

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

BEL-70-7.61

RICHLAND AND UNION TOWNSHIPS BELMONT COUNTY

PROJECT DESCRIPTION

THE PROJECT INCLUDES THE CONCRETE OVERLAY OF 5.0 MILES OF IR 70 INCLUDING THE SR 149 RAMPS. OTHER ITEMS INCLUDE THE REHABILITATION OF TWO SETS OF MAINLINE STRUCTURES, GUARDRAIL REPLACEMENT, TRAFFIC CONTROL, AND DRAINAGE.

PROJECT EARTH DISTURBED AREA: 100 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 42 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 142 ACRES

LIMITED ACCESS

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

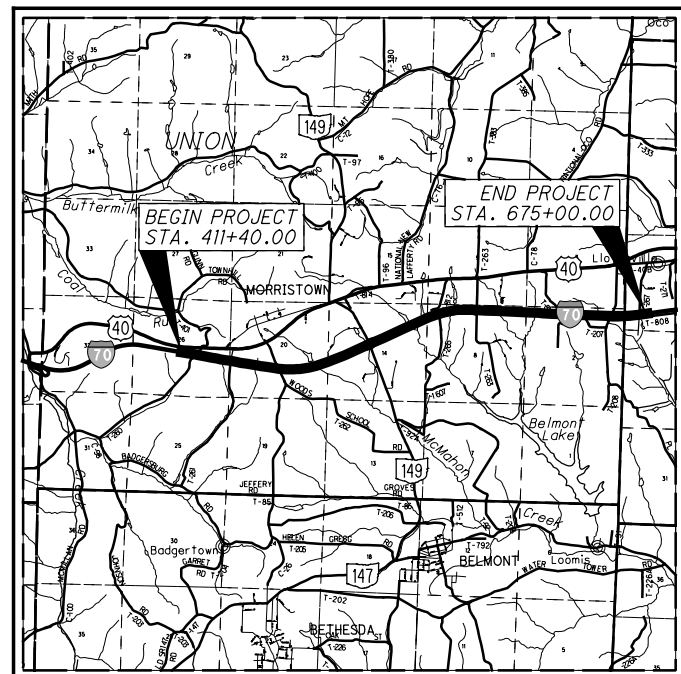
2008 SPECIFICATIONS

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

UNDER AUTHORITY OF SECTION 4511.21, DIVISION (H) OF THE OHIO REVISED CODE, THE REVISED PRIMA FACIE SPEED LIMITS AS INDICATED HEREIN ARE DETERMINED TO BE REASONABLE AND SAFE, AND ARE HEREBY ESTABLISHED FOR THE DURATION OF THIS PROJECT. THE PRIMA FACIE SPEED LIMIT OR LIMITS HEREBY ESTABLISHED SHALL BECOME EFFECTIVE WHEN APPROPRIATE SIGNS GIVING NOTICE THEREOF ARE ERECTED.

APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION



LOCATION MAP

LATITUDE: 40°03'41" LONGITUDE: 81°02'55"



- PORTION TO BE IMPROVED: [thick solid line]
- INTERSTATE HIGHWAY: [double solid line]
- STATE & FEDERAL ROUTES: [dashed line]
- COUNTY & TOWNSHIP ROADS: [thin solid line]
- OTHER ROADS: [dotted line]

DESIGN DESIGNATION

CURRENT ADT (2010)	35870
DESIGN YEAR ADT (2030)	46890
DESIGN HOURLY VOLUME (2030)	4220
DIRECTIONAL DISTRIBUTION	0.55
TRUCKS (24 HOUR B&C)	0.50
DESIGN SPEED	70 MPH
LEGAL SPEED	65 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
RURAL INTERSTATE	
NHS PROJECT	YES

DESIGN EXCEPTIONS

GRADED SHOULDER WIDTH 3/24/2009

UNDERGROUND UTILITIES
CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG

CALL
1-800-362-2764
(TOLL FREE)

OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS PROTECTIVE
SERVICE CALL: **1-800-925-0988**

PLAN PREPARED BY:



INDEX OF SHEETS:

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BUILDABLE UNIT 4

ENGINEERS SEAL:

FOR STRUCTURES
20' & OVER

SIGNED: *[Signature]*
DATE: 05/02/2011

ENGINEERS SEAL:

FOR ENTIRE PLAN EXCEPT
STRUCTURES 20' & OVER

SIGNED: *[Signature]*
DATE: 05/02/2011

STANDARD CONSTRUCTION DRAWINGS										SUPPLEMENTAL SPECIFICATIONS	
BP-2.1	7/18/08	F-1.1	7/16/04	RM-4.1	10/20/06	MT-101.70	1/16/09	HL-50.11	1/19/07	800	10/16/09
BP-2.2	7/18/08	F-2.1	7/28/00	RM-4.3	10/16/09	MT-101.90	1/16/09			888	4/18/08
BP-2.3	7/16/04	F-3.1	7/28/00	RM-4.5	10/16/09	MT-102.10	7/17/09			898	7/17/09
BP-3.1	10/19/07	F-3.3	7/28/00	RM-4.6	10/16/09	MT-102.20	4/17/09				
BP-6.1	7/28/00	F-3.4	7/28/00			MT-102.30	4/17/09				
CB-3.1	7/15/05	GR-1.1	7/16/04	AS-1-81	7/19/02						
CB-3.2	7/15/05	GR-2.1	1/16/04	MT-95.30	7/17/09	TC-42.10	1/19/07				
		GR-3.1	10/16/09	MT-95.71	7/17/09	TC-42.20	7/16/04				
HW-2.1	7/30/07	GR-3.2	10/16/09	MT-98.10	7/17/09	TC-51.11	4/20/01				
HW-2.2	7/30/07	GR-4.2	1/19/07	MT-98.11	7/17/09	TC-52.10	1/19/07				
		GR-5.1	4/18/03	MT-98.20	7/17/09	TC-52.20	1/19/07				
DM-1.1	4/21/06	GR-5.2	1/16/04	MT-98.28	7/17/09	TC-65.10	1/21/05				
DM-1.2	10/21/05	GR-5.3	1/16/04	MT-98.29	7/17/09	TC-65.11	1/21/05				
DM-4.1	7/19/02	GR-6.1	4/18/03	MT-100.00	1/16/09	TC-72.20	10/16/09				
		GR-6.2	4/18/03	MT-101.60	4/17/09	TC-73.10	1/19/01				

SPECIAL PROVISIONS

APPROVED FOR CONSTRUCTION - 5/2/2011

FEDERAL PROJECT NO.	E040(135)
PID NO.	76825
CONSTRUCTION PROJECT NO.	093005
RAILROAD INVOLVEMENT	NONE
BEL-70-7.61	1
	307

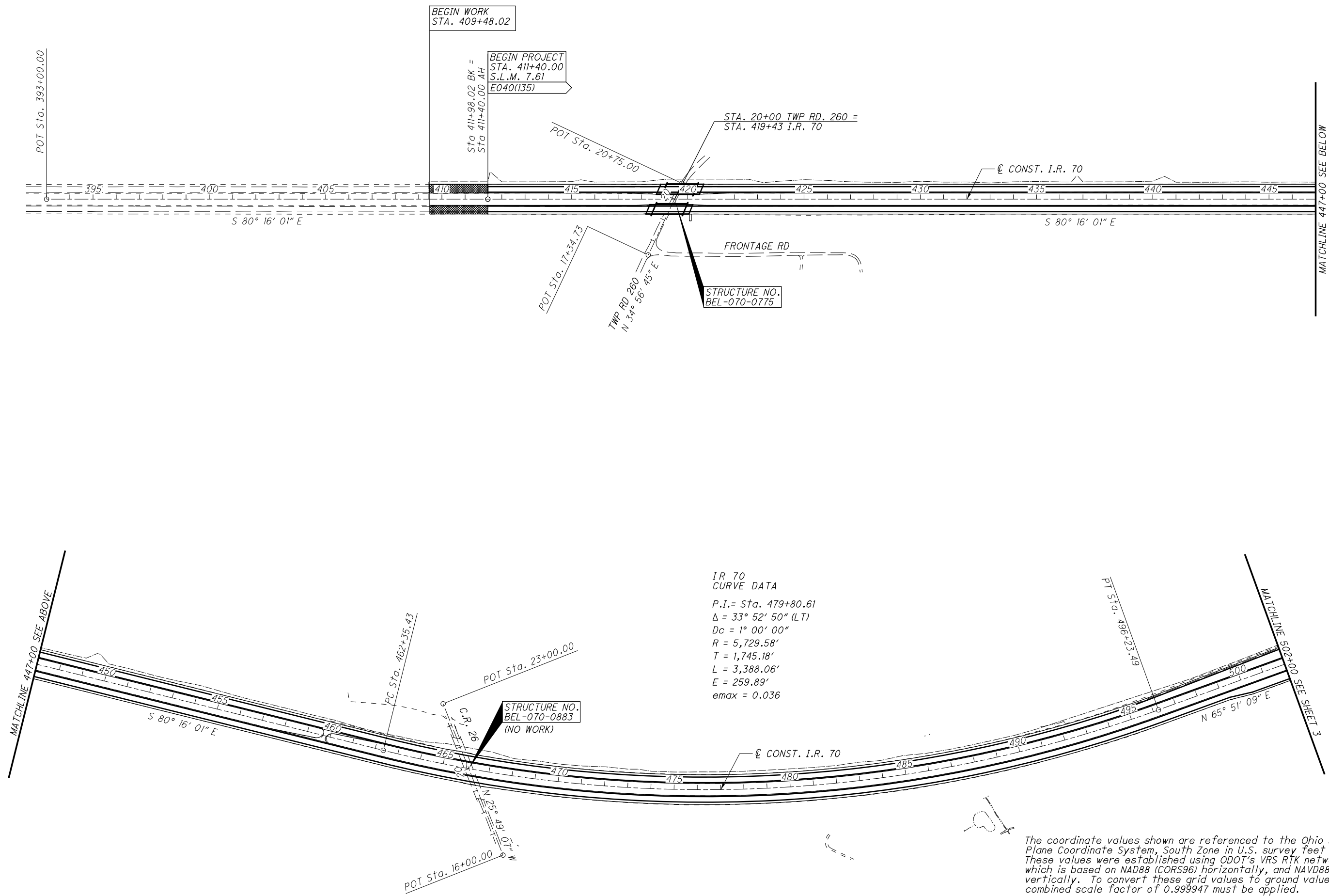
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APPROVED FOR CONSTRUCTION - 5/2/2011

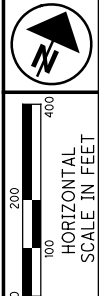
SCHEMATIC PLAN

BEL-70-7.61



The coordinate values shown are referenced to the Ohio State Plane Coordinate System, South Zone in U.S. survey feet units. These values were established using ODOT's VRS RTK network which is based on NAD88 (CORS96) horizontally, and NAVD88 vertically. To convert these grid values to ground values a combined scale factor of 0.999947 must be applied.

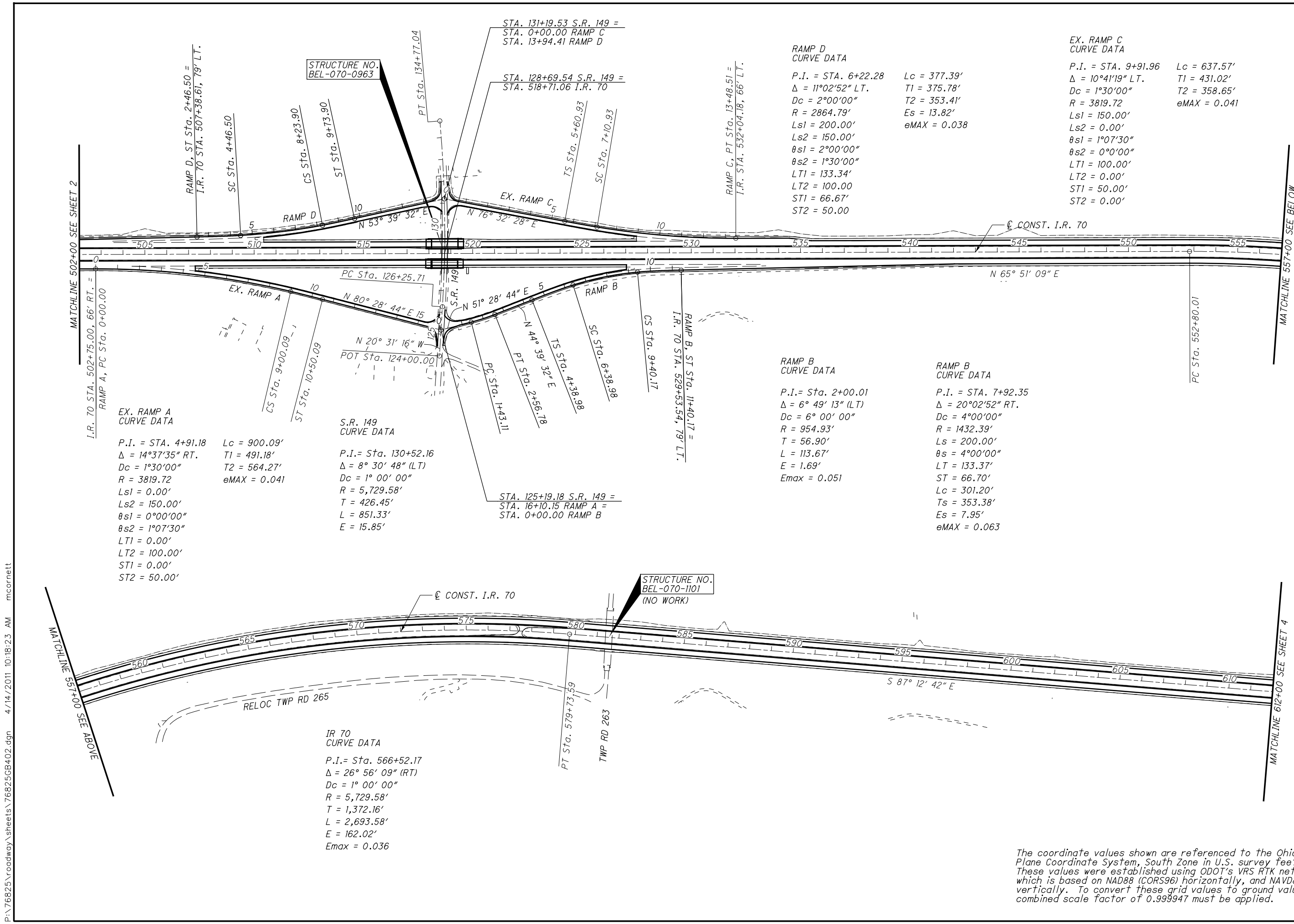
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APPROVED FOR CONSTRUCTION - 5/2/2011

SCHEMATIC PLAN

BEL-70-7.61



**EX. RAMP A
CURVE DATA**

P.I. = STA. 4+91.18
 $\Delta = 14^\circ 37' 35''$ RT.
 $Dc = 1^\circ 30' 00''$
 $R = 3819.72$
 $Ls1 = 0.00'$
 $Ls2 = 150.00'$
 $\theta s1 = 0^\circ 00' 00''$
 $\theta s2 = 1^\circ 07' 30''$
 $LT1 = 0.00'$
 $LT2 = 100.00'$
 $ST1 = 0.00'$
 $ST2 = 50.00'$

**S.R. 149
CURVE DATA**

P.I. = Sta. 130+52.16
 $\Delta = 8^\circ 30' 48''$ (LT)
 $Dc = 1^\circ 00' 00''$
 $R = 5,729.58'$
 $T = 426.45'$
 $L = 851.33'$
 $E = 15.85'$

**IR 70
CURVE DATA**

P.I. = Sta. 566+52.17
 $\Delta = 26^\circ 56' 09''$ (RT)
 $Dc = 1^\circ 00' 00''$
 $R = 5,729.58'$
 $T = 1,372.16'$
 $L = 2,693.58'$
 $E = 162.02'$
 $E_{max} = 0.036$

**STA. 125+19.18 S.R. 149 =
STA. 16+10.15 RAMP A =
STA. 0+00.00 RAMP B**

**RAMP B
CURVE DATA**

P.I. = Sta. 2+00.01
 $\Delta = 6^\circ 49' 13''$ (LT)
 $Dc = 6^\circ 00' 00''$
 $R = 954.93'$
 $T = 56.90'$
 $L = 113.67'$
 $E = 1.69'$
 $E_{max} = 0.051$

**RAMP B
CURVE DATA**

P.I. = STA. 7+92.35
 $\Delta = 20^\circ 02' 52''$ RT.
 $Dc = 4^\circ 00' 00''$
 $R = 1432.39'$
 $Ls = 200.00'$
 $\theta s = 4^\circ 00' 00''$
 $LT = 133.37'$
 $ST = 66.70'$
 $Lc = 301.20'$
 $Ts = 353.38'$
 $Es = 7.95'$
 $e_{MAX} = 0.063$

**RAMP D
CURVE DATA**

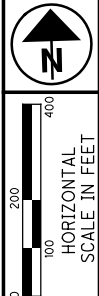
P.I. = STA. 6+22.28
 $\Delta = 11^\circ 02' 52''$ LT.
 $Dc = 2^\circ 00' 00''$
 $R = 2864.79'$
 $Ls1 = 200.00'$
 $Ls2 = 150.00'$
 $\theta s1 = 2^\circ 00' 00''$
 $\theta s2 = 1^\circ 30' 00''$
 $LT1 = 133.34'$
 $LT2 = 100.00'$
 $ST1 = 66.67'$
 $ST2 = 50.00'$

**EX. RAMP C
CURVE DATA**

P.I. = STA. 9+91.96
 $\Delta = 10^\circ 41' 19''$ LT.
 $Dc = 1^\circ 30' 00''$
 $R = 3819.72$
 $Ls1 = 150.00'$
 $Ls2 = 0.00'$
 $\theta s1 = 1^\circ 07' 30''$
 $\theta s2 = 0^\circ 00' 00''$
 $LT1 = 100.00'$
 $LT2 = 0.00'$
 $ST1 = 50.00'$
 $ST2 = 0.00'$

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APPROVED FOR CONSTRUCTION - 5/2/2011

SCHEMATIC PLAN

BEL-70-7.61

4
307

REST AREA
EX. CURVE DATA (2)

P.I. = Sta. 7+62.27
 $\Delta = 38^\circ 24' 19''$ (LT)
 $Dc = 19^\circ 05' 55''$
 $R = 300.00'$
 $T = 104.49'$
 $L = 201.09'$
 $E = 17.68'$

REST AREA
EX. CURVE DATA (3)

P.I. = Sta. 9+29.92
 $\Delta = 45^\circ 21' 54''$ (RT)
 $Dc = 33^\circ 42' 12''$
 $R = 170.00'$
 $T = 71.05'$
 $L = 134.60'$
 $E = 14.25'$

REST AREA
CURVE DATA (4)

P.I. = Sta. 17+69.91
 $\Delta = 24^\circ 00' 22''$ (RT)
 $Dc = 34^\circ 06' 17''$
 $R = 168.00'$
 $T = 35.72'$
 $L = 70.39'$
 $E = 3.76'$

REST AREA
CURVE DATA (5)

P.I. = Sta. 19+84.23
 $\Delta = 14^\circ 44' 32''$ (LT)
 $Dc = 19^\circ 05' 55''$
 $R = 300.00'$
 $T = 38.81'$
 $L = 77.19'$
 $E = 2.50'$
 $E_{max} = 0.032$

REST AREA
CURVE DATA (6)

P.I. = Sta. 23+75.94
 $\Delta = 10^\circ 08' 04''$ (LT)
 $Dc = 1^\circ 30' 00''$
 $R = 3,819.72'$
 $T = 338.69'$
 $L = 675.62'$
 $E = 14.99'$
 $E_{max} = 0.032$ (EX.)

REST AREA
CURVE DATA (7)

P.I. = Sta. 2+77.02
 $\Delta = 8^\circ 17' 46''$ (RT)
 $Dc = 1^\circ 30' 00''$
 $R = 3,819.72'$
 $T = 277.02'$
 $L = 553.07'$
 $E = 10.03'$
 $E_{max} = 0.035$ (EX.)

REST AREA
CURVE DATA (8)

P.I. = Sta. 5+96.18
 $\Delta = 11^\circ 21' 23''$ (RT)
 $Dc = 11^\circ 27' 33''$
 $R = 500.00'$
 $T = 49.71'$
 $L = 99.10'$
 $E = 2.47'$

REST AREA
CURVE DATA (9)

P.I. = Sta. 8+57.12
 $\Delta = 19^\circ 39' 06''$ (LT)
 $Dc = 34^\circ 06' 17''$
 $R = 168.00'$
 $T = 29.10'$
 $L = 57.62'$
 $E = 2.50'$

REST AREA
CURVE DATA (10)

P.I. = Sta. 15+36.68
 $\Delta = 45^\circ 11' 50''$ (LT)
 $Dc = 33^\circ 42' 12''$
 $R = 170.00'$
 $T = 70.76'$
 $L = 134.10'$
 $E = 14.14'$

REST AREA
CURVE DATA (11)

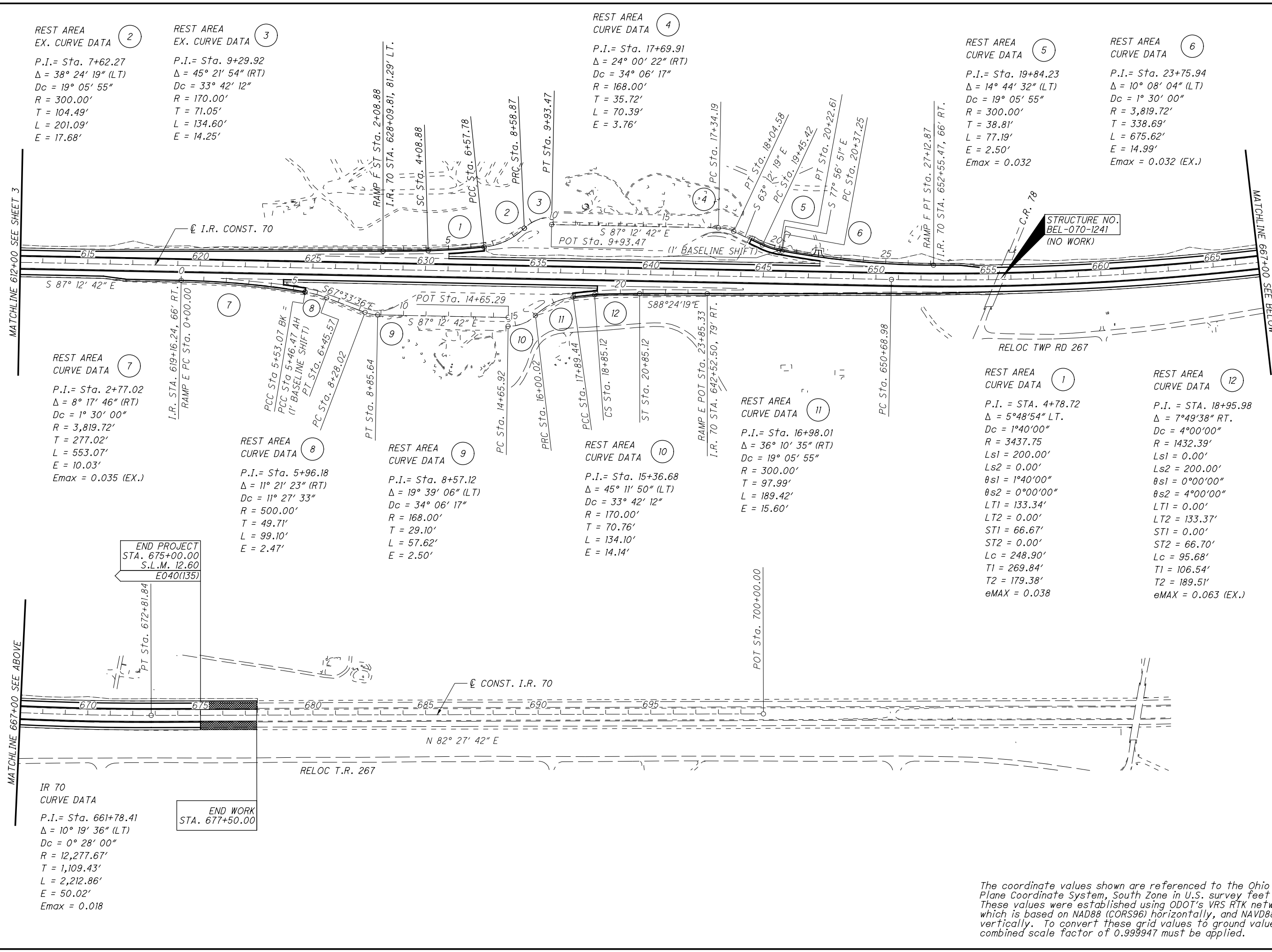
P.I. = Sta. 16+98.01
 $\Delta = 36^\circ 10' 35''$ (RT)
 $Dc = 19^\circ 05' 55''$
 $R = 300.00'$
 $T = 97.99'$
 $L = 189.42'$
 $E = 15.60'$

REST AREA
CURVE DATA (1)

P.I. = STA. 4+78.72
 $\Delta = 5^\circ 48' 54''$ LT.
 $Dc = 1^\circ 40' 00''$
 $R = 3437.75'$
 $Ls1 = 200.00'$
 $Ls2 = 0.00'$
 $\theta s1 = 1^\circ 40' 00''$
 $\theta s2 = 0^\circ 00' 00''$
 $LT1 = 133.34'$
 $LT2 = 0.00'$
 $ST1 = 66.67'$
 $ST2 = 0.00'$
 $Lc = 248.90'$
 $T1 = 269.84'$
 $T2 = 179.38'$
 $eMAX = 0.038$

REST AREA
CURVE DATA (12)

P.I. = STA. 18+95.98
 $\Delta = 7^\circ 49' 38''$ RT.
 $Dc = 4^\circ 00' 00''$
 $R = 1432.39'$
 $Ls1 = 0.00'$
 $Ls2 = 200.00'$
 $\theta s1 = 0^\circ 00' 00''$
 $\theta s2 = 4^\circ 00' 00''$
 $LT1 = 0.00'$
 $LT2 = 133.37'$
 $ST1 = 0.00'$
 $ST2 = 66.70'$
 $Lc = 95.68'$
 $T1 = 106.54'$
 $T2 = 189.51'$
 $eMAX = 0.063$ (EX.)



END PROJECT
STA. 675+00.00
S.L.M. 12.60
E040(135)

END WORK
STA. 677+50.00

IR 70
CURVE DATA

P.I. = Sta. 661+78.41
 $\Delta = 10^\circ 19' 36''$ (LT)
 $Dc = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 1,109.43'$
 $L = 2,212.86'$
 $E = 50.02'$
 $E_{max} = 0.018$

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BENCHMARK	ALIGNMENT	STATION	OFFSET	NORTHING	EASTING	ELEVATION	FEATURE
13	I.R. 70	415+99.86	0.02	753,010.0100	2,363,636.2800	1255.63	CENTERLINE MONUMENT FOUND
1397	I.R. 70	420+92.94	-192.26	753,116.1570	2,364,154.7680	1245.95	PK NAIL FOUND
12	I.R. 70	423+99.59	0.01	752,874.8200	2,364,424.5000	1253.64	CENTERLINE MONUMENT FOUND
11	I.R. 70	430+99.51	-0.05	752,756.5500	2,365,114.3500	1249.16	CENTERLINE MONUMENT FOUND
10	I.R. 70	439+99.32	-0.03	752,604.4100	2,366,001.2100	1247.78	CENTERLINE MONUMENT FOUND
9	I.R. 70	446+99.96	-0.09	752,486.0200	2,366,691.7700	1263.04	CENTERLINE MONUMENT FOUND
8	I.R. 70	453+00.11	-0.27	752,384.7300	2,367,283.3100	1275.01	CENTERLINE MONUMENT FOUND
7	I.R. 70	457+99.74	-0.20	752,300.2000	2,367,775.7400	1280.08	CENTERLINE MONUMENT FOUND
6	I.R. 70	462+35.29	-0.14	752,226.5100	2,368,205.0100	1279.65	CENTERLINE MONUMENT FOUND
14	I.R. 70	468+00.09	0.01	752,158.4300	2,368,765.4600	1272.63	CENTERLINE MONUMENT FOUND
15	I.R. 70	473+99.73	0.23	752,146.8300	2,369,364.7200	1256.91	CENTERLINE MONUMENT FOUND
16	I.R. 70	479+99.36	0.48	752,197.8600	2,369,961.9400	1239.44	CENTERLINE MONUMENT FOUND
17	I.R. 70	486+00.04	0.35	752,311.6300	2,370,551.5100	1221.55	CENTERLINE MONUMENT FOUND
18	I.R. 70	490+99.91	-0.06	752,453.2200	2,371,030.7600	1213.36	CENTERLINE MONUMENT FOUND
19	I.R. 70	496+24.39	0.15	752,645.4700	2,371,518.5400	1216.14	CENTERLINE MONUMENT FOUND
20	I.R. 70	506+00.60	0.14	753,044.8300	2,372,409.3200	1223.58	CENTERLINE MONUMENT FOUND
21	I.R. 70	512+00.68	0.16	753,290.3000	2,372,956.9000	1226.57	CENTERLINE MONUMENT FOUND
22	I.R. 70	524+00.62	0.14	753,781.2000	2,374,051.8300	1213.74	CENTERLINE MONUMENT FOUND
23	I.R. 70	530+00.46	0.00	754,026.7100	2,374,599.1300	1197.51	CENTERLINE MONUMENT FOUND
24	I.R. 70	537+00.00	0.00	754,312.8800	2,375,237.4600	1177.52	CENTERLINE MONUMENT FOUND
25	I.R. 70	543+99.52	0.04	754,599.0100	2,375,875.7800	1162.02	CENTERLINE MONUMENT FOUND
26	I.R. 70	552+80.55	0.09	754,959.3800	2,376,679.7400	1176.99	CENTERLINE MONUMENT FOUND
27	I.R. 70	558+00.19	0.03	755,150.1900	2,377,162.8800	1191.86	CENTERLINE MONUMENT FOUND
28	I.R. 70	564+98.42	-0.03	755,336.1900	2,377,835.4300	1211.44	CENTERLINE MONUMENT FOUND
29	I.R. 70	571+99.86	-0.09	755,439.3400	2,378,528.8100	1226.17	CENTERLINE MONUMENT FOUND
44	I.R. 70	579+74.16	0.00	755,453.8000	2,379,302.3900	1229.10	CENTERLINE MONUMENT FOUND
43	I.R. 70	586+99.95	0.05	755,418.4400	2,380,027.3200	1218.94	CENTERLINE MONUMENT FOUND
30	I.R. 70	593+99.92	0.10	755,384.3400	2,380,726.4600	1200.53	CENTERLINE MONUMENT FOUND
31	I.R. 70	599+99.40	-0.01	755,355.2800	2,381,325.2400	1186.09	CENTERLINE MONUMENT FOUND
32	I.R. 70	606+99.44	0.01	755,321.2100	2,382,024.4500	1182.86	CENTERLINE MONUMENT FOUND
33	I.R. 70	614+99.47	0.03	755,282.2700	2,382,823.5300	1189.58	CENTERLINE MONUMENT FOUND
34	I.R. 70	621+00.84	-0.01	755,253.0500	2,383,424.1900	1194.85	CENTERLINE MONUMENT FOUND
35	I.R. 70	627+00.46	0.02	755,223.8600	2,384,023.1000	1199.97	CENTERLINE MONUMENT FOUND
36	I.R. 70	633+00.13	0.02	755,194.6800	2,384,622.0600	1203.07	CENTERLINE MONUMENT FOUND
37	I.R. 70	639+00.09	-0.16	755,165.6800	2,385,221.3200	1200.23	CENTERLINE MONUMENT FOUND
38	I.R. 70	645+00.94	-0.24	755,136.5300	2,385,821.4600	1191.52	CENTERLINE MONUMENT FOUND
39	I.R. 70	650+69.91	-0.43	755,109.0400	2,386,389.7600	1182.31	CENTERLINE MONUMENT FOUND
40	I.R. 70	658+01.00	-0.30	755,095.1500	2,387,120.5900	1178.14	CENTERLINE MONUMENT FOUND
41	I.R. 70	665+00.81	-0.14	755,122.5900	2,387,819.7600	1184.50	CENTERLINE MONUMENT FOUND
42	I.R. 70	672+82.49	0.05	755,200.2700	2,388,597.4300	1193.69	CENTERLINE MONUMENT FOUND
965	S.R. 149	126+29.97	0.88	753,342.5200	2,373,658.1900	1196.07	PK NAIL FOUND
1694	S.R. 149	126+29.99	0.92	753,342.5460	2,373,658.2180	1196.04	PK NAIL FOUND
1695	S.R. 149	130+36.48	0.97	753,717.8390	2,373,502.0790	1205.01	PK NAIL FOUND
1398	T.R. 260	18+22.80	-22.52	752,819.6680	2,363,854.5170	1226.70	PK NAIL FOUND
1779	T.R. 260	18+22.80	-22.52	752,819.6680	2,363,854.5170	1226.70	IRON PIN FOUND
1766	T.R. 260	20+75.00	53.76	753,116.1570	2,364,154.7680	1245.95	PK NAIL FOUND

APPROVED FOR CONSTRUCTION - 5/2/2011

BENCHMARKS

BEL - 70 - 7 .61

REFERENCE POINT	STATION	NORTHING	EASTING
CONST. I.R. 70			
P.O.T.	393+00.00	753,408.6500	2,361,312.3400
P.O.T. (STA. EQ.)	411+98.02	753,087.7700	2,363,183.0400
	411+40.00		
P.C.	462+35.43	752,226.3400	2,368,205.1300
P.T.	496+23.49	752,645.2400	2,371,517.6600
P.C.	552+80.00	754,959.2400	2,376,679.2100
P.T.	579+73.59	755,453.8200	2,379,301.8300
P.C.	650+68.98	755,108.6500	2,386,388.8100
P.T.	672+81.84	755,200.2300	2,388,596.7800
P.O.T.	700+00.00	755,556.8200	2,391,291.4500
EX. CONST. RAMP A			
P.C.	0+00.00	752,851.5400	2,372,139.1600
C.S.	9+00.09	753,120.0300	2,372,996.0900
S.T.	10+50.09	753,145.8100	2,373,143.8600
P.O.T.	16+10.15	753,238.4500	2,373,696.2000
EX. CONST. RAMP B			
P.O.T.	0+00.00	753,238.4500	2,373,696.2000
P.C.	1+43.11	753,327.5800	2,373,808.1700
P.T.	2+56.78	753,403.4900	2,373,892.6800
T.S.	4+21.53	753,520.6800	2,374,008.4800
S.C.	6+21.53	753,659.6000	2,374,152.3000
C.S.	9+21.53	753,832.8200	2,374,396.5700
S.T.	11+21.53	753,922.5800	2,374,575.2500
P.O.T.	14+21.50	754,050.9700	2,374,846.3600
EX. CONST. RAMP C			
P.O.T.	0+00.00	753,792.6800	2,373,466.0400
T.S.	5+60.94	753,923.2400	2,374,011.5700
S.C.	7+10.94	753,959.1000	2,374,157.2200
P.T.	13+48.51	754,170.2700	2,374,758.0200
EX. CONST. RAMP D			
P.O.T.	0+00.00	753,072.4600	2,372,277.4900
T.S.	3+00.00	753,200.8600	2,372,548.6200
S.C.	4+50.00	753,266.2400	2,372,683.6200
C.S.	8+50.00	753,471.1400	2,373,026.7800
S.T.	10+00.00	753,558.9600	2,373,148.3700
P.O.T.	13+94.39	753,792.6800	2,373,466.0400
EX. CONST. RAMP E (OFF)			
P.C.	0+00.00	755,196.1200	2,383,236.6000
P.C.C. (STA. EQ.)	5+53.07	755,129.3900	2,383,785.1500
P.C.C. (1' SHIFT)	5+46.47	755,128.4100	2,383,784.9500
P.T.	6+45.57	755,099.8800	2,383,879.6900
P.C.	8+28.02	755,030.2300	2,384,048.3300
P.T.	8+85.64	755,017.7100	2,384,104.2800
P.O.T.	14+65.29	754,989.5100	2,384,683.2500

REFERENCE POINT	STATION	NORTHING	EASTING
EX. CONST. RAMP E (ON)			
P.C.	14+65.92	754,950.5300	2,384,681.3500
P.R.C.	16+00.02	754,994.8100	2,384,804.2700
P.C.C.	17+89.44	755,071.5300	2,384,974.0200
C.S.	18+85.12	755,078.8300	2,385,069.4100
S.T.	20+85.12	755,077.8200	2,385,269.3700
P.O.T.	23+85.33	755,069.4700	2,385,569.4600
EX. CONST. RAMP F (ON)			
P.O.T.	0+00.00	754,950.5300	2,384,681.3500
T.S.	3+00.00	754,994.8100	2,384,804.2700
S.C.	5+00.00	755,071.5300	2,384,974.0200
P.C.C. (STA. EQ.)	6+88.40	755,078.8300	2,385,069.4100
	6+57.78		
P.R.C.	8+58.87	755,077.8200	2,385,269.3700
P.T.	9+93.47	755,069.4700	2,385,569.4600
EX. CONST. RAMP E (OFF)			
P.O.T.	9+93.47	755,396.0100	2,374,887.8000
P.C.	17+34.19	755,359.9800	2,385,627.6400
P.T.	18+04.58	755,342.1400	2,385,695.2000
P.C.	19+45.42	755,278.6500	2,385,820.9200
P.T.	20+22.61	755,253.0500	2,385,893.5100
P.O.T. (1' SHIFT)	20+22.61	755,252.0700	2,385,893.3000
P.C.	20+37.25	755,249.0200	2,385,907.6200
P.T.	27+12.87	755,166.9600	2,386,577.3500
PR. RAMP B			
P.O.T.	0+00.00	753,238.4500	2,373,696.2030
P.C.	1+43.11	753,327.5790	2,373,808.1690
P.T.	2+56.78	753,403.4930	2,373,892.6840
T.S.	4+38.98	753,533.0900	2,374,020.7480
S.C.	6+38.98	753,672.0110	2,374,164.5660
C.S.	9+40.17	753,845.8130	2,374,409.8780
S.T.	11+40.17	753,935.4280	2,374,588.6290
PR. RAMP D			
T.S.	2+46.50	753,173.5070	2,372,502.8870
S.C.	4+46.50	753,261.0510	2,372,682.6970
C.S.	8+23.90	753,455.6600	2,373,005.7240
S.T.	9+73.90	753,543.4880	2,373,127.3170
P.O.T.	13+94.41	753,792.6820	2,373,466.0430
PR. CONST. RAMP F (ON)			
T.S.	2+08.88	755,299.7480	2,384,136.2770
S.C.	4+08.88	755,295.9540	2,384,336.2340
P.C.C.	6+57.78	755,305.0650	2,384,584.9150
P.R.C.	8+58.87	755,383.3620	2,384,766.0650
P.T.	9+93.47	755,427.9790	2,384,889.3520

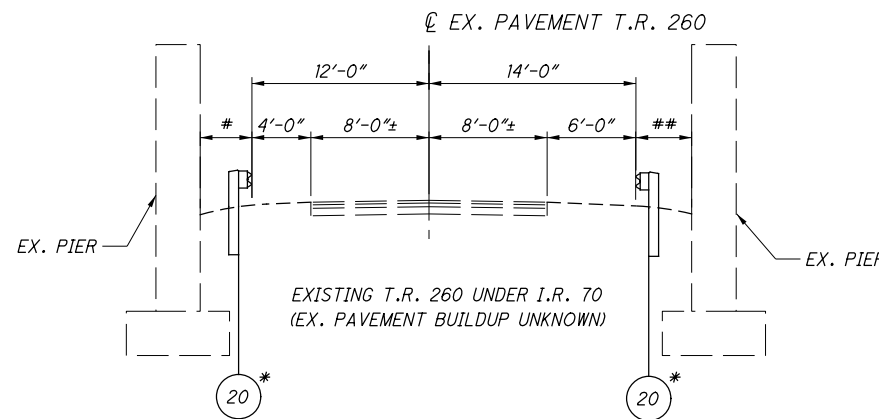
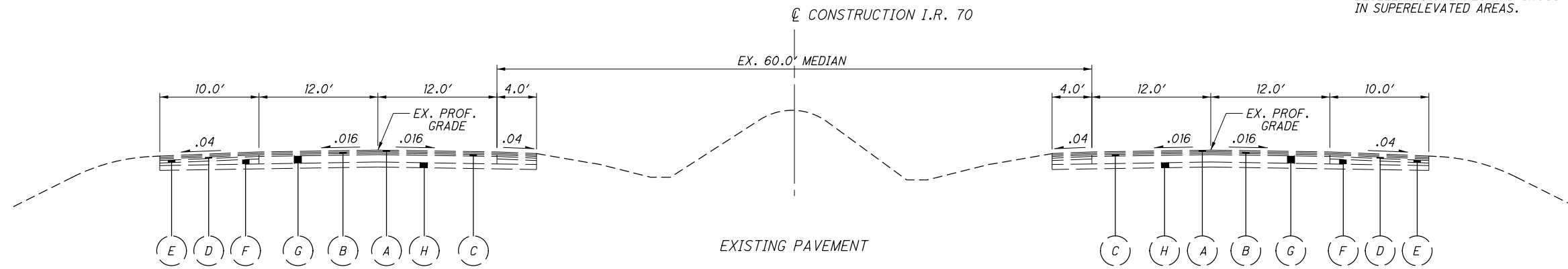
APPROVED FOR CONSTRUCTION - 5/2/2011

CENTERLINE REFERENCES

BEL - 70 - 7 .61

CALCULATED
CDS
CHECKED
BBD

NOTE:
EXISTING NORMAL TYPICAL SECTION SHOWN TO ILLUSTRATE PAVEMENT BUILDUP. OUTSIDE LANE WIDTHS VARY AT RAMP ACCELERATION AND DECELERATION LANES AND CROSS SLOPES VARY IN SUPERELEVATED AREAS.



* USE ITEM 606 - GUARDRAIL, TYPE 5A IN FRONT OF BOTH WESTBOUND PIERS.

* WESTBOUND PIER MIN = 3.5'
WESTBOUND PIER MAX = 9.8'
EASTBOUND PIER MIN = 6.0'
EASTBOUND PIER MAX = 8.5'

** WESTBOUND PIER MIN = 3.5'
WESTBOUND PIER MAX = 11.7'
EASTBOUND PIER MIN = 8.3'
EASTBOUND PIER MAX = 10.8'

LEGEND

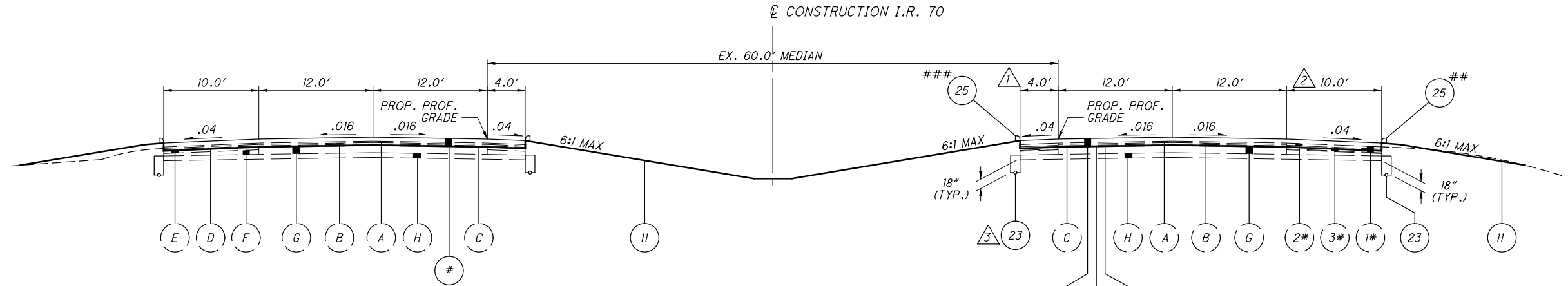
- (A) 1 3/4"± ASPHALT CONCRETE SURFACE COURSE
- (F) 3"-6" POROUS AGGREGATE
- (B) 1 3/4"± ASPHALT CONCRETE INTERMEDIATE COURSE
- (G) 9"± CONCRETE
- (C) 2"± ASPHALT CONCRETE
- (H) 6"± SUBBASE
- (D) 2"± ASPHALT CONCRETE BASE
- (I) APPROACH SLAB (T=13")
- (E) 3"± WATERPROOF AGGREGATE

- (1) ITEM 254 - PAVEMENT PLANING, 7.5" DEPTH
- (14) ITEM 204 - PROOF ROLLING
- (2) ITEM 448 - 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2
- (15) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, 5" DEPTH
- (3) ITEM 301 - 4 1/2" ASPHALT CONCRETE BASE
- (16) ITEM 442 - 1" ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5MM, TYPE A (448) (THICKNESS VARIES IN PROFILE CHANGE AND SUPERELEVATION AREAS)
- (4) ITEM 204 - 10" GRANULAR MATERIAL, TYPE B (304 GRADATION)
- (17) ITEM 888 - PORTLAND CEMENT CONCRETE PAVEMENT, 9" THICK (NON-REINFORCED PER 452)
- (5) ITEM 206 - CEMENT STABILIZED SUBGRADE, 12" DEEP
- (18) ITEM 888 - PORTLAND CEMENT CONCRETE PAVEMENT, 13" THICK (NON-REINFORCED PER 452)
- (6) ITEM 206 - CEMENT STABILIZED SUBGRADE, 14" DEEP
- (19) ITEM 304 - 6" AGGREGATE BASE
- (7) ITEM 206 - CURING COAT
- (20) ITEM 606 - GUARDRAIL, TYPE 5
- (8) ITEM 204 - EXCAVATION OF SUBGRADE, 3' DEEP
- (21) ITEM 209 - LINEAR GRADING, AS PER PLAN
- (9) ITEM 204 - EXCAVATION OF SUBGRADE, 2.5' DEEP
- (22) ITEM 448 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1 PG64-22, UNDER GUARDRAIL, AS PER PLAN (2" THICK)
- (10) ITEM 204 - GRANULAR MATERIAL, TYPE B
- (23) ITEM 605 - 6" BASE PIPE UNDERDRAIN
- (11) ITEM 659 - SEEDING AND MULCHING
- (24) ITEM 898 - QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), (T=15")
- (12) ITEM 832 - CONSTRUCTION SEEDING & MULCHING
- (25) ITEM 609 - CURB, TYPE 4-C
- (13) ITEM 204 - SUBGRADE COMPACTION

APPROVED FOR CONSTRUCTION - 5/2/2011

TYPICAL SECTIONS
EXISTING I.R. 70 & T.R. 260

BEL-70-7.61



OVERLAY - NORMAL SECTION

LIMITING STATIONS:

STA. 411+40.00 TO STA. 418+34.19	= 694.19'
STA. 420+19.08 TO STA. 460+69.83	= 4050.75'
STA. 497+89.09 TO STA. 517+85.28	= 1996.19'
STA. 519+56.37 TO STA. 551+14.41	= 3158.04'
STA. 581+39.19 TO STA. 649+79.81	= 6840.62'
STA. 673+70.97 TO STA. 675+00.00	= 129.03'

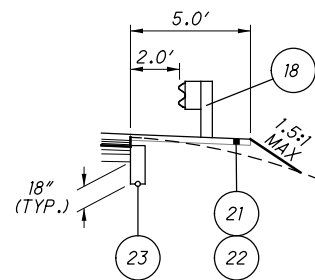
- * PLACED IN BUILDABLE UNIT 1.
- # PAVEMENT CONSTRUCTED IN BUILDABLE UNIT 3. SEE BUILDABLE UNIT 3 PLANS FOR COMPOSITION.
- ## STA. 420+04.64 TO STA. 420+06.19
STA. 466+04.20 TO STA. 466+23.97
STA. 517+69.78 TO STA. 517+85.28
STA. 519+56.37 TO STA. 519+71.87
STA. 581+01.56 TO STA. 581+21.56
- ### STA. 517+75.78 TO STA. 517+85.28

- △ 1 4' TO 6.16', STA. 417+82.64 TO STA. 418+36.81
6.16' TO 4', STA. 420+21.69 TO STA. 420+75.86
- △ 2 10' TO 12', STA. 465+94.20 TO STA. 466+04.20
12', STA. 466+04.20 TO STA. 466+87.24
12' TO 10', STA. 466+87.24 TO STA. 467+37.24
10' TO 12', STA. 517+59.78 TO STA. 517+69.78
12', STA. 517+69.78 TO STA. 517+85.28
STA. 519+56.37 TO STA. 519+71.87
12' TO 10', STA. 519+71.87 TO STA. 520+21.87
10' TO 12', STA. 580+91.56 TO STA. 581+01.56
12', STA. 581+01.56 TO STA. 581+75.56
12' TO 10', STA. 581+75.56 TO STA. 582+25.56
- △ 3 STA. 411+40.00 (AH) TO STA. 418+10.46
STA. 651+75.00 TO STA. 652+50.00
STA. 662+50.00 TO STA. 664+26.00

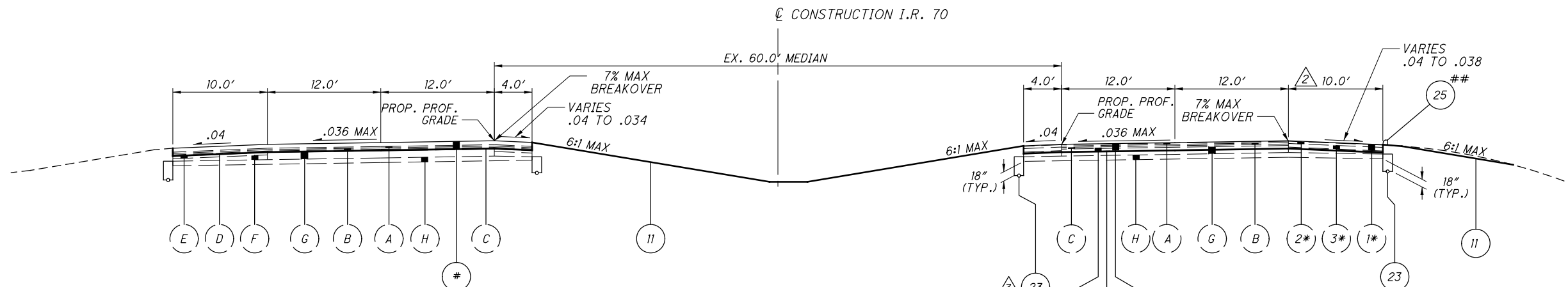
NOTES:

SEE SPEED CHANGE LANE DETAILS FOR STATION LIMITS AND WIDTHS AT ACCELERATION AND DECELERATION LANES.

INSTALL UNDERDRAINS AS PER STANDARD CONSTRUCTION DRAWING DM-1.2



GUARDRAIL DETAIL (RIGHT)



OVERLAY - SUPERELEVATED SECTION

LIMITING STATIONS:

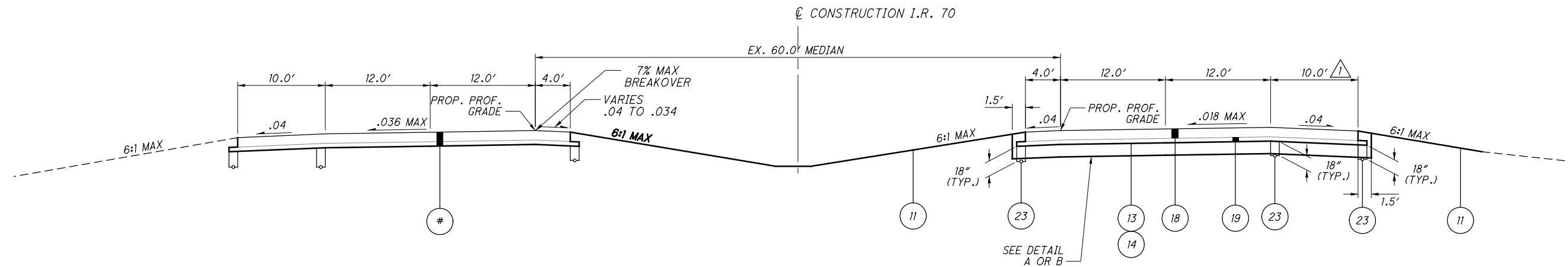
STA. 460+69.83 TO STA. 497+89.09	= 3719.26'
STA. 551+14.41 TO STA. 581+39.19	= 3024.78' (SUPERELEVATION DIRECTION REVERSED)
STA. 649+79.81 TO STA. 652+50.00	= 270.19'
STA. 662+50.00 TO STA. 673+70.97	= 1120.97'

FOR LEGEND, SEE SHEET 7

APPROVED FOR CONSTRUCTION - 5/2/2011

TYPICAL SECTIONS I.R. 70

BEL-70-7.61



FULL-DEPTH - SUPERELEVATED SECTION
LIMITING STATIONS:

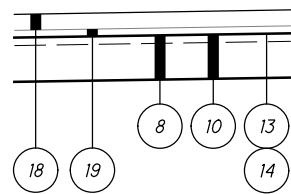
STA. 652+50.00 TO STA. 662+50.00 = 1000.00'

△ 12, STA. 655+02.50 TO STA. 655+41.25
12' TO 10', STA. 655+41.25 TO STA. 655+91.25

PAVEMENT CONSTRUCTED IN BUILDABLE UNIT 3.
SEE BUILDABLE UNIT 3 PLANS FOR COMPOSITION.

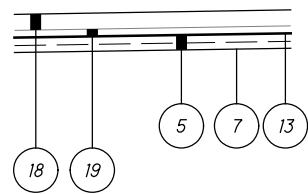
NOTE:

SEE SPEED CHANGE LANE DETAILS FOR STATION
LIMITS AND WIDTHS AT ACCELERATION AND
DECELERATION LANES.



DETAIL A - UNDERCUT OPTION
NOT TO SCALE

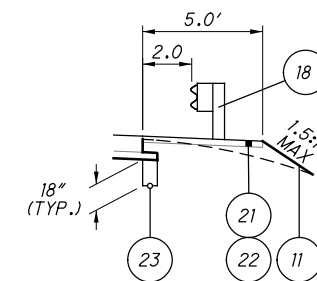
LIMITING STATIONS:



DETAIL B - CEMENT STABILIZATION OPTION
NOT TO SCALE

LIMITING STATIONS:

STA. 661+40.00 TO STA. 662+50.00



GUARDRAIL DETAIL
(RIGHT)

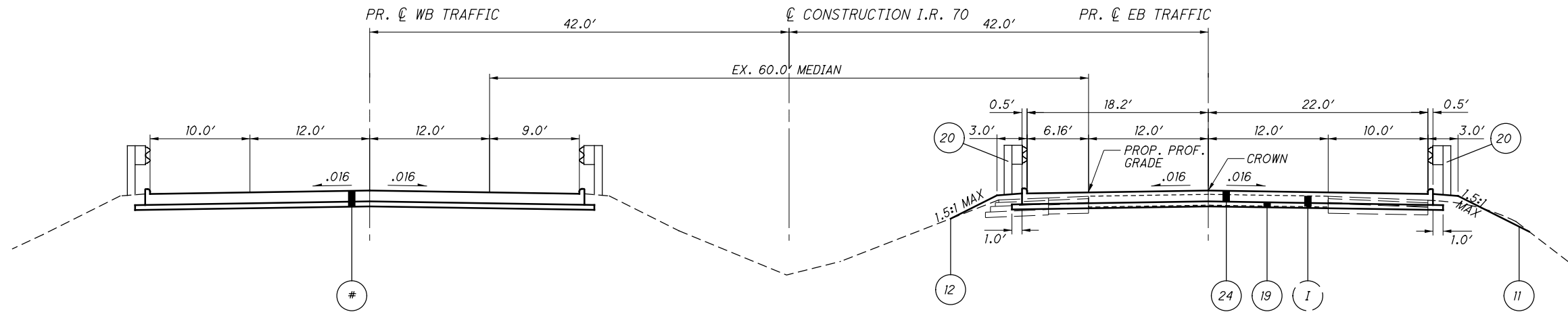
FOR LEGEND, SEE SHEET 7

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APPROVED FOR CONSTRUCTION - 5/2/2011

TYPICAL SECTIONS
I.R. 70

BEL-70-7.61



APPROACH SLABS

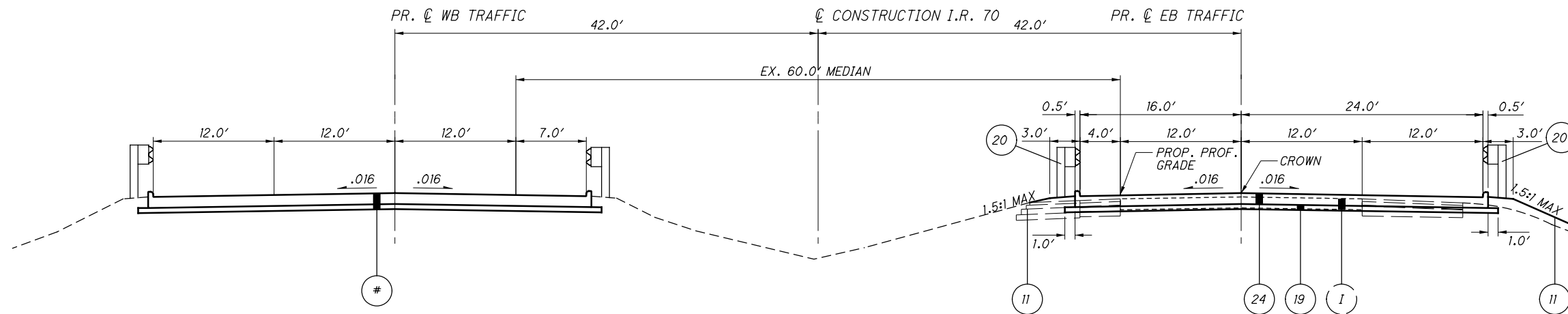
LIMITING STATIONS:

WESTBOUND

STA. 418+69.02 TO STA. 418+94.02 = 25.00'
 STA. 420+28.91 TO STA. 420+53.91 = 25.00'

EASTBOUND

STA. 418+34.19 TO STA. 418+59.19 = 25.00'
 STA. 419+94.08 TO STA. 420+19.08 = 25.00'



APPROACH SLABS

LIMITING STATIONS:

WESTBOUND

STA. 517+87.03 TO STA. 518+12.03 = 25.00'
 STA. 519+33.11 TO STA. 519+58.11 = 25.00'

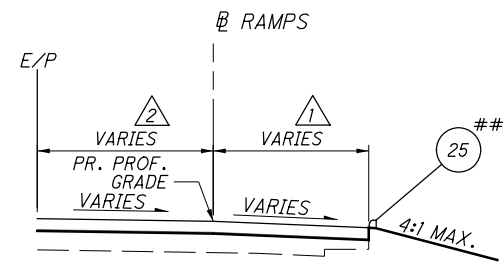
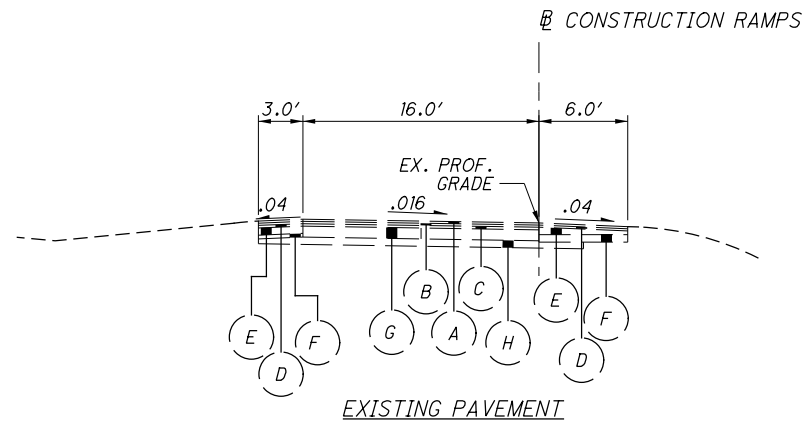
EASTBOUND

STA. 517+85.28 TO STA. 518+10.28 = 25.00'
 STA. 519+31.37 TO STA. 519+56.37 = 25.00'

PAVEMENT CONSTRUCTED IN BUILDABLE UNIT 3.
 SEE BUILDABLE UNIT 3 PLANS FOR COMPOSITION.

FOR LEGEND, SEE SHEET 7

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SPEED CHANGE LANE

△1	10' TO 8',	STA. 499+30.68 TO STA. 500+30.68
	8',	STA. 500+30.68 TO STA. 507+30.68
	6',	STA. 527+03.07 TO STA. 529+03.69
	6' TO 8',	STA. 529+03.69 TO STA. 529+53.54
	8',	STA. 529+53.54 TO STA. 541+03.54
	8' TO 10',	STA. 541+03.54 TO STA. 542+03.54
	10' TO 8',	STA. 615+70.76 TO STA. 616+70.76
	8',	STA. 616+70.76 TO STA. 623+70.76
	6',	STA. 637+64.29 TO STA. 639+02.27
	6' TO 8',	STA. 639+02.27 TO STA. 639+52.53
	8',	STA. 639+52.53 TO STA. 654+02.58
	8' TO 9.1',	STA. 654+02.58 TO STA. 654+57.65
	9.1' TO 11.3',	STA. 654+57.65 TO STA. 654+67.65
	11.3' TO 12',	STA. 654+67.65 TO STA. 655+02.50
△2	0' TO 12',	STA. 499+30.68 TO STA. 500+30.68
	12',	STA. 500+30.68 TO STA. 502+75.00
	12' TO 39.11',	STA. 502+75.00 TO STA. 507+30.68
	39.12' TO 0',	STA. 527+03.07 TO STA. 542+03.54
	0' TO 12',	STA. 615+70.76 TO STA. 616+70.76
	12',	STA. 616+70.76 TO STA. 619+16.24
	12' TO 39.11',	STA. 619+16.24 TO STA. 623+70.76
	39.06' TO 0',	STA. 637+64.29 TO STA. 655+02.50

STA. 654+67.65 TO STA. 654+87.54

APPROVED FOR CONSTRUCTION - 5/2/2011

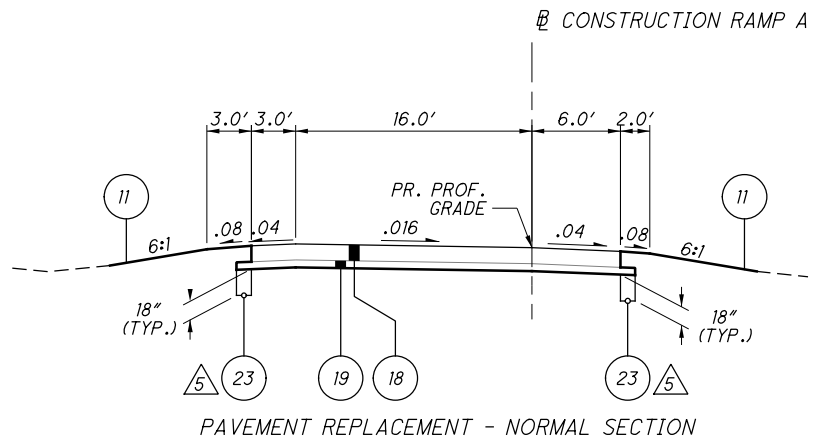
TYPICAL SECTIONS
RAMPS A, B & E

BEL-70-7.61

11
307

FOR LEGEND, SEE SHEET 7

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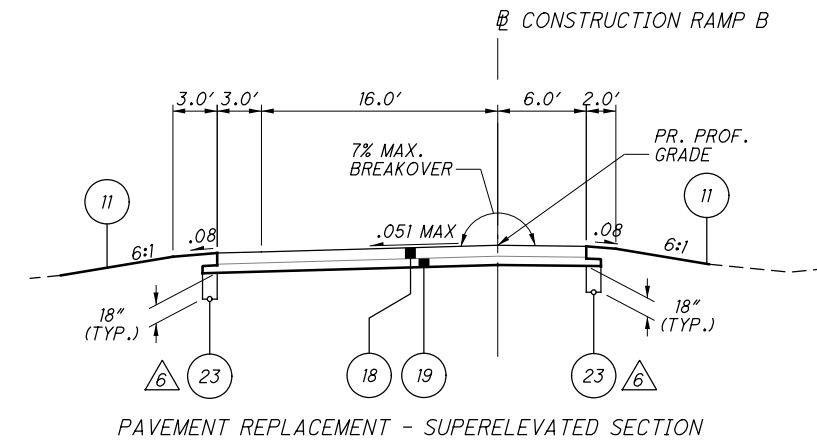
PAVEMENT REPLACEMENT - NORMAL SECTION

LIMITING STATIONS:

RAMP A STA. 13+65.00 TO STA. 15+98.95 = 233.95'

△ RAMP A STA. 13+65.00 TO STA. 14+95.00

SEE INTERSECTION DETAIL:
RAMP A STA. 15+26.11 TO STA. 15+98.95
RAMP B STA. 0+13.67 TO STA. 1+23+01

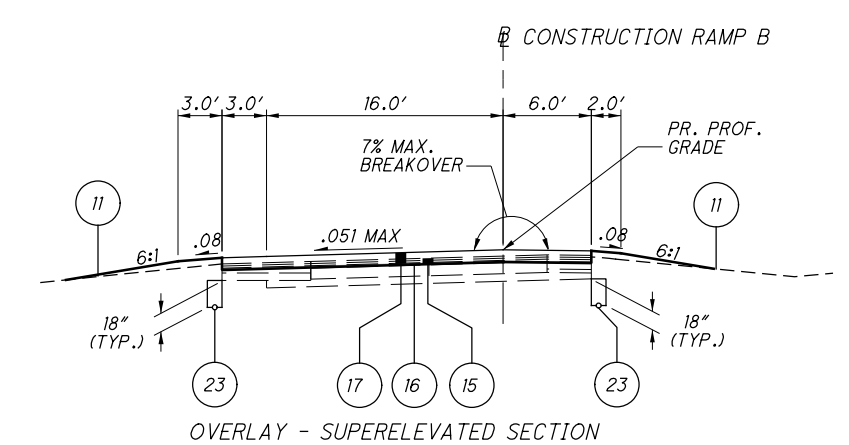


PAVEMENT REPLACEMENT - SUPERELEVATED SECTION

LIMITING STATIONS:

RAMP B STA. 0+13.67 TO STA. 1+75.00 = 161.33'

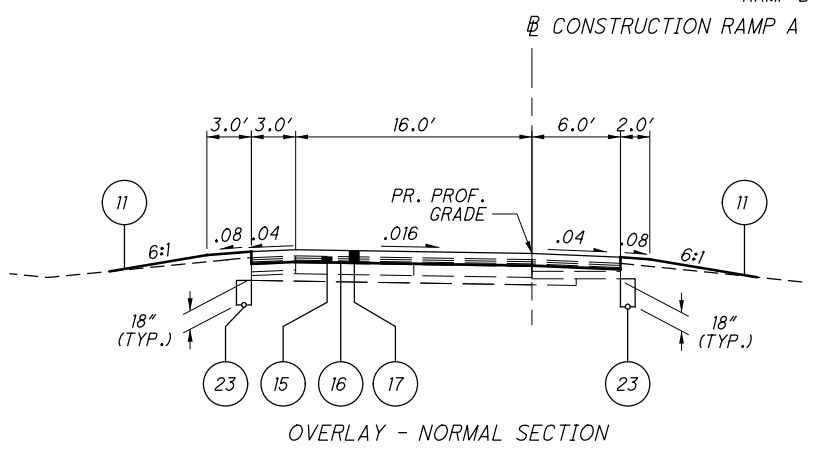
△ RAMP B STA. 0+70.00 TO STA. 1+75.00



OVERLAY - SUPERELEVATED SECTION

LIMITING STATIONS:

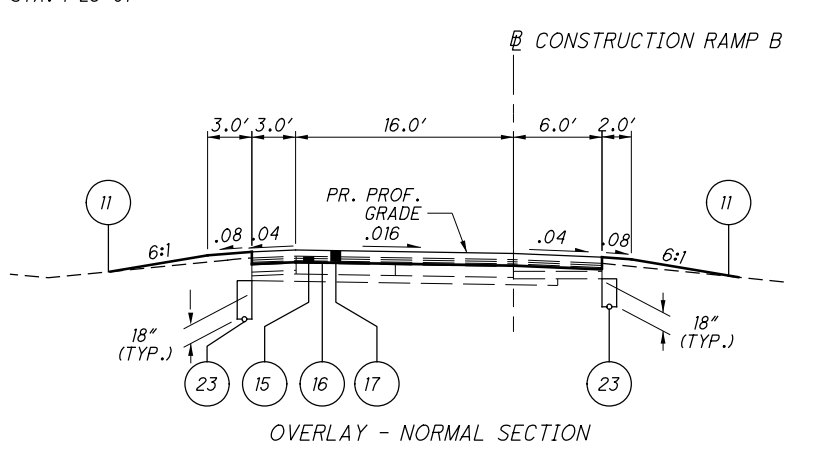
RAMP B STA. 1+75.00 TO STA. 3+89.96 = 214.96'



OVERLAY - NORMAL SECTION

LIMITING STATIONS:

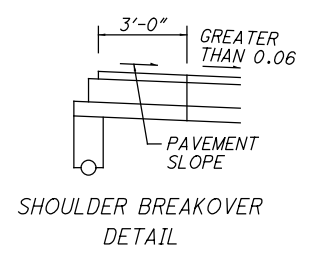
RAMP A STA. 10+50.09 TO STA. 13+65.00 = 314.91'



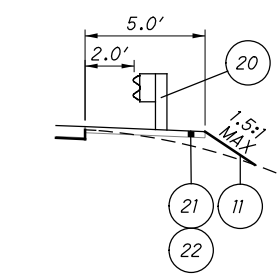
OVERLAY - NORMAL SECTION

LIMITING STATIONS:

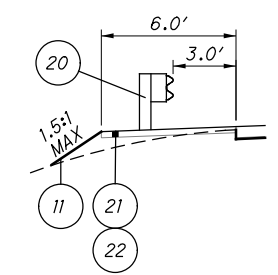
RAMP B STA. 3+89.96 TO STA. 4+38.98 = 49.02'



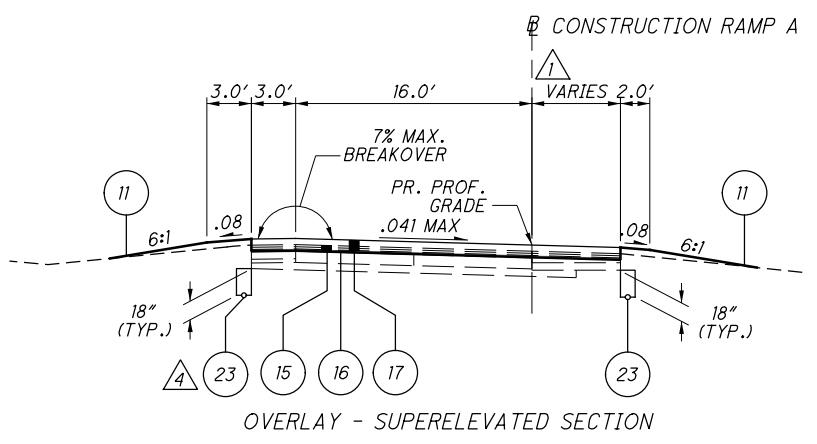
** VARIES .04 MAX TO .01 MIN AND SHOULDER BREAKOVER IS 7% MAX WHEN PAVEMENT SLOPE IS .06 OR LESS.
SEE SHOULDER BREAKOVER DETAILS WHEN PAVEMENT SLOPE IS GREATER THAN .06.



GUARDRAIL DETAIL (RIGHT) (OUTSIDE)



GUARDRAIL DETAIL (LEFT) (INSIDE)



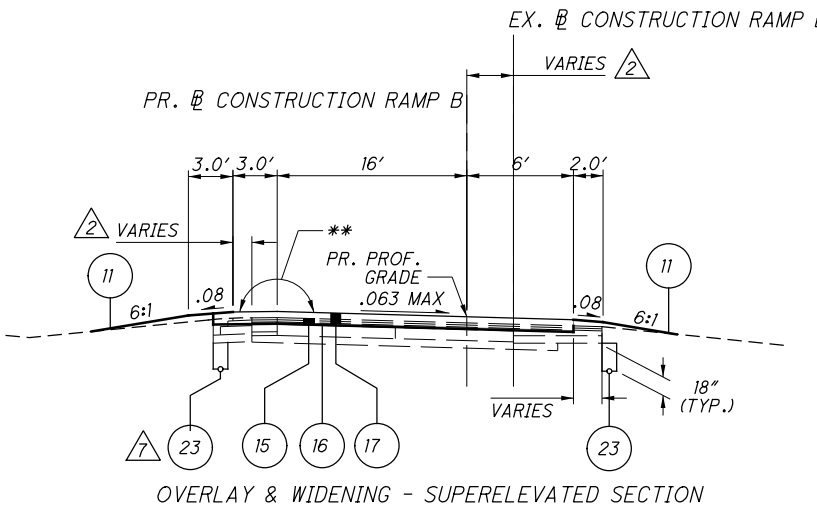
OVERLAY - SUPERELEVATED SECTION

LIMITING STATIONS:

RAMP A STA. 4+54.85 TO STA. 10+50.09 = 595.24'

△ 8' TO 6', RAMP A STA. 4+54.85 TO STA. 5+04.85
6', RAMP A STA. 5+04.85 TO STA. 10+50.09

△ RAMP A STA. 5+03.53 TO STA. 10+50.09



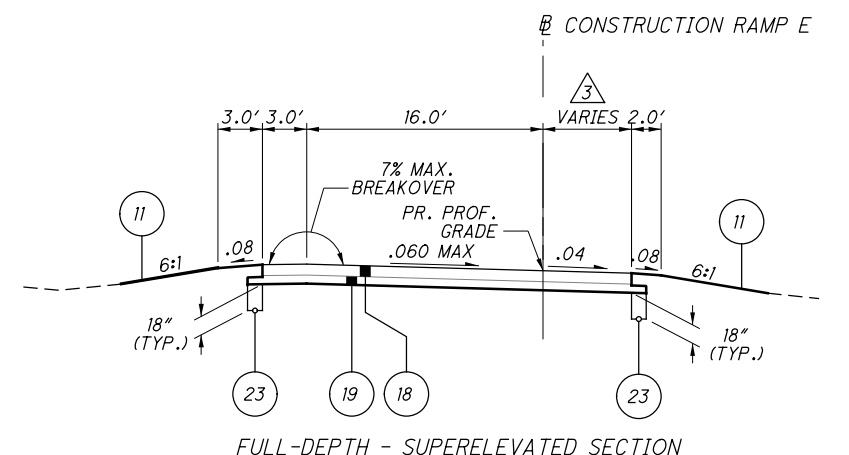
OVERLAY & WIDENING - SUPERELEVATED SECTION

LIMITING STATIONS:

RAMP B STA. 4+38.98 TO STA. 8+91.18 = 452.20'

△ 0' TO 4.35', RAMP B STA. 4+38.98 TO STA. 8+91.18

△ RAMP B STA. 4+38.98 TO STA. 6+89.88



FULL-DEPTH - SUPERELEVATED SECTION

LIMITING STATIONS:

RAMP E STA. 4+53.69 TO STA. 5+53.07 = 99.38'
RAMP E STA. 17+89.44 TO STA. 18+98.17 = 108.73'

△ 8' TO 6', RAMP E STA. 4+53.69 TO STA. 5+03.69
6', RAMP E STA. 5+03.69 TO STA. 5+53.07
6', RAMP E STA. 17+89.44 TO STA. 18+98.17

FOR LEGEND, SEE SHEET 7

APPROVED FOR CONSTRUCTION - 5/2/2011

TYPICAL SECTIONS
RAMPS A, B & E

BEL-70-7.61

UTILITIES

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

AEP OHIO POWER COMPANY
P.O. BOX 99
47687 NATIONAL ROAD
ST. CLAIRSVILLE, OHIO 43950
ATTN: JEFF TURNER
(740) 699-7845

SOUTH-CENTRAL POWER COMPANY
37801 BARNESVILLE-BETHESDA ROAD
BARNESVILLE, OHIO 43713
ATTN: JEFF LEWIS
(740) 425-4018

ATT OHIO
3935 NORTHPOINTE ROAD
ZANESVILLE, OHIO 43701
ATTN: SANDI RANDOLPH
(740) 454-3455

BELMONT COUNTY
SANITARY SEWER DISTRICT
P.O. BOX 457
ST. CLAIRSVILLE, OHIO 43950
ATTN: MARK ESPOSITO
(740) 695-3144

WINDSTREAM
32699 OLD NATIONAL ROAD
BARNESVILLE, OHIO 43713
ATTN: GREG KUHNASH
(740) 758-5818

COMCAST
100 WELDAY AVENUE, SUITE A
WINTERSVILLE, OHIO 43953
ATTN: CRAIG TACY
(740) 346-2250

OHIO DEPARTMENT OF TRANSPORTATION
2201 REISER AVENUE, SE
NEW PHILADELPHIA, OHIO 44663
ATTN: TODD MOORE
(330) 339-6633

COLUMBIA GAS OF OHIO, INC.
300 LURAY DRIVE
WINTERSVILLE, OHIO 43953
ATTN: TIM SEECH
(740) 266-4282

COLUMBIA GAS TRANSMISSION
11296 EAST PIKE ROAD
CAMBRIDGE, OHIO 43725
ATTN: BRENT NEUHART
(740) 432-1600

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

ELEVATION DATUM

ALL ELEVATIONS ARE ORTHOMETRIC HEIGHTS USING THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND THE GEOID03 GEOID. HORIZONTAL POSITIONS ARE BASED ON THE OHIO STATE PLANE SOUTH ZONE, A LAMBERT CONFORMAL CONIC MAP PROJECTION, THE NORTH AMERICAN DATUM OF 1983 ADJUSTED TO THE NATIONAL SPATIAL REFERENCE SYSTEM OF 2007 (NAD 83 (NSRS 2007)), AND THE GRS80 ELLIPSOID.

PAVING UNDER GUARDRAIL

THIS OPERATION SHALL INCLUDE PREPARATION OF THE GRADED SHOULDER USING 209, LINEAR GRADING AS PER PLAN, AND PAVING UNDER THE GUARDRAIL USING 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22, UNDER GUARDRAIL, AS PER PLAN.

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

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

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

WHEN CLEAN FILL IS PROVIDED THE USE OF HERBICIDE SHALL NOT BE REQUIRED WHEN PAVING UNDER GUARDRAIL.

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

ITEM 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22, UNDER GUARDRAIL, AS PER PLAN SHALL CONSIST OF PAVING UNDER GUARDRAIL TO THE DEPTH SPECIFIED USING ONE OF THE FOLLOWING METHODS:

METHOD A:

1. SET GUARDRAIL POSTS
2. PLACE ITEM 448

METHOD B:

1. PLACE ITEM 448
2. BORE ASPHALT AT POST LOCATIONS (MAY BE OMITTED IF STEEL POSTS ARE USED)
3. SET GUARDRAIL POSTS
4. PATCH AROUND POSTS. THE MATERIALS USED FOR PATCHING SHALL BE AN ASPHALT CONCRETE APPROVED BY THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN AWAY FROM THE POSTS.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH THE EXCEPTION OF SETTING GUARDRAIL POSTS, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 448, ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1, PG 64-22, UNDER GUARDRAIL, AS PER PLAN.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "W-BEAM RAIL SPLICE" AS SHOWN IN AASHTO M 180. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

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.

CONSTRUCTION LIMITS

UNLESS OTHERWISE SHOWN, THE CONSTRUCTION LIMITS SHALL BE CONSIDERED THE EXISTING RIGHT OF WAY LINE IN ORDER TO FACILITATE CONSTRUCTION OF THE NEW RIGHT OF WAY FENCE.

CONTRACTION AND/OR EXPANSION JOINTS

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

DRAINAGE REMOVAL

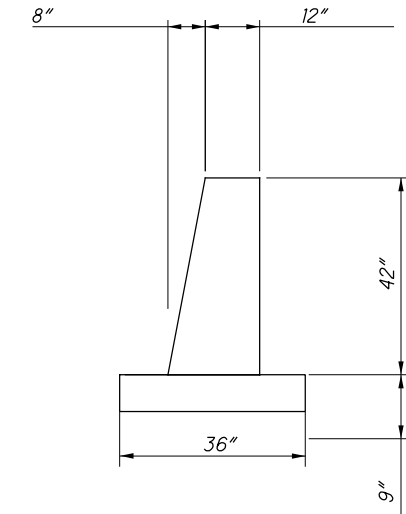
STORM SEWERS THAT ARE ITEMIZED FOR REMOVAL SHALL BE REMOVED TO THE EDGE OF THE EXISTING SHOULDER, OR TO THE NEAREST PIPE JOINT, IF THE JOINT IS WITHIN FOUR (4) FEET OF THE EXISTING SHOULDER. THE ACTUAL LIMITS OF THE PIPE REMOVAL SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.

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

FOR PIER PROTECTION UNDER THE BEL-70-0963 STRUCTURE INSTALL ITEM 622 CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN AT THE LOCATIONS SPECIFIED IN THE PLANS. PLACEMENT OF THE BARRIER SHALL BE DONE PER THE DETAIL BELOW IF THE CONCRETE BARRIER IS TO BE PLACED ON SOIL.

FOR CONCRETE BARRIER TO BE PLACED ON ASPHALT, CONCRETE, OR AGGREGATE BASE MATERIAL, INSTALL THE CONCRETE BARRIER AS SHOWN BELOW WITHOUT THE 36" X 9" BASE.

ALL OTHER REQUIREMENTS OF SECTION 622 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND STANDARD CONSTRUCTION DRAWING RM-4.5 SHALL STILL APPLY.



CONCRETE BARRIER INSTALLATION DETAIL WHEN PLACED ON SOIL

APPROVED FOR CONSTRUCTION - 5/2/2011

GENERAL NOTES

BEL - 70 - 7.61

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ITEM 606 - ANCHOR ASSEMBLY, TYPE B

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS, OR AN APPROVED EQUAL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE AT WWW.DOT.STATE.OH.US/DRRC/ UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS:

1. THE SRT-350, GUARDRAIL END TERMINAL AS MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE SRT-350 SYSTEM IS CONSIDERED TO BE 37'-6", INCLUSIVE OF THREE 12'-6" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SS444	SLOTTED RAIL TERMINAL POST LAYOUT AND	7/12/99 Rev. 1	8/27/99
SS444M	ERECTION DETAILS SRT-350 (12.5, 8 POST)	7/12/99	
SS425M	SLOTTED RAIL TERMINAL SRT-350 POST LAYOUT AND ERECTION DETAILS (12.5, 9 POST)	6/21/97 Rev. 1	3/6/98

2. THE FLEAT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 2516 MALLORY LANE, STOW, OHIO, 44224, (TELEPHONE: 330-346-0721).

THE LENGTH OF THE FLEAT-350 IS CONSIDERED TO BE 37'-6", INCLUSIVE OF THREE 12'-6" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
FLT-M	FLARED ENERGY ABSORBING TERMINAL (FLEAT-350) ASSEMBLY	4/16/98	7/31/98
FLT HINGED CRT	FLARED ENERGY ASORBING TERMINAL (POSTS 1 AND 2 ARE STEEL HINGED)	5/4/06	5/23/06
FLT-SP	FLARED ENERGY ASORBING TERMINAL (A SEVEN POST OPTION USING STANDARD STEEL POSTS)	3/30/09	3/4/09

REFER TO THE MANUFACTURER'S INSTRUCTION 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 27-3/4-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.

THE FACE OF THE TYPE B IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19: APPROXIMATELY 36" W X 12" H FOR THE SRT-350 AND 14" W X 20" H FOR THE FLEAT.

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

ITEM 606 - ANCHOR ASSEMBLY, TYPE E

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS, OR AN APPROVED EQUAL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE AT WWW.DOT.STATE.OH.US/DRRC/ UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS:

1. THE ET-2000 (1997) MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF TWO 25'-0" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SS142	ET2000 PLUS 50'-0" PLAN, ELEVATION AND SECTION 25'-0" RAIL, SLEEVE W/PL POSTS 1-4	4/12/00	7/31/00
SS141	ET2000 PLUS PLAN, ELEVATION AND SECTION 25'-0" RAIL, HBA POSTS 1-4	2/29/00	7/31/00
SS158	ET2000 PLUS 50'-0" WITH 12'-6" PANELS AND HBA POSTS 1-4 PLAN, ELEVATION AND SECTION	5/22/00	7/31/00
SS330	ET2000 PLUS 50'-0" WITH FOUR FOUNDATION TUBES AND FOUR CRT POSTS	3/28/06	3/29/06
SS373	ET2000 PLUS 50'-0" WITH 7 SYT POSTS AND ONE HBA POST	6/20/09	1/20/09

2. THE SKT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 2516 MALLORY LANE, STOW, OHIO, 44224, (TELEPHONE: 330-346-0721).

THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF FOUR 12'-6" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SKT-4M	SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4 FOUNDATION TUBES	12/11/97	3/6/98
SKT HINGED CRT	SEQUENTIAL KINKING TERMINAL (SKT-350) FOUR POSTS ARE STEEL HINGED AND FIVE POSTS ARE CRT	4/30/06	5/23/06
SKT-SP	SEQUENTIAL KINKING TERMINAL (SKT-350) A SEVEN POST OPTION USING STANDARD STEEL POST	3/30/09	3/4/09

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 18" X 18", OR 12" X 18" IF APPLIED TO A RECTANGULAR ET-2000 "PLUS" EXTRUDER HEAD.

REFER TO THE MANUFACTURER'S INSTRUCTION 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 27-3/4-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, 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.

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.

FENCE LENGTHS

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

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GENERAL NOTES

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ITEM 614, MAINTAINING TRAFFIC

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

1. A MINIMUM OF TWO ELEVEN FOOT LANES IN EACH DIRECTION ON I.R. 70 & A MINIMUM OF ONE TEN FOOT LANE ON THE RAMPS SHALL BE MAINTAINED ON THE EXISTING PAVEMENT (COMPLETED PAVEMENT AND TEMPORARY PAVEMENT) DURING CONSTRUCTION OF THE WORK. A REDUCTION IN THE NUMBER OF LANES ON I.R. 70 IS ALLOWED AS LONG AS IT IS IN COMPLIANCE WITH THE NOTES LISTED HEREIN.

THE FOLLOWING TIMES ARE THE PERMITTED LANE CLOSURE TIMES FOR I.R. 70. AT ALL TIMES OUTSIDE THE PERMITTED LANE CLOSURE WINDOWS, TWO (2) LANES IN EACH DIRECTION MUST BE OPEN TO TRAFFIC.

MONDAY-SUNDAY 7 PM TO 7 AM

2. NO LANE CLOSURE ON I.R. 70 WILL BE PERMITTED THE WEEK OF JAMBOREE IN THE HILLS; 7:00 A.M. TUESDAY PRIOR TO THE EVENT THROUGH 7:00 P.M. THE FOLLOWING MONDAY. THE DATES FOR JAMBOREE IN THE HILLS FOR 2010 ARE JULY 15-18 AND THE APPROXIMATE DATES FOR 2011 ARE JULY 14-17. THESE DATES ARE SUBJECT TO CONFIRMATION WITH THE JAMBOREE IN THE HILLS ORGANIZATION.

3. NO LANE CLOSURE ON I.R. 70 WILL BE PERMITTED ON FRIDAY EVENINGS THROUGH 11:00 P.M. DURING UNION LOCAL HIGH SCHOOL HOME FOOTBALL GAMES.

4. TWO LANES OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON TOWNSHIP ROAD 260 EXCEPT DURING THE BRIDGE DECK REMOVAL AND THE REMOVAL/PLACEMENT OF STEEL BEAMS. TRAFFIC MAY BE STOPPED ANYTIME FOR 15 MINUTE INTERVALS.

5. TWO LANES OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON STATE ROUTE 149 EXCEPT DURING THE BRIDGE DECK REMOVAL AND THE REMOVAL/PLACEMENT OF STEEL BEAMS. TRAFFIC MAY BE STOPPED ANYTIME FOR 15 MINUTE INTERVALS, MONDAY THROUGH SATURDAY 7:00 P.M. THROUGH 5:00 A.M., EXCEPT ON FRIDAY OR SATURDAY EVENINGS THROUGH 11:00 P.M. DURING UNION LOCAL HIGH SCHOOL HOME FOOTBALL GAMES. CLOSURES, FOR 15 MINUTE INTERVALS, WILL BE PERMITTED ANYTIME SUNDAY.

6. ANY SHOULDER RESTRICTIONS, EACH SIDE OF ROAD, SHALL NOT EXCEED 7 CONSECUTIVE CALENDAR DAYS WITHOUT THE APPROVAL OF THE ENGINEER.

7. EXISTING SHOULDERS MAY BE USED TO MAINTAIN TRAFFIC FOR 14 CONSECUTIVE CALENDAR DAYS WITHOUT REQUIRING PRIOR SHOULDER RECONSTRUCTION.

8. REST AREAS WILL BE CLOSED TO THE PUBLIC FOR THE DURATION OF THE PROJECT. THE CONTRACTOR SHALL PROVIDE ACCESS TO THE REST AREAS FOR THE SUCCESSFUL BIDDER OF FACILITY CONTRACT: PID 86119; "STW REST AREA REMODEL PROG.", TO BEGIN JULY 1, 2010 AND CONTINUE UNTIL DECEMBER 15, 2010. IN ADDITION, EASTBOUND AND WESTBOUND REST AREA PASSENGER VEHICLE PARKING LOTS SHALL BE MADE AVAILABLE TO THE FACILITIES PROJECT CONTRACTOR FOR PID 86119 FROM JULY 1, 2010 TO DECEMBER 15, 2010 TO BE USED FOR THE FACILITY PROJECT CONSTRUCTION STAGING AREA.

9. WORK SHALL BE PERMITTED DURING HOLIDAYS PROVIDED IT DOES NOT IMPACT WORK ZONE TRAFFIC FLOW.

10. THE CONTRACTOR IS RESTRICTED FROM USING SLIVER FILLS.

11. THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DETERMINED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

ITEM 410, TRAFFIC COMPACTED SURFACE, TYPE A OR B	200 CU. YD.
ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	200 CU. YD.
ITEM 616, WATER	50 M. GAL.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS AND SIGN SUPPORTS, AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES & SCD MT-101.60, AND TYPE III BARRICADES OF THE TYPE AND LOCATION AS FOLLOWS:

EASTBOUND EXIT RAMP FROM S.R. 149 - TYPE III BARRICADE
EASTBOUND REST AREA EXIT RAMP - TYPE III BARRICADE
WESTBOUND REST AREA EXIT RAMP - TYPE III BARRICADE

THE EASTBOUND AND WESTBOUND REST AREA EXIT RAMPS SHALL BE CLOSED AS PER STANDARD CONSTRUCTION DRAWING MT-98.29. THE EASTBOUND EXIT RAMP FROM S.R. 149 SHALL BE CLOSED TO TRAFFIC FOR A MAXIMUM OF 30 DAYS. DURING THE CLOSURE TRAFFIC SHALL BE DETOURED AS SHOWN IN THE PLANS. THE DESIGNATED LOCAL DETOUR SHALL BE THE SAME AS THE POSTED DETOUR.

NOTICE OF CLOSURE SIGNS, AS DETAILED IN THESE PLANS, SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD OR RAMP CLOSURE. 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 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.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

ITEM 614, REPLACEMENT SIGN

FLATSHEET SIGNS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT SIGNS SHALL BE NEW. OTHER MATERIALS MAY BE IN USED, BUT GOOD, CONDITION SUBJECT TO APPROVAL BY THE ENGINEER.

ITEM 614, REPLACEMENT DRUM

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT DRUMS SHALL BE NEW.

ITEM 614, WORK ZONE SPEED LIMIT SIGN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, COVER DURING SUSPENSION OF WORK, AND SUBSEQUENTLY REMOVE WORK ZONE SPEED LIMIT (R2-1) (55 SPEED LIMIT) SIGNS AND SUPPORTS WITHIN THE WORK LIMITS IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:

THE CONTRACTOR SHALL COVER OR REMOVE ANY EXISTING SPEED LIMIT SIGNS WITHIN THE REDUCED SPEED ZONE. THESE SIGNS SHALL BE RESTORED DURING SUSPENSION OR TERMINATION OF THE REDUCED SPEED LIMIT. THE EXPENSE OF COVERING OR REMOVAL AND RESTORATION OF EXISTING SPEED LIMIT OR MINIMUM SPEED LIMIT SIGNS SHALL BE INCLUDED IN THE PAY ITEM FOR THE WORK ZONE SPEED LIMIT SIGNS.

THE WORK ZONE SPEED LIMIT SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN FOUR HOURS BEFORE THE ACTUAL START OF WORK. 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 DAYS, SUCH AS DURING WINTER SHUT-DOWNS. CLEANUP WORK AND OTHER WORK BEYOND THE SHOULDER SUCH AS SEEDING, TO BE PERFORMED AFTER RESTORATION OF ALL FULL-WIDTH LANES AND SHOULDERS TO TRAFFIC, DOES NOT CONSTITUTE A CONDITION WARRANTING A SPEED REDUCTION. THEREFORE, WHEN ACTIVITY IS LIMITED TO SUCH WORK, THE SPEED LIMIT IN EFFECT SHALL BE THE NORMAL SPEED LIMIT FOR THE SITE.

CONSTRUCTION AND MATERIALS SPECIFICATIONS, ITEM 614, PARAGRAPH 614.02(B) INDICATES THAT THE TWO DIRECTIONS OF A DIVIDED HIGHWAY ARE CONSIDERED SEPARATE HIGHWAY SECTIONS. THEREFORE, IF THE WORK ON A MULTI-LANE DIVIDED HIGHWAY IS LIMITED TO ONLY ONE DIRECTION, SPEED REDUCTION IN THE DIRECTION OF THE WORK DOES NOT AUTOMATICALLY CONSTITUTE SPEED REDUCTION IN THE OPPOSITE DIRECTION. SPEED LIMIT REDUCTION IN THE OPPOSITE DIRECTION, IN SUCH CASE, IS APPROPRIATE ONLY IF CONDITIONS ARE EXPECTED TO HAVE AN IMPACT ON THE DIRECTIONAL TRAFFIC FLOW, AS DIRECTED BY THE ENGINEER.

(THE CONTRACTOR SHALL ERECT A WORK ZONE SPEED LIMIT SIGN IN ADVANCE OF ANY LANE RESTRICTION EXPECTED TO LAST AT LEAST 30 CONSECUTIVE CALENDAR DAYS, OR AS DIRECTED BY THE ENGINEER. THE SIGN SHALL BE MOUNTED ON BOTH SIDES OF A DIRECTIONAL ROADWAY OF DIVIDED HIGHWAYS. THE FIRST WORK ZONE SPEED LIMIT SIGN SHALL BE PLACED APPROXIMATELY 500 FEET IN ADVANCE OF THE LANE REDUCTION OR SHIFT TAPER OR OTHER ROADWAY OR SHOULDER RESTRICTION. ON UNDIVIDED HIGHWAYS THE SIGN SHALL BE MOUNTED ON THE RIGHT SIDE, APPROXIMATELY 250 FEET IN ADVANCE OF SUCH RESTRICTIONS. THE SIGN SHALL BE REPEATED, EVERY 1 MILE FOR 55 MPH ZONES AND EVERY ONE-HALF MILE FOR 50 MPH AND 45 MPH ZONES. THESE SIGNS SHALL ALSO BE ERECTED IMMEDIATELY AFTER EACH OPEN ENTRANCE RAMP WITHIN THE ZONE.)

ON PROJECTS FOR WHICH THE ACTIVITY OR ROADWAY RESTRICTION IS LIMITED TO ONE SECTION OF THE PROJECT FOR AT LEAST THIRTY DAYS AND THEN IS MOVED TO ANOTHER SECTION OF THE PROJECT UPON COMPLETION OF WORK IN THE FIRST SECTION, THE SPEED LIMIT REDUCTION SHALL BE LIMITED TO ONLY THE ACTIVE PORTION OF THE PROJECT AT THE GIVEN TIME. SIGNING FOR A SPEED LIMIT REDUCTION, AS WELL AS ALL OTHER ADVANCE CONSTRUCTION SIGNING, SHALL BE RELOCATED WHEN THE CONCENTRATION OF ACTIVITY IS RELOCATED.

ON PROJECTS FOR WHICH SPEED REDUCTION IS CALLED FOR ON MORE THAN ONE ROADWAY, THE DISPLAY OF REDUCED SPEED LIMIT SIGNING ON A GIVEN ROADWAY SHALL BE DEPENDENT ON THE SCHEDULING OF WORK ACTIVITY ON THE GIVEN ROADWAY

SPEED REDUCTION SIGNS (W3-5) SHALL BE ERECTED IN ADVANCE OF THE SPEED REDUCTION, APPROXIMATELY 1250-FEET ON MULTI-LANE HIGHWAYS AND 500 FEET ON TWO-LANE HIGHWAYS.

A SIGN(S) TO INDICATE THE RESUMPTION OF THE STATUTORY SPEED LIMIT SHALL BE ERECTED AT THE END OF ANY REDUCED SPEED ZONE, TYPICALLY AT THE POINT WHERE ROADWAY AND SHOULDER WIDTHS RETURN TO NORMAL. ON UNDIVIDED ROADWAYS, THE R2-1 (SPEED LIMIT) SIGN SHALL BE USED. ON DIVIDED HIGHWAYS WHERE THE SPEED LIMIT VARIES BY VEHICLE TYPE, THE R2-1 (SPEED LIMIT) SIGN AND THE R2-H2A (TRUCK SPEED LIMIT) SIGNS SHALL BE MOUNTED SIDE-BY-SIDE ON SEPARATE SUPPORTS. 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 CMS 730.19.

WORK ZONE SPEED LIMIT SIGNS SHALL BE MOUNTED ON TWO ITEM 630, GROUND MOUNTED SUPPORTS, NO. 3 POSTS.

ITEM 614, BARRIER REFLECTORS AND/OR OBJECT MARKERS

BARRIER REFLECTORS AND/OR OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE CONCRETE BARRIER USED FOR TRAFFIC CONTROL. BARRIER REFLECTORS, OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO CMS 626, EXCEPT THAT THE SPACING SHALL BE 50 FEET.

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 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 CMS 730.19.

APPROVED FOR CONSTRUCTION - 5/2/2011

CALCULATED
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MAINTENANCE OF TRAFFIC GENERAL NOTES

BEL-70-7.61

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

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ONE OF THE FOLLOWING IMPACT ATTENUATORS:

1. THE QUADGUARD CZ, (24 INCHES WIDE SIX-BAY) WORK ZONE IMPACT ATTENUATOR MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC., 35 EAST WACKER DRIVE, CHICAGO, IL 60601 (TELEPHONE: 312-467-6750).

THE LENGTH OF THE SIX-BAY QUADGUARD CZ IS 20'-9". INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DRAWING NUMBER: QSCZCVR-T4
 DRAWING NAME: QUADGUARD CZ SYSTEM FOR CONSTRUCTION ZONES
 REVISION DATE: 5/13/99 REV. J
 ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: 35-40-10
 DRAWING NAME: QUADGUARD SYSTEM CONCRETE PAD, CZ, QG
 REVISION DATE: 11/19/97 REV. D
 ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: 35-40-16
 DRAWING NAME: QUADGUARD SYSTEM BACKUP ASSEMBLY, CZ, QG
 REVISION DATE: 7/30/99 REV. F
 ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: 354051Z
 DRAWING NAME: QUADGUARD CZ SYSTEM NOSE ASSEMBLY, CZ, QG, 24, 30, 36
 REVISION DATE: 5/17/99
 ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: 35-40-18
 DRAWING NAME: TRANSITION ASSEMBLY, 4 OFFSET, QG
 REVISION DATE: 6/25/99 REV. F
 ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: 35400260
 DRAWING NAME: QUADGUARD SYSTEM PCMB ANCHOR ASSEMBLY
 REVISION DATE: 11/19/97 REV. C
 ODOT APPROVAL DATE: 8/27/99

2. THE TRACC (TRINITY ATTENUATING CRASH CUSHION) MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE TRACC IS 21'-0" LONG AND 2'-7" WIDE. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DRAWING NUMBER: SS450
 DRAWING NAME: CRASH-CUSHION ATTENUATING TERMINAL PLAN, ELEVATION & SECTIONS
 REVISION DATE: 3/12/99 REV. 1
 ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: SS455
 DRAWING NAME: TRACC TRANSITION TO W-BEAM MEDIAN BARRIER PLAN, ELEVATION & SECTIONS
 REVISION DATE: 2/18/99
 ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: SS461
 DRAWING NAME: TRACC TRANSITION TO CONCRETE SAFETY SHAPE BARRIER PLAN, ELEVATION & SECTIONS
 REVISION DATE: 6/30/99 REV. 1
 ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: SS462
 DRAWING NAME: TRACC TRANSITION TO CONCRETE BARRIER SINGLE SLOPE PLAN, ELEVATION & SECTIONS
 REVISION DATE: 6/30/99
 ODOT APPROVAL DATE: 8/27/99

3. THE BARRIER SYSTEMS, INC. TAU-II IMPACT ATTENUATOR, DISTRIBUTED BY ROAD SYSTEMS INC., SALES SUPPORT, 2183 ELM TRACE, AUSTINTOWN, OH 44515, (TELEPHONE 330-799-9291)

THE TAU-II FOR THIS NOTE IS A PARALLEL 8-BAY UNIT (24' LONG AND 35" WIDE). INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DRAWING NUMBER: A040416
 DRAWING NAME: UNIVERSAL TAU-II PARTS LIST
 REVISION DATE: 4/22/04
 ODOT APPROVAL DATE: 10/16/04

DRAWING NUMBER: A040420
 DRAWING NAME: UNIVERSAL TAU-II FOUNDATION, FLUSH MOUNT BACKSTOP
 REVISION DATE: 4/28/04
 ODOT APPROVAL DATE: 10/16/04

DRAWING NUMBER: A040105
 DRAWING NAME: UNIVERSAL TAU-II FOUNDATION, PCB BACKSTOP (REFERENCED ON A04020)
 REVISION DATE: 1/07/04
 ODOT APPROVAL DATE: 10/16/04

DRAWING NUMBER: B040239
 DRAWING NAME: APPLICATION, FLUSH MOUNT BACKSTOP (TYPICAL FOR PARALLEL 60 MPH UNIT)
 REVISION DATE: 4/21/04
 ODOT APPROVAL DATE: 10/16/04

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.

WORKSITE TRAFFIC SUPERVISOR

SUBJECT TO APPROVAL OF THE ENGINEER, THE CONTRACTOR SHALL EMPLOY AND IDENTIFY (SOMEONE OTHER THAN THE SUPERINTENDENT) A CERTIFIED WORKSITE TRAFFIC SUPERVISOR (WTS) BEFORE STARTING WORK IN THE FIELD. THE WTS MAY BE CERTIFIED FROM ONE OF THE FOLLOWING ORGANIZATIONS:

1. AMERICAN TRAFFIC SAFETY SERVICE ASSOCIATION (ATSSA), PHONE NUMBER 1-800-272-8772, CERTIFIED TRAFFIC CONTROL SUPERVISOR (TCS).
2. NATIONAL HIGHWAY INSTITUTE, DESIGN AND OPERATION OF WORK ZONE TRAFFIC CONTROL, PHONE NUMBER 1-703-235-0528.
3. THE OHIO CONTRACTORS ASSOCIATION, TRAFFIC CONTROL SUPERVISOR (OCA/TCS) WORK ZONE CLASS, ONLY IF TAKEN AFTER MAY 5, 2004, PHONE NUMBER 1-614-599-7915.
4. OHIO LABORERS TRAINING, TRAFFIC CONTROL SUPERVISORS CLASS, PHONE NUMBER 1-740-599-7915.

A COPY OF EACH WTS'S CERTIFICATION AND 24-HOUR CONTACT INFORMATION SHALL BE PROVIDED TO THE ENGINEER AT THE PRECONSTRUCTION CONFERENCE. IF THE DESIGNATED WTS WILL NOT BE AVAILABLE FULL TIME (24/7) THE CONTRACTOR MAY DESIGNATE AN ALTERNATE WTS TO BE AVAILABLE WHEN THE PRIMARY IS OFF DUTY. EACH WTS SHALL HAVE A CURRENT WTS CERTIFICATION (WITH AN EXPIRATION DATE NO MORE THAN 5 YEARS FROM THE DATE OF ISSUE) FROM ANY OF THE APPROVED ORGANIZATIONS.

THE WTS POSITION HAS THE RESPONSIBILITY OF MONITORING TRAFFIC CONTROL DEFICIENCIES FOR THE ENTIRE WORK ZONE. THE DUTIES OF THE WTS ARE AS FOLLOWS:

1. BE AVAILABLE ON A 24-HOUR PER DAY BASIS, AND BE ABLE TO BE ON SITE FOR ALL EMERGENCY TRAFFIC CONTROL NEEDS WITHIN ONE HOUR OF NOTIFICATION BY POLICE OR PROJECT STAFF AND BE PREPARED TO EFFECT CORRECTIVE MEASURES IMMEDIATELY ON EXISTING WORK ZONE TRAFFIC CONTROL DEVICES.
2. ATTEND PRECONSTRUCTION MEETING AND ALL PROJECT MEETINGS WHERE TRAFFIC CONTROL MANAGEMENT IS DISCUSSED.
3. BE AVAILABLE FOR MEETINGS OR DISCUSSIONS WITH THE ENGINEER UPON REQUEST OR WITHIN 36 HOURS.
4. BE AWARE OF, AND COORDINATE IF NECESSARY, ALL TRAFFIC CONTROL OPERATIONS, INCLUDING THOSE OF SUBCONTRACTORS AND SUPPLIERS.
5. COORDINATE PROJECT ACTIVITIES WITH ALL LAW ENFORCEMENT OFFICERS (LEOS). A WTS SHALL ALSO BE THE MAIN CONTACT PERSON WITH THE LEOS WHILE THEY ARE ON THE PROJECT.
6. COORDINATE MEETINGS WITH ODOT PERSONNEL, LEOS AND OTHER APPLICABLE ENTITIES BEFORE EACH PLAN PHASE SWITCH TO DISCUSS WORK ZONE TRAFFIC CONTROL.
7. ENSURE COMPLIANCE WITH THE CONTRACT DOCUMENTS FOR SIGNS, BARRICADES, TEMPORARY CONCRETE BARRIER, PAVEMENT MARKINGS, PORTABLE MESSAGE SIGNS, AND OTHER TRAFFIC CONTROL DEVICES ON A DAILY BASIS; AND FACILITATE ANY CORRECTIVE ACTION NECESSARY.

8. NOTIFY THE CONTRACTOR OF THE NEED FOR CLEANING AND MAINTENANCE OF ALL TRAFFIC CONTROL DEVICES, INCLUDING THE COVERING AND REMOVAL OF INAPPLICABLE SIGNS.
9. INSPECT, EVALUATE, PROPOSE NECESSARY MODIFICATIONS TO, AND DOCUMENT THE EFFECTIVENESS OF, THE TRAFFIC CONTROL DEVICES AND/OR TRAFFIC OPERATIONS ON A DAILY BASIS (7 DAYS A WEEK). IN ADDITION, A WEEKLY NIGHT INSPECTION OF THE WORK ZONE SETUP FOR DAYTIME WORK OPERATIONS; AND ONE DAYTIME INSPECTION PER WEEK FOR NIGHTTIME PROJECTS. THIS SHALL INCLUDE (BUT NOT BE LIMITED TO) DOCUMENTATION ON THE FOLLOWING PROJECT EVENTS:
 - A. INITIAL TRAFFIC CONTROL SETUP (DAY AND NIGHT REVIEW).
 - B. DAILY TRAFFIC CONTROL SETUP AND REMOVAL.
 - C. WHEN CONSTRUCTION STAGING CAUSES A CHANGE IN THE TRAFFIC CONTROL SETUP.
 - D. CRASH OCCURRENCES WITHIN THE CONSTRUCTION AREA.
 - E. REMOVAL OF TRAFFIC CONTROL DEVICES AT THE END OF A PHASE OR PROJECT.
 - F. ALL OTHER EMERGENCY TRAFFIC CONTROL NEEDS.

10. COMPLETE THE DEPARTMENT APPROVED LONG TERM INSPECTION FORM (CA-D-8) AFTER EACH INSPECTION AS REQUIRED IN # 9 AND SUBMIT IT TO THE ENGINEER THE FOLLOWING WORK DAY. THESE REPORTS SHALL INCLUDE A CHECKLIST OF ALL TRAFFIC CONTROL MAINTENANCE ITEMS TO BE REVIEWED. A COPY OF THE FORM WILL BE PROVIDED AT THE PRE-CONSTRUCTION MEETING. ANY DEFICIENCIES OBSERVED SHALL BE NOTED, ALONG WITH RECOMMENDED CORRECTIVE ACTIONS AND THE DATES BY WHICH SUCH CORRECTIONS WERE, OR WILL BE, COMPLETED. A COPY OF THIS DOCUMENT CAN BE FOUND IN THE DEPARTMENT OF TRANSPORTATION CONSTRUCTION INSPECTION FORMS MANUAL DATED 10/15/06 OR CURRENT REVISION.
11. VERIFY THAT ALL FLAGGING OPERATIONS ARE BEING CONDUCTED PER THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
12. HAVE COPIES OF THE ODOT TEMPORARY TRAFFIC CONTROL MANUAL AND APPLICABLE STANDARDS AND SPECIFICATIONS INCLUDED IN THE CONTRACT DOCUMENTS AVAILABLE AT ALL TIMES ON THE PROJECT.

THE DEPARTMENT WILL NOT PAY THE UNIT PRICE BID FOR THE WTS FOR ANY DAY ON WHICH THE CONTRACTOR FAILS TO PERFORM THE DUTIES SET FORTH ABOVE. SHOULD THE CONTRACTOR'S FAILURE TO PERFORM ANY OF THE DUTIES DESCRIBED ABOVE RESULT IN A MAINTENANCE OF TRAFFIC SAFETY ISSUE, THE DEPARTMENT WILL DEDUCT THE PRORATED DAILY AMOUNT FOR ITEM 614 MAINTENANCE OF TRAFFIC FROM THE CONTRACTOR'S NEXT SCHEDULED ESTIMATE.

IF THREE OR MORE FAILURES TO PERFORM THE DUTIES SET FORTH ABOVE OCCUR, THE WTS SHALL BE IMMEDIATELY REMOVED FROM THE WORK IN ACCORDANCE WITH C&MS 108.05.

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 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 CONCRETE BARRIER SHALL BE LOCATED OUTSIDE THE CLEAR ZONE, AND SHOULD BE LOCATED AT LEAST 30 FT (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.

CONCRETE BARRIER DELINEATION AS PER PLAN

INCREASED DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL CONCRETE BARRIER, PERMANENT OR TEMPORARY, LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE UNDER EITHER OF THE FOLLOWING CONDITIONS:

ALONG TAPERS AND TRANSITION AREAS

ALONG CURVES (OUTSIDE ONLY) WITH DEGREE OF CURVATURE GREATER THAN OR EQUAL TO 3 DEGREES

THE INCREASED DELINEATION SHALL CONSIST OF EITHER LINEAR DELINEATION PANELS OR THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.

THE LINEAR DELINEATION PANELS SHALL CONSIST OF PANELS OF DELINEATION, APPROXIMATELY 34 INCHES LONG AND 6-INCHES WIDE AND SHALL BE "CRIMPED". PANELS SHALL BE PROVIDED AT THE RATE OF ONE PER SECTION OF PORTABLE CONCRETE BARRIER, OR ONE PANEL EVERY 10 FEET ON PERMANENT BARRIER, SPACED EVENLY ALONG THE LENGTH OF THE RUN. THE PANELS SHALL BE MOUNTED SUCH THAT THE TOPS OF THE PANELS ARE 26 INCHES FROM THE BASE OF THE CONCRETE BARRIER.

TRIPLE STACKED BARRIER REFLECTORS SHALL CONSIST OF THREE BARRIER REFLECTORS STACKED VERTICALLY IN THEIR ATTACHMENT TO CONCRETE BARRIER. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TOP OF THE MIDDLE BARRIER REFLECTOR SHALL BE LOCATED 26 IN ABOVE THE PAVEMENT.

GUARDRAIL DELINEATION

OBJECT MARKERS SHALL BE INSTALLED ON ALL 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 MARKER SPACING SHALL BE APPROXIMATELY 50 FEET.

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

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

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

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 AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

WHEN CONSTRUCTION VEHICLES ARE ENTERING/EXITING THE ZONE DIRECTLY FROM/INTO AN OPEN LANE OF TRAFFIC. IF A LANE HAS BEEN CLOSED TO PROVIDE AN ACCELERATION/ DECELERATION LANE FOR THE VEHICLE, THE LEO WILL NOT BE REQUIRED.

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.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 300 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.

FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

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

WORK ZONE RAISED PAVEMENT MARKERS, AS PER PLAN, AND THEIR INSTALLATION SHALL CONFORM TO CMS 614 OR CMS 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 16 THROUGH MARCH 31.

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 CMS 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 CMS 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 SURFACE COURSE OF THE EXISTING PAVEMENT WITHIN THE TRANSITION AREA SHALL BE REMOVED TO A DEPTH EQUIVALENT TO THE DEPTH OF THE PROPOSED SURFACE COURSE, AS DETERMINED BY THE ENGINEER.

ITEM 614 - WORK ZONE RAISED PAVEMENT MARKERS ON CONCRETE SURFACES

RAISED PAVEMENT MARKERS IN WORK ZONES, INSTALLED ON TO CONCRETE SURFACES, SHALL BE ITEM 614 WORK ZONE RAISED PAVEMENT MARKERS. WZRPMS ARE INTENDED FOR USE ONLY DURING THE NON-SNOW-PLOWING SEASON. WZRPMS SHALL NOT BE PROVIDED DURING THE SNOW-PLOWING SEASON.

THE SNOW-PLOWING SEASON SHALL RUN FROM OCTOBER 16 THROUGH MARCH 31.

WHERE A TEMPORARY ALIGNMENT WILL REMAIN IN USE THROUGH THE WINTER, THE WZRPMS SHALL BE REMOVED PRIOR TO THE BEGINNING OF THE SNOW-PLOWING SEASON AND REPLACED APPROXIMATELY APRIL 1, OR AS OTHERWISE DETERMINED BY THE ENGINEER.

THIS ITEM SHALL INCLUDE PURCHASE, INSTALLATION AND REMOVAL OF ITEM 614 WORK ZONE RAISED PAVEMENT MARKERS.

DETOUR NOTIFICATION

THE CONTRACTOR SHALL ADVISE THE ODOT DISTRICT OFFICE EIGHTEEN (18) DAYS IN ADVANCE OF WHEN THE DETOUR ROUTE SHOULD BE IN EFFECT. ALL WORK ZONE DEVICES REQUIRED SHALL BE FURNISHED, ERECTED, MAINTAINED, AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR.

DETOUR DURATION

THE MAXIMUM LENGTH OF TIME FOR THE DETOUR ROUTE TO BE IN EFFECT SHALL BE 30 CONSECUTIVE DAYS. CONSTRUCTION WORK MAY BE PERFORMED BEFORE AND AFTER THE DETOUR LIMITATION DATES, BUT THE WORK SHALL BE COMPLETED AS PER THE MAINTAINANCE OF TRAFFIC REQUIREMENT IN THE PLANS.

WORK ZONE EXISTING SIGNS

ANY EXISTING SIGNS THAT ARE FOUND TO BE IN CONFLICT WITH MAINTENANCE OF TRAFFIC OPERATIONS THAT WILL NOT BE REPLACED DURING THE TRAFFIC CONTROL PROCEDURES, SHALL BE COVERED AND/OR REMOVED AND REPLACED AT THE CONCLUSION OF THE MAINTENANCE OF TRAFFIC OPERATIONS.

COVERING OF SIGNS

WHERE THE PLANS CALL FOR A PERMANENT SIGN TO BE COVERED, THE CONTRACTOR SHALL DO SO IN SUCH A MANNER AS TO AVOID DAMAGING THE PERMANENT SIGN WHEN THE COVER IS REMOVED. THE COVER SHALL BE TOTALLY OPAQUE. THE USE OF ADHESIVE TAPE APPLIED DIRECTLY TO A SIGN FACE IS STRICTLY PROHIBITED. THE CONTRACTOR SHALL PROVIDE ALL OF THE "CLOSED" PLAQUES NECESSARY.

CALCULATED	MJC
	CHECKED
BBD	
APPROVED FOR CONSTRUCTION - 5/2/2011	
MAINTENANCE OF TRAFFIC GENERAL NOTES	
BEL-70-7.61	
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ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN, ON SITE, FOR THE DURATION OF THE PROJECT. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS MAINTAINED BY THE DIRECTOR (OFFICE OF MATERIALS MANAGEMENT). THE APPROVED LIST OF PORTABLE CHANGEABLE MESSAGE SIGNS CAN BE FOUND ON THE ODOT WEBSITE BY CLICKING ON THE SERVICES MENU, THEN CLICKING ON MATERIALS MANAGEMENT. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 650 FT. AND 475 FT., RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. PCMS TRAILERS SHOULD BE DELINEATED ON A PERMANENT BASIS BY AFFIXING RETROREFLECTIVE MATERIAL, IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED, FACING AWAY FROM ALL TRAFFIC, AND SHALL DISPLAY ONE OR MORE YELLOW RETROREFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PREPROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

(THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.)

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF CMS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN,
AS PER PLAN 96 SIGN-MONTH

PLAN INSERT SHEET NO. 209572

THE CONTRACTOR SHALL SUBMIT FOUR COPIES OF DETAILED DRAWINGS OF THE DIAGRAMMATIC SIGN AND "ALL LANES" SIGN FOR APPROVAL BY THE ENGINEER BEFORE ORDERING OR INSTALLING THE SIGNS. SUBMIT 14 DAYS IN ADVANCE. NOTES 4A (W13-1 SIGN), 4H (DIAGRAMMATIC SIGN), 4J (SIGN SIZE) AND 4L (PCMS) SHALL BE IMPLEMENTED ALONG WITH ALL OTHER NOTES SHOWN.

APPROVED FOR CONSTRUCTION - 5/2/2011

BEL-70-7.61

MAINTENANCE OF TRAFFIC GENERAL NOTES

CALCULATED
MJC
CHECKED
BBD

SEQUENCE OF CONSTRUCTION

A MINIMUM OF TWO ELEVEN FOOT LANES IN EACH DIRECTION ON I.R. 70 & A MINIMUM OF ONE TEN FOOT LANE ON THE S.R. 149 RAMPS SHALL BE MAINTAINED ON THE EXISTING PAVEMENT (PROPOSED PAVEMENT AND TEMPORARY PAVEMENT) DURING CONSTRUCTION OF THE WORK. A REDUCTION IN THE NUMBER OF LANES ON I.R. 70 IS ALLOWED AS LONG AS IT IS IN COMPLIANCE WITH THE NOTES LISTED IN THE PLANS OR WITH ENGINEER'S APPROVAL.

THE FOLLOWING ARE THE PERMITTED LANE CLOSURE TIMES FOR I.R. 70. AT ALL TIMES OUTSIDE THE PERMITTED LANE CLOSURE WINDOW, TWO LANES IN EACH DIRECTION MUST BE OPEN TO TRAFFIC.

MONDAY - SUNDAY 7 PM TO 7 AM

PHASE IV-A

THE EASTBOUND AND WESTBOUND REST AREA EXIT RAMPS SHALL BE CLOSED AS PER STANDARD CONSTRUCTION DRAWING MT-98.29 FOR THE DURATION OF THE PROJECT.

PLACE ALL TEMPORARY TRAFFIC CONTROL DEVICES AND TEMPORARY PAVEMENT MARKINGS REQUIRED FOR PHASE IV-A OPERATIONS. THE CONTRACTOR SHALL PLACE DRUMS TO PROHIBIT THE USE OF CROSSOVER LOCATIONS NOT TO BE USED DURING PHASE IV-A.

EASTBOUND TRAFFIC IS TO BE SHIFTED ONTO THE EASTBOUND INSIDE SHOULDER AND TEMPORARY PAVEMENT PLACED IN PHASE II. WESTBOUND TRAFFIC SHALL REMAIN IN ITS FINAL CONFIGURATION EXCEPT AT THE BEL-70-0775 AND BEL-70-0963 BRIDGES, WHERE TRAFFIC SHALL BE SHIFTED ONTO THE WESTBOUND OUTSIDE SHOULDER. USING THE CROSSOVERS LOCATED ADJACENT TO THE BEL-70-0775 AND BEL-70-0963 BRIDGES, SHIFT ONE EASTBOUND LANE TO THE EXISTING WESTBOUND INSIDE PAVEMENT AND TEMPORARY PAVEMENT PLACED IN PHASE II. RAMP A TRAFFIC SHALL BE MAINTAINED AS SHOWN IN THE PLANS. RAMP B SHALL BE REDUCED TO ONE 10 FOOT LANE AND SHIFTED ONTO THE TEMPORARY PAVEMENT PLACED IN PHASE II. RAMP B MAY BE DETOURED AT NIGHT OR ON WEEKENDS IN ORDER TO COMPLETE INTERSECTION WORK REQUIRING RIGHT TURN RESTRICTIONS. THE DETOUR DURING TURN RESTRICTIONS SHALL BE POSTED AS DETAILED IN THE PLANS. TRAFFIC ON S.R. 149 MAY BE SHIFTED AS PER OMUTCD FIGURES 6H-5 AND/OR 6H-6. TRAFFIC MAY BE SHIFTED FOR A MAXIMUM DURATION OF 14 CALENDAR DAYS. CONTRACTOR SHALL COMPLY WITH SCD MT-101.90. RAMPS C AND D SHALL BE MAINTAINED ON THEIR RESPECTIVE PROPOSED PAVEMENT.

RECONSTRUCT THE PORTION OF EASTBOUND PAVEMENT NOT USED TO MAINTAIN TRAFFIC AS SHOWN IN THE PLANS. RECONSTRUCT THE OUTSIDE PORTION OF RAMP B. RECONSTRUCT THE EASTBOUND REST AREA ENTRANCE AND EXIT RAMP PAVEMENT AS SHOWN IN THE PLANS.

CONSTRUCT ASPHALT WEDGE COURSE TO TRANSITION RAMP B PHASE IV-B TRAFFIC FROM PROPOSED CONCRETE ELEVATIONS TO EXISTING PAVEMENT ELEVATIONS AS SHOWN IN THE PLANS.

THE OUTSIDE PORTIONS OF EASTBOUND BRIDGES BEL-70-0775 AND BEL-70-0963 SHALL BE RECONSTRUCTED AS SHOWN IN THE PLANS. PROPOSED EASTBOUND GUARDRAIL AND PERMANENT EASTBOUND DRAINAGE FEATURES SHALL BE INSTALLED AT THE LOCATIONS SHOWN IN THE PLANS.

THE CONTRACTOR SHALL SUBMIT FOUR COPIES OF THE SIGNING DETAILS FROM PIS 209572 TO THE ENGINEER FOR REVIEW AND APPROVAL. SHOW THE PROPOSED SIGNS FROM THE PIS PLUS ALL OTHER SIGNS ON THE MOT STATIONED PLAN SHEETS IN ADVANCE OF THE TWP. RD. 260 BRIDGES AND THE S.R. 149 BRIDGES. SUBMIT A MINIMUM OF 14 DAYS PRIOR TO SCHEDULED INSTALLATION.

PHASE IV-B

PLACE ALL TEMPORARY TRAFFIC CONTROL DEVICES AND TEMPORARY PAVEMENT MARKINGS REQUIRED FOR PHASE IV-B OPERATIONS. THE CONTRACTOR SHALL PLACE DRUMS TO PROHIBIT THE USE OF CROSSOVER LOCATIONS NOT TO BE USED DURING PHASE IV-B.

EASTBOUND TRAFFIC IS TO REMAIN SHIFTED ONTO THE EASTBOUND INSIDE SHOULDER AND TEMPORARY PAVEMENT PLACED IN PHASE II. WESTBOUND TRAFFIC SHALL REMAIN IN ITS FINAL CONFIGURATION EXCEPT AT THE BEL-70-0775 AND BEL-70-0963 BRIDGES, WHERE TRAFFIC SHALL REMAIN SHIFTED ONTO THE WESTBOUND OUTSIDE SHOULDER. USING THE CROSSOVERS LOCATED ADJACENT TO THE BEL-70-0775 AND BEL-70-0963 BRIDGES, SHIFT ONE EASTBOUND LANE TO THE EXISTING WESTBOUND INSIDE PAVEMENT AND TEMPORARY PAVEMENT PLACED IN PHASE II. RAMP A MAY BE CLOSED FOR A MAXIMUM OF 30 DAYS, AFTER WHICH RAMP A TRAFFIC SHALL BE MAINTAINED. THE DETOUR DURING THE CLOSURE OF RAMP A SHALL BE SIGNED AS DETAILED IN THE PLANS. RAMP B SHALL BE REDUCED TO ONE 10 FOOT LANE AND SHIFTED ONTO THE PERMANENT PAVEMENT PLACED IN PHASE IV-A. RAMP B MAY BE DETOURED AT NIGHT OR ON WEEKENDS IN ORDER TO COMPLETE INTERSECTION WORK REQUIRING RIGHT TURN RESTRICTIONS. THE DETOUR DURING TURN RESTRICTIONS SHALL BE POSTED AS DETAILED IN THE PLANS. TRAFFIC ON S.R. 149 MAY BE SHIFTED AS PER OMUTCD FIGURES 6H-5 AND/OR 6H-6. TRAFFIC MAY BE SHIFTED FOR A MAXIMUM DURATION OF 14 CALENDAR DAYS. CONTRACTOR SHALL COMPLY WITH SCD MT-101.90. RAMPS C AND D SHALL BE MAINTAINED ON THEIR RESPECTIVE PROPOSED PAVEMENT.

RECONSTRUCT ALL OF RAMP A AND THE REMAINING PORTION OF RAMP B AS SHOWN IN THE PLANS.

PHASE IV-C

PLACE ALL TEMPORARY TRAFFIC CONTROL DEVICES AND TEMPORARY PAVEMENT MARKINGS REQUIRED FOR PHASE IV-C OPERATIONS. THE CONTRACTOR SHALL PLACE DRUMS TO PROHIBIT THE USE OF CROSSOVER LOCATIONS NOT TO BE USED DURING PHASE IV-C.

THE INSIDE LANE OF EASTBOUND TRAFFIC IS TO REMAIN SHIFTED ONTO THE EASTBOUND INSIDE SHOULDER AND TEMPORARY PAVEMENT PLACED IN PHASE II. THE OUTSIDE LANE OF EASTBOUND TRAFFIC IS TO BE SHIFTED ONTO THE OUTSIDE SHOULDER COMPLETED IN PHASE IV-A & B. WESTBOUND TRAFFIC SHALL REMAIN IN ITS FINAL CONFIGURATION EXCEPT AT THE BEL-70-0775 AND BEL-70-0963 BRIDGES, WHERE TRAFFIC SHALL REMAIN SHIFTED ONTO THE WESTBOUND OUTSIDE SHOULDER. USING THE CROSSOVERS LOCATED ADJACENT TO THE BEL-70-0775 AND BEL-70-0963 BRIDGES, SHIFT THE INSIDE LANE OF EASTBOUND TRAFFIC TO THE EXISTING WESTBOUND INSIDE PAVEMENT AND TEMPORARY PAVEMENT PLACED IN PHASE II. RAMPS A, B, C AND D SHALL BE MAINTAINED ON THEIR RESPECTIVE PROPOSED PAVEMENT. THE CONTRACTOR SHALL COMPLY WITH SCD MT-101.90.

CLOSE THE EASTBOUND INSIDE LANE AS PER THE NOTES SPECIFIED IN THE PLANS AND RECONSTRUCT THE REMAINING PORTION OF EASTBOUND PAVEMENT AS SHOWN IN THE PLANS.

THE INSIDE PORTIONS OF EASTBOUND BRIDGES BEL-70-0775 AND BEL-70-0963 SHALL BE RECONSTRUCTED AS SHOWN IN THE PLANS. THE REMAINING GUARDRAIL SHALL BE INSTALLED AT THE LOCATIONS SHOWN IN THE PLANS.

ALL EASTBOUND SIGNING SHALL BE REMOVED AND REPLACED BY THE END OF PHASE IV. PLACE THE EASTBOUND PERMANENT TRAFFIC CONTROL ITEMS AS SHOWN IN THE PLANS. COMPLETE MEDIAN GRADING AS SHOWN IN THE PLANS.

AT THE END OF PHASE IV THE CONTRACTOR SHALL RESTORE TRAFFIC TO ITS ORIGINAL CONFIGURATION. NO TRAFFIC SHALL BE PLACED IN ITS ORIGINAL CONFIGURATION UNTIL ALL TRAFFIC CONTROL DEVICES (PERMANENT OR TEMPORARY) ARE IN PLACE.

BUILDABLE UNIT V WHICH INCLUDES PAVEMENT REPLACEMENT, PAVEMENT MARKINGS, AND TRUNCATED DOME INSTALLATION IN THE REST AREAS MAY BE CONSTRUCTED AT ANY TIME REGARDLESS OF PROGRESS OF BUILDABLE UNIT IV. THE EASTBOUND AND WESTBOUND REST AREAS SHALL REMAIN CLOSED UNTIL THE COMPLETION OF BUILDABLE UNIT IV OR V, WHICHEVER OCCURS LAST.

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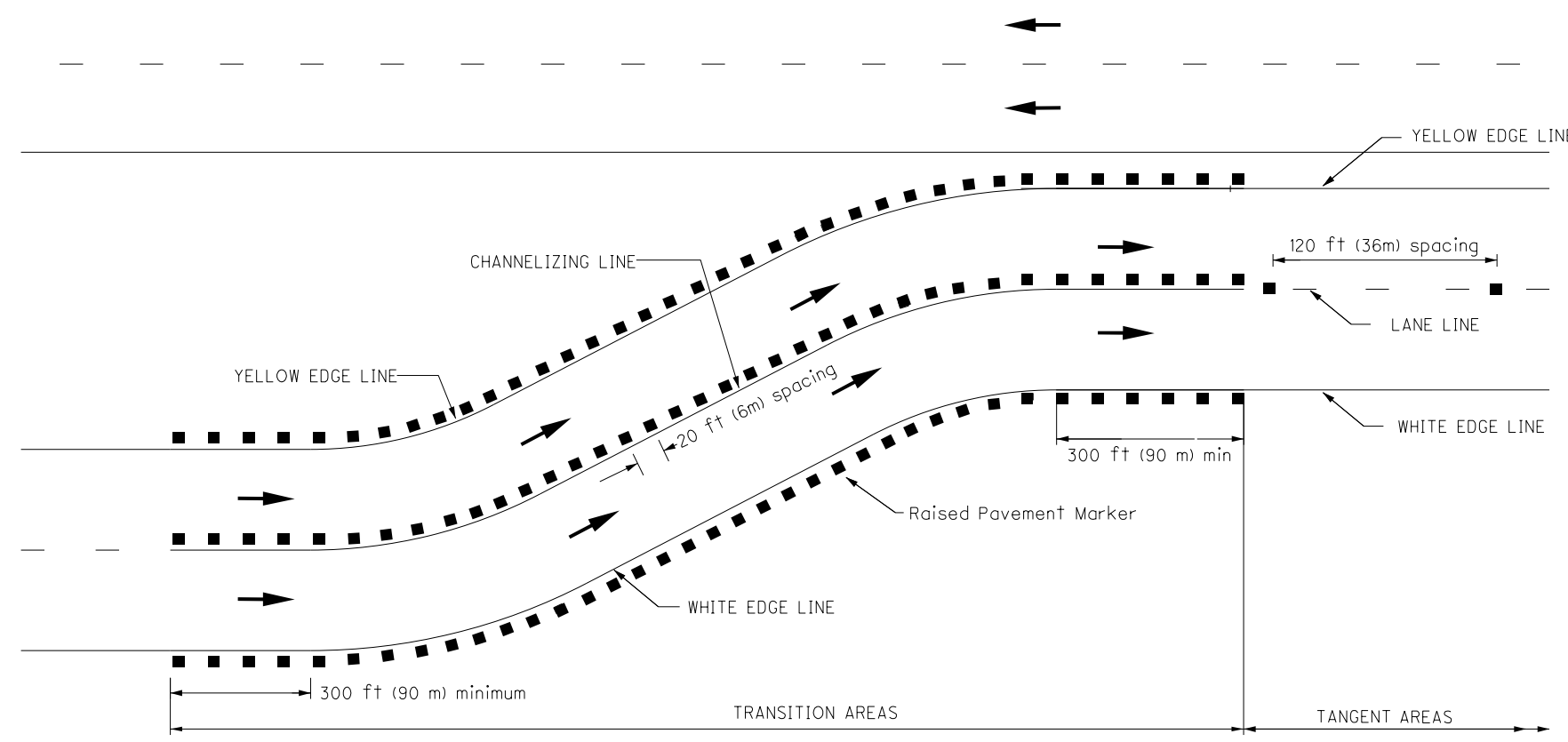
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APPROVED FOR CONSTRUCTION - 5/2/2011

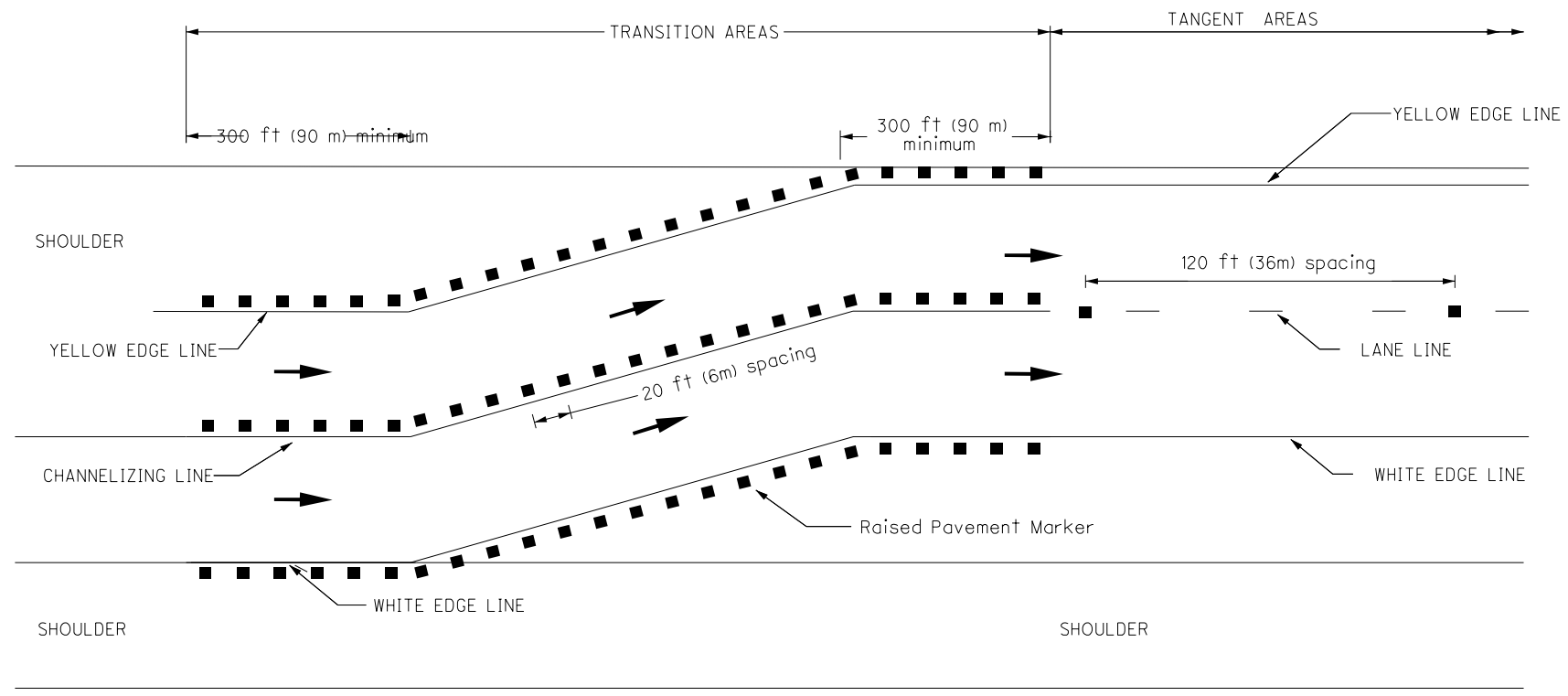
MAINTENANCE OF TRAFFIC - SEQUENCE OF CONSTRUCTION

BEL - 70 - 7 .61

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WORK ZONE DELINEATION FOR CROSSOVERS



WORK ZONE DELINEATION FOR LANE SHIFTS

LEGEND

■	RPM
➔	DIRECTION OF TRAVEL

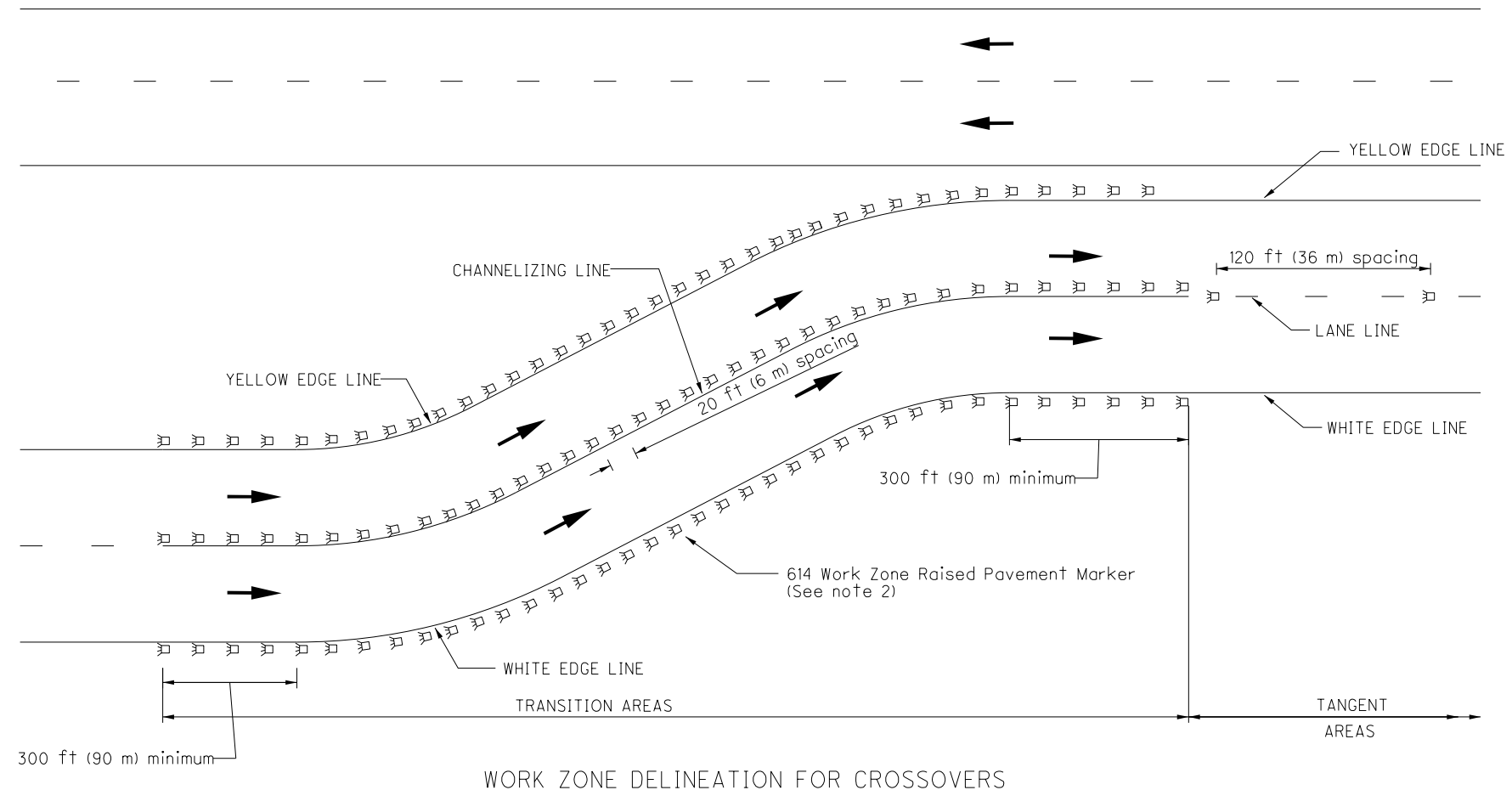
NOTES

- This drawing presents delineation procedures for freeways and expressways on asphalt surfaces. Procedures are provided for transition areas and for tangent areas. The procedures for transition areas apply to crossovers and to lane shifts of 4 feet (1.2 m) or greater. Delineation of transition areas for shifts of less than 4 feet (1.2 m) shall be as per the tangent area delineation.
- Raised Pavement Markers shall meet the following seasonal specifications:
 - Raised Pavement Markers in place during the normal construction season may be either 621 Raised Pavement Markers or 614 Work Zone Raised Pavement Markers (WZRPMS). The normal construction season with regard to use of WZRPMS shall be the period from April 1 through October 15.
 - At locations where it is intended that Raised Pavement Markers will winter over, 621 Raised Pavement Markers shall be provided.
 - At locations where it is intended that work will continue beyond October 15 but will be completed prior to the beginning of snow-plowing season, 614 WZRPMS may remain in place until such time. Snow-plowing season shall be as specified in the plans. If snow-plowing season is not specified in the plans, it shall be assumed that snow-plowing season runs from October 16 through March 31. If project delays, not the fault of ODOT, cause work to extend into the snow-plowing season, the contractor shall be responsible for replacing WZRPMS with 621 Raised Pavement Markers, as determined by the Engineer, at the contractor's expense.
- All material furnished shall be listed on the Department's Prequalified Lists.
- The geometrics of the crossover shall be as shown in the plans. Additional details are provided in Standard Construction Drawing MT-95.70.
- See Standard Construction Drawings MT-102.10 and MT-102.20 for more details concerning lane shifts.
- Spacing of raised pavement markers (RPMs) shall be at 20 feet (6 m) center-to-center for all long-line marking within transition areas. Within tangent areas RPMs shall be provided only along the lane lines, spaced at 120 foot (36 m) center-to-center.
- The RPMs shall be 1-way, facing oncoming traffic, and shall be white or yellow to match the color of the associated line marking.
- Along the edge lines, the RPMs shall be offset a maximum of 4 inches (100 mm) to the outside of the lines. Along the channelizing lines, the RPMs shall be offset to the left of the lines by no more than 1 inch (25 mm). Along the lane lines the RPMs shall be centered between dashes.
- The RPMs shall be removed when they are no longer appropriate.
- Holes resulting from removal of 621 RPMs shall be filled as per 621.08. If removal of the 621 RPMs does not take place immediately after the highlighted alignment becomes invalid, the reflectors within the 621 RPMs shall be removed.
- Following removal of 621 RPMs resurfacing of the transition shall be performed. The resurfacing shall be performed at the time the surface course is being applied. In preparation for resurfacing, the existing pavement shall be removed to a depth necessary to match the level of the intermediate course of the proposed pavement.

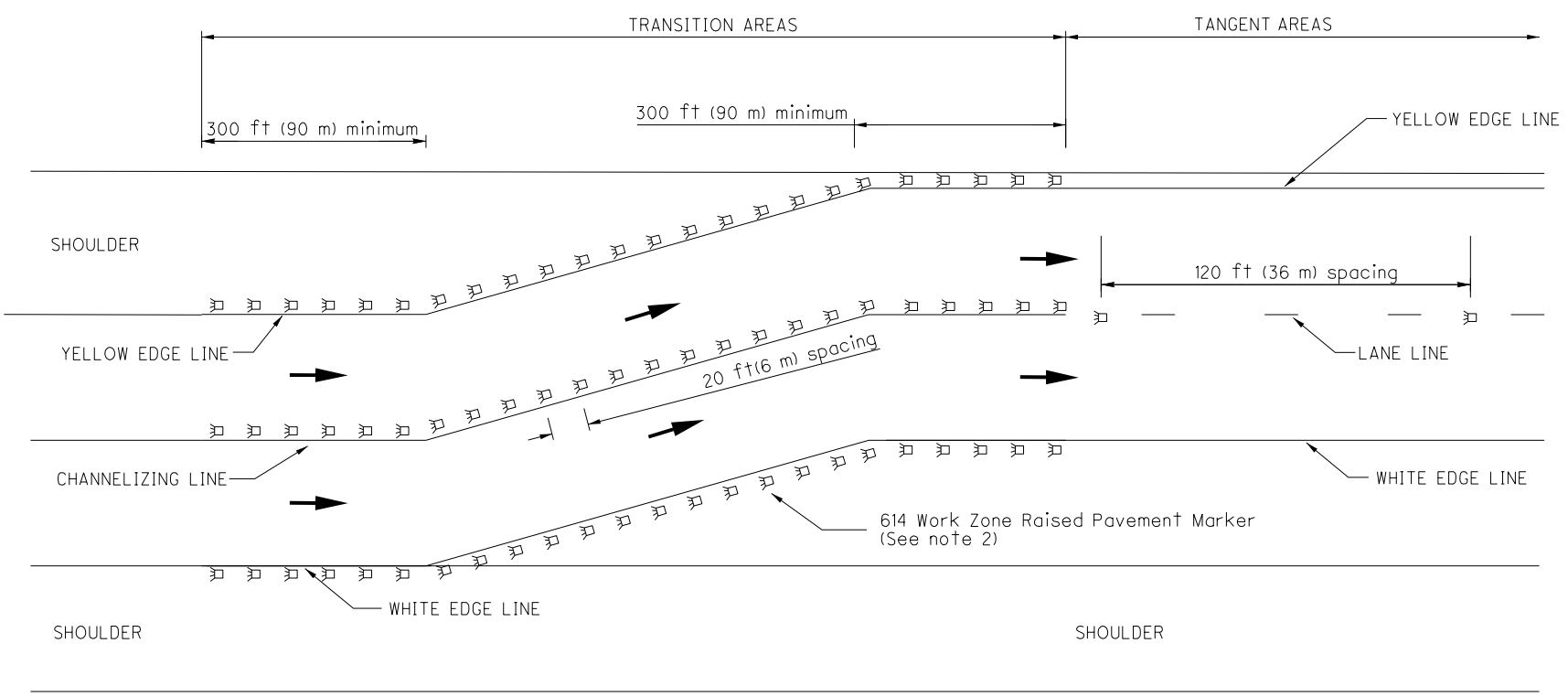
APPROVED FOR CONSTRUCTION - 5/2/2011

OFFICE OF TRAFFIC ENGINEERING	DESIGNED REVIEWED LAM	REVISION DATE 4/17/09 CHECKED	PIS NUMBER 209930	WORK ZONE DELINEATION ON ASPHALT SURFACES
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				20 307

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WORK ZONE DELINEATION FOR CROSSOVERS



WORK ZONE DELINEATION FOR LANE SHIFTS

NOTES

1. This drawing presents delineation procedures for freeways and expressways on concrete surfaces. Procedures are provided for transition areas and for tangent areas. The procedures for transition areas apply to crossovers and to lane shifts of 4 feet (1.2 m) or greater. Delineation of transition areas for shifts of less than 4 feet (1.2 m) shall be as per the tangent area delineation.
2. The Work Zone Raised Pavement Markers (WZRPMS) shown on this drawing are intended for use only during the non-snow-plowing season. WZRPMS shall not be provided during the snow-plowing season. The snow-plowing season shall be from October 16 through March 31 or as otherwise specified in the plans. Where a temporary alignment will remain in use through the winter, the WZRPMS shall be removed prior the beginning of snow-plowing season and replaced approximately April 1, or as otherwise determined by the Engineer.
3. All material furnished shall be listed on the Department's Prequalified Lists.
4. The geometrics of the crossover shall be as shown in the plans. Additional details are provided in Standard Construction Drawing MT-95.70.
5. See Standard Construction Drawings MT-102.10 and MT-102.20 for more details concerning lane shifts.
6. Spacing of WZRPMS shall be at 20 feet (6 m) center-to-center for all long-line marking within transition areas. Within tangent areas WZRPMS shall be provided only along the lane lines, spaced at 120 feet (36 m) center-to-center.
7. The WZRPMS shall be 1-way, facing oncoming traffic, and shall be white or yellow to match the color of the associated line marking.
8. Along the edge lines, the WZRPMS shall be offset a maximum of 4 inches (100 mm) to the outside of the lines. Along the channelizing lines, the WZRPMS shall be offset to the left of the lines by no more than 1 inch (25 mm). Along the lane lines the WZRPMS shall be centered between dashes.
9. The WZRPMS shall be removed when they are no longer appropriate.

LEGEND

	WORK ZONE RPM, TYPE A
	DIRECTION OF TRAVEL

APPROVED FOR CONSTRUCTION - 5/2/2011

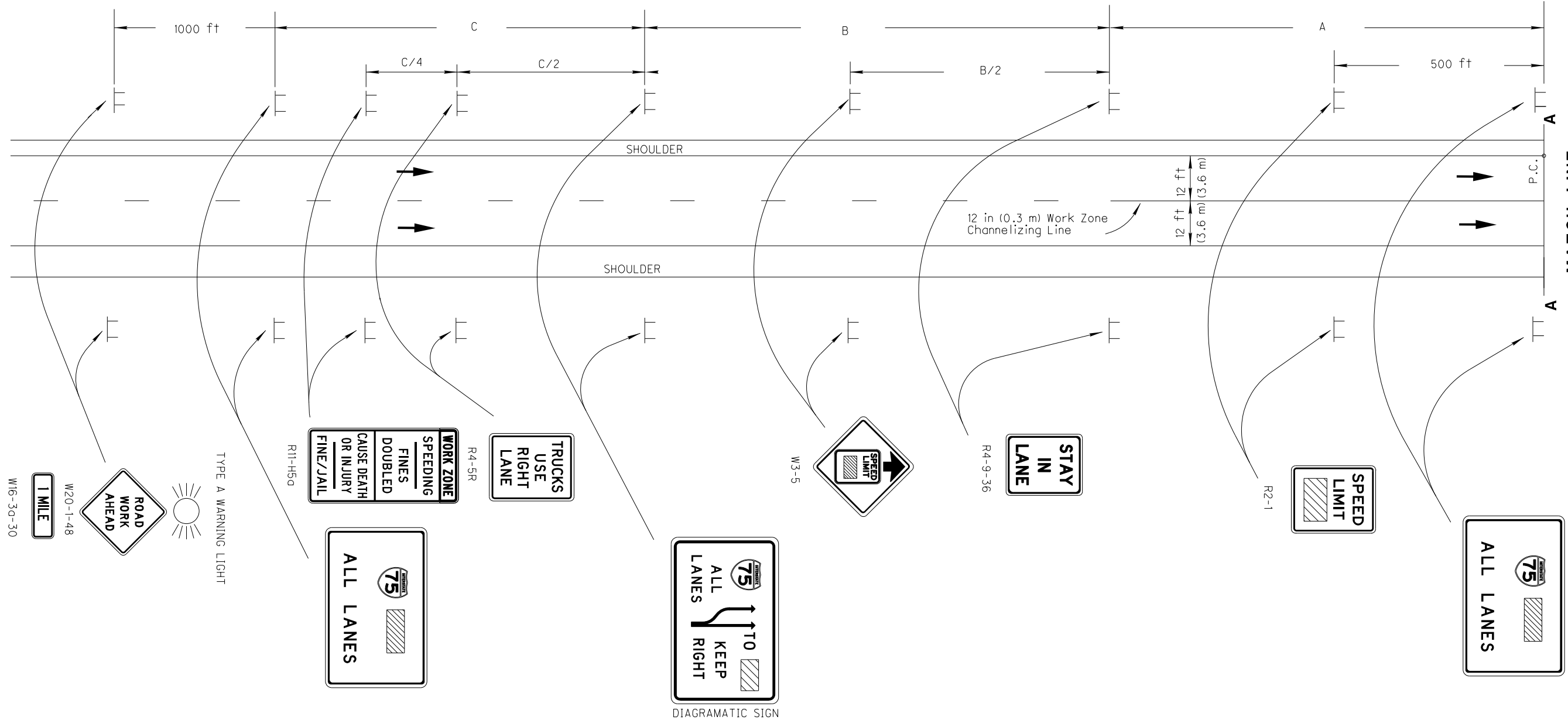
OFFICE OF TRAFFIC ENGINEERING

DESIGNED	REVIEWED
REVISION DATE	CHECKED
07/20/07	

PIS NUMBER
209931

PLAN INSERT SHEET
WORK ZONE DELINEATION ON CONCRETE SURFACES

BEL-70-7.61



MATCH LINE

APPROVED FOR CONSTRUCTION - 5/2/2011

OFFICE OF TRAFFIC ENGINEERING

DESIGNED SHB
REVISION DATE 07-17-09
CHECKED LAM

PIS NUMBER 209572

PLAN INSERT SHEET
MEDIAN CROSSOVER OF PASSING LANE
SHORT DISTANCE

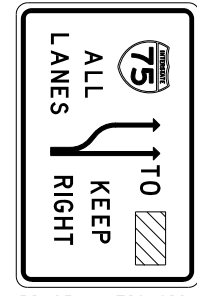
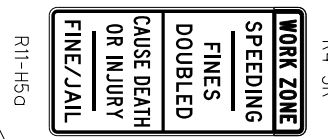
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TYPE A WARNING LIGHT



DIAGRAMATIC SIGN

OR (See Note 4H)



TYPE A WARNING LIGHT

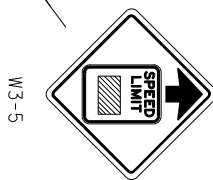
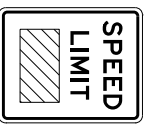
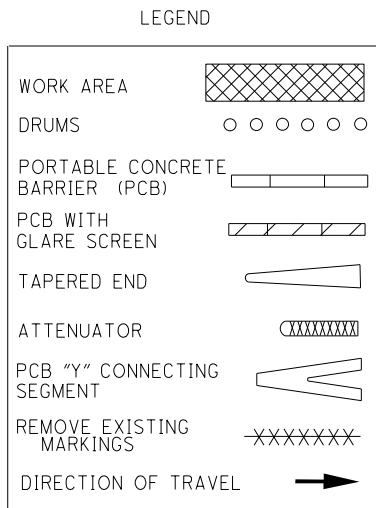


TABLE II

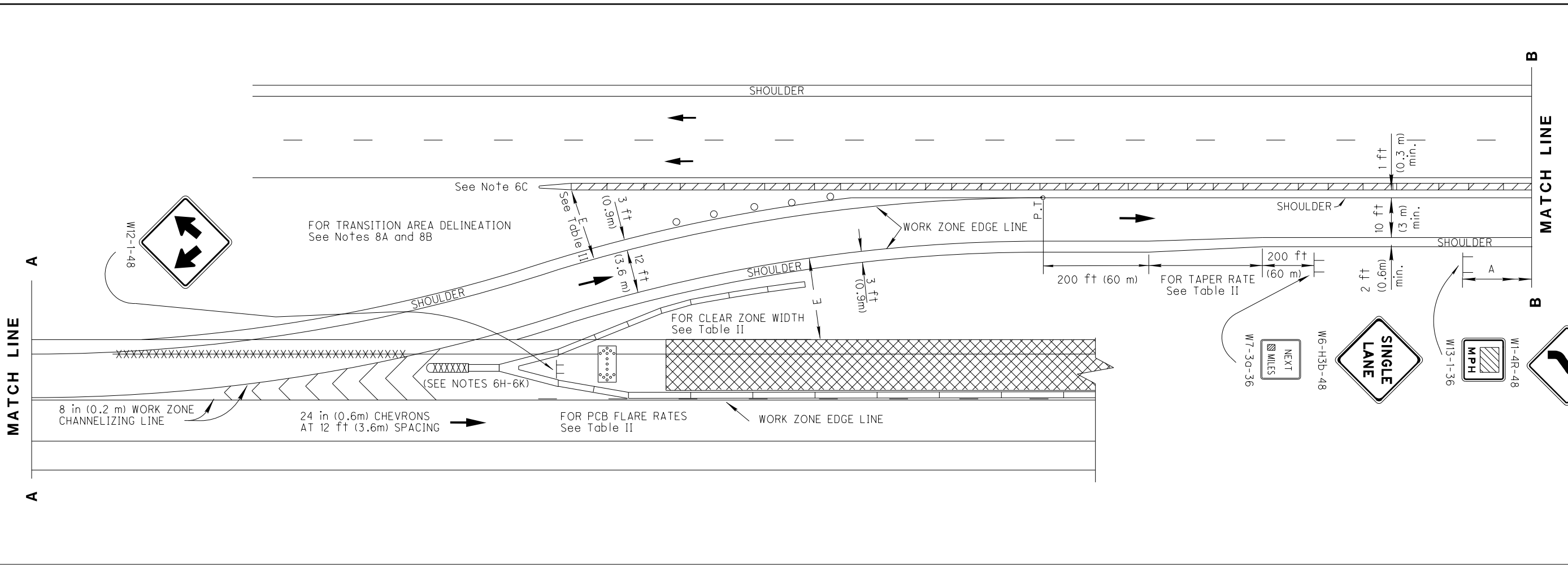
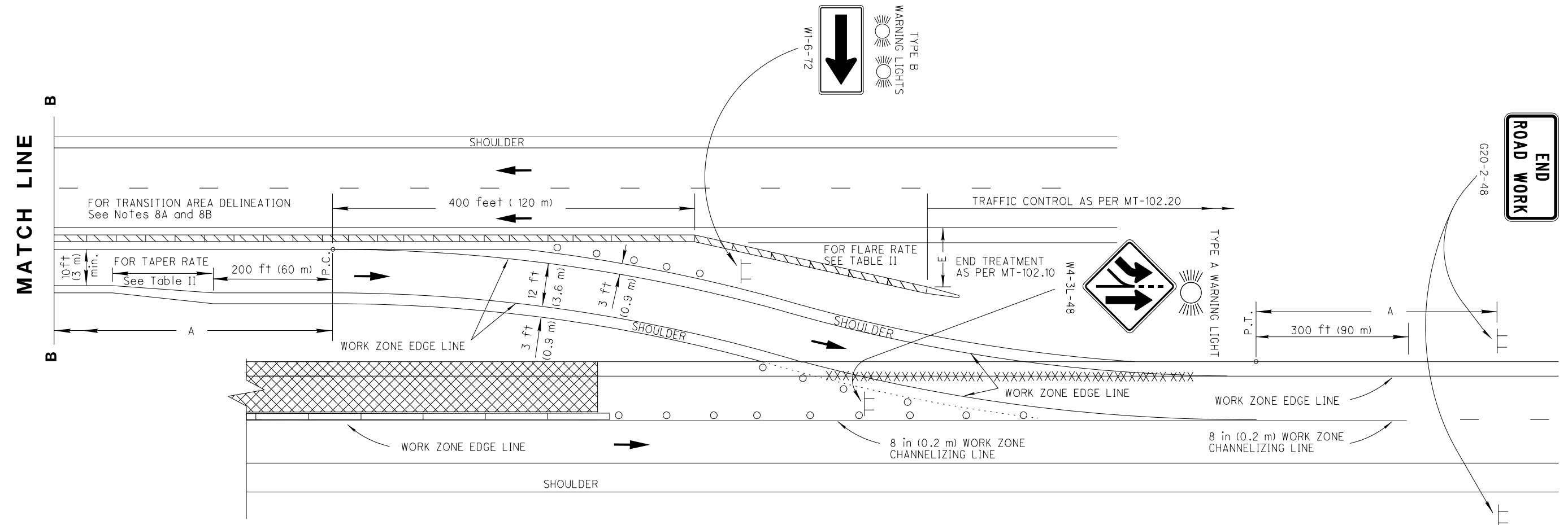
SPEED LIMIT (mph)	TAPER RATE MINIMUM	PCB FLARE RATE MINIMUM	MAXIMUM DRUM SPACING FT (m)		CLEAR ZONE WIDTH (E) FT (m)
			Taper sec.	Tangent sec.	
25	11:1	8:1	25 (7.5)	40 (12)	15 (5)
30	15:1	8:1	30 (9)	40 (12)	15 (5)
35	21:1	10:1	35 (10.5)	40 (12)	15 (5)
40	27:1	11:1	40 (12)	80 (24)	15 (5)
45	45:1	13:1	45 (13.5)	80 (24)	19 (6)
50	50:1	14:1	50 (15)	80 (24)	19 (6)
55	55:1	16:1	55 (16.5)	80 (24)	23 (7)
60	60:1	17:1	60 (18)	120 (36)	30 (9)
65	65:1	19:1	65 (19.5)	120 (36)	30 (9)

TABLE I (SIGN SPACING)

ROAD TYPE	DISTANCE BETWEEN SIGNS FT(m)		
	A	B	C
FREEWAY & EXPRESSWAY	1000 (300)	1500 (450)	2640 (800)



LEGEND



APPROVED FOR CONSTRUCTION - 5/2/2011

BEL-70-7.61	PLAN INSERT SHEET		OFFICE OF TRAFFIC ENGINEERING
	MEDIAN CROSSOVER OF PASSING LANE SHORT DISTANCE	PIS NUMBER 209572	DESIGNED SHB REVIEWED LAM
2 / 3			REVISION DATE 07-17-09 CHECKED
23 307			

GENERAL NOTES:

GENERAL

- 1A. This Standard Construction Drawing presents information which is applicable to crossover design. Additional information, applicable to Maintenance of Traffic on multilane highways can be found on the MT-95.30 and MT-95.40 series drawings, on MT-95.50 and on the MT-102 series drawings.
- 1B. Standard Construction Drawing MT-101.70 shall be used with this drawing.

DESIGN SPEED

- 2. The design speed used for taper rates should typically be the permanent legal speed. However, on construction projects for which the speed limit is reduced, the reduced speed may be used in determining the taper rate when the taper is not the first active construction area within the project.

TAPERS

- 3. The minimum acceptable length of taper shall be determined by multiplying the width of offset by the taper rate. The taper rate is provided in Table II.

SIGNING

- 4A. The advisory speed plaque (W13-1) shall be used when specified in the plans.
- 4B. The spacing between work zone signs, as shown in Table I, are minimums. Maximum spacing should not be greater than 1.5 times the distances shown in Table I.
- 4C. Sign spacing should be adjusted to avoid conflict with existing signs. Minimum spacing to existing signs shall be 200 feet (60m) for speeds of 45 mph or less and a minimum of 400 feet (120m) for speeds 50 mph or greater.
- 4D. Sign locations should be adjusted to provide adequate sight distance for the existing vertical and horizontal roadway alignment.
- 4E. If the tangent distance along the temporary diversion is less than 2000 feet (600 m), place the second Reverse Curve (W1-4) sign at the mid-point of the tangent.
- 4F. If the tangent distance along the temporary diversion is 600 feet (180 m) or less, then the double Reverse Curve sign (W24-1) may be used in place of the first Reverse Curve sign, eliminating the need for the second Reverse Curve sign.
- 4G. The W6-H3b sign shall be provided along directional single-lane roadways over 3 miles (4.8 km). Spacing of the W6-H3b shall be at approximately 1 mile (1.6 km).
- 4H. A diagrammatic sign shall be provided when detailed in the plan. Otherwise a W9-3a sign assembly shall be provided.
- 4J. The ALL LANES signs and the Diagrammatic sign shall have white legends on a green background, similar to the E6-2 series sign and the E4-H1 sign. However these signs shall be flat sheet signs on sign posts. The size of the signs shall be as specified in the plans.
- 4K. Signing for exit ramps located within the limits of the crossover lane should be as shown in the plan. Signing shall specify which exits are not accessible from the crossover lane.
- 4L. Additional information shall be provided in the form of fixed signs and/or changeable message boards as called for in the plans.
- 4M. Sign spacing on major conventional highways shall be as called for in Table I for freeway & expressway spacing unless otherwise determined by the Engineer.

PAVEMENT MARKING

- 5A. The existing conflicting pavement markings and reflectors from the raised pavement markers shall be removed and the appropriate color work zone edge lines shall be applied.
- 5B. Work zone edge lines shall be provided along the tangent section when called for in the plans.
- 5C. Work zone pavement markings which would conflict with the final traffic lanes shall be removable (CMS 740.06 Type I) tape unless the area will be resurfaced prior to project completion.
- 5D. After completion of the work, pavement markings other than CMS 740.06, Type I shall be removed in accordance with CMS 614.III. The original markings and raised pavement marker reflectors shall be restored at no additional cost unless separately itemized in the plans.
- 5E. Edge lines shall be of the appropriate color for the direction of travel. If the temporary edge lines are located on the same alignment as existing lines, the temporary lines may be painted over top of the existing lines (with subsequent over painting if necessary during the life of the work stage to maintain day and night color) if other than on the final surface. If on the final surface, all marking shall be removable tape as per 5C above.
- 5F. A 12 inch (0.3 m) channelizing line shall be provided in between the crossover lane and the through lane in advance of the "exit" gore, as shown on sheet 1 of 3. All other channelizing lines shown on this drawing shall be of standard 8 inch (0.2 m) width.
- 5G. If the intended location of the beginning of the channelizing line, as called for in the detail, is on a curve, then the beginning of the channelizing line should be relocated upstream a distance of 500 feet (150 m).
- 5H. If the beginning of the channelizing line would be located near an exit ramp, then the beginning of the channelizing line shall be relocated upstream a distance of 1000 feet in advance of the beginning of the exit ramp deceleration lane.

PORTABLE CONCRETE BARRIER

- 6A. The portable concrete barrier (PCB) near the exiting crossover, shall extend straight on the permanent roadway to 400 feet (120 m) beyond the PC of the crossover. The PCB shall then be flared at the rate specified in Table II.
- 6B. The PCB shall be 32 inches (813 mm), fitted with glare screen, or may be 50 inches (1270 mm) high if NCHRP 350 compliant.
- 6C. PCB end treatment shall be by impact attenuator if located within the clear zone of approaching traffic.
- 6D. PCB end treatment may be by tapered ends if located beyond the clear zone of approaching traffic.
- 6E. When used, impact attenuators shall be installed parallel to traffic. The last full section of PCB, adjacent to the impact attenuator shall be located parallel to traffic. For installation procedures, refer to manufacturer's installation instructions.
- 6F. No reflectors or other channelizing devices shall be permitted on the face of the PCB facing the exiting crossover, from PC to end of barrier.
- 6G. Where portable concrete barrier (PCB) is provided at the gore, the impact attenuators shall be installed parallel to mainline traffic.
- 6H. Where the impact attenuator is intended to apply to two barriers within the gore, one from the through lane and one from the crossover, the two barriers shall be joined to form one unit using a PCB "Y" connecting segment. For the "Y" details, see Roadway Plan Insert Sheet "Portable Concrete Barrier 'Y' Connector Segment".

PCB cont.

Contractors may choose to install a wide impact attenuator in lieu of utilizing the concrete "Y" segment. For example, a wide impact attenuator at a minimum of 48 inches (1200 mm) wide and rated for the design speed of the roadway could be installed in place of the aforementioned (1) work zone impact attenuator (2) PCB "Y" connector segment and (3) one standard PCB section. However, if contractors use this connection method, the wider impact attenuator must still be crashworthy in accordance with NCHRP Report 350, or MASH-08 and installed as per manufacturer's instructions.

The contractor shall repair or replace a damaged unit within 24 hours of a damaging impact.

- 6J. Where a PCB "Y" connecting segment is provided, one standard section of PCB shall be provided between the "Y" connecting segment and the impact attenuator.
- 6K. Connection of the Impact attenuator to the PCB shall be by positive connection. Appropriate crashworthy transitions between the impact attenuator and the first PCB shall be installed.
- 6L. Where PCB is located beyond the edge of the paved shoulder, the cross slope within the clear zone, including the surface on which the PCB is placed, shall be graded at 10:1 or flatter. If the cross slope is steeper than 10:1, the PCB shall be terminated on the paved shoulder. The PCB shall be extended along the paved shoulder as necessary to satisfy the length of need, and then terminated using an impact attenuator.
- 6M. For installation procedures for the PCB and for the impact attenuator, refer to manufacturers' installation instructions.
- 6N. For details on delineation of Portable Concrete Barrier, see Standard Construction Drawing MT-101.70.
- 6O. PCB shall also be provided along the crossover where the work is within the clear zone of the crossover. The PCB within the gore, along the right side of the crossover lane should be flared as per Table II, with the upstream end of the PCB placed adjacent to the mainline PCB.

DRUMS

- 7A. Drums along the crossover curves shall be spaced at 20 feet (6 m) center-to-center.
- 7B. Drums used to close off a crossover shall be spaced at 10 feet (3 m) center-to-center.
- 7C. All other drum spacing shall be as per Table II.
- 7D. Drums located along the crossover ramps should be placed on the aggregate shoulder as much as possible in order to maximize the width of pavement open to traffic.

TRANSITION AREA DELINEATION

- 8A. Transition area delineation shall be provided, as called for in Plan Insert Sheets 209930 or 209931, or as otherwise called for in the plans.
- 8B. Additionally, RPMs at 20 feet (6 m) spacing shall be provided beside the channelizing line located between the crossover lane and the through lanes.

LIGHTING

- 9. Work zone lighting shall be provided as per Standard Construction Drawing MT-100.00.

GEOMETRICS

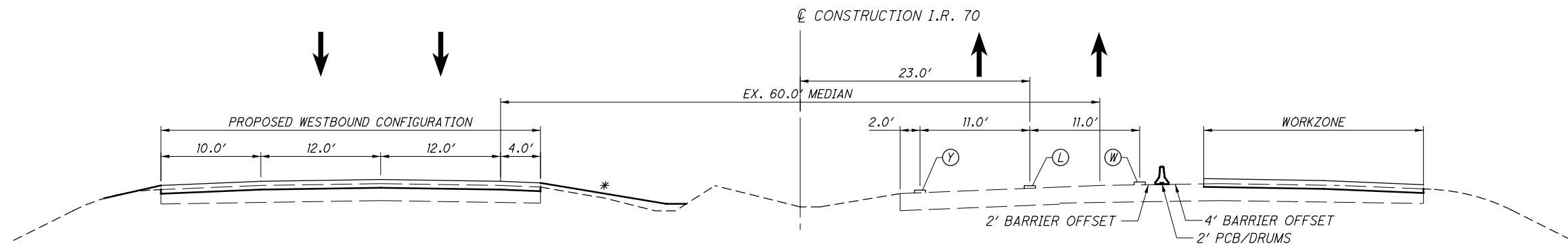
- 10. Geometrics of the crossover shall be as called for in the plans.

EXISTING LONGITUDINAL RUMBLE STRIPS

- 11. Existing longitudinal rumble strips, located within the alignment of the crossover, shall be eliminated by pavement planing and resurfacing.

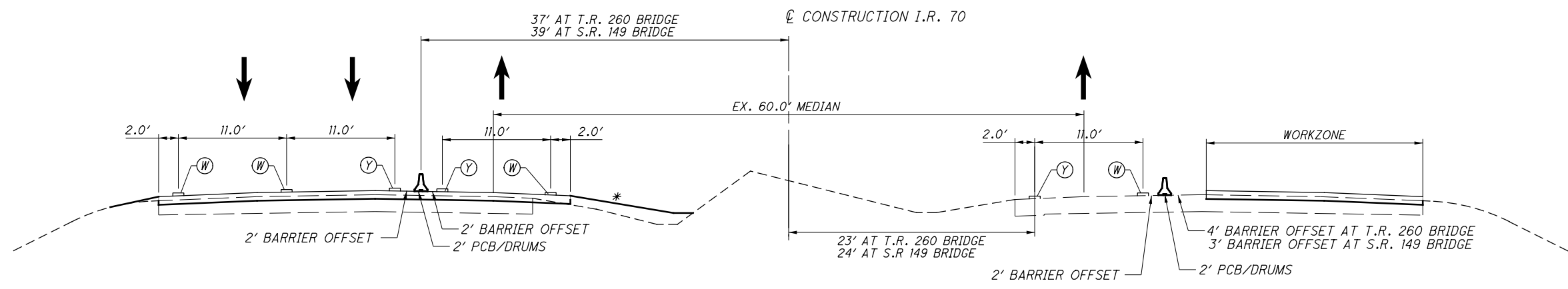
APPROVED FOR CONSTRUCTION - 5/2/2011

DESIGNED	SHB	OFFICE OF TRAFFIC ENGINEERING
	REVIEWED	
REVISION DATE	07-17-09	PIB NUMBER 209572
CHECKED		
PLAN INSERT SHEET		MEDIAN CROSSOVER OF PASSING LANE SHORT DISTANCE
BEL-70-7.61		
3 / 3		24 / 307

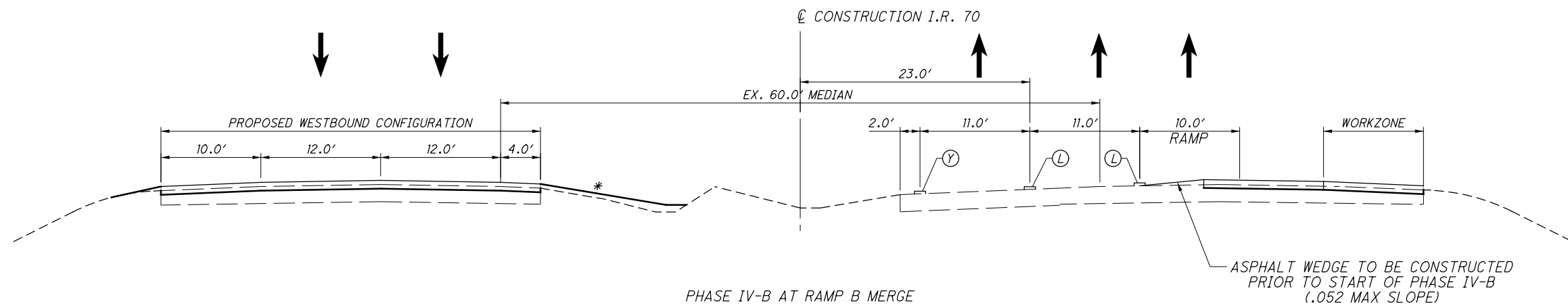


PHASE IV-A & IV-B OUTSIDE CROSSOVER AREAS

* SEE CROSS SECTIONS FOR GRADING



PHASE IV-A & IV-B AT MAINLINE BRIDGES



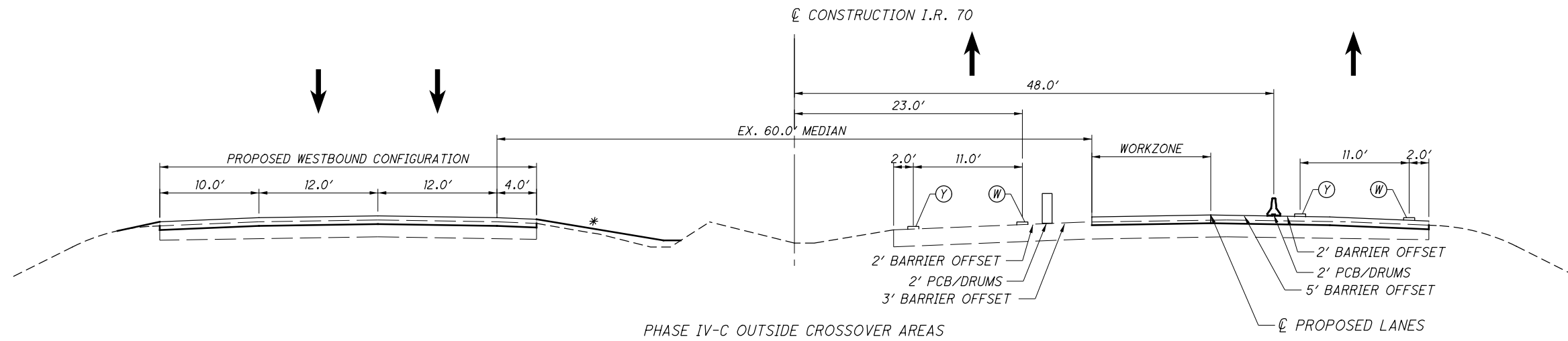
PHASE IV-B AT RAMP B MERGE

APPROVED FOR CONSTRUCTION - 5/2/2011

MAINTENANCE OF TRAFFIC I.R. 70
PHASE IV - TYPICAL SECTIONS

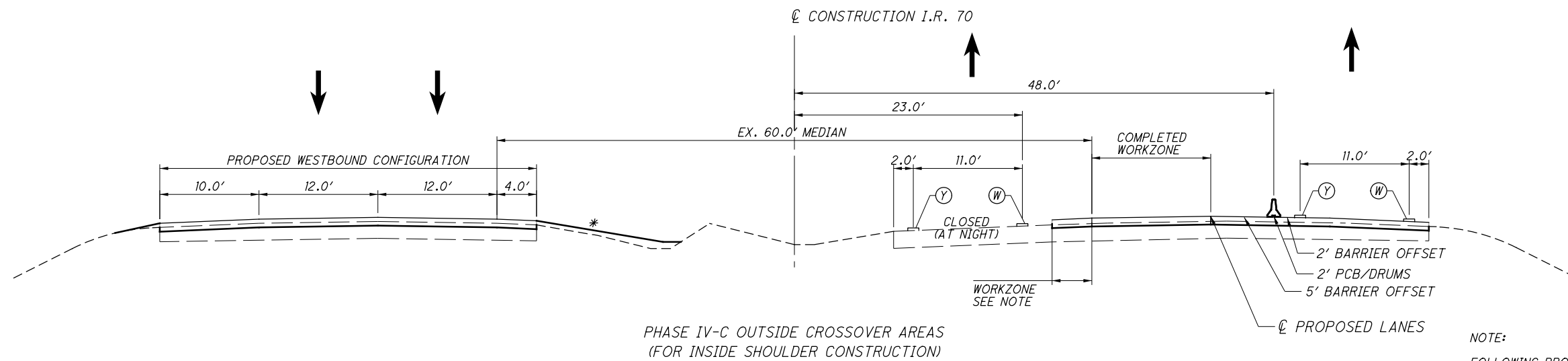
BEL-70-7.61

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PHASE IV-C OUTSIDE CROSSOVER AREAS

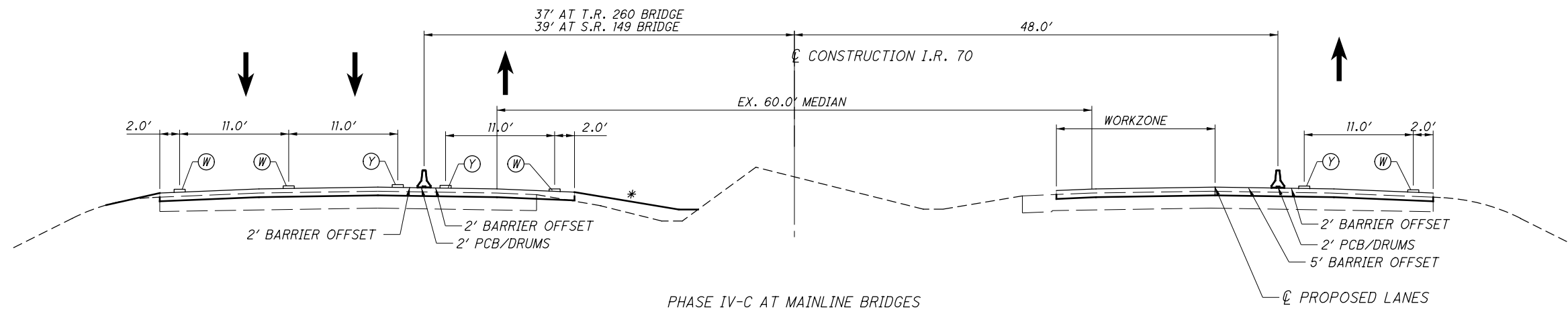
* SEE CROSS SECTIONS FOR GRADING



PHASE IV-C OUTSIDE CROSSOVER AREAS
(FOR INSIDE SHOULDER CONSTRUCTION)

NOTE:

FOLLOWING PROPOSED INSIDE LANE CONSTRUCTION CLOSE INSIDE MOT LANE AT NIGHT AND CONSTRUCT PROPOSED INSIDE SHOULDER.



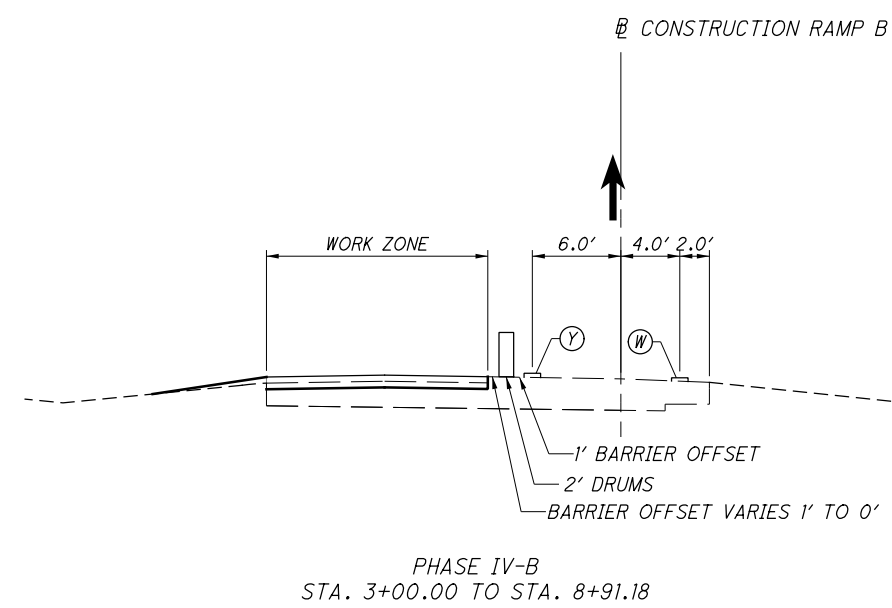
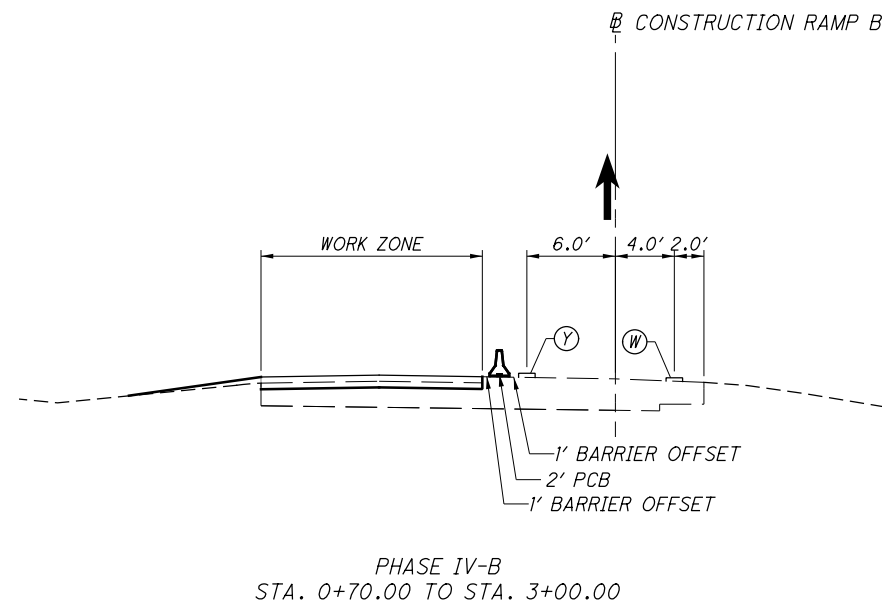
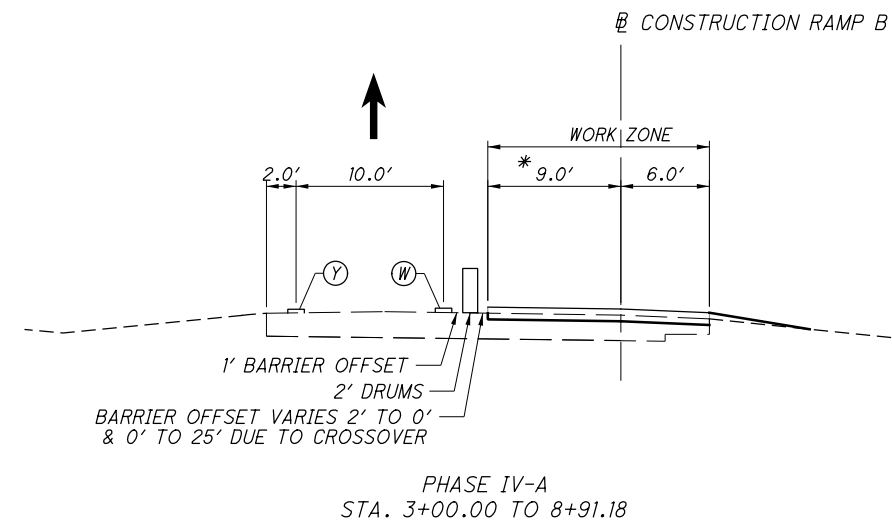
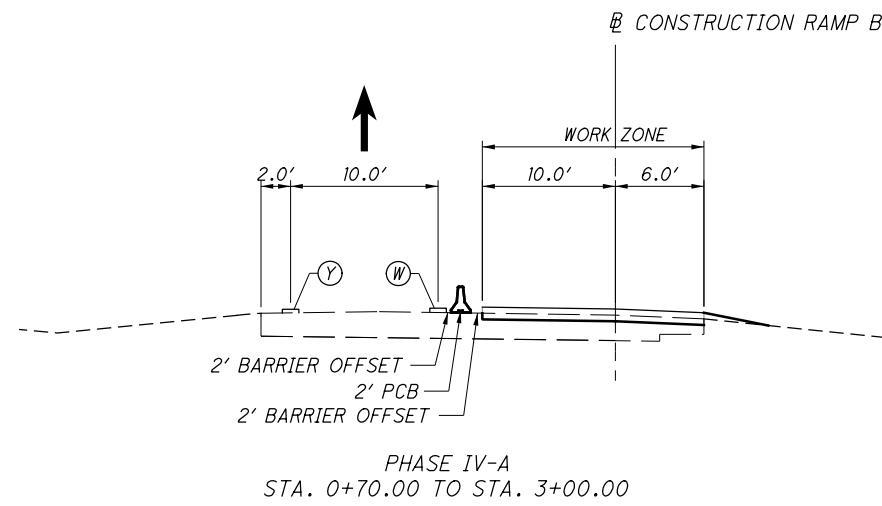
PHASE IV-C AT MAINLINE BRIDGES

APPROVED FOR CONSTRUCTION - 5/2/2011

MAINTENANCE OF TRAFFIC I.R. 70
PHASE IV - TYPICAL SECTIONS

BEL-70-7.61

* 10' TO 9' STA. 3+00 TO 3+81.66

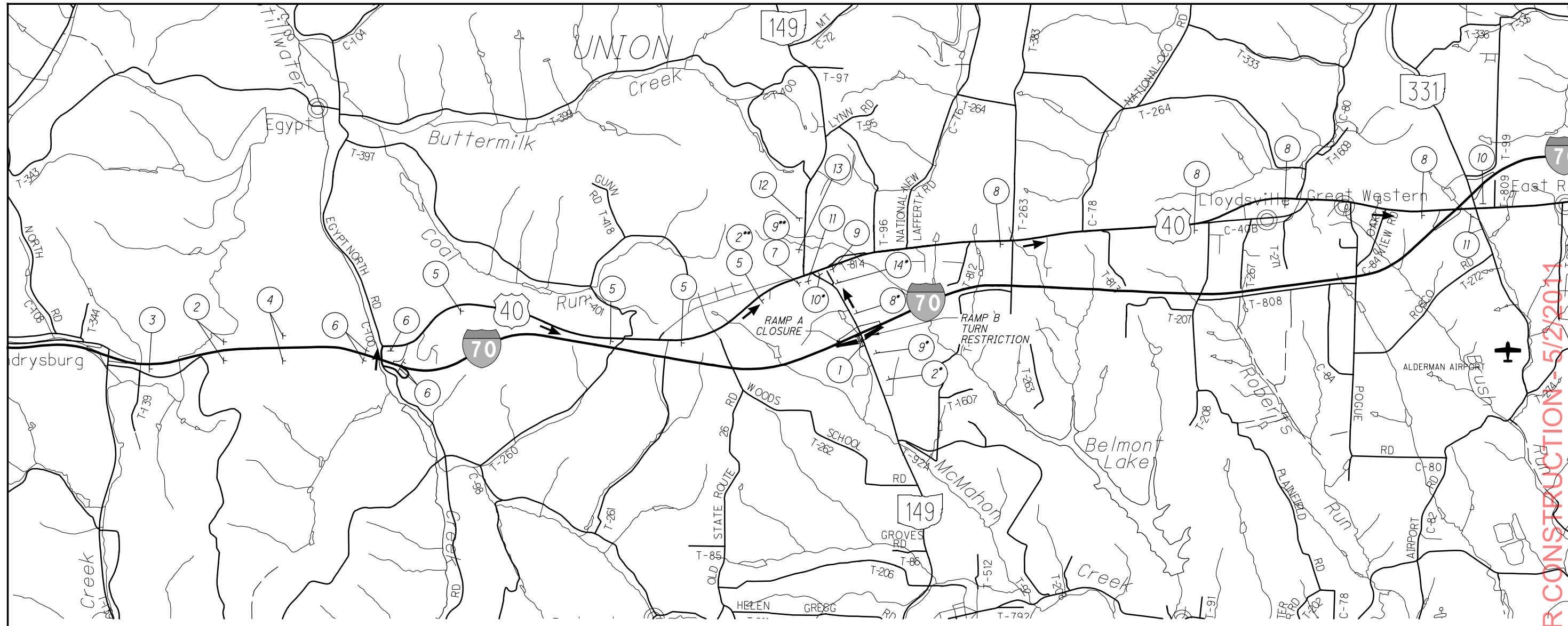


APPROVED FOR CONSTRUCTION - 5/2/2011

MAINTENANCE OF TRAFFIC RAMP B
PHASE IV - TYPICAL SECTIONS

BEL-70-7.61

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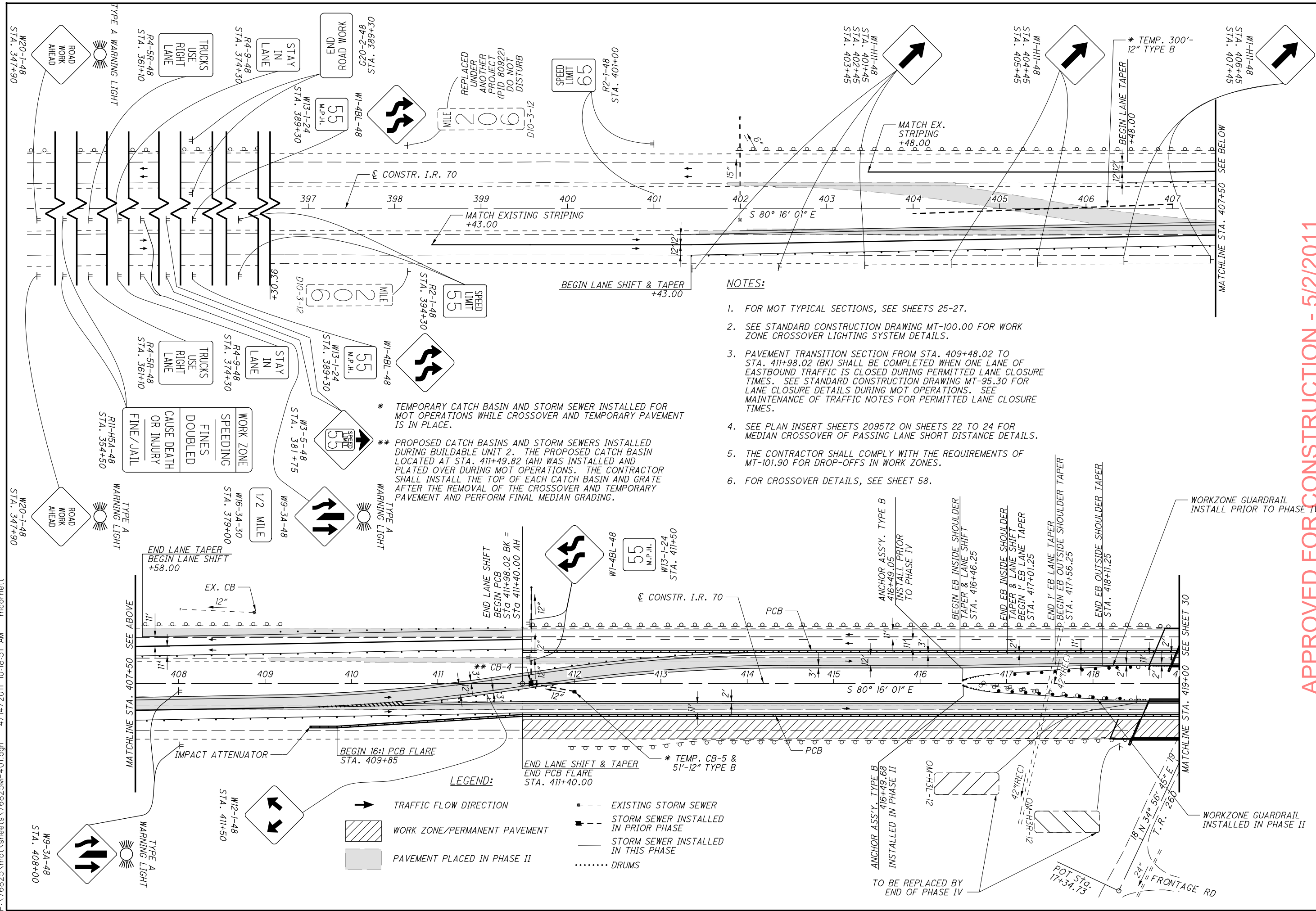


* USE DURING PHASE IV-A ONLY
** USE DURING PHASE IV-B ONLY

① R11-2-48 MOUNTED ON TYPE III BARRICADE	② MI-5-30-3 W20-2-48	③ W20-1-48	④ MI-5-30-3 E5-H2C-48	⑤ M4-8-24 MI-5-30-3	⑥ M4-8-24 MI-5-30-3 M6-1R-24	⑦ M4-8A-24 MI-5-30-3	⑧ M4-8-24 M3-2-24 MI-1-24-2	⑨ M4-8-24 M3-2-24 MI-1-24-2 M6-3-24	⑩ M4-8-24 M3-2-24 MI-1-24-2 M6-1R-24	⑪ M4-8-24 M3-2-24 MI-1-24-2 M6-1L-24	⑫ M3-2-24 MI-1-24-2 W20-2-48	⑬ M4-8-24 M3-2-24 MI-1-24-2 M5-1L-24	⑭ M4-8-24 M3-2-24 MI-1-24-2 M5-1R-24
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NOTE:
SIGN ⑤ LOCATIONS SHOWN FOR INFORMATION ONLY.
ACTUAL SIGNS TO BE PLACED AT 2 MILE INTERVALS
ALONG DETOUR ROUTE.
CLOSE EXIT RAMP A PER STANDARD CONSTRUCTION
DRAWING MT-98.29 AND DETAILS IN THE PLANS.

APPROVED FOR CONSTRUCTION - 5/2/2011



NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 25-27.
2. SEE STANDARD CONSTRUCTION DRAWING MT-100.00 FOR WORK ZONE CROSSOVER LIGHTING SYSTEM DETAILS.
3. PAVEMENT TRANSITION SECTION FROM STA. 409+48.02 TO STA. 411+98.02 (BK) SHALL BE COMPLETED WHEN ONE LANE OF EASTBOUND TRAFFIC IS CLOSED DURING PERMITTED LANE CLOSURE TIMES. SEE STANDARD CONSTRUCTION DRAWING MT-95.30 FOR LANE CLOSURE DETAILS DURING MOT OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
4. SEE PLAN INSERT SHEETS 209572 ON SHEETS 22 TO 24 FOR MEDIAN CROSSOVER OF PASSING LANE SHORT DISTANCE DETAILS.
5. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.
6. FOR CROSSOVER DETAILS, SEE SHEET 58.

LEGEND:

- TRAFFIC FLOW DIRECTION
- ▨ WORK ZONE/PERMANENT PAVEMENT
- ▭ PAVEMENT PLACED IN PHASE II
- - - EXISTING STORM SEWER
- STORM SEWER INSTALLED IN PRIOR PHASE
- STORM SEWER INSTALLED IN THIS PHASE
- DRUMS

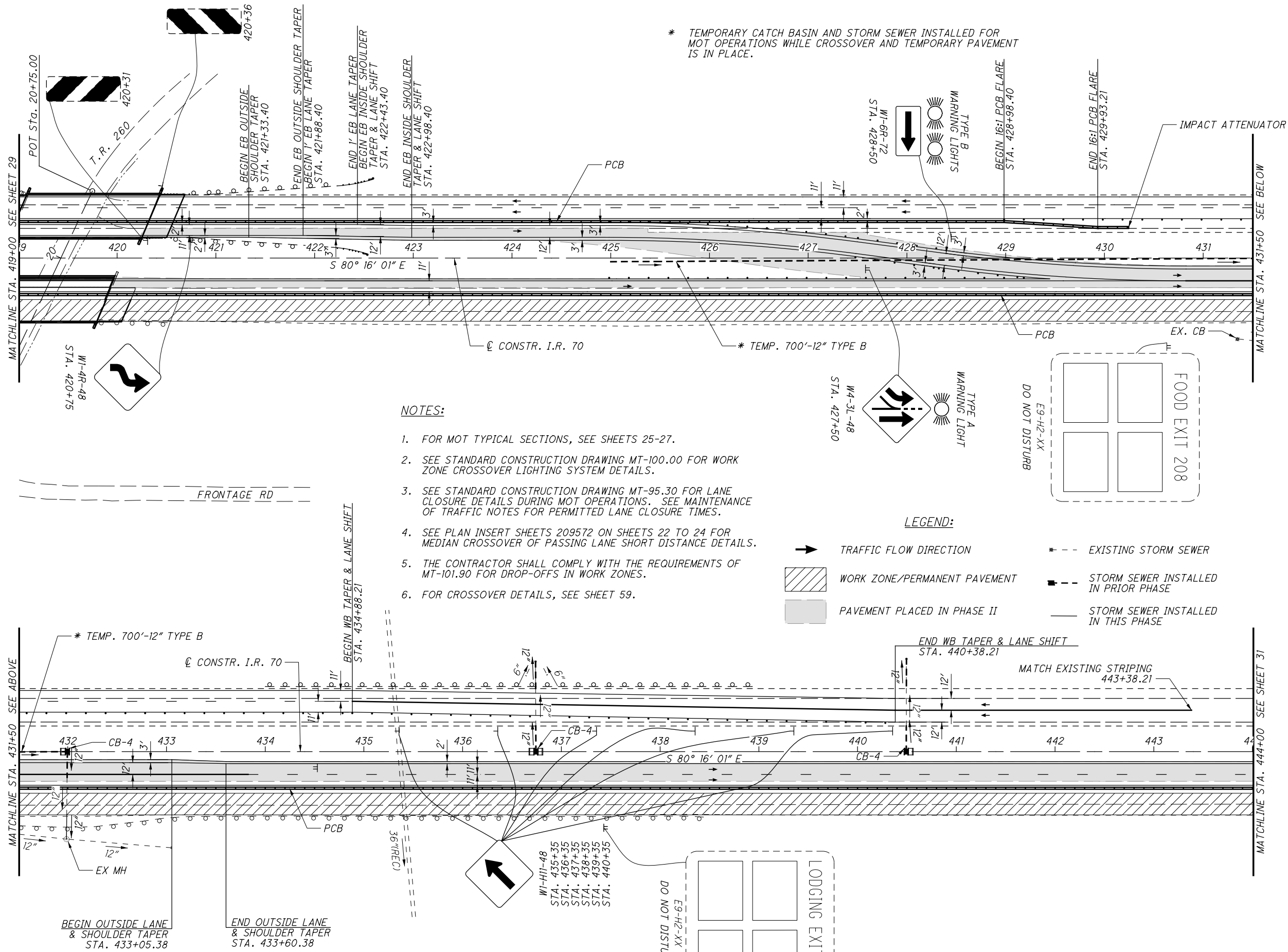
APPROVED FOR CONSTRUCTION - 5/2/2011

CALCULATED MJC CHECKED BBD

0 50 100
25
HORIZONTAL SCALE IN FEET

MAINTENANCE OF TRAFFIC

PHASE IV - A - STA. 374+90 TO STA. 419+00



* TEMPORARY CATCH BASIN AND STORM SEWER INSTALLED FOR MOT OPERATIONS WHILE CROSSOVER AND TEMPORARY PAVEMENT IS IN PLACE.

NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 25-27.
2. SEE STANDARD CONSTRUCTION DRAWING MT-100.00 FOR WORK ZONE CROSSOVER LIGHTING SYSTEM DETAILS.
3. SEE STANDARD CONSTRUCTION DRAWING MT-95.30 FOR LANE CLOSURE DETAILS DURING MOT OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
4. SEE PLAN INSERT SHEETS 209572 ON SHEETS 22 TO 24 FOR MEDIAN CROSSOVER OF PASSING LANE SHORT DISTANCE DETAILS.
5. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.
6. FOR CROSSOVER DETAILS, SEE SHEET 59.

LEGEND:

- TRAFFIC FLOW DIRECTION
- ▨ WORK ZONE/PERMANENT PAVEMENT
- ▭ PAVEMENT PLACED IN PHASE II
- EXISTING STORM SEWER
- ▣ STORM SEWER INSTALLED IN PRIOR PHASE
- STORM SEWER INSTALLED IN THIS PHASE

NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 25-27.
2. SEE STANDARD CONSTRUCTION DRAWING MT-100.00 FOR WORK ZONE CROSSOVER LIGHTING SYSTEM DETAILS.
3. SEE STANDARD CONSTRUCTION DRAWING MT-95.30 FOR LANE CLOSURE DETAILS DURING MOT OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
4. SEE PLAN INSERT SHEETS 209572 ON SHEETS 22 TO 24 FOR MEDIAN CROSSOVER OF PASSING LANE SHORT DISTANCE DETAILS.
5. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.
6. FOR CROSSOVER DETAILS, SEE SHEET 59.

LEGEND:

- TRAFFIC FLOW DIRECTION
- ▨ WORK ZONE/PERMANENT PAVEMENT
- ▭ PAVEMENT PLACED IN PHASE II
- EXISTING STORM SEWER
- ▣ STORM SEWER INSTALLED IN PRIOR PHASE
- STORM SEWER INSTALLED IN THIS PHASE

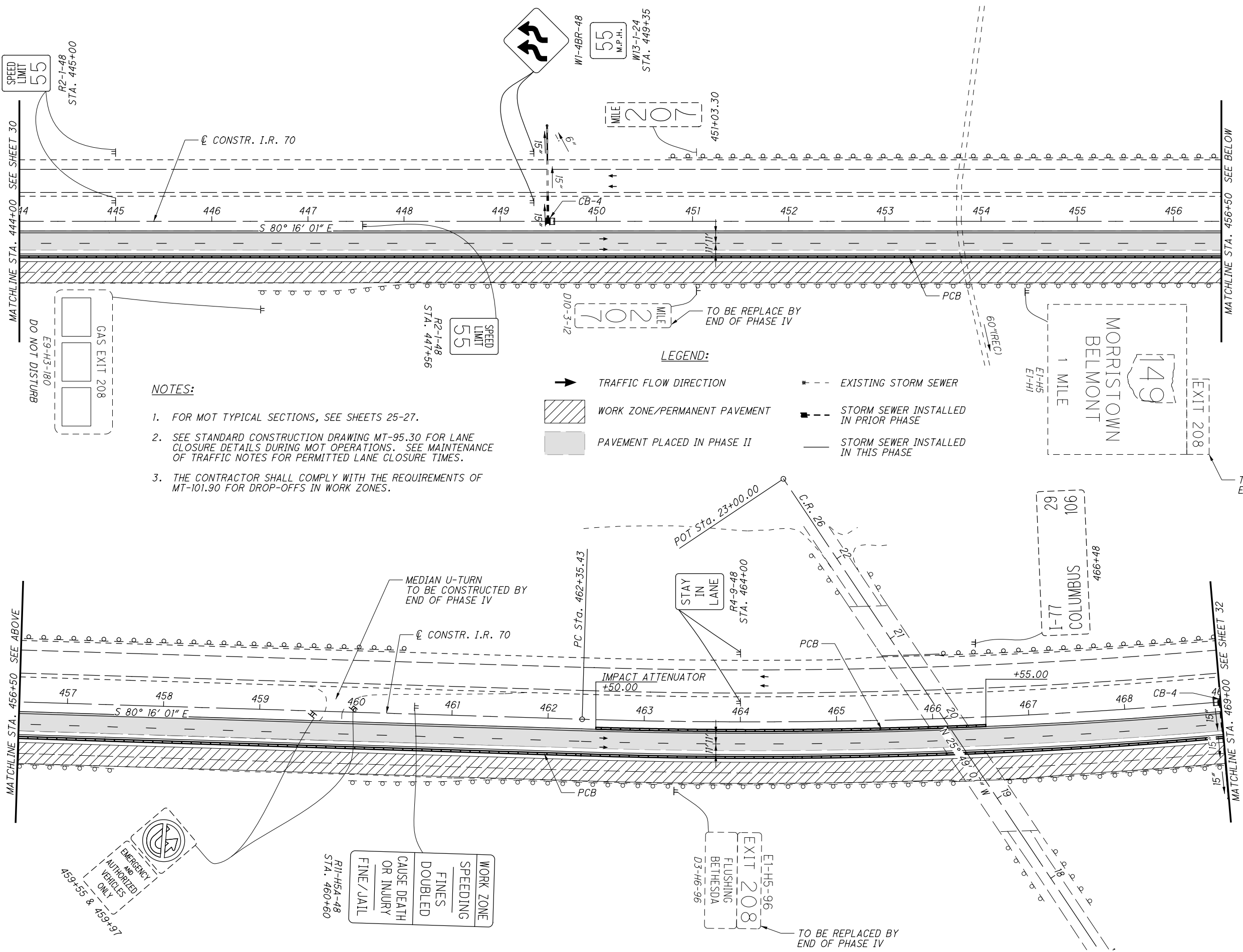
CALCULATED MJC CHECKED BBD

0 50 100
HORIZONTAL SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

MAINTENANCE OF TRAFFIC

PHASE IV - A - STA. 419+00 TO STA. 444+00



NOTES:

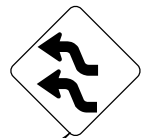
1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 25-27.
2. SEE STANDARD CONSTRUCTION DRAWING MT-95.30 FOR LANE CLOSURE DETAILS DURING MOT OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
3. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.

SPEED LIMIT 55
R2-1-48
STA. 445+00

DO NOT DISTURB
E9-H3-180
GAS EXIT 208

SPEED LIMIT 55
R2-1-48
STA. 447+56

55 M.P.H.
W13-1-24
STA. 449+35



MILE 207
D10-3-12

E1-H5-96
EXIT 208
FLUSHING
BETHESDA
D3-H6-96

MORRISTOWN
BELMONT
1 MILE
E1-H5
E1-H1

29
106
COLUMBUS
466+48
I-77

EMERGENCY
AUTHORIZED
VEHICLES
ONLY
459+55 & 459+57

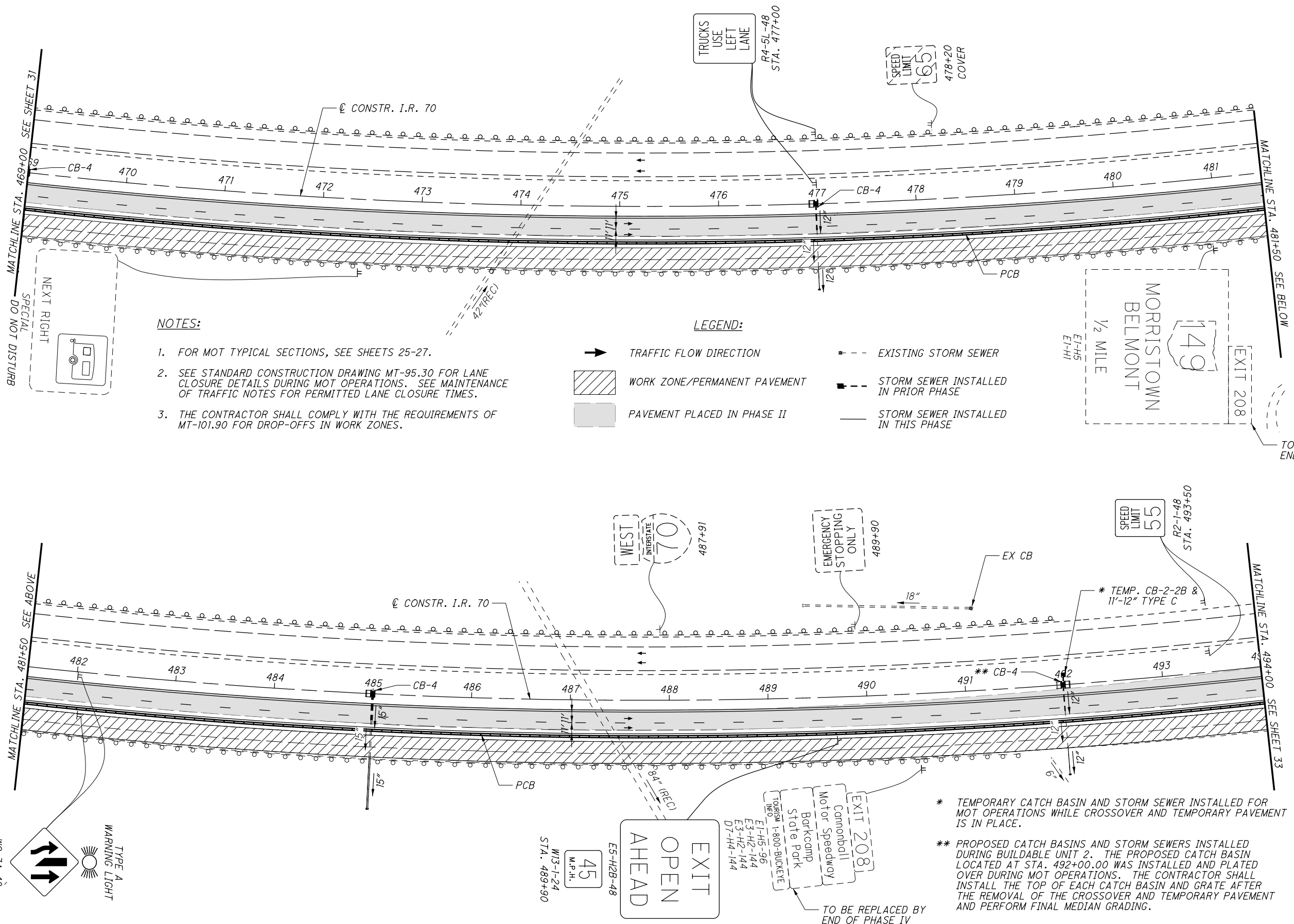
WORK ZONE
SPEEDING
FINES
DOUBLED
CAUSE DEATH
OR INJURY
FINE/JAIL
R1-H5-48
STA. 460+60

CALCULATED MJC CHECKED BBD

0 50 100
HORIZONTAL SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

MAINTENANCE OF TRAFFIC
PHASE IV-A - STA. 444+00 TO STA. 469+00

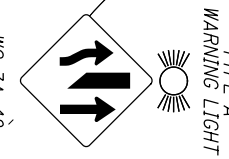
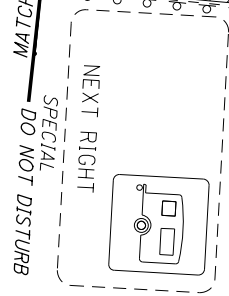


NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 25-27.
2. SEE STANDARD CONSTRUCTION DRAWING MT-95.30 FOR LANE CLOSURE DETAILS DURING MOT OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
3. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.

LEGEND:

- ➔ TRAFFIC FLOW DIRECTION
- ▨ WORK ZONE/PERMANENT PAVEMENT
- PAVEMENT PLACED IN PHASE II
- - - EXISTING STORM SEWER
- - - STORM SEWER INSTALLED IN PRIOR PHASE
- - - STORM SEWER INSTALLED IN THIS PHASE



W9-3A-48
1/2 MILE
W16-3A-30
STA. 482+00

W13-1-24
M.P.H. 45
E5-H2B-48
EXIT OPEN AHEAD

TO BE REPLACED BY END OF PHASE IV

EXIT 208
Canonball Motor Speedway
Barkcamp State Park
Tollman 1-800-BUCKEYE
E7-H5-96
E3-H2-144
E3-H2-144
D7-H4-144

- * TEMPORARY CATCH BASIN AND STORM SEWER INSTALLED FOR MOT OPERATIONS WHILE CROSSOVER AND TEMPORARY PAVEMENT IS IN PLACE.
- ** PROPOSED CATCH BASINS AND STORM SEWERS INSTALLED DURING BUILDABLE UNIT 2. THE PROPOSED CATCH BASIN LOCATED AT STA. 492+00.00 WAS INSTALLED AND PLATED OVER DURING MOT OPERATIONS. THE CONTRACTOR SHALL INSTALL THE TOP OF EACH CATCH BASIN AND GRATE AFTER THE REMOVAL OF THE CROSSOVER AND TEMPORARY PAVEMENT AND PERFORM FINAL MEDIAN GRADING.



