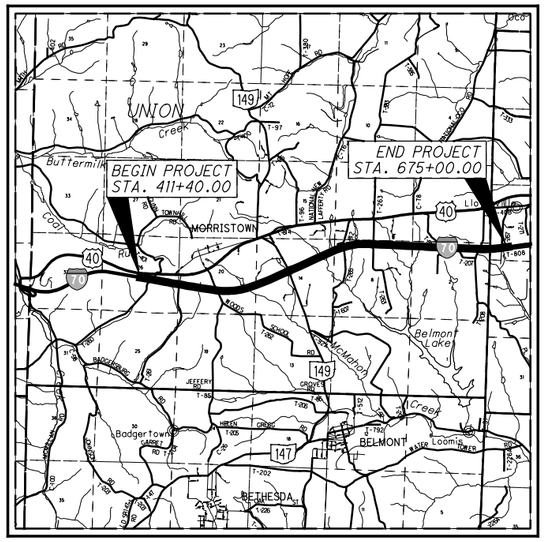

LOCATION MAP

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

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED _____

INTERSTATE HIGHWAY _____

STATE & FEDERAL ROUTES _____

COUNTY & TOWNSHIP ROADS _____

OTHER ROADS _____

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:

E.L.ROBINSON
the Challenge. the Choice
1801 Watermark Drive, Suite 310
Columbus, OH 43215

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

BEL-70-7.61

RICHLAND AND UNION TOWNSHIPS
BELMONT COUNTY

INDEX OF SHEETS:

ENGINEERS SEAL:

FOR STRUCTURES 20' & OVER

STATE OF OHIO — AMANDA M. ENGLE — E-68034 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: _____
DATE: 06/08/2010

ENGINEERS SEAL:

FOR SIGNALS & LIGHTING

STATE OF OHIO — MARK J. HUNTER — E-56376 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: _____
DATE: 06/08/2010

ENGINEERS SEAL:

FOR ENTIRE PLAN EXCEPT SIGNALS & LIGHTING AND STRUCTURES 20' & OVER

STATE OF OHIO — BRENT B. DOWNING — E-62886 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: _____
DATE: 06/08/2010

BUILDABLE UNIT 2

STANDARD CONSTRUCTION DRAWINGS

CB-1.1	7/15/05	HL-10.11	4/17/09	MT-98.29	7/17/09		
CB-3.1	7/15/05	HL-10.12	1/19/07	MT-100.00	1/16/09		
CB-3.2	7/15/05	HL-10.13	10/16/09	MT-101.60	4/17/09		
		HL-20.11	1/19/07	MT-101.70	1/16/09		
DM-1.1	4/21/06	HL-30.11	10/16/09	MT-101.90	1/16/09		
DM-1.2	10/21/05	HL-30.21	1/19/07	MT-102.10	7/17/09		
		HL-40.10	1/19/07	MT-102.20	4/17/09		
GR-1.1	7/16/04	HL-60.11	1/19/07	MT-102.30	4/17/09		
GR-2.1	1/16/04	HL-60.31	1/19/07	MT-105.10	1/16/09		
GR-3.1	10/16/09			MT-120.00	1/16/09		
GR-5.1	4/16/10	MT-95.30	7/17/09				
GR-5.2	4/16/10	MT-98.10	7/17/09	TC-41.20	1/19/01		
GR-6.1	4/16/10	MT-98.11	7/17/09	TC-42.20	7/16/04		
		MT-98.20	7/17/09	TC-52.10	1/19/07		
RM-4.1	10/20/06	MT-98.21	7/17/09	TC-52.20	1/19/07		
		MT-98.28	7/17/09				

SUPPLEMENTAL SPECIFICATIONS

800	1/15/10
888	4/18/08
898	7/17/09

SPECIAL PROVISIONS

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 REPLACMENT, TRAFFIC CONTROL, AND DRAINAGE.

PROJECT EARTH DISTURBED AREA:	ACRES
ESTIMATED CONTRACTOR EARTH DISTRUBED AREA:	ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	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

APPROVED FOR CONSTRUCTION - 6/8/2010

FEDERAL PROJECT NO. E040(135)
PID NO. 76825
CONSTRUCTION PROJECT NO. 093005
RAILROAD INVOLVEMENT NONE
BEL-70-7.61
1 / 210

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IR 70
CURVE DATA

P.I.= Sta. 479+80.61
Δ = 33° 52' 50" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 1,745.18'
L = 3,388.06'
E = 259.89'
emax = 0.036

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.

HORIZONTAL SCALE IN FEET
0 100 200 400

APPROVED FOR CONSTRUCTION - 6/8/2010

SCHEMATIC PLAN

BEL-70-7.61

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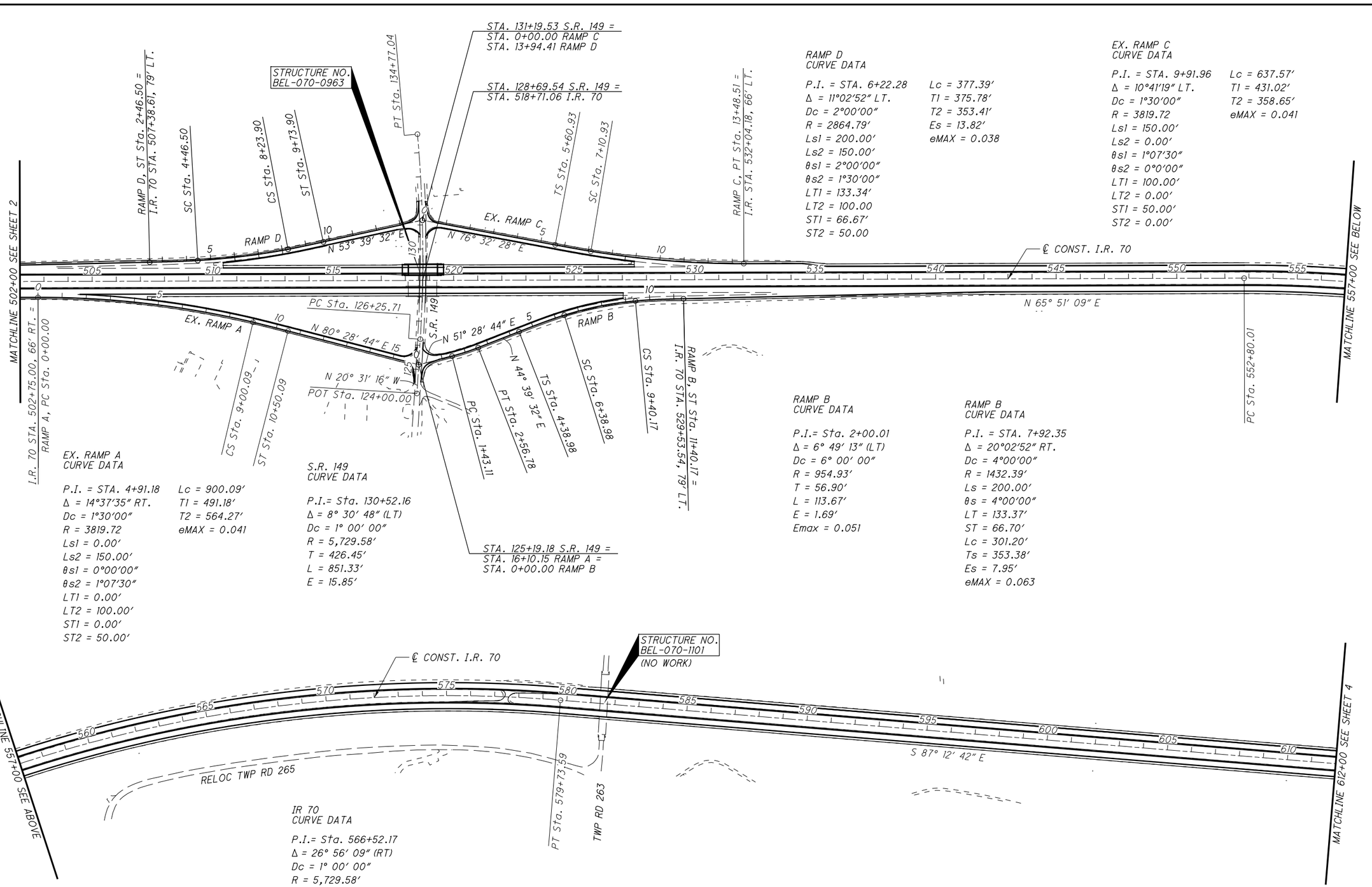


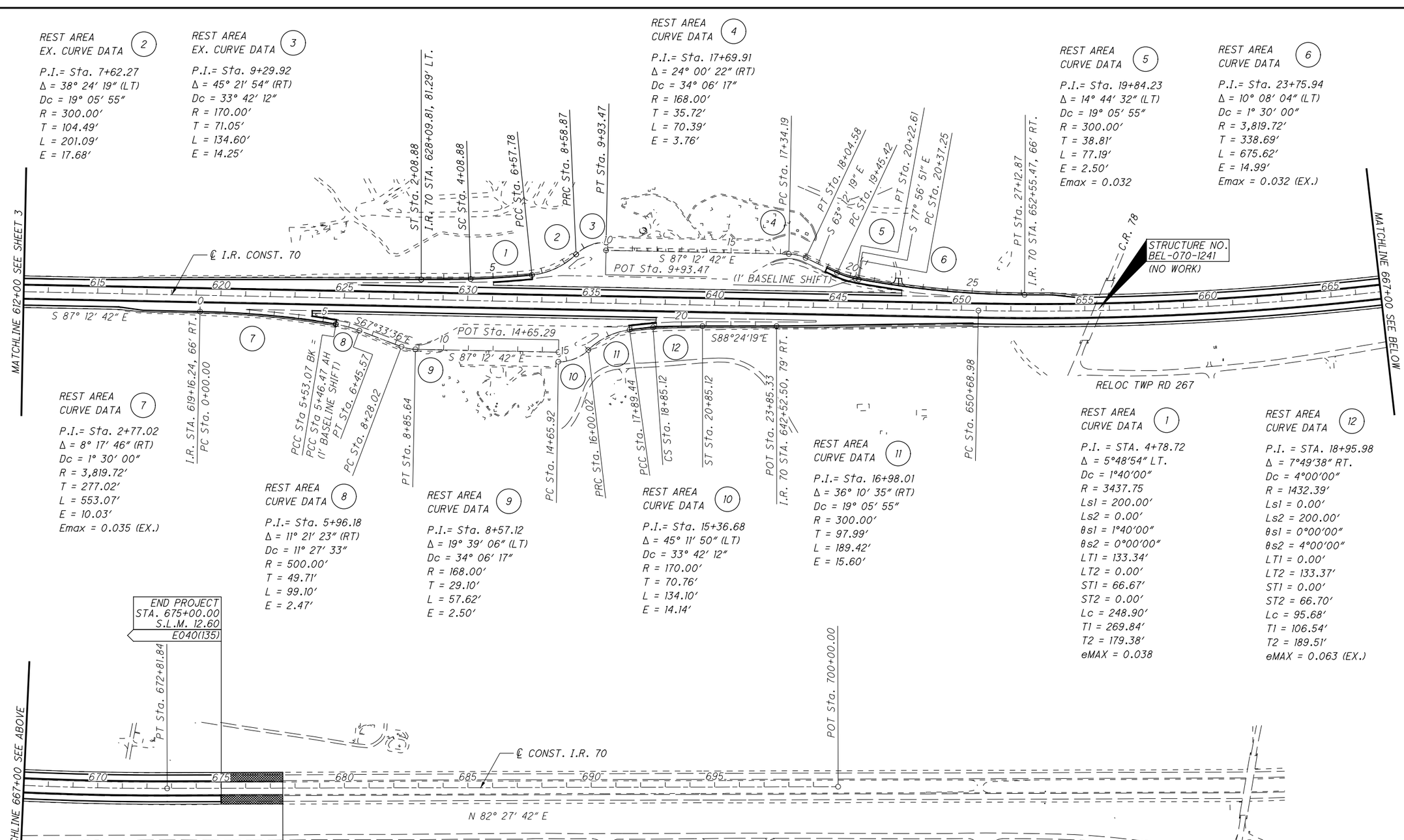
The coordinate values shown are referenced to the Ohio State Plane Coordinate System, South Zone in U.S. survey feet units. These values were established using ODOT's VRS RTK network which is based on NAD88 (CORS96) horizontally, and NAVD88 vertically. To convert these grid values to ground values a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

HORIZONTAL SCALE IN FEET
0 100 200 400

APPROVED FOR CONSTRUCTION - 6/8/2010

SCHEMATIC PLAN

BEL-70-7.61



REST AREA EX. CURVE DATA (2)

P.I.= Sta. 7+62.27
Δ = 38° 24′ 19″ (LT)
Dc = 19° 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
Δ = 45° 21′ 54″ (RT)
Dc = 33° 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
Δ = 24° 00′ 22″ (RT)
Dc = 34° 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
Δ = 14° 44′ 32″ (LT)
Dc = 19° 05′ 55″
R = 300.00′
T = 38.81′
L = 77.19′
E = 2.50′
Emax = 0.032

REST AREA CURVE DATA (6)

P.I.= Sta. 23+75.94
Δ = 10° 08′ 04″ (LT)
Dc = 1° 30′ 00″
R = 3,819.72′
T = 338.69′
L = 675.62′
E = 14.99′
Emax = 0.032 (EX.)

REST AREA CURVE DATA (7)

P.I.= Sta. 2+77.02
Δ = 8° 17′ 46″ (RT)
Dc = 1° 30′ 00″
R = 3,819.72′
T = 277.02′
L = 553.07′
E = 10.03′
Emax = 0.035 (EX.)

REST AREA CURVE DATA (8)

P.I.= Sta. 5+96.18
Δ = 11° 21′ 23″ (RT)
Dc = 11° 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
Δ = 19° 39′ 06″ (LT)
Dc = 34° 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
Δ = 45° 11′ 50″ (LT)
Dc = 33° 42′ 12″
R = 170.00′
T = 70.76′
L = 134.10′
E = 14.14′

REST AREA CURVE DATA (11)

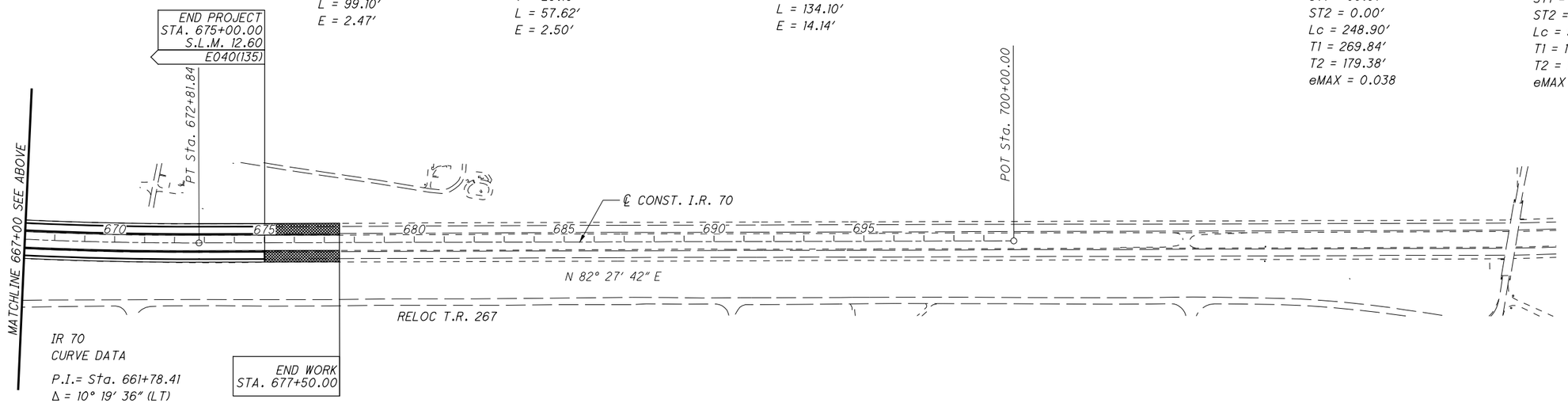
P.I.= Sta. 16+98.01
Δ = 36° 10′ 35″ (RT)
Dc = 19° 05′ 55″
R = 300.00′
T = 97.99′
L = 189.42′
E = 15.60′

REST AREA CURVE DATA (1)

P.I. = STA. 4+78.72
Δ = 5°48′54″ LT.
Dc = 1°40′00″
R = 3437.75
Ls1 = 200.00′
Ls2 = 0.00′
θs1 = 1°40′00″
θs2 = 0°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
Δ = 7°49′38″ RT.
Dc = 4°00′00″
R = 1432.39′
Ls1 = 0.00′
Ls2 = 200.00′
θs1 = 0°00′00″
θs2 = 4°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.)



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 = 0.018

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.

HORIZONTAL SCALE IN FEET
0 100 200 400

APPROVED FOR CONSTRUCTION - 6/8/2010

SCHEMATIC PLAN

BEL-70-7.61

4
210

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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

CALCULATED CDS
CHECKED BBD

APPROVED FOR CONSTRUCTION - 6/8/2010

BENCHMARKS

BEL-70-7.61

4A
210

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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 - 6/8/2010

CALCULATED CDS
CHECKED BBD

CENTERLINE REFERENCES

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: MARK DAVIS
(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.

MEDIAN 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.

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.

CALCULATED MJC
CHECKED BBD

APPROVED FOR CONSTRUCTION - 6/8/2010

GENERAL NOTES

BEL-70-7.61

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 ANYIME 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 ANYIME 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, AND TYPE III BARRICADES OF THE TYPE AND LOCATION AS FOLLOWS:

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.

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.

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 SPECIFIEDIN 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: BO40239
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.

CALCULATED MJC CHECKED BBD

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.

CALCULATED MJC CHECKED BBD

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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

APPROVED FOR CONSTRUCTION - 6/8/2010

CALCULATED MJC
CHECKED BBD

MAINTENANCE OF TRAFFIC GENERAL NOTES

BEL-70-7.61

SEQUENCE OF CONSTRUCTION

PHASE II

RECONSTRUCT OR REPLACE AND STABILIZE THE EXISTING EASTBOUND MEDIAN SHOULDER, WESTBOUND MEDIAN SHOULDER, WESTBOUND OUTSIDE SHOULDER, INSIDE SHOULDER OF RAMP B, INSIDE SHOULDER OF RAMP C, AND PLACE TEMPORARY AND CROSSOVER PAVEMENT AS SHOWN IN THE PLANS. 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 IN THE PLANS.

INSTALL TEMPORARY TRAFFIC SIGNALS AT THE S.R. 149 INTERCHANGE AND WORKZONE GUARDRAIL AS SHOWN IN THE PLANS. TEMPORARY TRAFFIC SIGNALS SHALL REMAIN IN OPERATION UNTIL THE COMPLETION OF CONSTRUCTIONS. INSTALL TEMPORARY AND PERMANENT MEDIAN DRAINAGE FEATURES AS WELL AS EASTBOUND MEDIAN SIDE UNDERDRAINS AS SHOWN IN THE PLANS. REMAINING UNDERDRAINS AND PERMANENT OUTSIDE DRAINAGE FEATURES WILL BE INSTALLED IN SUBSEQUENT BUILDABLE UNITS.

EASTBOUND BRIDGES BEL-70-0775 AND BEL-70-0963 SHALL BE TEMPORALLY WIDENED TO THE INSIDE AS SHOWN IN THE PLANS.

INSTALL PROPOSED LIGHTING AT THE S.R. 149 INTERCHANGE AS SHOWN IN THE PLANS. LIGHTING AT THE INTERCHANGE SHALL BE MAINTAINED AT ALL TIMES BY EITHER EXISTING OR PROPOSED LIGHTING FACILITIES.

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

WESTBOUND TRAFFIC IS TO BE MAINTAINED BY STANDARD CONSTRUCTION DRAWINGS MT-95.30 FOR SHOULDER RECONSTRUCTION AND STANDARD CONSTRUCTION DRAWING MT-102.10 OR MT-102.20 FOR SHOULDER REPLACEMENT AND STABILIZATION. TRAFFIC MAY BE SHIFTED ONTO THE WESTBOUND EXISTING SHOULDER FOR A MAXIMUM OF 14 CALENDAR DAYS.

EASTBOUND TRAFFIC IS TO BE SHIFTED ONTO THE EASTBOUND OUTSIDE SHOULDER AS SHOWN IN THE PLANS. EASTBOUND TRAFFIC CANNOT BE SHIFTED ONTO THE EXISTING OUTSIDE SHOULDER UNTIL IT HAS BEEN RECONSTRUCTED AS PER PHASE I. THE CONTRACTOR HAS THE OPTION OF SHORTENING THE WORKZONE AND SHIFTING TRAFFIC BACK TO THE ORIGINAL CONFIGURATION UNTIL THE OUTSIDE SHOULDER IS RECONSTRUCTED AS PER PHASE I. TRAFFIC SHALL BE MAINTAINED AS PER PHASE I WHILE RECONSTRUCTING THE EASTBOUND OUTSIDE SHOULDER IN SUBSEQUENT PHASES.

THE EASTBOUND ENTRANCE RAMP AND WESTBOUND EXIT RAMP SHALL BE REDUCED TO ONE TEN FOOT LANE AS SHOWN IN THE PLANS FOR THE RECONSTRUCTION OF THE EXISTING INSIDE RAMP SHOULDER AND PLACEMENT OF TEMPORARY PAVEMENT.

NO TRAFFIC SHALL BE MAINTAINED ON TEMPORARY AND/OR CROSSOVERS PAVEMENT UNTIL ALL TEMPORARY TRAFFIC CONTROL DEVICES ARE IN PLACE. TEMPORARY TRAFFIC CONTROL DEVICES ARE TO BE PLACED AT THE START OF PHASE III. THE CONTRACTOR SHALL PLACE DRUMS AT CROSSOVER LOCATIONS TO PROHIBIT USE UNTIL THE CROSSOVERS ARE TO BE USED IN SUBSEQUENT PHASES.

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.

PHASE III-A (FOR INFORMATION ONLY)

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 III-A OPERATIONS. THE CONTRACTOR SHALL PLACE DRUMS TO PROHIBIT THE USE OF CROSSOVER LOCATIONS NOT TO BE USED DURING PHASE III-A.

EASTBOUND TRAFFIC IS TO BE SHIFTED ONTO THE EASTBOUND OUTSIDE SHOULDER. USING THE CROSSOVERS, WESTBOUND TRAFFIC SHALL BE SHIFTED TO THE TEMPORARY PAVEMENT PLACED IN PHASE II. USING THE CROSSOVERS LOCATED ADJACENT TO THE BEL-70-0775 AND BEL-70-0963 BRIDGES, SHIFT ONE WESTBOUND LANE TO THE EXISTING WESTBOUND INSIDE PAVEMENT AND TEMPORARY PAVEMENT PLACED IN PHASE II. RAMP D SHALL BE CLOSED FOR A MAXIMUM OF 30 DAYS, AFTER WHICH RAMP D TRAFFIC SHALL BE CROSSED OVER TO THE EASTBOUND SIDE AS SHOWN IN THE PHASE III-B PLANS. RAMP C SHALL BE CROSSED OVER FROM THE EASTBOUND SIDE AND REDUCED TO ONE 10 FOOT LANE AND SHIFTED ONTO THE TEMPORARY PAVEMENT PLACED IN PHASE II. RIGHT TURNS FROM RAMP C SHALL BE PROHIBITED. THE DETOUR SHALL BE POSTED AS DETAILED IN THE PLANS. RAMPS A AND B SHALL BE MAINTAINED ON THEIR RESPECTIVE TEMPORARY AND/OR EXISTING PAVEMENT.

RECONSTRUCT THE PORTION OF WESTBOUND PAVEMENT NOT USED TO MAINTAIN TRAFFIC AS SHOWN IN THE PLANS. RECONSTRUCT THE OUTSIDE PORTION OF RAMP C. RECONSTRUCT ALL OF RAMP D, AND THE WESTBOUND REST AREA ENTRANCE AND EXIT RAMP PAVEMENT AS SHOWN IN THE PLANS.

PLACE PERMANENT WESTBOUND TRAFFIC CONTROL ITEMS AS SHOWN IN THE PLANS UNLESS THE TRAFFIC CONTROL ITEMS CONFLICT WITH PHASE III-B AND/OR PHASE IV MAINTENANCE OF TRAFFIC.

THE OUTSIDE PORTIONS OF WESTBOUND BRIDGES BEL-70-0775 AND BEL-70-0963 SHALL BE RECONSTRUCTED AS SHOWN IN THE PLANS. PROPOSED WESTBOUND GUARDRAIL AND PERMANENT WESTBOUND 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 III-B (FOR INFORMATION ONLY)

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

EASTBOUND TRAFFIC IS TO REMAIN SHIFTED ONTO THE EASTBOUND OUTSIDE SHOULDER. USING THE CROSSOVERS, WESTBOUND TRAFFIC SHALL REMAIN SHIFTED TO THE TEMPORARY PAVEMENT PLACED IN PHASE II. USING THE CROSSOVERS LOCATED ADJACENT TO THE BEL-70-0775 AND BEL-70-0963 BRIDGES, SHIFT ONE WESTBOUND LANE TO THE PERMANENT WESTBOUND OUTSIDE PAVEMENT COMPLETED IN PHASE III-A. RAMP C SHALL BE CROSSED OVER FROM THE EASTBOUND SIDE AND REDUCED TO ONE 10 FOOT LANE AND SHIFTED ONTO THE PERMANENT PAVEMENT PLACED IN PHASE III-A. LEFT TURNS FROM RAMP C SHALL BE PROHIBITED. THE DETOUR SHALL BE POSTED AS DETAILED IN THE PLANS. USING THE CROSSOVER AND TEMPORARY PAVEMENT PLACED IN PHASE II, RAMP D SHALL BE CROSSED OVER AND MERGED WITH THE WESTBOUND TRAFFIC AS SHOWN IN THE PLANS. RAMPS A AND B SHALL BE MAINTAINED ON THEIR RESPECTIVE TEMPORARY AND/OR EXISTING PAVEMENT.

