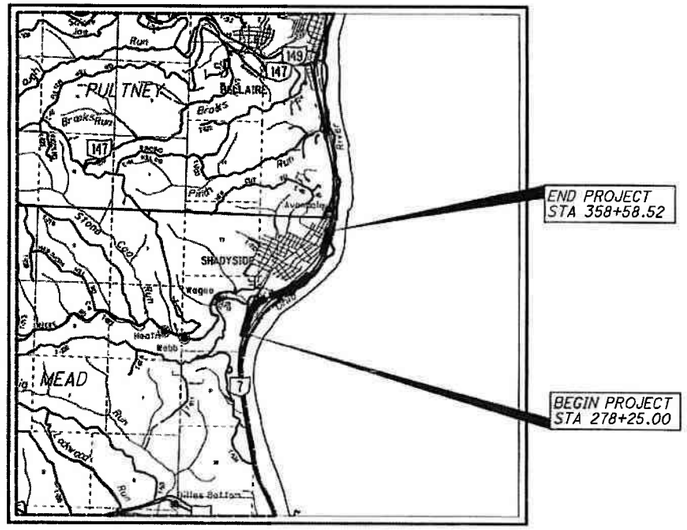
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

BEL-7-11.48

MEAD TOWNSHIP
VILLAGE OF SHADYSIDE
BELMONT COUNTY, OHIO



LOCATION MAP

LATITUDE: 39°57'40" LONGITUDE: 80°45'40"

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

CURRENT ADT (2021)	15,500
DESIGN YEAR ADT (2041)	18,000
DESIGN HOURLY VOLUME (2041)	1495
DIRECTIONAL DISTRIBUTION	50%
TRUCKS (24 HOUR B&C)	22%
Td	17%
DESIGN SPEED	55 MPH
LEGAL SPEED	55 MPH

DESIGN FUNCTIONAL CLASSIFICATION:
02 - OTHER FREEWAY AND EXPRESSWAY
NHS PROJECT ..... YES

DESIGN EXCEPTIONS

DESIGN FEATURE	APPROVAL DATE	SHEET NUMBER
SHOULDER WIDTH	09/24/20	5 - 8
VERTICAL CLEARANCE	09/24/20	78
VERTICAL CLEARANCE	09/24/20	79
VERTICAL CLEARANCE	09/24/20	82
STRUCTURAL CAPACITY	10/30/20	107
STRUCTURAL CAPACITY	10/30/20	155
STRUCTURAL CAPACITY	10/30/20	180

PLAN PREPARED BY:

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614 775 4500 Fax: 614 775 4800

M C M X X V I

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)

ENGINEERS SEAL:

STATE OF OHIO
MARK JOSEPH RAHALL E-77347
REGISTERED PROFESSIONAL ENGINEER

SIGNED:
DATE: 11/9/2020

ENGINEERS SEAL:
FOR STRUCTURES

STATE OF OHIO
CRAIG A SCHRADER E-77433
REGISTERED PROFESSIONAL ENGINEER

SIGNED:
DATE: 11/9/2020

INDEX OF SHEETS:

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PROJECT DESCRIPTION

REPLACE DECK ON EXISTING CONCRETE I-BEAM BRIDGE BEL-7-1152 (SFN 0700223). PROJECT WILL ALSO REPLACE THE BEARINGS AND EXPANSION JOINTS. THE SUBSTRUCTURE UNITS WILL BE REPAIRED. THE PROJECT WILL ALSO REPLACE THE EXPANSION JOINTS, REPAIR THE DECK, AND ADD AN ASPHALT WEARING SURFACE ON STRUCTURES BEL-7-1187 (SFN 0700312) AND BEL-7-1279 (SFN 0700339). APPROXIMATE PROJECT LENGTH 1.92 MILES.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 3.10 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: N/A* ACRES
* MAINTENANCE PROJECT

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 RAMP D (CR7 TO SR 7 NORTHBOUND) AS DESCRIBED ON SHEET 67 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	01/17/20	MGS-1.1	1/19/18	BR-1-13	1/17/14	TC-65.10	1/17/14	MT-95.70	1/17/20	800	1/15/21
BP-5.1	1/18/19	MGS-2.1	1/19/18	EXJ-4-87	1/19/18	TC-65.11	7/21/17	MT-97.10	4/19/19	807	7/17/20
BP-9.1	1/18/19	MGS-3.1	1/19/18	EXJ-6-17	1/19/18	TC-72.20	7/20/18	MT-98.20	4/19/19	808	1/18/19
		MGS-3.2	1/18/13	GSD-1-19	1/18/19			MT-98.22	1/17/20	821	4/20/16
CB-2.2	7/20/18	MGS-4.3	1/18/13	HW-2.1	7/20/18	HL-20.14	4/17/20	MT-99.20	4/19/19	832	10/19/18
		MGS-5.3	7/15/16	PCB-91	7/17/20	HL-30.11	7/17/20	MT-99.30	1/17/20	843	10/18/19
DM-1.1	7/17/20	MGS-6.1	1/19/18	PSID-1-13	7/20/18	HL-30.21	4/17/20	MT-100.00	1/15/16	844	4/20/18
DM-1.2	1/18/13			RB-1-55	7/19/13	HL-30.31	4/17/20	MT-101.70	1/17/20	902	7/19/19
DM-4.3	1/15/16	RM-4.1	1/17/20	SBR-1-20	7/17/20	HL-30.32	4/17/20	MT-101.75	1/17/20	908	10/20/17
DM-4.4	1/15/16	RM-4.2	4/17/20	SBR-2-20	7/17/20	HL-30.33	4/17/20	MT-101.80	1/17/20	921	4/20/12
		RM-4.3	7/18/14			HL-50.21	4/17/20	MT-101.90	7/17/20		
F-2.1	7/20/18	RM-4.4	7/19/19	TC-41.20	10/18/13			MT-102.10	1/17/20		
F-3.1	7/19/13			TC-42.20	10/18/13	MT-95.30	7/19/19	MT-102.20	4/19/19		
		A-1-69	7/19/02	TC-52.10	10/18/13	MT-95.40	1/17/20	MT-104.10	10/16/15		
I-2.4	1/15/16	AS-1-15	7/17/15	TC-52.20	7/20/18	MT-95.45	1/17/20	MT-105.10	1/17/20		
		AS-2-15	1/18/19	TC-61.30	7/19/19	MT-95.50	7/21/17				

SUPPLEMENTAL SPECIFICATIONS

SPECIAL PROVISIONS

CONFORMED SET

APPROVED Thomas A Craig
DATE 11-13-2020 DISTRICT DEPUTY DIRECTOR

APPROVED _____ Digitally signed by Tom Pannett
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION Date: 2021.01.15 12:29:38-05'00'

FEDERAL PROJECT NO. NON-FEDERAL
PID NO. 110324
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NORFOLK SOUTHERN RAIL CORP
BEL-7-11.48
1 / 213

BEL - SR 7-11.48
210143 PID - 110324
Dist 11 2/25/2021

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

J:\2019\0025\ODOT\IF BEL-7-11.52_11.87_12.79 (PID 110324)\BEL\110324_BEL-7-11.52\Design\Roadway\Sheets\110324GT001.dgn 11/9/2020 3:06:06 PM bmcutchen

VERTICAL DATUM

THE ELEVATIONS SHOWN ON THIS MAP ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988. SAID ELEVATIONS ARE BASED UPON POSITIONAL SOLUTIONS DERIVED FROM RTK GPS OBSERVATIONS USING THE OHIO DEPARTMENT OF TRANSPORTATION' VIRTUAL REFERENCE SYSTEM EQUIPMENT AND SOFTWARE AND THE NATIONAL GEODETIC SURVEY'S GEOID18 MODEL AT TRAVERSE CONTROL POINTS NUMBERED 201, 202, 203, 204, 205, 206, 207 AND 208. ELEVATIONS FROM SAID TRAVERSE CONTROL POINTS WERE THEN TRANSFERRED BY CONVENTIONAL LEVELING PROCEDURES TO THE PERMANENT BENCHMARKS LISTED HEREON. (FIELDWORK COMPLETED 03/2020).

HORIZONTAL DATUM

THE COORDINATES SHOWN ON THIS MAP ARE BASED ON THE OHIO STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 83 (2011). SAID COORDINATES ARE BASED UPON POSITIONAL SOLUTIONS DERIVED FROM RTK GPS OBSERVATIONS USING THE OHIO DEPARTMENT OF TRANSPORTATION'S VIRTUAL REFERENCE SYSTEM EQUIPMENT AND SOFTWARE AT TRAVERSE CONTROL POINTS NUMBERED 201, 202, 203, 204, 205, 206, 207 AND 208. THE GRID TO GROUND COMBINED SCALE FACTOR (1.000040586) WAS APPLIED AT (0,0) (FIELDWORK COMPLETED 03/2020).

(1)

P.I. Sta. 244+08.19
Δ = 23° 34' 18" (RT)
Dc = 0° 45' 00"
R = 7,639.44'
T = 1,593.99'
L = 3,142.89'
E = 164.52'
C = 3,120.77'
C.B. = N 3° 54' 29" E

(2)

P.I. STA.275+91.56
Δ = 06° 23' 18" (RT)
Dc = 03° 00' 00"
R = 1909.86'
Ls = 425.90'
f s = 6° 23' 18"
LT = 284.12'
ST = 142.13'
Ts = 1184.23'
Es = 236.36'
emax = 0.071

(3)

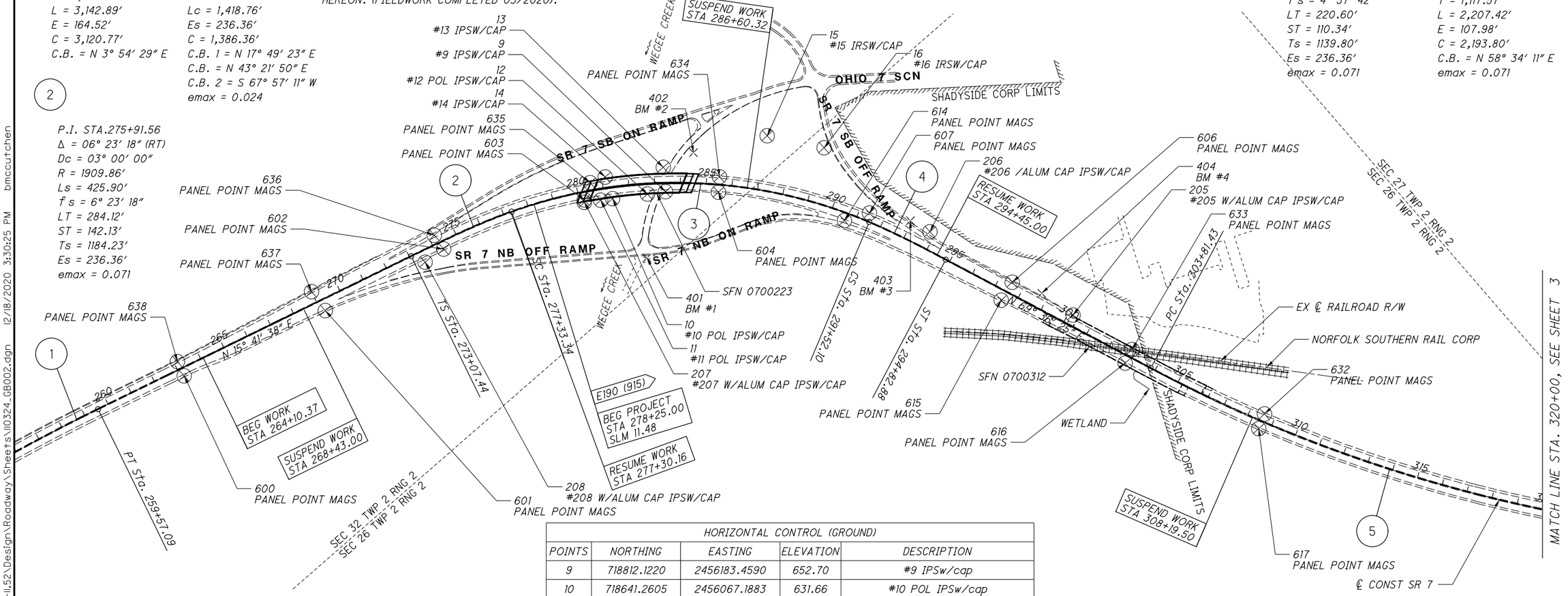
P.I. Sta. 284+91.66
Δ = 53° 54' 47" (RT)
Dc = 3° 00' 00"
R = 1,909.86'
Δc = 42° 33' 46" (RT)
Lc = 1,418.76'
Es = 236.36'
C = 1,386.36'
C.B. 1 = N 17° 49' 23" E
C.B. = N 43° 21' 50" E
C.B. 2 = S 67° 57' 11" W
emax = 0.024

(4)

P.I. STA.292+62.44
Δ = 01° 39' 14" (RT)
Dc = 03° 00' 00"
Ls = 330.78'
f s = 4° 57' 42"
LT = 220.60'
ST = 110.34'
Ts = 1139.80'
Es = 236.36'
emax = 0.071

(5)

P.I. Sta. 314+99.00
Δ = 22° 04' 27" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 1,117.57'
L = 2,207.42'
E = 107.98'
C = 2,193.80'
C.B. = N 58° 34' 11" E
emax = 0.071



VERTICAL CONTROL		
BENCH MARK	ELEVATION	DESCRIPTION
BM#1	654.08	CHISELED SQUARE ON A CONCRETE LIGHT POLE BASE ON THE SOUTH SIDE OF THE INTERSECTION OF OLD STATE ROUTE 7 AND THE RAMP TO STATE ROUTE 7 NORTH.
BM#2	652.01	CHISELED SQUARE ON THE SOUTH CORNER OF A CATCH BASIN LOCATED ON THE EAST SIDE OF OLD STATE ROUTE 7, BEING 110 FEET NORTH OF THE STATE ROUTE 7 OVERPASS.
BM#3	679.51	CHISELED SQUARE ON THE NORTHWEST CORNER OF A CONCRETE LIGHT POLE BASE LOCATED ON THE NORTH SIDE OF STATE ROUTE 7, BEING THE SECOND LIGHT POLE (740 FEET) WEST OF THE RAILROAD OVERPASS.
BM#4	681.72	CHISILED SQUARE ON THE SOUTHEAST CONER OF A CONCRETE LIGHT POLE BASE LOCATED ON THE NORTH SIDE OF STATE ROUTE 7, BEING THE FIRST LIGHT POLE (160 FEET) WEST OF THE RAILROAD OVERPASS.

HORIZONTAL CONTROL (GROUND)				
POINTS	NORTHING	EASTING	ELEVATION	DESCRIPTION
9	718812.1220	2456183.4590	652.70	#9 IPSw/cap
10	718641.2605	2456067.1883	631.66	#10 POL IPSw/cap
11	718602.5687	2456040.8586	649.57	#11 POL IPSw/cap
12	718753.8148	2456143.7812	649.44	#12 POL IPSw/cap
13	718868.4260	2456107.2050	655.13	#13 IPSw/cap
14	718675.5770	2455985.5370	659.11	#14 IPSw/cap
15	719250.2700	2456283.9760	662.85	#15 IRSw/cap
16	719383.9010	2456465.4980	668.82	#16 IRSw/cap
205	719672.8370	2457590.6160	683.99	#205 W/ ALUM CAP IPSw/cap
206	719473.6860	2456981.0750	678.78	#206 W/ ALUM CAP IPSw/cap
207	718549.7990	2456004.9490	672.41	#207 W/ ALUM CAP IPSw/cap
208	717935.1746	2455767.3126	671.44	#208 W/ ALUM CAP IPSw/cap
401	718588	2456327	654.08	BM#1 BMS
402	718994	2456143	652.01	BM#2 BMS
403	719446	2456899	679.51	BM#3 BMS
404	719638	2457447	681.72	BM#4 BMS
600	716945.1760	2455474.6260	675.67	PANEL POINT MAGS
601	717521.7240	2455649.8080	671.63	PANEL POINT MAGS
602	718022.8480	2455777.2990	672.99	PANEL POINT MAGS
603	718556.2850	2455997.5730	673.72	PANEL POINT MAGS
604	718963.7890	2456321.6470	676.08	PANEL POINT MAGS

NOTE: THERE ARE NO EXISTING LANDSCAPED AREAS WITHIN THE WORK LIMITS

HORIZONTAL CONTROL				
POINTS	NORTHING (GROUND)	EASTING (GROUND)	ELEVATION	DESCRIPTION
606	719581.6820	2457339.2610	681.95	PANEL POINT MAGS
607	719347.1640	2456770.8740	681.63	PANEL POINT MAGS
614	719255.3240	2456728.1390	678.13	PANEL POINT MAGS
615	719503.4720	2457362.6960	681.95	PANEL POINT MAGS
616	719699.8720	2457863.9250	685.29	PANEL POINT MAGS
617	719917.5900	2458397.8390	678.33	PANEL POINT MAGS
632	719971.8230	2458370.3660	677.12	PANEL POINT MAGS
633	719754.8950	2457842.8160	684.74	PANEL POINT MAGS
634	719006.5310	2456279.4400	679.62	PANEL POINT MAGS
635	718617.2850	2455962.9890	677.59	PANEL POINT MAGS
636	718031.1670	2455713.2220	673.97	PANEL POINT MAGS
637	717530.8510	2455559.7630	671.99	PANEL POINT MAGS
638	716962.6980	2455415.7630	675.62	PANEL POINT MAGS

HORIZONTAL SCALE IN FEET
0 100 200 400

CALCULATED JTS
CHECKED BMM

SCHEMATIC PLAN
SR 7

BEL-7-11.48

2
213

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6

P.I. Sta. 329+89.56
Δ = 7° 29′ 51″ (LT)
Dc = 0° 56′ 13″
R = 6,115.58′
T = 400.71′
L = 800.28′
E = 13.11′
C = 799.70′
C.B. = N 43° 47′ 02″ E

7

P.I. Sta. 343+49.73
Δ = 27° 37′ 46″ (LT)
Dc = 1° 28′ 00″
R = 3,906.53′
T = 960.60′
L = 1,883.82′
E = 116.37′
C = 1,865.62′
C.B. = N 26° 13′ 13″ E
emax = 0.035

8

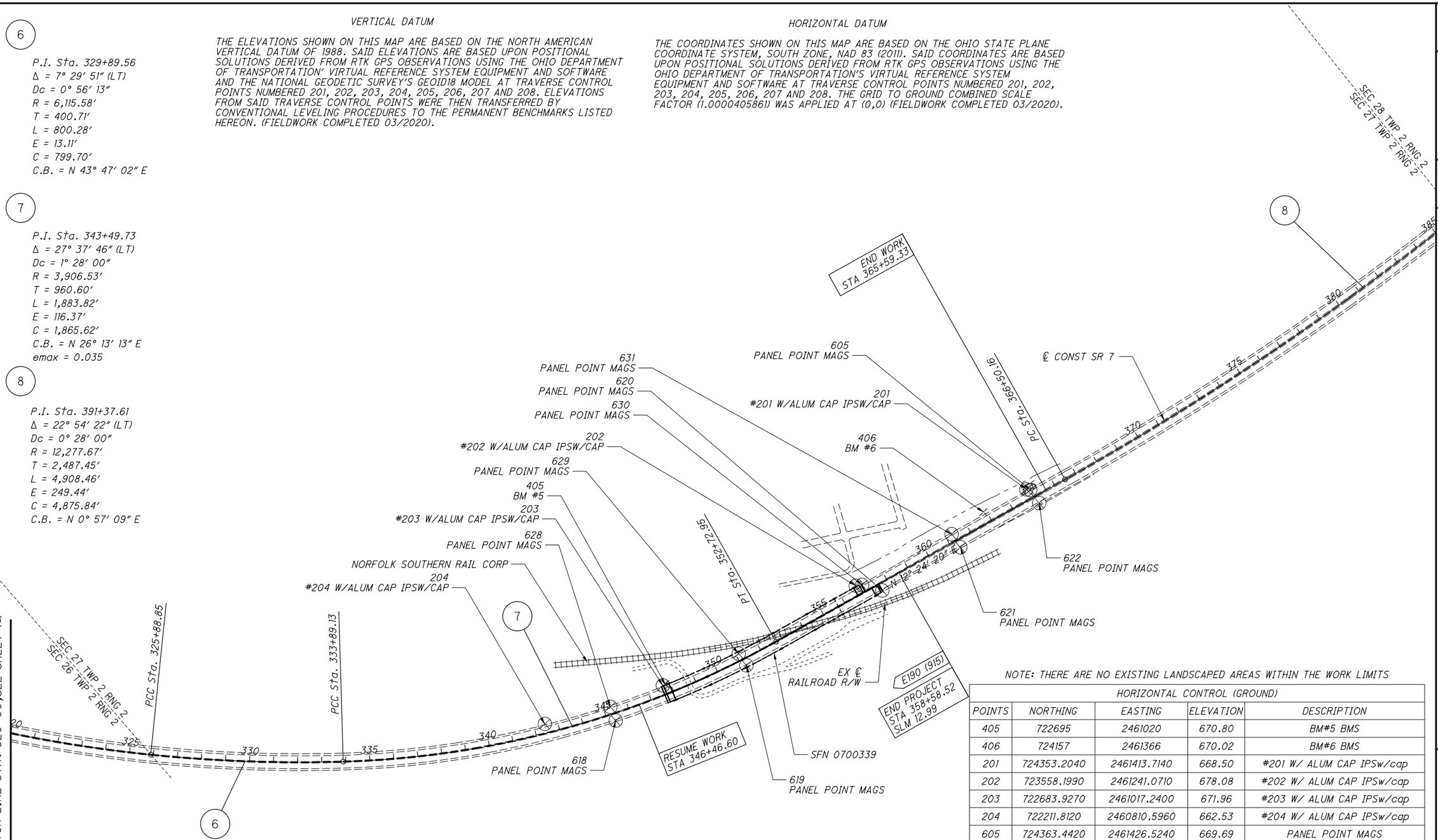
P.I. Sta. 391+37.61
Δ = 22° 54′ 22″ (LT)
Dc = 0° 28′ 00″
R = 12,277.67′
T = 2,487.45′
L = 4,908.46′
E = 249.44′
C = 4,875.84′
C.B. = N 0° 57′ 09″ E

VERTICAL DATUM

THE ELEVATIONS SHOWN ON THIS MAP ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988. SAID ELEVATIONS ARE BASED UPON POSITIONAL SOLUTIONS DERIVED FROM RTK GPS OBSERVATIONS USING THE OHIO DEPARTMENT OF TRANSPORTATION' VIRTUAL REFERENCE SYSTEM EQUIPMENT AND SOFTWARE AND THE NATIONAL GEODETIC SURVEY'S GEOID18 MODEL AT TRAVERSE CONTROL POINTS NUMBERED 201, 202, 203, 204, 205, 206, 207 AND 208. ELEVATIONS FROM SAID TRAVERSE CONTROL POINTS WERE THEN TRANSFERRED BY CONVENTIONAL LEVELING PROCEDURES TO THE PERMANENT BENCHMARKS LISTED HEREON. (FIELDWORK COMPLETED 03/2020).

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NOTE: THERE ARE NO EXISTING LANDSCAPED AREAS WITHIN THE WORK LIMITS

HORIZONTAL CONTROL (GROUND)				
POINTS	NORTHING	EASTING	ELEVATION	DESCRIPTION
405	722695	2461020	670.80	BM#5 BMS
406	724157	2461366	670.02	BM#6 BMS
201	724353.2040	2461413.7140	668.50	#201 W/ ALUM CAP IPSw/cap
202	723558.1990	2461241.0710	678.08	#202 W/ ALUM CAP IPSw/cap
203	722683.9270	2461017.2400	671.96	#203 W/ ALUM CAP IPSw/cap
204	722211.8120	2460810.5960	662.53	#204 W/ ALUM CAP IPSw/cap
605	724363.4420	2461426.5240	669.69	PANEL POINT MAGS
618	722440.6560	2460996.1430	670.14	PANEL POINT MAGS
619	722998.7910	2461186.1150	679.77	PANEL POINT MAGS
620	723626.9370	2461329.2990	677.43	PANEL POINT MAGS
621	723988.4180	2461411.2040	673.62	PANEL POINT MAGS
622	724355.2880	2461492.0390	669.54	PANEL POINT MAGS
628	722461.9230	2460938.4170	668.35	PANEL POINT MAGS
629	723006.6570	2461128.4780	677.74	PANEL POINT MAGS
630	723579.6100	2461256.6170	678.45	PANEL POINT MAGS
631	723997.4960	2461346.4620	673.74	PANEL POINT MAGS

VERTICAL CONTROL		
BENCH MARK	ELEVATION	DESCRIPTION
BM#5	670.80	CHISILED "X" ON THE EAST SIDE OF THE "SHADYSIDE EXIT 1 MILE" CONCRETE SIGN BASE LOCATED ON THE WEST SIDE OF STATE ROUTE 7, BEING AT THE SOUTHWEST CORNER OF THE BOAT DOCK ACCESS DRIVE AND RAILROAD OVERPASS.
BM#6	670.02	CHISELED SQUARE ON THE NORTHEAST CORNER OF THE CONCRETE BASE OF A TRAFFIC COUNTING STATION LOCATED ON THE WEST SIDE OF STATE ROUTE 7, BEING 600 FEET NORTH OF THE BOAT DOCK ACCESS DRIVE AND RAILROAD OVERPASS.

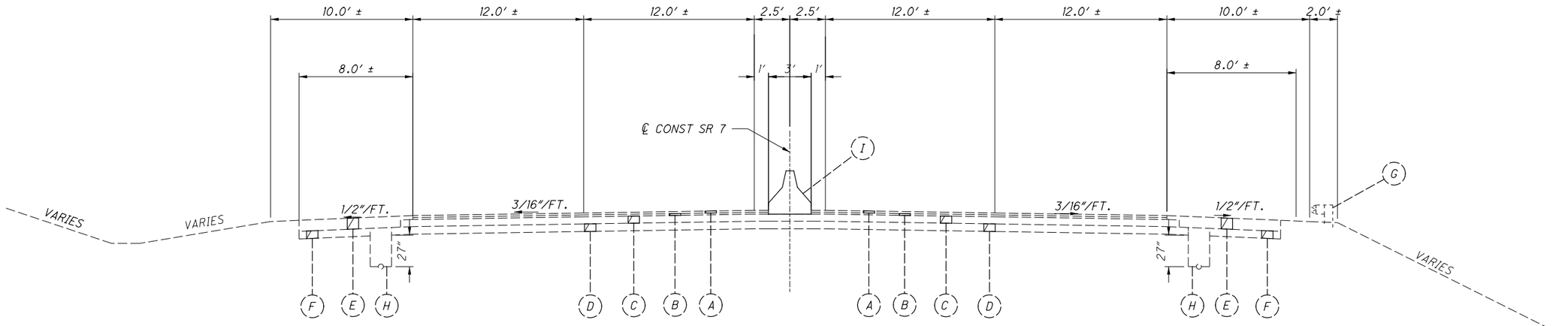
HORIZONTAL SCALE IN FEET
0 100 200 400
CALCULATED JTS
CHECKED BMM

SCHEMATIC PLAN
SR 7

BEL-7-11.48

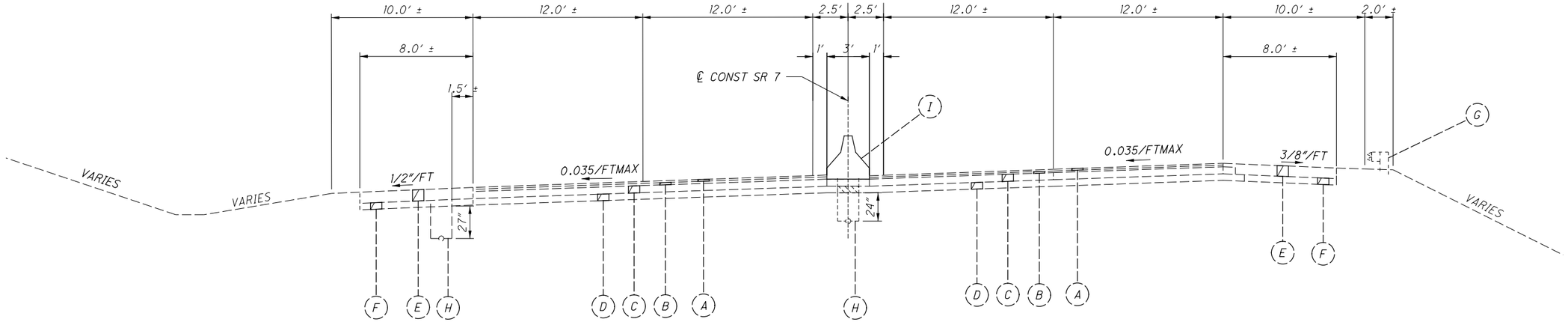
3
213

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NORMAL SECTION

STA 275+80.00 TO STA 284+80.00
STA 310+55.00 TO STA 312+80.00



EXISTING SUPERELEVATED SECTION

STA 264+00.00 TO STA 275+80.00
STA 284+80.00 TO STA 310+55.00
STA 312+80.00 TO STA 361+21.00

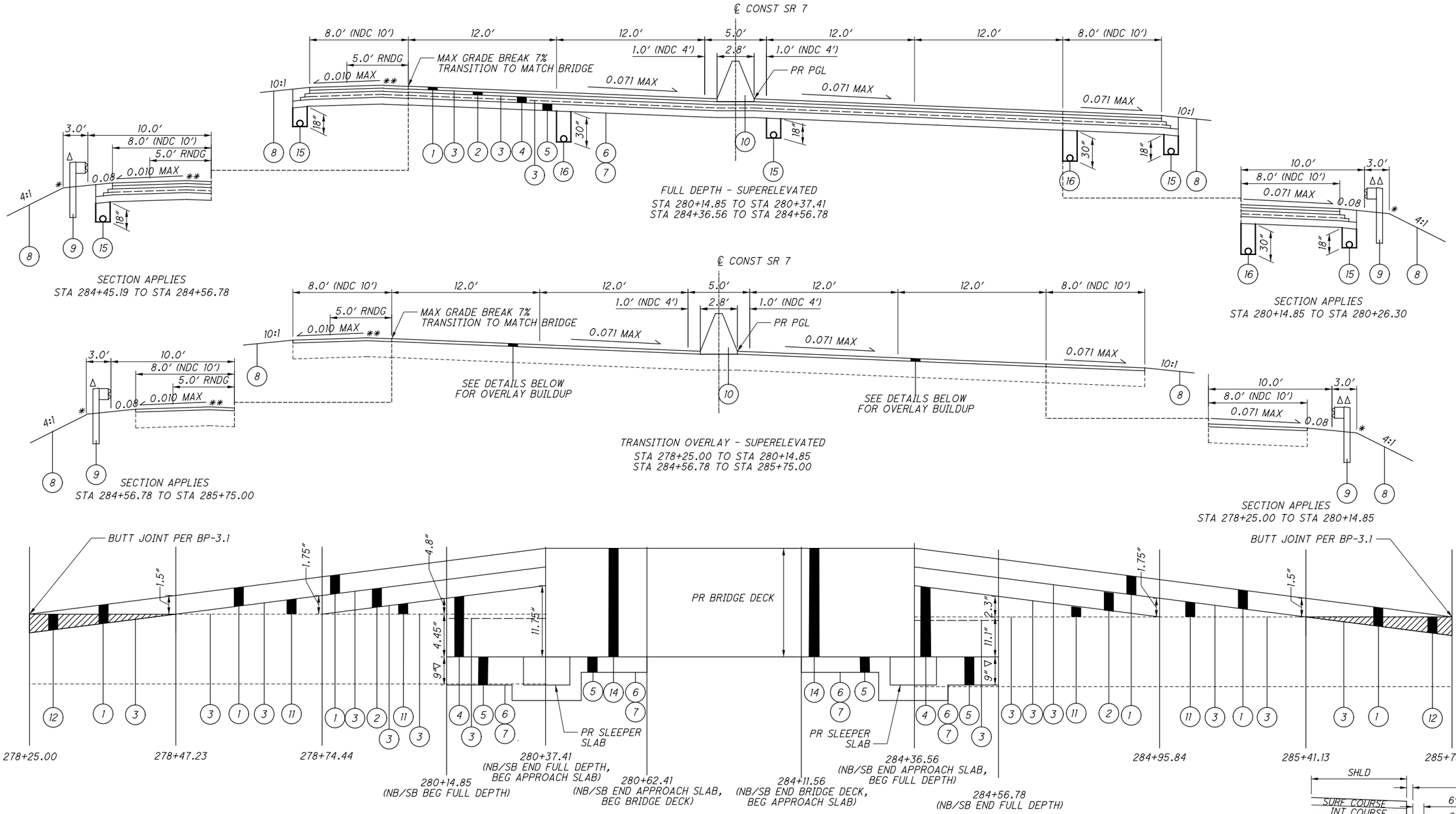
LEGEND

- (A) ITEM 402 1.25″ ASPHALT CONCRETE (70-85 OR AC 20)
- (B) ITEM 404 1.25″ ASPHALT CONCRETE (70-85 OR AC 20)
- (C) ITEM 301 4″ BITUMINOUS AGGREGATE BASE, 702.01 (85-100 OR AC-20) OR 702.09, RT-11 OR RT-12
- (D) ITEM 301 5″ BITUMINOUS AGGREGATE BASE, 702.01 (85-100 OR AC-20) OR 702.09, RT-11 OR RT-12
- (E) ITEM 301 7″ BITUMINOUS AGGREGATE BASE, 702.01 (85-100 OR AC-20) OR 702.09, RT-11 OR RT-12
- (F) ITEM 304 4″ AGGREGATE BASE
- (G) ITEM 606 GUARD RAIL, TYPE 5
- (H) ITEM 605 UNDERDRAINS
- (I) ITEM 622 CONCRETE BARRIER TYPE A, MODIFIED AS PER PLAN (INTEGRAL BASE NOT INCLUDED.)

TYPICAL SECTIONS

BEL-7-11.48

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TYPICAL ASPHALT PAVEMENT EDGE STEP DETAIL

NOT TO SCALE

* 4′ ROUNDING

** SHOULDER ROUNDING OCCURS WHEN SUPERELEVATION EXCEEDS 0.06

Δ STA 284+45.19 TO STA 286+36.90

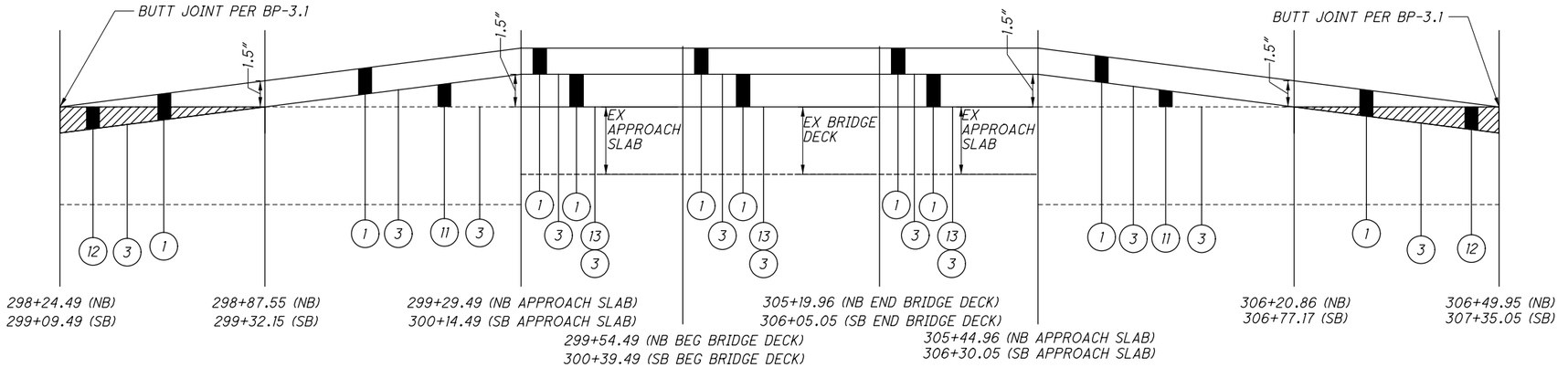
ΔΔ STA 277+45.78 TO STA 280+26.30

∇ PR AGGREGATE TO MATCH BOTTOM OF EX AGGREGATE

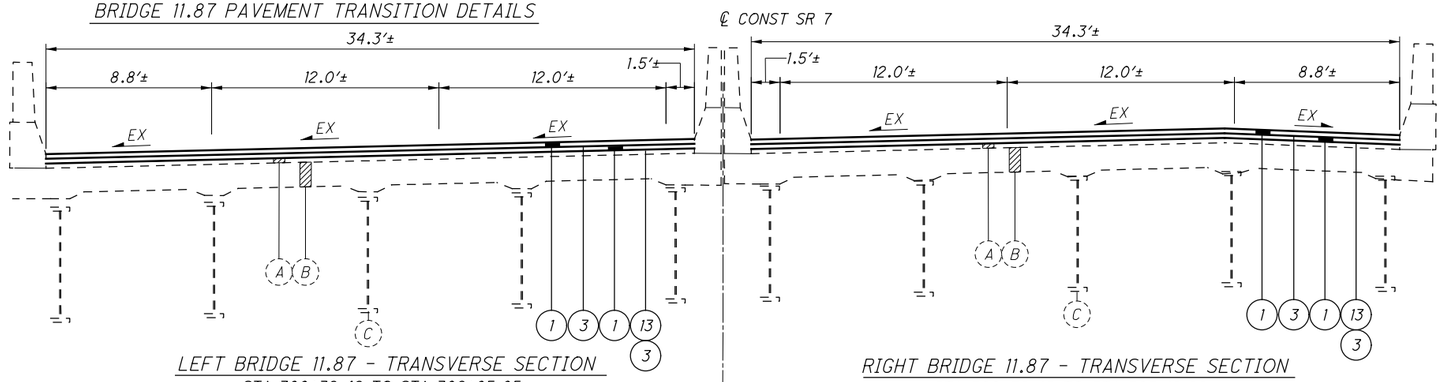
LEGEND

1. ITEM 442 - 1.5″ ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, (448), AS PER PLAN (PG70-22M)
2. ITEM 442 - 1.75″ ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A, (448)
3. ITEM 407 - TACK COAT
4. ITEM 302 - DEPTH VARIES ASPHALT CONCRETE BASE, PG64-22
5. ITEM 304 - DEPTH VARIES AGGREGATE BASE
6. ITEM 204 - SUBGRADE COMPACTION
7. ITEM 204 - PROOF ROLLING
8. ITEM 659 - SEEDING AND MULCHING
9. ITEM 606 - GUARDRAIL, TYPE MGS
10. ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE B1
11. ITEM 442 - (DEPTH VARIES) ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A, (448)
12. ITEM 202 - WEARING COURSE REMOVED (INCLUDED WITH PAYMENT OF SURFACE COURSE, SEE BP-3.1)
13. ITEM 512 - TYPE 3 WATERPROOFING
14. ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15″)
15. ITEM 605 - 6″ BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC
16. ITEM 605 - 6″ SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC

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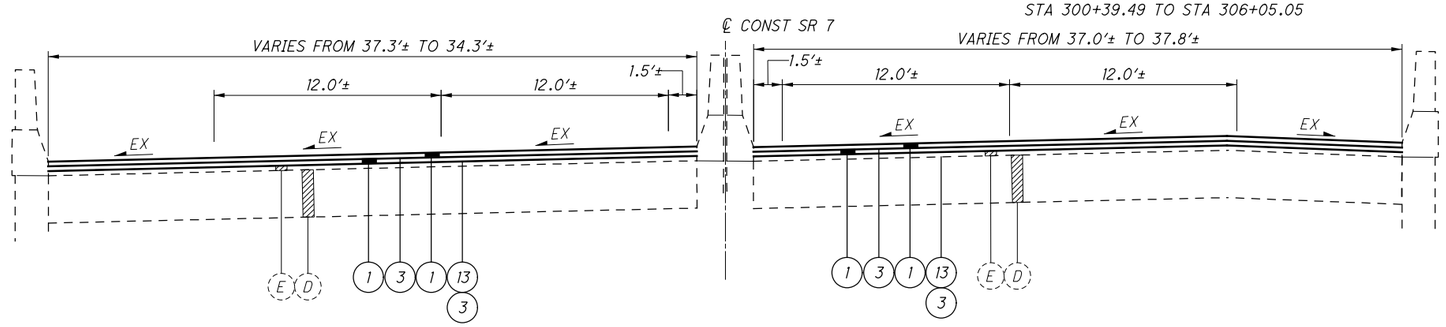


BRIDGE 11.87 PAVEMENT TRANSITION DETAILS



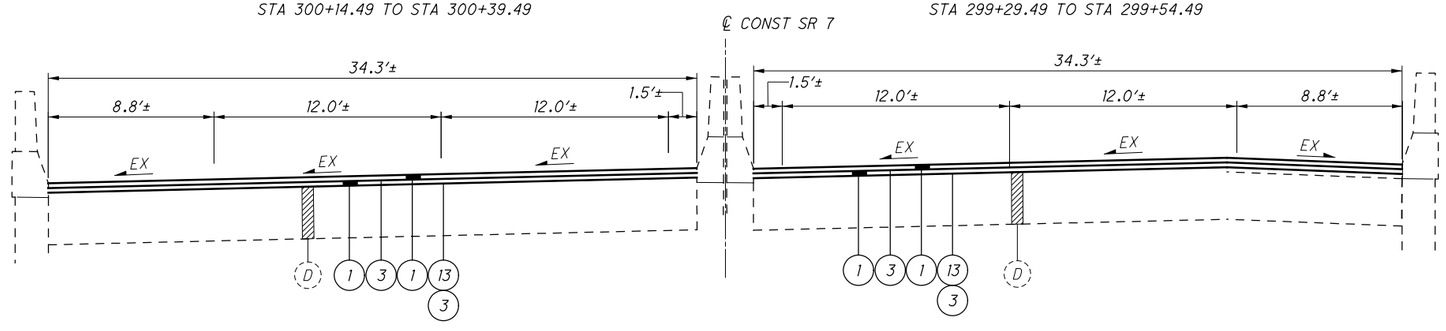
LEFT BRIDGE 11.87 - TRANSVERSE SECTION
STA 300+39.49 TO STA 306+05.05

RIGHT BRIDGE 11.87 - TRANSVERSE SECTION
STA 300+39.49 TO STA 305+19.96



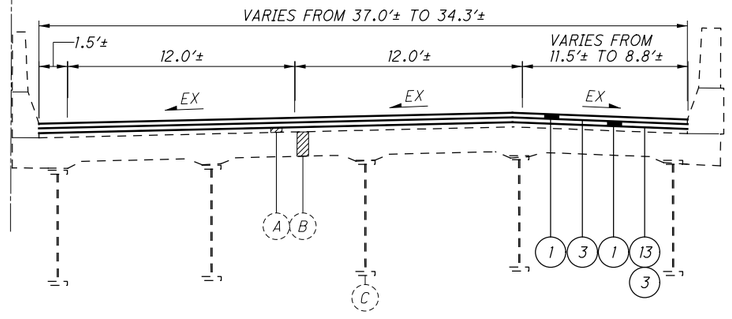
LEFT APPROACH SLAB 11.87 - TRANSVERSE SECTION
STA 300+14.49 TO STA 300+39.49

RIGHT APPROACH SLAB 11.87 - TRANSVERSE SECTION
STA 299+29.49 TO STA 299+54.49



LEFT APPROACH SLAB 11.87 - TRANSVERSE SECTION
STA 306+05.05 TO STA 306+30.05

RIGHT APPROACH SLAB 11.87 - TRANSVERSE SECTION
STA 305+19.96 TO STA 305+44.96



PARTIAL TRANSVERSE SECTION
STA 299+54.49 TO STA 300+39.49

EXISTING BRIDGE LEGEND

- (A) 1½" LATEX MODIFIED CONCRETE WEARING SURFACE
- (B) REINFORCED CONCRETE BRIDGE DECK
- (C) EX STEEL BEAM
- (D) REINFORCED CONCRETE APPROACH SLAB 15"
- (E) 2½" ASPHALT OVERLAY (TBR)

FOR EXISTING LEGEND, SEE SHEET 4
FOR PROPOSED LEGEND, SEE SHEET 5

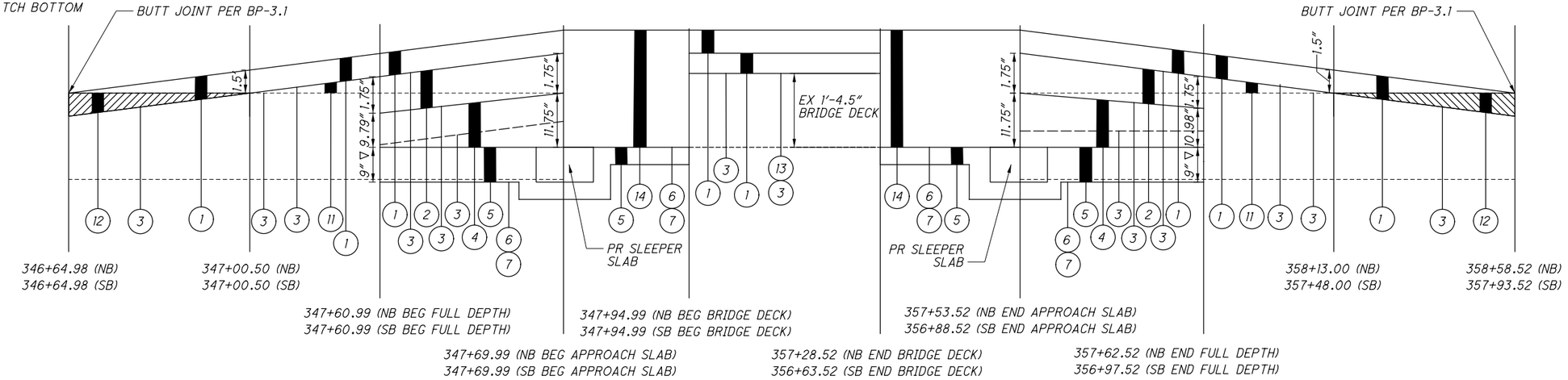
TYPICAL SECTIONS

BEL-7-11.48

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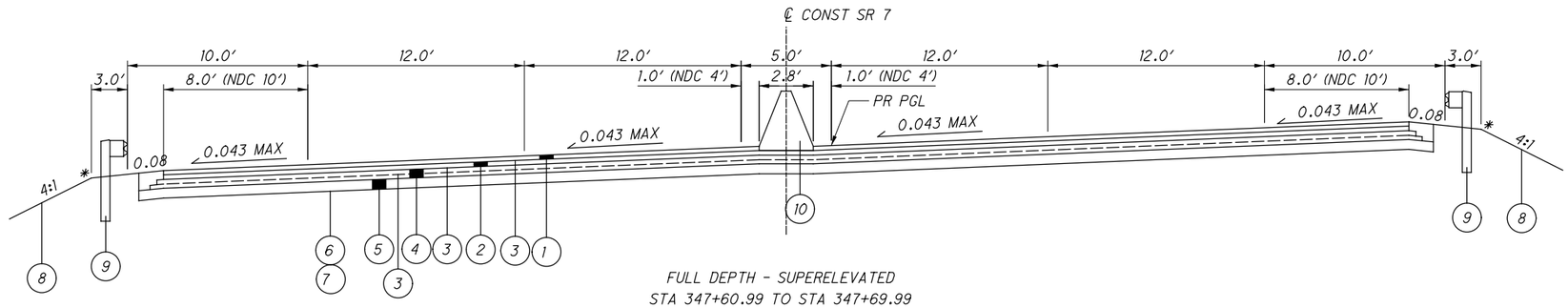
* 4" ROUNDING

▽ PR AGGREGATE TO MATCH BOTTOM OF EX AGGREGATE

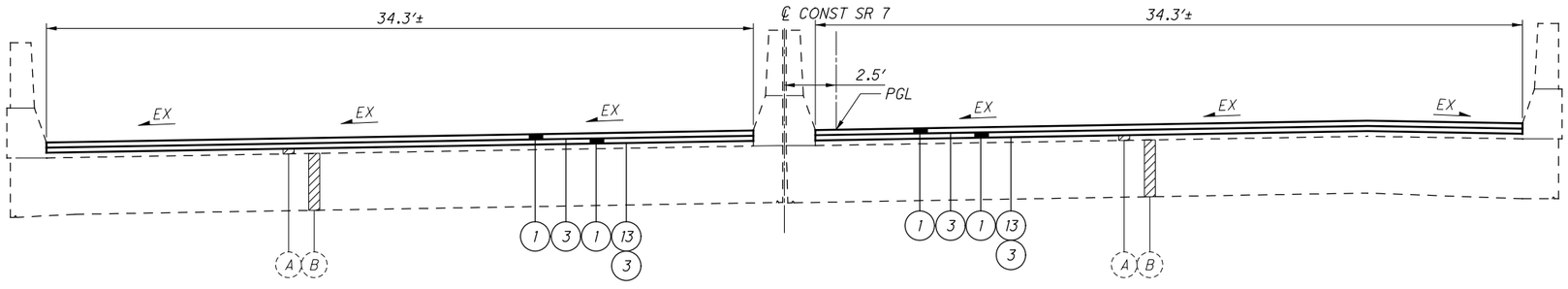


BRIDGE 12.79 PAVEMENT TRANSITION DETAILS

SLEEPER SLAB FULL DEPTH - SEE STRUCTURE SHEETS FOR ADDITIONAL DETAILS

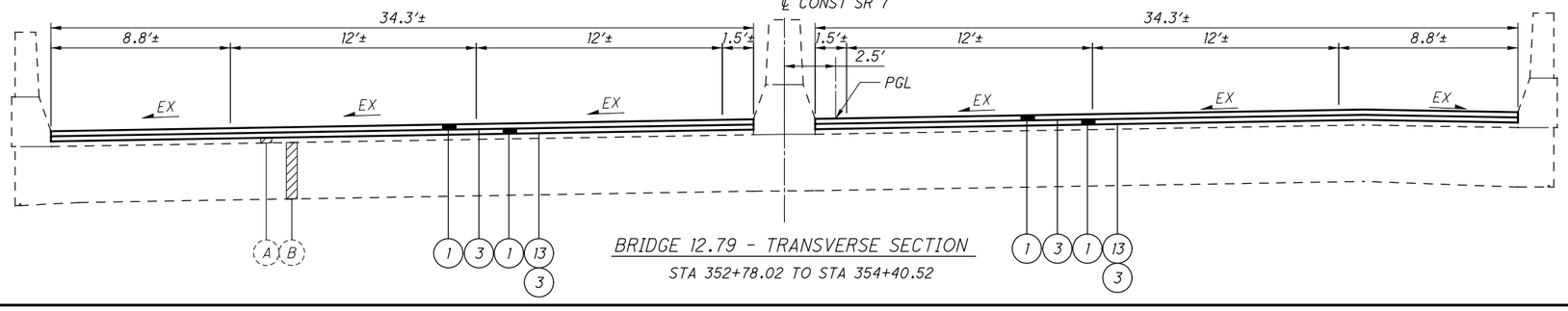


FULL DEPTH - SUPERELEVATED
STA 347+60.99 TO STA 347+69.99



LEFT BRIDGE 12.79 - TRANSVERSE SECTION
STA 347+94.99 TO STA 352+78.02
STA 354+40.52 TO STA 356+63.52

RIGHT BRIDGE 12.79 - TRANSVERSE SECTION
STA 347+94.99 TO STA 352+78.02
STA 354+40.52 TO STA 357+28.52



BRIDGE 12.79 - TRANSVERSE SECTION
STA 352+78.02 TO STA 354+40.52

EXISTING BRIDGE LEGEND

- (A) 1½" LATEX MODIFIED CONCRETE WEARING SURFACE
- (B) REINFORCED CONCRETE BRIDGE DECK
- (C) EX STEEL BEAM
- (D) REINFORCED CONCRETE APPROACH SLAB 15"
- (E) 2½" ASPHALT OVERLAY (TBR)

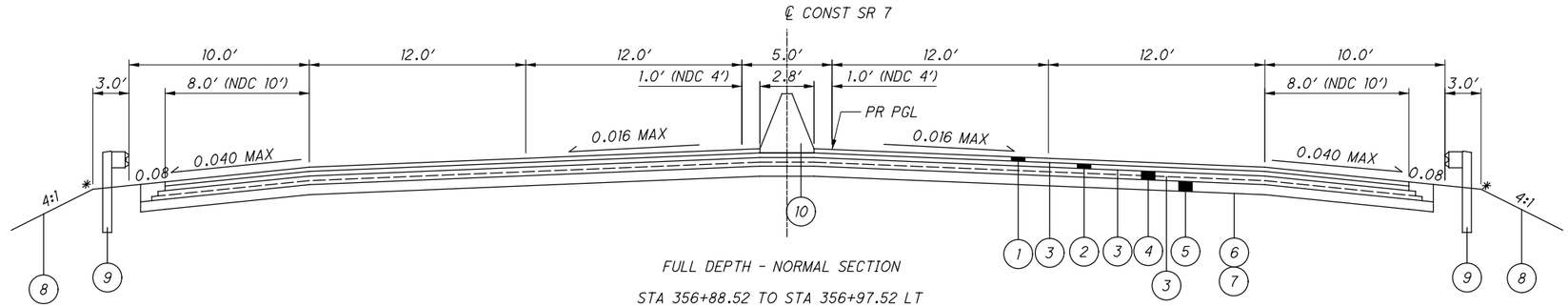
FOR EXISTING LEGEND, SEE SHEET 4
FOR PROPOSED LEGEND, SEE SHEET 5

TYPICAL SECTIONS

BEL-7-11.48

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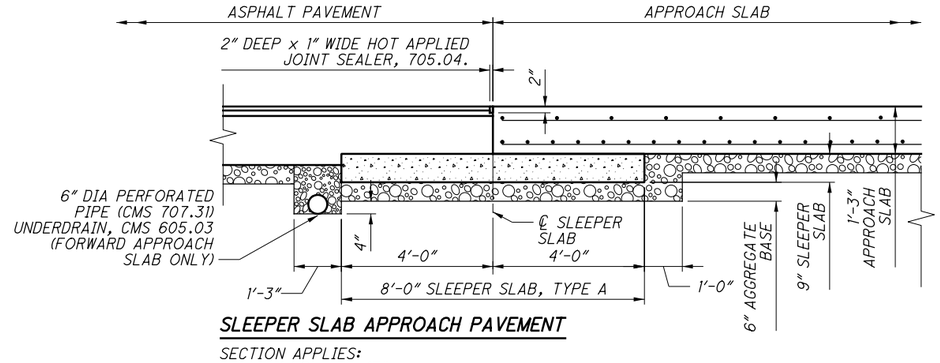
* 4' ROUNDING



FULL DEPTH - NORMAL SECTION

STA 356+88.52 TO STA 356+97.52 LT
STA 357+53.52 TO STA 357+62.52 RT

FOR TRANSITION DETAILS SEE SHEET 7



SLEEPER SLAB APPROACH PAVEMENT

SECTION APPLIES:
BEL-7-11.52 - T = 15"
BEL-7-12.79 - T = 15"

SEE BRIDGE PLANS FOR ADDITIONAL INFORMATION

FOR EXISTING LEGEND, SEE SHEET 4
FOR PROPOSED LEGEND, SEE SHEET 5

TYPICAL SECTIONS

BEL-7-11.48

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UTILITIES

THERE ARE NO KNOWN UNDERGROUND OR OVERHEAD UTILITIES WITHIN THE PROJECT CONSTRUCTION LIMITS.

RAILROAD PROVISIONS & COORDINATION

ALL WORK ON, OVER, UNDER, OR ADJACENT TO NORFOLK SOUTHERN RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH THE NORFOLK SOUTHERN "SPECIAL PROVISIONS FOR THE PROTECTION OF RAILWAY INTERESTS" (NS SPECIAL PROVISIONS).

"ONE CALL" SERVICES DO NOT LOCATE BURIED RAILROAD SIGNAL AND COMMUNICATION LINES. THE CONTRACTOR SHALL CONTACT THE RAILROAD'S REPRESENTATIVE TWO (2) DAYS IN ADVANCE OF THOSE PLACES WHERE EXCAVATION, PILE DRIVING, OR HEAVY LOADS MAY DAMAGE RAILROAD UNDERGROUND LINES ON RAILROAD PROPERTY. UPON REQUEST FROM THE CONTRACTOR OR AGENCY, RAILROAD SIGNAL FORCES WILL LOCATE AND PAINT MARK OR FLAG RAILROAD UNDERGROUND SIGNAL, COMMUNICATION, AND POWER LINES IN THE ARE TO BE DISTURBED FOR THE CONTRACTOR. THE CONTRACTOR SHALL AVOID EXCAVATION OR OTHER DISTURBANCE OF THESE LINES WHICH ARE CRITICAL TO THE SAFETY OF THE RAILROAD AND PUBLIC. IF DISTURBANCE OR EXCAVATION IS REQUIRED NEAR A BURIED RAILROAD SIGNAL, COMMUNICATION, OR POWER LINE, THE LINE SHALL BE POTHOLED MANUALLY WITH CAREFUL HAND EXCAVATION BY THE CONTRACTOR AND PROTECTED BY THE CONTRACTOR DURING THE COURSE OF THE DISTURBANCE UNDER THE SUPERVISION AND DIRECTION OF A RAILROAD SIGNAL REPRESENTATIVE.

FOR PROJECTS EXCEEDING 30 DAYS OF CONSTRUCTION, CONTRACTOR SHALL PROVIDE THE FLAGMAN A SMALL WORK AREA WITH A DESK/COUNTER AND CHAIR WITHIN THE FIELD/SITE TRAILER, INCLUDING THE USE OF BATHROOM FACILITIES, WHERE THE FLAGMAN CAN CHECK IN/OUT WITH THE PROJECT, AS WELL AS TO THE FLAGMAN'S HOME TERMINAL. THE WORK AREA SHOULD PROVIDE ACCESS TO TWO (2) ELECTRICAL OUTLETS FOR RECHARGING RADIO(S), AND A LAPTOP COMPUTER; AND HAVE THE ABILITY TO PRINT OFF NEEDED DOCUMENTATION AND ORDERS AS NEEDED AT THE FIELD/SITE TRAILER. THIS SHOULD AID IN MAXIMIZING THE FLAGMAN'S TIME AND EFFICIENCY ON THE PROJECT. ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS FOR THE ABOVE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 619 - FIELD OFFICE, TYPE C.

THE CONTRACTOR SHALL PROVIDE CONSTRUCTION SUBMITTALS, DETAILING MEANS AND METHODS OF THE PROPOSED WORK, IN ACCORDANCE WITH THE PUBLIC PROJECT MANUAL.

THE PROPOSED WORK WILL NOT CHANGE THE QUANTITY AND/OR CHARACTER OF FLOW ON THE RAILWAY'S RIGHT-OF-WAY OR IN THE DITCHES AND DRAINAGE STRUCTURES.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 2 & 3 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: VRS/RTK/TOTAL STATION/DIFFERENTIAL LEVELING

MONUMENT TYPE:
IRON REBARS, THREE-QUARTER (3/4) INCH DIAMETER, THIRTY (30) INCHES LONG WITH TWO (2) INCH ALUMINUM CAP PLACED ON THE TOP

IRON PIPES, THIRTEEN-SIXTEENTHS (13/16) INCH INSIDE DIAMETER, THIRTY (30) INCHES LONG WITH A PLASTIC CAP PLACED IN THE TOP BEARING THE INITIALS EMHT INC.

IRON REBAR, ONE-HALF (1/2) INCH DIAMETER, TWELVE (12) INCHES LONG WITH A PLASTIC PLUG PLACED ON THE TOP BEARING THE INITIALS EMHT INC.
VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM:	NAVD88
GEOID:	GEOID18

HORIZONTAL POSITIONING

REFERENCE FRAME:	NAD83(2011)
ELLIPSOID:	GRS 80
MAP PROJECTION:	LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM:	OHIO STATE PLANE, SOUTH ZONE
COMBINED SCALE FACTOR:	1.0000405861 (GRID TO GROUND)
ORIGIN OF COORDINATE SYSTEM:	0,0

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH C&MS 623.

UNITS ARE IN U.S. SURVEY FEET.

WORK LIMITS

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

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A 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.

ROUNDING

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

ITEM 204 - PROOF ROLLING

THE FOLLOWING QUANTITY IS CARRIED TO THE GENERAL SUMMARY FROM SHEET 75 TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING.

ITEM 204 - PROOF ROLLING 2 HOUR.

SEEDING AND MULCHING

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

659, SOIL ANALYSIS TEST	2 EACH
659, TOPSOIL	867 CU. YD.
659, SEEDING AND MULCHING	7807 SQ. YD.
659, REPAIR SEEDING AND MULCHING	390 SQ. YD.
659, COMMERCIAL FERTILIZER	1.05 TON
659, LIME	1.61 TON
659, WATER	42 M. GAL.

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.

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, (448), AS PER PLAN (PG70-22M)

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

WATERS OF THE US AVOIDANCE

WATERS OF THE US HAVE BEEN IDENTIFIED WITHIN THE PROJECT AREA. THE CONTRACTOR SHALL EXERCISE CAUTION TO ENSURE THAT NO IMPACTS OCCUR TO WATERS OF THE US. NO TEMPORARY OR PERMANENT FILL OF ANY TYPE MAY BE PLACED IN ANY STREAM OR WETLAND AS PART OF THIS PROJECT. ANY ACTIVITIES OCCURRING IN STREAMS OR WETLANDS WOULD REQUIRE PERMITS FROM THE US ARMY CORPS OF ENGINEERS AND/OR THE OHIO EPA.

ANY OTHER SITE PROPOSED BY THE CONTRACTOR FOR OFF PROJECT ANCILLARY CONSTRUCTION (STAGING AREAS, WASTE LOCATIONS, AND/OR BORROW LOCATIONS) MUST MEET THE REQUIREMENTS OF C&MS 105.16.

ITEM 611 - DRAINAGE STRUCTURE, MISC.: INLET, NO. 4 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN

THE WORK SHALL CONSIST OF ADJUSTING TO GRADE THE TROUGH AND CONSTRUCTING THE SINGLE SLOPE BARRIER, TYPE B1 ABOVE THE INLET AS PER ODOT SCD 1-2.4.

ALL LABOR, TOOLS, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE BID PRICE FOR THE ITEM 611 - DRAINAGE STRUCTURE, MISC.: INLET, NO. 4 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN

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

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

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER C&MS 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 JTS
CHECKED BMM

GENERAL NOTES

BEL-7-11.48

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SEQUENCE OF CONSTRUCTION

THE PLANNED IMPROVEMENTS OF SR 7 SHALL BE COMPLETED OVER 2 PHASES AND MUST FOLLOW THE PHASING BELOW.

PRE-PHASE 1 PART 1
PRIOR TO THE START OF PHASE 1, THE NORTHBOUND OUTSIDE SHOULDER SHALL BE RECONSTRUCTED (PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN) IN ORDER TO CARRY SHIFTED PHASE 1 TRAFFIC. LANE CLOSURES (PER ODOT SCD MT-95.30) SHALL BE IMPLEMENTED DURING WORKING HOURS.

PRE-PHASE 1 PART 2
PRE-PHASE 1 PART 2 SHALL CONSTRUCT THE MAINLINE CROSSOVERS BY REMOVING THE EXISTING MEDIAN WALL AND REPLACING IT WITH STANDARD ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A. THE CONTRACTOR SHALL MAINTAIN THE DROP-OFF REQUIREMENTS PER ODOT SCD MT-101.90. THE WORK SHALL BE COMPLETED UTILIZING A LANE CLOSURE PER ODOT SCD MT-95.30. PART 1 AND 2 SHALL NOT BE COMPLETED CONCURRENTLY. THE CONTRACTOR SHALL INSTALL AND MAINTAIN CROSSOVER LIGHTING PER ODOT SCD MT-100.00.

PHASE 1
PHASE 1 SHALL CONSTRUCT THE IMPROVEMENTS ON SOUTHBOUND SR 7. ONE LANE IN EACH DIRECTION SHALL BE MAINTAINED ON THE NORTHBOUND SIDE. RAMP B (SR 7 SOUTHBOUND TO CR 7) SHALL REMAIN OPEN BY UTILIZING A SOUTHBOUND RAMP CROSSOVER. SOUTHBOUND OUTSIDE SHOULDER SHALL BE RECONSTRUCTED (PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN) IN ORDER TO CARRY SHIFTED PHASE 2 TRAFFIC.

AT THE COMPLETION OF PHASE 1 THE CROSSOVERS SHALL BE REMOVED AND TRAFFIC SHALL BE MAINTAINED AS PER STANDARD CONSTRUCTION DRAWING FROM OCTOBER 31, 2021 THRU MARCH 1, 2022.

THE OPEN ENDS OF THE BARRIER AT THE CROSSOVER LOCATIONS SHALL BE PROTECTED WITH PORTABLE BARRIER OR IMPACT ATTENUATORS. ALL COST FOR THE ABOVE WORK SHALL BE INCUDED IN THE LUMP SUM ITEM BID FOR ITEM 614 MAINTAINING TRAFFIC.

PHASE 2
PHASE 2 SHALL CONSTRUCT THE IMPROVEMENTS ON NORTHBOUND SR 7. ONE LANE IN EACH DIRECTION SHALL BE ON THE SOUTHBOUND SIDE. RAMP D (CR 7 TO SR 7 NORTHBOUND) SHALL BE CLOSED FOR THE DURATION OF THIS PHASE.

POST PHASE 2
AT THE CONCLUSION OF PHASE 2, TRAFFIC SHALL BE RESTORED TO EXISTING ALIGNMENTS. MEDIAN WALL THAT WAS REMOVED FOR CROSSOVER INSTALLATION SHALL BE RECONSTRUCTED. LANE CLOSURES (PER ODOT SCD MT-95.30) SHALL BE IMPLEMENTED DURING MEDIAN WALL WORKING HOURS.

ITEM 614, MAINTAINING TRAFFIC

A MINIMUM OF 1 LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT AND ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC.

ALL RAMPS SHALL BE MAINTAINED AT ALL TIMES WITH THE FOLLOWING EXCEPTIONS:

RAMP D PHASE 2 DETOUR 90 DAYS MAX

TRAFFIC SHALL BE DETOURED AS DETAILED WITHIN. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF $650 PER DAY FOR EACH CALANDAR DAY ANY RAMP REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

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 DISPLAY 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.



W20-H13-60

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48 X 30 INCH ROAD CLOSED SIGNS, SIGN SUPPORTS, BARRICADES AND LIGHTS, AS DETAILED IN SCD MT-101.60 AT THE LOCATIONS DETAILED WITHIN.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS AND SIGN SUPPORTS, AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND TYPE III BARRICADES OF THE TYPE AND LOCATION AS DETAILED WITHIN.

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.

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 15 M. GAL.

WORK ZONE MARKINGS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE ON THE FINAL WEARING COURSE, PRIOR TO APPLICATION OF PERMANANT MARKINGS, PER THE REQUIREMENTS OF C&MS 614.11.

ITEM 614, WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT 4.12 MILE
ITEM 614, WORK ZONE EDGE LINE, CLASS I, 6", 807 PAINT 7.97 MILE
ITEM 614, WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807 PAINT 1907 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.

INTERIM COMPLETION DATE

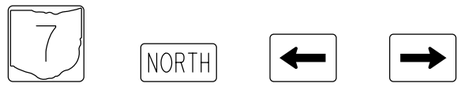
ALL PHASE ONE WORK SHALL BE COMPETED, CROSSOVERS REMOVED, AND A MINIMUM OF ONE LANE OF TRAFFIC MAINTAINED IN EACH DIRECTION AS PER STANDARD CONSTRUCTION DRAWING MT-95.30 BY OCTOBER 31, 2021.

OCTOBER 31, 2021 SHALL BE CONSIDERED AN INTERIM COMPLETION DATE AND LIQUIDATED DAMAGES SHALL BE ASSESSED IN ACCORDANCE WITH CMS 180.07 FOR EACH CALENDAR DAY THAT PHASE ONE WORK IS NOT COMPLETE AND THE CROSSOVER IS STILL IN USE.

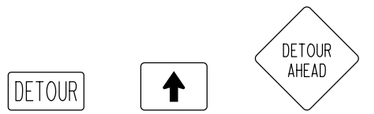
ITEM 614, DETOUR SIGNING

THE FOLLOWING SIGNS SHALL BE ERECTED ALONG THE DESIGNATED OFFICIAL DETOUR ROUTS AND SHALL BE ASSEMBLED AS SHOWN ON THE DETOUR PLANS. ALL DETOUR SIGNING SHALL BE INSTALLED BEFORE COMMENCING ANY OF THE PROPOSED WORK.

EACH SIGN ASSEMBLE SHALL BE PLACED 100 FT. (OR AS DIRECTED) IN ADVANCE OF THE IMPENDING CHANGE OF ROUTE. OFFSET SHALL BE PER STANDARD CONSTRUCTION DRAWING TC-42.20.

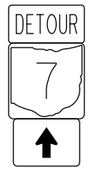


M1-5-24-2 M3-1-24 M6-1L-21 M6-1R-21



M4-8-24 M6-3-21 W20-2-36

IN ADDITION TO THE SIGNS LISTED ABOVE AND SHOWN ON THE DETOUR MAPS, PLACE THE FOLLOWING SIGN ASSEMBLY:



AT INTERVALS NOT TO EXCEED 2 MILES IN RURAL AREAS AND AT INTERVALS NOT TO EXCEED 2 BLOCKS WITHIN URBAN AREAS. IT IS ANTICIPATED THAT 8 S.R. 7 SIGN ASSEMBIES WILL BE REWUIRED TO MEET THIS MAXIMUM SPACING.

ALL ANTICIPATED QUANTITIES ARE SHOWN IN THE TABLE BELOW AND ARE PROVIDED FOR INFORMATION ONLY.

RAMP A DETOUR

SIGN CODE	NO. OF SIGNS	SIZE
M4-8-24	8	24" X 12"
M1-5-24-2	12	24" X 24"
M3-1-24	4	24" X 12"
M6-1R-21	1	21" X 15"
M6-1L-21	2	21" X 15"
M6-3-21	9	21" X 15"
W20-2-36	1	36" X 36"

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, DETOUR SIGNING, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

CALCULATED BER CHECKED SMM

MAINTENANCE OF TRAFFIC GENERAL NOTES

BEL-7-11.48

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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:

WZSW REVISION NUMBER	COUNTY-ROUTE-SECTION	DIRECTION
WZ-60620	BEL-7-11.48	NB
WZ-60620	BEL-7-11.48	SB

POTENTIAL WZSZ LOCATIONS SHALL HAVE AN ORIGINAL (PRE-CONSTRUCTION) 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 THIS 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, PRE-CONSTRUCTION, 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	W/ POSITIVE PROT.		W/OUT POSITIVE PROT.	
	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
33 SIGN MNTH
ASSUMING 6 DSL SIGN ASSEMBLYIES FOR 3 MONTHS (PHASE 1)
ASSUMING 5 DSL SIGN ASSEMBLYIES FOR 3 MONTHS (PHASE 2)

WORK ZONE INCREASED PENALTIES SIGN (R11-H5A)

R11-H5A-48 SIGNS SHALL BE FURNISHED, ERECTED, AND MAINTAINED IN GOOD CONDITION AND/OR REPLACED AS NECESSARY AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. SIGNS SHALL BE MOUNTED AT THE APPROPRIATE OFFSETS AND ELEVATIONS AS PRESCRIBED BY THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THEY SHALL BE MAINTAINED ON SUPPORTS MEETING CURRENT SAFETY CRITERIA.

THE SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN FOUR HOURS BEFORE THE ACTUAL START OF WORK. THE SIGNS SHALL BE REMOVED OR COVERED NO LATER THAN FOUR HOURS FOLLOWING RESTORATION OF ALL LANES TO TRAFFIC WITH NO RESTRICTIONS, OR SOONER AS DIRECTED BY THE ENGINEER. TEMPORARY SIGN COVERING AND UNCOVERING DUE TO TEMPORARY LANE RESTORATIONS SHALL BE GUIDED BY THE FOUR-HOUR LIMITATIONS STATED ABOVE. SUCH LANE RESTORATIONS SHOULD BE EXPECTED TO REMAIN IN EFFECT FOR 30 OR MORE CONSECUTIVE CALENDAR DAYS, SUCH AS DURING WINTER SHUT-DOWNS.

THE SIGNS ON THE MAINLINE SHALL BE DUAL MOUNTED UNLESS NOT PHYSICALLY POSSIBLE. THE FIRST SIGN SHALL BE PLACED BETWEEN THE ROAD WORK AHEAD (W20-1) SIGN AND THE NEXT SIGN IN THE SEQUENCE. SIGNS SHALL BE ERECTED ON EACH ENTRANCE RAMP AND EVERY 2 MILES THROUGH THE CONSTRUCTION WORK LIMITS. SIGNS ON THE MAINLINE SHALL BE R11-H5A-48. SIGNS USED ON THE RAMPS SHALL BE R11-H5A-24. R11-H5A-24 SIGNS MAY BE USED IN THE MEDIAN IN LIEU OF R11-H5A-48 SIGNS IF IT IS NOT PHYSICALLY POSSIBLE TO PROVIDE R11-H5A-48 SIGNS IN THE MEDIAN.

THE R11-H5A-48 SIGNS SHALL BE MOUNTED ON 2 NO. 3 POSTS WHEN LOCATED WITHIN CLEAR ZONES.

THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED, BUT GOOD, CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE RETROREFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF C&MS 730.19.

WORK ZONE INCREASED PENALTIES SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGN AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND REERECTED AT ANOTHER LOCATION AS DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE, IN PLACE WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING, MAINTAINING, COVERING DURING SUSPENSION OF WORK, AND REMOVAL OF THE SIGN AND SUPPORT.

ITEM 614, WORK ZONE INCREASED PENALTIES SIGN 10 EACH

WORK ZONE INCREASED PENALTIES SIGNS WILL BE PLACED AT THE LOCATIONS DETAILED WITHIN.

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS APPROVED PRODUCTS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE 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.

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 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 ARE CARRIED TO THE GENERAL SUMMARY FROM SHEET 16 AND SHOULD BE INCLUDED IN THE PLANS:

ITEM 614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN 290 EACH

PAYMENT FOR RESURFACING WITHIN THE TRANSITION AREA SHALL BE PAID FOR UNDER THE APPROPRIATE BID ITEMS FOR THE WORK REQUIRED, AS PROVIDED FOR IN THE PLANS.

CALCULATED BER CHECKED SMM

MAINTENANCE OF TRAFFIC GENERAL NOTES

BEL-7-11.48

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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.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY FROM SHEET 16 :

ITEM 614, BARRIER REFLECTOR, TYPE 1 ONE-WAY
839 EACH
ITEM 614, OBJECT MARKER, ONE-WAY
449 EACH
ITEM 614, OBJECT MARKER, TWO-WAY
407 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

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 INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY FROM SHEET 16 :

ITEM 614, BARRIER REFLECTOR, TYPE 2, ONE-WAY
133 EACH
ITEM 614, OBJECT MARKER, ONE-WAY
133 EACH

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

ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

- DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.
- DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC, OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

IN ADDITION TO THE REQUIREMENT OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED BY THE ENGINEER:

- FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION OR AT THE POINT OF ROAD CLOSURE, AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE 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 100 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.

NOTIFICATION OF TRAFFIC RESTRICTIONS

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

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION TIME TABLE

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

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF THE C&MS, ALL LABOR AND MATERIALS ASSOCIATED WITH THE FOLLOWING CONSTRUCTION ACTIVITIES SHALL BE INCIDENTAL TO THIS ITEM:

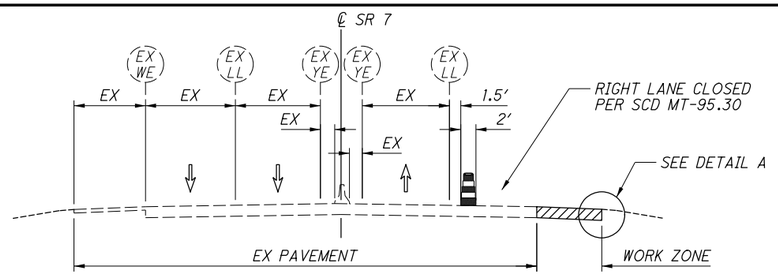
- REMOVAL OF EXISTING SHOULDER
- EXCAVATION TO MATCH BOTTOM OF EX PAVEMENT BUILDUP
- RECONSTRUCTION OF SHOULDER BUILDUP TO REMAIN (FOR PAVEMENT BUILDUP, SEE DETAIL A ON SHEET 13)
- WIDENINING OF SHOULDER WHERE SPECIFIED (INCLUDING GRADING)
- EMBANKMENT FOR ADDITIONAL WIDENING

CALCULATED BER CHECKED SMM

MAINTENANCE OF TRAFFIC GENERAL NOTES

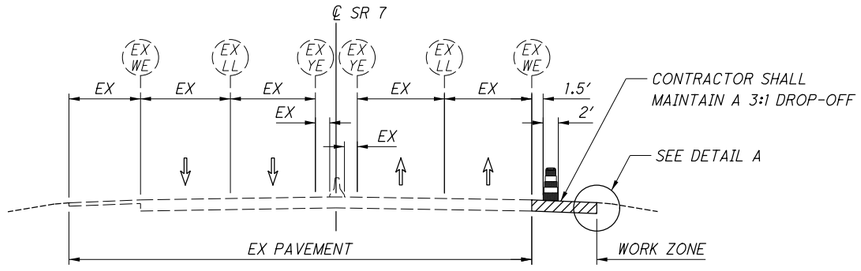
BEL-7-11.48

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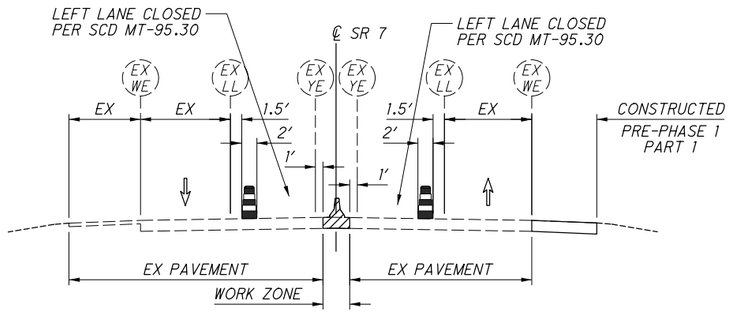


TYPICAL SECTION - SR 7
PRE-PHASE 1 PART 1 - SHOULDER RECONSTRUCTION - WORKING HOURS
STA. 266+78 - STA. 270+01*
STA. 271+93 - STA. 280+48*
STA. 284+00 - STA. 289+52*
STA. 298+00 - STA. 299+29*
STA. 305+44 - STA. 347+71*
STA. 357+54 - STA. 366+36*

* - SEE NOTE 1

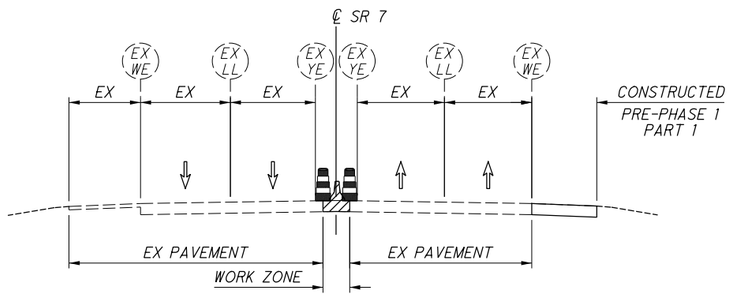


TYPICAL SECTION - SR 7
PRE-PHASE 1 PART 1 - SHOULDER RECONSTRUCTION - NON-WORKING HOURS



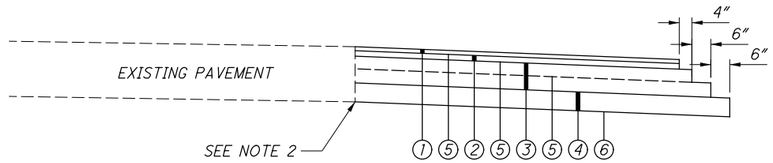
TYPICAL SECTION - SR 7
PRE-PHASE 1 PART 2 - MEDIAN REMOVAL - WORKING HOURS
STA. 264+20 - STA. 268+33*
STA. 294+50 - STA. 299+00*
STA. 361+10 - STA. 365+49*

* - SEE NOTE 1



TYPICAL SECTION - SR 7
PRE-PHASE 1 PART 2 - MEDIAN REMOVAL - NON-WORKING HOURS

DETAIL A
(NOT TO SCALE)
ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN



LEGEND
(1) - ITEM 442 - 1 1/2″ ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A, (448), AS PER PLAN (PG70-22M)
(2) - ITEM 442 - 1 3/4″ ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A, (448)
(3) - ITEM 302 - 8 1/2″ ASPHALT CONCRETE BASE, PG64-22
(4) - ITEM 304 - 6″ AGGREGATE BASE
(5) - ITEM 407 - TACK COAT (0.055 GAL/SY)
(6) - ITEM 204 - SUBGRADE COMPACTION

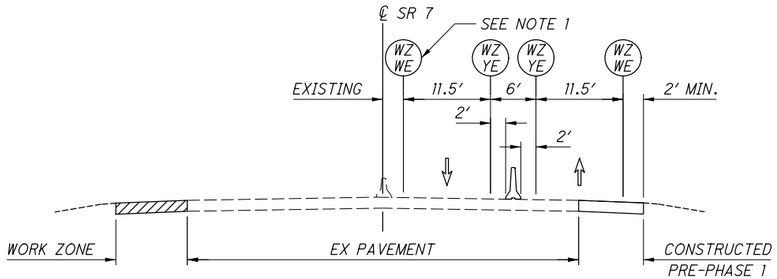
NOTES:
1. STATION RANGES DENOTES THE LIMITS OF SHOULDER REPLACEMENT OR MEDIAN REMOVAL AND NOT THE LENGTH OF THE MOT SET-UP NEEDED TO RECONSTRUCT THE SHOULDERS OR REMOVE THE MEDIAN. THE CONTRACTOR SHALL REFER TO ODOT SCD MT-95.30 FOR THE REQUIRED MOT SET-UP.

2. THE BOTTOM OF THE RECONSTRUCTED SHOULDER BUILDUP SHALL MATCH THE ELEVATION OF THE BOTTOM OF EXISTING PAVEMENT BUILDUP.

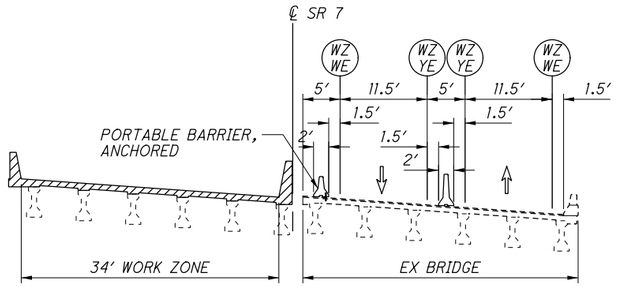
MAINTENANCE OF TRAFFIC TYPICAL SECTIONS - PRE-PHASE 1

BEL-7-11.48

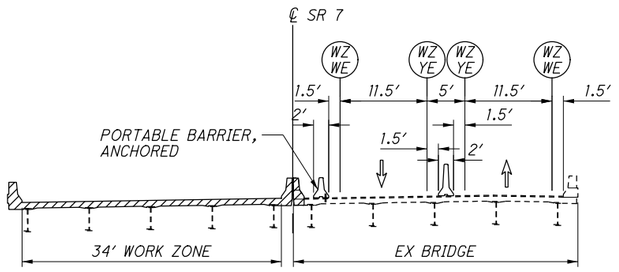
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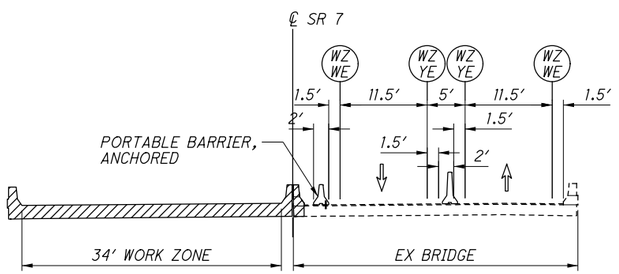
TYPICAL SECTION - SR 7
PHASE 1 - PAVEMENT SECTION



TYPICAL SECTION - SR 7
PHASE 1 - STRUCTURE NO. BEL-7-1152C SECTION



TYPICAL SECTION - SR 7
PHASE 1 - STRUCTURE NO. BEL-7-1187C SECTION



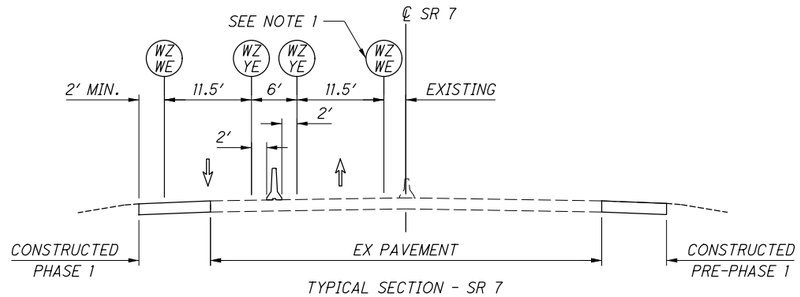
TYPICAL SECTION - SR 7
PHASE 1 - STRUCTURE NO. BEL-7-1279C SECTION

NOTES:
1. THE WORK ZONE EDGE LINE SHALL BE PLACED ON TOP OF THE EXISTING YELLOW EDGE LINE.

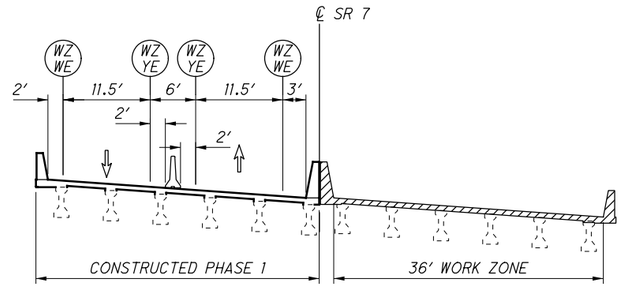
MAINTENANCE OF TRAFFIC TYPICAL SECTIONS - PHASE 1

BEL-7-11.48

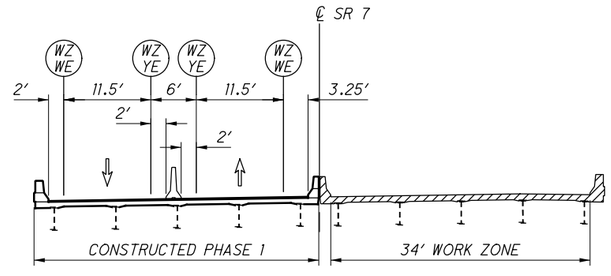
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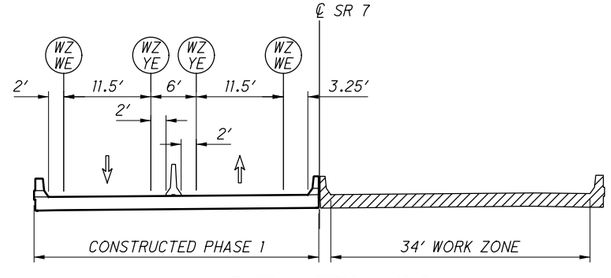
TYPICAL SECTION - SR 7
PHASE 2 - PAVEMENT SECTION



TYPICAL SECTION - SR 7
PHASE 2 - STRUCTURE NO. BEL-7-1152C SECTION



TYPICAL SECTION - SR 7
PHASE 2 - STRUCTURE NO. BEL-7-1187C SECTION



TYPICAL SECTION - SR 7
PHASE 2 - STRUCTURE NO. BEL-7-1279C SECTION

NOTES:
1. THE WORK ZONE EDGE LINE SHALL BE PLACED ON TOP OF THE EXISTING YELLOW EDGE LINE.

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS - PHASE 2

BEL-7-11.48

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SHEET NO.	PHASE	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS. (UNIDIRECTIONAL) EACH	614 DETOUR SIGNING	614 WORK ZONE CROSSOVER LIGHTING SYSTEM EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH	614 BARRIER REFLECTOR, TYPE 1, ONE-WAY EACH	614 BARRIER REFLECTOR, TYPE 2, ONE-WAY EACH	614 OBJECT MARKER, ONE WAY EACH	614 OBJECT MARKER, TWO WAY EACH	614 WORK ZONE EDGE LINE, CLASS 1, 6" 807 PAINT FT	614 WORK ZONE CHANNELIZING LINE, CLASS 1, 12" 807 PAINT FT	614 WORK ZONE DOTTED LINE, CLASS 1, 6" 807 PAINT FT		615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN SY		622 PORTABLE BARRIER, 50" AS PER PLAN FT	622 PORTABLE BARRIER, UNANCHORED FT	622 PORTABLE BARRIER, ANCHORED FT							
17	PRE-PHASE 1			1										460												
18	PRE-PHASE 1													634												
19	PRE-PHASE 1													292												
20	PRE-PHASE 1													567												
21	PRE-PHASE 1			1										292												
22	PRE-PHASE 1													260												
23	PRE-PHASE 1													692												
24	PRE-PHASE 1													691												
25	PRE-PHASE 1													690												
26	PRE-PHASE 1													714												
27	PRE-PHASE 1													730												
29	PRE-PHASE 1													214												
30	PRE-PHASE 1			1										992												
33	PHASE 1				28						277															
34	PHASE 1				88	23		7	16	3103	23	420				780										
35	PHASE 1					36	1	21	16	3200				528		800	180									
36	PHASE 1	1				43	1	27	16	3200				371		800	240	410								
37	PHASE 1	1				29		29	16	3649		356		571		80										
38	PHASE 1					36		20	16	3055		260		337		800										
39	PHASE 1	1				32	13	31	16	3200				560		800	30	20								
40	PHASE 1					32	16	32	16	3200				787		800										
41	PHASE 1					32	16	32	16	3200				787		800										
42	PHASE 1					32	16	32	16	3200				786		800										
43	PHASE 1					32	16	32	16	3200				762		800										
44	PHASE 1	1				37	8	29	16	3200				341		800	60	60								
45	PHASE 1	1				37	5	26	16	3200				259		800										
46	PHASE 1	1			64	14	6	8	12	2372				558		570										
50	PHASE 2				42					148	266															
51	PHASE 2	1			68	23		7	16	2332	34	588				780										
52	PHASE 2					32		16	16	3132		68				800										
53	PHASE 2					38	4	26	16	3200						800										
54	PHASE 2					32		16	16	3129		219				800										
55	PHASE 2	1				39		23	16	3200		300				800	90	20								
56	PHASE 2					36	12	32	16	3200						800										
57	PHASE 2					32	7	23	16	3200						800										
58	PHASE 2					32		16	16	3200						800										
59	PHASE 2					32		16	16	3200						800										
60	PHASE 2					32		16	16	3200						800										
61	PHASE 2					41		25	16	3200						800										
62	PHASE 2	1				42	6	32	16	3200						800		20								
63	PHASE 2					13	6	8	11	2264						550										
10 , 67	PHASE 2		LS																							
SUB-TOTAL										80784 FT																
TOTALS CARRIED TO GENERAL SUMMARY		9	LS	3	290	839	133	582	407	15.30 MI	600	2211		13875		19560	600	530								

CALCULATED BER
CHECKED SMM

MAINTENANCE OF TRAFFIC SUBSUMMARY

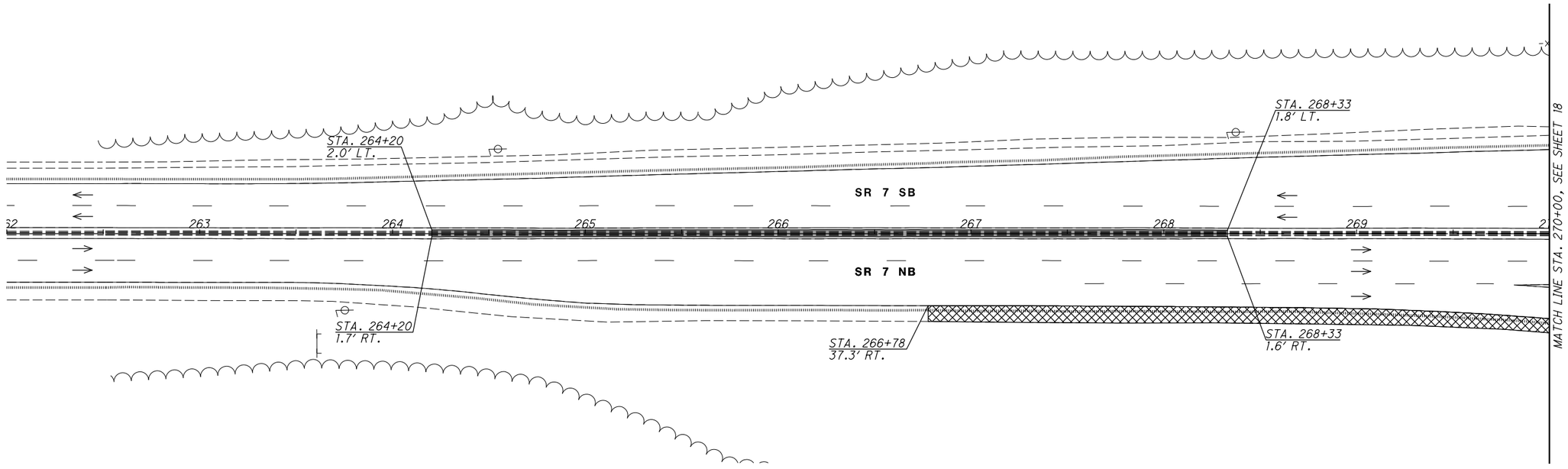
BEL-7-11.48

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NOTES:

1. LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND MEDIAN WORK ADJACENT TO SR 7. WORK SHALL BE LIMITED TO ONE SIDE OF NB TRAFFIC AT A TIME.

2. EXISTING SHOULDERS SHALL BE REMOVED AND REPLACED PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE SHEET 13). WHERE DETAILED, SHOULDER WIDENING SHALL BE CONSTRUCTED USING THE SAME PAVEMENT BUILDUP. SEE SHEET 13 FOR PAVEMENT BUILDUP DETAILS.



LEGEND

SHOULDER TO BE REMOVED AND RECONSTRUCTED THIS PHASE (SEE NOTE 2)

TEMPORARY PAVEMENT CONSTRUCTED THIS PHASE

OPEN TRAVEL LANE

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED BER
CHECKED SMM

MAINTENANCE OF TRAFFIC PLAN - SR 7
PRE-PHASE 1 - STA. 262+00 TO STA. 270+00

BEL-7-11.48

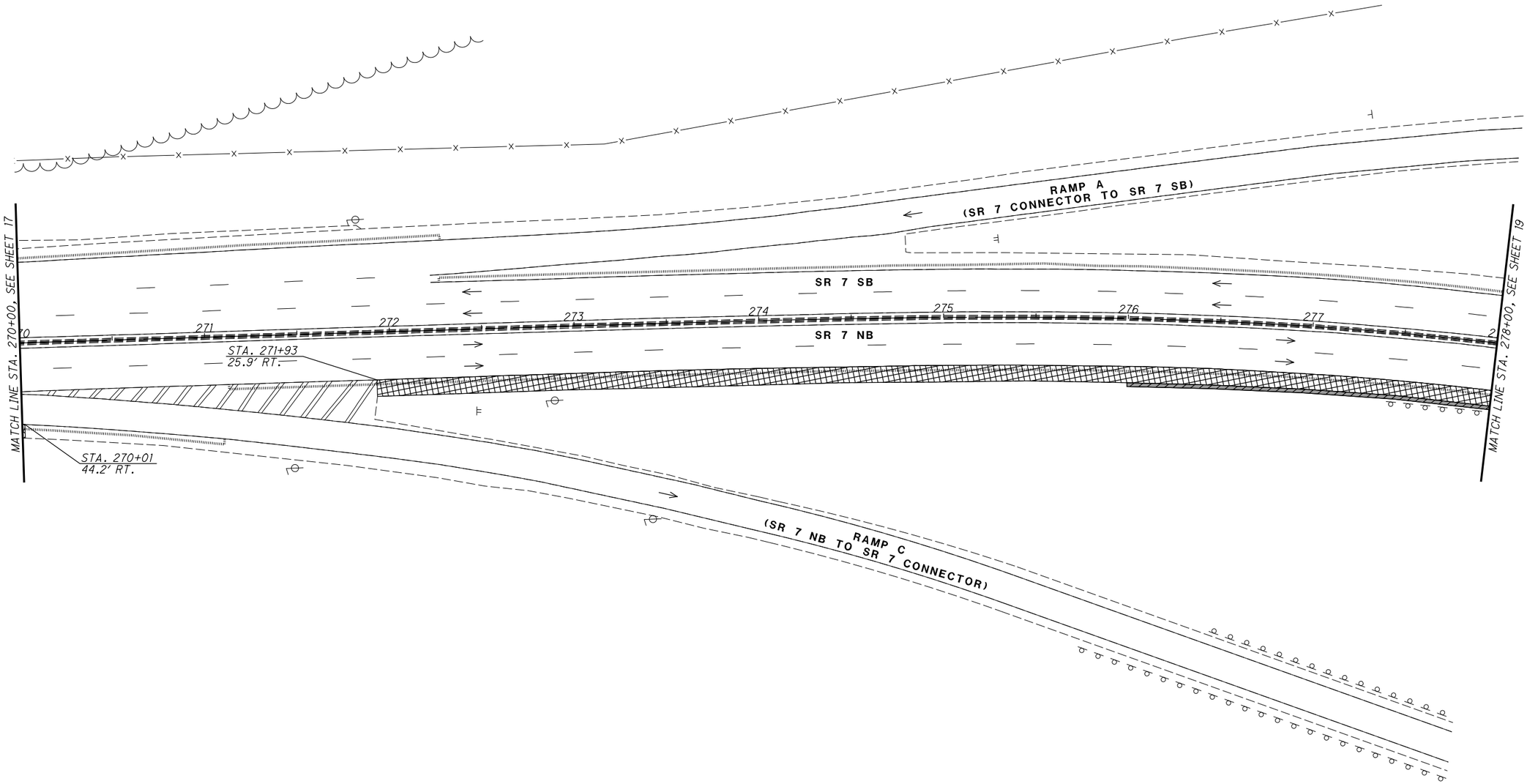
17
213

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NOTES:

1. LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND MEDIAN WORK ADJACENT TO SR 7. WORK SHALL BE LIMITED TO ONE SIDE OF NB TRAFFIC AT A TIME.

2. EXISTING SHOULDERS SHALL BE REMOVED AND REPLACED PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE SHEET 13). WHERE DETAILED, SHOULDER WIDENING SHALL BE CONSTRUCTED USING THE SAME PAVEMENT BUILDUP. SEE SHEET 13 FOR PAVEMENT BUILDUP DETAILS.



LEGEND

SHOULDER TO BE REMOVED AND RECONSTRUCTED THIS PHASE (SEE NOTE 2)

OPEN TRAVEL LANE

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED BER
CHECKED SMM

MAINTENANCE OF TRAFFIC PLAN - SR 7
PRE-PHASE 1 - STA. 270+00 TO STA. 278+00

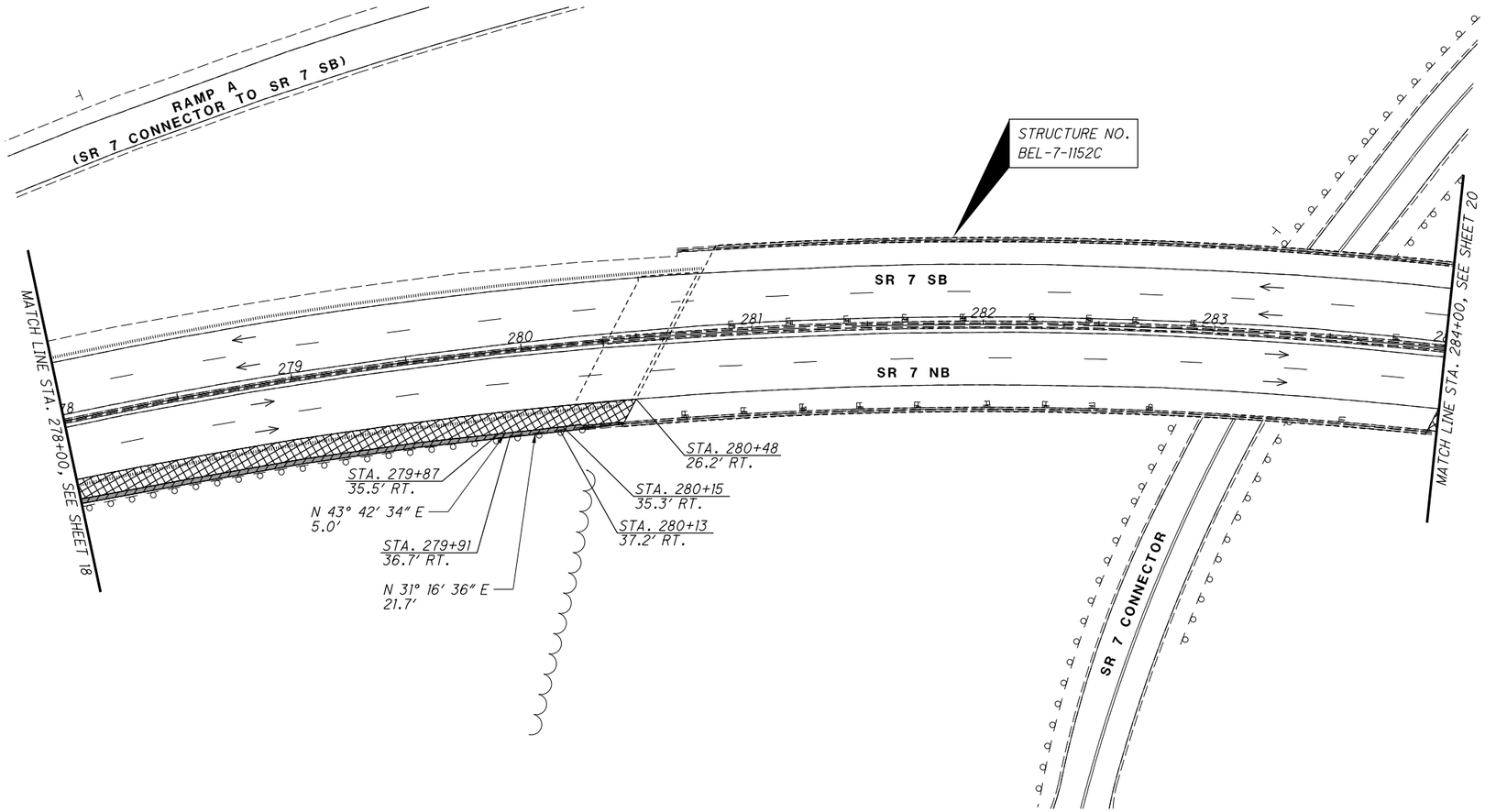
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NOTES:

1. LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND MEDIAN WORK ADJACENT TO SR 7. WORK SHALL BE LIMITED TO ONE SIDE OF NB TRAFFIC AT A TIME.

2. EXISTING SHOULDERS SHALL BE REMOVED AND REPLACED PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE SHEET 13). WHERE DETAILED, SHOULDER WIDENING SHALL BE CONSTRUCTED USING THE SAME PAVEMENT BUILDUP. SEE SHEET 13 FOR PAVEMENT BUILDUP DETAILS.



LEGEND

SHOULDER TO BE REMOVED AND RECONSTRUCTED THIS PHASE (SEE NOTE 2)

SHOULDER WIDENING CONSTRUCTED THIS PHASE (SEE NOTE 2)

OPEN TRAVEL LANE

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED BER
CHECKED SMM

MAINTENANCE OF TRAFFIC PLAN - SR 7
PRE-PHASE 1 - 278+00 TO STA. 284+00

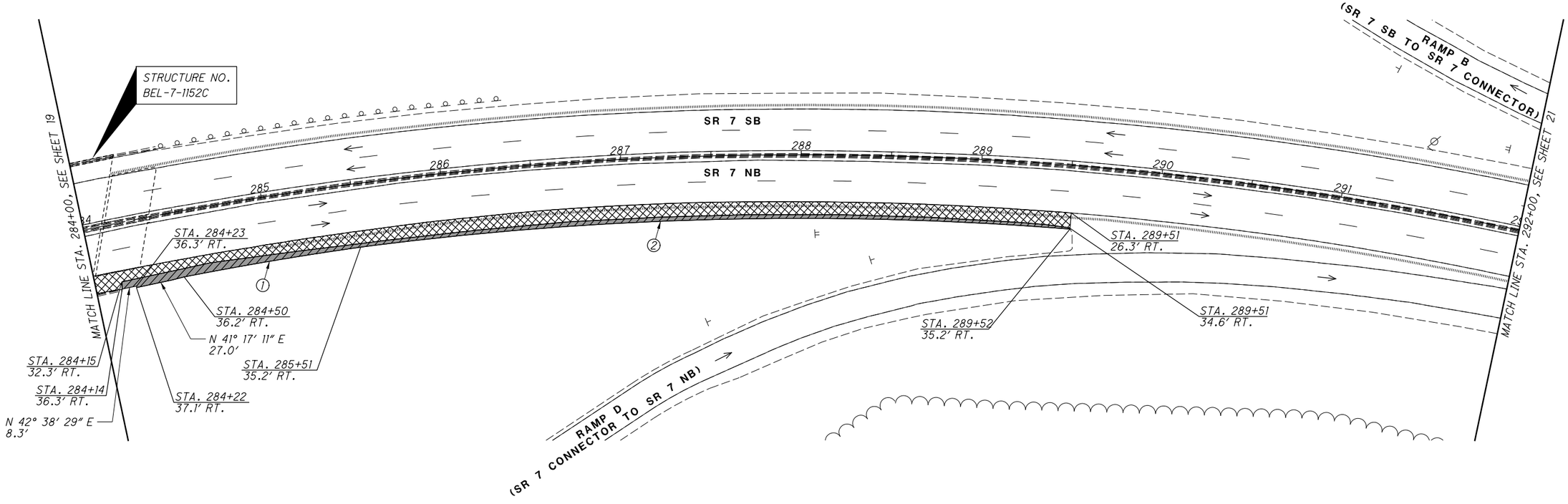
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NOTES:

1. LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND MEDIAN WORK ADJACENT TO SR 7. WORK SHALL BE LIMITED TO ONE SIDE OF NB TRAFFIC AT A TIME.

2. EXISTING SHOULDERS SHALL BE REMOVED AND REPLACED PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE SHEET 13). WHERE DETAILED, SHOULDER WIDENING SHALL BE CONSTRUCTED USING THE SAME PAVEMENT BUILDUP. SEE SHEET 13 FOR PAVEMENT BUILDUP DETAILS.



(1) Δ = 3° 01' 49" (RT)
Dc = 3° 03' 27"
R = 1873.91'
T = 49.56'
L = 99.11'
E = 0.66'
C = 99.09
C.B. = N 44° 30' 19" E

(2) Δ = 12° 01' 05" (RT)
Dc = 3° 03' 23"
R = 1874.63'
T = 197.33'
L = 393.21'
E = 10.36'
C = 392.49
C.B. = N 52° 37' 15" E

LEGEND

SHOULDER TO BE REMOVED AND RECONSTRUCTED THIS PHASE (SEE NOTE 2)

SHOULDER WIDENING CONSTRUCTED THIS PHASE (SEE NOTE 2)

OPEN TRAVEL LANE

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED BER
CHECKED SMM

MAINTENANCE OF TRAFFIC PLAN - SR 7
PRE-PHASE 1 - STA. 284+00 TO STA. 292+00

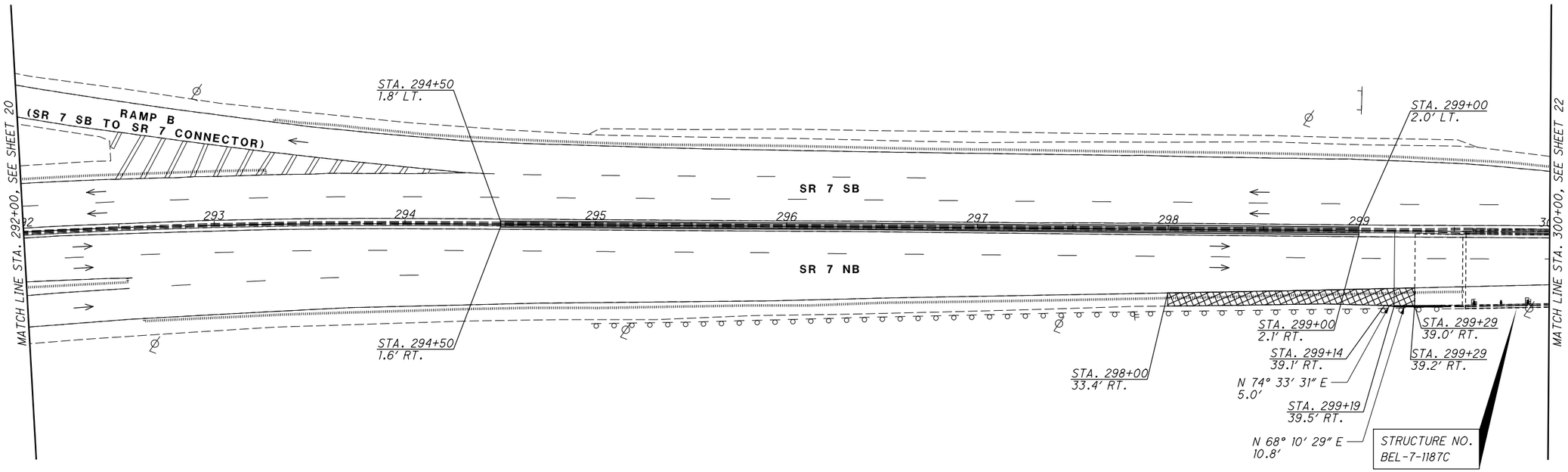
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NOTES:

1. LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND MEDIAN WORK ADJACENT TO SR 7. WORK SHALL BE LIMITED TO ONE SIDE OF NB TRAFFIC AT A TIME.

2. EXISTING SHOULDERS SHALL BE REMOVED AND REPLACED PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE SHEET 13). WHERE DETAILED, SHOULDER WIDENING SHALL BE CONSTRUCTED USING THE SAME PAVEMENT BUILDUP. SEE SHEET 13 FOR PAVEMENT BUILDUP DETAILS.



LEGEND

SHOULDER TO BE REMOVED AND RECONSTRUCTED THIS PHASE (SEE NOTE 2)

TEMPORARY PAVEMENT CONSTRUCTED THIS PHASE

OPEN TRAVEL LANE

N

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED BER
CHECKED SMM

MAINTENANCE OF TRAFFIC PLAN - SR 7
PER-PHASE 1 - STA. 292+00 TO STA. 300+00

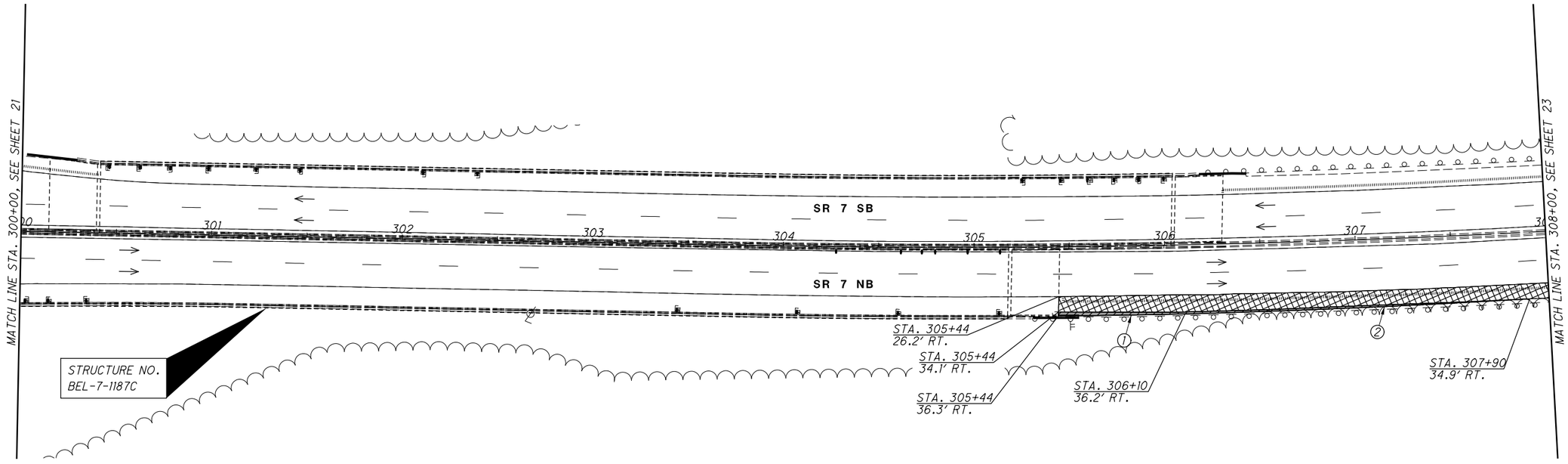
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NOTES:

1. LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND MEDIAN WORK ADJACENT TO SR 7. WORK SHALL BE LIMITED TO ONE SIDE OF NB TRAFFIC AT A TIME.

2. EXISTING SHOULDERS SHALL BE REMOVED AND REPLACED PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE SHEET 13). WHERE DETAILED, SHOULDER WIDENING SHALL BE CONSTRUCTED USING THE SAME PAVEMENT BUILDUP. SEE SHEET 13 FOR PAVEMENT BUILDUP DETAILS.



(1) Δ = 0° 39′ 37″ (LT)
Dc = 0° 59′ 37″
R = 5765.83′
T = 33.22′
L = 66.45′
E = 0.096′
C = 66.45
C.B. = N 67° 39′ 05″ E

(2) Δ = 1° 47′ 57″ (RT)
Dc = 0° 59′ 38″
R = 5765.00′
T = 90.52′
L = 181.03′
E = 0.71′
C = 181.02
C.B. = N 65° 59′ 52″ E

LEGEND

SHOULDER TO BE REMOVED AND RECONSTRUCTED THIS PHASE (SEE NOTE 2)

SHOULDER WIDENING CONSTRUCTED THIS PHASE (SEE NOTE 2)

OPEN TRAVEL LANE

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED BER
CHECKED SMM

MAINTENANCE OF TRAFFIC PLAN - SR 7
PRE-PHASE 1 - STA. 300+00 TO STA. 308+00

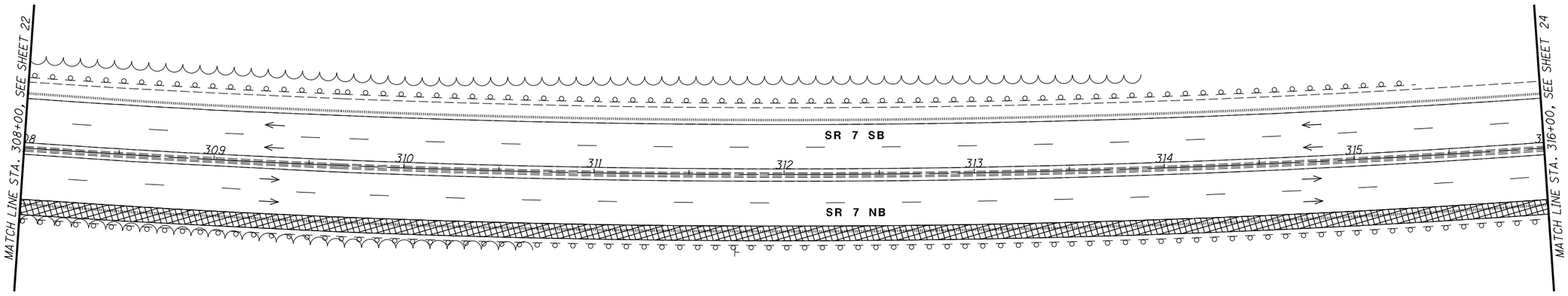
BEL-7-11.48

J:\2019\0025\ODOT\IF BEL-7-11.52_11.87_12.79 (PID 110324)\BEL\110324_BEL-7-11.52\Design\MOT\Sheets\110324_MP004.dgn 11/9/2020 3:06:26 PM bmccutchen

NOTES:

1. LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND MEDIAN WORK ADJACENT TO SR 7. WORK SHALL BE LIMITED TO ONE SIDE OF NB TRAFFIC AT A TIME.

2. EXISTING SHOULDERS SHALL BE REMOVED AND REPLACED PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE SHEET 13). WHERE DETAILED, SHOULDER WIDENING SHALL BE CONSTRUCTED USING THE SAME PAVEMENT BUILDUP. SEE SHEET 13 FOR PAVEMENT BUILDUP DETAILS.



LEGEND

SHOULDER TO BE REMOVED AND RECONSTRUCTED THIS PHASE (SEE NOTE 2)

OPEN TRAVEL LANE

MAINTENANCE OF TRAFFIC PLAN - SR 7
PRE-PHASE 1 - STA. 308+00 TO STA. 316+00

HORIZONTAL SCALE IN FEET: 0, 15, 30, 60

CALCULATED BER

CHECKED SMM

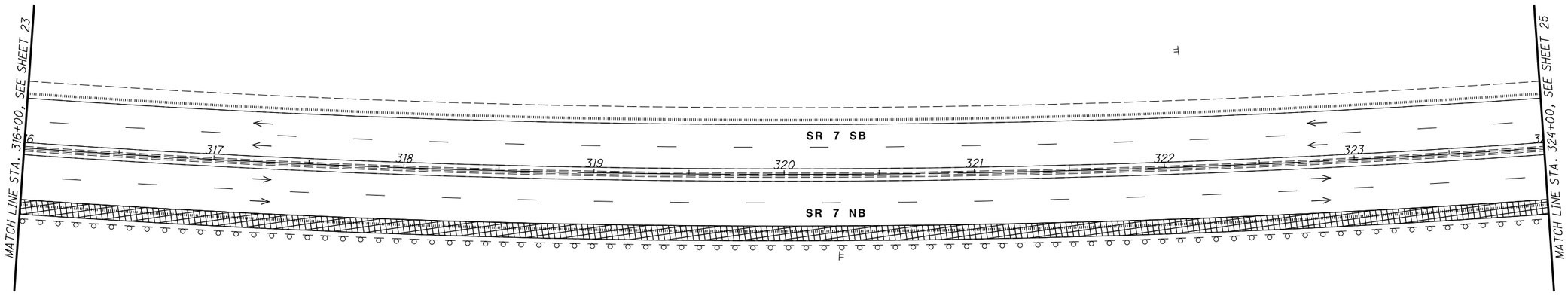
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NOTES:

1. LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND MEDIAN WORK ADJACENT TO SR 7. WORK SHALL BE LIMITED TO ONE SIDE OF NB TRAFFIC AT A TIME.

2. EXISTING SHOULDERS SHALL BE REMOVED AND REPLACED PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE SHEET 13). WHERE DETAILED, SHOULDER WIDENING SHALL BE CONSTRUCTED USING THE SAME PAVEMENT BUILDUP. SEE SHEET 13 FOR PAVEMENT BUILDUP DETAILS.



LEGEND

SHOULDER TO BE REMOVED AND RECONSTRUCTED THIS PHASE (SEE NOTE 2)

OPEN TRAVEL LANE

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED BER
CHECKED SMM

MAINTENANCE OF TRAFFIC PLAN - SR 7
PRE-PHASE 1 - STA. 316+00 TO STA. 324+00

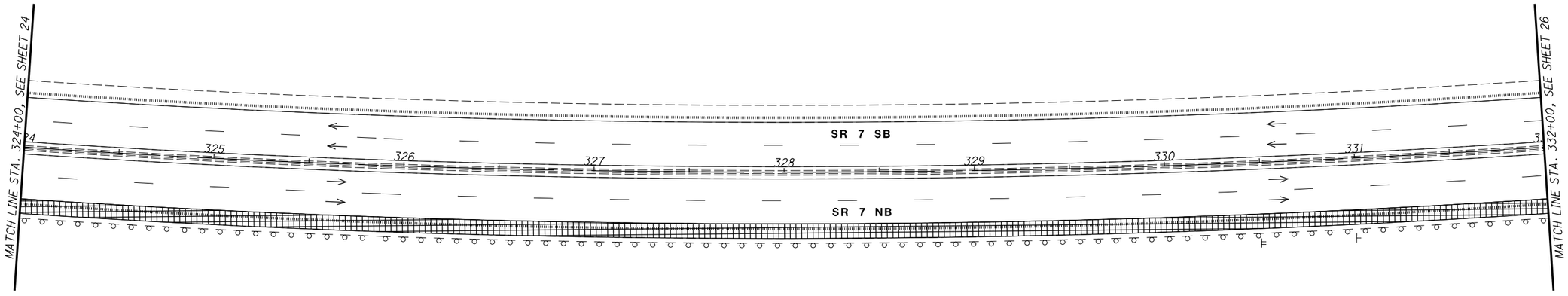
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NOTES:

1. LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND MEDIAN WORK ADJACENT TO SR 7. WORK SHALL BE LIMITED TO ONE SIDE OF NB TRAFFIC AT A TIME.

2. EXISTING SHOULDERS SHALL BE REMOVED AND REPLACED PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE SHEET 13). WHERE DETAILED, SHOULDER WIDENING SHALL BE CONSTRUCTED USING THE SAME PAVEMENT BUILDUP. SEE SHEET 13 FOR PAVEMENT BUILDUP DETAILS.



LEGEND

SHOULDER TO BE REMOVED AND RECONSTRUCTED THIS PHASE (SEE NOTE 2)

OPEN TRAVEL LANE

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED BER
CHECKED SMM

MAINTENANCE OF TRAFFIC PLAN - SR 7
PRE-PHASE 1 - STA. 324+00 TO STA. 332+00

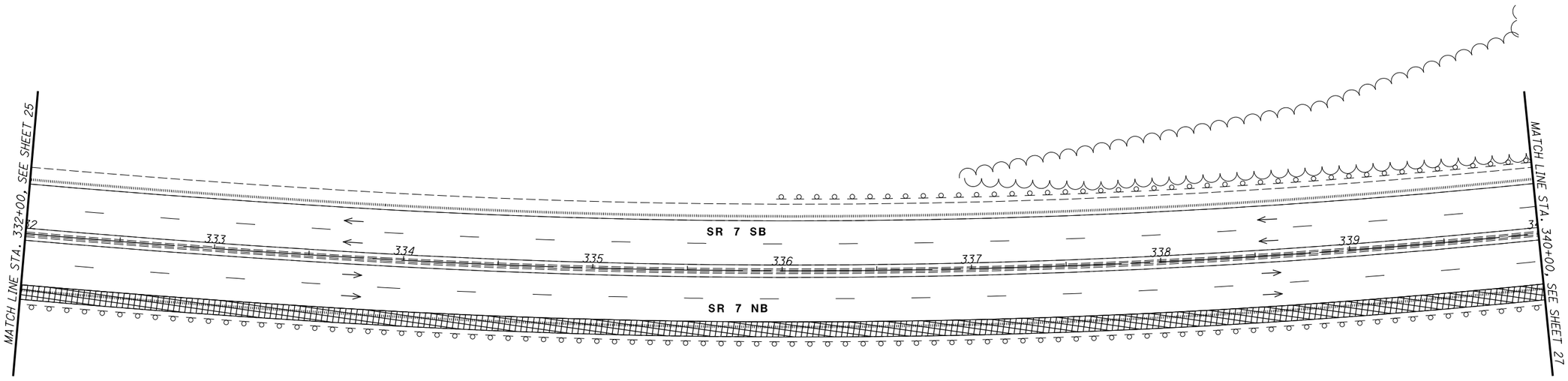
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NOTES:

1. LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND MEDIAN WORK ADJACENT TO SR 7. WORK SHALL BE LIMITED TO ONE SIDE OF NB TRAFFIC AT A TIME.

2. EXISTING SHOULDERS SHALL BE REMOVED AND REPLACED PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE SHEET 13). WHERE DETAILED, SHOULDER WIDENING SHALL BE CONSTRUCTED USING THE SAME PAVEMENT BUILDUP. SEE SHEET 13 FOR PAVEMENT BUILDUP DETAILS.



LEGEND

SHOULDER TO BE REMOVED AND RECONSTRUCTED THIS PHASE (SEE NOTE 2)

OPEN TRAVEL LANE

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED BER
CHECKED SMM

MAINTENANCE OF TRAFFIC PLAN - SR 7
PRE-PHASE 1 - STA. 332+00 TO STA. 340+00

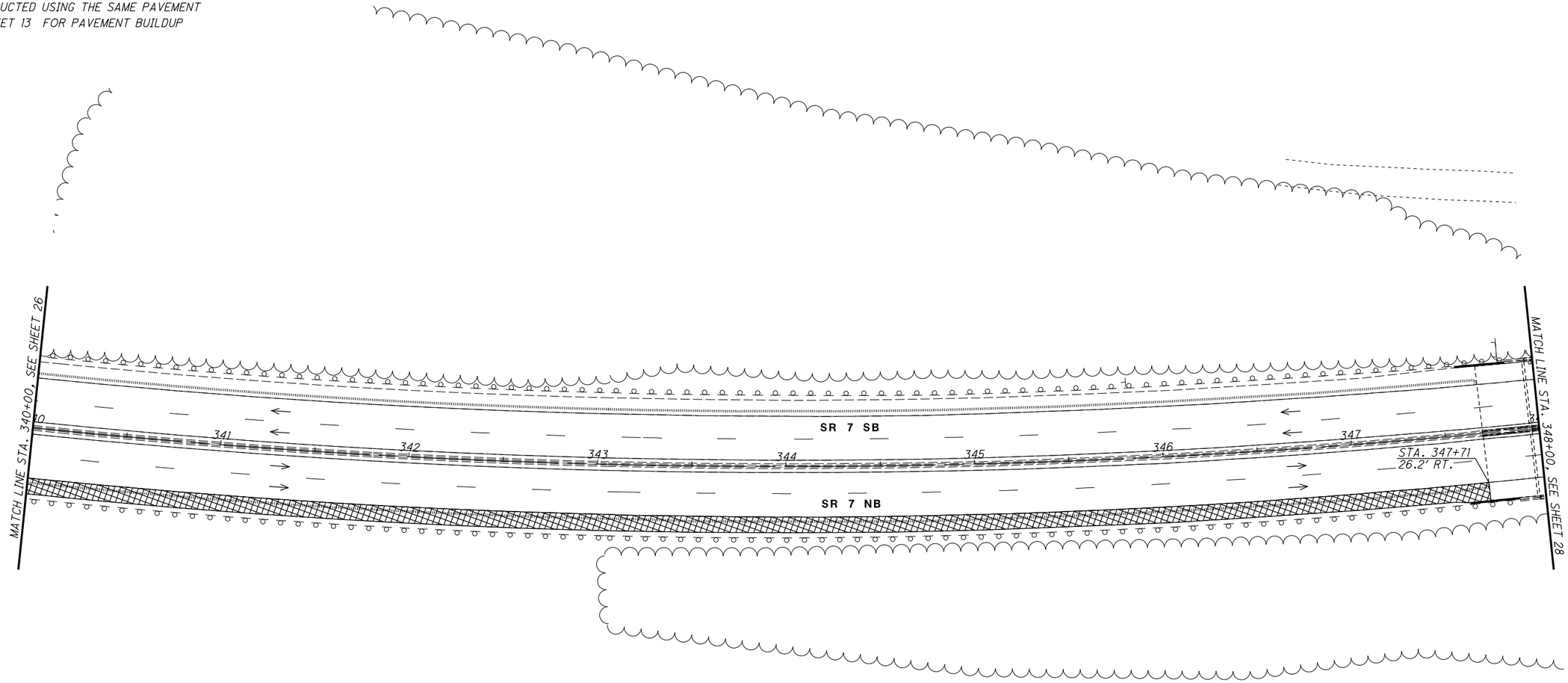
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NOTES:

1. LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND MEDIAN WORK ADJACENT TO SR 7. WORK SHALL BE LIMITED TO ONE SIDE OF NB TRAFFIC AT A TIME.

2. EXISTING SHOULDERS SHALL BE REMOVED AND REPLACED PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE SHEET 13). WHERE DETAILED, SHOULDER WIDENING SHALL BE CONSTRUCTED USING THE SAME PAVEMENT BUILDUP. SEE SHEET 13 FOR PAVEMENT BUILDUP DETAILS.



LEGEND

SHOULDER TO BE REMOVED AND RECONSTRUCTED THIS PHASE (SEE NOTE 2)

OPEN TRAVEL LANE

N

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED BER
CHECKED SMM

MAINTENANCE OF TRAFFIC PLAN - SR 7
PRE-PHASE 1 - STA. 340+00 TO STA. 348+00

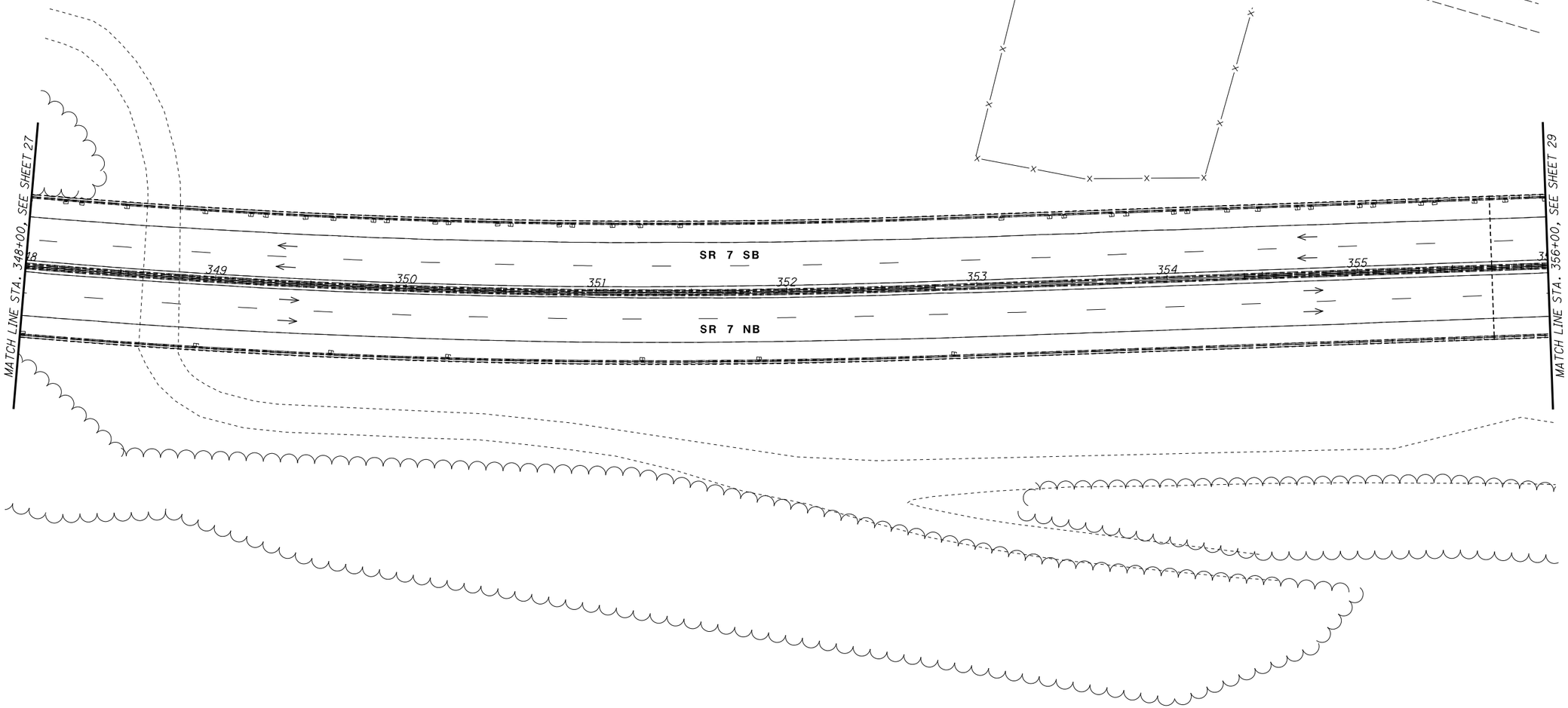
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NOTES:

1. LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND MEDIAN WORK ADJACENT TO SR 7. WORK SHALL BE LIMITED TO ONE SIDE OF NB TRAFFIC AT A TIME.

2. EXISTING SHOULDERS SHALL BE REMOVED AND REPLACED PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE SHEET 13). WHERE DETAILED, SHOULDER WIDENING SHALL BE CONSTRUCTED USING THE SAME PAVEMENT BUILDUP. SEE SHEET 13 FOR PAVEMENT BUILDUP DETAILS.



LEGEND

SHOULDER TO BE REMOVED AND RECONSTRUCTED THIS PHASE (SEE NOTE 2)

OPEN TRAVEL LANE

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED BER
CHECKED SMM

MAINTENANCE OF TRAFFIC PLAN - SR 7
PRE-PHASE 1 - STA. 348+00 TO STA. 356+00

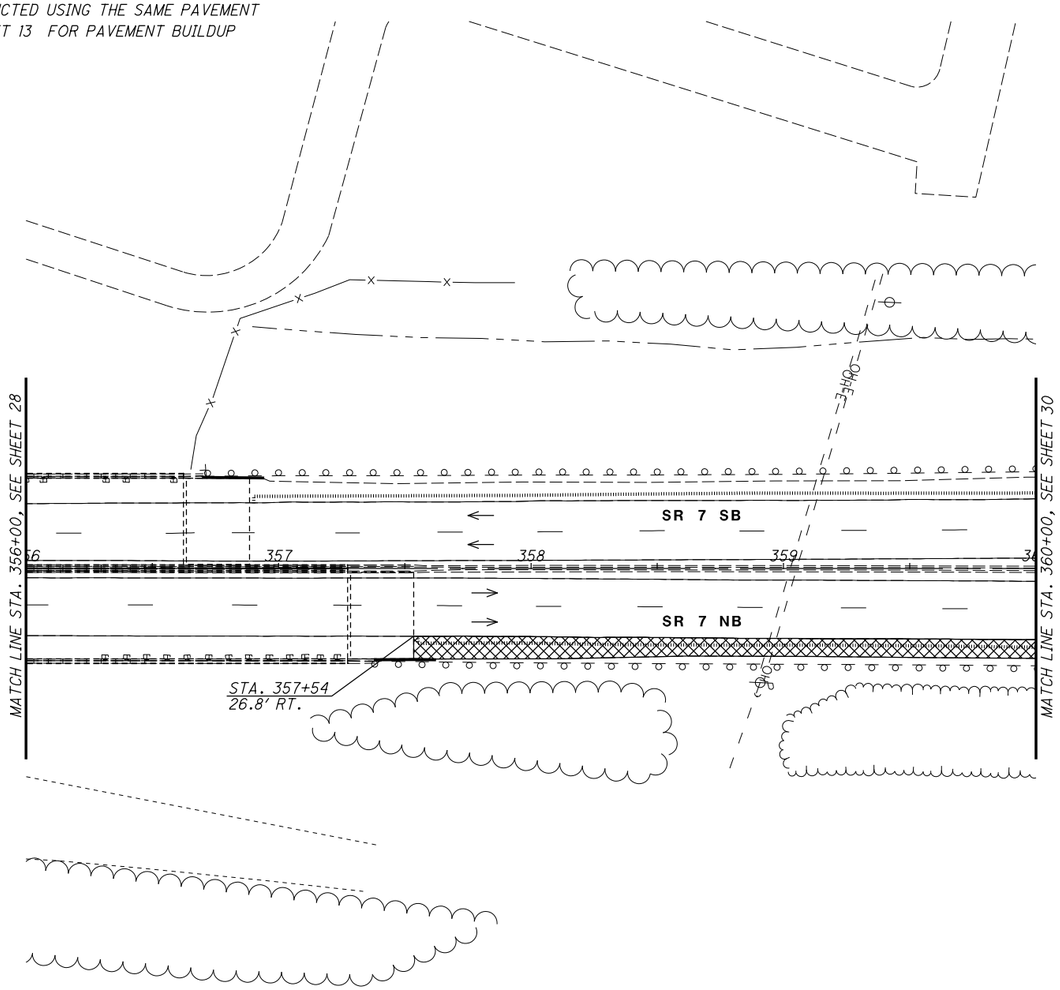
BEL-7-11.48

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NOTES:

1. LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND MEDIAN WORK ADJACENT TO SR 7. WORK SHALL BE LIMITED TO ONE SIDE OF NB TRAFFIC AT A TIME.

2. EXISTING SHOULDERS SHALL BE REMOVED AND REPLACED PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE SHEET 13). WHERE DETAILED, SHOULDER WIDENING SHALL BE CONSTRUCTED USING THE SAME PAVEMENT BUILDUP. SEE SHEET 13 FOR PAVEMENT BUILDUP DETAILS.



LEGEND

SHOULDER TO BE REMOVED AND RECONSTRUCTED THIS PHASE (SEE NOTE 2)

OPEN TRAVEL LANE

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED BER
CHECKED SMM

MAINTENANCE OF TRAFFIC PLAN - SR 7
PRE-PHASE 1 - STA. 356+00 TO STA. 360+00

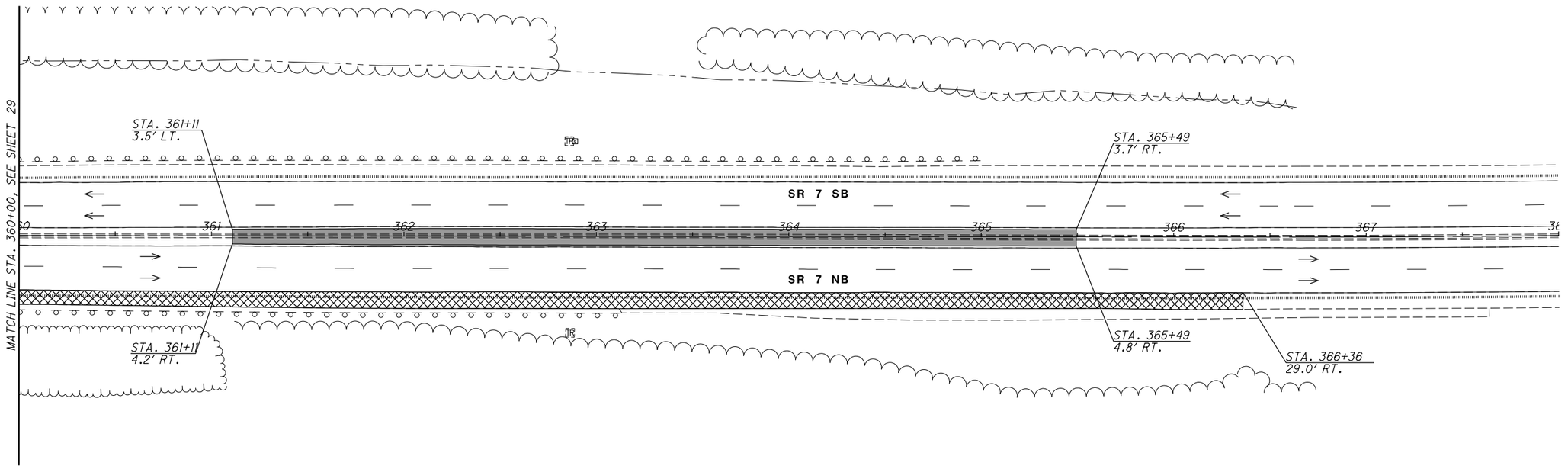
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NOTES:

1. LANE CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND MEDIAN WORK ADJACENT TO SR 7. WORK SHALL BE LIMITED TO ONE SIDE OF NB TRAFFIC AT A TIME.

2. EXISTING SHOULDERS SHALL BE REMOVED AND REPLACED PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE SHEET 13). WHERE DETAILED, SHOULDER WIDENING SHALL BE CONSTRUCTED USING THE SAME PAVEMENT BUILDUP. SEE SHEET 13 FOR PAVEMENT BUILDUP DETAILS.



LEGEND

SHOULDER TO BE REMOVED AND RECONSTRUCTED THIS PHASE (SEE NOTE 2)

TEMPORARY PAVEMENT CONSTRUCTED THIS PHASE

OPEN TRAVEL LANE

HORIZONTAL SCALE IN FEET
0 15 30 60

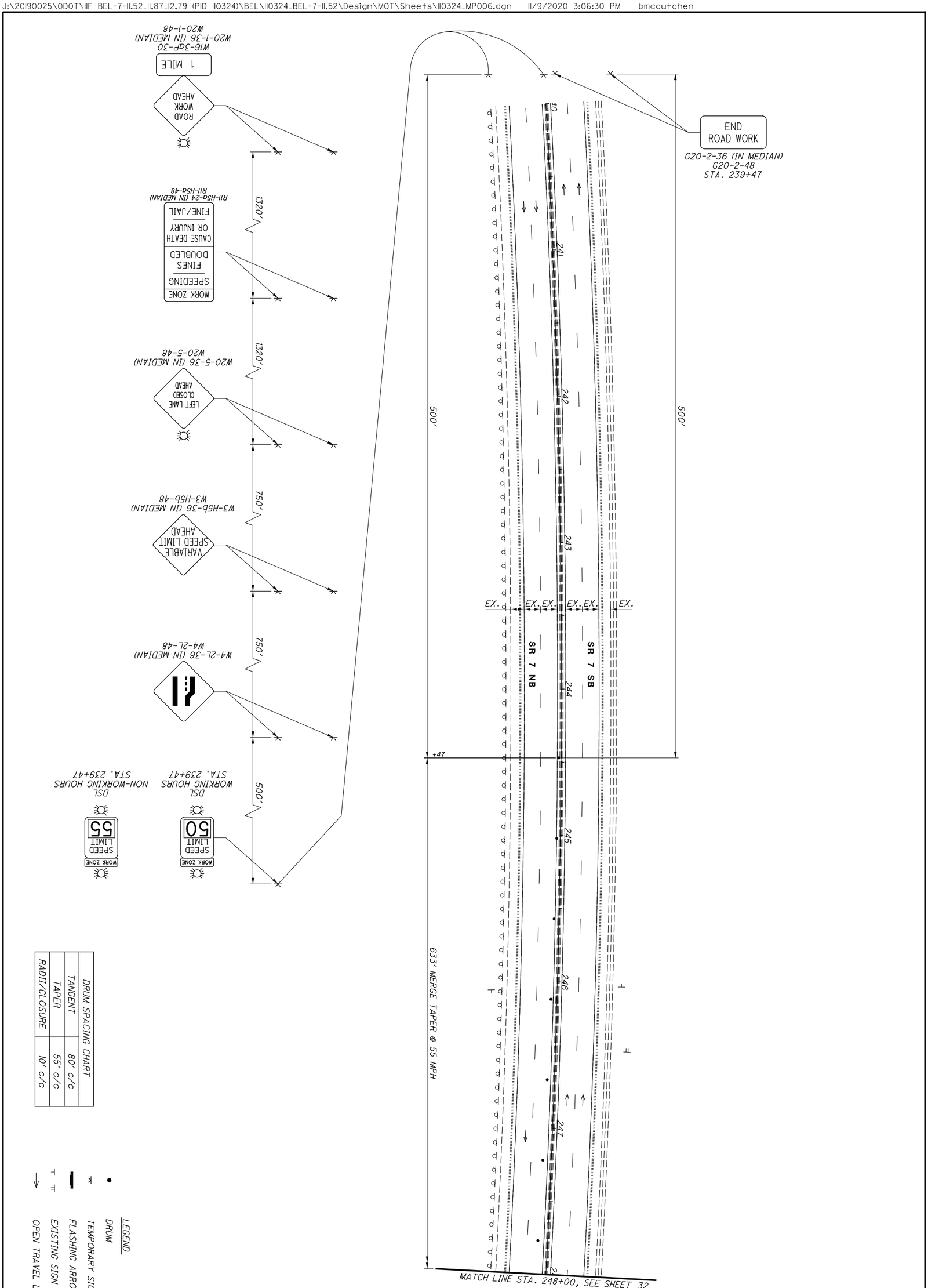
CALCULATED BER
CHECKED SMM

MAINTENANCE OF TRAFFIC PLAN - SR 7
PRE-PHASE 1 - STA. 360+00 TO STA. 368+00

BEL-7-11.48

30
213

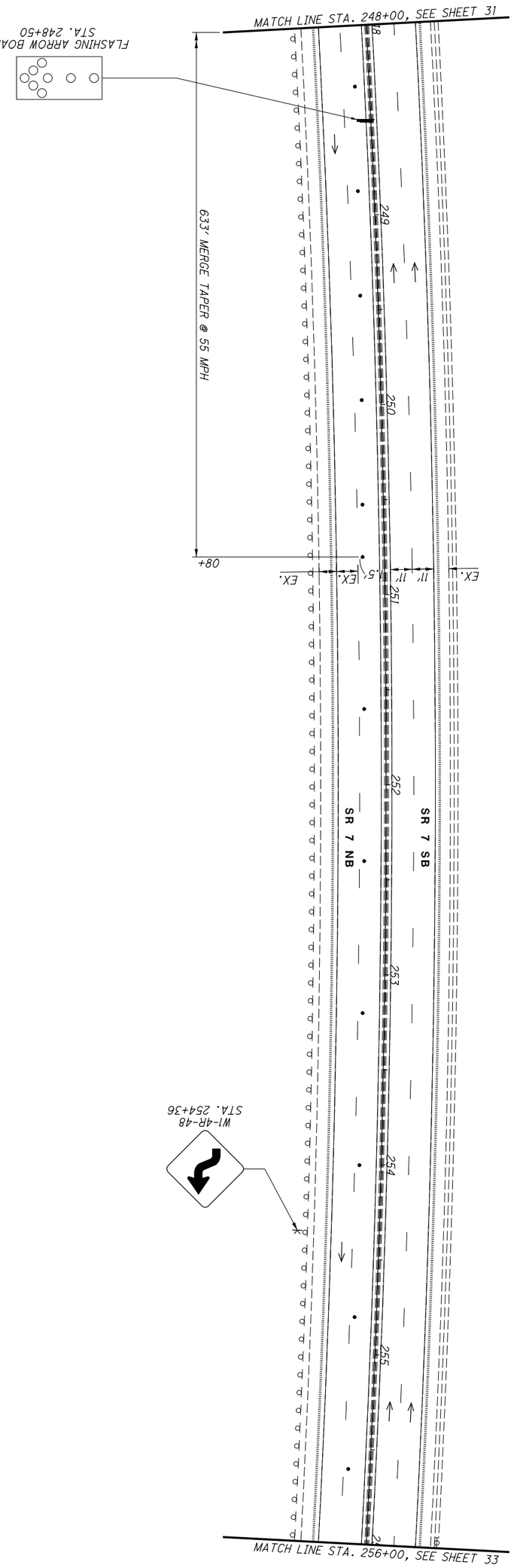
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DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII/CLOSURE	10' c/c

LEGEND

- DRUM
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII/CLOSURE	10' c/c

LEGEND

DRUM

TEMPORARY SIGN SUPPORT

OPEN TRAVEL LANE

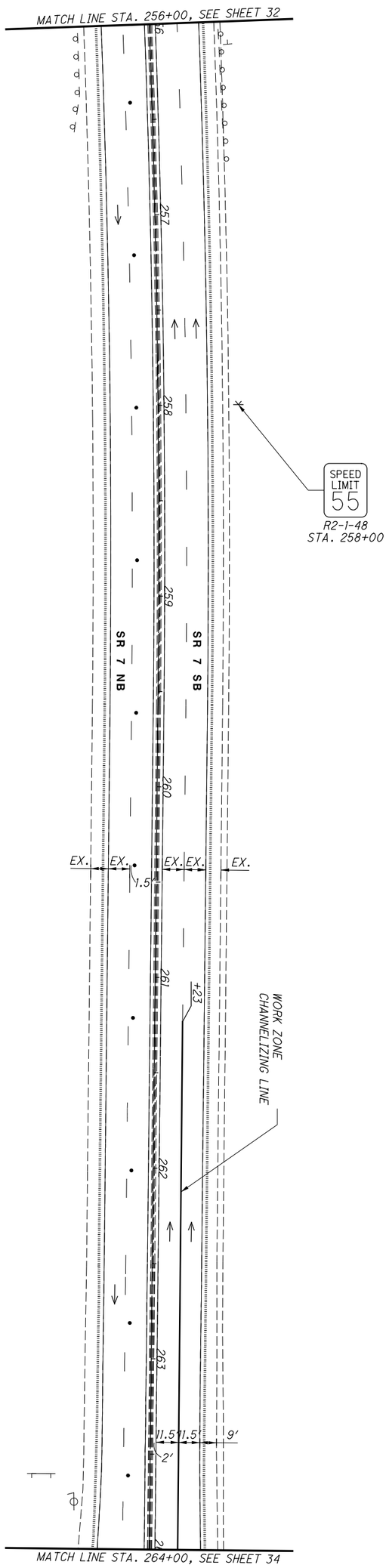
BEL-7-11.48

MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 1 - STA. 248+00 TO STA. 256+00

CALCULATED BER
CHECKED SMM

0 15 30 60
HORIZONTAL SCALE IN FEET

N



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII/CLOSURE	10' c/c

LEGEND

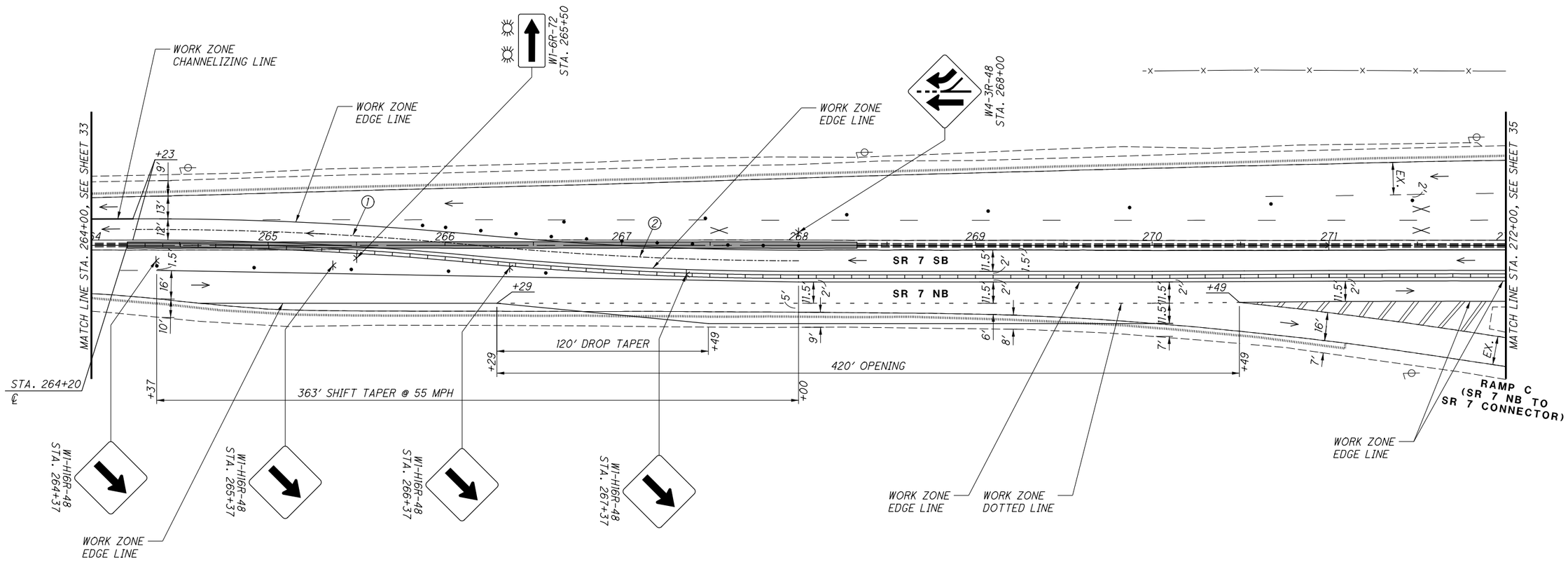
- DRUM
- TEMPORARY SIGN SUPPORT
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE
- CLOSED TRAVEL LANE

BEL-7-11.48

MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 1 - STA. 256+00 TO STA. 264+00

CALCULATED BER
CHECKED SMM

0 15 30 60
HORIZONTAL SCALE IN FEET



(1) FROM STA. 264+23.5, 8.9' LT.
TO STA. 266+16.6, 0.1' LT.
Δ = 5° 48' 10" (RT)
Dc = 02° 59' 59"
R = 1910.00'
T = 96.81'
L = 193.44'
E = 2.45'
C = 193.36'
C.B. = S 87° 23' 31" E

(2) FROM STA. 266+16.6, 0.1' LT.
TO STA. 268+00.0, 8.7' RT.
Δ = 5° 30' 34" (LT)
Dc = 02° 59' 59"
R = 1910.00'
T = 91.90'
L = 183.66'
E = 2.21'
C = 183.59'
C.B. = S 87° 14' 43" E

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII/CLOSURE	10' c/c

LEGEND
- TEMPORARY PAVEMENT
- DRUM
- PORTABLE BARRIER
- TEMPORARY SIGN SUPPORT
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE
- CLOSED TRAVEL LANE

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED BER
CHECKED SMM

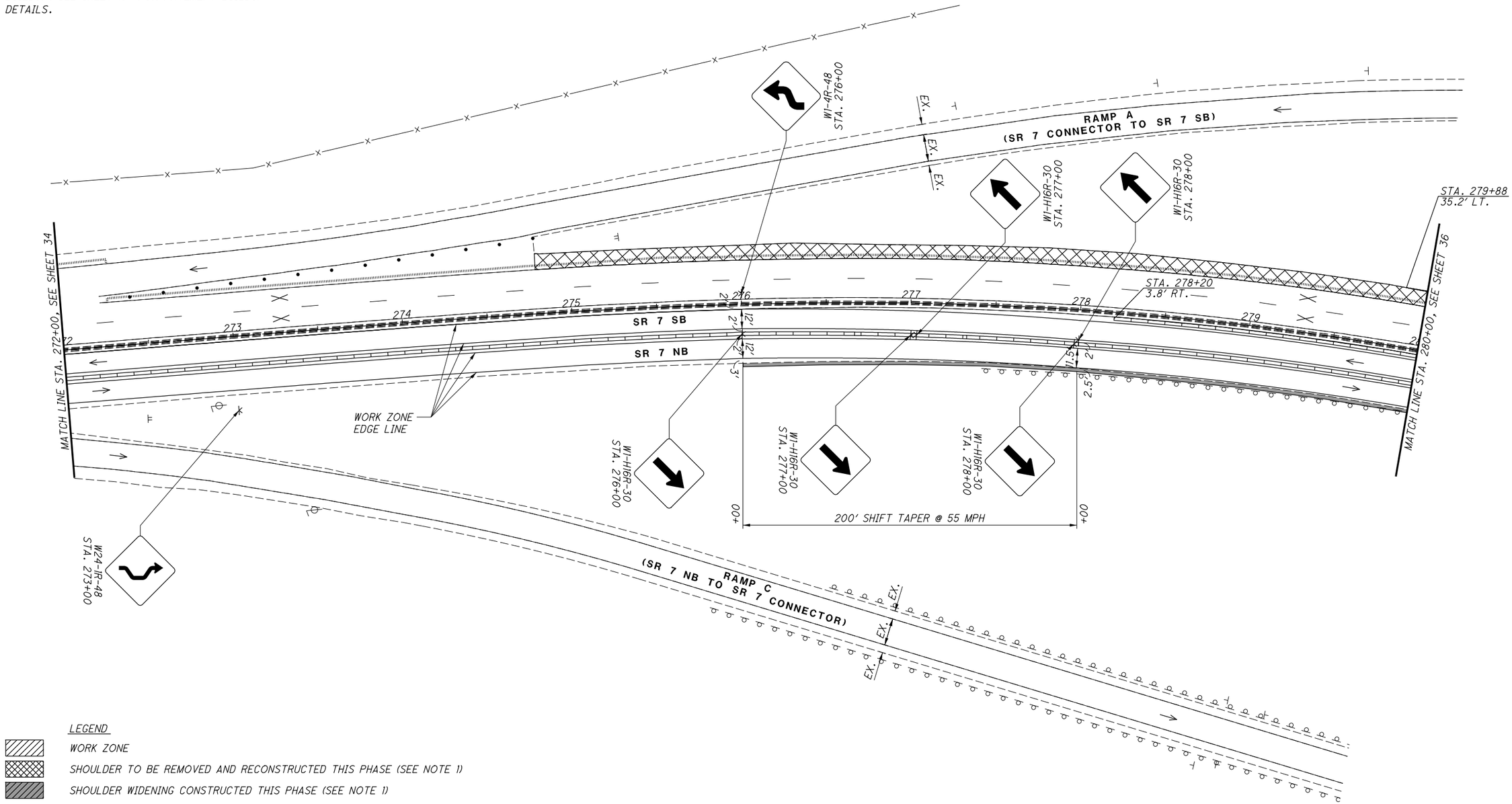
MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 1 - STA. 264+00 TO STA. 272+00

BEL-7-11.48

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NOTES:

1. EXISTING SHOULDERS SHALL BE REMOVED AND REPLACED PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE SHEET 13). WHERE DETAILED, SHOULDER WIDENING SHALL BE CONSTRUCTED USING THE SAME PAVEMENT BUILDUP. SEE SHEET 13 FOR PAVEMENT BUILDUP DETAILS.



LEGEND

- WORK ZONE
- SHOULDER TO BE REMOVED AND RECONSTRUCTED THIS PHASE (SEE NOTE 1)
- SHOULDER WIDENING CONSTRUCTED THIS PHASE (SEE NOTE 1)
- DRUM
- PORTABLE BARRIER
- TEMPORARY SIGN SUPPORT
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE
- CLOSED TRAVEL LANE

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII/CLOSURE	10' c/c

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED BER
CHECKED SMM

MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 1 - STA. 272+00 TO STA. 280+00

BEL-7-11.48

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MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 1 - STA. 280+00 TO STA. 288+00

CALCULATED BER
CHECKED SMM

HORIZONTAL SCALE IN FEET
0 15 30 60

BEL-7-11.48

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RAMP A
(SR 7 CONNECTOR TO SR 7 SB)

200′

R11-H5a-48
WORK ZONE
SPEEDING FINES DOUBLED
CAUSE DEATH OR INJURY
FINE/JAIL

W20-1-48
ROAD WORK AHEAD

W20-1-48
ROAD WORK AHEAD

END ROAD WORK
G20-2-48

SR 7 CONNECTOR

WORK ZONE SPEED LIMIT 55
DSL NON-WORKING HOURS
STA. 285+00

WORK ZONE SPEED LIMIT 50
DSL WORKING HOURS
STA. 285+00

410′ - 32″ PORTABLE BARRIER, ANCHORED

+30

+40

STRUCTURE NO.
BEL-7-1152C

N 29° 47′ 28″ E
50.9′

STA. 280+38
35.8′ LT.

STA. 280+37
34.5′ LT.

STA. 280+31
26.0′ LT.

STA. 284+69
34.9′ LT.

STA. 284+66
26.0′ LT.

STA. 284+70
36.3′ LT.

N 47° 00′ 21″ E
56.5′

STA. 288+25
34.3′ LT.

STA. 286+50
2.6′ RT.

16:1 PB FLARE
@ 55 MPH

W1-1H6L-30
STA. 287+00

W1-1H6L-30
STA. 288+00

MATCH LINE STA. 280+00, SEE SHEET 35

MATCH LINE STA. 288+00, SEE SHEET 37

SR 7 SB

SR 7 NB

280 281 282 283 284 285 286 287

11.5′ 11.5′ 11.5′ 11.5′ 11.5′ 11.5′ 2′

WORK ZONE LANE LINE

SEE NOTE 1

+00

200′ SHIFT TAPER @ 55 MPH

W1-1H6L-24
STA. 286+00

W1-1H6L-24
STA. 287+00

EX.

W1-4R-48
STA. 288+00

RAMP C
(SR 7 NB TO SR 7 CONNECTOR)

RAMP D
(SR 7 CONNECTOR TO SR 7 NB)

200′

R11-H5a-48
WORK ZONE
SPEEDING FINES DOUBLED
CAUSE DEATH OR INJURY
FINE/JAIL

W20-1-48
ROAD WORK AHEAD

NOTES:

1. EXISTING SHOULDERS SHALL BE REMOVED AND REPLACED PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE SHEET 13). WHERE DETAILED, SHOULDER WIDENING SHALL BE CONSTRUCTED USING THE SAME PAVEMENT BUILDUP. SEE SHEET 13 FOR PAVEMENT BUILDUP DETAILS.

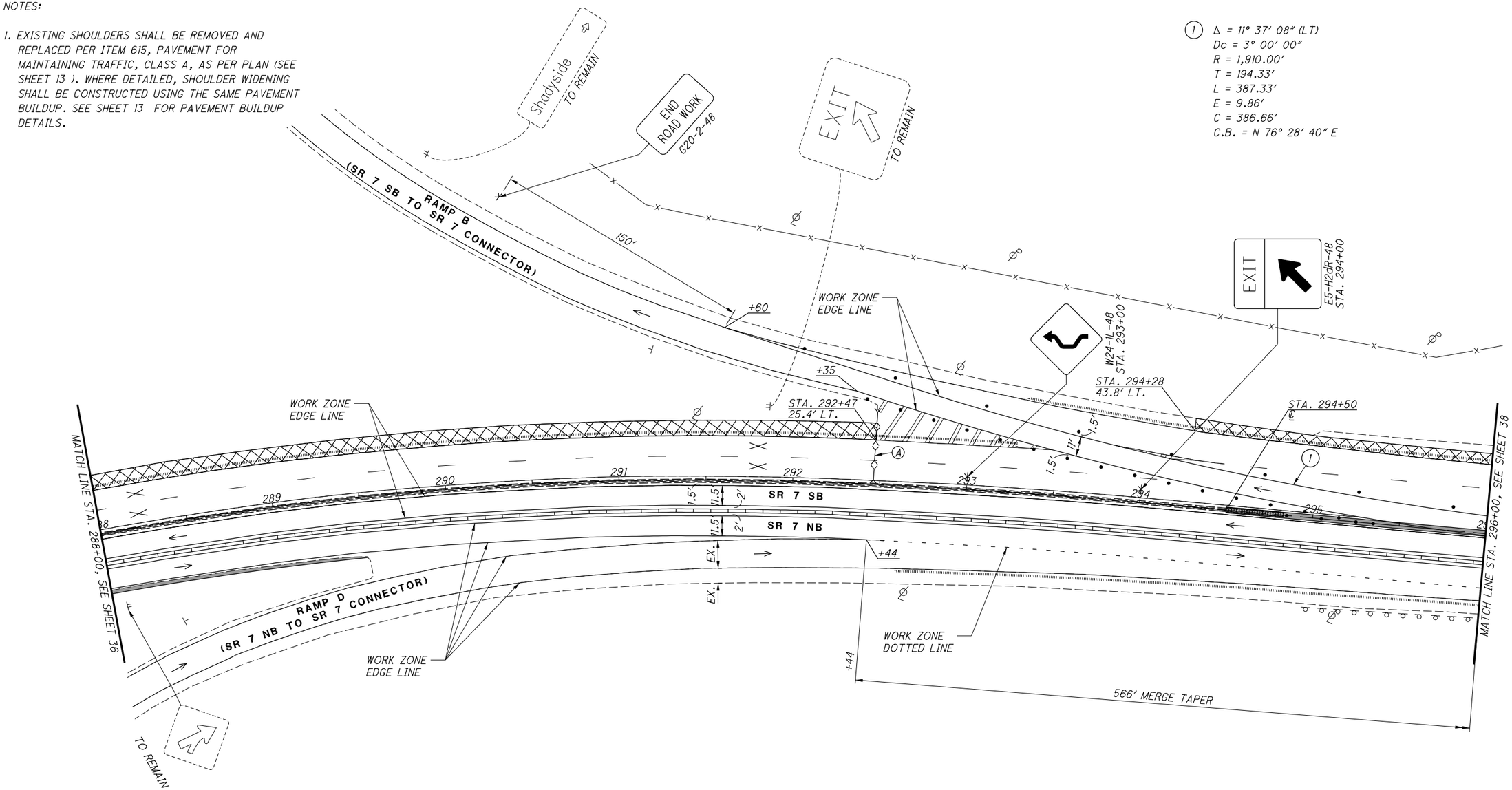
2. WHEN PROPOSED WORK IMPACTS SR 7 CONNECTOR, ONE LANE IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES PER ODOT SCD MT-97.10.

LEGEND

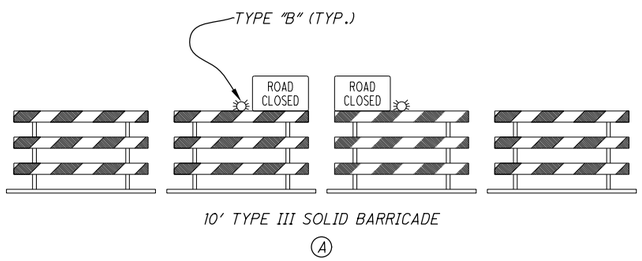
- WORK ZONE
- SHOULDER TO BE REMOVED AND RECONSTRUCTED THIS PHASE (SEE NOTE 1)
- SHOULDER WIDENING CONSTRUCTED THIS PHASE (SEE NOTE 1)
- TEMPORARY PAVEMENT
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- TEMPORARY SIGN SUPPORT
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE
- CLOSED TRAVEL LANE

NOTES:

1. EXISTING SHOULDERS SHALL BE REMOVED AND REPLACED PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE SHEET 13). WHERE DETAILED, SHOULDER WIDENING SHALL BE CONSTRUCTED USING THE SAME PAVEMENT BUILDUP. SEE SHEET 13 FOR PAVEMENT BUILDUP DETAILS.