CALCULATED MJC CHECKED BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

MAINTENANCE OF TRAFFIC
PHASE IV - A - STA. 469+00 TO STA. 494+00

BEL-70-7.61

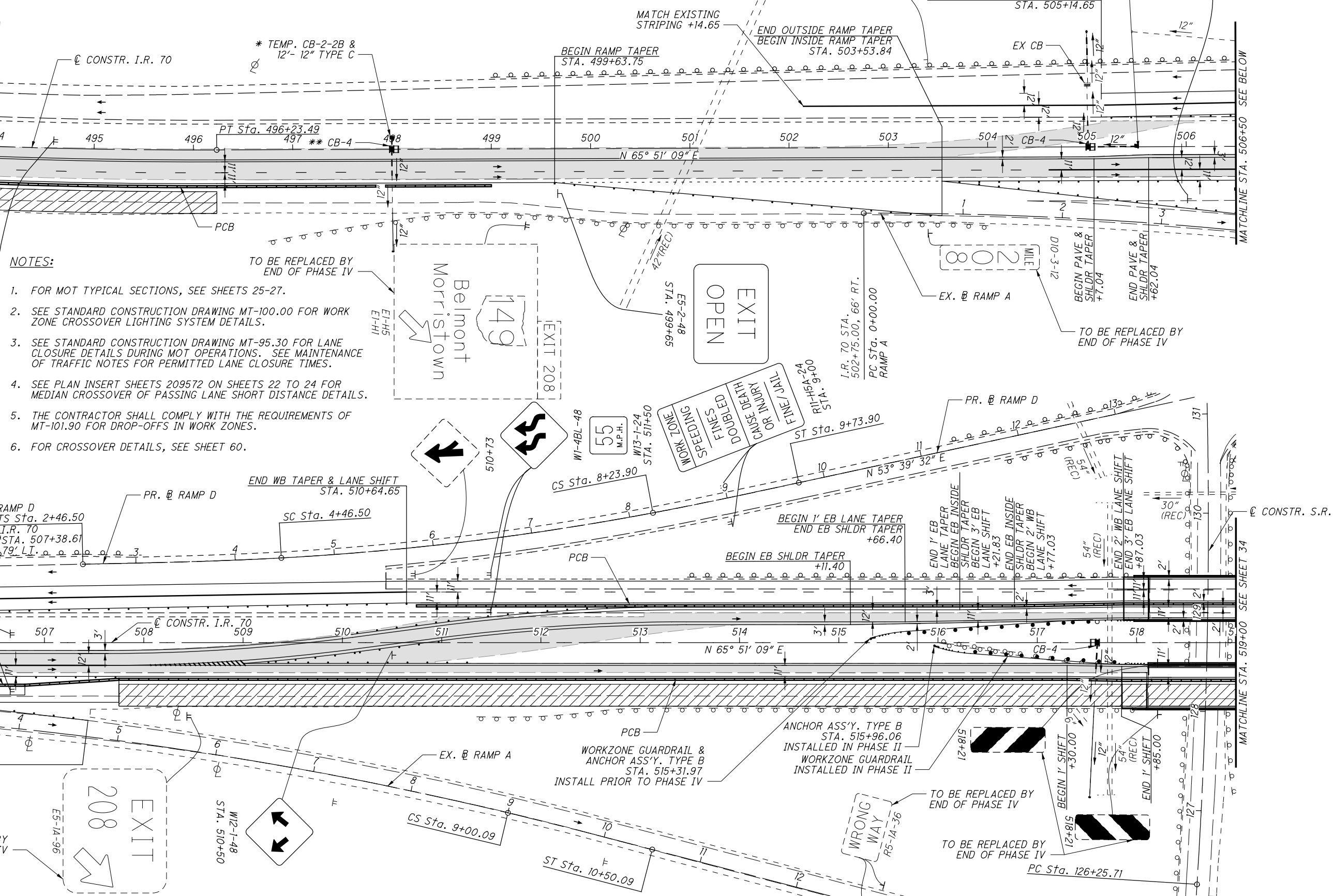
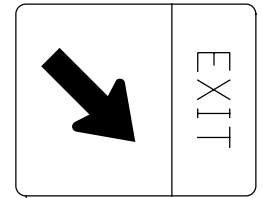
32
307

* TEMPORARY CATCH BASIN AND STORM SEWER INSTALLED FOR MOT OPERATIONS WHILE CROSSOVER AND TEMPORARY PAVEMENT IS IN PLACE.

** PROPOSED CATCH BASINS AND STORM SEWERS INSTALLED DURING BUILDABLE UNIT 2. THE PROPOSED CATCH BASIN LOCATED AT STA. 498+00.00 WAS INSTALLED AND PLATED OVER DURING MOT OPERATIONS. THE CONTRACTOR SHALL INSTALL THE TOP OF EACH CATCH BASIN AND GRATE AFTER THE REMOVAL OF THE CROSSOVER AND TEMPORARY PAVEMENT AND PERFORM FINAL MEDIAN GRADING.

LEGEND:

- TRAFFIC FLOW DIRECTION
- EXISTING STORM SEWER
- STORM SEWER INSTALLED IN PRIOR PHASE
- STORM SEWER INSTALLED IN THIS PHASE
- ▨ WORK ZONE/PERMANENT PAVEMENT
- ▭ PAVEMENT PLACED IN PHASE II



NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 25-27.
2. SEE STANDARD CONSTRUCTION DRAWING MT-100.00 FOR WORK ZONE CROSSOVER LIGHTING SYSTEM DETAILS.
3. SEE STANDARD CONSTRUCTION DRAWING MT-95.30 FOR LANE CLOSURE DETAILS DURING MOT OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
4. SEE PLAN INSERT SHEETS 209572 ON SHEETS 22 TO 24 FOR MEDIAN CROSSOVER OF PASSING LANE SHORT DISTANCE DETAILS.
5. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.
6. FOR CROSSOVER DETAILS, SEE SHEET 60.

APPROVED FOR CONSTRUCTION - 5/2/2011

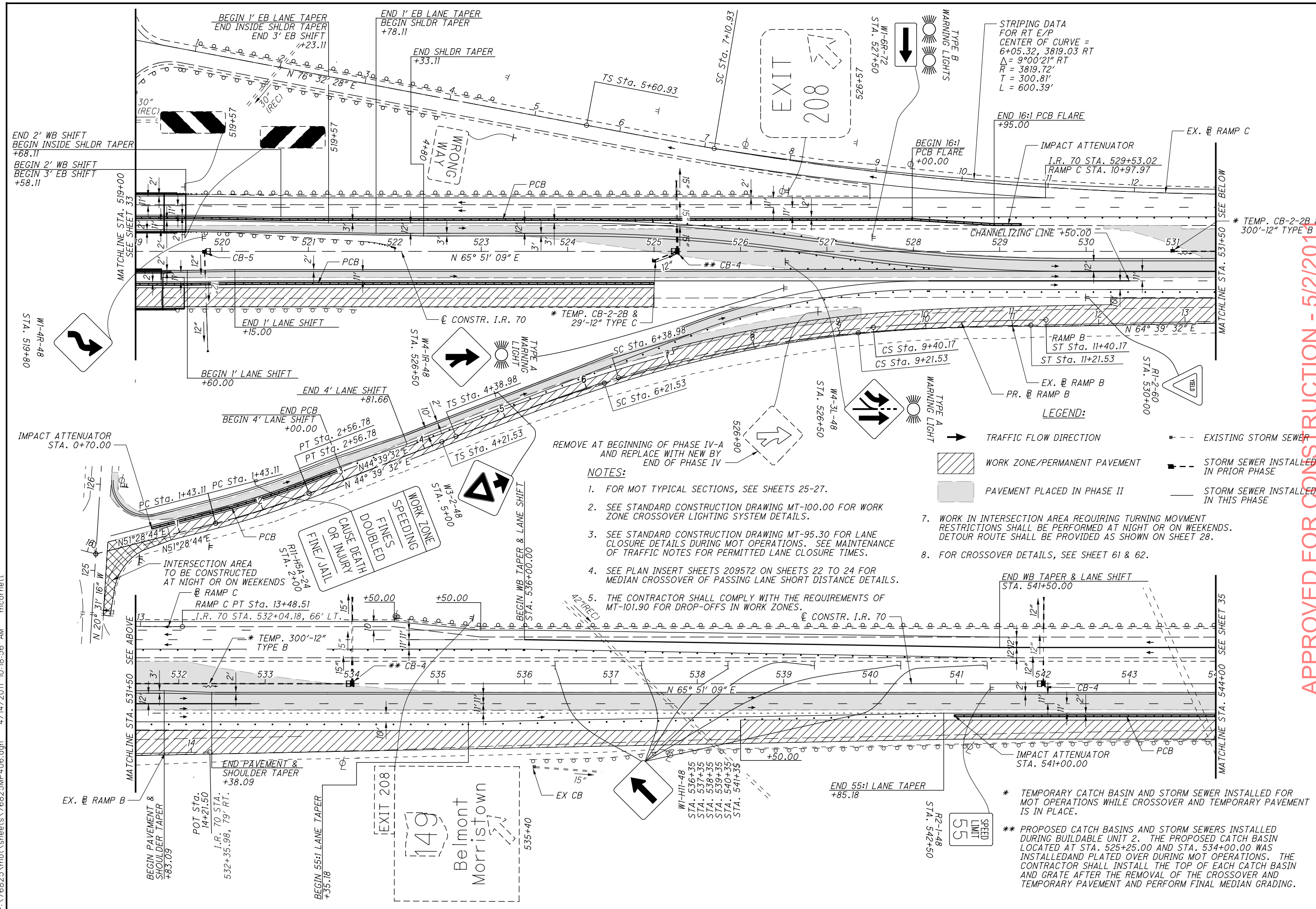
MAINTENANCE OF TRAFFIC

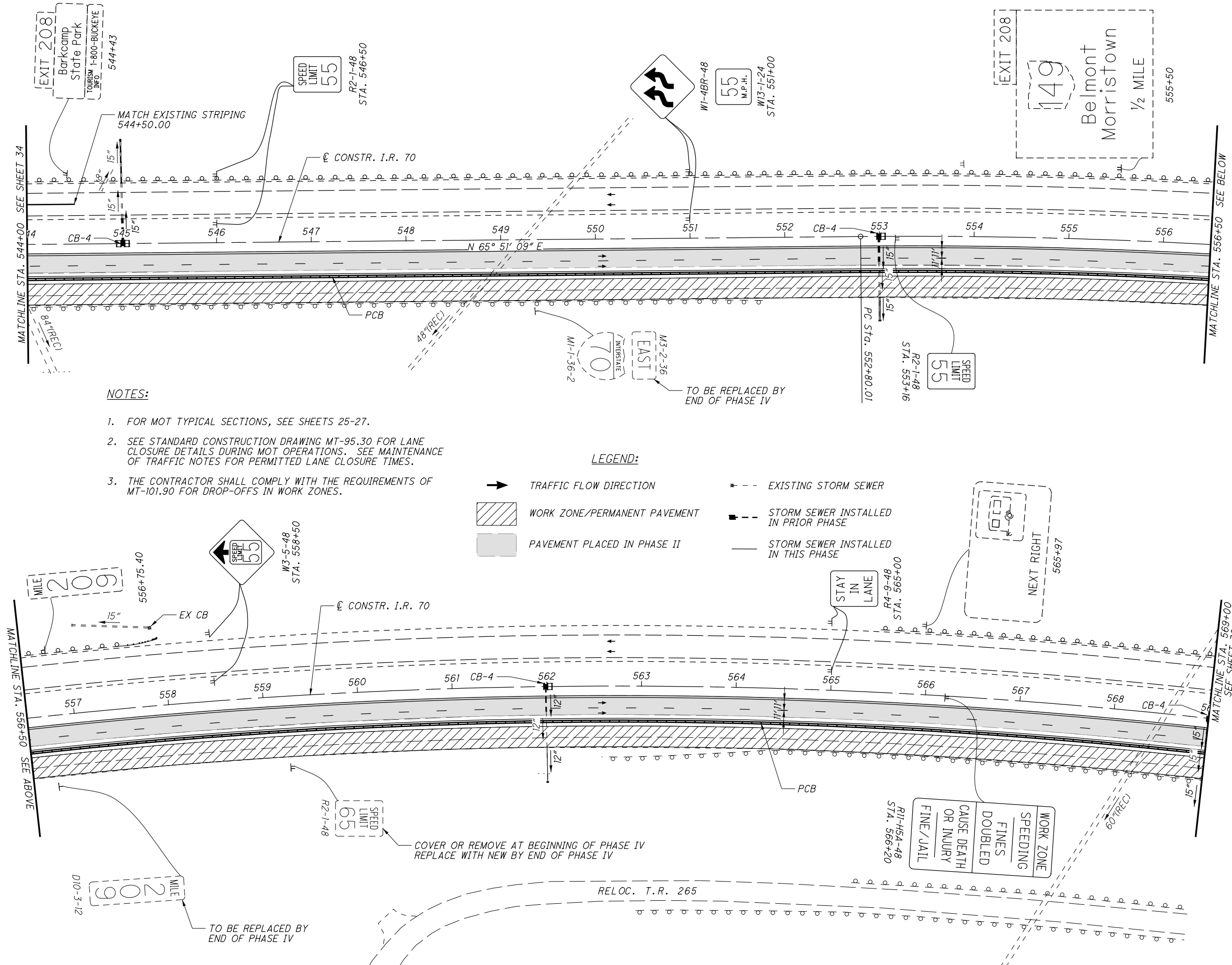
PHASE IV - A - STA. 494+00 TO STA. 519+00

BEL-70-7.61

33
307

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NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 25-27.
2. SEE STANDARD CONSTRUCTION DRAWING MT-95.30 FOR LANE CLOSURE DETAILS DURING MOT OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
3. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.

LEGEND:

- ➔ TRAFFIC FLOW DIRECTION
- ▨ WORK ZONE/PERMANENT PAVEMENT
- PAVEMENT PLACED IN PHASE II
- - - EXISTING STORM SEWER
- - - STORM SEWER INSTALLED IN PRIOR PHASE
- - - STORM SEWER INSTALLED IN THIS PHASE

MILE 209
D10-3-12
TO BE REPLACED BY END OF PHASE IV

SPEED LIMIT 65
R2-1-48
COVER OR REMOVE AT BEGINNING OF PHASE IV
REPLACE WITH NEW BY END OF PHASE IV

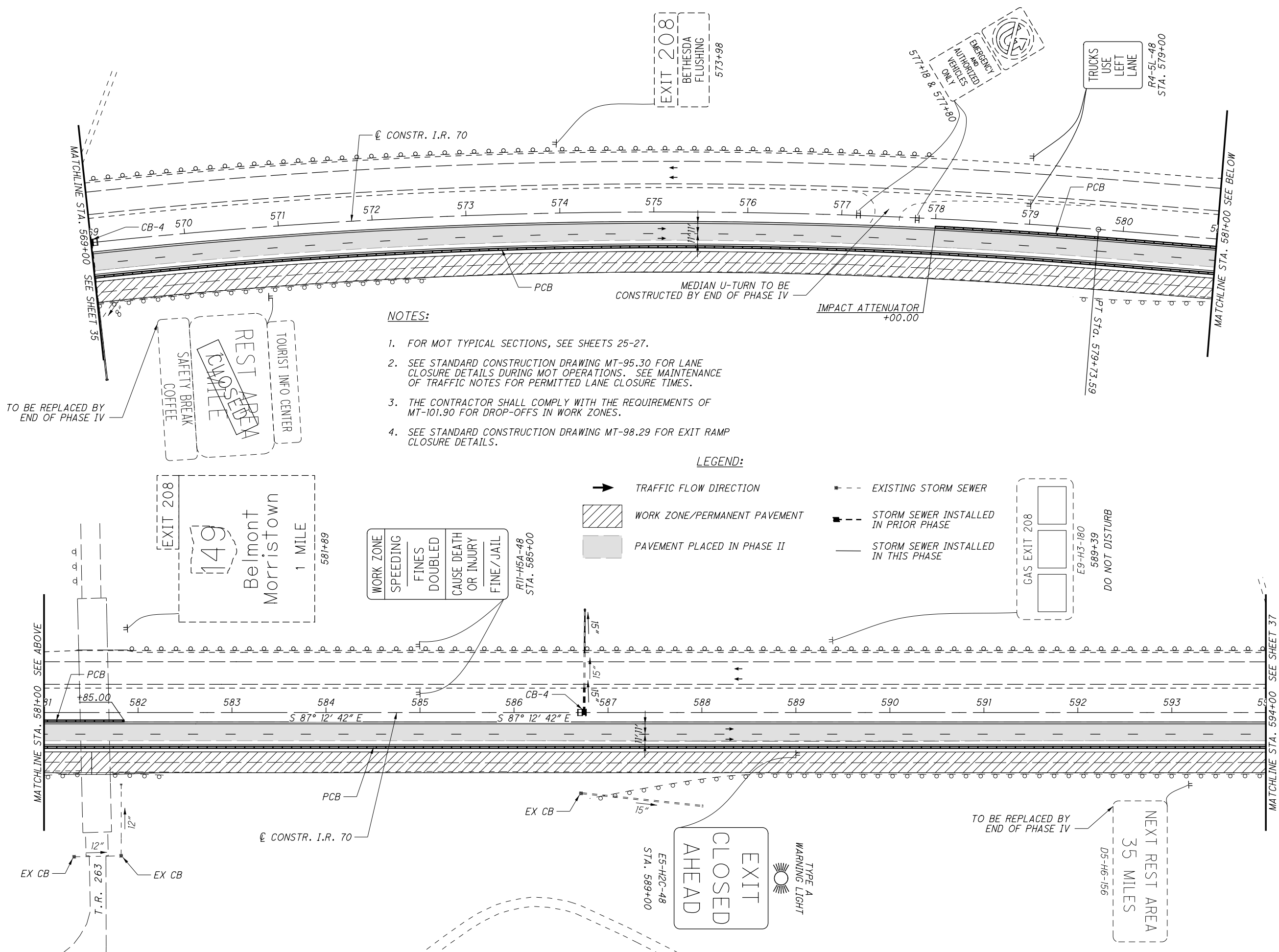
WORK ZONE
SPEEDING
FINES DOUBLED
CAUSE DEATH OR INJURY
FINE/JAIL
R11-45A-48
STA. 566+20

CALCULATED MJC
CHECKED BBD

HORIZONTAL SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

MAINTENANCE OF TRAFFIC
PHASE IV-A - STA. 544+00 TO STA. 569+00



NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 25-27.
2. SEE STANDARD CONSTRUCTION DRAWING MT-95.30 FOR LANE CLOSURE DETAILS DURING MOT OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
3. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.
4. SEE STANDARD CONSTRUCTION DRAWING MT-98.29 FOR EXIT RAMP CLOSURE DETAILS.

LEGEND:

- TRAFFIC FLOW DIRECTION
- EXISTING STORM SEWER
- ▨ WORK ZONE/PERMANENT PAVEMENT
- ▩ STORM SEWER INSTALLED IN PRIOR PHASE
- PAVEMENT PLACED IN PHASE II
- STORM SEWER INSTALLED IN THIS PHASE

WORK ZONE
SPEEDING
FINES DOUBLED
CAUSE DEATH OR INJURY
FINE/JAIL

R11-H5A-48
STA. 585+00

GAS EXIT 208
E9-H3-180
589+39
DO NOT DISTURB

TYPE A
WARNING LIGHT
EXIT
CLOSED
AHEAD

E5-H2C-48
STA. 589+00

TO BE REPLACED BY
END OF PHASE IV
NEXT REST AREA
35 MILES
D5-H6-156

TO BE REPLACED BY
END OF PHASE IV

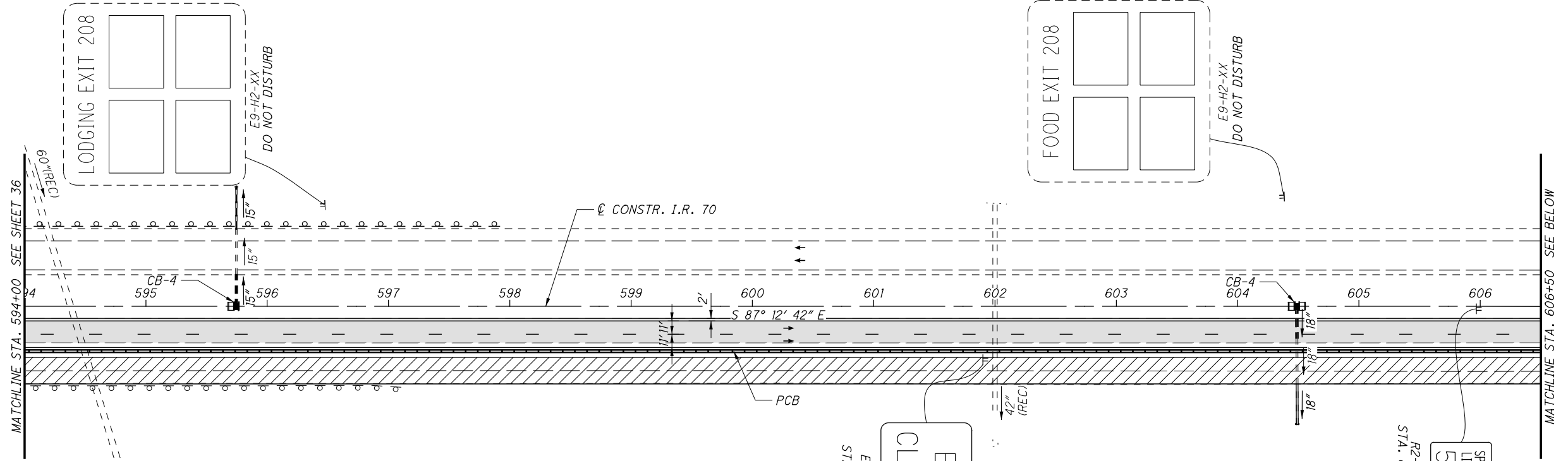
REST AREA
SAFETY BREAK
COFFEE
TOURIST INFO CENTER

CALCULATED MJC
CHECKED BBD

0 50 100
25
HORIZONTAL SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

MAINTENANCE OF TRAFFIC
PHASE IV-A - STA. 569+00 TO STA. 594+00

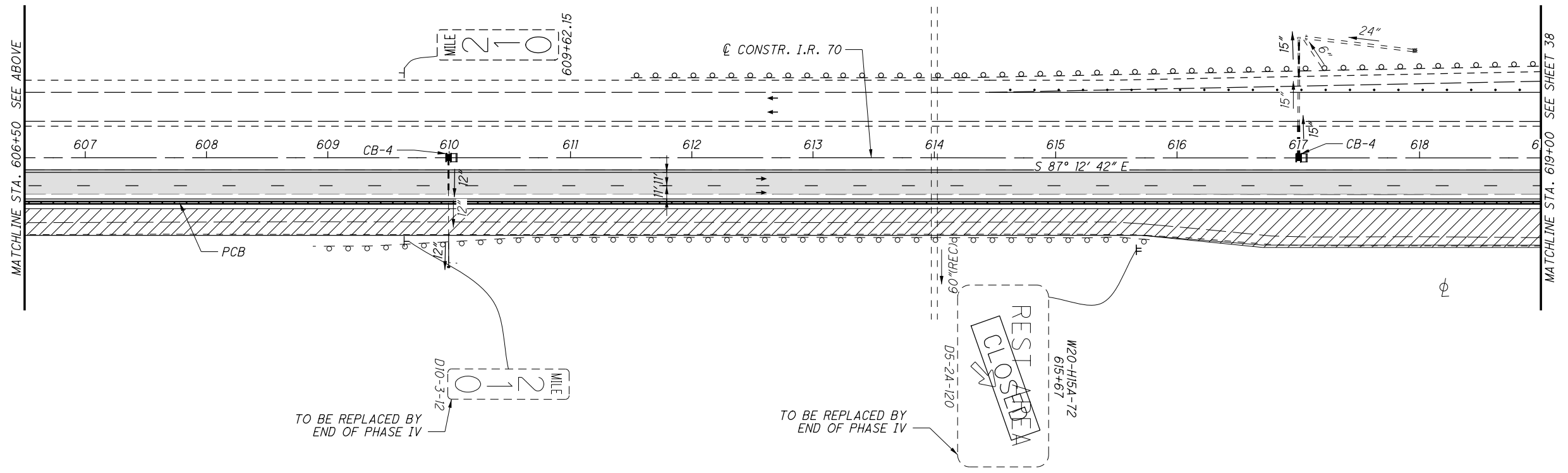


NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 25-27.
2. SEE STANDARD CONSTRUCTION DRAWING MT-95.30 FOR LANE CLOSURE DETAILS DURING MOT OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
3. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.
4. SEE STANDARD CONSTRUCTION DRAWING MT-98.29 FOR EXIT RAMP CLOSURE DETAILS.

LEGEND:

- ➔ TRAFFIC FLOW DIRECTION
- ▨ WORK ZONE/PERMANENT PAVEMENT
- ▭ PAVEMENT PLACED IN PHASE II
- EXISTING STORM SEWER
- STORM SEWER INSTALLED IN PRIOR PHASE
- STORM SEWER INSTALLED IN THIS PHASE



TO BE REPLACED BY
END OF PHASE IV

TO BE REPLACED BY
END OF PHASE IV

CALCULATED MJC CHECKED BBD

0 50 100
25
HORIZONTAL SCALE IN FEET

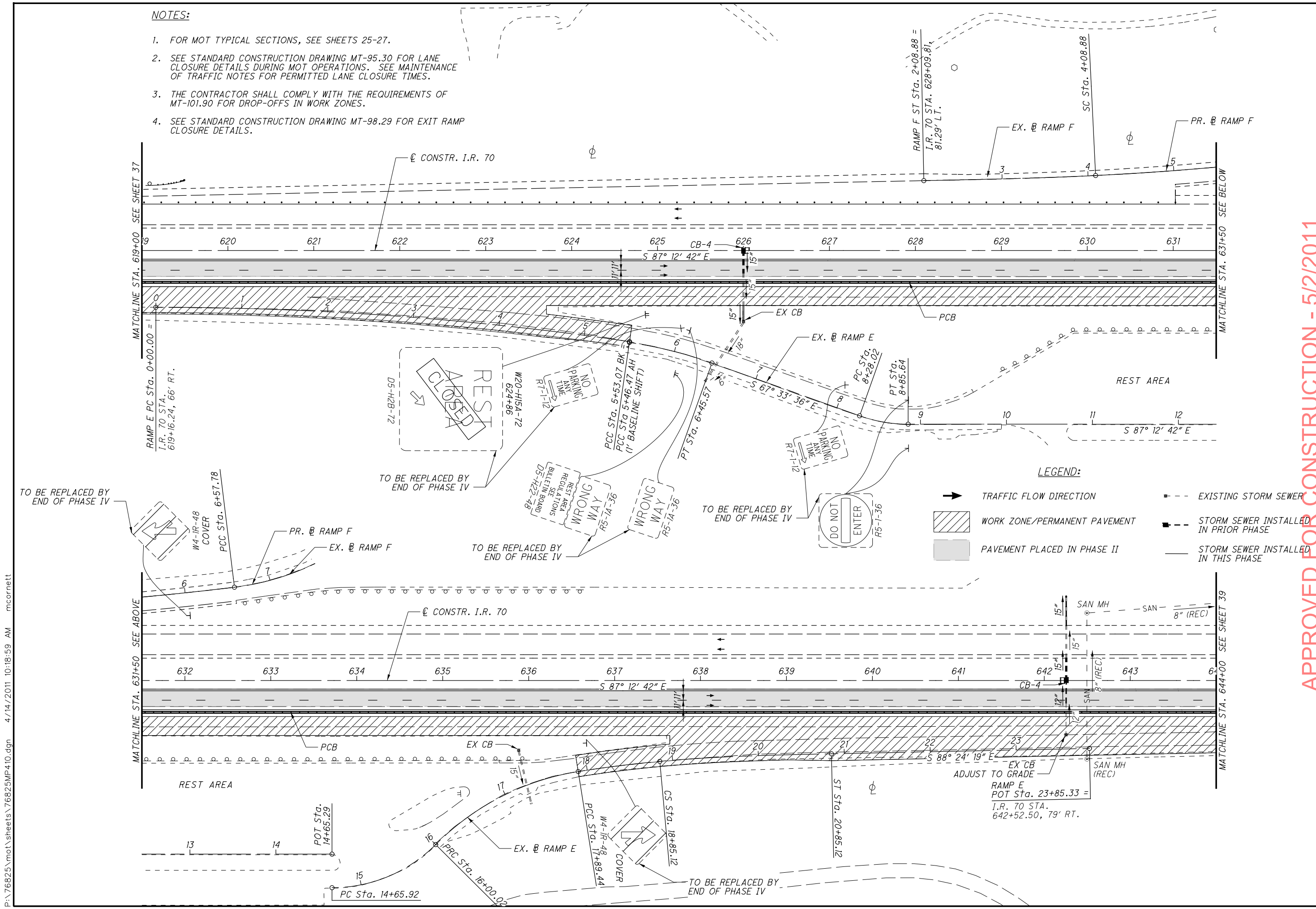
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APPROVED FOR CONSTRUCTION - 5/2/2011

MAINTENANCE OF TRAFFIC
PHASE IV - A - STA. 594+00 TO STA. 619+00

NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 25-27.
2. SEE STANDARD CONSTRUCTION DRAWING MT-95.30 FOR LANE CLOSURE DETAILS DURING MOT OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
3. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.
4. SEE STANDARD CONSTRUCTION DRAWING MT-98.29 FOR EXIT RAMP CLOSURE DETAILS.



LEGEND:

- ➔ TRAFFIC FLOW DIRECTION
- EXISTING STORM SEWER
- ▨ WORK ZONE/PERMANENT PAVEMENT
- STORM SEWER INSTALLED IN PRIOR PHASE
- PAVEMENT PLACED IN PHASE II
- STORM SEWER INSTALLED IN THIS PHASE

CALCULATED MJC CHECKED BBD

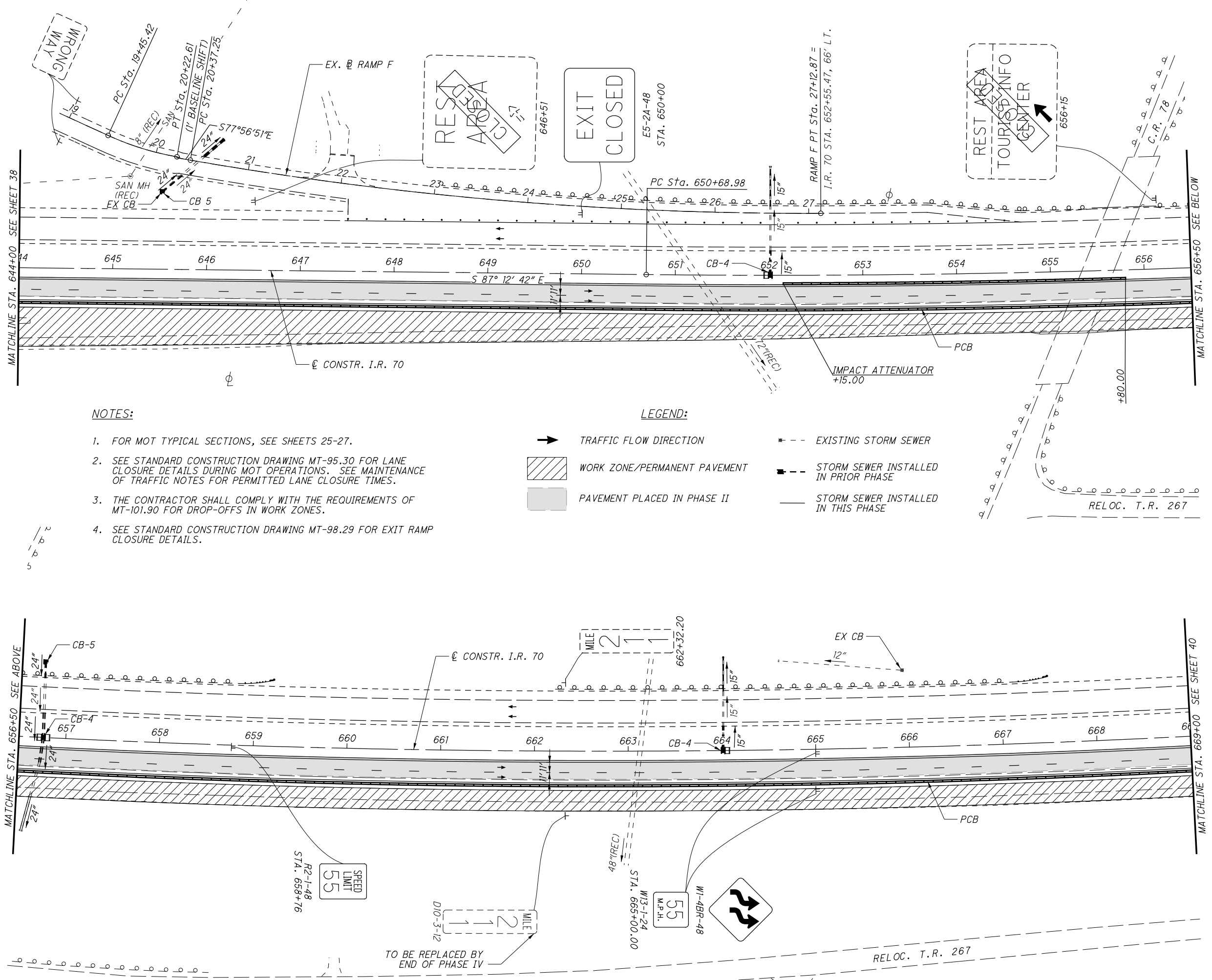
0 50 100
25
HORIZONTAL SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

MAINTENANCE OF TRAFFIC
PHASE IV - A - STA. 619+00 TO STA. 644+00

BEL-70-7.61
38
307

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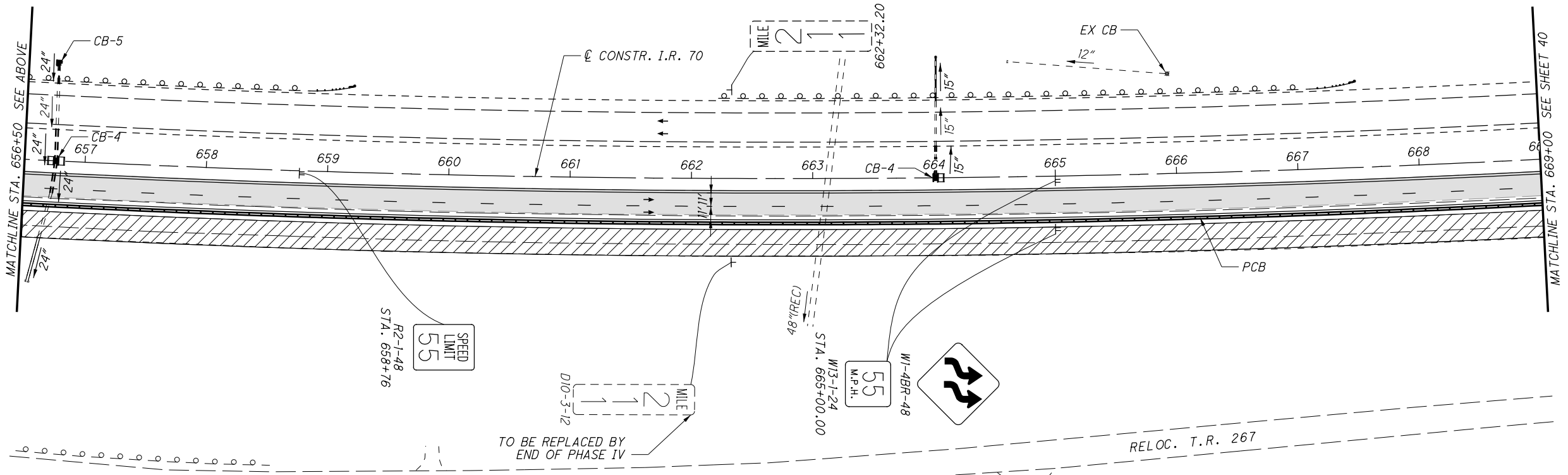


NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 25-27.
2. SEE STANDARD CONSTRUCTION DRAWING MT-95.30 FOR LANE CLOSURE DETAILS DURING MOT OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
3. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.
4. SEE STANDARD CONSTRUCTION DRAWING MT-98.29 FOR EXIT RAMP CLOSURE DETAILS.

LEGEND:

- ➔ TRAFFIC FLOW DIRECTION
- ▨ WORK ZONE/PERMANENT PAVEMENT
- PAVEMENT PLACED IN PHASE II
- - - EXISTING STORM SEWER
- - - STORM SEWER INSTALLED IN PRIOR PHASE
- STORM SEWER INSTALLED IN THIS PHASE



CALCULATED MJC CHECKED BBD

0 50 100
HORIZONTAL SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

MAINTENANCE OF TRAFFIC

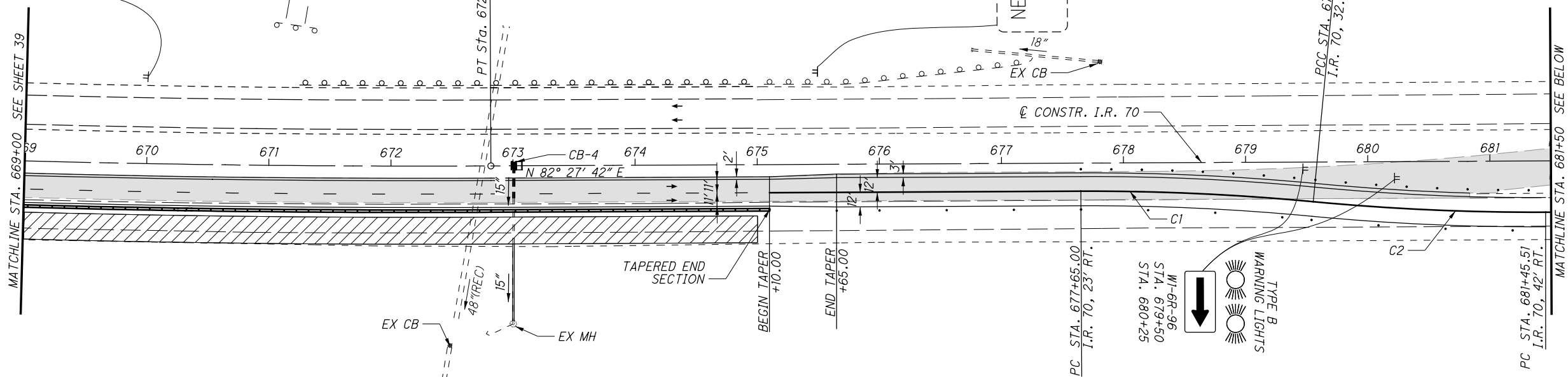
PHASE IV - A - STA. 644+00 TO STA. 669+00

LEGEND:

- ➔ TRAFFIC FLOW DIRECTION
- ▨ WORK ZONE/PERMANENT PAVEMENT
- PAVEMENT PLACED IN PHASE II
- EXISTING STORM SEWER
- - - STORM SEWER INSTALLED IN PRIOR PHASE
- STORM SEWER INSTALLED IN THIS PHASE
- DRUMS

EXIT
CLOSED

E5-2A-48
STA. 670+00
SEE SHEET 39



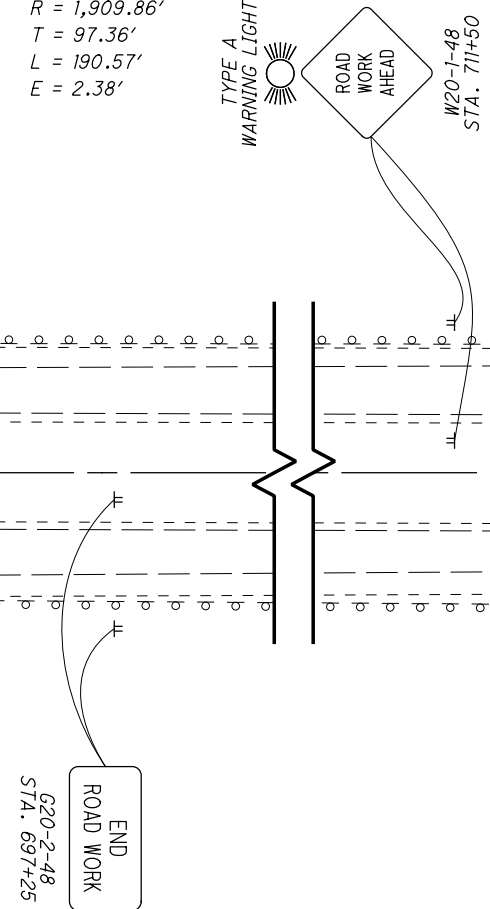
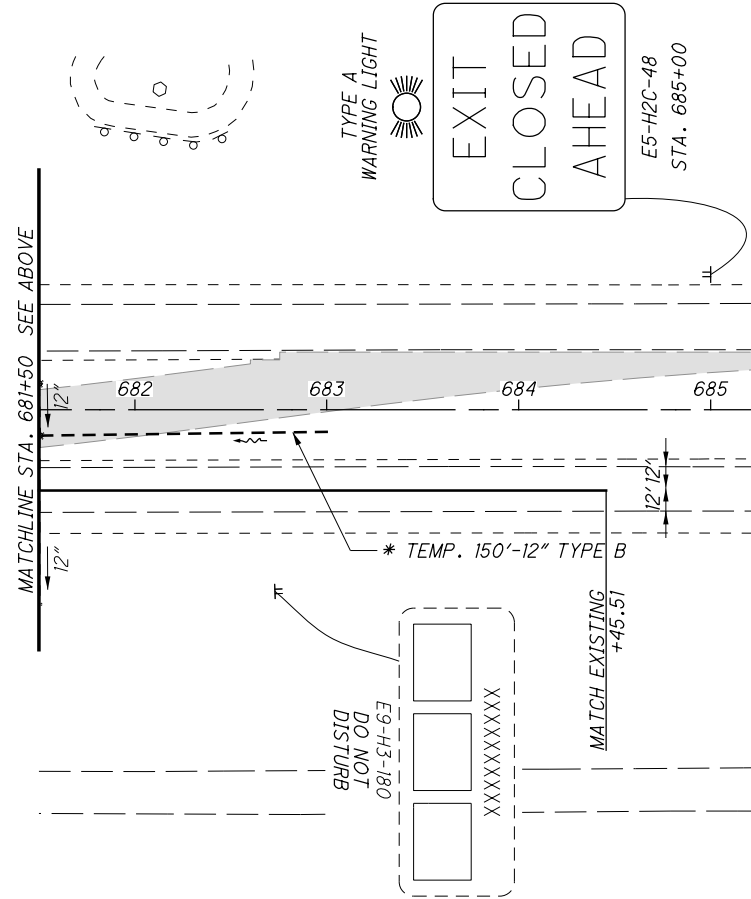
* TEMPORARY CATCH BASIN AND STORM SEWER INSTALLED FOR MOT OPERATIONS WHILE CROSSOVER AND TEMPORARY PAVEMENT IS IN PLACE.

NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 25-27.
2. SEE STANDARD CONSTRUCTION DRAWING MT-95.30 FOR LANE CLOSURE DETAILS DURING MOT OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
3. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.
4. SEE STANDARD CONSTRUCTION DRAWING MT-98.29 FOR EXIT RAMP CLOSURE DETAILS.

**STRIPING
C1 CURVE DATA**
 P.I. Sta. 678+60.36
 $\Delta = 5^\circ 43' 02''$ (RT)
 $Dc = 3^\circ 00' 00''$
 $R = 1,909.86'$
 $T = 97.36'$
 $L = 190.57'$
 $E = 2.38'$

**STRIPING
C2 CURVE DATA**
 P.I. Sta. 680+50.14
 $\Delta = 5^\circ 43' 02''$ (LT)
 $Dc = 3^\circ 00' 00''$
 $R = 1,909.86'$
 $T = 97.36'$
 $L = 190.57'$
 $E = 2.38'$



APPROVED FOR CONSTRUCTION - 5/2/2011

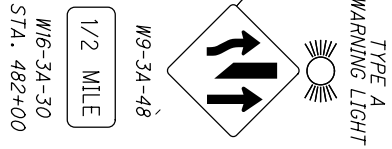
MAINTENANCE OF TRAFFIC
PHASE IV-A - STA. 669+00 TO STA. 711+50

BEL-70-7.61

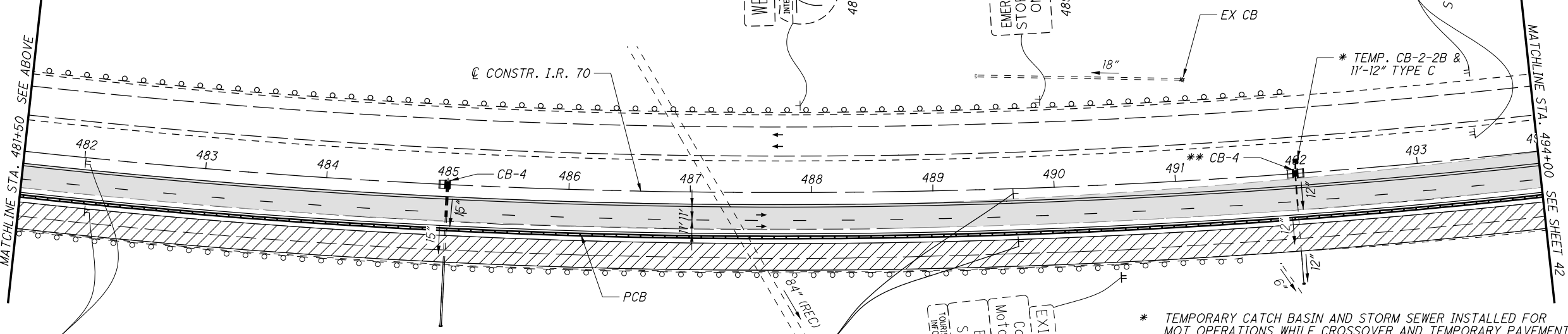
CALCULATED MJC CHECKED BBD

0 50 100
HORIZONTAL SCALE IN FEET

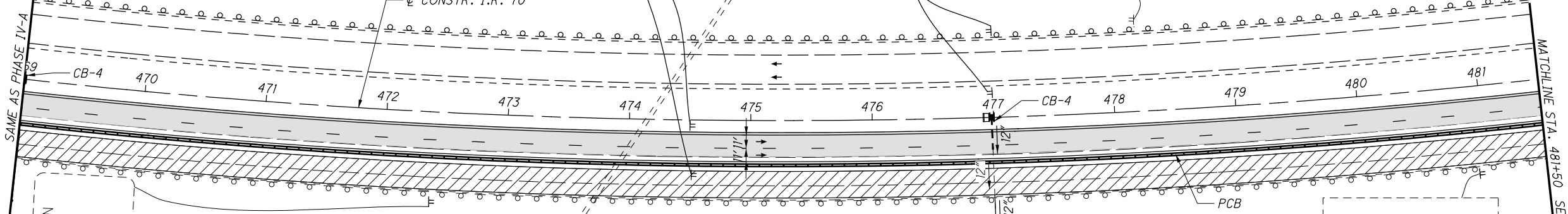
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1/2 MILE
W/6-3A-30
STA. 482+00



SAME AS PHASE IV-A



NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 25-27.
2. SEE STANDARD CONSTRUCTION DRAWING MT-95.30 FOR LANE CLOSURE DETAILS DURING MOT OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
3. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.
4. SEE STANDARD CONSTRUCTION DRAWING MT-98.29 FOR EXIT RAMP CLOSURE DETAILS. THE CONTRACTOR SHALL INSTALL "CLOSED" SIGN OR COVER ALL EASTBOUND EXIT APPROACH SIGNING WHILE EXIT RAMP IS CLOSED.

LEGEND:

- TRAFFIC FLOW DIRECTION
- ▨ WORK ZONE/PERMANENT PAVEMENT
- ▭ PAVEMENT PLACED IN PHASE II
- - - EXISTING STORM SEWER
- - - STORM SEWER INSTALLED IN PRIOR PHASE
- - - STORM SEWER INSTALLED IN THIS PHASE



CALCULATED MJC CHECKED BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

MAINTENANCE OF TRAFFIC
PHASE IV-B - STA. 469+00 TO STA. 494+00

BEL-70-7.61

* TEMPORARY CATCH BASIN AND STORM SEWER INSTALLED FOR MOT OPERATIONS WHILE CROSSOVER AND TEMPORARY PAVEMENT IS IN PLACE.

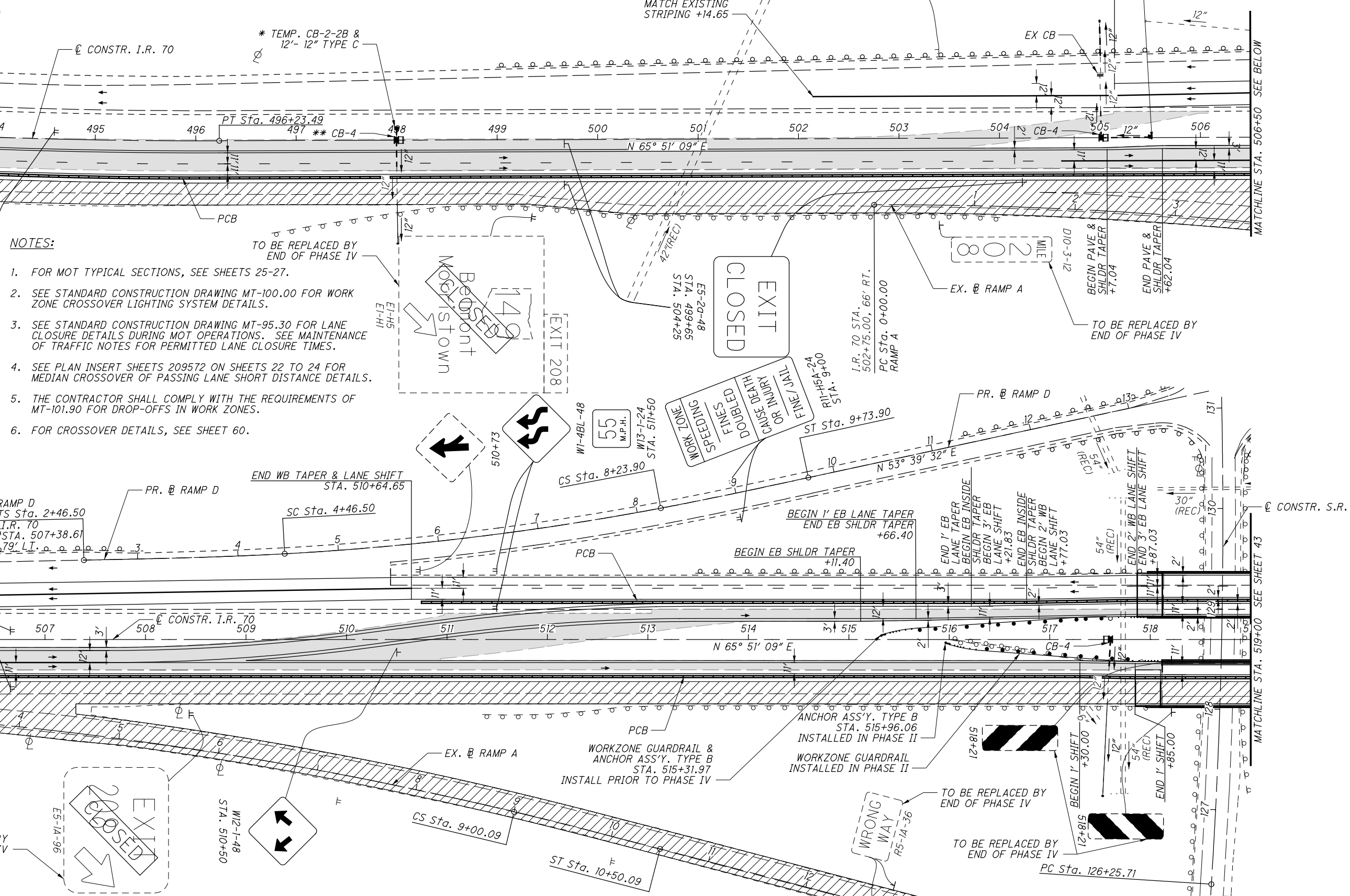
** PROPOSED CATCH BASINS AND STORM SEWERS INSTALLED DURING BUILDABLE UNIT 2. THE PROPOSED CATCH BASIN LOCATED AT STA. 492+00.00 WAS INSTALLED AND PLATED OVER DURING MOT OPERATIONS. THE CONTRACTOR SHALL INSTALL THE TOP OF EACH CATCH BASIN AND GRATE AFTER THE REMOVAL OF THE CROSSOVER AND TEMPORARY PAVEMENT AND PERFORM FINAL MEDIAN GRADING.

* TEMPORARY CATCH BASIN AND STORM SEWER INSTALLED FOR MOT OPERATIONS WHILE CROSSOVER AND TEMPORARY PAVEMENT IS IN PLACE.

** PROPOSED CATCH BASINS AND STORM SEWERS INSTALLED DURING BUILDABLE UNIT 2. THE PROPOSED CATCH BASIN LOCATED AT STA. 498+00.00 WAS INSTALLED AND PLATED OVER DURING MOT OPERATIONS. THE CONTRACTOR SHALL INSTALL THE TOP OF EACH CATCH BASIN AND GRATE AFTER THE REMOVAL OF THE CROSSOVER AND TEMPORARY PAVEMENT AND PERFORM FINAL MEDIAN GRADING.

LEGEND:

- TRAFFIC FLOW DIRECTION
- EXISTING STORM SEWER
- ▨ WORK ZONE/PERMANENT PAVEMENT
- STORM SEWER INSTALLED IN PRIOR PHASE
- PAVEMENT PLACED IN PHASE II
- STORM SEWER INSTALLED IN THIS PHASE



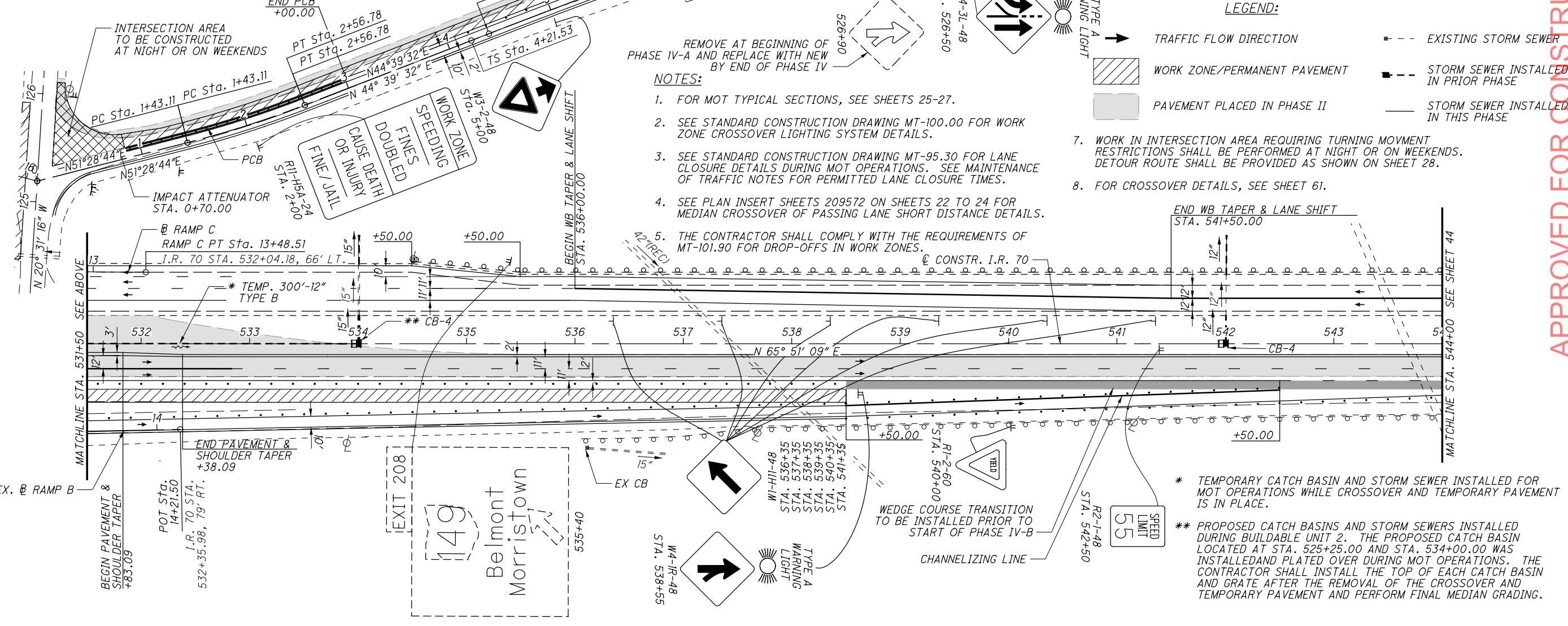
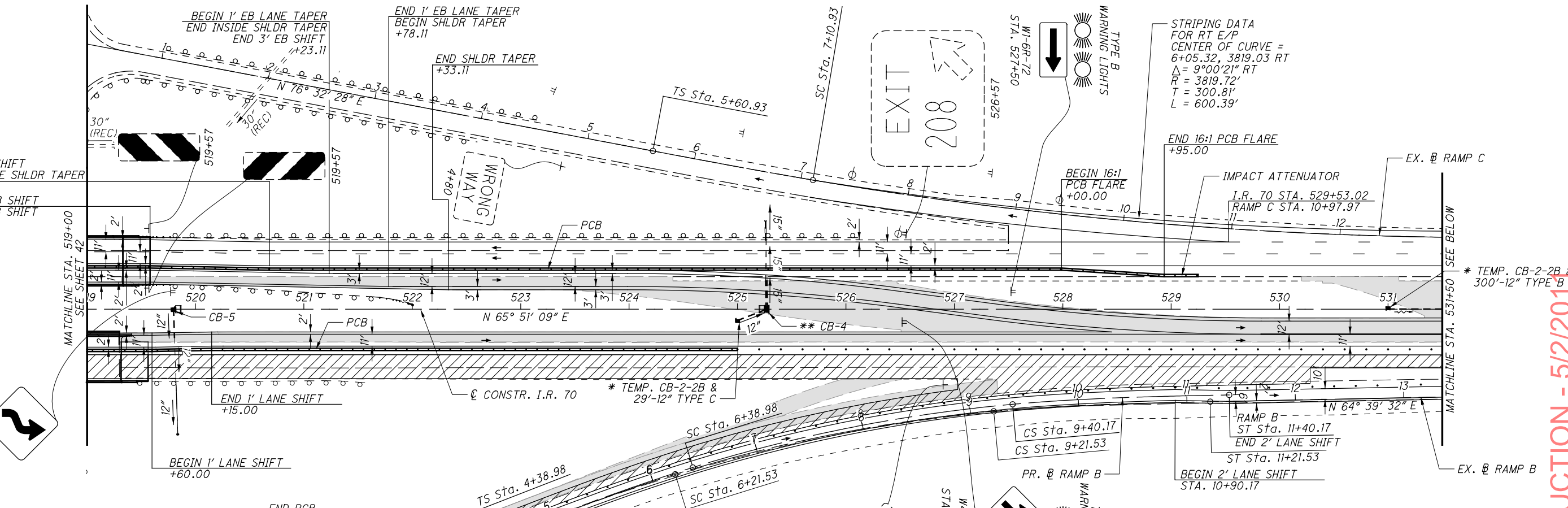
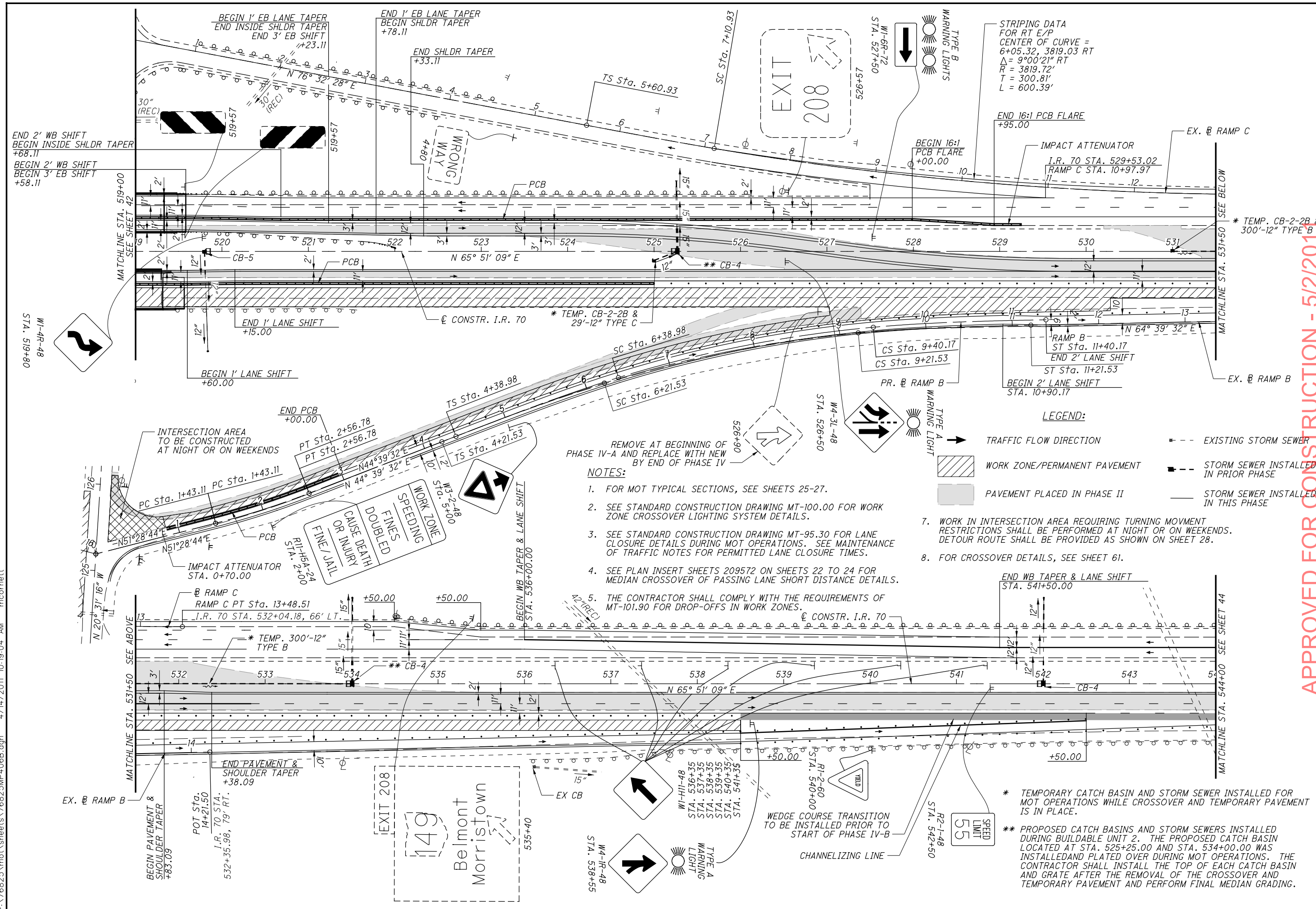
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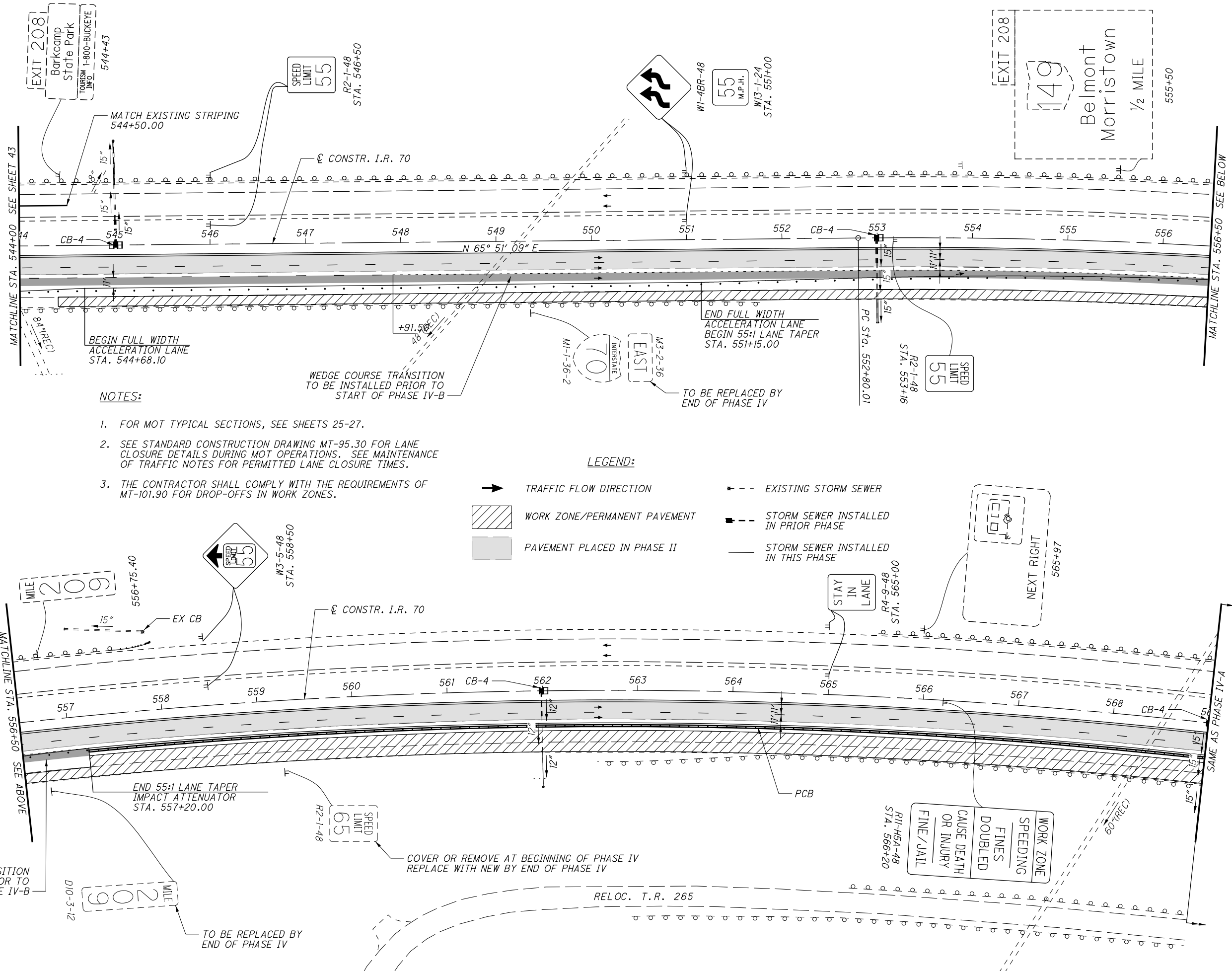
1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 25-27.
2. SEE STANDARD CONSTRUCTION DRAWING MT-100.00 FOR WORK ZONE CROSSOVER LIGHTING SYSTEM DETAILS.
3. SEE STANDARD CONSTRUCTION DRAWING MT-95.30 FOR LANE CLOSURE DETAILS DURING MOT OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
4. SEE PLAN INSERT SHEETS 209572 ON SHEETS 22 TO 24 FOR MEDIAN CROSSOVER OF PASSING LANE SHORT DISTANCE DETAILS.
5. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.
6. FOR CROSSOVER DETAILS, SEE SHEET 60.



APPROVED FOR CONSTRUCTION - 5/2/2011
MAINTENANCE OF TRAFFIC
PHASE IV-B - STA. 494+00 TO STA. 519+00

BEL-70-7.61
 42
 307





NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 25-27.
2. SEE STANDARD CONSTRUCTION DRAWING MT-95.30 FOR LANE CLOSURE DETAILS DURING MOT OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
3. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.

LEGEND:

- ➔ TRAFFIC FLOW DIRECTION
- ▨ WORK ZONE/PERMANENT PAVEMENT
- PAVEMENT PLACED IN PHASE II
- - - EXISTING STORM SEWER
- ▬ STORM SEWER INSTALLED IN PRIOR PHASE
- ▬ STORM SEWER INSTALLED IN THIS PHASE

WEDGE COURSE TRANSITION TO BE INSTALLED PRIOR TO START OF PHASE IV-B

MILE 209

END 55:1 LANE TAPER IMPACT ATTENUATOR STA. 557+20.00

SPEED LIMIT 65 R2-1-48

COVER OR REMOVE AT BEGINNING OF PHASE IV REPLACE WITH NEW BY END OF PHASE IV

RELOC. T.R. 265

R11-H5A-48 STA. 566+20
 WORK ZONE
 SPEEDING
 FINES DOUBLED
 CAUSE DEATH OR INJURY
 FINE/JAIL

NEXT RIGHT 565+97

SAME AS PHASE IV-A

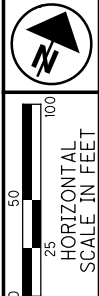
SAME AS PHASE IV-A

APPROVED FOR CONSTRUCTION - 5/2/2011

BEL-70-7.61

MAINTENANCE OF TRAFFIC
PHASE IV-B - STA. 544+00 TO STA. 569+00

CALCULATED MJC
 CHECKED BBD





NOT TO SCALE

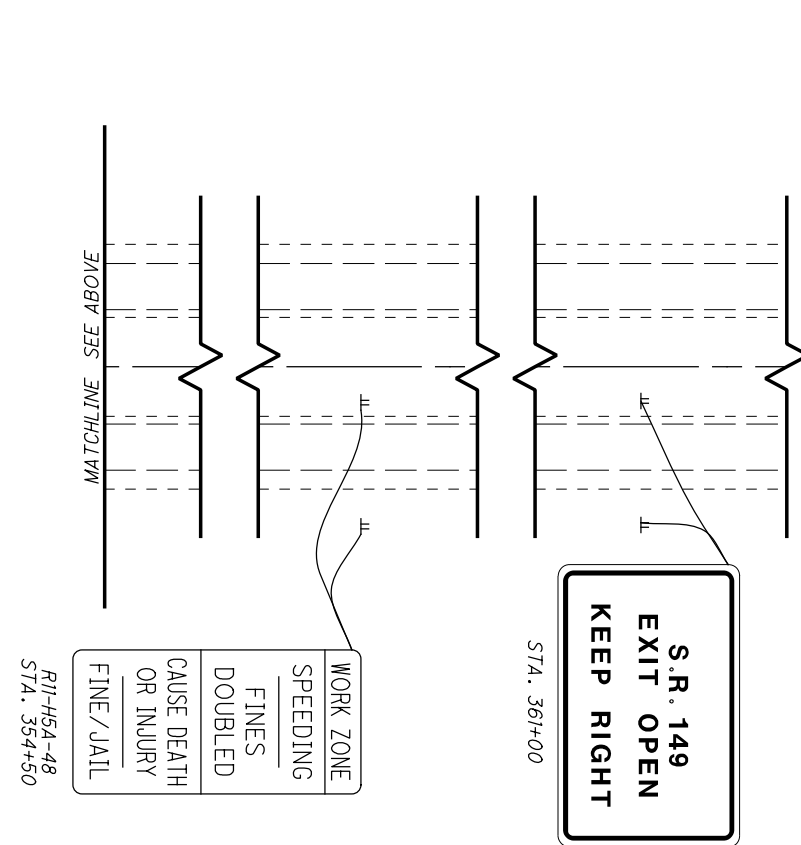
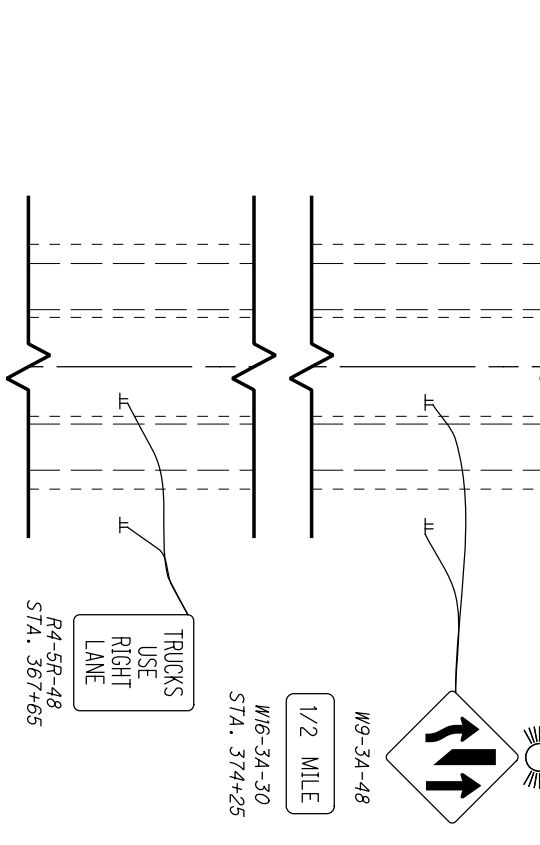
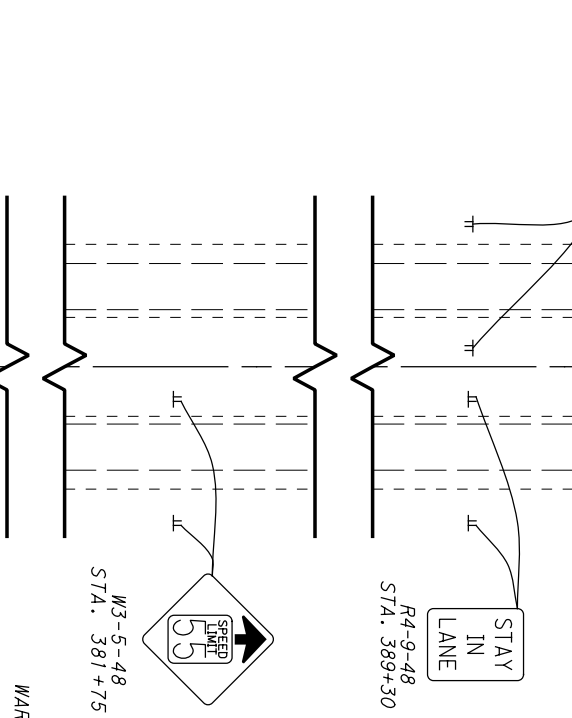
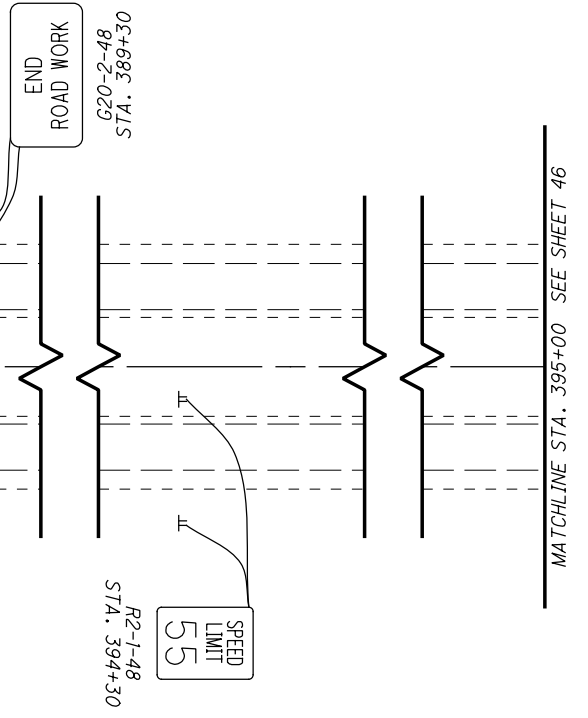
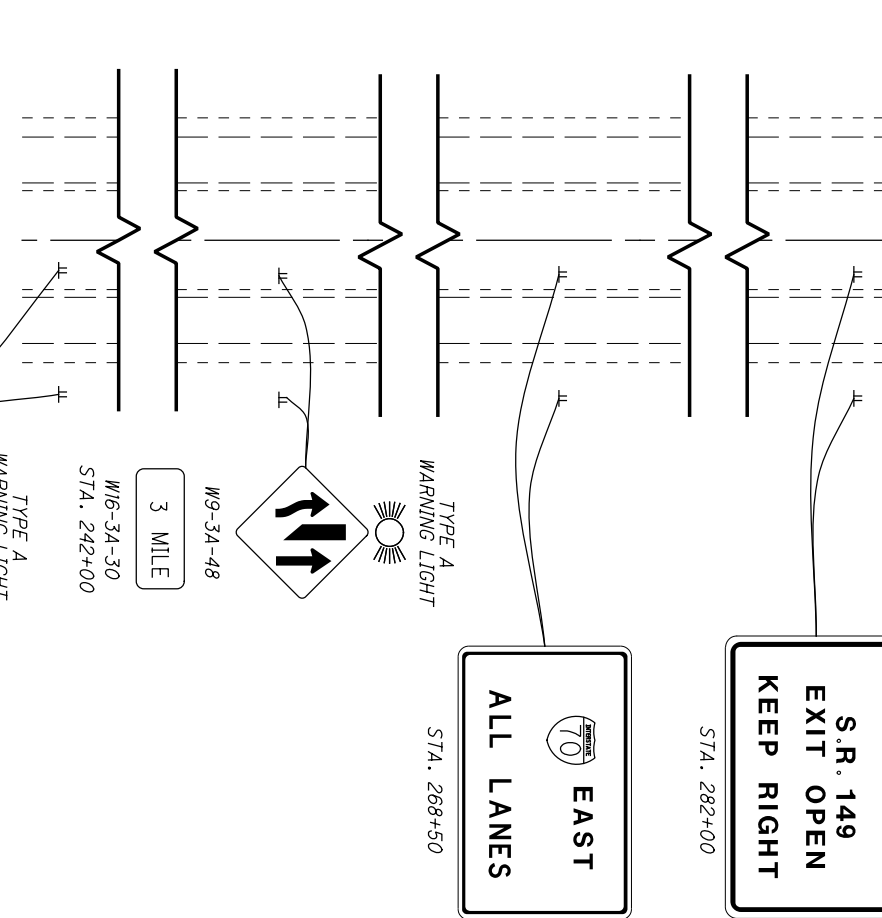
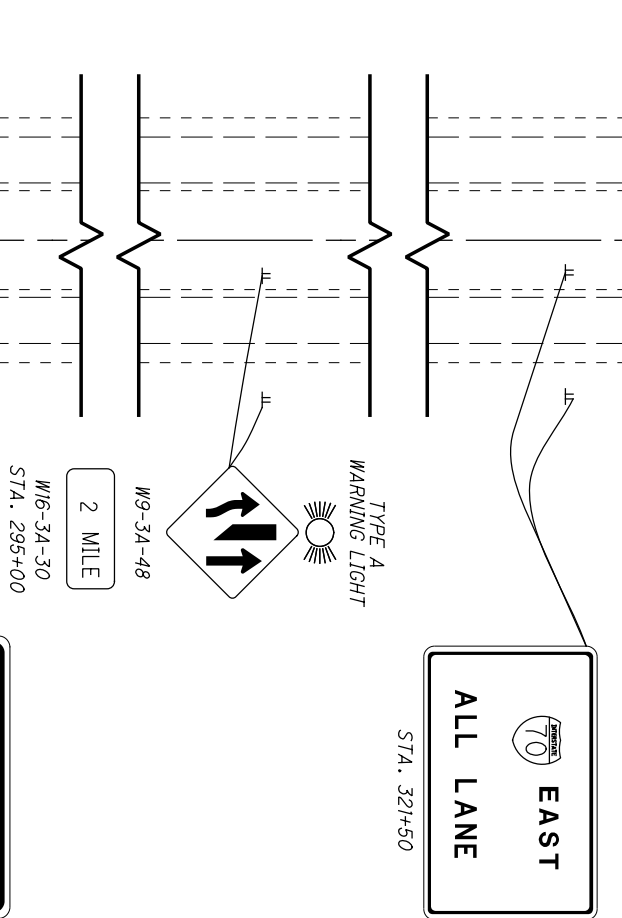
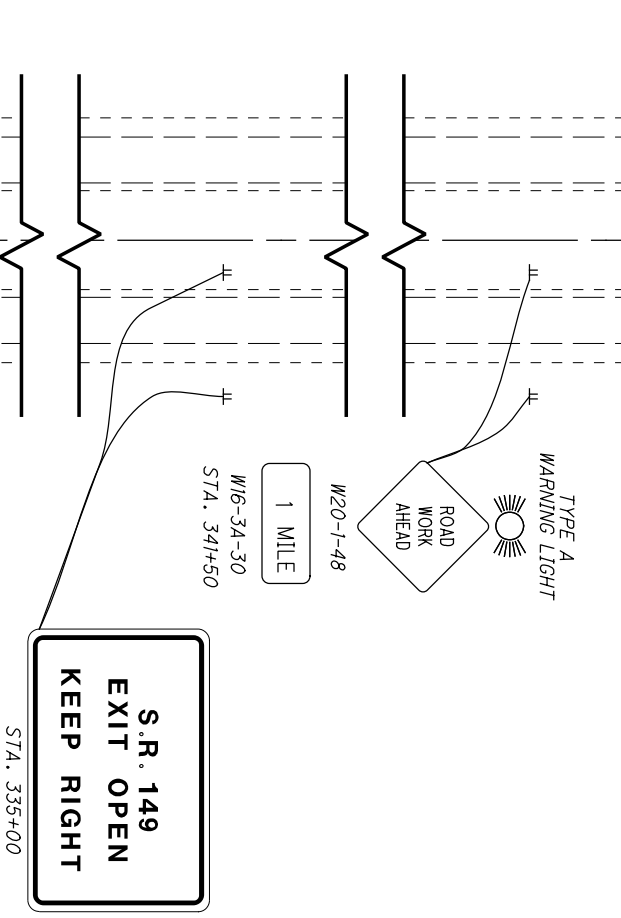
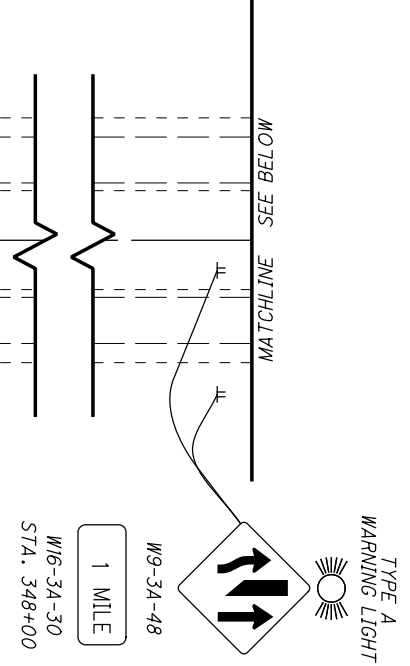
CALCULATED MJC CHECKED BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

MAINTENANCE OF TRAFFIC

PHASE IV-C - STA. 240+00 TO STA. 395+00

BEL-70-7.61



WORK ZONE
SPEEDING
FINES DOUBLED
CAUSE DEATH OR INJURY
FINE / JAIL

R1-H5A-48
STA. 354+50

S.R. 149
EXIT OPEN
KEEP RIGHT

STA. 361+00

TRUCKS
USE
RIGHT
LANE

R4-5R-48
STA. 367+65

1/2 MILE

W9-3A-48
W16-3A-30
STA. 374+25

TYPE A
WARNING LIGHT

SPEED LIMIT 55

W3-5-48
STA. 381+75

STAY
IN
LANE

R4-9-48
STA. 389+30

SPEED
LIMIT
55

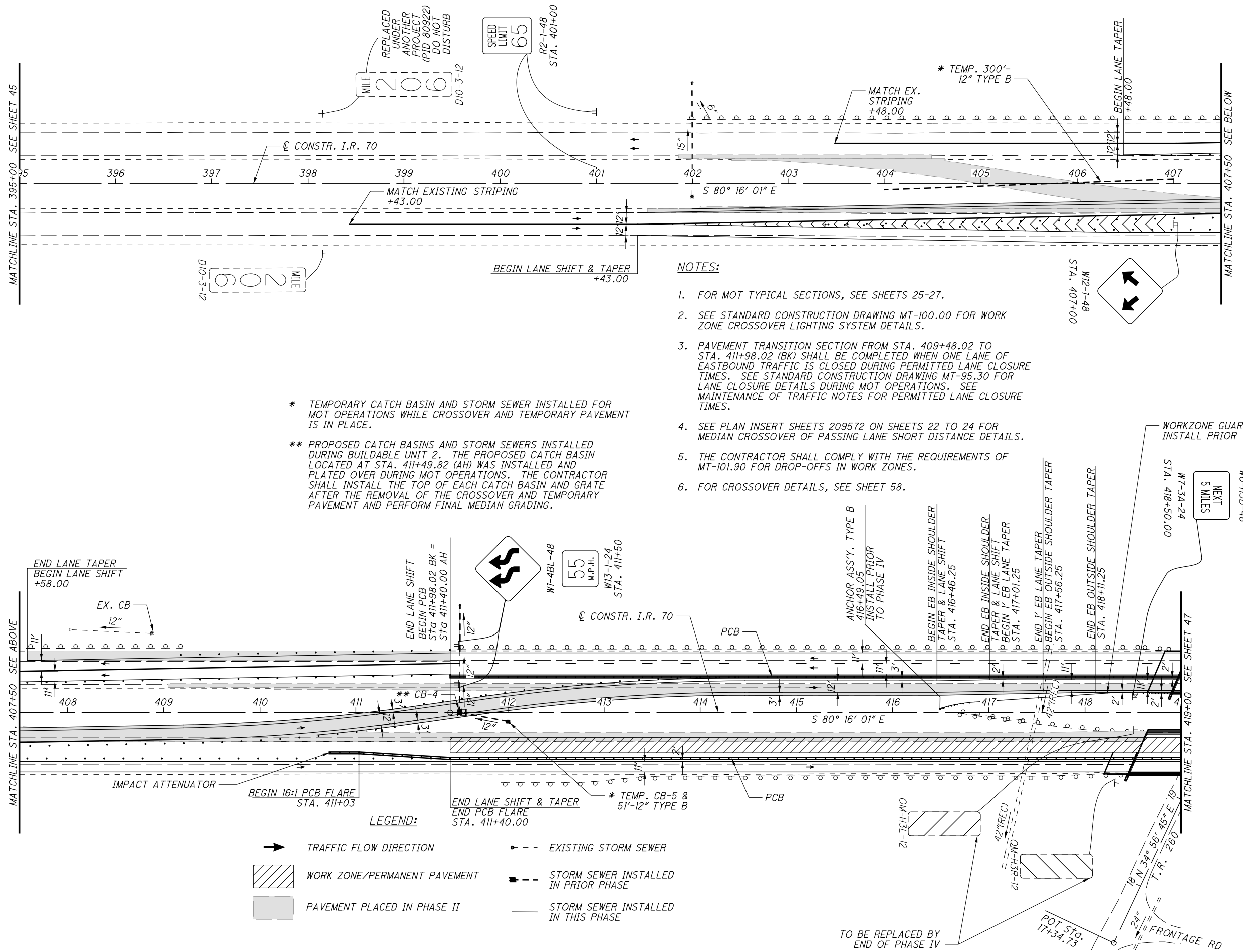
R2-1-48
STA. 394+30

END
ROAD
WORK

OC+68C
8F-2-02G
STA. 388+30

MATCHLINE STA. 395+00 SEE SHEET 46

MATCHLINE SEE ABOVE



* TEMPORARY CATCH BASIN AND STORM SEWER INSTALLED FOR MOT OPERATIONS WHILE CROSSOVER AND TEMPORARY PAVEMENT IS IN PLACE.

** PROPOSED CATCH BASINS AND STORM SEWERS INSTALLED DURING BUILDABLE UNIT 2. THE PROPOSED CATCH BASIN LOCATED AT STA. 411+49.82 (AH) WAS INSTALLED AND PLATED OVER DURING MOT OPERATIONS. THE CONTRACTOR SHALL INSTALL THE TOP OF EACH CATCH BASIN AND GRATE AFTER THE REMOVAL OF THE CROSSOVER AND TEMPORARY PAVEMENT AND PERFORM FINAL MEDIAN GRADING.

NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 25-27.
2. SEE STANDARD CONSTRUCTION DRAWING MT-100.00 FOR WORK ZONE CROSSOVER LIGHTING SYSTEM DETAILS.
3. PAVEMENT TRANSITION SECTION FROM STA. 409+48.02 TO STA. 411+98.02 (BK) SHALL BE COMPLETED WHEN ONE LANE OF EASTBOUND TRAFFIC IS CLOSED DURING PERMITTED LANE CLOSURE TIMES. SEE STANDARD CONSTRUCTION DRAWING MT-95.30 FOR LANE CLOSURE DETAILS DURING MOT OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
4. SEE PLAN INSERT SHEETS 209572 ON SHEETS 22 TO 24 FOR MEDIAN CROSSOVER OF PASSING LANE SHORT DISTANCE DETAILS.
5. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.
6. FOR CROSSOVER DETAILS, SEE SHEET 58.

LEGEND:

	TRAFFIC FLOW DIRECTION		EXISTING STORM SEWER
	WORK ZONE/PERMANENT PAVEMENT		STORM SEWER INSTALLED IN PRIOR PHASE
	PAVEMENT PLACED IN PHASE II		STORM SEWER INSTALLED IN THIS PHASE

APPROVED FOR CONSTRUCTION - 5/2/2011

CALCULATED MJC
CHECKED BBD

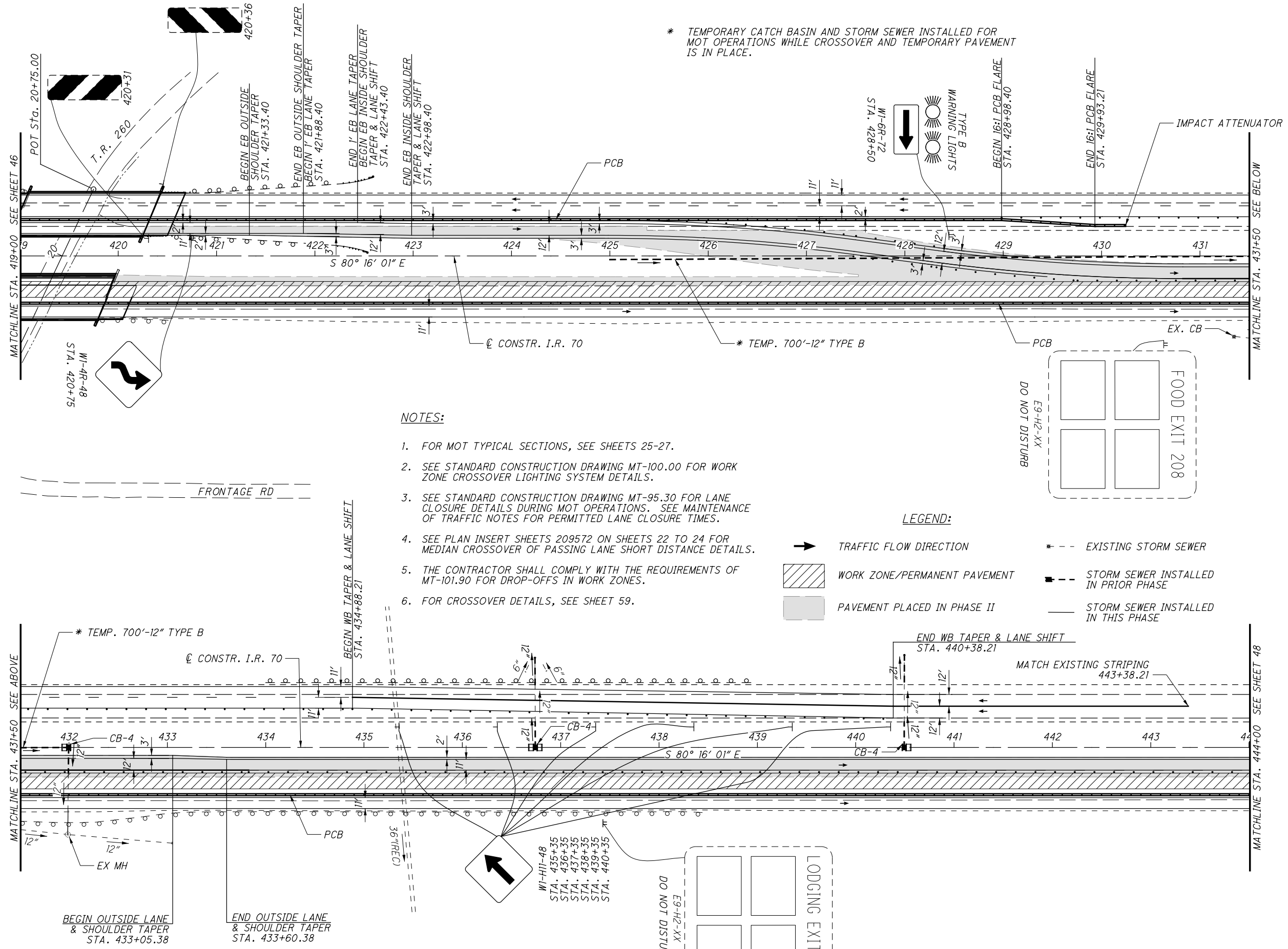
0 50 100
25
HORIZONTAL SCALE IN FEET

MAINTENANCE OF TRAFFIC

PHASE IV-C - STA. 395+00 TO STA. 419+00

BEL-70-7.61

46
307



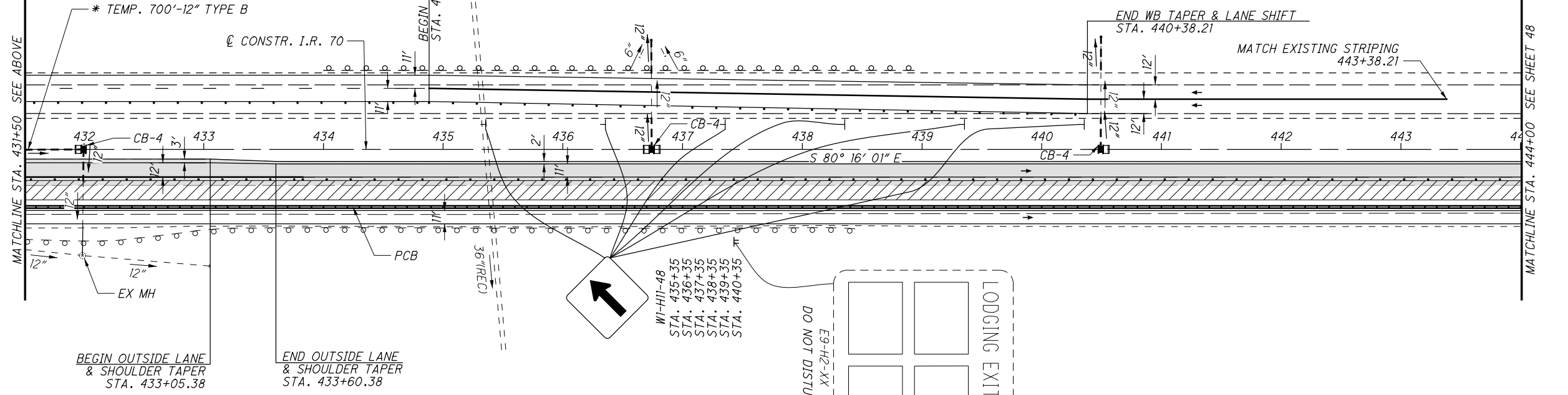
* TEMPORARY CATCH BASIN AND STORM SEWER INSTALLED FOR MOT OPERATIONS WHILE CROSSOVER AND TEMPORARY PAVEMENT IS IN PLACE.

NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 25-27.
2. SEE STANDARD CONSTRUCTION DRAWING MT-100.00 FOR WORK ZONE CROSSOVER LIGHTING SYSTEM DETAILS.
3. SEE STANDARD CONSTRUCTION DRAWING MT-95.30 FOR LANE CLOSURE DETAILS DURING MOT OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
4. SEE PLAN INSERT SHEETS 209572 ON SHEETS 22 TO 24 FOR MEDIAN CROSSOVER OF PASSING LANE SHORT DISTANCE DETAILS.
5. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.
6. FOR CROSSOVER DETAILS, SEE SHEET 59.

LEGEND:

- TRAFFIC FLOW DIRECTION
- EXISTING STORM SEWER
- ▨ WORK ZONE/PERMANENT PAVEMENT
- ▩ STORM SEWER INSTALLED IN PRIOR PHASE
- ▭ PAVEMENT PLACED IN PHASE II
- STORM SEWER INSTALLED IN THIS PHASE

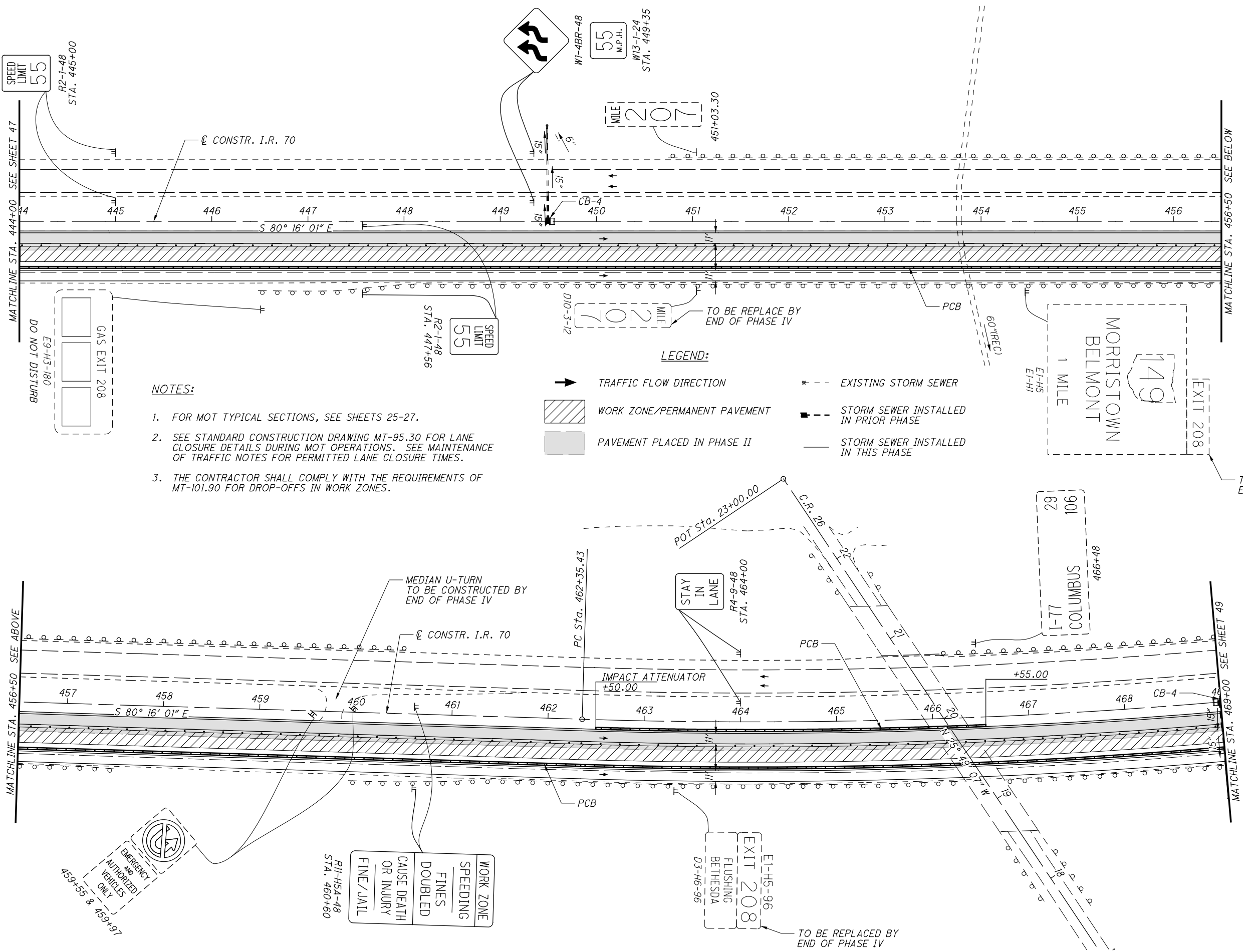


CALCULATED MJC CHECKED BBD

0 50 100
HORIZONTAL SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

MAINTENANCE OF TRAFFIC
PHASE IV-C - STA. 419+00 TO STA. 444+00



NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 25-27.
2. SEE STANDARD CONSTRUCTION DRAWING MT-95.30 FOR LANE CLOSURE DETAILS DURING MOT OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
3. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.

LEGEND:

- TRAFFIC FLOW DIRECTION
- ▨ WORK ZONE/PERMANENT PAVEMENT
- PAVEMENT PLACED IN PHASE II
- - - EXISTING STORM SEWER
- - - STORM SEWER INSTALLED IN PRIOR PHASE
- - - STORM SEWER INSTALLED IN THIS PHASE

SPEED LIMIT 55
R2-1-48
STA. 445+00

DO NOT DISTURB
E9-H3-180
GAS EXIT 208

SPEED LIMIT 55
R2-1-48
STA. 447+56

55 M.P.H.
W13-1-24
STA. 449+35



W1-4BR-48

MILE 207
451+03.30

MILE 207
D10-3-12
TO BE REPLACED BY END OF PHASE IV

EXIT 149
MORRISTOWN BELMONT
1 MILE
E1-H5
E1-H1

TO BE REPLACED BY END OF PHASE IV

EXIT 106
COLUMBUS
1-77
29
466+48

POT Sta. 23+00.00
C.R. 26

STAY IN LANE
R4-9-48
STA. 464+00

IMPACT ATTENUATOR
+50.00

+55.00

EMERGENCY AUTHORIZED VEHICLES ONLY
R1-H5A-48
STA. 460+60
459+55 & 459+57

WORK ZONE
SPEEDING
FINES DOUBLED
CAUSE DEATH OR INJURY
FINE/JAIL
R1-H5A-48
STA. 460+60

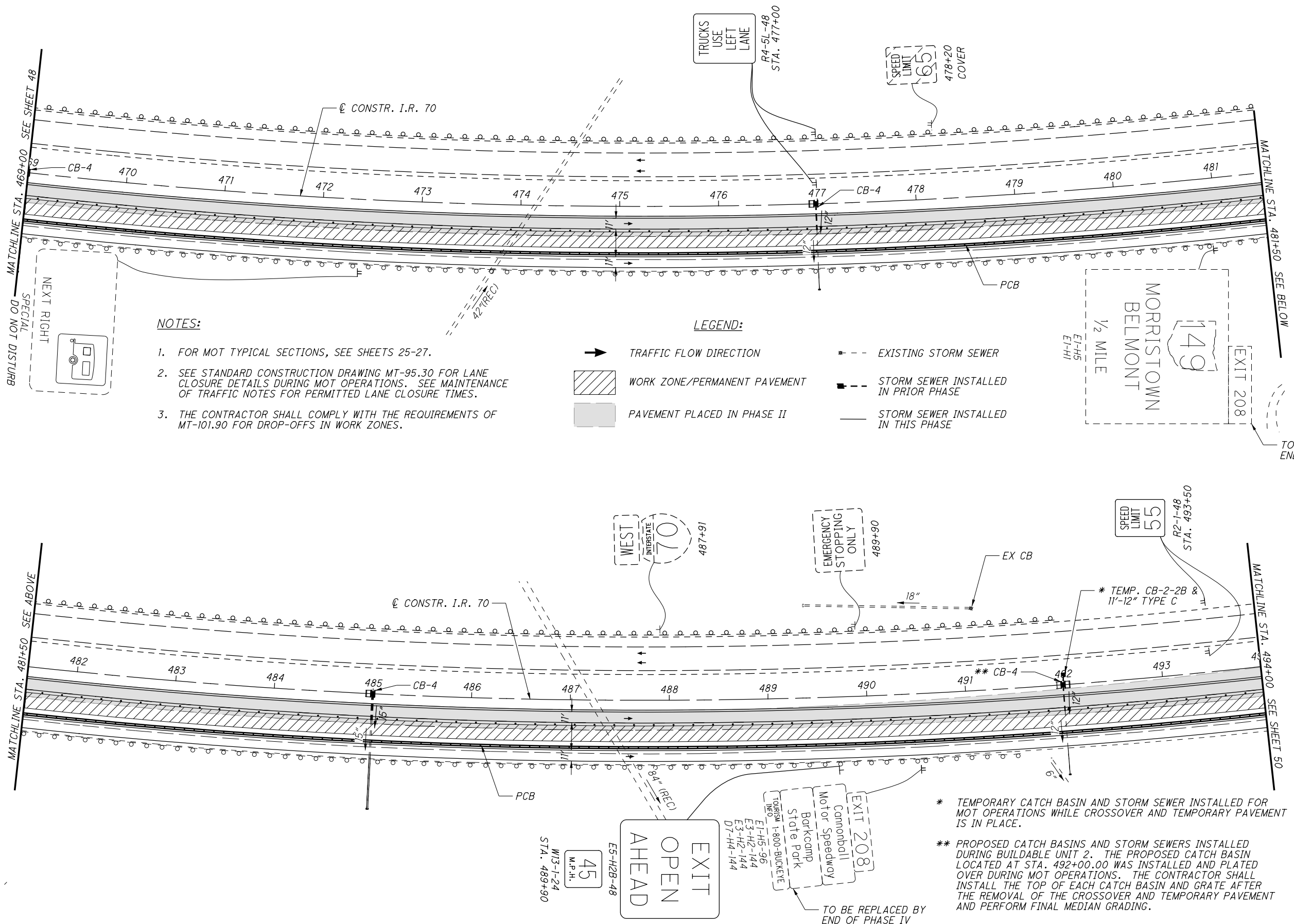
EXIT 208
E1-H5-96
FLUSHING BETHESDA
D3-H6-96
TO BE REPLACED BY END OF PHASE IV

CALCULATED MJC CHECKED BBD

0 50 100
HORIZONTAL SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

MAINTENANCE OF TRAFFIC
PHASE IV-C - STA. 444+00 TO STA. 469+00

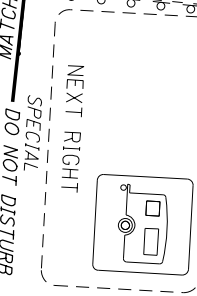


NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 25-27.
2. SEE STANDARD CONSTRUCTION DRAWING MT-95.30 FOR LANE CLOSURE DETAILS DURING MOT OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
3. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.

LEGEND:

- ➔ TRAFFIC FLOW DIRECTION
- ▨ WORK ZONE/PERMANENT PAVEMENT
- PAVEMENT PLACED IN PHASE II
- - - EXISTING STORM SEWER
- - - STORM SEWER INSTALLED IN PRIOR PHASE
- - - STORM SEWER INSTALLED IN THIS PHASE



CALCULATED MJC CHECKED BBD

0 50 100
25
HORIZONTAL SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

MAINTENANCE OF TRAFFIC
PHASE IV-C - STA. 469+00 TO STA. 494+00

BEL-70-7.61

49
307

* TEMPORARY CATCH BASIN AND STORM SEWER INSTALLED FOR MOT OPERATIONS WHILE CROSSOVER AND TEMPORARY PAVEMENT IS IN PLACE.

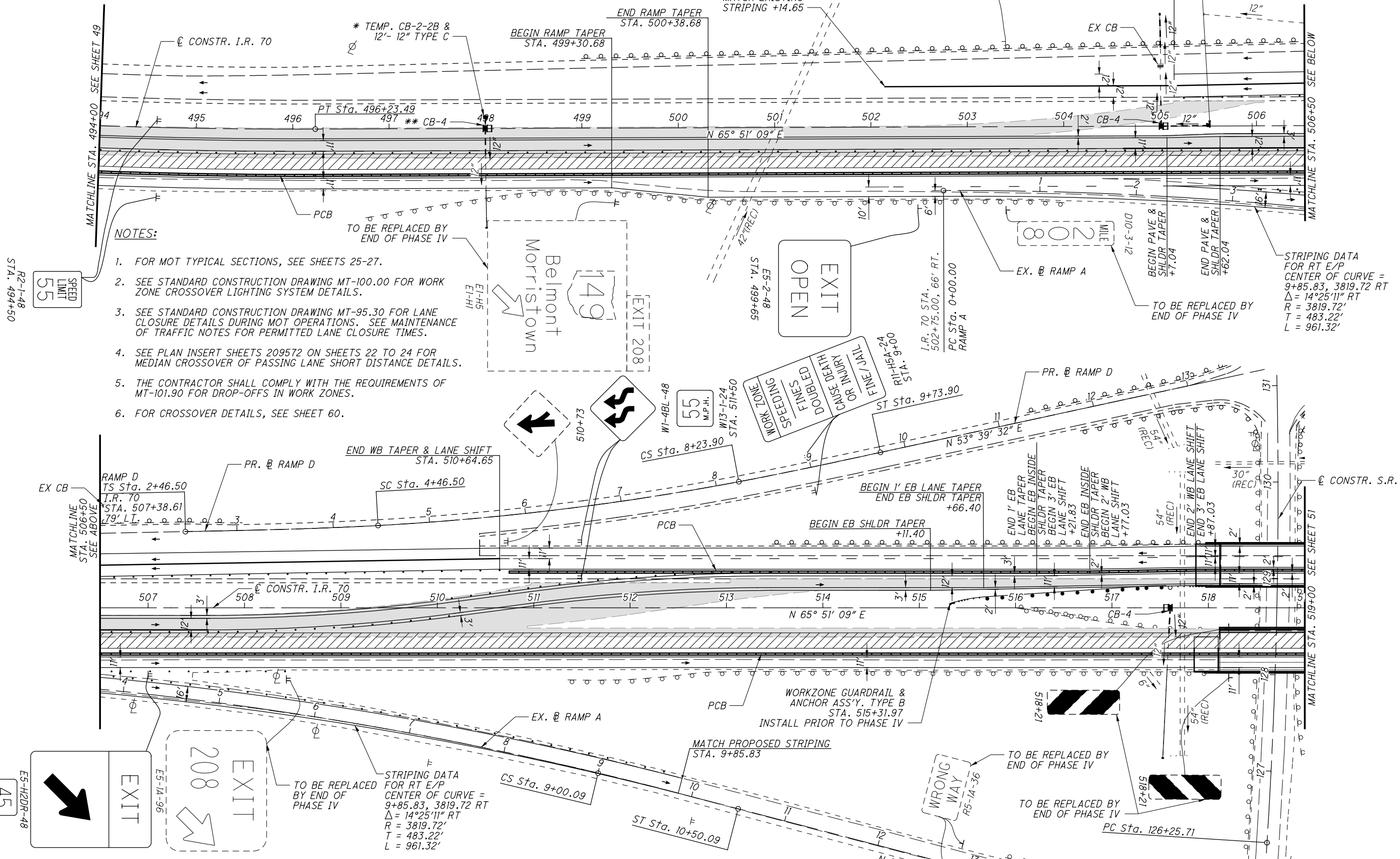
** PROPOSED CATCH BASINS AND STORM SEWERS INSTALLED DURING BUILDABLE UNIT 2. THE PROPOSED CATCH BASIN LOCATED AT STA. 492+00.00 WAS INSTALLED AND PLATED OVER DURING MOT OPERATIONS. THE CONTRACTOR SHALL INSTALL THE TOP OF EACH CATCH BASIN AND GRATE AFTER THE REMOVAL OF THE CROSSOVER AND TEMPORARY PAVEMENT AND PERFORM FINAL MEDIAN GRADING.

* TEMPORARY CATCH BASIN AND STORM SEWER INSTALLED FOR MOT OPERATIONS WHILE CROSSOVER AND TEMPORARY PAVEMENT IS IN PLACE.

** PROPOSED CATCH BASINS AND STORM SEWERS INSTALLED DURING BUILDABLE UNIT 2. THE PROPOSED CATCH BASIN LOCATED AT STA. 498+00.00 WAS INSTALLED AND PLATED OVER DURING MOT OPERATIONS. THE CONTRACTOR SHALL INSTALL THE TOP OF EACH CATCH BASIN AND GRATE AFTER THE REMOVAL OF THE CROSSOVER AND TEMPORARY PAVEMENT AND PERFORM FINAL MEDIAN GRADING.

LEGEND:

- TRAFFIC FLOW DIRECTION
- EXISTING STORM SEWER
- ▨ WORK ZONE/PERMANENT PAVEMENT
- STORM SEWER INSTALLED IN PRIOR PHASE
- PAVEMENT PLACED IN PHASE II
- STORM SEWER INSTALLED IN THIS PHASE



NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 25-27.
2. SEE STANDARD CONSTRUCTION DRAWING MT-100.00 FOR WORK ZONE CROSSOVER LIGHTING SYSTEM DETAILS.
3. SEE STANDARD CONSTRUCTION DRAWING MT-95.30 FOR LANE CLOSURE DETAILS DURING MOT OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
4. SEE PLAN INSERT SHEETS 209572 ON SHEETS 22 TO 24 FOR MEDIAN CROSSOVER OF PASSING LANE SHORT DISTANCE DETAILS.
5. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.
6. FOR CROSSOVER DETAILS, SEE SHEET 60.

R2-1-48
STA. 494+50
SPEED LIMIT 55

E5-H2DR-48
M.P.H.
45

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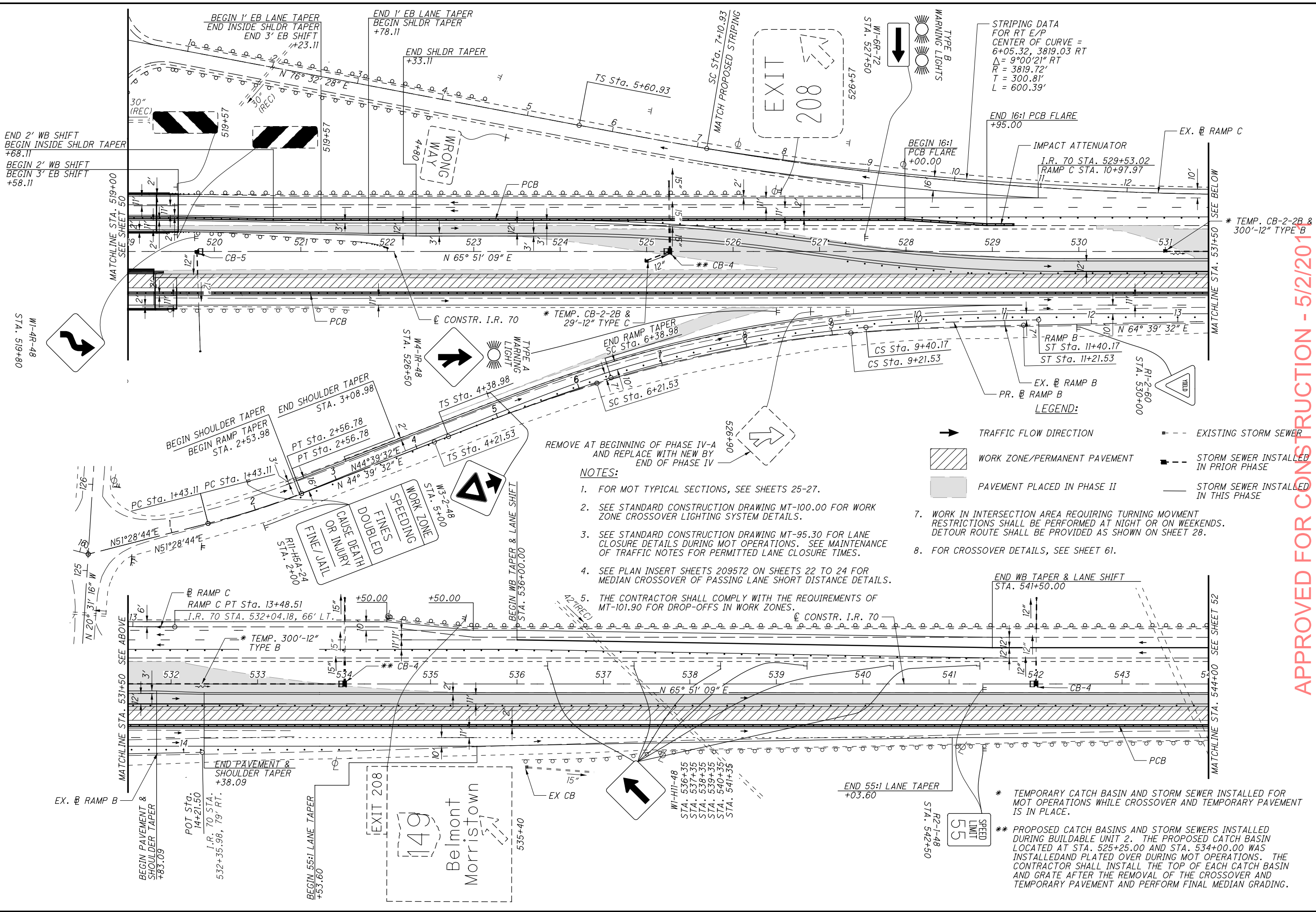
APPROVED FOR CONSTRUCTION - 5/2/2011



MAINTENANCE OF TRAFFIC
PHASE IV-C - STA. 494+00 TO STA. 519+00

BEL-70-7.61
50
307

CALCULATED MJC CHECKED BBD



CALCULATED MJC CHECKED BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

MAINTENANCE OF TRAFFIC

PHASE IV-C - STA. 519+00 TO STA. 544+00

BEL-70-7.61

51
307

STRIPING DATA FOR RT E/P
 CENTER OF CURVE = 6+05.32, 3819.03 RT
 $\Delta = 9^{\circ}00'21''$ RT
 $R = 3819.72'$
 $T = 300.81'$
 $L = 600.39'$

END 16:1 PCB FLARE +95.00

IMPACT ATTENUATOR
 I.R. 70 STA. 529+53.02
 RAMP C STA. 10+97.97

CS Sta. 9+40.17
 CS Sta. 9+21.53

RAMP B
 ST Sta. 11+40.17
 ST Sta. 11+21.53

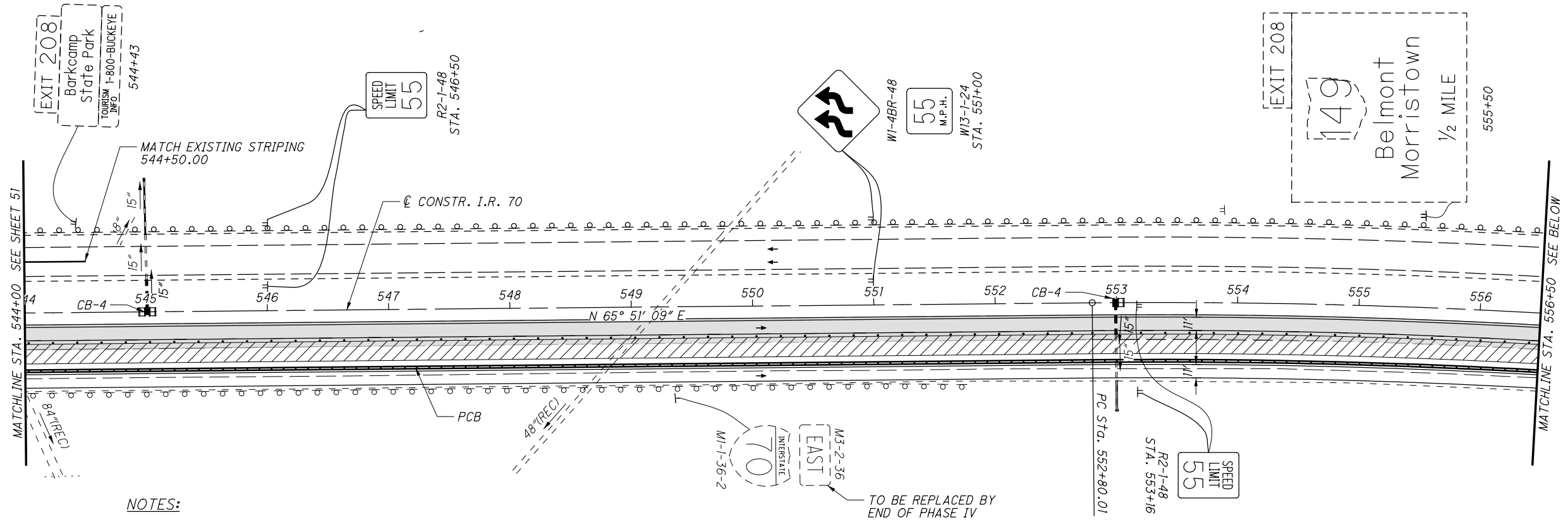
EX. RAMP B
 PR. RAMP B

LEGEND:
 → TRAFFIC FLOW DIRECTION
 --- EXISTING STORM SEWER
 [Hatched Box] WORK ZONE/PERMANENT PAVEMENT
 [Dashed Box] STORM SEWER INSTALLED IN PRIOR PHASE
 [Solid Box] PAVEMENT PLACED IN PHASE II
 [Dotted Box] STORM SEWER INSTALLED IN THIS PHASE

- REMOVE AT BEGINNING OF PHASE IV-A AND REPLACE WITH NEW BY END OF PHASE IV
- NOTES:
- FOR MOT TYPICAL SECTIONS, SEE SHEETS 25-27.
 - SEE STANDARD CONSTRUCTION DRAWING MT-100.00 FOR WORK ZONE CROSSOVER LIGHTING SYSTEM DETAILS.
 - SEE STANDARD CONSTRUCTION DRAWING MT-95.30 FOR LANE CLOSURE DETAILS DURING MOT OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
 - SEE PLAN INSERT SHEETS 209572 ON SHEETS 22 TO 24 FOR MEDIAN CROSSOVER OF PASSING LANE SHORT DISTANCE DETAILS.
 - THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.
 - WORK IN INTERSECTION AREA REQUIRING TURNING MOVEMENT RESTRICTIONS SHALL BE PERFORMED AT NIGHT OR ON WEEKENDS. DETOUR ROUTE SHALL BE PROVIDED AS SHOWN ON SHEET 28.
 - FOR CROSSOVER DETAILS, SEE SHEET 61.

* TEMPORARY CATCH BASIN AND STORM SEWER INSTALLED FOR MOT OPERATIONS WHILE CROSSOVER AND TEMPORARY PAVEMENT IS IN PLACE.

** PROPOSED CATCH BASINS AND STORM SEWERS INSTALLED DURING BUILDABLE UNIT 2. THE PROPOSED CATCH BASIN LOCATED AT STA. 525+25.00 AND STA. 534+00.00 WAS INSTALLED AND PLATED OVER DURING MOT OPERATIONS. THE CONTRACTOR SHALL INSTALL THE TOP OF EACH CATCH BASIN AND GRATE AFTER THE REMOVAL OF THE CROSSOVER AND TEMPORARY PAVEMENT AND PERFORM FINAL MEDIAN GRADING.

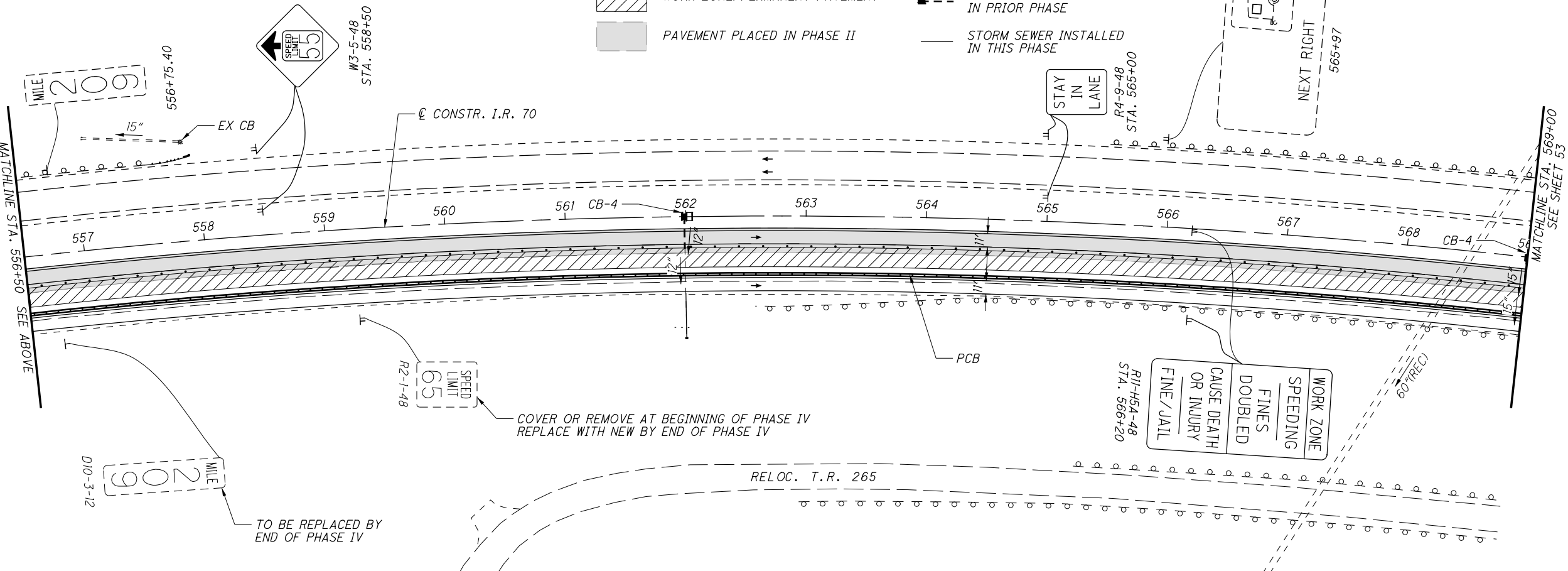


NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 25-27.
2. SEE STANDARD CONSTRUCTION DRAWING MT-95.30 FOR LANE CLOSURE DETAILS DURING MOT OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
3. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.

LEGEND:

- ➔ TRAFFIC FLOW DIRECTION
- ▨ WORK ZONE/PERMANENT PAVEMENT
- PAVEMENT PLACED IN PHASE II
- - - EXISTING STORM SEWER
- ▣ STORM SEWER INSTALLED IN PRIOR PHASE
- STORM SEWER INSTALLED IN THIS PHASE



CALCULATED MJC CHECKED BBD

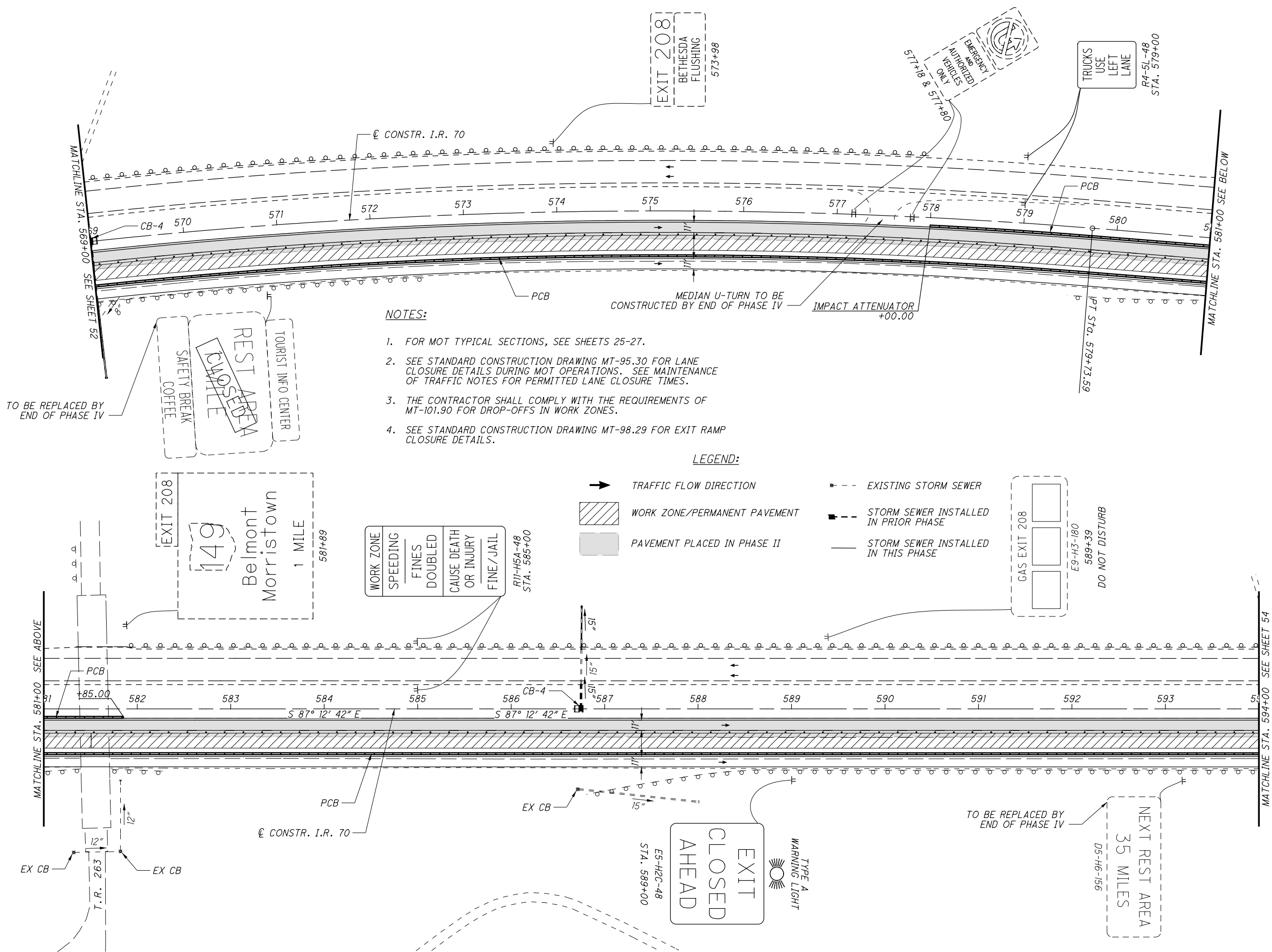
0 50 100
25
HORIZONTAL SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

MAINTENANCE OF TRAFFIC

PHASE IV-C - STA. 544+00 TO STA. 569+00

BEL-70-7.61



- NOTES:**
1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 25-27.
 2. SEE STANDARD CONSTRUCTION DRAWING MT-95.30 FOR LANE CLOSURE DETAILS DURING MOT OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
 3. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.
 4. SEE STANDARD CONSTRUCTION DRAWING MT-98.29 FOR EXIT RAMP CLOSURE DETAILS.

- LEGEND:**
- TRAFFIC FLOW DIRECTION
 - ▨ WORK ZONE/PERMANENT PAVEMENT
 - ▭ PAVEMENT PLACED IN PHASE II
 - EXISTING STORM SEWER
 - STORM SEWER INSTALLED IN PRIOR PHASE
 - STORM SEWER INSTALLED IN THIS PHASE

TO BE REPLACED BY END OF PHASE IV

SAFETY BREAK COFFEE

REST AREA

TOURIST INFO CENTER

EXIT 208

149

Belmont
Morristown

1 MILE

581+89

WORK ZONE

SPEEDING

FINES DOUBLED

CAUSE DEATH OR INJURY

FINE/JAIL

RI-H54-48

STA. 585+00

TYPE A

WARNING LIGHT

EXIT CLOSED AHEAD

E5-H26-48

STA. 589+00

GAS EXIT 208

E9-H3-180

589+39

DO NOT DISTURB

TO BE REPLACED BY END OF PHASE IV

TO BE REPLACED BY END OF PHASE IV

NEXT REST AREA

35 MILES

D5-H6-156

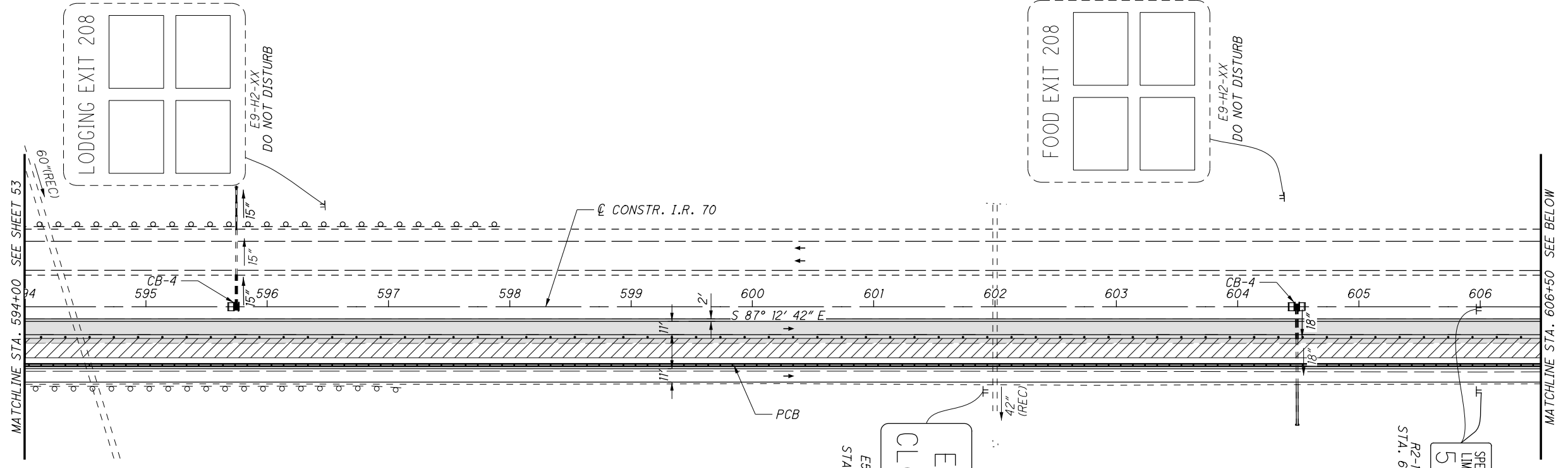
APPROVED FOR CONSTRUCTION - 5/2/2011

CALCULATED MJC
CHECKED BBD

0 50 100
25
HORIZONTAL SCALE IN FEET

MAINTENANCE OF TRAFFIC

PHASE IV-C - STA. 569+00 TO STA. 594+00

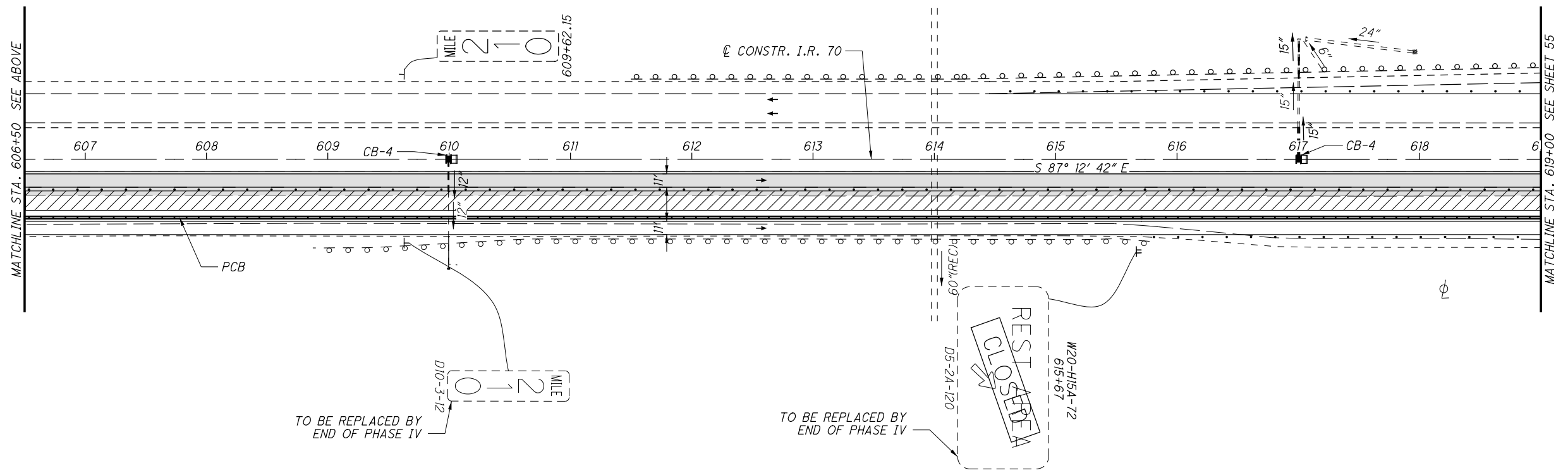


NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 25-27.
2. SEE STANDARD CONSTRUCTION DRAWING MT-95.30 FOR LANE CLOSURE DETAILS DURING MOT OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
3. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.
4. SEE STANDARD CONSTRUCTION DRAWING MT-98.29 FOR EXIT RAMP CLOSURE DETAILS.

LEGEND:

- ➔ TRAFFIC FLOW DIRECTION
- ▨ WORK ZONE/PERMANENT PAVEMENT
- PAVEMENT PLACED IN PHASE II
- EXISTING STORM SEWER
- ▬ STORM SEWER INSTALLED IN PRIOR PHASE
- STORM SEWER INSTALLED IN THIS PHASE



TO BE REPLACED BY END OF PHASE IV

TO BE REPLACED BY END OF PHASE IV

CALCULATED MJC CHECKED BBD

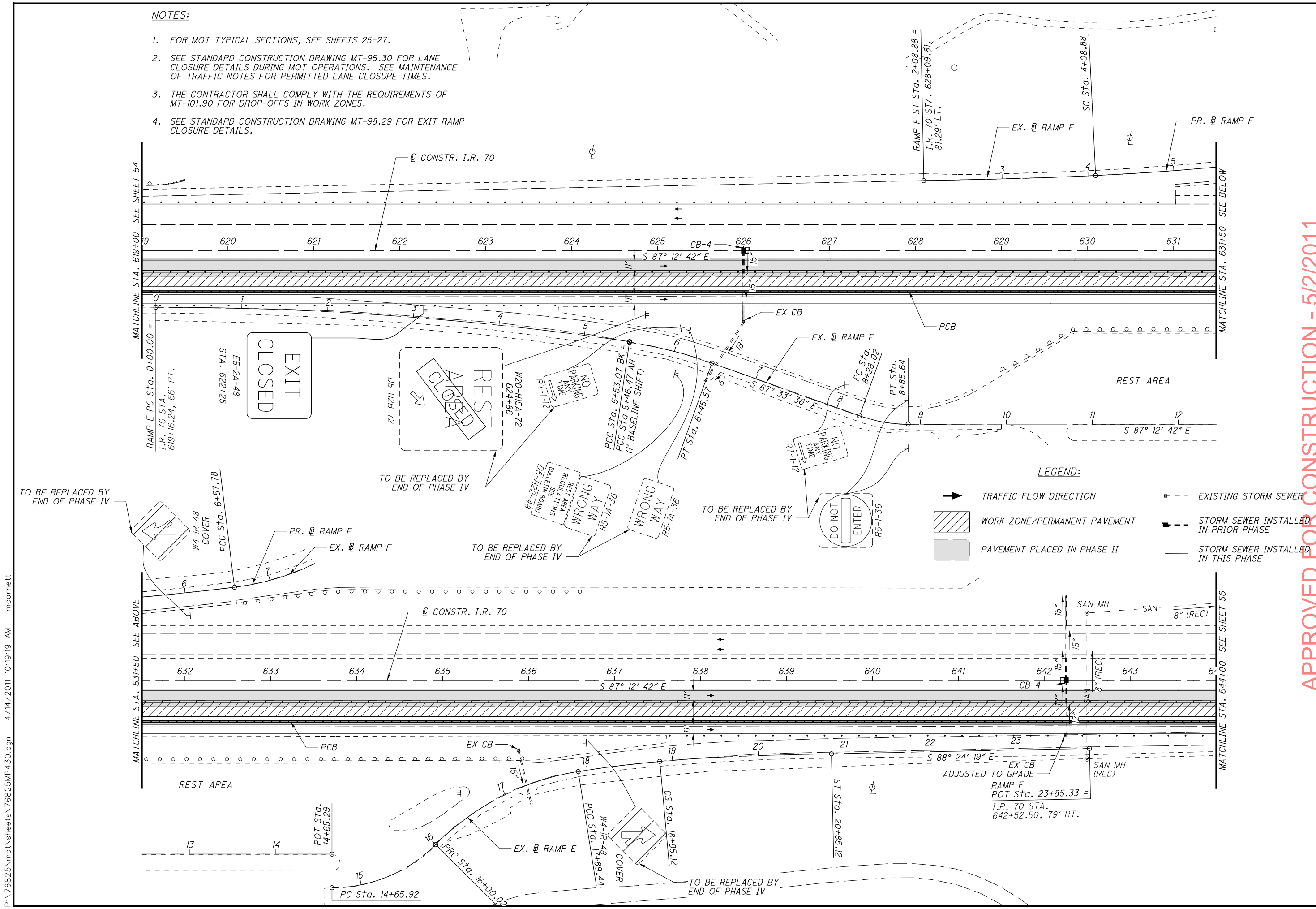
0 50 100
25
HORIZONTAL SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

MAINTENANCE OF TRAFFIC
PHASE IV-C - STA. 594+00 TO STA. 619+00

NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 25-27.
2. SEE STANDARD CONSTRUCTION DRAWING MT-95.30 FOR LANE CLOSURE DETAILS DURING MOT OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
3. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.
4. SEE STANDARD CONSTRUCTION DRAWING MT-98.29 FOR EXIT RAMP CLOSURE DETAILS.



CALCULATED MJC CHECKED BBD

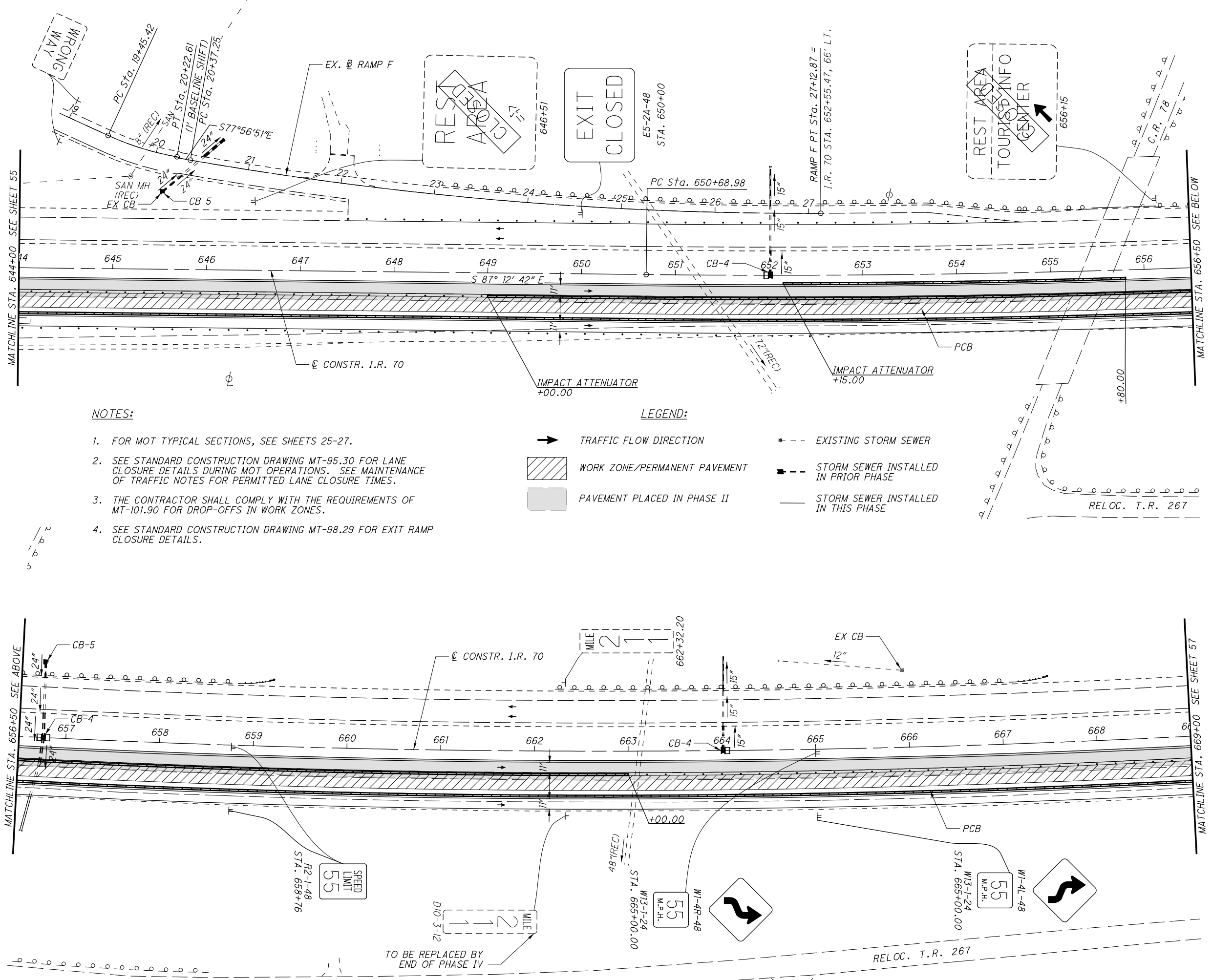
0 50 100
25
HORIZONTAL SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

MAINTENANCE OF TRAFFIC
PHASE IV-C - STA. 619+00 TO STA. 644+00

BEL-70-7.61
55
307

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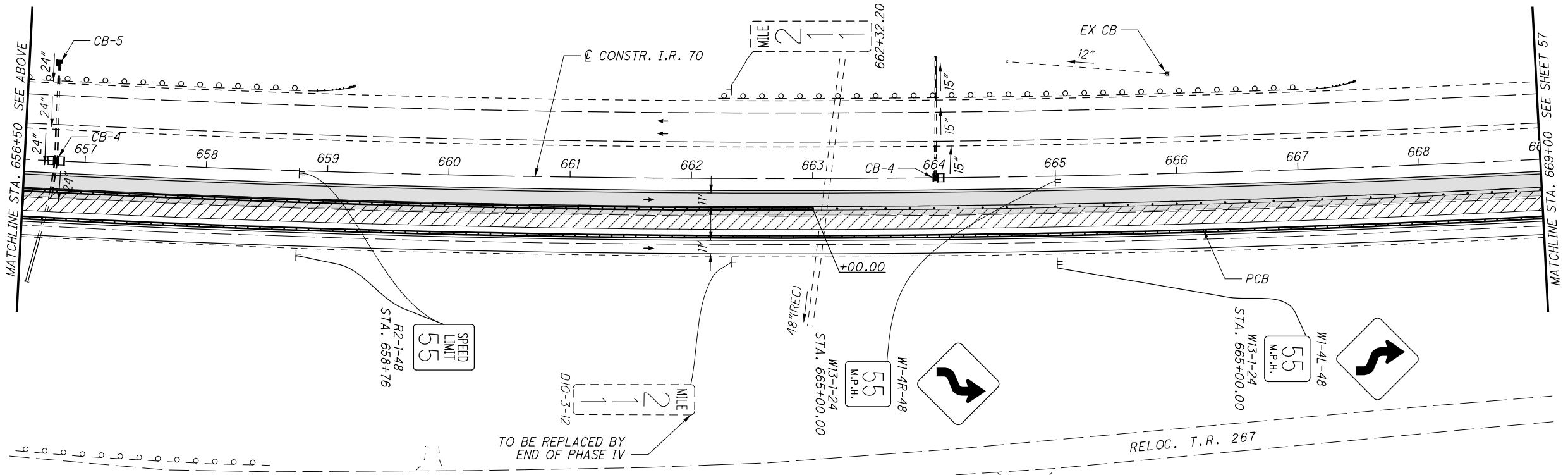


NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 25-27.
2. SEE STANDARD CONSTRUCTION DRAWING MT-95.30 FOR LANE CLOSURE DETAILS DURING MOT OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
3. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.
4. SEE STANDARD CONSTRUCTION DRAWING MT-98.29 FOR EXIT RAMP CLOSURE DETAILS.

LEGEND:

- TRAFFIC FLOW DIRECTION
- WORK ZONE/PERMANENT PAVEMENT
- PAVEMENT PLACED IN PHASE II
- EXISTING STORM SEWER
- STORM SEWER INSTALLED IN PRIOR PHASE
- STORM SEWER INSTALLED IN THIS PHASE



CALCULATED MJC CHECKED BDD

0 50 100
HORIZONTAL SCALE IN FEET

25
HORIZONTAL SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

MAINTENANCE OF TRAFFIC

PHASE IV-C - STA. 644+00 TO STA. 669+00

BEL-70-7.61

LEGEND:

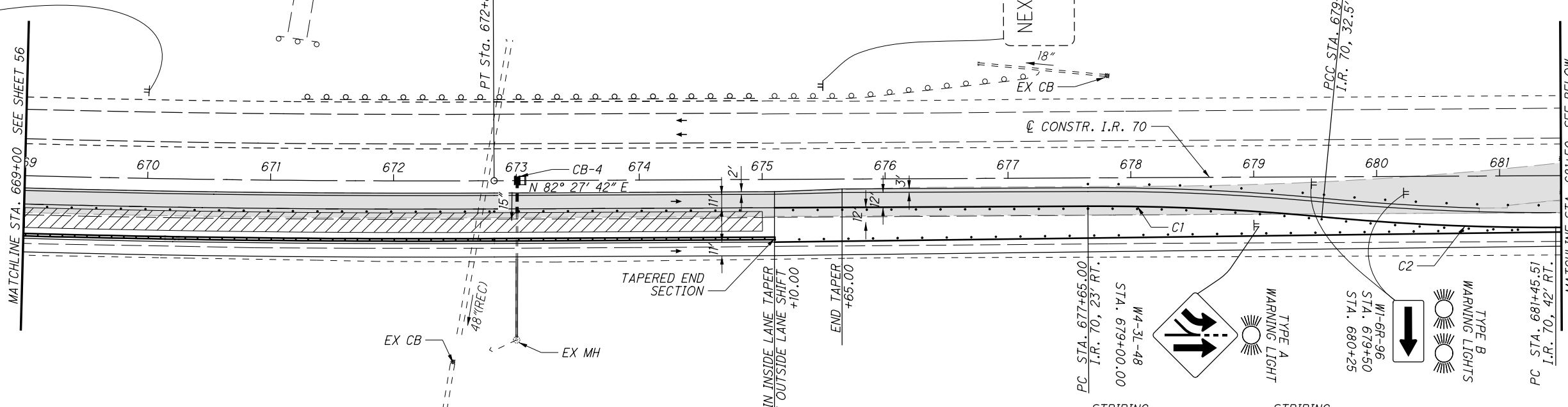
- TRAFFIC FLOW DIRECTION
- WORK ZONE/PERMANENT PAVEMENT
- PAVEMENT PLACED IN PHASE II
- EXISTING STORM SEWER
- STORM SEWER INSTALLED IN PRIOR PHASE
- STORM SEWER INSTALLED IN THIS PHASE
- DRUMS

CALCULATED MJC CHECKED BBD

0 50 100
HORIZONTAL SCALE IN FEET

EXIT CLOSED

E5-2A-48
STA. 670+00
MATCHLINE STA. 669+00 SEE SHEET 56



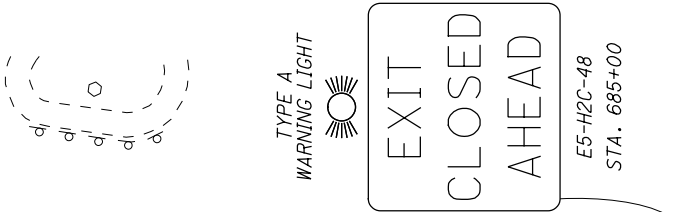
* TEMPORARY CATCH BASIN AND STORM SEWER INSTALLED FOR MOT OPERATIONS WHILE CROSSOVER AND TEMPORARY PAVEMENT IS IN PLACE.

NOTES:

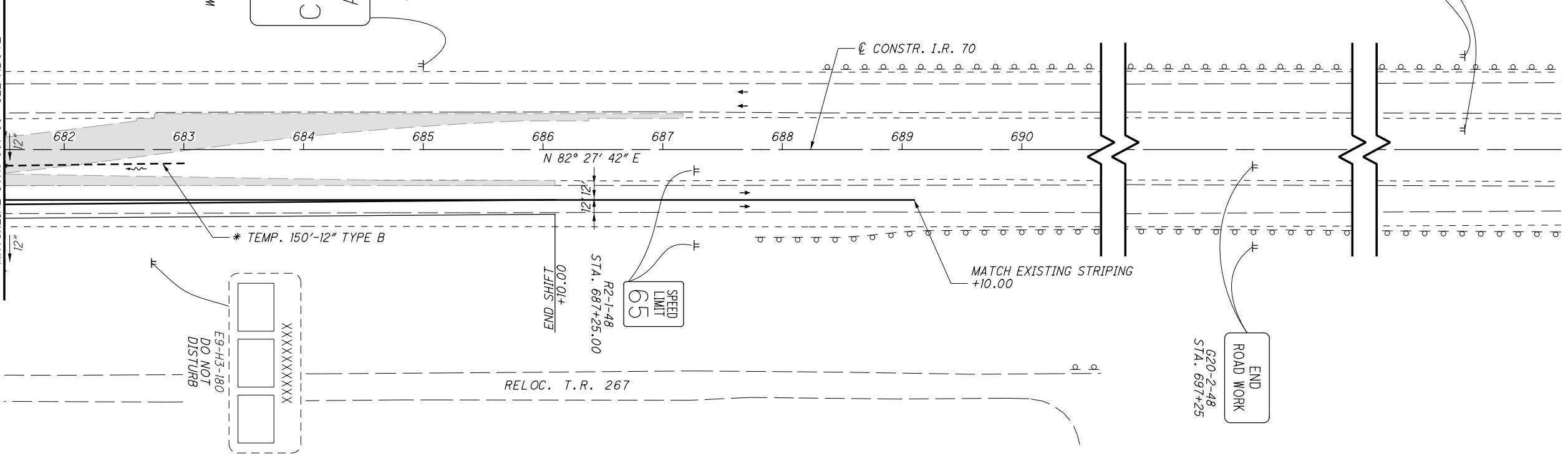
1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 25-27.
2. SEE STANDARD CONSTRUCTION DRAWING MT-95.30 FOR LANE CLOSURE DETAILS DURING MOT OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
3. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.
4. SEE STANDARD CONSTRUCTION DRAWING MT-98.29 FOR EXIT RAMP CLOSURE DETAILS.

STRIPING C1 CURVE DATA
 P.I. Sta. 678+60.36
 $\Delta = 5^\circ 43' 02''$ (RT)
 $Dc = 3^\circ 00' 00''$
 $R = 1,909.86'$
 $T = 97.36'$
 $L = 190.57'$
 $E = 2.38'$

STRIPING C2 CURVE DATA
 P.I. Sta. 680+50.14
 $\Delta = 5^\circ 43' 02''$ (LT)
 $Dc = 3^\circ 00' 00''$
 $R = 1,909.86'$
 $T = 97.36'$
 $L = 190.57'$
 $E = 2.38'$



MATCHLINE STA. 681+50 SEE ABOVE



E3-H3-180
DO NOT DISTURB

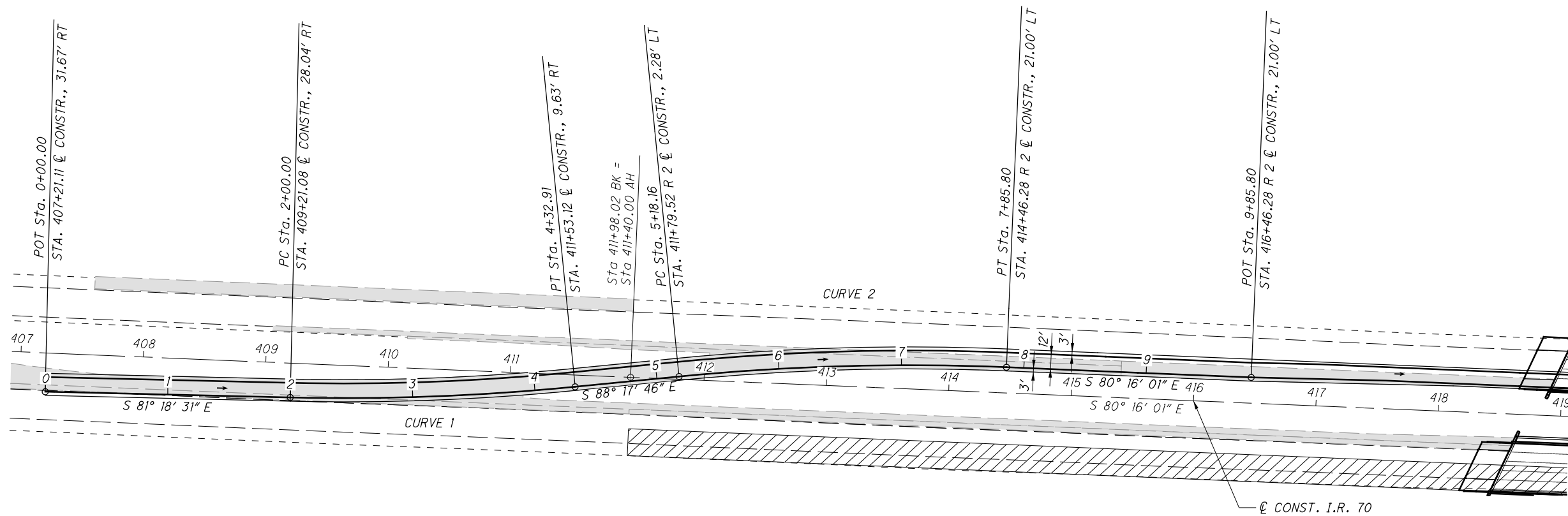
APPROVED FOR CONSTRUCTION - 5/2/2011

MAINTENANCE OF TRAFFIC
PHASE IV-C - STA. 669+00 TO STA. 711+50

BEL-70-7.61

SINGLE LANE CROSSOVER
CURVE 1

P.I. = Sta. 3+16.60
 $\Delta = 6^\circ 59' 15''$ (LT)
 $Dc = 3^\circ 00' 00''$
 $R = 1,909.86'$
 $T = 116.60'$
 $L = 232.91'$
 $E = 3.56'$



SINGLE LANE CROSSOVER
CURVE 2

P.I. = Sta. 6+52.20
 $\Delta = 8^\circ 01' 45''$ (RT)
 $Dc = 3^\circ 00' 00''$
 $R = 1,909.86'$
 $T = 134.04'$
 $L = 267.63'$
 $E = 4.70'$

- LEGEND:
- TRAFFIC FLOW DIRECTION
 - WORK ZONE/PERMANENT PAVEMENT
 - PAVEMENT PLACED IN PHASE II

SEE BUILDABLE UNIT 2 SHEET 157 AND BUILDABLE UNIT 3 SHEET 53 FOR ELEVATIONS AND PAVEMENT TRANSITION DETAILS.

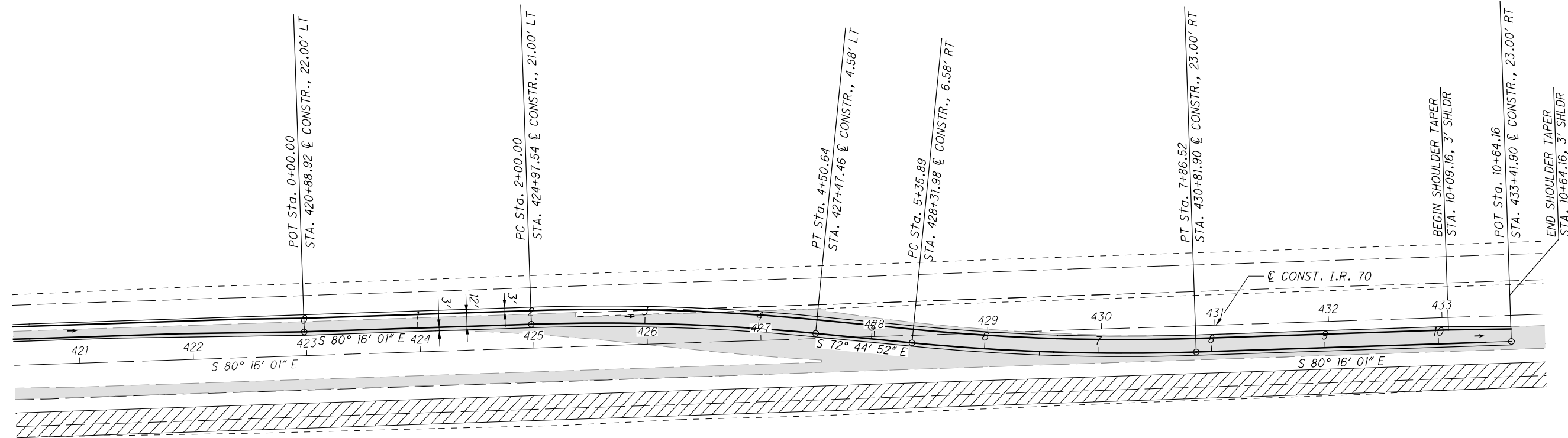
CALCULATED
MJC
CHECKED
BBD

0 50 100
HORIZONTAL
SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

MAINTENANCE OF TRAFFIC - I.R. 70




CROSSOVER DETAILS



SINGLE LANE CROSSOVER
CURVE 2

P.I. = Sta. 6+61.38
 $\Delta = 7^\circ 31' 09''$ (LT)
 $Dc = 3^\circ 00' 00''$
 $R = 1,909.86'$
 $T = 125.50'$
 $L = 250.64'$
 $E = 4.12'$

LEGEND:

-  TRAFFIC FLOW DIRECTION
-  WORK ZONE/PERMANENT PAVEMENT
-  PAVEMENT PLACED IN PHASE II

SINGLE LANE CROSSOVER
CURVE 1

P.I. = Sta. 3+25.50
 $\Delta = 7^\circ 31' 09''$ (RT)
 $Dc = 3^\circ 00' 00''$
 $R = 1,909.86'$
 $T = 125.50'$
 $L = 250.64'$
 $E = 4.12'$

SEE BUILDABLE UNIT 2 SHEET 158 FOR ELEVATION DETAILS.
 SEE BUILDABLE UNIT 3 SHEETS 46 AND 50 FOR PAVEMENT TRANSITION NOTES.

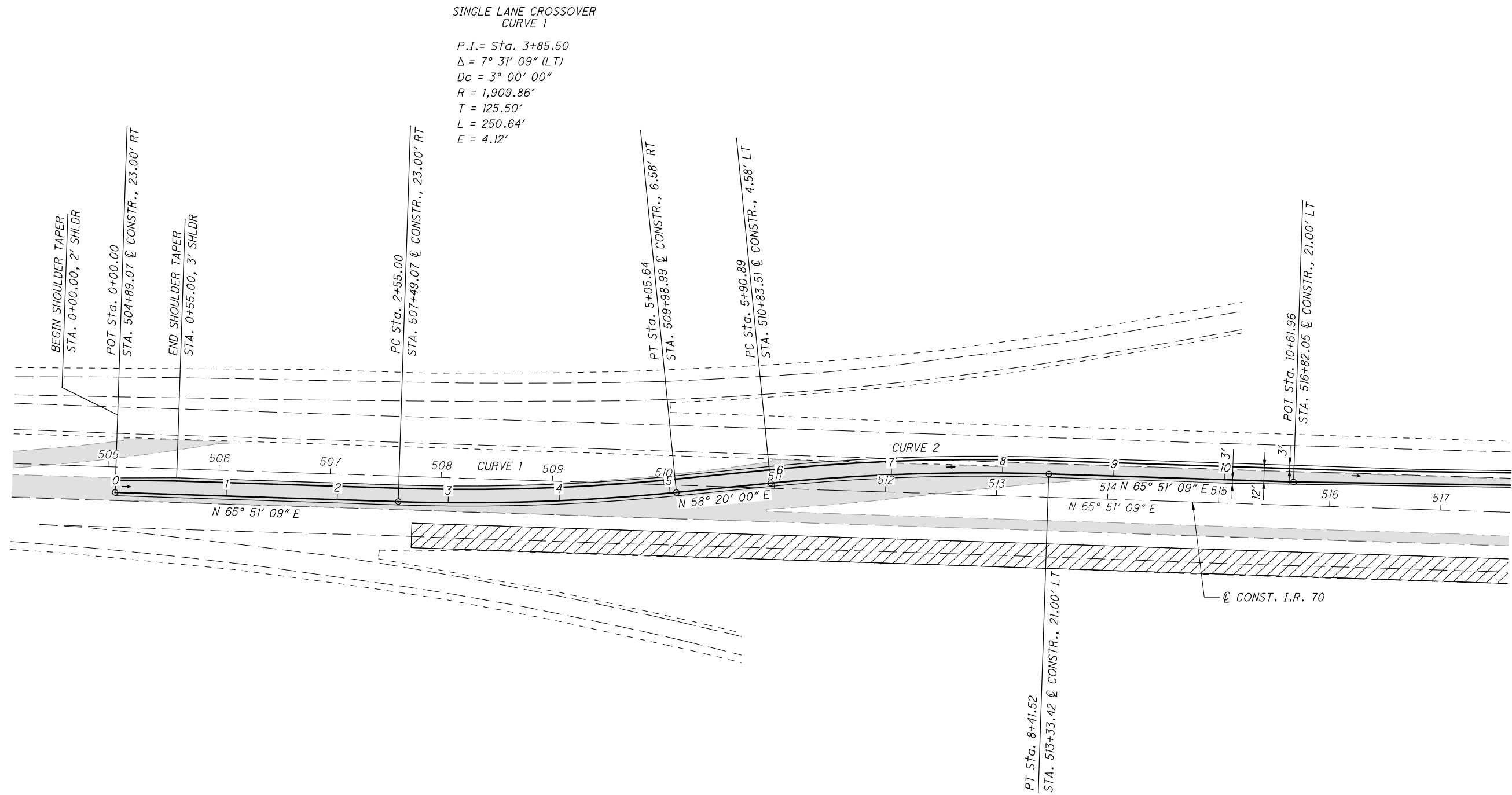
CALCULATED
MJC
CHECKED
BBD

0 50 100
HORIZONTAL
SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

MAINTENANCE OF TRAFFIC - I.R. 70
CROSSOVER DETAILS

BEL-70-7.61



SINGLE LANE CROSSOVER
CURVE 1

P.I. = Sta. 3+85.50
 $\Delta = 7^\circ 31' 09''$ (LT)
 $D_c = 3^\circ 00' 00''$
 $R = 1,909.86'$
 $T = 125.50'$
 $L = 250.64'$
 $E = 4.12'$

SINGLE LANE CROSSOVER
CURVE 2

P.I. = Sta. 7+16.38
 $\Delta = 7^\circ 31' 09''$ (RT)
 $D_c = 3^\circ 00' 00''$
 $R = 1,909.86'$
 $T = 125.50'$
 $L = 250.64'$
 $E = 4.12'$

- LEGEND:
- TRAFFIC FLOW DIRECTION
 - WORK ZONE/PERMANENT PAVEMENT
 - PAVEMENT PLACED IN PHASE II

SEE BUILDABLE UNIT 2 SHEET 159 FOR ELEVATION DETAILS.
 SEE BUILDABLE UNIT 3 SHEETS 46 AND 51 FOR PAVEMENT TRANSITION NOTES.

CALCULATED
MJC
CHECKED
BBD

0 50 100
HORIZONTAL
SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

MAINTENANCE OF TRAFFIC - I.R. 70
CROSSOVER DETAILS

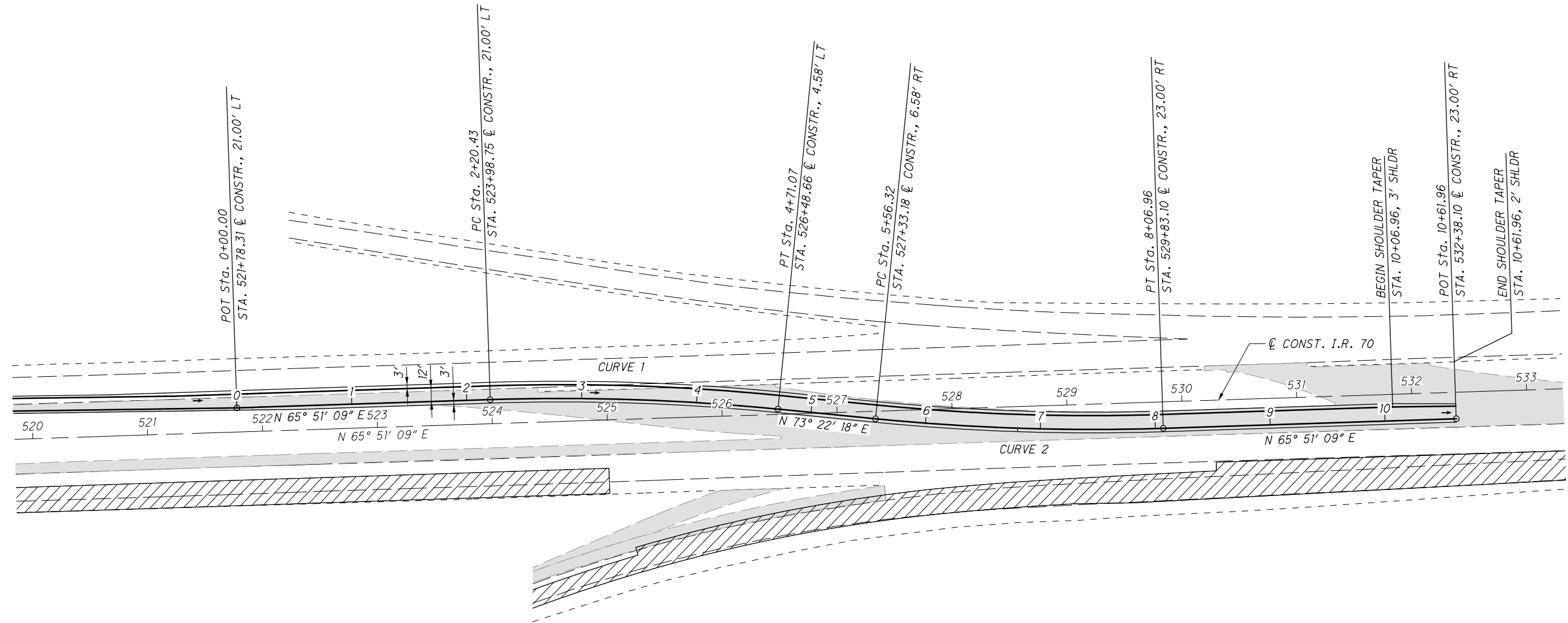
BEL-70-7.61

SINGLE LANE CROSSOVER
CURVE 1




P.I. = Sta. 3+45.93
 $\Delta = 7^\circ 31' 09''$ (RT)
 $Dc = 3^\circ 00' 00''$
 $R = 1,909.86'$
 $T = 125.50'$
 $L = 250.64'$
 $E = 4.12'$

SINGLE LANE CROSSOVER
CURVE 2

P.I. = Sta. 6+81.82
 $\Delta = 7^\circ 31' 09''$ (LT)
 $Dc = 3^\circ 00' 00''$
 $R = 1,909.86'$
 $T = 125.50'$
 $L = 250.64'$
 $E = 4.12'$



LEGEND:

-  TRAFFIC FLOW DIRECTION
-  WORK ZONE/PERMANENT PAVEMENT
-  PAVEMENT PLACED IN PHASE II

SEE BUILDABLE UNIT 2 SHEET 160 FOR ELEVATION DETAILS.
 SEE BUILDABLE UNIT 3 SHEET 48 AND 52 FOR PAVEMENT TRANSITION NOTES.



CALCULATED	MJC
CHECKED	BBD

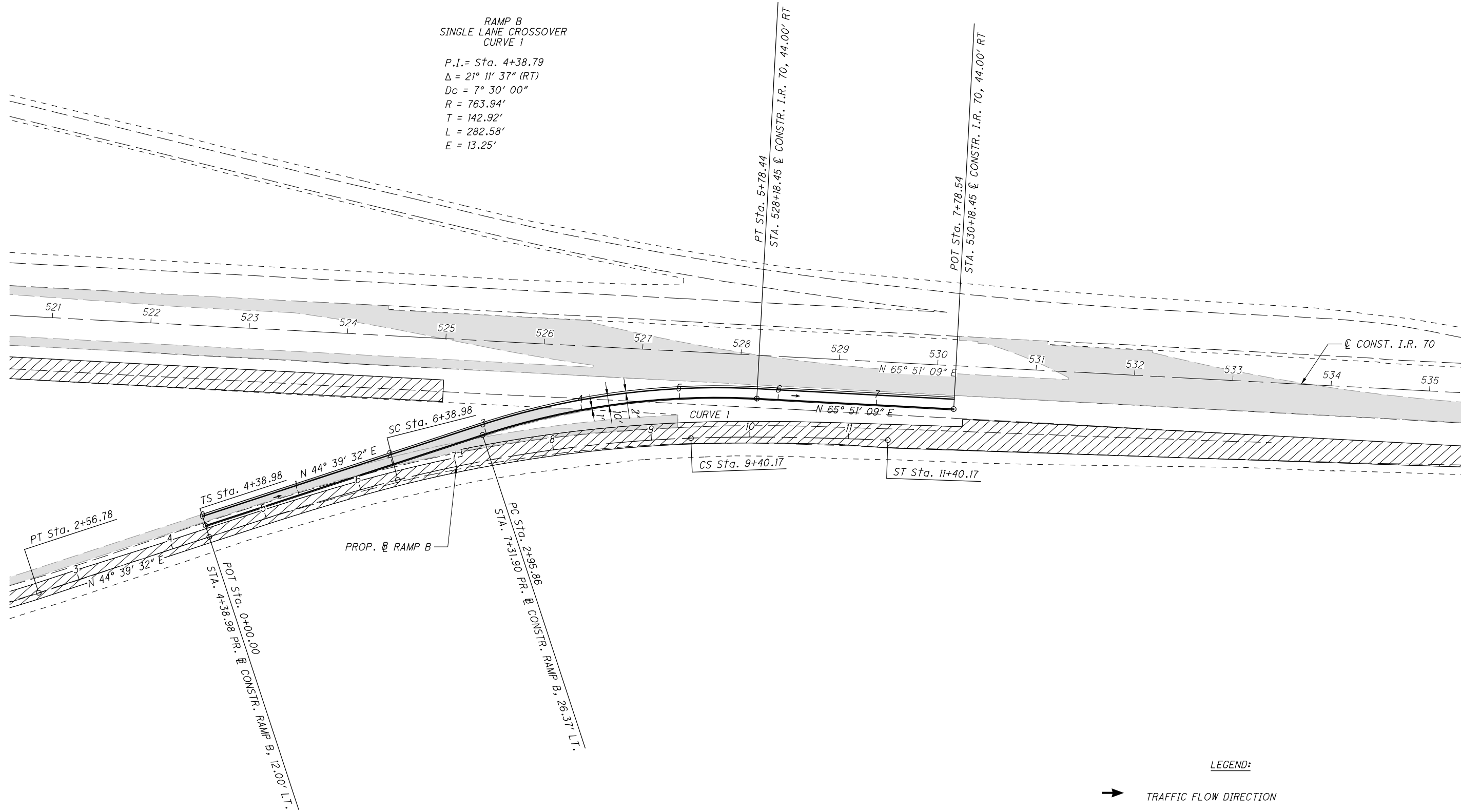
APPROVED FOR CONSTRUCTION - 5/2/2011

MAINTENANCE OF TRAFFIC - I.R. 70
CROSSOVER DETAILS




BEL-70-7.61

RAMP B
SINGLE LANE CROSSOVER
CURVE 1

P.I. = Sta. 4+38.79
 $\Delta = 21^\circ 11' 37''$ (RT)
 $D_c = 7^\circ 30' 00''$
 $R = 763.94'$
 $T = 142.92'$
 $L = 282.58'$
 $E = 13.25'$



LEGEND:

-  TRAFFIC FLOW DIRECTION
-  WORK ZONE/PERMANENT PAVEMENT
-  PAVEMENT PLACED IN PHASE II

APPROVED FOR CONSTRUCTION - 5/2/2011

CALCULATED
MJC
CHECKED
BBD

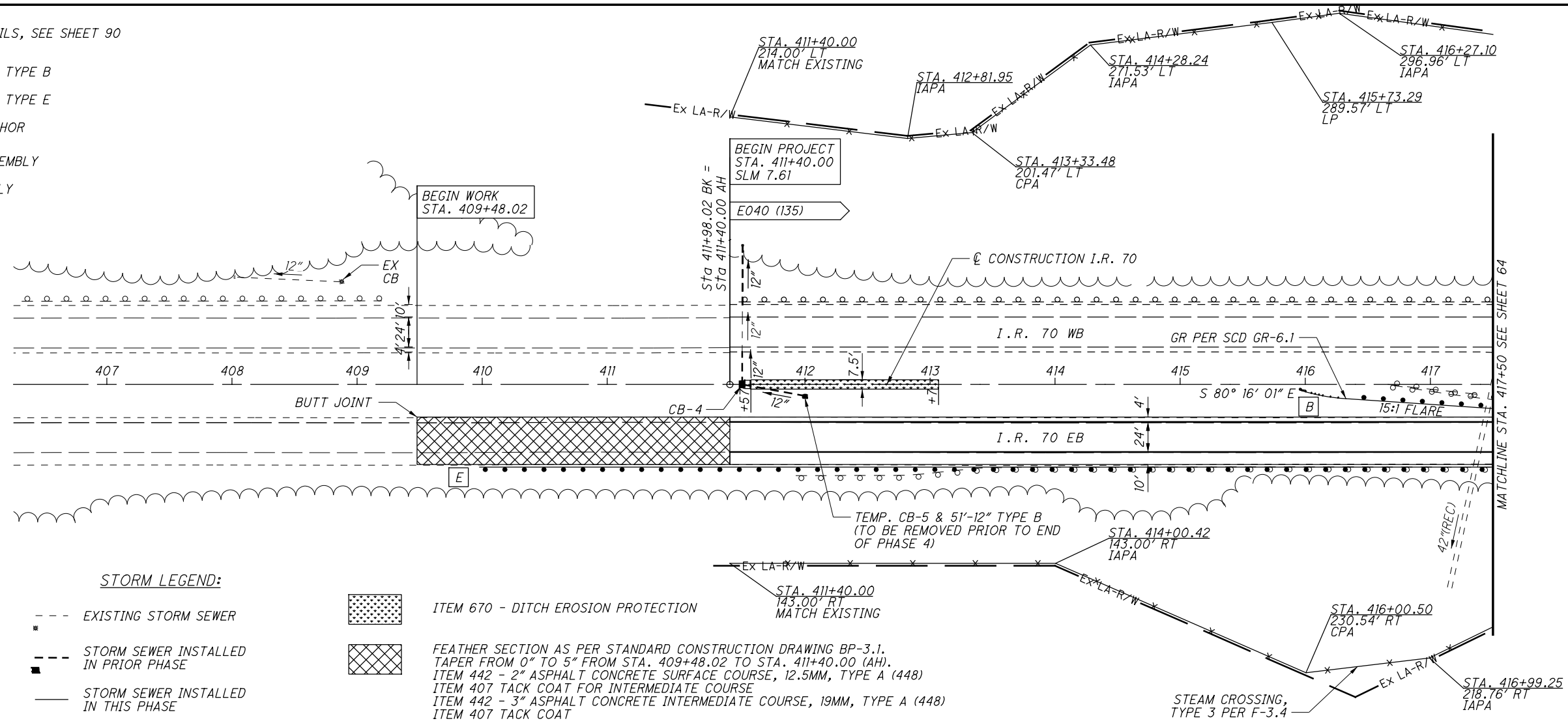
0 50 100
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC - RAMP B
CROSSOVER DETAILS

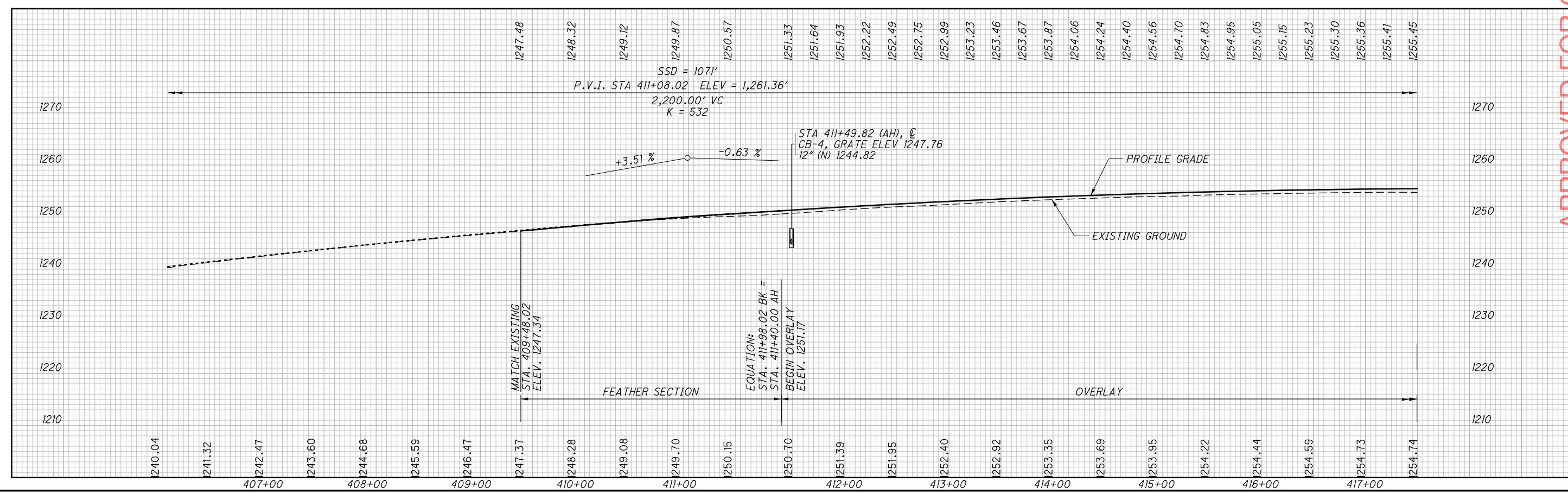
BEL-70-7.61

FOR STORM SEWER DETAILS, SEE SHEET 90

- B ANCHOR ASSEMBLY TYPE B
- E ANCHOR ASSEMBLY TYPE E
- IAPA INTERMEDIATE ANCHOR POST ASSEMBLY
- CPA CORNER POST ASSEMBLY
- EPA END POST ASSEMBLY
- LP LINE POST



- STORM LEGEND:**
- - - EXISTING STORM SEWER
 - - - STORM SEWER INSTALLED IN PRIOR PHASE
 - STORM SEWER INSTALLED IN THIS PHASE
- ITEM 670 - DITCH EROSION PROTECTION
 - FEATHER SECTION AS PER STANDARD CONSTRUCTION DRAWING BP-3.1. TAPER FROM 0" TO 5" FROM STA. 409+48.02 TO STA. 411+40.00 (AH). ITEM 442 - 2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (448) ITEM 407 TACK COAT FOR INTERMEDIATE COURSE ITEM 442 - 3" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448) ITEM 407 TACK COAT



APPROVED FOR CONSTRUCTION - 5/2/2011

CALCULATED CDS CHECKED BDD

0 25 50 100
HORIZONTAL SCALE IN FEET

I.R. 70 - PLAN AND PROFILE
STA. 406+50 TO STA. 417+50

BEL-70-7.61

63
307

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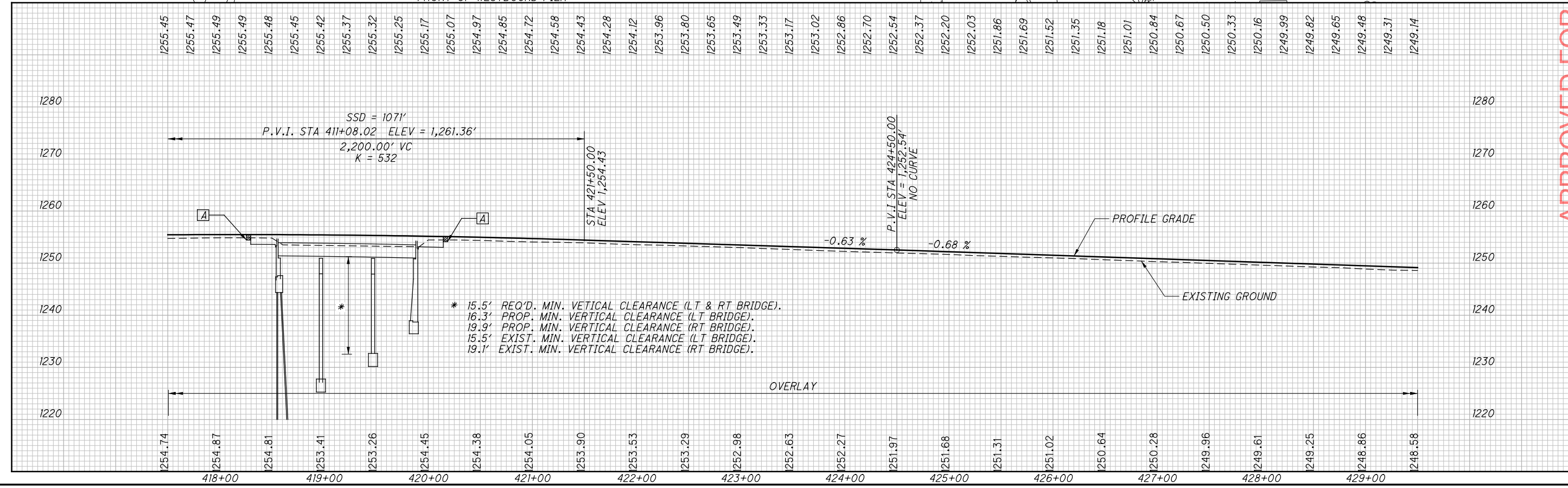
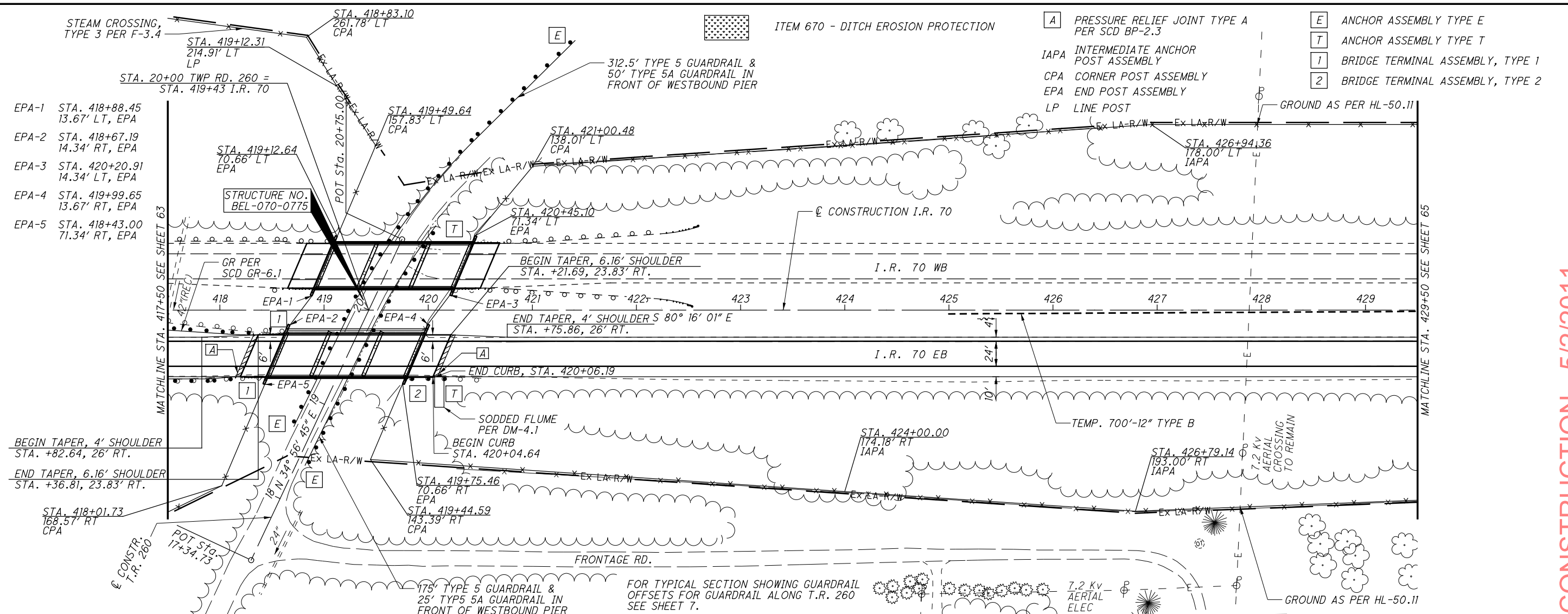
CALCULATED
CDS
CHECKED
BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

I.R. 70 - PLAN AND PROFILE
STA. 417+50 TO STA. 429+50

BEL-70-7.61

64
307



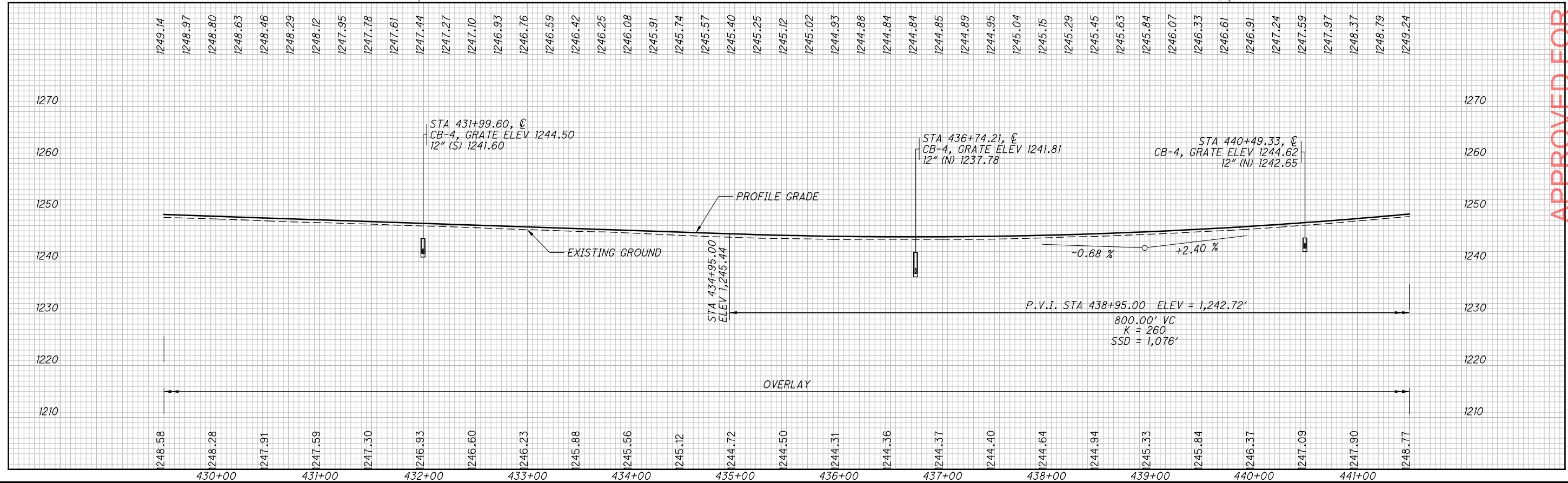
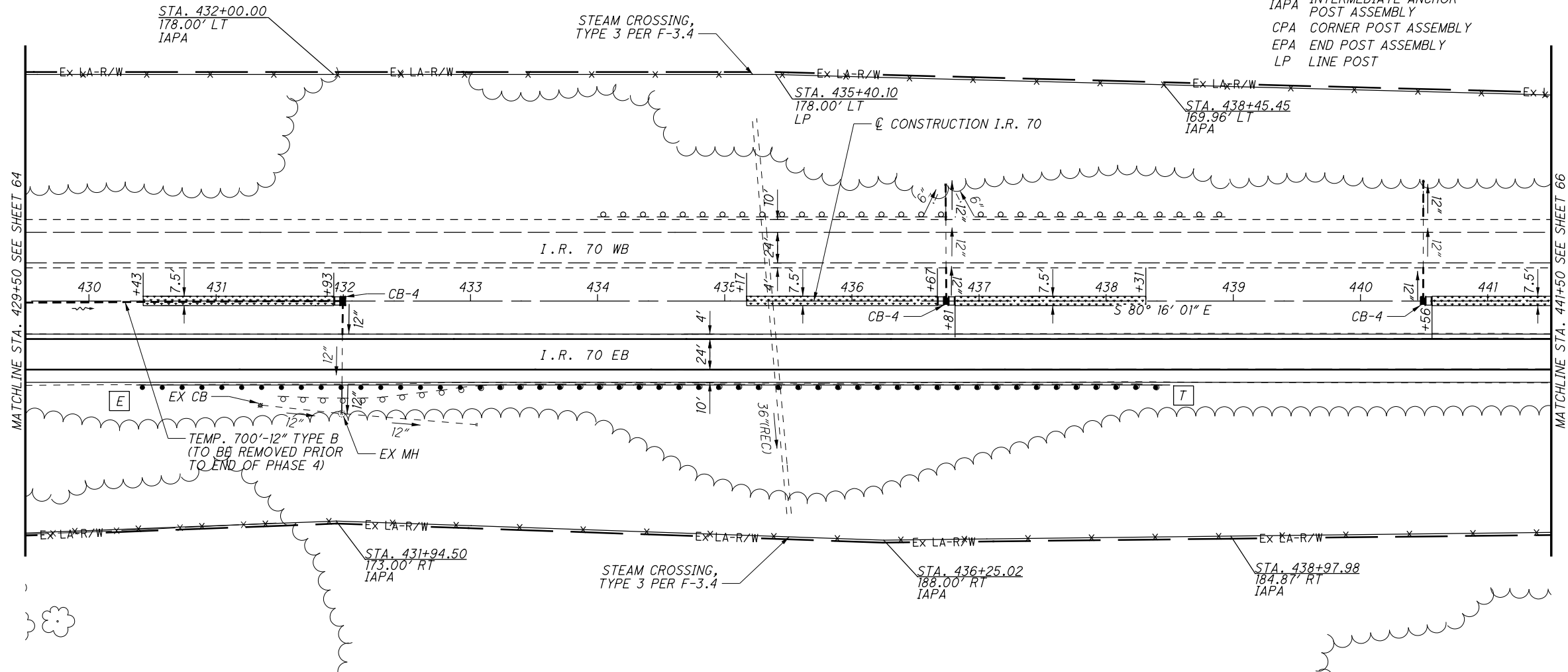
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FOR STORM SEWER DETAILS, SEE SHEETS 97, 99, & 100



ITEM 670 - DITCH EROSION PROTECTION

- E ANCHOR ASSEMBLY, TYPE E
- T ANCHOR ASSEMBLY, TYPE T
- IAPA INTERMEDIATE ANCHOR POST ASSEMBLY
- CPA CORNER POST ASSEMBLY
- EPA END POST ASSEMBLY
- LP LINE POST



0 25 50 100

 HORIZONTAL SCALE IN FEET

 CALCULATED CDS

 CHECKED BDD

APPROVED FOR CONSTRUCTION - 5/2/2011

I.R. 70 - PLAN AND PROFILE
STA. 429+50 TO STA. 441+50

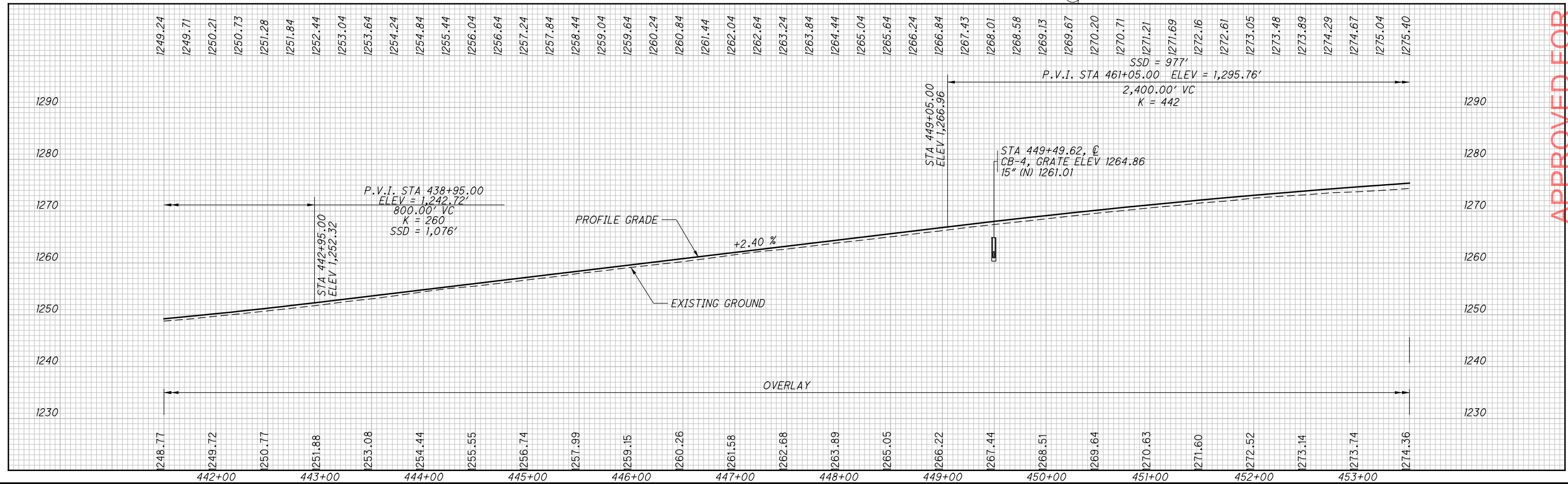
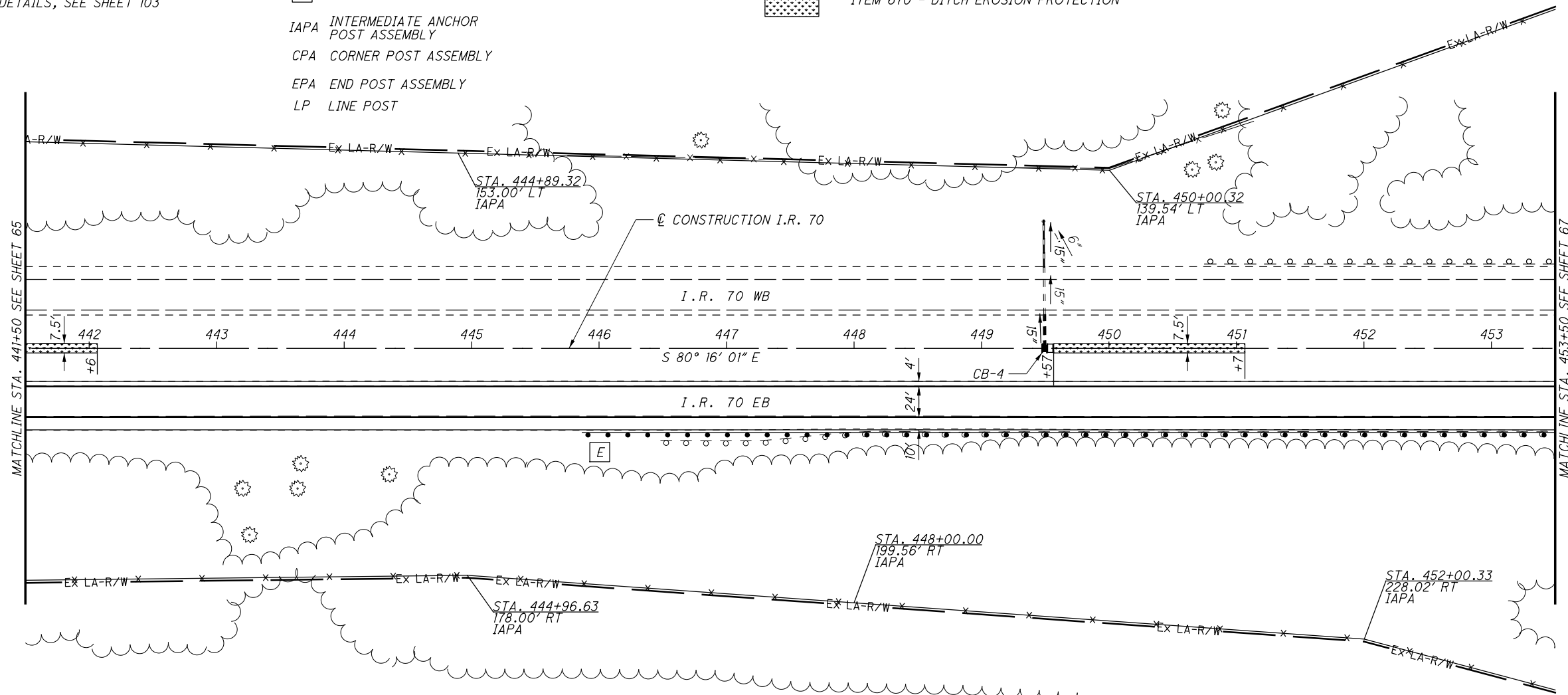
BEL-70-7.61

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FOR STORM SEWER DETAILS, SEE SHEET 103

- E ANCHOR ASSEMBLY, TYPE E
- IAPA INTERMEDIATE ANCHOR POST ASSEMBLY
- CPA CORNER POST ASSEMBLY
- EPA END POST ASSEMBLY
- LP LINE POST

ITEM 670 - DITCH EROSION PROTECTION



APPROVED FOR CONSTRUCTION - 5/2/2011

CALCULATED CDS CHECKED BDD

0 25 50 100
HORIZONTAL SCALE IN FEET

I.R. 70 - PLAN AND PROFILE
STA. 441+50 TO STA. 453+50

BEL-70-7.61

66
307

STEAM CROSSING, TYPE 3 PER F-3.4

STA. 453+70.10
272.91' LT
CPA

STA. 453+96.52
229.24' LT
EPA

STA. 454+66.33
248.06' LT
CPA FOR MEDIAN U-TURN DETAILS, SEE SHEET 237.

