL K
END WORK ℄ R/W & CONST. I.R. 277/U.S. 224 STA. 279+50.00
S. ARLINGTON ST.
STRUCTURE NO. SUM-224-1061 (NO WORK)
BEGIN ℄ CONST. RAMP C STA. 781+45.30
℄ EX. RAMP C
℄ CONST. RAMP C
END ℄ CONST. RAMP C STA. 606+67.88
END ℄ EX. RAMP C STA. 25+17.54
℄ CONST. RAMP C-2
FOR GEOMETRIC PLAN, SEE SHEETS 13 -22
FOR CURVE DATA, SEE SHEETS 23 -26
PROJECT SITE PLAN
STA. 266+000 TO END
SUM-77/277/224
VARIOUS
451
1288

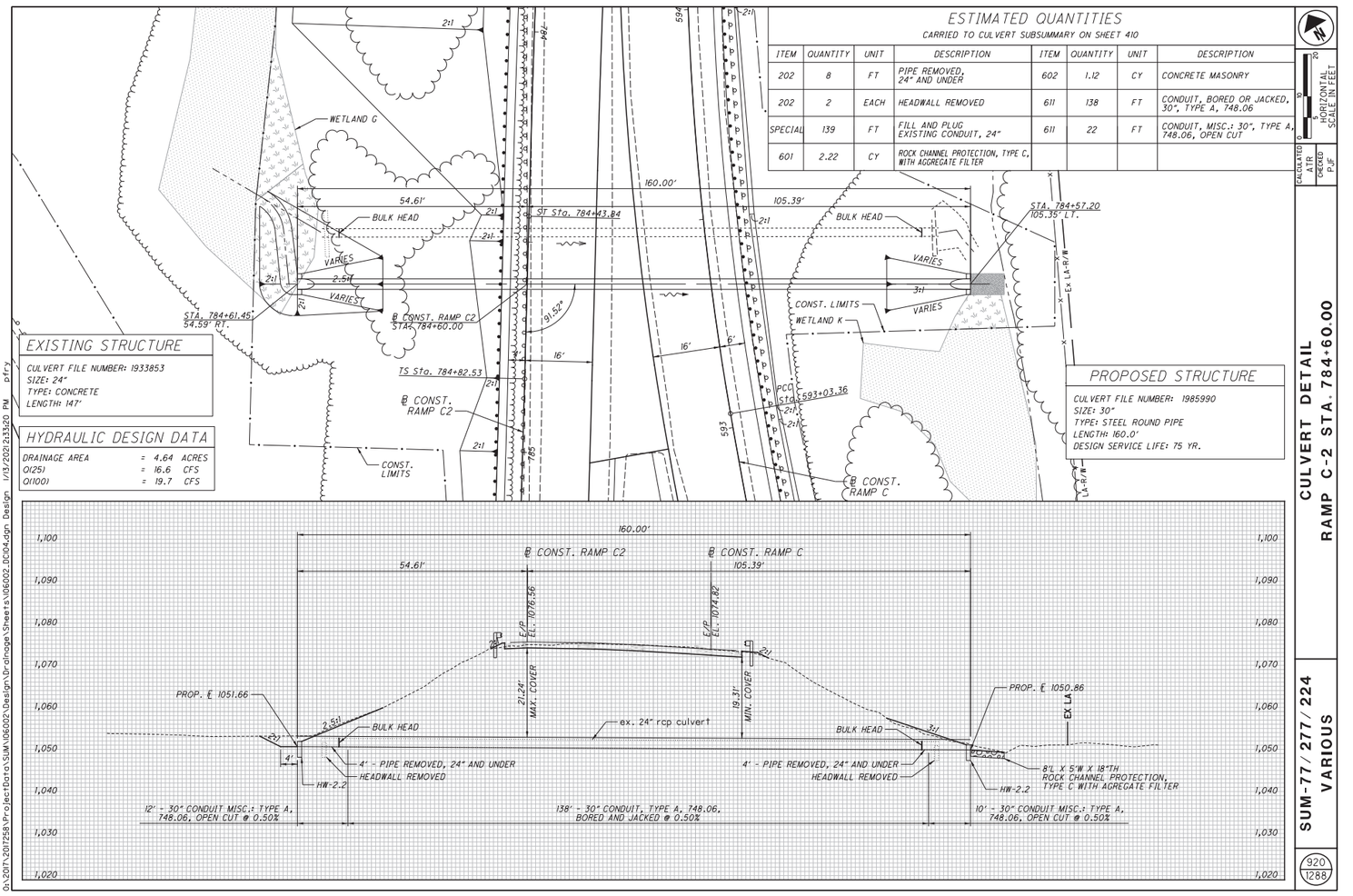

CHANNEL BOTTOM
20:1 BENCH
EX. 18" VCP SANITARY, CITY OF AKRON, O.U.
MASONRY COLLAR PER DM-1.1
HW-2.2
EXIST HEADWALL (TBR)
STA. 87+58.61, 55.15' LT.
RCP, TYPE B (30" THICK) WITH GEOTEXTILE FABRIC OR AGGREGATE FILTER
FLAT BOTTOM
CONSTRUCTION LIMITS
STREAM 3
NOISE BARRIER WALL H1
STA. 87+63.69
STA. 87+22.69 ℄ CONST.
℄ CULVERT
℄ CONST. I.R. 277 EB RAMP A
℄ CONST. I.R. 77 SB
℄ CONST. I.R. 77 NB RAMP B2
EXIST. 60" RCP @ 0.45%
15" RCP
NOTES:
1. NO WORK IS PROPOSED FOR THE INLET SIDE OF THE EXISTING CULVERT.
PROP. FINISHED GRADE
EOP ELEV. 1047.45
EXIST. GROUND
PROP. ℄ ELEV. 1024.85
EXIST. ℄ ELEV. 1024.92
16' - 60" CONDUIT TYPE A, 706.02 @ 0.45%
2:1 NORMAL
9'
2.5'
ESTIMATED QUANTITIES
ITEM | QUAN | UNIT | DESCRIPTION
202 | 1 | EA | HEADWALL REMOVED
601 | 21 | CY | RCP, TYPE B WITH FILTER
602 | 1.9 | CY | CONCRETE MASONRY
611 | 16 | FT | 60" CONDUIT TYPE A, 706.02
QUANTITIES CARRIED TO DRAINAGE SUBSUMMARY, SHEET 410
HYDRAULIC DESIGN DATA
DRAINAGE AREA = 220 Ac.
Qw = 140.0 cfs
ORDINARY HIGH WATER MARK = 1025.59
NOTE: TAKEN FROM RECORD PLAN DATA
EXISTING STRUCTURE
TYPE: REINFORCED CONCRETE PIPE
SIZE: 60"
SKEW: 32°
ALIGNMENT: TANGENT
YEAR BUILT: 1963
CONDITION: GOOD
CFN: 1844085
REVISIONS
NO. | DATE | DESCRIPTION
1 | 03/18/21 | ADDED OHWM ELEV.
CULVERT DETAIL
RAMP A STA. 87+23
SUM-77/277/224
VARIOUS
809
1288