① Δ = 11° 37' 08" (LT)
Dc = 3° 00' 00"
R = 1,910.00'
T = 194.33'
L = 387.33'
E = 9.86'
C = 386.66'
C.B. = N 76° 28' 40" E



10' TYPE III SOLID BARRICADE
Ⓐ

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII/CLOSURE	10' c/c

LEGEND

- WORK ZONE
- SHOULDER TO BE REMOVED AND RECONSTRUCTED THIS PHASE (SEE NOTE 1)
- TEMPORARY PAVEMENT
- DRUM
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- TEMPORARY SIGN SUPPORT
- TYPE III BARRICADE
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE
- CLOSED TRAVEL LANE

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED BER
CHECKED SMM

MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 1 - STA. 288+00 TO STA. 296+00

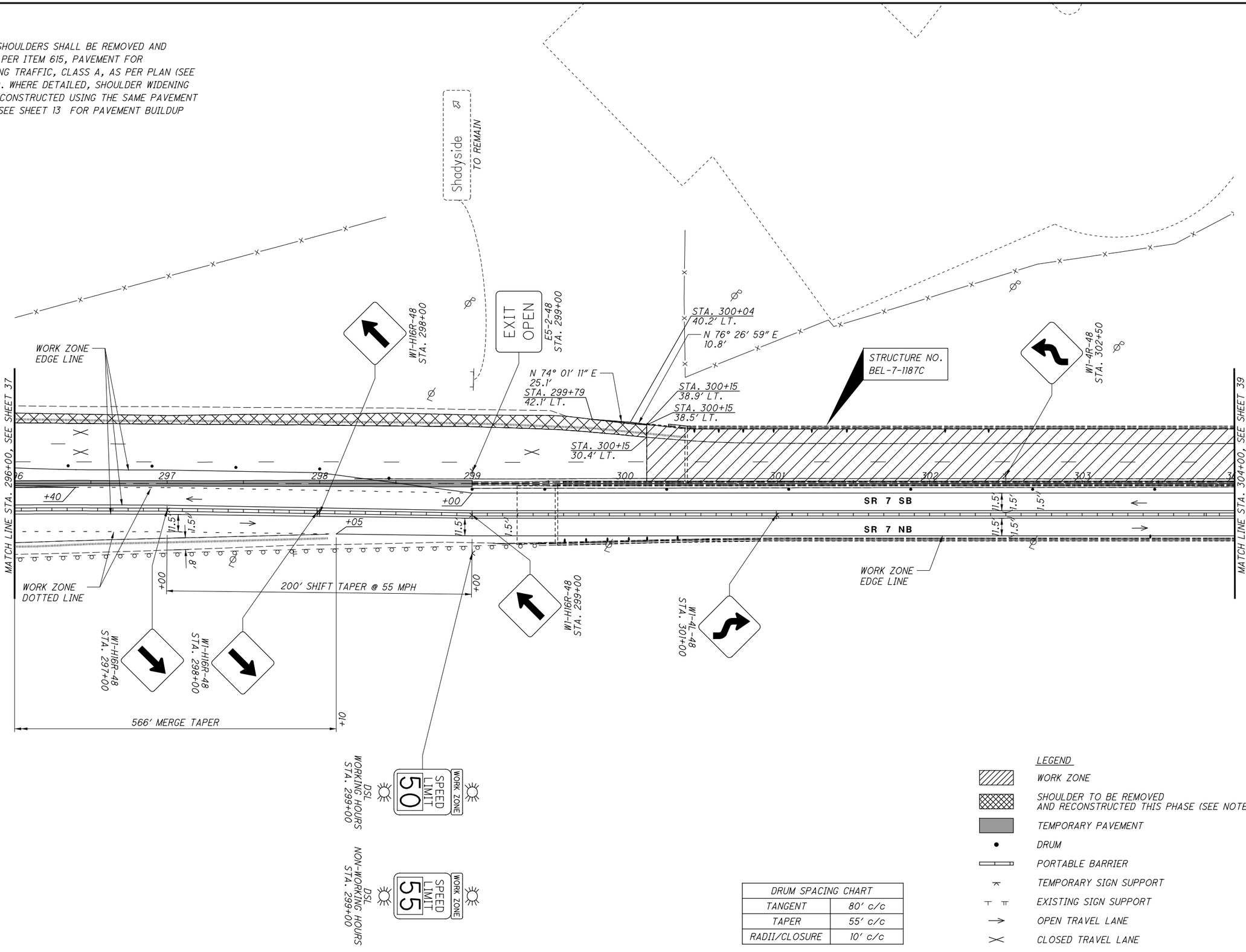
BEL-7-11.48

37
213

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NOTES:

1. EXISTING SHOULDERS SHALL BE REMOVED AND REPLACED PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE SHEET 13). WHERE DETAILED, SHOULDER WIDENING SHALL BE CONSTRUCTED USING THE SAME PAVEMENT BUILDUP. SEE SHEET 13 FOR PAVEMENT BUILDUP DETAILS.



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII/CLOSURE	10' c/c

LEGEND

- WORK ZONE
- SHOULDER TO BE REMOVED AND RECONSTRUCTED THIS PHASE (SEE NOTE 1)
- TEMPORARY PAVEMENT
- DRUM
- PORTABLE BARRIER
- TEMPORARY SIGN SUPPORT
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE
- CLOSED TRAVEL LANE

N

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED BER
CHECKED SMM

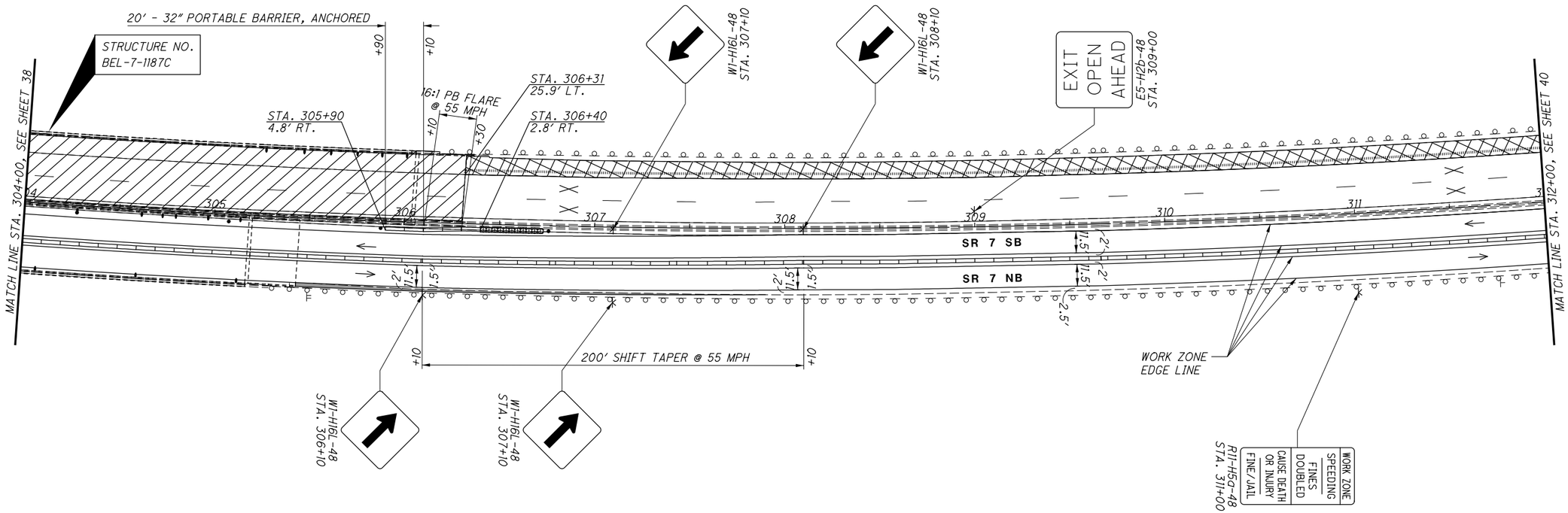
MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 1 - STA. 296+00 TO STA. 304+00

BEL-7-11.48

J:\2019\0025\ODOT\IF BEL-7-11.52_11.87_12.79 (PID 110324)\BEL\110324_BEL-7-11.52\Design\MOT\Sheets\110324_MP013.dgn 11/9/2020 3:06:35 PM bmccutchen

NOTES:

1. EXISTING SHOULDERS SHALL BE REMOVED AND REPLACED PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE SHEET 13). WHERE DETAILED, SHOULDER WIDENING SHALL BE CONSTRUCTED USING THE SAME PAVEMENT BUILDUP. SEE SHEET 13 FOR PAVEMENT BUILDUP DETAILS.



DRUM SPACING CHART	
TANGENT	80′ c/c
TAPER	55′ c/c
RADII/CLOSURE	10′ c/c

LEGEND

- WORK ZONE
- SHOULDER TO BE REMOVED AND RECONSTRUCTED THIS PHASE (SEE NOTE 2)
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- TEMPORARY SIGN SUPPORT
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE
- CLOSED TRAVEL LANE

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED BER
CHECKED SMM

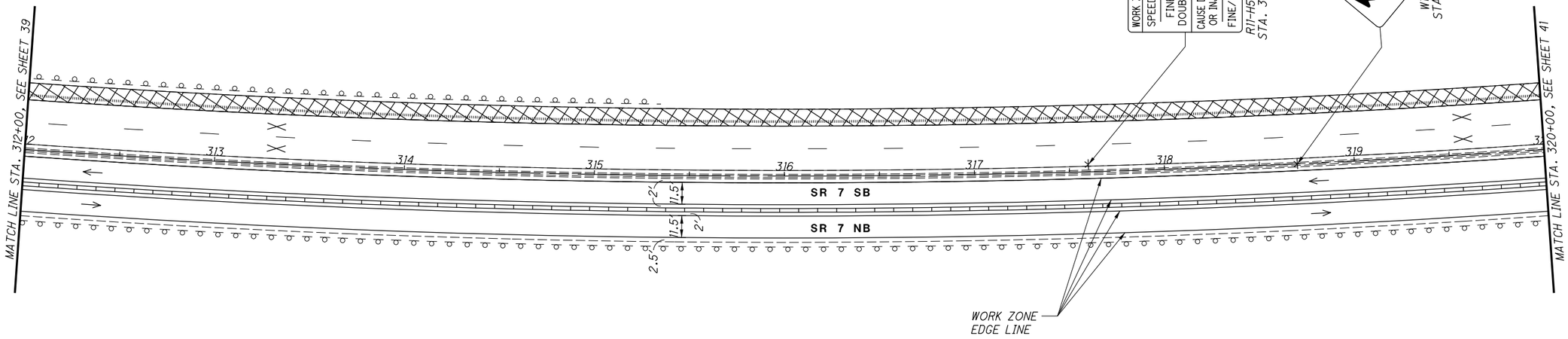
MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 1 - STA. 304+00 TO STA. 312+00

BEL-7-11.48

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NOTES:

1. EXISTING SHOULDERS SHALL BE REMOVED AND REPLACED PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE SHEET 13). WHERE DETAILED, SHOULDER WIDENING SHALL BE CONSTRUCTED USING THE SAME PAVEMENT BUILDUP. SEE SHEET 13 FOR PAVEMENT BUILDUP DETAILS.



LEGEND

- WORK ZONE
- SHOULDER TO BE REMOVED AND RECONSTRUCTED THIS PHASE (SEE NOTE 1)
- PORTABLE BARRIER
- TEMPORARY SIGN SUPPORT
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE
- CLOSED TRAVEL LANE

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED BER
CHECKED SMM

MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 1 - STA. 312+00 TO STA. 320+00

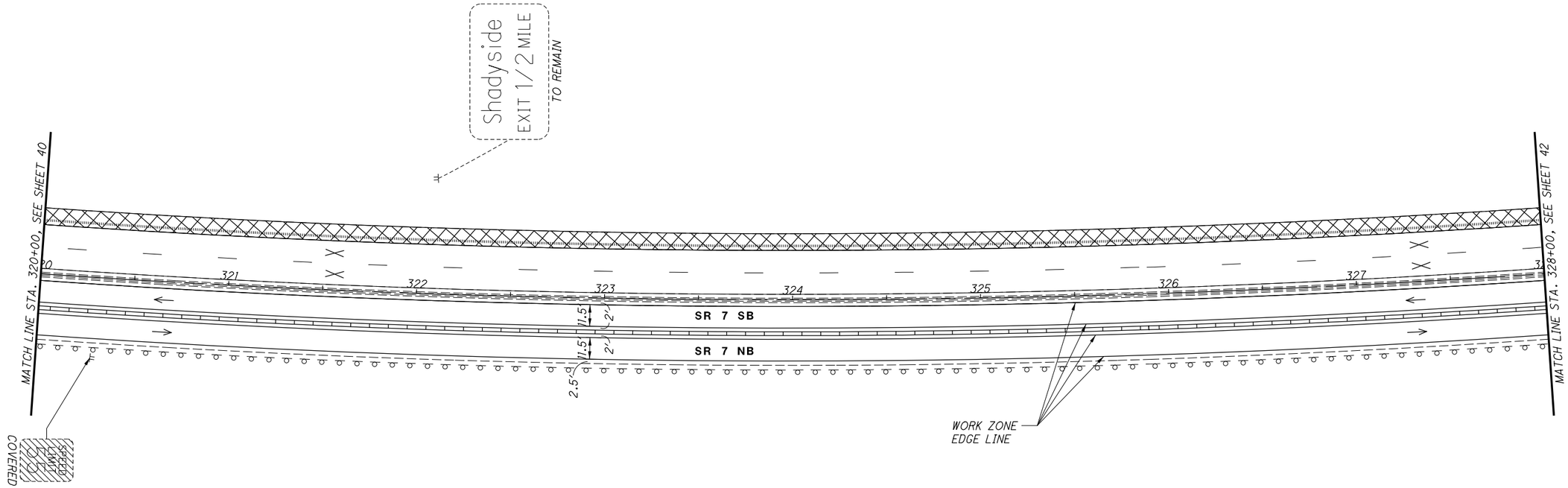
BEL-7-11.48

40
213

J:\2090025\ODOT\IF BEL-7-11.52_11.87_12.79 (PID 110324)\BEL\110324_BEL-7-11.52\Design\MOT\Sheets\110324_MP015.dgn 11/9/2020 3:06:36 PM bmccutchen

NOTES:

1. EXISTING SHOULDERS SHALL BE REMOVED AND REPLACED PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE SHEET 13). WHERE DETAILED, SHOULDER WIDENING SHALL BE CONSTRUCTED USING THE SAME PAVEMENT BUILDUP. SEE SHEET 13 FOR PAVEMENT BUILDUP DETAILS.



LEGEND

- WORK ZONE
- SHOULDER TO BE REMOVED AND RECONSTRUCTED THIS PHASE (SEE NOTE 1)
- PORTABLE BARRIER
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE
- CLOSED TRAVEL LANE

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED BER
CHECKED SMM

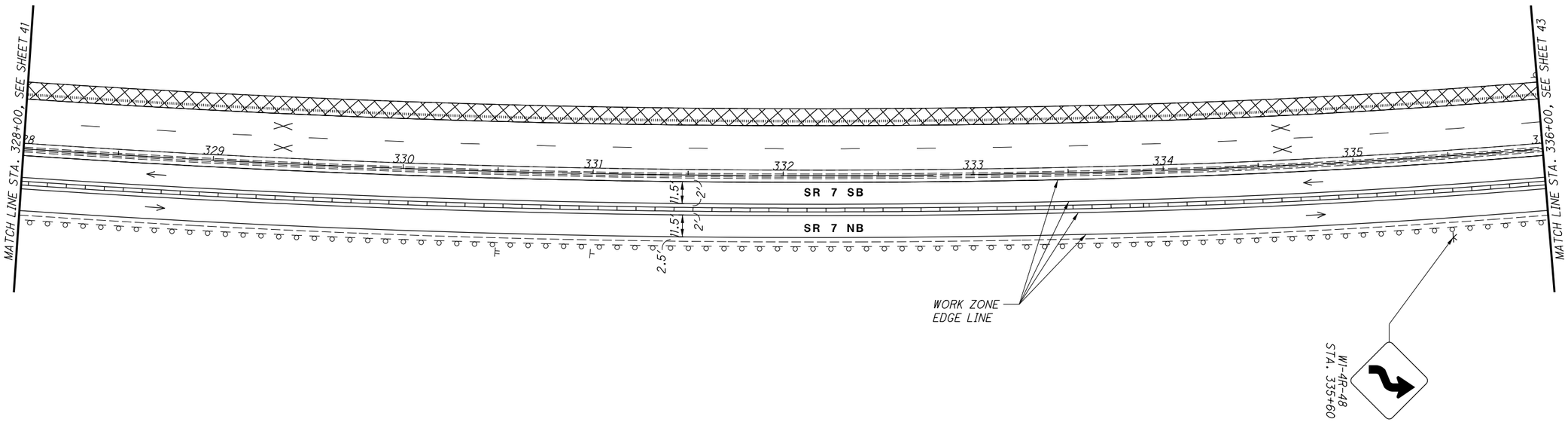
MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 1 - STA. 320+00 TO STA. 328+00

BEL-7-11.48

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NOTES:

1. EXISTING SHOULDERS SHALL BE REMOVED AND REPLACED PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE SHEET 13). WHERE DETAILED, SHOULDER WIDENING SHALL BE CONSTRUCTED USING THE SAME PAVEMENT BUILDUP. SEE SHEET 13 FOR PAVEMENT BUILDUP DETAILS.



LEGEND

- WORK ZONE
- SHOULDER TO BE REMOVED AND RECONSTRUCTED THIS PHASE (SEE NOTE 1)
- PORTABLE BARRIER
- TEMPORARY SIGN SUPPORT
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE
- CLOSED TRAVEL LANE

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED BER
CHECKED SMM

MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 1 - STA. 328+00 TO STA. 336+00

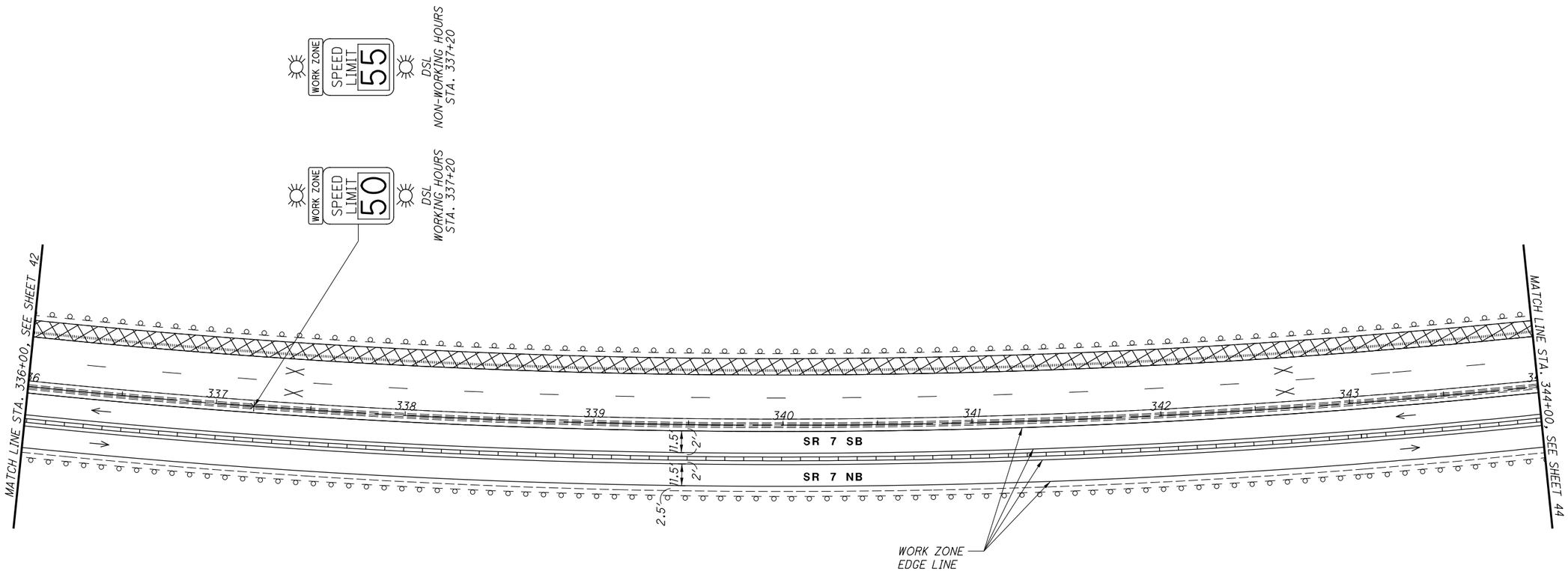
BEL-7-11.48

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213

J:\2019025\ODOT\IF BEL-7-11.52_11.87_12.79 (PID 110324)\BEL\110324_BEL-7-11.52\Design\MOT\Sheets\110324_MPOI7.dgn 11/9/2020 3:06:37 PM bmccutchen

NOTES:

1. EXISTING SHOULDERS SHALL BE REMOVED AND REPLACED PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE SHEET 13). WHERE DETAILED, SHOULDER WIDENING SHALL BE CONSTRUCTED USING THE SAME PAVEMENT BUILDUP. SEE SHEET 13 FOR PAVEMENT BUILDUP DETAILS.



LEGEND

- WORK ZONE
- SHOULDER TO BE REMOVED AND RECONSTRUCTED THIS PHASE (SEE NOTE 1)
- PORTABLE BARRIER
- TEMPORARY SIGN SUPPORT
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE
- CLOSED TRAVEL LANE

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED BER
CHECKED SMM

MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 1 - STA. 336+00 TO STA. 344+00

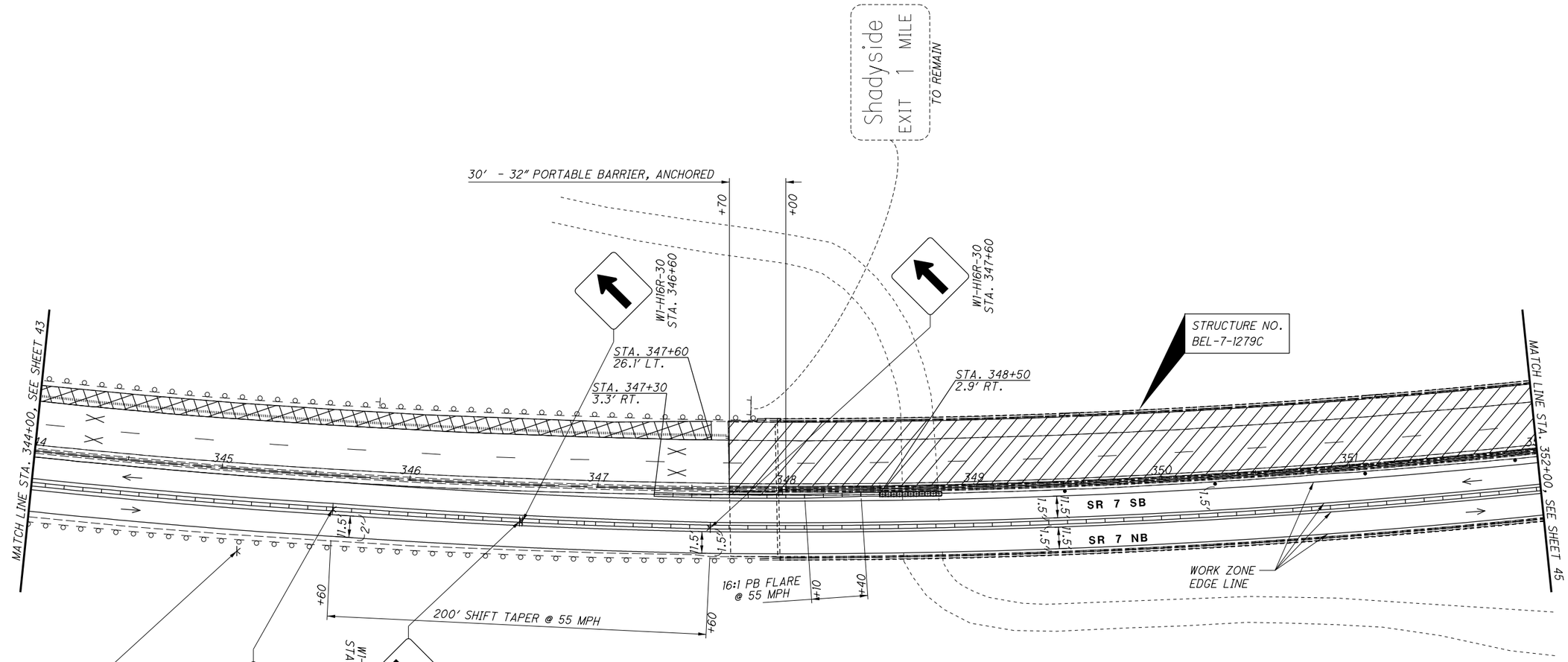
BEL-7-11.48

43
213

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NOTES:

1. EXISTING SHOULDERS SHALL BE REMOVED AND REPLACED PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE SHEET 13). WHERE DETAILED, SHOULDER WIDENING SHALL BE CONSTRUCTED USING THE SAME PAVEMENT BUILDUP. SEE SHEET 13 FOR PAVEMENT BUILDUP DETAILS.



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII/CLOSURE	10' c/c

LEGEND

- WORK ZONE
- SHOULDER TO BE REMOVED AND RECONSTRUCTED THIS PHASE (SEE NOTE 1)
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- TEMPORARY SIGN SUPPORT
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE
- CLOSED TRAVEL LANE

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED BER
CHECKED SMM

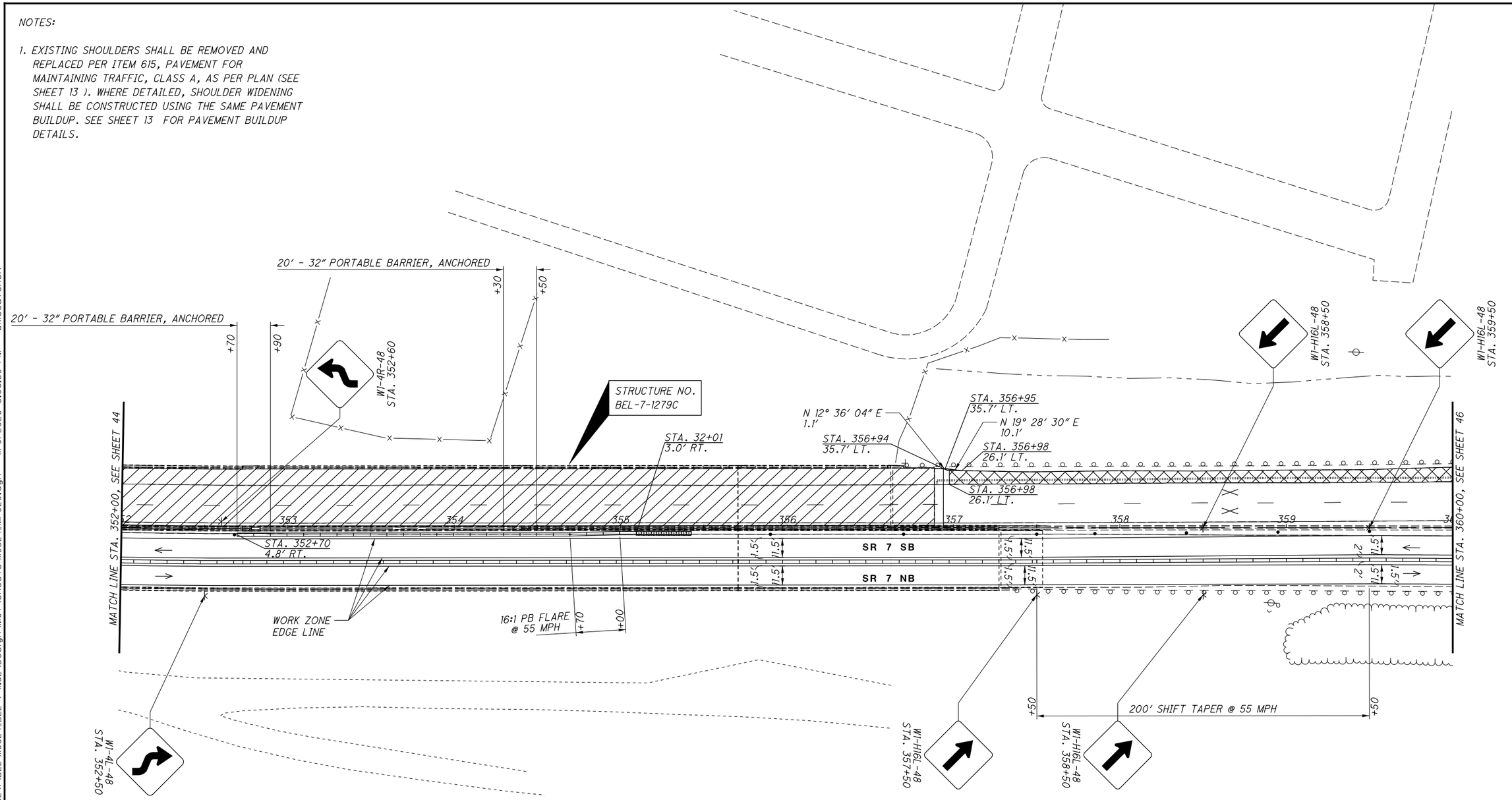
MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 1 - STA. 344+00 TO STA. 352+00

BEL-7-11.48

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NOTES:

1. EXISTING SHOULDERS SHALL BE REMOVED AND REPLACED PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE SHEET 13). WHERE DETAILED, SHOULDER WIDENING SHALL BE CONSTRUCTED USING THE SAME PAVEMENT BUILDUP. SEE SHEET 13 FOR PAVEMENT BUILDUP DETAILS.



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII/CLOSURE	10' c/c

LEGEND

- WORK ZONE
- SHOULDER TO BE REMOVED AND RECONSTRUCTED THIS PHASE (SEE NOTE 1)
- SHOULDER WIDENING CONSTRUCTED THIS PHASE (SEE NOTE 1)
- DRUM
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- TEMPORARY SIGN SUPPORT
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE
- CLOSED TRAVEL LANE

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED BER
CHECKED SMM

MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 1 - STA. 352+00 TO STA. 360+00

BEL-7-11.48

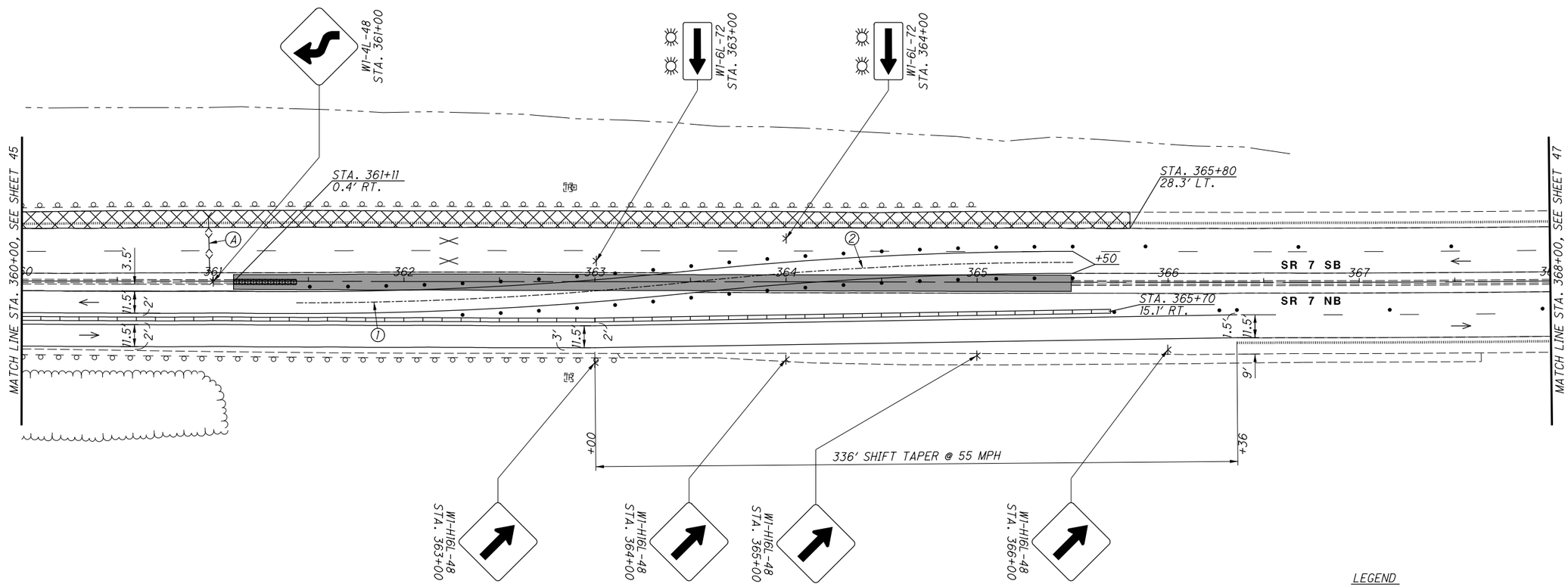
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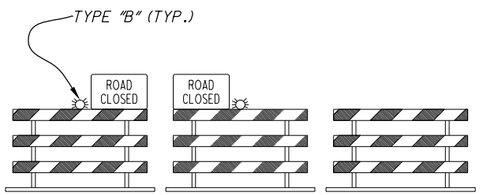
(1) FROM STA. 361+43.8, 11.3′ RT.
TO STA. 363+46.9, 0.42′ RT.
Δ = 6° 6′ 13″ (LT)
Dc = 2° 59′ 59″
R = 1910.00′
T = 101.83′
L = 203.47′
E = 2.71′
C = 203.37′
C.B. = N 87° 00′ 49″ E

(2) FROM STA. 363+46.9, 0.42′ RT.
TO STA. 365+50.0, 10.4′ LT.
Δ = 6° 6′ 13″ (RT)
Dc = 2° 59′ 59″
R = 1910.00′
T = 101.83′
L = 203.47′
E = 2.71′
C = 203.37′
C.B. = N 87° 00′ 49″ E

NOTES:

1. EXISTING SHOULDERS SHALL BE REMOVED AND REPLACED PER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE SHEET 13). WHERE DETAILED, SHOULDER WIDENING SHALL BE CONSTRUCTED USING THE SAME PAVEMENT BUILDUP. SEE SHEET 13 FOR PAVEMENT BUILDUP DETAILS.





10′ TYPE III SOLID BARRICADE
(A)

DRUM SPACING CHART	
TANGENT	80′ c/c
TAPER	55′ c/c
RADII/CLOSURE	10′ c/c

LEGEND
- WORK ZONE
- TEMPORARY PAVEMENT
- SHOULDER TO BE REMOVED AND RECONSTRUCTED THIS PHASE (SEE NOTE 1)
- DRUM
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- TEMPORARY SIGN SUPPORT
- TYPE III BARRICADE
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE
- CLOSED TRAVEL LANE

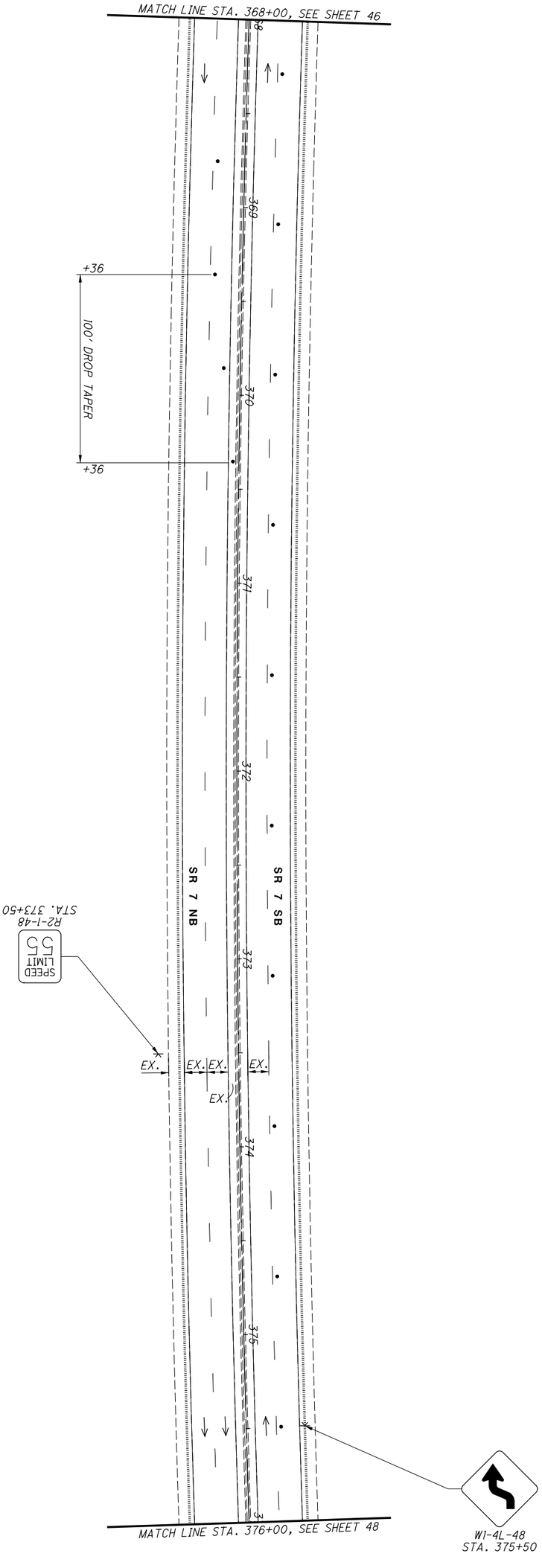
HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED BER
CHECKED SMM

MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 1 - STA. 360+00 TO STA. 368+00

BEL-7-11.48

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DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII/CLOSURE	10' c/c

LEGEND

DRUM

TEMPORARY SIGN SUPPORT

OPEN TRAVEL LANE

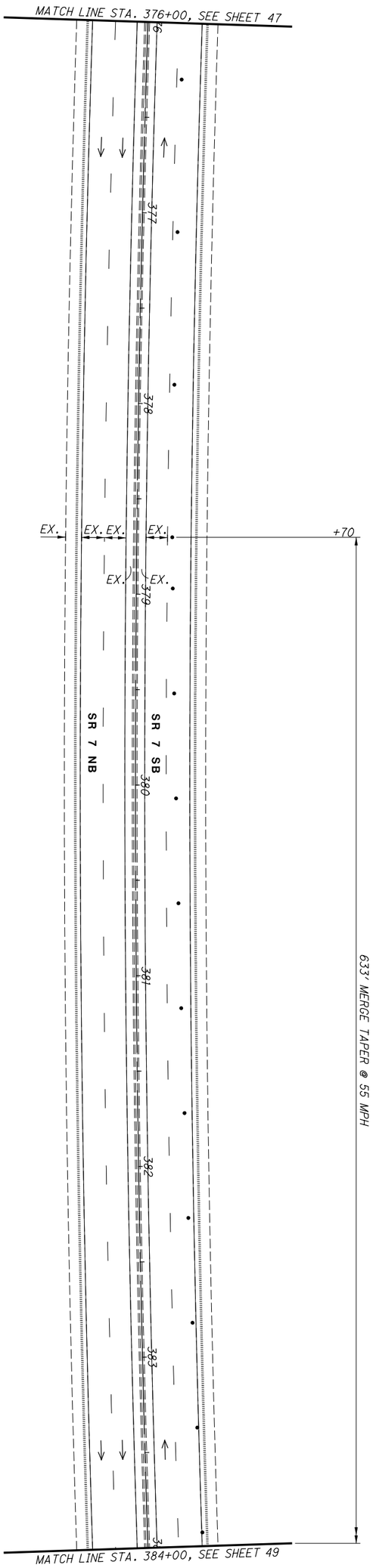
BEL-7-11.48

MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 1 - STA. 368+00 TO STA. 376+00

CALCULATED BER
CHECKED SMM

0 15 30 60
HORIZONTAL SCALE IN FEET

N

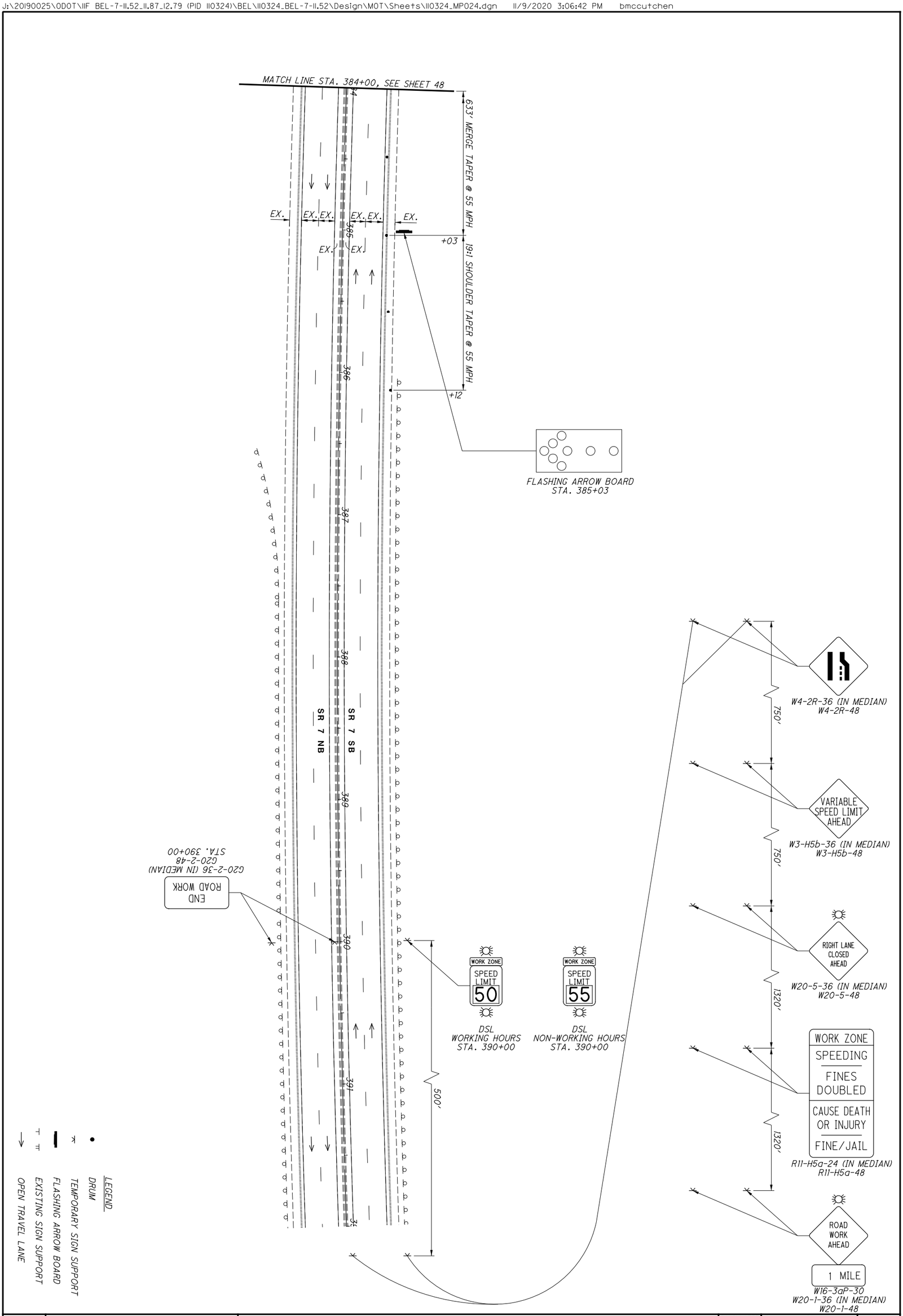


DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII/CLOSURE	10' c/c

LEGEND

DRUM

OPEN TRAVEL LANE



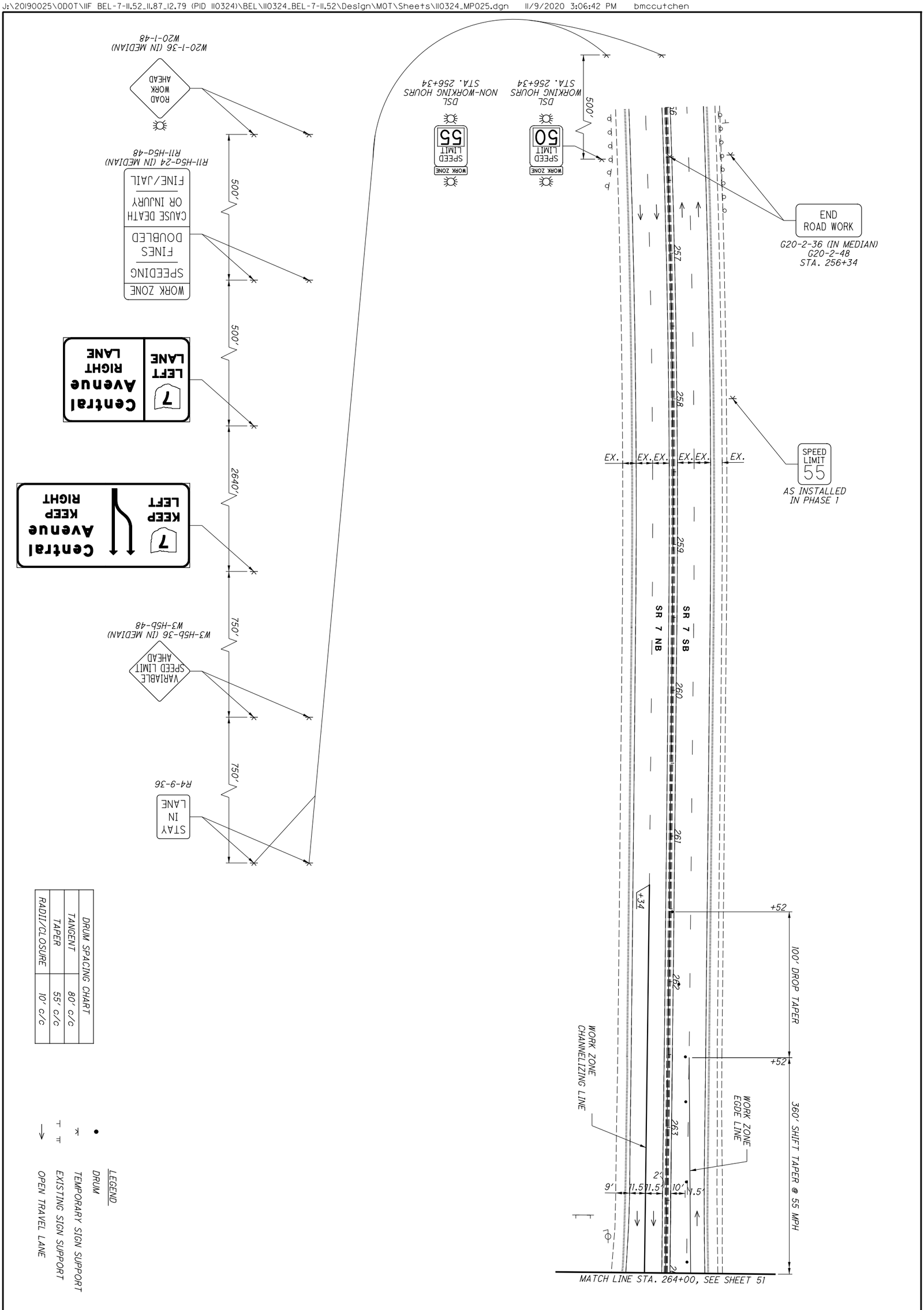
BEL-7-11.48

MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 1 - STA. 384+00 TO STA. 392+00

CALCULATED BER
CHECKED SMM

0 15 30 60
HORIZONTAL SCALE IN FEET

N



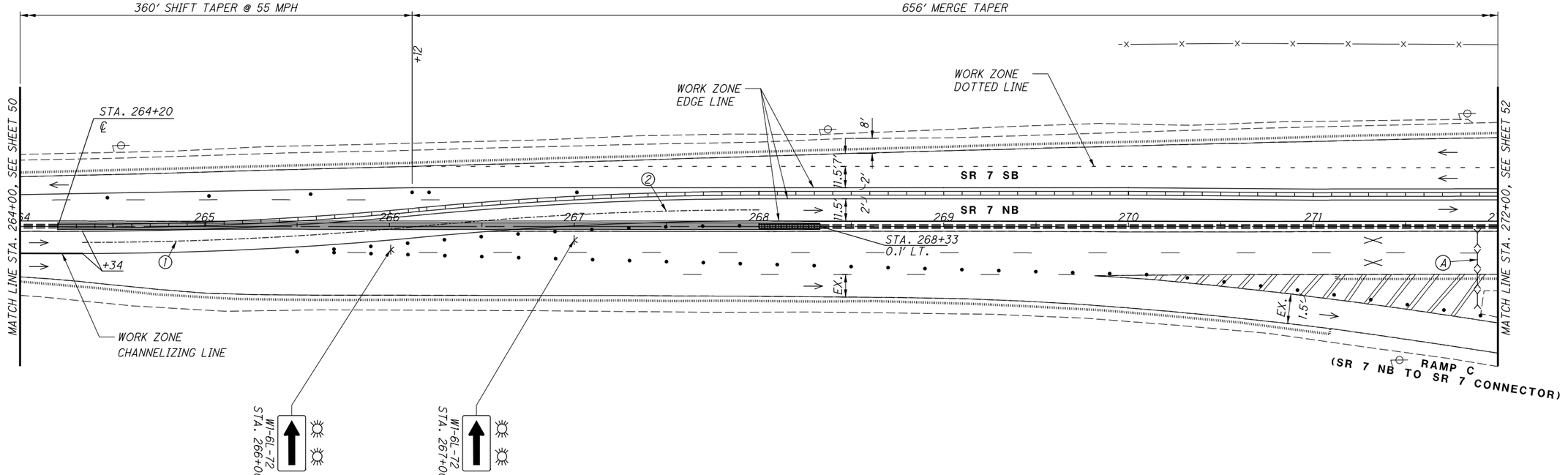
DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII/CLOSURE	10' c/c

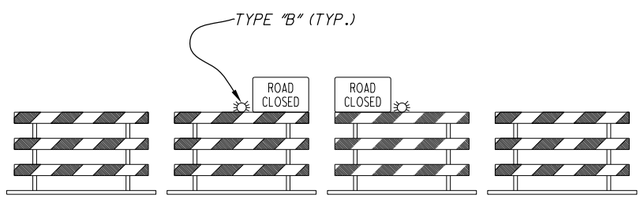
LEGEND

- DRUM
- TEMPORARY SIGN SUPPORT
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE

(1) *FROM STA. 264+33.8, 8.6′ RT.*
TO STA. 266+16.9, 0.2′ LT.
Δ = 5° 30′ 4″ (LT)
Dc = 2° 59′ 59″
R = 1910.00′
T = 91.76′
L = 183.39′
E = 2.20′
C = 183.32′
C.B. = N 87° 14′ 58″ E

(2) *STA. STA. 266+16.9, 0.2′ LT.*
TO STA. 268+00.0, 9.0′ LT.
Δ = 5° 30′ 4″ (RT)
Dc = 2° 59′ 59″
R = 1910.00′
T = 91.76′
L = 183.39′
E = 2.20′
C = 183.32′
C.B. = N 87° 14′ 58″ E





10′ TYPE III SOLID BARRICADE
Ⓐ

DRUM SPACING CHART	
TANGENT	80′ c/c
TAPER	55′ c/c
RADII/CLOSURE	10′ c/c

LEGEND
- TEMPORARY PAVEMENT
- DRUM
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- TEMPORARY SIGN SUPPORT
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE
- CLOSED TRAVEL LANE

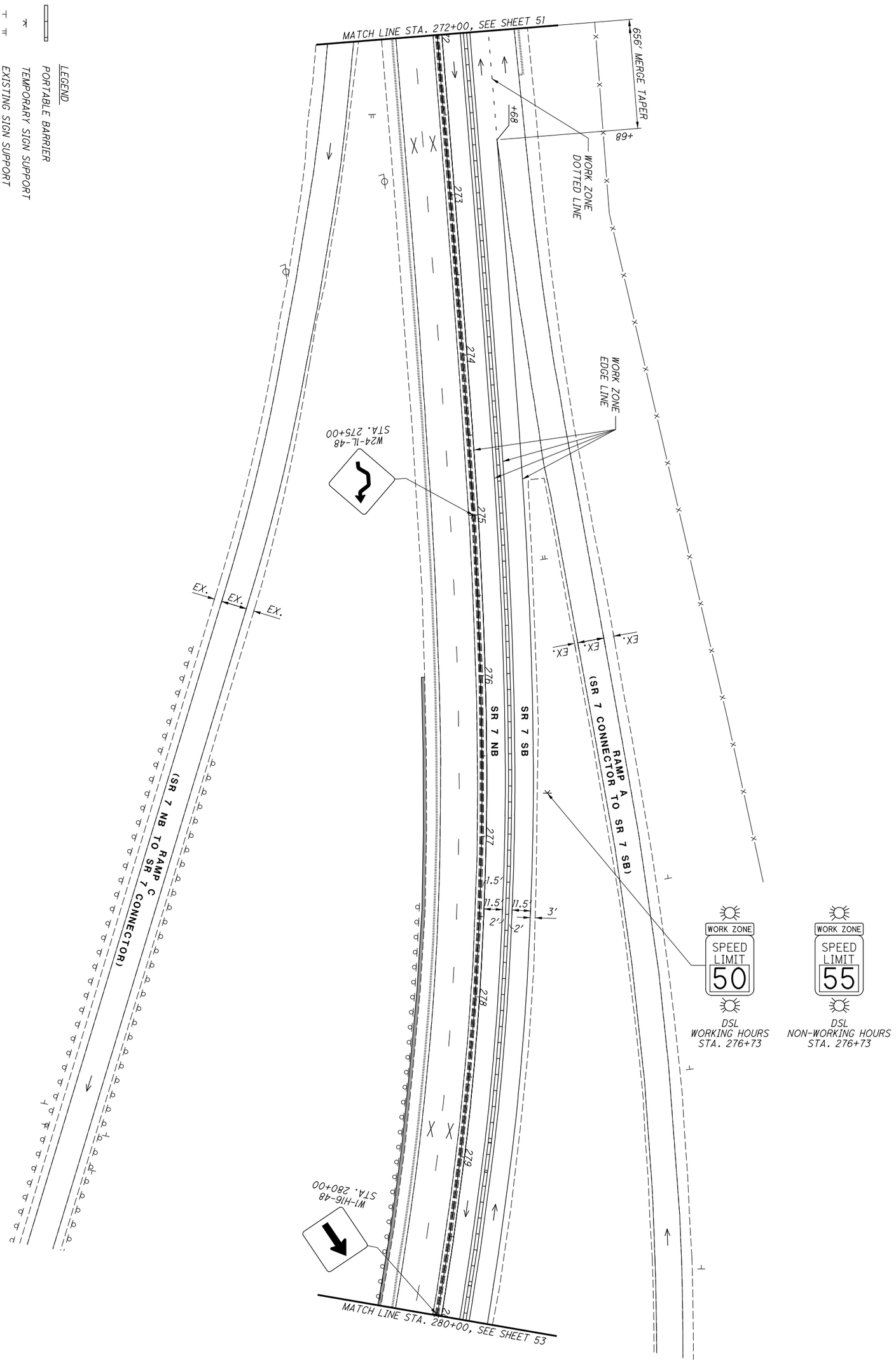
HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED BER
CHECKED SMM

MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 2 - STA. 264+00 TO STA. 272+00

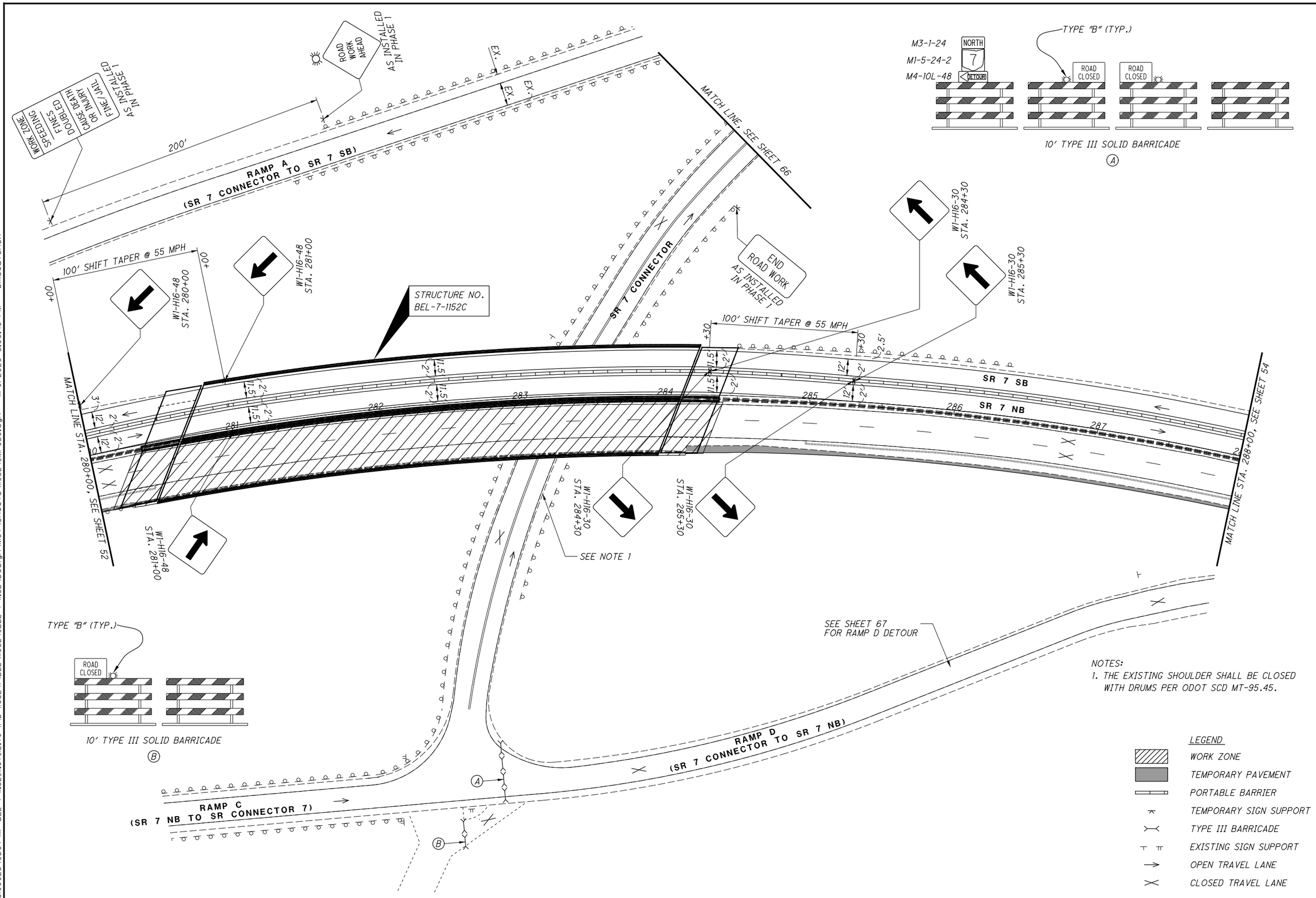
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52 / 213	BEL-7-11.48	MAINTENANCE OF TRAFFIC PLAN - SR 7 PHASE 2 - STA. 272+00 TO STA. 280+00	CALCULATED BER CHECKED SMM	0 30 15 60 HORIZONTAL SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 2 - STA. 280+00 TO STA. 288+00



NOTES:

1. THE EXISTING SHOULDER SHALL BE CLOSED WITH DRUMS PER ODOT SCD MT-95.45.

LEGEND

- WORK ZONE
- TEMPORARY PAVEMENT
- PORTABLE BARRIER
- TEMPORARY SIGN SUPPORT
- TYPE III BARRICADE
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE
- CLOSED TRAVEL LANE

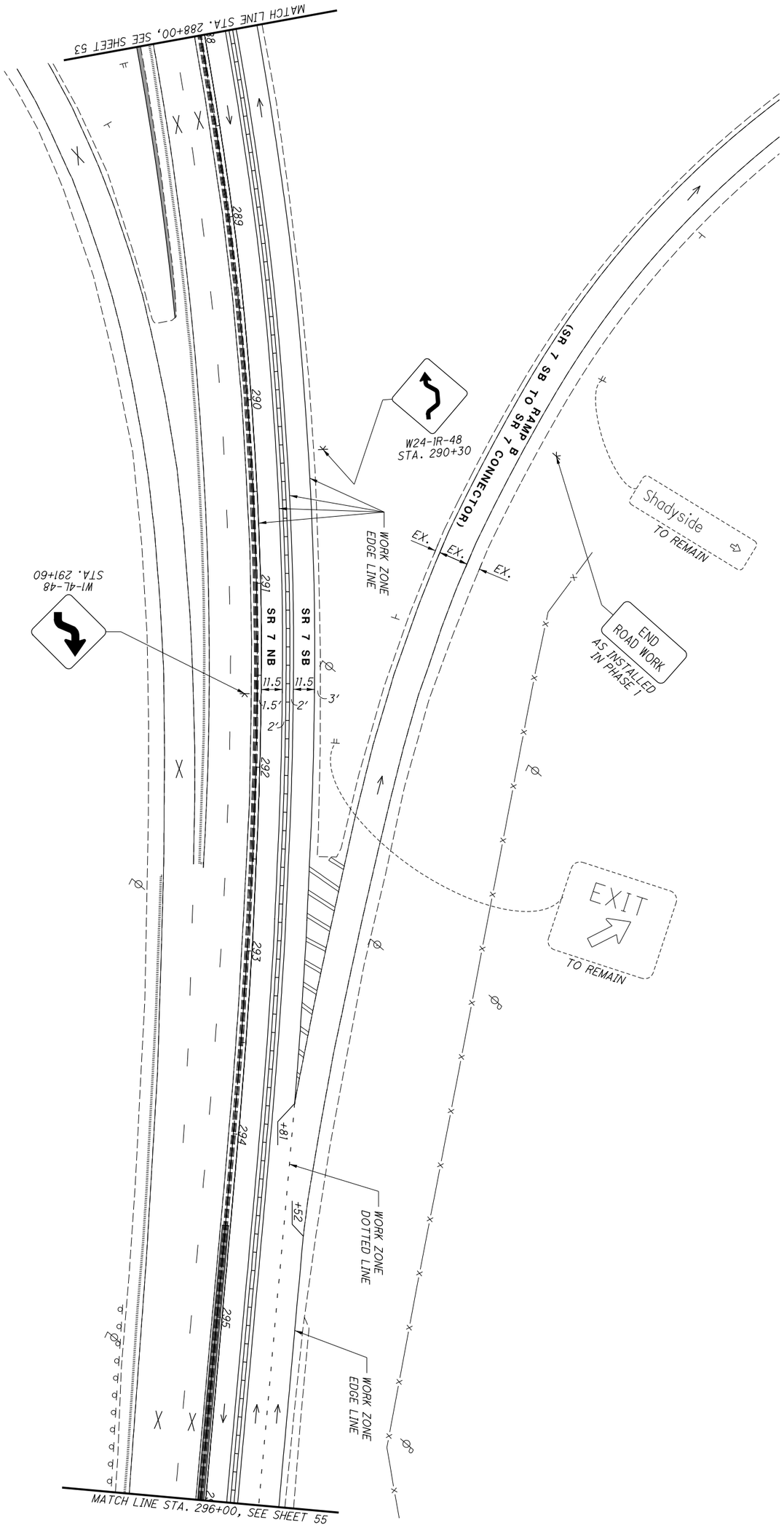
HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED BER
CHECKED SMM

BEL-7-11.48

53
213

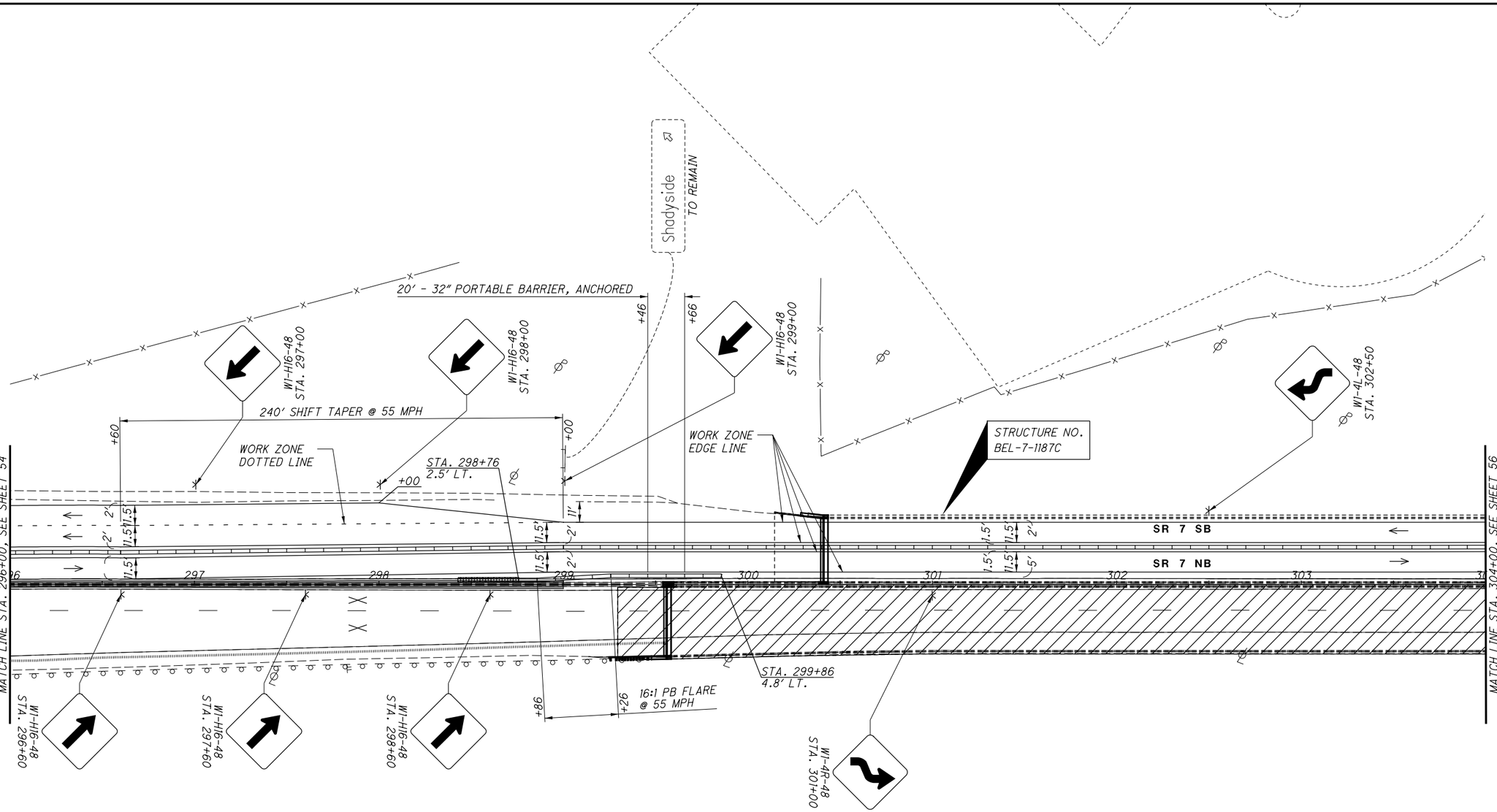
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LEGEND

- TEMPORARY PAVEMENT
- PORTABLE BARRIER
- TEMPORARY SIGN SUPPORT
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE
- CLOSED TRAVEL LANE

54 / 213	BEL-7-11.48	MAINTENANCE OF TRAFFIC PLAN - SR 7 PHASE 2 - STA. 288+00 TO STA. 296+00	CALCULATED BER CHECKED SMM	0 15 30 60 HORIZONTAL SCALE IN FEET



LEGEND

- WORK ZONE
- TEMPORARY PAVEMENT
- DRUM
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- TEMPORARY SIGN SUPPORT
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE
- CLOSED TRAVEL LANE

HORIZONTAL SCALE IN FEET
0 15 30 60

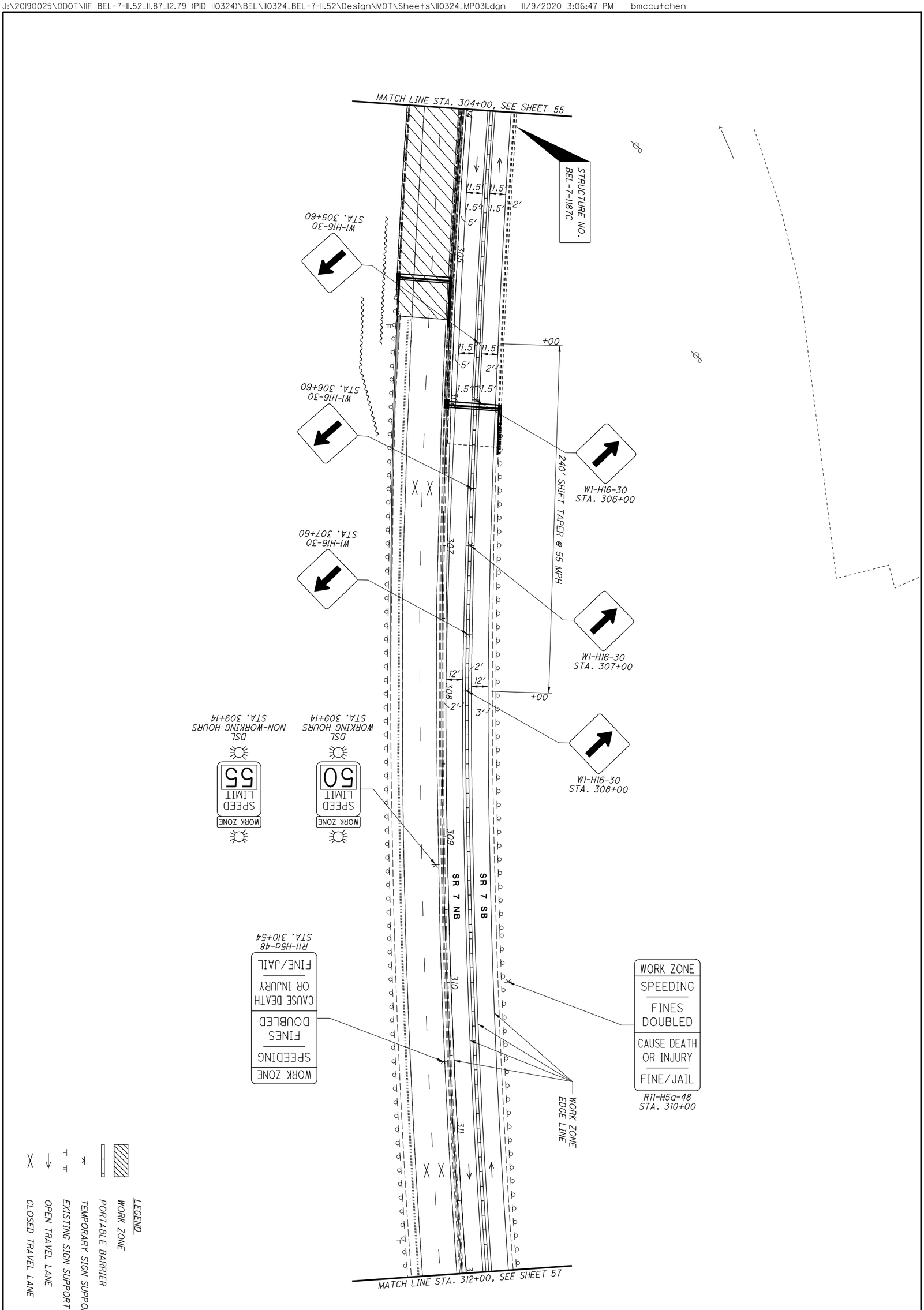
CALCULATED BER
CHECKED SMM

MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 2 - STA. 296+00 TO STA. 304+00

BEL-7-11.48

55
213

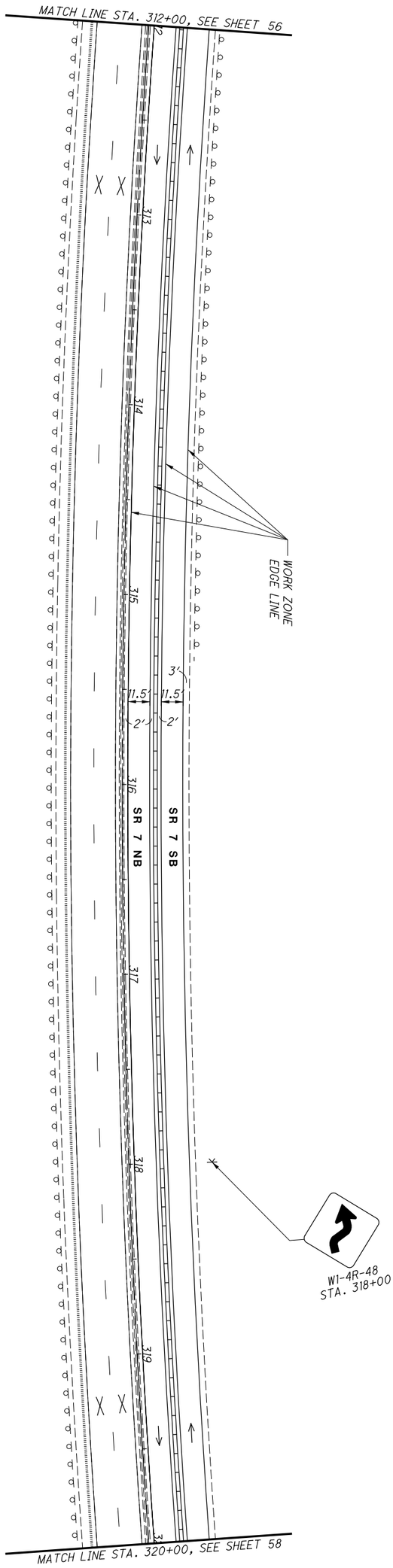
JA\2019025\ODOT\IF BEL-7-11.52_11.87_12.79 (PID 110324)\BEL\110324_BEL-7-11.52\Design\MOT\Sheets\110324_MP030.dgn 11/9/2020 3:06:46 PM bmccutchen



BEL-7-11.48

MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 2 - STA. 304+00 TO STA. 312+00

CALCULATED BER
CHECKED SMM
HORIZONTAL SCALE IN FEET



LEGEND

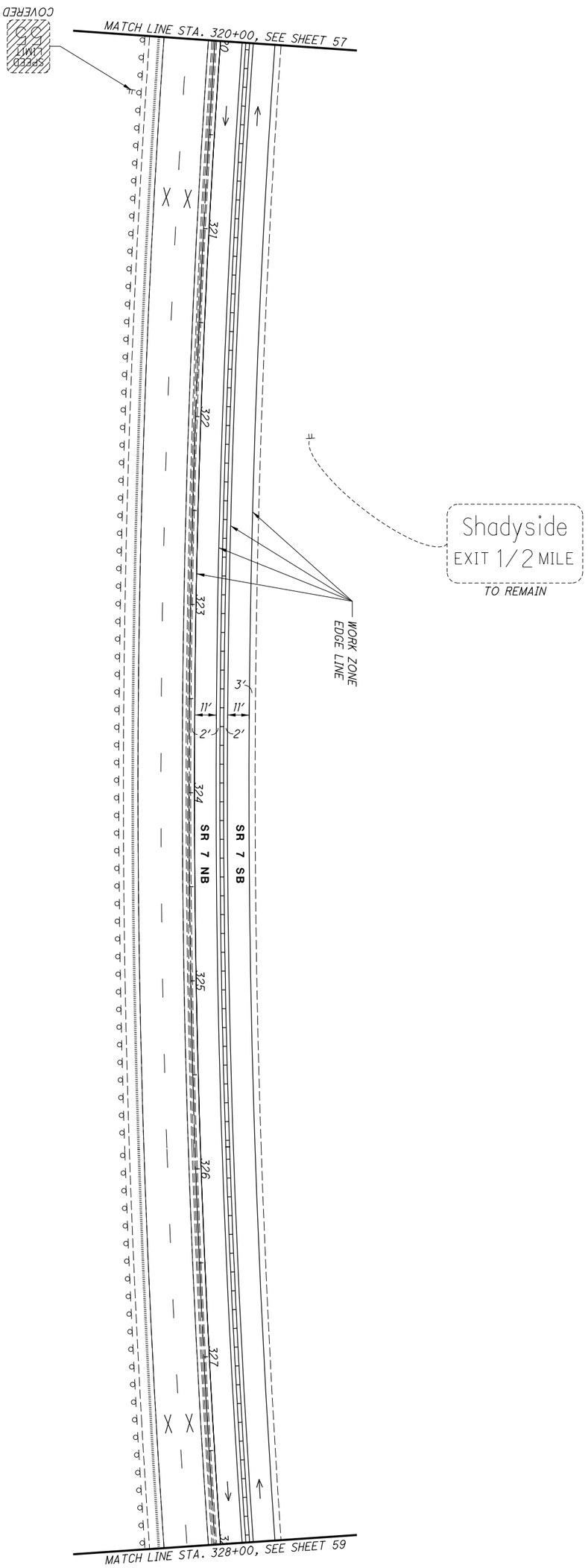
- PORTABLE BARRIER
- TEMPORARY SIGN SUPPORT
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE
- CLOSED TRAVEL LANE

BEL-7-11.48

MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 2 - STA. 312+00 TO STA. 320+00

CALCULATED BER
CHECKED SMM

0 15 30 60
HORIZONTAL SCALE IN FEET



LEGEND

PORTABLE BARRIER

TEMPORARY SIGN SUPPORT

EXISTING SIGN SUPPORT

OPEN TRAVEL LANE

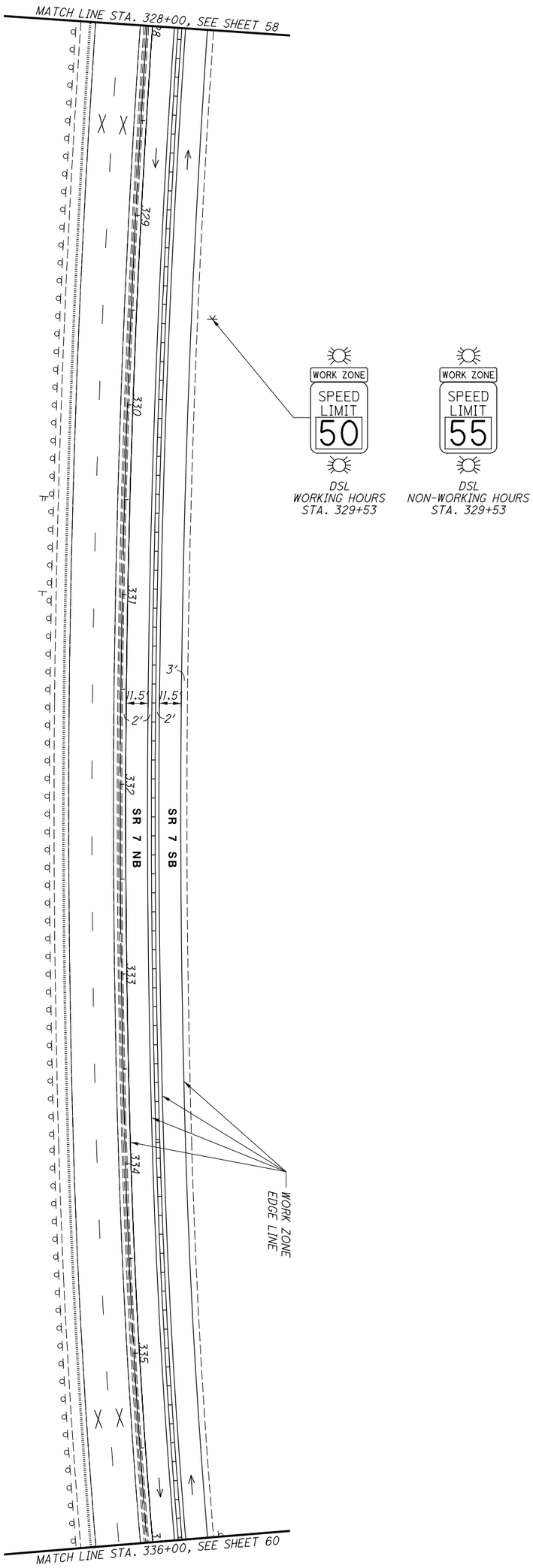
CLOSED TRAVEL LANE

BEL-7-11.48

MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 2 - STA. 320+00 TO STA. 328+00

CALCULATED BER
CHECKED SMM

0 15 30 60
HORIZONTAL SCALE IN FEET



LEGEND

PORTABLE BARRIER

TEMPORARY SIGN SUPPORT

OPEN TRAVEL LANE

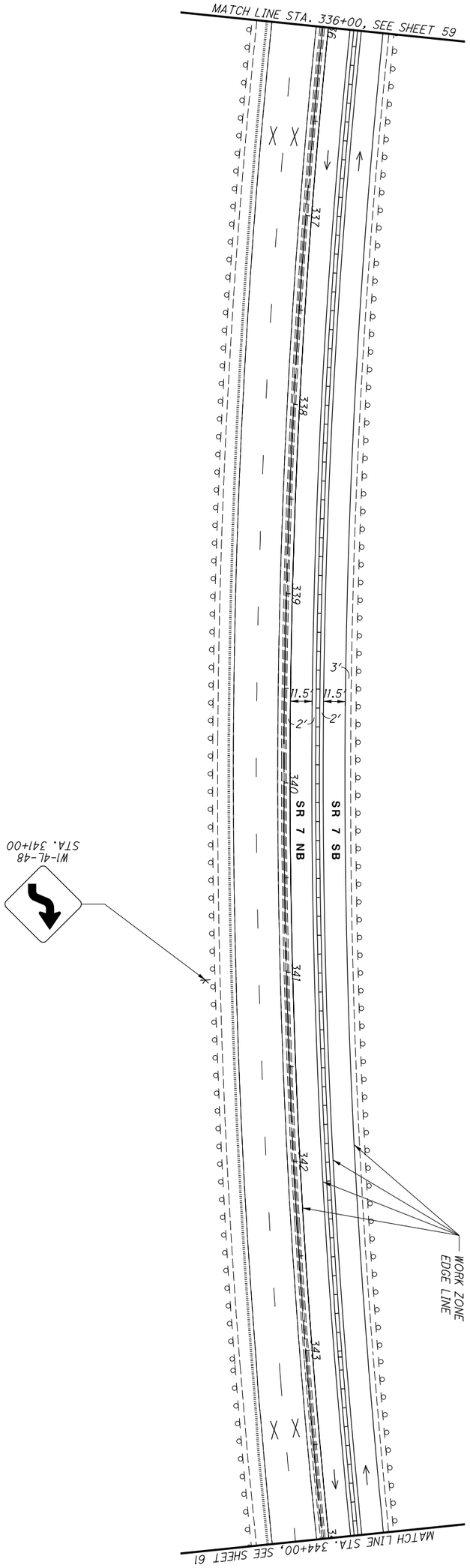
CLOSED TRAVEL LANE

BEL-7-11.48

MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 2 - STA. 328+00 TO STA. 336+00

CALCULATED BER
CHECKED SMM

0 15 30 60
HORIZONTAL SCALE IN FEET



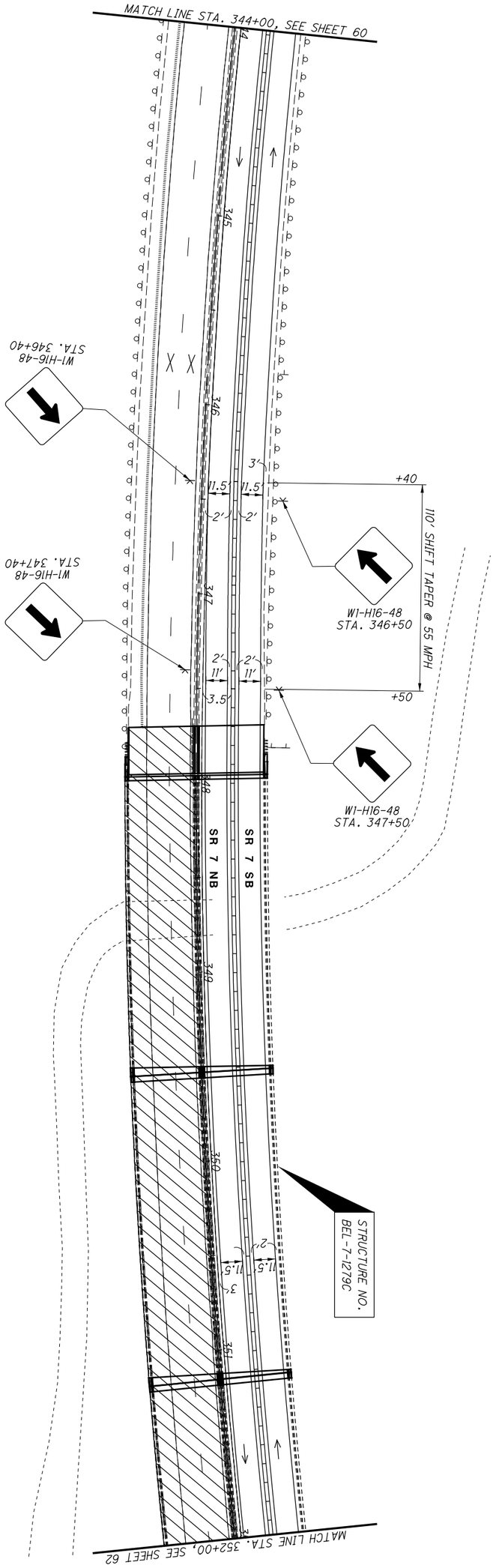
LEGEND

PORTABLE BARRIER

TEMPORARY SIGN SUPPORT

OPEN TRAVEL LANE

CLOSED TRAVEL LANE



LEGEND

- WORK ZONE
- PORTABLE BARRIER
- TEMPORARY SIGN SUPPORT
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE
- CLOSED TRAVEL LANE

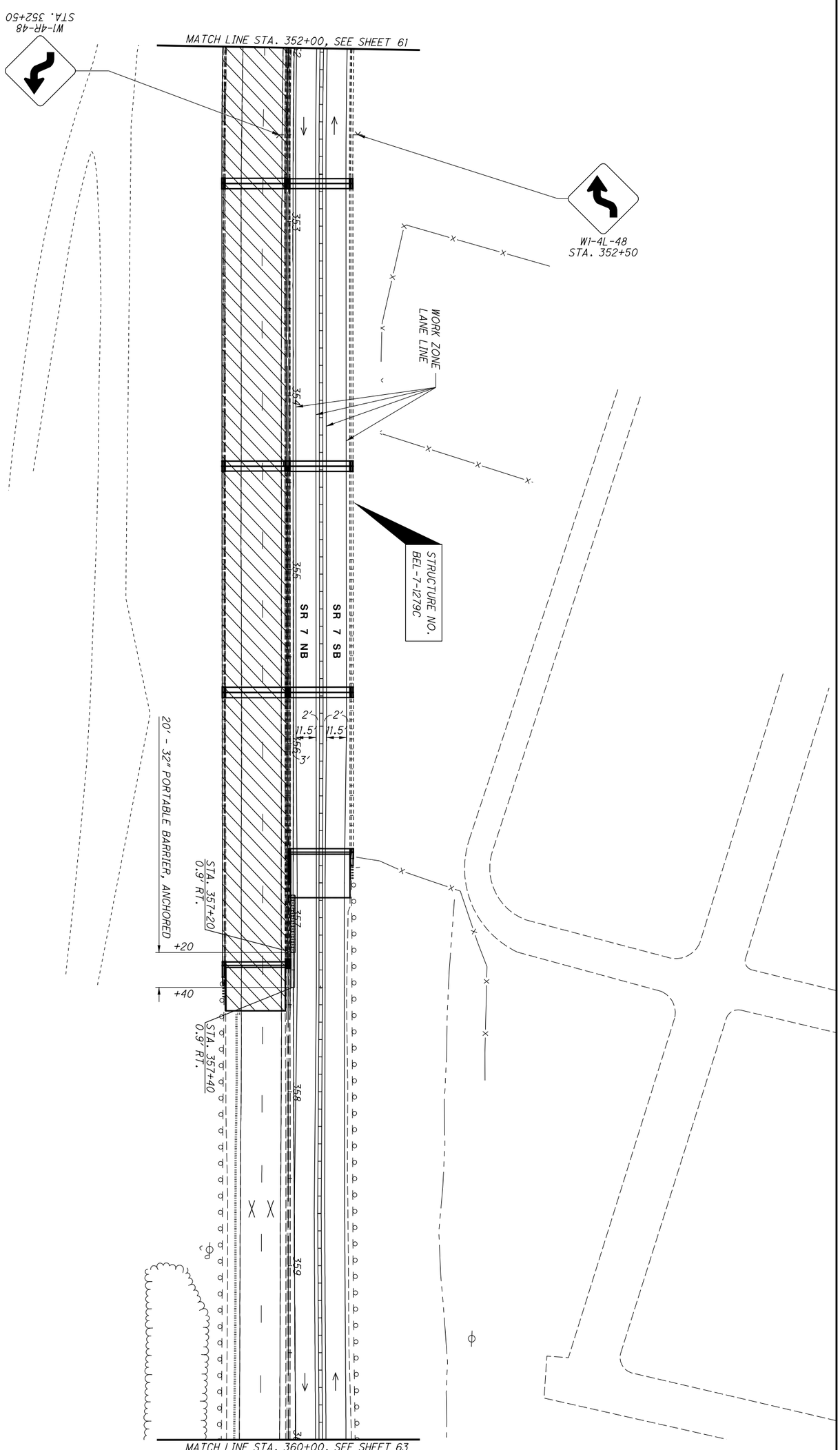
61
213

BEL-7-11.48

MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 2 - STA. 344+00 TO STA. 352+00

CALCULATED BER
CHECKED SMM

0 15 30 60
HORIZONTAL SCALE IN FEET



BEL-7-11.48

MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 2 - STA. 352+00 TO STA. 360+00

CALCULATED BER
CHECKED SMM

0 15 30 60
HORIZONTAL SCALE IN FEET

(1) STA. 361+43.8, 10.3' LT.
TO STA. 363+47.8, 0.6' RT.
Δ = 6° 7' 52" (RT)
Dc = 2° 59' 59"
R = 1910.00'
T = 102.29'
L = 204.39'
E = 2.74'
C = 204.29'
C.B. = S 86° 52' 08" E

(2) FROM STA. 363+47.8, 0.6' RT.
TO STA. 365+51.8, 11.5' RT.
Δ = 6° 7' 52" (LT)
Dc = 2° 59' 59"
R = 1910.00'
T = 102.29'
L = 204.39'
E = 2.74'
C = 204.29'
C.B. = S 86° 52' 08" E

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII/CLOSURE	10' c/c

LEGEND
- TEMPORARY PAVEMENT
- DRUM
- PORTABLE BARRIER
- TEMPORARY SIGN SUPPORT
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE
- CLOSED TRAVEL LANE

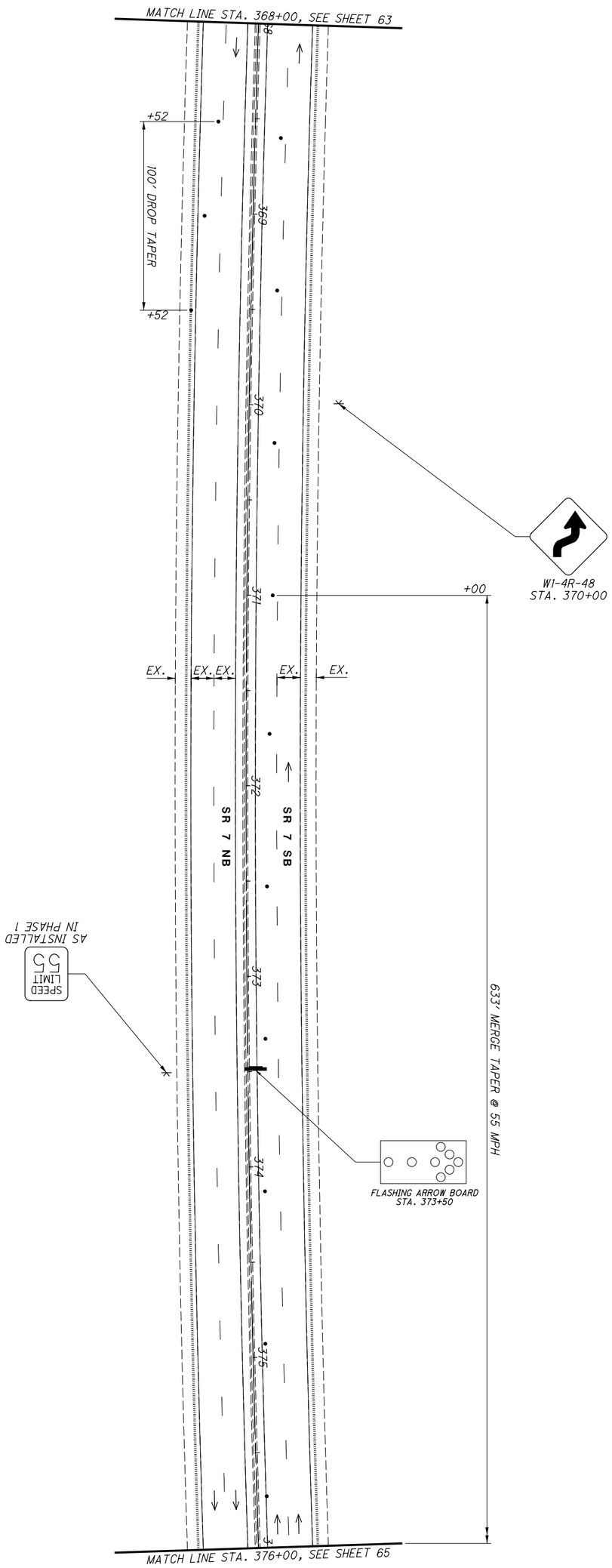
HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED BER
CHECKED SMM

MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 2 - 360+00 TO STA. 368+00

BEL-7-11.48

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DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII/CLOSURE	10' c/c

LEGEND

DRUM

TEMPORARY SIGN SUPPORT

FLASHING ARROW BOARD

OPEN TRAVEL LANE

CLOSED TRAVEL LANE

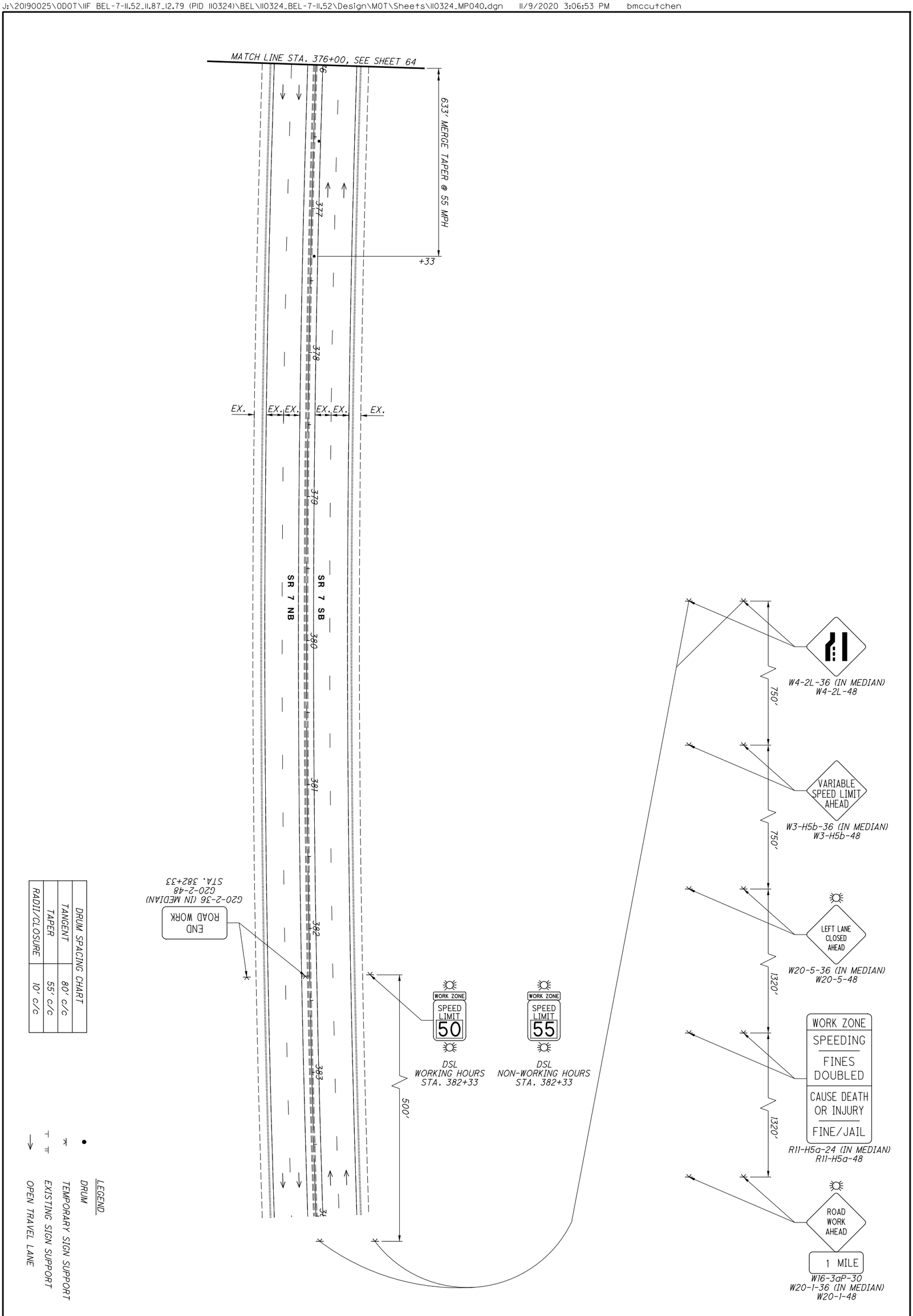
64
213

BEL-7-11.48

MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 2 - STA. 368+00 TO STA. 376+00

CALCULATED BER
CHECKED SMM

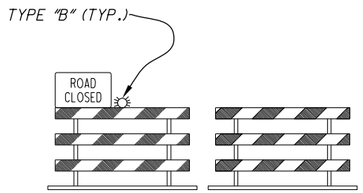
0 15 30 60
HORIZONTAL SCALE IN FEET



BEL-7-11.48

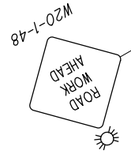
MAINTENANCE OF TRAFFIC PLAN - SR 7
PHASE 2 - STA. 376+00 TO STA. 384+00

CALCULATED BER
CHECKED SMM
0 15 30 60
HORIZONTAL SCALE IN FEET



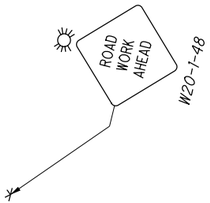
10' TYPE III SOLID BARRICADE

(A)



100'

MCGEE RD



RAMP A
(SR 7 CONNECTOR TO SR 7 SB)

SR 7 CONNECTOR

MATCH LINE, SEE SHEET 53

RAMP B
(SR 7 SB TO SR 7 CONNECTOR)

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII/CLOSURE	10' c/c

LEGEND

- DRUM
- TEMPORARY SIGN SUPPORT
- TYPE III BARRICADE
- EXISTING SIGN SUPPORT
- OPEN TRAVEL LANE
- CLOSED TRAVEL LANE

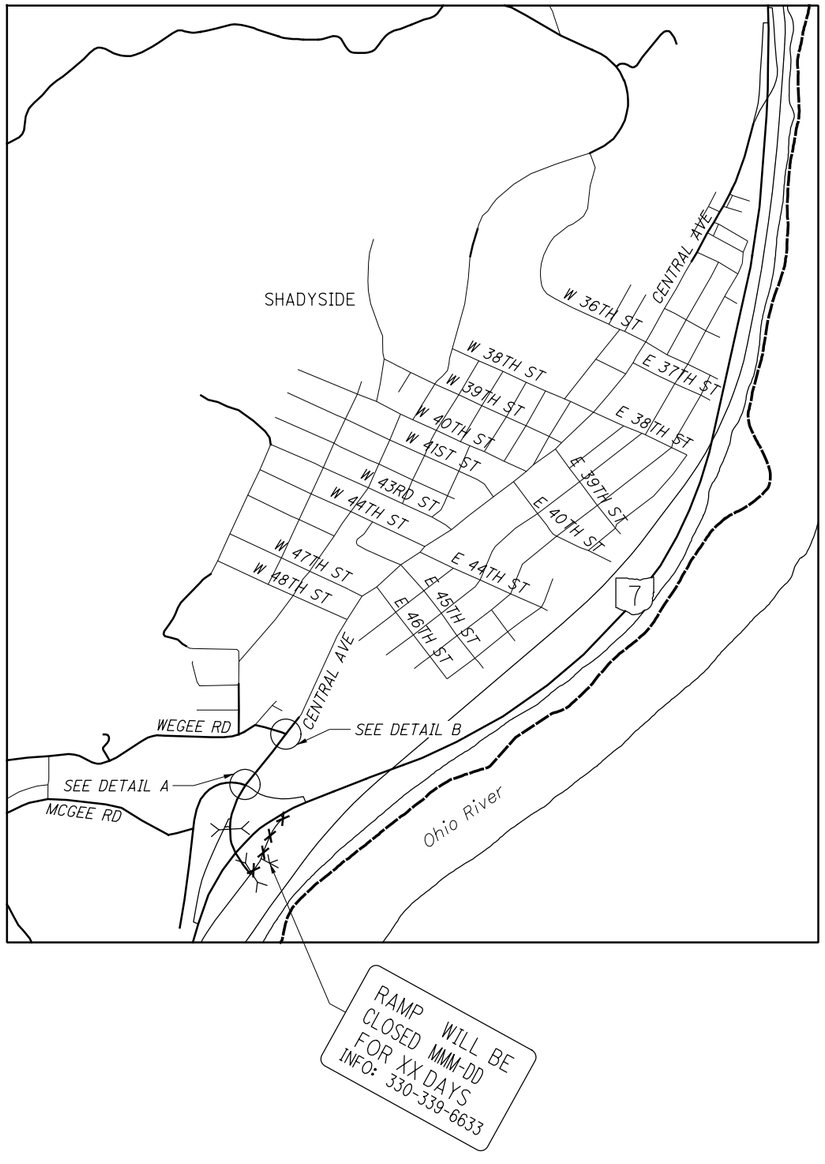
HORIZONTAL SCALE IN FEET
0 15 30 60

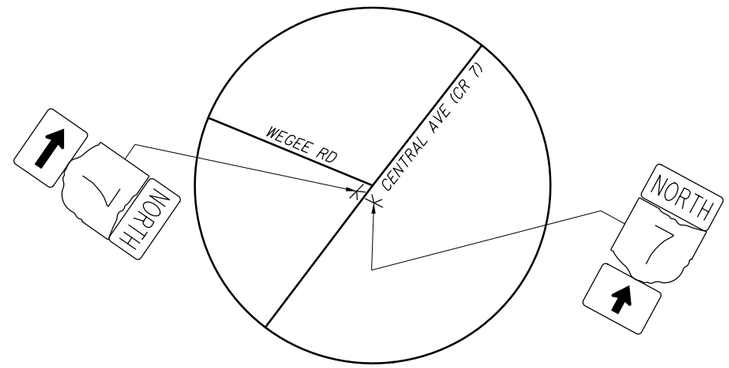
CALCULATED BER
CHECKED SMM

MAINTENANCE OF TRAFFIC PLAN - SR 7 CONNECTOR PHASE 2

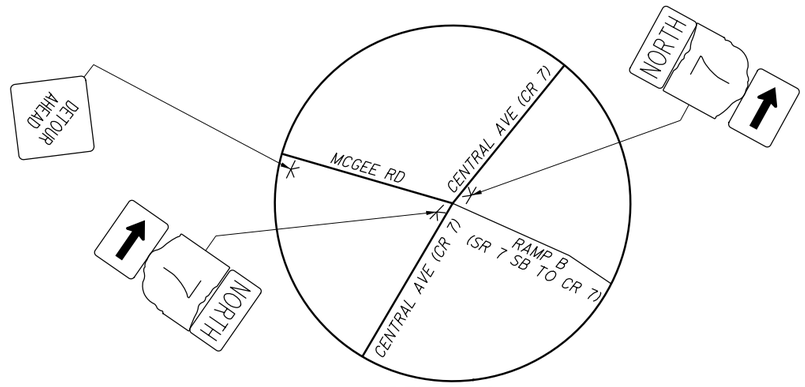
BEL-7-11.48

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DETAIL B
INTERSECTION OF WEGEE RD AND CENTRAL AVE (CR 7)



DETAIL A
INTERSECTION OF MCGEE RD AND CENTRAL AVE (CR 7)

NOTES:

1. *THE RAMP D DETOUR SHALL BE LIMITED TO 90 DAYS MAXIMUM DURATION.*
2. *FOR CLOSURE DETAILS INCLUDING BARRICADE LOCATIONS, SEE SHEETS 53 AND 66.*

LEGEND

- *RAMP CLOSURE*
- *TEMPORARY SIGN SUPPORT*
- *TYPE III BARRICADE*

MAINTENANCE OF TRAFFIC DETOUR PLAN
PHASE 2 - RAMP D (CR 7 TO SR 7 NB)

CALCULATED BER
CHECKED SMM

BEL-7-11.48

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SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
9	72	73	75	76	89	93							01/NHS/BR						
																		ROADWAY	
LS													LS	201	11000	LS		CLEARING AND GRUBBING	
	446												446	202	23000	446	SY	PAVEMENT REMOVED	
	1,685												1,685	202	30700	1,685	FT	CONCRETE BARRIER REMOVED	
	1,528												1,528	202	38000	1,528	FT	GUARDRAIL REMOVED	
	64												64	202	75000	64	FT	FENCE REMOVED	
						29							29	203	10000	29	CY	EXCAVATION	
						144							144	203	20000	144	CY	EMBANKMENT	
			1,342										1,342	204	10000	1,342	SY	SUBGRADE COMPACTION	
			2										2	204	45000	2	HOUR	PROOF ROLLING	
		1,212.5											1,212.5	606	15050	1,212.5	FT	GUARDRAIL, TYPE MGS	
		100											100	606	15250	100	FT	GUARDRAIL, TYPE MGS QUARTER POST SPACING	
		2											2	606	26150	2	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	
		6											6	606	35002	6	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
		3											3	606	35102	3	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
		64											64	607	23000	64	FT	FENCE, TYPE CLT	
		64											64	607	70000	64	FT	FENCELINE SEEDING AND MULCHING	
		1,381											1,381	622	10100	1,381	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE B1	
		7											7	622	10200	7	EACH	BARRIER TRANSITION	91
		9											9	622	25006	9	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1	
		1											1	622	25007	1	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1, AS PER PLAN	92
		1											1	622	25020	1	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED	92
																		EROSION CONTROL	
				4									4	601	21050	4	SY	TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT	
2													2	659	00100	2	EACH	SOIL ANALYSIS TEST	
867													867	659	00300	867	CY	TOPSOIL	
7,807													7,807	659	10000	7,807	SY	SEEDING AND MULCHING	
390													390	659	14000	390	SY	REPAIR SEEDING AND MULCHING	
1.05													1.05	659	20000	1.05	TON	COMMERCIAL FERTILIZER	
1.61													1.61	659	31000	1.61	ACRE	LIME	
42													42	659	35000	42	MGAL	WATER	
													22,766	832	30000	22,766	EACH	EROSION CONTROL	
																		DRAINAGE	
				0.3									0.3	602	20000	0.3	CY	CONCRETE MASONRY	
				72									72	605	11110	72	FT	6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
				126									126	605	14020	126	FT	6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
				235									235	611	00510	235	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
				13									13	611	06100	13	FT	15" CONDUIT, TYPE C	
				127									127	611	06700	127	FT	15" CONDUIT, TYPE F	
				1									1	611	98180	1	EACH	CATCH BASIN, NO. 3A	
				2									2	611	99710	2	EACH	PRECAST REINFORCED CONCRETE OUTLET	
				1									1	611	99900	1	EACH	DRAINAGE STRUCTURE, MISC.: INLET, NO. 4 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN	9
																		PAVEMENT	
			157										157	302	46000	157	CY	ASPHALT CONCRETE BASE, PG64-22	
			261										261	304	20000	261	CY	AGGREGATE BASE	
			2,439										2,439	407	10000	2,439	GAL	TACK COAT	
			1,214										1,214	442	20001	1,214	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448), AS PER PLAN (PG70-22M)	9
			185										185	442	20200	185	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448)	
		249											249	609	24510	249	FT	CURB, TYPE 4-C	
						3.22							3.22	618	40600	3.22	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	

CALCULATED BMM
CHECKED MJR

GENERAL SUMMARY

BEL-7-11.48

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SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
93	94	100	101	109									01/NHS/BR						
																		LIGHTING	
		20											20	611	00410	20	FT	4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET	
			14										14	625	00480	14	EACH	CONNECTION, UNFUSED PERMANENT	
			1,238										1,238	625	23200	1,238	FT	NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE	
			361										361	625	25403	361	FT	CONDUIT, 2", 725.05, AS PER PLAN	100
			208										208	625	25408	208	FT	CONDUIT, 2", 725.051	
			50										50	625	25910	50	FT	CONDUIT CLEANED AND CABLES REMOVED	
			208										208	625	29000	208	FT	TRENCH	
			3										3	625	29900	3	EACH	JUNCTION BOX	
			5										5	625	30700	5	EACH	PULL BOX, 725.08, 18"	
			4										4	625	31510	4	EACH	PULL BOX REMOVED	
			1										1	625	33000	1	EACH	STRUCTURE GROUNDING SYSTEM	
			208										208	625	36010	208	FT	UNDERGROUND WARNING/MARKING TAPE	
			LS										LS	625	37001	LS		SERVICE TO UNDERPASS LIGHTING, AS PER PLAN	100
			LS										LS	SPECIAL	62540000	LS		MAINTAIN EXISTING LIGHTING	100
			1										1	SPECIAL	62540010	1	EACH	REPLACEMENT OF EXISTING LIGHTING UNIT	100
			2										2	625	75801	2	EACH	DISCONNECT CIRCUIT, AS PER PLAN	100
																		TRAFFIC CONTROL	
250													250	621	00100	250	EACH	RPM	
236													236	621	54000	236	EACH	RAISED PAVEMENT MARKER REMOVED	
	58												58	630	03100	58	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
	5												5	630	85100	5	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
	1												1	630	85600	1	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION	
	4												4	630	86002	4	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
7.97													7.97	646	10010	7.97	MILE	EDGE LINE, 6"	
4.12													4.12	646	10110	4.12	MILE	LANE LINE, 6"	
1,907													1,907	646	10310	1,907	FT	CHANNELIZING LINE, 12"	
223													223	646	10620	223	FT	CHEVRON MARKING	
																		STRUCTURE OVER 20 FOOT SPAN (BEL-7-1152C)	
				LS									LS	202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	107
				296									296	202	22900	296	SY	APPROACH SLAB REMOVED	
				296									296	202	23500	296	SY	WEARING COURSE REMOVED	
				LS									LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
				LS									LS	503	21300	LS		UNCLASSIFIED EXCAVATION	
				294,922									294,922	509	10000	294,922	LB	EPOXY COATED REINFORCING STEEL	
				100									100	509	20001	100	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	107
				10,642									10,642	509	30020	10,642	FT	NO. 4 GFRP DEFORMED BARS	
				11,967									11,967	509	30040	11,967	FT	NO. 6 GFRP DEFORMED BARS	
				209									209	510	10001	209	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	108
				837									837	511	34446	837	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK	
				288									288	511	34450	288	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)	
				100									100	511	44112	100	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	
				3,452									3,452	511	81300	3,452	EACH	CONCRETE, MISC.:EMBEDDED GALVANIC ANODES (EGA)	108
				4,434									4,434	512	10100	4,434	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
				85									85	512	10600	85	FT	CONCRETE REPAIR BY EPOXY INJECTION	
				71									71	512	33000	71	SY	TYPE 2 WATERPROOFING	
				165									165	516	12300	165	FT	STRIP SEAL EXPANSION JOINT ANCHORED WITH ELASTOMERIC CONCRETE	
				116									116	516	13600	116	SF	1" PREFORMED EXPANSION JOINT FILLER	
				24									24	516	43301	24	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE), AS PER PLAN(10"X15"X3.875")	128
				46									46	516	43301	46	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE), AS PER PLAN (9"X14.5"X3.125")	128
				24									24	516	44101	24	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE),	127
																		AS PER PLAN (BEARING: 9"X11.5"X2.84", LOAD PLATE: 10"X26"XVARIES)	
				12									12	516	44201	12	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE),	126
																		AS PER PLAN (BEARING: 8"X24"X3.223", LOAD PLATE: 9"X26"X2.16")	
				12									12	516	44201	12	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE),	126
																		AS PER PLAN (BEARING: 8.5"X20"X3.198", LOAD PLATE: 9.5"X22"X1.18")	
				2									2	516	44201	2	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE),	128
																		AS PER PLAN (BEARING: 9"X14.5"X3.125", LOAD PLATE: 11"X26"XVARIES)	

CALCULATED BMM CHECKED MJR

GENERAL SUMMARY

BEL-7-11.48

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SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
109	158	183											01/NHS/BR						
																		STRUCTURE OVER 20 FOOT SPAN (BEL-7-1152C) CONTINUED	
LS													LS	516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	108
10													10	518	12301	10	EACH	SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN	131
80													80	518	21200	80	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
85													85	SPECIAL	51900100	85	SF	COMPOSITE FIBER WRAP SYSTEM	108
407													407	526	25011	407	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN	146
165													165	526	90010	165	FT	TYPE A INSTALLATION	
180													180	601	20000	180	SY	CRUSHED AGGREGATE SLOPE PROTECTION	
397													397	601	34200	397	CY	ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER	
12													12	843	50000	12	SF	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	
27													27	844	10001	27	SF	CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN	108
																		STRUCTURE REPAIR (BEL-7-1187C)	
	LS												LS	202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	155
	209												209	202	23500	209	SY	WEARING COURSE REMOVED, ASPHALT	
	LS												LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
	6,882												6,882	509	10000	6,882	LB	EPOXY COATED REINFORCING STEEL	
	100												100	509	20001	100	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	155
	40												40	510	10001	40	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	156
	27												27	511	34446	27	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK	
	164												164	511	81300	164	EACH	CONCRETE, MISC.:EMBEDDED GALVANIC ANODE (EGA)	156
	468												468	512	10101	468	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	156
	4,658												4,658	512	33010	4,658	SY	TYPE 3 WATERPROOFING	
	LS												LS	513	10001	LS		STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN	156
	137												137	514	00050	137	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
	137												137	514	00056	137	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	
	137												137	514	00060	137	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
	137												137	514	00066	137	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	
	2												2	514	00504	2	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
	1												1	514	10000	1	EACH	FINAL INSPECTION REPAIR	
	1,706												1,706	514	27700	1,706	SF	FIELD PAINTING, MISC.:ZINC RICH PRIMER	156
	153												153	516	11210	153	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL	
	85												85	516	13600	85	SF	1" PREFORMED EXPANSION JOINT FILLER	
	280												280	516	31010	280	FT	2" DEEP JOINT SEALER	
	9												9	516	45305	9	EACH	REFURBISH BEARING DEVICE, AS PER PLAN	156
	LS												LS	516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	156
	30												30	518	12801	30	EACH	SCUPPER, MODIFICATION, AS PER PLAN	176
	982												982	519	12300	982	SY	PATCHING CONCRETE BRIDGE DECK - TYPE B	157
	1,690												1,690	520	10001	1,690	SF	PNEUMATICALLY PLACED CONCRETE SHOTCRETE, AS PER PLAN	156
	61												61	601	20000	61	SY	CRUSHED AGGREGATE SLOPE PROTECTION	
	50												50	844	10001	50	SF	CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN	157
																		STRUCTURE REPAIR (BEL-7-1279C)	
		LS											LS	202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	180
		389											389	202	22900	389	SY	APPROACH SLAB REMOVED	
		LS											LS	503	21300	LS		UNCLASSIFIED EXCAVATION	
		51,618											51,618	509	10000	51,618	LB	EPOXY COATED REINFORCING STEEL	
		200											200	509	20001	200	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	180
		492											492	510	10001	492	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	180
		188											188	511	32212	188	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE	
		196											196	511	81300	196	EACH	CONCRETE, MISC.:EMBEDDED GALVANIC ANODE (EGA)	180

CALCULATED BMM CHECKED MJR

GENERAL SUMMARY

BEL-7-11.48

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SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
10	11	12	16	183									01/NHS/BR						
																		STRUCTURE REPAIR (BEL-7-1279C) CONTINUED	
				387									387	512	10101	387	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	181
				7,189									7,189	512	33010	7,189	SY	TYPE 3 WATERPROOFING	
				1,267									1,267	514	27700	1,267	SF	FIELD PAINTING, MISC.:ZINC RICH PRIMER	181
				510									510	516	12300	510	FT	STRIP SEAL EXPANSION JOINT ANCHORED WITH ELASTOMERIC CONCRETE	
				126									126	516	13600	126	SF	1" PREFORMED EXPANSION JOINT FILLER	
				822									822	516	31010	822	FT	2" DEEP JOINT SEALER	
				89									89	518	12801	89	EACH	SCUPPER, MODIFICATION, AS PER PLAN	211
				81									81	519	11100	81	SF	PATCHING CONCRETE STRUCTURE	
				1,000									1,000	519	12300	1,000	SY	PATCHING CONCRETE BRIDGE DECK - TYPE B	181
				1,250									1,250	520	10001	1,250	SF	PNEUMATICALLY PLACED CONCRETE SHOTCRETE, AS PER PLAN	181
				388									388	526	25000	388	SY	REINFORCED CONCRETE APPROACH SLABS (T=15")	
				140									140	526	90010	140	FT	TYPE A INSTALLATION	
				10									10	601	20000	10	SY	CRUSHED AGGREGATE SLOPE PROTECTION	
				287									287	844	10001	287	SF	CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN	182
																		MAINTENANCE OF TRAFFIC	
		100											100	614	11110	100	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
			9										9	614	12380	9	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	
			LS										LS	614	12420	LS		DETOUR SIGNING	
	10												10	614	12484	10	EACH	WORK ZONE INCREASED PENALTIES SIGN	
			3										3	614	12756	3	EACH	WORK ZONE CROSSOVER LIGHTING SYSTEM	
			290										290	614	12801	290	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	11
			839										839	614	13310	839	EACH	BARRIER REFLECTOR, TYPE 1, ONE-WAY	
			133										133	614	13312	133	EACH	BARRIER REFLECTOR, TYPE 2, ONE-WAY	
			582										582	614	13350	582	EACH	OBJECT MARKER, ONE WAY	
			407										407	614	13360	407	EACH	OBJECT MARKER, TWO WAY	
4.12													4.12	614	20056	4.12	MILE	WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT	
7.97			15.3										23.27	614	22056	23.27	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 807 PAINT	
1,907			600										2,507	614	23110	2,507	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807 PAINT	
			2,211										2,211	614	24102	2,211	FT	WORK ZONE DOTTED LINE, CLASS I, 6", 807 PAINT	
			13,875										13,875	615	20001	13,875	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	12
15													15	616	10000	15	MGAL	WATER	
			19,560										19,560	622	41011	19,560	FT	PORTABLE BARRIER, 50", AS PER PLAN	10
			600										600	622	41100	600	FT	PORTABLE BARRIER, UNANCHORED	
			530										530	622	41110	530	FT	PORTABLE BARRIER, ANCHORED	
	33												33	808	18700	33	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	
																		INCIDENTALS	
LS													LS	614	11000	LS		MAINTAINING TRAFFIC	
													6	619	16020	6	MNTH	FIELD OFFICE, TYPE C	
													LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
													LS	624	10000	LS		MOBILIZATION	

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GENERAL SUMMARY

BEL-7-11.48

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SHEET NO.	REF. NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	202 GUARDRAIL REMOVED FT	202 CONCRETE BARRIER REMOVED FT	202 FENCE REMOVED FT	202 PAVEMENT REMOVED SY
77	R1	277+42.78	280+27.43	RT	℄ SR-7	279			
	R2	278+25.00	280+36.25	℄	℄ SR-7		211		
	R3	279+97.49	280+35.51	RT	℄ SR-7				63
	R4	280+15.28	280+83.23	LT	℄ SR-7				106
78	R1	282+55.66	283+42.45	LT/RT	℄ SR-7	188			
	R2	283+32.51	284+15.88	LT/RT	℄ SR-7	166			
	R3	284+45.71	286+36.90	LT	℄ SR-7	195			
	R4	284+37.24	285+75.00	℄	℄ SR-7		138		
	R5	284+22.14	284+69.05	LT	℄ SR-7				101
	R6	284+27.37	284+56.34	RT	℄ SR-7				56
79	R1	298+62.19	299+46.49	RT	℄ SR-7	84			
80	R1	305+28.99	306+48.66	RT	℄ SR-7	120			
	R2	306+16.54	307+99.41	LT	℄ SR-7	181			
81	R1	347+11.81	347+85.19	LT	℄ SR-7	73			
	R2	347+05.94	347+87.15	RT	℄ SR-7	82			
	R3	347+59.93	347+69.95	LT	℄ SR-7				34
	R4	347+61.03	347+70.69	RT	℄ SR-7				26
	R5	347+35.00	347+69.99	℄	℄ SR-7		35		
83	R1	356+66.71	357+51.53	LT	℄ SR-7	85			
	R2	357+35.40	358+10.79	RT	℄ SR-7	75			
	R3	356+88.52	356+97.52	LT	℄ SR-7				34
	R4	357+53.52	357+62.52	RT	℄ SR-7				26
	R5	356+65.21	356+84.76	LT	℄ SR-7			64	
90	R1	264+20.37	268+33.00	℄	℄ SR-7		413		
	R2	294+50.00	299+00.00	℄	℄ SR-7		450		
	R3	361+10.83	365+49.33	℄	℄ SR-7		438		
TOTALS CARRIED TO GENERAL SUMMARY						1,528	1,685	64	446

CALCULATED BMM
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REMOVAL SUBSUMMARY

BEL-7-11.48

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SHEET NO.	REF. NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	606 GUARDRAIL, TYPE MGS (FT)	606 GUARDRAIL, TYPE MGS QUARTER POST SPACING (FT)	606 ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016) (EACH)	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 (EACH)	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2 (EACH)	607 FENCE, TYPE CLT (FT)	607 FENCELINE SEEDING AND MULCHING (FT)	609 CURB, TYPE 4-C (FT)	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE B1 (FT)	622 BARRIER TRANSITION (EACH)	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1 (EACH)	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED (EACH)	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1, AS PER PLAN (EACH)	659 SEEDING AND MULCHING (SY)	FOR INFORMATION ONLY: LINE POST (EACH)	FOR INFORMATION ONLY: END/CORNER POST ASSEMBLY (EACH)	FOR INFORMATION ONLY: ABUTMENT CONNECTION (EACH)
77	GR1	277+35.91	280+26.30	RT	SR-7	212.5		1	1													
	C1	279+91.26	280+23.85	RT	SR-7								32									
	B1	278+25.00	280+36.25	℄	SR-7									161	1	2						
	EC1	277+30.36	280+43.13	RT	SR-7														1,131.1			
	EC2	278+07.97	281+12.06	LT	SR-7														555.6			
78	GR1	282+55.66	283+42.45	LT/RT	SR-7	125	62.5															
	GR2	283+32.51	284+15.88	LT/RT	SR-7	125	37.5															
	GR3	284+45.19	286+36.90	LT	SR-7	125		1	1													
	B1	284+37.24	284+47.54	℄	SR-7													1				
	B2	284+67.54	285+75.00	℄	SR-7									57.50	1	2						
	C1	284+47.71	284+63.66	LT	SR-7								16.25									
	EC1	283+80.92	286+01.86	RT	SR-7														863.8			
	EC2	284+21.60	286+60.00	LT	SR-7														630.1			
79	GR1	298+62.19	299+46.04	RT	SR-7	62.5			1													
	C1	299+18.70	299+43.71	RT	SR-7								25									
	C2	300+03.78	300+28.60	LT	SR-7								25									
	EC1	297+94.64	299+56.79	RT	SR-7														187.9			
	EC2	297+96.52	302+43.33	LT	SR-7														1,000.4			
80	GR1	305+25.80	306+50.00	RT	SR-7	125				1												
	GR2	306+17.29	307+99.41	LT	SR-7	162.5			1													
	B1	306+05.49	306+30.01	℄	SR-7												1					
	C1	306+17.29	306+42.45	LT	SR-7								25									
	C2	305+29.77	305+54.62	RT	SR-7								25									
	EC1	305+14.09	306+63.23	RT	SR-7														474			
	EC2	305+90.60	308+19.50	LT	SR-7														1,225.8			
81	GR1	347+05.94	347+88.70	RT	SR-7	62.5			1													
	GR2	347+11.81	347+87.19	LT	SR-7	75				1												
	C1	347+61.53	347+86.30	RT	SR-7								25									
	C2	347+59.43	347+84.67	LT	SR-7								25									
	B1	347+35.00	347+69.99	℄	SR-7										1	1						
	EC1	346+47.93	347+96.69	RT	SR-7														539.8			
	EC2	346+44.96	347+96.91	LT	SR-7														376			
83	GR1	357+35.52	358+10.79	RT	SR-7	75				1												
	GR2	356+67.65	357+51.53	LT	SR-7	62.5			1													
	C1	356+70.11	356+95.02	LT	SR-7								25									
	C2	357+38.02	357+63.02	RT	SR-7								25									
	F1	356+65.21	356+84.76	LT	SR-7						64	64								5	3	1
	EC1	356+65.02	358+10.29	LT	SR-7														634.6			
	EC2	357+26.94	358+69.66	RT	SR-7														188.3			
90	B1	264+20.37	268+33.00	℄	SR-7									343	2	2						
	B2	294+50.00	299+00.00	℄	SR-7									380	2	2						
	B3	361+10.83	365+49.33	℄	SR-7									439								
TOTALS CARRIED TO SHEET 9																			7,807			
FOR INFORMATION ONLY																				5	3	1
TOTALS CARRIED TO GENERAL SUMMARY						1,212.5	100	2	6	3	64	64	249	1,381	7	9	1	1				

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ROADWAY SUBSUMMARY

BEL-7-11.48

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DESCRIPTION	STATION RANGE		SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW	CADD GENERATED AREA	204 SUBGRADE COMPACTION	204 PROOF ROLLING	302 ASPHALT CONCRETE BASE, PG64-22	304 AGGREGATE BASE	407 TACK COAT	442 ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448), AS PER PLAN (PG70-22M)	442 ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448)
	FROM	TO		FT	FT	SF	SF	SY	HOUR	CY	CY	GAL	CY	CY
SURFACE COURSE/WEARING COURSE REMOVED	278+25.00	278+47.23	LT	22.23	34.45	765.82						7.23	3.55	
VARIABLE INTERMEDIATE COURSE	278+47.23	278+74.44	LT	27.21	34.30	933.30						14.52	4.32	2.52
STD & VARIABLE INTERMEDIATE COURSE	278+74.44	280+14.85	LT				5259.58					113.96	24.35	42.61
FULL DEPTH PAVEMENT	280+14.85	280+37.41	LT				787.64	87.52	0.04	27.96	21.88	14.44	3.65	4.25
ASPHALT EDGE COURSE	280+37.52	280+59.61	LT	22.51				3.33	0.00	5.31	0.35	0.05		
11.52 REAR APPROACH SLAB	280+37.41	280+62.41	LT				891.00	99.00	0.05		16.50			
SURFACE COURSE/WEARING COURSE REMOVED	278+25.00	278+47.23	RT	22.23	33.80	751.37							3.48	
VARIABLE INTERMEDIATE COURSE	278+47.23	278+74.44	RT	27.21	33.90	922.42						14.35	4.27	2.49
STD & VARIABLE INTERMEDIATE COURSE	278+74.44	280+14.85	RT				4321.57					93.63	20.01	35.01
FULL DEPTH PAVEMENT	280+14.85	280+37.41	RT				566.80	62.98	0.03	20.12	15.74	10.39	2.62	3.06
CURB EDGE COURSE	279+91.26	280+13.38	RT	21.75							0.40			
11.52 REAR APPROACH SLAB	280+37.41	280+62.41	RT				932.00	103.56	0.05		17.26			
BARRIER TYPE B1	278+25.00	280+36.25	LT/RT	211.25	2.77	585.34		65.04	0.03	15.36	10.84	7.15		3.16
11.52 FWD APPROACH SLAB	284+11.56	284+36.56	LT				895.00	99.44	0.05		16.57			
FULL DEPTH PAVEMENT	284+36.56	284+56.78	LT				707.12	78.57	0.04	18.55	13.09	12.96	3.27	3.82
ASPHALT EDGE COURSE	284+63.67	284+69.52	LT	5.85				0.87	0.00	1.38	0.09	0.01		
CURB EDGE COURSE	284+49.59	284+63.67	LT	14.08							0.26			
STD & VARIABLE INTERMEDIATE COURSE	284+56.78	284+95.84	LT				1121.25					24.29	5.19	9.08
VARIABLE INTERMEDIATE COURSE	284+95.84	285+41.13	LT	45.29	33.55	1519.48						23.64	7.03	4.10
SURFACE COURSE/WEARING COURSE REMOVED	285+41.13	285+75.00	LT	33.87	33.35	1129.56							5.23	
11.52 FWD APPROACH SLAB	284+11.56	284+36.56	RT				928.00	103.11	0.05		17.19			
FULL DEPTH PAVEMENT	284+36.56	284+56.78	RT				707.13	78.57	0.04	25.10	19.64	12.96	3.27	3.82
STD & VARIABLE INTERMEDIATE COURSE	284+56.78	284+95.84	RT				1579.03					34.21	7.31	12.79
VARIABLE INTERMEDIATE COURSE	284+95.84	285+41.13	RT	45.29	34.45	1560.24						24.27	7.22	4.21
SURFACE COURSE/WEARING COURSE REMOVED	285+41.13	285+75.00	RT	33.87	34.10	1154.97						10.91	5.35	
BARRIER TYPE B1	284+37.24	285+75.00	LT/RT	137.76	2.77	381.71		42.41	0.02	10.01	7.07	4.67		2.06
SURFACE COURSE/WEARING COURSE REMOVED	298+24.49	298+87.55	RT	63.06	38.10	2402.59						22.69	11.12	
VARIABLE INTERMEDIATE COURSE	298+87.55	299+29.49	RT	41.94	37.85	1587.43						24.69	7.35	4.29
11.87 BRIDGE/APPROACH SLAB OVERLAY	299+29.49	305+44.96	RT				21470.00					333.98	198.80	
VARIABLE INTERMEDIATE COURSE	305+44.96	306+20.86	RT				2543.00					39.56	11.77	6.87
SURFACE COURSE/WEARING COURSE REMOVED	306+20.86	306+49.95	RT				959.00					9.06	4.44	
SURFACE COURSE/WEARING COURSE REMOVED	299+09.49	299+32.15	LT				1067.00					10.08	4.94	
VARIABLE INTERMEDIATE COURSE	299+32.15	300+14.49	LT	82.34	40.50	3334.77						51.87	15.44	9.01
11.87 BRIDGE/APPROACH SLAB OVERLAY	300+14.49	306+30.05	LT				21118.00					328.50	195.54	
VARIABLE INTERMEDIATE COURSE	306+30.05	306+77.17	LT				1581.00					24.59	7.32	4.27
SURFACE COURSE/WEARING COURSE REMOVED	306+77.17	307+35.05	LT				1984.00					18.74	9.19	
SUBTOTALS								824.39	0.41	123.79	156.90	1287.41	576.03	157.44
TOTALS CARRIED TO SHEET 75								825	1	124	157	1288	577	158

CALCULATED BMM
CHECKED MJR

PAVEMENT SUBSUMMARY

BEL-7-11.48

J:\2019025\ODOT\IF BEL-7-11.52_11.87_12.79 (PID 110324)\BEL\110324_BEL-7-11.52\Design\Roadway\Sheets\110324_GS003.dgn 11/9/2020 3:06:58 PM bmccutchen

DESCRIPTION	STATION RANGE		SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW	CADD GENERATED AREA	204 SUBGRADE COMPACTION	204 PROOF ROLLING	302 ASPHALT CONCRETE BASE, PG64-22	304 AGGREGATE BASE	407 TACK COAT	442 ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448), AS PER PLAN (PG70-22M)	442 ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448)
				FT	FT	SF	SF	SY	HOUR	CY	CY	GAL	CY	CY
SURFACE COURSE/WEARING COURSE REMOVED	346+64.98	347+00.50	LT	35.52	33.60	1193.47						11.27	5.53	
VARIABLE INTERMEDIATE COURSE	347+00.50	347+60.99	LT	60.49	34.00	2056.66						31.99	9.52	5.55
FULL DEPTH PAVEMENT	347+60.99	347+69.99	LT	9.00	34.25	308.25		34.25	0.02	8.09	8.56	5.65	1.43	1.66
CURB EDGE COURSE	347+60.99	347+69.99	LT	9.00							0.17			
12.79 REAR APPROACH SLAB	347+69.99	347+94.99	LT	25.00	34.25	856.25		95.14	0.05		15.86			
12.79 BRIDGE OVERLAY	347+94.99	356+63.52	LT	868.53	34.25	29747.15						462.73	275.44	
SURFACE COURSE/WEARING COURSE REMOVED	346+64.98	347+00.50	RT	35.52	33.75	1198.80						11.32	5.55	
VARIABLE INTERMEDIATE COURSE	347+00.50	347+60.99	RT	60.49	34.00	2056.66						31.99	9.52	5.55
FULL DEPTH PAVEMENT	347+60.99	347+69.99	RT	9.00	34.25	308.25		34.25	0.02	8.09	8.56	5.65	1.43	1.66
CURB EDGE COURSE	347+60.99	347+69.99	RT	9.00							0.17			
12.79 REAR APPROACH SLAB	347+69.99	347+94.99	RT	25.00	34.25	856.25		95.14	0.05		15.86			
12.79 BRIDGE OVERLAY	347+94.99	357+28.52	RT	933.53	34.25	31973.40						497.36	296.05	
12.79 FWD APPROACH SLAB	356+63.52	356+88.52	LT	25.00	34.00	850.00		94.44	0.05		15.74			
FULL DEPTH PAVEMENT	356+88.52	356+97.52	LT	9.00	34.00	306.00		34.00	0.02	8.03	8.50	5.61	1.42	1.65
CURB EDGE COURSE	356+88.52	356+97.52	LT	9.00							0.17			
VARIABLE INTERMEDIATE COURSE	356+97.52	357+48.00	LT	50.48	33.00	1665.84						25.91	7.71	4.50
SURFACE COURSE/WEARING COURSE REMOVED	357+48.00	357+93.52	LT	45.52	33.30	1515.82						14.32	7.02	
12.79 FWD APPROACH SLAB	357+28.52	357+53.52	RT	25.00	34.25	856.25		95.14	0.05		23.78			
FULL DEPTH PAVEMENT	357+53.52	357+62.52	RT	9.00	34.25	308.25		34.25	0.02	8.09	5.71	5.65	1.43	1.66
CURB EDGE COURSE	357+53.52	357+62.52	RT	9.00							0.17			
VARIABLE INTERMEDIATE COURSE	357+62.52	358+13.00	RT	50.48	34.30	1731.46						26.93	8.02	4.68
SURFACE COURSE/WEARING COURSE REMOVED	358+13.00	358+58.52	RT	45.52	33.75	1536.30						14.51	7.11	
SUBTOTALS								516.61	0.28	32.29	103.24	1150.91	637.16	26.93
TOTALS CARRIED FROM SHEET 74								825.00	1.00	124.00	157.00	1288.00	577.00	158.00
TOTALS CARRIED TO GENERAL SUMMARY								1342	2	157	261	2439	1214	185

CALCULATED BMM
CHECKED MJR

PAVEMENT SUBSUMMARY

BEL-7-11.48

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SHEET NO.	REF. NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	OUTLET ELEVATION	601 TIED CONCRETE BLOCK MAT, WITH TYPE 1 UNDERLAYMENT	602 CONCRETE MASONRY	605 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	605 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	611 15" CONDUIT, TYPE C	611 15" CONDUIT, TYPE F	611 CATCH BASIN, NO. 3A	611 PRECAST REINFORCED CONCRETE OUTLET	611 DRAINAGE STRUCTURE, MISC.: INLET, NO. 4 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN	FOR INFORMATION ONLY BENDS AND BRANCHES: PLUG	6" x 45° BEND	6" x 90° BEND	6" x 6" TEE	6" x 6" CROSS	6" x 6" WYE
							SY	CY	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
77	D1	279+47	280+03	RT	SR 7			0.27				13	127	1								
77	UD1	279+83	280+01	RT	SR 7	667.00	1.78			10	35				1		1					1
77	UD2	279+91	280+70	LT/RT	SR 7					31	89						1	1				
77	UD3	279+99	280+20	RT	SR 7				21								1					1
77	UD4	280+04	280+24	RT	SR 7					19							1					
77	UD5	280+14	280+36	RT	SR 7					21							1					1
77	UD6	280+25	280+46	LT	SR7				21								1					1
78	D1	284+58		LT	SR 7											1						
78	UD1	284+27	284+43	RT	SR 7	669.00	1.78			15	32				1		1					1
78	UD2	284+27	284+69	LT/RT	SR 7					15	79						1	1				
78	UD3	284+32	284+47	RT	SR 7				15								1					1
78	UD4	284+41	284+56	RT	SR 7					15							1					1
78	UD5	284+47	284+62	LT/RT	SR 7				15								1					1
TOTALS CARRIED TO GENERAL SUMMARY							4	0.27	72	126	235	13	127	1	2	1						

CALCULATED RSH CHECKED BMM

DRAINAGE SUBSUMMARY

BEL-7-11.48

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HORIZONTAL SCALE IN FEET
0 10 20 40

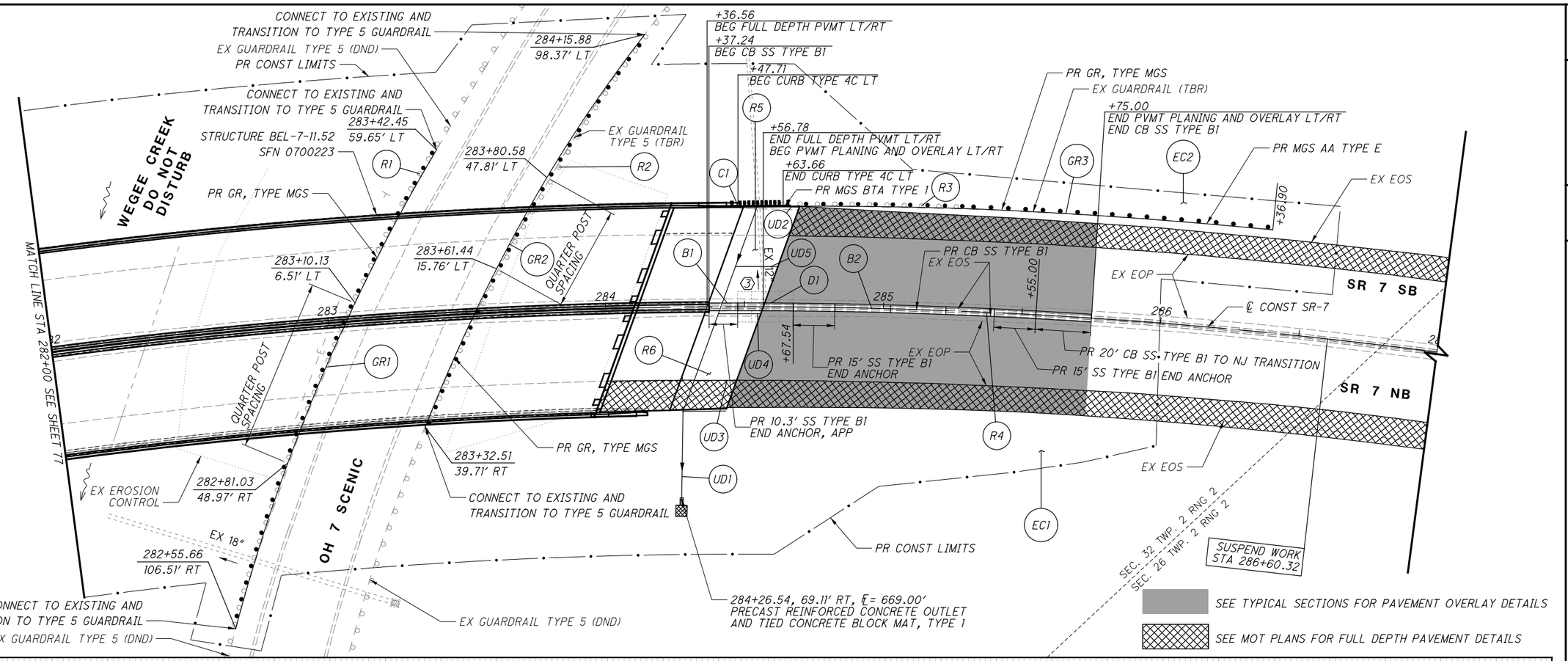
CALCULATED JTS
CHECKED BMM

PLAN AND PROFILE - SR 7
STA 277+00 TO STA 282+00

BEL-7-11.48

77
213

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HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JTS
CHECKED BMM

PLAN AND PROFILE - SR 7
STA 282+00 TO STA 287+00

BEL-7-11.48

78
213

SEE TYPICAL SECTIONS FOR PAVEMENT OVERLAY DETAILS

SEE MOT PLANS FOR FULL DEPTH PAVEMENT DETAILS

RESUME WORK STA 294+45

EX AGGREGATE SHOULDER

EX EOS

EX EOP

℄ CONST SR 7

N 69° 36' 25" E

+09.49 BEG PVMT PLANING AND OVERLAY LT

+03.78 BEG CURB TYPE 4C

CURB, TYPE 4C

+14.49 END PVMT PLANING AND OVERLAY LT

+28.60 END CURB TYPE 4C

PR CONST LIMITS

EC2

C2

298 299 300 301 302

EX EOS

EX EOP

CURB, TYPE 4C

PR MGS BTA TYPE 1

EX ℄ RAILROAD R/W

SR 7 SB

SR 7 NB

STRUCTURE BEL-7-11.87
SFN 0700312

MATCH LINE STA 303+00 SEE SHEET 80

EX GUARDRAIL TYPE 5

+24.49 BEG PVMT PLANING AND OVERLAY RT

CONNECT TO EXISTING AND TRANSITION TO TYPE 5 GUARDRAIL

EC1 +62.19 R1 GR1 C1

+18.70 BEG CURB TYPE 4C

PR GR, TYPE MGS

+29.49 END PVMT PLANING AND OVERLAY RT

+43.71 END CURB TYPE 4C

NORFOLK SOUTHERN RAIL

PR CONST LIMITS

Ex LA Ex SH Ex A HS x3

GRAPHIC GRADE

NB APPROACH SLAB

SB APPROACH SLAB

PR PROFILE GRADE

EX GROUND

STA 298+24.49 ELEV = 683.19 BEG PVMT PLANING AND OVERLAY NB

STA 299+09.49 BEG PVMT PLANING AND OVERLAY SB

STA 299+29.49 END PVMT PLANING AND OVERLAY NB

STA 299+54.49

STA 300+14.49 END PVMT PLANING AND OVERLAY SB

STA 300+39.49

22.6±' (NDC 23.0' MIN)

683.20 683.39 683.59 683.78 683.98 684.04 684.16 684.28 684.42 684.52 684.66 684.76 684.89 684.99 685.10 685.21 685.29 685.37 685.45 685.50

683.05 683.36 683.65 683.79 684.03 684.27 684.51 684.74 684.96 685.12 685.25

700 695 690 685 680 675 670 665

298+00 299+00 300+00 301+00 302+00 303+00

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED JTS CHECKED BMM

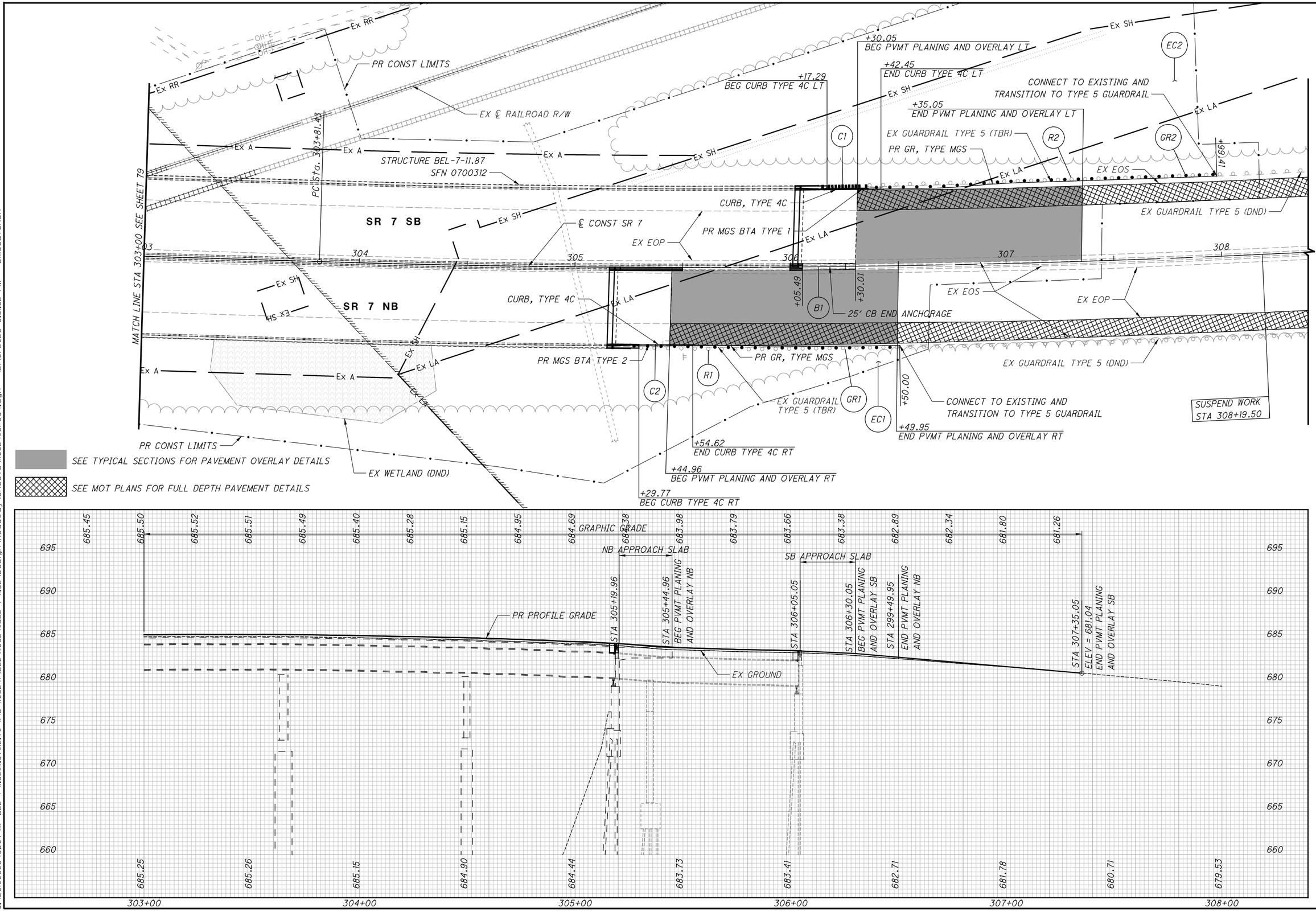
PLAN AND PROFILE - SR 7
STA 297+50 TO STA 303+00

BEL-7-11.48

79 213

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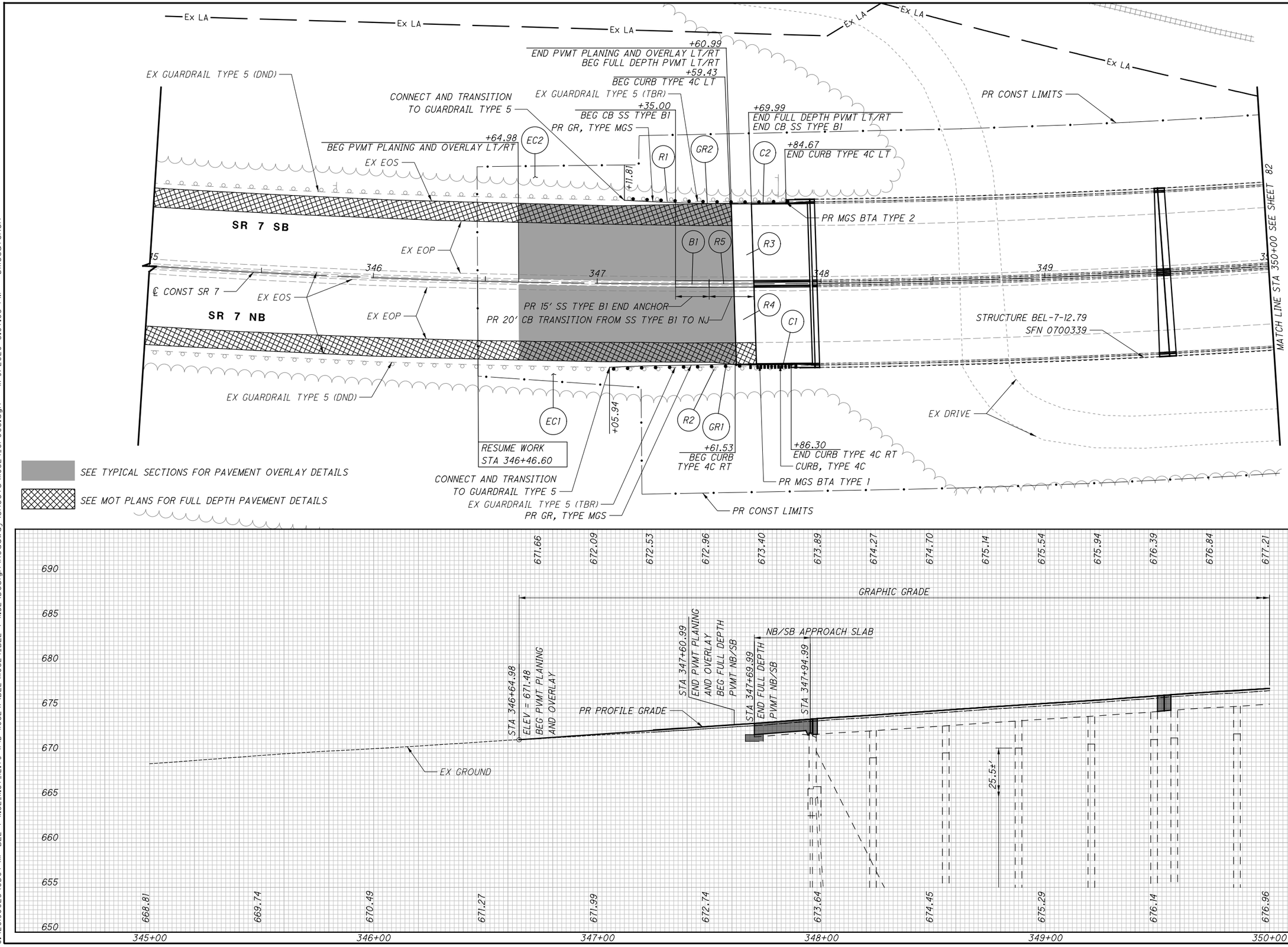
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HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JTS
CHECKED BMM

PLAN AND PROFILE - SR 7
STA 303+00 TO STA 308+50

BEL-7-11.48



J:\20190025\ODOT\IF BEL-7-11.52_11.87_12.79 (PID 110324)\BEL\110324_BEL-7-11.52\Design\Roadway\Sheets\110324_GP005.dgn 11/9/2020 3:07:03 PM bmccutchen

HORIZONTAL SCALE IN FEET
0 10 20 40

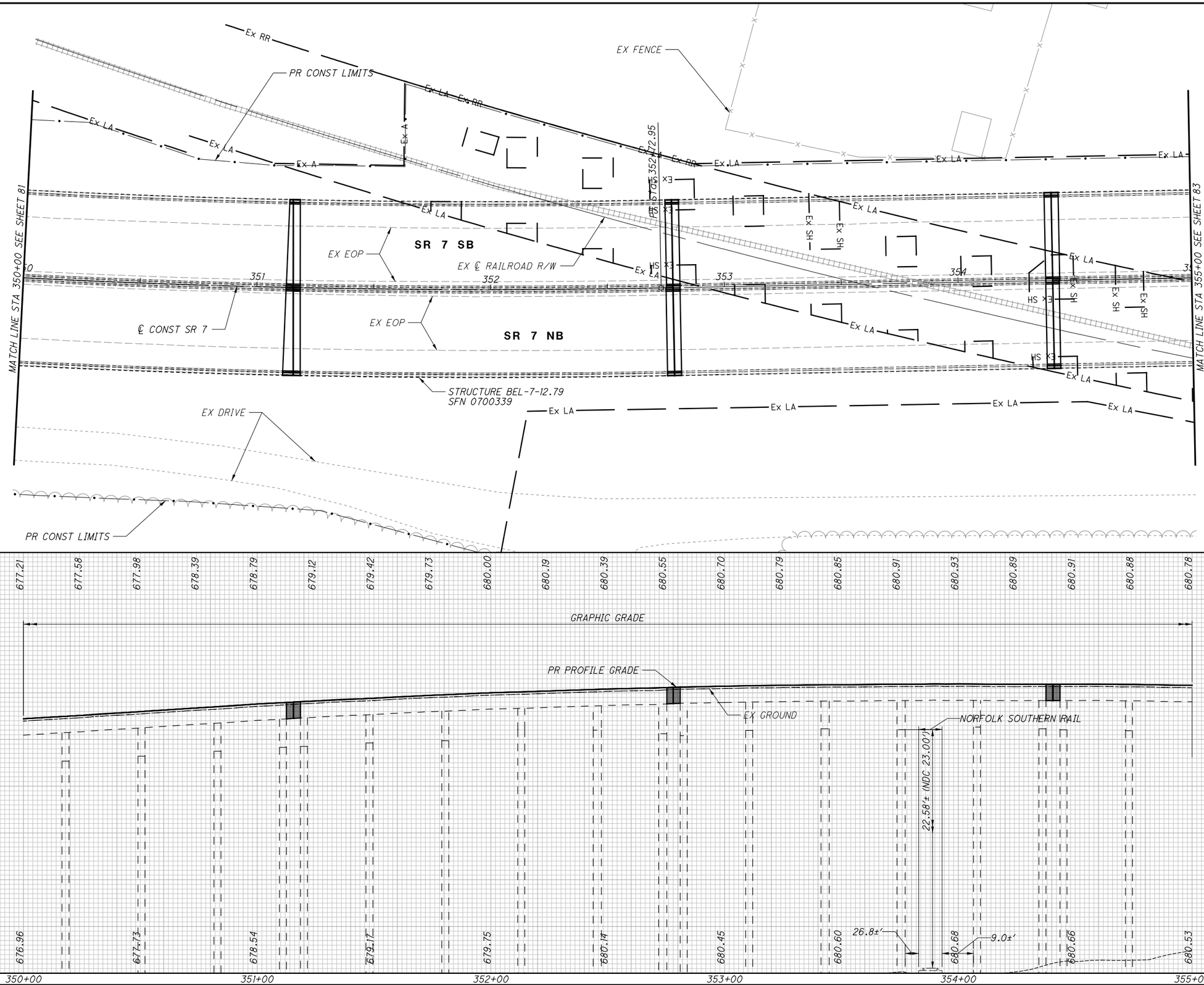
CALCULATED JTS
CHECKED BMM

PLAN AND PROFILE - SR 7
STA 345+00 TO STA 350+00

BEL-7-11.48

81
213

J:\2019\0025\ODOT\IF BEL-7-11.52_11.87_12.79 (PID 110324)\BEL\110324_BEL-7-11.52\Design\Roadway\Sheets\110324_GP006.dgn 12/18/2020 3:32:23 PM bmccutchen

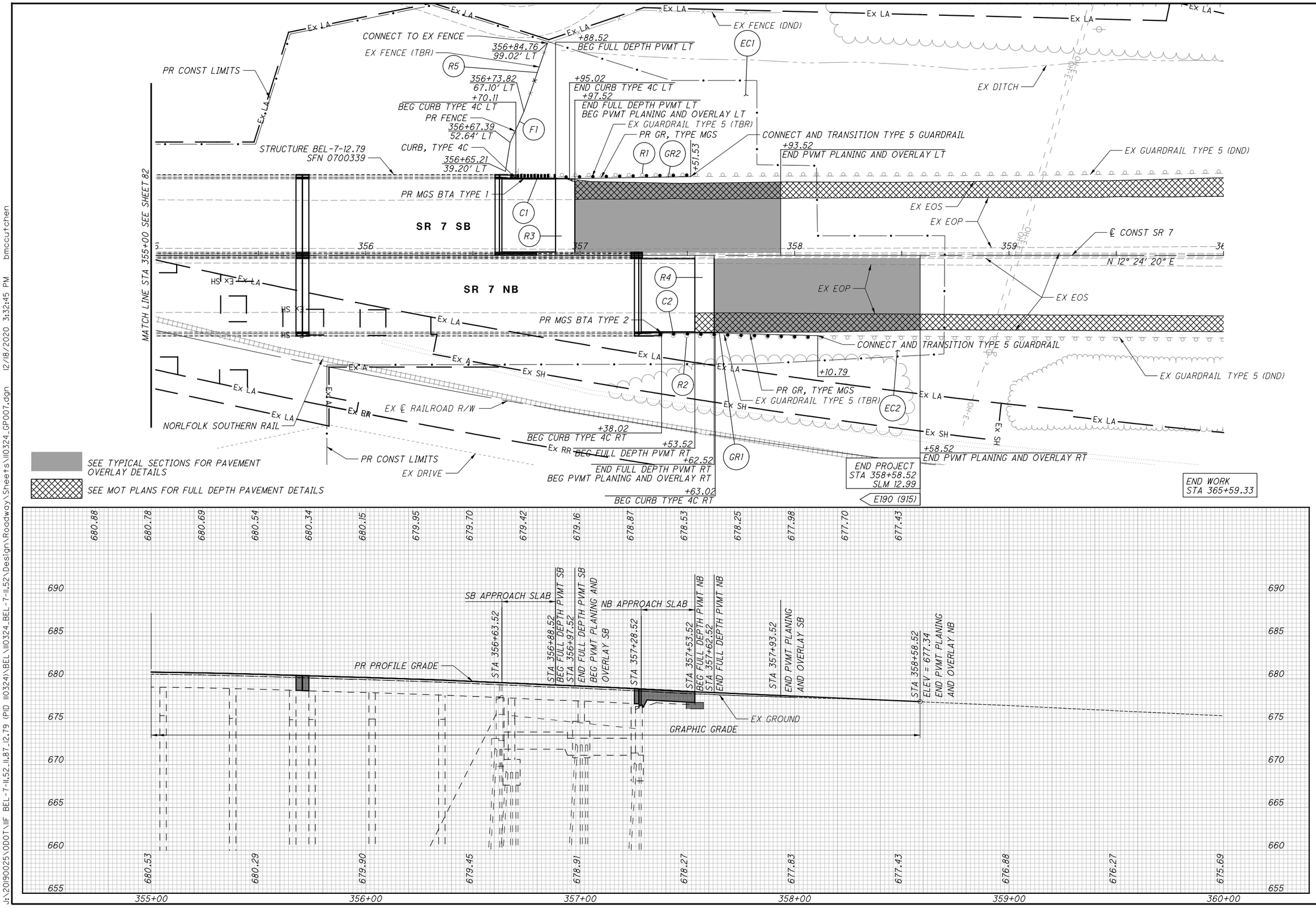


HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JTS
CHECKED BMM

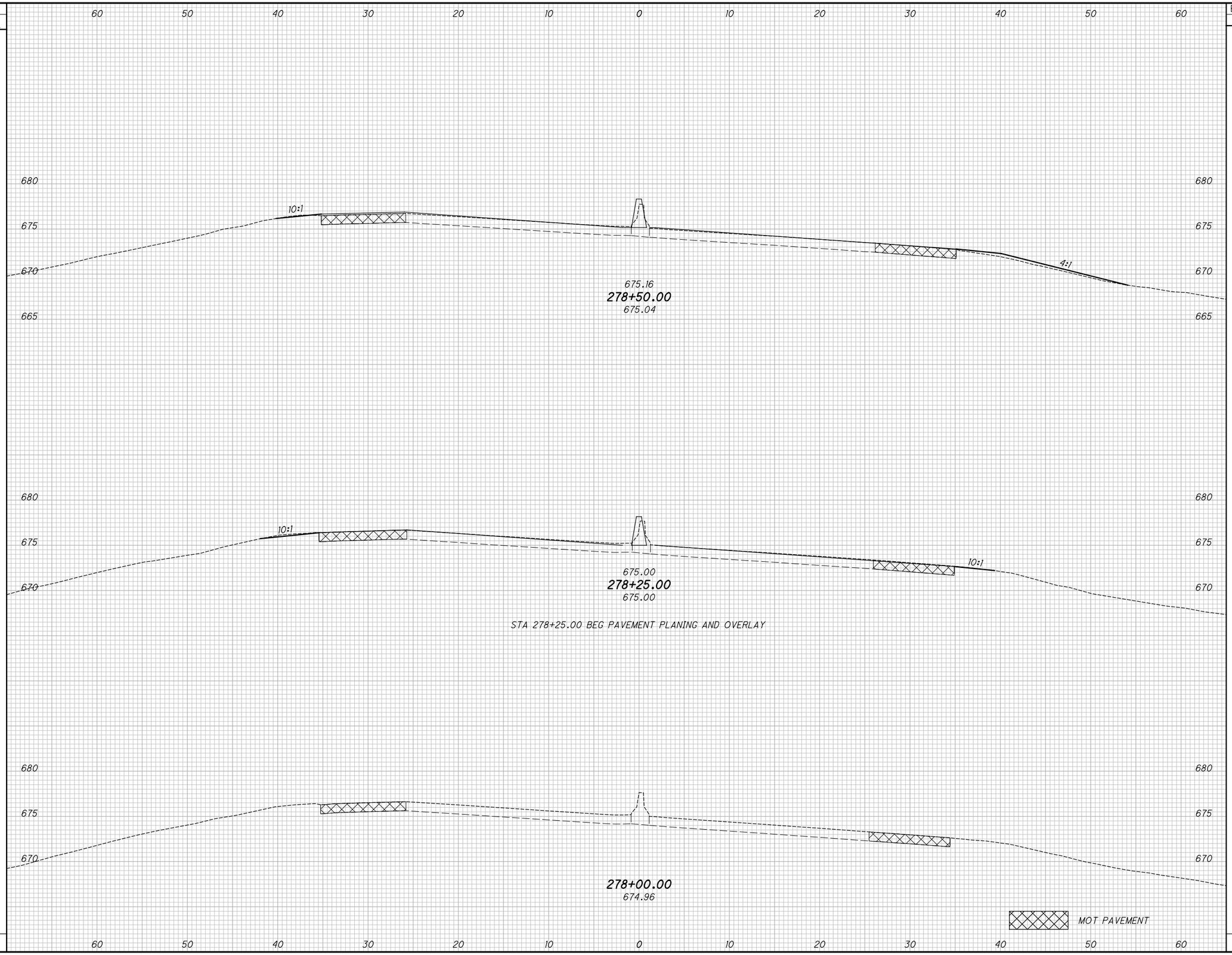
PLAN AND PROFILE - SR 7
STA 350+00 TO STA 355+00

BEL-7-11.48



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SEEDING END WIDTH	SEEDING SQ. YDS.
25	50
11	15
0	0
	65



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1	5	1	2
1	0	0	0
0	0		
		1	2

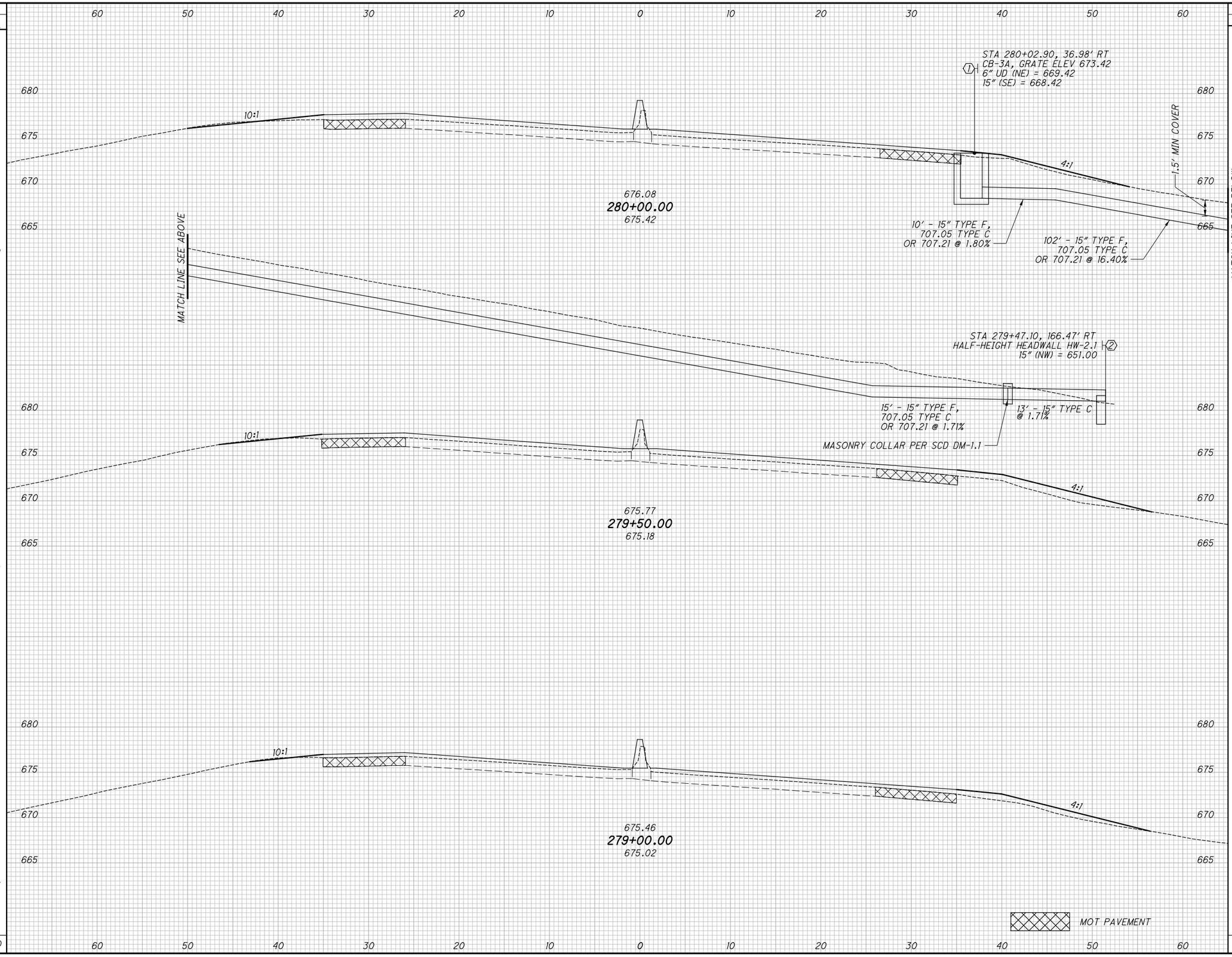
CALCULATED BMM
CHECKED AMC

CROSS SECTIONS SR 7
STA. 278+00.00 TO STA. 278+50.00

BEL-7-11.48

J:\20190025\ODOT\MF BEL-7-11.52_11.87_12.79 (PID 110324)\BEL\110324_BEL-7-11.52\Design\Roadway\Sheets\110324XS001.dgn 11/9/2020 3:07:05 PM bmccutchen