STA. 454+06.26
226.76' LT
EPA

STA. 458+99.80
137.99' LT
IAPA

- [I] IMPACT ATTENUATOR, TYPE I
- IAPA INTERMEDIATE ANCHOR POST ASSEMBLY
- CPA CORNER POST ASSEMBLY
- EPA END POST ASSEMBLY
- LP LINE POST

STA. 462+35.53
156.00' LT
LP

POT STA. 23+00.00
STA. 464+46.55
164.00' LT
LP

STA. 464+69.98
164.29' LT
CPA

STA. 463+50.08
160.00' LT
LP

STA. 464+97.07
119.88' LT
CPA

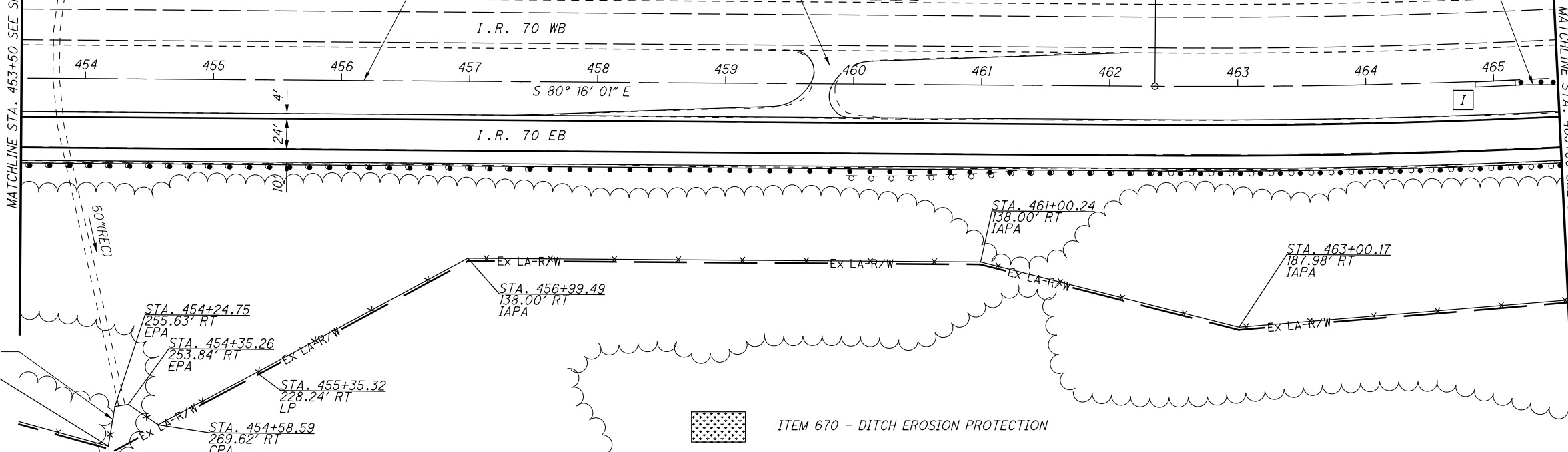
STA. 465+14.35
119.08' LT
EPA

IR 70
CURVE DATA
P.I. = Sta. 479+80.61
 $\Delta = 33^\circ 52' 50''$ (LT)
 $D_c = 1^\circ 00' 00''$
 $R = 5,729.58'$
 $T = 1,745.18'$
 $L = 3,388.06'$
 $E = 259.89'$
 $e_{max} = 0.036$

SCALE IN FEET
HORIZONTAL
0 25 50
CALCULATED CDS CHECKED BDD

MATCHLINE STA. 453+50 SEE SHEET 66

MATCHLINE STA. 465+50 SEE SHEET 68



STEAM CROSSING, TYPE 3 PER F-3.4

STA. 454+19.84
286.55' RT
CPA

STA. 454+24.75
255.63' RT
EPA

STA. 454+35.26
253.84' RT
EPA

STA. 455+35.32
228.24' RT
LP

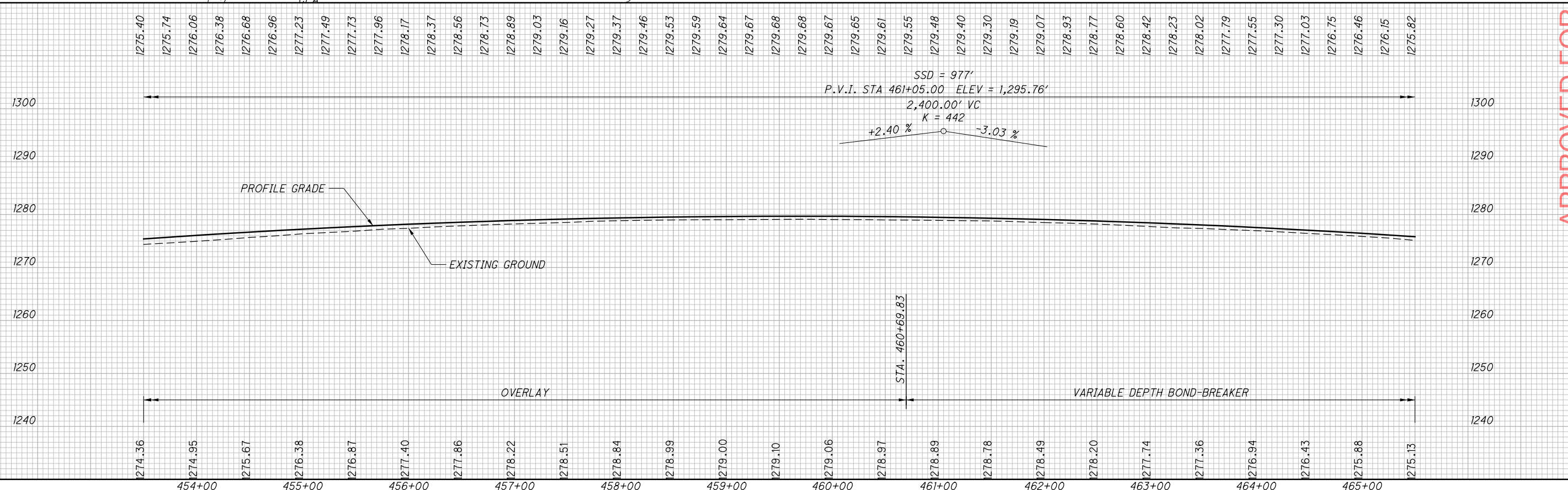
STA. 454+58.59
269.62' RT
CPA

STA. 456+99.49
138.00' RT
IAPA

STA. 461+00.24
138.00' RT
IAPA

STA. 463+00.17
187.98' RT
IAPA

ITEM 670 - DITCH EROSION PROTECTION



APPROVED FOR CONSTRUCTION - 5/2/2011

I.R. 70 - PLAN AND PROFILE
STA. 453+50 TO STA. 465+50

BEL-70-7.61

67
307

FOR STORM SEWER DETAILS, SEE SHEETS 111 & 114

- I IMPACT ATTENUATOR TYPE I
- T ANCHOR ASSEMBLY TYPE T
- 1 BRIDGE TERMINAL ASSEMBLY, TYPE 1
- 2 BRIDGE TERMINAL ASSEMBLY, TYPE 2

IR 70
CURVE DATA
P.I. = Sta. 479+80.61
 $\Delta = 33^\circ 52' 50''$ (LT)
 $D_c = 1^\circ 00' 00''$
 $R = 5,729.58'$
 $T = 1,745.18'$
 $L = 3,388.06'$
 $E = 259.89'$
 $e_{max} = 0.036$



- ITEM 670 - DITCH EROSION PROTECTION
- IAPA INTERMEDIATE ANCHOR POST ASSEMBLY
- CPA CORNER POST ASSEMBLY
- EPA END POST ASSEMBLY
- LP LINE POST

N

50
25
0

HORIZONTAL
SCALE IN FEET

CALCULATED
CDS
CHECKED
BDD

GROUND AS PER HL-50.11

STA. 465+59.58
164.48' LT
CPA

STA. 465+83.90
123.21' LT
CPA

STA. 465+57.01
118.85' LT
EPA

STRUCTURE NO.
BEL-070-0883

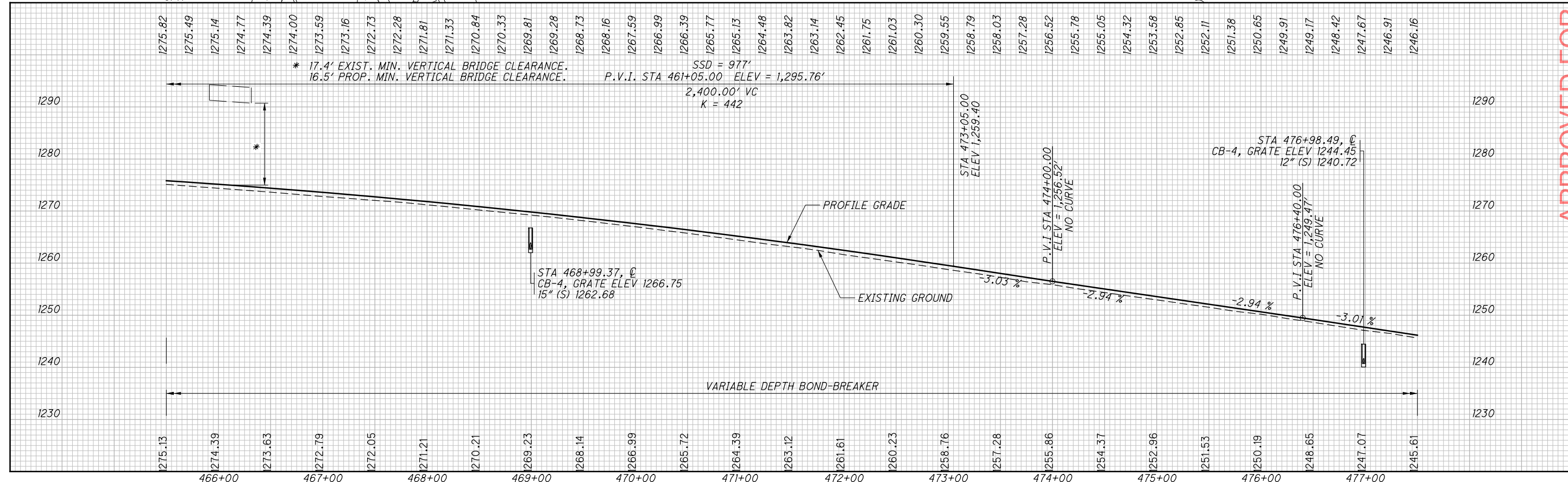
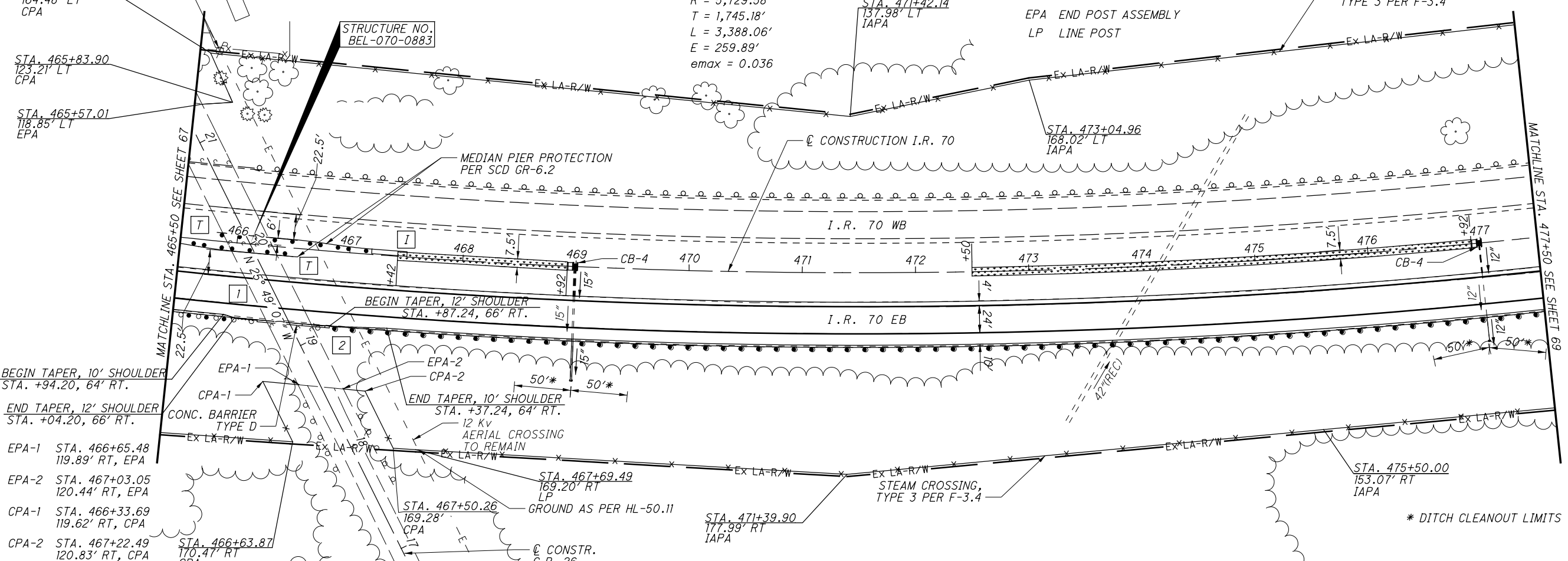
STA. 471+42.14
137.98' LT
IAPA

STA. 473+04.96
168.02' LT
IAPA

STEAM CROSSING,
TYPE 3 PER F-3.4

MATCHLINE STA. 465+50 SEE SHEET 67

MATCHLINE STA. 477+50 SEE SHEET 69



APPROVED FOR CONSTRUCTION - 5/2/2011

I.R. 70 - PLAN AND PROFILE
STA. 465+50 TO STA. 477+50

BEL-70-7.61

FOR STORM SEWER DETAILS, SEE SHEET 117

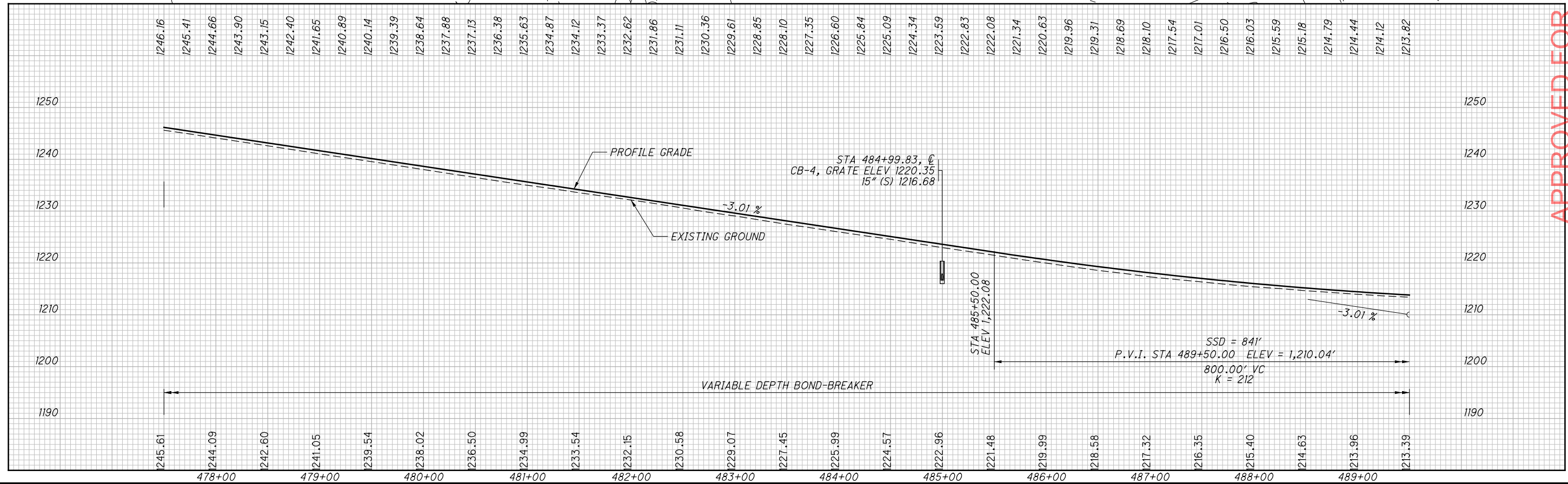
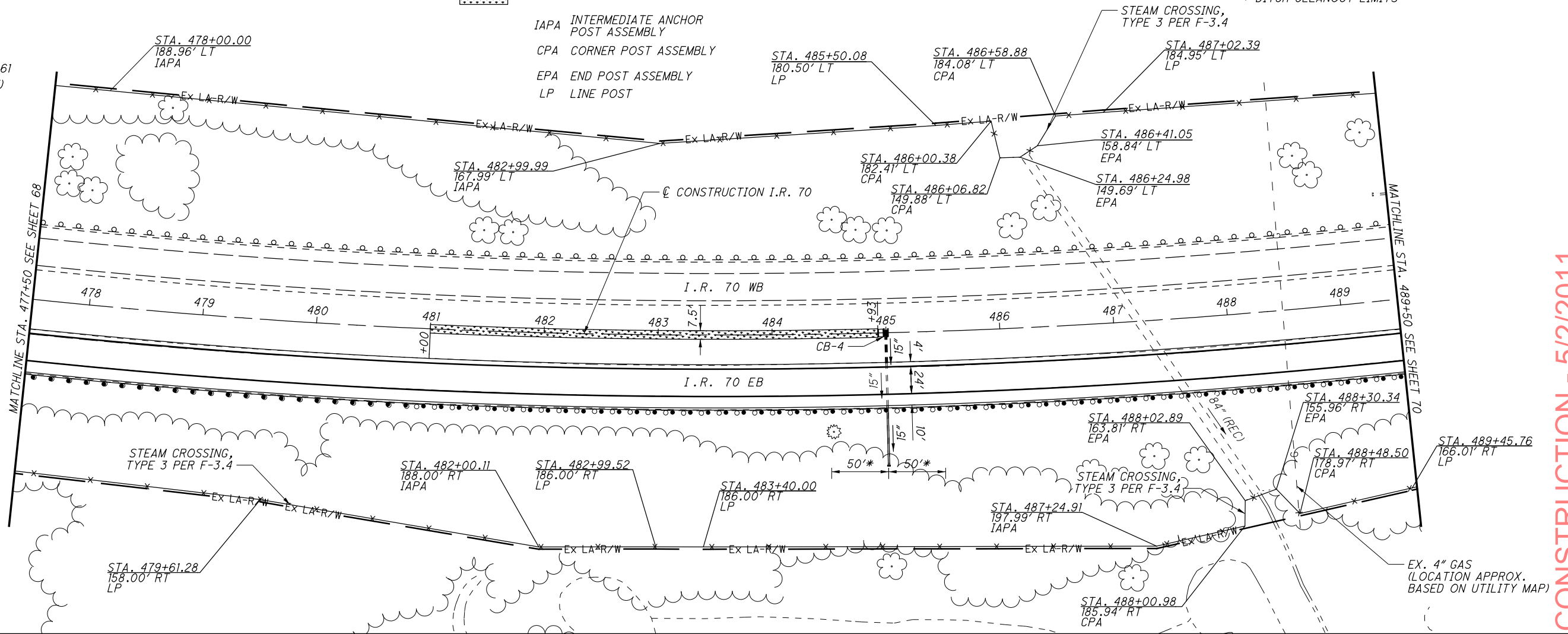
IR 70
CURVE DATA
P.I. = Sta. 479+80.61
 $\Delta = 33^\circ 52' 50''$ (LT)
 $D_c = 1^\circ 00' 00''$
 $R = 5,729.58'$
 $T = 1,745.18'$
 $L = 3,388.06'$
 $E = 259.89'$
 $e_{max} = 0.036$



ITEM 670 - DITCH EROSION PROTECTION

IAPA INTERMEDIATE ANCHOR
POST ASSEMBLY
CPA CORNER POST ASSEMBLY
EPA END POST ASSEMBLY
LP LINE POST

* DITCH CLEANOUT LIMITS



CALCULATED
CDS
CHECKED
BBD

0 25 50 100
HORIZONTAL
SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

I.R. 70 - PLAN AND PROFILE
STA. 477+50 TO STA. 489+50

BEL-70-7.61

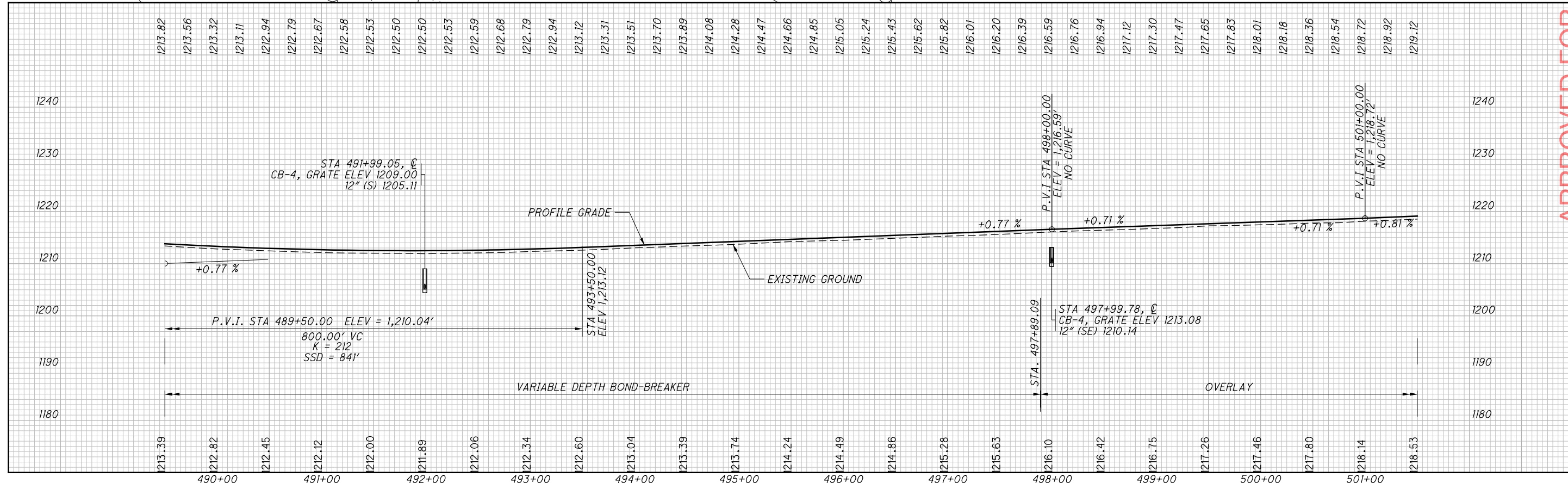
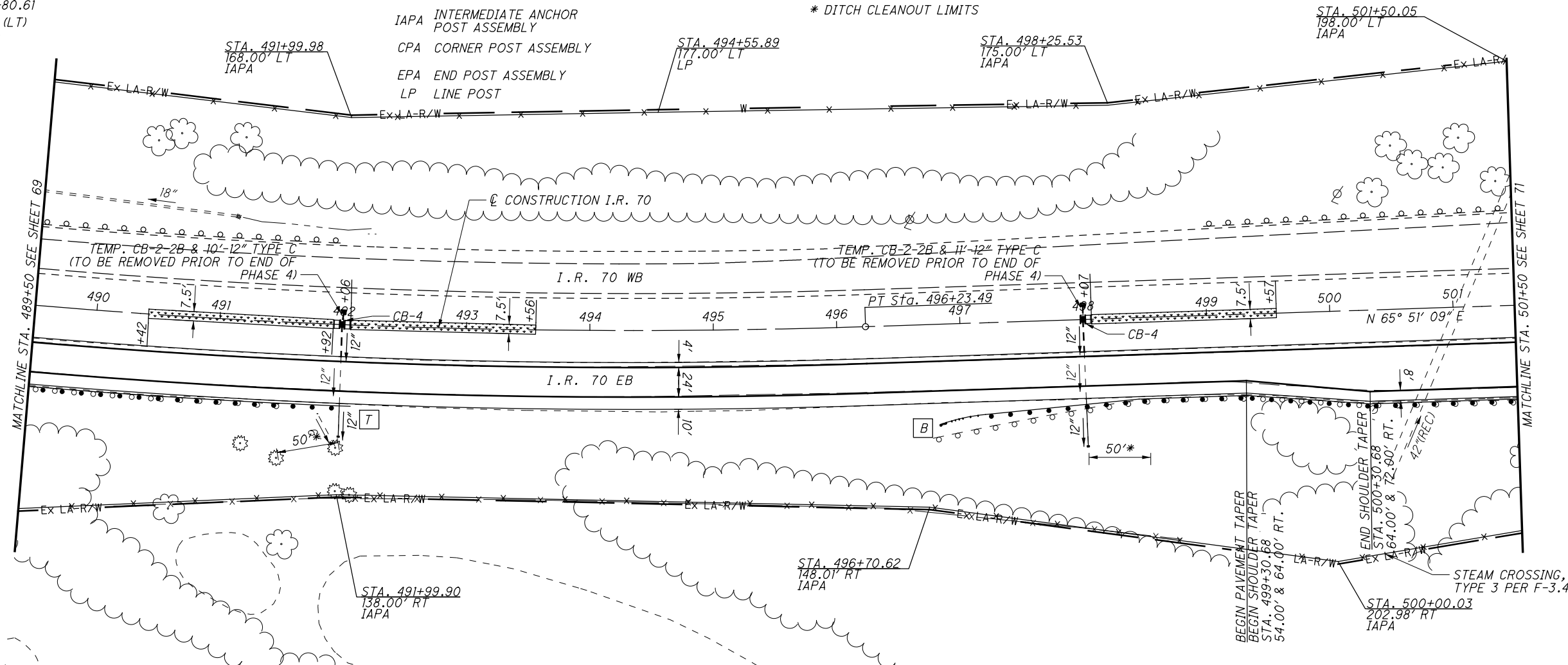
IR 70
CURVE DATA
P.I. = Sta. 479+80.61
 $\Delta = 33^\circ 52' 50''$ (LT)
 $D_c = 1^\circ 00' 00''$
 $R = 5,729.58'$
 $T = 1,745.18'$
 $L = 3,388.06'$
 $E = 259.89'$
 $e_{max} = 0.036$

- [B] ANCHOR ASSEMBLY, TYPE B
 - [T] ANCHOR ASSEMBLY TYPE T
 - IAPA INTERMEDIATE ANCHOR POST ASSEMBLY
 - CPA CORNER POST ASSEMBLY
 - EPA END POST ASSEMBLY
 - LP LINE POST
- ITEM 670 - DITCH EROSION PROTECTION
- * DITCH CLEANOUT LIMITS

FOR STORM SEWER DETAILS, SEE SHEETS 119 & 121

CALCULATED
CDS
CHECKED
BDD

0 25 50
HORIZONTAL
SCALE IN FEET



APPROVED FOR CONSTRUCTION - 5/2/2011

I.R. 70 - PLAN AND PROFILE
STA. 489+50 TO STA. 501+50

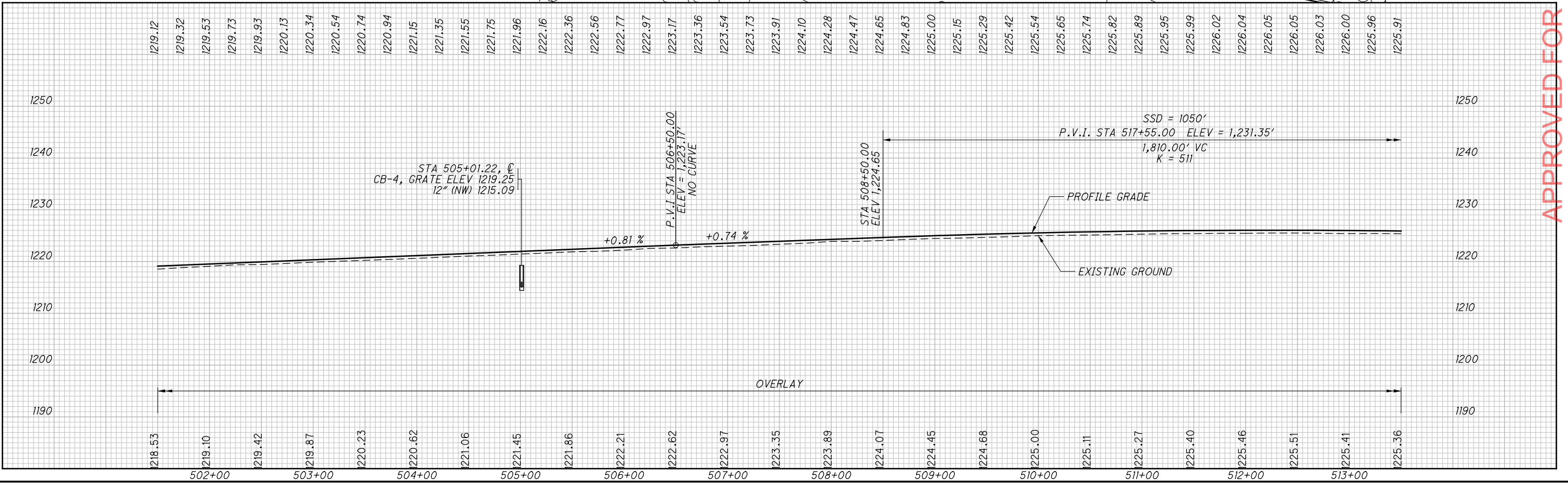
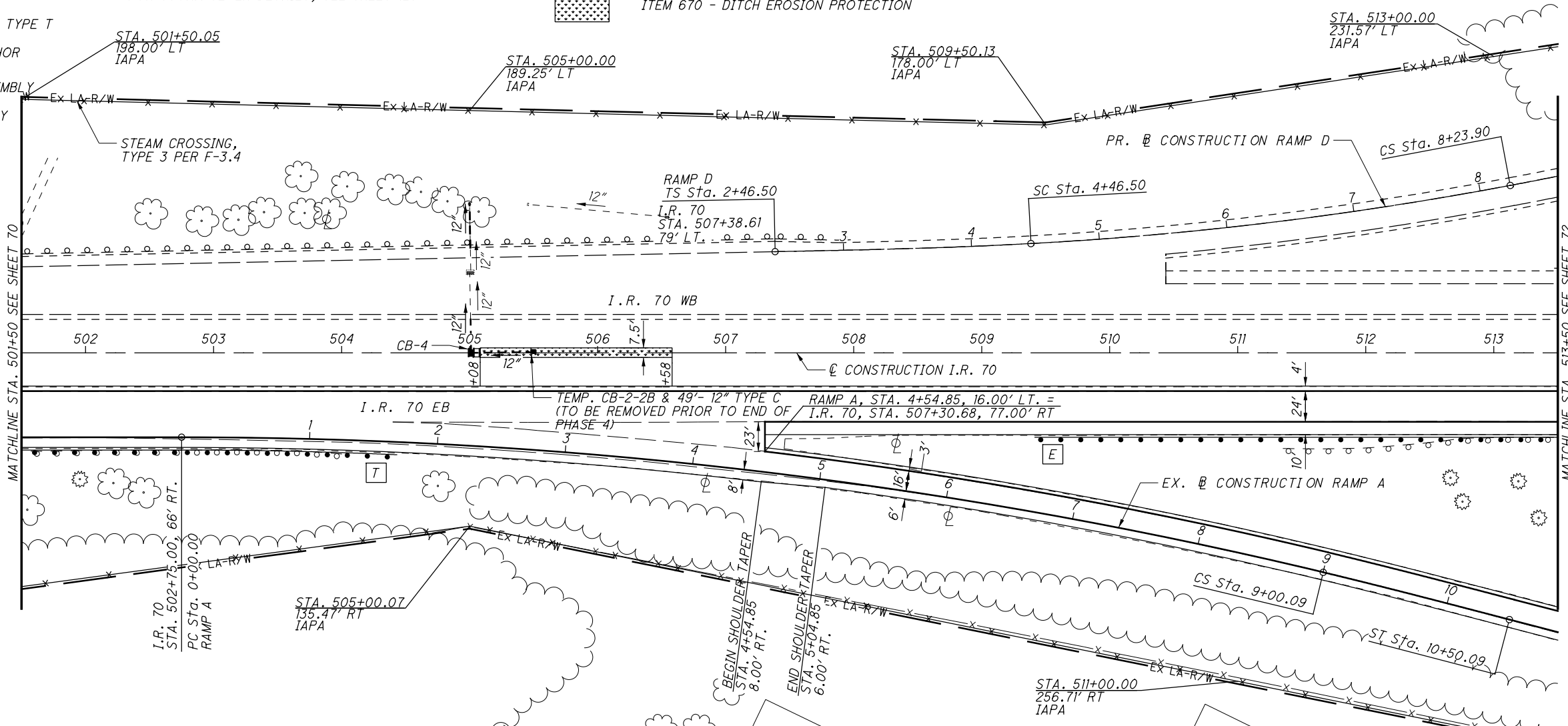
BEL-70-7.61

70
307

- E ANCHOR ASSEMBLY, TYPE E
- T ANCHOR ASSEMBLY, TYPE T
- IAPA INTERMEDIATE ANCHOR POST ASSEMBLY
- CPA CORNER POST ASSEMBLY
- EPA END POST ASSEMBLY
- LP LINE POST

FOR STORM SEWER DETAILS, SEE SHEET 123

ITEM 670 - DITCH EROSION PROTECTION



N

0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED CDS CHECKED BDD

APPROVED FOR CONSTRUCTION - 5/2/2011

**I.R. 70 - PLAN AND PROFILE
STA. 501+50 TO STA. 513+50**

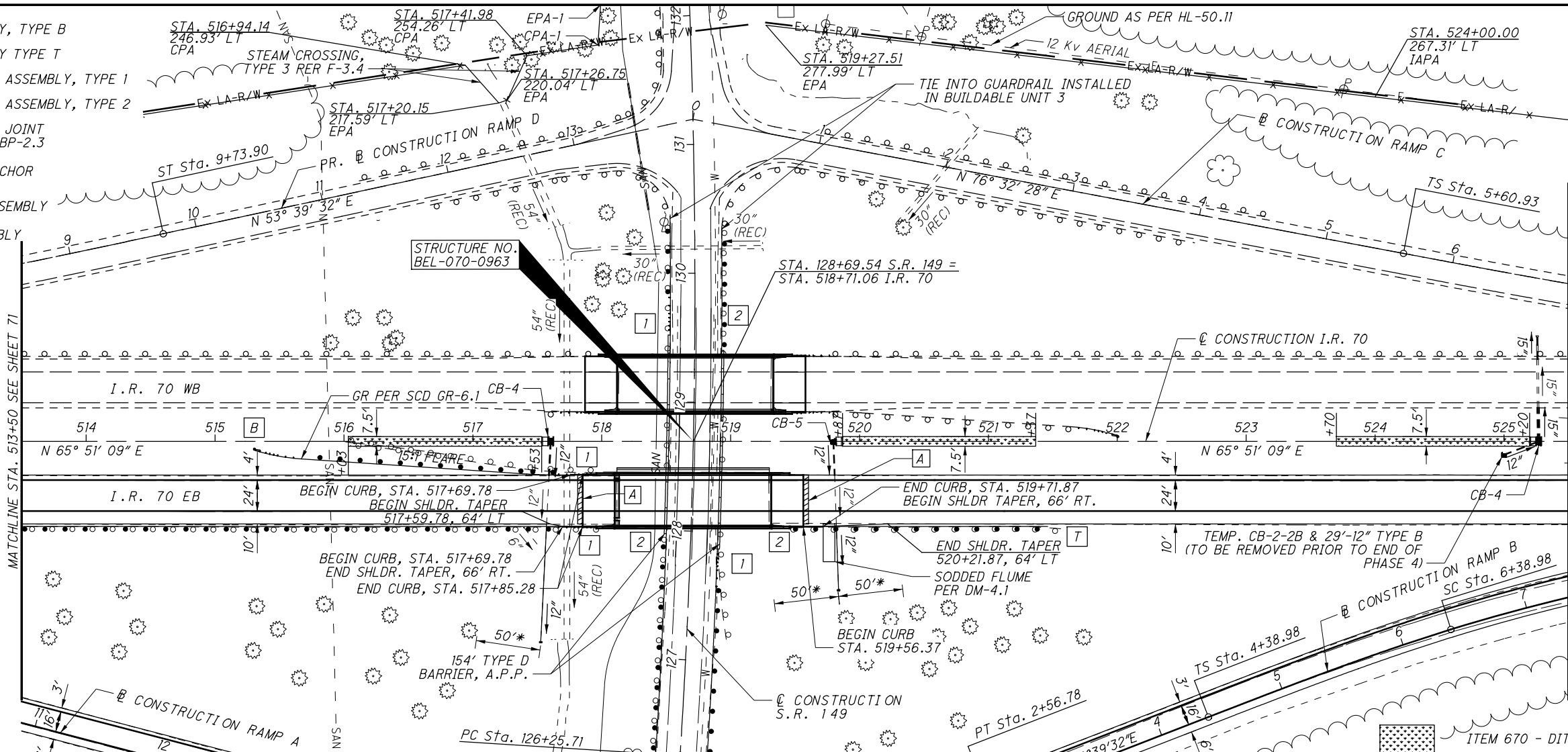
BEL-70-7.61

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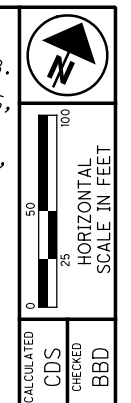
- [B] ANCHOR ASSEMBLY, TYPE B
 - [T] ANCHOR ASSEMBLY TYPE T
 - [1] BRIDGE TERMINAL ASSEMBLY, TYPE 1
 - [2] BRIDGE TERMINAL ASSEMBLY, TYPE 2
 - [A] PRESSURE RELIEF JOINT TYPE A PER SCD BP-2.3
- IAPA INTERMEDIATE ANCHOR POST ASSEMBLY
 CPA CORNER POST ASSEMBLY
 EPA END POST ASSEMBLY
 LP LINE POST

EPA-1 STA. 517+99.97
 307.37' LT, EPA
 CPA-1 STA. 517+96.98
 262.70' LT, CPA

S.R. 149
 CURVE DATA
 P.I. = Sta. 130+52.16
 $\Delta = 8^\circ 30' 48''$ (LT)
 $D_c = 1^\circ 00' 00''$
 $R = 5,729.58'$
 $T = 426.45'$
 $L = 851.33'$
 $E = 15.85'$



FOR RAMP DETAILS,
 SEE SHEETS 192, 193, & 198.
 FOR INTERSECTION DETAILS,
 SEE SHEETS 222 & 223.
 FOR STORM SEWER DETAILS,
 SEE SHEETS 129, 130, & 132



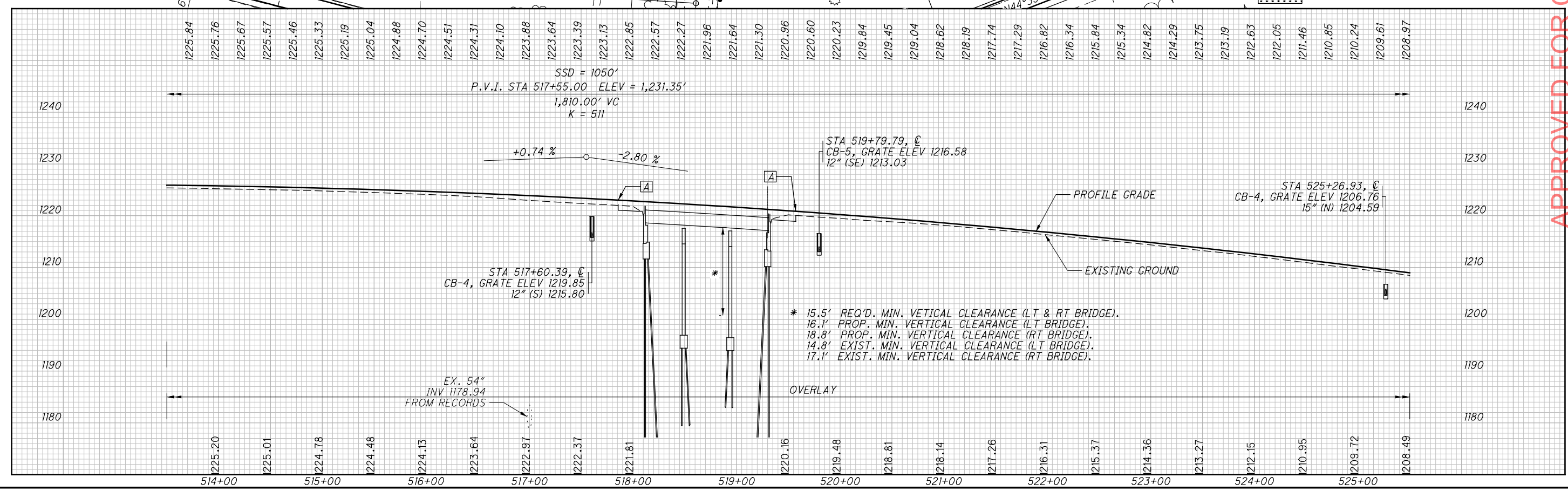
CALCULATED CDS CHECKED BDD

APPROVED FOR CONSTRUCTION - 5/2/2011

I.R. 70 - PLAN AND PROFILE
 STA. 513+50 TO STA. 525+50

BEL-70-7.61

72
307



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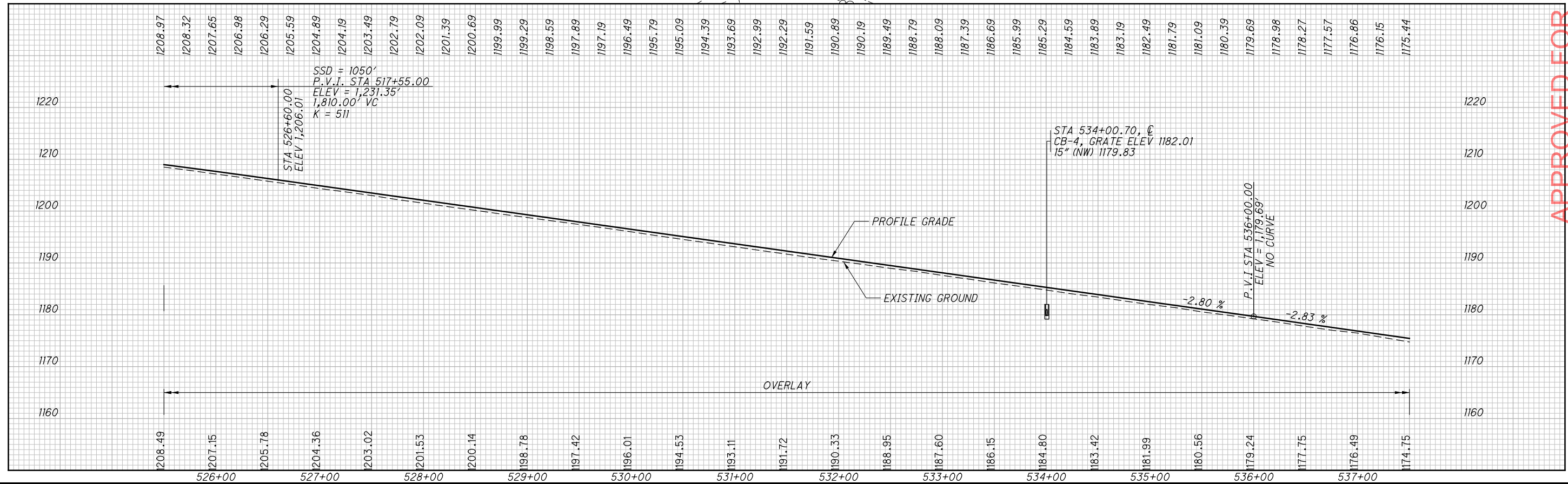
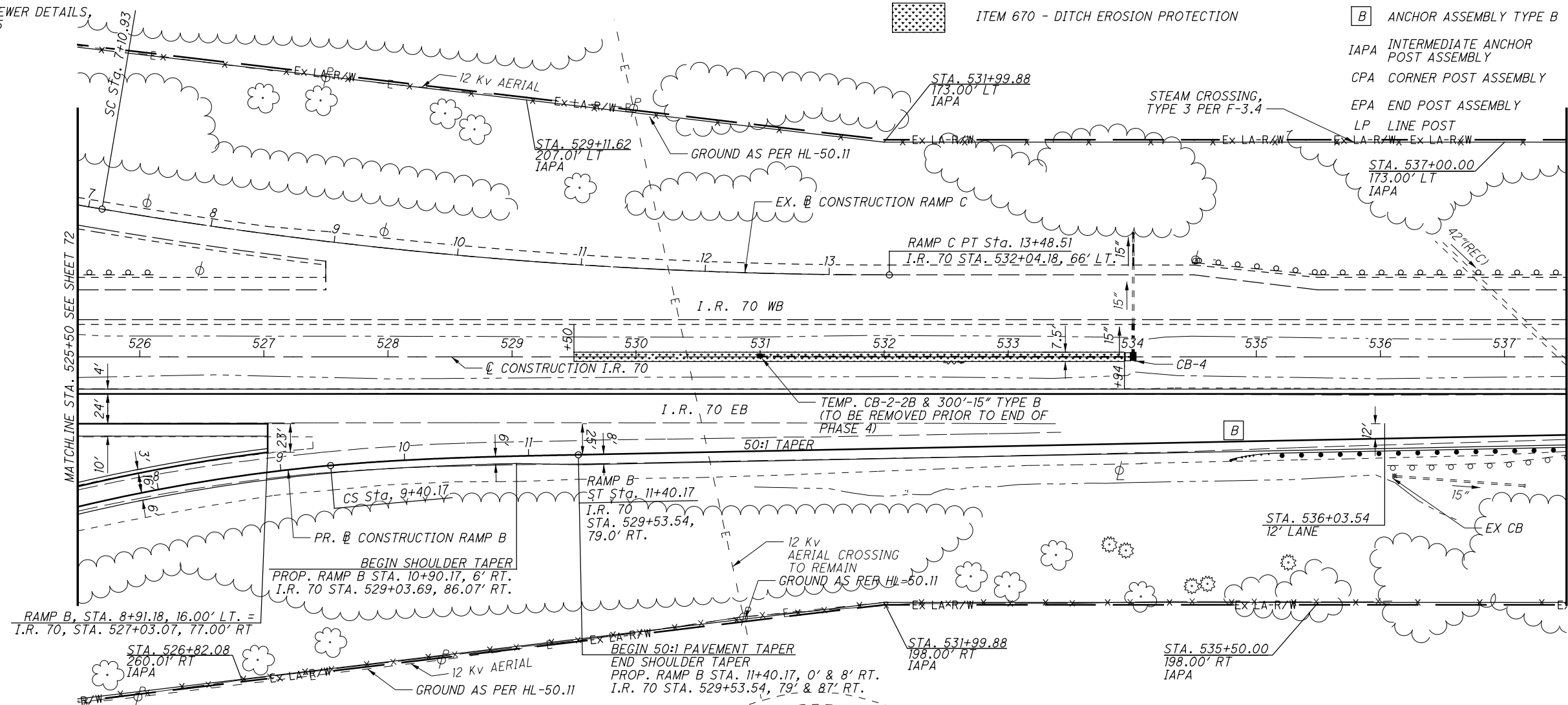
FOR STORM SEWER DETAILS, SEE SHEET 135

ITEM 670 - DITCH EROSION PROTECTION

- [B] ANCHOR ASSEMBLY TYPE B
- IAPA INTERMEDIATE ANCHOR POST ASSEMBLY
- CPA CORNER POST ASSEMBLY
- EPA END POST ASSEMBLY
- LP LINE POST

CALCULATED CDS CHECKED BBD

0 25 50 100
HORIZONTAL SCALE IN FEET

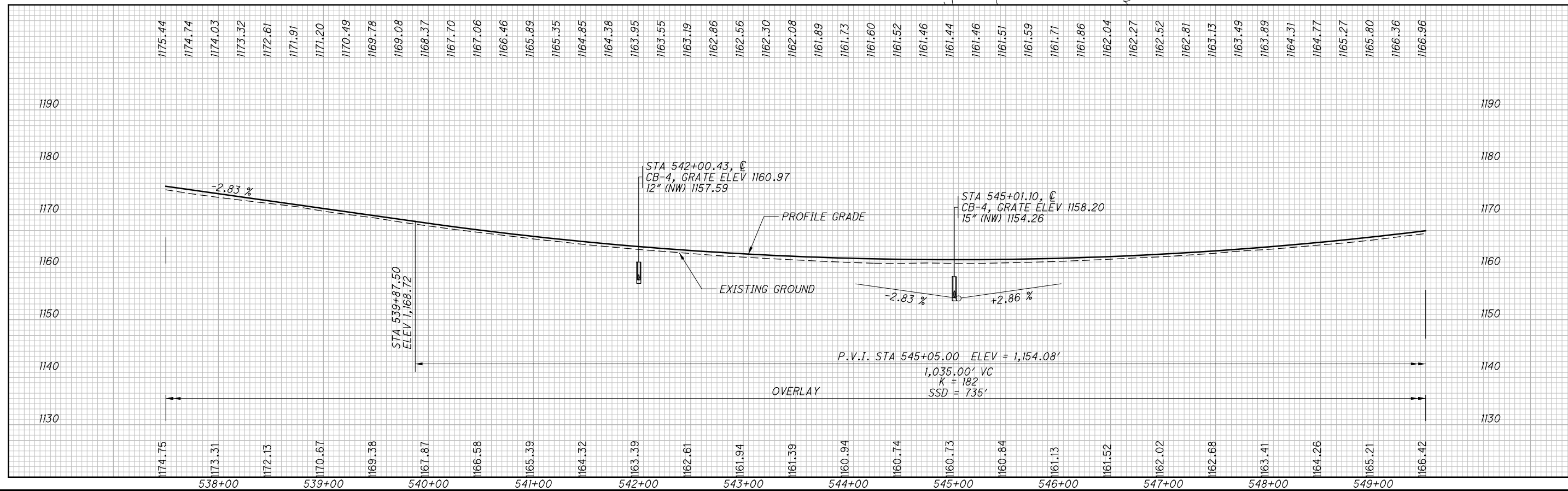
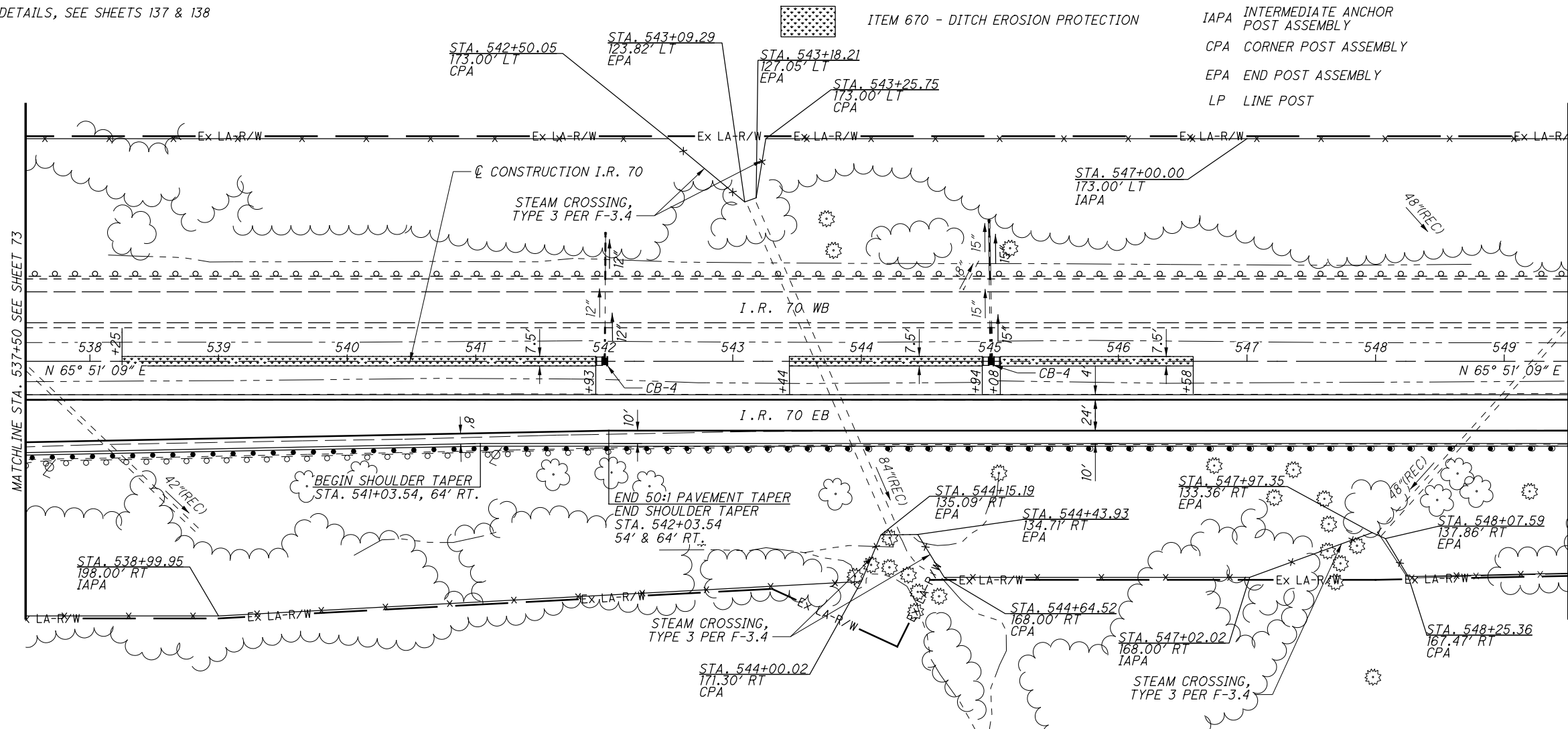


APPROVED FOR CONSTRUCTION - 5/2/2011

I.R. 70 - PLAN AND PROFILE
 STA. 525+50 TO STA. 537+50

BEL-70-7.61

FOR STORM SEWER DETAILS, SEE SHEETS 137 & 138



APPROVED FOR CONSTRUCTION - 5/2/2011



I.R. 70 - PLAN AND PROFILE
 STA. 537+50 TO STA. 549+50

BEL-70-7.61

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FOR STORM SEWER DETAILS, SEE SHEET 141

* DITCH CLEANOUT LIMITS



ITEM 670 - DITCH EROSION PROTECTION

T ANCHOR ASSEMBLY, TYPE T

IAPA INTERMEDIATE ANCHOR POST ASSEMBLY

CPA CORNER POST ASSEMBLY

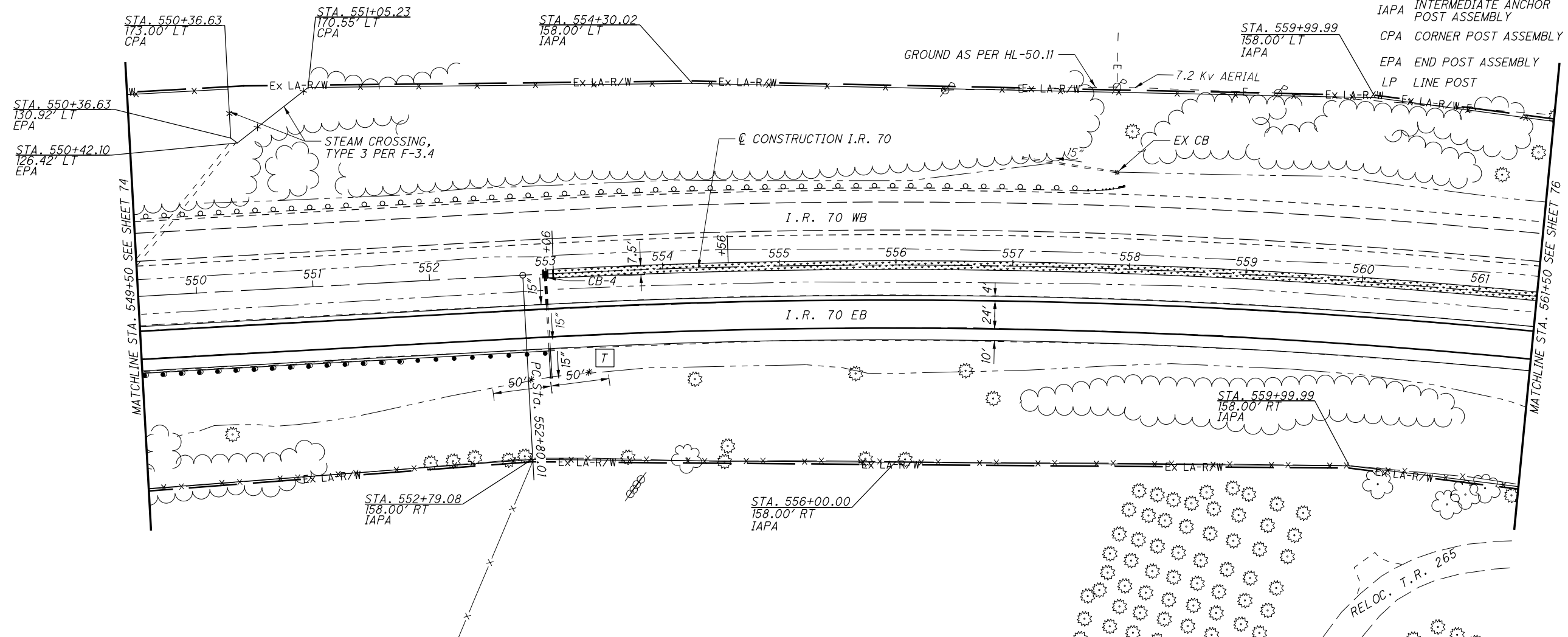
EPA END POST ASSEMBLY

LP LINE POST



0 25 50
HORIZONTAL SCALE IN FEET

CALCULATED CDS CHECKED BDD



IR 70 CURVE DATA
 P.I. = Sta. 566+52.17
 $\Delta = 26^\circ 56' 09''$ (RT)
 $D_c = 1^\circ 00' 00''$
 $R = 5,729.58'$
 $T = 1,372.16'$
 $L = 2,693.58'$
 $E = 162.02'$
 $E_{max} = 0.036$

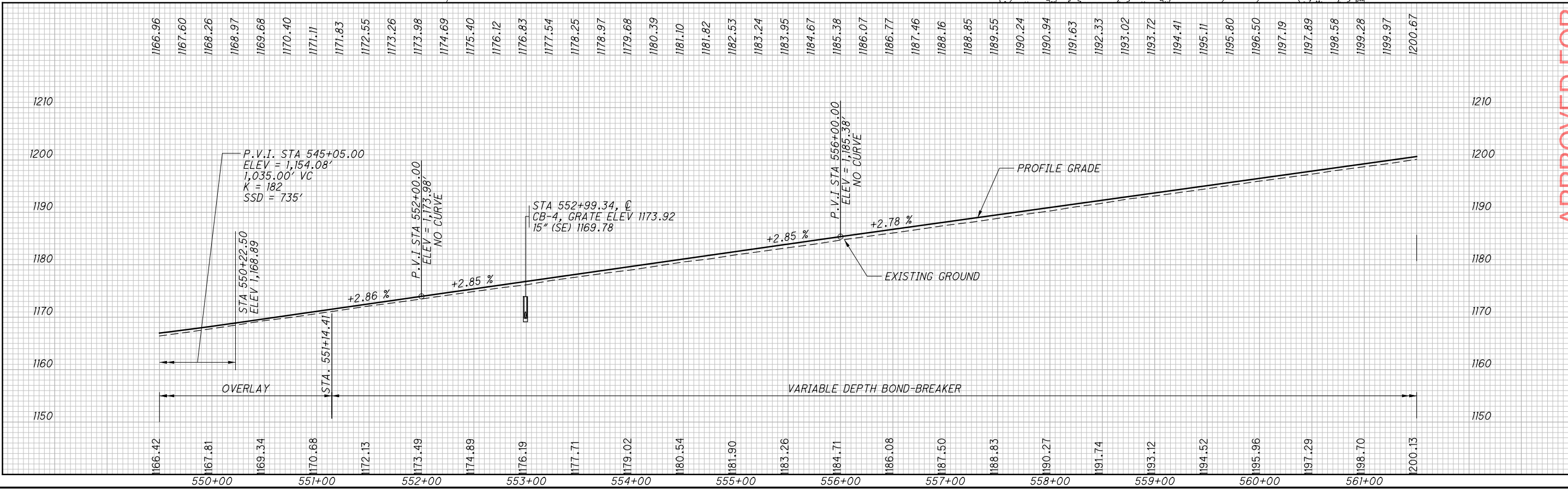
APPROVED FOR CONSTRUCTION - 5/2/2011

I.R. 70 - PLAN AND PROFILE
 STA 549+50 TO STA. 561+50

BEL-70-7.61

75
307

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IR 70
 CURVE DATA
 P.I. = Sta. 566+52.17
 $\Delta = 26^\circ 56' 09''$ (RT)
 $D_c = 1^\circ 00' 00''$
 $R = 5,729.58'$
 $T = 1,372.16'$
 $L = 2,693.58'$
 $E = 162.02'$
 $E_{max} = 0.036$

- B** ANCHOR ASSEMBLY TYPE B
- T** ANCHOR ASSEMBLY TYPE T
- IAPA INTERMEDIATE ANCHOR POST ASSEMBLY
- CPA CORNER POST ASSEMBLY
- EPA END POST ASSEMBLY
- LP LINE POST

 ITEM 670 - DITCH EROSION PROTECTION

* DITCH CLEANOUT LIMITS
 STA. 569+27.58
 222.56' LT
 CPA

FOR STORM SEWER DETAILS, SEE SHEETS 144 & 146

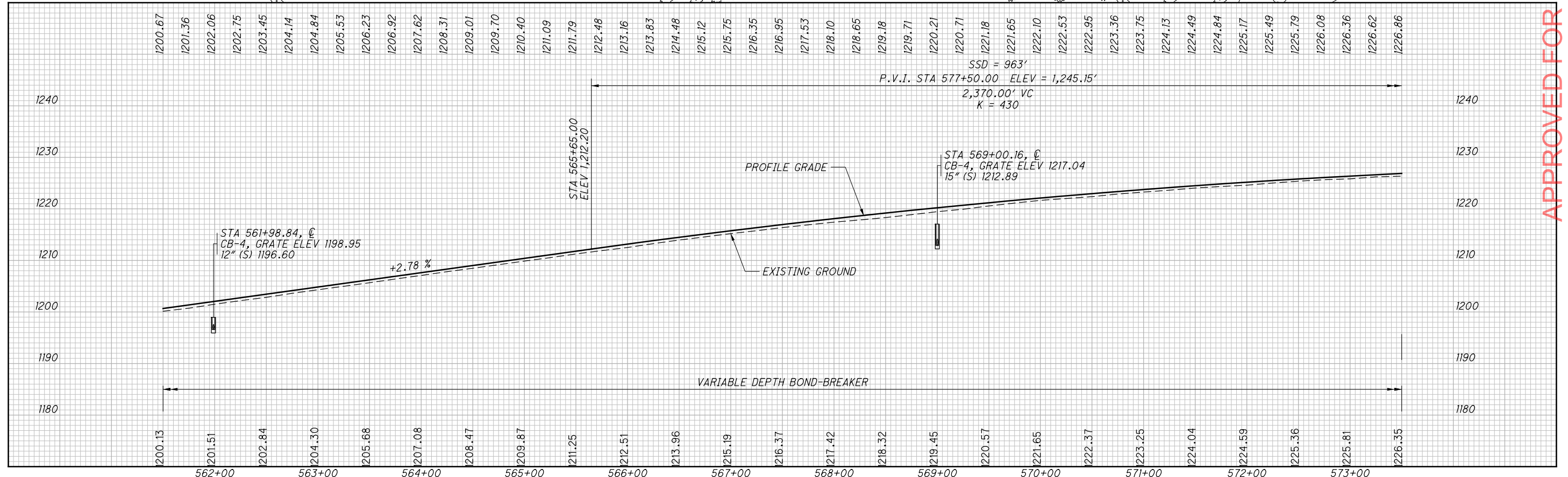
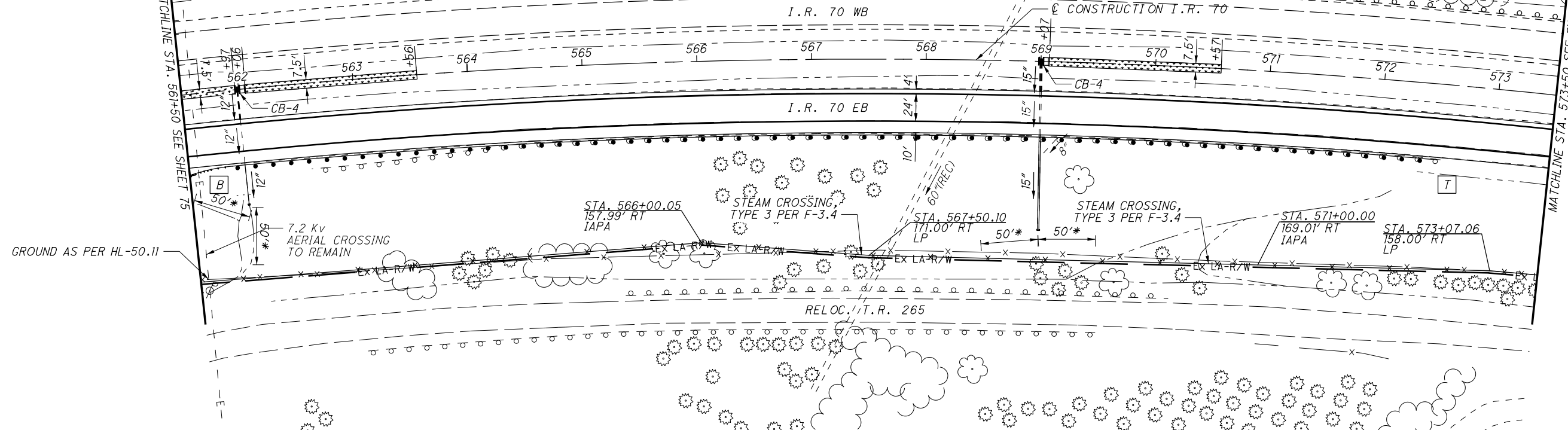
CALCULATED CDS CHECKED BDD

0 25 50
 HORIZONTAL SCALE IN FEET

GROUND AS PER HL-50.11

MATCHLINE STA. 561+50 SEE SHEET 75

MATCHLINE STA. 573+50 SEE SHEET 77



APPROVED FOR CONSTRUCTION - 5/2/2011

I.R. 70 - PLAN AND PROFILE
 STA. 561+50 TO STA. 573+50

BEL-70-7.61

IR 70
CURVE DATA
P.I. = Sta. 566+52.17
 $\Delta = 26^\circ 56' 09''$ (RT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 1,372.16'
L = 2,693.58'
E = 162.02'
Emax = 0.036

FOR MEDIAN U-TURN DETAILS, SEE SHEET 237.

- T ANCHOR ASSEMBLY, TYPE T
- E ANCHOR ASSEMBLY, TYPE B
- I BRIDGE TERMINAL ASSEMBLY, TYPE I
- I IMPACT ATTENUATOR, TYPE I

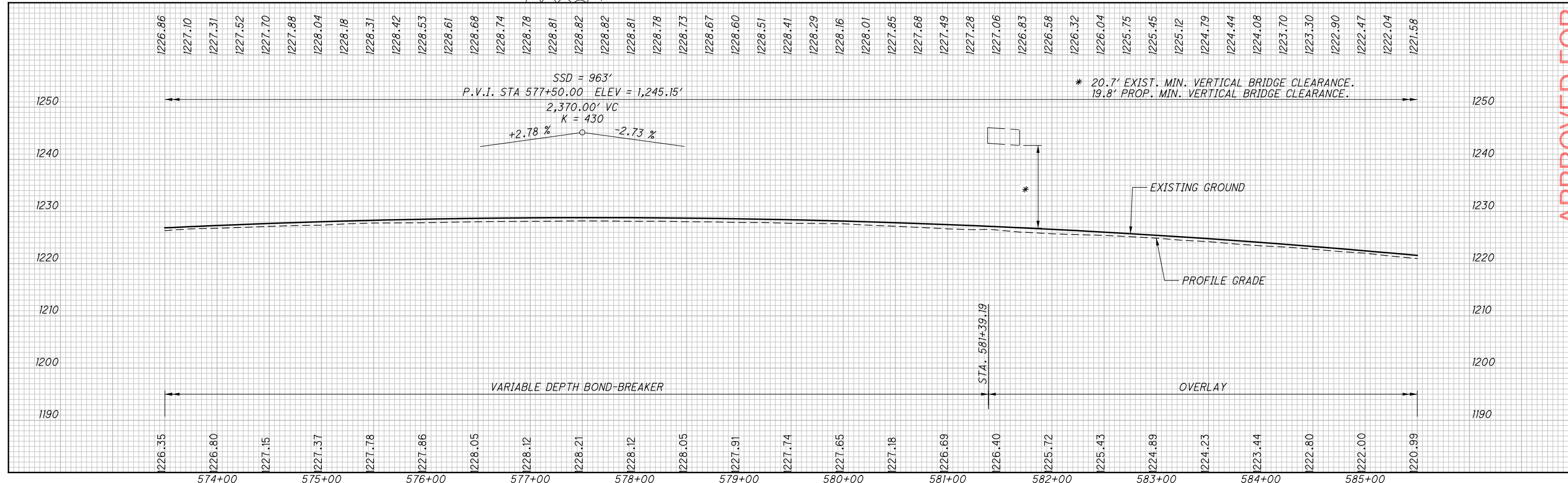
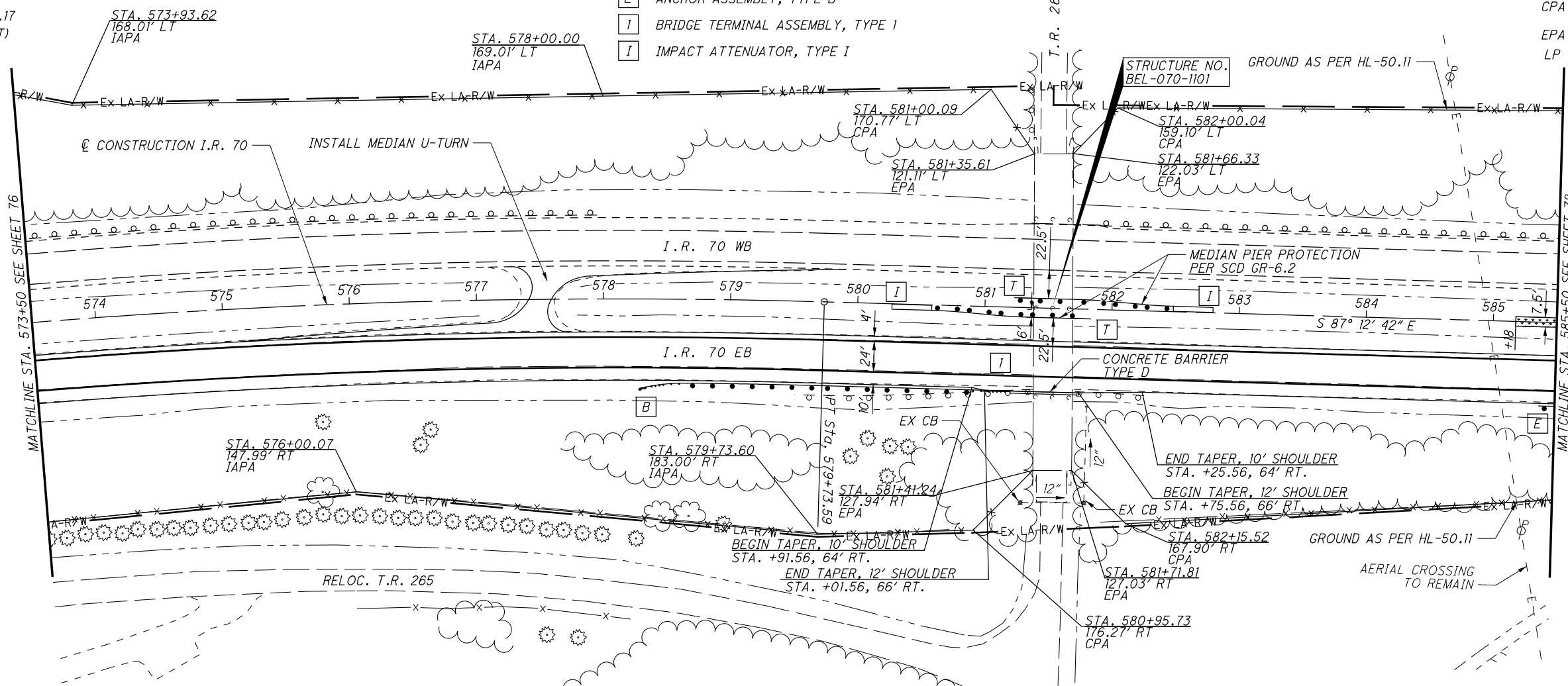


ITEM 670 - DITCH EROSION PROTECTION

- IAPA INTERMEDIATE ANCHOR POST ASSEMBLY
- CPA CORNER POST ASSEMBLY
- EPA END POST ASSEMBLY
- LP LINE POST

0 50 100
25
HORIZONTAL
SCALE IN FEET

CALCULATED
CDS
CHECKED
BBD





APPROVED FOR CONSTRUCTION - 5/2/2011

I.R. 70 - PLAN AND PROFILE
STA. 573+50 TO STA. 585+50

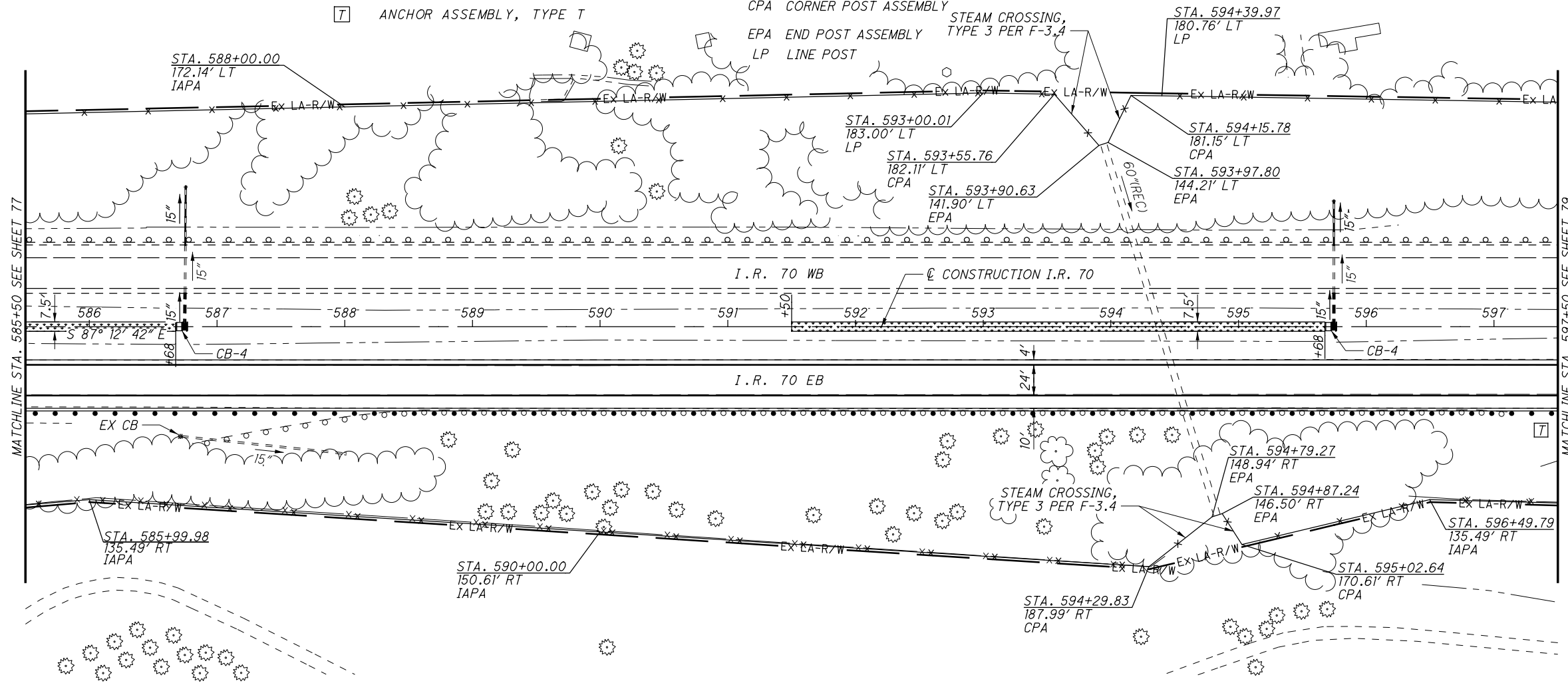
BEL-70-7.61

77
307

FOR STORM SEWER DETAILS, SEE SHEETS 153 & 157

 ITEM 670 - DITCH EROSION PROTECTION
 ANCHOR ASSEMBLY, TYPE T

IAPA INTERMEDIATE ANCHOR POST ASSEMBLY
 CPA CORNER POST ASSEMBLY
 EPA END POST ASSEMBLY
 LP LINE POST



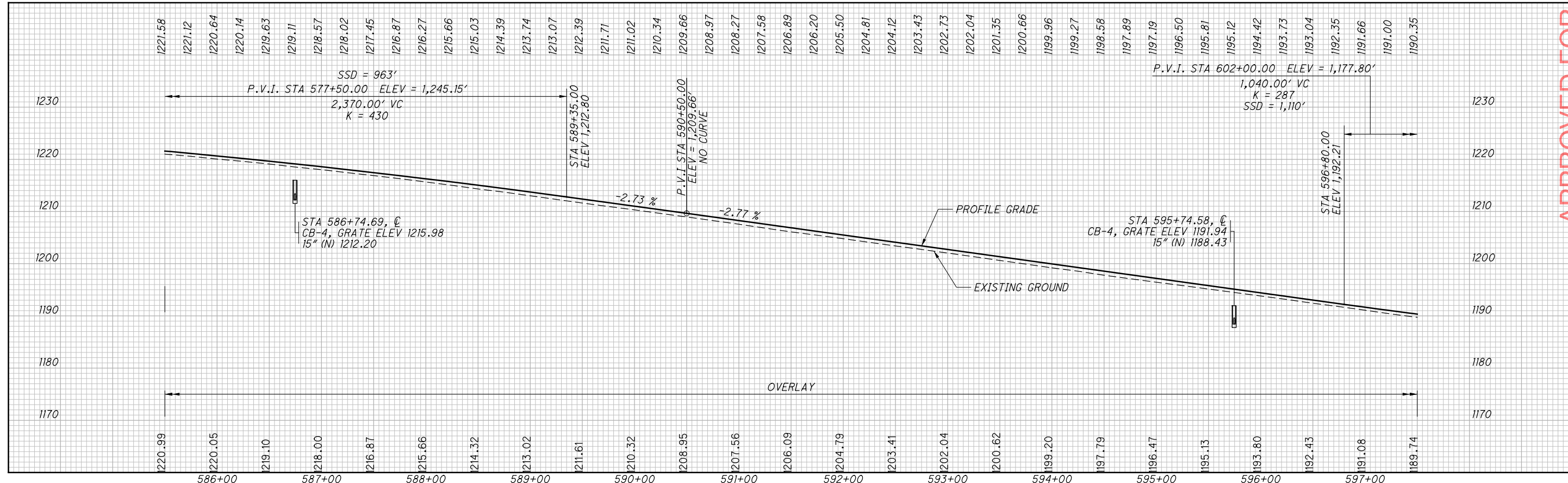
CALCULATED CDS CHECKED BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

I.R. 70 - PLAN AND PROFILE
 STA. 585+50 TO STA. 597+50

BEL-70-7.61

78
307



P:\76825\roadway\sheet\76825GP4.16.dgn 4/14/2011 10:19:42 AM mcornett

FOR STORM SEWER DETAILS, SEE SHEET 161

* DITCH CLEANOUT LIMITS

[E] ANCHOR ASSEMBLY, TYPE E



ITEM 670 - DITCH EROSION PROTECTION

IAPA INTERMEDIATE ANCHOR POST ASSEMBLY

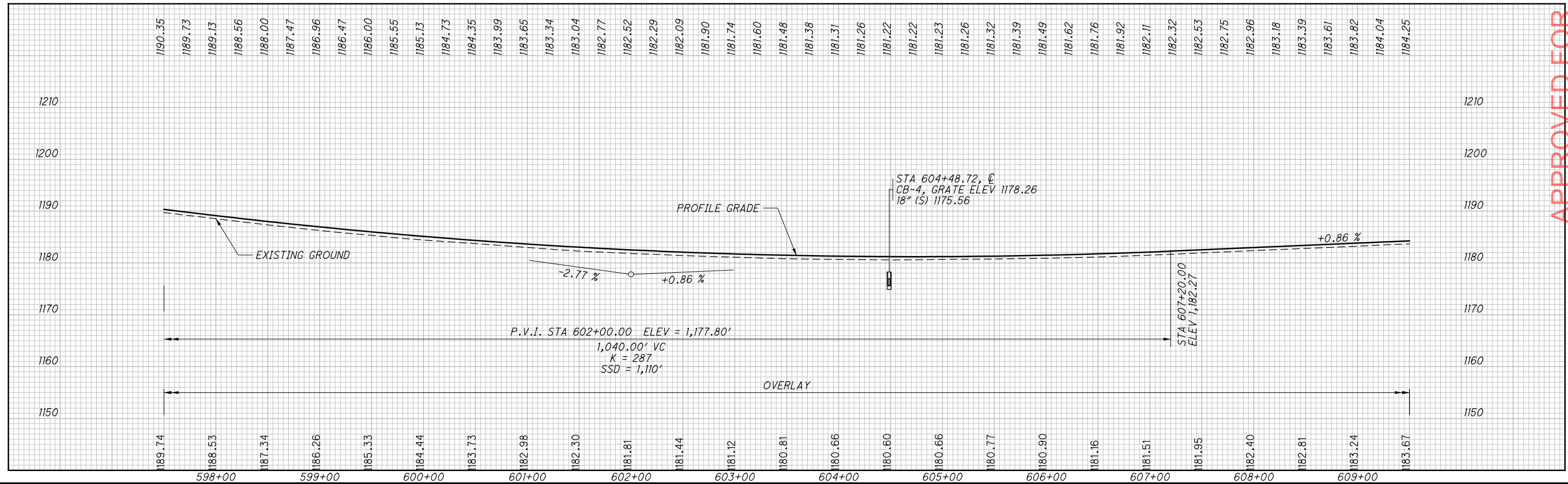
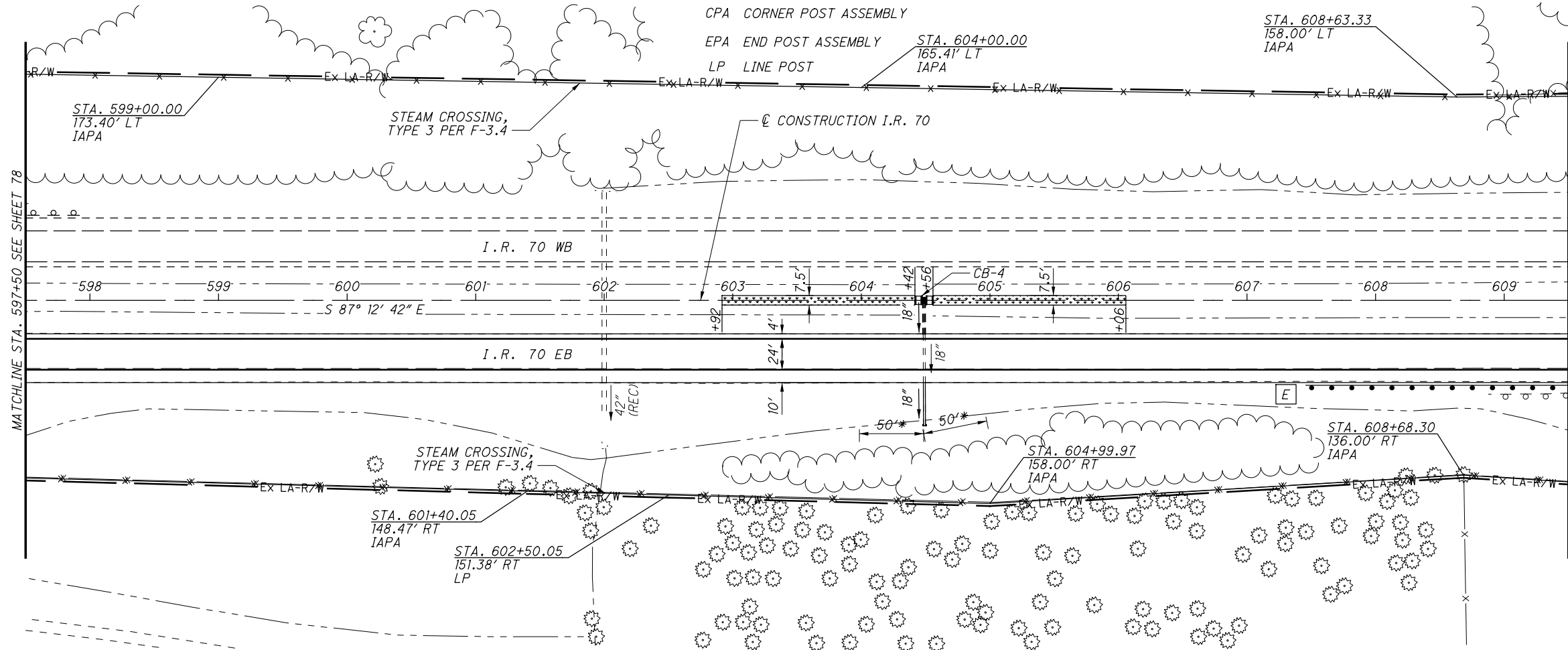
CPA CORNER POST ASSEMBLY

EPA END POST ASSEMBLY

LP LINE POST

STA. 604+00.00
165.41' LT
IAPA

STA. 608+63.33
158.00' LT
IAPA



APPROVED FOR CONSTRUCTION - 5/2/2011



CALCULATED
CDS
CHECKED
BBD

I.R. 70 - PLAN AND PROFILE
STA. 597+50 TO STA. 609+50

BEL-70-7.61

79
307

FOR STORM SEWER DETAILS, SEE SHEETS 163 & 165

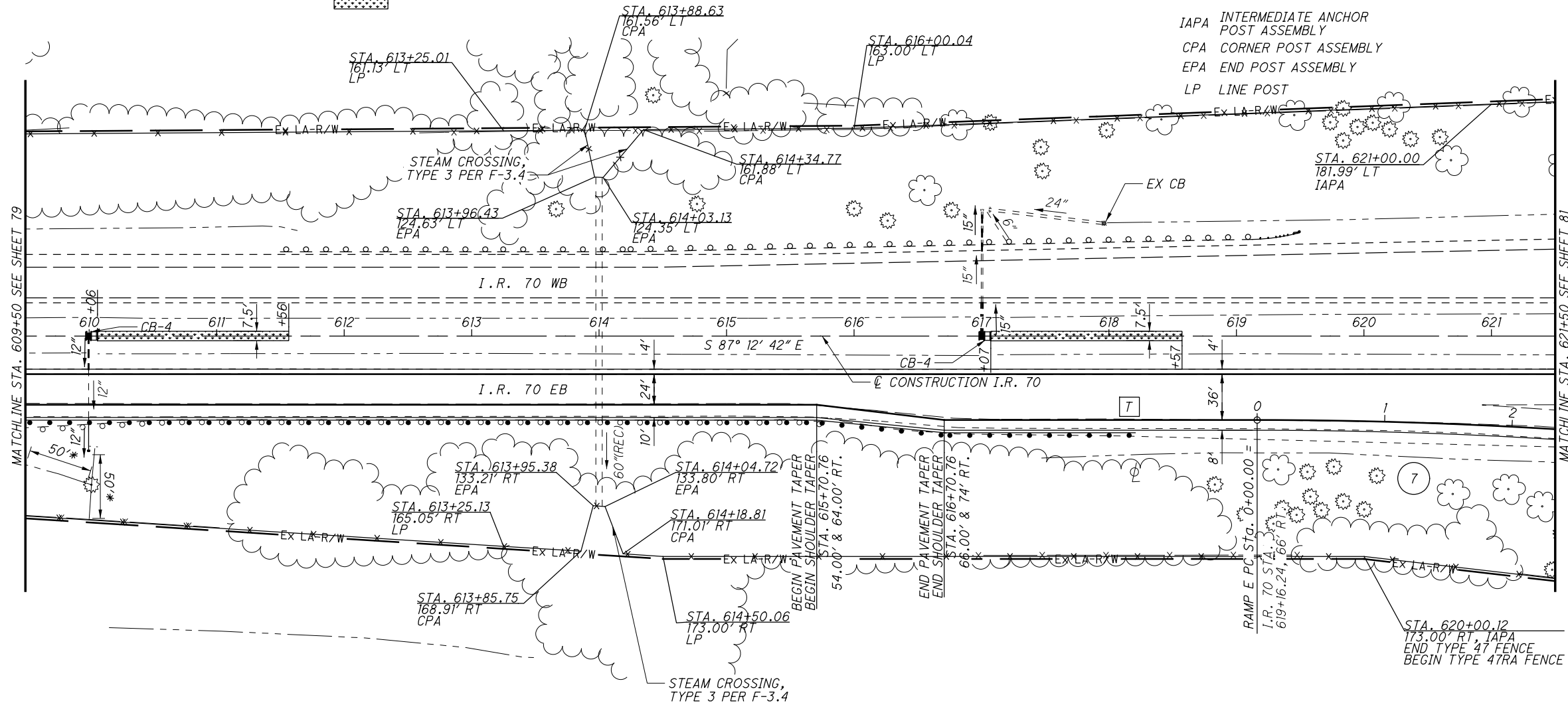


ITEM 670 - DITCH EROSION PROTECTION

* DITCH CLEANOUT LIMITS

T ANCHOR ASSEMBLY, TYPE T

IAPA INTERMEDIATE ANCHOR
POST ASSEMBLY
CPA CORNER POST ASSEMBLY
EPA END POST ASSEMBLY
LP LINE POST



REST AREA
CURVE DATA (7)

P.I. = Sta. 2+77.02
 $\Delta = 8^\circ 17' 46''$ (RT)
 $D_c = 1^\circ 30' 00''$
 $R = 3,819.72'$
 $T = 277.02'$
 $L = 553.07'$
 $E = 10.03'$
 $E_{max} = 0.046$ (EX.)



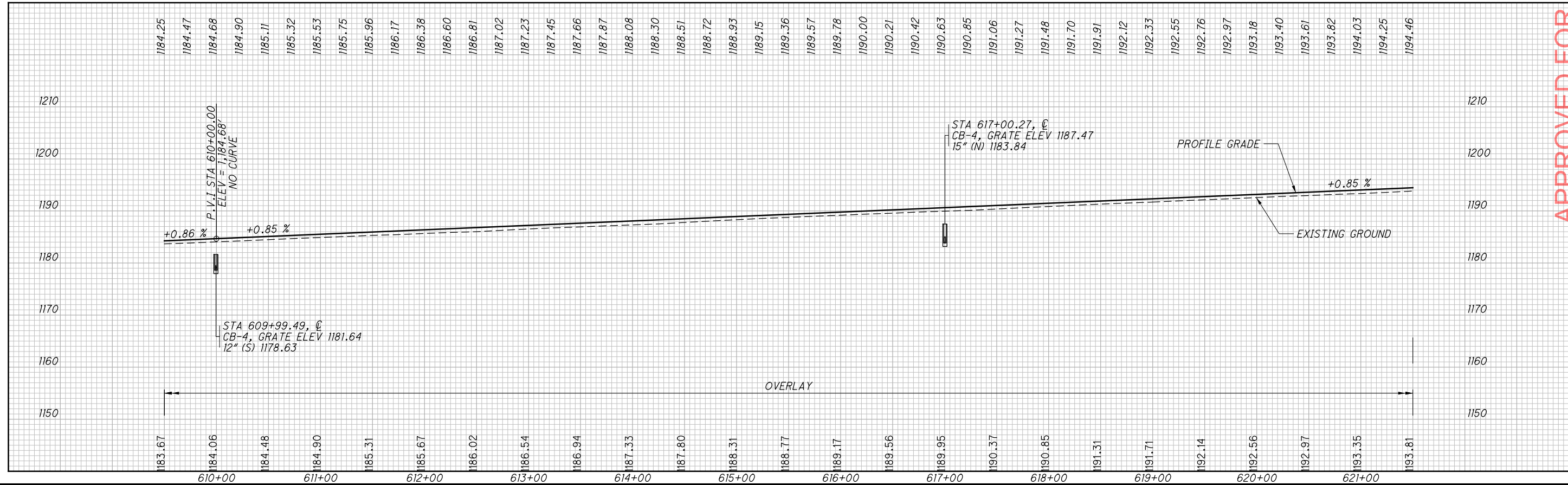
CALCULATED
CDS
CHECKED
BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

I.R. 70 - PLAN AND PROFILE
STA. 609+50 TO STA. 621+50

BEL-70-7.61

80
307



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REST AREA CURVE DATA 1

P.I. = STA. 4+78.72
 $\Delta = 5^{\circ}48'54''$ LT.
 $D_c = 1^{\circ}40'00''$
 $R = 3437.75$
 $Ls_1 = 200.00'$
 $Ls_2 = 0.00'$
 $\theta s_1 = 1^{\circ}40'00''$
 $\theta s_2 = 0^{\circ}00'00''$
 $LT_1 = 133.34'$
 $LT_2 = 0.00'$
 $ST_1 = 66.67'$
 $ST_2 = 0.00'$
 $L_c = 248.90'$
 $T_1 = 269.84'$
 $T_2 = 179.38'$
 $e_{MAX} = 0.038$

REST AREA CURVE DATA 7

P.I. = Sta. 2+77.02
 $\Delta = 8^{\circ}17'46''$ (RT)
 $D_c = 1^{\circ}30'00''$
 $R = 3,819.72'$
 $T = 277.02'$
 $L = 553.07'$
 $E = 10.03'$
 $E_{max} = 0.035$ (EX.)

REST AREA CURVE DATA 2

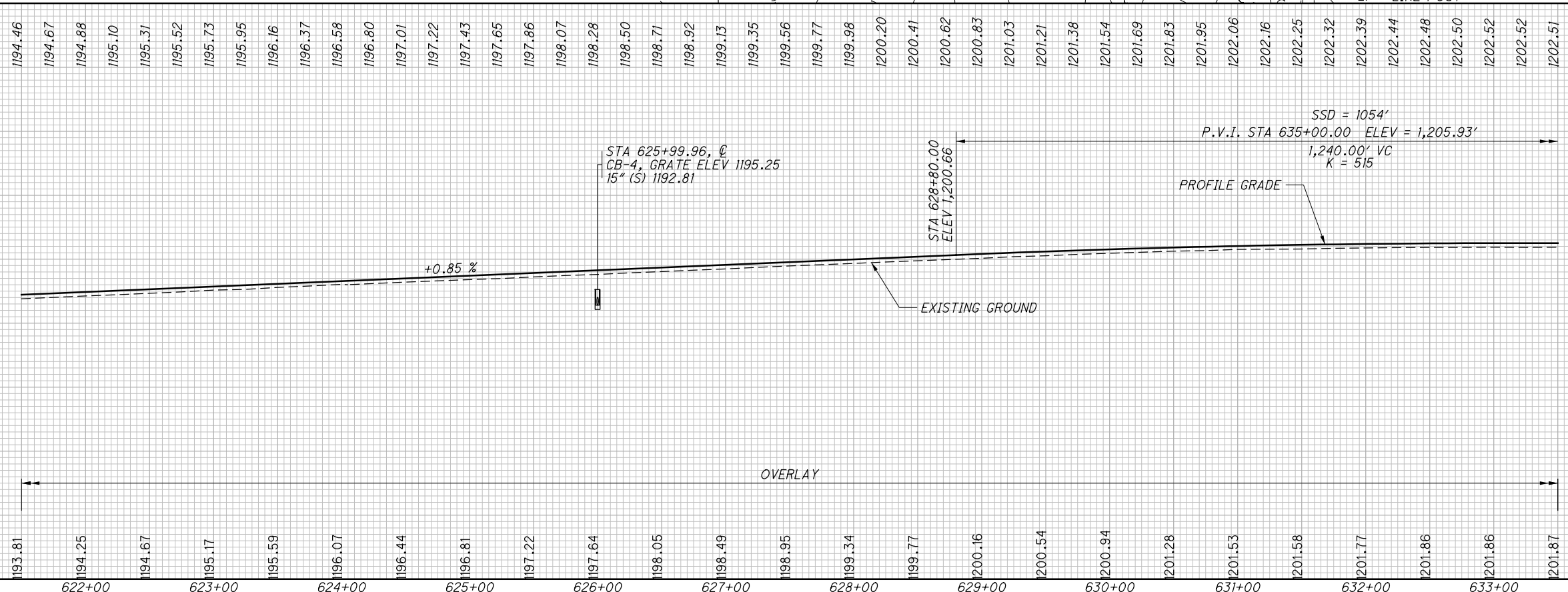
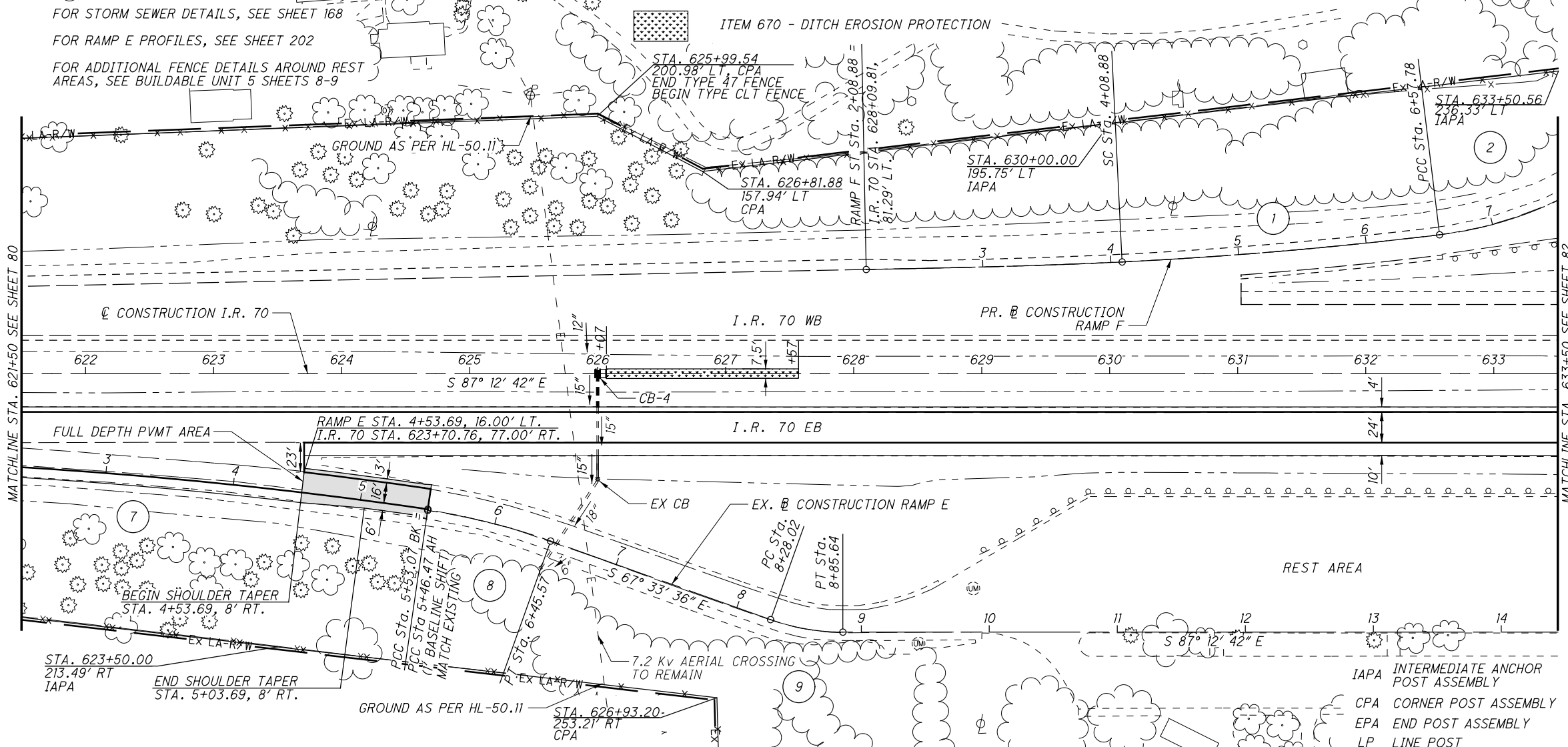
P.I. = Sta. 7+62.27
 $\Delta = 38^{\circ}24'19''$ (LT)
 $D_c = 19^{\circ}05'55''$
 $R = 300.00'$
 $T = 104.49'$
 $L = 201.09'$
 $E = 17.68'$

REST AREA CURVE DATA 8

P.I. = Sta. 6+02.79
 $\Delta = 11^{\circ}21'23''$ (RT)
 $D_c = 11^{\circ}27'33''$
 $R = 500.00'$
 $T = 49.71'$
 $L = 99.10'$
 $E = 2.47'$

REST AREA CURVE DATA 9

P.I. = Sta. 8+63.72
 $\Delta = 19^{\circ}39'09''$ (LT)
 $D_c = 34^{\circ}06'17''$
 $R = 168.00'$
 $T = 29.10'$
 $L = 57.62'$
 $E = 2.50'$



APPROVED FOR CONSTRUCTION - 5/2/2011



**I.R. 70 - PLAN AND PROFILE
 STA. 621+50 TO STA. 633+50**

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REST AREA CURVE DATA (2)

P.I. = Sta. 7+62.27
 $\Delta = 38^\circ 24' 19''$ (LT)
 $D_c = 19^\circ 05' 55''$
 $R = 300.00'$
 $T = 104.49'$
 $L = 201.09'$
 $E = 17.68'$

REST AREA CURVE DATA (3)

P.I. = Sta. 9+29.92
 $\Delta = 45^\circ 21' 54''$ (RT)
 $D_c = 33^\circ 42' 12''$
 $R = 170.00'$
 $T = 71.05'$
 $L = 134.60'$
 $E = 14.25'$

REST AREA CURVE DATA (10)

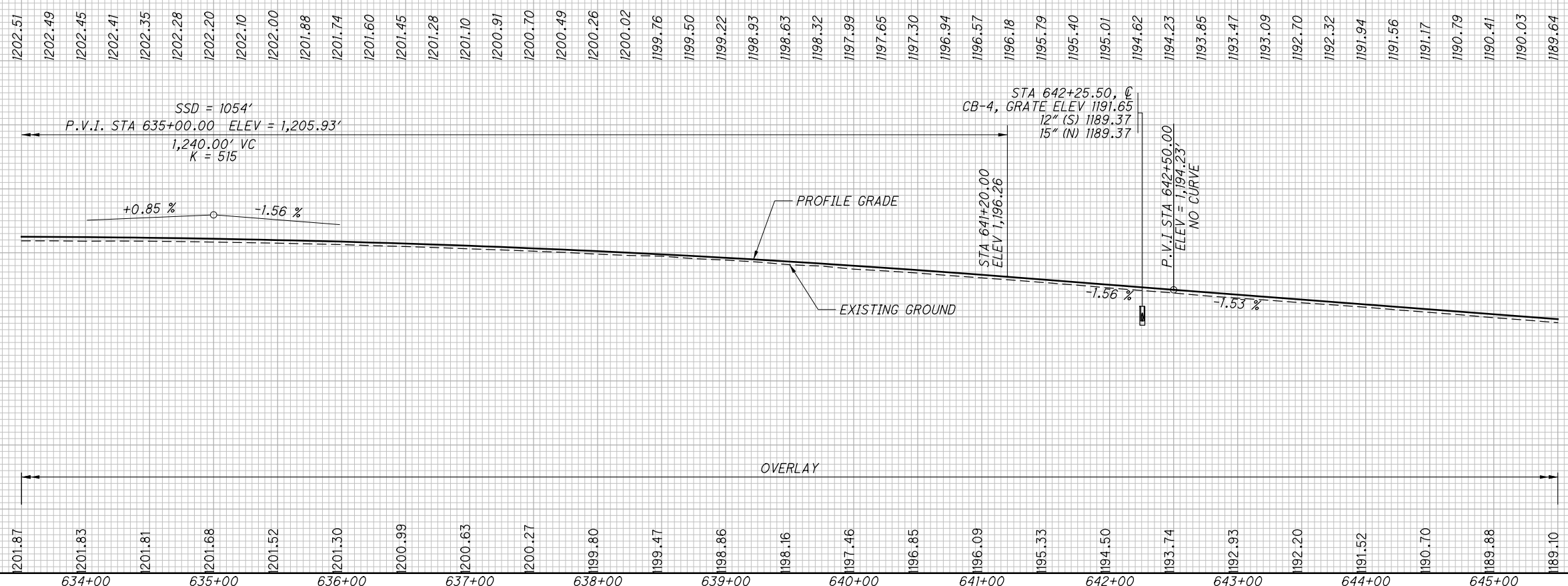
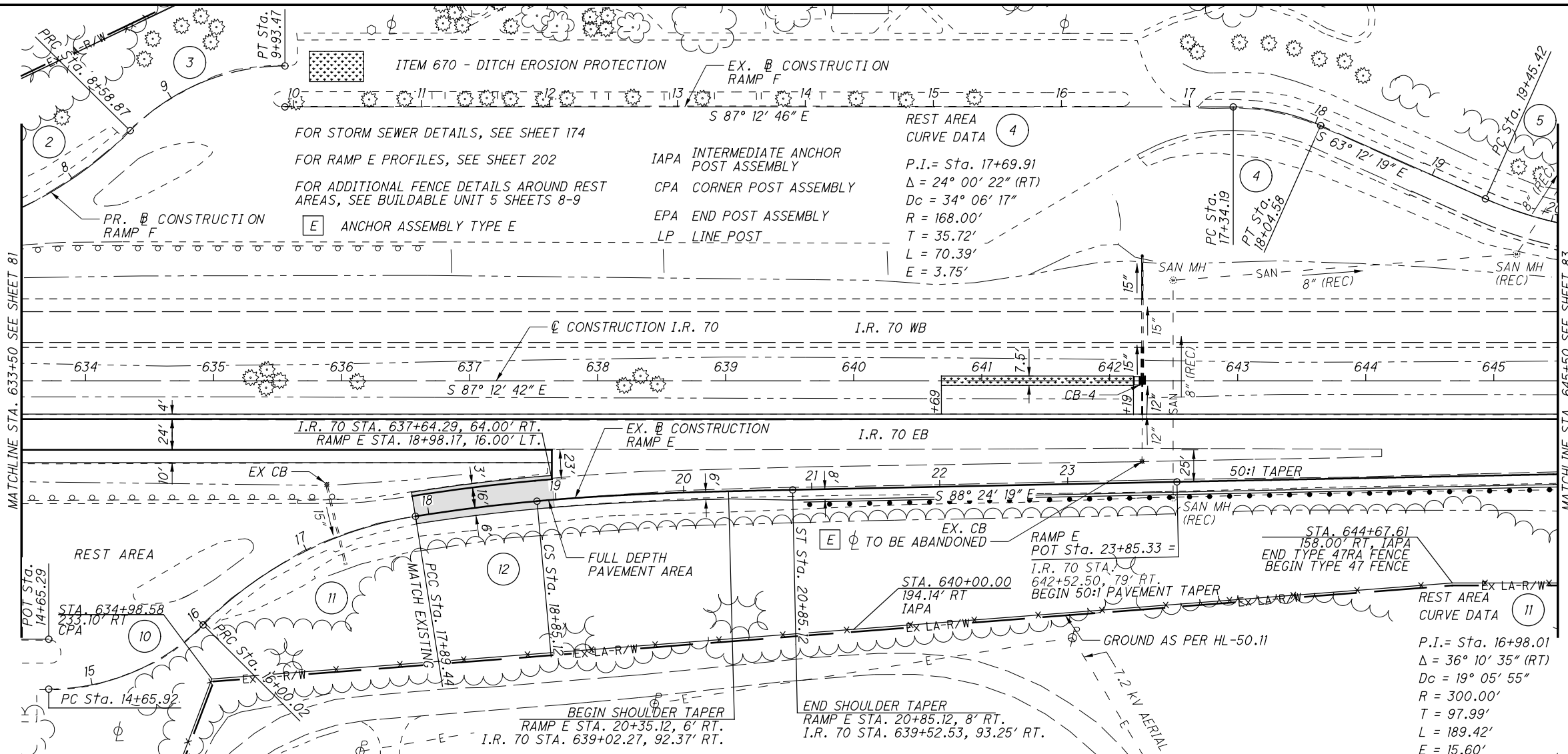
P.I. = Sta. 15+36.68
 $\Delta = 45^\circ 11' 50''$ (LT)
 $D_c = 33^\circ 42' 12''$
 $R = 170.00'$
 $T = 70.76'$
 $L = 134.10'$
 $E = 14.14'$

REST AREA CURVE DATA (5)

P.I. = Sta. 19+84.23
 $\Delta = 14^\circ 44' 32''$ (LT)
 $D_c = 19^\circ 05' 55''$
 $R = 300.00'$
 $T = 38.81'$
 $L = 77.19'$
 $E = 2.50'$
 $E_{max} = 0.032$

REST AREA CURVE DATA (12)

P.I. = STA. 18+95.98
 $\Delta = 7^\circ 49' 38''$ RT.
 $D_c = 4^\circ 00' 00''$
 $R = 1432.39'$
 $Ls1 = 0.00'$
 $Ls2 = 200.00'$
 $\theta s1 = 0^\circ 00' 00''$
 $\theta s2 = 4^\circ 00' 00''$
 $LT1 = 0.00'$
 $LT2 = 133.37'$
 $ST1 = 0.00'$
 $ST2 = 66.70'$
 $Lc = 95.68'$
 $T1 = 106.54'$
 $T2 = 189.51'$
 $e_{MAX} = 0.063$ (EX.)



APPROVED FOR CONSTRUCTION - 5/2/2011



I.R. 70 - PLAN AND PROFILE STA. 633+50 TO STA. 645+50

BEL-70-7.61

FOR STORM SEWER DETAILS, SEE SHEETS 175, 177 & 179
 FOR ADDITIONAL FENCE DETAILS AROUND REST AREAS, SEE BUILDABLE UNIT 5 SHEETS 8-9

REST AREA CURVE DATA (6)
 P.I. = Sta. 23+75.94
 $\Delta = 10^\circ 08' 04''$ (LT)
 $D_c = 1^\circ 30' 00''$
 $R = 3,819.72'$
 $T = 338.69'$
 $L = 675.62'$
 $E = 14.99'$
 $E_{max} = 0.032$ (EX.)

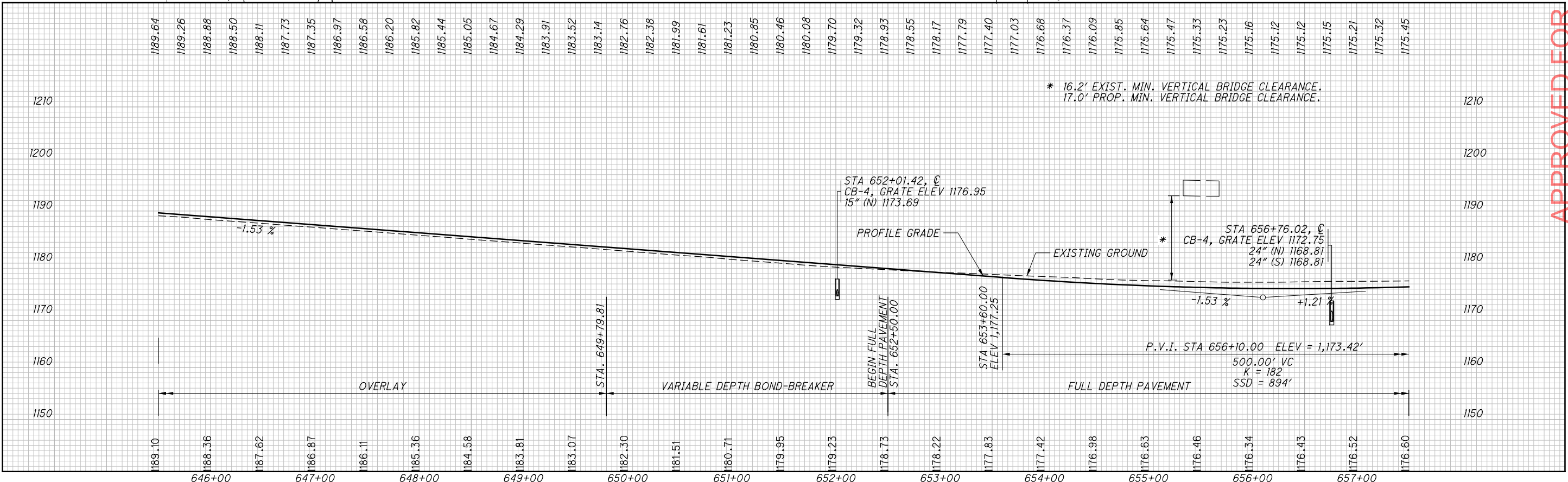
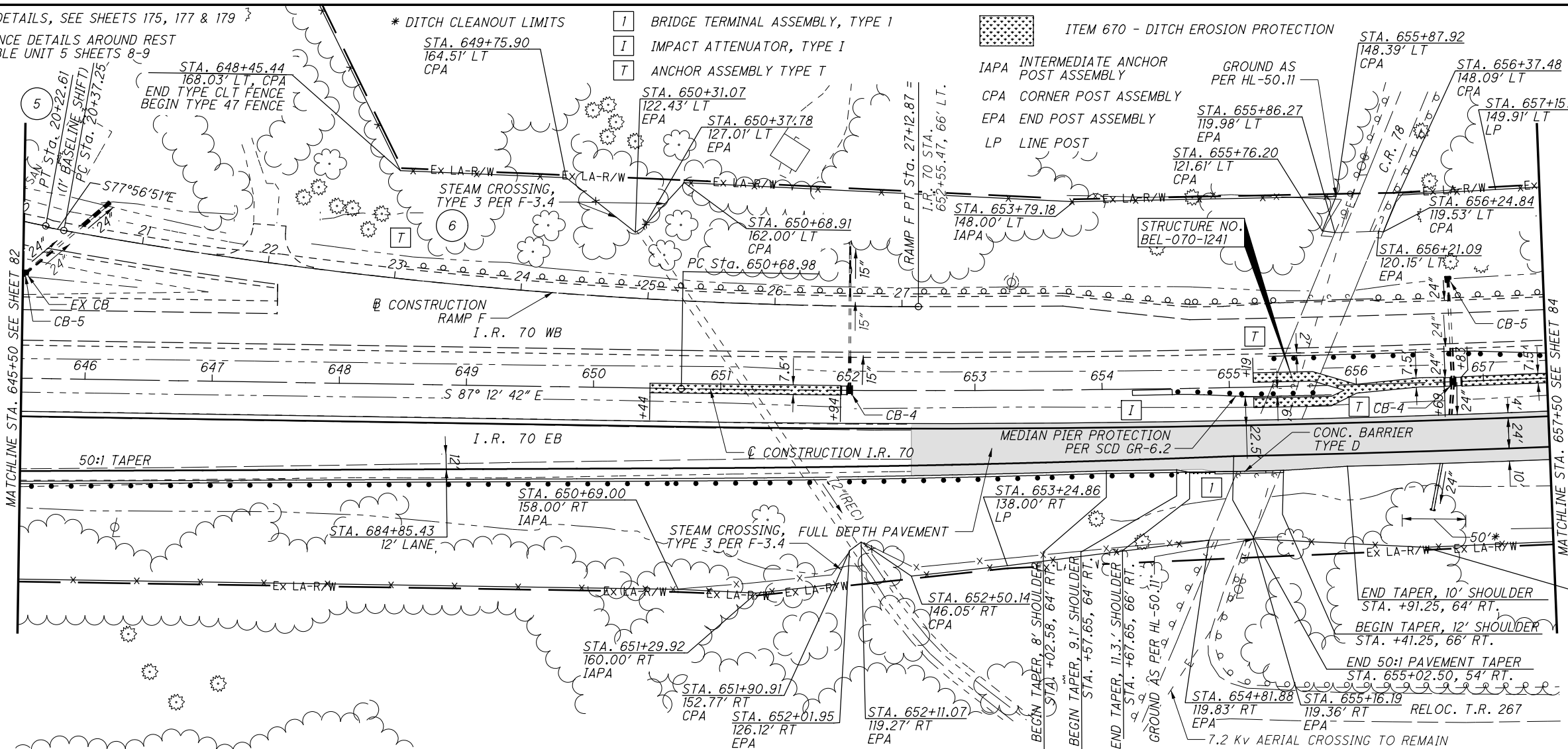
REST AREA CURVE DATA (5)
 P.I. = Sta. 19+84.23
 $\Delta = 14^\circ 44' 32''$ (LT)
 $D_c = 19^\circ 05' 55''$
 $R = 300.00'$
 $T = 38.81'$
 $L = 77.19'$
 $E = 2.50'$
 $E_{max} = 0.032$

* DITCH CLEANOUT LIMITS
 STA. 649+75.90
 164.51' LT
 CPA

BRIDGE TERMINAL ASSEMBLY, TYPE 1
 IMPACT ATTENUATOR, TYPE I
 ANCHOR ASSEMBLY TYPE T

ITEM 670 - DITCH EROSION PROTECTION
 IAPA INTERMEDIATE ANCHOR POST ASSEMBLY
 CPA CORNER POST ASSEMBLY
 EPA END POST ASSEMBLY
 LP LINE POST

IR 70 CURVE DATA
 P.I. = Sta. 661+78.41
 $\Delta = 10^\circ 19' 36''$ (LT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 1,109.43'$
 $L = 2,212.86'$
 $E = 50.02'$
 $E_{max} = 0.018$



APPROVED FOR CONSTRUCTION - 5/2/2011



I.R. 70 - PLAN AND PROFILE
 STA. 645+50 TO STA. 657+50

BEL-70-7.61

83
 307

FOR STORM SEWER DETAILS, SEE SHEET 182

[B] ANCHOR ASSEMBLY, TYPE B



ITEM 670 - DITCH EROSION PROTECTION

IAPA INTERMEDIATE ANCHOR POST ASSEMBLY

CPA CORNER POST ASSEMBLY

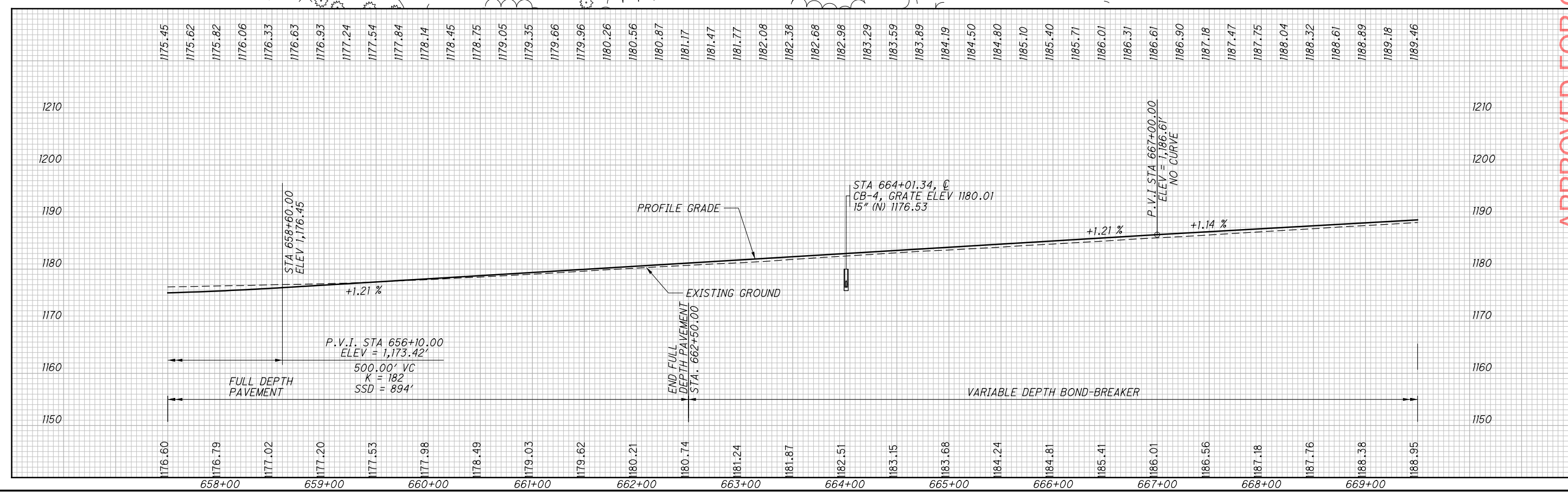
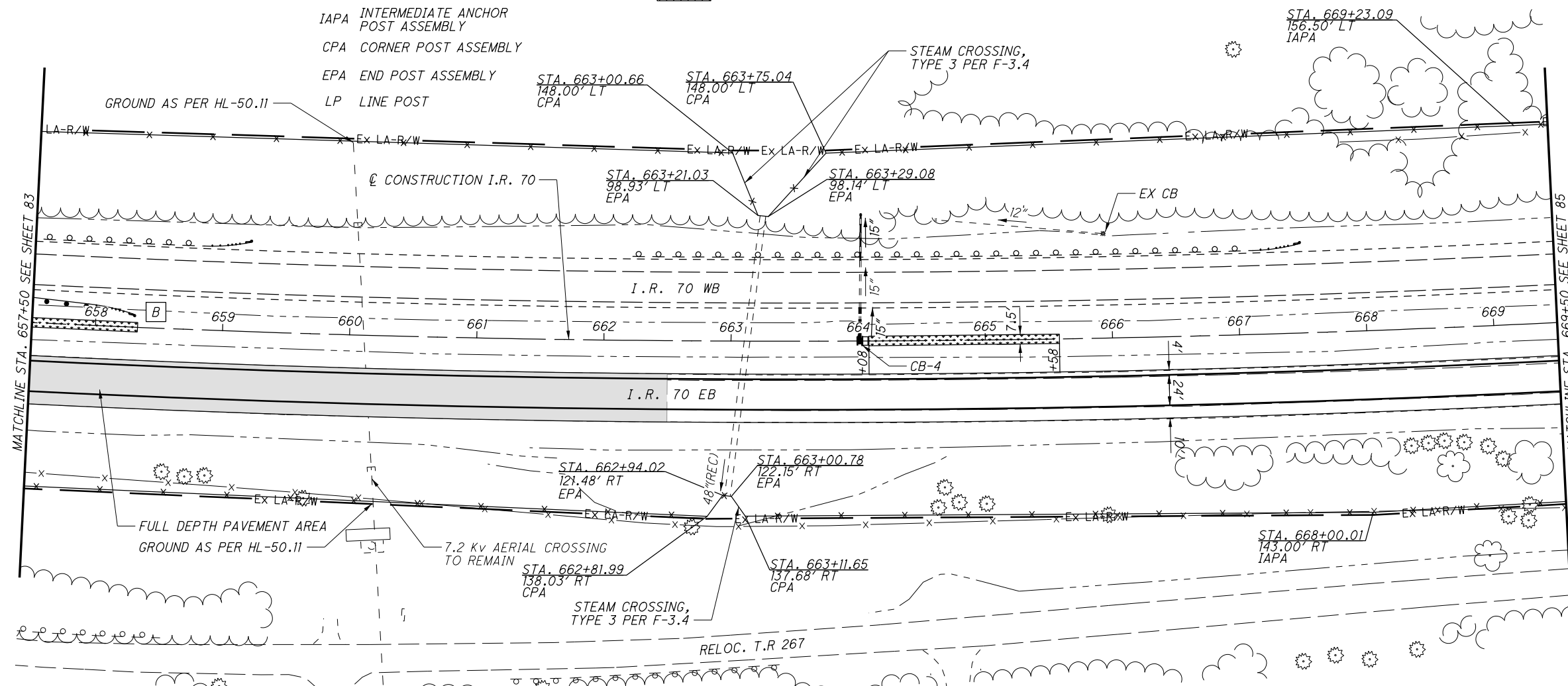
EPA END POST ASSEMBLY

LP LINE POST

IR 70
CURVE DATA

P.I. = Sta. 661+78.41
 $\Delta = 10^\circ 19' 36''$ (LT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 1,109.43'$
 $L = 2,212.86'$
 $E = 50.02'$
 $E_{max} = 0.018$

0 25 50
 HORIZONTAL SCALE IN FEET
 CALCULATED CDS CHECKED BDD



APPROVED FOR CONSTRUCTION - 5/2/2011

I.R. 70 - PLAN AND PROFILE
STA. 657+50 TO STA. 669+50

BEL-70-7.61

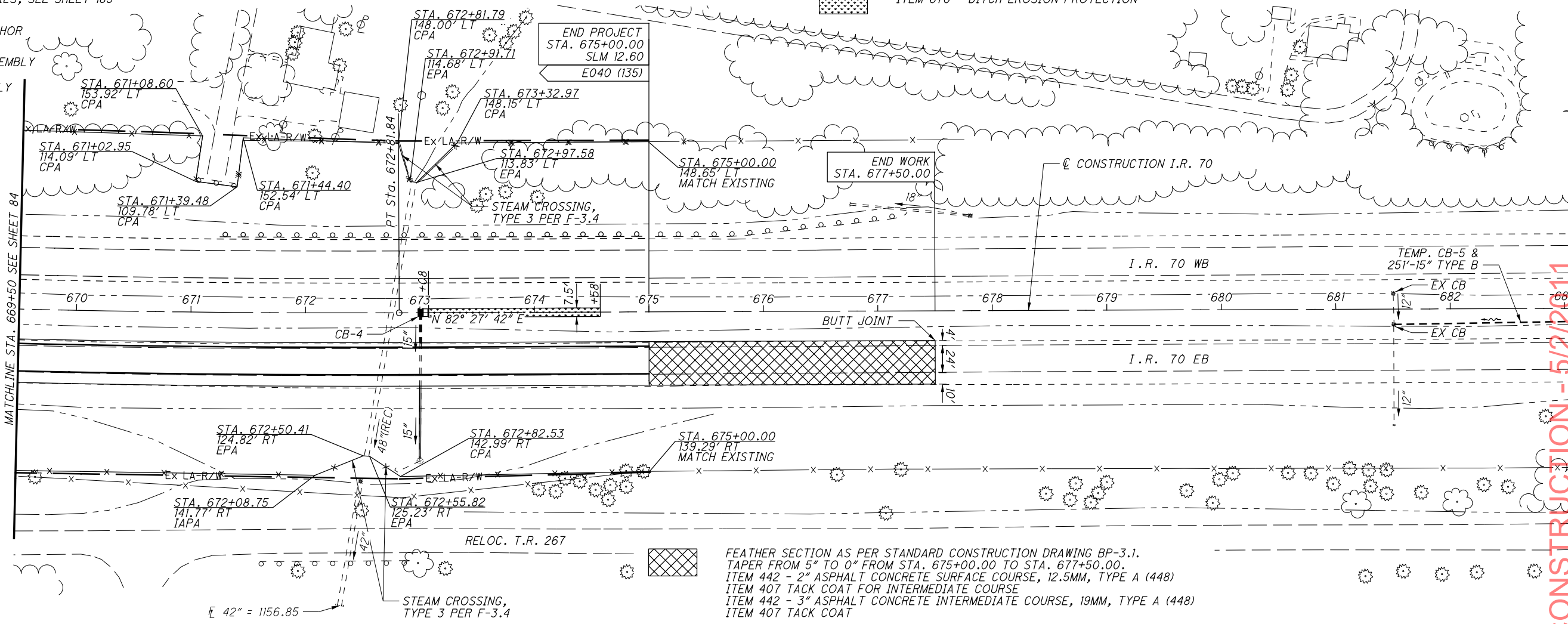
84
307

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FOR STORM SEWER DETAILS, SEE SHEET 185

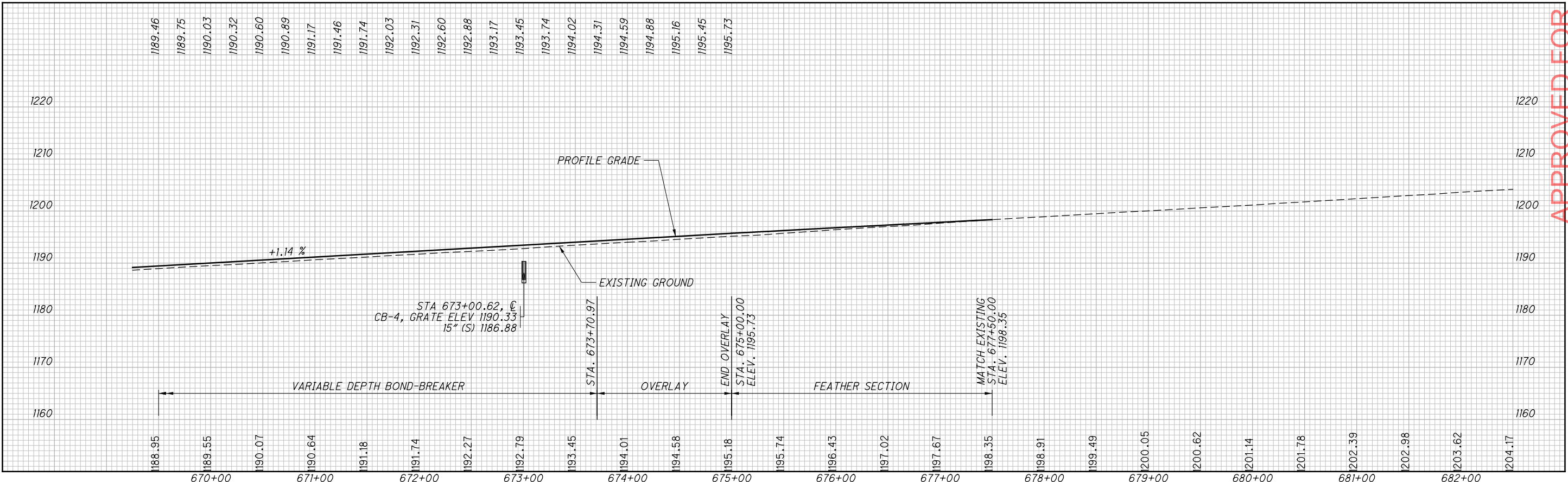
IAPA INTERMEDIATE ANCHOR POST ASSEMBLY
 CPA CORNER POST ASSEMBLY
 EPA END POST ASSEMBLY
 LP LINE POST

ITEM 670 - DITCH EROSION PROTECTION



IR 70
 CURVE DATA
 P.I. = Sta. 661+78.41
 Δ = 10° 19' 36" (LT)
 Dc = 0° 28' 00"
 R = 12,277.67'
 T = 1,109.43'
 L = 2,212.86'
 E = 50.02'
 Emax = 0.0178

FEATHER SECTION AS PER STANDARD CONSTRUCTION DRAWING BP-3.1.
 TAPER FROM 5" TO 0" FROM STA. 675+00.00 TO STA. 677+50.00.
 ITEM 442 - 2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (448)
 ITEM 407 TACK COAT FOR INTERMEDIATE COURSE
 ITEM 442 - 3" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448)
 ITEM 407 TACK COAT



APPROVED FOR CONSTRUCTION - 5/2/2011



CALCULATED CDS CHECKED BDD

I.R. 70 - PLAN AND PROFILE
 STA. 669+50 TO STA. 683+00

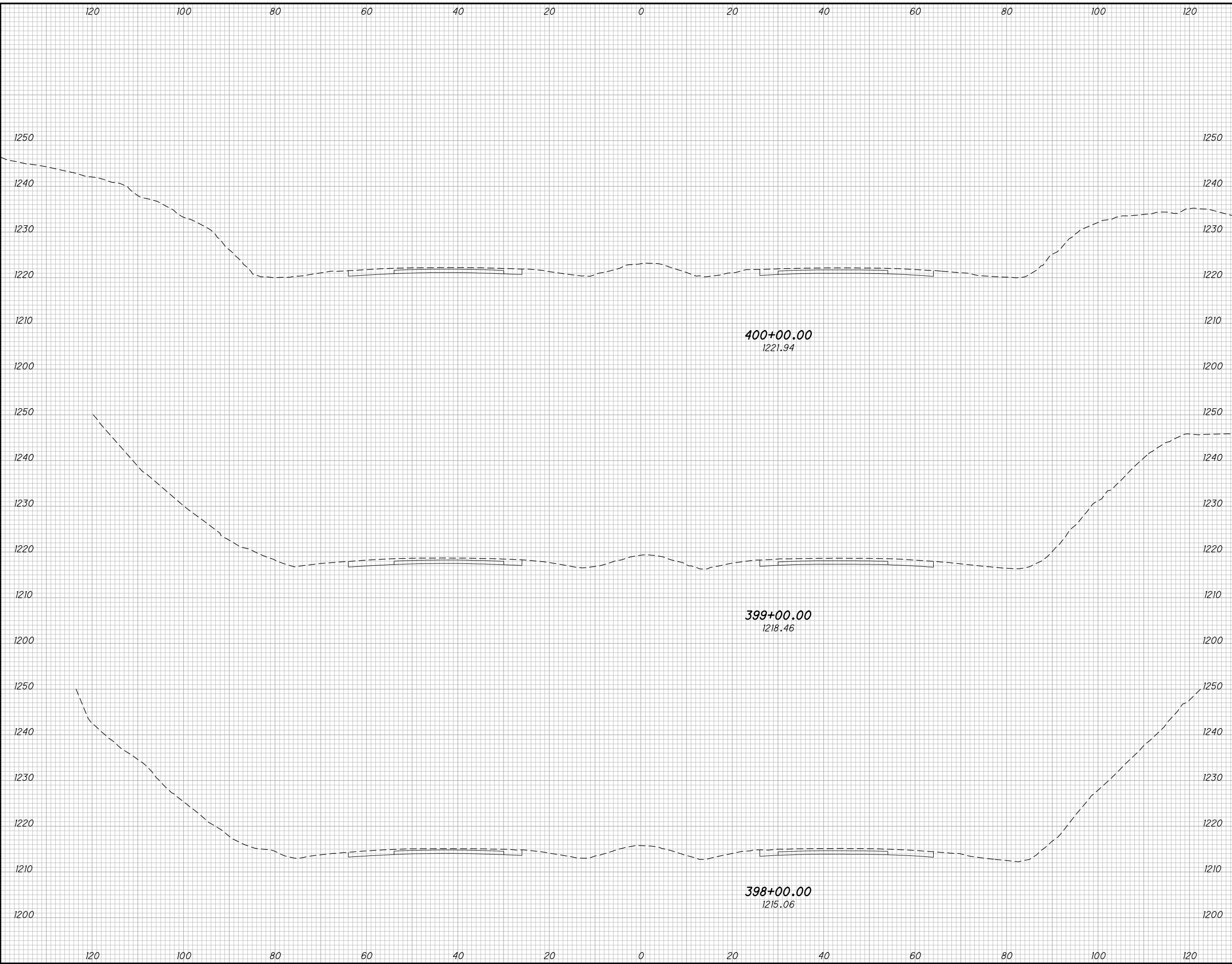
BEL-70-7.61

85
 307

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SEEDING

END WIDTH	SO. YDS.



END AREA		VOLUME		CALCULATED MJC	CHECKED BBD
CUT	FILL	CUT	FILL		

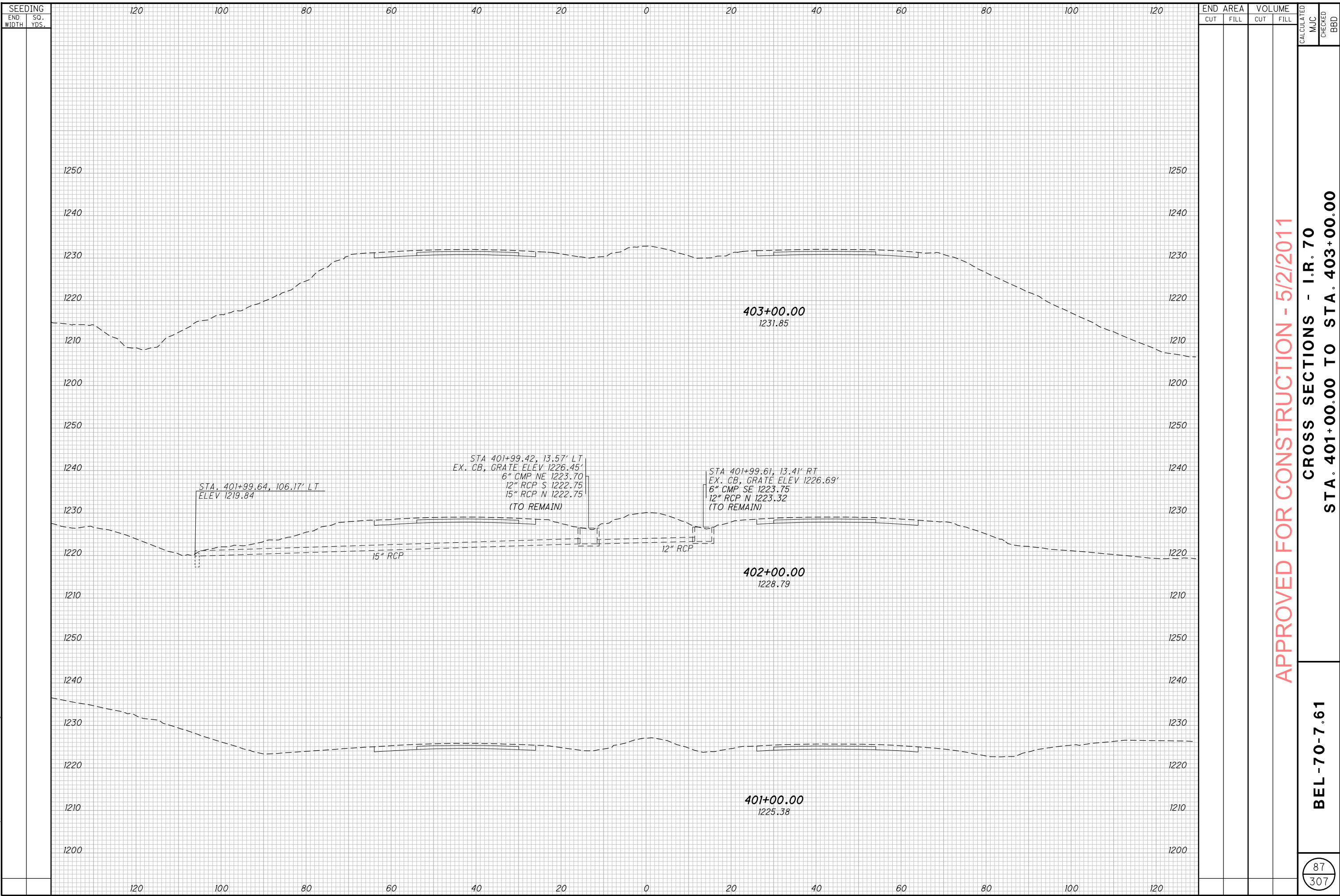
APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 398+00.00 TO STA. 400+00.00

BEL-70-7.61

86
307

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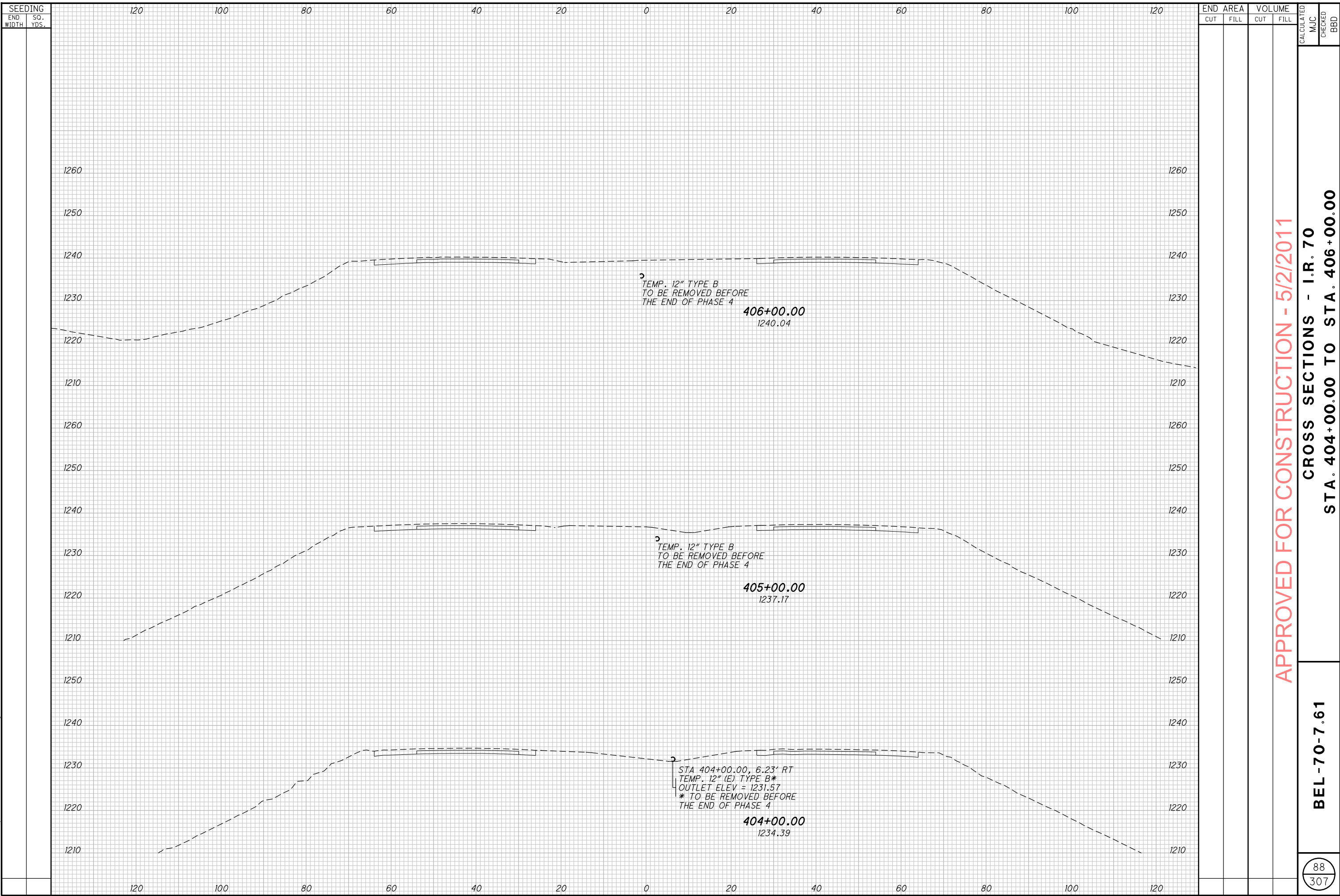
APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 401+00.00 TO STA. 403+00.00

BEL - 70 - 7.61

87
307

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SEEDING	
END WIDTH	SO. YDS.

STATION	END AREA		VOLUME	
	CUT	FILL	CUT	FILL

CALCULATED	CHECKED	MJC	BBD

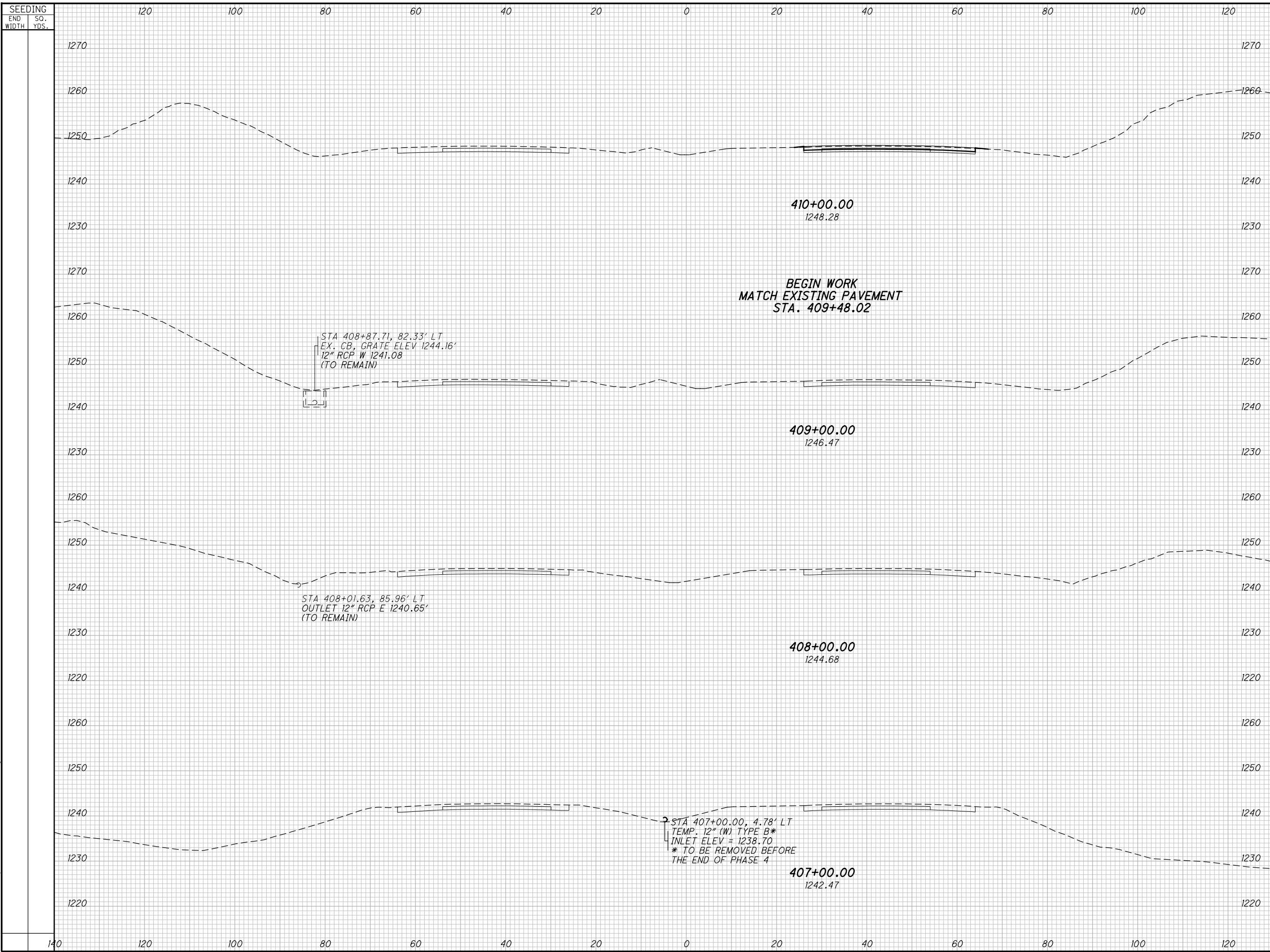
APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 404+00.00 TO STA. 406+00.00

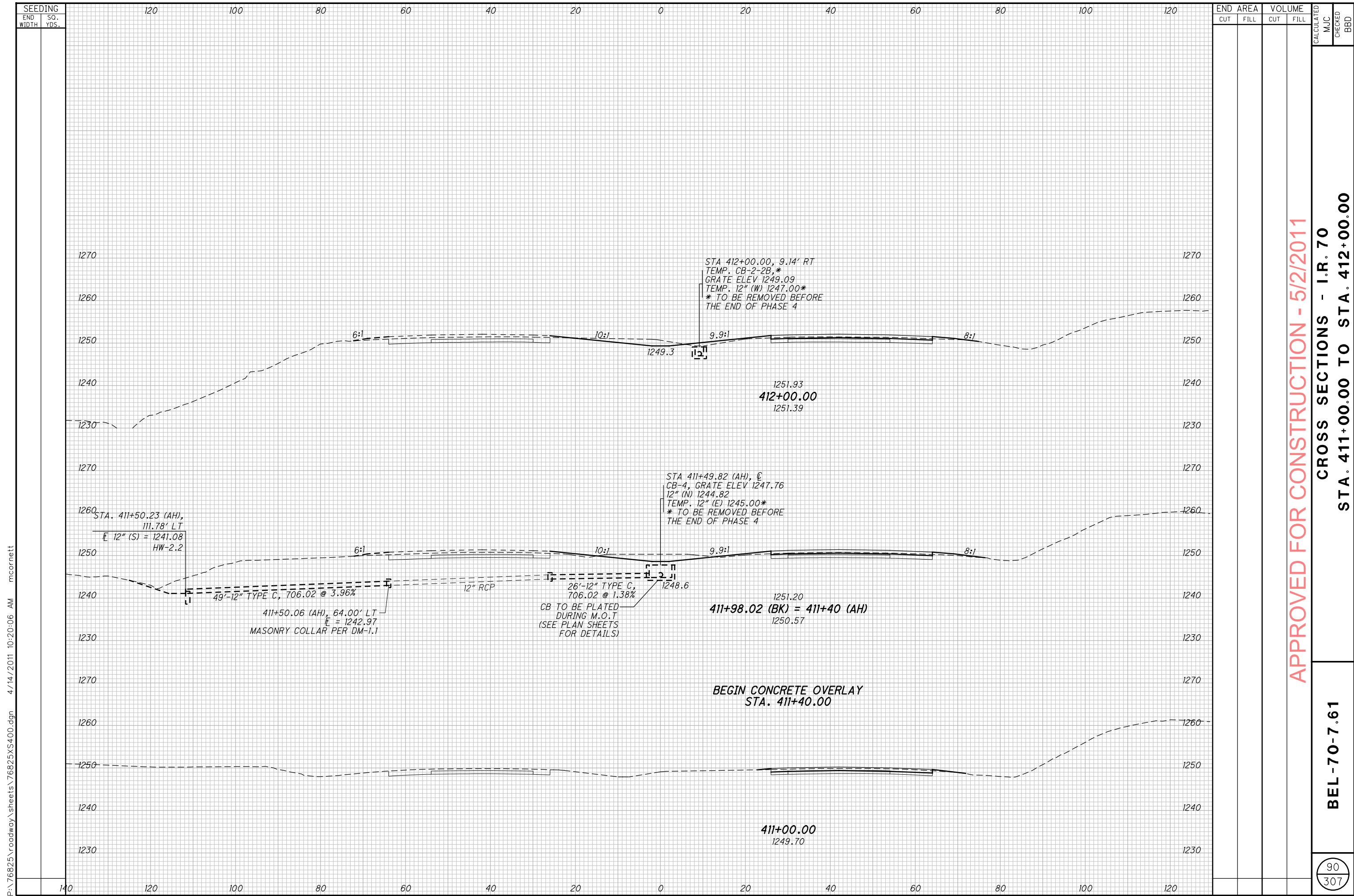
BEL-70-7.61

88
307

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SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBB
APPROVED FOR CONSTRUCTION - 5/2/2011 CROSS SECTIONS - I.R. 70 STA. 407+00.00 TO STA. 410+00.00							
BEL-70-7.61							
89 307							



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SEEDING	
END WIDTH	SO. YDS.

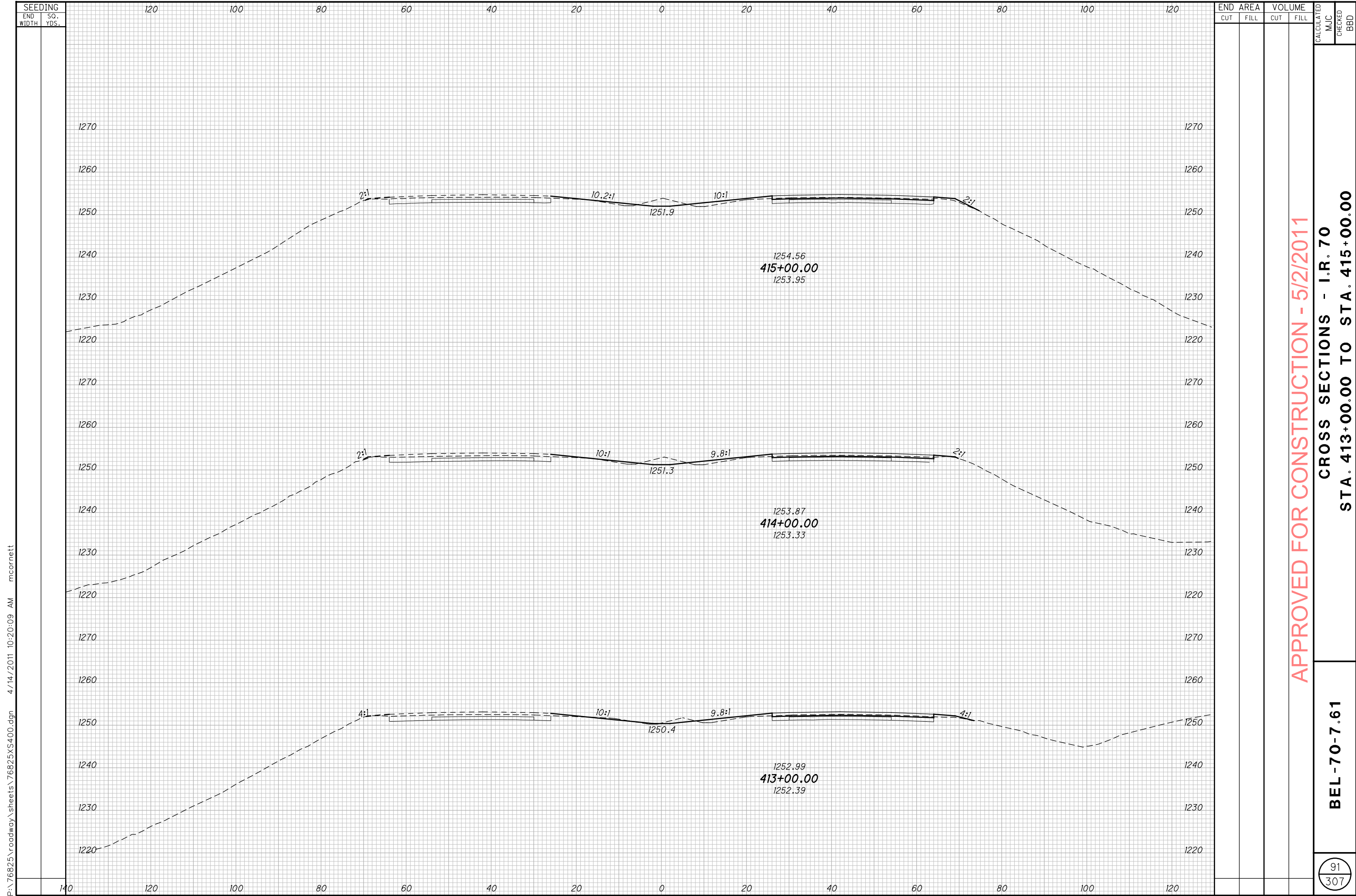
END AREA		VOLUME		CALCULATED	
CUT	FILL	CUT	FILL	MJC	BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 411+00.00 TO STA. 412+00.00

BEL-70-7.61

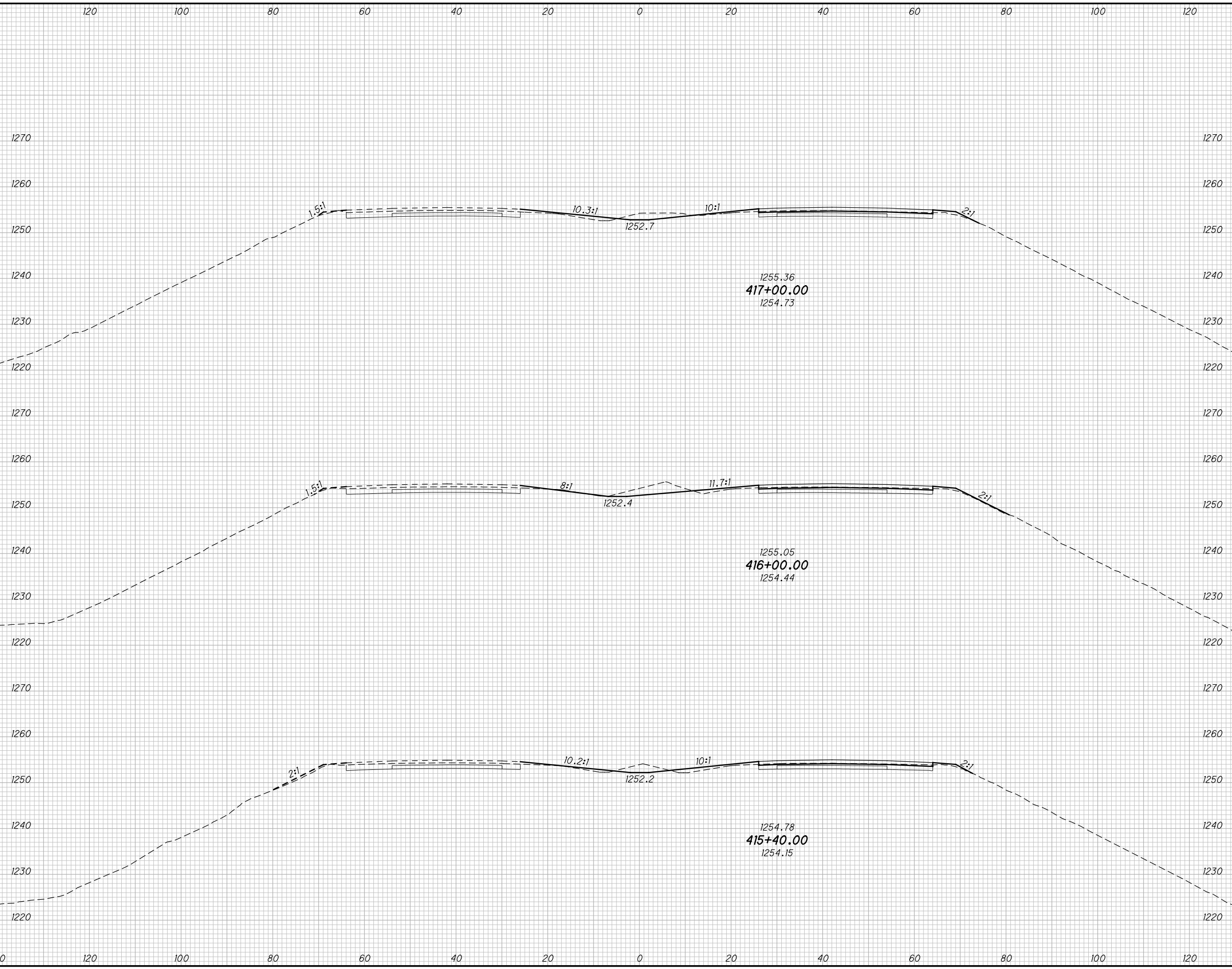
90
307



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SEEDING	
END WIDTH	SO. YDS.



END AREA	VOLUME	CALCULATED	CHECKED	MJC	BBD

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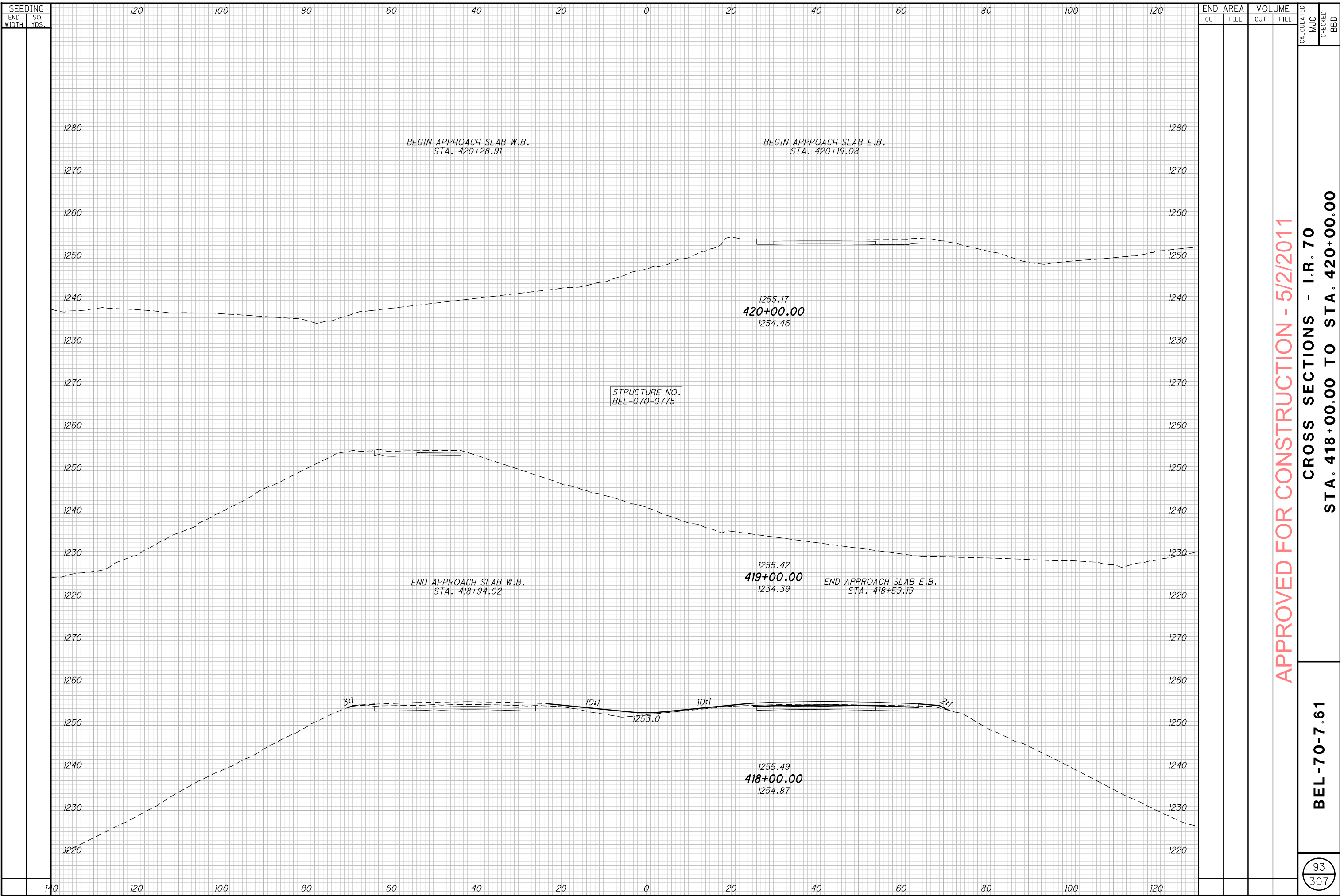
CROSS SECTIONS - I.R. 70

STA. 415+40.00 TO STA. 417+00.00

BEL-70-7.61

92
307

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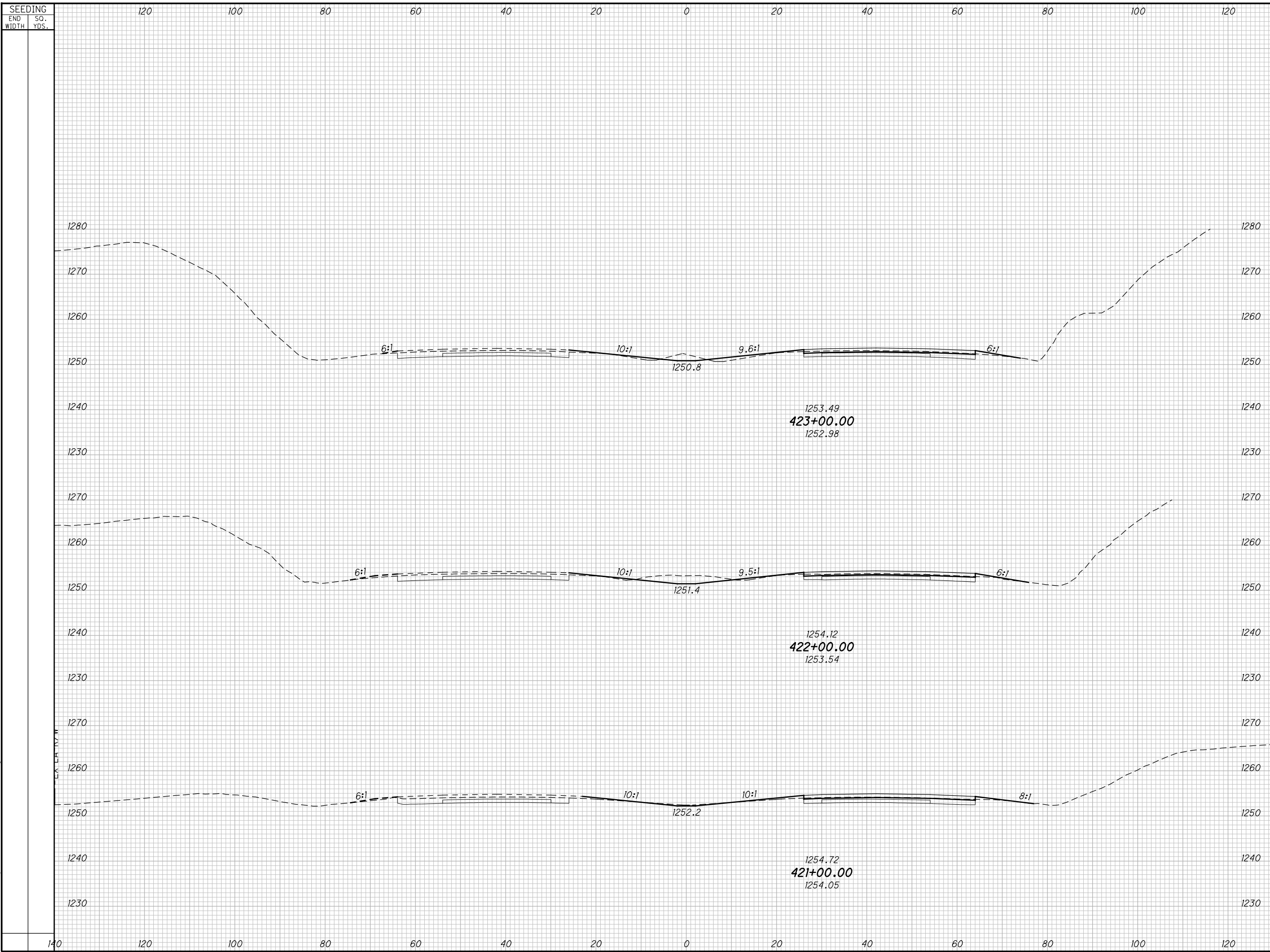


APPROVED FOR CONSTRUCTION - 5/2/2011
CROSS SECTIONS - I.R. 70
STA. 418+00.00 TO STA. 420+00.00

BEL-70-7.61

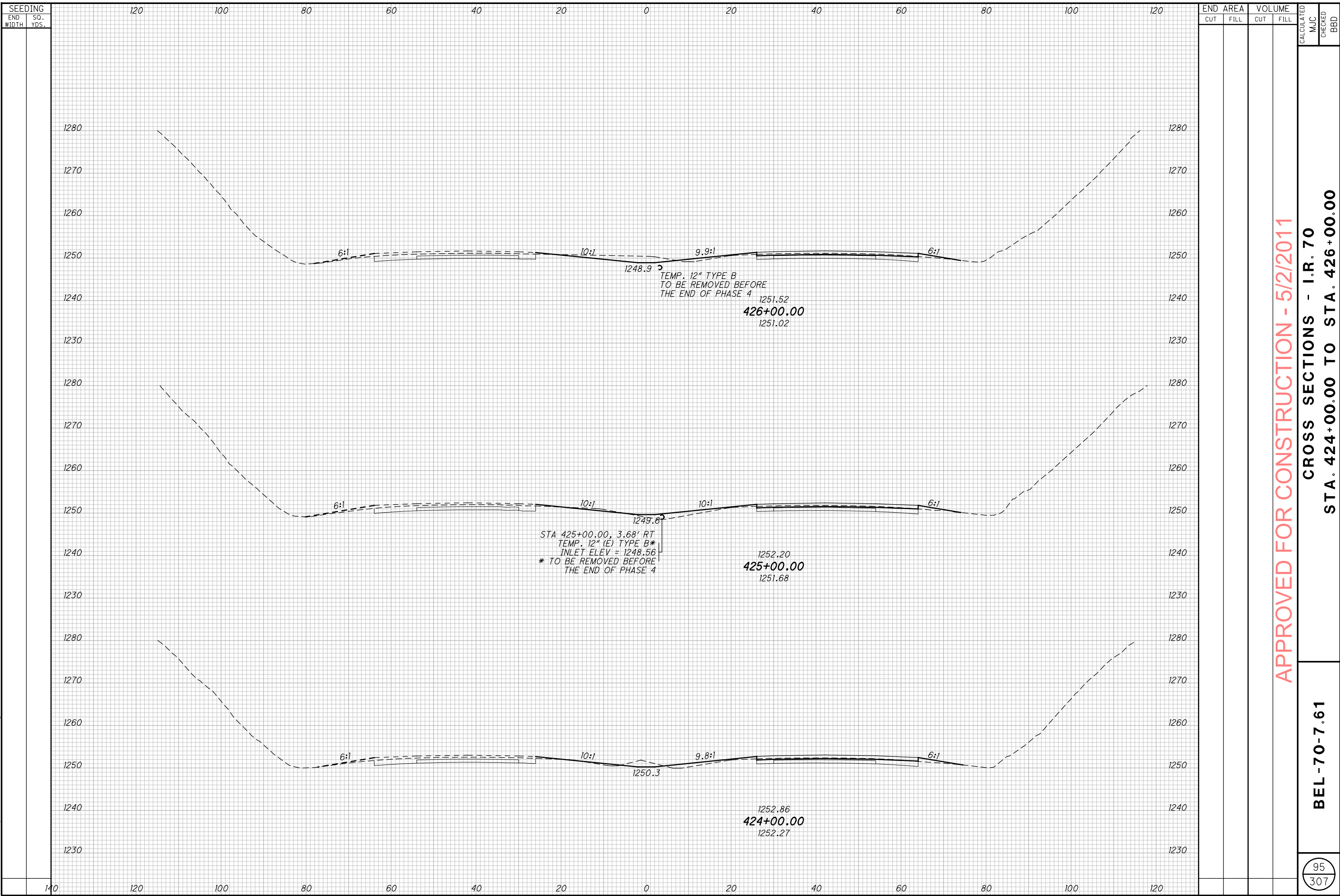
93
307

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END AREA	VOLUME	CALCULATED	CHECKED						
				CUT	FILL	CUT	FILL	MJC	BBD
APPROVED FOR CONSTRUCTION - 5/2/2011									
CROSS SECTIONS - I.R. 70									
STA. 421+00.00 TO STA. 423+00.00									
BEL-70-7.61									
<table border="1"> <tr> <td>94</td> </tr> <tr> <td>307</td> </tr> </table>				94	307				
94									
307									

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SEEDING	
END WIDTH	SO. YDS.

END AREA		VOLUME		CALCULATED	
CUT	FILL	CUT	FILL	MJC	BBD

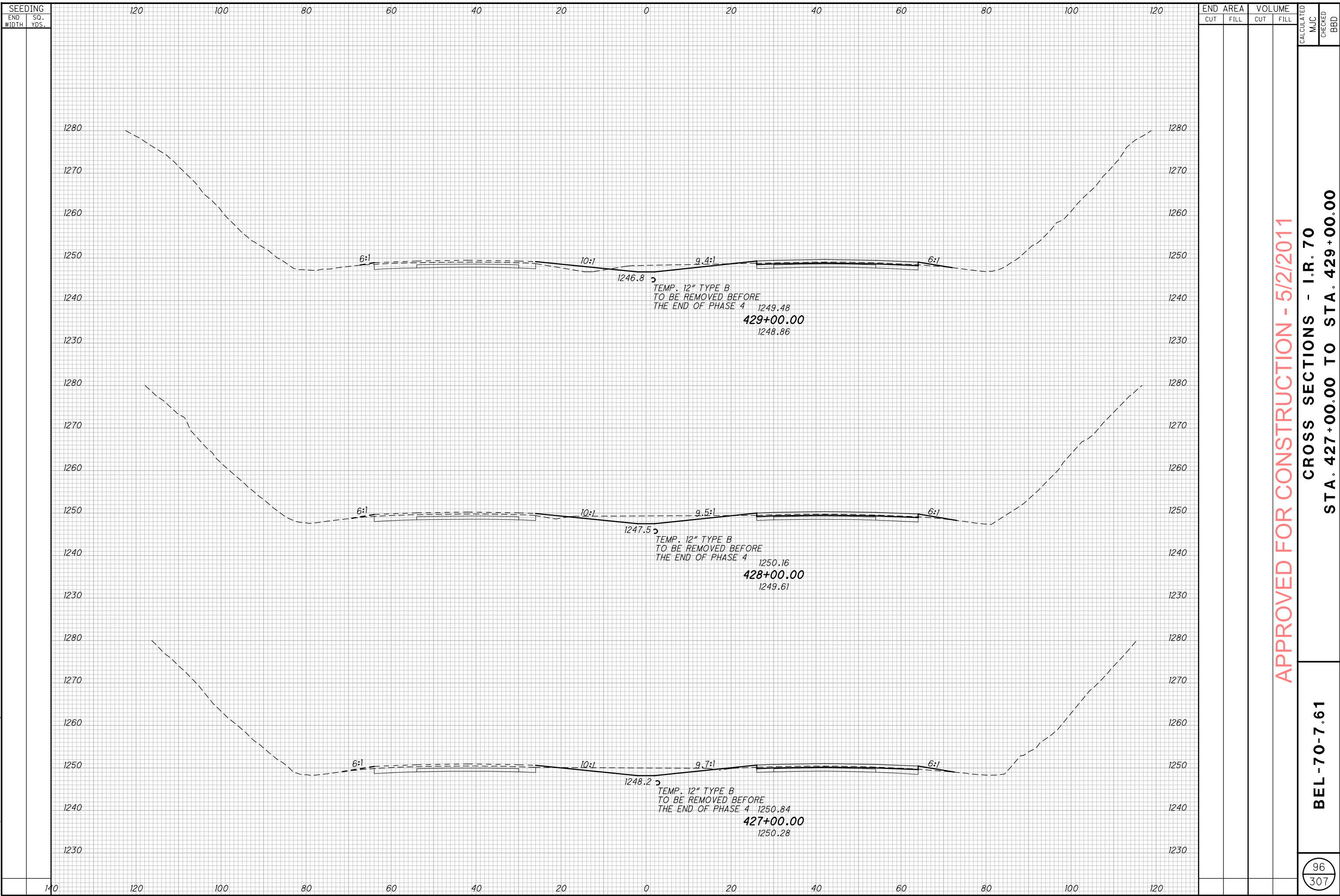
APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 424+00.00 TO STA. 426+00.00

BEL-70-7.61

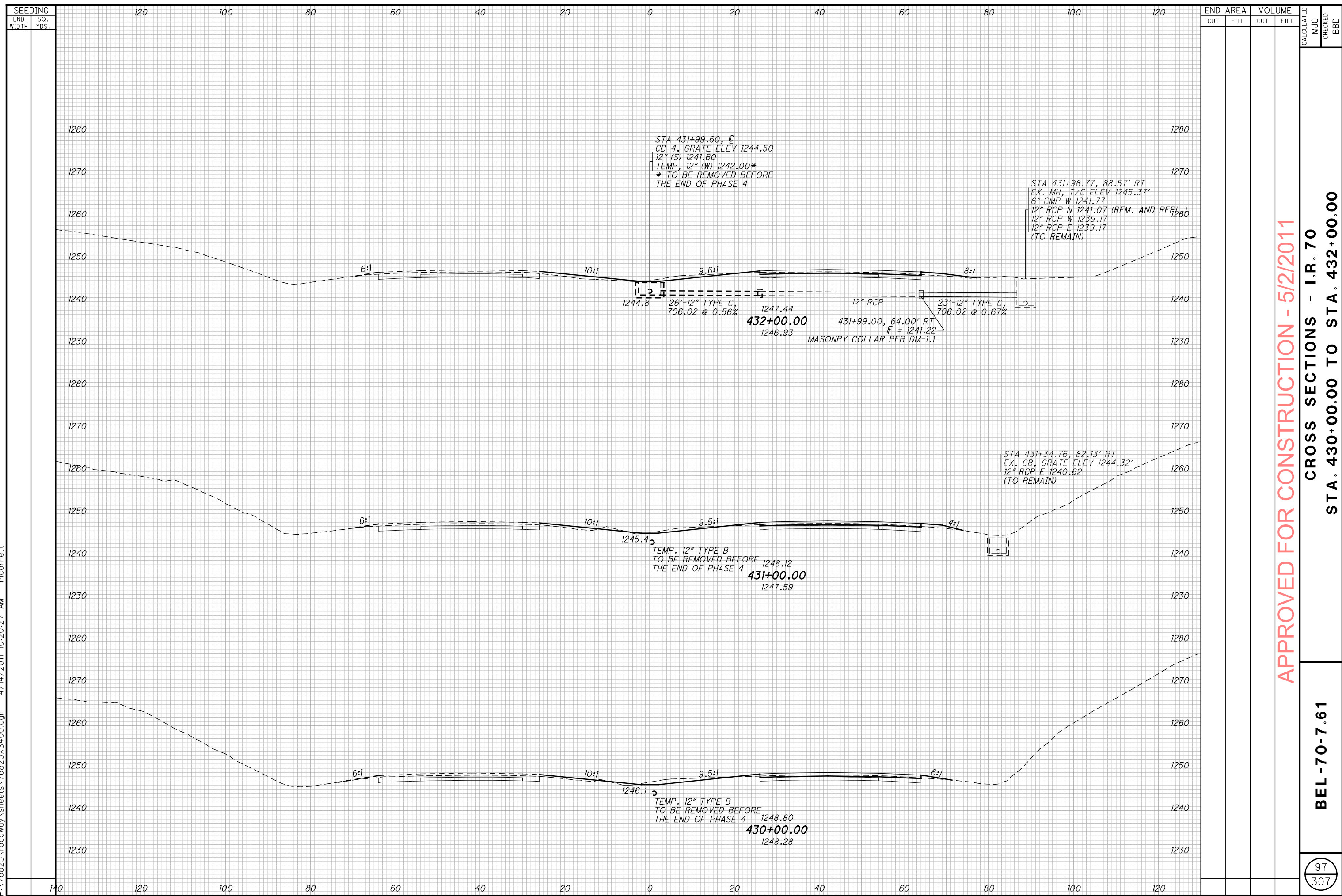
95
307

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SEEDING		END AREA		VOLUME		CALCULATED			
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD		
APPROVED FOR CONSTRUCTION - 5/2/2011									
CROSS SECTIONS - I.R. 70									
STA. 427+00.00 TO STA. 429+00.00									
BEL-70-7.61									
<table border="1" style="margin: auto;"> <tr> <td style="padding: 2px;">96</td> </tr> <tr> <td style="padding: 2px;">307</td> </tr> </table>								96	307
96									
307									

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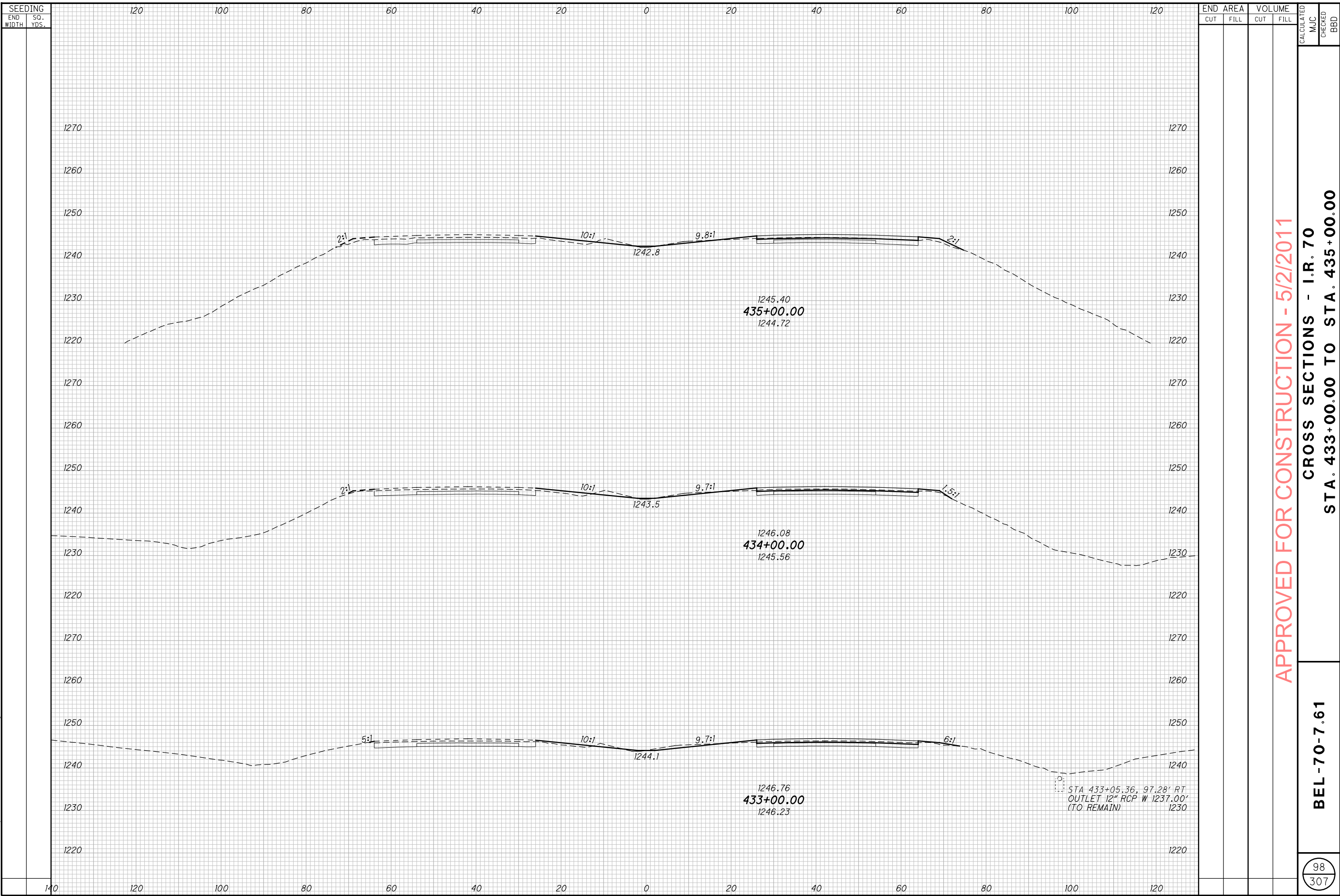
CROSS SECTIONS - I.R. 70
STA. 430+00.00 TO STA. 432+00.00

BEL-70-7.61

SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD

97
307

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1270
1260
1250
1240
1230
1220
1270
1260
1250
1240
1230
1220
1270
1260
1250
1240
1230
1220
1270
1260
1250
1240
1230
1220

120 100 80 60 40 20 0 20 40 60 80 100 120

140 120 100 80 60 40 20 0 20 40 60 80 100 120

2:1

10:1

9.8:1

2:1

2:1

10:1

9.7:1

1.5:1

5:1

10:1

9.7:1

6:1

1242.8

1243.5

1244.1

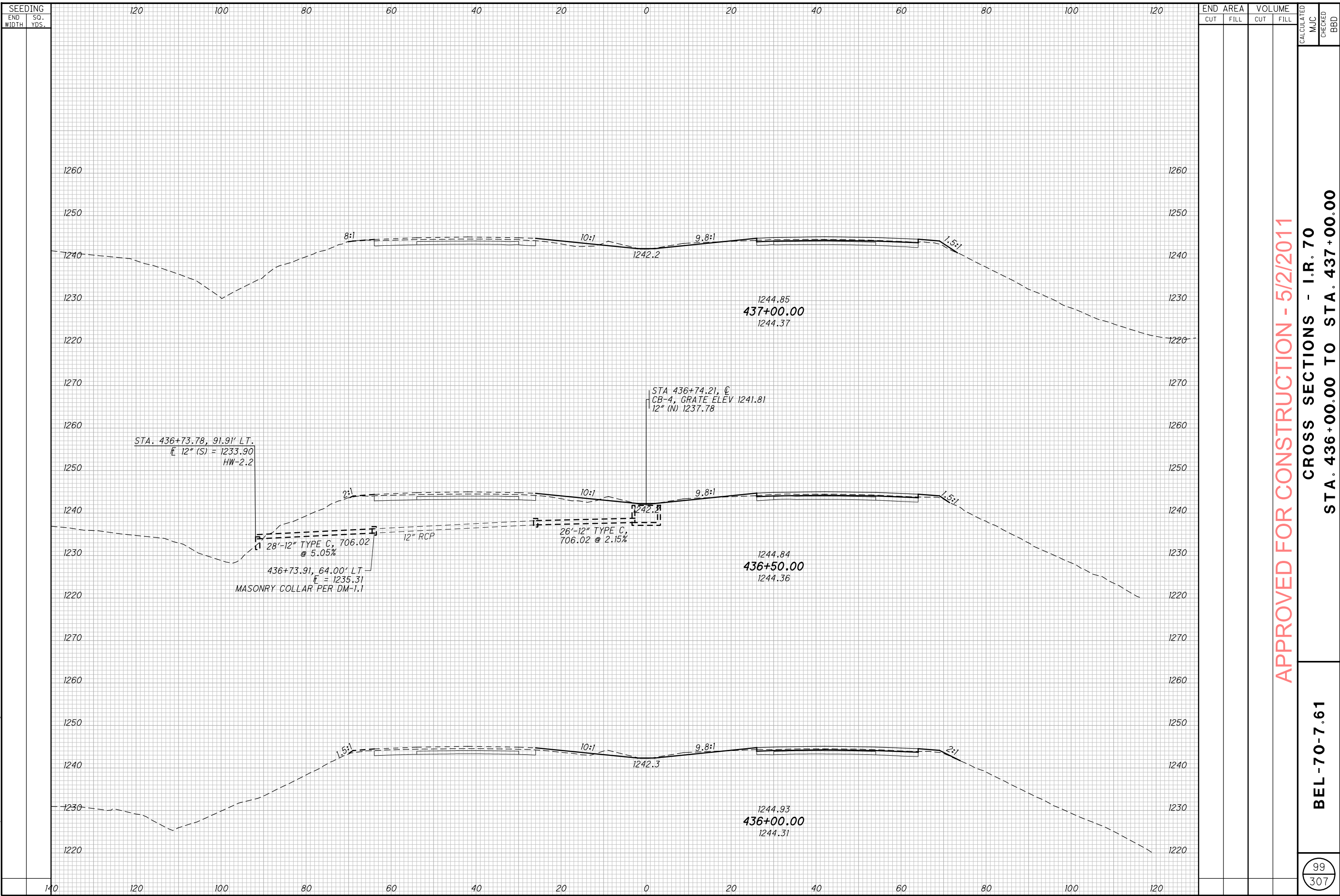
1245.40
435+00.00
1244.72

1246.08
434+00.00
1245.56

1246.76
433+00.00
1246.23

STA 433+05.36, 97.28' RT
OUTLET 12" RCP W 1237.00'
(TO REMAIN) 1230

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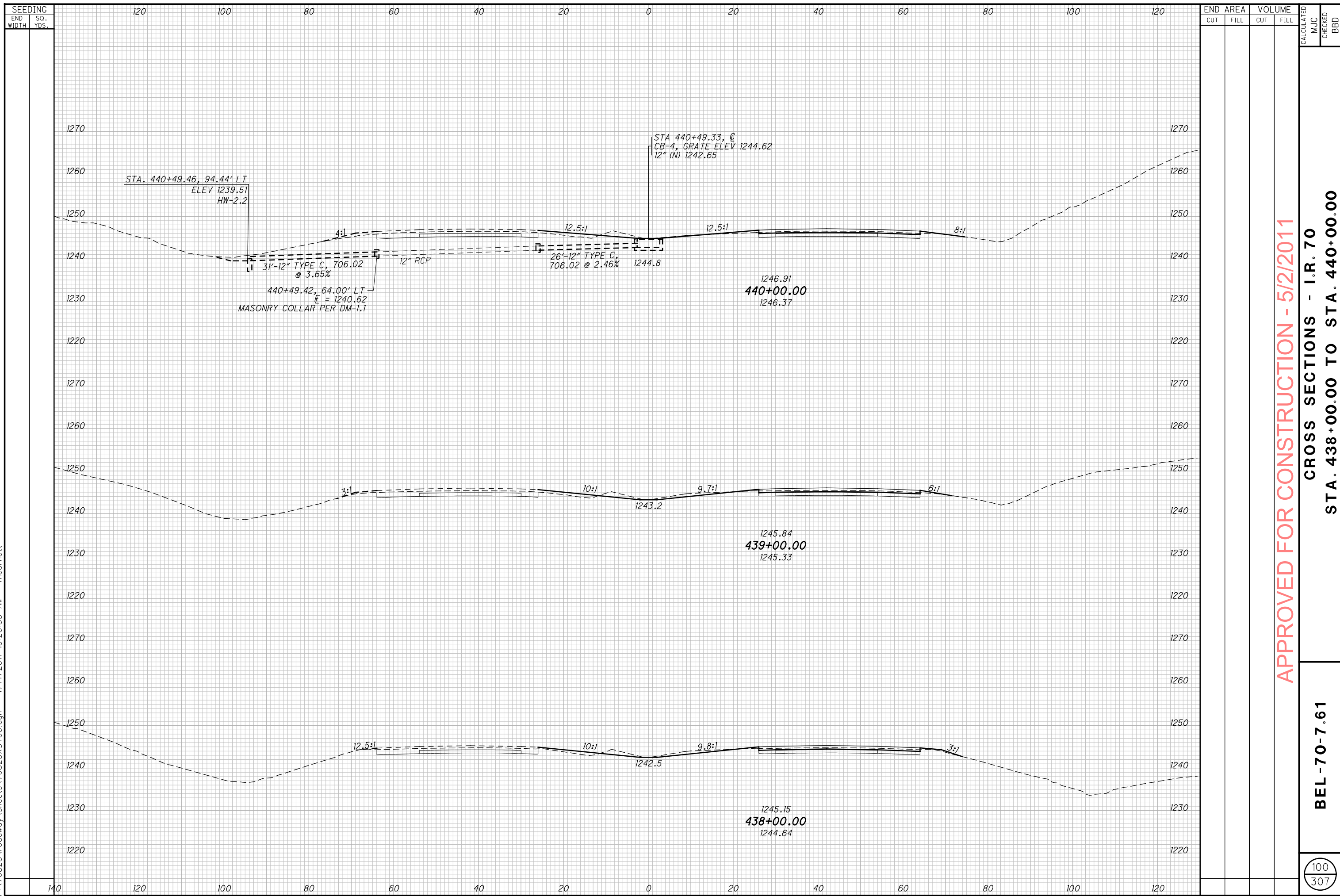
APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 436+00.00 TO STA. 437+00.00

BEL-70-7.61

99
307

P:\76825\roadway\sheet\76825XS400.dgn 4/14/2011 10:20:35 AM mcornett



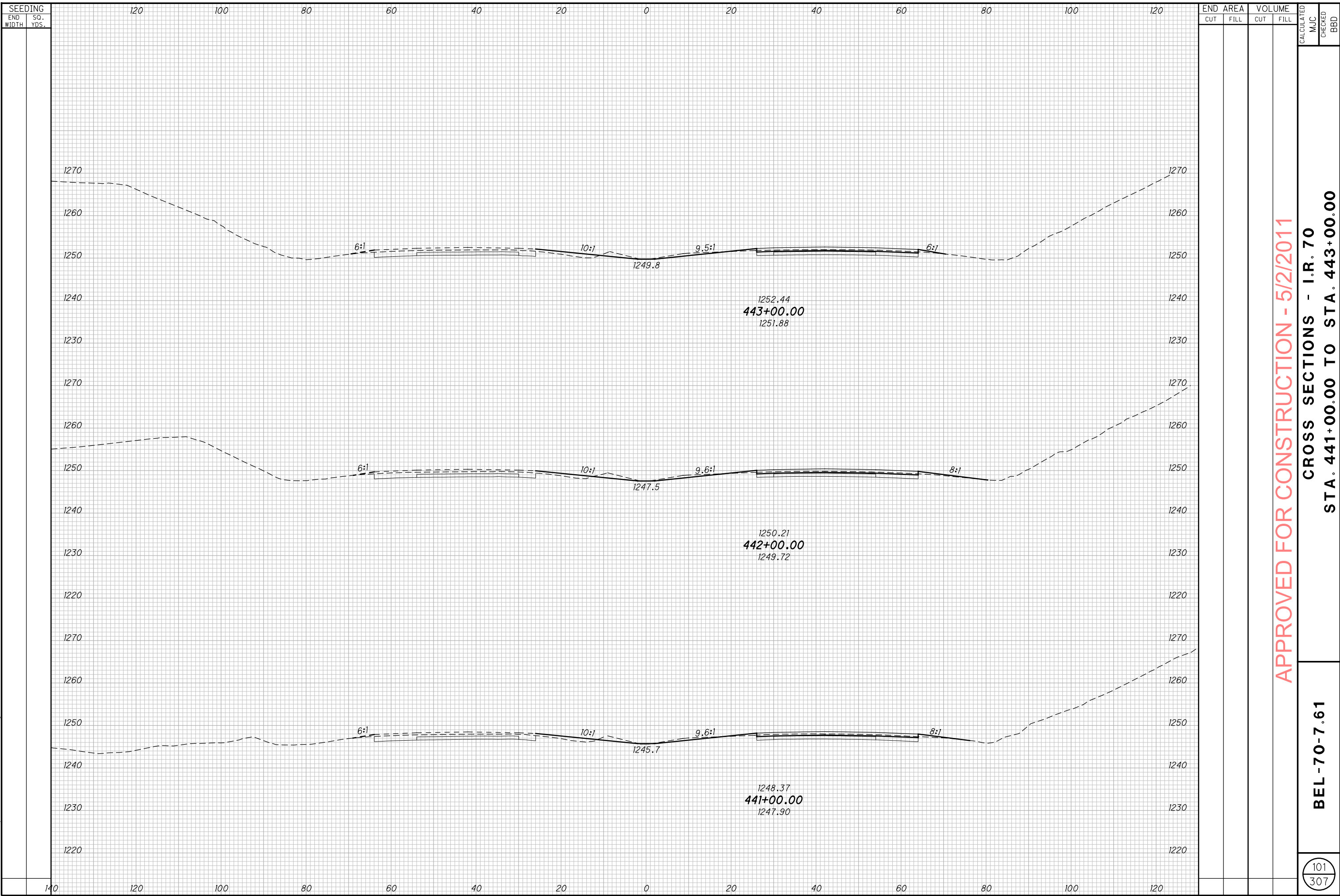
APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 438+00.00 TO STA. 440+00.00

BEL-70-7.61

100
307

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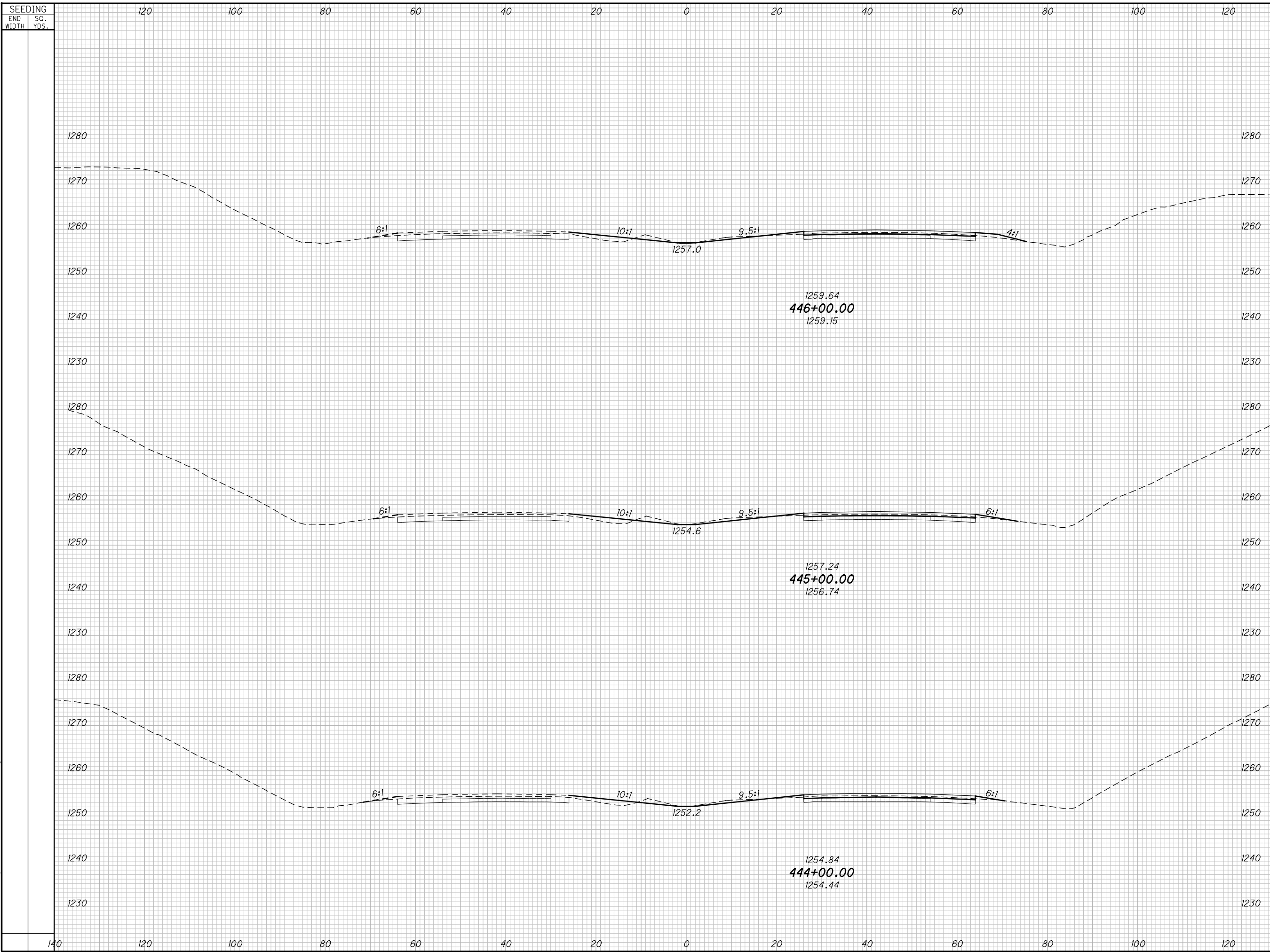


APPROVED FOR CONSTRUCTION - 5/2/2011
CROSS SECTIONS - I.R. 70
STA. 441+00.00 TO STA. 443+00.00

BEL-70-7.61

101
307

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SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD

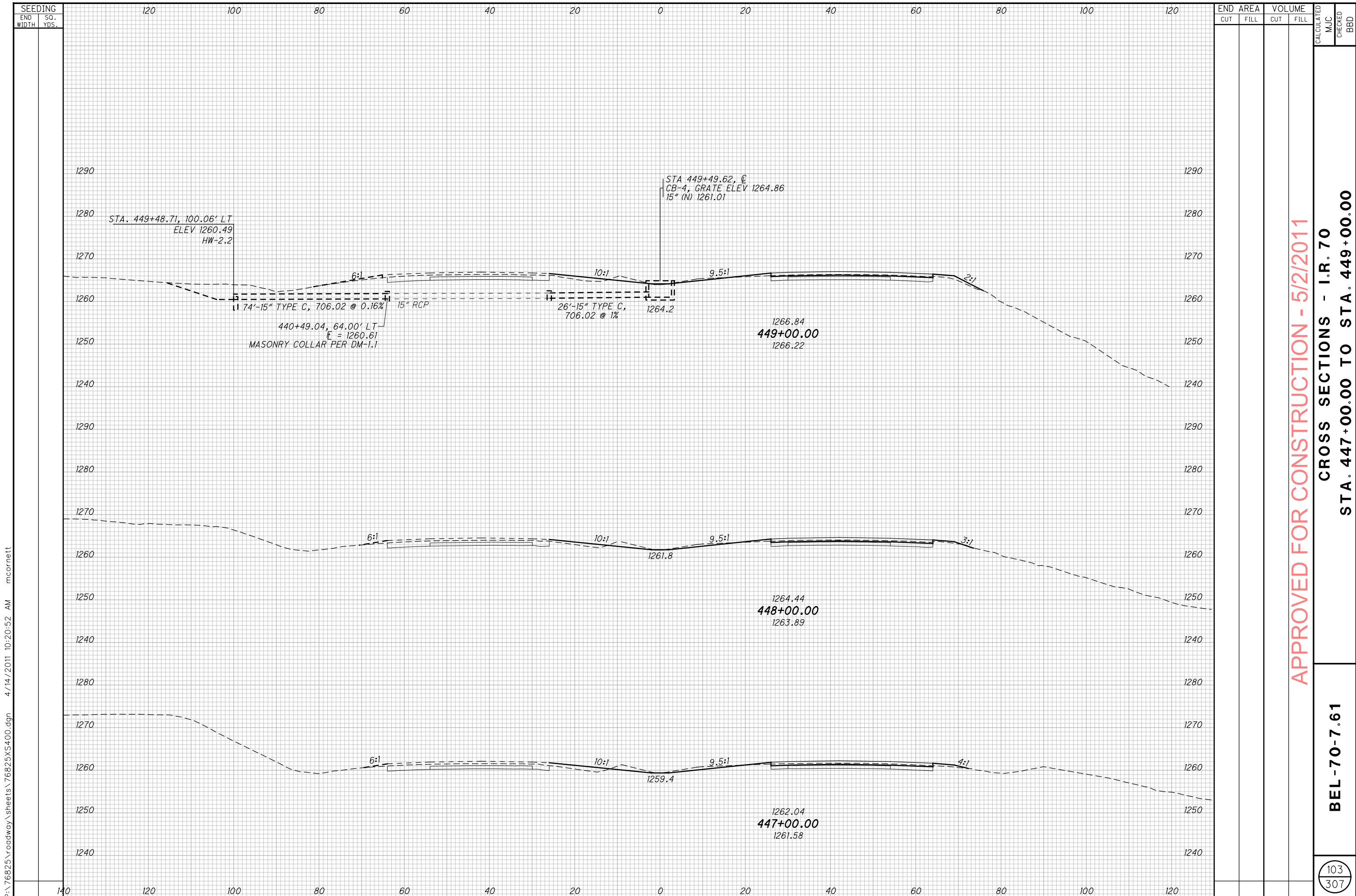
APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70

STA. 444+00.00 TO STA. 446+00.00

BEL-70-7.61

102
307



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SEEDING	
END WIDTH	SO. YDS.
140	
120	
100	
80	
60	
40	
20	
0	
20	
40	
60	
80	
100	
120	

END AREA		VOLUME		CALCULATED		
CUT	FILL	CUT	FILL	MJC	CHECKED	BBD

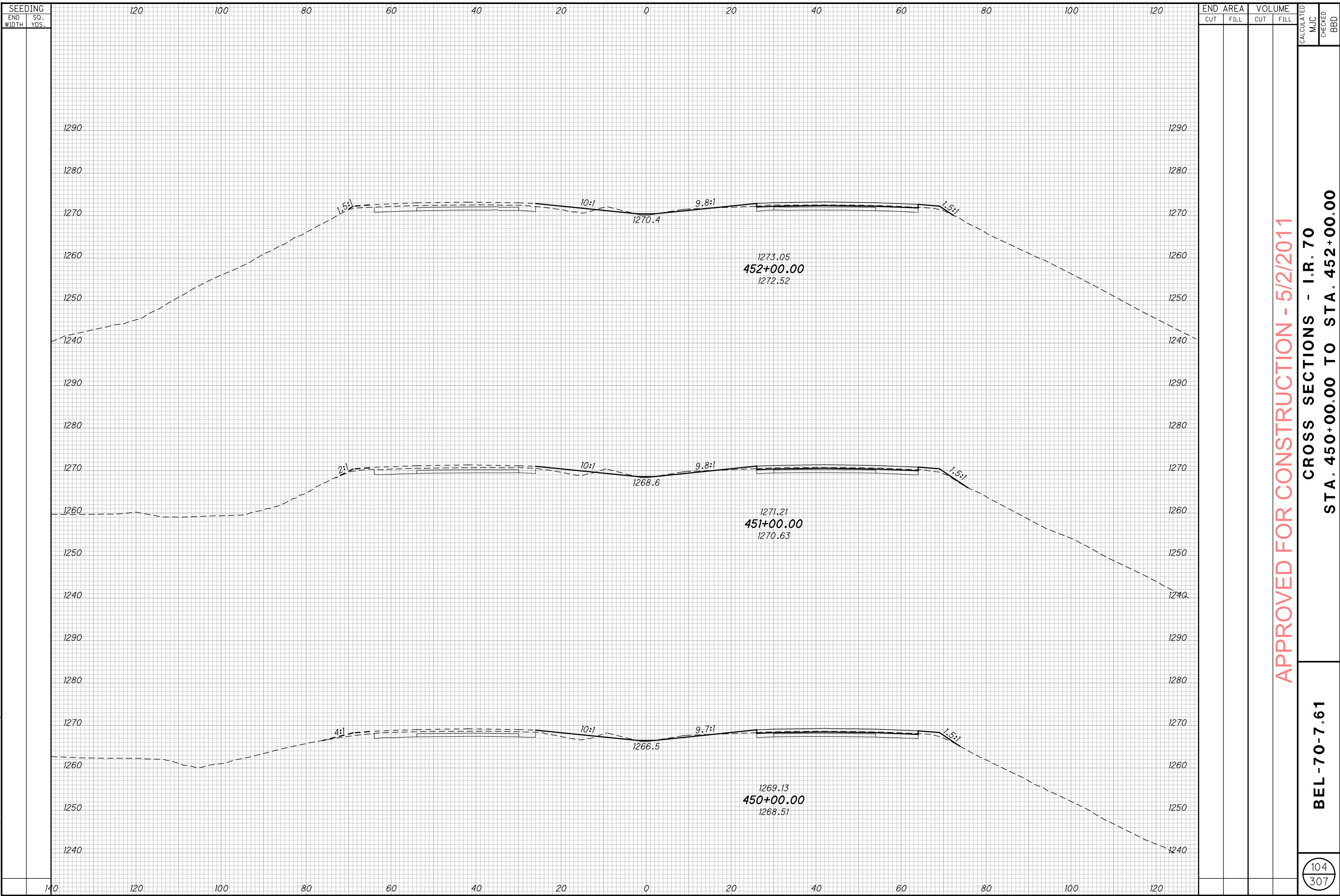
APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 447+00.00 TO STA. 449+00.00

BEL-70-7.61

103
307

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SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD

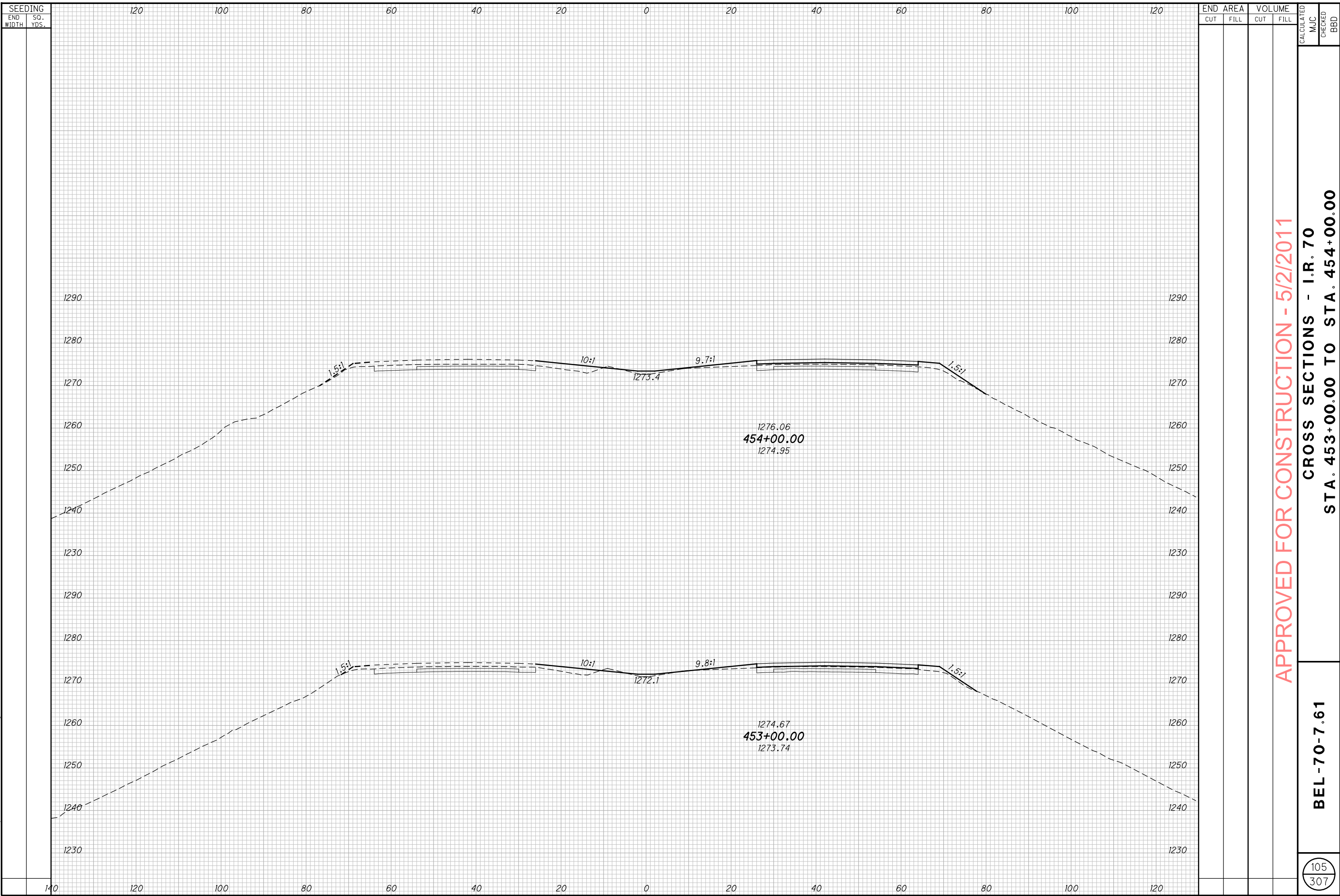
APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 450+00.00 TO STA. 452+00.00

BEL-70-7.61

104
307

P:\76825\roadway\sheets\76825XS400.dgn 4/14/2011 10:20:57 AM mcornett



SEEDING	
END WIDTH	SO. YDS.

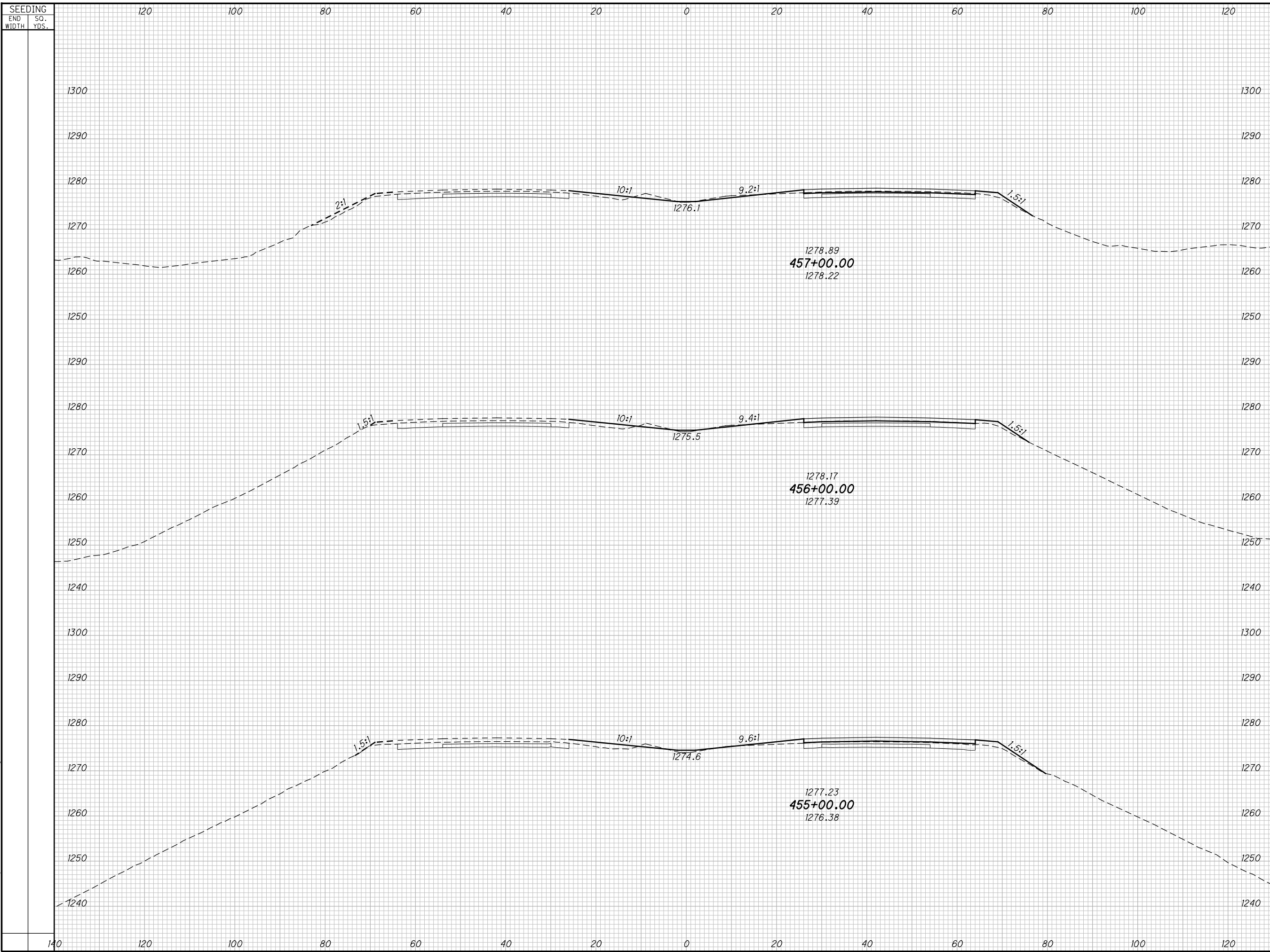
END AREA		VOLUME		CALCULATED MJC	CHECKED BBD
CUT	FILL	CUT	FILL		

APPROVED FOR CONSTRUCTION - 5/2/2011
CROSS SECTIONS - I.R. 70
STA. 453+00.00 TO STA. 454+00.00

BEL-70-7.61

105
307

P:\76825\roadway\sheets\76825\5400.dgn 4/14/2011 10:20:59 AM mcorneett



SEEDING		END AREA		VOLUME		CALCULATED		CHECKED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD	MJC	BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

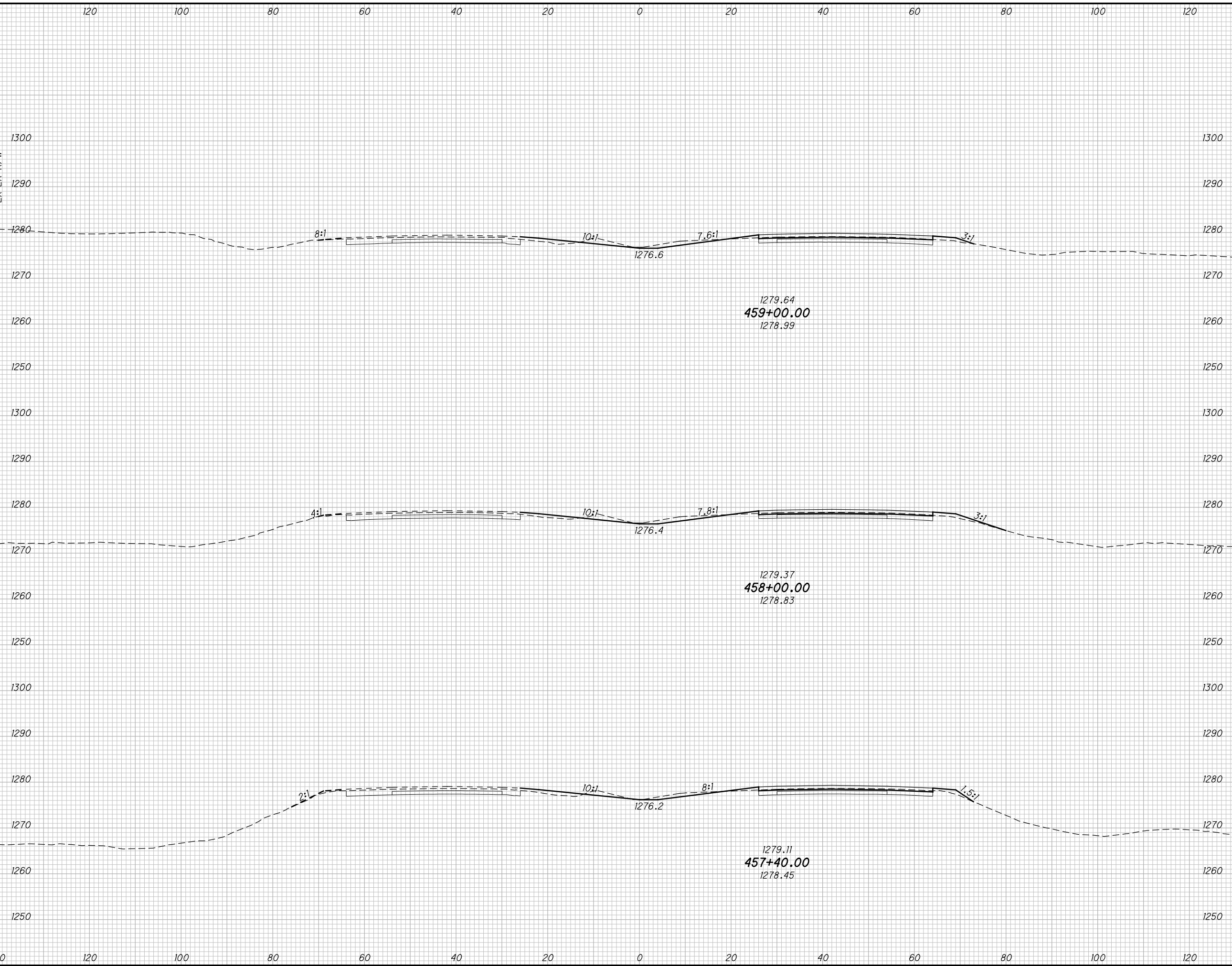
CROSS SECTIONS - I.R. 70
STA. 455+00.00 TO STA. 457+00.00

BEL-70-7.61

106
307

P:\76825\roadway\sheets\76825XS400.dgn 4/14/2011 10:21:02 AM mcornett

SEEDING	
END WIDTH	SO. YDS.
140	



END AREA		VOLUME		CALCULATED	
CUT	FILL	CUT	FILL	MJC	BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

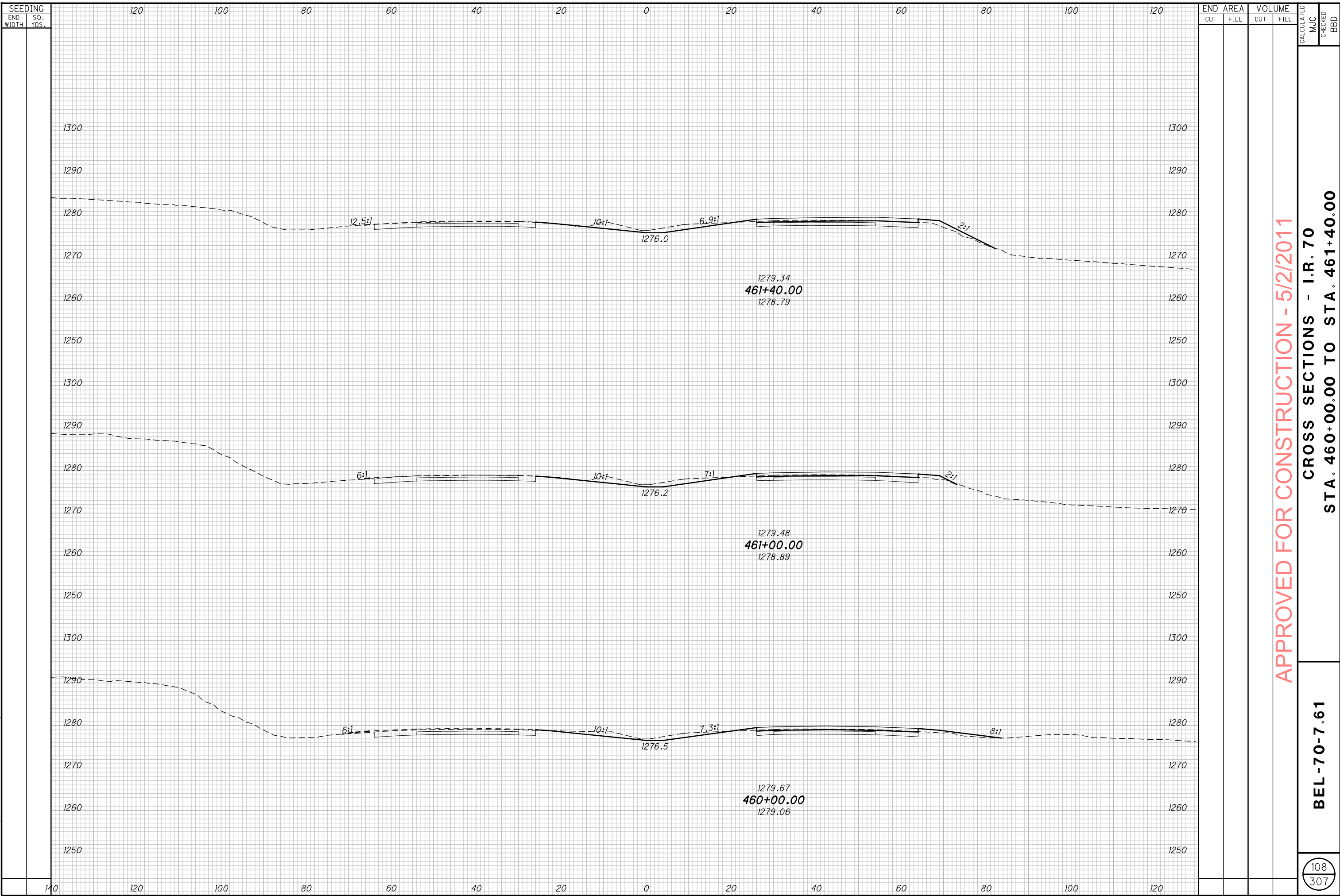
CROSS SECTIONS - I.R. 70

STA. 457+40.00 TO STA. 459+00.00

BEL-70-7.61

107
307

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SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

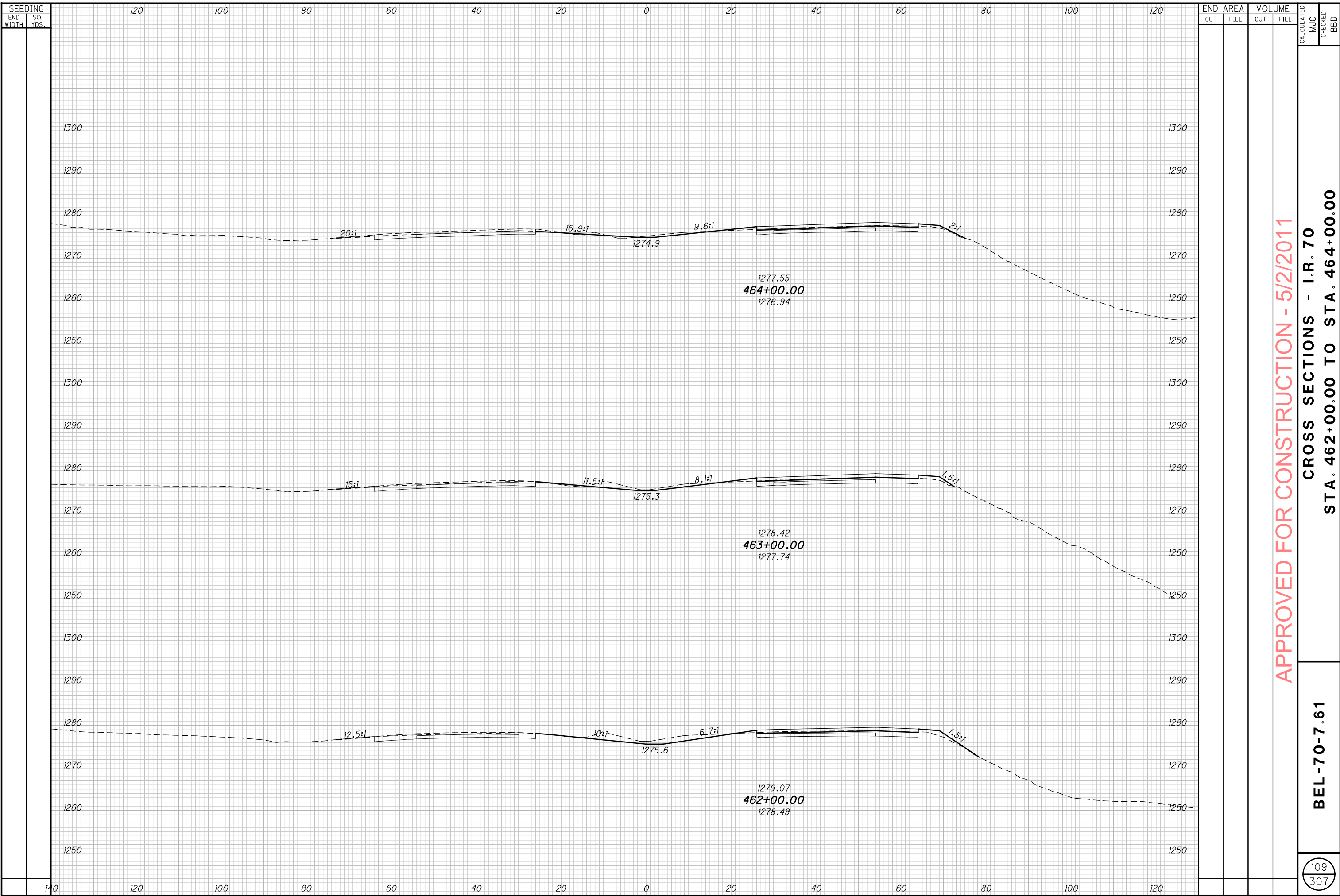
CROSS SECTIONS - I.R. 70

STA. 460+00.00 TO STA. 461+40.00

BEL-70-7.61

108
307

P:\76825\roadway\sheets\76825XS400.dgn 4/14/2011 10:21:07 AM mcornett



SEEDING	
END WIDTH	SO. YDS.