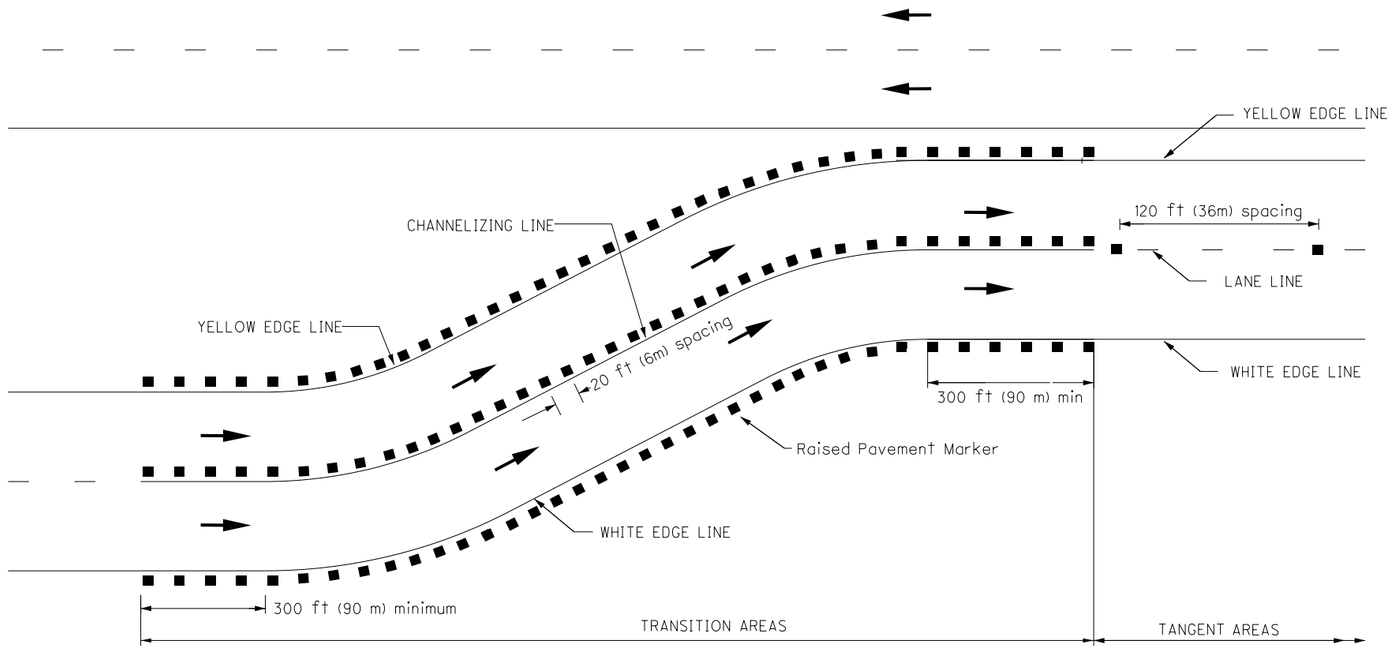
RECONSTRUCT THE REMAINING PORTION OF WESTBOUND PAVEMENT AND RECONSTRUCT THE INSIDE PORTION OF RAMP C AS SHOWN IN THE PLANS.

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

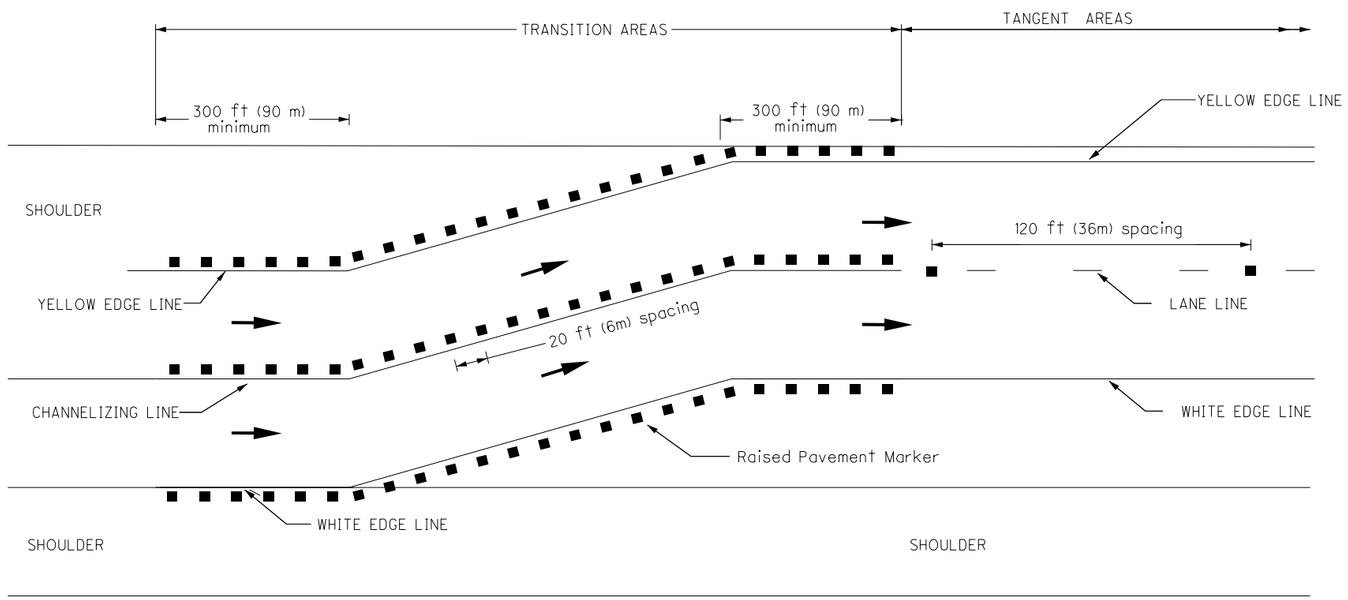
ALL WESTBOUND SIGNING SHALL BE REMOVED AND REPLACED BY THE END OF PHASE III. PLACE THE REMAINING PORTIONS OF THE WESTBOUND PERMANENT TRAFFIC CONTROL ITEMS AS SHOWN IN THE PLANS. THE CONTRACTOR MAY PLACE TEMPORARY TRAFFIC CONTROL DEVICES FOR ITEMS THAT WILL BE IN CONFLICT OR REMOVED DURING PHASE IV OPERATIONS.

AT THE END OF PHASE III 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.

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.



WORK ZONE DELINEATION FOR CROSSOVERS



WORK ZONE DELINEATION FOR LANE SHIFTS

LEGEND

- RPM
- DIRECTION OF TRAVEL

NOTES

1. 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 inches (1.2 m)shall be as per the tangent area delineation.

2. Raised Pavement Markers shall meet the following seasonal specifications:

   a) 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.

   b) At locations where it is intended that Raised Pavement Markers will winter over, 621 Raised Pavement Markers shall be provided.

   c) 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 contrator's expense.

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 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.

7. The RPMs shall be 1-way, facing oncomming traffic, and shall be white or yellow to match the color of the associated line marking.

8. 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.

9. The RPMs shall be removed when they are no longer appropriate.

10. 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.

11. 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.

OFFICE OF TRAFFIC ENGINEERING

DESIGNED	REVIEWED
	LAM
REVISION DATE	CHECKED
4/17/09	

PID NUMBER 209930

PLAN INSERT SHEET

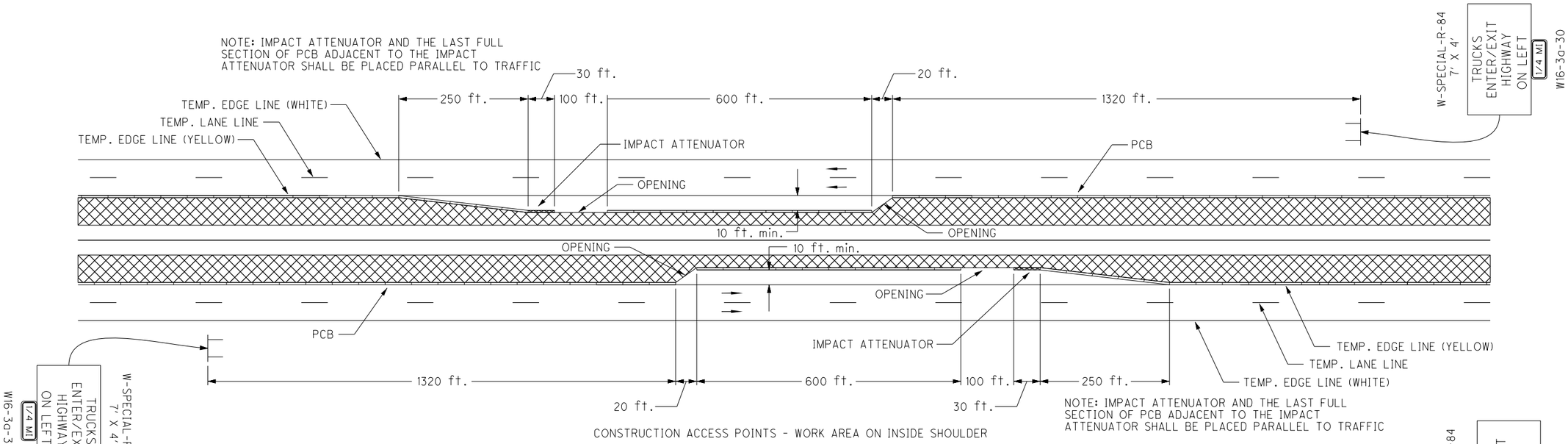
WORK ZONE DELINEATION ON ASPHALT SURFACES

BEL-70-7.61

1 / 1

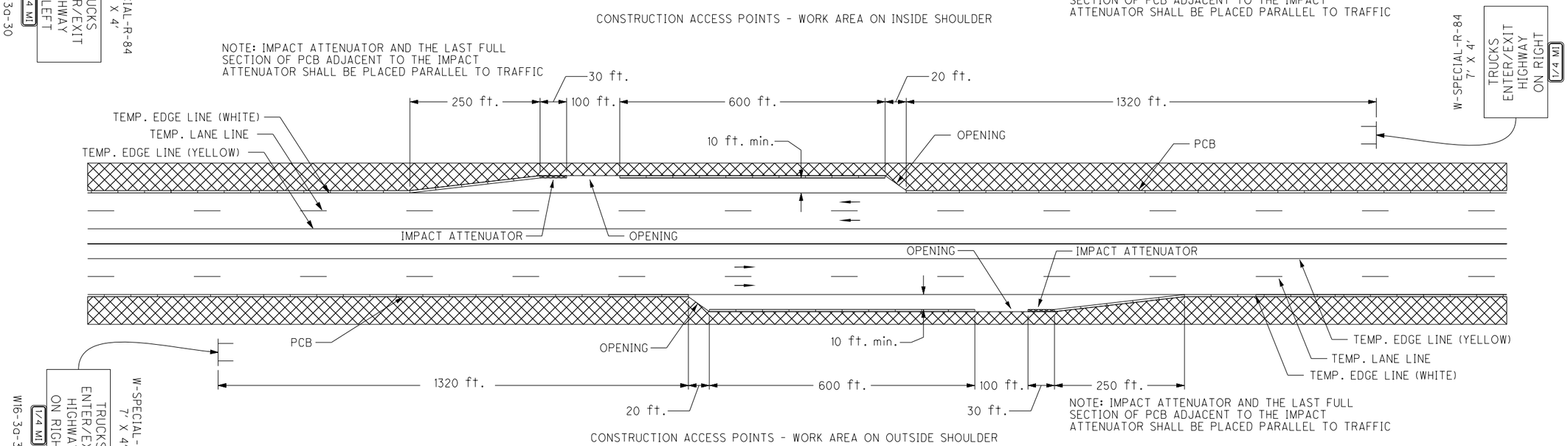
11
210

NOTE: IMPACT ATTENUATOR AND THE LAST FULL SECTION OF PCB ADJACENT TO THE IMPACT ATTENUATOR SHALL BE PLACED PARALLEL TO TRAFFIC



CONSTRUCTION ACCESS POINTS - WORK AREA ON INSIDE SHOULDER

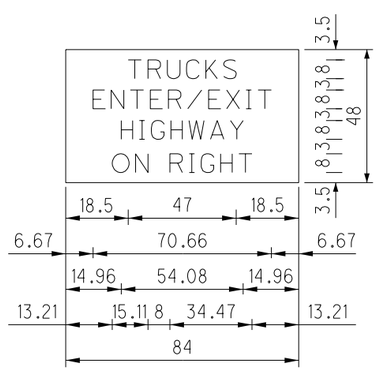
NOTE: IMPACT ATTENUATOR AND THE LAST FULL SECTION OF PCB ADJACENT TO THE IMPACT ATTENUATOR SHALL BE PLACED PARALLEL TO TRAFFIC



CONSTRUCTION ACCESS POINTS - WORK AREA ON OUTSIDE SHOULDER

W-SPECIAL; NO BORDER, BLACK ON ORANGE;
"TRUCKS" E MOD; "ENTER/EXIT" E MOD;
"HIGHWAY" E MOD; "ON RIGHT" E MOD;
TABLE OF WIDTHS AND SPACES

	T		R		U		C		K		S													
18.50	5.94	1.65	6.38	2.05	6.37	2.06	6.37	1.65	6.50	1.65	6.38	18.50												
	E		N		T		E		R		/		E		X		I		T					
6.67	5.94	1.65	6.38	1.67	5.94	1.65	5.94	1.65	5.94	0.55	6.47	1.10	5.94	1.65	6.94	1.65	1.60	1.65	5.94	6.67				
	H		I		G		H		W		A		Y											
14.96	6.38	2.05	1.60	2.05	6.38	2.05	6.37	1.65	8.44	0.56	8.00	0.55	8.00	14.96										
	O		N		R		I		G		H		T											
13.21	6.69	2.05	6.37	8.00	6.38	2.05	1.60	2.05	6.38	2.05	6.37	1.65	5.94	13.21										



CONSTRUCTION ACCESS POINTS

Construction access point locations may be selected by the Contractor with the approval of the Engineer. The locations shall be selected for good sight distance and ease of access for entering vehicles (avoid locations just beyond crest vertical curves, on overhead structures, on upgrades, etc.). In the event that the Engineer determines that an access point does not function in a safe manner, he/she shall order it immediately closed at no cost to the State. Access points may be relocated subject to the approval of the Engineer, as necessary to accomplish construction activites.

All costs for relocation of portable concrete barrier, installation, repair, replacement and removal of impact attenuators, grading for access drives and related costs shall be included in the lump sum bid for Item 614 Maintaining Traffic.

APPROVED FOR CONSTRUCTION - 6/8/2010

OFFICE OF TRAFFIC ENGINEERING

DESIGNED RAS | REVIEWED LAM

REVISION DATE 04/17/09 | CHECKED

PIS NUMBER 209563

PLAN INSERT SHEET

CONSTRUCTION ACCESS POINTS

BEL-70-7.61

1 / 1

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210

P:\76825\mot\sheets\76825MN207.dgn 6/8/2010 9:58:32 AM csteck

PHASE II - MAINLINE

PHASE II - RAMP C

PHASE II - RAMP B

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

BEL-70-7.61

△1 2′, STA. 400+52.91 TO STA. 402+07.88

TAPER 2′ TO 7′, STA. 402+07.88 TO STA. 406+03.19

SEE CROSSOVER DETAILS, STA. 406+03.19 TO STA. 411+98.02 (BK)/411+40 (AH)

5′, STA. 415+40.00 TO STA. 417+46.10

TAPER 5′ TO 6.7′, STA. 417+46.10 TO STA. 418+46.10

6.7′, STA. 418+46.10 TO STA. 418+62.70

6.7′, STA. 419+93.96 TO STA. 419+97.70

TAPER 6.7′ TO 5′, STA. 419+97.70 TO STA. 420+97.70

5′, STA. 420+97.70 TO STA. 427+52.73

SEE CROSSOVER DETAILS, STA. 427+52.73 TO STA. 433+60.38
STA. 502+18.22 TO STA. 503+70.00
STA. 509+40.00 TO STA. 510+93.39

5′, STA. 510+93.39 TO STA. 517+11.53

TAPER 4′ TO 5′, STA. 517+11.53 TO STA. 518+11.53

TAPER 5′ TO 4′, STA. 519+30.12 TO STA. 520+30.12

5′, STA. 520+30.12 TO STA. 526+50.84

SEE CROSSOVER DETAILS, STA. 526+50.84 TO STA. 535+75.39
STA. 678+20.78 TO STA. 680+83.39

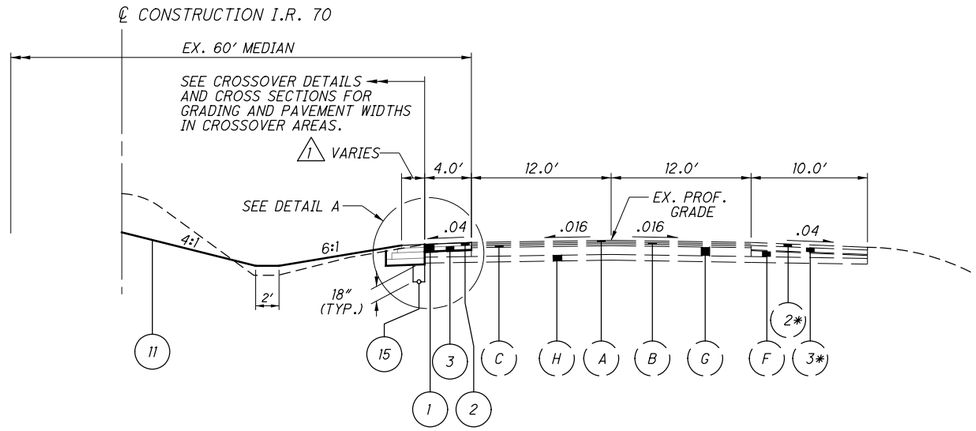
△3 UNDERDRAINS TO BE INSTALLED FROM:

STA. 415+40.00 TO STA. 418+45.00
STA. 420+56.99 TO STA. 432+00.00
STA. 505+00.00 TO STA. 517+60.59
STA. 519+63.71 TO STA. 534+00.70

NOTE:

EXISTING OUTSIDE LANE AND SHOULDER WIDTHS VARY AT RAMP ACCELERATION AND DECELERATION LANES.

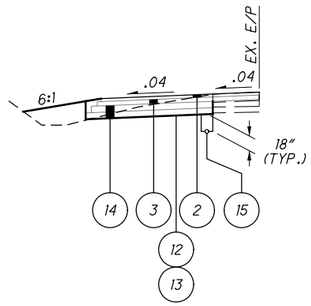
* PLACED IN BUILDABLE UNIT #1



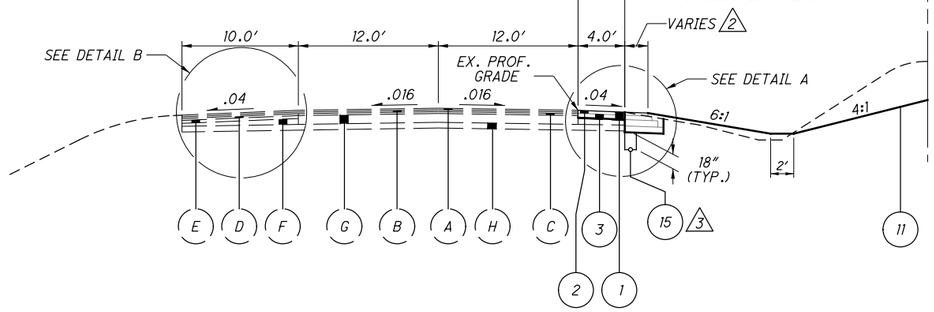
SHOULDER BUILDUP & WIDENING - NORMAL SECTION

LIMITING STATIONS:

STA. 401+52.91 TO STA. 411+98.02 (BK)/ 411+40.00 (AH)	= 1045.11′
STA. 415+40.00 TO STA. 418+62.70	= 322.70′
STA. 419+93.96 TO STA. 433+60.38	= 1366.42′
STA. 502+18.22 TO STA. 503+70.00	= 151.78′
STA. 509+40.00 TO STA. 518+11.53	= 871.53′
STA. 519+30.12 TO STA. 535+75.39	= 1645.27′
STA. 678+20.78 TO STA. 680+83.39	= 262.61′



DETAIL A
(LEFT & RIGHT SIDE OF MEDIAN)
NOT TO SCALE



SHOULDER BUILDUP & WIDENING - NORMAL SECTION

LIMITING STATIONS:

STA. 401+85.36 TO STA. 404+48.73	= 263.37′
STA. 409+04.65 TO STA. 411+98.02 (BK)/ 411+40.00 (AH)	= 293.37′
STA. 415+40.00 TO STA. 418+92.16	= 352.16′
STA. 420+25.40 TO STA. 425+37.63	= 512.23′
STA. 513+03.83 TO STA. 518+13.45	= 509.62′
STA. 519+31.70 TO STA. 524+40.39	= 508.69′
STA. 530+20.40 TO STA. 531+09.88	= 89.48′
STA. 681+76.41 TO STA. 685+22.27	= 345.86′

△2 0′, STA. 401+85.36 TO STA. 402+40.93

SEE CROSSOVER DETAILS, STA. 402+40.93 TO STA. 404+48.73

0′, STA. 409+04.65 TO STA. 410+14.64

2′, STA. 410+14.64 TO STA. 411+24.64

TAPER 2′ TO 3′, STA. 411+24.64 TO STA. 411+98.02 (BK)/411+40.00 (AH)

8′, STA. 415+40.00 TO STA. 416+46.28

TAPER 8′ TO 5′, STA. 416+46.28 TO STA. 418+11.28

5′, STA. 418+11.28 TO STA. 418+92.16

5′, STA. 420+25.40 TO STA. 421+33.40

TAPER 5′ TO 8′, STA. 421+33.40 TO STA. 422+98.40

8′, STA. 422+98.40 TO STA. 424+26.86

SEE CROSSOVER DETAILS, STA. 424+26.86 TO STA. 425+37.63
STA. 513+03.83 TO STA. 513+99.55

8′, STA. 513+99.55 TO STA. 515+11.80

TAPER 8′ TO 5′, STA. 515+11.80 TO STA. 517+86.80

5′, STA. 517+86.80 TO STA. 518+15.45

5′, STA. 519+31.70 TO STA. 519+58.11

TAPER 5′ TO 8′, STA. 519+58.11 TO STA. 522+33.11

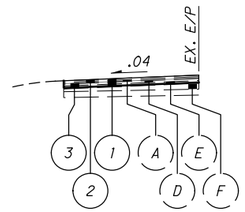
8′, STA. 522+33.11 TO STA. 523+44.67

SEE CROSSOVER DETAILS, STA. 523+44.67 TO STA. 524+40.39

0′, STA. 530+20.40 TO STA. 530+39.63

SEE CROSSOVER DETAILS, STA. 530+39.63 TO STA. 531+09.88
STA. 682+75.55 TO STA. 686+38.14

0′, STA. 686+38.14 TO STA. 687+17.00



DETAIL B
NOT TO SCALE

STA. 407+18.02 TO
STA. 411+98.02 (BK)/411+40.00 (AH)

LEGEND

(A) 1¾″(±) ASPHALT CONCRETE SURFACE COURSE

(B) 1¾″(±) ASPHALT CONCRETE INTERMEDIATE COURSE

(C) 2″(±) ASPHALT CONCRETE

(D) 2″(±) ASPHALT CONCRETE BASE

(E) 3″(±) WATERPROOF AGGREGATE

(F) 3″-6″ POROUS AGGREGATE

(G) 9″(±) CONCRETE

(H) 6″(±) SUBBASE

(1) ITEM 254 - PAVEMENT PLANING, 7.5″ DEPTH

(2) ITEM 448 - 3″ ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2

(3) ITEM 301 - 4½″ ASPHALT CONCRETE BASE

(4) ITEM 204 - 10″ GRANULAR MATERIAL, TYPE B (304 GRADATION)

(5) ITEM 206 - CEMENT STABILIZED SUBGRADE, 12″ DEEP

(6) ITEM 206 - CEMENT STABILIZED SUBGRADE, 14″ DEEP

(7) ITEM 206 - CURING COAT

(8) ITEM 204 - EXCAVATION OF SUBGRADE, 3′ DEEP

(9) ITEM 204 - EXCAVATION OF SUBGRADE, 2.5′ DEEP

(10) ITEM 204 - GRANULAR MATERIAL, TYPE B

(11) ITEM 832 - CONSTRUCTION SEEDING & MULCHING

(12) ITEM 204 - SUBGRADE COMPACTION

(13) ITEM 204 - PROOF ROLLING

(14) ITEM 304 - 10″ AGGREGATE BASE (PER 615.05)

(15) ITEM 605 - 6″ BASE PIPE UNDERDRAIN

APPROVED FOR CONSTRUCTION - 6/8/2010

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

BEL-70-7.61

△1 5′, STA. 411+98.02 (BK)/411+40 (AH) TO STA. 415+40.00

18′, STA. 506+40.00 TO STA. 507+49.73

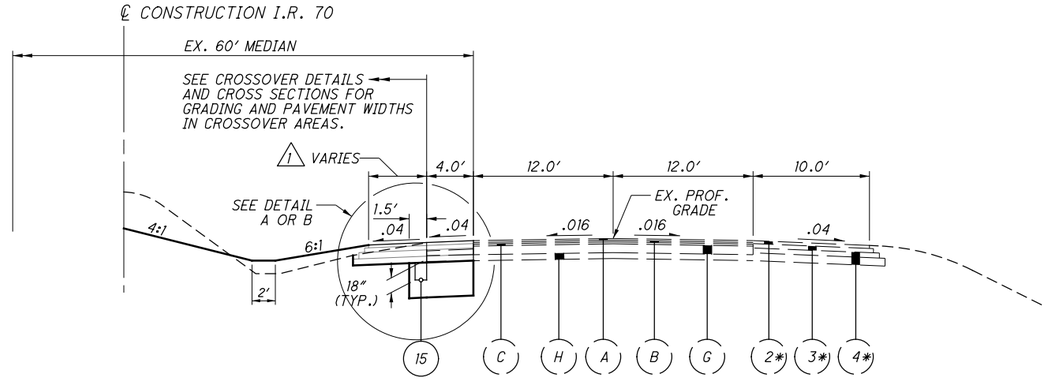
SEE CROSSOVER DETAILS, STA. 507+49.73 TO STA. 509+40.00

NOTE:

EXISTING OUTSIDE LANE AND SHOULDER WIDTHS VARY AT RAMP ACCELERATION AND DECELERATION LANES.

USE ITEM 5 INSTEAD OF ITEM 6.

* PLACED IN BUILDABLE UNIT 1.