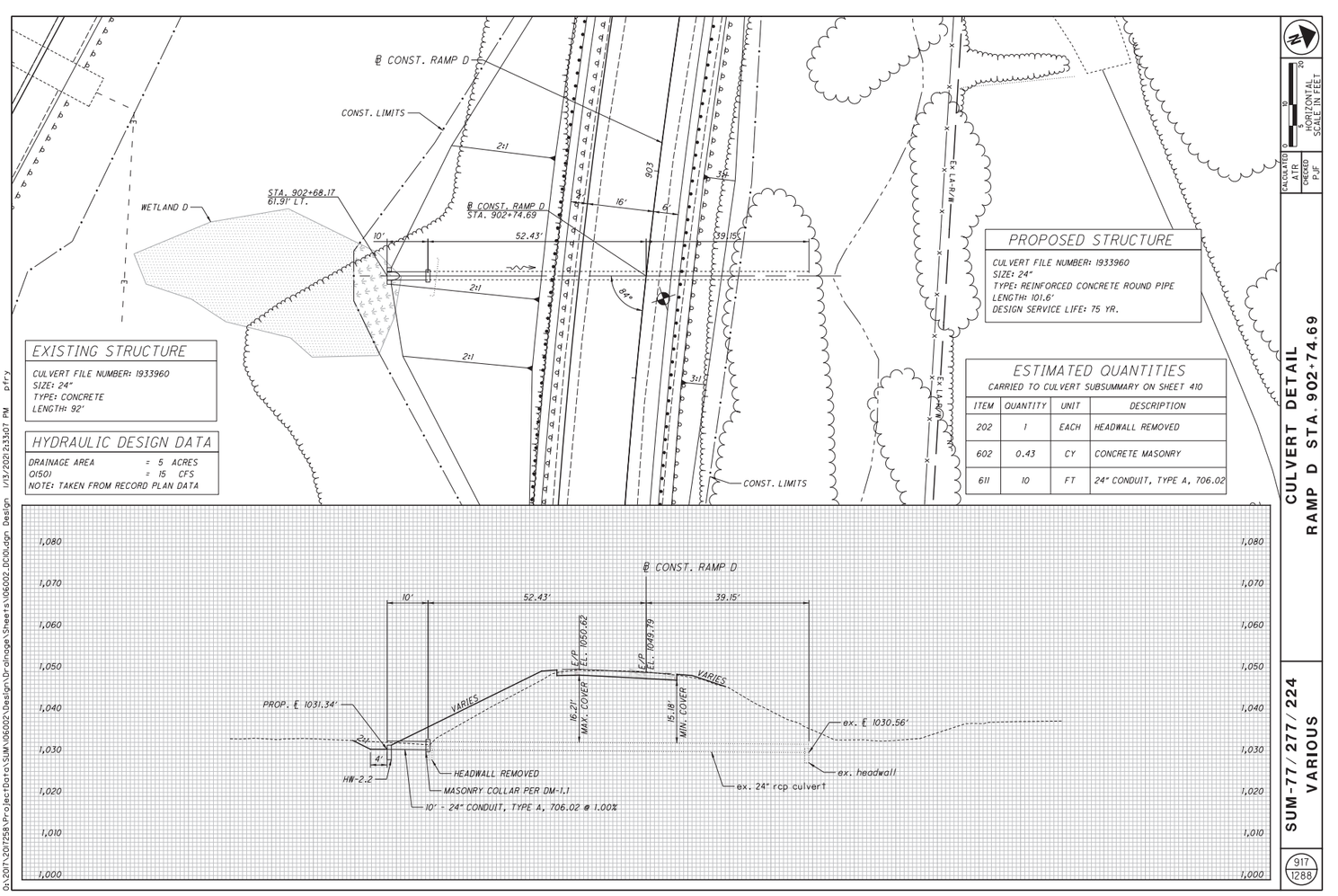

PROP. 27" SAN
EX. 27" SAN (TO BE RELOCATED)
NOISE BARRIER WALL H1
CONSTRUCTION LIMITS
B-088-0-17
STA. 101+77.94, 76.37' LT.
EXIST. HEADWALL (TBR)
MASONRY COLLAR PER DM-1.1
REPLACE DISTURBED DUMPED ROCK FILL MATCH EXISTING SIZE AND DEPTH
STREAM 3
℄ CONST. I.R. 277 EB RAMP A
STA. 102+18.94 ℄ CONST.
B-046-0-17
EXIST. 10'x5' CONCRETE BOX @ 0.61%
℄ CULVERT
B-089-0-17
SAWCUT
℄ CONST. I.R. 277
NOTES:
1. NO WORK IS PROPOSED FOR THE OUTLET SIDE OF THE EXISTING CULVERT.
2. THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH ITEM 611 EXCEPT THAT THE NEW CULVERT SHALL BE CAST-IN-PLACE. PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR ITEM 611 - 10'x5' CONDUIT TYPE A, 706.05, AS PER PLAN.
SEE SHEET 911 FOR ESTIMATED QUANTITIES
SEE SHEETS 911 - 915 FOR HEADWALL DETAILS
EOP ELEV. 1049.97
PROP. FINISHED GRADE
2:1 NORMAL
EXIST. GROUND
PROP. ℄ ELEV. 1014.33
EXIST. ELECTRIC
EXIST. ℄ ELEV. 1014.23
MASONRY COLLAR PER DM-1.1 (INCLUDED FOR PAYMENT WITH ITEM 611 - 10'x5' CONDUIT, TYPE A, 706.05, AS PER PLAN)
16' - 10'x5' CONDUIT TYPE A, 706.05, AS PER PLAN @ 0.61%
EXIST. 27" SAN (TO BE RELOCATED)
EXIST. 10'x5' CONCRETE BOX @ 0.61%
REVISIONS
NO. DATE DESCRIPTION
1 03/18/21 ADDED OHWM ELEV.
EXISTING STRUCTURE
TYPE: CONCRETE BOX CULVERT
SIZE: 10' WIDE x 5' HIGH
SKEW: 27°
ALIGNMENT: TANGENT
YEAR BUILT: 1968
CONDITION: EXCELLENT
SFN: 7709781
HYDRAULIC DESIGN DATA
DRAINAGE AREA = 409 Ac.
Q100 = 552.0 cfs
ORDINARY HIGH WATER MARK = 1015.02
NOTE: TAKEN FROM RECORD PLAN DATA
CULVERT DETAIL
RAMP A STA. 102+19
SUM-77/277/224
VARIOUS
910
1288