END AREA		VOLUME		CALCULATED	
CUT	FILL	CUT	FILL	MJC	BBD

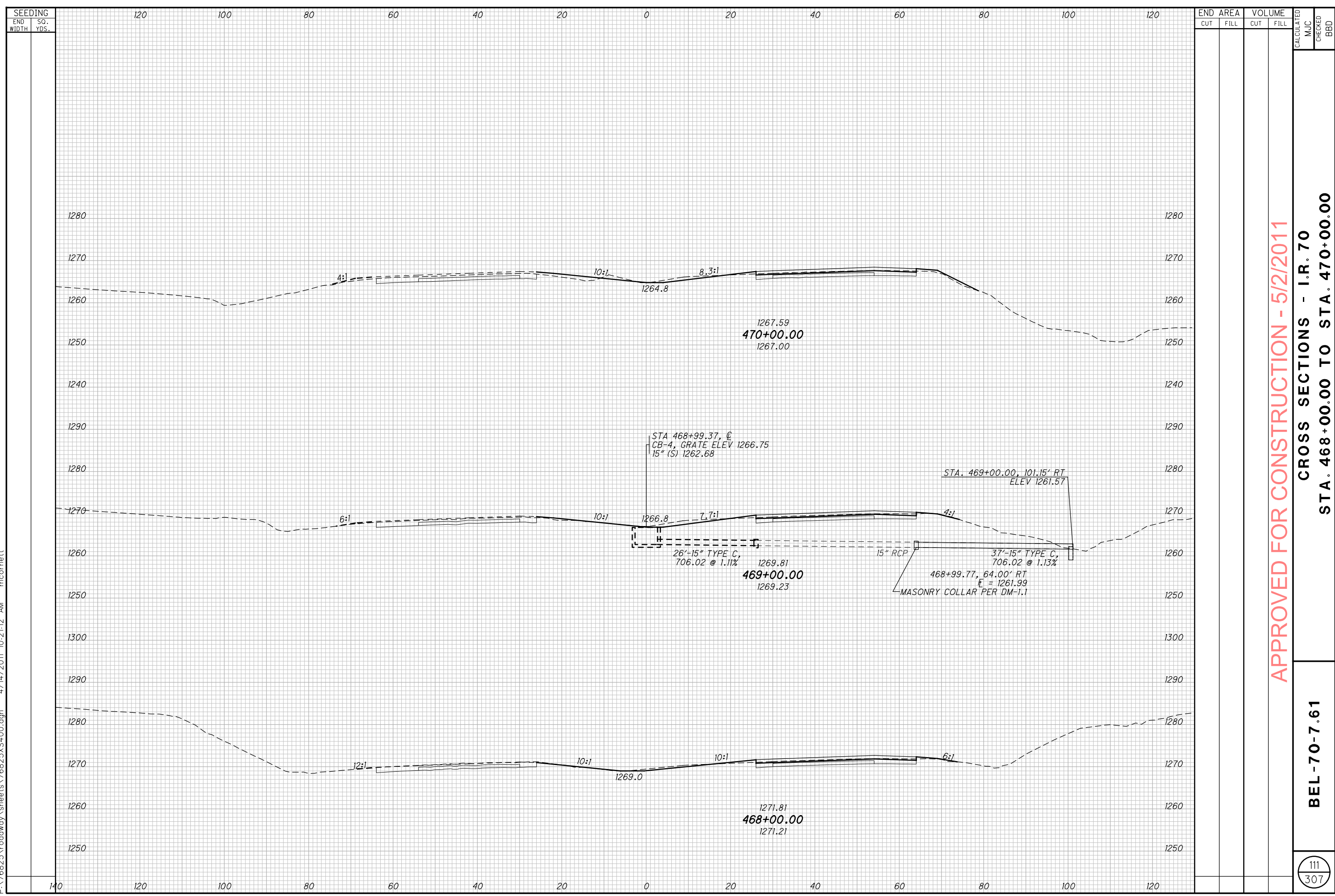
APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 462+00.00 TO STA. 464+00.00

BEL-70-7.61

109
307

P:\76825\roadway\sheet\76825S400.dgn 4/14/2011 10:21:12 AM mcornett



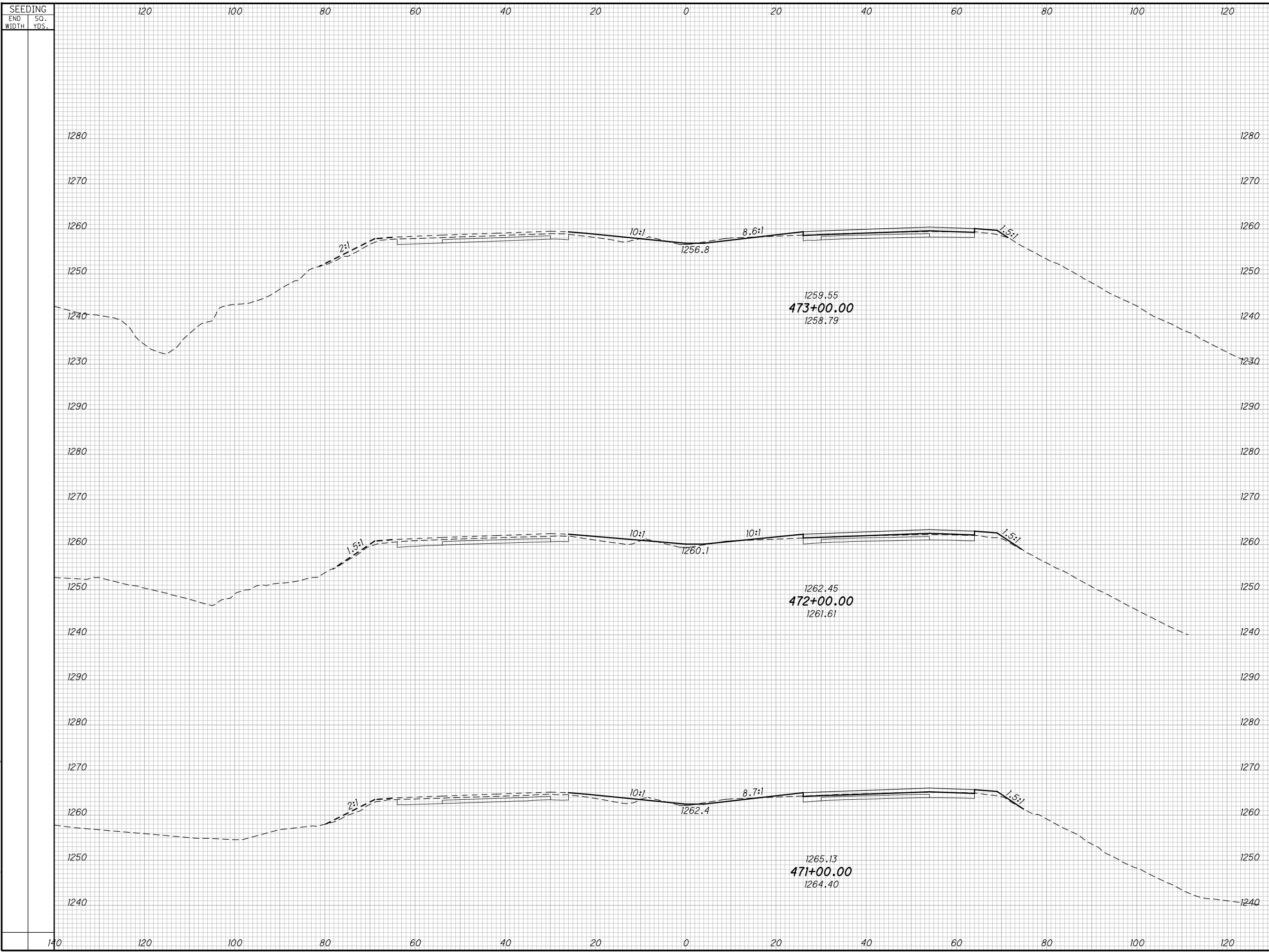
APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 468+00.00 TO STA. 470+00.00

BEL-70-7.61

111
307

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SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

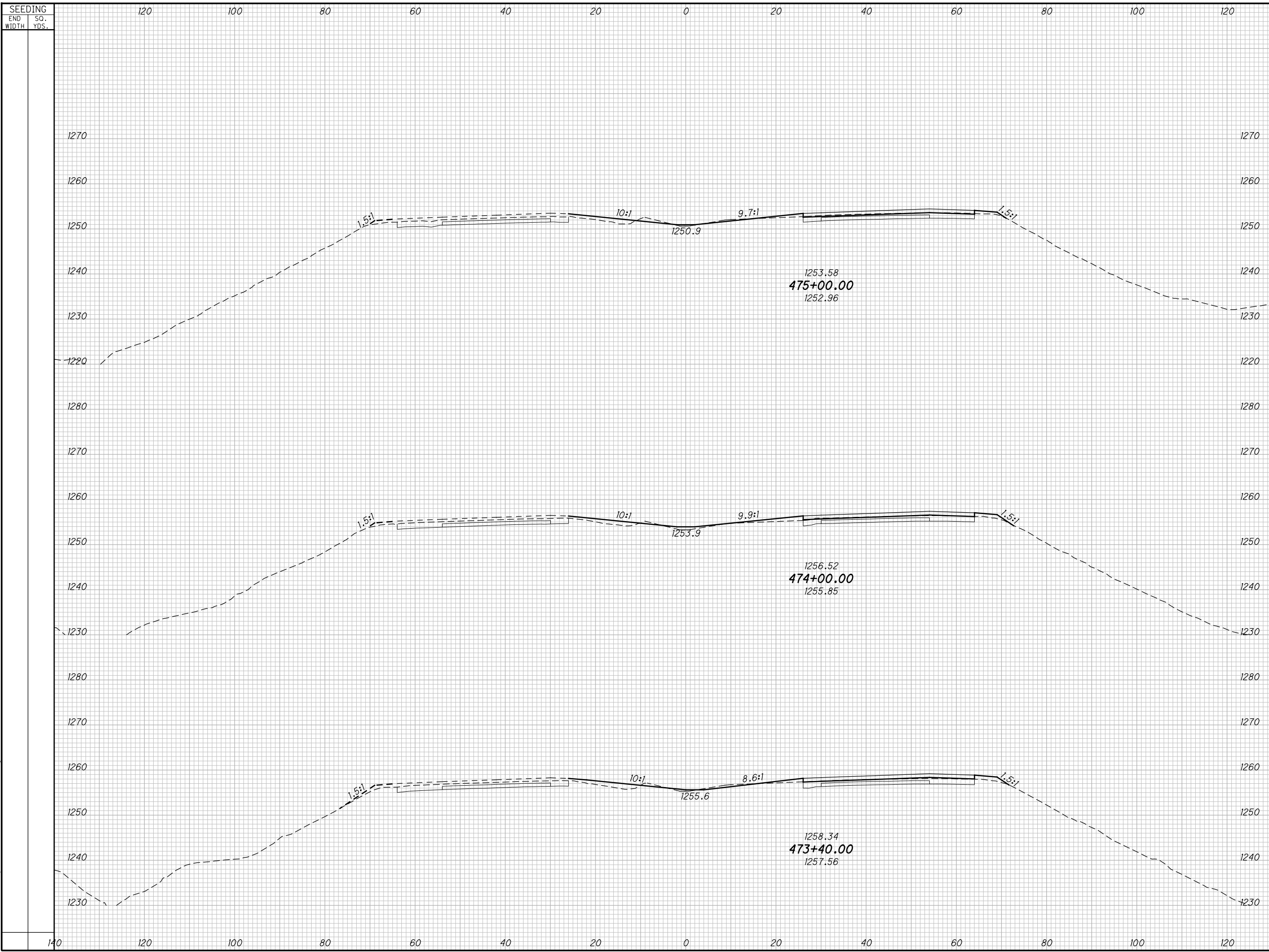
CROSS SECTIONS - I.R. 70

STA. 471+00.00 TO STA. 473+00.00

BEL-70-7.61

112
307

P:\76825\roadway\sheets\76825XS400.dgn 4/14/2011 10:21:17 AM mcornett



SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70

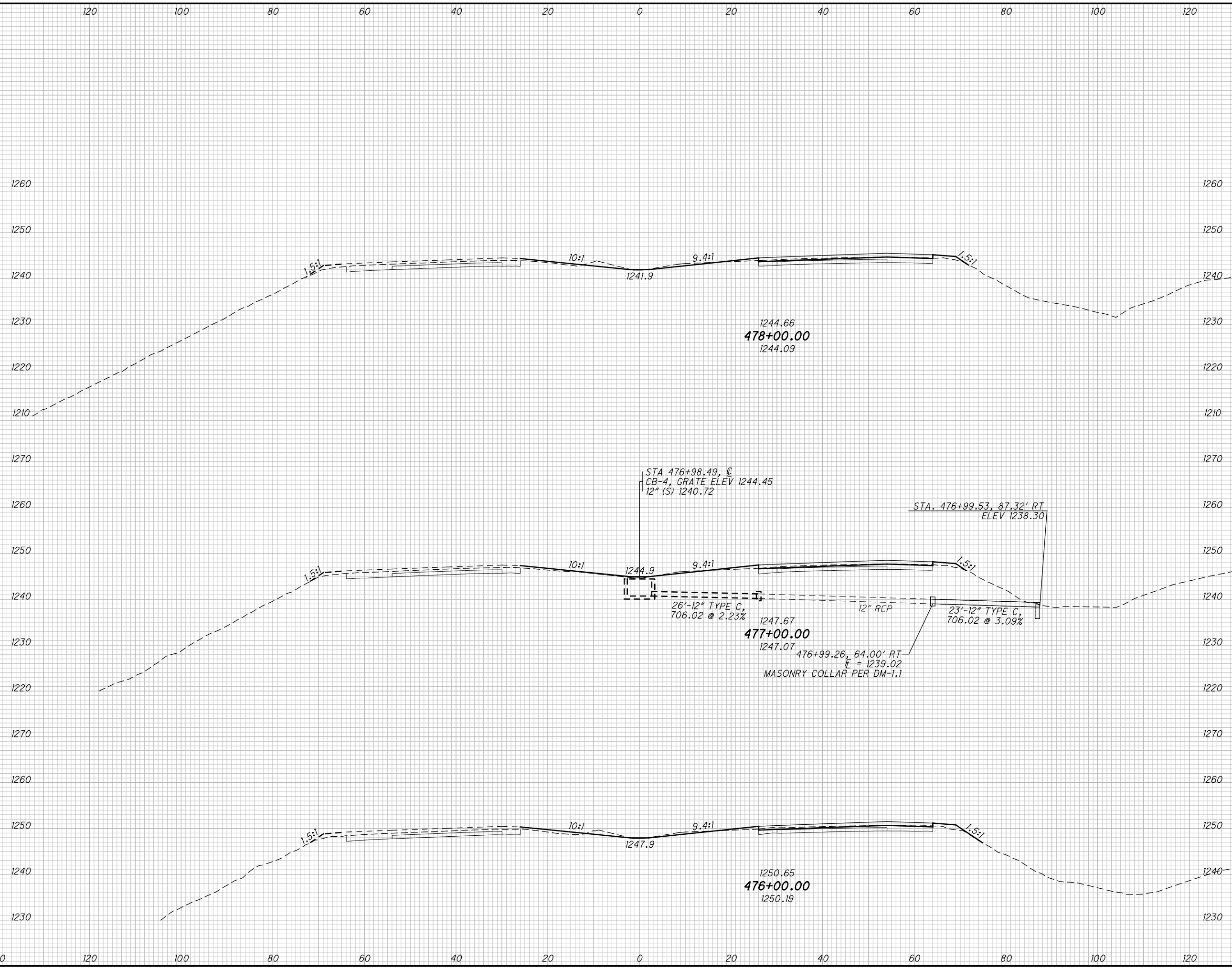
STA. 473+40.00 TO STA. 475+00.00

BEL-70-7.61

113
307

P:\76825\roadway\sheets\76825\5400.dgn 4/14/2011 10:21:20 AM mcornett

SEEDING	
END WIDTH	SO. YDS.



END AREA	VOLUME	CALCULATED	CHECKED						
				CUT	FILL	CUT	FILL	MJC	BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

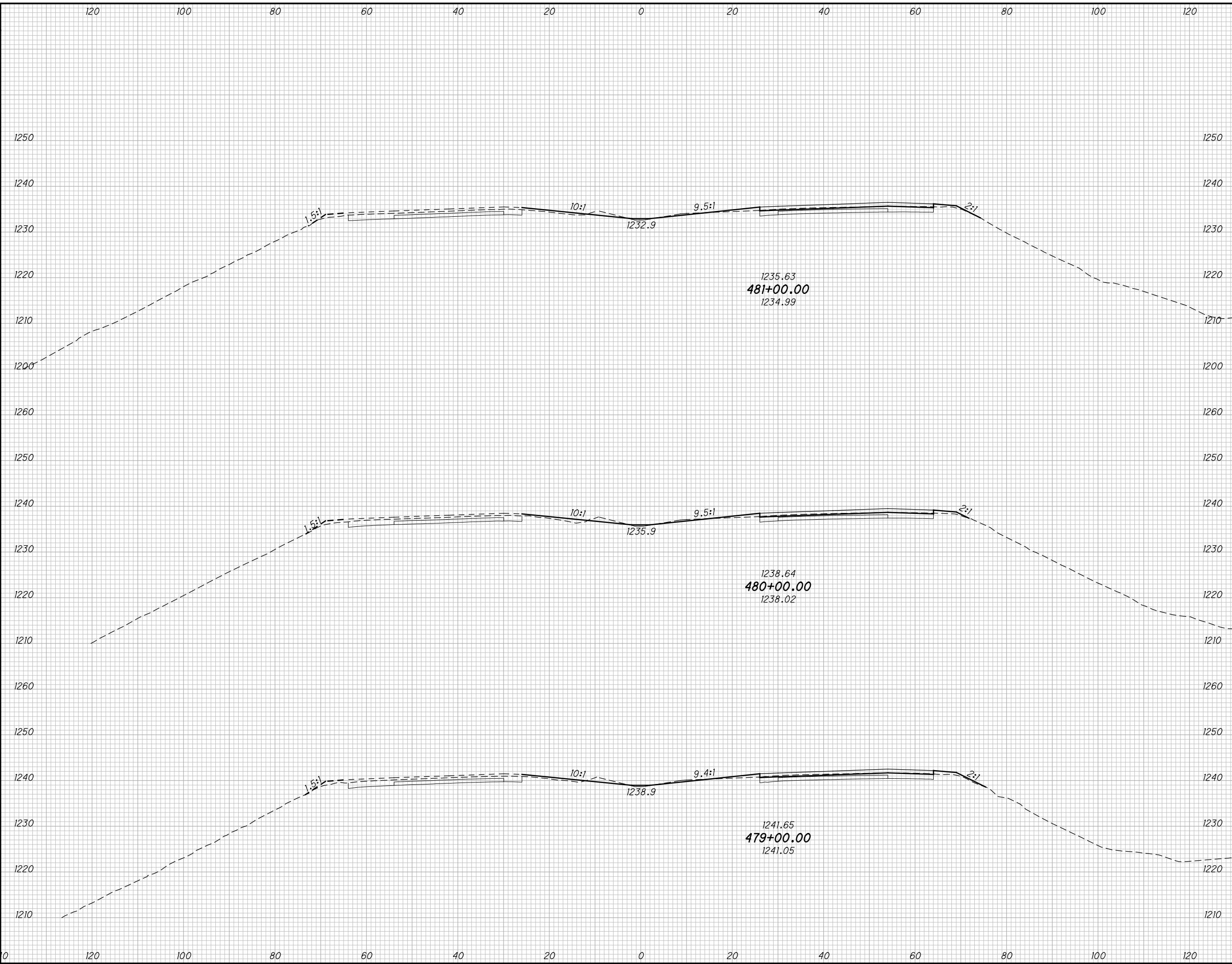
CROSS SECTIONS - I.R. 70
STA. 476+00.00 TO STA. 478+00.00

BEL-70-7.61

114
307

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SEEDING
END SO.
WIDTH YDS.



END AREA		VOLUME		CALCULATED MJC	CHECKED BBD
CUT	FILL	CUT	FILL		

APPROVED FOR CONSTRUCTION - 5/2/2011

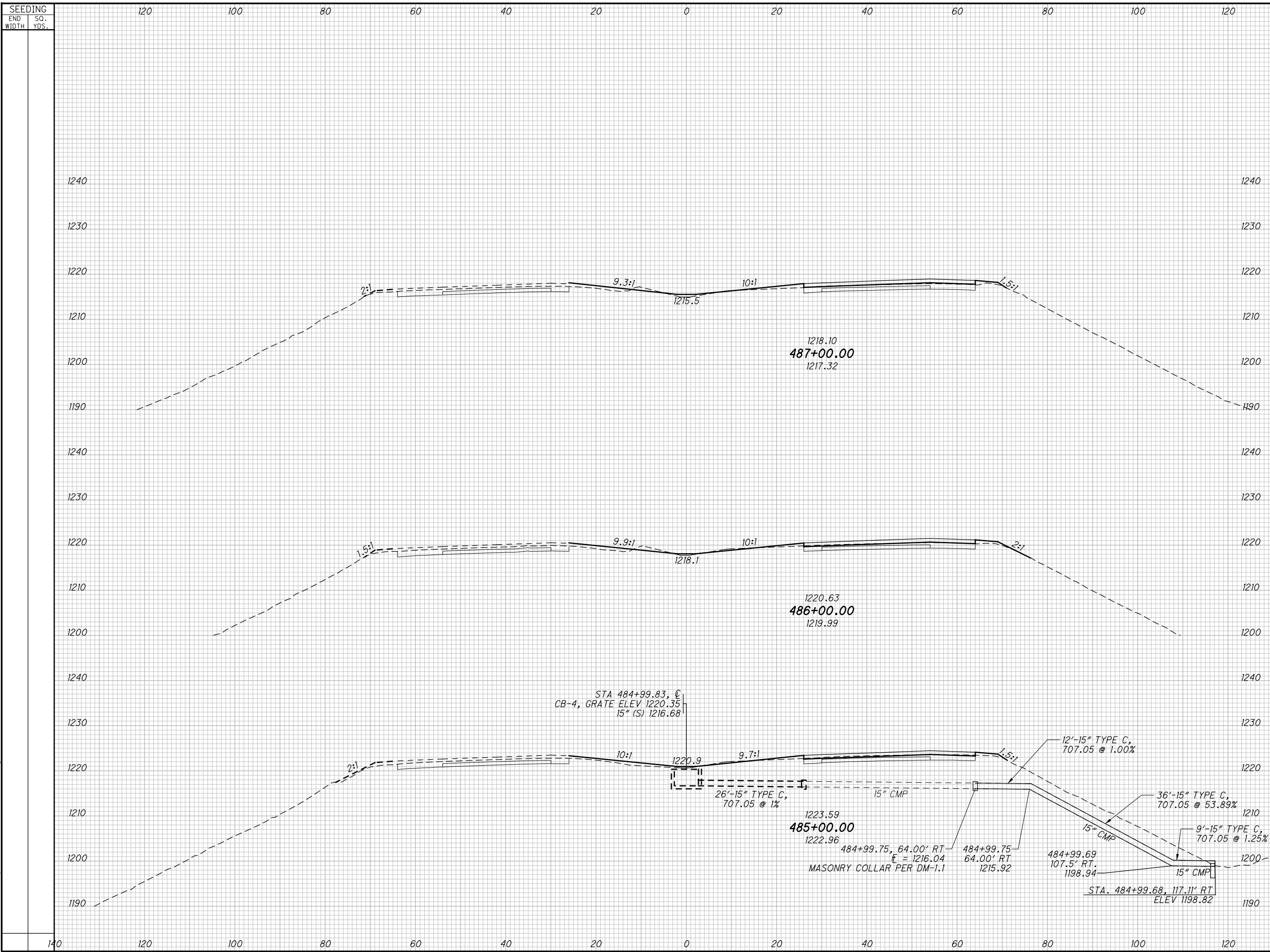
CROSS SECTIONS - I.R. 70

STA. 479+00.00 TO STA. 481+00.00

BEL-70-7.61

115
307

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END AREA	VOLUME		CALCULATED MJC	CHECKED BBD
	CUT	FILL		

APPROVED FOR CONSTRUCTION - 5/2/2011

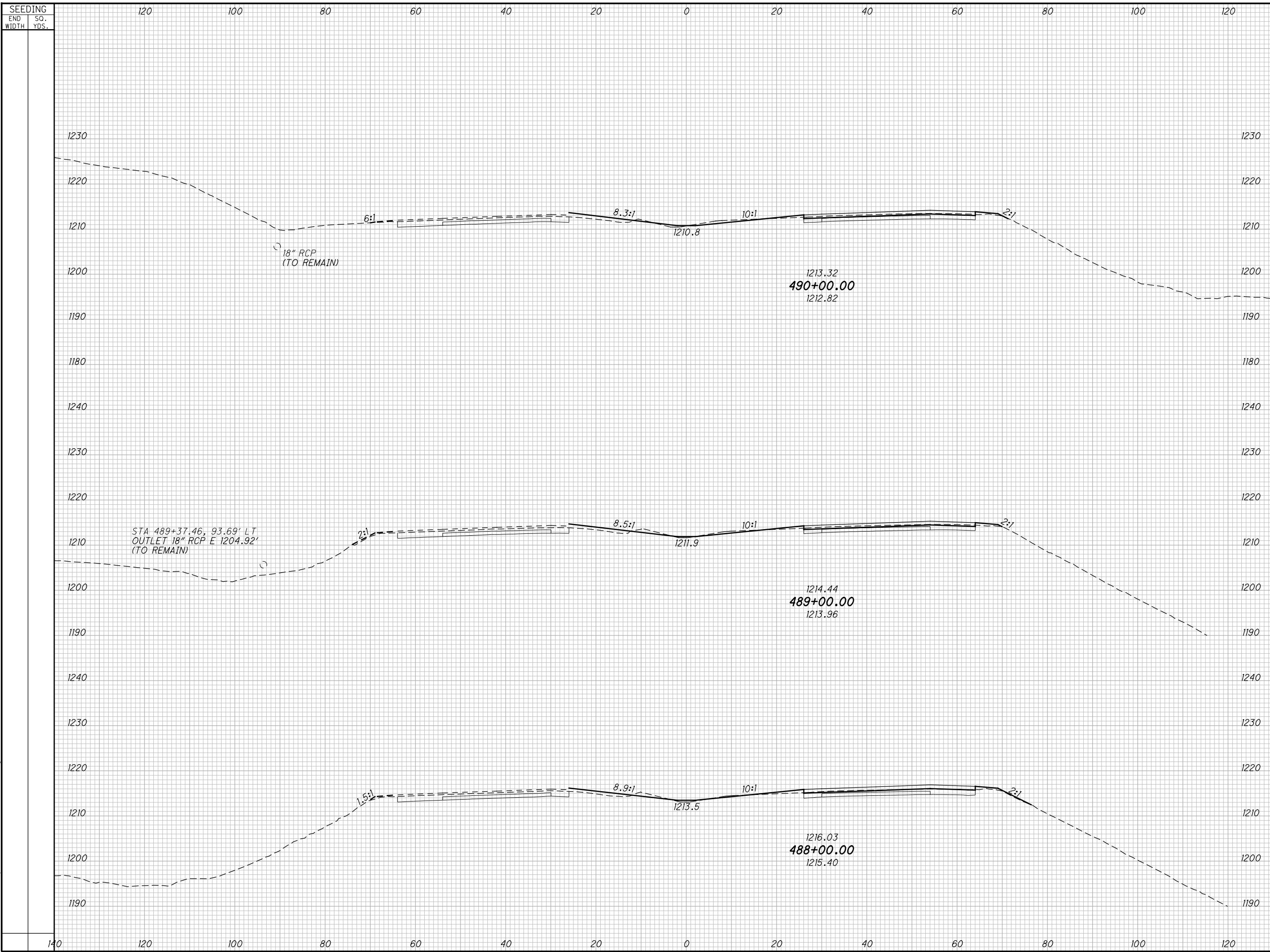
CROSS SECTIONS - I.R. 70

STA. 485+00.00 TO STA. 487+00.00

BEL-70-7.61

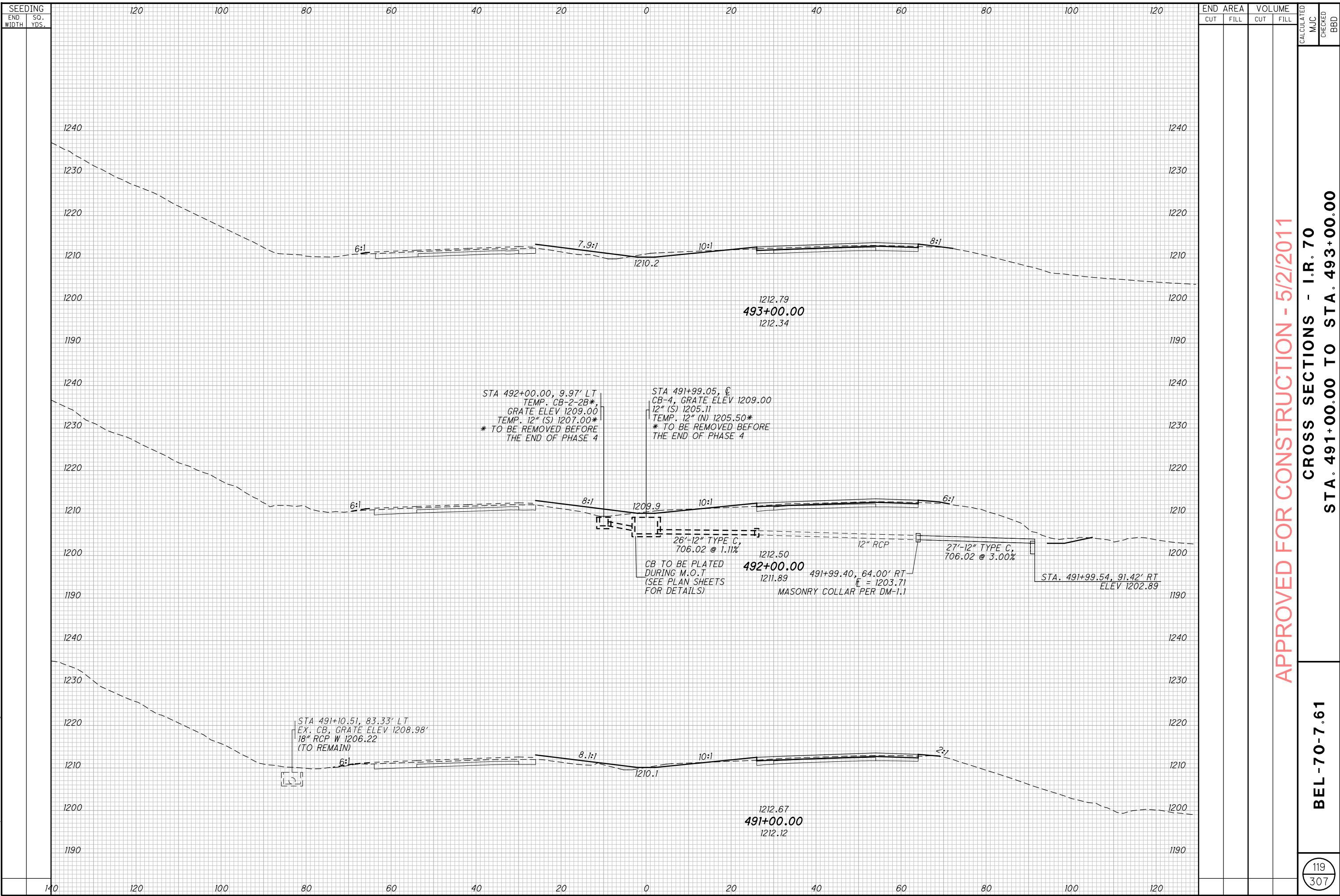
117
307

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SEEDING		END AREA		VOLUME		CALCULATED			
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD		
APPROVED FOR CONSTRUCTION - 5/2/2011									
CROSS SECTIONS - I.R. 70									
STA. 488+00.00 TO STA. 490+00.00									
BEL-70-7.61									
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118									
307									

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APPROVED FOR CONSTRUCTION - 5/2/2011

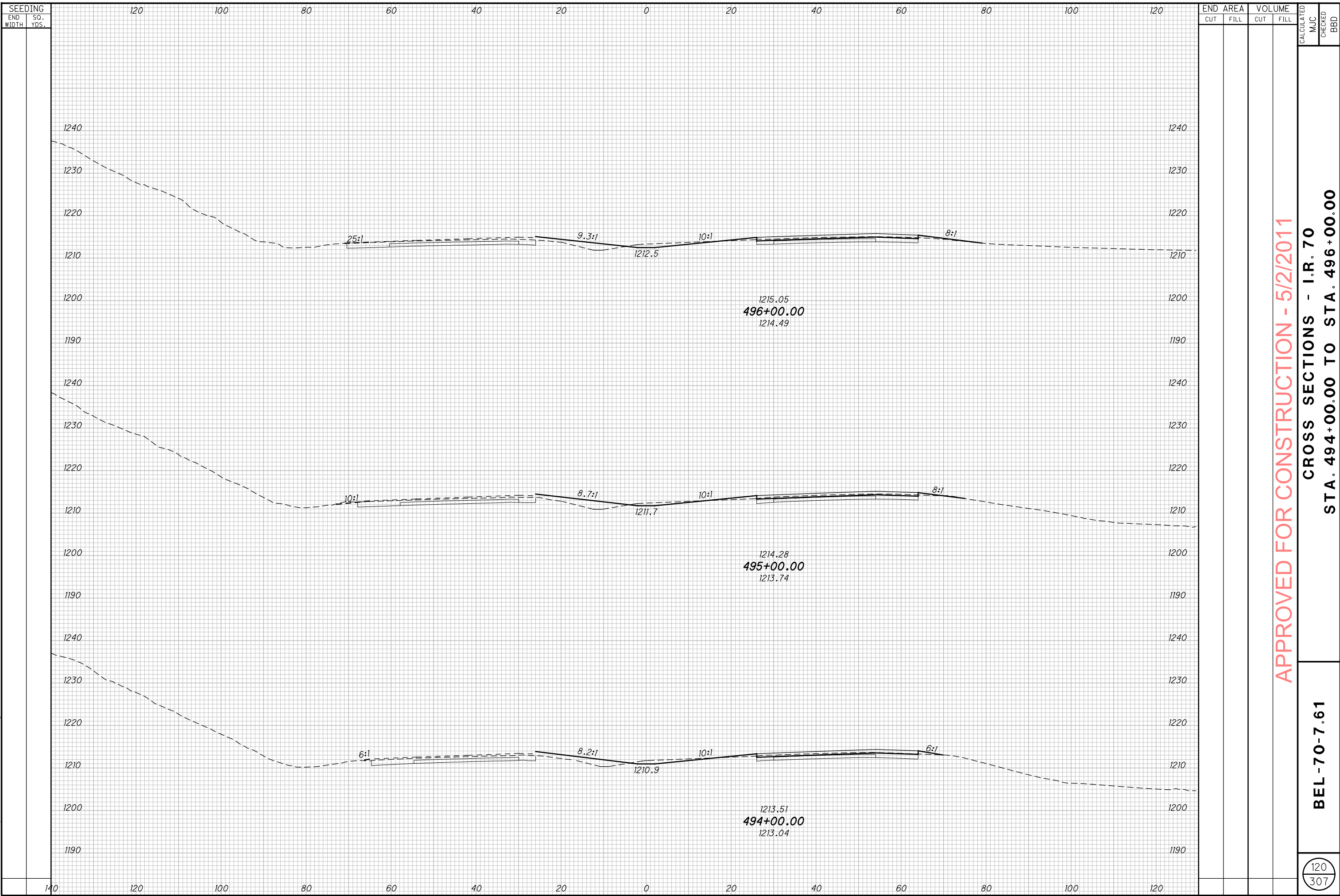
CROSS SECTIONS - I.R. 70

STA. 491+00.00 TO STA. 493+00.00

BEL-70-7.61

119
307

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SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70

STA. 494+00.00 TO STA. 496+00.00

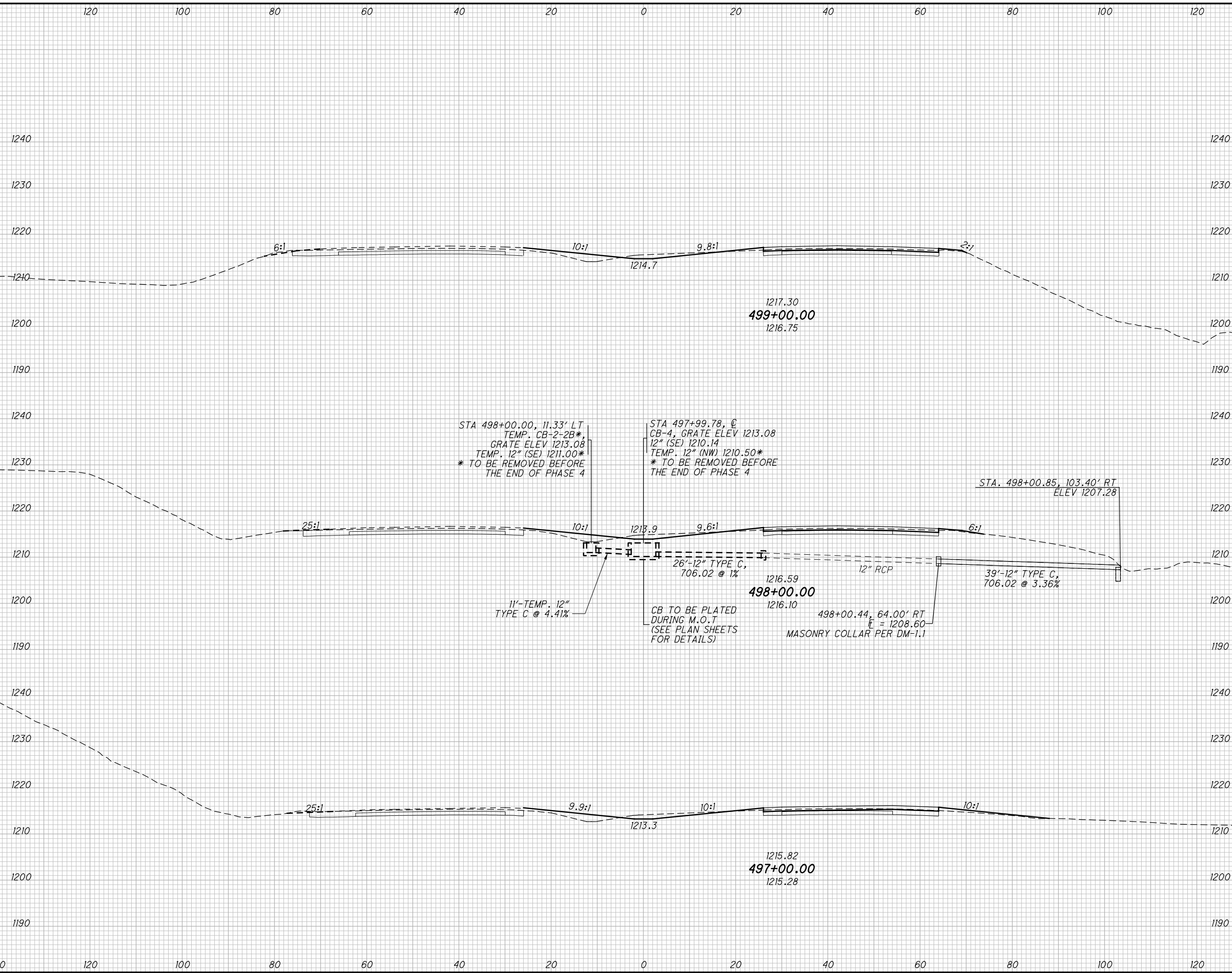
BEL-70-7.61

120
307

P:\76825\roadway\sheet\76825XS400.dgn 4/14/2011 10:21:38 AM mcornett

SEEDING
END SO.
WIDTH YDS.

END AREA		VOLUME		CALCULATED MJC	CHECKED BBD
CUT	FILL	CUT	FILL		



APPROVED FOR CONSTRUCTION - 5/2/2011

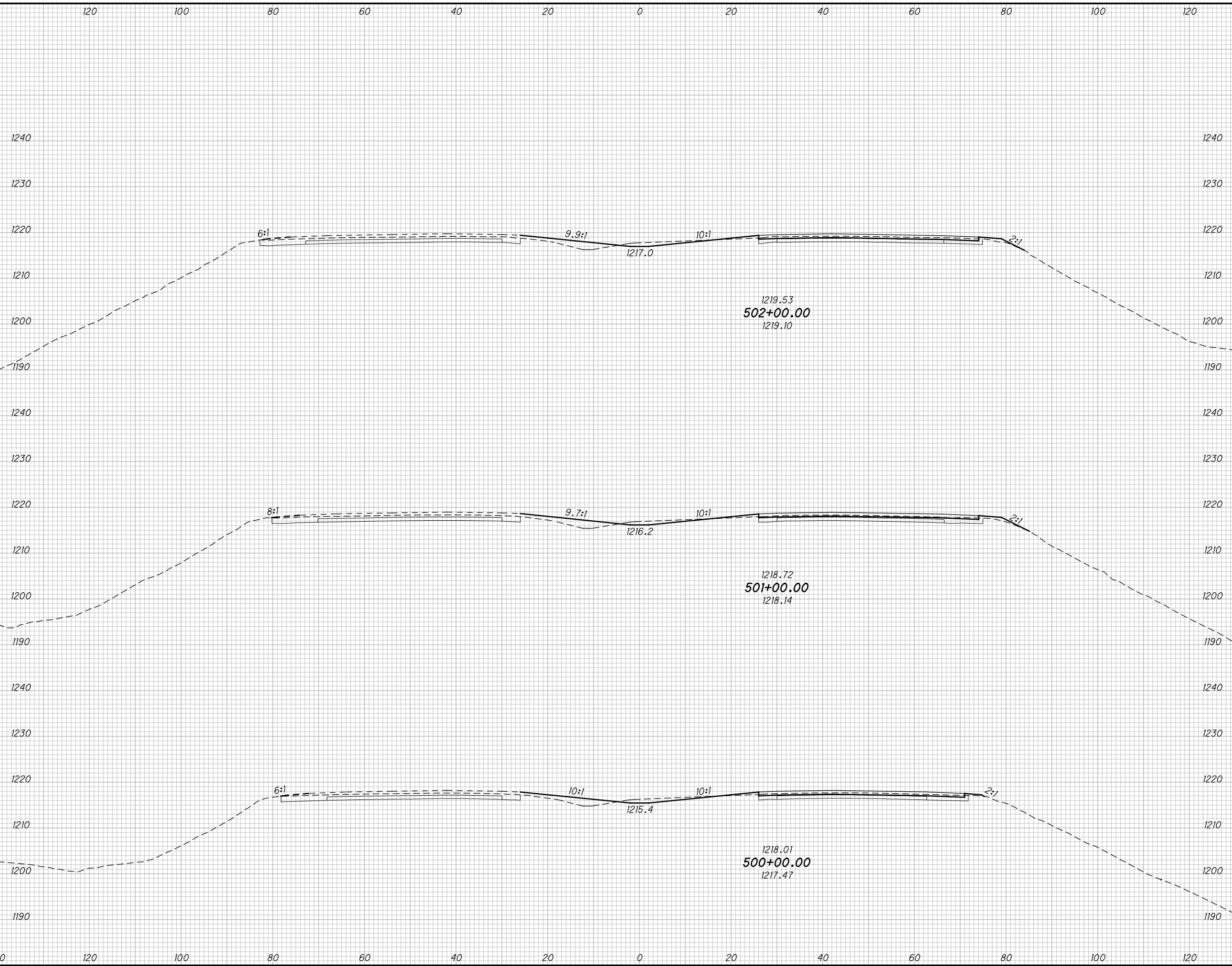
CROSS SECTIONS - I.R. 70
STA. 497+00.00 TO STA. 499+00.00

BEL-70-7.61

121
307

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SEEDING	
END WIDTH	SO. YDS.
140	



END AREA		VOLUME		CALCULATED MJC	CHECKED BBD
CUT	FILL	CUT	FILL		

APPROVED FOR CONSTRUCTION - 5/2/2011

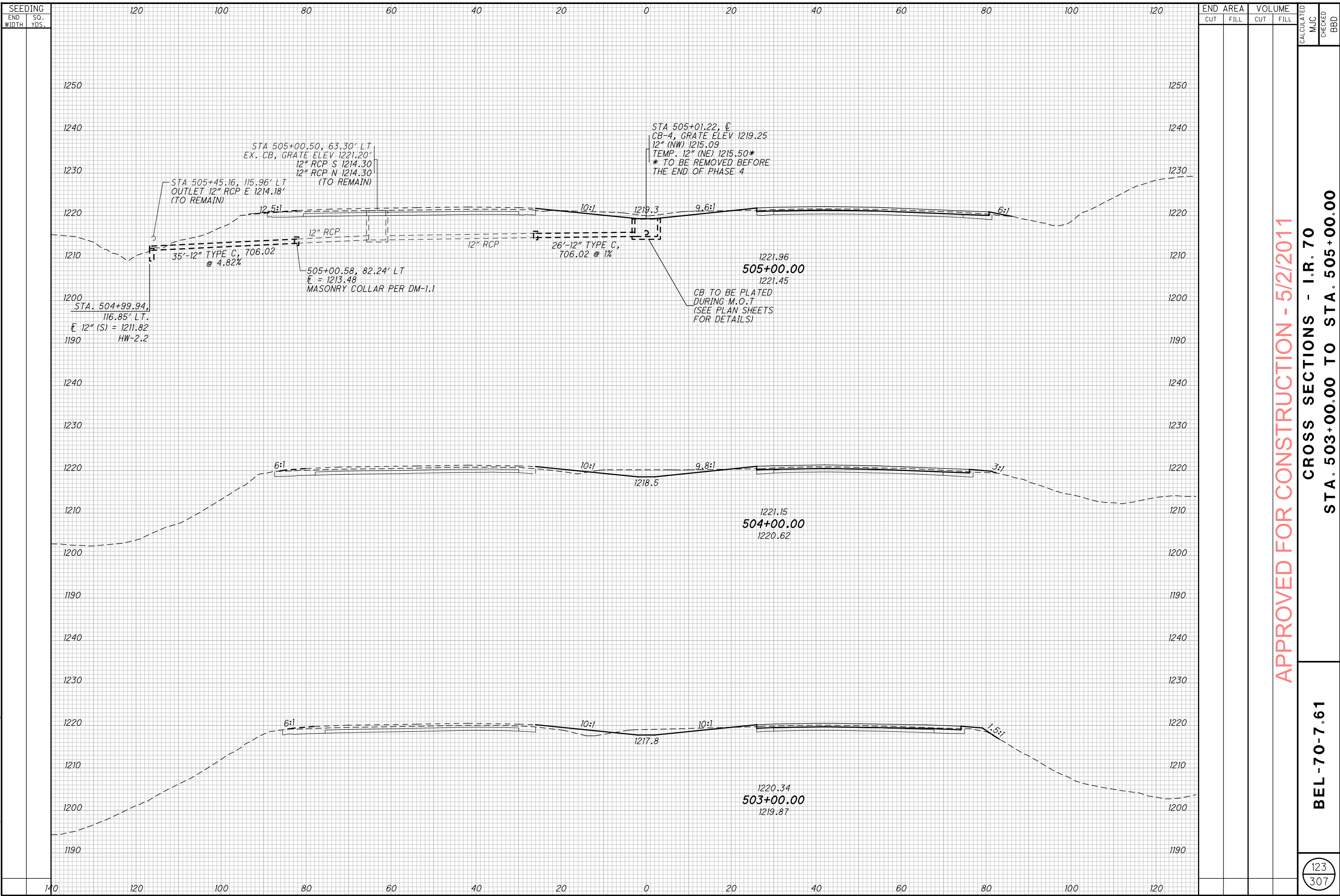
CROSS SECTIONS - I.R. 70

STA. 500+00.00 TO STA. 502+00.00

BEL-70-7.61

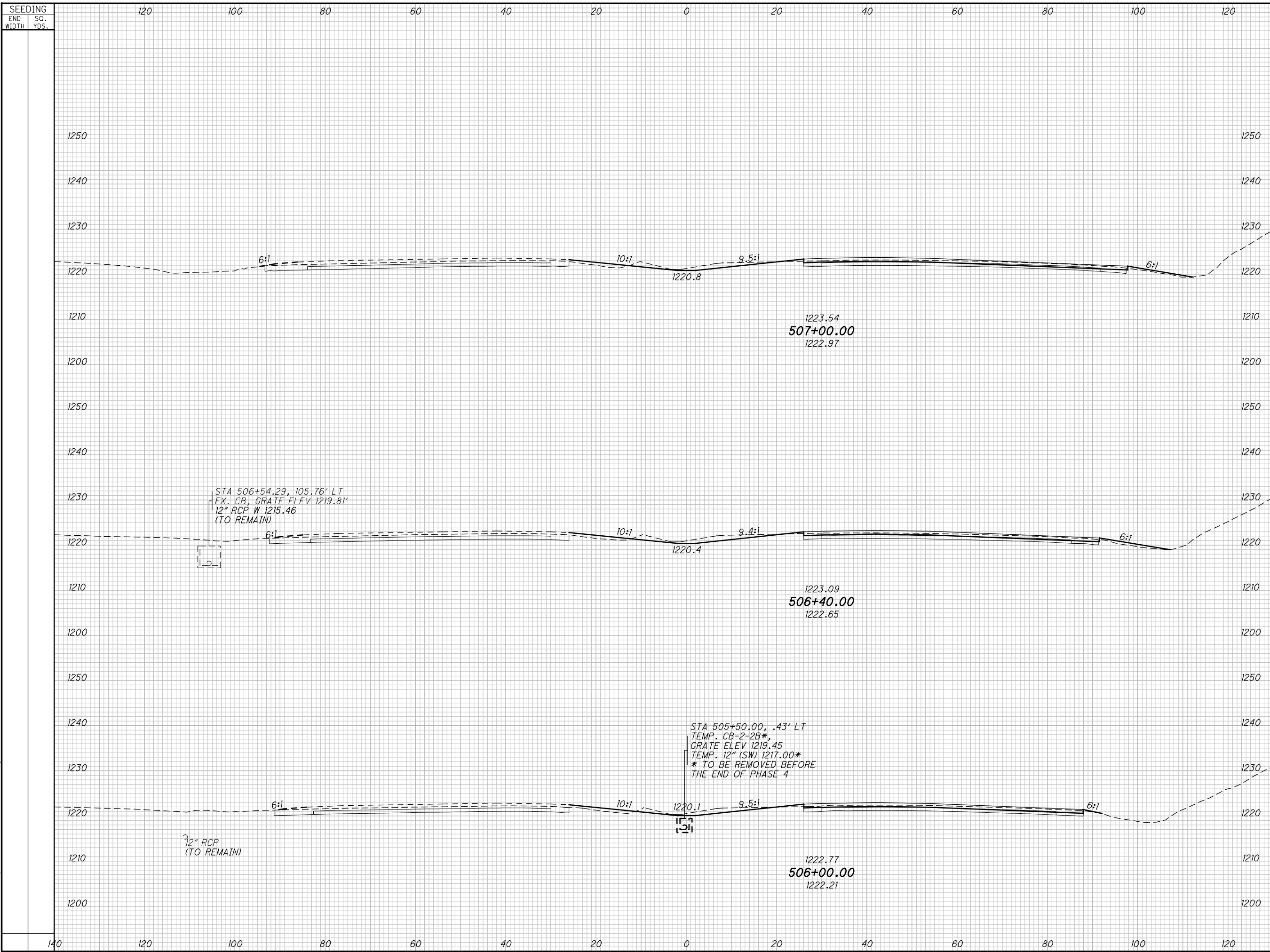
122
307

P:\76825\roadway\sheets\76825XS400.dgn 4/14/2011 10:21:43 AM mcornett



SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD
APPROVED FOR CONSTRUCTION - 5/2/2011 CROSS SECTIONS - I.R. 70 STA. 503+00.00 TO STA. 505+00.00							
BEL-70-7.61							
123 307							

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SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

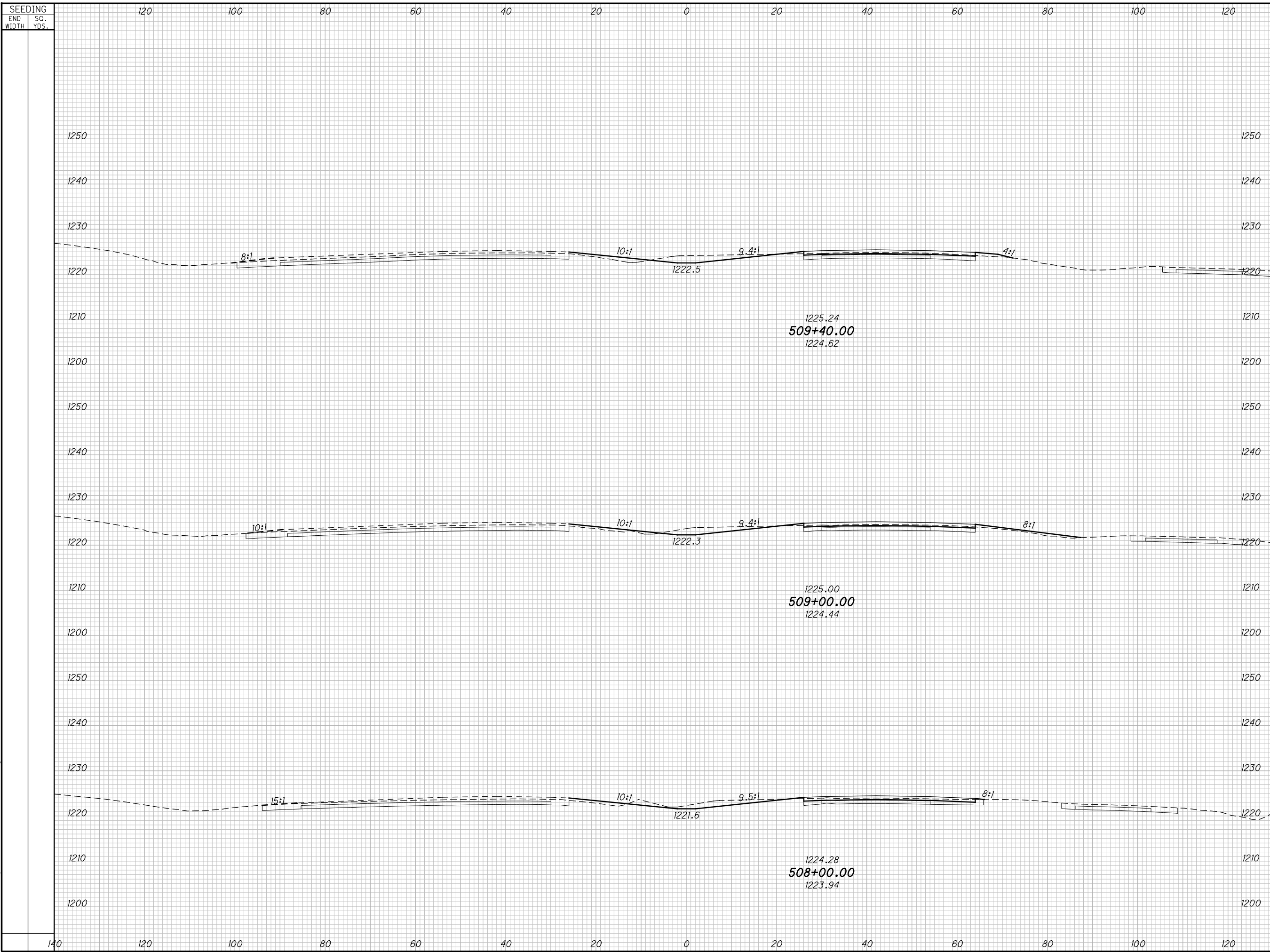
CROSS SECTIONS - I.R. 70

STA. 506+00.00 TO STA. 507+00.00

BEL-70-7.61

124
307

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SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

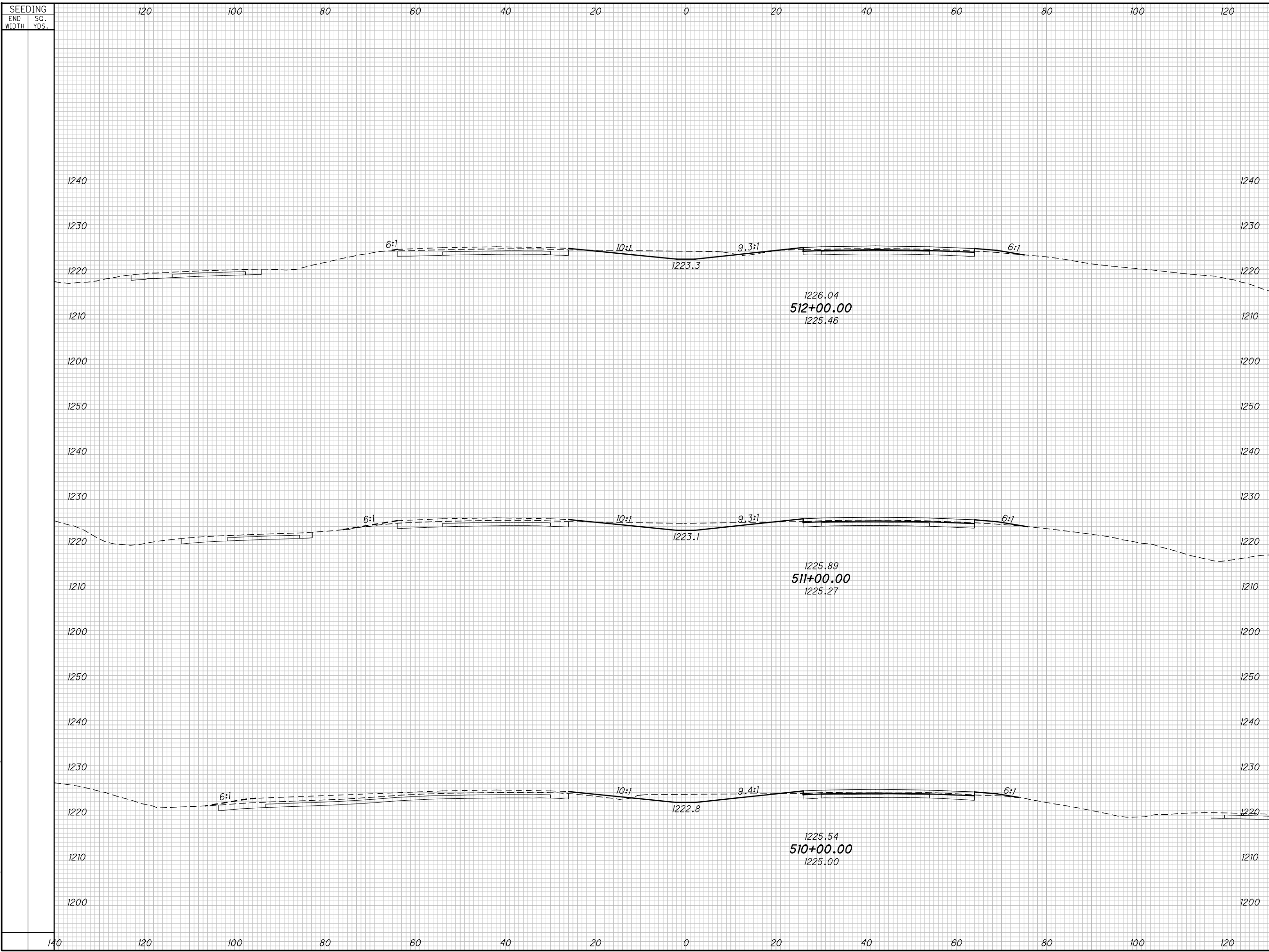
CROSS SECTIONS - I.R. 70

STA. 508+00.00 TO STA. 509+40.00

BEL-70-7.61

125
307

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END AREA	VOLUME	CALCULATED		CHECKED	BBD
		CUT	FILL		

APPROVED FOR CONSTRUCTION - 5/2/2011

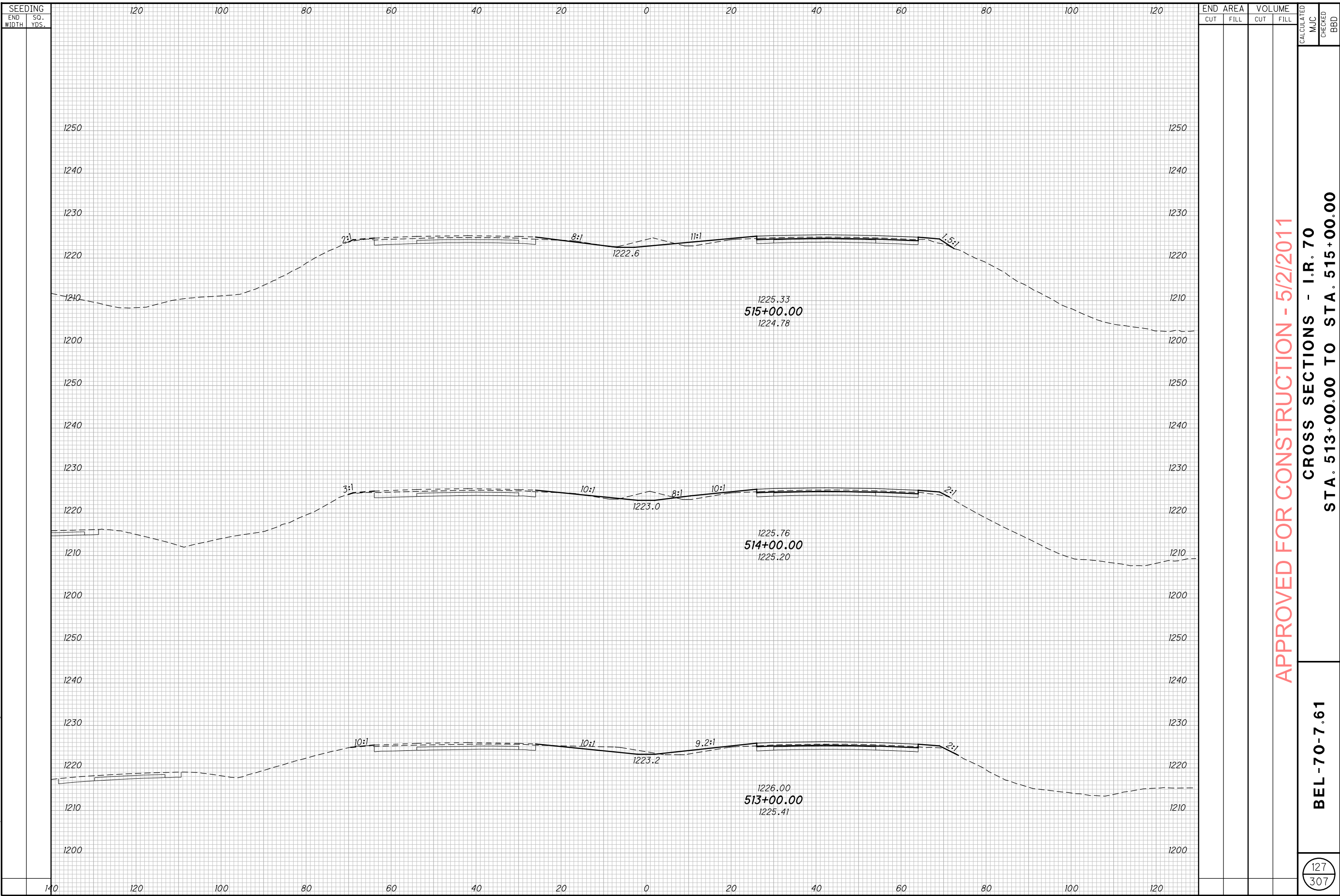
CROSS SECTIONS - I.R. 70

STA. 510+00.00 TO STA. 512+00.00

BEL-70-7.61

126
307

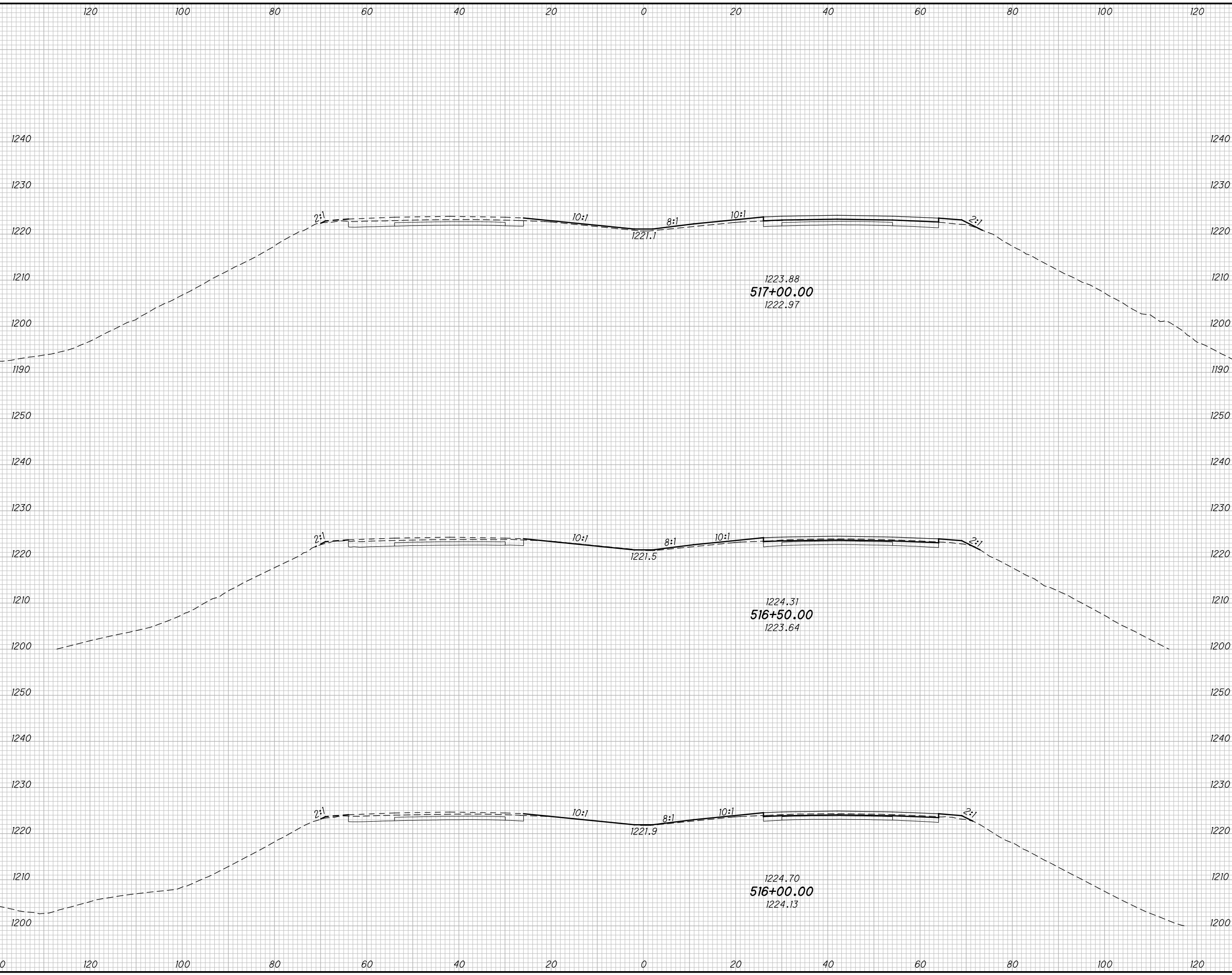
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SEEDING	
END WIDTH	SO. YDS.

END AREA		VOLUME		CALCULATED	
CUT	FILL	CUT	FILL	MJC	BBD



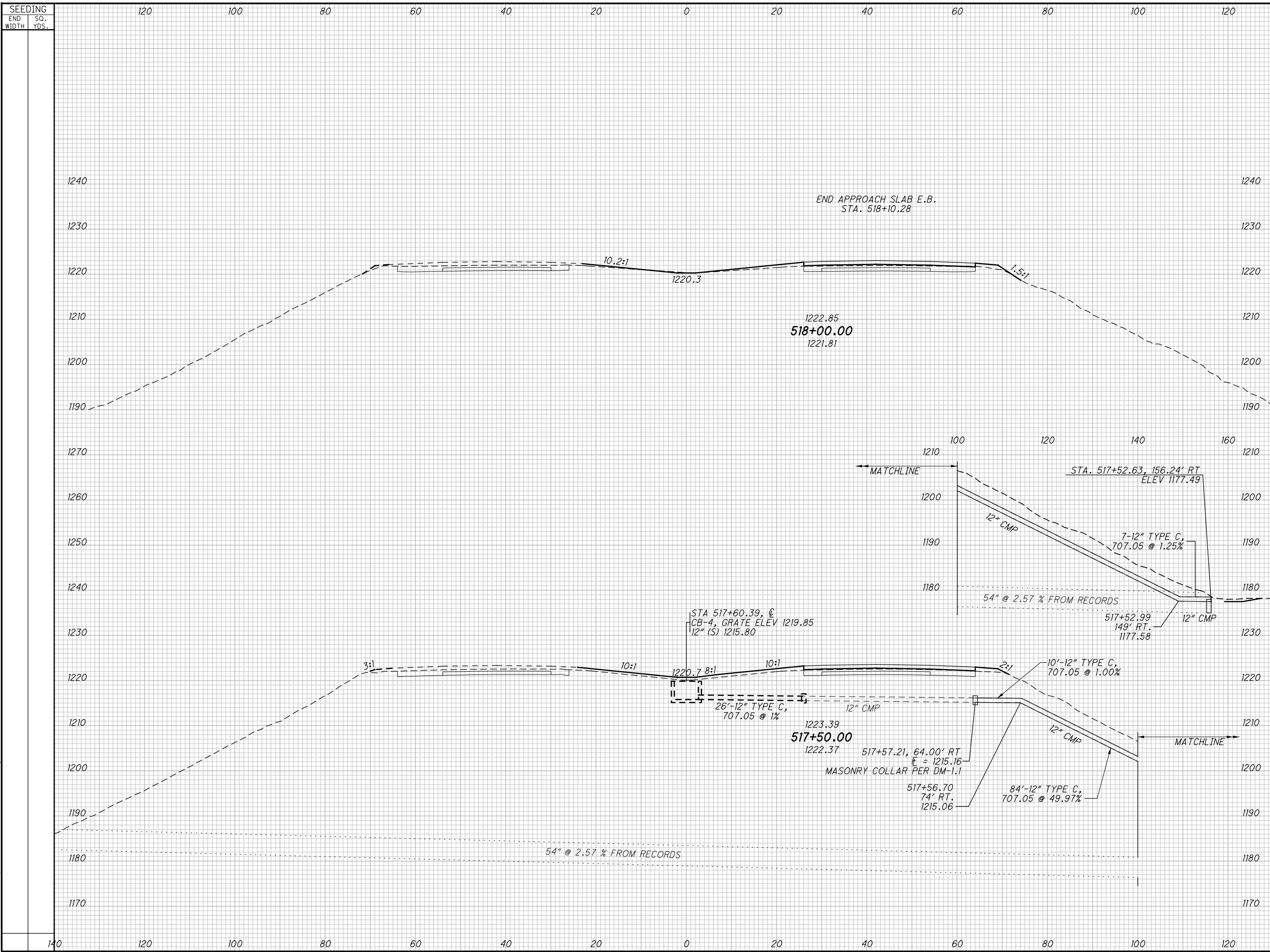
APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 516+00.00 TO STA. 517+00.00

BEL-70-7.61

128
307

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END AREA		VOLUME		CALCULATED MJC	CHECKED BBD
CUT	FILL	CUT	FILL		

APPROVED FOR CONSTRUCTION - 5/2/2011

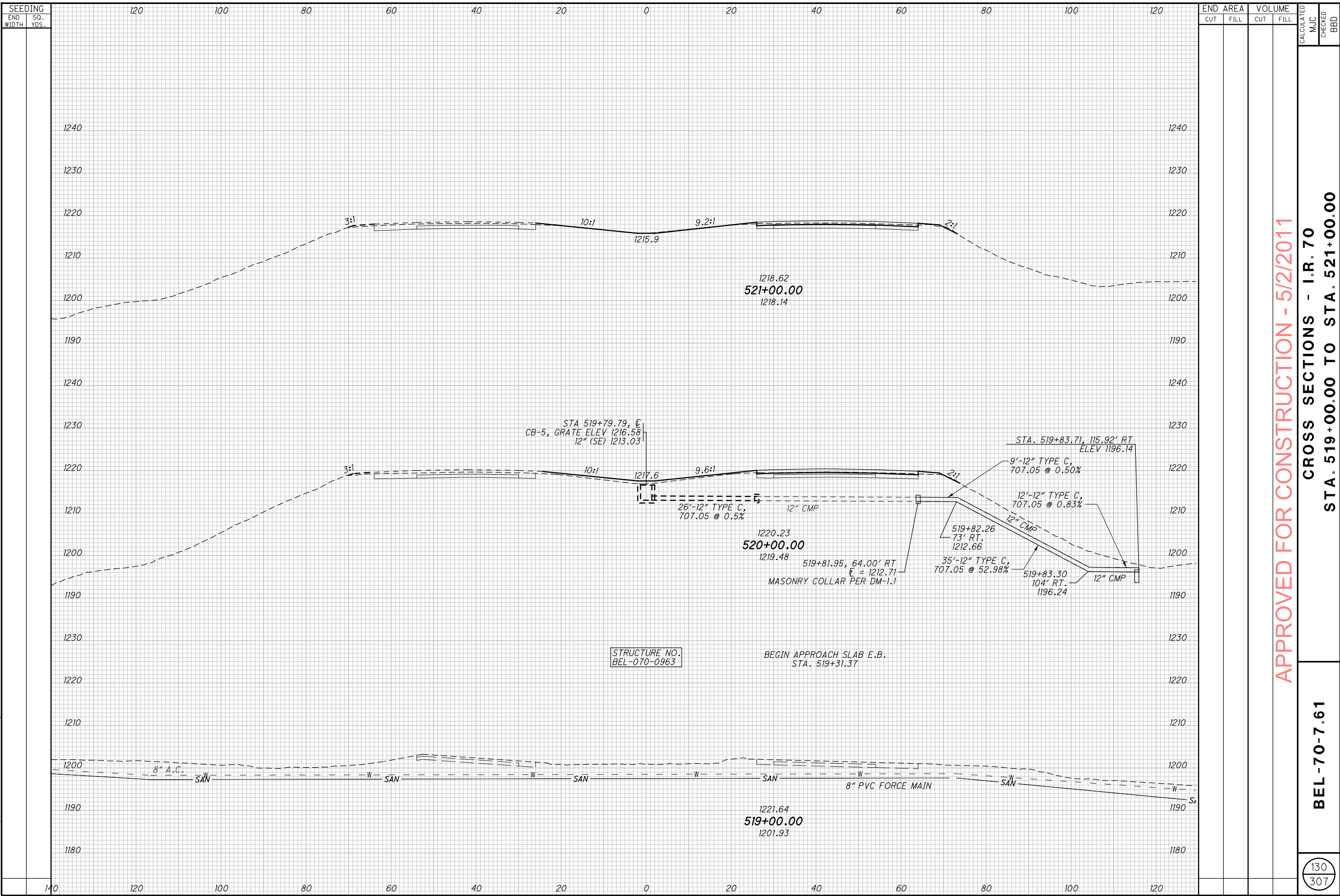
CROSS SECTIONS - I.R. 70

STA. 517+50.00 TO STA. 518+00.00

BEL-70-7.61

129
307

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APPROVED FOR CONSTRUCTION - 5/2/2011

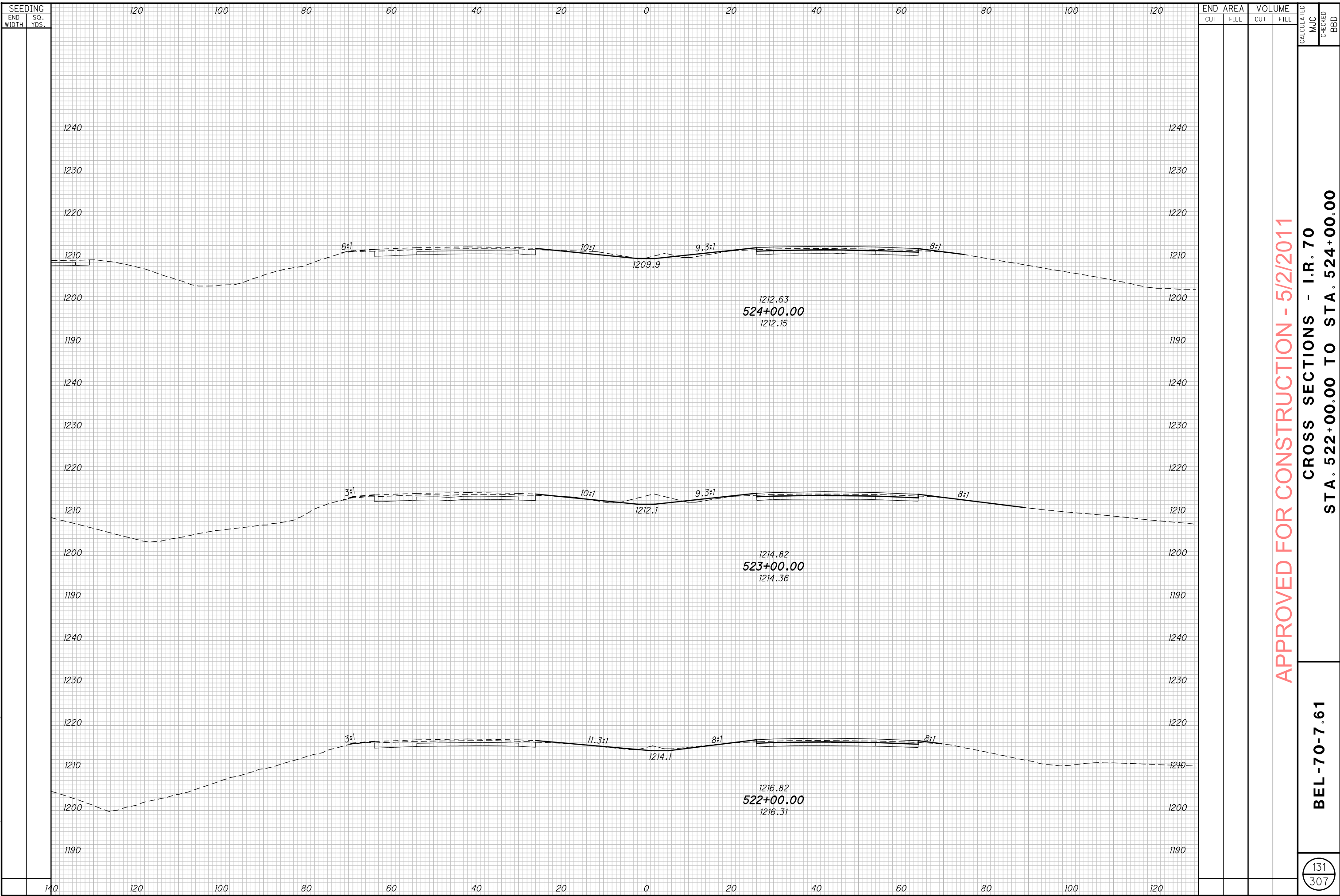
CROSS SECTIONS - I.R. 70

STA. 519+00.00 TO STA. 521+00.00

BEL-70-7.61

130
307

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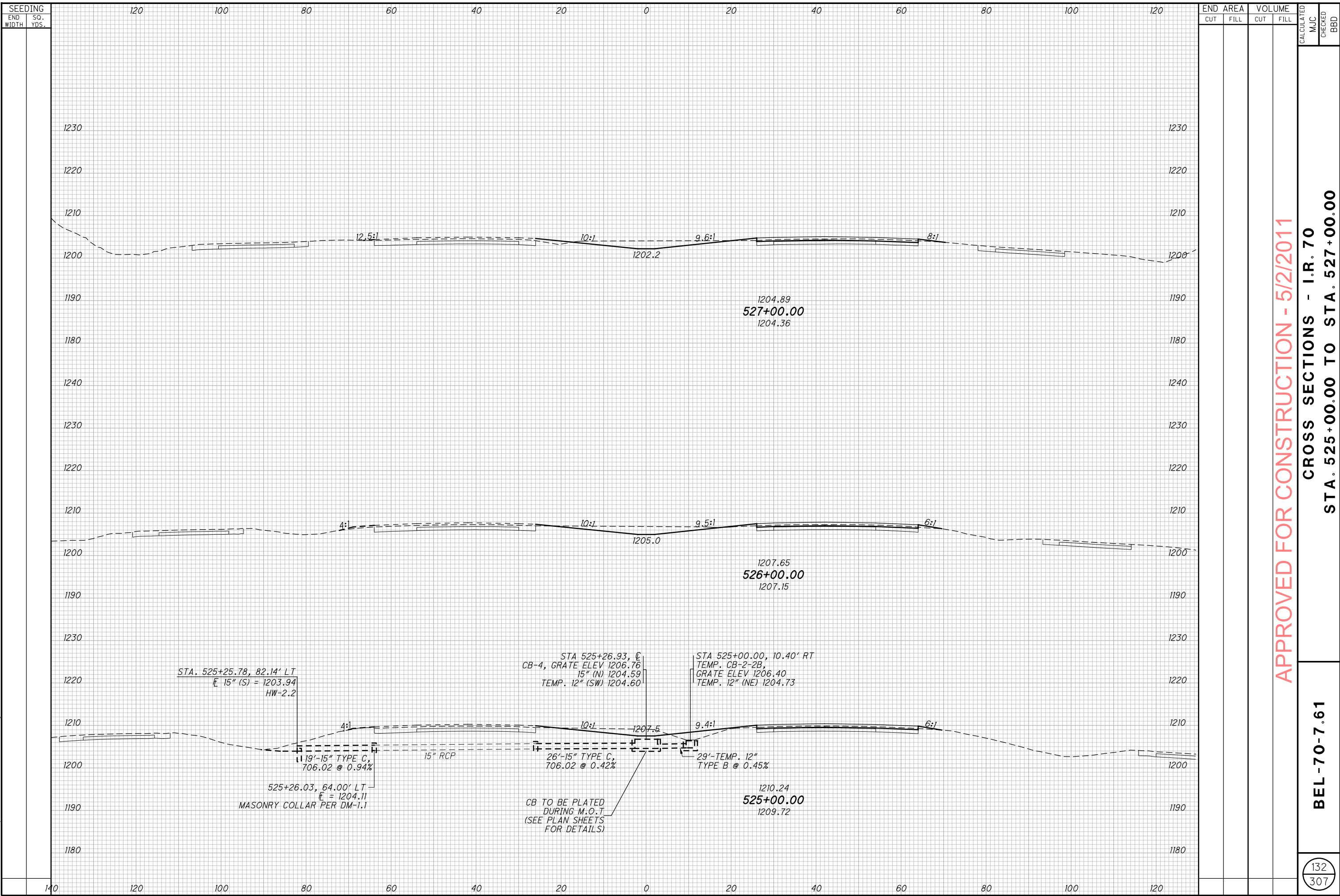
APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 522+00.00 TO STA. 524+00.00

BEL-70-7.61

131
307

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SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

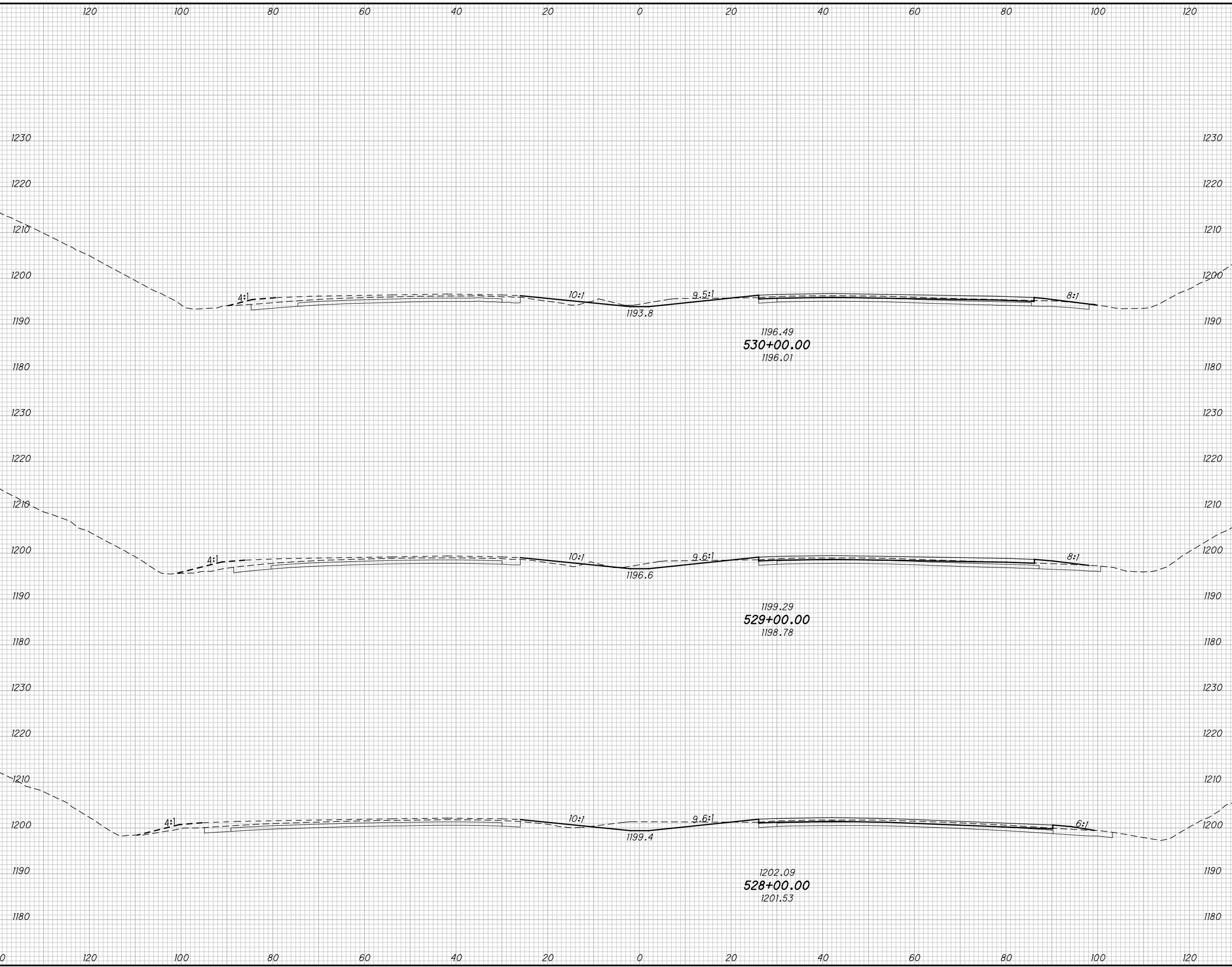
CROSS SECTIONS - I.R. 70
STA. 525+00.00 TO STA. 527+00.00

BEL-70-7.61

132
307

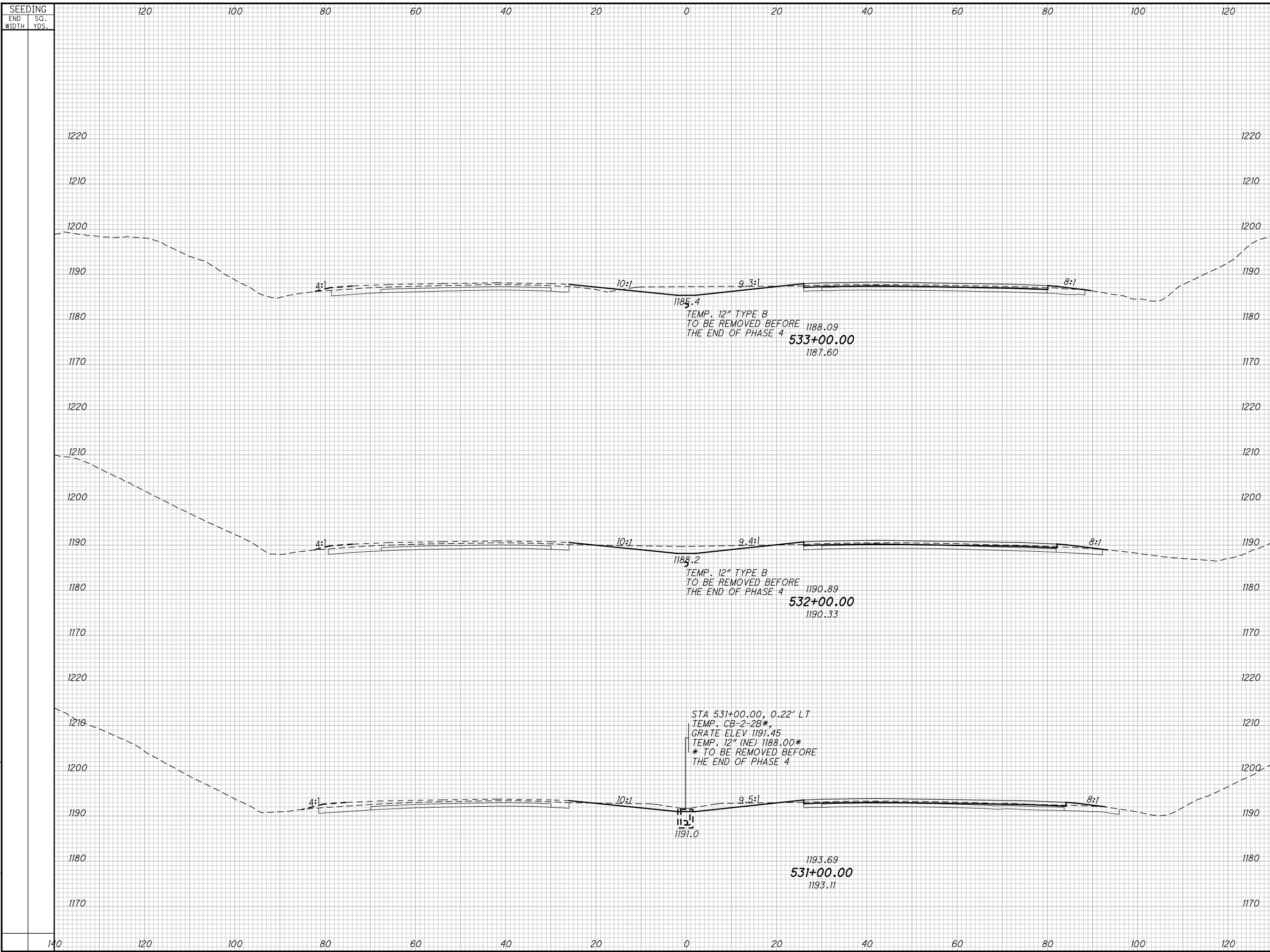
P:\76825\roadway\sheets\76825XS400.dgn 4/14/2011 10:22:09 AM mcorneett

SEEDING	
END WIDTH	SO. YDS.
140	



END AREA		VOLUME		CALCULATED	
CUT	FILL	CUT	FILL	MJC	BBD
APPROVED FOR CONSTRUCTION - 5/2/2011 CROSS SECTIONS - I.R. 70 STA. 528+00.00 TO STA. 530+00.00					
BEL-70-7.61					
133 307					

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END AREA	VOLUME	CALCULATED		CHECKED	BBD
		CUT	FILL		

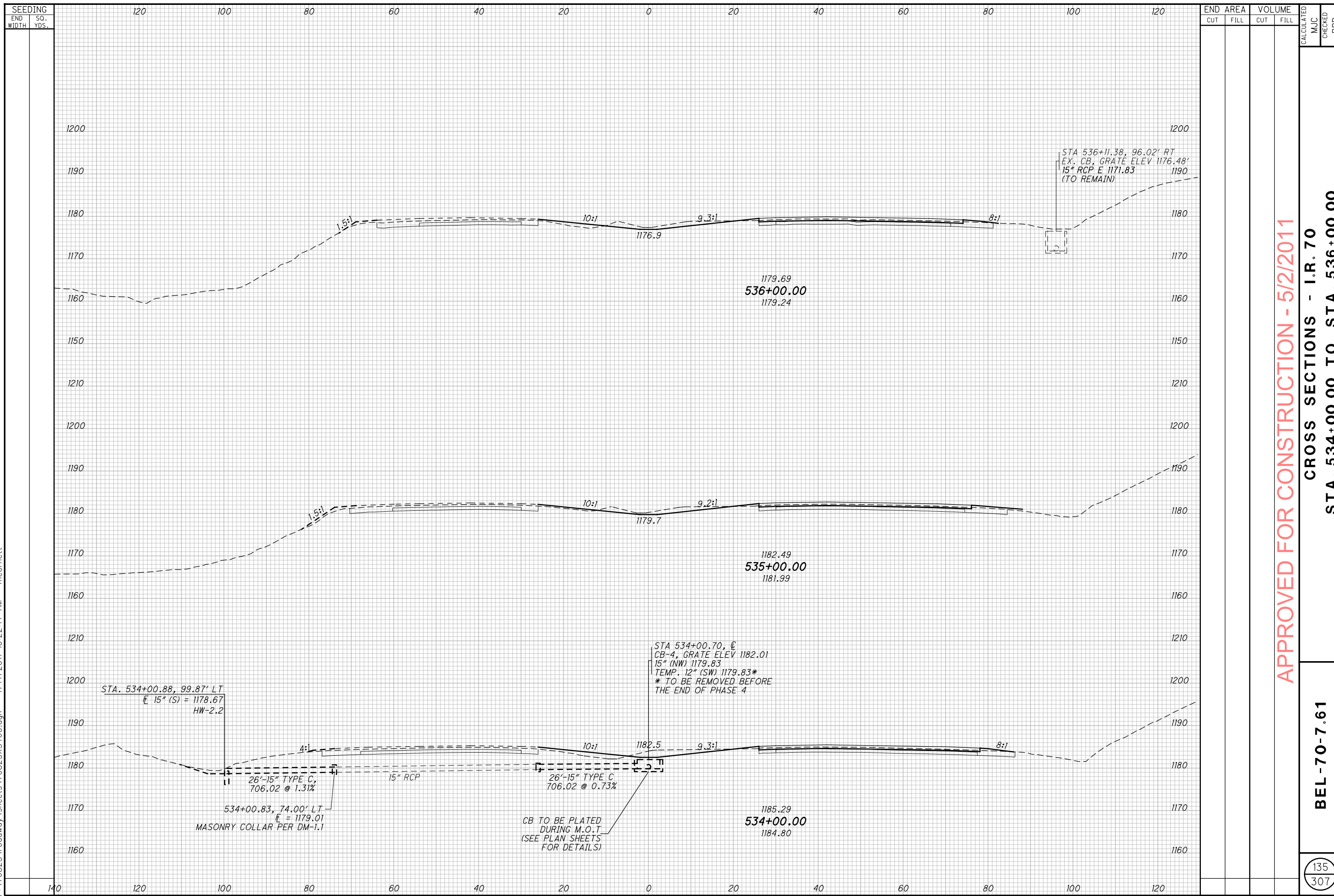
APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70

STA. 531+00.00 TO STA. 533+00.00

BEL-70-7.61

134
307



APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70

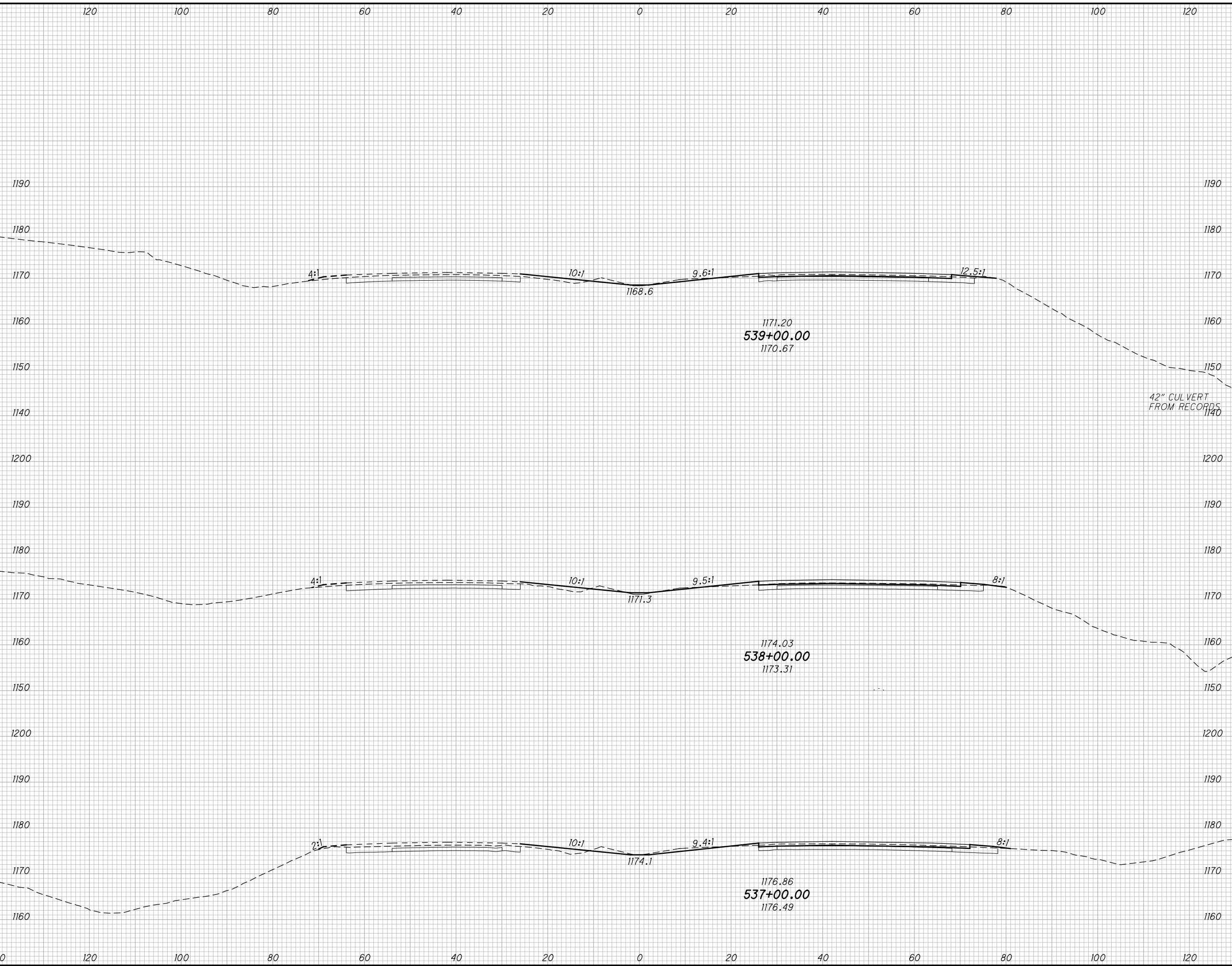
STA. 534+00.00 TO STA. 536+00.00

BEL-70-7.61

135
307

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SEEDING	
END WIDTH	SO. YDS.



END AREA		VOLUME		CALCULATED MJC	CHECKED BBD
CUT	FILL	CUT	FILL		

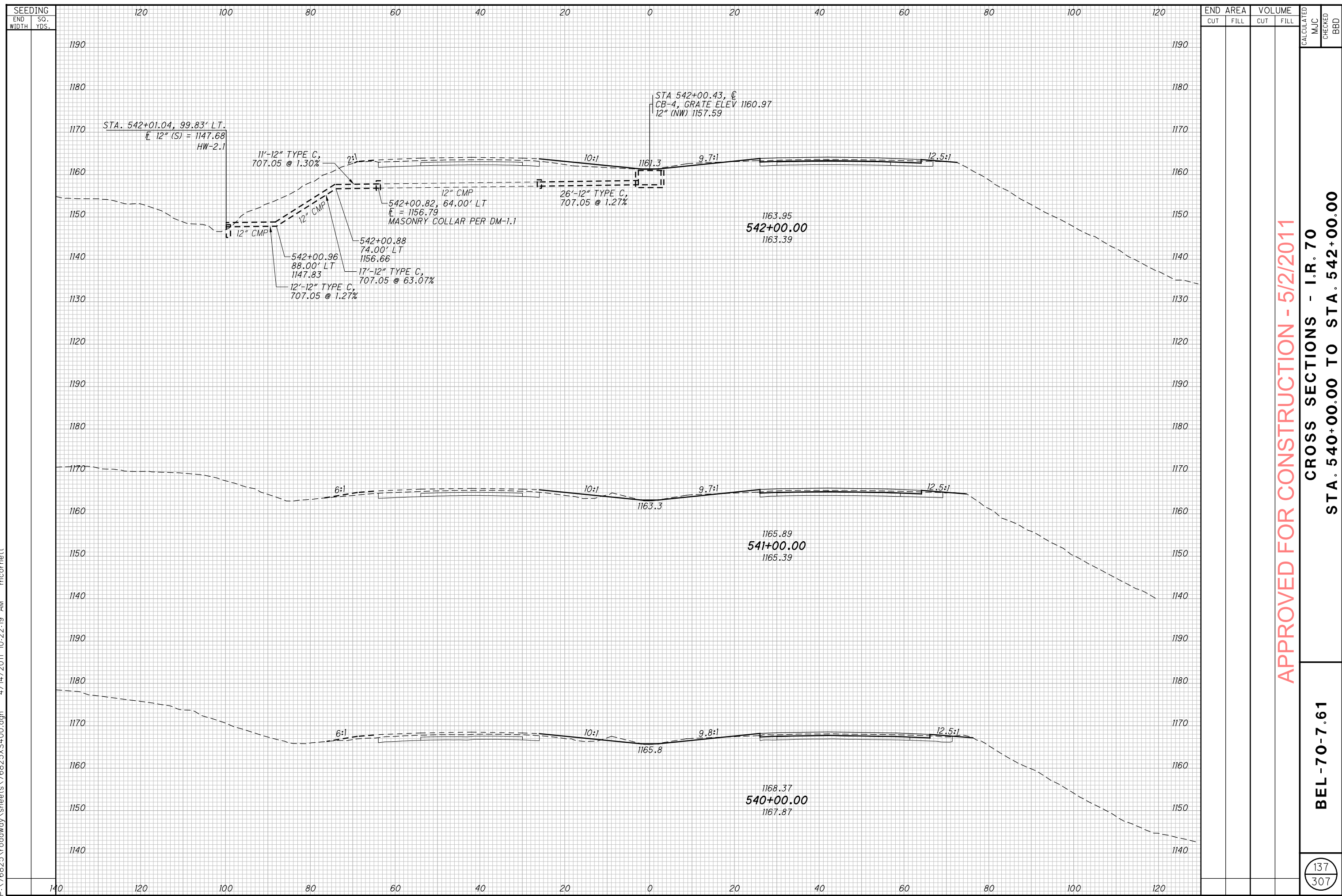
APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 537+00.00 TO STA. 539+00.00

BEL-70-7.61

136
307

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APPROVED FOR CONSTRUCTION - 5/2/2011

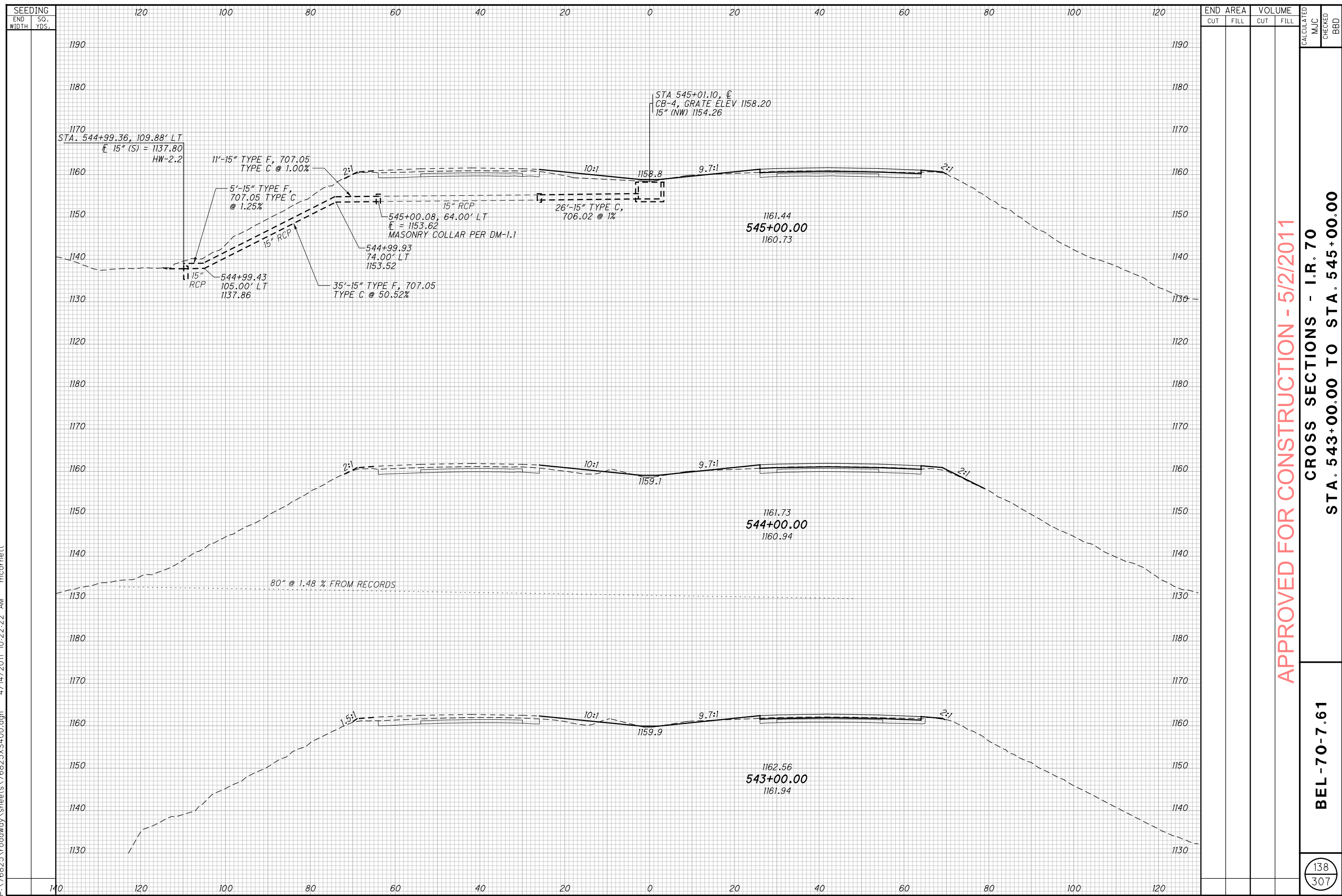
CROSS SECTIONS - I.R. 70

STA. 540+00.00 TO STA. 542+00.00

BEL-70-7.61

137
307

P:\76825\roadway\sheets\76825\5400.dgn 4/14/2011 10:22:22 AM mcornett



SEEDING		END AREA		VOLUME		CALCULATED		CHECKED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD	MJC	BBD

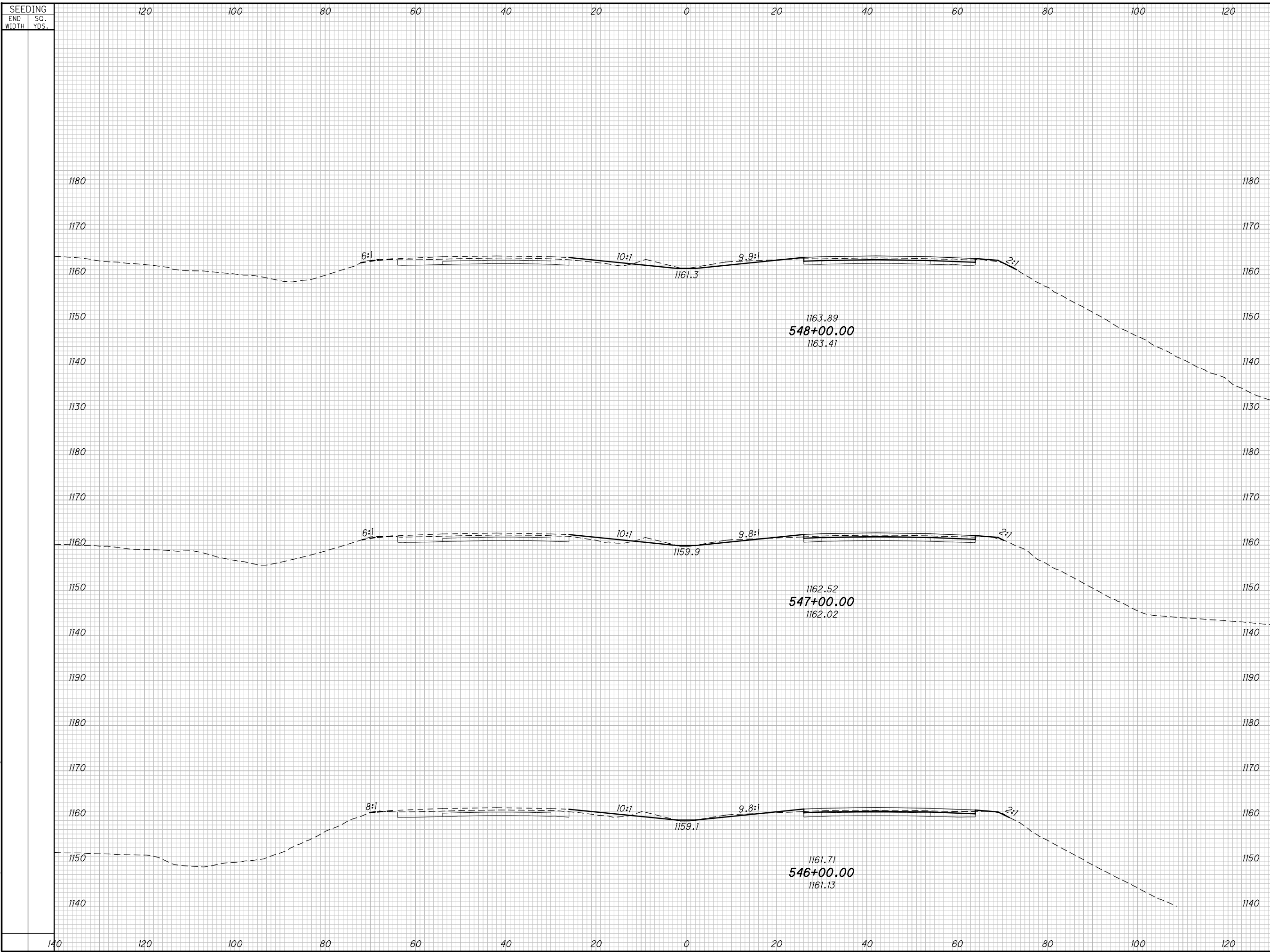
APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 543+00.00 TO STA. 545+00.00

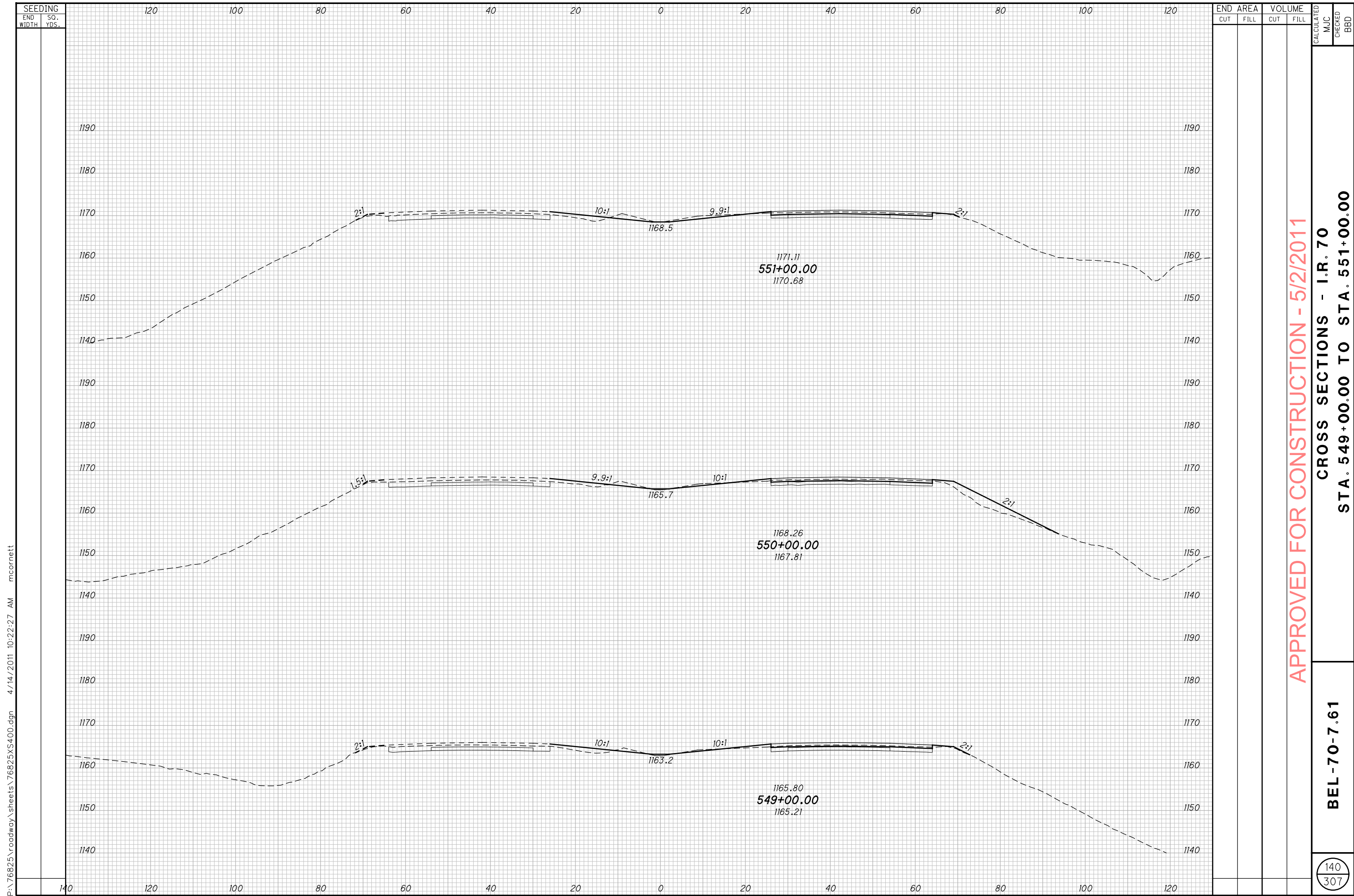
BEL-70-7.61

138
307

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SEEDING		END AREA		VOLUME		CALCULATED			
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD		
APPROVED FOR CONSTRUCTION - 5/2/2011									
CROSS SECTIONS - I.R. 70									
STA. 546+00.00 TO STA. 548+00.00									
BEL-70-7.61									
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139									
307									



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SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBB

APPROVED FOR CONSTRUCTION - 5/2/2011

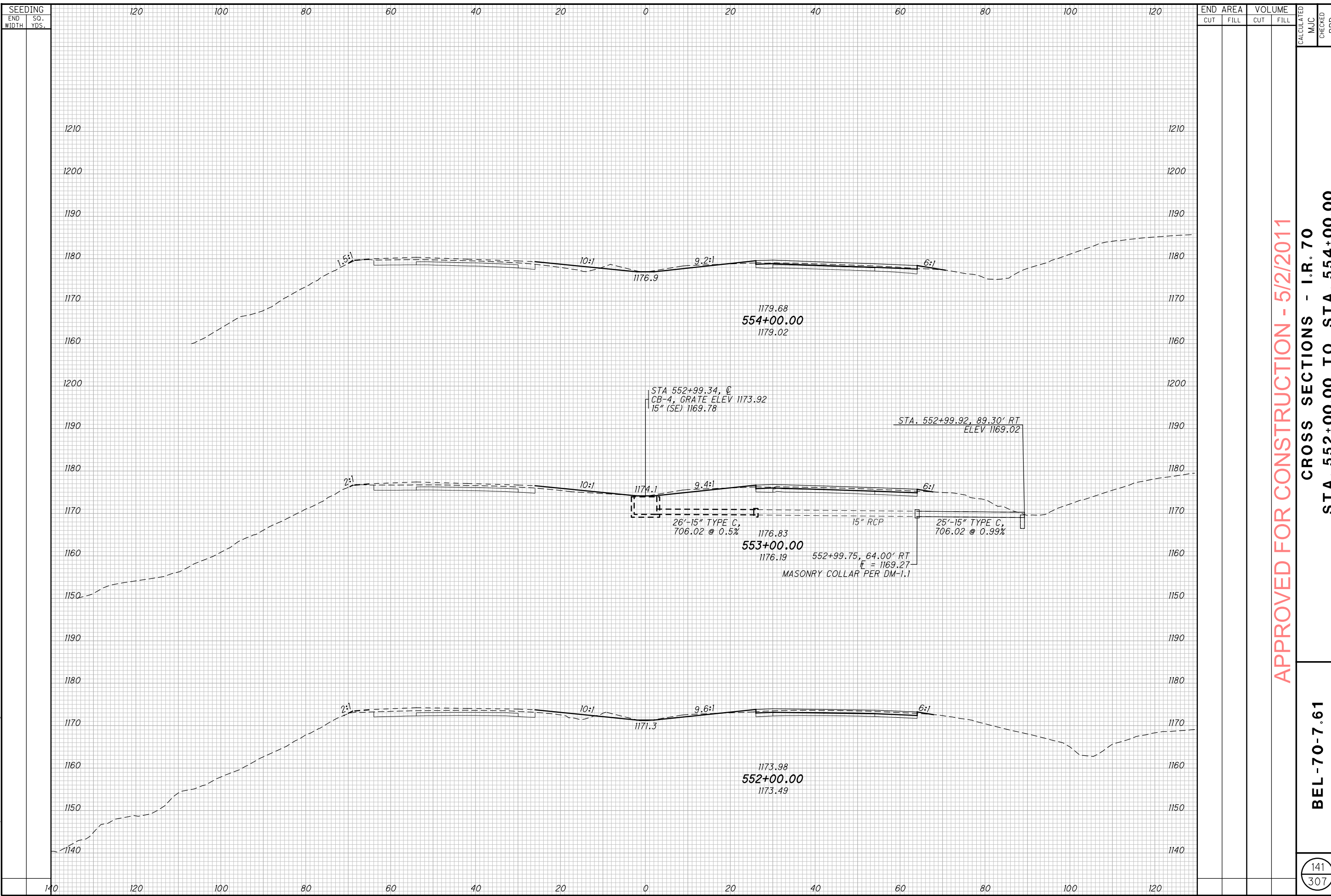
CROSS SECTIONS - I.R. 70

STA. 549+00.00 TO STA. 551+00.00

BEL-70-7.61

140
307

P:\76825\roadway\sheets\76825XS400.dgn 4/14/2011 10:22:29 AM mcornett



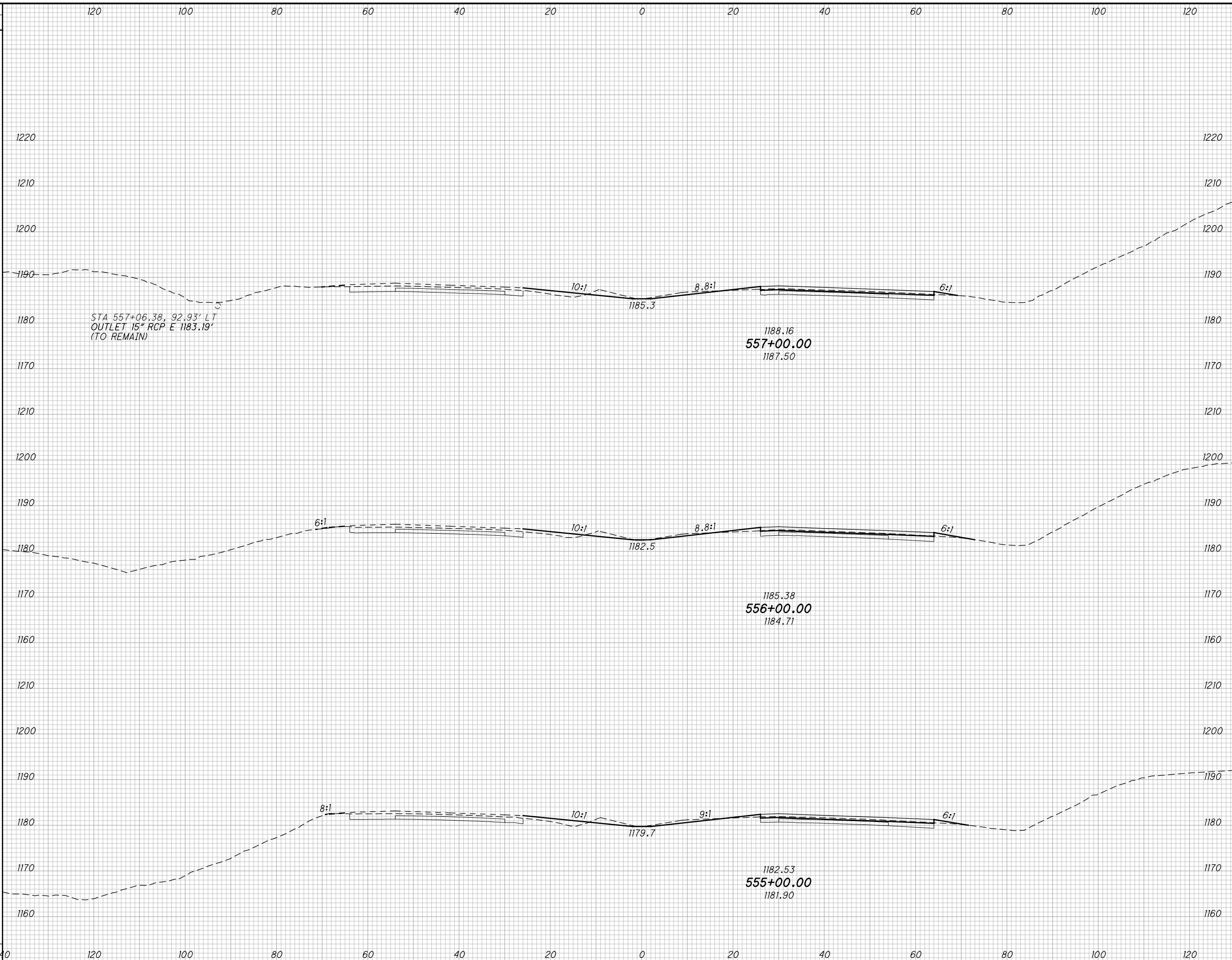
APPROVED FOR CONSTRUCTION - 5/2/2011
CROSS SECTIONS - I.R. 70
STA. 552+00.00 TO STA. 554+00.00

BEL-70-7.61

141
307

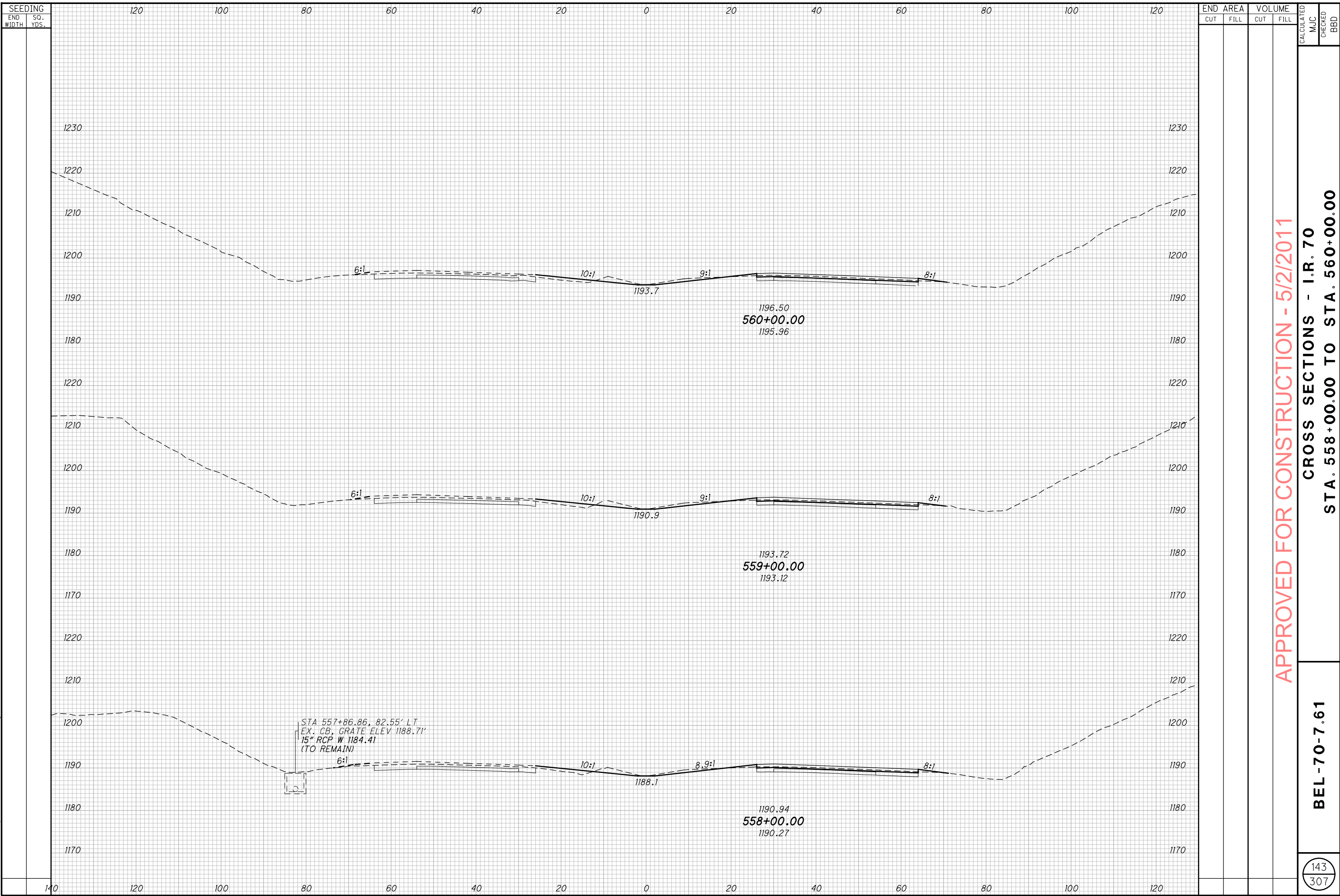
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SEEDING
END SO.
WIDTH YDS.



END AREA	VOLUME	CALCULATED	CUT		FILL	
			CUT	FILL	CUT	FILL
APPROVED FOR CONSTRUCTION - 5/2/2011						
CROSS SECTIONS - I.R. 70						
STA. 555+00.00 TO STA. 557+00.00						
BEL-70-7.61						
142 307						

P:\76825\roadway\sheets\76825XS400.dgn 4/14/2011 10:22:35 AM mcornett



SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

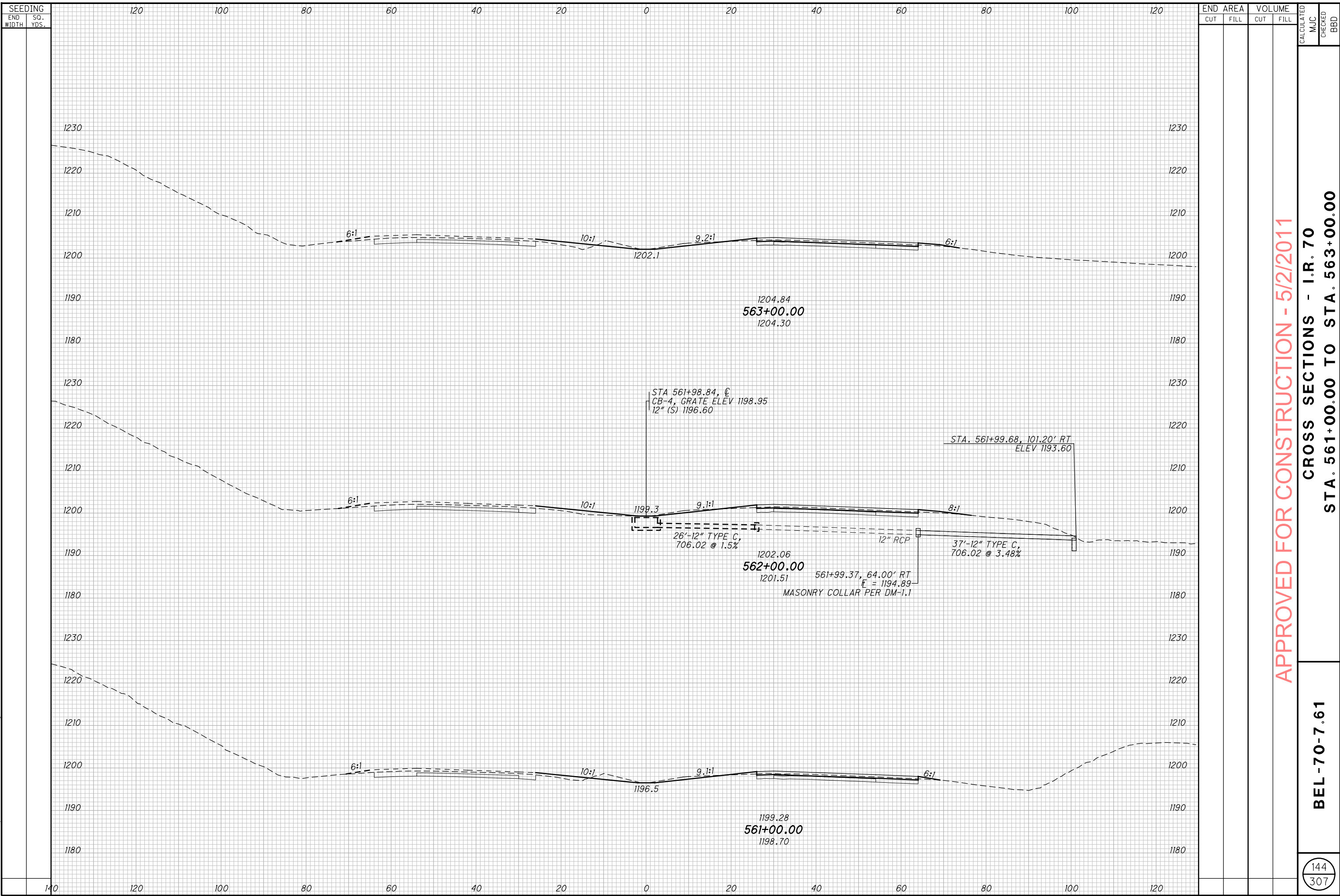
CROSS SECTIONS - I.R. 70

STA. 558+00.00 TO STA. 560+00.00

BEL-70-7.61

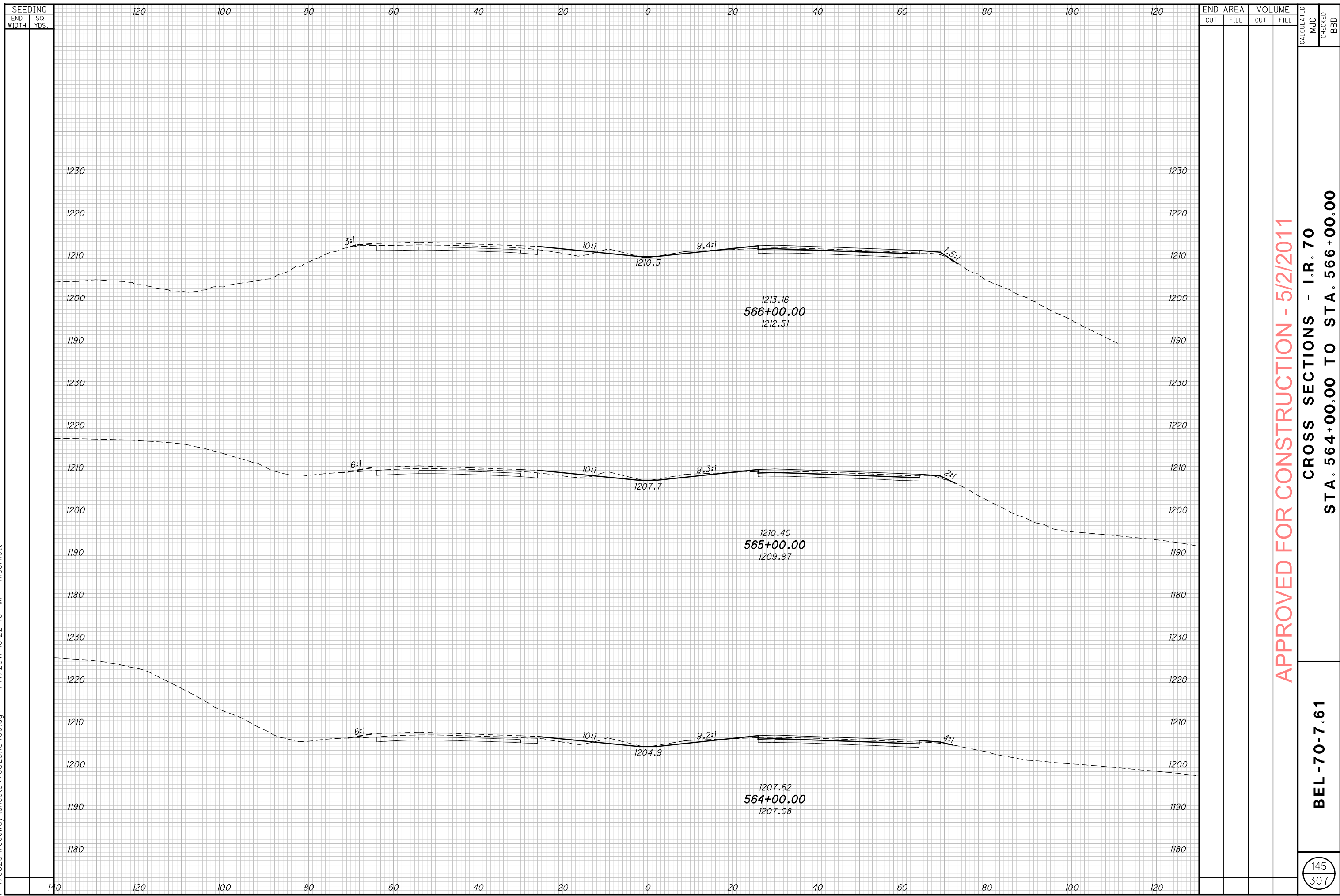
143
307

P:\76825\roadway\sheets\76825XS400.dgn 4/14/2011 10:22:37 AM mcornett



SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD
<p>APPROVED FOR CONSTRUCTION - 5/2/2011</p> <p>CROSS SECTIONS - I.R. 70</p> <p>STA. 561+00.00 TO STA. 563+00.00</p>							
<p>BEL-70-7.61</p>							
<p>144</p> <p>307</p>							

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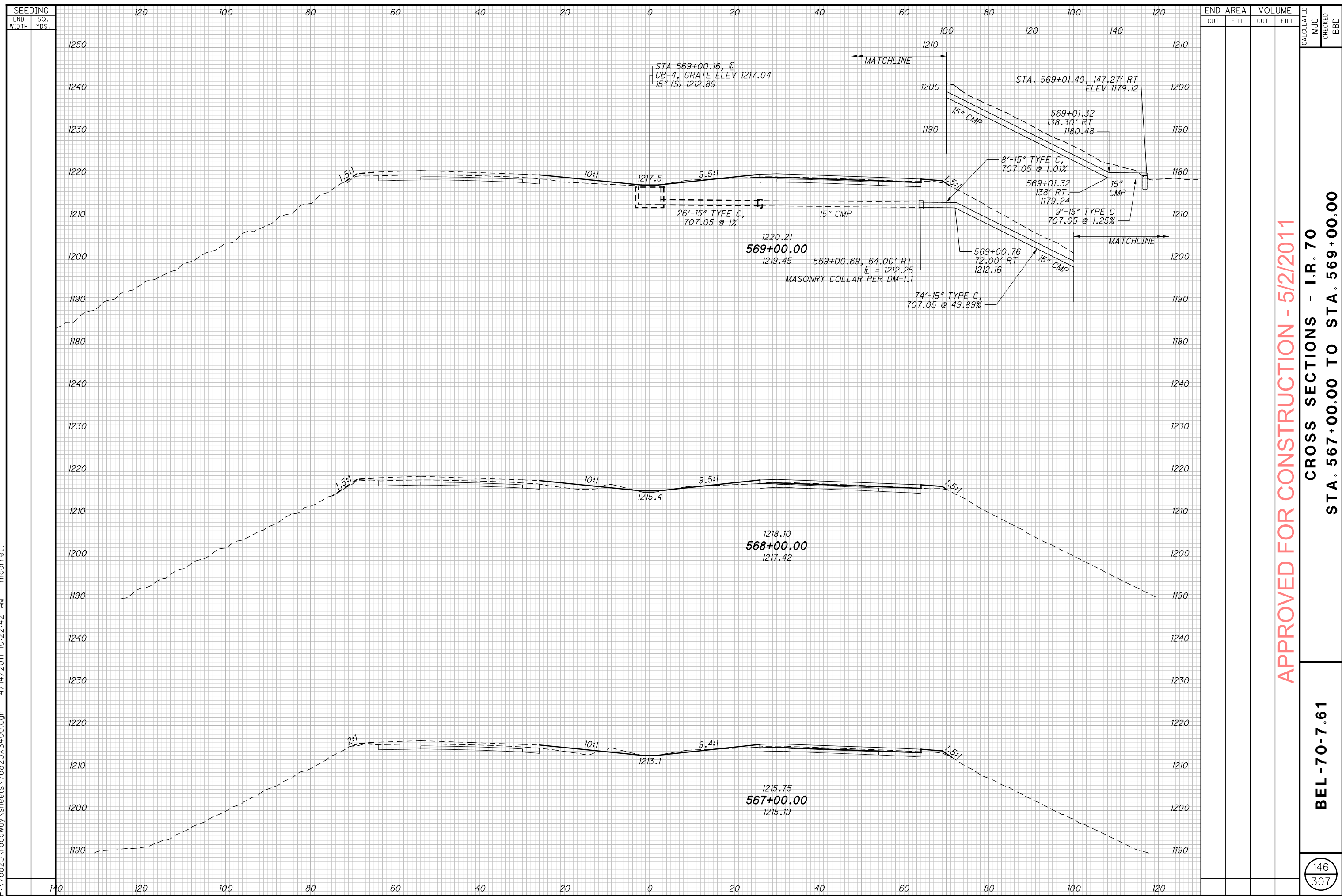
APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 564+00.00 TO STA. 566+00.00

BEL-70-7.61

145
307

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SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD

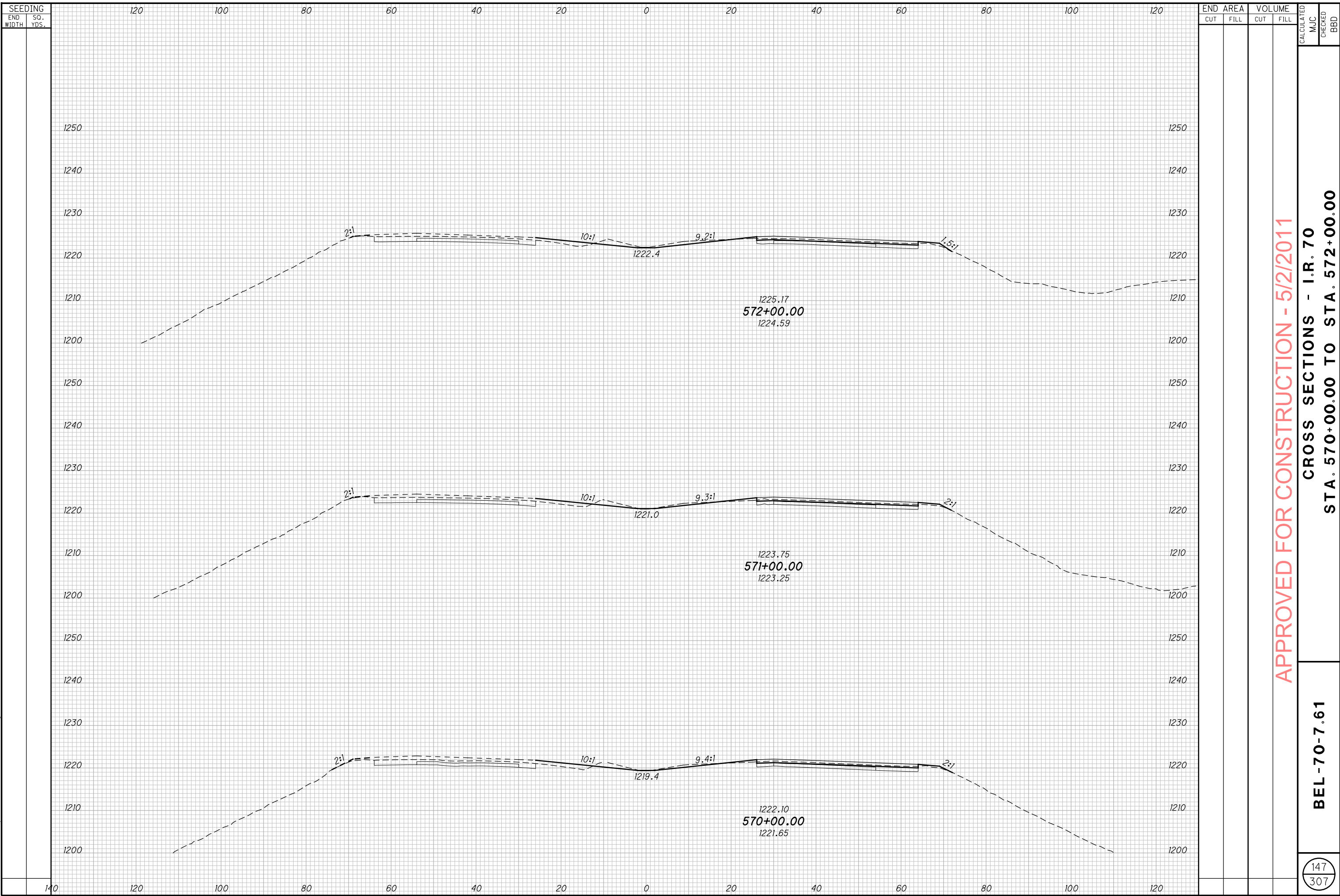
APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 567+00.00 TO STA. 569+00.00

BEL-70-7.61

146
307

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SEEDING		END AREA		VOLUME		CALCULATED		
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	CHECKED	BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

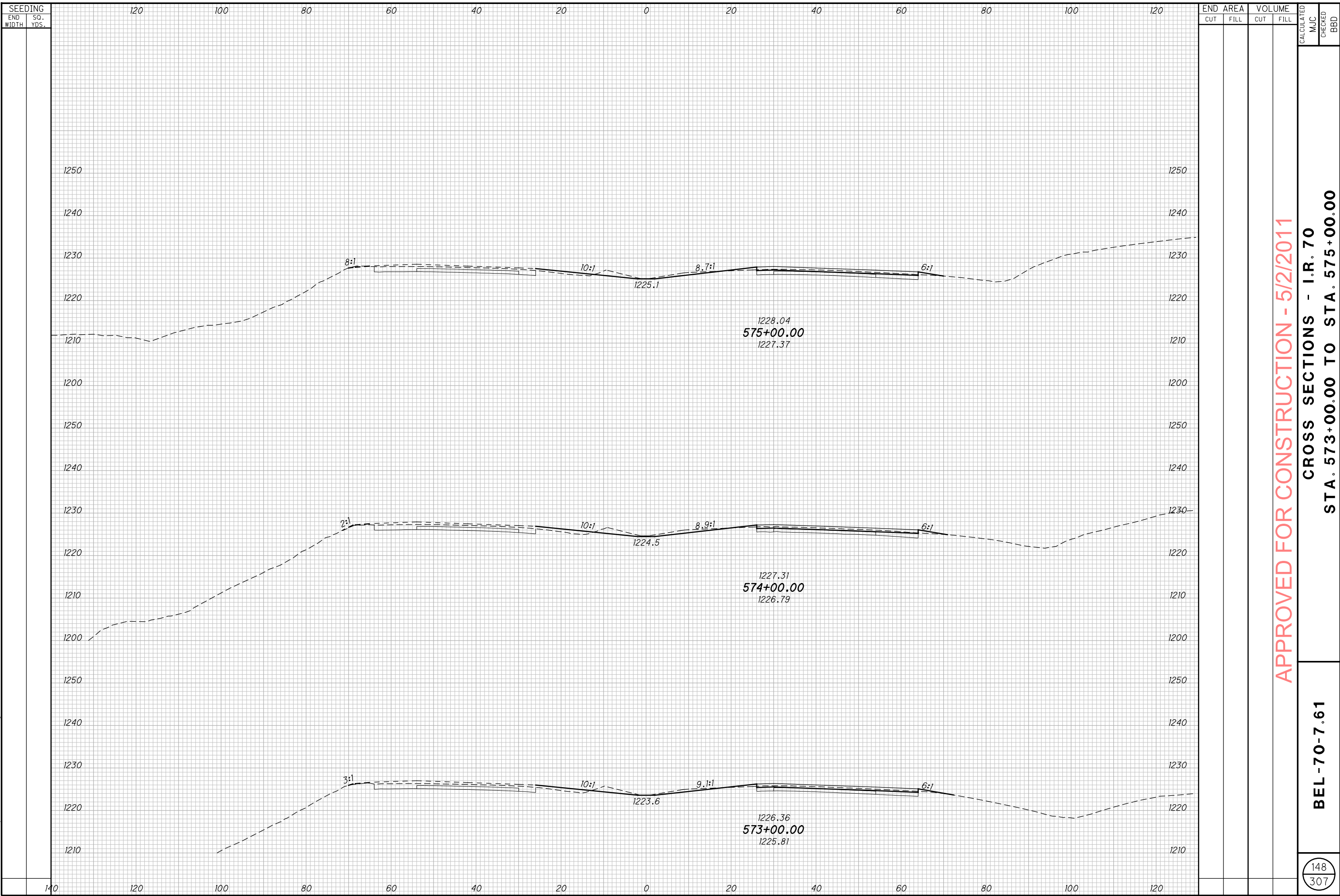
CROSS SECTIONS - I.R. 70

STA. 570+00.00 TO STA. 572+00.00

BEL-70-7.61

147
307

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SEEDING	
END WIDTH	SO. YDS.

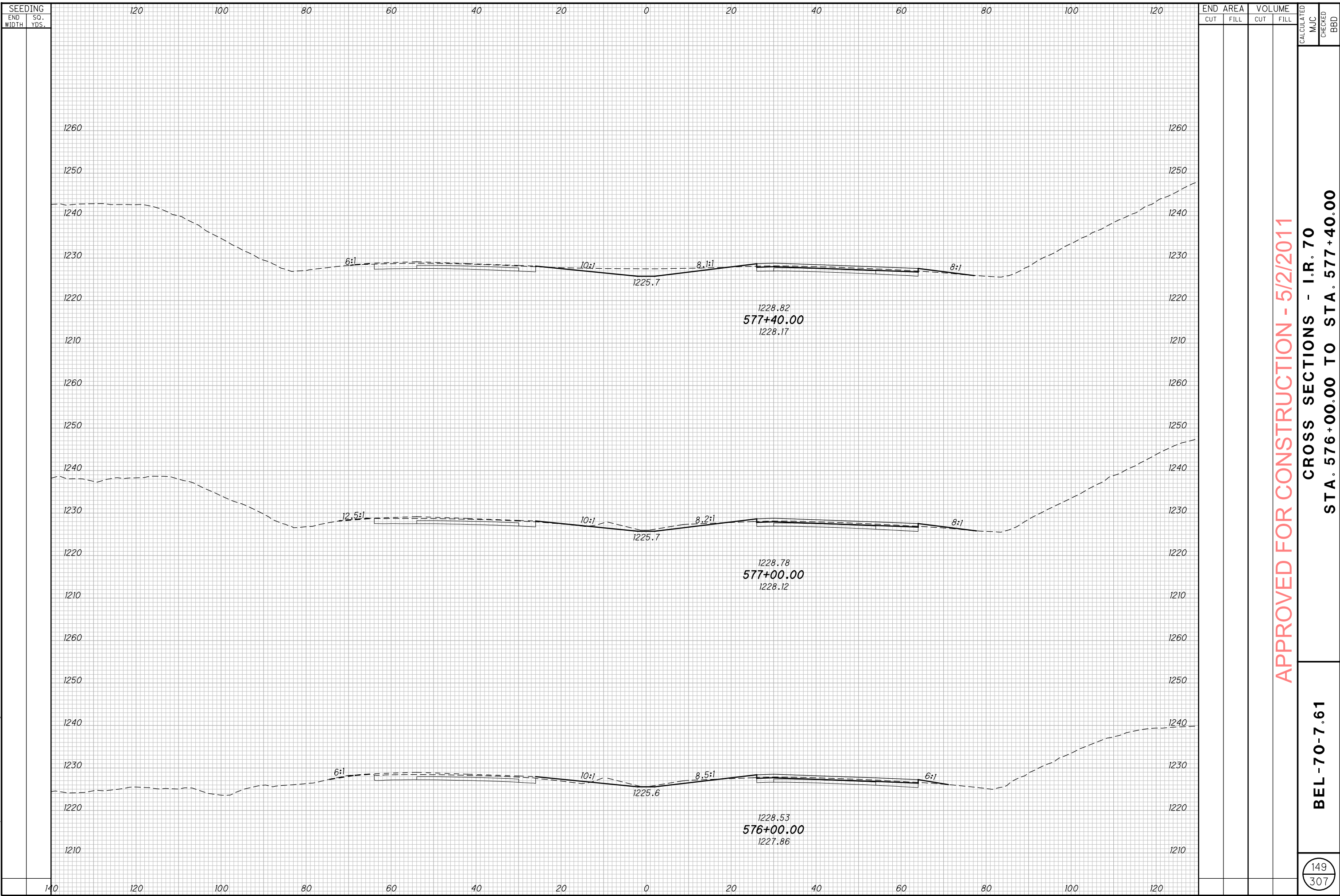
END AREA		VOLUME		CALCULATED MJC	CHECKED BBD
CUT	FILL	CUT	FILL		

APPROVED FOR CONSTRUCTION - 5/2/2011
CROSS SECTIONS - I.R. 70
STA. 573+00.00 TO STA. 575+00.00

BEL-70-7.61

148
307

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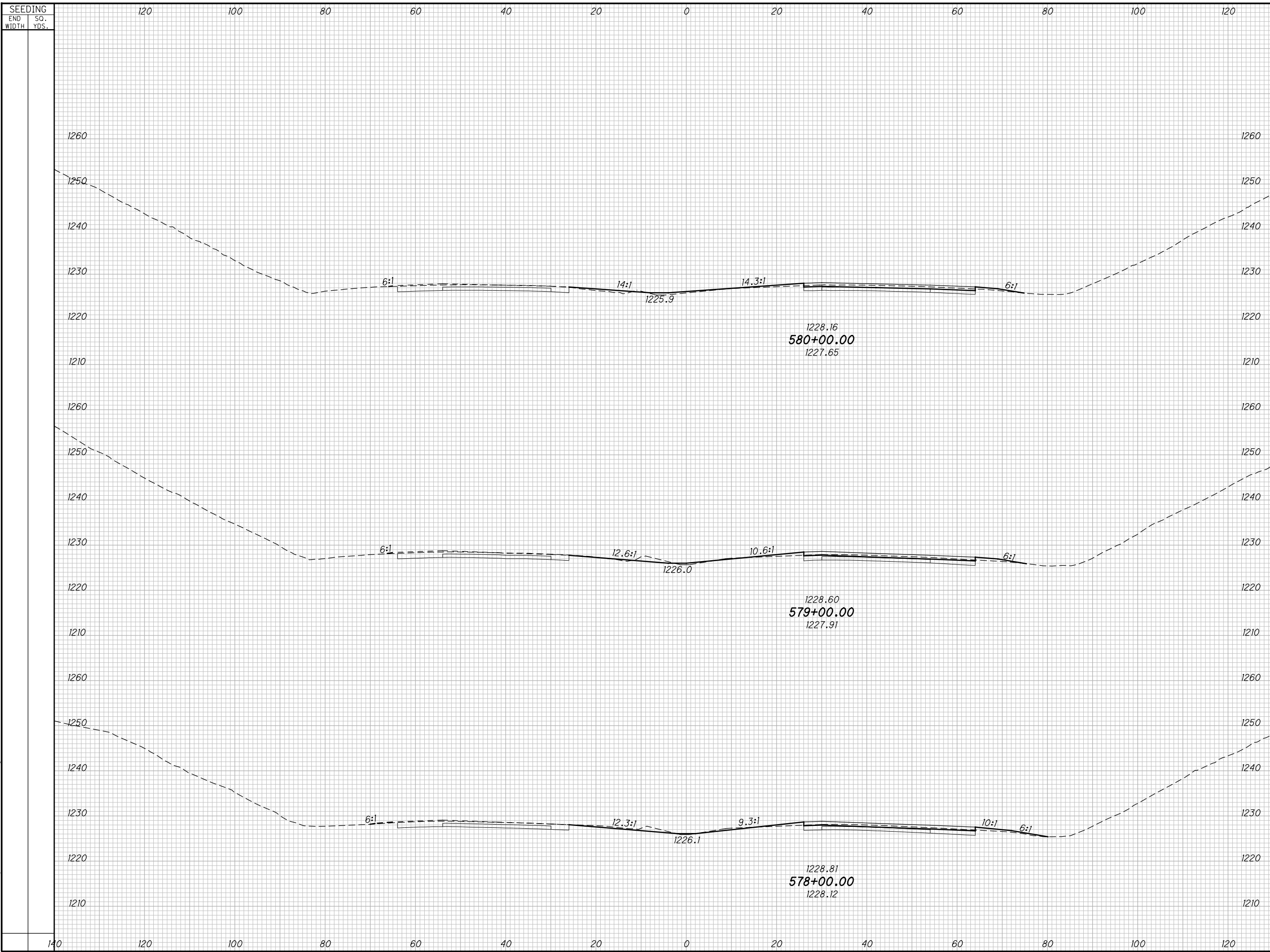
APPROVED FOR CONSTRUCTION - 5/2/2011

**CROSS SECTIONS - I.R. 70
STA. 576+00.00 TO STA. 577+40.00**

BEL-70-7.61

149
307

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END AREA	VOLUME	CALCULATED	CHECKED		
				CUT	FILL

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CROSS SECTIONS - I.R. 70

STA. 578+00.00 TO STA. 580+00.00

BEL-70-7.61

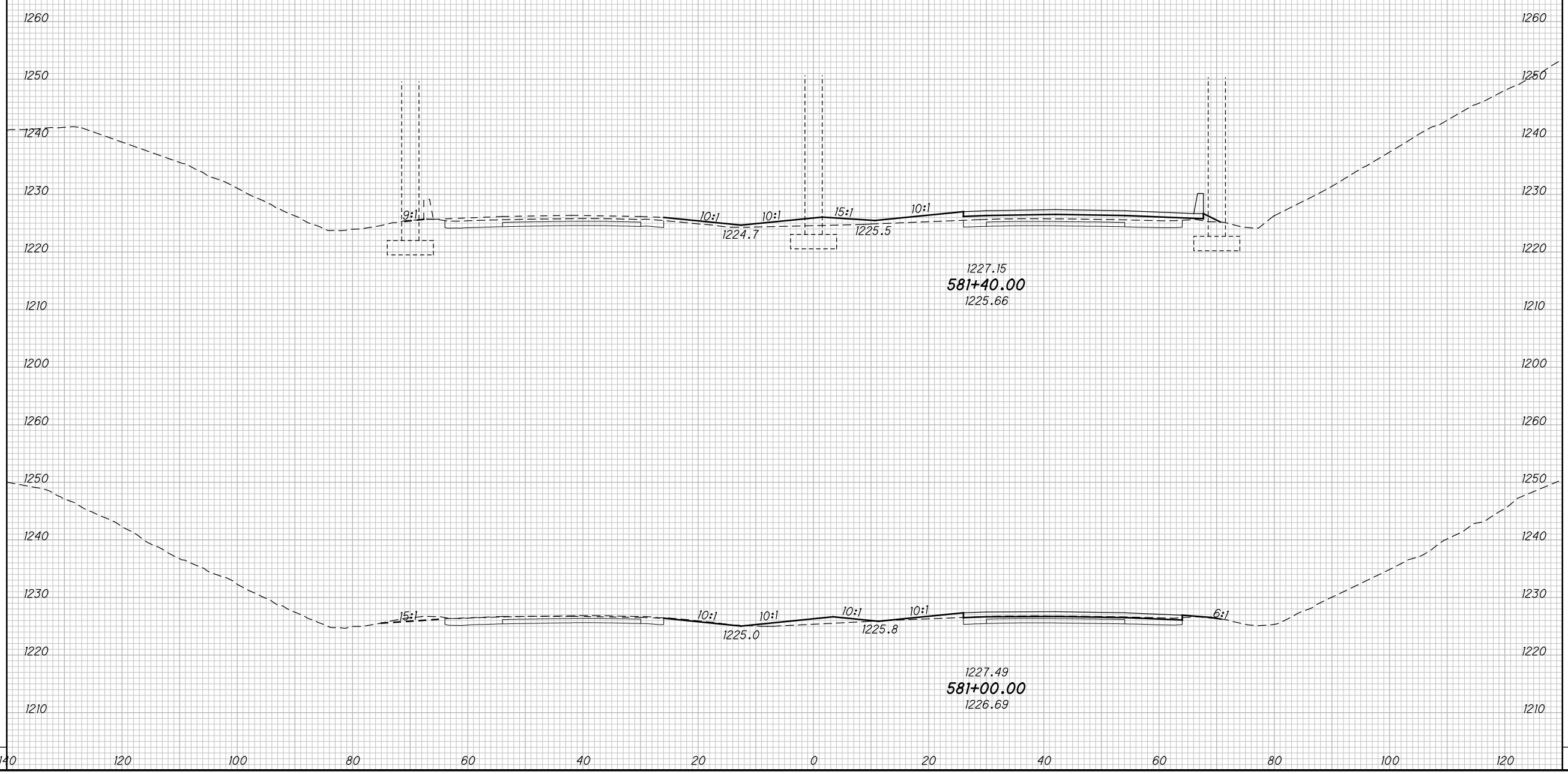
150
307

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SEEDING	
END WIDTH	SO. YDS.

120 100 80 60 40 20 0 20 40 60 80 100 120

END AREA		VOLUME		CALCULATED MJC	CHECKED BBD
CUT	FILL	CUT	FILL		



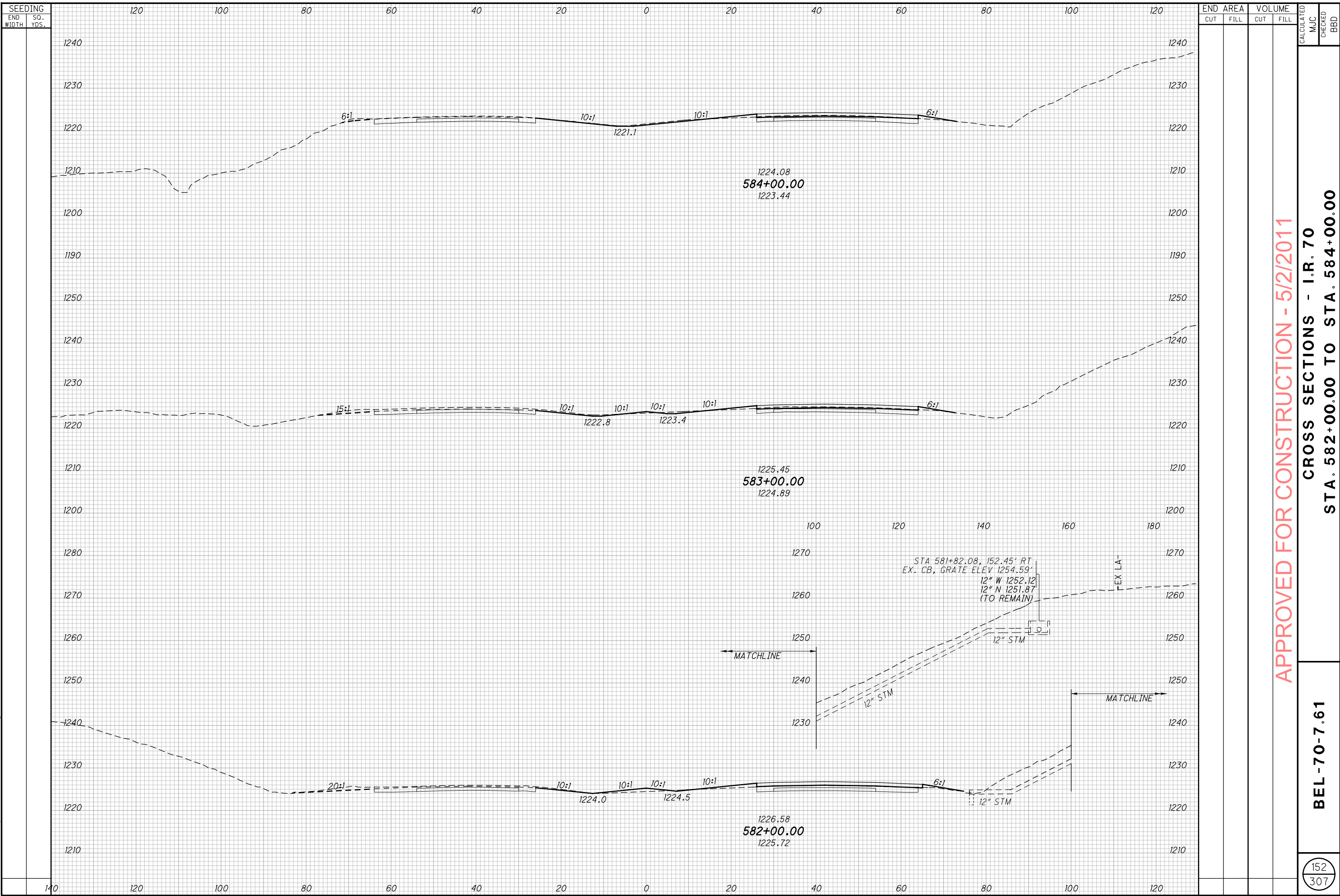
APPROVED FOR CONSTRUCTION - 5/2/2011

**CROSS SECTIONS - I.R. 70
STA. 581+00.00 TO STA. 581+40.00**

BEL-70-7.61

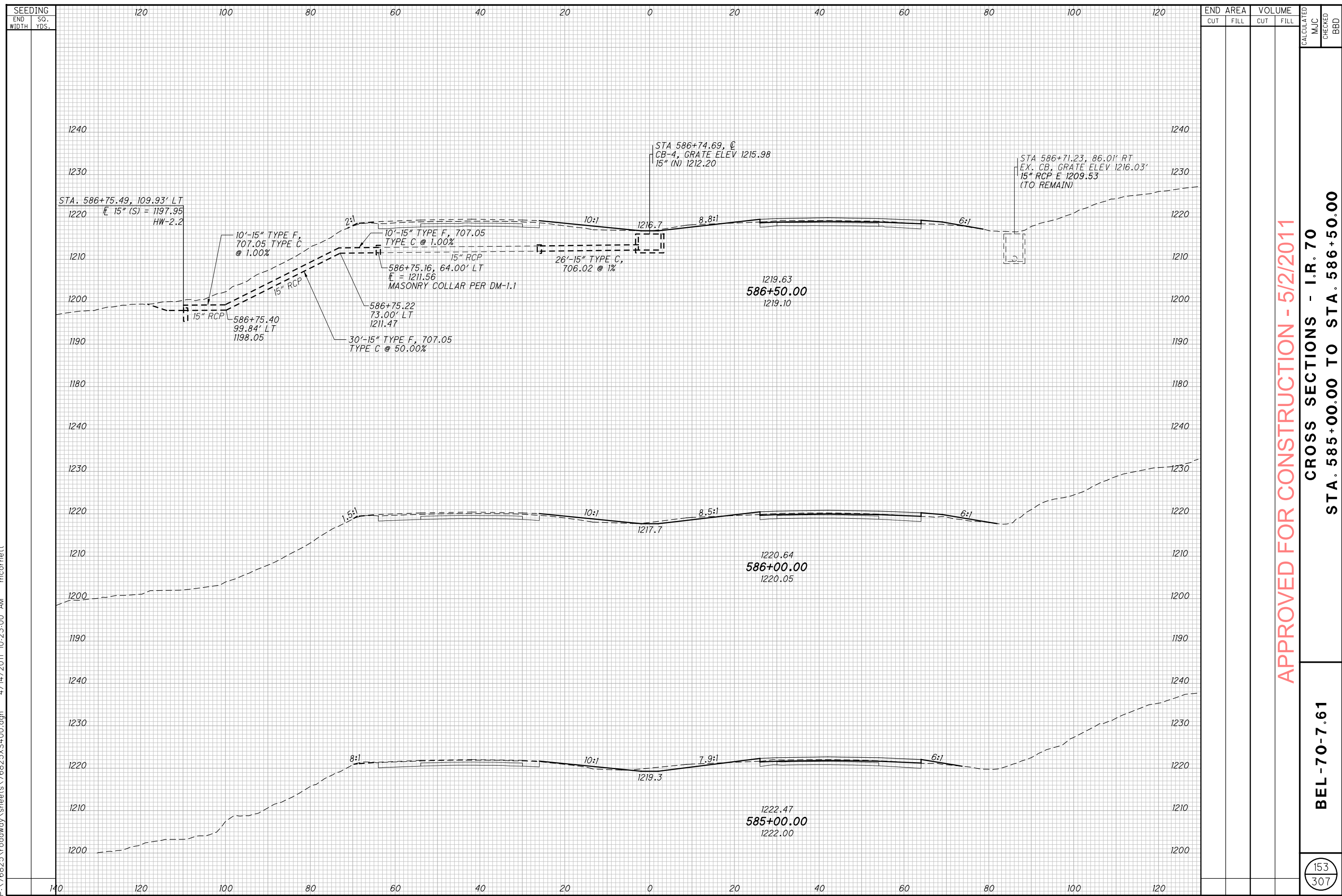
151
307

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SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD
APPROVED FOR CONSTRUCTION - 5/2/2011 CROSS SECTIONS - I.R. 70 STA. 582+00.00 TO STA. 584+00.00							
BEL-70-7.61							
152 307							

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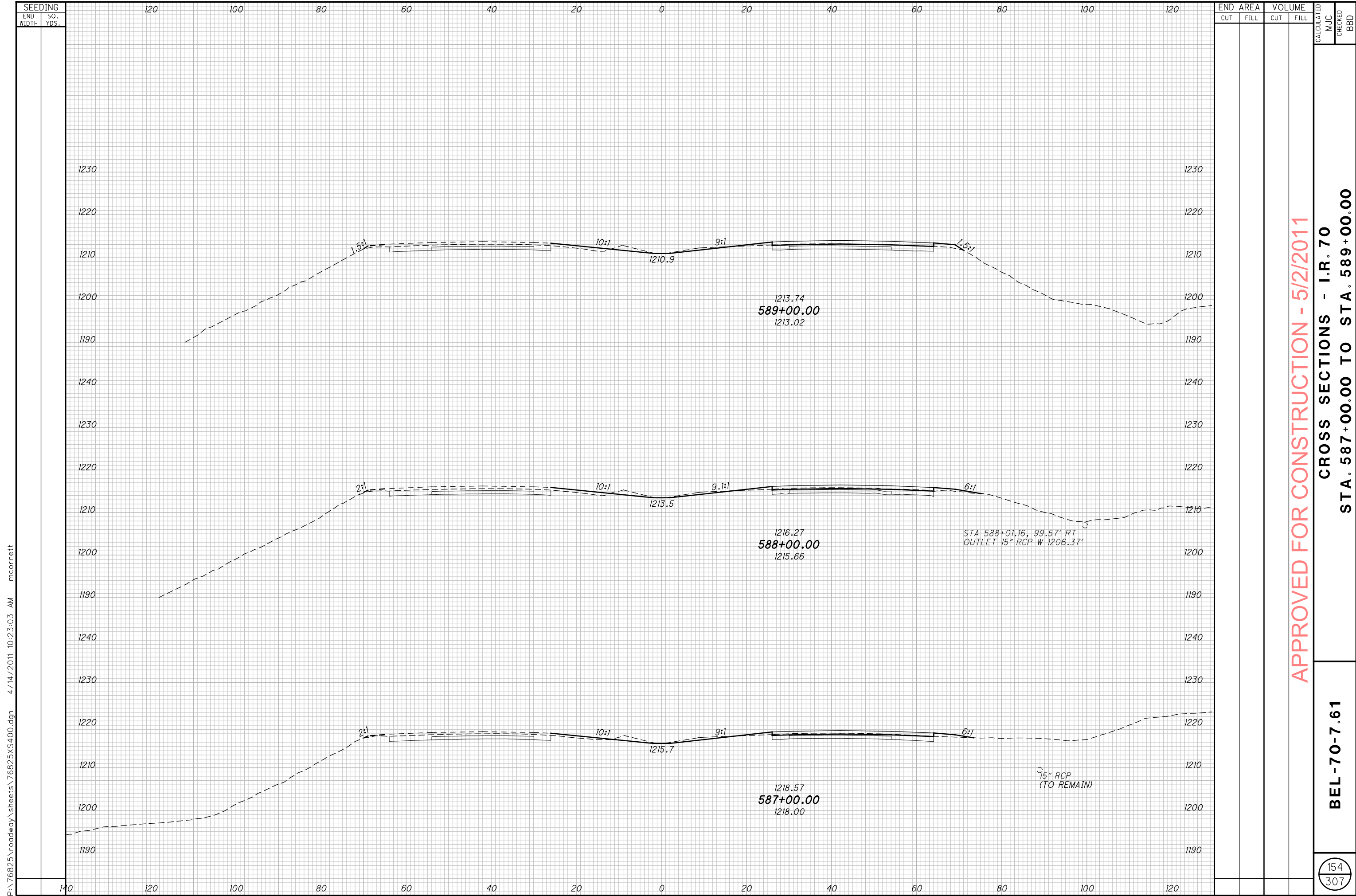
END AREA	VOLUME	CALCULATED	CHECKED						
				CUT	FILL	CUT	FILL	MJC	BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 585+00.00 TO STA. 586+50.00

BEL-70-7.61

153
307



APPROVED FOR CONSTRUCTION - 5/2/2011

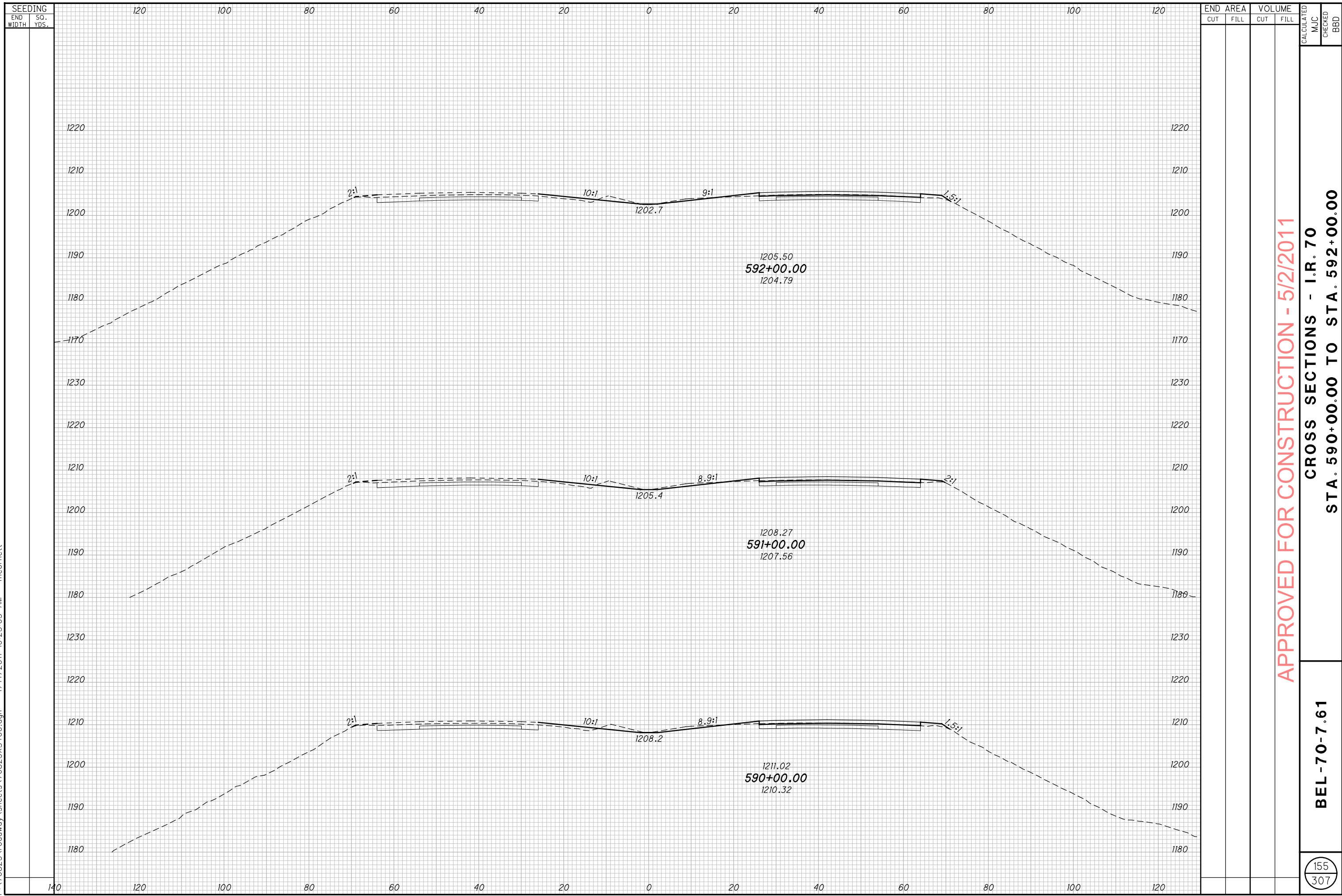
CROSS SECTIONS - I.R. 70
STA. 587+00.00 TO STA. 589+00.00

BEL-70-7.61

154
307

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SEEDING	
END WIDTH	SO. YDS.

END AREA		VOLUME		CALCULATED	
CUT	FILL	CUT	FILL	MJC	BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 590+00.00 TO STA. 592+00.00

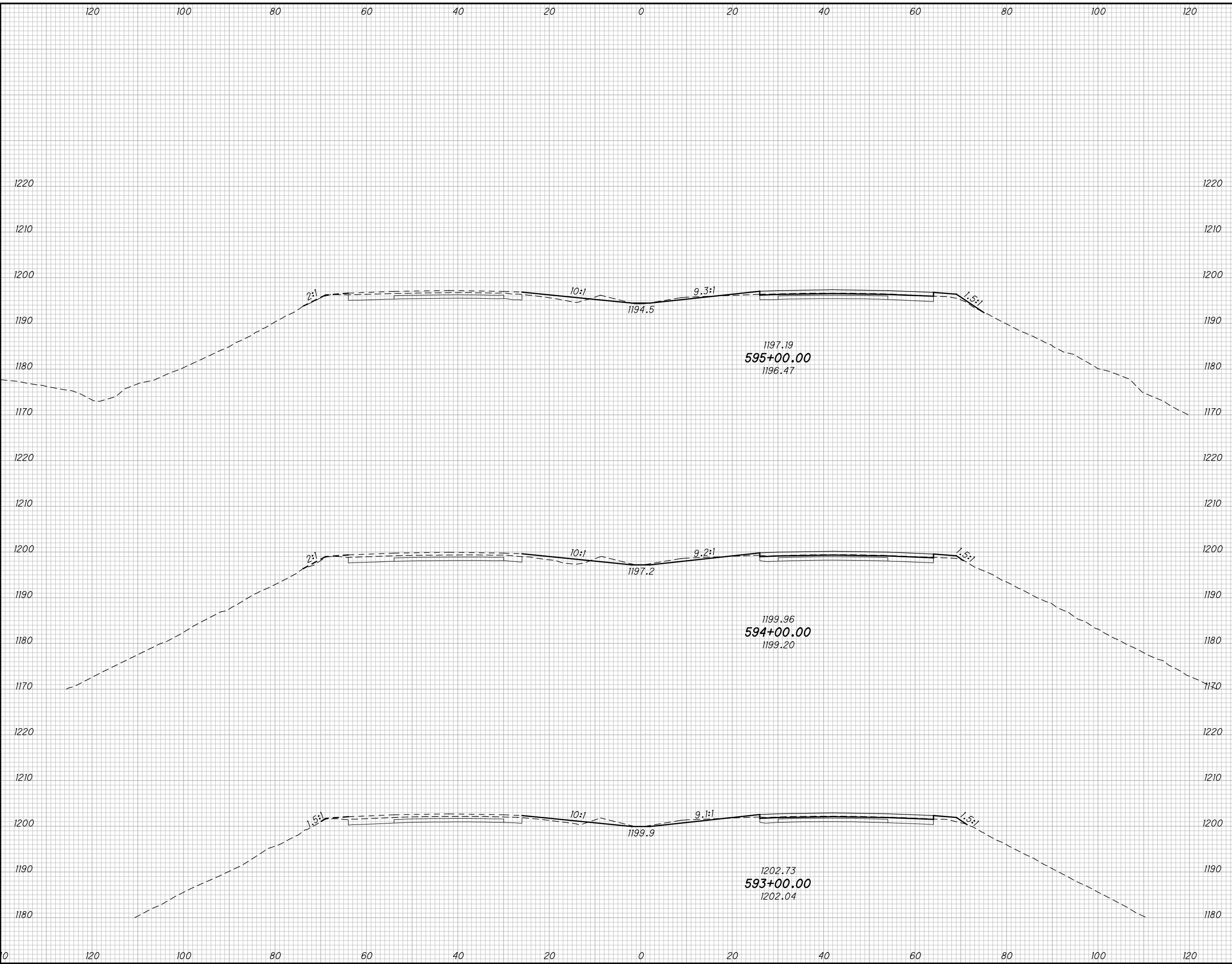
BEL-70-7.61

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SEEDING

END WIDTH	SO. YDS.
140	



END AREA		VOLUME		CALCULATED MJC	CHECKED BBD
CUT	FILL	CUT	FILL		

APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70

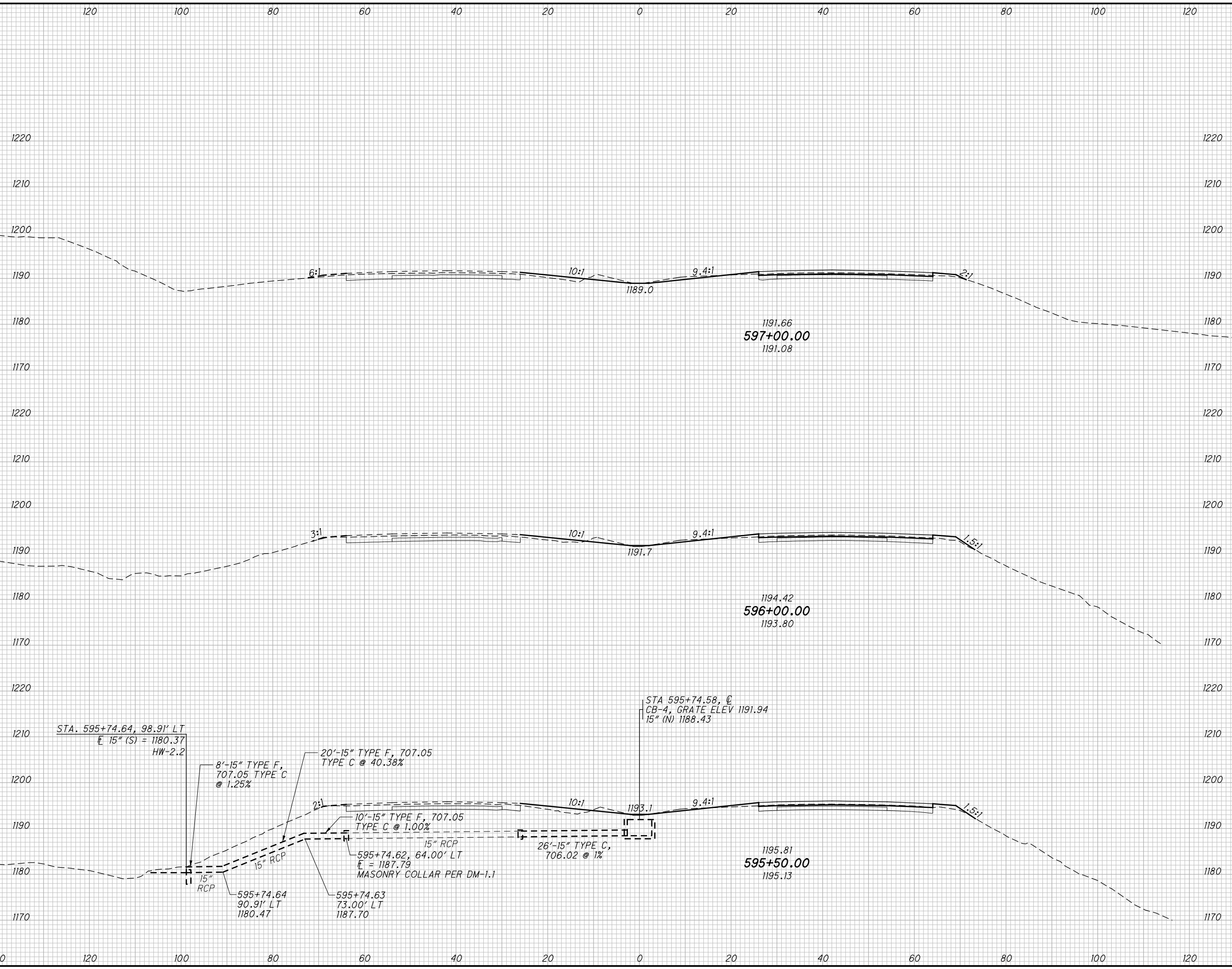
STA. 593+00.00 TO STA. 595+00.00

BEL-70-7.61

156
307

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SEEDING	
END WIDTH	SO. YDS.