SHOULDER BUILDUP & WIDENING - NORMAL SECTION

LIMITING STATIONS:

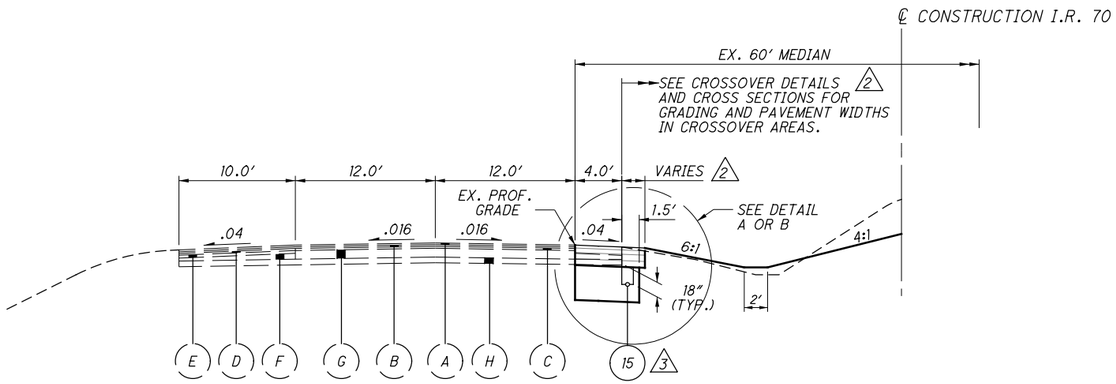
STA. 411+98.02 (BK)/411+40.00 (AH) TO STA. 415+40.00 = 400.00′
STA. 506+40.00 TO STA. 509+40.00 = 300.00′

△2 3.3′,STA. 411+98.02 (BK)/411+40 (AH) TO STA. 412+03.80

SEE CROSSOVER DETAILS, STA. 412+03.80 TO STA. 414+46.28

8′, STA. 414+46.28 TO STA. 415+40.00

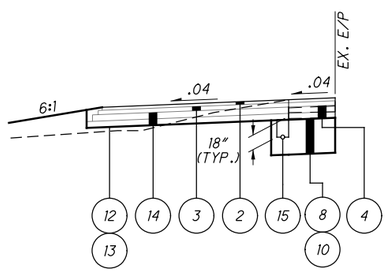
△3 UNDERDRAIN TO BE INSTALLED FROM STA. 411+50.85 TO STA. 415+40.00



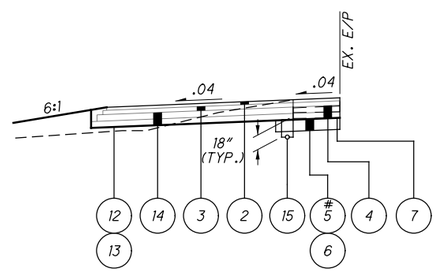
SHOULDER BUILDUP & WIDENING - NORMAL SECTION

LIMITING STATIONS:

STA. 411+98.02 (BK)/411+40.00 (AH) TO STA. 415+40.00 = 400.00′



DETAIL A - UNDERCUT OPTION
(LEFT & RIGHT SIDE OF MEDIAN)
NOT TO SCALE



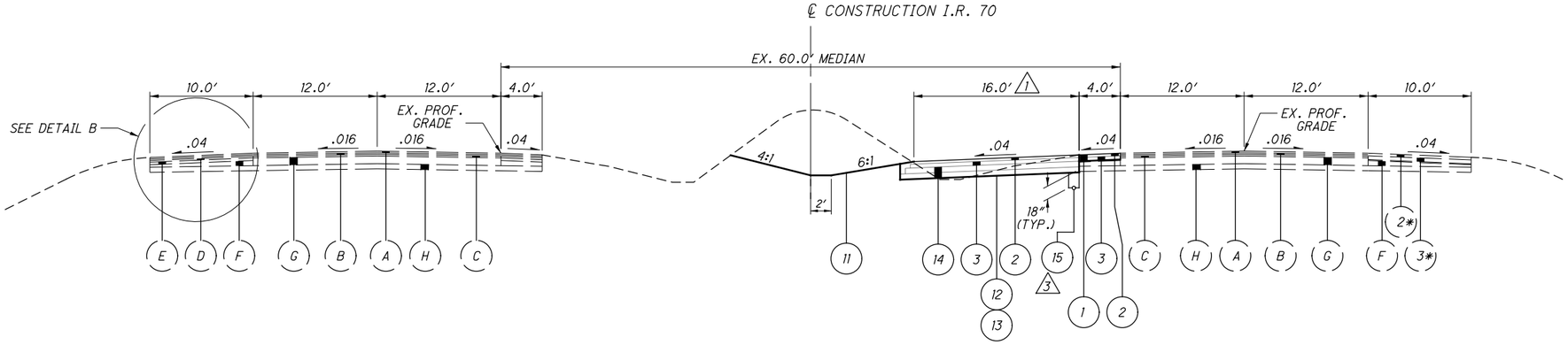
DETAIL B - CEMENT STABILIZATION OPTION
(LEFT & RIGHT SIDE OF MEDIAN)
NOT TO SCALE

FOR LEGEND, SEE SHEET 14

APPROVED FOR CONSTRUCTION - 6/8/2010

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

BEL-70-7.61



SHOULDER BUILDUP & WIDENING - NORMAL SECTION

LIMITING STATIONS:

STA. 433+60.38 TO STA. 457+40.00	= 2379.62'
STA. 497+57.49 TO STA. 502+18.22	= 460.73'
STA. 503+70.00 TO STA. 506+40.00	= 270.00'
STA. 535+75.39 TO STA. 551+46.01	= 1570.62'
STA. 581+40.00 TO STA. 597+40.00	= 1600.00'
STA. 601+40.00 TO STA. 661+40.00	= 6000.00'
STA. 665+40.00 TO STA. 678+20.78	= 1280.78'

1 WIDTH 16' EXCEPT AS NOTED BELOW:
27', STA. 497+57.49 TO STA. 502+18.22

TAPER 16' TO 18', STA. 504+94.73 TO STA. 505+49.73

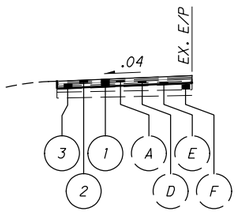
18', STA. 505+49.73 TO STA. 506+40.00

STA. 16' TO 19', STA. 675+10.78 TO STA. 676+20.78
19', STA. 676+20.78' TO STA. 678+20.78

2 WIDTH 16' EXCEPT AS NOTED BELOW:
TAPER 16' TO 27', STA. 488+79.96 TO STA. 494+84.96

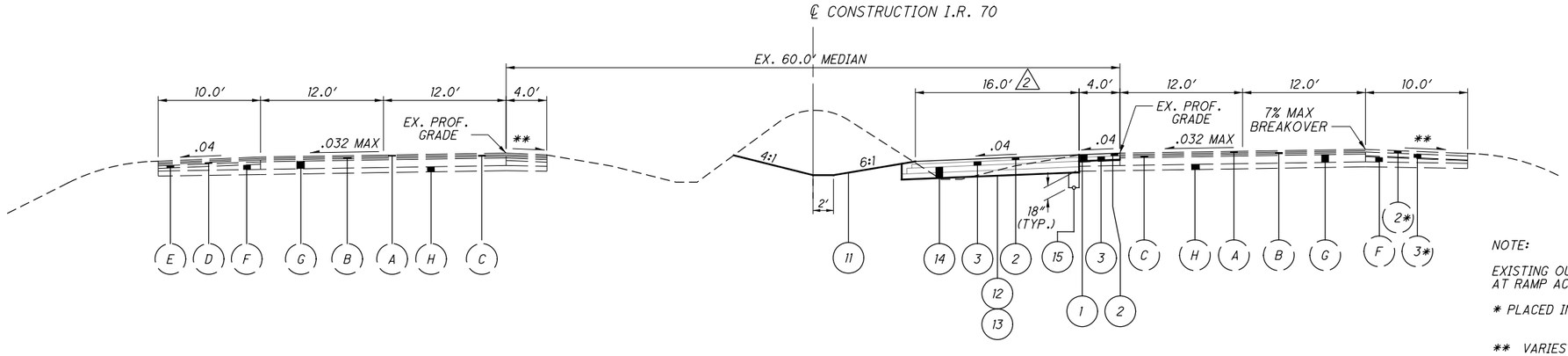
27', STA. 494+84.96 TO STA. 497+57.49

3 UNDERDRAIN TO BE INSTALLED IN BUILDABLE UNIT 4, FROM STA. 651+75.00 TO STA. 661+40.00



DETAIL B
NOT TO SCALE

STA. 407+18.02 (BK) TO
STA. 411+98.02 (BK)



SHOULDER BUILDUP & WIDENING - SUPERELEVATED SECTION

LIMITING STATIONS:

STA. 473+40.00 TO STA. 497+57.49	= 2417.49'
STA. 551+46.01 TO STA. 577+40.00	= 2593.99' (SUPERELEVATION DIRECTION REVERSED)

NOTE:

EXISTING OUTSIDE LANE AND SHOULDER WIDTHS VARY AT RAMP ACCELERATION AND DECELERATION LANES.

* PLACED IN BUILDABLE UNIT 1.

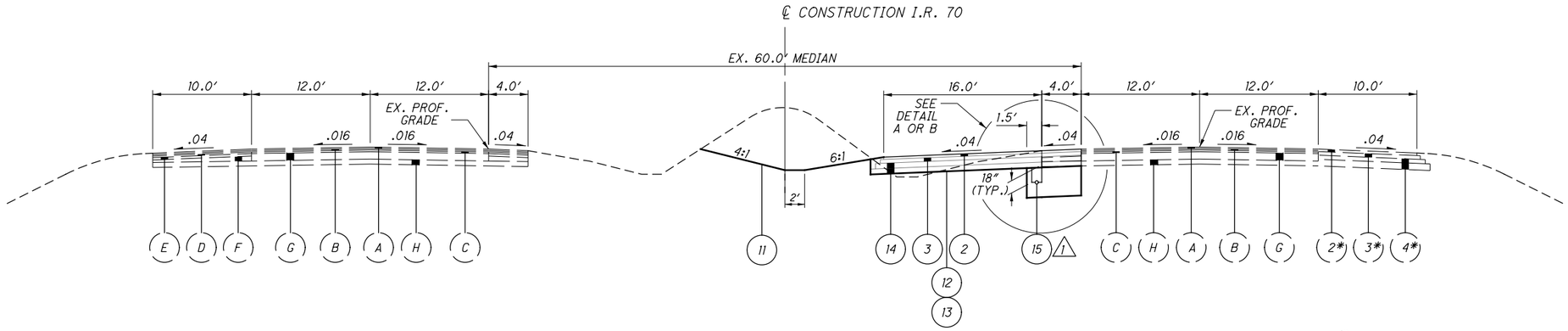
** VARIES .038 TO .04

FOR LEGEND, SEE SHEET 14

APPROVED FOR CONSTRUCTION - 6/8/2010

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

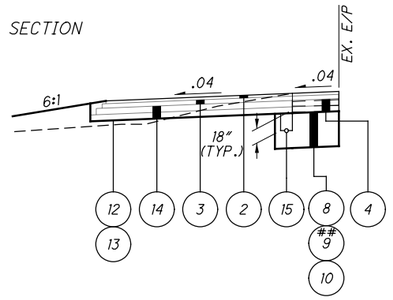
BEL-70-7.61



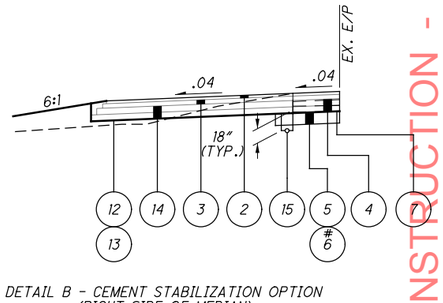
SHOULDER REPLACEMENT & WIDENING WITH UNDERCUT & STABILIZATION - NORMAL SECTION

LIMITING STATIONS:

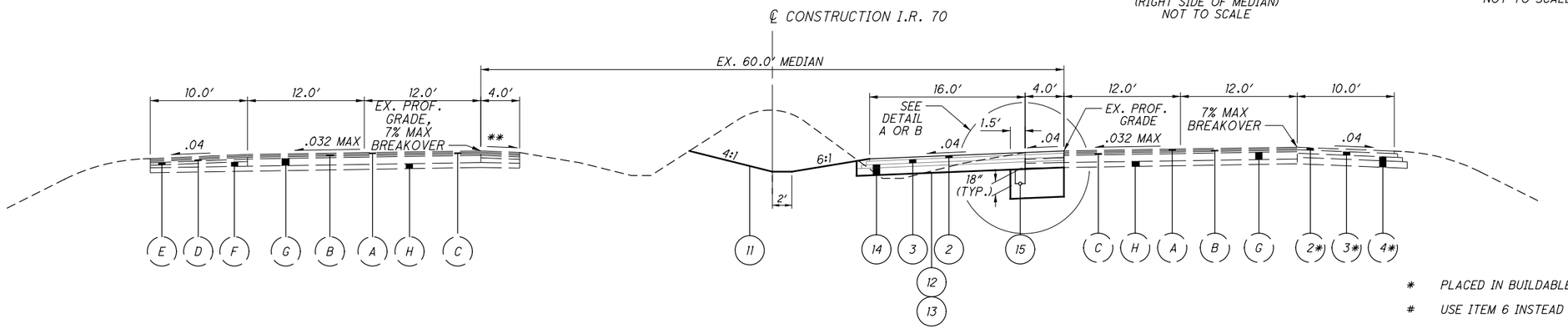
##	STA. 457+40.00 TO STA. 461+01.43	= 361.43′
##	STA. 581+07.59 TO STA. 581+40.00	= 32.41′
	STA. 597+40.00 TO STA. 601+40.00	= 400.00′
	STA. 661+40.00 TO STA. 665+40.00	= 400.00′



DETAIL A - UNDERCUT OPTION
(RIGHT SIDE OF MEDIAN)
NOT TO SCALE



DETAIL B - CEMENT STABILIZATION OPTION
(RIGHT SIDE OF MEDIAN)
NOT TO SCALE



SHOULDER REPLACEMENT & WIDENING WITH UNDERCUT & STABILIZATION - SUPERELEVATED SECTION

LIMITING STATIONS:

##	STA. 461+01.43 TO STA. 461+40.00	= 38.57′
#	STA. 461+40.00 TO STA. 473+40.00	= 1200.00′
##	STA. 577+40.00 TO STA. 581+07.59	= 367.59′ (SUPERELEVATION DIRECTION REVERSED)

* PLACED IN BUILDABLE UNIT 1.

\# USE ITEM 6 INSTEAD OF ITEM 5.

USE ITEM 9 INSTEAD OF ITEM 8.

NOTE:

EXISTING OUTSIDE LANE AND SHOULDER WIDTHS VARY AT RAMP ACCELERATION AND DECELERATION LANES.

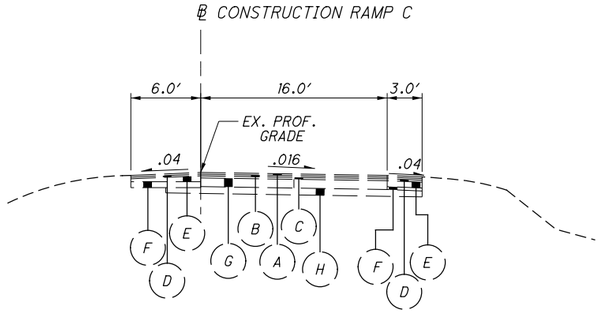
** VARIES .038 TO .04

/1 UNDERDRAIN TO BE INSTALLED IN BUILDABLE UNIT 4, FROM STA. 661+40.00 TO STA. 664+25.00

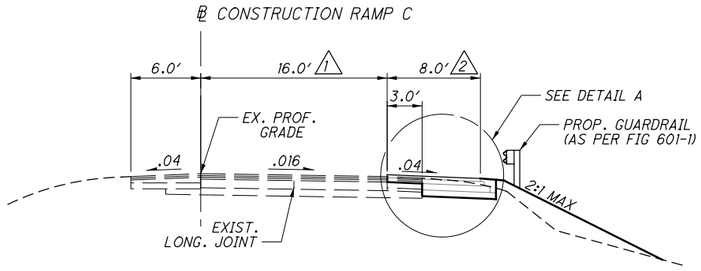
FOR LEGEND, SEE SHEET 14

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

BEL-70-7.61



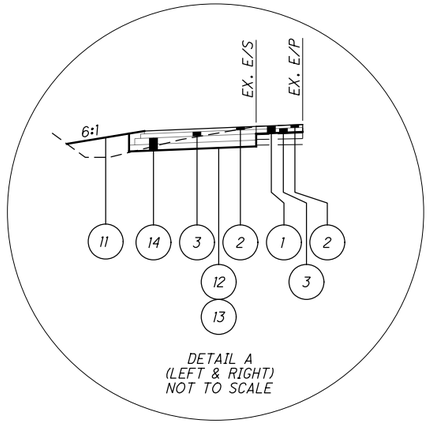
EXISTING PAVEMENT



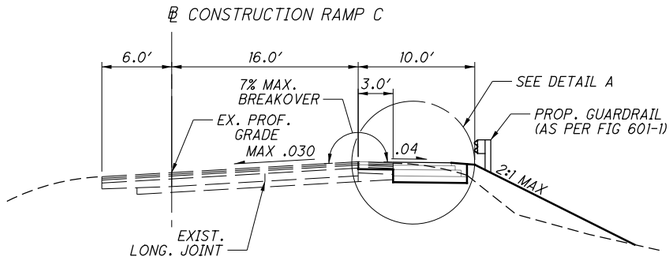
SHOULDER BUILDUP & WIDENING - NORMAL SECTION

LIMITING STATIONS:

S.R. 149 STA. 130+41.05 TO STA. 0+72.51 = 85.50′
STA. 0+72.51 TO STA. 5+60.95 = 488.44′



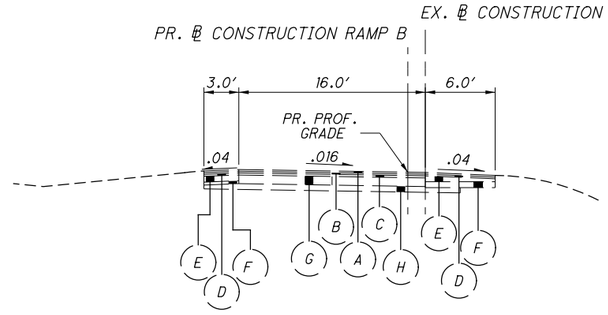
DETAIL A
(LEFT & RIGHT)
NOT TO SCALE



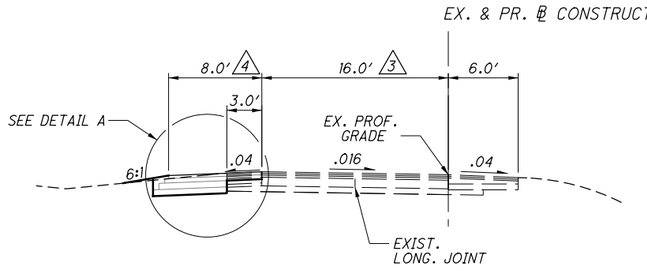
SHOULDER BUILDUP & WIDENING - SUPERELEVATED SECTION

LIMITING STATIONS:

STA. 5+60.95 TO STA. 8+83.90 = 322.95′



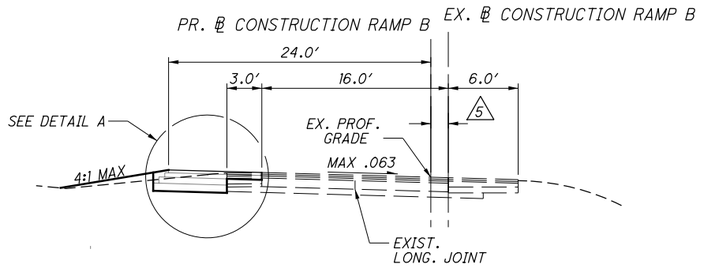
EXISTING PAVEMENT



SHOULDER BUILDUP & WIDENING - NORMAL SECTION

LIMITING STATIONS:

S.R. 149 STA. 126+14.88 TO STA. 0+75.72 = 98.30′
STA. 0+75.72 TO STA. 1+43.11 = 67.39′
STA. 2+56.78 TO STA. 4+21.53 = 164.75′



SHOULDER BUILDUP & WIDENING - SUPERELEVATED SECTION

LIMITING STATIONS:

STA. 1+43.11 TO STA. 2+56.78 = 113.67′ (SUPERELEVATION DIRECTION REVERSED)
STA. 4+21.53 TO STA. 9+27.29 = 505.76′

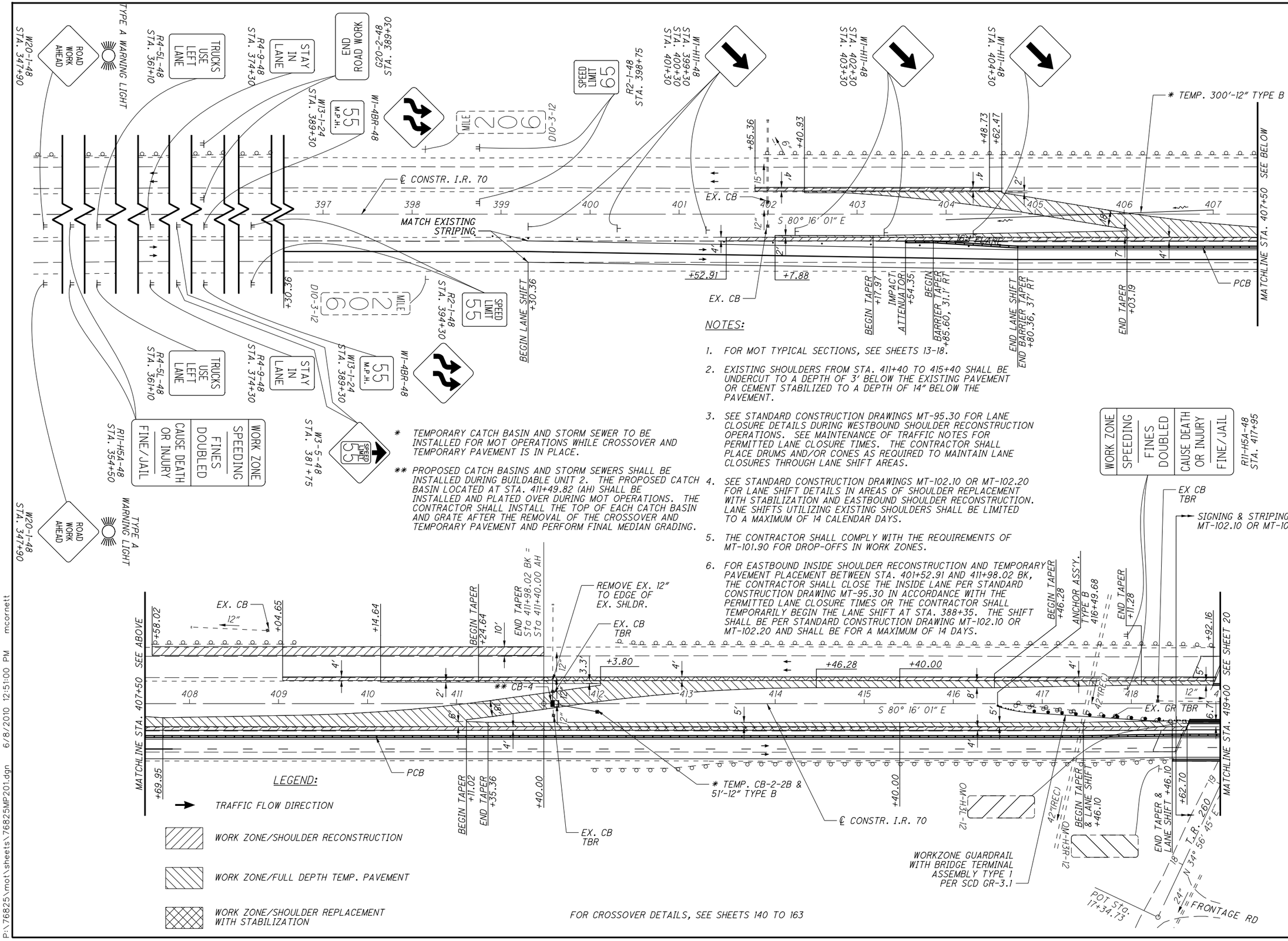
1. VARIES SEE PLAN SHEETS, S.R. 149 STA. 130+41.05 TO RAMP C STA. 0+72.51
2. 0′, S.R. 149 STA. 130+41.05 TO S.R. 149 STA. 130+58.76
   VARIES 5′ TO 12′, S.R. 149 STA. 130+58.76 TO RAMP C STA. 0+72.51
   12′, STA. 0+72.51 TO STA. 3+25.00
   VARIES 12′ TO 8′, STA. 3+25.00 TO STA. 4+06.67
3. VARIES SEE PLAN SHEETS, S.R. 149 STA. 126+14.88 TO RAMP B STA. 0+75.72
   VARIES 21.4′ TO 16′, STA. 0+75.72 TO STA. 1+19.80
4. 0′, S.R. 149 STA. 126+14.88 TO RAMP B STA. 0+75.72
5. VARIES 0′ TO 5.88′
   EX. ℄ STA. 4+21.53 TO 11+39.12

FOR LEGEND, SEE SHEET 14

APPROVED FOR CONSTRUCTION - 6/8/2010

MAINTENANCE OF TRAFFIC RAMPS B & C
PHASE II - TYPICAL SECTIONS

BEL-70-7.61



APPROVED FOR CONSTRUCTION - 6/8/2010

CALCULATED MJC
CHECKED BBD

HORIZONTAL SCALE IN FEET
0 25 50 100

MAINTENANCE OF TRAFFIC
PHASE II - STA. 395+00 TO STA. 419+00

BEL-70-7.61

19
210

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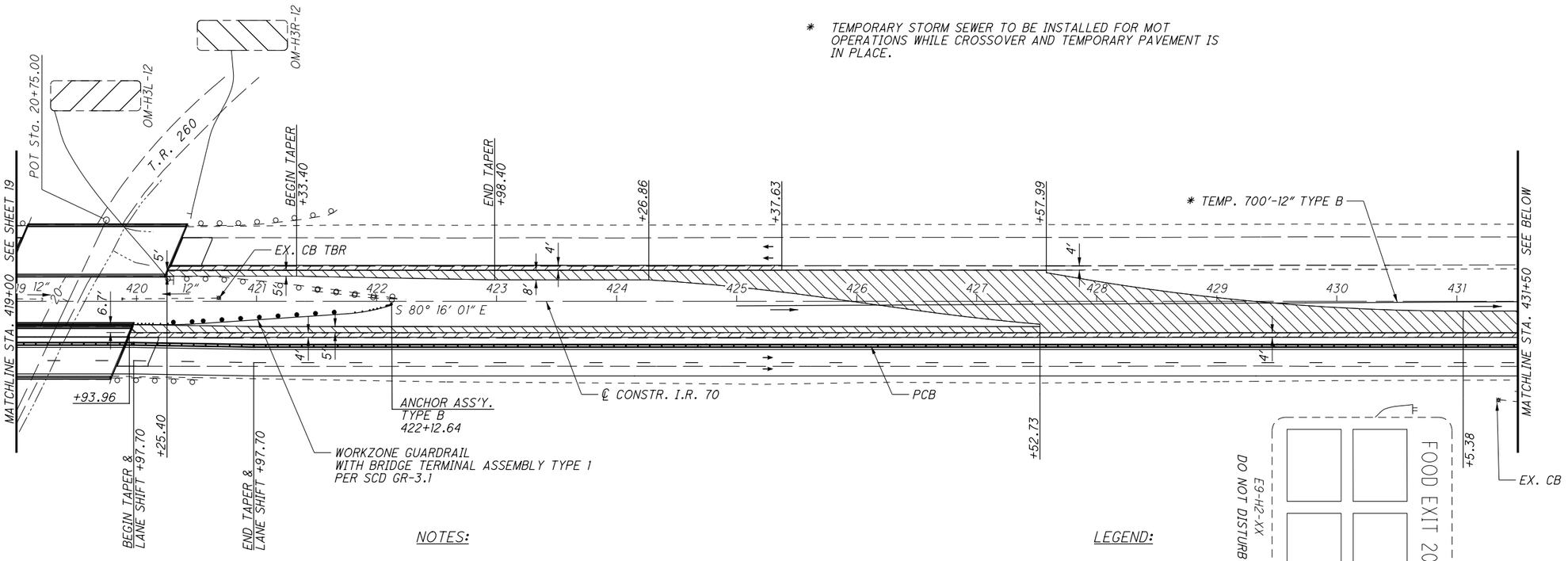


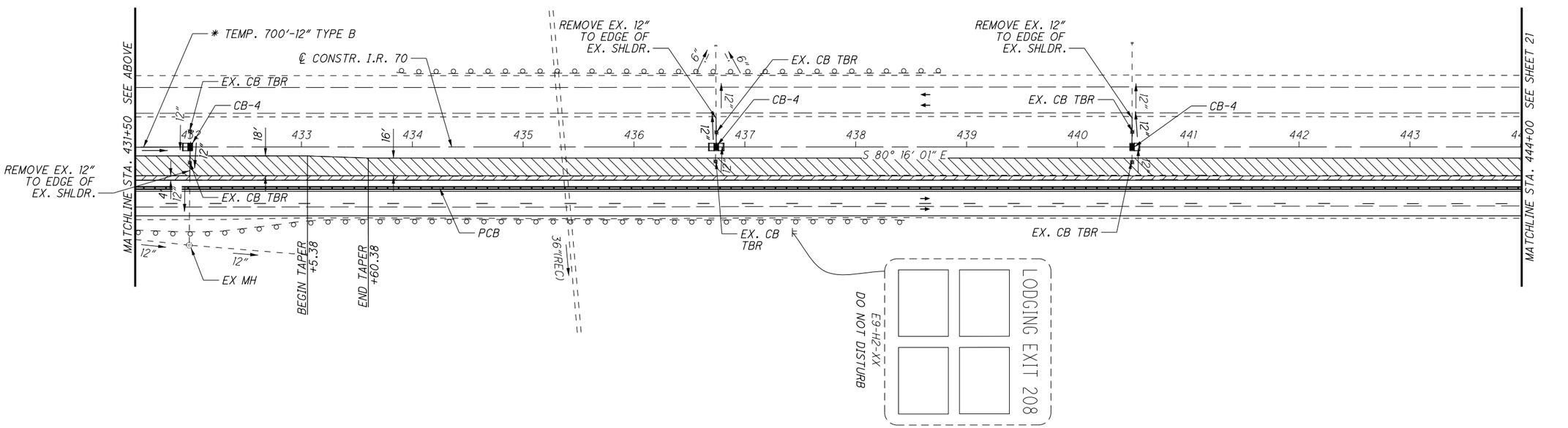
NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 13-18.
2. SEE STANDARD CONSTRUCTION DRAWINGS MT-95.30 FOR LANE CLOSURE DETAILS DURING WESTBOUND SHOULDER RECONSTRUCTION OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
3. SEE STANDARD CONSTRUCTION DRAWINGS MT-102.10 OR MT-102.20 FOR LANE SHIFT DETAILS DURING EASTBOUND SHOULDER RECONSTRUCTION.
4. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.