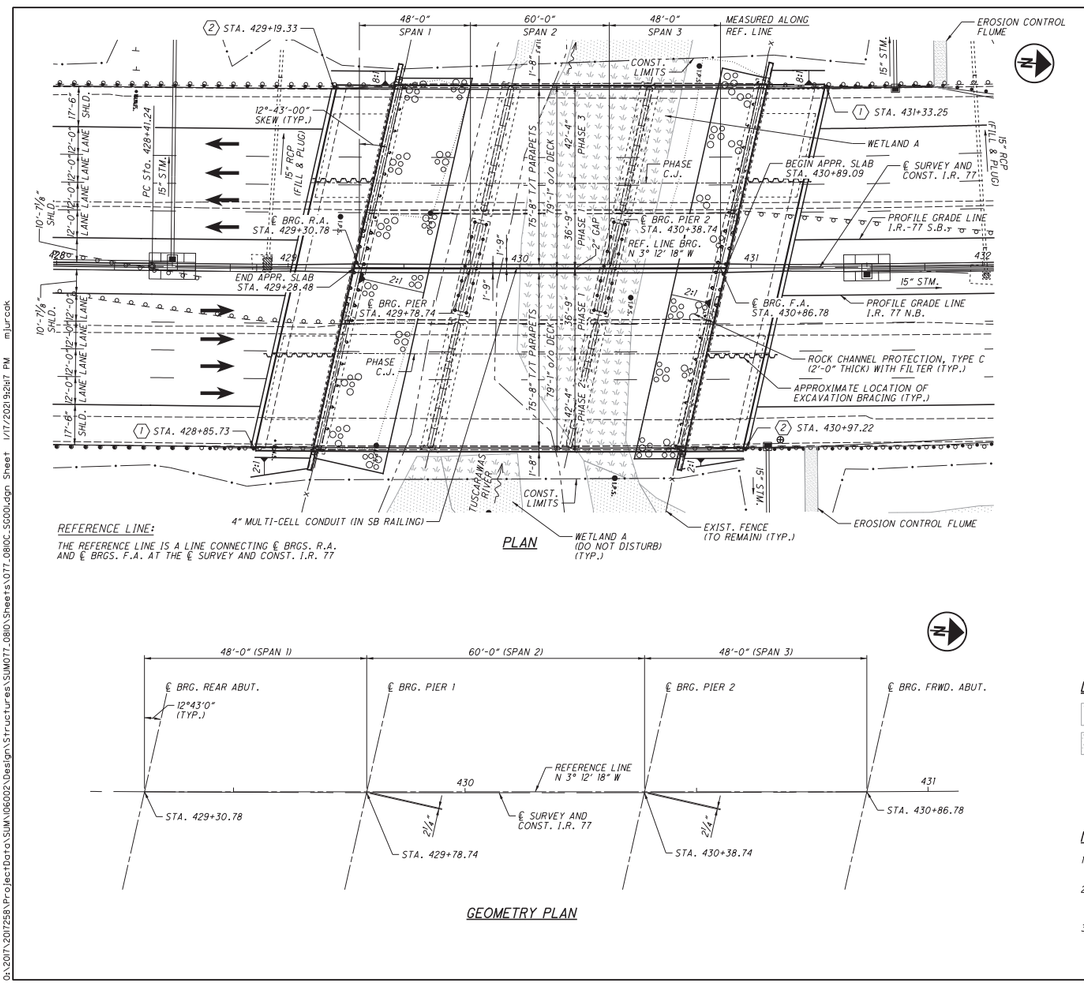

CONSTRUCTION LIMITS
STREAM 3
20:1 BENCH
CHANNEL BOTTOM
25:1 BENCH
EX. 24" SAN (DND)
STA. 207+14.98 ℄ CONST.
STA. 206+98.22, 87.09' LT.
HW-2.1
RCP, TYPE B (30" THICK) WITH GEOTEXTILE FABRIC OR AGGREGATE FILTER
℄ CULVERT
℄ CONST. I.R. 77 SB RAMP B
℄ CONST. I.R. 77 NB RAMP B2
CS-Sta. 13+87.73
EXIST. 96" CMP @ 0.48% FIELD PAVE 317' LENGTH OF EXISTING CONDUIT
CONSTRUCTION LIMITS
NOTES:
1. NO WORK IS PROPOSED FOR THE INLET SIDE OF THE EXISTING CULVERT.
ESTIMATED QUANTITIES
ITEM QUAN UNIT DESCRIPTION
202 1 EA HEADWALL REMOVED
601 40 CY RCP, TYPE B WITH FILTER
602 4.4 CY CONCRETE MASONRY
611 20 FT 96" CONDUIT TYPE A, 707.02, 707.03 OR 707.04
611 317 FT FIELD PAVING OF EXISTING PIPE, 96" 707.02, 707.03 OR 707.04
611 20 FT CONDUIT, FIELD PAVING OF PIPE, 96" 707.02, 707.03 OR 707.04
QUANTITIES CARRIED TO DRAINAGE SUBSUMMARY, SHEET 410
EOP ELEV. 1049.04
PROP. FINISHED GRADE
2:1 NORMAL
EXIST. GROUND
PROP. ℄ ELEV. 1007.08
EXIST HEADWALL (TBR)
EXIST. ℄ ELEV. 1007.18
MASONRY COLLAR PER DM-1.1
20' - 96" CONDUIT TYPE A, 707.02, 707.03 OR 707.04 @ 0.48% WITH FIELD PAVED INVERT
EXIST. 96" CMP @ 0.48% FIELD PAVE 317' LENGTH OF EXISTING CONDUIT
EX. 24" SAN (DND)
REVISIONS
NO. DATE DESCRIPTION
1 03/18/21 ADDED OHWM ELEV.
EXISTING STRUCTURE
TYPE: CORRUGATED METAL PIPE
SIZE: 96"
SKEW: 11°
ALIGNMENT: TANGENT
YEAR BUILT: 1966
CONDITION: GOOD
CFN: 1844084
HYDRAULIC DESIGN DATA
DRAINAGE AREA = 415 Ac.
Q100 = 356.0 cfs
ORDINARY HIGH WATER MARK = 1008.66
NOTE: TAKEN FROM RECORD PLAN DATA
CULVERT DETAIL
RAMP B STA. 207+15
SUM-77/277/224
VARIOUS
916
1288


HYDRAULIC DESIGN DATA
DRAINAGE AREA = 6.25 ACRES
Q(25) = 28.6 CFS
Q(100) = 33.3 CFS
EXISTING STRUCTURE