SEEDING	
END WIDTH	SQ. YDS.
34	189
34	178
30	153
	520



END AREA	
CUT	FILL
1	8
MATCH LINE SEE BELOW	
1	16
1	12

VOLUME	
CUT	FILL
2	22
2	26
2	16
6	64

CALCULATED BMM
CHECKED AMC

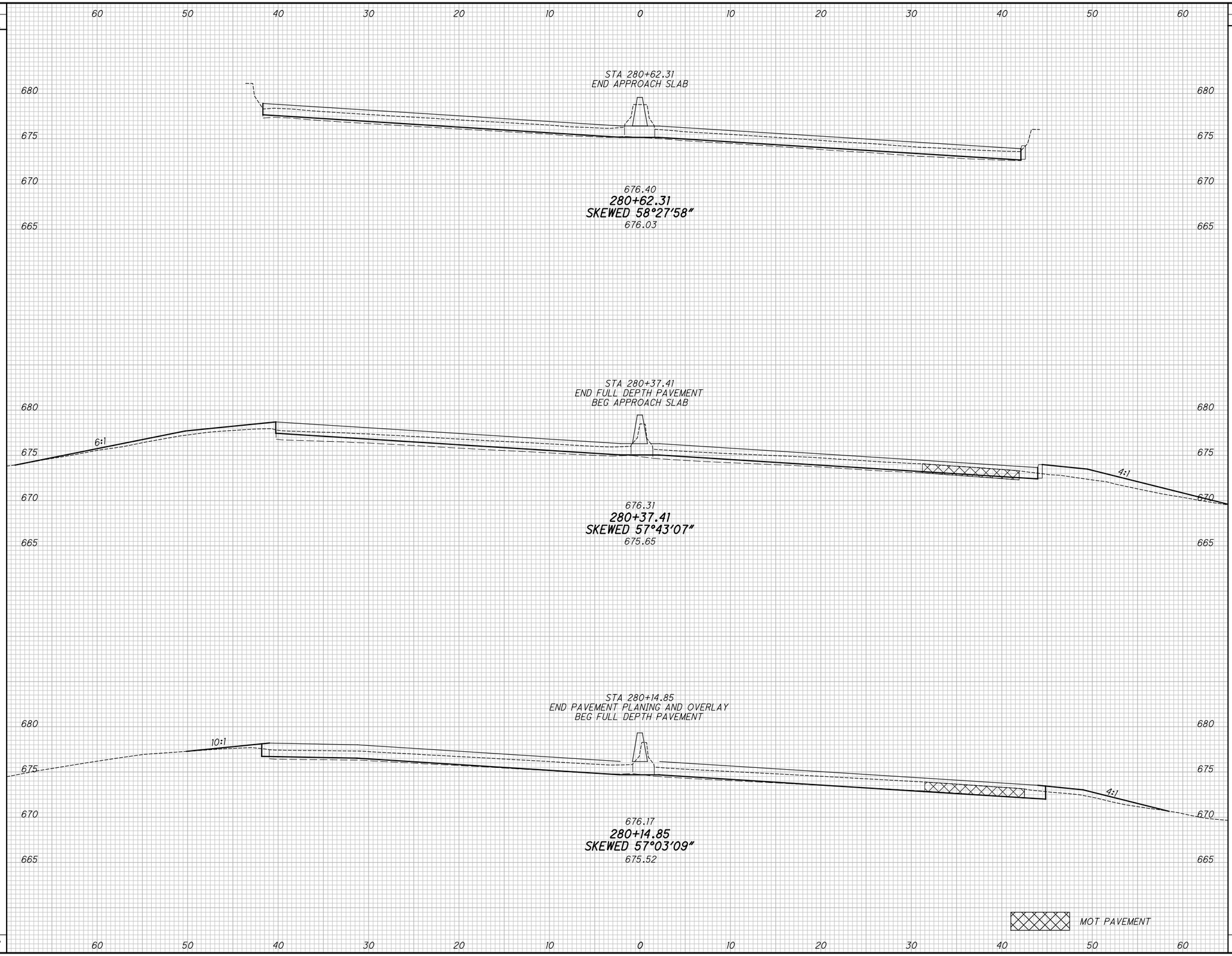
CROSS SECTIONS SR 7
STA. 279+00.00 TO STA. 280+00.00

BEL-7-11.48

85
213

J:\2090025\ODOT\MF BEL-7-11.52_11.87_12.79 (PID 110324)\BEL\110324_BEL-7-11.52\Design\Roadway\Sheets\110324XS001.dgn 11/9/2020 3:07:05 PM bmccutchen

SEEDING	
END WIDTH	SQ. YDS.
51	94
24	48
142	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	25		
3	8		
		1	14
		1	4
		2	18

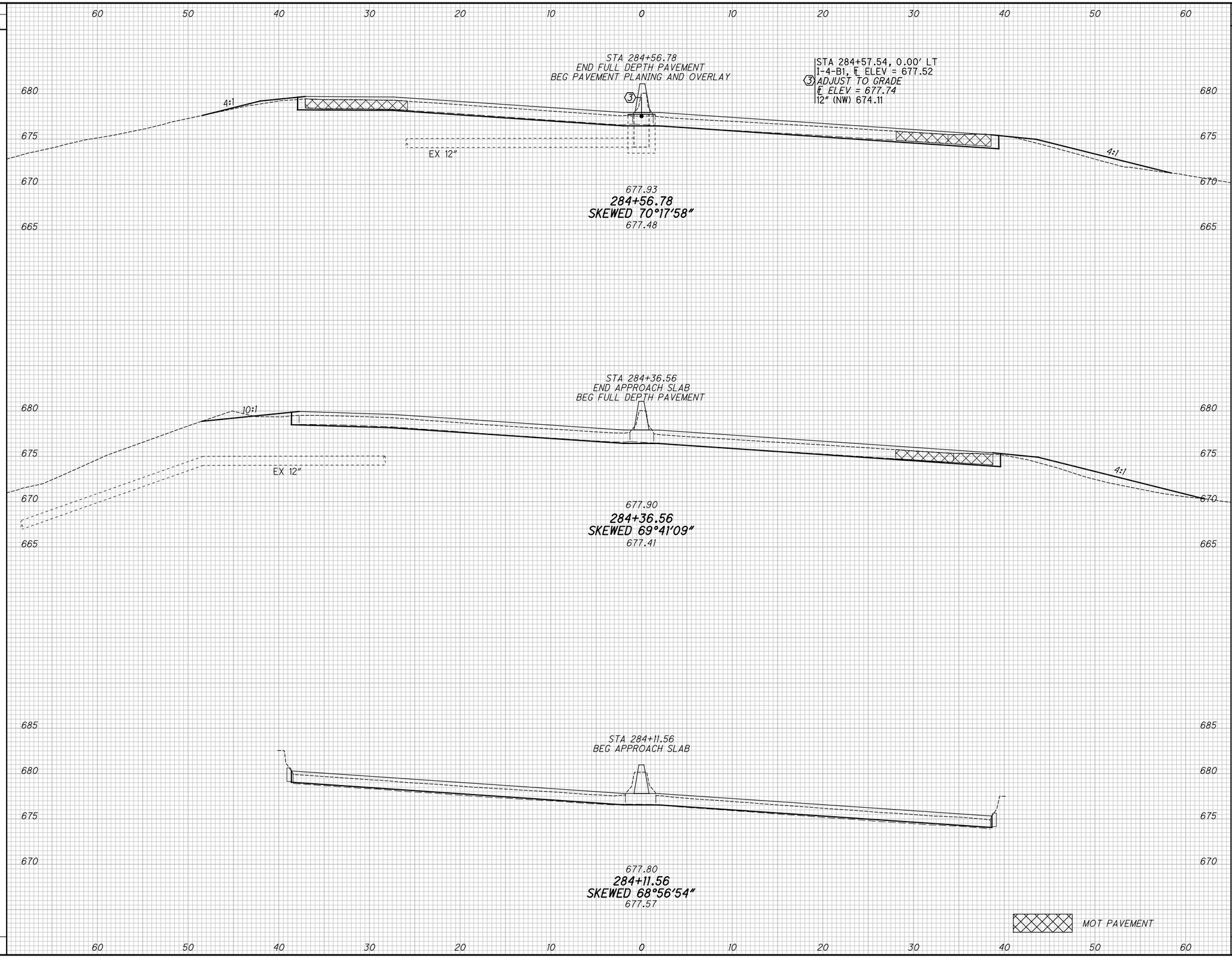
CALCULATED BMM
CHECKED AMC

CROSS SECTIONS SR 7
STA. 280+14.85 TO STA. 280+62.31

BEL-7-11.48

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SEEDING	
END WIDTH	SQ. YDS.
32	75
35	
	75



END AREA	
CUT	FILL
11	9
10	14
8	9

VOLUME	
CUT	FILL
8	9

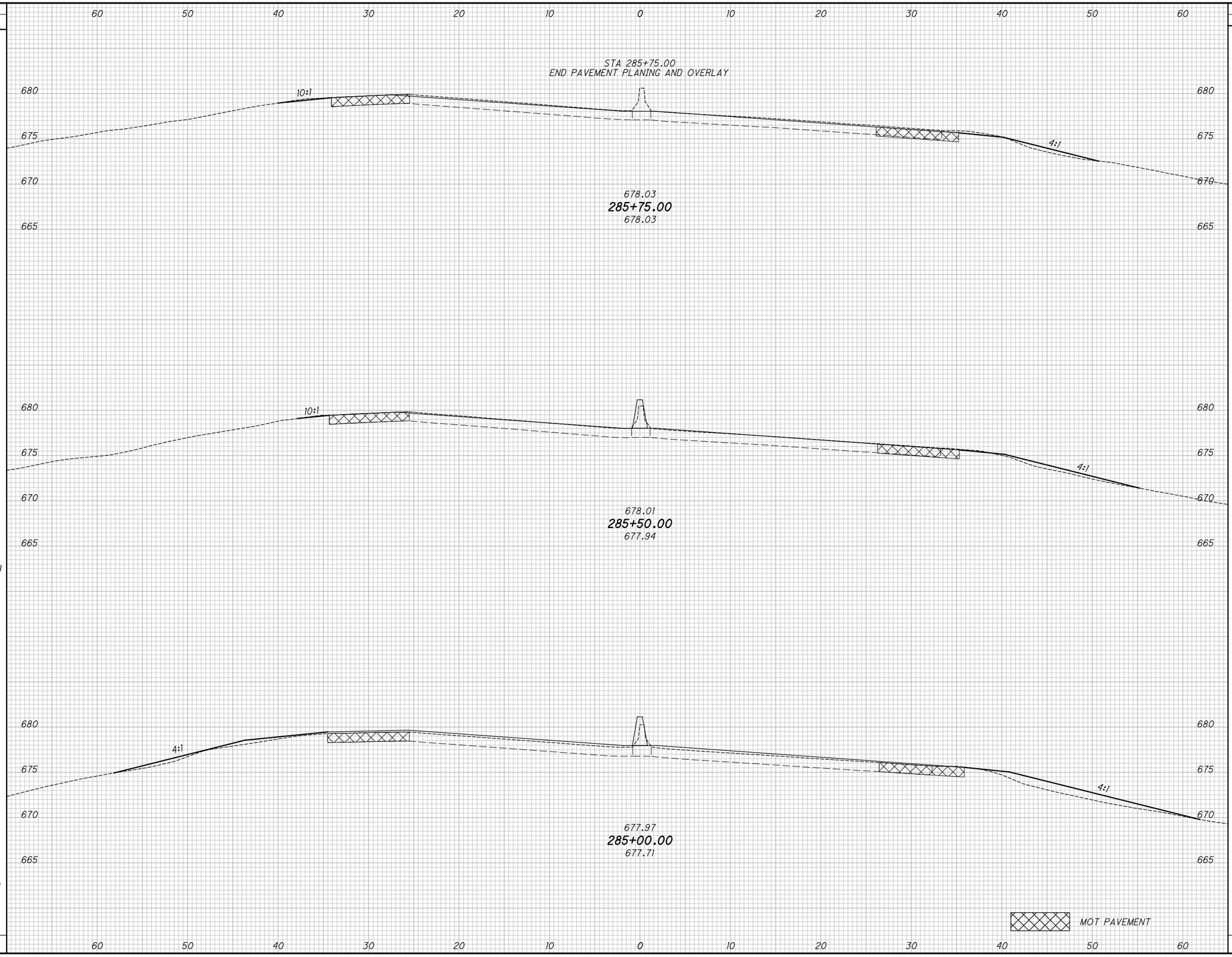
CALCULATED BMM
CHECKED AMC

CROSS SECTIONS SR 7
STA. 284+11.65 TO STA. 284+56.78

BEL-7-11.48

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SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
22	64	2	3	1	4
24	208	1	5	1	23
51	199	0	20	9	23
	471			11	50



CALCULATED BMM
CHECKED AMC

CROSS SECTIONS SR 7
STA. 285+00.00 TO STA. 285+75.00

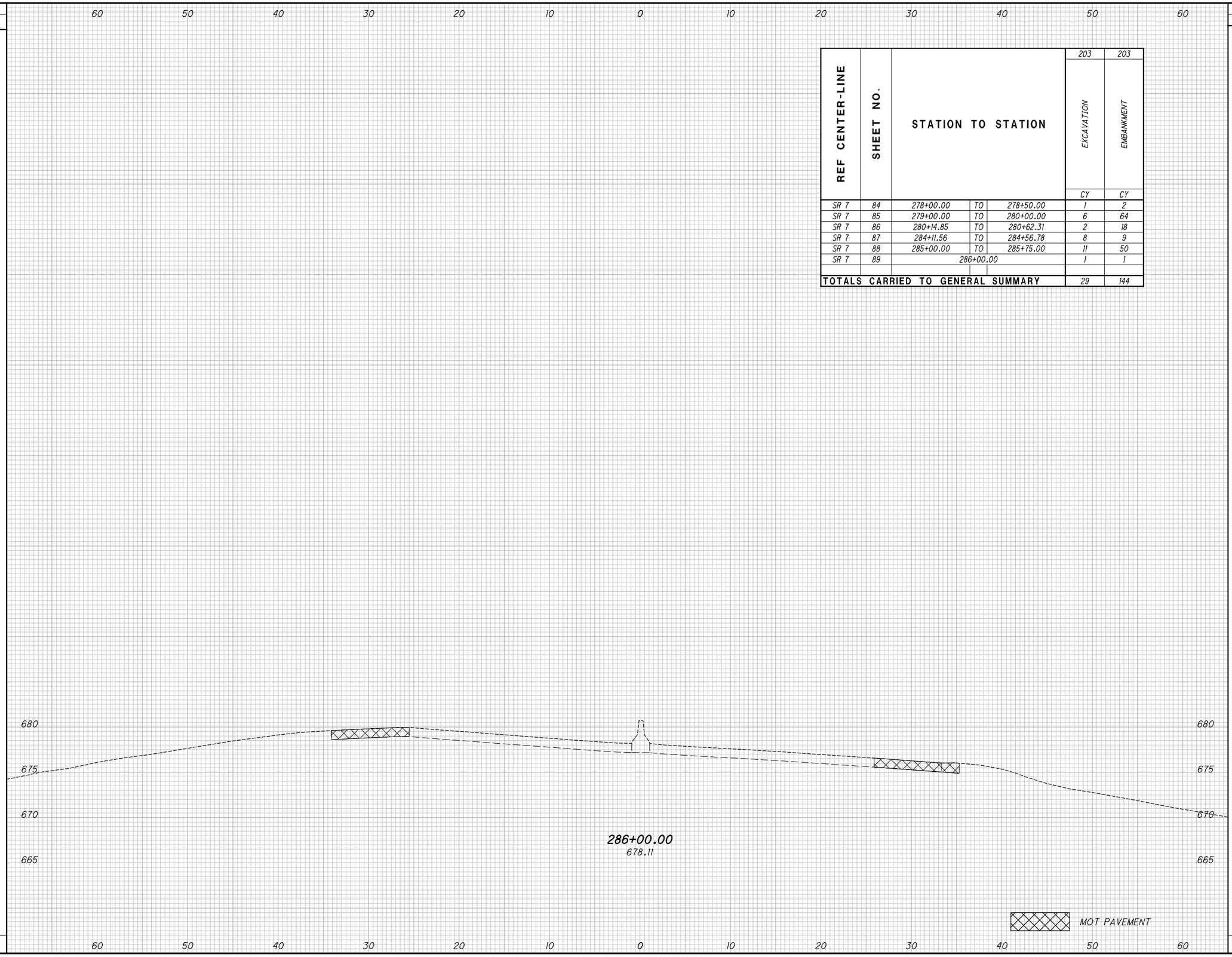
BEL-7-11.48

88
213

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SEEDING	
END WIDTH	SQ. YDS.
0	31
	31

REF CENTER-LINE	SHEET NO.	STATION TO STATION			203 EXCAVATION CY	203 EMBANKMENT CY
SR 7	84	278+00.00	TO	278+50.00	1	2
SR 7	85	279+00.00	TO	280+00.00	6	64
SR 7	86	280+14.85	TO	280+62.31	2	18
SR 7	87	284+11.56	TO	284+56.78	8	9
SR 7	88	285+00.00	TO	285+75.00	11	50
SR 7	89	286+00.00			1	1
TOTALS CARRIED TO GENERAL SUMMARY					29	144



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0		
		1	1
		1	1

CALCULATED BMM
CHECKED AMC

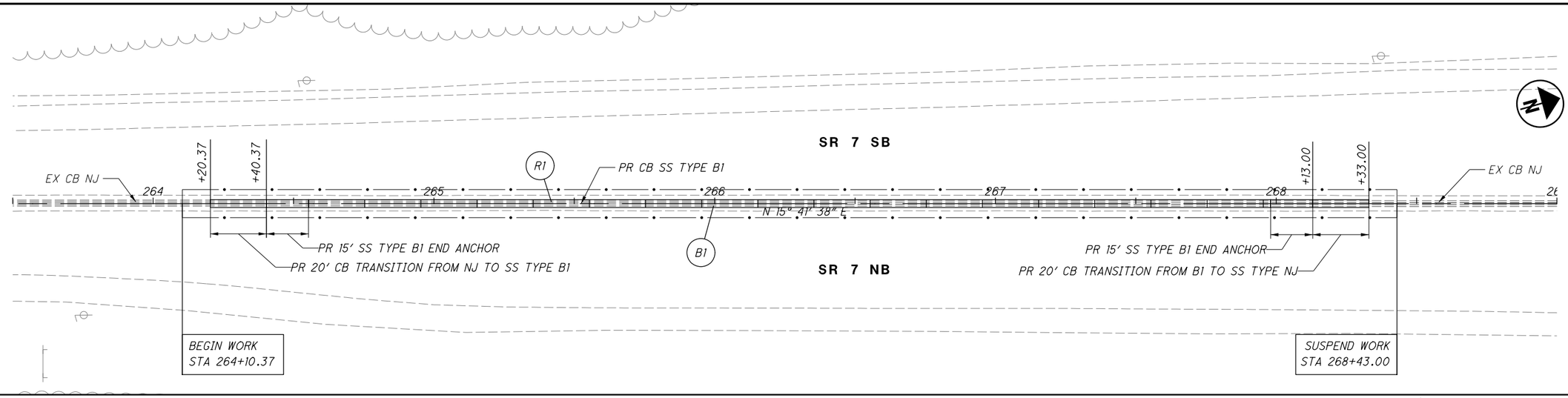
CROSS SECTIONS SR 7
STA. 286+00.00

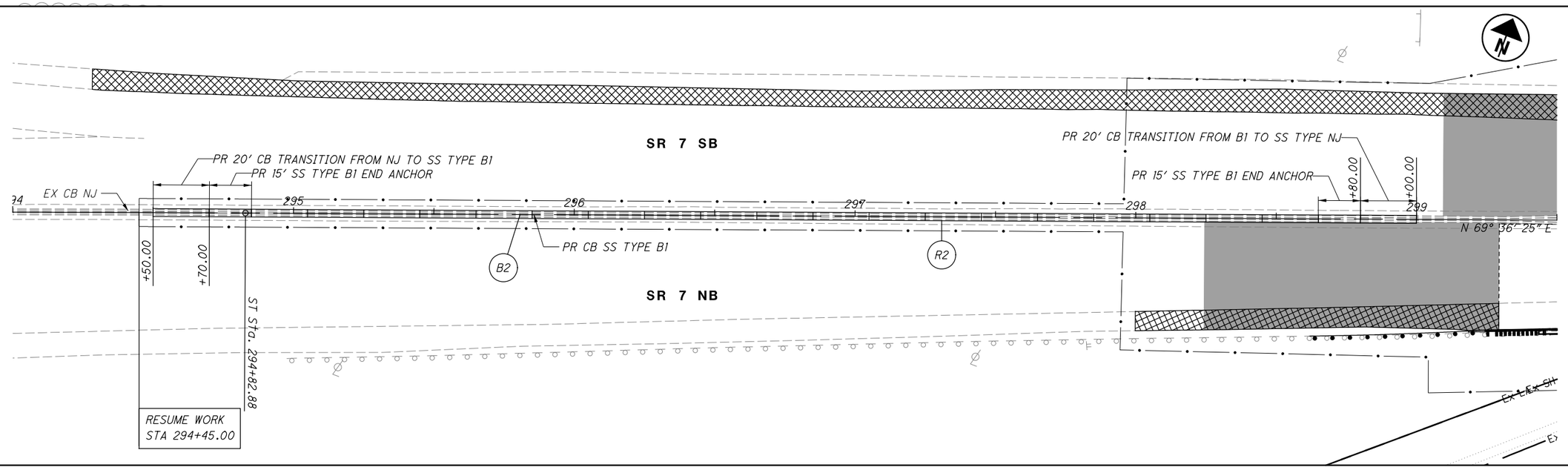
BEL-7-11.48

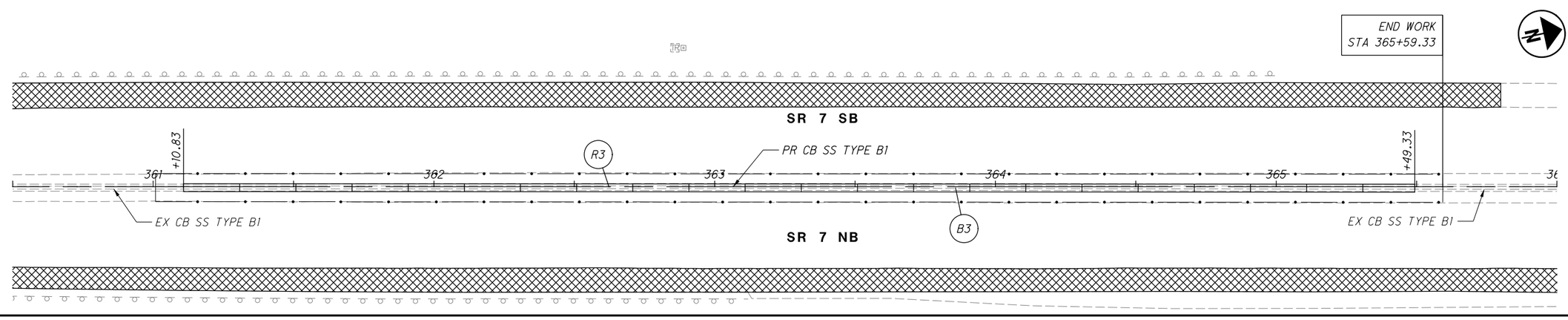
89
213

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J:\2019\0025\ODOT\IF BEL-7-11.52_11.87_12.79 (PID 110324)\BEL\110324-BEL-7-11.52\Design\Roadway\Sheets\110324GR001.dgn 11/9/2020 3:07:08 PM bmccutchen







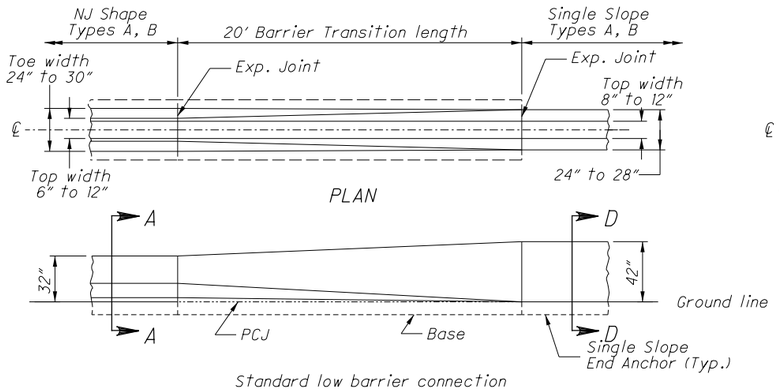
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED BMM
CHECKED MJR

BARRIER DETAILS SR 7

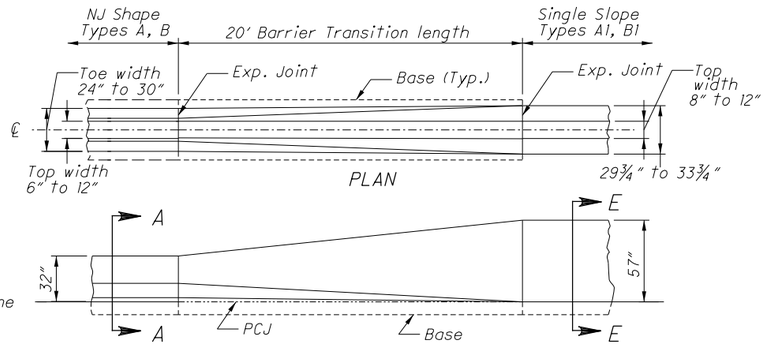
BEL-7-11.48

\\cmhdata01\project01\20190025\ODOT\IF BEL-7-11.52_11.87_12.79 (PID 110324)\BEL\110324_BEL-7-11.52\Design\Roadway\Sheets\110324GR002.dgn 11/9/2020 3:07:09 PM bmccutchen



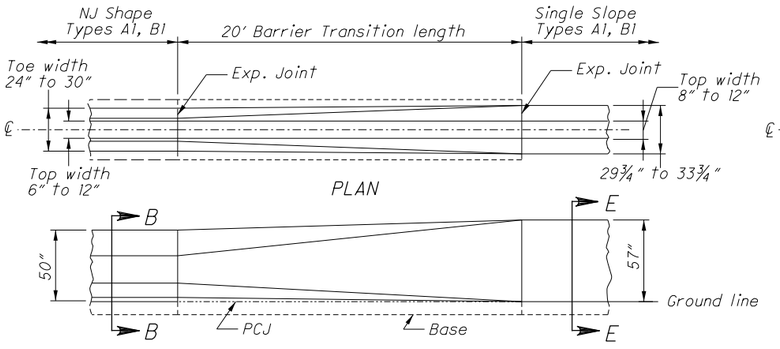
Standard low barrier connection

ELEVATION



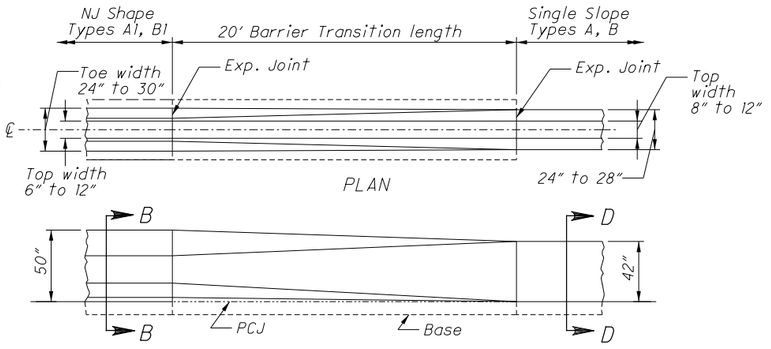
Atypical use

ELEVATION



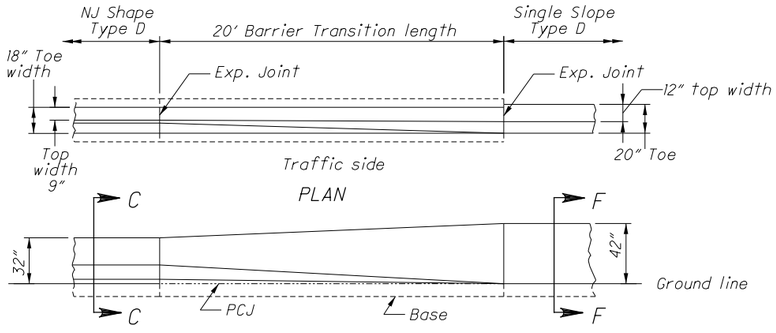
Standard tall barrier connection

ELEVATION



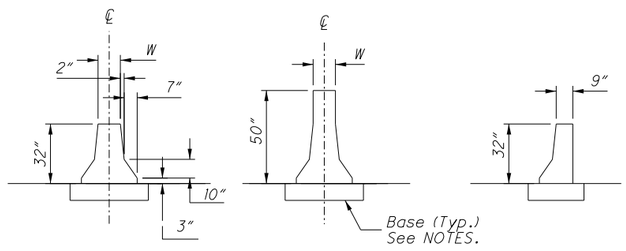
Atypical use

ELEVATION



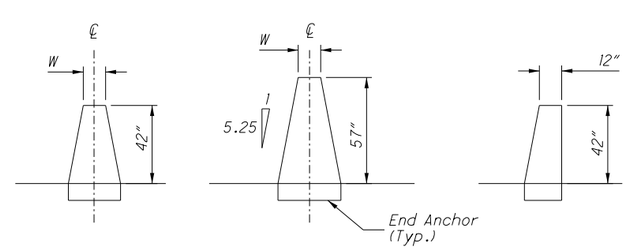
Standard Roadside barrier connection

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.

OFFICE OF ROADWAY ENGINEERING
CHECKED: 10/20/2006

NOTES

GENERAL: This insert details the Barrier Transition, to connect existing NJ Concrete Barrier (safety shape) to a new run of Single Slope Concrete Barrier at locations shown on the plans. For NJ barrier shape and other details see the respective plan insert sheets. For Single Slope barrier details, see SCD RM-4.3 (RM-4.5 for Type D).

ADJACENT CONCRETE BARRIER RUNS: Remove any tapered end sections, Impact attenuators, or other guardrail hardware from existing barrier end. The barrier to barrier transition is not intended to be used at transition sections (those shown on SCD RM-4.4), Inlets, or on Type C or C1 Barrier. If proposed adjacent single slope barrier is Type A or A1, the Barrier Transiton should contain horizontal reinforcing steel similiar to that required in the respective single slope barrier. Reinforcement is not shown and should be detailed separately. The adjacent single slope end should be terminated with a reinforced End Anchor as detailed on the SCDs.

BARRIER FACE TRANSITION: To prevent vehicle snagging, a smooth transition from the safety shape face to the single slope face is made over a 20' length. The actual shape of the Transition is dependent on both the adjacent NJ barrier and the single slope barrier Types, as detailed on the plans. The contractor and Engineer will agree on a construction method to ensure a smooth barrier face.

MATERIALS: Materials are same for those shown on RM-4.3 and RM-4.5, except that cast-in-place is the only acceptable method. Edges may be chamfered or radiused as shown on those drawings.

CONCRETE BASE: Construct base as shown on the NJ shape insert sheets, including the methods detailing the footing joint, Permissible Construction Joint (PCJ), and Dowelling requirements. The width of the base matches the existing NJ barrier.

JOINTS: Construct joints as shown on respective barrier drawings.

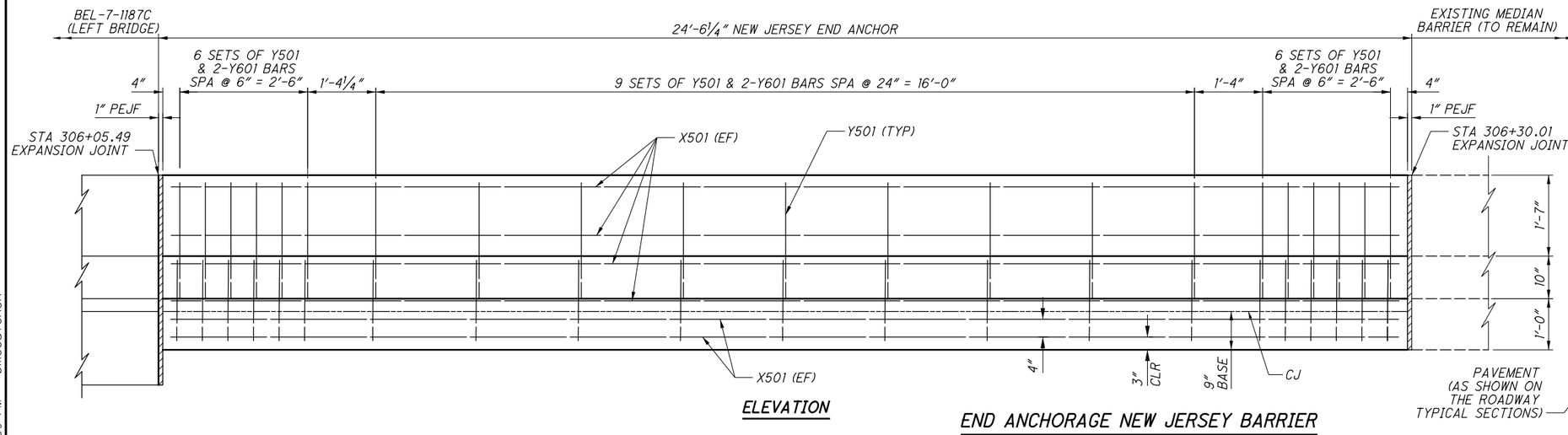
RACEWAYS: When specified, place raceway(s) to match raceway elevation in adjoining segments. Place to obtain maximum concrete cover.

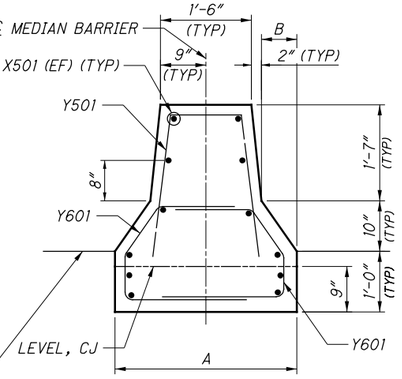
METRIC UNITS: Refer to respective barrier drawings or inserts for metric dimensions.

PAYMENT: This Barrier Transiton shall include all material and labor needed to construct this 20' section, including any raceways, reinforcing steel, dowels and other necessary incidentals. Payment shall be made at the unit price for Item 622 - Barrier Transition, Each.

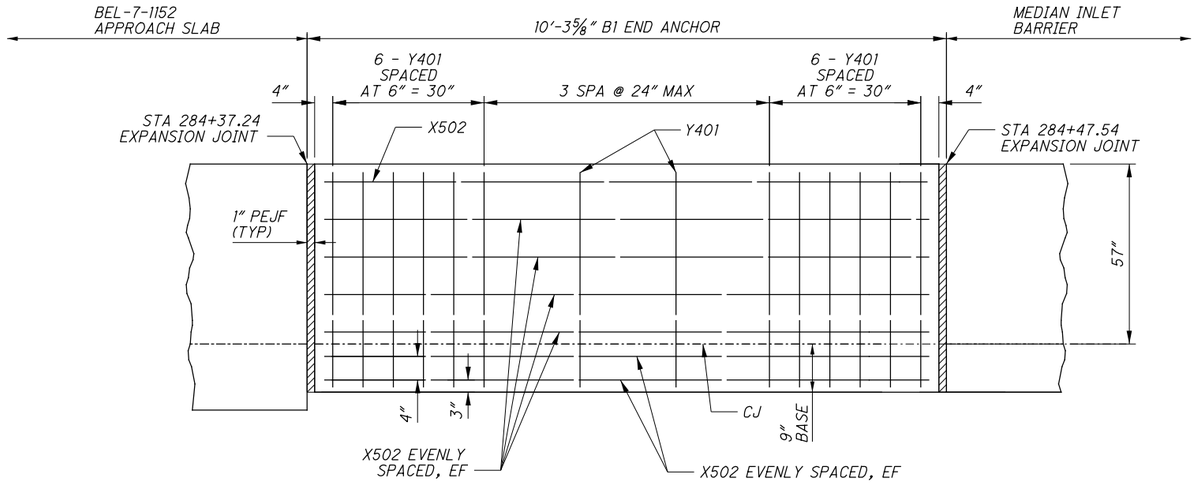
BARRIER DETAILS
NJ SHAPE TO SINGLE SLOPE BARRIER TRANSITION

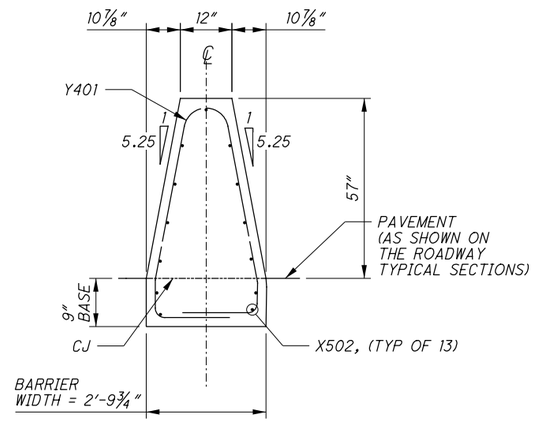
BEL-7-11.48

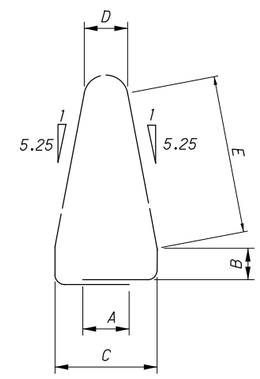




END ANCHORAGE NEW JERSEY BARRIER

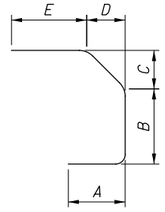




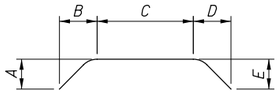


END ANCHORAGE TYPE B1

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
BARRIER END ANCHORAGE*											
Y401	14	13'-2"	123	2	1'-0"	0'-7"	2'-0"	0'-8"	4'-3"		
X501	12	24'-2"	302	STR							
X502	13	9'-9"	132	STR							
Y501	21	5'-8"	124	20	2'-4"	0'-3 ½"	1'-2"	0'-3 ½"	2'-4"		
Y601	42	4'-7"	300	14	2'-0"	0'- 7½"	0'-9 ½"	0'-7"	1'-4"		
SUB-TOTAL			981								



TYPE-14



TYPE-20

LEGEND

A: VARIES FROM 3'-0" AT BEGINNING OF MEDIAN BARRIER TO 2'-8"± AT END OF MEDIAN BARRIER.

B: VARIES FROM 0'-7" AT BEGINNING OF MEDIAN BARRIER TO 0'-5"± AT END OF MEDIAN BARRIER.

* FOR INFORMATIONAL PURPOSES ONLY. REINFORCING STEEL IN END ANCHORAGES IS INCLUDED WITH THE BARRIER FOR PAYMENT.

NOTES

1. CONTRACTOR SHALL FIELD VERIFY EXISTING MEDIAN BARRIER DIMENSIONS AND ALIGNMENT.

2. SEE MAINTENANCE OF TRAFFIC PLANS FOR CONSTRUCTION PHASING.

3. ALL LABOR, MATERIALS, EQUIPMENT, TOOLS AND INCIDENTALS TO CONSTRUCT THE END ANCHORAGES PER THE DETAILS ON THIS SHEET SHALL BE INCLUDED WITH ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED FOR THE NEW JERSEY BARRIER AND ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1, AS PER PLAN FOR THE TYPE B1 BARRIER.

4. PROVIDE 2" CLEAR COVER UNLESS NOTED OTHERWISE.

CALCULATED MJR
CHECKED TDA

CONCRETE BARRIER END ANCHORAGE

BEL-7-11.48

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SHEET NO.	REF NO.	LOCATION	STATION TO STATION			SIDE	618 RUMBLE STRIPS, (ASPHALT CONCRETE) FT		621 RPM, ONE-WAY WHITE EACH	621 RPM, TWO-WAY WHITE/RED EACH	621 RPM, TWO-WAY YELLOW/RED EACH	621 RAISED PAVEMENT MARKER REMOVED EACH		646 EDGE LINE, 6", WHITE FT	646 EDGE LINE, 6", YELLOW FT	646 LANE LINE, 6" FT	646 CHANNELIZING LINE, 12" FT	646 CHEVRON MARKING FT					
				TO																			
95												236											
95	RS-1	SR 7	261+23.00		272+29.00	LT	1106																
95	RS-2	SR 7	261+34.00		271+09.00	RT	975																
95 - 96	RS-3	SR 7	271+13.00		280+19.00	RT	906																
95 - 96	RS-4	SR 7	272+23.00		280+54.00	LT	831																
96	RS-5	SR 7	284+26.00		292+56.00	RT	830																
96	RS-6	SR 7	284+47.00		293+27.00	LT	880																
96	RS-7	SR 7	292+62.00		299+50.00	RT	688																
96	RS-8	SR 7	293+32.00		300+49.00	LT	717																
97 - 98	RS-9	SR 7	305+44.00		347+48.00	RT	4204																
97 - 98	RS-10	SR 7	306+31.00		347+45.00	LT	4114																
99	RS-11	SR 7	356+89.00		365+80.00	LT	891																
99	RS-12	SR 7	357+54.00		366+36.00	RT	882																
95	WE-1	SR 7	261+23.00		274+80.00	LT								1357									
95	WE-2	SR 7	261+34.00		271+91.00	RT								1057									
95 - 96	WE-3	SR 7	271+94.00		289+54.00	RT								1760									
95 - 96	WE-4	SR 7	274+80.00		292+47.00	LT								1767									
96 - 99	WE-5	SR 7	291+60.00		365+80.00	LT								7420									
96 - 99	WE-6	SR 7	289+54.00		366+36.00	RT								7682									
95 - 99	YE-1	SR 7	261+23.00		365+80.00	LT									10457								
95 - 99	YE-2	SR 7	261+34.00		366+36.00	RT									10502								
96	YE-3	SR 7	291+60.00		292+47.00	LT					2				87								
95 - 99	LL-1	SR 7	261+23.00		365+80.00	LT			89							10457							
95 - 99	LL-2	SR 7	261+34.00		366+36.00	RT			89							10502							
95	LL-3	SR 7	267+59.00		269+82.00	RT			3							223							
95	LL-4	SR 7	270+64.00		272+23.00	LT			2							159							
96	LL-5	SR 7	292+56.00		294+08.00	RT			2							152							
96	LL-6	SR 7	294+31.00		296+74.00	LT			3							243							
95	CH-1	SR 7	269+82.00		271+91.00	RT				7							209						
95	CH-2	SR 7	269+82.00		271+94.00	RT				7							212						
95	CH-3	SR 7	272+23.00		274+80.00	LT				8							257						
95	CH-4	SR 7	272+23.00		274+80.00	LT				8							257						
96	CH-5	SR 7	289+54.00		292+56.00	RT				9							302						
96	CH-6	SR 7	289+54.00		292+56.00	RT				9							302						
96	CH-7	SR 7	292+47.00		294+31.00	LT				6							184						
96	CH-8	SR 7	292+47.00		294+31.00	LT				6							184						
95	CM-1	SR 7	269+82.00		271+94.00	RT												103					
96	CM-2	SR 7	292+47.00		294+31.00	LT												120					
						SUB-TOTALS	17024 FT		188	60	2			21043 FT	21046 FT	21736 FT							
						TOTALS CARRIED TO GENERAL SUMMARY	3.22 MI		250			236		7.97 MI		4.12 MI	1907	223					

CALCULATED BER
CHECKED SMM

PAVEMENT MARKING SUBSUMMARY

BEL-7-11.48

J:\20190025\ODOT\NF BEL-7-11.52_11.87_12.79 (PID 110324)\BEL\110324_BEL-7-11.52\Design\Traffic\Sheets\110324_TS00.dgn 11/9/2020 3:07:10 PM bmccutchen

SHEET NO.	REF. NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	630 GROUND MOUNTED SUPPORT, NO. 3 POST	630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	630 REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL												
							FT	EACH	EACH	EACH												
96	S-1	SR 7	283+24.00	LT			14	3		1												
97	S-2	SR 7	305+50.00	RT			14-16	1		2												
98	S-3	SR 7	347+81.00	LT					1													
99	S-4	SR 7	356+71.00	LT			14	1		1												
TOTALS CARRIED TO GENERAL SUMMARY							58	5	1	4												

CALCULATED BER
CHECKED SMM

SIGNING SUBSUMMARY

BEL-7-11.48

J:\20190025\ODOT\NF BEL-7-11.52_11.87_12.79 (PID 110324)\BEL\110324_BEL-7-11.52\Design\Traffic\Sheets\110324_TS002.dgn 11/9/2020 3:07:11 PM bmccutchen

PAVEMENT MARKING LEGEND	
XX	= PROPOSED PAVEMENT MARKINGS
XX	= EXISTING PAVEMENT MARKINGS

SIGNING LEGEND	
	= EXISTING SIGN
	= EXISTING SIGN REMOVED

LINE SPECIFICATIONS		
ITEM 618	ITEM 646	
	YE	EDGE LINE, 6" YELLOW
	WE	EDGE LINE, 6" WHITE
	LL	LANE LINE, 6" WHITE
	DY	CENTER LINE, DOUBLE YELLOW
	CH	CHANNELIZING LINE, 12" WHITE
	CM	CHEVRON MARKING, 24" WHITE
RS		RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)

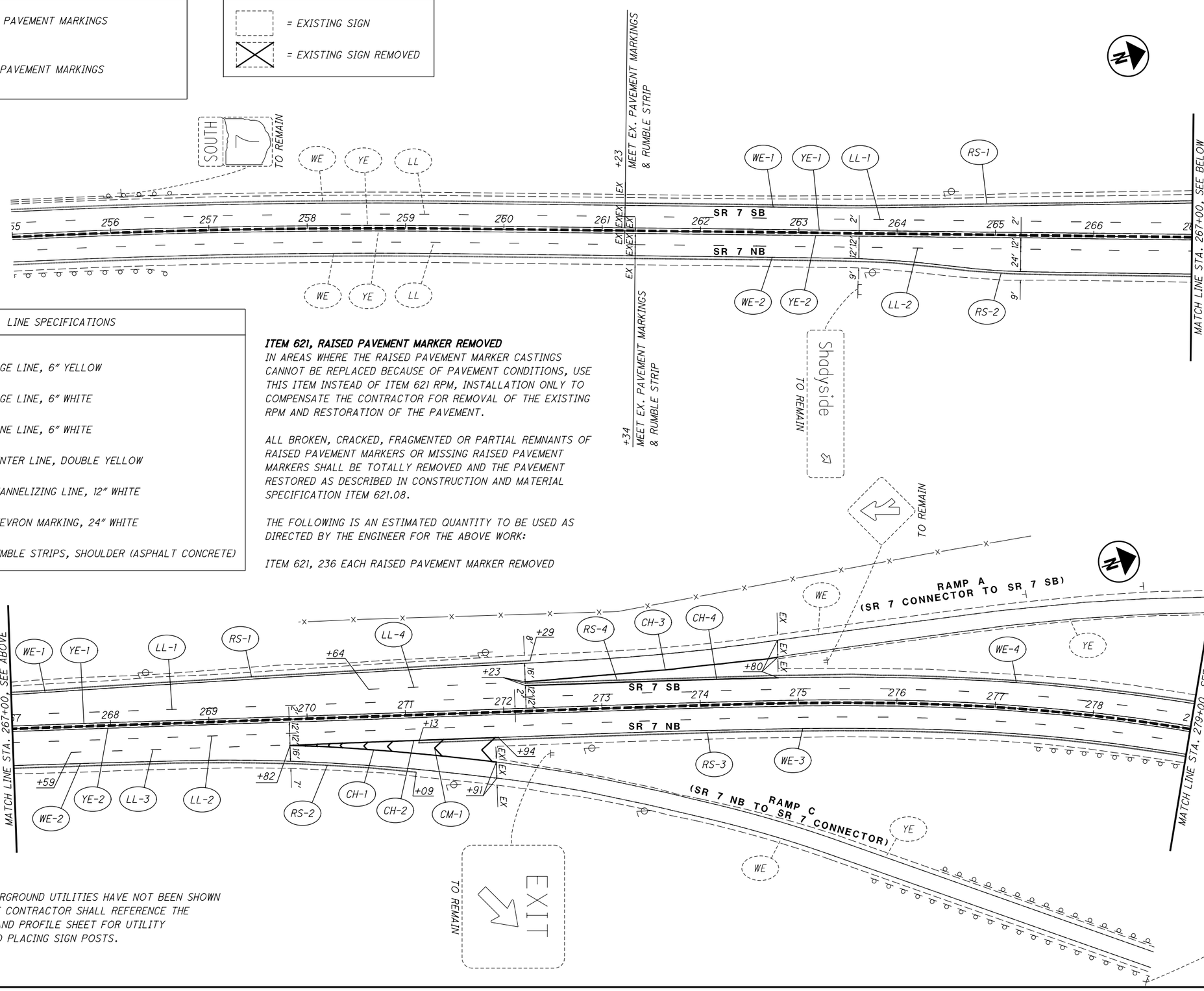
ITEM 621, RAISED PAVEMENT MARKER REMOVED

IN AREAS WHERE THE RAISED PAVEMENT MARKER CASTINGS CANNOT BE REPLACED BECAUSE OF PAVEMENT CONDITIONS, USE THIS ITEM INSTEAD OF ITEM 621 RPM, INSTALLATION ONLY TO COMPENSATE THE CONTRACTOR FOR REMOVAL OF THE EXISTING RPM AND RESTORATION OF THE PAVEMENT.

ALL BROKEN, CRACKED, FRAGMENTED OR PARTIAL REMNANTS OF RAISED PAVEMENT MARKERS OR MISSING RAISED PAVEMENT MARKERS SHALL BE TOTALLY REMOVED AND THE PAVEMENT RESTORED AS DESCRIBED IN CONSTRUCTION AND MATERIAL SPECIFICATION ITEM 621.08.

THE FOLLOWING IS AN ESTIMATED QUANTITY TO BE USED AS DIRECTED BY THE ENGINEER FOR THE ABOVE WORK:

ITEM 621, 236 EACH RAISED PAVEMENT MARKER REMOVED



NOTES:

1. FOR CLARITY, UNDERGROUND UTILITIES HAVE NOT BEEN SHOWN ON THIS SHEET. THE CONTRACTOR SHALL REFERENCE THE APPROPRIATE PLAN AND PROFILE SHEET FOR UTILITY LOCATIONS PRIOR TO PLACING SIGN POSTS.

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

CALCULATED BER | CHECKED SMM

TRAFFIC CONTROL PLAN - SR 7
STA. 255+00 TO STA. 279+00

BEL-7-11.48

95
213

J:\20190025\ODOT\IF BEL-7-11.52_11.87-12.79 (PID 110324)\BEL\110324_BEL-7-11.52\Design\Traffic\Sheets\110324_TP001.dgn 11/9/2020 3:07:11 PM bmccutchen

TRAFFIC CONTROL PLAN - SR 7
STA. 279+00 TO STA. 303+00

BEL-7-11.48

CALCULATED BER
CHECKED SMM

HORIZONTAL SCALE IN FEET
0 25 50 100

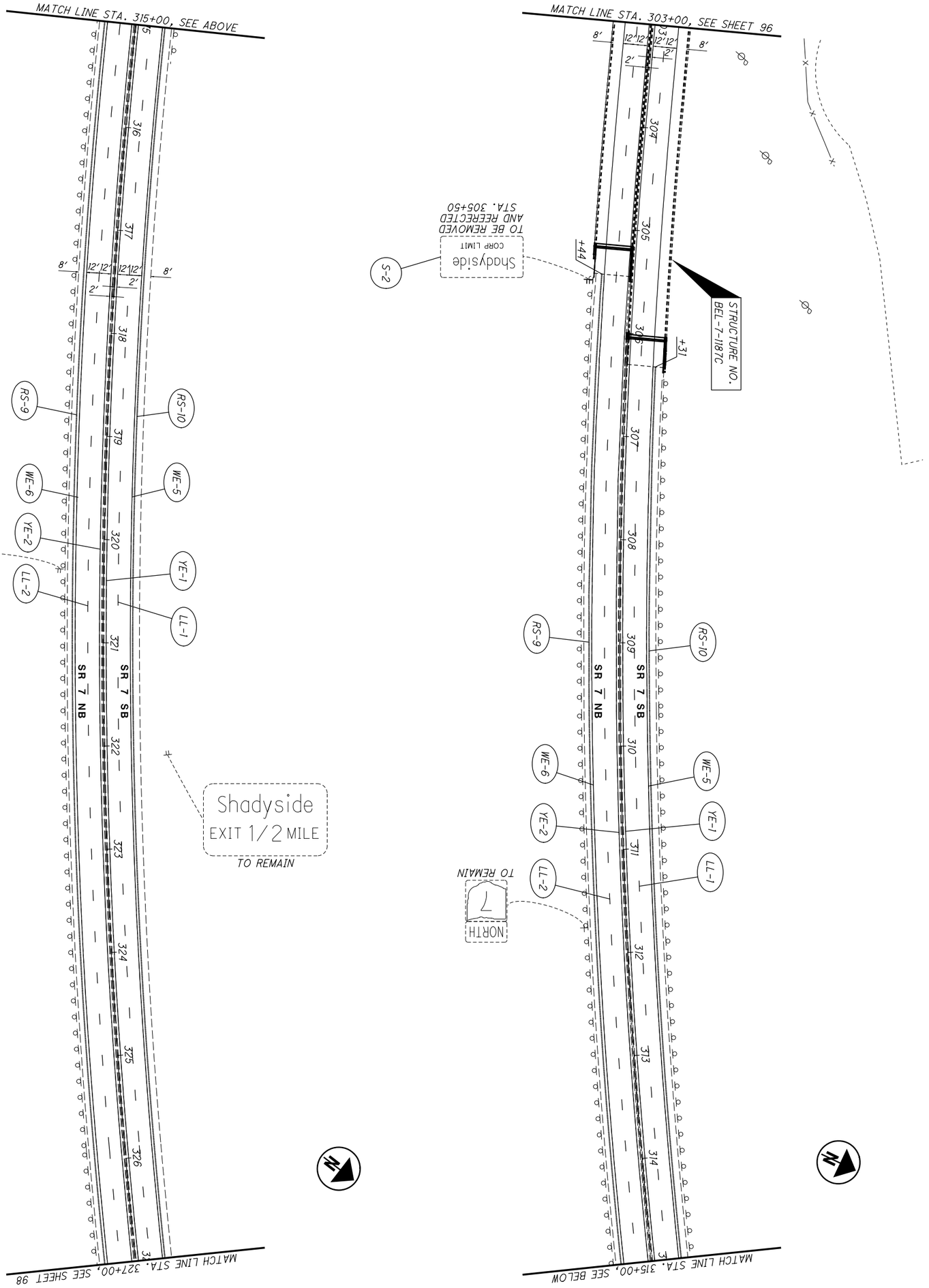
96
213

RAMP A (SR 7 CONNECTOR TO SR 7 SB)
TO BE REMOVED AND RECYCLED STA. 283+24
RAMP B (SR 7 SB TO SR 7 CONNECTOR)
RAMP C (SR 7 NB TO SR 7 CONNECTOR)
RAMP D (SR 7 CONNECTOR TO SR 7 NB)
SR 7 CONNECTOR
SR 7 SB
SR 7 NB
MATCH LINE STA. 279+00, SEE SHEET 95
MATCH LINE STA. 291+00, SEE ABOVE
MATCH LINE STA. 291+00, SEE BELOW
MATCH LINE STA. 303+00, SEE SHEET 97
STRUCTURE NO. BEL-7-1152C
STRUCTURE NO. BEL-7-1187C
TO REMAIN
EXIT
ONE WAY
DO NOT ENTER
WRONG WAY
NORTH
Shadyside
Bellaire
$500 PENALTY FOR LITTERING ORC SEC. 3767.32
ADOPT A HIGHWAY LITTER CONTROL
NEW LIFE FELLOWSHIP

NOTES:
1. FOR CLARITY, UNDERGROUND UTILITIES HAVE NOT BEEN SHOWN ON THIS SHEET. THE CONTRACTOR SHALL REFERENCE THE APPROPRIATE PLAN AND PROFILE SHEET FOR UTILITY LOCATIONS PRIOR TO PLACING SIGN POSTS.

2. FOR SIGNING AND PAVEMENT MARKING LEGEND, SEE SHEET 95

J:\2019025\ODOT\IF BEL-7-11.52_11.87_12.79 (PID 110324)\BEL\110324_BEL-7-11.52\Design\Traffic\Sheets\110324_TP002.dgn 11/9/2020 3:07:12 PM bmccutchen



NOTES:

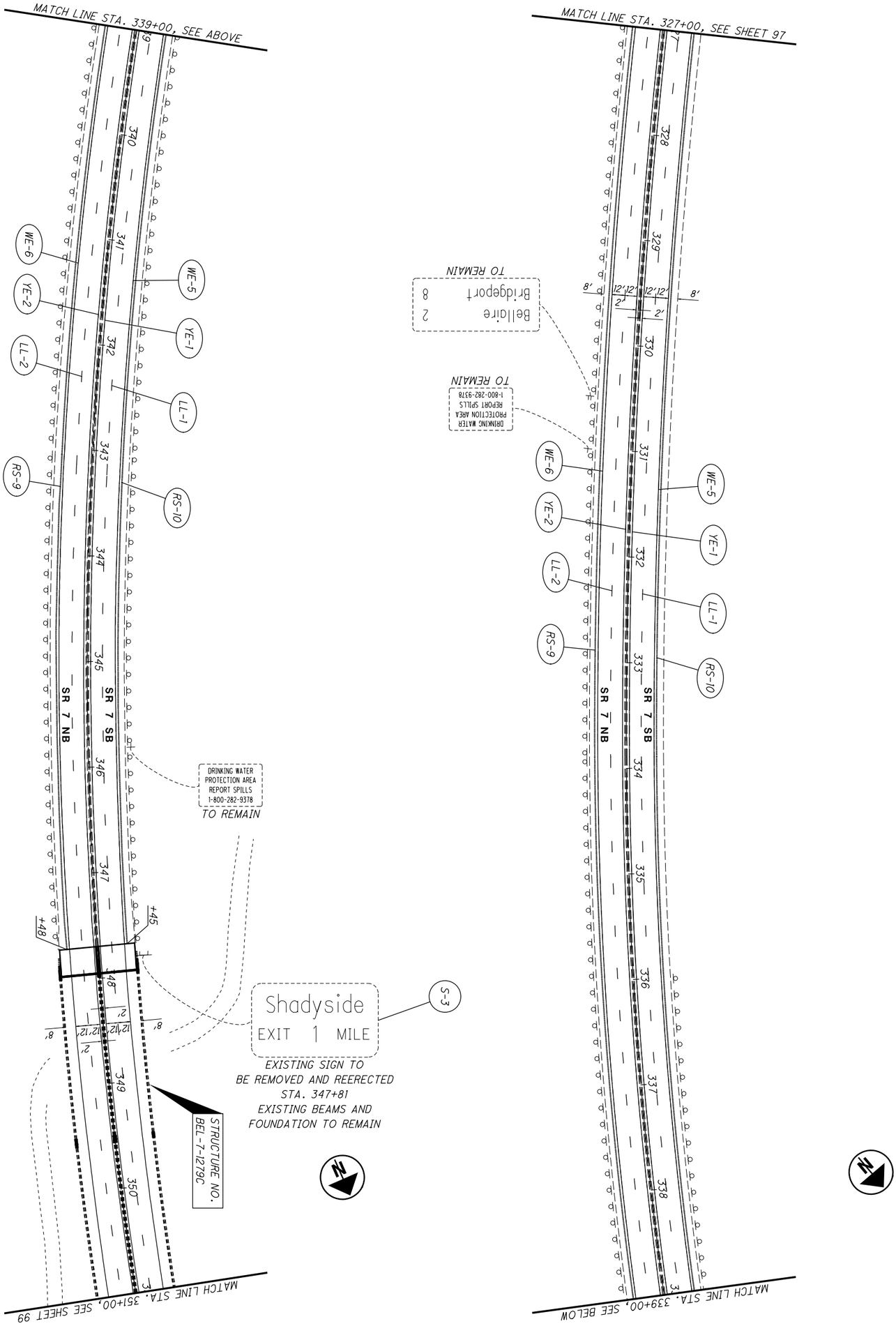
1. FOR CLARITY, UNDERGROUND UTILITIES HAVE NOT BEEN SHOWN ON THIS SHEET. THE CONTRACTOR SHALL REFERENCE THE APPROPRIATE PLAN AND PROFILE SHEET FOR UTILITY LOCATIONS PRIOR TO PLACING SIGN POSTS.
2. FOR SIGNING AND PAVEMENT MARKING LEGEND, SEE SHEET 95

BEL-7-11.48

TRAFFIC CONTROL PLAN - SR 7
STA. 303+00 TO STA. 327+00

CALCULATED BER
CHECKED SMM

0 25 50 100
HORIZONTAL SCALE IN FEET



NOTES:

1. FOR CLARITY, UNDERGROUND UTILITIES HAVE NOT BEEN SHOWN ON THIS SHEET. THE CONTRACTOR SHALL REFERENCE THE APPROPRIATE PLAN AND PROFILE SHEET FOR UTILITY LOCATIONS PRIOR TO PLACING SIGN POSTS.

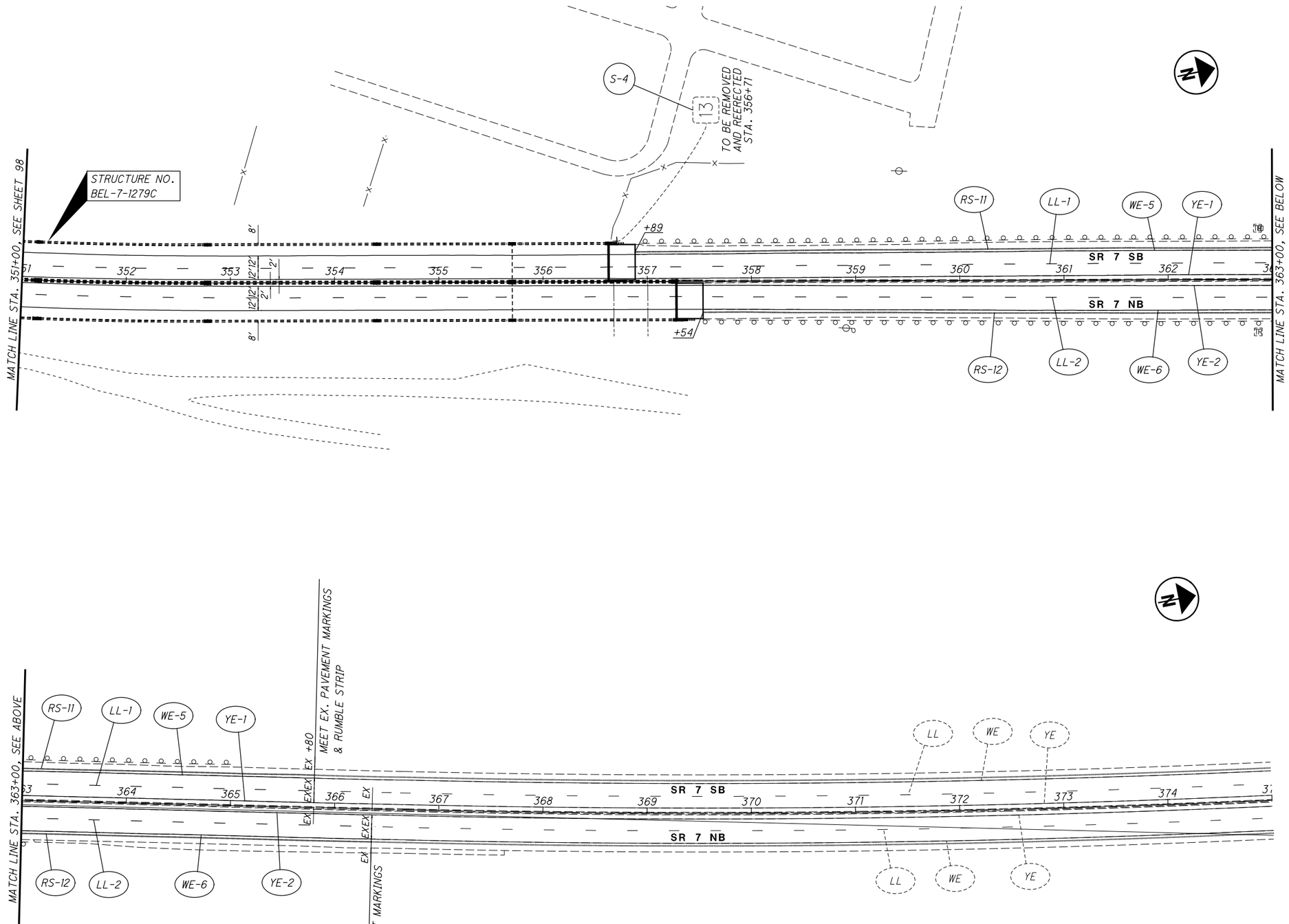
2. FOR SIGNING AND PAVEMENT MARKING LEGEND, SEE SHEET 95

BEL-7-11.48

TRAFFIC CONTROL PLAN - SR 7
STA. 237+00 TO STA. 351+00

CALCULATED BER
CHECKED SMM

0 25 50 100
HORIZONTAL SCALE IN FEET



NOTES:

1. FOR CLARITY, UNDERGROUND UTILITIES HAVE NOT BEEN SHOWN ON THIS SHEET. THE CONTRACTOR SHALL REFERENCE THE APPROPRIATE PLAN AND PROFILE SHEET FOR UTILITY LOCATIONS PRIOR TO PLACING SIGN POSTS.

2. FOR SIGNING AND PAVEMENT MARKING LEGEND, SEE SHEET 95

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED BER
CHECKED SMM

TRAFFIC CONTROL PLAN - SR 7
STA. 351+00 TO STA. 375+00

BEL-7-11.48

99
213

J:\20190025\ODOT\IF BEL-7-11.52_11.87_12.79 (PID 110324)\BEL\110324_BEL-7-11.52\Design\Traffic\Sheets\110324_TP005.dgn 11/9/2020 3:07:14 PM bmccutchen

GENERAL LIGHTING NOTE
THE CONTRACTOR SHALL CONFORM TO THE NATIONAL ELECTRIC CODE, NATIONAL ELECTRICAL SAFETY CODE AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAY IN PERFORMING CONTRACT WORK. THE HIGHWAY LIGHTING SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE 2019 OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS. THIS DOCUMENT SHALL GOVERN ALL MATERIALS AND WORKMANSHIP INVOLVED IN THE IMPROVEMENTS SHOWN ON THESE PLANS, EXCEPT AS SUCH SPECIFICATIONS ARE MODIFIED BY THE FOLLOWING SPECIFICATIONS OR BY THE CONSTRUCTION DETAILS SET FORTH HEREIN.

GROUNDING AND BONDING
THE REQUIREMENTS OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS) AND THE HL SERIES OF STANDARD CONSTRUCTION DRAWINGS ARE MODIFIED AS FOLLOWS:

1. ALL METALLIC PARTS CONTAINING ELECTRICAL CONDUCTORS SHALL BE PERMANENTLY JOINED TO FORM AN EFFECTIVE GROUND FAULT CURRENT PATH BACK TO THE GROUNDED CONDUCTOR IN THE POWER SERVICE DISCONNECT SWITCH.
   A. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUITS (725.04) IN ADDITION TO THE CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS GROUNDING CONDUCTOR.
   B. WHEN AN EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED IN PLASTIC CONDUIT (725.05), THE INSTALLATION SHALL INCLUDE AS SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN ADDITION TO THE CONDUCTORS SPECIFIED.
   C. METAL PULL BOX LIDS SHALL BE BONDED BY ATTACHMENT OF THE EQUIPMENT GROUNDING CONDUCTOR TO THE FRAME DIAGONAL AS PROVIDED ON HL-30.11.
2. CONDUITS
   A. THE 725.04 CONDUIT SHALL HAVE GROUNDING BUSHINGS INSTALLED AT ALL TERMINATION POINTS. THE BUSHING MATERIAL SHALL BE COMPATIBLE WITH GALVANIZED STEEL CONDUIT AND THE GROUNDING LUG MATERIAL SHALL BE COMPATIBLE FOR USE WITH COPPER WIRE. THREADED OR COMPRESSION TYPE BUSHINGS MAY BE USED.
   B. THE 725.05 CONDUIT SHALL HAVE THE INSIDE AND OUTSIDE DIAMETERS OF THE CONDUIT DEBURRED AT ALL TERMINATION POINTS.
   C. BOTH ENDS OF METALLIC CONDUIT SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.
   D. METALLIC CONDUIT MAY BE BONDED TO METALLIC BOXES THROUGH THE USE OF CONDUIT FITTINGS UL APPROVED FOR THIS TYPE OF CONNECTION, WITH THE BOX BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.
3. WIRE FOR GROUNDING AND BONDING
   A. USE INSULATED, COPPER WIRE FOR THE EQUIPMENT GROUNDING CONDUCTOR. BONDING JUMPERS IN BOXES AND ENCLOSURES MAY BE BARE OR INSULATED COPPER WIRE. WIRE SIZE SHALL BE AS FOLLOWS: THE INSULATION SHALL BE GREEN OR GREEN WITH YELLOW STRIPE(S). FOR 4 AWG OR LARGER, INSULATION MAY ALSO BE BLACK WITH GREEN TAPE/LABELS INSTALLED AT ALL ACCESS POINTS.
   B. IN A HIGHWAY LIGHTING SYSTEM, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE THE SAME WIRE SIZE AS THE DUCT CABLE OR DISTRIBUTION CABLE CIRCUIT CONDUCTORS, WITH THE MINIMUM CONDUCTOR SIZE OF 4 AWG. BONDING JUMPERS WILL BE MINIMUM SIZE 4 AWG.
4. GROUND ROD
   A. A ¾ INCH SCHEDULE 40 PVC CONDUIT WILL BE USED IN FOUNDATIONS AND CONCRETE WALLS FOR THE GROUNDING CONDUCTOR (GROUND WIRE) RACEWAY TO THE GROUND ROD. SHOULD METALLIC CONDUIT BE USED, BOTH ENDS OF THE CONDUIT SHALL BE BONDED TO THE GROUNDING CONDUCTOR.
   B. THE TYPICAL GROUNDING CONDUCTOR (GROUND WIRE) SHALL BE 4 AWG INSULATED, COPPER.
5. POWER SERVICE AND DISCONNECT SWITCH
   A. AT THE POWER SERVICE LOCATION, THE GROUNDING CONDUCTOR (GROUND WIRE) FROM THE DISCONNECT SWITCH NEUTRAL (AC-) BAR TO THE GROUND ROD SHALL BE A CONTINUOUS, UNSPLICED CONDUCTOR. IF SPLICED, IT SHALL BE AN EXOTHERMIC WELD BUTT SPLICE.
   B. THE SERVICE NEUTRAL (AC-) SHALL ONLY BE CONNECTED TO GROUND AT THE PRIMARY POWER SERVICE DISCONNECT SWITCH.
6. PAYMENT FOR GROUNDING AND BONDING SHALL BE INCIDENTAL TO THE CONDUCTORS SUPPLIED BY THE PROJECT.

CONDUIT EXPANSION AND DEFLECTION
EXPANSION FITTINGS SHALL BE OZ TYPE AX, CROUSE HINDS TYPE XJG, OR EQUAL APPROVED BY THE ENGINEER. EACH EXPANSION FITTING SHALL PROVIDE EITHER 4 OR 8 INCHES TOTAL MOVEMENT AS SPECIFIED BY THE PLAN DETAILS AND SHALL HAVE AN EXTERNAL COPPER BONDING JUMPER, UNLESS SPECIFIED OTHERWISE BY THE PLAN DETAILS.

DEFLECTION COUPLINGS SHALL BE OZ TYPE DX, CROUSE HINDS TYPE XD, OR EQUAL APPROVED BY THE ENGINEER. EACH DEFLECTION COUPLING SHALL HAVE AN EXTERNAL COPPER BONDING JUMPER, UNLESS SPECIFIED OTHERWISE BY THE PLAN DETAILS. MINIMUM DEFLECTION CAPABILITY: 25°.

HIGH VOLTAGE TEST WAIVED
THE HIGH VOLTAGE TEST SHALL NOT BE PERFORMED ON THE CIRCUITS CONSTRUCTED BY THIS PROJECT, SINCE THE TEST COULD DAMAGE THE PORTION OF THE COMPLETED CIRCUIT WHICH HAS BEEN IN SERVICE PRIOR TO THIS PROJECT.

ITEM 625, SPECIAL, MAINTAIN EXISTING LIGHTING
EXISTING ROADWAYS WHICH ARE TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OF THIS PROJECT AND WHICH ARE LIGHTED SHALL HAVE THE LIGHTING MAINTAINED AS DESCRIBED HEREIN.

BEFORE ANY WORK IS STARTED IN THE IMMEDIATE VICINITY OF THE EXISTING LIGHTING CIRCUITS, REPRESENTATIVES OF ODOT, THE MAINTAINING AGENCY AND THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE EXISTING ROADWAY LIGHTING CIRCUITS TO BE MAINTAINED. DURING THIS INSPECTION, A WRITTEN RECORD OF THE CONDITION OF EXISTING LIGHTING SHALL BE MADE BY ODOT'S REPRESENTATIVE.THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL LUMINAIRES WHICH ARE NOT IN WORKING ORDER, INDIVIDUAL POLES WHICH ARE NOT STANDING, AND INDIVIDUAL CIRCUITS WHICH ARE NOT IN WORKING ORDER. THE COMPLETED REPORT SHALL BE SIGNED BY THE REPRESENTATIVES OF ODOT, THE MAINTAINING AGENCY AND THE CONTRACTOR.

IF, AS A RESULT OF THIS INSPECTION, IT IS DETERMINED THAT THE CONDITION OF THE EXISTING SYSTEM IS BELOW THAT REQUIRED FOR THE SAFETY OF THE TRAVELING PUBLIC, THEN THE MAINTAINING AGENCY SHALL MAKE THE REPAIRS NECESSARY TO RETURN THE SYSTEM TO AN ACCEPTABLE CONDITION. FOLLOWING THESE REPAIRS, THE SYSTEM SHALL AGAIN BE INSPECTED AND A REPORT SHALL BE MADE AND SIGNED AS OUTLINED HEREIN.

WHEN THE EXISTING SYSTEM IS IN AN ACCEPTABLE CONDITION, IT SHALL BE TURNED OVER TO THE CONTRACTOR WHO SHALL THEN BE REQUIRED TO MAINTAIN THE EXISTING LIGHTING TO THE CONDITION OUTLINED IN THIS REPORT WITH THE EXCEPTION OF KNOCKDOWNS DUE TO TRAFFIC ACCIDENTS.

REPLACEMENT OF KNOCKED DOWNED UNITS SHALL BE DONE ONLY WHEN THE ENGINEER HAS DETERMINED THAT THE REPLACEMENT OF THE KNOCKED DOWN UNIT IS NECESSARY AND SHALL BE PAID SEPARATELY ON A UNIT BASIS.

BETTERMENTS SHALL BE COVERED IN ITEMS OF WORK PERTAINING TO THE CONSTRUCTION OF PERMANENT IMPROVEMENT.

WHEN THE SEQUENCE OF CONSTRUCTION ACTIVITIES REQUIRES, OR SHOULD THE CONTRACTOR DESIRE, THE REMOVAL OF THE EXISTING LIGHTING BEFORE THE NEW LIGHTING IS OPERATIONAL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY LIGHTING OF THIS PORTION OF THE ROADWAY.

PRIOR TO INSTALLING SUCH LIGHTING, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOUR SETS OF THE TEMPORARY LIGHTING PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL.

THIS PLAN SHALL SHOW LOCATIONS OF POLES, LENGTHS OF BRACKET ARMS, STYLES OF LUMINAIRES, MOUNTING HEIGHTS, WIRING METHODS AND OTHER PERTINENT INFORMATION. THE TEMPORARY LIGHTING SHALL PROVIDE AN AVERAGE INITIAL INTENSITY OF 1.2 FOOTCANDLES WITH AN AVERAGE TO MINIMUM UNIFORMITY NOT TO EXCEED 3:1. MOUNTING HEIGHT OF TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 30 FEET, AND THE MINIMUM OVERHEAD CONDUCTOR CLEARANCE SHALL BE 20 FEET. TEMPORARY OVERHEAD CONSTRUCTION SHALL NOT BE LESS THAN GRADE "B" FOR STRENGTH REQUIREMENTS AS DEFINED BY THE NATIONAL ELECTRIC SAFETY CODE. WOOD POLES WITH OVERHEAD WIRING MAY BE USED. HOWEVER, TEMPORARY LIGHTING SHALL MEET FEDERAL AND STATE SAFETY CRITERIA. IF BREAKAWAY POLES ARE USED TO MEET THESE CRITERIA, THEN UNDERGROUND WIRING SHALL BE USED. RECONDITIONED OR USED MATERIALS MAY BE FURNISHED FOR TEMPORARY LIGHTING.

ALL MATERIALS NECESSARY TO COMPLETE THE TEMPORARY LIGHTING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. WHEN NO LONGER NEEDED, THE TEMPORARY LIGHTING INSTALLATION SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

THE MAINTAINING AGENCY WILL PAY FOR ELECTRICAL ENERGY CONSUMED BY EXISTING POWER SERVICES AND BY PROPOSED PERMANENT POWER SERVICES AFTER ACCEPTANCE OF THE LIGHTING WORK. THE CONTRACTOR WILL PAY FOR ELECTRICAL ENERGY, INSTALLATION, REMOVAL AND MAINTENANCE OF ANY TEMPORARY POWER SERVICES.

THE LUMP SUM PRICE BID FOR ITEM SPECIAL "MAINTAIN EXISTING LIGHTING" SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HEREIN.

THE UNIT PRICE BID FOR ITEM SPECIAL "REPLACEMENT OF EXISTING LIGHTING UNIT" SHALL BE FULL PAYMENT FOR THE REPLACEMENT OF AN EXISTING LIGHTING UNIT WHICH HAS BEEN KNOCKED DOWN AFTER THE AFOREMENTIONED INSPECTION AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO PROVIDE A REPLACEMENT FOR SUCH UNIT.

GUARANTEE
THE CONTRACTOR SHALL GUARANTEE THAT THE LIGHTING INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF 90 DAYS FOLLOWING COMPLETION OF THE 10 DAY PERFORMANCE TEST. IN THE EVENT OF UNSATISFACTORY OPERATION, THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATIONS, MAKE REPAIRS AND REPLACE DEFECTIVE PARTS WITH NEW PARTS OF EQUAL OR BETTER QUALITY. EQUIPMENT, MATERIAL AND LABOR COSTS INCURRED IN CORRECTING AN UNSATISFACTORY OPERATION SHALL BE BORNE BY THE CONTRACTOR.

CUSTOMARY MANUFACTURER'S GUARANTEES FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE STATE FOLLOWING ACCEPTANCE OF THE EQUIPMENT.

THE COST OF GUARANTEEING THE LIGHTING WILL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE SYSTEM.

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, CONDUIT, 2", 725.05, AS PER PLAN
IN ADDITION TO THE REQUIREMENTS OF ODOT'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, CONDUIT, 2", 725.05, AS PER PLAN SHALL INCLUDE ALL EXPANSION FITTINGS AS INCIDENTAL TO THIS ITEM OF WORK.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR FEET FOR CMS ITEM 625, CONDUIT, 2", 725.05, 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.

ITEM 625, SERVICE TO UNDERPASS LIGHTING, AS PER PLAN
THIS ITEM SHALL CONSIST OF ALL REMOVALS AND PROVIDING COMPLETE ELECTRICAL POWER, EXCEPT FOR LUMINAIRES, FOR UNDERPASS LIGHTING SYSTEMS. THE INSTALLATION WORK SHALL INCLUDE STRUCTURE JUNCTION BOXES, CONDUITS, CONDUIT RISERS, CONDUIT GROUNDING, MOUNTINGS, FITTINGS, CABLES, SPLICES, AND ALL INCIDENTALS NECESSARY TO COMPLETE, READY FOR USE, THE FEED AS DETAILED ON THE PLANS.

STRUCTURE JUNCTION BOXES SHALL CONFORM TO THE REQUIREMENTS OF HL-20.14 AND ODOT'S C&MS. STRUCTURE JUNCTION BOXES SHALL BE APPROXIMATELY 12" X 12" X 6" AND SHALL HAVE AN EMBOSSMENT IN THE BACK OF THE BOX THAT SHALL BE DRILLED AND TAPPED FOR A 1/4"-20 CAP SCREW FOR CONNECTION OF GROUNDS.

WHEN SURFACE MOUNTED, THE JUNCTION BOXES SHALL HAVE FIELD INSTALLED HUBS, IN LIEU OF BOSSED DRILLED AND TAPPED CONNECTIONS, TO ACCOMMODATE THE CONDUIT(S) ENTERING THE BOX.

THE PRICE BID FOR ITEM 625, SERVICE TO UNDERPASS LIGHTING, AS PER PLAN, SHALL INCLUDE PAYMENT FOR ALL REMOVALS, 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, DISCONNECT CIRCUIT, AS PER PLAN
THIS ITEM OF WORK SHALL FOLLOW C&MS 625 EXCEPT FOR THE FOLLOWING ITEMS.

DISCONNECTION SHALL INVOLVE CUTTING THE EXISTING CIRCUIT AND REMOVING ALL CONNECTIONS. ALL CABLE NOT TO BE REUSED SHALL BE REMOVED AND THE EXISTING CONDUIT SHALL BE CLEANED OF ALL CABLE AND DEBRIS SO THAT THE NEW CABLE CAN BE INSTALLED. ALL EXISTING CABLE TO REMAIN ACTIVE SHALL BE CUT IN A MANNER SO THAT THERE IS SUFFICIENT CABLE LEFT FOR RE-CONNECTION.

PAYMENT SHALL BE MADE AT THE UNIT BID PRICE UNDER C&MS ITEM 625, DISCONNECT CIRCUIT, AS PER PLAN AT EACH LOCATION WHERE DISCONNECTION IS REQUIRED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRE TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 611, 4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET
ITEM 611 - 4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET SHALL BE USED TO DRAIN PULL BOXES AS SHOWN IN SCD HL-30.11. PLACEMENT SHALL BE AT THE DIRECTION OF THE ENGINEER.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 611, 4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET 20 FT.

LEGEND

- EXISTING LIGHT POLE
- EXISTING CIRCUIT CABLE
- EXISTING CONDUIT W/EXISTING CIRCUIT CABLE
- EXISTING UNDERPASS LUMINAIRE
- PULL BOX, 725.08 (BY SIZE)
- PROPOSED CONDUIT

CALCULATED BER CHECKED DRM

LIGHTING GENERAL NOTES

BEL-7-11.48

100 213

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REF NO.	SHEET NO.	SIDE	ROADWAY	STATION TO STATION	625 CONNECTION, UNFUSED PERMANENT EACH	625 NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE FT	625 CONDUIT, 2", 725.05, AS PER PLAN FT	625 CONDUIT, 2", 725.051 FT	625 CONDUIT CLEANED AND CABLES REMOVED FT	625 TRENCH FT	625 JUNCTION BOX EACH	625 PULL BOX, 725.08, 18" EACH	625 PULL BOX REMOVED EACH	625 STRUCTURE GROUNDING SYSTEM EACH	625 UNDERGROUND WARNING/MARKING TAPE FT	625 SERVICE TO UNDERPASS LIGHTING, AS PER PLAN	SPECIAL MAINTAIN EXISTING LIGHTING	SPECIAL REPLACEMENT OF EXISTING LIGHTING UNIT EACH	625 DISCONNECT CIRCUIT, AS PER PLAN EACH
				TO															
	100															LS	LS	1	
1	102	RT	SR 7	279+96.90	2							1							1
2	102	RT	SR 7	279+96.90 — 282+81.50		592	227	59		59					59				
3	102	RT	SR 7	280+11.70									1						
4	102	RT	SR 7	282+81.50	2						1			1					
5	102	RT	SR 7	282+81.50 — 284+40.00		350	106	59		59					59				
6	102	RT	SR 7	284+24.90									1						
7	102	RT	SR 7	284+40.00								1							
8	102	RT	SR 7	284+40.00 — 285+00.00		138		59		59					59				
9	102	RT	SR 7	285+00.00	2							1							
1	103	LT	SR 7	300+17.60	2							1	1						1
2	103	LT	SR 7	300+17.60 — 300+42.60		74	14	13		13					13				
3	103	LT	SR 7	300+42.60	2						1								
4	103	RT	SR 7	299+26.90	2							1							
5	103	RT	SR 7	299+26.90 — 299+57.70		84	14	18		18					18				
6	103	RT	SR 7	299+32.60									1						
7	103	RT	SR 7	299+57.70	2						1								
	104								50										
TOTALS CARRIED TO GENERAL SUMMARY					14	1238	361	208	50	208	3	5	4	1	208	LS	LS	1	2

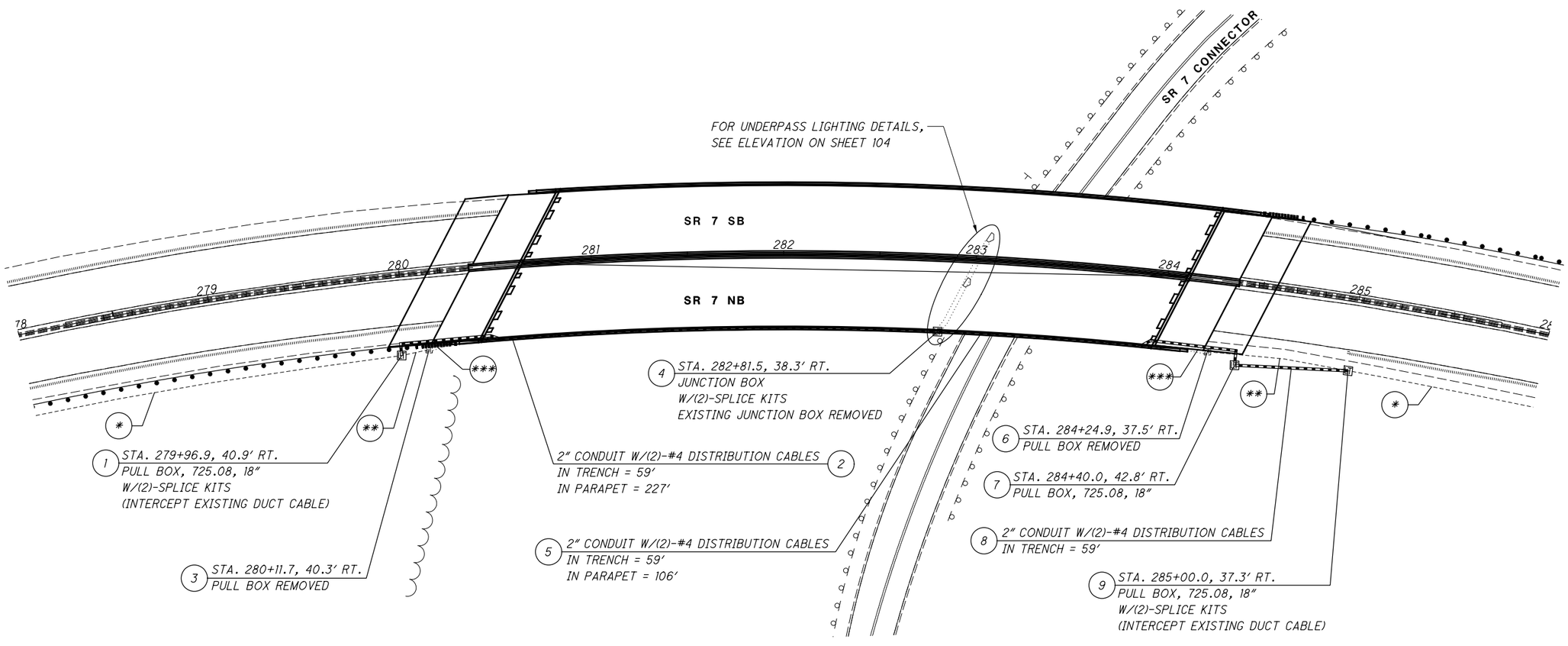
CALCULATED BER
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LIGHTING SUBSUMMARY

BEL-7-11.48

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NOTE:
FOR LEGEND, SEE SHEET 100 .

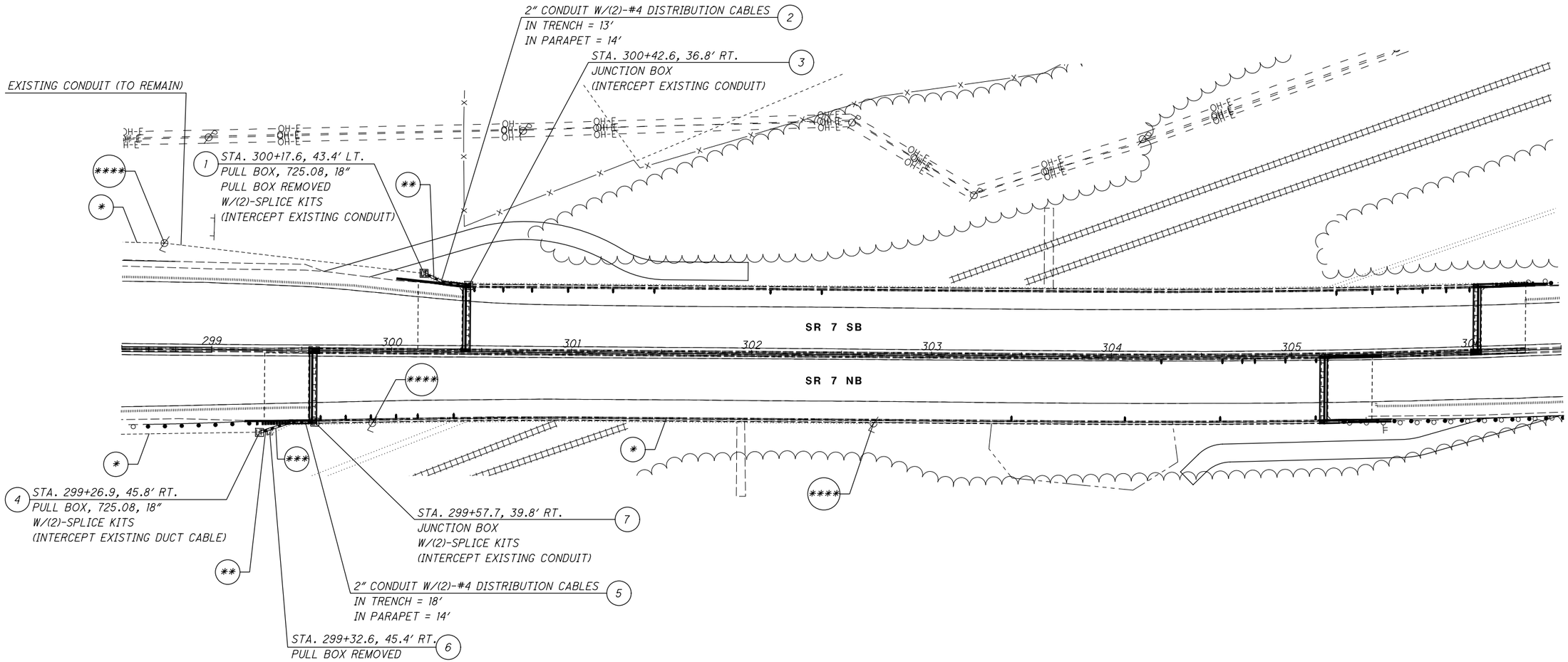
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0 15 30 60
HORIZONTAL SCALE IN FEET

CALCULATED BER
CHECKED DRM

LIGHTING PLAN - SR 7
STA. 278+00 TO STA. 286+00

BEL-7-11.48



NOTE:
FOR LEGEND, SEE SHEET 100 .

(*) - EXISTING CIRCUIT CABLE (REMAIN)

(**) - EXISTING CIRCUIT CABLE (REMOVED)

(***) - EXISTING CONDUIT & CIRCUIT CABLE (REMOVED)

(****) - EXISTING LIGHT POLE (REMAIN)

HORIZONTAL SCALE IN FEET
0 15 30 60

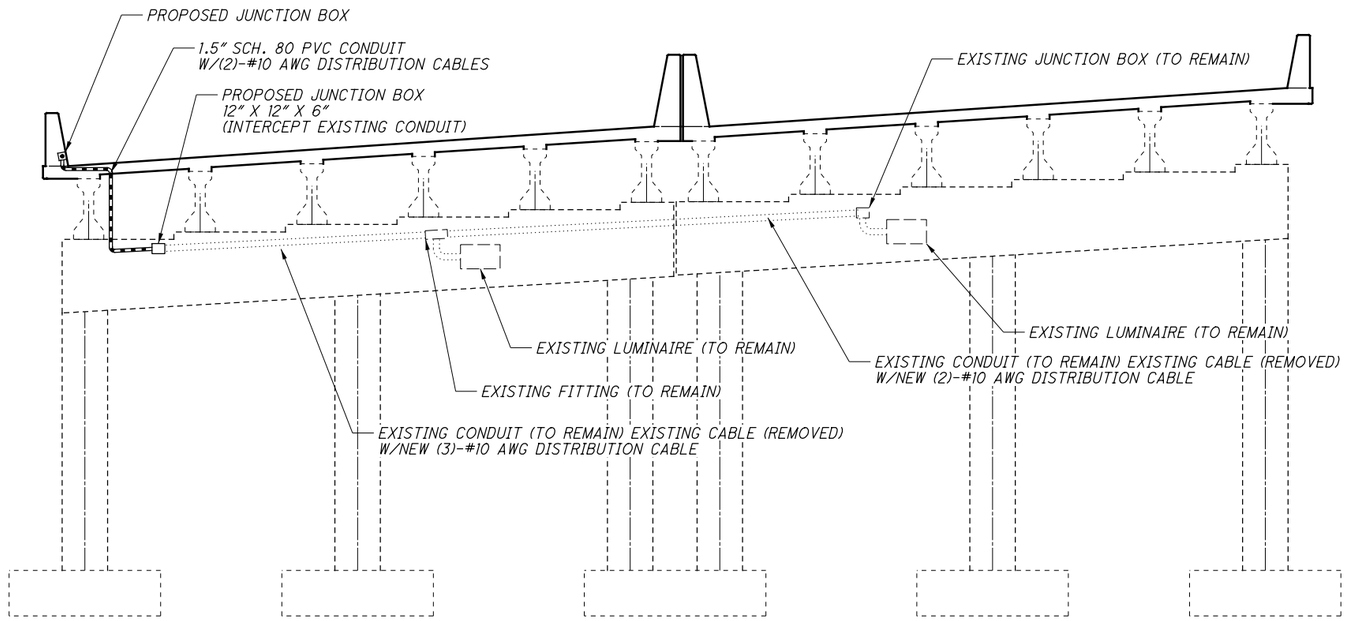
CALCULATED BER
CHECKED DRM

LIGHTING PLAN - SR 7
STA. 298+50 TO STA. 306+50

BEL-7-11.48

103
213

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STRUCTURE NO. BEL-7-1152 UNDERPASS DETAIL (LOOKING SOUTH)

CALCULATED BER
CHECKED DRM

UNDERPASS LUMINAIRE ELEVATION DETAIL
STRUCTURE NO. BEL-7-1152

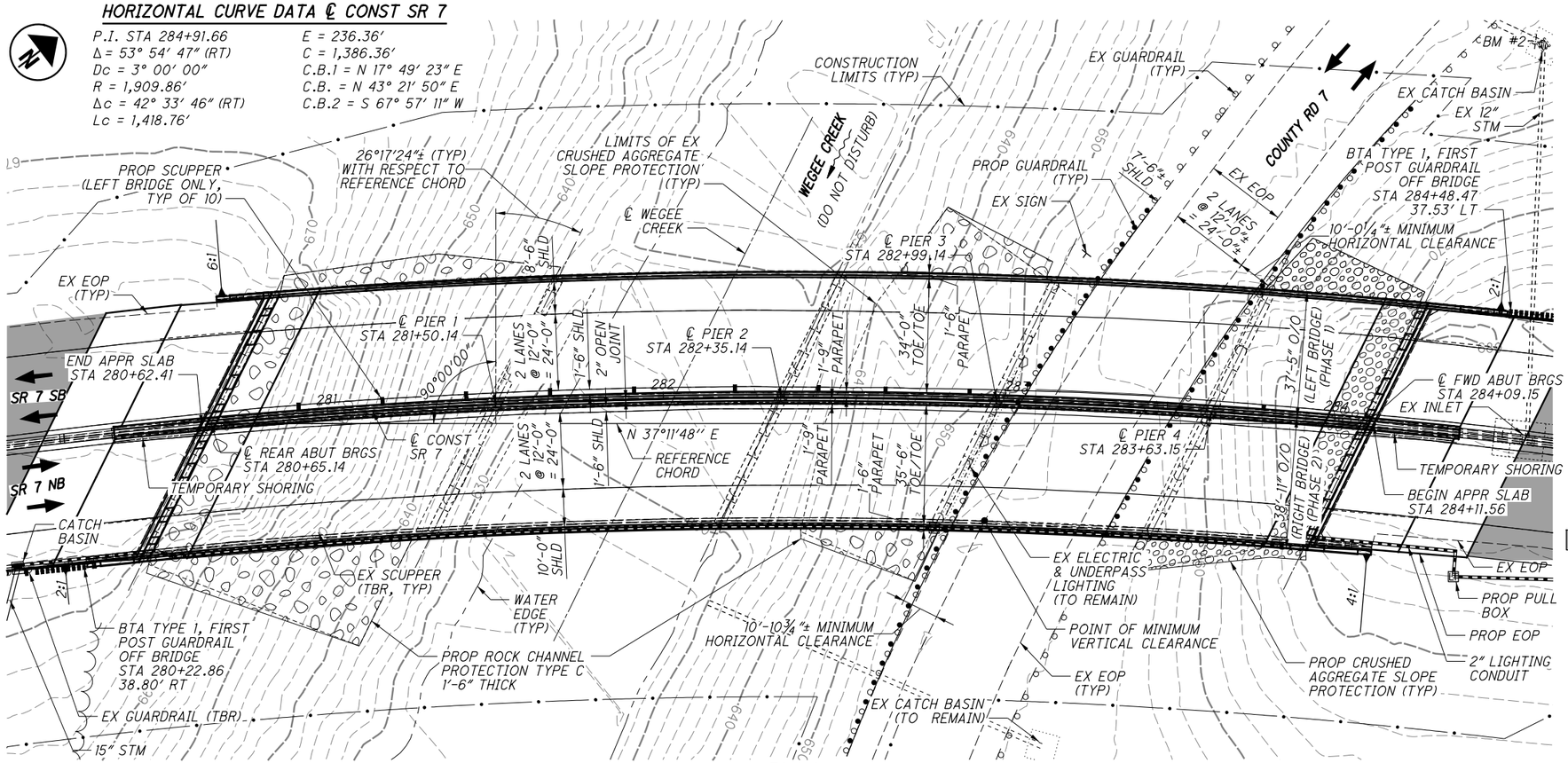
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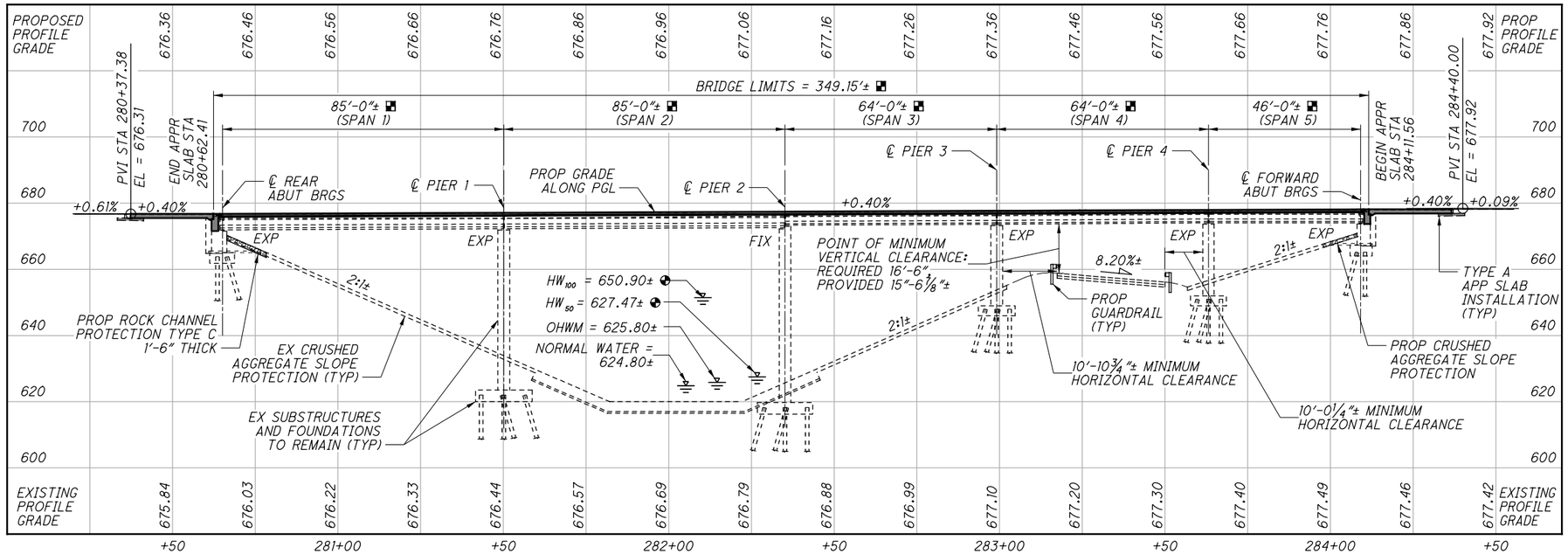
HORIZONTAL CURVE DATA ℄ CONST SR 7

P.I. STA 284+91.66
Δ = 53° 54′ 47″ (RT)
Dc = 3° 00′ 00″
R = 1,909.86′
Δc = 42° 33′ 46″ (RT)
Lc = 1,418.76′

E = 236.36′
C = 1,386.36′
C.B.1 = N 17° 49′ 23″ E
C.B. = N 43° 21′ 50″ E
C.B.2 = S 67° 57′ 11″ W



PLAN



PROFILE ALONG NB PROFILE GRADE LINE

(RIGHT BRIDGE SHOWN, LEFT BRIDGE SIMILAR)

BENCHMARK DATA

BM #1 - STA 282+49.34, OFFSET 286.28′ RT, EL 654.08 CHISELED SQUARE ON A CONCRETE LIGHT POLE BASE ON THE SOUTH SIDE OF THE INTERSECTION OF OLD STATE ROUTE 7 AND THE RAMP TO STATE ROUTE 7 NORTH.

BM #2 - STA 284+47.04, OFFSET 118.22′ RT, EL 652.01 CHISELED SQUARE ON THE SOUTH CORNER OF A CATCH BASIN LOCATED ON THE EAST SIDE OF OLD STATE ROUTE 7, BEING 110 FEET NORTH OF THE STATE ROUTE 7 OVERPASS.

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET 2/213

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. SEE GENERAL PLAN SHEET FOR PROPOSED WORK NOTE.

DESIGN TRAFFIC:

2021 ADT = 15,500 2021 ADTT = 3,410
2031 ADT = 18,000 2041 ADTT = 3,960
DIRECTIONAL DISTRIBUTION = 57% (NB)

LEGEND

- ■ - MEASURED ALONG ℄ CONST SR 7
- ◔ - HYDRAULIC INFORMATION FROM RECORD CONST PLANS
- ▭ - LIMITS OF PAVEMENT RESURFACING

EXISTING STRUCTURE

TYPE: PRESTRESSED CONCRETE I-BEAMS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE ON STEEL PILES

SPANS: 85′-0″±, 85′-0″±, 64′-0″±, 64′-0″±, AND 46′-0″± C/C BEARINGS, MEASURED ALONG ℄ CONST SR 7

ROADWAY: 34′-1″± (LEFT), 33′-9″± (RIGHT) EX TOE/TOE

LOADING: HS 20-44

SKEW: 26°17′24″± LT FORWARD WITH RESPECT TO REFERENCE CHORD

APPROACH SLABS: AS-1-67 (MODIFIED, 25′-0″± LONG)

ALIGNMENT: 3°0′0″± CURVE RIGHT

SUPERELEVATION: 0.071± FT/FT

STRUCTURAL FILE NUMBER: 0700223

DATE BUILT: 1975

REHABILITATION: 1987 - SDC OVERLAY
UNKNOWN - MEDIAN BARRIER REPLACED

DISPOSITION: TO BE REHABILITATED

PROPOSED STRUCTURE

PROPOSED WORK: NEW COMPOSITE REINFORCED CONCRETE DECK ON REPAIRED EXISTING BEAMS AND SUBSTRUCTURES

SPANS: 85′-0″±, 85′-0″±, 64′-0″±, 64′-0″±, AND 46′-0″± C/C BEARINGS, MEASURED ALONG CENTERLINE CONST SR 7

ROADWAY: 34′-0″ (LEFT), 35′-6″ (RIGHT) TOE/TOE

VEHICULAR LIVE LOAD: 63.4 % OF HL-93

FUTURE WEARING SURFACE: 0 PSF

SKEW: 26°17′24″± LT FORWARD WITH RESPECT TO REFERENCE CHORD

WEARING SURFACE: MONOLITHIC CONCRETE

APPROACH SLABS: 25′-0″ LONG, TYPE A INSTALLATION (AS-1-15 AND AS-2-15)

ALIGNMENT: 3°0′0″± CURVE RIGHT

SUPERELEVATION: 0.071± FT/FT

COORDINATES: LATITUDE 39° 57′ 36.31″
LONGITUDE 80° 45′ 40.21″

DESIGN AGENCY
EMH&T
Engineers • Architects • Surveyors • Planners
5500 New Albany Road, Columbus, Ohio 43054
614.775.4500 www.emht.com

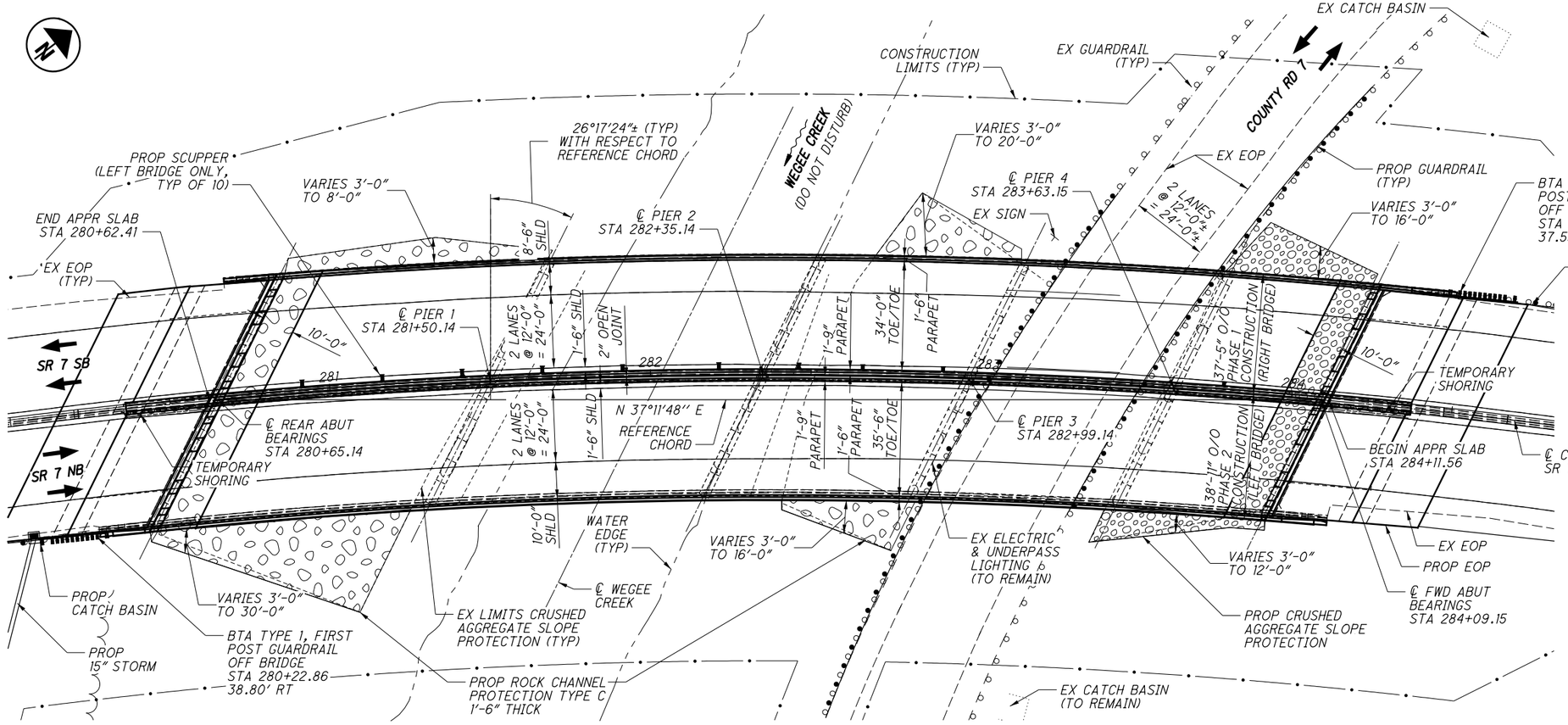
DESIGNED	DRAWN	REVIEWED	DATE
TDA	GB	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	0700223	

BELMONT COUNTY
STA. 280+62.41
STA. 284+11.56

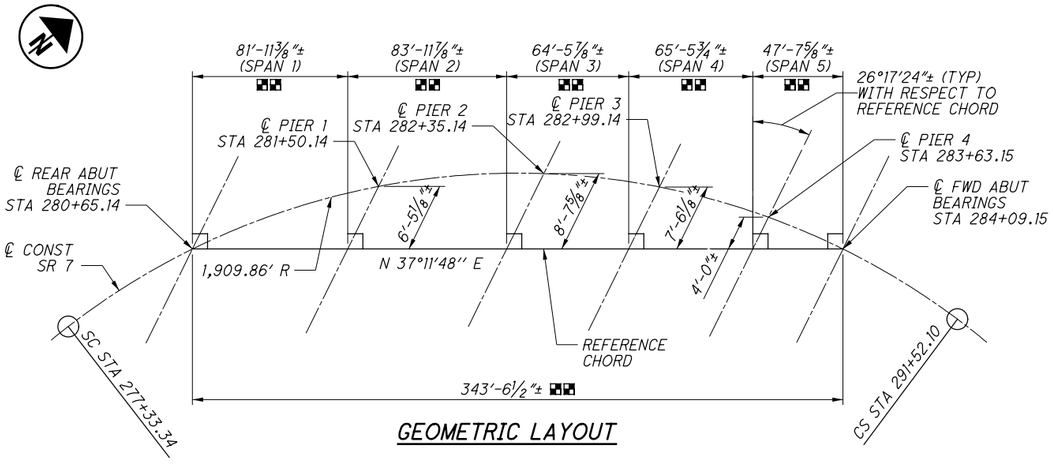
SITE PLAN
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

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PLAN



GEOMETRIC LAYOUT

PROPOSED WORK

WORK LISTED IS NOT ALL INCLUSIVE CONTRACTOR IS TO SEQUENCE WORK AS NEEDED.

1. REPLACE DECK WITH NEW COMPOSITE CONCRETE DECK AND SBR BARRIERS.
2. REPLACE ABUTMENT BACKWALLS AND PORTIONS OF EXISTING WINGWALLS.
3. INSTALL NEW EXPANSION JOINTS PER EXJ-6-17
4. RAISE BEAMS TO MEET NEW PROFILE AND REPLACE BEARINGS AT ALL SUBSTRUCTURE UNITS WITH ELASTOMERIC BEARINGS.
5. REPLACE APPROACH SLABS AND INSTALL SLEEPER SLABS AT END OF APPROACH SLABS.
6. REPAIR EXISTING BEAMS AND DIAPHRAGMS AS DETAILED IN THE PLANS.
7. SEAL EXPOSED LIMITS OF PROPOSED CONCRETE WITH EPOXY-URETHANE SEALER.
8. SEAL EXISTING CRACKS AND PATCH CONCRETE ABUTMENTS.
9. REPLACE PORTIONS OF THE EXISTING CRUSHED AGGREGATE SLOPE PROTECTION AT FORWARD ABUTMENT. INSTALL ROCK CHANNEL TYPE C AT REAR ABUTMENT AND PIER 3.

HORIZONTAL CURVE DATA

℄ CONST SR 7

P.I. STA 284+91.66
Δ = 53° 54' 47" (RT)
Dc = 3° 00' 00"
R = 1,909.86'
Δc = 42° 33' 46" (RT)
Lc = 1,418.76'
E = 236.36'
C = 1,386.36'
C.B.1 = N 17° 49' 23" E
C.B. = N 43° 21' 50" E
C.B.2 = S 67° 57' 11" W

LEGEND

■■ - MEASURED ALONG REFERENCE CHORD

NOTES

1. FOR ADDITIONAL BRIDGE TYPE 1 TERMINAL ASSEMBLY DETAILS AND NOTES NOT SHOWN, SEE ODOT STANDARD DRAWINGS MGS-3.1.

DESIGN AGENCY EMH&T
DESIGNED TDA | DRAWN GB | CHECKED RMW | REVIEWED CAS | DATE 10/30/20 | REVISED - | STRUCTURE FILE NUMBER 0700223

GENERAL PLAN
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

2 / 48

106 / 213

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STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

A-1-69	REVISED	07-19-02 (ARCHIVED)
AS-1-15	REVISED	07-17-15
AS-2-15	REVISED	01-18-19
EXJ-6-17	REVISED	01-19-18
PSID-1-13	REVISED	07-20-18
PCB-91	REVISED	07-17-20
SBR-1-20	DATED	01-17-20 (ARCHIVED) ■
SBR-1-20	DATED	07-17-20
SBR-2-20	DATED	07-17-20

■ - THE PROVIDED STANDARD DRAWING APPLIES ONLY TO THE PROPOSED WINGWALL BARRIERS. FOR ALL OTHER LOCATIONS REFERENCE THE CURRENT STANDARD DRAWING DATED 07-17-20

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

843	DATED	10-18-19
844	DATED	04-20-18

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 8TH EDITION, 2017, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

OPERATIONAL IMPORTANCE

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN LOADING

VEHICULAR LIVE LOAD: 63.4% OF HL-93
FUTURE WEARING SURFACE (FWS) OF 0.000 KIPS/SQ.FT.
THIS BRIDGE RECEIVED AN APPROVED DESIGN EXCEPTION FOR DESIGN LOADING STRUCTURAL CAPACITY.

DESIGN DATA

CONCRETE CLASS QC2 WITH QC/QA - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS QC1 WITH QC/QA - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

REINFORCING STEEL - MIN YIELD STRENGTH 60 KSI

DECK PROTECTION METHOD:

2.5" CONCRETE COVER
EPOXY COATED REINFORCING STEEL
SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

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 ODOT 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 WHICH HAVE BEEN VERIFIED IN THE FIELD.

EXISTING PLANS:
THE EXISTING PLANS LISTED MAY BE INSPECTED IN THE ODOT DISTRICT 11 OFFICE IN NEW PHILADELPHIA, OHIO.

ORIGINAL CONSTRUCTION: BEL-7-8.68 (1973)
OVERLAY: BEL-7-8.71 (1987)

THESE EXISTING PLANS CAN ALSO BE DOWNLOADED FROM THE FOLLOWING WEBSITE:
http://www.dot.state.oh.us/Divisions/ContractAdmin/Contracts/Pages/designfiles.aspx

ASBESTOS NOTIFICATION

AN ASBESTOS SURVEY OF THE BRIDGE STRUCTURE SCHEDULED FOR REHABILITATION WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE STRUCTURE.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORMS, PARTIALLY COMPLETED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE AND SUBMIT THE FORMS VIA OHIO EPA'S WEBSITE OR MAIL HARD COPIES TO THE ADDRESS BELOW AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION.

ASBESTOS PROGRAM
OHIO EPA, DAPC
P.O. BOX 1049
COLUMBUS, OH 43216-1049

THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER. INFORMATION REQUIRED ON THE FORM WILL INCLUDE: 1) THE CONTRACTORS NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED. COPIES OF THE OEPA FORM AND BRIDGE INSPECTION REPORT ARE AVAILABLE FOR REVIEW AT THE ODOT DISTRICT 11 OFFICE, 2201 REISER AVENUE, NEW PHILADELPHIA, OHIO 44663.

BASIS FOR PAYMENT - THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

THIS WORK CONSISTS OF THE REMOVAL OF CONCRETE DECKS INCLUDING SIDEWALKS, PARAPETS, RAILINGS, DECK JOINTS AND OTHER APPURTENANCES FROM CONCRETE SUPPORTING SYSTEMS (BEAMS, DIAPHRAGMS, 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 C&MS 501.05.

PROTECTION OF PRESTRESSED CONCRETE SUPPORT SYSTEMS: BEFORE DECK SLAB CUTTING IS PERMITTED, DRAW THE OUTLINE OF PRIMARY PRESTRESSED CONCRETE MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK ON THE SURFACE OF DECK. DRILL SMALL DIAMETER PILOT HOLES 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF THE EDGES OF THOSE MEMBERS. DECK CUTS OVER OR WITHIN 2 INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 2 INCHES OF FLANGE EDGES MAY EXTEND THE FULL DEPTH OF THE DECK. PERFORM WORK CAREFULLY DURING CUTTING OF THE DECK SLAB TO AVOID DAMAGING PRESTRESSED CONCRETE MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURE. REPLACE OR REPAIR PRESTRESSED CONCRETE MEMBERS DAMAGED BY THE DECK SLAB CUTTING 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.

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 (PRESTRESSED BOX BEAM, I-BEAM, STEEL BEAM STEEL GIRDER, ETC.), 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.

DECK REMOVALS -COMPOSITE DECK DESIGNS PRESTRESSED SUPERSTRUCTURES:
DUE TO THE PRESENCE OF COMPOSITE REINFORCING STEEL BETWEEN THE DECK AND THE PRESTRESSED BEAM FLANGES, SUBMIT A DETAILED PROCEDURE OF THE DECK REMOVAL TO THE ENGINEER AT LEAST 7 DAYS BEFORE CONSTRUCTION BEGINS. DEPARTMENT ACCEPTANCE IS NOT REQUIRED. THE PROCEDURE SHALL INCLUDE ALL DETAILS, EQUIPMENT AND METHODS OF REMOVAL OVER THE PRESTRESSED BEAMS AND AROUND THE COMPOSITE REINFORCING STEEL. REPLACE OR REPAIR PRESTRESSED MEMBERS AND COMPOSITE REINFORCING 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 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.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO SHEET 5/48 FOR USE AS DIRECTED BY THE ENGINEER:

ITEM 509 - REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN = 100 LBS

ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK

THE CONCRETE QUANTITIES, INCLUDING ALL NECESSARY MATERIALS, LABOR, AND EQUIPMENT, REQUIRED TO CONSTRUCT THE BRIDGE DECK, PIER 3 AND 4 DIAPHRAGMS ADJACENT TO BEAM 12, THE INTERMEDIATE DIAPHRAGM IN SPAN 4 ADJACENT TO BEAM 12, AND THE EXPANSION JOINT END DIAPHRAGMS SHALL BE INCLUDED IN THIS ITEM FOR PAYMENT.

DESIGN AGENCY
EMH&T
Engineers • Architects • Surveyors • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 www.emht.com

DESIGNED	DRAWN	REVIEWED	DATE
RMW	RMW	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700223	

GENERAL NOTES
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

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ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN:

DRILL DOWEL HOLES WHERE SHOWN IN THE PLANS AND 4" CLEAR FROM EDGE OF EXISTING CONCRETE SURFACES. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING EPOXY GROUT, 705.20. PRIOR TO DRILLING DOWEL HOLES LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A PACHOMETER. IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR.

BASIS FOR PAYMENT - ALL LABOR MATERIALS, EQUIPMENT, TOOLS, AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK SHALL BE INCLUDED FOR PAYMENT WITH THE UNIT PRICE BID FOR ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN

ITEM 511 - CONCRETE, MISC.: EMBEDDED GALVANIC ANODE (EGA)

THIS PAY ITEM SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, SERVICES AND INCIDENTALS TO PROPERLY INSTALL EMBEDDED GALVANIC ANODES AND PROPOSED CONCRETE AT THE PROPOSED EXPANSION JOINTS. SUPPLY AND INSTALL ANODES ACCORDING TO ODOT SUPPLEMENTAL SPECIFICATION 844.

GALVANIC ANODES SHALL BE INSTALLED IN THE LOCATIONS AND SPACING AS SPECIFIED IN THE PLANS. IN NO CASE, SHALL THE SPACING EXCEED 18 INCHES.

THE CONTRACTOR SHALL PERFORM THIS WORK AS TO NOT DAMAGE THE EMBEDDED ANODES NOR CREATE ANY AIR VOIDS AROUND THE EMBEDDED ANODES WHILE SETTING FORMWORK AND PLACING CONCRETE.

THE PRICE FOR ALL MATERIAL AND LABOR NECESSARY FOR THE IMPROVEMENTS DESCRIBED ABOVE TO BE INCLUDED IN THE CUBIC YARD UNIT BID FOR ITEM 511, CONCRETE MISC.: EMBEDDED GALVANIC ANODE (EGA), FOR PAYMENT

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 2.39 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

ITEM 519 - COMPOSITE FIBER WRAP SYSTEM

THE COMPOSITE FIBER WRAP SYSTEM SHALL BE INSTALLED PER PROPOSAL NOTE 519. ALL SUBMITTALS REQUIRED BY PROPOSAL NOTE 519 SHALL BE SUBMITTED TO THE DISTRICT ENGINEERING DEPARTMENT FOR ACCEPTANCE TWO WEEKS PRIOR TO THE INSTALLATION OF THE SYSTEM. NO WORK ON THE COMPOSITE FIBER WRAP SYSTEM MAY OCCUR UNTIL THE SUBMITTAL'S HAVE BEEN ACCEPTED.

ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN:

844.01 DESCRIPTION

INSTALL CONCRETE PATCHES USING GALVANIZED ANODES PER ODOT SUPPLEMENTAL SPECIFICATION 844 EXCEPT AS NOTED HEREIN.

ALL CONCRETE PATCHES SHALL BE PLACED TO THE EXISTING SURFACE UNLESS OTHERWISE DETAILED IN THE PLANS.

844.02 MATERIALS

PROVIDE A SUPERPLASTICIZED DENSE CONCRETE (SDC) CONCRETE MIX (PER SUPPLEMENTAL SPECIFICATION 848.06 & 848.14) WITH THE FOLLOWING ADDITIONAL PROPERTY:

MINIMUM SPREAD = 24"

PROVIDE SDC CONCRETE MIX AT A 24 INCH SPREAD THAT ALLOWS THE CONCRETE MIX TO BE PLACED THROUGH A 3½" DIAMETER ACCESS HOLE THROUGH THE FORM AND SELF CONSOLIDATE. THE FINAL CONCRETE WILL BE SELF CONSOLIDATING USING AN APPROVED SELF CONSOLIDATING ADMIXTURE.

DURING THE CONCRETE OPERATIONS ASSURE THE REPRESENTATIVES OF THE READY MIX PRODUCER AND THE CHEMICAL ADMIXTURE MANUFACTURER ARE ON SITE TO DETERMINE ANY ADJUSTMENTS REQUIRED TO COMPLETE THE CONCRETE PLACEMENT. MAKE BATCHES OF AT LEAST 3 CUBIC YARDS PER DELIVERY. DELIVER AND PLACE ALL SDC CONCRETE PRIOR TO 9:00 AM TO HELP AVOID ADVERSE TEMPERATURE EFFECTS ON THE MIX CHARACTERISTICS.

844.03 CLEANING AND REPAIR OF REINFORCING STEEL

PRIOR TO THE SURFACE CLEANING SPECIFIED IN ODOT C&MS 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

844.04 GALVANIC ANODE INSTALLATION

INSTALL ANODE UNITS AND REPAIR MATERIAL IMMEDIATELY FOLLOWING PREPARATION AND CLEANING OF STEEL REINFORCEMENT. REPAIR MATERIAL SHALL BE PLACED NO LATER THAN ONE (1) WEEK AFTER CONCRETE REMOVAL UNLESS APPROVED BY THE ENGINEER. GALVANIC ANODES SHALL BE INSTALLED IN THE LOCATIONS AND SPACING AS SPECIFIED IN THE PLANS. IN NO CASE, SHALL THE SPACING EXCEED 18 INCHES.

THE CONTRACTOR SHALL PERFORM HIS WORK AS TO NOT DAMAGE THE EMBEDDED ANODES NOR CREATE ANY AIR VOIDS AROUND THE EMBEDDED ANODES WHILE SETTING FORMWORK AND PLACING CONCRETE.

844.06 QUALITY CONTROL

THE PROPOSED FORM SYSTEM MUST BE SUBMITTED, AND ACCEPTED BY THE PROJECT ENGINEER PRIOR TO THE INSTALLATION OF ANY FORMWORK. THE FORM SYSTEM SHALL PROVIDE ENOUGH HEAD PRESSURE TO ENSURE THE PATCH IS FULLY CONSOLIDATED AND NULL OF VOIDS. THE FORM SYSTE M SHALL INCORPORATE VENTS ALONG THE TOP OF THE PATCH TO ALLOW ENTRAPPED AIR TO ESCAPE DURING CONCRETE PLACEMENT. THE FORM SYSTEM SHALL INCORPORATE A GATE/VALVE SYSTEM CAPABLE OF CONTAINING THE SELF CONSOLIDATING CONCRETE ONCE CONCRETE PLACEMENT IS COMPLETE.

844.08 BASIS OF PAYMENT

PAYMENT FOR ALL OF THE ABOVE DESCRIBED WORK WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 844 CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN.

PAYMENT WILL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, INCIDENTALS AND THE WORK TO REMOVE UNSOUND CONCRETE, FORMWORK, PLACING DRAIN HOLES, PLACEMENT OF SELF CONSOLIDATING SDC CONCRETE MIX, ON SITE REPRESENTATIVE FEES AND PNEUMATICALLY PLACED MORTAR.

ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPER-STRUCTURE, 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 CMS 501.05. IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER 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. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH CMS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER 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.

ABBREVIATION LEGEND

ABUT - ABUTMENT
APPR - APPROACH
BM - BENCH MARK
BOT - BOTTOM
BRG - BEARING
BRGS - BEARINGS
BTA - BRIDGE TERMINAL ASSEMBLY
C/C - CENTER TO CENTER
CJ - CONSTRUCTION JOINT
℄ - CENTERLINE
CFRP - CARBON FIBER REINFORCED POLYMER
CLR - CLEARANCE
CMP - CORRUGATED METAL PIPE
CONST - CONSTRUCTION
CONT - CONTINUED
CY - CUBIC YARD
DIA - DIAMETER
DND - DO NOT DISTURB
EF - EACH FACE
EGA - EMBEDDED GALVANIC ANODE
EL - ELEVATION
EOP - EDGE OF PAVEMENT
EX - EXISTING
EXP - EXPANSION
FF - FAR FACE
FWD - FORWARD
FWS - FUTURE WEARING SURFACE
GFRP - GLASS FIBER REINFORCED POLYMER
HMWM - HIGH MOLECULAR WEIGHT METHACRYLATE
LB - POUNDS
LS - LUMP SUM
LT - LEFT
MAX - MAXIMUM
MIN - MINIMUM
MISC - MISCELLANEOUS
NF - NEAR FACE
NO - NUMBER
O/O - OUT TO OUT
PVI - POINT OF VERTICAL INTERSECTION
PEJF - PREFORMED EXPANSION JOINT FILLER
PROP - PROPOSED
R - RADIUS
RT - RIGHT
SBR - STRAIGHT BRIDGE RAILING
SDC - SUPERPLASTICIZED DENSE CONCRETE
SF - SQUARE FOOT
SPA - SPACES
SR - STATE ROUTE
STA - STATION
SY - SQUARE YARD
TBR - TO BE REMOVED
TYP - TYPICAL

DESIGN AGENCY
EMH&T
Engineers, Surveyors, Planners, Scientists
5500 New Albany Road, Columbus, Ohio 43054
Phone: (614) 775-4500 www.emht.com

DESIGNED	DRAWN	REVIEWED	DATE
RMW	RMW	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700223	

GENERAL NOTES (CONT.)
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

ESTIMATED QUANTITIES

CALCULATED BY: TDA CHECKED BY: RJE

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
202	11203		LS	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					3/48
202	22900	296	SY	APPROACH SLAB REMOVED				296	
202	23500	296	SY	WEARING COURSE REMOVED, ASPHALT				296	
503	11100		LS	COFFERDAMS AND EXCAVATION BRACING					
503	21300		LS	UNCLASSIFIED EXCAVATION					
509	10000	294,922	LB	EPOXY COATED REINFORCING STEEL	18,711		276,211		
509	20001	100	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN				100	3/48
509	30020	10,642	FT	NO. 4 GFRP DEFORMED BARS			10,642		
509	30040	11,967	FT	NO. 6 GFRP DEFORMED BARS	1,053		10,914		
510	10001	209	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	209				4/48
511	34446	837	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK			837		3/48
511	34450	288	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)			288		
511	44112	100	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	100				
511	81300	3,452	EACH	CONCRETE, MISC.: EMBEDDED GALVANIC ANODES (EGA)	116		3,336		4/48
512	10100	4,434	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	286	1,554	2,594		
512	10600	85	FT	CONCRETE REPAIR BY EPOXY INJECTION	23		62		
512	33000	71	SY	TYPE 2 WATERPROOFING	71				
516	12300	165	FT	STRIP SEAL EXPANSION JOINT ANCHORED WITH ELASTOMERIC CONCRETE			165		
516	13600	116	SF	1" PREFORMED EXPANSION JOINT FILLER				116	
516	43301	24	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE), AS PER PLAN (10"X15"X3.875")		24			24/48
516	43301	46	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE), AS PER PLAN (9"X14.5"X3.125")		46			24/48
516	44101	24	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (BEARING: 9"X11.5"X2.84", LOAD PLATE: 10"X26"X VARIES")		24			23/48
516	44201	12	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (BEARING: 8"X24"X3.223", LOAD PLATE: 9"X26"X2.16")	12				22/48
516	44201	12	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (BEARING: 8.5"X20"X3.198", LOAD PLATE: 9.5"X22"X1.18")	12				22/48
516	44201	2	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (BEARING: 9"X14.5"X3.125", LOAD PLATE: 11"X26"X VARIES)		2			24/48
516	47001		LS	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN					4/48
518	12301	10	EACH	SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN				10	27/48
518	21200	80	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC				80	
SPECIAL	51900100	85	SF	COMPOSITE FIBER WRAP SYSTEM*			85		4/48
526	25011	407	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN				407	42/48
526	90010	165	FT	TYPE A INSTALLATION				165	
601	20000	180	SY	CRUSHED AGGREGATE SLOPE PROTECTION				180	
601	34200	397	CY	ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER				397	
843	50000	12	SF	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR			12		
844	10001	27	SF	CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN		27			4/48

* - SEE PROPOSAL NOTE

QUANTITIES CARRIED TO THE GENERAL SUMMARY, SEE SHEET 69/213 THROUGH SHEET 70/213 .

NOTES

1. ALL QUANTITIES PRESENTED ON THIS SHEET SHALL BE INCLUDED WITH 01/NHS/BR.

DESIGN AGENCY EMH&T

DESIGNED TDA | DRAWN TDA | CHECKED RJE | REVISED -

REVIEWED CAS | DATE 10/30/20 | STRUCTURE FILE NUMBER 0700223

ESTIMATED QUANTITIES

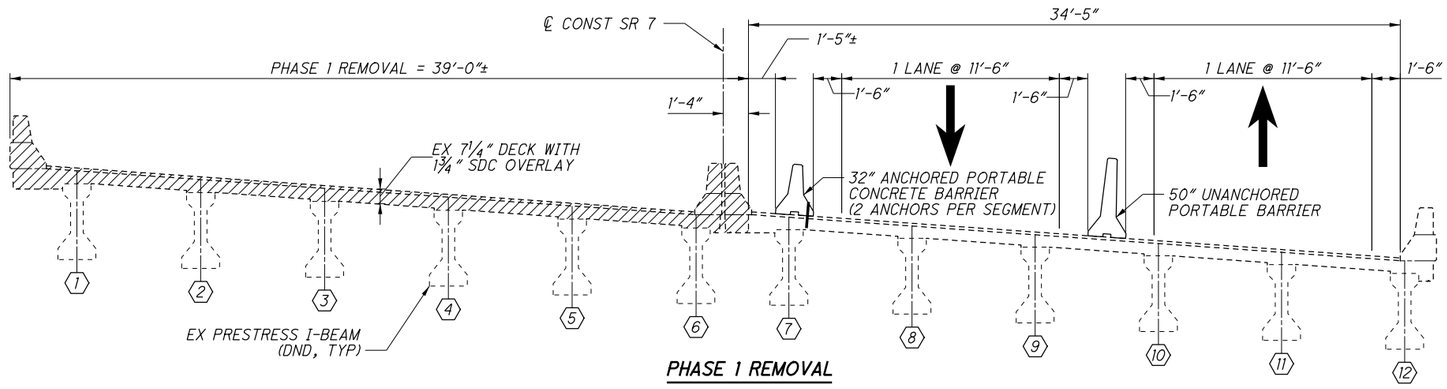
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SR 7 OVER CO RD 7 & WEGEE CREEK

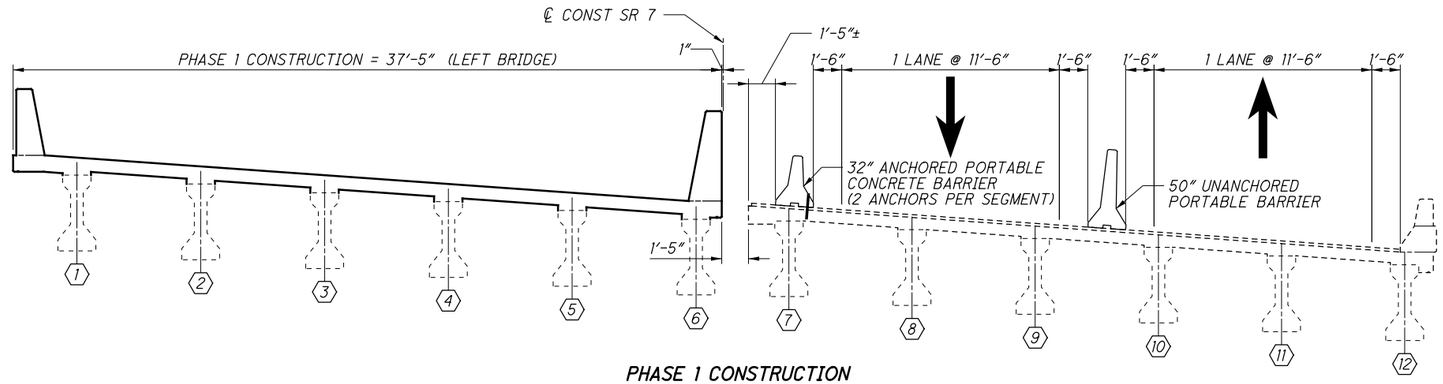
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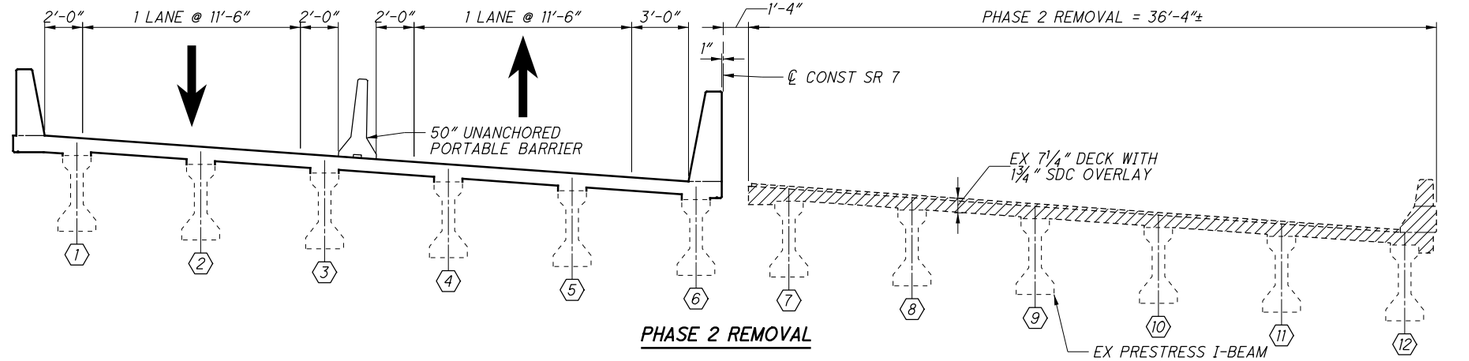
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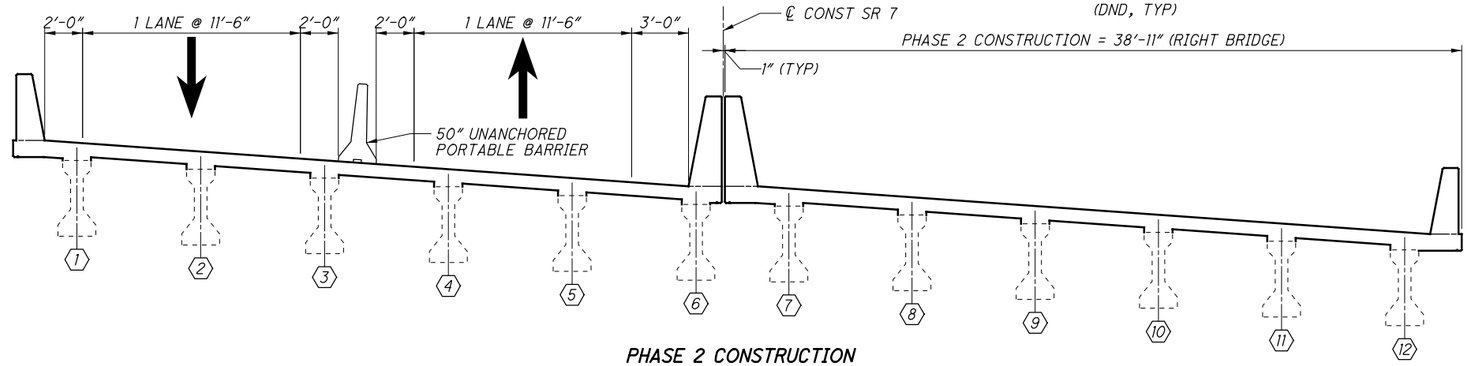
PHASE 1 REMOVAL



PHASE 1 CONSTRUCTION



PHASE 2 REMOVAL



PHASE 2 CONSTRUCTION

SEQUENCE OF CONSTRUCTION

(SEE NOTE 5)

PHASE 1

1. INSTALL ANCHORED AND UNANCHORED PORTABLE CONCRETE BARRIER ON THE EXISTING DECK AND MAINTAIN TRAFFIC PER THE MAINTENANCE OF TRAFFIC PLANS.
2. SAWCUT AND REMOVE PORTIONS OF THE EXISTING SUPERSTRUCTURE AND APPROACH SLABS AS DETAILED IN THE PHASE 1 REMOVAL DETAILS.
3. INSTALL TEMPORARY SHORING AND REMOVE PORTIONS OF THE EXISTING ABUTMENTS AND WINGWALLS AS SHOWN IN THE PHASE 1 REMOVAL DETAILS.
4. JACK EXISTING BEAMS AND REPLACE EXISTING BEARINGS WITH ELASTOMERIC BEARINGS AS SHOWN IN THE PLANS.
5. PERFORM REPAIRS TO EXISTING BEAMS AND DIAPHRAGMS AT THE LOCATIONS SHOWN IN THE PLANS.
6. CONSTRUCT ABUTMENT BACKWALLS AND WINGWALLS TO THE PHASE 1 LIMITS.
7. CONSTRUCT ABUTMENT END DIAPHRAGMS, DECK, APPROACH SLAB, AND EXPANSION JOINTS TO THE PHASE 1 LIMITS.
8. CONSTRUCT EXTERIOR AND MEDIAN PARAPETS ON THE DECK, WINGWALLS, AND APPROACH'S TO THE PHASE 1 LIMITS.

PHASE 2

1. MOVE 50″ PORTABLE CONCRETE BARRIER TO THE PROPOSED DECK AND MAINTAIN TRAFFIC PER THE MAINTENANCE OF TRAFFIC PLANS.
2. REMOVE PORTIONS OF THE EXISTING SUPERSTRUCTURE, APPROACH SLABS, AND PORTIONS OF DIAPHRAGMS AT BEAM 12 IN SPAN 4 AS DETAILED IN THE PHASE 2 REMOVAL DETAILS.
3. RELOCATE TEMPORARY SHORING AND REMOVE PORTIONS OF THE EXISTING ABUTMENTS AND WINGWALLS AS SHOWN IN THE PHASE 2 REMOVAL DETAILS.
4. JACK EXISTING BEAMS AND REPLACE EXISTING BEARINGS WITH ELASTOMERIC BEARINGS AS SHOWN IN THE PLANS.
5. PERFORM REPAIRS TO EXISTING BEAMS AND DIAPHRAGMS AT THE LOCATIONS SHOWN IN THE PLANS.
6. CONSTRUCT ABUTMENT BACKWALLS AND WINGWALLS TO THE PHASE 2 LIMITS.
7. CONSTRUCT ABUTMENT END DIAPHRAGMS, DECK, APPROACH SLAB, AND EXPANSION JOINTS TO THE PHASE 2 LIMITS.
8. CONSTRUCT EXTERIOR AND MEDIAN PARAPETS ON THE DECK AND WINGWALLS.
9. REMOVE PORTABLE CONCRETE BARRIER AND REROUTE TRAFFIC TO FINAL CONDITION.

LEGEND

- DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

(X) - EX BEAM "X"

NOTES

1. FOR 50″ PORTABLE CONCRETE BARRIER, REFER TO ODOT STANDARD DRAWING RM-4.1, DATED 01-17-2020.
2. FOR 32″ ANCHORED PORTABLE CONCRETE BARRIER SHALL REFER TO ODOT STANDARD DRAWING PCB-91, DATED 07-17-2020. ANCHORED BARRIER SEGMENTS SHALL BE FASTENED USING THE NUMBER 1″ DIAMETER HIGH STRENGTH BOLTS SHOWN (2 ANCHORS PER SEGMENT).
3. INTERMEDIATE DIAPHRAGM NOT SHOWN FOR CLARITY.
4. SEE SHEET 9/48 AND 10/48 FOR SPECIFIC DECK REMOVAL LIMITS OVER EXISTING BEAMS.
5. PATCHING, CRACK SEALING, AND EPOXY-URETHANE SEALING OF SUBSTRUCTURE UNITS, THAT CAN BE PERFORMED WITHOUT MAINTAINING TRAFFIC, MAY BE PERFORMED AT THE CONTRACTOR'S DISCRETION SUCH THAT IT IS NOT DAMAGED BY FUTURE WORK.
6. PORTABLE CONCRETE BARRIER SHALL BE INCLUDED WITH ITEM 614 FOR PAYMENT.
7. PORTABLE CONCRETE BARRIER LIMITS SHALL BE APPLIED TO APPROACH SLABS.

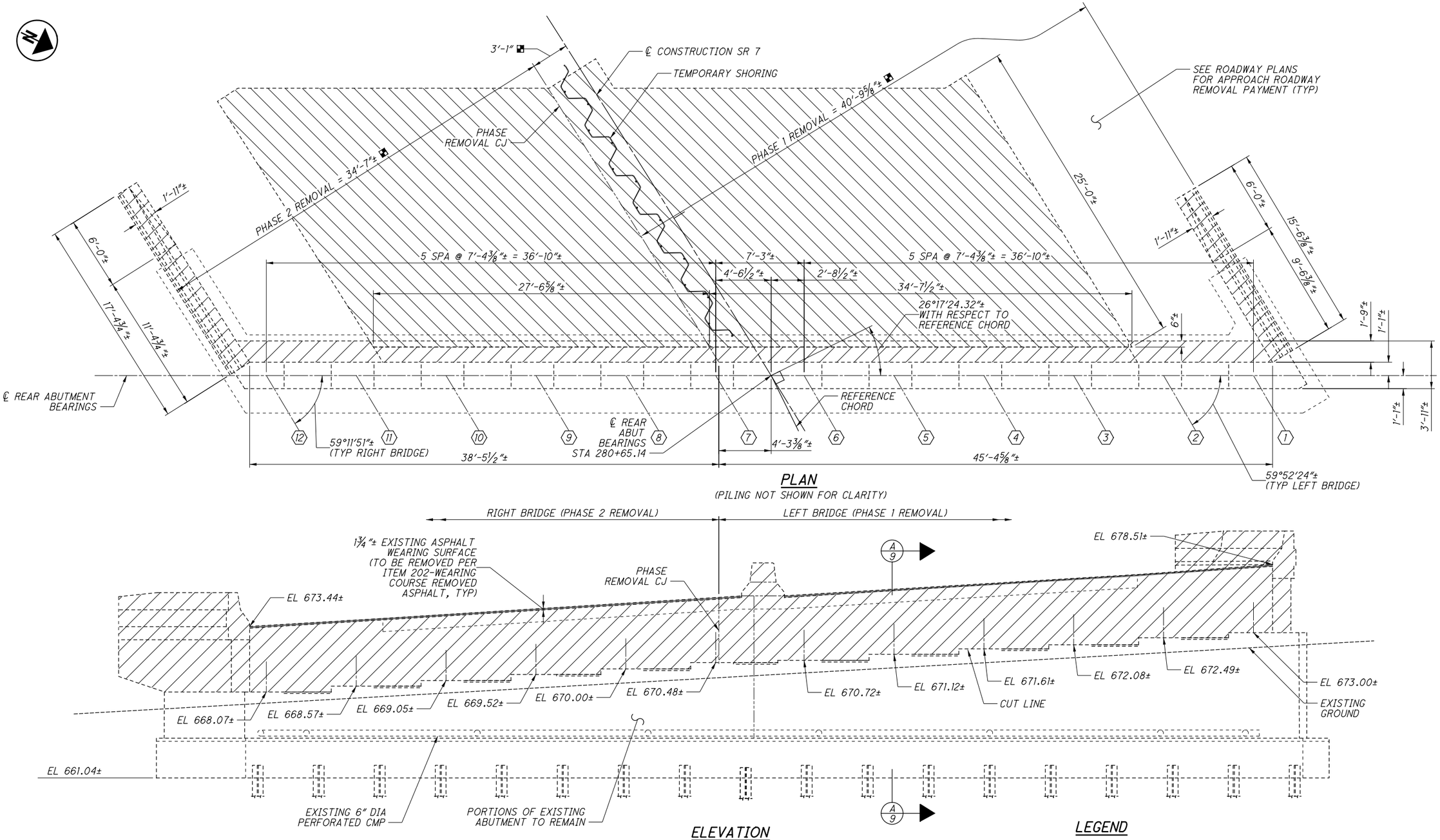
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RMW	-	0700223	

PHASE CONSTRUCTION DETAILS
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

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PLAN

(PILING NOT SHOWN FOR CLARITY)

ELEVATION

LEGEND

DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

LIMITS OF REMOVAL PER ITEM 202 - APPROACH SLAB REMOVED AND ITEM 202 - WEARING COURSE REMOVED, ASPHALT

■ - MEASURED RADIALLY

⟨X⟩ - ℄ EX BEAM "X"

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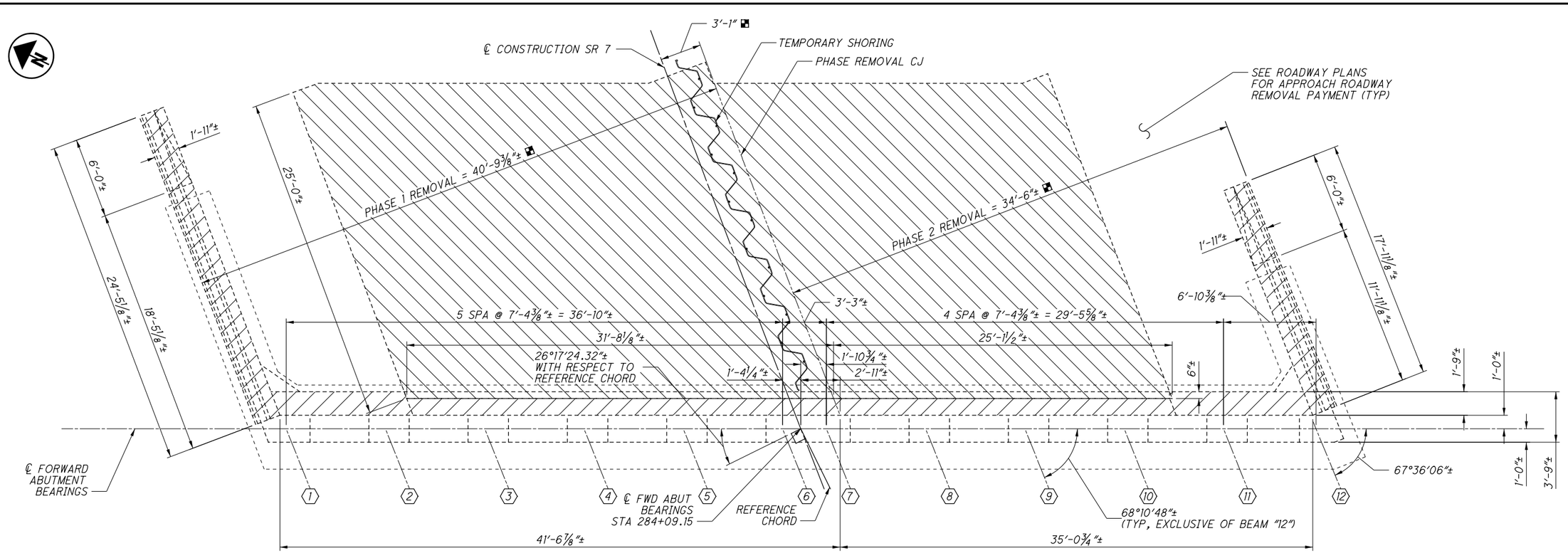
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TDA	-	0700223	

REAR ABUTMENT REMOVAL DETAILS

BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

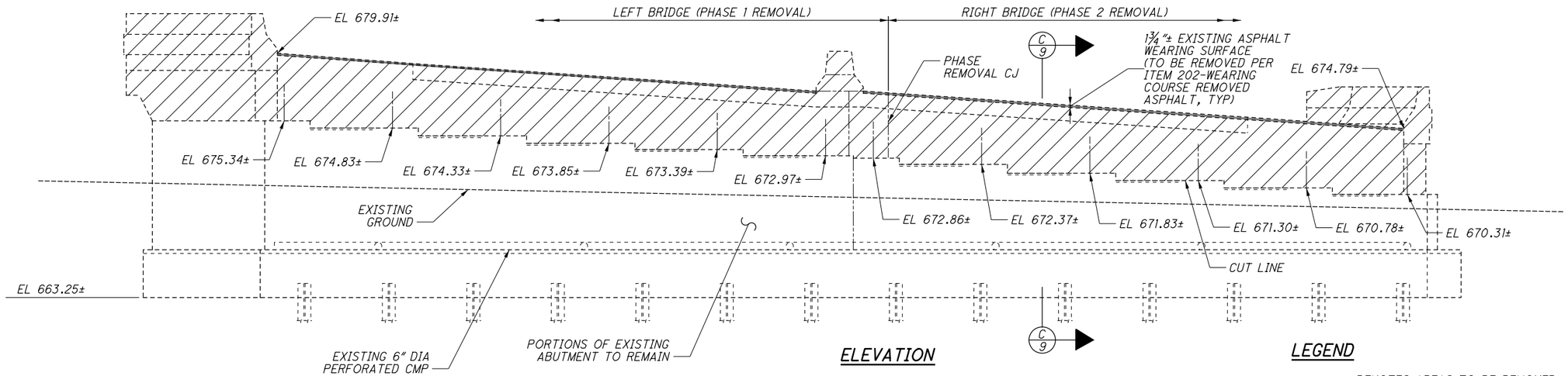
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PLAN

(PILING NOT SHOWN FOR CLARITY)



ELEVATION

LEGEND

DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

LIMITS OF REMOVAL PER ITEM 202 - APPROACH SLAB REMOVED AND ITEM 202 - WEARING COURSE REMOVED, ASPHALT

■ - MEASURED RADIALLY

⟨X⟩ - ℄ EX BEAM "X"

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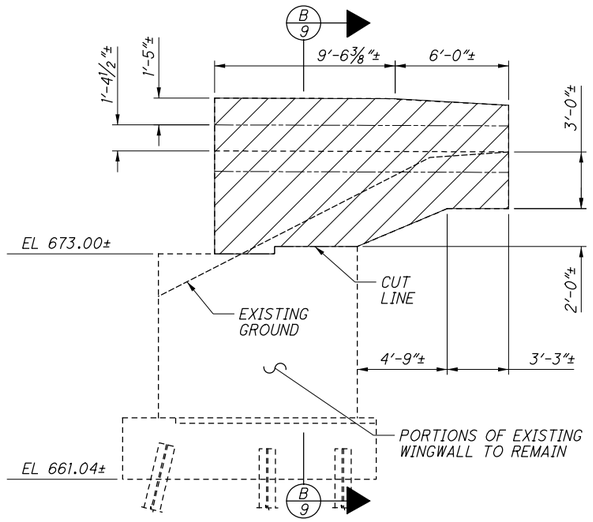
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FORWARD ABUTMENT REMOVAL DETAILS

BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

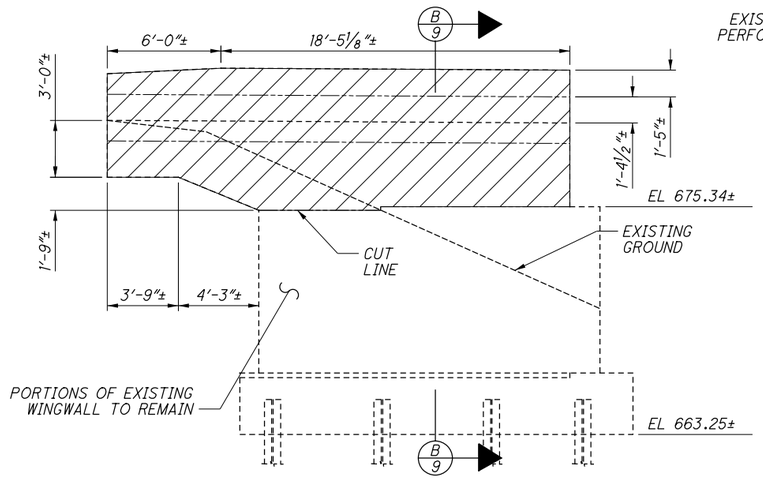
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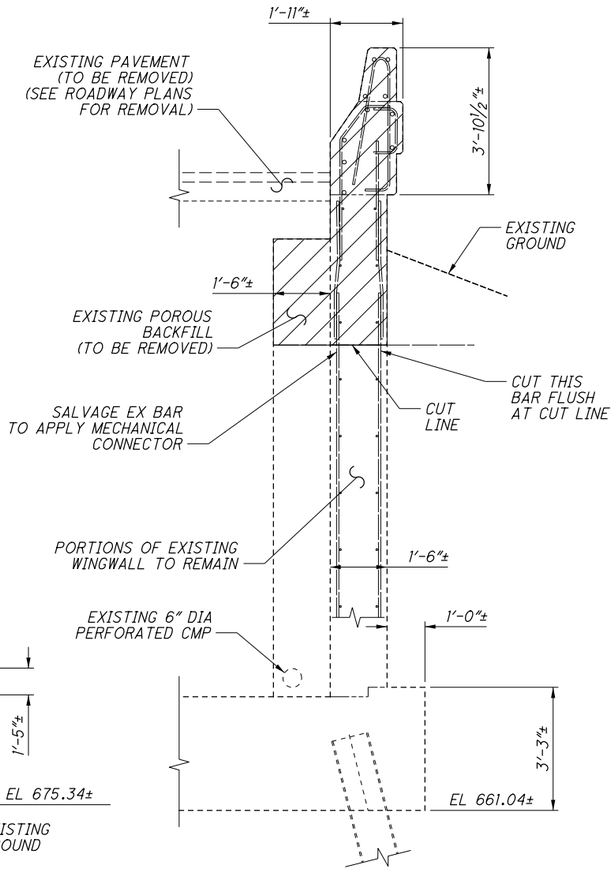
REAR ABUTMENT WINGWALL REMOVAL DETAILS

(LEFT WINGWALL SHOWN, RIGHT WINGWALL SIMILAR)



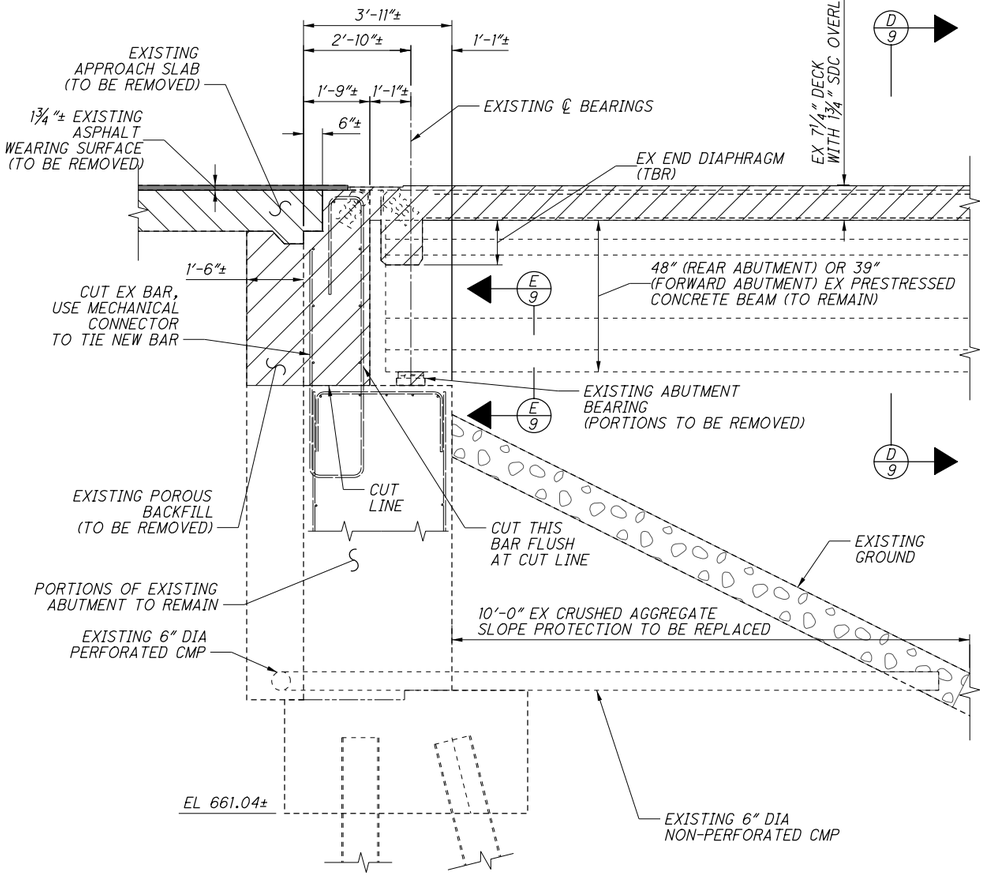
FORWARD ABUTMENT WINGWALL REMOVAL DETAILS

(LEFT WINGWALL SHOWN, RIGHT WINGWALL SIMILAR)



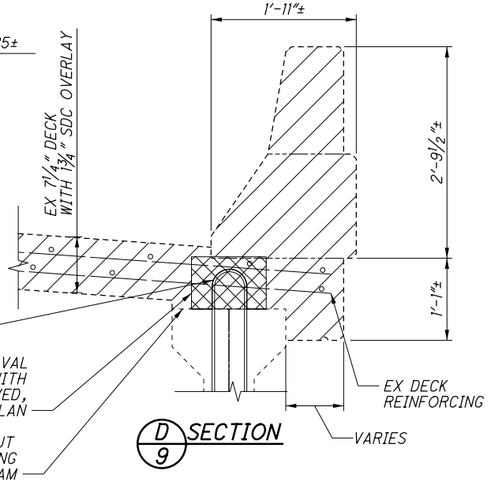
B/9 SECTION

(REAR ABUTMENT SHOWN, FORWARD ABUTMENT SIMILAR)

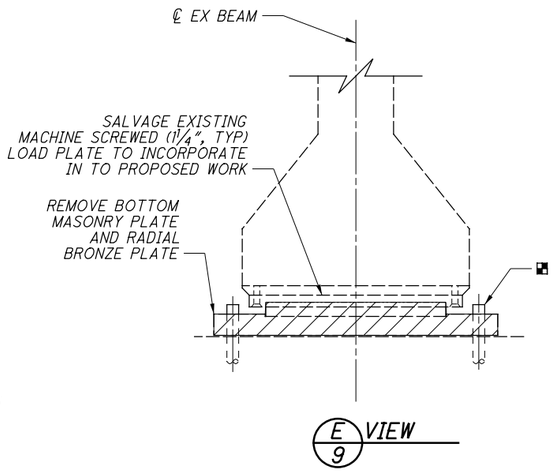


A/7 C/8 SECTION

(REAR ABUTMENT SECTION A-A SHOWN, FORWARD ABUTMENT SECTION C-C SIMILAR)



D/9 SECTION



E/9 VIEW

LEGEND

- DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- LIMITS OF REMOVAL PER ITEM 202 - APPROACH SLAB REMOVED
- DENOTES AREAS TO BE REMOVED PER ITEM 202 - WEARING COURSE REMOVED
- ■ - CUT EX 1 1/4" DIA ANCHOR RODS FLUSH AT BEAM SEAT AND APPLY ZINC RICH PRIMER TO CUT FACE. INCLUDE WITH THE ELASTOMERIC BEARING FOR PAYMENT.

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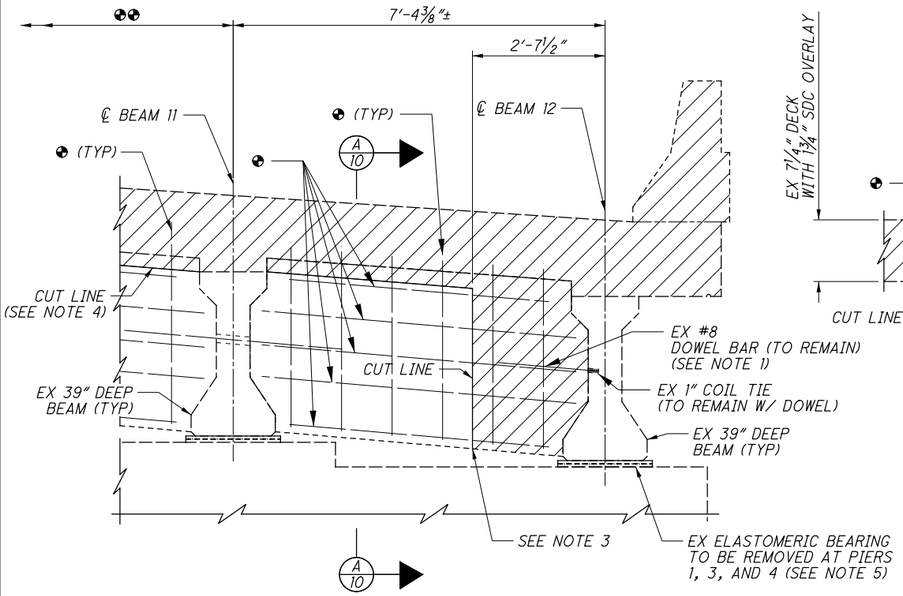
REMOVAL DETAILS
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

9 / 48

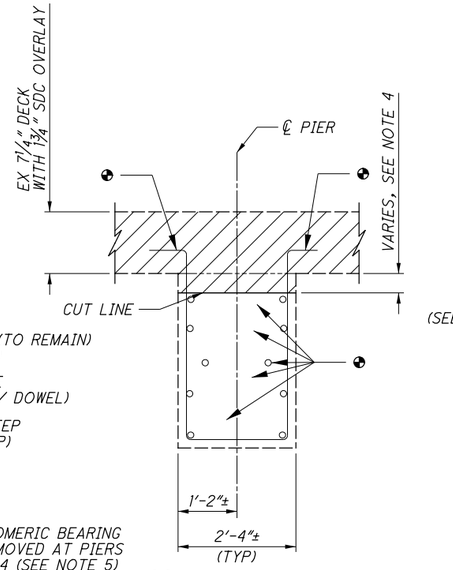
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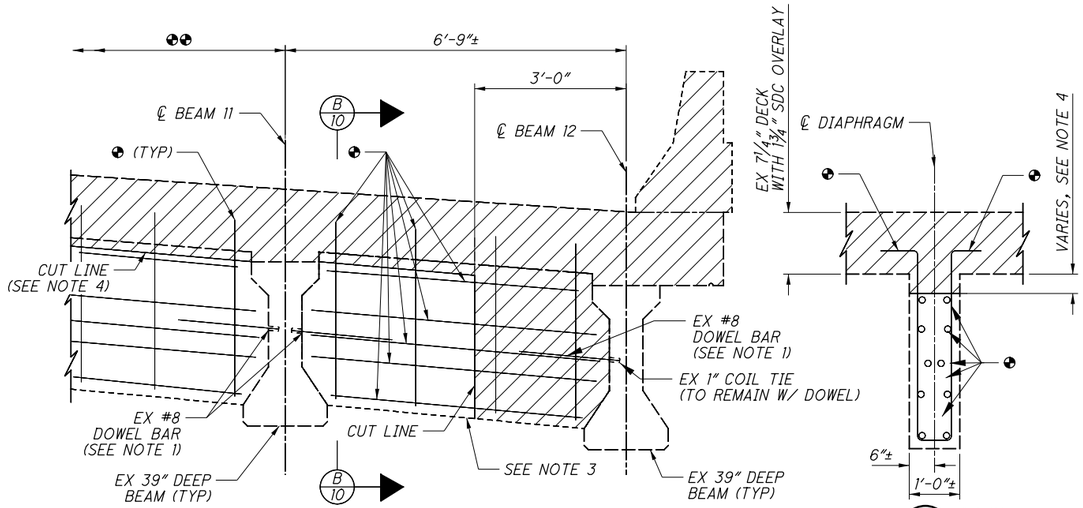
PIER DIAPHRAGM REMOVAL DETAILS

(PIER 3 SHOWN, PIER 4 SIMILAR
(LOOKING UP-STATION, ALONG ℄ PIER BRG)



A 10 VIEW

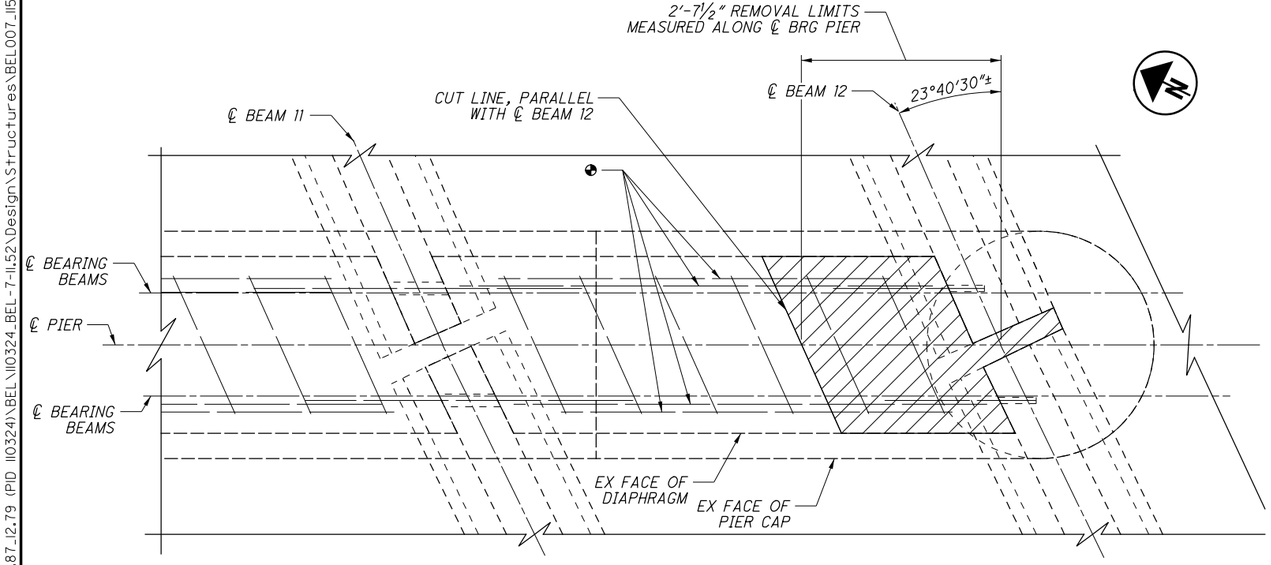
(PIER 3 SHOWN, PIER 4 SIMILAR)
PIER CAP AND EXISTING BEARINGS NOT SHOWN FOR CLARITY



INTERMEDIATE DIAPHRAGM REMOVAL DETAILS

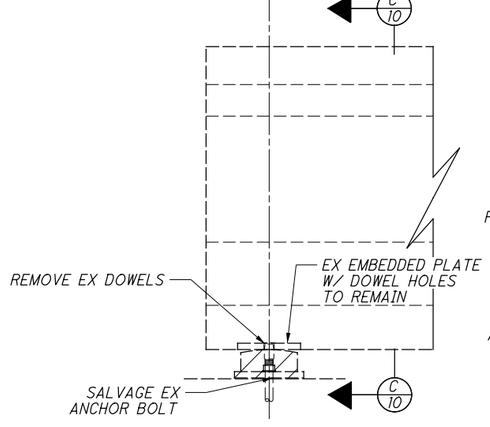
(LOOKING UP-STATION, ALONG ℄ DIAPHRAGM)

B 10 VIEW



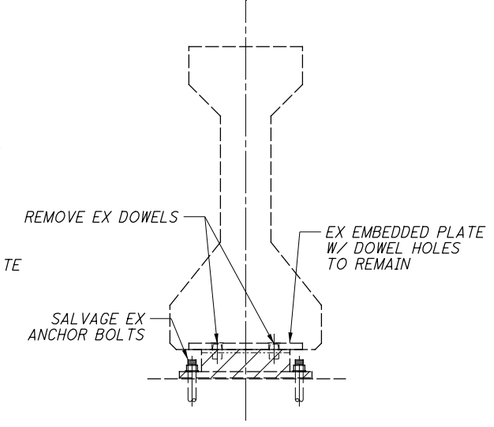
PART PLAN OF DIAPHRAGM AT PIERS 3 & 4

(PIER 3 SHOWN, PIER 4 SIMILAR
(SLAB AND PARAPET REMOVAL NOT SHOWN FOR CLARITY)



BEARING REMOVAL

(PIER 2)



C 10 SECTION (PIER 2)

LEGEND

- — DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- ◔ - SALVAGE EX BAR TO APPLY MECHANICAL CONNECTOR
- ◔◔ - PIER DIAPHRAGM AND INTERMEDIATE DIAPHRAGM REMOVAL LIMITS DEPICTED SHALL BE APPLIED TO ALL LOCATIONS, EXCEPT AS SHOWN IN THE ADJACENT DETAIL FOR BEAM 12 AT PIERS 3 & 4 AND MID SPAN 4

NOTES

1. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO NOT DISTURB EX DOWEL BAR.
2. SEE SHEET 104/213 FOR LIGHTING DETAILS AT PIER 3.
3. CONTRACTOR SHALL SUPPORT PORTION OF DIAPHRAGM TO REMAIN. SHORING SHALL REMAIN IN PLACE DURING DECK POUR. SHORING MAY BE REMOVED ONCE CONCRETE HAS CURED IN ACCORDANCE WITH C&MS 511.
4. CUT LINES SHALL BE AT THE TOP OF EXISTING BEAMS AND PARALLEL TO THE BOTTOM OF EXISTING DECK.
5. EXISTNG ELASTOMERIC BEARING REMOVAL SHALL BE INCLUDED WITH ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

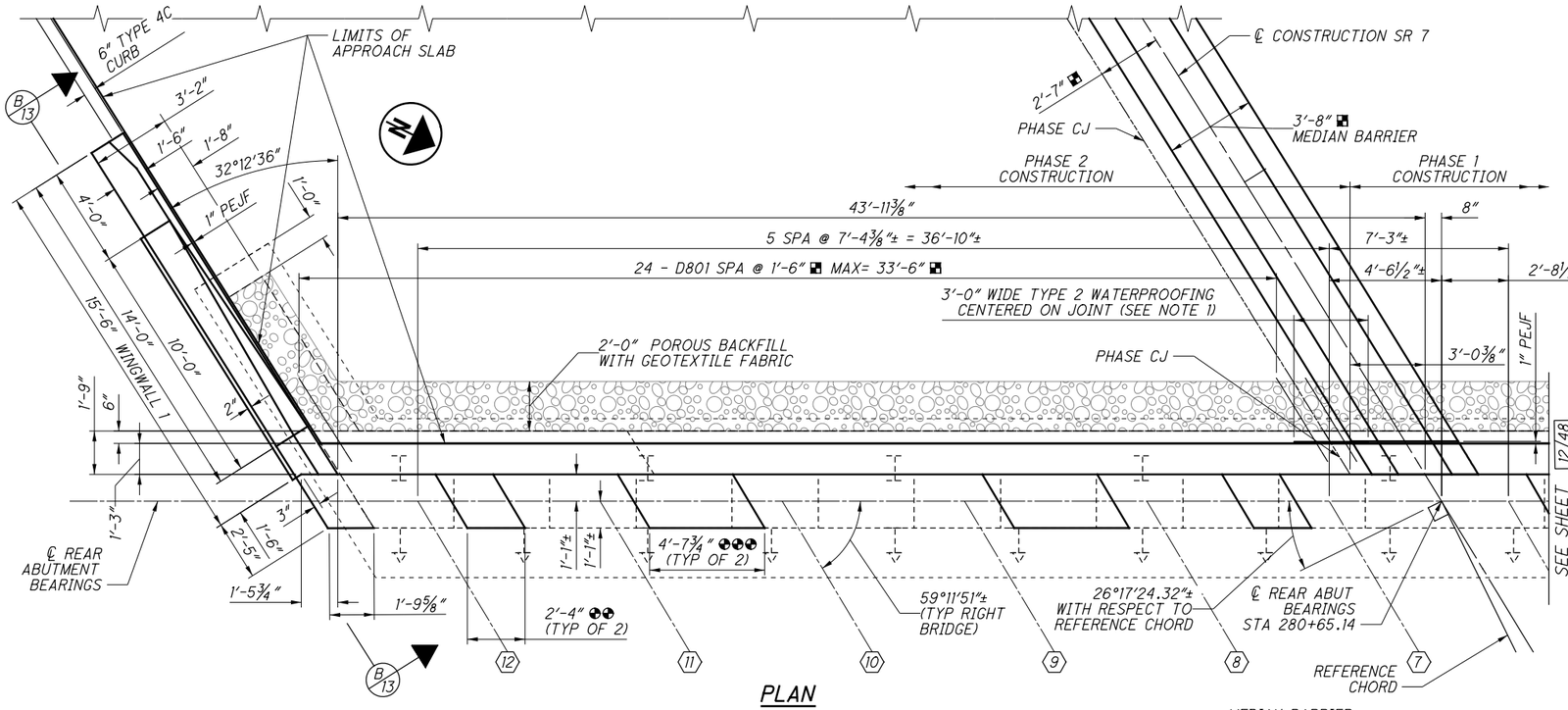
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REMOVAL DETAILS
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

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NOTES

1. SEAL VERTICAL PHASE CONSTRUCTION JOINT ON THE BACKSIDE FROM 1'-0" BELOW CUT LINE TO THE APPROACH SLAB SEAT WITH TYPE 2 WATERPROOFING. SEAL HORIZONTAL JOINT AT EXISTING ABUTMENT TO REMAIN WITH 3'-0" WIDE TYPE 2 WATERPROOFING.