FOR CROSSOVER DETAILS, SEE SHEETS 140 TO 163

LEGEND:

- TRAFFIC FLOW DIRECTION
- WORK ZONE/SHOULDER RECONSTRUCTION
- WORK ZONE/FULL DEPTH TEMP. PAVEMENT
- WORK ZONE/SHOULDER REPLACEMENT WITH STABILIZATION



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

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MJC
CHECKED BBD

BEL-70-7.61

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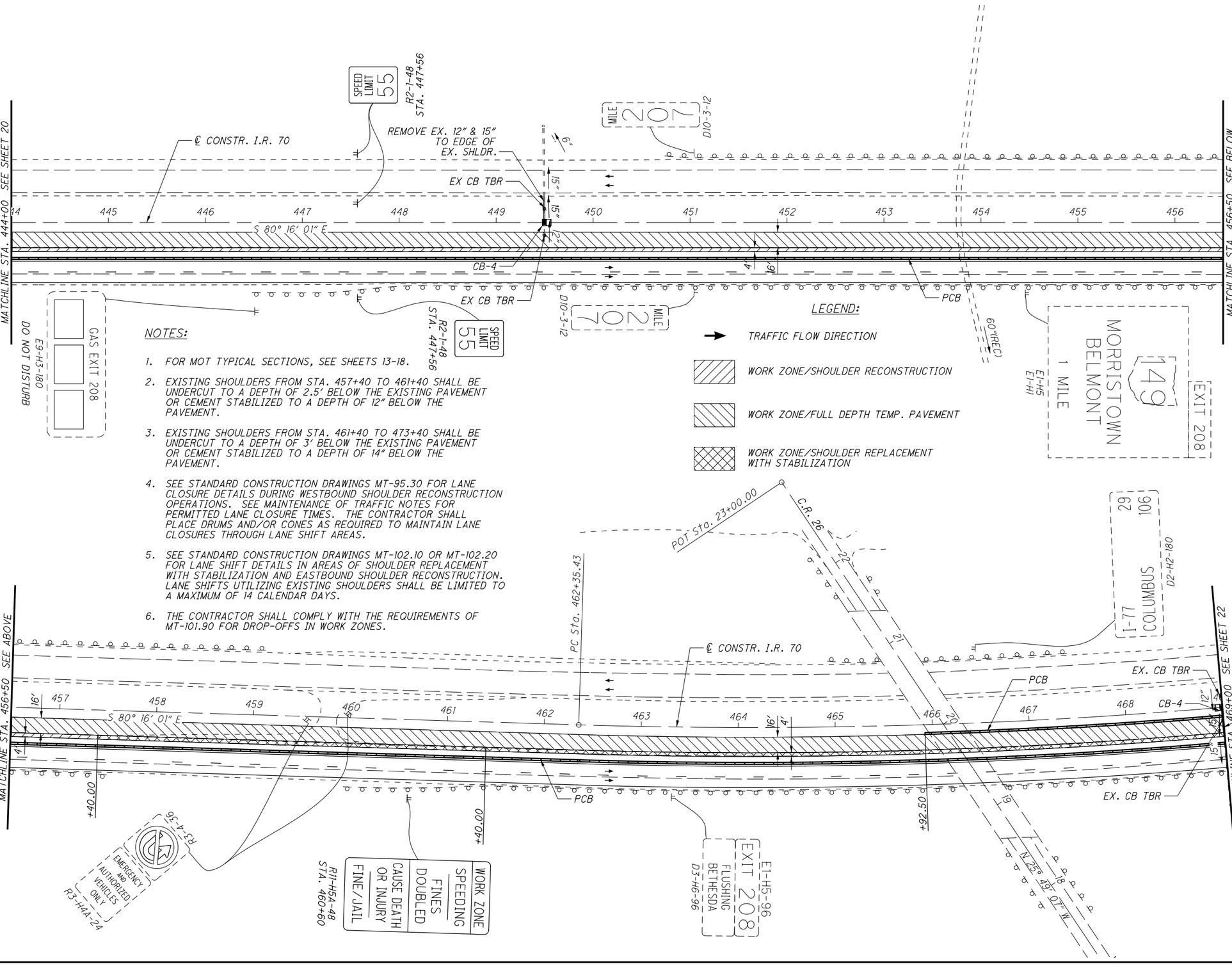

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APPROVED FOR CONSTRUCTION - 6/8/2010

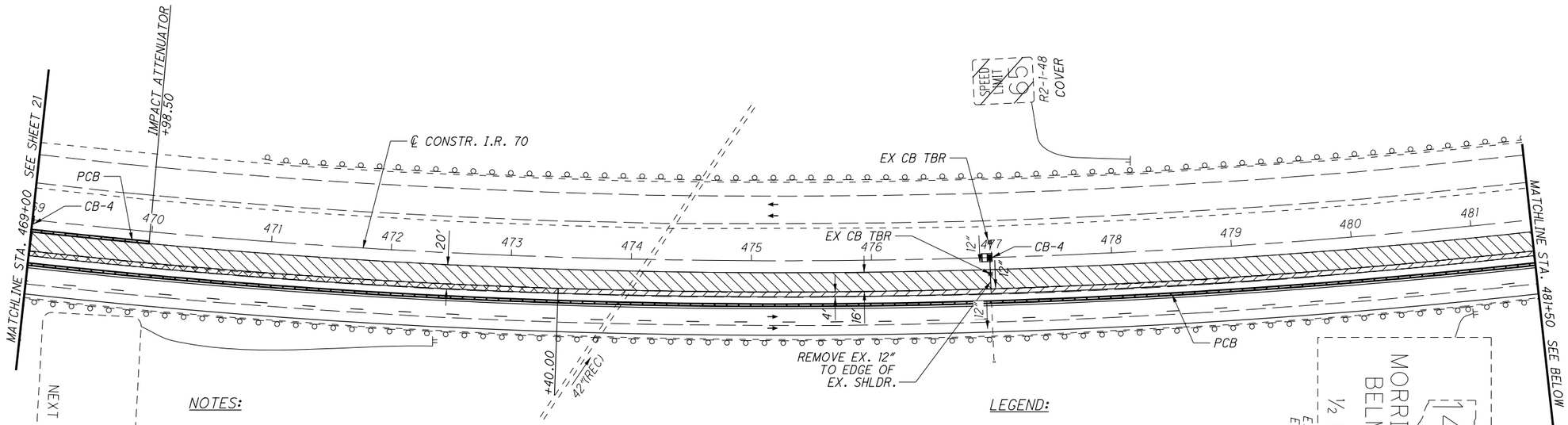
HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MJC
CHECKED BBD

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

BEL-70-7.61

21
210

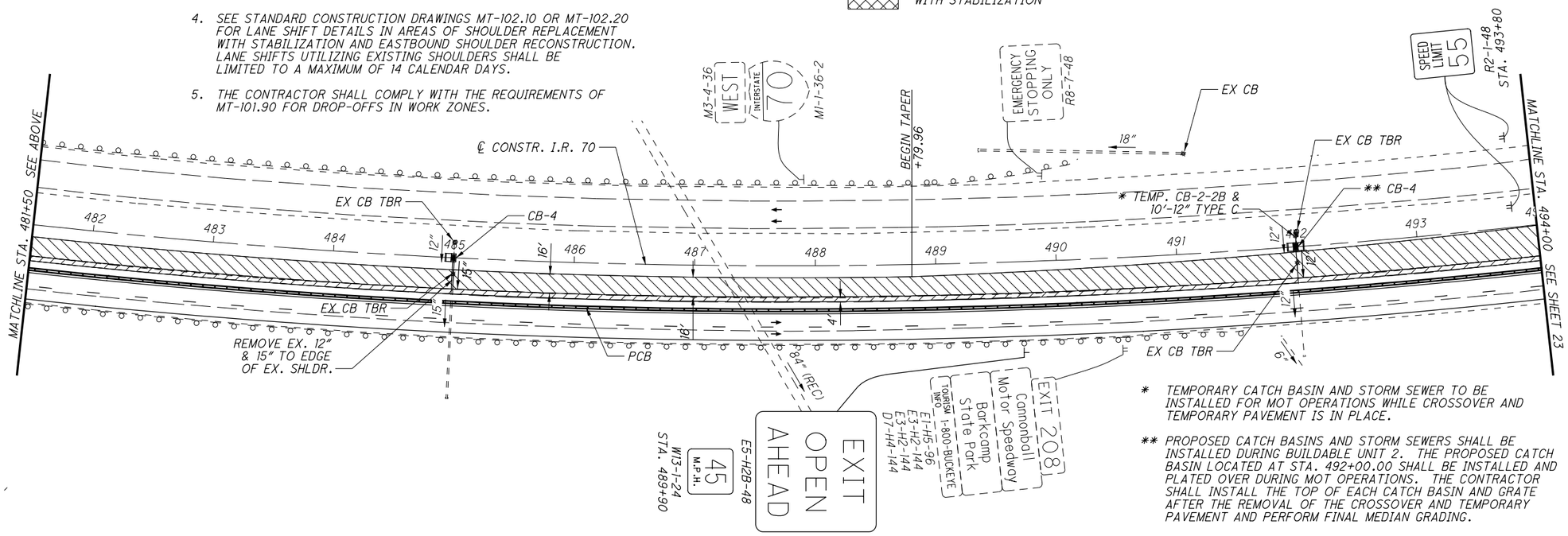


NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 13-18.
2. EXISTING SHOULDERS FROM STA. 461+40 TO 473+40 SHALL BE UNDERCUT TO A DEPTH OF 3' BELOW THE EXISTING PAVEMENT OR CEMENT STABILIZED TO A DEPTH OF 14" BELOW THE PAVEMENT.
3. SEE STANDARD CONSTRUCTION DRAWINGS MT-95.30 FOR LANE CLOSURE DETAILS DURING WESTBOUND SHOULDER RECONSTRUCTION OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES. THE CONTRACTOR SHALL PLACE DRUMS AND/OR CONES AS REQUIRED TO MAINTAIN LANE CLOSURES THROUGH LANE SHIFT AREAS.
4. SEE STANDARD CONSTRUCTION DRAWINGS MT-102.10 OR MT-102.20 FOR LANE SHIFT DETAILS IN AREAS OF SHOULDER REPLACEMENT WITH STABILIZATION AND EASTBOUND SHOULDER RECONSTRUCTION. LANE SHIFTS UTILIZING EXISTING SHOULDERS SHALL BE LIMITED TO A MAXIMUM OF 14 CALENDAR DAYS.
5. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.

LEGEND:

- TRAFFIC FLOW DIRECTION
- WORK ZONE/SHOULDER RECONSTRUCTION
- WORK ZONE/FULL DEPTH TEMP. PAVEMENT
- WORK ZONE/SHOULDER REPLACEMENT WITH STABILIZATION



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

** PROPOSED CATCH BASINS AND STORM SEWERS SHALL BE INSTALLED DURING BUILDABLE UNIT 2. THE PROPOSED CATCH BASIN LOCATED AT STA. 492+00.00 SHALL BE 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.

APPROVED FOR CONSTRUCTION - 6/8/2010

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MJC
CHECKED BBD

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

BEL-70-7.61

22
210

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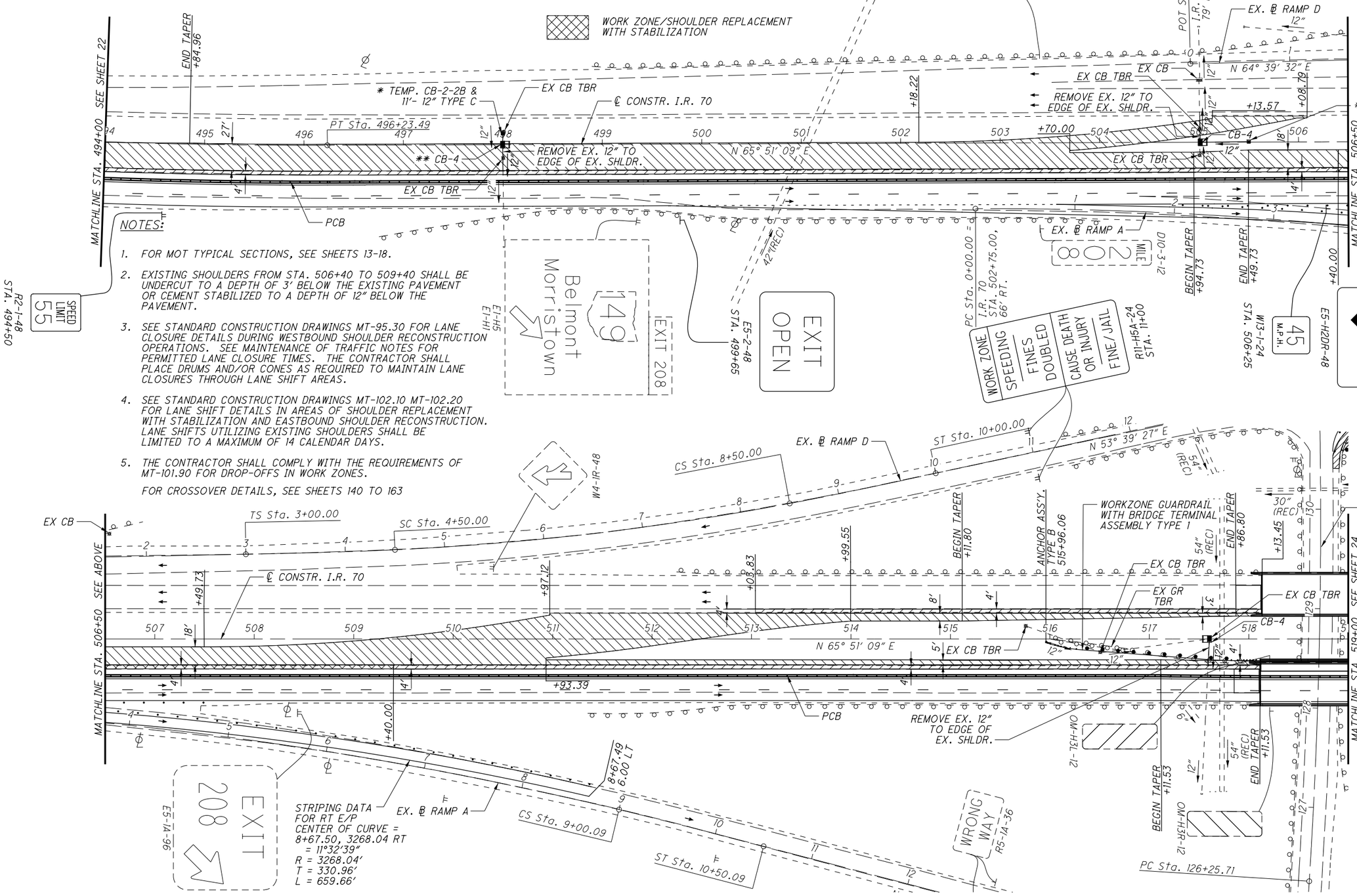
* TEMPORARY CATCH BASIN AND STORM SEWER TO BE INSTALLED FOR MOT OPERATIONS WHILE CROSSOVER AND TEMPORARY PAVEMENT IS IN PLACE.

** PROPOSED CATCH BASINS AND STORM SEWERS SHALL BE INSTALLED DURING BUILDABLE UNIT 2. THE PROPOSED CATCH BASIN LOCATED AT STA. 498+00.00 SHALL BE 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
- WORK ZONE/SHOULDER RECONSTRUCTION
- WORK ZONE/FULL DEPTH TEMP. PAVEMENT
- WORK ZONE/SHOULDER REPLACEMENT WITH STABILIZATION



APPROVED FOR CONSTRUCTION - 6/8/2010

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

CALCULATED MJC | CHECKED BBD

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

BEL-70-7.61

23
210

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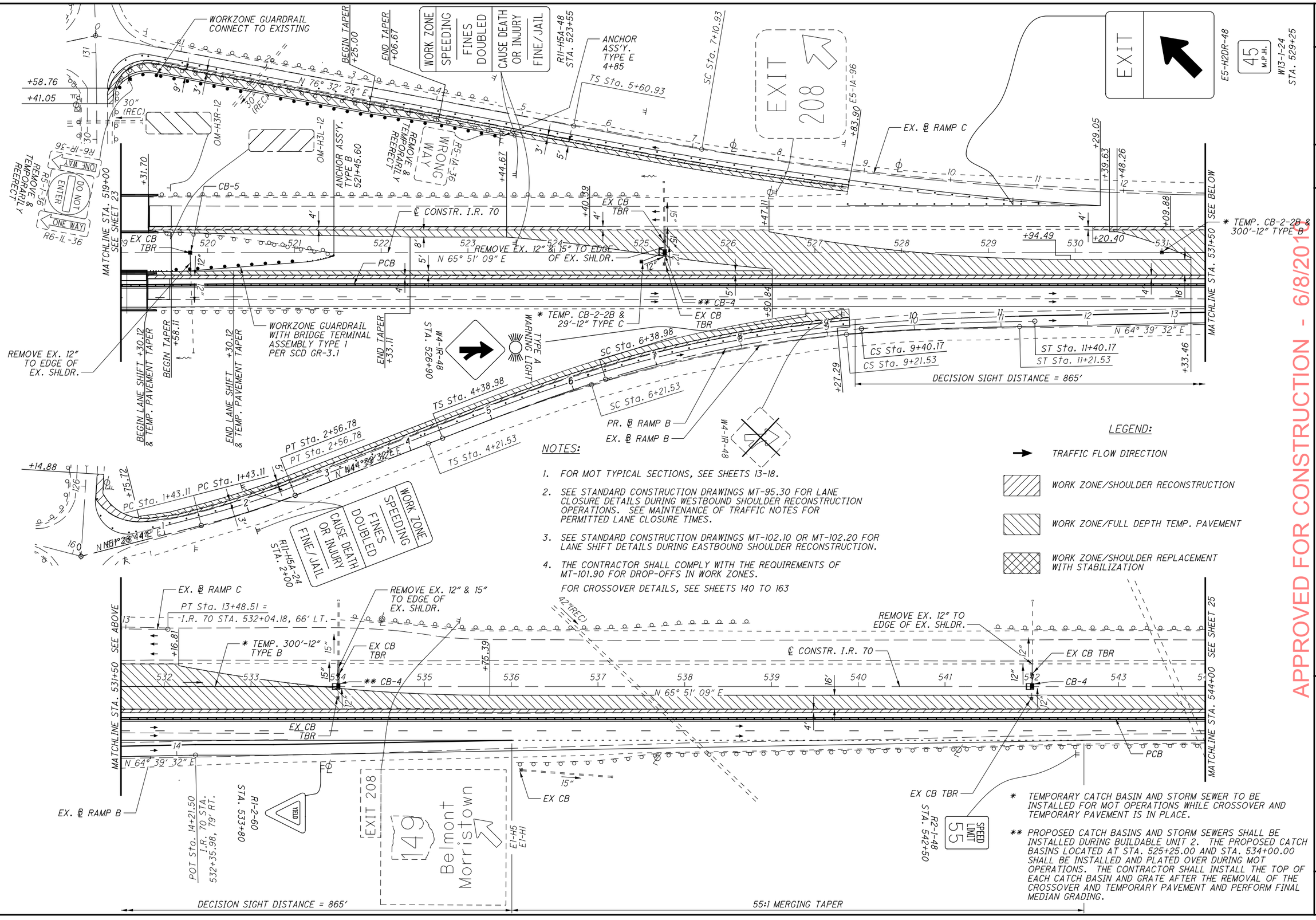

APPROVED FOR CONSTRUCTION - 6/8/2010

MAINTENANCE OF TRAFFIC
PHASE II - STA. 519+00 TO STA. 544+00

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MJC
CHECKED BBD

BEL-70-7.61

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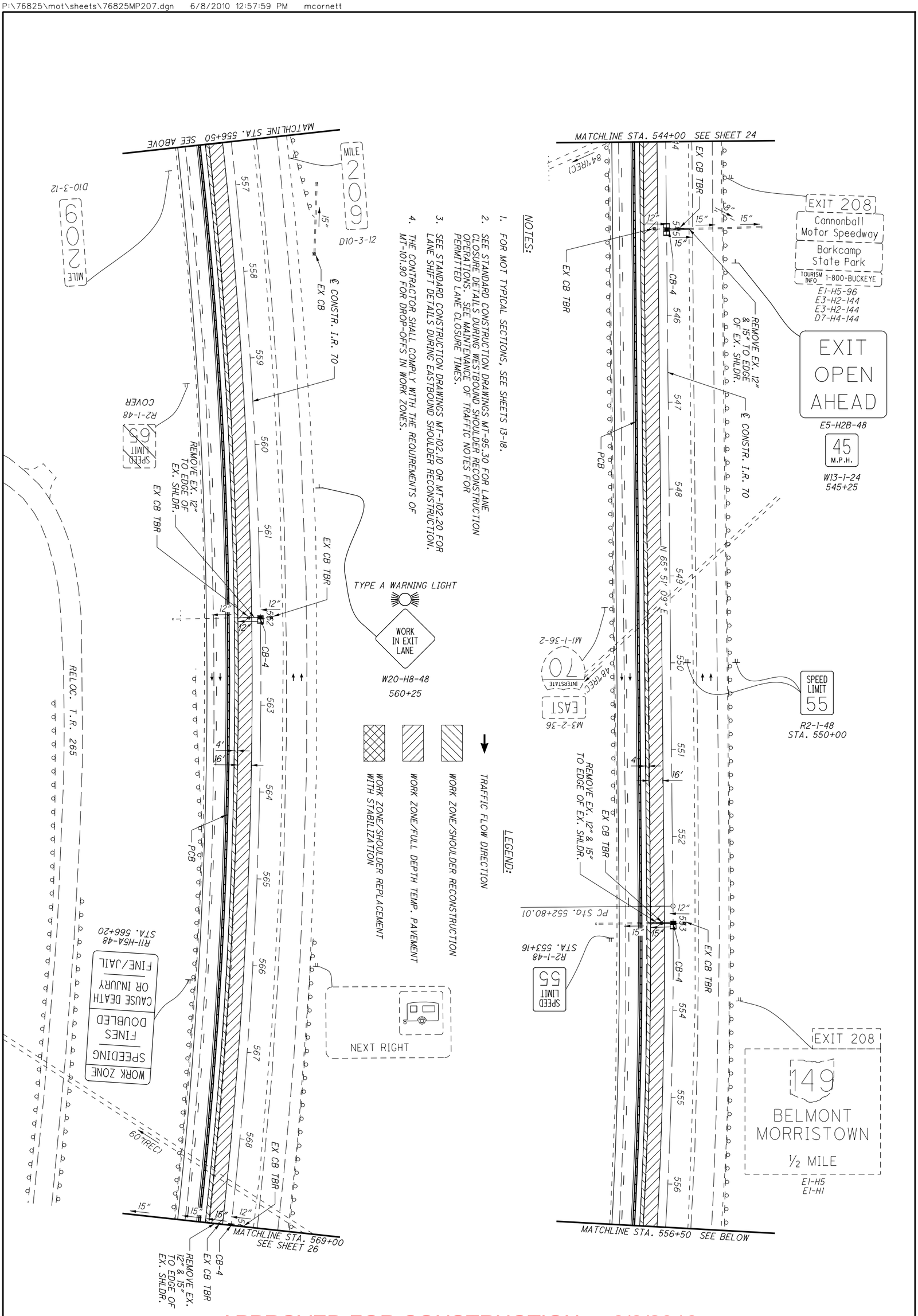
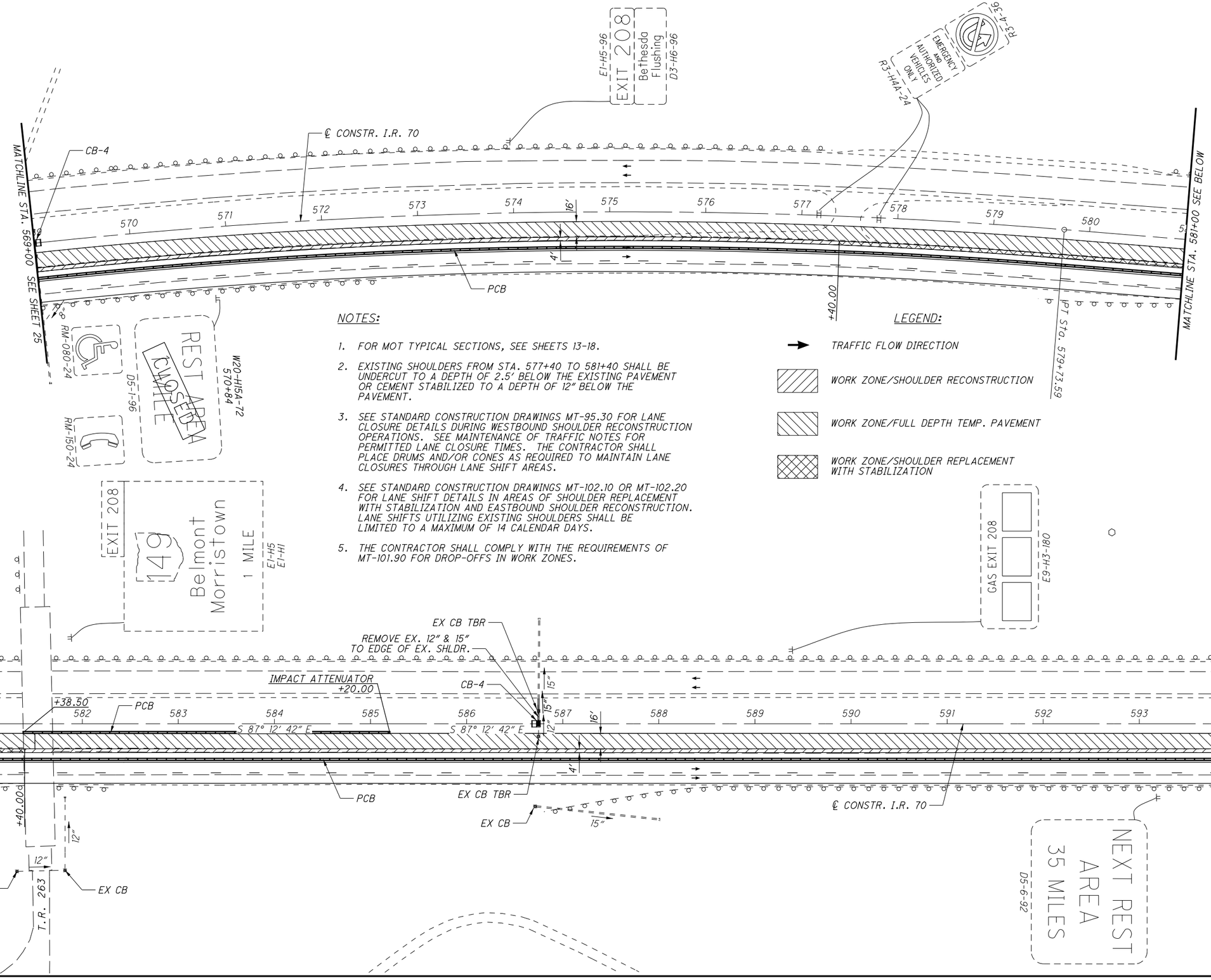


APPROVED FOR CONSTRUCTION - 6/8/2010

25/210	BEL-70-7.61	MAINTENANCE OF TRAFFIC PHASE II - STA. 544+00 TO STA. 569+00	CALCULATED MJC CHECKED BBD	0 50 25 100 HORIZONTAL SCALE IN FEET



NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 13-18.
2. EXISTING SHOULDERS FROM STA. 577+40 TO 581+40 SHALL BE UNDERCUT TO A DEPTH OF 2.5' BELOW THE EXISTING PAVEMENT OR CEMENT STABILIZED TO A DEPTH OF 12" BELOW THE PAVEMENT.
3. SEE STANDARD CONSTRUCTION DRAWINGS MT-95.30 FOR LANE CLOSURE DETAILS DURING WESTBOUND SHOULDER RECONSTRUCTION OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES. THE CONTRACTOR SHALL PLACE DRUMS AND/OR CONES AS REQUIRED TO MAINTAIN LANE CLOSURES THROUGH LANE SHIFT AREAS.
4. SEE STANDARD CONSTRUCTION DRAWINGS MT-102.10 OR MT-102.20 FOR LANE SHIFT DETAILS IN AREAS OF SHOULDER REPLACEMENT WITH STABILIZATION AND EASTBOUND SHOULDER RECONSTRUCTION. LANE SHIFTS UTILIZING EXISTING SHOULDERS SHALL BE LIMITED TO A MAXIMUM OF 14 CALENDAR DAYS.
5. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.