CULVERT FILE NUMBER: 1933857
SIZE: 24"
TYPE: PLASTIC
LENGTH: 177'
PROPOSED STRUCTURE
CULVERT FILE NUMBER: 1985989
SIZE: 30"
TYPE: STEEL ROUND PIPE
LENGTH: 180.0'
DESIGN SERVICE LIFE: 75 YR.
CONST. LIMITS
180.00'
72.46'
107.54'
BULK HEAD
ex. paved gutter (TO BE REMOVED)
STA. 211+11.13 72.44' LT.
STA. 211+15.17 107.51' RT.
VARIES
2:1
5:1
91.33°
℄ CONST. RAMP B STA. 211+13.00
℄ CONST. RAMP B
STREAM 4
12.5±1
6'
16'
4'
211
ESTIMATED QUANTITIES
CARRIED TO CULVERT SUBSUMMARY ON SHEET 410
ITEM | QUANTITY | UNIT | DESCRIPTION | ITEM | QUANTITY | UNIT | DESCRIPTION
202 | 8 | FT | PIPE REMOVED, 24" AND UNDER | 601 | 6.13 | CY | ROCK CHANNEL PROTECTION, TYPE B WITH AGGREGATE FILTER
202 | 2 | EACH | HEADWALL REMOVED | 602 | 1.12 | CY | CONCRETE MASONRY
SPECIAL | 169 | FT | FILL AND PLUG EXISTING CONDUIT, 24" | 611 | 156 | FT | CONDUIT, BORED OR JACKED, 30", TYPE A, 748.06
601 | 78 | FT | PAVED GUTTER, TYPE 1-2 | 611 | 24 | FT | CONDUIT, MISC.: 30", TYPE A, 748.06, OPEN CUT
1,070
1,060
1,050
1,040
1,030
1,020
1,010
1,000
990
℄ CONST. RAMP B
E.P. 1046.81
E.P. 1047.76
24.86' MIN. COVER
25.15' MAX. COVER
PROP. ℄ 1014.00
13.25'L X 5'W X 30"TH ROCK CHANNEL PROTECTION, TYPE B WITH AGGREGATE FILTER
OHWM 1011.90
STREAM 4
4' - PIPE REMOVED, 24" AND UNDER
HEADWALL REMOVED
HW-2.2
ex. 24" cpp culvert
PROP. ℄ 1022.50
PROP. ℄ 1022.95
MATCH LINE CULVERT DETAIL SB I.R. 77
PAVED GUTTER, TYPE 1-2
12' - 30" CONDUIT MISC.: TYPE A, 748.06, OPEN CUT @ 4.72%
156' - 30" CONDUIT, TYPE A, 748.06, BORED AND JACKED @ 4.72%
12' - 30" CONDUIT MISC.: TYPE A, 748.06, OPEN CUT @ 4.72%
HORIZONTAL SCALE IN FEET
CALCULATED PJF
DRAWN PJF
CULVERT DETAIL
RAMP B STA. 211+13.00
SUM-77/277/224
VARIOUS
919
1288