LEGEND

- ■ - MEASURED RADIALLY
- ■■ - BAR TO BE DOWELED INTO EXISTING SUBSTRUCTURE
- ●● - SEISMIC PEDESTAL TYPE 1 SEE SHEET 19/48
- ●●● - SEISMIC PEDESTAL TYPE 2 SEE SHEET 19/48
- (X) - ℄ EX BEAM "X"
- ⟋⟍ - DENOTES CONCRETE CRACKS TO BE REPAIRED PER ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION

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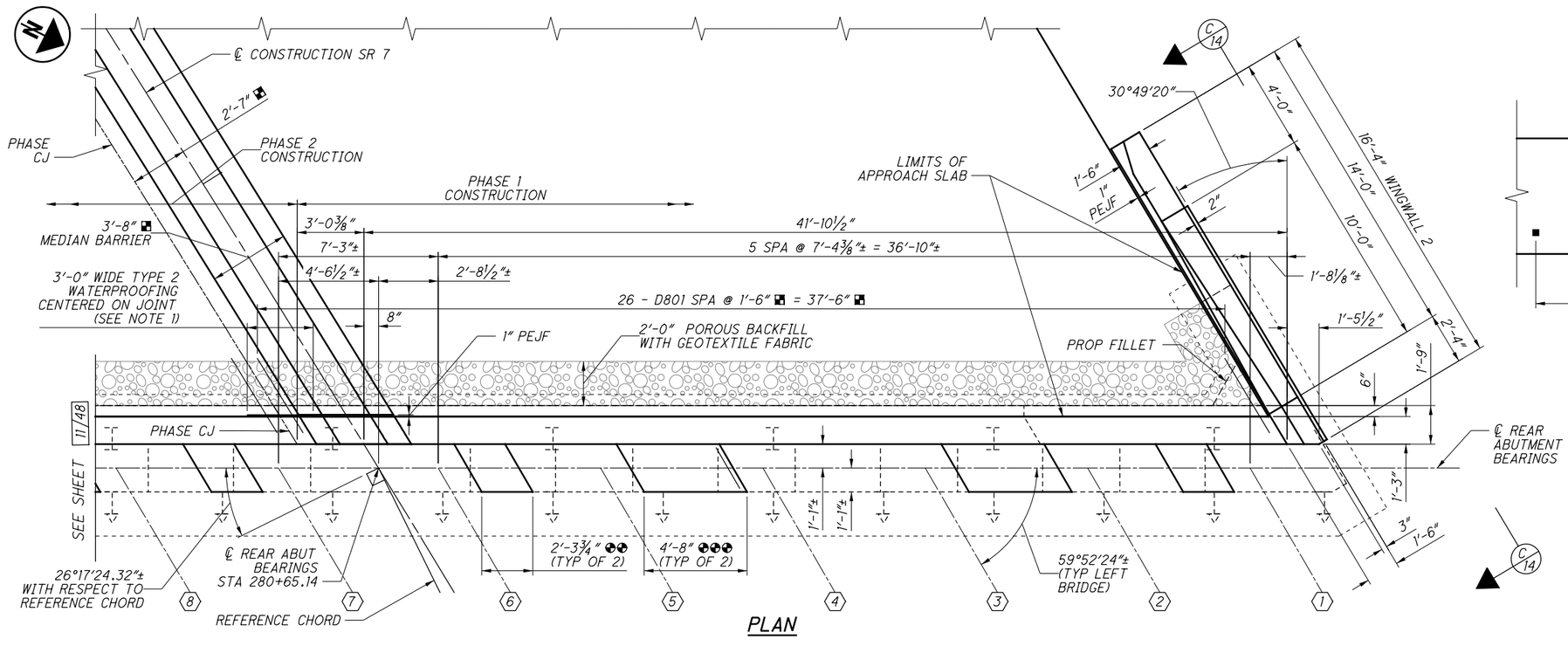
REAR ABUTMENT DETAILS (RIGHT BRIDGE)
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

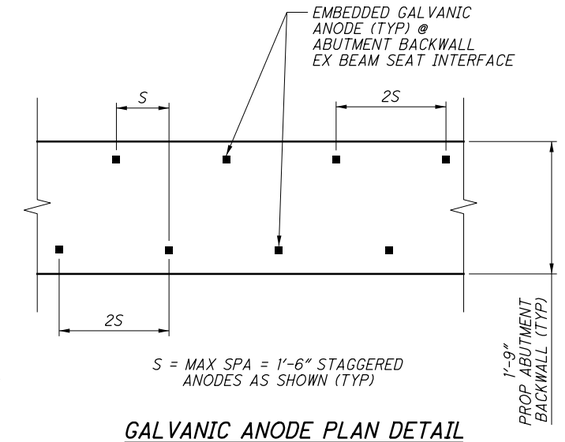
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115 / 213

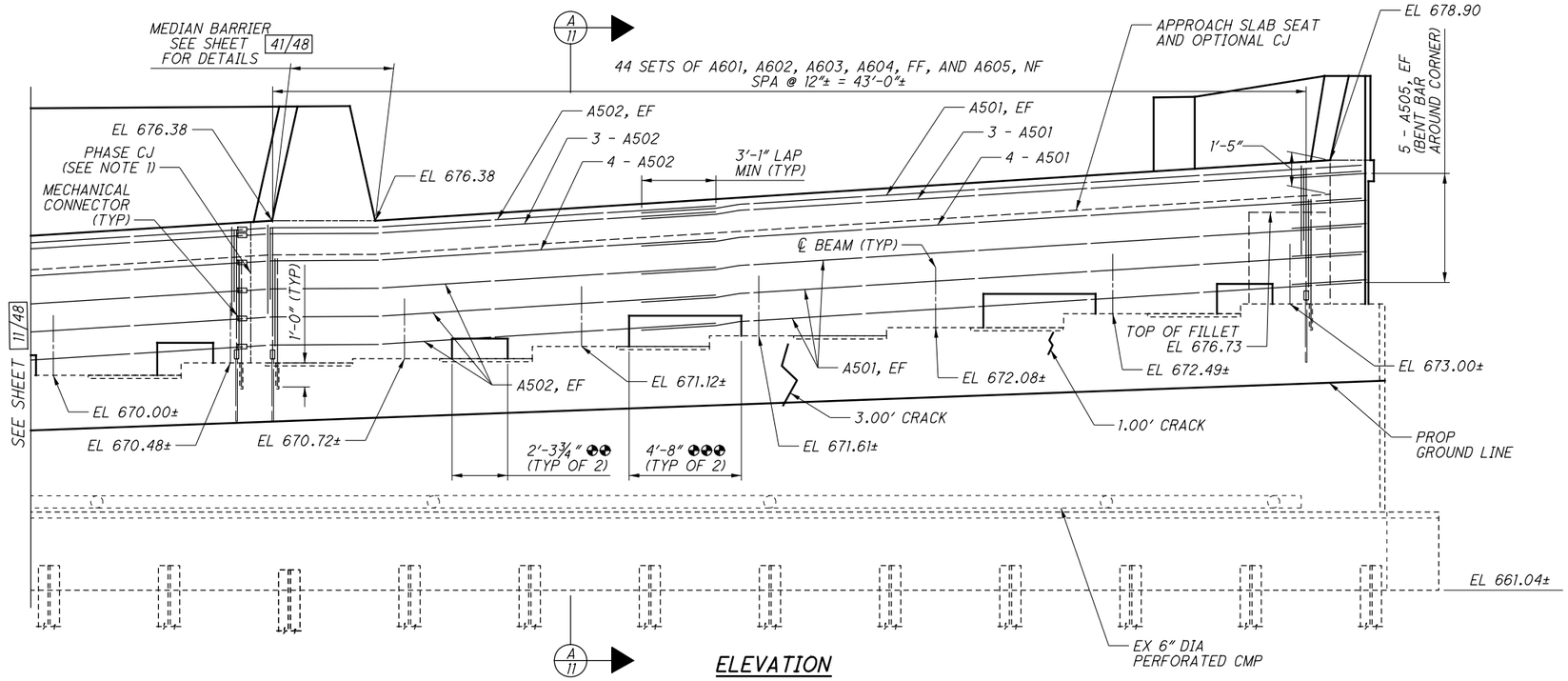
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PLAN



GALVANIC ANODE PLAN DETAIL



ELEVATION

NOTES

1. SEAL VERTICAL PHASE CONSTRUCTION JOINT ON THE BACKSIDE FROM 1'-0" BELOW CUT LINE TO THE APPROACH SLAB SEAT WITH TYPE 2 WATERPROOFING. SEAL HORIZONTAL JOINT AT EXISTING ABUTMENT TO REMAIN WITH 3'-0" WIDE TYPE 2 WATERPROOFING.

LEGEND

- ■ - MEASURED RADIALLY
- ●● - SEISMIC PEDESTAL TYPE 1 SEE SHEET 19/48
- ●●● - SEISMIC PEDESTAL TYPE 2 SEE SHEET 19/48
- ⟨X⟩ - ℄ EX BEAM "X"
- - DENOTES CONCRETE CRACKS TO BE REPAIRED PER ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION

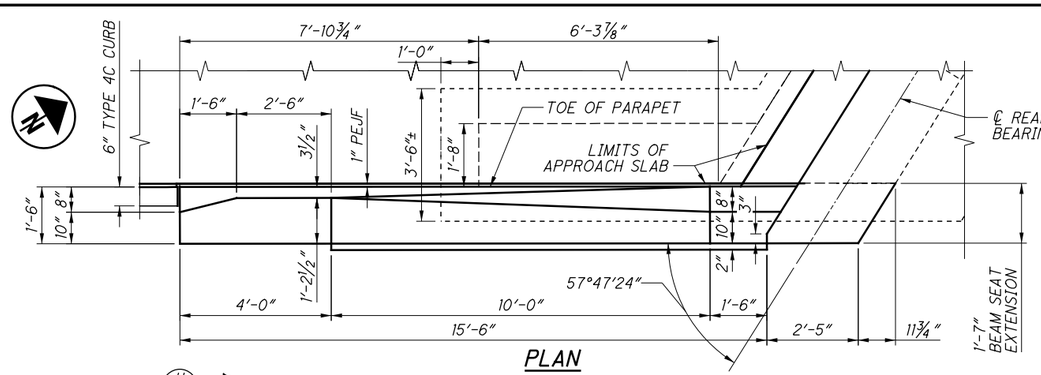
DESIGN AGENCY
EMH&T
Engineers • Architects • Planners • Surveyors
5500 New Albany Road, Columbus, Ohio 43054
Phone: (614) 775-4500 www.emht.com

DESIGNED	DRAWN	REVIEWED	DATE
TDA	GB	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	0700223	

REAR ABUTMENT DETAILS (LEFT BRIDGE)
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

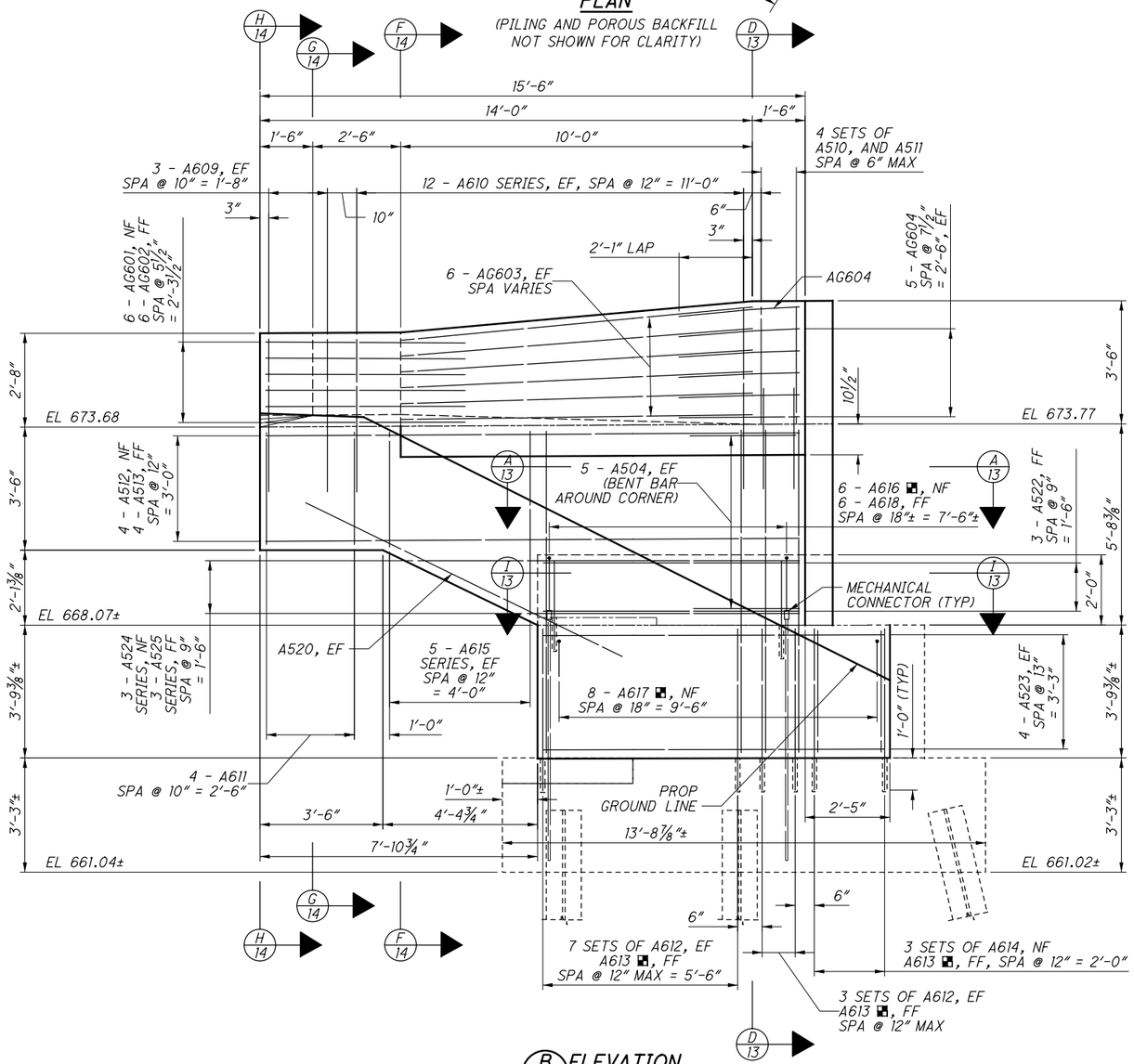
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PID No. 110324

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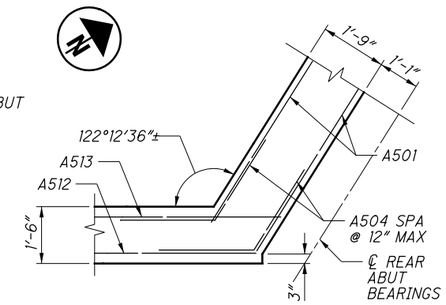
PLAN

(PILING AND POROUS BACKFILL NOT SHOWN FOR CLARITY)

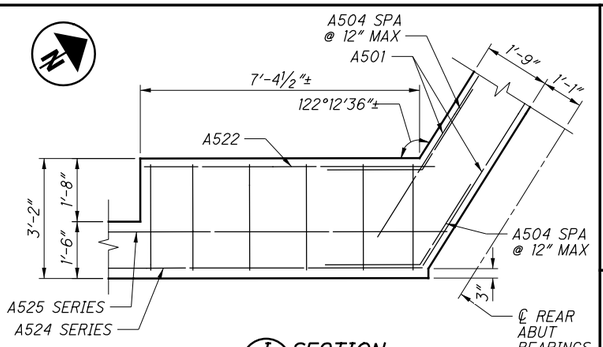


B 11 ELEVATION

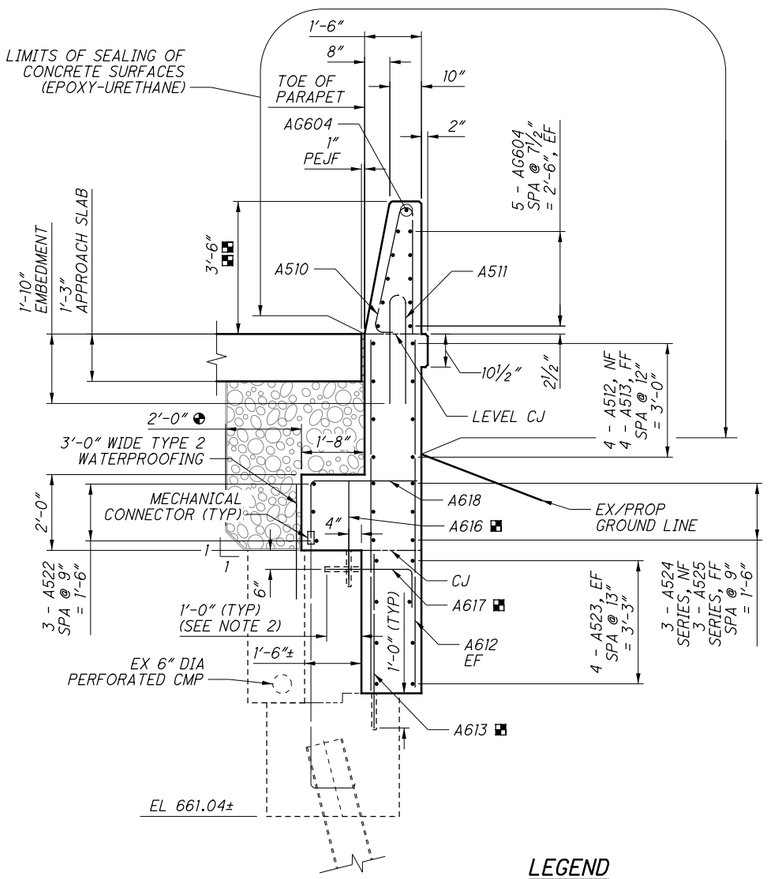
(EX REINFORCING NOT SHOWN FOR CLARITY)



A 13 SECTION



I 13 SECTION



D 13 SECTION

NOTES

1. FOR ADDITIONAL PARAPET DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWING SBR-1-20 DATED 01-17-20 (ARCHIVED).
2. SPACE VERTICAL AND HORIZONTAL DOWELS TO AVOID CONFLICT DURING INSTALLATION.

LEGEND

◐ - 2'-0" MIN POROUS BACKFILL WITH GEOTEXTILE FABRIC SHALL BE PLACED BEHIND FULL HEIGHT WINGWALL

■ - BAR TO BE DOWELED INTO EXISTING SUBSTRUCTURE

■■ - PARAPET CONCRETE SHALL BE INCLUDED IN ITEM 511 - CLASS QC2, CONCRETE WITH QC/QA BRIDGE DECK (PARAPET), FOR PAYMENT. MINIMUM COMPRESSIVE STRENGTH = 4,500 PSI.

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EMH&T
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 www.emht.com

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TDA	GB	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	0700223	

WINGWALL 1 DETAILS
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

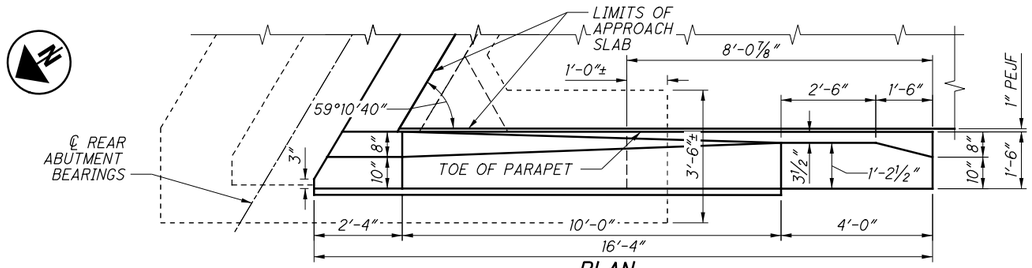
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PID No. 110324

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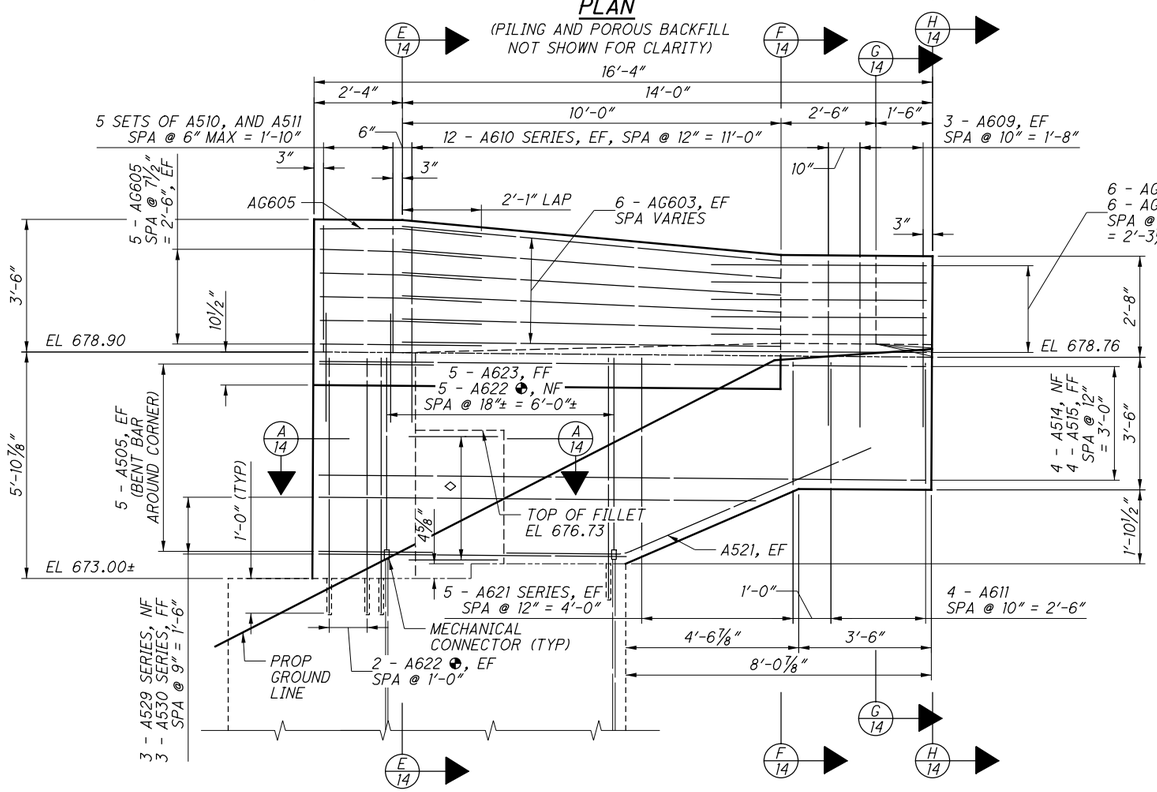
117 / 213

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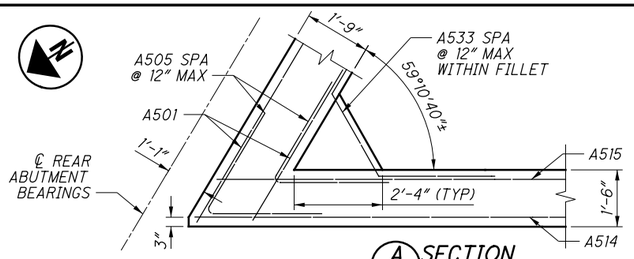
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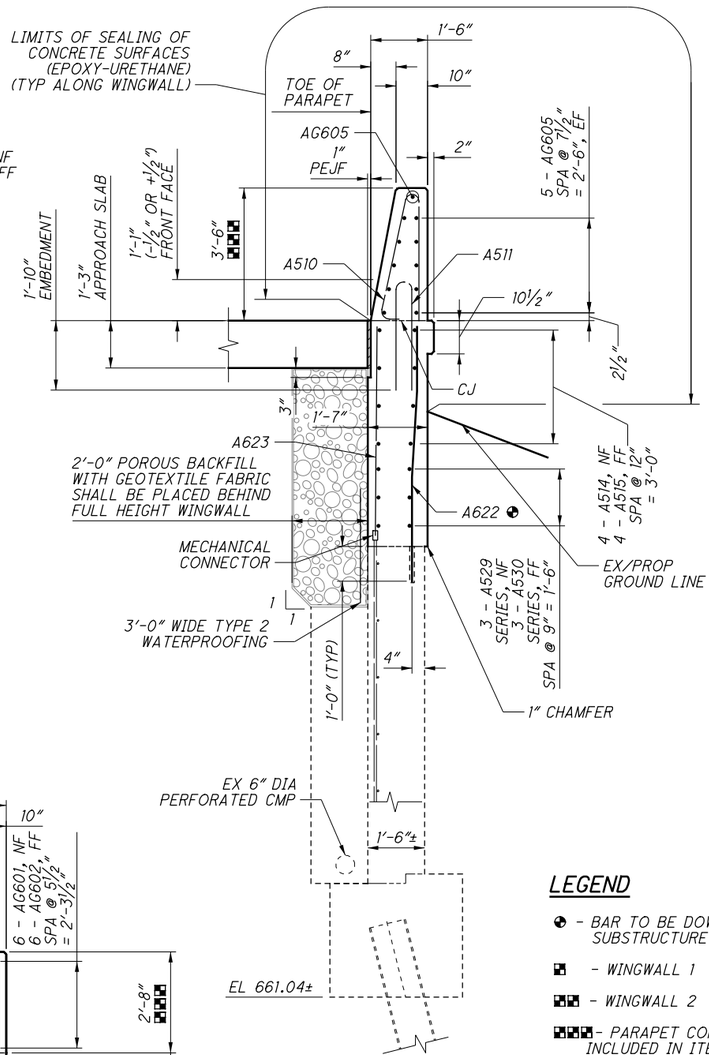
PLAN
(PILING AND POROUS BACKFILL NOT SHOWN FOR CLARITY)



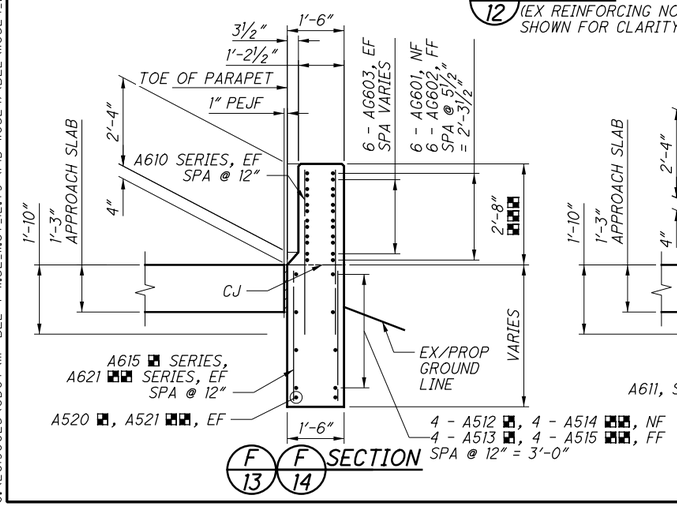
C 12 ELEVATION
(EX REINFORCING NOT SHOWN FOR CLARITY)



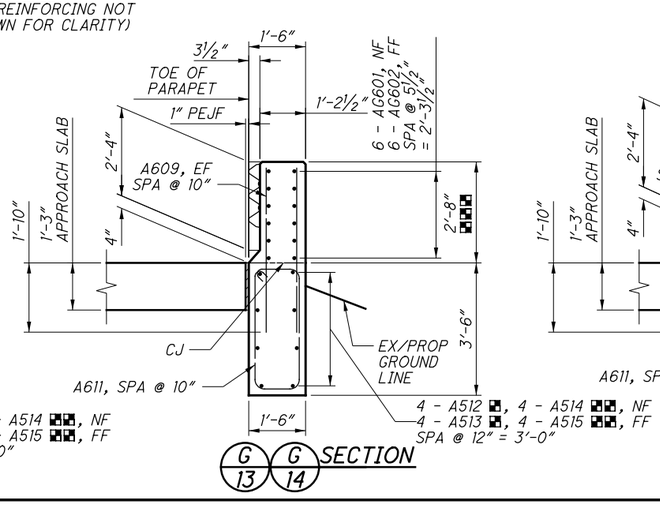
A 14 SECTION
(VERTICAL REINFORCING NOT SHOWN FOR CLARITY)



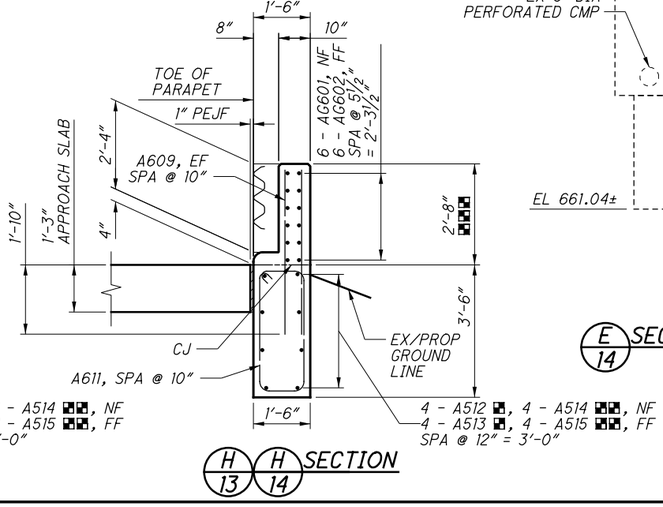
E 14 SECTION



F 13 F 14 SECTION



G 13 G 14 SECTION



H 13 H 14 SECTION

LEGEND

◆ - BAR TO BE DOWELED INTO EXISTING SUBSTRUCTURE

■ - WINGWALL 1

■■ - WINGWALL 2

■■■ - PARAPET CONCRETE SHALL BE INCLUDED IN ITEM 511 - CLASS QC2, CONCRETE WITH QC/QA BRIDGE DECK (PARAPET), FOR PAYMENT. MINIMUM COMPRESSIVE STRENGTH = 4,500 PSI.

◇ - 4 - A533 SPA @ 12" = 3'-0"

NOTES

1. FOR ADDITIONAL PARAPET DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWING SBR-1-20 DATED 01-17-20 (ARCHIVED).

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TDA	GB	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	0700223	

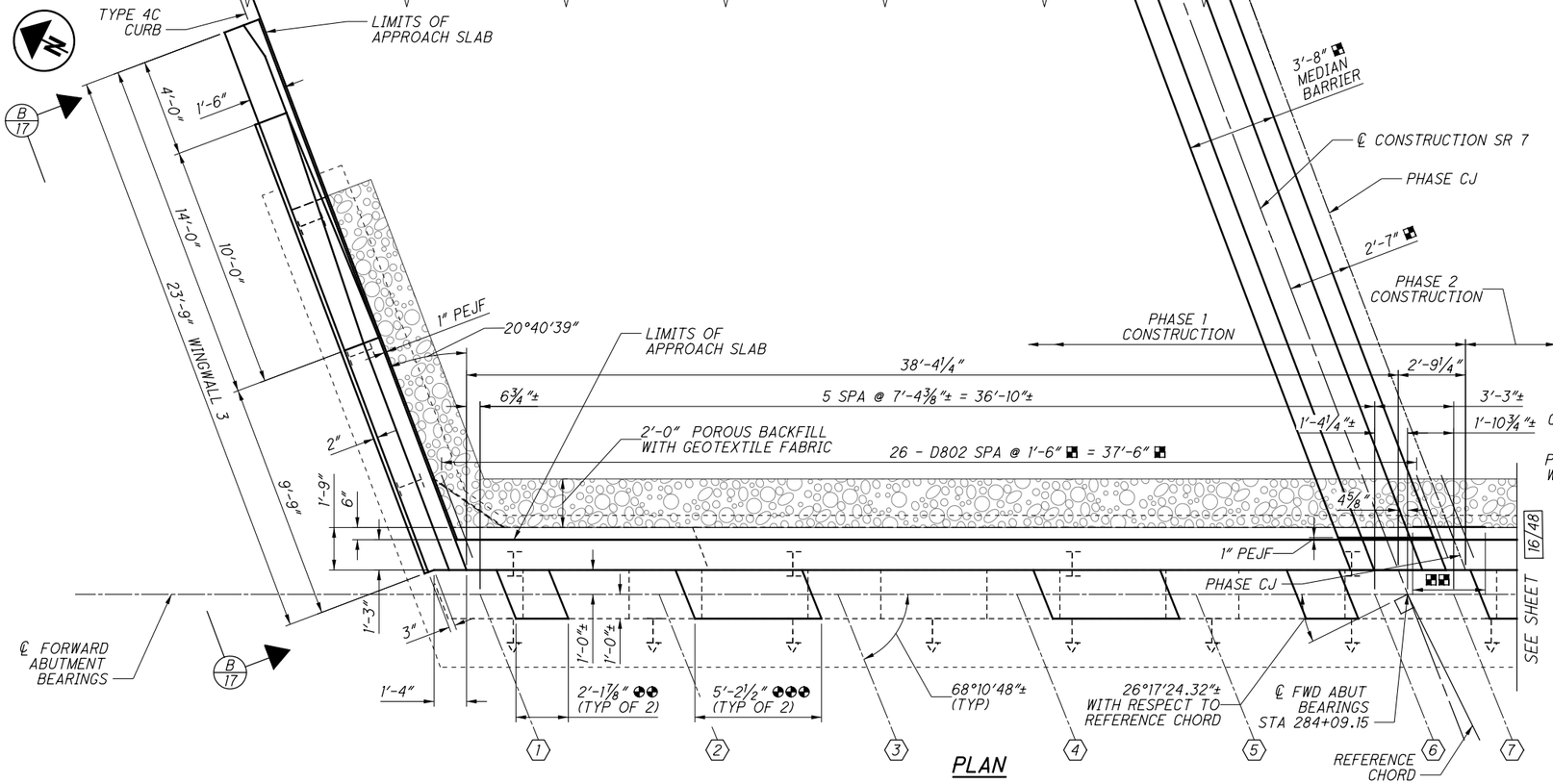
WINGWALL 2 DETAILS
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

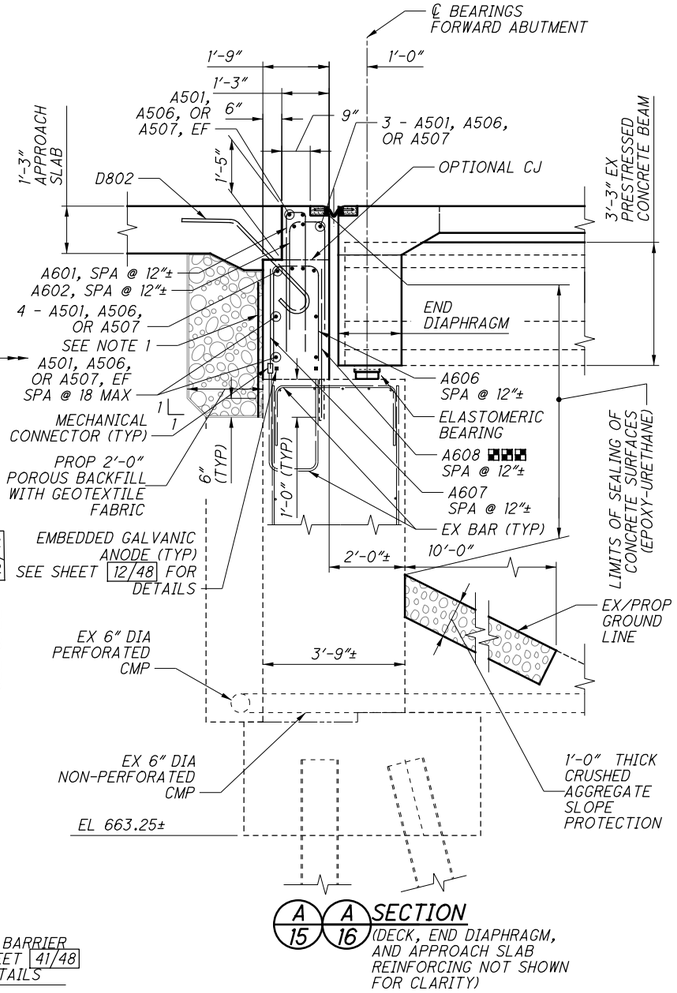
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118 / 213

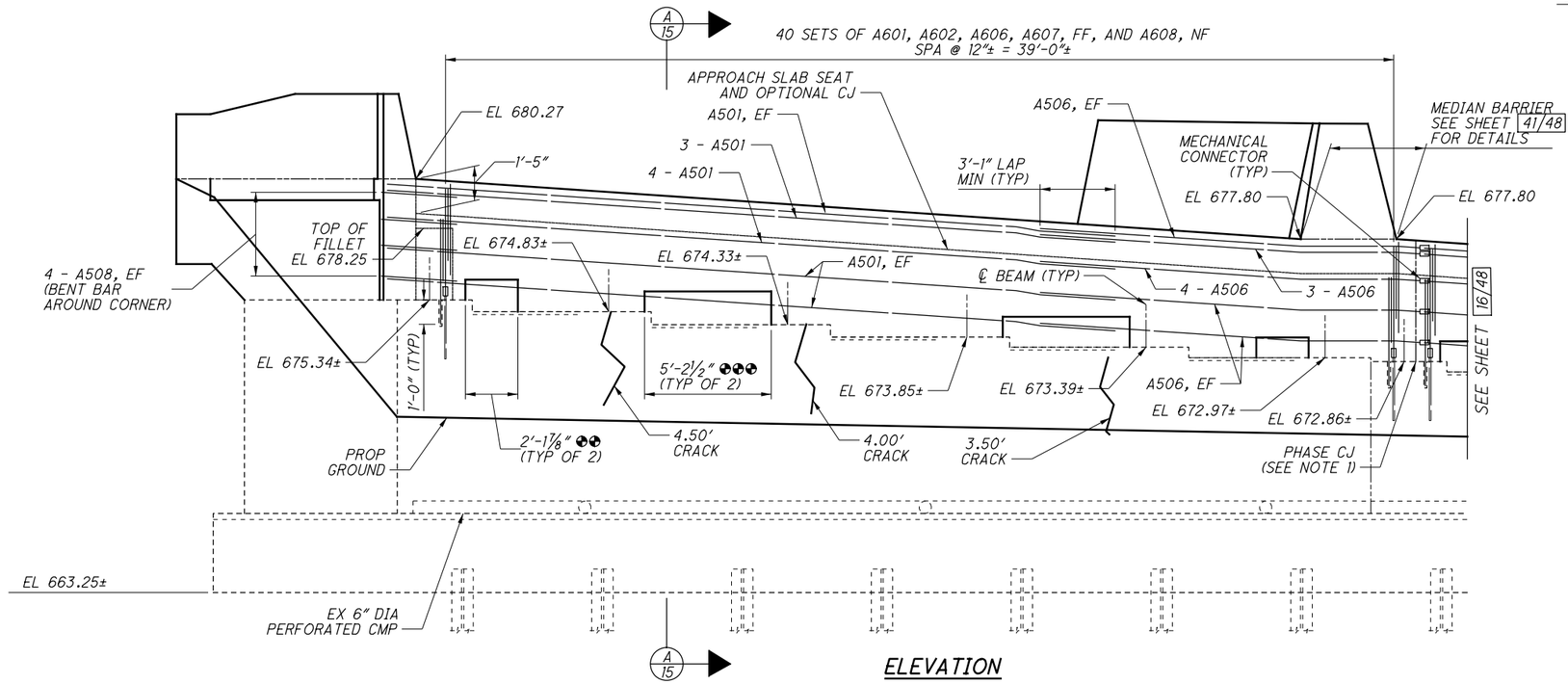
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PLAN



A 15 A 16 SECTION
(DECK, END DIAPHRAGM, AND APPROACH SLAB REINFORCING NOT SHOWN FOR CLARITY)



ELEVATION

NOTES

1. SEAL VERTICAL PHASE CONSTRUCTION JOINT ON THE BACKSIDE FROM 1'-0" BELOW CUT LINE TO THE APPROACH SLAB SEAT WITH TYPE 2 WATERPROOFING. SEAL HORIZONTAL JOINT AT EXISTING ABUTMENT TO REMAIN WITH 3'-0" WIDE TYPE 2 WATERPROOFING.

LEGEND

- ■ - MEASURED RADIALLY
- ■■ - 3'-0" WIDE TYPE 2 WATERPROOFING CENTERED ON JOINT (SEE NOTE 1)
- ■■■ - BAR TO BE DOWELED INTO EXISTING SUBSTRUCTURE
- ●● - SEISMIC PEDESTAL TYPE 1 SEE SHEET 19/48
- ●●● - SEISMIC PEDESTAL TYPE 2 SEE SHEET 19/48
- ⟨X⟩ - ℄ EX BEAM "X"
- - DENOTES CONCRETE CRACKS TO BE REPAIRED PER ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION

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Phone: (614) 775-4500 www.emht.com

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TDA	GB	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	0700223	

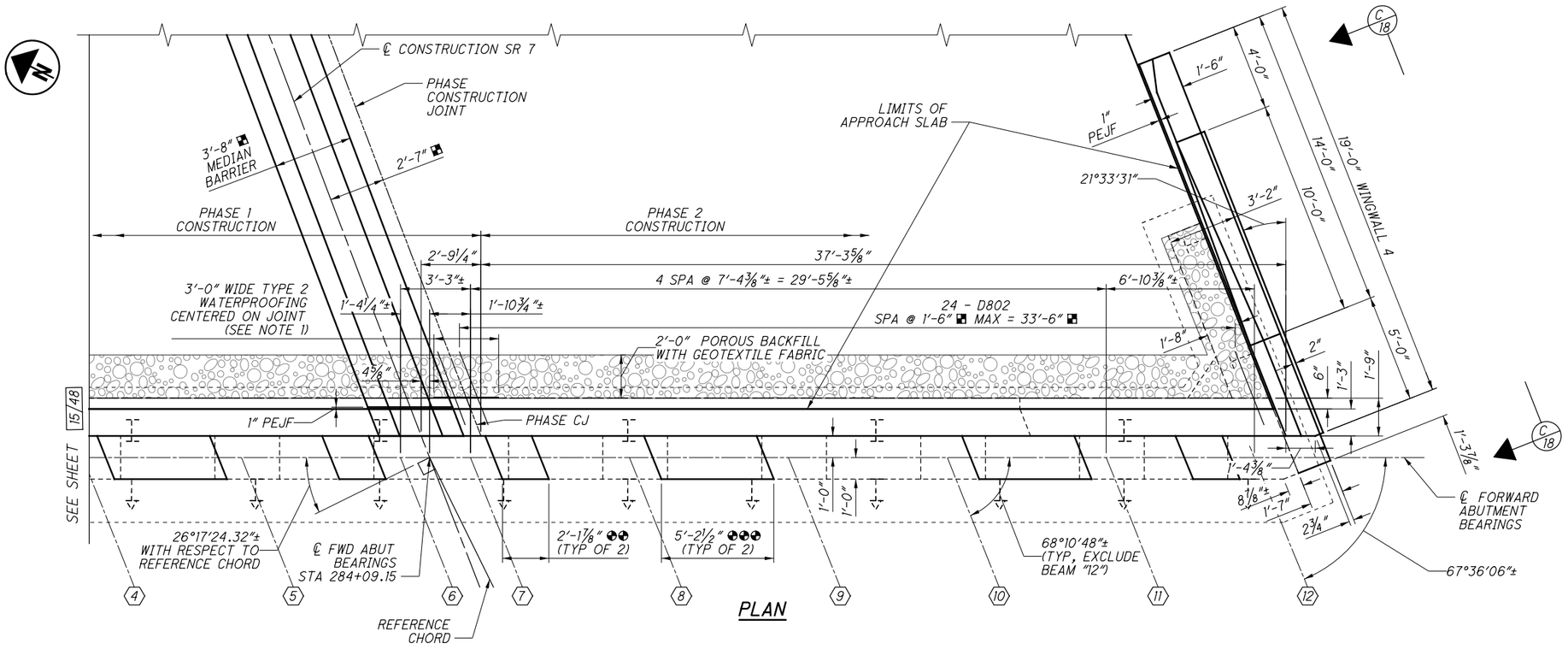
FORWARD ABUTMENT DETAILS (LEFT BRIDGE)
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

15 / 48

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213

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LEGEND

- ■ - MEASURED RADIALLY
- ◓◓ - SEISMIC PEDESTAL TYPE 1 SEE SHEET 19/48
- ◓◓◓ - SEISMIC PEDESTAL TYPE 2 SEE SHEET 19/48
- ⟨X⟩ - ℄ EX BEAM "X"
- DENOTES CONCRETE CRACKS TO BE REPAIRED PER ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION
- DENOTES AREAS TO BE PATCHED PER ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN

NOTES

1. SEAL VERTICAL PHASE CONSTRUCTION JOINT ON THE BACKSIDE FROM 1'-0" BELOW CUT LINE TO THE APPROACH SLAB SEAT WITH TYPE 2 WATERPROOFING. SEAL HORIZONTAL JOINT AT EXISTING ABUTMENT TO REMAIN WITH 3'-0" WIDE TYPE 2 WATERPROOFING.

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Phone: 614.775.4500 www.emht.com

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TDA	GB	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	0700223	

FORWARD ABUTMENT DETAILS (RIGHT BRIDGE)

BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

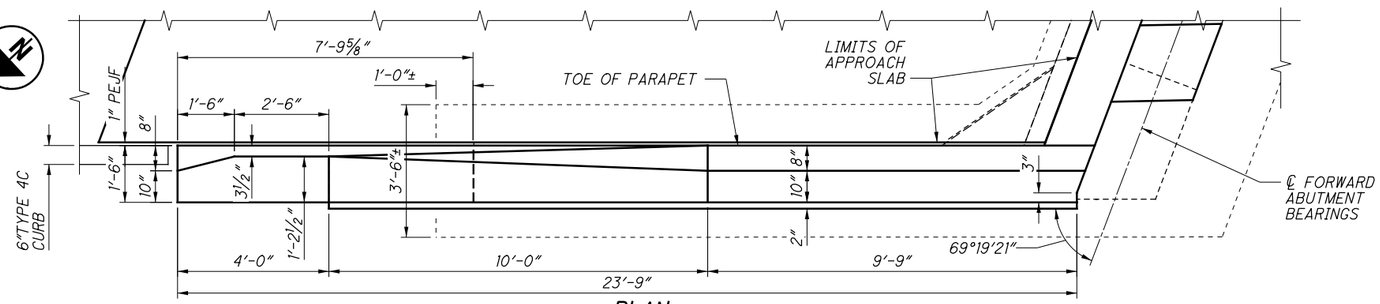
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PID No. 110324

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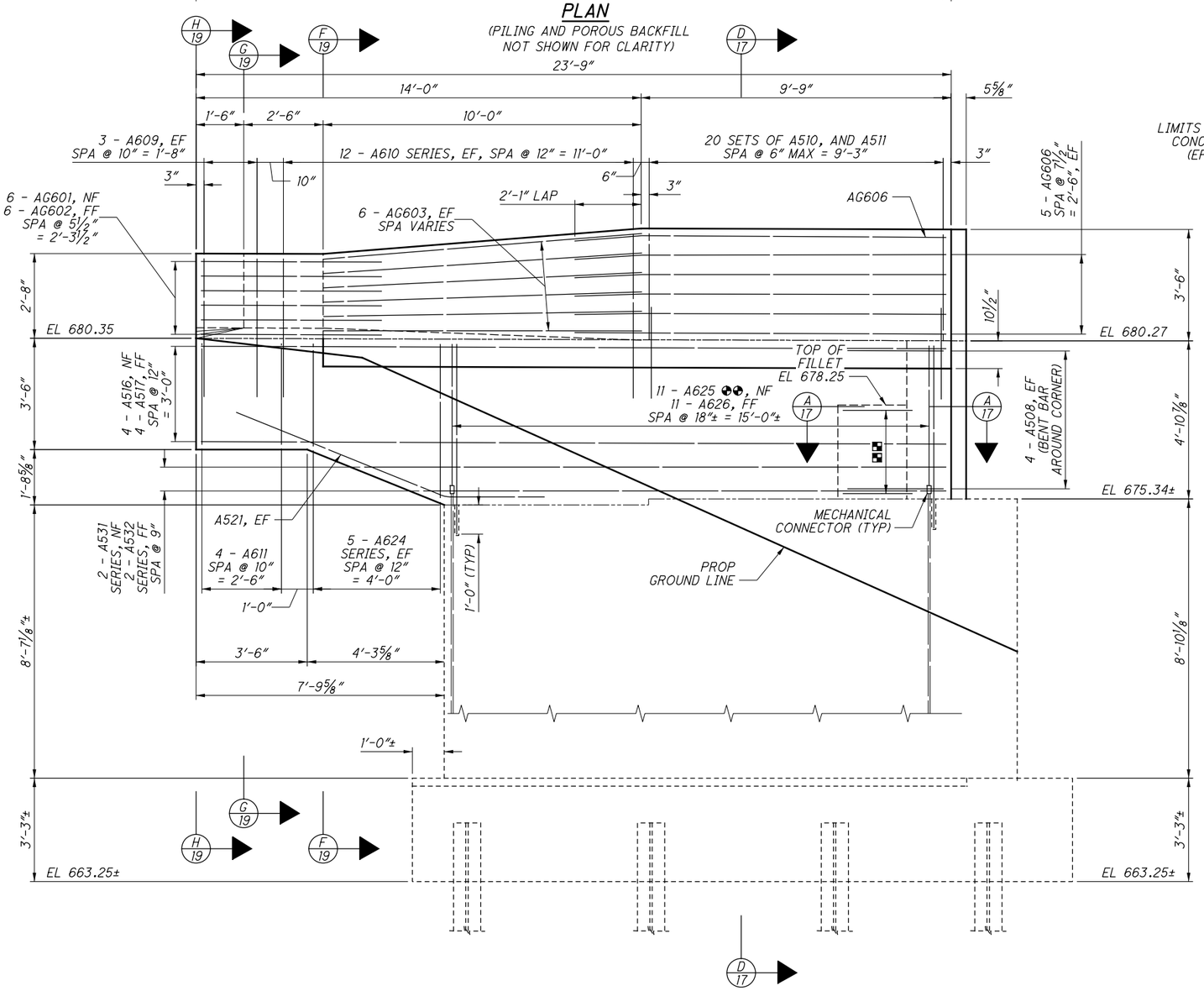
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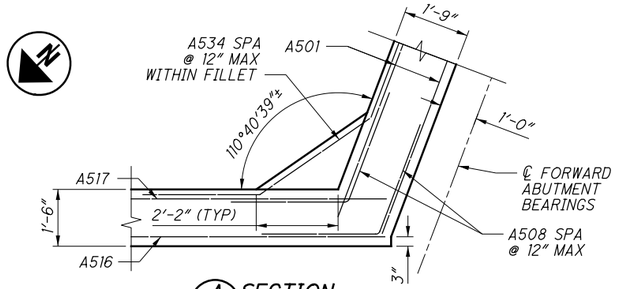
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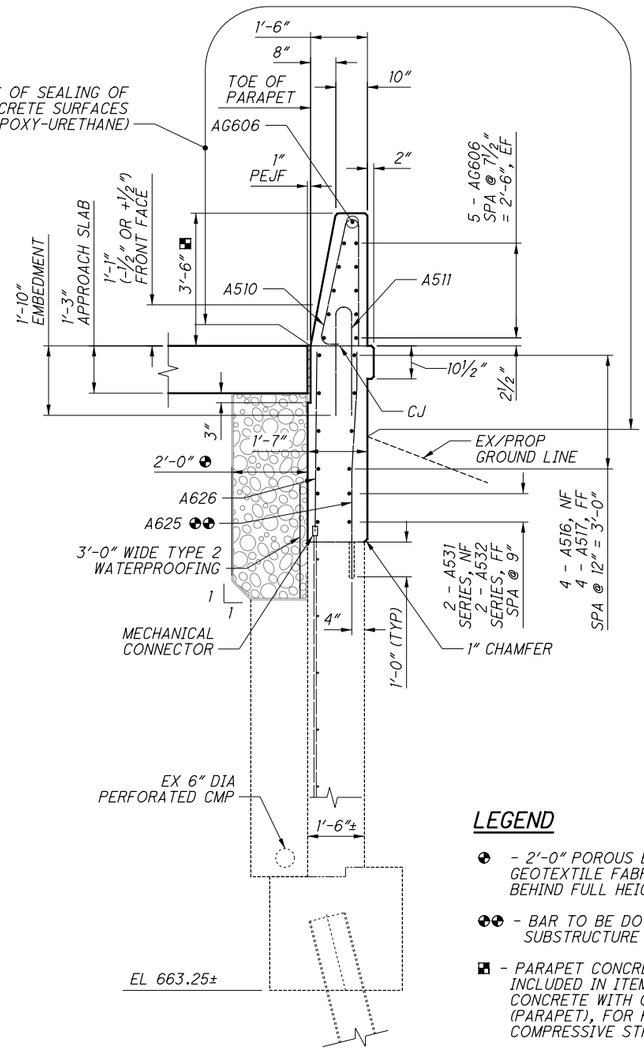
PLAN
(PILING AND POROUS BACKFILL NOT SHOWN FOR CLARITY)



B 15 ELEVATION
(EX REINFORCING NOT SHOWN FOR CLARITY)



A 17 SECTION
(VERTICAL REINFORCING NOT SHOWN FOR CLARITY)



D 17 SECTION

LEGEND

- ● - 2'-0" POROUS BACKFILL WITH GEOTEXTILE FABRIC SHALL BE PLACED BEHIND FULL HEIGHT WINGWALL
- ●● - BAR TO BE DOWELED INTO EXISTING SUBSTRUCTURE
- ■ - PARAPET CONCRETE SHALL BE INCLUDED IN ITEM 511 - CLASS QC2, CONCRETE WITH QC/QA BRIDGE DECK (PARAPET), FOR PAYMENT. MINIMUM COMPRESSIVE STRENGTH = 4,500 PSI.
- ■■ - 4 - A534 SPA @ 12" MAX = 2'-6"

NOTES

1. FOR ADDITIONAL PARAPET DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWING SBR-1-20 DATED 01-17-20 (ARCHIVED).

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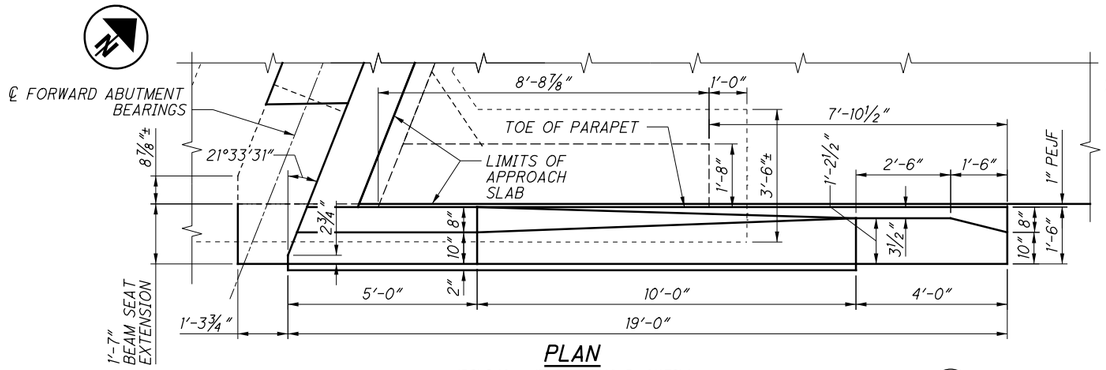
CHECKED	REVISED	STRUCTURE FILE NUMBER
RMW	-	0700223

WINGWALL 3 DETAILS
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

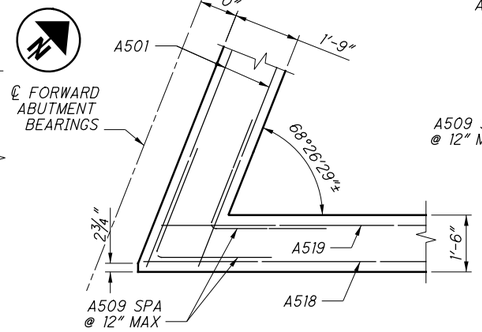
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121 / 213

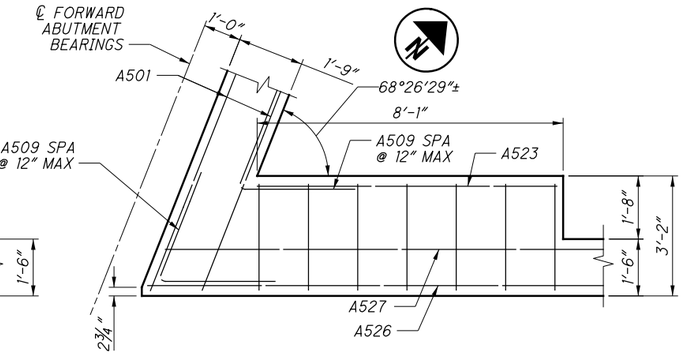


PLAN

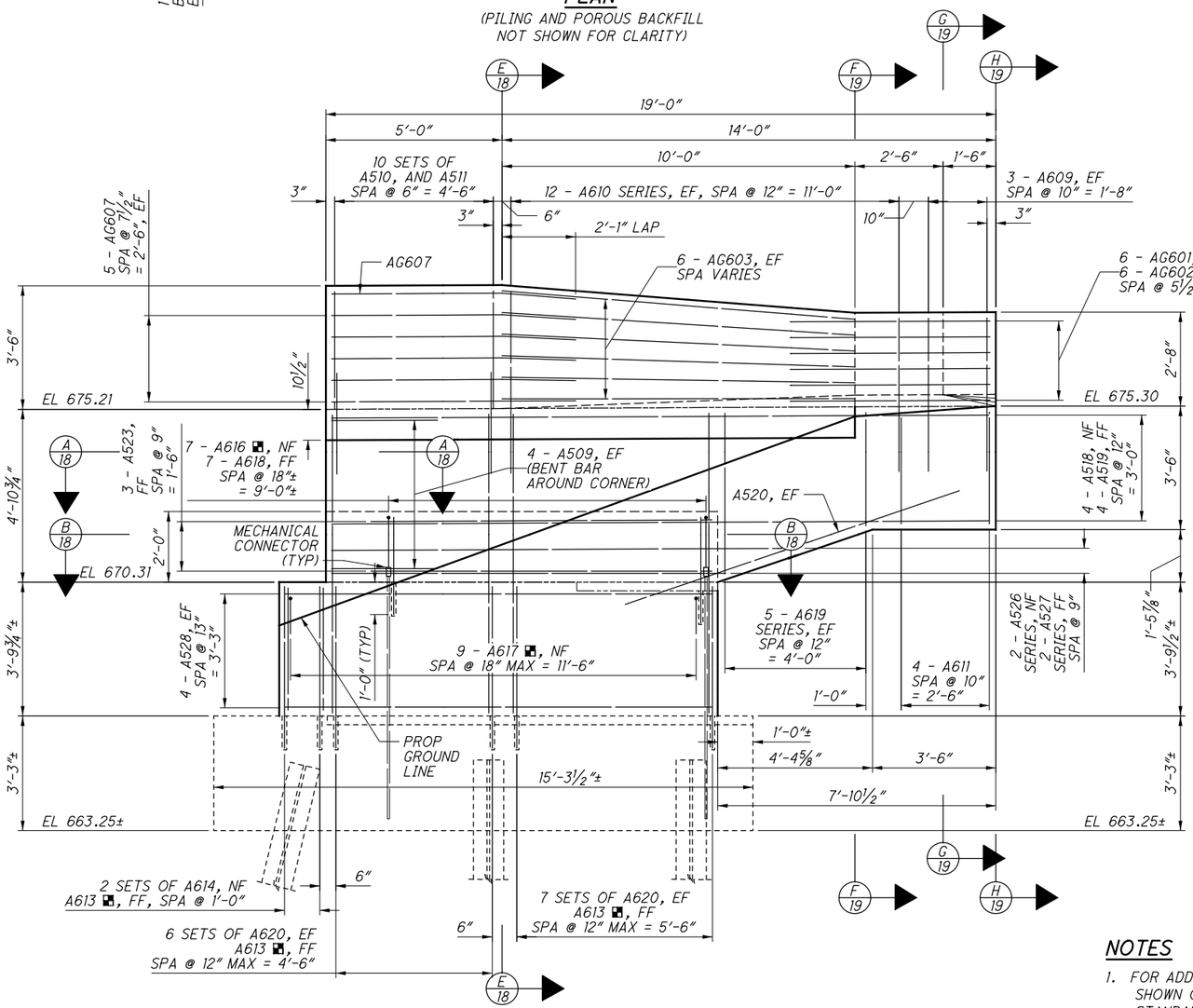
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A 18 SECTION

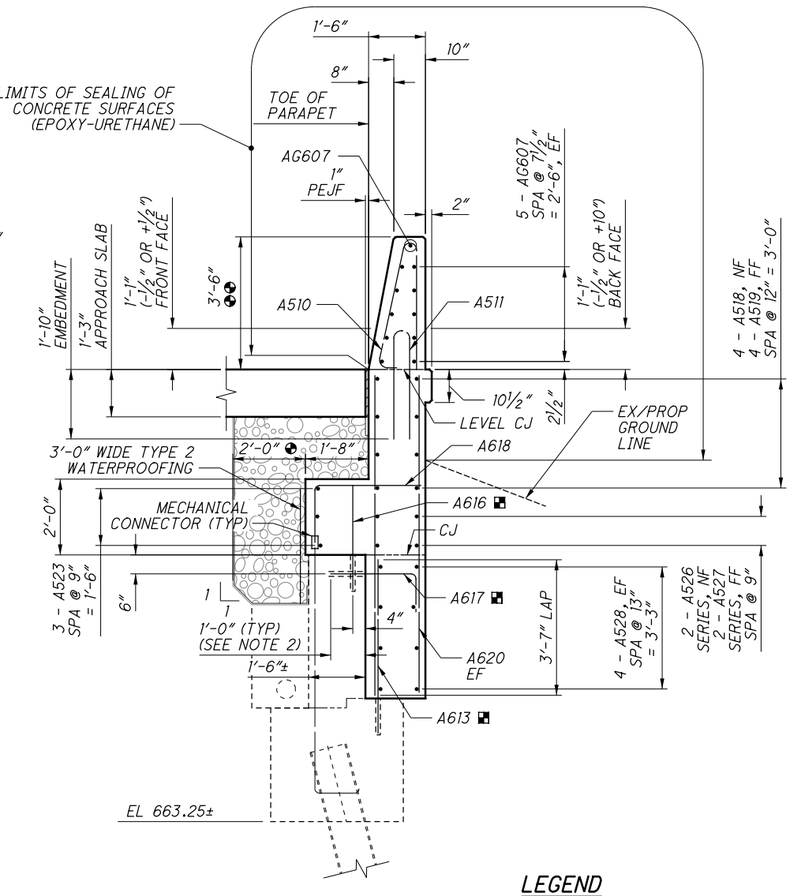


B 18 SECTION



C 16 ELEVATION

(EX REINFORCING NOT SHOWN FOR CLARITY)



E 18 SECTION

NOTES

1. FOR ADDITIONAL PARAPET DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWING SBR-1-20 DATED 01-17-20 (ARCHIVED).
2. SPACE VERTICAL AND HORIZONTAL DOWELS TO AVOID CONFLICT DURING INSTALLATION.

LEGEND

■ - BAR TO BE DOWELED INTO EXISTING SUBSTRUCTURE

◕ - 2'-0" MIN POROUS BACKFILL WITH GEOTEXTILE FABRIC SHALL BE PLACED BEHIND FULL HEIGHT WINGWALL

◕◕ - PARAPET CONCRETE SHALL BE INCLUDED IN ITEM 511 - CLASS QC2, CONCRETE WITH QC/QA BRIDGE DECK (PARAPET), FOR PAYMENT. MINIMUM COMPRESSIVE STRENGTH = 4,500 PSI.

DESIGN AGENCY: EMH&T
DESIGNED: TDA
DRAWN: GB
REVIEWED: CAS
DATE: 10/30/20
CHECKED: RMW
REVISED: -
STRUCTURE FILE NUMBER: 0700223

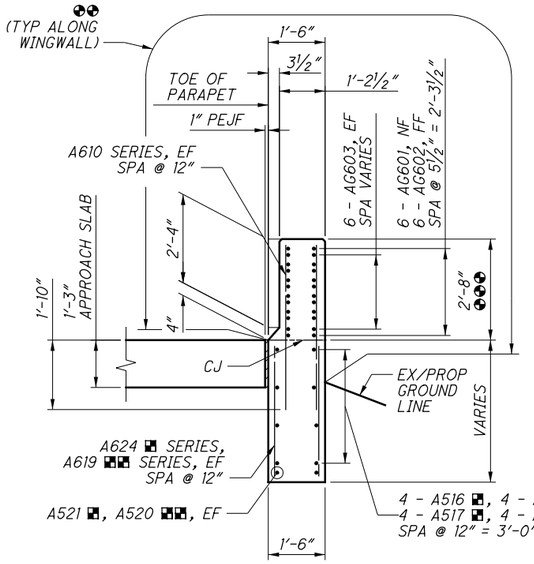
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BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

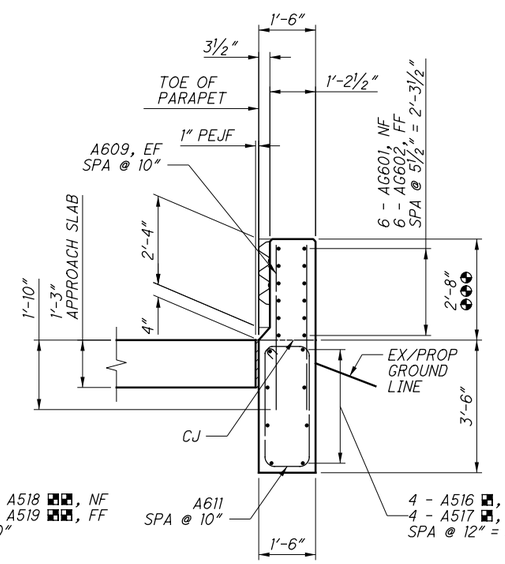
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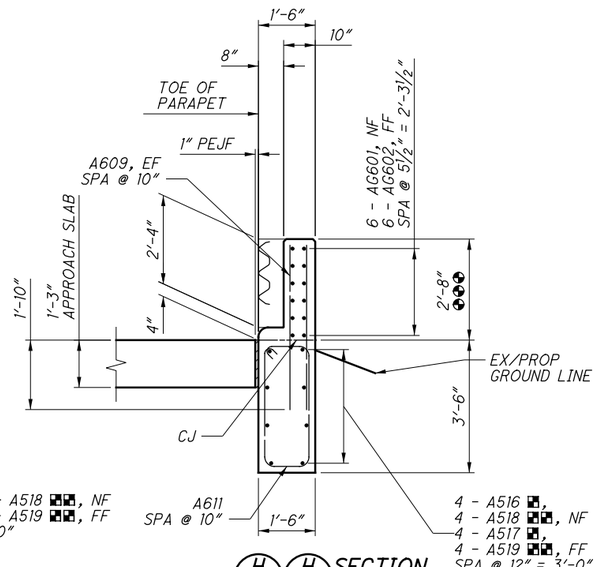
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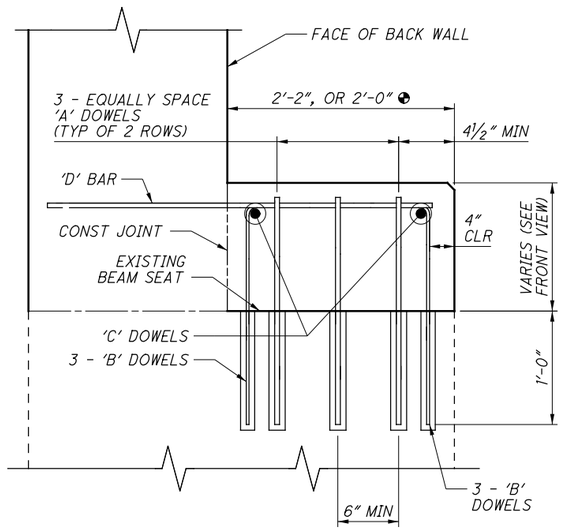
F 17 F 18 SECTION



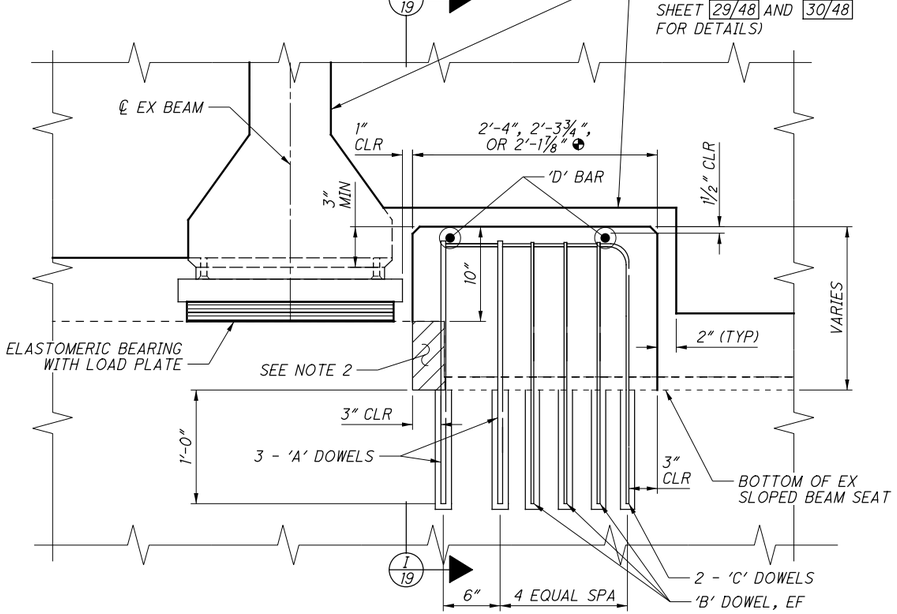
G 17 G 18 SECTION



H 17 H 18 SECTION



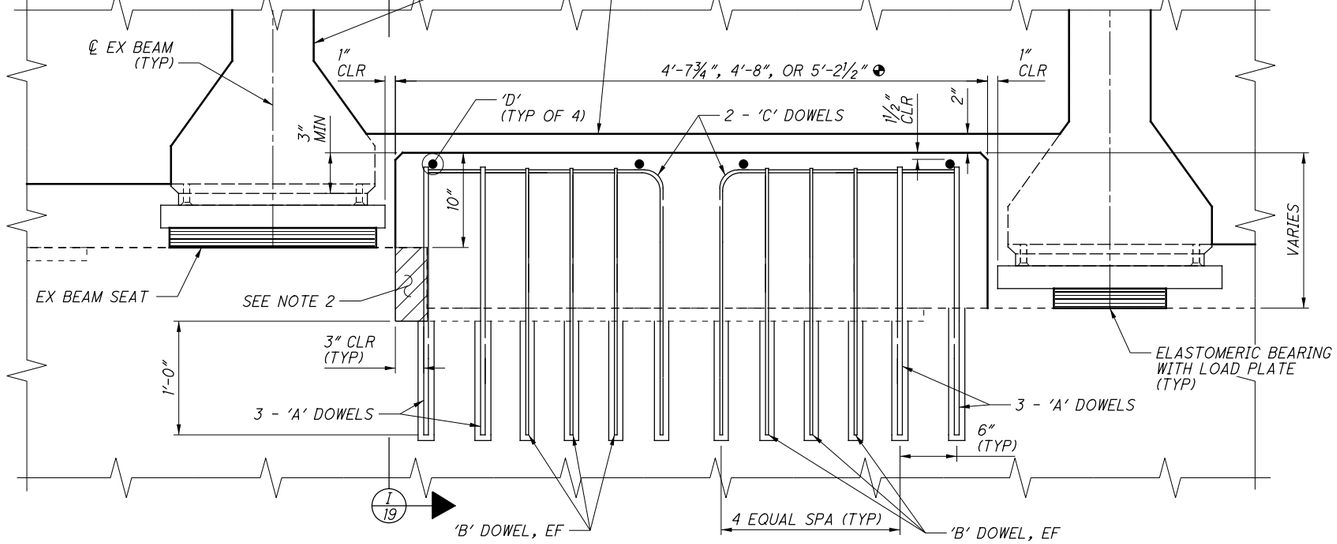
I 19 SECTION
(END DIAPHRAGM NOT SHOWN FOR CLARITY)



FRONT VIEW OF TYPE 1 SEISMIC PEDESTAL

THE WIDTH OF THE PEDESTAL SHOWN SHALL BE MEASURED PARALLEL TO THE CENTERLINE OF BEARING. THE 'C' DOWELS SHALL BE PLACED PARALLEL TO THE CENTERLINE OF BEARING. THE 'B' DOWELS AND 'D' BARS SHALL BE PLACED PARALLEL TO THE EXISTING BEAMS

SEISMIC PEDESTAL BAR MARKS					
ABUTMENT	BEAM NO.	'A' BAR	'B' BAR	'C' BAR	'D' BAR
REAR	1-5 & 7-11	A901	A627	A628	A902
REAR	6 & 12	A903	A629	A630	A902
FORWARD	1 & 7	A901	A631	A631	A905
FORWARD	2-5 & 8-11	A904	A632	A634	A905
FORWARD	6 & 12	A903	A633	A633	A905



FRONT VIEW OF TYPE 2 SEISMIC PEDESTAL

THE WIDTH OF THE PEDESTAL SHOWN SHALL BE MEASURED PARALLEL TO THE CENTERLINE OF BEARING. THE 'C' DOWELS SHALL BE PLACED PARALLEL TO THE CENTERLINE OF BEARING. THE 'B' DOWELS AND 'D' BARS SHALL BE PLACED PARALLEL TO THE EXISTING BEAMS

NOTES

1. *FOR ADDITIONAL PARAPET DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWINGS SBR-1-20 DATED 01-17-20 (ARCHIVED).*
2. *REMOVE PORTIONS OF EXISTING BEAM SEAT AS NEEDED TO INSTALL DOWELS AS TO AVOID DAMAGE TO BEAM SEAT ADJACENT TO BEAMS.*
3. *FOR SEISMIC PEDESTAL LOCATIONS SEE SHEET 11/48, 12/48, 15/48, AND 16/48.*
4. *SEISMIC PEDESTAL CONCRETE AND DOWEL HOLES SHALL BE INCLUDED WITH ITEM 511 - CLASS QC1 CONCRETE, ABUTMENTS NOT INCLUDING FOOTING, AS PER PLAN.*
5. *CARE SHALL BE TAKEN TO AVOID THE EXISTING REINFORCING STEEL WHEN PLACING THE DOWELS. A PACHOMETER SHALL BE USED TO LOCATE THE EXISTING STEEL.*

LEGEND

■ - *WINGWALL 3*
■■ - *WINGWALL 4*
◒ - *THE SURFACE OF THE BEAM SEAT SHALL BE THOROUGHLY CLEANED TO REMOVE ALL DIRT, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS.*
◒◒ - *LIMITS OF SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).*
◒◒◒ - *PARAPET CONCRETE SHALL BE INCLUDED IN ITEM 511 - CLASS QC2, CONCRETE WITH QC/QA BRIDGE DECK (PARAPET), FOR PAYMENT. MINIMUM COMPRESSIVE STRENGTH = 4,500 PSI.*

DESIGN AGENCY EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
TDA	GB	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	0700223	

WINGWALL AND SEISMIC PEDESTAL DETAILS

BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

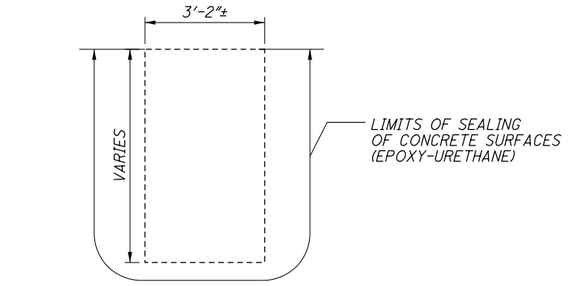
BEL-7-11.48
PID No. 110324

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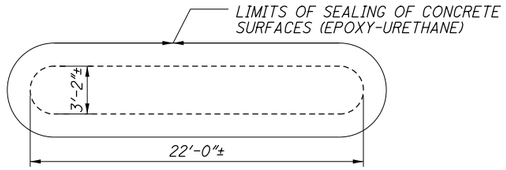
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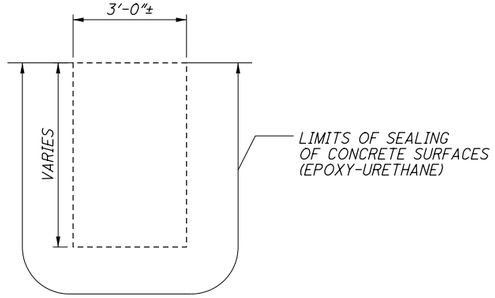
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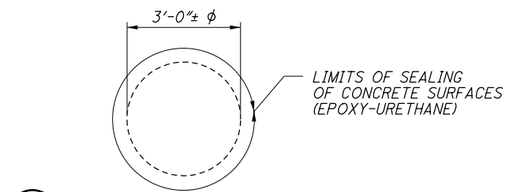
A/20 SECTION
TYPICAL HAMMERHEAD PIER CAP
(REINFORCEMENT NOT SHOWN FOR CLARITY)



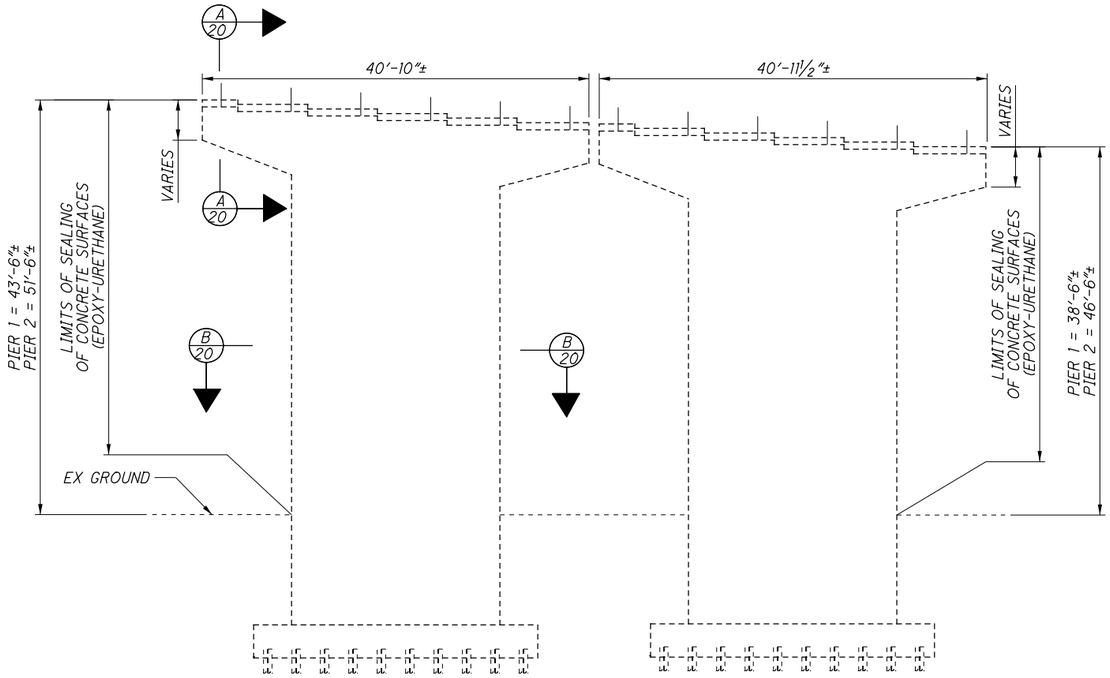
B/20 SECTION
TYPICAL PIER WALL
(REINFORCEMENT NOT SHOWN FOR CLARITY)



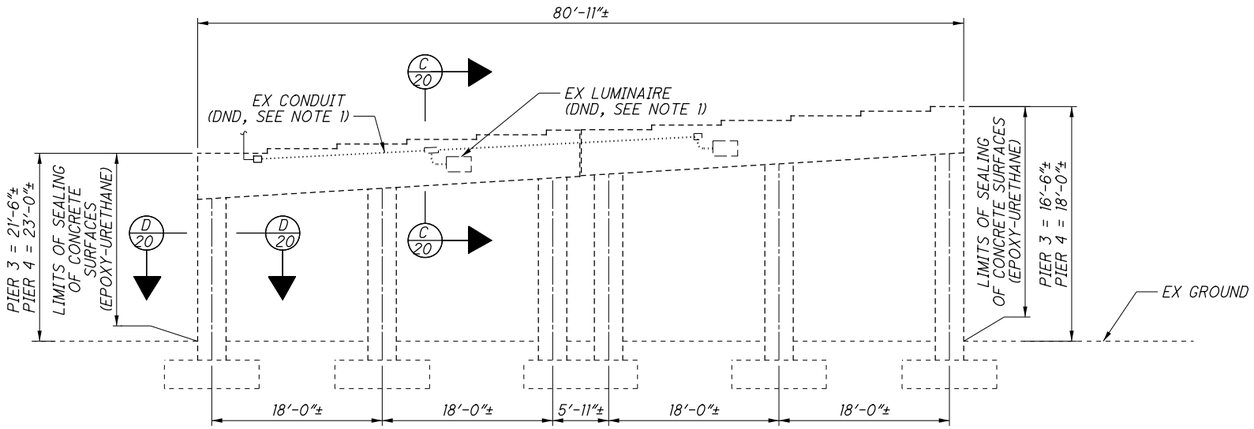
C/20 SECTION
TYPICAL PIER CAP
(REINFORCEMENT NOT SHOWN FOR CLARITY)



D/20 SECTION
TYPICAL PIER COLUMN
(REINFORCEMENT NOT SHOWN FOR CLARITY)



TYPICAL HAMMERHEAD PIERS 1 & 2 SEALING DETAIL



TYPICAL CAP AND COLUMN PIERS 3 & 4 SEALING DETAIL

NOTES:

1. EX LIGHTING ON THE NORTH SIDE OF PIER 3 SHALL BE DE-ENERGIZED FOR THE PIER SEALING OPERATIONS. LIGHTING OUTAGES SHALL BE HELD TO A MINIMUM AND COORDINATED WITH THE ENGINEER PRIOR TO BEGINNING WORK.
2. SEE SHEET 104/213 FOR LIGHTING DETAILS AT PIER 3.

DESIGN AGENCY
EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
TDA	MSM	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	0700223	

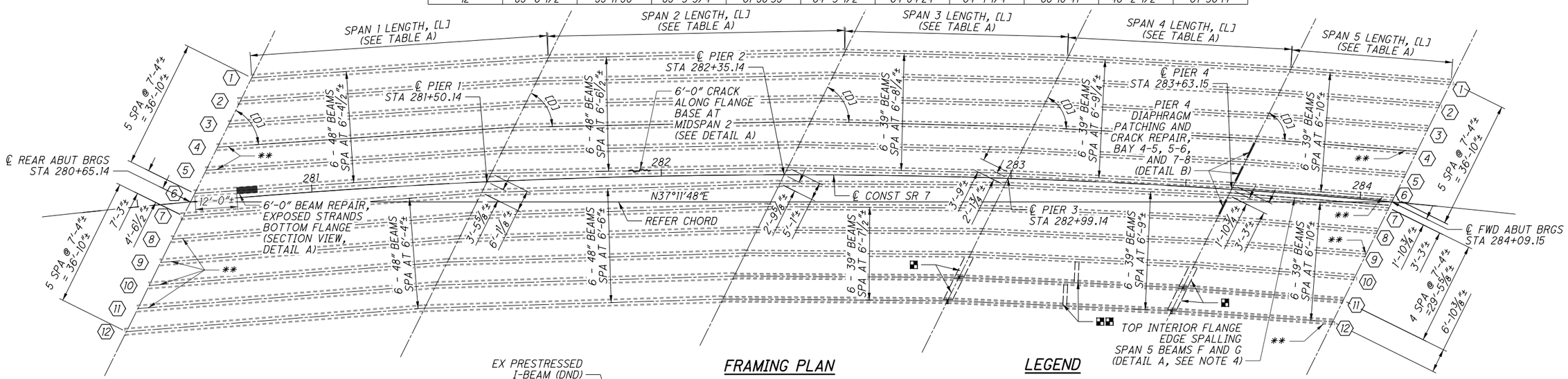
PIER DETAILS
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

20/48

124/213

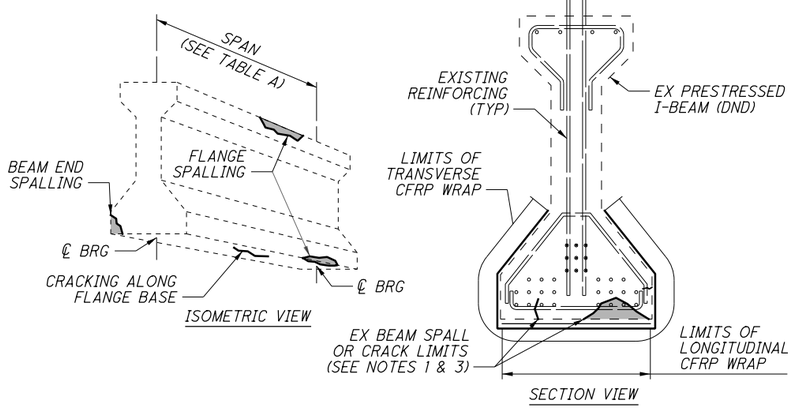
TABLE A, ALL DIMENSIONS CONSIDERED +/-										
	SPAN 1		SPAN 2		SPAN 3		SPAN 4		SPAN 5	
BEAM LINE	[L]	[D]	[L]	[D]	[L]	[D]	[L]	[D]	[L]	[D]
1-6	84'-11 1/2"	59°52'22"	84'-10"	62°34'26"	63'-8 1/2"	68°09'07"	63'-10 3/4"	66°44'04"	46'-0"	68°10'47"
7-11	85'-6 1/2"	59°11'50"	85'-3 3/4"	61°58'39"	64'-3 1/2"	64°04'24"	64'-1 1/4"	68°10'47"	46'-0"	68°10'47"
12	85'-6 1/2"	59°11'50"	85'-3 3/4"	61°58'39"	64'-3 1/2"	64°04'24"	64'-1 1/4"	68°10'47"	46'-2 1/2"	67°36'14"



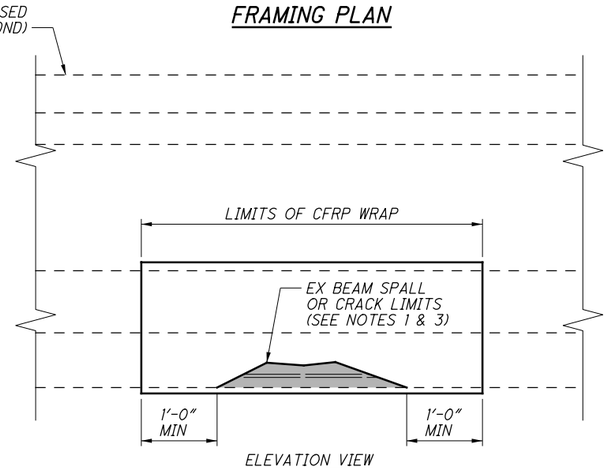
FRAMING PLAN

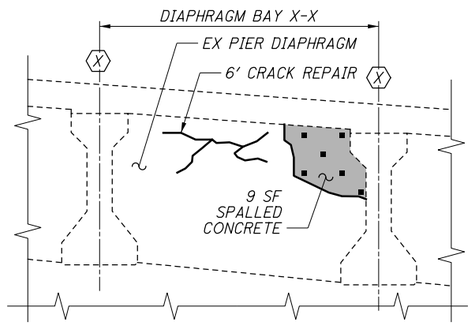
LEGEND

- DENOTES AREAS TO BE PATCHED PER ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN
- DENOTES AREAS TO BE PATCHED PER ITEM 843 - CONCRETE PATCHING WITH TROWELABLE MORTAR (SEE NOTE 1)
- DENOTES LIMITS OF CRACK REPAIR PER ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION (SEE NOTE 3)
- (X) - EX ℄ BEAM "X"
- SEE SHEET 31/48 FOR ADDITIONAL PIER DIAPHRAGM DETAILS.
- SEE SHEET 32/48 FOR ADDITIONAL INTERMEDIATE DIAPHRAGM DETAILS.
- ** - 2'-0" OF EPOXY INJECTION INCLUDED AT THE CORRESPONDING LOCATIONS AT BEAMS ENDS PRIOR TO ENCASING WITH PROPOSED END DIAPHRAGMS



BEAM REPAIR DETAIL A





DIAPHRAGM REPAIR DETAIL B

(TYP OF 3 PIER DIAPHRAGM LOCATIONS)

NOTES

1. REPAIR PRESTRESSED BEAM SPALLING WITH ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, WHERE EXPOSED STRANDS AND/OR MILD REINFORCING STEEL IS ENCOUNTERED. PATCHING SHALL INCLUDE INSTALLATION OF TWO LAYERS OF UNIDIRECTIONAL CARBON FIBER REINFORCED POLYMER WRAP (CFRP). ALL CFRP SHALL BE INSTALLED PER PN519 - DATED 07/21/2017.

   REPAIR SEQUENCE OF CONSTRUCTION:

   A. CAREFULLY REMOVE LOOSE CONCRETE BY USE OF HAND TOOLS ONLY. NO PNEUMATIC HAMMERS WILL BE ALLOWED.

   B. CRACKS THAT ARE UNCOVERED AFTER LOOSE CONCRETE REMOVAL SHALL BE REPAIRED PER ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION.

   C. APPLY TROWELABLE MORTAR FOR THE ENTIRE LIMITS OF THE PATCH BRINGING THE BEAM BACK TO ITS ORIGINAL SHAPE. MULTIPLE LIFTS MAY BE REQUIRED AS DIRECTED BY MANUFACTURER.

   D. APPLY THE FIRST UNIDIRECTIONAL LAYER OF CFRP WHICH SHALL BE PLACED ALONG THE BOTTOM OF THE FLANGE AND ORIENTED PARALLEL THE CENTERLINE OF THE EXISTING BEAM.

   E. THE SECOND LAYER SHALL BE PLACED TRANSVERSE THE EXISTING BEAM AND ORIENTED PERPENDICULAR THE CENTERLINE OF THE EXISTING BEAM.

2. ALL LIMITS OF THE DESCRIBED BEAM REPAIRS AND PATCHING SHALL BE SEALED WITH AN EPOXY URETHANE SEALER EXCEPT WHERE WORK WILL BE ENCASED BY THE PROPOSED END DIAPHRAGMS.

3. CRACKS ENCOUNTERED DURING CONSTRUCTION BETWEEN 7 TO 100 MILS SHALL BE REPAIRED THROUGH EPOXY INJECTION AND COVERED WITH CFRP WRAP AS SHOWN IN BEAM REPAIR DETAIL A. ALL CFRP SHALL BE INSTALLED PER PN519 - DATED 07/21/2017.

4. WHERE CONCRETE SPALLING IS ENCOUNTERED ON THE EXISTING BEAMS, BUT DOES NOT CONTAIN EXPOSED STRANDS, MILD REINFORCING STEEL, OR VISIBLE EVIDENCE OF CORROSION/RUSTING, SPALLING LIMITS SHALL BE SEALED WITH AN EPOXY-URETHANE CONCRETE SEALER.

DESIGN AGENCY EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
RMW	RMW	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700223	

FRAMING PLAN, BEAM REPAIR, AND DIAPHRAGM REPAIR DETAILS

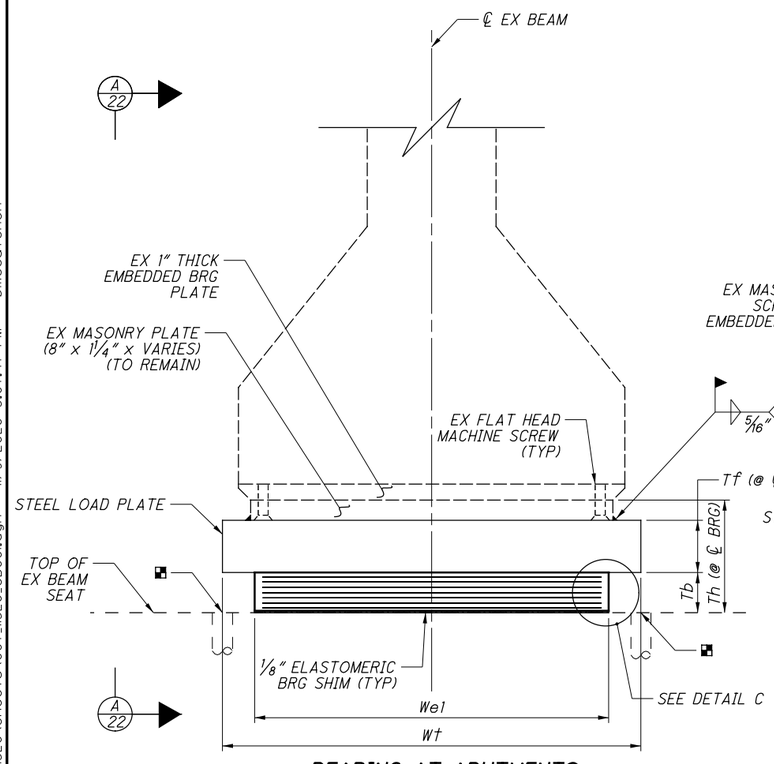
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

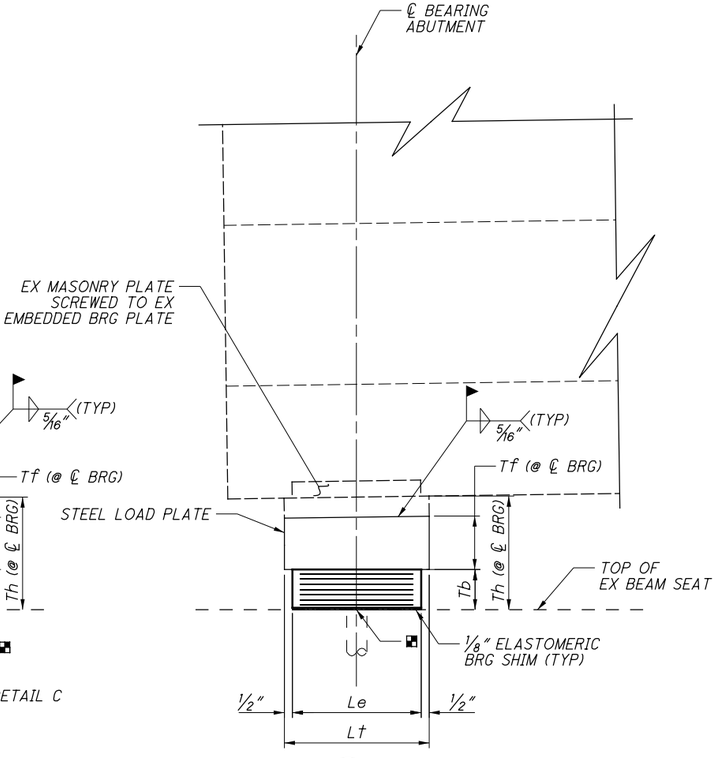
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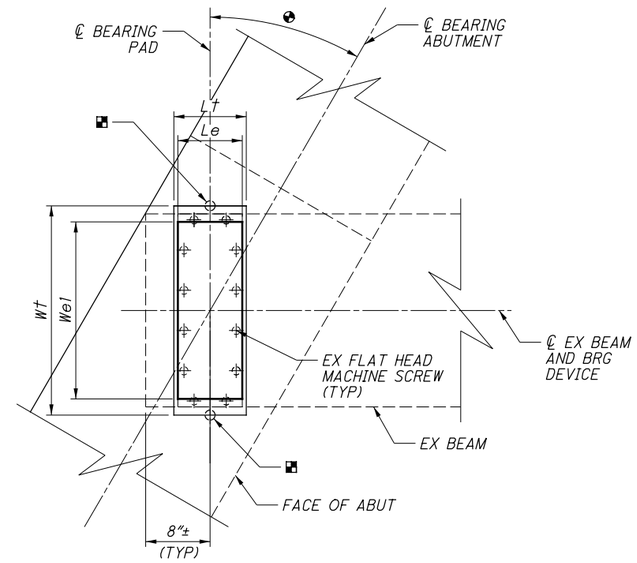
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BEARING AT ABUTMENTS



A VIEW
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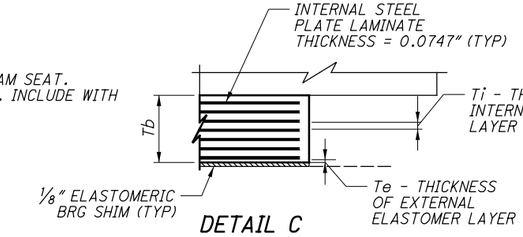


BEARING ORIENTATION PLAN

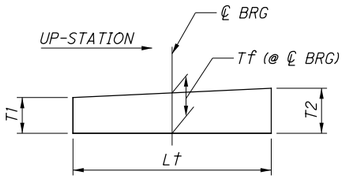
LEGEND

■ - CUT EX 1¼" DIA ANCHOR RODS FLUSH AT BEAM SEAT. AND APPLY ZINC RICH PRIMER TO CUT FACE. INCLUDE WITH THE ELASTOMERIC BEARING FOR PAYMENT.

◒ - SKEW BETWEEN ℄ BEARINGS ABUTMENT AND ℄ BEARING PAD



DETAIL C



BEVELED STEEL LOAD PLATE

NOTES

1. ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION 1, SECTION 14.6.5 (METHOD B) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION AND THE 2020 ODOT BRIDGE DESIGN MANUAL (BDM).
2. LOAD PLATES AND MASONRY PLATES: ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE (REAR ABUTMENT, PIER, OR FORWARD ABUTMENT), AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER THE BEARING IS INSTALLED. THE STEEL FOR THE STEEL LOAD PLATES AND MASONRY PLATES SHALL BE ASTM A709 GRADE 50.
3. THE STEEL LOAD PLATES AND STEEL MASONRY PLATE (IF APPLICABLE) SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.
4. THE PROPOSED STEEL LOAD AND MASONRY PLATES AND EXISTING STEEL PLATES TO REMAIN SHALL HAVE A THREE-COAT PAINTED SYSTEM PER ITEM 514. THE EXISTING PLATES SHALL BE COATED WITH AN ORGANIC ZINC PRIME COAT AND THE PROPOSED PLATES SHALL BE COATED WITH A SHOP APPLIED INORGANIC ZINC PRIME COAT. AN EPOXY INTERMEDIATE AND A URETHANE FINISH COAT SHALL BE APPLIED TO BOTH EXISTING AND PROPOSED PLATES. THE SURFACE OF THE EXISTING PLATES SHALL BE PREPARED PER ITEM 514. PAINTING AND SURFACE PREPARATION SHALL BE INCLUDED WITH THE RESPECTIVE BEARING ITEM FOR PAYMENT.
5. THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE). MASONRY PLATES, STEEL LOAD PLATES, PAINTING, AND ELASTOMERIC BEARING SHIMS SHALL BE INCLUDED WITH THE BEARINGS FOR PAYMENT.

SKEW, ◒		
	REAR ABUTMENT	
BEAM	LEFT BRIDGE	RIGHT BRIDGE
1 - 6	30° 07' 36" RF	—
7 - 12	—	30° 48' 09" RF

SKEW, ◒		
	FWD ABUTMENT	
BEAM	LEFT BRIDGE	RIGHT BRIDGE
1 - 6	21° 49' 12" RF	—
7 - 11	—	21° 49' 12" RF
12	—	22° 23' 54" RF

ELASTOMERIC BEARING DATA														STEEL LOAD PLATES	TOTAL HEIGHT
LOCATION	BEAM(S)	TYPE	NUMBER REQ'D	UNFACTORED DL (KIPS)	UNFACTORED LL (KIPS) WITHOUT IMPACT	UNFACTORED FUTURE WEARING SURFACE (KIPS)	MAXIMUM DESIGN LOAD (KIPS)	Le (IN)	Wel (IN)	ti (IN)	te(IN)	NUMBER OF ti's	NUMBER OF STEEL LAMINATES	Tb (IN)	TOTAL THICKNESS AT ℄ BRG (IN)	TOTAL THICKNESS AT ℄ BRG Th (IN)
REAR ABUT	1 - 12	EXP	12	85.45	71.50	15.37	172.32	8	24	0.3125	0.125	8	8	3.223	3.41	6.63
FWD ABUT	1 - 12	EXP	12	37.22	57.34	8.25	102.81	8.5	20	0.4375	0.125	6	6	3.198	2.43	5.63

STEEL LOAD PLATE DATA											
		STEEL LOAD PLATE						EXISTING MASONRY PLATE			TOTAL THICKNESS AT ℄ BRG (IN)
LOCATION	BEAMS	BEVEL (YES/NO)	Lt (IN)	Wt (IN)	Tf (IN)	T1 (IN)	T2 (IN)	Lt (IN)	Wt (IN)	Ts (IN)	
REAR ABUT	1 - 12	YES	9	26	2.16	2.08	2.23	8	22.5	1.25	3.41
FWD ABUT	1 - 12	YES	9.5	22	1.18	1.22	1.14	8	18.5	1.25	2.43

DESIGN AGENCY
EMH&T
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, Ohio 43054
Phone: (614) 775-4500 FAX: (614) 775-4800

DESIGNED	DRAWN	REVIEWED	DATE
TDA	MJR	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA		0700223	

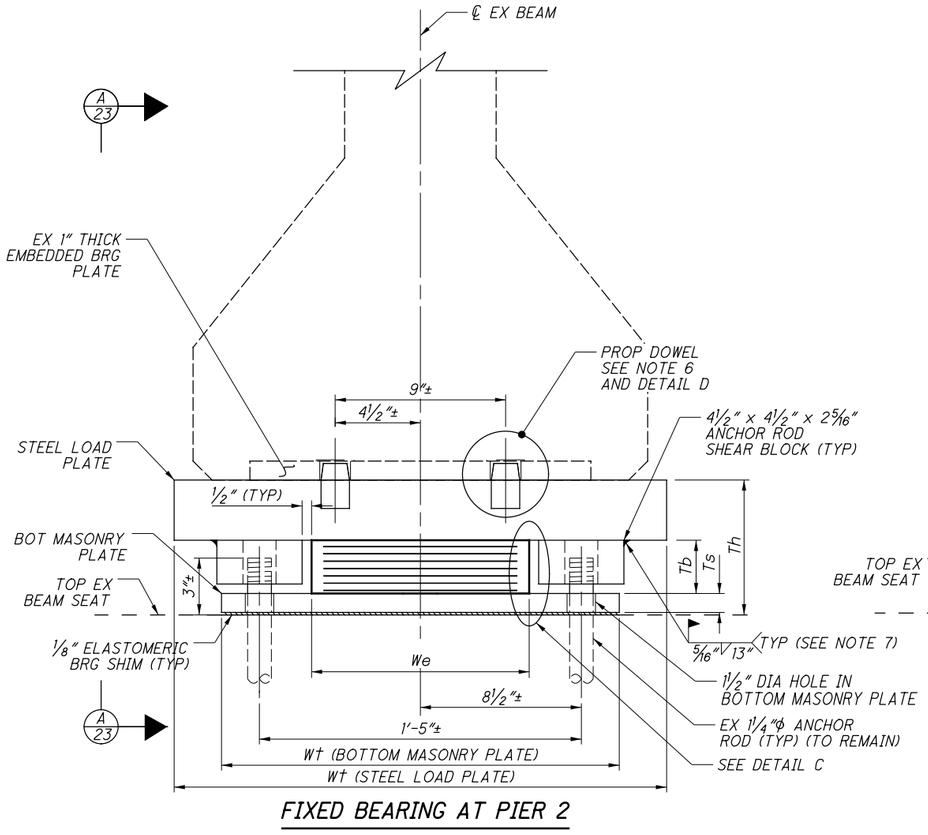
BEARING DETAILS - ABUTMENTS
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

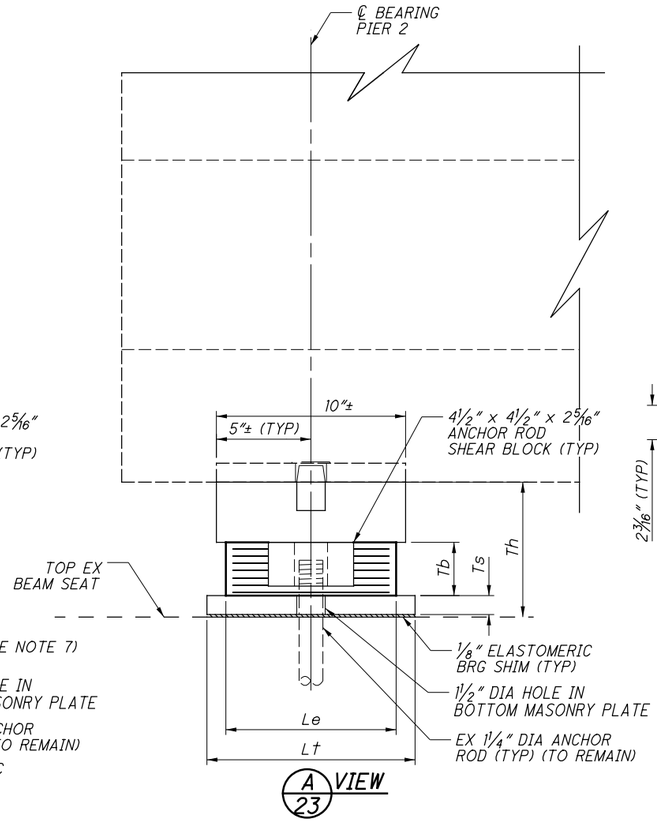
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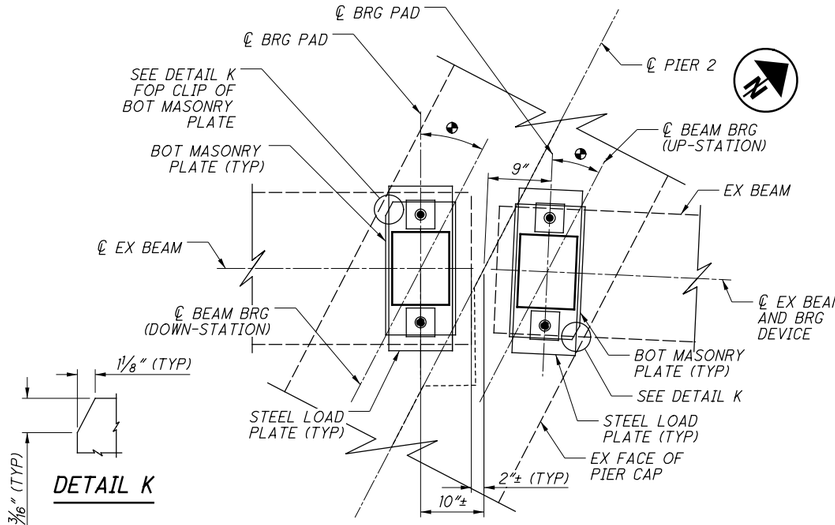
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FIXED BEARING AT PIER 2



A 23 VIEW

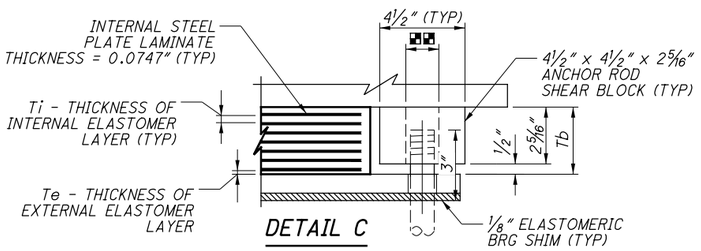


FIXED BEARING ORIENTATION PLAN

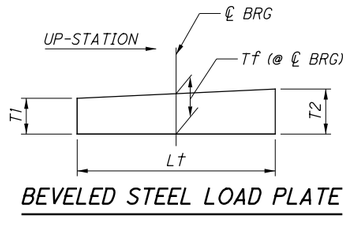
DETAIL K

NOTES

1. ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION 1, SECTION 14.6.5 (METHOD B) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION AND THE 2020 ODOT BRIDGE DESIGN MANUAL (BDM).
2. LOAD PLATES AND MASONRY PLATES: ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE (REAR ABUTMENT, PIER, OR FORWARD ABUTMENT), AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER THE BEARING IS INSTALLED. THE STEEL FOR THE STEEL LOAD PLATES, MASONRY PLATES AND SHEAR BLOCKS SHALL BE ASTM A709 GRADE 50.
3. THE STEEL LOAD PLATES AND STEEL MASONRY PLATE (IF APPLICABLE) SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.
4. THE PROPOSED STEEL LOAD PLATE, SHEAR BLOCKS AND MASONRY PLATES SHALL HAVE A THREE-COAT PAINTED SYSTEM PER ITEM 514. SHALL BE INCLUDED WITH THE RESPECTIVE BEARING ITEM FOR PAYMENT.
5. THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE). MASONRY PLATES, STEEL LOAD PLATES, SHEAR BLOCKS, PAINTING AND ELASTOMER BEARING SHIMS SHALL BE INCLUDED WITH THE BEARINGS FOR PAYMENT.
6. PRESS FIT NEW DOWEL INTO STEEL LOAD PLATE. THE DOWEL SHALL BE ASTM A36 GRADE 36 STEEL.
7. TOTAL 5/16" WELD LENGTH FOR THE ANCHOR ROD SHEAR BLOCK TO THE STEEL LOAD PLATE SHALL BE A MINIMUM OF 13". THE SIDE OF THE SHEAR BLOCK ADJACENT TO THE ELASTOMERIC BEARING SHALL NOT BE WELDED.



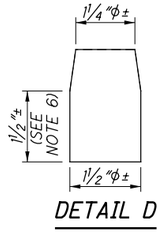
DETAIL C



BEVELED STEEL LOAD PLATE

SKEW, ◔		
	PIER 2 - LEFT BRIDGE	
BEAM	UP-STATION	DOWN-STATION
1 - 12	24° 50' 55" RF	27° 25' 32" RF

SKEW, ◔		
	PIER 2 - RIGHT BRIDGE	
BEAM	UP-STATION	DOWN-STATION
1 - 12	25° 55' 37" RF	28° 01' 19" RF



DETAIL D

ELASTOMERIC BEARING DATA															STEEL LOAD PLATES	TOTAL HEIGHT
LOCATION	BEAM(S)	TYPE	NUMBER REQ'D	UNFACTORED DL (KIPS)	UNFACTORED LL (KIPS) WITHOUT IMPACT	UNFACTORED FUTURE WEARING SURFACE (KIPS)	MAXIMUM DESIGN LOAD (KIPS)	Le (IN)	We1 (IN)	ti (IN)	te(IN)	NUMBER OF ti's	NUMBER OF STEEL LAMINATES	Tb (IN)	TOTAL THICKNESS AT ℄ BRG (IN)	TOTAL THICKNESS AT ℄ BRG Th (IN)
PIER 2 - DOWN-STATION (SPAN 2)	1 - 12	FIXED	12	80.53	70.42	14.93	165.88	9	11.5	0.3125	0.1250	7	7	2.84	4.00	6.84
PIER 2 - UP-STATION (SPAN 3)	1 - 12	FIXED	12	53.94	63.91	12.73	130.58	9	11.5	0.3125	0.1250	7	7	2.84	4.00	6.84

LOCATION	BEAMS	STEEL LOAD PLATE DATA									
		BOTTOM MASONRY PLATE			STEEL LOAD PLATE						TOTAL THICKNESS AT ℄ BRG (IN)
		Lt (IN)	Wt (IN)	Ts (IN)	BEVEL (YES/NO)	Lt (IN)	Wt (IN)	Tf (IN)	T1 (IN)	T2 (IN)	
PIER 2 - DOWNSTATION (SPAN 2)	1 - 12	11.00	21.00	1.00	NO	10.00	26.00	3.00	-	-	4.00
PIER 2 - UPSTATION (SPAN 3)	1 - 12	11.00	21.00	1.00	YES	10.00	26.00	3.00	2.88	3.12	4.00

LEGEND

◔ - SKEW BETWEEN ℄ PIER BEARINGS AND ℄ BEARING PAD

▪▪ - 1¾" DIA HOLE THROUGH SHEAR BLOCK

DESIGN AGENCY EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
TDA	MJR	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA		0700223	

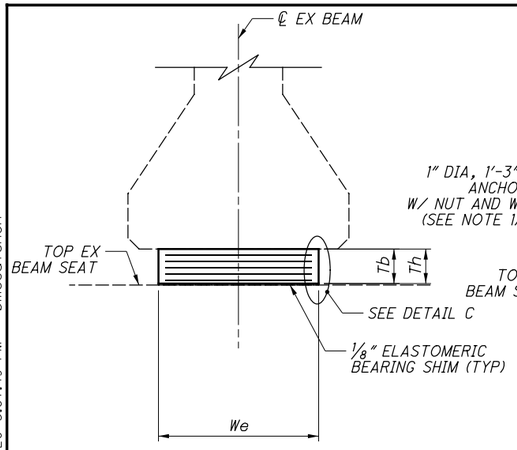
BEARING DETAILS - PIER 2
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

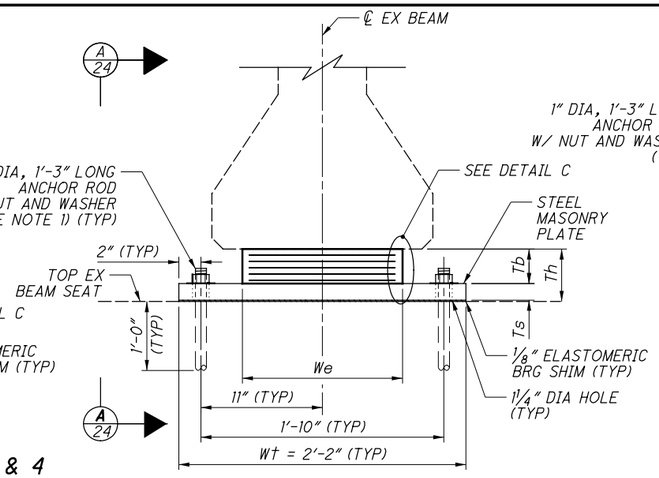
23 / 48

127 / 213

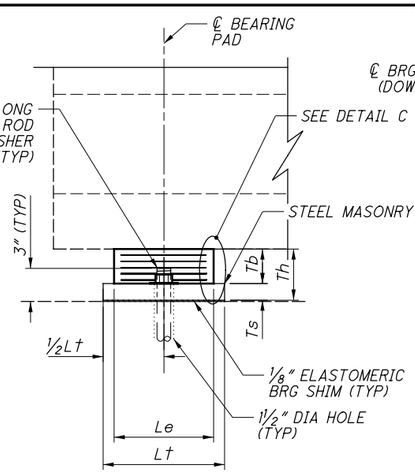
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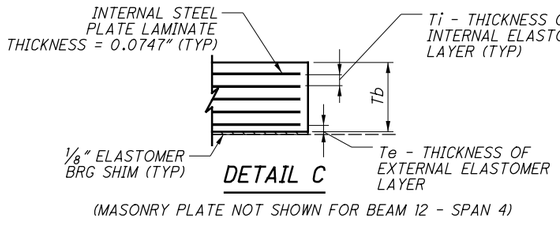
EXPANSION BEARING AT PIERS 1, 3, & 4



BEARING AT BEAM 12 (SPAN 4)



A/24 VIEW



DETAIL C

(MASONRY PLATE NOT SHOWN FOR BEAM 12 - SPAN 4)

LEGEND

■ - 9" (TYP), EXCEPT AT PIER 1 = 10"±

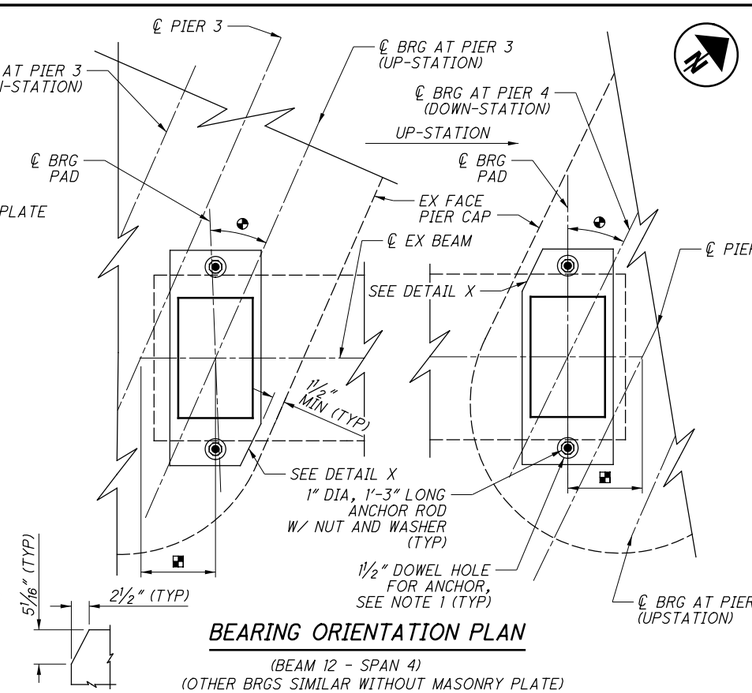
✥ - SKEW BETWEEN ℄ BRG PIER AND ℄ BRG PAD

◇ - BEAMS 7-11 = 21°49' 12"
BEAM 12 = 22° 23' 54"

NOTES

1. CARE SHALL BE TAKEN TO AVOID EXISTING REINFORCING STEEL WHEN PLACING THE ANCHOR RODS. A PACHOMETER SHALL BE USED TO LOCATE THE EXISTING REINFORCING STEEL. ANCHOR RODS SHALL BE ASTM F1544 GRADE 55 AND GALVANIZE AS PER ODOT C&MS 711.02. ANCHOR RODS SHALL BE INSTALL PER C&MS 510. ANCHOR RODS AND DOWEL HOLES SHALL BE INCLUDED FOR PAYMENT WITH ITEM 513 FOR PAYMENT.

2. FOR ELASTOMERIC BEARING AND MASONRY PLATE NOTES, SEE SHEET 23/48.



BEARING ORIENTATION PLAN

(BEAM 12 - SPAN 4)
(OTHER BRGS SIMILAR WITHOUT MASONRY PLATE)

DETAIL X

SKEW, ✥							
STRUCTURE	BEAM	PIER 1		PIER 3		PIER 4	
		UP-STATION	DOWN-STATION	UP-STATION	DOWN-STATION	UP-STATION	DOWN-STATION
LEFT BRIDGE	1 - 6	27° 25' 32"	30° 07' 36"	23° 15' 52"	24° 50' 55"	21° 49' 12"	23° 15' 52"
RIGHT BRIDGE	7 - 12	28° 01' 19"	30° 48' 09"	25° 55' 37"	23° 40' 30"	◇	23° 40' 30"

STEEL MASONRY PLATE DATA						
STRUCTURE	LOCATION	SIDE	BEAM	Lt (IN)	Wt (IN)	Ts (IN)
RIGHT BRIDGE	PIER 3	UP-STATION	12	11.00	26.00	1.625
	PIER 4	DOWN-STATION	12	11.00	26.00	0.625

ELASTOMERIC BEARING DATA																STEEL MASONRY PLATES	TOTAL HEIGHT
STRUCTURE	LOCATION	SIDE	BEAM(S)	TYPE	NUMBER REQ'D	UNFACTORED DL (KIPS)	UNFACTORED LL (KIPS) WITHOUT IMPACT	UNFACTORED FUTURE WEARING SURFACE (KIPS)	MAXIMUM DESIGN LOAD (KIPS)	Le (IN)	We1 (IN)	ti (IN)	te(IN)	NUMBER OF ti's	NUMBER OF STEEL LAMINATES	Tb (IN)	TOTAL THICKNESS AT ℄ BRG (IN)	TOTAL THICKNESS AT ℄ BRG Th (IN)
LEFT BRIDGE	PIER 1	UP-STATION & DOWN-STATION	1-6	EXP	12	85.89	71.50	17.81	175.20	10	15	0.375	0.250	8	8	3.875	-	3.875
	PIER 3	UP-STATION & DOWN-STATION	1-6	EXP	12	52.36	63.91	11.36	127.63	9	14.5	0.5	0.281	5	5	3.125	-	3.125
	PIER 4	UP-STATION & DOWN-STATION	1-6	EXP	12	51.38	64.32	11.25	126.95	9	14.5	0.5	0.281	5	5	3.125	-	3.125
RIGHT BRIDGE	PIER 1	UP-STATION & DOWN-STATION	7-12	EXP	12	83.49	70.42	17.81	171.72	10	15	0.375	0.250	8	8	3.875	-	3.875
	PIER 3	DOWN-STATION	7-12	EXP	6	51.66	64.32	11.36	127.34	9	14.5	0.5	0.281	5	5	3.125	-	3.125
	PIER 3	UP-STATION	7-11	EXP	5	51.66	64.32	11.36	127.34	9	14.5	0.5	0.281	5	5	3.125	-	3.125
	PIER 3	UP-STATION	12	EXP	1	51.66	64.32	11.36	127.34	9	14.5	0.5	0.281	5	5	3.125	1.625	4.750
	PIER 4	DOWN-STATION	7-11	EXP	5	39.23	57.34	11.03	107.60	9	14.5	0.5	0.281	5	5	3.125	-	3.125
	PIER 4	DOWN-STATION	12	EXP	1	39.23	57.34	11.03	107.60	9	14.5	0.5	0.281	5	5	3.125	0.625	3.750
	PIER 4	UP-STATION	7-12	EXP	6	39.23	57.34	11.03	107.60	9	14.5	0.5	0.281	5	5	3.125	-	3.125

DESIGN AGENCY
EMH&T
Engineers • Architects • Surveyors • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 www.emht.com

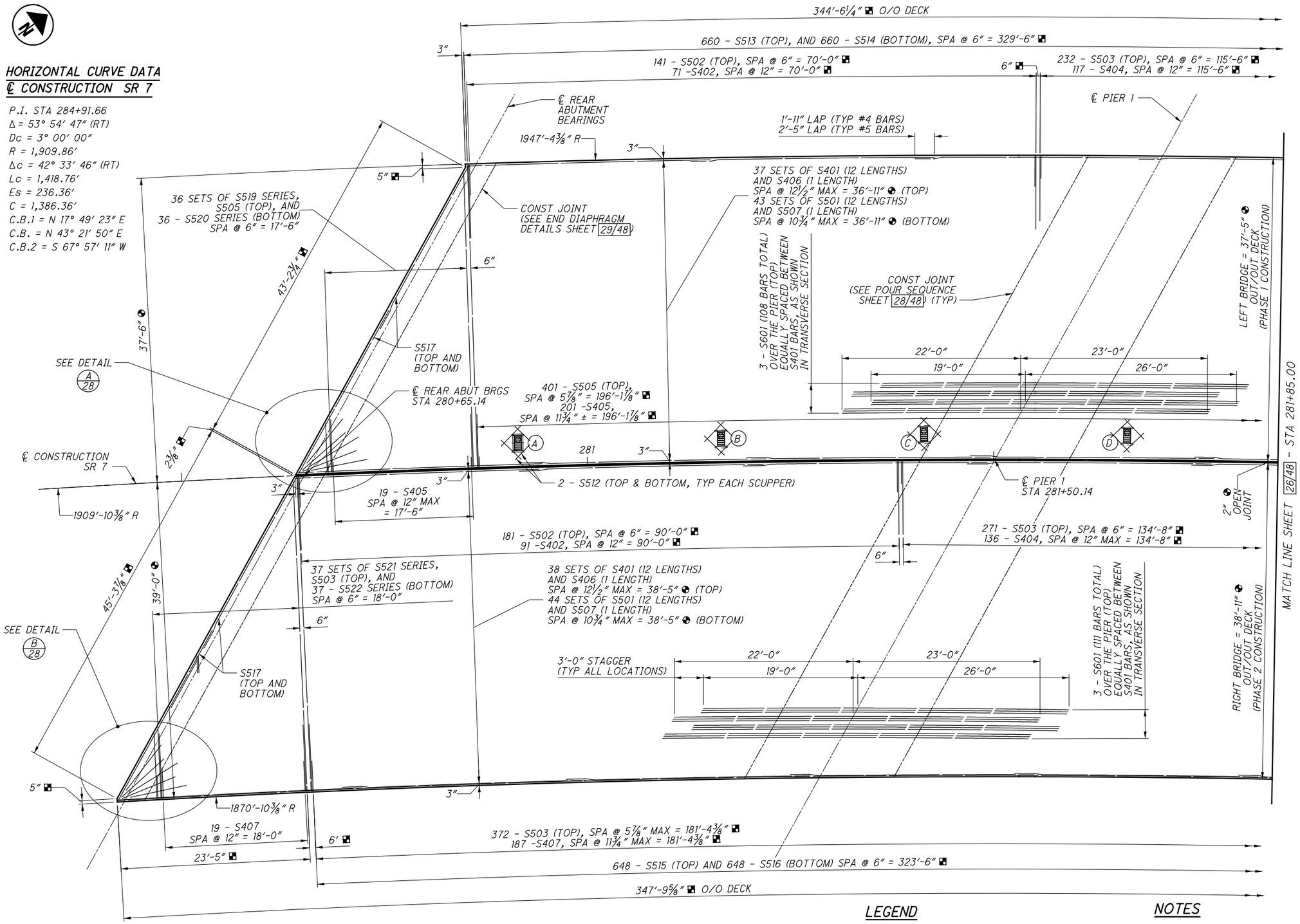
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TDA	MJR	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA		0700223	

BEARING DETAILS - PIERS 1, 3 & 4
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

24/48
128/213

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HORIZONTAL CURVE DATA
℄ CONSTRUCTION SR 7

P.I. STA 284+91.66
Δ = 53° 54' 47" (RT)
Dc = 3° 00' 00"
R = 1,909.86'
Δc = 42° 33' 46" (RT)
Lc = 1,418.76'
Es = 236.36'
C = 1,386.36'
C.B.1 = N 17° 49' 23" E
C.B. = N 43° 21' 50" E
C.B.2 = S 67° 57' 11" W

PLAN

(PARAPET AND PARAPET REINFORCING NOT SHOWN FOR CLARITY)

LEGEND

■ - MEASURED ALONG EDGE OF DECK

◕ - MEASURED RADIALLY

(X) - SCUPPER LOCATION, SEE SHEET 27/48

NOTES

1. THE CONCRETE DECK AND APPROACH SLABS SHALL NOT BE PLACED IN THE SAME CONCRETE POUR.
2. THE TRANSVERSE REINFORCING SHALL BE PLACED RADIALLY.

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EMH&T
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5500 New Albany Road, Columbus, Ohio 43054
Phone: (614) 775-4500

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RMW	-	0700223	

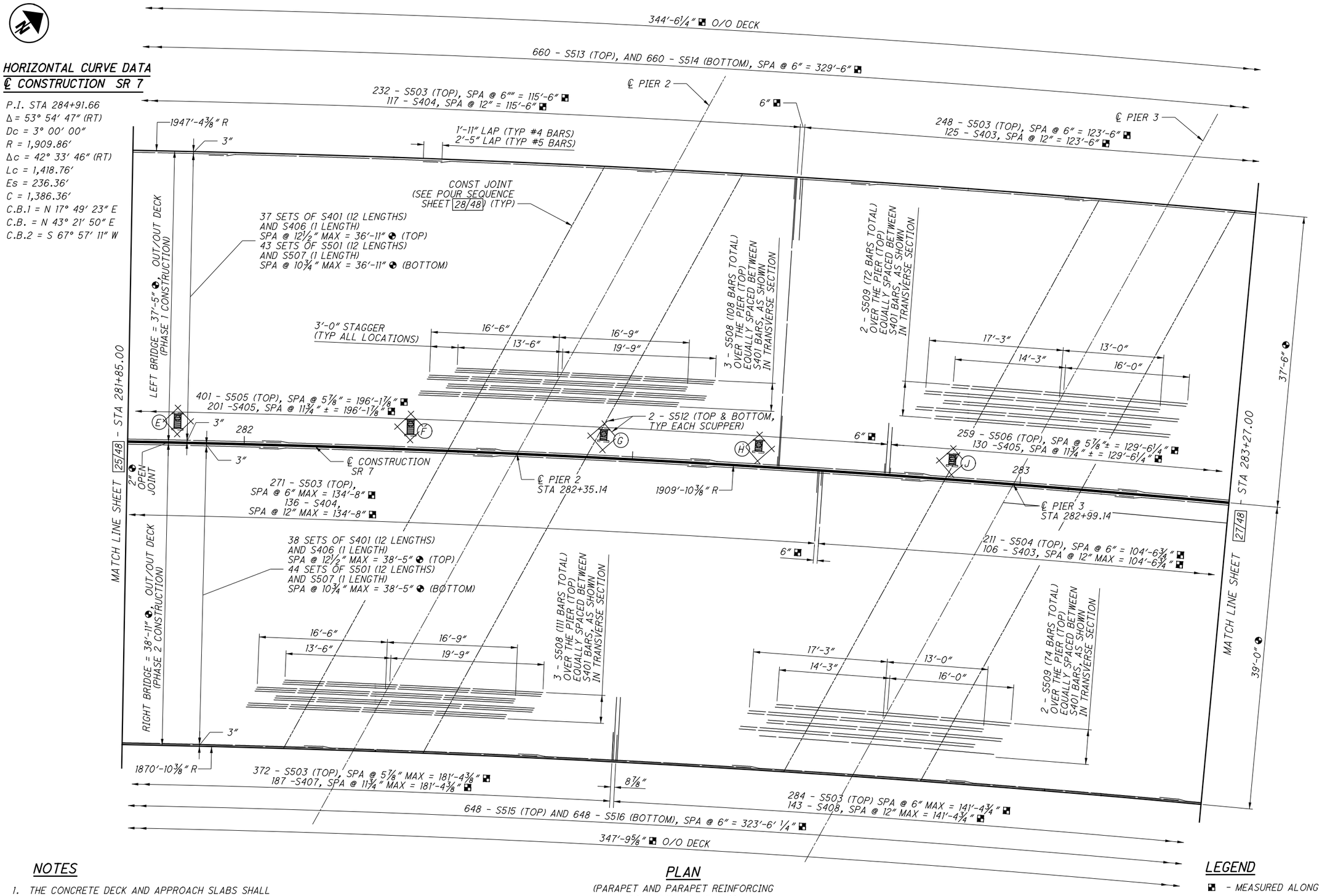
DECK PLAN
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

25 / 48

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HORIZONTAL CURVE DATA
℄ CONSTRUCTION SR 7

P.I. STA 284+91.66
Δ = 53° 54' 47" (RT)
Dc = 3° 00' 00"
R = 1,909.86'
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Lc = 1,418.76'
Es = 236.36'
C = 1,386.36'
C.B.1 = N 17° 49' 23" E
C.B. = N 43° 21' 50" E
C.B.2 = S 67° 57' 11" W

NOTES

1. THE CONCRETE DECK AND APPROACH SLABS SHALL NOT BE PLACED IN THE SAME CONCRETE POUR.
2. THE TRANSVERSE REINFORCING SHALL BE PLACED RADIALLY.

PLAN

(PARAPET AND PARAPET REINFORCING NOT SHOWN FOR CLARITY)

LEGEND

■ - MEASURED ALONG EDGE OF DECK
◒ - MEASURED RADIALLY
(X) - SCUPPER LOCATION, SEE SHEET 27/48

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Phone: (614) 775-4500 www.emht.com

DESIGNED	DRAWN	REVIEWED	DATE
TDA	GB	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	0700223	

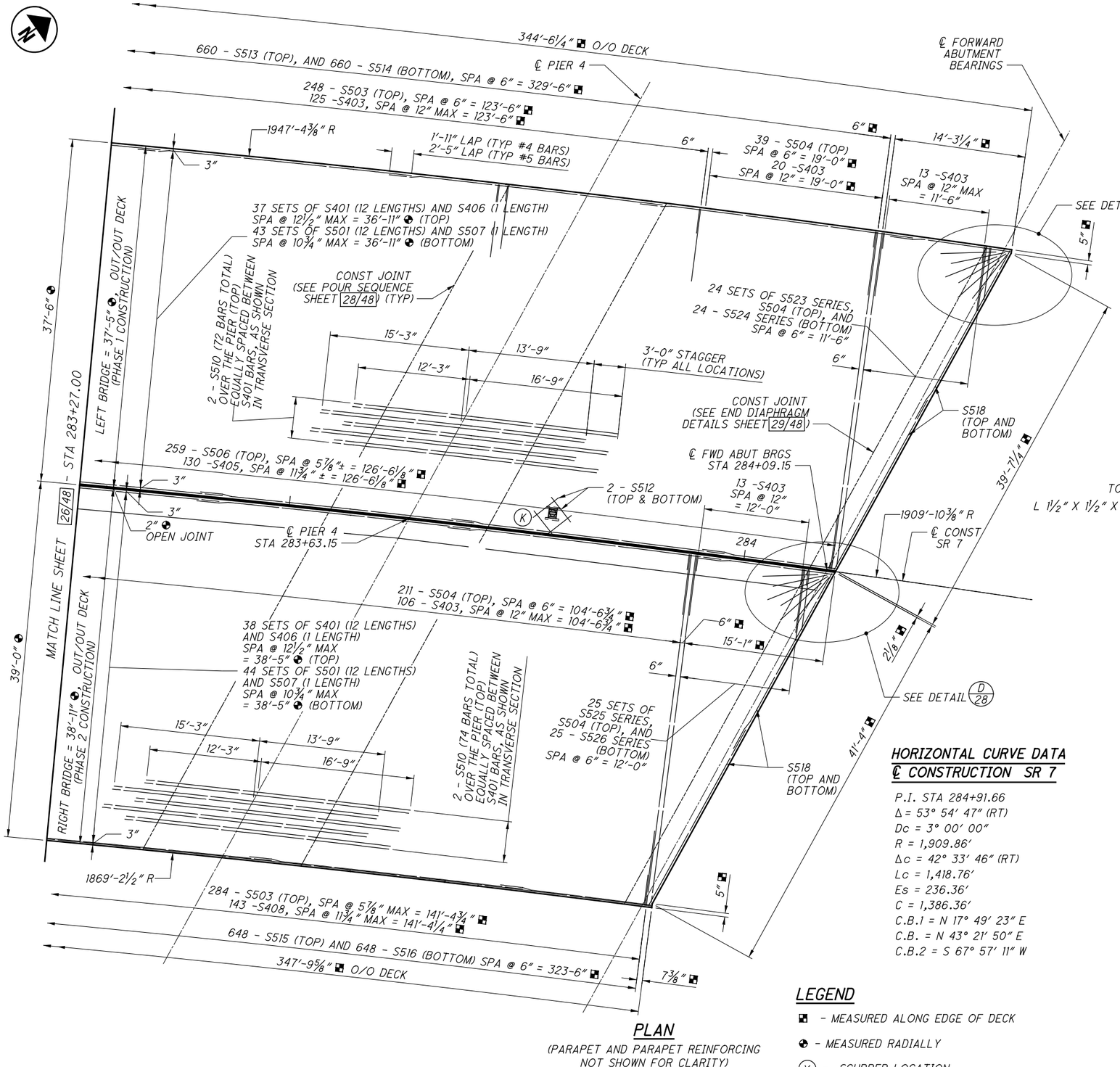
DECK PLAN (CONT)
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

26/48

130/213

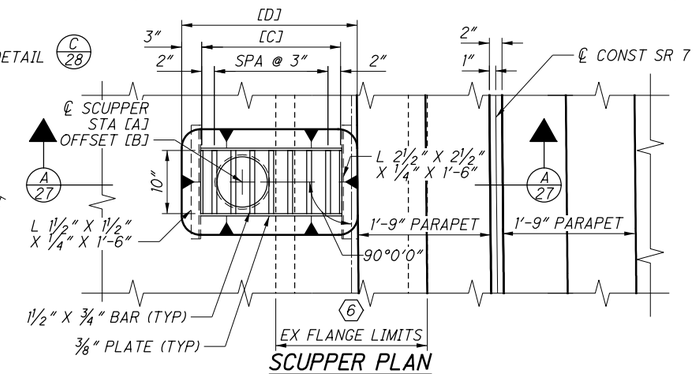
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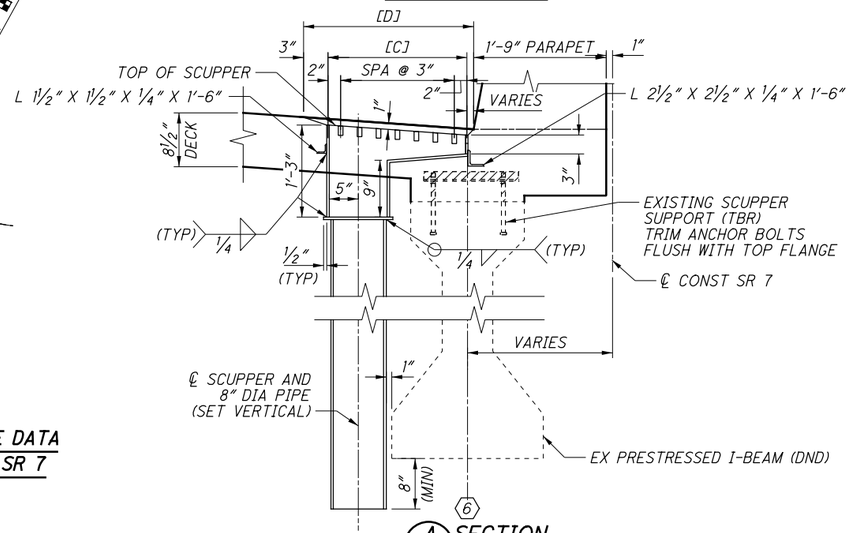
PLAN

(PARAPET AND PARAPET REINFORCING NOT SHOWN FOR CLARITY)

SCUPPER DIMENSIONS				
SCUPPER	STA [A]	OFFSET [B]	WIDTH [C]	DIM [D]
A	280+91.54	3.36' LT	1'-10"	2'-3"
B	281+16.49	3.29' LT	1'-10"	2'-3"
C	281+41.45	3.55' LT	1'-10"	2'-6"
D	281+66.41	3.41' LT	1'-10"	2'-4"
E	281+91.37	3.15' LT	1'-10"	2'-1"
F	282+21.32	3.26' LT	1'-10"	2'-3"
G	282+46.16	3.08' LT	1'-4"	2'-0"
H	282+66.13	2.78' LT	1'-4"	1'-9"
J	282+91.10	2.69' LT	1'-4"	1'-8"
K	283+78.66	2.40' LT	1'-1"	1'-4"



SCUPPER PLAN



A/27 SECTION

(EX SCUPPER PAN AND PROP DECK REINFORCING NOT SHOWN FOR CLARITY)

HORIZONTAL CURVE DATA
℄ CONSTRUCTION SR 7

P.I. STA 284+91.66
Δ = 53° 54' 47" (RT)
Dc = 3° 00' 00"
R = 1,909.86'
Δc = 42° 33' 46" (RT)
Lc = 1,418.76'
Es = 236.36'
C = 1,386.36'
C.B.1 = N 17° 49' 23" E
C.B. = N 43° 21' 50" E
C.B.2 = S 67° 57' 11" W

LEGEND

◪ - MEASURED ALONG EDGE OF DECK

◔ - MEASURED RADIALLY

(X) - SCUPPER LOCATION

▨ - DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

NOTES

1. THE CONCRETE DECK AND APPROACH SLABS SHALL NOT BE PLACED IN THE SAME CONCRETE POUR.
2. THE TRANSVERSE REINFORCING SHALL BE PLACED RADIALLY.
3. 8" DIAMETER VERTICAL PIPES AND SPECIALS, CLEANOUTS, AND SUPPORT SYSTEMS SHALL BE LOW OR MILD CARBON STEEL CONFORMING TO ITEM 513, AVAILABLE COMMERCIALLY, AND SHALL BE GALVANIZED ACCORDING TO CMS ITEM 711.02.
4. THE SCUPPERS AND SCUPPER SUPPORTS SHALL BE INCLUDED WITH ITEM 518 - SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN, FOR PAYMENT.
5. SUBMIT SHOP DRAWINGS ACCORDING TO CMS 501.04 FOR APPROVAL. PREPARATION OF SHOP DRAWINGS SHALL BE INCIDENTAL TO ITEM 518 - SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN, FOR PAYMENT.

DESIGN AGENCY
EMH&T
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, Ohio 43054
Phone: (614) 775-4500 www.emht.com

DESIGNED	DRAWN	REVIEWED	DATE
TDA	GB	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	0700223	

DECK PLAN (CONT) AND SCUPPER DETAILS

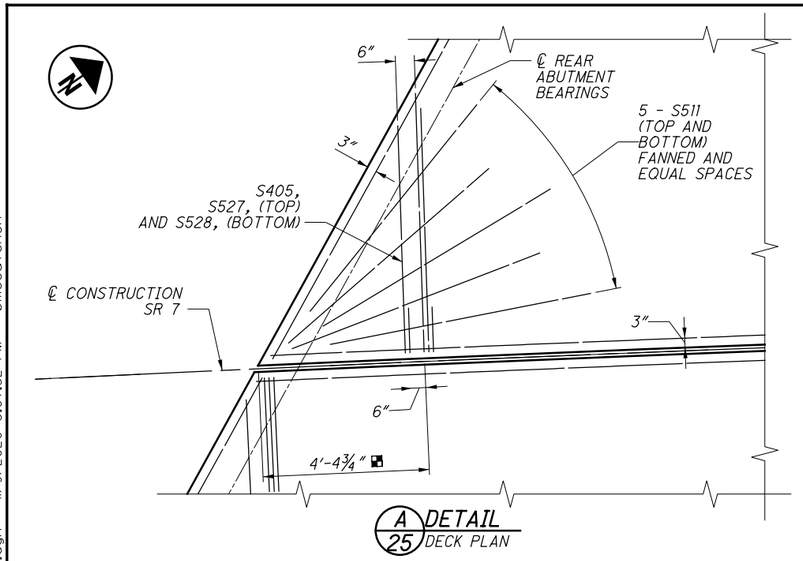
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

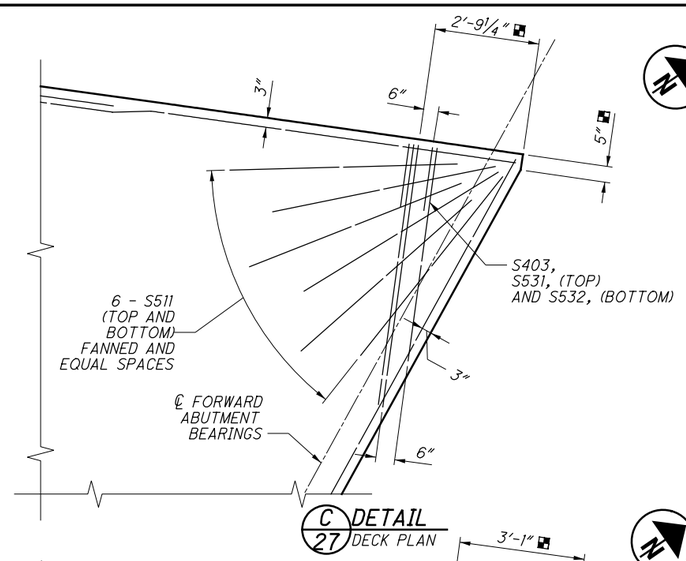
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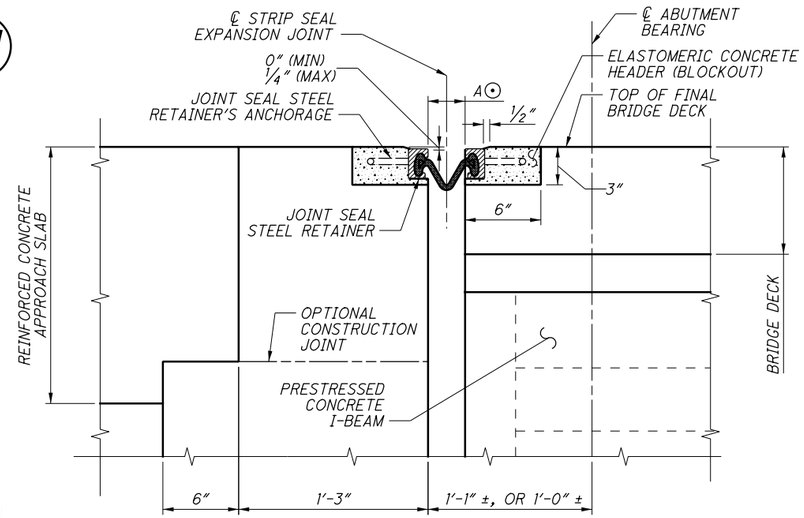
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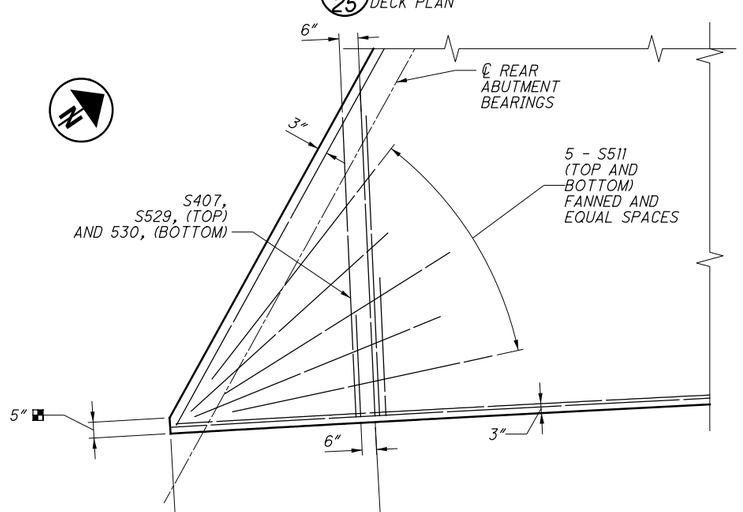
A 25 DETAIL
DECK PLAN



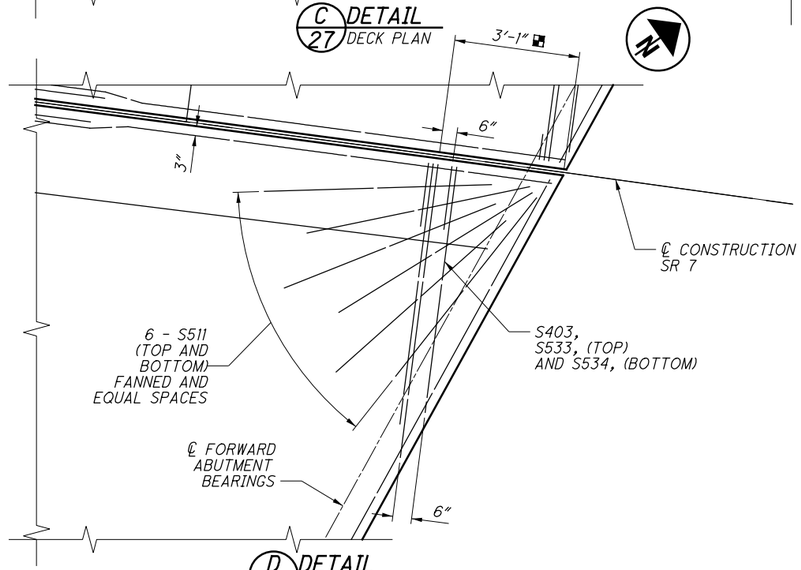
C 27 DETAIL
DECK PLAN



EXPANSION JOINT DETAIL

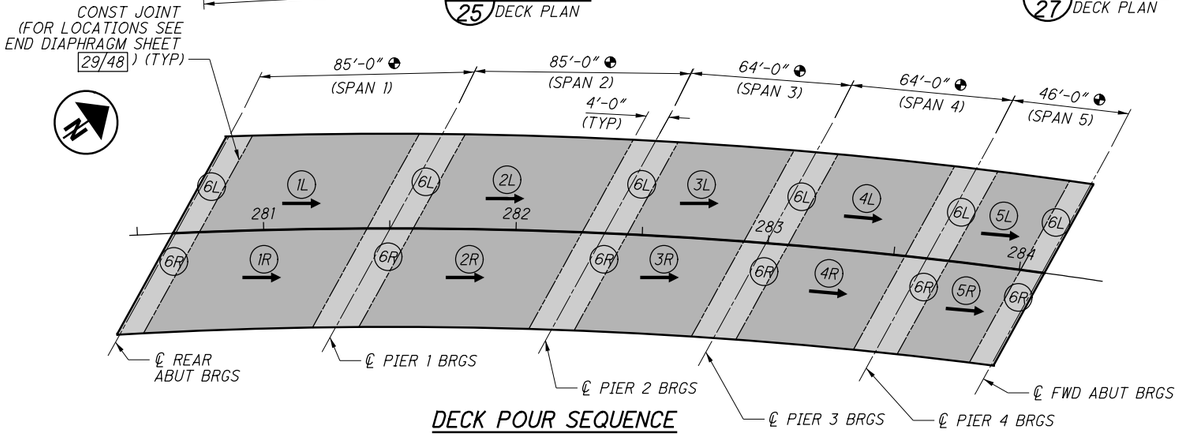


B 25 DETAIL
DECK PLAN

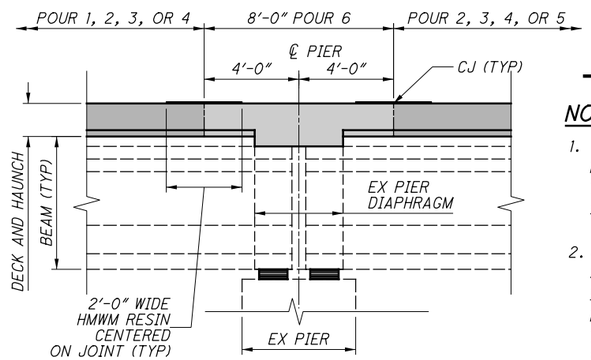


D 27 DETAIL
DECK PLAN

3″ STRIP SEAL EXPANSION JOINT DETAILS		
AMBIENT TEMPERATURE (DEGREES)	REAR ABUTMENT "A" ⊙ (IN.)	FORWARD ABUTMENT "A" ⊙ (IN.)
30	1.92	1.95
40	1.81	1.82
50	1.70	1.70
60	1.59	1.57
70	1.48	1.44
80	1.37	1.31
90	1.25	1.18



DECK POUR SEQUENCE



INTERMEDIATE DECK POUR DETAIL

LEGEND

- ■ - MEASURED ALONG EDGE OF DECK
- ◕ - MEASURED ALONG ℄ CONST SR 7
- ➡ - DIRECTION OF POUR

NOTES

1. FOR ADDITIONAL STRIP SEAL EXPANSION JOINT DETAILS NOT SHOWN ON THIS SHEET, INCLUDING JOINT TERMINATION DETAILS INSIDE PARAPET, REFER TO ODOT STANDARD DRAWING EXJ-6-17, REVISION 01-19-2018.
2. PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS AFTER THE DECK PLACEMENT IN THE ADJACENT SPAN IS COMPLETE. PROCEDURES THAT PLACE THE PIER AND/OR ABUTMENT DIAPHRAGMS WITH THE DECK CONCRETE MAY BE APPROVED BY THE ENGINEER IF THE PLACEMENT SUBMITTAL CAN ASSURE THAT THE DECK CONCRETE IN THE ADJACENT SPAN WILL BE PLACED BEFORE CONCRETE IN THE DIAPHRAGM HAS REACHED ITS INITIAL SET.

DESIGN AGENCY
EMH&T
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, Ohio 43054
Phone: 614.775.4500 www.emht.com

DESIGNED	DRAWN	REVIEWED	DATE
TDA	GB	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	0700223	

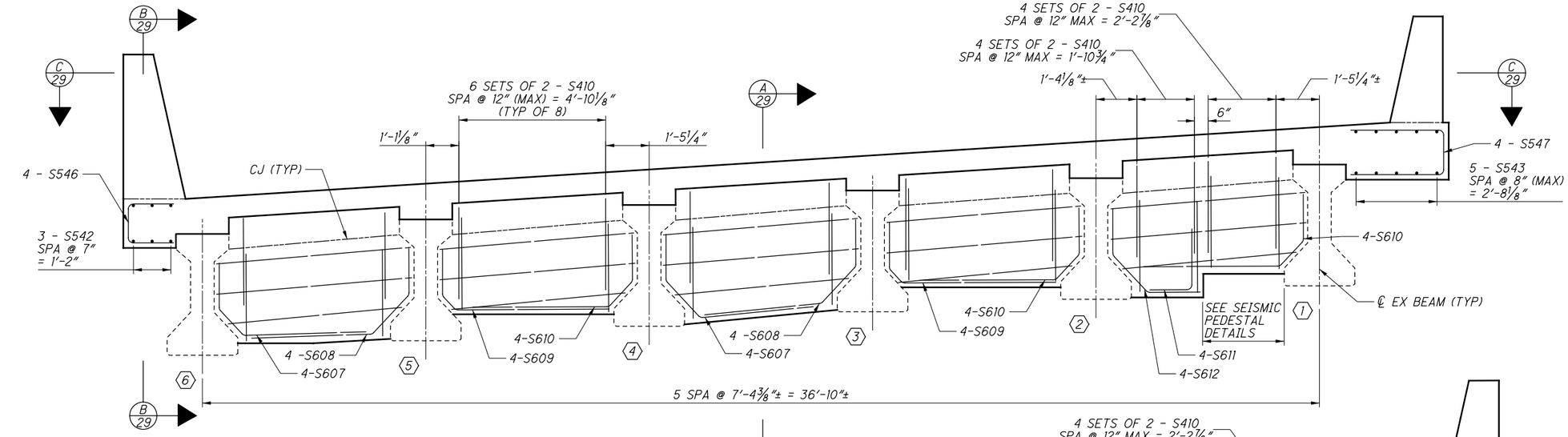
DECK DETAILS
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

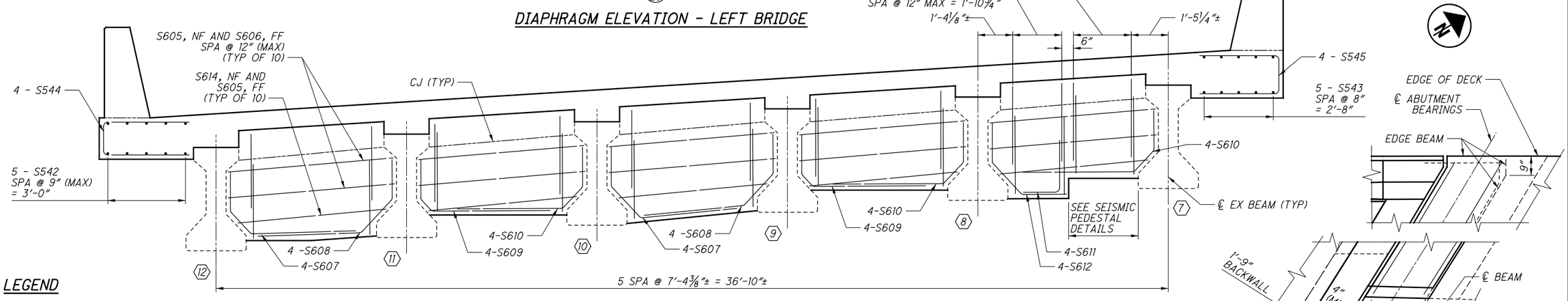
28/48

132/213

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DIAPHRAGM ELEVATION - LEFT BRIDGE



LEGEND

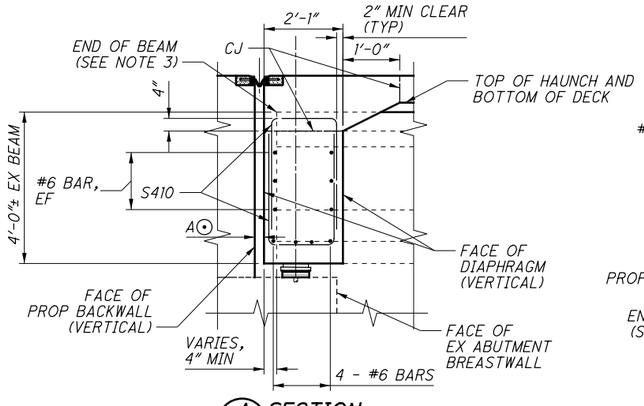
(X) - EX BEAM "X"

A⊙ - EXPANSION JOINT OPENING. SEE SHEET 28/48 FOR DETAILS

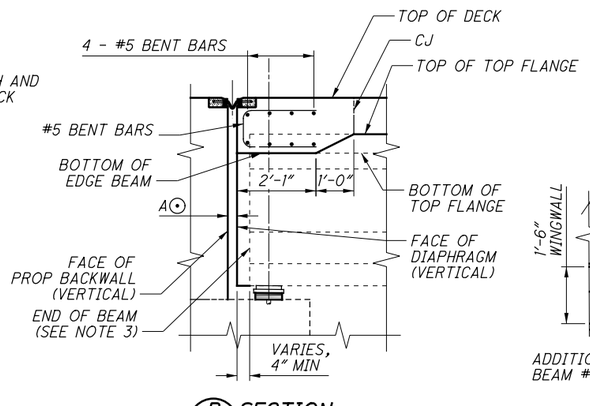
NOTES

1. FOR ADDITIONAL EXPANSION JOINT END DIAPHRAGM DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWING PSID-1-13, REVISION 07-20-2018.
2. DECK REINFORCING NOT SHOWN FOR CLARITY.
3. TRIM EXPOSED STRANDS FLUSH WITH THE BACK SURFACE OF THE PRESTRESSED I-BEAM. CLEAN BEAM ENDS PRIOR TO CONSTRUCTING END DIAPHRAGMS.
4. PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS AFTER THE DECK PLACEMENT IN THE ADJACENT SPAN IS COMPLETE. PROCEDURES THAT PLACE THE ABUTMENT/PIER DIAPHRAGM WITH THE DECK CONCRETE MAY BE APPROVED BY THE ENGINEER IF THE PLACEMENT SUBMITTAL CAN ASSURE THAT THE DECK CONCRETE IN THE ADJACENT SPAN WILL BE PLACED BEFORE CONCRETE IN THE DIAPHRAGM HAS REACHED IT'S INITIAL SET.