LEGEND:

- TRAFFIC FLOW DIRECTION
- WORK ZONE/SHOULDER RECONSTRUCTION
- WORK ZONE/FULL DEPTH TEMP. PAVEMENT
- WORK ZONE/SHOULDER REPLACEMENT WITH STABILIZATION

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MJC
CHECKED BBD

APPROVED FOR CONSTRUCTION - 6/8/2010

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

BEL-70-7.61

26
210

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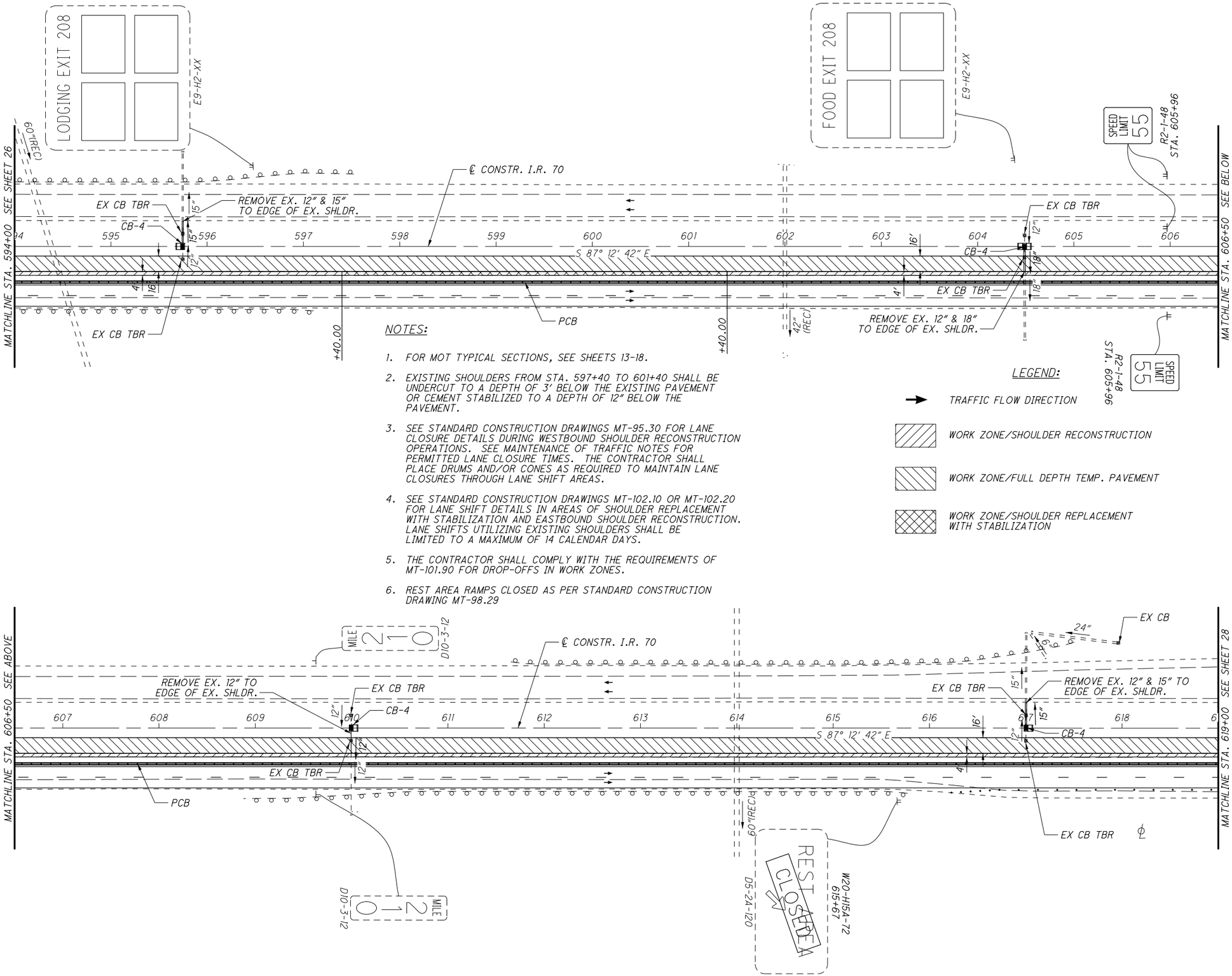

NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 13-18.
2. EXISTING SHOULDERS FROM STA. 597+40 TO 601+40 SHALL BE UNDERCUT TO A DEPTH OF 3' BELOW THE EXISTING PAVEMENT OR CEMENT STABILIZED TO A DEPTH OF 12" BELOW THE PAVEMENT.
3. SEE STANDARD CONSTRUCTION DRAWINGS MT-95.30 FOR LANE CLOSURE DETAILS DURING WESTBOUND SHOULDER RECONSTRUCTION OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES. THE CONTRACTOR SHALL PLACE DRUMS AND/OR CONES AS REQUIRED TO MAINTAIN LANE CLOSURES THROUGH LANE SHIFT AREAS.
4. SEE STANDARD CONSTRUCTION DRAWINGS MT-102.10 OR MT-102.20 FOR LANE SHIFT DETAILS IN AREAS OF SHOULDER REPLACEMENT WITH STABILIZATION AND EASTBOUND SHOULDER RECONSTRUCTION. LANE SHIFTS UTILIZING EXISTING SHOULDERS SHALL BE LIMITED TO A MAXIMUM OF 14 CALENDAR DAYS.
5. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.
6. REST AREA RAMPS CLOSED AS PER STANDARD CONSTRUCTION DRAWING MT-98.29

LEGEND:

- TRAFFIC FLOW DIRECTION
- WORK ZONE/SHOULDER RECONSTRUCTION
- WORK ZONE/FULL DEPTH TEMP. PAVEMENT
- WORK ZONE/SHOULDER REPLACEMENT WITH STABILIZATION

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MJC
CHECKED BBD

APPROVED FOR CONSTRUCTION - 6/8/2010

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

BEL-70-7.61

27
210

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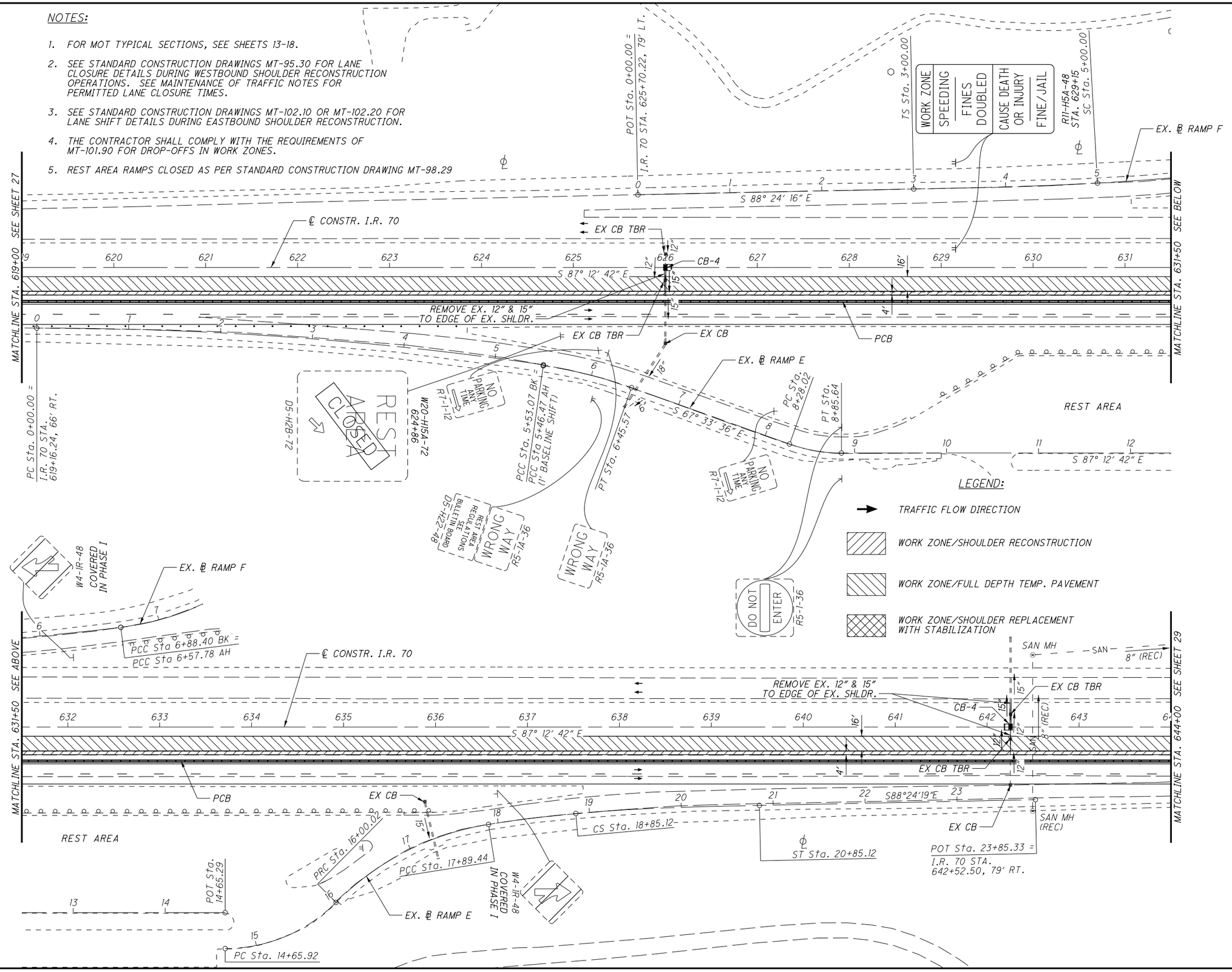
NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 13-18.
2. SEE STANDARD CONSTRUCTION DRAWINGS MT-95.30 FOR LANE CLOSURE DETAILS DURING WESTBOUND SHOULDER RECONSTRUCTION OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES.
3. SEE STANDARD CONSTRUCTION DRAWINGS MT-102.10 OR MT-102.20 FOR LANE SHIFT DETAILS DURING EASTBOUND SHOULDER RECONSTRUCTION.
4. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.
5. REST AREA RAMPS CLOSED AS PER STANDARD CONSTRUCTION DRAWING MT-98.29



LEGEND:

- TRAFFIC FLOW DIRECTION
- WORK ZONE/SHOULDER RECONSTRUCTION
- WORK ZONE/FULL DEPTH TEMP. PAVEMENT
- WORK ZONE/SHOULDER REPLACEMENT WITH STABILIZATION

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

CALCULATED MJC | CHECKED BBD

APPROVED FOR CONSTRUCTION - 6/8/2010

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

BEL-70-7.61

28
210

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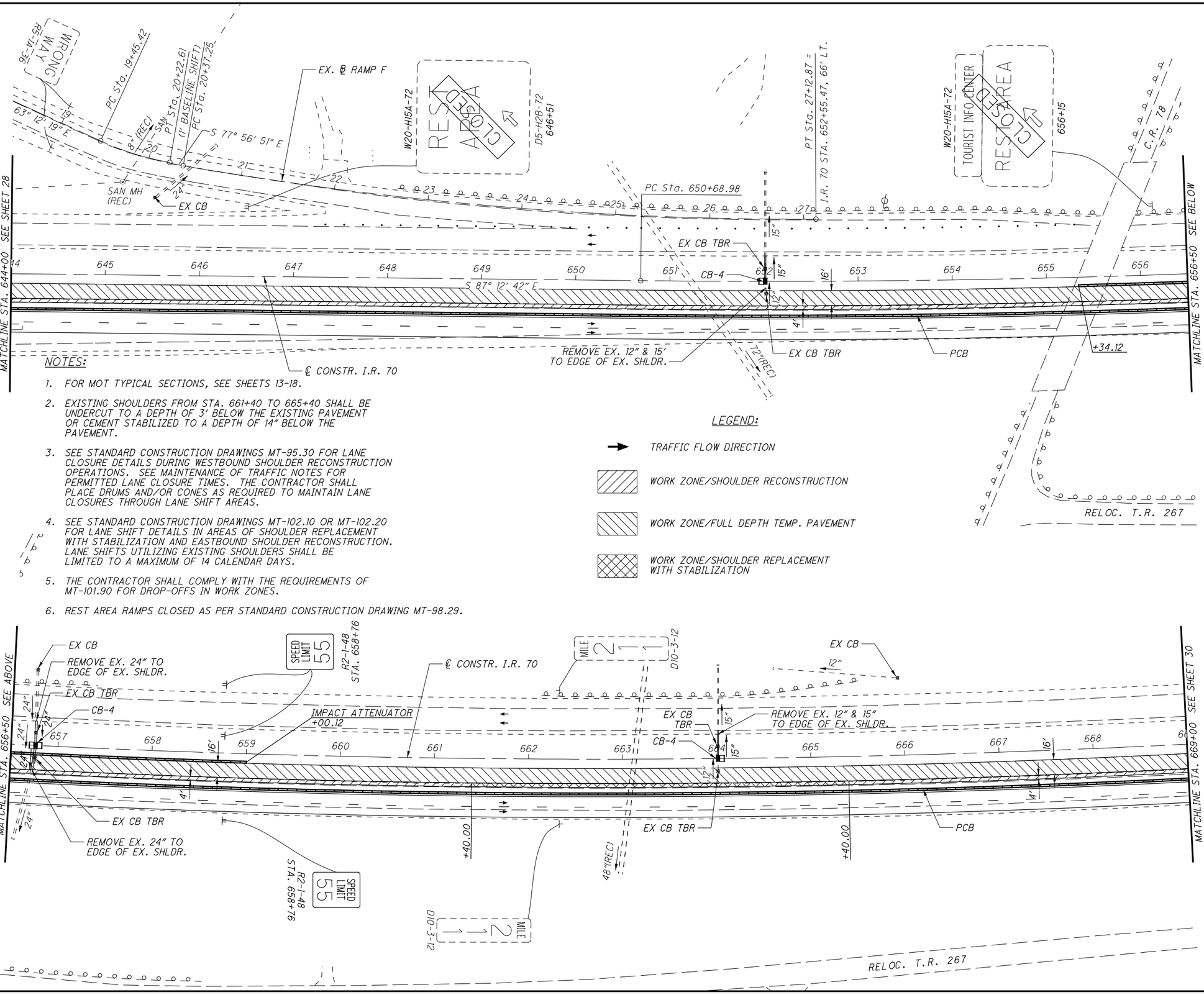

NOTES:

1. FOR MOT TYPICAL SECTIONS, SEE SHEETS 13-18.
2. EXISTING SHOULDERS FROM STA. 661+40 TO 665+40 SHALL BE UNDERCUT TO A DEPTH OF 3' BELOW THE EXISTING PAVEMENT OR CEMENT STABILIZED TO A DEPTH OF 14" BELOW THE PAVEMENT.
3. SEE STANDARD CONSTRUCTION DRAWINGS MT-95.30 FOR LANE CLOSURE DETAILS DURING WESTBOUND SHOULDER RECONSTRUCTION OPERATIONS. SEE MAINTENANCE OF TRAFFIC NOTES FOR PERMITTED LANE CLOSURE TIMES. THE CONTRACTOR SHALL PLACE DRUMS AND/OR CONES AS REQUIRED TO MAINTAIN LANE CLOSURES THROUGH LANE SHIFT AREAS.
4. SEE STANDARD CONSTRUCTION DRAWINGS MT-102.10 OR MT-102.20 FOR LANE SHIFT DETAILS IN AREAS OF SHOULDER REPLACEMENT WITH STABILIZATION AND EASTBOUND SHOULDER RECONSTRUCTION. LANE SHIFTS UTILIZING EXISTING SHOULDERS SHALL BE LIMITED TO A MAXIMUM OF 14 CALENDAR DAYS.
5. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MT-101.90 FOR DROP-OFFS IN WORK ZONES.
6. REST AREA RAMPS CLOSED AS PER STANDARD CONSTRUCTION DRAWING MT-98.29.

LEGEND:

- TRAFFIC FLOW DIRECTION
- WORK ZONE/SHOULDER RECONSTRUCTION
- WORK ZONE/FULL DEPTH TEMP. PAVEMENT
- WORK ZONE/SHOULDER REPLACEMENT WITH STABILIZATION

APPROVED FOR CONSTRUCTION - 6/8/2010

MAINTENANCE OF TRAFFIC

PHASE II - STA. 644+00 TO STA. 669+00

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

CALCULATED: MJC

CHECKED: BBD

BEL-70-7.61

29
210

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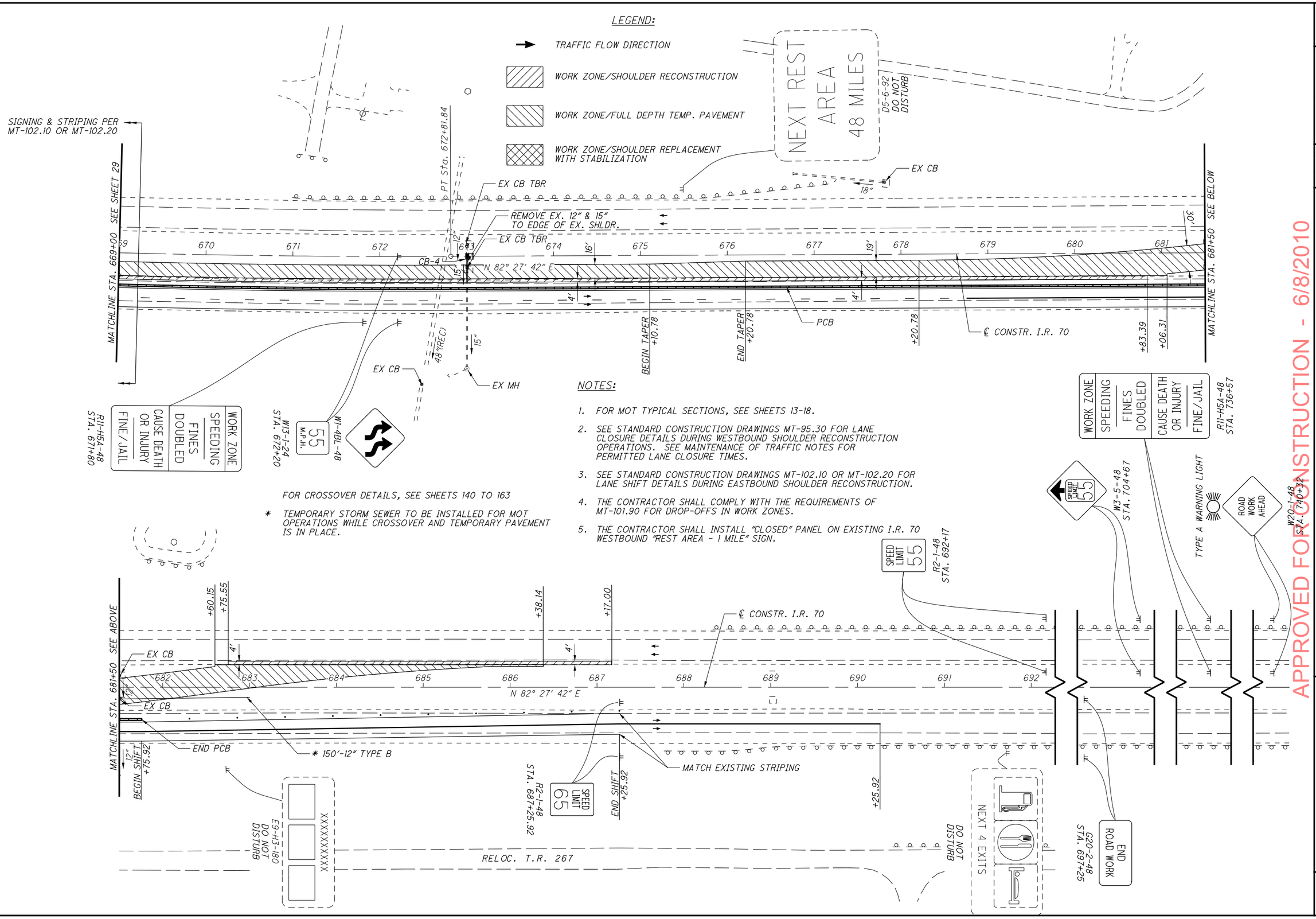

APPROVED FOR CONSTRUCTION - 6/8/2010

MAINTENANCE OF TRAFFIC
PHASE II - STA. 669+00 TO STA. 694+00

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

CALCULATED MJC | CHECKED BBD

BEL-70-7.61

30
210

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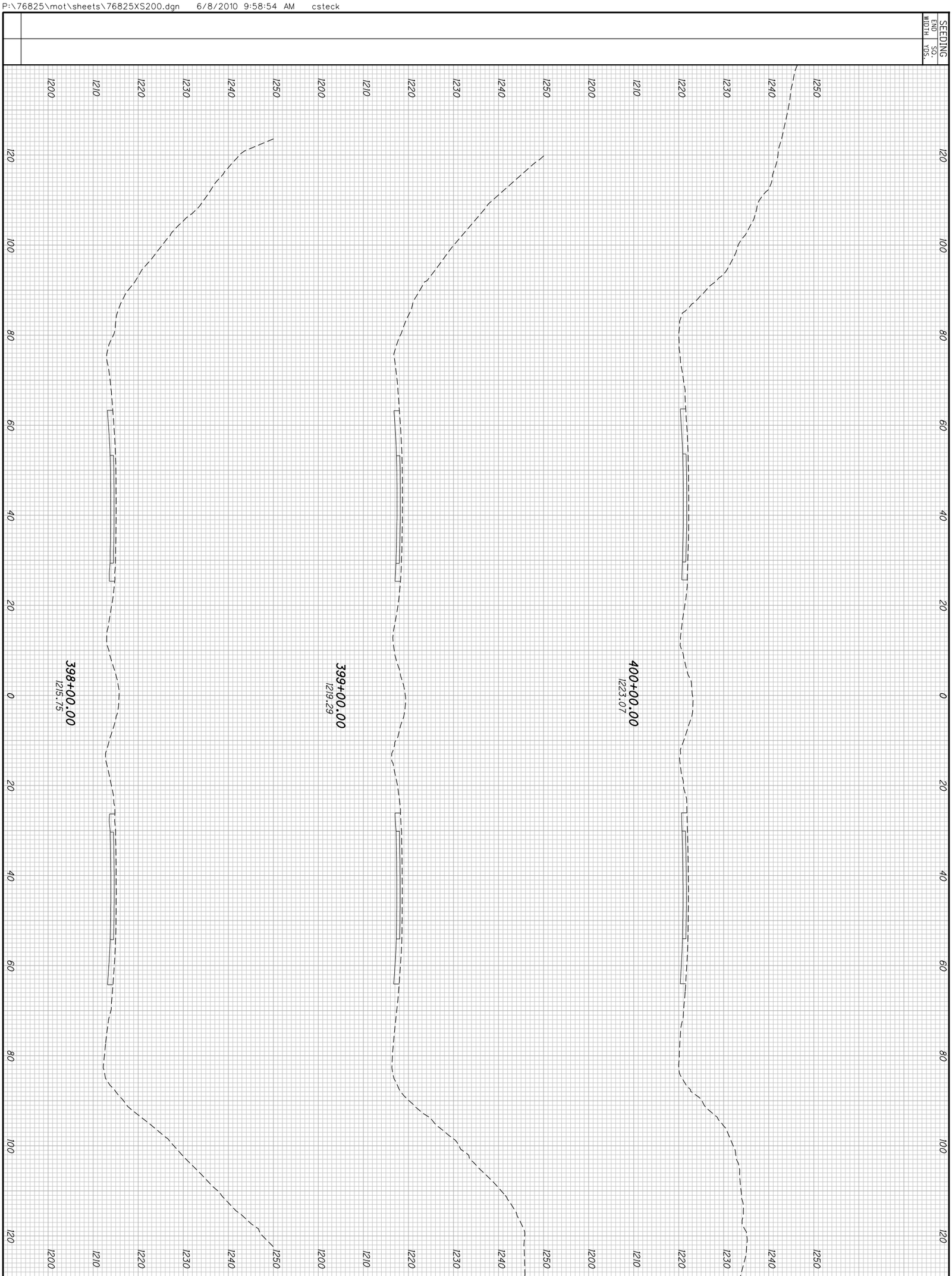