END AREA	VOLUME	CALCULATED	CHECKED	MJC	BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

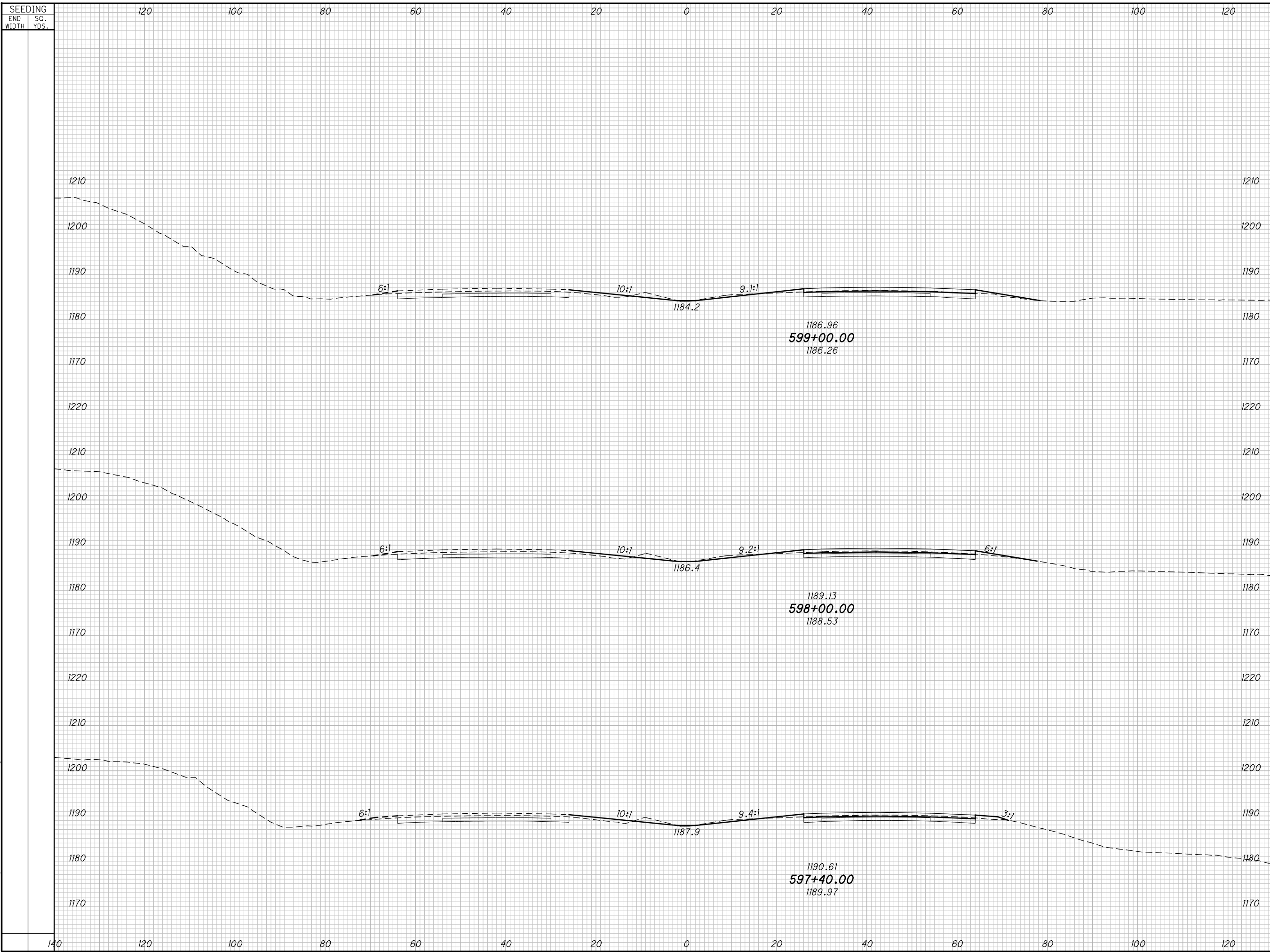
CROSS SECTIONS - I.R. 70

STA. 595+50.00 TO STA. 597+00.00

BEL-70-7.61

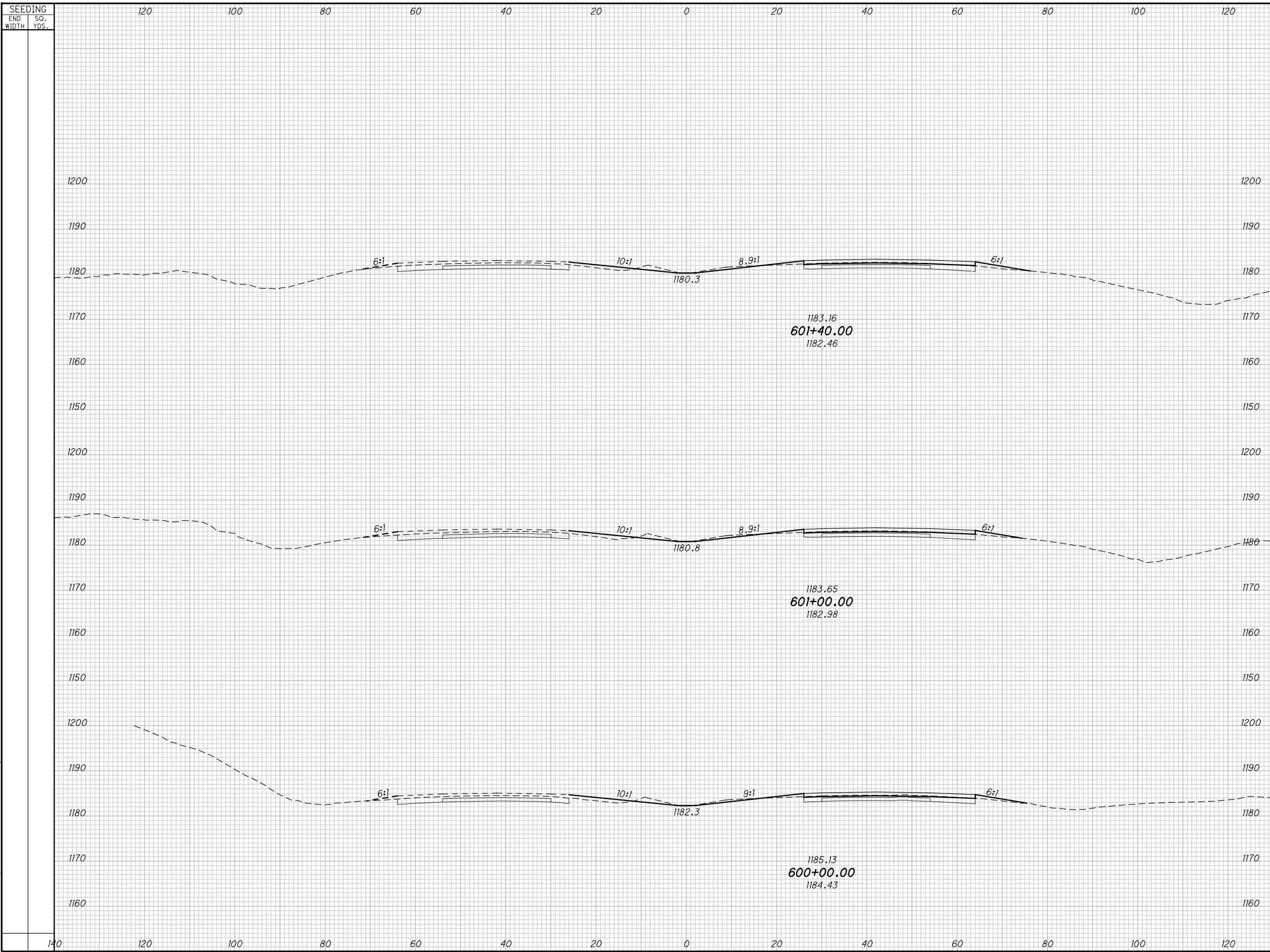
157
307

P:\76825\roadway\sheets\76825S400.dgn 4/14/2011 10:23:13 AM mcornett



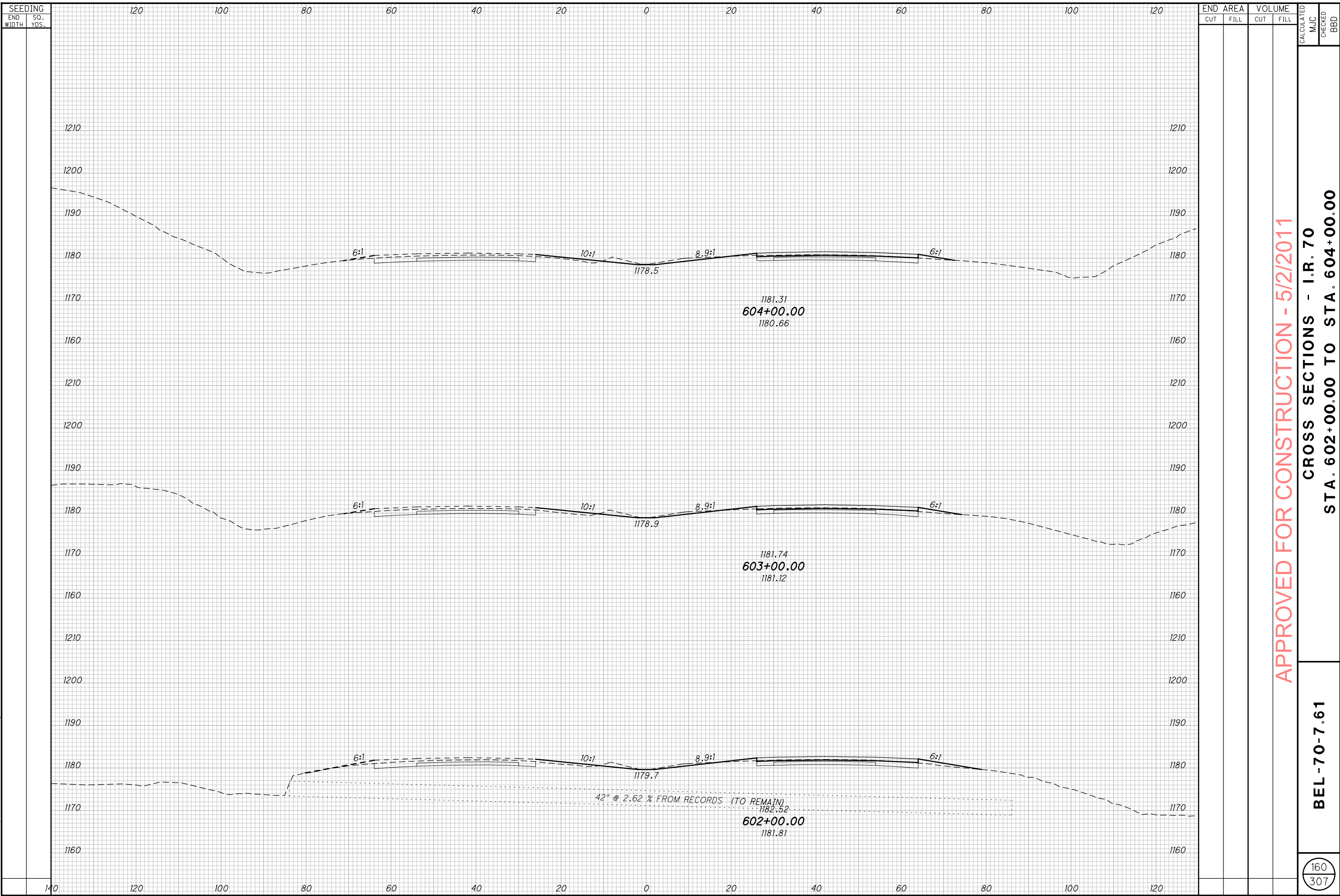
SEEDING		END AREA		VOLUME		CALCULATED			
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD		
APPROVED FOR CONSTRUCTION - 5/2/2011									
CROSS SECTIONS - I.R. 70									
STA. 597+40.00 TO STA. 599+00.00									
BEL-70-7.61									
<table border="1"> <tr> <td>158</td> </tr> <tr> <td>307</td> </tr> </table>								158	307
158									
307									

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END AREA	VOLUME	CALCULATED	CHECKED		
				CUT	FILL
<p>APPROVED FOR CONSTRUCTION - 5/2/2011</p> <p>CROSS SECTIONS - I.R. 70</p> <p>STA. 600+00.00 TO STA. 601+40.00</p>					
<p>BEL-70-7.61</p>					
<p>159</p> <p>307</p>					

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SEEDING	
END WIDTH	SO. YDS.
140	
120	
100	
80	
60	
40	
20	
0	
20	
40	
60	
80	
100	
120	

END AREA		VOLUME		CALCULATED		
CUT	FILL	CUT	FILL	MJC	CHECKED	BBD

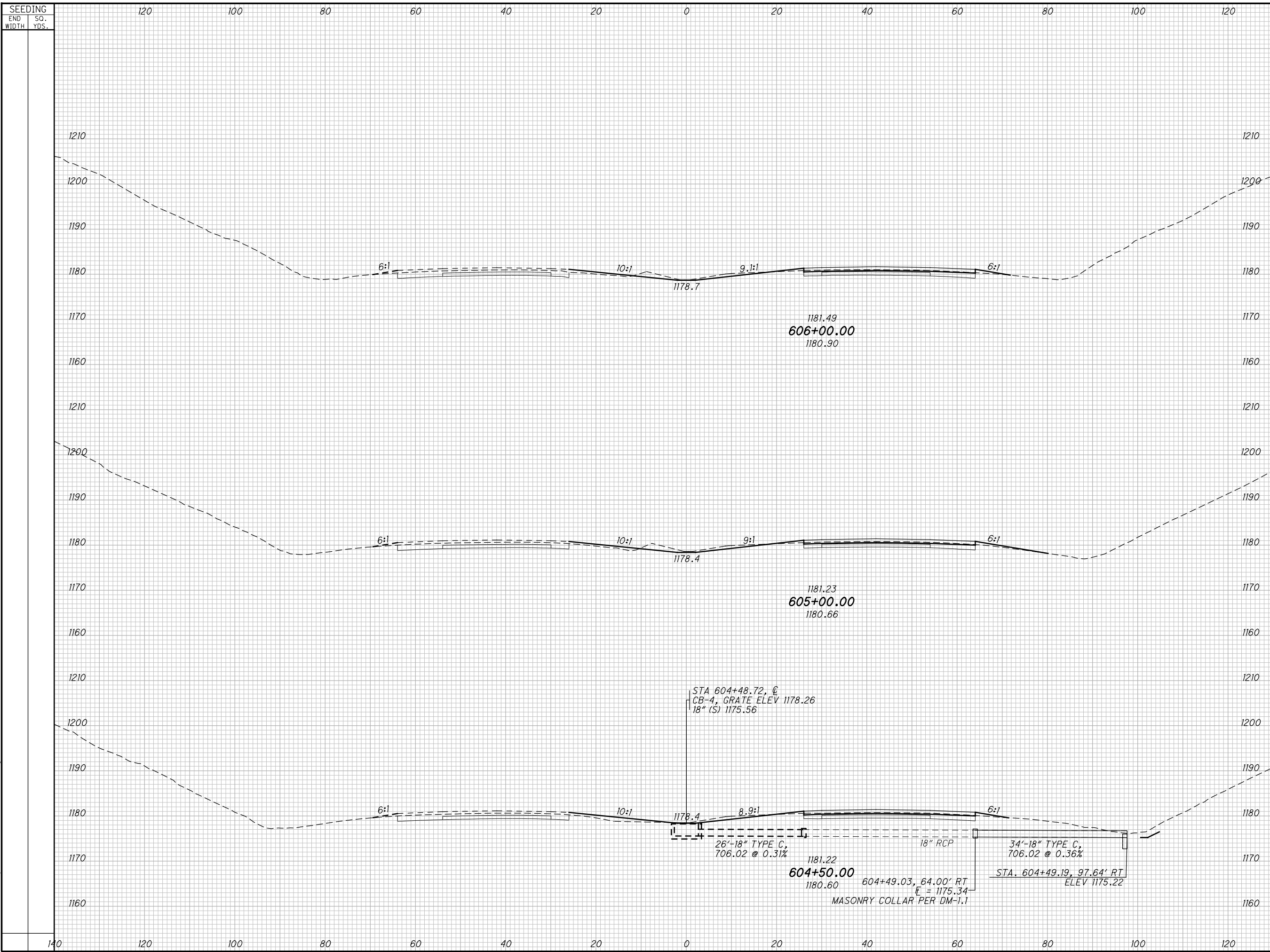
APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 602+00.00 TO STA. 604+00.00

BEL-70-7.61

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SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD

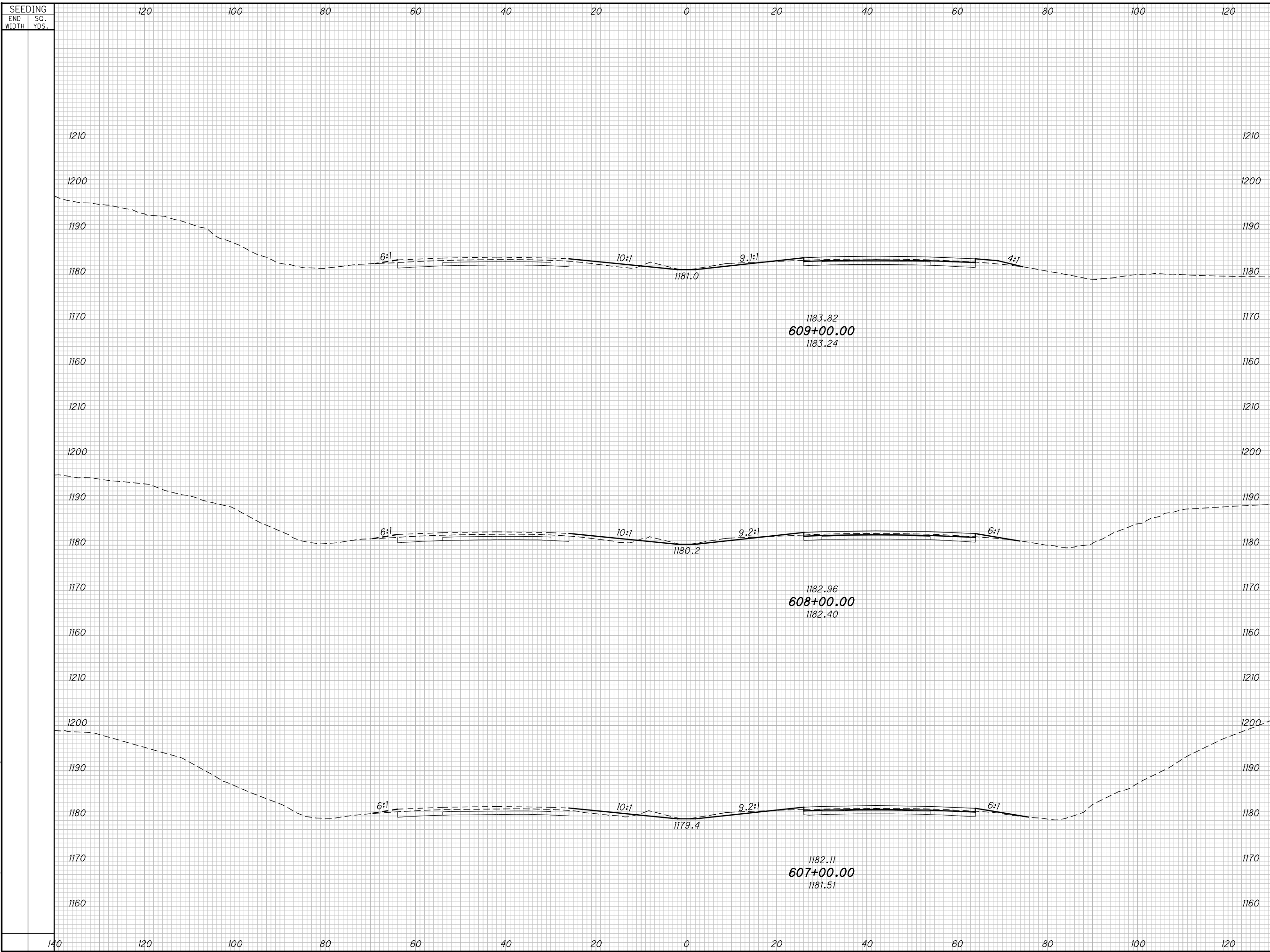
APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 604+50.00 TO STA. 606+00.00

BEL-70-7.61

161
307

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SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBB

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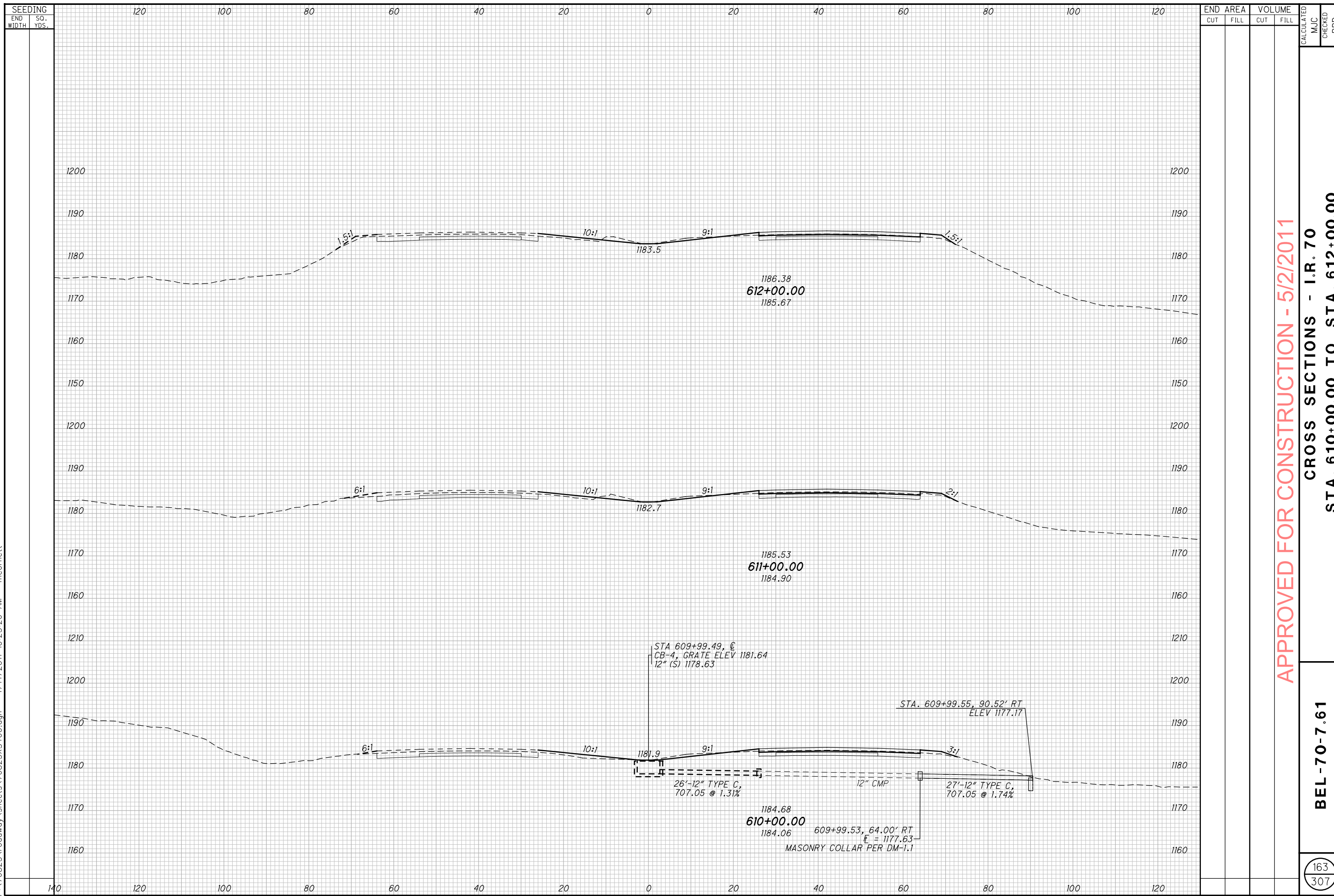
CROSS SECTIONS - I.R. 70

STA. 607+00.00 TO STA. 609+00.00

BEL-70-7.61

162
307

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CROSS SECTIONS - I.R. 70

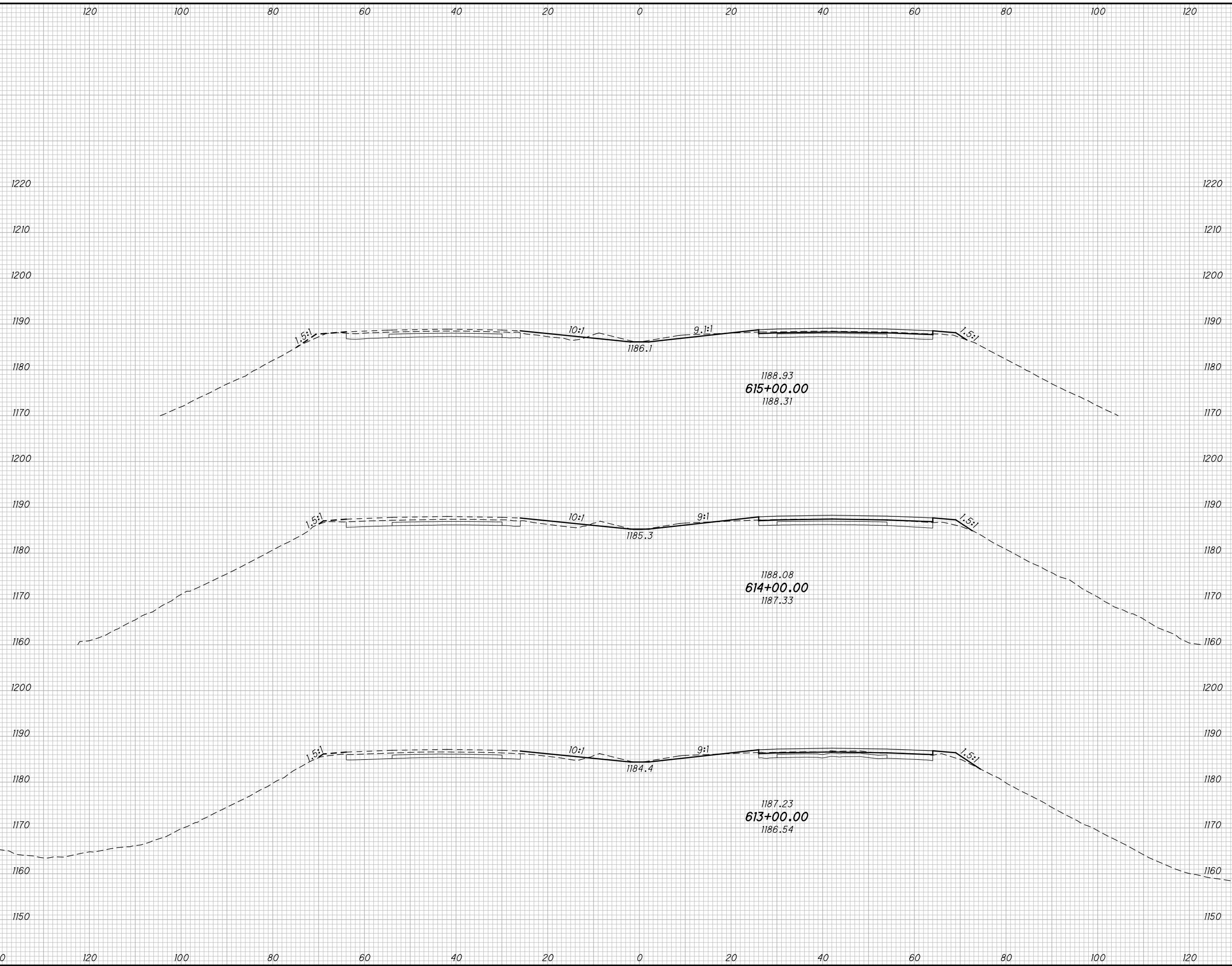
STA. 610+00.00 TO STA. 612+00.00

BEL-70-7.61

163
307

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SEEDING	
END WIDTH	SO. YDS.
140	



END AREA		VOLUME		CALCULATED	
CUT	FILL	CUT	FILL	MJC	BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

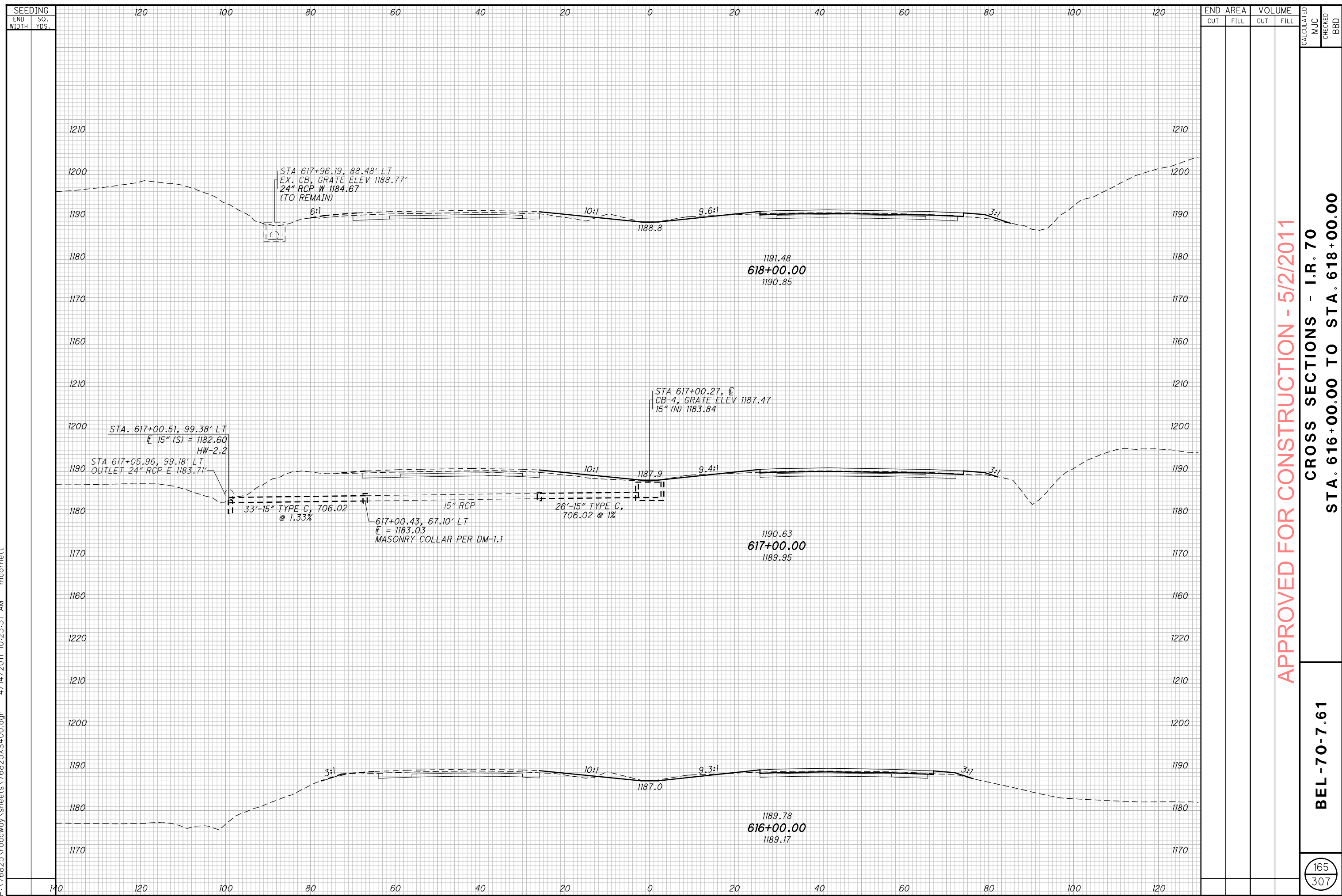
CROSS SECTIONS - I.R. 70

STA. 613+00.00 TO STA. 615+00.00

BEL-70-7.61

164
307

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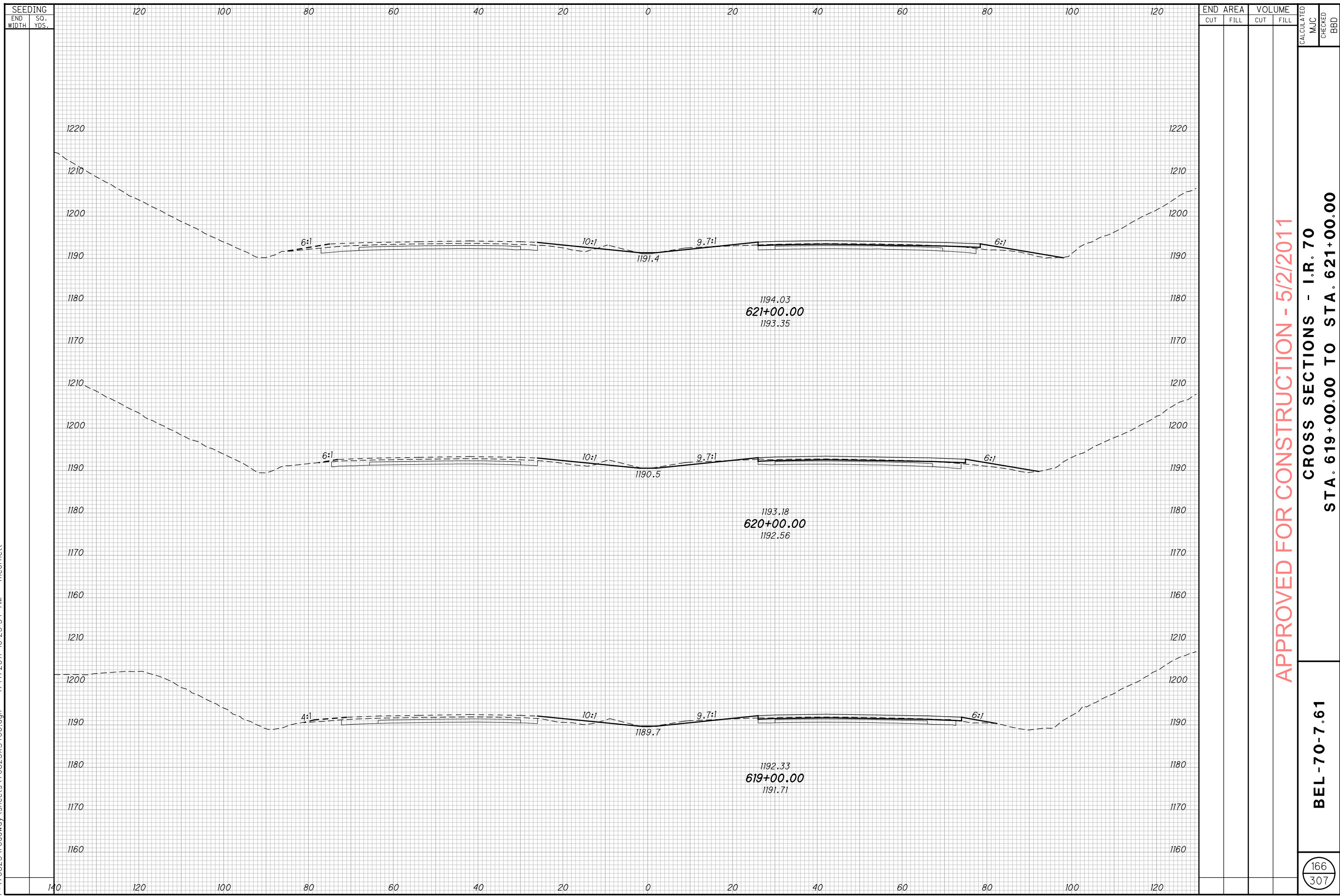
APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 616+00.00 TO STA. 618+00.00

BEL-70-7.61

165
307

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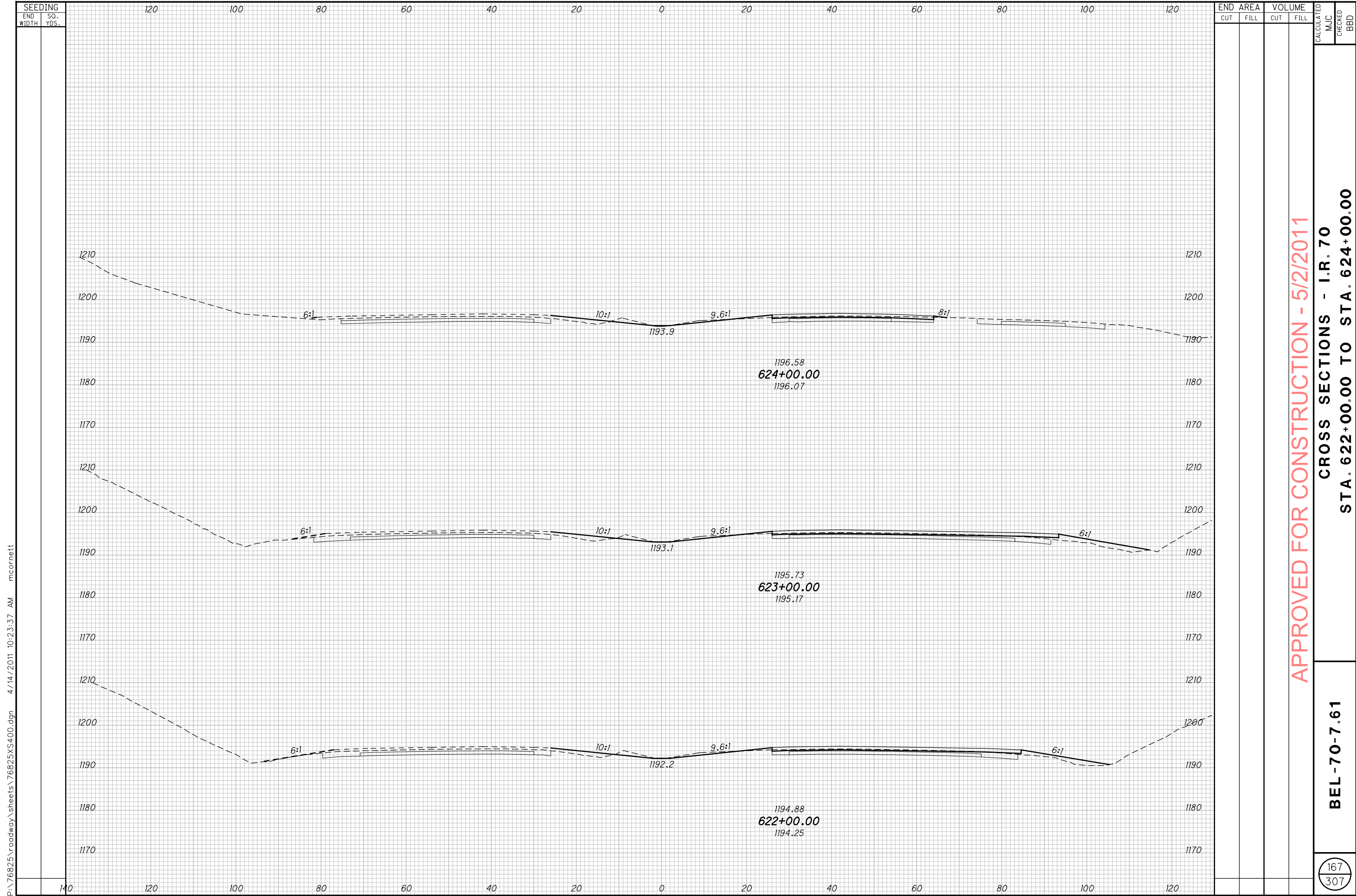


APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 619+00.00 TO STA. 621+00.00

BEL-70-7.61

166
307



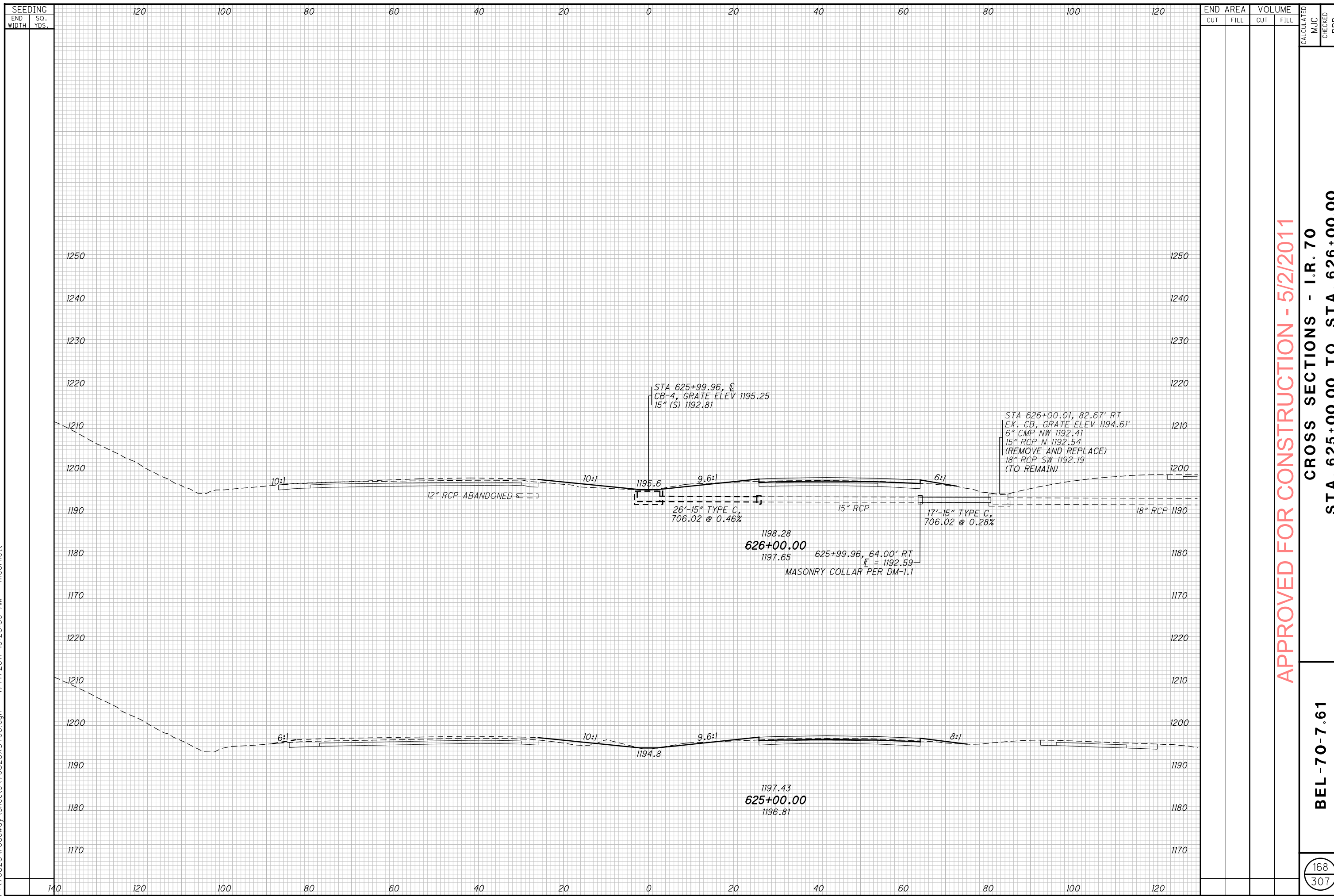
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APPROVED FOR CONSTRUCTION - 5/2/2011
CROSS SECTIONS - I.R. 70
STA. 622+00.00 TO STA. 624+00.00

BEL-70-7.61

167
307

P:\76825\roadway\sheets\76825XS400.dgn 4/14/2011 10:23:39 AM mcorneett



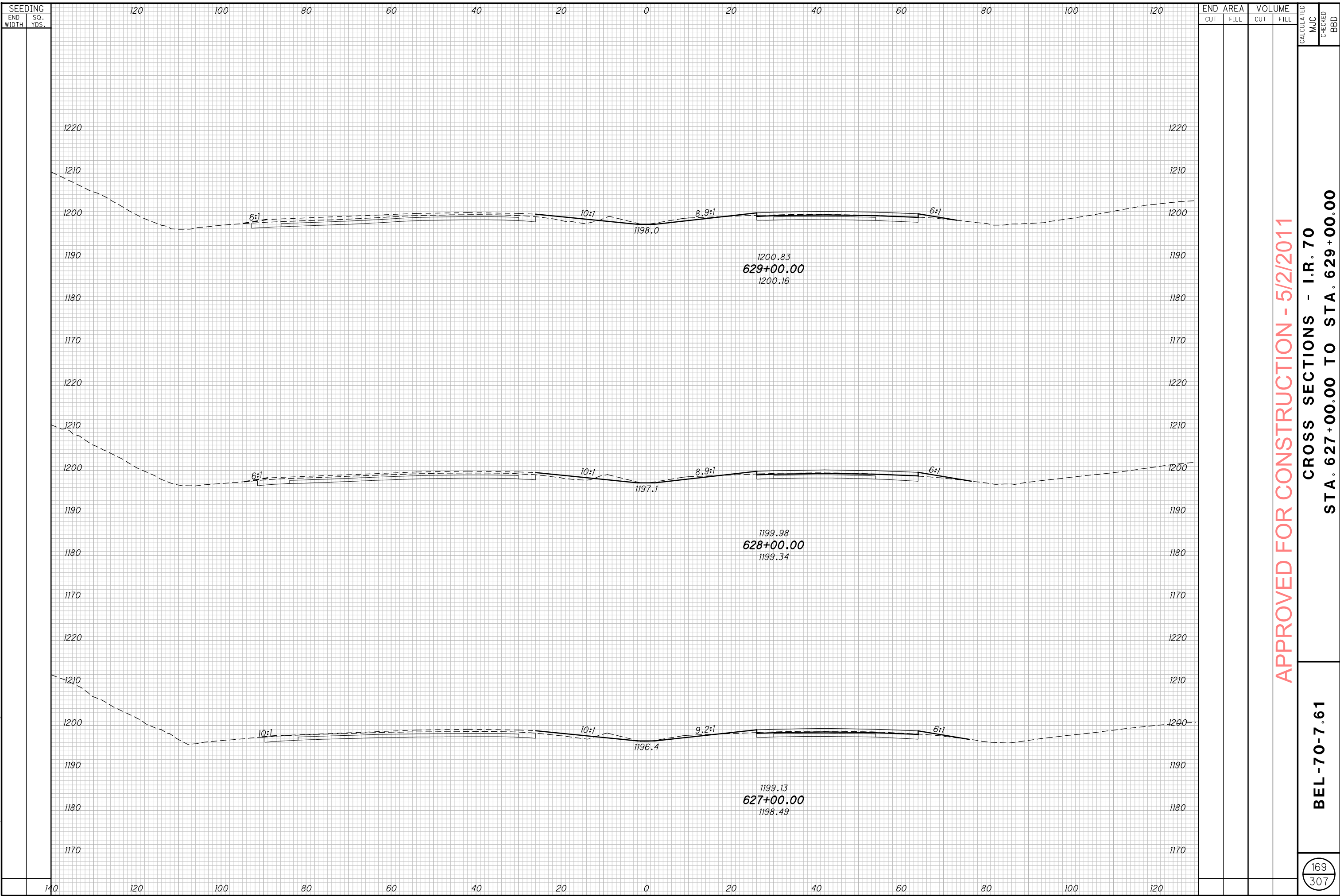
APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 625+00.00 TO STA. 626+00.00

BEL-70-7.61

168
307

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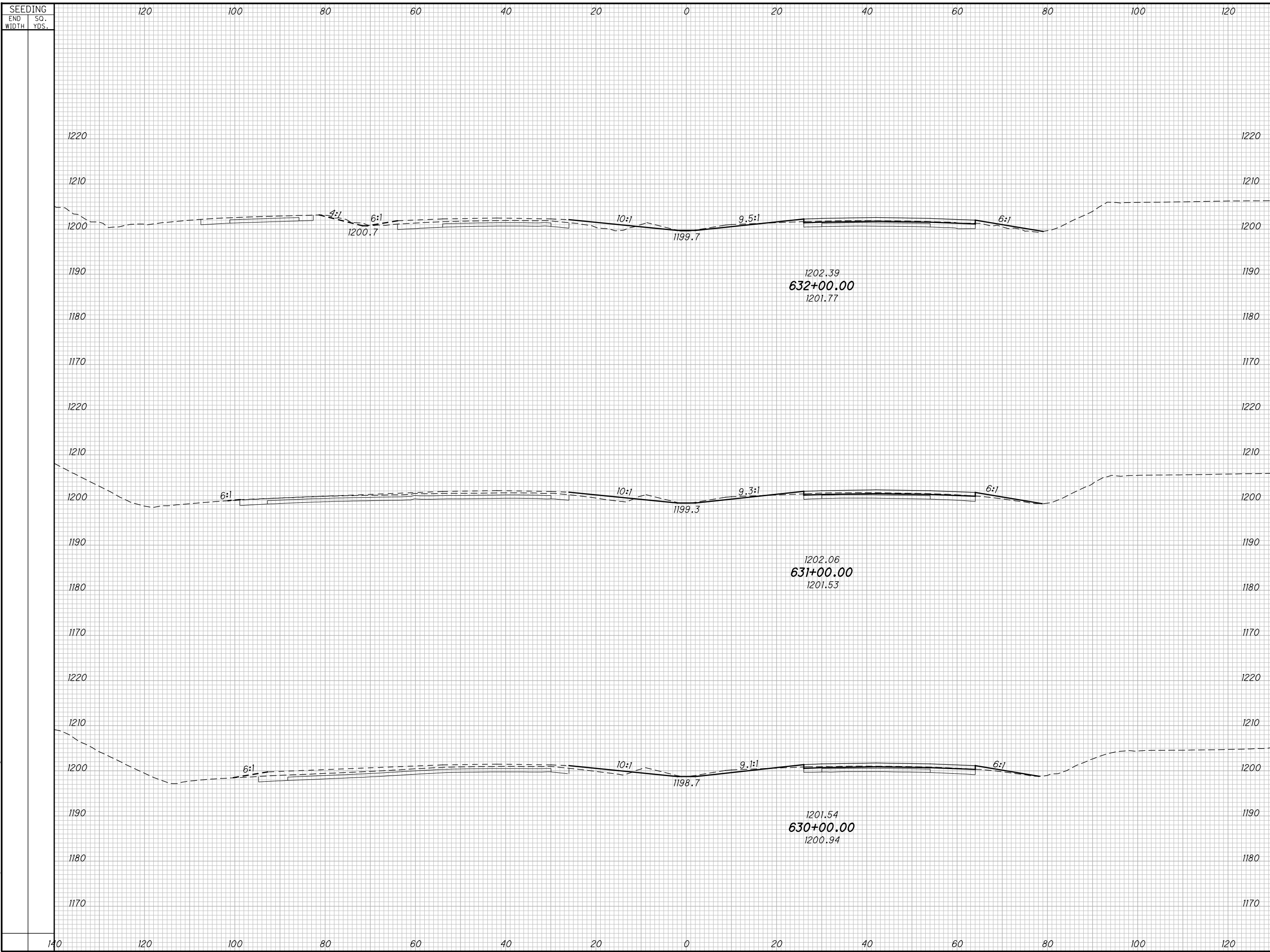
APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 627+00.00 TO STA. 629+00.00

BEL-70-7.61

169
307

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SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD

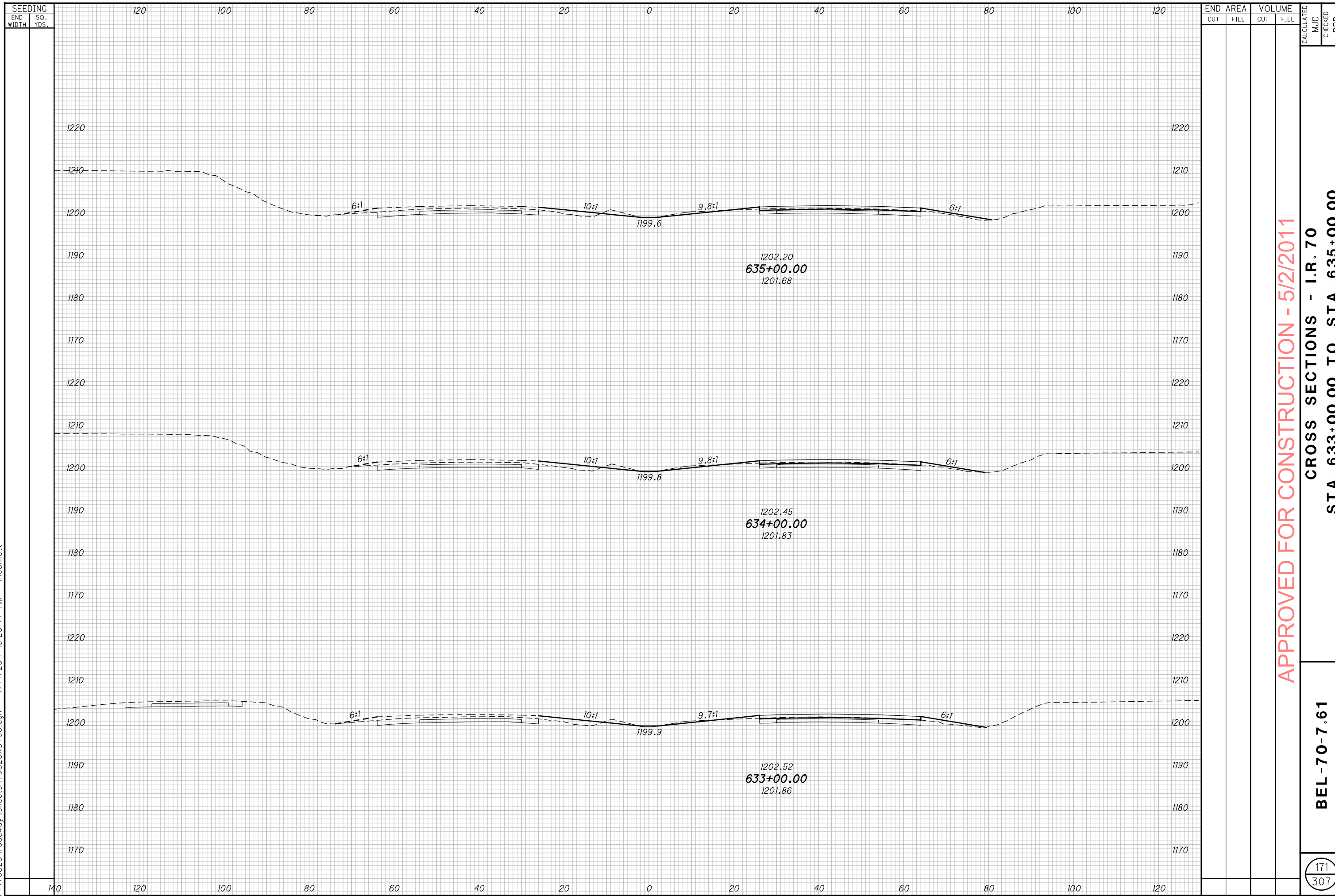
APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 630+00.00 TO STA. 632+00.00

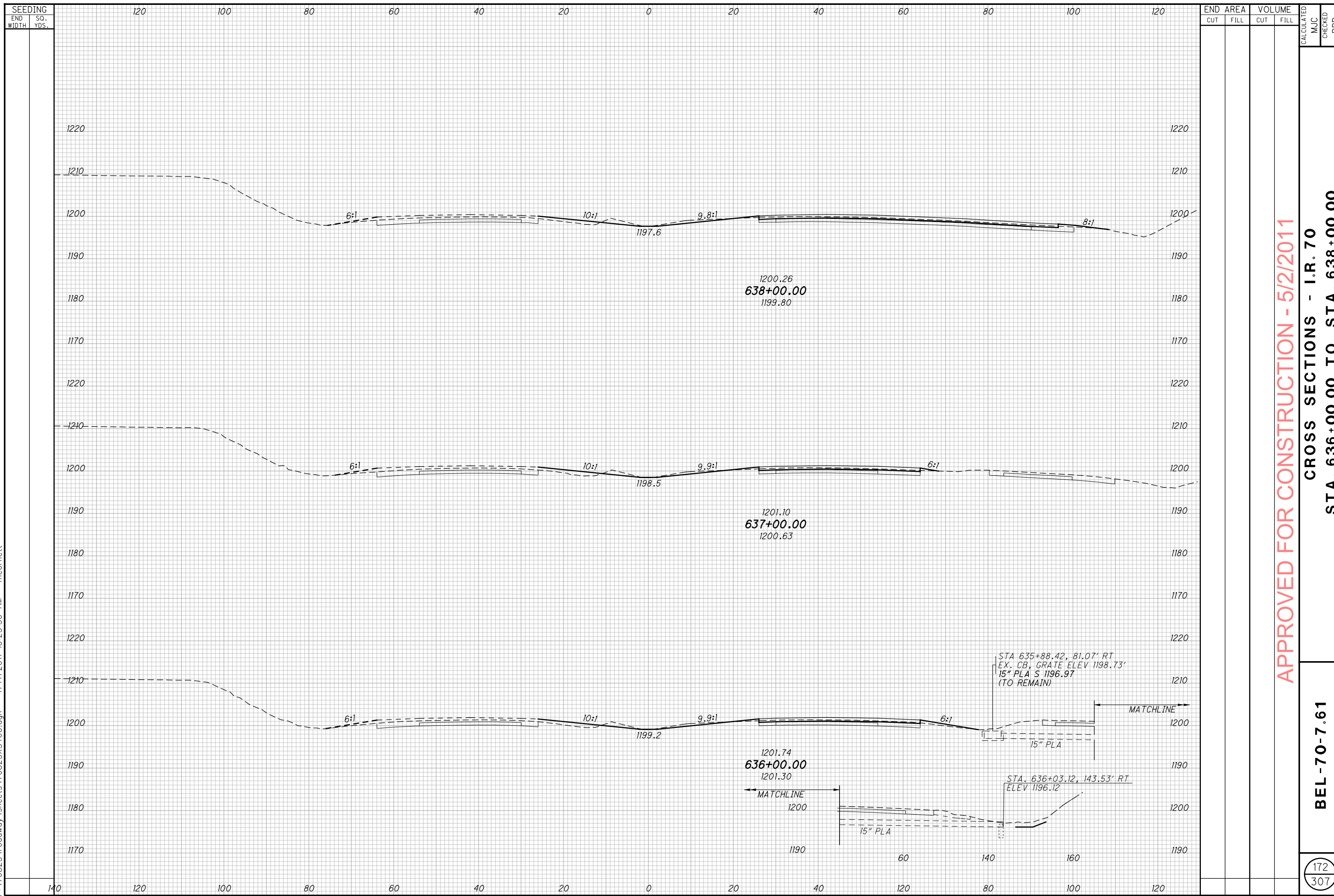
BEL-70-7.61

170
307

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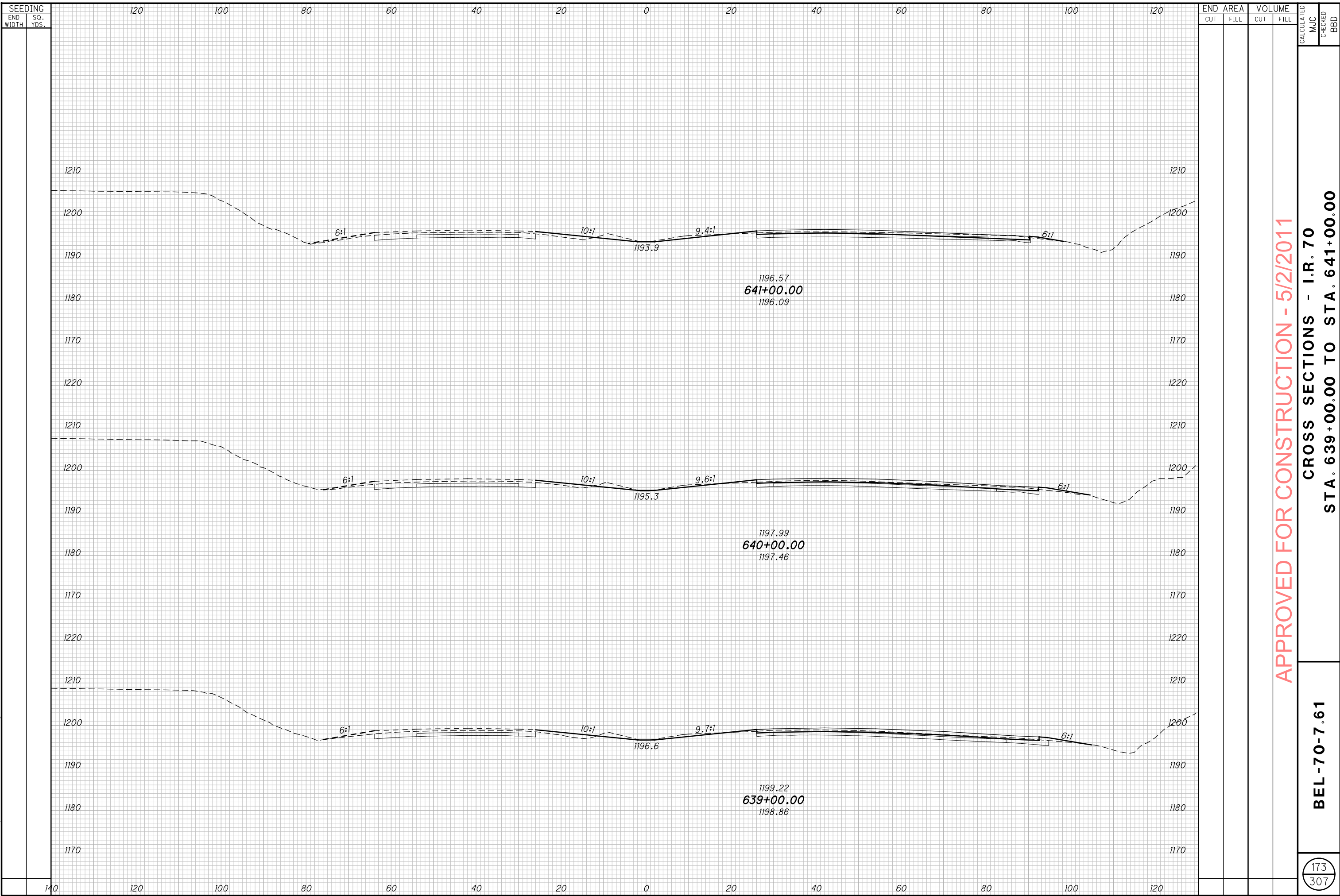
CROSS SECTIONS - I.R. 70
STA. 636+00.00 TO STA. 638+00.00

BEL-70-7.61

172
307

END AREA	VOLUME	CALCULATED		CHECKED	BBD
		CUT	FILL		

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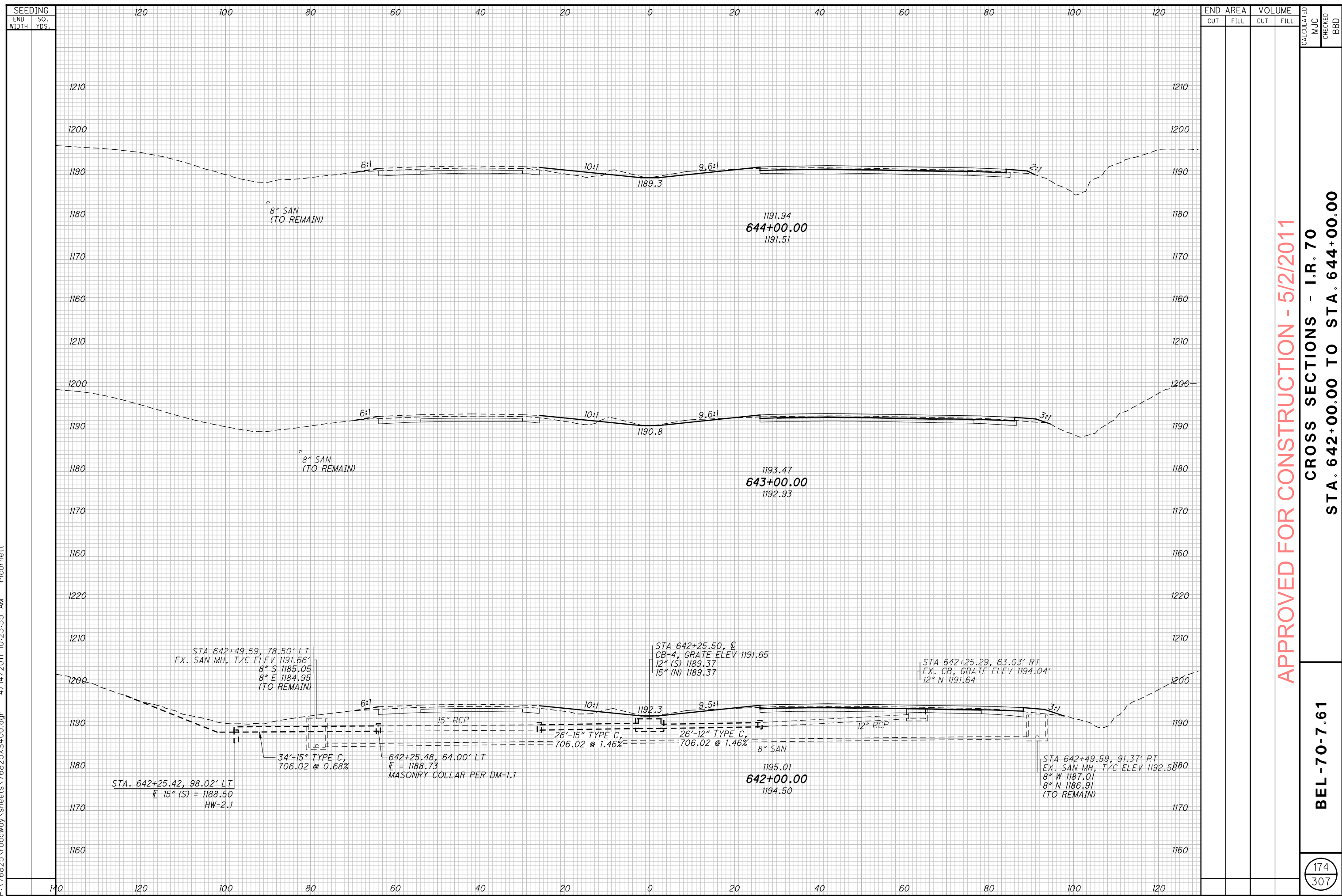
APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 639+00.00 TO STA. 641+00.00

BEL-70-7.61

173
307

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120 100 80 60 40 20 0 20 40 60 80 100 120

1210 1200 1190 1180 1170 1160 1210 1200 1190 1180 1170 1160 1210 1200 1190 1180 1170 1160 1220 1210 1190 1180 1170 1160 1210 1190 1180 1170 1160 1200 1190 1180 1170 1160 1200 1190 1180 1170 1160

6:1 10:1 9.6:1 2:1

8" SAN (TO REMAIN)

1191.94
644+00.00
1191.51

6:1 10:1 9.6:1 3:1

8" SAN (TO REMAIN)

1193.47
643+00.00
1192.93

STA 642+49.59, 78.50' LT
EX. SAN MH, T/C ELEV 1191.66'
8" S 1185.05
8" E 1184.95
(TO REMAIN)

STA 642+25.50, C
CB-4, GRATE ELEV 1191.65
12" (S) 1189.37
15" (N) 1189.37

STA 642+25.29, 63.03' RT
EX. CB, GRATE ELEV 1194.04'
12" N 1191.64

6:1 10:1 9.5:1 3:1

15" RCP

26'-15" TYPE C,
706.02 @ 1.46%

26'-12" TYPE C,
706.02 @ 1.46%

12" RCP

8" SAN

STA. 642+25.42, 98.02' LT
15" (S) = 1188.50
HW-2.1

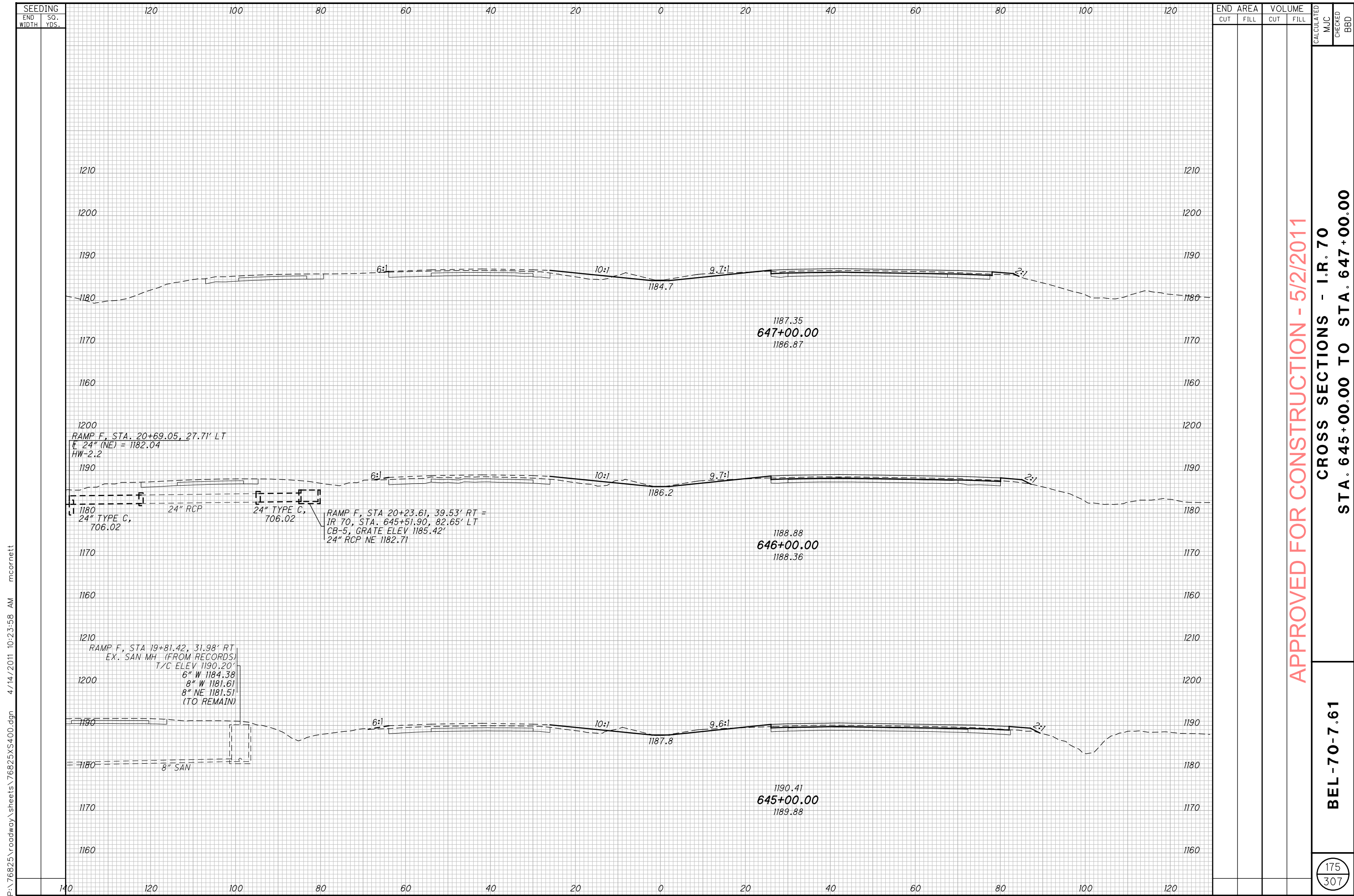
34'-15" TYPE C,
706.02 @ 0.68%

642+25.48, 64.00' LT
E = 1188.73
MASONRY COLLAR PER DM-1.1

1195.01
642+00.00
1194.50

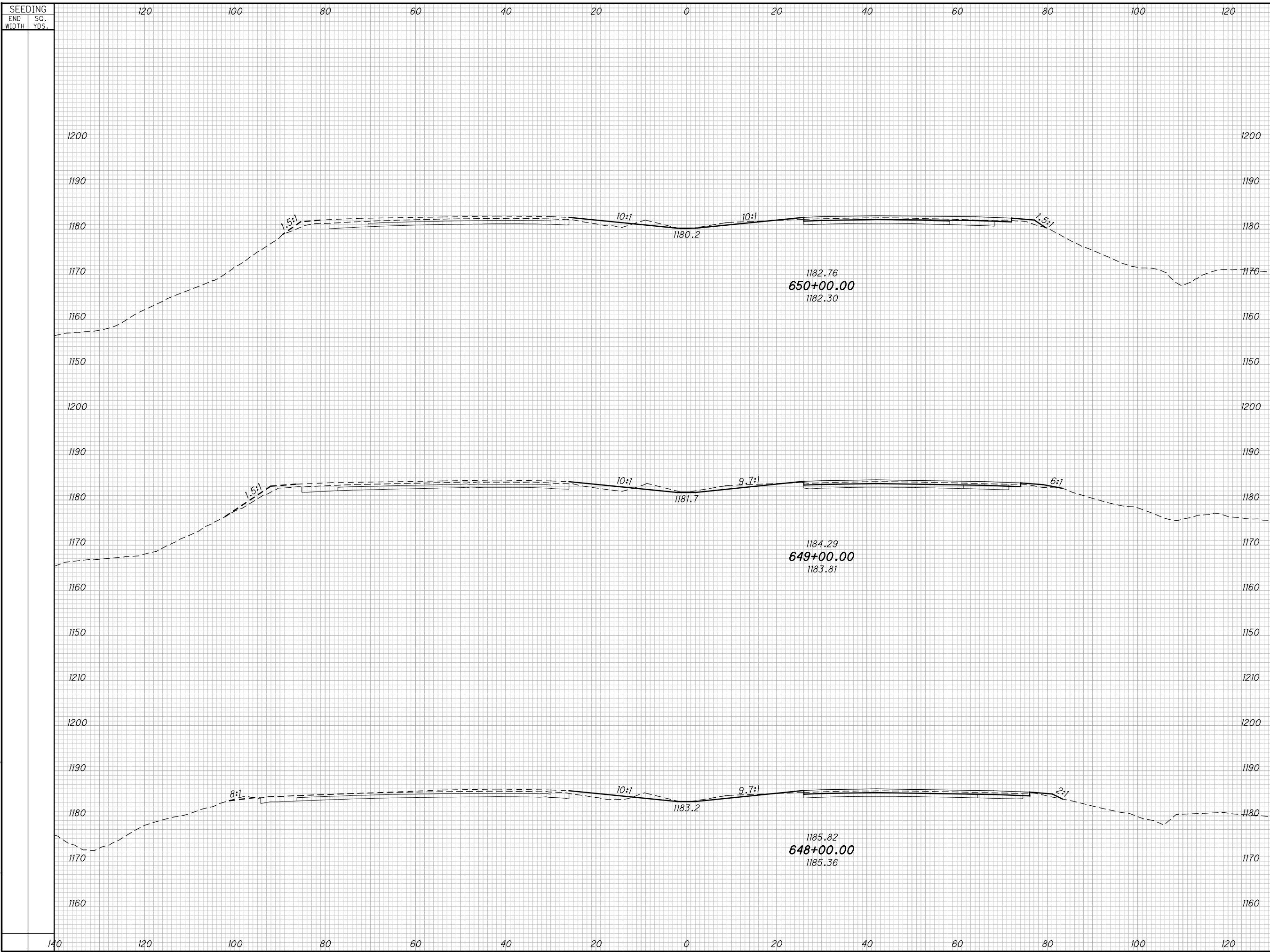
STA 642+49.59, 91.37' RT
EX. SAN MH, T/C ELEV 1192.51
8" W 1187.01
8" N 1186.91
(TO REMAIN)

140 120 100 80 60 40 20 0 20 40 60 80 100 120



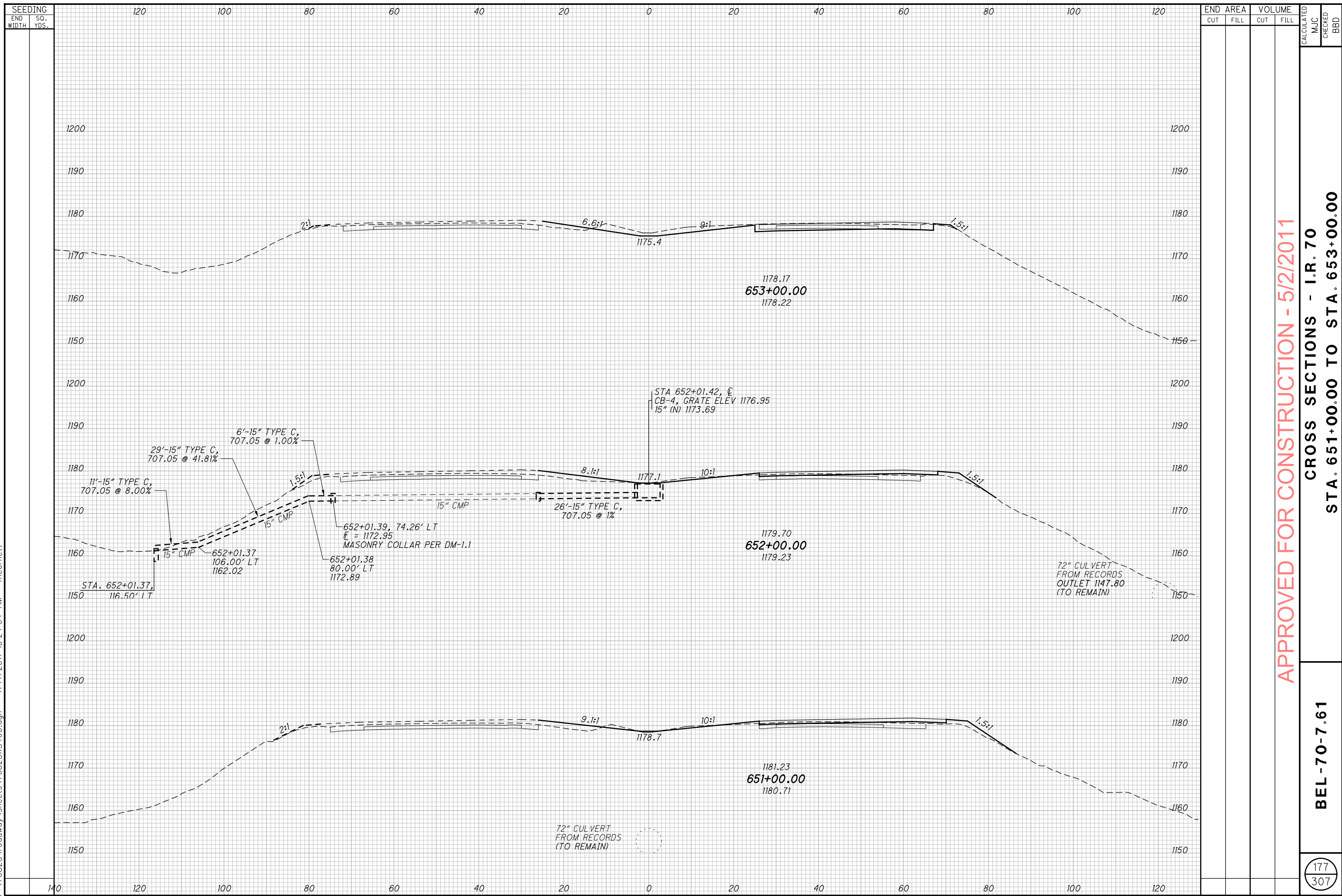
P:\76825\roadway\sheet\76825X5400.dgn 4/14/2011 10:23:58 AM mcornett

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SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD
<p>APPROVED FOR CONSTRUCTION - 5/2/2011</p> <p>CROSS SECTIONS - I.R. 70</p> <p>STA. 648+00.00 TO STA. 650+00.00</p>							
<p>BEL-70-7.61</p>							
<p>176</p> <p>307</p>							

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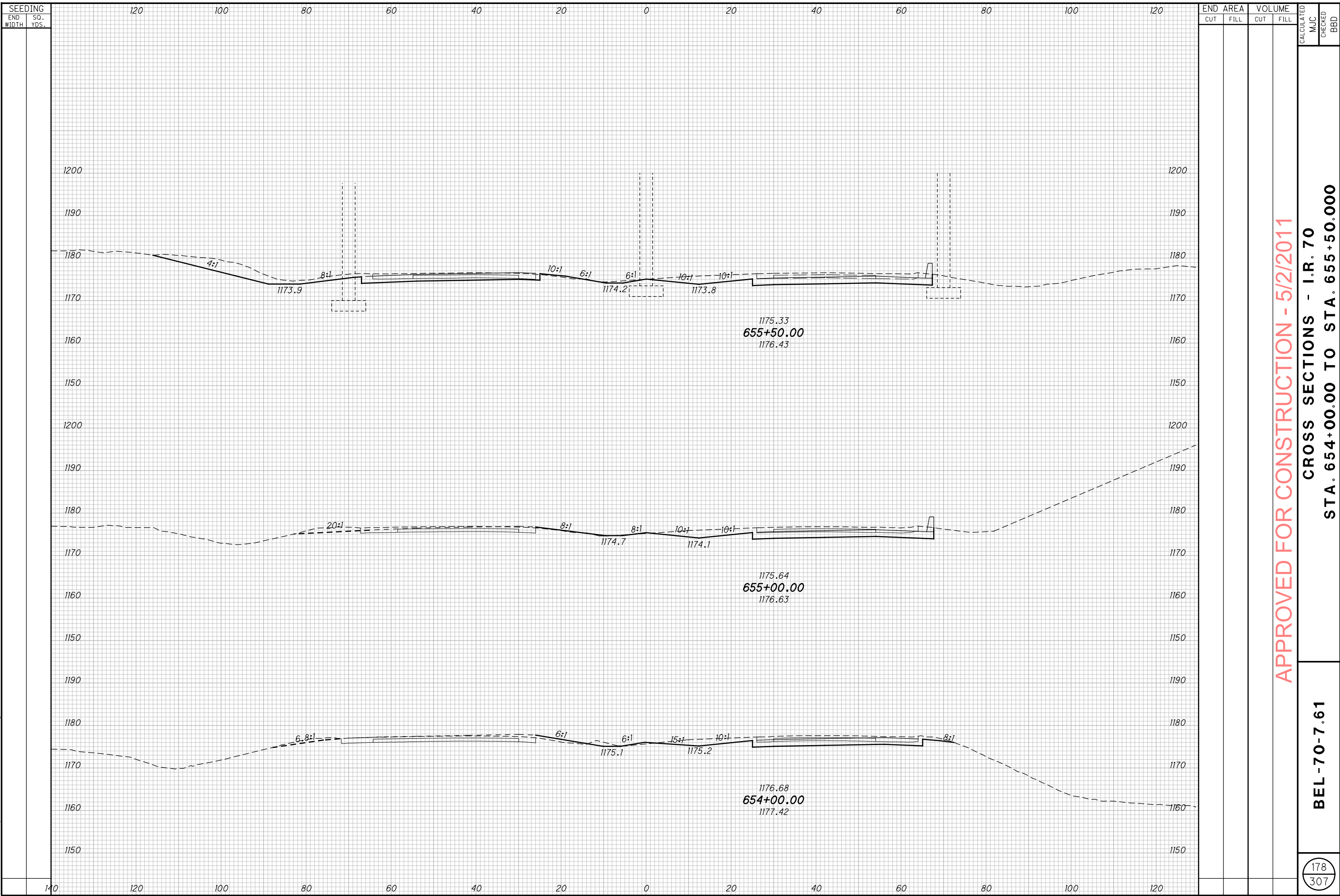
APPROVED FOR CONSTRUCTION - 5/2/2011

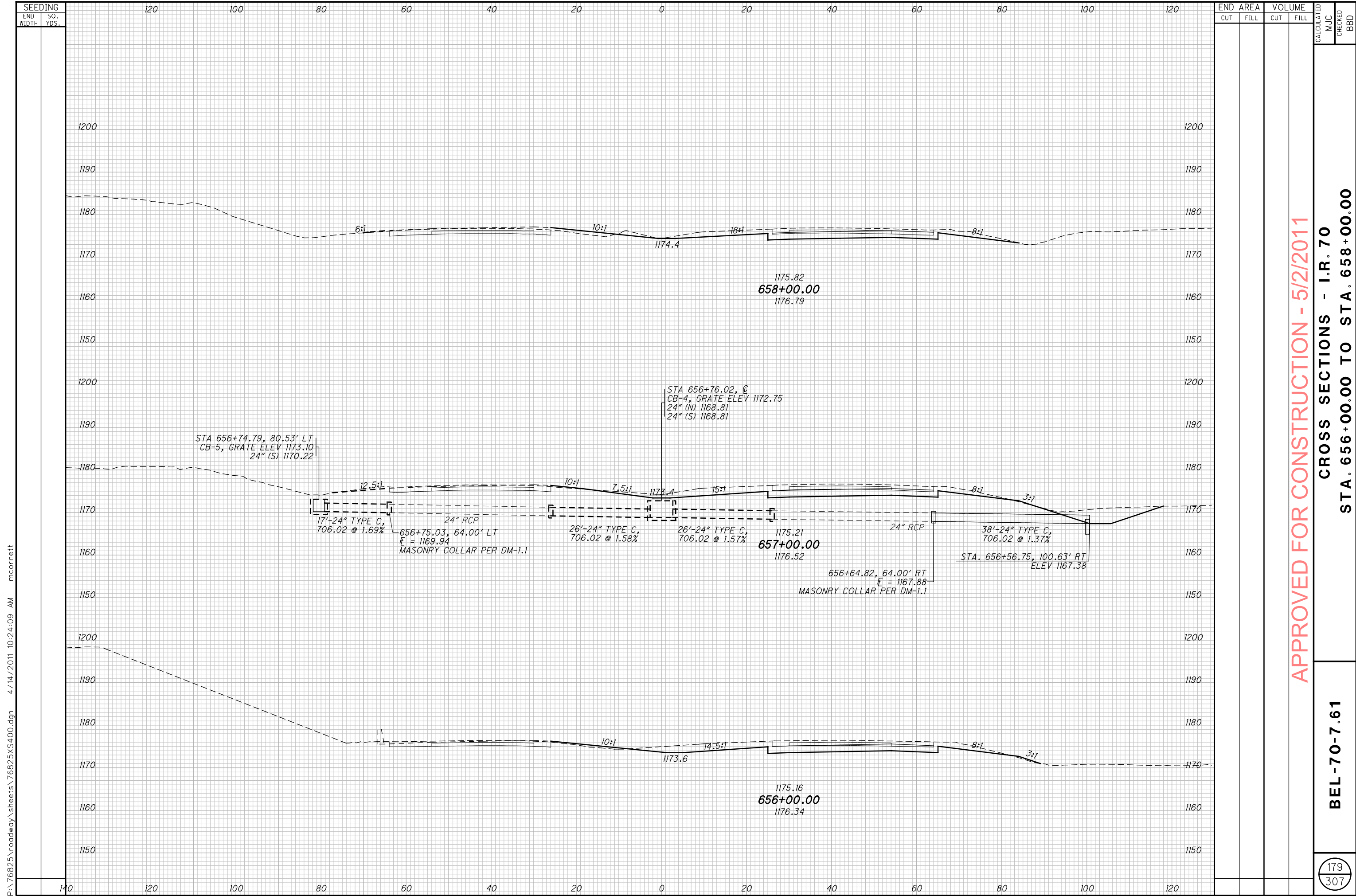
CROSS SECTIONS - I.R. 70
STA. 651+00.00 TO STA. 653+00.00

BEL-70-7.61

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307

P:\76825\roadway\sheets\76825XS400.dgn 4/14/2011 10:24:06 AM mcornett





P:\76825\roadway\sheets\76825XS400.dgn 4/14/2011 10:24:09 AM mcornett

SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70

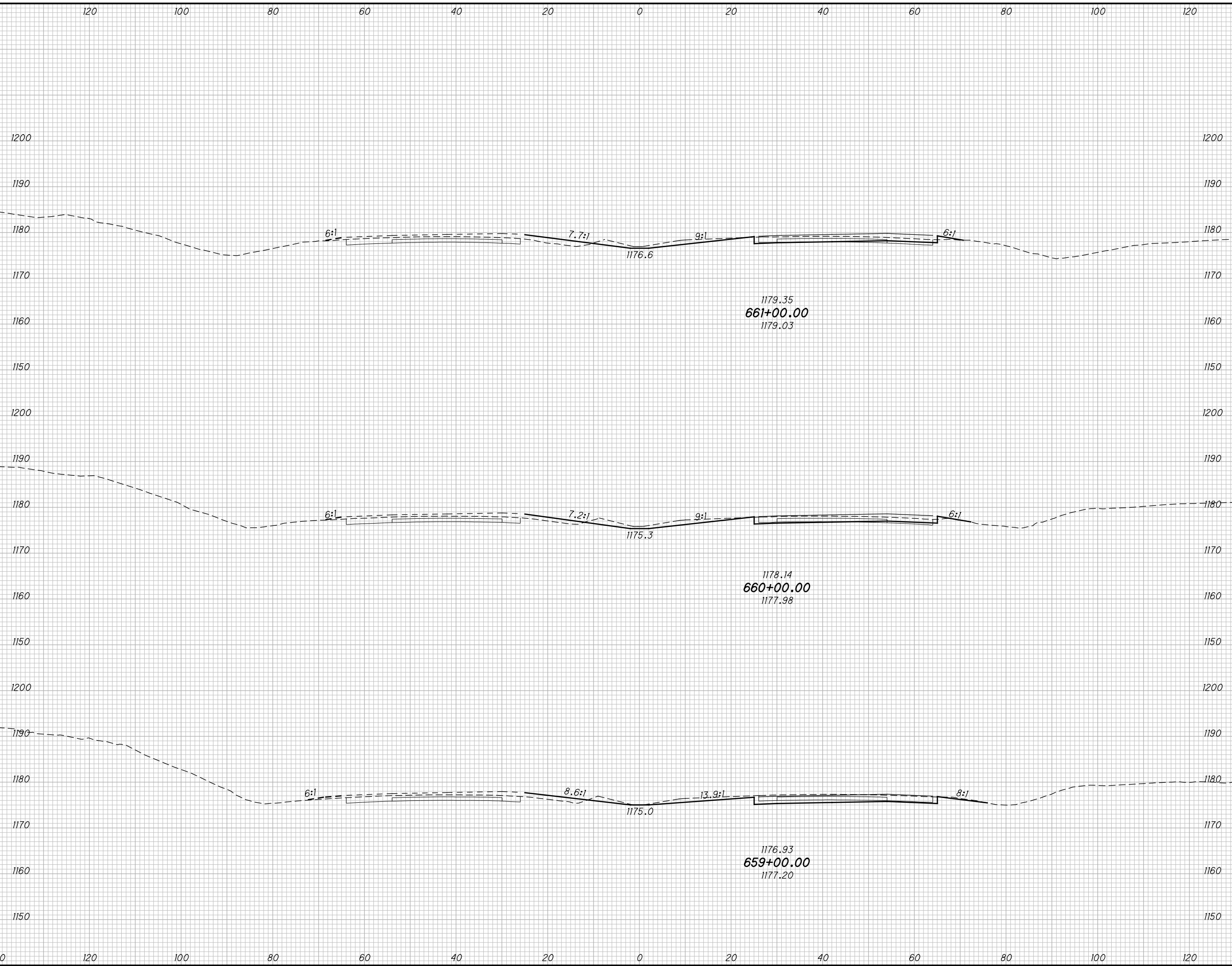
STA. 656+00.00 TO STA. 658+00.00

BEL-70-7.61

179
307

P:\76825\roadway\sheets\76825XS400.dgn 4/14/2011 10:24:12 AM mcornett

SEEDING	
END WIDTH	SO. YDS.
140	



END AREA		VOLUME		CALCULATED		
CUT	FILL	CUT	FILL	MJC	CHECKED	BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

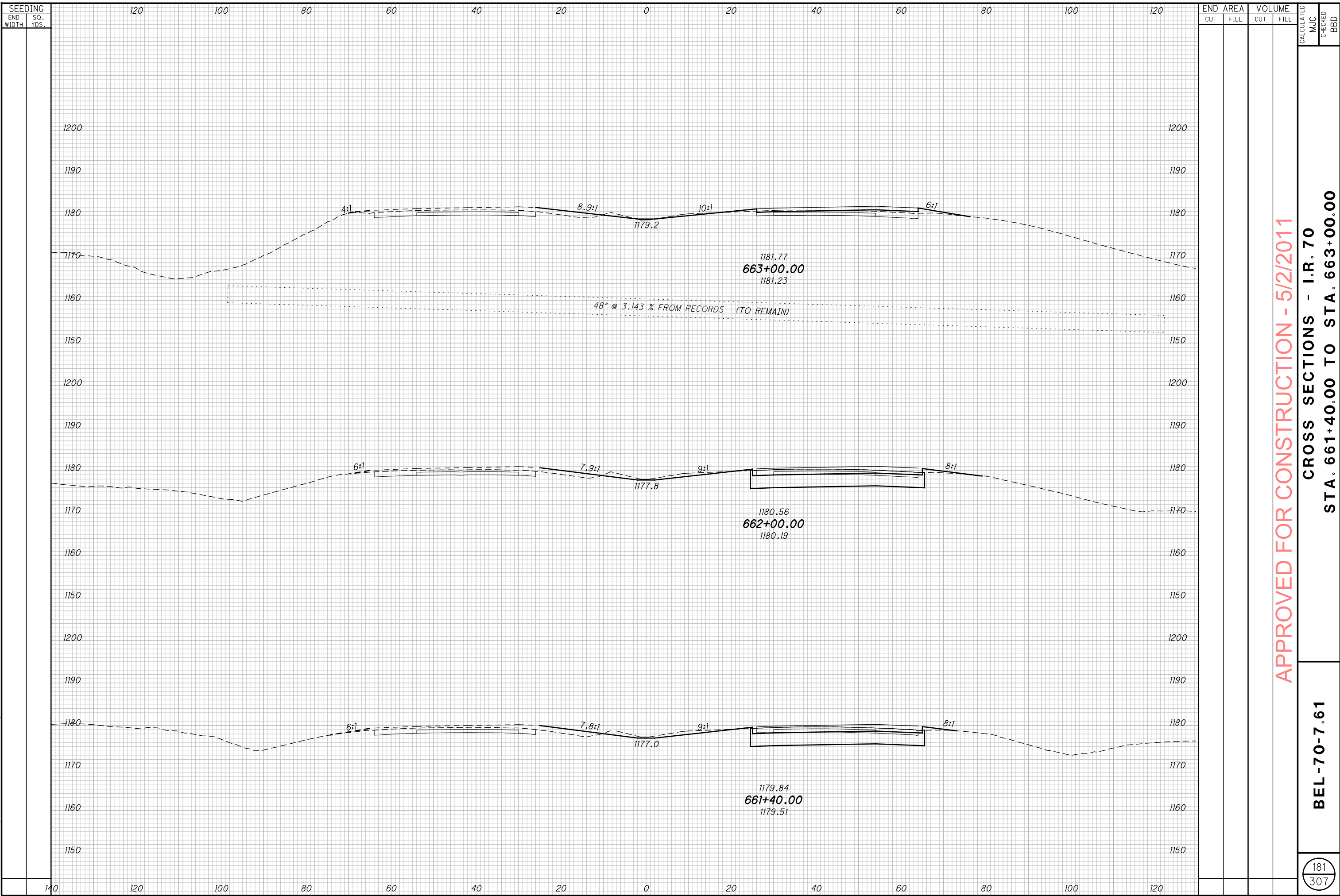
CROSS SECTIONS - I.R. 70

STA. 659+00.00 TO STA. 661+00.00

BEL-70-7.61

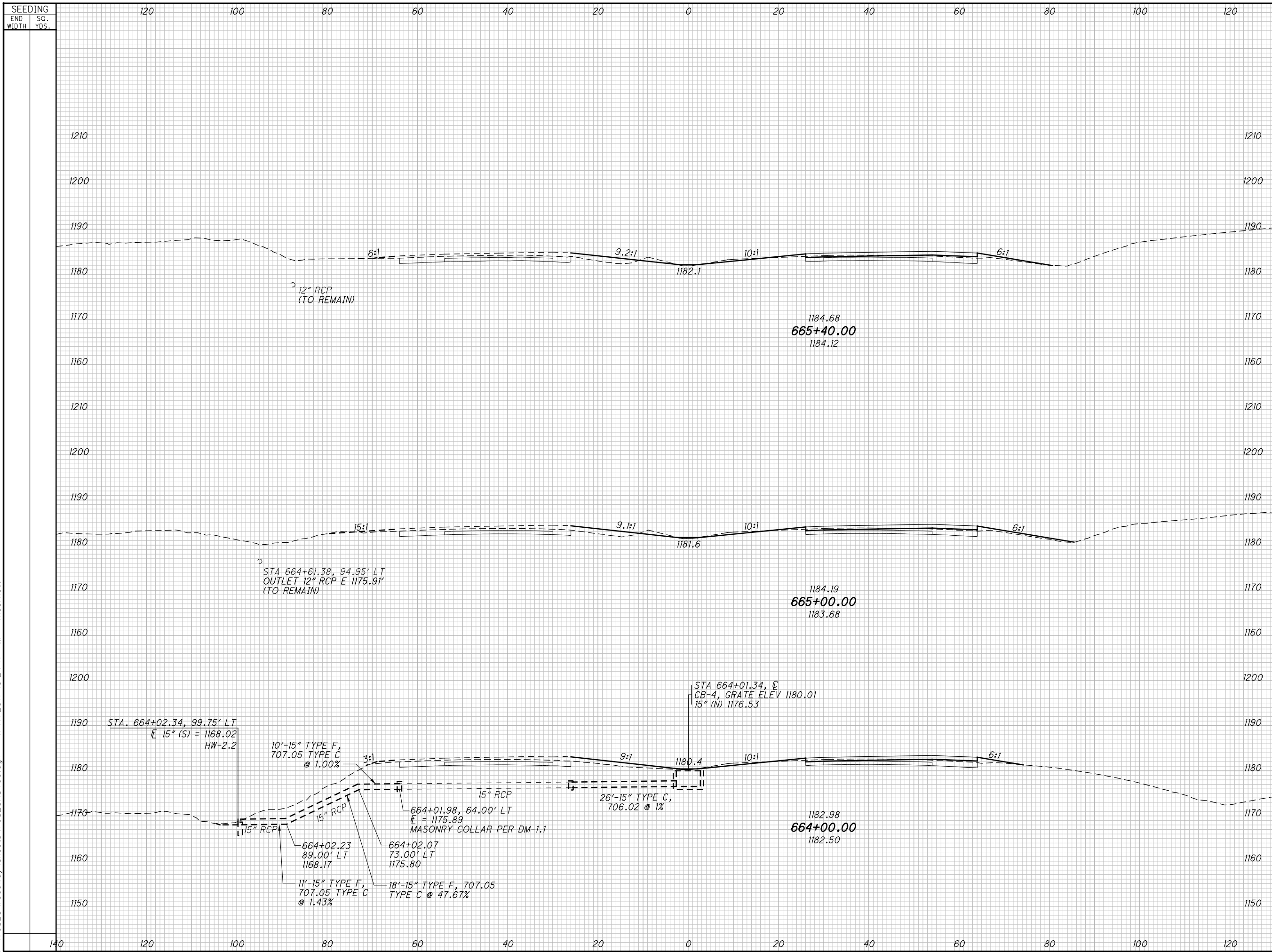
180
307

P:\76825\roadway\sheets\76825XS400.dgn 4/14/2011 10:24:14 AM mcornett



END AREA	VOLUME	CALCULATED	CHECKED	MJC	BBD		
						CUT	FILL
APPROVED FOR CONSTRUCTION - 5/2/2011							
CROSS SECTIONS - I.R. 70							
STA. 661+40.00 TO STA. 663+00.00							
BEL-70-7.61							
<table border="1"> <tr> <td>181</td> </tr> <tr> <td>307</td> </tr> </table>						181	307
181							
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P:\76825\roadway\sheets\76825XS400.dgn 4/14/2011 10:24:17 AM mcornett



APPROVED FOR CONSTRUCTION - 5/2/2011

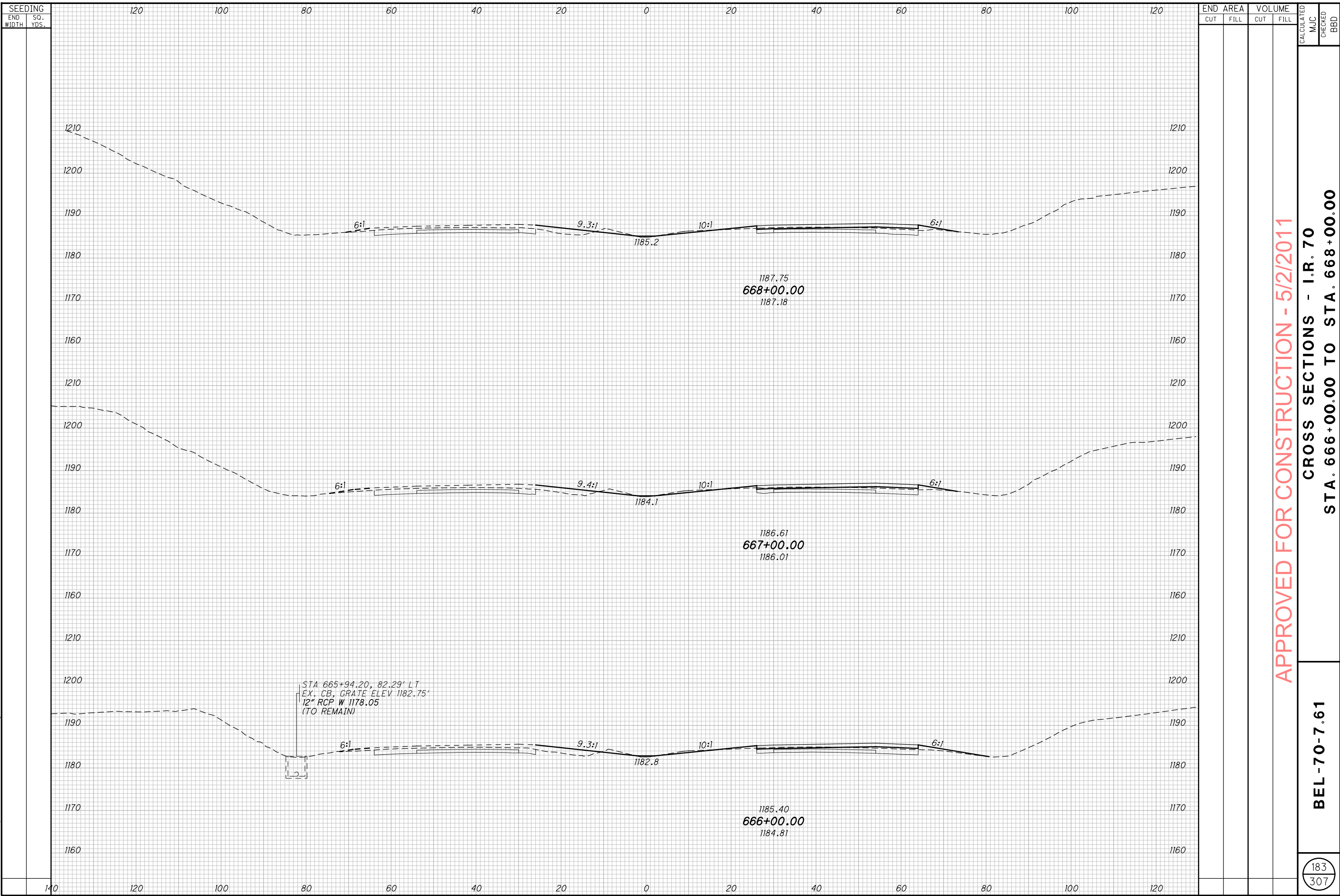
CROSS SECTIONS - I.R. 70

STA. 664+00.00 TO STA. 665+40.00

BEL-70-7.61

182
307

P:\76825\roadway\sheets\76825\5400.dgn 4/14/2011 10:24:20 AM mcornett



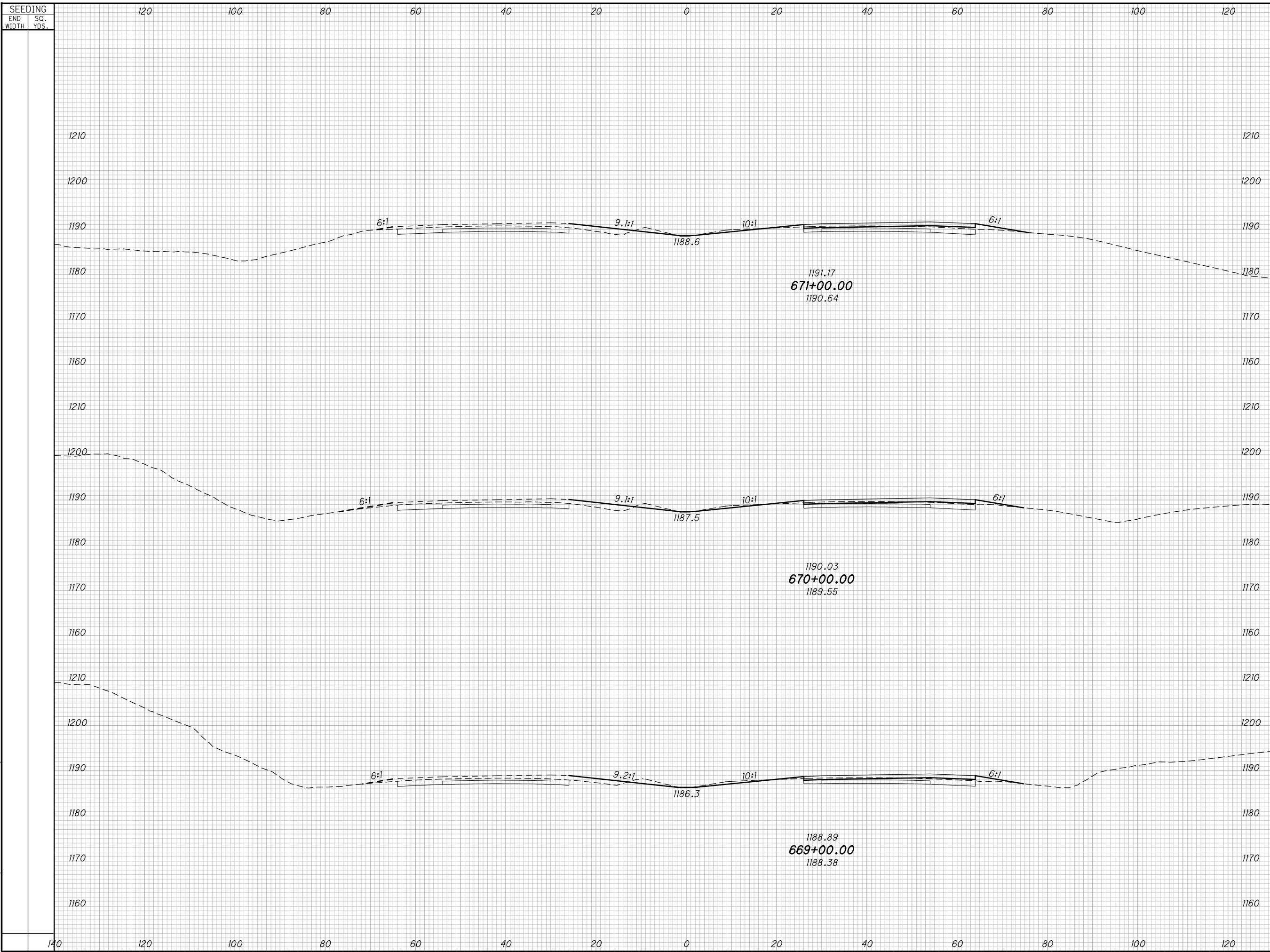
APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 666+00.00 TO STA. 668+00.00

BEL-70-7.61

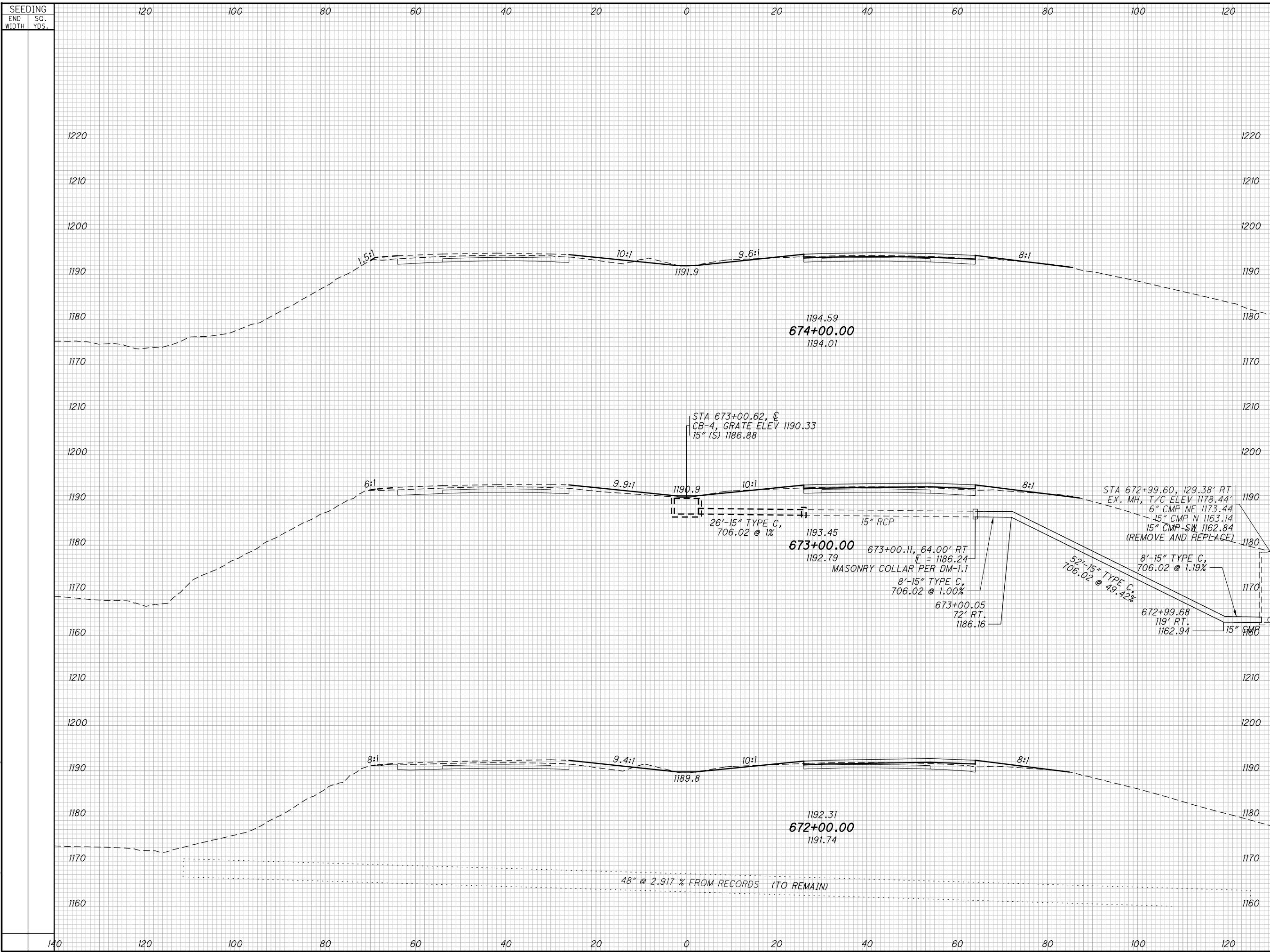
183
307

P:\76825\roadway\sheets\76825XS400.dgn 4/14/2011 10:24:22 AM mcornett



SEEDING		END AREA		VOLUME		CALCULATED			
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD		
APPROVED FOR CONSTRUCTION - 5/2/2011									
CROSS SECTIONS - I.R. 70									
STA. 669+00.00 TO STA. 671+00.00									
BEL-70-7.61									
<table border="1"> <tr> <td>184</td> </tr> <tr> <td>307</td> </tr> </table>								184	307
184									
307									

P:\76825\roadway\sheets\76825XS400.dgn 4/14/2011 10:24:25 AM mcornett



END AREA	VOLUME	CALCULATED	MJC	CHECKED	BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70

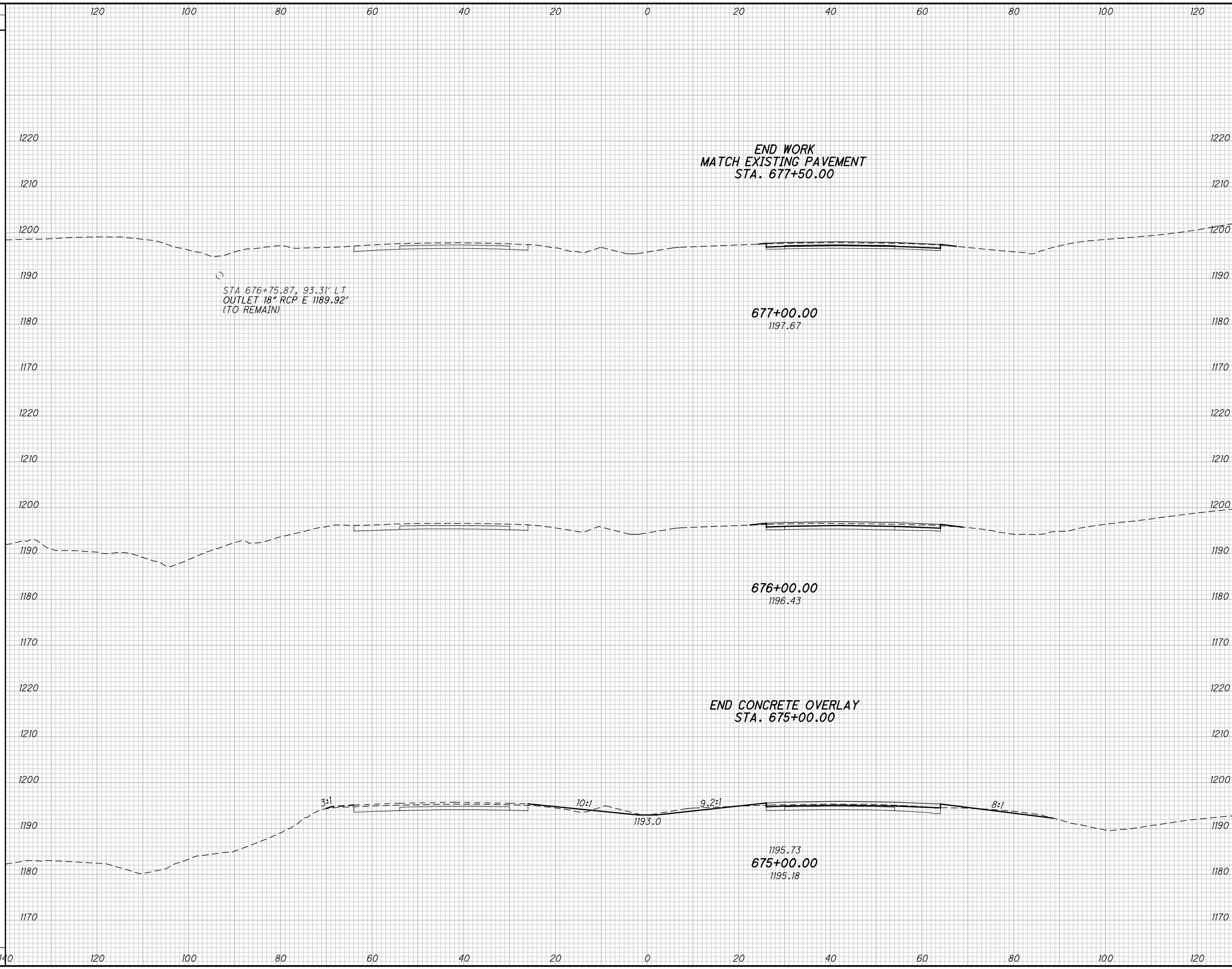
STA. 672+00.00 TO STA. 674+00.00

BEL-70-7.61

185
307

P:\76825\roadway\sheets\76825XS400.dgn 4/14/2011 10:24:28 AM mcorneett

SEEDING	
END WIDTH	SO. YDS.



END AREA		VOLUME		CALCULATED MJC	CHECKED BBD
CUT	FILL	CUT	FILL		

APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70

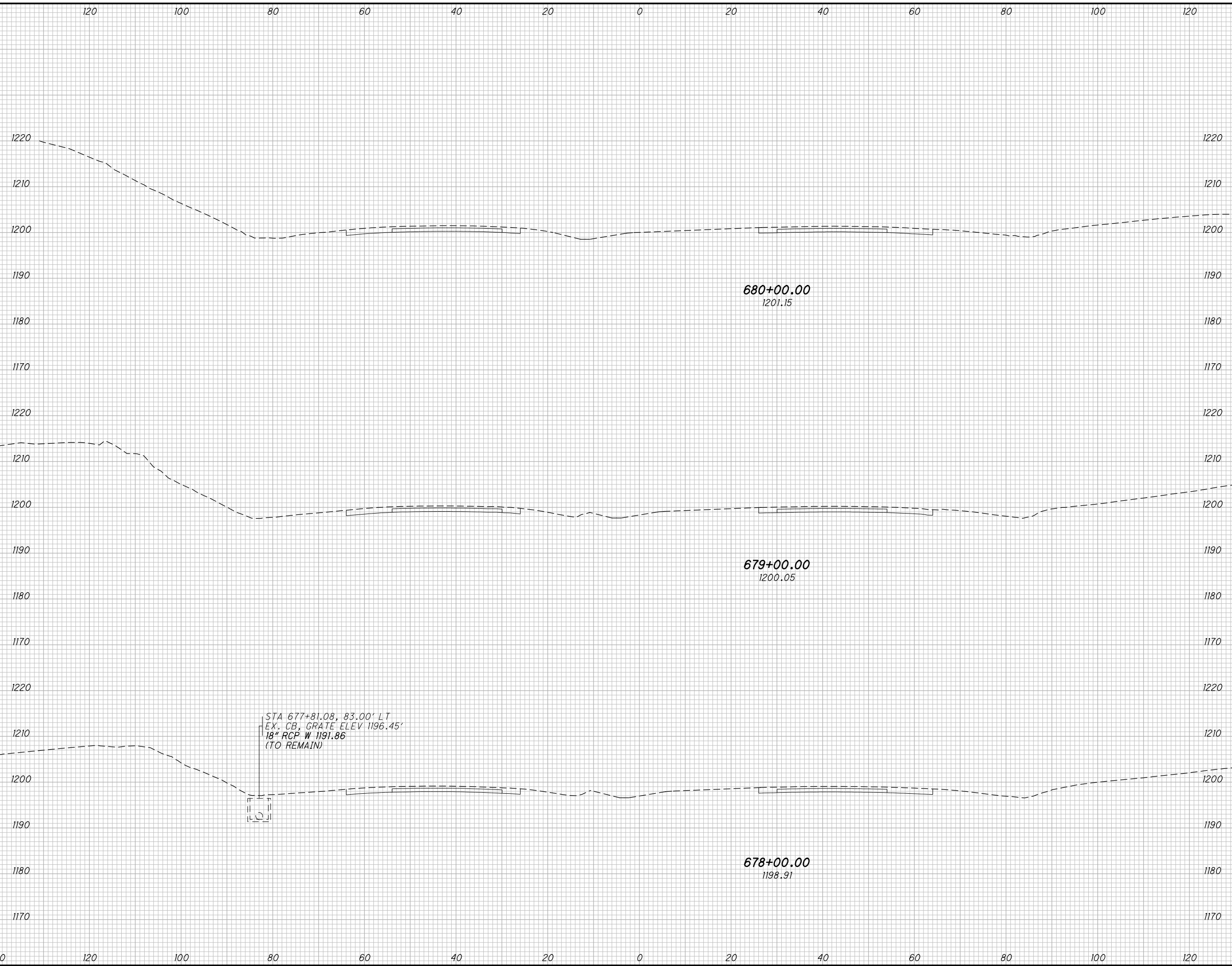
STA. 675+00.00 TO STA. 677+00.00

BEL-70-7.61

186
307

P:\76825\roadway\sheets\76825XS400.dgn 4/14/2011 10:24:31 AM mcornett

SEEDING	
END WIDTH	SO. YDS.
140	



END AREA		VOLUME		CALCULATED MJC	CHECKED BBD
CUT	FILL	CUT	FILL		

APPROVED FOR CONSTRUCTION - 5/2/2011

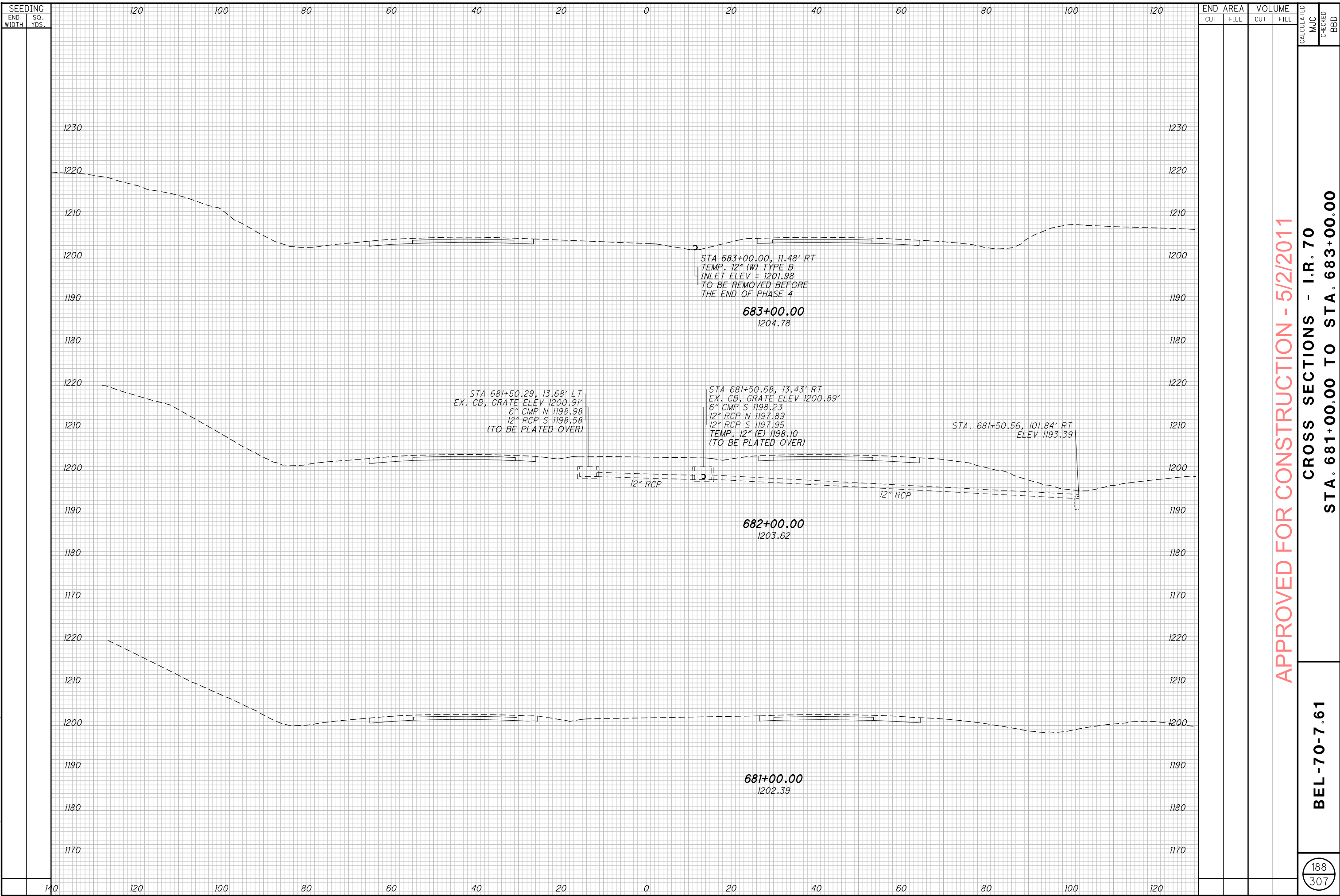
CROSS SECTIONS - I.R. 70

STA. 678+00.00 TO STA. 680+00.00

BEL-70-7.61

187
307

P:\76825\roadway\sheets\76825XS400.dgn 4/14/2011 10:24:33 AM mcornett



SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBB

APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - I.R. 70
STA. 681+00.00 TO STA. 683+00.00

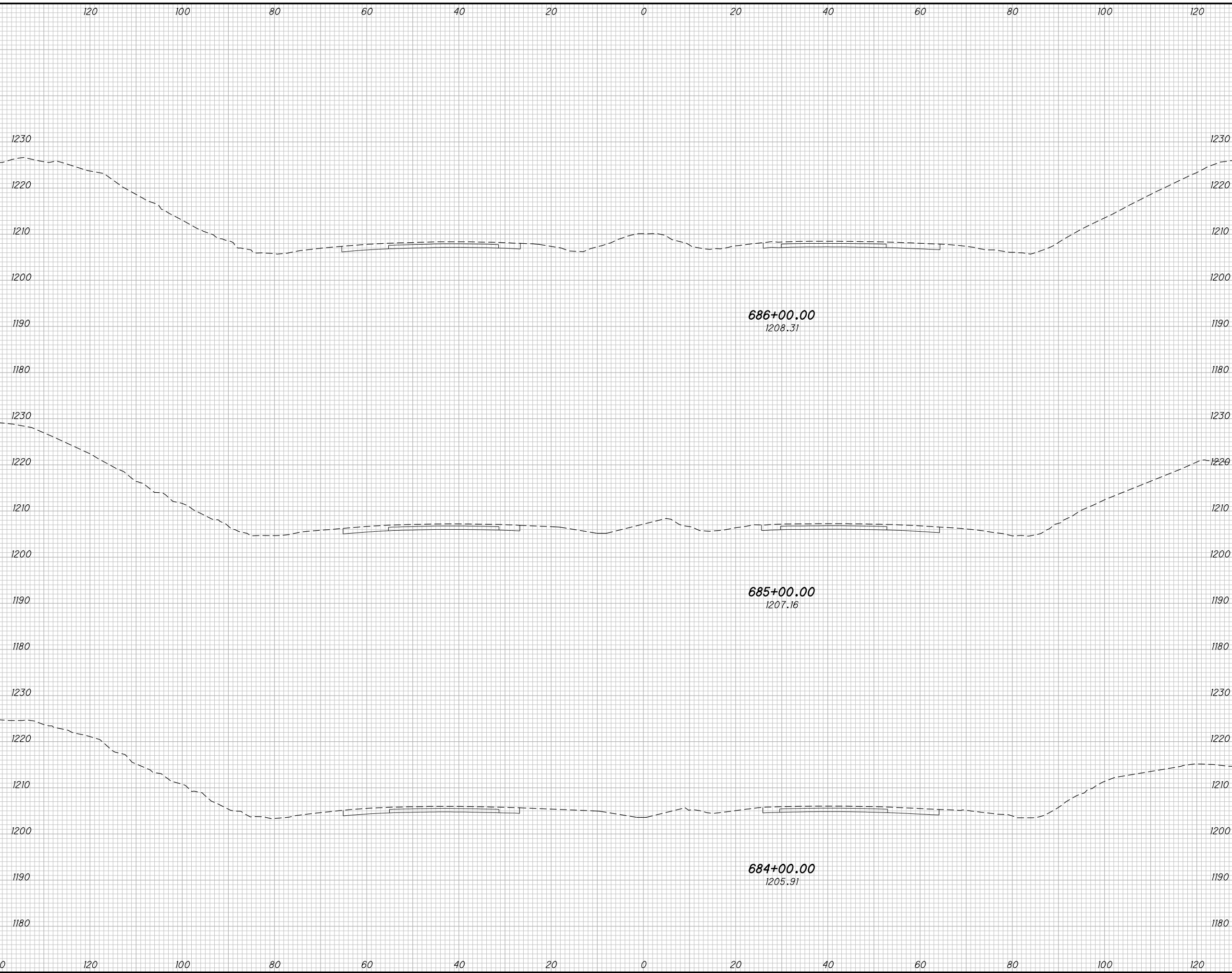
BEL-70-7.61

188
307

P:\76825\roadway\sheets\76825XS400.dgn 4/14/2011 10:24:36 AM mcornett

SEEDING
END SO.
WIDTH YDS.

END AREA
CUT FILL
VOLUME
CUT FILL
CALCULATED
MJC
CHECKED
BBD



686+00.00
1208.31

685+00.00
1207.16

684+00.00
1205.91

APPROVED FOR CONSTRUCTION - 5/2/2011

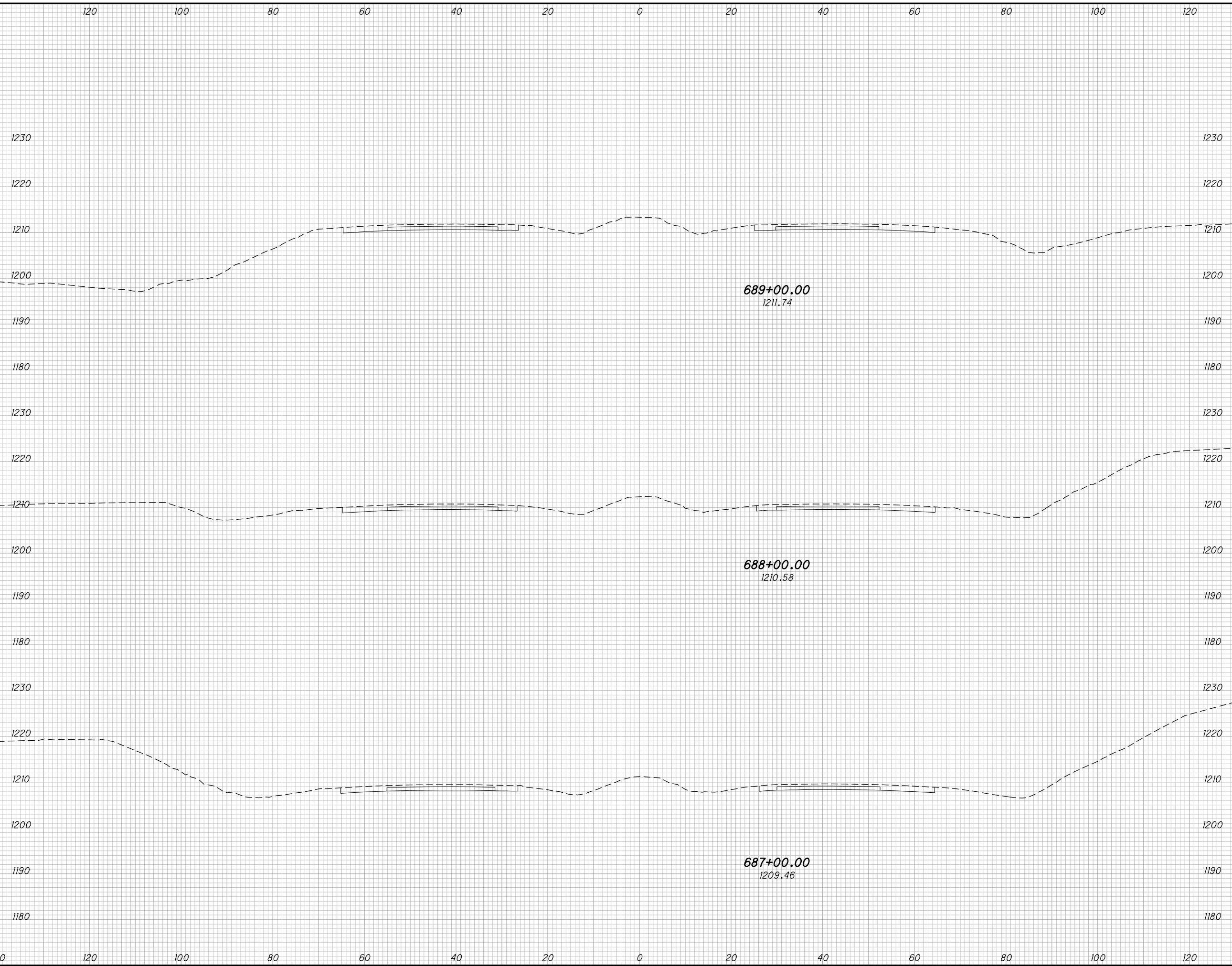
CROSS SECTIONS - I.R. 70
STA. 684+00.00 TO STA. 686+00.00

BEL-70-7.61

189
307

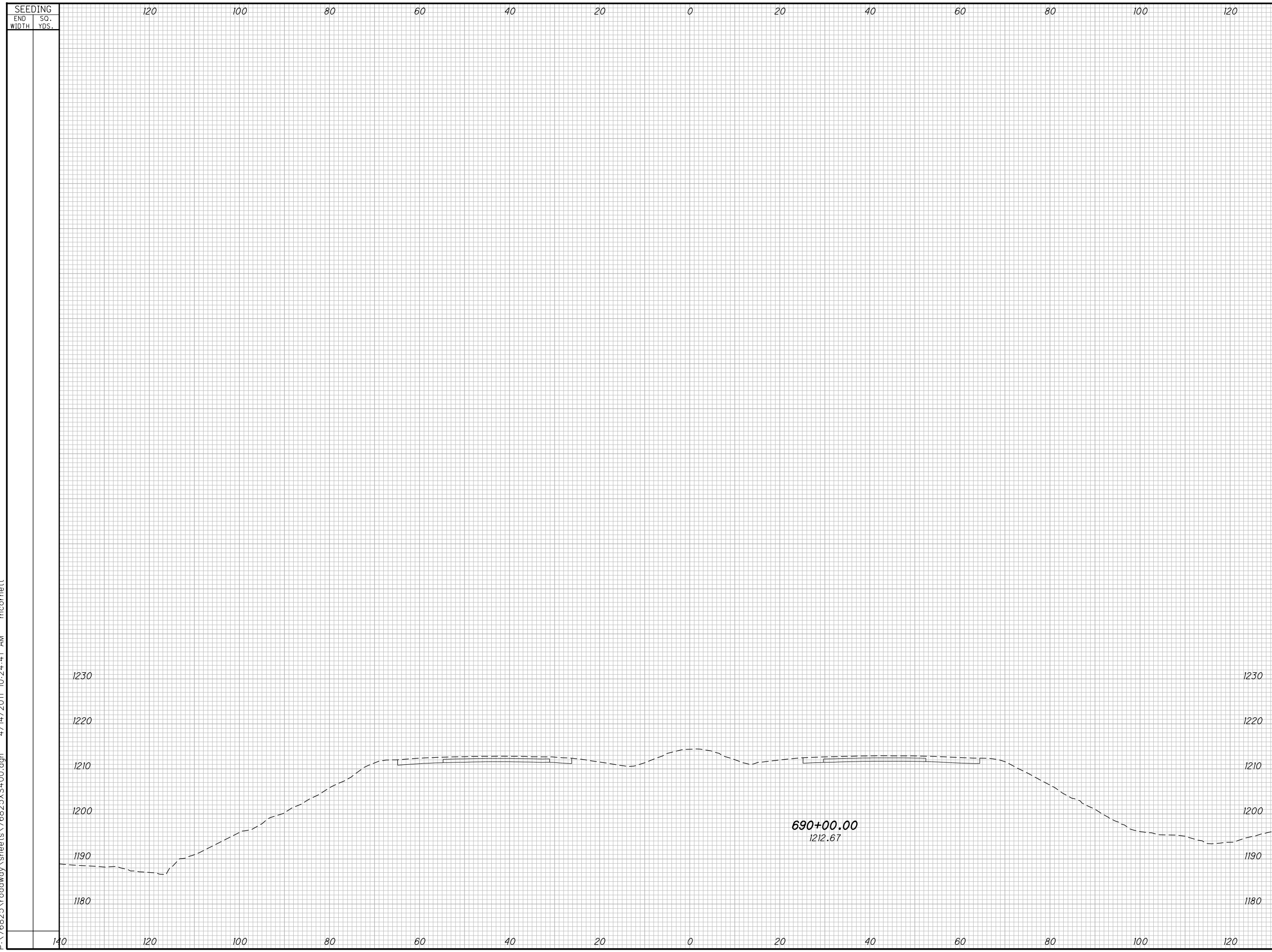
P:\76825\roadway\sheets\76825XS400.dgn 4/14/2011 10:24:39 AM mcornett

SEEDING	
END WIDTH	SO. YDS.
140	



END AREA		VOLUME		CALCULATED			
CUT	FILL	CUT	FILL	MJC	BBD		
APPROVED FOR CONSTRUCTION - 5/2/2011							
CROSS SECTIONS - I.R. 70							
STA. 687+00.00 TO STA. 689+00.00							
BEL - 70 - 7.61							
<table border="1"> <tr> <td>190</td> </tr> <tr> <td>307</td> </tr> </table>						190	307
190							
307							

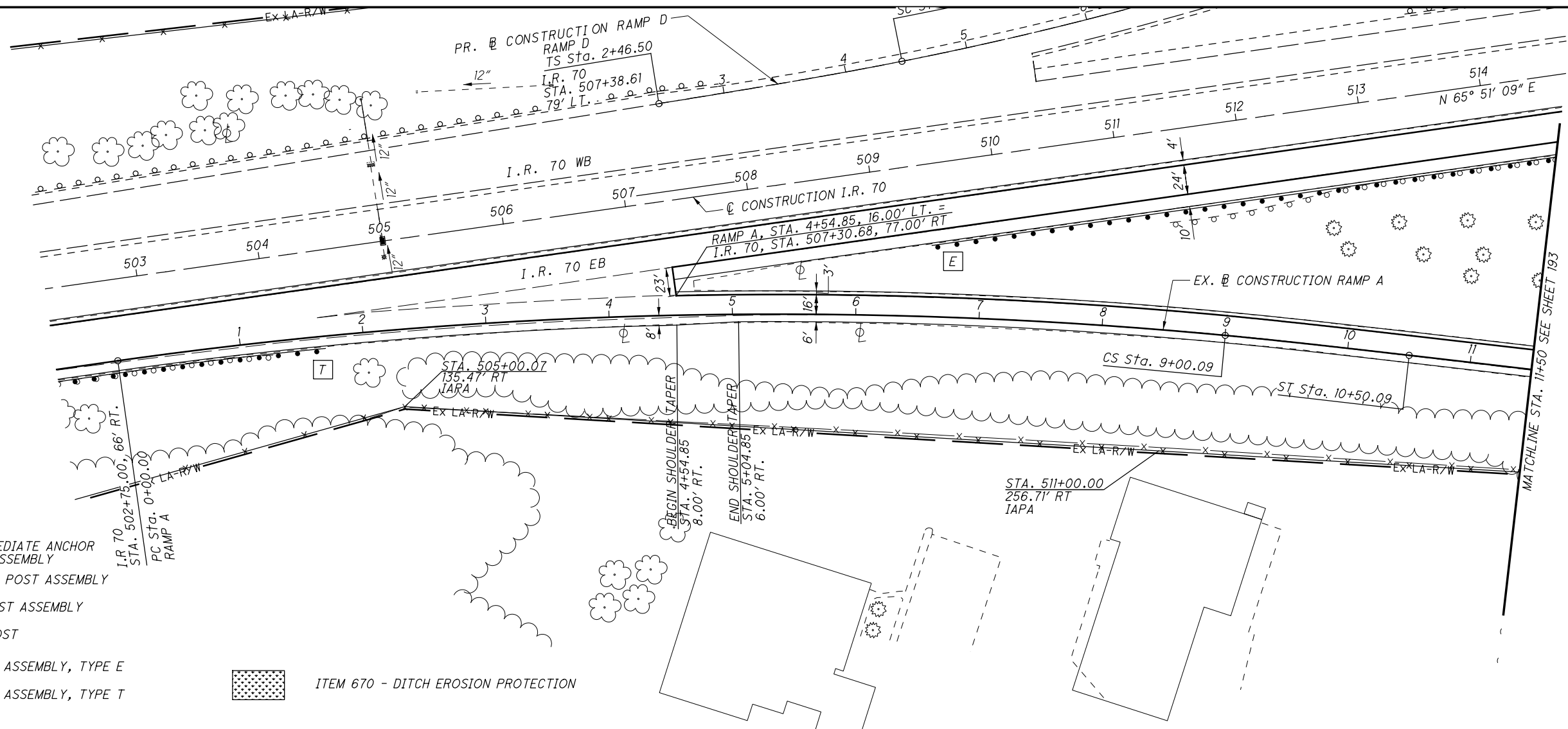
P:\76825\roadway\sheets\76825XS400.dgn 4/14/2011 10:24:41 AM mcornett



SEEDING		120	100	80	60	40	20	0	20	40	60	80	100	120
END WIDTH	SO. YDS.													

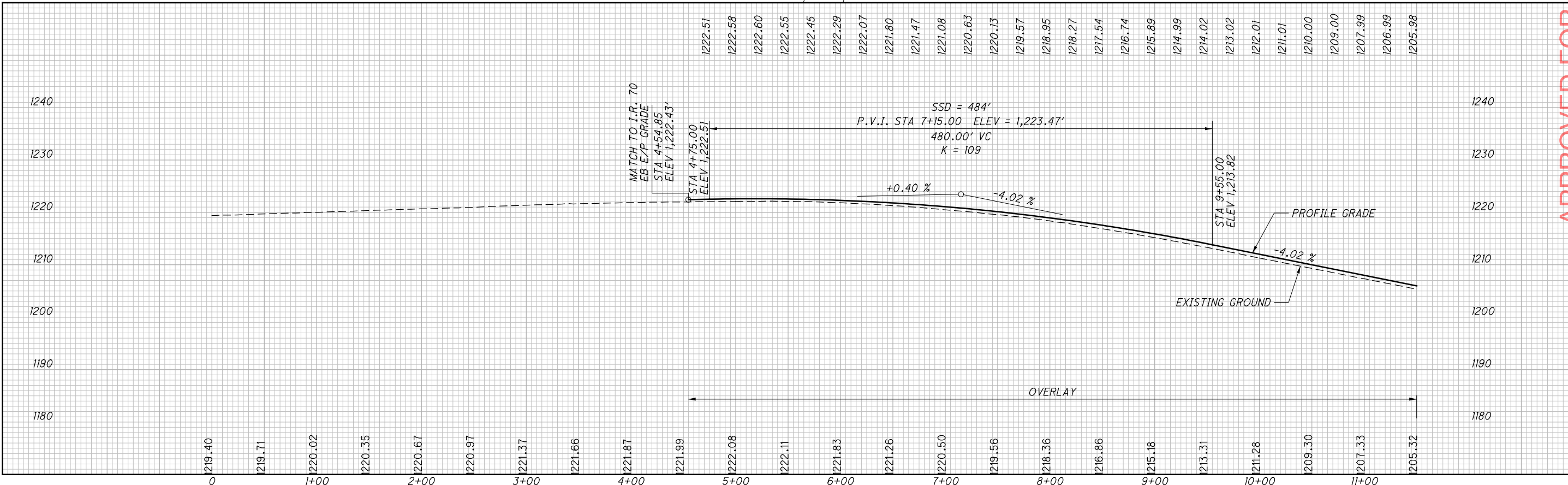
END AREA		VOLUME		CALCULATED MJC	CHECKED BBD		
CUT	FILL	CUT	FILL				
APPROVED FOR CONSTRUCTION - 5/2/2011							
CROSS SECTIONS - I.R. 70							
STA. 690+00.00							
BEL - 70 - 7.61							
<table border="1"> <tr> <td>191</td> </tr> <tr> <td>307</td> </tr> </table>						191	307
191							
307							

P:\76825\roadway\sheets\76825GP4.30.dgn 4/14/2011 10:24:46 AM mcornett



- IAPA INTERMEDIATE ANCHOR POST ASSEMBLY
- CPA CORNER POST ASSEMBLY
- EPA END POST ASSEMBLY
- LP LINE POST
- E ANCHOR ASSEMBLY, TYPE E
- T ANCHOR ASSEMBLY, TYPE T

ITEM 670 - DITCH EROSION PROTECTION

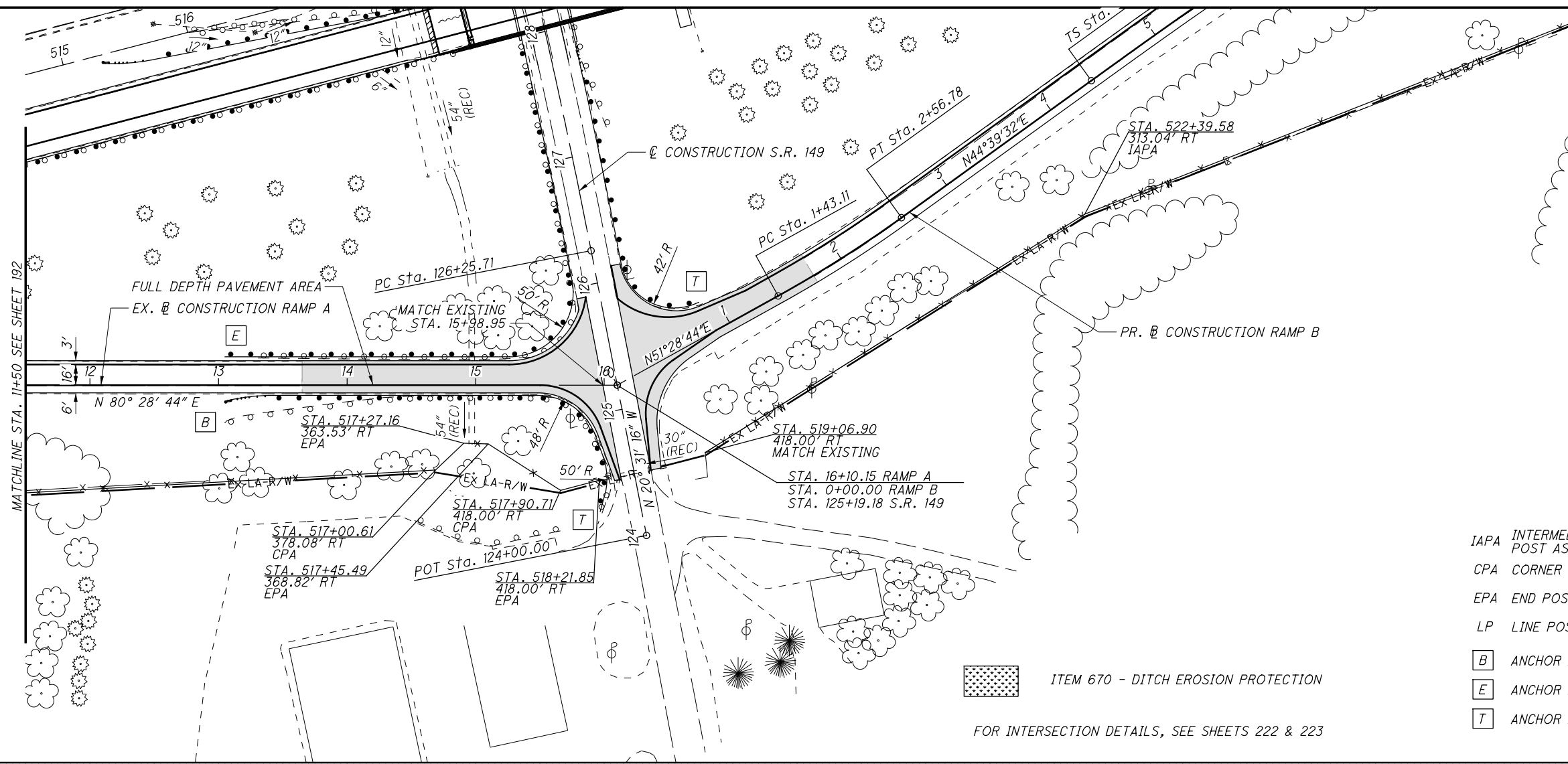


APPROVED FOR CONSTRUCTION - 5/2/2011



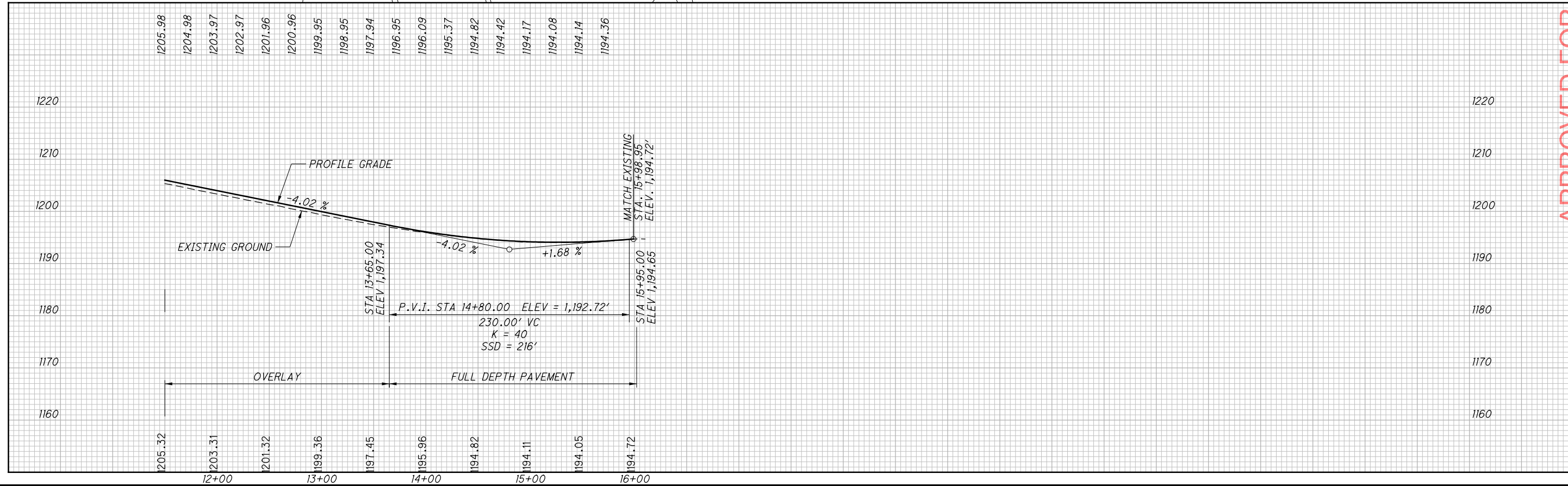
RAMP A - PLAN AND PROFILE
STA. 0+00 TO STA. 11+50

BEL-70-7.61



- IAPA INTERMEDIATE ANCHOR POST ASSEMBLY
- CPA CORNER POST ASSEMBLY
- EPA END POST ASSEMBLY
- LP LINE POST
- [B] ANCHOR ASSEMBLY, TYPE B
- [E] ANCHOR ASSEMBLY, TYPE E
- [T] ANCHOR ASSEMBLY, TYPE T

[ITEM 670] ITEM 670 - DITCH EROSION PROTECTION
 FOR INTERSECTION DETAILS, SEE SHEETS 222 & 223



APPROVED FOR CONSTRUCTION - 5/2/2011



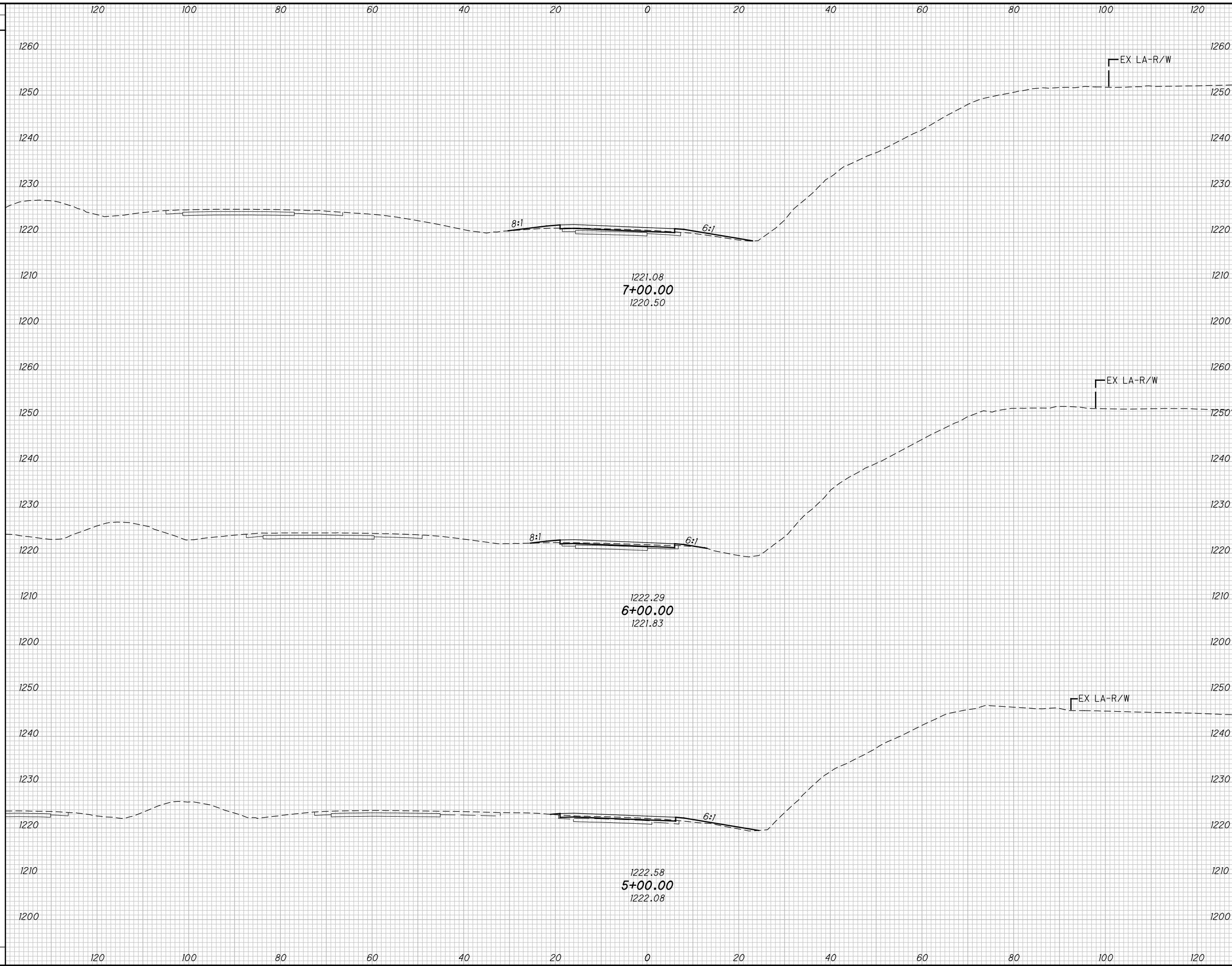
CALCULATED CDS CHECKED BBD

RAMP A - PLAN AND PROFILE
STA. 11+50 TO STA. 16+10.15

BEL-70-7.61

P:\76825\roadway\sheets\76825X54.10.dgn 4/14/2011 10:24:48 AM mcornett

SEEDING	
END WIDTH	SO. YDS.



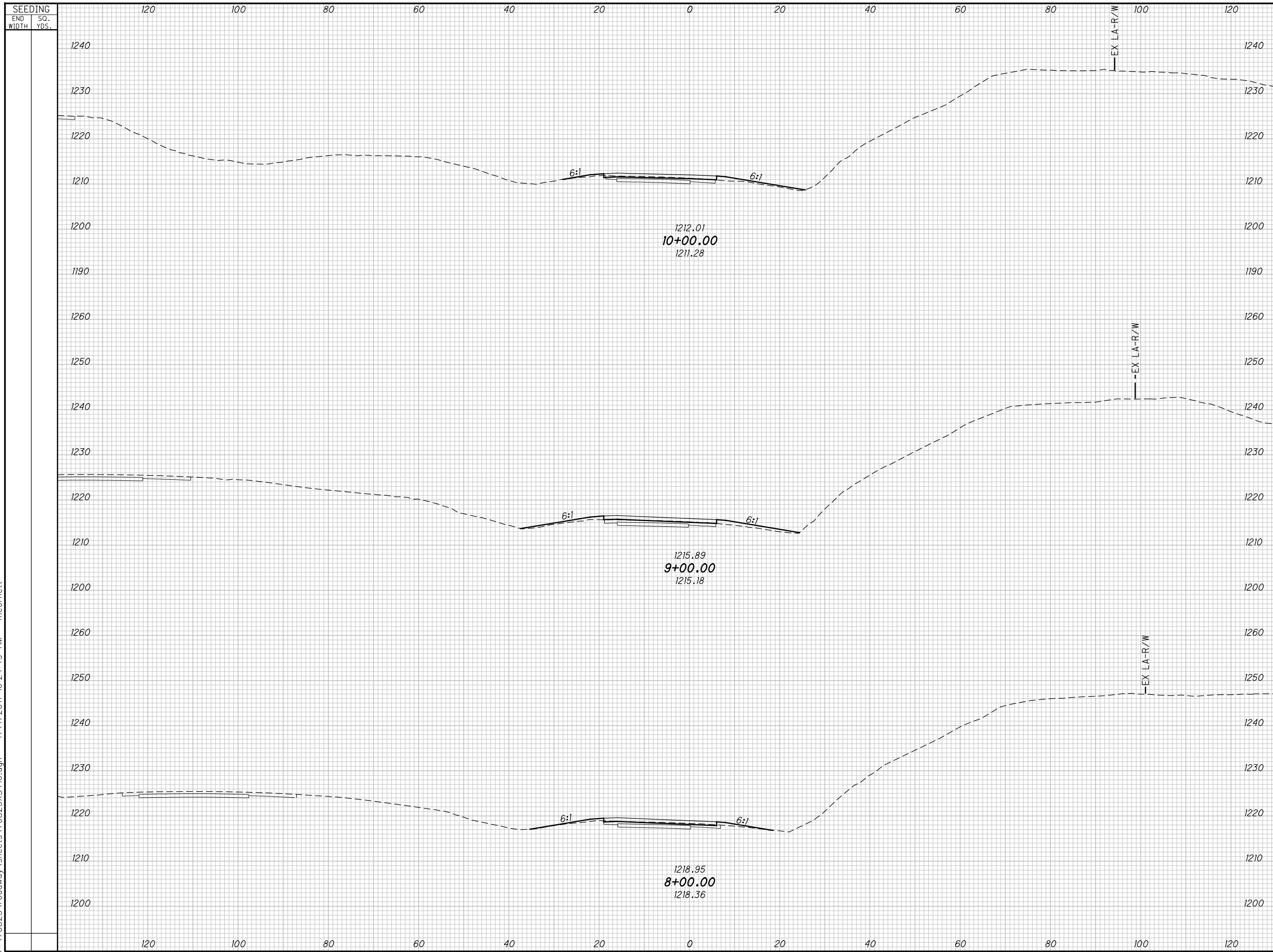
END AREA		VOLUME		CALCULATED MJC	CHECKED BBD
CUT	FILL	CUT	FILL		

APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - RAMP A
STA. 5+00.00 TO STA. 7+00.00

BEL-70-7.61

P:\76825\roadway\sheets\76825X54.10.dgn 4/14/2011 10:24:49 AM mcornett



END AREA		VOLUME		CALCULATED MJC	CHECKED BBD
CUT	FILL	CUT	FILL		

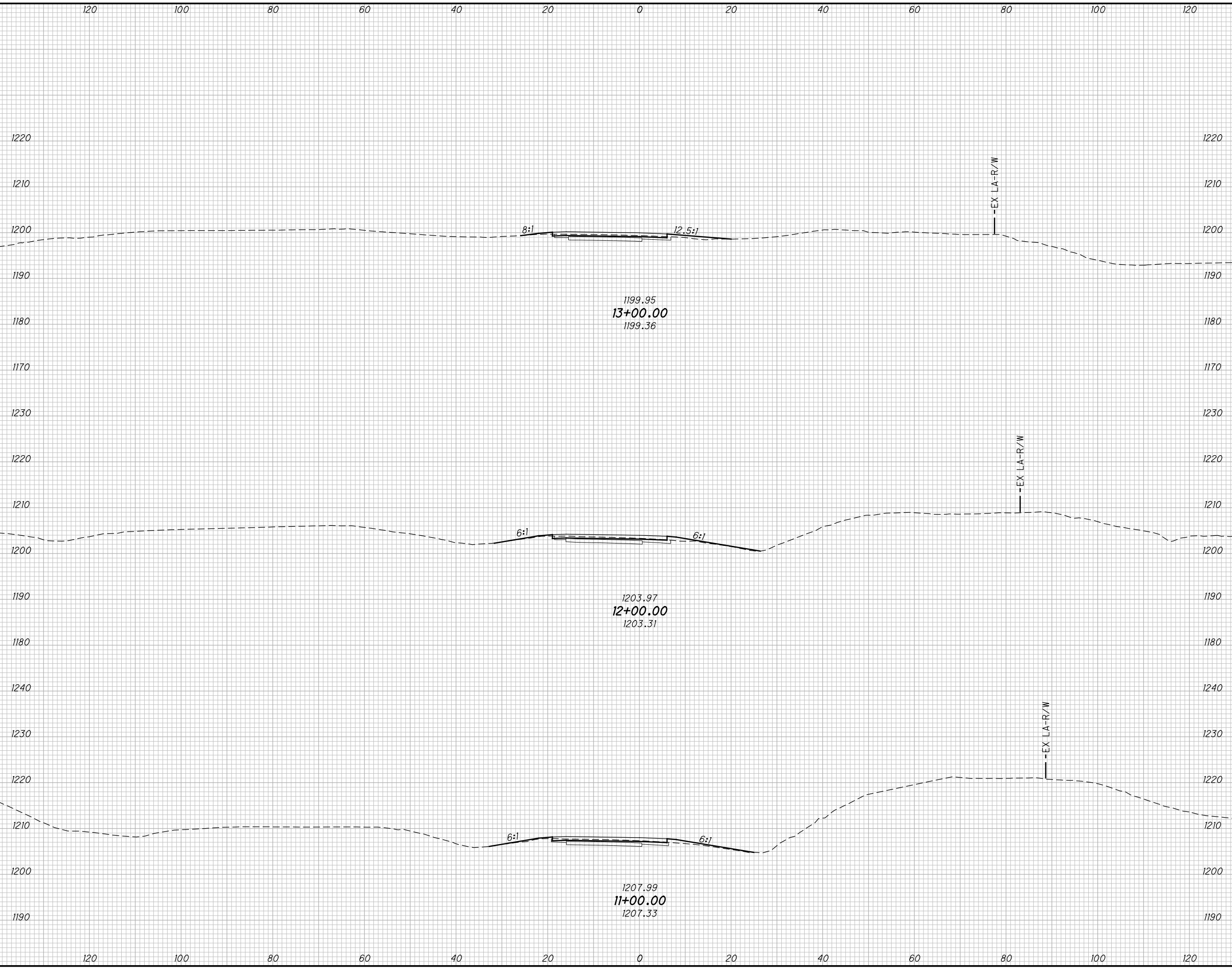
APPROVED FOR CONSTRUCTION - 5/2/2011
CROSS SECTIONS - RAMP A
STA. 8+00.00 TO STA. 10+00.00

BEL-70-7.61

195
307

P:\76825\roadway\sheets\76825X54.10.dgn 4/14/2011 10:24:49 AM mcornett

SEEDING	
END WIDTH	SO. YDS.



END AREA	VOLUME	CALCULATED	CHECKED

APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - RAMP A

STA. 11+00.00 TO STA. 13+00.00

BEL-70-7.61

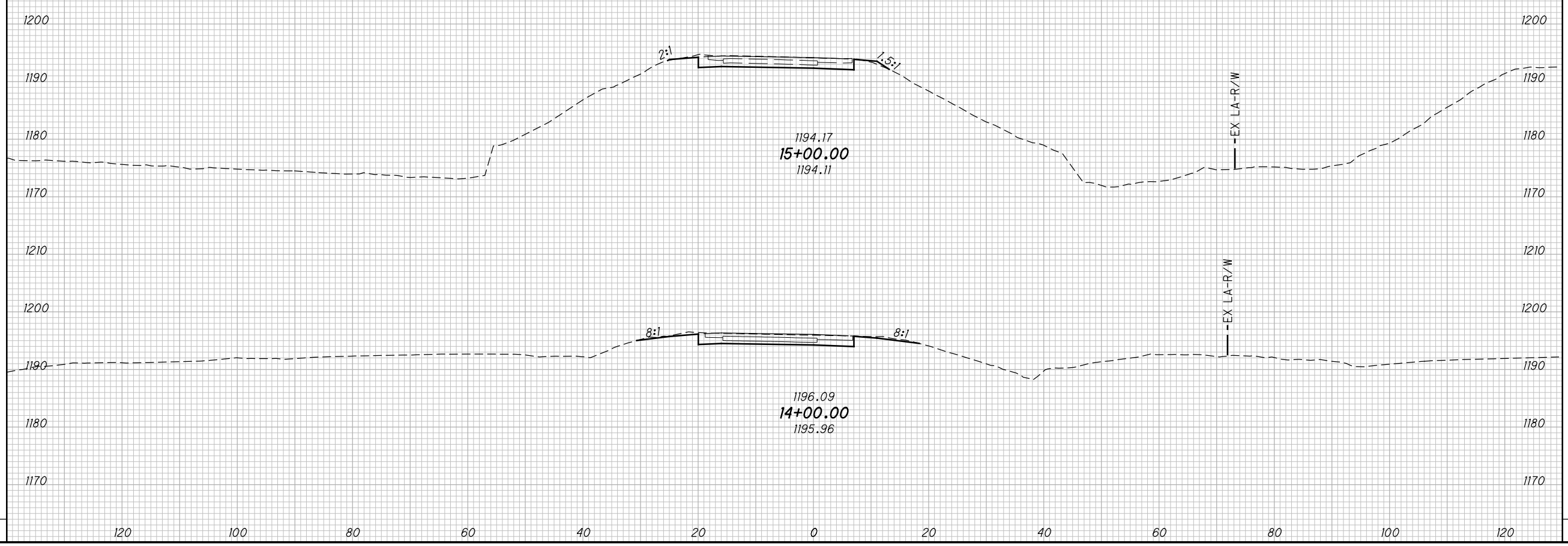
196
307

P:\76825\roadway\sheets\76825X54.10.dgn 4/14/2011 10:24:50 AM mcornett

SEEDING
END SO.
WIDTH YDS.

120 100 80 60 40 20 0 20 40 60 80 100 120

END AREA
CUT FILL
VOLUME
CUT FILL
CALCULATED
MJC
CHECKED
BBD



APPROVED FOR CONSTRUCTION - 5/2/2011
CROSS SECTIONS - RAMP A
STA. 14+00.00 TO STA. 15+00.00

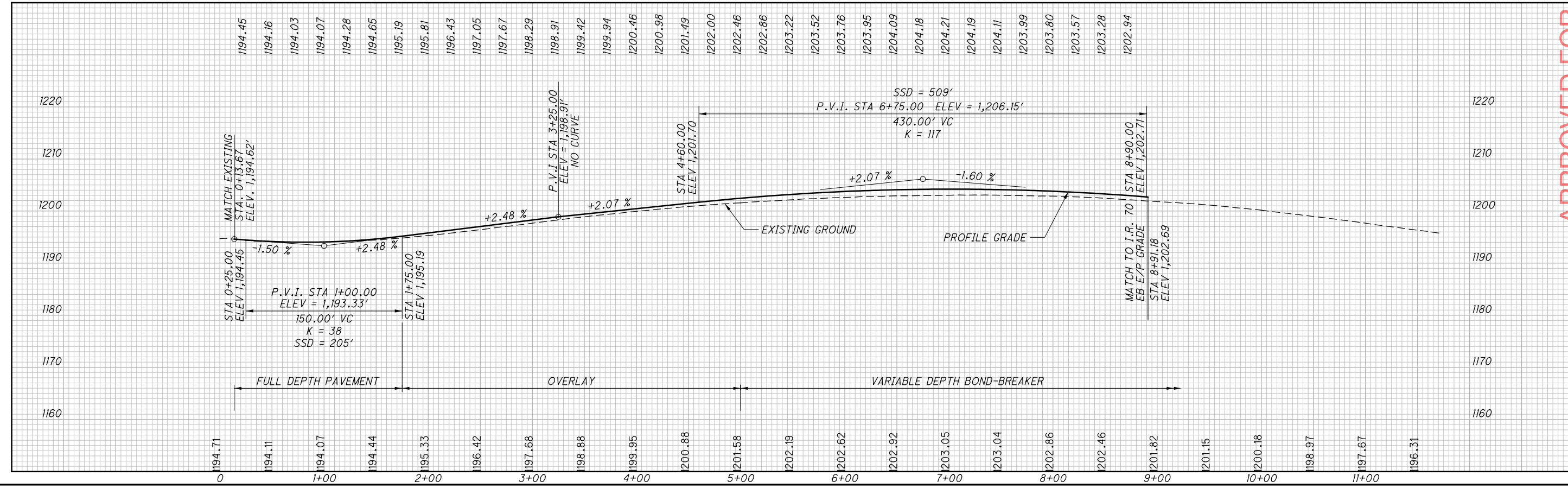
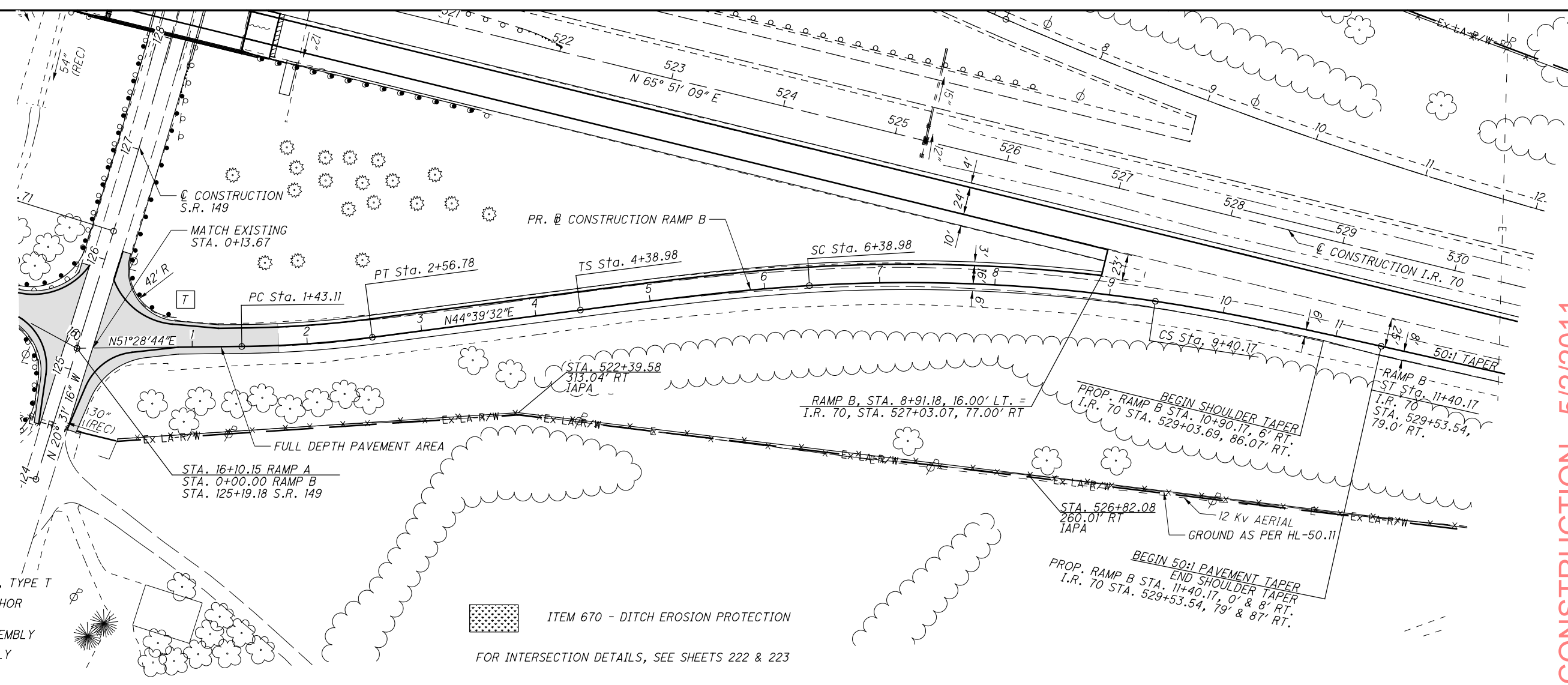
BEL-70-7.61

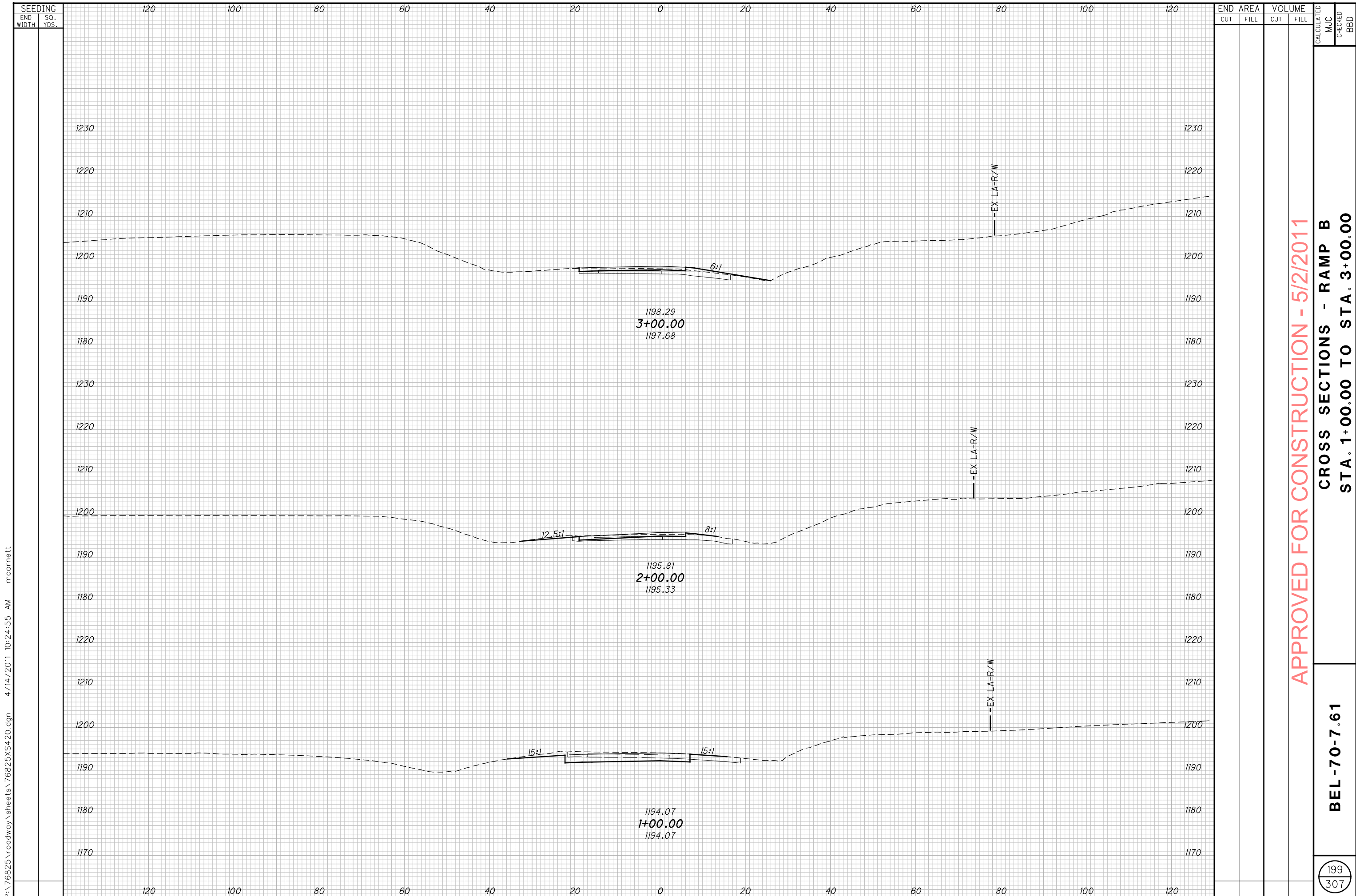
197
307

APPROVED FOR CONSTRUCTION - 5/2/2011

RAMP B - PLAN AND PROFILE
STA. 0+00 TO STA. 11+50

BEL-70-7.61
 198
 307





SEEDING	
END WIDTH	SO. YDS.

END AREA	VOLUME	
	CUT	FILL

CALCULATED	MJC	CHECKED	BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - RAMP B
STA. 1+00.00 TO STA. 3+00.00

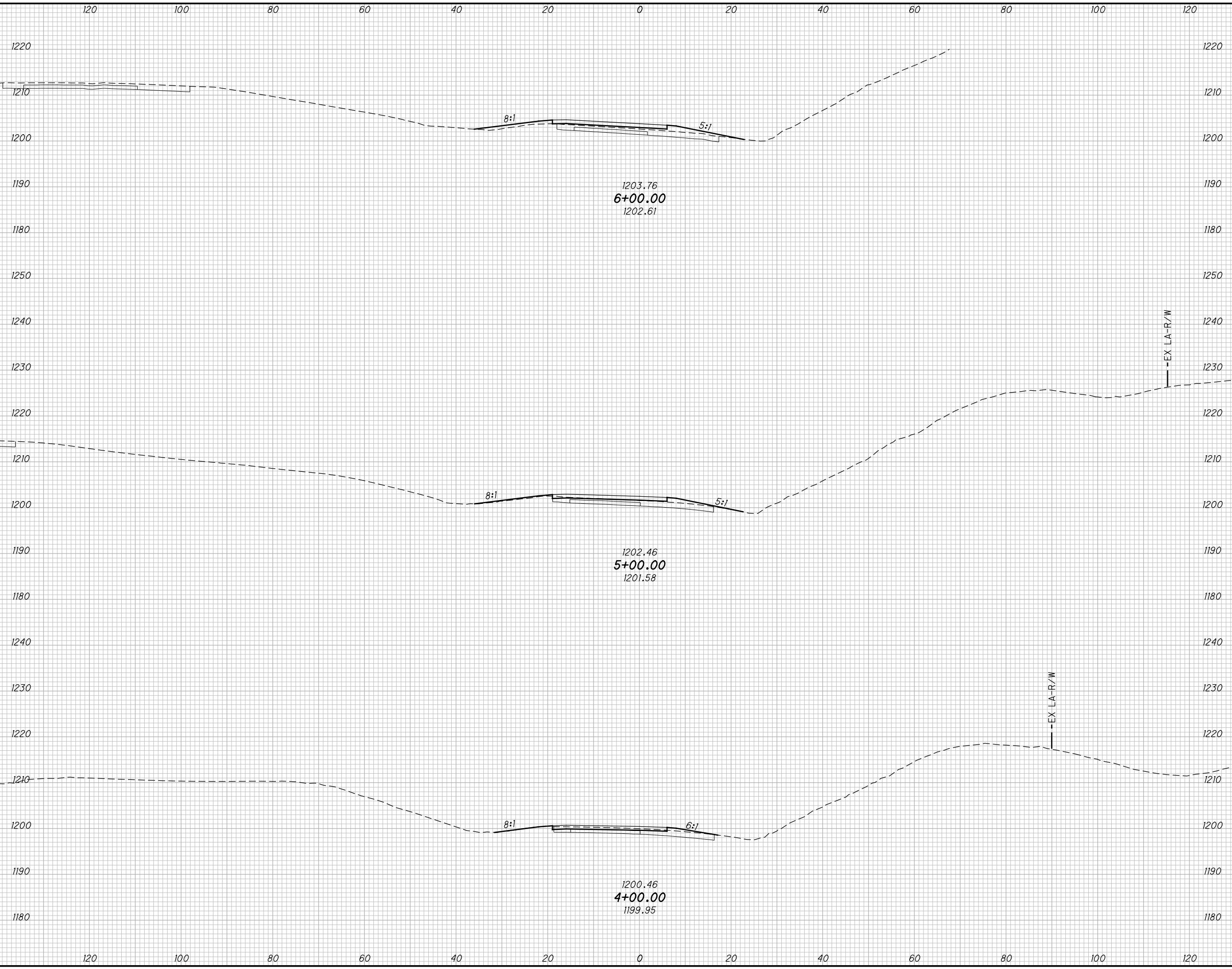
BEL-70-7.61

199
307

P:\76825\roadway\sheets\76825\5420.dgn 4/14/2011 10:24:55 AM mcornett

P:\76825\roadway\sheets\76825X5420.dgn 4/14/2011 10:24:56 AM mcornett

SEEDING	
END WIDTH	SO. YDS.



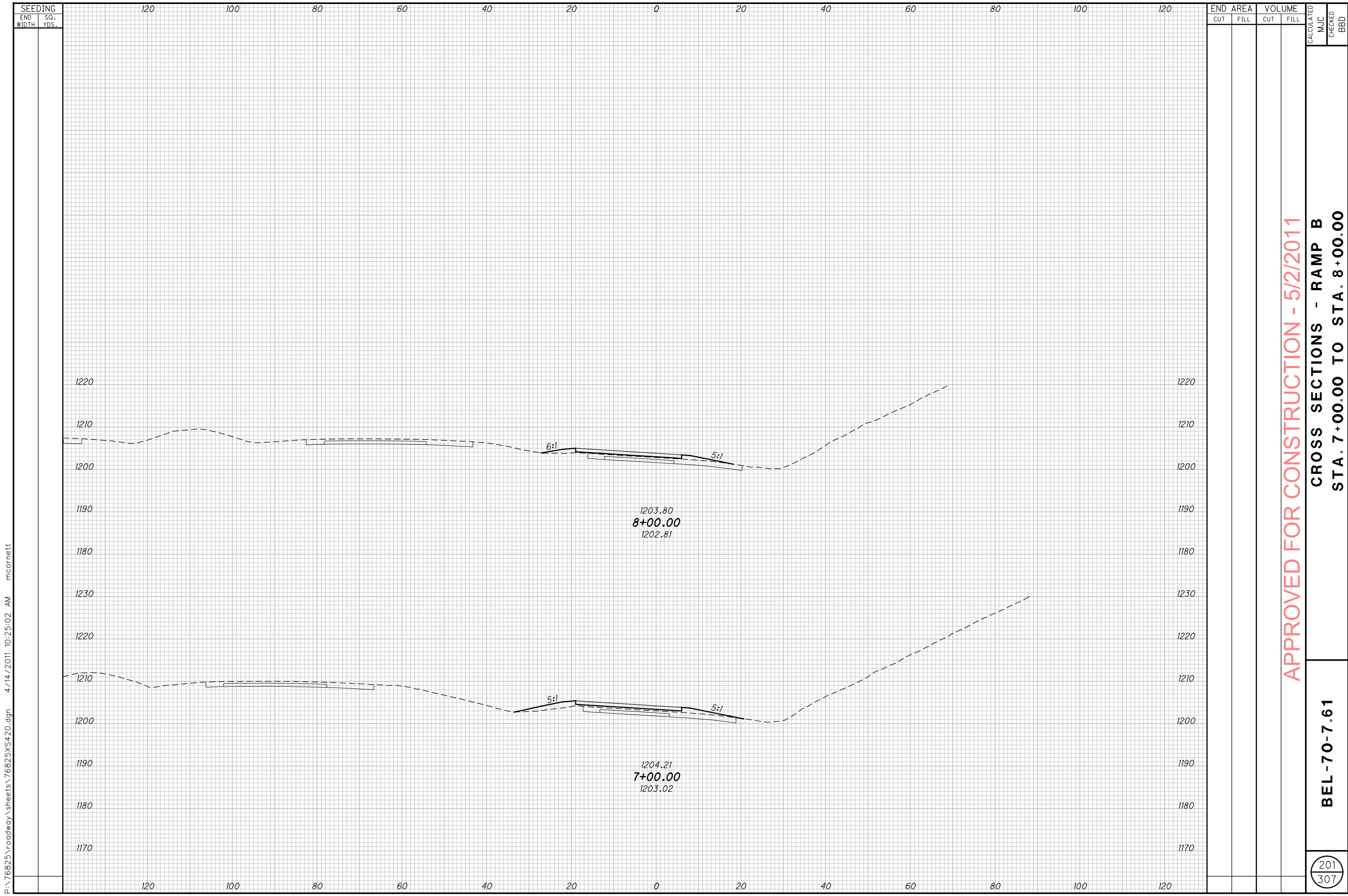
END AREA	VOLUME	CALCULATED		CHECKED	BBD
		CUT	FILL		

APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - RAMP B
STA. 4+00.00 TO STA. 6+00.00

BEL-70-7.61

(200 / 307)



P:\76825\roadway\sheets\76825X5420.dgn 4/14/2011 10:25:02 AM mcornett

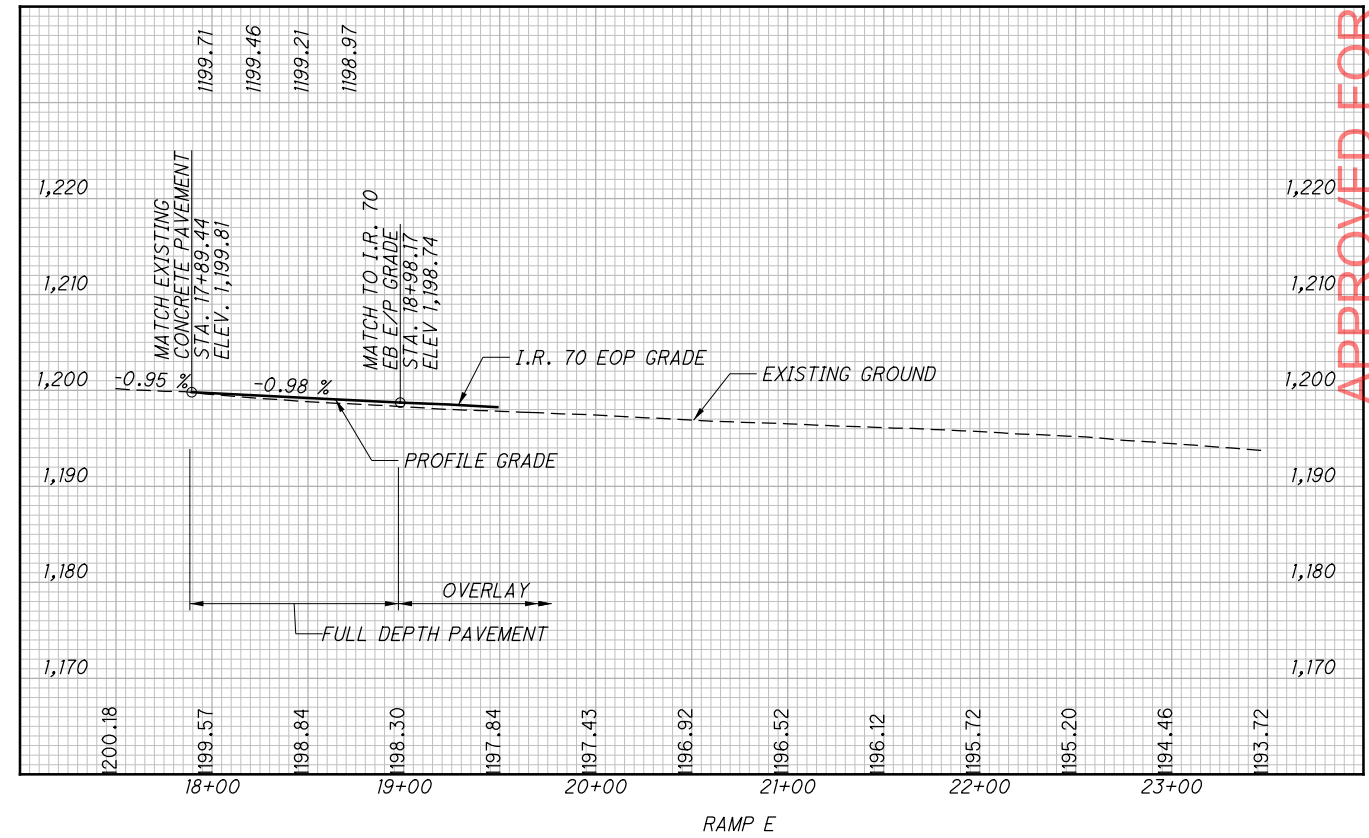
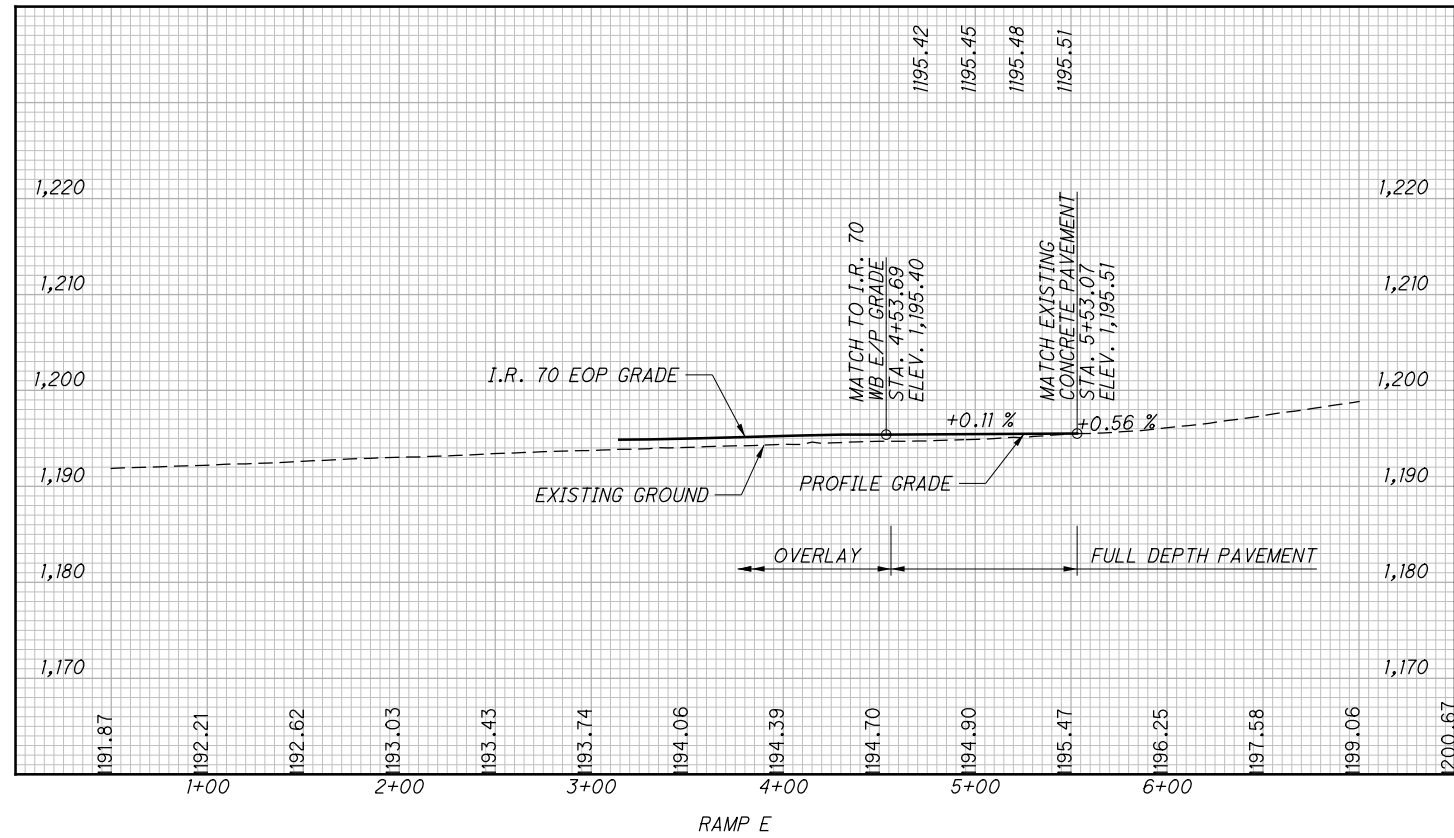
SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

CROSS SECTIONS - RAMP B
STA. 7+00.00 TO STA. 8+00.00

BEL-70-7.61

(201 / 307)



APPROVED FOR CONSTRUCTION - 5/2/2011

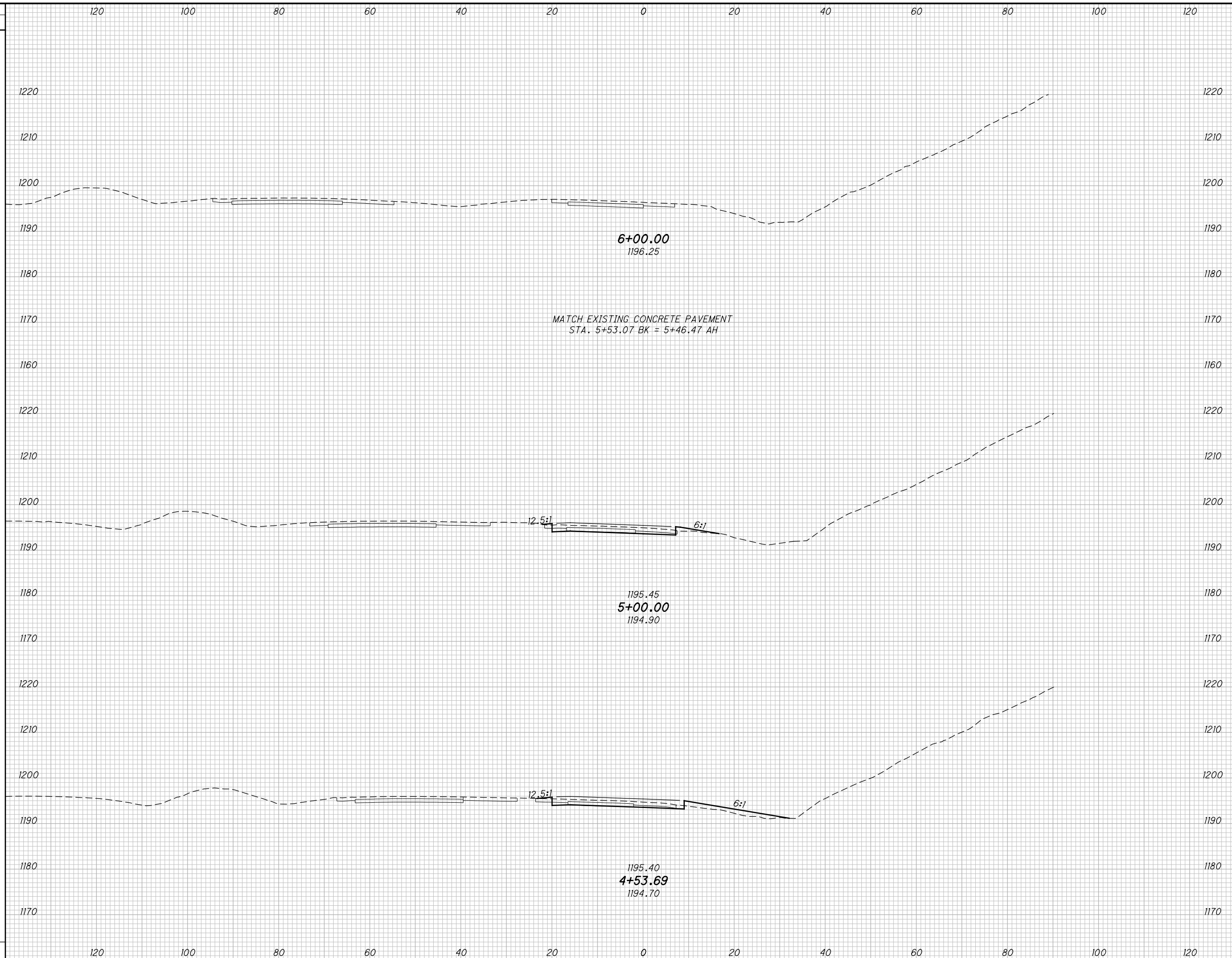
CALCULATED
CDS
CHECKED
BBD

RAMP E PROFILES

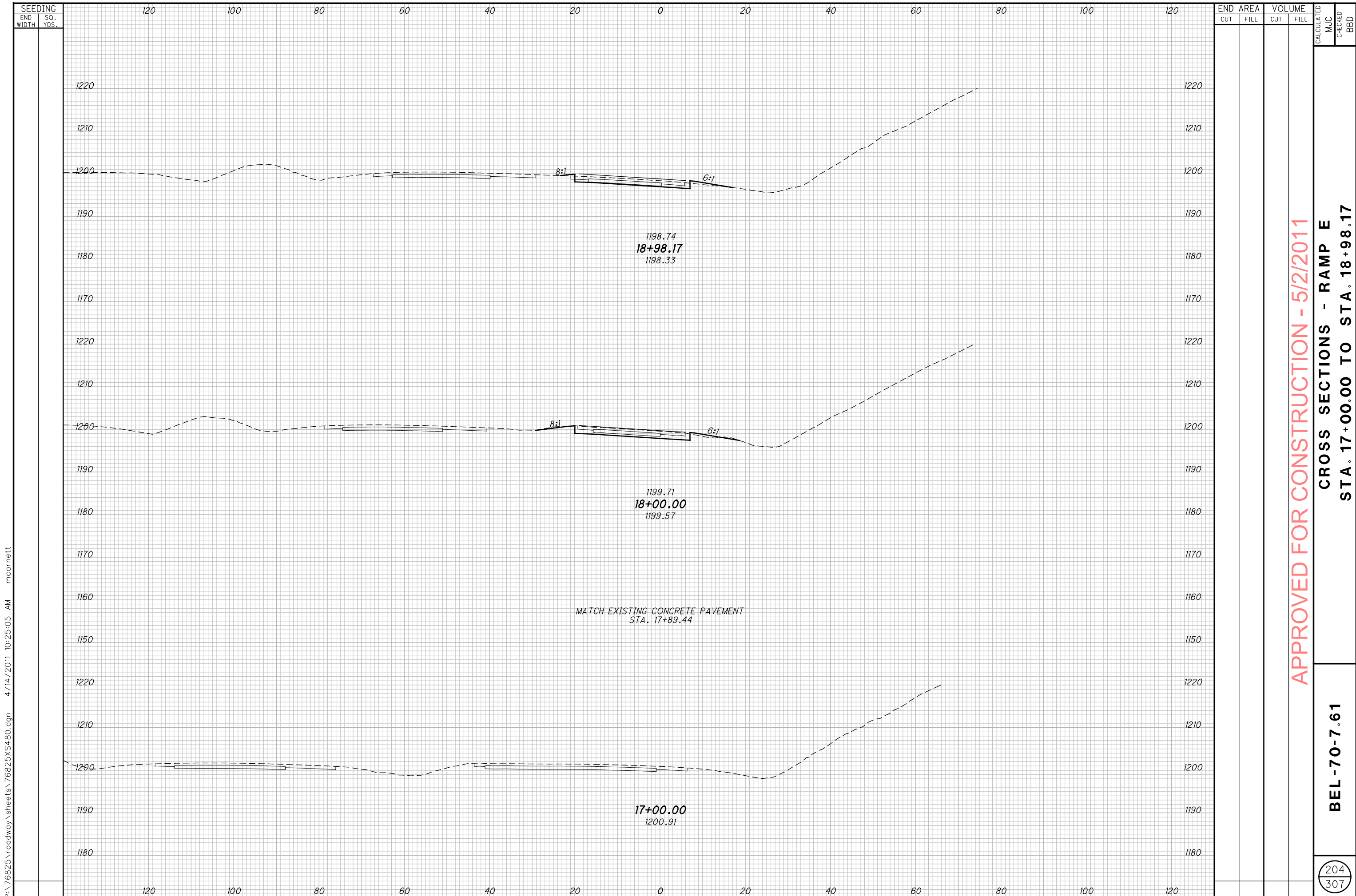
BEL-70-7.61

202
307

P:\76825\roadway\sheets\76825\5470.dgn 4/14/2011 10:25:04 AM mcornett



SEEDING		END AREA		VOLUME		CALCULATED			
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MJC	BBD		
APPROVED FOR CONSTRUCTION - 5/2/2011									
CROSS SECTIONS - RAMP E									
STA. 4+53.69 TO STA. 6+00.00									
BEL-70-7.61									
<table border="1" style="display: inline-table;"> <tr> <td>203</td> </tr> <tr> <td>307</td> </tr> </table>								203	307
203									
307									



P:\76825\roadway\sheets\76825\5480.dgn 4/14/2011 10:25:05 AM mcornett

END AREA	VOLUME		CALCULATED	CHECKED		
	CUT	FILL			MJC	BBD
APPROVED FOR CONSTRUCTION - 5/2/2011						
CROSS SECTIONS - RAMP E						
STA. 17+00.00 TO STA. 18+98.17						
BEL - 70-7.61						
<table border="1"> <tr> <td>204</td> </tr> <tr> <td>307</td> </tr> </table>					204	307
204						
307						

I.R. 70 CURVE 1 SUPERELEVATION TABLE

P.I. STA. 479+80.61 Dc = 1° 00' 00"

REMARKS	OUTSIDE EDGE -					CENTERLINE OF LANES					INSIDE EDGE (PROFILE GRADE)		STATION	INSIDE EDGE (PROFILE GRADE)					CENTERLINE OF LANES					OUTSIDE EDGE -					REMARKS
	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	OFFSET		OFFSET	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION				
													460+69.83	30		1279.56	12		0.0160	0.19	1279.75	12		-0.0160	-0.19	1279.56	N.C.		
													460+75.00	30		1279.55	12		0.0160	0.19	1279.74	12		-0.0143	-0.17	1279.57			
													461+00.00	30		1279.48	12		0.0160	0.19	1279.67	12		-0.0059	-0.07	1279.60			
													461+17.83	30		1279.42	12		0.0160	0.19	1279.61	12		0.0000	0.00	1279.61	1/2 FLAT		
													461+25.00	30		1279.40	12		0.0160	0.19	1279.59	12		0.0024	0.03	1279.62			
													461+50.00	30		1279.30	12		0.0160	0.19	1279.49	12		0.0107	0.13	1279.62			
													461+65.83	30		1279.23	12		0.0160	0.19	1279.42	12		0.0160	0.19	1279.61	R.C.		
													461+75.00	30		1279.19	12		0.0175	0.21	1279.40	12		0.0175	0.21	1279.61			
													462+00.00	30		1279.07	12		0.0217	0.26	1279.33	12		0.0217	0.26	1279.59			
													462+25.00	30		1278.93	12		0.0259	0.31	1279.24	12		0.0259	0.31	1279.55			
													462+35.43	30		1278.86	12		0.0276	0.33	1279.19	12		0.0276	0.33	1279.52	P.C.		
													462+50.00	30		1278.77	12		0.0300	0.36	1279.13	12		0.0300	0.36	1279.49			
													462+75.00	30		1278.60	12		0.0342	0.41	1279.01	12		0.0342	0.41	1279.42			
													462+85.83	30		1278.53	12		0.0360	0.43	1278.96	12		0.0360	0.43	1279.39	F.S.		
													463+00.00	30		1278.42	12		0.0360	0.43	1278.85	12		0.0360	0.43	1279.28			
													463+25.00	30		1278.23	12		0.0360	0.43	1278.66	12		0.0360	0.43	1279.09			
													463+50.00	30		1278.02	12		0.0360	0.43	1278.45	12		0.0360	0.43	1278.88			
													463+75.00	30		1277.79	12		0.0360	0.43	1278.22	12		0.0360	0.43	1278.65			
													464+00.00	30		1277.55	12		0.0360	0.43	1277.98	12		0.0360	0.43	1278.41			
													464+25.00	30		1277.30	12		0.0360	0.43	1277.73	12		0.0360	0.43	1278.16			
													464+50.00	30		1277.03	12		0.0360	0.43	1277.46	12		0.0360	0.43	1277.89			
													464+75.00	30		1276.75	12		0.0360	0.43	1277.18	12		0.0360	0.43	1277.61			
													465+00.00	30		1276.46	12		0.0360	0.43	1276.89	12		0.0360	0.43	1277.32			
													465+25.00	30		1276.15	12		0.0360	0.43	1276.58	12		0.0360	0.43	1277.01			
													465+50.00	30		1275.82	12		0.0360	0.43	1276.25	12		0.0360	0.43	1276.68			
													465+75.00	30		1275.49	12		0.0360	0.43	1275.92	12		0.0360	0.43	1276.35			
													466+00.00	30		1275.14	12		0.0360	0.43	1275.57	12		0.0360	0.43	1276.00			
													466+25.00	30		1274.77	12		0.0360	0.43	1275.20	12		0.0360	0.43	1275.63			
													466+50.00	30		1274.39	12		0.0360	0.43	1274.82	12		0.0360	0.43	1275.25			
													466+75.00	30		1274.00	12		0.0360	0.43	1274.43	12		0.0360	0.43	1274.86			
													467+00.00	30		1273.59	12		0.0360	0.43	1274.02	12		0.0360	0.43	1274.45			
													467+25.00	30		1273.16	12		0.0360	0.43	1273.59	12		0.0360	0.43	1274.02			
													467+50.00	30		1272.73	12		0.0360	0.43	1273.16	12		0.0360	0.43	1273.59			
													467+75.00	30		1272.28	12		0.0360	0.43	1272.71	12		0.0360	0.43	1273.14			
													468+00.00	30		1271.81	12		0.0360	0.43	1272.24	12		0.0360	0.43	1272.67			
													468+25.00	30		1271.33	12		0.0360	0.43	1271.76	12		0.0360	0.43	1272.19			
													468+50.00	30		1270.84	12		0.0360	0.43	1271.27	12		0.0360	0.43	1271.70			
													468+75.00	30		1270.33	12		0.0360	0.43	1270.76	12		0.0360	0.43	1271.19			
													469+00.00	30		1269.81	12		0.0360	0.43	1270.24	12		0.0360	0.43	1270.67			
													469+25.00	30		1269.28	12		0.0360	0.43	1269.71	12		0.0360	0.43	1270.14			
													469+50.00	30		1268.73	12		0.0360	0.43	1269.16	12		0.0360	0.43	1269.59			
													469+75.00	30		1268.16	12		0.0360	0.43	1268.59	12		0.0360	0.43	1269.02			
													470+00.00	30		1267.59	12		0.0360	0.43	1268.02	12		0.0360	0.43	1268.45			
													470+25.00	30		1266.99	12		0.0360	0.43	1267.42	12		0.0360	0.43	1267.85			
													470+50.00	30		1266.39	12		0.0360	0.43	1266.82	12		0.0360	0.43	1267.25			
													470+75.00	30		1265.77	12		0.0360	0.43	1266.20	12		0.0360	0.43	1266.63			
													471+00.00	30		1265.13	12		0.0360	0.43	1265.56	12		0.0360	0.43	1265.99			
													471+25.00	30		1264.48	12		0.0360	0.43	1264.91	12		0.0360	0.43	1265.34			
													471+50.00	30		1263.82	12		0.0360	0.43	1264.25	12		0.0360	0.43	1264.68			
													471+75.00	30		1263.14	12		0.0360	0.43	1263.57	12		0.0360	0.43	1264.00			
													472+00.00	30		1262.45	12		0.0360	0.43	1262.88	12		0.0360	0.43	1263.31			
													472+25.00	30		1261.75	12		0.0360	0.43	1262.18	12		0.0360	0.43	1262.61			
													472+50.00	30		1261.03	12		0.0360	0.43	1261.46	12		0.0360	0.43	1261.89			
													472+75.00	30		1260.30	12		0.0360	0.43	1260.73	12		0.0360	0.43	1261.16			
													473+00.00	30		1259.55	12		0.0360	0.43	1259.98	12		0.0360	0.43	1260.41			
													473+25.00	30		1258.79	12		0.0360	0.43	1259.22	12		0.0360	0.43	1259.65			
													473+50.00	30		1258.03	12		0.0360	0.43	1258.46	12		0.0360	0.43	1258.89			
													473+75.00	30		1257.28	12		0.0360	0.43	1257.71	12		0.0360	0.43	1258.14			

CALCULATED
MJC
CHECKED
BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

SUPERELEVATION TABLE - I.R. 70

BEL - 70-7.61

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I.R. 70 CURVE 1 SUPERELEVATION TABLE

P.I. STA. 479+80.61 Dc = 1° 00' 00"

REMARKS	OUTSIDE EDGE -					CENTERLINE OF LANES					INSIDE EDGE (PROFILE GRADE)		STATION	INSIDE EDGE (PROFILE GRADE)					CENTERLINE OF LANES					OUTSIDE EDGE -					REMARKS
	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	OFFSET		OFFSET	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION				
													488+25.00	30	1215.59	12		0.0360	0.43	1216.02	12		0.0360	0.43	1216.45				
													488+50.00	30	1215.18	12		0.0360	0.43	1215.61	12		0.0360	0.43	1216.04				
													488+75.00	30	1214.79	12		0.0360	0.43	1215.22	12		0.0360	0.43	1215.65				
													489+00.00	30	1214.44	12		0.0360	0.43	1214.87	12		0.0360	0.43	1215.30				
													489+25.00	30	1214.12	12		0.0360	0.43	1214.55	12		0.0360	0.43	1214.98				
													489+50.00	30	1213.82	12		0.0360	0.43	1214.25	12		0.0360	0.43	1214.68				
													489+75.00	30	1213.56	12		0.0360	0.43	1213.99	12		0.0360	0.43	1214.42				
													490+00.00	30	1213.32	12		0.0360	0.43	1213.75	12		0.0360	0.43	1214.18				
													490+25.00	30	1213.11	12		0.0360	0.43	1213.54	12		0.0360	0.43	1213.97				
													490+50.00	30	1212.94	12		0.0360	0.43	1213.37	12		0.0360	0.43	1213.80				
													490+75.00	30	1212.79	12		0.0360	0.43	1213.22	12		0.0360	0.43	1213.65				
													491+00.00	30	1212.67	12		0.0360	0.43	1213.10	12		0.0360	0.43	1213.53				
													491+25.00	30	1212.58	12		0.0360	0.43	1213.01	12		0.0360	0.43	1213.44				
													491+50.00	30	1212.53	12		0.0360	0.43	1212.96	12		0.0360	0.43	1213.39				
													491+75.00	30	1212.50	12		0.0360	0.43	1212.93	12		0.0360	0.43	1213.36				
													492+00.00	30	1212.50	12		0.0360	0.43	1212.93	12		0.0360	0.43	1213.36				
													492+25.00	30	1212.53	12		0.0360	0.43	1212.96	12		0.0360	0.43	1213.39				
													492+50.00	30	1212.59	12		0.0360	0.43	1213.02	12		0.0360	0.43	1213.45				
													492+75.00	30	1212.68	12		0.0360	0.43	1213.11	12		0.0360	0.43	1213.54				
													493+00.00	30	1212.79	12		0.0360	0.43	1213.22	12		0.0360	0.43	1213.65				
													493+25.00	30	1212.94	12		0.0360	0.43	1213.37	12		0.0360	0.43	1213.80				
													493+50.00	30	1213.12	12		0.0360	0.43	1213.55	12		0.0360	0.43	1213.98				
													493+75.00	30	1213.31	12		0.0360	0.43	1213.74	12		0.0360	0.43	1214.17				
													494+00.00	30	1213.51	12		0.0360	0.43	1213.94	12		0.0360	0.43	1214.37				
													494+25.00	30	1213.70	12		0.0360	0.43	1214.13	12		0.0360	0.43	1214.56				
													494+50.00	30	1213.89	12		0.0360	0.43	1214.32	12		0.0360	0.43	1214.75				
													494+75.00	30	1214.08	12		0.0360	0.43	1214.51	12		0.0360	0.43	1214.94				
													495+00.00	30	1214.28	12		0.0360	0.43	1214.71	12		0.0360	0.43	1215.14				
													495+25.00	30	1214.47	12		0.0360	0.43	1214.90	12		0.0360	0.43	1215.33				
													495+50.00	30	1214.66	12		0.0360	0.43	1215.09	12		0.0360	0.43	1215.52				
													495+73.09	30	1214.84	12		0.0360	0.43	1215.27	12		0.0360	0.43	1215.70	F.S.			
													495+75.00	30	1214.85	12		0.0357	0.43	1215.28	12		0.0357	0.43	1215.71				
													496+00.00	30	1215.05	12		0.0315	0.38	1215.43	12		0.0315	0.38	1215.81				
													496+23.49	30	1215.23	12		0.0276	0.33	1215.56	12		0.0276	0.33	1215.89	P.T.			
													496+25.00	30	1215.24	12		0.0273	0.33	1215.57	12		0.0273	0.33	1215.90				
													496+50.00	30	1215.43	12		0.0232	0.28	1215.71	12		0.0232	0.28	1215.99				
													496+75.00	30	1215.62	12		0.0190	0.23	1215.85	12		0.0190	0.23	1216.08				
													496+93.09	30	1215.76	12		0.0160	0.19	1215.95	12		0.0160	0.19	1216.14	R.C.			
													497+00.00	30	1215.82	12		0.0160	0.19	1216.01	12		0.0137	0.16	1216.18				
													497+25.00	30	1216.01	12		0.0160	0.19	1216.20	12		0.0054	0.06	1216.27				
													497+41.09	30	1216.13	12		0.0160	0.19	1216.32	12		0.0000	0.00	1216.32	1/2 FLAT			
													497+50.00	30	1216.20	12		0.0160	0.19	1216.39	12		-0.0030	-0.04	1216.36				
													497+75.00	30	1216.39	12		0.0160	0.19	1216.58	12		-0.0113	-0.14	1216.45				
													497+89.09	30	1216.50	12		0.0160	0.19	1216.69	12		-0.0160	-0.19	1216.50	N.C.			

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APPROVED FOR CONSTRUCTION - 5/2/2011

SUPERELEVATION TABLE - I.R. 70

BEL - 70 - 7.61

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I.R. 70 CURVE 2 SUPERELEVATION TABLE

P.I. STA. 566+52.17

$D_c = 1^\circ 00' 00''$

REMARKS	OUTSIDE EDGE -					CENTERLINE OF LANES					INSIDE EDGE (PROFILE GRADE)		STATION	INSIDE EDGE (PROFILE GRADE)		CENTERLINE OF LANES					OUTSIDE EDGE -					REMARKS
	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	OFFSET		OFFSET	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	
													564+25.00	30	1208.31	12		-0.0360	-0.43	1207.88	12		-0.0360	-0.43	1207.45	
													564+50.00	30	1209.01	12		-0.0360	-0.43	1208.58	12		-0.0360	-0.43	1208.15	
													564+75.00	30	1209.70	12		-0.0360	-0.43	1209.27	12		-0.0360	-0.43	1208.84	
													565+00.00	30	1210.40	12		-0.0360	-0.43	1209.97	12		-0.0360	-0.43	1209.54	
													565+25.00	30	1211.09	12		-0.0360	-0.43	1210.66	12		-0.0360	-0.43	1210.23	
													565+50.00	30	1211.79	12		-0.0360	-0.43	1211.36	12		-0.0360	-0.43	1210.93	
													565+75.00	30	1212.48	12		-0.0360	-0.43	1212.05	12		-0.0360	-0.43	1211.62	
													566+00.00	30	1213.16	12		-0.0360	-0.43	1212.73	12		-0.0360	-0.43	1212.30	
													566+25.00	30	1213.83	12		-0.0360	-0.43	1213.40	12		-0.0360	-0.43	1212.97	
													566+50.00	30	1214.48	12		-0.0360	-0.43	1214.05	12		-0.0360	-0.43	1213.62	
													566+75.00	30	1215.12	12		-0.0360	-0.43	1214.69	12		-0.0360	-0.43	1214.26	
													567+00.00	30	1215.75	12		-0.0360	-0.43	1215.32	12		-0.0360	-0.43	1214.89	
													567+25.00	30	1216.35	12		-0.0360	-0.43	1215.92	12		-0.0360	-0.43	1215.49	
													567+50.00	30	1216.95	12		-0.0360	-0.43	1216.52	12		-0.0360	-0.43	1216.09	
													567+75.00	30	1217.53	12		-0.0360	-0.43	1217.10	12		-0.0360	-0.43	1216.67	
													568+00.00	30	1218.10	12		-0.0360	-0.43	1217.67	12		-0.0360	-0.43	1217.24	
													568+25.00	30	1218.65	12		-0.0360	-0.43	1218.22	12		-0.0360	-0.43	1217.79	
													568+50.00	30	1219.18	12		-0.0360	-0.43	1218.75	12		-0.0360	-0.43	1218.32	
													568+75.00	30	1219.71	12		-0.0360	-0.43	1219.28	12		-0.0360	-0.43	1218.85	
													569+00.00	30	1220.21	12		-0.0360	-0.43	1219.78	12		-0.0360	-0.43	1219.35	
													569+25.00	30	1220.71	12		-0.0360	-0.43	1220.28	12		-0.0360	-0.43	1219.85	
													569+50.00	30	1221.18	12		-0.0360	-0.43	1220.75	12		-0.0360	-0.43	1220.32	
													569+75.00	30	1221.65	12		-0.0360	-0.43	1221.22	12		-0.0360	-0.43	1220.79	
													570+00.00	30	1222.10	12		-0.0360	-0.43	1221.67	12		-0.0360	-0.43	1221.24	
													570+25.00	30	1222.53	12		-0.0360	-0.43	1222.10	12		-0.0360	-0.43	1221.67	
													570+50.00	30	1222.95	12		-0.0360	-0.43	1222.52	12		-0.0360	-0.43	1222.09	
													570+75.00	30	1223.36	12		-0.0360	-0.43	1222.93	12		-0.0360	-0.43	1222.50	
													571+00.00	30	1223.75	12		-0.0360	-0.43	1223.32	12		-0.0360	-0.43	1222.89	
													571+25.00	30	1224.13	12		-0.0360	-0.43	1223.70	12		-0.0360	-0.43	1223.27	
													571+50.00	30	1224.49	12		-0.0360	-0.43	1224.06	12		-0.0360	-0.43	1223.63	
													571+75.00	30	1224.84	12		-0.0360	-0.43	1224.41	12		-0.0360	-0.43	1223.98	
													572+00.00	30	1225.17	12		-0.0360	-0.43	1224.74	12		-0.0360	-0.43	1224.31	
													572+25.00	30	1225.49	12		-0.0360	-0.43	1225.06	12		-0.0360	-0.43	1224.63	
													572+50.00	30	1225.79	12		-0.0360	-0.43	1225.36	12		-0.0360	-0.43	1224.93	
													572+75.00	30	1226.08	12		-0.0360	-0.43	1225.65	12		-0.0360	-0.43	1225.22	
													573+00.00	30	1226.36	12		-0.0360	-0.43	1225.93	12		-0.0360	-0.43	1225.50	
													573+25.00	30	1226.62	12		-0.0360	-0.43	1226.19	12		-0.0360	-0.43	1225.76	
													573+50.00	30	1226.86	12		-0.0360	-0.43	1226.43	12		-0.0360	-0.43	1226.00	
													573+75.00	30	1227.10	12		-0.0360	-0.43	1226.67	12		-0.0360	-0.43	1226.24	
													574+00.00	30	1227.31	12		-0.0360	-0.43	1226.88	12		-0.0360	-0.43	1226.45	
													574+25.00	30	1227.52	12		-0.0360	-0.43	1227.09	12		-0.0360	-0.43	1226.66	
													574+50.00	30	1227.70	12		-0.0360	-0.43	1227.27	12		-0.0360	-0.43	1226.84	
													574+75.00	30	1227.88	12		-0.0360	-0.43	1227.45	12		-0.0360	-0.43	1227.02	
													575+00.00	30	1228.04	12		-0.0360	-0.43	1227.61	12		-0.0360	-0.43	1227.18	
													575+25.00	30	1228.18	12		-0.0360	-0.43	1227.75	12		-0.0360	-0.43	1227.32	
													575+50.00	30	1228.31	12		-0.0360	-0.43	1227.88	12		-0.0360	-0.43	1227.45	
													575+75.00	30	1228.42	12		-0.0360	-0.43	1227.99	12		-0.0360	-0.43	1227.56	
													576+00.00	30	1228.53	12		-0.0360	-0.43	1228.10	12		-0.0360	-0.43	1227.67	
													576+25.00	30	1228.61	12		-0.0360	-0.43	1228.18	12		-0.0360	-0.43	1227.75	
													576+50.00	30	1228.68	12		-0.0360	-0.43	1228.25	12		-0.0360	-0.43	1227.82	
													576+75.00	30	1228.74	12		-0.0360	-0.43	1228.31	12		-0.0360	-0.43	1227.88	
													577+00.00	30	1228.78	12		-0.0360	-0.43	1228.35	12		-0.0360	-0.43	1227.92	
													577+25.00	30	1228.81	12		-0.0360	-0.43	1228.38	12		-0.0360	-0.43	1227.95	
													577+50.00	30	1228.82	12		-0.0360	-0.43	1228.39	12		-0.0360	-0.43	1227.96	
													577+75.00	30	1228.82	12		-0.0360	-0.43	1228.39	12		-0.0360	-0.43	1227.96	
													578+00.00	30	1228.81	12		-0.0360	-0.43	1228.38	12		-0.0360	-0.43	1227.95	
													578+25.00	30	1228.78	12		-0.0360	-0.43	1228.35	12		-0.0360	-0.43	1227.92	

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SUPERELEVATION TABLE - I.R. 70

BEL - 70-7.61

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I.R. 70 CURVE 2 SUPERELEVATION TABLE

P.I. STA. 566+52.17

$D_c = 1^\circ 00' 00''$

CALCULATED
MJC
CHECKED
BBD

REMARKS	OUTSIDE EDGE -					CENTERLINE OF LANES					INSIDE EDGE (PROFILE GRADE)		STATION	INSIDE EDGE (PROFILE GRADE)		CENTERLINE OF LANES					OUTSIDE EDGE -					REMARKS
	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	OFFSET		OFFSET	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	
													578+50.00	30	1228.73	12		-0.0360	-0.43	1228.30	12		-0.0360	-0.43	1227.87	
													578+75.00	30	1228.67	12		-0.0360	-0.43	1228.24	12		-0.0360	-0.43	1227.81	
													579+00.00	30	1228.60	12		-0.0360	-0.43	1228.17	12		-0.0360	-0.43	1227.74	
													579+23.19	30	1228.52	12	\updownarrow 250:1	-0.0360	-0.43	1228.09	12	\updownarrow 250:1	-0.0360	-0.43	1227.66	F.S.
													579+25.00	30	1228.51	12		-0.0357	-0.43	1228.08	12		-0.0357	-0.43	1227.65	
													579+50.00	30	1228.41	12		-0.0315	-0.38	1228.03	12		-0.0315	-0.38	1227.65	
													579+73.59	30	1228.30	12		-0.0276	-0.33	1227.97	12		-0.0276	-0.33	1227.64	P.C.
													579+75.00	30	1228.29	12		-0.0274	-0.33	1227.96	12		-0.0274	-0.33	1227.63	
													580+00.00	30	1228.16	12		-0.0232	-0.28	1227.88	12		-0.0232	-0.28	1227.60	
													580+25.00	30	1228.01	12		-0.0190	-0.23	1227.78	12		-0.0190	-0.23	1227.55	
													580+43.19	30	1227.90	12		-0.0160	-0.19	1227.71	12		-0.0160	-0.19	1227.52	R.C.
													580+50.00	30	1227.85	12		-0.0137	-0.16	1227.69	12		-0.0160	-0.19	1227.49	
													580+75.00	30	1227.68	12		-0.0054	-0.06	1227.62	12		-0.0160	-0.19	1227.42	
													580+91.19	30	1227.56	12	0.0000	0.00	1227.56	12	-0.0160	-0.19	1227.37	1/2 F.L.		
													581+00.00	30	1227.49	12	0.0029	0.04	1227.53	12	-0.0160	-0.19	1227.33			
													581+25.00	30	1227.28	12	0.0113	0.14	1227.42	12	-0.0160	-0.19	1227.22			
													581+39.19	30	1227.16	12	0.0160	0.19	1227.35	12	-0.0160	-0.19	1227.16	N.C.		

APPROVED FOR CONSTRUCTION - 5/2/2011

SUPERELEVATION TABLE - I.R. 70

BEL-70-7.61

P:\76825\roadway\sheets\76825GE406.dgn 4/14/2011 10:25:10 AM mcornett

I.R. 70 CURVE 3 SUPERELEVATION TABLE

P.I. STA. 661+78.41

Dc = 0° 28' 00"

REMARKS	OUTSIDE EDGE -					CENTERLINE OF LANES					INSIDE EDGE (PROFILE GRADE)		STATION	INSIDE EDGE (PROFILE GRADE)		CENTERLINE OF LANES					OUTSIDE EDGE -					REMARKS
	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	OFFSET		OFFSET	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	
													649+79.81	30	1183.07	12		0.0160	0.19	1183.26	12		-0.0160	-0.19	1183.07	N.C.
													650+00.00	30	1182.76	12		0.0160	0.19	1182.95	12		-0.0093	-0.11	1182.84	
													650+25.00	30	1182.38	12		0.0160	0.19	1182.57	12		-0.0009	-0.01	1182.56	
													650+27.81	30	1182.33	12		0.0160	0.19	1182.52	12		0.0000	0.00	1182.52	1/2 FLAT
													650+50.00	30	1181.99	12		0.0160	0.19	1182.18	12		0.0074	0.09	1182.27	
													650+68.98	30	1181.70	12		0.0160	0.19	1181.89	12		0.0137	0.16	1182.06	P.C.
													650+75.00	30	1181.61	12		0.0160	0.19	1181.80	12		0.0157	0.19	1181.99	
													650+75.81	30	1181.60	12		0.0160	0.19	1181.79	12		0.0160	0.19	1181.98	R.C.
													650+86.61	30	1181.43	12	250:1	0.0180	0.22	1181.65	12		0.0180	0.22	1181.86	F.S.
													651+00.00	30	1181.23	12		0.0180	0.22	1181.45	12		0.0180	0.22	1181.66	
													651+25.00	30	1180.85	12		0.0180	0.22	1181.07	12		0.0180	0.22	1181.28	
													651+50.00	30	1180.46	12		0.0180	0.22	1180.68	12		0.0180	0.22	1180.89	
													651+75.00	30	1180.08	12		0.0180	0.22	1180.30	12		0.0180	0.22	1180.51	
													652+00.00	30	1179.70	12		0.0180	0.22	1179.92	12		0.0180	0.22	1180.13	
													652+25.00	30	1179.32	12		0.0180	0.22	1179.54	12		0.0180	0.22	1179.75	
													652+50.00	30	1178.93	12		0.0180	0.22	1179.15	12		0.0180	0.22	1179.36	
													652+75.00	30	1178.55	12		0.0180	0.22	1178.77	12		0.0180	0.22	1178.98	
													653+00.00	30	1178.17	12		0.0180	0.22	1178.39	12		0.0180	0.22	1178.60	
													653+25.00	30	1177.79	12		0.0180	0.22	1178.01	12		0.0180	0.22	1178.22	
													653+50.00	30	1177.40	12		0.0180	0.22	1177.62	12		0.0180	0.22	1177.83	
													653+75.00	30	1177.03	12		0.0180	0.22	1177.25	12		0.0180	0.22	1177.46	
													654+00.00	30	1176.68	12		0.0180	0.22	1176.90	12		0.0180	0.22	1177.11	
													654+25.00	30	1176.37	12		0.0180	0.22	1176.59	12		0.0180	0.22	1176.80	
													654+50.00	30	1176.09	12		0.0180	0.22	1176.31	12		0.0180	0.22	1176.52	
													654+75.00	30	1175.85	12		0.0180	0.22	1176.07	12		0.0180	0.22	1176.28	
													655+00.00	30	1175.64	12		0.0180	0.22	1175.86	12		0.0180	0.22	1176.07	
													655+25.00	30	1175.47	12		0.0180	0.22	1175.69	12		0.0180	0.22	1175.90	
													655+50.00	30	1175.33	12		0.0180	0.22	1175.55	12		0.0180	0.22	1175.76	
													655+75.00	30	1175.23	12		0.0180	0.22	1175.45	12		0.0180	0.22	1175.66	
													656+00.00	30	1175.16	12		0.0180	0.22	1175.38	12		0.0180	0.22	1175.59	
													656+25.00	30	1175.12	12		0.0180	0.22	1175.34	12		0.0180	0.22	1175.55	
													656+50.00	30	1175.12	12		0.0180	0.22	1175.34	12		0.0180	0.22	1175.55	
													656+75.00	30	1175.15	12		0.0180	0.22	1175.37	12		0.0180	0.22	1175.58	
													657+00.00	30	1175.21	12		0.0180	0.22	1175.43	12		0.0180	0.22	1175.64	
													657+25.00	30	1175.32	12		0.0180	0.22	1175.54	12		0.0180	0.22	1175.75	
													657+50.00	30	1175.45	12		0.0180	0.22	1175.67	12		0.0180	0.22	1175.88	
													657+75.00	30	1175.62	12		0.0180	0.22	1175.84	12		0.0180	0.22	1176.05	
													658+00.00	30	1175.82	12		0.0180	0.22	1176.04	12		0.0180	0.22	1176.25	
													658+25.00	30	1176.06	12		0.0180	0.22	1176.28	12		0.0180	0.22	1176.49	
													658+50.00	30	1176.33	12		0.0180	0.22	1176.55	12		0.0180	0.22	1176.76	
													658+75.00	30	1176.63	12		0.0180	0.22	1176.85	12		0.0180	0.22	1177.06	
													659+00.00	30	1176.93	12		0.0180	0.22	1177.15	12		0.0180	0.22	1177.36	
													659+25.00	30	1177.24	12		0.0180	0.22	1177.46	12		0.0180	0.22	1177.67	
													659+50.00	30	1177.54	12		0.0180	0.22	1177.76	12		0.0180	0.22	1177.97	
													659+75.00	30	1177.84	12		0.0180	0.22	1178.06	12		0.0180	0.22	1178.27	
													660+00.00	30	1178.14	12		0.0180	0.22	1178.36	12		0.0180	0.22	1178.57	
													660+25.00	30	1178.45	12		0.0180	0.22	1178.67	12		0.0180	0.22	1178.88	
													660+50.00	30	1178.75	12		0.0180	0.22	1178.97	12		0.0180	0.22	1179.18	
													660+75.00	30	1179.05	12		0.0180	0.22	1179.27	12		0.0180	0.22	1179.48	
													661+00.00	30	1179.35	12		0.0180	0.22	1179.57	12		0.0180	0.22	1179.78	
													661+25.00	30	1179.66	12		0.0180	0.22	1179.88	12		0.0180	0.22	1180.09	
													661+50.00	30	1179.96	12		0.0180	0.22	1180.18	12		0.0180	0.22	1180.39	
													661+75.00	30	1180.26	12		0.0180	0.22	1180.48	12		0.0180	0.22	1180.69	
													662+00.00	30	1180.56	12		0.0180	0.22	1180.78	12		0.0180	0.22	1180.99	

APPROVED FOR CONSTRUCTION - 6/2/2011

SUPERELEVATION TABLE - I.R. 70

BEL - 70-7.61

CALCULATED
MJC
CHECKED
BBD

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I.R. 70 CURVE 3 SUPERELEVATION TABLE

P.I. STA. 661+78.41

$D_c = 0^\circ 28' 00''$

CALCULATED
MJC
CHECKED
BBD

REMARKS	OUTSIDE EDGE -					CENTERLINE OF LANES					INSIDE EDGE (PROFILE GRADE)		STATION	INSIDE EDGE (PROFILE GRADE)		CENTERLINE OF LANES					OUTSIDE EDGE -					REMARKS
	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	OFFSET		OFFSET	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	
													662+25.00	30	1180.87	12		0.0180	0.22	1181.09	12		0.0180	0.22	1181.30	
													662+50.00	30	1181.17	12		0.0180	0.22	1181.39	12		0.0180	0.22	1181.60	
													662+75.00	30	1181.47	12		0.0180	0.22	1181.69	12		0.0180	0.22	1181.90	
													663+00.00	30	1181.77	12		0.0180	0.22	1181.99	12		0.0180	0.22	1182.20	
													663+25.00	30	1182.08	12		0.0180	0.22	1182.30	12		0.0180	0.22	1182.51	
													663+50.00	30	1182.38	12		0.0180	0.22	1182.60	12		0.0180	0.22	1182.81	
													663+75.00	30	1182.68	12		0.0180	0.22	1182.90	12		0.0180	0.22	1183.11	
													664+00.00	30	1182.98	12		0.0180	0.22	1183.20	12		0.0180	0.22	1183.41	
													664+25.00	30	1183.29	12		0.0180	0.22	1183.51	12		0.0180	0.22	1183.72	
													664+50.00	30	1183.59	12		0.0180	0.22	1183.81	12		0.0180	0.22	1184.02	
													664+75.00	30	1183.89	12		0.0180	0.22	1184.11	12		0.0180	0.22	1184.32	
													665+00.00	30	1184.19	12		0.0180	0.22	1184.41	12		0.0180	0.22	1184.62	
													665+25.00	30	1184.50	12		0.0180	0.22	1184.72	12		0.0180	0.22	1184.93	
													665+50.00	30	1184.80	12		0.0180	0.22	1185.02	12		0.0180	0.22	1185.23	
													665+75.00	30	1185.10	12		0.0180	0.22	1185.32	12		0.0180	0.22	1185.53	
													666+00.00	30	1185.40	12		0.0180	0.22	1185.62	12		0.0180	0.22	1185.83	
													666+25.00	30	1185.71	12		0.0180	0.22	1185.93	12		0.0180	0.22	1186.14	
													666+50.00	30	1186.01	12		0.0180	0.22	1186.23	12		0.0180	0.22	1186.44	
													666+75.00	30	1186.31	12		0.0180	0.22	1186.53	12		0.0180	0.22	1186.74	
													667+00.00	30	1186.61	12		0.0180	0.22	1186.83	12		0.0180	0.22	1187.04	
													667+25.00	30	1186.90	12		0.0180	0.22	1187.12	12		0.0180	0.22	1187.33	
													667+50.00	30	1187.18	12		0.0180	0.22	1187.40	12		0.0180	0.22	1187.61	
													667+75.00	30	1187.47	12		0.0180	0.22	1187.69	12		0.0180	0.22	1187.90	
													668+00.00	30	1187.75	12		0.0180	0.22	1187.97	12		0.0180	0.22	1188.18	
													668+25.00	30	1188.04	12		0.0180	0.22	1188.26	12		0.0180	0.22	1188.47	
													668+50.00	30	1188.32	12		0.0180	0.22	1188.54	12		0.0180	0.22	1188.75	
													668+75.00	30	1188.61	12		0.0180	0.22	1188.83	12		0.0180	0.22	1189.04	
													669+00.00	30	1188.89	12		0.0180	0.22	1189.11	12		0.0180	0.22	1189.32	
													669+25.00	30	1189.18	12		0.0180	0.22	1189.40	12		0.0180	0.22	1189.61	
													669+50.00	30	1189.46	12		0.0180	0.22	1189.68	12		0.0180	0.22	1189.89	
													669+75.00	30	1189.75	12		0.0180	0.22	1189.97	12		0.0180	0.22	1190.18	
													670+00.00	30	1190.03	12		0.0180	0.22	1190.25	12		0.0180	0.22	1190.46	
													670+25.00	30	1190.32	12		0.0180	0.22	1190.54	12		0.0180	0.22	1190.75	
													670+50.00	30	1190.60	12		0.0180	0.22	1190.82	12		0.0180	0.22	1191.03	
													670+75.00	30	1190.89	12		0.0180	0.22	1191.11	12		0.0180	0.22	1191.32	
													671+00.00	30	1191.17	12		0.0180	0.22	1191.39	12		0.0180	0.22	1191.60	
													671+25.00	30	1191.46	12		0.0180	0.22	1191.68	12		0.0180	0.22	1191.89	
													671+50.00	30	1191.74	12		0.0180	0.22	1191.96	12		0.0180	0.22	1192.17	
													671+75.00	30	1192.03	12		0.0180	0.22	1192.25	12		0.0180	0.22	1192.46	
													672+00.00	30	1192.31	12		0.0180	0.22	1192.53	12		0.0180	0.22	1192.74	
													672+25.00	30	1192.60	12		0.0180	0.22	1192.82	12		0.0180	0.22	1193.03	
													672+50.00	30	1192.88	12		0.0180	0.22	1193.10	12		0.0180	0.22	1193.31	
													672+62.97	30	1193.03	12	250:1	0.0180	0.22	1193.25	12		0.0180	0.22	1193.46	F.S.
													672+74.97	30	1193.17	12		0.0160	0.19	1193.36	12		0.0160	0.19	1193.55	R.C.
													672+75.00	30	1193.17	12		0.0160	0.19	1193.36	12		0.0160	0.19	1193.55	
													672+81.84	30	1193.25	12		0.0160	0.19	1193.44	12		0.0137	0.16	1193.61	P.C.
													673+00.00	30	1193.45	12		0.0160	0.19	1193.64	12		0.0077	0.09	1193.73	
													673+22.97	30	1193.72	12		0.0160	0.19	1193.91	12		0.0000	0.00	1193.91	1/2 FLAT
													673+25.00	30	1193.74	12		0.0160	0.19	1193.93	12		-0.0007	-0.01	1193.92	
													673+50.00	30	1194.02	12		0.0160	0.19	1194.21	12		-0.0090	-0.11	1194.10	
													673+70.97	30	1194.26	12		0.0160	0.19	1194.45	12		-0.0160	-0.19	1194.26	N.C.

APPROVED FOR CONSTRUCTION - 5/2/2011

SUPERELEVATION TABLE - I.R. 70

BEL - 70-7.61

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RAMP A SUPERELEVATION TABLE

P.I. STA. 4+91.18 RAMP A

$D_c = 1^\circ 30' 00''$

REMARKS	LEFT SIDE					BASELINE CONTROL								
	EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	PROFILE GRADE	STATION							
	1223.09		0.66	0.0410	16	1222.43	4+54.85							
	1223.17		0.66	0.0410	16	1222.51	4+75.00							
	1223.24		0.66	0.0410	16	1222.58	5+00.00							
	1223.26		0.66	0.0410	16	1222.60	5+25.00							
	1223.21		0.66	0.0410	16	1222.55	5+50.00							
	1223.11		0.66	0.0410	16	1222.45	5+75.00							
	1222.95		0.66	0.0410	16	1222.29	6+00.00							
	1222.73		0.66	0.0410	16	1222.07	6+25.00							
	1222.46		0.66	0.0410	16	1221.80	6+50.00							
	1222.13		0.66	0.0410	16	1221.47	6+75.00							
	1221.74		0.66	0.0410	16	1221.08	7+00.00							
	1221.29		0.66	0.0410	16	1220.63	7+25.00							
	1220.79		0.66	0.0410	16	1220.13	7+50.00							
	1220.23		0.66	0.0410	16	1219.57	7+75.00							
	1219.61		0.66	0.0410	16	1218.95	8+00.00							
	1218.93		0.66	0.0410	16	1218.27	8+25.00							
	1218.20		0.66	0.0410	16	1217.54	8+50.00							
	1217.40		0.66	0.0410	16	1216.74	8+75.00							
C.S.	1216.55	375:1	0.66	0.0410	16	1215.89	9+00.00							
	1216.55		0.66	0.0410	16	1215.89	9+00.09							
	1215.58		0.59	0.0368	16	1214.99	9+25.00							
	1214.54		0.52	0.0327	16	1214.02	9+50.00							
	1213.48		0.46	0.0285	16	1213.02	9+75.00							
	1212.40		0.39	0.0243	16	1212.01	10+00.00							
	1211.33		0.32	0.0202	16	1211.01	10+25.00							
	1210.26		0.26	0.0160	16	1210.00	10+50.00							
S.T.	1210.26		0.26	0.0160	16	1210.00	10+50.09							

RAMP B SUPERELEVATION TABLE

P.I. STA. 2+00.01 RAMP B

$D_c = 6^\circ 00' 00''$

REMARKS	LEFT SIDE					BASELINE CONTROL							
	EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	PROFILE GRADE	STATION						
RC	1193.78	16:1	-0.26	-0.0160	16	1194.04	0+92.36						
	1193.77		-0.30	-0.0190	16	1194.07	1+00.00						
	1193.82		-0.46	-0.0287	16	1194.28	1+25.00						
P.C.	1193.96		-0.57	-0.0357	16	1194.53	1+43.11						
	1194.04		-0.61	-0.0384	16	1194.65	1+50.00						
	1194.42		-0.77	-0.0481	16	1195.19	1+75.00						
FS	1194.55		-0.82	-0.0510	16	1195.37	1+82.52						
	1194.99		-0.82	-0.0510	16	1195.81	2+00.00						
FS	1195.42		-0.82	-0.0510	16	1196.24	2+17.37						
	1195.66		-0.77	-0.0480	16	1196.43	2+25.00						
	1196.44	-0.61	-0.0383	16	1197.05	2+50.00							
P.T.	1196.64	-0.57	-0.0357	16	1197.21	2+56.78							
	1197.21	-0.46	-0.0286	16	1197.67	2+75.00							
	1197.99	-0.30	-0.0189	16	1198.29	3+00.00							
RC	1198.21	-0.26	-0.0160	16	1198.47	3+07.53							
	1198.76	-0.15	-0.0092	16	1198.91	3+25.00							
	1199.43	0.01	0.0005	16	1199.42	3+50.00							
NC	1200.10	0.16	0.0102	16	1199.94	3+75.00							
	1200.51	0.26	0.0160	16	1200.25	3+89.96							

RAMP B SUPERELEVATION TABLE

P.I. STA. 7+95.35 RAMP B

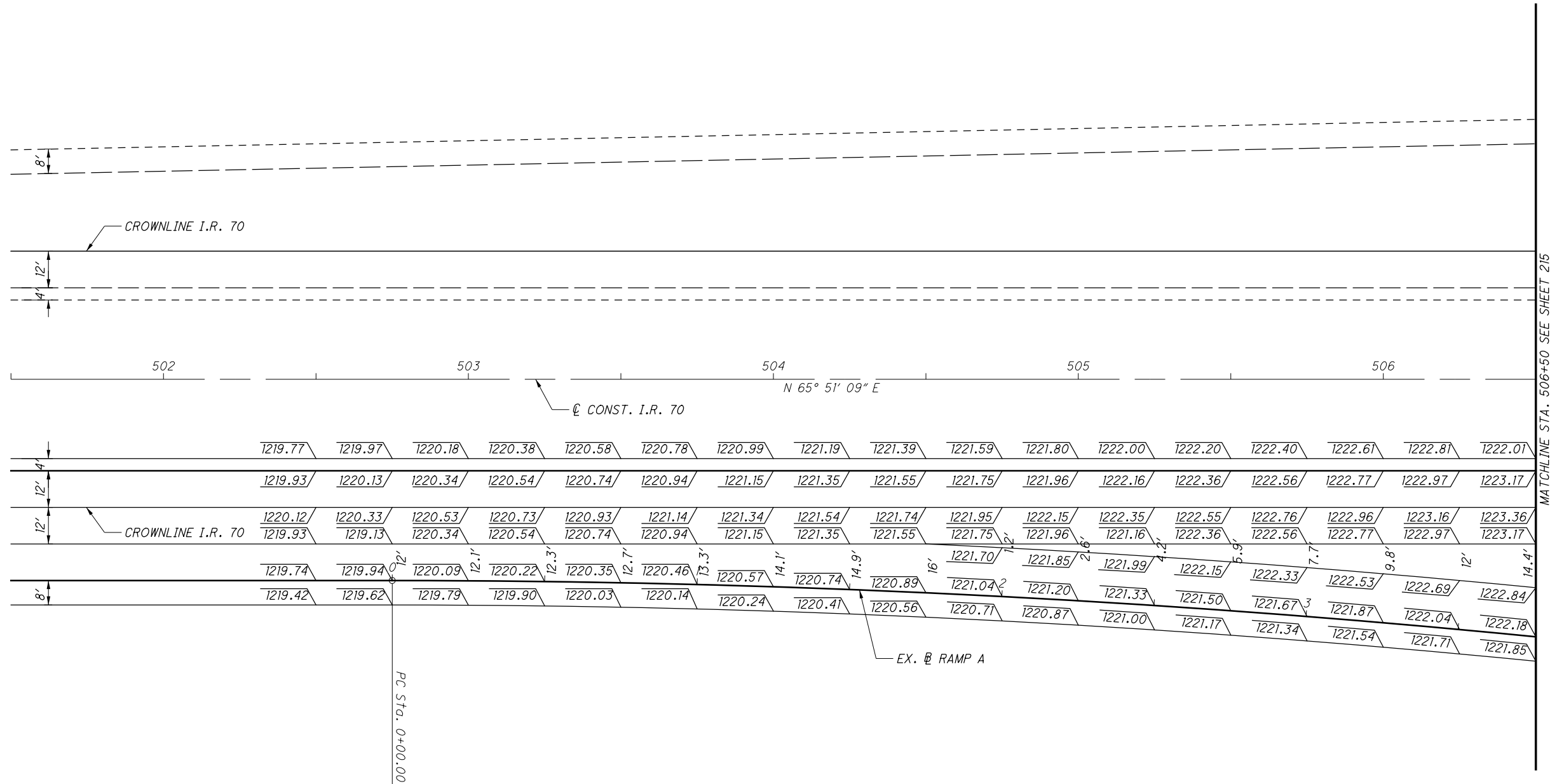
$D_c = 4^\circ 00' 00''$

REMARKS	EDGE ELEVATION	TRANSITION RATE	LEFT SIDE		WIDTH	BASELINE CONTROL							
			ELEVATION CORRECTION	CROSS SLOPE		PROFILE GRADE	STATION						
T.S.	1201.52	266:1	0.26	0.0160	16	1201.26	4+38.98						
	1201.79		0.30	0.0186	16	1201.49	4+50.00						
	1202.39		0.39	0.0245	16	1202.00	4+75.00						
	1202.95		0.49	0.0303	16	1202.46	5+00.00						
	1203.44		0.58	0.0362	16	1202.86	5+25.00						
	1203.89		0.67	0.0421	16	1203.22	5+50.00						
	1204.29		0.77	0.0480	16	1203.52	5+75.00						
	1204.62		0.86	0.0538	16	1203.76	6+00.00						
	1204.91		0.96	0.0597	16	1203.95	6+25.00						
S.C.	1205.05		1.01	0.0630	16	1204.04	6+38.98						
	1205.10	1.01	0.0630	16	1204.09	6+50.00							
	1205.19	1.01	0.0630	16	1204.18	6+75.00							
	1205.22	1.01	0.0630	16	1204.21	7+00.00							
	1205.20	1.01	0.0630	16	1204.19	7+25.00							
	1205.12	1.01	0.0630	16	1204.11	7+50.00							
	1205.00	1.01	0.0630	16	1203.99	7+75.00							
	1204.81	1.01	0.0630	16	1203.80	8+00.00							
	1204.58	1.01	0.0630	16	1203.57	8+25.00							
	1204.29	1.01	0.0630	16	1203.28	8+50.00							
	1203.95	1.01	0.0630	16	1202.94	8+75.00							
	1203.70	1.01	0.0630	16	1202.69	8+91.18							

APPROVED FOR CONSTRUCTION - 5/2/2011

SUPERELEVATION TABLE - RAMPS A & B

BEL - 70 - 7.61



NOTE:

FOR PAVEMENT JOINT DETAILS AT RAMP TERMINALS, SEE STANDARD CONSTRUCTION DRAWING BP-6.1.