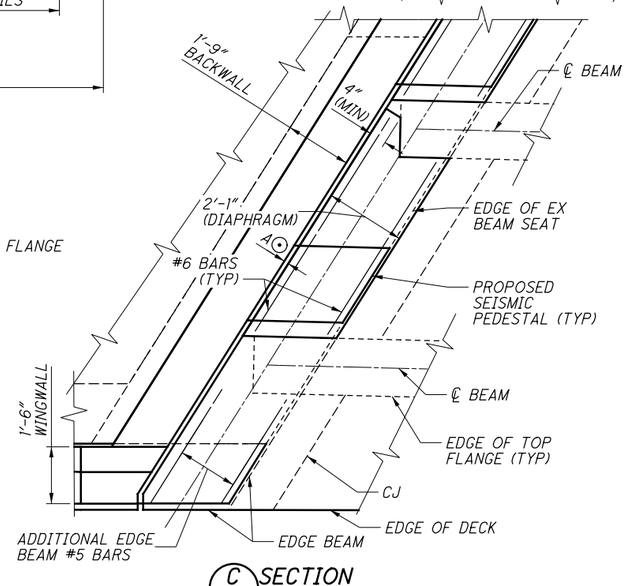
DIAPHRAGM ELEVATION - RIGHT BRIDGE



A 29 SECTION (PARTIAL ABUTMENT SHOWN)



B 29 SECTION (PARAPET NOT SHOWN)



C 29 SECTION (BARS PARALLEL TO BEAM NOT SHOWN FOR CLARITY)

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Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, Ohio 43054
Phone: 614.775.4500

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RMW	-	0700223	

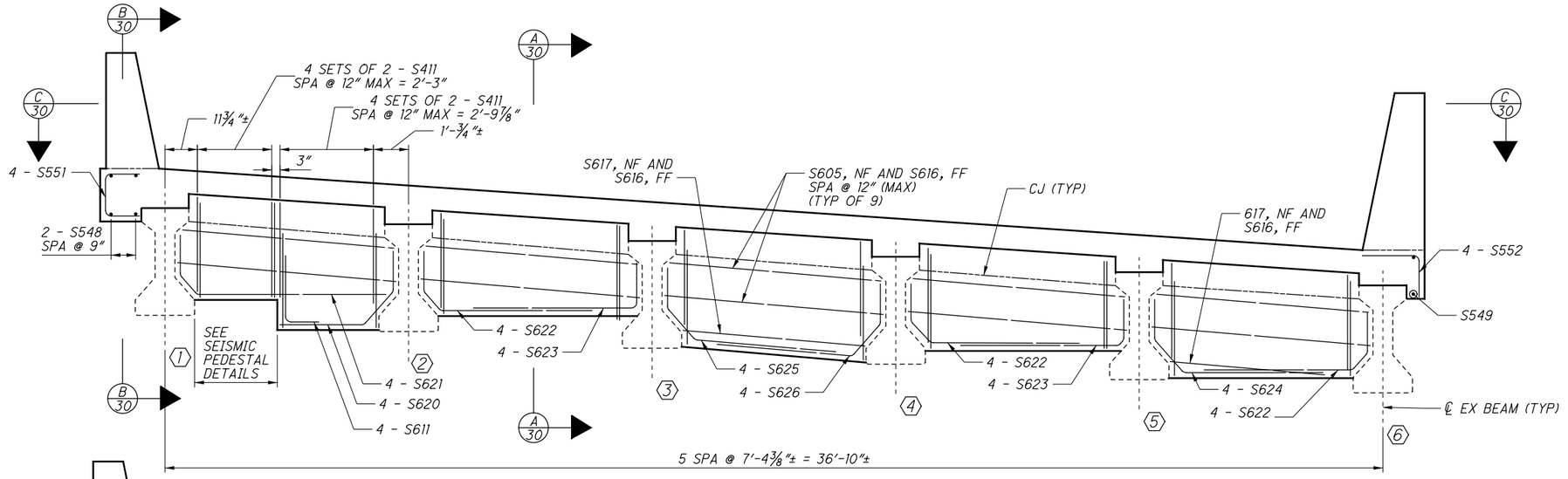
REAR ABUTMENT DIAPHRAGM DETAILS
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

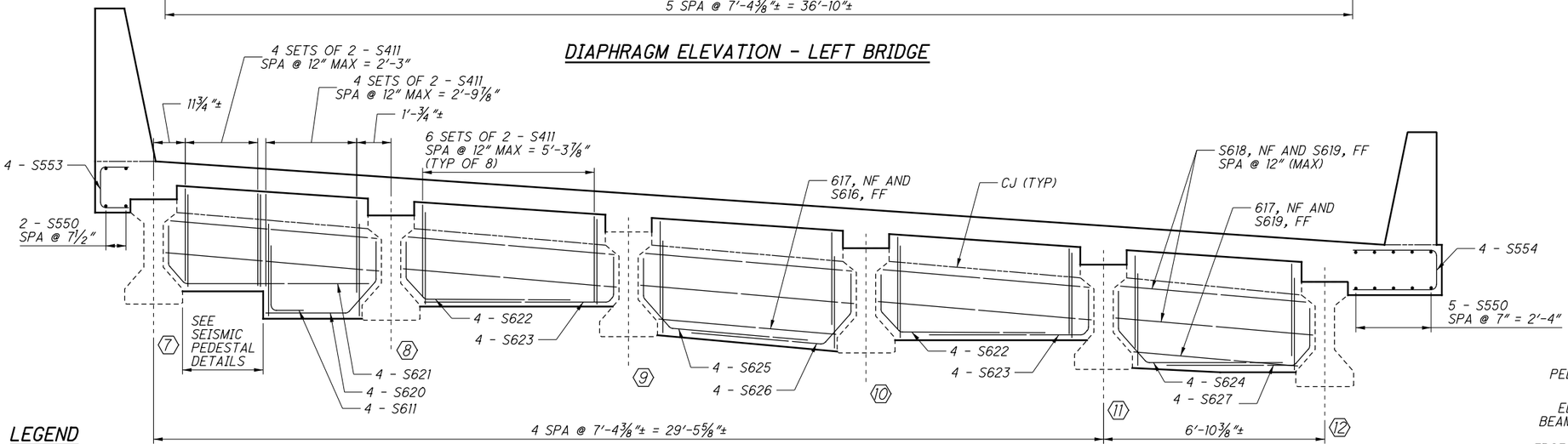
29 / 48

133 / 213

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DIAPHRAGM ELEVATION - LEFT BRIDGE



DIAPHRAGM ELEVATION - RIGHT BRIDGE

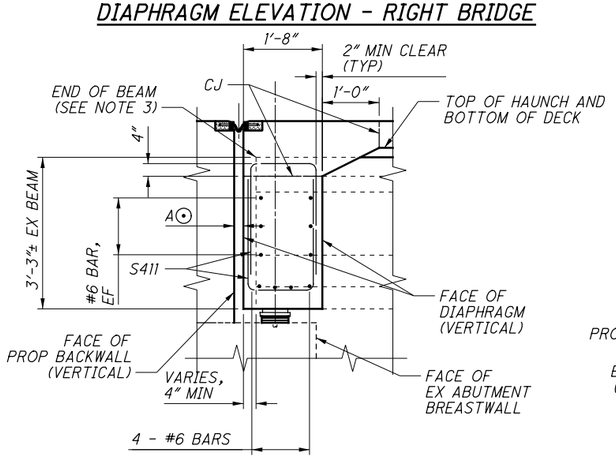
LEGEND

⟨X⟩ - EX BEAM "X"

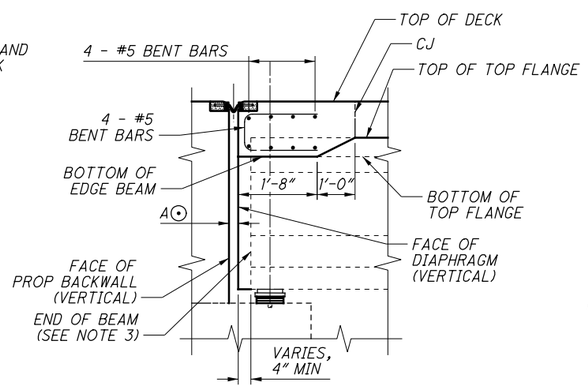
A⊙ - EXPANSION JOINT OPENING. SEE SHEET 28/48 FOR DETAILS

NOTES

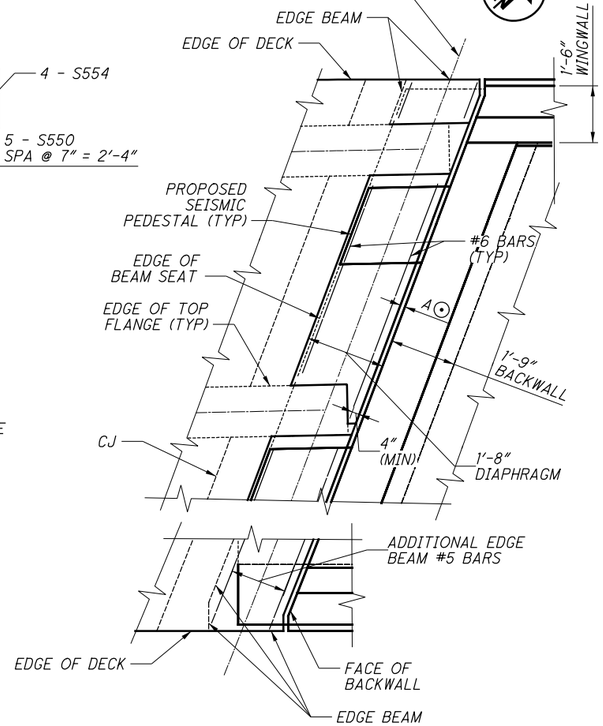
1. FOR ADDITIONAL EXPANSION JOINT END DIAPHRAGM DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWING PSID-1-13, REVISION 07-20-2018.
2. DECK REINFORCING NOT SHOWN FOR CLARITY.
3. TRIM EXPOSED STRANDS FLUSH WITH THE BACK SURFACE OF THE PRESTRESSED I-BEAM. CLEAN BEAM ENDS PRIOR TO CONSTRUCTING END DIAPHRAGMS.
4. PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS AFTER THE DECK PLACEMENT IN THE ADJACENT SPAN IS COMPLETE. PROCEDURES THAT PLACE THE ABUTMENT/PIER DIAPHRAGM WITH THE DECK CONCRETE MAY BE APPROVED BY THE ENGINEER IF THE PLACEMENT SUBMITTAL CAN ASSURE THAT THE DECK CONCRETE IN THE ADJACENT SPAN WILL BE PLACED BEFORE CONCRETE IN THE DIAPHRAGM HAS REACHED ITS INITIAL SET.



A 30 SECTION (PARTIAL ABUTMENT SHOWN)



B 30 SECTION (PARAPET NOT SHOWN)



C 30 SECTION (BARS PARALLEL TO BEAM NOT SHOWN FOR CLARITY)

DESIGN AGENCY EMH&T

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FORWARD ABUTMENT DIAPHRAGM DETAILS

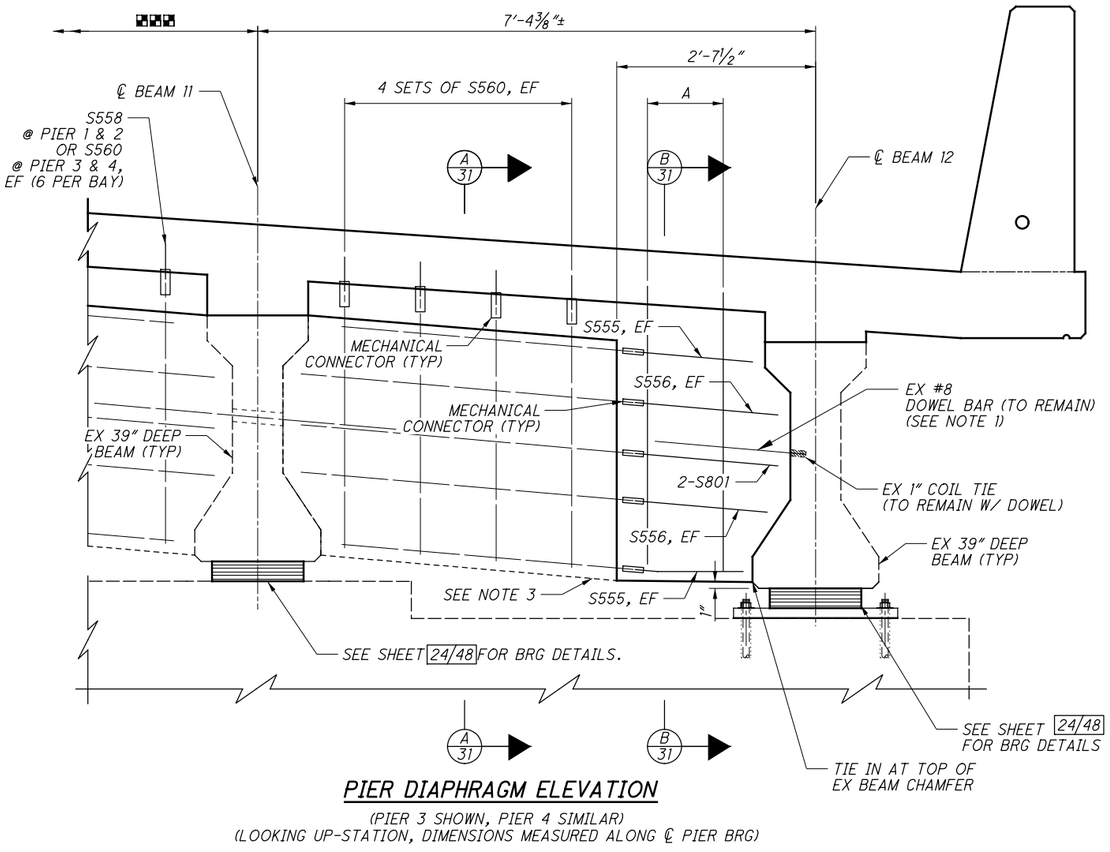
BRIDGE NO. BEL-7-1152C

SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48

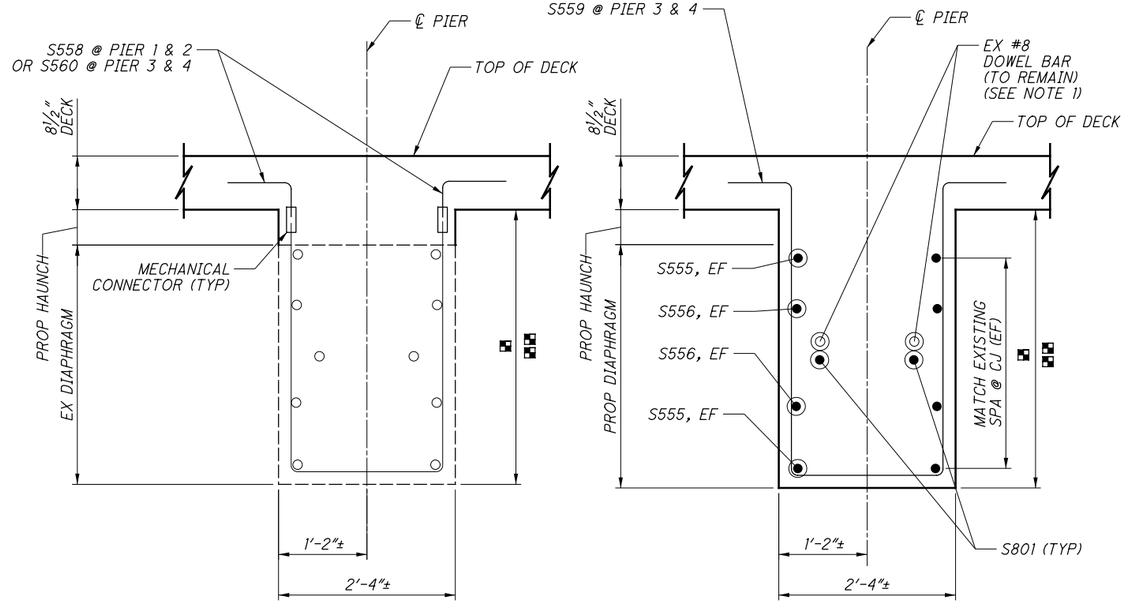
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PIER DIAPHRAGM ELEVATION

(PIER 3 SHOWN, PIER 4 SIMILAR)
(LOOKING UP-STATION, DIMENSIONS MEASURED ALONG ℄ PIER BRG)

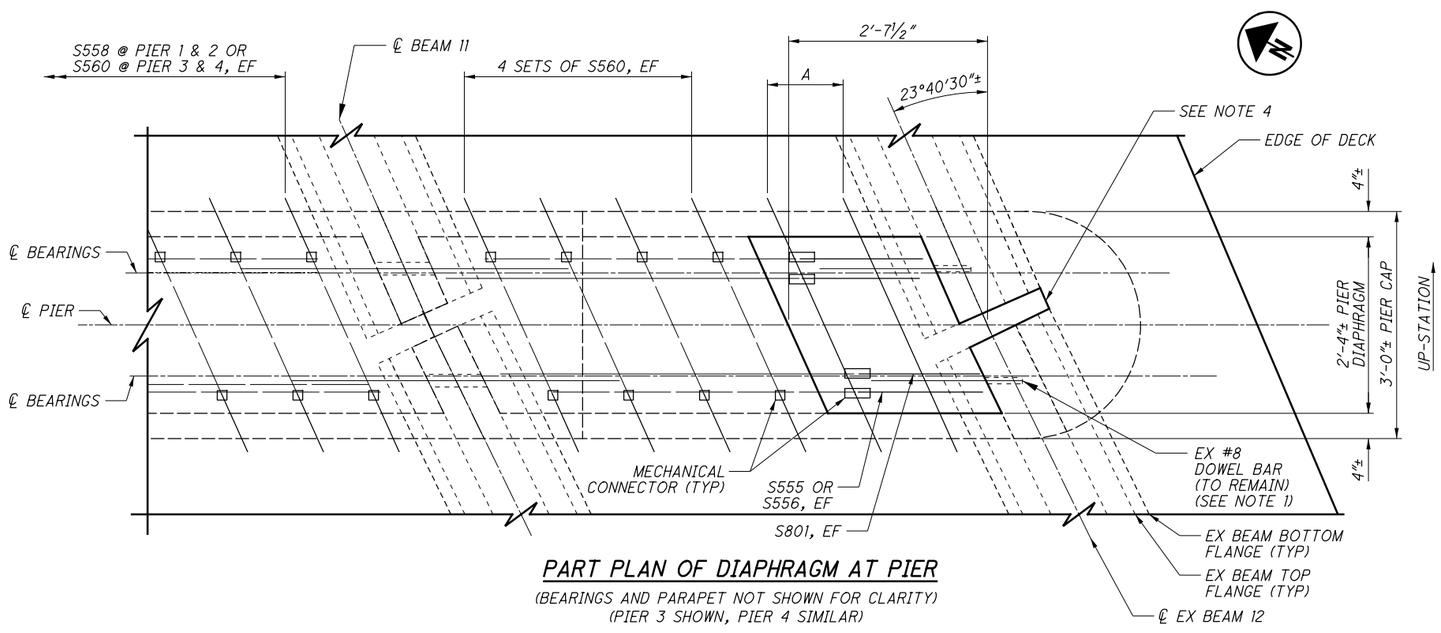


A 31 SECTION

(PIER 3 SHOWN, ALL OTHER PIER DIAPHRAGMS SIMILAR)
PIER CAP, BEARINGS, AND DECK REINFORCING NOT SHOWN FOR CLARITY

B 31 SECTION

(PIER 3 SHOWN)
PIER CAP, BEARINGS, AND DECK REINFORCING NOT SHOWN FOR CLARITY



PART PLAN OF DIAPHRAGM AT PIER

(BEARINGS AND PARAPET NOT SHOWN FOR CLARITY)
(PIER 3 SHOWN, PIER 4 SIMILAR)

LEGEND

A - 2-S559 BARS @ PIER 3 & 4
@ 1'-0" MAX SPA = 1'-0"

▪ - VARIES, 3'-8"± MAX (PIER 3)

▪▪ - VARIES, 3'-8"± MAX (PIER 4)

▪▪▪ - PIER DIAPHRAGM LIMITS DEPICTED SHALL BE APPLIED TO ALL LOCATIONS, EXCEPT AS SHOWN IN THE ADJACENT DETAIL FOR BEAM 12 AT PIERS 3 & 4

NOTES

1. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO NOT DISTURB EX DOWEL BAR.
2. SEE SHEET 104/213 FOR LIGHTING DETAILS AT PIER 3.
3. CONTRACTOR SHALL SUPPORT PORTION OF DIAPHRAGM TO REMAIN. SHORING SHALL REMAIN IN PLACE DURING DECK POUR. SHORING MAY BE REMOVED ONCE CONCRETE HAS CURED IN ACCORDANCE WITH C&MS 511.
4. CONCRETE BETWEEN OUTSIDE BEAM ENDS SHALL EXTEND TO OUTSIDE FACE OF BEAMS.
5. PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS AFTER THE DECK PLACEMENT IN THE ADJACENT SPAN IS COMPLETE. PROCEDURES THAT PLACE THE ABUTMENT/PIER DIAPHRAGM WITH THE DECK CONCRETE MAY BE APPROVED BY THE ENGINEER IF THE PLACEMENT SUBMITTAL CAN ASSURE THAT THE DECK CONCRETE IN THE ADJACENT SPAN WILL BE PLACED BEFORE CONCRETE IN THE DIAPHRAGM HAS REACHED IT'S INITIAL SET.

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Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, Ohio 43054
Phone: 614.775.4500

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TDA		0700223	

PIER DIAPHRAGM DETAILS

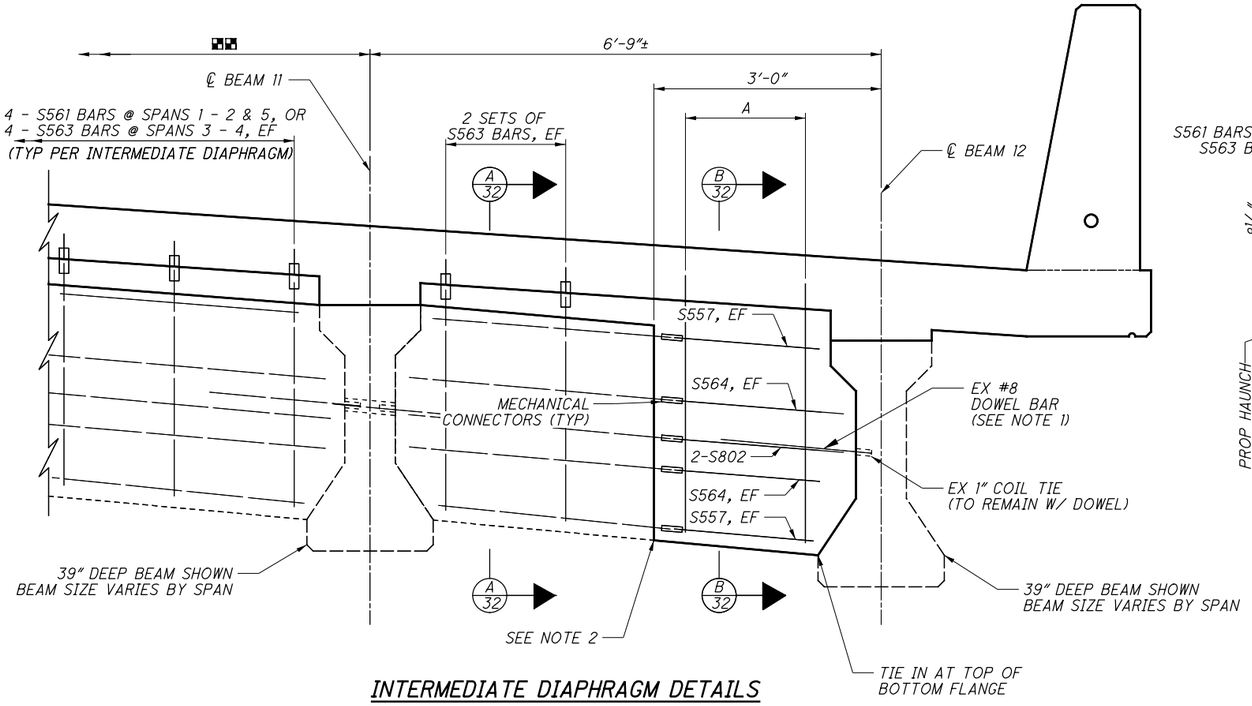
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

31 / 48

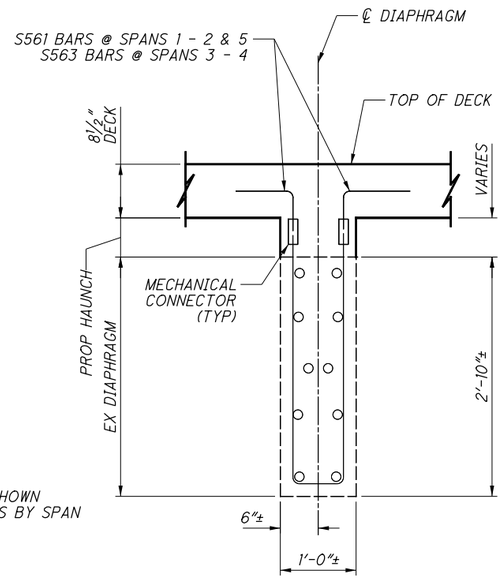
135
213

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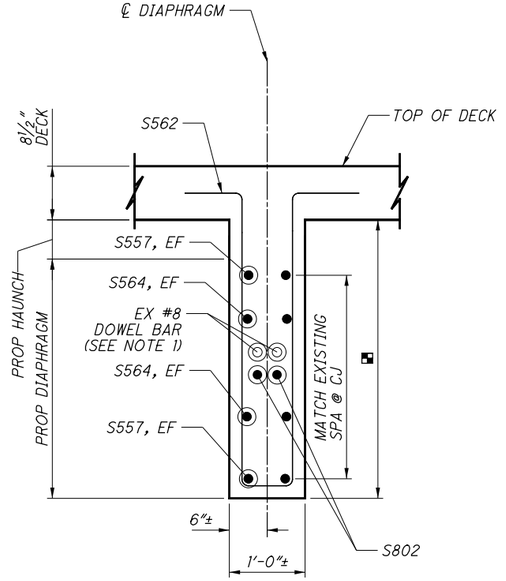
INTERMEDIATE DIAPHRAGM DETAILS

(LOOKING UP-STATION, DIMENSIONS MEASURED ALONG ℄ DIAPHRAGM)
(LOOKING UP-STATION, DIMENSIONS MEASURED ALONG ℄ DIAPHRAGM)



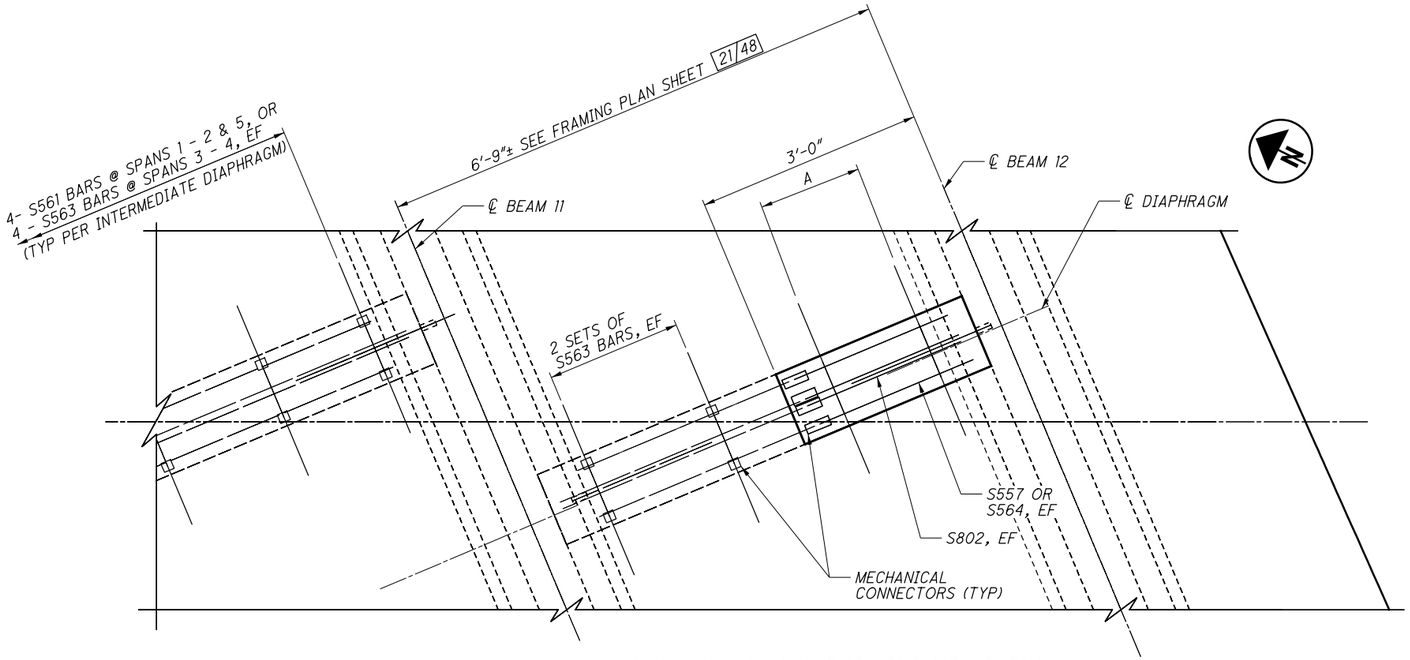
A/32 SECTION

(BAY BETWEEN BEAM 11 AND 12
MID SPAN 4 SHOWN, ALL OTHER
INTERMEDIATE DIAPHRAGMS SIMILAR)
(DECK REINFORCING
NOT SHOWN FOR CLARITY)



B/32 SECTION

(DECK REINFORCING
NOT SHOWN FOR CLARITY)



PART PLAN OF INTERMEDIATE DIAPHRAGM

(PARAPET NOT SHOWN FOR CLARITY)
(LOOKING UP-STATION)

LEGEND

A: 2-S562 SPA @ 1'-6"

■ - VARIES, 3'-8" MAX

■■ - INTERMEDIATE DIAPHRAGM LIMITS DEPICTED SHALL BE APPLIED TO ALL INTERMEDIATE DIAPHRAGM LOCATIONS, EXCEPT AS SHOWN IN THE ADJACENT DETAIL FOR BEAM 12 IN SPAN 4

NOTES

1. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO NOT DISTURB EX DOWEL BAR.
2. CONTRACTOR SHALL SUPPORT PORTION OF DIAPHRAGM TO REMAIN. SHORING SHALL REMAIN IN PLACE DURING DECK POUR. SHORING MAY BE REMOVED ONCE CONCRETE HAS CURED IN ACCORDANCE WITH C&MS 511.

DESIGN AGENCY
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Engineers • Architects • Surveyors
Environmental Professionals
5500 New Albany Road, Columbus, OH 43054
614.775.4500 www.emht.com

DESIGNED	DRAWN	REVIEWED	DATE
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA		0700223	

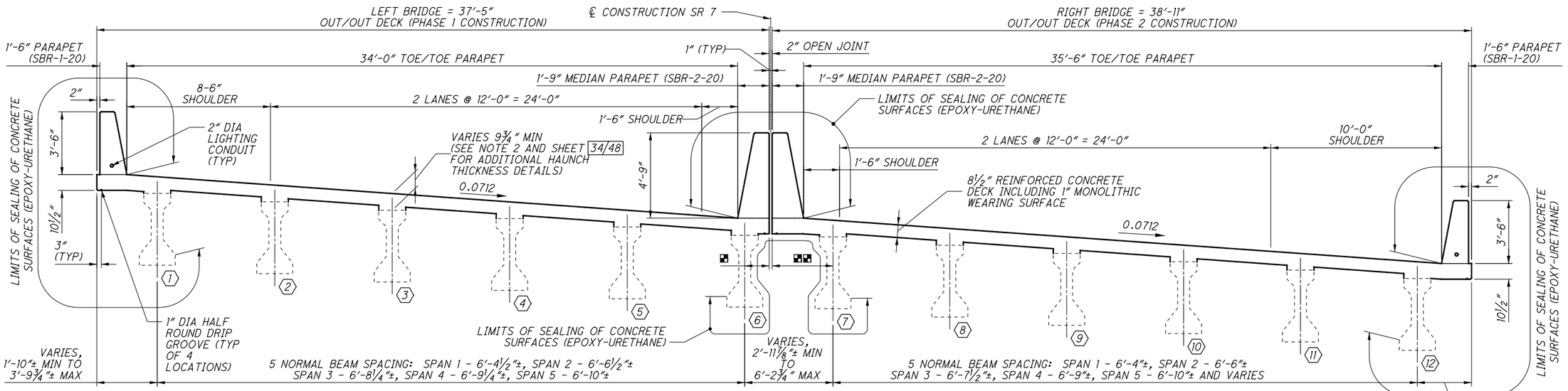
INTERMEDIATE DIAPHRAGM DETAILS
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

32/48

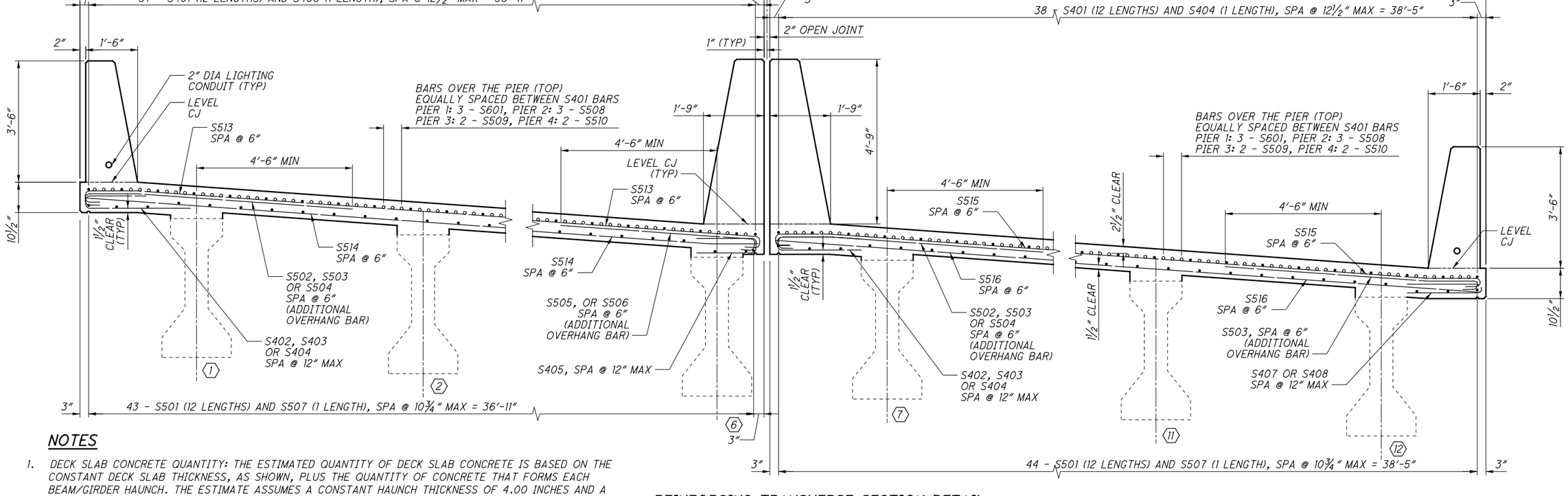
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TRANSVERSE SECTION

(INTERMEDIATE DIAPHRAGM NOT SHOWN FOR CLARITY)



NOTES

1. DECK SLAB CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH BEAM/GIRDER HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF 4.00 INCHES 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 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 511.23.
2. FOR PARAPET DETAILS SEE SHEETS 39/48 THROUGH 41/48

REINFORCING TRANSVERSE SECTION DETAIL

(PARAPET REINFORCING NOT SHOWN FOR CLARITY)

LEGEND

⟨X⟩ - EX BEAM "X"

▪ - VARIES, 11⅞"± MINIMUM TO 2'-2½"± MAXIMUM

▪▪ - VARIES, 1'-8"± MINIMUM TO 3'-11¼"± MAXIMUM

DESIGN AGENCY: EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
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RMW	-	0700223	

TRANSVERSE SECTION
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

33/48

137/213

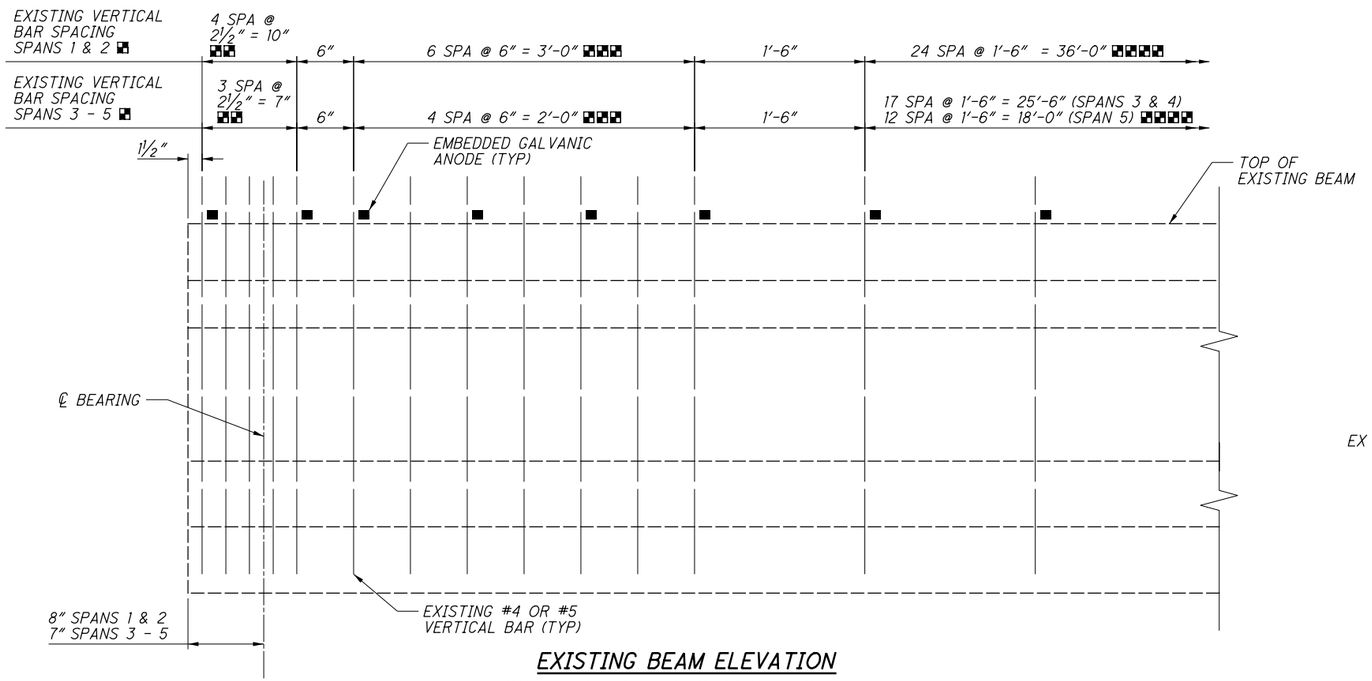
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ANTICIPATED HAUNCH DEPTH (LEFT BRIDGE)

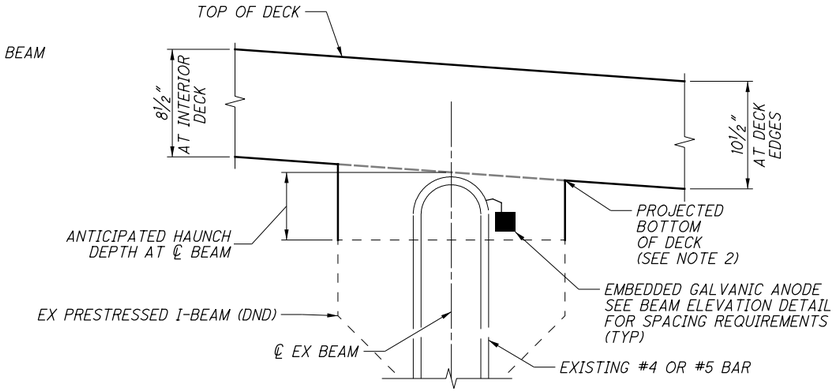
LOCATION	REAR ABUTMENT	SPAN 1			PIER 1	SPAN 2			PIER 2	SPAN 3			PIER 3	SPAN 4			PIER 4	SPAN 5			FWD ABUTMENT
		1/4 SPAN	1/2 SPAN	3/4 SPAN		1/4 SPAN	1/2 SPAN	3/4 SPAN		1/4 SPAN	1/2 SPAN	3/4 SPAN		1/4 SPAN	1/2 SPAN	3/4 SPAN		1/4 SPAN	1/2 SPAN	3/4 SPAN	
BEAM 1	6 3/8"	5 7/16"	3 5/16"	3 3/4"	6 1/16"	3 5/8"	3"	3 3/8"	5 3/8"	3 3/16"	1 13/16"	2 1/2"	5 5/16"	2 3/4"	1 1/2"	3 7/16"	5 1/16"	4 3/16"	4"	4 13/16"	5 11/16"
BEAM 2	6 1/8"	4 3/8"	3 1/8"	3 3/16"	5 3/8"	4 1/4"	2 3/8"	4"	5 1/4"	3 5/16"	2 7/16"	2 15/16"	5 1/8"	2 7/16"	1 5/8"	2 3/8"	5 1/8"	4 7/16"	3 13/16"	4 3/8"	5 9/16"
BEAM 3	5 7/16"	4 3/4"	2 3/4"	3 1/8"	5 3/8"	4 11/16"	2 13/16"	4 3/16"	5 1/4"	2 15/16"	1 15/16"	2 7/8"	5 9/16"	2 11/16"	1 13/16"	3 3/16"	4 3/4"	4 3/4"	3 15/16"	4 5/8"	5 5/8"
BEAM 4	5 9/16"	4 1/4"	2 5/16"	3 5/16"	5 3/8"	3 15/16"	2 1/16"	3 1/16"	5 3/8"	3 3/16"	1 1/2"	2 7/8"	5 5/16"	2 7/8"	1 15/16"	2 15/16"	4 15/16"	4 3/4"	3 9/16"	4 3/8"	5 3/8"
BEAM 5	5 11/16"	4 1/8"	3 1/4"	3 7/16"	5 9/16"	5 1/8"	2 5/8"	4 5/16"	4 11/16"	2 15/16"	1 7/16"	2 5/16"	5 1/8"	2 11/16"	1 7/8"	2 7/8"	5 3/16"	4 5/8"	3 7/16"	2 3/16"	5"
BEAM 6	5 13/16"	4"	2 7/16"	3 1/4"	5 13/16"	4 3/16"	2 3/4"	3 7/8"	5 7/16"	3 7/16"	2 11/16"	3 3/4"	5 3/4"	3 3/8"	2 5/16"	3 3/16"	5 9/16"	4 1/4"	4 1/4"	3"	4 5/16"

ANTICIPATED HAUNCH DEPTH (RIGHT BRIDGE)

LOCATION	REAR ABUTMENT	SPAN 1			PIER 1	SPAN 2			PIER 2	SPAN 3			PIER 3	SPAN 4			PIER 4	SPAN 5			FWD ABUTMENT
		1/4 SPAN	1/2 SPAN	3/4 SPAN		1/4 SPAN	1/2 SPAN	3/4 SPAN		1/4 SPAN	1/2 SPAN	3/4 SPAN		1/4 SPAN	1/2 SPAN	3/4 SPAN		1/4 SPAN	1/2 SPAN	3/4 SPAN	
BEAM 7	5 13/16"	4 3/8"	3 3/8"	3 5/8"	6 3/16"	5 1/4"	3 3/16"	4 1/4"	5 7/8"	2 5/8"	1 7/8"	3 7/16"	5 5/8"	2 1/2"	2 1/4"	2"	5"	4 5/8"	3 13/16"	4 9/16"	5 11/16"
BEAM 8	5 13/16"	3 5/8"	2"	2 7/16"	6 1/16"	4 9/16"	2 11/16"	3 11/16"	6"	3 7/16"	1 7/8"	3 1/8"	5 7/8"	3 1/4"	2 1/16"	2 9/16"	5 1/8"	4 7/16"	2 3/4"	3 7/8"	5 11/16"
BEAM 9	5 15/16"	4"	3 1/4"	3 7/16"	6 5/16"	4 5/8"	2 9/16"	3 3/16"	5 3/4"	3 5/16"	2 1/4"	3 5/16"	5 7/8"	3 9/16"	2 3/8"	1 11/16"	5 1/4"	4 3/8"	4 7/16"	6 3/16"	5 13/16"
BEAM 10	6 1/4"	3 1/2"	2 9/16"	2 3/4"	5 7/8"	4"	1 15/16"	3 11/16"	5 7/8"	3 1/4"	1 9/16"	3 1/16"	5 11/16"	3 3/4"	1 15/16"	2 15/16"	5 7/16"	4 5/8"	4 7/16"	4 3/4"	5 7/8"
BEAM 11	6 1/2"	4 1/2"	3 1/4"	4"	6 1/8"	4 9/16"	3"	4"	6"	2 3/4"	2 7/16"	3 15/16"	5 7/8"	3 15/16"	2 7/16"	3 13/16"	5 3/8"	4 1/4"	4 1/16"	4 7/16"	6"
BEAM 12	7 1/8"	4 1/2"	3 5/16"	4"	6 3/8"	4 3/4"	3 1/4"	4 1/8"	5 15/16"	2 15/16"	2 1/16"	4"	5 3/16"	1 1/2"	1 1/4"	2 11/16"	5 3/8"	5 1/8"	5 1/16"	5 1/2"	6 13/16"



EXISTING BEAM ELEVATION
EMBEDDED GALVANIC ANODE SPACING



HAUNCH DETAIL

(PROPOSED DECK AND HAUNCH REINFORCING NOT SHOWN FOR CLARITY)

EMBEDDED GALVANIC ANODES

BEAM NO.	NUMBER OF GALVANIC ANODES					
	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	TOTAL
1	68	68	53	53	36	278
2	68	68	53	53	36	278
3	68	68	53	53	36	278
4	68	68	53	53	36	278
5	68	68	53	53	36	278
6	68	68	53	53	36	278
7	68	68	53	53	36	278
8	68	68	53	53	36	278
9	68	68	53	53	36	278
10	68	68	53	53	36	278
11	68	68	53	53	36	278
12	68	68	53	53	36	278
					TOTAL =	3336

LEGEND

- ▪ - EXISTING VERTICAL BAR SPACING IS SYMMETRICAL ABOUT THE ℄ OF SPAN. SEE RECORD PLANS FOR ADDITIONAL VERTICAL BAR INFORMATION.
- ▪▪ - PLACE A GALVANIC ANODE AT THE BEGINNING AND END OF THIS SET OF BARS
- ▪▪▪▪ - PLACE A GALVANIC ANODE AT THE BEGINNING, END, AND AT EVERY OTHER VERTICAL BAR IN THIS SET OF BARS
- ▪▪▪▪▪ - PLACE A GALVANIC ANODE AT EVERY VERTICAL BAR IN THIS SET OF BARS

NOTES

1. INCLUDE THE COST OF ADDITIONAL CONCRETE ASSOCIATED WITH VARIABLE HAUNCH DEPTHS WITH ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK.
2. HAUNCH DIMENSIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE PRESTRESSED I BEAM HAUNCH AFTER DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS. THE DIMENSIONS SHALL BE CONSIDERED APPROXIMATE AND ARE PROVIDED FOR REFERENCE ONLY. ACTUAL DIMENSIONS MAY VARY, SEE SHEETS 37/48 & 38/48 FOR ADDITIONAL INFORMATION REGARDING FINAL DECK ELEVATIONS AND PLACEMENT.

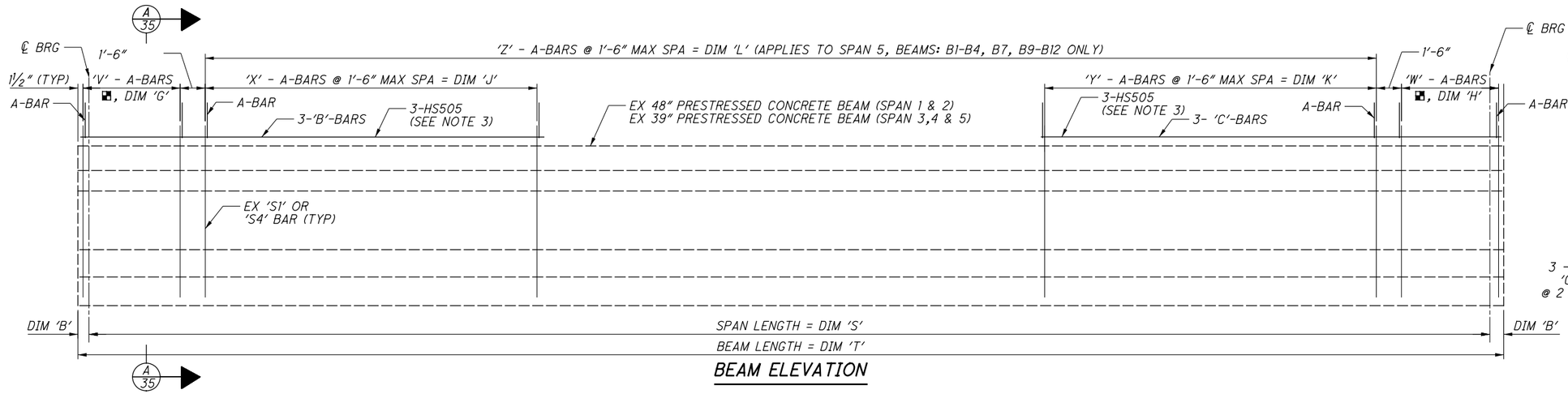
DESIGN AGENCY
EMH&T
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 www.emht.com

DESIGNED	DRAWN	REVIEWED	DATE
RMW	RMW	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700223	

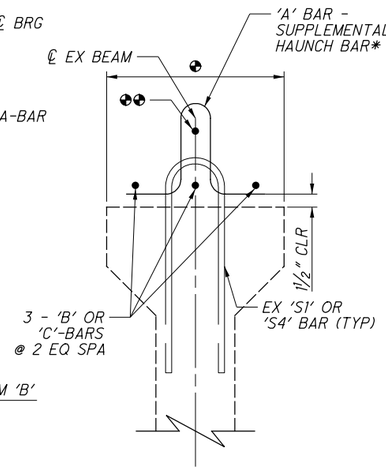
HAUNCH DETAILS
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

J:\2019\0025\ODOT\IF BEL-7-11.52_11.87_12.79 (PID 110324)\BEL\110324_BEL-7-11.52\Design\Structures\BEL007_1152C\Sheets\007_1152C_SD005.dgn 11/9/2020 3:07:57 PM bmccutchen



BEAM ELEVATION



A/35 SECTION
(HAUNCH NOT SHOWN FOR CLARITY)

SPAN NO	BEAM	DIMENSIONS								BAR DESIGNATIONS			NUMBER OF BARS				
		DIM 'B'	DIM 'G'	DIM ' H'	DIM 'J'	DIM 'K'	DIM 'L'	DIM 'S'	DIM 'T'	A-BAR	B-BAR	C-BAR	V	W	X	Y	Z
SPAN 1	1	0'-8"	4'-4"	4'-4"	30'-0"	13'-6"	-	84'-1 1/2"	86'-5 1/2"	HS401	HS501	HS502	12	12	21	10	-
	2-3	0'-8"	4'-4"	4'-4"	24'-0"	7'-6"	-	84'-1 1/2"	86'-5 1/2"	HS401	HS503	HS504	12	12	17	6	-
	4-5	0'-8"	4'-4"	4'-4"	19'-6"	10'-6"	-	84'-1 1/2"	86'-5 1/2"	HS401	HS505	HS506	12	12	14	8	-
	6	0'-8"	4'-4"	4'-4"	19'-6"	10'-6"	-	84'-1 1/2"	86'-5 1/2"	HS401	HS505	HS506	12	12	14	8	-
	7	0'-8"	4'-4"	4'-4"	24'-0"	13'-6"	-	84'-8 1/2"	86'-0 1/2"	HS401	HS503	HS502	12	12	17	10	-
	8	0'-8"	4'-4"	4'-4"	12'-0"	7'-6"	-	84'-8 1/2"	86'-0 1/2"	HS401	HS502	HS504	12	12	9	6	-
	9	0'-8"	4'-4"	4'-4"	16'-6"	12'-0"	-	84'-8 1/2"	86'-0 1/2"	HS401	HS507	HS502	12	12	12	9	-
	10	0'-8"	4'-4"	4'-4"	12'-0"	7'-6"	-	84'-8 1/2"	86'-0 1/2"	HS401	HS502	HS504	12	12	9	6	-
	11	0'-8"	4'-4"	4'-4"	25'-6"	16'-6"	-	84'-8 1/2"	86'-0 1/2"	HS401	HS508	HS507	12	12	18	12	-
	12	0'-8"	4'-4"	4'-4"	25'-6"	16'-6"	-	84'-8 1/2"	86'-0 1/2"	HS402	HS508	HS507	12	12	18	12	-
SPAN 2	1	0'-8"	4'-4"	4'-4"	15'-0"	9'-0"	-	83'-2"	84'-6"	HS401	HS507	HS506	12	12	11	7	-
	2	0'-8"	4'-4"	4'-4"	19'-6"	15'-0"	-	83'-2"	84'-6"	HS401	HS505	HS507	12	12	14	11	-
	3	0'-8"	4'-4"	4'-4"	27'-0"	19'-6"		83'-2"	84'-6"	HS401	HS508	HS505	12	12	19	14	-
	4	0'-8"	4'-4"	4'-4"	15'-0"	9'-0"	-	83'-2"	84'-6"	HS401	HS507	HS506	12	12	11	7	-
	5	0'-8"	4'-4"	4'-4"	31'-6"	21'-0"	-	83'-2"	84'-6"	HS401	HS501	HS503	12	12	22	15	-
	6	0'-8"	4'-4"	4'-4"	19'-6"	15'-0"	-	83'-2"	84'-6"	HS401	HS505	HS502	12	12	14	11	-
	7	0'-8"	4'-4"	4'-4"	31'-6"	21'-0"	-	83'-7 3/4"	84'-11 3/4"	HS401	HS501	HS503	12	12	22	15	-
	8	0'-8"	4'-4"	4'-4"	28'-6"	19'-6"	-	83'-7 3/4"	84'-11 3/4"	HS401	HS501	HS505	12	12	20	14	-
	9	0'-8"	4'-4"	4'-4"	28'-6"	19'-6"	-	83'-7 3/4"	84'-11 3/4"	HS401	HS501	HS505	12	12	20	14	-
	10	0'-8"	4'-4"	4'-4"	22'-6"	13'-6"	-	83'-7 3/4"	84'-11 3/4"	HS401	HS503	HS502	12	12	16	10	-
	11	0'-8"	4'-4"	4'-4"	27'-0"	19'-6"	-	83'-7 3/4"	84'-11 3/4"	HS401	HS508	HS505	12	12	19	14	-
	12	0'-8"	4'-4"	4'-4"	27'-0"	19'-6"	-	83'-7 3/4"	84'-11 3/4"	HS401	HS508	HS505	12	12	19	14	-
SPAN 3	1	0'-7"	3'-1 1/2"	3'-1 1/2"	6'-0"	3'-0"	-	62'-2 1/2"	63'-4 1/2"	HS403	HS511	HS509	9	9	5	3	-
	2	0'-7"	3'-1 1/2"	3'-1 1/2"	6'-0"	3'-0"	-	62'-2 1/2"	63'-4 1/2"	HS403	HS511	HS509	9	9	5	3	-
	3	0'-7"	3'-1 1/2"	3'-1 1/2"	6'-0"	3'-0"	-	62'-2 1/2"	63'-4 1/2"	HS403	HS511	HS509	9	9	5	3	-
	4	0'-7"	3'-1 1/2"	3'-1 1/2"	6'-0"	3'-0"	-	62'-2 1/2"	63'-4 1/2"	HS403	HS511	HS509	9	9	5	3	-
	5	0'-7"	3'-1 1/2"	3'-1 1/2"	6'-0"	3'-0"	-	62'-2 1/2"	63'-4 1/2"	HS403	HS511	HS509	9	9	5	3	-
	6	0'-7"	3'-1 1/2"	3'-1 1/2"	7'-6"	9'-0"	-	62'-2 1/2"	63'-4 1/2"	HS403	HS511	HS506	9	9	6	7	-
	7-10	0'-7"	3'-1 1/2"	3'-1 1/2"	9'-0"	7'-6"	-	62'-9 1/2"	63'-11 1/2"	HS403	HS506	HS504	9	9	7	6	-
	11-12	0'-7"	3'-1 1/2"	3'-1 1/2"	6'-0"	12'-0"	-	62'-9 1/2"	63'-11 1/2"	HS403	HS511	HS502	9	9	5	9	-
SPAN 4	1	0'-7"	3'-1 1/2"	3'-1 1/2"	4'-6"	6'-0"	-	62'-4 3/4"	63'-6 3/4"	HS403	HS510	HS511	9	9	4	5	-
	2	0'-7"	3'-1 1/2"	3'-1 1/2"	4'-6"	6'-0"	-	62'-4 3/4"	63'-6 3/4"	HS403	HS510	HS511	9	9	4	5	-
	3-4	0'-7"	3'-1 1/2"	3'-1 1/2"	4'-6"	6'-0"	-	62'-4 3/4"	63'-6 3/4"	HS403	HS510	HS511	9	9	4	5	-
	5	0'-7"	3'-1 1/2"	3'-1 1/2"	4'-6"	6'-0"	-	62'-4 3/4"	63'-6 3/4"	HS403	HS510	HS511	9	9	4	5	-
	6	0'-7"	3'-1 1/2"	3'-1 1/2"	7'-6"	6'-0"	-	62'-4 3/4"	63'-6 3/4"	HS403	HS511	HS511	9	9	6	5	-
	7	0'-7"	3'-1 1/2"	3'-1 1/2"	4'-6"	1'-6"	-	62'-7 1/4"	63'-9 1/4"	HS403	HS510	HS509	9	9	4	2	-
	8	0'-7"	3'-1 1/2"	3'-1 1/2"	7'-6"	3'-0"	-	62'-7 1/4"	63'-9 1/4"	HS403	HS511	HS509	9	9	6	3	-
	9	0'-7"	3'-1 1/2"	3'-1 1/2"	9'-0"	1'-6"	-	62'-7 1/4"	63'-9 1/4"	HS403	HS504	HS509	9	9	7	2	-
	10	0'-7"	3'-1 1/2"	3'-1 1/2"	10'-6"	4'-6"	-	62'-7 1/4"	63'-9 1/4"	HS403	HS506	HS510	9	9	8	4	-
	11	0'-7"	3'-1 1/2"	3'-1 1/2"	12'-0"	10'-6"	-	62'-7 1/4"	63'-9 1/4"	HS403	HS506	HS506	9	9	9	8	-
	12	0'-7"	3'-1 1/2"	3'-1 1/2"	1'-6"	4'-6"	-	62'-7 1/4"	63'-9 1/4"	HS403	HS509	HS510	9	9	2	4	-
SPAN 5	1-4	0'-7"	3'-1 1/2"	3'-1 1/2"	-	-	37'-6"	45'-3"	46'-5"	HS403	HS505	HS505	9	9	-	-	26
	5-6	0'-7"	3'-1 1/2"	3'-1 1/2"	15'-0"	0'-0"	-	45'-3"	46'-5"	HS403	HS502	HS512	9	9	11	-	-
	7	0'-7"	3'-1 1/2"	3'-1 1/2"	-	-	37'-6"	45'-3"	46'-5"	HS403	HS505	HS505	9	9	-	-	26
	8	0'-7"	3'-1 1/2"	3'-1 1/2"	10'-6"	7'-6"	-	45'-3"	46'-5"	HS403	HS506	HS511	9	9	8	6	-
	9-11	0'-7"	3'-1 1/2"	3'-1 1/2"	-	-	37'-6"	45'-3"	46'-5"	HS403	HS505	HS505	9	9	-	-	26
	12	0'-7"	3'-1 1/2"	3'-1 1/2"	-	-	37'-6"	45'-5 1/4"	46'-7 1/4"	HS404	HS505	HS505	9	9	-	-	26

LEGEND

- ◪ - MATCH EXISTING 'S1' (#4 BAR) OR 'S4' (#5 BAR) SHEAR REINFORCEMENT BAR SPACING. SEE RECORD PLANS FOR ADDITIONAL INFORMATION.
- * - SEE TABLE ON THIS SHEET FOR BAR DESIGNATION BY BEAM AND SPAN)
- ◔ - 1'-6" SPAN 1 & 2
  1'-4" SPAN 3,4 & 5
- ◔◔ - BOTTOM MAT, LONGITUDINAL DECK REINFORCEMENT, SEE NOTE 2

NOTES

1. HAUNCH STIRRUPS (A-BARS) MAY BE TIPPED OVER FROM VERTICAL 4:1 MAX (V:H) TO ACCOMMODATE PLACEMENT.
2. HAUNCH STIRRUP SHALL BE HOOKED OVER LONGITUDINAL BAR IN BOTTOM MAT OF DECK REINFORCEMENT.
3. HS505 BARS LOCATED IN SPAN 5, FOR BEAMS 1-4, 7, 9-12 ARE TO BE LAPPED MID SPAN.

   MIN LAP #5 BARS: 2'-5"
4. HAUNCH REINFORCEMENT LOCATIONS ARE BASED ON THE EXISTING PRESTRESSED CONCRETE BEAMS' SHAPES. FINAL BEAM SHAPE MAY VARY.

   THE CONTRACTOR SHALL VERIFY HAUNCH LIMITS 4" AND GREATER AFTER DETERMINING REBOUND OF BEAMS POST DECK REMOVAL. LIMITS OF 4" HAUNCH SHALL BE COORDINATED WITH THE ENGINEER TO VERIFY THE REINFORCING IN THE HAUNCH.

DESIGN AGENCY: EMH&T
DESIGNED: MJR | CHECKED: TDA
DRAWN: MJR | REVISED:
REVIEWED: CAS | DATE: 10/30/20
STRUCTURE FILE NUMBER: 0700223

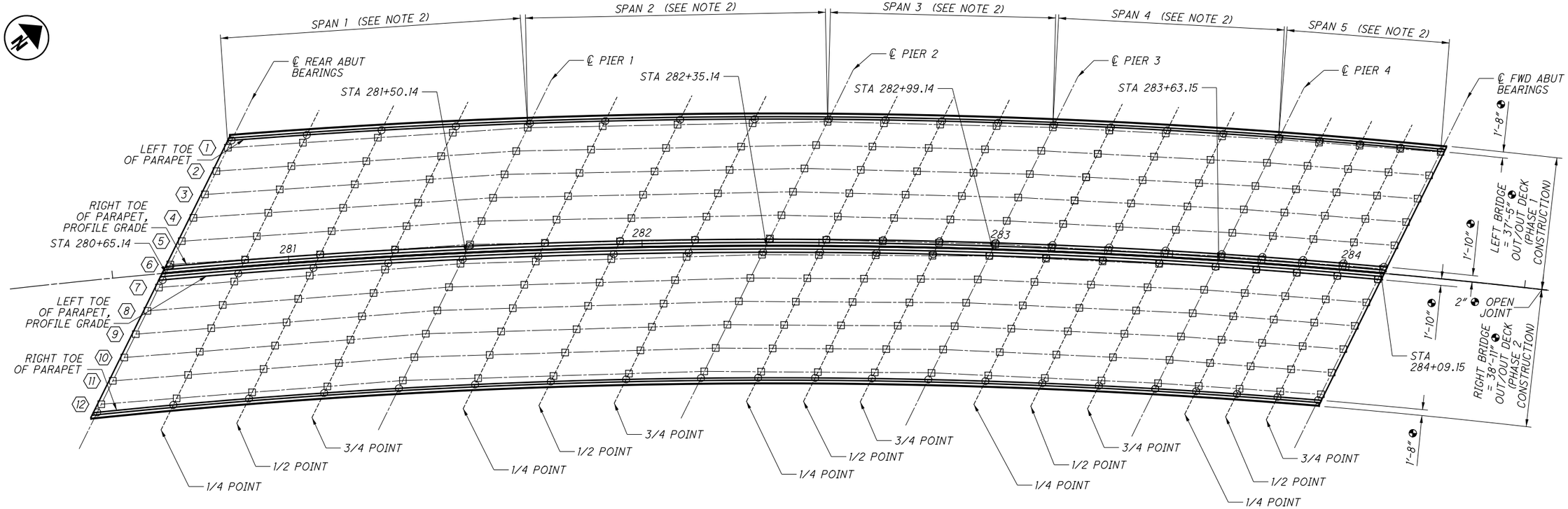
HAUNCH DETAILS (CONT.)
BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

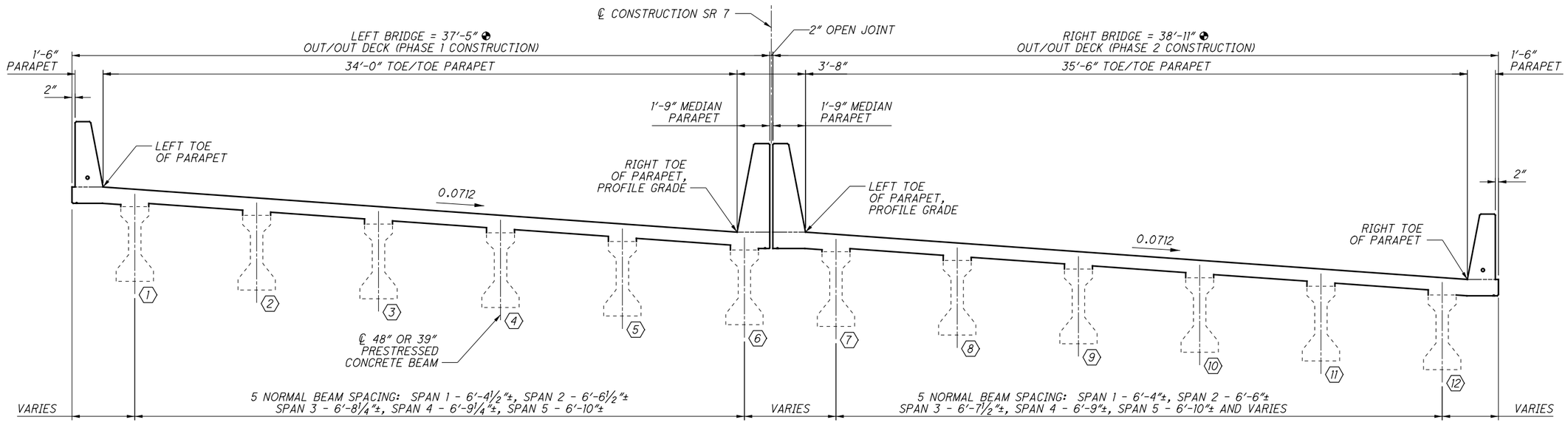
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DECK ELEVATION LOCATION LAYOUT



TYPICAL TRANSVERSE SECTION

(INTERMEDIATE DIAPHRAGM NOT SHOWN FOR CLARITY)

NOTES

1. FOR TABLES OF FINAL DECK, TOP OF HAUNCH AND SCREED ELEVATIONS, SEE SHEETS 37/48 AND 38/48.
2. SPAN LENGTH MEASURED USING ℄ ABUTMENT BEARING AND ℄ PIER. SEE SHEET 21/48 FOR SPAN LENGTH INFORMATION.

LEGEND

- ○ - SCREED AND FINAL DECK ELEVATIONS
- □ - TOP OF HAUNCH AND FINAL DECK ELEVATIONS
- ◒ - MEASURED RADIALLY
- ⟨X⟩ - EX BEAM "X"

DESIGN AGENCY: EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
TDA	GB	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	0700223	

DECK ELEVATION LOCATIONS
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

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LOCATION		REAR ABUTMENT	SPAN 1 1/4 SPAN	SPAN 1 1/2 SPAN	SPAN 1 3/4 SPAN	PIER 1	SPAN 2 1/4 SPAN	SPAN 2 1/2 SPAN	SPAN 2 3/4 SPAN	PIER 2	SPAN 3 1/4 SPAN	SPAN 3 1/2 SPAN	SPAN 3 3/4 SPAN	PIER 3	SPAN 4 1/4 SPAN	SPAN 4 1/2 SPAN	SPAN 4 3/4 SPAN	PIER 4	SPAN 5 1/4 SPAN	SPAN 5 1/2 SPAN	SPAN 5 3/4 SPAN	FWD ABUTMENT
LEFT TOE OF PARAPET	STATION	280+86.58	281+07.51	281+28.30	281+48.97	281+69.51	281+90.44	282+11.25	282+31.94	282+52.53	282+68.26	282+83.93	282+99.54	283+15.09	283+30.83	283+46.50	283+62.13	283+77.70	283+88.99	284+00.26	284+11.50	284+22.72
	OFFSET	35.83' LT	35.83' LT	35.83' LT	35.83' LT	35.83' LT	35.83' LT	35.83' LT	35.83' LT	35.83' LT	35.83' LT	35.83' LT	35.83' LT	35.83' LT	35.83' LT	35.83' LT	35.83' LT	35.83' LT	35.83' LT	35.83' LT	35.83' LT	35.83' LT
	[A]	678.92	679.01	679.09	679.17	679.25	679.34	679.42	679.50	679.59	679.65	679.71	679.77	679.84	679.90	679.96	680.03	680.09	680.13	680.18	680.22	680.27
	* [B]																					
	* [C]																					
	* [D]																					
	[E]	1.18	1.17	1.11	1.11	1.08	1.04	1.01	1.02	1.01	0.97	0.95	0.96	1.00	0.96	0.93	0.96	0.94	0.93	0.91	0.93	0.95
	[F]	1.16	1.15	1.10	1.10	1.08	1.04	1.02	1.03	1.02	0.99	0.96	0.97	1.01	0.97	0.95	0.98	0.96	0.95	0.94	0.95	0.98
	* [G]																					
	[H]	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"
	* [J]																					
BEAM 1	STATION	280+85.42	281+06.28	281+27.15	281+48.02	281+68.87	281+89.70	282+10.54	282+31.37	282+52.19	282+67.83	282+83.47	282+99.11	283+14.75	283+30.44	283+46.13	283+61.82	283+77.50	283+88.79	284+00.08	284+11.37	284+22.66
	OFFSET	33.84' LT	33.69' LT	33.77' LT	34.09' LT	34.63' LT	34.41' LT	34.42' LT	34.66' LT	35.12' LT	34.91' LT	34.83' LT	34.88' LT	35.06' LT	34.93' LT	34.93' LT	35.07' LT	35.33' LT	35.31' LT	35.36' LT	35.48' LT	35.67' LT
	[A]	678.78	678.85	678.94	679.04	679.17	679.23	679.32	679.42	679.53	679.58	679.64	679.71	679.78	679.83	679.90	679.97	680.05	680.09	680.14	680.20	680.26
	* [B]																					
	* [C]																					
	* [D]																					
	[E]	1.18	1.17	1.11	1.11	1.08	1.04	1.01	1.02	1.01	0.97	0.95	0.96	1.00	0.96	0.93	0.96	0.94	0.93	0.91	0.93	0.95
	[F]	1.16	1.15	1.10	1.10	1.08	1.04	1.02	1.03	1.02	0.99	0.96	0.97	1.01	0.97	0.95	0.98	0.96	0.95	0.94	0.95	0.98
	* [G]																					
	[H]	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"
	* [J]																					
	* [K]																					
BEAM 2	STATION	280+81.69	281+02.63	281+23.57	281+44.50	281+65.42	281+86.32	282+07.23	282+28.13	282+49.02	282+64.72	282+80.41	282+96.11	283+11.81	283+27.55	283+43.29	283+59.03	283+74.77	283+86.10	283+97.43	284+08.76	284+20.09
	OFFSET	27.52' LT	27.33' LT	27.37' LT	27.65' LT	28.15' LT	27.89' LT	27.86' LT	28.06' LT	28.49' LT	28.26' LT	28.15' LT	28.18' LT	28.33' LT	28.18' LT	28.16' LT	28.27' LT	28.51' LT	28.47' LT	28.5' LT	28.61' LT	28.78' LT
	[A]	678.31	678.38	678.47	678.57	678.69	678.76	678.84	678.94	679.05	679.10	679.15	679.22	679.29	679.34	679.40	679.47	679.55	679.60	679.64	679.70	679.75
	* [B]																					
	* [C]																					
	* [D]																					
	[E]	0.99	0.96	0.94	0.94	1.00	0.98	0.94	0.97	1.00	0.97	0.95	0.96	1.01	0.96	0.95	0.96	1.02	1.00	0.99	1.00	1.02
	[F]	1.05	1.01	0.99	0.99	1.05	1.03	1.00	1.03	1.05	1.02	1.01	1.01	1.06	1.02	1.00	1.01	1.07	1.06	1.05	1.06	1.08
	* [G]																					
	[H]	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"
	* [J]																					
	* [K]																					
BEAM 3	STATION	280+77.95	280+98.95	281+19.96	281+40.96	281+61.95	281+82.93	282+03.90	282+24.87	282+45.84	282+61.59	282+77.34	282+93.09	283+08.84	283+24.63	283+40.43	283+56.23	283+72.02	283+83.39	283+94.76	284+06.13	284+17.50
	OFFSET	21.21' LT	20.97' LT	20.98' LT	21.21' LT	21.67' LT	21.38' LT	21.31' LT	21.48' LT	21.87' LT	21.61' LT	21.48' LT	21.48' LT	21.61' LT	21.43' LT	21.38' LT	21.47' LT	21.68' LT	21.63' LT	21.65' LT	21.74' LT	21.89' LT
	[A]	677.85	677.91	678.00	678.10	678.22	678.28	678.36	678.45	678.57	678.61	678.66	678.73	678.80	678.85	678.91	678.98	679.06	679.10	679.15	679.20	679.25
	* [B]																					
	* [C]																					
	* [D]																					
	[E]	0.99	0.96	0.94	0.94	1.00	0.98	0.94	0.97	1.00	0.97	0.95	0.96	1.01	0.96	0.95	0.96	1.02	1.00	0.99	1.00	1.02
	[F]	1.05	1.01	0.99	0.99	1.05	1.03	1.00	1.03	1.05	1.02	1.01	1.01	1.06	1.02	1.00	1.01	1.07	1.06	1.05	1.06	1.08
	* [G]																					
	[H]	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"
	* [J]																					
	* [K]																					
BEAM 4	STATION	280+74.17	280+95.25	281+16.32	281+37.40	281+58.46	281+79.50	282+00.55	282+21.59	282+42.63	282+58.43	282+74.24	282+90.04	283+05.85	283+21.70	283+37.55	283+53.41	283+69.26	283+80.67	283+92.08	284+03.49	284+14.90
	OFFSET	14.9' LT	14.63' LT	14.59' LT	14.78' LT	15.21' LT	14.87' LT	14.77' LT	14.9' LT	15.26' LT	14.97' LT	14.81' LT	14.78' LT	14.89' LT	14.68' LT	14.61' LT	14.68' LT	14.87' LT	14.8' LT	14.8' LT	14.87' LT	15.01' LT
	[A]	677.38	677.45	677.53	677.63	677.74	677.80	677.88	677.97	678.08	678.13	678.18	678.24	678.31	678.36	678.42	678.48	678.56	678.60	678.65	678.70	678.75
	* [B]																					
	* [C]																					
	* [D]																					
	[E]	0.99	0.96	0.94	0.94	1.00	0.98	0.94	0.97	1.00	0.97	0.95	0.96	1.01	0.96	0.95	0.96	1.02	1.00	0.99	1.00	1.02
	[F]	1.05	1.01	0.99	0.99	1.05	1.03	1.00	1.03	1.05	1.02	1.01	1.01	1.06	1.02	1.00	1.01	1.07	1.06	1.05	1.06	1.08
	* [G]																					
	[H]	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"
	* [J]																					
	* [K]																					
BEAM 5	STATION	280+70.38	280+91.52	281+12.66	281+33.81	281+54.95	281+76.06	281+97.17	282+18.29	282+39.40	282+55.26	282+71.12	282+86.98	283+02.84	283+18.74	283+34.65	283+50.56	283+66.47	283+77.92	283+89.37	284+00.82	284+12.28
	OFFSET	8.6' LT	8.29' LT	8.21' LT	8.36' LT	8.74' LT	8.37' LT	8.23' LT	8.32' LT	8.64' LT	8.33' LT	8.15' LT	8.09' LT	8.17' LT	7.94' LT	7.85' LT	7.89' LT	8.06' LT	7.97' LT	7.96' LT	8.01' LT	8.13' LT
	[A]	676.92	676.98	677.06	677.16	677.27	677.33	677.40	677.49	677.60	677.64	677.69	677.75	677.82	677.87	677.92	677.99	678.07	678.11	678.15	678.20	678.25
	* [B]																					
	* [C]																					
	* [D]																					
	[E]	0.99	0.96	0.94	0.94	1.00	0.98	0.94	0.97	1.00	0.97	0.95	0.96	1.01	0.96	0.95	0.96	1.02	1.00	0.99	1.00	1.02
	[F]	1.05	1.01	0.99	0.99	1.05	1.03	1.00	1.03	1.05	1.02	1.01	1.01	1.06	1.02	1.00	1.01	1.07	1.06	1.05	1.06	1.08
	* [G]																					
	[H]	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"
	* [J]																					
	* [K]																					
BEAM 6	STATION	280+66.55	280+87.77	281+08.98	281+30.20	281+51.41	281+72.59	281+93.78	282+14.97	282+36.15	282+52.06	282+67.97	282+83.89	282+99.81	283+15.77	283+31.73	283+47.70	283+63.66	283+75.15	283+86.65	283+98.14	284+09.63
	OFFSET	2.31' LT	1.95' LT	1.83' LT	1.95' LT	2.29' LT	1.88' LT	1.7' LT	1.75' LT	2.04' LT	1.7' LT	1.49' LT	1.41' LT	1.46' LT	1.21' LT	1.09' LT	1.1' LT	1.25' LT	1.15' LT	1.12' LT	1.15' LT	1.26' LT
	[A]	676.46	676.52	676.59	676.69	676.79	676.85	676.93	677.02	677.12	677.16	677.23	677.29	677.36	677.42	677.48	677.55	677.61	677.66	677.70	677.75	677.79
	* [B]																					
	* [C]																					
	* [D]																					
	[E]	0.90	0.87	0.84	0.86	0.90	0.87	0.83	0.85	0.85	0.81	0.79	0.80	0.79	0.75	0.72	0.74	0.78	0.76	0.76	0.74	0.81
	[F]	0.94	0.90	0.87	0.89	0.93	0.90	0.87	0.89	0.89	0.85	0.83	0.85	0.84	0.80	0.78	0.80	0.84	0.82	0.82	0.80	0.84
	* [G]																					
	[H]	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"
	* [J]																					
	* [K]																					
RIGHT TOE OF PARAPET, PROFILE GRADE	STATION	280+66.26	280+87.70	281+08.98	281+30.14	281+51.16	281+72.57	281+93.85	282+15.01	282+36.05	282+52.13	282+68.14	282+84.09	282+99.98	283+16.05	283+32.06	283+48.01	283+63.90	283+75.43	283+86.93	283+98.41	284+09.85
	OFFSET	1.83' LT	1.83' LT	1.83' LT	1.83' LT	1.83' LT	1.83' LT	1.83' LT	1.83' LT	1.83' LT	1.83' LT	1.83' LT	1.83' LT	1.83' LT	1.83' LT	1.83' LT	1.83' LT	1.83' LT	1.83' LT	1.83' LT	1.83' LT	1.83' LT
	[A]	676.42	676.51	676.59	676.68	676.76	676.85	676.93	677.02	677.10	677.17	677.23	677.29	677.36	677.42	677.48	677.55	677.61	677.66	677.70	677.75	677.80
	* [B]																					
	* [C]																					
	* [D]																					
	[E]	0.90	0.87	0.84	0.86	0.90	0.87	0.83	0.85	0.85	0.81	0.79	0.80	0.79	0.75	0.72	0.74	0.78	0.76	0.76	0.74	0.81
	[F]	0.94	0.90	0.87	0.89	0.93	0.90	0.87	0.89	0.89	0.85	0.83	0.85	0.84	0.80	0.78	0.80	0.84	0.82	0.82	0.80	0.84
	* [G]																					
	[H]	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"
	* [J]																					

LEGEND

[A] - FINAL DECK ELEV

[B] - BOTTOM OF FLANGE ELEV (BEFORE REMOVAL)

[C] - BOTTOM OF FLANGE ELEV (AFTER REMOVAL)

[D] - REBOUND (FT)

[E] - WEIGHT OF EX DECK (KIPS/FT)

[F] - WEIGHT OF PROP DECK (KIPS/FT)

[G] - DECK DEFLECTION (IN)

[H] - DECK THICKNESS (IN)

[J] - SCREED ELEV

[K] - TOP OF HAUNCH ELEV

BY CONTRACTOR

* - INDICATES AN OMITTED VALUE TO BE COMPLETED BY THE CONTRACTOR

[D] = ([C] - [B]) x 12
[G] = [D] x [F]/[E]
[J] = [A] + [G] / 12
[K] = [A] + ([G] - [H]) / 12

NOTES

1. FINAL DECK ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.

2. SCREED ELEVATIONS: SCREED ELEVATIONS CALCULATED BY THE CONTRACTOR REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.

DESIGN AGENCY
EMH&T
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, Ohio 43054
Phone: (614) 775-4500 www.emht.com

DESIGNED	DRAWN	REVIEWED	DATE
RMW	RMW	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700223	

FINAL DECK ELEVATIONS (LEFT BRIDGE)
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

J:\2019\0025\ODOT\WF BEL-7-11.52_11.87_12.79 (PID 110324)\BEL\110324_BEL-7-11.52\Design\Structures\BEL007_1152C\Sheets\007_1152C_SS006.dgn 11/9/2020 3:08:00 PM bmccutchen

LOCATION		REAR ABUTMENT	SPAN 1 1/4 SPAN	SPAN 1 1/2 SPAN	SPAN 1 3/4 SPAN	PIER 1	SPAN 2 1/4 SPAN	SPAN 2 1/2 SPAN	SPAN 2 3/4 SPAN	PIER 2	SPAN 3 1/4 SPAN	SPAN 3 1/2 SPAN	SPAN 3 3/4 SPAN	PIER 3	SPAN 4 1/4 SPAN	SPAN 4 1/2 SPAN	SPAN 4 3/4 SPAN	PIER 4	SPAN 5 1/4 SPAN	SPAN 5 1/2 SPAN	SPAN 5 3/4 SPAN	FWD ABUTMENT
LEFT TOE OF PARAPET, PROFILE GRADE	STATION	280+64.02	280+85.51	281+06.85	281+28.06	281+49.13	281+70.60	281+91.93	282+13.14	282+34.23	282+50.35	282+66.40	282+82.39	282+98.31	283+14.42	283+30.46	283+46.45	283+62.39	283+73.94	283+85.47	283+96.97	284+08.44
	OFFSET	1.83' RT	1.83' RT	1.83' RT	1.83' RT	1.83' RT	1.83' RT	1.83' RT	1.83' RT	1.83' RT	1.83' RT	1.83' RT	1.83' RT	1.83' RT	1.83' RT	1.83' RT	1.83' RT	1.83' RT	1.83' RT	1.83' RT	1.83' RT	1.83' RT
	[A]	676.41	676.50	676.58	676.67	676.75	676.84	676.92	677.01	677.09	677.15	677.22	677.28	677.35	677.41	677.48	677.54	677.60	677.65	677.70	677.74	677.79
	* [B]																					
	* [C]																					
	* [D]																					
	[E]	1.19	1.16	1.12	1.13	1.10	1.08	1.03	1.05	0.98	0.93	0.90	0.93	0.92	0.87	0.86	0.85	0.88	0.88	0.86	0.88	0.91
	[F]	1.16	1.14	1.11	1.11	1.09	1.08	1.03	1.05	1.00	0.94	0.92	0.95	0.95	0.89	0.89	0.88	0.92	0.91	0.90	0.91	0.94
	* [G]																					
	[H]	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"
	* [J]																					
BEAM 7	STATION	280+62.77	280+84.20	281+05.63	281+27.05	281+48.47	281+69.83	281+91.19	282+12.55	282+33.90	282+49.99	282+66.08	282+82.17	282+98.26	283+14.30	283+30.34	283+46.38	283+62.42	283+73.93	283+85.44	283+96.95	284+08.46
	OFFSET	3.87' RT	4.02' RT	3.93' RT	3.6' RT	3.03' RT	3.26' RT	3.25' RT	3' RT	2.51' RT	2.58' RT	2.5' RT	2.29' RT	1.95' RT	2.1' RT	2.12' RT	2' RT	1.76' RT	1.86' RT	1.9' RT	1.87' RT	1.77' RT
	[A]	676.26	676.33	676.43	676.54	676.66	676.73	676.82	676.92	677.04	677.10	677.17	677.25	677.34	677.39	677.45	677.53	677.60	677.65	677.69	677.74	677.79
	* [B]																					
	* [C]																					
	* [D]																					
	[E]	1.19	1.16	1.12	1.13	1.10	1.08	1.03	1.05	0.98	0.93	0.90	0.93	0.92	0.87	0.86	0.85	0.88	0.88	0.86	0.88	0.91
	[F]	1.16	1.14	1.11	1.11	1.09	1.08	1.03	1.05	1.00	0.94	0.92	0.95	0.95	0.89	0.89	0.88	0.92	0.91	0.90	0.91	0.94
	* [G]																					
	[H]	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"
	* [J]																					
	* [K]																					
BEAM 8	STATION	280+58.90	280+80.40	281+01.90	281+23.40	281+44.89	281+66.31	281+87.75	282+09.18	282+30.61	282+46.75	282+62.90	282+79.05	282+95.19	283+11.29	283+27.39	283+43.49	283+59.58	283+71.13	283+82.69	283+94.24	284+05.79
	OFFSET	10.15' RT	10.34' RT	10.29' RT	10' RT	9.47' RT	9.74' RT	9.77' RT	9.56' RT	9.11' RT	9.2' RT	9.15' RT	8.97' RT	8.65' RT	8.83' RT	8.88' RT	8.78' RT	8.56' RT	8.68' RT	8.74' RT	8.72' RT	8.64' RT
	[A]	675.80	675.87	675.96	676.07	676.19	676.26	676.34	676.44	676.56	676.62	676.68	676.76	676.85	676.90	676.96	677.03	677.11	677.15	677.19	677.24	677.29
	* [B]																					
	* [C]																					
	* [D]																					
	[E]	0.99	0.95	0.91	0.92	1.01	0.98	0.95	0.97	1.01	0.97	0.94	0.97	1.02	0.98	0.96	0.97	1.02	1.00	0.98	1.00	1.03
	[F]	1.04	1.00	0.97	0.98	1.06	1.04	1.00	1.02	1.07	1.02	1.00	1.02	1.07	1.03	1.01	1.02	1.07	1.06	1.03	1.05	1.08
	* [G]																					
	[H]	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"
	* [J]																					
	* [K]																					
BEAM 9	STATION	280+55.00	280+76.57	280+98.15	281+19.72	281+41.28	281+62.78	281+84.29	282+05.80	282+27.29	282+43.50	282+59.70	282+75.91	282+92.11	283+08.26	283+24.42	283+40.57	283+56.73	283+68.32	283+79.91	283+91.51	284+03.10
	OFFSET	16.42' RT	16.65' RT	16.65' RT	16.4' RT	15.91' RT	16.22' RT	16.29' RT	16.11' RT	15.7' RT	15.82' RT	15.8' RT	15.64' RT	15.35' RT	15.56' RT	15.62' RT	15.56' RT	15.36' RT	15.5' RT	15.57' RT	15.57' RT	15.51' RT
	[A]	675.33	675.40	675.49	675.60	675.72	675.78	675.86	675.96	676.08	676.13	676.20	676.27	676.36	676.41	676.47	676.54	676.62	676.65	676.69	676.74	676.79
	* [B]																					
	* [C]																					
	* [D]																					
	[E]	0.99	0.95	0.91	0.92	1.01	0.98	0.95	0.97	1.01	0.97	0.94	0.97	1.02	0.98	0.96	0.97	1.02	1.00	0.98	1.00	1.03
	[F]	1.04	1.00	0.97	0.98	1.06	1.04	1.00	1.02	1.07	1.02	1.00	1.02	1.07	1.03	1.01	1.02	1.07	1.06	1.03	1.05	1.08
	* [G]																					
	[H]	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"
	* [J]																					
	* [K]																					
BEAM 10	STATION	280+51.08	280+72.72	280+94.37	281+16.01	281+37.65	281+59.22	281+80.80	282+02.38	282+23.96	282+40.22	282+56.48	282+72.74	282+89.00	283+05.21	283+21.42	283+37.64	283+53.85	283+65.48	283+77.12	283+88.76	284+00.39
	OFFSET	22.68' RT	22.96' RT	22.99' RT	22.78' RT	22.34' RT	22.69' RT	22.79' RT	22.66' RT	22.29' RT	22.43' RT	22.44' RT	22.31' RT	22.04' RT	22.28' RT	22.37' RT	22.33' RT	22.15' RT	22.31' RT	22.4' RT	22.42' RT	22.37' RT
	[A]	674.87	674.94	675.02	675.13	675.24	675.31	675.38	675.48	675.59	675.65	675.71	675.79	675.87	675.92	675.98	676.04	676.12	676.16	676.20	676.24	676.29
	* [B]																					
	* [C]																					
	* [D]																					
	[E]	0.99	0.95	0.91	0.92	1.01	0.98	0.95	0.97	1.01	0.97	0.94	0.97	1.02	0.98	0.96	0.97	1.02	1.00	0.98	1.00	1.03
	[F]	1.04	1.00	0.97	0.98	1.06	1.04	1.00	1.02	1.07	1.02	1.00	1.02	1.07	1.03	1.01	1.02	1.07	1.06	1.03	1.05	1.08
	* [G]																					
	[H]	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"
	* [J]																					
	* [K]																					
BEAM 11	STATION	280+47.13	280+68.84	280+90.56	281+12.28	281+33.99	281+55.63	281+77.29	281+98.95	282+20.60	282+36.92	282+53.24	282+69.56	282+85.87	283+02.14	283+18.41	283+34.68	283+50.95	283+62.63	283+74.31	283+85.98	283+97.66
	OFFSET	28.93' RT	29.25' RT	29.33' RT	29.17' RT	28.76' RT	29.15' RT	29.3' RT	29.2' RT	28.87' RT	29.04' RT	29.07' RT	28.97' RT	28.73' RT	28.99' RT	29.11' RT	29.09' RT	28.94' RT	29.12' RT	29.22' RT	29.26' RT	29.22' RT
	[A]	674.41	674.48	674.56	674.66	674.77	674.83	674.91	675.00	675.11	675.16	675.23	675.30	675.38	675.43	675.48	675.55	675.63	675.66	675.70	675.74	675.79
	* [B]																					
	* [C]																					
	* [D]																					
	[E]	0.99	0.95	0.91	0.92	1.01	0.98	0.95	0.97	1.01	0.97	0.94	0.97	1.02	0.98	0.96	0.97	1.02	1.00	0.98	1.00	1.03
	[F]	1.04	1.00	0.97	0.98	1.06	1.04	1.00	1.02	1.07	1.02	1.00	1.02	1.07	1.03	1.01	1.02	1.07	1.06	1.03	1.05	1.08
	* [G]																					
	[H]	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"
	* [J]																					
	* [K]																					
BEAM 12	STATION	280+43.15	280+64.94	280+86.73	281+08.52	281+30.31	281+52.03	281+73.76	281+95.49	282+17.22	282+33.59	282+49.97	282+66.35	282+82.72	282+99.04	283+15.37	283+31.71	283+48.03	283+59.80	283+71.57	283+83.34	283+95.10
	OFFSET	35.17' RT	35.54' RT	35.66' RT	35.54' RT	35.17' RT	35.61' RT	35.79' RT	35.73' RT	35.44' RT	35.64' RT	35.7' RT	35.63' RT	35.41' RT	35.7' RT	35.84' RT	35.85' RT	35.72' RT	35.8' RT	35.81' RT	35.74' RT	35.61' RT
	[A]	673.95	674.01	674.09	674.19	674.30	674.36	674.43	674.52	674.63	674.68	674.74	674.81	674.89	674.94	674.99	675.06	675.13	675.17	675.22	675.27	675.33
	* [B]																					
	* [C]																					
	* [D]																					
	[E]	1.02	0.97	0.95	0.96	1.00	0.96	0.93	0.95	0.98	0.93	0.92	0.95	0.96	0.90	0.89	0.91	0.96	0.95	0.96	0.96	0.92
	[F]	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.97	0.97	0.97	0.97	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
	* [G]																					
	[H]	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"
	* [J]																					
	* [K]																					
RIGHT TOE OF PARAPET	STATION	280+41.77	280+63.82	280+85.71	281+07.46	281+29.06	281+51.06	281+72.91	281+94.64	282+16.24	282+32.73	282+49.16	282+65.52	282+81.81	282+98.29	283+14.70	283+31.05	283+47.34	283+59.15	283+70.93	283+82.68	283+94.41
	OFFSET	37.33' RT	37.33' RT	37.33' RT	37.33' RT	37.33' RT	37.33' RT	37.33' RT	37.33' RT	37.33' RT	37.33' RT	37.33' RT	37.33' RT	37.33' RT	37.33' RT	37.33' RT	37.33' RT	37.33' RT	37.33' RT	37.33' RT	37.33' RT	37.33' RT
	[A]	673.79	673.88	673.97	674.06	674.14	674.23	674.32	674.40	674.49	674.56	674.62	674.69	674.75	674.82	674.88	674.95	675.01	675.06	675.11	675.16	675.20
	* [B]																					
	* [C]																					
	* [D]																					
	[E]	1.02	0.97	0.95	0.96	1.00	0.96	0.93	0.95	0.98	0.93	0.92	0.95	0.96	0.90	0.89	0.91	0.96	0.95	0.96	0.96	0.92
	[F]	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.97	0.97	0.97	0.97	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
	* [G]																					
	[H]	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"
	* [J]																					

LEGEND

[A] - FINAL DECK ELEV

[B] - BOTTOM OF FLANGE ELEV (BEFORE REMOVAL)

[C] - BOTTOM OF FLANGE ELEV (AFTER REMOVAL)

[D] - REBOUND (FT)

[E] - WEIGHT OF EX DECK (KIPS/FT)

[F] - WEIGHT OF PROP DECK (KIPS/FT)

[G] - DECK DEFLECTION (IN)

[H] - DECK THICKNESS (IN)

[J] - SCREED ELEV

[K] - TOP OF HAUNCH ELEV

BY CONTRACTOR

* - INDICATES AN OMITTED VALUE TO BE COMPLETED BY THE CONTRACTOR

[D] = ([C] - [B]) x 12
[G] = [D] x [F]/[E]
[J] = [A] + [G] / 12
[K] = [A] + ([G] - [H]) / 12

NOTES

1. FINAL DECK ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.

2. SCREED ELEVATIONS: SCREED ELEVATIONS CALCULATED BY THE CONTRACTOR REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.

DESIGN AGENCY
EMH&T
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, Ohio 43054
Phone: (614) 775-4500 www.emht.com

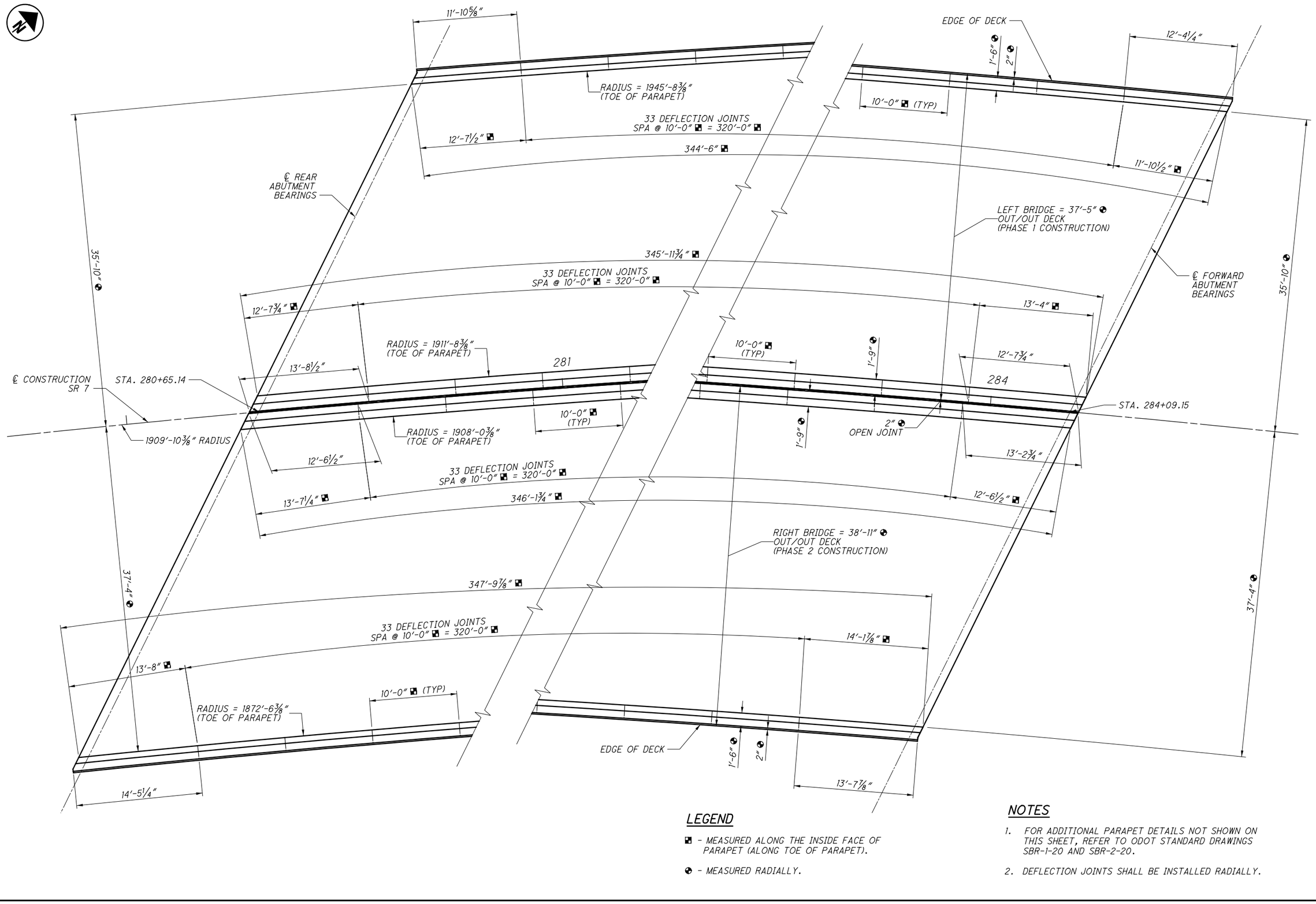
DESIGNED	DRAWN	REVIEWED	DATE
RMW	RMW	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700223	

FINAL DECK ELEVATIONS (RIGHT BRIDGE)

BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

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LEGEND

■ - MEASURED ALONG THE INSIDE FACE OF PARAPET (ALONG TOE OF PARAPET).

◐ - MEASURED RADIALLY.

NOTES

1. FOR ADDITIONAL PARAPET DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWINGS SBR-1-20 AND SBR-2-20.
2. DEFLECTION JOINTS SHALL BE INSTALLED RADIALLY.

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EMH&T
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, Ohio 43054
Phone: 614.775.4500 www.emht.com

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TDA	GB	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	0700223	

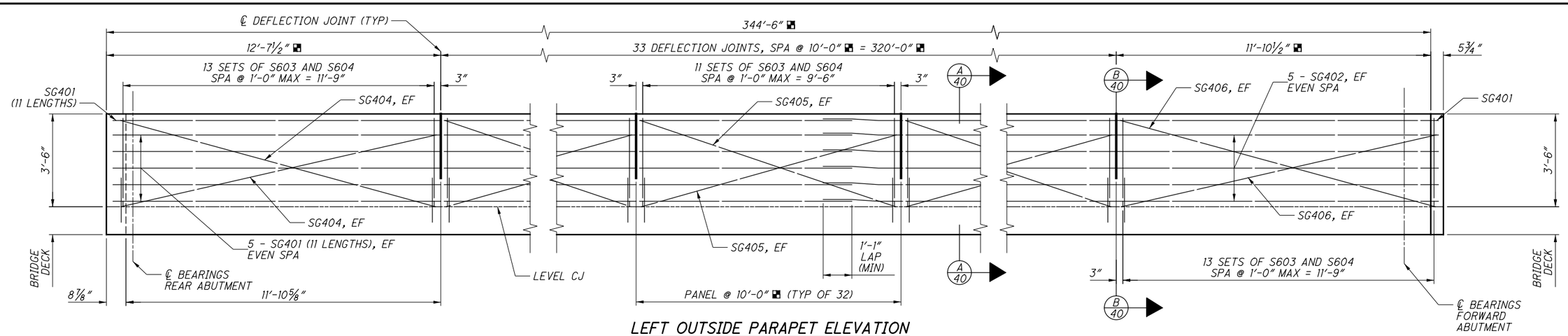
PARAPET PLAN
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

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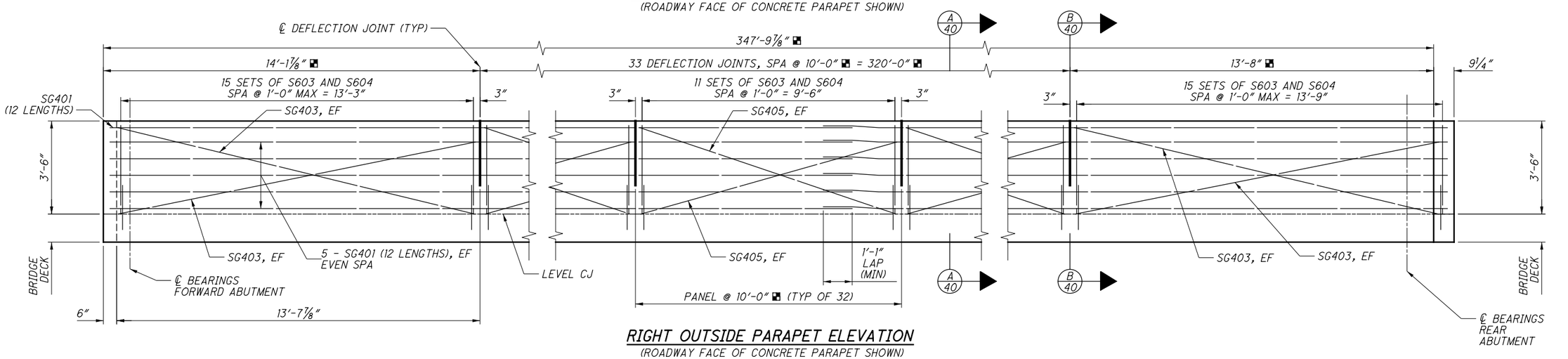
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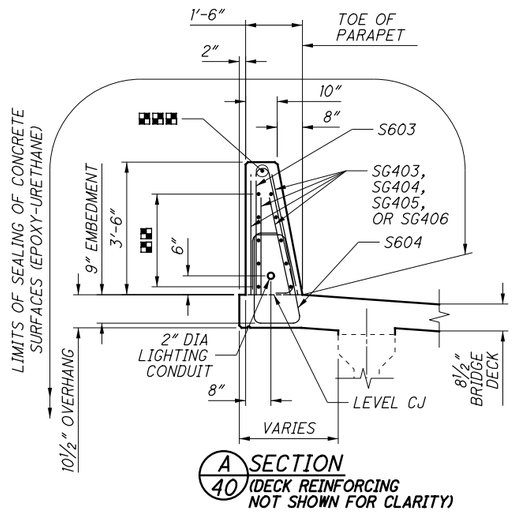
LEFT OUTSIDE PARAPET ELEVATION

(ROADWAY FACE OF CONCRETE PARAPET SHOWN)

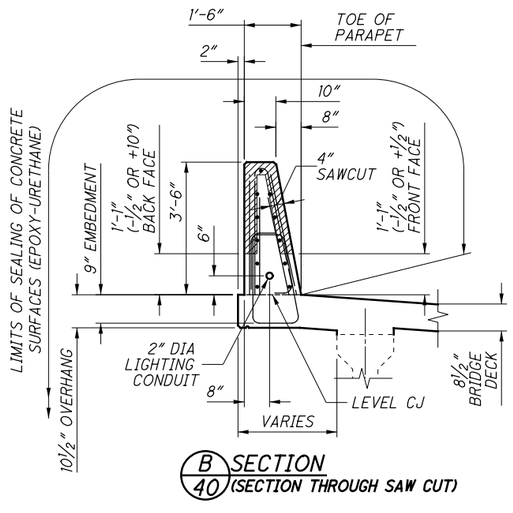


RIGHT OUTSIDE PARAPET ELEVATION

(ROADWAY FACE OF CONCRETE PARAPET SHOWN)



A 40 SECTION
(DECK REINFORCING NOT SHOWN FOR CLARITY)



B 40 SECTION
(SECTION THROUGH SAW CUT)

LEGEND

- ▪ - MEASURED ALONG THE INSIDE FACE OF PARAPET (ALONG TOE OF PARAPET).
- ▪▪ - LEFT OUTSIDE PARAPET - SG401 OR SG402 SPA @ 7½" = 2'-6", EF OR RIGHT OUTSIDE PARAPET - SG401 SPA @ 7½" = 2'-6", EF
- ▪▪▪▪ - LEFT SIDE PARAPET - SG401 OR SG402 OR RIGHT SIDE PARAPET - SG401

NOTES

1. FOR ADDITIONAL PARAPET DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWINGS SBR-1-20.
2. DECK REINFORCING NOT SHOWN FOR CLARITY.

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EMH&T
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 www.emht.com

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TDA	GB	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	0700223	

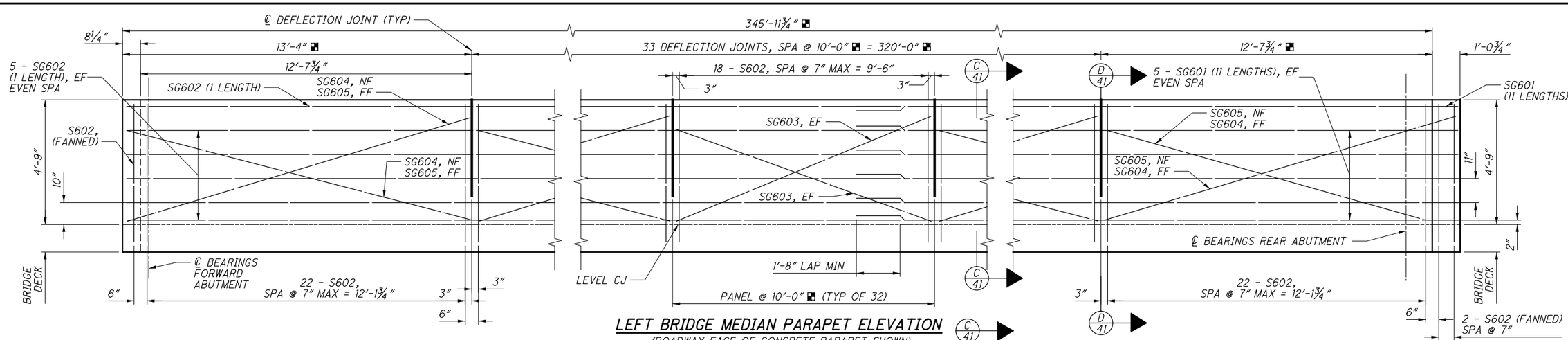
OUTSIDE PARAPET DETAILS
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

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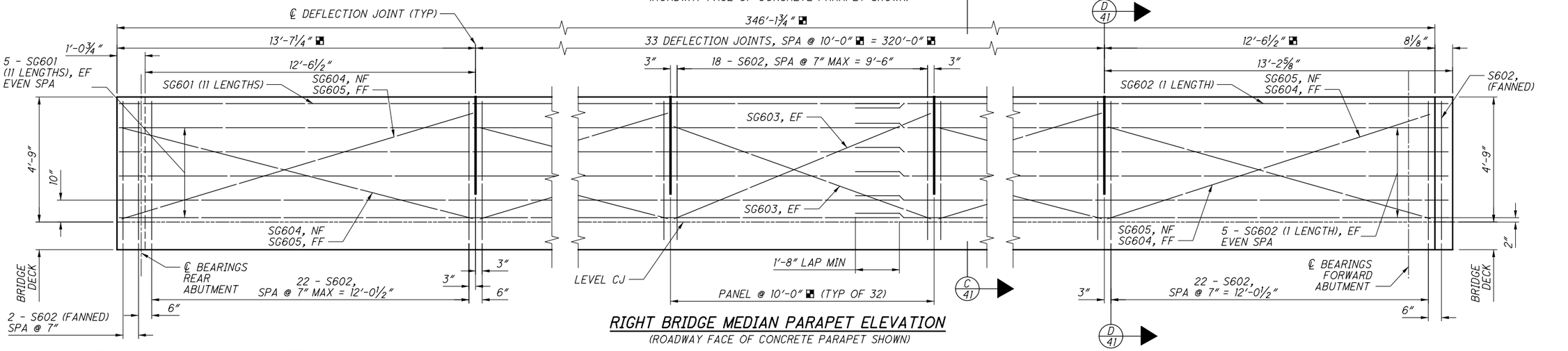
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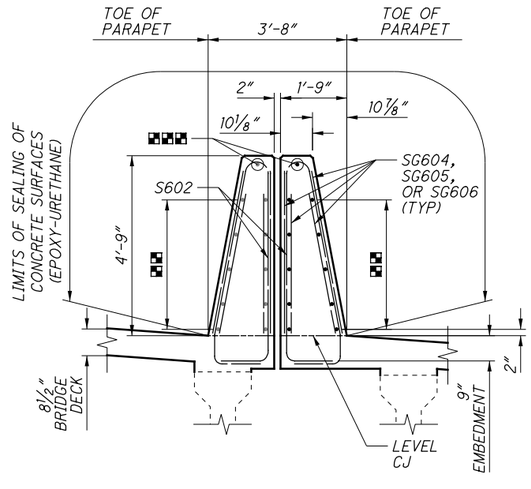
LEFT BRIDGE MEDIAN PARAPET ELEVATION

(ROADWAY FACE OF CONCRETE PARAPET SHOWN)



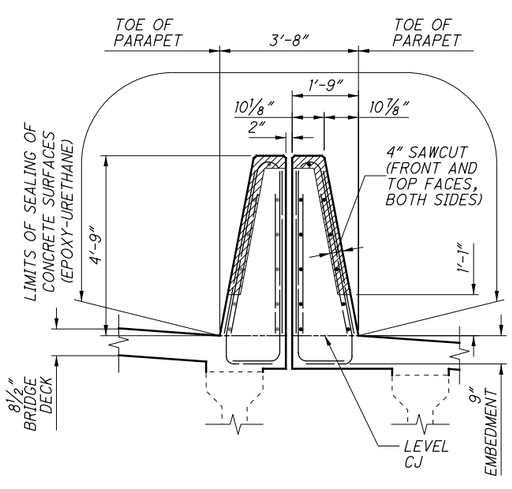
RIGHT BRIDGE MEDIAN PARAPET ELEVATION

(ROADWAY FACE OF CONCRETE PARAPET SHOWN)



C 41 SECTION

(DECK REINFORCING NOT SHOWN FOR CLARITY)



D 41 SECTION

(SECTION THROUGH SAW CUT)

LEGEND

■ - MEASURED ALONG THE INSIDE FACE OF PARAPET (ALONG TOE OF PARAPET).

■■ - SG601 OR SG602 SPA @ 10½" = 3'-8", EF

■■■ - SG601 OR SG602

NOTES

1. FOR ADDITIONAL PARAPET DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWINGS SBR-2-20.
2. DECK REINFORCING NOT SHOWN FOR CLARITY.

DESIGN AGENCY EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
TDA	GB	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	0700223	

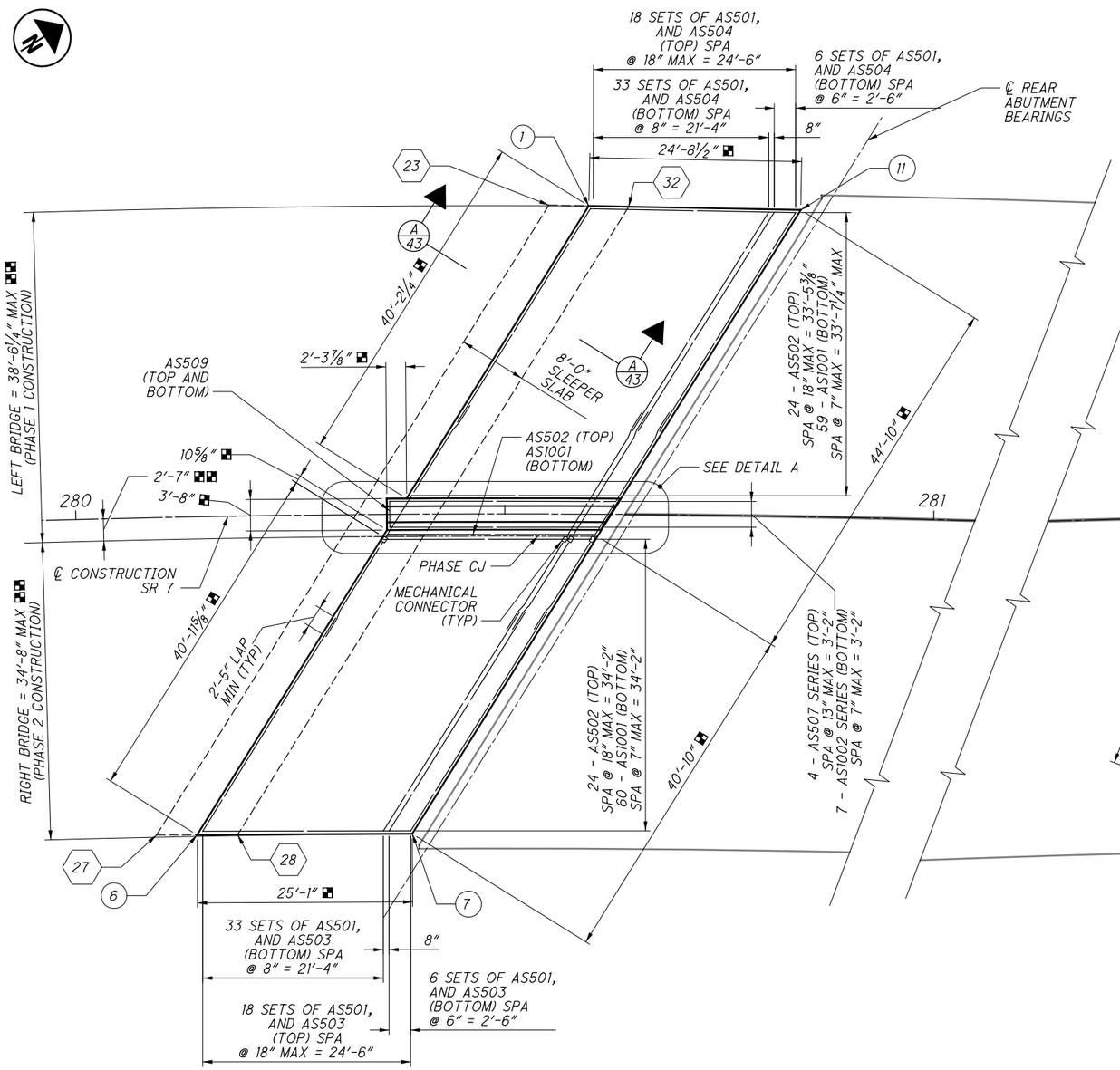
MEDIAN PARAPET DETAILS
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

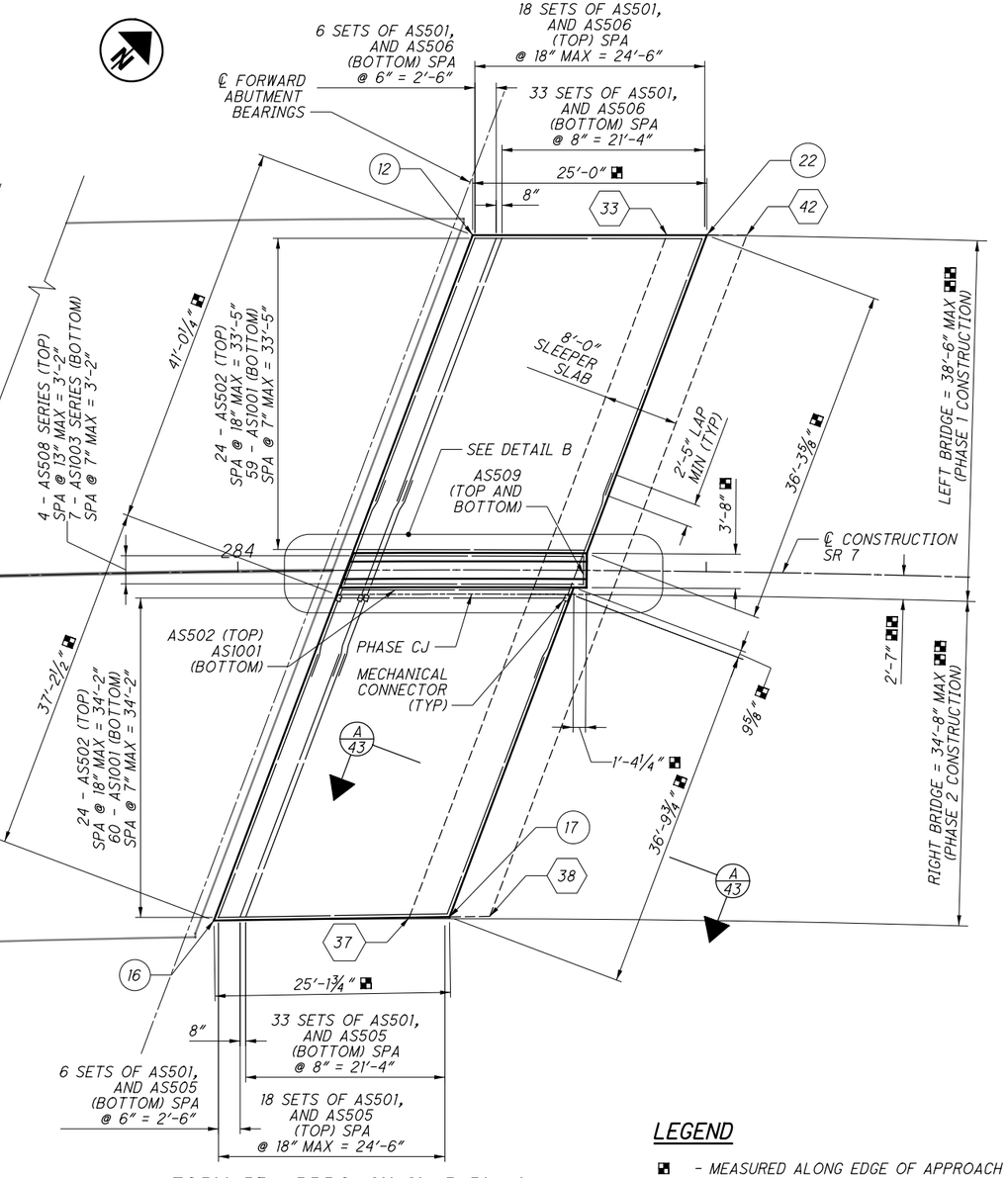
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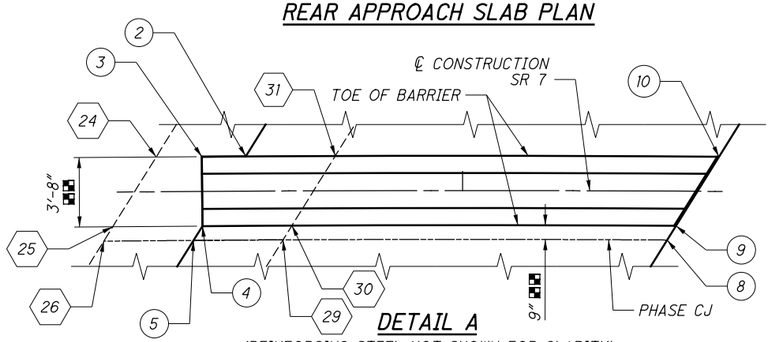
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REAR APPROACH SLAB PLAN

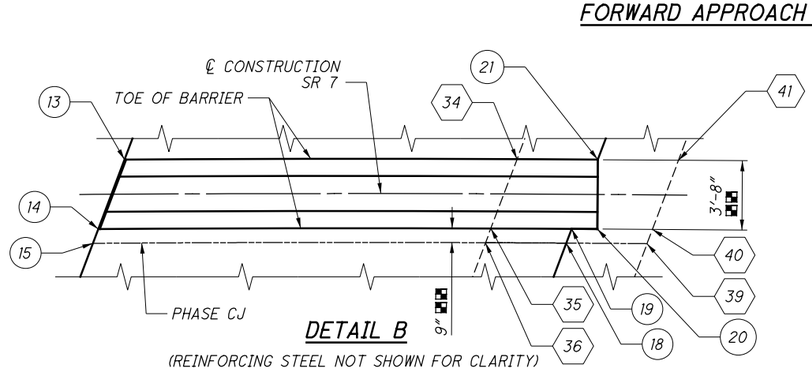


FORWARD APPROACH SLAB PLAN



DETAIL A

(REINFORCING STEEL NOT SHOWN FOR CLARITY)



DETAIL B

(REINFORCING STEEL NOT SHOWN FOR CLARITY)

LEGEND

- ■ - MEASURED ALONG EDGE OF APPROACH SLAB
- ■■ - MEASURED RADIALLY
- (X) - APPROACH SLAB SURFACE ELEVATION LOCATION NO. "X"
- ⟨X⟩ - SLEEPER SLAB SURFACE ELEVATION LOCATION NO. "X"

NOTES

1. FOR ADDITIONAL APPROACH SLAB DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWINGS AS-1-15 AND AS-2-15.
2. ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO CONSTRUCT THE APPROACH SLAB AND AS SHOWN ON THIS SHEET AND AS-1-15 SHALL BE INCLUDED WITH ITEM 526 - REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN, FOR PAYMENT.

DESIGN AGENCY
EMH&T
Engineers • Architects • Surveyors • Scientists
5500 New Albany Road, Columbus, Ohio 43054
Phone: (614) 775-4500 www.emht.com

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TDA	GB	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	0700223	

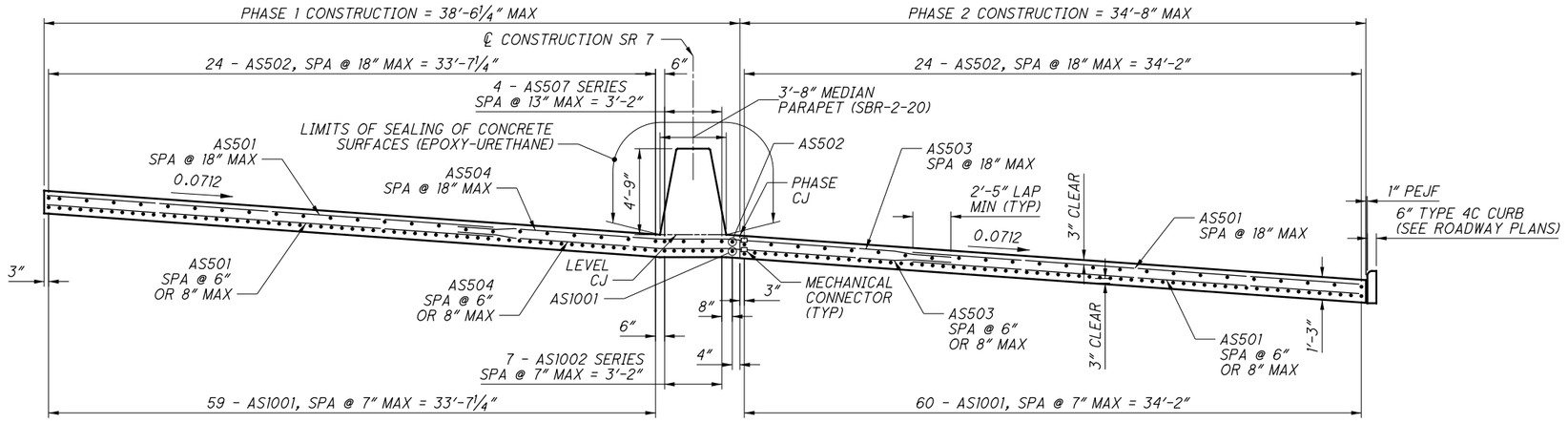
APPROACH SLAB PLAN
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

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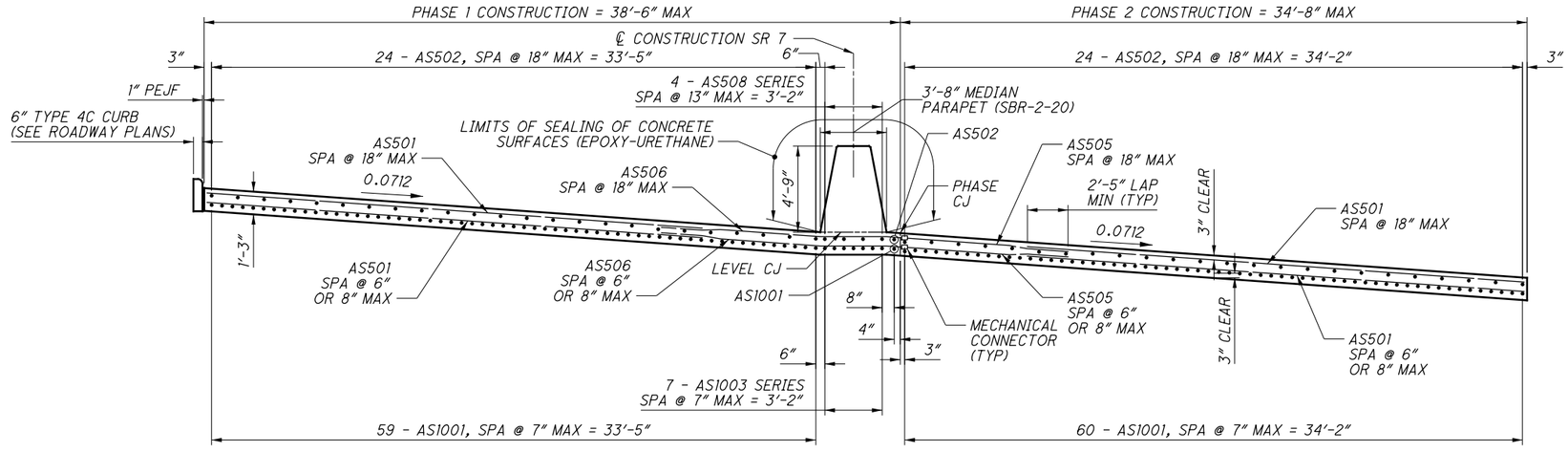
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REAR APPROACH SLAB TRANSVERSE SECTION

(PARAPET REINFORCING NOT SHOWN FOR CLARITY)

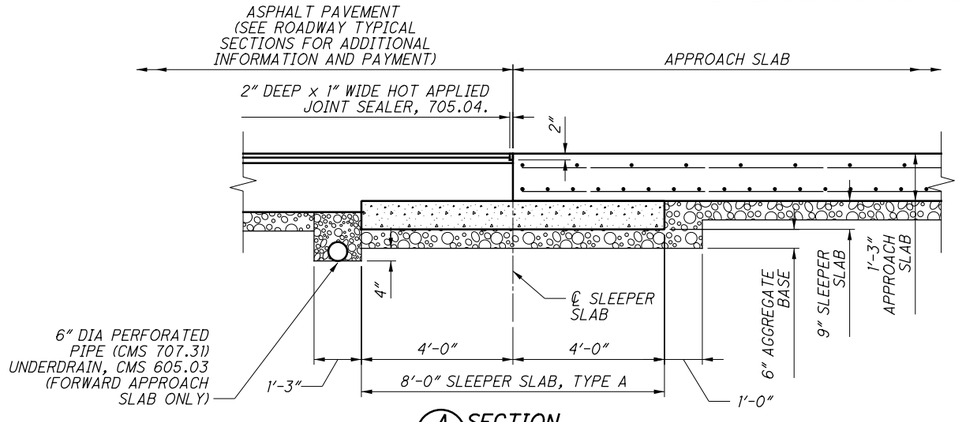
APPROACH SLAB SURFACE ELEVATIONS			
MARK	STATION	OFFSET	ELEV
1	280+59.61	35.94' LT	678.82
2	280+38.57	1.83' LT	676.31
3	280+36.25	1.83' LT	676.30
4	280+36.25	1.83' RT	676.30
5	280+35.77	2.58' RT	676.24
6	280+13.43	37.07' RT	673.65
7	280+39.01	37.25' RT	673.79
8	280+60.82	2.58' RT	676.34
9	280+61.28	1.83' RT	676.40
10	280+63.53	1.83' LT	676.41
11	280+83.87	35.75' LT	678.91
12	284+25.05	35.75' LT	680.27
13	284+12.26	1.83' LT	677.80
14	284+10.85	1.83' RT	677.80
15	284+10.56	2.58' RT	677.74
16	283+96.91	37.25' RT	675.22
17	284+22.56	37.05' RT	675.34
18	284+35.60	2.58' RT	677.84
19	284+35.88	1.83' RT	677.90
20	284+37.24	1.83' RT	677.90
21	284+37.24	1.83' LT	677.90
22	284+49.59	35.92' LT	680.35



FORWARD APPROACH SLAB TRANSVERSE SECTION

(PARAPET REINFORCING NOT SHOWN FOR CLARITY)

SLEEPER SLAB SURFACE ELEVATIONS			
MARK	STATION	OFFSET	ELEV
23	280+55.04	36.01' LT	677.56
24	280+33.84	1.83' LT	675.03
25	280+31.51	1.83' RT	675.02
26	280+31.03	2.58' RT	674.96
27	280+08.61	37.00' RT	672.37
28	280+18.25	37.13' RT	672.42
29	280+40.51	2.58' RT	675.01
30	280+40.98	1.83' RT	675.07
31	280+43.29	1.83' LT	675.08
32	280+64.18	35.88' LT	677.59
33	284+45.39	35.87' LT	679.09
34	284+32.97	1.83' LT	676.64
35	284+31.61	1.83' RT	676.63
36	284+31.33	2.58' RT	676.57
37	284+18.17	37.11' RT	674.06
38	284+26.94	36.99' RT	674.11
39	284+39.87	2.58' RT	676.61
40	284+40.15	1.83' RT	676.66
41	284+41.49	1.83' LT	676.67
42	284+53.79	35.98' LT	679.11



A 42 SECTION (SECTION THROUGH SLEEPER SLAB)

NOTES

1. FOR ADDITIONAL APPROACH SLAB DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWINGS AS-1-15 AND AS-2-15.
2. ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO CONSTRUCT THE APPROACH SLAB AND AS SHOWN ON THIS SHEET AND AS-1-15 SHALL BE INCLUDED WITH ITEM 526 - REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN, FOR PAYMENT.

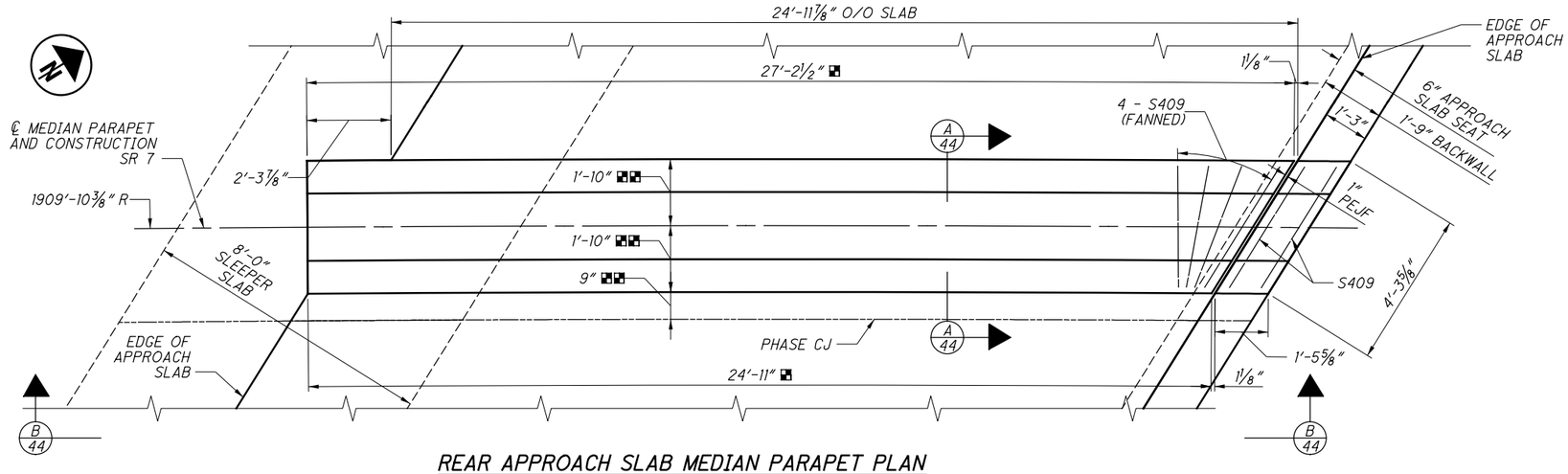
DESIGN AGENCY
EMH&T
Engineers • Architects • Surveyors • Scientists
5500 New Albany Road, Columbus, Ohio 43054
Phone: (614) 775-4500 www.emht.com

DESIGNED	DRAWN	REVIEWED	DATE
TDA	GB	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	0700223	

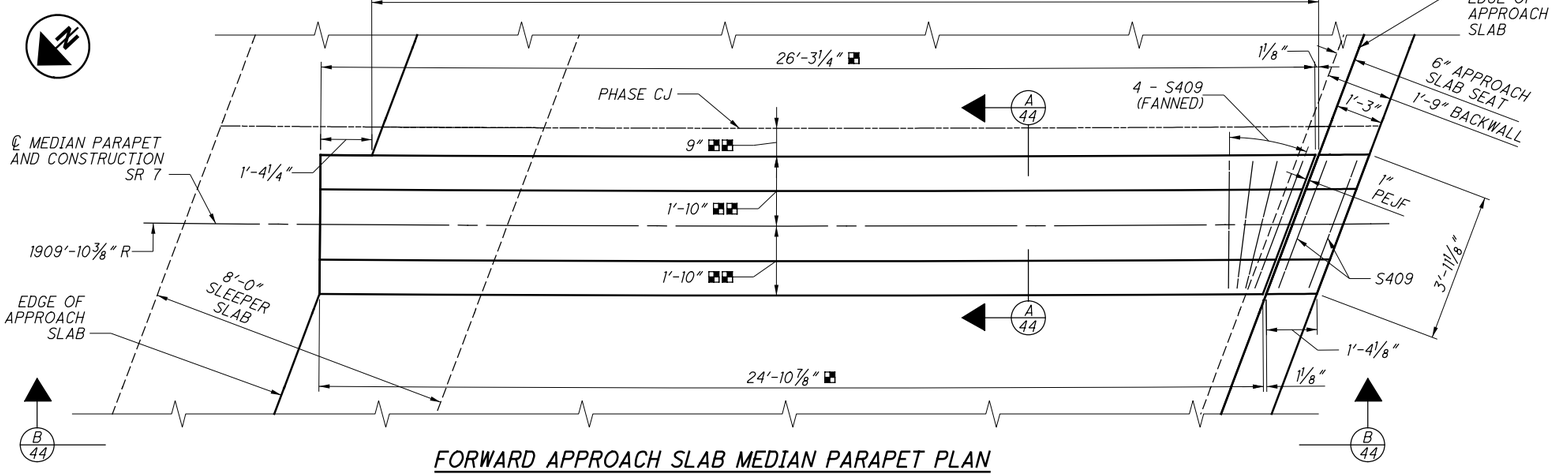
APPROACH SLAB SECTIONS
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

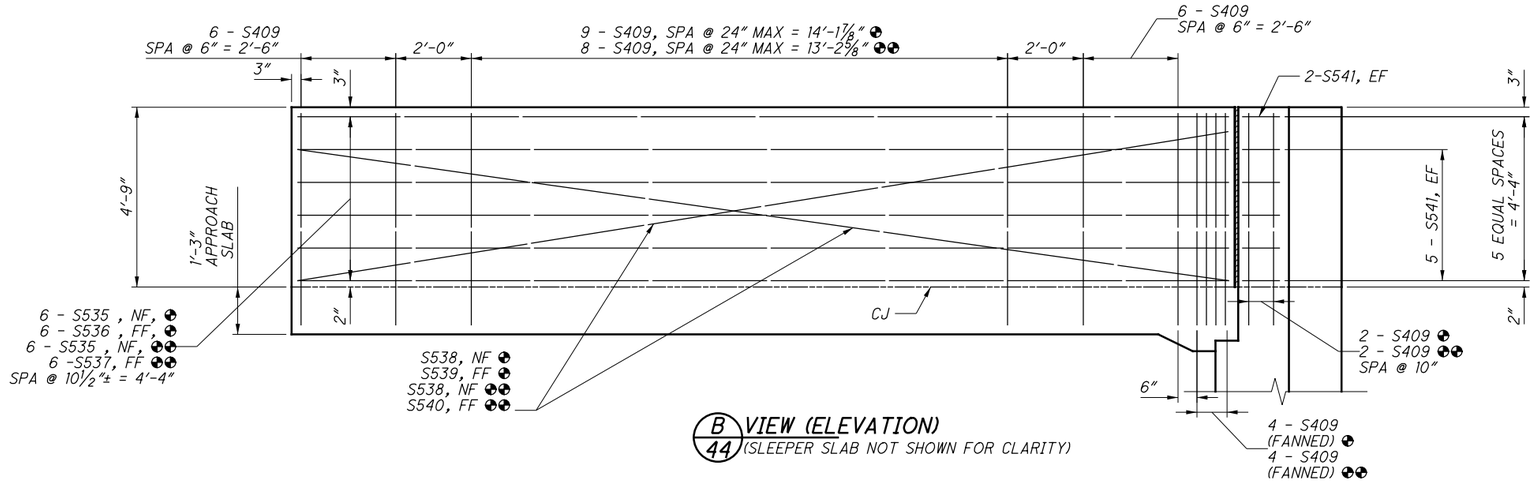
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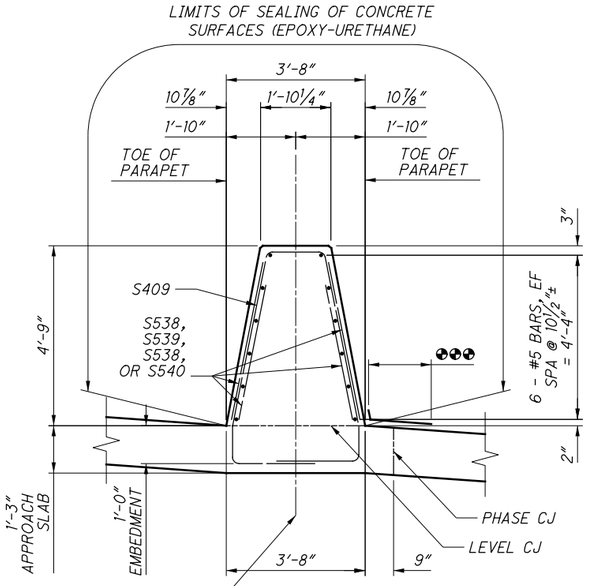
REAR APPROACH SLAB MEDIAN PARAPET PLAN



FORWARD APPROACH SLAB MEDIAN PARAPET PLAN



B/44 VIEW (ELEVATION)
(SLEEPER SLAB NOT SHOWN FOR CLARITY)



A/44 SECTION
(SECTION THROUGH MEDIAN PARAPET)

LEGEND

- ▪ - MEASURED ALONG TOE OF MEDIAN PARAPET
- ▪▪ - MEASURED RADIALLY
- ◒ - REAR APPROACH SLAB MEDIAN PARAPET
- ◒◒ - FORWARD APPROACH SLAB MEDIAN PARAPET
- ◒◒◒ - 2'-0" WIDE HMWM (CENTERED ON JOINT) (INCLUDE IN COST OF APPROACH SLAB)

NOTES

1. FOR ADDITIONAL PARAPET DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWINGS SBR-2-20.
2. APPROACH SLAB REINFORCING NOT SHOWN FOR CLARITY.

DESIGN AGENCY EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
TDA	GB	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	0700223	

APPROACH SLAB MEDIAN PARAPET DETAILS
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

44 / 48

148 / 213

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MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
SUPERSTRUCTURE											
S401	900	30'-0"	18036	STR							
S402	162	5'-1"	550	2	1'-8"	0'-5"	3'-2"				
S403	289	4'-4"	837	2	2'-1"	0'-5"	2'-1"				
S404	253	4'-2"	704	2	1'-7"	0'-5"	2'-5"				
S405	355	2'-10"	672	2	1'-4"	0'-5"	1'-4"				
S406	75	10'-9"	533	STR							
S407	211	7'-3"	1022	2	3'-6"	0'-5"	3'-6"				
S408	143	6'-9"	645	2	3'-3"	0'-5"	3'-3"				
S409	53	17'-0"	602	36	1'-0"	1'-0"	3'-3"	1'-5"	4'-7"		
S410	128	7'-8"	656	2	3'-1"	1'-9"	3'-1"				
S411	128	6'-9"	577	2	2'-10"	1'-4"	2'-10"				
S501	1044	30'-0"	32667	STR							
S502	322	2'-1"	700	16	1'-6"	6'-6"	0'-6"				
S503	1444	8'-8"	13053	16	8'-1"						
S504	299	7'-2"	2235	16	6'-7"						
S505	437	7'-0"	3191	16	6'-5"						
S506	259	6'-6"	1756	16	5'-11"						
S507	87	16'-9"	1520	STR							
S508	219	33'-3"	7595	STR							
S509	146	30'-3"	4606	STR							
S510	146	29'-0"	4416	STR							
S511	44	7'-0"	321	STR							
S512	80	3'-4"	278	STR							
S513	660	38'-3"	26331	17	37'-1"						
S514	660	37'-1"	25527	STR							
S515	648	39'-9"	26866	17	38'-7"						
S516	648	38'-7"	26077	STR							
S517	8	24'-0"	200	STR							
S518	8	21'-11"	183	STR							
S519	1 SER OF 36	7'-4" TO 36'-8"	826	16	6'-9" TO 36'-1"						0'-10"
520	1 SER OF 36	6'-9" TO 36'-1"	804	STR							0'-10"
S521	1 SER OF 37	9'-3" TO 38'-7"	923	16	8'-8" TO 38'-0"						0'-9 3/4"
S522	1 SER OF 37	8'-8" TO 38'-0"	900	STR							0'-9 3/4"
S523	1 SER OF 24	7'-6" TO 37'-4"	561	16	6'-11" TO 36'-9"						1'-3 1/2"
S524	1 SER OF 24	6'-11" TO 36'-9"	547	STR							1'-3 1/2"
S525	1 SER OF 25	7'-9" TO 38'-2"	600	16	7'-2" TO 37'-7"						1'-3 1/4"

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
SUPERSTRUCTURE (CONT)											
S526	1 SER OF 25	7'-2" TO 37'-7"	583	STR							1'-3 1/4"
S527	1	6'-7"	7	16	6'-0"						
S528	1	6'-0"	6	STR							
S529	1	8'-5"	9	16	7'-10"						
S530	1	7'-10"	8	STR							
S531	1	6'-3"	7	16	5'-8"						
S532	1	5'-8"	6	STR							
S533	1	6'-6"	7	16	5'-11"						
S534	1	5'-11"	6	STR							
S535	12	24'-8"	309	STR							
S536	6	26'-2"	164	STR							
S537	6	25'-8"	161	STR							
S538	4	25'-0"	104	STR							
S539	2	25'-6"	53	STR							
S540	2	25'-9"	54	STR							
S541	24	1'-0"	25	STR							
S542	8	5'-2"	43	2	2'-1"	1'-3"	2'-1"				
S543	10	5'-5"	56	2	2'-1"	1'-6"	2'-1"				
S544	4	7'-6"	31	2	3'-3"	1'-3"	3'-3"				
S545	4	7'-7"	32	2	3'-2"	1'-6"	3'-2"				
S546	4	3'-8"	15	2	1'-4"	1'-3"	1'-4"				
S547	4	7'-3"	30	2	3'-0"	1'-6"	3'-0"				
S548	2	3'-10"	8	2	1'-5"	1'-3"	1'-5"				
S549	1	3'-7"	4	2	1'-5"	1'-0"	1'-5"				
S550	7	3'-8"	27	2	1'-5"	1'-1"	1'-5"				
S551	4	2'-8"	11	2	0'-10"	1'-3"	0'-10"				
S552	4	2'-5"	10	1	1'-1"	1'-6"					
S553	4	2'-6"	10	2	0'-9"	1'-3"	0'-9"				
S554	4	6'-1"	25	2	2'-7"	1'-2"	2'-7"				
S555 ■	8	1'-9"	15	STR							
S556 ■	8	1'-11"	16	STR							
S557 ■	4	2'-2"	9	STR							
S558 ■	240	1'-9"	438	1	0'-10 1/4"	1'-0"					
S559	4	11'-0"	46	6	2'-0"	3'-9 1/2"	1'-0"				
S560 ■	232	1'-8"	403	1	0'-9 3/4"	1'-0"					
S561 ■	240	1'-5"	355	1	0'-6 1/2"	1'-0"					
S562	2	8'-6"	18	6	0'-8"	3'-2"	1'-0"				
S563 ■	156	1'-3"	203	1	0'-5"	1'-0"					
S564 ■	4	2'-6"	10	STR							

NOTES:

1. SEE SHEET 48/48 FOR REINFORCING STEEL NOTES AND BAR TYPES.

LEGEND

■ - REINFORCING BAR UTILIZES A MECHANICAL CONNECTOR. BAR LENGTH IS MEASURED TO THE CONSTRUCTION JOINT. EXTRA BAR LENGTH AND/OR BAR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED.

DESIGN AGENCY
EMH&T
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 www.emht.com

DESIGNED MSM | DRAWN MSM | REVIEWED CAS | DATE 10/30/20
CHECKED TDA | REVISED - | STRUCTURE FILE NUMBER 0700223

REINFORCING STEEL LIST
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

45 / 48

149
213

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MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
SUPERSTRUCTURE (CONT)											
S601	219	45'-0"	14802	STR							
S602	1246	13'-0"	24797	35	0'-9"	1'-5"	1'-0"	4'-7"		0'-3"	
S603	760	7'-0"	8086	39	0'-6"	3'-3"	3'-3"	1'-0½"		0'-2"	
S604	760	7'-6"	6374	38	0'-9 ½"	0'-7"	1'-0"	2'-2"	1'-2 ½"		
S605	48	6'-5"	463	STR							
S606	20	6'-7"	198	STR							
S607	16	6'-6"	156	20	1'-0"	1'-1"	1'-2"	2'-7"	3'-0"		
S608	16	7'-1"	170	20	1'-0"	1'-1"	1'-9"	2'-10"	2'-9"		
S609	16	6'-6"	156	13	4'-6"	0'-6"	0'-5"	1'-5"			
S610	24	6'-6"	234	13	4'-0"	0'-9"	0'-9"	1'-6"			
S611	16	3'-2"	76	1	1'-4"	2'-0"					
S612	8	4'-9"	57	13	1'-8"	1'-1"	1'-2"	1'-6 ½"			
S613	NOT USED										
S614	10	5'-8"	85	STR							
S615	NOT USED										
S616	21	6'-8"	210	STR							
S617	4	5'-6"	33	STR							
S618	2	6'-0"	18	STR							
S619	3	6'-3"	28	STR							
S620	8	4'-11"	59	13	2'-6"	0'-11"	1'-0"	1'-2"			
S621	8	7'-6"	90	13	5'-8"	0'-6"	0'-7"	1'-2"			
S622	20	6'-4"	178	13	4'-6"	0'-6"	0'-6"	1'-2"			
S623	16	6'-2"	164	13	4'-9"	0'-2"	0'-2"	1'-3"			
S624	8	6'-6"	78	13	4'-2"	0'-10"	0'-11"	1'-2"			
S625	8	6'-7"	79	20	0'-9"	0'-10"	1'-3"	3'-1"	2'-11"		
S626	8	6'-5"	77	20	3'-3"	2'-5"	1'-3"	0'-11"	0'-9"		
S627	4	5'-8"	34	13	3'-11"	0'-5"	0'-6"	1'-2"			
S801 ■	4	2'-1"	22	STR							
S802 ■	2	2'-6"	13	STR							
HS401	1063	2'-4½"	1686	40	1'-2"	0'-8 ½"				0'-1 ½"	
HS402	54	2'-5½"	89	40	1'-2"	0'-9"				0'-1 ½"	
HS403	721	2'-2½"	1064	40	1'-0"	0'-8 ½"				0'-1 ½"	
HS404	44	2'-3½"	67	40	1'-0"	0'-9"				0'-1 ½"	
HS501	15	37'-6"	587	STR							
HS502	27	20'-0"	563	STR							
HS503	15	30'-0"	469	STR							
HS504	15	14'-0"	219	STR							
HS505	51	26'-0"	1383	STR							
HS506	30	16'-6"	516	STR							
HS507	18	24'-0"	451	STR							
HS508	15	33'-0"	516	STR							
HS509	27	8'-0"	225	STR							
HS510	21	10'-0"	219	STR							
HS511	45	12'-0"	563	STR							
HS512	3	5'-0"	16	STR							
SUB-TOTAL			276,211								

MARK	NUMBER TOTAL	LENGTH PER BAR (FEET)	TOTAL LENGTH (FEET)	TYPE	DIMENSIONS A	B	C	D	E	R	INC
SUPERSTRUCTURE GFRP #4 ◆											
SG401	253	30'-0"	7590	STR							
SG402	11	26'-1"	287	STR							
SG403	8	13'-8"	110	STR							
SG404	4	11'-8"	47	STR							
SG405	256	10'-0"	2560	STR							
SG406	4	11'-10"	48	STR							
SUB-TOTAL			10,642								

MARK	NUMBER TOTAL	LENGTH PER BAR (FEET)	TOTAL LENGTH (FEET)	TYPE	DIMENSIONS A	B	C	D	E	R	INC
SUPERSTRUCTURE GFRP #6 ◆											
SG601	242	30'-0"	7260	STR							
SG602	22	34'-2"	752	STR							
SG603	256	10'-6"	2688	STR							
SG604	8	13'-9"	110	STR							
SG605	8	13'-0"	104	STR							
SUB-TOTAL			10,914								

NOTES:

1. SEE SHEET 48/48 FOR REINFORCING STEEL NOTES AND BAR TYPES.

LEGEND

■ - REINFORCING BAR UTILIZES A MECHANICAL CONNECTOR. BAR LENGTH IS MEASURED TO THE CONSTRUCTION JOINT. EXTRA BAR LENGTH AND/OR BAR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED.

◆ - SG6XX OR SG4XX- GLASS FIBER REINFORCED POLYMER (GFRP) BAR.

DESIGN AGENCY EMH&T

DESIGNED MSM | CHECKED TDA | DRAWN MSM | REVIEWED CAS | DATE 10/30/20 | REVISED - | STRUCTURE FILE NUMBER 0700223

REINFORCING STEEL LIST

BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

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MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD	TOTAL				A	B	C	D	E	R	INC
ABUTMENTS													
A501	30	26	56	30′-0″	1752	STR							
A502 ■	15		15	19′-8″	308	STR							
A503 ■	15		15	15′-8″	245	STR							
A504	10		10	6′-1″	63	19	3′-1″	1′-8″	2′-7″				
A505	10		10	5′-10″	61	11	1′-7″	2′-8″	3′-1″				
A506 ■		13	13	15′-9″	214	STR							
A507 ■		13	13	11′-10″	160	STR							
A508		8	8	6′-1″	51	19	3′-1″	1′-1″	2′-11″				
A509		8	8	5′-11″	49	11	1′-2″	2′-10″	3′-1″				
A510	9	30	39	7′-4″	298	39	0′-6″	3′-3½″	3′-4″	0′-11¼″		0′-1½″	
A511	9	30	39	6′-6″	264	24	0′-5″	2′-11″				0′-1⅞″	
A512	4		4	15′-2″	63	STR							
A513	4		4	15′-9″	66	STR							
A514	4		4	16′-0″	67	STR							
A515	4		4	15′-4″	64	STR							
A516		4	4	23′-5″	98	STR							
A517		4	4	23′-9″	99	STR							
A518		4	4	18′-8″	78	STR							
A519		4	4	18′-3″	76	STR							
A520	2	2	4	10′-0″	42	STR							
A521	2	2	4	10′-2″	42	19	3′-1″	6′-6″	2′-9″				
A522	3		3	7′-10″	25	STR							
A523	8	3	11	9′-8″	111	STR							
A524	1 SER OF 3		1 SER OF 3	7′-8″ TO 10′-10″	29	STR							1′-7″
A525	1 SER OF 3		1 SER OF 3	8′-3″ TO 11′-5″	31	STR							1′-7″
A526		1 SER OF 2	1 SER OF 2	10′-10″ TO 13′-1″	25	STR							2′-3″
A527		1 SER OF 2	1 SER OF 2	10′-5″ TO 12′-8″	24	STR							2′-3″
A528		8	8	12′-1″	101	STR							
A529	1 SER OF 3		1 SER OF 3	8′-1″ TO 11′-7″	31	STR							1′-9″
A530	1 SER OF 3		1 SER OF 3	7′-6″ TO 11′-0″	29	STR							1′-9″
A531		1 SER OF 2	1 SER OF 2	16′-5″ TO 18′-3″	36	STR							1′-10″
A532		1 SER OF 2	1 SER OF 2	16′-9″ TO 18′-7″	37	STR							1′-10″
A533	4		4	8′-9″	37	20	2′-8″	1′-6½″	2′-8″	1′-6½″	2′-8″		
A534		4	4	10′-3″	43	20	1′-10″	2′-6″	4′-1″	2′-6″	1′-10″		
A601	84	77	161	7′-5″	1794	2	3′-8″	0′-5″	3′-8″				
A602	84	77	161	6′-3″	1511	2	2′-10″	0′-11″	2′-10″				
A603	84		84	8′-11″	1125	2	3′-11″	1′-5″	3′-11″				
A604 ■	84		84	3′-9″	473	STR							
A605	84		84	5′-0″	631	STR							
A606		77	77	7′-1″	819	2	3′-0″	1′-5″	3′-0″				
A607 ■		77	77	2′-10″	328	STR							
A608		77	77	4′-1″	472	STR							

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD	TOTAL				A	B	C	D	E	R	INC
ABUTMENTS (CONT)													
A609	12	12	24	4′-4″	156	STR							
A610	4 SER OF 12	4 SER OF 12	8 SER OF 12	4′-3″ TO 5′-2″	679	STR							0′-1″
A611	8	8	16	9′-6″	228	3	1′-2″	3′-2″					
A612	20		20	9′-1″	273	STR							
A613	13	15	28	4′-7″	193	STR							
A614	3	2	5	3′-5″	26	STR							
A615	2 SER OF 5		2 SER OF 5	3′-3″ TO 5′-3″	64	STR							0′-6″
A616	6	7	13	2′-10″	55	STR							
A617	8	9	17	3′-2″	81	1	1′-0″	2′-4″					
A618 ■	6	7	13	5′-9″	112	2	1′-8″	2′-9″	1′-8″				
A619		2 SER OF 5	2 SER OF 5	3′-2″ TO 4′-6″	58	STR							0′-4″
A620		26	26	8′-3″	322	STR							
A621	2 SER OF 5		2 SER OF 5	3′-2″ TO 5′-0″	61	STR							0′-5½″
A622	9		9	6′-9″	91	STR							
A623 ■	5		5	5′-6″	41	STR							
A624		2 SER OF 5	2 SER OF 5	3′-2″ TO 4′-10″	60	STR							0′-5″
A625		11	11	5′-10″	96	STR							
A626 ■		11	11	4′-6″	74	STR							
A627	60		60	3′-10″	345	1	2′-0″	2′-0″					
A628	20		20	3′-8″	110	1	1′-10″	2′-0″					
A629	12		12	3′-5″	62	1	2′-0″	1′-7 ¼″					
A630	4		4	3′-3″	20	1	1′-10″	1′-7 ¼″					
A631		16	16	3′-6″	84	1	1′-7 ¾″	2′-0 ½″					
A632		48	48	3′-8″	352	1	1′-7 ¾″	2′-2 ½″					
A633		16	16	3′-1″	74	1	1′-7 ¾″	1′-7 ¼″					
A634		16	16	4′-2″	100	1	2′-1 ¼″	2′-2 ½″					
A901	60	12	72	2′-0″	490	STR							
A902	24		24	4′-0″	326	STR							
A903	12	12	24	1′-7″	129	STR							
A904		48	48	2′-3″	367	STR							
A905		24	24	3′-6″	286	STR							
D801	50		50	5′-6″	734	18	3′-4″	1′-0″	1′-0″				
D802		50	50	5′-2″	690	18	3′-0″	1′-0″	1′-0″				
			SUB-TOTAL		18,711								

MARK	NUMBER			LENGTH PER BAR (FEET)	TOTAL LENGTH (FEET)	TYPE	DIMENSIONS						
	REAR	FWD	TOTAL				A	B	C	D	E	R	INC
ABUTMENTS GFRP #6 ◕													
AG601	12	12	24	5′-8″	136	STR							
AG602	12	12	24	5′-8″	136	25	1′-10″	2′-5″	1′-4¼″	0′-1½″	0′-5″		
AG603	24	24	48	10′-0″	480	STR							
AG604	11		11	4′-1″	45	STR							
AG605	11		11	4′-3″	47	STR							
AG606		11	11	12′-1″	133	STR							
AG607		11	11	6′-11″	76	STR							
			SUB-TOTAL		1,053								

NOTES:

1. SEE SHEET 48/48 FOR REINFORCING STEEL NOTES AND BAR TYPES.

LEGEND

■ - REINFORCING BAR UTILIZES A MECHANICAL CONNECTOR. BAR LENGTH IS MEASURED TO THE CONSTRUCTION JOINT. EXTRA BAR LENGTH AND/OR BAR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED.

◕ - AG6XX - GLASS FIBER REINFORCED POLYMER (GFRP) BAR.

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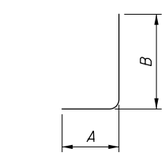
DESIGN AGENCY
EMH&T
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 www.emht.com

DESIGNED	DRAWN	REVIEWED	DATE
TDA	GB	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	0700223	

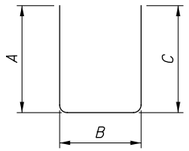
REINFORCING STEEL LIST
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

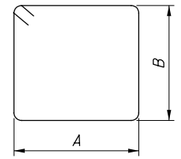
MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD	TOTAL				A	B	C	D	E	R	INC
APPROACH SLABS ■■													
AS501	114	114	228	30'-0"	7134	STR							
AS502	49	49	98	24'-6"	2504	STR							
AS503 ■	57		57	13'-4"	793	STR							
AS504 ■	57		57	17'-9"	1055	STR							
AS505 ■		57	57	9'-6"	565	STR							
AS506 ■		57	57	13'-5"	798	STR							
AS507	1 SER OF 4		1 SER OF 4	24'-9" TO 26'-9"	107	STR							0'-8"
AS508		1 SER OF 4	1 SER OF 4	24'-9" TO 25'-10½"	106	STR							0'-4½"
AS509	2	2	4	3'-4"	14	STR							
AS1001	120	120	240	25'-11"	26765	16	24'-6"						
AS1002	1 SER OF 7		1 SER OF 7	26'-2" TO 28'-2"	818	16	24'-9" TO 26'-9"						0'-4"
AS1003		1 SER OF 7	1 SER OF 7	26'-2" TO 27'-4"	806	16	24'-9" TO 25'-10½"						0'-2¼"
				SUB-TOTAL	41,465								



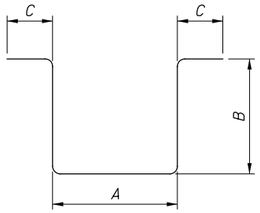
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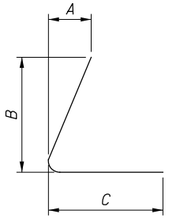
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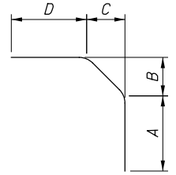
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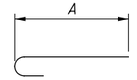
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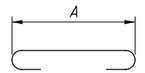
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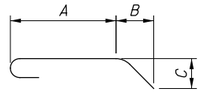
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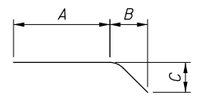
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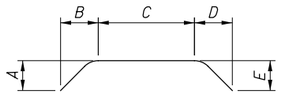
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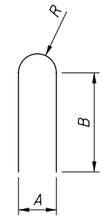
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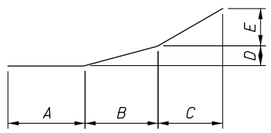
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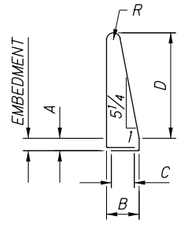
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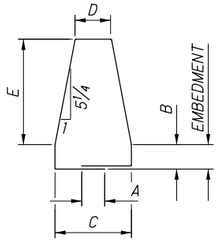
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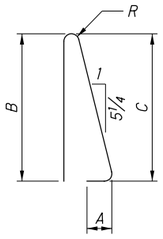
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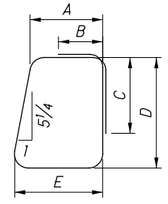
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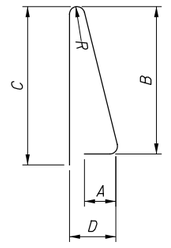
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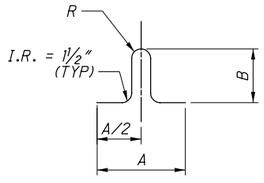
TYPE-37



TYPE-38



TYPE-39



TYPE-40

LEGEND

■■ - REINFORCING BAR UTILIZES A MECHANICAL CONNECTOR. BAR LENGTH IS MEASURED TO THE CONSTRUCTION JOINT. EXTRA BAR LENGTH AND/OR BAR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED.

■■ - REINFORCING STEEL IN APPROACH SLABS ARE INCLUDED FOR PAYMENT WITH ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN.

NOTES

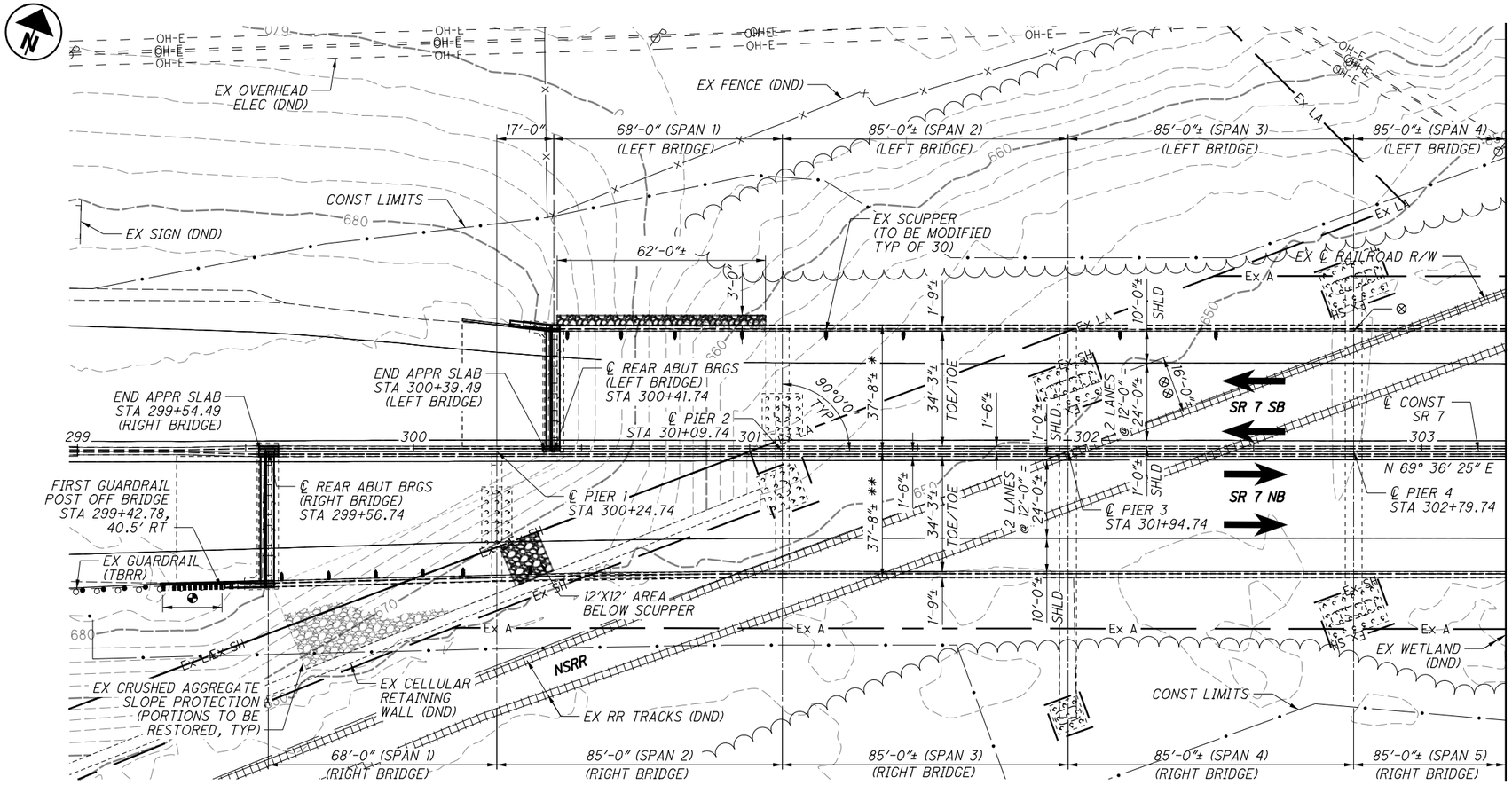
1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE THE NUMBER S601 IS A NO. 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT, UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD" WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.
2. ALL REINFORCING STEEL TO EPOXY COATED.
3. UNLESS OTHERWISE SPECIFIED, THE FOLLOWING LAP LENGTHS SHALL APPLY:
   #4 BARS: 1'-11" (VERT)
   #5 BARS: 2'-5" (VERT), #5 BARS: 3'-1" (HORIZ)
   #6 BARS: 3'-7" (VERT), #6 BARS: 4'-0" (HORIZ)
   #8 BARS: 4'-9" (VERT).
4. SEE SHEET 4/48 FOR ABBREVIATION LEGENDS.

DESIGN AGENCY EMH&T
DESIGNED TDA | DRAWN GB | REVIEWED CAS 10/30/20 | CHECKED RMW | REVISED - | DATE | STRUCTURE FILE NUMBER 0700223

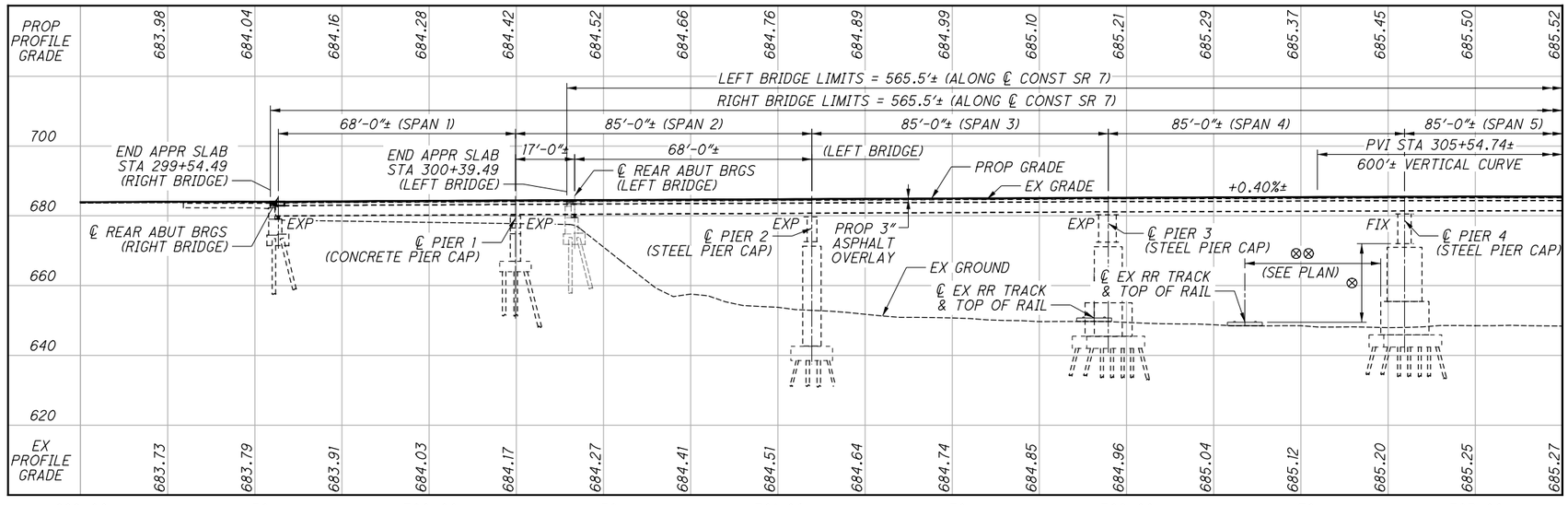
REINFORCING STEEL LIST
BRIDGE NO. BEL-7-1152C
SR 7 OVER CO RD 7 & WEGEE CREEK

BEL-7-11.48
PID No. 110324

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PLAN



PROFILE ALONG NB PROFILE GRADE LINE

(RIGHT BRIDGE SHOWN, LEFT BRIDGE SIMILAR)

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. FOR BENCHMARK INFORMATION SEE SHEET 2/25

DESIGN TRAFFIC:

2021 ADT = 15,500 2021 ADTT = 3,410
2031 ADT = 18,000 2041 ADTT = 3,960
DIRECTIONAL DISTRIBUTION = 57% (NB)

LEGEND

- * - PHASE 1 CONSTRUCTION
- ** - PHASE 2 CONSTRUCTION
- ⊗ - POINT OF MINIMUM VERTICAL CLEARANCE: REQUIRED 23'-0" PROVIDED 22'-7"± MEASURED 5'-6"± FROM CENTERLINE OF TRACK
- ⊗⊗ - MINIMUM HORIZONTAL CLEARANCE TO ℄ RR TRACK
- ◕ - MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 (BY ROADWAY)
- ◕◕ - MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2 (BY ROADWAY)
- ▩ - PROP CRUSHED AGGREGATE SLOPE PROTECTION

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAMS WITH REINFORCED CONCRETE DECK, PIERS AND ABUTMENTS. PIERS 2, 3, 4, 5 AND 6 HAVE WELDED BOX GIRDER CAPS

SPANS: ALL SPAN DIMENSIONS ARE ±
68'-0", 5 @ 85'-0", 68'-0" C/C BRG (RIGHT BRIDGE)
68'-0", 5 @ 85'-0", 68'-0" C/C BRG (LEFT BRIDGE)

ROADWAY: 34'-3" F/F CONCRETE BARRIERS (RIGHT BRIDGE)
34'-3" F/F CONCRETE BARRIERS (LEFT BRIDGE)

LOADING: HS 20-44 AND THE ALTERNATE MILITARY LOADING

SKEW: NONE

WEARING SURFACE: 1½" LATEX MODIFIED CONCRETE

APPROACH SLABS: AS-1-72 (25'-0"±, MOD)

ALIGNMENT: TANGENT AND 1°0'0" CURVE LEFT

CROWN: VARIES

STRUCTURAL FILE NUMBER: 0700312

DATE BUILT: 1983

COORDINATES: LATITUDE 39°57'45.57" N
LONGITUDE 80°45'19.95" W

DISPOSITION: TO BE REHABILITATED

PROPOSED STRUCTURE

SAME AS EXISTING EXCEPT AS FOLLOWS:
WEARING SURFACE: 3" ASPHALT
VEHICULAR LIVE LOAD: 75.6% OF HL-93
FUTURE WEARING SURFACE: 0 PSF

PROPOSED WORK

WORK LISTED IS NOT ALL INCLUSIVE CONTRACTOR IS TO SEQUENCE WORK AS NEEDED.