APPROVED FOR CONSTRUCTION - 6/8/2010

31
210

BEL-70-7.61

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

CALCULATED MJC
CHECKED BBD

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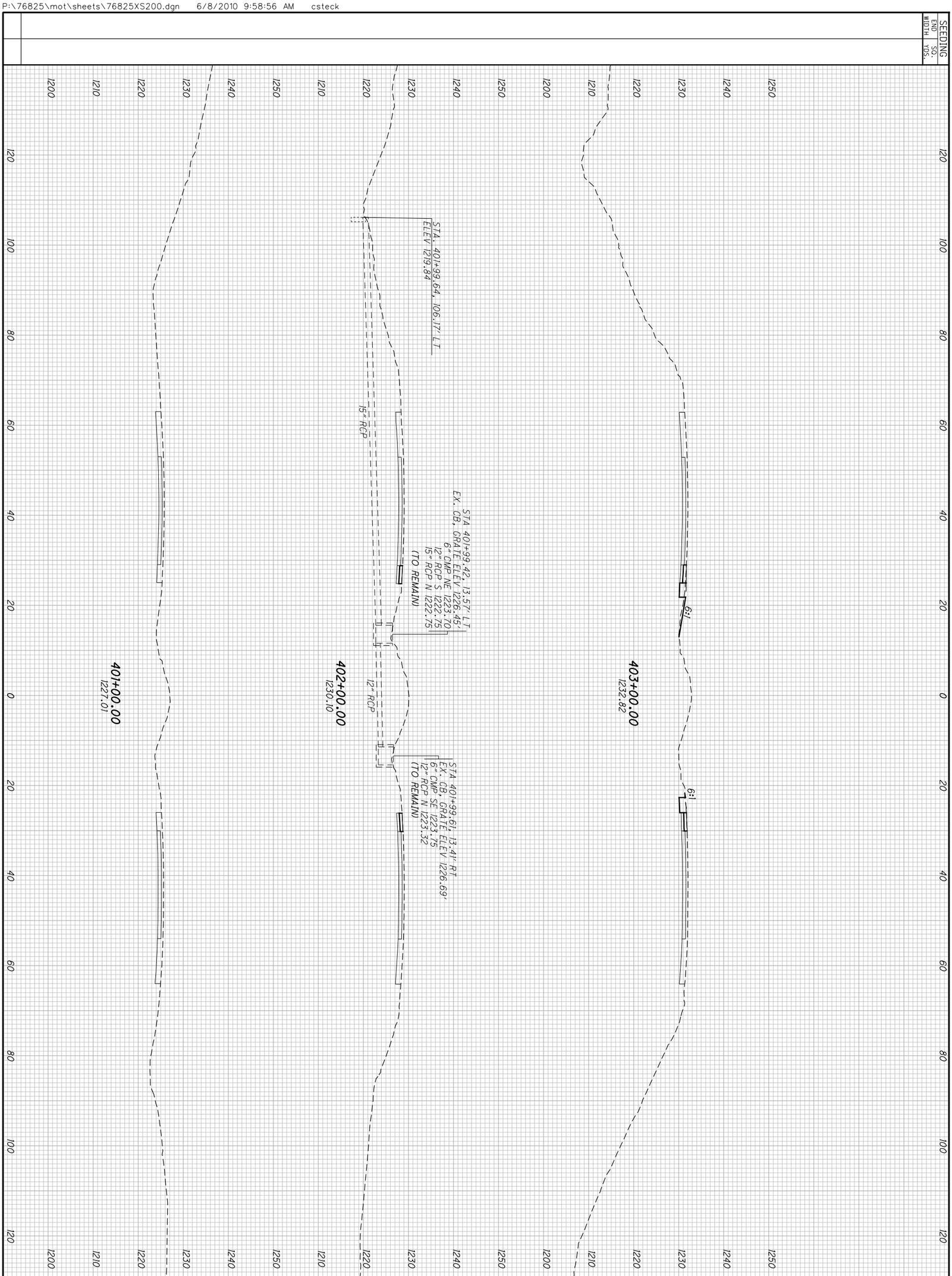


APPROVED FOR CONSTRUCTION - 6/8/2010

32 / 210	BEL-70-7.61	CROSS SECTIONS - I.R. 70 PHASE II STA. 401+00.00 TO STA. 403+00.00

CALCULATED MJC
CHECKED BBD

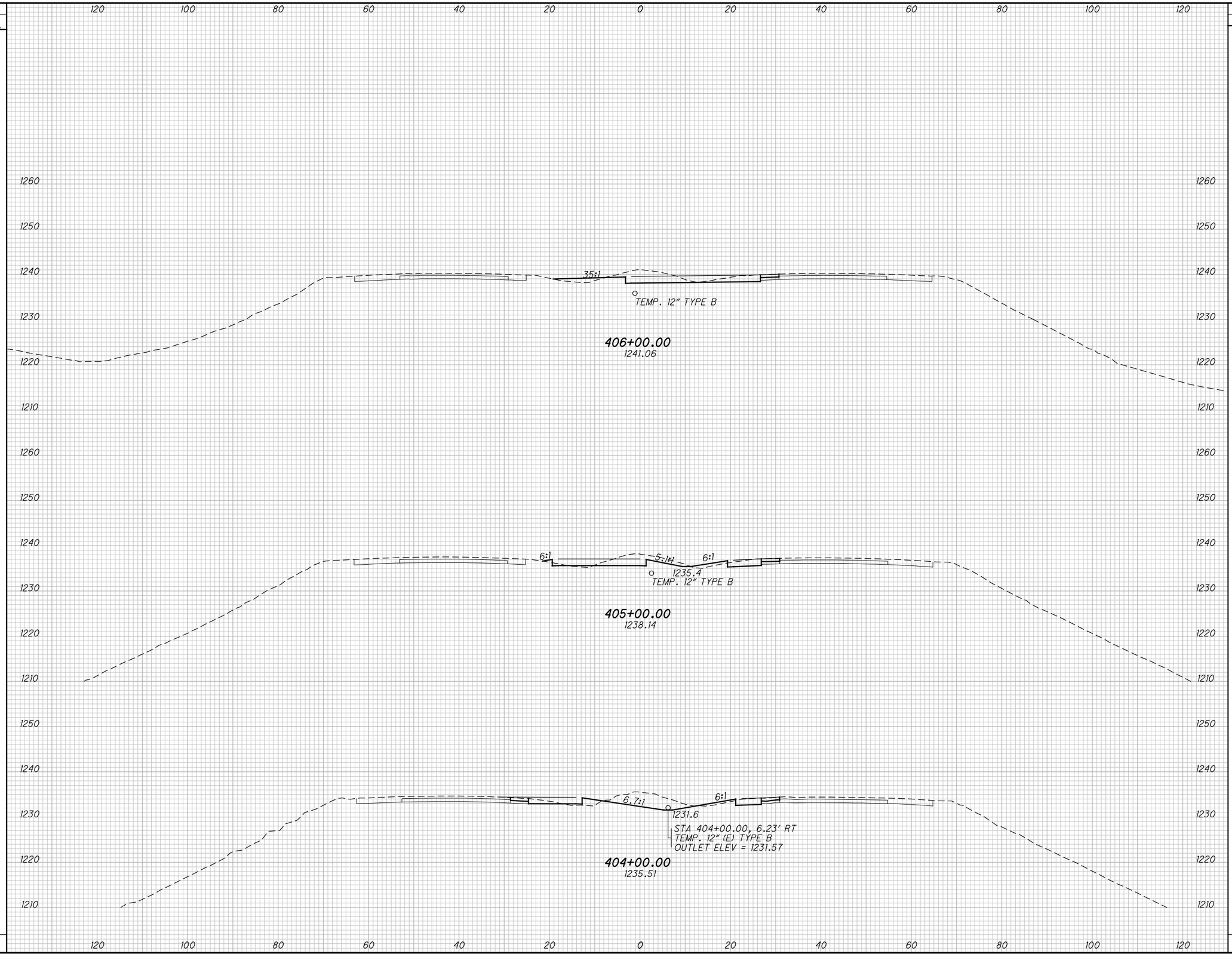
SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED MJC

CHECKED BBD



APPROVED FOR CONSTRUCTION - 6/8/2010

CROSS SECTIONS - I.R. 70 PHASE II

STA. 404+00.00 TO STA. 406+00.00

BEL-70-7.61

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 9:58:58 AM csteck

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED MJC

CHECKED BBD

APPROVED FOR CONSTRUCTION - 6/8/2010

CROSS SECTIONS - I.R. 70 PHASE II
STA. 407+00.00 TO STA. 410+00.00

BEL-70-7.61

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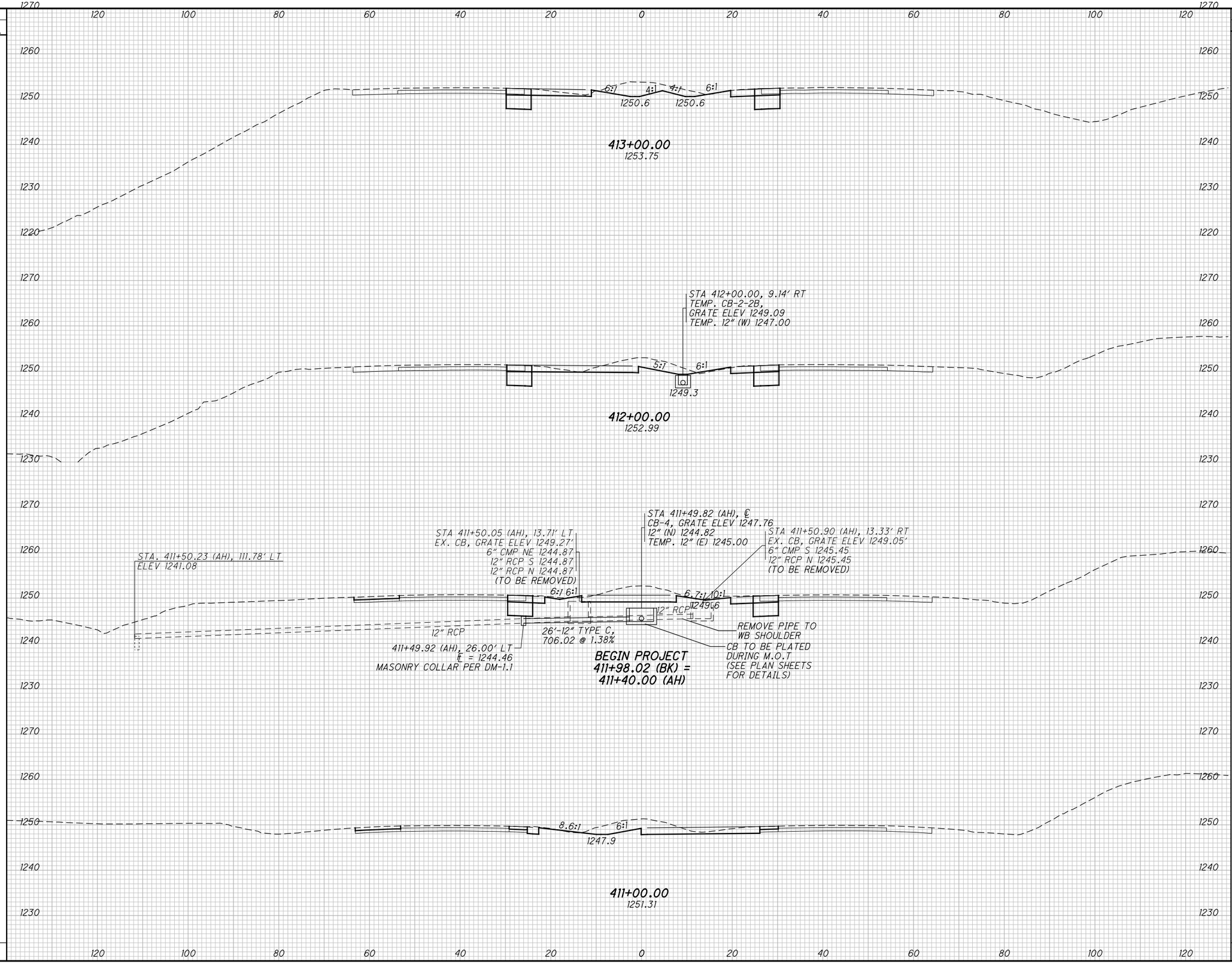
SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED MJC

CHECKED BBD

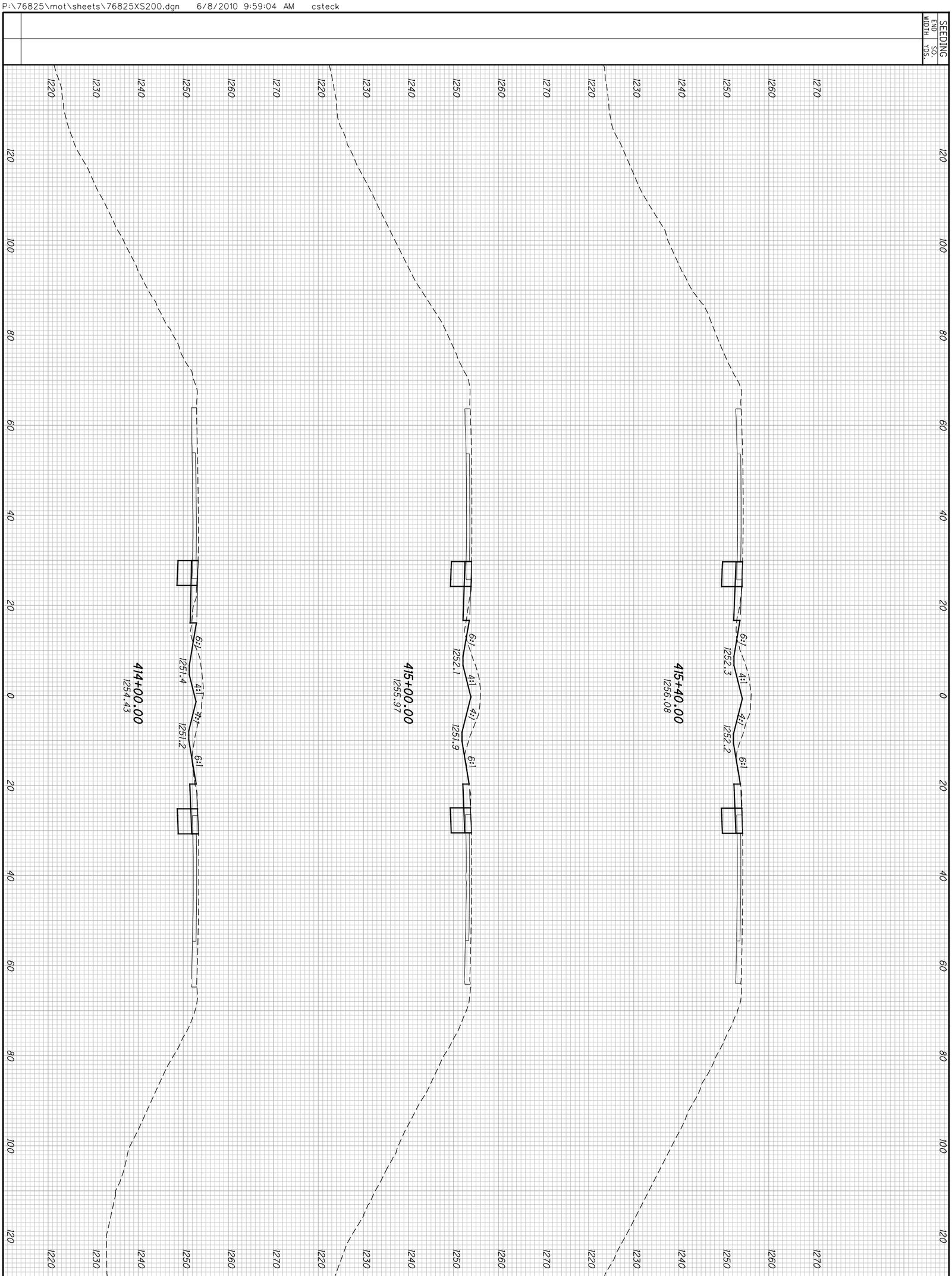


APPROVED FOR CONSTRUCTION - 6/8/2010

CROSS SECTIONS - I.R. 70 PHASE II
STA. 411+00.00 TO STA. 413+00.00

BEL-70-7.61

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 9:59:04 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

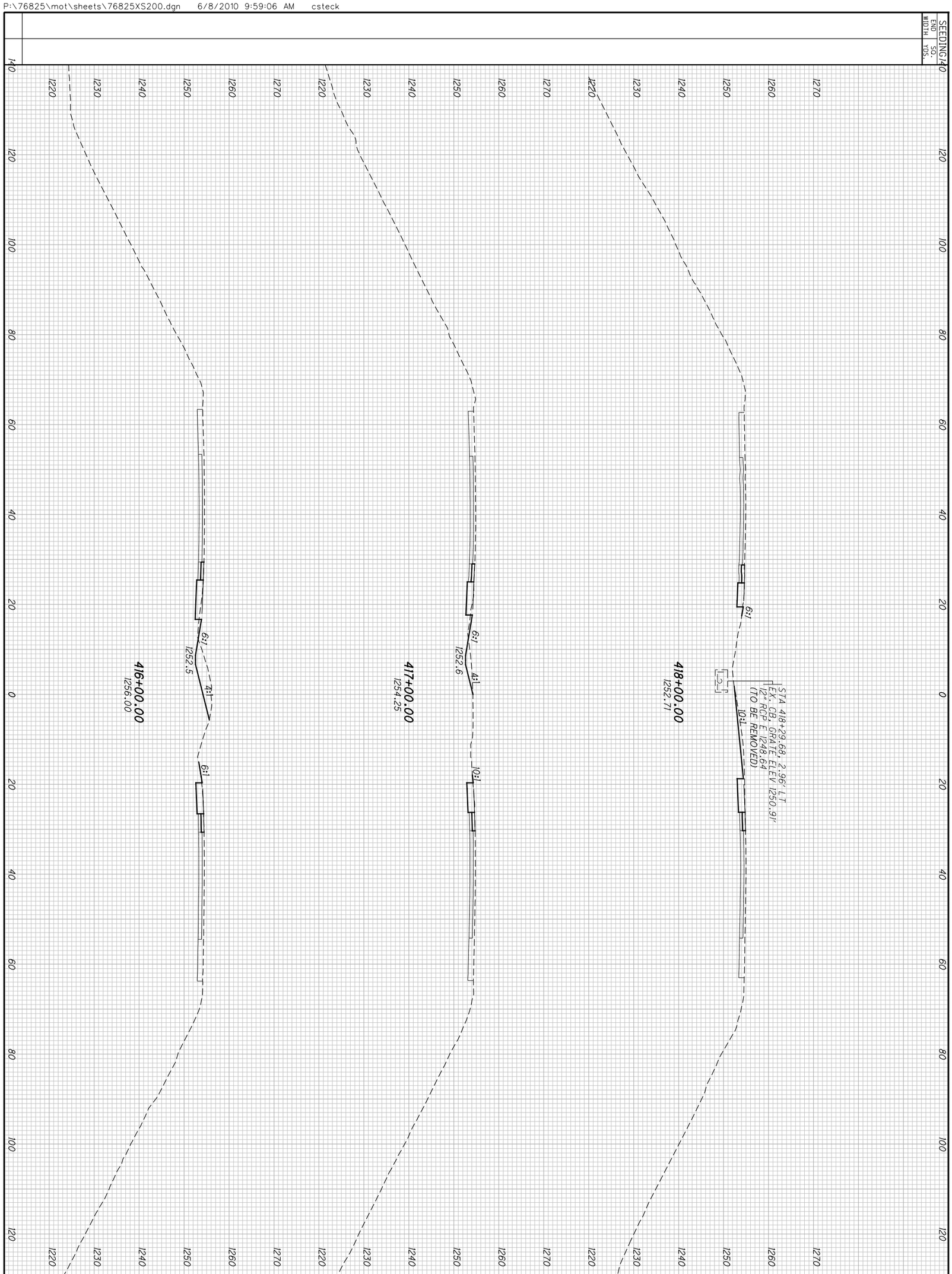
36
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 414+00.00 TO STA. 415+40.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 9:59:06 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

37
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 416+00.00 TO STA. 418+00.00

CALCULATED MJC
CHECKED BBD

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED MJC

CHECKED BBD

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

1270 1260 1250 1240 1230 1280 1270 1260 1250 1240 1230 1270 1260 1250 1240 1230 1220

EX. EARTH

STA 420+68.58, 2.96' LT
EX. CB, GRATE ELEV 1249.91'
12" RCP W 1247.61
(TO BE REMOVED)

15:1 15:1

1252.4

421+00.00
1250.86

BEGIN APPROACH SLAB W.B.
STA. 420+28.91

STA 419+87.69, 2.08' LT
OUTLET 12" RCP E 1242.29'
(TO BE REMOVED)

420+00.00
1247.42

STRUCTURE NO.
BEL-070-0775

BEGIN APPROACH SLAB E.B.
STA. 419+88.98

STA 419+21.85, 1.83' LT
OUTLET 12" RCP W 1231.00'
FROM RECORDS
(TO BE REMOVED)

1241.33

419+00.00

END APPROACH SLAB W.B.
STA. 418+94.02

END APPROACH SLAB E.B.
STA. 418+54.10

APPROVED FOR CONSTRUCTION - 6/8/2010

CROSS SECTIONS - I.R. 70 PHASE II
STA. 419+00.00 TO STA. 421+00.00

BEL-70-7.61

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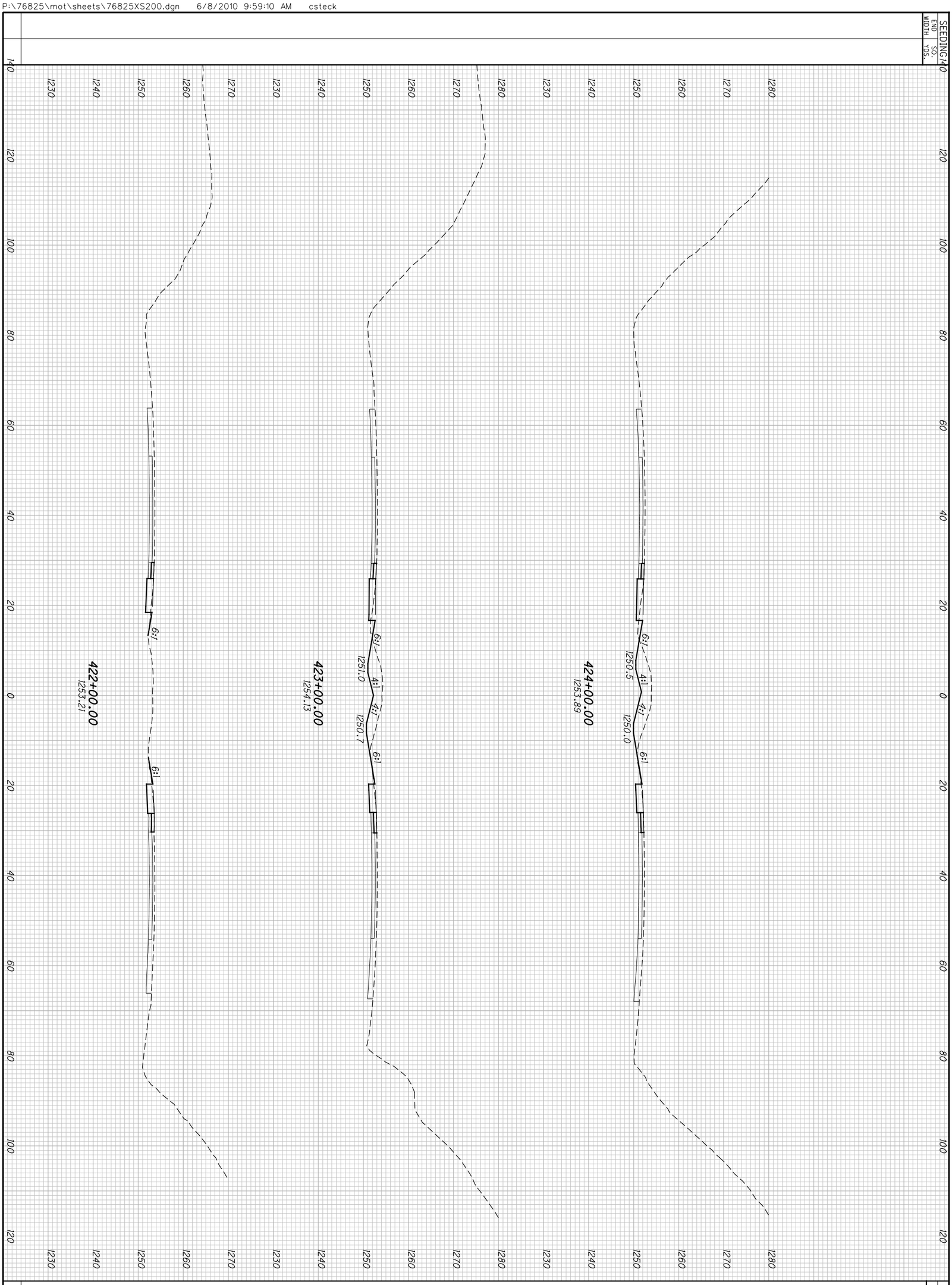
P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 9:59:10 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