Ex LA-R/W
22'
12'
STA. 442+66.52, 124.80' LT.
EXIST HEADWALL (TBR)
MASONRY COLLAR PER DM-1.1
HW-2.2
RCP, TYPE A (36" THICK) WITH GEOTEXTILE FABRIC FILTER
RIPRAP CUTOFF WALL PER DM-1.1
CONSTRUCTION LIMITS
2:1
EXIST. 66" RCP @ 0.77%
℄ CULVERT
66" RCP
29°
STA. 443+36.47 ℄ CONST.
60'
15'
℄ CONST. I.R. 77
CONSTRUCTION LIMITS
NOTES:
1. NO WORK IS PROPOSED FOR THE INLET SIDE OF THE EXISTING CULVERT.
ESTIMATED QUANTITIES
ITEM | QUAN | UNIT | DESCRIPTION
202 | 1 | EA | HEADWALL REMOVED
601 | 26 | CY | RCP, TYPE A WITH FILTER
602 | 2.4 | CY | CONCRETE MASONRY
611 | 12 | FT | 66" CONDUIT TYPE A, 706.02
QUANTITIES CARRIED TO DRAINAGE SUBSUMMARY, SHEET 410
22'
12'
131'
PROP. FINISHED GRADE
EOP ELEV. 1024.69
STREAM 2
2:1 NORMAL
EXIST. GROUND
EXIST HEADWALL (TBR)
EXIST. ℄ ELEV. 1002.05
MASONRY COLLAR PER DM-1.1
12' - 66" CONDUIT TYPE A, 706.02 @ 0.77%
HW-2.2
RIPRAP CUTOFF WALL PER DM-1.1
RCP, TYPE A (36" THICK) WITH GEOTEXTILE FILTER OR AGGREGATE FILTER
1025
1020
1015
1010
1005
1000
995
990
985
980
REVISIONS
NO. | DATE | DESCRIPTION
1 | 03/18/21 | ADDED OHWM ELEV. AND STREAM LABEL
HYDRAULIC DESIGN DATA
DRAINAGE AREA = 576 Ac.
Q100 = 260.0 cfs
ORDINARY HIGH WATER MARK = 1004.75
NOTE: TAKEN FROM RECORD PLAN DATA
EXISTING STRUCTURE
TYPE: REINFORCED CONCRETE PIPE
SIZE: 66"
SKEW: 29°
ALIGNMENT: TANGENT
YEAR BUILT: 1963
CONDITION: GOOD
CFN: 1806509
HORIZONTAL SCALE IN FEET
CALCULATED SSG
DRAWN DLT
CULVERT DETAIL
I77 STA. 443+36
SUM-77/277/224
VARIOUS
908
1288


ESTIMATED QUANTITIES
CARRIED TO CULVERT SUBSUMMARY ON SHEET 410
ITEM | QUANTITY | UNIT | DESCRIPTION | ITEM | QUANTITY | UNIT | DESCRIPTION
202 | 8 | FT | PIPE REMOVED, 24" AND UNDER | 602 | 1.12 | CY | CONCRETE MASONRY
202 | 2 | EACH | HEADWALL REMOVED | 611 | 138 | FT | CONDUIT, BORED OR JACKED, 30", TYPE A, 748.06
SPECIAL | 139 | FT | FILL AND PLUG EXISTING CONDUIT, 24" | 611 | 22 | FT | CONDUIT, MISC.: 30", TYPE A, 748.06, OPEN CUT
601 | 2.22 | CY | ROCK CHANNEL PROTECTION, TYPE C, WITH AGGREGATE FILTER
EXISTING STRUCTURE
CULVERT FILE NUMBER: 1933853
SIZE: 24"
TYPE: CONCRETE
LENGTH: 147'
HYDRAULIC DESIGN DATA
DRAINAGE AREA = 4.64 ACRES
Q(25) = 16.6 CFS
Q(100) = 19.7 CFS
PROPOSED STRUCTURE
CULVERT FILE NUMBER: 1985990
SIZE: 30"
TYPE: STEEL ROUND PIPE
LENGTH: 160.0'
DESIGN SERVICE LIFE: 75 YR.
WETLAND G
WETLAND K
℄ CONST. RAMP C2
℄ CONST. RAMP C
CONST. LIMITS
BULK HEAD
TS Sta. 784+82.53
ST Sta. 784+43.84
PCO Sta. 593+03.36
STA. 784+61.45' 54.59' RT.
STA. 784+57.20 105.35' LT.
160.00'
54.61'
105.39'
PROP. ℄ 1051.66
PROP. ℄ 1050.86
E/P EL. 1076.56
E/P EL. 1074.82
MAX. COVER 21.34'
MIN. COVER 19.31'
ex. 24" rcp culvert
4' - PIPE REMOVED, 24" AND UNDER
HEADWALL REMOVED
HW-2.2
8'L X 5'W X 18"TH ROCK CHANNEL PROTECTION, TYPE C WITH AGREGATE FILTER
12' - 30" CONDUIT MISC.: TYPE A, 748.06, OPEN CUT @ 0.50%
138' - 30" CONDUIT, TYPE A, 748.06, BORED AND JACKED @ 0.50%
10' - 30" CONDUIT MISC.: TYPE A, 748.06, OPEN CUT @ 0.50%
CULVERT DETAIL
RAMP C-2 STA. 784+60.00
SUM-77/277/224
VARIOUS
920
1288