ELEVATIONS SHOWN AT 25' INTERVALS BASED ON I.R. 70 STATIONING UNLESS OTHERWISE SHOWN.

CALCULATED MJC CHECKED BBD

0 10 20 40
HORIZONTAL SCALE IN FEET

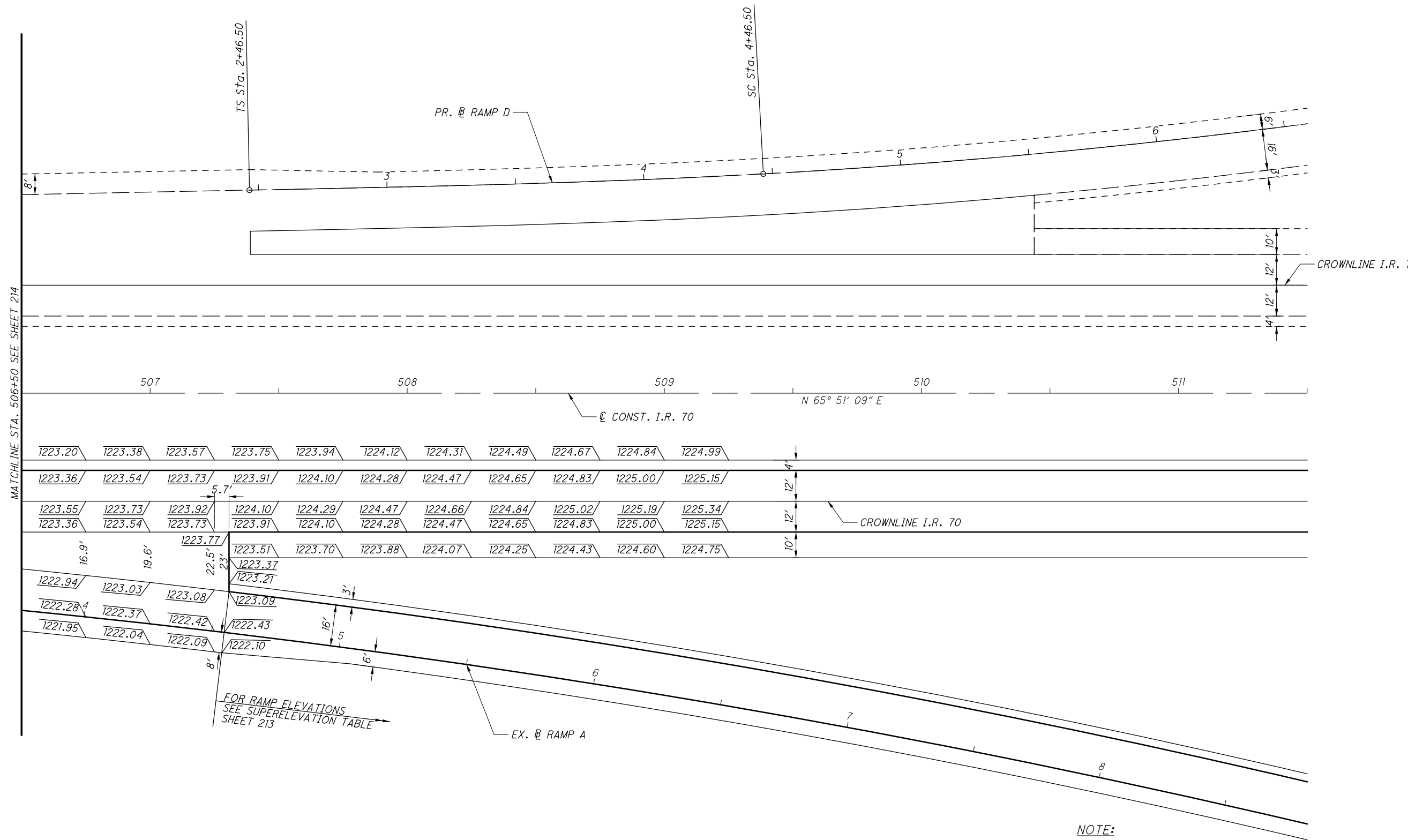
APPROVED FOR CONSTRUCTION - 5/2/2011

I.R. 70 PAVEMENT DETAILS

STA. 501+50 TO STA. 506+50

BEL-70-7.61

P:\76825\roadway\sheets\76825GA402.dgn 4/14/2011 10:25:20 AM mcornett



FOR RAMP ELEVATIONS
SEE SUPERELEVATION TABLE
SHEET 213

NOTE:
FOR PAVEMENT JOINT DETAILS AT RAMP TERMINALS,
SEE STANDARD CONSTRUCTION DRAWING BP-6.1.
ELEVATIONS SHOWN AT 25' INTERVALS BASED ON
I.R. 70 STATIONING UNLESS OTHERWISE SHOWN.

APPROVED FOR CONSTRUCTION - 5/2/2011

CALCULATED	MJC	CHECKED	BBD

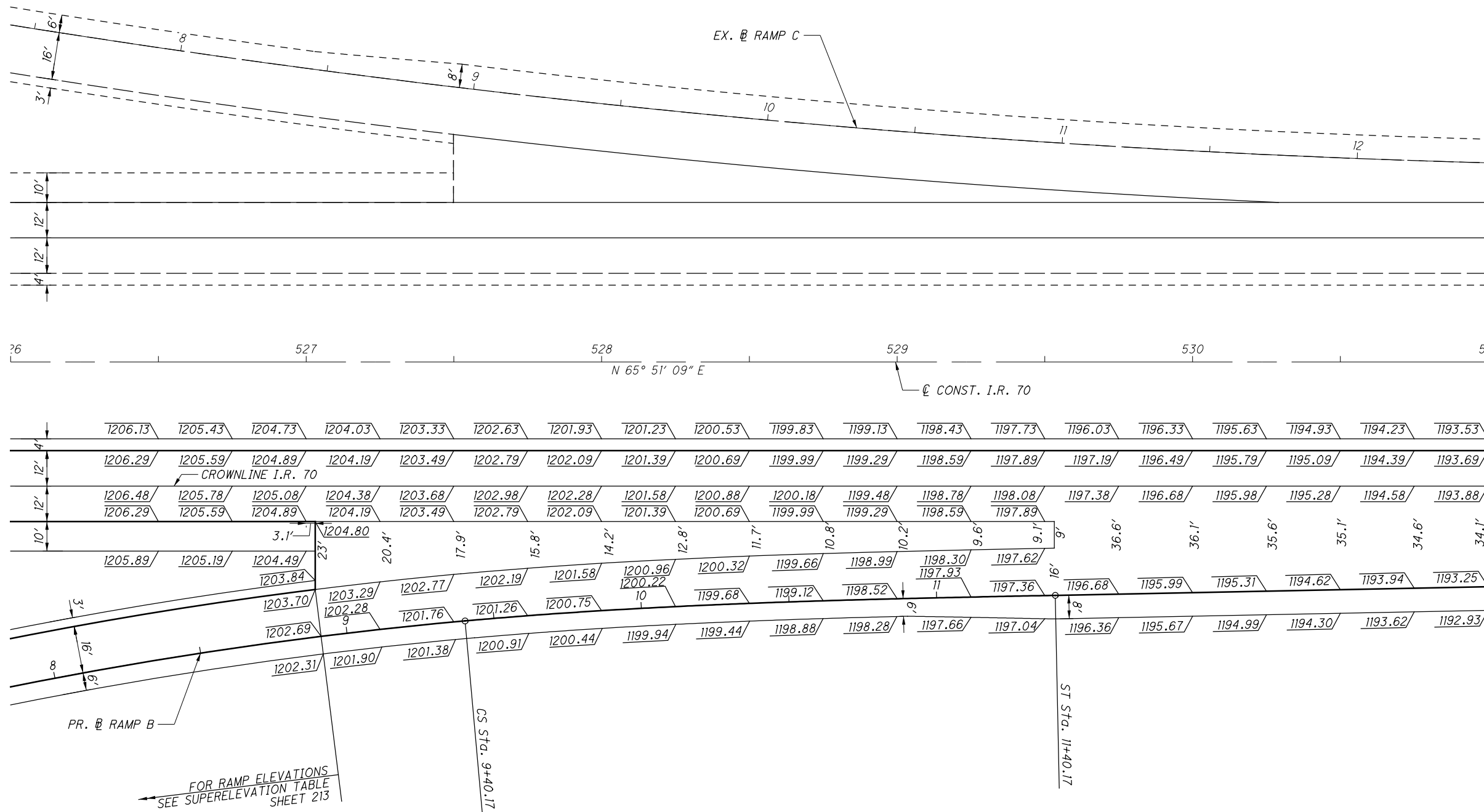
0 20 40
HORIZONTAL
SCALE IN FEET

I.R. 70 PAVEMENT DETAILS
STA. 506+50 TO STA. 511+50

BEL-70-7.61

215
307

P:\76825\roadway\sheets\76825GA403.dgn 4/14/2011 10:25:20 AM mcornett



FOR RAMP ELEVATIONS
SEE SUPERELEVATION TABLE
SHEET 213

NOTE:

FOR PAVEMENT JOINT DETAILS AT RAMP TERMINALS,
SEE STANDARD CONSTRUCTION DRAWING BP-6.1.

ELEVATIONS SHOWN AT 25' INTERVALS BASED ON
I.R. 70 STATIONING UNLESS OTHERWISE SHOWN.



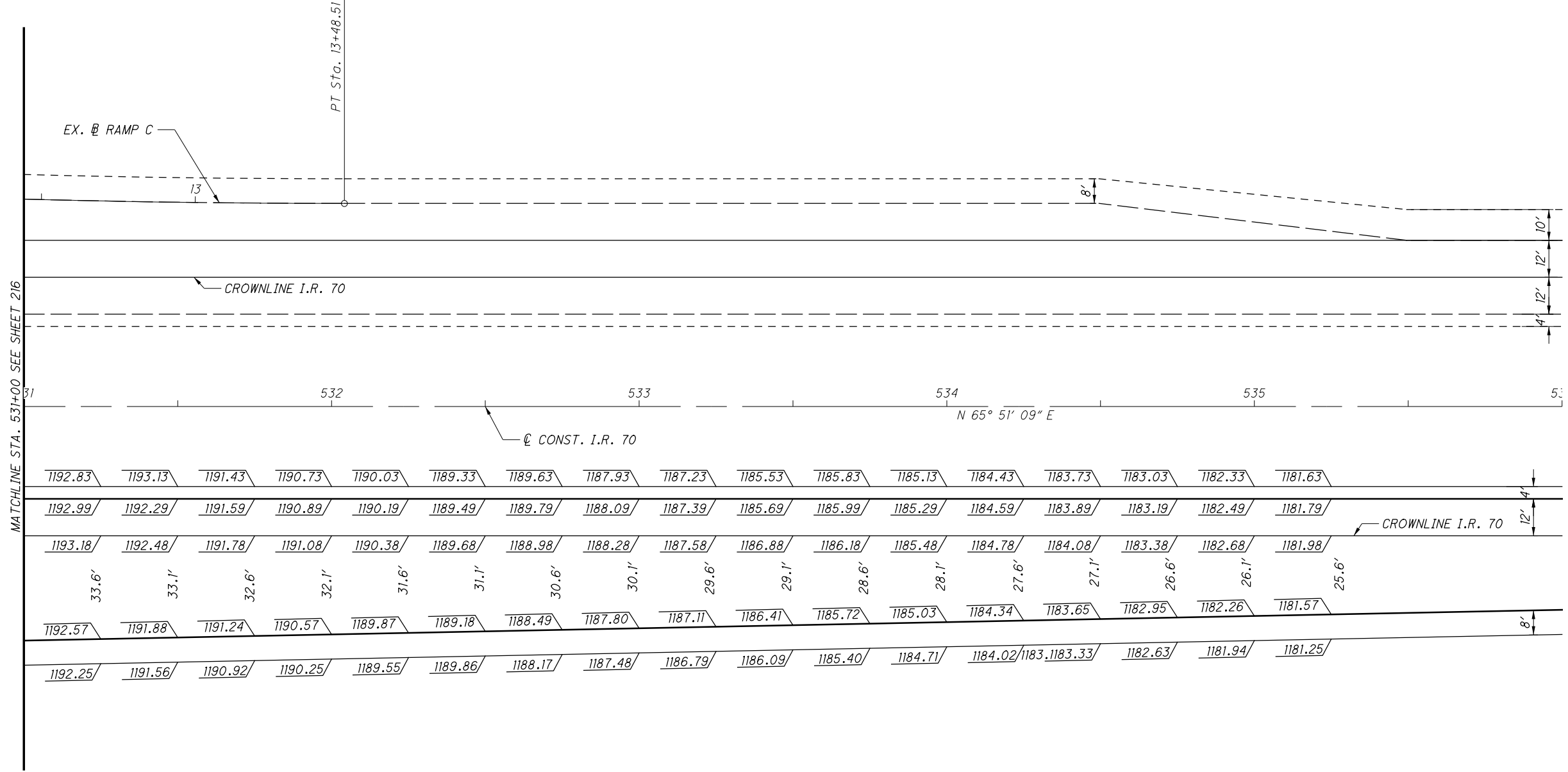
CALCULATED
MJC
CHECKED
BBD

APPROVED FOR CONSTRUCTION - 5/2/2011

**I.R. 70 PAVEMENT DETAILS
STA. 526+00 TO STA. 531+00**

BEL-70-7.61

216
307



NOTE:

FOR PAVEMENT JOINT DETAILS AT RAMP TERMINALS, SEE STANDARD CONSTRUCTION DRAWING BP-6.1.

ELEVATIONS SHOWN AT 25' INTERVALS BASED ON I.R. 70 STATIONING UNLESS OTHERWISE SHOWN.

CALCULATED
MJC
CHECKED
BBD

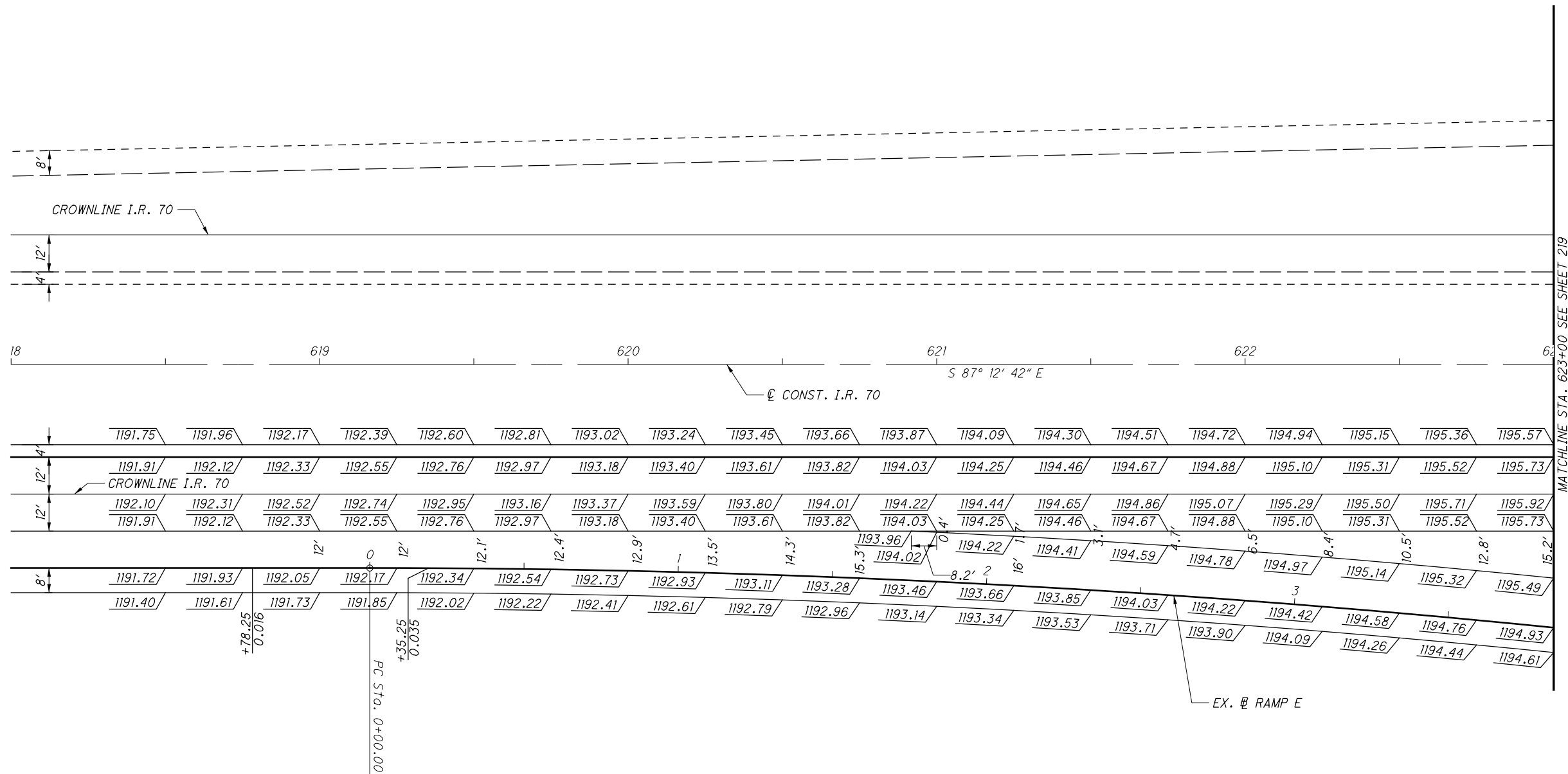
0 20 40
10
HORIZONTAL
SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

**I.R. 70 PAVEMENT DETAILS
STA. 531+00 TO STA. 536+00**

BEL-70-7.61

217
307



NOTE:

FOR PAVEMENT JOINT DETAILS AT RAMP TERMINALS, SEE STANDARD CONSTRUCTION DRAWING BP-6.1.

ELEVATIONS SHOWN AT 25' INTERVALS BASED ON I.R. 70 STATIONING UNLESS OTHERWISE SHOWN.

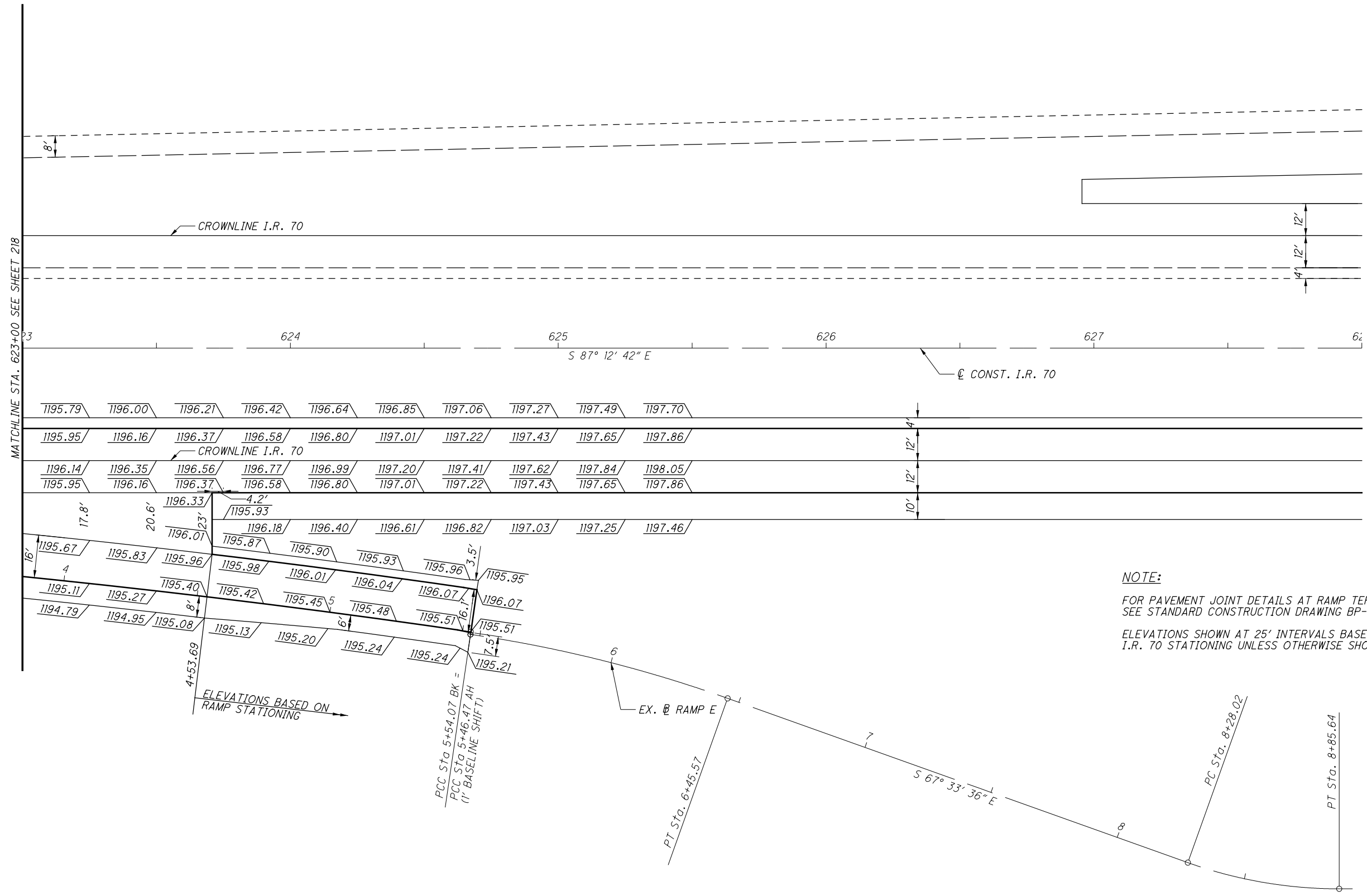
APPROVED FOR CONSTRUCTION - 5/2/2011

BEL-70-7.61

I.R. 70 PAVEMENT DETAILS
STA. 618+00 TO STA. 623+00

CALCULATED MJC CHECKED BBD

0 20 40
HORIZONTAL SCALE IN FEET



MATCHLINE STA. 623+00 SEE SHEET 218

APPROVED FOR CONSTRUCTION - 5/2/2011

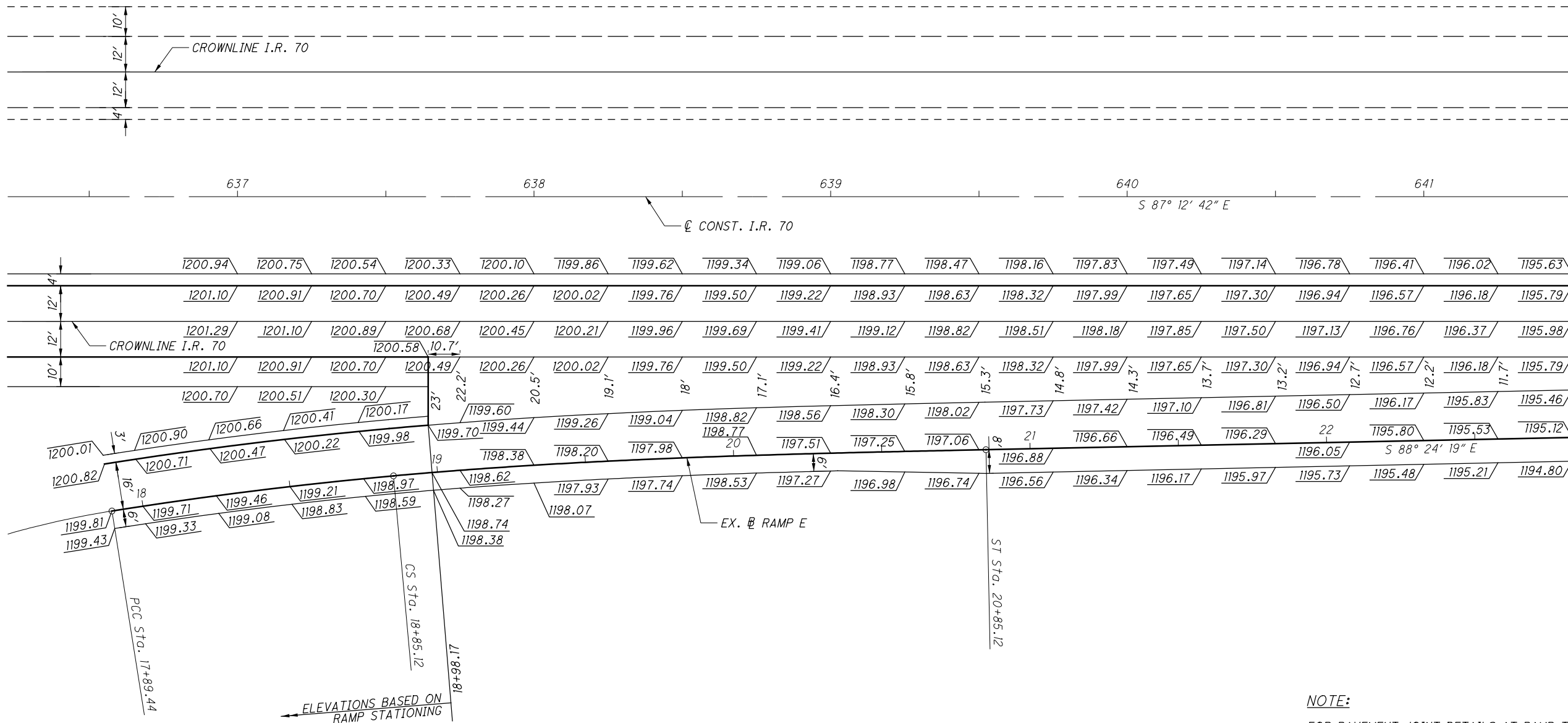
CALCULATED
 MJC
 CHECKED
 BBD

0 20 40
 HORIZONTAL
 SCALE IN FEET

I.R. 70 PAVEMENT DETAILS
STA. 623+00 TO STA. 628+00

BEL-70-7.61

219
 307



ELEVATIONS BASED ON RAMP STATIONING

NOTE:

FOR PAVEMENT JOINT DETAILS AT RAMP TERMINALS, SEE STANDARD CONSTRUCTION DRAWING BP-6.1.

ELEVATIONS SHOWN AT 25' INTERVALS BASED ON I.R. 70 STATIONING UNLESS OTHERWISE SHOWN.



CALCULATED
MJC
CHECKED
BBD

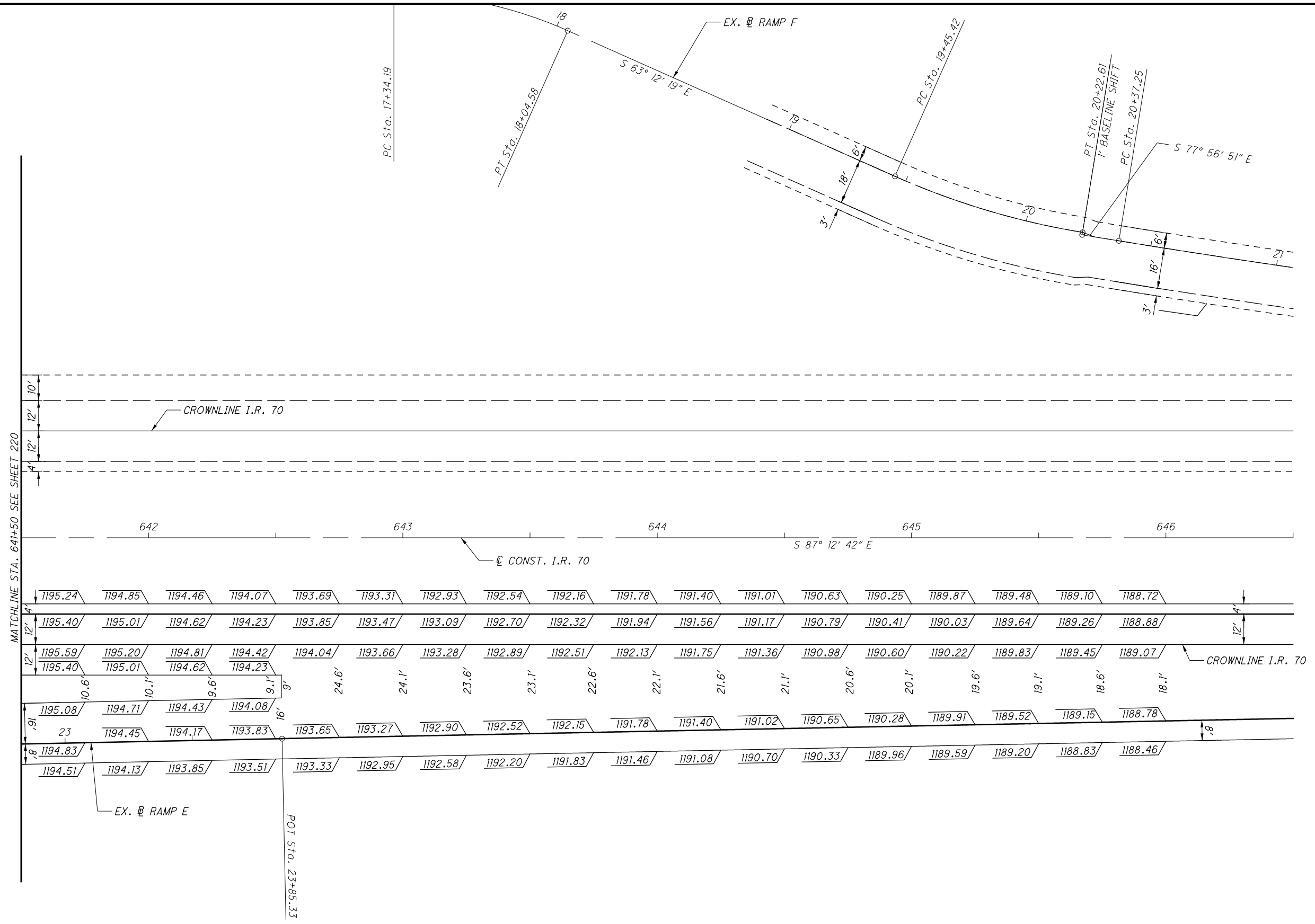
APPROVED FOR CONSTRUCTION - 5/2/2011

**I.R. 70 PAVEMENT DETAILS
STA. 636+50 TO STA. 641+50**

BEL-70-7.61

MATCHLINE STA. 641+50 SEE SHEET 221

11.1'



NOTE:
 FOR PAVEMENT JOINT DETAILS AT RAMP TERMINALS,
 SEE STANDARD CONSTRUCTION DRAWING BP-6.1.
 ELEVATIONS SHOWN AT 25' INTERVALS BASED ON
 I.R. 70 STATIONING UNLESS OTHERWISE SHOWN.

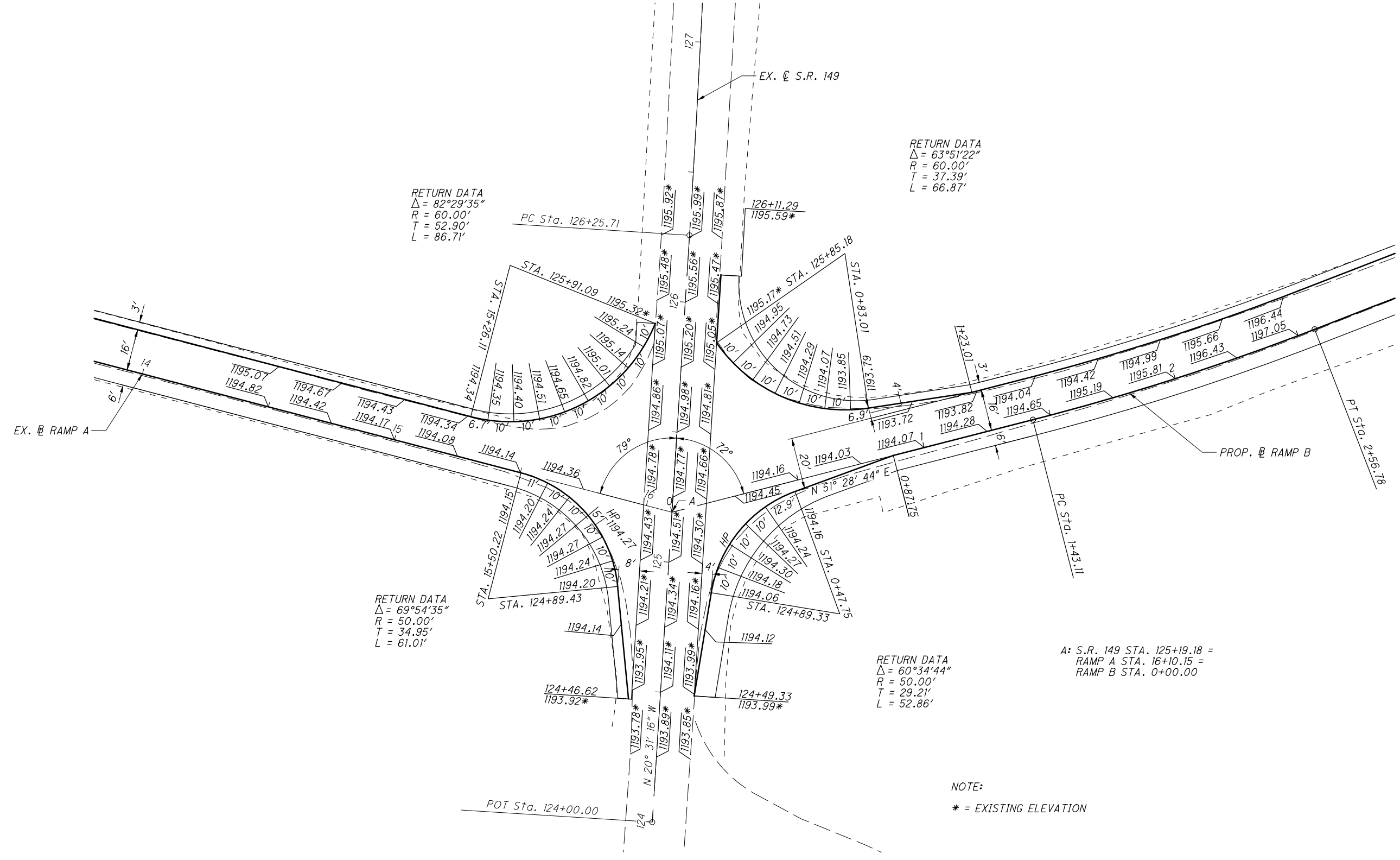
APPROVED FOR CONSTRUCTION - 5/2/2011

CALCULATED
 MJC
 CHECKED
 BBD

0 20 40
 HORIZONTAL
 SCALE IN FEET

I.R. 70 PAVEMENT DETAILS
STA. 641+50 TO STA. 646+50

BEL-70-7.61



RETURN DATA
 $\Delta = 82^\circ 29' 35''$
 $R = 60.00'$
 $T = 52.90'$
 $L = 86.71'$

RETURN DATA
 $\Delta = 63^\circ 51' 22''$
 $R = 60.00'$
 $T = 37.39'$
 $L = 66.87'$

RETURN DATA
 $\Delta = 69^\circ 54' 35''$
 $R = 50.00'$
 $T = 34.95'$
 $L = 61.01'$

RETURN DATA
 $\Delta = 60^\circ 34' 44''$
 $R = 50.00'$
 $T = 29.21'$
 $L = 52.86'$

A: S.R. 149 STA. 125+19.18 =
 RAMP A STA. 16+10.15 =
 RAMP B STA. 0+00.00

NOTE:
 * = EXISTING ELEVATION

CALCULATED
 MJC
 CHECKED
 BBD

0 20 40
 HORIZONTAL
 SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

INTERSECTION DETAILS
S.R. 149, RAMP A & RAMP B



LEGEND

- (L) STANDARD LONGITUDINAL JOINT AS PER STD. DWG. BP-2.1
- (S) LONGITUDINAL JOINT WITHOUT TIE BARS AS PER STD. DWG. BP-2.1
- (C) TRANSVERSE CONTRACTION JOINT AS PER STD. DWG. BP-2.2

CALCULATED	MJC	CHECKED	BDD

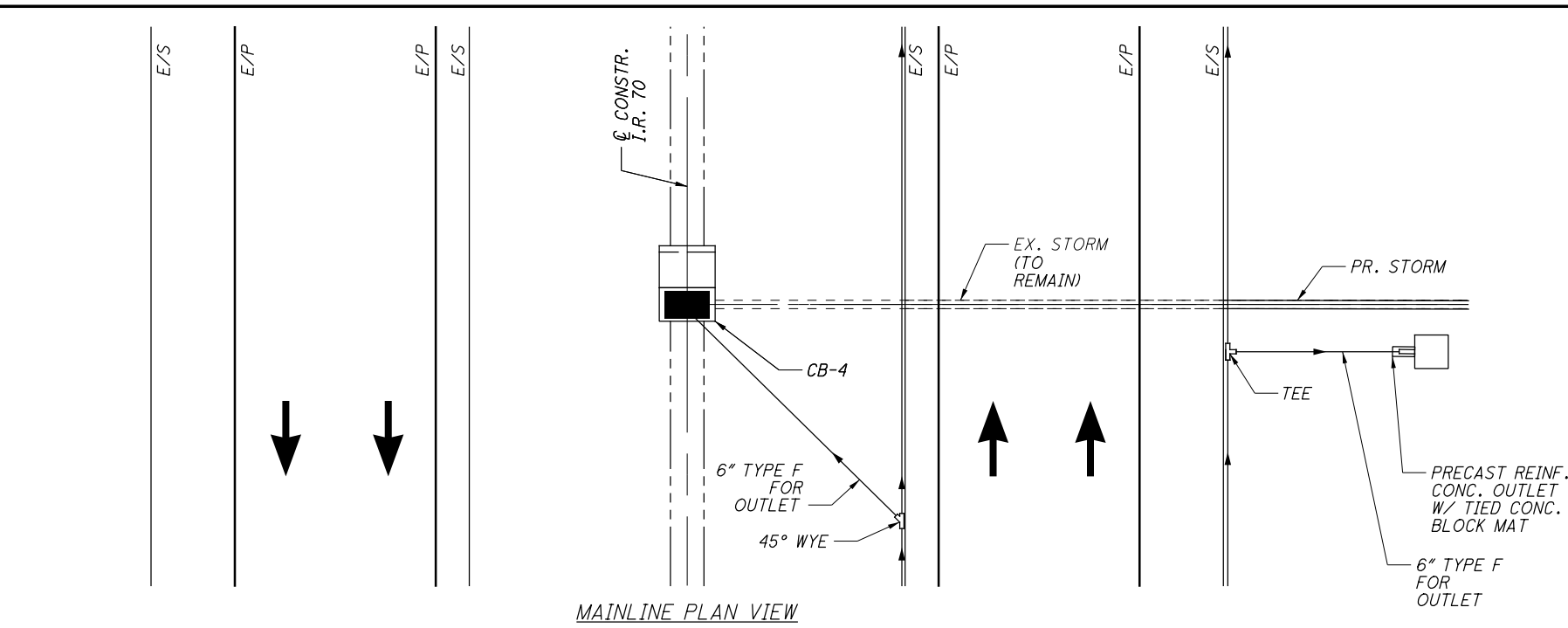
0 20 40
HORIZONTAL SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

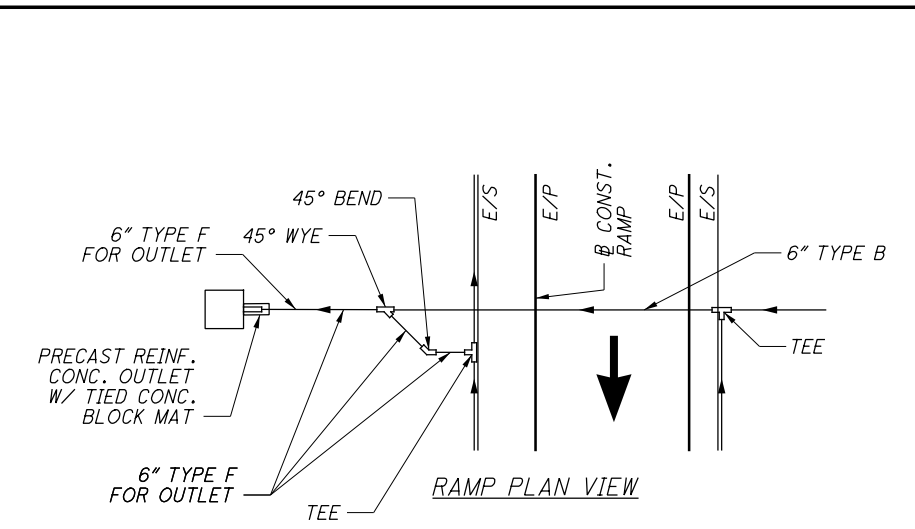
INTERSECTION JOINT DETAILS
S.R. 149, RAMP A & RAMP B

BEL-70-7.61

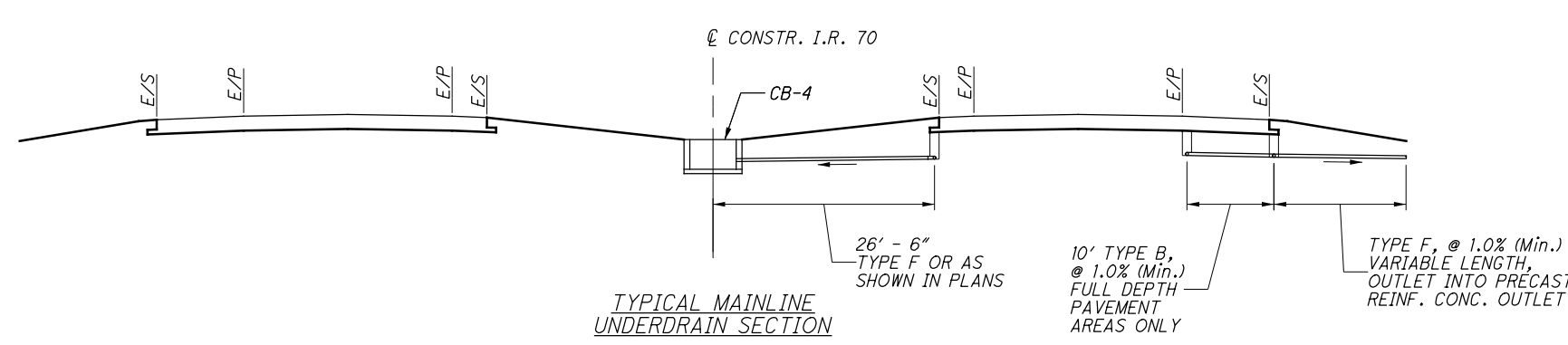
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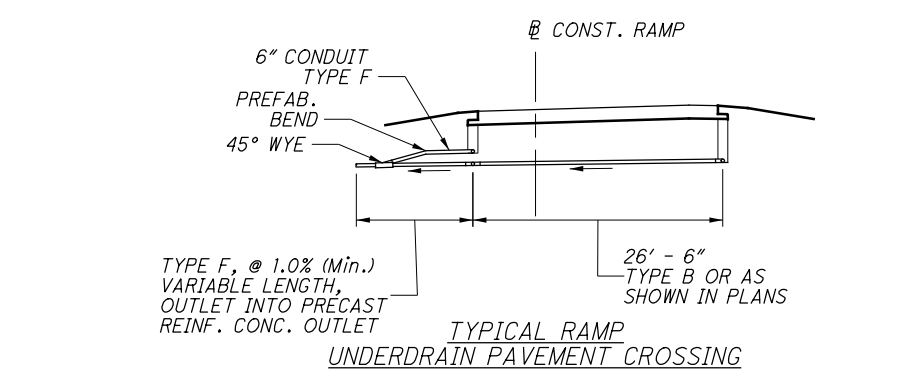
MAINLINE PLAN VIEW



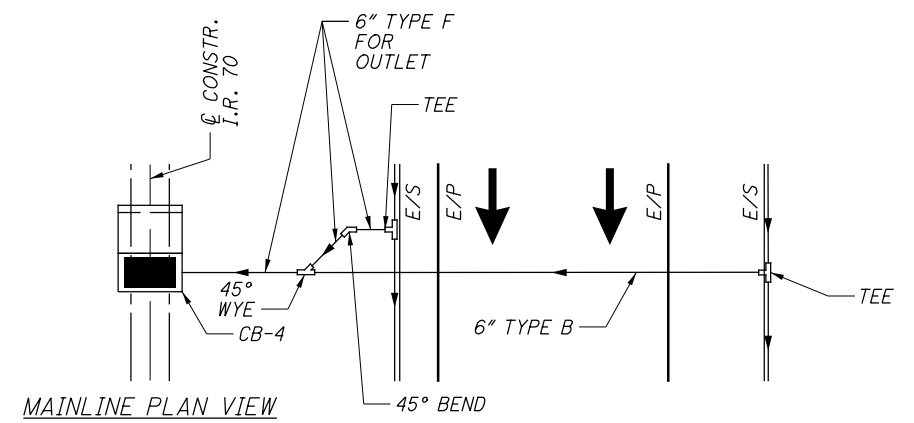
RAMP PLAN VIEW



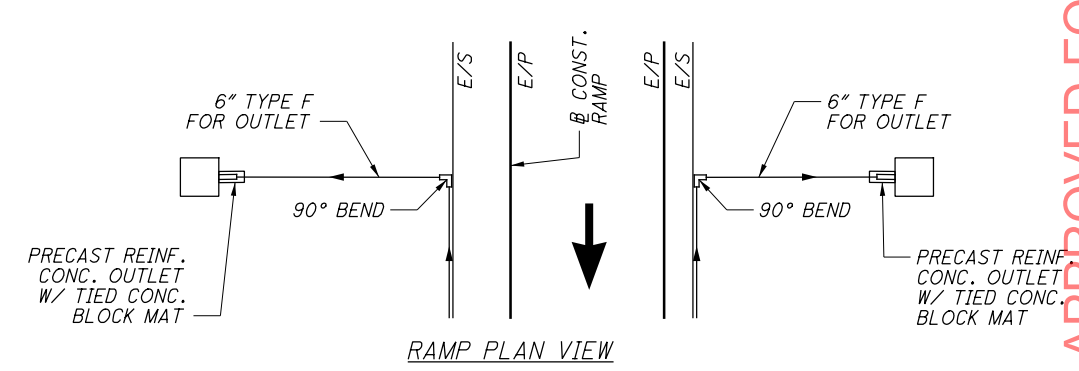
TYPICAL MAINLINE UNDERDRAIN SECTION



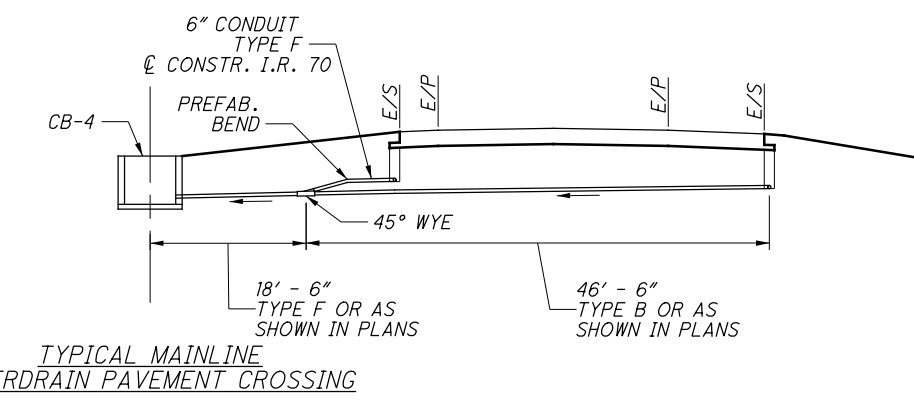
TYPICAL RAMP UNDERDRAIN PAVEMENT CROSSING



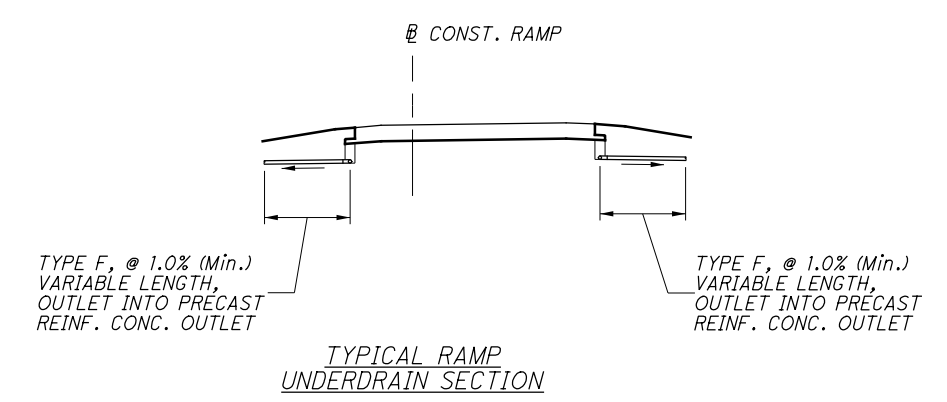
MAINLINE PLAN VIEW



RAMP PLAN VIEW



TYPICAL MAINLINE UNDERDRAIN PAVEMENT CROSSING



TYPICAL RAMP UNDERDRAIN SECTION

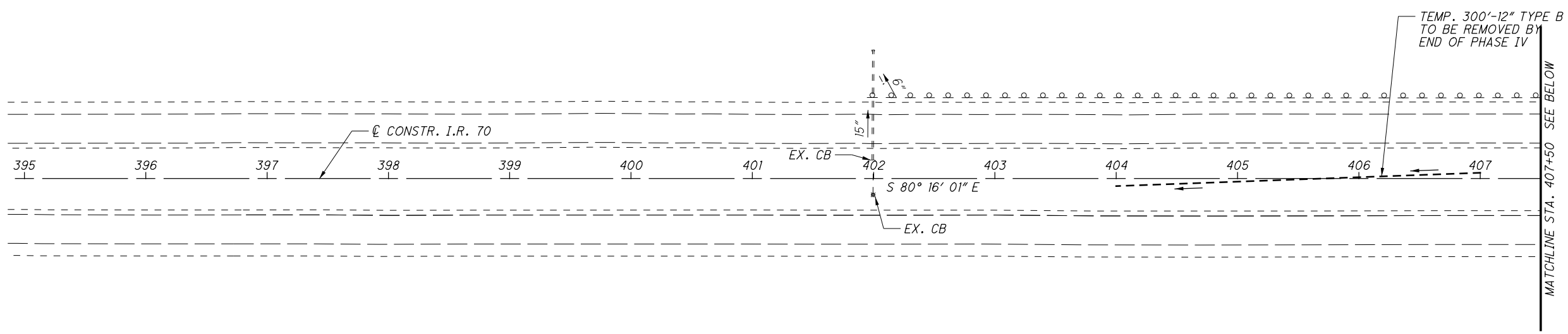
APPROVED FOR CONSTRUCTION - 5/2/2011

CALCULATED
CDS
CHECKED
BBD

UNDERDRAINS DETAILS

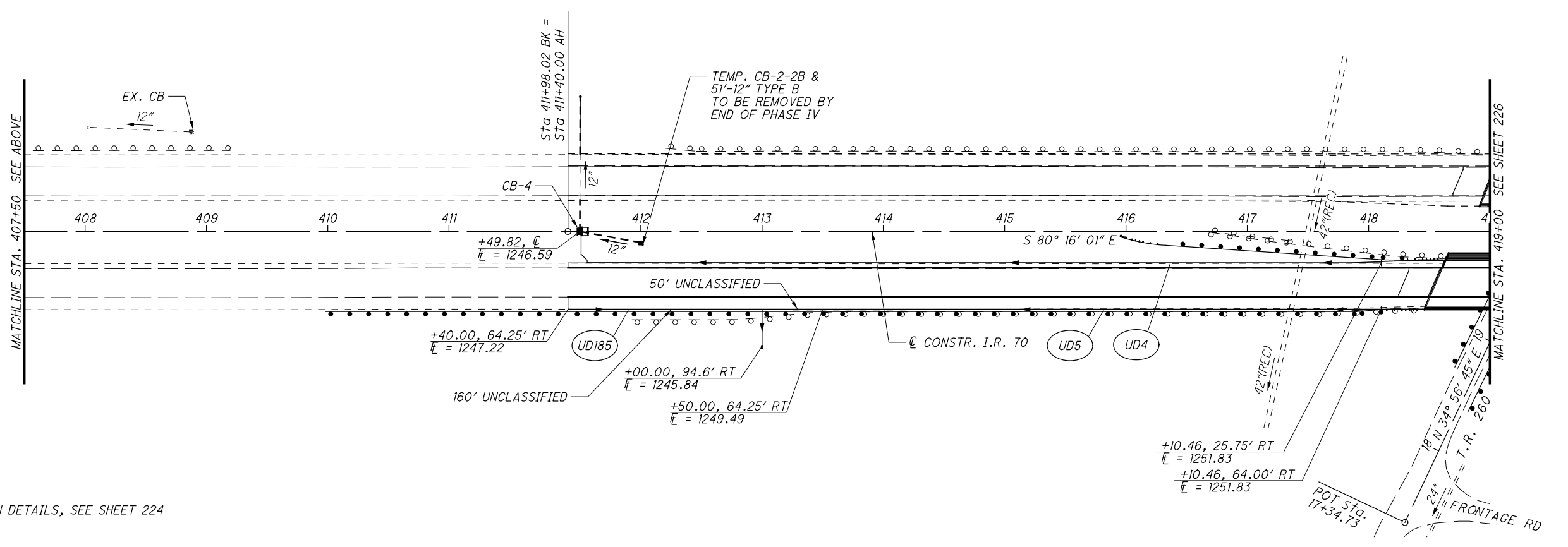
BEL-70-7.61

224
307



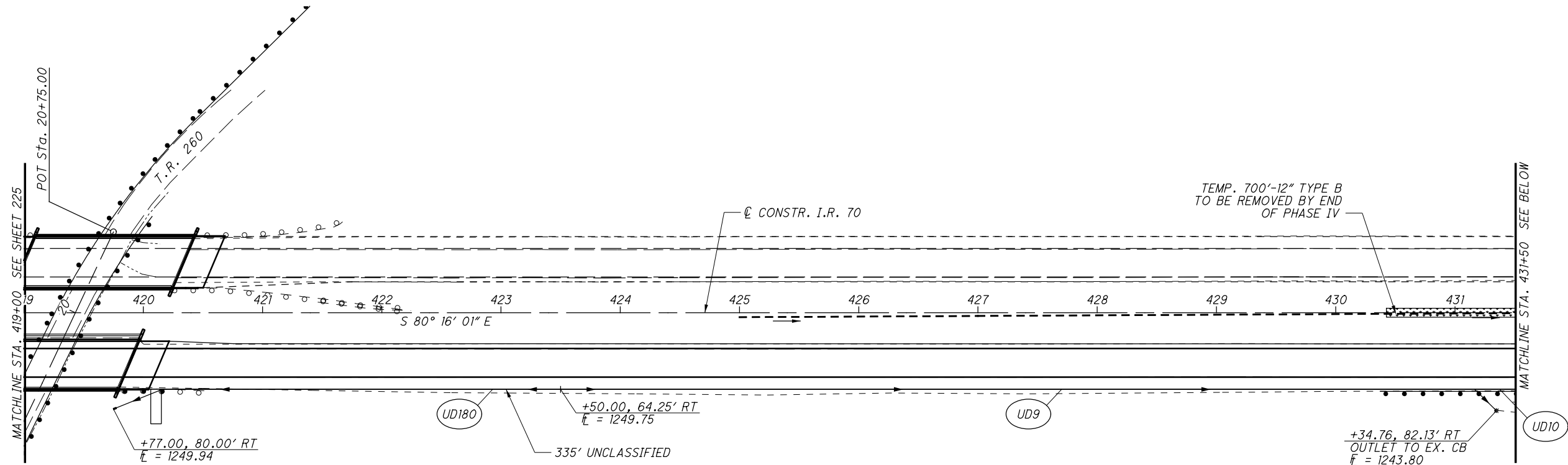
NOTE: BEGINNING UNDERDRAIN DEPTH IS 18" BELOW EXISTING SUBGRADE, OR 18" BELOW PROPOSED SUBGRADE IN FULL DEPTH PAVEMENT AREAS.

- STORM LEGEND**
- EXISTING STORM SEWER.
 - STORM SEWER INSTALLED IN PRIOR PHASE.
 - STORM SEWER INSTALLED IN THIS PHASE.



FOR UNDERDRAIN DETAILS, SEE SHEET 224

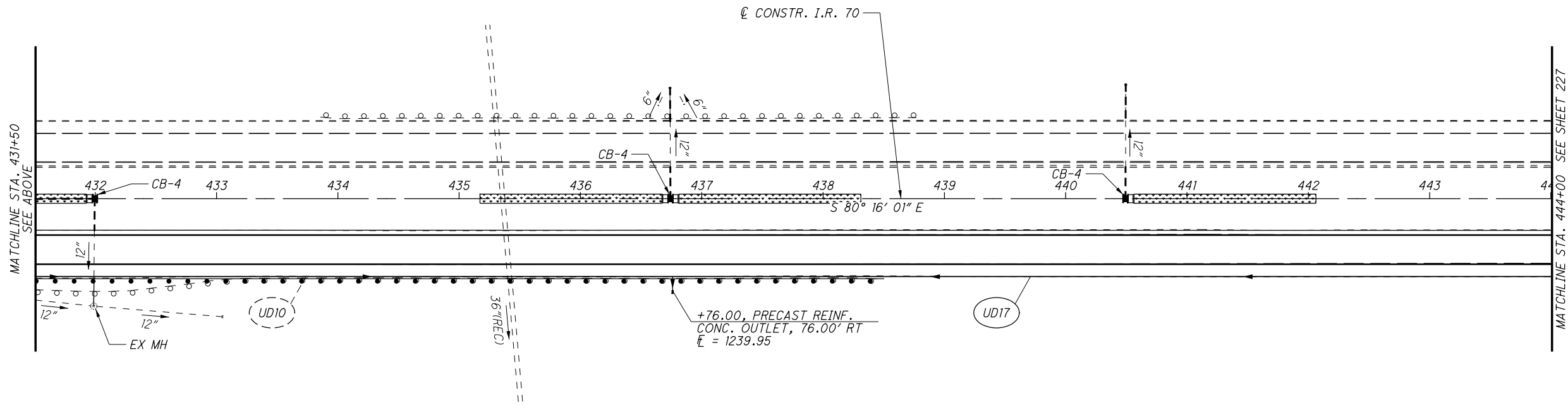
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NOTE: BEGINNING UNDERDRAIN DEPTH IS 18" BELOW EXISTING SUBGRADE, OR 18" BELOW PROPOSED SUBGRADE IN FULL DEPTH PAVEMENT AREAS.

STORM LEGEND

- EXISTING STORM SEWER.
- STORM SEWER INSTALLED IN PRIOR PHASE.
- STORM SEWER INSTALLED IN THIS PHASE.



FOR UNDERDRAIN DETAILS, SEE SHEET 224

CALCULATED
CDS
CHECKED
BBD

0 50 100
HORIZONTAL
SCALE IN FEET

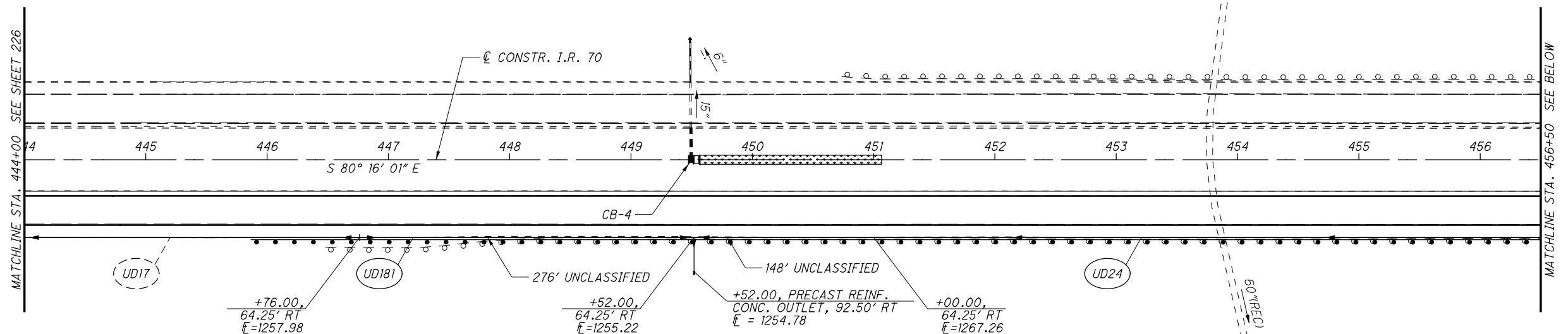
APPROVED FOR CONSTRUCTION - 5/2/2011

UNDERDRAIN DETAILS
STA. 419+00 TO STA. 444+00

BEL-70-7.61

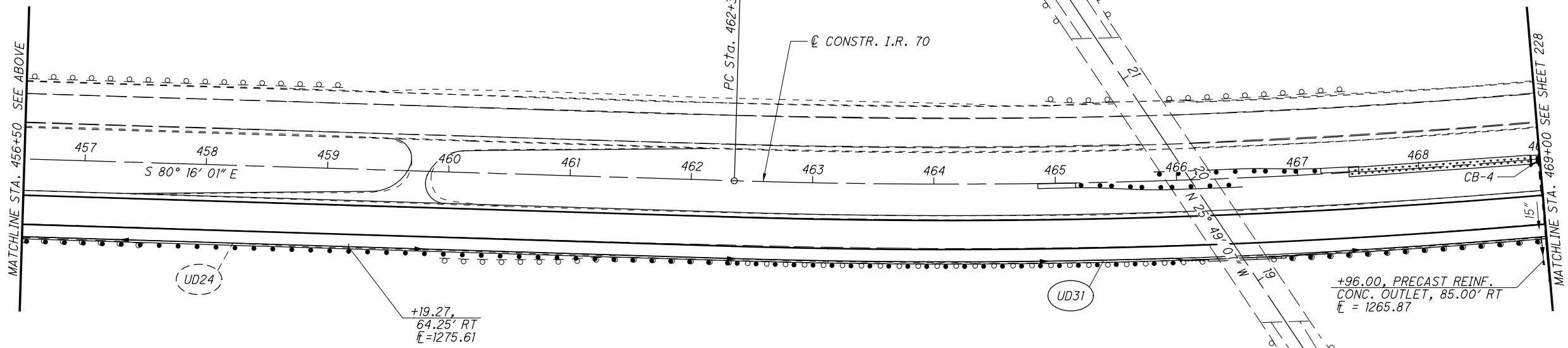
226
307

P:\76825\drainage\sheets\76825DD0403.dgn 4/14/2011 10:25:41 AM mcorneett



NOTE: BEGINNING UNDERDRAIN DEPTH IS 18" BELOW EXISTING SUBGRADE, OR 18" BELOW PROPOSED SUBGRADE IN FULL DEPTH PAVEMENT AREAS.

- STORM LEGEND
- EXISTING STORM SEWER.
 - STORM SEWER INSTALLED IN PRIOR PHASE.
 - STORM SEWER INSTALLED IN THIS PHASE.



FOR UNDERDRAIN DETAILS, SEE SHEET 224

CALCULATED CDS CHECKED BBD

0 50 100
HORIZONTAL SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

UNDERDRAIN DETAILS
STA. 444+00 TO STA. 469+00

BEL-70-7.61

227
307



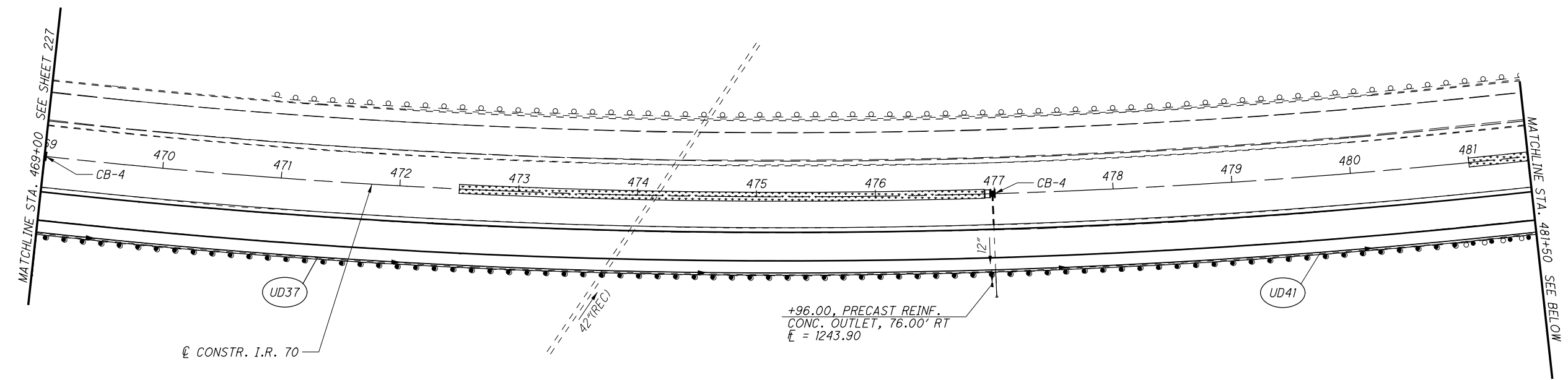
CALCULATED	CDS	CHECKED	BDD
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APPROVED FOR CONSTRUCTION - 5/2/2011

UNDERDRAIN DETAILS
STA. 469+00 TO STA. 494+00

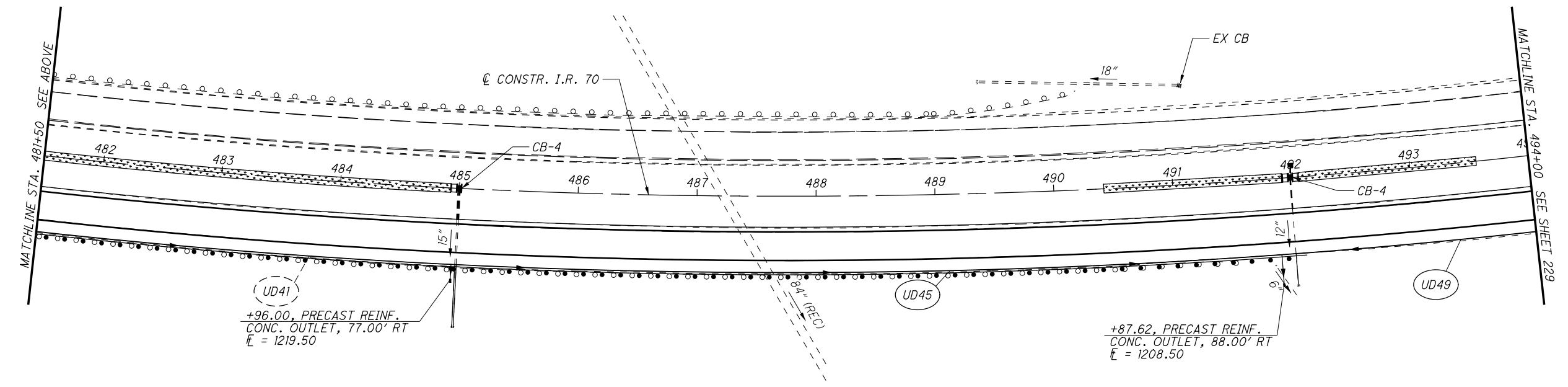
BEL-70-7.61

228
307



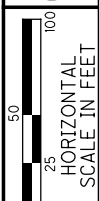
NOTE: BEGINNING UNDERDRAIN DEPTH IS 18" BELOW EXISTING SUBGRADE, OR 18" BELOW PROPOSED SUBGRADE IN FULL DEPTH PAVEMENT AREAS.

- STORM LEGEND
- EXISTING STORM SEWER.
 - · - · - STORM SEWER INSTALLED IN PRIOR PHASE.
 - STORM SEWER INSTALLED IN THIS PHASE.



FOR UNDERDRAIN DETAILS, SEE SHEET 224

P:\76825\drainage\sheets\76825DD0404.dgn 4/14/2011 10:25:42 AM mcornett



CALCULATED
CDS
CHECKED
BBD

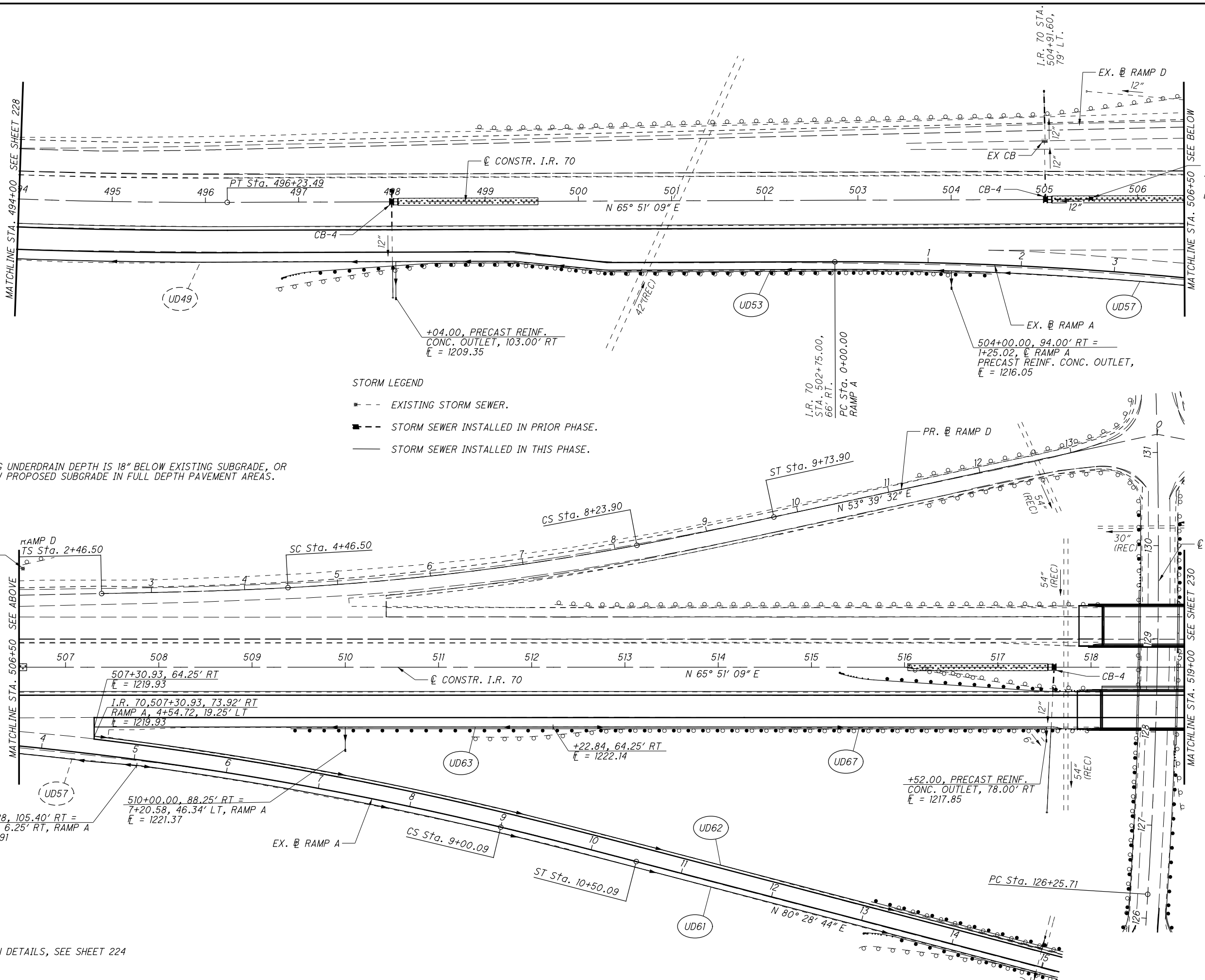
APPROVED FOR CONSTRUCTION - 5/2/2011

UNDERDRAIN DETAILS

STA. 494+00 TO STA. 519+00

BEL-70-7.61

229
307



TEMP. CB-2-2B & 49'-12" TYPE C TO BE REMOVED BY END OF PHASE IV

- STORM LEGEND
- EXISTING STORM SEWER.
 - - - STORM SEWER INSTALLED IN PRIOR PHASE.
 - STORM SEWER INSTALLED IN THIS PHASE.

NOTE: BEGINNING UNDERDRAIN DEPTH IS 18" BELOW EXISTING SUBGRADE, OR 18" BELOW PROPOSED SUBGRADE IN FULL DEPTH PAVEMENT AREAS.

EX CB
RAMP D
TS Sta. 2+46.50

SC Sta. 4+46.50

507+30.93, 64.25' RT
E = 1219.93

I.R. 70, 507+30.93, 73.92' RT
RAMP A, 4+54.72, 19.25' LT
E = 1219.93

507+76.28, 105.40' RT =
5+03.57, 6.25' RT, RAMP A
E = 1218.91

510+00.00, 88.25' RT =
7+20.58, 46.34' LT, RAMP A
E = 1221.37

507+30.93, 64.25' RT
E = 1219.93

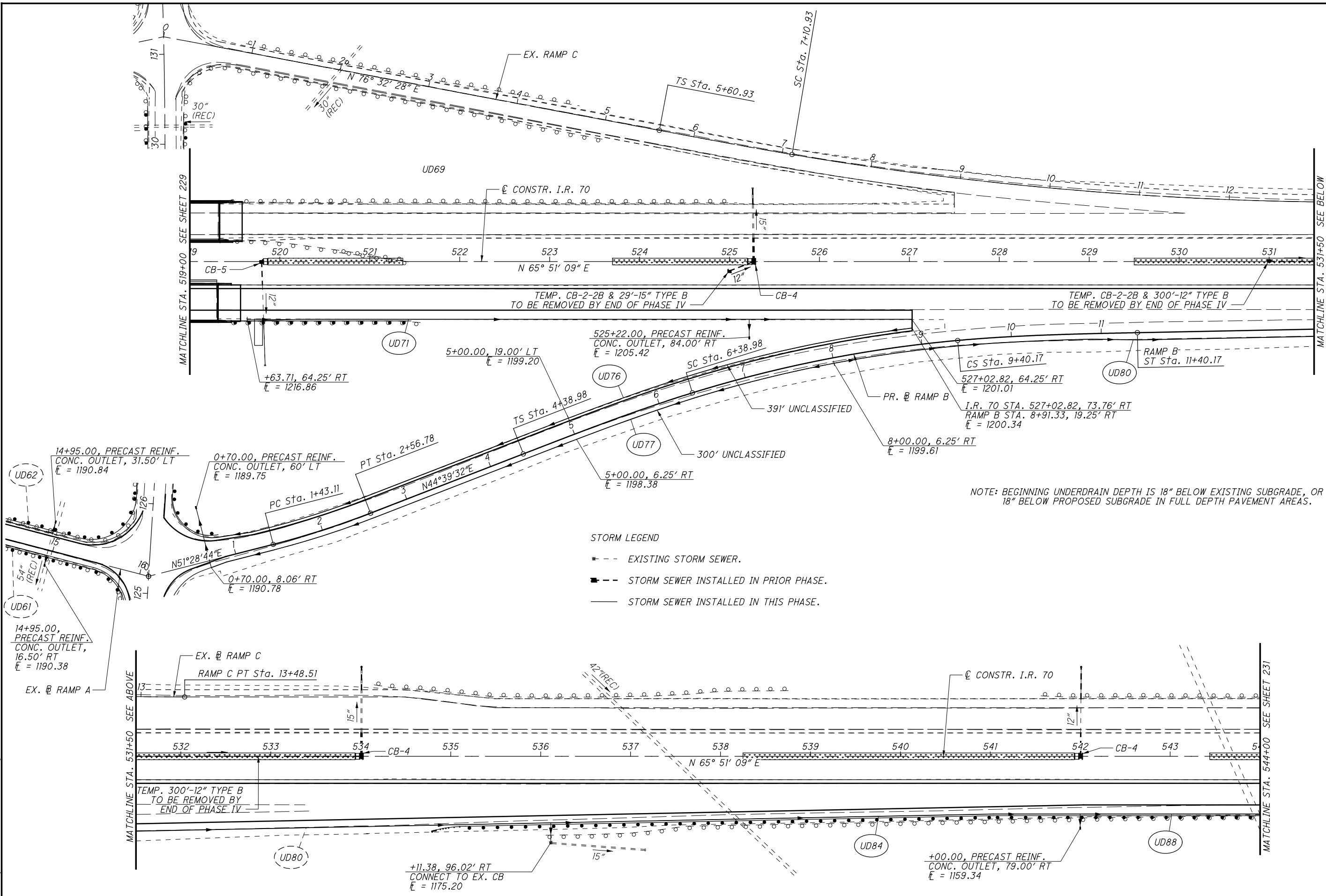
+22.84, 64.25' RT
E = 1222.14

+52.00, PRECAST REINF.
CONC. OUTLET, 78.00' RT
E = 1217.85

FOR UNDERDRAIN DETAILS, SEE SHEET 224

P:\76825\drainage\sheet\76825DD405.dgn 4/14/2011 10:25:43 AM mcornett

P:\76825\drainage\sheets\76825DD406.dgn 4/14/2011 10:25:44 AM mcornett



STORM LEGEND

- - - EXISTING STORM SEWER.
- · - · STORM SEWER INSTALLED IN PRIOR PHASE.
- STORM SEWER INSTALLED IN THIS PHASE.

NOTE: BEGINNING UNDERDRAIN DEPTH IS 18" BELOW EXISTING SUBGRADE, OR 18" BELOW PROPOSED SUBGRADE IN FULL DEPTH PAVEMENT AREAS.

FOR UNDERDRAIN DETAILS, SEE SHEET 224

CALCULATED
CDS
CHECKED
BBD

0 50 100
25
HORIZONTAL
SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

UNDERDRAIN DETAILS

STA. 519+00 TO STA. 544+00

BEL-70-7.61

230
307



CALCULATED CDS CHECKED BBD

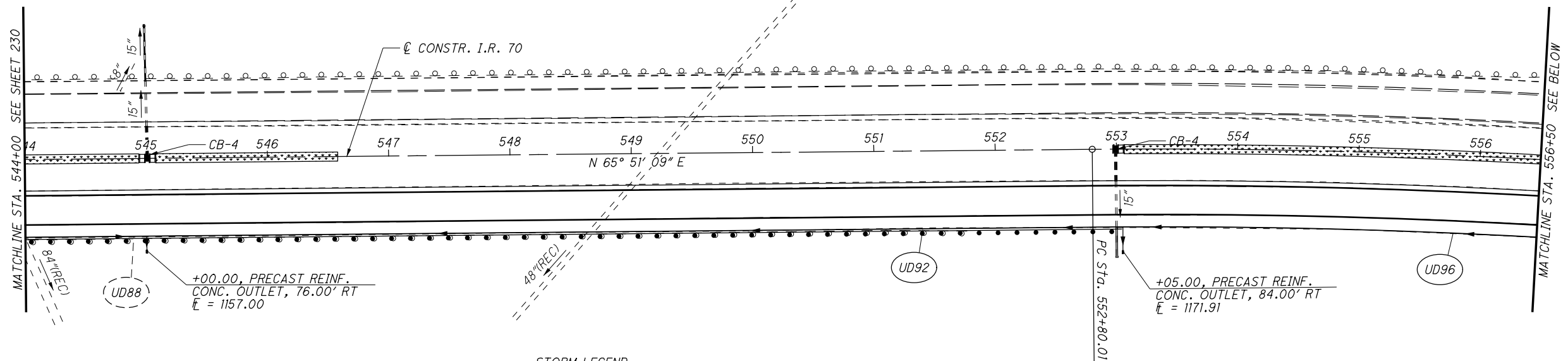
APPROVED FOR CONSTRUCTION - 5/2/2011

UNDERDRAIN DETAILS

STA. 544+00 TO STA. 569+00

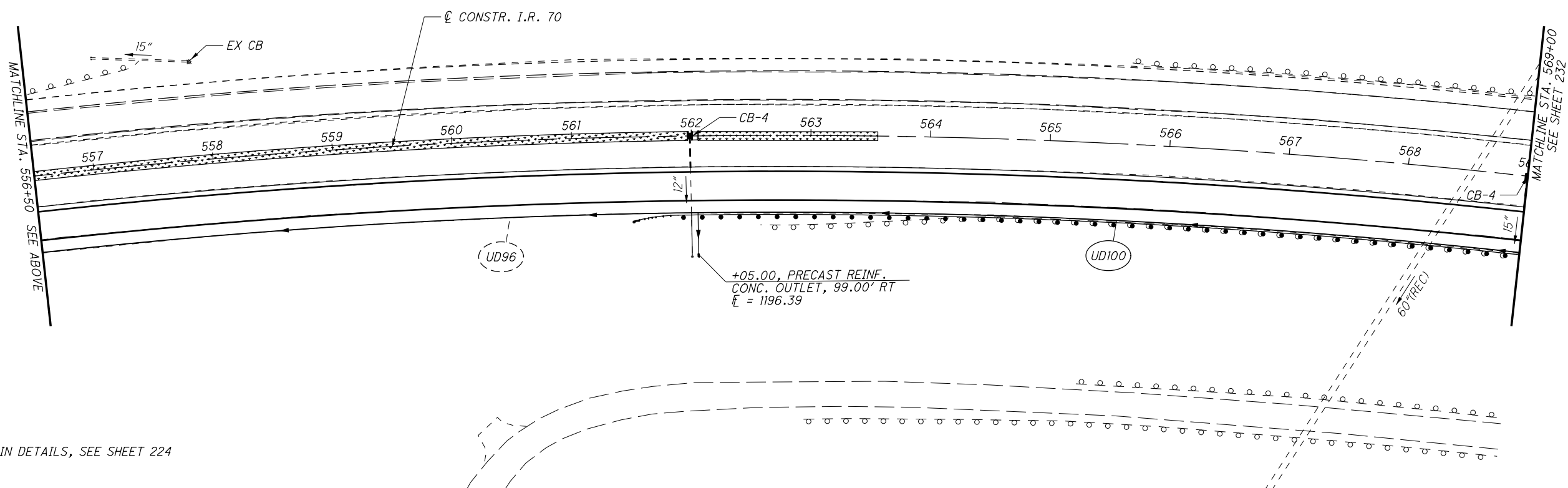
BEL-70-7.61

231
307



NOTE: BEGINNING UNDERDRAIN DEPTH IS 18" BELOW EXISTING SUBGRADE, OR 18" BELOW PROPOSED SUBGRADE IN FULL DEPTH PAVEMENT AREAS.

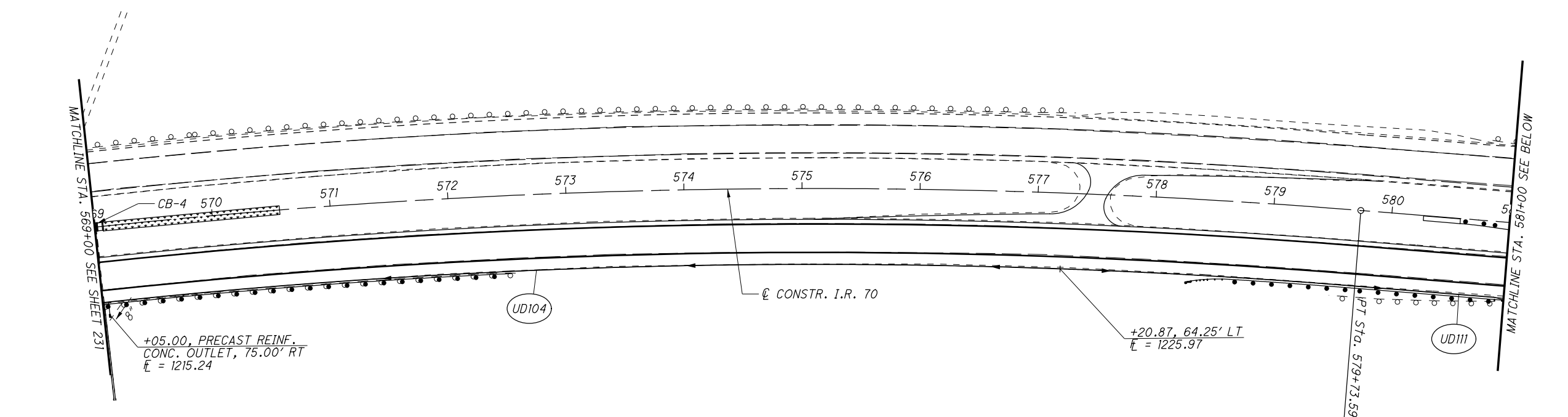
- STORM LEGEND
- - - EXISTING STORM SEWER.
 - · - · - STORM SEWER INSTALLED IN PRIOR PHASE.
 - STORM SEWER INSTALLED IN THIS PHASE.



FOR UNDERDRAIN DETAILS, SEE SHEET 224

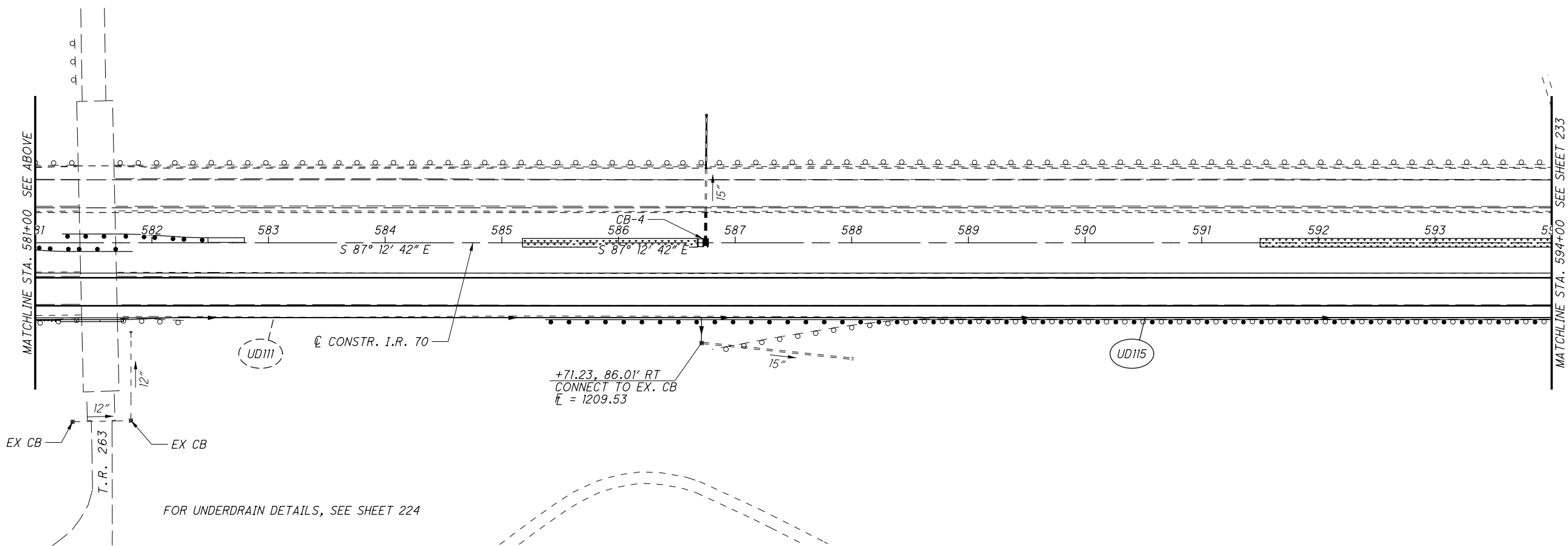
P:\76825\drainage\sheets\76825DD0407.dgn 4/14/2011 10:25:45 AM mcornett

P:\76825\drainage\sheets\76825DD408.dgn 4/14/2011 10:25:46 AM mcornett



NOTE: BEGINNING UNDERDRAIN DEPTH IS 18" BELOW EXISTING SUBGRADE, OR 18" BELOW PROPOSED SUBGRADE IN FULL DEPTH PAVEMENT AREAS.

- STORM LEGEND
- EXISTING STORM SEWER.
 - · - · - STORM SEWER INSTALLED IN PRIOR PHASE.
 - STORM SEWER INSTALLED IN THIS PHASE.



FOR UNDERDRAIN DETAILS, SEE SHEET 224

CALCULATED
CDS
CHECKED
BBD

0 50 100
HORIZONTAL
SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

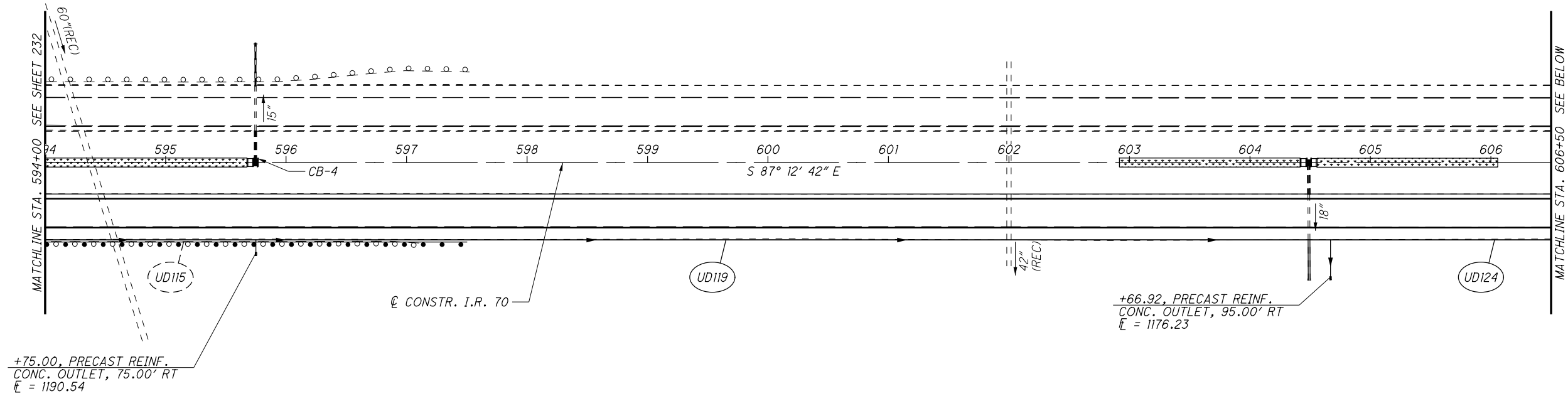
UNDERDRAIN DETAILS

STA. 569+00 TO STA. 594+00

BEL-70-7.61

232
307

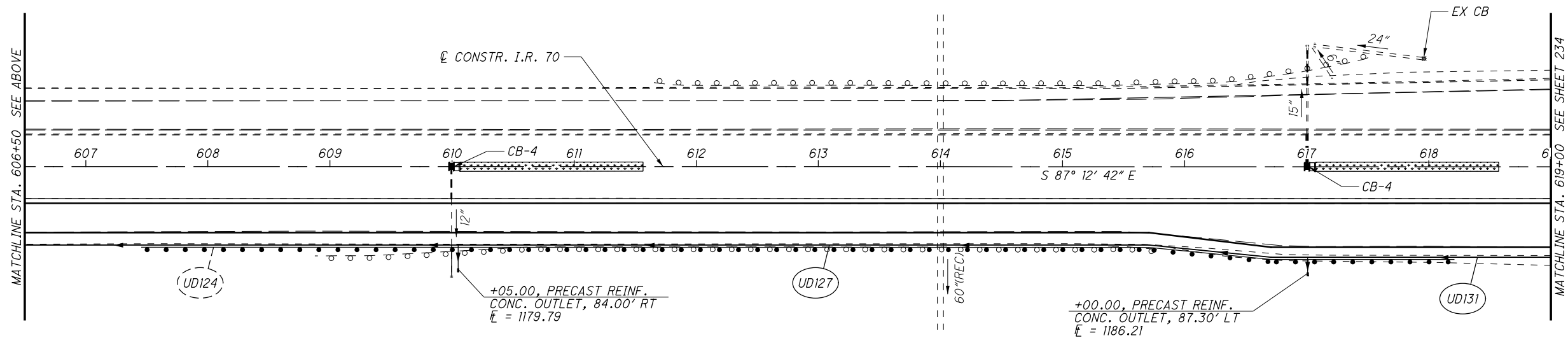
P:\76825\drainage\sheets\76825DD409.dgn 4/14/2011 10:25:47 AM mcornett



NOTE: BEGINNING UNDERDRAIN DEPTH IS 18" BELOW EXISTING SUBGRADE, OR 18" BELOW PROPOSED SUBGRADE IN FULL DEPTH PAVEMENT AREAS.

STORM LEGEND

- EXISTING STORM SEWER.
- STORM SEWER INSTALLED IN PRIOR PHASE.
- STORM SEWER INSTALLED IN THIS PHASE.



FOR UNDERDRAIN DETAILS, SEE SHEET 224

CALCULATED CDS CHECKED BBD

0 50 100
HORIZONTAL SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

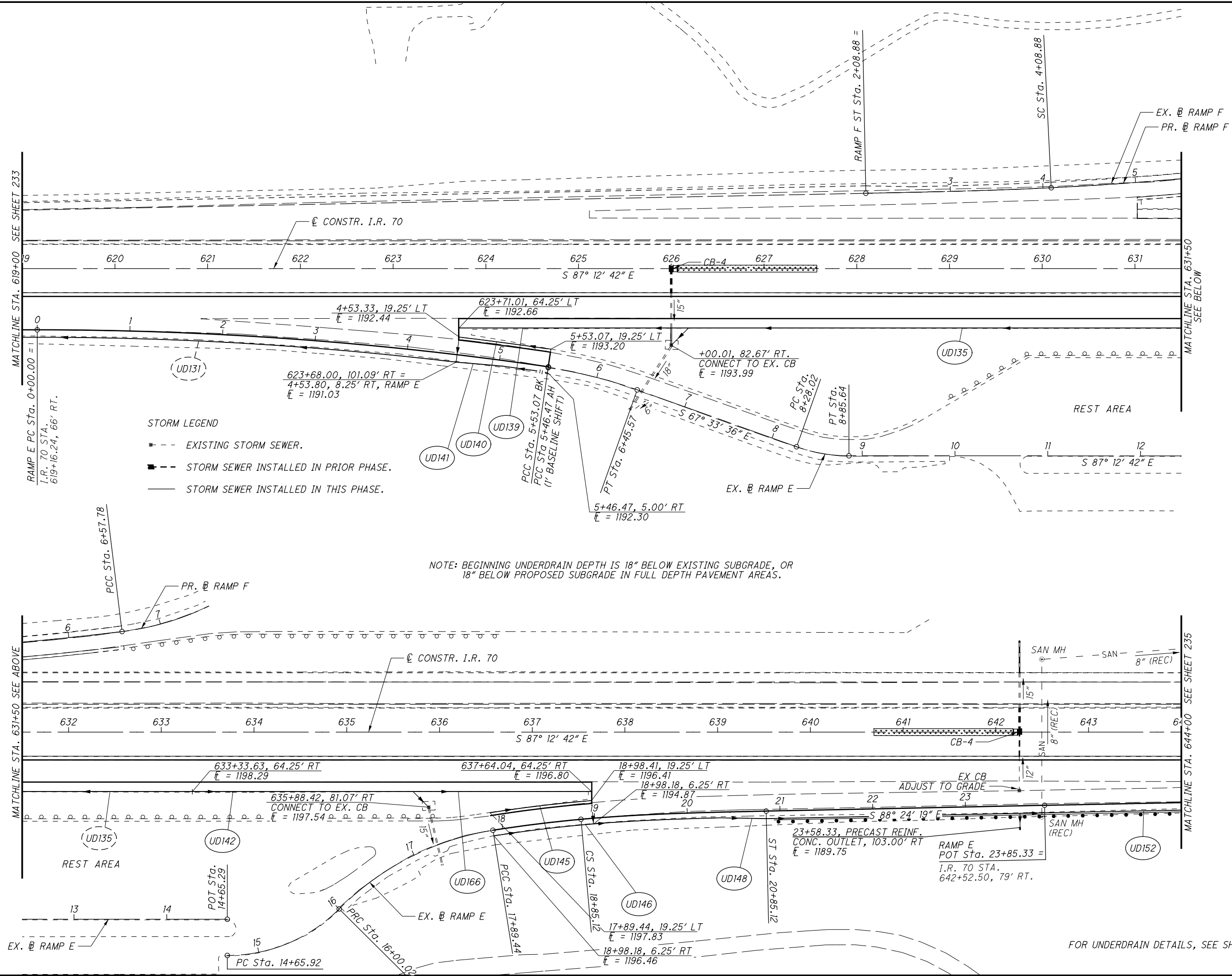
UNDERDRAIN DETAILS

STA. 594+00 TO STA. 619+00

BEL-70-7.61

233
307

P:\76825\drainage\sheets\76825DD410.dgn 4/14/2011 10:25:48 AM mcorneett



STORM LEGEND

- EXISTING STORM SEWER.
- · - · - STORM SEWER INSTALLED IN PRIOR PHASE.
- STORM SEWER INSTALLED IN THIS PHASE.

NOTE: BEGINNING UNDERDRAIN DEPTH IS 18" BELOW EXISTING SUBGRADE, OR 18" BELOW PROPOSED SUBGRADE IN FULL DEPTH PAVEMENT AREAS.

CALCULATED
CDS
CHECKED
BBD

0 50 100
HORIZONTAL
SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

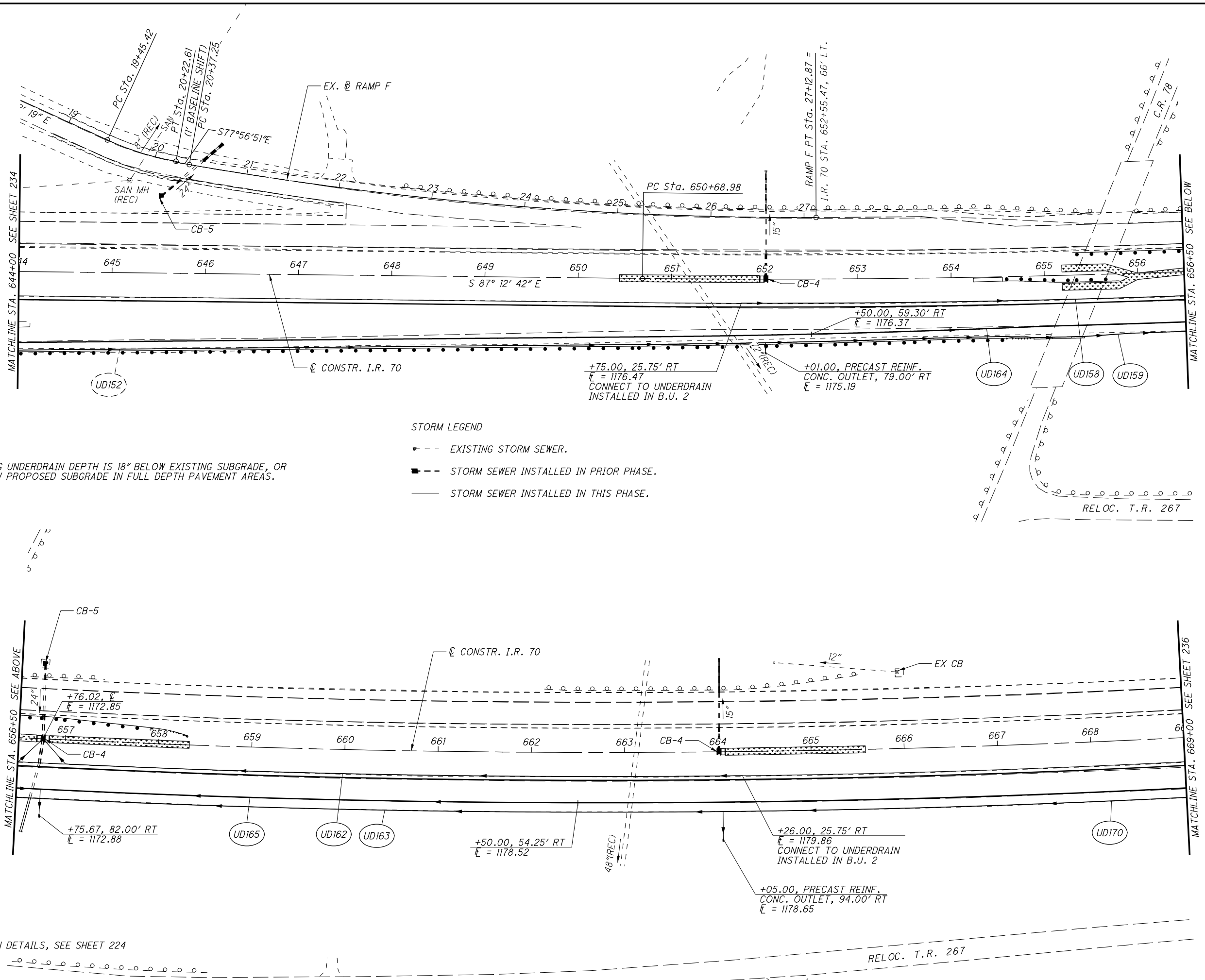
UNDERDRAIN DETAILS
STA. 619+00 TO STA. 644+00

BEL-70-7.61

234
307

FOR UNDERDRAIN DETAILS, SEE SHEET 224

P:\76825\drainage\sheets\76825DD411.dgn 4/14/2011 10:25:49 AM mcornett



NOTE: BEGINNING UNDERDRAIN DEPTH IS 18" BELOW EXISTING SUBGRADE, OR 18" BELOW PROPOSED SUBGRADE IN FULL DEPTH PAVEMENT AREAS.

STORM LEGEND

- - - EXISTING STORM SEWER.
- · - · - STORM SEWER INSTALLED IN PRIOR PHASE.
- STORM SEWER INSTALLED IN THIS PHASE.

FOR UNDERDRAIN DETAILS, SEE SHEET 224

CALCULATED
CDS
CHECKED
BDD

0 50 100
HORIZONTAL
SCALE IN FEET

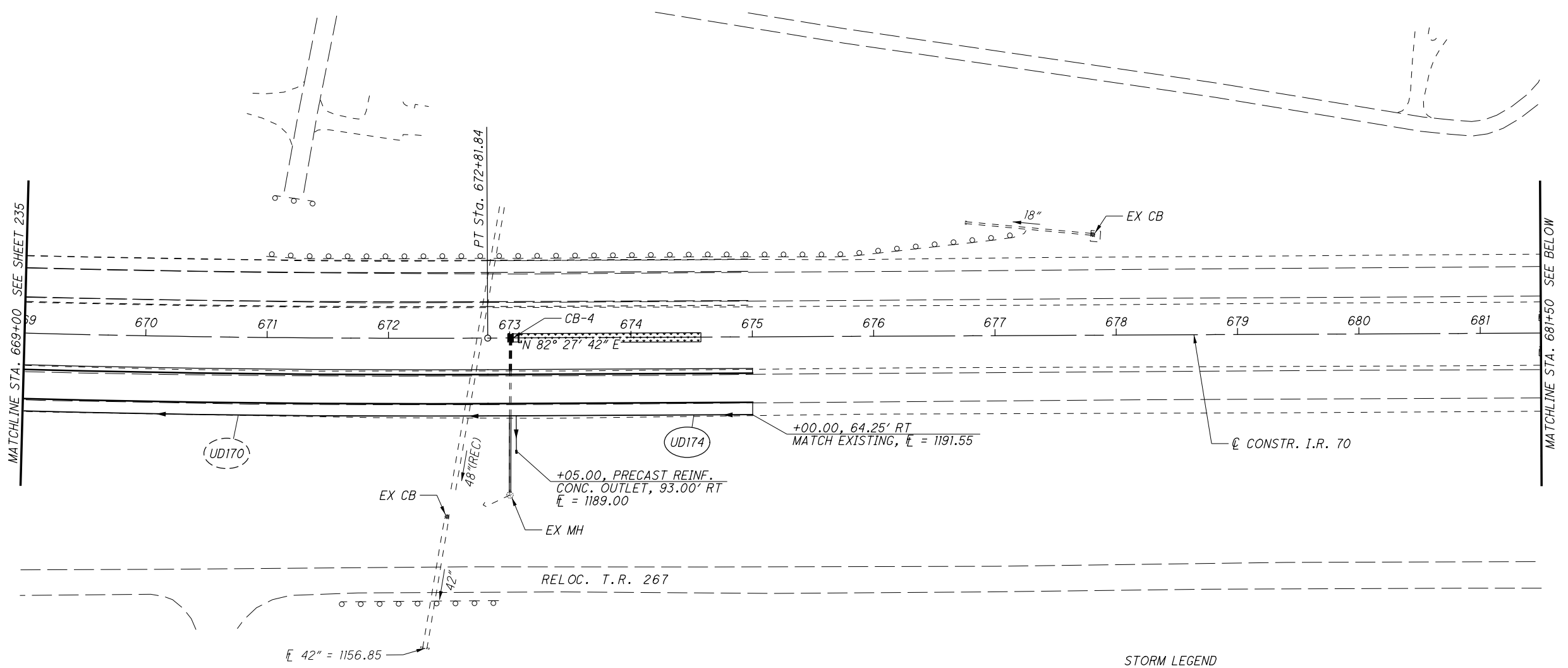
APPROVED FOR CONSTRUCTION - 5/2/2011

UNDERDRAIN DETAILS
STA. 644+00 TO STA. 669+00

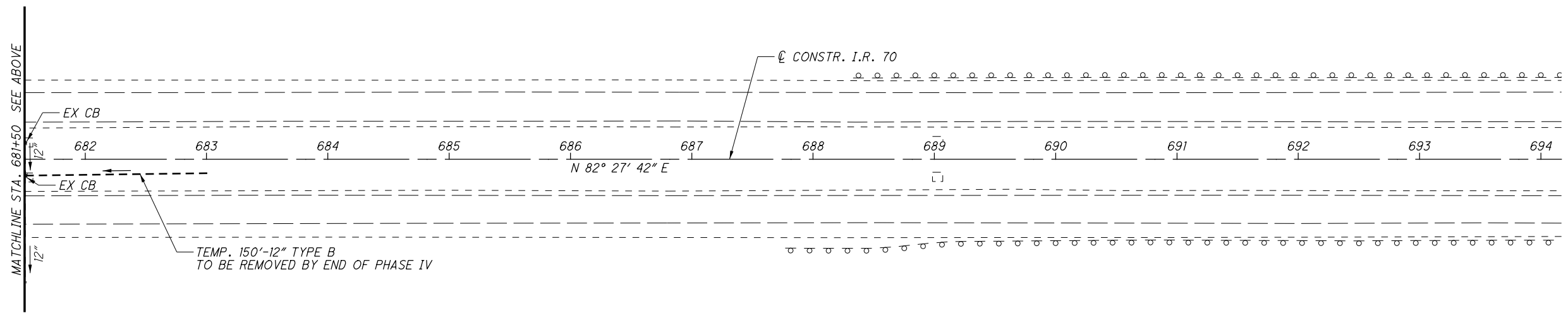
BEL-70-7.61

235
307

P:\76825\drainage\sheets\76825DD412.dgn 4/14/2011 10:25:49 AM mcornett



NOTE: BEGINNING UNDERDRAIN DEPTH IS 18" BELOW EXISTING SUBGRADE, OR 18" BELOW PROPOSED SUBGRADE IN FULL DEPTH PAVEMENT AREAS.



STORM LEGEND

- - - EXISTING STORM SEWER.
- · - · - STORM SEWER INSTALLED IN PRIOR PHASE.
- STORM SEWER INSTALLED IN THIS PHASE.

CALCULATED CDS CHECKED BBD

0 50 100
25
HORIZONTAL SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

UNDERDRAIN DETAILS
STA. 669+00 TO STA. 694+00

BEL-70-7.61

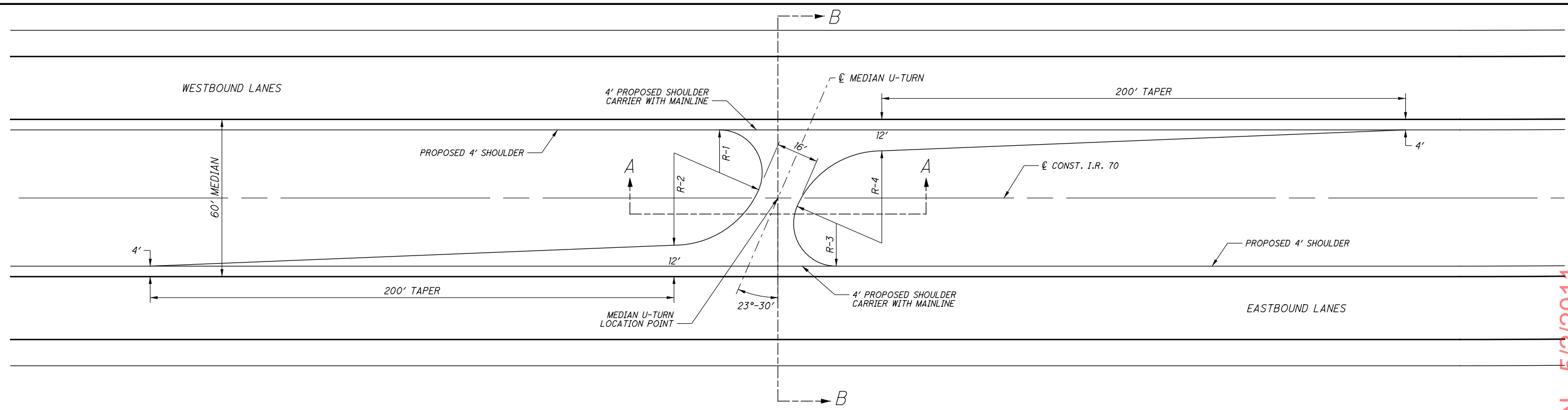
236
307

FOR UNDERDRAIN DETAILS, SEE SHEET 224

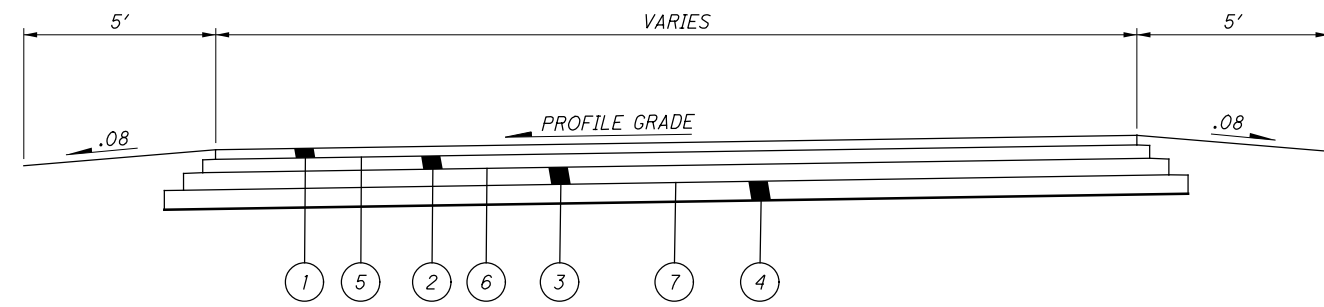
APPROVED FOR CONSTRUCTION - 5/2/2011

PROPOSED MEDIAN U-TURN DETAIL

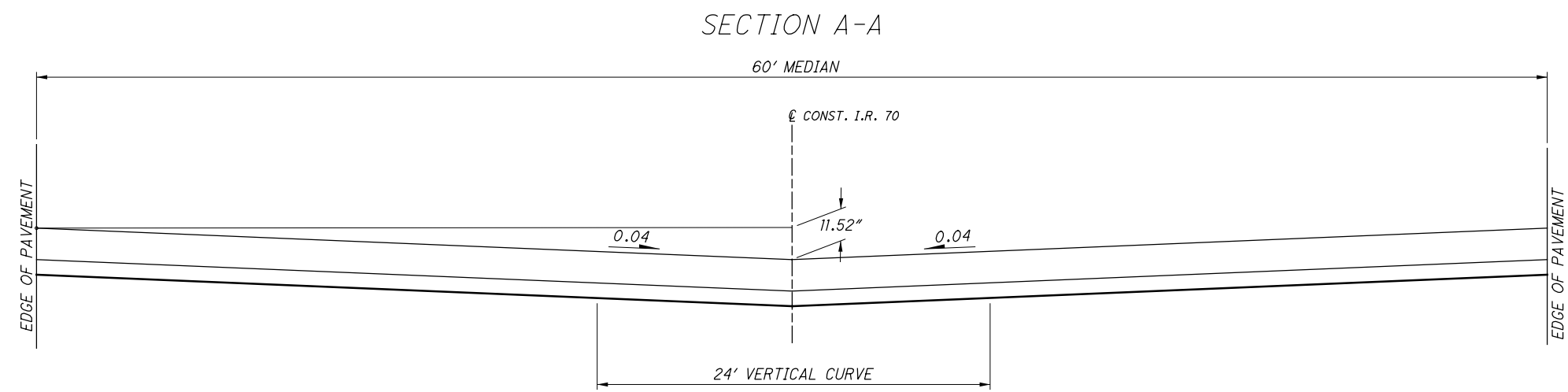
BEL-70-7.61



U-TURN STA.	R-1		R-2		R-3		R-4	
	R	CENTER	R	CENTER	R	CENTER	R	CENTER
459+75	16.3'	459+52.71, 9.69' LT	35.2'	459+35.34, 17.24' LT	16.3'	459+97.29, 9.69' RT	35.2'	460+14.66, 17.24' RT
577+50	16.3'	577+27.77, 9.72' LT	35.5'	577+10.25, 17.47' LT	16.3'	577+72.36, 9.66' RT	35.0'	577+89.57, 17.02' RT



- LEGEND**
- ① ITEM 442 - 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5 mm TYPE A (448)
 - ② ITEM 442 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 mm TYPE A (448)
 - ③ ITEM 302 - 9" ASPHALT CONCRETE BASE, PG64-22
 - ④ ITEM 304 - 6" AGGREGATE BASE
 - ⑤ ITEM 407 - TACK COAT FOR INTERMEDIATE COAT
 - ⑥ ITEM 407 - TACK COAT
 - ⑦ ITEM 408 - PRIME COAT



SECTION B-B

REFERENCE LOCATION SIGNS

THE LOCATION OF REFERENCE LOCATION SIGNS ON THE PLANS ARE APPROXIMATE AND A MORE PRECISE LOCATION WILL BE PROVIDED BY THE DEPARTMENT. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 30 DAYS IN ADVANCE OF THE PLANNED DATE OF REFERENCE LOCATION SIGN INSTALLATION. THE ENGINEER WILL CONTACT THE OFFICE OF TECHNICAL SERVICES WHICH WILL LOCATE THE LONGITUDINAL POSITION OF REFERENCE LOCATION SIGNS BY MEANS OF A PAINT MARK ON THE PAVEMENT EDGE. ALTERNATE MARKS WILL NOT BE PROVIDED ON DIVIDED HIGHWAYS AND THE CONTRACTOR SHALL SET REFERENCE LOCATION SIGNS FOR THE OPPOSITE ROADWAY ACROSS FROM THE PROVIDED MARK. DELINEATORS WHOSE NORMAL POSITION FALLS WITHIN 50 FEET OF A REFERENCE LOCATION SIGN SHALL BE OMITTED.

ITEM 630 SIGN, EXTRUSHEET GUIDE

THE DESIGNABLE EXTRUSHEET GUIDE SIGNS SHOWN IN THIS PLAN WERE DESIGNED USING THE FHWA STANDARD HIGHWAY ALPHABETS. THE CONTRACTOR SHALL USE CLEARVIEW FONTS FOR THESE SIGNS AS REQUIRED IN SECTION 630.04 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS. DO NOT REVISE OVERALL SIGN SIZES FROM WHAT IS SHOWN IN THE PLANS. THE EDGE SPACE BETWEEN THE BORDER AND THE TEXT MAY BE REDUCED FROM WHAT IS NORMALLY ACCEPTABLE TO ACHIEVE THE SIGN WIDTHS SHOWN. IF THIS RESULTS IN CROWDING OF THE BORDER, A SLIGHT REDUCTION IN INTER-LETTER AND INTER-WORD SPACING MAY BE USED.

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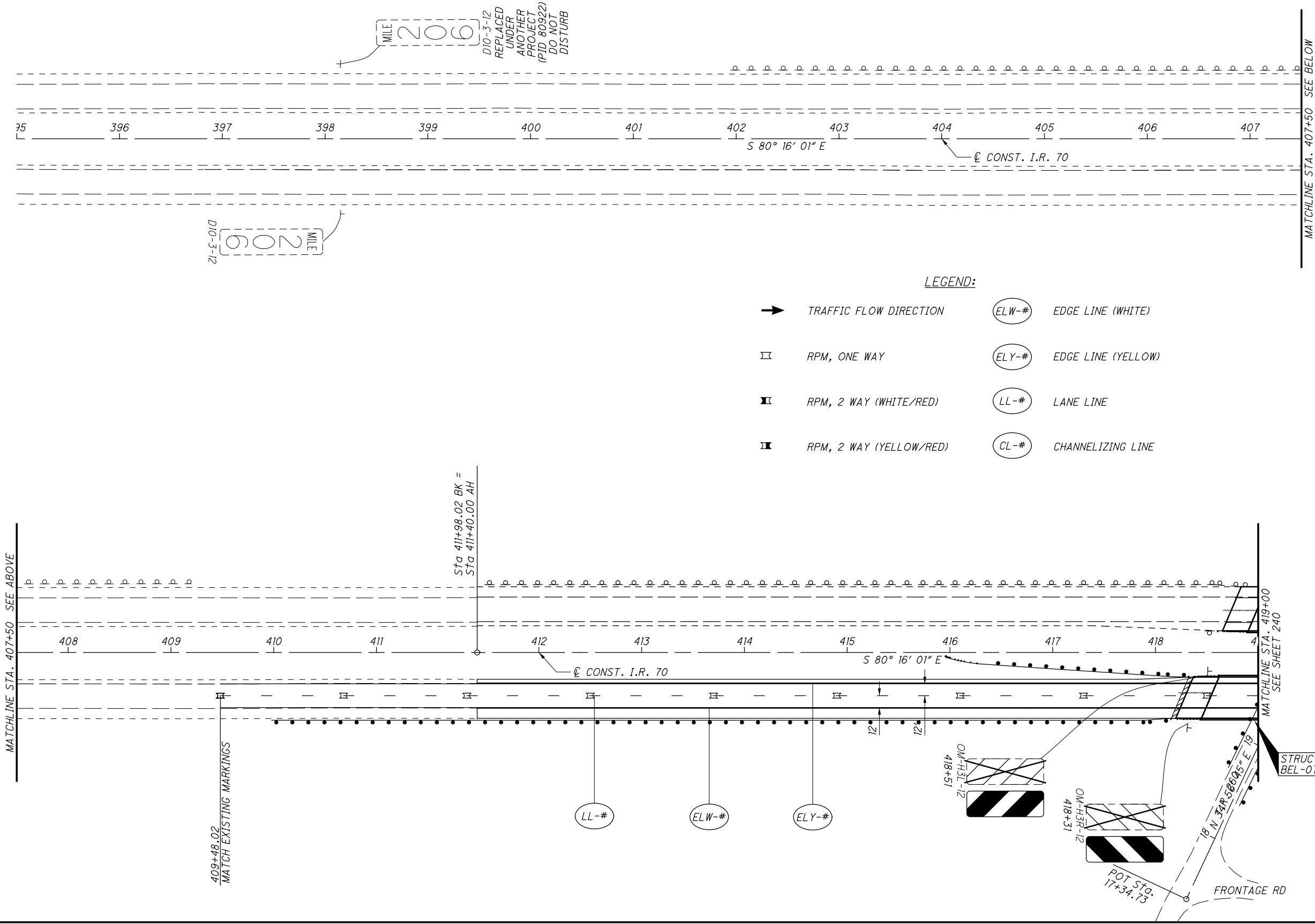
APPROVED FOR CONSTRUCTION - 5/2/2011

BEL-70-7.61

TRAFFIC CONTROL GENERAL NOTES

238
307

CALCULATED
CDS
CHECKED
BBD



MILE 206
 D10-3-12
 REPLACED
 UNDER
 ANOTHER
 PROJECT
 (PID. 80922)
 DO NOT
 DISTURB

MILE 209
 D10-3-12

LEGEND:

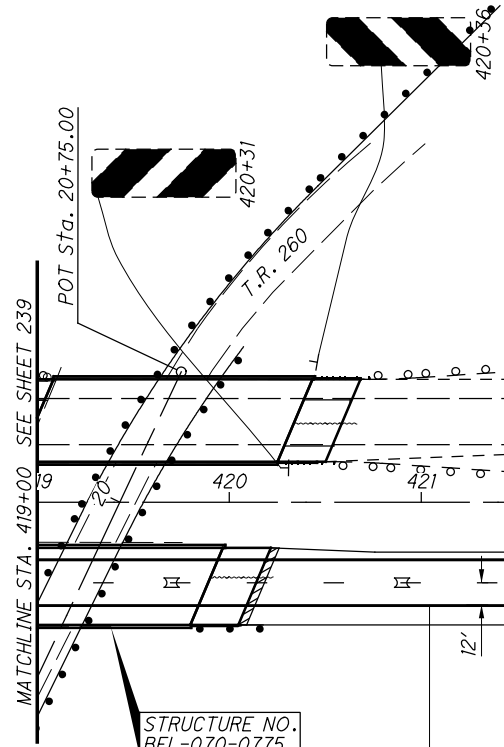
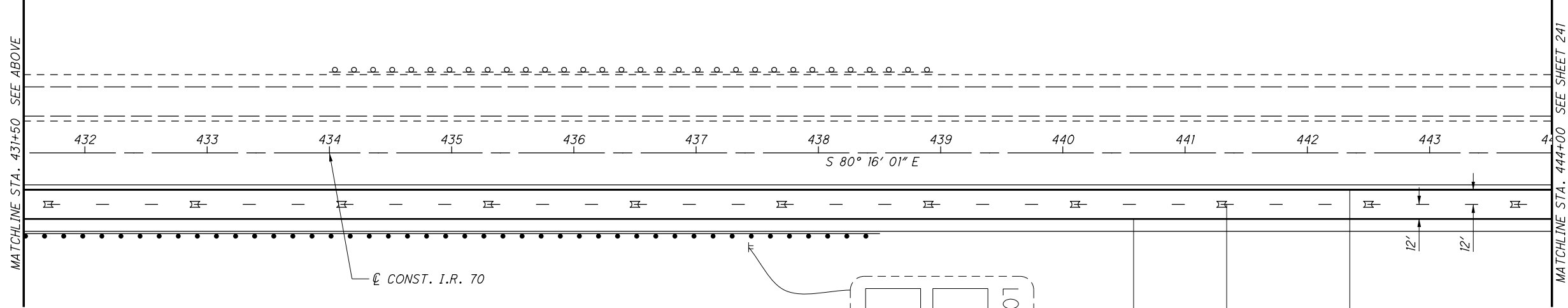
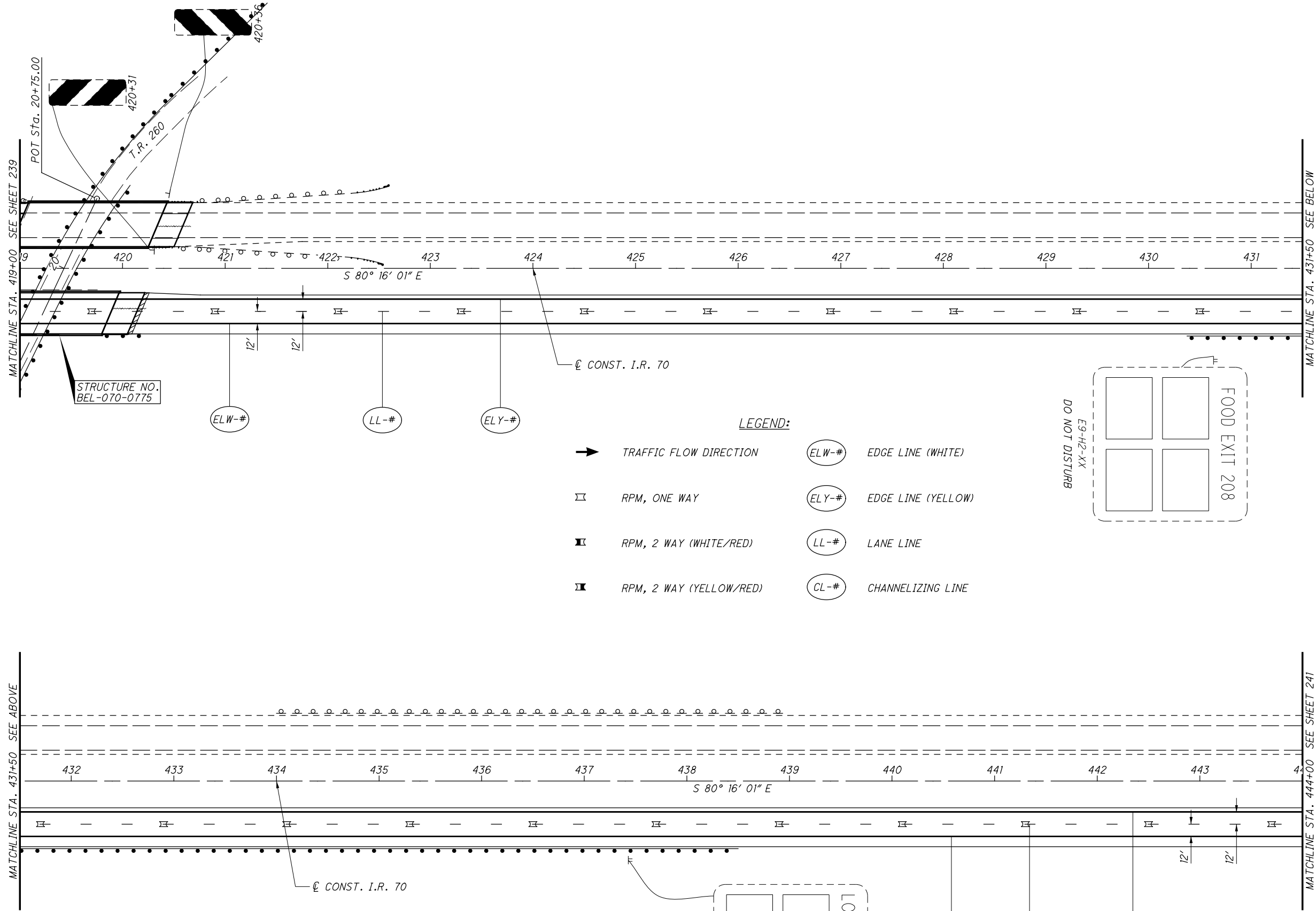
- ➔ TRAFFIC FLOW DIRECTION
- ⊏ RPM, ONE WAY
- ⊏ RPM, 2 WAY (WHITE/RED)
- ⊏ RPM, 2 WAY (YELLOW/RED)
- ELW-# EDGE LINE (WHITE)
- ELY-# EDGE LINE (YELLOW)
- LL-# LANE LINE
- CL-# CHANNELIZING LINE

APPROVED FOR CONSTRUCTION - 5/2/2011

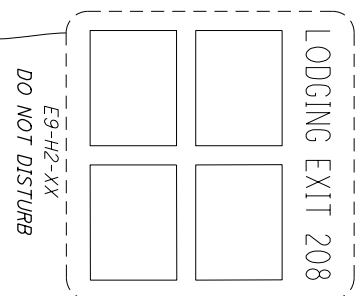
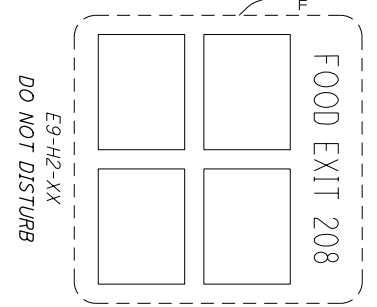
SIGNING AND PAVEMENT MARKING PLAN
 STA. 395+00 TO STA. 419+00

CALCULATED	MJC
CHECKED	BBD

0 50 100
 HORIZONTAL
 SCALE IN FEET



- LEGEND:**
- ➔ TRAFFIC FLOW DIRECTION
 - ▬ RPM, ONE WAY
 - ▬▬ RPM, 2 WAY (WHITE/RED)
 - ▬▬ RPM, 2 WAY (YELLOW/RED)
 - (ELW-#) EDGE LINE (WHITE)
 - (ELY-#) EDGE LINE (YELLOW)
 - (LL-#) LANE LINE
 - (CL-#) CHANNELIZING LINE



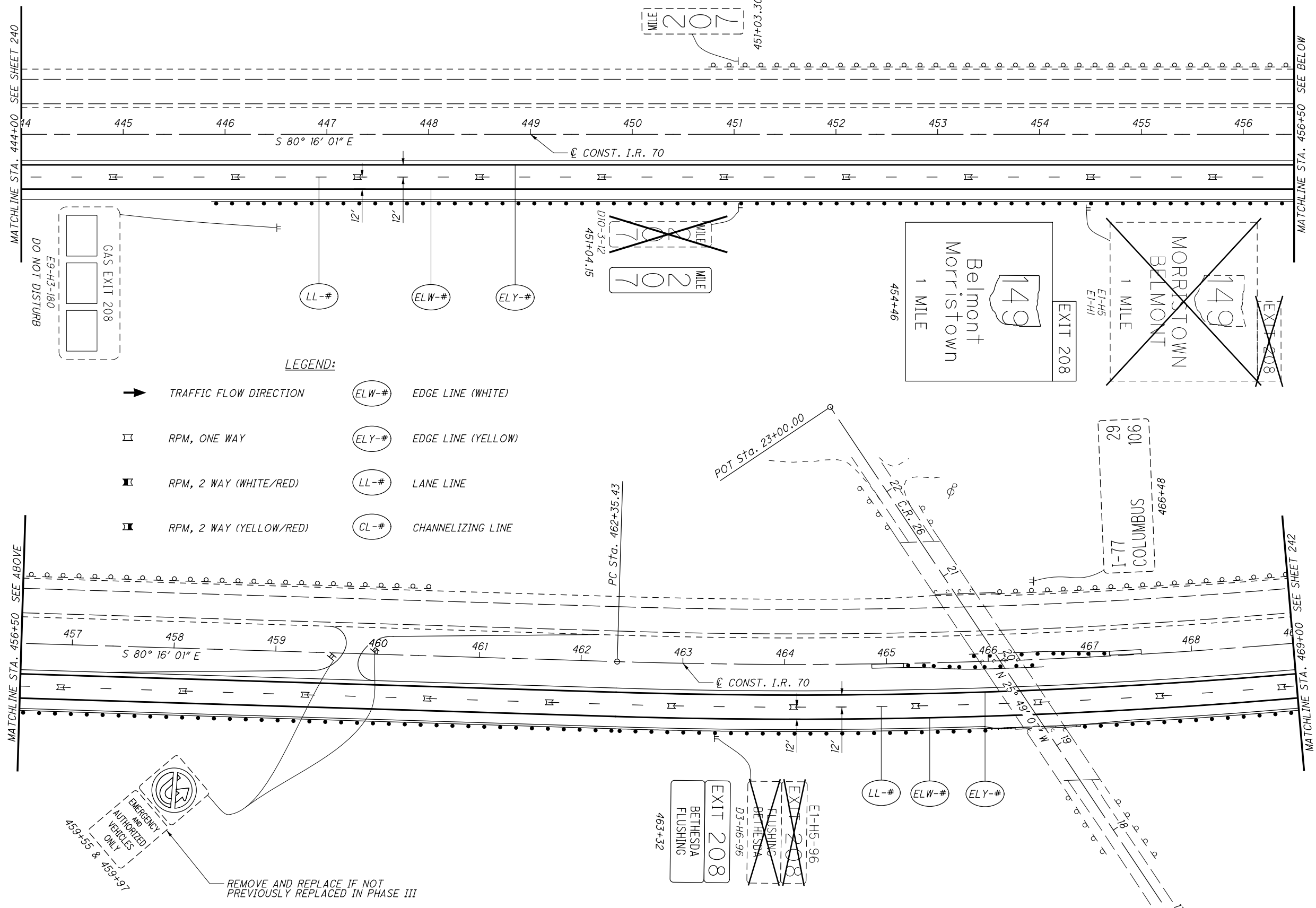
CALCULATED
MJC
CHECKED
BBD

0 50 100
HORIZONTAL
SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

SIGNING AND PAVEMENT MARKING PLAN

STA. 419+00 TO STA. 444+00

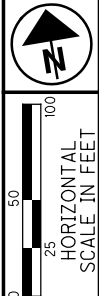


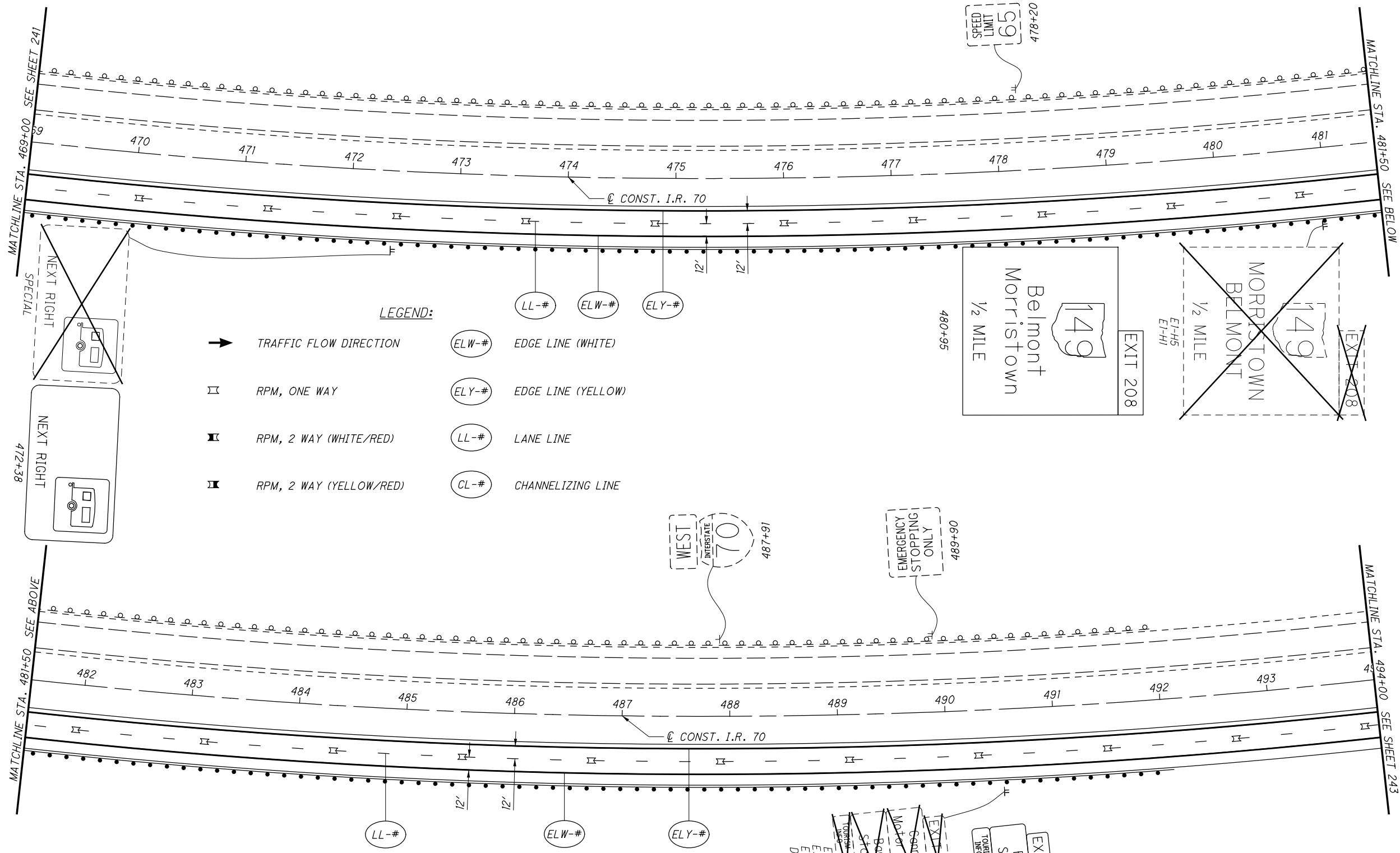
APPROVED FOR CONSTRUCTION - 5/2/2011

CALCULATED: MJC
 CHECKED: BBD

SIGNING AND PAVEMENT MARKING PLAN

BEL-70-7.61
STA. 444+00 TO STA. 469+00





APPROVED FOR CONSTRUCTION - 5/2/2011

SIGNING AND PAVEMENT MARKING PLAN

STA. 469+00 TO STA. 494+00

CALCULATED MJC
CHECKED BBD

0 50 100
25
HORIZONTAL SCALE IN FEET

↑
N

BEL-70-7.61

242
307

EXIT 208
Barkcamp State Park
TOLLISM 1-800-BUCKEYE
490+52

~~EXIT 208~~
Barkcamp State Park
Motor Speedway
Spartanball
Tennis
State Park
D7-H4-144
E3-H2-144
E3-H2-144
E1-H5-96

EMERGENCY STOPPING ONLY
486+60

WEST INTERSTATE 70
487+91

SPEED LIMIT 65
478+20

~~**EXIT 208**~~
~~MORRISTOWN BELMONT~~
~~1/2 MILE~~
~~480+95~~
~~EXIT 208~~
~~149~~
EXIT 208
Belmont Morristown
1/2 MILE
E1-H5
E1-H1

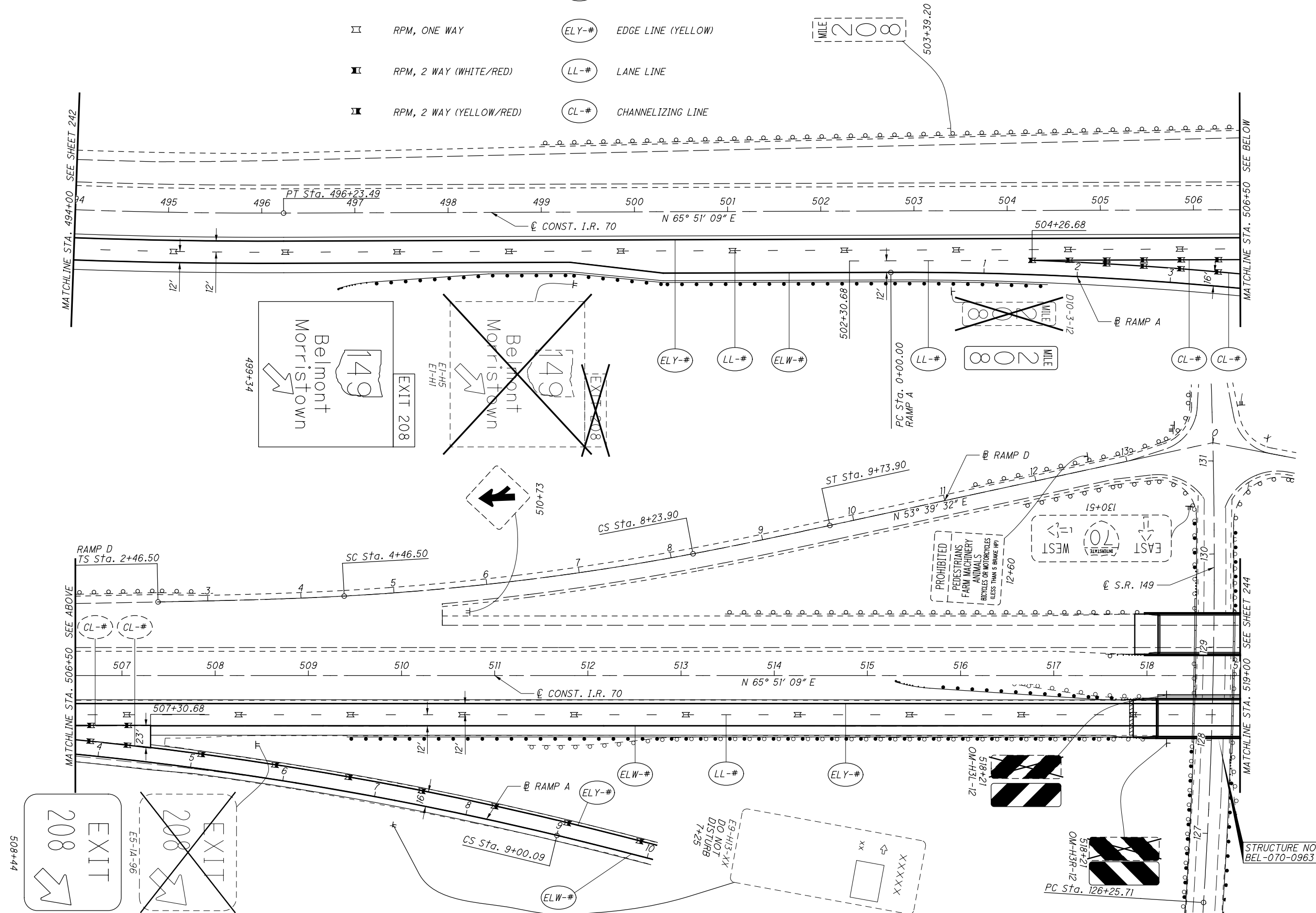
FOR RAMP SIGNING AND MARKING DETAILS, SEE SHEET 251

LEGEND:

- ➔ TRAFFIC FLOW DIRECTION
- ⊓ RPM, ONE WAY
- ⊓ RPM, 2 WAY (WHITE/RED)
- ⊓ RPM, 2 WAY (YELLOW/RED)
- ELW-# EDGE LINE (WHITE)
- ELY-# EDGE LINE (YELLOW)
- LL-# LANE LINE
- CL-# CHANNELIZING LINE

CALCULATED
MJC
CHECKED
BBD

0 50 100
25
HORIZONTAL
SCALE IN FEET



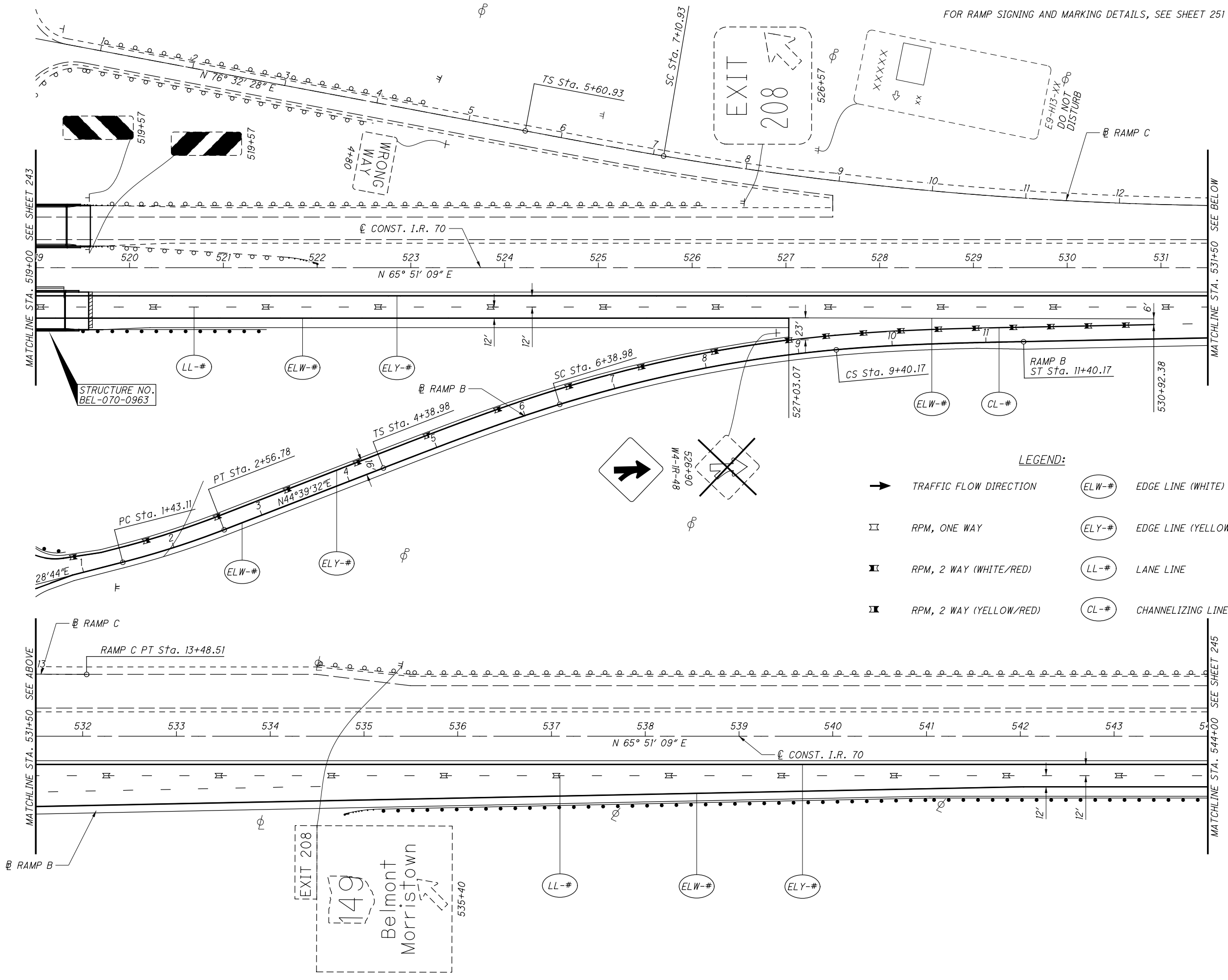
APPROVED FOR CONSTRUCTION - 5/2/2011

SIGNING AND PAVEMENT MARKING PLAN
STA. 494+00 TO STA. 519+00

BEL-70-7.61

243
307

P:\76825\traffic\sheets\76825TP405.dgn 4/14/2011 10:25:58 AM mcorneett



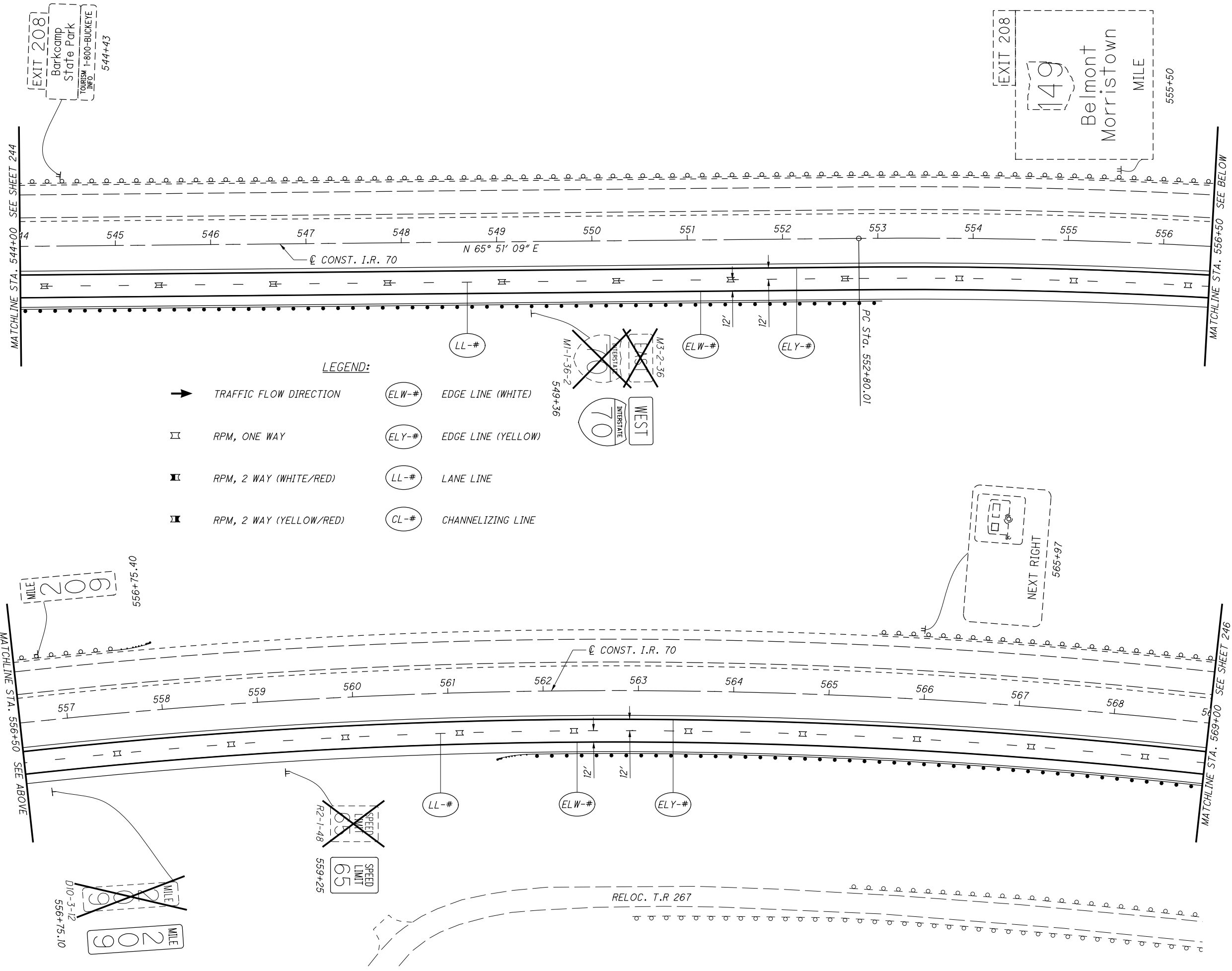
CALCULATED
MJC
CHECKED
BBD

0 50 100
25
HORIZONTAL
SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

SIGNING AND PAVEMENT MARKING PLAN

STA. 519+00 TO STA. 544+00



CALCULATED
MJC
CHECKED
BBD

0 50 100
25
HORIZONTAL
SCALE IN FEET

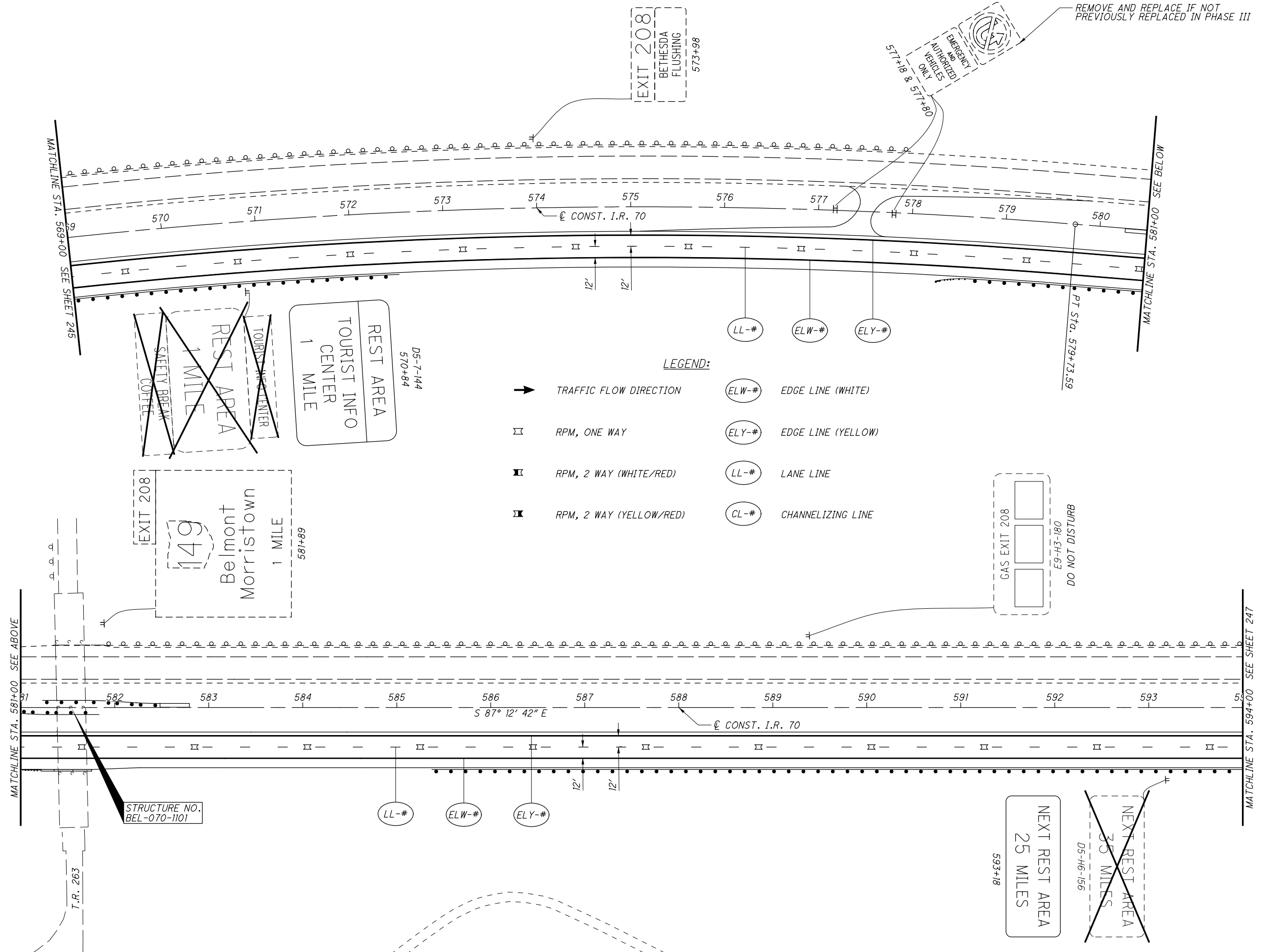
APPROVED FOR CONSTRUCTION - 5/2/2011

SIGNING AND PAVEMENT MARKING PLAN

STA. 544+00 TO STA. 569+00

BEL-70-7.61

245
307



- LEGEND:**
- ➔ TRAFFIC FLOW DIRECTION
 - ▤ RPM, ONE WAY
 - ▥ RPM, 2 WAY (WHITE/RED)
 - ▧ RPM, 2 WAY (YELLOW/RED)
 - ELW-# EDGE LINE (WHITE)
 - ELY-# EDGE LINE (YELLOW)
 - LL-# LANE LINE
 - CL-# CHANNELIZING LINE

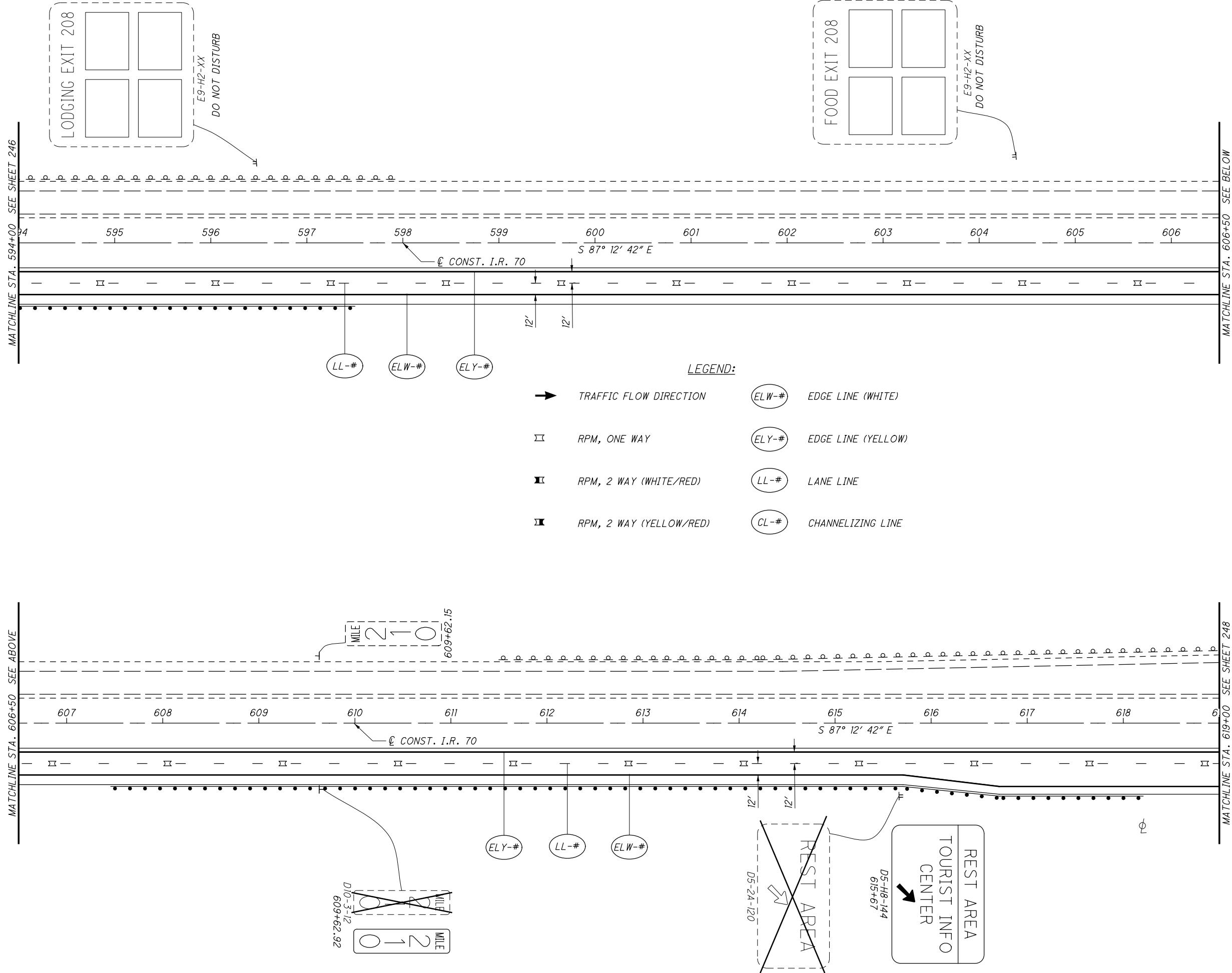
CALCULATED MJC CHECKED BBD

0 50 100
25
HORIZONTAL SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

SIGNING AND PAVEMENT MARKING PLAN

STA. 569+00 TO STA. 594+00



LEGEND:

- ➔ TRAFFIC FLOW DIRECTION
- ⏏ RPM, ONE WAY
- ⏏ RPM, 2 WAY (WHITE/RED)
- ⏏ RPM, 2 WAY (YELLOW/RED)
- ELW-# EDGE LINE (WHITE)
- ELY-# EDGE LINE (YELLOW)
- LL-# LANE LINE
- CL-# CHANNELIZING LINE

APPROVED FOR CONSTRUCTION - 5/2/2011

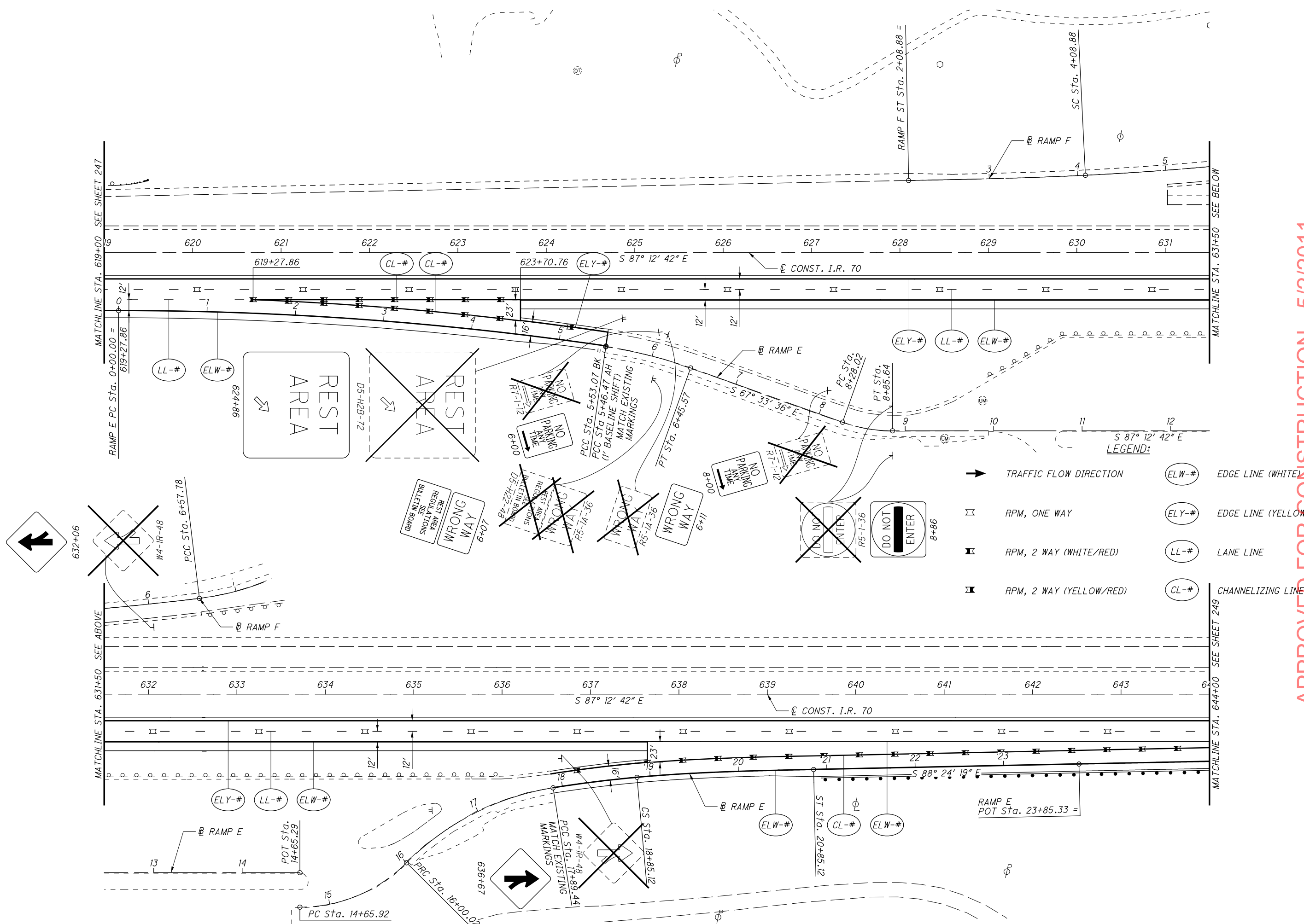
SIGNING AND PAVEMENT MARKING PLAN
STA. 594+00 TO STA. 619+00

BEL-70-7.61

247
307

CALCULATED	MJC
CHECKED	BBD

0 50 100
 HORIZONTAL SCALE IN FEET



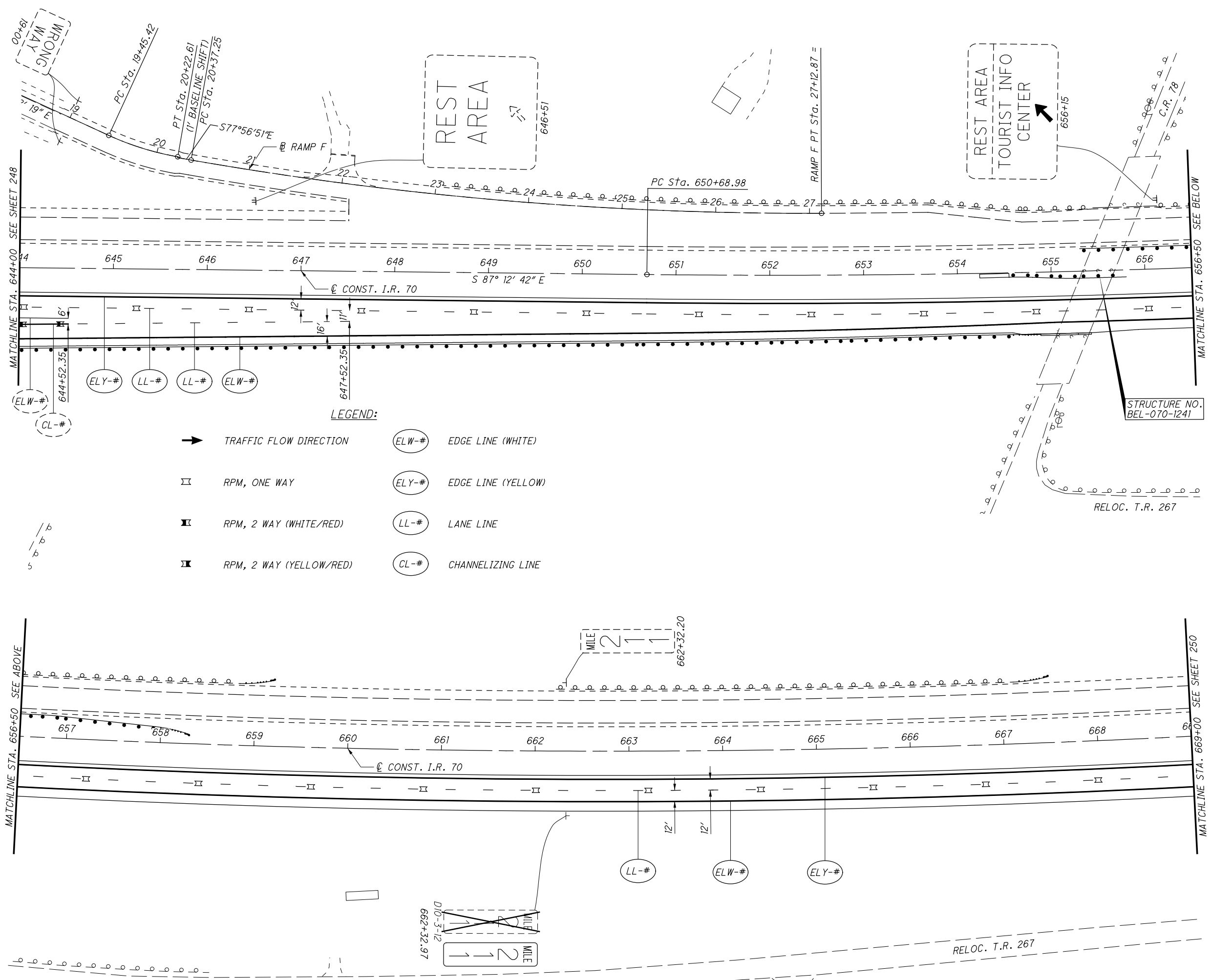
- LEGEND:**
- ➔ TRAFFIC FLOW DIRECTION
 - ▤ RPM, ONE WAY
 - ▥ RPM, 2 WAY (WHITE/RED)
 - ▧ RPM, 2 WAY (YELLOW/RED)
 - ELW-# EDGE LINE (WHITE)
 - ELY-# EDGE LINE (YELLOW)
 - LL-# LANE LINE
 - CL-# CHANNELIZING LINE

CALCULATED
MJC
CHECKED
BBD

0 50 100
25
HORIZONTAL
SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

SIGNING AND PAVEMENT MARKING PLAN
STA. 619+00 TO STA. 644+00



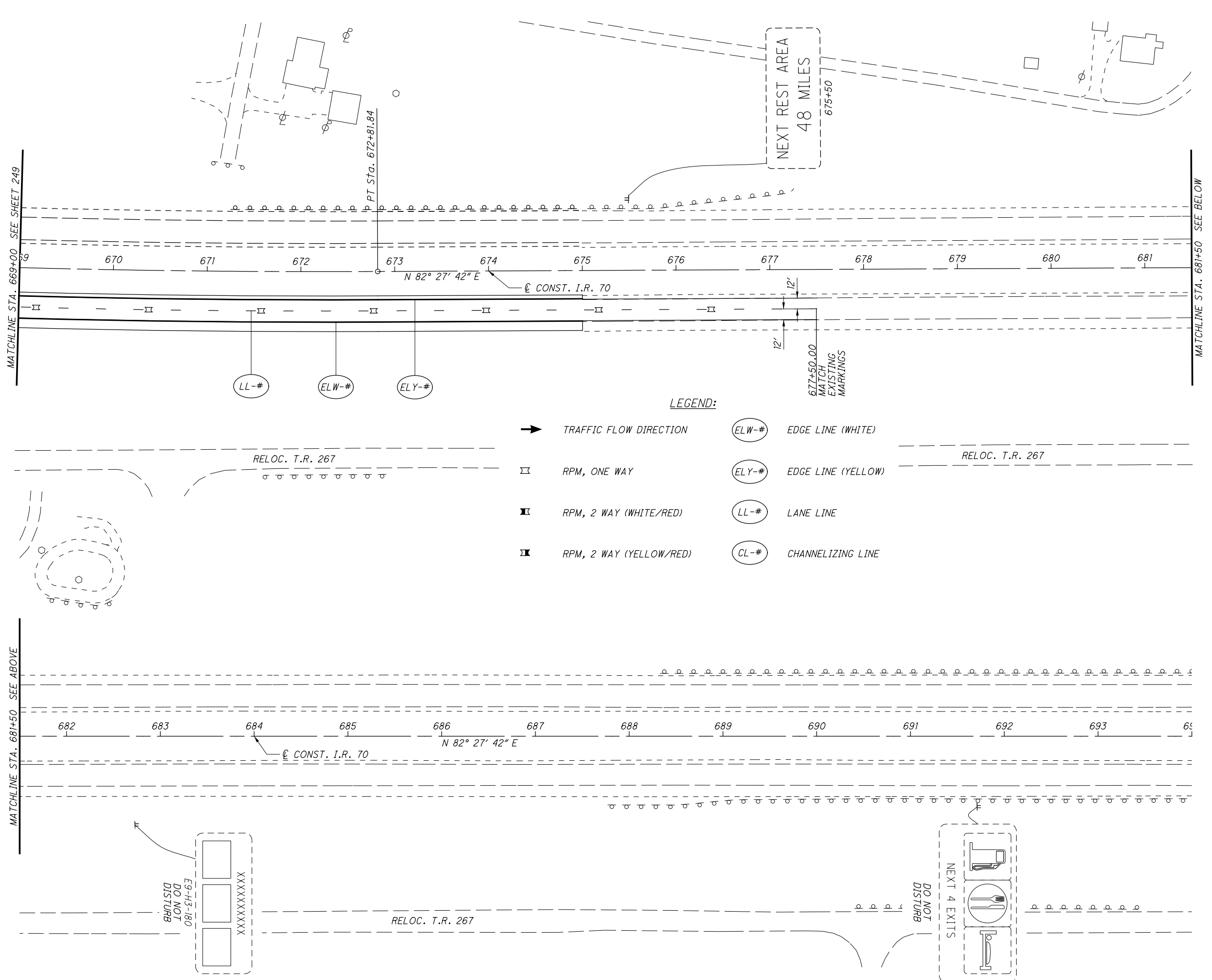
APPROVED FOR CONSTRUCTION - 5/2/2011

SIGNING AND PAVEMENT MARKING PLAN
STA. 644+00 TO STA. 669+00

CALCULATED: MJC
 CHECKED: BBD

0 50 100
 HORIZONTAL SCALE IN FEET

0 25 50 100
 HORIZONTAL SCALE IN FEET



LEGEND:

- ➔ TRAFFIC FLOW DIRECTION
- ⊓ RPM, ONE WAY
- ⊓ RPM, 2 WAY (WHITE/RED)
- ⊓ RPM, 2 WAY (YELLOW/RED)
- ⊓ ELW-# EDGE LINE (WHITE)
- ⊓ ELY-# EDGE LINE (YELLOW)
- ⊓ LL-# LANE LINE
- ⊓ CL-# CHANNELIZING LINE

APPROVED FOR CONSTRUCTION - 5/2/2011

SIGNING AND PAVEMENT MARKING PLAN
STA. 669+00 TO STA. 694+00

CALCULATED
MJC
CHECKED
BBD

0 50 100
HORIZONTAL
SCALE IN FEET

BEL-70-7.61

250
307

FOR I.R. 70 AND RAMP GORE SIGNING AND MARKING DETAILS, SEE SHEETS 243 & 244

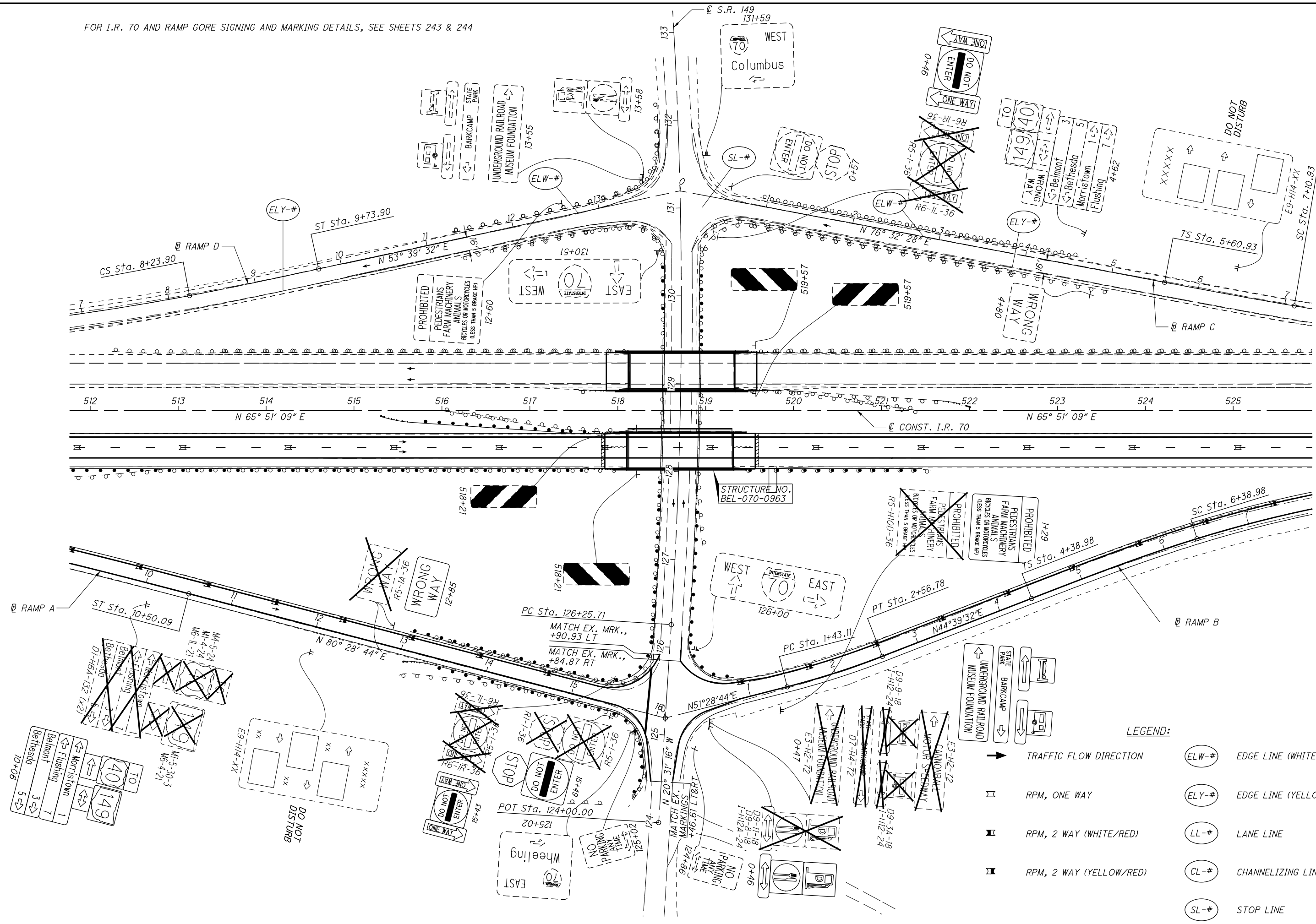
CALCULATED MJC CHECKED BBD

0 50 100
HORIZONTAL SCALE IN FEET

APPROVED FOR CONSTRUCTION - 5/2/2011

SIGNING AND PAVEMENT MARKING PLAN
S.R. 149 INTERCHANGE

BEL-70-7.61
251
307



LEGEND:

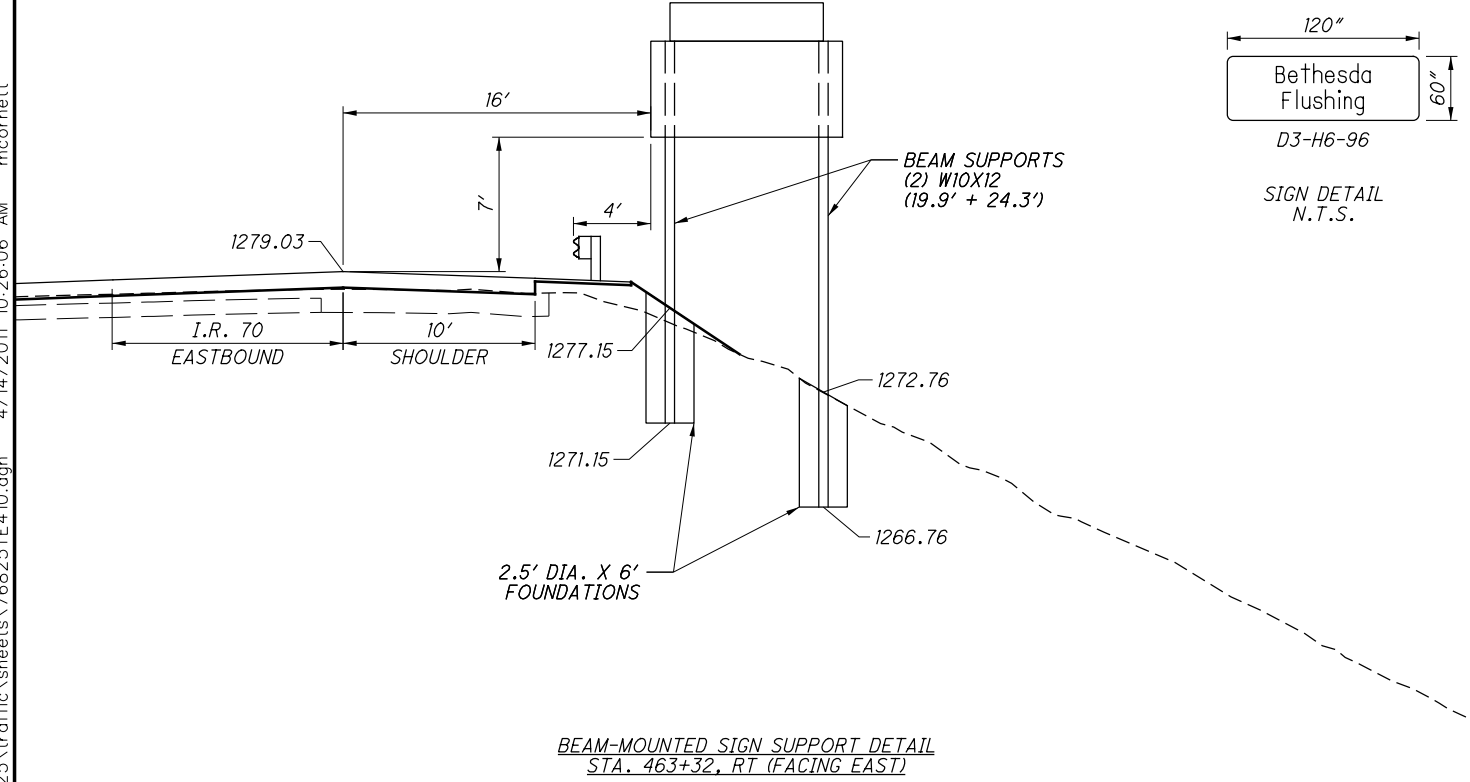
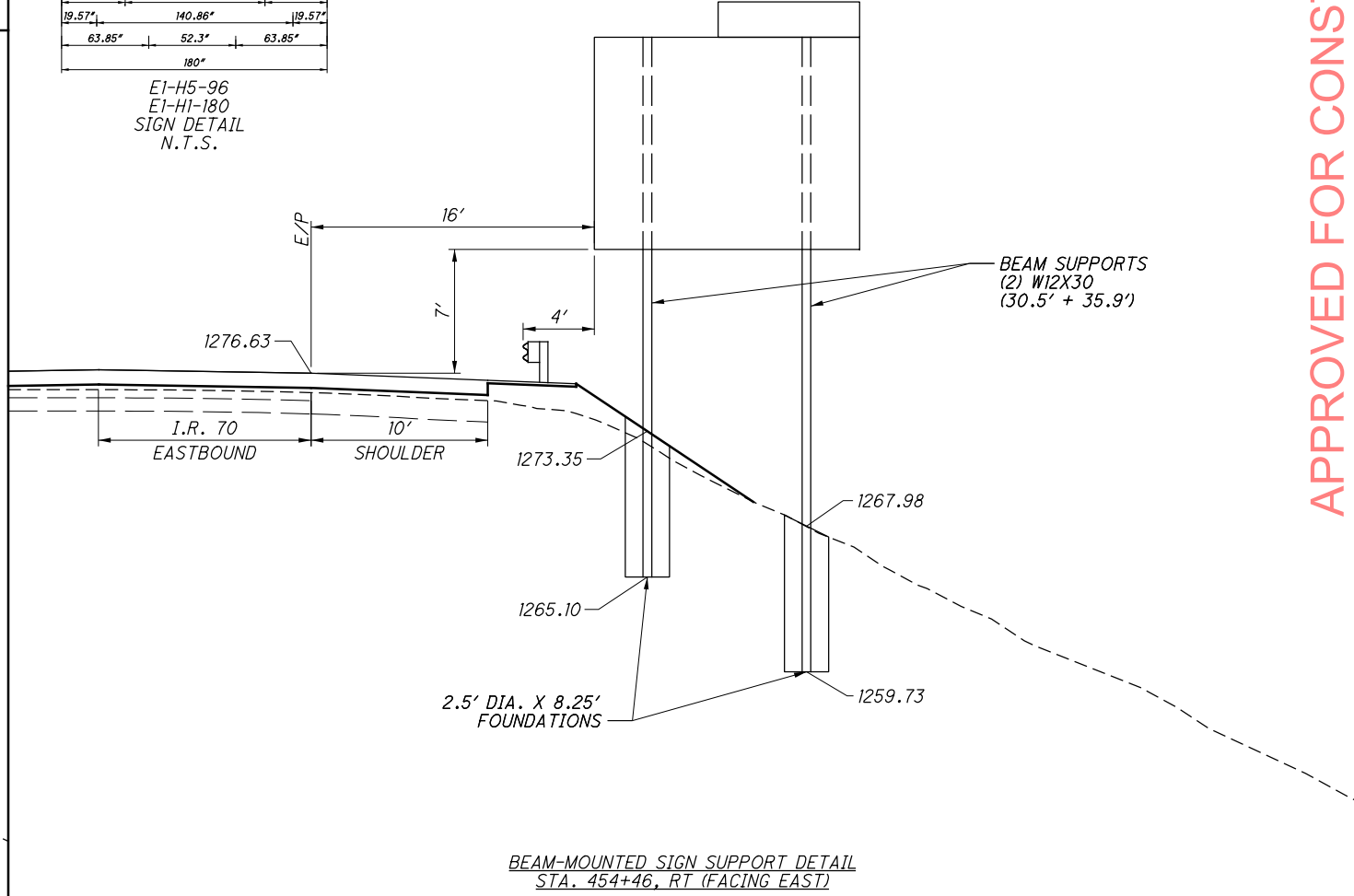
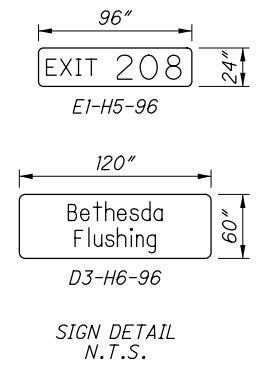
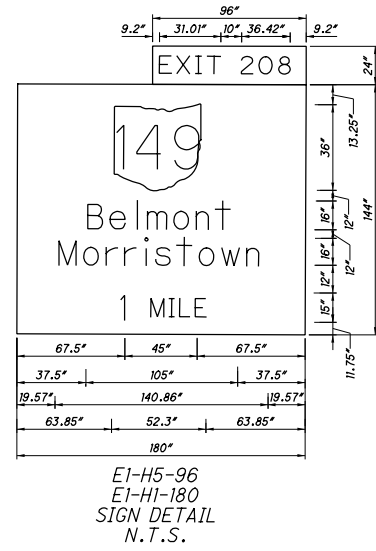
- TRAFFIC FLOW DIRECTION
- RPM, ONE WAY
- RPM, 2 WAY (WHITE/RED)
- RPM, 2 WAY (YELLOW/RED)
- ELW-# EDGE LINE (WHITE)
- ELY-# EDGE LINE (YELLOW)
- LL-# LANE LINE
- CL-# CHANNELIZING LINE
- SL-# STOP LINE

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P:\76825\traffic\sheets\76825TE4.10.dgn 4/14/2011 10:26:06 AM mcornett

SIGN INFORMATION	
DESIGN LEVEL	1
EXIT PANEL TEXT FONT	E
EXIT PANEL TEXT SIZE (INCH)	10
EXIT PANEL BACKGROUND	GREEN
EXIT PANEL FILL COLOR	WHITE
EXIT PANEL SIZE	8' X 2'
SIGN DESIGNATION	E1-H5-96
TEXT FONT	E (M)
TEXT SIZE (INCH)	16
BACKGROUND	GREEN
FILL COLOR	WHITE
PANEL SIZE	15' X 12'
ARROW	A-1
SIGN DESIGNATION	E1-H1-180

		8'														
		96.00														
2'	24.00	7.00												4.50	24.00	
	10.00													15.00		
12'	4.25	7.00												4.50	24.00	
	9.00															
	36.00	67.50	45.00	67.50												
	12.00															
	16.00	37.50	B	e	i	m	o	n	f							37.50
	12.00															
	16.00	3.57	16.00	M	o	r	r	i	s	f	o	w	n			
	12.00															
	15.00		I		M		I		L		E					
	7.50	63.85	52.30										63.85			
4.25																
		3.57	16.00	140.86										16.00	3.57	Longest line
		180.00														
		15'														



APPROVED FOR CONSTRUCTION - 5/2/2011

SIGN ELEVATIONS

PHASE IV - I.R. 70

BEL-70-7.61



SIGN INFORMATION	
DESIGN LEVEL	1
EXIT PANEL TEXT FONT	E
EXIT PANEL TEXT SIZE (INCH)	10
EXIT PANEL BACKGROUND	GREEN
EXIT PANEL FILL COLOR	WHITE
EXIT PANEL SIZE	8' X 2'
SIGN DESIGNATION	E1-H5-96
TEXT FONT	E (M)
TEXT SIZE (INCH)	16
BACKGROUND	GREEN
FILL COLOR	WHITE
PANEL SIZE	15' X 12'
ARROW	A-1
SIGN DESIGNATION	E1-H1-180

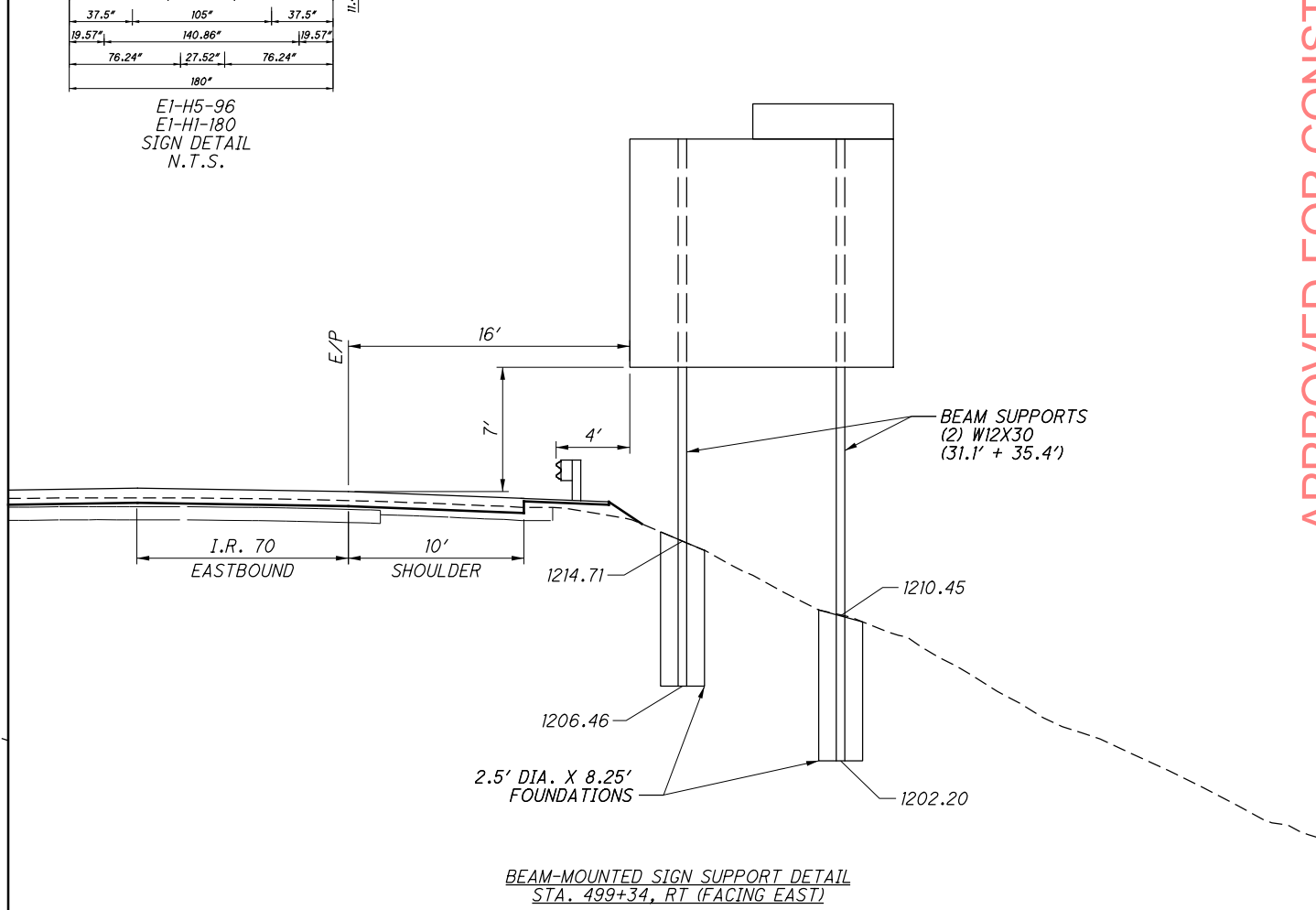
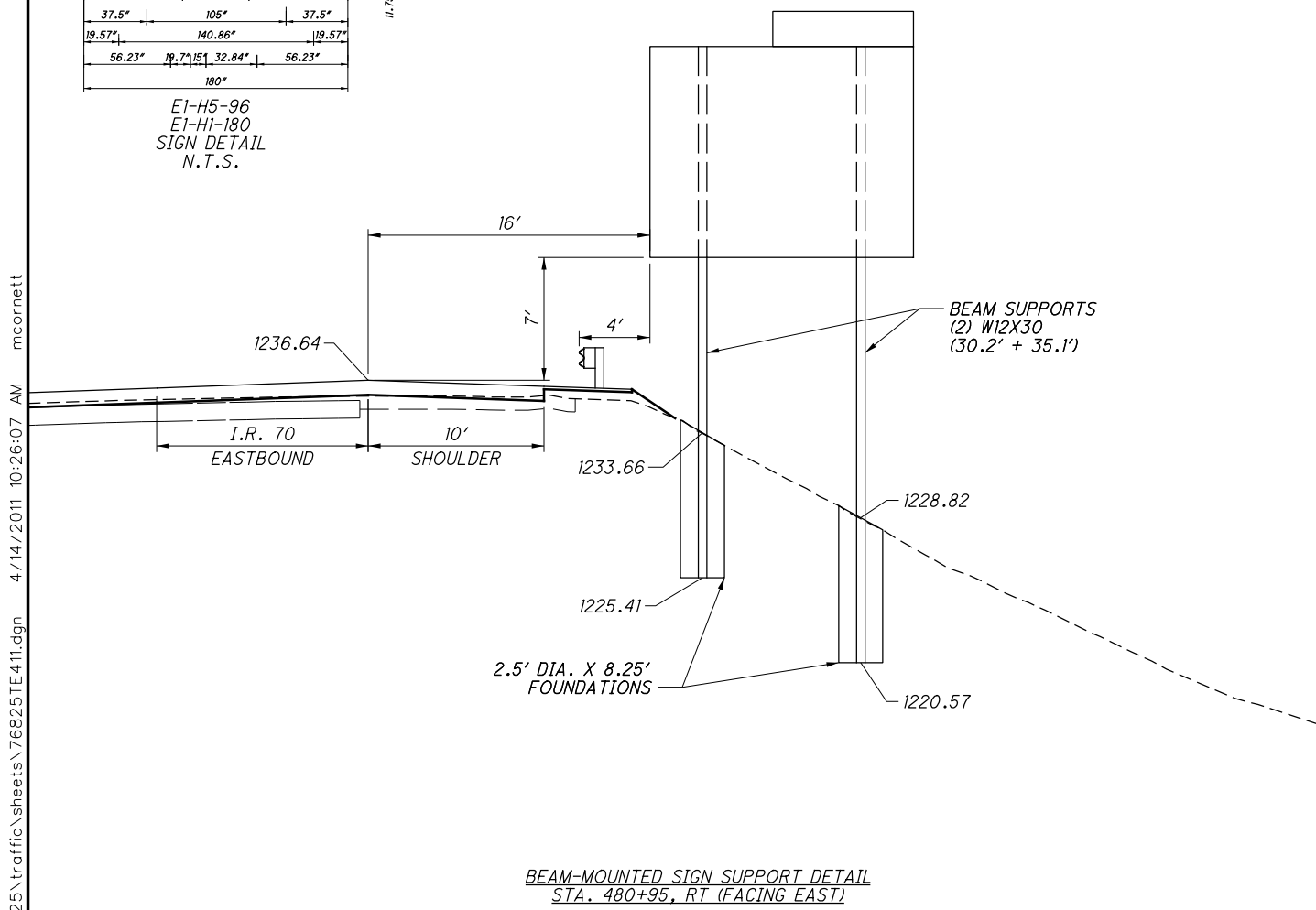
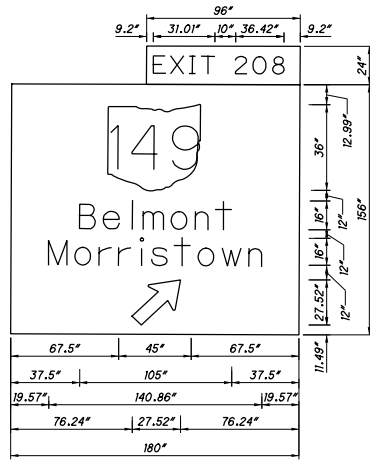
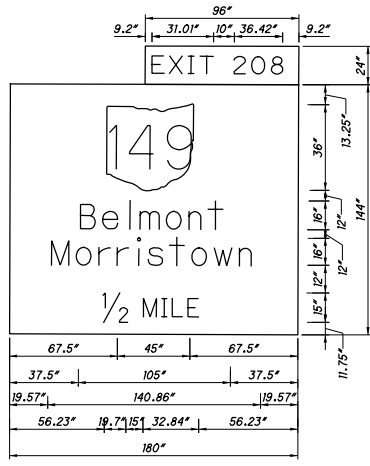
3.00" Radius, 2.00" Border, White on Green
 EXIT 208J E
 12.00" Radius, 2.00" Border, White on Green
 State Highway 149, MI-H5-45-2; [Belmont] E (M); [Morristown] E (M)
 [EXIT 1/2 MILE] E (M)

2'	7.00	8'										4.50	24.00				
	10.00	96.00												15.00			
12'	7.00	9.20	31.18	10.00	36.42	9.20							4.50		24.00		
	4.25	E	X	I	T	2	0	8									
	9.00	9.20	8.20	10.11	4.40	8.30	10.00	15.05	16.92	4.45	9.20						
	36.00	67.50	45.00	67.50													
	12.00	12.00	B	e	I	m	o	n	f								
	16.00	37.50	14.25	14.09	9.60	24.01	14.41	16.97	11.68	37.50							
	12.00	12.00	M	o	r	r	i	s	t	o	w	n					
	16.00	3.57	16.00	17.13	14.41	11.84	11.84	9.60	13.77	11.68	14.41	19.21		16.97		16.00	3.57
	12.00	12.00	1/2	M	I	L	E										
	15.00	56.23	19.70	15.00	32.84				56.23								
7.50	3.57	16.00	140.86						16.00				3.57				
4.25	180.00											15'					

SIGN INFORMATION	
DESIGN LEVEL	1
EXIT PANEL TEXT FONT	E
EXIT PANEL TEXT SIZE (INCH)	10
EXIT PANEL BACKGROUND	GREEN
EXIT PANEL FILL COLOR	WHITE
EXIT PANEL SIZE	8' X 2'
SIGN DESIGNATION	E1-H5-96
TEXT FONT	E (M)
TEXT SIZE (INCH)	16
BACKGROUND	GREEN
FILL COLOR	WHITE
PANEL SIZE	15' X 13'
ARROW	A-1
SIGN DESIGNATION	E1-H1-180

3.00" Radius, 2.00" Border, White on Green
 EXIT 208J E
 12.00" Radius, 2.00" Border, White on Green
 State Highway 149, MI-H5-45-2; [Belmont] E Mod; [Morristown] E Mod
 Arrow A-1: 35.00° 45°

2'	7.00	8'										4.50	24.00				
	10.00	96.00												15.00			
13'	7.00	9.20	31.18	10.00	36.42	9.20							4.50		24.00		
	3.99	E	X	I	T	2	0	8									
	9.00	9.20	9.40	10.67	3.78	17.34	10.00	15.05	16.92	4.45	9.20						
	36.00	67.50	45.00	67.50													
	12.00	12.00	B	e	I	m	o	n	f								
	16.00	37.50	14.25	14.09	9.60	24.01	14.41	16.97	11.68	37.50							
	12.00	12.00	M	o	r	r	i	s	t	o	w	n					
	16.00	3.57	16.00	17.13	14.41	11.84	11.84	9.60	13.77	11.68	14.41	19.21		16.97		16.00	3.57
	12.00	12.00	1/2	M	I	L	E										
	27.52	76.24	27.52	76.24													
7.50	3.57	16.00	140.86						16.00				3.57				
3.99	180.00											15'					



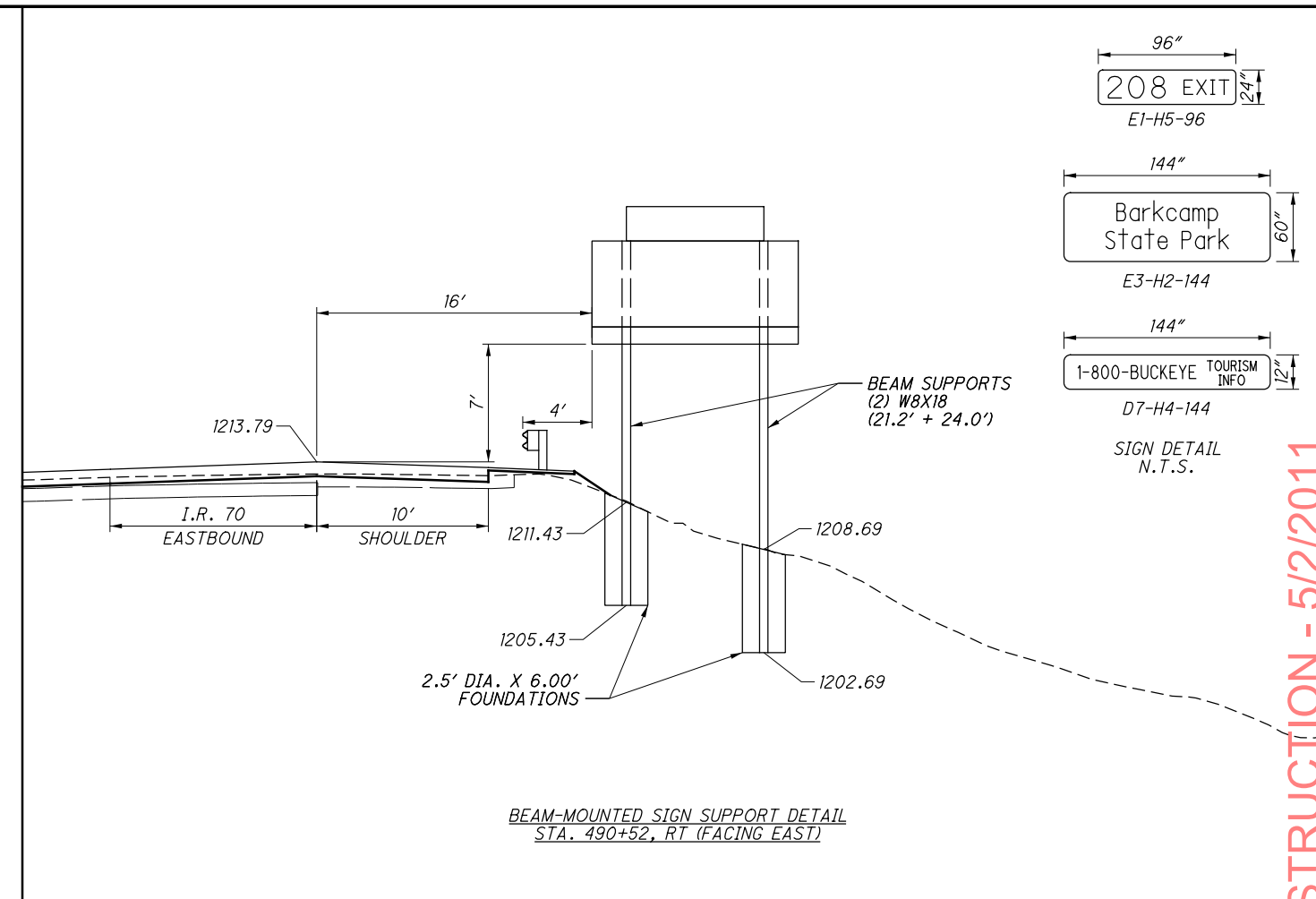
APPROVED FOR CONSTRUCTION - 5/2/2011

SIGN ELEVATIONS

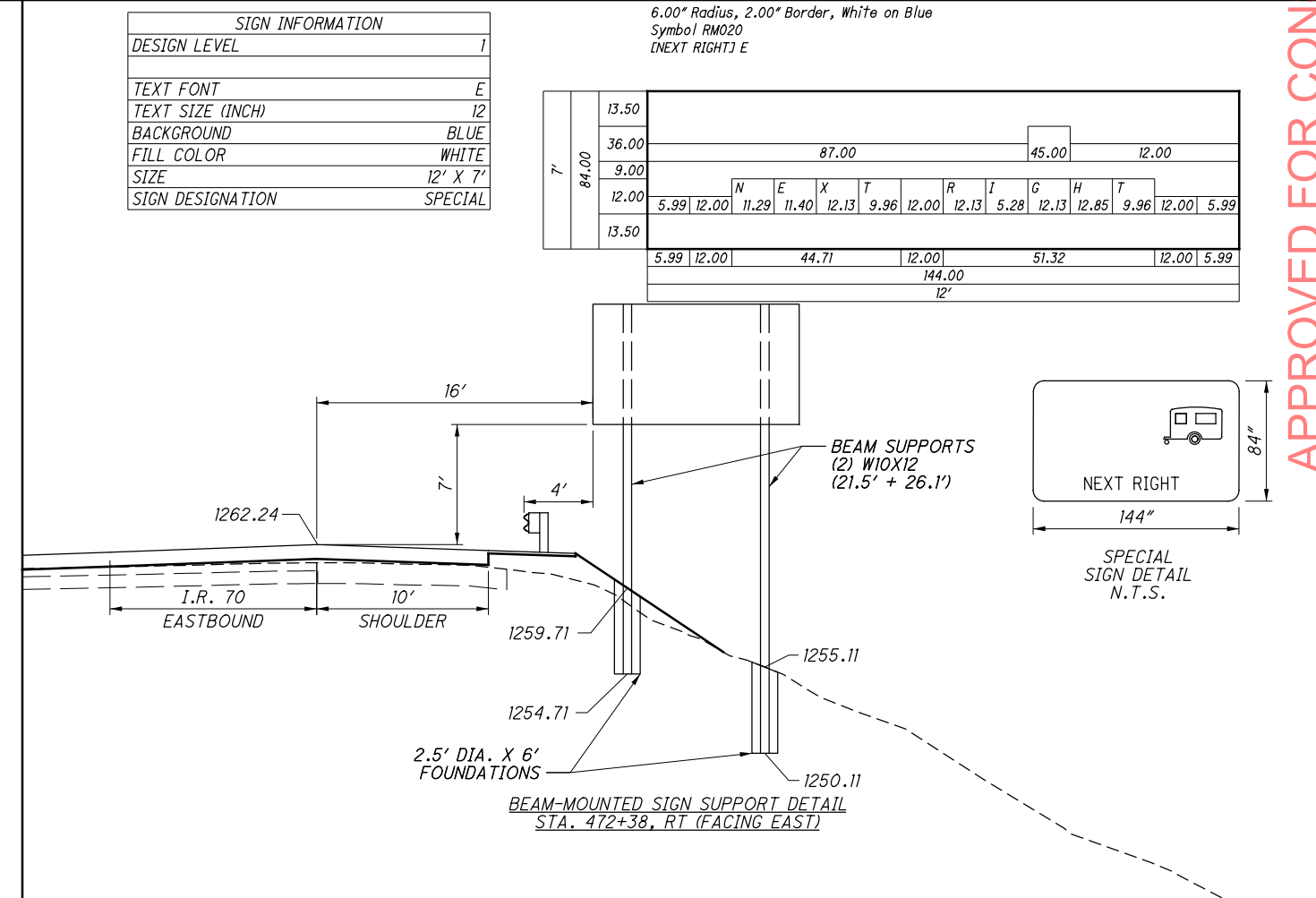
PHASE IV - I.R. 70

BEL-70-7.61





BEAM-MOUNTED SIGN SUPPORT DETAIL
STA. 490+52, RT (FACING EAST)



BEAM-MOUNTED SIGN SUPPORT DETAIL
STA. 472+38, RT (FACING EAST)

SIGN INFORMATION	
DESIGN LEVEL	I
TEXT FONT	E
TEXT SIZE (INCH)	12
BACKGROUND	BLUE
FILL COLOR	WHITE
SIZE	12' X 7'
SIGN DESIGNATION	SPECIAL

6.00' Radius, 2.00' Border, White on Blue
Symbol RM020
[NEXT RIGHT] E

7'	13.50													45.00	12.00
	36.00	87.00													
	9.00														
	12.00	5.99	12.00	11.29	11.40	12.13	9.96	12.00	12.13	5.28	12.13	12.85	9.96	12.00	5.99
13.50	5.99	12.00	44.71				12.00	51.32				12.00	5.99		
		144.00													
		12'													

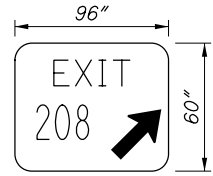
CALCULATED
 CDS
 CHECKED
 BDD

0 5 10
 2.5
 HORIZONTAL
 SCALE IN FEET

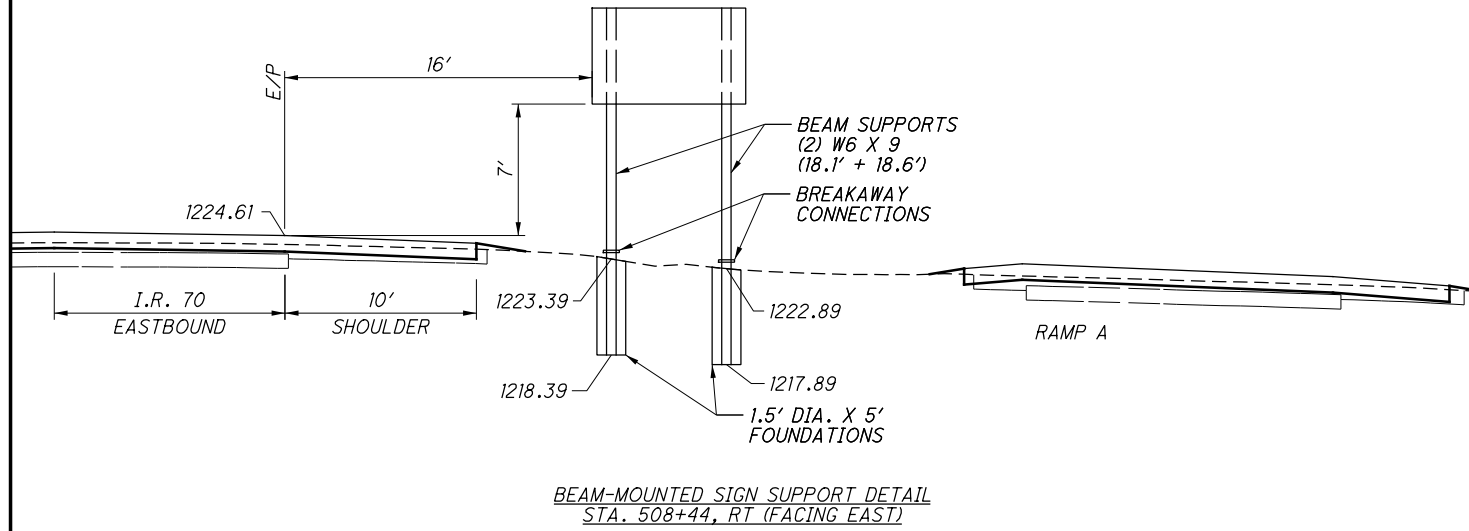
APPROVED FOR CONSTRUCTION - 5/2/2011

SIGN ELEVATIONS
--- PHASE IV --- I.R. 70 ---

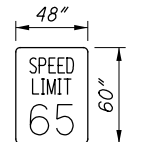
BEL-70-7.61



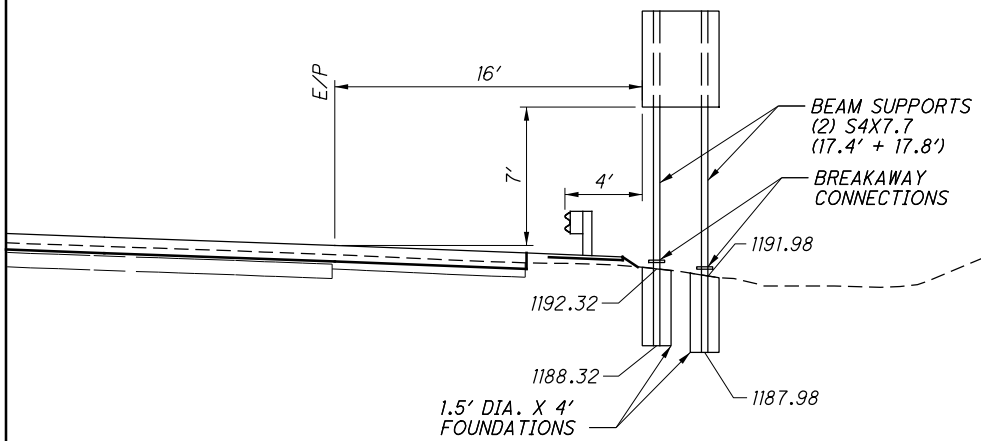
E5-H1A-96
SIGN DETAIL
N.T.S.