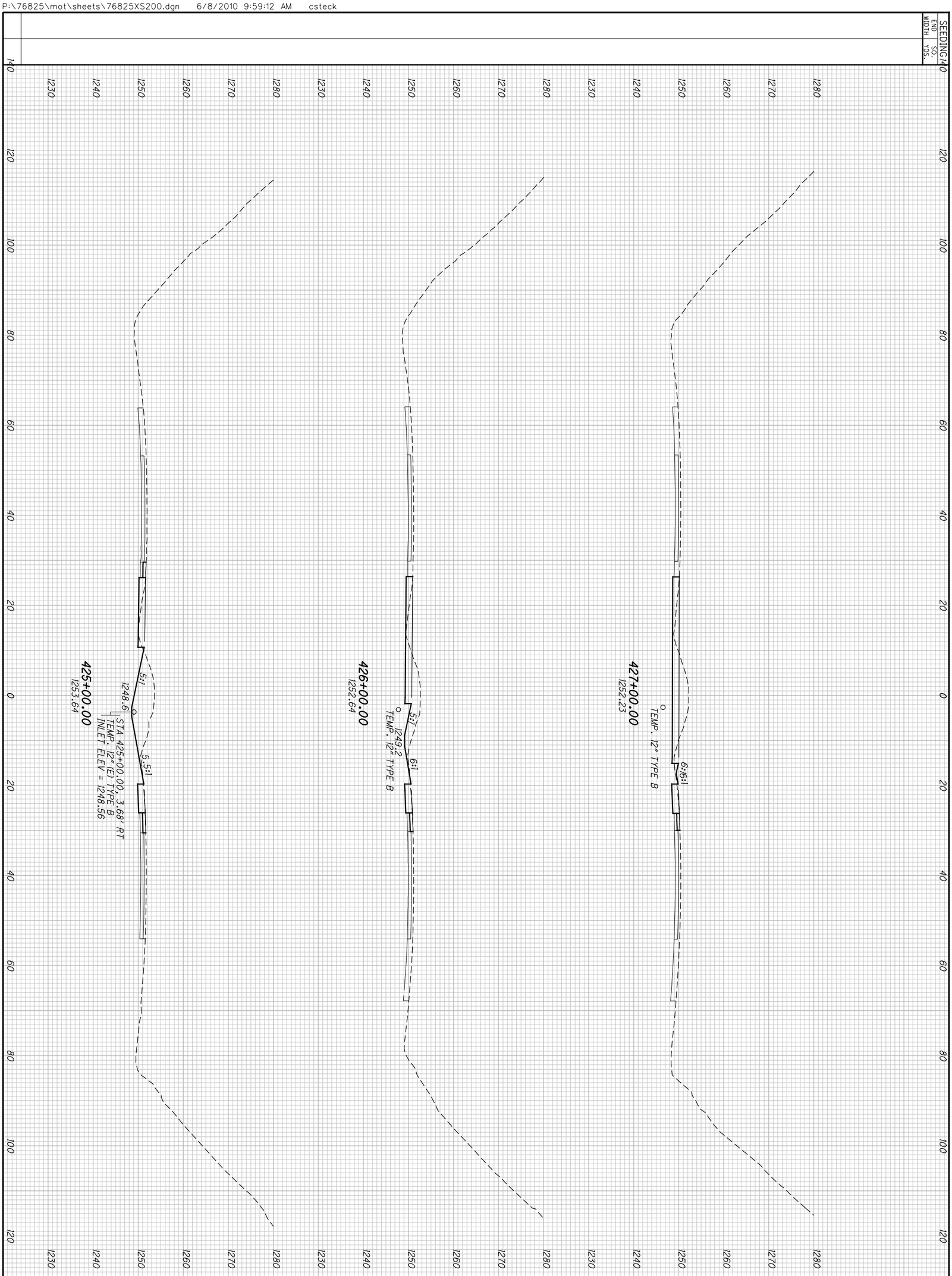
39
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 422+00.00 TO STA. 424+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 9:59:12 AM csteck

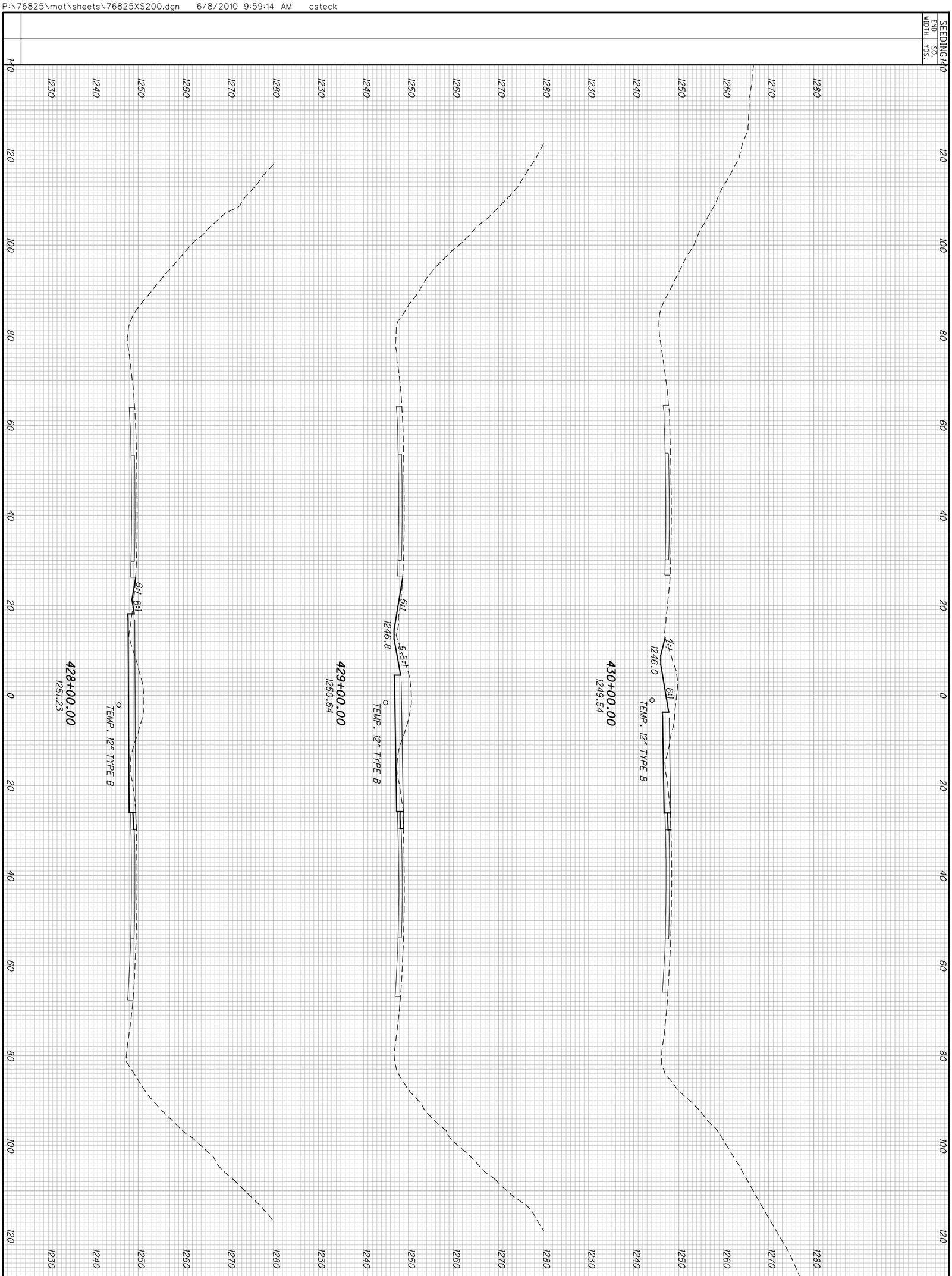


APPROVED FOR CONSTRUCTION - 6/8/2010

40 / 210	BEL-70-7.61	CROSS SECTIONS - I.R. 70 PHASE II STA. 425+00.00 TO STA. 427+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 9:59:14 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

41
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 428+00.00 TO STA. 430+00.00

CALCULATED MJC
CHECKED BBD

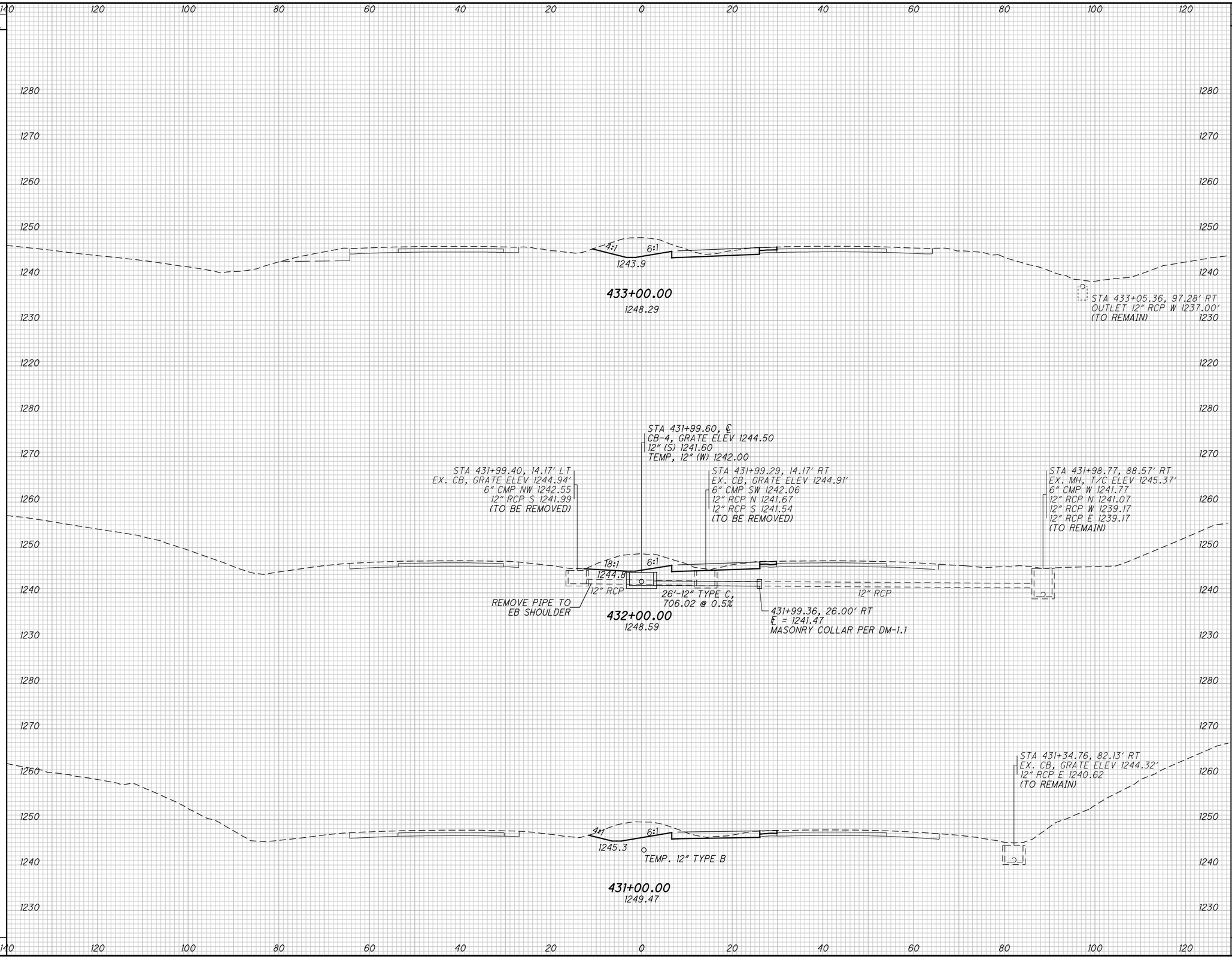
SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED MJC

CHECKED BBD



APPROVED FOR CONSTRUCTION - 6/8/2010

CROSS SECTIONS - I.R. 70 PHASE II

STA. 431+00.00 TO STA. 433+00.00

BEL-70-7.61

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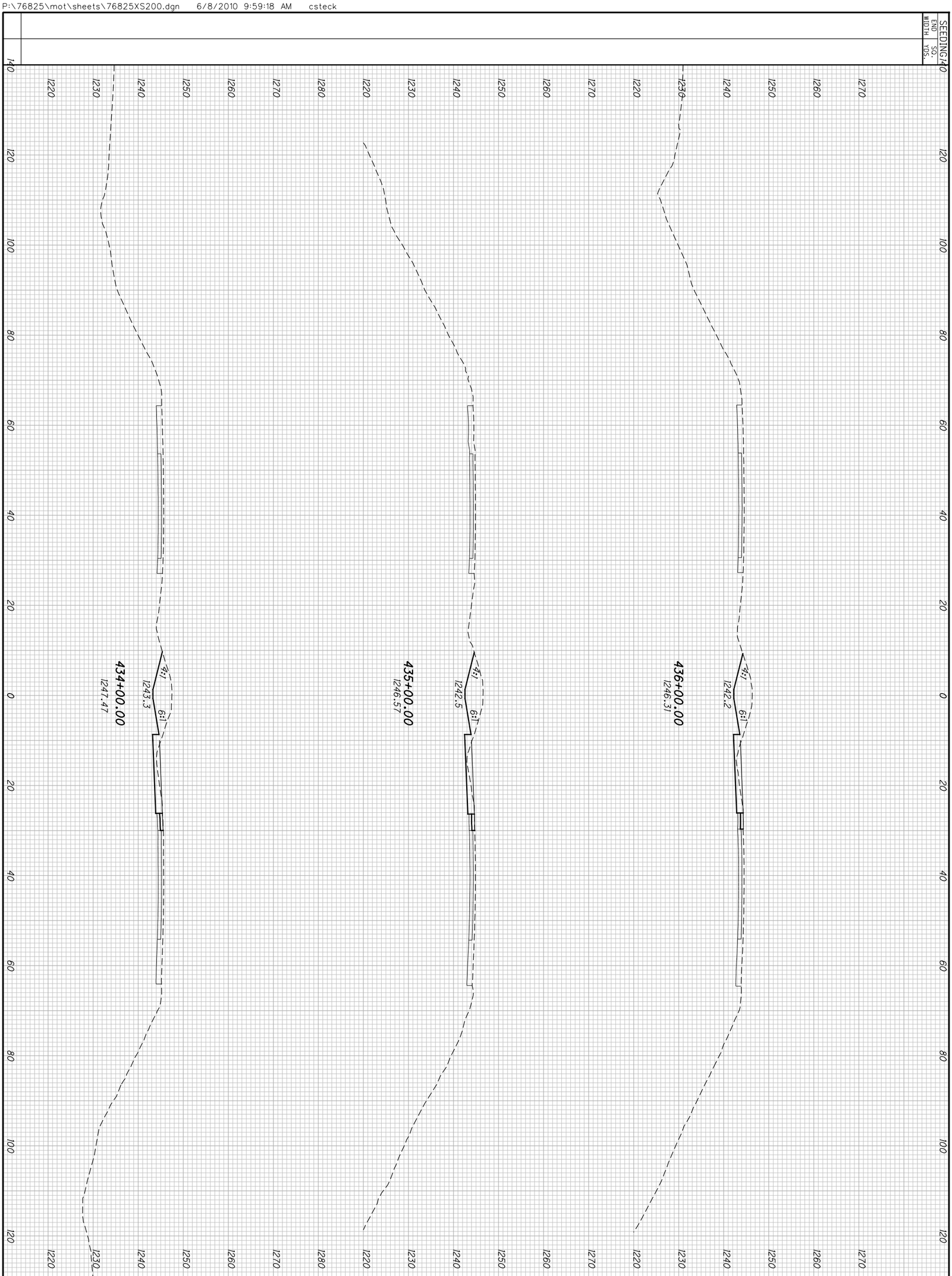


APPROVED FOR CONSTRUCTION - 6/8/2010

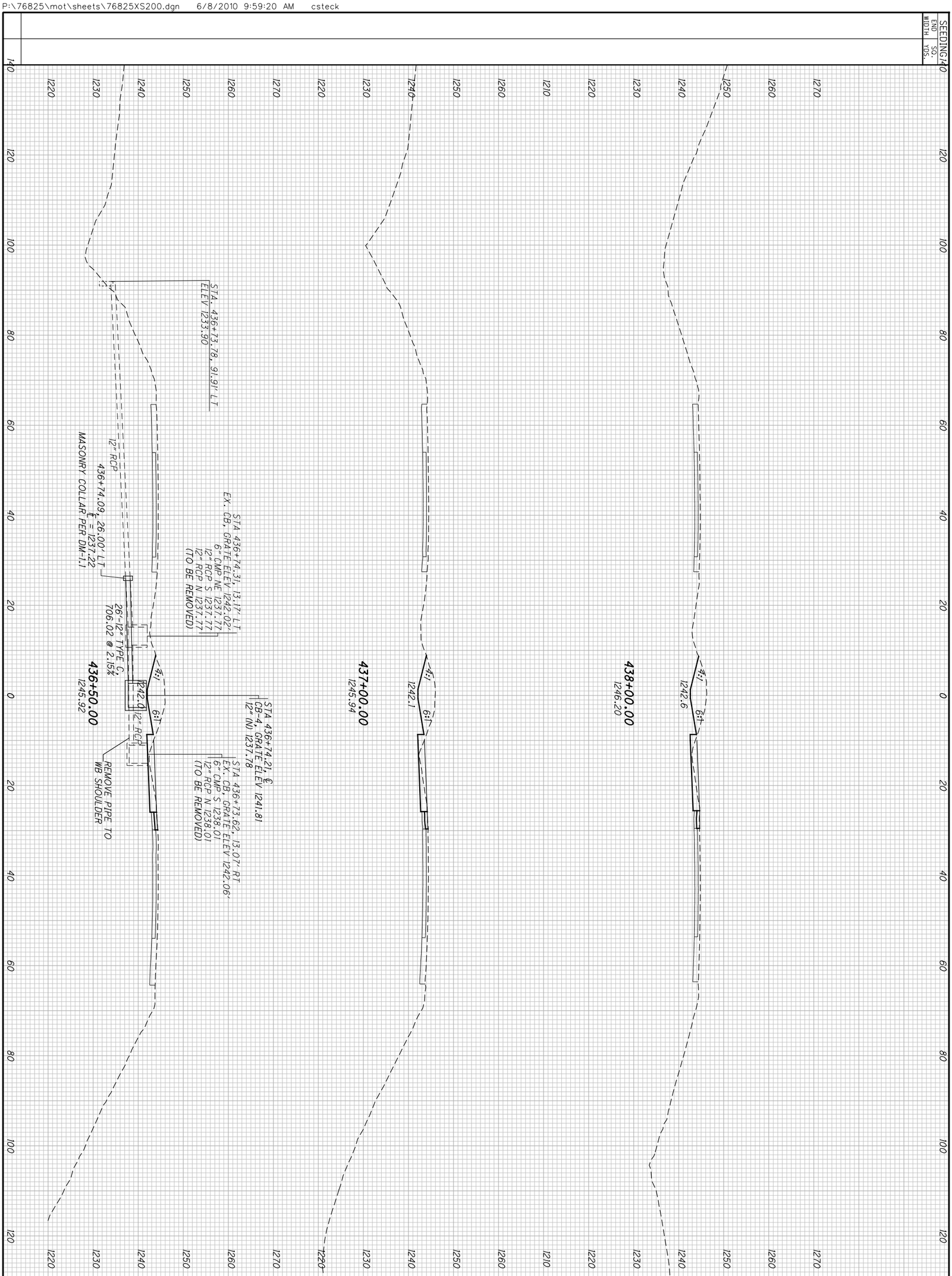
43
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 434+00.00 TO STA. 436+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 9:59:20 AM csteck

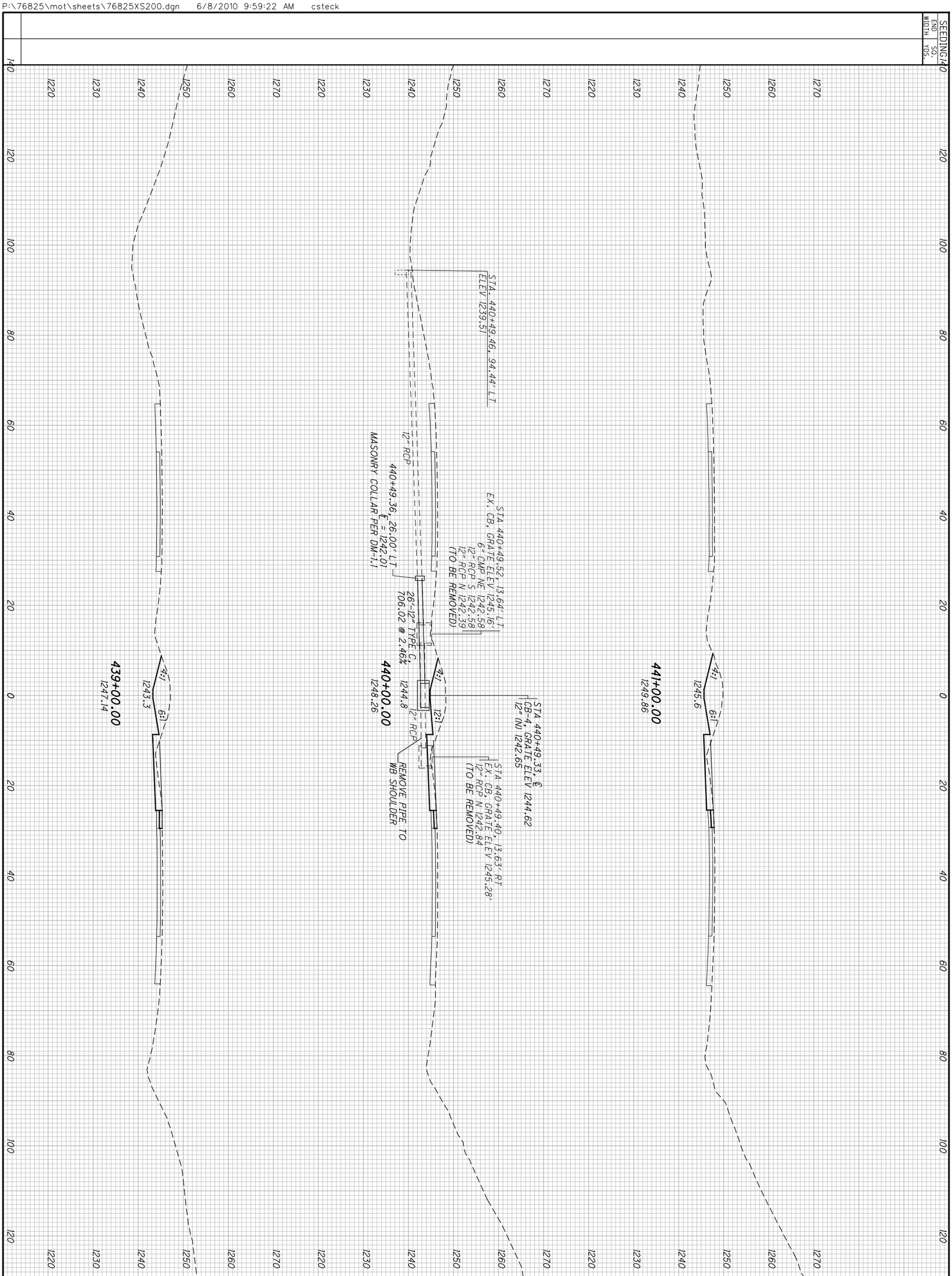


APPROVED FOR CONSTRUCTION - 6/8/2010

44 / 210	BEL-70-7.61	CROSS SECTIONS - I.R. 70 PHASE II STA. 436+50.00 TO STA. 438+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 9:59:22 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

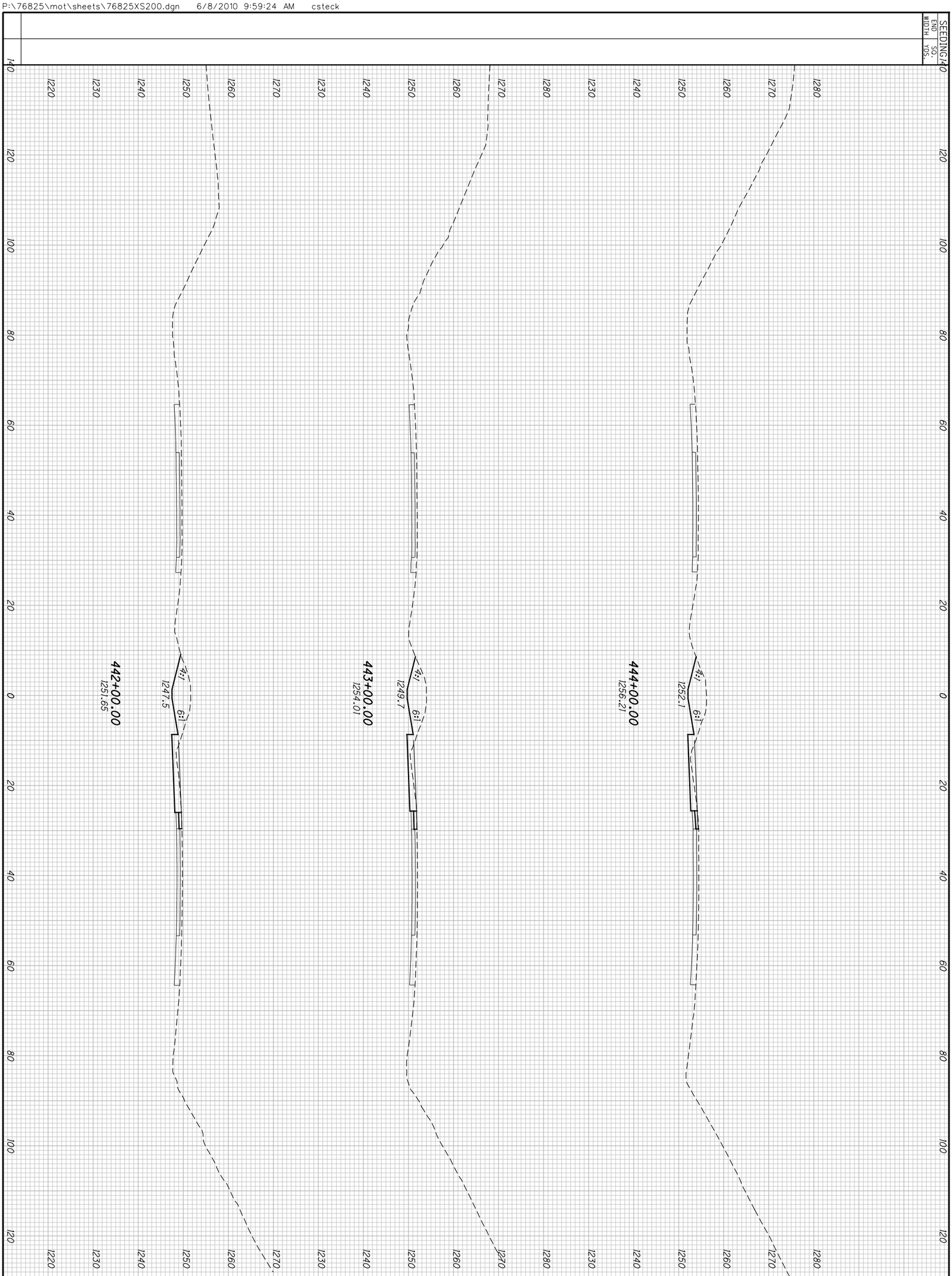
45
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 439+00.00 TO STA. 441+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 9:59:24 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