℄ CONST. RAMP D
CONST. LIMITS
WETLAND D
STA. 902+68.17 61.91' LT.
℄ CONST. RAMP D STA. 902+74.69
EXISTING STRUCTURE
CULVERT FILE NUMBER: 1933960
SIZE: 24"
TYPE: CONCRETE
LENGTH: 92'
HYDRAULIC DESIGN DATA
DRAINAGE AREA = 5 ACRES
Q(50) = 15 CFS
NOTE: TAKEN FROM RECORD PLAN DATA
PROPOSED STRUCTURE
CULVERT FILE NUMBER: 1933960
SIZE: 24"
TYPE: REINFORCED CONCRETE ROUND PIPE
LENGTH: 101.6'
DESIGN SERVICE LIFE: 75 YR.
ESTIMATED QUANTITIES
CARRIED TO CULVERT SUBSUMMARY ON SHEET 410
ITEM | QUANTITY | UNIT | DESCRIPTION
202 | 1 | EACH | HEADWALL REMOVED
602 | 0.43 | CY | CONCRETE MASONRY
611 | 10 | FT | 24" CONDUIT, TYPE A, 706.02
10' | 52.43' | 39.15'
E/P EL. 1050.82
E/P EL. 1048.79
MAX. COVER 16.21'
MIN. COVER 15.18'
PROP. ℄ 1031.34'
ex. ℄ 1030.56'
ex. headwall
ex. 24" rcp culvert
HEADWALL REMOVED
MASONRY COLLAR PER DM-1.1
10' - 24" CONDUIT, TYPE A, 706.02 @ 1.00%
CULVERT DETAIL
RAMP D STA. 902+74.69
SUM-77/277/224
VARIOUS
917
1288



PLAN

REFERENCE LINE:

THE REFERENCE LINE IS A LINE CONNECTING ℄ BRGS. R.A. AND ℄ BRGS. F.A. AT THE ℄ SURVEY AND CONST. I.R. 77

GEOMETRY PLAN

HORIZONTAL CURVE DATA:

P.I. STA. 438+34.18
Δ = 7° 59' 02" (LT)
Dc = 0° 24' 10"
R = 14,228.56'
T = 992.94'
L = 1982.67'
E = 34.60'
C = 1,981.07'

LEGEND:

WETLAND

WETLAND AREA NOT TO BE DISTURBED

(1) MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 FIRST POST LOCATION (SEE STD. DWG. MGS-3.1)

(2) MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2 FIRST POST LOCATION (SEE STD. DWG. MGS-3.2)

NOTES:

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. THE EXISTING AND PROPOSED BEAMS ARE PARALLEL TO THE REFERENCE LINE. SPAN LENGTHS AND SUBSTRUCTURE SKEWS ARE MEASURED TO THE REFERENCE LINE.
3. THE BRIDGE DECKS, CONSTRUCTION JOINTS, CROWNS, AND PROFILE GRADES ARE OFFSETS FROM THE ℄ SURVEY AND CONST. I.R. 77.

DESIGN AGENCY: GPD GROUP, 520 South Main Street, Akron, OH 44311, 330.572.2100
DATE: 1-13-21
REVISED: STRUCTURE FILE NO. 7702558/7702582
DRAWN: REVISED
DESIGNED: MJD
CHECKED: RHC

GENERAL PLAN
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77 / 277 / 224
VARIOUS
PID No. 106002

2 / 44

1182
1288

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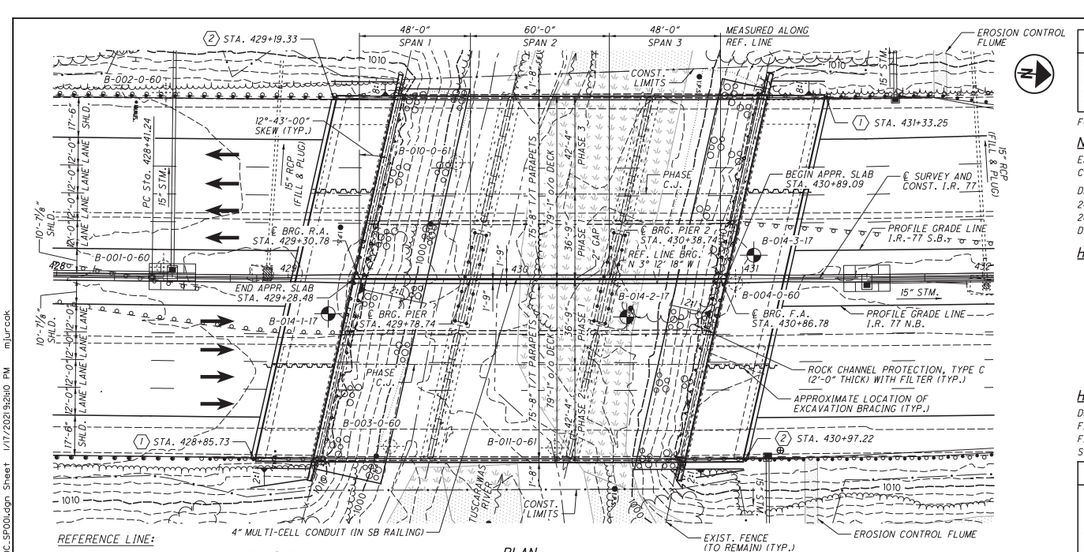
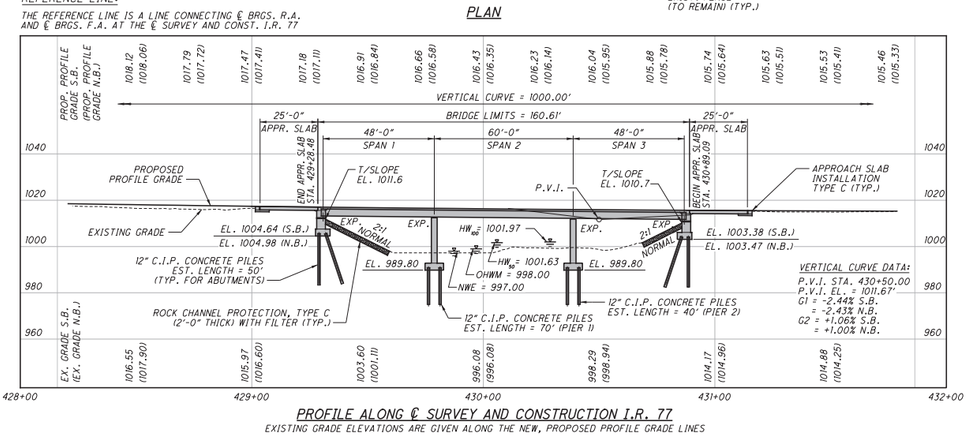