1. REMOVE ASPHALT CONCRETE WEARING SURFACE ON EXISTING REAR APPROACH SLABS.
2. REMOVE PORTIONS OF THE EXISTING REINFORCED CONCRETE DECK ENDS, ABUTMENT BACKWALL, AND BARRIERS.
3. PROVIDE DECK AND SUBSTRUCTURE PATCHING.
4. RECONSTRUCT PORTIONS OF THE EXISTING BRIDGE SLOPE PROTECTION.
5. JACK AND RESET MISALIGNED ROCKER BEARINGS.
6. MODIFY EXISTING SCUPPERS TO ACCOMMODATE PROPOSED ASPHALT OVERLAY.
7. RECONSTRUCT ABUTMENT BACKWALL AND INSTALL NEW DECK END EXPANSION JOINTS PER EXJ-4-87. RECONSTRUCT EXISTING PARAPETS.
9. PROVIDE NEW ASPHALT OVERLAY ON THE EXISTING BRIDGE DECK AND APPROACH SLABS.
10. COMPLETE SEALING OF CONCRETE SURFACES.

DESIGN AGENCY EMH&T
DESIGNED RMW | DRAWN MEM | REVIEWED CAS | DATE 10/30/20
CHECKED TDA | REVISED - | STRUCTURE FILE NUMBER 0700312

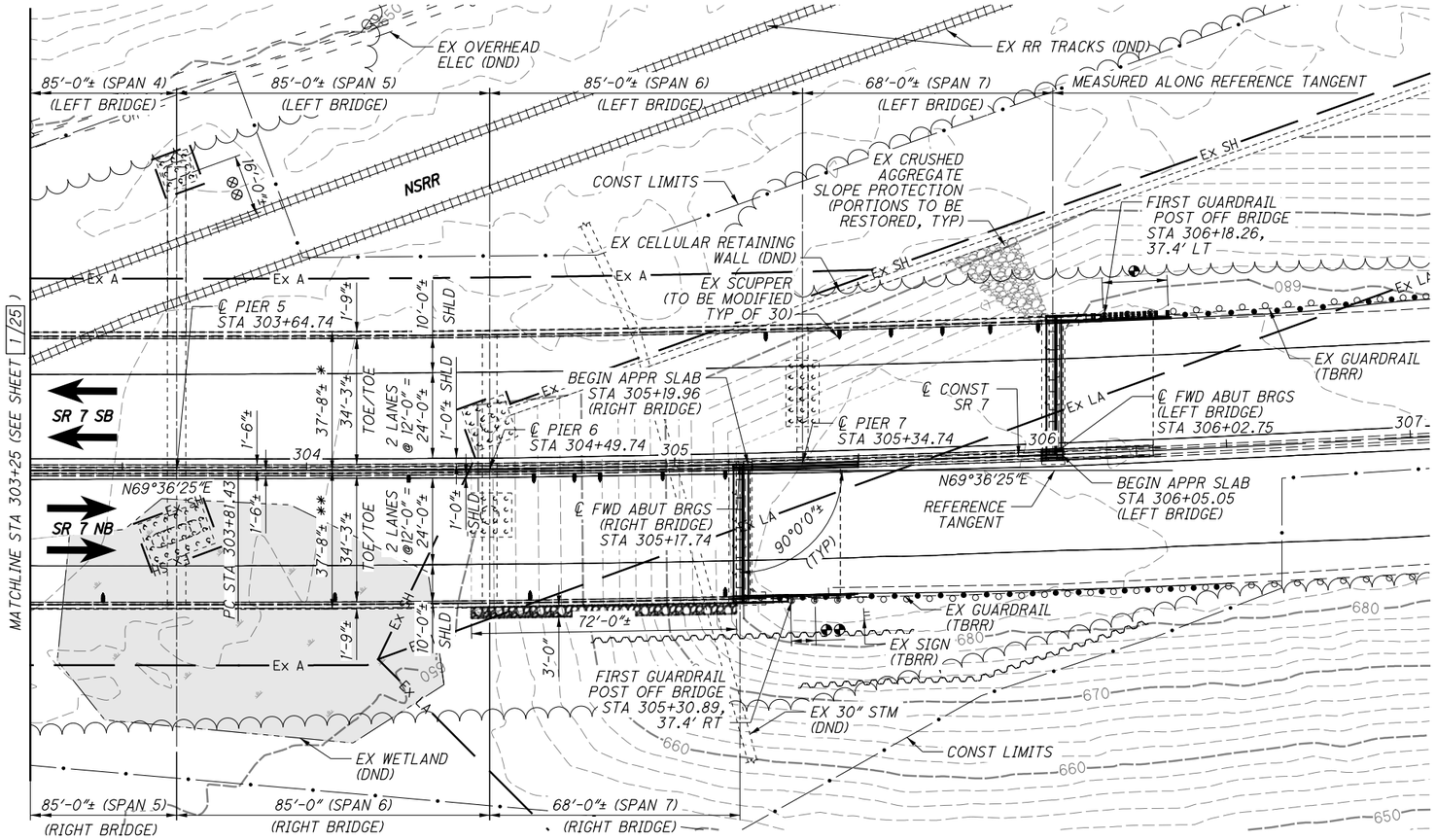
BELMONT COUNTY
STA. 299+54.49
STA. 303+25.00

SITE PLAN
BRIDGE NO. BEL-7-1187C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

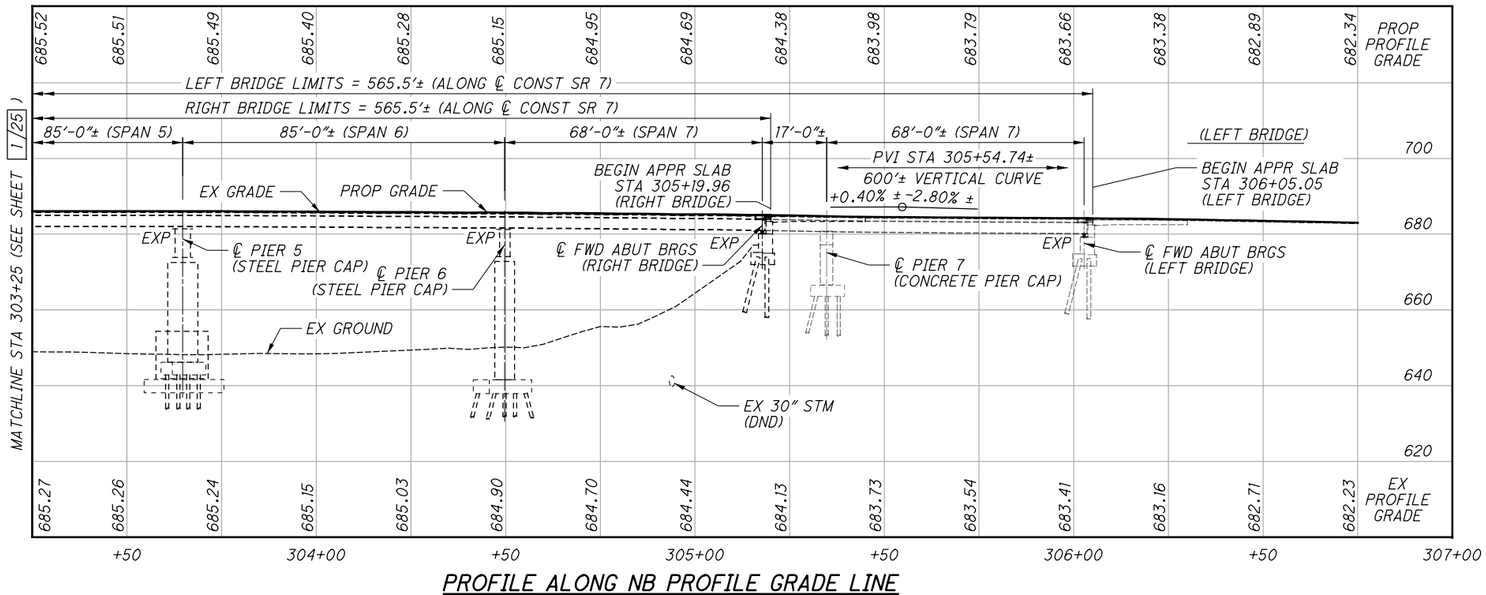
BEL-7-11.48
PID No. 110324

1 / 25
153 / 213

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PLAN



PROFILE ALONG NB PROFILE GRADE LINE

(RIGHT BRIDGE SHOWN, LEFT BRIDGE SIMILAR)

BENCHMARK DATA

BM #3: STA 292+93.19, OFFSET 70.9' LT, EL 679.51
CHISELED SQUARE ON THE NORTHWEST CORNER OF A CONCRETE LIGHTPOLE BASE LOCATED ON THE NORTH SIDE OF STATE ROUTE 7, BEING THE SECOND LIGHT POLE (740 FEET) WEST OF THE RAILROAD OVERPASS.

BM #4: STA 298+72.57, OFFSET 58.6' LT, EL 681.72
CHISELED SQUARE ON THE NORTHWEST CORNER OF A CONCRETE LIGHTPOLE BASE LOCATED ON THE NORTH SIDE OF STATE ROUTE 7, BEING THE FIRST LIGHT POLE (160 FEET) WEST OF THE RAILROAD OVERPASS.

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET 2/213

HORIZONTAL CURVE DATA

P.I. STA 314+99.00
Δ = 22° 04' 27" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 1,117.57'
L = 2,207.42'
E = 107.98'
C = 2,193.80'
C.B. = N 58° 34' 11" E

LEGEND

* - PHASE 1 CONSTRUCTION
** - PHASE 2 CONSTRUCTION
◕ - MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 (BY ROADWAY)
◕◕ - MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2 (BY ROADWAY)
EX WETLAND (DND) - APPROXIMATE LIMITS EX WETLAND (DND) ALL WORK SHALL BE PERFORMED OUTSIDE OF THE EXISTING WETLANDS. ALL WETLANDS TO BE IDENTIFIED IN FIELD WITH A VISIBLE BARRIER PRIOR TO CONSTRUCTION.
⊗⊗ - MINIMUM HORIZONTAL CLEARANCE TO ℄ RR TRACK
- PROP CRUSHED AGGREGATE SLOPE PROTECTION
- APPROXIMATE LIMITS OF TEMPORARY SHEETING, FOR REFERENCE ONLY. TEMPORARY SHEETING IS INTENDED TO SUPPORT SITE ACCESS BELOW THE BRIDGE TO FACILITATE PROPOSED CONSTRUCTION. THE SELECTED LIMITS SHALL BE CLOSELY COORDINATED WITH THE APPROPRIATE MAINTENANCE OF TRAFFIC PHASING.

DESIGN AGENCY EMH&T
DESIGNED RMW | DRAWN MEM | REVIEWED CAS | DATE 10/30/20
CHECKED TDA | REVISED - | STRUCTURE FILE NUMBER 0700312
BELMONT COUNTY
STA. 303+25.00
STA. 306+05.05
SITE PLAN (CONT.)
BRIDGE NO. BEL-7-1187C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.
BEL-7-11.48
PID No. 110324
2 / 25
154/213

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STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

BR-1-13	REVISED	01-17-14
EXJ-4-87	REVISED	01-19-18
GSD-1-19	REVISED	01-18-19
PCB-91	REVISED	07-17-20
RB-1-55	REVISED	07-19-13

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

844 DATED 04-20-18

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 8TH EDITION, 2017, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

REDUNDANCY

THE FOLLOWING ITEM(S) WERE CONSIDERED NON-REDUNDANT FOR LOAD RATING AND INCLUDE A LOAD MODIFIER EQUAL TO 1.05 IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.4:

STEEL BOX GIRDER PIER CAPS ON TWO COLUMN SUPPORTS

OPERATIONAL IMPORTANCE

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN LOADING

DESIGN LOADING: 75.6% OF HL-93
EXISTING 1½" MONOLITHIC WEARING COURSE (ASSUMED)
WEARING SURFACE (WS) OF 0.036 KIPS/SQ.FT.
THIS BRIDGE RECEIVED AN APPROVED DESIGN EXCEPTION FOR DESIGN LOADING STRUCTURAL CAPACITY.

DESIGN DATA

CONCRETE CLASS QC2 WITH QC/QA - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE AND SUBSTRUCTURE)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL
TYPE 3 WATERPROOFING

CONSTRUCTION CLEARANCE

THE CONTRACTOR MUST MAINTAIN THE MINIMUM CONSTRUCTION CLEARANCES HEREIN UNLESS OTHERWISE DISCUSSED WITHIN AN ESTABLISHED MAINTENANCE AGREEMENT. CONSTRUCTION CLEARANCE: MAINTAIN A CONSTRUCTION CLEARANCE OF 14 FEET HORIZONTALLY FROM THE CENTER OF TRACKS AND 22 FEET VERTICALLY FROM A POINT LEVEL WITH THE TOP OF THE HIGHER RAIL.

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 ODOT 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 WHICH HAVE BEEN VERIFIED IN THE FIELD.

RECORD CONSTRUCTION PLANS FOR THE EXISTING BRIDGE ARE ON FILE AT THE DEPARTMENT OF TRANSPORTATION, DISTRICT 11 OFFICE, 2201 REISER AVENUE, NEW PHILADELPHIA, OHIO, 44663 AND ARE AVAILABLE FOR REFERENCE.

EXISTING PLANS:
THE EXISTING PLANS LISTED MAY BE INSPECTED IN THE ODOT DISTRICT 11 OFFICE IN NEW PHILADELPHIA, OHIO.

ORIGINAL CONSTRUCTION: BEL-7-11.89 (1979)
OVERLAY: BEL-7-8.71 (1987)

THESE EXISTING PLANS CAN ALSO BE DOWNLOADED FROM THE FOLLOWING WEBSITE:
http://www.dot.state.oh.us/Divisions/ContractAdmin/Contracts/Pages/designfiles.aspx

ASBESTOS NOTIFICATION

AN ASBESTOS SURVEY OF THE BRIDGE STRUCTURE SCHEDULED FOR REHABILITATION WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE STRUCTURE.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORMS, PARTIALLY COMPLETED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE AND SUBMIT THE FORMS VIA OHIO EPA'S WEBSITE OR MAIL HARD COPIES TO THE ADDRESS BELOW AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION.

ASBESTOS PROGRAM
OHIO EPA, DAPC
P.O. BOX 1049
COLUMBUS, OH 43216-1049

THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER. INFORMATION REQUIRED ON THE FORM WILL INCLUDE: 1) THE CONTRACTORS NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED. COPIES OF THE OEPA FORM AND BRIDGE INSPECTION REPORT ARE AVAILABLE FOR REVIEW AT THE ODOT DISTRICT 11 OFFICE, 2201 REISER AVENUE, NEW PHILADELPHIA, OHIO 44663.

BASIS FOR PAYMENT - THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN:

THIS WORK CONSISTS OF THE REMOVAL OF CONCRETE SUBSTRUCTURE, CONCRETE DECKS INCLUDING PARAPETS, DECK JOINTS, THE PARTIAL REMOVAL OF THE EXISTING LATEX MODIFIED CONCRETE OVERLAY AT DECK ENDS, AND OTHER APPURTENANCES FROM STEEL SUPPORTING SYSTEMS (BEAMS, GIRDERS, CROSS-FRAMES, 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 C&MS 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 BEAM, STEEL GIRDER, ETC.), 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.

PROTECTION OF STEEL SUPPORT SYSTEMS:

BEFORE DECK SLAB CUTTING IS PERMITTED, DRAW THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK ON THE SURFACE OF DECK. DRILL SMALL DIAMETER PILOT HOLES 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF FLANGE EDGES. DECK CUTS OVER OR WITHIN 2 INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 2 INCHES OF FLANGE EDGES MAY EXTEND THE FULL DEPTH OF THE DECK. PERFORM WORK CAREFULLY DURING CUTTING OF THE DECK SLAB TO AVOID DAMAGING STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURE. REPLACE OR REPAIR STEEL MEMBERS DAMAGED BY THE DECK SLAB CUTTING 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 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.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO SHEET 6/25 FOR USE AS DIRECTED BY THE ENGINEER:

ITEM 509 - REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN = 100 LBS

DESIGN AGENCY
EMH&T
Engineers/Architects/Surveyors/Planners
5500 New Albany Road, Columbus, Ohio 43054
Phone: (614) 775-4500 www.emht.com

DESIGNED	DRAWN	REVIEWED	DATE
RMW	RMW	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700312	

GENERAL NOTES
BRIDGE NO. BEL-7-1187C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

3 / 25

155
213

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ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN:

DRILL DOWEL HOLES WHERE SHOWN IN THE PLANS AND 4" CLEAR FROM EDGE OF EXISTING CONCRETE SURFACES. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING EPOXY GROUT, 705.20. PRIOR TO DRILLING DOWEL HOLES LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A PACHOMETER. IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR.

BASIS FOR PAYMENT - ALL LABOR MATERIALS, EQUIPMENT, TOOLS, AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK SHALL BE INCLUDED FOR PAYMENT WITH THE UNIT PRICE BID FOR ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN

ITEM 511 - CONCRETE, MISC.: EMBEDDED GALVANIC ANODE (EGA)

THIS PAY ITEM SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, SERVICES AND INCIDENTALS TO PROPERLY INSTALL EMBEDDED GALVANIC ANODES. SUPPLY AND INSTALL ANODES ACCORDING TO ODOT SUPPLEMENTAL SPECIFICATION 844.

GALVANIC ANODES SHALL BE INSTALLED IN THE LOCATIONS AND SPACING AS SPECIFIED IN THE PLANS. IN NO CASE, SHALL THE SPACING EXCEED 24 INCHES.

THE CONTRACTOR SHALL PERFORM HIS WORK AS TO NOT DAMAGE THE EMBEDDED ANODES NOR CREATE ANY AIR VOIDS AROUND THE EMBEDDED ANODES WHILE SETTING FORMWORK AND PLACING CONCRETE.

THE PRICE FOR ALL MATERIAL AND LABOR NECESSARY FOR THE IMPROVEMENTS DESCRIBED ABOVE TO BE INCLUDED IN THE CUBIC YARD UNIT BID FOR ITEM 511, CONCRETE MISC.: EMBEDDED GALVANIC ANODE (EGA), FOR PAYMENT.

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN:

ALL REQUIREMENTS OF C&MS 512 SHALL APPLY AS INDICATED IN THE PLANS.

AT THE FORWARD RIGHT BRIDGE, THE END 15' OF THE EXTERIOR PARAPET IS MARKED WITH GRAFFITI. WHERE PORTIONS OF THE EXISTING PARAPET ARE TO REMAIN ADJACENT THE DECK END REPLACEMENT, REMOVE THE EXISTING GRAFFITI THROUGH STANDARD SURFACE PREPARATION PROCEDURES TO BARE CONCRETE. ONCE THE SURFACE HAS BEEN PREPARED AND CLEANED OF DUST AND DEBRIS, APPLY AN EPOXY URETHANE SEALER. PERFORM SIMILAR GRAFFITI REMOVAL THROUGH SURFACE PREPARATION AND SEALING AT ALL SUBSTRUCTURE COMPONENTS AS DESIGNATED IN THESE PLANS.

ALL COSTS FOR SEALING AND THE LIMITS OF GRAFFITI REMOVAL DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT BID FOR ITEM 512 - LIMITS OF SEALING OF CONCRETE SURFACES, AS PER PLAN, FOR PAYMENT

ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN:

ALL REQUIREMENTS OF C&MS 513 APPLY TO SHOP FABRICATED MEMBERS. PERFORM WORK FOR FIELD FABRICATED MEMBERS ACCORDING TO ITEM 513, EXCEPT AS MODIFIED HEREIN. THE DEPARTMENT WILL NOT REQUIRE THE CONTRACTOR PERFORMING FIELD FABRICATION TO BE PRE-QUALIFIED AS SPECIFIED IN S1078. SUBMIT A WRITTEN LETTER OF MATERIAL ACCEPTANCE IN ACCORDANCE WITH C&MS 501.06, TO THE ENGINEER. PROVIDE THE ENGINEER "AS-BUILT" DRAWINGS ACCORDING TO C&MS 513.06, EXCEPT C&MS 501.04 DOES NOT APPLY. UPON RECEIPT OF THE ENGINEER'S ACCEPTANCE, SUPPLY A COPY OF THE DRAWINGS, ACCORDING TO S1002, TO THE OFFICE OF MATERIAL MANAGEMENT FOR RECORD PURPOSES.

THE FOLLOWING MEMBERS ARE INCLUDED IN THIS ITEM:
END FRAME ANGLE MODIFICATIONS.

ITEM 516 - REFURBISHING BEARING DEVICES, AS PER PLAN:

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN BRIDGE BEARINGS AS WELL AS THEIR CLEANING AND PAINTING. INCLUDED SHALL BE THE DISASSEMBLY OF THE BEARINGS, HAND TOOL CLEANING (GRINDING IF NECESSARY), PAINTING ACCORDING TO ITEM 514, REPLACEMENT OF ANY DAMAGED SHEET LEAD WITH PREFORMED BEARING PADS (C&MS 711.21), INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARING TO PROVIDE A SNUG FIT, REALIGNMENT OF THE UPPER BEARING PLATE BY REMOVING EXISTING WELDS AND REWELDING SO THAT THE BEARINGS ARE VERTICALLY ALIGNED AT 60°F, LUBRICATING SLIDING SURFACES, AND REASSEMBLY OF THE BEARINGS. ASSURE ALL BEARINGS ARE SHIMMED ADEQUATELY AND THAT NO BEAMS AND/OR BEARING DEVICES ARE "FLOATING". AT NO ADDITIONAL COST TO THE STATE, THE CONTRACTOR MAY INSTALL NEW BEARINGS OF THE SAME TYPE AS THE EXISTING IN PLACE OF REFURBISHING THE BEARINGS. ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR ALL OF THE ABOVE DESCRIBED LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516 - REFURBISH BEARING DEVICES, AS PER PLAN

BASED ON THE LATEST INSPECTION REPORT, BEARINGS REQUIRING REHABILITATION ARE LOCATED AT THE REAR ABUTMENT ALONG BEAM LINES 3 AND 4, AND AT THE FORWARD ABUTMENT AT BEAM LINES 2, 3, 6, 7, 8, 9, AND 10.

THE TOTAL NUMBER CARRIED TO THE ESTIMATED QUANTITIES IS 9 EACH.

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, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER 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. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH C&MS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER 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.

ITEM 514 - FIELD PAINTING, MISC.: ZINC RICH PRIMER

ITEM 520 - PNEUMATICALLY PLACED CONCRETE SHOTCRETE, AS PER PLAN

THESE ITEMS ARE FOR TREATMENT OF THE BOTTOM FACE OF THE EXISTING BRIDGE SLAB. THESE ITEMS ARE TO BE USED AS DIRECTED BY THE ENGINEER USING THE GUIDANCE, RECOMMENDATIONS, AND PROVISIONS BELOW. THE CONTRACTOR SHALL REPAIR AREAS THAT HAVE VISIBLE DISTRESS ONLY. IT IS NOT THE INTENT TO SOUND THE ENTIRE BOTTOM OF THE EXISTING BRIDGE DECK. HOWEVER, LIMITS OF THE IDENTIFIED REPAIR AREAS MUST BE DETERMINED BY THE CONTRACTOR BY SOUNDING.

ITEM 514 - FIELD PAINTING, MISC: ZINC RICH PRIMER.

THIS ITEM SHALL CONSIST OF THE REMOVAL OF ALL LOOSE AND DISINTEGRATED CONCRETE, CLEANING OF THE REINFORCING STEEL, AND APPLICATION OF A ZINC RICH PRIMER LOCATED ON THE BOTTOM OF THE EXISTING CONCRETE DECK. THE LOOSE CONCRETE SHALL BE REMOVED AS DIRECTED BY THE ENGINEER. ALL DEBRIS SHALL BE COLLECTED AND REMOVED OFF SITE. BLAST CLEAN ALL EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVES WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING. APPLY A ZINC RICH PRIMER, PER ODOT C&MS 708.02B, OVER ALL EXPOSED REINFORCING STEEL SURFACES. IN ADDITION APPLY ZINC RICH PRIMER TO THE CONCRETE SURFACES CONTAINED WITHIN THE EXTENT OF THE REMOVAL/REPAIR AREA AND 6" MINIMUM FROM EXPOSED LIMITS OF REINFORCING STEEL. THE APPLICATION OF THE PRIMER SHALL FOLLOW ODOT C&MS 514 AND ALL MANUFACTURER(S)' SPECIFICATIONS.

THE ITEM SHALL BE APPLIED TO AREAS WHERE THE EXISTING REINFORCING STEEL IS NOT FULLY EXPOSED AS SHOWN IN DETAIL 'A' (ON THIS SHEET) AND WHERE UPON PERFORMING THE REMOVAL OF ALL LOOSE DISINTEGRATED CONCRETE DOES NOT EXPOSE THE FULL CIRCUMFERENCE OF THE EXISTING REINFORCING STEEL BAR. SHOULD THE REINFORCING STEEL BECOME FULLY EXPOSED, THEN THE CONTRACTOR MUST REPAIR THE AREA USING ITEM 520 - PNEUMATICALLY PLACED CONCRETE, SHOTCRETE, AS PER PLAN.

PRIOR TO CONSTRUCTING THE REPAIRS ALL REPAIR LOCATIONS MUST BE IDENTIFIED AND DIMENSIONED (LENGTH X WIDTH) ON A PLAN SHEET AND SUBMITTED TO THE ENGINEER FOR APPROVAL.

PAYMENT FOR ALL LABOR, MATERIALS, EQUIPMENT, TOOLS AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK SHALL BE PAID UNDER THE CONTRACT UNIT BID PRICE FOR ITEM 514 - FIELD PAINTING, MISC.: ZINC RICH PRIMER.

ITEM 520 - PNEUMATICALLY PLACED CONCRETE SHOTCRETE, AS PER PLAN

ALL PROVISIONS OF ODOT C&MS 520 APPLY EXCEPT AS SPECIFIED HEREIN.

THIS ITEM SHALL CONSIST OF THE REMOVAL OF ALL LOOSE AND DISINTEGRATED CONCRETE, CLEANING OF THE REINFORCING STEEL, SURFACE PREPARATION, FURNISHING AND PLACING PNEUMATICALLY APPLIED CONCRETE AND CURING.

THE LOOSE CONCRETE SHALL BE REMOVED IN ACCORDANCE WITH ODOT C&MS 520 EXCEPT THE REMOVAL LIMITS SHALL EXTEND A MINIMUM OF 2 INCHES ABOVE THE TOP OF THE EXPOSED REINFORCING STEEL OR 1" INTO SOUND CONCRETE, WHICHEVER IS GREATER AND SHALL BE REMOVED TO THE EXTENT OF THE LIMITS SHOWN IN DETAIL 'B' (ON THIS SHEET) OR AS DIRECTED BY THE ENGINEER.

PRIOR TO CONSTRUCTING THE REPAIRS ALL REPAIR LOCATIONS MUST BE IDENTIFIED AND DIMENSIONED (LENGTH X WIDTH) ON A PLAN SHEET AND SUBMITTED TO THE ENGINEER FOR APPROVAL.

PAYMENT FOR ALL LABOR, MATERIALS, EQUIPMENT, TOOLS AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK SHALL BE PAID UNDER THE CONTRACT UNIT BID PRICE FOR ITEM 520 - PNEUMATICALLY PLACED CONCRETE, SHOTCRETE, AS PER PLAN.

THE FOLLOWING QUANTITIES HAVE BEEN ESTIMATED BASED UPON GROUND LEVEL FIELD OBSERVATIONS PERFORMED BY EMH&T ON MARCH 17TH, 2020 AS WELL AS THE LATEST INSPECTION REPORT, 2019.

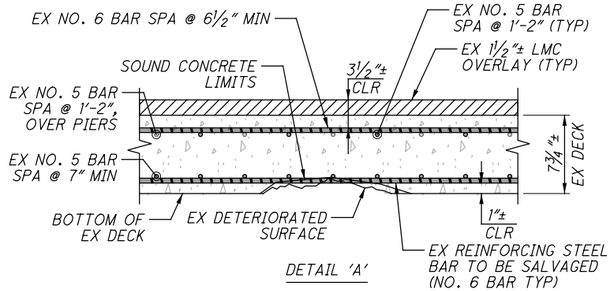
A TOTAL ESTIMATED REPAIR AREA OF 3,380 SQUARE FEET (SF) HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER. THE TOTAL ESTIMATED REPAIR AREA ASSUMES APPROXIMATELY EIGHT (8) PERCENT OF THE BOTTOM OF DECK IS IN NEED OF REPAIRS.

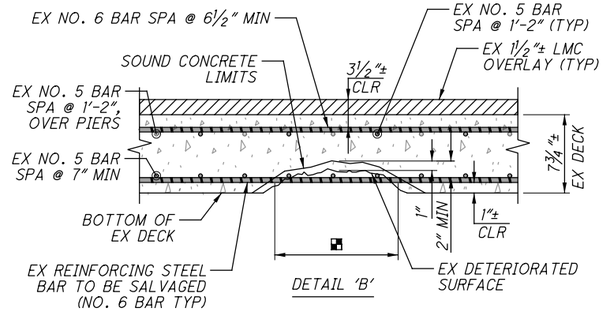
OF THIS TOTAL AREA (3,380 SQUARE-FEET); FIFTY (50) PERCENT IS ESTIMATED TO BE TREATABLE USING ITEM 514 - PAINTING, MISC.: ZINC RICH PRIMER. THE REMAINING FIFTY (50) PERCENT OF THIS AREA HAS BEEN PLACED UNDER ITEM 520 - PNEUMATICALLY PLACED CONCRETE SHOTCRETE, AS PER PLAN.

ODOT S&MS 104 ADJUSTMENTS WILL NOT APPLY TO ITEM 514 - PAINTING, MISC.: ZINC RICH PRIMER NOR ITEM 520 - PNEUMATICALLY PLACED CONCRETE SHOTCRETE, AS PER PLAN

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO SHEET 6/25 FOR USE AS DIRECTED BY THE ENGINEER.

ITEM	QTY	UNIT
514 - FIELD PAINTING, MISC.: ZINC RICH PRIMER	1,706	SF
520 - PNEUMATICALLY PLACED CONCRETE SHOTCRETE, AS PER PLAN	1,690	SF





■ - HORIZONTAL LIMITS FOR 2" REMOVAL ATOP EXPOSED REINFORCING BAR OR 1" INTO SOUND CONCRETE, WHICHEVER IS GREATER.

DESIGN AGENCY EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
RMW	RMW	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	07000312	

GENERAL NOTES (CONT.)
BRIDGE NO. BEL-7-1187C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

J:\20190025\ODOT\IF BEL-7-11.52_11.87_12.79 (PID 110324)\BEL\110324_BEL-7-11.52\Design\Structures\BEL007_1187C\Sheets\007_1187C_SN002.dgn 11/9/2020 3:08:13 PM bmccutchen

ITEM 519 - PATCHING CONCRETE BRIDGE DECK - TYPE B

THIS ITEM IS FOR THE PATCHING OF THE TOP FACE OF THE EXISTING BRIDGE SLAB AND APPROACH SLABS.

THE CONTRACTOR SHALL REPAIR AREAS THAT HAVE VISIBLE DISTRESS ONLY. IT IS NOT THE INTENT TO SOUND THE ENTIRE BRIDGE DECK. EXTENTS OF TYPE B DECK PATCHING AT AREAS OF VISUAL DISTRESS SHALL BE DETERMINED WITH LIMITED SOUNDING BY THE CONTRACTOR AND SHALL BE CONFIRMED BY THE OWNER PRIOR TO COMPLETION OF WORK.

PRIOR TO CONSTRUCTING THE REPAIRS IN THE PHASE UNDER CONSTRUCTION, ALL REPAIR LOCATIONS MUST BE IDENTIFIED AND DIMENSIONED (LENGTH X WIDTH) ON A PLAN SHEET AND SUBMITTED TO THE ENGINEER FOR APPROVAL.

REMOVAL OF THE EXISTING LATEX MODIFIED CONCRETE OVERLAY WITHIN PATCHING REPAIR AREAS SHALL BE PAID WITH ITEM 519 PATCHING CONCRETE BRIDGE DECK - TYPE B.

THE CONTRACTOR IS ADVISED THAT PORTIONS OF THE EXISTING BRIDGE DECK, MAY REQUIRE FULL DEPTH REPAIRS. PORTIONS OF THE EXISTING BRIDGE DECK ARE LOCATED ABOVE THE EXISTING RAILROAD. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING TRAFFIC UNDER AND ADJACENT TO THE WORK WHILE REMOVING DECK CONCRETE. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO ENSURE THE SAFETY OF THE PUBLIC AND RAILROAD FROM FALLING DEBRIS WHEN PERFORMING THE ABOVE DESCRIBED WORK.

FULL DEPTH REPAIRS:

WHERE THE DECK IS SOUND FOR LESS THAN ONE HALF OF THE ORIGINAL DECK THICKNESS, THE CONCRETE SHALL BE REMOVED FULL DEPTH EXCEPT FOR LIMITED AREAS AS MAY BE DESIGNATED BY THE ENGINEER. FORMS SHALL BE PROVIDED TO SUPPORT CONCRETE PLACED IN FULL-DEPTH REPAIR AREAS. THE FORMS FOR AREAS OF UP TO 4 SQUARE FEET MAY BE SUSPENDED FROM WIRES FROM THE REINFORCING STEEL. FOR AREAS GREATER THAN 4 SQUARE FEET, THE FORMS SHALL BE SUPPORTED FROM THE SUPERSTRUCTURE OR BY SHORING FROM BELOW. AREAS OF FULL-DEPTH REPAIRS SHALL HAVE THE CONCRETE FACES AND REINFORCING STEEL CLEANED TO REMOVE ALL LOOSE AND BUILT-UP RUST, AND CONTAMINANTS DETRIMENTAL TO ACHIEVING ADEQUATE BOND. POCKETS OF RUST (CORROSION CELLS) ON EXPOSED REINFORCING STEEL SHALL BE CLEANED OF ALL CORROSION PRODUCTS.

FULL-DEPTH REPAIRS SHALL BE WATER-CURED.

ALL LABOR, MATERIALS, EQUIPMENT, TOOLS AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK SHALL BE PAID UNDER ITEM 519 - PATCHING CONCRETE BRIDGE DECK - TYPE B.

THE FOLLOWING QUANTITY HAS BEEN ESTIMATED BASED ON INSPECTION RECORDS PROVIDED BY ODOT DISTRICT 11 AND FIELD OBSERVATIONS PERFORMED BY EMH&T ON MARCH 17TH, 2020.

APPROXIMATELY TWENTY ONE (21) PERCENT OF THE EXISTING BRIDGE DECK IS ESTIMATED TO REQUIRE PATCHING REPAIRS.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO SHEET 6/25 FOR USE AS DIRECTED BY THE ENGINEER.

ITEM	QTY	UNIT
519 - PATCHING CONCRETE BRIDGE DECK - TYPE B	982	SY

ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN:

844.01 DESCRIPTION

INSTALL CONCRETE PATCHES USING GALVANIZED ANODES PER ODOT SUPPLEMENTAL SPECIFICATION 844 EXCEPT AS NOTED HEREIN.

ALL CONCRETE PATCHES SHALL BE PLACED TO THE EXISTING SURFACE UNLESS OTHERWISE DETAILED IN THE PLANS.

844.02 MATERIALS

PROVIDE A SUPERPLASTICIZED DENSE CONCRETE (SDC) CONCRETE MIX (PER SUPPLEMENTAL SPECIFICATION 848.06 & 848.14) WITH THE FOLLOWING ADDITIONAL PROPERTY:

MINIMUM SPREAD = 24"

PROVIDE SDC CONCRETE MIX AT A 24 INCH SPREAD THAT ALLOWS THE CONCRETE MIX TO BE PLACED THROUGH A 3½" DIAMETER ACCESS HOLE THROUGH THE FORM AND SELF CONSOLIDATE. THE FINAL CONCRETE WILL BE SELF CONSOLIDATING USING AN APPROVED SELF CONSOLIDATING ADMIXTURE.

DURING THE CONCRETE OPERATIONS ASSURE THE REPRESENTATIVES OF THE READY MIX PRODUCER AND THE CHEMICAL ADMIXTURE MANUFACTURER ARE ON SITE TO DETERMINE ANY ADJUSTMENTS REQUIRED TO COMPLETE THE CONCRETE PLACEMENT. MAKE BATCHES OF AT LEAST 3 CUBIC YARDS PER DELIVERY. DELIVER AND PLACE ALL SDC CONCRETE PRIOR TO 9:00 AM TO HELP AVOID ADVERSE TEMPERATURE EFFECTS ON THE MIX CHARACTERISTICS.

844.03 CLEANING AND REPAIR OF REINFORCING STEEL

PRIOR TO THE SURFACE CLEANING SPECIFIED IN ODOT C&MS 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

844.04 GALVANIC ANODE INSTALLATION

INSTALL ANODE UNITS AND REPAIR MATERIAL IMMEDIATELY FOLLOWING PREPARATION AND CLEANING OF STEEL REINFORCEMENT. REPAIR MATERIAL SHALL BE PLACED NO LATER THAN ONE (1) WEEK AFTER CONCRETE REMOVAL UNLESS APPROVED BY THE ENGINEER. GALVANIC ANODES SHALL BE INSTALLED IN THE LOCATIONS AND SPACING AS SPECIFIED IN THE PLANS. IN NO CASE, SHALL THE SPACING EXCEED 18 INCHES.

THE CONTRACTOR SHALL PERFORM HIS WORK AS TO NOT DAMAGE THE EMBEDDED ANODES NOR CREATE ANY AIR VOIDS AROUND THE EMBEDDED ANODES WHILE SETTING FORMWORK AND PLACING CONCRETE.

844.06 QUALITY CONTROL

THE PROPOSED FORM SYSTEM MUST BE SUBMITTED, AND ACCEPTED BY THE PROJECT ENGINEER PRIOR TO THE INSTALLATION OF ANY FORMWORK. THE FORM SYSTEM SHALL PROVIDE ENOUGH HEAD PRESSURE TO ENSURE THE PATCH IS FULLY CONSOLIDATED AND NULL OF VOIDS. THE FORM SYSTEM SHALL INCORPORATE VENTS ALONG THE TOP OF THE PATCH TO ALLOW ENTRAPPED AIR TO ESCAPE DURING CONCRETE PLACEMENT. THE FORM SYSTEM SHALL INCORPORATE A GATE/VALVE SYSTEM CAPABLE OF CONTAINING THE SELF CONSOLIDATING CONCRETE ONCE CONCRETE PLACEMENT IS COMPLETE.

844.08 BASIS OF PAYMENT

PAYMENT FOR ALL OF THE ABOVE DESCRIBED WORK WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 844 CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN.

PAYMENT WILL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, INCIDENTALS AND THE WORK TO REMOVE UNSOUND CONCRETE, FORMWORK, PLACING DRAIN HOLES, PLACEMENT OF SELF CONSOLIDATING SDC CONCRETE MIX, ON SITE REPRESENTATIVE FEES AND PNEUMATICALLY PLACED MORTAR.

ABBREVIATION LEGEND

ABUT - ABUTMENT
APPR - APPROACH
BM - BENCH MARK
BOT - BOTTOM
BRGS - BEARINGS
BTA - BRIDGE TERMINAL ASSEMBLY
C/C - CENTER TO CENTER
CJ - CONSTRUCTION JOINT
℄ - CENTERLINE
CLR - CLEARANCE
CONST - CONSTRUCTION
CONT. - CONTINUED
CY - CUBIC YARD
DIA - DIAMETER
DND - DO NOT DISTURB
EF - EACH FACE
EGA - EMBEDDED GALVANIC ANODE
EL - ELEVATION
ELEC - ELECTRICAL
EX - EXISTING
EXP - EXPANSION
FF - FAR FACE
FT - FEET
FWD - FORWARD
LB - POUNDS
LLH - LONG LEG HORIZONTAL
LMC - LATEX MODIFIED CONCRETE
LS - LUMP SUM
LT - LEFT
MAX - MAXIMUM
MIN - MINIMUM
MISC - MISCELLANEOUS
MNHR - MANHOURS
MOD - MODIFIED
NB - NORTHBOUND
NSRR - NORFOLK SOUTHERN RAILROAD
NF - NEAR FACE
NO. - NUMBER
O/O - OUT TO OUT
PC - POINT OF CURVE
PVI - POINT OF VERTICAL INTERSECTION
PEJF - PREFORMED EXPANSION JOINT FILLER
PROP - PROPOSED
QTY - QUANTITY
R - RADIUS
RR - RAILROAD
RT - RIGHT
SB - SOUTHBOUND
SHLD - SHOULDER
SPA - SPACES
SR - STATE ROUTE
STA - STATION
SY - SQUARE YARD
TBR - TO BE REMOVED
TBRR - TO BE REMOVED AND REPLACED
TYP - TYPICAL

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DESIGN AGENCY EMH&T
DESIGNED RMW
DRAWN RMW
CHECKED TDA
REVIEWED CAS
DATE 10/30/20
REVISED -
STRUCTURE FILE NUMBER 0700312

GENERAL NOTES (CONT.)
BRIDGE NO. BEL-7-1187C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
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ESTIMATED QUANTITIES

CALCULATED BY: RMW CHECKED BY: RJE

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
202	11203		LS	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					3/25
202	23500	209	SY	WEARING COURSE REMOVED, ASPHALT				209	
503	11100		LS	COFFERDAMS AND EXCAVATION BRACING					
509	10000	6,882	LB	EPOXY COATED REINFORCING STEEL	3,062		3,820		
509	20001	100	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN				100	3/25
510	10001	40	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	40				4/25
511	34446	27	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK	13		14		
511	81300	164	EACH	CONCRETE, MISC.: EMBEDDED GALVANIC ANODE (EGA)	82		82		4/25
512	10101	468	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	130	332	6		4/25
512	33010	4,658	SY	TYPE 3 WATERPROOFING			4,264	394	
513	10001		LS	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN					4/25
514	00050	137	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			137		
514	00056	137	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			137		
514	00060	137	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			137		
514	00066	137	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			137		
514	00504	2	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			2		
514	10000	1	EACH	FINAL INSPECTION REPAIR			1		
514	27700	1,706	SF	FIELD PAINTING, MISC.: ZINC RICH PRIMER		16	1,690		4/25
516	11210	153	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL			153		
516	13600	85	SF	1" PREFORMED EXPANSION JOINT FILLER				85	
516	31010	280	FT	2" DEEP JOINT SEALER				280	
516	45305	9	EACH	REFURBISH BEARING DEVICE, AS PER PLAN				9	4/25
516	47001		LS	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN					4/25
518	12801	30	EACH	SCUPPER, MODIFICATION, AS PER PLAN				30	24/25
519	12300	982	SY	PATCHING CONCRETE BRIDGE DECK - TYPE B, AS PER PLAN			982		5/25
520	10001	1,690	SF	PNEUMATICALLY PLACED CONCRETE SHOTCRETE, AS PER PLAN			1,690		4/25
601	20000	61	SY	CRUSHED AGGREGATE SLOPE PROTECTION				61	
844	10001	50	SF	CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN				50	5/25

QUANTITIES CARRIED TO THE GENERAL SUMMARY, SEE SHEET 70/213 .

NOTES

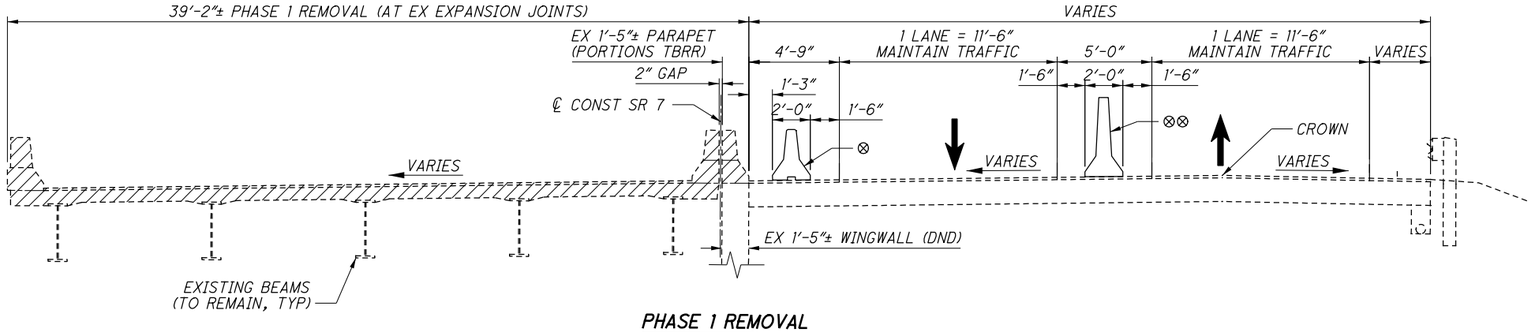
1. ALL QUANTITIES PRESENTED ON THIS SHEET SHALL BE INCLUDED WITH 01/NHS/BR.

DESIGN AGENCY EMH&T

DESIGNED RMW | DRAWN RMW | CHECKED RJE | REVIEWED CAS | DATE 10/30/20 | REVISED - | STRUCTURE FILE NUMBER 07000312

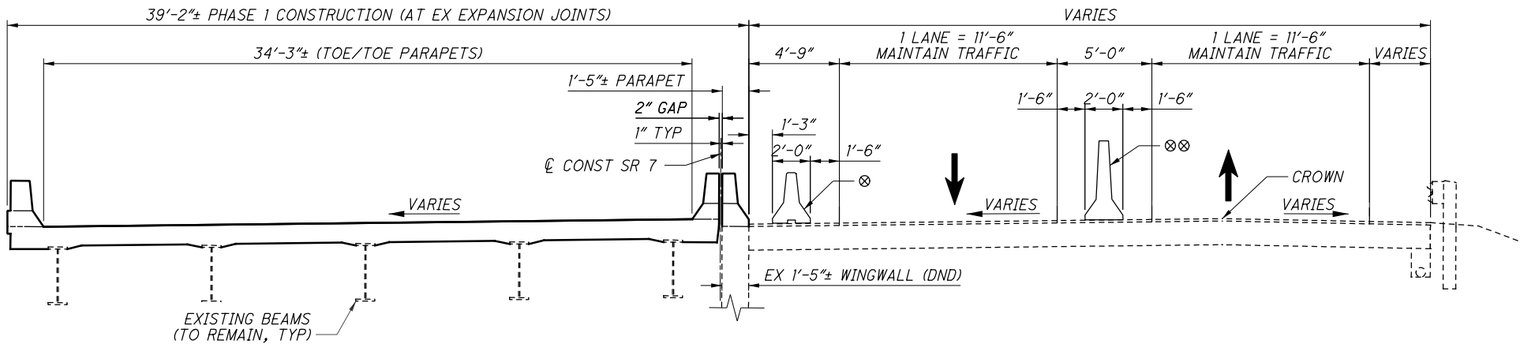
ESTIMATED QUANTITIES
BRIDGE NO. BEL-7-1187C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324



PHASE 1 REMOVAL

(FORWARD LEFT BRIDGE JOINT SHOWN, REAR LEFT BRIDGE JOINT SIMILAR, SEE NOTE 1)



PHASE 1 CONSTRUCTION

(FORWARD LEFT BRIDGE JOINT SHOWN, REAR LEFT BRIDGE JOINT SIMILAR, SEE NOTE 1)

SEQUENCE OF CONSTRUCTION

PHASE 1

1. INSTALL PORTABLE CONCRETE BARRIER WHERE SHOWN AND MAINTAIN TRAFFIC PER THE MAINTENANCE OF TRAFFIC PLANS.
2. REMOVE EXISTING ASPHALT ON THE APPROACH SLAB, PORTIONS OF THE EXISTING DECK ENDS, EXPANSION JOINT, ABUTMENT BACKWALLS, AND PORTIONS OF THE PARAPET AND MEDIAN. REFERENCE THE REMOVAL PLANS FOR ADDITIONAL INFORMATION.
3. PROVIDE TEMPORARY JACKING AND RESET ALL ROCKER BEARINGS TO PLUMB WHERE DESCRIBED IN THE STRUCTURE GENERAL NOTES PER ITEM 516 - REFURBISHING BEARING DEVICES, AS PER PLAN.
4. PROVIDE DECK PATCHING/REPAIRS TO THE TOP AND BOTTOM SIDES OF THE DECK AS DESCRIBED IN THE PLANS AND WHERE OBSERVABLE CONCRETE DELAMINATION IS ENCOUNTERED IN THE FIELD.
5. INSTALL THE NEW EXPANSION JOINT SYSTEM, CONSTRUCT THE REMOVED DECK ENDS AND PARAPET.
6. CLEAN DEBRIS FROM EXISTING SCUPPERS AND PROVIDE SCUPPER EXTENSIONS AT ALL SCUPPER LOCATIONS TO MEET THE PROPOSED OVERLAY THICKNESS.
7. APPLY TYPE 3 WATERPROOFING AND INSTALL NEW ASPHALT OVERLAY ON THE BRIDGE DECK AND APPROACH SLABS.

LEGEND

- ▨ - DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- ⊗ - PORTABLE CONCRETE BARRIER (SEE NOTE 2)
- ⊗⊗ - 50" UNANCHORED PORTABLE CONCRETE BARRIER (SEE NOTE 3)

NOTES

1. PHASE 1 REMOVAL AND CONSTRUCTION DEPICTED AT THE FORWARD LEFT BRIDGE, REAR LEFT BRIDGE SIMILAR. ALL PHASED CONSTRUCTION DETAILS SHOW THE REMOVAL AND RECONSTRUCTION OF THE EXISTING DECK AT THE EXISTING EXPANSION JOINTS TO BE REPLACED. ALL OTHER DECK LOCATIONS TO RECEIVE AN ASPHALT OVERLAY.
2. FOR 32" PORTABLE CONCRETE BARRIER REFER TO ODOT STANDARD DRAWING PCB-91, DATED 07-17-2020. PROVIDE ANCHORED BARRIER SEGMENTS ADJACENT EXPANSION JOINT CONSTRUCTION AND AS DEPICTED IN THE MAINTENANCE OF TRAFFIC PLANS. PORTABLE CONCRETE BARRIERS SHALL BE FASTENED USING 1" DIAMETER HIGH STRENGTH BOLTS (3 ANCHORS PER SEGMENT).
3. FOR 50" PORTABLE CONCRETE BARRIER REFER TO ODOT STANDARD DRAWING RM-4.1, DATED 01-17-2020.
4. PATCHING TO THE SUBSTRUCTURE UNITS AND PAINTING OF REHABILITATED JOINT ARMOR AND BEARINGS MAY BE CONSTRUCTED DURING EITHER PHASE 1 OR PHASE 2, AT THE CONTRACTOR'S DISCRETION.
5. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL DETERMINE THE PREFERRED METHOD OF ACCESS BELOW THE EXISTING BRIDGE. ACCESS SHALL BE COORDINATED WITH THE APPROPRIATE MAINTENANCE OF TRAFFIC PHASING TO ENSURE ALL EQUIPMENT STAGING AND ACCESS IS AVAILABLE THROUGHOUT CONSTRUCTION. ACCESSIBILITY SHALL BE MAINTAINED WITHIN THE DESCRIBED WORK LIMITS AND SHALL LIMIT INCONVENIENCE OR DISTURBANCE TO THE ADJACENT NORFOLK SOUTHERN RAILROAD PROPERTY AND THE EXISTING WETLAND.
6. PORTABLE CONCRETE BARRIER SHALL BE INCLUDED WITH ITEM 614 FOR PAYMENT.

DESIGN AGENCY EMH&T

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RMW	MEM	CAS	10/30/20
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TDA	-	0700312	

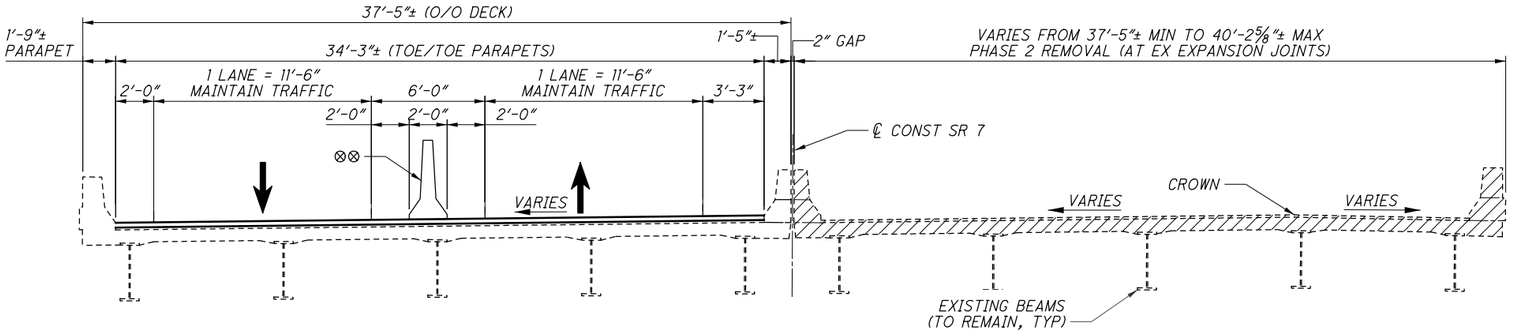
PHASE CONSTRUCTION DETAILS
BRIDGE NO. BEL-7-11.87C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

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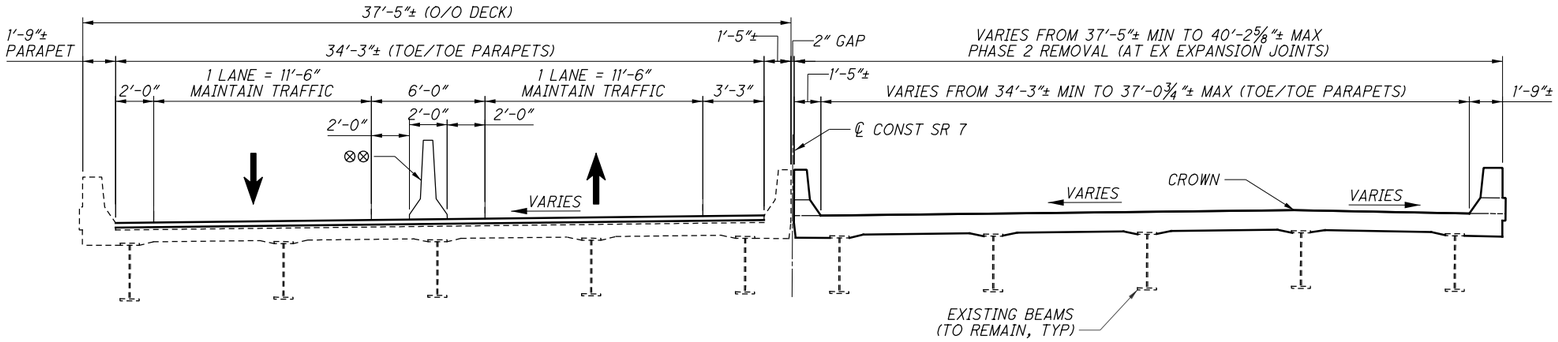
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PHASE 2 REMOVAL

(FORWARD RIGHT BRIDGE JOINT SHOWN, REAR RIGHT BRIDGE JOINT SIMILAR, SEE NOTE 1)



PHASE 2 CONSTRUCTION

(FORWARD RIGHT BRIDGE JOINT SHOWN, REAR RIGHT BRIDGE JOINT SIMILAR, SEE NOTE 1)

SEQUENCE OF CONSTRUCTION

PHASE 2

1. REMOVE AND RELOCATE PORTABLE CONCRETE BARRIERS TO LEFT BRIDGE AND SHIFT NB/SB TRAFFIC TO THE LEFT BRIDGE, AS DETAILED IN THE MAINTENANCE OF TRAFFIC PLANS.
2. REMOVE EXISTING ASPHALT ON THE REAR APPROACH SLAB, PORTIONS OF THE EXISTING DECK ENDS, EXPANSION JOINT, ABUTMENT BACKWALLS, AND PORTIONS OF THE APPROACH PARAPET AND MEDIAN. REFERENCE THE REMOVAL PLANS FOR ADDITIONAL INFORMATION.
3. PROVIDE TEMPORARY JACKING AND RESET ALL ROCKER BEARINGS TO PLUMB WHERE DESCRIBED IN THE STRUCTURE GENERAL NOTES PER ITEM 516 - REFURBISHING BEARING DEVICES, AS PER PLAN.
4. PROVIDE DECK PATCHING/REPAIRS AS DESCRIBED IN THE PLANS AND WHERE OBSERVABLE CONCRETE DELAMINATION IS ENCOUNTERED IN THE FIELD.
5. INSTALL THE NEW EXPANSION JOINT SYSTEM, CONSTRUCT THE REMOVED DECK ENDS AND PARAPET.
6. CLEAN DEBRIS FROM EXISTING SCUPPERS AND PROVIDE SCUPPER EXTENSIONS AT ALL SCUPPER LOCATIONS TO MEET THE PROPOSED OVERLAY THICKNESS.
7. APPLY TYPE 3 WATERPROOFING AND INSTALL NEW ASPHALT OVERLAY ON THE BRIDGE DECK AND APPROACH SLABS
8. REMOVE PORTABLE CONCRETE BARRIERS FROM RIGHT BRIDGE AND RESTORE TRAFFIC TO FINAL CONFIGURATION.

LEGEND

▨ - DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

⊗⊗ - 50" UNANCHORED PORTABLE CONCRETE BARRIER (SEE NOTE 2)

NOTES

1. PHASE 2 REMOVAL AND CONSTRUCTION DEPICTED AT THE FORWARD RIGHT BRIDGE, REAR RIGHT BRIDGE SIMILAR. ALL PHASED CONSTRUCTION DETAILS SHOW THE REMOVAL AND RECONSTRUCTION OF THE EXISTING DECK AT THE EXISTING EXPANSION JOINTS TO BE REPLACED. ALL OTHER DECK LOCATIONS TO RECEIVE AN ASPHALT OVERLAY.
2. FOR 50" PORTABLE CONCRETE BARRIER REFER TO ODOT STANDARD DRAWING RM-4.1, DATED 01-17-2020.
3. PATCHING TO THE SUBSTRUCTURE UNITS AND PAINTING OF REHABILITATED JOINT ARMOR AND BEARINGS MAY BE CONSTRUCTED DURING EITHER PHASE 1 OR PHASE 2, AT THE CONTRACTOR'S DISCRETION.
4. FOR ADDITIONAL SITE ACCESSIBILITY NOTES, SEE SHEET 7/25
5. PORTABLE CONCRETE BARRIER SHALL BE INCLUDED WITH ITEM 614 FOR PAYMENT.

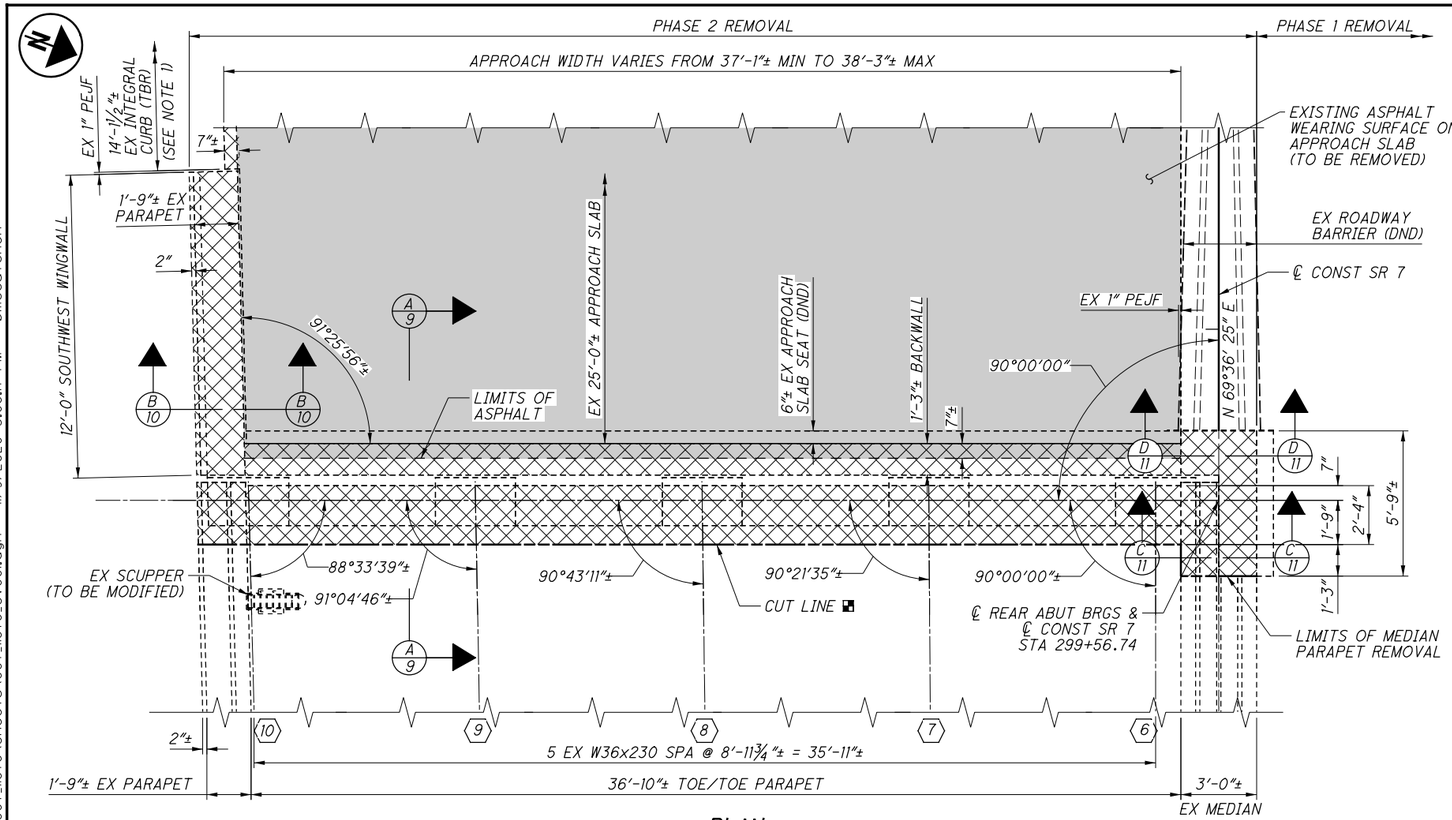
DESIGN AGENCY EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
RMW	MEM	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700312	

PHASE CONSTRUCTION DETAILS (CONT.)
BRIDGE NO. BEL-7-1187C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

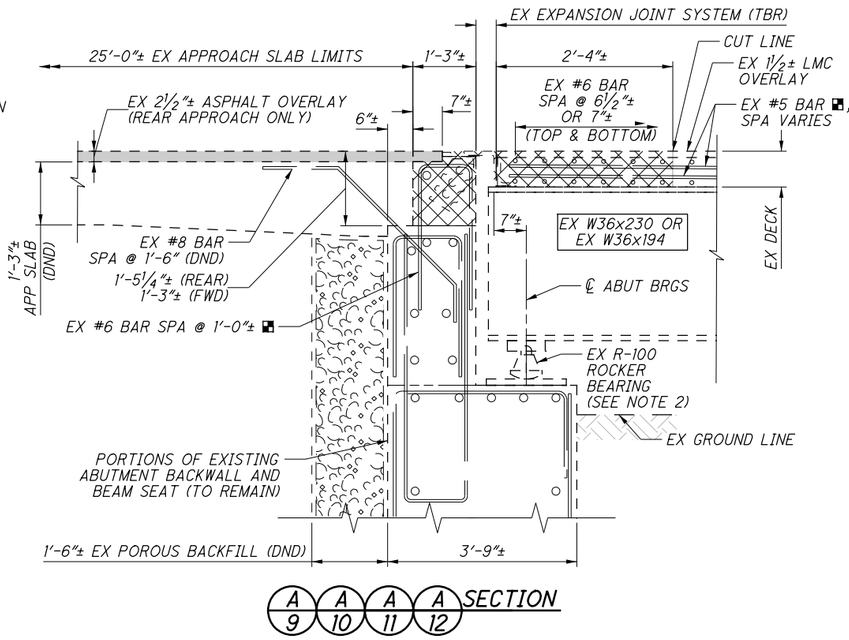
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PID No. 110324

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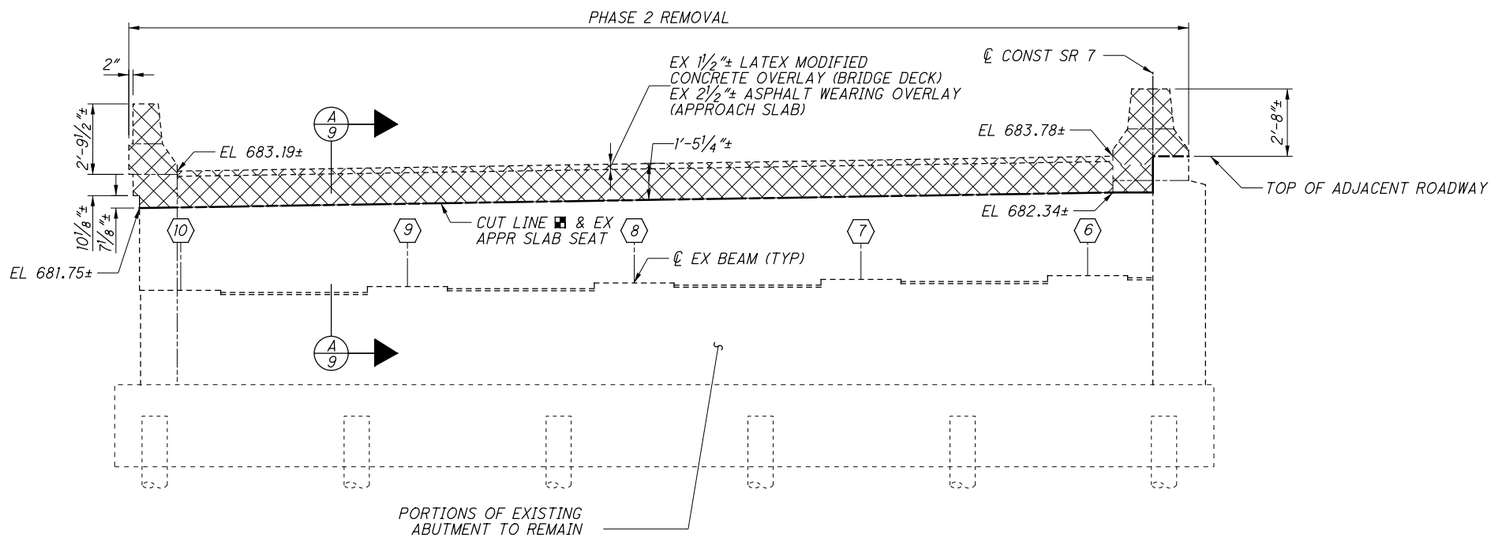


PLAN

(EXISTING REINFORCING NOT SHOWN FOR CLARITY)



A 9 A 10 A 11 A 12 SECTION



ELEVATION

(EXISTING REINFORCING, BEAMS AND BEARINGS NOT SHOWN FOR CLARITY)

LEGEND

■ - SALVAGE PORTION OF EXISTING BAR TO APPLY MECHANICAL CONNECTOR AS DETAILED ON SHEET 22/25

(X) - EXISTING BEAM "X"

- DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

- DENOTES ASPHALT WEARING SURFACE TO BE REMOVED WITH ITEM 202 - WEARING COURSE REMOVED, ASPHALT

NOTES

1. REMOVAL OF THE EXISTING INTEGRAL CURB IS INTENDED TO EXTEND TO THE BOTTOM OF THE EXISTING APPROACH SLAB. APPLY A ZINC RICH PRIMER TO THE ENDS OF EXPOSED REINFORCING BARS TO REMAIN. THE PAINTING OF BAR ENDS SHALL BE INCLUDED WITH ITEM 514, FIELD PAINTING, MISC.: ZINC RICH PRIMER, FOR PAYMENT.

2. REFURBISH EXISTING BEARINGS AND PROVIDE JACKING AND TEMPORARY SUPPORT AT LOCATIONS DESCRIBED IN THE GENERAL NOTES ON SHEET 4/25 . ALL PROPOSED WORK SHALL BE INCLUDED PER ITEM 516 - REFURBISH BEARING DEVICE, AS PER PLAN AND ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

DESIGN AGENCY: EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
RMW	MEM	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	07000312	

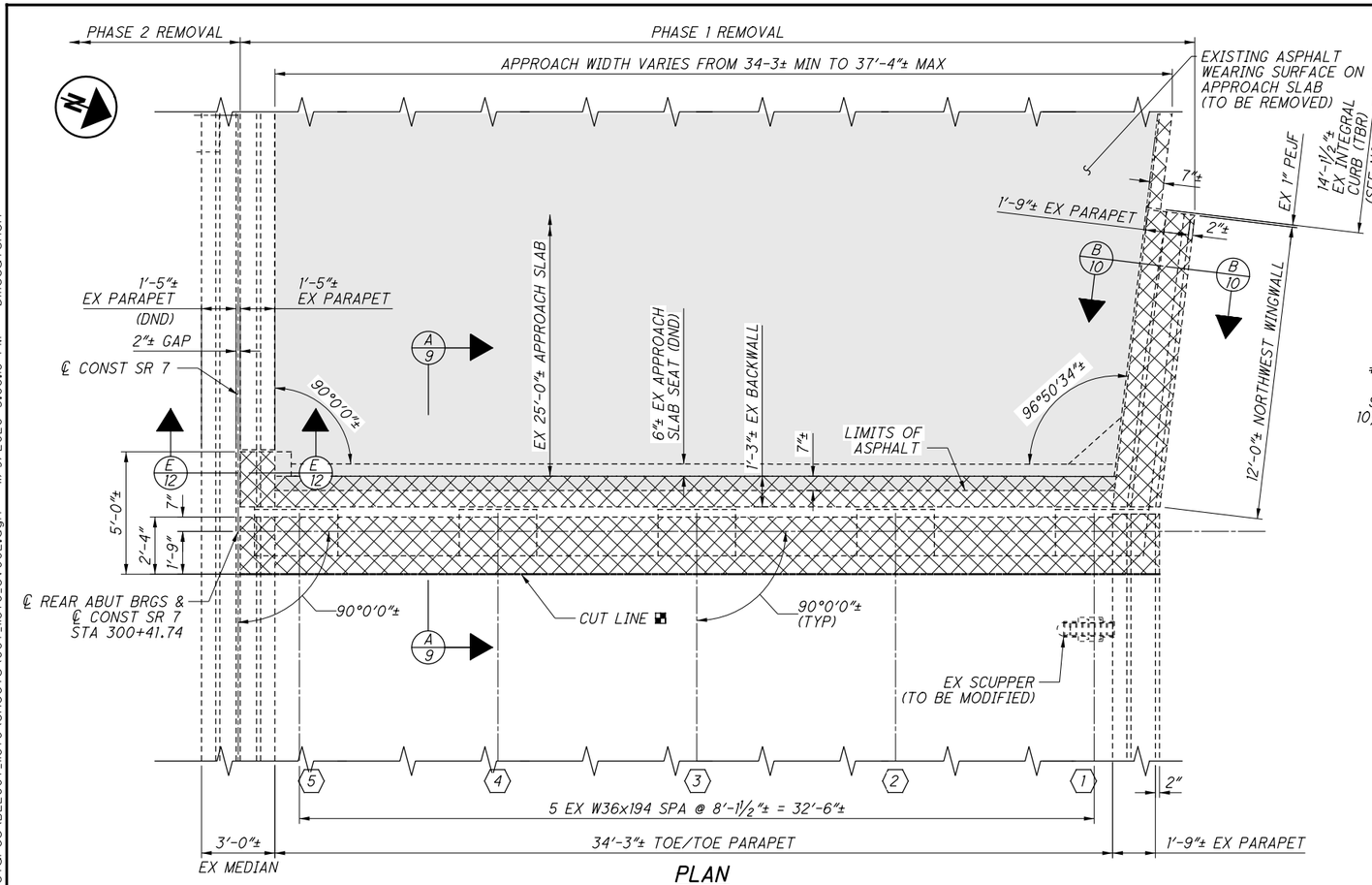
REAR ABUTMENT REMOVAL DETAILS (RIGHT BRIDGE)
BRIDGE NO. BEL-7-1187C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

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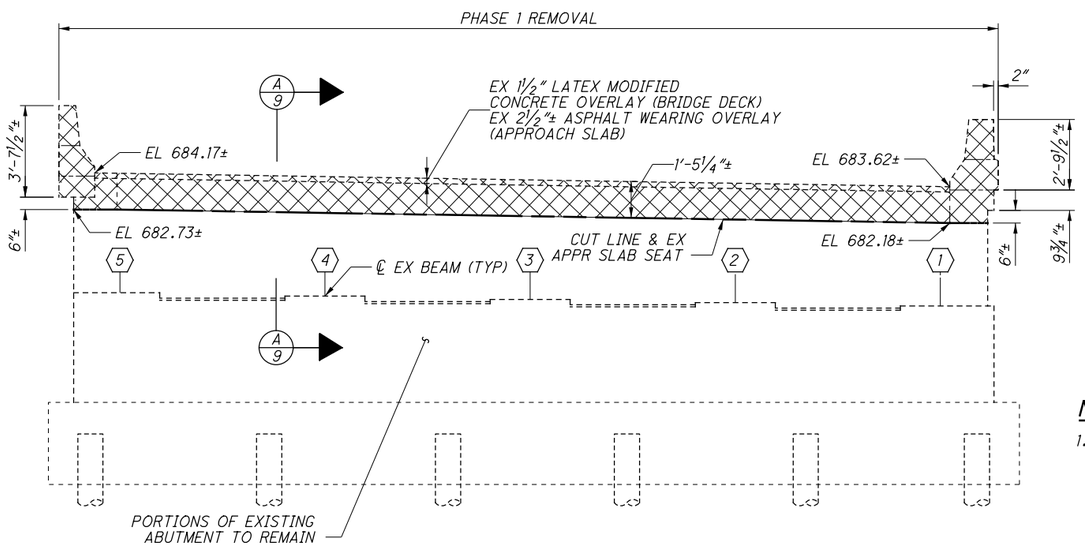
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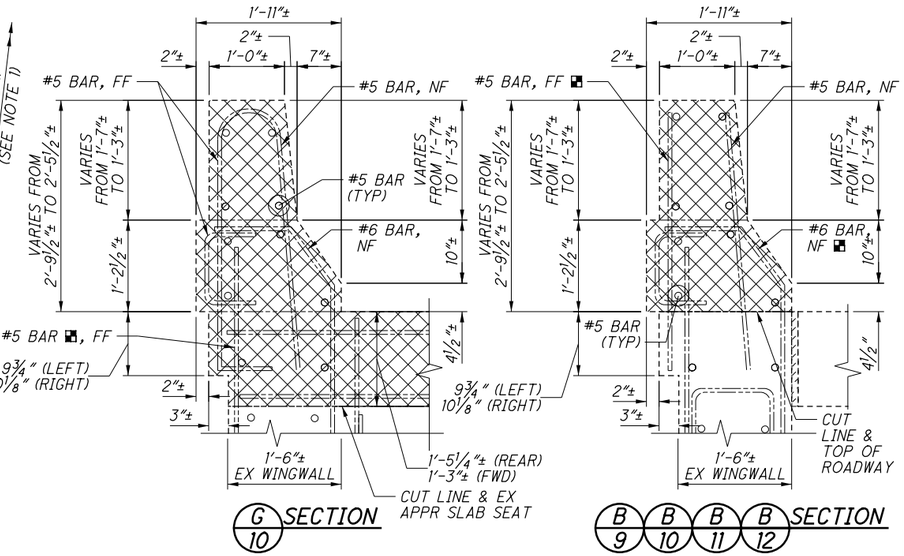
PLAN

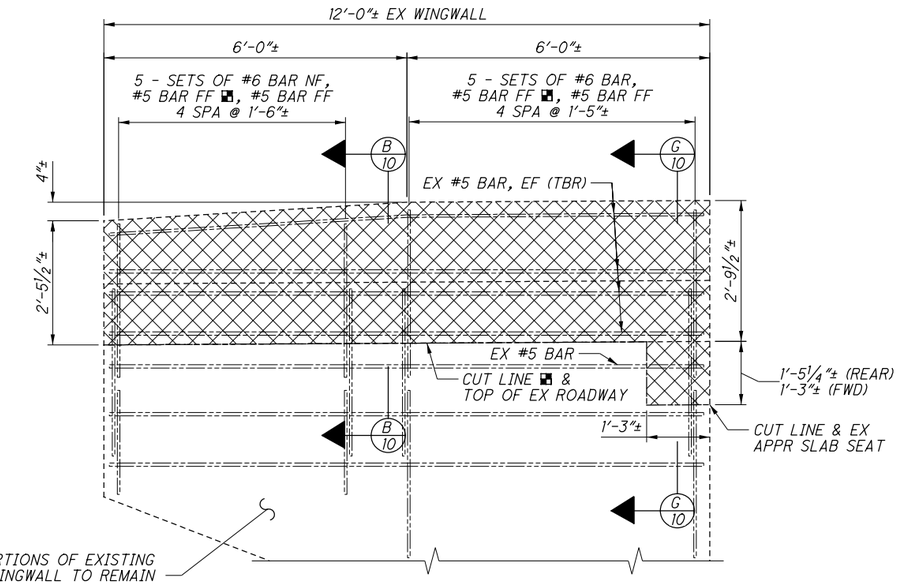
(EXISTING REINFORCING NOT SHOWN FOR CLARITY)



ELEVATION

(EXISTING REINFORCING, BEAMS, AND BEARINGS NOT SHOWN FOR CLARITY)





TYPICAL WINGWALL REMOVAL DETAIL

NOTES

1. REMOVAL OF THE EXISTING INTEGRAL CURB IS INTENDED TO EXTEND TO THE BOTTOM OF THE EXISTING APPROACH SLAB. APPLY A ZINC RICH PRIMER TO THE ENDS OF EXPOSED REINFORCING BARS TO REMAIN. THE PAINTING OF BAR ENDS SHALL BE INCLUDED WITH ITEM 514, FIELD PAINTING, MISC.: ZINC RICH PRIMER, FOR PAYMENT.

LEGEND

- ▪ – SALVAGE PORTION OF EXISTING BAR TO APPLY MECHANICAL CONNECTOR AS DETAILED ON SHEET 18/25
- (X) – EXISTING BEAM "X"
- – DENOTES AREAS TO BE REMOVED PER ITEM 202 – PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- – DENOTES ASPHALT WEARING SURFACE TO BE REMOVED WITH ITEM 202 – WEARING COURSE REMOVED, ASPHALT

DESIGN AGENCY: EMH&T

DESIGNED	DRAWN	CHECKED
RMW	MEM	TDA

REVIEWED	DATE
CAS	10/30/20

REVISED	STRUCTURE FILE NUMBER
-	07000312

REAR ABUTMENT REMOVAL DETAILS (LEFT BRIDGE)

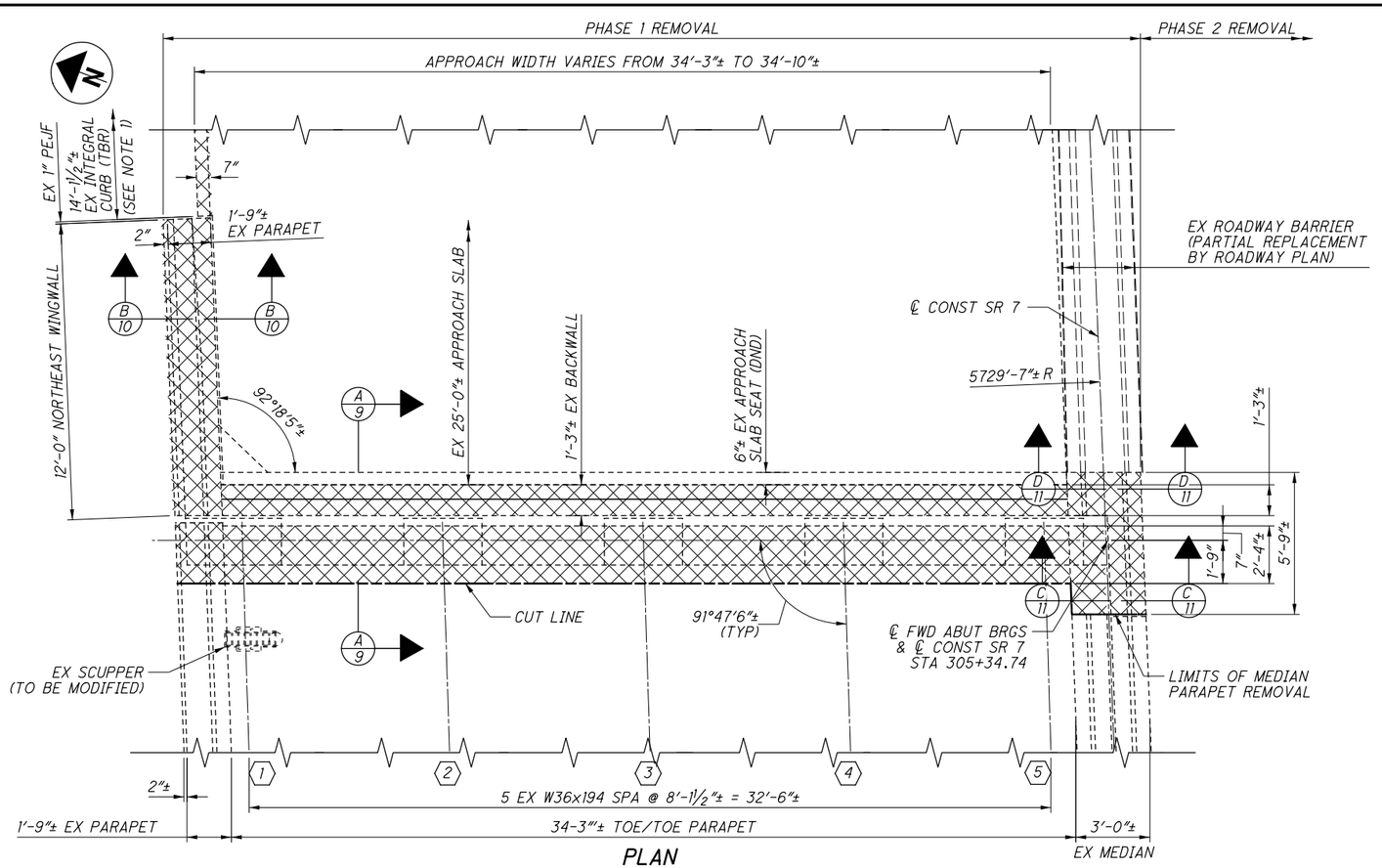
BRIDGE NO. BEL-7-1187C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

10 / 25

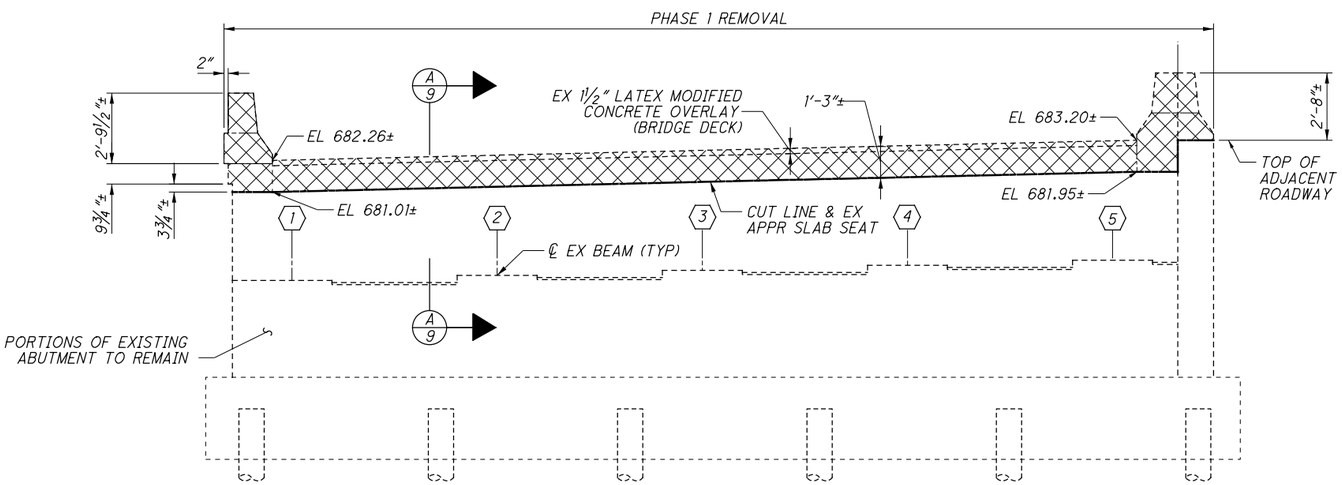
162 / 213

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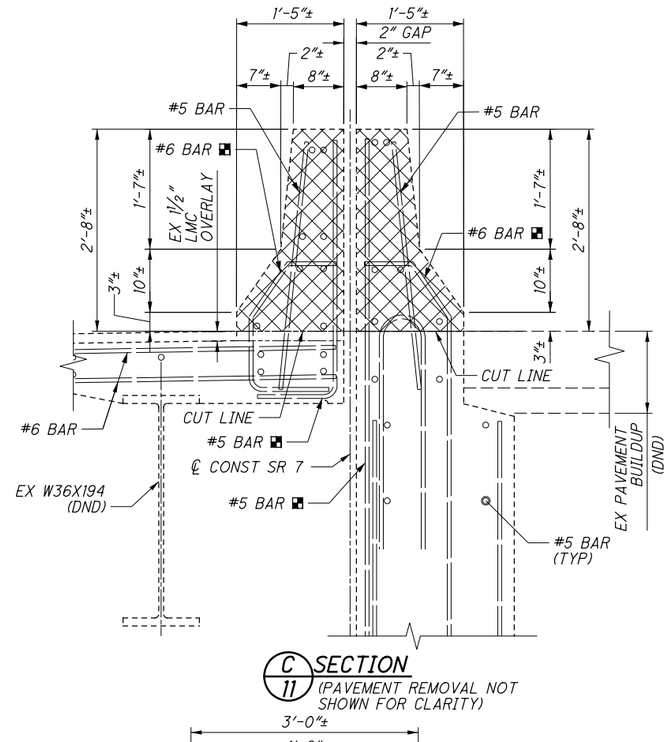
PLAN

(EXISTING REINFORCING NOT SHOWN FOR CLARITY)



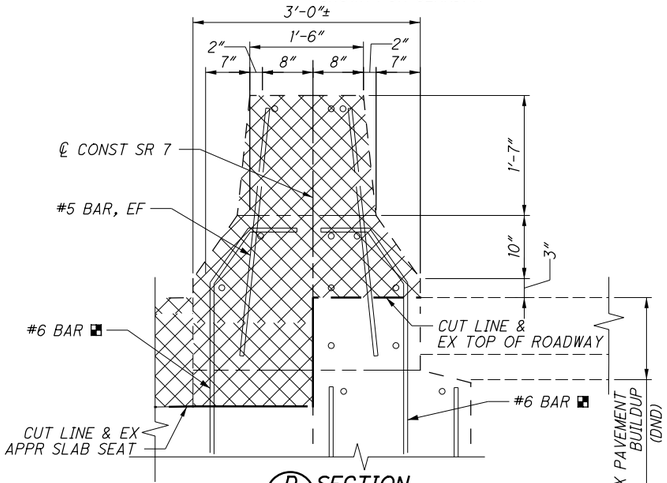
ELEVATION

(EXISTING REINFORCING, BEAMS, AND BEARINGS NOT SHOWN FOR CLARITY)



C/11 SECTION

(PAVEMENT REMOVAL NOT SHOWN FOR CLARITY)



D/11 SECTION

(PAVEMENT REMOVAL NOT SHOWN FOR CLARITY)

NOTES

1. REMOVAL OF THE EXISTING INTEGRAL CURB IS INTENDED TO EXTEND TO THE BOTTOM OF THE EXISTING APPROACH SLAB. APPLY A ZINC RICH PRIMER TO THE ENDS OF EXPOSED REINFORCING BARS TO REMAIN. THE PAINTING OF BAR ENDS SHALL BE INCLUDED WITH ITEM 514, FIELD PAINTING, MISC.: ZINC RICH PRIMER, FOR PAYMENT.

LEGEND

- ■ - SALVAGE PORTION OF EXISTING BAR TO APPLY MECHANICAL CONNECTOR AS DETAILED ON SHEET 19/25
- ⟨X⟩ - EXISTING BEAM "X"
- ▨ - DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

DESIGN AGENCY
EMH&T
Engineers/Architects/Planners/Surveyors
5500 New Albany Road, Columbus, Ohio 43054
Phone: 614-775-4500 www.emht.com

DESIGNED	DRAWN	REVIEWED	DATE
RMW	MEM	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700312	

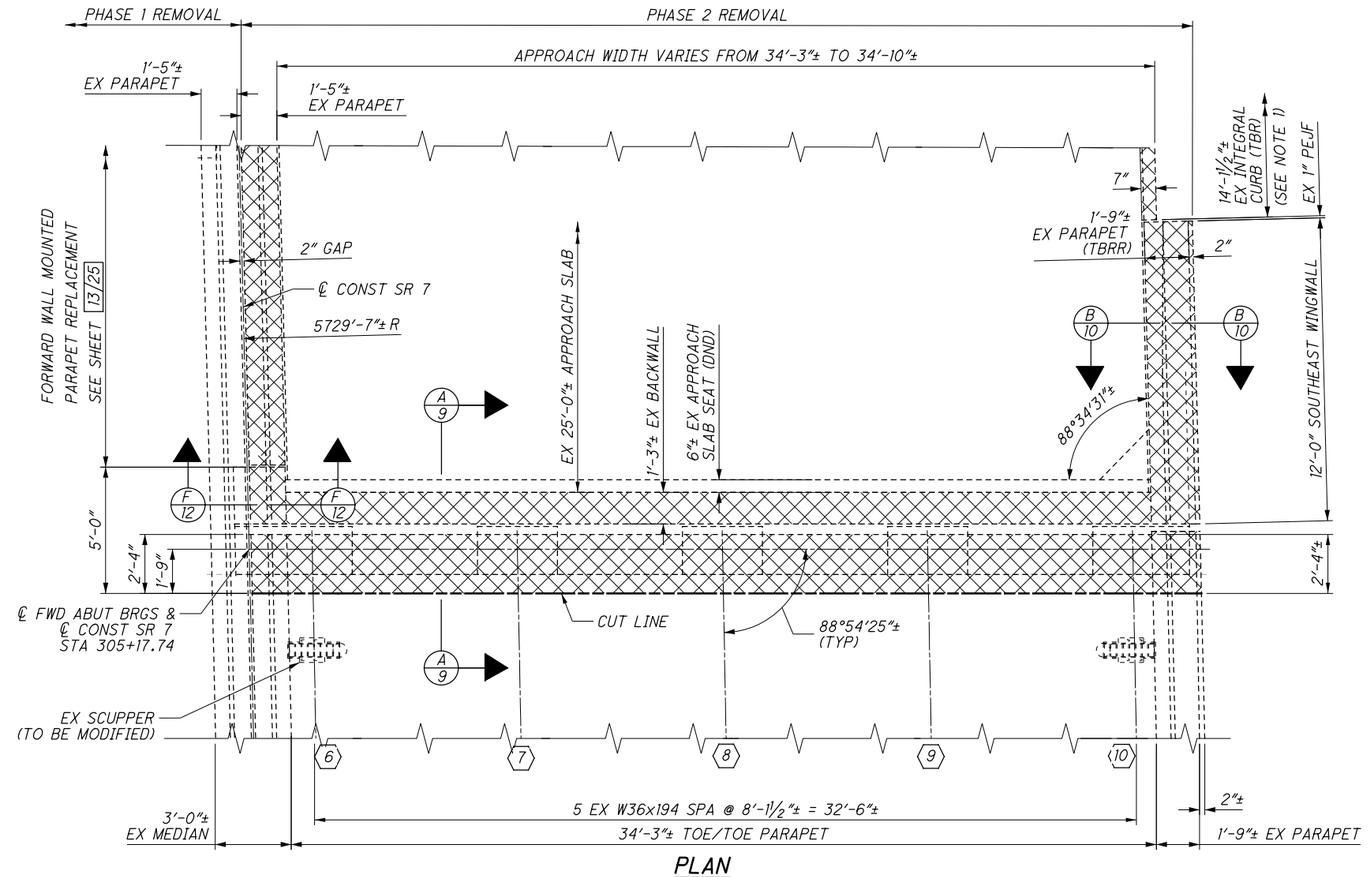
FORWARD ABUTMENT REMOVAL DETAILS (LEFT BRIDGE)
BRIDGE NO. BEL-7-1187C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

11/25

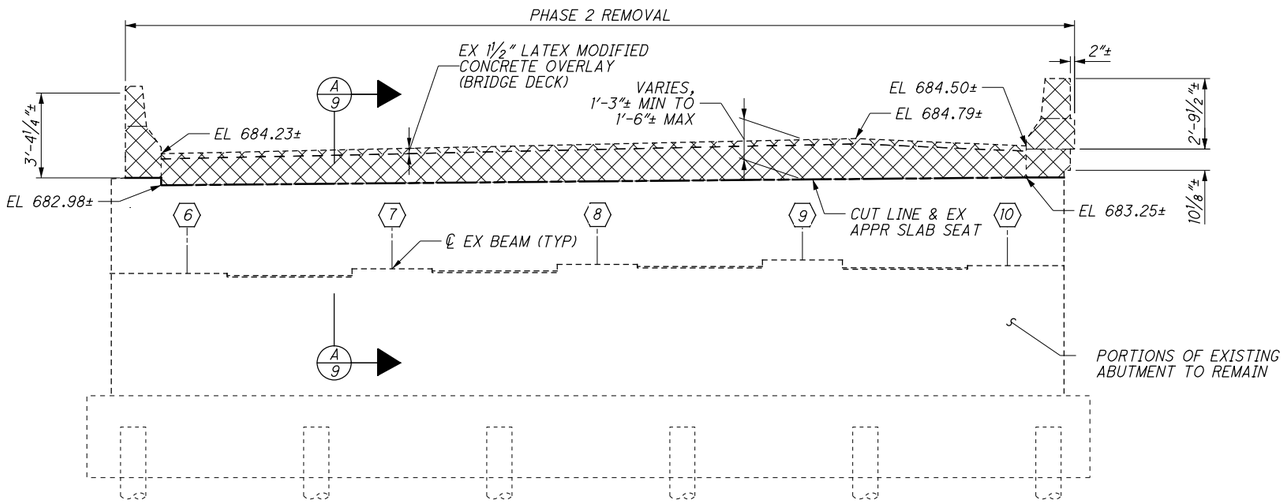
163/213

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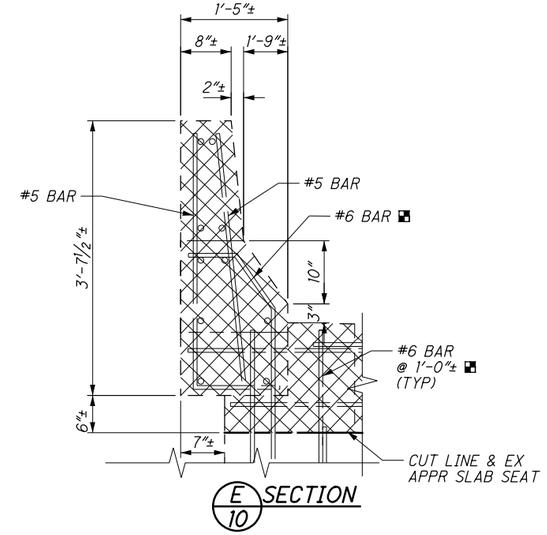
PLAN

(EXISTING REINFORCING NOT SHOWN FOR CLARITY)

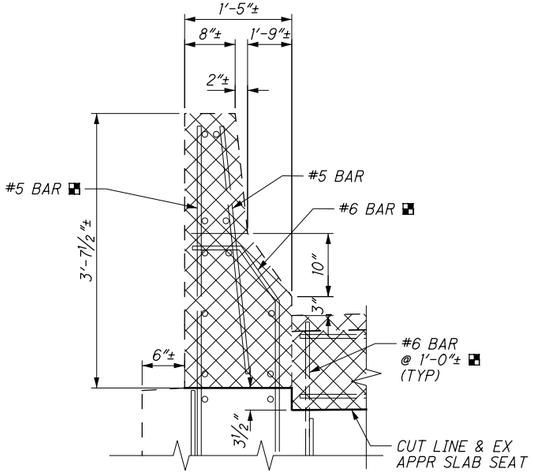


ELEVATION

(EXISTING REINFORCING, BEAMS, AND BEARINGS NOT SHOWN FOR CLARITY)



E 10 SECTION



F 12 SECTION

NOTES

1. REMOVAL OF THE EXISTING INTEGRAL CURB IS INTENDED TO EXTEND TO THE BOTTOM OF THE EXISTING APPROACH SLAB. APPLY A ZINC RICH PRIMER TO THE ENDS OF EXPOSED REINFORCING BARS TO REMAIN. THE PAINTING OF BAR ENDS SHALL BE INCLUDED WITH ITEM 514, FIELD PAINTING, MISC.: ZINC RICH PRIMER, FOR PAYMENT.

LEGEND

- ▪ - SALVAGE PORTION OF EXISTING BAR TO APPLY MECHANICAL CONNECTOR AS DETAILED ON SHEET 20/25
- ⟨X⟩ - EXISTING BEAM "X"
- ▨ - DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

DESIGN AGENCY EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
RMW	MEM	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	07000312	

FORWARD ABUTMENT REMOVAL DETAILS (RIGHT BRIDGE)

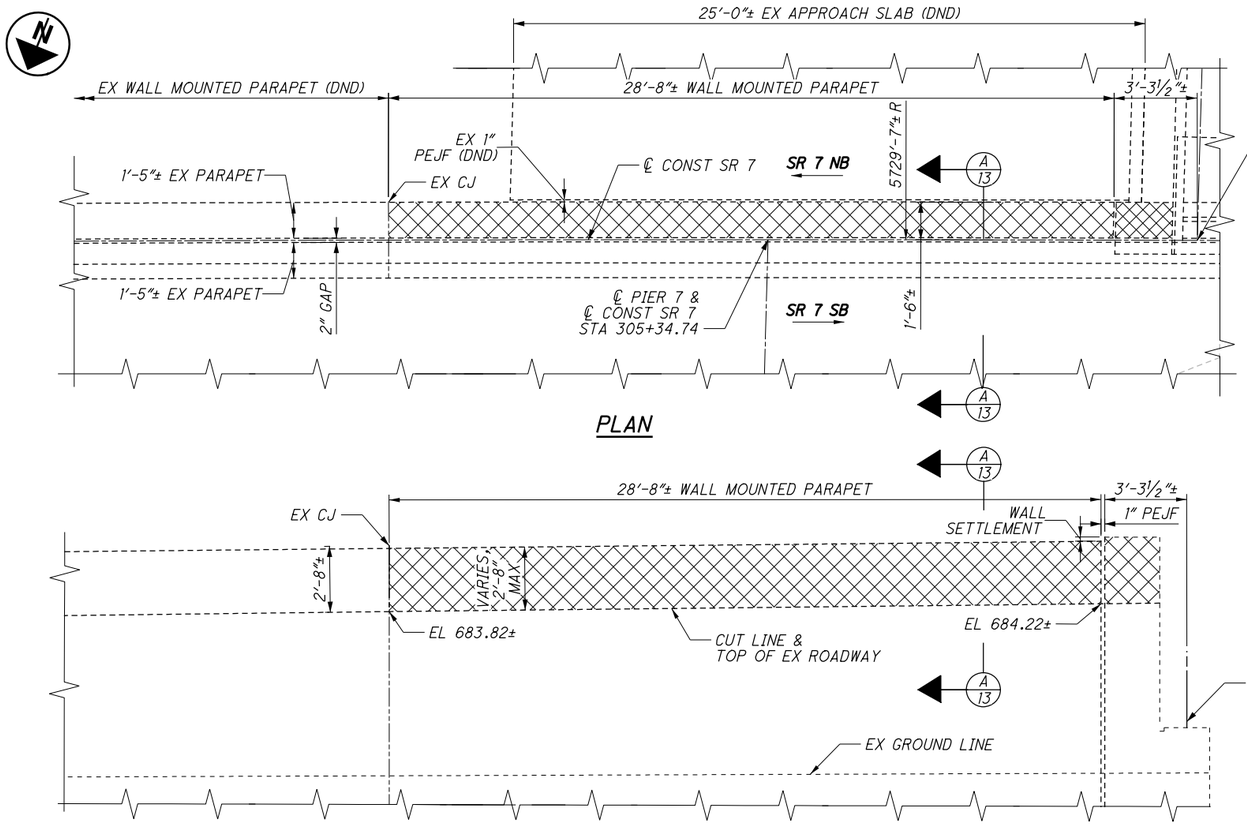
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SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

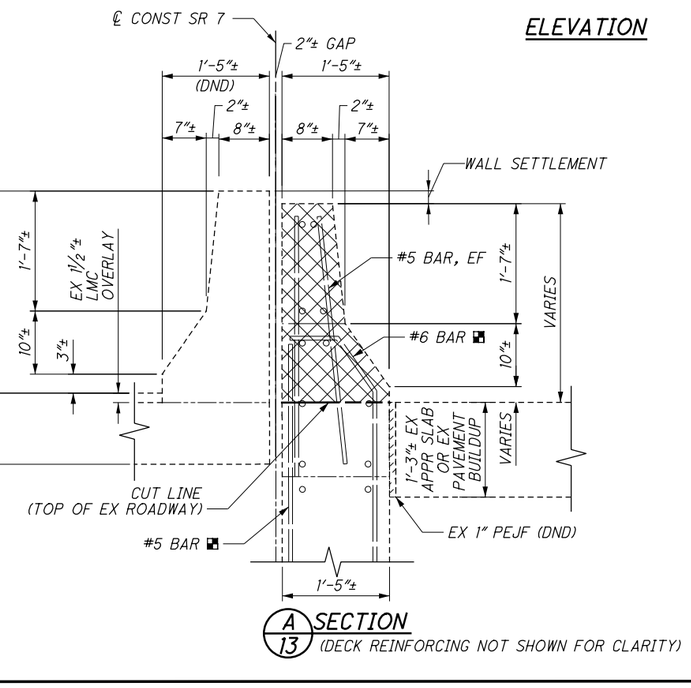
12/25

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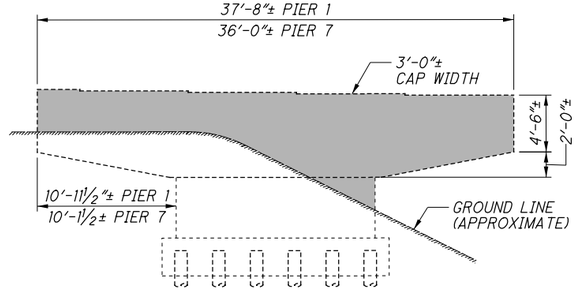
PLAN



ELEVATION

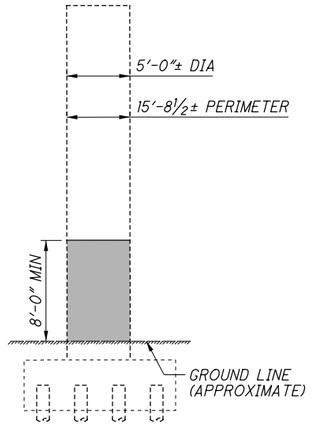
A/13 SECTION

(DECK REINFORCING NOT SHOWN FOR CLARITY)



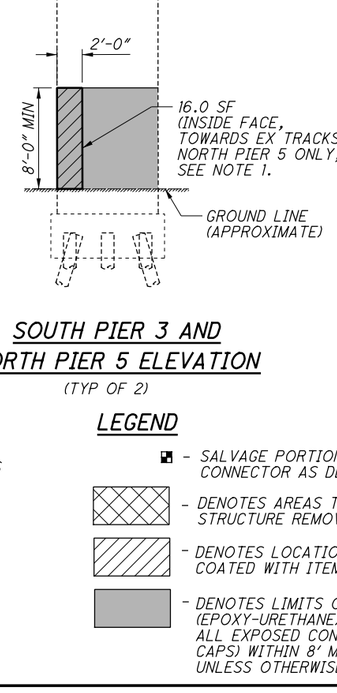
PIER 1 AND 7 ELEVATION

(TYP OF 2)



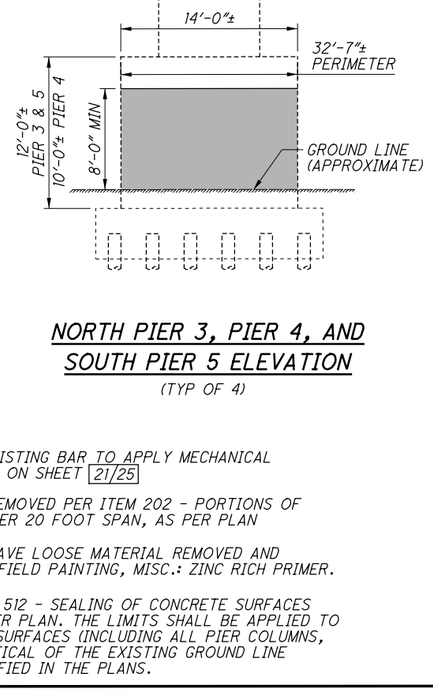
PIER 2 AND 6 ELEVATION

(TYP OF 4)



SOUTH PIER 3 AND NORTH PIER 5 ELEVATION

(TYP OF 2)



NORTH PIER 3, PIER 4, AND SOUTH PIER 5 ELEVATION

(TYP OF 4)

NOTES

1. FOLLOWING APPLICATION OF THE ZINC RICH PRIMER AND AFTER ADEQUATE TIME TO CURE PER THE MANUFACTURER'S SPECIFICATIONS, APPLY AN EPOXY-URETHANE SEALER TO THE CONCRETE SURFACES WITHIN THE LIMITS SHOWN AND 6" MINIMUM FROM EXPOSED LIMITS OF REINFORCING STEEL AND LIMITS OF ZINC PRIMER.

LEGEND

- ■ - SALVAGE PORTION OF EXISTING BAR TO APPLY MECHANICAL CONNECTOR AS DETAILED ON SHEET 21/25
- - DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- - DENOTES LOCATION TO HAVE LOOSE MATERIAL REMOVED AND COATED WITH ITEM 514 - FIELD PAINTING, MISC.: ZINC RICH PRIMER.
- - DENOTES LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN. THE LIMITS SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES (INCLUDING ALL PIER COLUMNS, CAPS) WITHIN 8' MIN VERTICAL OF THE EXISTING GROUND LINE UNLESS OTHERWISE SPECIFIED IN THE PLANS.

DESIGN AGENCY: EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
RMW	MEM	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700312	

FORWARD ABUTMENT REMOVAL AND PIER DETAILS

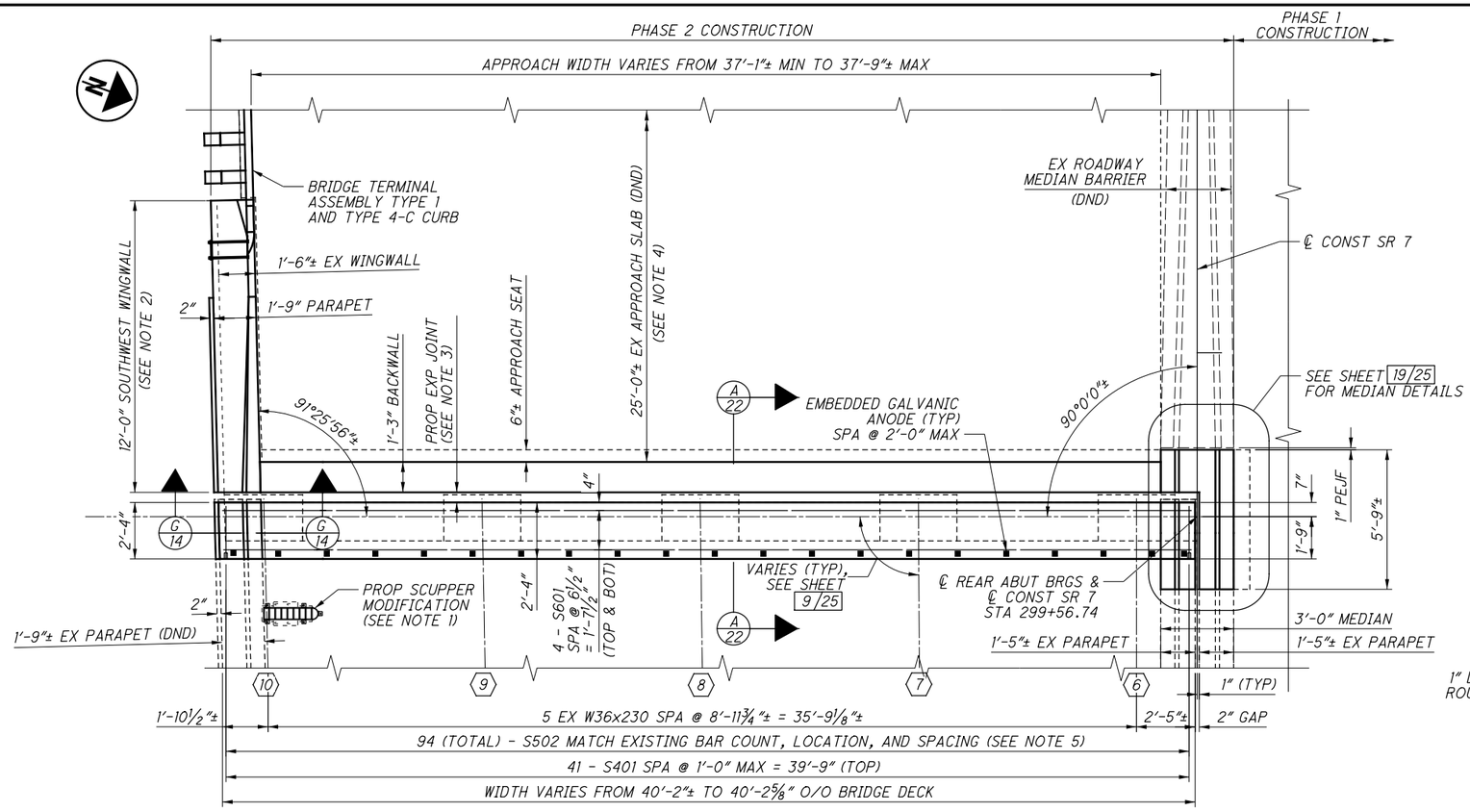
BRIDGE NO. BEL-7-1187C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

13 / 25

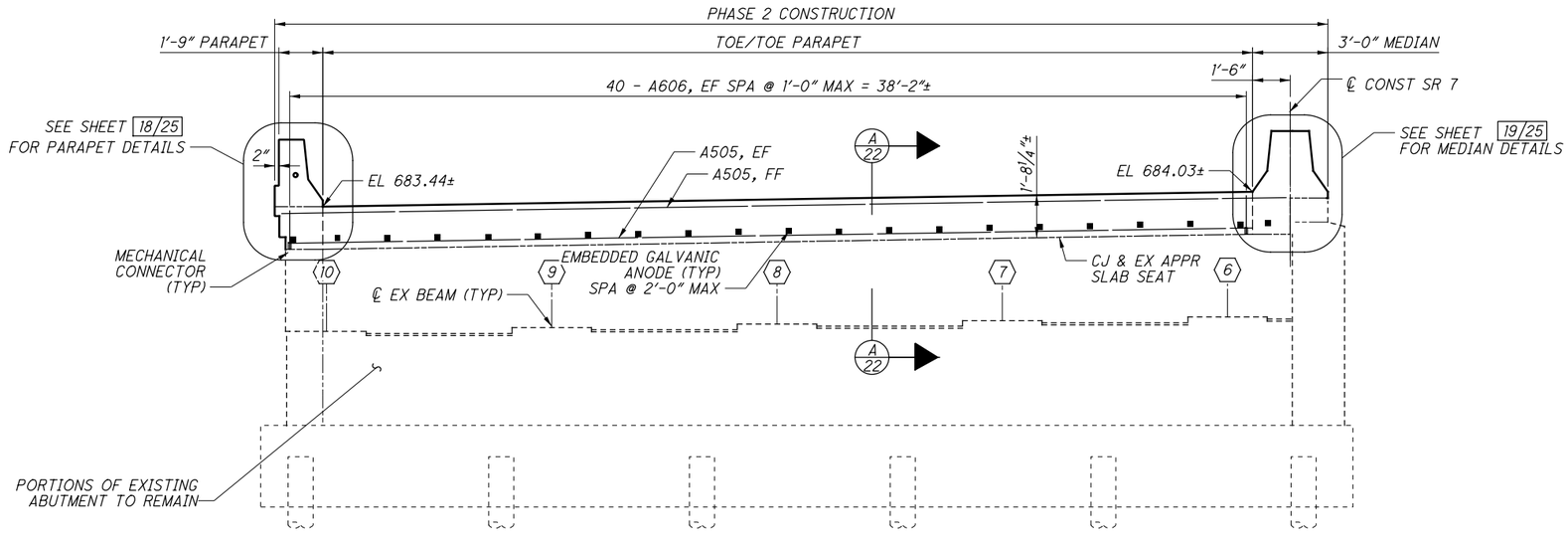
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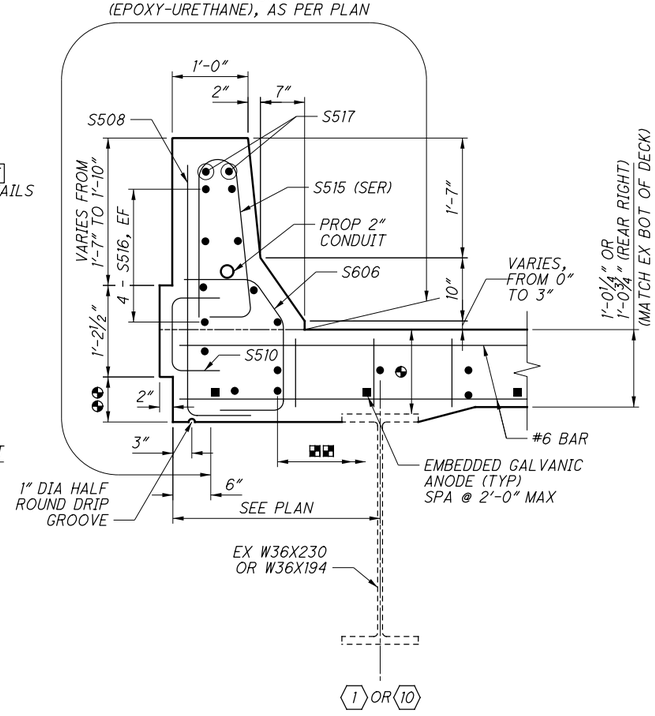
PLAN

(BACKWALL AND PARAPET REINFORCING NOT SHOW FOR CLARITY)



ELEVATION

(ALL DIMENSIONS MEASURED ALONG THE FACE OF BACKWALL. SLAB REINFORCING NOT SHOWN FOR CLARITY)



G 14 G 15 G 16 G 17 G 18 **SECTION**

(JUNCTION BOX NOT SHOWN FOR CLARITY, SEE LIGHTING PLAN)

LEGEND

- ⟨X⟩ - EXISTING BEAM "X"
- ■■ - S502 (TOP AND MIDDLE), MATCH EX LONGITUDINAL REINFORCING STEEL AND S401 SPA @ 1'-0" MAX
- ◕ - 1'-1" OR 1'-1½" (REAR RIGHT). MATCH TOP OF EX BEAM
- ◕◕ - 9¾"± (LEFT), 10⅛"± (RIGHT)

NOTES

1. FOR PROPOSED SCUPPER MODIFICATIONS SEE SHEET 24/25.
2. FOR PROPOSED WINGWALL MOUNTED PARAPET DETAILS SEE SHEET 18/25.
3. FOR ADDITIONAL DETAILS FOR THE PROPOSED EXJ-4-87 EXPANSION JOINT SYSTEM SEE SHEET 22/25.
4. PORTIONS OF THE EXPOSED APPROACH SLAB, WHERE DETERMINED TO BE DELAMINATED FROM THE EXISTING REINFORCING STEEL, SHALL RECEIVE PATCHING OF CONCRETE SURFACES PER ITEM 519. LIMITS OF PATCHING SHALL BE DELINEATED IN FIELD AND APPROVED BY THE DISTRICT, THE ACTUAL SQUARE YARD AREA SHALL BE PAID FOR AT THE UNIT BID PRICE FOR 519 - PATCHING CONCRETE BRIDGE DECK - TYPE B, FOR PAYMENT
5. ATTACH A MECHANICAL CONNECTOR TO THE END OF EACH EXISTING TOP AND BOTTOM #5 LONGITUDINAL DECK REINFORCING BAR TO REMAIN AND SPLICE WITH THE PROPOSED S502. SPLICED BARS WILL BE LOCATED IN THE BOTTOM AND MIDDLE OF THE PROPOSED DECK END AS SHOWN ON SECTION A ON SHEET 22/25

DESIGN AGENCY EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
RMW	MEM	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	07000312	

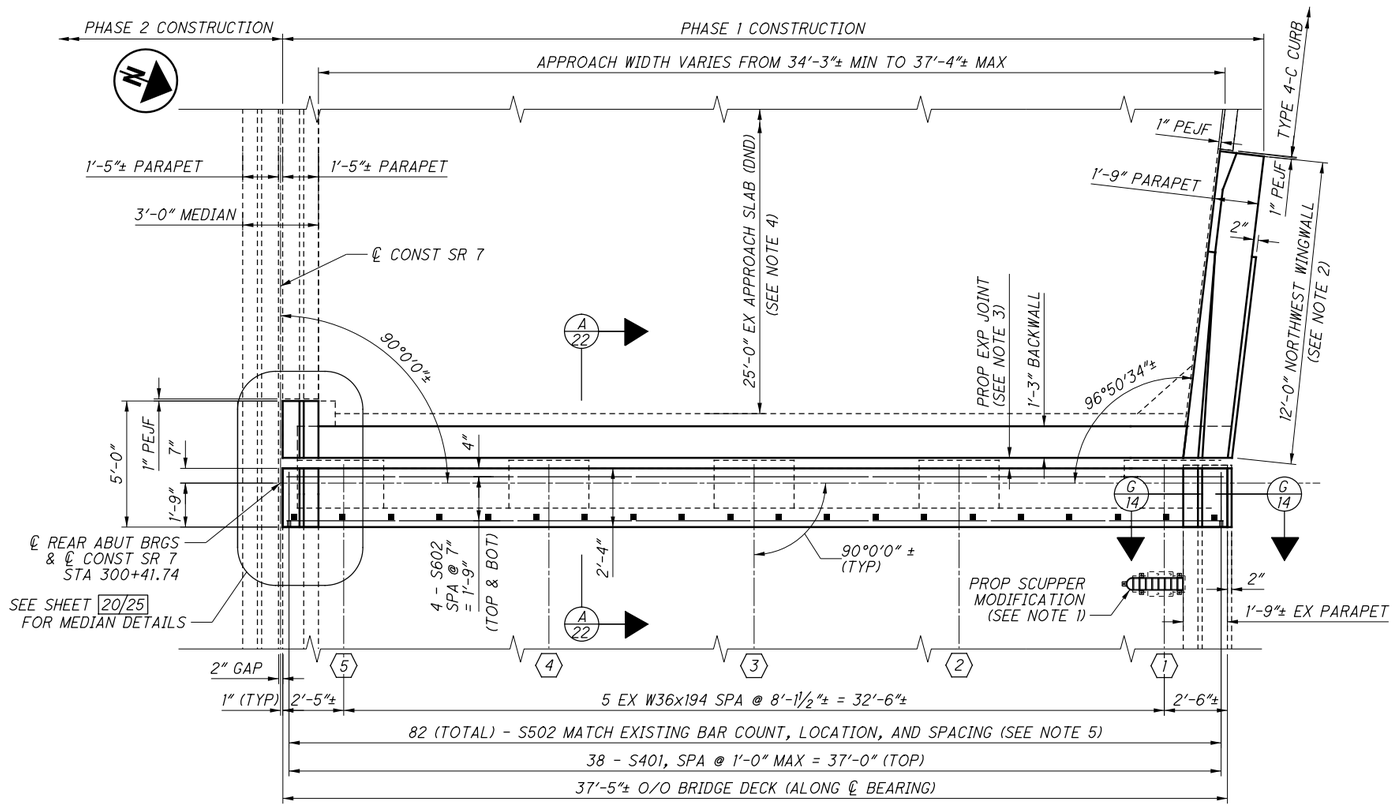
REAR ABUTMENT DETAILS (RIGHT BRIDGE)
BRIDGE NO. BEL-7-11870
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

14 / 25

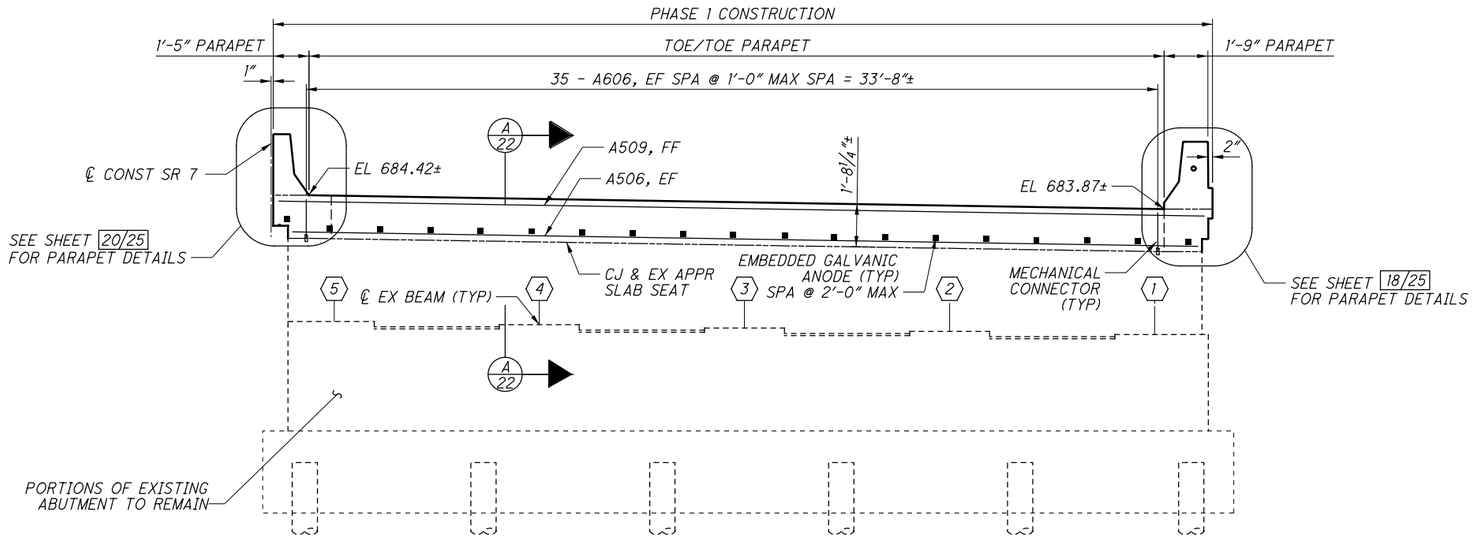
166 / 213

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PLAN

(BACKWALL AND PARAPET REINFORCING NOT SHOW FOR CLARITY)



ELEVATION

(ALL DIMENSIONS MEASURED ALONG THE FACE OF BACKWALL,
PARAPET REINFORCING NOT SHOWN FOR CLARITY)

LEGEND

(X) - EXISTING BEAM "X"

NOTES

1. FOR PROPOSED SCUPPER MODIFICATIONS SEE SHEET 24/25.
2. FOR PROPOSED WINGWALL MOUNTED PARAPET DETAILS SEE SHEET 18/25.
3. FOR ADDITIONAL DETAILS FOR THE PROPOSED EXJ-4-87 EXPANSION JOINT SYSTEM SEE SHEET 22/25.
4. PORTIONS OF THE EXPOSED APPROACH SLAB WHERE DETERMINED TO BE DELAMINATED FROM THE EXISTING REINFORCING STEEL SHALL RECEIVE PATCHING OF CONCRETE SURFACES PER ITEM 519. LIMITS OF PATCHING SHALL BE DELINEATED IN FIELD AND APPROVED BY THE DISTRICT, THE ACTUAL SQUARE YARD AREA SHALL BE PAID FOR AT THE UNIT BID PRICE FOR 519 - PATCHING CONCRETE BRIDGE DECK - TYPE B, FOR PAYMENT
5. ATTACH A MECHANICAL CONNECTOR TO THE END OF EACH EXISTING TOP AND BOTTOM #5 LONGITUDINAL DECK REINFORCING BAR TO REMAIN AND SPLICE WITH THE PROPOSED S502. SPLICED BARS WILL BE LOCATED IN THE BOTTOM AND MIDDLE OF THE PROPOSED DECK END AS SHOWN ON SECTION A ON SHEET 22/25

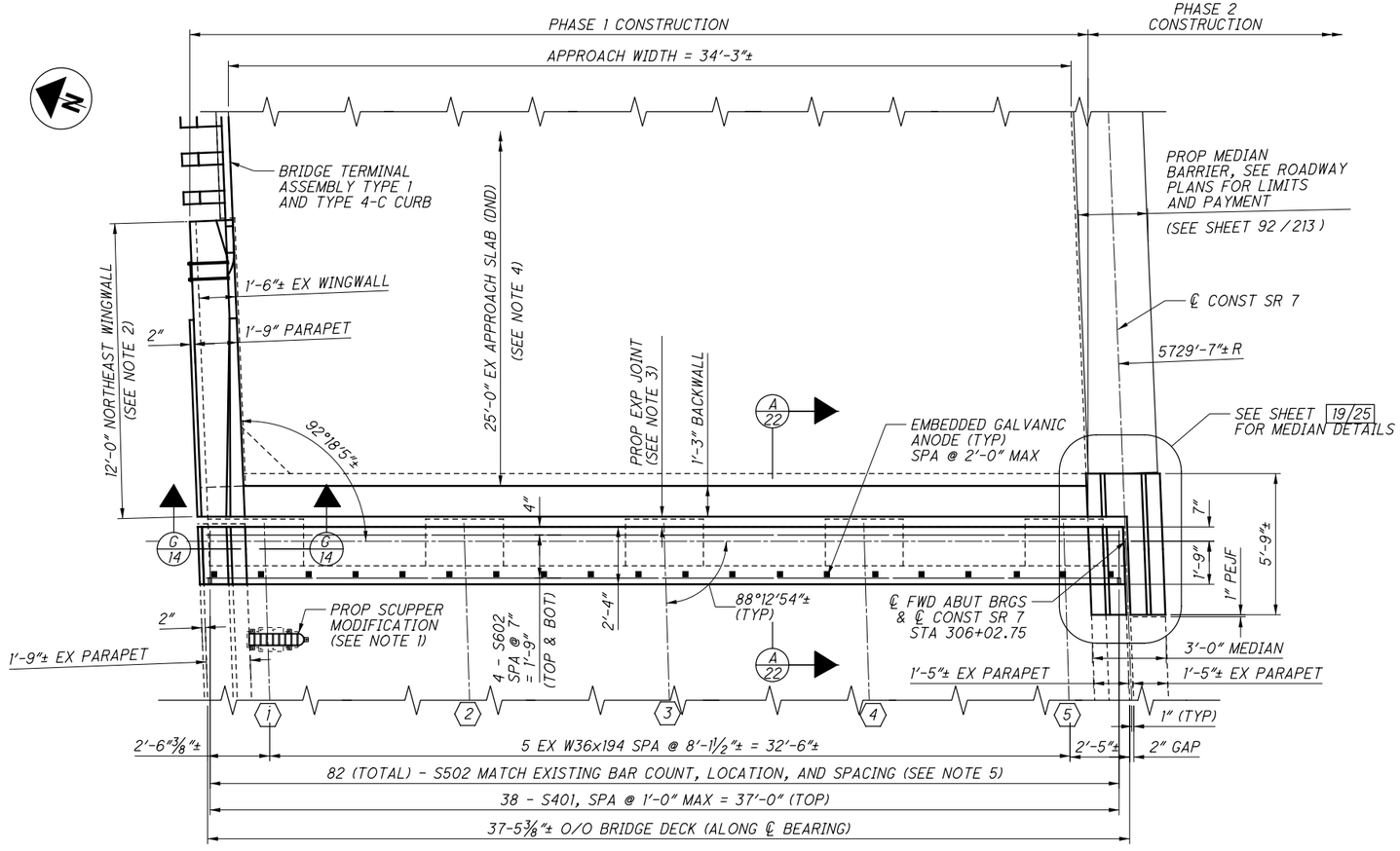
DESIGN AGENCY
EMH&T
DESIGNED RMW
DRAWN MEM
REVIEWED CAS
DATE 10/30/20
CHECKED TDA
REVISED -
STRUCTURE FILE NUMBER 07000312

REAR ABUTMENT DETAILS (LEFT BRIDGE)
BRIDGE NO. BEL-7-11870
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

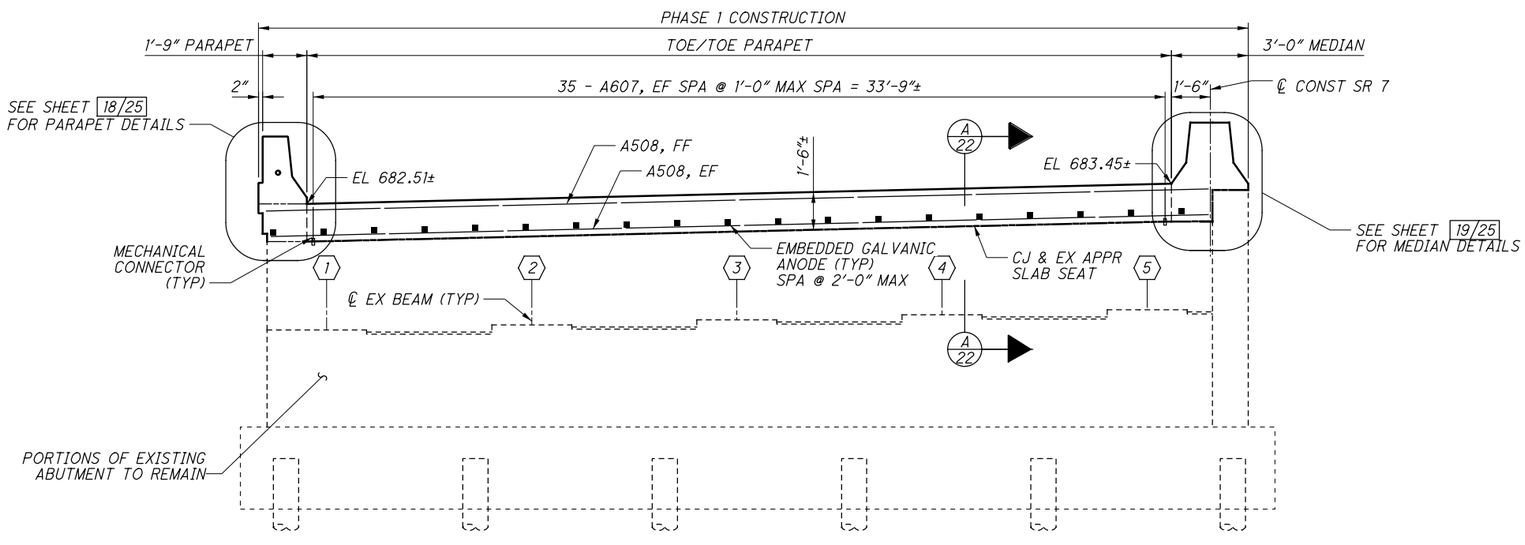
15 / 25
167 / 213

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PLAN

(BACKWALL AND PARAPET REINFORCING NOT SHOW FOR CLARITY)



ELEVATION

(ALL DIMENSIONS MEASURED ALONG THE FACE OF BACKWALL, PARAPET REINFORCING NOT SHOWN FOR CLARITY)

LEGEND

(X) - EXISTING BEAM "X"

NOTES

1. FOR PROPOSED SCUPPER MODIFICATIONS SEE SHEET 24/25.
2. FOR PROPOSED WINGWALL MOUNTED PARAPET DETAILS SEE SHEET 18/25.
3. FOR ADDITIONAL DETAILS FOR THE PROPOSED EXJ-4-87 EXPANSION JOINT SYSTEM SEE SHEET 22/25.
4. PORTIONS OF THE EXPOSED APPROACH SLAB WHERE DETERMINED TO BE DELAMINATED FROM THE EXISTING REINFORCING STEEL SHALL RECEIVE PATCHING OF CONCRETE SURFACES PER ITEM 519. LIMITS OF PATCHING SHALL BE DELINEATED IN FIELD AND APPROVED BY THE DISTRICT, THE ACTUAL SQUARE YARD AREA SHALL BE PAID FOR AT THE UNIT BID PRICE FOR 519 - PATCHING CONCRETE BRIDGE DECK - TYPE B, FOR PAYMENT
5. ATTACH A MECHANICAL CONNECTOR TO THE END OF EACH EXISTING TOP AND BOTTOM #5 LONGITUDINAL DECK REINFORCING BAR TO REMAIN AND SPLICE WITH THE PROPOSED S502. SPLICED BARS WILL BE LOCATED IN THE BOTTOM AND MIDDLE OF THE PROPOSED DECK END AS SHOWN ON SECTION A ON SHEET 22/25

DESIGN AGENCY
EMH&T
ENGINEERS SURVEYORS PLANNERS SCIENTISTS
5500 New Albany Road, Columbus, Ohio 43054
Phone: 614-775-4500

DESIGNED	DRAWN	REVIEWED	DATE
RMW	MEM	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	07000312	

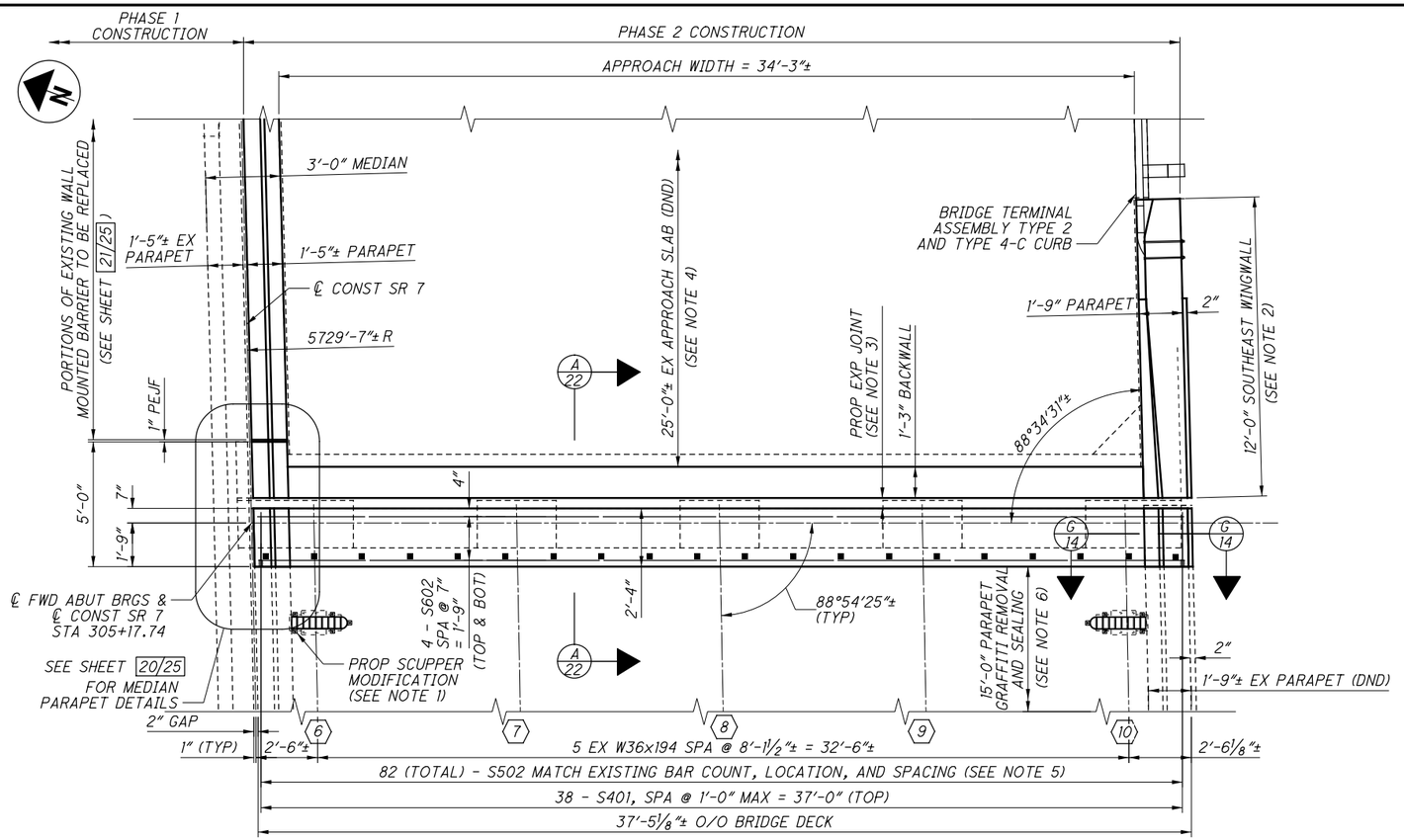
FORWARD ABUTMENT DETAILS (LEFT BRIDGE)
BRIDGE NO. BEL-7-11870 & BEL-7-11871C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

16 / 25

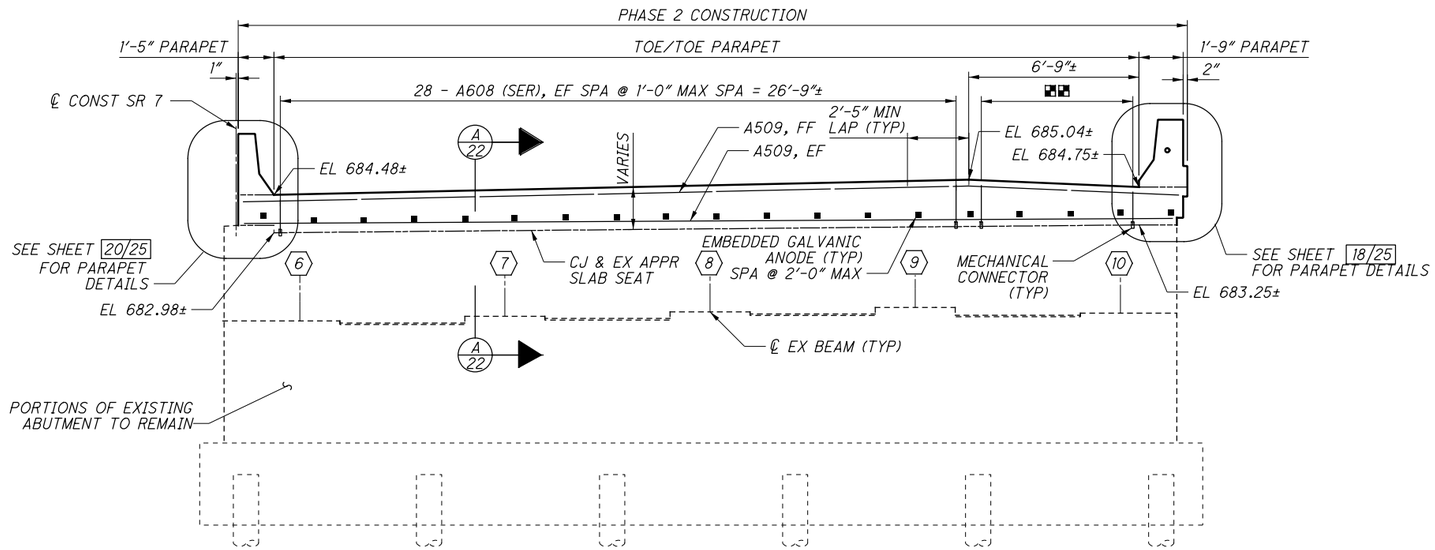
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PLAN

(BACKWALL AND PARAPET REINFORCING NOT SHOW FOR CLARITY)



ELEVATION

(ALL DIMENSIONS MEASURED ALONG THE FACE OF BACKWALL, PARAPET REINFORCING NOT SHOWN FOR CLARITY)

LEGEND

(X) - EXISTING BEAM "X"

■■■ - 7 - A609 (SER), EF SPA @ 1'-0" MAX = 6'-0"±

NOTES

1. FOR PROPOSED SCUPPER MODIFICATIONS SEE SHEET 24/25.
2. FOR PROPOSED WINGWALL MOUNTED PARAPET DETAILS SEE SHEET 18/25.
3. FOR ADDITIONAL DETAILS FOR THE PROPOSED EXJ-4-87 EXPANSION JOINT SYSTEM SEE SHEET 22/25.
4. PORTIONS OF THE EXPOSED APPROACH SLAB WHERE DETERMINED TO BE DELAMINATED FROM THE EXISTING REINFORCING STEEL SHALL RECEIVE PATCHING OF CONCRETE SURFACES PER ITEM 519. LIMITS OF PATCHING SHALL BE DELINEATED IN FIELD AND APPROVED BY THE DISTRICT, THE ACTUAL SQUARE YARD AREA SHALL BE PAID FOR AT THE UNIT BID PRICE FOR 519 - PATCHING CONCRETE BRIDGE DECK - TYPE B, FOR PAYMENT
5. ATTACH A MECHANICAL CONNECTOR TO THE END OF EACH EXISTING TOP AND BOTTOM #5 LONGITUDINAL DECK REINFORCING BAR TO REMAIN AND SPLICE WITH THE PROPOSED S502. SPLICED BARS WILL BE LOCATED IN THE BOTTOM AND MIDDLE OF THE PROPOSED DECK END AS SHOWN ON SECTION A ON SHEET 22/25
6. GRAFFITI REMOVAL AND SEALING TO BE PROVIDED AS DESCRIBED WITHIN ITEM 512 - LIMITS OF SEALING OF CONCRETE SURFACES, AS PER PLAN.

DESIGN AGENCY
EMH&T
Engineers/Architects/Surveyors/Planners
5500 New Albany Road, Columbus, Ohio 43054
Phone: 614-775-4500

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RMW	MEM	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700312	

FORWARD ABUTMENT DETAILS (RIGHT BRIDGE)

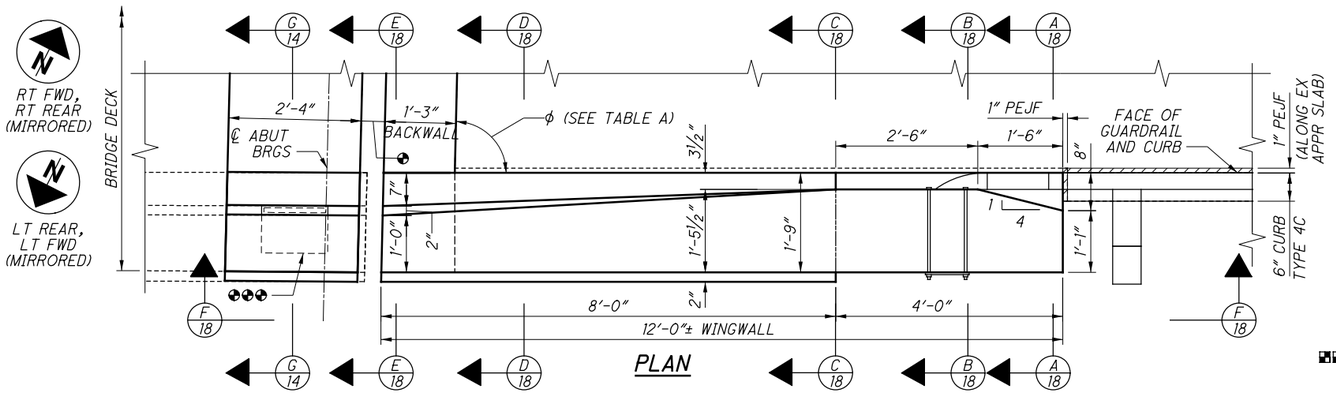
BRIDGE NO. BEL-7-1187C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

17 / 25

169
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PLAN

TABLE A

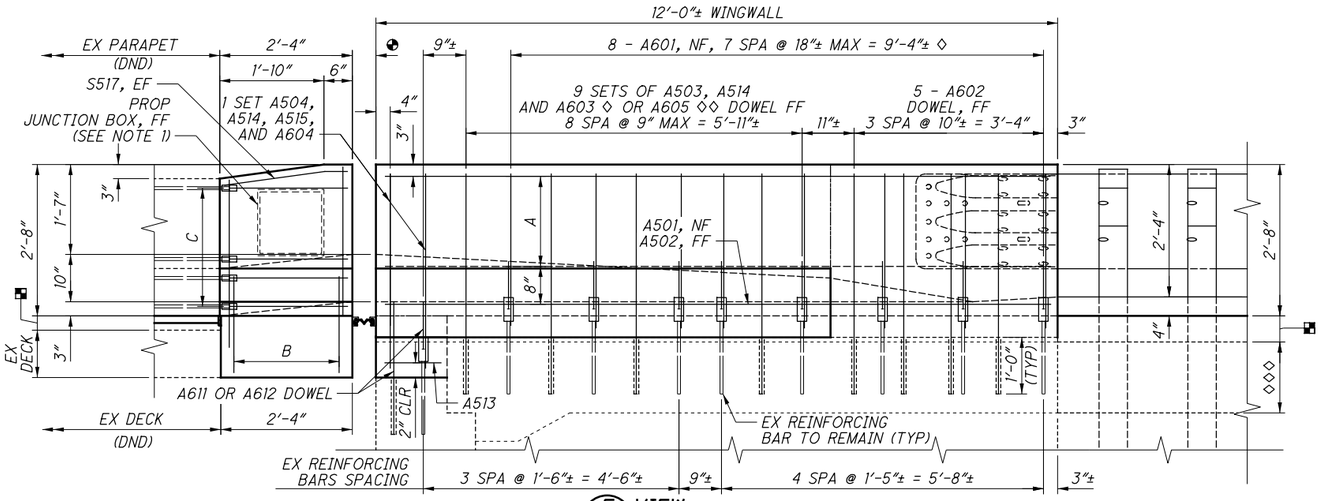
APPROACH	ϕ
REAR RIGHT	91°25'56"±
REAR LEFT	96°50'34"±
FWD LEFT	92°18'05"±
FWD RIGHT	88°34'31"±

LEGEND

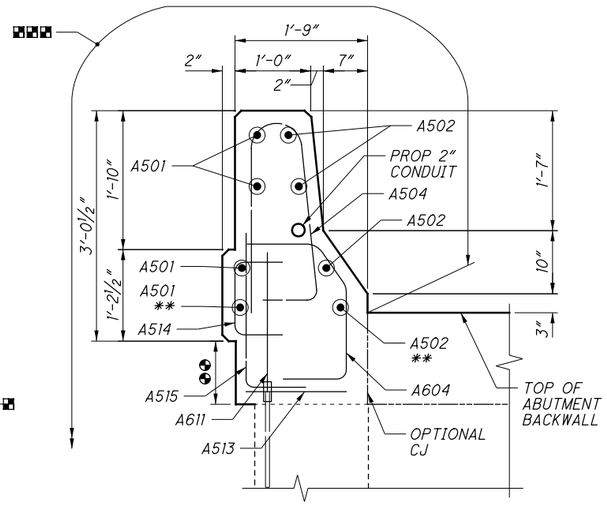
- ◕ - FOR ADDITIONAL DETAILS FOR THE PROPOSED EXJ-4-87 EXPANSION JOINT SYSTEM SEE SHEET 22/25
- ◕◕ - 9¾"± (LEFT), 10⅛"± (RIGHT)
- ◕◕◕ - PROP LIGHTING JUNCTION BOX, FF (SEE NOTE 1)
- ◪ - PROP 3" ASPHALT OVERLAY AT FWD APPROACH SLABS AND BRIDGE DECK, OR 5½" ASPHALT OVERLAY AT REAR APPROACH SLABS. PROPOSED OVERLAY INCLUDED WITH ROADWAY ITEMS FOR PAYMENT.
- ◪◪◪ - LIMITS OF SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN
- ◇ - THE PROP BARS WILL BE SPACED TO MECHANICALLY CONNECT TO THE EX BAR
- ◇◇ - THE A605 DOWELS WILL BE PLACED BETWEEN THE EXISTING BARS (SECTION D-D).
- ◇◇◇ - 1'-3" APPROACH SLAB (DND)
- A - 3 - A501, NF, 3 - A502, FF, 2 SPA @ 9½"= 1'-7"
- B - 3 SETS OF S515 (SER), S508 NF, S606 FF (SER), S510 NF SPA @ 1'-0" MAX = 2'-0"
- C - 4 - S516, EF
- ** - FIELD BEND WHERE NECESSARY

NOTES

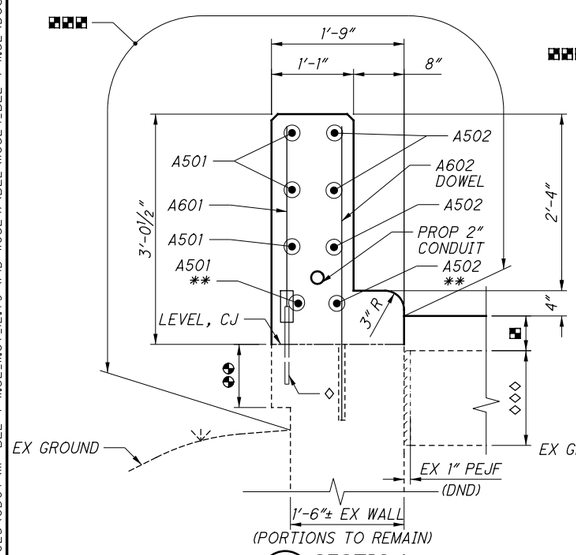
1. SEE LIGHTING PLAN FOR LOCATIONS AND SPECIFICATIONS FOR THE PROPOSED JUNCTION BOX. PROVIDE THE MINIMUM NUMBER OF BARS AS INDICATED IN THE PLANS. INSTALL THE JUNCTION BOX AT A LOCATION THAT MINIMIZES CONFLICT WITH THE EXISTING REINFORCING STEEL. TRIM HORIZONTAL BARS AND PROVIDE BENDS WHERE NECESSARY TO AVOID CONFLICT.



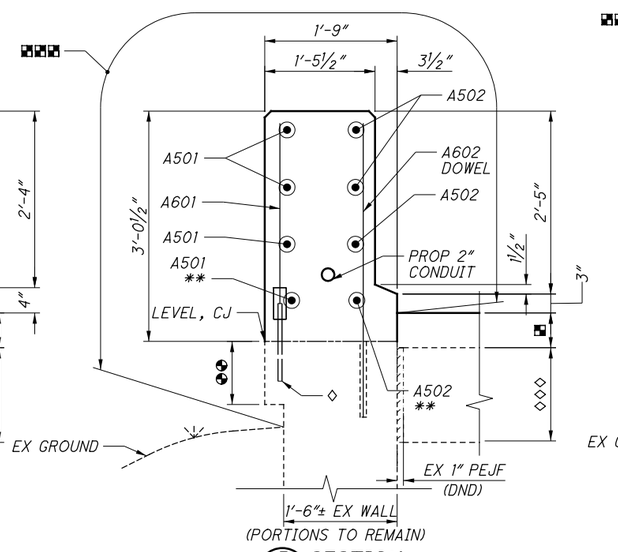
F 18 VIEW (DECK REINFORCING NOT SHOWN FOR CLARITY)



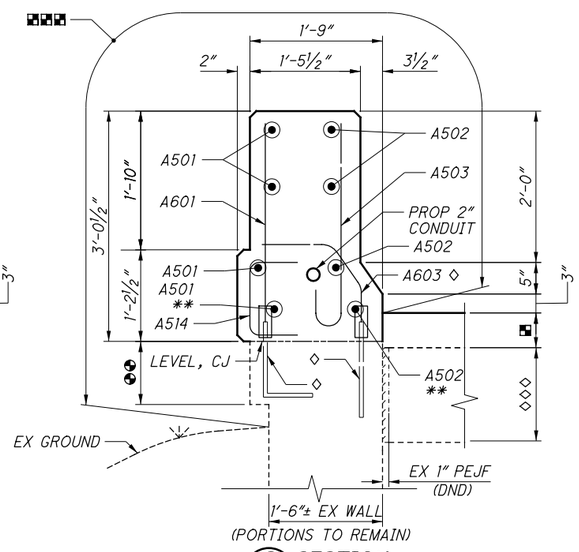
E 18 SECTION



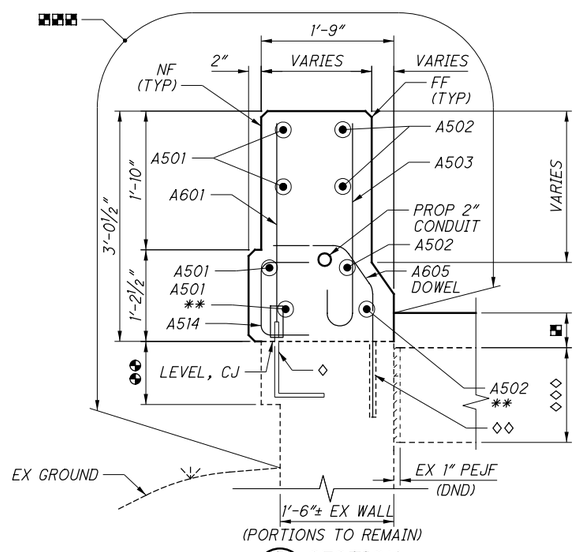
A 18 SECTION



B 18 SECTION



C 18 SECTION



D 18 SECTION

DESIGN AGENCY: EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
RMW	MEM	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700312	

WINGWALL PARAPET DETAILS

BRIDGE NO. BEL-7-1187C

SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

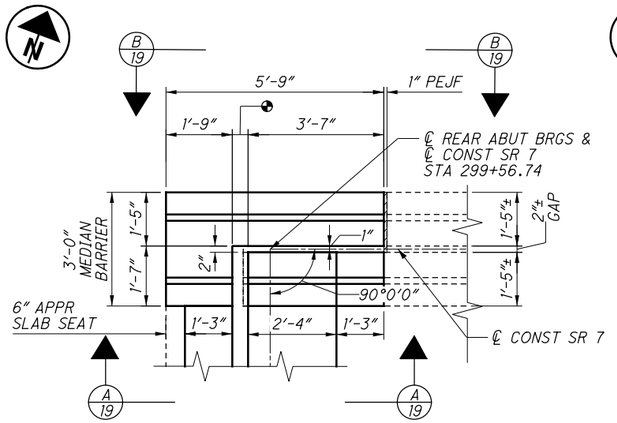
BEL-7-11.48

PID No. 110324

18 / 25

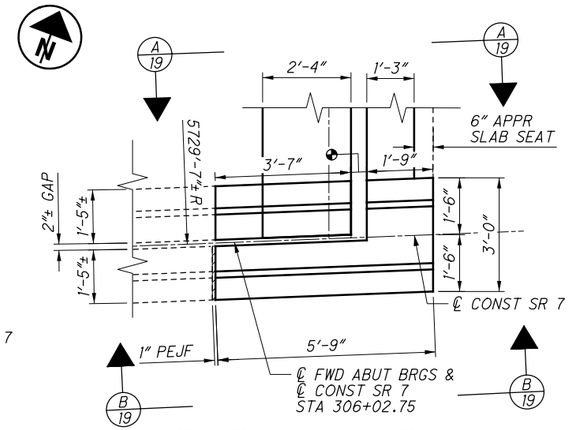
170 / 213

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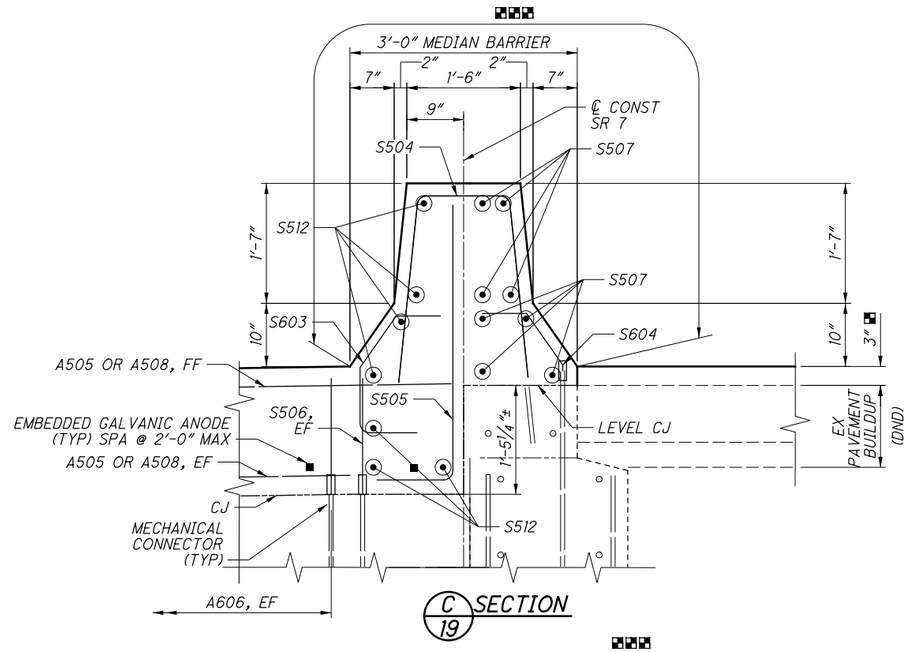
MEDIAN BARRIER PLAN

(RIGHT BRIDGE REAR ABUTMENT SHOWN)

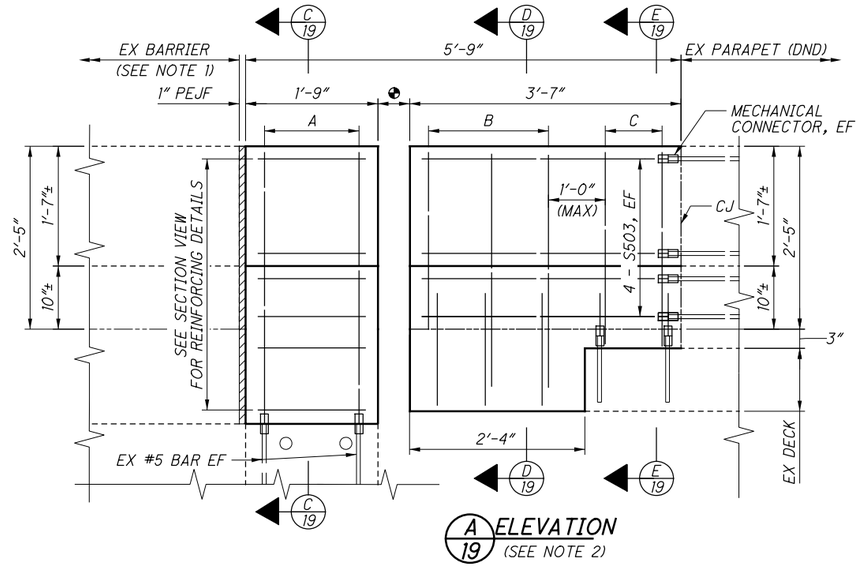


MEDIAN BARRIER PLAN

(LEFT BRIDGE FORWARD ABUTMENT SHOWN)

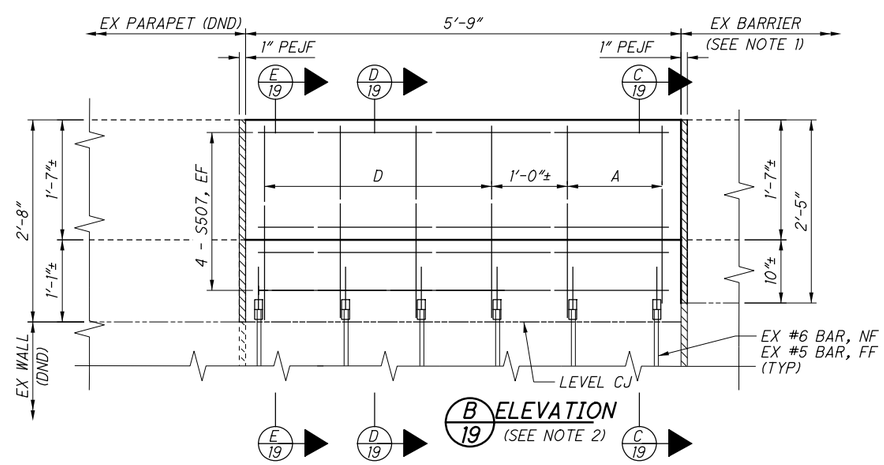


C 19 SECTION



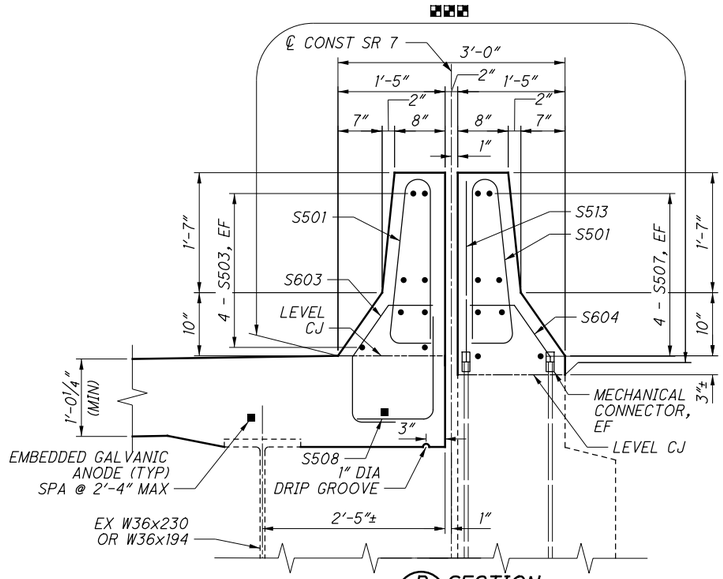
A 19 ELEVATION

(SEE NOTE 2)



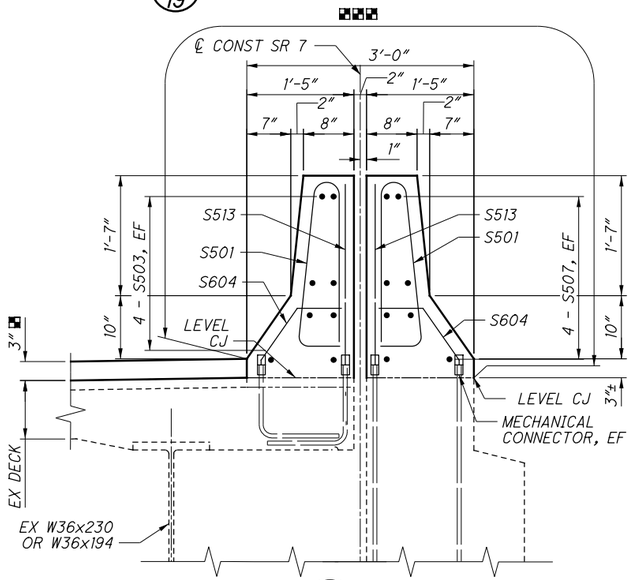
B 19 ELEVATION

(SEE NOTE 2)



D 19 SECTION

(ADJACENT ROADWAY AND DECK REINFORCING NOT SHOWN FOR CLARITY)



E 19 SECTION

(ADJACENT ROADWAY AND DECK REINFORCING NOT SHOWN FOR CLARITY)

NOTES

1. PORTIONS OF THE FORWARD APPROACH MEDIAN BARRIER TO BE REPLACED, BY ROADWAY. REAR APPROACH MEDIAN BARRIER TO REMAIN.
2. FOR DECK AND ABUTMENT REINFORCING DETAILS AND DIMENSIONS REFERENCE SHEETS 14/25 THROUGH 17/25 .