BEAM-MOUNTED SIGN SUPPORT DETAIL
STA. 508+44, RT (FACING EAST)



R2-1-48
SIGN DETAIL
N.T.S.



BEAM-MOUNTED SIGN SUPPORT DETAIL
STA. 559+25, RT (FACING EAST)

CALCULATED	0	5	10
CDS			
CHECKED			
BDD			

APPROVED FOR CONSTRUCTION - 5/2/2011

SIGN ELEVATIONS
PHASE_IV - I.R. 70

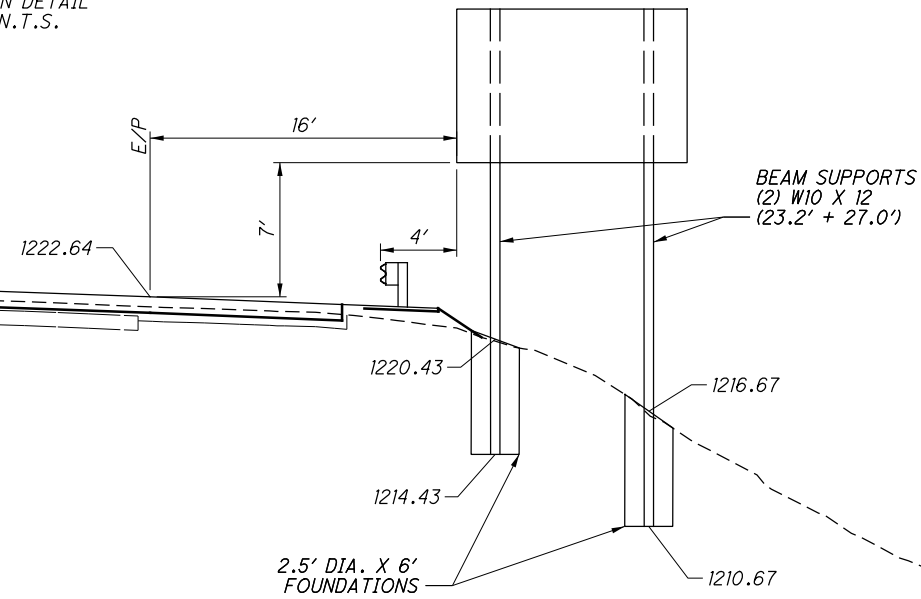
BEL-70-7.61

255
307

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D5-H8-144
SIGN DETAIL
N.T.S.



BEAM-MOUNTED SIGN SUPPORT DETAIL
STA. 570+84, RT (FACING EAST)

APPROVED FOR CONSTRUCTION - 5/2/2011

SIGN ELEVATIONS
PHASE IV - I.R. 70

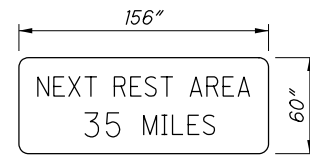
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CALCULATED	
CDS	
CHECKED	
BDD	

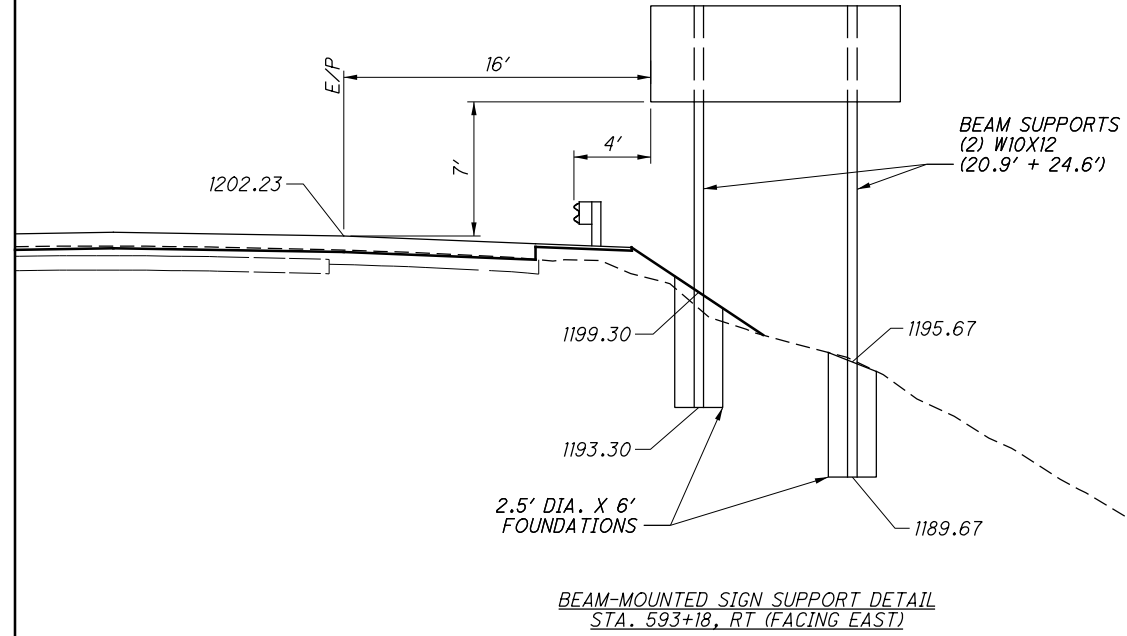


256
307

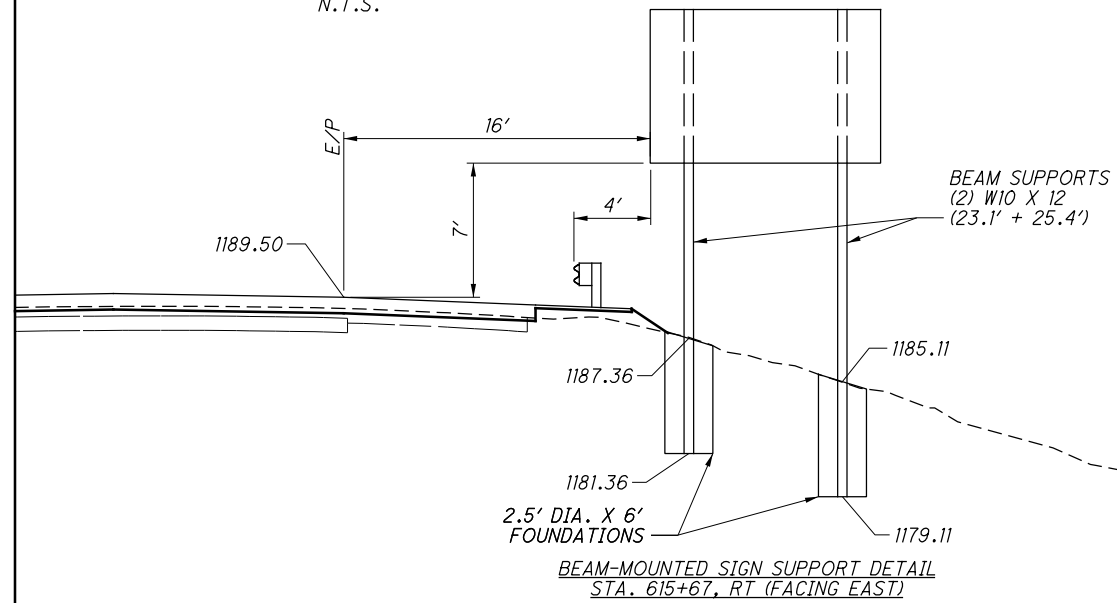
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D5-H6-156
SIGN DETAIL
N.T.S.



D5-H8-144
SIGN DETAIL
N.T.S.

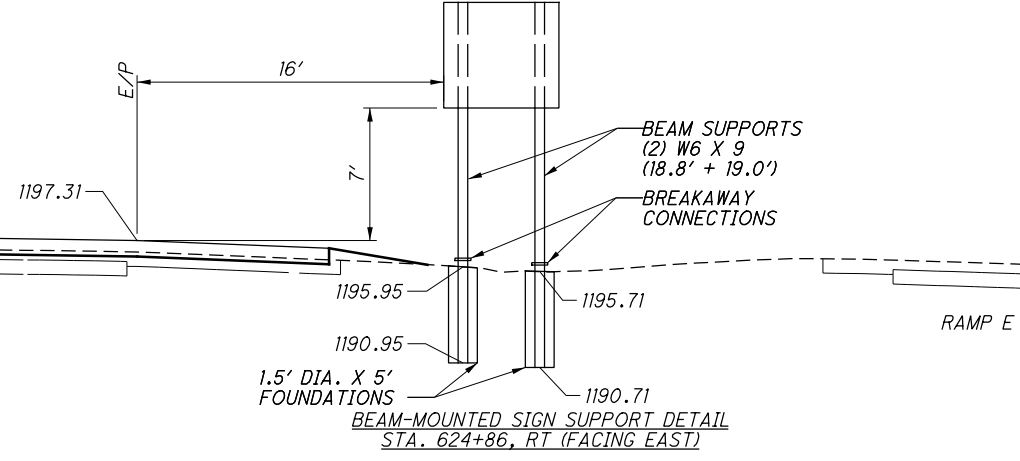
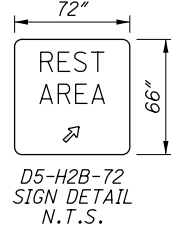


APPROVED FOR CONSTRUCTION - 5/2/2011

CALCULATED	0
CDS	5
CHECKED	10
BDD	

SIGN ELEVATIONS
PHASE IV - I.R. 70

BEL-70-7.61



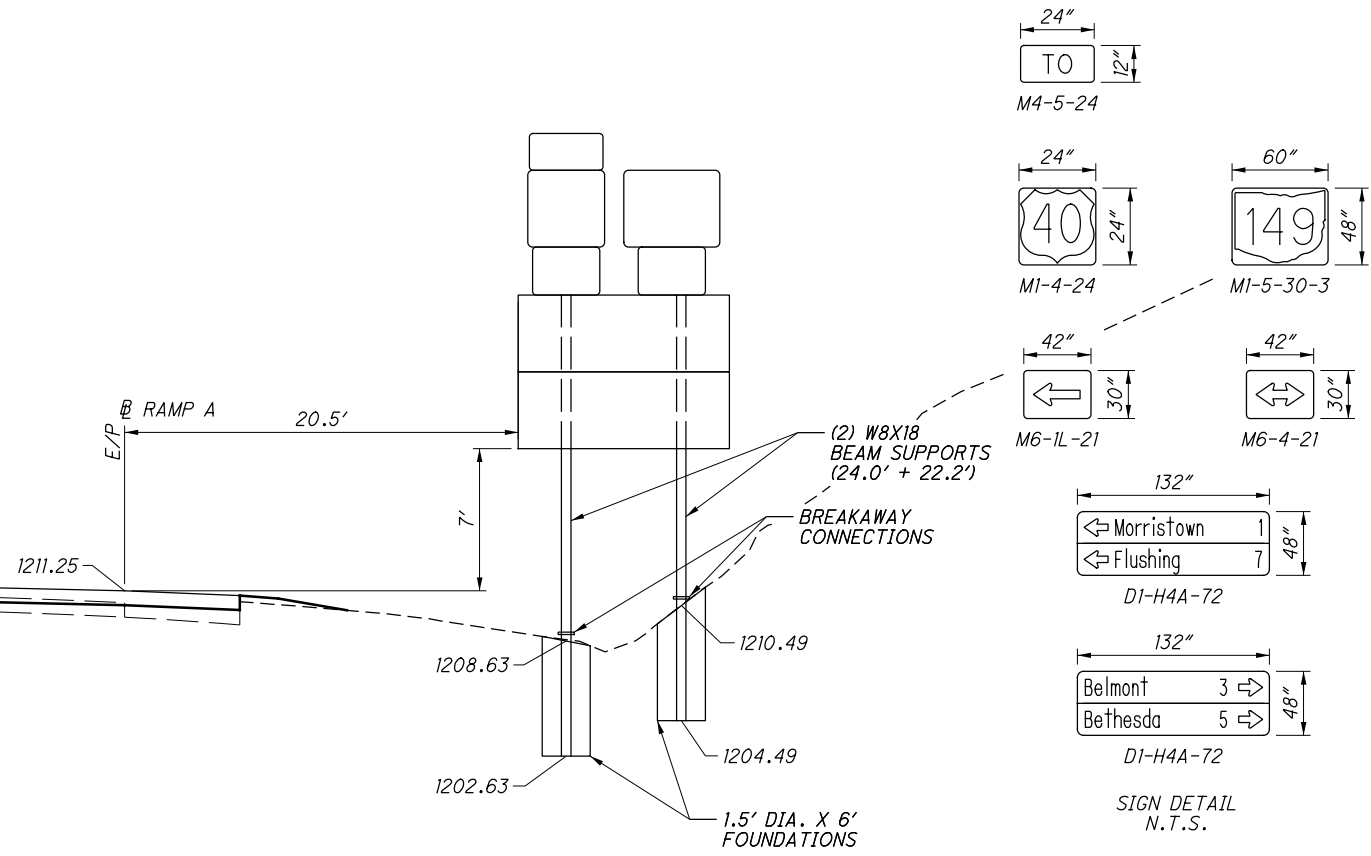
APPROVED FOR CONSTRUCTION - 5/2/2011

BEL - 70 - 7 . 61

SIGN ELEVATIONS
PHASE IV - I.R. 70

CALCULATED	0
CDS	10
CHECKED	
BDD	

2.5'
HORIZONTAL
SCALE IN FEET



BEAM-MOUNTED SIGN SUPPORT DETAIL
RAMP A, STA. 10+06, RT (FACING EASTBOUND)

APPROVED FOR CONSTRUCTION - 5/2/2011

SIGN ELEVATIONS
PHASE IV - RAMP A

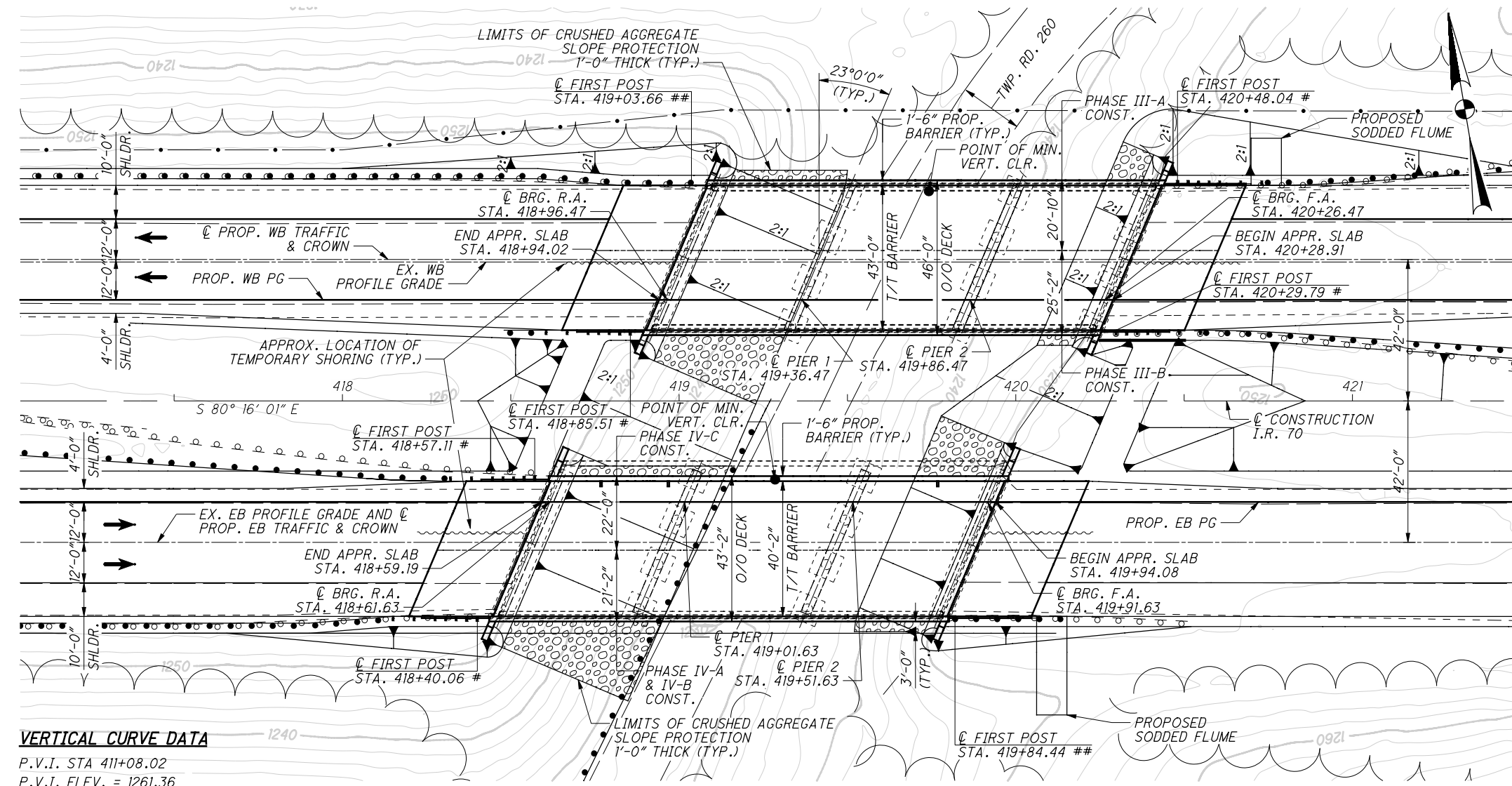
BEL-70-7.61

259
307

CALCULATED
CDS
CHECKED
BDD

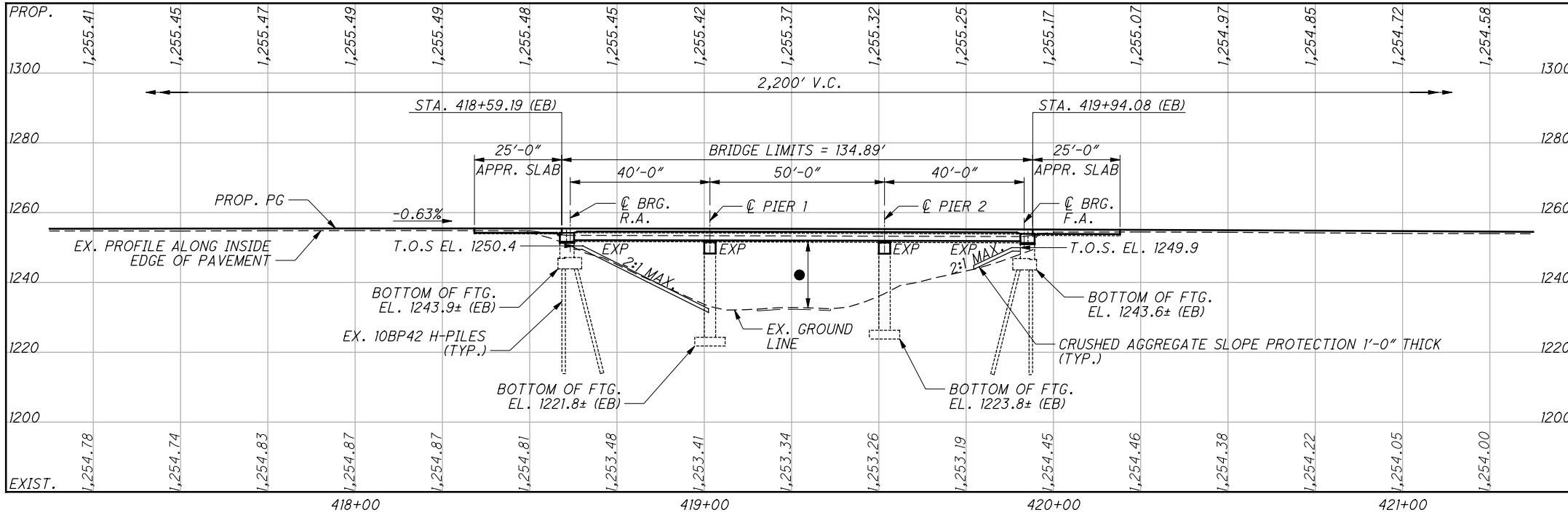
0 5 10
2.5
HORIZONTAL
SCALE IN FEET

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VERTICAL CURVE DATA

P.V.I. STA 411+08.02
 P.V.I. ELEV. = 1261.36
 G1 = +3.51%
 G2 = -0.63%
 V.C. = 2,200'



BENCHMARK DATA

BM #12 STA. 423+99.59, ELEV. 1253.64, OFFSET 0.01' LT CENTERLINE MONUMENT FOUND
BM #13 STA. 415+99.86, ELEV. 1255.63, OFFSET 0.02' LT CENTERLINE MONUMENT FOUND

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET 5/267

NOTES

- EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
- ALL EXISTING DIMENSIONS ARE ±.

DESIGN TRAFFIC:
 2010 ADT = 35,870 2010 ADTT = 17,935
 2030 ADT = 46,890 2030 ADTT = 23,445
 DIRECTIONAL DISTRIBUTION = 0.55

LEGEND

- - 15.5' EXISTING MINIMUM VERTICAL CLEARANCE LEFT BRIDGE
- - 19.1' EXISTING MINIMUM VERTICAL CLEARANCE RIGHT BRIDGE
- - 16.3' PROPOSED MINIMUM VERTICAL CLEARANCE LEFT BRIDGE
- - 19.9' PROPOSED MINIMUM VERTICAL CLEARANCE RIGHT BRIDGE
- - 15.5' REQUIRED MINIMUM VERTICAL CLEARANCE BOTH BRIDGES

BRIDGE TERMINAL ASSEMBLY TYPE 1
 ## BRIDGE TERMINAL ASSEMBLY TYPE 2
 BRIDGE TERMINAL ASSEMBLIES ARE INCLUDED WITH ROADWAY QUANTITIES FOR PAYMENT

PROPOSED WORK

- REMOVE AND REPLACE CONCRETE DECK, STEEL BEAMS, CONCRETE PIER CAPS AND APPROACH SLABS.
- CONVERT ABUTMENTS TO SEMI-INTEGRAL.
- PATCH PIER COLUMNS.
- INSTALL CRUSHED AGGREGATE SLOPE PROTECTION.
- REMOVE BRUSH UNDER STRUCTURE AND FROM 20 FT EACH SIDE OF STRUCTURE.
- EPOXY WRAP ALL PIER COLUMNS.
- SEAL CONCRETE SURFACES ON PIERS, ABUTMENTS, AND PARAPETS.

EXISTING STRUCTURE

TYPE: 3-SPAN CONTINUOUS STEEL BEAM WITH CONCRETE DECK AND SUBSTRUCTURE
 SPANS: 40'-0" ± - 50'-0" ± - 40'-0" ± C/C BEARINGS
 ROADWAY: 39'-8" T/T SAFETY CURB (WB) / 43'-0" T/T SAFETY CURB TO T/ PARAPET (EB)
 LOADING: CF 2000 (57) (WB) / HS20 AND THE ALTERNATE MILITARY LOADING (EB)
 SKEW: 23°00'00" ± LF
 APPROACH SLABS: AS-1-54 (25' LONG)
 WEARING SURFACE: MICROSILICA MODIFIED CONCRETE OVERLAY (WB) / 1" MONOLITHIC CONCRETE AND MICROSILICA MODIFIED CONCRETE OVERLAY (EB)
 ALIGNMENT: TANGENT
 CROWN: 0.1875
 STRUCTURAL FILE NUMBER: 0702137L/0702161R
 DATE BUILT: 1964

PROPOSED STRUCTURE (EB)

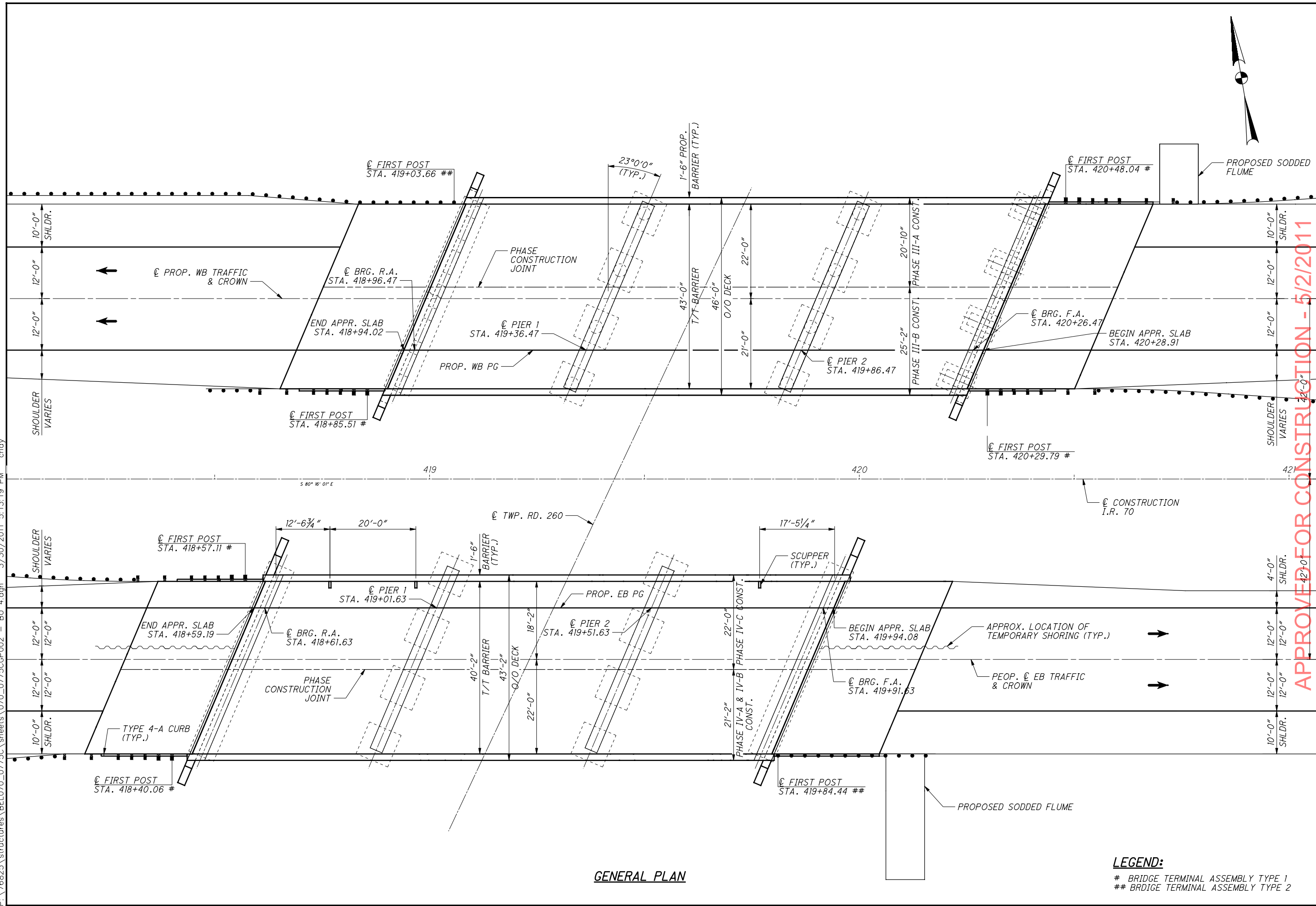
TYPE: 3-SPAN CONTINUOUS STEEL BEAM A709 GRADE 50W SUPPORTED BY MODIFIED SUBSTRUCTURE
 SPANS: 40'-0" - 50'-0" - 40'-0" C/C BEARINGS
 ROADWAY: 40'-2" T/T BARRIER (EB)
 LOADING: HS20 CASE I AND THE ALTERNATE MILITARY LOADING
 FUTURE WEARING SURFACE: 60 PSF
 SKEW: 23°00'00" LF
 APPROACH SLABS: 25'-0" LONG (AS-1-81)
 ALIGNMENT: TANGENT
 WEARING SURFACE: 1" MONOLITHIC CONCRETE
 CROWN: 0.0156
 COORDINATES: LATITUDE 40°3'32" N / LONGITUDE 81°5'14" W

APPROVED FOR CONSTRUCTION - 5/2/2011

E.L. ROBINSON
 The Challenge. The Choice.
 1801 Watermark Drive, Suite 310 - Columbus, Ohio 43215

DATE	2/3/11
REVIEWED	RER
DRAWN	DTA
DESIGNED	DTA
CHECKED	RLE
STRUCTURE FILE NUMBER	0702137L/0702161R
BELMONT COUNTY (WESTBOUND)	STA. 418+94.02
BELMONT COUNTY (EASTBOUND)	STA. 419+94.08
BELMONT COUNTY (WESTBOUND)	STA. 418+59.19
BELMONT COUNTY (EASTBOUND)	STA. 419+94.08
SITE PLAN	BRIDGE NO. BEL-70-0775 L/R
	I.R. 70 OVER TWP. RD. 260
BEL-70-7.61	PID No. 76825
1 / 24	
260	307

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APPROVED FOR CONSTRUCTION - 5/2/2011

GENERAL PLAN

LEGEND:
 # BRIDGE TERMINAL ASSEMBLY TYPE 1
 ## BRIDGE TERMINAL ASSEMBLY TYPE 2

E.L. ROBINSON the Challenge. the Choice 1807 Watermark Drive, Suite 310 - Columbus, Ohio 43215	DATE	2/3/11
	REVIEWED	RER
DRAWN	DTA	REVISED
DESIGNED	DTA	RLE
BELMONT COUNTY (WESTBOUND)	STA. 418+94.02	STA. 420+28.91
BELMONT COUNTY (EASTBOUND)	STA. 418+59.19	STA. 419+94.08
GENERAL PLAN	BRIDGE NO. BEL-70-0775 L/R	I.R. 70 OVER TWP. RD. 260
BEL-70-7.61	PID No. 76825	
2 / 24		
		261 307

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):
AS-1-81 REVISED 7-19-02
GSD-1-96 REVISED 7-19-02
SBR-1-99 REVISED 7-19-02
SICD-1-96 REVISED 7-19-02
AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):
898 DATED 7-17-09

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAYS AND TRANSPORTATION OFFICIALS, 2002 - 17th EDITION AND THE 2004 ODOT BRIDGE DESIGN MANUAL.

DESIGN DATA:

DESIGN LOADING -
SUPERSTRUCTURE - HS20, CASE I AND THE ALTERNATE MILITARY LOADING

CONCRETE CLASS QSC2 - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

CONCRETE CLASS QSC2 - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

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

STRUCTURAL STEEL - ASTM A709 GRADE 50W - YIELD STRENGTH 50,000 P.S.I.

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL
2 1/2" CONCRETE COVER

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

EXISTING BRIDGE PLANS

EXISTING BRIDGE PLANS MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE ODOT DISTRICT ELEVEN OFFICE IN NEW PHILADELPHIA OHIO.

UTILITY LINES:

THE UTILITY(IES) SHALL BORE ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES. THE CONTRACTOR AND UTILITY(IES) ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

MAINTENANCE OF TRAFFIC

SEE ROADWAY PLANS FOR ADDITIONAL MAINTENANCE OF TRAFFIC NOTES AND DETAILS.

ITEM 201 - CLEARING AND GRUBBING

CLEAR AND GRUB ALL VEGETATION UNDER AND WITHIN 20 FEET OF EACH SIDE OF THE EXISTING STRUCTURE.

ITEM 202. PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN:
THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

CUT LINE CONSTRUCTION JOINT PREPARATION:
SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING 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 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.

ITEM 203 - EMBANKMENT, AS PER PLAN

PLACE AND COMPACT EMBANKMENT MATERIAL IN 6 INCH LIFTS FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT.

ITEM 509 EPOXY COATED REINFORCING STEEL, AS PER PLAN

IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACINGS. REPAIR ALL DAMAGE TO THE EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO 709.00.

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. AN ALLOWANCE OF 100 POUNDS IS INCLUDED IN ITEM 509 FOR THIS PURPOSE.

REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE DEEMED BY THE ENGINEER TO BE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE DEPARTMENT.

ITEM 516-SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN:

INSTALL A 3 FOOT WIDE NEOPRENE SHEET AT LOCATIONS SHOWN IN THE PLANS. SECURE THE NEOPRENE SHEETING TO THE CONCRETE WITH 1/4" X #10 GAGE (LENGTH X SHANK DIAMETER) GALVANIZED BUTTON HEAD SPIKES THROUGH A 1 INCH OUTSIDE

DIAMETER, #10 GAGE GALVANIZED WASHER. MAXIMUM FASTENER SPACING IS 9 INCHES. USE OF OTHER SIMILAR GALVANIZED DEVICES, WHICH WILL NOT DAMAGE EITHER THE NEOPRENE OR THE CONCRETE, WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

CENTER THE NEOPRENE STRIPS ON ALL JOINTS. FOR HORIZONTAL JOINTS, SECURE THE HORIZONTAL NEOPRENE STRIP BY USING A SINGLE LINE OF FASTENERS, STARTING AT 6 INCHES,+/-, FROM THE TOP OF THE NEOPRENE STRIP. FOR THE VERTICAL JOINTS SECURE THE VERTICAL NEOPRENE STRIP BY USING A SINGLE VERTICAL LINE OF FASTENERS, STARTING AT 6 INCHES,+/-, FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST TO THE CENTERLINE OF ROADWAY. FOR VERTICAL JOINTS, INSTALL 2 ADDITIONAL FASTENERS AT 6 INCHES, CENTER TO CENTER, ACROSS THE TOP OF THE NEOPRENE STRIP ON THE SAME SIDE OF THE VERTICAL JOINT AS THE SINGLE VERTICAL ROW OF FASTENERS IS LOCATED.

THE VERTICAL NEOPRENE STRIPS SHALL COMPLETELY OVERLAP THE HORIZONTAL STRIPS. LAP LENGTHS OF THE HORIZONTAL STRIPS THAT ARE NOT VULCANIZED OR ADHESIVE BONDED, SHALL BE AT LEAST 1 FOOT IN LENGTH, OR 6 INCHES IN LENGTH IF THE LAP IS VULCANIZED OR ADHESIVE BONDED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED NEOPRENE STRIPS.

THE NEOPRENE SHEETING SHALL BE 3/32" THICK GENERAL PURPOSE, HEAVY-DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER NN-0003", BY E. I. DUPONT DE NEMOURS AND COMPANY, INC., "WINGPRENE" BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

DESCRIPTION OF TEST	ASTM METHOD	REQUIREMENT
THICKNESS, INCHES	D751	0.094 ± 0.01
BREAKING STRENGTH, GRAB, LBS MINIMUM (LONG. X TRANS.)	D751	700 x 700
ADHESIVE STRIP, 1" WIDE x 2" LONG, LBS MINIMUM	D751	9
BURST STRENGTH, PSI MINIMUM	D751	1400
HEAT AGING, 70 HR, 212 °F, 180° BEND WITHOUT CRACKING	D2136	NO CRACKING OF COATING
LOW TEMP. BRITTLENESS, 1 HR, -40°F, BEND AROUND 1/4" MANDREL	D2136	NO CRACKING OF COATING

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE THE TOTAL LENGTH OF JOINT TO BE SEALED BY THE NUMBER OF FEET.

BASIS OF PAYMENT: THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN

PRIOR TO THE SURFACE CLEANING SPECIFIED IN 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. A QUANTITY OF 135 SQUARE FEET HAS BEEN INCLUDED IN THE ESTIMATED QUANTITIES. THIS ITEM IS TO BE USED AS DIRECTED BY THE ENGINEER AT THE PIER COLUMNS.

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APPROVED FOR CONSTRUCTION - 5/2/2011



DATE	2/3/11
REVIEWED	RER
DRAWN	DTA
CHECKED	AME
STRUCTURE FILE NUMBER	0702137L/0702161R

GENERAL NOTES
BRIDGE NO. BEL-70-0775 L/R
I.R. 70 OVER TWP. RD 260

BEL-70-7.61
PID No. 76825
3 / 24
262
307

ITEM 898 - QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), AS PER PLAN

FURNISH APPROACH SLABS CONFORMING TO CMS 526 EXCEPT CONCRETE SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 898, QC/QA CONCRETE, CLASS QSC2. THE ACCEPTED QUANTITIES SHALL INCLUDE: CONCRETE, CURBS, PARAPETS, REINFORCING STEEL, JOINT FILLERS, JOINT SEALERS, JOINT SEALS, AND WATERPROOFING. THE DEPARTMENT WILL MEASURE APPROACH SLABS BY THE NUMBER OF SQUARE YARDS. THE DEPARTMENT WILL INITIALLY PAY THE FULL BID PRICE TO THE CONTRACTOR UPON COMPLETING THE WORK. THE DEPARTMENT WILL CALCULATE THE FINAL ADJUSTED PAYMENT ACCORDING TO 898.17 AND INCLUDE APPROACH SLAB CONCRETE AND DECK CONCRETE IN THE SAME LOT TO DETERMINE FINAL PAY FACTORS.

ITEM 898 - QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK), AS PER PLAN

THE DEPARTMENT WILL CALCULATE THE FINAL ADJUSTED PAYMENT ACCORDING TO 898.17 AND INCLUDE APPROACH SLAB CONCRETE AND DECK CONCRETE IN THE SAME LOT TO DETERMINE FINAL PAY FACTORS.

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 0.95 KIPS FOR A TOTAL MACHINE LOAD OF 7.6 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".

APPROVED FOR CONSTRUCTION - 5/2/2011



DESIGNED	DTA	CHECKED	AME
DRAWN	DTA	REVIEWED	AME
REVIEWED	RER	DATE	2/3/11
STRUCTURE FILE NUMBER	0702137L/0702161R		

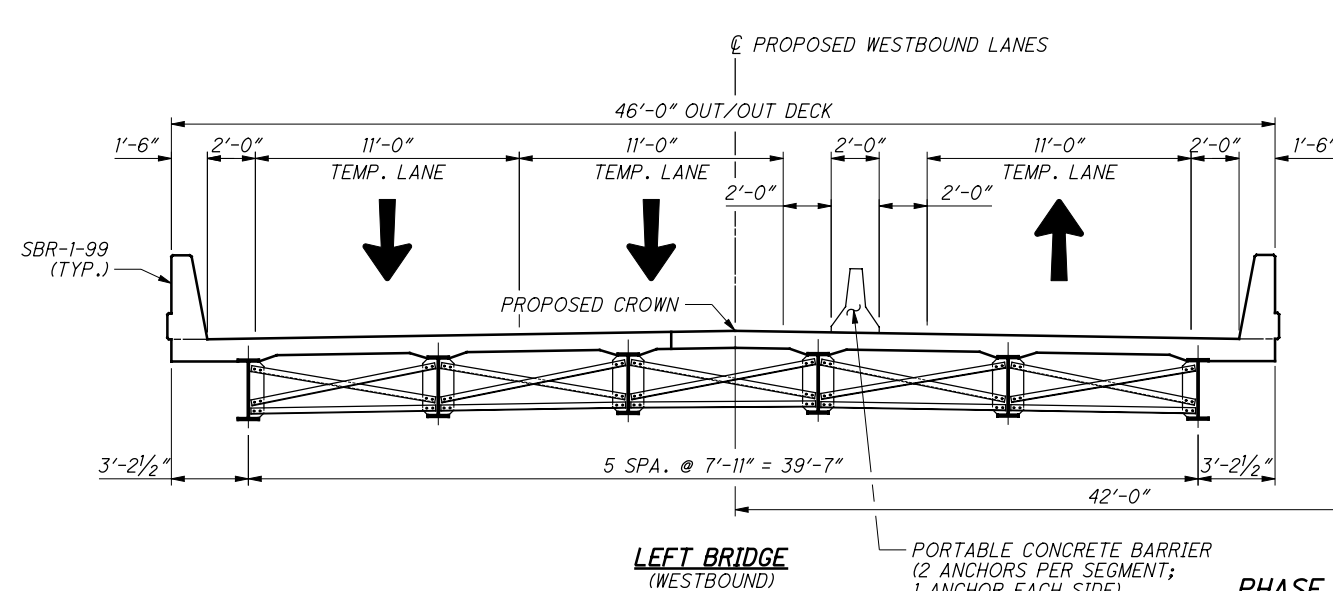
GENERAL NOTES
 BRIDGE NO. BEL-70-0775 L/R
 I.R. 70 OVER TWP. RD 260

BEL-70-7.61
PID No. 76825

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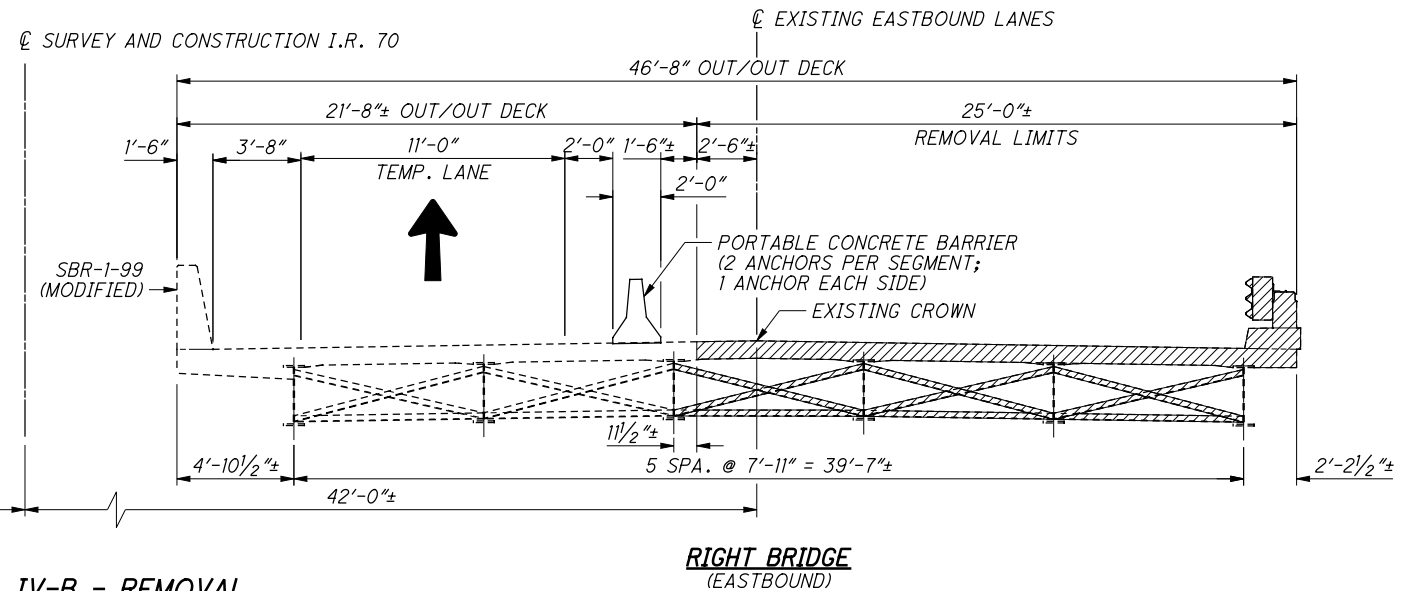
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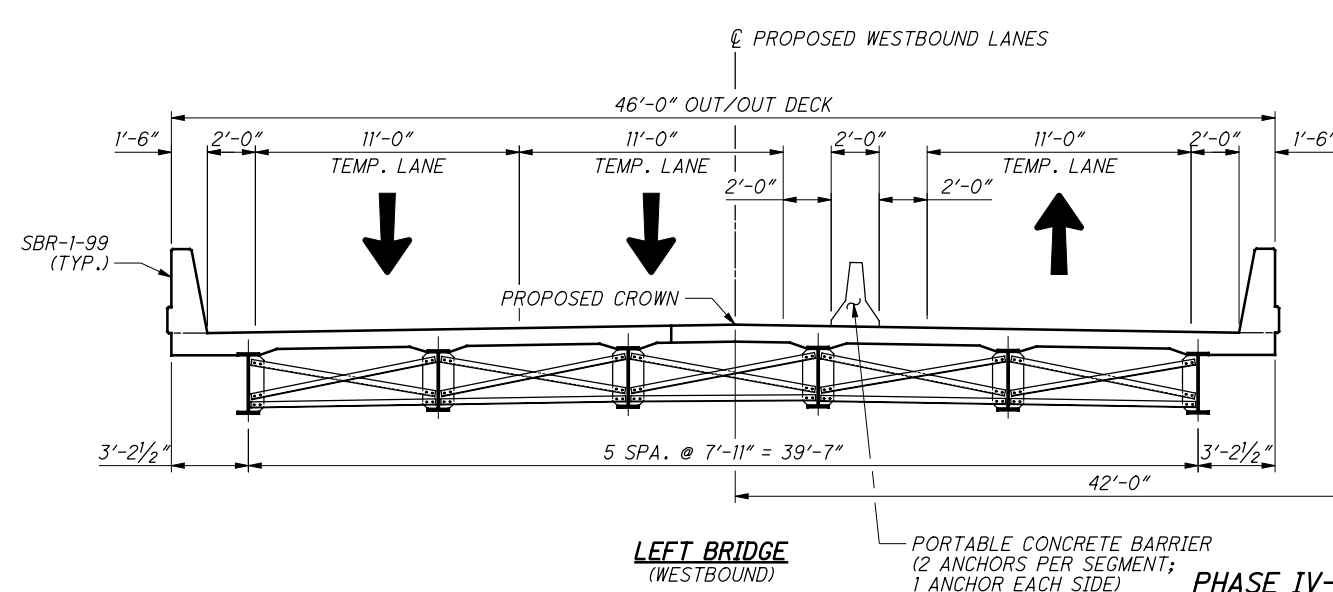
LEFT BRIDGE
(WESTBOUND)

PORTABLE CONCRETE BARRIER
(2 ANCHORS PER SEGMENT;
1 ANCHOR EACH SIDE)

PHASE IV-A & IV-B - REMOVAL



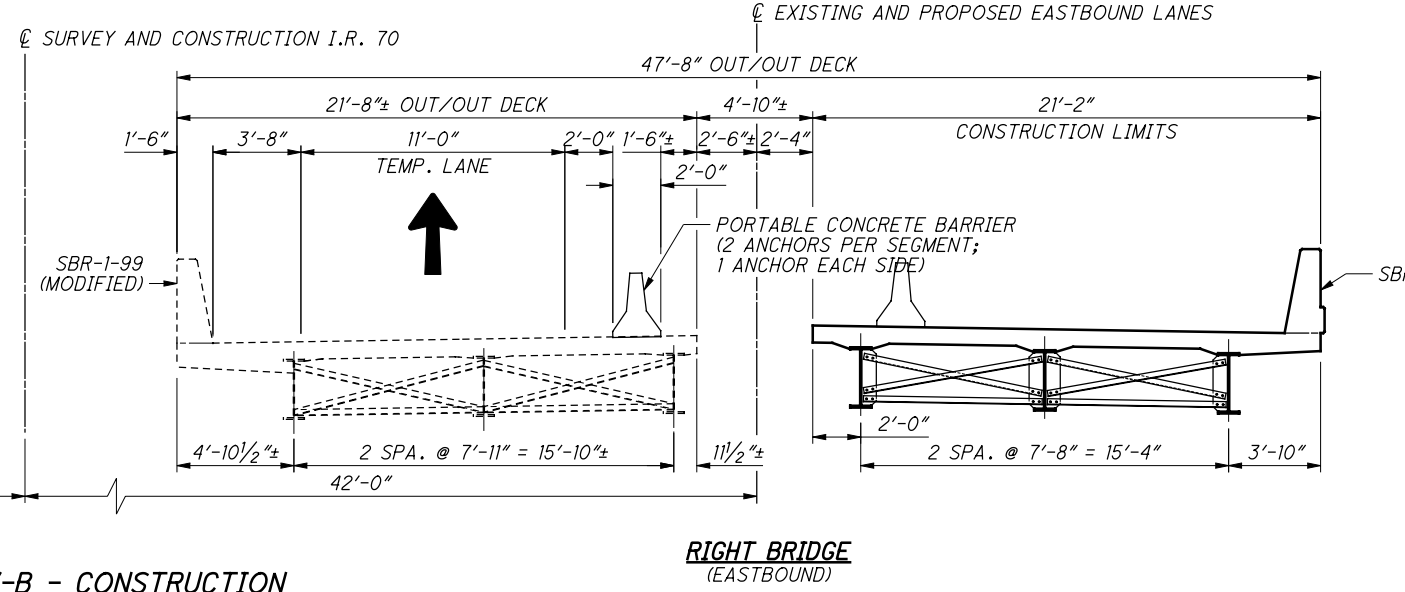
RIGHT BRIDGE
(EASTBOUND)



LEFT BRIDGE
(WESTBOUND)

PORTABLE CONCRETE BARRIER
(2 ANCHORS PER SEGMENT;
1 ANCHOR EACH SIDE)

PHASE IV-A & IV-B - CONSTRUCTION



RIGHT BRIDGE
(EASTBOUND)

PHASE IV-A REMOVAL

1. RELOCATE PORTABLE CONCRETE BARRIERS. DIRECT EASTBOUND AND WESTBOUND TRAFFIC AS REQUIRED.
2. REMOVE EXISTING SUPERSTRUCTURE AND APPROACH SLABS TO THE LIMITS SHOWN IN THE PLANS.
3. REMOVE EXISTING PORTIONS OF ABUTMENTS AND PIERS TO THE LIMITS SHOWN IN THE PLANS.

PHASE IV-A CONSTRUCTION

1. CONSTRUCT THE NEW ABUTMENTS AND PIER CAPS TO THE LIMITS SHOWN IN THE PLANS.
2. INSTALL NEW BEARINGS, STEEL BEAMS, AND CROSS FRAMES.
3. CONSTRUCT NEW DECK AND PARAPETS TO THE LIMITS SHOWN IN THE PLANS.
4. SEAL CONCRETE SURFACES.

LEGEND:

 LIMITS OF REMOVAL

APPROVED FOR CONSTRUCTION - 5/2/2011



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PHASE CONSTRUCTION DETAILS
BRIDGE NO. BEL-70-0775 L/R
I.R. 70 OVER TWP. RD. 260

BEL-70-7.61
PID No. 76825

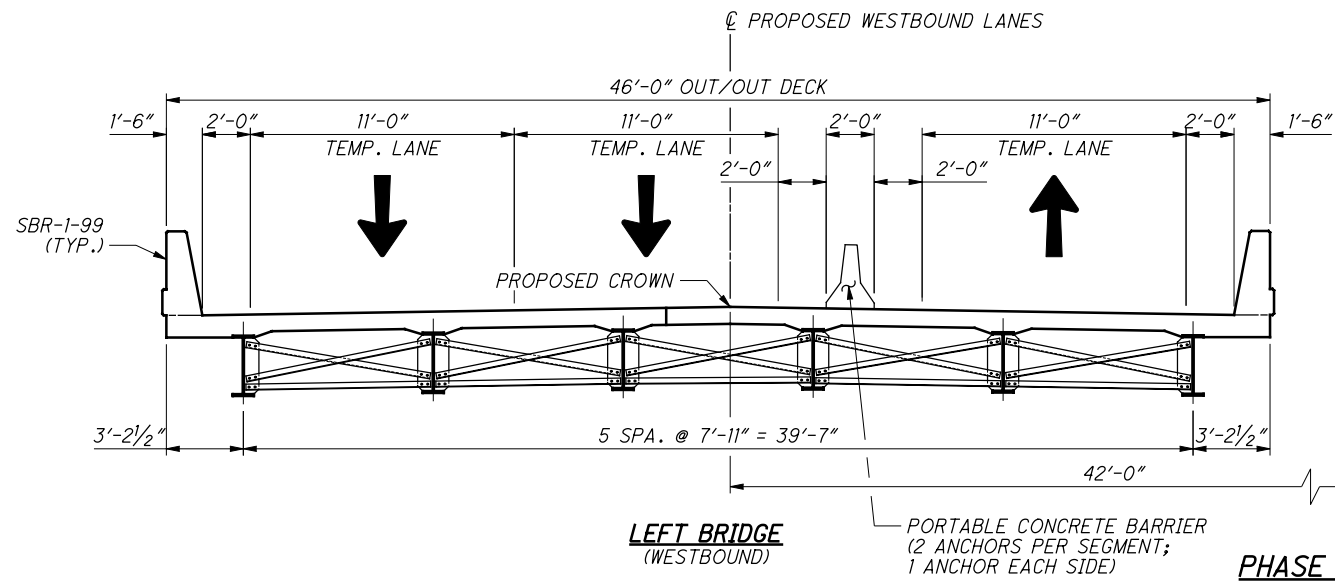
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REVIEWED	RER	STRUCTURE FILE NUMBER	0702137L/0702161R
DATE	2/3/11		

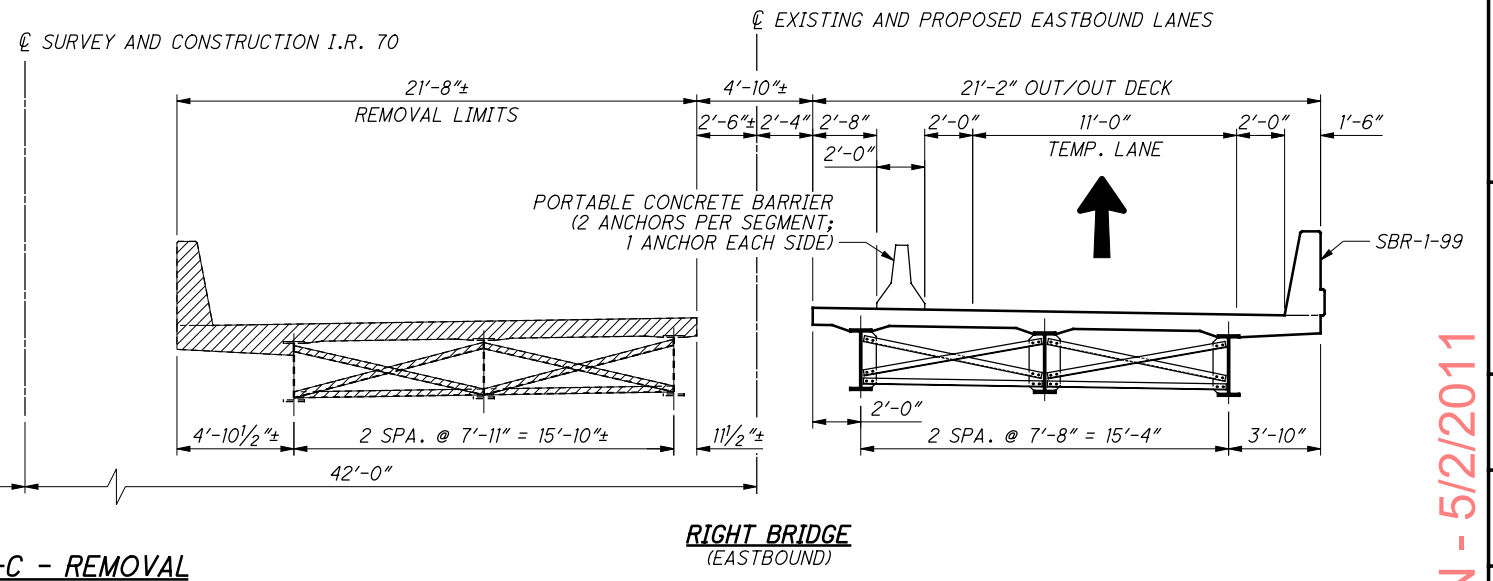
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 I.R. 70 OVER TWP. RD. 260

BEL-70-7.61
PID No. 76825

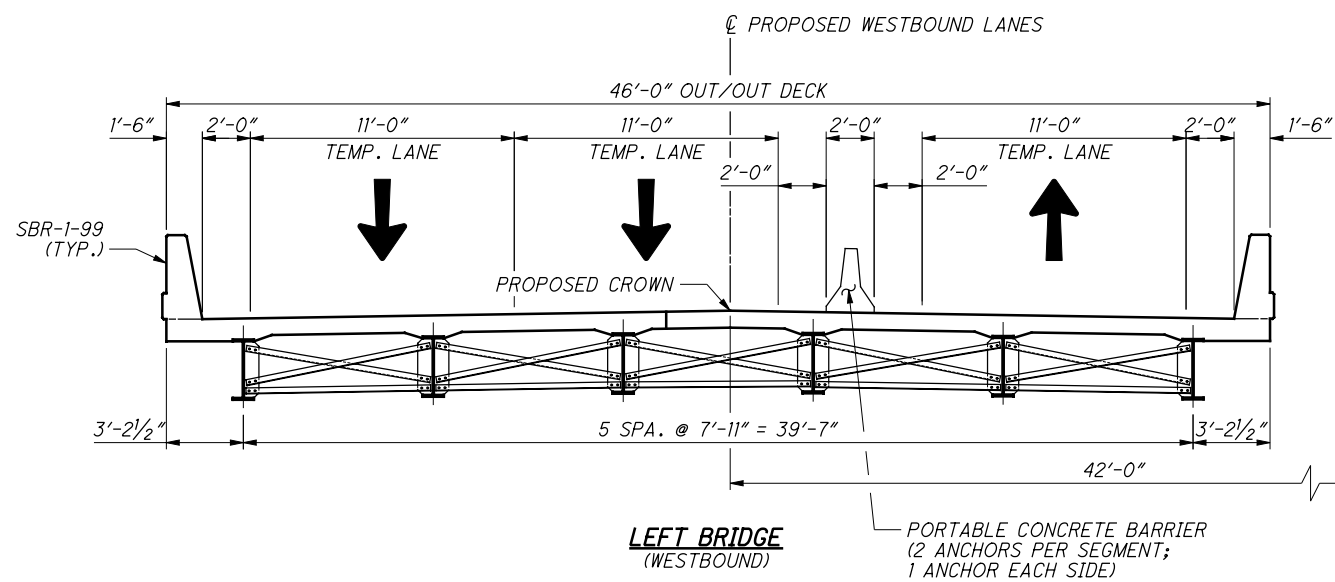
APPROVED FOR CONSTRUCTION - 5/2/2011



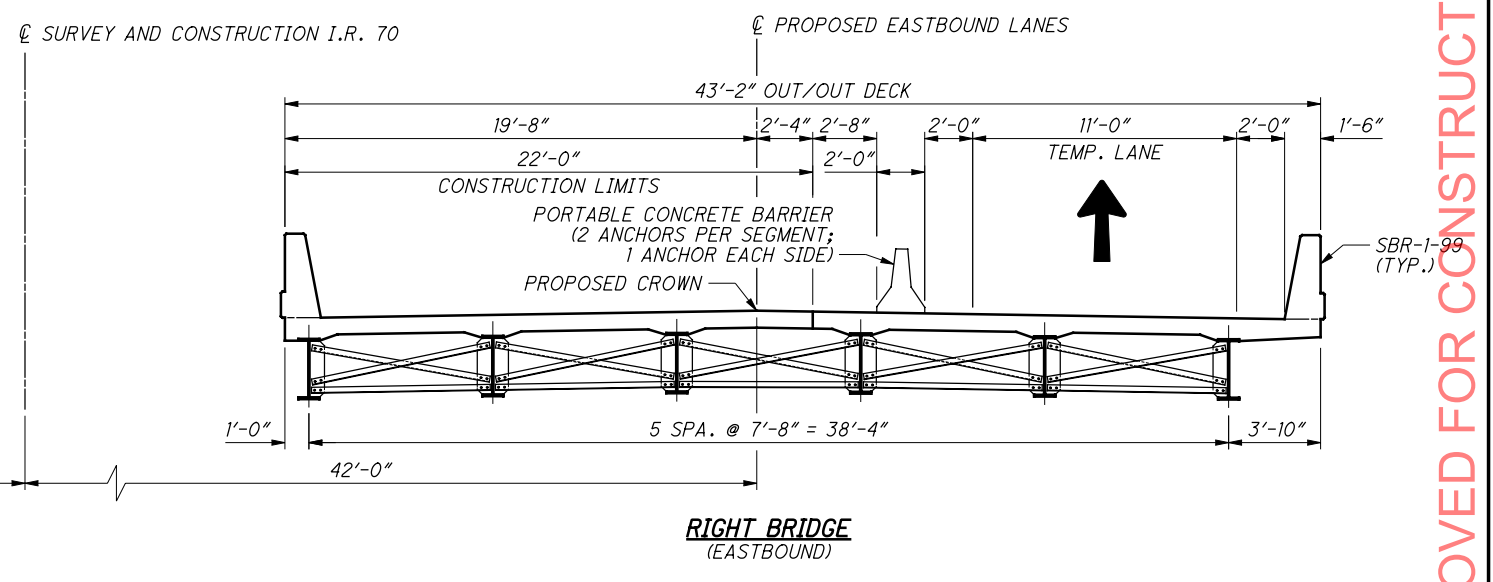
PHASE IV-C - REMOVAL



RIGHT BRIDGE (EASTBOUND)



PHASE IV-C - CONSTRUCTION



RIGHT BRIDGE (EASTBOUND)

PHASE IV-B REMOVAL

1. RELOCATE PORTABLE CONCRETE BARRIERS. DIRECT EASTBOUND AND WESTBOUND TRAFFIC AS REQUIRED.
2. REMOVE EXISTING SUPERSTRUCTURE AND APPROACH SLABS TO THE LIMITS SHOWN IN THE PLANS.
3. REMOVE EXISTING PORTIONS OF ABUTMENTS AND PIERS TO THE LIMITS SHOWN IN THE PLANS.

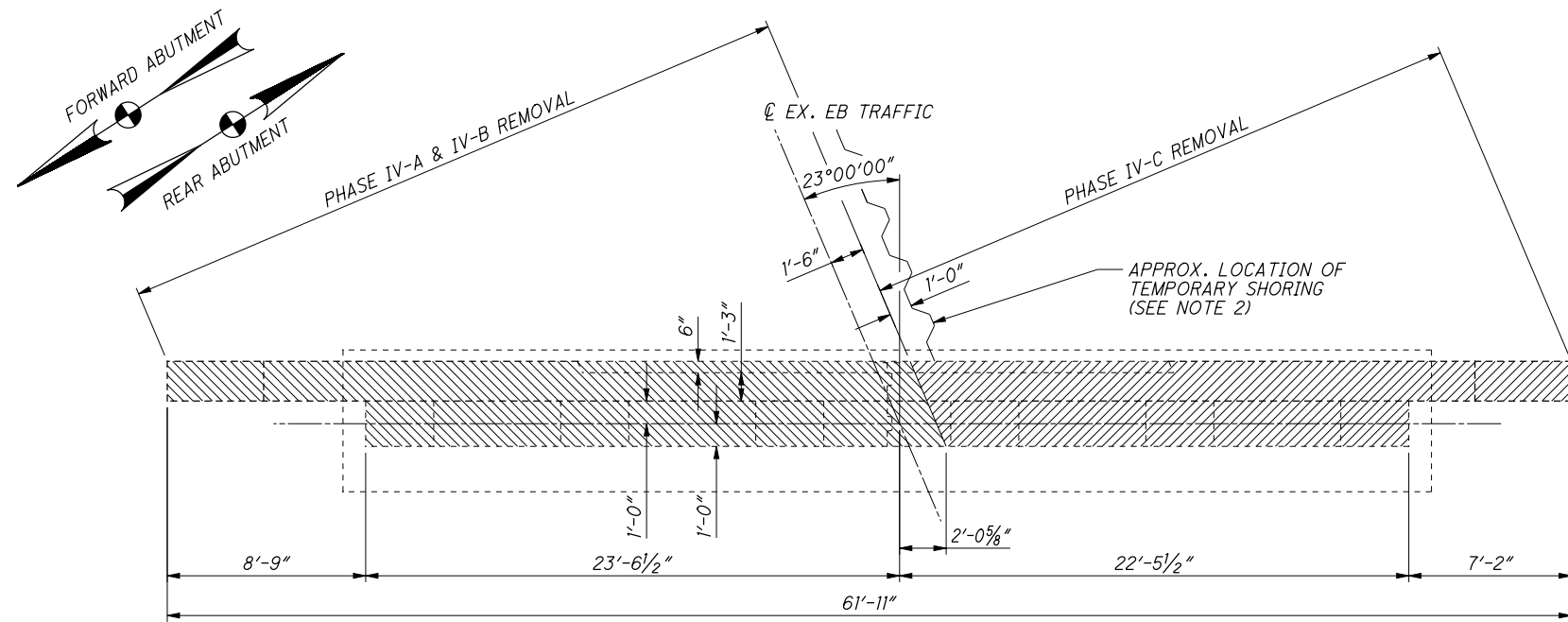
PHASE IV-B CONSTRUCTION

1. CONSTRUCT THE NEW ABUTMENTS AND PIER CAPS TO THE LIMITS SHOWN IN THE PLANS.
2. INSTALL NEW BEARINGS, STEEL BEAMS, AND CROSS FRAMES.
3. CONSTRUCT NEW DECK AND PARAPETS TO THE LIMITS SHOWN IN THE PLANS.
4. INSTALL NEW CROSSFRAMES UNDER THE CLOSURE POUR. CAST THE CLOSURE POUR.
5. SEAL CONCRETE SURFACES.
6. REMOVE THE PORTABLE CONCRETE BARRIERS.

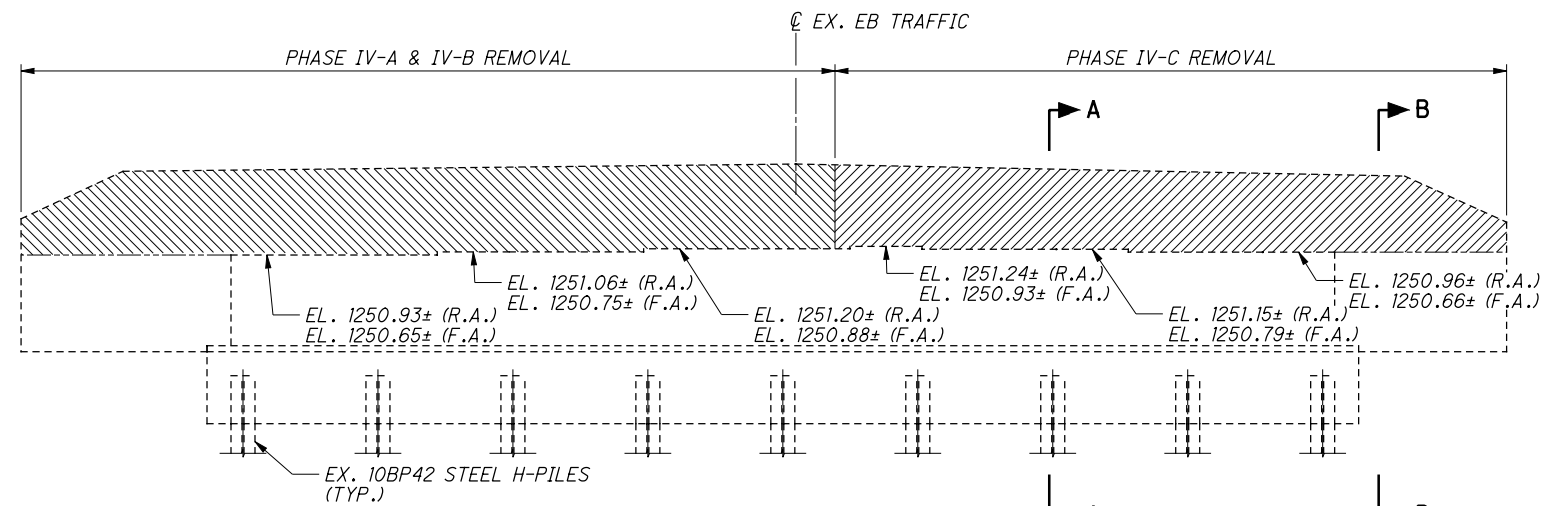
LEGEND:

LIMITS OF REMOVAL

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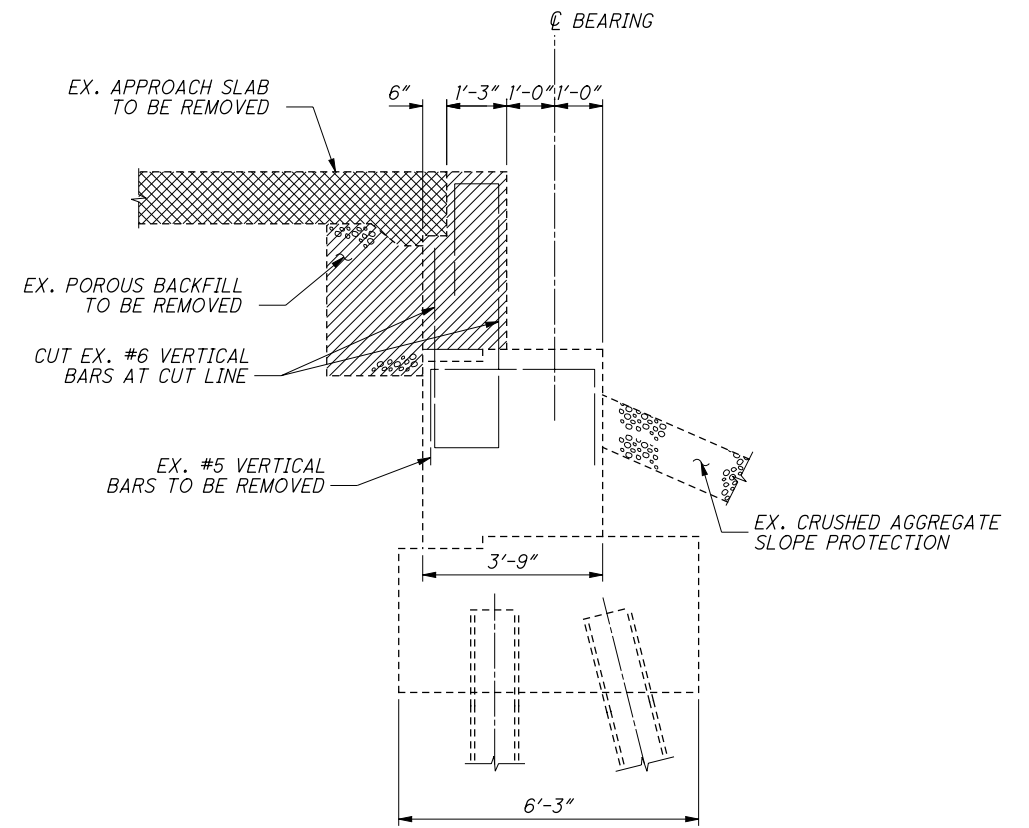


EXISTING ABUTMENT REMOVAL PLAN
RIGHT BRIDGE REAR ABUTMENT SHOWN
(RIGHT BRIDGE FORWARD ABUTMENT OPPOSITE HAND)

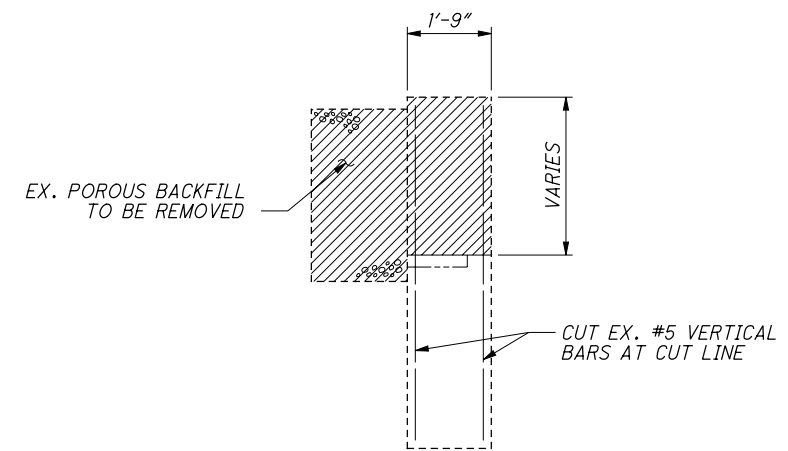


EXISTING ABUTMENT REMOVAL ELEVATION
RIGHT BRIDGE REAR ABUTMENT SHOWN
(RIGHT BRIDGE FORWARD ABUTMENT OPPOSITE HAND)

- LEGEND:**
- PHASE IV-A REMOVAL
 - PHASE IV-B REMOVAL
 - APPROACH SLAB REMOVED



SECTION A-A



SECTION B-B

LEGEND:

F.A. - FORWARD ABUTMENT
R.A. - REAR ABUTMENT

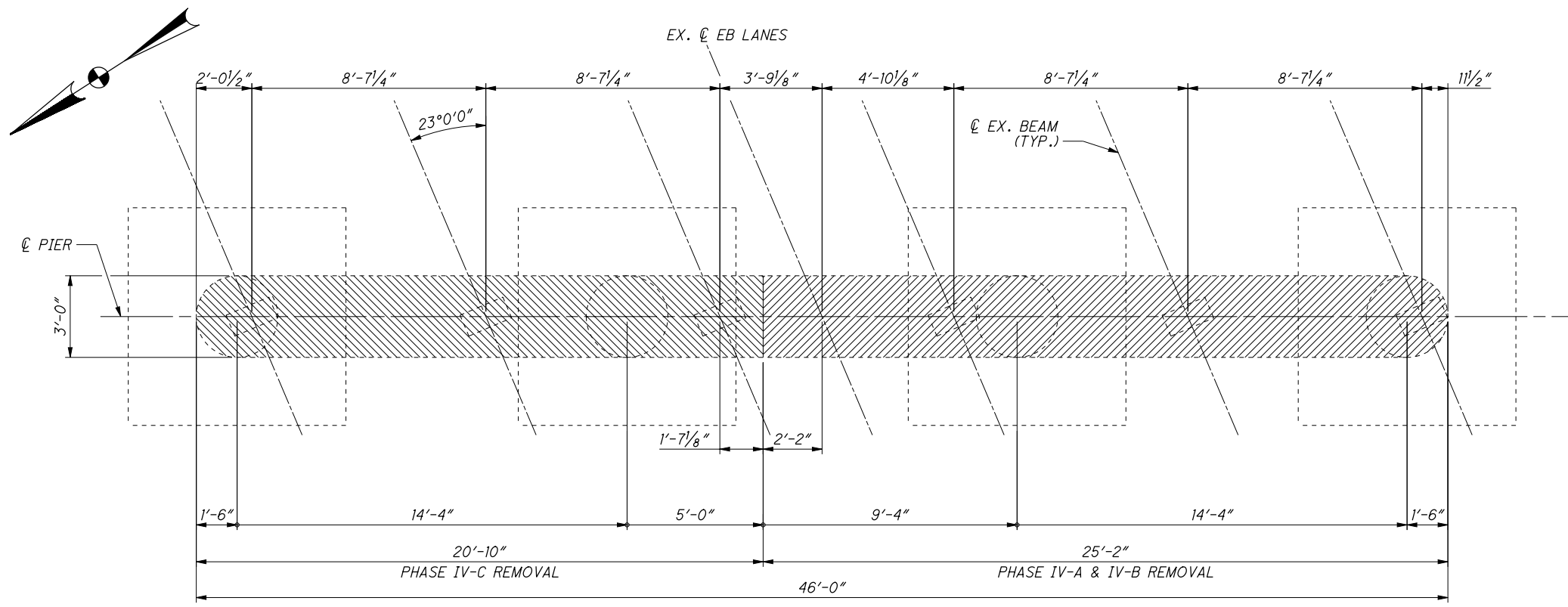
NOTES:

1. ALL EXISTING DIMENSIONS ARE ±
2. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE PLACEMENT OF TEMPORARY SHORING DOES NOT DAMAGE THE ABUTMENT STEM OR FOOTING.

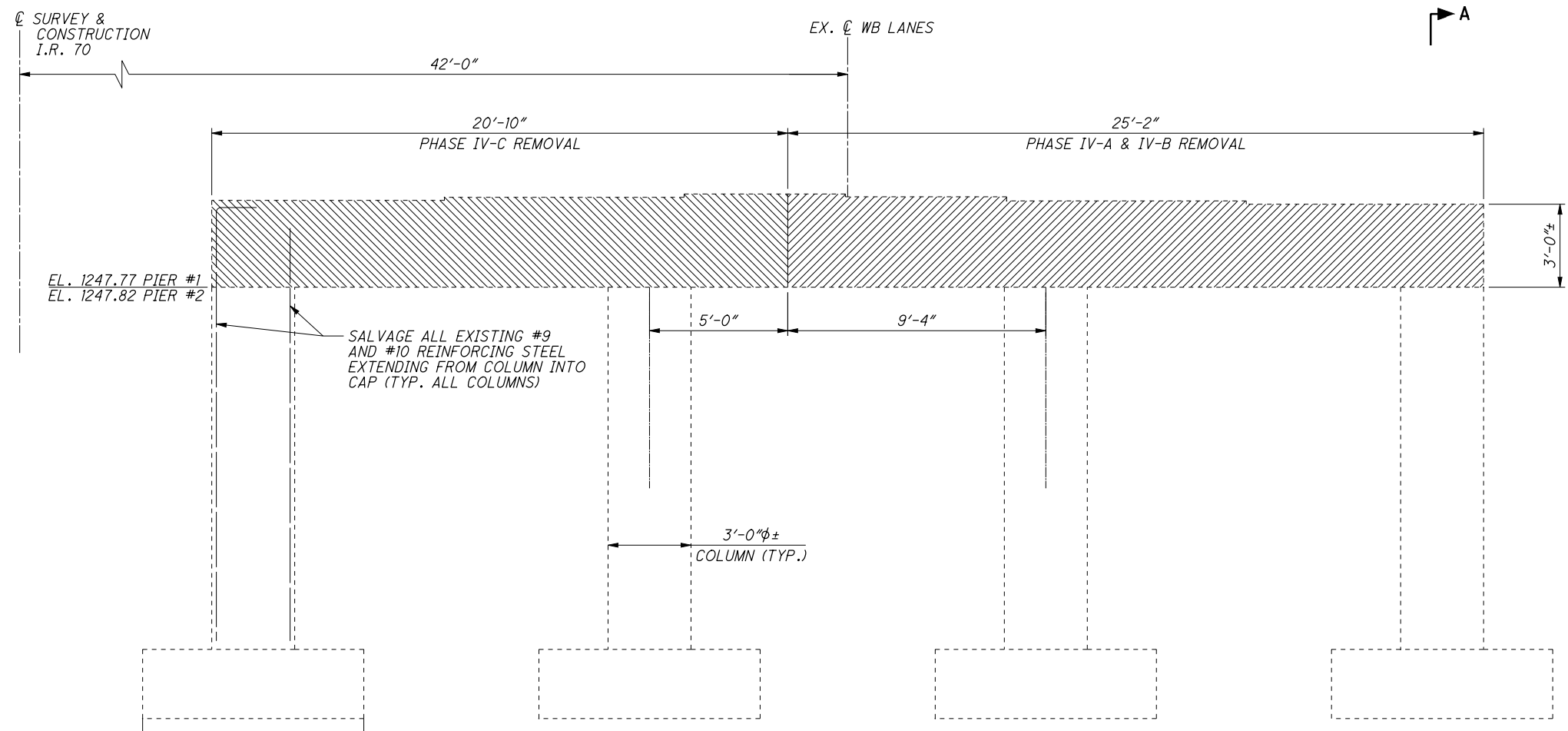
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E.L. ROBINSON <i>The Challenge. The Choice.</i> 1801 Watermark Drive, Suite 310 - Columbus, Ohio 43215	
DESIGNED DTA	DATE 2/3/11
DRAWN DTA	REVIEWED RER
CHECKED AME	STRUCTURE FILE NUMBER 0702137L/0702161R
ABUTMENT REMOVAL DETAILS - RIGHT BRIDGE BRIDGE NO. BEL-70-0775 L/R I.R. 70 OVER TWP. RD. 260	
BEL-70-7.61	PID No. 76825
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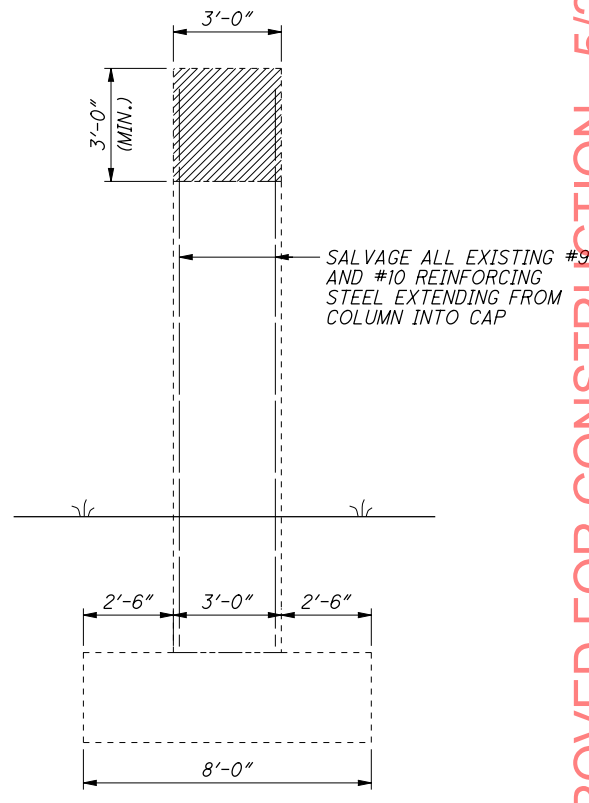
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EXISTING TYPICAL PIER PLAN
RIGHT BRIDGE (PIERS 1 & 2)



EXISTING TYPICAL PIER ELEVATION
RIGHT BRIDGE (PIERS 1 & 2)



EXISTING PIER SECTION
RIGHT BRIDGE

LEGEND:

- PHASE IV-A REMOVAL
- PHASE IV-B REMOVAL

NOTE:

ALL EXISTING DIMENSIONS ARE ±

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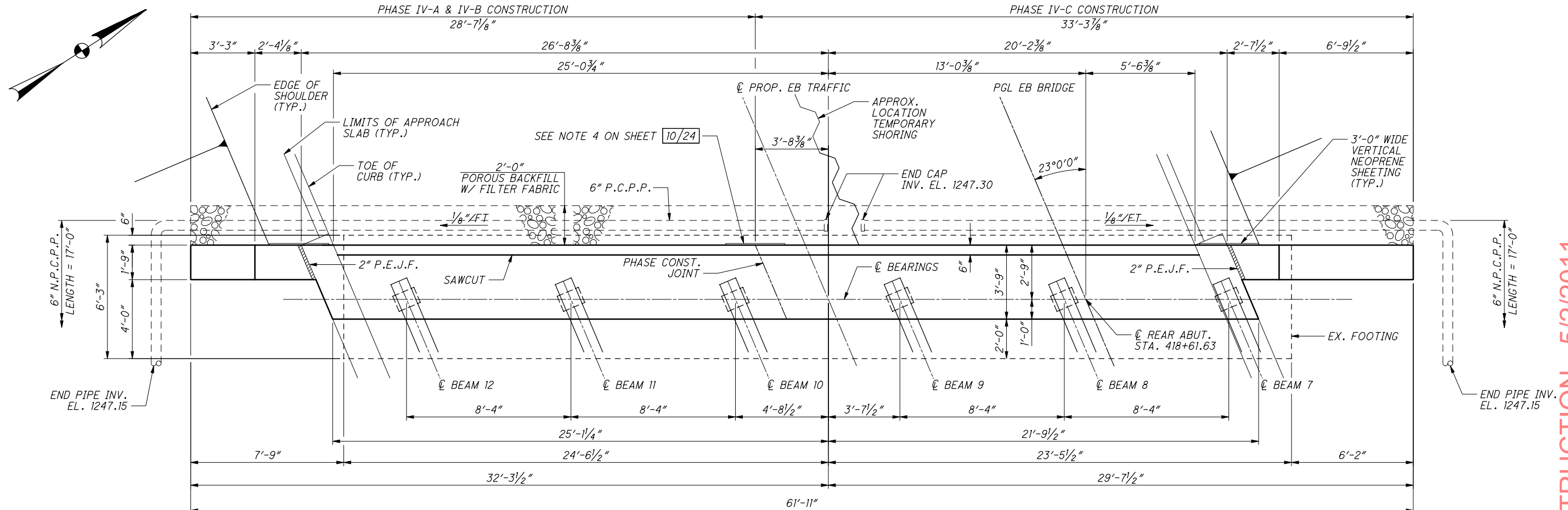
E.L. ROBINSON <small>the Challenge, the Choice</small> 1807 Watermark Drive, Suite 310 - Columbus, Ohio 43215	
DESIGNED: DTA CHECKED: AWE DRAWN: BMG REVISIONS:	DATE: 2/3/11 REVISION: RER STRUCTURE FILE NUMBER: 0702137L/0702161R
PIER REMOVAL DETAILS - RIGHT BRIDGE BRIDGE NO. BEL-70-0775 L/R I.R. 70 OVER S.R. 260	
BEL-70-7.61 PID No. 76825	
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REAR ABUTMENT DETAILS - RIGHT BRIDGE
BRIDGE NO. BEL-70-0775 L/R
I.R. 70 OVER TWP. RD. 260

BEL-70-7.61
PID No. 76825

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REAR ABUTMENT PLAN
RIGHT BRIDGE

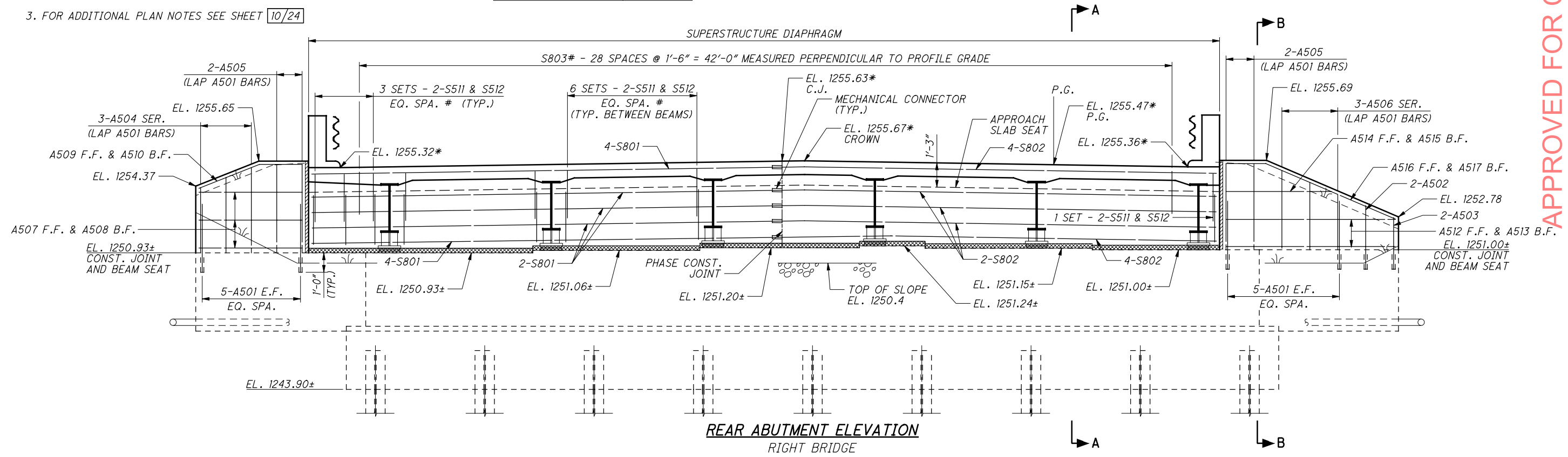
NOTES:

- FOR SECTIONS A-A AND B-B SEE SHEET 10/24
- 6" N.P.C.P.P. AT ENDS SPLICED TO PERFORATED PIPE AND OUTLET AS SHOWN IN PIPE TERMINATION DETAIL ON SHEET 10/24
- FOR ADDITIONAL PLAN NOTES SEE SHEET 10/24

LAP LENGTHS	
NO. 5 BARS	2'-6" MIN.

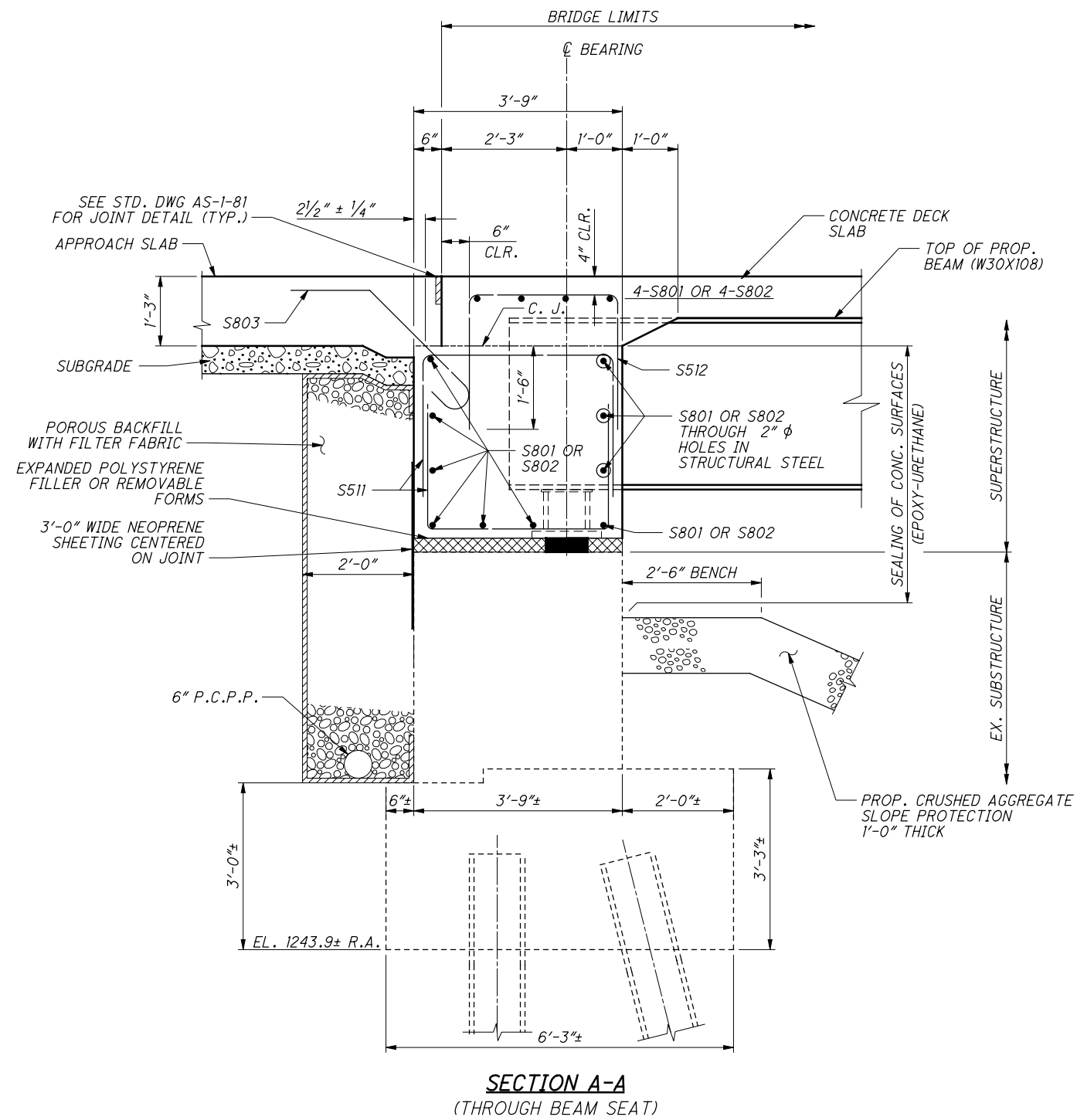
LEGEND:

- * - ELEVATION GIVEN AT BRIDGE LIMIT
- # - PLACED PARALLEL TO PROFILE GRADE

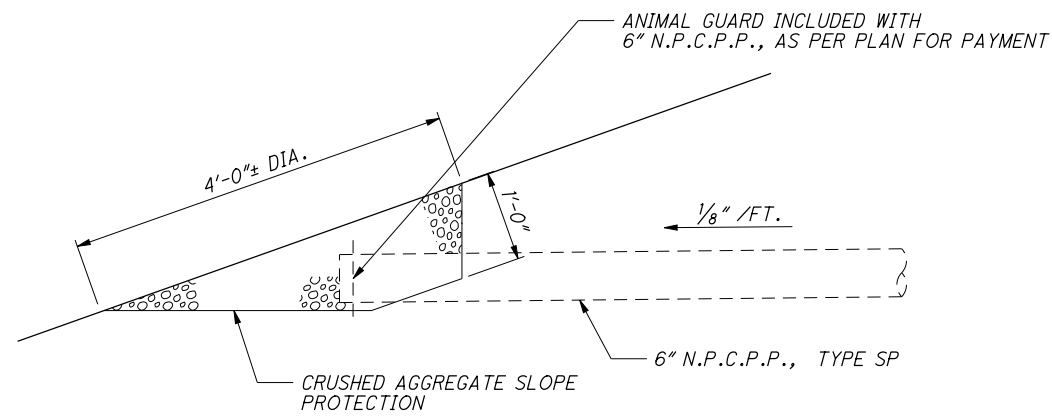


REAR ABUTMENT ELEVATION
RIGHT BRIDGE

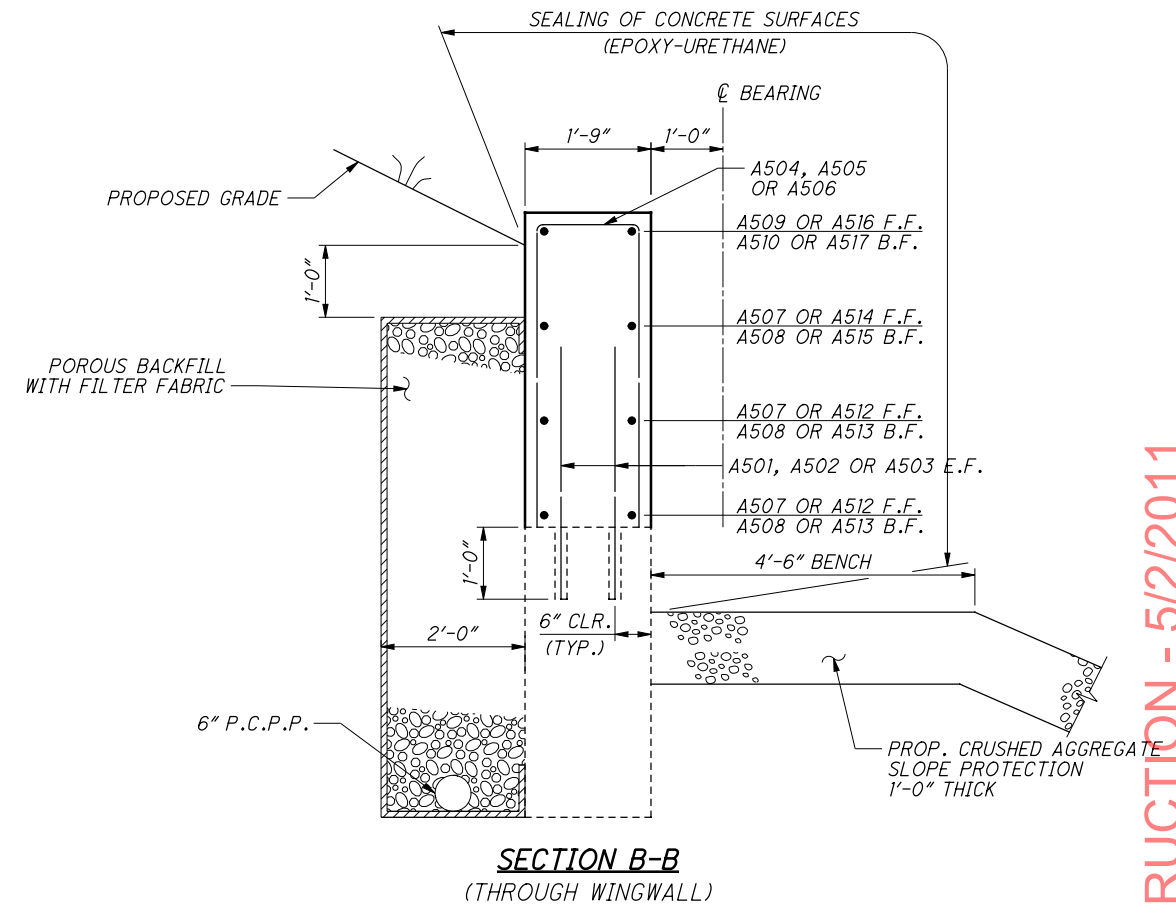
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SECTION A-A
(THROUGH BEAM SEAT)



TERMINATION OF 6" N.P.C.P.P. DETAIL



SECTION B-B
(THROUGH WINGWALL)

NOTES:

- POROUS BACKFILL WITH FILTER FABRIC, 2'-0" THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 1 FOOT BELOW THE EMBANKMENT SURFACE, AND Laterally TO THE ENDS OF THE WINGWALLS.
- ABUTMENT DIAPHRAGM CONCRETE, STEEL SUPERSTRUCTURE, PHASED CONSTRUCTION: PLACE THE CONCRETE IN THE ABUTMENT DIAPHRAGM ENCASEING STRUCTURAL STEEL MEMBERS OF AN INDIVIDUAL PHASE SEPARATELY OR WITH THE DECK CONCRETE OF THAT PHASE. IF THE DIAPHRAGM CONCRETE IS PLACED SEPARATELY, ALLOW AT LEAST 48 HOURS OF SET TIME BEFORE PLACING DECK CONCRETE. LOCATE THE HORIZONTAL CONSTRUCTION JOINT BETWEEN THE DIAPHRAGM AND DECK CONCRETE AT THE APPROACH SLAB SEAT.
- FOR ADDITIONAL SEMI-INTEGRAL ABUTMENT DETAILS SEE ODOT STD. DWG. SICD-1-96.
- VERTICALLY PLACE TYPE 2 WATERPROOFING 3' WIDE CENTERED ON JOINT FROM 1'-6" BELOW EXISTING BRIDGE SEAT TO APPROACH SLAB SEAT.
- MECHANICAL CONECTORS SHALL BE CAPABLE OF DEVELOPING 125 PERCENT OF THE YIELD STRENGTH OF THE BARS JOINED.
- FOR ADDITIONAL BEARING DETAILS, SEE SHEET 16/24.
- FOR LOCATIONS OF SECTIONS A-A AND B-B, SEE SHEET 9/24.

APPROVED FOR CONSTRUCTION - 5/2/2011

REAR ABUTMENT DETAILS - RIGHT BRIDGE

BRIDGE NO. BEL-70-0775 L/R
 I.R. 70 OVER TWP. RD. 260

BEL-70-7.61
 PID No. 76825

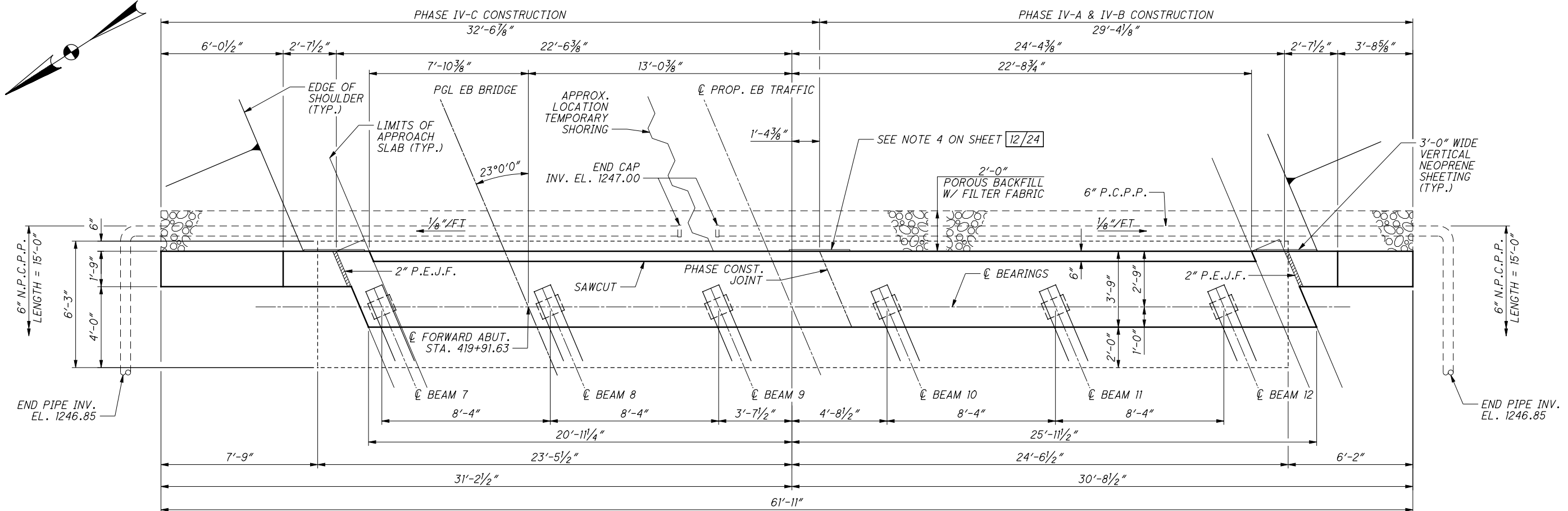
10/24

269
 307

E.L. ROBINSON
 the Challenge. the Choice.
 1801 Watermark Drive, Suite 310 - Columbus, Ohio 43215

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STRUCTURE FILE NUMBER	0702137L/0702161R

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FORWARD ABUTMENT PLAN
RIGHT BRIDGE

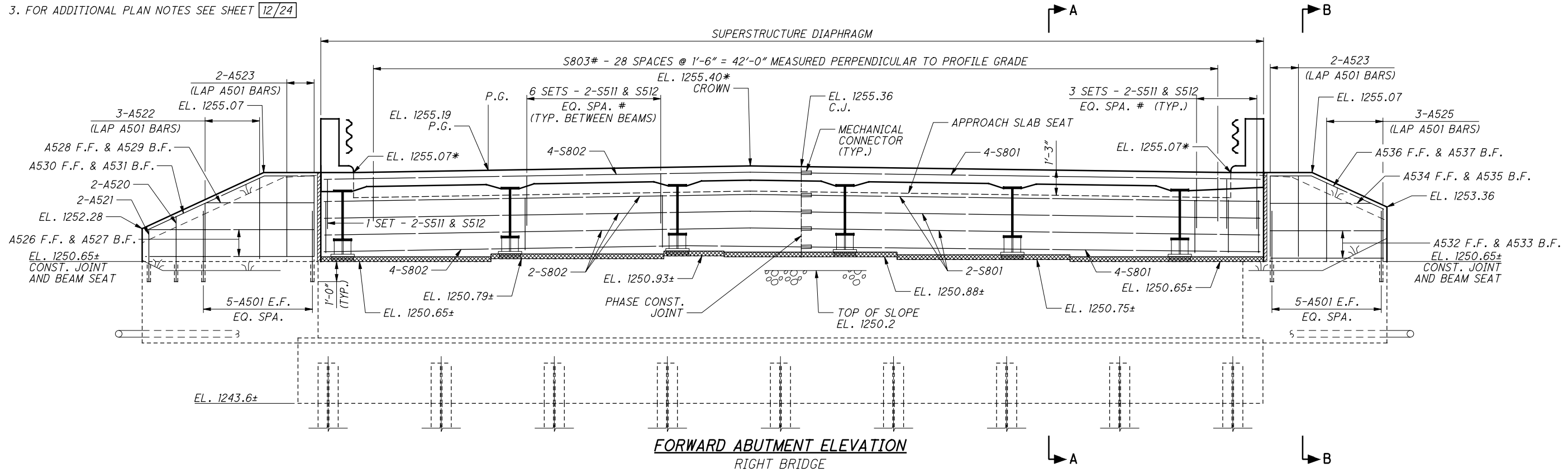
NOTES:

1. FOR SECTIONS A-A AND B-B SEE SHEET 12/24
2. 6" N.P.C.P.P. AT ENDS SPLICED TO PERFORATED PIPE AND OUTLET AS SHOWN IN PIPE TERMINATION DETAIL ON SHEET 12/24
3. FOR ADDITIONAL PLAN NOTES SEE SHEET 12/24

LAP LENGTHS	
NO. 5 BARS	2'-6" MIN.

LEGEND:

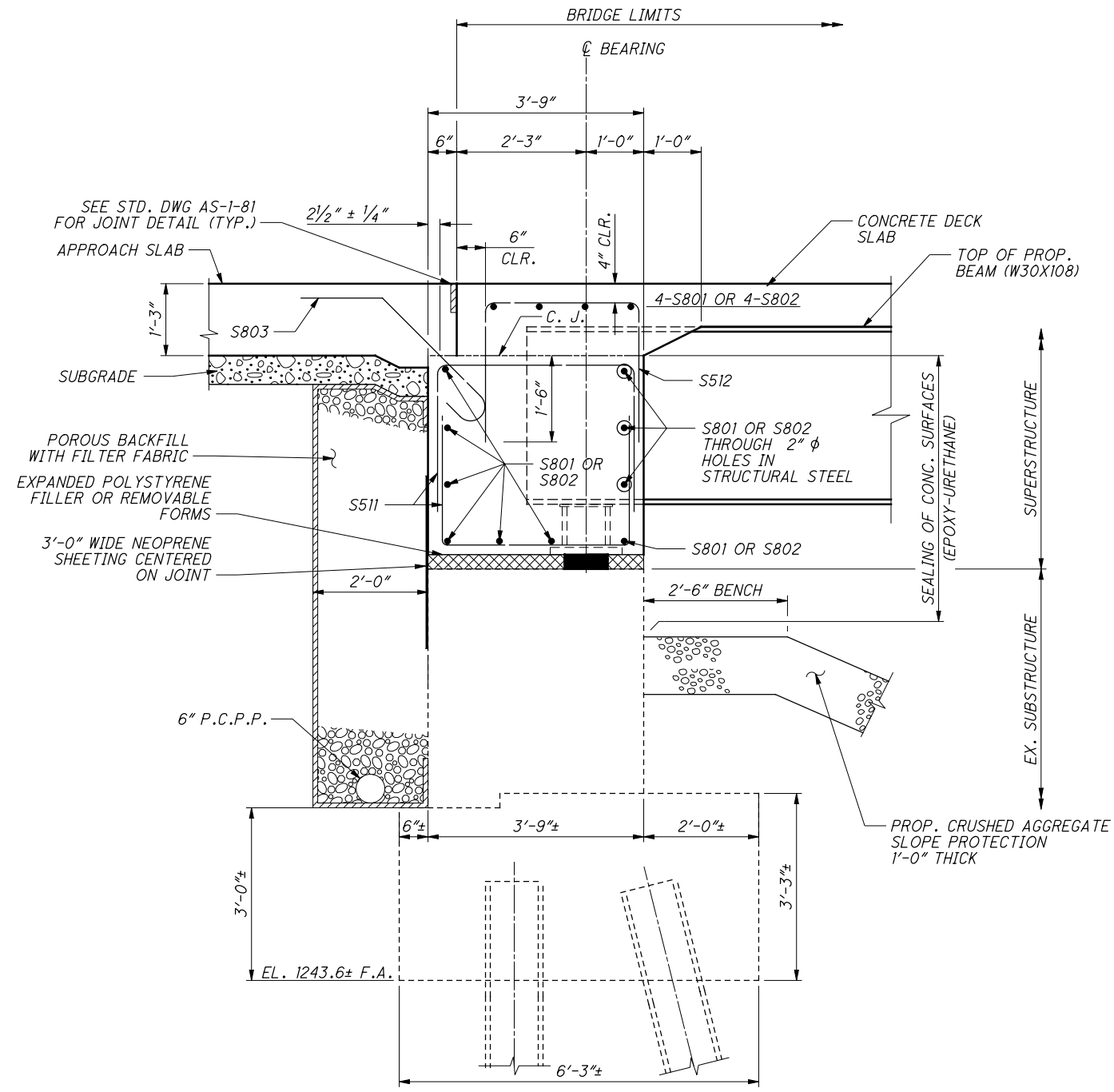
- * - ELEVATION GIVEN AT BRIDGE LIMIT
- # - PLACED PARALLEL TO PROFILE GRADE



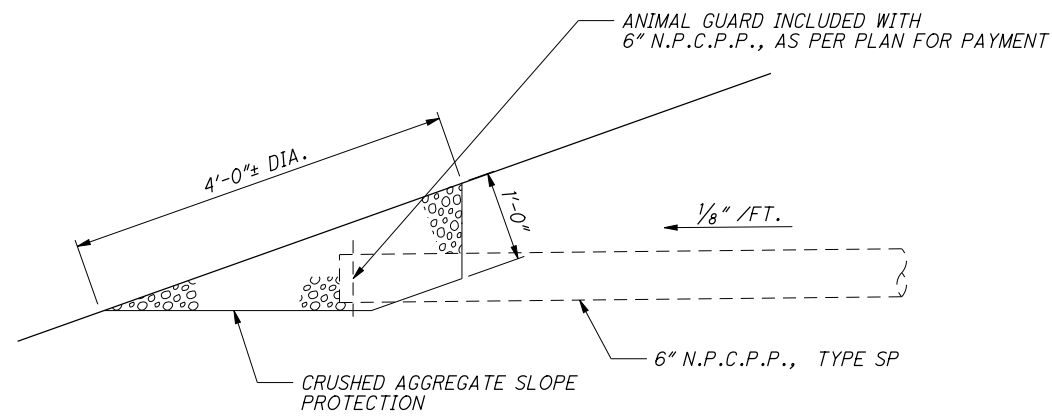
FORWARD ABUTMENT ELEVATION
RIGHT BRIDGE

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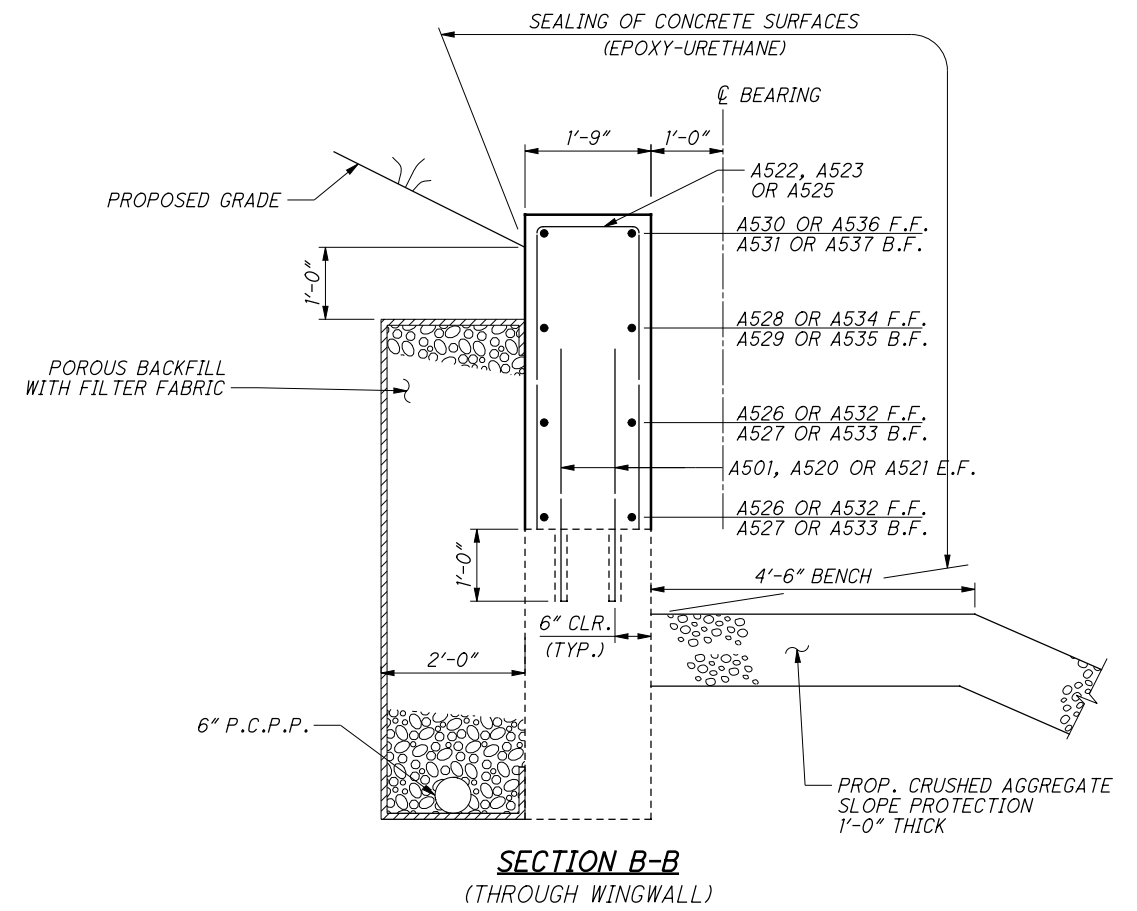
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SECTION A-A
(THROUGH BEAM SEAT)



TERMINATION OF 6" N.P.C.P.P. DETAIL



NOTES:

- POROUS BACKFILL WITH FILTER FABRIC, 2'-0" THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 1 FOOT BELOW THE EMBANKMENT SURFACE, AND Laterally TO THE ENDS OF THE WINGWALLS.
- ABUTMENT DIAPHRAGM CONCRETE, STEEL SUPERSTRUCTURE, PHASED CONSTRUCTION: PLACE THE CONCRETE IN THE ABUTMENT DIAPHRAGM ENCASEING STRUCTURAL STEEL MEMBERS OF AN INDIVIDUAL PHASE SEPARATELY OR WITH THE DECK CONCRETE OF THAT PHASE. IF THE DIAPHRAGM CONCRETE IS PLACED SEPARATELY, ALLOW AT LEAST 48 HOURS OF SET TIME BEFORE PLACING DECK CONCRETE. LOCATE THE HORIZONTAL CONSTRUCTION JOINT BETWEEN THE DIAPHRAGM AND DECK CONCRETE AT THE APPROACH SLAB SEAT.
- FOR ADDITIONAL SEMI-INTEGRAL ABUTMENT DETAILS SEE ODOT STD. DWG. SICD-1-96.
- VERTICALLY PLACE TYPE 2 WATERPROOFING 3' WIDE CENTERED ON JOINT FROM 1'-6" BELOW EXISTING BRIDGE SEAT TO APPROACH SLAB SEAT.
- MECHANICAL CONECTORS SHALL BE CAPABLE OF DEVELOPING 125 PERCENT OF THE YIELD STRENGTH OF THE BARS JOINED.
- FOR ADDITIONAL BEARING DETAILS, SEE SHEET 16/24.
- FOR LOCATIONS OF SECTIONS A-A AND B-B, SEE SHEET 11/24.

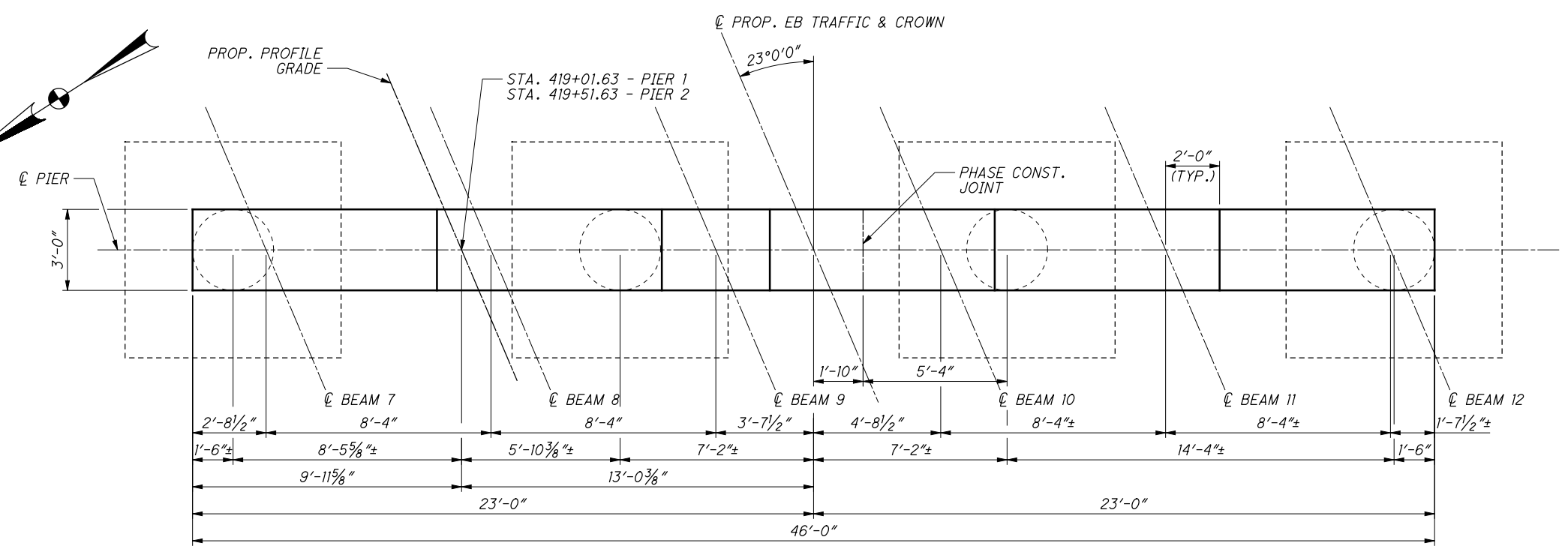
APPROVED FOR CONSTRUCTION - 5/2/2011

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STRUCTURE FILE NUMBER	0702137L/0702161R

FORWARD ABUTMENT DETAILS - RIGHT BRIDGE
BRIDGE NO. BEL-70-0775 L/R
I.R. 70 OVER TWP. RD. 260

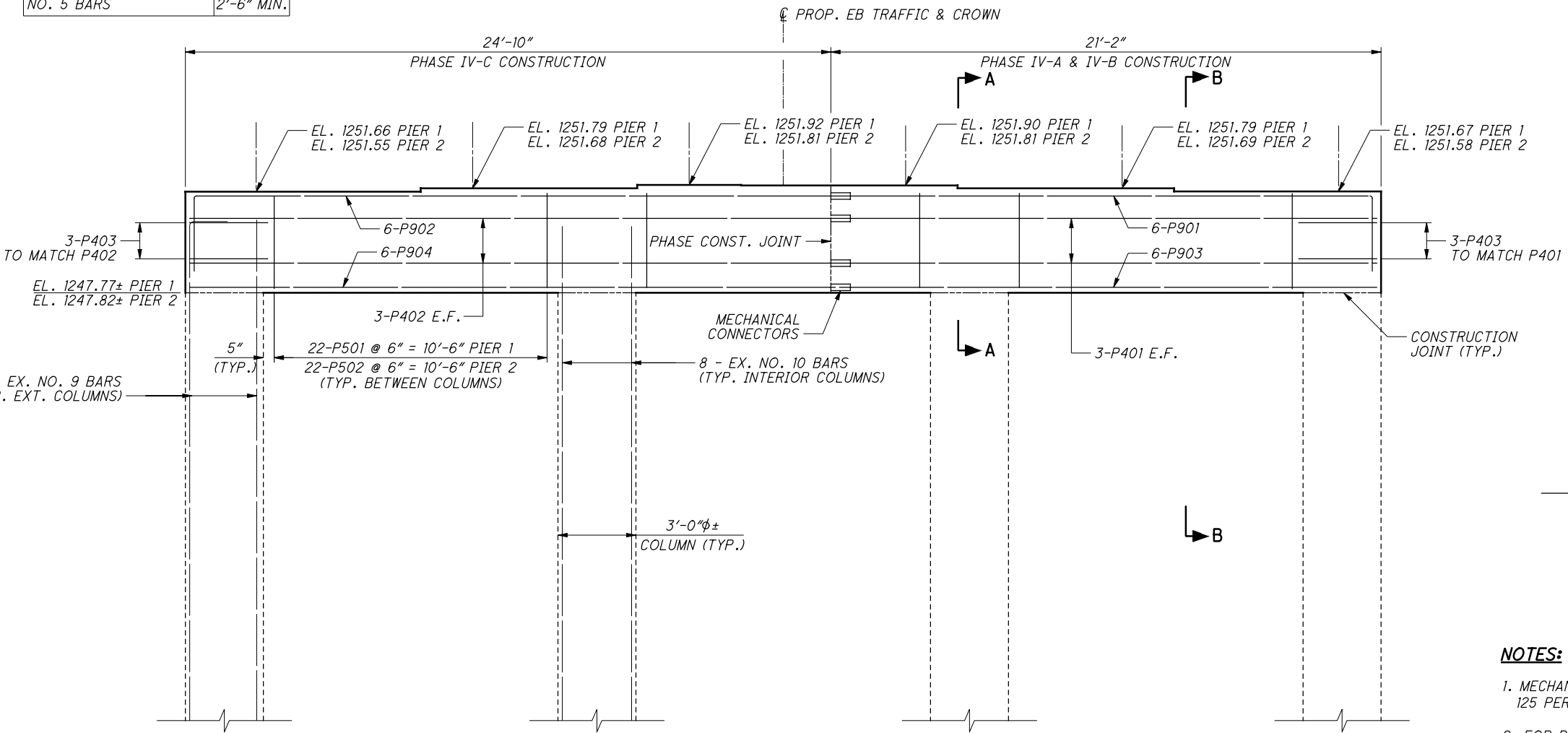
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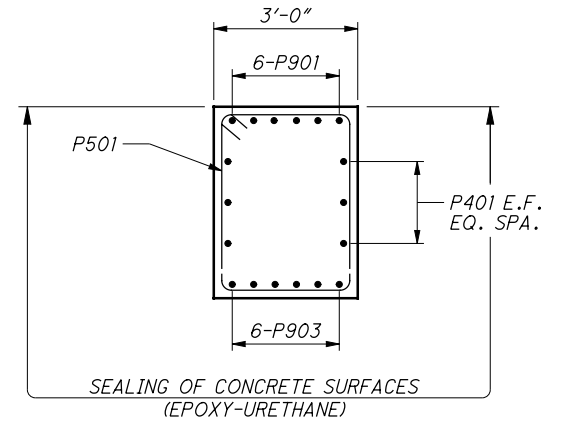


PLAN - RIGHT BRIDGE
(PIER 1 SHOWN - PIER 2 SIMILAR)

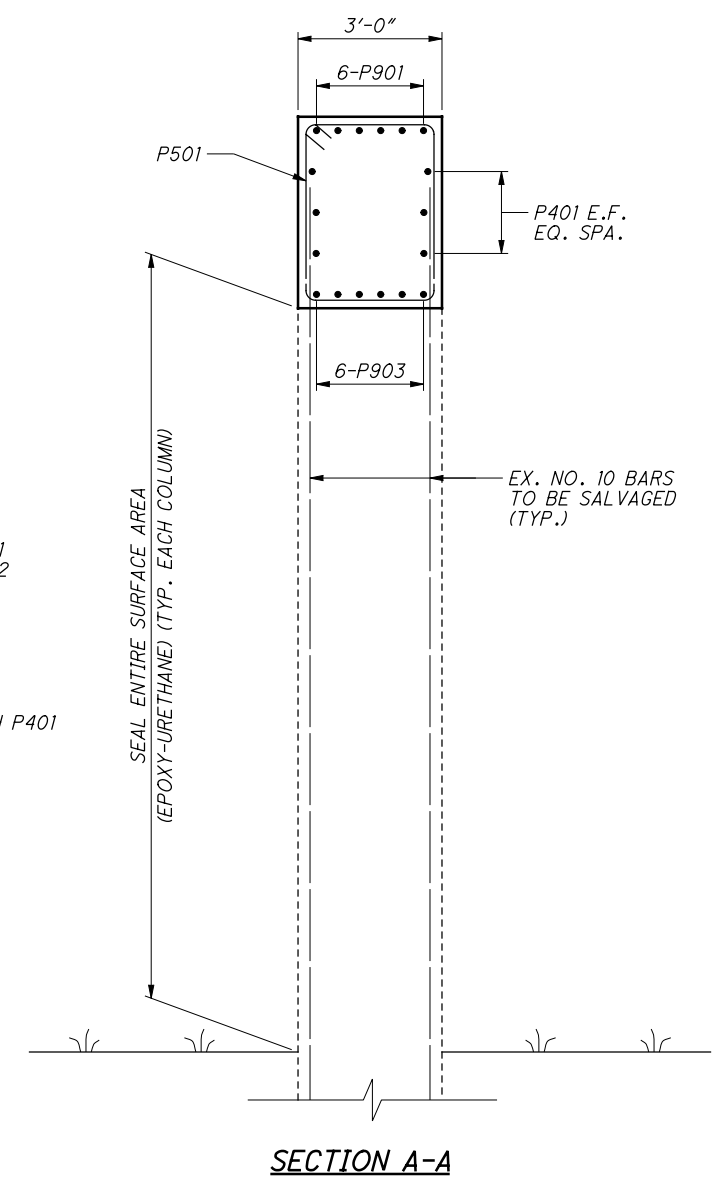
LAP LENGTHS	
NO. 4 BARS	2'-0" MIN.
NO. 5 BARS	2'-6" MIN.



ELEVATION - RIGHT BRIDGE
(PIER 1 SHOWN - PIER 2 SIMILAR)



SECTION B-B



SECTION A-A

- NOTES:**
1. MECHANICAL CONNECTORS SHALL BE CAPABLE OF DEVELOPING 125 PERCENT OF THE YIELD STRENGTH OF THE BARS JOINED.
 2. FOR BEARING DETAILS, SEE SHEET 16/24.
 3. FOR PHASE CONSTRUCTION DETAILS, SEE SHEET 5/24 THROUGH 6/24.
 4. FOR REINFORCING SCHEDULE, SEE SHEET 23/24.

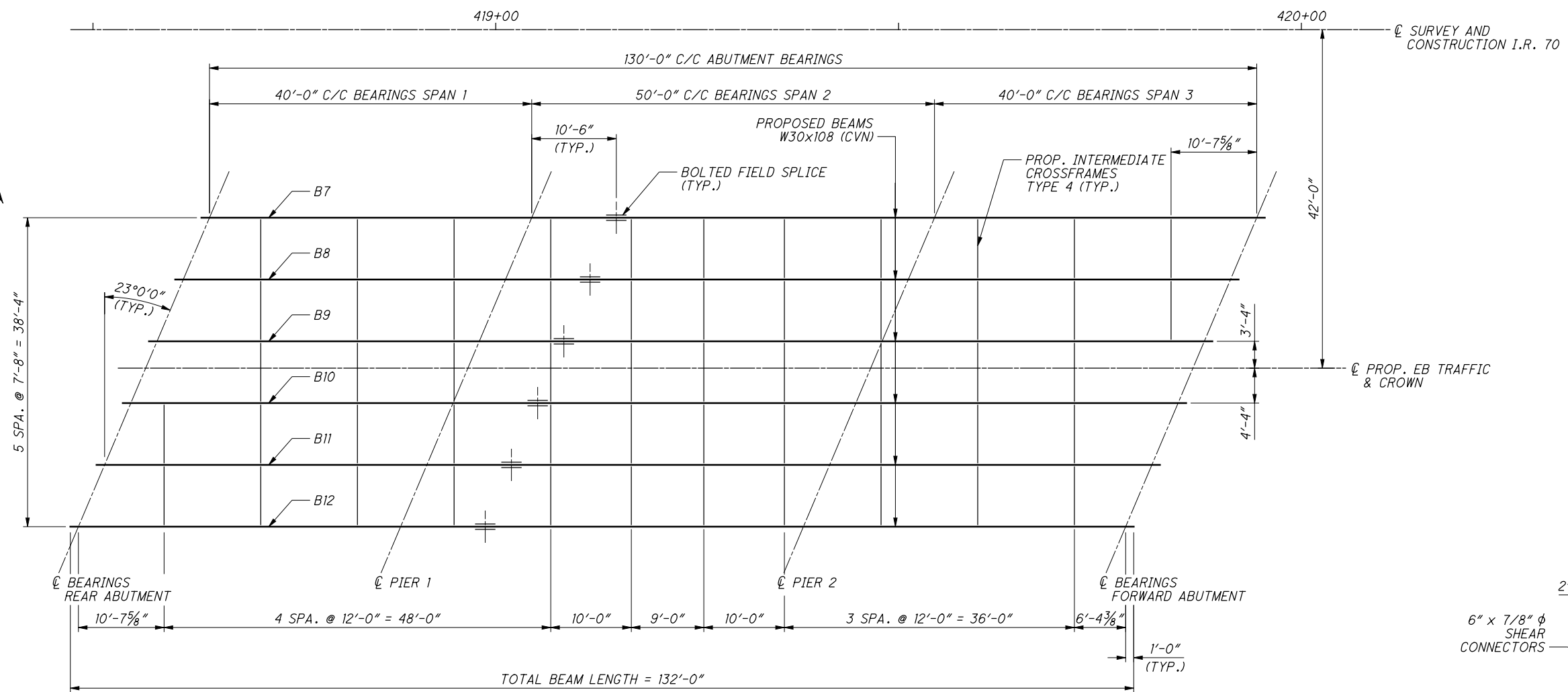
APPROVED FOR CONSTRUCTION - 5/2/2011



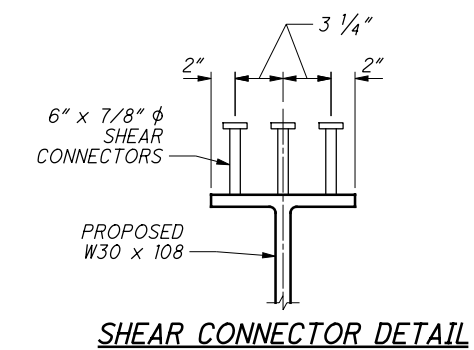
DESIGNED	DTA	CHECKED	RLE
DRAWN	BMG	REVIEWED	RER
DATE	2/3/11	STRUCTURE FILE NUMBER	0702137L/0702161R

PIER DETAILS - RIGHT BRIDGE
BEL-70-0775 L/R
I.R. 70 OVER S.R. 260

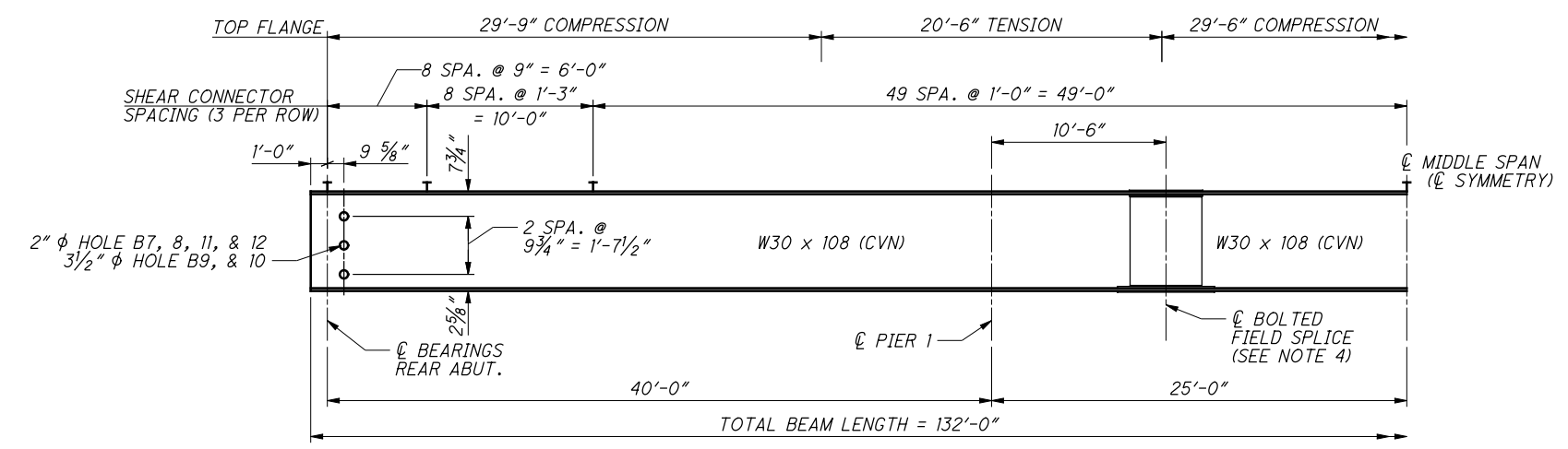
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FRAMING PLAN



SHEAR CONNECTOR DETAIL



PROPOSED BEAM ELEVATION

BEAM 7 - BEAM 12

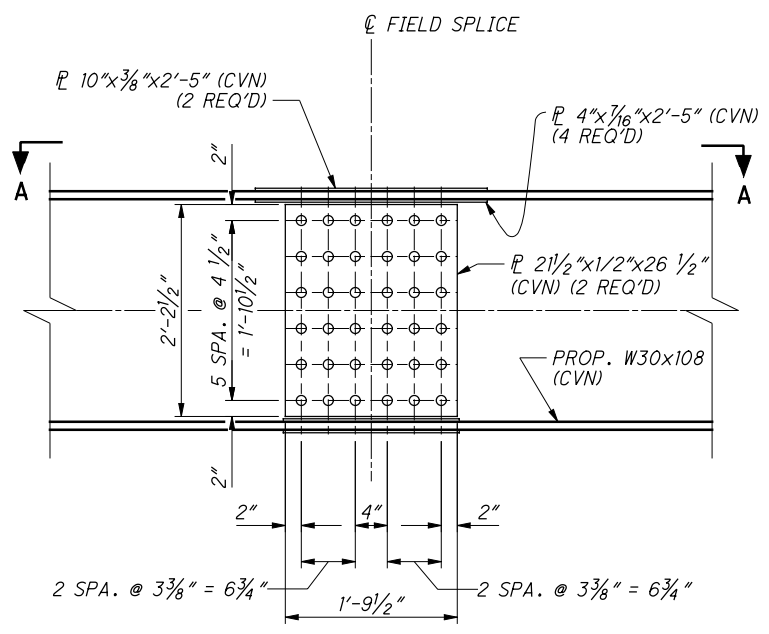
NOTES:

1. ALL PROPOSED BEAMS, CROSS-FRAMES AND FIELD SPLICE PLATES SHALL BE ASTM A709, GRADE 50W.
2. WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA BEAM FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE NO MORE THAN 2" LONG, AND BE AT LEAST 1/4" FOR THICKNESSES UP TO 3/4" OR 5/16" FOR GREATER THAN 3/4" THICK.
3. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
4. SHEAR CONNECTOR PLACEMENT ON FLANGE SPLICE PLATES IS NOT PERMITTED. SPACING OF WELDED SHEAR CONNECTORS MAY BE ALTERED AT FIELD SPLICE LOCATIONS TO AVOID INTERFERENCE WITH FLANGE SPLICE PLATES. THE TOTAL NUMBER OF SHEAR CONNECTORS SPECIFIED IN THE BEAM ELEVATION SHALL REMAIN THE SAME WITHIN EACH TENSION OR COMPRESSION ZONE.
5. FOR CROSSFRAME DETAILS, SEE ODOT STANDARD DRAWING GSD-1-96, TYPE 4 INTERMEDIATE WELDED CROSSFRAME DETAILS, SHEET 1 OF 3.
6. FOR DEFLECTION AND CAMBER INFORMATION, SEE SHEET 15/24.
7. FOR BEARING DETAILS, SEE SHEET 16/24.

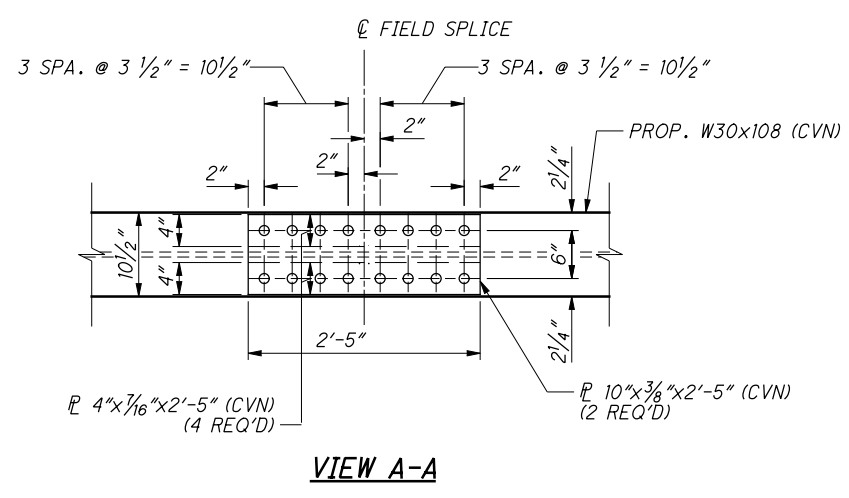
APPROVED FOR CONSTRUCTION - 5/2/2011

E.L. ROBINSON The Challenge. The Choice.	
DESIGNED AME	DATE 2/3/11
CHECKED RLE	REVIEWED RER
	STRUCTURE FILE NUMBER 0702137L/0702161R
FRAMING PLAN - RIGHT BRIDGE	
BRIDGE NO. BEL-70-0775 L/R	
I.R. 70 OVER TWP. RD. 260	
BEL-70-7.61	14/24
PID No. 76825	273 307

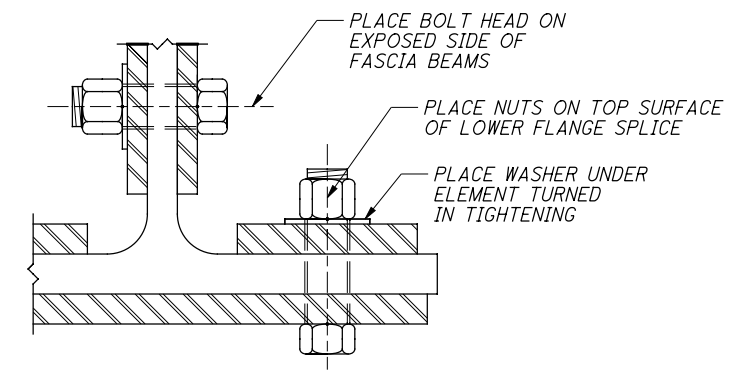
APPROVED FOR CONSTRUCTION - 5/2/2011



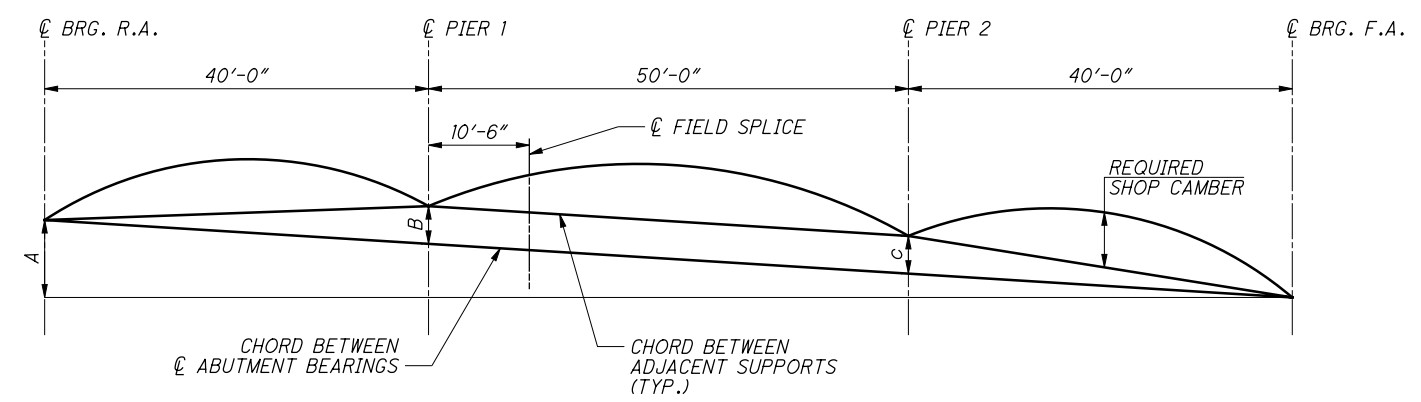
BOLTED FIELD SPLICE ELEVATION



VIEW A-A



PARTIAL SECTION
(AT C OF BEAM SPLICE)



CAMBER DIAGRAM

CAMBER DIAGRAM DIMENSIONS						
	B7	B8	B9	B10	B11	B12
DIM A	3 3/8"	3 1/4"	3 3/16"	3 1/16"	3"	2 7/8"
DIM B	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
DIM C	3/8"	1/16"	3/8"	1/16"	3/8"	1/16"

DEFLECTION AND CAMBER TABLE										
	SPAN 1			SPAN 2				SPAN 3		
	1/4	1/2	3/4	SPLICE	1/4	1/2	3/4	1/4	1/2	3/4
DEFLECTION DUE TO WEIGHT OF STEEL	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"
DEFLECTION DUE TO REMAINING DEAD LOAD	1/8"	3/16"	1/16"	1/8"	1/8"	3/16"	1/8"	1/16"	3/16"	1/8"
ADJUSTMENT FOR VERTICAL CURVE	1/16"	1/16"	1/16"	1/16"	1/16"	1/16"	1/16"	1/16"	1/16"	1/16"
REQUIRED SHOP CAMBER	3/16"	1/4"	1/8"	3/16"	3/16"	1/4"	3/16"	1/8"	1/4"	3/16"

NOTES:

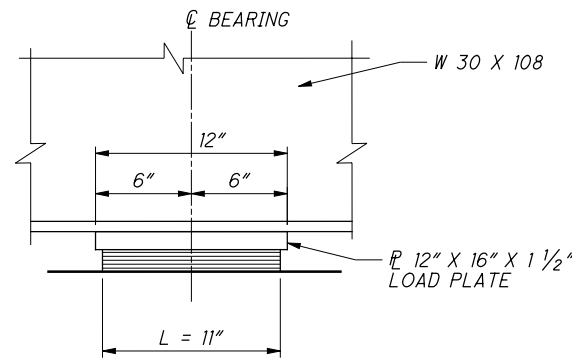
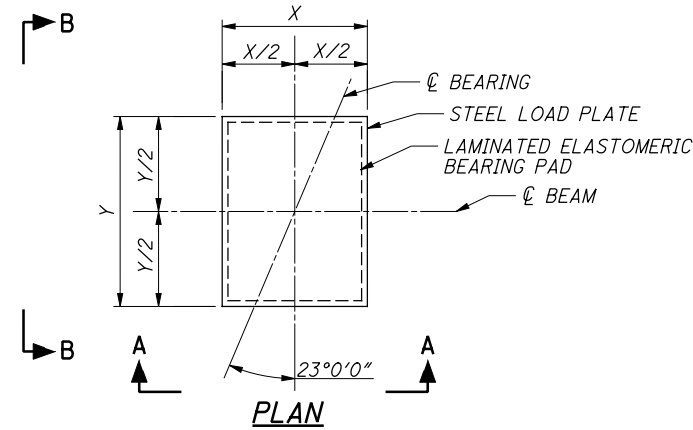
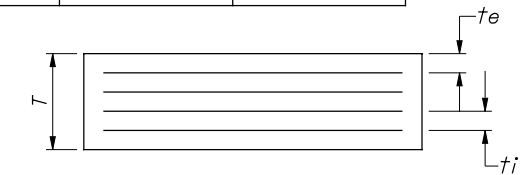
- ALL FIELD SPLICE PLATES SHALL BE ASTM A709W, 50 KSI, WEATHERING STEEL.
- HIGH STRENGTH BOLTS SHALL BE 1" DIAMETER A325, TYPE III UNLESS OTHERWISE NOTED.
- CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
- FOR FIELD SPLICE LOCATIONS, SEE SHEETS 14/24.

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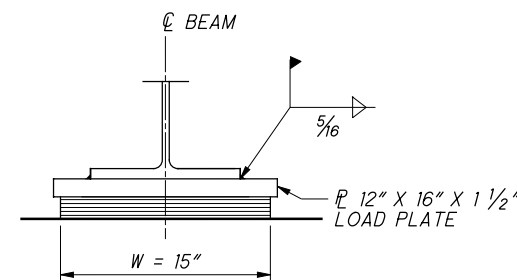
LAMINATED ELASTOMERIC BEARINGS													
LOCATION	BEARING DIMENSIONS							STEEL LOAD PLATE			REACTIONS		MAXIMUM DESIGN LOAD
	L	W	t _i	t _e	T	n	N	X	Y	Z	DL	LL W/O IMPACT	
ABUTMENTS	10"	14"	0.375"	0.25"	1.924"	3	4	11"	15"	1 1/2"	55 K	42 K	97 K
PIERS	11"	15"	0.375"	0.25"	1.924"	3	4	12"	16"	1 1/2"	80 K	49 K	129 K

t_i = THICKNESS OF INTERNAL LAYER
t_e = THICKNESS OF EXTERNAL LAYER
T = TOTAL THICKNESS OF ELASTOMERIC BEARING
n = NUMBER OF INTERNAL ELASTOMER LAYERS

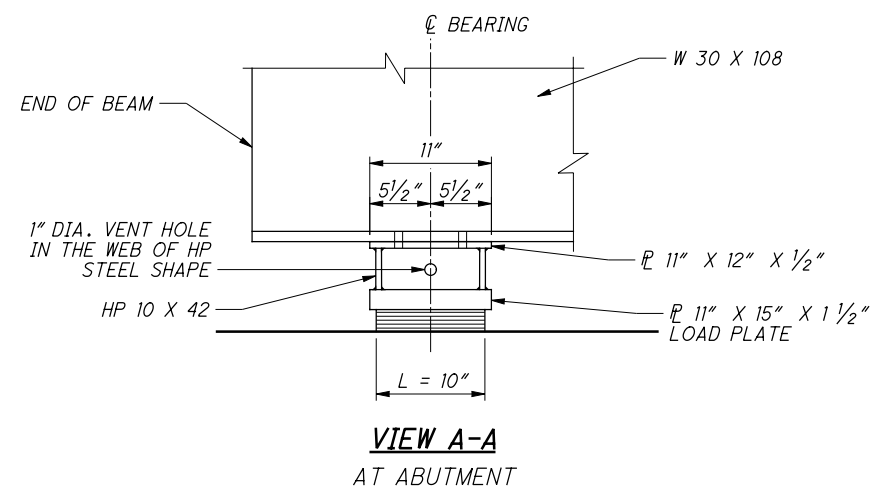
N = NO. OF STEEL LAMINATES
INTERNAL STEEL LAMINATE THICKNESS = 0.0747"
DUROMETER OF ELASTOMER = 50 DUROMETER



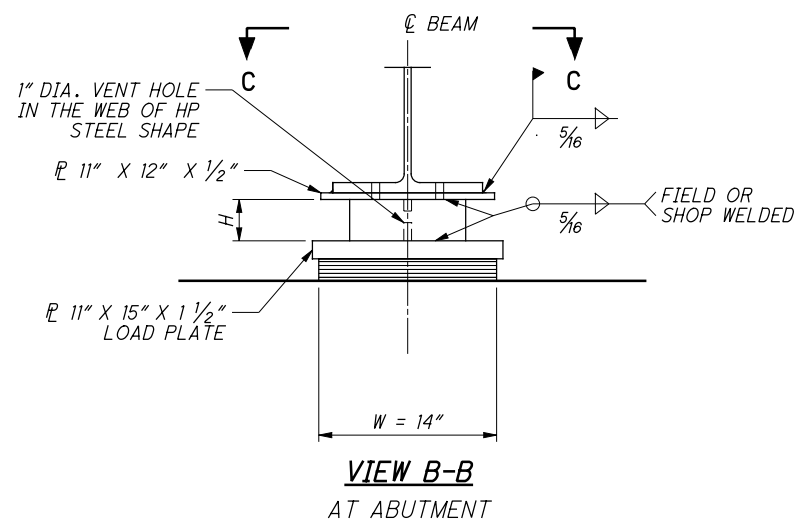
VIEW A-A
AT PIER



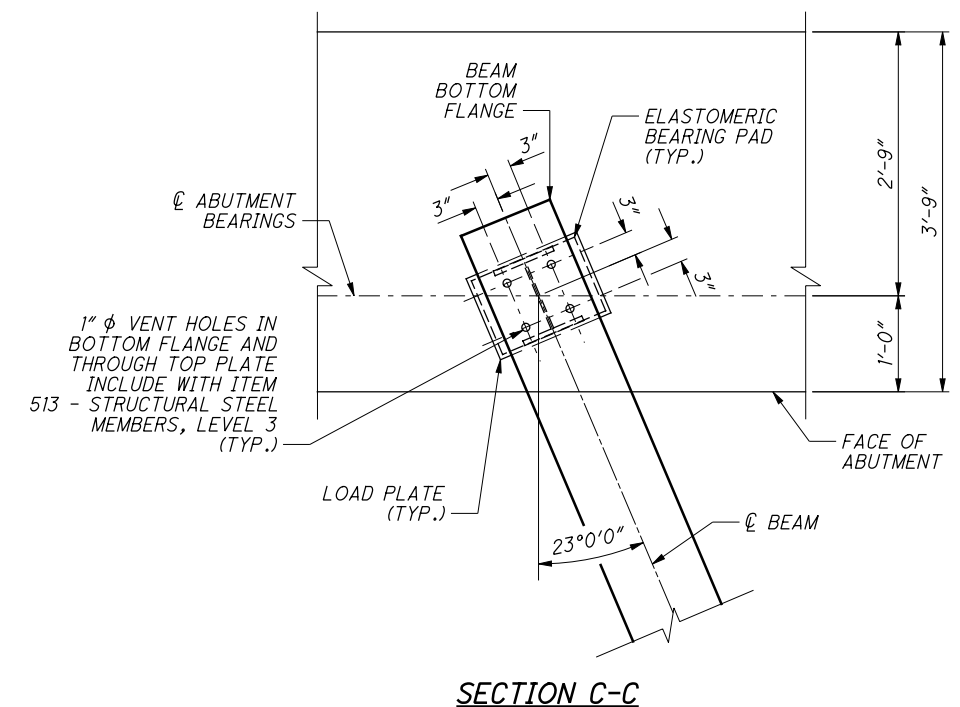
VIEW B-B
AT PIER



VIEW A-A
AT ABUTMENT



VIEW B-B
AT ABUTMENT



SECTION C-C

HP 10X42 POST HEIGHT RIGHT BRIDGE		
		H
REAR ABUT.	BEAM 7	8 1/8"
	BEAM 8	7 3/4"
	BEAM 9	8 1/16"
	BEAM 10	8 9/16"
	BEAM 11	8 3/4"
FWD. ABUT.	BEAM 7	8 1/8"
	BEAM 8	8 13/16"
	BEAM 9	8 1/16"
	BEAM 10	9 1/4"
	BEAM 11	9 1/16"
	BEAM 12	9 5/16"

NOTES:

1. THE STEEL LOAD PLATE, TOP PLATE AND HP SECTION SHALL BE GALVANIZED ASTM A709 GRADE 50 STEEL.
2. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. WELDING: CONTROL WELDING SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300 °F AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.
3. ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION I, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
4. BEARING REPOSITIONING: IF THE STEEL IS ERECTED AT AN AMBIENT TEMPERATURE HIGHER THAN 80 °F OR LOWER THAN 40 °F AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/6 OF THE BEARING HEIGHT AT 60 °F ±10 °F RAISE THE BEAMS OR GIRDERS TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60 °F ±10 °F.

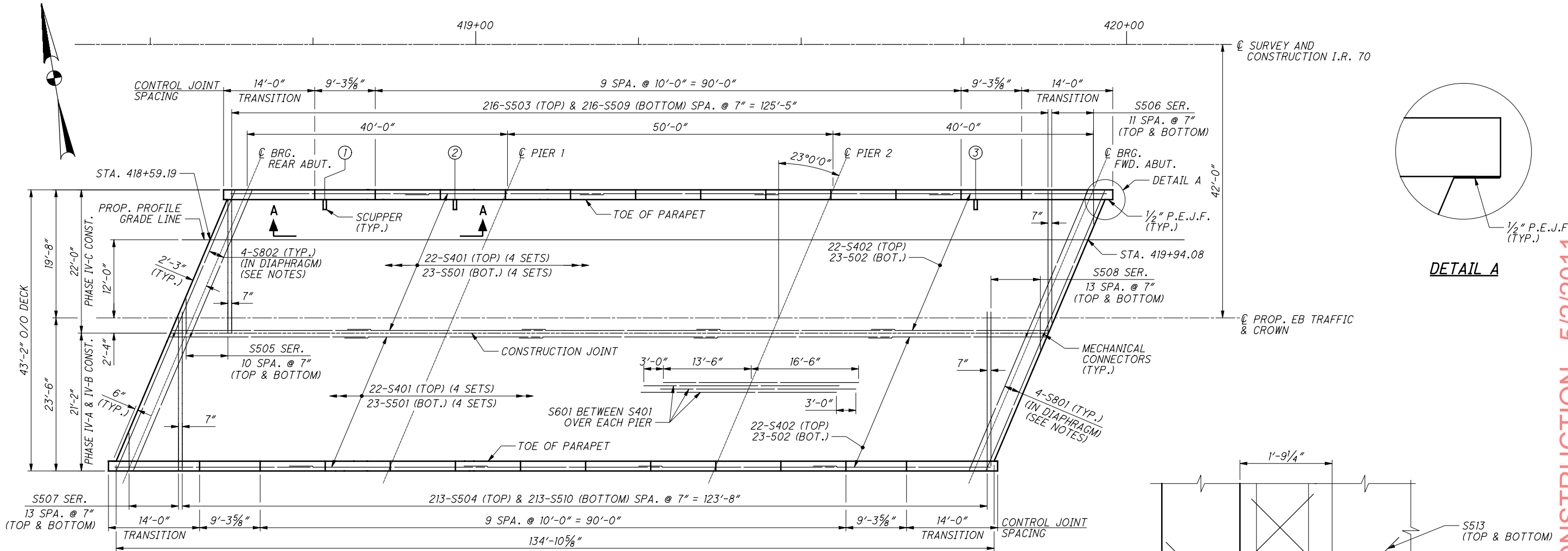
APPROVED FOR CONSTRUCTION - 5/2/2011



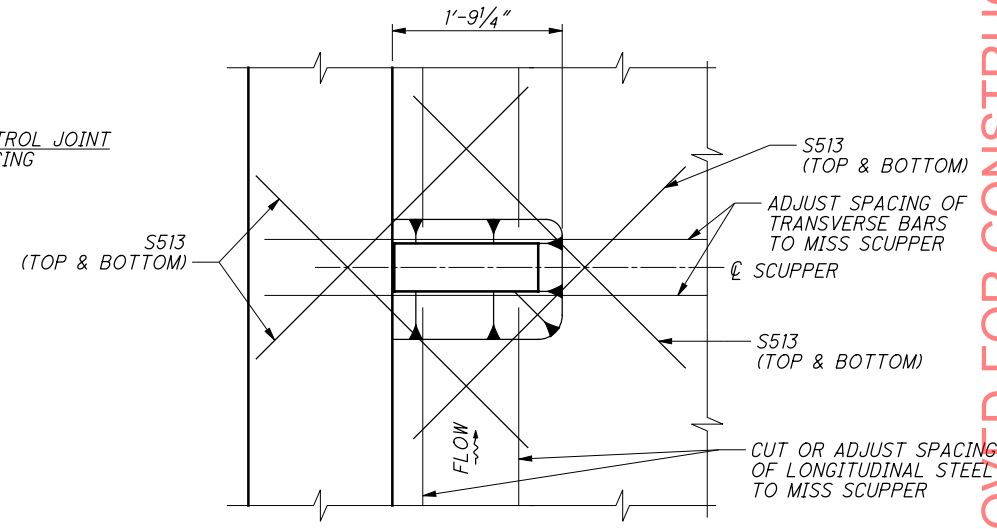
DESIGNED	DTA	CHECKED	RLE
DRAWN	DTA	REVISED	
REVIEWED	RER	STRUCTURE FILE NUMBER	0702137L/0702161R
DATE	2/3/11		

BEARING DETAILS
BRIDGE NO. BEL-70-0775 L/R
I.R. 70 OVER TWP. RD. 260

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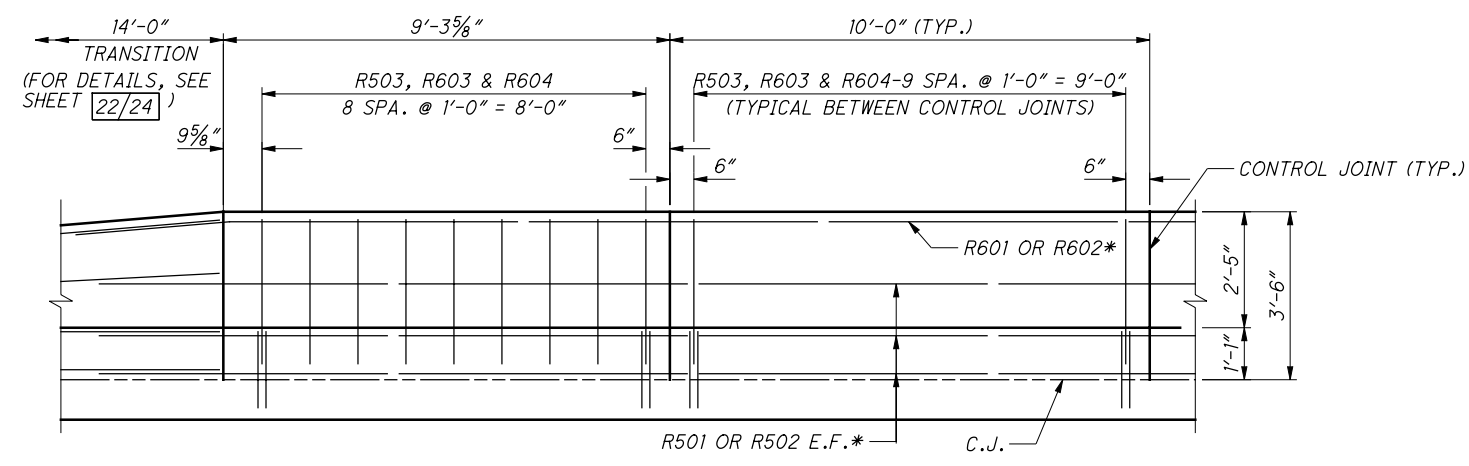


DECK PLAN



SCUPPER DETAIL

FOR ADDITIONAL SCUPPER DETAILS SEE STD. DWG. GSD-1-96 SHEET 3/3



VIEW A-A

LAP LENGTHS	
NO. 4 BARS	2'-0" MIN.
NO. 5 BARS (IN DECK)	3'-3" MIN.
NO. 5 BARS (IN PARAPET)	3'-6" MIN.
NO. 6 BARS	4'-2" MIN.

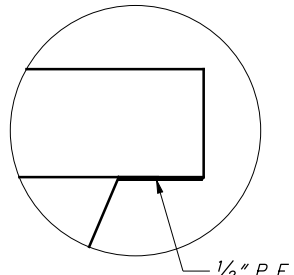
LEGEND:

* - 6-R501 & 1-R601 (4 SETS) AND 6-R502 & 1-R602 (1 SET) ALONG PARAPET

- ① SCUPPER NO. 1, STA 418+76.81
- ② SCUPPER NO. 2, STA 418+96.81
- ③ SCUPPER NO. 3, STA 419+76.81

NOTES:

1. FOR TRANSVERSE SECTION AND ADDITIONAL NOTES, SEE SHEET 18/24.
2. FOR ABUTMENT DETAILS, INCLUDING NO. 8 BARS IN DIAPHRAGM, SEE SHEETS 9/24 THROUGH 12/24.
3. FOR PARAPET DETAIL, SEE SHEET 18/24.
4. FOR SCREED ELEVATIONS, TOP OF HAUNCH, AND FINAL DECK SURFACE ELEVATIONS, SEE SHEET 20/24.
5. FOR PHASE CONSTRUCTION DETAILS, SEE SHEETS 5/24 THROUGH 6/24.
6. FOR PARAPET CONTROL JOINT DETAILS, SEE ODOT STD. DRAWING SBR-1-99.
7. DRIP GROOVES SHALL TERMINATE 2'-0" FROM THE FACE OF ABUTMENT DIAPHRAGM.
8. FOR REINFORCEMENT SCHEDULE, SEE SHEET 24/24.



DETAIL A

APPROVED FOR CONSTRUCTION - 5/2/2011

DECK PLAN - RIGHT BRIDGE

BRIDGE NO. BEL-70-0775 L/R

I.R. 70 OVER S.R. 260

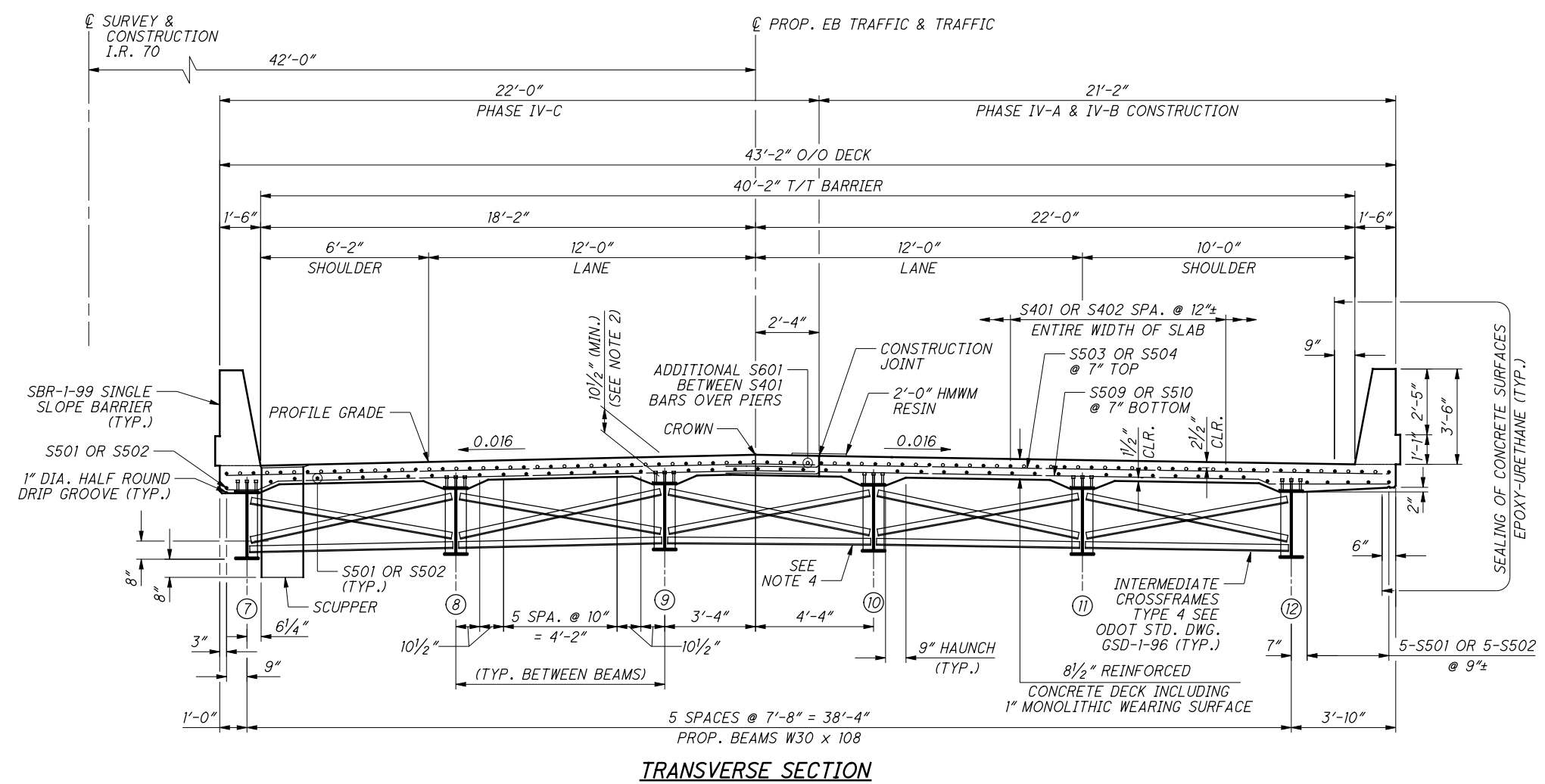
BEL-70-7.61

PID No. 76825

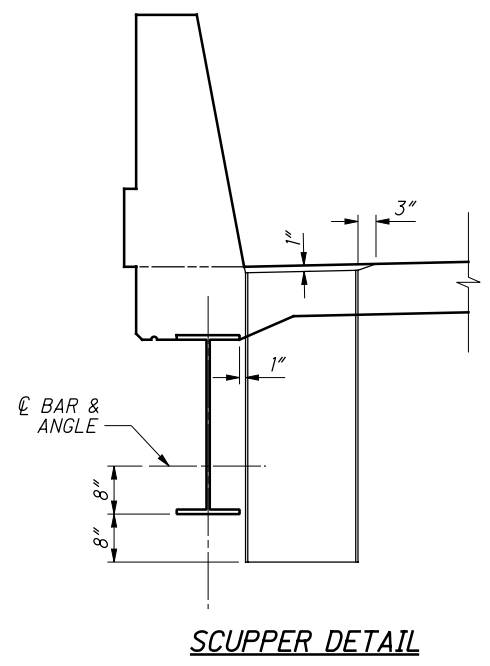
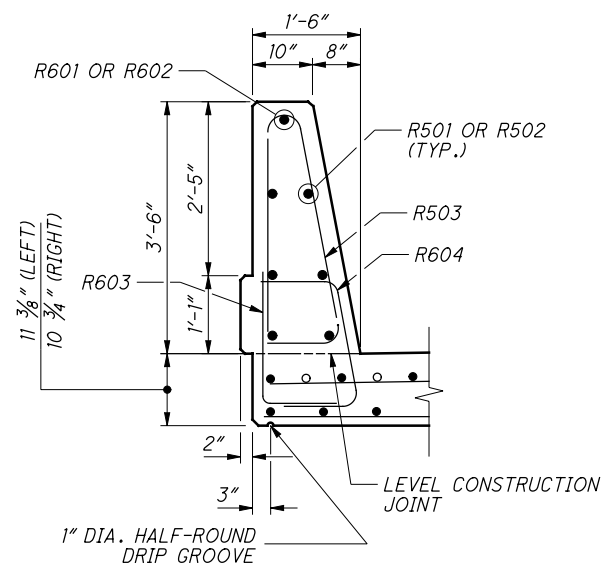
17 / 24

276
307

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REQUIRED LAP LENGTHS	
NO. 4 BARS	2'-0" MIN.
NO. 5 BARS (IN DECK)	3'-3" MIN.
NO. 5 BARS (IN PARAPET)	3'-6" MIN.
NO. 6 BARS	4'-2" MIN.



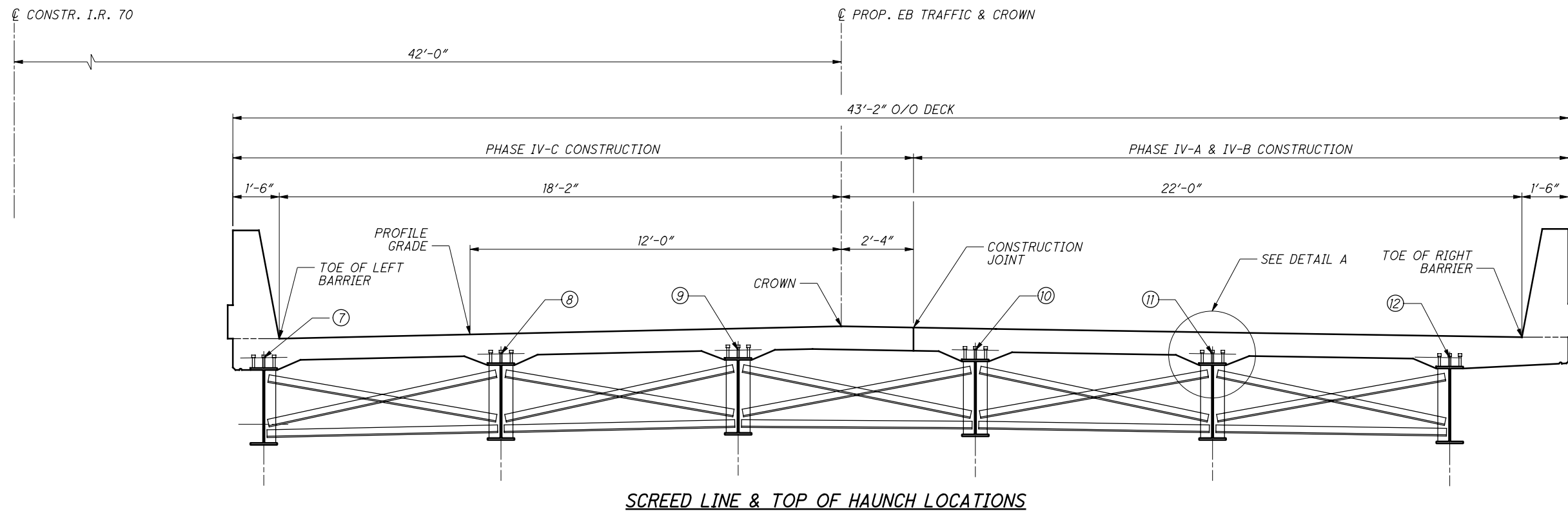
NOTES:

- PROPOSED STEEL BEAMS AND CROSS-FRAMES ARE ASTM A709 GRADE 50W, YIELD STRENGTH 50,000 PSI.
- DECK SLAB CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH BEAM HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF 2 INCHES AND A CONSTANT HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE OF 9 INCHES. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. THE ALLOWABLE TOLERANCE FOR THE HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE IS ±3 INCHES.

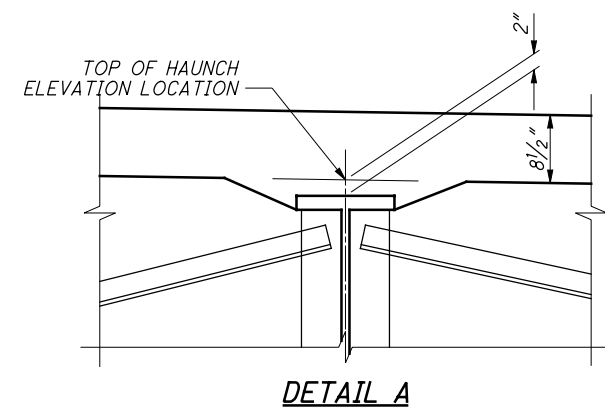
THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE BEAM, FROM THE SURFACE OF THE DECK TO THE TOP OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS.
- FOR PARAPET JOINT SPACING AND REINFORCING DETAILS SEE SHEET 17/24.
- CROSS FRAMES IN THE BAY BETWEEN BEAMS 9 & 10 SHOULD NOT BE PERMANENTLY ATTACHED UNTIL THE CONCRETE DECKS AND PARAPETS LOCATED IN THE ADJACENT PHASES HAVE BEEN PLACED.
- FOR SLAB PLAN, SEE SHEET 17/24.
- FOR SCREED ELEVATIONS, TOP OF HAUNCH AND FINAL DECK SURFACE ELEVATIONS SEE SHEET 20/24.
- FOR REINFORCEMENT SCHEDULE, SEE SHEET 24/24.
- THE HMWM SEAL AT THE CONSTRUCTION JOINT SHALL BE PAID FOR WITH ITEM 898, QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK), AS PER PLAN.
- FOR ADDITIONAL SCUPPER DETAILS SEE STD. DWG. GSD-1-96 SHEET 3/3.

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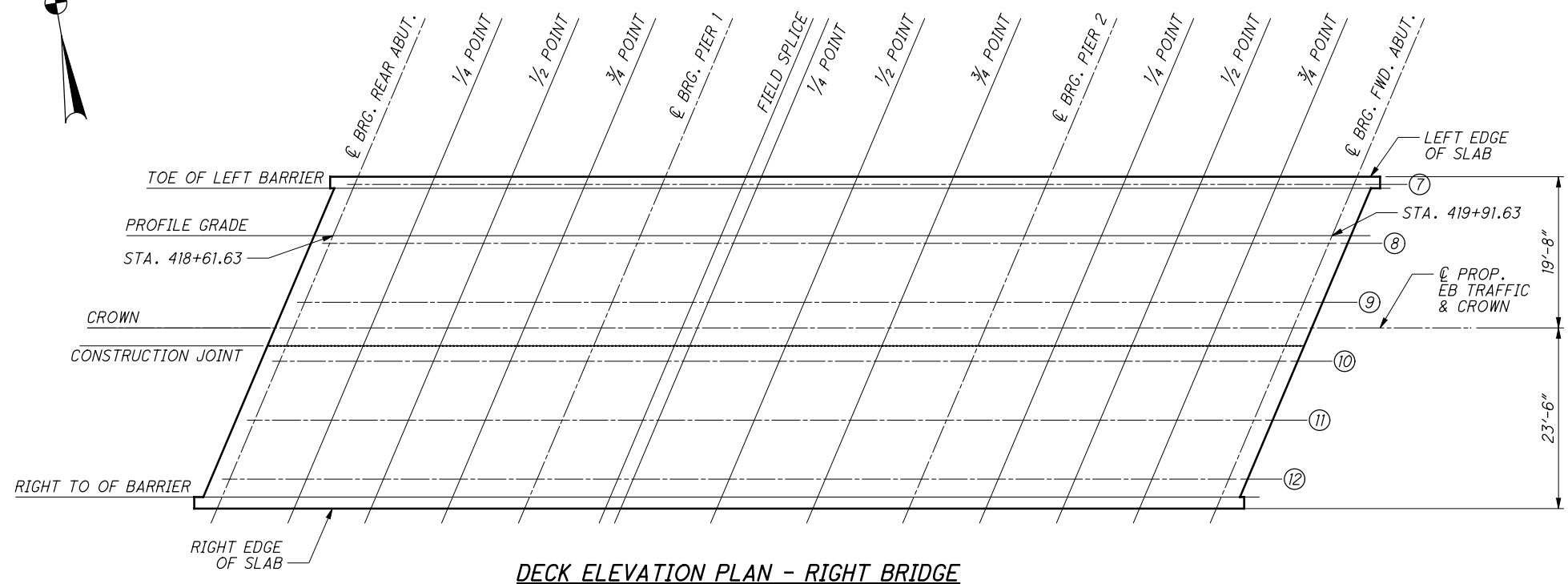
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SCREED LINE & TOP OF HAUNCH LOCATIONS



DETAIL A



DECK ELEVATION PLAN - RIGHT BRIDGE

NOTES:

1. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS
2. TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
3. FOR SCREED ELEVATIONS, TOP OF HAUNCH AND FINAL DECK ELEVATION TABLES SEE SHEET 20/24

APPROVED FOR CONSTRUCTION - 5/2/2011



DESIGNED	DTA	CHECKED	RLE
DRAWN	DTA	REVIEWED	RER
DATE	2/3/11	STRUCTURE FILE NUMBER	0702137L/0702161R

TOP OF HAUNCH & SCREED TABLE - RIGHT BRIDGE
 BRIDGE NO. BEL-70-0775 L/R
 I.R. 70 OVER TWP. RD. 260

BEL-70-7.61
 PID No. 76825

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TOP OF HAUNCH ELEVATION TABLE (RIGHT BRIDGE)

LOCATION	BEAM 7		BEAM 8		BEAM 9		BEAM 10		BEAM 11		BEAM 12		
	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	
SPAN 1	0.00L	418+64.46	1254.65	418+61.21	1254.78	418+57.95	1254.90	418+54.70	1254.89	418+51.45	1254.77	418+48.19	1254.65
	0.25L	418+74.46	1254.65	418+71.21	1254.78	418+67.95	1254.90	418+64.70	1254.89	418+61.45	1254.77	418+58.19	1254.65
	0.50L	418+84.46	1254.64	418+81.21	1254.77	418+77.95	1254.89	418+74.70	1254.88	418+71.45	1254.76	418+68.19	1254.64
	0.75L	418+94.46	1254.62	418+91.21	1254.75	418+87.95	1254.87	418+84.70	1254.86	418+81.45	1254.74	418+78.19	1254.63
SPAN 2	0.00L	419+04.46	1254.60	419+01.21	1254.73	418+97.95	1254.85	418+94.70	1254.84	418+91.45	1254.72	418+88.19	1254.61
	SPLICE	419+14.96	1254.59	419+11.71	1254.72	419+08.45	1254.84	419+05.20	1254.83	419+01.95	1254.71	418+98.69	1254.60
	0.25L	419+16.96	1254.59	419+13.71	1254.71	419+10.45	1254.84	419+07.20	1254.83	419+03.95	1254.71	419+00.69	1254.60
	0.50L	419+29.46	1254.57	419+26.21	1254.70	419+22.95	1254.83	419+19.70	1254.82	419+16.45	1254.70	419+13.19	1254.58
	0.75L	419+41.96	1254.53	419+38.71	1254.66	419+35.45	1254.79	419+32.20	1254.78	419+28.95	1254.67	419+25.69	1254.55
SPAN 3	0.00L	419+54.46	1254.49	419+51.21	1254.62	419+47.95	1254.75	419+44.70	1254.74	419+41.45	1254.63	419+38.19	1254.51
	0.25L	419+64.46	1254.47	419+61.21	1254.60	419+57.95	1254.73	419+54.70	1254.72	419+51.45	1254.61	419+48.19	1254.50
	0.50L	419+74.46	1254.45	419+71.21	1254.58	419+67.95	1254.71	419+64.70	1254.70	419+61.45	1254.59	419+58.19	1254.48
	0.75L	419+84.46	1254.41	419+81.21	1254.55	419+77.95	1254.68	419+74.70	1254.67	419+71.45	1254.56	419+68.19	1254.45
	0.00L	419+94.46	1254.37	419+91.21	1254.50	419+87.95	1254.64	419+84.70	1254.63	419+81.45	1254.52	419+78.19	1254.41

SCREED ELEVATION TABLE (RIGHT BRIDGE)

LOCATION	TOE OF LEFT BARRIER		PROFILE GRADE		CROWN		CONSTRUCTION JOINT		TOE OF RIGHT BARRIER		
	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	
SPAN 1	0.00L	418+64.25	1255.37	418+61.63	1255.47	418+56.54	1255.66	418+55.55	1255.63	418+47.20	1255.32
	0.25L	418+74.25	1255.37	418+71.63	1255.47	418+66.54	1255.67	418+65.55	1255.63	418+57.20	1255.32
	0.50L	418+84.25	1255.36	418+81.63	1255.46	418+76.54	1255.66	418+75.55	1255.62	418+67.20	1255.32
	0.75L	418+94.25	1255.34	418+91.63	1255.44	418+86.54	1255.64	418+85.55	1255.60	418+77.20	1255.30
SPAN 2	0.00L	419+04.25	1255.31	419+01.63	1255.42	418+96.54	1255.62	418+95.55	1255.58	418+87.20	1255.28
	SPLICE	419+14.75	1255.30	419+12.13	1255.41	419+07.04	1255.61	419+06.05	1255.57	418+97.70	1255.27
	0.25L	419+16.75	1255.30	419+14.13	1255.41	419+09.04	1255.61	419+08.05	1255.57	418+99.70	1255.27
	0.50L	419+29.25	1255.28	419+26.63	1255.39	419+21.54	1255.59	419+20.55	1255.56	419+12.20	1255.26
	0.75L	419+41.75	1255.25	419+39.13	1255.35	419+34.04	1255.56	419+33.05	1255.52	419+24.70	1255.22
SPAN 3	0.00L	419+54.25	1255.21	419+51.63	1255.31	419+46.54	1255.52	419+45.55	1255.48	419+37.20	1255.19
	0.25L	419+64.25	1255.19	419+61.63	1255.29	419+56.54	1255.50	419+55.55	1255.46	419+47.20	1255.17
	0.50L	419+74.25	1255.16	419+71.63	1255.27	419+66.54	1255.48	419+65.55	1255.44	419+57.20	1255.15
	0.75L	419+84.25	1255.13	419+81.63	1255.24	419+76.54	1255.45	419+75.55	1255.41	419+67.20	1255.12
	0.00L	419+94.25	1255.09	419+91.63	1255.19	419+86.54	1255.40	419+85.55	1255.37	419+77.20	1255.08

FINAL DECK SURFACE ELEVATION TABLE (RIGHT BRIDGE)

LOCATION	BEAM 7		TOE OF LEFT BARRIER		PROFILE GRADE		BEAM 8		BEAM 9		CROWN		CONSTRUCTION JOINT		BEAM 10		BEAM 11		BEAM 12		TOE OF RIGHT BARRIER		
	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	
SPAN 1	0.00L	418+64.46	1255.36	418+64.25	1255.37	418+61.63	1255.47	418+61.21	1255.48	418+57.95	1255.61	418+56.54	1255.66	418+55.55	1255.63	418+54.70	1255.60	418+51.45	1255.48	418+48.19	1255.35	418+47.20	1255.32
	0.25L	418+74.46	1255.35	418+74.25	1255.36	418+71.63	1255.46	418+71.21	1255.47	418+67.95	1255.60	418+66.54	1255.65	418+65.55	1255.62	418+64.70	1255.59	418+61.45	1255.47	418+58.19	1255.35	418+57.20	1255.31
	0.50L	418+84.46	1255.34	418+84.25	1255.34	418+81.63	1255.45	418+81.21	1255.46	418+77.95	1255.59	418+76.54	1255.64	418+75.55	1255.61	418+74.70	1255.58	418+71.45	1255.46	418+68.19	1255.34	418+67.20	1255.30
	0.75L	418+94.46	1255.32	418+94.25	1255.33	418+91.63	1255.43	418+91.21	1255.45	418+87.95	1255.58	418+86.54	1255.63	418+85.55	1255.60	418+84.70	1255.56	418+81.45	1255.45	418+78.19	1255.33	418+77.20	1255.29
SPAN 2	0.00L	419+04.46	1255.31	419+04.25	1255.31	419+01.63	1255.42	419+01.21	1255.43	418+97.95	1255.56	418+96.54	1255.62	418+95.55	1255.58	418+94.70	1255.55	418+91.45	1255.43	418+88.19	1255.31	418+87.20	1255.28
	SPLICE	419+14.96	1255.29	419+14.75	1255.30	419+12.13	1255.40	419+11.71	1255.42	419+08.45	1255.54	419+07.04	1255.60	419+06.05	1255.56	419+05.20	1255.54	419+01.95	1255.42	418+98.69	1255.31	418+97.70	1255.26
	0.25L	419+16.96	1255.28	419+16.75	1255.29	419+14.13	1255.40	419+13.71	1255.41	419+10.45	1255.54	419+09.04	1255.60	419+08.05	1255.56	419+07.20	1255.53	419+03.95	1255.41	419+00.69	1255.30	418+99.70	1255.26
	0.50L	419+29.46	1255.26	419+29.25	1255.27	419+26.63	1255.37	419+26.21	1255.39	419+22.95	1255.52	419+21.54	1255.57	419+20.55	1255.54	419+19.70	1255.51	419+16.45	1255.39	419+13.19	1255.27	419+12.20	1255.24
	0.75L	419+41.96	1255.23	419+41.75	1255.24	419+39.13	1255.34	419+38.71	1255.36	419+35.45	1255.49	419+34.04	1255.55	419+33.05	1255.51	419+32.20	1255.48	419+28.95	1255.37	419+25.69	1255.25	419+24.70	1255.21
SPAN 3	0.00L	419+54.46	1255.20	419+54.25	1255.21	419+51.63	1255.31	419+51.21	1255.33	419+47.95	1255.46	419+46.54	1255.52	419+45.55	1255.48	419+44.70	1255.45	419+41.45	1255.34	419+38.19	1255.22	419+37.20	1255.19
	0.25L	419+64.46	1255.17	419+64.25	1255.18	419+61.63	1255.29	419+61.21	1255.30	419+57.95	1255.43	419+56.54	1255.49	419+55.55	1255.46	419+54.70	1255.43	419+51.45	1255.31	419+48.19	1255.20	419+47.20	1255.16
	0.50L	419+74.46	1255.14	419+74.25	1255.15	419+71.63	1255.26	419+71.21	1255.27	419+67.95	1255.41	419+66.54	1255.46	419+65.55	1255.43	419+64.70	1255.40	419+61.45	1255.29	419+58.19	1255.17	419+57.20	1255.14
	0.75L	419+84.46	1255.11	419+84.25	1255.12	419+81.63	1255.23	419+81.21	1255.24	419+77.95	1255.38	419+76.54	1255.43	419+75.55	1255.40	419+74.70	1255.37	419+71.45	1255.26	419+68.19	1255.14	419+67.20	1255.11
	0.00L	419+94.46	1255.08	419+94.25	1255.09	419+91.63	1255.19	419+91.21	1255.21	419+87.95	1255.35	419+86.54	1255.40	419+85.55	1255.37	419+84.70	1255.34	419+81.45	1255.23	419+78.19	1255.11	419+77.20	1255.08

NOTES:

- SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS
- TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
- FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.
- FOR LOCATIONS OF SCREED ELEVATIONS, TOP OF HAUNCH ELEVATIONS AND FINAL DECK SURFACE ELEVATIONS SEE SHEET 19/24.

APPROVED FOR CONSTRUCTION - 5/2/2011

E.L. ROBINSON
the Challenge, the Choice
1907 Watermark Drive, Suite 310 - Columbus, Ohio 43215

DATE	2/3/11
REVIEWED	RER
STRUCTURE FILE NUMBER	0702137L/0702161R
DRAWN	DTA
CHECKED	RLE
DESIGNED	DTA

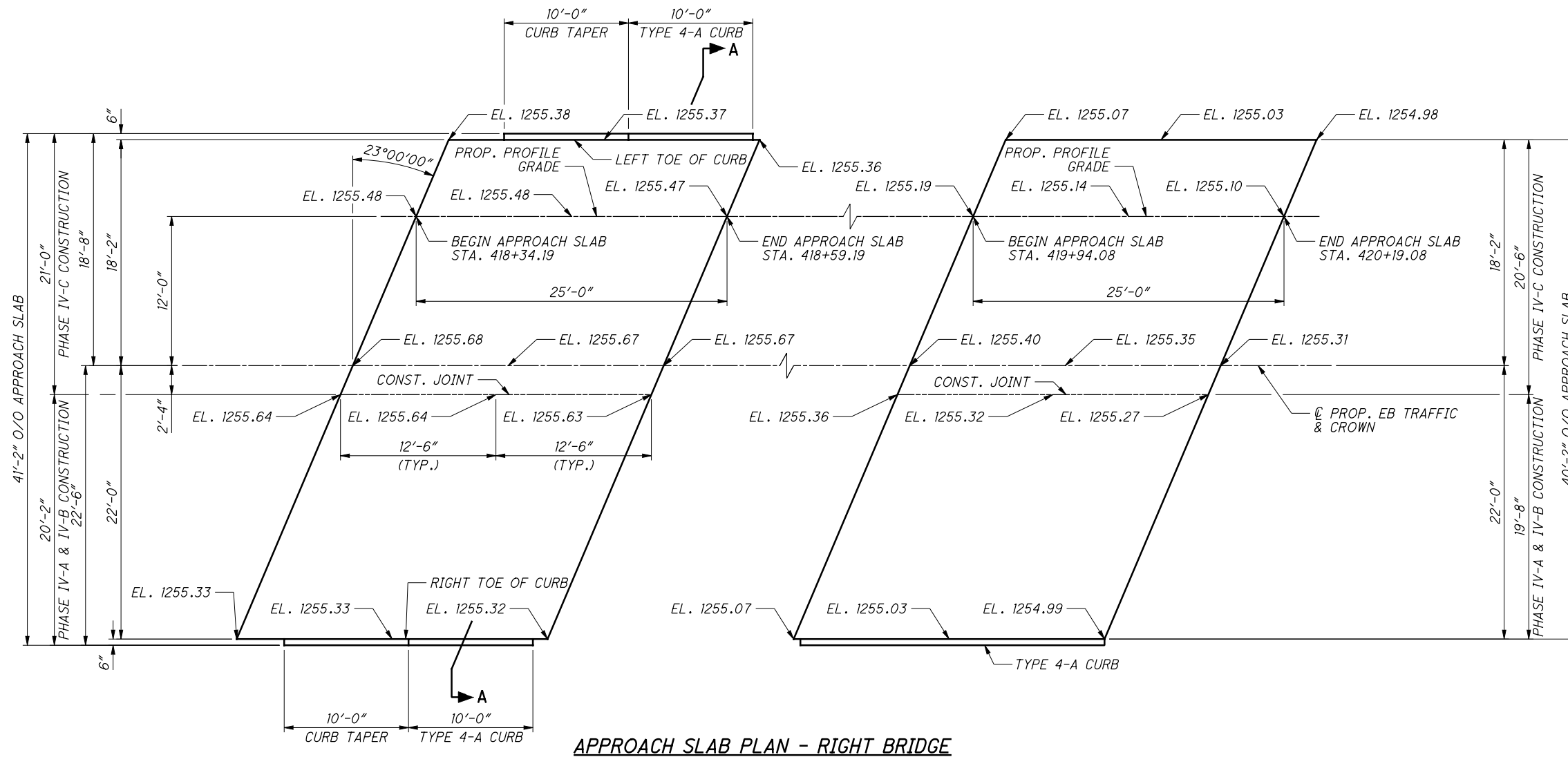
FINAL DECK ELEVATION TABLE - RIGHT BRIDGE
BRIDGE NO. BEL-70-0775 L/R
I.R. 70 OVER TWP. RD. 260

BEL-70-7.61
PID No. 76825

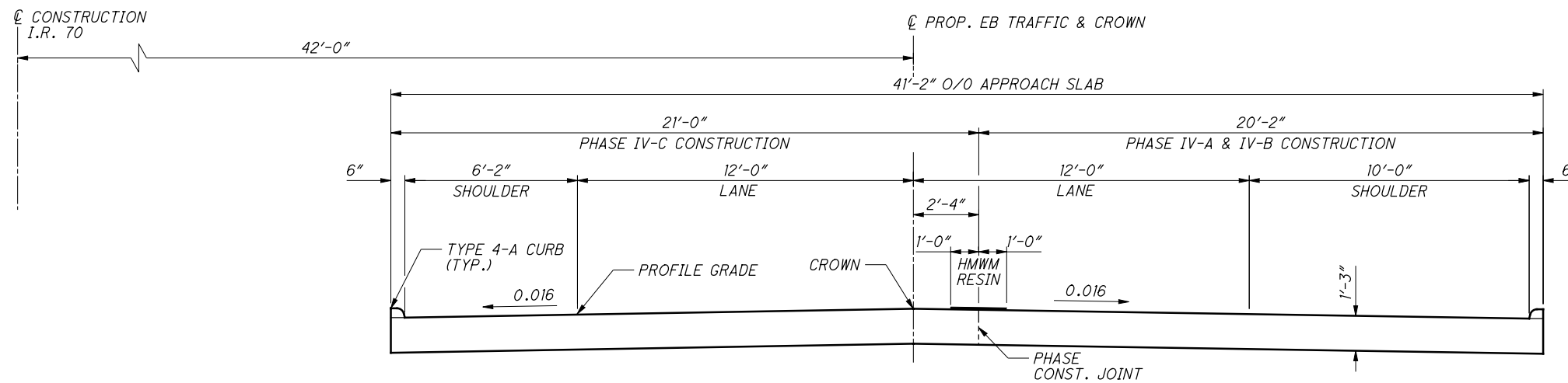
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307

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APPROACH SLAB PLAN - RIGHT BRIDGE



**SECTION A-A
TRANSVERSE TO CENTERLINE**

NOTES

1. SEE ODOT STD. DWG. AS-1-81 FOR ADDITIONAL APPROACH SLAB DETAILS.
2. FOR ADDITIONAL CURB DETAILS SEE ODOT STD. CONSTRUCTION DWG. BP-5.1.
3. TYPE 4-A CURB AND SEALING CONCRETE APPROACH SLAB CONSTRUCTION JOINT WITH HMWM RESIN IS INCLUDED WITH ITEM 898, QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), (T=15'), AS PER PLAN.



APPROVED FOR CONSTRUCTION - 5/2/2011

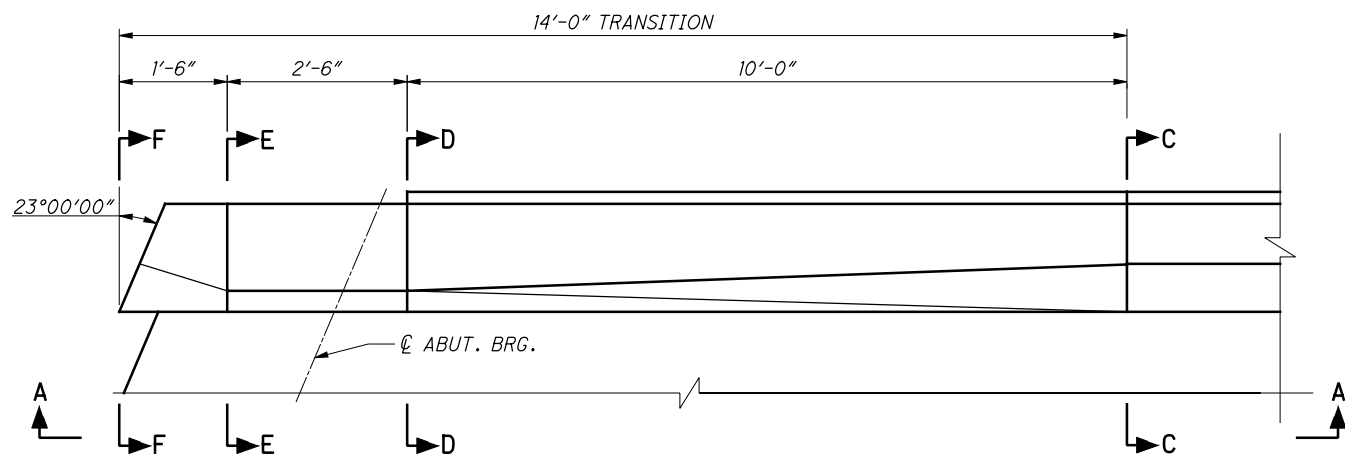


DESIGNED	DTA	CHECKED	RLE
DRAWN	DTA	REVISION	
REVIEWED	RER	DATE	2/3/11
STRUCTURE FILE NUMBER	0702137L/0702161R		

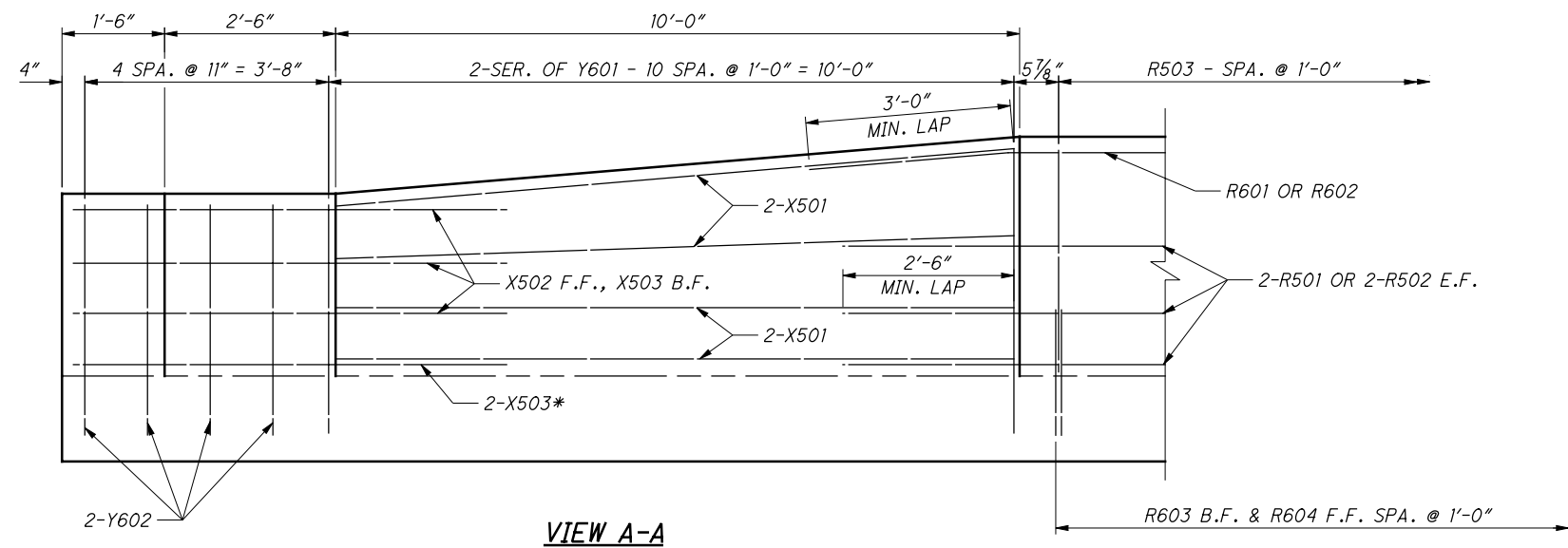
APPROACH SLAB DETAILS - RIGHT BRIDGE
 BRIDGE NO. BEL-70-0775 L/R
 I.R. 70 OVER TWP. RD. 260

BEL-70-7.61
PID No. 76825

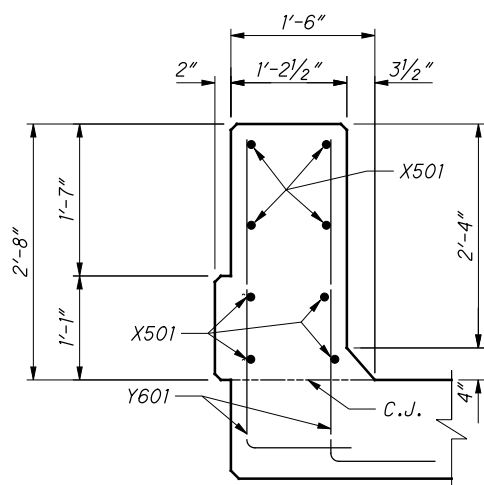
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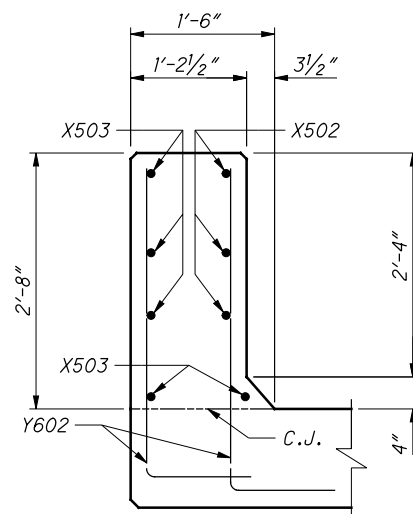
TYPICAL PARAPET TRANSITION DETAIL
LEFT REAR PARAPET SHOWN, OTHER SIMILAR



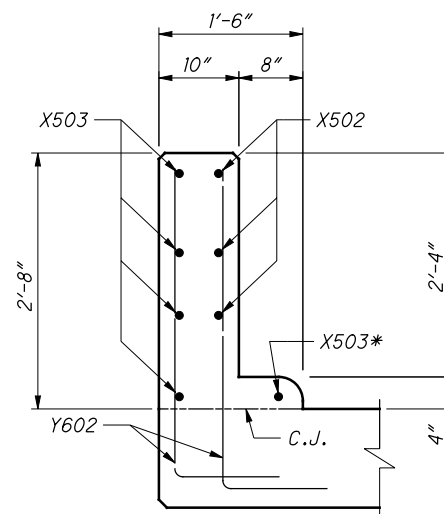
VIEW A-A



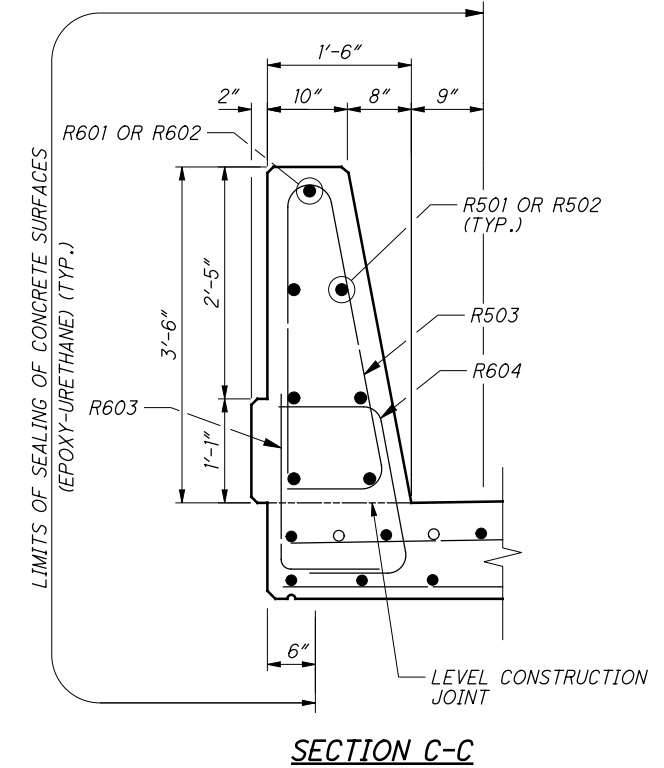
SECTION D-D



SECTION E-E



SECTION F-F



SECTION C-C

LEGEND:

* - FIELD BEND IF NECESSARY

NOTES:

- FOR NOTES AND DETAILS ON CONTROL JOINTS AND OTHER DETAILS NOT SHOWN, SEE ODOT STD. DWG. SBR-1-99.
- FOR BRIDGE TERMINAL ASSEMBLIES, SEE STANDARD CONSTRUCTION DRAWINGS GR-3.1 AND GR-3.2.

APPROVED FOR CONSTRUCTION - 5/2/2011

PARAPET TRANSITION DETAILS

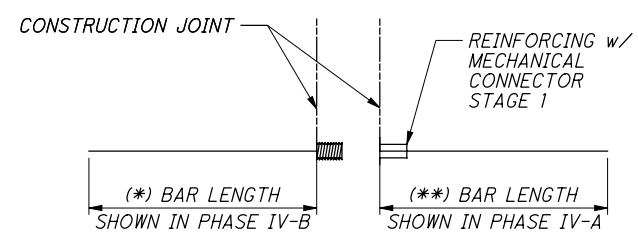
BRIDGE NO. BEL-70-0775 L/R
I.R. 70 OVER TWP. RD. 260

BEL-70-7.61
PID No. 76825

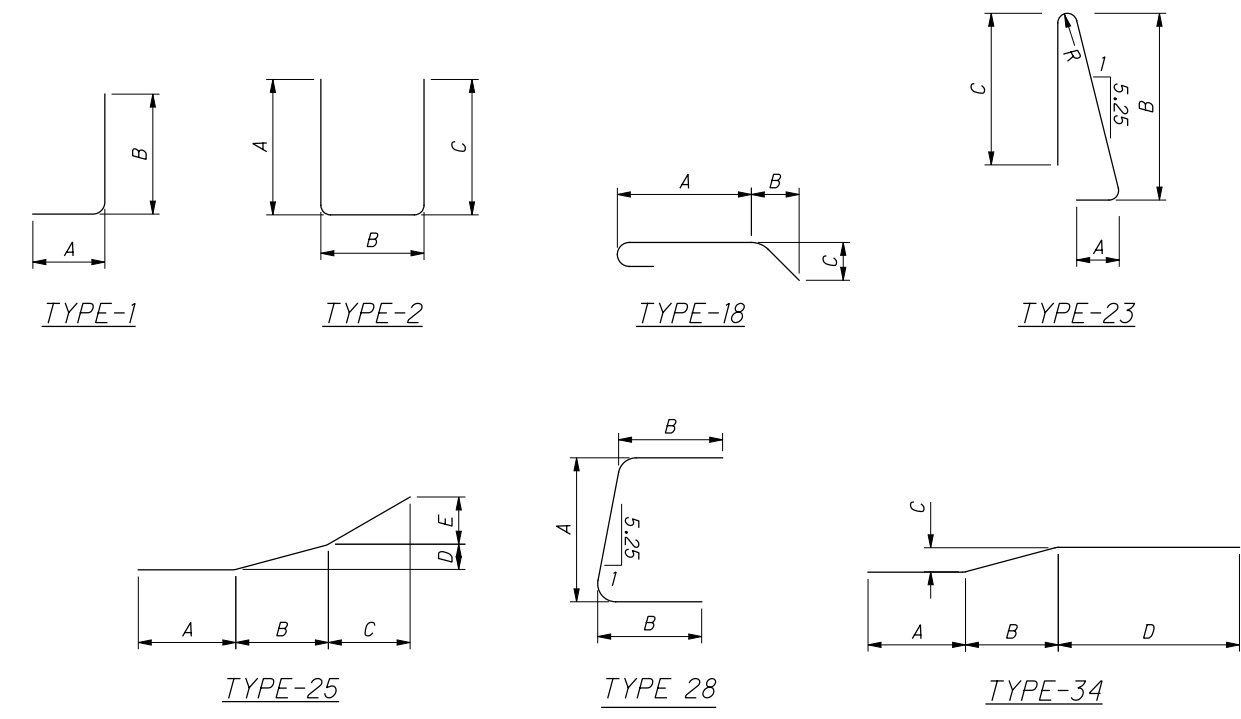
DESIGNED	DTA	CHECKED	RLE
DRAWN	DTA	REVISED	
REVIEWED	RER	STRUCTURE FILE NUMBER	0702137L/0702161R
DATE	2/3/11		

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
SUPERSTRUCTURE - RIGHT BRIDGE											
S401	176	30'-0"	3527	STR							
S402	44	22'-7"	664	STR							
S501	184	30'-0"	5757	STR							
S502	46	27'-7"	1323	STR							
S503	216	21'-9"	4900	STR							
S504	213	24'-5"	5424	STR							
	2 SR	5'-0"									
S505	OF	TO	315	STR							1'-4 1/2"
	12	20'-2"									
	2 SR	4'-9"									
S506	OF	TO	309	STR							1'-4 1/2"
	12	19'-11"									
	2 SR	5'-4"									
S507	OF	TO	417	STR							1'-4 1/2"
	14	23'-3"									
	2 SR	5'-11"									
S508	OF	TO	434	STR							1'-4 1/2"
	14	23'-10"									
S509	216	21'-8"	4881	34	1'-3"	0'-9"	0'-3"	19'-8"			
S510	213	24'-5"	5424	34	4'-1"	0'-9"	0'-3"	19'-7"			
S511	136	8'-5"	1194	2	2'-6"	3'-8"	2'-6"				
S512	68	7'-4"	520	2	2'-5"	2'-9"	2'-5"				
S513	24	4'-0"	100	STR							
S601	86	30'-0"	3875	STR							
* S801	28	22'-10"	1707	STR							
** S802	28	23'-8"	1769	STR							
S803	58	5'-2"	800	18	2'-10"	1'-0"	1'-0"				
SUB-TOTAL			43,340								

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
PARAPET - RIGHT BRIDGE											
R501	48	30'-0"	1502	STR							
R502	12	8'-4"	104	STR							
R503	216	7'-5"	1671	23	1'-1"	3'-2"	3'-0"				0'-2 3/4"
R601	8	30'-0"	360	STR							
R602	2	11'-0"	33	STR							
R603	216	2'-7"	838	1	1'-1"	1'-8"					
R604	216	3'-6"	1136	28	1'-8"	1'-1"					
X501	32	10'-0"	334	STR							
X502	12	5'-6"	69	25	1'-8"	2'-5"	1'-4"	0'-1 1/2"	0'-5"		
X503	20	5'-0"	104	STR							
	8 SR	4'-2"					3'-3"				
Y601	OF	TO	617	1	1'-1"	TO					0'-1"
	11	5'-1"				4'-1"					
Y602	32	4'-1"	196	1	1'-1"	3'-2"					
SUB-TOTAL			6,964								



MECHANICAL CONNECTOR DETAIL



LEGEND:

- * - BAR CONTAINED IN PHASE IV-A
- ** - BAR CONTAINED IN PHASE IV-B

NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, P601 IS A NO. 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.
2. ALL REINFORCING STEEL TO BE EPOXY COATED.

APPROVED FOR CONSTRUCTION - 5/2/2011

E.L. ROBINSON
The Challenge, the Choice
1807 Watermark Drive, Suite 310 - Columbus, Ohio 43215

DESIGNED: DTA
CHECKED: RLE

DRAWN: DTA
REVISED:

REVIEWED: RER
STRUCTURE FILE NUMBER: 0702137L/0702161R

DATE: 2/3/11

REINFORCING STEEL LIST

BRIDGE NO. BEL-70-0775 L/R

I.R. 70 OVER TWP. RD. 260

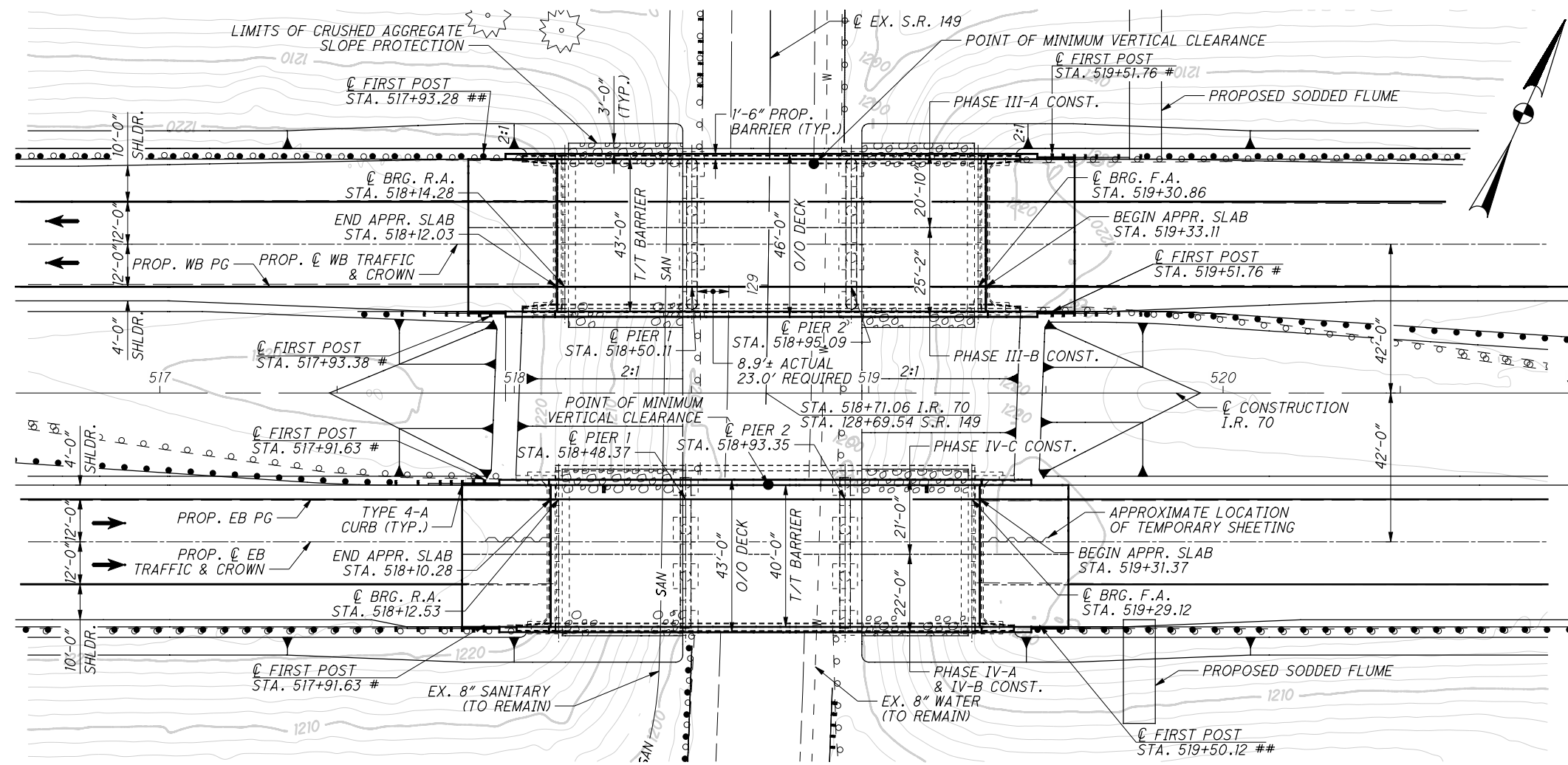
BEL-70-7.61

PID No. 76825

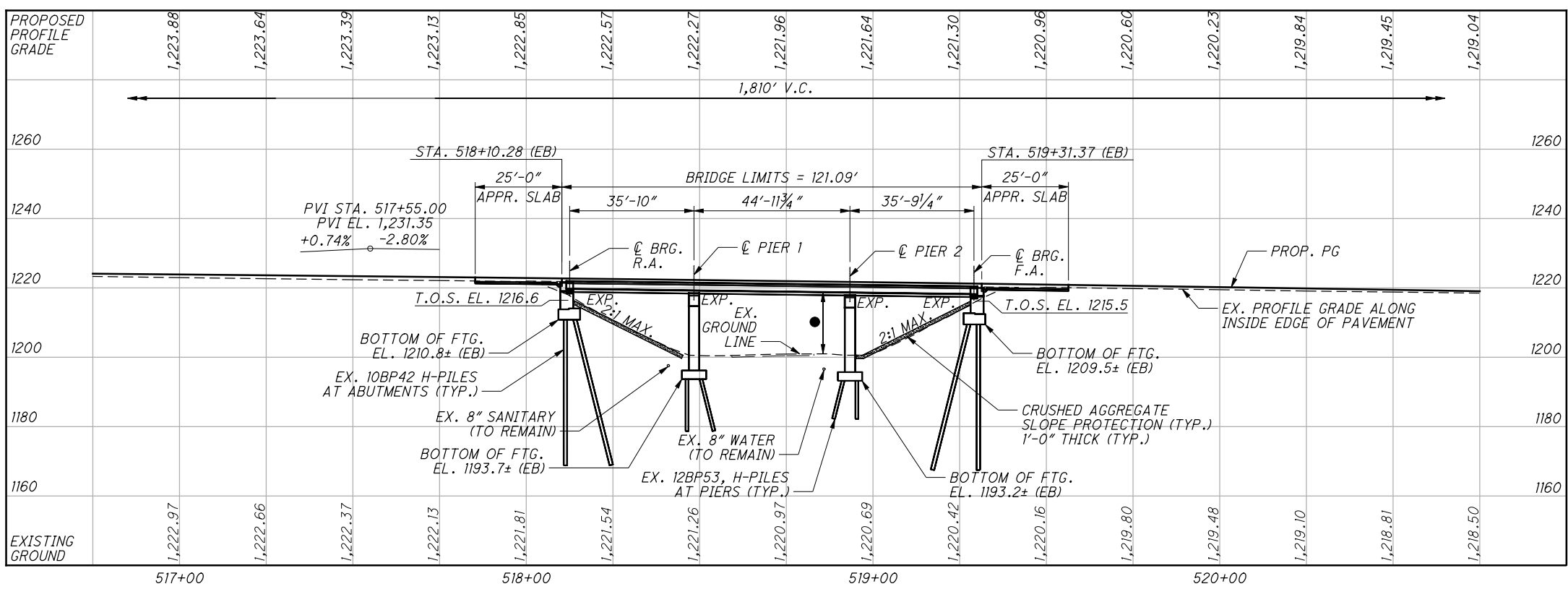
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307

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PLAN



PROFILE ALONG EASTBOUND PROFILE GRADE

BENCHMARK DATA

BM #21 STA. 512+00.68, ELEV. 1226.57, OFFSET 0.16 RT., CENTERLINE MONUMENT FOUND
 BM #22 STA. 524+00.62, ELEV. 1213.74, OFFSET 0.14 RT., CENTERLINE MONUMENT FOUND

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET 267

NOTES

- EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
 - ALL EXISTING DIMENSIONS ARE ±.
- DESIGN TRAFFIC:
 2010 ADT = 35,870 2010 ADTT = 17,935
 2030 ADT = 46,890 2030 ADTT = 23,445
 DIRECTIONAL DISTRIBUTION = 0.55

LEGEND

- 14.8' EXISTING MINIMUM VERTICAL CLEARANCE - LEFT BRIDGE
 - 17.1' EXISTING MINIMUM VERTICAL CLEARANCE - RIGHT BRIDGE
 - 16.1' PROPOSED MINIMUM VERTICAL CLEARANCE - LEFT BRIDGE
 - 18.8' PROPOSED MINIMUM VERTICAL CLEARANCE - RIGHT BRIDGE
 - 15.5' REQUIRED MINIMUM VERTICAL CLEARANCE BOTH BRIDGES
- # BRIDGE TERMINAL ASSEMBLY TYPE 1
 ## BRIDGE TERMINAL ASSEMBLY TYPE 2
 BRIDGE TERMINAL ASSEMBLIES ARE INCLUDED WITH ROADWAY QUANTITIES FOR PAYMENT

PROPOSED WORK

- REMOVE AND REPLACE CONCRETE DECK, STEEL BEAMS, CONCRETE PIER CAPS AND APPROACH SLABS IN PHASES.
- CONVERT ABUTMENTS TO SEMI-INTEGRAL.
- PATCH PIER COLUMNS.
- INSTALL CRUSHED AGGREGATE SLOPE PROTECTION.
- REMOVE BRUSH UNDER STRUCTURE AND FROM 20 FT. EACH SIDE OF STRUCTURE.
- SEAL CONCRETE SURFACES ON PIERS, ABUTMENTS & SUPERSTRUCTURE.