PLAN

REFERENCE LINE:

THE REFERENCE LINE IS A LINE CONNECTING ℄ BRGS. R.A. AND ℄ BRGS. F.A. AT THE ℄ SURVEY AND CONST. I.R. 77



PROFILE ALONG ℄ SURVEY AND CONSTRUCTION I.R. 77

EXISTING GRADE ELEVATIONS ARE GIVEN ALONG THE NEW, PROPOSED PROFILE GRADE LINES

BENCHMARK DATA

POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
CP03	485566.6495	2246336.2535	1117.76	CONC. MONUMENT
CP04	486357.9587	2246323.9152	1121.63	CONC. MONUMENT
CP05	493895.1420	2245390.8980	1073.53	CONC. MONUMENT
CP06	493906.9643	2244750.3816	1090.46	CONC. MONUMENT

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLANS.

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

DESIGN TRAFFIC:
2020 ADT = 118,630 2020 ADTT = 10,680
2040 ADT = 141,010 2040 ADTT = 12,690
DIRECTIONAL DISTRIBUTION = 57%

HORIZONTAL CURVE DATA:

P.I. STA. 438+34.18
Δ = 7° 59' 02" (LT)
Dc = 0° 24' 10"
R = 14,228.56'
T = 992.94'
L = 1982.67'
E = 34.60'
C = 1,981.07'

LEGEND:

PROJECT BORING LOCATION
HISTORIC BORING LOCATION
(1) MGS BTA, TYPE 1 FIRST POST LOCATION (SEE STD. DWG. MGS-3.1)
(2) MGS BTA, TYPE 2 FIRST POST LOCATION (SEE STD. DWG. MGS-3.2)

HYDRAULIC DATA

DRAINAGE AREA = 32.90 SQ. MILES
FIS Q (50) = 2,519 CFS V (50) = 7.17 FT/S
FIS Q (100) = 2,914 CFS V (100) = 7.79 FT/S
STRUCTURE CLEARS THE 50 YEAR DESIGN HW BY 10.9 FEET.

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAMS WITH REINFORCED CONCRETE DECK, STUB ABUTMENTS AND WALL TYPE PIERS.
SPANS: 48'-0"±, 60'-0"±, 48'-0"± C/C BRGS. ALONG REF. LINE
ROADWAY: 53'-0"± F/F CURBS
LOADING: CF = 2000 (57)
SKEW: 12°-43'-00"± L.F.
WEARING SURFACE: 4"± ASPHALT
APPROACH SLABS: AS-1-54 (25'-0" LONG)
ALIGNMENT: CURVE LEFT
CROWN: 0.016 FT/FT
STRUCTURAL FILE NUMBER: 7702558 (LT) & 7702582 (RT)
DATE BUILT: 1965
DISPOSITION: TO BE REHABILITATED

PROPOSED STRUCTURE

PROPOSED WORK: 3-SPAN EXIST. CONTINUOUS STEEL BEAM (A7) & NEW CONTINUOUS STEEL BEAM (A709 GRADE 50, PAINTED) BRIDGE W/ NEW COMPOSITE REINF. CONC. DECK ON WIDENED SEMI-INTEGRAL ABUTS. & WALL TYPE PIERS
SPANS: 48'-0", 60'-0", 48'-0" C/C BRGS. ALONG REF. LINE
ROADWAY: 75'-8" TOE/TOE PARAPET (S.B. AND N.B.)
VEHICULAR LIVE LOAD: (SEE GENERAL NOTES)
FUTURE WEARING SURFACE: (SEE GENERAL NOTES)
SKEW: 12°-43'-00" L.F. (TO REFERENCE CHORD)
WEARING SURFACE: 1" MONOLITHIC CONCRETE
DECK AREA: 12,702 SQ. FT. (N.B.), 12,702 SQ. FT. (S.B.)
APPROACH SLABS: 25'-0" LONG (MODIFIED) (AS-1-15) TYPE C INSTALLATION (AS-2-15)
ALIGNMENT: 0°-24'-10" CURVE LEFT
CROWN: 0.016 FT/FT
COORDINATES: LATITUDE 41°-00'-25.56" (SB) 41°-00'-25.42" (NB)
LONGITUDE 81°-29'-40.05" (SB) 81°-29'-38.40" (NB)

DESIGN AGENCY: GPD GROUP, 520 South Main Street, Akron, OH 44311, 330.572.2100
DATE: 1-13-21
REVISED: STRUCTURE FILE NO. 7702558/7702582
DRAWN: REVISED
DESIGNED: MJD
CHECKED: RHC