LEGEND

- ◔ - FOR ADDITIONAL DETAILS FOR THE PROPOSED EXJ-4-87 EXPANSION JOINT SYSTEM SEE SHEET 22/25 .
- ▪ - PROP 3" ASPHALT OVERLAY AT FWD APPR SLABS AND BRIDGE DECK, OR 5½" ASPHALT OVERLAY AT REAR APPR SLABS. PROPOSED OVERLAY INCLUDED WITH ROADWAY ITEMS FOR PAYMENT.
- ▪▪▪ - LIMITS OF SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN
- A - 2 SETS OF S504, S505, S506, S603, & S604 BARS = 1'-3"
- B - 3 SETS OF S501, S508 FF, S603 NF SPA @ 1'-0" = 2'-0"
- C - 2 SETS OF S501, S513 FF, S604 NF SPA @ 1'-0"
- D - 4 SETS OF S501, S513 FF, S604 NF SPA @ 1'-0" = 2'-0"

DESIGN AGENCY
EMH&T
Engineers, Surveyors, Planners, Scientists
5500 New Albany Road, Columbus, Ohio 43054
614.775.4500 www.emht.com

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RMW	MEM	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700312	

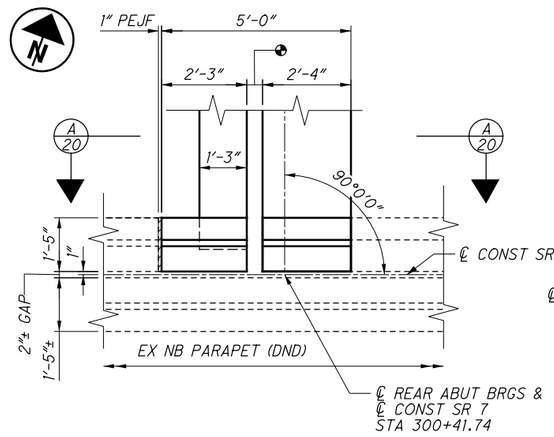
MEDIAN PARAPET DETAILS
BRIDGE NO. BEL-7-11.87C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

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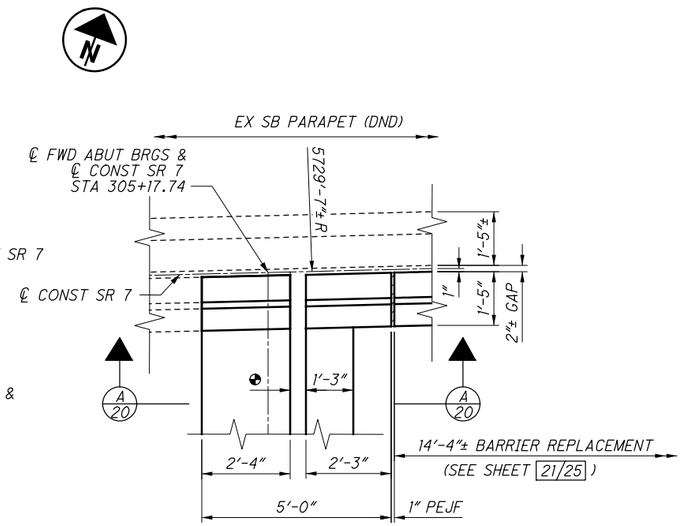
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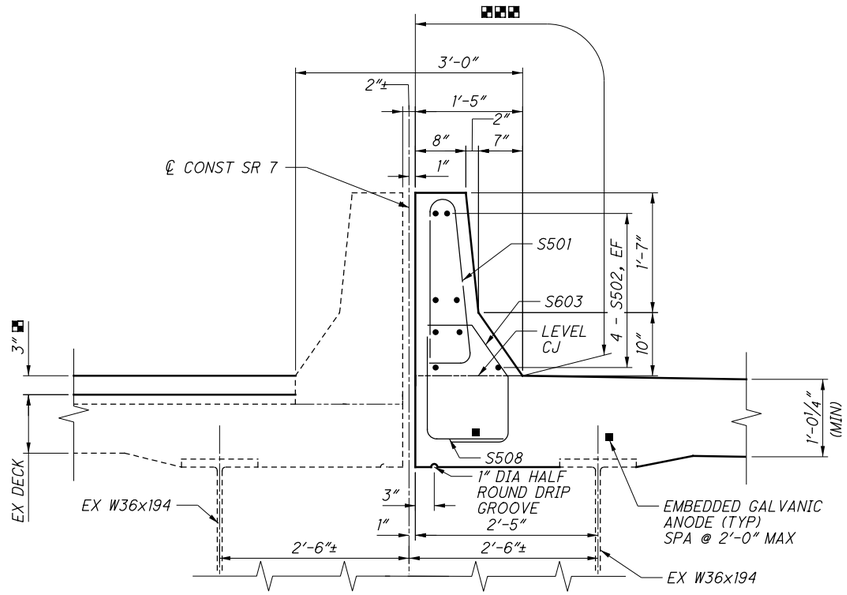
MEDIAN BARRIER PLAN

(LEFT BRIDGE REAR ABUTMENT SHOWN)



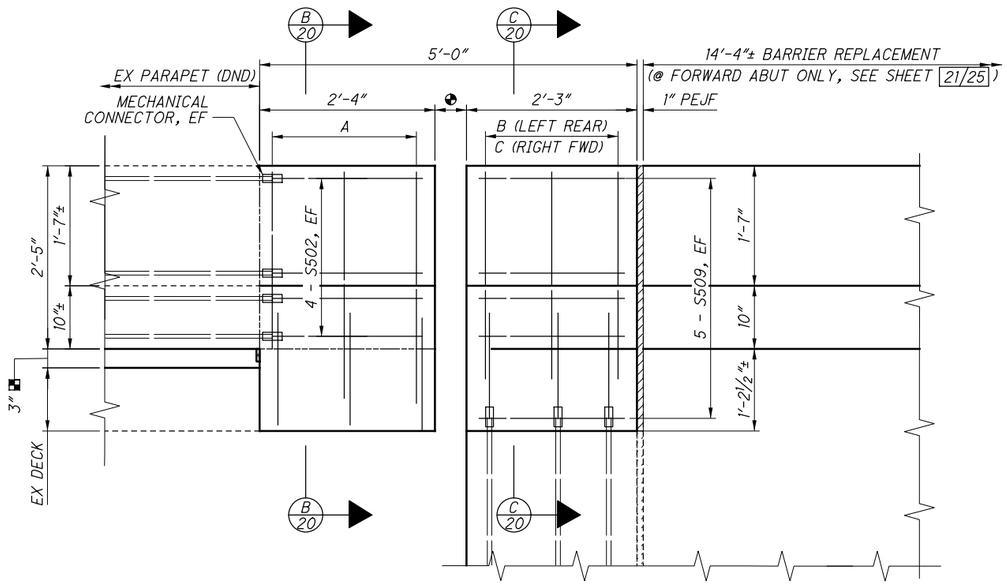
MEDIAN BARRIER PLAN

(RIGHT BRIDGE FORWARD ABUTMENT SHOWN)

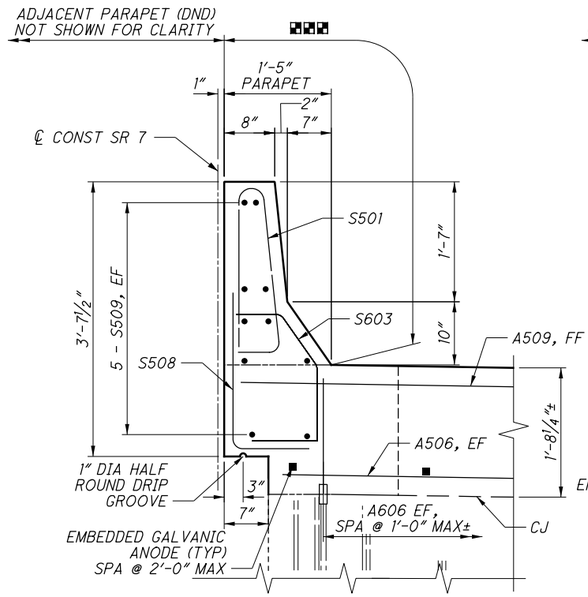


B / 20 SECTION

(DECK REINFORCING NOT SHOWN FOR CLARITY, SEE NOTE 1)

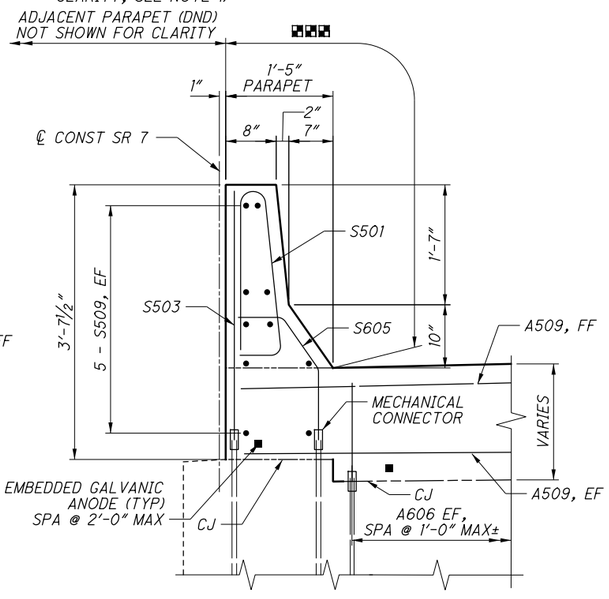


A / 20 ELEVATION



C / 20 SECTION

(LEFT BRIDGE REAR ABUTMENT)



C / 20 SECTION

(RIGHT BRIDGE FORWARD ABUTMENT)

NOTES

1. FOR DECK AND ABUTMENT REINFORCING DETAILS AND DIMENSIONS REFERENCE SHEETS 14/25 THROUGH 17/25 .

LEGEND

- ◔ - FOR ADDITIONAL DETAILS FOR THE PROPOSED EXJ-4-87 EXPANSION JOINT SYSTEM SEE SHEET 22/25 .
- ▪ - PROP 3" ASPHALT OVERLAY AT BRIDGE DECK. PROPOSED OVERLAY INCLUDED WITH ROADWAY ITEMS FOR PAYMENT.
- ▪▪▪▪ - LIMITS OF SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN
- A - 3 SETS OF S501, S508 FF, S603 NF SPA @ 1'-0" MAX = 2'-0"
- B - 3 SETS OF S501, S508 FF, S603 NF SPA @ 1'-0" MAX = 1'-11"
- C - 3 SETS OF S501, S503 FF, S605 NF SPA @ 1'-0" MAX = 1'-11"

DESIGN AGENCY
EMH&T
Environmental, Planning & Economics
Engineering, Surveying & Architecture
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500

DESIGNED	DRAWN	REVIEWED	DATE
RMW	MEM	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	07000312	

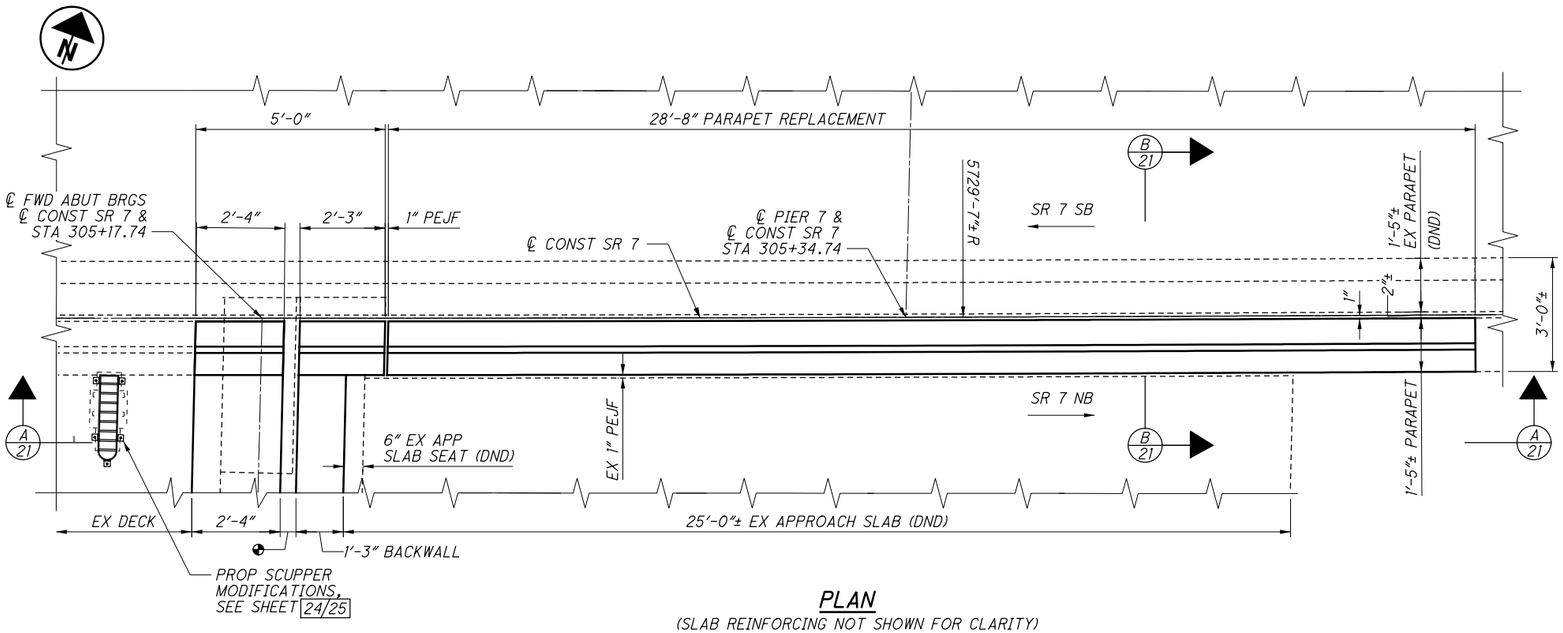
MEDIAN PARAPET DETAILS
BRIDGE NO. BEL-7-1187C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

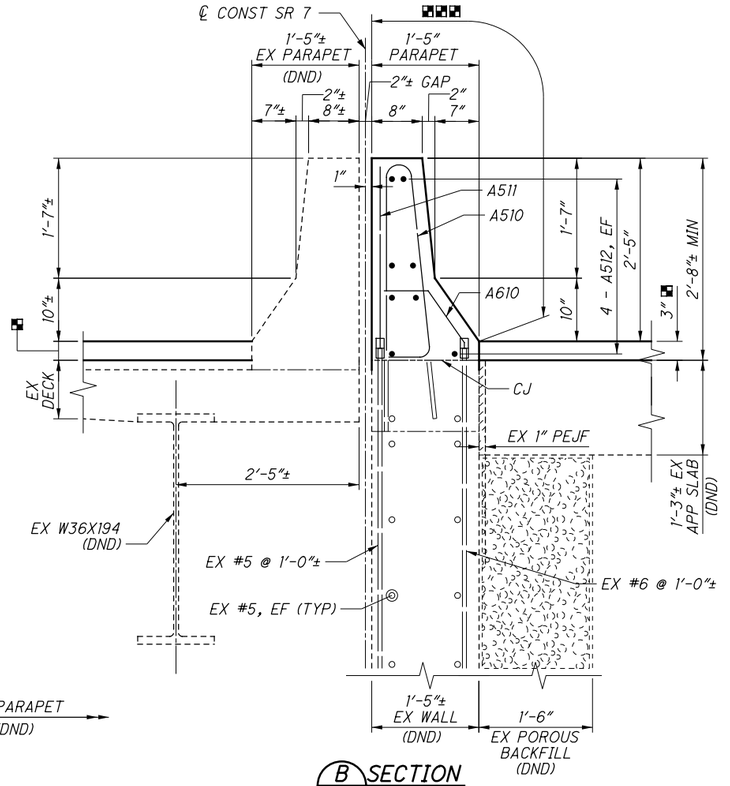
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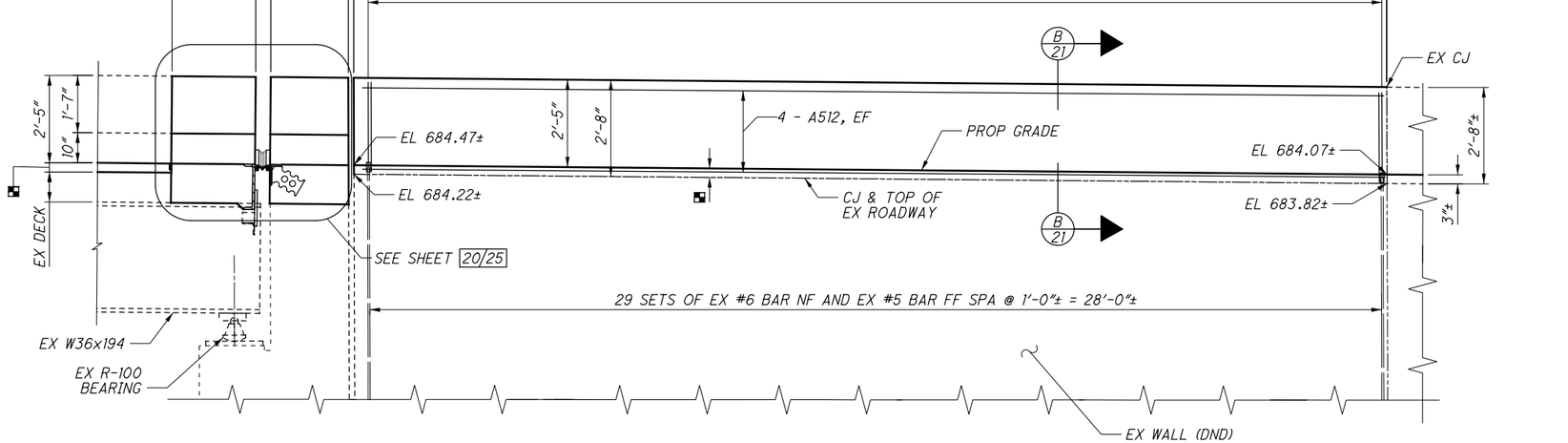
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PLAN
(SLAB REINFORCING NOT SHOWN FOR CLARITY)



B/21 SECTION



A/21 ELEVATION
(EX APPROACH SLAB NOT SHOWN FOR CLARITY)

LEGEND

- FOR ADDITIONAL DETAILS FOR THE PROPOSED EXJ-4-87 EXPANSION JOINT SYSTEM SEE SHEET 22/25
- PROP 3" ASPHALT OVERLAY (BRIDGE DECK AND APPROACH SLAB)
- LIMITS OF SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN

DESIGN AGENCY: EMH&T
DESIGNED: RMW
DRAWN: MEM
CHECKED: TDA
REVIEWED: CAS
DATE: 10/30/20
REVISED: -
STRUCTURE FILE NUMBER: 07000312

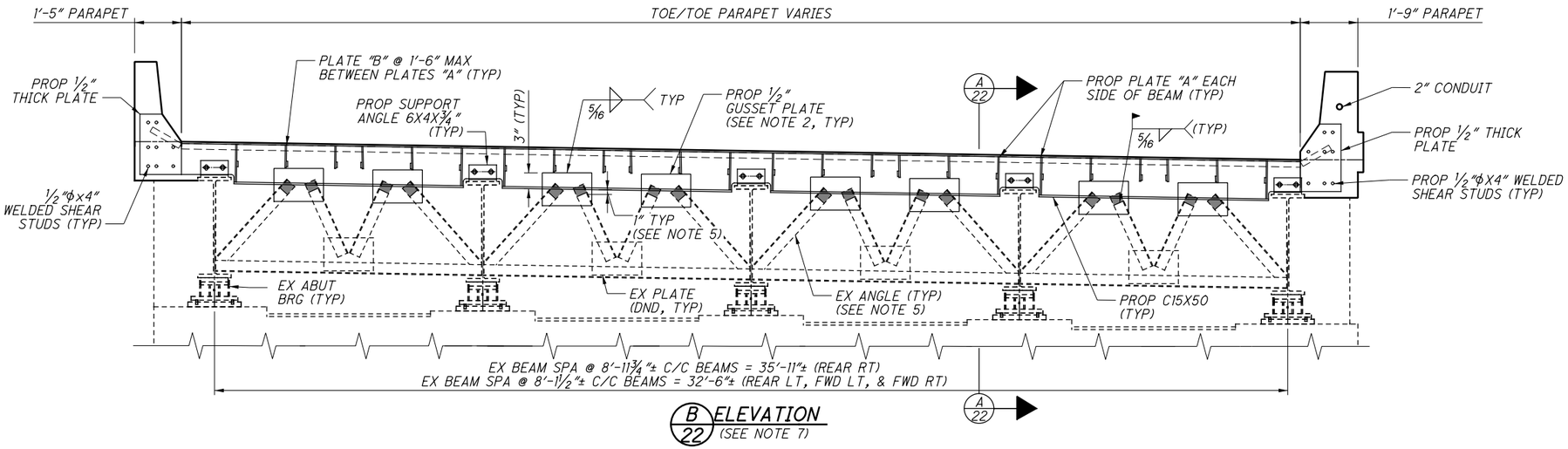
MEDIAN BARRIER DETAILS
BRIDGE NO. BEL-7-1187C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

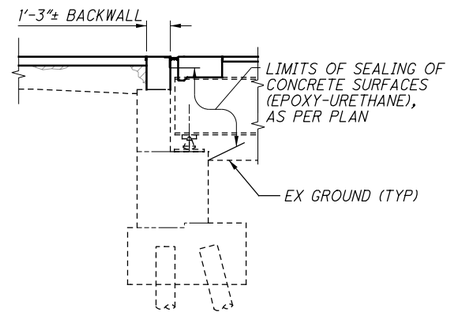
BEL-7-11.48
PID No. 110324

21/25

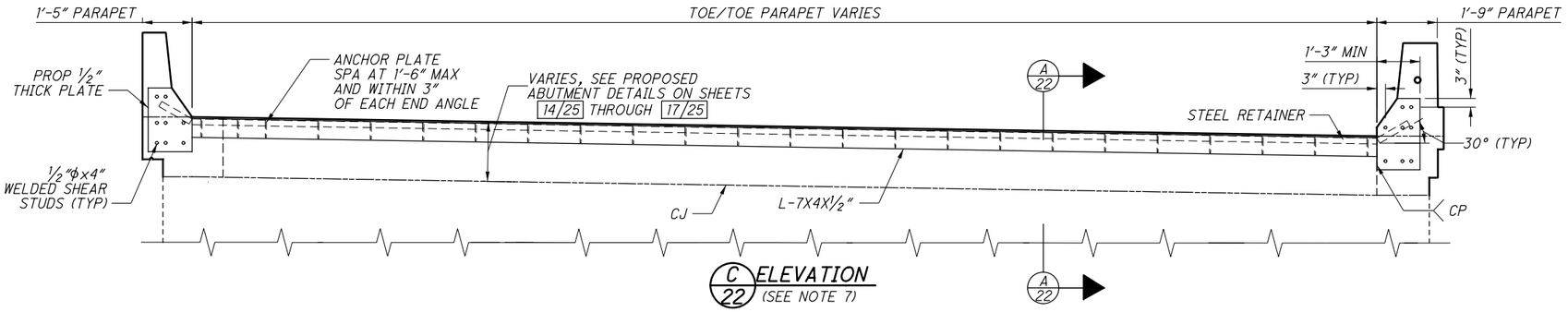
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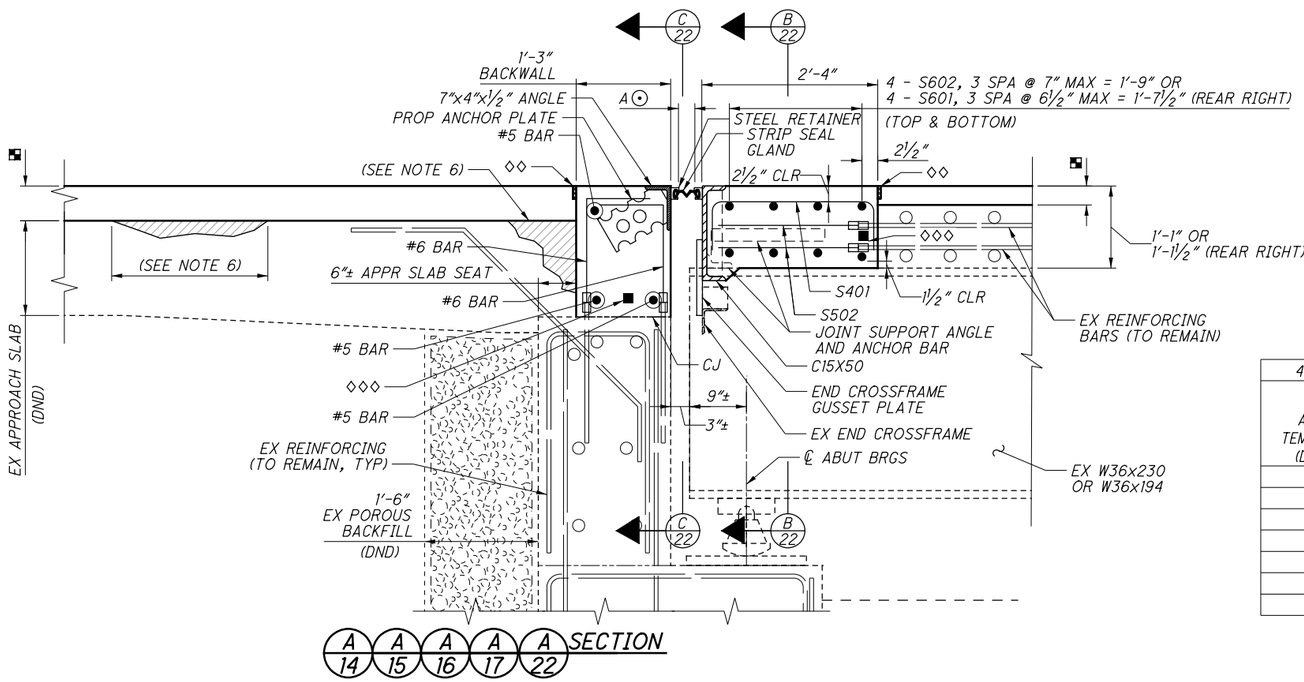
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LIMITS OF ABUTMENT SEALING





4" STRIP SEAL EXPANSION JOINT DETAILS		
AMBIENT TEMPERATURE (DEGREES)	REAR RT ABUT FWD LT ABUT "A"⊙ (IN)	FWD RT ABUT REAR LT ABUT "A"⊙ (IN)
30	2.63	2.53
40	2.38	2.35
50	2.12	2.16
60	1.88	1.97
70	1.62	1.78
80	1.37	1.60
90	1.12	1.42

LEGEND

- ■ - PROP 3" ASPHALT OVERLAY AT FWD APP SLABS AND BRIDGE DECK, OR 5½" ASPHALT OVERLAY AT REAR APP SLABS. PROPOSED OVERLAY INCLUDED WITH ROADWAY ITEMS FOR PAYMENT.
- ◇◇ - 2" DEEP X 1" WIDE HOT APPLIED JOINT SEALER, CMS 705.04
- ◇◇◇ - EMBEDDED GALVANIC ANODE (TYP) SPA @ 2'-0" MAX
- ▩ - TRIM EXISTING ANGLE (SEE NOTE 5)

NOTES

1. FOR ADDITIONAL DETAILS NOT SHOWN REFERENCE ODOT STANDARD DRAWING EXJ-4-87. ALL APPLICABLE DETAILS SHALL APPLY EXCEPT THAT A C15X50 SHALL BE USED IN PLACE OF THE MC12X45 CHANNEL SECTION DEPICTED IN THE STANDARD DRAWING.
2. PROP GUSSET PLATES TO BE WELDED 3" MIN AND FLUSH WITH THE C15X50 CHANNEL SECTION. GUSSET PLATES TO BE BENT TO PLUMB (VERTICAL) BELOW C15X50 CHANNEL FOR FITUP.
3. PAINT ALL IMPACTED END CROSSFRAMES, STIFFENERS, AND PROPOSED GUSSET PLATES WITH AN INTERMEDIATE AND FINISH COAT PER ITEM 514. FINISH COAT TO MATCH THE EXISTING SUPERSTRUCTURE PAINT COLOR. ALL WORK INCLUDING SURFACE PREPARATION OF EXISTING STEEL SHALL BE INCLUDED FOR PAYMENT WITH ITEM 514.
4. ALL PROPOSED STEEL, INCLUDING GUSSET PLATE AND C15X50 JOINT ARMOR, AND FIELD TRIMMING OF ANGLES SHALL BE INCLUDED WITH ITEM 516 - STRUCTURAL EXPANSION JOINT STRIP SEAL, FOR PAYMENT
5. WHERE EXISTING CROSS FRAME ANGLES CONFLICT WITH THE PROPOSED JOINT ARMOR, FIELD TRIM EXISTING STEEL ANGLES 1" MIN CLEAR OF THE PROPOSED C15X50 AND PROVIDE WELDED CONNECTION TO PROPOSED GUSSET PLATES. ONCE STEEL ANGLES ARE PROPERLY ATTACHED TO THE PROPOSED GUSSET PLATES, APPLY FIELD PAINTING TO THE ENDS OF ALL IMPACTED STEEL ANGLES AS DESCRIBED IN NOTE 3.
6. THE EXPOSED SURFACE OF THE EXISTING APPROACH SLAB SHALL BE FIELD DELINIATED BY THE CONTRACTOR AND APPROVED BY THE OWNER PRIOR TO COMPLETING REPAIRS. ALL PATCHING TO BE PERFORMED PER ITEM 519 AND INCLUDED FOR PAYMENT WITH ITEM 519 - PATCHING CONCRETE BRIDGE DECK - TYPE B.
7. SEE PROPOSED ABUTMENT DETAILS FOR JOINT GEOMETRY AT EACH LOCATION.

DESIGN AGENCY EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
RMW	MEM	CAS	10/30/20
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TDA	-	07000312	

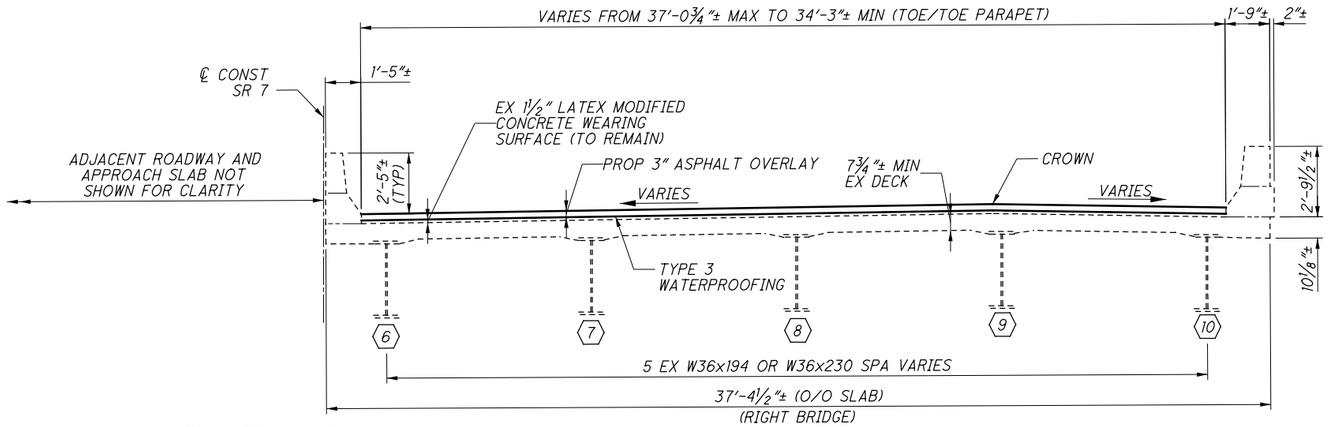
EXPANSION JOINT DETAILS

BRIDGE NO. BEL-7-1187C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

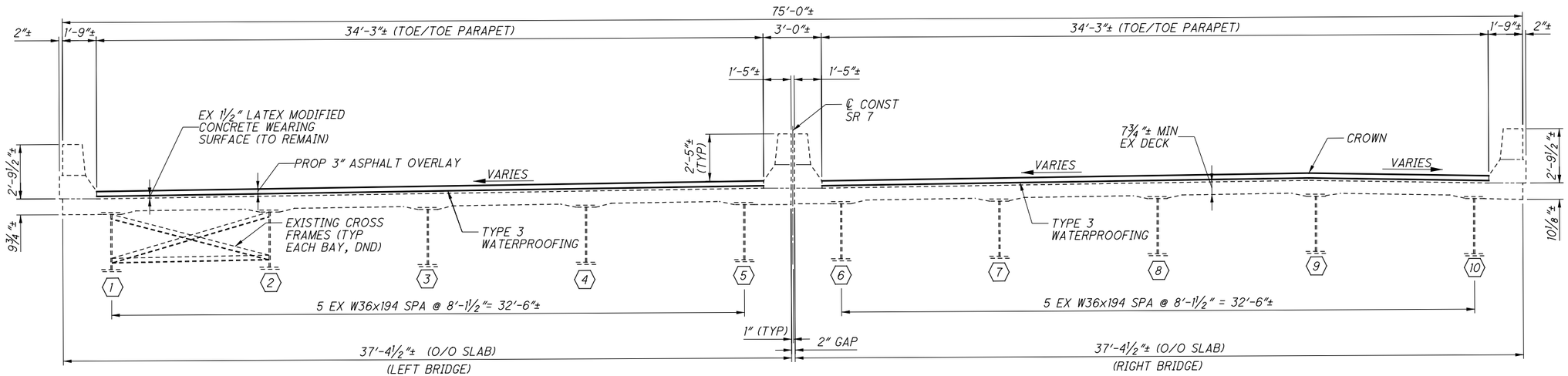
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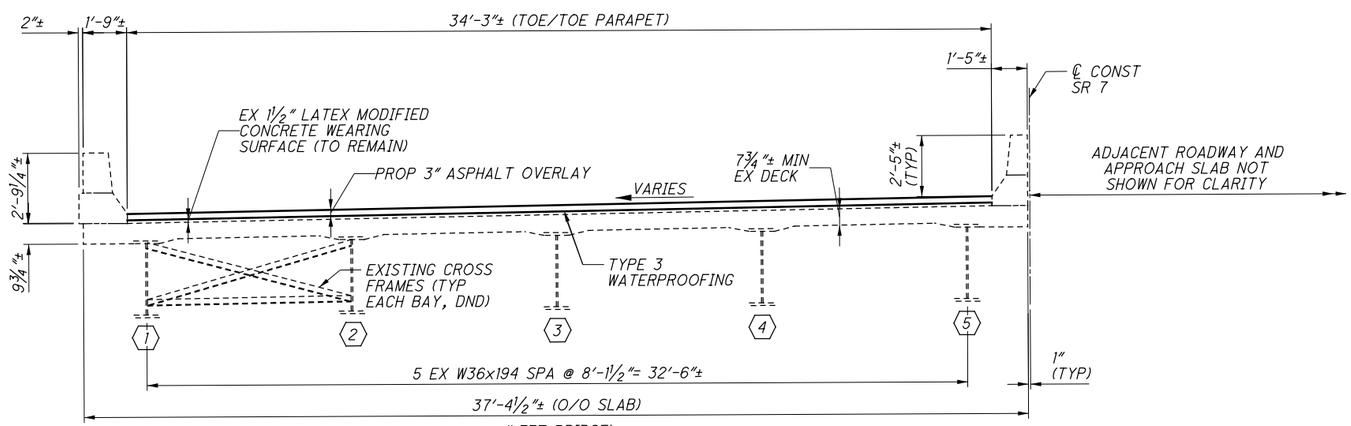
PARTIAL TRANSVERSE SECTION

STA 299+58.49 TO STA 300+43.49



TRANSVERSE SECTION

STA 300+43.49 TO STA 305+15.99



PARTIAL TRANSVERSE SECTION

STA 305+15.99 TO STA 306+00.99

DESIGN AGENCY
EMH&T
Engineers • Architects • Surveyors • Scientists
5500 New Albany Road, Columbus, Ohio 43054
Phone: (614) 775-4500 www.emht.com

DESIGNED	DRAWN	REVIEWED	DATE
RMW	MEM	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700312	

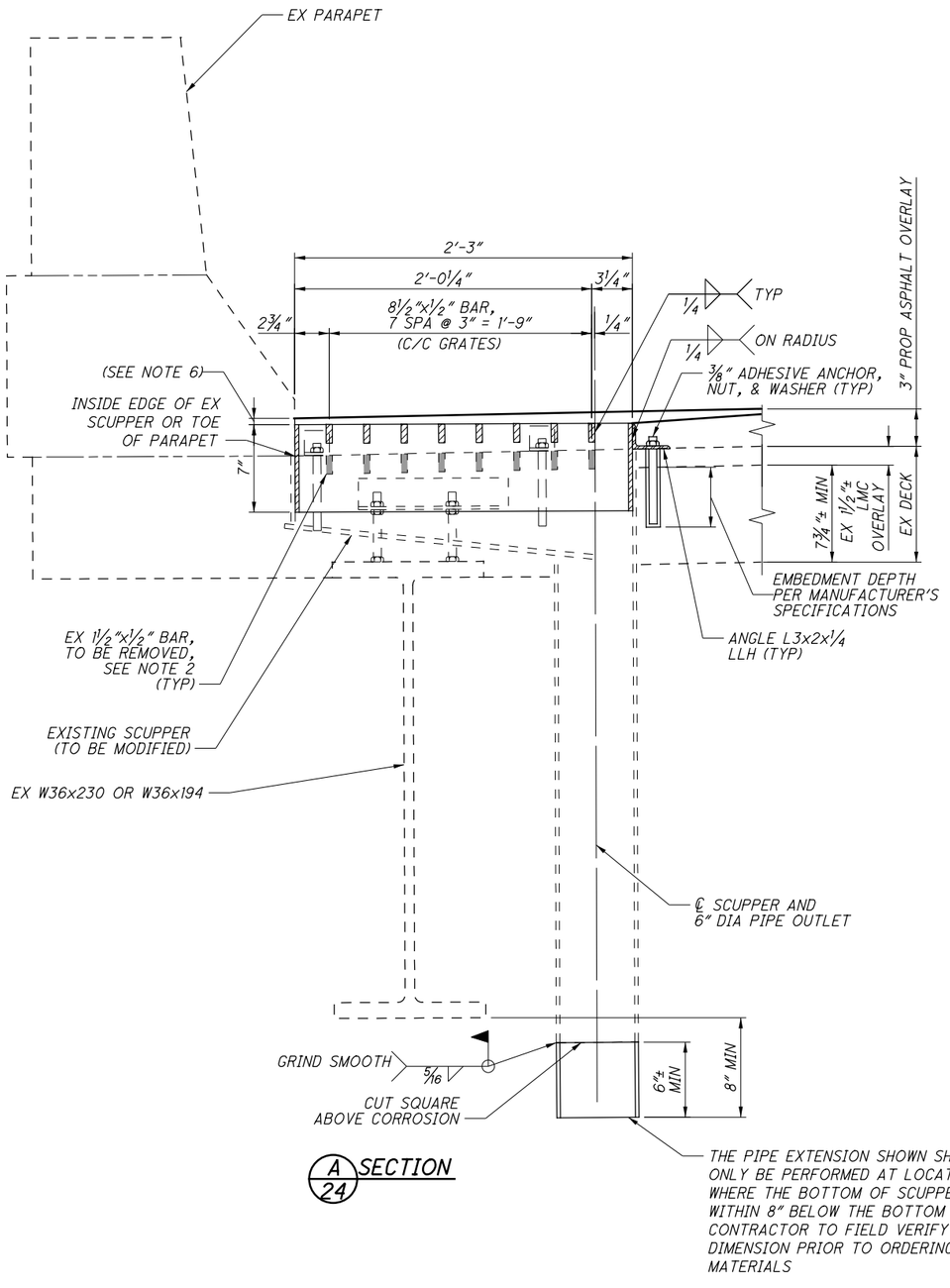
TRANSVERSE SECTION
BRIDGE NO. BEL-7-1187C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

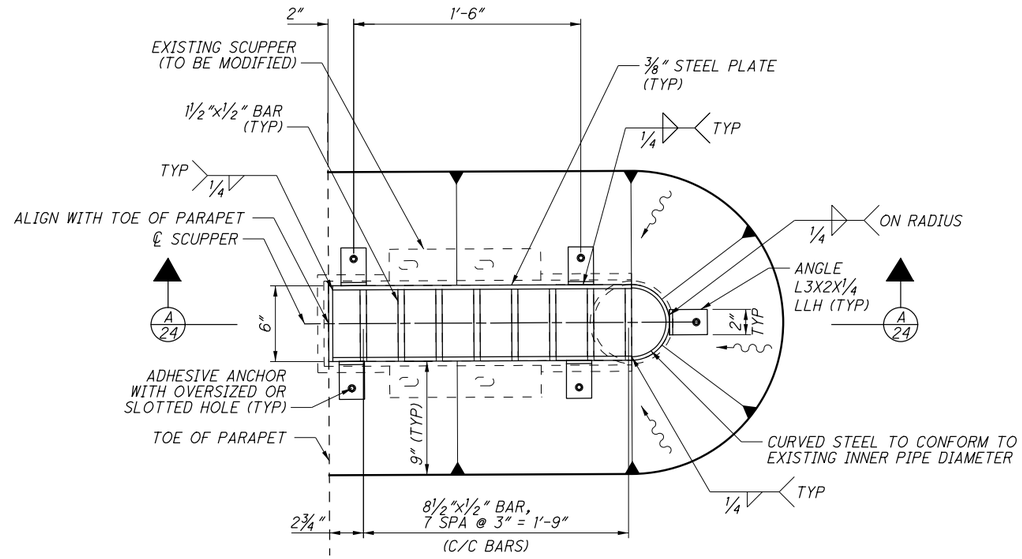
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A/24 SECTION



SCUPPER PLAN

ITEM 518 - SCUPPER, MODIFICATION, AS PER PLAN

PRIOR TO INSTALLATION, THE CONTRACTOR SHALL CLEAN ALL DEBRIS FROM, IN, AND AROUND THE SCUPPER TO CONDUCT THE CONSTRUCTION ACTIVITIES DESCRIBED ON THIS SHEET, TO THE SATISFACTION OF THE ENGINEER. THE RISER SHALL BE IN ACCORDANCE WITH CMS 518 BUT DOES NOT NEED TO BE GALVANIZED THE MATERIAL OF EACH RISER FOR SHALL MATCH THE EXISTING INLET AND ADHERE TO THE DETAILS AND ADDITIONAL NOTES ON THIS SHEET. COST FOR ALL MATERIAL, LABOR, FIELD VERIFICATION, REMOVALS, AND INCIDENTALS FOR THE ABOVE WORK SHALL BE INCLUDED UNDER ITEM 518, SCUPPER, MODIFICATIONS, AS PER PLAN.

THE TOTAL NUMBER OF SCUPPERS THAT HAS BEEN CARRIED TO THE ESTIMATED QUANTITIES TO BE INCLUDED FOR PAYMENT IS: 30 EACH

NOTES

1. ALL DIMENSIONS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND RISER HEIGHT FOR EACH LOCATION PRIOR TO FABRICATION.
2. CONTRACTOR SHALL REMOVE THE EXISTING 1½" x ½" BARS IN THE EXISTING SCUPPER TO PERMIT INSTALLATION OF THE NEW RISER.
3. FIELD GRINDING OF THE BACK OF SCUPPER MAY BE NECESSARY TO ALLOW FOR INSTALLATION OF THE RISER.
4. CONTRACTOR SHALL DETERMINE THE VERTICAL PLACEMENT OF THE CONNECTION TABS BEFORE SHOP WELDING THEM TO THE RISER.
5. EXISTING SCUPPERS WERE DESIGNED PER STANDARD DRAWING SD-1-69 AS INDICATED IN THE RECORD PLANS.
6. INSTALL THE SCUPPER EXTENSIONS TO FACILITATE POSITIVE DRAINAGE AS SHOWN IN THE SCUPPER PLAN VIEW. THE TOP OF PROPOSED EXTENSION SHALL BE 2½" ABOVE THE EXISTING SCUPPER AND THE PROPOSED ASPHALT OVERLAY SHALL BE PAVED TO FACILITATE THE FINAL CONDITION SHOWN.

DESIGN AGENCY
EMH&T
Engineers • Architects • Surveyors • Scientists
5500 New Albany Road, Columbus, Ohio 43054
Phone: 614.775.4500 • FAX: 614.775.4800

DESIGNED	DRAWN	REVIEWED	DATE
RMW	MEM	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	07000312	

SCUPPER MODIFICATION DETAILS
BRIDGE NO. BEL-7-1187C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

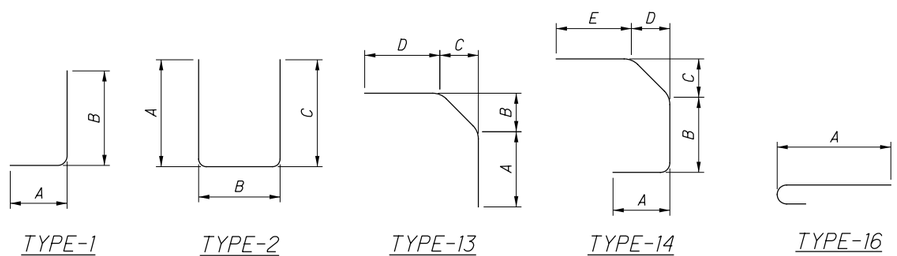
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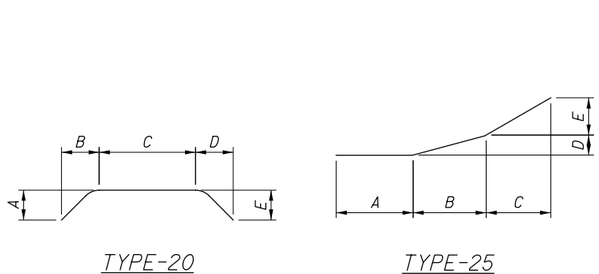
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MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FORWARD	TOTAL				A	B	C	D	E	R	INC
ABUTMENTS													
A501	8	8	16	11'-8"	195	STR							
A502	8	8	16	11'-8"	195	25	7'-10"	2'-5"	1'-4"	0'-1½"	0'-5"		
A503	18	18	36	3'-3"	122	16	2'-8"						
A504	4	4	8	5'-2"	43	37	0'-8"	2'-4"	2'-2"			0'-4"	
A505	3	-	3	39'-8"	124	STR							
A506	-	2	2	36'-3"	76	STR							
NOT USED													
A508	-	3	3	36'-9"	115	STR							
A509	1	3	4	37'-0"	154	STR							
A510	-	29	29	4'-10"	146	37	0'-8"	2'-2"	2'-0"			0'-2"	
A511 ■	-	29	29	2'-6"	76	STR							
A512	-	8	8	28'-4"	236	STR							
A513	2	2	4	3'-4"	14	2	1'-5"	0'-9"	1'-5"				
A514	22	22	44	1'-11"	88	2	0'-8"	0'-10"	0'-8"				
A515	4	4	8	3'-4"	28	1	1'-0"	2'-6"					
A601 ■	16	16	32	2'-10"	136	STR							
A602	10	10	20	3'-10"	115	STR							
A603 ■	10	10	20	2'-1"	63	13	0'-5"	0'-8½"	0'-6"	0'-10"			
A604	4	4	8	3'-10"	46	14	1'-0"	1'-4"	0'-8½"	0'-6"	0'-10"		
A605	8	8	16	3'-1"	74	13	1'-5"	0'-8½"	0'-6"	0'-10"			
A606 ■	150	-	150	2'-2"	488	1	0'-10"	1'-6"					
A607 ■	-	70	70	2'-0"	210	1	0'-10"	1'-4"					
A608 ■	-	2 SER OF 28	2 SER OF 28	2'-0" TO 2'-2"	175	1	0'-10"	1'-4" TO 1'-6"					0'-0¼"
A609 ■	-	2 SER OF 7	2 SER OF 7	2'-0" TO 2'-2"	44	1	0'-10"	1'-4" TO 1'-6"					0'-0⅜"
A610 ■	-	29	29	1'-7"	69	13	0'-2½"	0'-8½"	0'-6"	0'-7"			
A611 ■	2	2	4	2'-0"	12	STR							
A612	2	2	4	3'-0"	18	STR							
SUB-TOTAL					3,062								

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
SUPERSTRUCTURE											
S401	155	3'-1"	319	2	0'-8"	2'-0"	0'-8"				
S501	30	4'-11"	154	37	0'-8"	2'-1"	2'-0"			0'-2"	
S502 ■	356	2'-2"	805	STR							
S503 ■	19	3'-5"	68	STR							
S504	4	5'-0"	21	20	2'-0"	0'-3"	1'-2"	0'-3"	2'-0"		
S505	4	4'-4"	18	1	1'-0"	3'-6"					
S506 ■	4	1'-4"	6	STR							
S507	16	5'-5"	90	STR							
S508	27	3'-4"	94	1	1'-0"	2'-6"					
S509	20	1'-11"	40	STR							
S510	12	1'-11"	24	2	0'-8"	0'-10"	0'-8"				
NOT USED											
S512	14	1'-5"		STR							
S513 ■	12	2'-6"									
NOT USED											
S515	4 SER OF 3	5'-2" TO 5'-5"	66	37	0'-8"	2'-1" TO 2'-4"	2'-0"			0'-4"	0'-1½"
S516 ■	32	2'-2"	72	STR							
S517	8	2'-0"	17	STR							
S601	8	39'-10"	479	STR							
S602	24	37'-1"	1337	STR							
S603	19	3'-1"	88	14	1'-0"	0'-10"	0'-8½"	0'-6"	0'-7"		
S604 ■	20	1'-7"	48	13	0'-2½"	0'-8½"	0'-6"	0'-7"			
S605 ■	3	2'-7"	12	13	1'-2½"	0'-8½"	0'-6"	0'-7"			
S606	4 SER OF 3	3'-4" TO 3'-7"	62	14	1'-0"	0'-10" TO 1'-1"	0'-8½"	0'-6"	0'-10"		
SUB-TOTAL			3,820								





LEGEND

■ - REINFORCING BAR UTILIZES A MECHANICAL CONNECTOR. BAR LENGTH IS MEASURED TO THE CONSTRUCTION JOINT. EXTRA BAR LENGTH AND/OR BAR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED.

NOTES

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE THE NUMBER S601 IS A NO. 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT, UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD" WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.
2. ALL REINFORCING STEEL TO EPOXY COATED.
3. UNLESS OTHERWISE SPECIFIED, THE FOLLOWING LAP LENGTHS SHALL APPLY:
   #5 BARS: 2'-5" (VERT), #5 BARS: 3'-1" (HORIZ)
   #6 BARS: 3'-7" (VERT), #6 BARS: 4'-0" (HORIZ)
4. SEE SHEET 5/25 FOR ADDITIONAL NOTES AND ABBREVIATION LEGENDS.

DESIGN AGENCY
EMH&T
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 www.emht.com

DESIGNED RMW | DRAWN MSM | REVIEWED CAS | DATE 10/30/20
CHECKED RJE | REVISED - | STRUCTURE FILE NUMBER 07000312

REINFORCING STEEL LIST

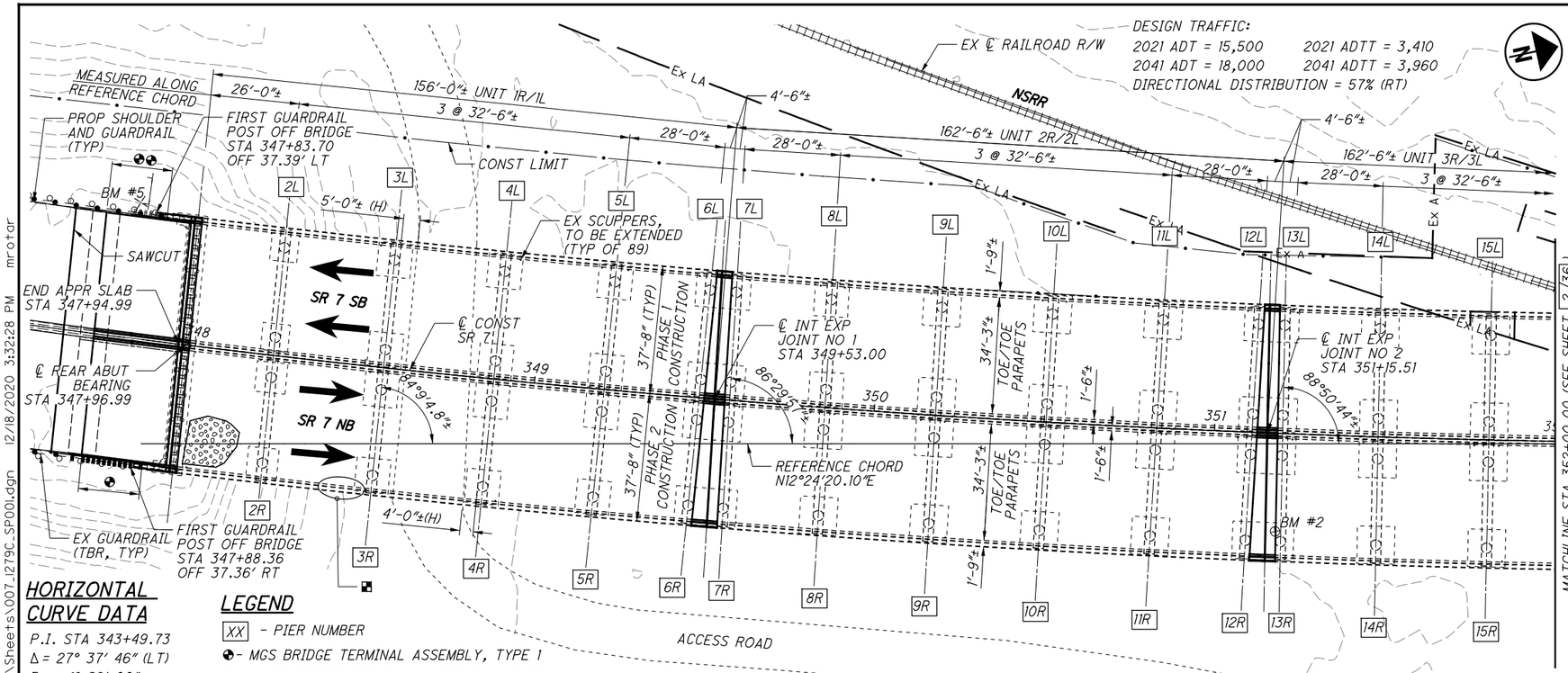
BRIDGE NO. BEL-7-1187C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORR.

BEL-7-11.48
PID No. 110324

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PLAN

HORIZONTAL CURVE DATA

P.I. STA 343+49.73
Δ = 27° 37' 46" (LT)
Dc = 1° 28' 00"
R = 3,906.53'
T = 960.60'
L = 1,883.82'
E = 116.37'
C = 1,865.62'
C.B. = N 26° 13' 13" E

LEGEND

XX - PIER NUMBER

◔ - MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1

◔◔ - MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2

- ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION (10 SY)

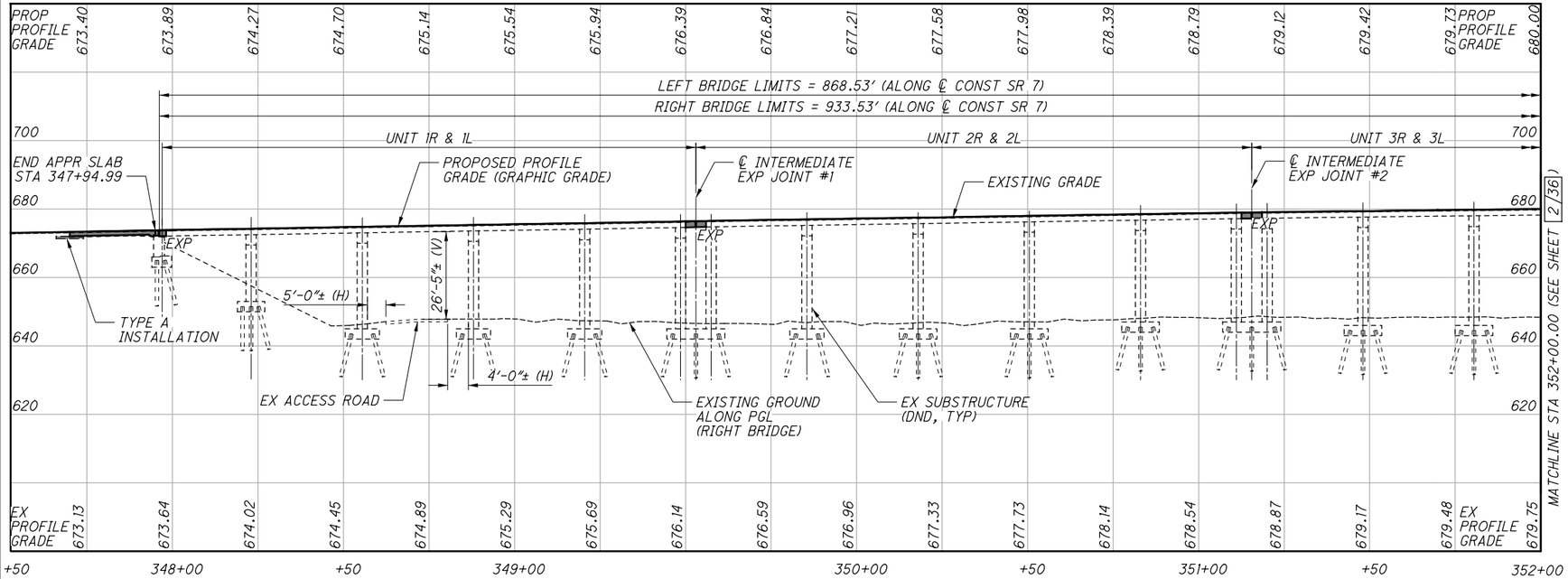
H - MIN HORIZONTAL CLEARANCE, MEASURED FROM ℄ RR TO FACE OF NEAREST COLUMN OR EOP TO NEAREST COLUMN

V - MIN VERTICAL CLEARANCE

■ - REMOVE GRAFFITI & SEAL PARAPET PER ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN. AREA = 5.0 SY

NOTES

1. SEE SHEET 2/36 FOR BENCHMARK INFORMATION.



PROFILE ALONG PROFILE GRADE LINE (PGL)

EXISTING STRUCTURE

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB SUPPORTED ON REINFORCED CONCRETE CAP AND COLUMN PIERS AND SPILL THRU ABUTMENTS

SPANS: VARIES BY UNIT. SPAN DIMENSIONS ABOUT REFERENCE CHORD:

UNIT 1RT/1LT: 26'-0" - 3 @ 32'-6" - 28'-0" - 4'-6"
UNIT 2RT/2LT: 4'-6" - 28'-0" - 3 @ 32'-6" - 28'-0" - 4'-6"
UNIT 3RT/3LT: 4'-6" - 28'-0" - 3 @ 32'-6" - 28'-0" - 4'-6"
UNIT 4: 4'-6" - 28'-0" - 3 @ 32'-6" - 28'-0" - 4'-6"
UNIT 5RT/5LT: 4'-6" - 28'-0" - 2 @ 32'-6" - 28'-0" - 4'-6"
UNIT 6RT: 4'-6" - 28'-0" - 3 @ 32'-6" - 26'-0"
UNIT 6LT: 4'-6" - 28'-0" - 32'-6" - 26'-0"

ROADWAY: VARIES BY UNIT.
UNITS 1,2,3,5 &6: 34'-3" TOE/TOE OF PARAPET (RT & LT)
UNITS 4: 71'-6" TOE/TOE OF PARAPET (W/ 3'-0" MEDIAN)

LOADING: HS 20-44

SKEW: VARIES. SKEWS GIVEN LT FWD ABOUT REFERENCE CHORD.
UNIT 1 = 5° 50' 12"±; UNIT 2 = 3° 30' 03"±;
UNIT 3 = 1° 09' 16.43"±

APPROACH SLABS: AS-1-72 (25'-0"±, MOD)

ALIGNMENT: 1° 28'-00" CURVE & TANGENT

CROWN: VARIES

STRUCTURAL FILE NUMBER: 0700339

COORDINATES: LATITUDE 39° 58' 15.56" N
LONGITUDE 80° 44' 33.92" W

DISPOSITION: TO BE REHABILITATED

PROPOSED STRUCTURE

SAME AS EXISTING EXCEPT AS FOLLOWS:
WEARING SURFACE: 3" ASPHALT
VEHICULAR LIVE LOAD: 70.8% OF HL-93
FUTURE WEARING SURFACE: 0 PSF
NEW APPROACH SLABS WITH TYPE A INSTALLATIONS (AS-1-15, AS-2-15)

PROPOSED WORK

WORK LISTED IS NOT ALL INCLUSIVE. CONTRACTOR SHALL SEQUENCE WORK AS NEEDED TO MEET MOT RESTRICTIONS AND PHASING.

1. REMOVE PORTIONS OF EXISTING SUPERSTRUCTURE (E.G. DECK, BARRIER AND COMPRESSIONS SEALS) AT INTERMEDIATE EXPANSION JOINTS TO THE LIMITS SHOWN IN THE PLANS. REMOVE APPROACH SLABS FULL DEPTH. REMOVE PORTIONS OF EXISTING REINFORCED CONCRETE DECK, BACKWALL, WINGWALLS AND BARRIERS AT ABUTMENTS TO THE LIMITS SHOWN IN THE PLANS.

2. RECONSTRUCT DECK AND BARRIER WITH REINFORCED CONCRETE AND PLACE STRIP SEAL EXP JOINT AT INTERMEDIATE EXP JOINTS.

3. RECONSTRUCT DECK, ABUTMENT BACKWALLS, WINGWALL, BARRIERS AND PLACE STRIP SEAL EXP JOINTS. RECONSTRUCT APPROACH SLAB AND PLACE NEW BRIDGE TERMINAL ASSEMBLIES.

4. MODIFY EXISTING SCUPPERS TO ACCOMMODATE PROPOSED ASPHALT OVERLAY.

5. PATCH EXISTING BRIDGE DECK USING ITEM 519 - PATCHING CONCRETE BRIDGE DECK, TYPE B.

6. PATCH EXISTING BOTTOM OF DECK IN ACCORDANCE WITH THE PLANS USING ITEM 514 - FIELD PAINTING, MISC.: ZINC RICH PRIMER OR ITEM 520 - PNEUMATICALLY PLACED CONCRETE SHOTCRETE, AS PER PLAN.

7. PATCH EXISTING SUBSTRUCTURE USING ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN.

8. SEAL CONCRETE SURFACES.

9. PERFORM ASPHALT OVERLAY.

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5500 New Albany Road, Columbus, Ohio 43054
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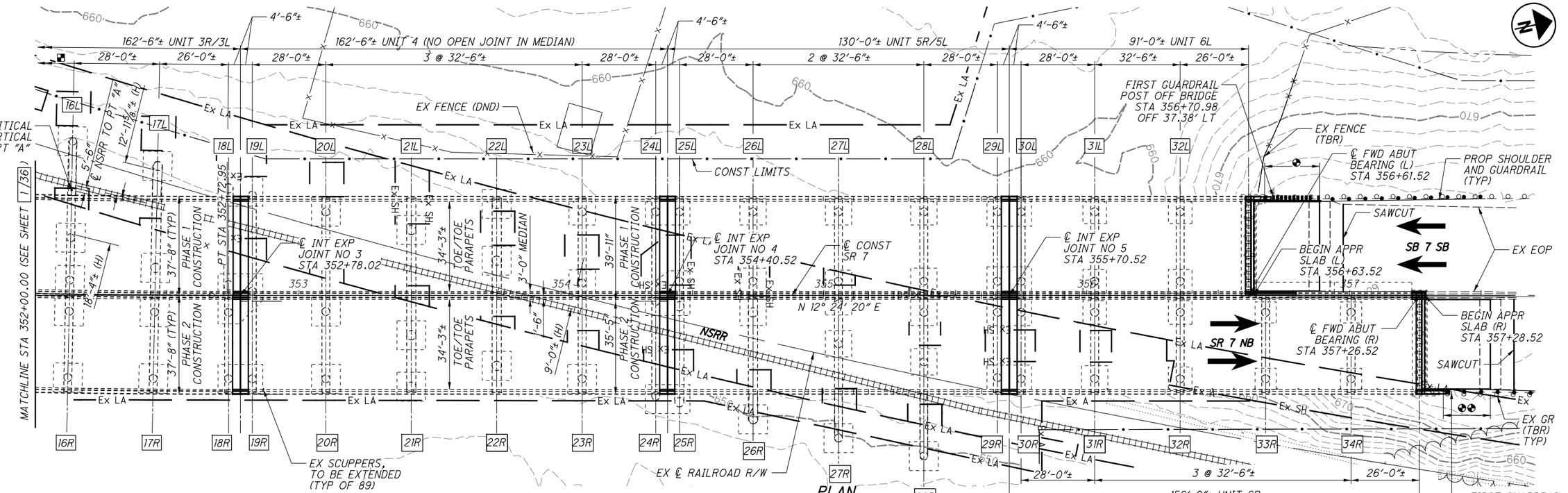
DESIGNED	DRAWN	REVIEWED	DATE
MJR	GB	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700339	

BELMONT COUNTY
STA. 347+94.99
STA. 352+00.00

SITE PLAN
BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

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PLAN

BENCHMARK DATA

BM #5: STA 347+78.77, OFFSET 39.89' LT, ELEV 670.80 CHISELED "X" ON THE EAST SIDE OF "SHADYSIDE EXIT 1 MILE" CONCRETE SIGN BASE LOCATED ON THE WEST SIDE OF STATE ROUTE 7, BEING AT THE SOUTHWEST CORNER OF THE BOAT DOCK ACCESS DRIVE AND RAILROAD OVERPASS.

BM #6: STA 362+87.32, OFFSET 47.69' LT, ELEV 670.02 CHISELED SQUARE ON THE NORTHWEST CORNER OF A CONCRETE BASE OF A TRAFFIC COUNTING STATION LOCATED ON THE WEST SIDE OF STATE ROUTE 7, BEING 600 FEET NORTH OF THE BOAT DOCK ACCESS DRIVE AND RAILROAD OVERPASS.

FOR ADDITIONAL BENCHMARK INFORMATION SEE ROADWAY PLAN SHEET 2/213

LEGEND

XX - PIER NUMBER

-3 @ 32'-6"±

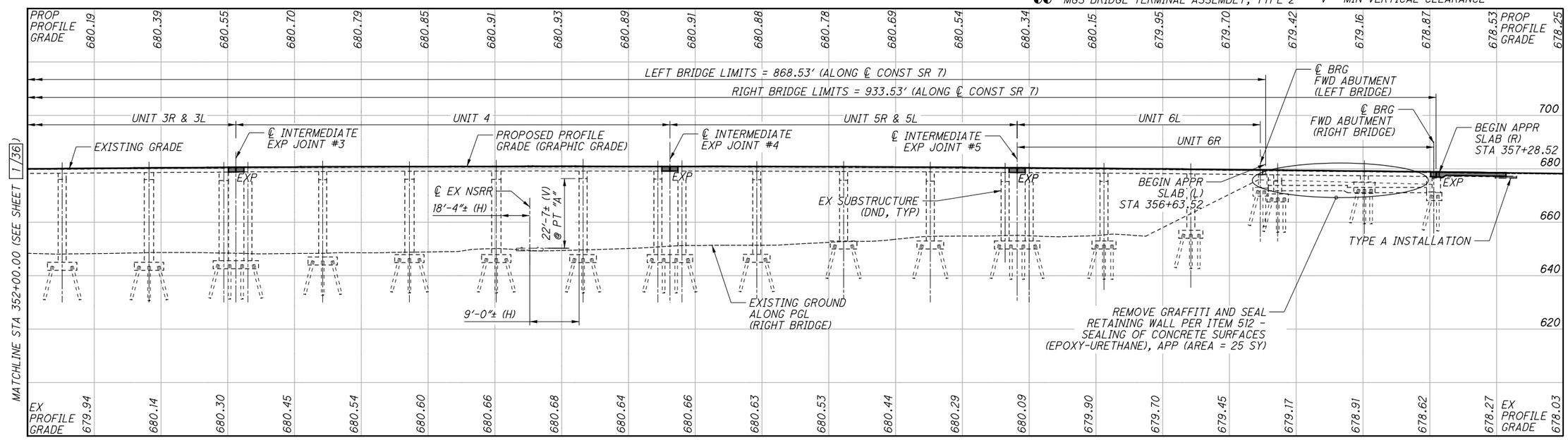
- UNIT 4 (ONLY)

- MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1

- MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2

H - MIN HORIZONTAL CLEARANCE, MEASURED FROM ℄ RR TO FACE OF NEAREST COLUMN OR EOP TO NEAREST COLUMN

V - MIN VERTICAL CLEARANCE



PROFILE ALONG PROFILE GRADE LINE (PGL)

DESIGN AGENCY EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
MJR	GB	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700339	

BELMONT COUNTY
STA. 352+00.00
STA. 357+28.52

SITE PLAN (CONT.)
BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

2/36

179/213

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STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-15	REVISED	07-17-15
AS-2-15	REVISED	01-18-19
BR-1-13	REVISED	01-17-14
EXJ-6-17	REVISED	01-19-18
PCB-91	REVISED	07-17-20

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

844 DATED 04-20-18

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 8TH EDITION, 2017 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

REDUNDANCY

THE FOLLOWING ITEM(S) WERE CONSIDERED NON-REDUNDANT FOR LOAD RATING AND INCLUDE A LOAD MODIFIER EQUAL TO 1.05 IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.4:

CAP AND COLUMN PIERS SUPPORTED ON TWO COLUMNS

OPERATIONAL IMPORTANCE

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN LOADING

DESIGN LOADING: 70.8% OF HL-93
EXISTING 1" MONOLITHIC WEARING COURSE (ASSUMED)

WEARING SURFACE (WS) OF 0.036 KIPS/SQ.FT.

THIS BRIDGE RECEIVED AN APPROVED DESIGN EXCEPTION FOR DESIGN LOADING STRUCTURAL CAPACITY.

DESIGN DATA

CONCRETE CLASS QC2 - QC/QA - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE AND SUBSTRUCTURE)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL
TYPE 3 WATERPROOFING

CONSTRUCTION CLEARANCE

THE CONTRACTOR MUST MAINTAIN THE MINIMUM CONSTRUCTION CLEARANCES HEREIN UNLESS OTHERWISE DISCUSSED WITHIN AN ESTABLISHED MAINTENANCE AGREEMENT. CONSTRUCTION CLEARANCE: MAINTAIN A CONSTRUCTION CLEARANCE OF 14 FEET HORIZONTALLY FROM THE CENTER OF TRACKS AND 22 FEET VERTICALLY FROM A POINT LEVEL WITH THE TOP OF THE HIGHER RAIL.

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 ODOT 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 WHICH HAVE BEEN VERIFIED IN THE FIELD.

EXISTING PLANS:
THE EXISTING PLANS LISTED MAY BE INSPECTED IN THE ODOT DISTRICT 11 OFFICE IN NEW PHILADELPHIA, OHIO.

ORIGINAL CONSTRUCTION: BEL-7-11.89 (1979)
OVERLAY: BEL-7-8.71 (1987)

THESE EXISTING PLANS CAN ALSO BE DOWNLOADED FROM THE FOLLOWING WEBSITE:
http://www.dot.state.oh.us/Divisions/ContractAdmin/Contracts/Pages/designfiles.aspx

ASBESTOS NOTIFICATION

AN ASBESTOS SURVEY OF THE BRIDGE STRUCTURES SCHEDULED FOR REHABILITATION WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE STRUCTURES.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORMS, PARTIALLY COMPLETED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE AND SUBMIT THE FORMS VIA OHIO EPA'S WEBSITE OR MAIL HARD COPIES TO THE ADDRESS BELOW AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION (SEE ATTACHED).

ASBESTOS PROGRAM
OHIO EPA, DAPC
P.O. BOX 1049
COLUMBUS, OHIO 43216-1049

THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORMS TO THE ENGINEER. INFORMATION REQUIRED ON THE FORMS WILL INCLUDE: 1) THE CONTRACTOR'S NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVALS AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED. COPIES OF THE OEPA FORMS AND BRIDGE INSPECTION REPORTS ARE AVAILABLE FOR REVIEW AT THE ODOT DISTRICT 11 OFFICE, 2201 REISER AVENUE, NEW PHILADELPHIA, OHIO 44663.

BASIS FOR PAYMENT - THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES, AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, INCLUDING THE REMOVAL OF THE EXISTING LATEX MODIFIED CONCRETE OVERLAY ON PORTIONS OF DECK, SUBSTRUCTURE, BACKWALL AND JOINTS. 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 THE 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 ODOT 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.

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 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.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO SHEET 6/36 FOR USE AS DIRECTED BY THE ENGINEER:

ITEM 509 - REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN = 200 LBS

ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN:

DRILL DOWEL HOLES WHERE SHOWN IN THE PLANS AND 4" CLEAR FROM EDGE OF EXISTING CONCRETE SURFACES. INSTALL REINFORCING STEEL ACCORDING TO C&MS 510 USING EPOXY GROUT, 705.20. PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A PACHOMETER. IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR.

BASIS FOR PAYMENT - ALL LABOR, MATERIALS, EQUIPMENT, TOOLS AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK SHALL BE INCLUDED FOR PAYMENT WITH THE UNIT PRICE BID FOR ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN.

ITEM 511 - CONCRETE, MISC.: EMBEDDED GALVANIC ANODE (EGA)

THIS PAY ITEM SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, SERVICES AND INCIDENTALS TO PROPERLY INSTALL EMBEDDED GALVANIC ANODES. SUPPLY AND INSTALL ANODES ACCORDING TO ODOT SUPPLEMENTAL SPECIFICATION 844 UNLESS OTHERWISE SPECIFIED IN THE PLANS.

GALVANIC ANODES SHALL BE INSTALLED IN THE LOCATIONS AND SPACING AS SPECIFIED IN THE PLANS. IN NO CASE, SHALL THE SPACING EXCEED 18 INCHES UNLESS OTHERWISE SHOWN IN THE PLANS.

THE CONTRACTOR SHALL PERFORM THE WORK AS TO NOT DAMAGE THE EMBEDDED ANODES NOR CREATE ANY AIR VOIDS AROUND THE EMBEDDED ANODES WHILE SETTING FORMWORK AND PLACING CONCRETE.

DESIGN AGENCY
EMH&T
Engineers • Architects • Surveyors • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 www.emht.com

DESIGNED	DRAWN	REVIEWED	DATE
MJR	MJR	CAS	10/30/20

CHECKED	REVISED	STRUCTURE FILE NUMBER
TDA	-	0700339

GENERAL NOTES
BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

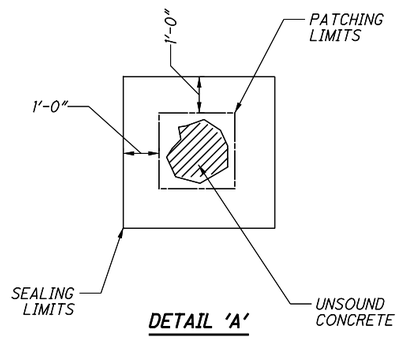
ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN

ALL REQUIREMENTS OF C&MS 512 APPLY IN ADDITION TO THE PROVISIONS HEREIN.

THE FOLLOWING SEALING LIMITS APPLY TO LOCATIONS RECEIVING:

ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN

SEALING LIMITS SHALL EXTEND A MINIMUM DISTANCE OF 1'-0" IN EACH DIRECTION BEYOND THE PATCHING LIMITS AS SHOWN IN DETAIL 'A' BELOW.



DETAIL 'A'

GRAFFITI REMOVAL

REMOVE EXISTING GRAFFITI THROUGH STANDARD SURFACE PREPARATION PROCEDURES TO BARE CONCRETE. ONCE THE SURFACE HAS BEEN PREPARED AND CLEANED OF DUST AND DEBRIS, APPLY AN EPOXY URETHANE SEALER. PERFORM GRAFFITI REMOVAL WHERE DESIGNATED IN THE PLANS AND AS DIRECTED BY THE ENGINEER.

ALL COSTS FOR SEALING THE LIMITS AND GRAFFITI DESCRIBED ABOVE SHALL BE INCLUDED FOR PAYMENT IN THE UNIT BID PRICE FOR ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN.

ITEM 519 - PATCHING CONCRETE BRIDGE DECK, TYPE B

THIS ITEM IS FOR THE PATCHING OF THE TOP FACE OF THE EXISTING BRIDGE DECK.

THE CONTRACTOR SHALL REPAIR AREAS THAT HAVE VISIBLE DISTRESS ONLY. IT IS NOT THE INTENT TO SOUND THE ENTIRE BRIDGE DECK. EXTENTS OF TYPE B DECK PATCHING AT AREAS OF VISIBLE DISTRESS SHALL BE DETERMINED WITH LIMITED SOUNDING BY CONTRACTOR AND SHALL BE CONFIRMED BY OWNER PRIOR TO COMPLETION OF WORK.

REMOVAL OF THE EXISTING LATEX CONCRETE MODIFIED OVERLAY WITHIN PATCHING REPAIR AREAS SHALL BE PAID WITH ITEM 519 PATCHING CONCRETE BRIDGE DECKS, TYPE B.

THE CONTRACTOR IS ADVISED THAT PORTIONS OF THE EXISTING BRIDGE DECKS, PARTICULARLY BRIDGE UNIT 5R MAY REQUIRE FULL DEPTH REPAIRS.

PORTIONS OF THIS UNIT AND/OR OTHER BRIDGE UNITS ARE LOCATED ABOVE THE EXISTING RAILROAD OR OTHER POTENTIAL AREAS HAZARDOUS TO TRAFFIC (E.G. PUBLIC ACCESS DRIVE). THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING TRAFFIC UNDER AND ADJACENT TO THE WORK WHILE REMOVING DECK CONCRETE. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO ENSURE THE SAFETY OF THE PUBLIC AND RAILROAD FROM FALLING DEBRIS WHEN PERFORMING THE ABOVE DESCRIBED WORK.

FULL DEPTH REPAIRS:

WHERE THE DECK IS SOUND FOR LESS THAN ONE HALF OF THE ORIGINAL DECK THICKNESS, THE CONCRETE SHALL BE REMOVED FULL DEPTH EXCEPT FOR LIMITED AREAS AS MAY BE DESIGNATED BY THE ENGINEER. FORMS SHALL BE PROVIDED TO SUPPORT CONCRETE PLACED IN FULL-DEPTH REPAIR AREAS. THE FORMS FOR AREAS OF UP TO 4 SQUARE FEET MAY BE SUSPENDED FROM WIRES FROM THE REINFORCING STEEL. FOR AREAS GREATER THAN 4 SQUARE FEET, THE FORMS SHALL BE SUPPORTED FROM THE SUPERSTRUCTURE OR BY SHORING FROM BELOW. AREAS OF FULL-DEPTH REPAIRS SHALL HAVE THE CONCRETE FACES AND REINFORCING STEEL CLEANED TO REMOVE ALL LOOSE AND BUILT-UP RUST, AND CONTAMINANTS DETRIMENTAL TO ACHIEVING ADEQUATE BOND. POCKETS OF RUST (CORROSION CELLS) ON EXPOSED REINFORCING STEEL SHALL BE CLEANED OF ALL CORROSION PRODUCTS.

FULL -DEPTH REPAIRS SHALL BE WATER-CURED.

ALL LABOR, MATERIALS, EQUIPMENT, TOOLS AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK SHALL BE PAID UNDER ITEM 519 - PATCHING CONCRETE BRIDGE DECK, TYPE B.

THE FOLLOWING QUANTITY HAS BEEN ESTIMATED BASED ON INSPECTION RECORDS PROVIDED BY ODOT DISTRICT 11 AND FIELD OBSERVATIONS PERFORMED BY EMH&T ON MARCH 17TH, 2020.

APPROXIMATELY TWELVE (12) PERCENT OF THE EXISTING BRIDGE DECK IS ESTIMATED TO REQUIRE PATCHING REPAIRS.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO SHEET 6/36 FOR USE AS DIRECTED BY THE ENGINEER.

ITEM	QTY	UNIT
519 - PATCHING CONCRETE BRIDGE DECK, TYPE B	1000	SY

ITEM 514 - FIELD PAINTING, MISC.: ZINC RICH PRIMER

ITEM 520 - PNEUMATICALLY PLACED CONCRETE, SHOTCRETE, AS PER PLAN

THESE ITEMS ARE FOR TREATMENT OF THE BOTTOM FACE OF THE EXISTING BRIDGE SLAB. THESE ITEMS ARE TO BE USED AS DIRECTED BY THE ENGINEER USING THE GUIDANCE, RECOMMENDATIONS, AND PROVISIONS BELOW. THE CONTRACTOR SHALL REPAIR AREAS THAT HAVE VISIBLE DISTRESS ONLY. IT IS NOT THE INTENT TO SOUND THE ENTIRE BOTTOM OF THE EXISTING BRIDGE DECK. HOWEVER, LIMITS OF THE IDENTIFIED REPAIR AREAS MUST BE DETERMINED BY THE CONTRACTOR BY SOUNDING.

ITEM 514 - FIELD PAINTING, MISC: ZINC RICH PRIMER

THIS ITEM SHALL CONSIST OF THE REMOVAL OF ALL LOOSE AND DISINTEGRATED CONCRETE, CLEANING OF THE REINFORCING STEEL, AND APPLICATION OF A ZINC RICH PRIMER TO THE BOTTOM OF THE EXISTING CONCRETE DECK AND EXPOSED REINFORCING STEEL. THE LOOSE CONCRETE SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.

ALL DEBRIS SHALL BE COLLECTED AND REMOVED OFF SITE. BLAST CLEAN ALL EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVES WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING. APPLY A ZINC RICH PRIMER, PER ODOT C&MS 708.02B, OVER ALL EXPOSED REINFORCING STEEL. IN ADDITION APPLY ZINC RICH PRIMER TO THE CONCRETE SURFACES CONTAINED WITHIN THE EXTENT OF THE REMOVAL/REPAIR AREA AND 6" MINIMUM FROM EXPOSED REINFORCING STEEL. THE APPLICATION OF THE PRIMER SHALL FOLLOW ODOT C&MS 514 AND ALL MANUFACTURER(S)' SPECIFICATIONS.

THE ITEM SHALL BE APPLIED TO AREAS WHERE THE EXISTING REINFORCING STEEL IS NOT FULLY EXPOSED AS SHOWN IN DETAIL 'A' (ON THIS SHEET) AND WHERE UPON PERFORMING THE REMOVAL OF ALL LOOSE DISINTEGRATED CONCRETE DOES NOT EXPOSE THE FULL CIRCUMFERENCE OF THE EXISTING REINFORCING STEEL BAR. SHOULD THE REINFORCING STEEL BECOME FULLY EXPOSED, THEN THE CONTRACTOR MUST REPAIR THE AREA USING ITEM 520 - PNEUMATICALLY PLACED CONCRETE, SHOTCRETE, AS PER PLAN.

PRIOR TO CONSTRUCTING THE REPAIRS ALL REPAIR LOCATIONS MUST BE IDENTIFIED AND DIMENSIONED (LENGTH X WIDTH) ON A PLAN SHEET AND SUBMITTED TO THE ENGINEER FOR APPROVAL.

PAYMENT FOR ALL LABOR, MATERIALS, EQUIPMENT, TOOLS AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK SHALL BE PAID UNDER THE CONTRACT UNIT BID PRICE FOR ITEM 514 - FIELD PAINTING, MISC.: ZINC RICH PRIMER.

ITEM 520 - PNEUMATICALLY PLACED CONCRETE, SHOTCRETE, AS PER PLAN

ALL PROVISIONS OF ODOT C&MS 520 APPLY EXCEPT AS SPECIFIED HEREIN.

THIS ITEM SHALL CONSIST OF THE REMOVAL OF ALL LOOSE AND DISINTEGRATED CONCRETE, CLEANING OF THE REINFORCING STEEL, SURFACE PREPARATION, FURNISHING AND PLACING PNEUMATICALLY APPLIED CONCRETE AND CURING.

THE LOOSE CONCRETE SHALL BE REMOVED IN ACCORDANCE WITH ODOT C&MS 520 EXCEPT THE REMOVAL LIMITS SHALL EXTEND A MINIMUM OF 2 INCHES ABOVE THE TOP OF THE EXPOSED REINFORCING STEEL OR 1" INTO SOUND CONCRETE, WHICHEVER IS GREATER AND SHALL BE REMOVED TO THE EXTENT OF THE LIMITS SHOWN IN DETAIL 'B' (ON THIS SHEET) OR AS DIRECTED BY THE ENGINEER.

PRIOR TO CONSTRUCTING THE REPAIRS ALL REPAIR LOCATIONS MUST BE IDENTIFIED AND DIMENSIONED (LENGTH X WIDTH) ON A PLAN SHEET AND SUBMITTED TO THE ENGINEER FOR APPROVAL.

PAYMENT FOR ALL LABOR, MATERIALS, EQUIPMENT, TOOLS AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK SHALL BE PAID UNDER THE CONTRACT UNIT BID PRICE FOR ITEM 519 - PNEUMATICALLY PLACED CONCRETE, SHOTCRETE, AS PER PLAN.

THE FOLLOWING QUANTITIES HAVE BEEN ESTIMATED BASED UPON GROUND LEVEL FIELD OBSERVATIONS PERFORMED BY EMH&T ON MARCH 17TH, 2020.

A TOTAL ESTIMATED REPAIR AREA OF 2517 SQUARE FEET (SF) HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER. THE TOTAL ESTIMATED REPAIR AREA (2517 SF) ASSUMES APPROXIMATELY THREE (3) PERCENT OF THE BOTTOM OF DECK IS IN NEED OF REPAIRS.

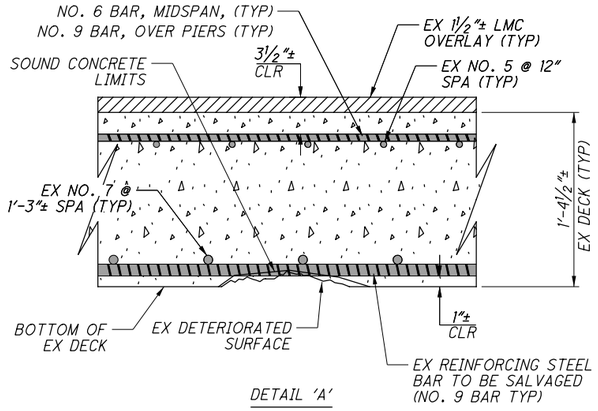
OF THIS TOTAL AREA (2517 SQUARE -FEET); APPROXIMATELY FIFTY (50) PERCENT IS ESTIMATED TO BE TREATABLE USING ITEM 514 - PAINTING, MISC.: ZINC RICH PRIMER. THE REMAINING FIFTY (50) PERCENT OF THIS AREA HAS BEEN PLACED UNDER ITEM 520 - PNEUMATICALLY PLACED CONCRETE, SHOTCRETE, AS PER PLAN.

ODOT C&MS 104 ADJUSTMENTS WILL NOT APPLY TO ITEM 514 - PAINTING, MISC.: ZINC RICH PRIMER OR ITEM 520 - PNEUMATICALLY PLACED CONCRETE, SHOTCRETE, AS PER PLAN.

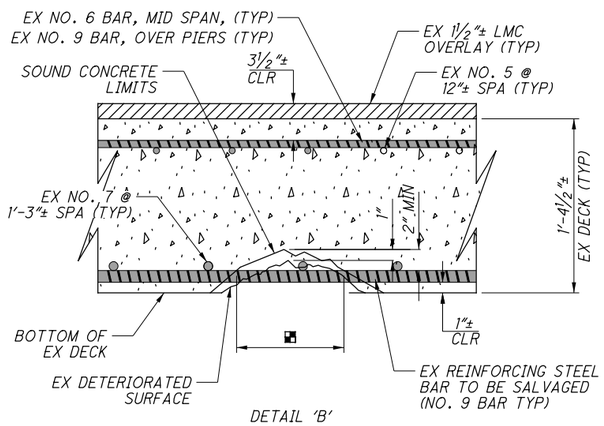
THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO SHEET 6/36 FOR USE AS DIRECTED BY THE ENGINEER.

ITEM	QTY	UNIT
514 - PAINTING, MISC.: ZINC RICH PRIMER	1267*	SF
520 - PNEUMATICALLY PLACED CONCRETE SHOTCRETE, AS PER PLAN	1250	SF

*INLCUDES 17SF FROM SHEET 17/36



DETAIL 'A'



DETAIL 'B'

■ - HORIZONTAL LIMITS FOR 2" REMOVAL ATOP EXPOSED REINFORCING BAR OR 1" INTO SOUND CONCRETE, WHICHEVER IS GREATER.

DESIGN AGENCY EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
MJR	MJR	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700339	

GENERAL NOTES (CONT.)
BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

J:\20190025\ODOT\MF BEL-7-11.52_11.87_12.79 (PID 110324)\BEL\110324_BEL-7-11.52\Design\Structures\BEL007_1279C_SN002.dgn 11/9/2020 3:08:35 PM bmcutchen

ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN:

844.01 DESCRIPTION

INSTALL CONCRETE PATCHES USING GALVANIZED ANODES PER ODOT SUPPLEMENTAL SPECIFICATION 844 EXCEPT AS NOTED HEREIN.

ALL CONCRETE PATCHES SHALL BE PLACED TO THE EXISTING SURFACE UNLESS OTHERWISE DETAILED IN THE PLANS.

844.02 MATERIALS

PROVIDE A SUPERPLASTICIZED DENSE CONCRETE (SDC) CONCRETE MIX (PER SUPPLEMENTAL SPECIFICATION 848.06 & 848.14) WITH THE FOLLOWING ADDITIONAL PROPERTY:

MINIMUM SPREAD = 24"

PROVIDE SDC CONCRETE MIX AT A 24 INCH SPREAD THAT ALLOWS THE CONCRETE MIX TO BE PLACED THROUGH A 3½" DIAMETER ACCESS HOLE THROUGH THE FORM AND SELF CONSOLIDATE. THE FINAL CONCRETE WILL BE SELF CONSOLIDATING USING AN APPROVED SELF CONSOLIDATING ADMIXTURE.

DURING THE CONCRETE OPERATIONS ASSURE THE REPRESENTATIVES OF THE READY MIX PRODUCER AND THE CHEMICAL ADMIXTURE MANUFACTURER ARE ON SITE TO DETERMINE ANY ADJUSTMENTS REQUIRED TO COMPLETE THE CONCRETE PLACEMENT. MAKE BATCHES OF AT LEAST 3 CUBIC YARDS PER DELIVERY. DELIVER AND PLACE ALL SDC CONCRETE PRIOR TO 9:00 AM TO HELP AVOID ADVERSE TEMPERATURE EFFECTS ON THE MIX CHARACTERISTICS.

844.03 CLEANING AND REPAIR OF REINFORCING STEEL

PRIOR TO THE SURFACE CLEANING SPECIFIED IN ODOT C&MS 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

844.04 GALVANIC ANODE INSTALLATION

INSTALL ANODE UNITS AND REPAIR MATERIAL IMMEDIATELY FOLLOWING PREPARATION AND CLEANING OF STEEL REINFORCEMENT. REPAIR MATERIAL SHALL BE PLACED NO LATER THAN ONE (1) WEEK AFTER CONCRETE REMOVAL UNLESS APPROVED BY THE ENGINEER. GALVANIC ANODES SHALL BE INSTALLED IN THE LOCATIONS AND SPACING AS SPECIFIED IN THE PLANS. IN NO CASE, SHALL THE SPACING EXCEED 18 INCHES.

THE CONTRACTOR SHALL PERFORM HIS WORK AS TO NOT DAMAGE THE EMBEDDED ANODES NOR CREATE ANY AIR VOIDS AROUND THE EMBEDDED ANODES WHILE SETTING FORMWORK AND PLACING CONCRETE.

844.06 QUALITY CONTROL

THE PROPOSED FORM SYSTEM MUST BE SUBMITTED, AND ACCEPTED BY THE PROJECT ENGINEER PRIOR TO THE INSTALLATION OF ANY FORMWORK. THE FORM SYSTEM SHALL PROVIDE ENOUGH HEAD PRESSURE TO ENSURE THE PATCH IS FULLY CONSOLIDATED AND NULL OF VOIDS. THE FORM SYSTE M SHALL INCORPORATE VENTS ALONG THE TOP OF THE PATCH TO ALLOW ENTRAPPED AIR TO ESCAPE DURING CONCRETE PLACEMENT. THE FORM SYSTEM SHALL INCORPORATE A GATE/VALVE SYSTEM CAPABLE OF CONTAINING THE SELF CONSOLIDATING CONCRETE ONCE CONCRETE PLACEMENT IS COMPLETE.

844.08 BASIS OF PAYMENT

PAYMENT FOR ALL OF THE ABOVE DESCRIBED WORK WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 844 CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN.

PAYMENT WILL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, INCIDENTALS AND THE WORK TO REMOVE UNSOUND CONCRETE, FORMWORK, PLACING DRAIN HOLES, PLACEMENT OF SELF CONSOLIDATING SDC CONCRETE MIX, ON SITE REPRESENTATIVE FEES AND PNEUMATICALLY PLACED MORTAR.

ABBREVIATION LEGEND

ABUT - ABUTMENT
APP - AS PER PLAN
BM - BENCH MARK
BRG - BEARING
C/C - CENTER TO CENTER
CIP - CAST IN PLACE
CJ - CONSTRUCTION JOINT
℄ - CENTERLINE
CLR - CLEARANCE
CONST - CONSTRUCTION
DIA - DIAMETER
DR - DRIVE
EF - EACH FACE
EL - ELEVATION
EX - EXISTING
EXP - EXPANSION
FA - FORWARD ABUTMENT
FF - FAR FACE
FWD - FORWARD
GR - GUARDRAIL
INT - INTEGRAL
INV - INVERT
L - LEFT
LLH - LONG LEG HORIZONTAL
LT - LEFT
MAX - MAXIMUM
MIN - MINIMUM
MISC - MISCELLANEOUS
MOT - MAINTENANCE OF TRAFFIC
NF - NEAR FACE
NO - NUMBER
NPCPP - NON -PERFORATED CORRUGATED PLASTIC PIPE
O/O - OUT TO OUT
PC - POINT OF CURVE
PT - POINT OF TANGENT
P.V.I. - POINT OF VERTICAL INTERSECTION
P.V.C. - POINT OF VERTICAL CURVE
P.V.T. - POINT OF VERTICAL TANGENT
PEJF - PREFORMED EXPANSION JOINT FILLER
PROP - PROPOSED
PT - POINT
R - RIGHT
RA - REAR ABUTMENT
RT - RIGHT
SPA - SPACES
ST - STREET
STA - STATION
SCD - STANDARD CONSTRUCTION DRAWING
STD - STANDARD
T/S - TOE OF SLOPE
TYP - TYPICAL
UNO - UNLESS NOTED OTHERWISE
WWR - WELDED WIRE REINFORCING

DESIGN AGENCY
EMH&T
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 www.emht.com

DESIGNED	DRAWN	REVIEWED	DATE
MJR	MJR	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700339	

GENERAL NOTES (CONT.)
BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

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ESTIMATED QUANTITIES

CALCULATED BY: MJR CHECKED BY: RMW

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
202	11203		LS	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					3/36
202	22900	389	SY	APPROACH SLAB REMOVED				389	
503	21300		LS	UNCLASSIFIED EXCAVATION					
509	10000	51,618	LB	EPOXY COATED REINFORCING STEEL	3,170		48,448		
509	20001	200	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN			200		3/36
510	10001	492	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	492				3/36
511	32212	188	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE	18		170		
511	81300	196	EACH	CONCRETE, MISC.: EMBEDDED GALVANIC ANODE (EGA)	103		93		3/36
512	10101	387	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	92	180	115		4/36
512	33010	7,189	SY	TYPE 3 WATERPROOFING			6,810	379	
514	27700	1,267	SF	FIELD PAINTING, MISC.: ZINC RICH PRIMER		17	1,250		4/36
516	12300	510	FT	STRIP SEAL EXPANSION JOINT ANCHORED WITH ELASTOMERIC CONCRETE			510		
516	13600	126	SF	1" PREFORMED EXPANSION JOINT FILLER	126				
516	31010	822	FT	2" DEEP JOINT SEALER	822				
518	12801	89	EACH	SCUPPER, MODIFICATION, AS PER PLAN			89		34/36
519	11100	81	SF	PATCHING CONCRETE STRUCTURE		81			
519	12300	1,000	SY	PATCHING CONCRETE BRIDGE DECK - TYPE B			1,000		4/36
520	10001	1,250	SF	PNEUMATICALLY PLACED CONCRETE SHOTCRETE, AS PER PLAN			1,250		4/36
526	25000	388	SY	REINFORCED CONCRETE APPROACH SLABS (T=15")				388	
526	90010	140	FT	TYPE A INSTALLATION				140	
601	20000	10	SY	CRUSHED AGGREGATE SLOPE PROTECTION				10	
844	10001	287	SF	CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN	79	208			5/36

QUANTITIES CARRIED TO THE GENERAL SUMMARY, SEE SHEET 70/213 THROUGH SHEET 71/213 .

NOTES

1. ALL QUANTITIES PRESENTED ON THIS SHEET SHALL BE INCLUDED WITH 01/NHS/BR.

DESIGN AGENCY EMH&T

REVIEWED CAS DATE 10/30/20
STRUCTURE FILE NUMBER 0700339

DRAWN MJR REVISED -

DESIGNED MJR CHECKED TDA

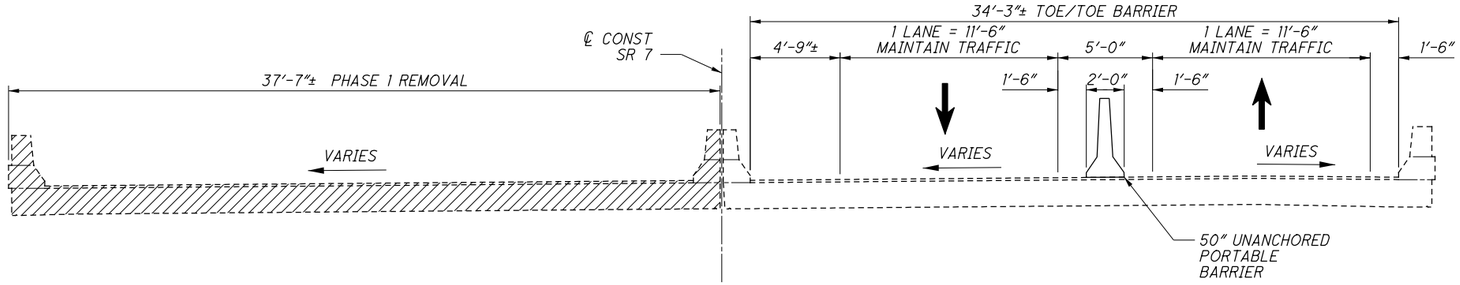
ESTIMATED QUANTITIES
BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

6 / 36

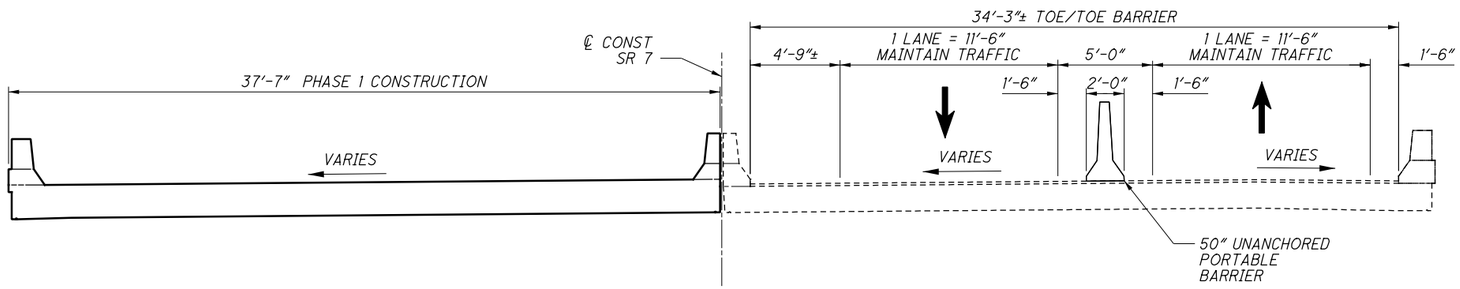
183 / 213

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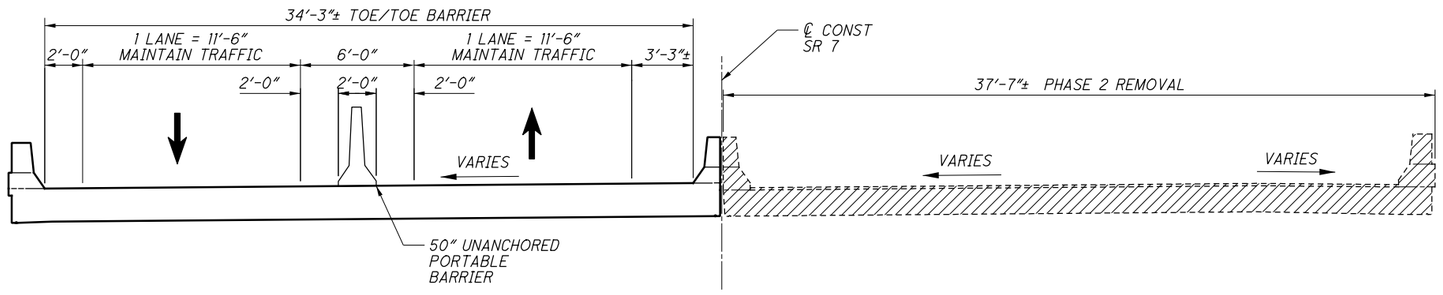
PHASE 1 REMOVAL

(AT INTERMEDIATE EXPANSION JOINT)



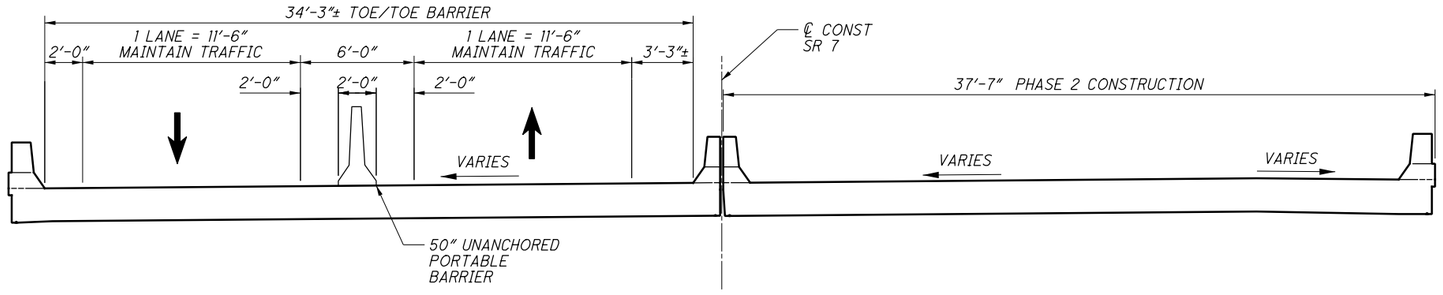
PHASE 1 CONSTRUCTION

(AT INTERMEDIATE EXPANSION JOINT)



PHASE 2 REMOVAL

(AT INTERMEDIATE EXPANSION JOINT)



PHASE 2 CONSTRUCTION

(AT INTERMEDIATE EXPANSION JOINT)

LEGEND

- DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

NOTES

1. FOR 50" PORTABLE CONCRETE BARRIER, REFER TO ODOT STANDARD DRAWING RM-4.1, DATED 1-17-2020.
2. SEE SHEET 8/36 FOR SEQUENCE OF CONSTRUCTION.

DESIGN AGENCY
EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
MJR	GB	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700339	

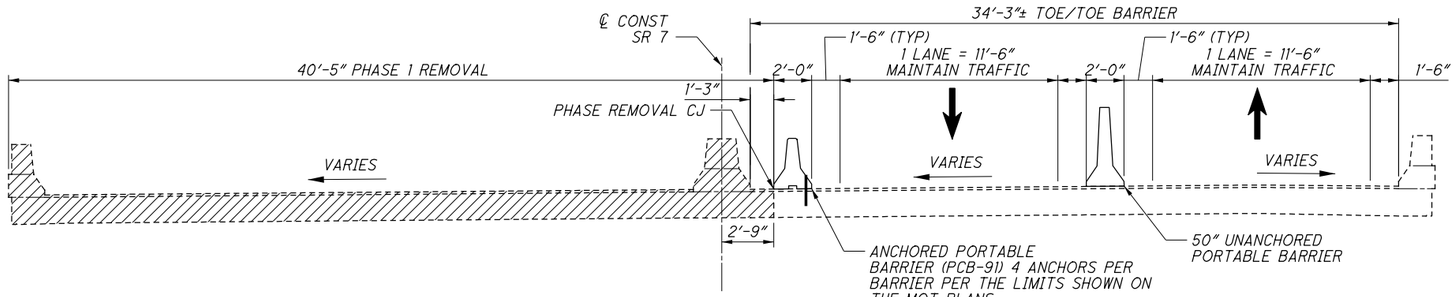
PHASE CONSTRUCTION DETAILS (UNITS 1, 2, 3, 5, AND 6)
BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

7 / 36

184
213

J:\20190025\ODOT\MF BEL-7-11.52_11.87_12.79 (PID 110324)\BEL\110324_BEL-7-11.52\Design\Structures\BEL007_1279C_SC001.dgn 11/9/2020 3:08:38 PM bmccutchen

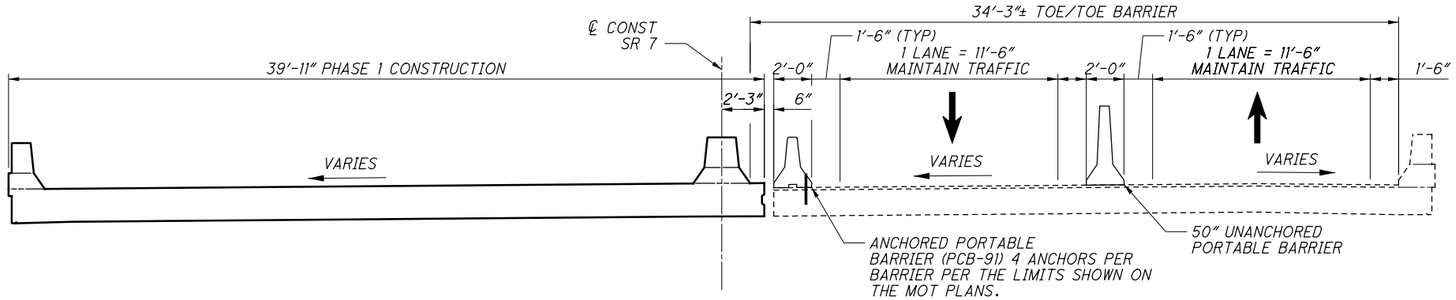


PHASE 1 REMOVAL

(SEE NOTE 1)

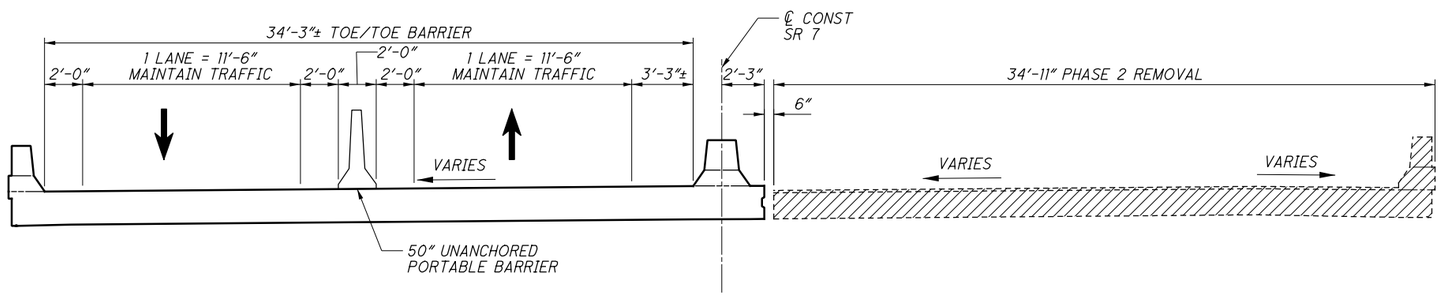
LEGEND

- DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN



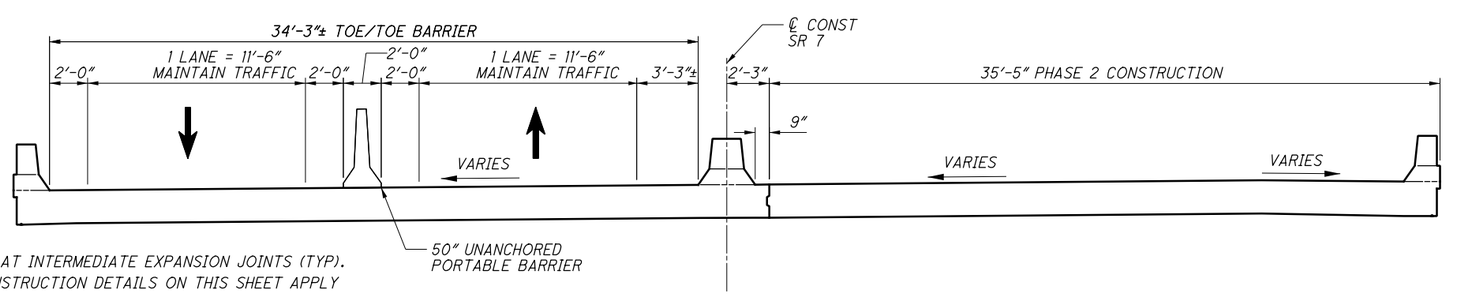
PHASE 1 CONSTRUCTION

(SEE NOTE 1)



PHASE 2 REMOVAL

(SEE NOTE 1)



PHASE 2 CONSTRUCTION

(SEE NOTE 1)

NOTES

1. TYPICAL SECTIONS SHOWN AT INTERMEDIATE EXPANSION JOINTS (TYP). ADDITIONALLY, PHASE CONSTRUCTION DETAILS ON THIS SHEET APPLY AT THE REAR ABUTMENT AND REAR APPROACH SLAB.

2. FOR 50" PORTABLE CONCRETE BARRIER, REFER TO ODOT STANDARD DRAWING RM-4.1, DATED 1-17-2020.

SEQUENCE OF CONSTRUCTION

PHASE 1

1. INSTALL PCB ON THE EXISTING RIGHT BRIDGE SLAB AND APPROACH SLABS WHERE DESIGNATED IN THE PLANS. MAINTAIN TRAFFIC PER THE MAINTENANCE OF TRAFFIC PLANS.

2. SAWCUT AND REMOVE THE PORTIONS OF THE EXISTING SUPERSTRUCTURE AND APPROACH SLABS DESIGNATED FOR REMOVAL UNDER PHASE 1. SALVAGE EXISTING REINFORCING BARS AS REQUIRED BY REMOVAL DETAILS ON TRAILING SHEETS.

3. CONSTRUCT THE SUPERSTRUCTURE PORTIONS DESIGNATED TO BE CONSTRUCTED UNDER THE PHASE 1 CONSTRUCTION LIMITS SHOWN IN THE PLANS AND SUMMARIZED BELOW:

REAR APPROACH SLAB - INCLUDES REPLACEMENT OF THE MEDIAN BARRIER ATOP THE APPROACH SLABS. INCLUDES A PORTION OF THE RIGHT REAR APPROACH SLAB AND SLEEPER SLAB. ANCHORED PCB IS REQUIRED FOR THIS WORK.

REAR ABUTMENT (LT & PORTION OF RT) EXPANSION JOINT REPLACEMENT - INCLUDES PORTIONS OF THE EXISTING SLAB, BACKWALL, WINGWALL, PARAPET AND MEDIAN BARRIER. PHASE CONSTRUCTION LIMITS EXTEND ONTO THE RIGHT BRIDGE.

INTERMEDIATE EXPANSION JOINTS:
NO. 1,2 & 5: REPLACE EXP JOINTS - INCLUDING PORTION OF THE EXISTING SLAB, PARAPET AND MEDIAN BARRIER.

NO. 3 & 4: REPLACE EXP JOINTS - INCLUDING PORTION OF THE EXISTING SLAB, PARAPET, AND MEDIAN BARRIER. PHASE CONSTRUCTION LIMITS EXTEND ONTO THE RIGHT BRIDGE. REQUIRES ANCHORED PCB ON THE RIGHT STRUCTURE.

FORWARD ABUTMENT (LT) EXPANSION JOINT REPLACEMENT - INCLUDES PORTIONS OF THE EXISTING SLAB, BACKWALL, WINGWALL, APPROACH SLAB, PARAPET AND MEDIAN BARRIER.

4. CONCRETE PATCHING OF SUPERSTRUCTURE ON THE LEFT BRIDGE INCLUDING UNDERSIDE OF DECK NOT UNDER TRAFFIC.

5. CLEAN AND EXTEND SCUPPERS. INSTALL TYPE 3 WATERPROOFING AND 3" ASPHALT CONCRETE OVERLAY ON LEFT BRIDGE.

PHASE 2

1. INSTALL PCB ON LEFT BRIDGE AND APPROACH SLABS WHERE DESIGNATED IN THE PLANS AND SHIFT TRAFFIC TO THE LEFT BRIDGE AS DETAILED IN THE MAINTENANCE OF TRAFFIC PLANS.

2. REMOVE ANCHORED PCB AND REPAIR SLAB ON RIGHT BRIDGE. REPAIR ANCHOR HOLES WITH GROUT, C&MS 705.04. PAYMENT IS INCLUDED WITH ITEM 614, MAINTAINING TRAFFIC.

3. SAWCUT AND REMOVE THE PORTIONS OF THE EXISTING SUPERSTRUCTURE AND APPROACH SLABS DESIGNATED FOR REMOVAL UNDER PHASE 2. SALVAGE EXISTING REINFORCING STEEL BARS AS REQUIRED BY REMOVAL DETAILS ON TRAILING SHEETS.

4. CONSTRUCT THE SUPERSTRUCTURE PORTIONS DESIGNATED TO BE CONSTRUCTED UNDER THE PHASE 2 CONSTRUCTION LIMITS SHOWN IN THE PLANS AND SUMMARIZED BELOW:

REAR & FWD APPROACH SLAB - RT BRIDGE ONLY.

REAR ABUTMENT (RT) EXPANSION JOINT REPLACEMENT - INCLUDES PORTIONS OF THE EXISTING SLAB, BACKWALL, WINGWALL, PARAPET AND MEDIAN BARRIER. REQUIRES SPLICING OF JOINT SEAL STEEL RETAINER ON BACKWALL.

INTERMEDIATE EXPANSION JOINTS:
NO. 1 - 3: REPLACE EXP JOINTS - INCLUDING PORTION OF THE EXISTING SLAB, PARAPET, AND MEDIAN BARRIER.

NO. 3 & 4: REPLACE EXP JOINTS - INCLUDING PORTION OF THE EXISTING SLAB.

FORWARD ABUTMENT (RT) EXPANSION JOINT REPLACEMENT - INCLUDES PORTIONS OF THE EXISTING SLAB, BACKWALL, WINGWALL, PARAPET AND MEDIAN BARRIER.

5. CONCRETE PATCHING OF SUPERSTRUCTURE ON THE RIGHT BRIDGE INCLUDING UNDERSIDE OF DECK NOT UNDER TRAFFIC.

6. CLEAN AND EXTEND SCUPPERS. INSTALL TYPE 3 WATERPROOFING AND 3" ASPHALT CONCRETE OVERLAY ON RIGHT BRIDGE.

7. REMOVE PCB FROM LEFT BRIDGE AND SHIFT TRAFFIC TO FINAL CONFIGURATION. PAYMENT INCLUDED WITH ITEM 614, MAINTENANCE OF TRAFFIC, AS PER PLAN.

PHASE 1/2

1. CONTRACTOR SHALL PERFORM ITEM 844 PATCHING OR ITEM 514 PAINTING REPAIRS TO ABUTMENTS AND PIERS SUCH THAT FUTURE BRIDGE WORK WILL NOT DAMAGE/COMPROMISE THESE REPAIRS.

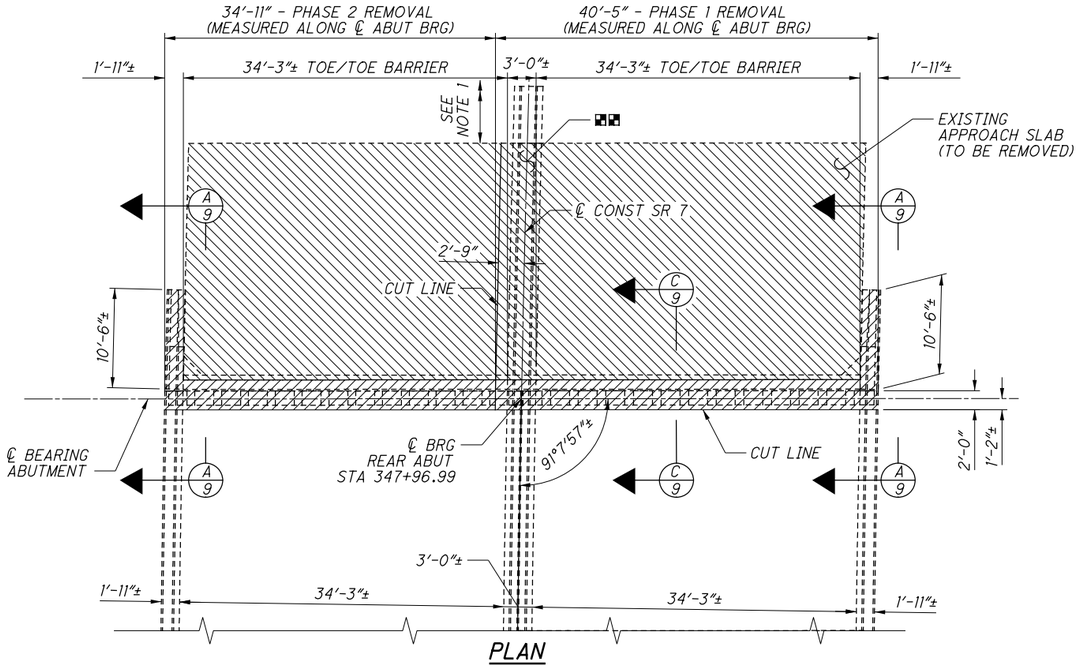
DESIGN AGENCY
EMH&T
Engineers/Architects/Planners/Surveyors
5500 New Albany Road, Columbus, Ohio 43054
614-775-4500

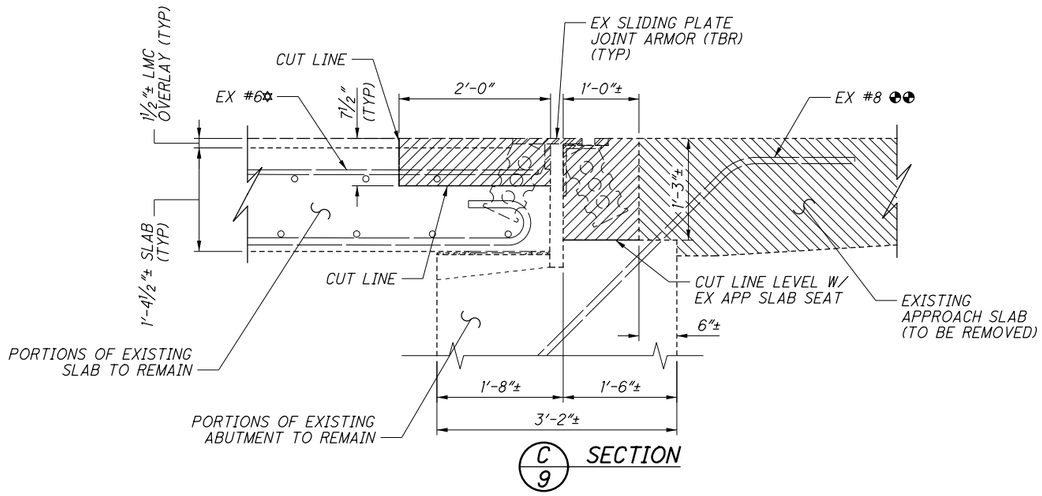
REVIEWED	DATE
CAS	10/30/20
DRAWN	STRUCTURE FILE NUMBER
GB	0700339
DESIGNED	REVISED
MJR	-
CHECKED	
TDA	

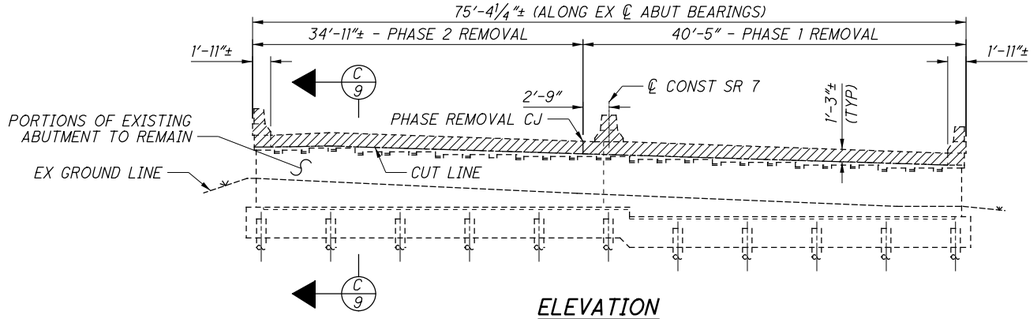
PHASE CONSTRUCTION DETAILS (UNIT 4)
BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

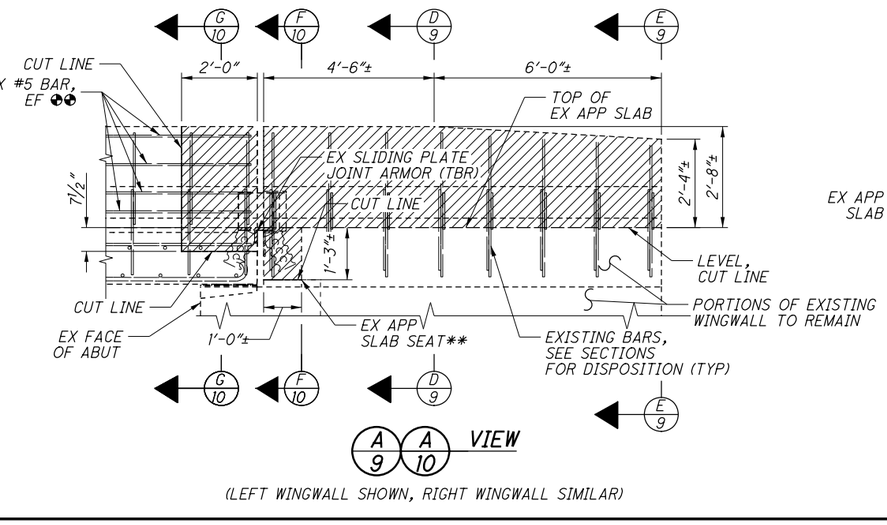
BEL-7-11.48
PID No. 110324

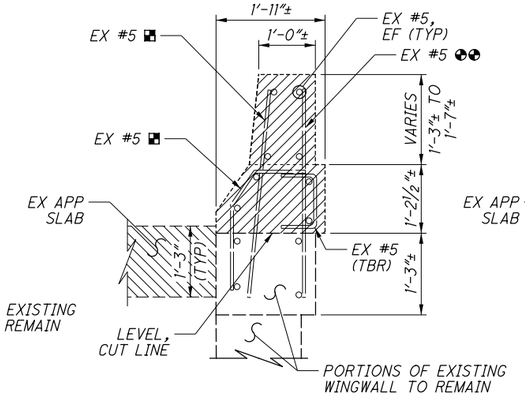
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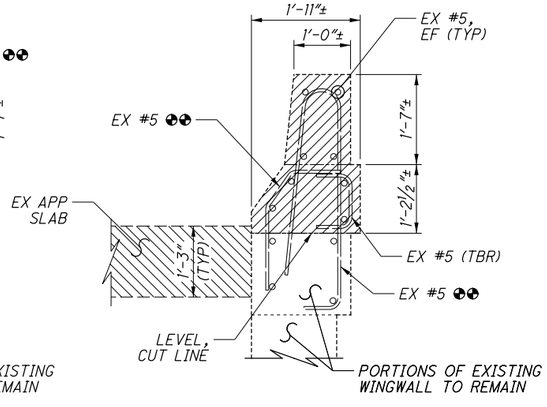












LEGEND

- DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- DENOTES AREAS TO BE REMOVED PER ITEM 202 - APPROACH SLAB REMOVED
- ■■ - CUT EXISTING REINFORCING BARS FLUSH AT THE CUT LINE
- ■■ - MEDIAN PARAPET REMOVAL TO BE PAID UNDER ITEM 202 - APPROACH SLAB REMOVED
- ◒◒ - SALVAGE EXISTING REINFORCING BAR TO APPLY MECHANICAL CONNECTOR (SEE NOTE 2)
- ✡ - SALVAGE EX BARS
- ** - EX APPROACH SLAB NOT SHOWN FOR CLARITY

NOTES

1. REFER TO ROADWAY PLANS FOR ADDITIONAL PORTION OF MEDIAN BARRIER TO BE REMOVED TO ACCOMMODATE CONSTRUCTION OF SLEEPER SLAB AS PART OF TYPE A APPROACH SLAB INSTALLATION.
2. REMOVAL LIMITS MAY VARY DEPENDING ON THE TYPE OF MECHANICAL CONNECTOR FURNISHED.

DESIGN AGENCY EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
MJR	GB	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700339	

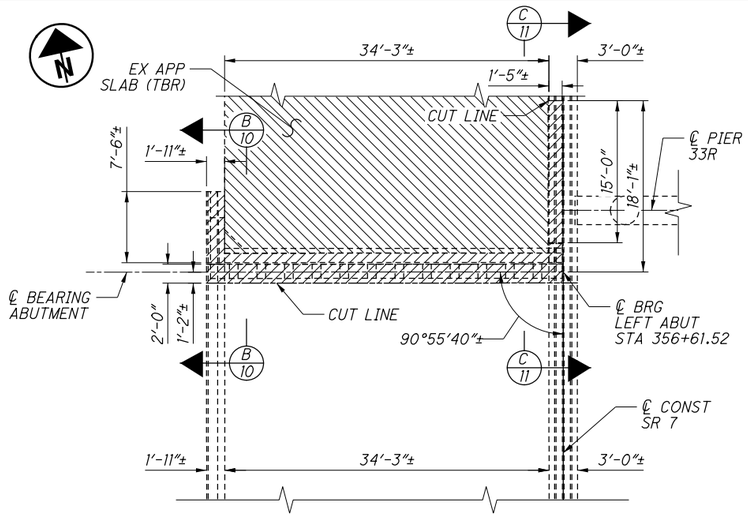
REAR ABUTMENT REMOVAL DETAILS
BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

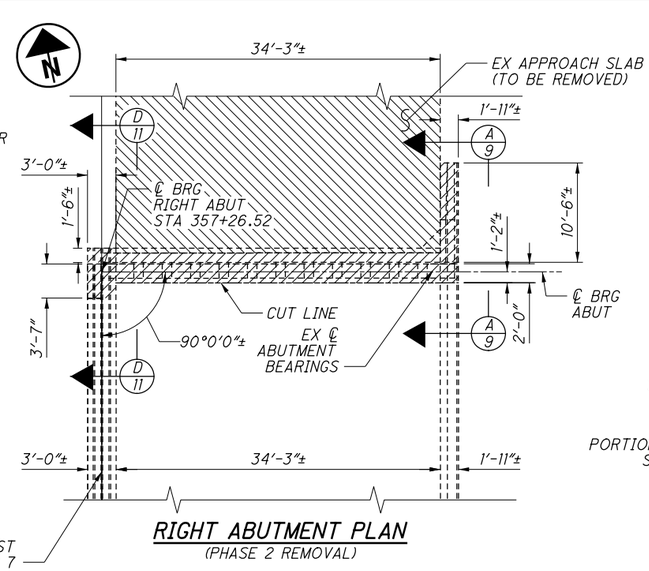
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186 / 213

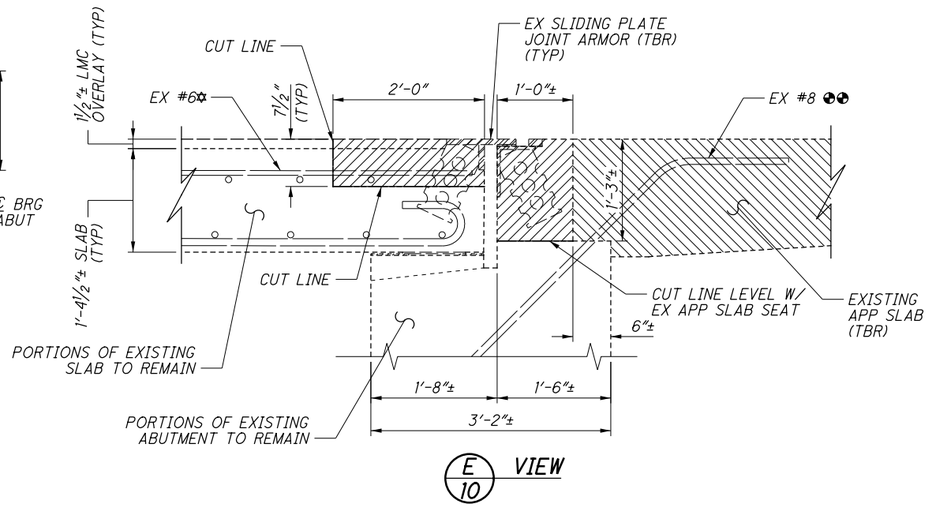
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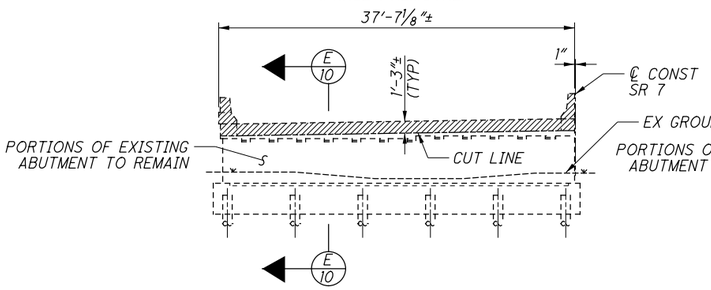
LEFT ABUTMENT PLAN
(PHASE 1 REMOVAL)



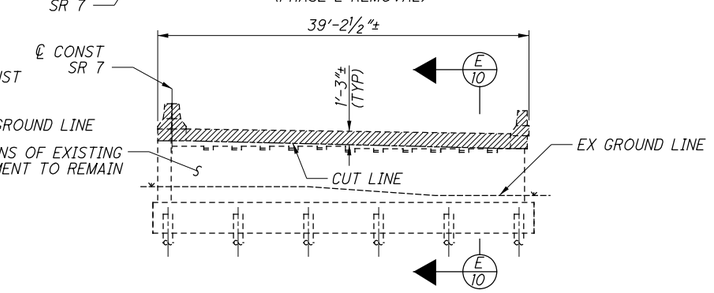
RIGHT ABUTMENT PLAN
(PHASE 2 REMOVAL)



E 10 VIEW



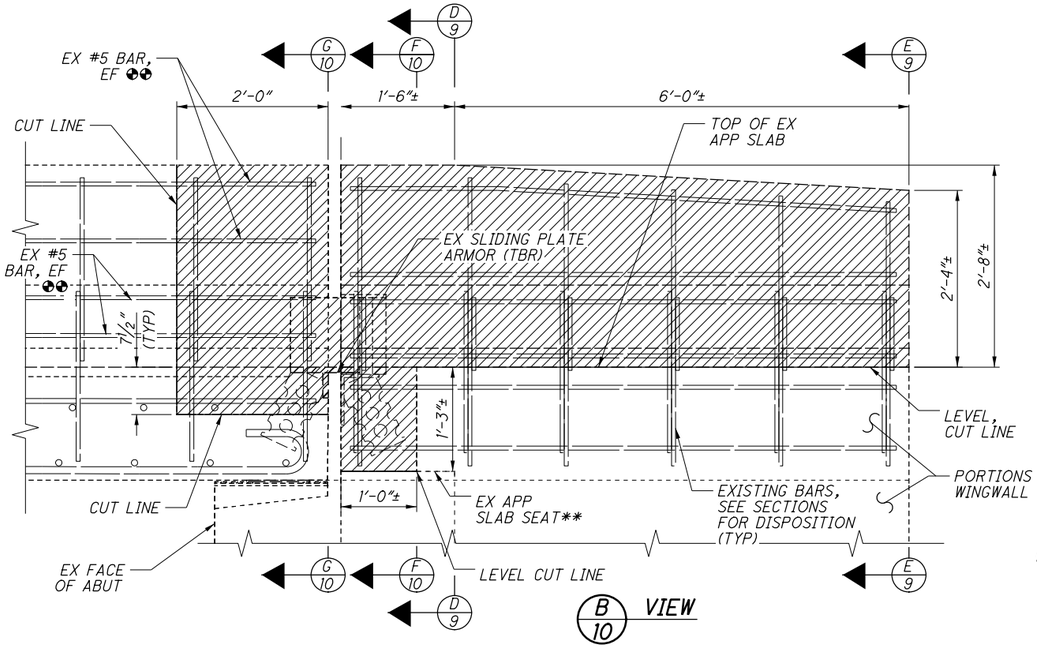
LEFT ABUTMENT ELEVATION
(PHASE 1 REMOVAL)



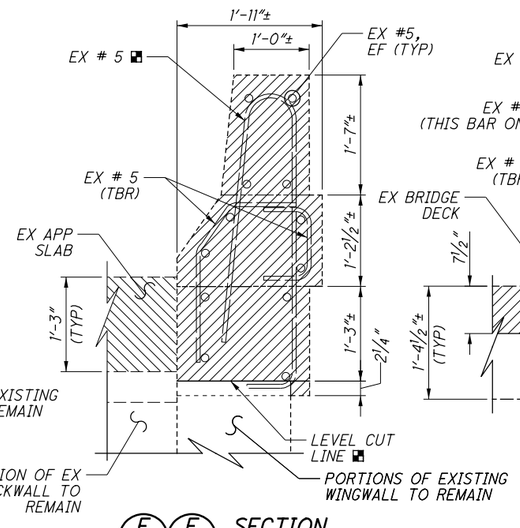
RIGHT ABUTMENT ELEVATION
(PHASE 2 REMOVAL)

LEGEND

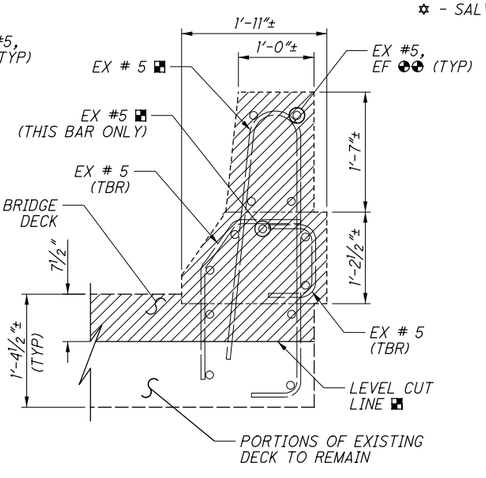
- ▨ - DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- ▨ - DENOTES AREAS TO BE REMOVED PER ITEM 202 - APPROACH SLAB REMOVED
- ■ - CUT EXISTING REINFORCING BARS FLUSH AT THE CUT LINE
- ◕◕ - SALVAGE EXISTING REINFORCING BAR TO APPLY MECHANICAL CONNECTOR (SEE NOTE 1)
- ** - EX APPROACH SLAB NOT SHOWN FOR CLARITY
- ✡ - SALVAGE EX BARS



B 10 VIEW



F 9 F 10 SECTION



G 9 G 10 SECTION

NOTES

1. REMOVAL LIMITS MAY VARY DEPENDING ON THE TYPE OF MECHANICAL CONNECTOR FURNISHED.

DESIGN AGENCY EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
MJR	GB	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700339	

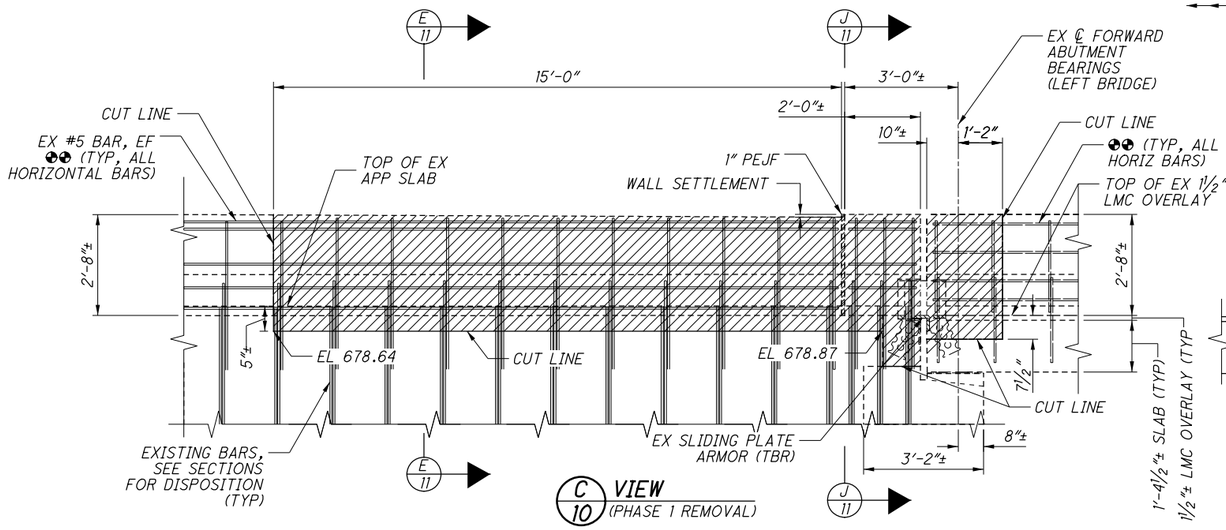
FORWARD ABUTMENT REMOVAL DETAILS
BRIDGE NO. BEL-7-12.79 & BEL-7-11.48
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

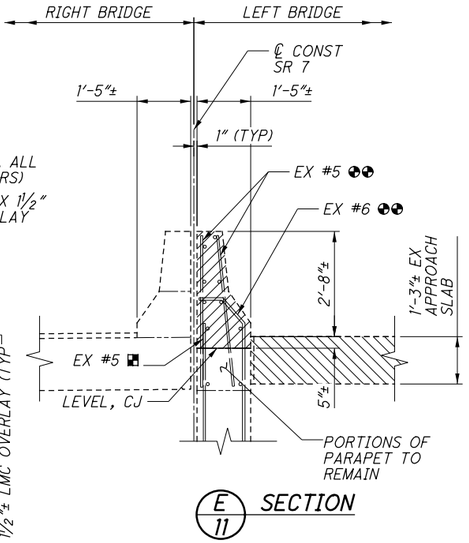
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187 / 213

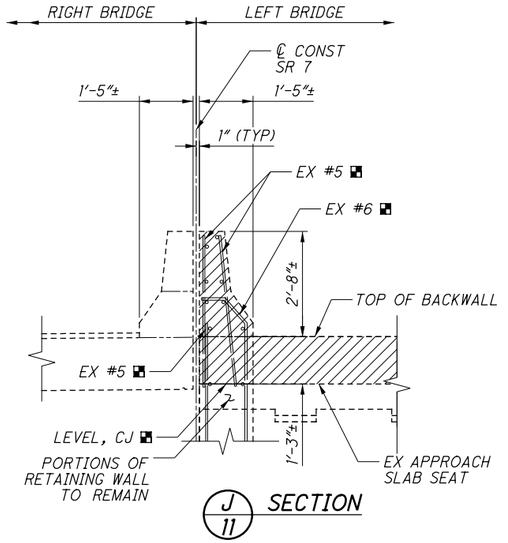
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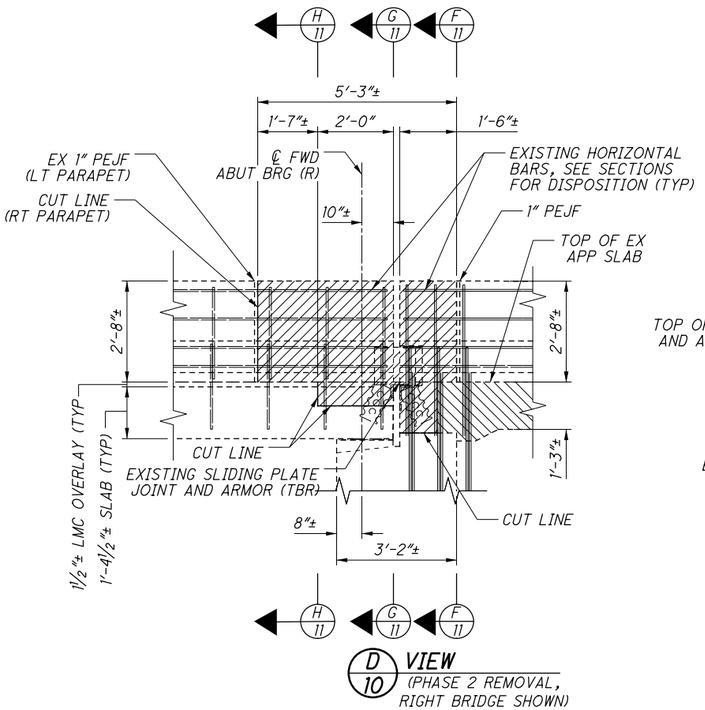
C 10 **VIEW** (PHASE 1 REMOVAL)



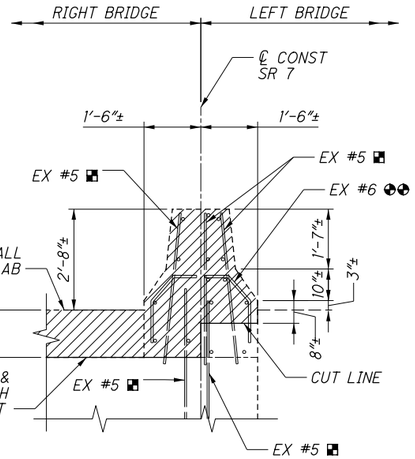
E 11 **SECTION**



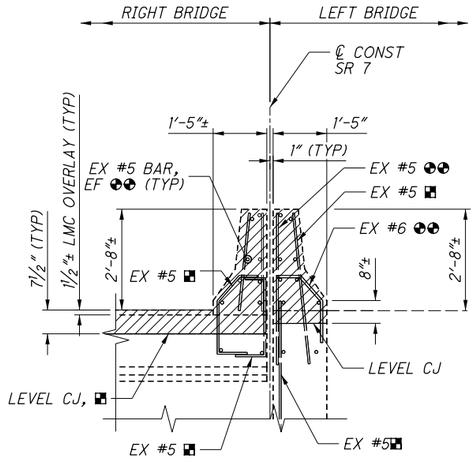
J 11 **SECTION**



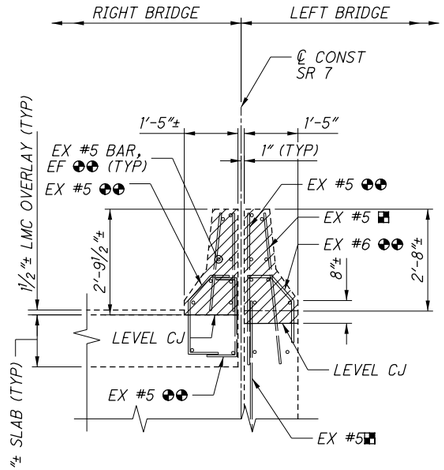
D 10 **VIEW** (PHASE 2 REMOVAL, RIGHT BRIDGE SHOWN)



F 11 **SECTION**



G 11 **SECTION**



H 11 **SECTION**

LEGEND

- DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- DENOTES AREAS TO BE REMOVED PER ITEM 202 - APPROACH SLAB REMOVED

■ - CUT EXISTING REINFORCING BARS FLUSH AT THE CUT LINE

●● - SALVAGE EXISTING REINFORCING BAR TO APPLY MECHANICAL CONNECTOR (SEE NOTE 1)

NOTES

1. REMOVAL LIMITS MAY VARY DEPENDING ON THE TYPE OF MECHANICAL CONNECTOR FURNISHED.

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Phone: 614.775.4500 www.emht.com

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TDA	-	0700339	

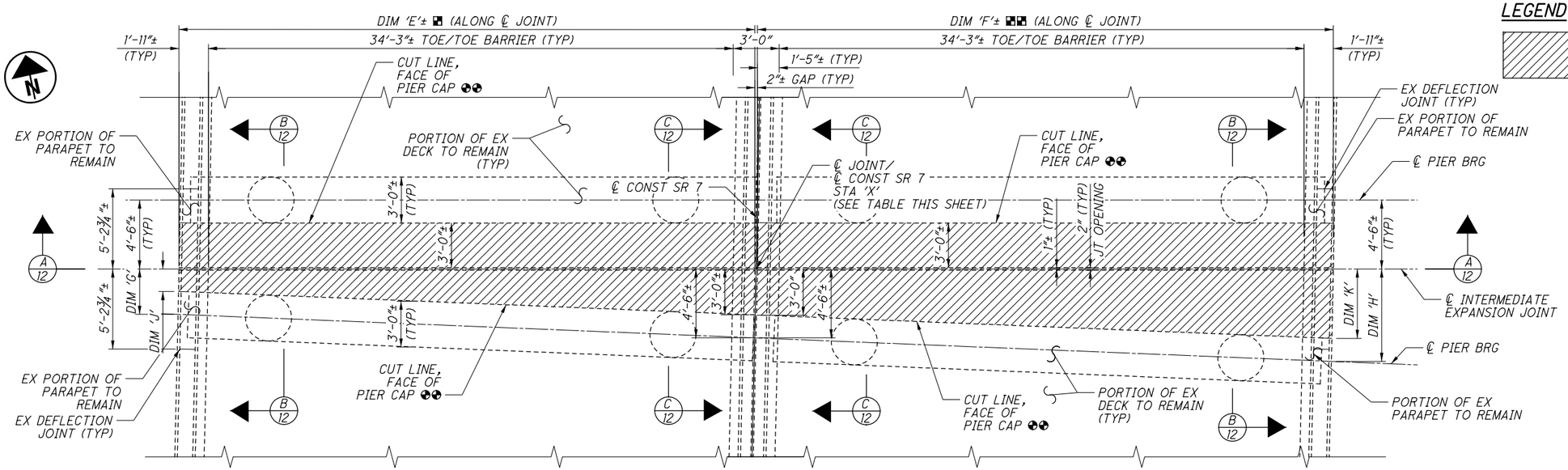
FORWARD ABUTMENT REMOVAL DETAILS
BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

11 / 36

188 / 213

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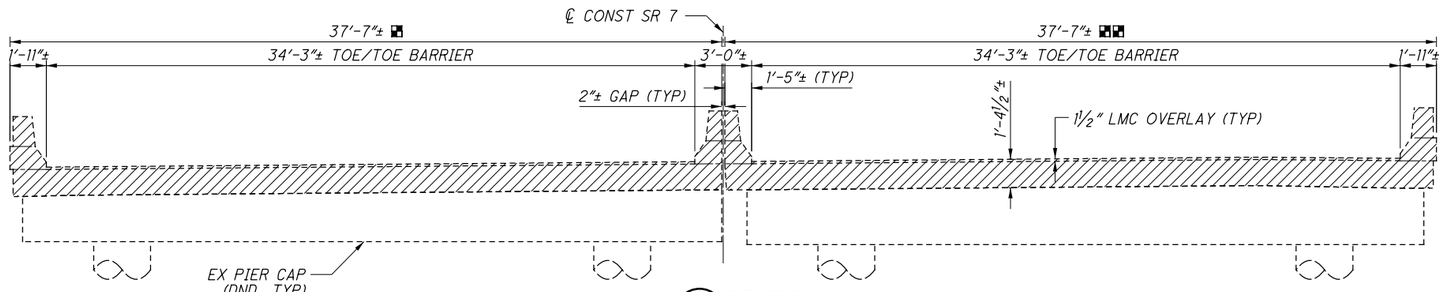


PLAN

(JOINT NO 1 SHOWN, 2 & 5 SIMILAR)

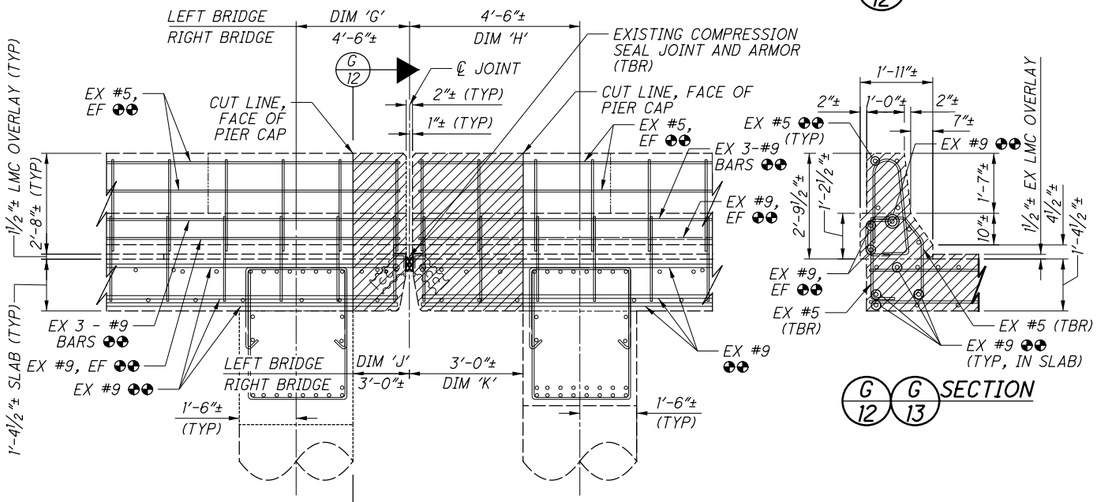
LEGEND

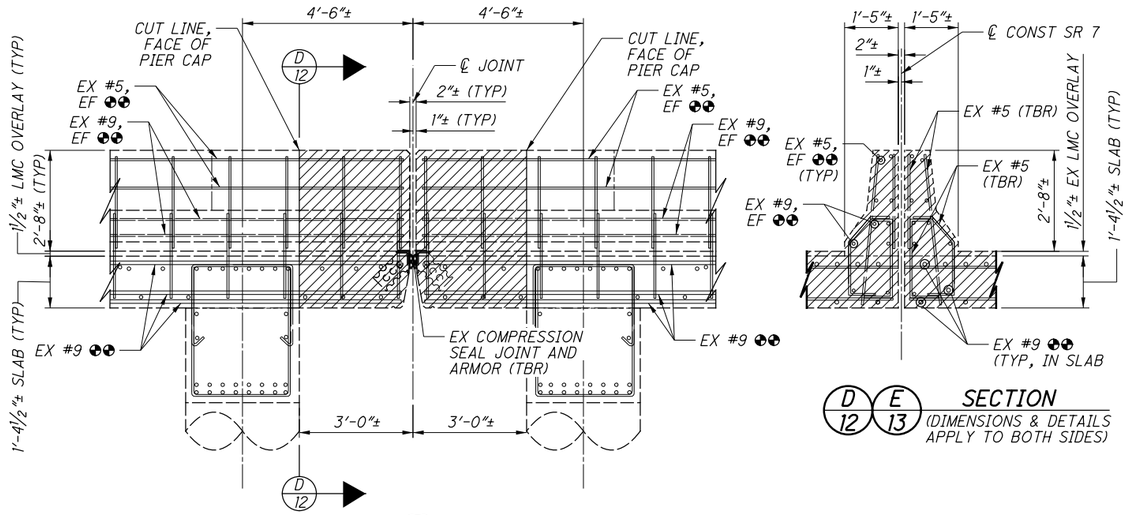
- ▨ - DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- ◔ - CUT EX BAR FLUSH AT CUT LINE
- ◓◓ - SALVAGE EXISTING REINFORCING BAR TO APPLY MECHANICAL CONNECTOR
- ■ - PHASE 1 REMOVAL LIMITS
- ■■ - PHASE 2 REMOVAL LIMITS



A 12 SECTION

INT EXP JT NO	STA 'X'	ALL DIMENSIONS IN TABLE ARE ±					
		DIM 'E'	DIM 'F'	DIM 'G'	DIM 'H'	DIM 'J'	DIM 'K'
1	349+53.00	37'-7⅛"	37'-7⅛"	2'-11⅝"	6'-0⅜"	1'-5⅞"	4'-6⅛"
2	351+15.51	37'-7⅛"	37'-7⅛"	2'-11½"	6'-0½"	1'-5⅞"	4'-6⅛"
5	355+70.52	37'-7"	37'-7"	4'-6"	4'-6"	3'-0"	3'-0"





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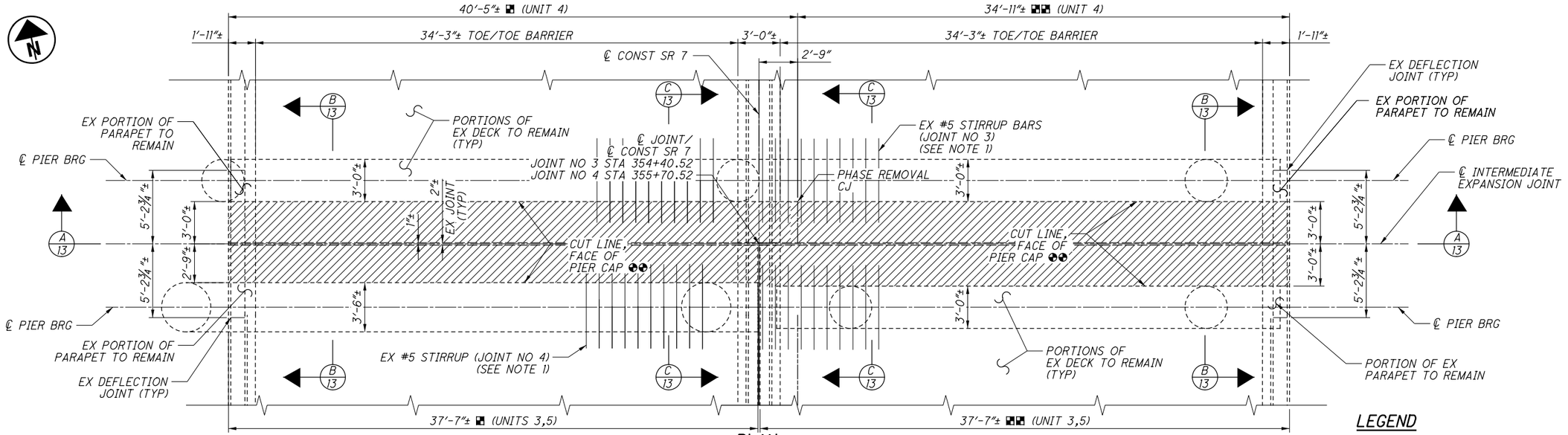
EXPANSION JOINT REMOVAL DETAILS (NO 1, 2 & 5)

BRIDGE NO. BEL-7-11.48
PID No. 110324

SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

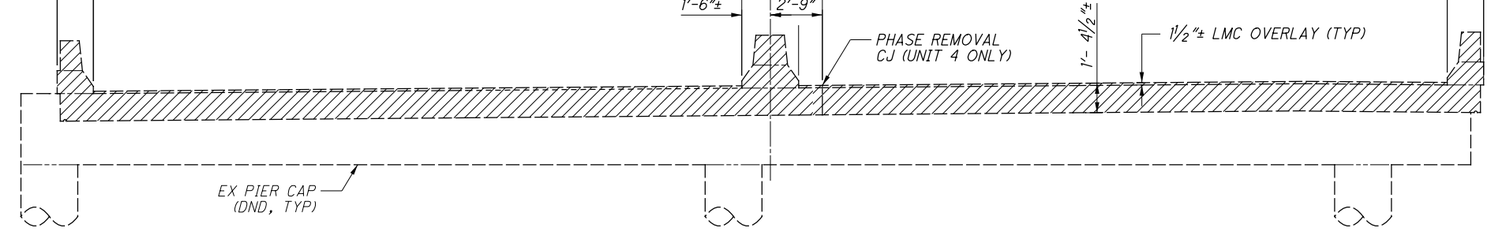
BEL-7-11.48

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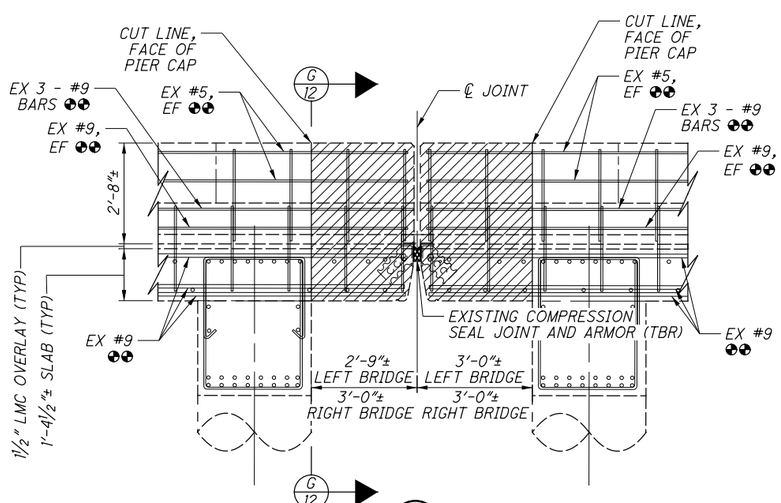


PLAN

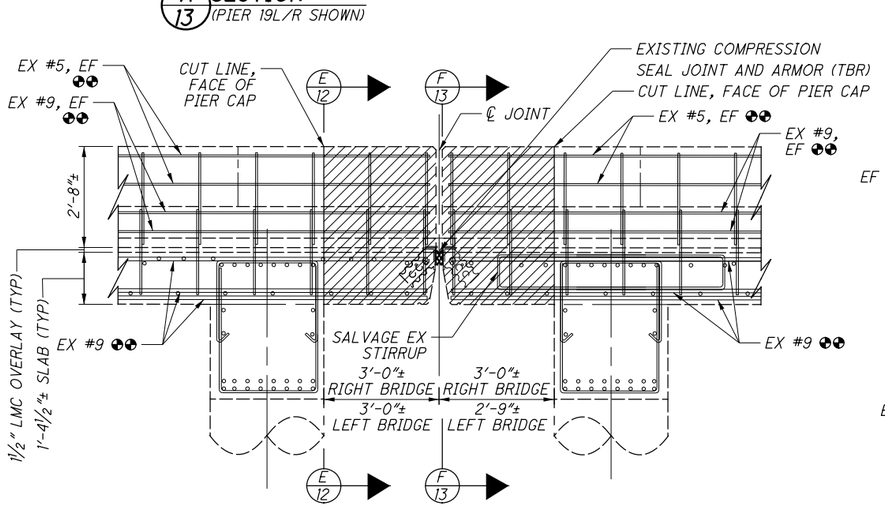
(JOINT NO 3 SHOWN BETWEEN UNIT 3/4)
(JOINT 4 SIMILAR, MIRRORED ABOUT ℄ JOINT)



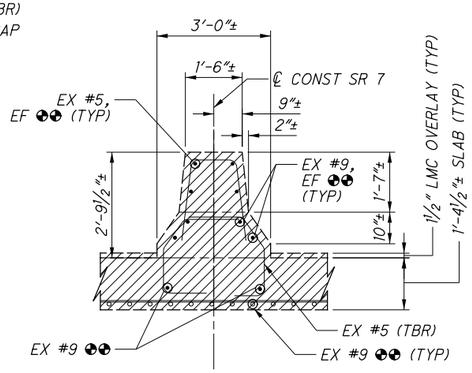
A 13 SECTION (PIER 19L/R SHOWN)



B 13 VIEW



C 13 VIEW (RT SHOWN, LT MIRRORED)



F 13 SECTION (UNIT 4 ONLY)

LEGEND

- DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- ● - CUT EX BAR FLUSH AT CUT LINE
- ●● - SALVAGE EXISTING REINFORCING BAR TO APPLY MECHANICAL CONNECTOR
- ■ - PHASE 1 REMOVAL LIMITS
- ■■ - PHASE 2 REMOVAL LIMITS

NOTES

1. EXISTING #5 STIRRUP BAR TO BE SALVAGED AT JOINT #3 (PIER 19) AND JOINT #4 (PIER 24). THE POSITION OF THE BARS SHOWN ARE FOR REFERENCE ONLY. SEE RECORD PLANS FOR ADDITIONAL DETAILS.