EXISTING STRUCTURE

TYPE: 3-SPAN CONTINUOUS STEEL BEAM WITH CONCRETE DECK AND SUBSTRUCTURE
 SPANS: 35'-10" ± - 44'-11 3/4" ± - 35'-9 1/4" ± C/C BEARINGS
 ROADWAY: 39'-8" T/T SAFETY CURB (WB)
 43'-0" T/T SAFETY CURB TO T/ PARAPET (EB)
 LOADING: CF 2000 (57) (WB)
 HS20 AND THE ALTERNATE MILITARY LOADING (EB) (SUPERSTRUCTURE)
 SKEW: NONE
 APPROACH SLABS: AS-1-54 (25' LONG)
 WEARING SURFACE: MICROSILICA MODIFIED CONCRETE OVERLAY (WB)
 1" MONOLITHIC CONCRETE AND MICROSILICA MODIFIED CONCRETE OVERLAY (EB)
 ALIGNMENT: TANGENT
 CROWN: 0.016
 STRUCTURE FILE NUMBER: 0702226L/0702250R
 DATE BUILT: 1964

PROPOSED STRUCTURE (EB)

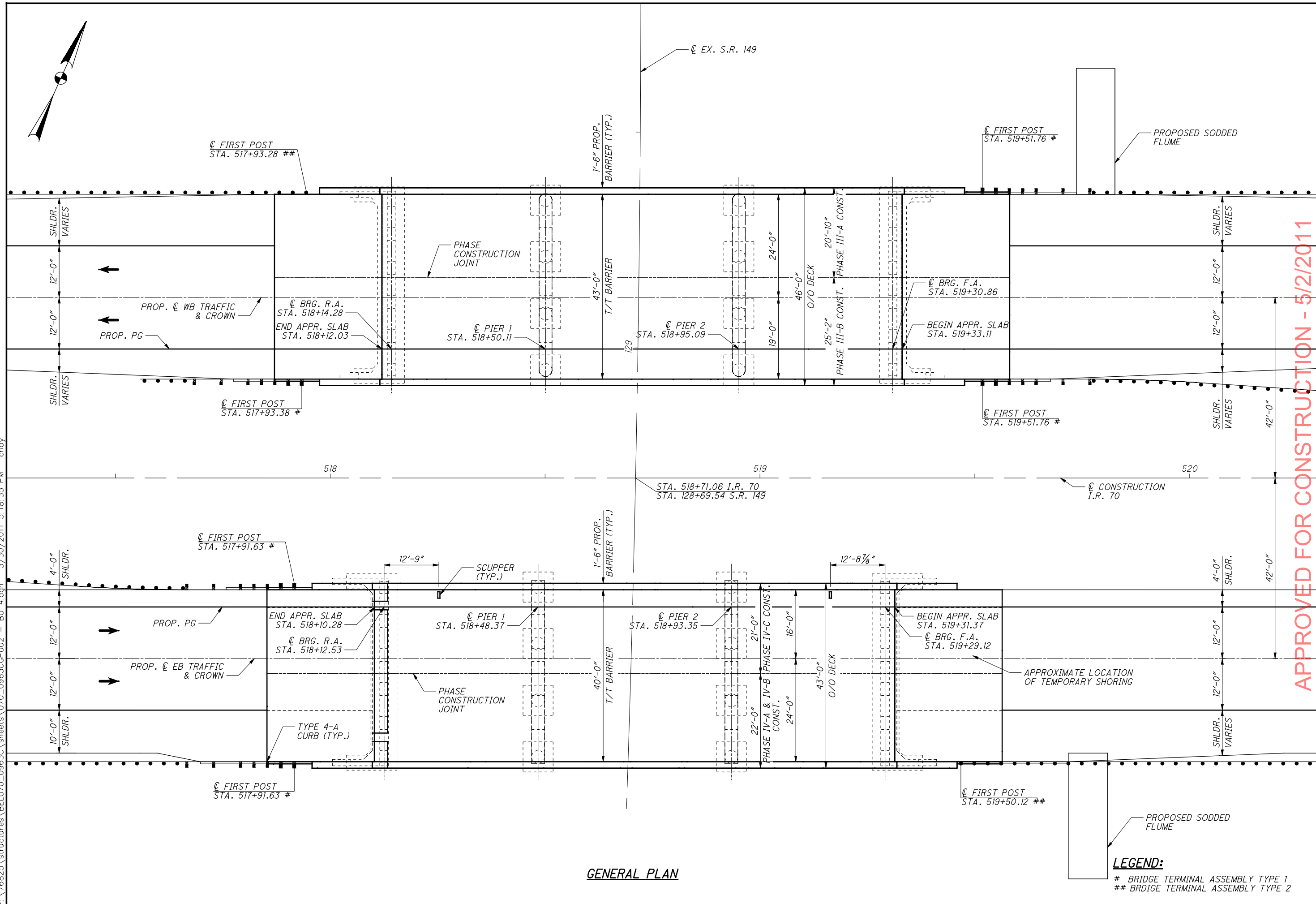
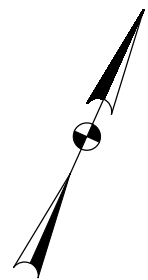
TYPE: 3-SPAN CONTINUOUS COMPOSITE STEEL BEAM A709 GRADE 50W SUPPORTED BY MODIFIED SUBSTRUCTURE
 SPANS: 35'-10" - 44'-11 3/4" - 35'-9 1/4" C/C BEARINGS
 ROADWAY: 40'-0" T/T BARRIER (EB)
 LOADING: HS20 CASE I AND THE ALTERNATE MILITARY LOADING (SUPERSTRUCTURE)
 FUTURE WEARING SURFACE: 60 PSF
 SKEW: NONE
 APPROACH SLABS: AS-1-81, 25' LONG (MODIFIED)
 ALIGNMENT: TANGENT
 WEARING SURFACE: 1" MONOLITHIC CONCRETE
 CROWN: 0.016
 COORDINATES: LATITUDE 40°03'36" N
 LONGITUDE 81°03'10" W
 STRUCTURE FILE NUMBER: 0702226L/0702250R

APPROVED FOR CONSTRUCTION - 5/2/2011

E.L. ROBINSON
 the Challenge. the Choice.
 1001 Watermark Drive, Suite 310 - Columbus, Ohio 43215

DATE	2/3/11
REVIEWED	RER
DRAWN	DTA
DESIGNED	CHEKED
AMC	AME
BELMONT COUNTY (WESTBOUND)	STA. 518+12.03
BELMONT COUNTY (EASTBOUND)	STA. 519+31.37
BELMONT COUNTY (WESTBOUND)	STA. 518+10.28
BELMONT COUNTY (EASTBOUND)	STA. 519+31.37
SITE PLAN	BRIDGE NO. BEL-70-0963 L/R
	I.R. 70 OVER S.R. 149
BEL-70-7.61	PID No. 76825
1/24	284
	307

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LEGEND:
 # BRIDGE TERMINAL ASSEMBLY TYPE 1
 ## BRIDGE TERMINAL ASSEMBLY TYPE 2

APPROVED FOR CONSTRUCTION - 5/2/2011

BEL-70-7.61	GENERAL PLAN	BELMONT COUNTY (EASTBOUND)	BELMONT COUNTY (WESTBOUND)	DESIGNED	DRAWN	REVIEWED	DATE
	BRIDGE NO. BEL-70-0963 L/R I.R. 70 OVER S.R. 149	STA. 518+10.28 STA. 519+31.37	STA. 518+12.03 STA. 519+33.11	CHECKED	DTA	RER	2/3/11
PID No. 76825							STRUCTURE FILE NUMBER 0702250
2/24							



STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):
AS-1-81 REVISED 7-19-02
GSD-1-96 REVISED 7-19-02
SBR-1-99 REVISED 7-19-02
SICD-1-96 REVISED 7-19-02
AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):
898 DATED 7-17-09

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAYS AND TRANSPORTATION OFFICIALS, 2002 - 17th EDITION AND THE 2004 ODOT BRIDGE DESIGN MANUAL.

DESIGN DATA:

DESIGN LOADING -
SUPERSTRUCTURE - HS20, CASE I AND THE ALTERNATE MILITARY LOADING

CONCRETE CLASS QSC2 - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)
CONCRETE CLASS QSC2 - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

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

STRUCTURAL STEEL - ASTM A709 GRADE 50W - YIELD STRENGTH 50,000 P.S.I.

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL
2 1/2" CONCRETE COVER

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

EXISTING BRIDGE PLANS

EXISTING BRIDGE PLANS MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE ODOT DISTRICT ELEVEN OFFICE IN NEW PHILADELPHIA OHIO.

UTILITY LINES:

THE UTILITY(IES) SHALL BORE ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES. THE CONTRACTOR AND UTILITY(IES) ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

MAINTENANCE OF TRAFFIC

SEE ROADWAY PLANS FOR ADDITIONAL MAINTENANCE OF TRAFFIC NOTES AND DETAILS.

ITEM 201 - CLEARING AND GRUBBING

CLEAR AND GRUB ALL VEGETATION UNDER AND WITHIN 20 FEET OF EACH SIDE OF THE EXISTING STRUCTURE.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN:
THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

CUT LINE CONSTRUCTION JOINT PREPARATION:
SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING 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 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.

ITEM 203 - EMBANKMENT, AS PER PLAN

PLACE AND COMPACT EMBANKMENT MATERIAL IN 6 INCH LIFTS FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT.

ITEM 509 EPOXY COATED REINFORCING STEEL, AS PER PLAN

IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACINGS. REPAIR ALL DAMAGE TO THE EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO 709.00.

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. AN ALLOWANCE OF 100 POUNDS IS INCLUDED IN ITEM 509 FOR THIS PURPOSE.

REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE DEEMED BY THE ENGINEER TO BE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE DEPARTMENT.

ITEM 516-SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN:

INSTALL A 3 FOOT WIDE NEOPRENE SHEET AT LOCATIONS SHOWN IN THE PLANS. SECURE THE NEOPRENE SHEETING TO THE CONCRETE WITH 1/4" X #10 GAGE (LENGTH X SHANK DIAMETER) GALVANIZED BUTTON HEAD SPIKES THROUGH A 1 INCH OUTSIDE

DIAMETER, #10 GAGE GALVANIZED WASHER. MAXIMUM FASTENER SPACING IS 9 INCHES. USE OF OTHER SIMILAR GALVANIZED DEVICES, WHICH WILL NOT DAMAGE EITHER THE NEOPRENE OR THE CONCRETE, WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

CENTER THE NEOPRENE STRIPS ON ALL JOINTS. FOR HORIZONTAL JOINTS, SECURE THE HORIZONTAL NEOPRENE STRIP BY USING A SINGLE LINE OF FASTENERS, STARTING AT 6 INCHES,+/-, FROM THE TOP OF THE NEOPRENE STRIP. FOR THE VERTICAL JOINTS SECURE THE VERTICAL NEOPRENE STRIP BY USING A SINGLE VERTICAL LINE OF FASTENERS, STARTING AT 6 INCHES,+/-, FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST TO THE CENTERLINE OF ROADWAY. FOR VERTICAL JOINTS, INSTALL 2 ADDITIONAL FASTENERS AT 6 INCHES, CENTER TO CENTER, ACROSS THE TOP OF THE NEOPRENE STRIP ON THE SAME SIDE OF THE VERTICAL JOINT AS THE SINGLE VERTICAL ROW OF FASTENERS IS LOCATED.

THE VERTICAL NEOPRENE STRIPS SHALL COMPLETELY OVERLAP THE HORIZONTAL STRIPS. LAP LENGTHS OF THE HORIZONTAL STRIPS THAT ARE NOT VULCANIZED OR ADHESIVE BONDED, SHALL BE AT LEAST 1 FOOT IN LENGTH, OR 6 INCHES IN LENGTH IF THE LAP IS VULCANIZED OR ADHESIVE BONDED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED NEOPRENE STRIPS.

THE NEOPRENE SHEETING SHALL BE 3/32" THICK GENERAL PURPOSE, HEAVY-DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER NN-0003", BY E. I. DUPONT DE NEMOURS AND COMPANY, INC., "WINGPRENE" BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

DESCRIPTION OF TEST	ASTM METHOD	REQUIREMENT
THICKNESS, INCHES	D751	0.094 ± 0.01
BREAKING STRENGTH, GRAB, LBS MINIMUM (LONG. X TRANS.)	D751	700 x 700
ADHESIVE STRIP, 1" WIDE x 2" LONG, LBS MINIMUM	D751	9
BURST STRENGTH, PSI MINIMUM	D751	1400
HEAT AGING, 70 HR, 212 °F, 180° BEND WITHOUT CRACKING	D2136	NO CRACKING OF COATING
LOW TEMP. BRITTLENESS, 1 HR, -40°F, BEND AROUND 1/4" MANDREL	D2136	NO CRACKING OF COATING

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE THE TOTAL LENGTH OF JOINT TO BE SEALED BY THE NUMBER OF FEET.

BASIS OF PAYMENT: THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN

PRIOR TO THE SURFACE CLEANING SPECIFIED IN 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. A QUANTITY OF 135 SQUARE FEET HAS BEEN INCLUDED IN THE ESTIMATED QUANTITIES. THIS ITEM IS TO BE USED AS DIRECTED BY THE ENGINEER AT THE PIER COLUMNS.

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APPROVED FOR CONSTRUCTION - 5/2/2011



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DIA	2/3/11
CHECKED	FILE NUMBER
TUE	0702226L/0702250R

GENERAL NOTES
BRIDGE NO. BEL-70-0963 L/R
I.R. TO OVER S.R. 149

BEL-70-7.61
PID No. 76825

ITEM 898 - QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), AS PER PLAN

FURNISH APPROACH SLABS CONFORMING TO CMS 526 EXCEPT CONCRETE SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 898, QC/QA CONCRETE, CLASS QSC2. THE ACCEPTED QUANTITIES SHALL INCLUDE: CONCRETE, CURBS, PARAPETS, REINFORCING STEEL, JOINT FILLERS, JOINT SEALERS, JOINT SEALS, AND WATERPROOFING. THE DEPARTMENT WILL MEASURE APPROACH SLABS BY THE NUMBER OF SQUARE YARDS. THE DEPARTMENT WILL INITIALLY PAY THE FULL BID PRICE TO THE CONTRACTOR UPON COMPLETING THE WORK. THE DEPARTMENT WILL CALCULATE THE FINAL ADJUSTED PAYMENT ACCORDING TO 898.17 AND INCLUDE APPROACH SLAB CONCRETE AND DECK CONCRETE IN THE SAME LOT TO DETERMINE FINAL PAY FACTORS.

ITEM 898 - QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK), AS PER PLAN

THE DEPARTMENT WILL CALCULATE THE FINAL ADJUSTED PAYMENT ACCORDING TO 898.17 AND INCLUDE APPROACH SLAB CONCRETE AND DECK CONCRETE IN THE SAME LOT TO DETERMINE FINAL PAY FACTORS.

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 0.95 KIPS FOR A TOTAL MACHINE LOAD OF 7.6 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".

APPROVED FOR CONSTRUCTION - 5/2/2011

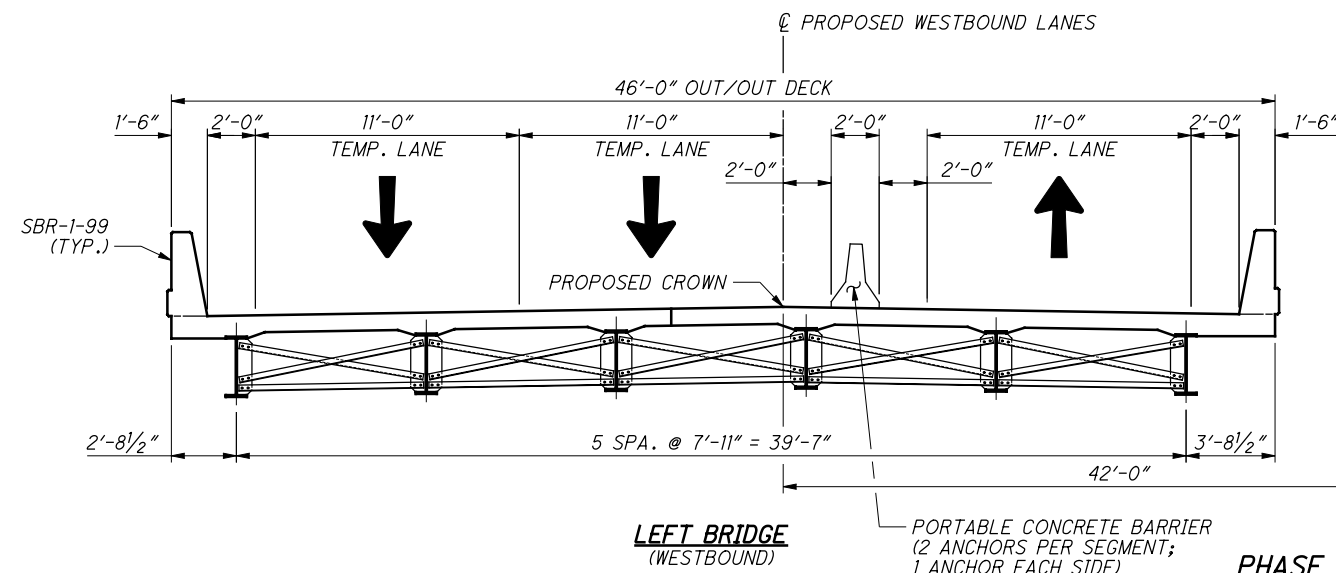


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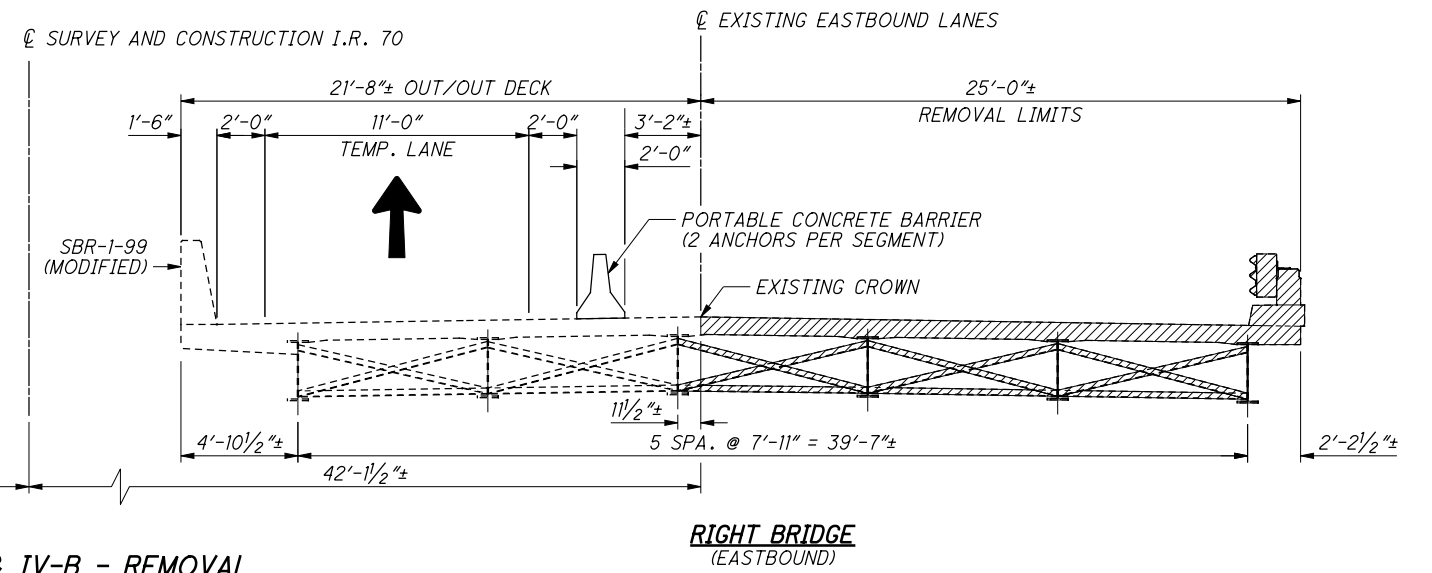
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 BRIDGE NO. BEL-70-0963 L/R
 I.R. TO OVER S.R. 149

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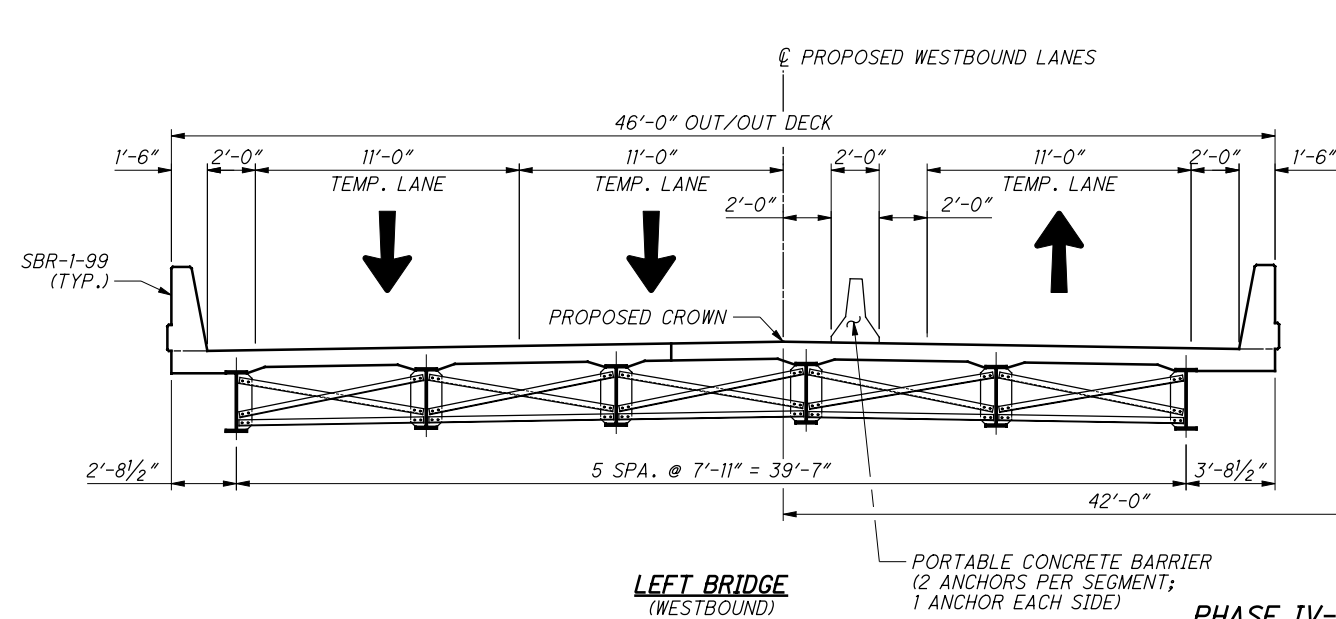


LEFT BRIDGE
(WESTBOUND)

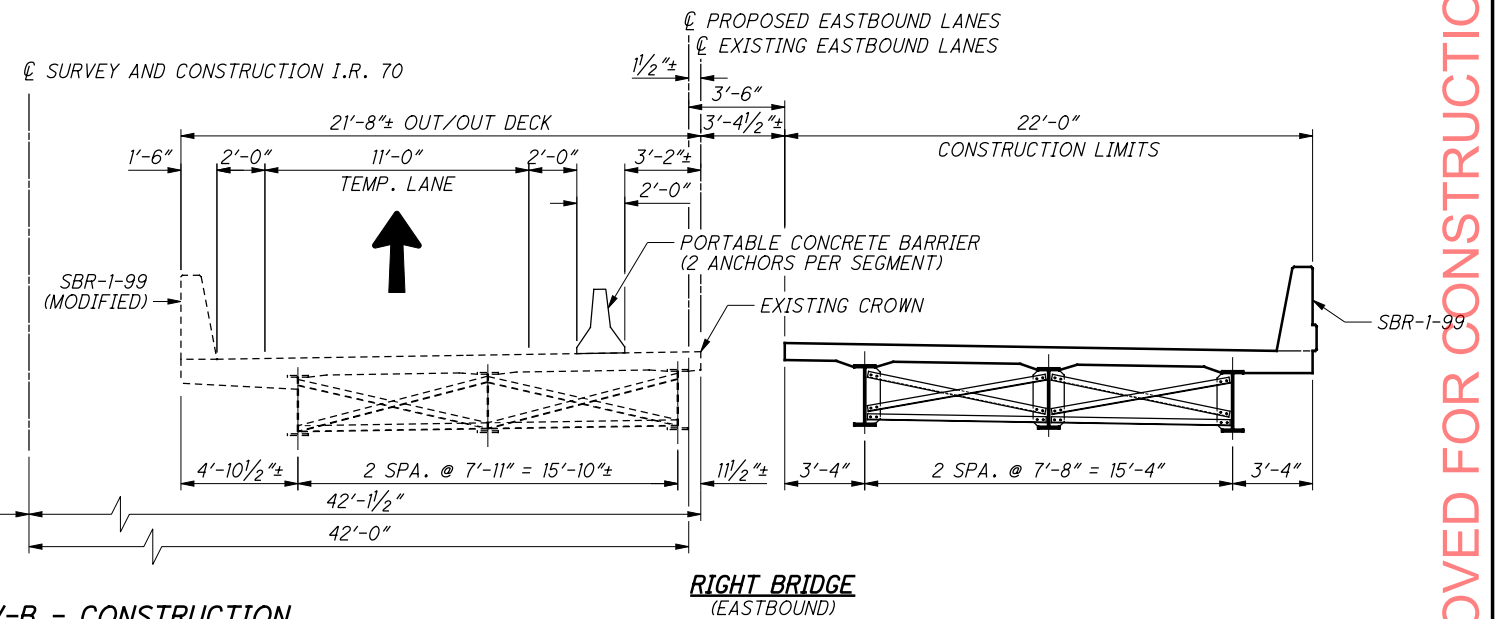


RIGHT BRIDGE
(EASTBOUND)

PHASE IV-A & IV-B - REMOVAL



LEFT BRIDGE
(WESTBOUND)



RIGHT BRIDGE
(EASTBOUND)

PHASE IV-A & IV-B - CONSTRUCTION

PHASE IV-A REMOVAL

1. RELOCATE PORTABLE CONCRETE BARRIERS. DIRECT EASTBOUND AND WESTBOUND TRAFFIC AS REQUIRED.
2. REMOVE EXISTING SUPERSTRUCTURE AND APPROACH SLABS TO THE LIMITS SHOWN IN THE PLANS.
3. REMOVE EXISTING PORTIONS OF ABUTMENTS AND PIERS TO THE LIMITS SHOWN IN THE PLANS.

PHASE IV-A CONSTRUCTION

1. CONSTRUCT THE NEW ABUTMENTS AND PIER CAPS TO THE LIMITS SHOWN IN THE PLANS.
2. INSTALL NEW BEARINGS, STEEL BEAMS, AND CROSS FRAMES.
3. CONSTRUCT NEW DECK AND PARAPETS TO THE LIMITS SHOWN IN THE PLANS.
4. SEAL CONCRETE SURFACES.

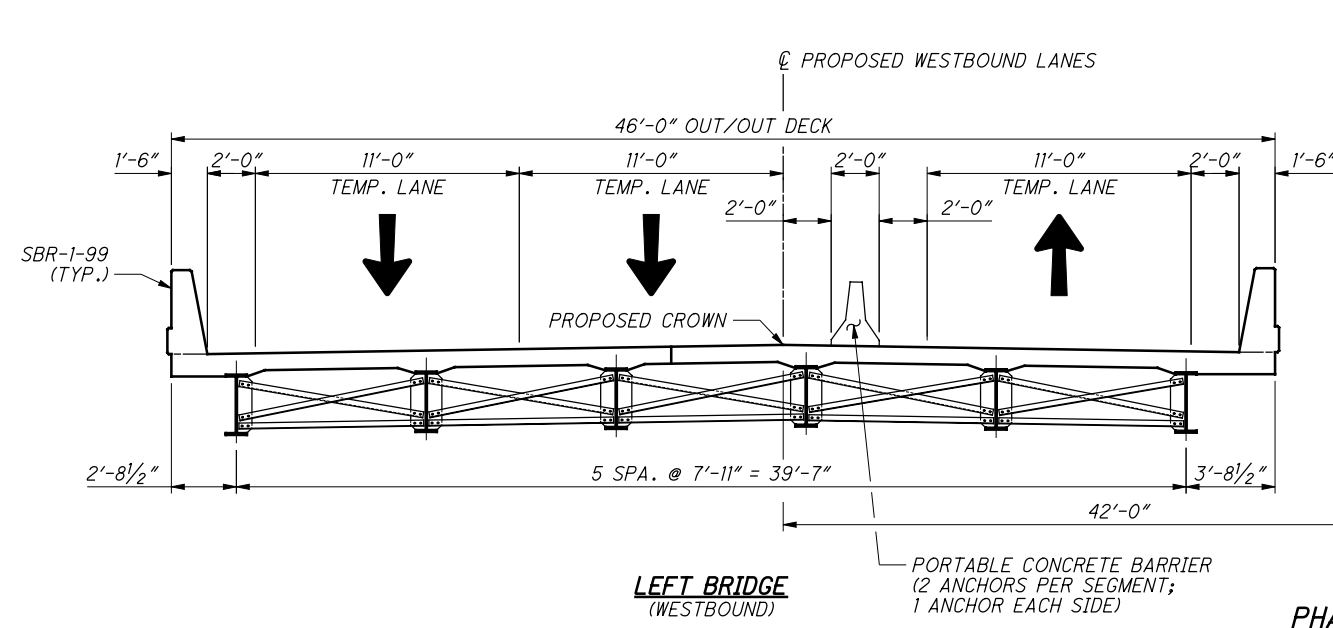
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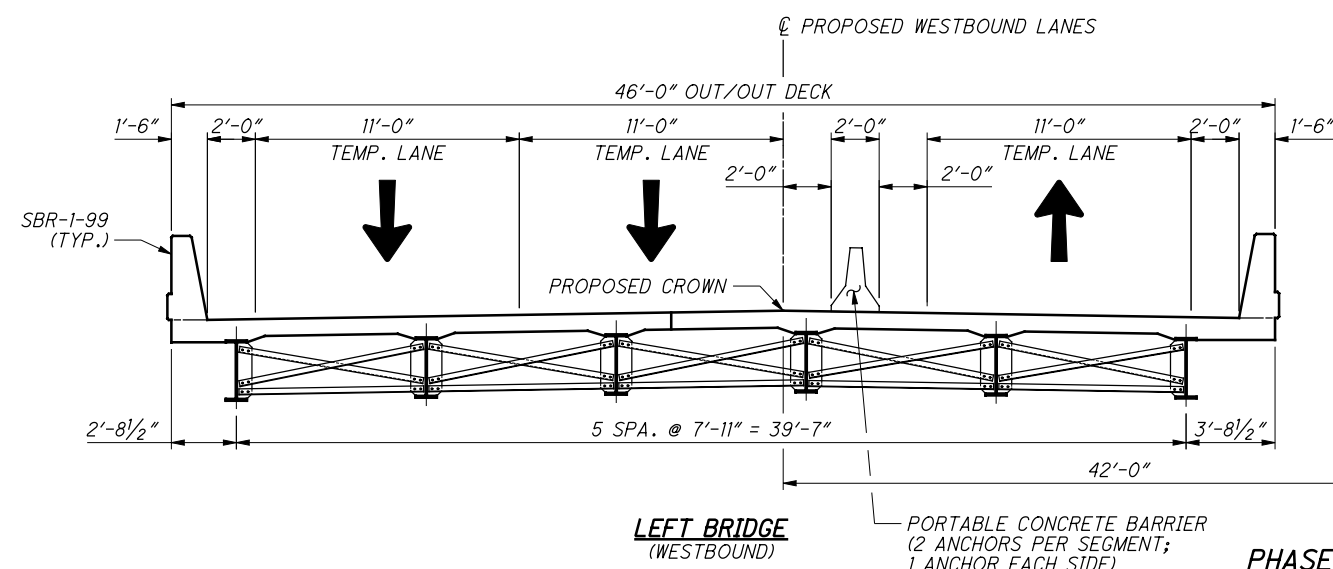
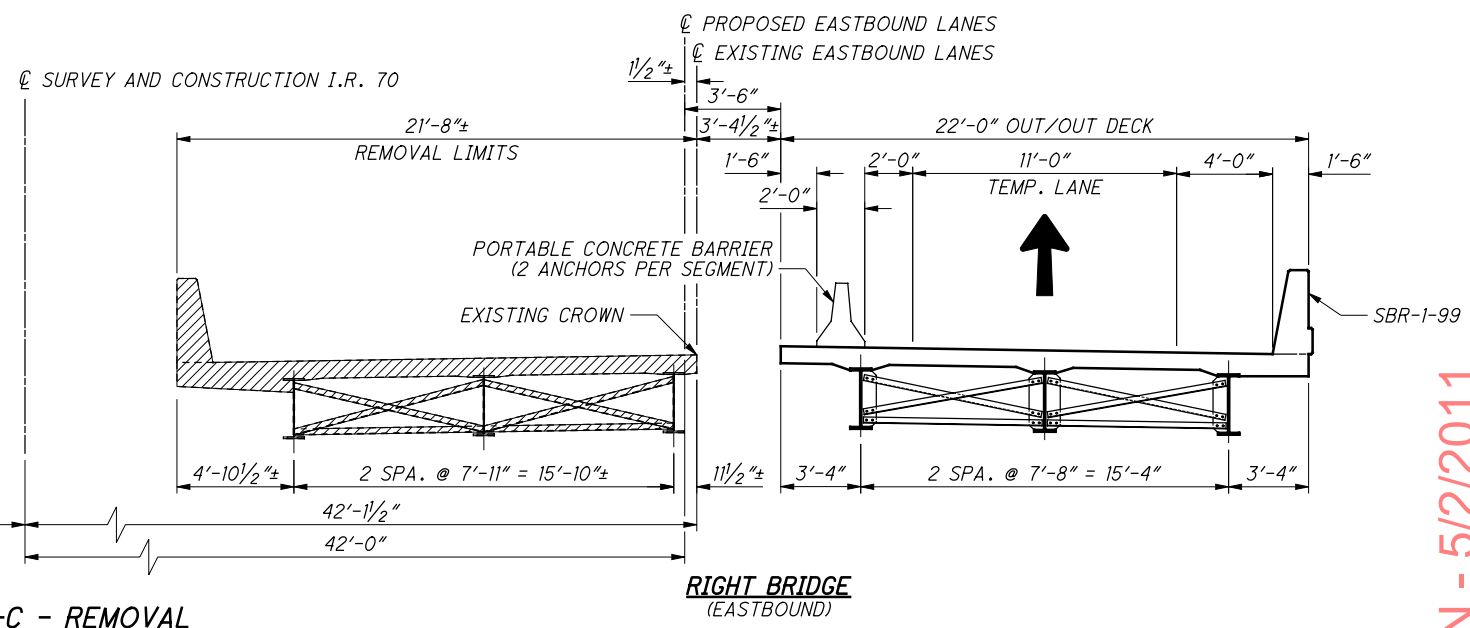
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PHASE CONSTRUCTION DETAILS BRIDGE NO. BEL-70-0963 L/R I.R. TO OVER S.R. 149			
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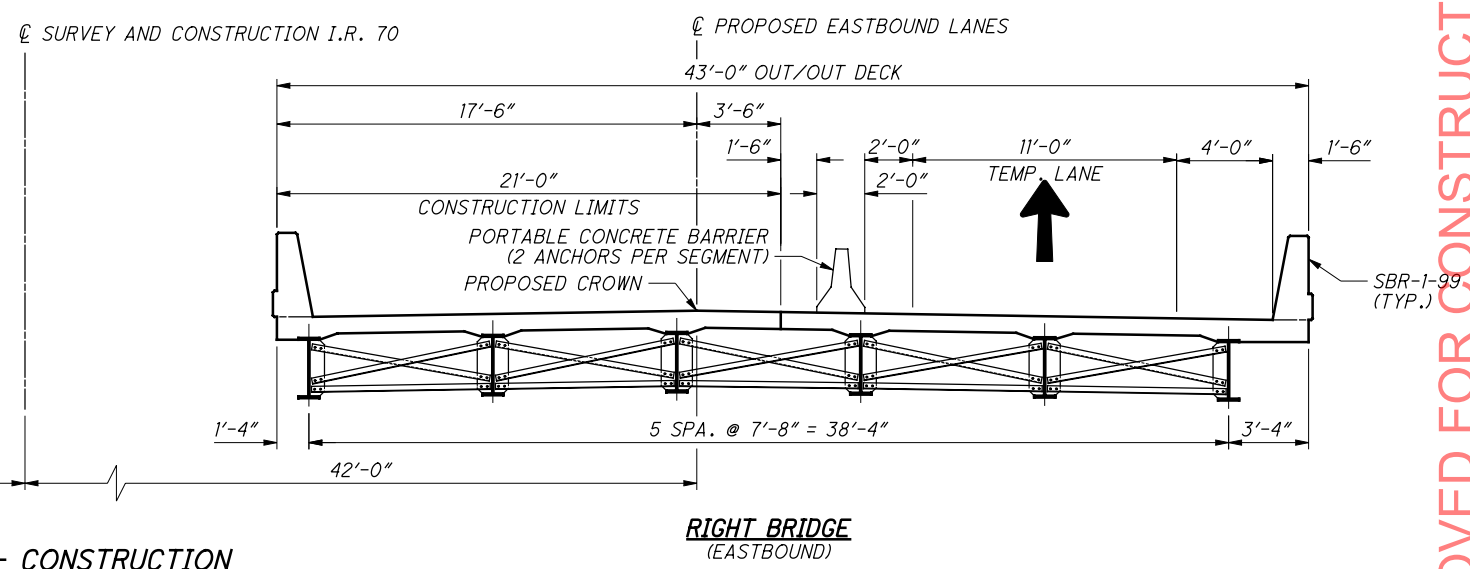
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PHASE IV-C - REMOVAL



PHASE IV-C - CONSTRUCTION



PHASE IV-B REMOVAL

1. RELOCATE PORTABLE CONCRETE BARRIERS. DIRECT EASTBOUND AND WESTBOUND TRAFFIC AS REQUIRED.
2. REMOVE EXISTING SUPERSTRUCTURE AND APPROACH SLABS TO THE LIMITS SHOWN IN THE PLANS.
3. REMOVE EXISTING PORTIONS OF ABUTMENTS AND PIERS TO THE LIMITS SHOWN IN THE PLANS.

PHASE IV-B CONSTRUCTION

1. CONSTRUCT THE NEW ABUTMENTS AND PIER CAPS TO THE LIMITS SHOWN IN THE PLANS.
2. INSTALL NEW BEARINGS, STEEL BEAMS, AND CROSS FRAMES.
3. CONSTRUCT NEW DECK AND PARAPETS TO THE LIMITS SHOWN IN THE PLANS.
4. INSTALL NEW CROSSFRAMES UNDER THE CLOSURE POUR. CAST THE CLOSURE POUR.
5. SEAL CONCRETE SURFACES.
6. REMOVE THE PORTABLE CONCRETE BARRIERS.

LEGEND:



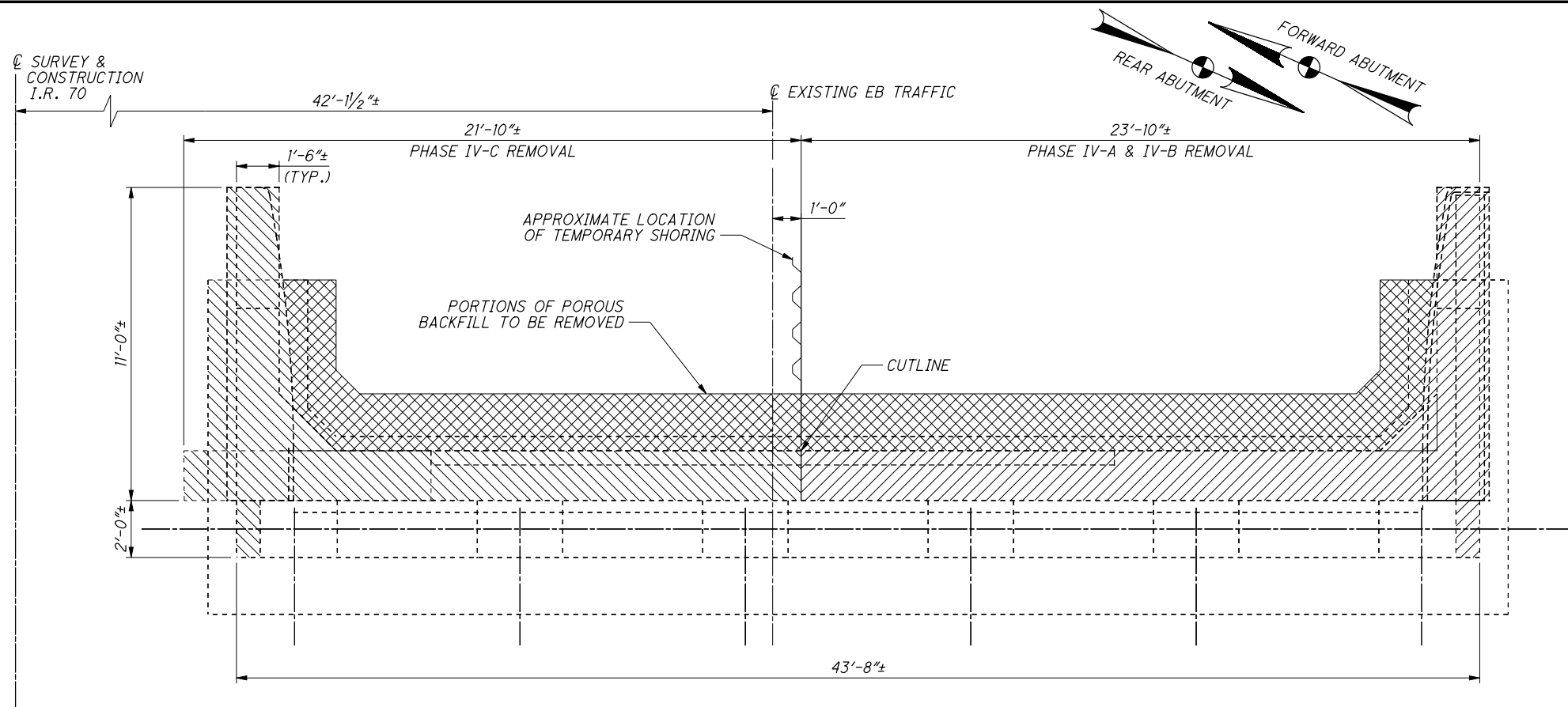
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REVIEWED	RER	STRUCTURE FILE NUMBER	0702226L/0702250R
DATE	2/3/11		

PHASE CONSTRUCTION DETAILS
BRIDGE NO. BEL-70-0963 L/R
I.R. TO OVER S.R. 149

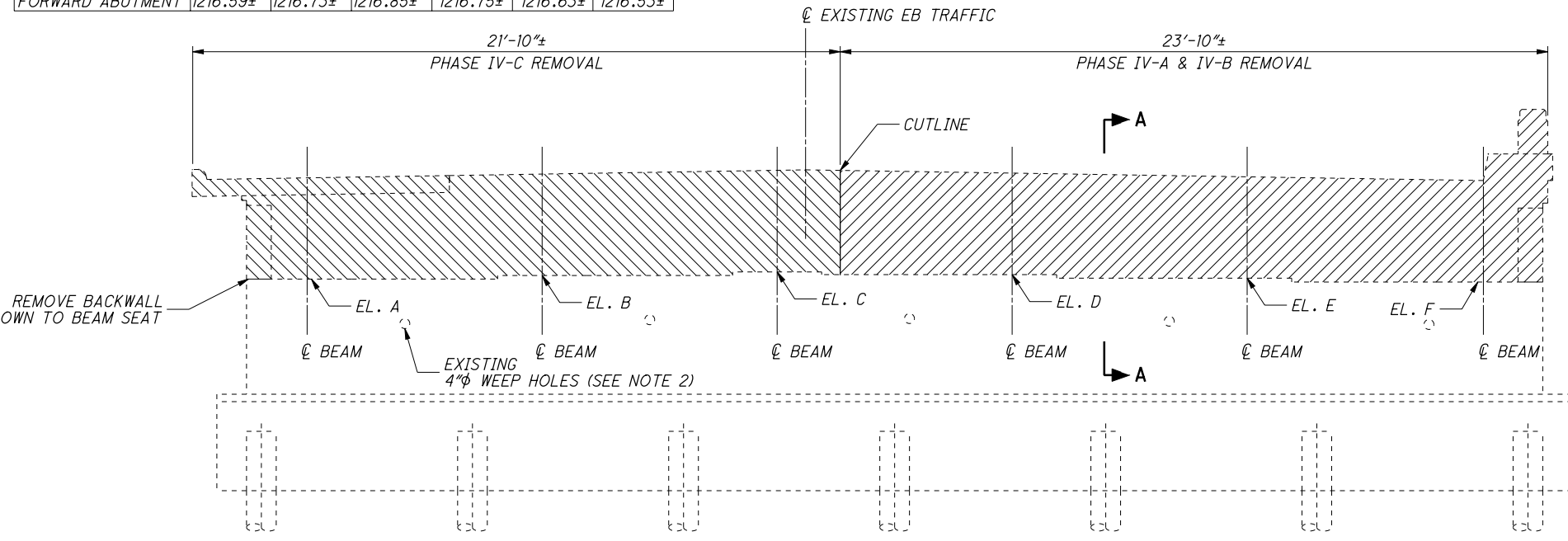
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PID No. 76825

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ABUTMENT PLAN VIEW
(FORWARD ABUTMENT SHOWN, REAR ABUTMENT OPPOSITE HAND)

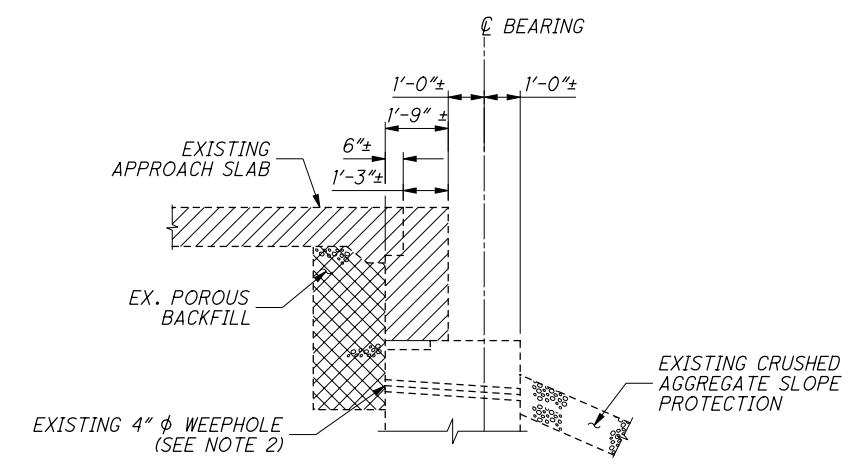
BEAM SEAT ELEVATIONS						
	A	B	C	D	E	F
REAR ABUTMENT	1217.93±	1218.07±	1218.21±	1218.13±	1217.98±	1217.93±
FORWARD ABUTMENT	1216.59±	1216.73±	1216.85±	1216.75±	1216.63±	1216.53±



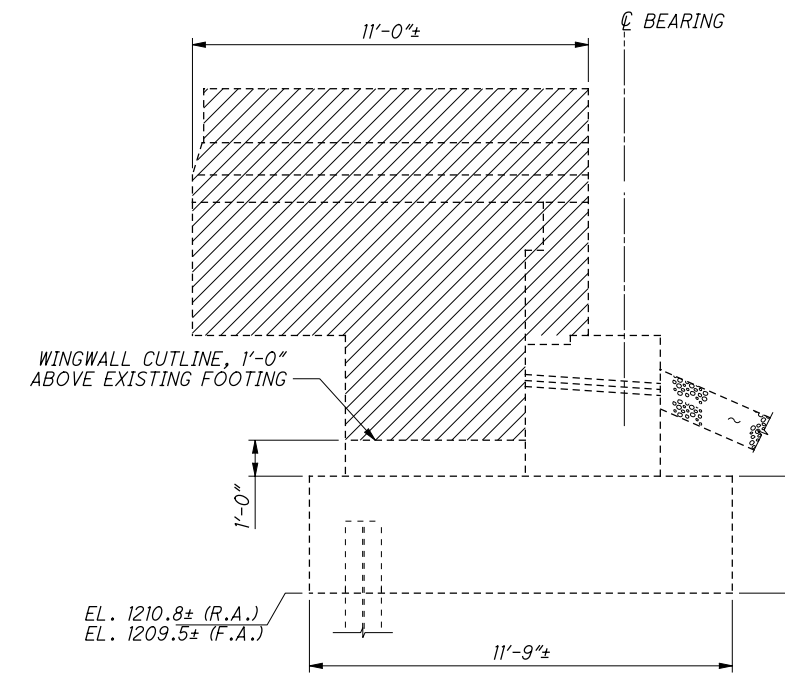
ABUTMENT ELEVATION VIEW
(FORWARD ABUTMENT SHOWN, REAR ABUTMENT OPPOSITE HAND)

- LEGEND:**
- ITEM 202 - PORTIONS OF STRUCTURE REMOVED - PHASE IV-A
 - ITEM 202 - PORTIONS OF STRUCTURE REMOVED - PHASE IV-B
 - ITEM 202 - PORTIONS OF POROUS BACKFILL TO BE REMOVED

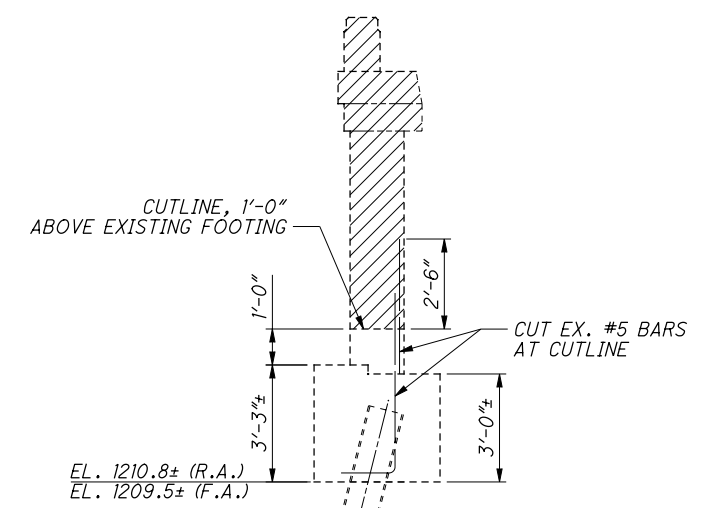
- NOTES:**
- CLEAN OUT EXISTING WEEPHOLES, UNPLUGGED. PAYMENT INCLUDED WITH ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.



SECTION A-A



WINGWALL ELEVATION VIEW
(FOR DIMENSIONS NOT SHOWN, SEE SECTION A-A)



EXISTING WINGWALL SECTION

APPROVED FOR CONSTRUCTION - 5/2/2011

E.L. ROBINSON
The Challenge. The Choice.

1801 Watermark Drive, Suite 310 - Columbus, Ohio 43215

DATE: 2/3/11

REVIEWED: RER

STRUCTURE FILE NUMBER: 0702226L/0702250R

DESIGNED: BMG

CHECKED: AWE

DRAWN: BMG

REVISED:

ABUTMENT REMOVAL DETAILS - RIGHT BRIDGE

BRIDGE NO. BEL-70-0963 L/R

I.R. 70 OVER S.R. 149

BEL-70-7.61

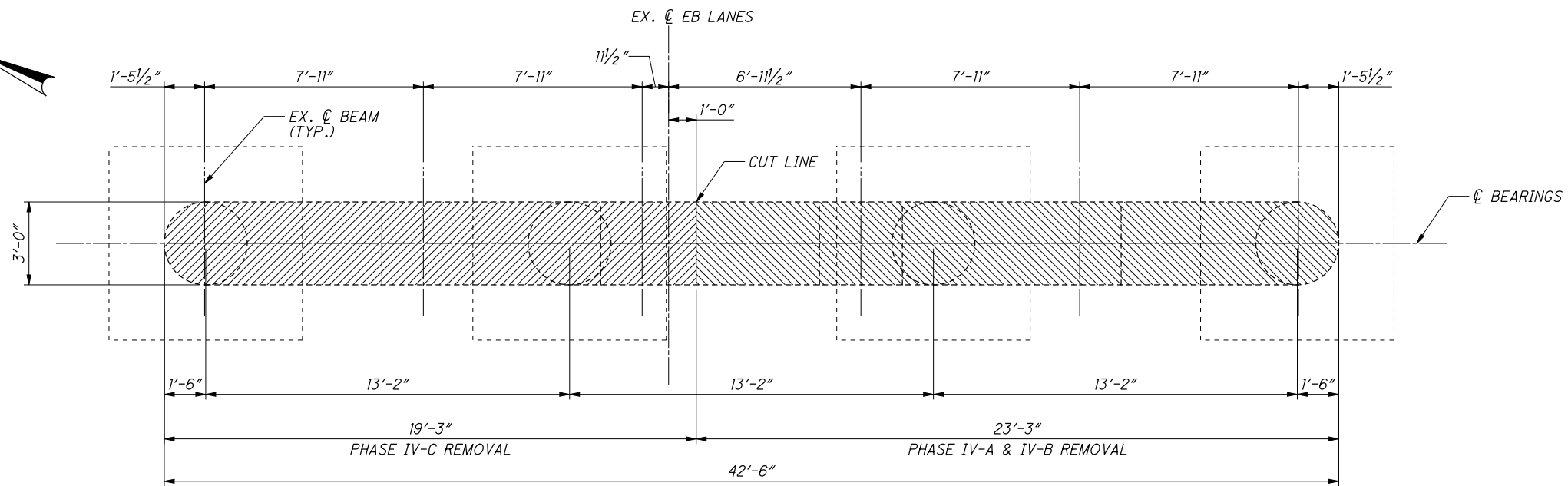
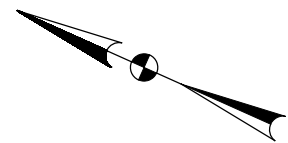
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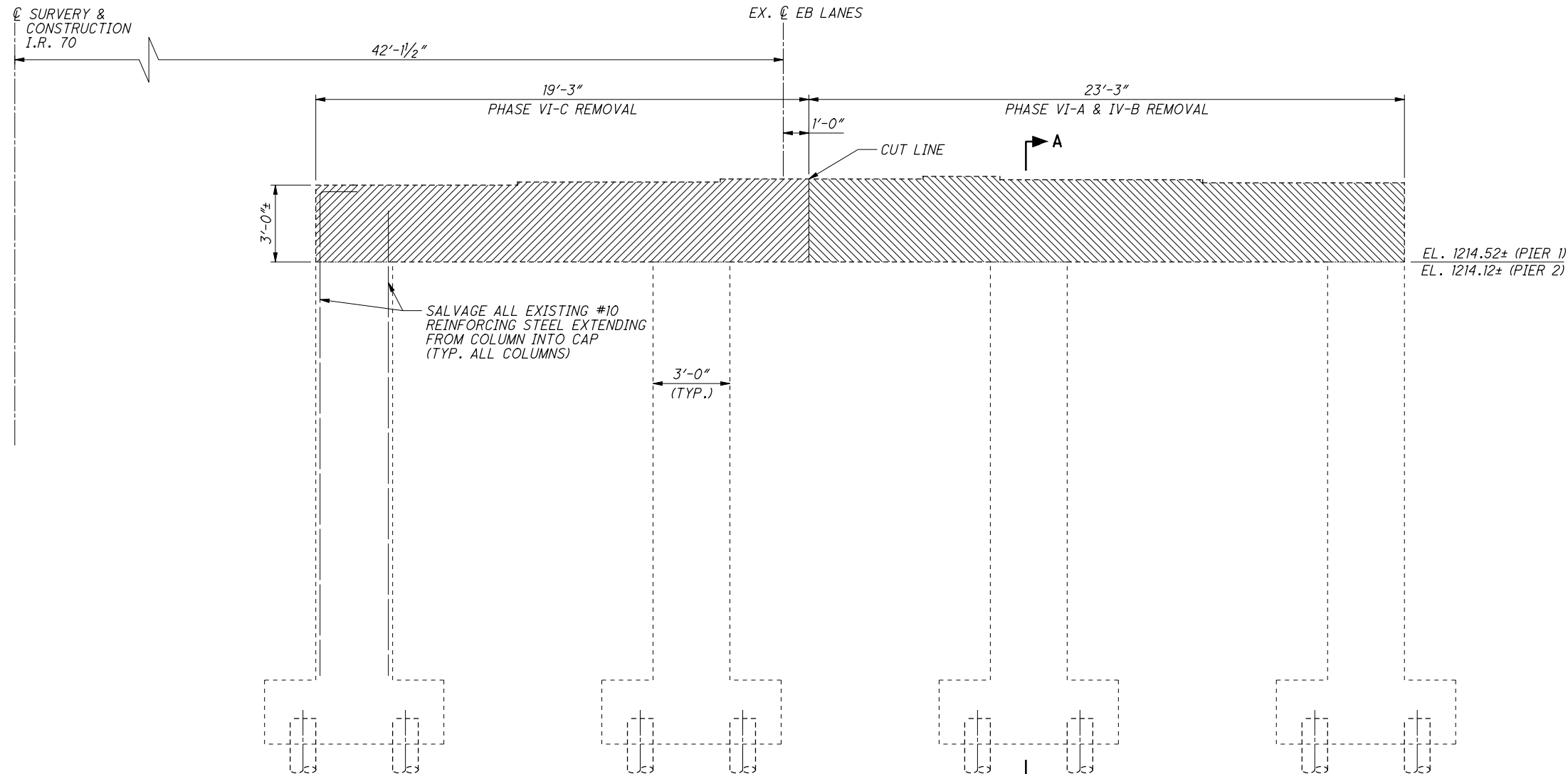
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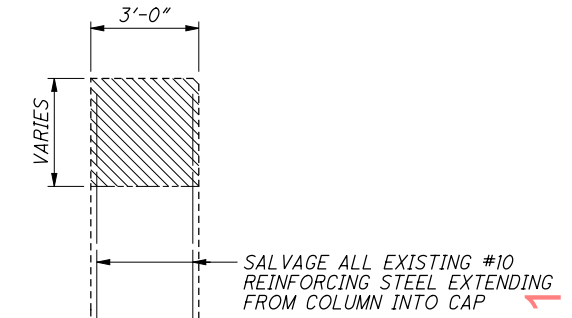
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PLAN
RIGHT BRIDGE



EXISTING TYPICAL PIER ELEVATION
RIGHT BRIDGE (TYP. BOTH PIERS)



SECTION A-A

NOTES:

ALL EXISTING DIMENSIONS ARE ±

LEGEND:

- PHASE IV-A REMOVAL
- PHASE IV-B REMOVAL

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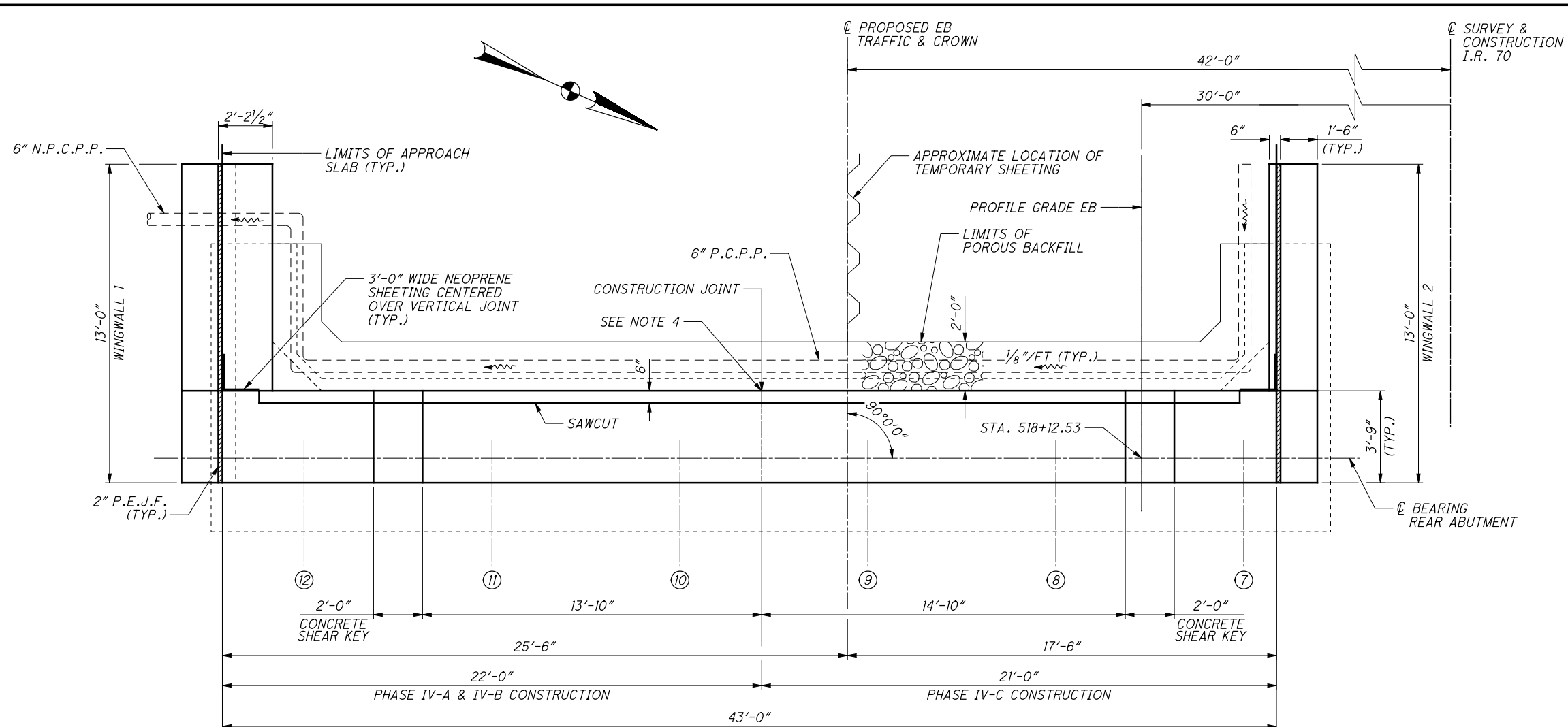


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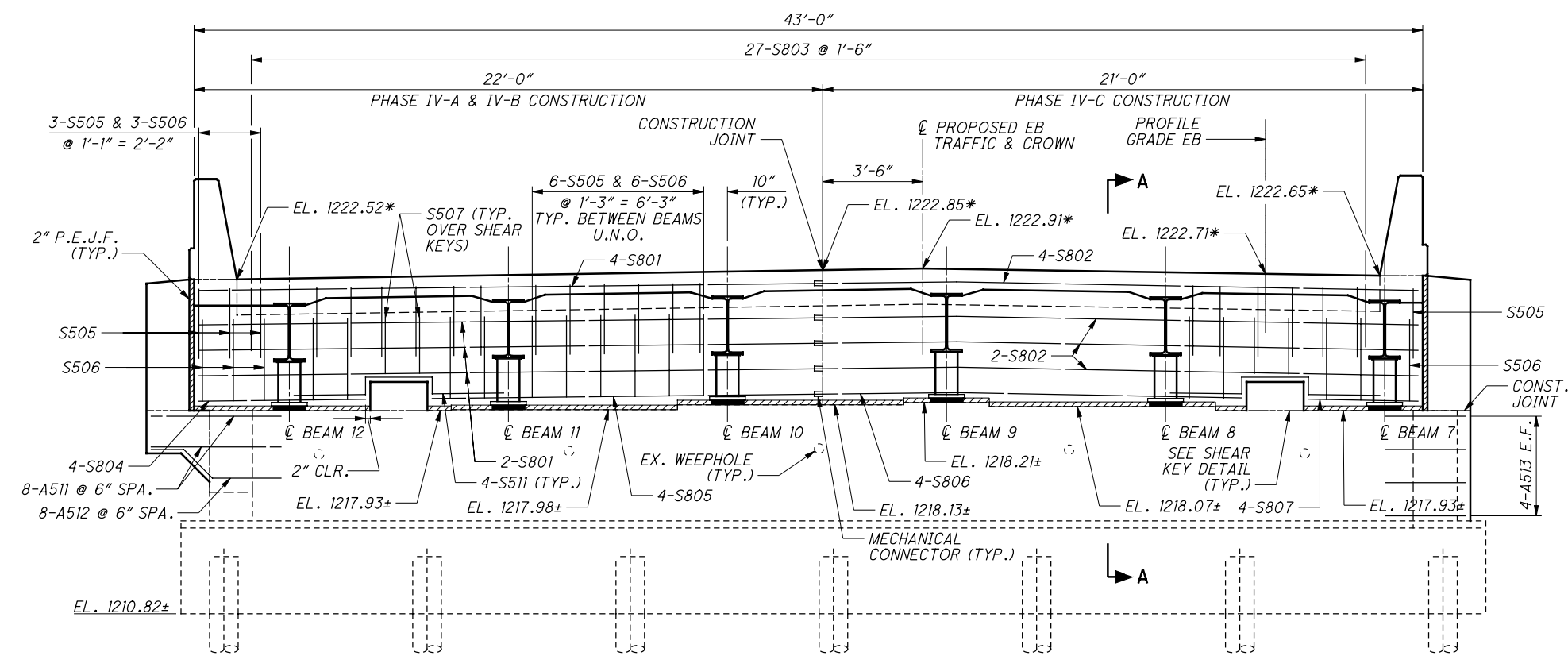
PIER REMOVAL - RIGHT BRIDGE
BRIDGE NO. BEL-70-0963 L/R
I.R. 70 OVER S.R. 149

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PID No. 76825

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PLAN



ELEVATION

LEGEND:

* - ELEVATION GIVE AT \odot BEARINGS

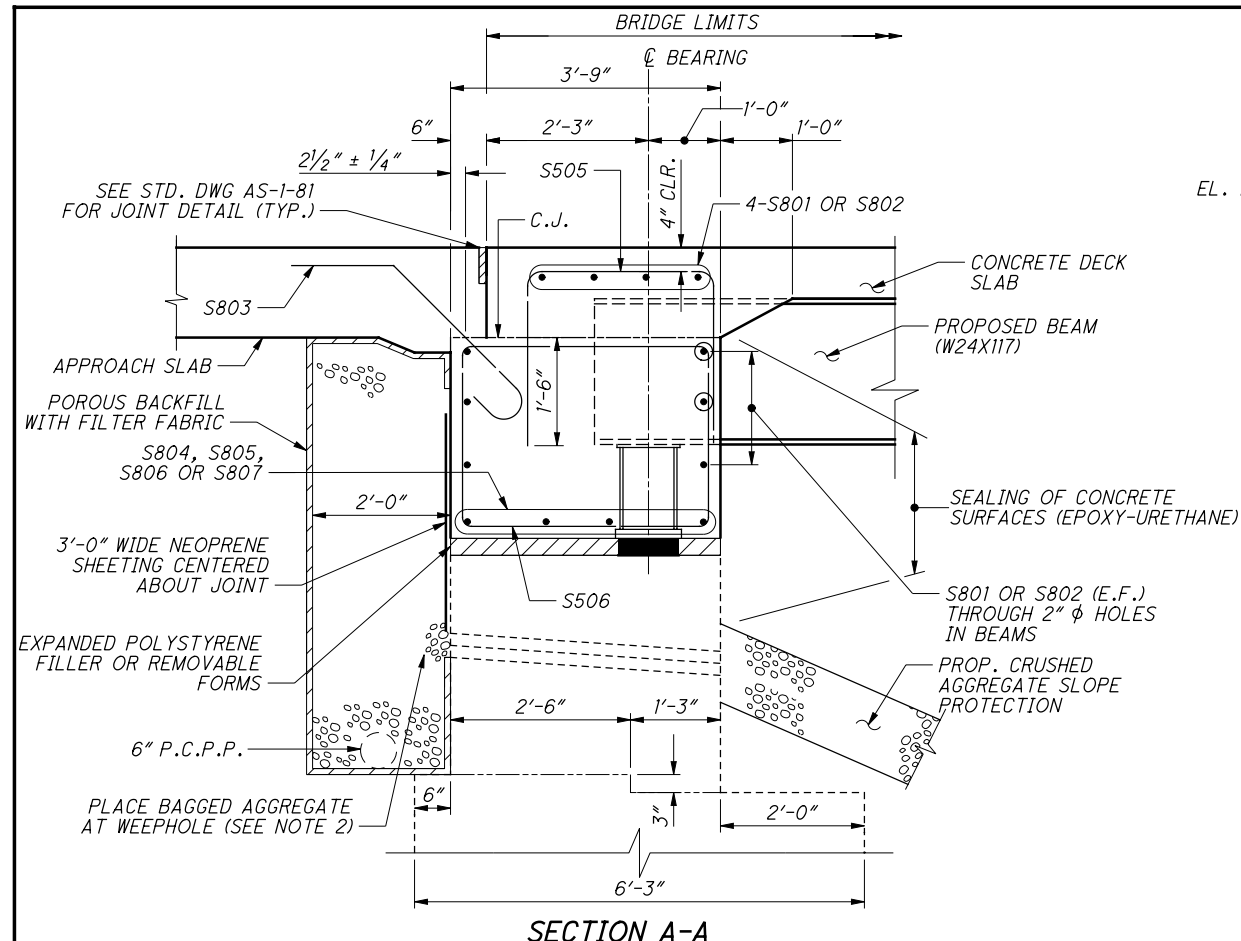
NOTES:

- MECHANICAL CONNECTORS SHALL BE CAPABLE OF DEVELOPING 125 PERCENT OF THE YIELD STRENGTH OF THE BARS JOINED.
- FOR BEARING DETAILS, SEE SHEET [16/24].
- POROUS BACKFILL, 2'-0" THICK, SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE AND Laterally TO THE END OF THE WINGWALLS TO THE LIMITS SHOWN. PLACE TWO CUBIC FEET OF BAGGED NO. 3 AGGREGATE AT EACH WEEPHOLE.
- VERTICALLY PLACE TYPE 2 WATERPROOFING 3' WIDE CENTERED ON JOINT FROM 1'-6" BELOW EXISTING BRIDGE SEAT TO BOTTOM OF APPROACH SLAB.
- ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASE THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE THE HORIZONTAL CONSTRUCTION JOINT BETWEEN THE DIAPHRAGM AND DECK CONCRETE AT THE APPROACH SLAB SEAT.
- FOR ADDITIONAL SEMI-INTEGRAL ABUTMENT DETAILS, SEE ODOT STD. DRAWING SICD-1-96.
- THE LOCATION OF THE MAIN REINFORCEMENT IN THE BEAM SEAT MAY BE ADJUSTED HORIZONTALLY \pm 1" TO ACCOMMODATE THE A901 BARS IN THE SHEAR KEY.
- FOR SECTION A-A, SHEAR KEY DETAILS AND WINGWALL DETAILS, SEE SHEET [10/24].

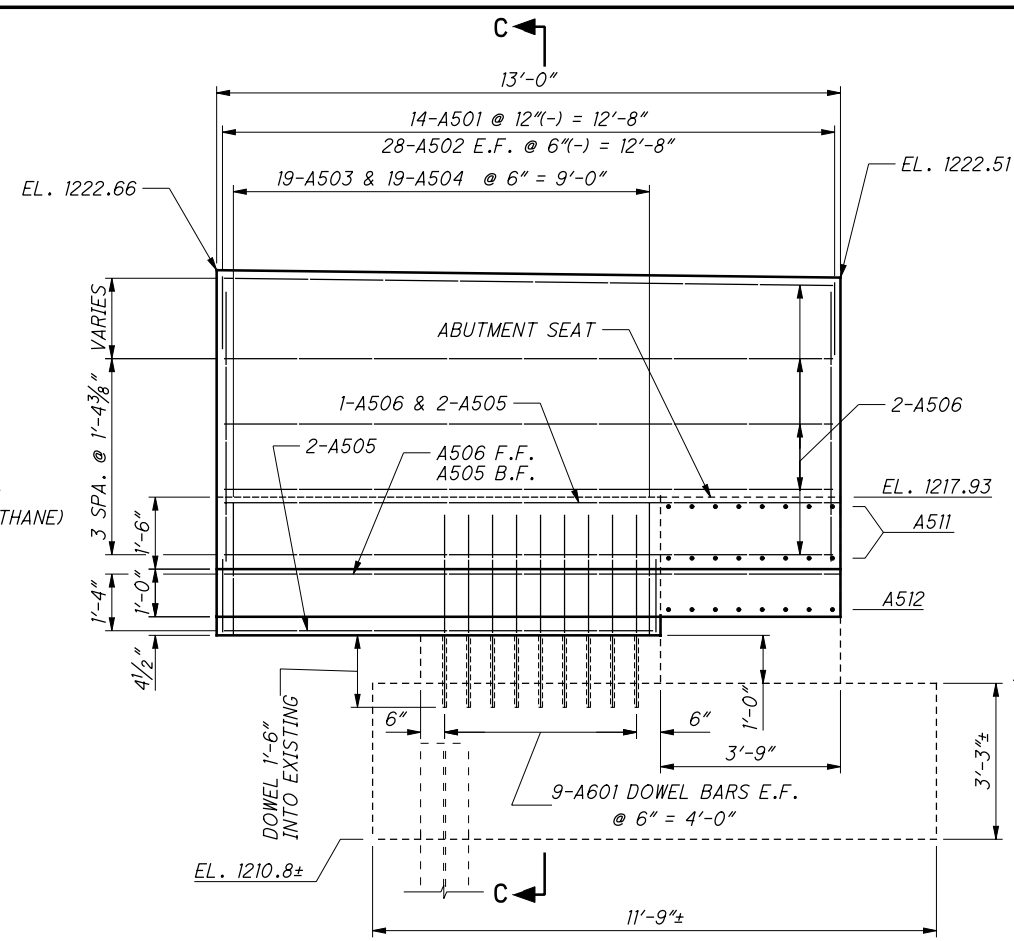
APPROVED FOR CONSTRUCTION - 5/2/2011

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		DRAWN	DTA	REVISED	
REVIEWED	RER	STRUCTURE FILE NUMBER			
DATE	2/3/11				
REAR ABUTMENT - RIGHT BRIDGE BRIDGE NO. BEL-70-0963 L/R I.R. 70 OVER S.R. 149					
BEL-70-7.61 PID No. 76825		9 / 24 292 307			

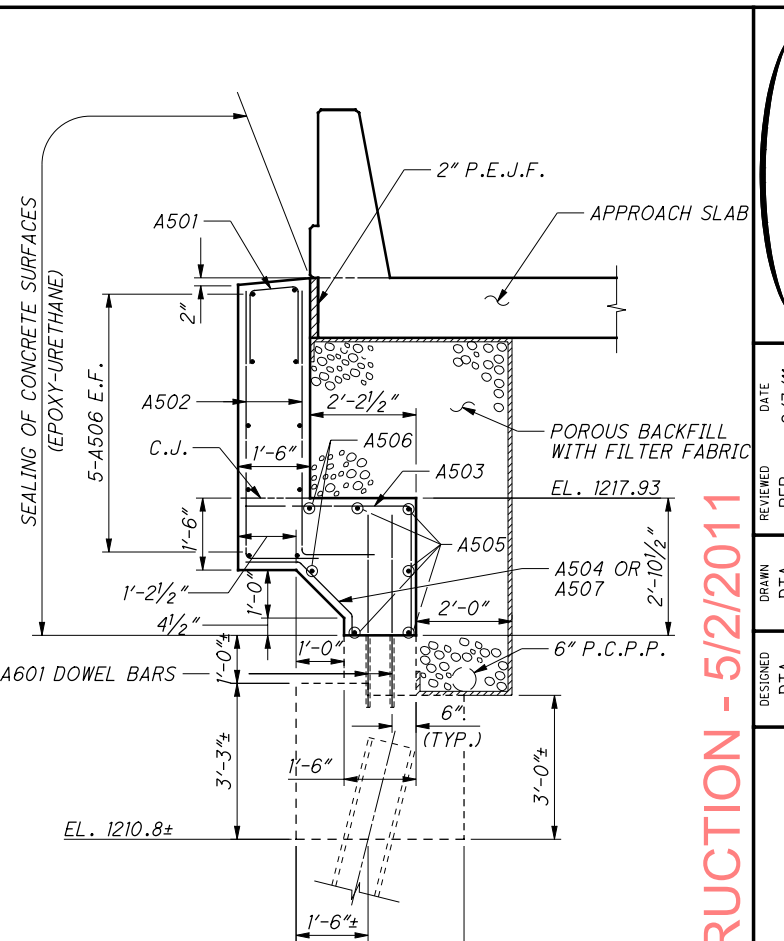
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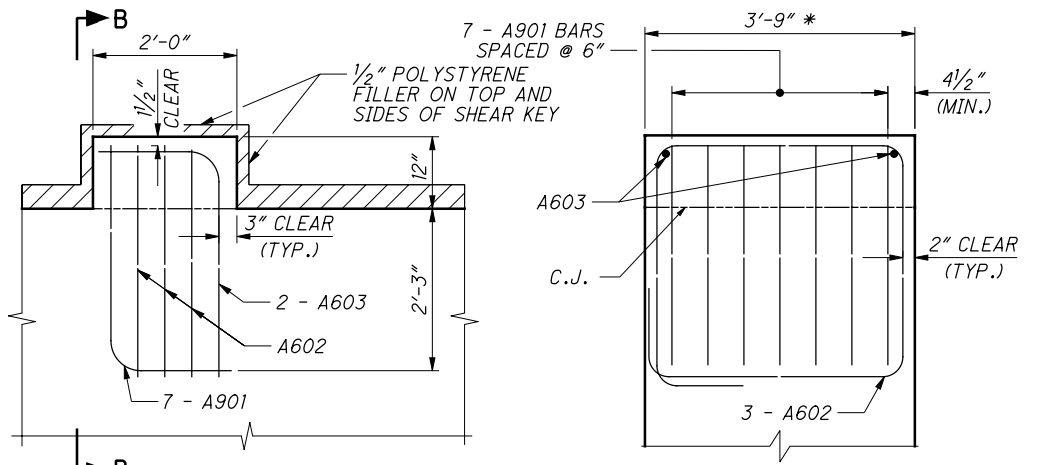
SECTION A-A



WINGWALL 1 ELEVATION



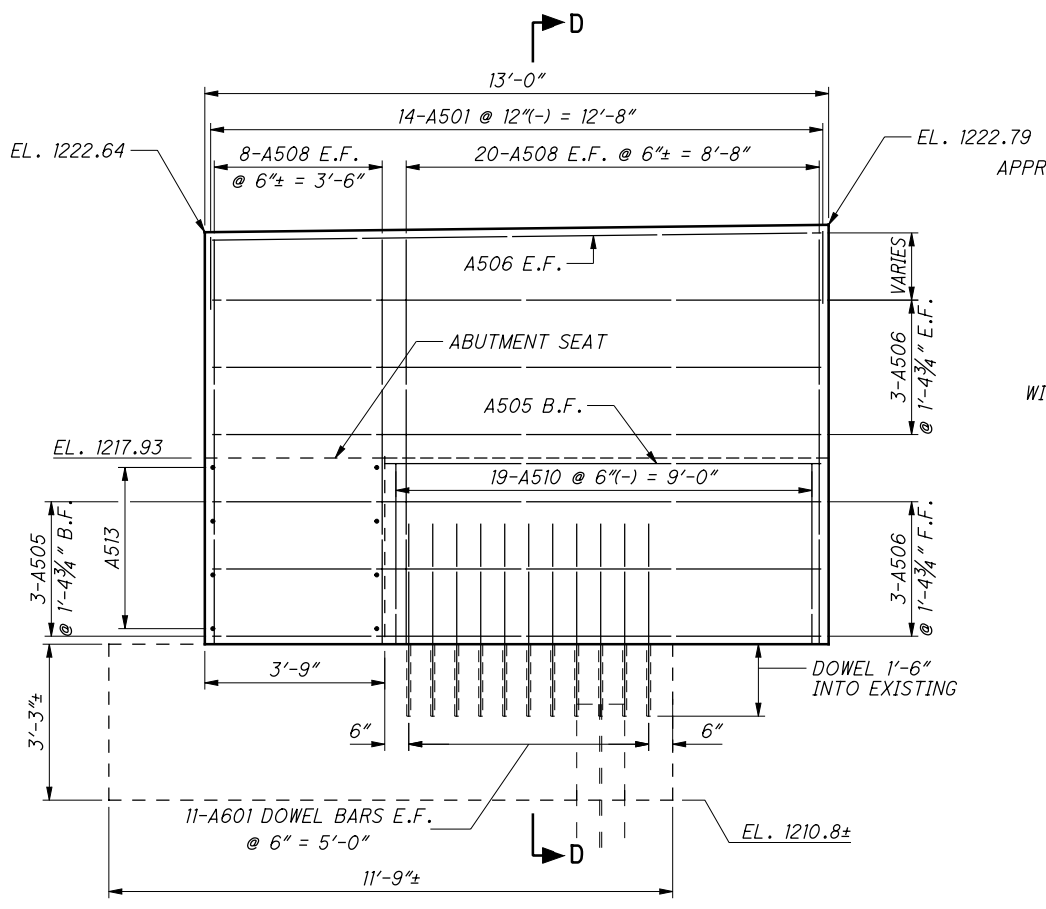
SECTION C-C



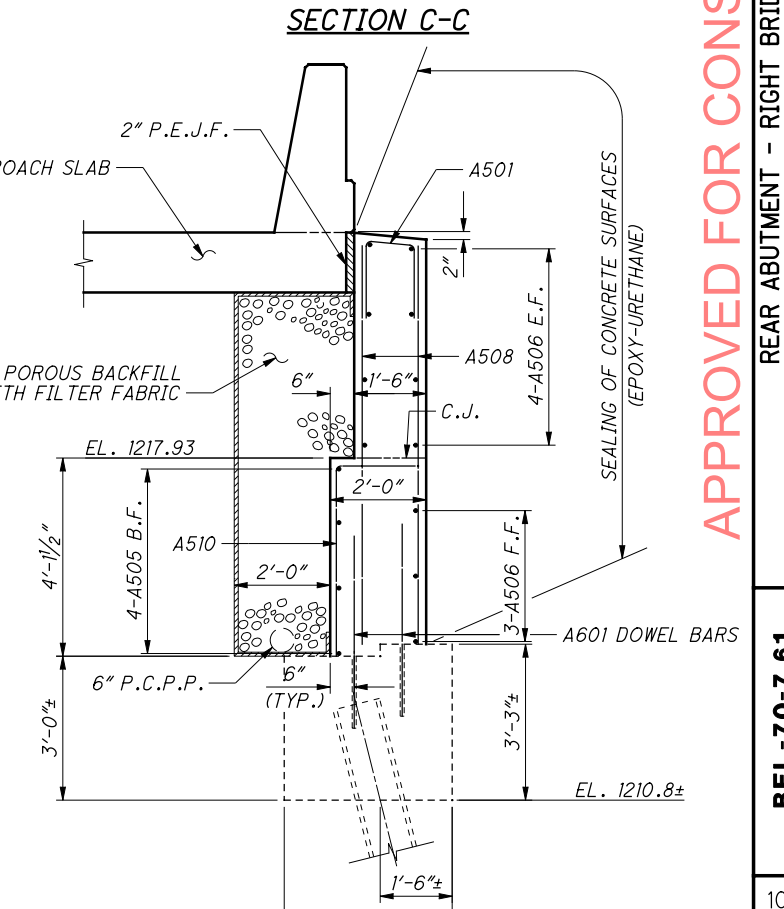
SHEAR KEY DETAIL

VIEW B-B

*-THE SURFACE OF THE BEAM SEAT IN THIS AREA SHALL BE FINISHED WITH A SERRATED TROWEL. SERRATIONS SHALL BE 1/4" DEEP MINIMUM.



WINGWALL 2 ELEVATION



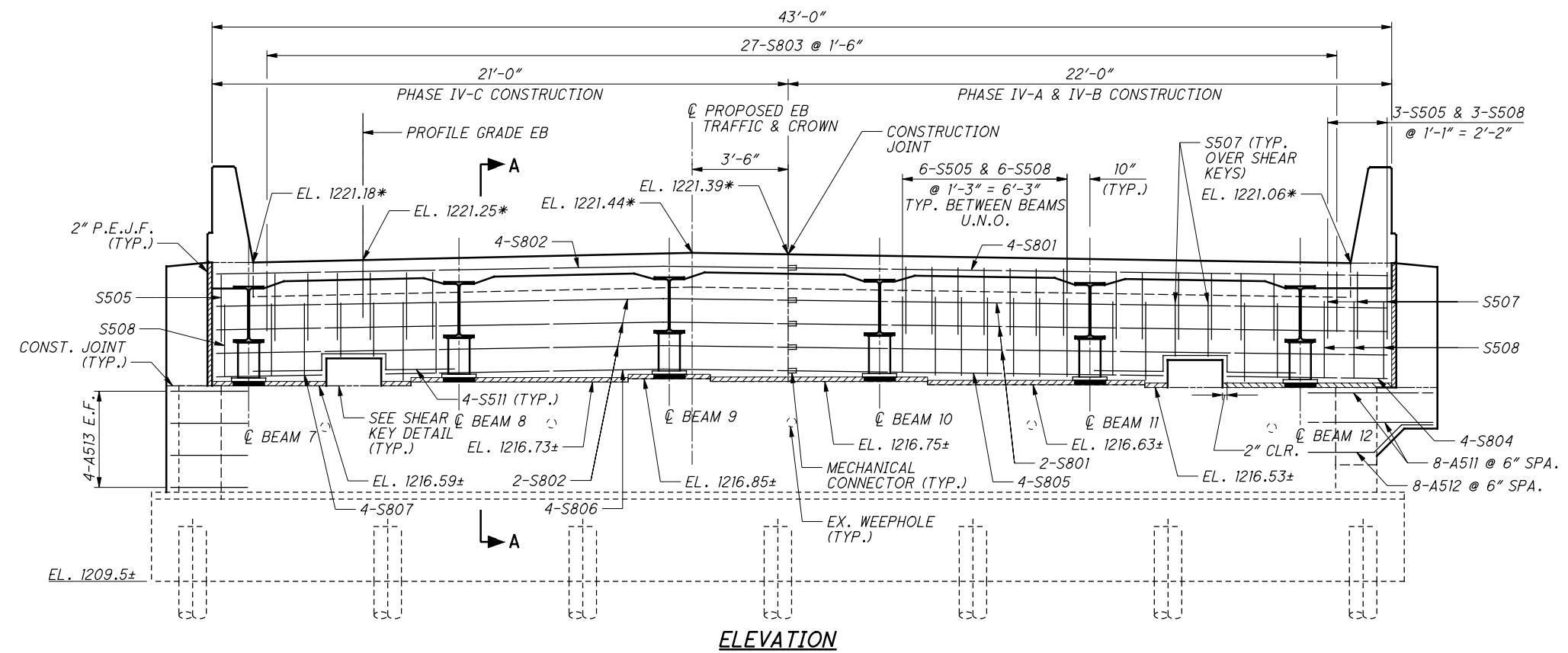
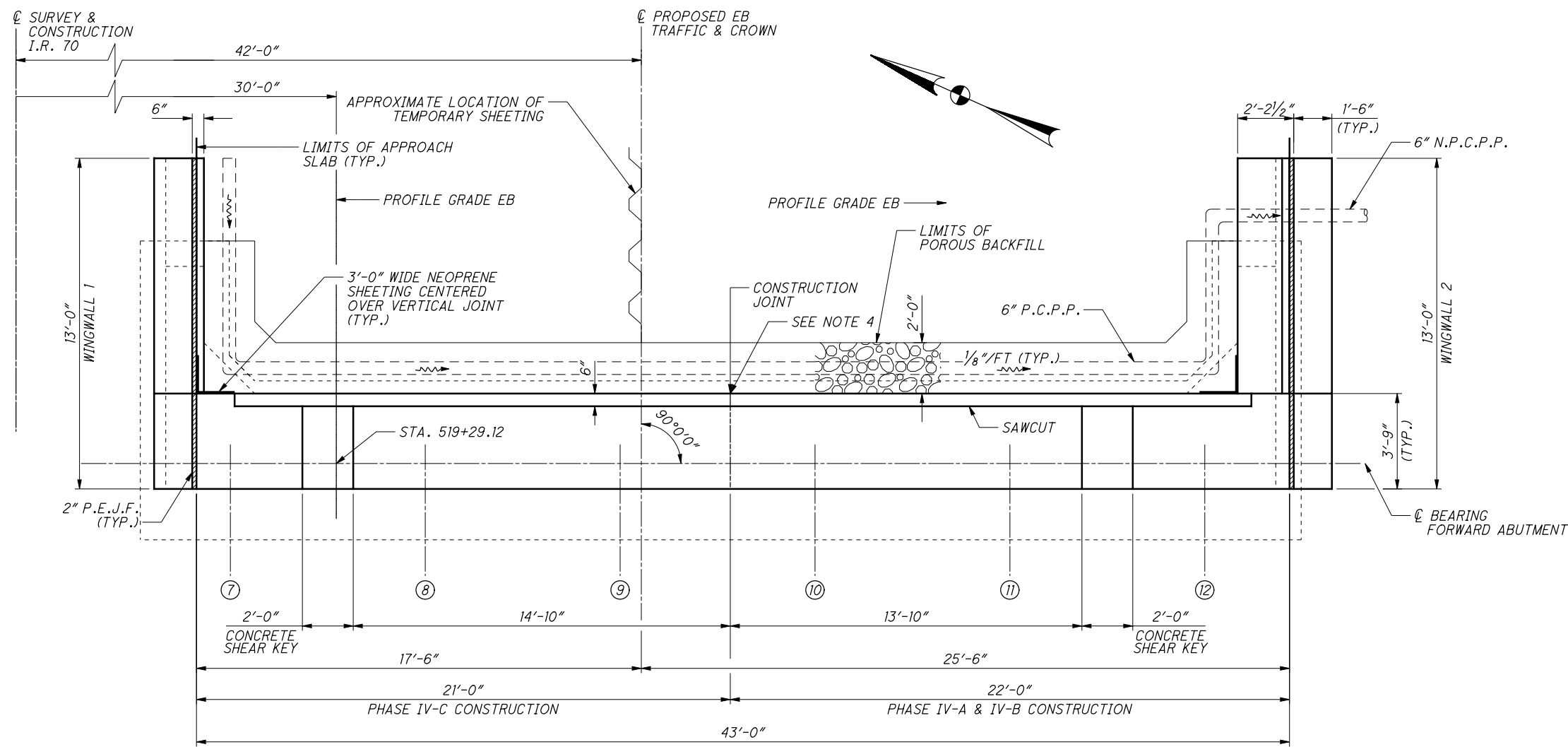
SECTION D-D

- NOTE:**
1. FOR SHEAR KEY LOCATIONS, AND LOCATION OF SECTION A-A, SEE SHEET 9/24.
 2. PLACE TWO CUBIC FEET OF BAGGED NO. 3 AGGREGATE AT EACH WEEPHOLE.

APPROVED FOR CONSTRUCTION - 5/2/2011

		DATE	2/3/11
		REVIEWED	RER
DESIGNED	DTA	CHECKED	RLE
DRAWN	DTA	REVISION	
REAR ABUTMENT - RIGHT BRIDGE BRIDGE NO. BEL-70-0963 L/R I.R. TO OVER S.R. 149		STRUCTURE FILE NUMBER 0702226L/0702250R	
BEL-70-7.61 PID No. 76825			
10/24			
293 307			

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LEGEND:

* - ELEVATION GIVE AT \bar{C} BEARINGS

NOTES:

- MECHANICAL CONNECTORS SHALL BE CAPABLE OF DEVELOPING 125 PERCENT OF THE YIELD STRENGTH OF THE BARS JOINED.
- FOR BEARING DETAILS, SEE SHEET 16/24.
- POROUS BACKFILL, 2'-0" THICK, SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE AND Laterally TO THE END OF THE WINGWALLS TO THE LIMITS SHOWN. PLACE TWO CUBIC FEET OF BAGGED NO. 3 AGGREGATE AT EACH WEEPHOLE.
- VERTICALLY PLACE TYPE 2 WATERPROOFING 3' WIDE CENTERED ON JOINT FROM 1'-6" BELOW EXISTING BRIDGE SEAT TO BOTTOM OF APPROACH SLAB.
- ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE THE HORIZONTAL CONSTRUCTION JOINT BETWEEN THE DIAPHRAGM AND DECK CONCRETE AT THE APPROACH SLAB SEAT.
- FOR ADDITIONAL SEMI-INTEGRAL ABUTMENT DETAILS, SEE ODOT STD. DRAWING SICD-1-96.
- THE LOCATION OF THE MAIN REINFORCEMENT IN THE BEAM SEAT MAY BE ADJUSTED HORIZONTALLY $\pm 1"$ TO ACCOMMODATE THE A901 BARS IN THE SHEAR KEY.
- FOR SECTION A-A, SHEAR KEY DETAILS AND WINGWALL DETAILS, SEE SHEET 12/24.

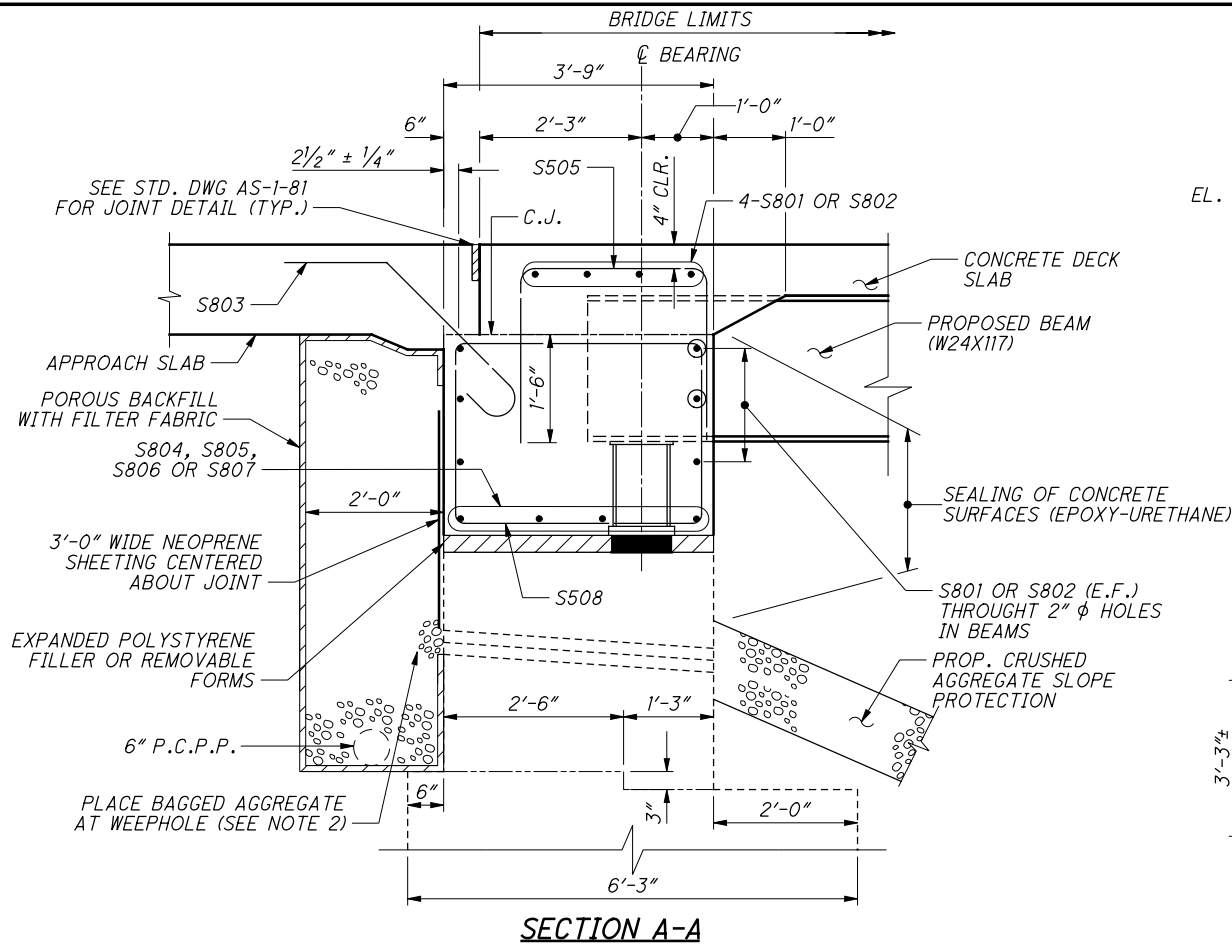
APPROVED FOR CONSTRUCTION - 5/2/2011



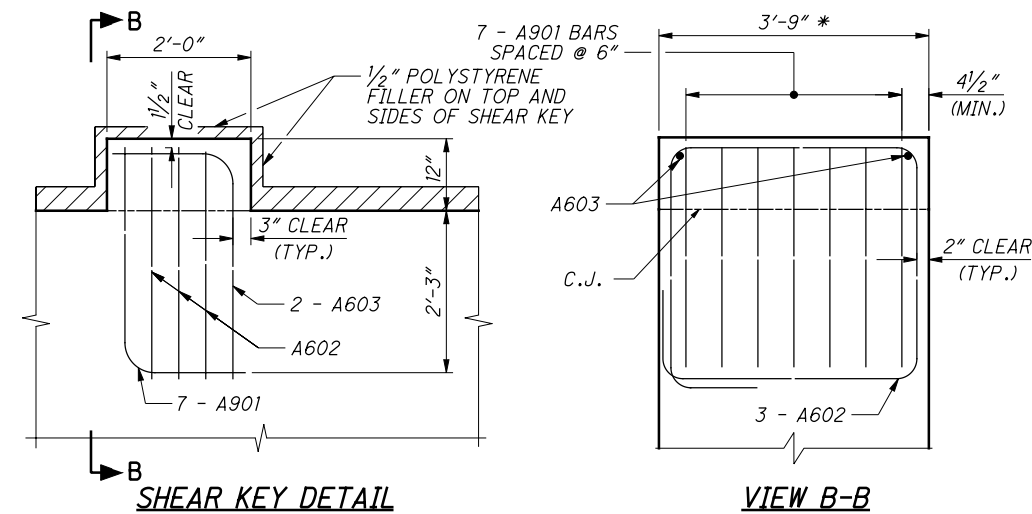
DESIGNED	DTA	CHECKED	RLE
DRAWN	DTA	REVIEWED	RER
DATE	2/3/11	STRUCTURE FILE NUMBER	0702226L/0702250R

FORWARD ABUTMENT - RIGHT BRIDGE
 BRIDGE NO. BEL-70-0963 L/R
 I.R. 70 OVER S.R. 149

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SECTION A-A



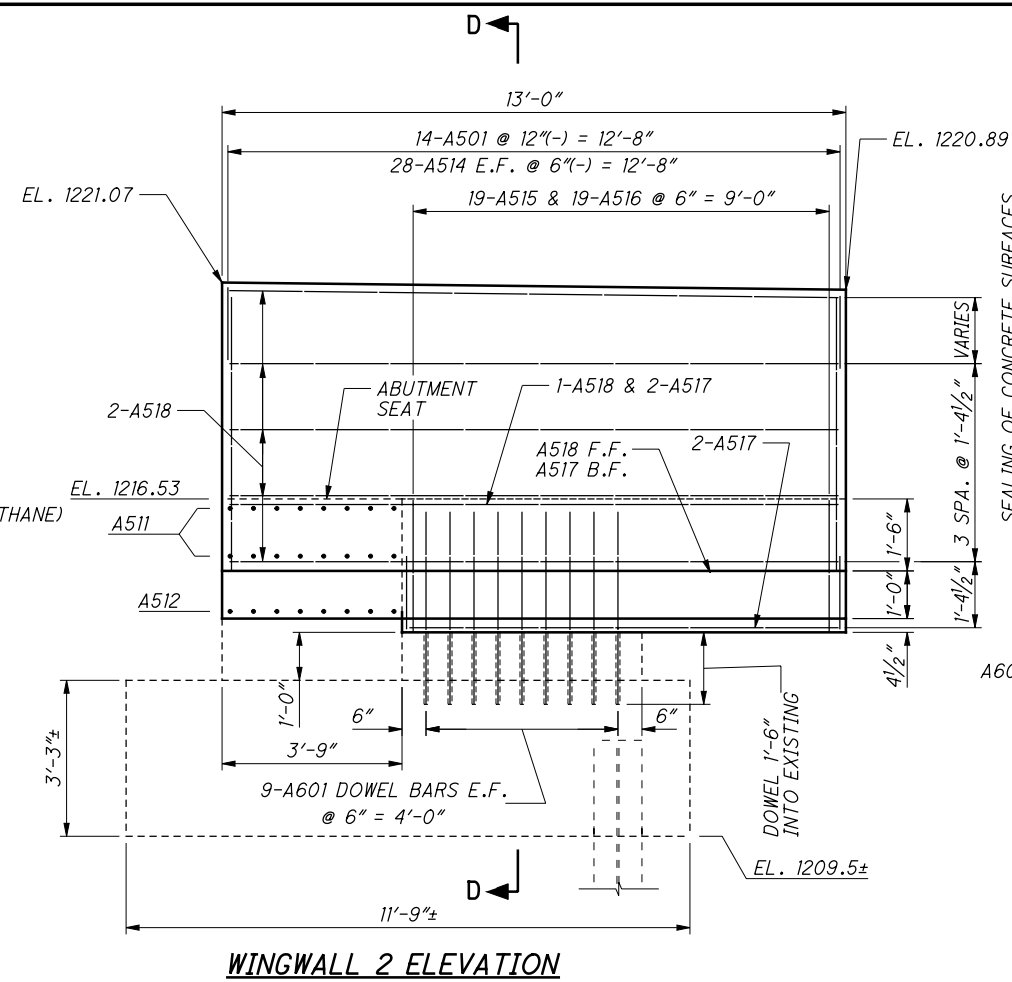
SHEAR KEY DETAIL

VIEW B-B

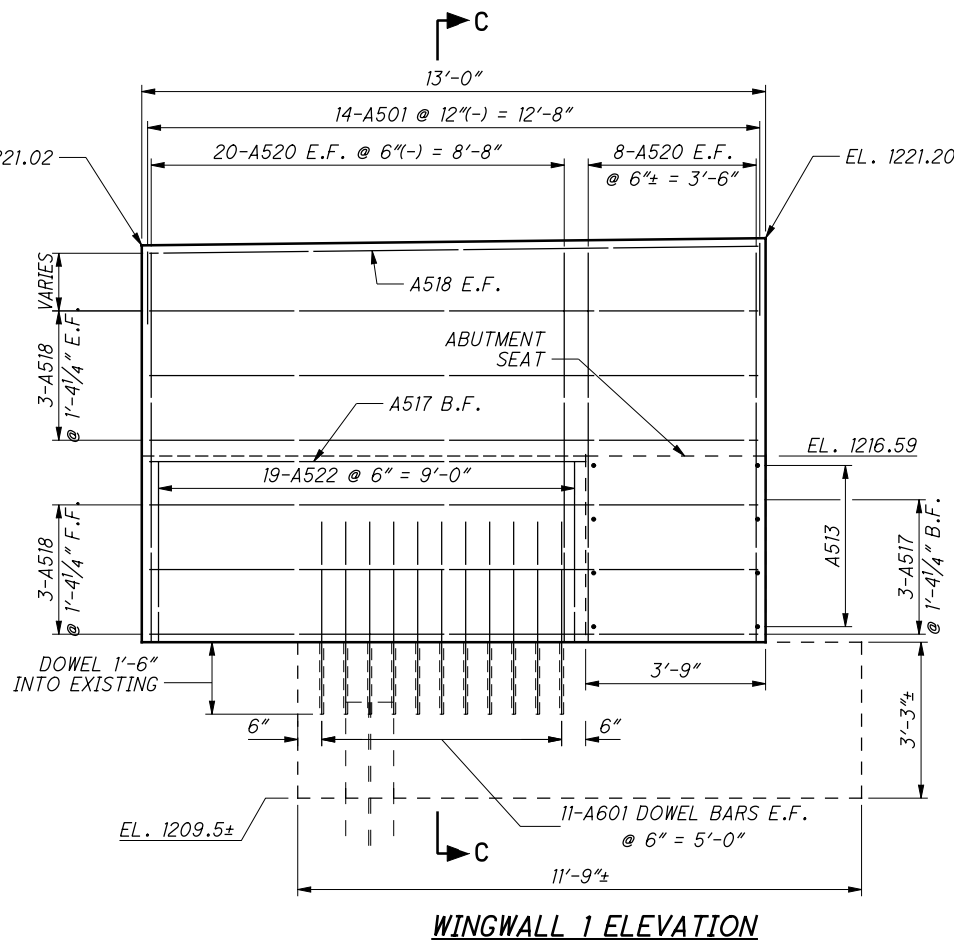
*-THE SURFACE OF THE BEAM SEAT IN THIS AREA SHALL BE FINISHED WITH A SERRATED TROWEL. SERRATIONS SHALL BE 1/4" DEEP MINIMUM.

NOTE:

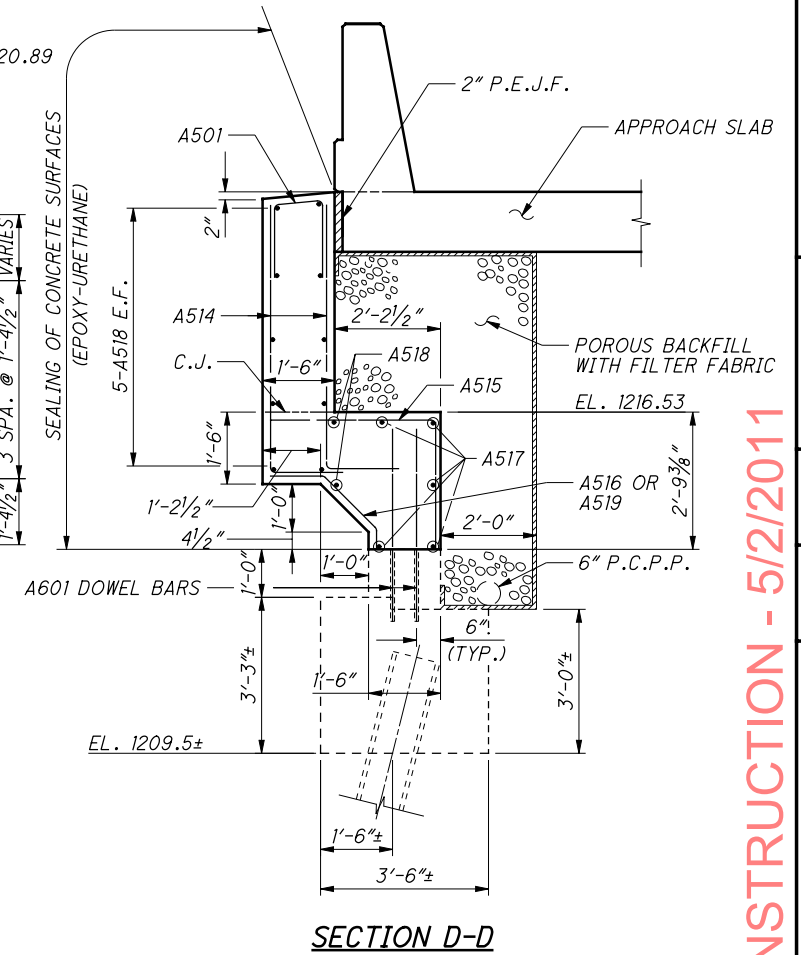
1. FOR SHEAR KEY LOCATIONS, AND LOCATION OF SECTION A-A, SEE SHEET 11/24.
2. PLACE TWO CUBIC FEET OF BAGGED NO. 3 AGGREGATE AT EACH WEEPHOLE.



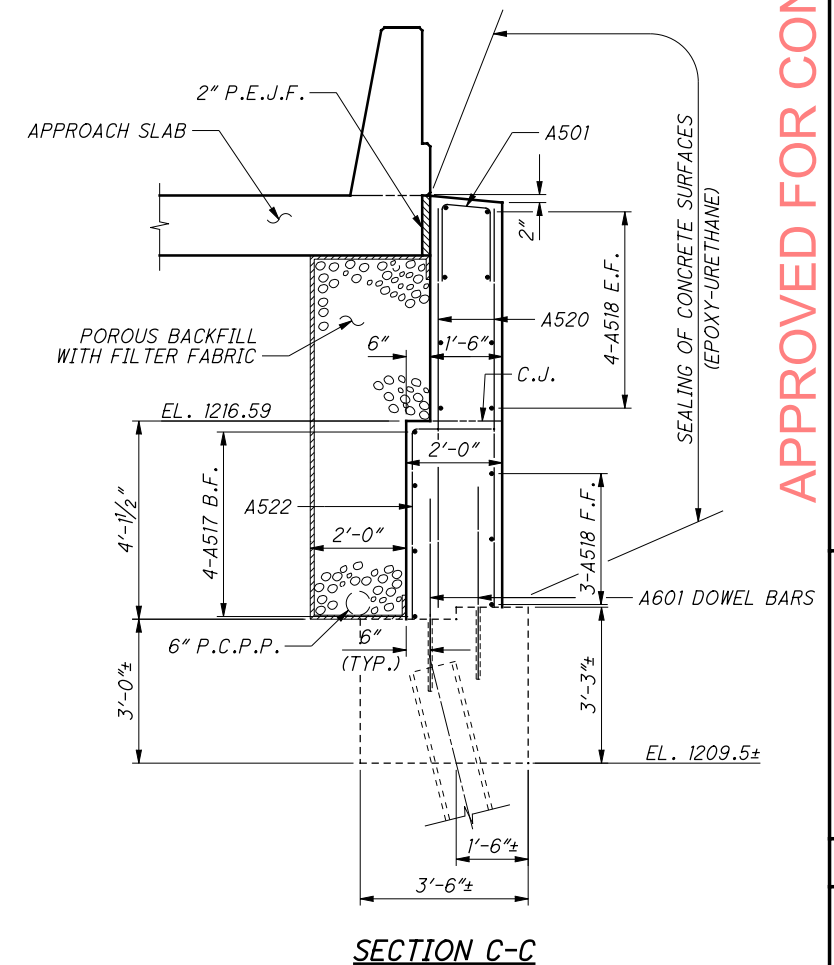
WINGWALL 2 ELEVATION



WINGWALL 1 ELEVATION



SECTION D-D



SECTION C-C

APPROVED FOR CONSTRUCTION - 5/2/2011

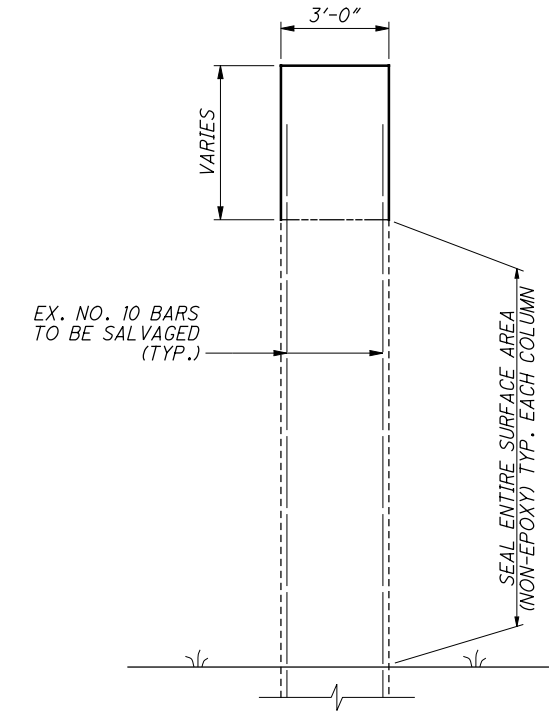
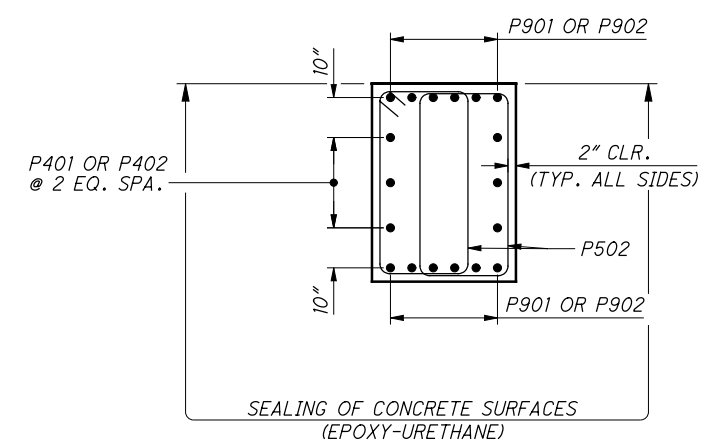
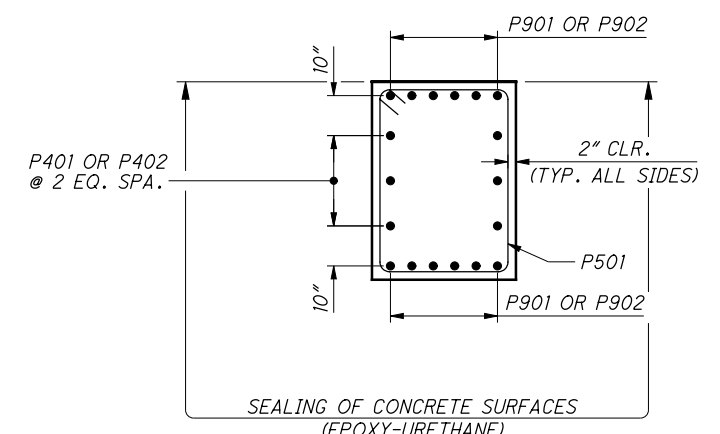
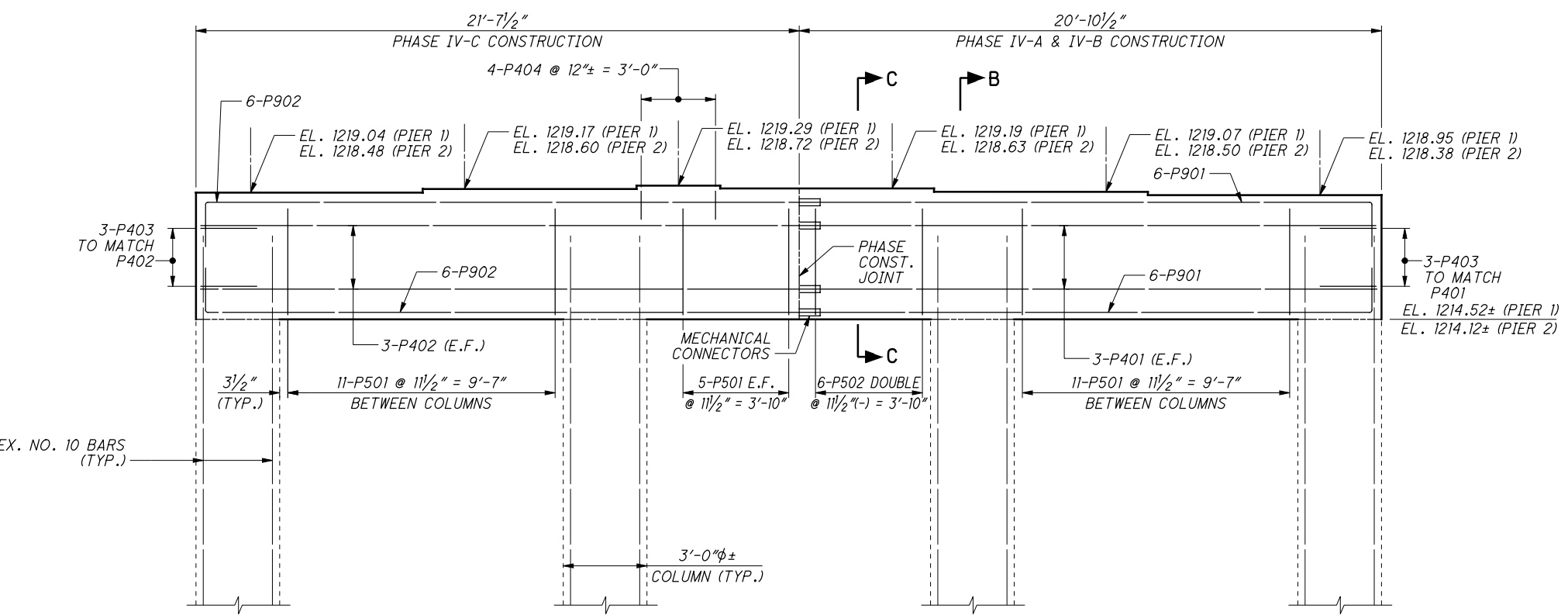
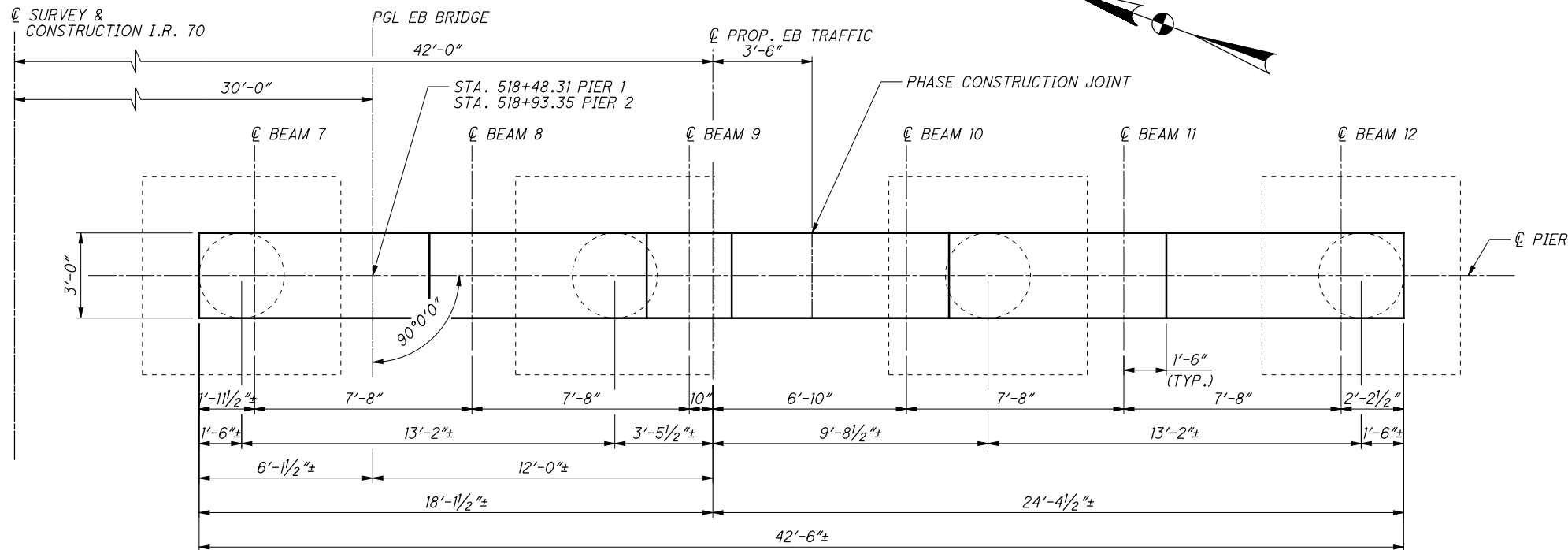
DATE	2/3/11
REVIEWED	RER
DRAWN	DTA
CHECKED	RLE
DESIGNED	DTA
STRUCTURE FILE NUMBER	0702226L/0702250R

FORWARD ABUTMENT - RIGHT BRIDGE

BRIDGE NO. BEL-70-0963 L/R

BEL-70-7.61
PID No. 76825

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LAP LENGTHS	
NO. 4 BARS	2'-0" MIN.
NO. 5 BARS	2'-6" MIN.

NOTES:

- MECHANICAL CONNECTORS SHALL BE CAPABLE OF DEVELOPING 125 PERCENT OF THE YIELD STRENGTH OF THE BARS JOINED.
- FOR BEARING DETAILS, SEE SHEET 16/24.
- FOR PHASE CONSTRUCTION DETAILS, SEE SHEETS 5/24 AND 6/24.

APPROVED FOR CONSTRUCTION - 5/2/2011

E.L. ROBINSON
The Challenge, the Choice
1801 Watermark Drive, Suite 310 - Columbus, Ohio 43215

DATE: 2/3/11
REVIEWED BY: RER
STRUCTURE FILE NUMBER: 0702250R

DESIGNED BY: DTA
CHECKED BY: RLE

DRAWN BY: DTA
REVISED BY:

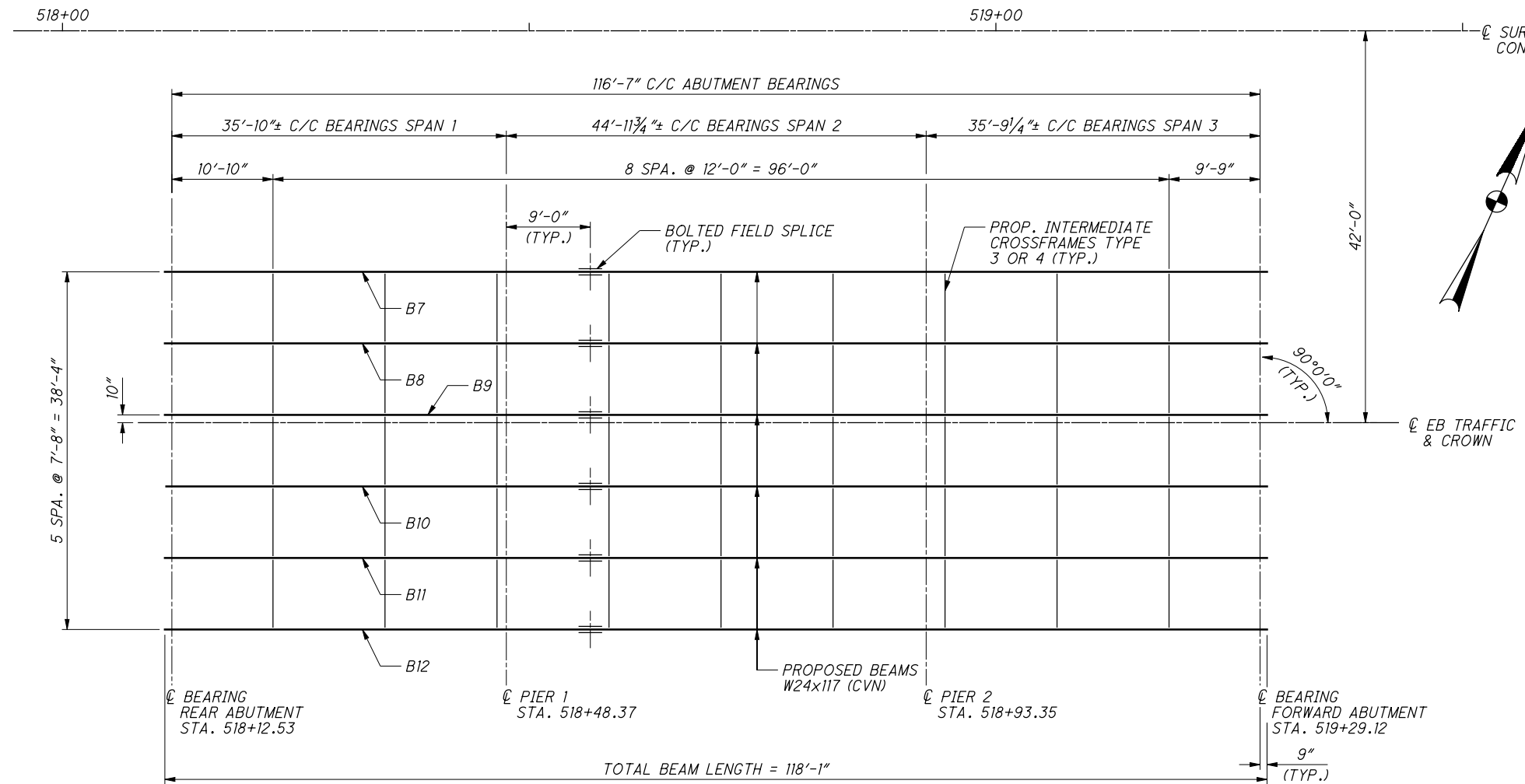
PIER DETAILS - RIGHT BRIDGE
BRIDGE NO. BEL-70-0963 L/R
I.R. 70 OVER S.R. 149

BEL-70-7.61
PID No. 76825

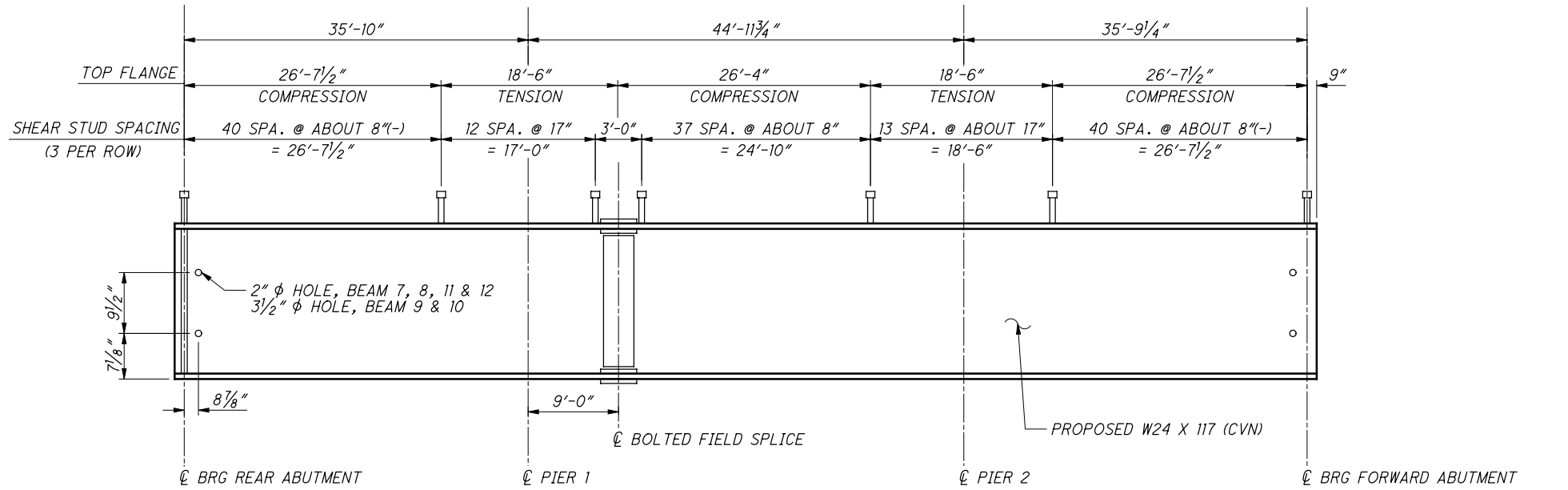
13 / 24

296
307

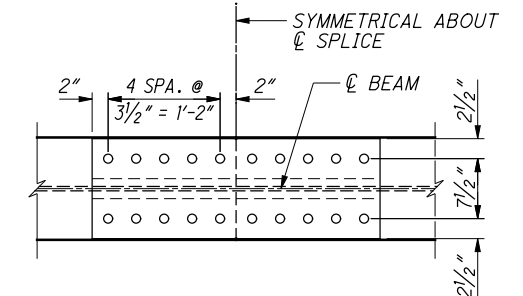
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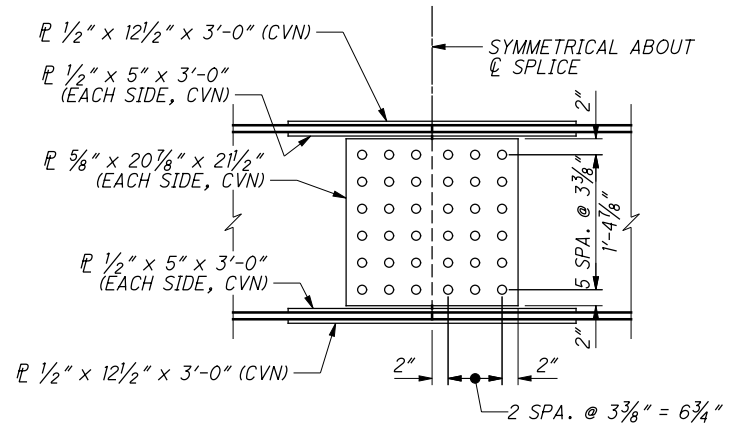
FRAMING PLAN



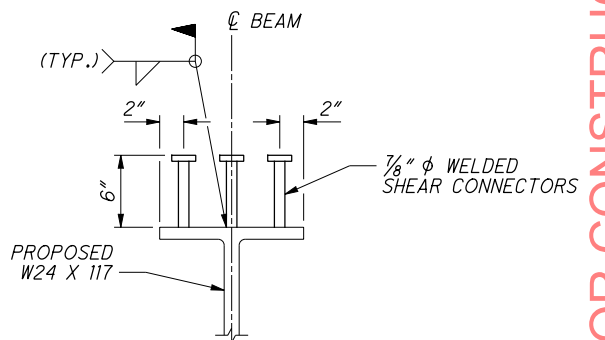
BEAM ELEVATION



TOP & BOTTOM FLANGE SPLICE
(1 OUTSIDE PLATE & 2 INSIDE PLATES REQUIRED)



BEAM WEB SPLICE



SHEAR CONNECTOR DETAIL

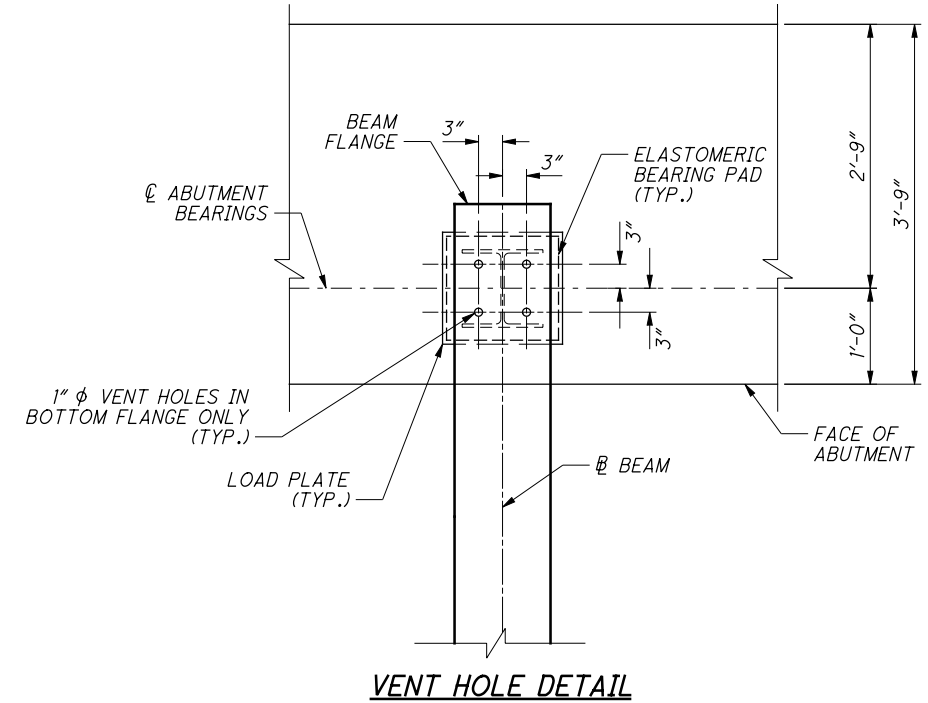
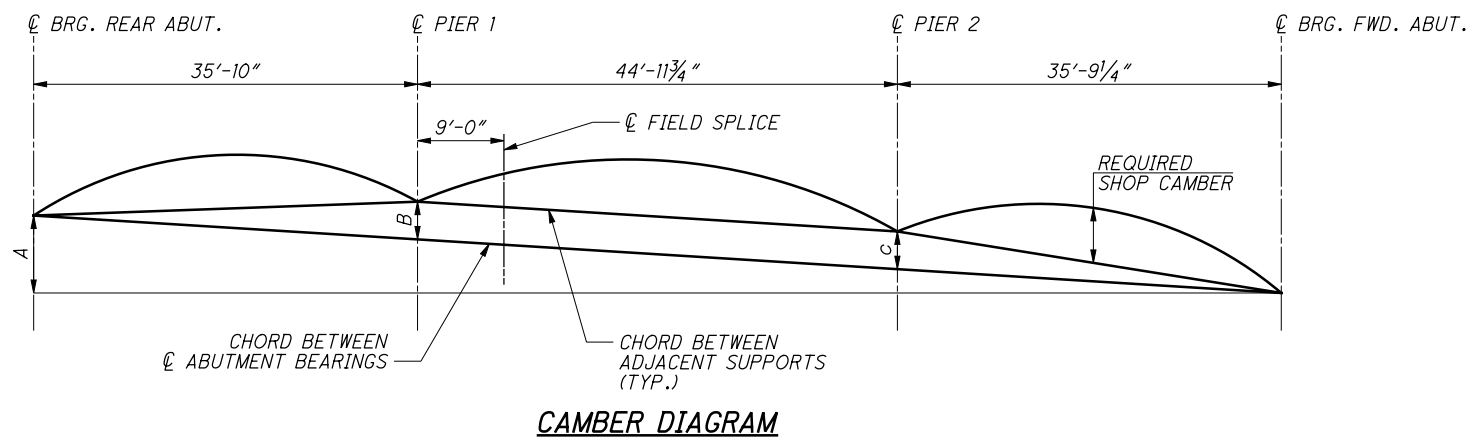
NOTE: SHEAR CONNECTOR PLACEMENT ON FLANGE SPLICE PLATES IS NOT PERMITTED. ADJUST SPACINGS TO AVOID INTERFERENCE WITH SPLICE PLATES AND CONNECTION BOLTS. THE TOTAL NUMBER OF SHEAR CONNECTORS SPECIFIED IN THE BEAM ELEVATION SHALL REMAIN THE SAME WITHIN EACH COMPRESSION OR TENSION ZONE.

NOTES:

1. PROPOSED STEEL BEAMS AND CROSS-FRAMES ARE A709W, 50 KSI, WEATHERING STEEL.
2. WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE NO MORE THAN 2" LONG, AND BE AT LEAST 1#4" FOR THICKNESSES UP TO 3#4" OR 5#16" FOR GREATER THAN 3#4" THICK.
3. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
4. SPACING OF WELDED SHEAR CONNECTORS MAY BE ALTERED AT FIELD SPLICE LOCATIONS TO AVOID INTERFERENCE WITH FLANGE SPLICE BOLTS. THE TOTAL NUMBER OF SHEAR CONNECTORS SPECIFIED IN THE BEAM ELEVATION SHALL REMAIN THE SAME WITHIN EACH TENSION OR COMPRESSION ZONE.
5. FOR ADDITIONAL DETAILS, SEE STD. DWG. GSD-1-96.
6. 1 FIELD SPLICE WAS ASSUMED IN THE ESTIMATED QUANTITIES FOR ITEM 513 STRUCTURAL STEEL MEMBERS, LEVEL 3. A SPLICE MAY BE ADDED AT THE CONTRACTOR'S OPTION AT NO ADDITIONAL COST TO THE STATE.

APPROVED FOR CONSTRUCTION - 5/2/2011

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CAMBER DIAGRAM DIMENSIONS						
	B7	B8	B9	B10	B11	B12
DIM A	1'-5 5/16"	1'-5 5/16"	1'-5 5/16"	1'-5 5/16"	1'-5 5/16"	1'-5 5/16"
DIM B	5/16"	5/16"	5/16"	5/16"	5/16"	5/16"
DIM C	5/16"	5/16"	5/16"	5/16"	5/16"	5/16"

DEFLECTION AND CAMBER TABLE										
	SPAN 1			SPAN 2				SPAN 3		
	1/4	1/2	3/4	SPLICE	1/4	1/2	3/4	1/4	1/2	3/4
DEFLECTION DUE TO WEIGHT OF STEEL	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"
DEFLECTION DUE TO REMAINING DEAD LOAD	1/8"	1/8"	1/16"	1/16"	1/8"	3/16"	1/8"	1/16"	1/8"	1/8"
ADJUSTMENT FOR VERTICAL CURVE	0"	1/16"	0"	1/16"	1/16"	1/16"	1/16"	0"	1/16"	0"
REQUIRED SHOP CAMBER	1/8"	3/16"	1/16"	1/8"	3/16"	1/4"	3/16"	1/16"	3/16"	1/8"

NOTES:

- FOR ADDITIONAL NOTES AND BEAM DETAILS, SEE SHEET 14/24.
- DEFLECTIONS AND CAMBER GIVEN TO THE NEAREST 1/16".
- NEGATIVE VALUES FOR DEFLECTIONS INDICATE DEFLECTIONS UPWARD.
- FOR BEARING DETAILS, SEE SHEET 16/24.

APPROVED FOR CONSTRUCTION - 5/2/2011

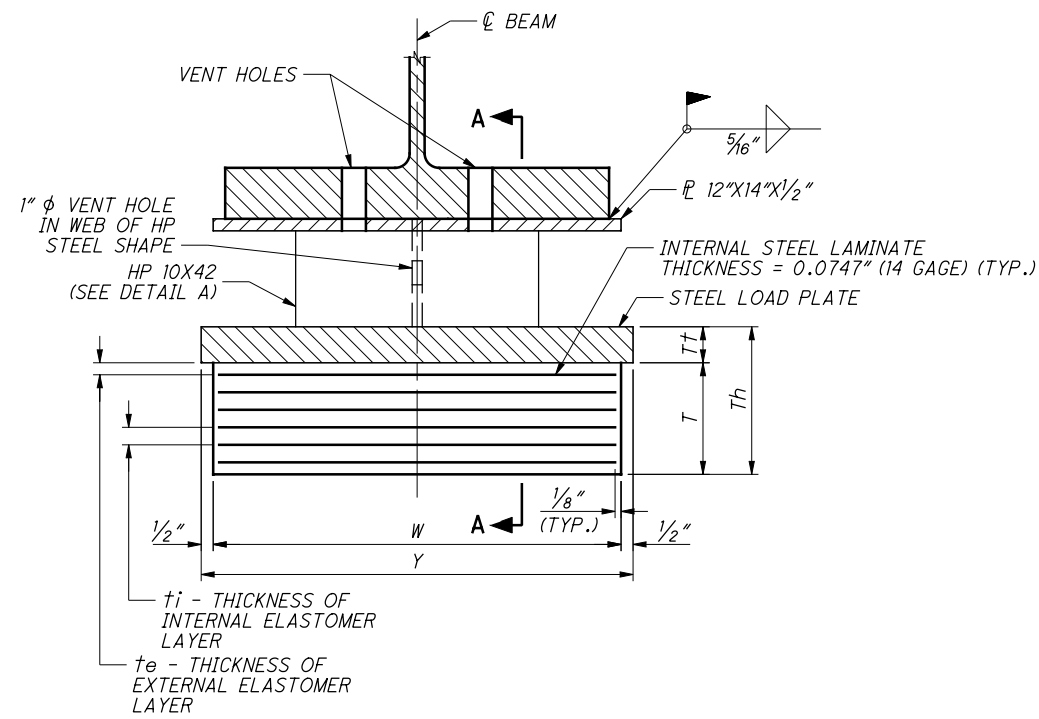


DESIGNED	DTA	CHECKED	RLE
DRAWN	DTA	REVIEWED	RER
DATE	2/3/11	STRUCTURE FILE NUMBER	0702226L/0702250R

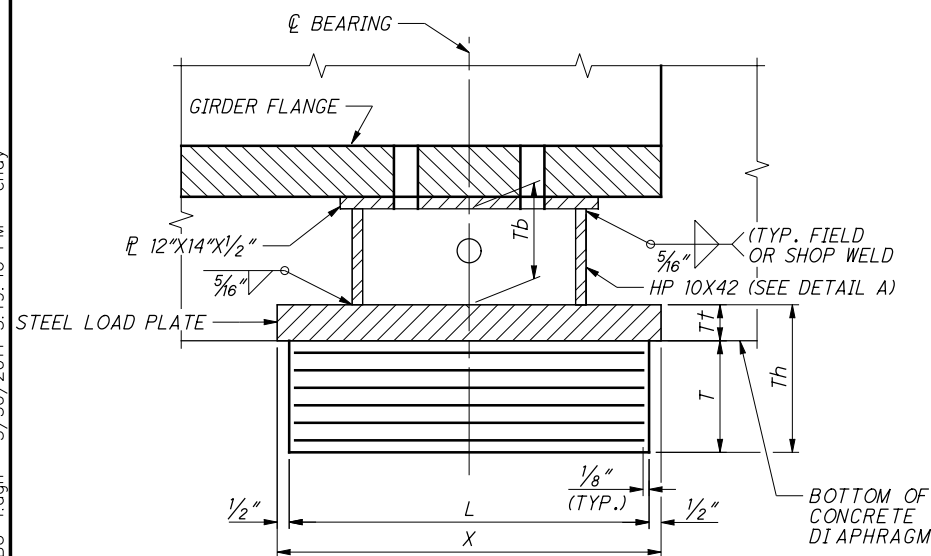
DEFLECTION AND CAMBER - RIGHT BRIDGE
 BRIDGE NO. BEL-70-0963 L/R
 I.R. TO OVER S.R. 149

BEL-70-7.61
 PID No. 76825

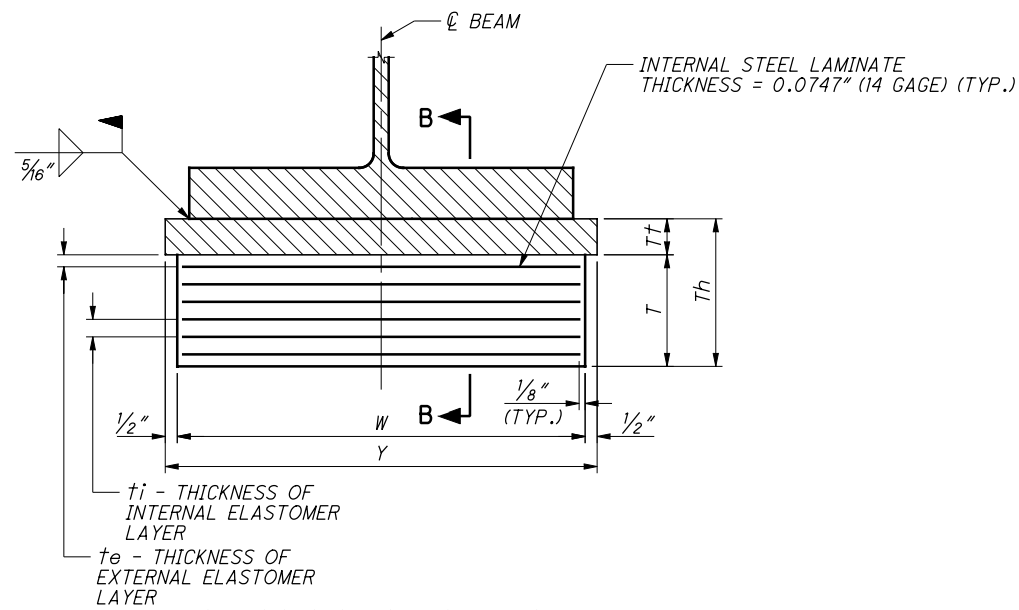
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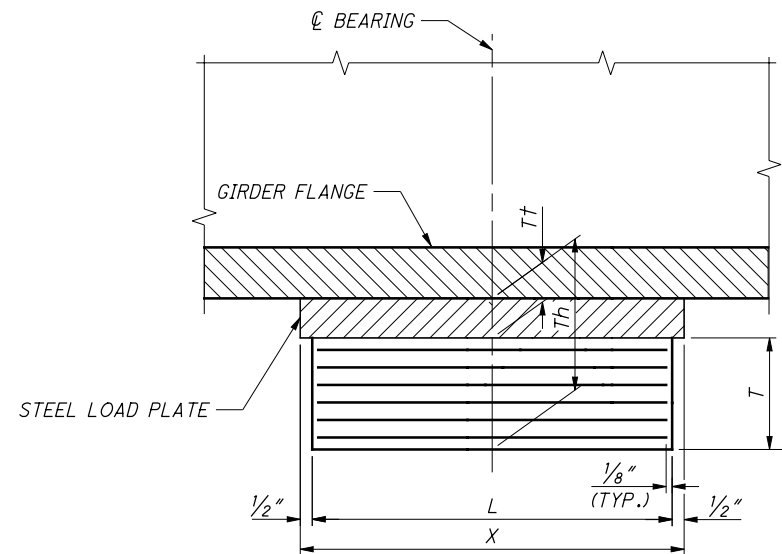
LAMINATED ELASTOMERIC EXPANSION BEARING AT ABUTMENTS



SECTION A-A



LAMINATED ELASTOMERIC EXPANSION BEARING AT PIERS



SECTION B-B

HP 10X42 HEIGHTS		
	BEAM	T_b (IN.)
REAR ABUTMENT	7	17.964
	8	17.808
	9	17.564
	10	17.300
	11	17.676
	12	16.828

HP 10X42 HEIGHTS		
	BEAM	T_b (IN.)
FORWARD ABUTMENT	7	16.488
	8	16.284
	9	16.292
	10	16.292
	11	16.296
	12	16.072

NOTES:

1. THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION I, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
2. THE STEEL LOAD PLATE, TOP PLATE AND HP SECTION SHALL BE GALVANIZED ASTM A709 GRADE 50 STEEL.
3. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. WELDING: CONTROL WELDING SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300°F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.
4. BEARING REPOSITIONING: IF THE STEEL IS ERECTED AT AN AMBIENT TEMPERATURE HIGHER THAN 80°F OR LOWER THAN 40°F AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/6 OF THE BEARING HEIGHT AT 60°F ± 10°F, RAISE THE BEAMS OR GIRDERS TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60°F ± 10°F.
5. TOTAL DESIGN LOAD FOR BEARINGS EQUALS THE SUM OF THE DEAD LOADS AND LIVE LOADS TABULATED IN THE BEARING TABLE.
6. FOR VENT HOLE DETAIL, SEE SHEET 14/24.

BEARING DATA

LOCATION	TYPE	NO. REQ'D.	DL (KIP)	LL (KIP) W/O IMPACT	MAX DESIGN LOAD (DL+LL)	L (IN.)	W (IN.)	t_i (IN.)	t_e (IN.)	n NO. OF t_i 's	N NO. INTERNAL LAMINATES	T (IN.)	STEEL LOAD PLATE			
													X (IN.)	Y (IN.)	T_t (IN.)	Th (IN.)
REAR ABUT.	EXP	6	55	41	96	10	14	0.375	0.25	3	4	1.924	11	15	1.5	3.424
FWD. ABUT.	EXP	6	55	41	96	10	14	0.375	0.25	3	4	1.924	11	15	1.5	3.424
PIER 1	EXP	6	72	48	120	11	14	0.375	0.25	3	4	1.924	12	15	1.5	3.424
PIER 2	EXP	6	72	48	120	11	14	0.375	0.25	3	4	1.924	12	15	1.5	3.424

APPROVED FOR CONSTRUCTION - 5/2/2011

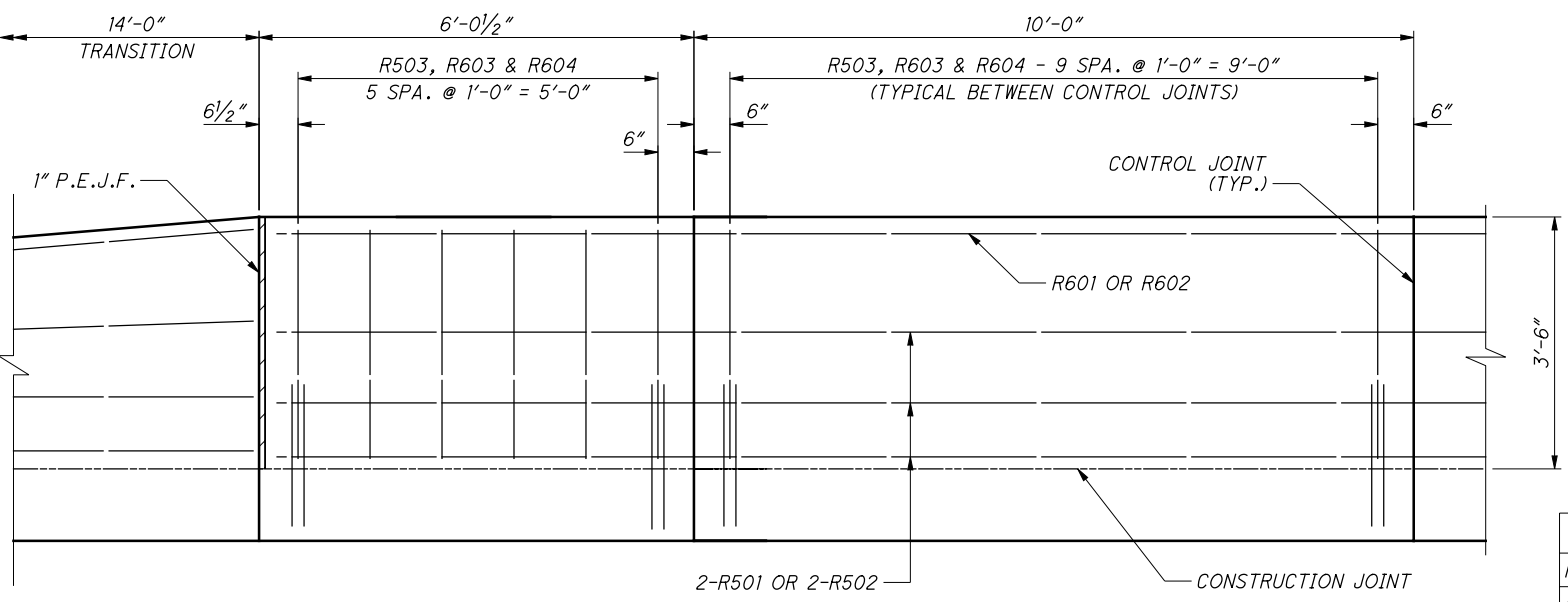
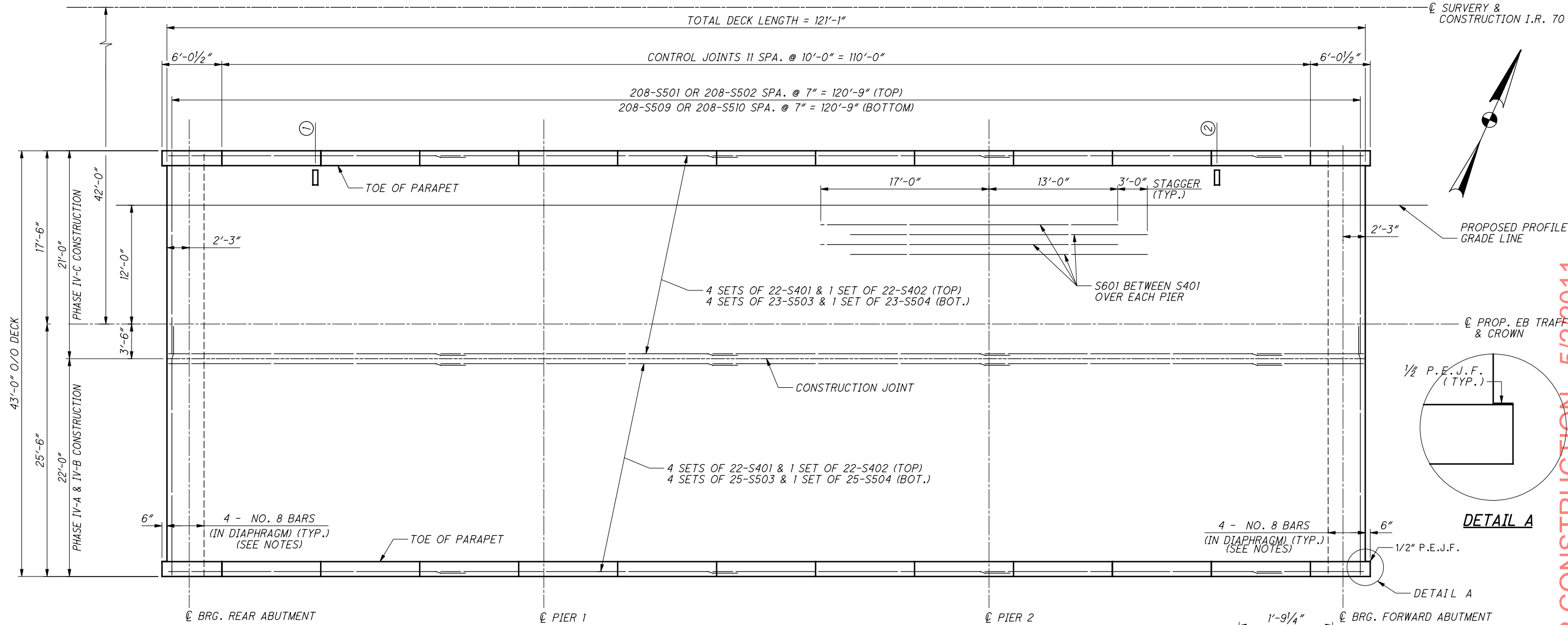


DESIGNED	DTA	CHECKED	RL
DRAWN	DTA	REVISED	
REVIEWED	RER	STRUCTURE FILE NUMBER	0702250
DATE	2/3/11		

BEARING DETAILS - RIGHT BRIDGE
 BRIDGE NO. BEL-70-0963 L/R
 I.R. TO OVER S.R. 149

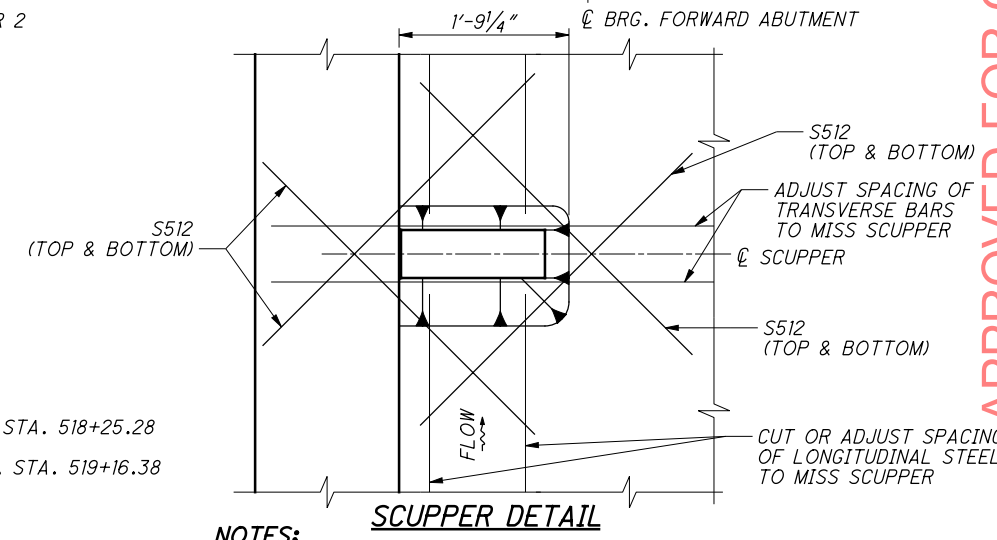
BEL-70-7.61
 PID No. 76825

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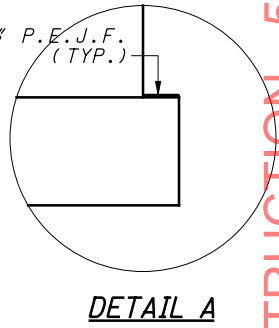


- LEGEND:**
- ① SCUPPER NO. 1, STA. 518+25.28
 - ② SCUPPER NO. 2, STA. 519+16.38

LAP LENGTHS	
NO. 4 BARS	2'-0" MIN.
NO. 5 BARS (IN DECK)	3'-3" MIN.
NO. 5 BARS (IN PARAPET)	3'-6" MIN.
NO. 6 BARS	4'-2" MIN.



- NOTES:**
1. FOR TRANSVERSE SECTION AND ADDITIONAL NOTES, SEE SHEET 18/24.
 2. FOR ABUTMENT DETAILS, INCLUDING NO. 8 BARS IN DIAPHRAGM, SEE SHEETS 9/24 AND 12/24.
 3. FOR PARAPET DETAIL, SEE SHEET 18/24.
 4. FOR SCREED ELEVATIONS, TOP OF HAUNCH, AND FINAL DECK SURFACE ELEVATIONS, SEE SHEET 20/24.
 5. FOR PHASE CONSTRUCTION DETAILS, SEE SHEETS 5/24 AND 6/24.
 6. FOR PARAPET CONTROL JOINT DETAILS, SEE ODOT STD. DRAWING SBR-1-99.
 7. DRIP GROOVES SHALL TERMINATE 2'-0" FROM THE FACE OF ABUTMENT DIAPHRAGM.



SURVEY & CONSTRUCTION I.R. 70

APPROVED FOR CONSTRUCTION - 5/22/2011



DATE	2/3/11
REVIEWED	RER
STRUCTURE FILE NUMBER	0702250R
DRAWN	BMG
CHECKED	RLE
DESIGNED	BMG

DECK PLAN - RIGHT BRIDGE
BRIDGE NO. BEL-70-0963 L/R
I.R. 70 OVER S.R. 149

BEL-70-7.61
PID No. 76825

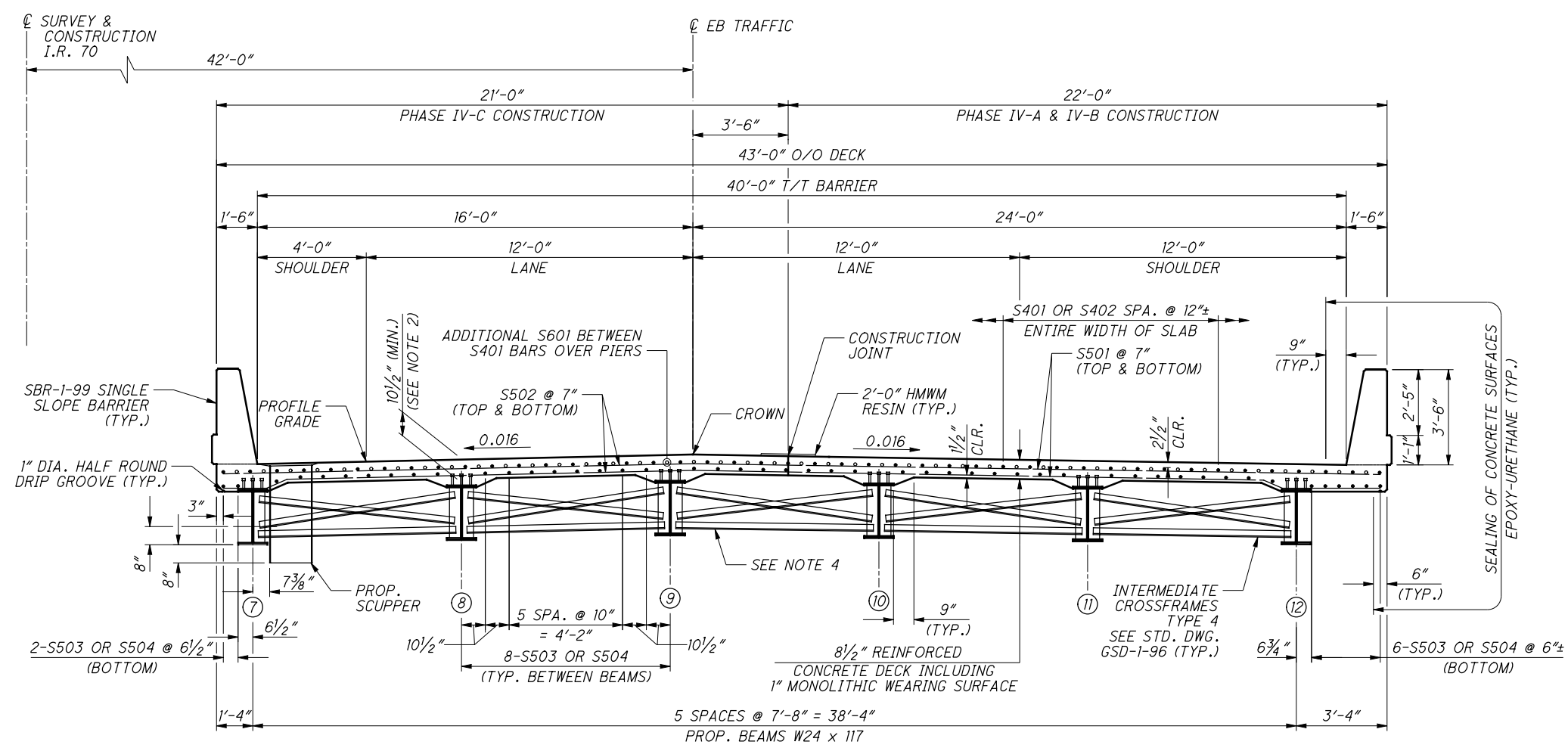
APPROVED FOR CONSTRUCTION - 5/2/2011

TRANSVERSE SECTION - RIGHT BRIDGE
BRIDGE NO. BEL-70-0963 L/R
I.R. 70 OVER S.R. 149

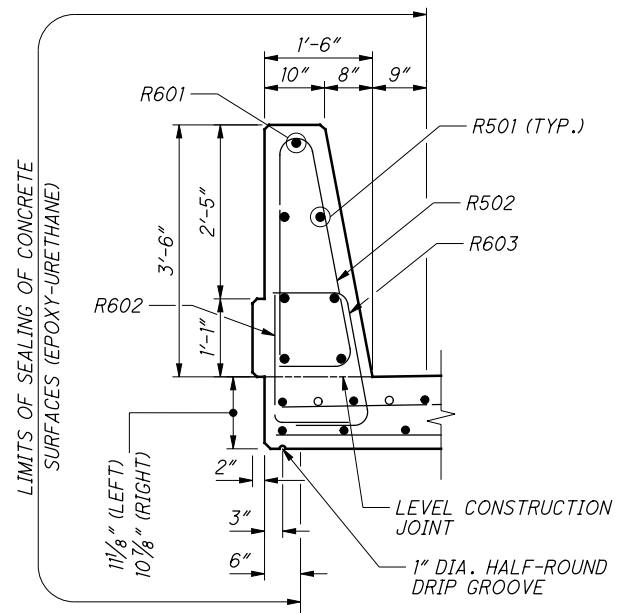
BEL-70-7.61
PID No. 76825

18 / 24

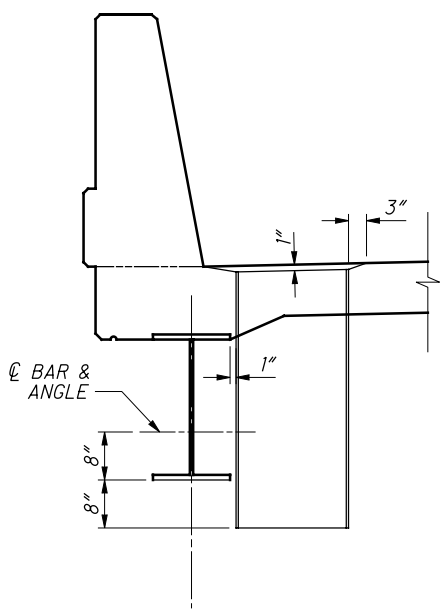
301
307



REQUIRED LAP LENGTHS	
NO. 4 BARS	2'-0" MIN.
NO. 5 BARS (IN DECK)	3'-3" MIN.
NO. 5 BARS (IN PARAPET)	3'-6" MIN.
NO. 6 BARS	4'-2" MIN.



PARAPET DETAIL
(LEFT PARAPET SHOWN, RIGHT PARAPET SIMILAR)



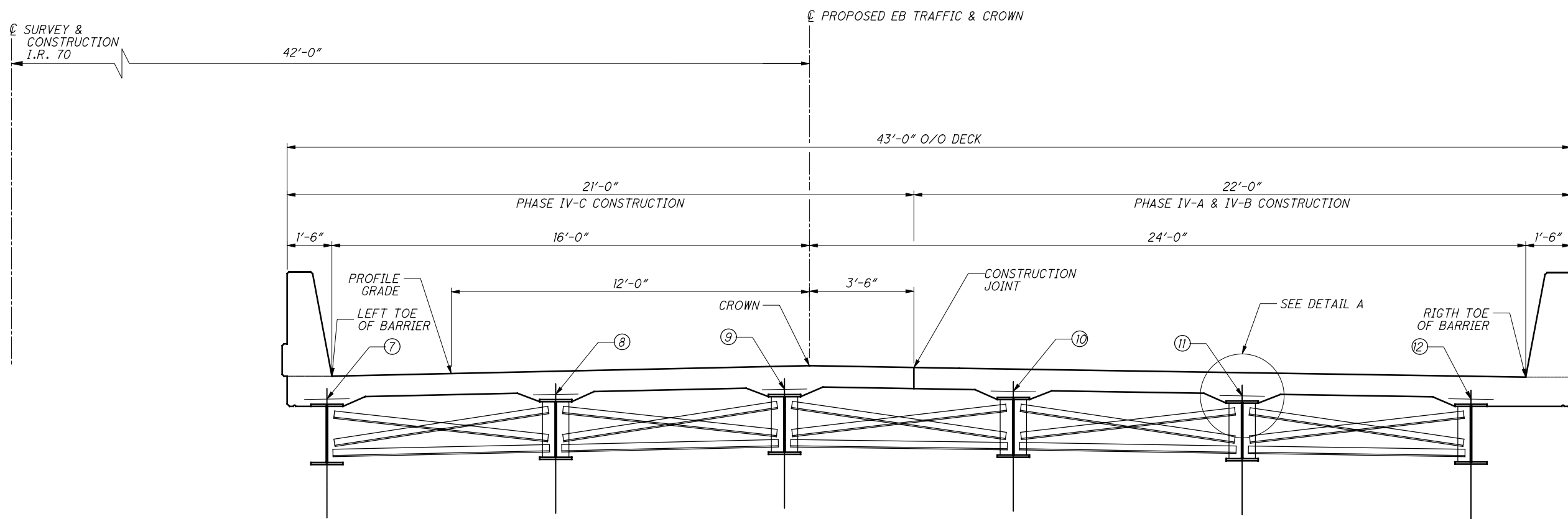
SCUPPER DETAIL

NOTES:

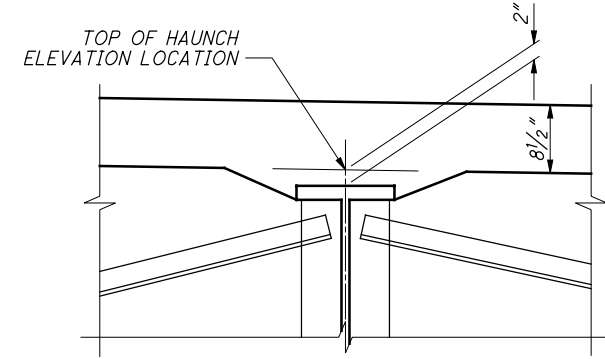
- PROPOSED STEEL BEAMS AND CROSS-FRAMES ARE ASTM A709 GRADE 50W, YIELD STRENGTH 50,000 PSI.
- DECK SLAB CONCRETE QUANTITY:
THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH BEAM HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF 2 INCHES AND A CONSTANT HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE OF 9 INCHES. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. THE ALLOWABLE TOLERANCE FOR THE HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE IS ±3 INCHES.
THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE 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 511.24.
- FOR PARAPET REINFORCING DETAILS SEE SHEET 17/24.
- CROSS FRAMES IN THIS BAY SHOULD NOT BE PERMANENTLY ATTACHED UNTIL THE DECK AND PARAPETS LOCATED IN THE ADJACENT PHASES HAVE BEEN PLACED.
- FOR SLAB PLAN, SEE SHEET 17/24.
- FOR SCREED ELEVATIONS, TOP OF HAUNCH & FINAL DECK SURFACE ELEVATIONS SEE SHEET 20/24.
- FOR REINFORCEMENT SCHEDULE, SEE SHEET 24/24.
- THE HMWM SEAL AT THE CLOSURE POUR JOINTS SHALL BE PAID FOR WITH ITEM 898, QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK), AS PER PLAN.
- FOR ADDITIONAL SCUPPER DETAILS SEE STD. DWG. GSD-1-96 SHEET 3/3.

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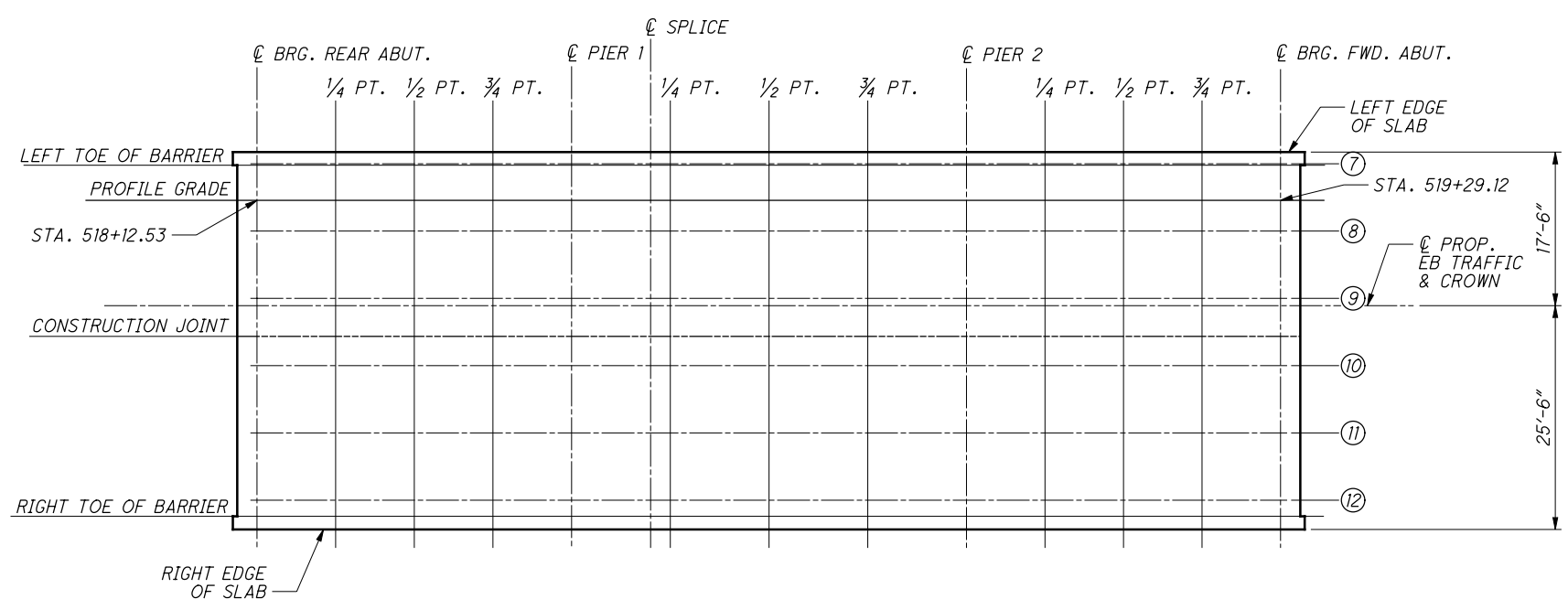
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SCREED LINE & TOP OF HAUNCH LOCATIONS



DETAIL A



DECK ELEVATION PLAN - RIGHT BRIDGE

NOTES:

1. FOR SCREED, TOP OF HAUNCH AND FINAL DECK ELEVATIONS, SEE SHEET [20/24].
2. FOR ADDITIONAL NOTES, SEE SHEET [20/24].

APPROVED FOR CONSTRUCTION - 5/2/2011



DESIGNED	DTA	CHECKED	RLE
DRAWN	DTA	REVIEWED	RER
DATE	2/3/11	STRUCTURE FILE NUMBER	0702226L/0702250R

SUPERSTRUCTURE ELEVATION DETAILS - RIGHT BRIDGE
BRIDGE NO. BEL-70-0963 L/R
I.R. TO OVER S.R. 149

BEL-70-7.61
PID No. 76825

TOP OF HAUNCH ELEVATION TABLE (LEFT BRIDGE)

LOCATION	BEAM 7		BEAM 8		BEAM 9		BEAM 10		BEAM 11		BEAM 12		
	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	
SPAN 1	0.00L	518+12.53	1221.94	518+12.53	1222.06	518+12.53	1222.18	518+12.53	1222.09	518+12.53	1221.96	518+12.53	1221.84
	0.25L	518+21.49	1221.84	518+21.49	1221.97	518+21.49	1222.09	518+21.49	1221.99	518+21.49	1221.87	518+21.49	1221.75
	0.50L	518+30.45	1221.74	518+30.45	1221.86	518+30.45	1221.99	518+30.45	1221.89	518+30.45	1221.77	518+30.45	1221.65
	0.75L	518+39.41	1221.63	518+39.41	1221.75	518+39.41	1221.87	518+39.41	1221.78	518+39.41	1221.66	518+39.41	1221.53
SPAN 2	0.00L	518+48.37	1221.52	518+48.37	1221.64	518+48.37	1221.76	518+48.37	1221.67	518+48.37	1221.54	518+48.37	1221.42
	SPLICE	518+57.37	1221.41	518+57.37	1221.54	518+57.37	1221.66	518+57.37	1221.56	518+57.37	1221.44	518+57.37	1221.32
	0.25L	518+59.62	1221.39	518+59.62	1221.51	518+59.62	1221.63	518+59.62	1221.54	518+59.62	1221.41	518+59.62	1221.29
	0.50L	518+70.86	1221.25	518+70.86	1221.38	518+70.86	1221.50	518+70.86	1221.40	518+70.86	1221.28	518+70.86	1221.16
	0.75L	518+82.11	1221.10	518+82.11	1221.23	518+82.11	1221.35	518+82.11	1221.25	518+82.11	1221.13	518+82.11	1221.01
SPAN 3	0.00L	518+93.35	1220.95	518+93.35	1221.07	518+93.35	1221.20	518+93.35	1221.10	518+93.35	1220.98	518+93.35	1220.86
	0.25L	519+02.29	1220.84	519+02.29	1220.96	519+02.29	1221.08	519+02.29	1220.99	519+02.29	1220.87	519+02.29	1220.74
	0.50L	519+11.24	1220.73	519+11.24	1220.85	519+11.24	1220.97	519+11.24	1220.88	519+11.24	1220.75	519+11.24	1220.63
	0.75L	519+20.18	1220.60	519+20.18	1220.73	519+20.18	1220.85	519+20.18	1220.75	519+20.18	1220.63	519+20.18	1220.51
	0.00L	519+29.12	1220.47	519+29.12	1220.60	519+29.12	1220.72	519+29.12	1220.62	519+29.12	1220.50	519+29.12	1220.38

SCREED ELEVATION TABLE (LEFT BRIDGE)

LOCATION	TOE OF LEFT BARRIER		PROFILE GRADE		CROWN		CONSTRUCTION JOINT		TOE OF RIGHT BARRIER		
	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	
SPAN 1	0.00L	518+12.53	1222.65	518+12.53	1222.71	518+12.53	1222.91	518+12.53	1222.85	518+12.53	1222.52
	0.25L	518+21.49	1222.56	518+21.49	1222.62	518+21.49	1222.81	518+21.49	1222.76	518+21.49	1222.43
	0.50L	518+30.45	1222.45	518+30.45	1222.52	518+30.45	1222.71	518+30.45	1222.65	518+30.45	1222.32
	0.75L	518+39.41	1222.34	518+39.41	1222.40	518+39.41	1222.60	518+39.41	1222.54	518+39.41	1222.21
SPAN 2	0.00L	518+48.37	1222.23	518+48.37	1222.29	518+48.37	1222.48	518+48.37	1222.43	518+48.37	1222.10
	SPLICE	518+57.37	1222.12	518+57.37	1222.19	518+57.37	1222.38	518+57.37	1222.32	518+57.37	1222.00
	0.25L	518+59.62	1222.10	518+59.62	1222.16	518+59.62	1222.35	518+59.62	1222.30	518+59.62	1221.97
	0.50L	518+70.86	1221.96	518+70.86	1222.03	518+70.86	1222.22	518+70.86	1222.16	518+70.86	1221.84
	0.75L	518+82.11	1221.82	518+82.11	1221.88	518+82.11	1222.07	518+82.11	1222.02	518+82.11	1221.69
SPAN 3	0.00L	518+93.35	1221.66	518+93.35	1221.73	518+93.35	1221.92	518+93.35	1221.86	518+93.35	1221.53
	0.25L	519+02.29	1221.55	519+02.29	1221.61	519+02.29	1221.81	519+02.29	1221.75	519+02.29	1221.42
	0.50L	519+11.24	1221.44	519+11.24	1221.50	519+11.24	1221.69	519+11.24	1221.64	519+11.24	1221.31
	0.75L	519+20.18	1221.32	519+20.18	1221.38	519+20.18	1221.57	519+20.18	1221.52	519+20.18	1221.19
	0.00L	519+29.12	1221.18	519+29.12	1221.25	519+29.12	1221.44	519+29.12	1221.38	519+29.12	1221.06

FINAL DECK SURFACE ELEVATION TABLE (LEFT BRIDGE)

LOCATION	BEAM 7		TOE OF LEFT BARRIER		PROFILE GRADE		BEAM 8		BEAM 9		CROWN		CONSTRUCTION JOINT		BEAM 10		BEAM 11		BEAM 12		TOE OF RIGHT BARRIER		
	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	
SPAN 1	0.00L	518+12.53	1222.65	518+12.53	1222.65	518+12.53	1222.71	518+12.53	1222.77	518+12.53	1222.89	518+12.53	1222.91	518+12.53	1222.85	518+12.53	1222.80	518+12.53	1222.67	518+12.53	1222.55	518+12.53	1222.52
	0.25L	518+21.49	1222.54	518+21.49	1222.55	518+21.49	1222.61	518+21.49	1222.67	518+21.49	1222.79	518+21.49	1222.80	518+21.49	1222.75	518+21.49	1222.69	518+21.49	1222.57	518+21.49	1222.45	518+21.49	1222.42
	0.50L	518+30.45	1222.44	518+30.45	1222.44	518+30.45	1222.51	518+30.45	1222.56	518+30.45	1222.68	518+30.45	1222.70	518+30.45	1222.64	518+30.45	1222.59	518+30.45	1222.47	518+30.45	1222.34	518+30.45	1222.31
	0.75L	518+39.41	1222.33	518+39.41	1222.34	518+39.41	1222.40	518+39.41	1222.46	518+39.41	1222.58	518+39.41	1222.59	518+39.41	1222.54	518+39.41	1222.48	518+39.41	1222.36	518+39.41	1222.24	518+39.41	1222.21
SPAN 2	0.00L	518+48.37	1222.22	518+48.37	1222.23	518+48.37	1222.29	518+48.37	1222.35	518+48.37	1222.47	518+48.37	1222.48	518+48.37	1222.43	518+48.37	1222.37	518+48.37	1222.25	518+48.37	1222.13	518+48.37	1222.10
	SPLICE	518+57.37	1222.11	518+57.37	1222.12	518+57.37	1222.18	518+57.37	1222.24	518+57.37	1222.36	518+57.37	1222.37	518+57.37	1222.32	518+57.37	1222.26	518+57.37	1222.14	518+57.37	1222.02	518+57.37	1221.99
	0.25L	518+59.62	1222.09	518+59.62	1222.09	518+59.62	1222.15	518+59.62	1222.21	518+59.62	1222.33	518+59.62	1222.35	518+59.62	1222.29	518+59.62	1222.24	518+59.62	1222.11	518+59.62	1221.99	518+59.62	1221.96
	0.50L	518+70.86	1221.95	518+70.86	1221.95	518+70.86	1222.01	518+70.86	1222.07	518+70.86	1222.19	518+70.86	1222.21	518+70.86	1222.15	518+70.86	1222.10	518+70.86	1221.97	518+70.86	1221.85	518+70.86	1221.82
	0.75L	518+82.11	1221.80	518+82.11	1221.81	518+82.11	1221.87	518+82.11	1221.93	518+82.11	1222.05	518+82.11	1222.06	518+82.11	1222.01	518+82.11	1221.95	518+82.11	1221.83	518+82.11	1221.71	518+82.11	1221.68
SPAN 3	0.00L	518+93.35	1221.66	518+93.35	1221.66	518+93.35	1221.73	518+93.35	1221.78	518+93.35	1221.90	518+93.35	1221.92	518+93.35	1221.86	518+93.35	1221.81	518+93.35	1221.69	518+93.35	1221.56	518+93.35	1221.53
	0.25L	519+02.29	1221.54	519+02.29	1221.54	519+02.29	1221.61	519+02.29	1221.66	519+02.29	1221.79	519+02.29	1221.80	519+02.29	1221.74	519+02.29	1221.69	519+02.29	1221.57	519+02.29	1221.45	519+02.29	1221.42
	0.50L	519+11.24	1221.42	519+11.24	1221.43	519+11.24	1221.49	519+11.24	1221.55	519+11.24	1221.67	519+11.24	1221.68	519+11.24	1221.63	519+11.24	1221.57	519+11.24	1221.45	519+11.24	1221.33	519+11.24	1221.30
	0.75L	519+20.18	1221.30	519+20.18	1221.31	519+20.18	1221.37	519+20.18	1221.43	519+20.18	1221.55	519+20.18	1221.56	519+20.18	1221.51	519+20.18	1221.45	519+20.18	1221.33	519+20.18	1221.21	519+20.18	1221.18
	0.00L	519+29.12	1221.18	519+29.12	1221.18	519+29.12	1221.25	519+29.12	1221.30	519+29.12	1221.43	519+29.12	1221.44	519+29.12	1221.38	519+29.12	1221.33	519+29.12	1221.21	519+29.12	1221.09	519+29.12	1221.06

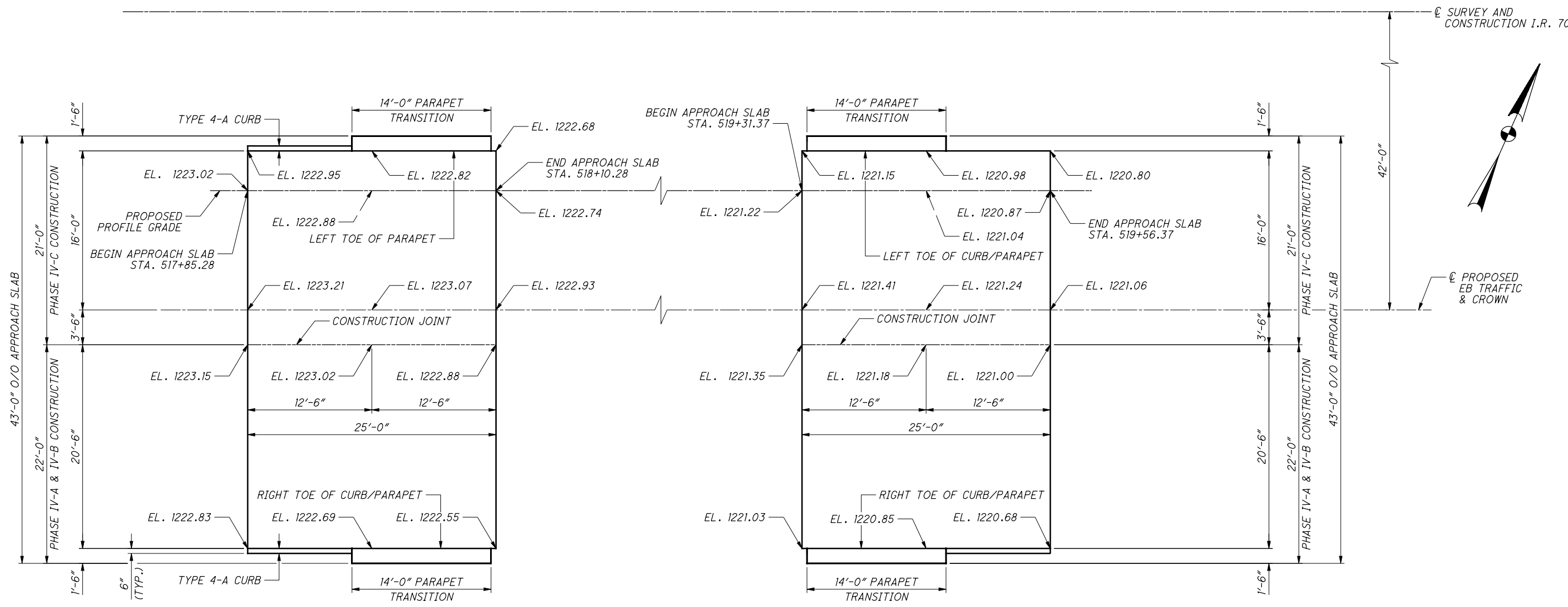
NOTES:

- SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS
- TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
- FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.
- FOR LOCATIONS OF SCREED ELEVATIONS, TOP OF HAUNCH ELEVATIONS AND FINAL DECK SURFACE ELEVATIONS, SEE SHEET 19/24.

APPROVED FOR CONSTRUCTION - 5/2/2011

E.L. ROBINSON The Challenge. The Choice.		DATE	2/3/11
DESIGNED	DTA	CHECKED	RLE
DRAWN	DTA	REVIEWED	RER
STRUCTURE FILE NUMBER	0702226L/0702250R		
SUPERSTRUCTURE ELEVATIONS - RIGHT BRIDGE			
BRIDGE NO. BEL-70-0963 L/R			
I.R. TO OVER S.R. 149			
BEL-70-7.61			
PID No. 76825			
20/24			
303 307			

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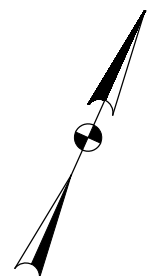
APPROACH SLAB PLAN

APPROVED FOR CONSTRUCTION - 5/2/2011

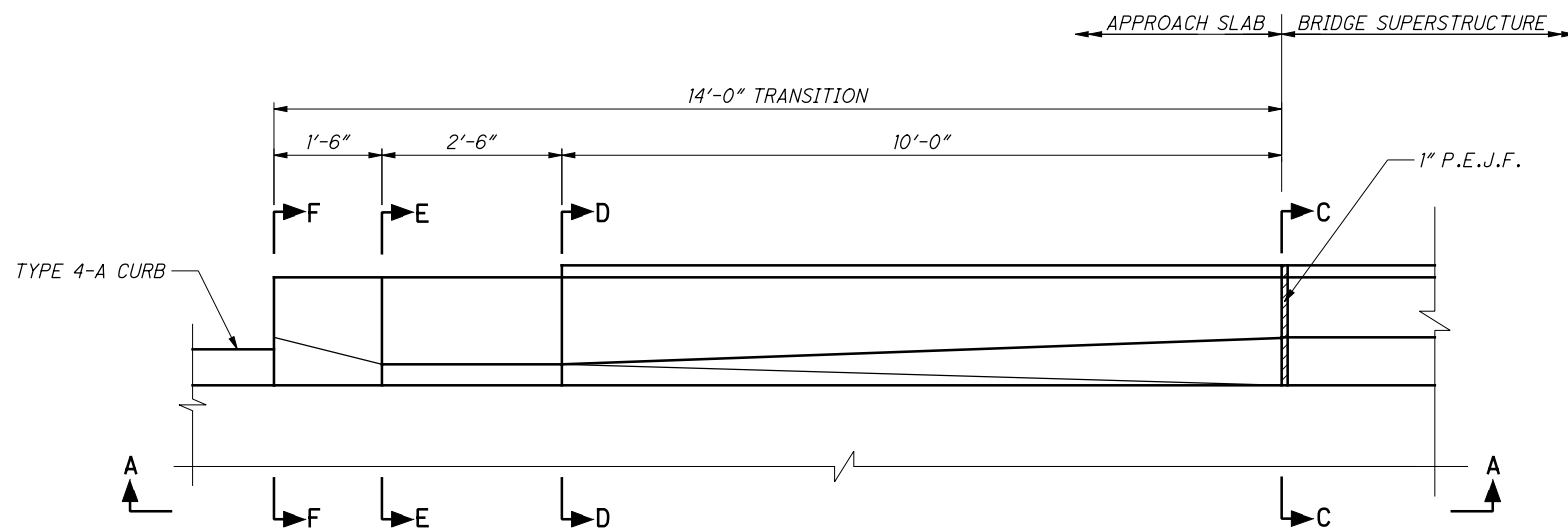
NOTES:

- FOR ADDITIONAL APPROACH SLAB DETAILS, SEE ODOT STANDARD DRAWING AS-1-81.
- FOR ADDITIONAL CURB DETAILS, SEE ODOT STANDARD CONSTRUCTION DRAWING BP-5.1
- PARAPET, REINFORCING, TYPE 4-A CURB AND SEALING CONCRETE APPROACH SLAB CONSTRUCTION JOINT WITH HMWM RESIN IS INCLUDED WITH ITEM 898, QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), (T=15'), AS PER PLAN.
- FOR PARAPET TRANSITION DETAILS, SEE SHEET 22/24.

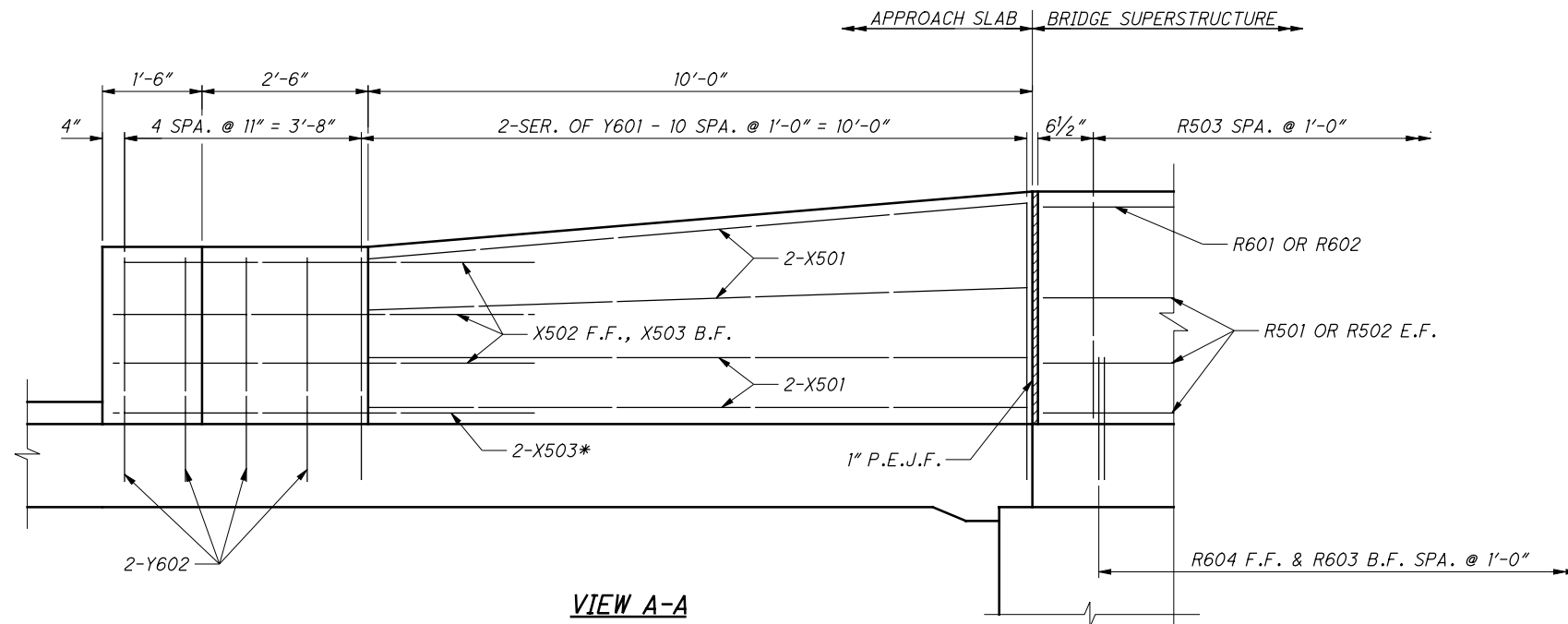
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APPROACH SLAB DETAILS - RIGHT BRIDGE BRIDGE NO. BEL-70-0963 L/R I.R. TO OVER S.R. 149	
BEL-70-7.61 PID No. 76825	
21 / 24	
304 307	



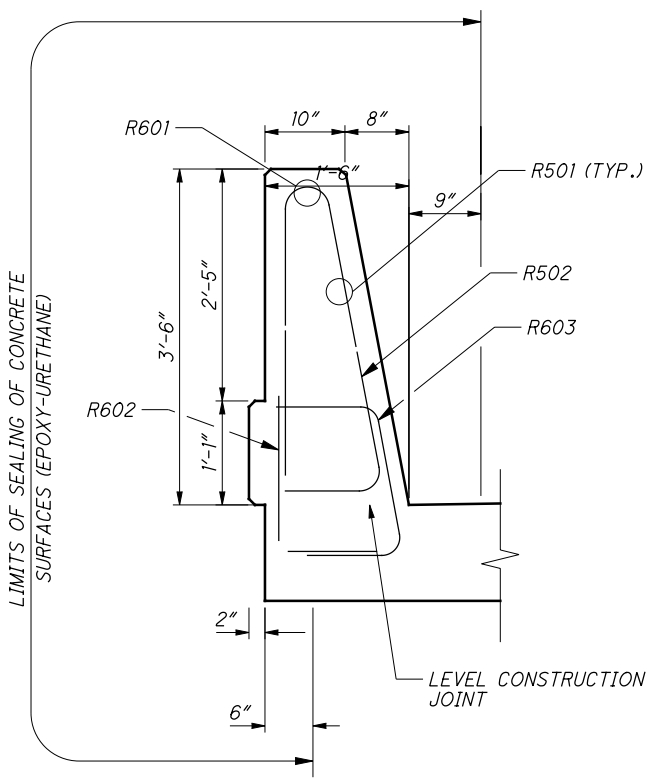
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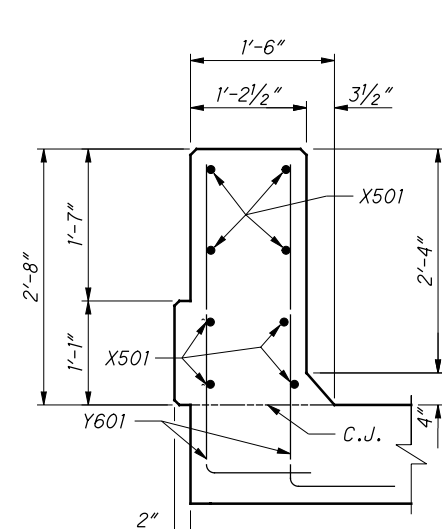
TYPICAL PARAPET TRANSITION DETAIL
LEFT REAR PARAPET SHOWN, OTHERS SIMILAR



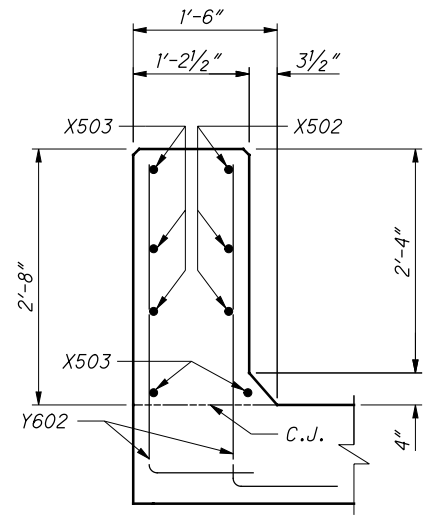
VIEW A-A
* FIELD BEND IF NECESSARY



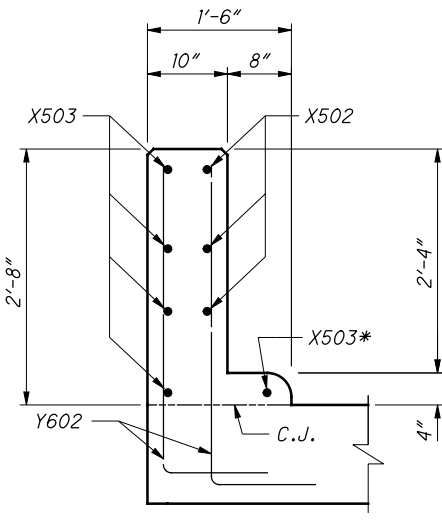
SECTION C-C



SECTION D-D



SECTION E-E



SECTION F-F

- NOTES:**
- FOR NOTES AND DETAILS ON CONTROL JOINTS AND OTHER DETAILS NOT SHOWN, SEE ODOT STD. DRAWING SBR-1-99.
 - FOR BRIDGE TERMINAL ASSEMBLIES, SEE STANDARD CONSTRUCTION DRAWINGS GR-3.1 AND GR-3.2.

APPROVED FOR CONSTRUCTION - 5/2/2011



DESIGNED	DTA	CHECKED	RLE
DRAWN	DTA	REVIEWED	RER
DATE	2/3/11	STRUCTURE FILE NUMBER	0702226L/0702250R

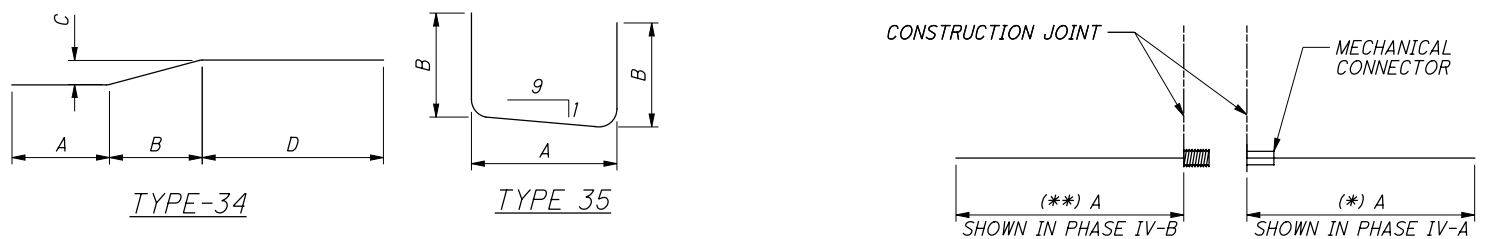
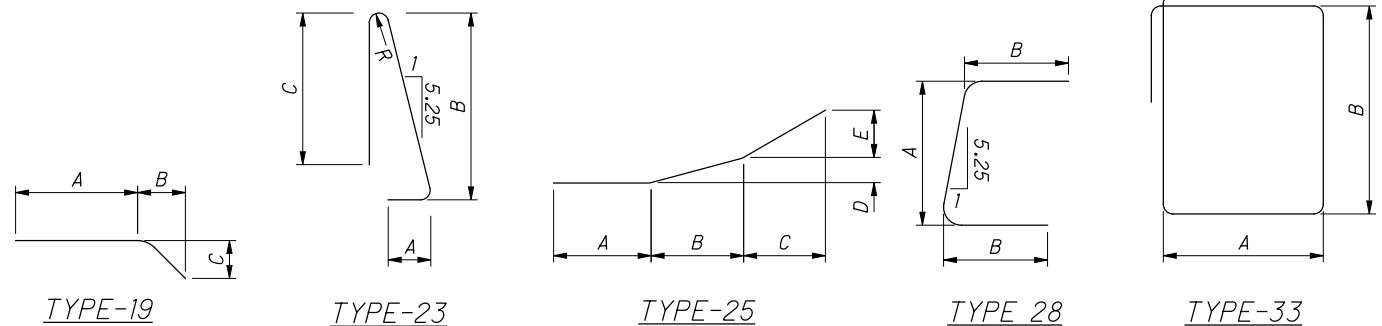
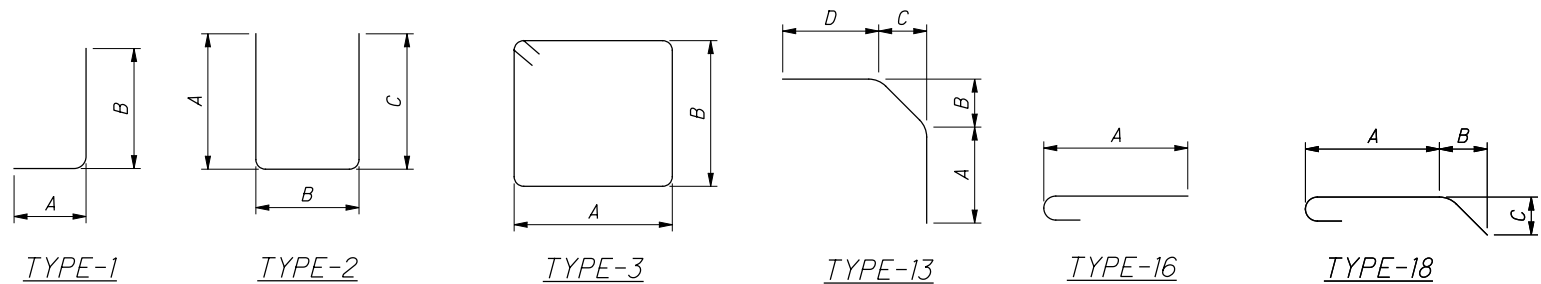
PARAPET TRANSITION DETAILS - RIGHT BRIDGE
BRIDGE NO. BEL-70-0963 L/R
I.R. TO OVER S.R. 149

BEL-70-7.61
PID No. 76825

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
REAR ABUTMENT - RIGHT BRIDGE											
A501	28	4'-1"	119	35	1'-2"	1'-7"					
A502	56	7'-1"	414	1	1'-6"	5'-9"					
A503	19	5'-8"	112	1	2'-6"	3'-4"					
A504	19	3'-0"	59	13	0'-5"	1'-1"	1'-1"	1'-1"			
A505	9	8'-11"	84	STR							
A506	23	12'-8"	304	STR							
A508	56	8'-5"	492	STR							
A510	19	5'-4"	106	1	1'-8"	3'-10"					
A511	16	5'-4"	89	STR							
A512	8	6'-0"	50	34	2'-6"	1'-0"	1'-0"	3'-3"			
A513	8	4'-10"	40	1	1'-6"	3'-6"					
A601	40	3'-6"	210	STR							
A602	6	14'-4"	129	33	3'-5"	3'-2"					
A603	4	4'-7"	28	1	1'-7"	3'-2"					
A901	14	4'-6"	214	1	1'-7"	3'-2"					
SUB-TOTAL			2,450								

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
FORWARD ABUTMENT - RIGHT BRIDGE											
A501	28	4'-1"	119	35	1'-2"	1'-7"					
A511	16	5'-4"	89	STR							
A512	8	6'-9"	56	34	2'-6"	1'-0"	1'-0"	3'-3"			
A513	8	4'-10"	40	1	1'-6"	3'-6"					
A514	56	6'-9"	394	1	1'-6"	5'-5"					
A515	19	5'-7"	111	1	2'-5"	3'-4"					
A516	19	3'-0"	59	13	0'-5"	1'-1"	1'-1"	1'-1"			
A517	9	8'-11"	84	STR							
A518	23	12'-8"	304	STR							
A520	56	8'-1"	472	STR							
A522	19	5'-5"	107	1	1'-8"	3'-11"					
A601	40	3'-6"	210	STR							
A602	6	14'-4"	129	33	3'-5"	3'-2"					
A603	4	4'-7"	28	1	1'-7"	3'-2"					
A901	14	4'-6"	214	1	1'-7"	3'-2"					
SUB-TOTAL			2,416								

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
PIERS - RIGHT BRIDGE											
P401	12	20'-8"	166	STR							
P402	12	21'-4"	171	STR							
P403	12	6'-6"	52	2	2'-0"	2'-8"	2'-0"				
P404	8	4'-6"	24	2	1'-0"	2'-8"	1'-0"				
P501	54	13'-10"	779	3	2'-8"	3'-11"					
P502	24	12'-2"	305	3	1'-10"	3'-11"					
*P901	24	22'-0"	1795	1	1'-7"	20'-8"					
**P902	24	22'-8"	1850	1	1'-7"	21'-4"					
SUB-TOTAL			5,142								



NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, P601 IS A NO. 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.
2. ALL REINFORCING STEEL TO BE EPOXY COATED.

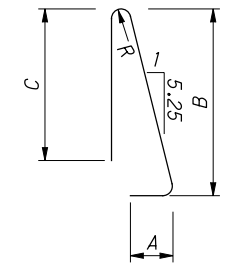
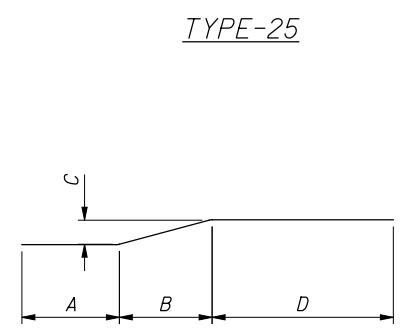
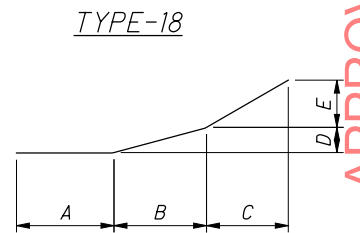
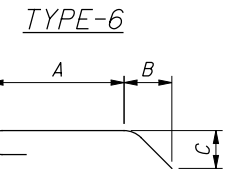
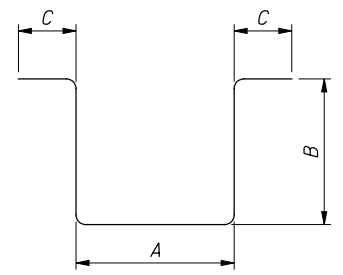
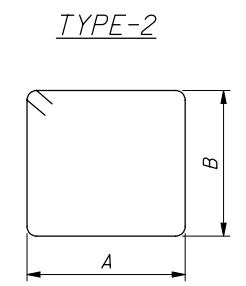
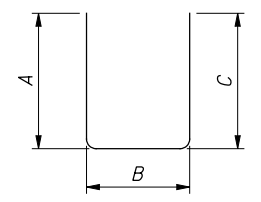
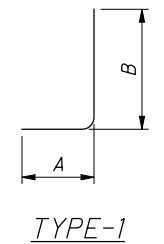
LEGEND:

- **/* REINFORCING BAR UTILIZES A MECHANICAL CONNECTOR. BAR LENGTH ADJUSTMENT AND/OR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF CONNECTOR USED.

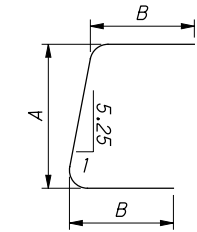
APPROVED FOR CONSTRUCTION - 5/2/2011

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
SUPERSTRUCTURE - RIGHT BRIDGE											
S401	176	30'-0"	3527	STR							
S402	44	9'-9"	287	STR							
S501	208	25'-1"	5442	STR							
S502	208	20'-10"	4520	STR							
S503	192	30'-0"	6008	STR							
S504	48	13'-9"	688	STR							
S505	68	7'-2"	508	2	2'-5"	2'-7"	2'-5"				
S506	30	13'-2"	412	3	3'-5"	2'-10"					
S507	8	11'-6"	96	3	3'-5"	2'-0"					
S508	30	13'-0"	407	3	3'-5"	2'-9"					
S509	208	25'-1"	5442	34	3'-8"	0'-9"	0'-3"	20'-8"			
S510	208	20'-10"	4520	34	1'-8"	0'-9"	0'-3"	18'-5"			
S511	16	7'-2"	120	6	2'-4"	0'-8"	2'-0"				
S512	16	4'-0"	67	STR							
S601	86	30'-0"	3875	STR							
S801	20	21'-10"	1166	STR							
S802	20	20'-10"	1112	STR							
S803	54	4'-9"	685	18	2'-7"	1'-0"	1'-0"				
S804	8	5'-10"	125	STR							
S805	8	13'-8"	292	STR							
S806	8	14'-8"	313	STR							
S807	8	3'-10"	82	STR							
SUB-TOTAL			39,694								

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
PARAPET - RIGHT BRIDGE											
R501	48	30'-0"	1502	STR							
R502	16	14'-9"	246	STR							
R503	244	7'-5"	1887	23	1'-1"	3'-2"	3'-0"			0'-2 3/4"	
R601	8	30'-0"	360	STR							
R602	2	18'-5"	55	STR							
R603	244	2'-7"	947	1	1'-1"	1'-8"					
R604	244	3'-6"	1283	28	1'-8"	1'-1"					
X501	32	10'-0"	334	STR							
X502	12	5'-7"	70	25	1'-8"	2'-5"	1'-5"	1 1/2"	5"		
X503	20	5'-6"	115	STR							
8 SR		4'-2"				3'-3"					
Y601	OF	TO	606	1	1'-1"	TO					0'-1"
11		5'-0"				4'-1"					
Y602	32	4'-2"	200	1	1'-1"	3'-3"					
SUB-TOTAL			7,605								



TYPE-23



TYPE 28

APPROVED FOR CONSTRUCTION - 5/2/2011

E.L. ROBINSON
The Challenge. The Choice.
1807 Watermark Drive, Suite 310 - Columbus, Ohio 43215

REINFORCING STEEL LIST
BRIDGE NO. BEL-70-0963 L/R
I.R. 70 OVER S.R. 149

DESIGNED	DTA	CHECKED	RLE
DRAWN	DTA	REVIEWED	RER
DATE	2/3/11	STRUCTURE FILE NUMBER	0702226L/0702250R

BEL-70-7.61
PID No. 76825

24/24

307
307