SUMMIT COUNTY
STA. 429+28.48
STA. 430+89.09

SITE PLAN
BRIDGE NO. SUM-77-0810 L/R
I.R. 77 OVER THE TUSCARAWAS RIVER

SUM-77 / 277 / 224
VARIOUS
PID No. 106002

1 / 44

1181
1288

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BMP TYPE	LOCATION	SIDE	DITCH WIDTH	STATION	LATITUDE	LONGITUDE	EDA CREDIT (ACRES)
FILTER STRIP 2	E. R/W & CONST. LIM. I-71	LT.	N/A	453+38	41.013525° N	-81.496739° W	0.90
				458+67	41.015600° N	-81.496089° W	
FILTER STRIP 3	E. R/W & CONST. LIM. I-71	RT.	N/A	455+28	41.014719° N	-81.495213° W	0.25
				457+00	41.014645° N	-81.495306° W	
FILTER STRIP 4	RAMP B1	LT.	N/A	402+87	41.026574° N	-81.502519° W	0.56
				408+50	41.026680° N	-81.504017° W	
FILTER STRIP 5	RAMP B1	LT.	N/A	414+68	41.025706° N	-81.504890° W	0.28
				417+56	41.025459° N	-81.503995° W	
FILTER STRIP 6	RAMP B2	LT.	N/A	15+16	41.026211° N	-81.505574° W	0.29
				16+67	41.025902° N	-81.505949° W	
FILTER STRIP 7	RAMP C1	RT.	N/A	683+45	41.025282° N	-81.498754° W	0.72
				690+50	41.024060° N	-81.498253° W	
FILTER STRIP 8	RAMP C2	RT.	N/A	795+45	41.024421° N	-81.500314° W	0.15
				796+95	41.024699° N	-81.500774° W	
FILTER STRIP 9	SB I.R. 77	LT.	N/A	498+00	41.024686° N	-81.501350° W	0.40
				500+44	41.025183° N	-81.501945° W	
					TREATMENT PROVIDED		24.05
					TREATMENT REQUIRED*		24.02

* CALCULATED PER L&D VOL. 2, SEC. 1115.7

FOR TYPICAL SECTIONS, SEE SHEET 55
FOR PROJECT SITE PLANS, SEE SHEETS 444 - 451

BMP TYPE	LOCATION	SIDE	DITCH WIDTH	STATION	LATITUDE	LONGITUDE	EDA CREDIT (ACRES)
BIOFILTER 1	SB I.R. 77	RT.	4.0'	510+00	41.027451° N	-81.503705° W	1.57
				514+95	41.028651° N	-81.504493° W	
BIOFILTER 2	ARLINGTON ROAD RAMP D	RT.	4.0'	78+50	40.993766° N	-81.483466° W	1.24
				83+50	40.994528° N	-81.483472° W	
BIOFILTER 3	ARLINGTON ROAD RAMP D	RT.	4.0'	83+50	40.994528° N	-81.483472° W	0.71
				87+00	40.995489° N	-81.483460° W	
BIOFILTER 4	E. R/W & CONST. LIM. I-71	RT.	4.0'	416+50	41.035581° N	-81.483716° W	0.24
				418+00	41.037988° N	-81.483740° W	
BIOFILTER 6	RAMP B	LT.	4.0'	198+00	41.025269° N	-81.508252° W	1.02
				203+00	41.025781° N	-81.506654° W	
BIOFILTER 7	RAMP B2	LT.	4.0'	19+00	41.025412° N	-81.506536° W	0.54
				21+00	41.025581° N	-81.507231° W	
BIOFILTER 8	RAMP B1	RT.	4.0'	408+50	41.026864° N	-81.503936° W	0.72
				411+00	41.026657° N	-81.504931° W	
BIOFILTER 9	NB I.R. 77	RT.	4.0'	483+00	41.022627° N	-81.497365° W	1.68
			6.0'				
			8.0'	488+50	41.023009° N	-81.498238° W	
BIOFILTER 10	NB I.R. 77	LT.	5.0'	483+00	41.021532° N	-81.497612° W	0.91
				486+00	41.022274° N	-81.498120° W	
BIOFILTER 11	RAMP B2	LT.	5.0'	286+00	41.022274° N	-81.498120° W	1.44
			4.0'	290+50	41.023118° N	-81.498362° W	
BIOFILTER 12	RAMP B2	RT.	4.0'	301+00	41.025579° N	-81.501312° W	0.68
				305+50	41.026520° N	-81.502368° W	
BIOFILTER 13	RAMP C1	LT.	4.0'	689+00	41.024260° N	-81.497121° W	0.87
				692+00	41.023889° N	-81.498802° W	
BIOFILTER 14	RAMP C1	RT.	4.0'	696+50	41.024834° N	-81.499932° W	0.64
				697+50	41.025035° N	-81.500179° W	
BIOFILTER 15	RAMP C1	RT.	4.0'	690+50	41.024110° N	-81.499103° W	1.04
				692+50	41.024104° N	-81.498907° W	
BIOFILTER 16	E. R/W & CONST. LIM. I-71	RT.	4.0'	232+00	41.024684° N	-81.509312° W	2.29
			6.0'	242+00	41.024893° N	-81.505698° W	
BIOFILTER 17	RAMP B1	RT.	4.0'	413+00	41.026192° N	-81.505445° W	0.69
				416+50	41.025331° N	-81.504406° W	
BIOFILTER 19	SB I.R. 77	RT.	4.0'	484+00	41.021772° N	-81.498056° W	0.87
				493+00	41.023810° N	-81.499320° W	
BIOFILTER 20	RAMP D	LT.	4.0'	894+00	41.025743° N	-81.498032° W	0.38
				896+50	41.025754° N	-81.498939° W	
BIOFILTER 21	SB I.R. 77	RT.	4.0'	504+00	41.026137° N	-81.502456° W	1.10
			5.0'	507+00	41.026128° N	-81.503205° W	
BIOFILTER 22	RAMP A	RT.	4.0'	102+00	41.025046° N	-81.502941° W	0.32
				103+50	41.025067° N	-81.503508° W	
BIOFILTER 23	RAMP B2	LT.	4.0'	301+50	41.025549° N	-81.501833° W	1.03
			5.0'	304+60	41.026137° N	-81.502456° W	
BIOFILTER 24	SB I.R. 77	LT.	4.0'	496+00	41.024271° N	-81.500877° W	0.46
				498+00	41.024645° N	-81.501413° W	

SUM-77/277/224 VARIOUS	452 1288
BMP TABLE	CALCULATED ATR CHECKED CJC

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US Army Corps of Engineers
Huntington District

Permit Number: 2020-00204-TUS

Name of Permittee: Ohio Department of Transportation

Date of Issuance: April 8, 2021

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

U.S. Army Corps of Engineers - Huntington District
Building 10/ Section 10
PO Box 3990
Columbus, OH 43218-3990

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above-referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

_____ _____
Signature of Permittee Date