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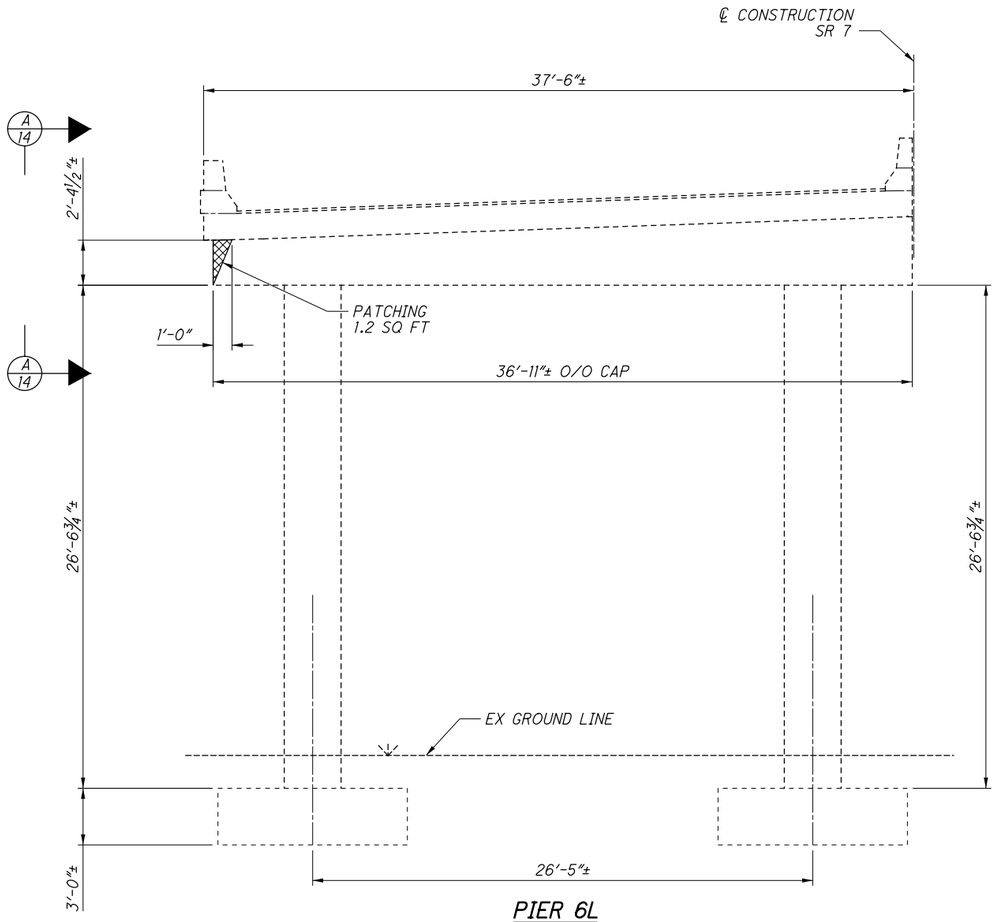
EXPANSION JOINT REMOVAL DETAILS (NO 3 & 4)
BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

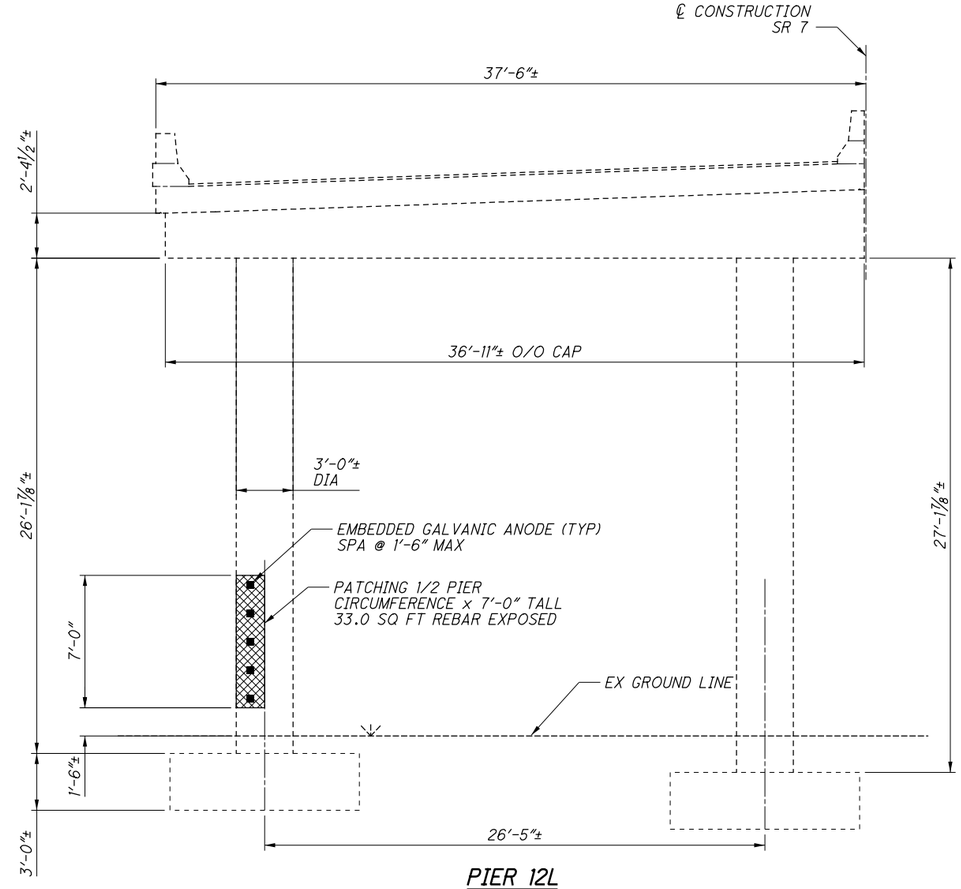
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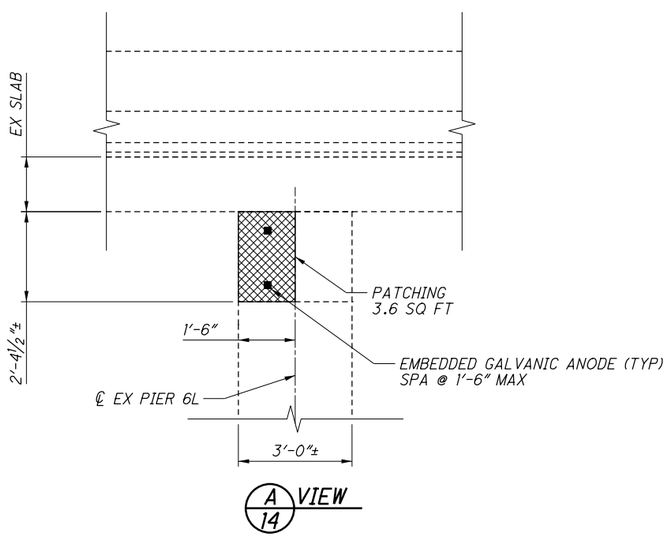
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PIER 6L



PIER 12L



A 14 VIEW

LEGEND

- DENOTES AREA TO BE PATCHED PER ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN

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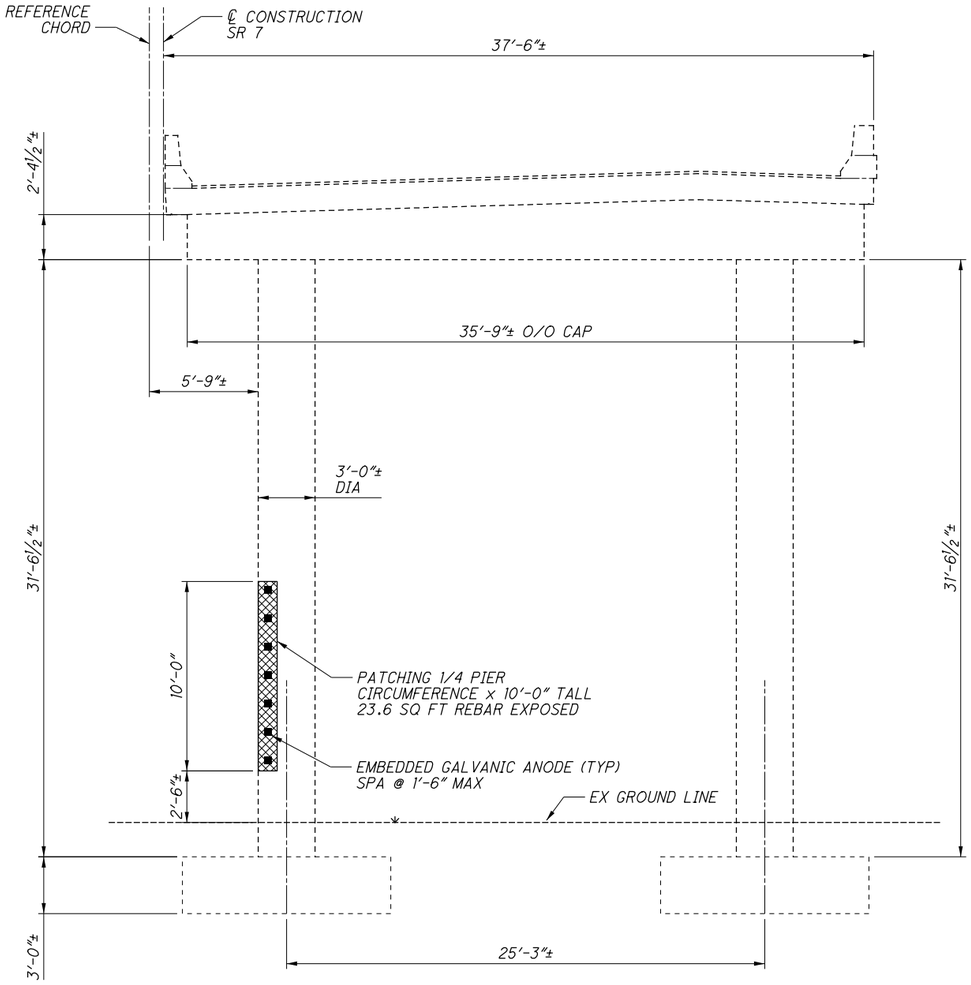
PIERS 6L AND 12L PATCHING DETAILS
BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

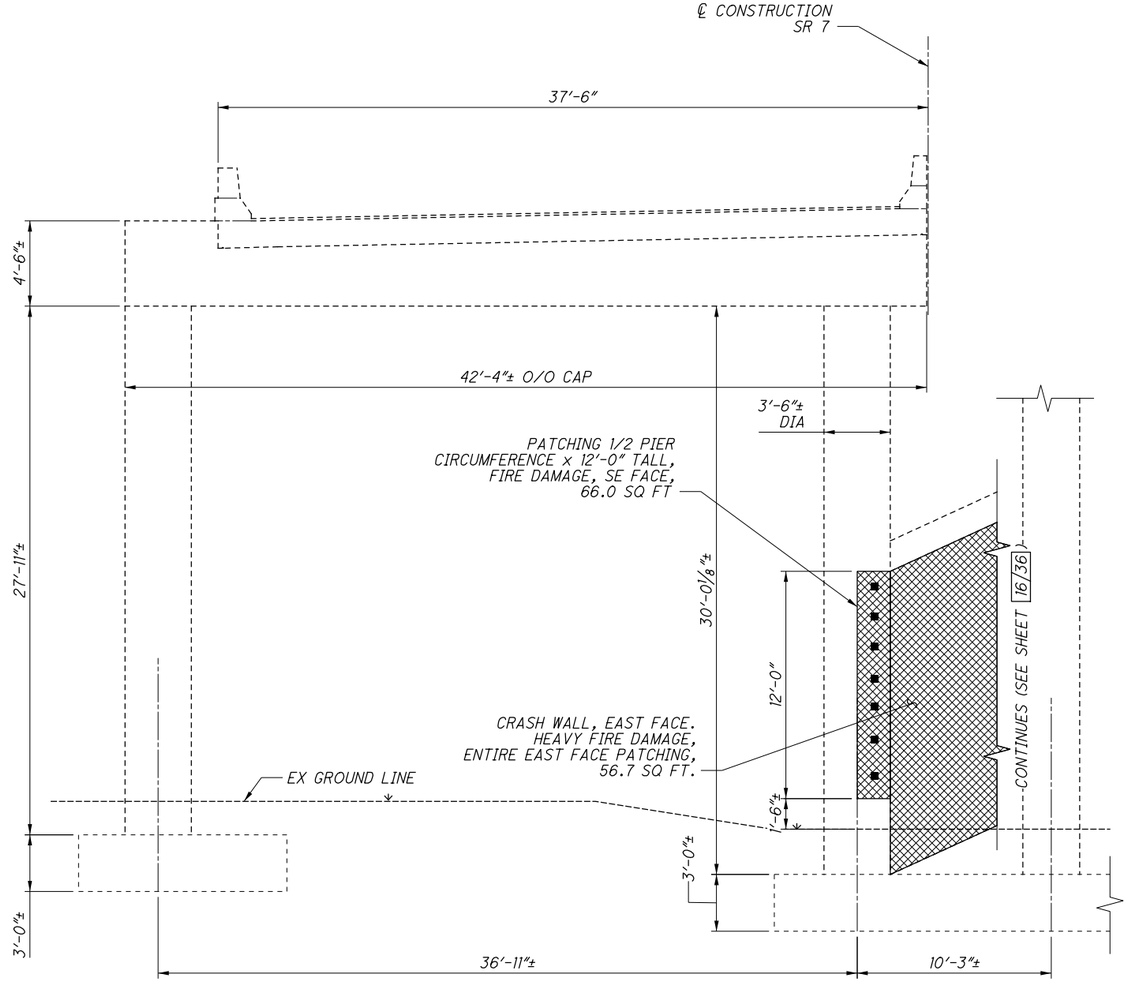
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PIER 16R



PIER 18L

LEGEND

- DENOTES AREA TO BE PATCHED PER ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN
- DENOTES AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE

DESIGN AGENCY
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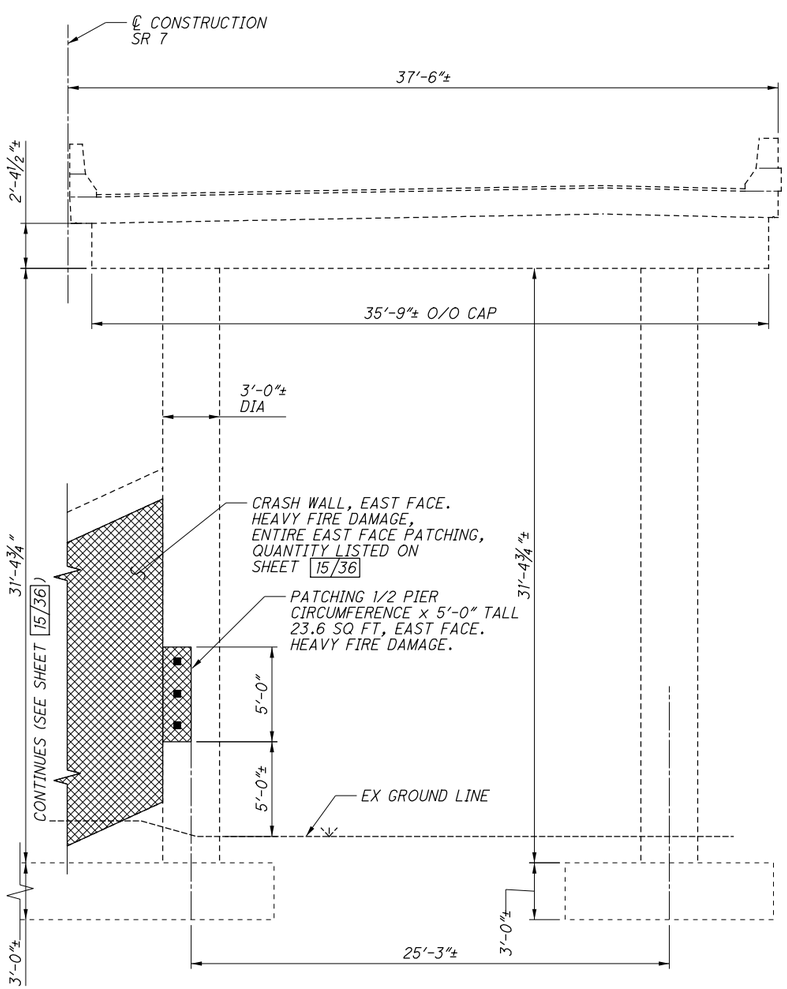
DESIGNED	DRAWN	REVIEWED	DATE
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700339	

PIERS 16R AND 18L PATCHING DETAILS

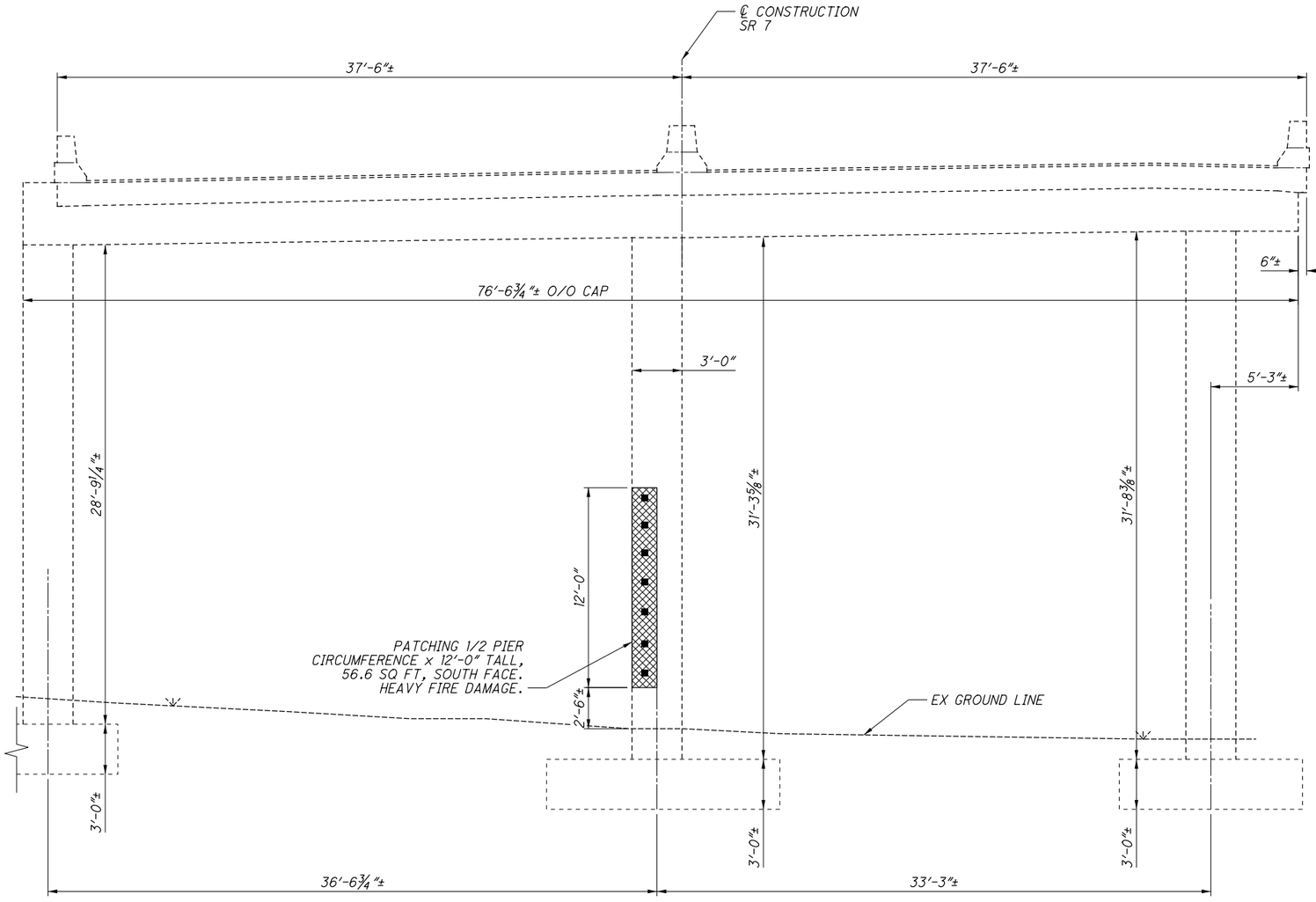
BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

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PIER 18R



PIER 19L/R

LEGEND

- DENOTES AREA TO BE PATCHED PER ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN
- DENOTES AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE

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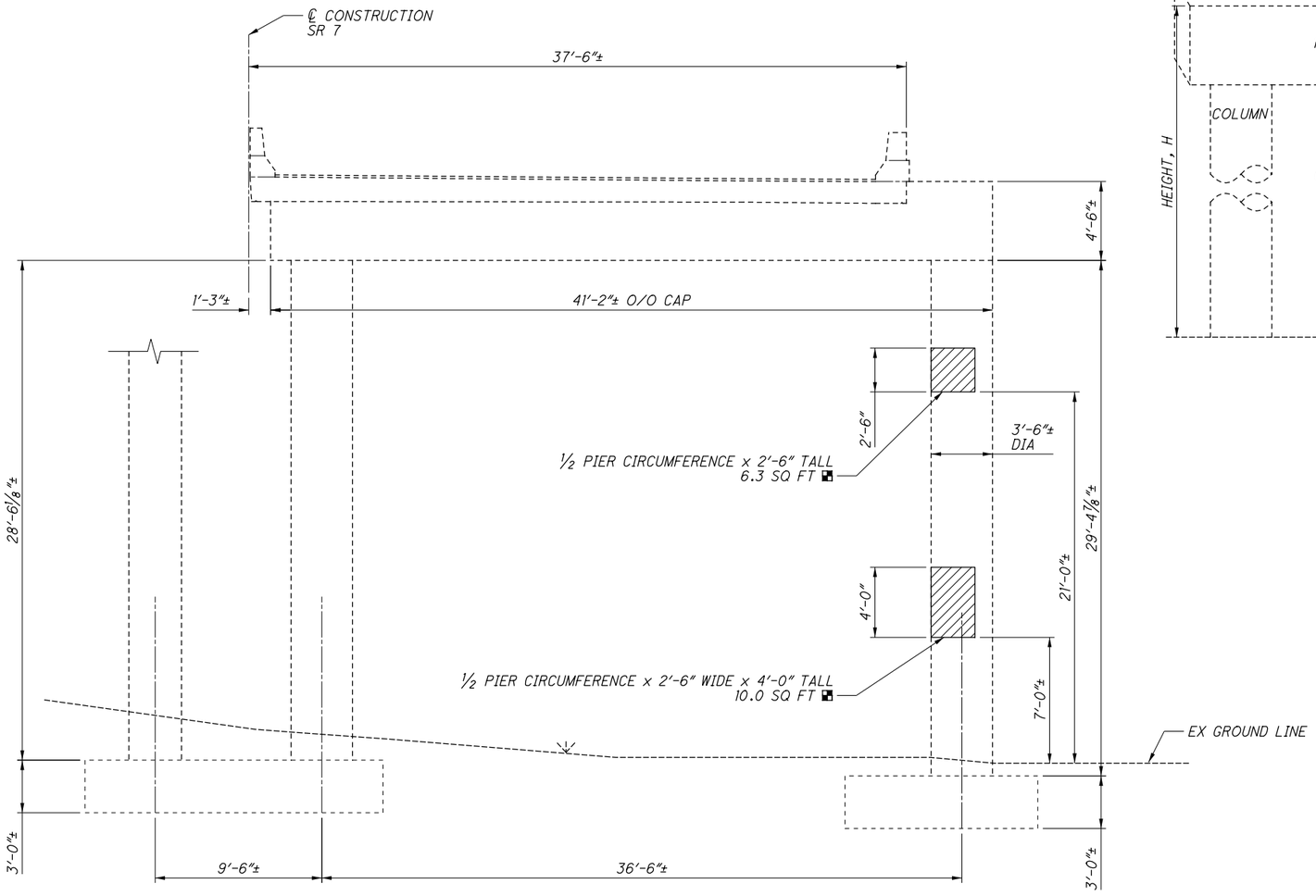
PIERS 18R AND 19L/R PATCHING DETAILS

BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

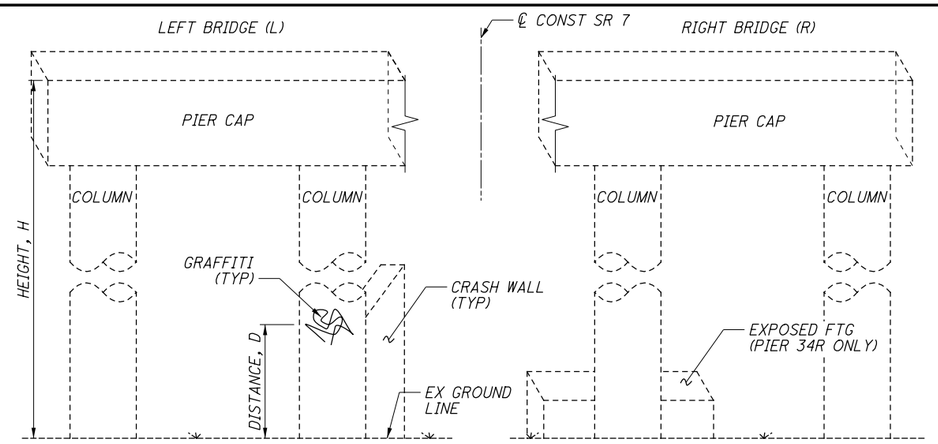
BEL-7-11.48
PID No. 110324

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213

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PIER 25R



PIER - GRAFFITI SEALING SCHEMATIC

(COLUMN NUMBER VARIES),

GRAFFITI SEALING OF PIERS & CRASH WALLS SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)						
PIER NUMBER	LOCATION/QUANTITY					
	HEIGHT H	PIER CAP (SY)	COLUMN(S) (SY)	DISTANCE D ◕	CRASH WALLS (SY)	SUBTOTAL (SY)
4R	25'-9"±	-	2.0	4'-0"±	-	2.0
22R	29'-0"±	-	1.0	2'-6"±	-	1.0
23R	29'-7"±	-	2.5	4'-0"±	12.0	15.0
24R	28'-6"±	-	-	-	12.0	12.0
27R	26'-0"±	-	-	-	6.0	6.0
28R	24'-2"±	-	-	-	6.0	6.0
33R	6'-6"±	23.0	12.5	3'-0"±	-	36.0
34R	3'-0"±	28.0✱	18.5 ◇	3'-0"±	-	47.0
TOTAL CARRIED TO GENERAL SUMMARY (SY)						125.0

✱ INCLUDES ADDITIONAL 5 SY FOR BOTTOM OF DECK IN VICINITY OF PIER

◕ - DISTANCE MEASURED FROM TOP OF EXISTING GROUND TO APPROXIMATE CENTER OF GRAFFITI. DISTANCE VARIES.

◇ - INCLUDES ADDITIONAL 5.5 SY FOR EXPOSED FOOTING.

LEGEND

▨ - DENOTES AREA TO BE REPAIRED USING ITEM 514 - PAINTING, MISC.: ZINC RICH PRIMER

■ - SPIRAL CAGE EXPOSED, DUE TO POOR COVER

DESIGN AGENCY EMH&T

DESIGNED MJR | DRAWN GB | CHECKED TDA | REVIEWED CAS | DATE 10/30/20 | REVISED - | STRUCTURE FILE NUMBER 0700339

PIER 25R PATCHING DETAILS

BRIDGE NO. BEL-7-1279C

SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

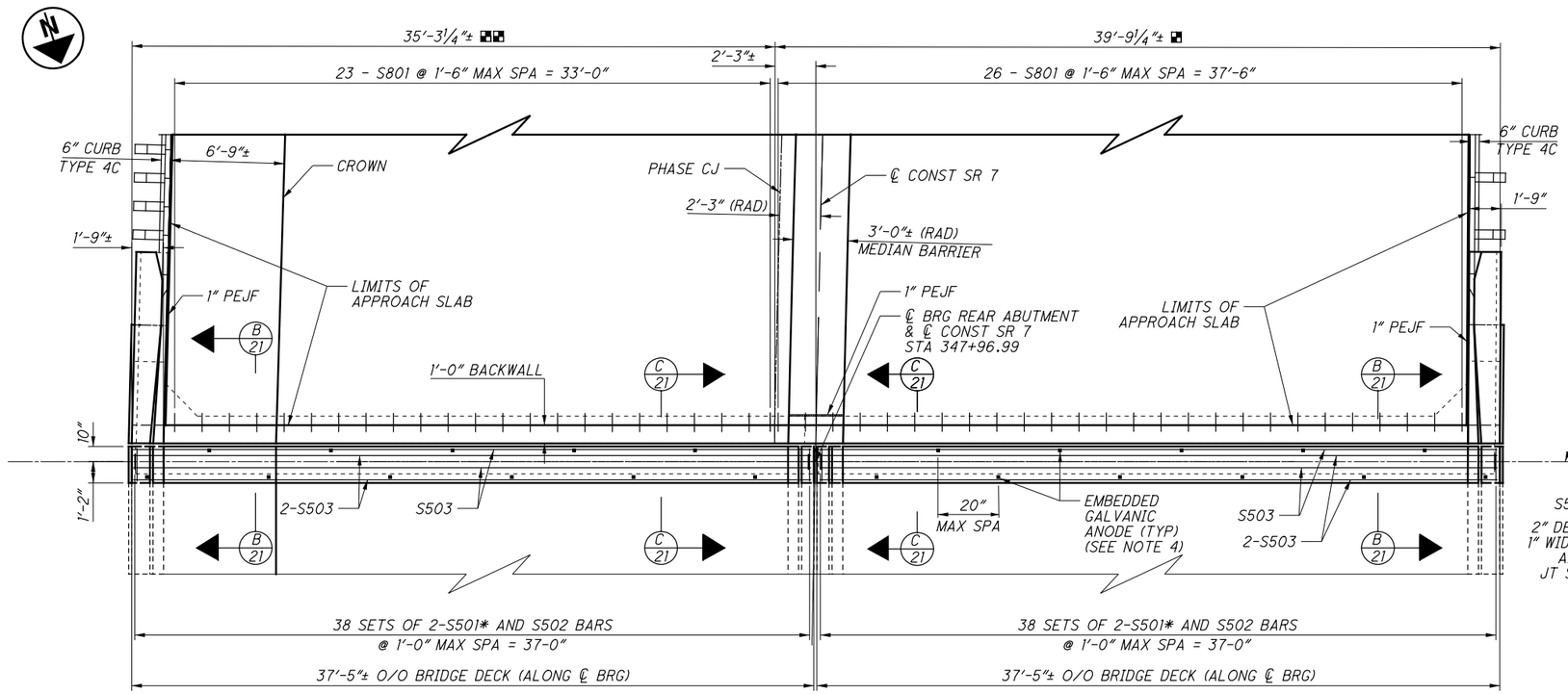
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PID No. 110324

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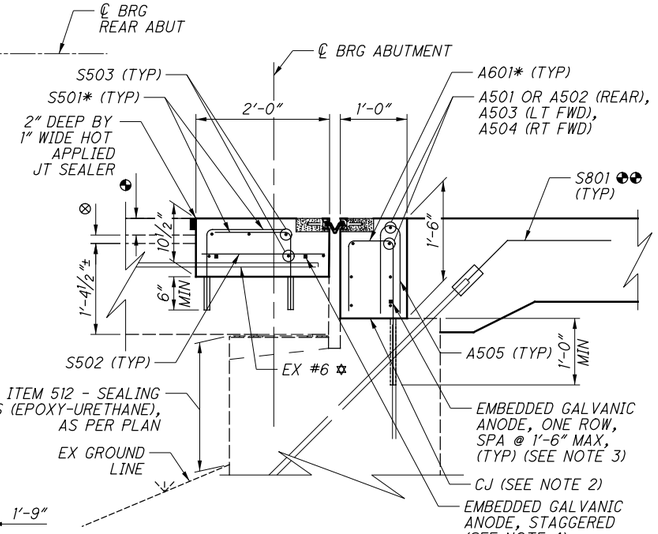


PLAN

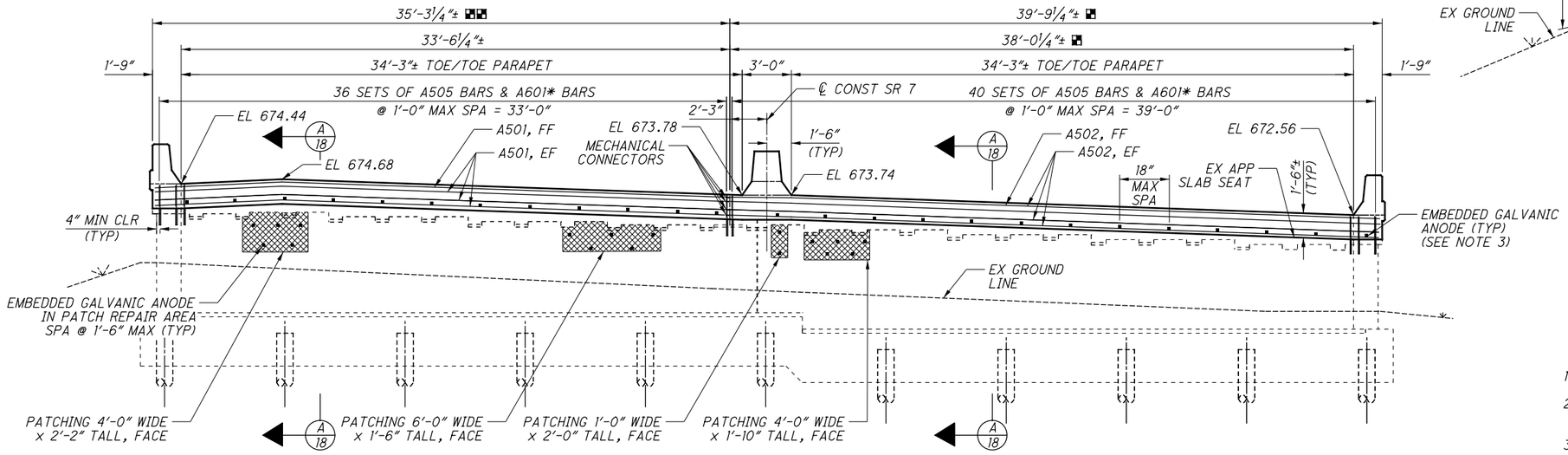
LEGEND

- ■ - PHASE 1 CONSTRUCTION
- ■■ - PHASE 2 CONSTRUCTION
- * - DENOTES DOWEL BAR
- ✡ - SALVAGE EX BAR
- ■ - EMBEDDED GALVANIC ANODE (PAYMENT INCLUDED UNDER ITEM 511 - CONCRETE MISC.: EMBEDDED CONCRETE ANODE)
- ⊗ - EX 1½"± LMC OVERLAY
- ◕ - 3" ASPHALT OVERLAY
- ◕◕ - SALVAGE EX REINFORCING BAR TO APPLY MECHANICAL CONNECTOR

RAD - MEASURED RADIALLY



A 18 A 19 A 20 SECTION



ELEVATION

(ELEVATIONS AND MEASUREMENTS ALONG BACK FACE OF BACKWALL)

NOTES

1. SEE SHEET 23/36 FOR WINGWALL DETAILS.
2. CONSTRUCTION JOINT TO BE LEVEL WITH EX APPROACH SLAB SEAT.
3. EMBEDDED GALVANIC ANODES IN BACKWALL SHALL BE CENTERED IN THE BACKWALL AND LOCATED APPROXIMATELY 3" ABOVE THE LEVEL CONSTRUCTION JOINT/APP SLAB SEAT.
4. EMBEDDED GALVANIC ANODES IN THE PROPOSED DECK AT ABUTMENT JOINTS SHALL BE STAGGERED FRONT FACE-BACK FACE AS SHOWN IN THE PLAN VIEW ON THIS SHEET. ANODES WITHIN THE NEW DECK SHALL BE TIED ATOP THE EXISTING LONGITUDINAL BAR TO REMAIN (EX BAR SPA 19½"±).

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Phone: (614) 775-4500 www.emht.com

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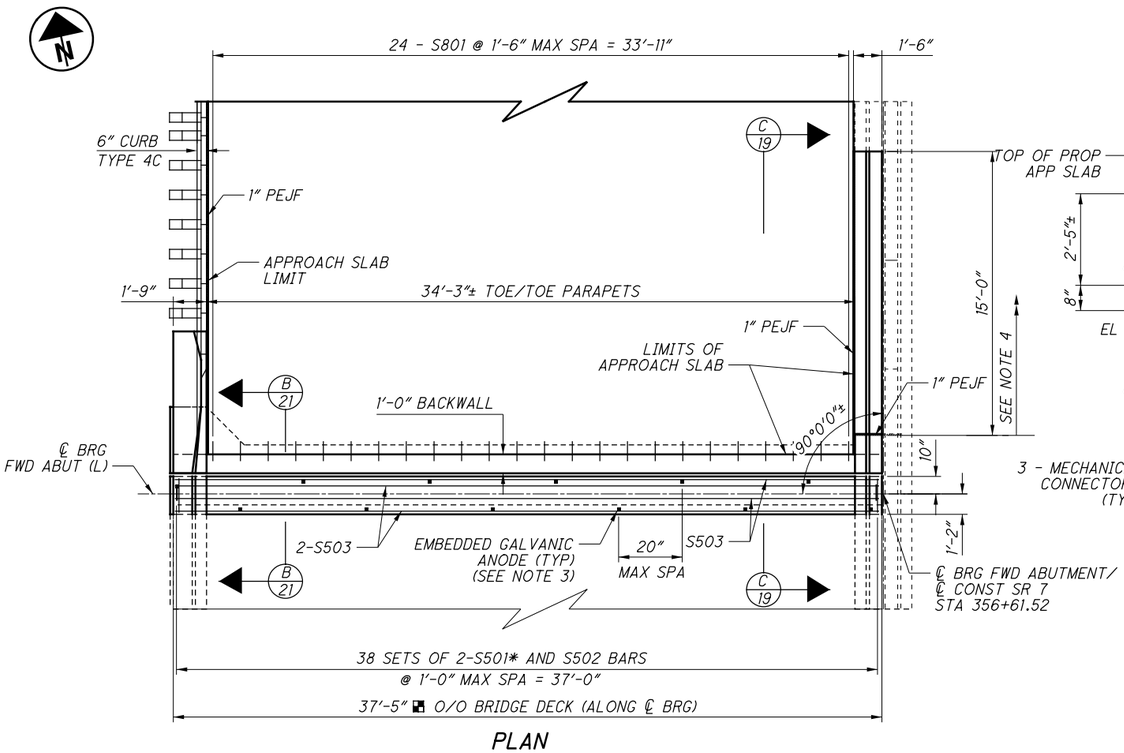
REAR ABUTMENT DETAILS
BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORPS.

BEL-7-11.48
PID No. 110324

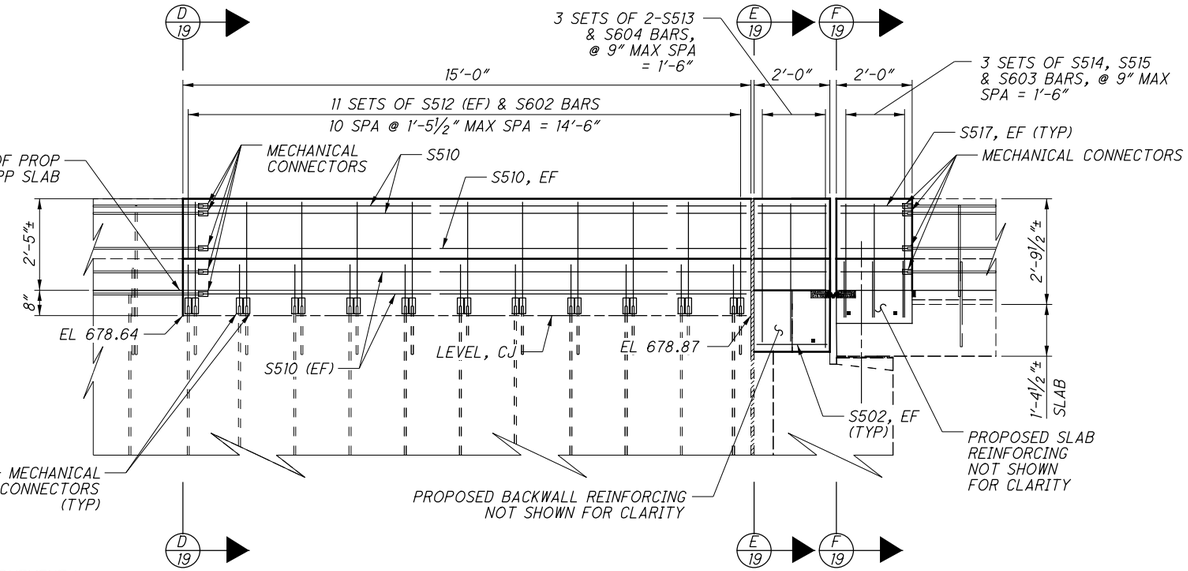
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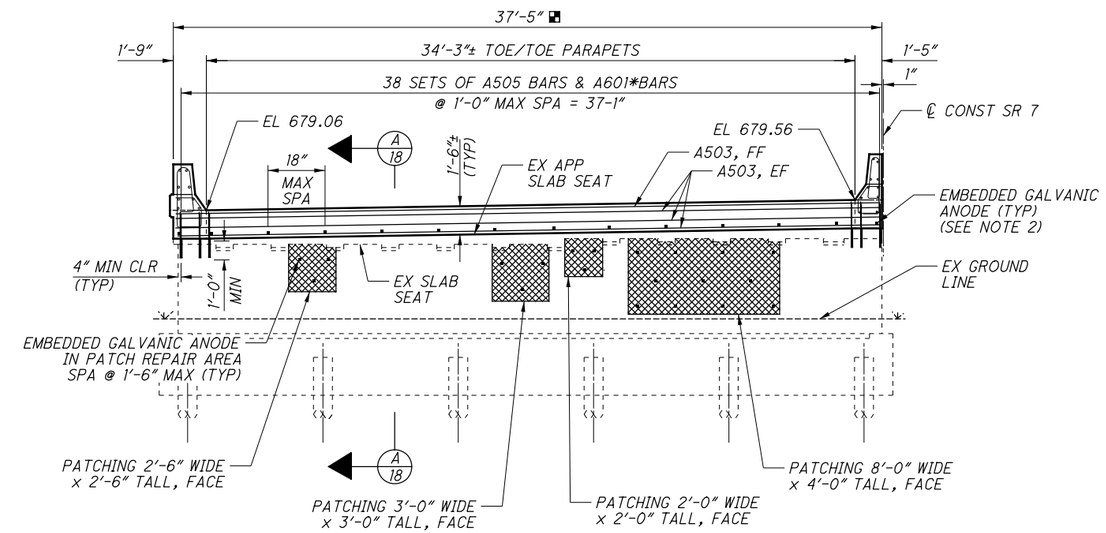
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PLAN

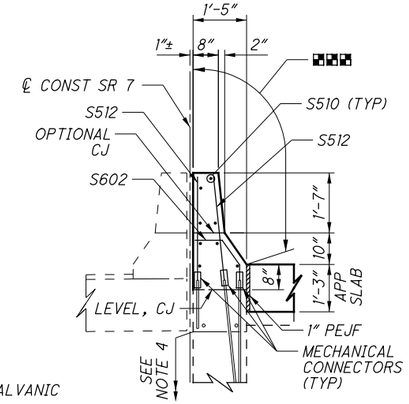


C 19 VIEW

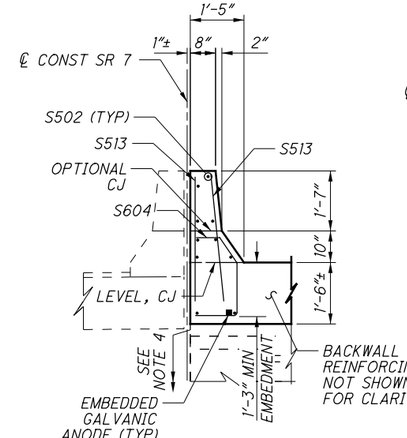


ELEVATION

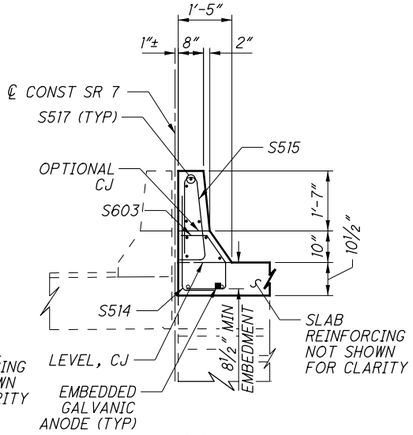
(ELEVATIONS AND MEASUREMENTS ALONG BACK FACE OF BACKWALL)



D 19 SECTION



E 19 SECTION



F 19 SECTION

LEGEND

■ - PHASE 1 CONSTRUCTION

■■ - PHASE 2 CONSTRUCTION

■■■ - SEALING LIMITS (EPOXY-URETHANE) (TYP ALONG BARRIER)

* - DENOTES DOWEL BAR

■ - EMBEDDED GALVANIC ANODE (PAYMENT INCLUDED UNDER ITEM 511 - CONCRETE MISC.: EMBEDDED CONCRETE ANODE)

NOTES

1. SEE SHEET 24/36 FOR WINGWALL DETAILS.
2. EMBEDDED GALVANIC ANODES IN BACKWALL SHALL BE CENTERED IN THE BACKWALL AND LOCATED APPROXIMATELY 3" ABOVE THE LEVEL CONSTRUCTION JOINT/APP SLAB SEAT.
3. EMBEDDED GALVANIC ANODES IN THE PROPOSED DECK AT ABUTMENT JOINTS SHALL BE STAGGERED FRONT FACE BACK FACE AS SHOWN IN THE PLAN VIEW ON THIS SHEET. ANODES WITHIN THE PROPOSED DECK SHALL BE TIED ATOP THE EXISTING LONGITUDINAL BAR TO REMAIN (EX BAR SPA 19½"±).
4. SEAL FACE OF TURNBACK RETAINING WITH EPOXY-URETHANE. SEALING LIMITS SHALL EXTEND FROM BOTTOM OF DECK TO EXISTING GROUND ALONG FULL LENGTH OF WALL (BETWEEN FORWARD ABUTMENTS). SEE SITE PLAN FOR ADDITIONAL DETAILS.

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EMH&T
Engineers, Architects, Planners, Surveyors, Scientists, Economists
5500 New Albany Road, Columbus, Ohio 43054
614.775.4500 www.emht.com

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700339	

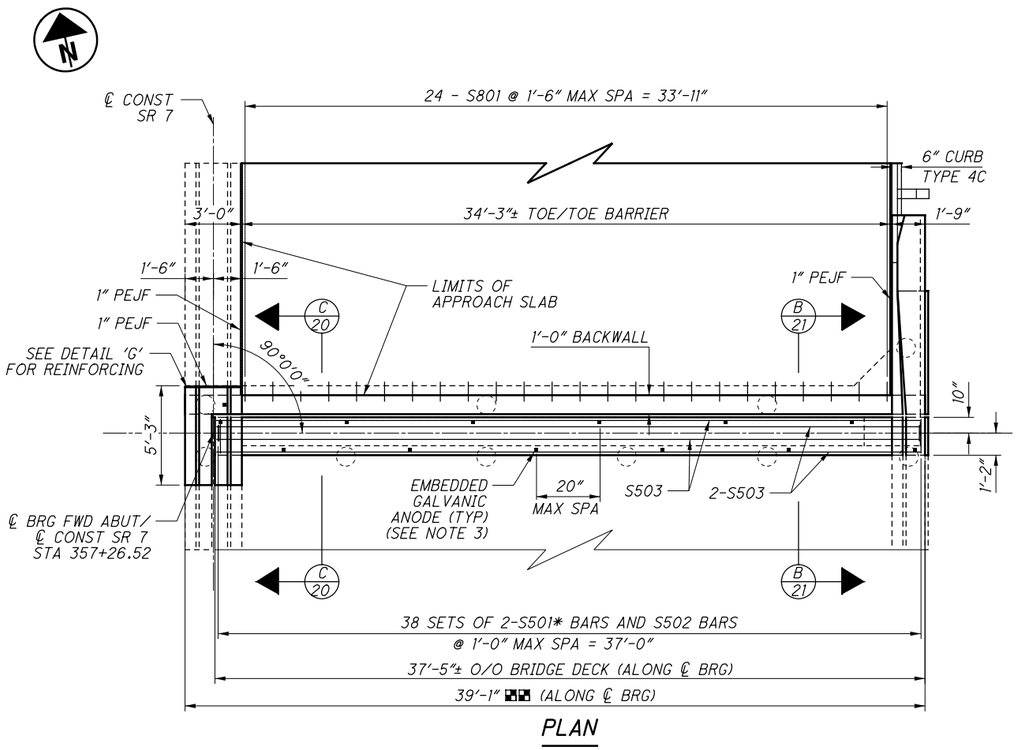
FORWARD ABUTMENT DETAILS (LEFT BRIDGE)
BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

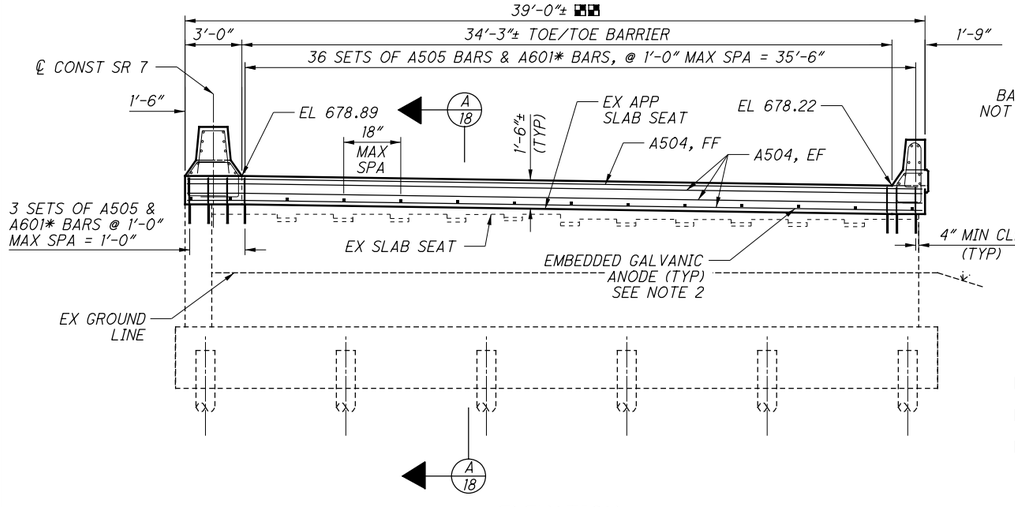
19 / 36

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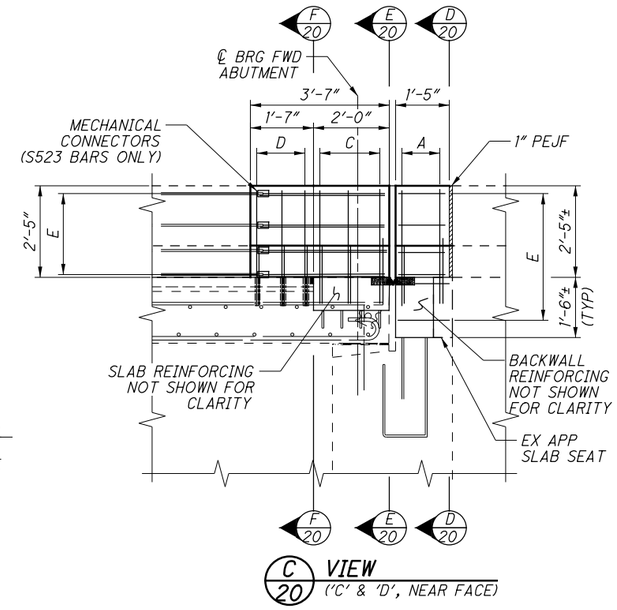


PLAN



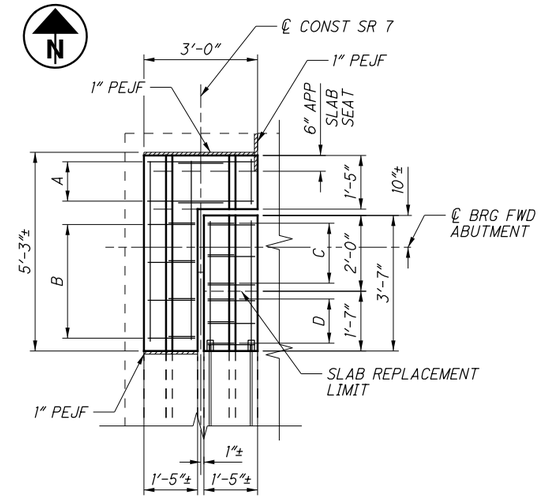
ELEVATION

(ELEVATIONS AND MEASUREMENTS ALONG BACK FACE OF BACKWALL)



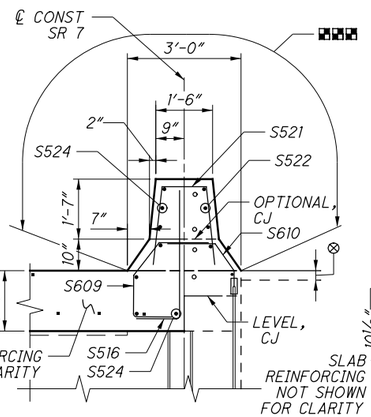
C 20 VIEW

('C' & 'D', NEAR FACE)

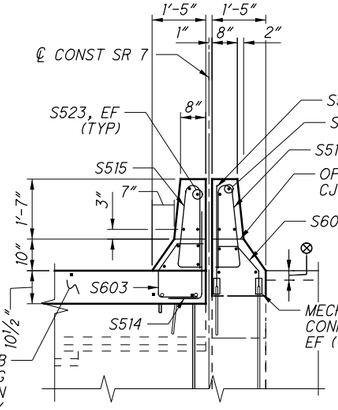


DETAIL G

(SEE NOTE 4)

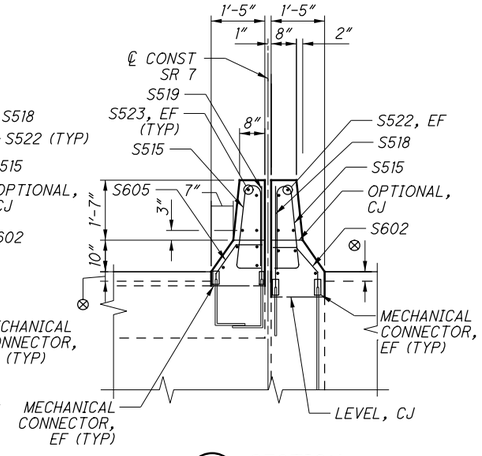


D 20 SECTION



E 20 SECTION

(DIMENSION ON LEFT SIMILAR)



F 20 SECTION

(DIMENSION ON LEFT SIMILAR)

LEGEND

■ - PHASE 1 CONSTRUCTION

■■ - PHASE 2 CONSTRUCTION

■■■ - SEALING LIMITS (EPOXY-URETHANE) (TYP ALONG BARRIER)

* - DENOTES DOWEL BAR

✡ - SALVAGE EX BOTTOM LONGITUDINAL & BOTTOM TRANSVERSE BARS

◒ - CUT EXISTING REINFORCING BARS FLUSH AT CONSTRUCTION JOINT

■ - EMBEDDED GALVANIC ANODE (PAYMENT INCLUDED UNDER ITEM 511 - CONCRETE MISC.: EMBEDDED CONCRETE ANODE)

⊗ - PROPOSED ASPHALT OVERLAY, 3"±

A: 2 SETS OF S516 BARS, S521, S609 BAR & S610 BARS @ 1'-0" MAX SPA = 1'-0"

B: 4 SETS OF S515, S518 & S602 BARS @ 1'-0" MAX SPA = 3'-0"

C: 3 SETS OF S514, S515 & S603 BARS @ 10" MAX SPA = 1'-8"

D: 3 SETS OF S515, S519 & S605 BARS @ 10" MAX SPA = 1'-8"

E: SEE SECTION VIEWS FOR REINFORCEMENT DETAILS

NOTES

1. SEE SHEET 23/36 FOR WINGWALL DETAILS.

2. EMBEDDED GALVANIC ANODES IN BACKWALL SHALL BE CENTERED IN THE BACKWALL AND LOCATED APPROXIMATELY 3" ABOVE THE HORIZONTAL CJ/ APPROACH SLAB SEAT.

3. EMBEDDED GALVANIC ANODES IN THE PROPOSED DECK AT ABUTMENT JOINTS SHALL BE STAGGERED FRONT FACE-BACK FACE AS SHOWN IN PLAN VIEW ON THIS SHEET. ANODES WITHIN THE PROPOSED DECK SHALL BE TIED ATOP THE EXISTING LONGITUDINAL BAR TO REMAIN (EX. SPA 191#2"±).

4. THE FULL EXTENTS OF DETAIL G ARE TO BE CONSTRUCTED DURING PHASE 2.

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Engineers, Architects, Planners, Surveyors, Environmental Scientists
5500 New Albany Road, Columbus, Ohio 43054
Phone: (614) 775-4500 www.emht.com

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MJR	MJR	CAS	10/30/20
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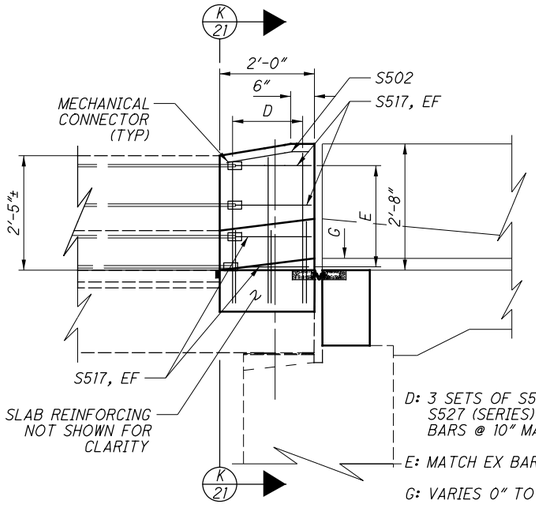
FORWARD ABUTMENT DETAILS (RIGHT BRIDGE)
BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

20/36

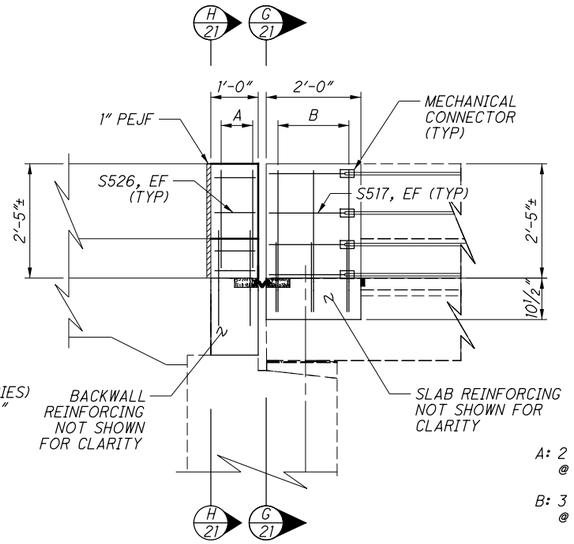
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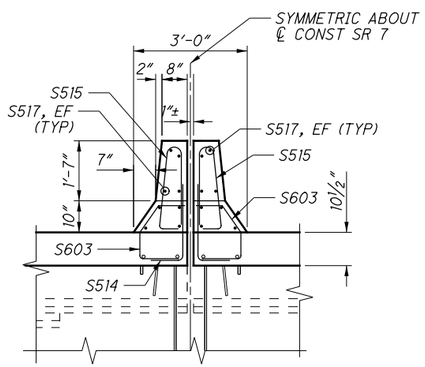


B 18 B 19 B 20 VIEW (RIGHT SECTION SHOWN)

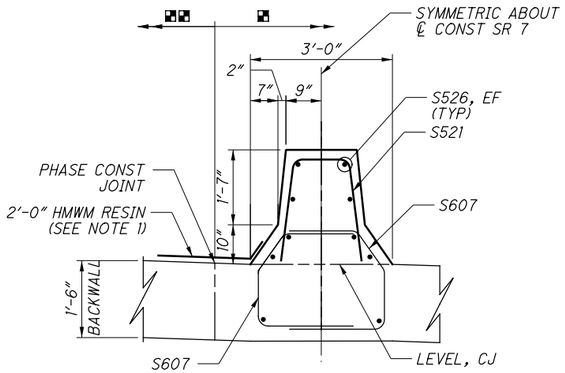
(LEFT SECTION OPPOSITE HAND)



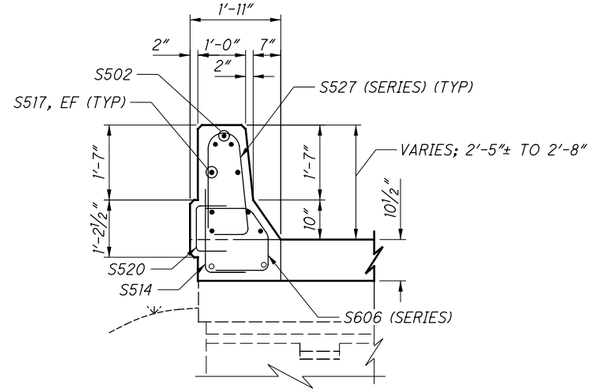
C 18 VIEW (RIGHT BRIDGE SHOWN, LEFT BRIDGE SIMILAR)



G 21 SECTION (SEE NOTE 2)



H 21 SECTION



K 21 SECTION

LEGEND

- ■ - PHASE 1 CONSTRUCTION
- ■■ - PHASE 2 CONSTRUCTION
- ■ - EMBEDDED GALVANIC ANODE (PAYMENT INCLUDED UNDER ITEM 511 - CONCRETE MISC.: EMBEDDED CONCRETE ANODE)

NOTES

1. PER C&MS 511.19, THE 2'-0" OF HMWM CENTERED ON THE PHASE CONSTRUCTION JOINT IS CONSIDERED INCIDENTAL TO ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE.

2. REINFORCING AND DIMENSIONS APPLY TO LEFT AND RIGHT MEDIAN BARRIER.

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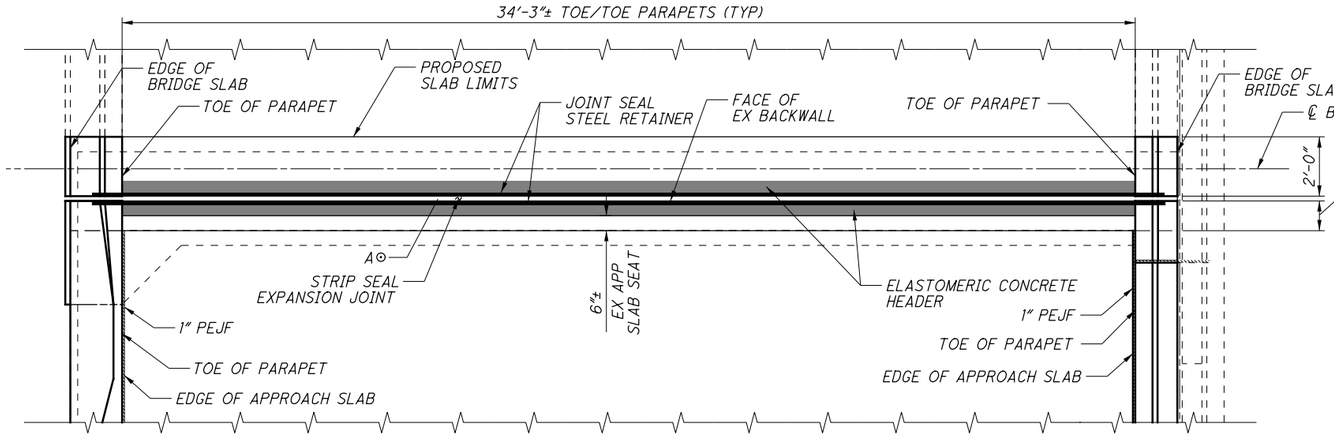
ABUTMENT PARAPET DETAILS

BRIDGE NO. BEL-7-1279C

SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

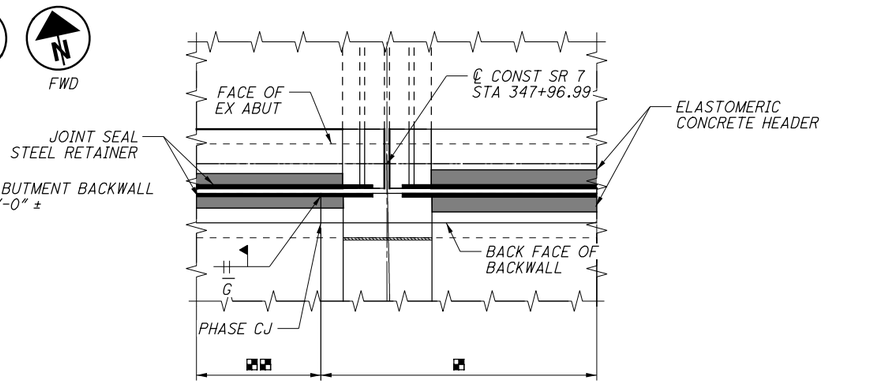
BEL-7-11.48

PID No. 110324



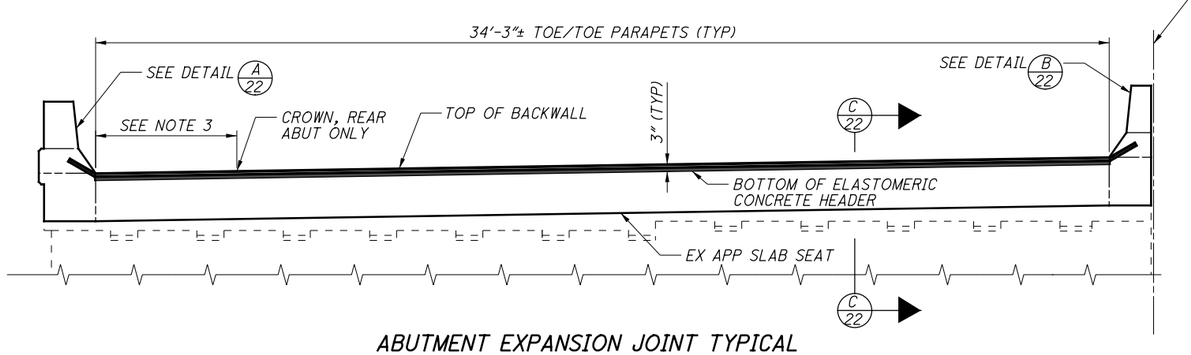
ABUTMENT EXPANSION JOINT PLAN

(LEFT FWD ABUTMENT SHOWN, LOOKING DOWN STATION)
(RIGHT FWD & REAR ABUTMENT SIMILAR)



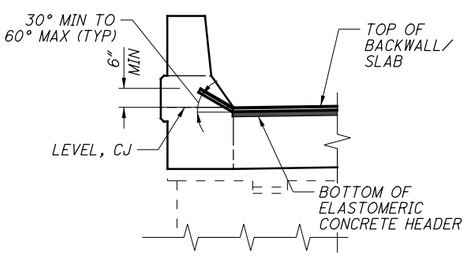
REAR ABUTMENT EXPANSION JOINT SPLICE DETAIL

(LOOKING DOWNSTATION, SEE NOTE 2)

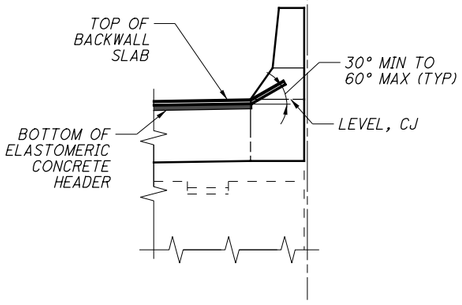


ABUTMENT EXPANSION JOINT TYPICAL

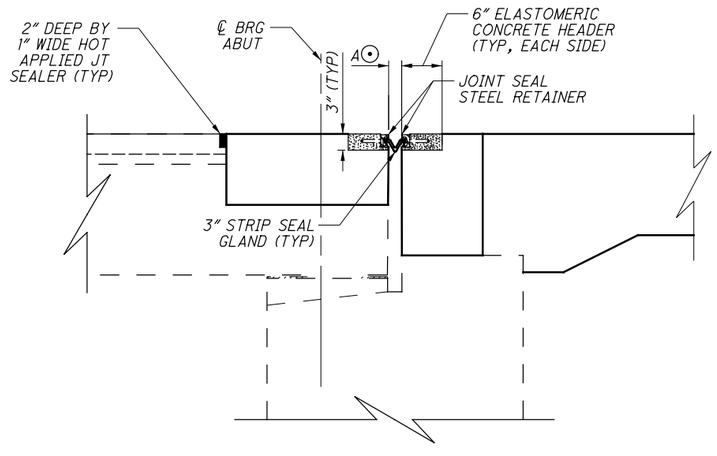
(LEFT FWD ABUTMENT SHOWN)
(RIGHT FWD & REAR ABUTMENT SIMILAR)



A 22 DETAIL
FASCIA PARAPET



B 22 DETAIL
MEDIAN PARAPET



C 22 SECTION

3" STRIP SEAL EXPANSION JOINT DETAILS			
AMBIENT TEMPERATURE (DEGREES)	REAR ABUTMENT A⊙ (IN)	FORWARD ABUTMENT (NORTH BOUND) A⊙ (IN)	FORWARD ABUTMENT (SOUTH BOUND) A⊙ (IN)
30	1.84	1.84	1.84
40	1.78	1.78	1.78
50	1.72	1.72	1.72
60	1.66	1.66	1.66
70	1.60	1.60	1.60
80	1.54	1.54	1.54
90	1.48	1.48	1.48

LEGEND

- ■ - PHASE 1 CONSTRUCTION
- ■■ - PHASE 2 CONSTRUCTION

NOTES

1. SEE ODOT STD DWG EXJ-6-17 FOR ADDITIONAL DETAILS.
2. STRIP SEAL GLAND SHALL BE FURNISHED IN ONE CONTINUOUS PIECE UNLESS OTHERWISE APPROVED BY THE ENGINEER.
3. SEE PROPOSED ABUTMENT DETAILS FOR JOINT GEOMETRY AT EACH LOCATION.

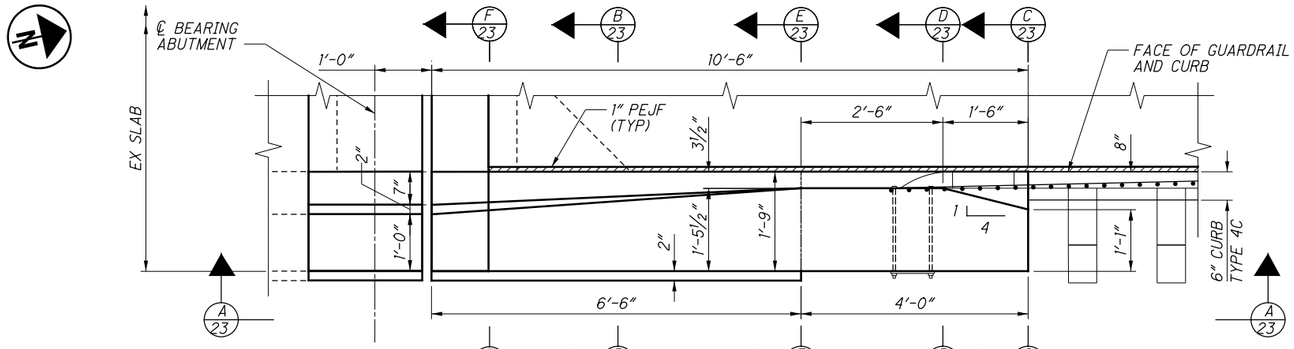
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Engineers, Architects, Planners, Surveyors, Scientists
5500 New Albany Road, Columbus, Ohio 43054
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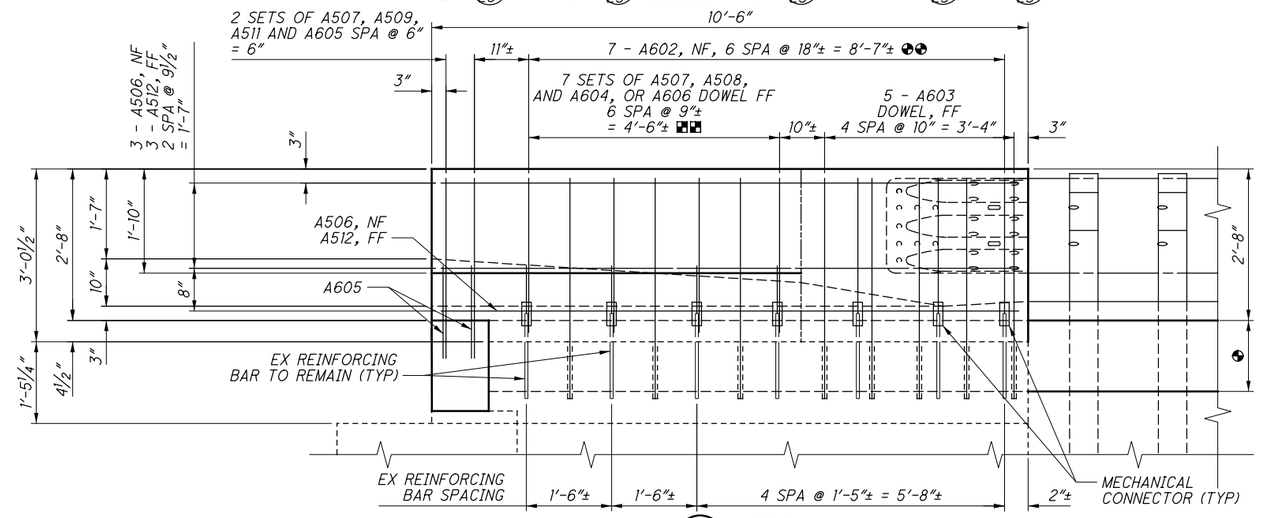
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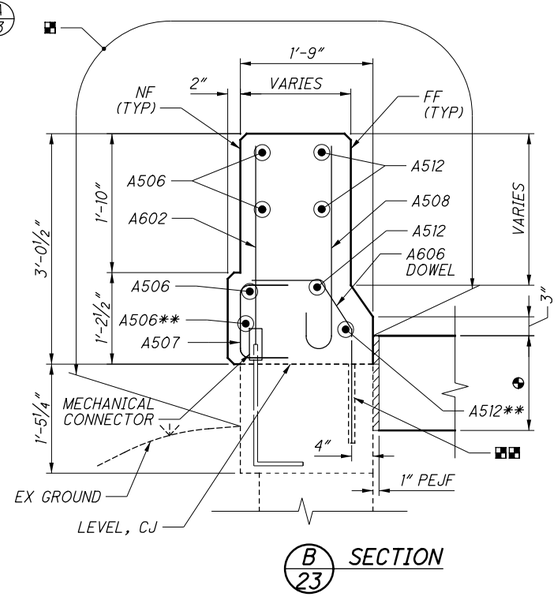
ABUTMENT EXPANSION JOINT DETAILS
BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
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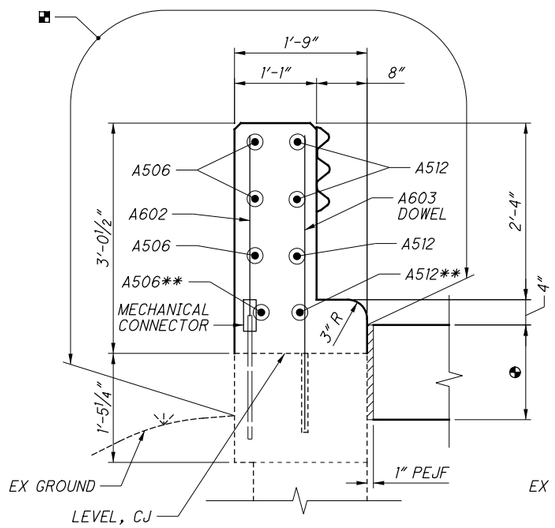


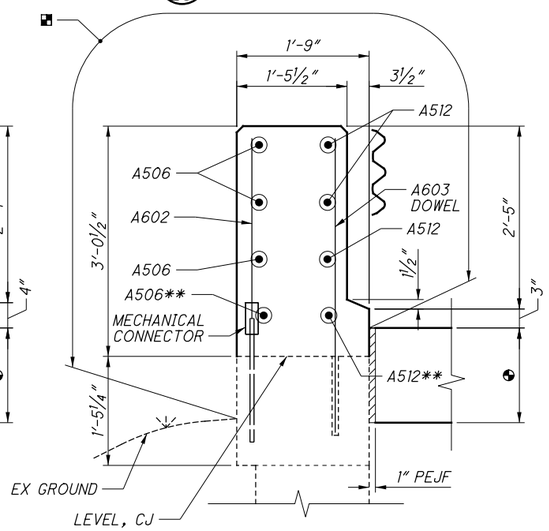
LEGEND

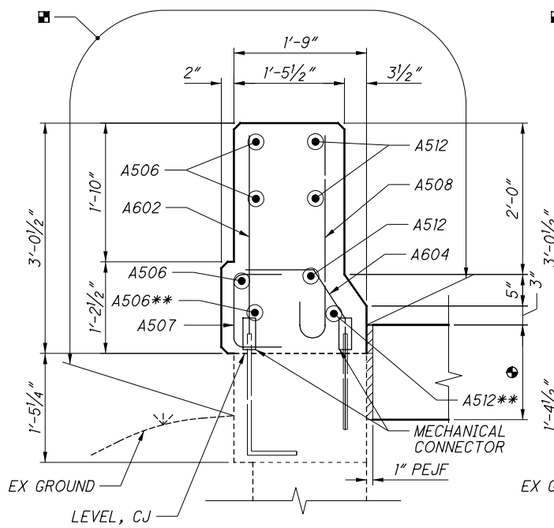
- ▪ - LIMITS OF SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
- ▪▪ - THE A606 DOWEL BARS SHALL BE PLACED BETWEEN THE EXISTING BARS (SECTION B-B). THE A604 BARS SHALL BE MECHANICALLY CONNECTED TO THE EX BARS (SECTION E-E)
- ◒ - 1'-3" APPROACH SLAB
- ◒◒ - THE BARS WILL BE SPACED TO MATCH THE EX BAR SPACING FOR MECHANICAL CONNECTION
- ** - FIELD BEND BARS WHERE NECESSARY.

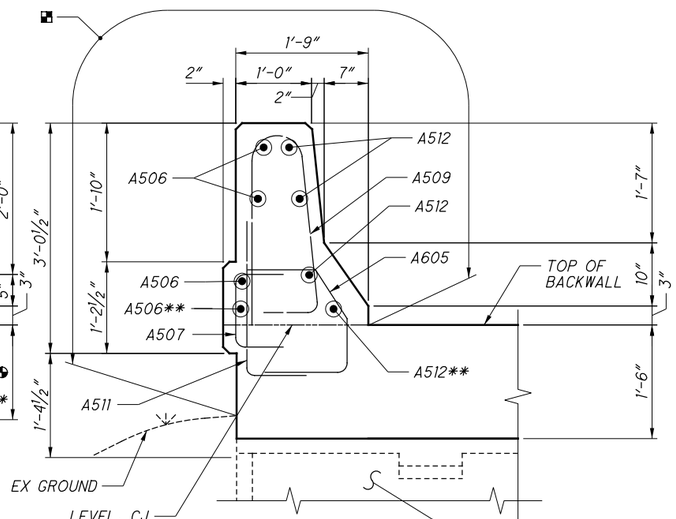
NOTES

1. FORWARD RIGHT WINGWALL PARAPET DETAILS SHOWN, REAR LEFT AND RIGHT WINGWALL PARAPET DETAILS SIMILAR.









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EMH&T
Engineers • Surveyors • Planners • Scientists
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Phone: 614.775.4500

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WINGWALL PARAPET DETAILS - REAR & FWD RIGHT

BRIDGE NO. BEL-7-11.48
PID No. 110324

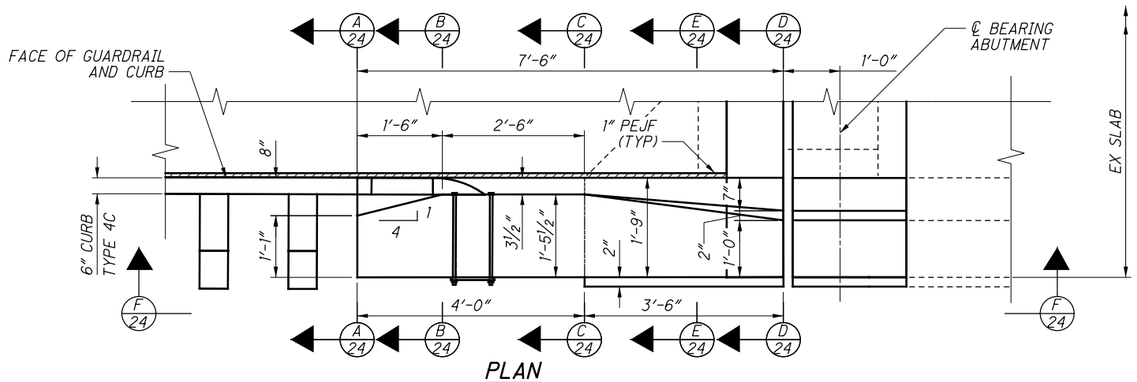
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

23 / 36

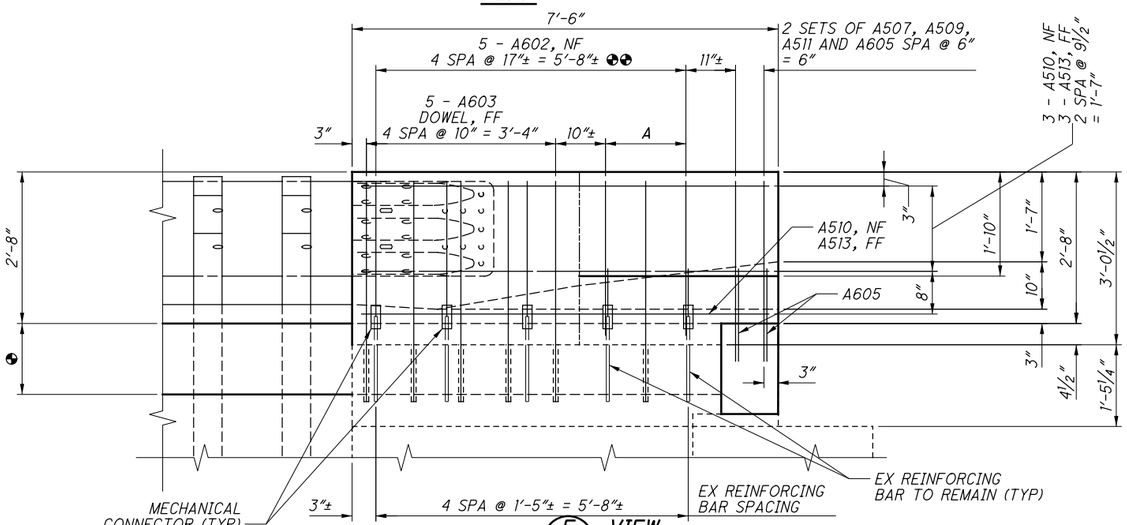
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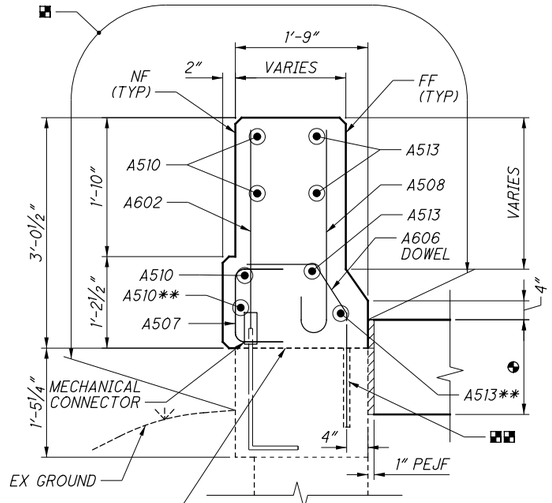
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PLAN



F 24 VIEW



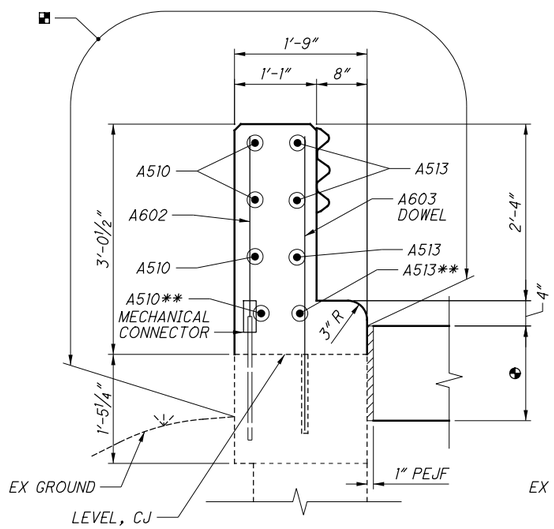
E 24 SECTION

LEGEND

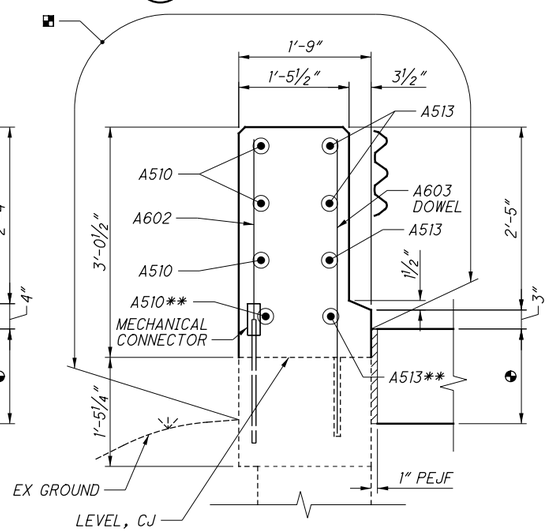
- ▪ - LIMITS OF SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
- ▪▪ - THE A606 DOWEL BARS SHALL BE PLACED BETWEEN THE EXISTING BARS (SECTION E-E). THE A604 BARS SHALL BE MECHANICALLY CONNECTED TO THE EX BARS (SECTION C-C)
- ◒ - 1'-3" APPROACH SLAB
- ◒◒ - THE BARS WILL BE SPACED TO MATCH THE EX BAR SPACING FOR MECHANICAL CONNECTION

** - FIELD BEND WHERE NECESSARY.

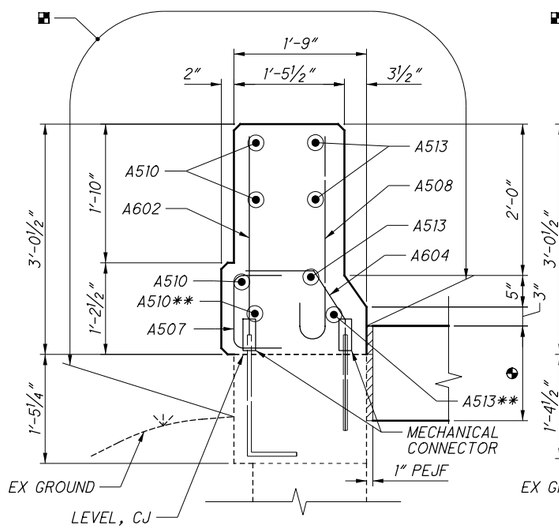
A - 3 SETS OF A507, A508, AND A604, OR A606 DOWEL, FF 2 SPA @ 8½"± = 1'-5"± ▪▪



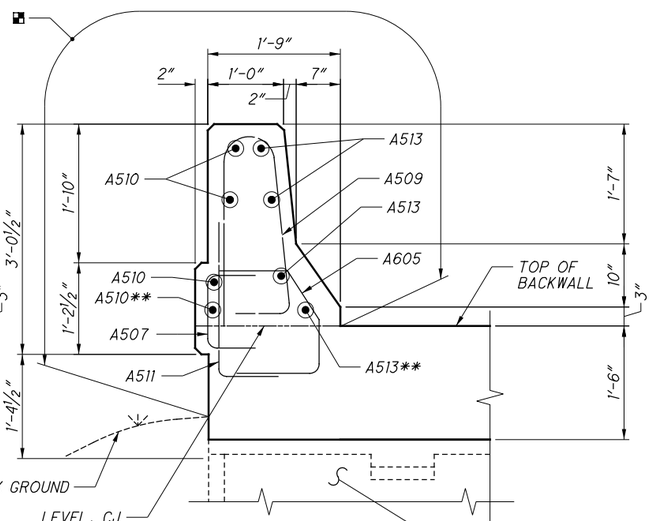
A 24 SECTION



B 24 SECTION



C 24 SECTION



D 24 SECTION

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TDA	-	0700339	

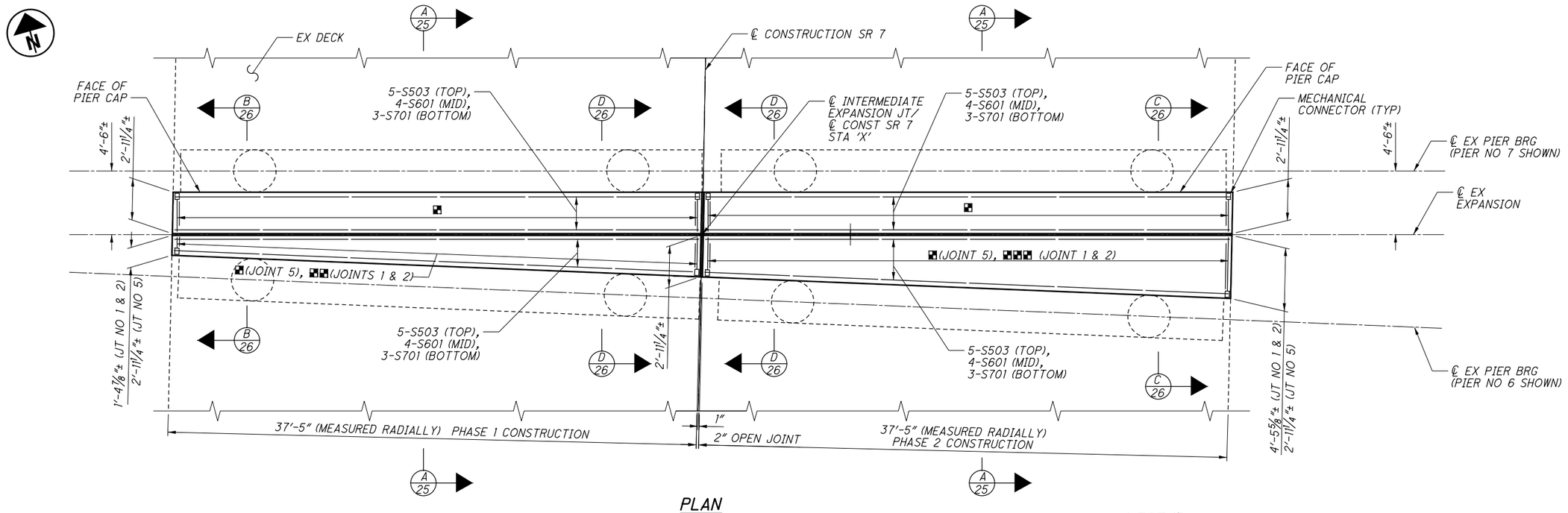
WINGWALL PARAPET DETAILS - FORWARD LEFT

BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

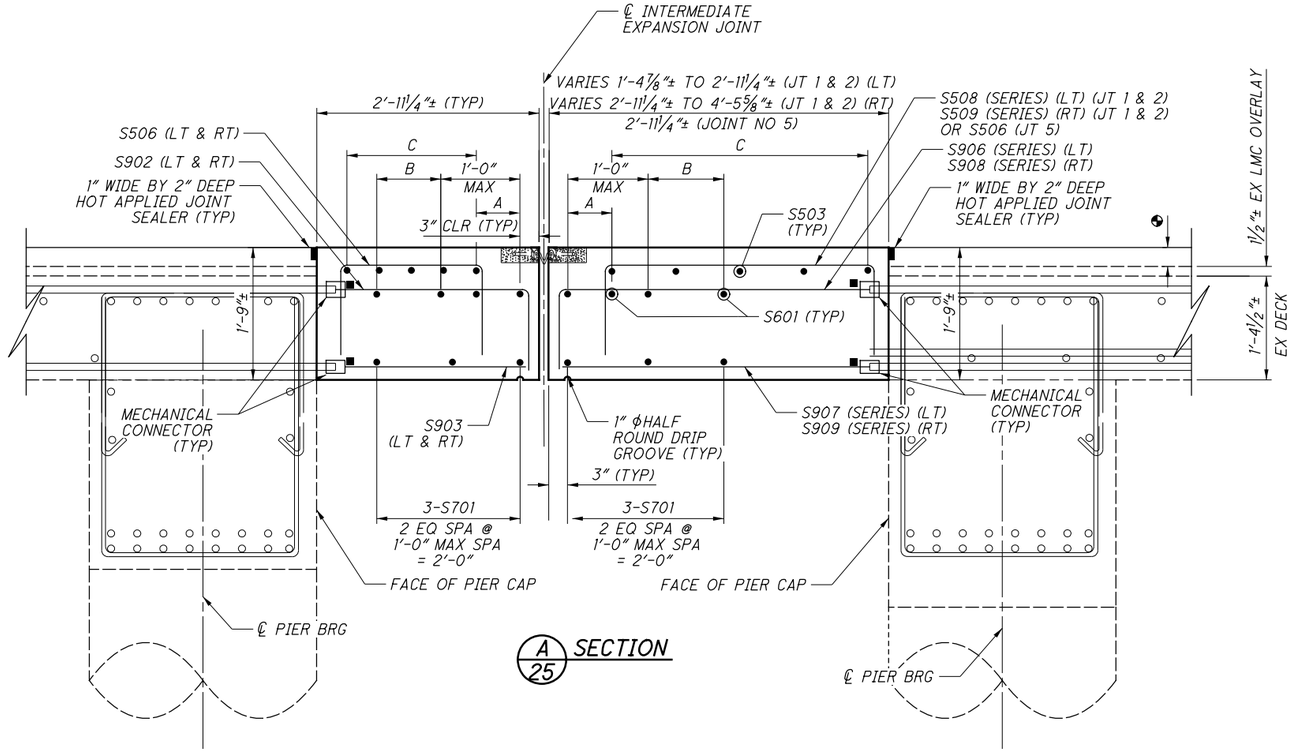
24 / 36

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PLAN

(MEDIAN, PARAPET AND ANODES NOT SHOWN FOR CLARITY)



LEGEND

JOINT NO 1 & 2

■ - 35 SETS OF S506* (TOP), S903 (BOTTOM) SPA @ 1'-1"±, AND 69-S902 (MID) SPA @ 6½"± = 36'-10"±

■■ - 35 SETS OF S508* (TOP SERIES), S907 (BOTTOM SERIES) SPA @ 1'-1"±, AND 69-S906 (MID, SERIES) SPA @ 6½"± = 36'-10"±

■■■ - 35 SETS OF S509* (TOP SERIES), S909 (BOTTOM SERIES) SPA @ 1'-1"±, AND 69-S908 (MID, SERIES) SPA @ 6½"± = 36'-10"±

JOINT NO 5

■ - 35 SETS OF S506* (TOP), S903 (BOTTOM) SPA @ 1'-1"±, AND 69-S902 (MID) SPA @ 6½"± = 36'-10"±

* TOP BAR (#5) SPACING TO MATCH EXISTING BOTTOM LONGITUDINAL (#9) BAR SPACING (PER RECORD PLANS SPA = 1'-1")

A: 2-S601 SPA @ 6" = 6"

B: 2-S601 SPA @ 1'-0" MAX

C: 5-S503 SPA @ 9" MAX

■ - EMBEDDED GALVANIC ANODE (PAYMENT INCLUDED UNDER ITEM 511 - CONCRETE MISC.: EMBEDDED CONCRETE ANODE)

◕ - PROPOSED 3" ASPHALT OVERLAY (TYP)

LOCATION	STA 'X'
JT NO. 1	349+53.00
JT. NO. 2	351+15.51
JT. NO. 5	355+70.52

NOTES

1. FOR STRIP SEAL EXPANSION JOINT DETAILS SEE SHEET 30/36 .
2. SEE DETAIL J ON SHEET 26/36 FOR EMBEDDED GALVANIC ANODE SPACING IN DECK AT INTERMEDIATE EXPANSION JOINTS.

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EMH&T
Engineers • Architects • Surveyors • Scientists
5500 New Albany Road, Columbus, Ohio 43054
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MJR	MJR	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700339	

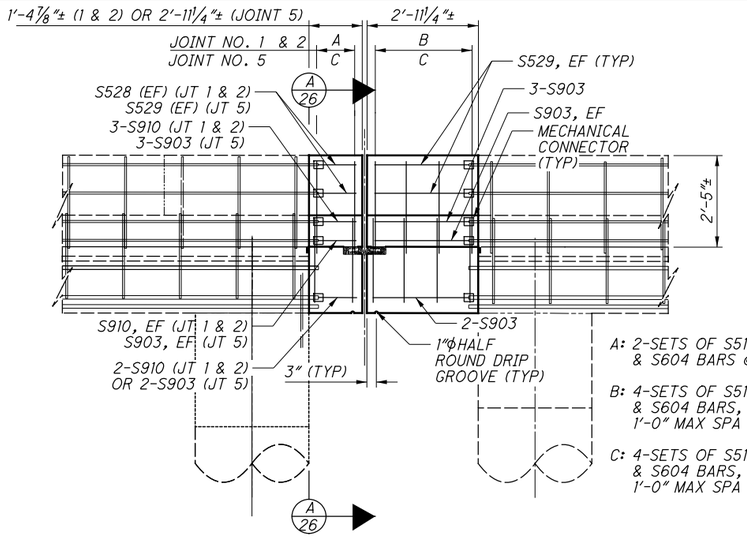
INTERMEDIATE EXPANSION JOINT (No.1, 2 & 5)
BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

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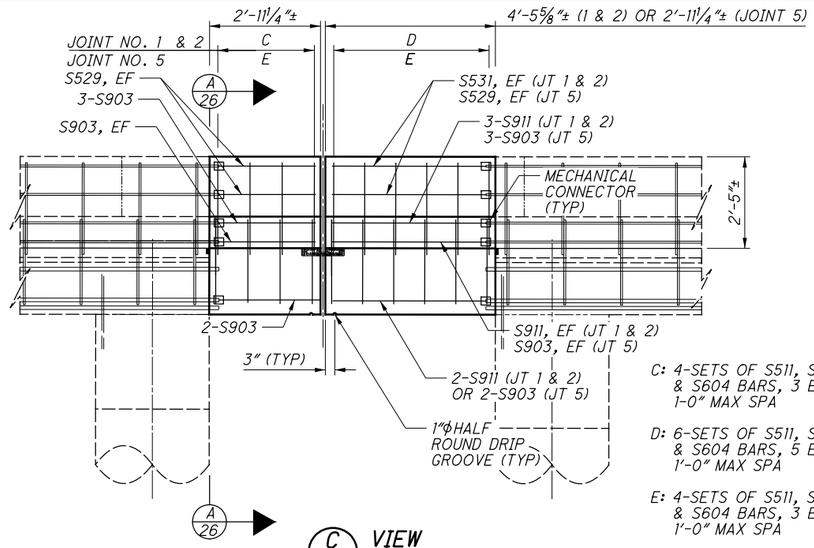


A: 2-SETS OF S511, S520, S525 & S604 BARS @ 1-0" MAX SPA

B: 4-SETS OF S511, S520, S525 & S604 BARS, 3 EQ SPA @ 1'-0" MAX SPA

C: 4-SETS OF S511, S520, S525 & S604 BARS, 3 EQ SPA @ 1'-0" MAX SPA

B 25 VIEW
(GALVANIC ANODES & DECK REINFORCING NOT SHOWN FOR CLARITY)

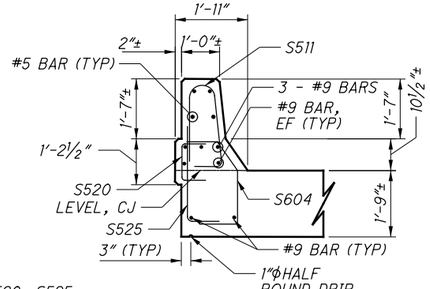


C: 4-SETS OF S511, S520, S525 & S604 BARS, 3 EQ SPA @ 1-0" MAX SPA

D: 6-SETS OF S511, S520, S525 & S604 BARS, 5 EQ SPA @ 1'-0" MAX SPA

E: 4-SETS OF S511, S520, S525 & S604 BARS, 3 EQ SPA @ 1'-0" MAX SPA

C 25 VIEW
(GALVANIC ANODES & DECK REINFORCING NOT SHOWN FOR CLARITY)



A 26 A 29 SECTION
(SLAB REINFORCING AND GALVANIC ANODES NOT SHOWN FOR CLARITY)

E: 4-SETS OF S515, S525 & & S604 BARS, SPA @ 1-0" MAX

D 25 VIEW
(GALVANIC ANODES & DECK REINFORCING NOT SHOWN FOR CLARITY)

H 26 H 29 SECTION
DETAILS ABOUT BOTH SIDES

(SLAB REINFORCING AND GALVANIC ANODES NOT SHOWN FOR CLARITY)

S = MAX SPA = 1'-6" STAGGERED ANODES AS SHOWN (TYP)

J 25 J 27 J 28 DETAIL

3" STRIP SEAL EXPANSION JOINT DETAILS				
AMBIENT TEMPERATURE (DEGREES)	JOINT 1	JOINT 2	JOINT 5 RT	JOINT 5 LT
	A ⊙ (IN)	A ⊙ (IN)	A ⊙ (IN)	A ⊙ (IN)
30	1.94	1.94	1.94	1.88
40	1.81	1.81	1.81	1.80
50	1.69	1.69	1.69	1.71
60	1.56	1.56	1.56	1.62
70	1.43	1.43	1.43	1.53
80	1.31	1.31	1.31	1.45
90	1.18	1.18	1.18	1.36

LEGEND

■ - EMBEDDED GALVANIC ANODE (PAYMENT INCLUDED UNDER ITEM 511 - CONCRETE MISC.: EMBEDDED CONCRETE ANODE)

NOTES

1. FOR STRIP SEAL EXPANSION JOINT DETAILS SEE SHEET 30/36.

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EMH&T
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: (614) 775-4500 www.emht.com

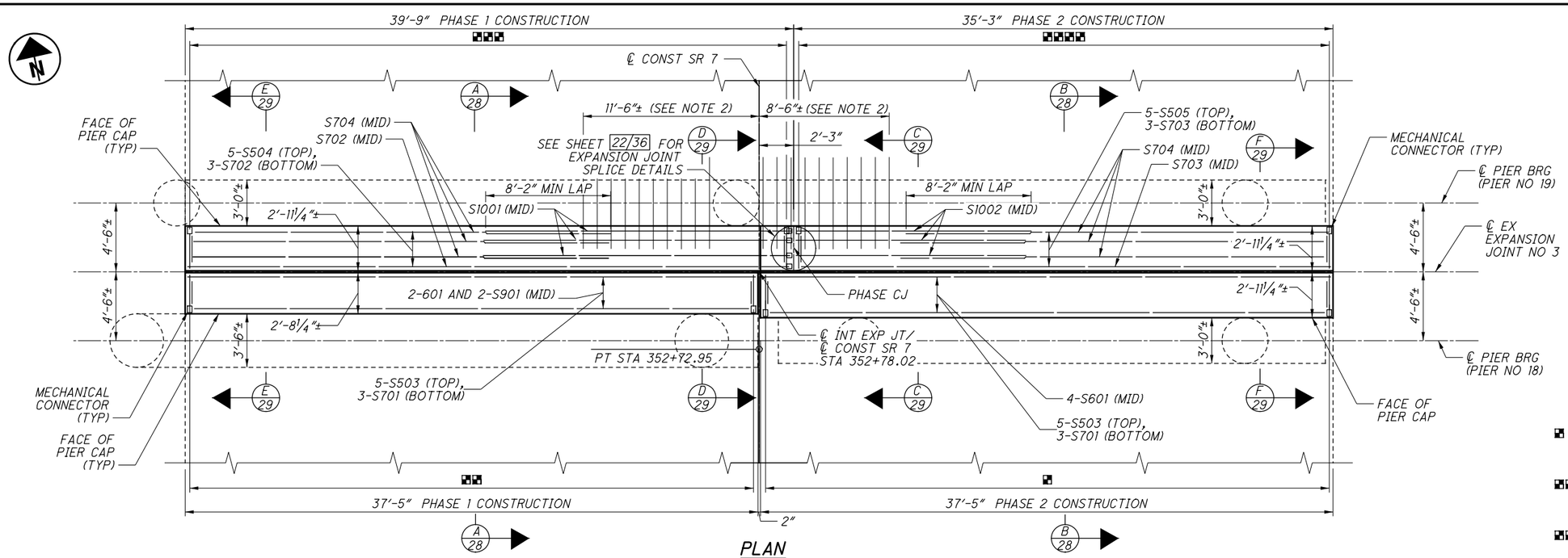
DESIGNED	DRAWN	REVIEWED	DATE
MJR	MJR	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700339	

INTERMEDIATE EXPANSION JOINT DETAILS JOINT 1, 2 AND 5

BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

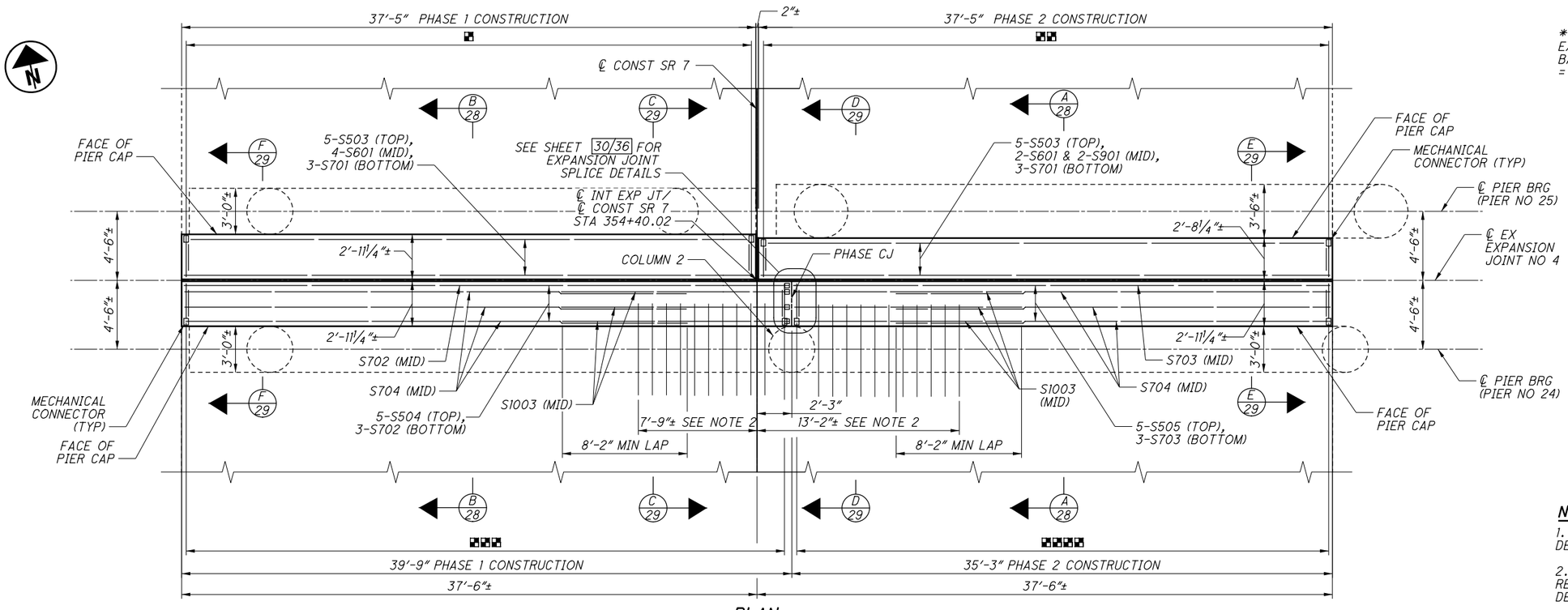
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PID No. 110324

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PLAN

INTERMEDIATE EXPANSION JOINT NO 3
(MEDIAN AND PARAPET AND ANODES NOT SHOWN FOR CLARITY)



PLAN

INTERMEDIATE EXPANSION JOINT NO 4
(MEDIAN AND PARAPET AND ANODES NOT SHOWN FOR CLARITY)

LEGEND

■ - 35 SETS OF S506* (TOP), S903 (BOTTOM) SPA @ 1'-1"±, AND 69-S902 (MID) SPA @ 6½"± = 36'-10"±

■■ - 35 SETS OF S507* (TOP), S905 (BOTTOM) SPA @ 1'-1"±, AND 69-S904 (MID) SPA @ 6½"± = 36'-10"±

■■■ - 37 SETS OF S506* (TOP), S903 (BOTTOM) SPA @ 1'-1"±, AND 73-S902 (MID) SPA @ 6½"± = 39'-0"±

■■■■ - 33 SETS OF S506* (TOP), S903 (BOTTOM) SPA @ 1'-1"±, AND 65-S902 (MID) SPA @ 6½"± = 34'-8"±

* TOP BAR (#5) SPACING TO MATCH EXISTING BOTTOM LONGITUDINAL (#9) BAR SPACING (PER RECORD PLANS SPA = 1'-1")

NOTES

1. FOR STRIP SEAL EXPANSION JOINT DETAILS SEE SHEET 30/36.
2. SALVAGE EX STIRRUP BARS. SEE REMOVAL SHEET 13/36 FOR ADDITIONAL DETAILS.
3. SEE DETAIL J ON SHEET 26/36 FOR EMBEDDED GALVANIC ANODE SPACING IN DECK AT INTERMEDIATE EXPANSION JOINTS.

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5500 New Albany Road, Columbus, Ohio 43054
Phone: 614.775.4500 www.emht.com

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700339	

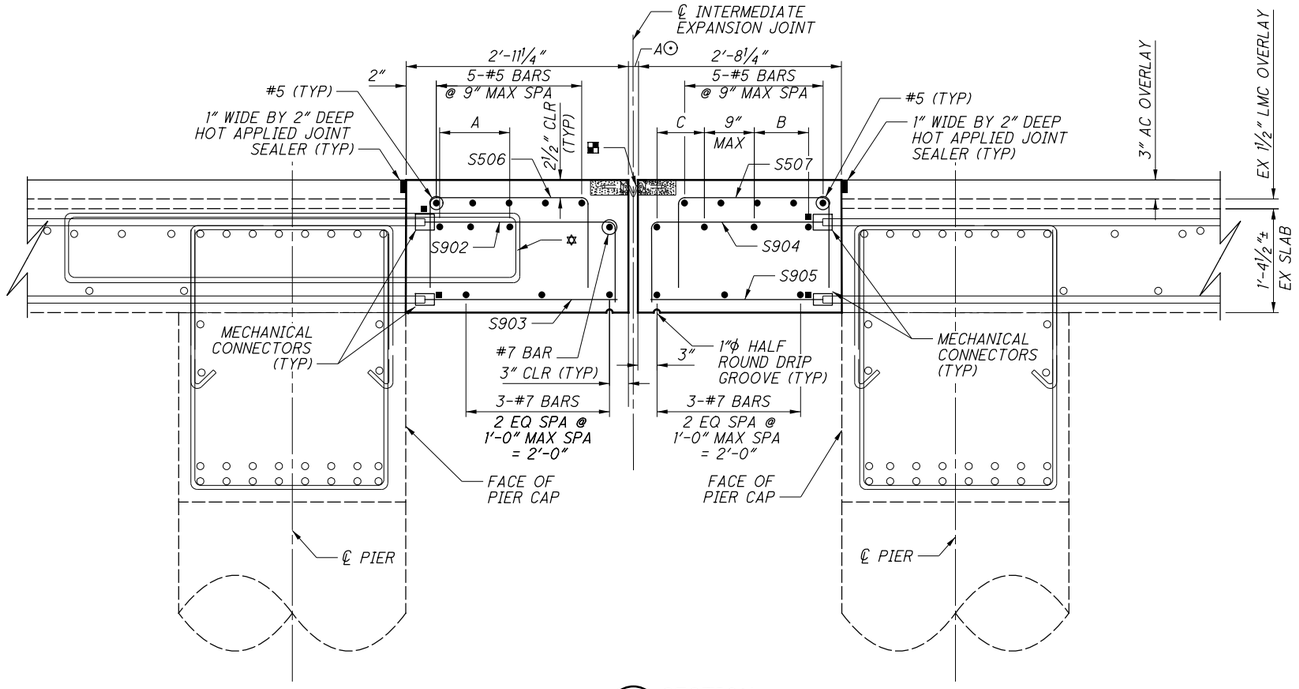
INTERMEDIATE EXPANSION JOINT NO.3 AND NO.4
BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

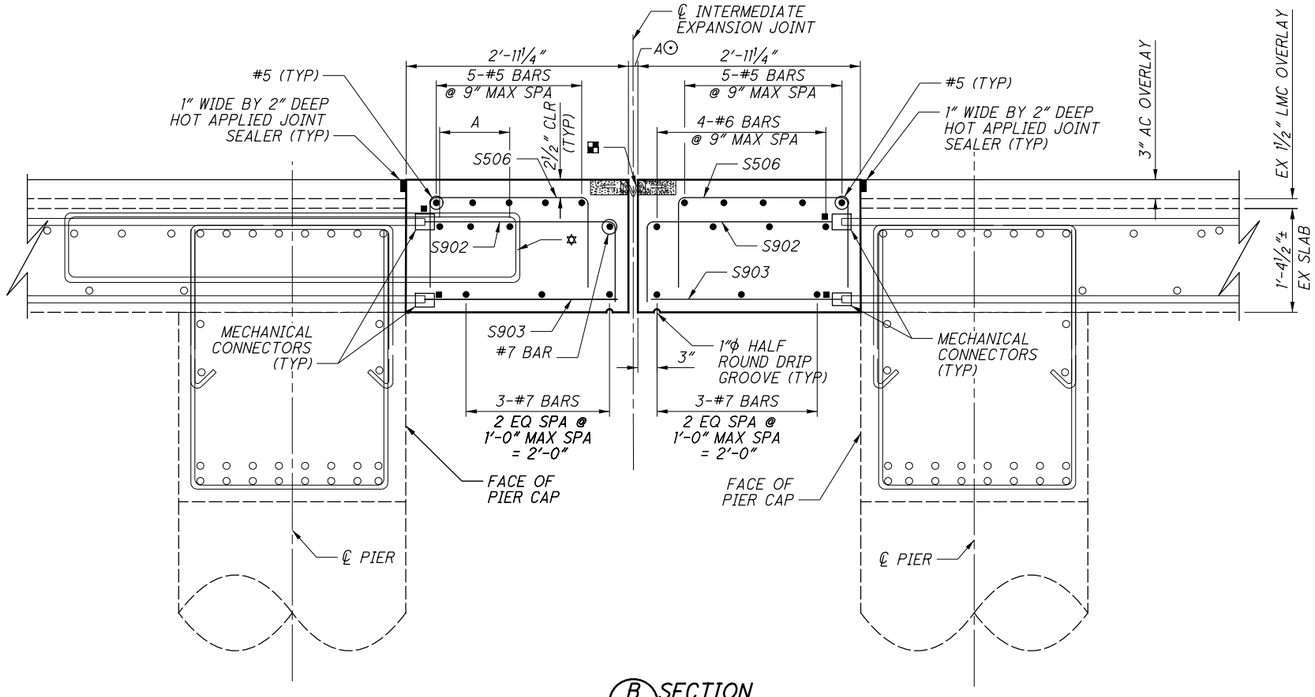
27/36

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A/27 SECTION



B/27 SECTION

LEGEND

■ - EMBEDDED GALVANIC ANODE (PAYMENT INCLUDED UNDER ITEM 511 - CONCRETE MISC.: EMBEDDED GALVANIC ANODE)

◪ - STRIP SEAL EXPANSION JOINT PER STD DWG EXJ-6-17

✡ - EXISTING STIRRUP (#5 BAR) TO REMAIN (DND).

A: 3-#10 & 3- #7 BARS @ 2 EQ SPACES. #10 BARS SHALL BE PLACED INSIDE EXISTING, SALVAGED STIRRUP BAR AS SHOWN.

#10 BAR MIN LAP: 8'-2"

B: 2-#9 BARS @ 9" MAX SPA = 9"

C: 2-#6 BARS @9" MAX SPA = 9"

NOTES

1. FOR STRIP SEAL EXPANSION JOINT DETAILS SEE SHEET 30/36.
2. SEE DETAIL J ON SHEET 26/36 FOR EMBEDDED GALVANIC ANODE SPACING IN DECK AT INTERMEDIATE EXPANSION JOINTS.

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DESIGNED	DRAWN	REVIEWED	DATE
MJR	MJR	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700339	

INTERMEDIATE EXPANSION JOINT NO. 3 AND NO. 4 - DECK SECTIONS

BRIDGE NO. BEL-7-1279C

SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

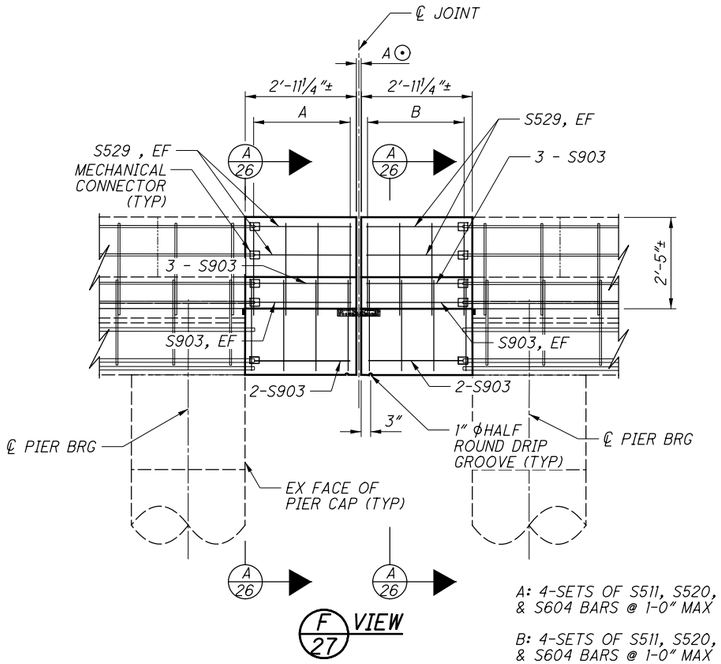
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PID No. 110324

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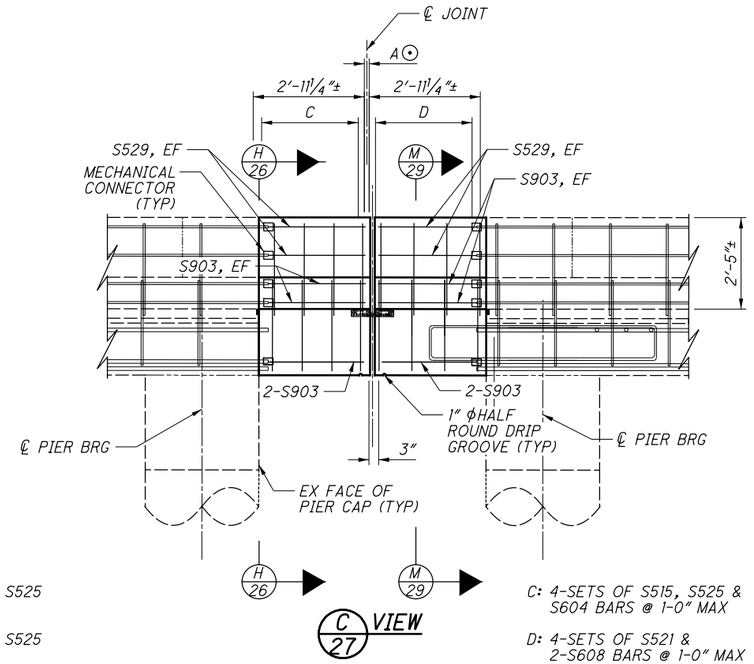
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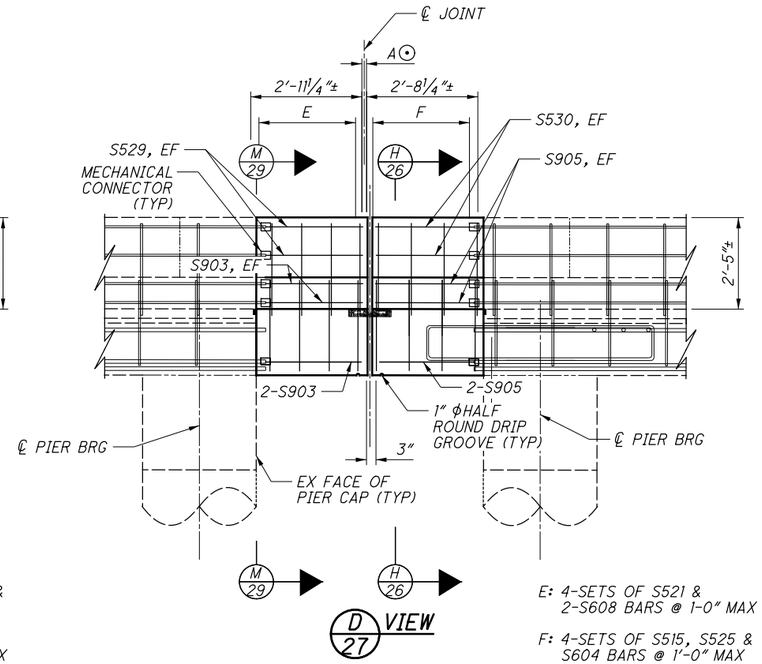
A: 4-SETS OF S511, S520, S525 & S604 BARS @ 1-0" MAX

B: 4-SETS OF S511, S520, S525 & S604 BARS @ 1-0" MAX



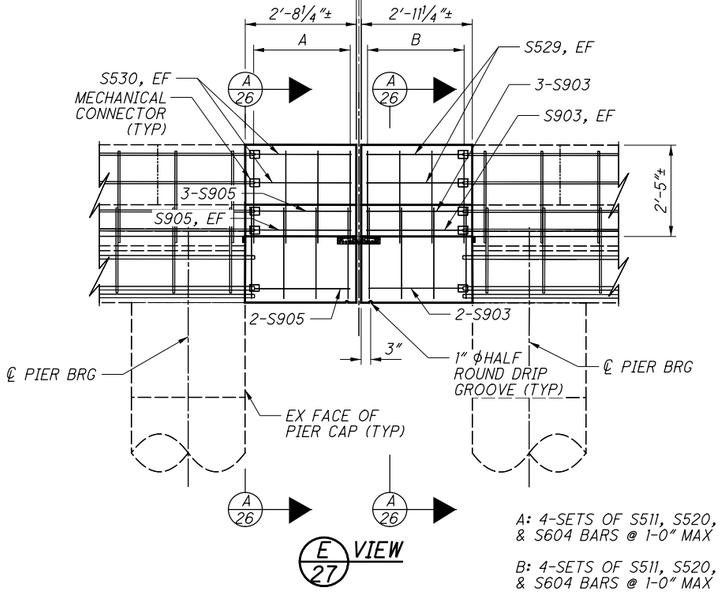
C: 4-SETS OF S515, S525 & S604 BARS @ 1-0" MAX

D: 4-SETS OF S521 & 2-S608 BARS @ 1-0" MAX



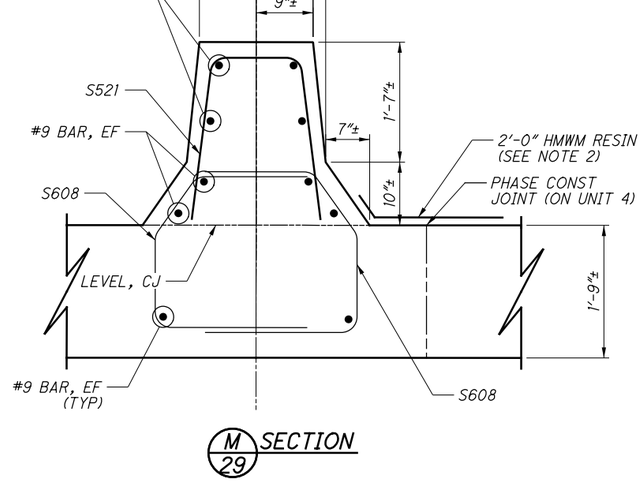
E: 4-SETS OF S521 & 2-S608 BARS @ 1-0" MAX

F: 4-SETS OF S515, S525 & S604 BARS @ 1'-0" MAX



A: 4-SETS OF S511, S520, S525 & S604 BARS @ 1-0" MAX

B: 4-SETS OF S511, S520, S525 & S604 BARS @ 1-0" MAX



NOTES

1. FOR STRIP SEAL EXPANSION JOINT DETAILS SEE SHEET 30/36.
2. PER C&MS 511.19, THE 2'-0" OF HMWM CENTERED ON THE PHASE CONST JOINT IS CONSIDERED INCIDENTAL TO ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE

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INTERMEDIATE EXPANSION JOINT NO. 3 AND NO.4

BRIDGE NO. BEL-7-1279C

SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

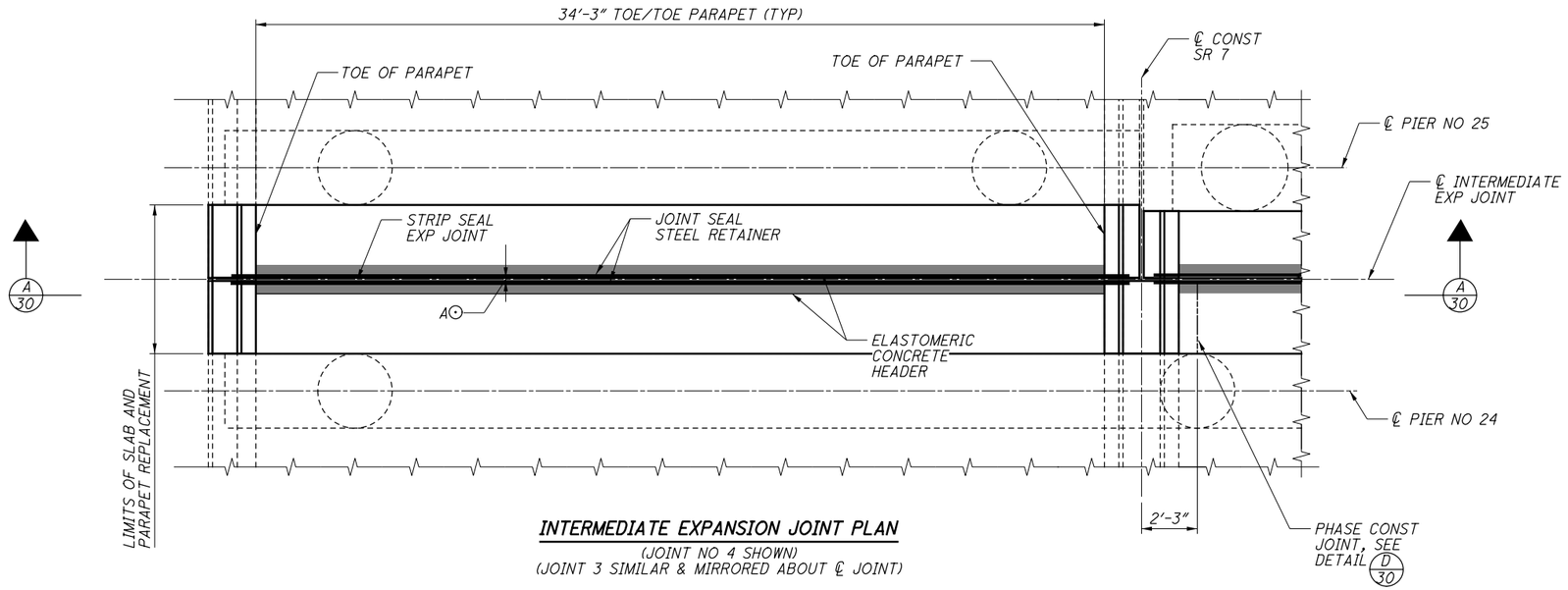
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PID No. 110324

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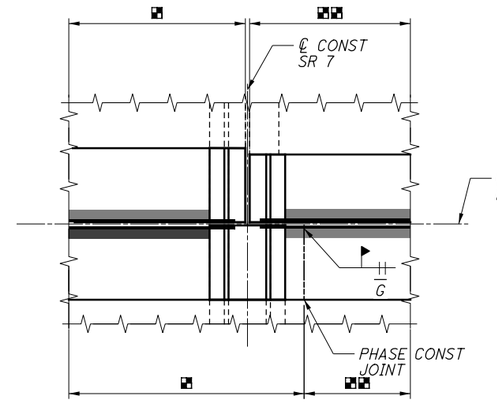
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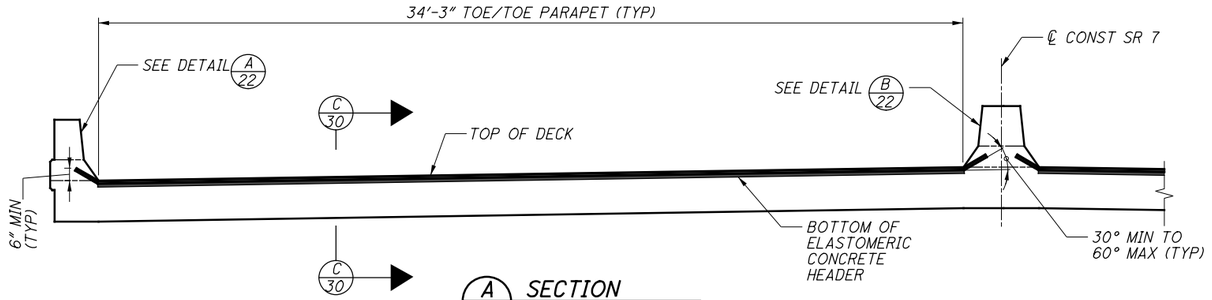
INTERMEDIATE EXPANSION JOINT PLAN

(JOINT NO 4 SHOWN)
(JOINT 3 SIMILAR & MIRRORED ABOUT ℄ JOINT)



INTERMEDIATE EXPANSION JOINT SPLICE DETAIL

(JOINT NO 4 SHOWN)
(JOINT 3 SIMILAR & MIRRORED ABOUT ℄ JOINT)

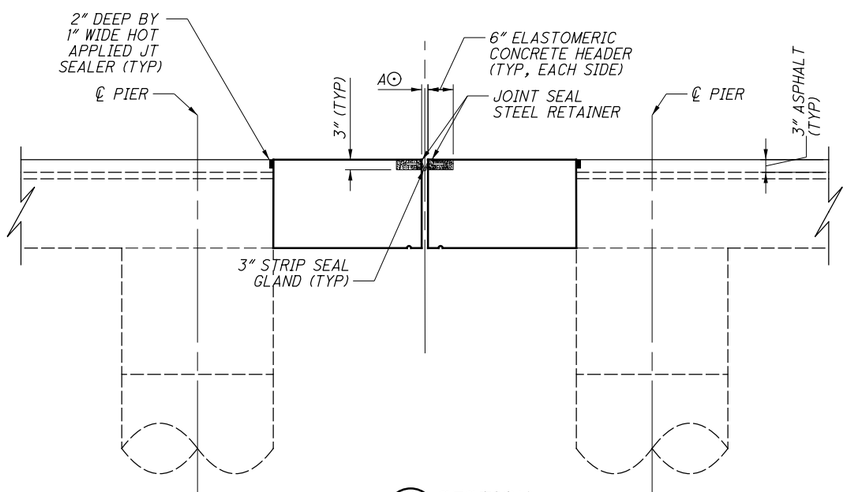


A/30 SECTION

(BRIDGE UNIT 4 ONLY)

D/30 DETAIL

(JT 4 DOWNSTATION OF INT EXP JOINT)
(JT 3 UPSTATION OF INT EXP JOINT)



C/30 SECTION

3" STRIP SEAL EXPANSION JOINT DETAILS						
AMBIENT TEMPERATURE (DEGREES)	JOINT 1	JOINT 2	JOINT 3	JOINT 4	JOINT 5 RT	JOINT 5 LT
	A⊙ (IN)	A⊙ (IN)	A⊙ (IN)	A⊙ (IN)	A⊙ (IN)	A⊙ (IN)
30	1.94	1.94	1.94	1.92	1.94	1.88
40	1.81	1.81	1.81	1.81	1.81	1.80
50	1.69	1.69	1.69	1.70	1.69	1.71
60	1.56	1.56	1.56	1.58	1.56	1.62
70	1.43	1.43	1.43	1.46	1.43	1.53
80	1.31	1.31	1.31	1.35	1.31	1.45
90	1.18	1.18	1.18	1.24	1.18	1.36

LEGEND

- PHASE 1 CONSTRUCTION
- PHASE 2 CONSTRUCTION

NOTES

1. SEE ODOT STD DWG EXJ-6-17 FOR ADDITIONAL DETAILS.
2. STRIP SEAL GLAND SHALL BE FURNISHED IN ONE CONTINUOUS PIECE UNLESS OTHERWISE APPROVED BY THE ENGINEER.
3 SEE DETAIL 'A' ON SHEET 22/36 FOR FASCIA PARAPET DETAILS.
4 SEE DETAIL 'B' ON SHEET 22/36 FOR JOINTED MEDIAN PARAPET DETAILS.

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EMH&T
Engineers • Architects • Surveyors • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 www.emht.com

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MJR	MJR	CAS	10/30/20
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TDA	-	0700339	

INTERMEDIATE EXPANSION JOINT DETAILS

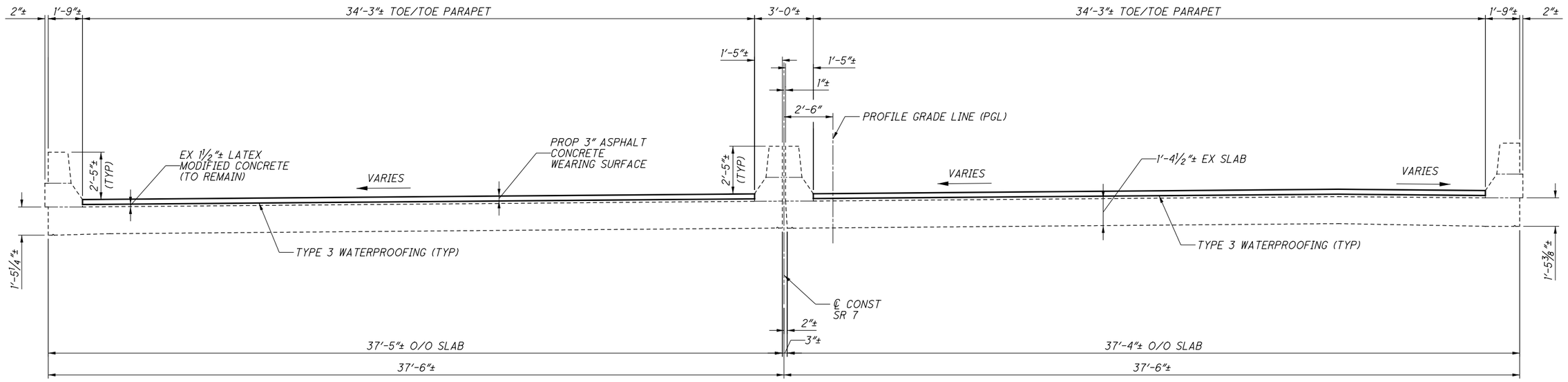
BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

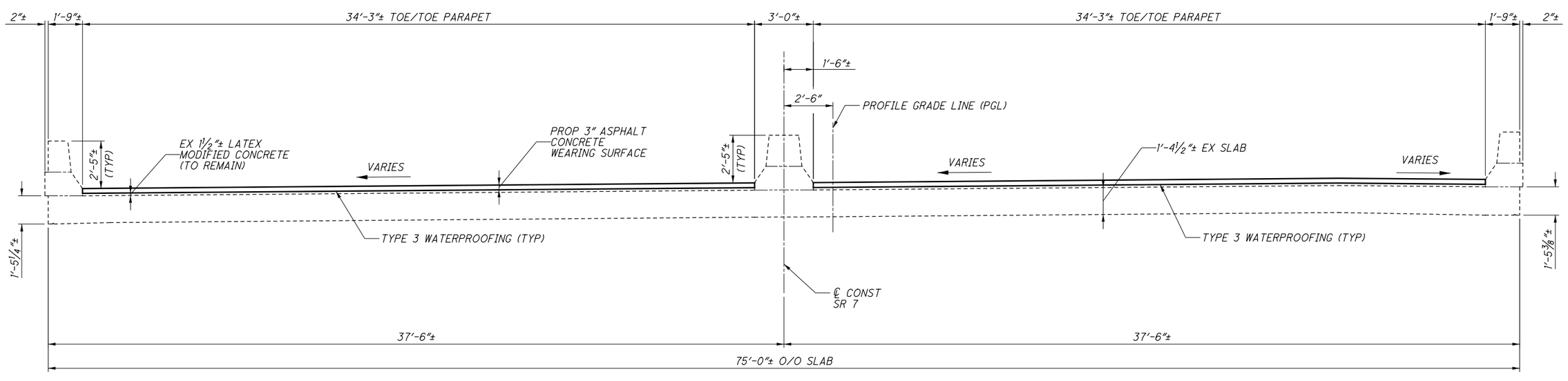
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TRANSVERSE SECTION (MIDSPAN UNITS 1, 2, 3, 5, AND 6)



TRANSVERSE SECTION (MIDSPAN UNIT 4)

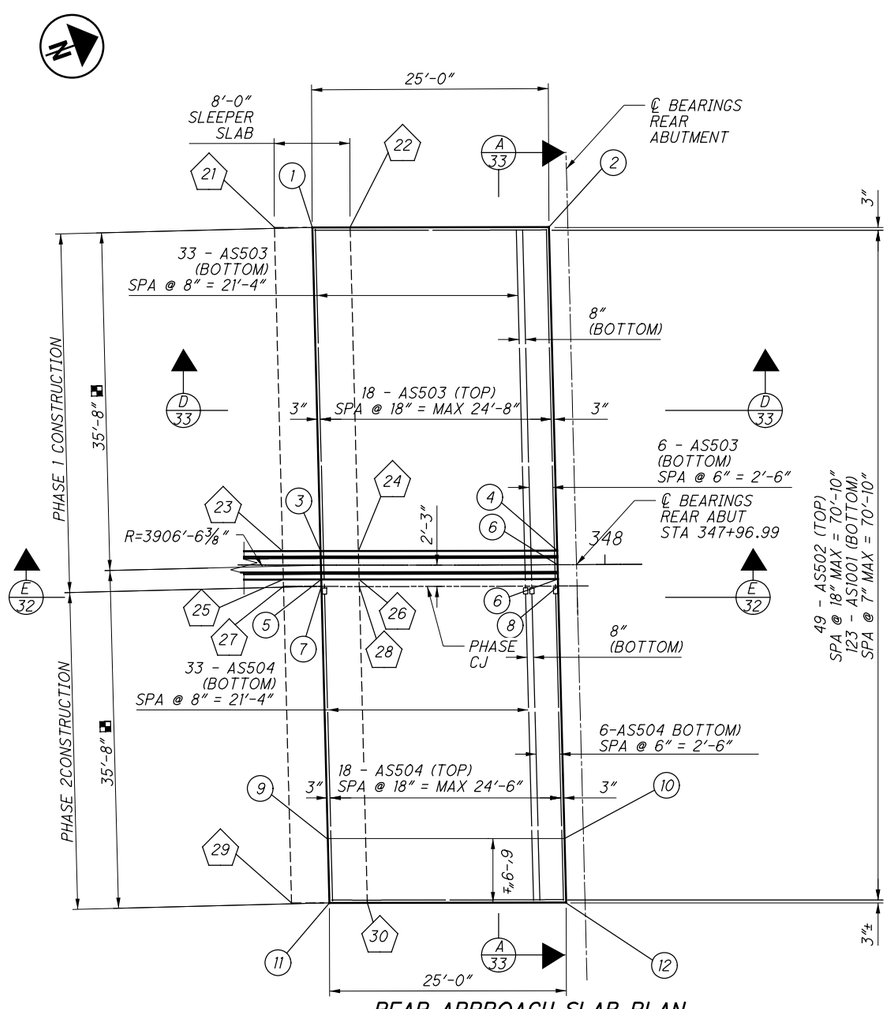
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DESIGNED	DRAWN	REVIEWED	DATE
MJR	GB	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
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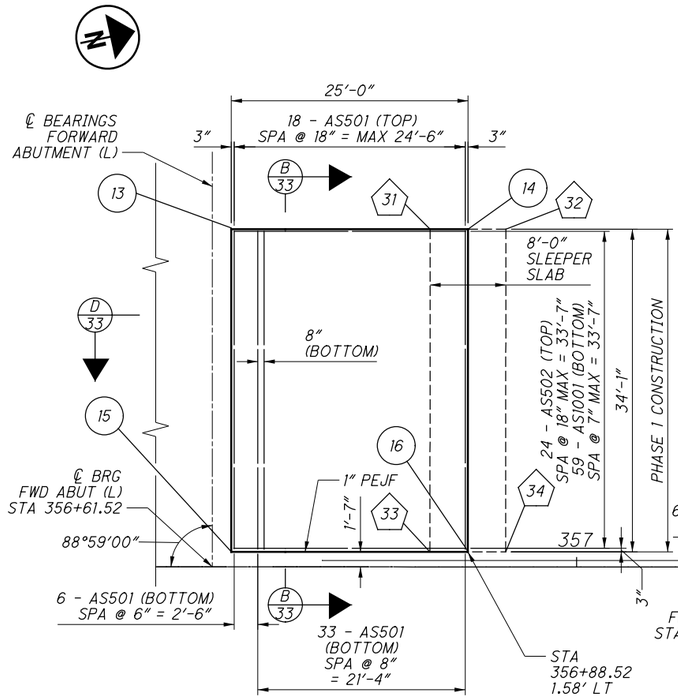
TRANSVERSE SECTION
BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

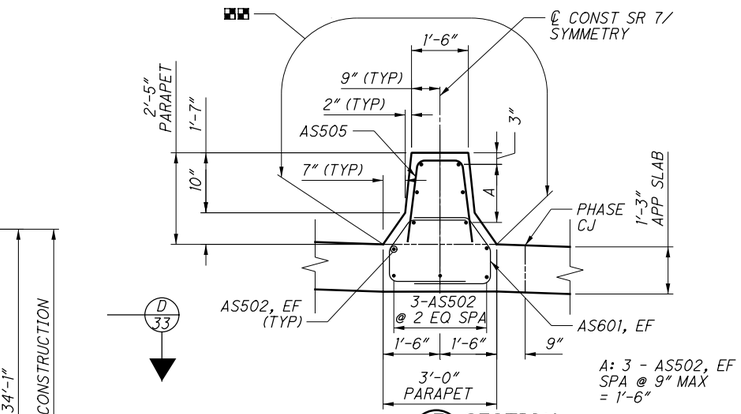
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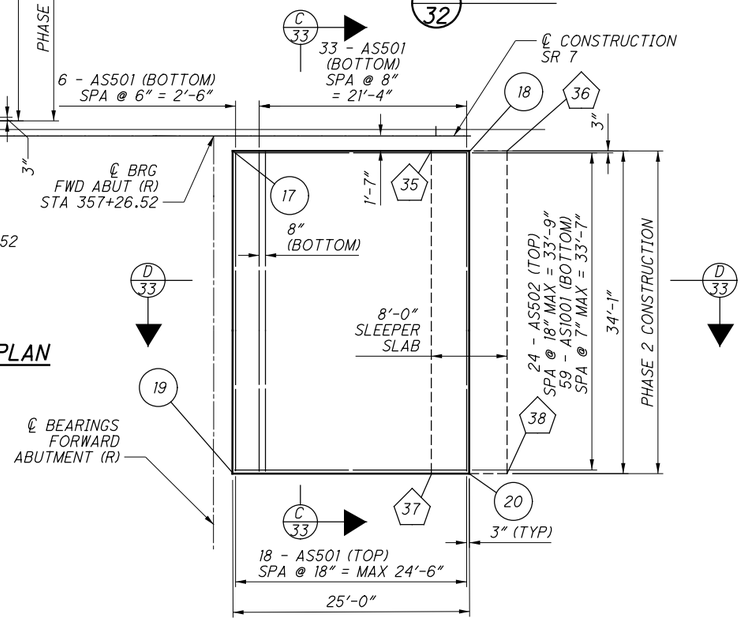
REAR APPROACH SLAB PLAN

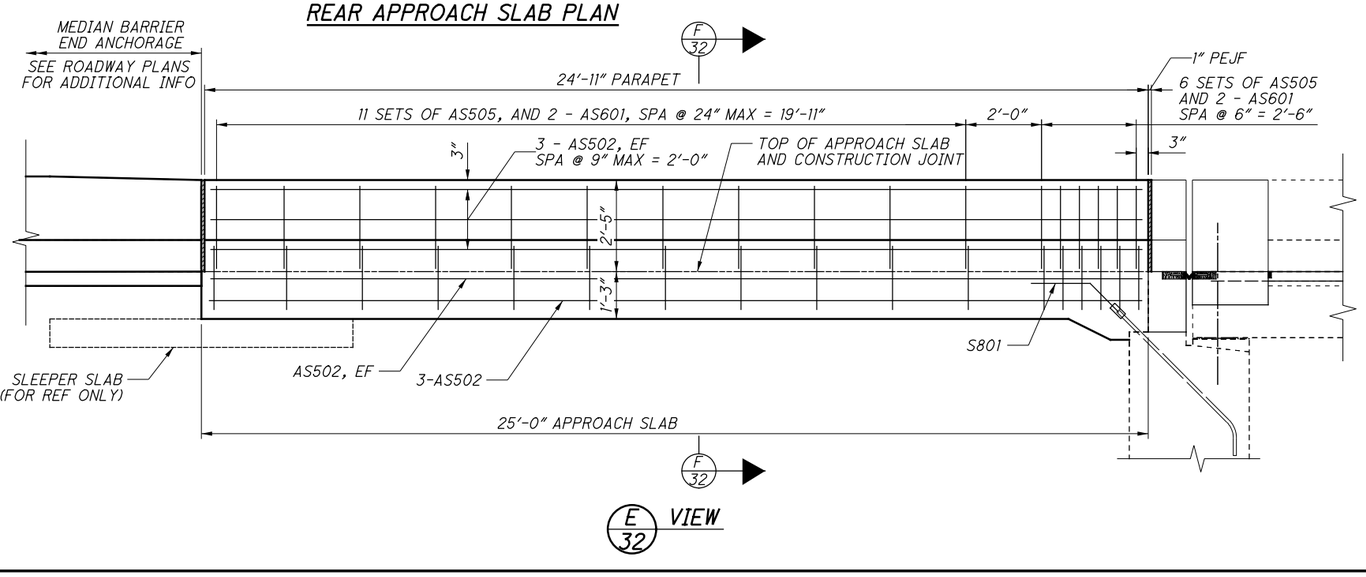


FORWARD APPROACH SLAB PLAN



F SECTION 32





E VIEW 32

LEGEND

- ▪ - MEASURED ALONG EDGE OF APPROACH SLAB.
- ▪▪▪ - LIMITS OF SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
- ◔ - TYPE 4C CURB (TYP)

NOTES

1. FOR ADDITIONAL APPROACH SLAB DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWINGS AS-1-15 AND AS-2-15.
2. ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO CONSTRUCT THE APPROACH SLAB AND AS SHOWN ON THIS SHEET AND AS-1-15 SHALL BE INCLUDED WITH ITEM 526 - REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN, FOR PAYMENT.
3. FOR SECTIONS, SEE SHEET 33/36 .

DESIGN AGENCY
EMH&T
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
614.775.4500 www.emht.com

DESIGNED	DRAWN	REVIEWED	DATE
MJR	GB	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700339	

BRIDGE APPROACH SLAB DETAILS

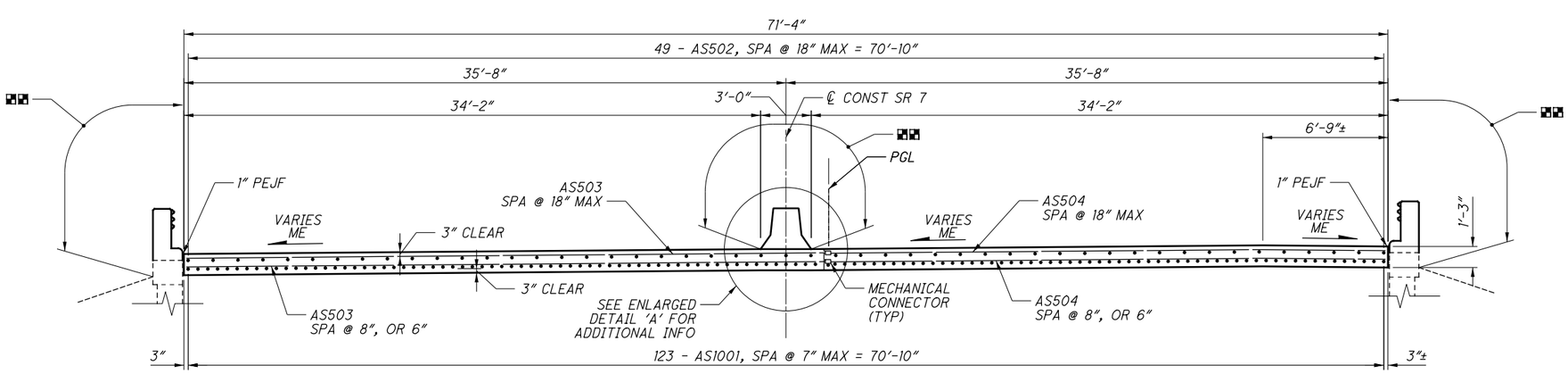
BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

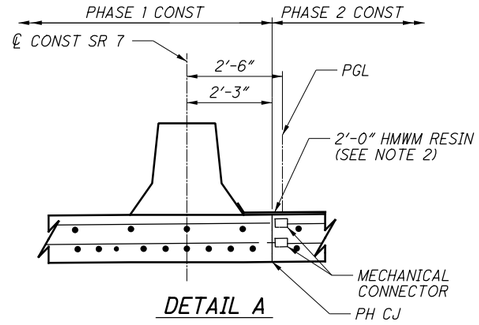
32/36

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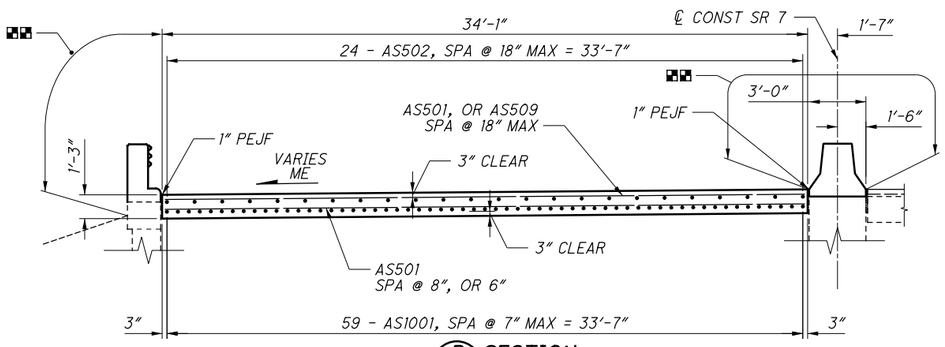
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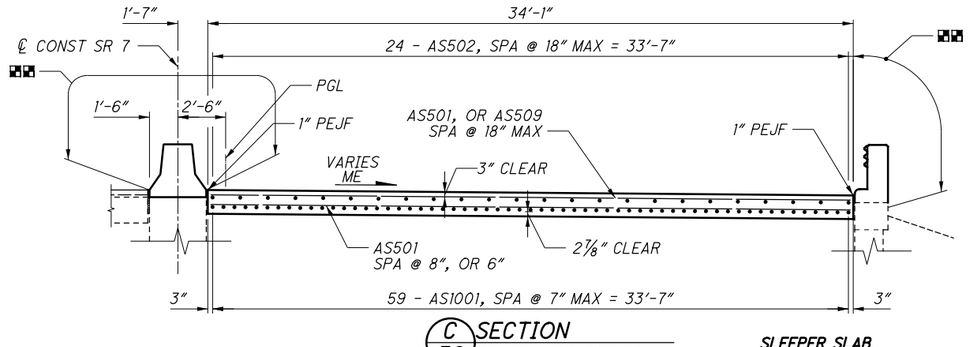
A/32 SECTION



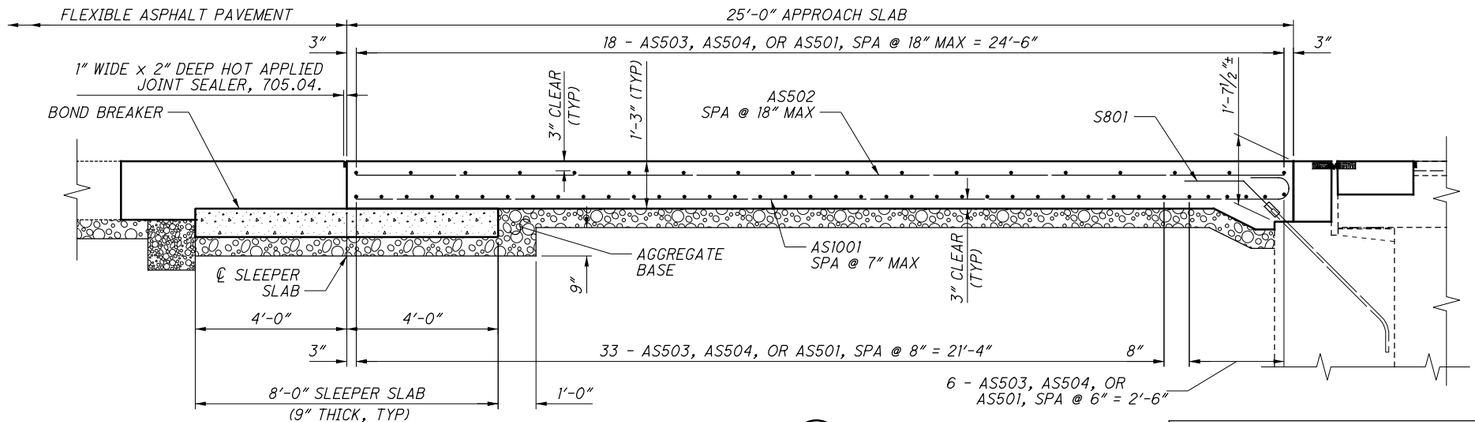
DETAIL A



B/32 SECTION (PHASE 2 CONSTRUCTION)



C/32 SECTION (PHASE 1 CONSTRUCTION)



D/32 SECTION

NOTES

1. FOR ADDITIONAL APPROACH SLAB DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWINGS AS-1-15 AND AS-2-15.
2. PER C&MS 511.19, THE 2'-0" HMWM CENTERED ON THE PHASE CONST JOINT IS CONSIDERED INCIDENTAL TO ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE.

LEGEND

▪▪ - LIMITS OF SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

ME - MATCH EXISTING CROSS SLOPE

APPROACH SLAB SURFACE ELEVATIONS

MARK	STATION	OFFSET	ELEV
1	347+69.02	35.67' LT	672.01
2	347+94.25	35.67' LT	672.56
3	347+69.95	1.50' LT	673.23
4	347+94.96	1.50' LT	673.75
5	347+70.03	1.50' RT	673.35
6	347+95.02	1.50' RT	673.74
7	347+70.05	2.25' RT	673.32
8	347+95.04	2.25' RT	673.78
9	347+70.76	28.92' RT	674.02
10	347+95.58	28.92' RT	674.68
11	347+70.94	35.67' RT	674.03
12	347+95.72	35.67' RT	674.44
13	356+63.52	35.67' LT	679.06
14	356+88.52	35.67' LT	678.89
15	356+63.52	1.58' LT	679.56
16	356+88.52	1.58' LT	679.20
17	357+28.52	1.58' RT	678.88
18	357+53.52	1.58' RT	678.57
19	357+28.52	35.67' RT	678.22
20	357+53.52	35.67' RT	677.72

SLEEPER SLAB SURFACE ELEVATIONS

MARK	STATION	OFFSET	ELEV
21	347+64.99	35.67' LT	670.66
22	347+73.06	35.67' LT	670.86
23	347+65.95	1.50' LT	671.91
24	347+73.95	1.50' LT	672.06
25	347+66.03	1.50' RT	672.01
26	347+74.03	1.50' RT	672.17
27	347+66.05	2.25' RT	672.01
28	347+74.05	2.25' RT	672.13
29	347+66.98	35.67' RT	672.72
30	347+74.91	35.67' RT	672.84
31	356+84.52	35.67' LT	677.69
32	356+92.52	35.67' LT	677.55
33	356+84.52	1.58' LT	678.00
34	356+92.52	1.58' LT	677.91

SLEEPER SLAB SURFACE ELEV'S CONTINUED

35	357+49.52	1.58' RT	677.37
36	357+57.52	1.58' RT	677.30
37	357+49.52	35.67' RT	676.56
38	357+57.52	35.67' RT	676.44

DESIGN AGENCY EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
MJR	GB	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700339	

BRIDGE APPROACH SLAB DETAILS
BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

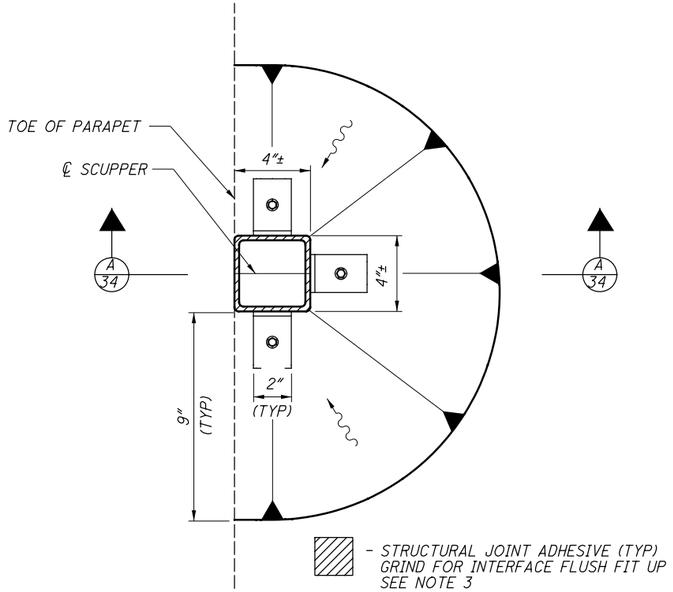
BEL-7-11.48
PID No. 110324

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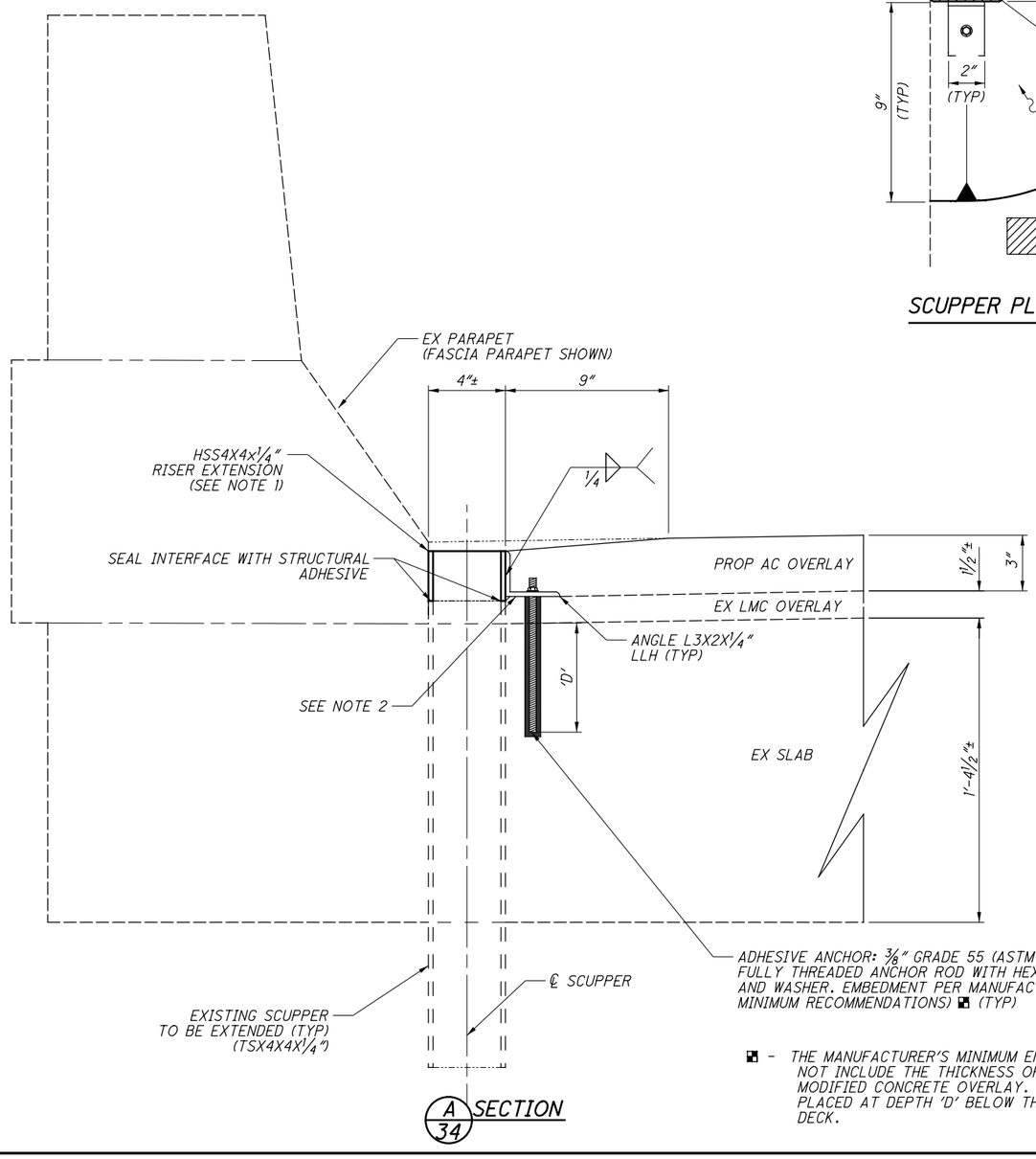
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SCUPPER PLAN



A/34 SECTION

■ - THE MANUFACTURER'S MINIMUM EMBEDMENT ('D') SHALL NOT INCLUDE THE THICKNESS OF THE EXISTING LATEX MODIFIED CONCRETE OVERLAY. THE ANCHORS MUST BE PLACED AT DEPTH 'D' BELOW THE TOP OF EXISTING BRIDGE DECK.

ITEM 518 - SCUPPER, MODIFICATION, AS PER PLAN

THIS ITEM CONSISTS OF ALL WORK TO CONSTRUCT THE SCUPPER EXTENSION DETAILED HEREIN.

PRIOR TO INSTALLATION, THE CONTRACTOR SHALL CLEAN ALL DEBRIS FROM ON TOP AND INSIDE OF THE SCUPPERS AND AROUND THE SCUPPER TO CONDUCT THE CONSTRUCTION ACTIVITIES DESCRIBED ON THIS SHEET TO THE SATISFACTION OF THE ENGINEER. THE RISER SHALL BE IN ACCORDANCE WITH ODOT C&MS 518 BUT DOES NOT NEED TO BE GALVANIZED. THE MATERIAL OF EACH RISER SHALL MATCH THE EXISTING INLET AND ADHERE TO THE DETAILS AND ADDITIONAL NOTES ON THIS SHEET.

PRIOR TO INSTALLATION OF THE PROPOSED RISER SECTION (HSS4X4X¼), THE CONTRACTOR SHALL TEST THE FIT UP OF THE RISER SECTION TO THE PREPARED SURFACE (PRIOR TO APPLYING THE STRUCTURAL ADHESIVE/CAULKING). THE RISER SECTION SHALL FIT FLUSH AND LEVEL WITH THE EXISTING, PREPARED SURFACE. ANY RAISED (VERTICAL) IMPERFECTIONS (E.G.FINS, SLIVERS, TEARS) SHALL BE GRINDED TO A SMOOTH FINISH ON BOTH THE BOTTOM OF THE RISER SECTION AND ATOP THE EXISTING SCUPPER.

THE CONTRACTOR SHALL INSTALL THE ANCHORS FIRST SUCH THAT THEY MAY BE USED TO APPLY LOAD TO THE ADHESIVE. THE AREA IS TO BE CLEANED AND THEN COAT THE ENTIRE SURFACE AREA OF THE PREPARED SURFACE WITH THE JOINT ADHESIVE. ANCHORS ARE THEN TO BE TIGHTENED TO MANUFACTURER'S SPECIFICATIONS.

INSTALL A STRUCTURAL ADHESIVE MEETING THE SPECIFICATIONS OF LOCTITE® AA H860™ OR AN APPROVED EQUIVALENT.

COST FOR ALL LABOR, FIELD VERIFICATION, CLEANING, MATERIALS, EQUIPMENT, TOOLS AND INCIDENTALS FOR THE ABOVE WORK SHALL BE INCLUDED UNDER ITEM 518, SCUPPER, MODIFICATIONS, AS PER PLAN.

ONE UNIT (EACH) OF WORK SHALL BE DEFINED AS PERFORMING THIS TASK AT ONE SCUPPER LOCATION TO THE SATISFACTION OF THE ENGINEER. SHOULD THE SCUPPER EXTENSION BE DETERMINED TO BE LOOSELY OR IMPROPERLY SECURED, THE CONTRACTOR SHALL REPAIR AT NO ADDITIONAL COST TO THE DEPARTMENT.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE ESTIMATED QUANTITIES:

ITEM 518 - SCUPPER MODIFICATION, AS PER PLAN = 89 EACH

NOTES

1. ALL DIMENSIONS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS (INCLUDING EXISTING SCUPPER SIZE) AND RISER HEIGHT FOR EACH LOCATION PRIOR TO FABRICATION.
2. CONTRACTOR SHALL LEVEL THE EXISTING CONCRETE SURFACE AT EACH CONNECTION TAB TO PERMIT LEVEL INSTALLATION OF THE L3X2X¼ ANGLES.
3. FIELD GRINDING OF THE EXISTING SCUPPER AND BOTTOM OF RISER MAY BE NECESSARY TO ALLOW FOR INSTALLATION OF THE RISER.
4. CONTRACTOR SHALL DETERMINE THE VERTICAL PLACEMENT OF THE CONNECTION TABS BEFORE SHOP WELDING THEM TO THE RISER.
5. IF CORROSION IS ENCOUNTERED, CUT THE EXISTING SCUPPERS 90° TO THE DOWNSPOUT AND GRIND SMOOTH AT THE FIRST AVAILABLE SECTION WITHOUT CORROSION, ABOVE THE CORRODED END. COST TO BE INCLUDED WITH ITEM 518 - SCUPPER, MODIFICATION, AS PER PLAN. SEE RECORD PLAN FOR ADDITIONAL DETAILS NOT SHOWN.

DESIGN AGENCY
EMH&T
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, Ohio 43054
614.775.4500 www.emht.com

DESIGNED	DRAWN	REVIEWED	DATE
MJR	MJR	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700339	

SCUPPER EXTENSION DETAILS
BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48
PID No. 110324

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FORWARD	TOTAL				A	B	C	D	E	R	INC
ABUTMENTS													
A501 ■	7		7	35'-1"	256	STR							
A502 ■	7		7	39'-7"	289	STR							
A503		7	7	37'-1"	271	STR							
A504		7	7	38'-8"	282	STR							
A505	76	79	155	2'-6"	404	24	0'-4"	1'-0"				0'-2"	
A506	8	4	12	10'-2"	127	STR							
A507	18	14	32	1'-11"	64	2	0'-8"	0'-10"	0'-8"				
A508	14	10	24	3'-3"	81	16	2'-8"						
A509	4	4	8	5'-2"	43	37	0'-8"	2'-4"	2'-2"			0'-4"	
A510		4	4	7'-2"	30	STR							
A511	4	4	8	3'-4"	28	1	1'-0"	2'-6"					
A512	8	4	12	10'-2"	127	25	6'-4"	2'-5"	1'-4"	0'-1 ½"	0'-5"		
A513		4	4	7'-2"	30	25	3'-4"	2'-5"	1'-4"	0'-1 ½"	0'-5"		
A601	76	79	155	3'-4"	776	2	0'-11"	0'-8"	2'-1"				
A602 ■	14	12	26	2'-10"	111	STR							
A603	10	10	20	3'-10"	115	STR							
A604 ■	8	6	14	2'-1"	44	13	0'-5"	0'-8 ½"	0'-6"	0'-10"			
A605	4	4	8	3'-10"	46	14	1'-0"	1'-4"	0'-8 ½"	0'-6"	0'-10"		
A606	6	4	10	3'-1"	46	13	1'-5"	0'-8 ½"	0'-6"	0'-10"			
					SUB-TOTAL	3,170							

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
SUPERSTRUCTURE											
S501	304	2'-3"	713	1	1'-2"	1'-3"					
S502	166	1'-8"	289	STR							
S503	104	37'-1"	4023	STR							
S504	10	39'-7"	413	STR							
S505	10	35'-1"	366	STR							
S506	490	4'-6"	2300	2	1'-4"	2'-1"	1'-4"				
S507	70	4'-2"	304	2	1'-4"	1'-9"	1'-4"				
S508	2 SR OF 35	3'-0" TO 4'-6"	274	2	1'-4"	0'-7" TO 2'-1"	1'-4"				0'-0 ½"
	2 SR	4'-6"				2'-1"					
S509	OF	TO	383	2	1'-4"	TO	1'-4"				0'-0 ½"
	35	6'-0"				3'-7"					
S510 ■	8	14'-10"	124	STR							
S511	80	5'-1"	424	37	0'-8"	2'-1"	2'-0"			0'-4"	
S512 ■	22	2'-11"	67	STR							
S513	6	3'-6"	22	STR							
S514	24	3'-1"	77	1	1'-0"	2'-3"					
S515	83	4'-11"	426	37	0'-8"	2'-1"	2'-0"			0'-2"	
S516	2	4'-4"	9	1	1'-0"	3'-6"					
S517 ■	56	1'-10"	107	STR							
S518 ■	4	2'-11"	12	STR							
S519 ■	3	2'-7"	8	STR							
S520	92	1'-11"	184	2	0'-8"	0'-10"	0'-8"				
S521	20	5'-0"	104	20	2'-0"	0'-3"	1'-2"	0'-3"	2'-0"		
S522	8	4'-11"	41	STR							
S523 ■	8	3'-5"	29	STR							
S524	7	1'-1"	8	STR							
S525	144	3'-7"	538	1	1'-0"	2'-9"					
S526	10	0'-8"	7	STR							

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
SUPERSTRUCTURE (CONT)											
S527	4 SR OF 3	5'-2" TO 5'-5"	66	37	0'-8"	2'-1" TO 2'-4"	2'-2"				0'-1 ½"
S528 ■	8	1'-2"	10	STR							
S529 ■	136	2'-9"	374	STR							
S530 ■	12	2'-6"	31	STR							
S531 ■	8	4'-3"	35	STR							
S601	58	37'-1"	3231	STR							
S602 ■	15	2'-1"	47	13	0'-8"	0'-8 ½"	0'-6"	0'-7"			
S603	12	2'-11"	53	14	1'-0"	0'-8 ½"	0'-8 ½"	0'-6"	0'-7"		
S604	147	3'-5"	754	14	1'-0"	1'-2"	0'-8 ½"	0'-6"	0'-7"		
S605 ■	3	1'-7"	7	13	0'-2½"	0'-8 ½"	0'-6"	0'-7"			
S606	4 SR OF 3	2'-11" TO 3'-3"	56	14	1'-0"	0'-8 ½" TO 1'-0 ½"	0'-8 ½"	0'-6"	0'-7"		0'-2"
S607	4	5'-2"	31	14	2'-0"	1'-2"	0'-8½"	0'-6"	1'-4"		
S608	16	5'-5"	130	14	2'-0"	1'-5"	0'-8½"	0'-6"	1'-4"		
S609	2	3'-1"	9	14	1'-0"	0'-10"	0'-8 ½"	0'-6"	0'-7"		
S610	2	2'-9"	8	13	0'-8"	0'-8 ½"	0'-6"	1'-3"			
S701	48	37'-1"	3638	STR							
S702 ■	8	39'-7"	647	STR							
S703 ■	8	35'-1"	574	STR							
S704	12	28'-6"	699	STR							
S801 ■	97	3'-0"	777	19	1'-8"	1'-0"	1'-0"				
S901	4	37'-1"	504	STR							
S902 ■	966	3'-6"	11495	1	1'-0"	2'-9"					
S903 ■	696	2'-9"	6508	STR							
S904 ■	138	3'-3"	1039	1	1'-0"	2'-6"					
S905 ■	96	2'-6"	816	STR							
S906 ■	2 SR OF 69	1'-11" TO 3'-6"	1251	1	1'-0"	1'-2" TO 2'-9"					0'-0 ¼"
S907 ■	2 SR OF 35	1'-2" TO 2'-9"	466	STR							
S908 ■	2 SR OF 69	3'-6" TO 4'-11"	1955	1	1'-0"	2'-9" TO 4'-2"					0'-0 ¼"
S909 ■	2 SR OF 35	2'-9" TO 4'-2"	823	STR							
S910 ■	14	1'-2"	56	STR							
S911 ■	14	4'-3"	202	STR							
S1001 ■	3	20'-0"	258	STR							
S1002 ■	3	15'-0"	194	STR							
S1003 ■	6	17'-6"	452	STR							
	SUB-TOTAL		48,448								

LEGEND

■ - REINFORCING BAR UTILIZES A MECHANICAL CONNECTOR. BAR LENGTH IS MEASURED TO THE CONSTRUCTION JOINT. EXTRA BAR LENGTH AND/OR BAR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED.

NOTES

1. SEE SHEET 36/36 FOR NOTES.

DESIGN AGENCY EMH&T

DESIGNED MJR | DRAWN MSM | REVIEWED CAS | DATE 10/30/20 | CHECKED TDA | REVISED - | STRUCTURE FILE NUMBER 0700339

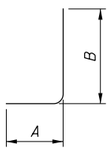
REINFORCING STEEL LIST

BRIDGE NO. BEL-7-1279C
SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

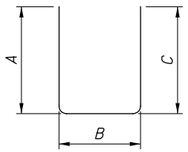
BEL-7-11.48
PID No. 110324

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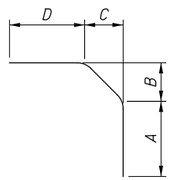
MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
APPROACH SLABS*											
AS501	114	33'-9"	4013	STR							
AS502	108	24'-6"	2760	STR							
AS503 ■	57	37'-9"	2244	STR							
AS504 ■	57	33'-3"	1977	STR							
AS505	17	5'-2"	92	20	2'-2"	0'-3"	1'-2"	0'-3"	2'-0"		
AS601	34	4'-11"	251	14	2'-0"	0'-11"	0'-8 ½"	0'-6"	1'-4"		
AS1001	241	25'-11"	26876	16	24'-6"						
SUB-TOTAL			38,213								



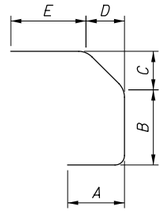
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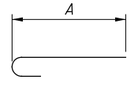
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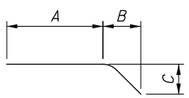
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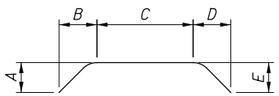
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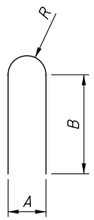
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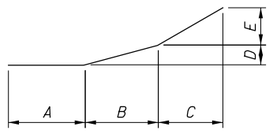
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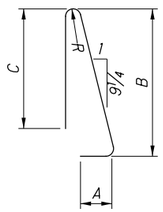
TYPE-20



TYPE-24



TYPE-25



TYPE-37

LEGEND

■ - REINFORCING BAR UTILIZES A MECHANICAL CONNECTOR. BAR LENGTH IS MEASURED TO THE CONSTRUCTION JOINT. EXTRA BAR LENGTH AND/OR BAR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED.

* - REINFORCING STEEL IN APPROACH SLABS ARE INCLUDED FOR PAYMENT WITH ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15")

NOTES

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE THE NUMBER S601 IS A NO. 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT, UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD" WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.
2. ALL REINFORCING STEEL SHALL BE EPOXY- COATED.
3. SEE GENERAL NOTES FOR ABBREVIATION LEGENDS.

DESIGN AGENCY EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
MJR	MSM	CAS	10/30/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	
TDA	-	0700339	

REINFORCING STEEL LIST

BRIDGE NO. BEL-7-1279C

SR 7 OVER NORFOLK SOUTHERN RAILROAD CORP.

BEL-7-11.48

PID No. 110324

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