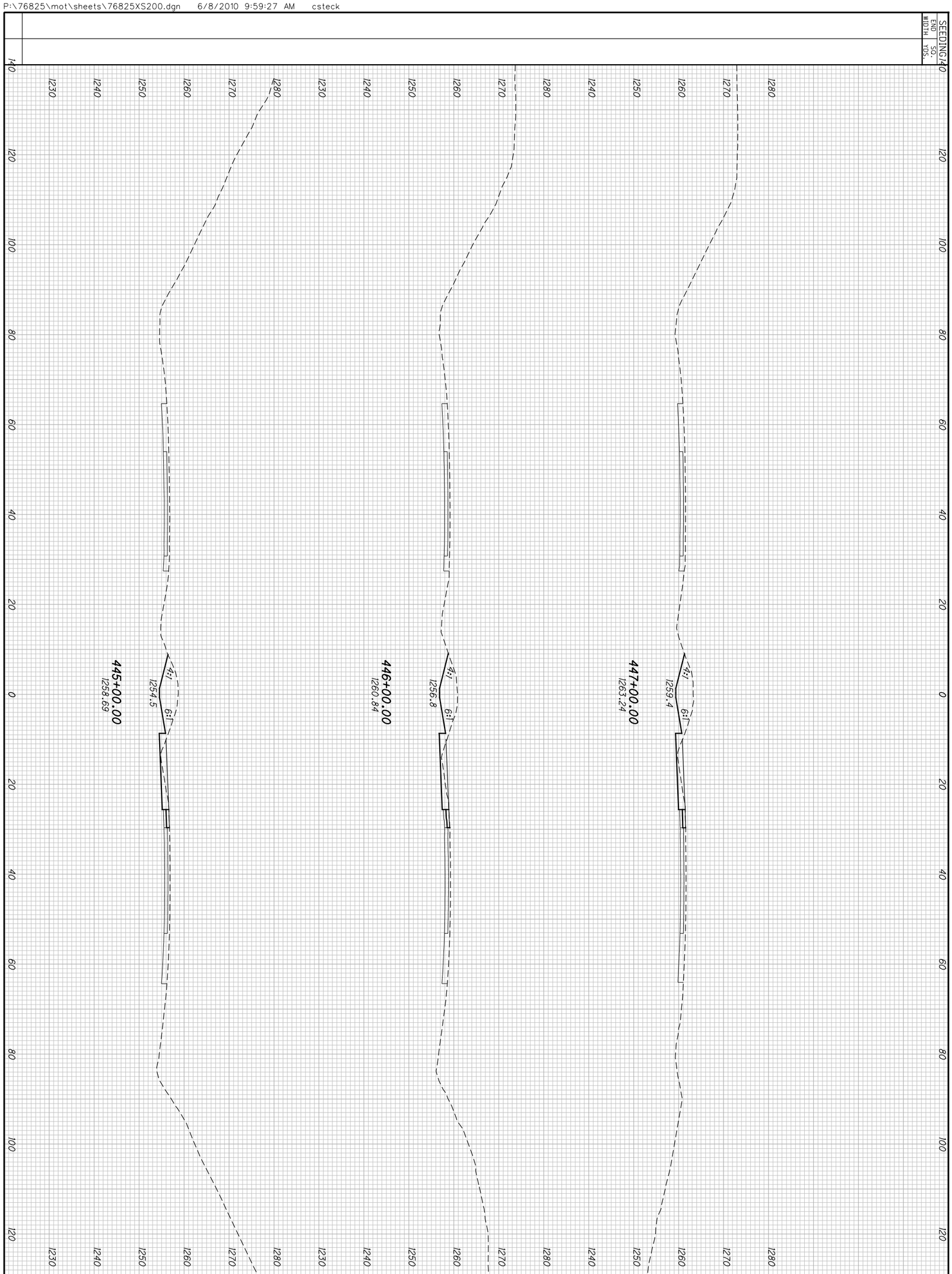
46
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 442+00.00 TO STA. 444+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 9:59:27 AM csteck



END AREA CUT FILL | VOLUME CUT FILL

APPROVED FOR CONSTRUCTION - 6/8/2010

47
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 445+00.00 TO STA. 447+00.00

CALCULATED MJC
CHECKED BBD

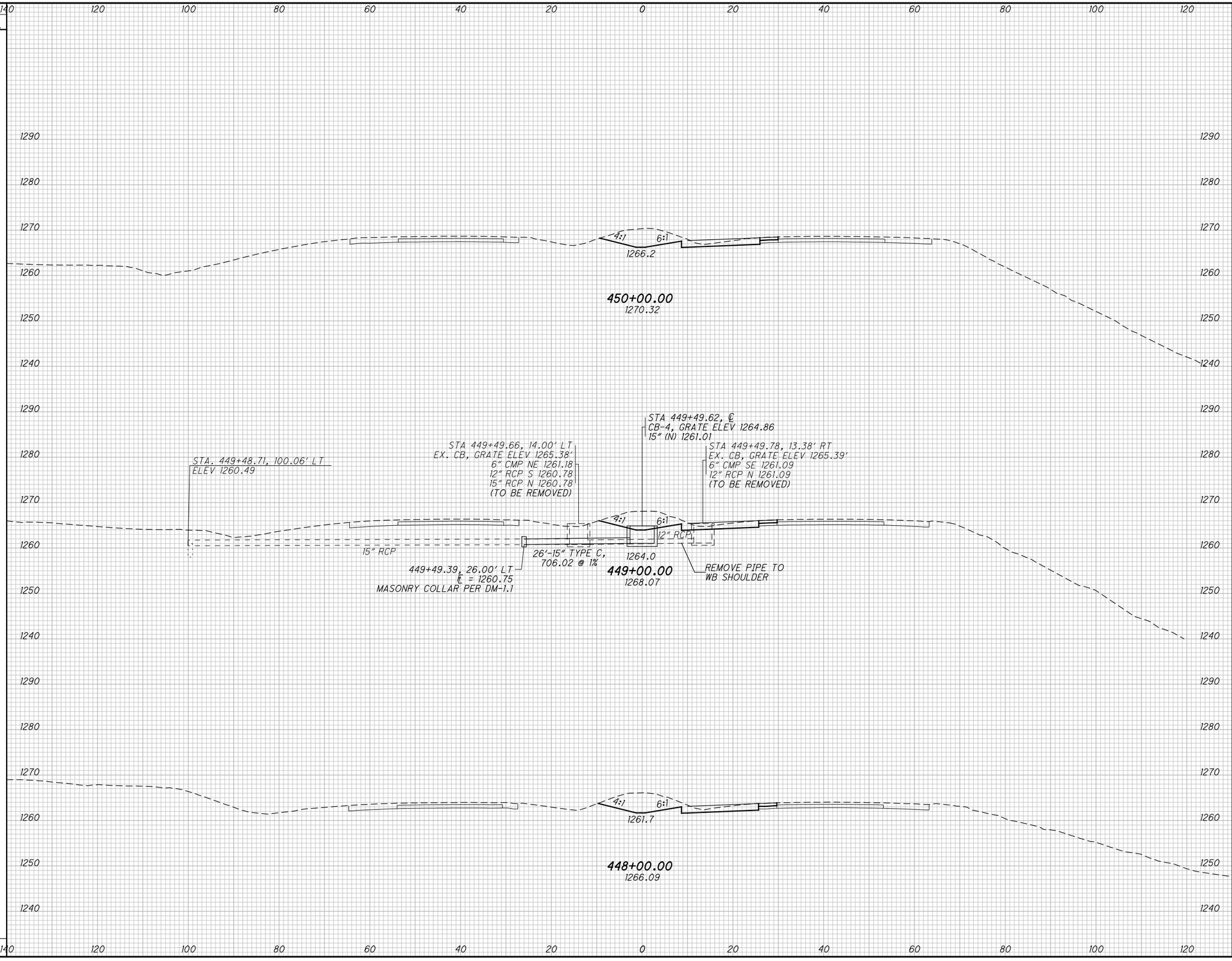
SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED MJC

CHECKED BBD



APPROVED FOR CONSTRUCTION - 6/8/2010

CROSS SECTIONS - I.R. 70 PHASE II

STA. 448+00.00 TO STA. 450+00.00

BEL-70-7.61

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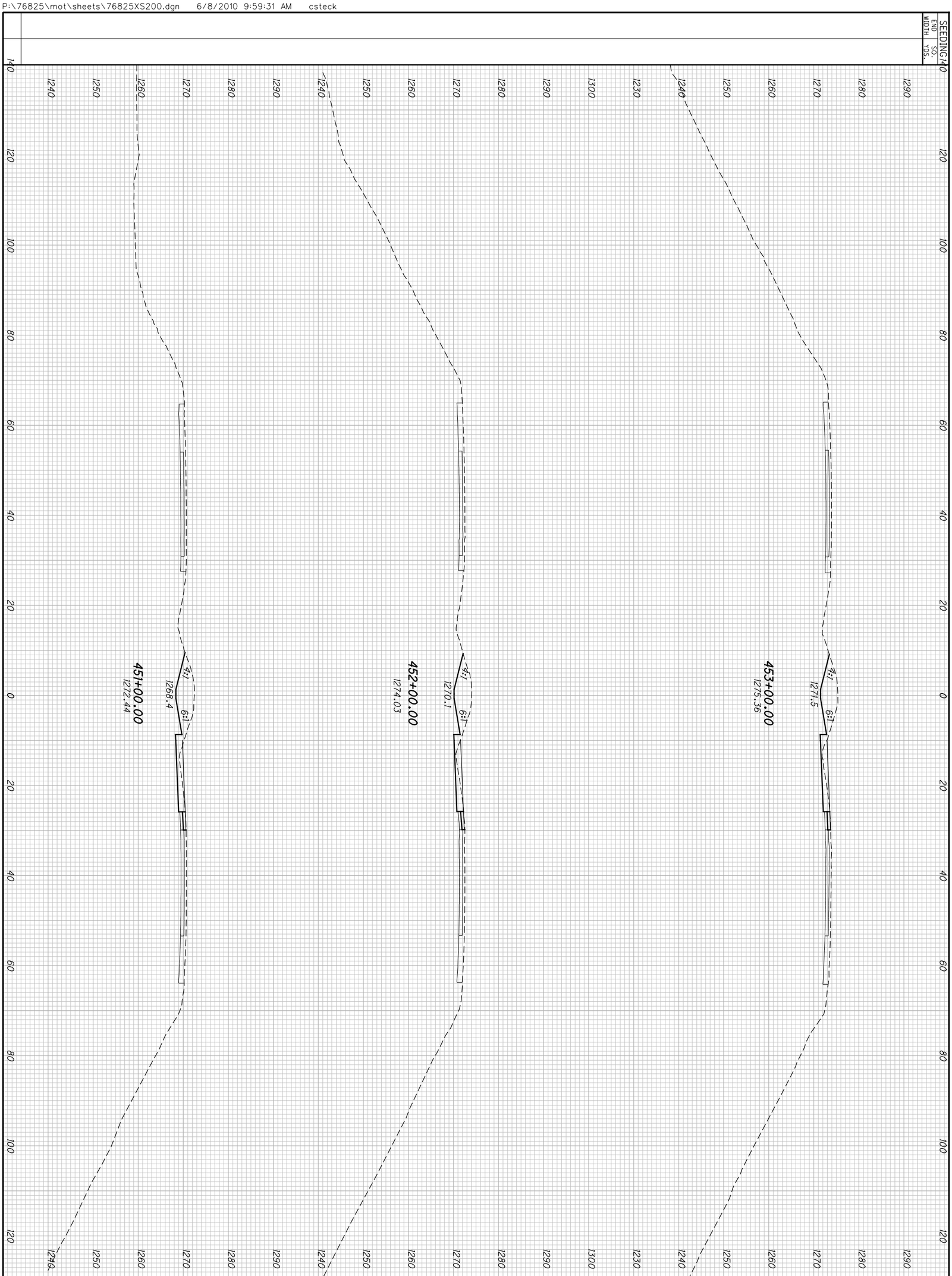
P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 9:59:31 AM csteck



END AREA CUT FILL VOLUME CUT FILL

APPROVED FOR CONSTRUCTION - 6/8/2010

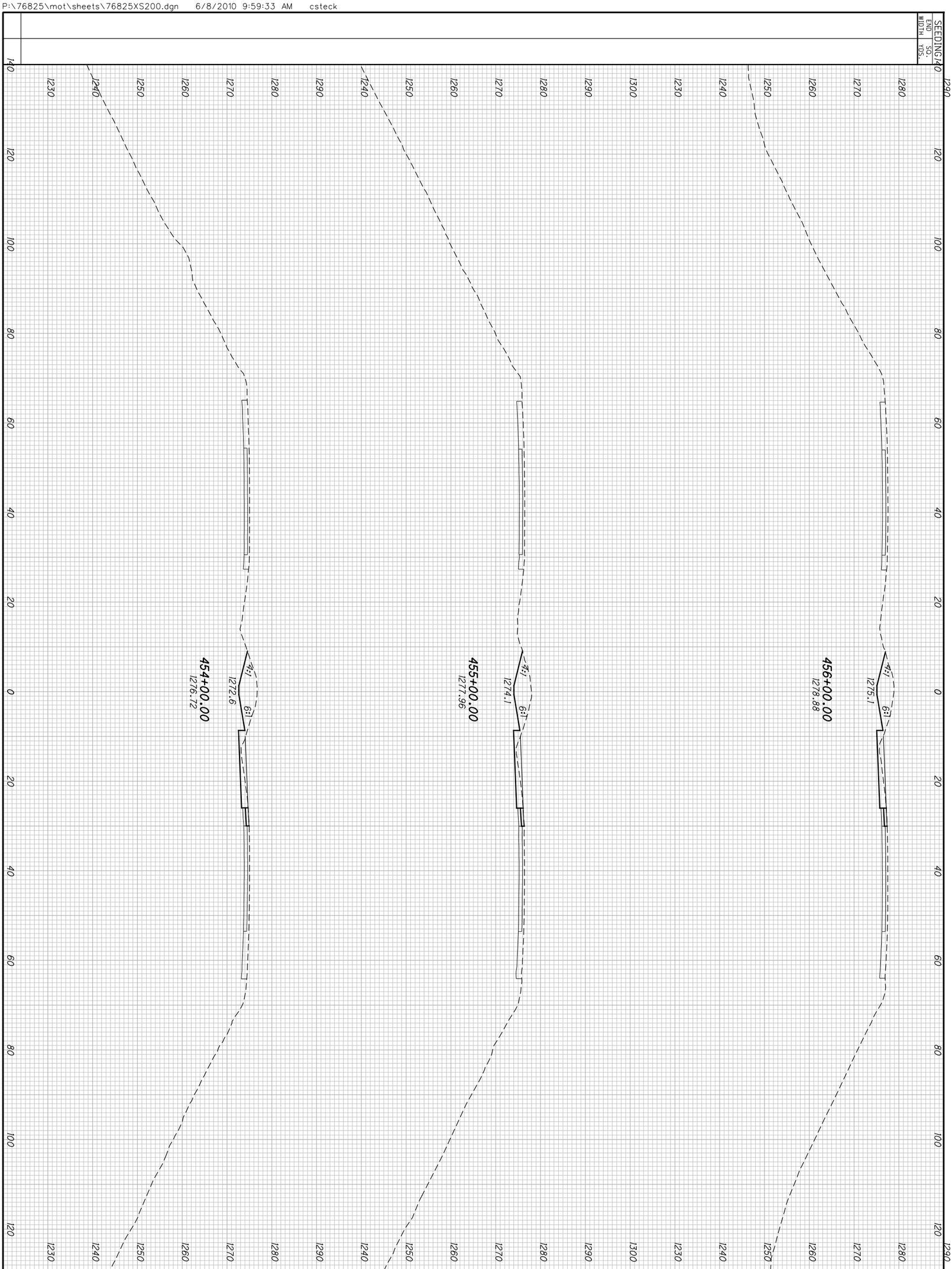
49
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 451+00.00 TO STA. 453+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 9:59:33 AM csteck



END AREA CUT FILL VOLUME CUT FILL

APPROVED FOR CONSTRUCTION - 6/8/2010

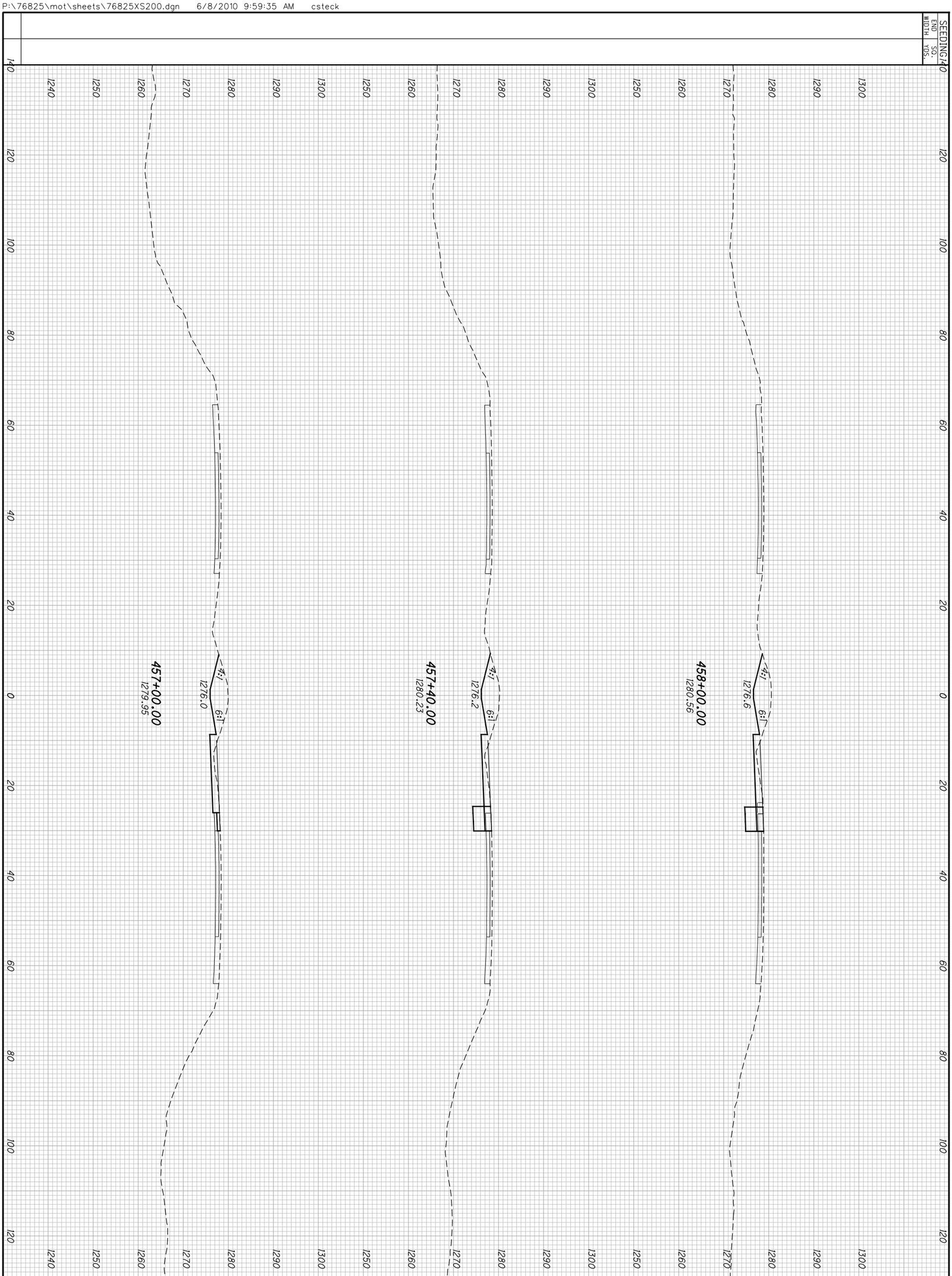
50/210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 454+00.00 TO STA. 456+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 9:59:35 AM csteck



END AREA CUT FILL VOLUME CUT FILL

APPROVED FOR CONSTRUCTION - 6/8/2010

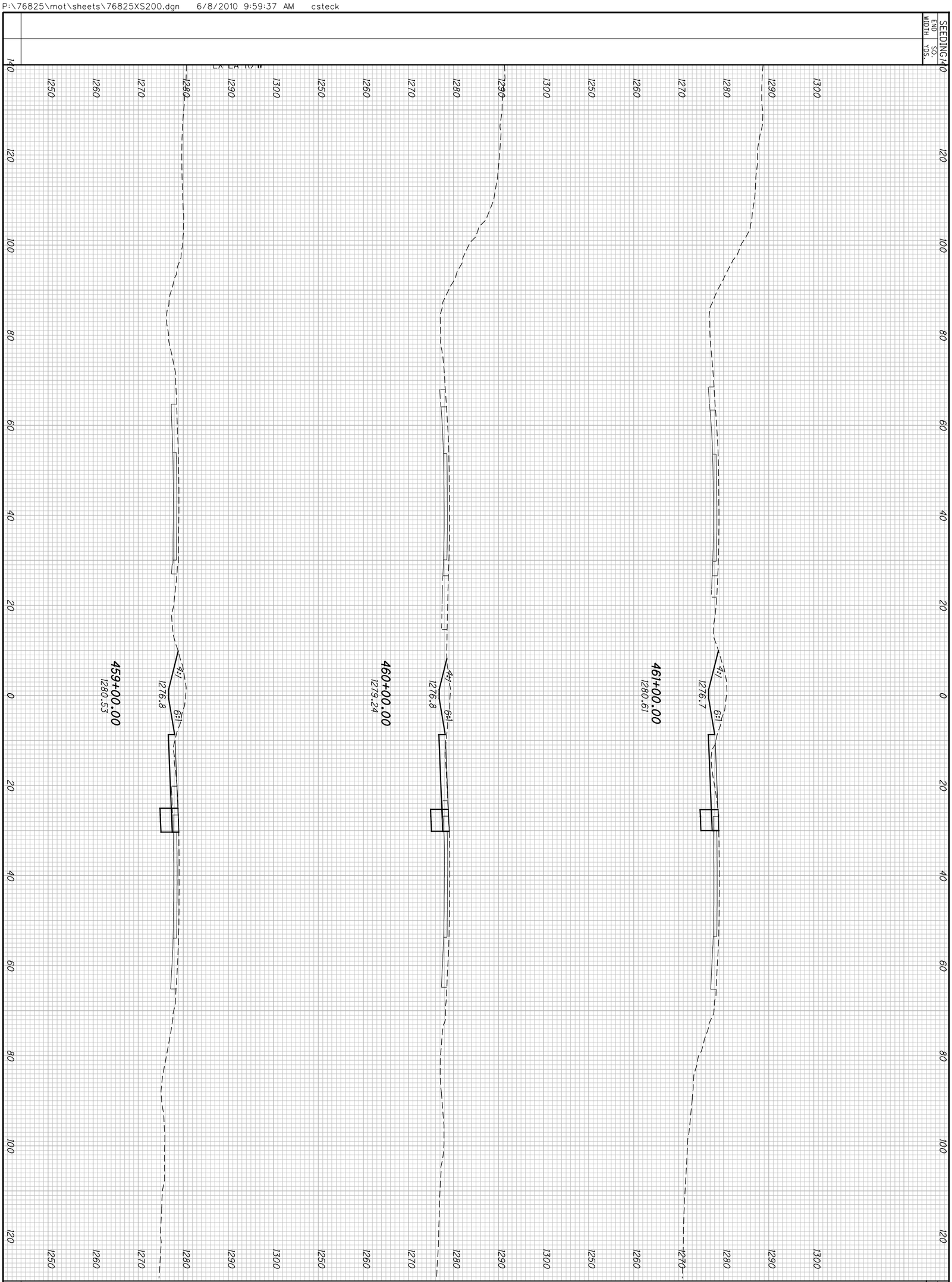
51/210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 457+00.00 TO STA. 458+00.00

CALCULATED MJC
CHECKED BBD

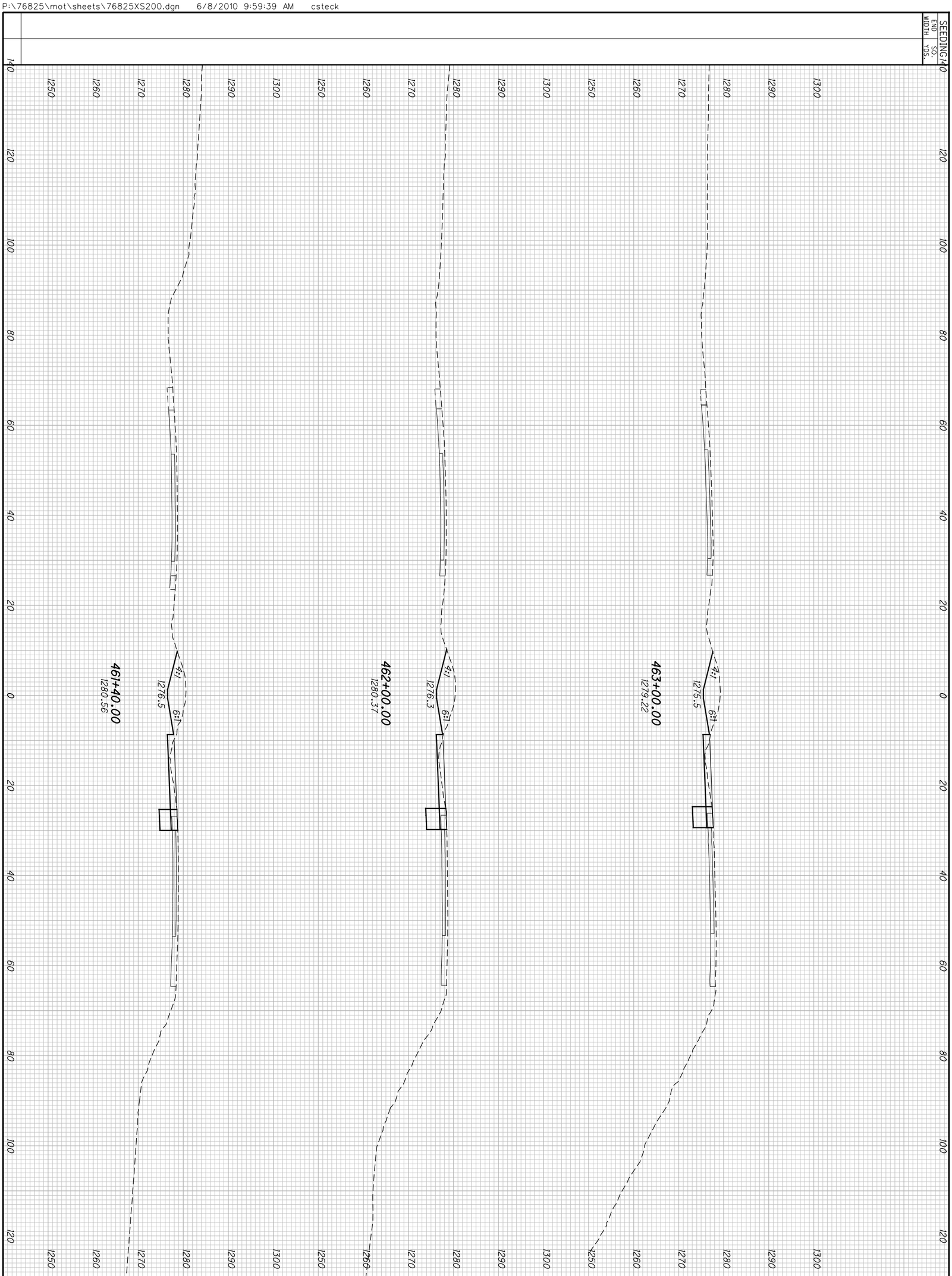
P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 9:59:37 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

52 / 210	BEL-70-7.61	CROSS SECTIONS - I.R. 70 PHASE II STA. 459+00.00 TO STA. 461+00.00	CALCULATED MJC CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 9:59:39 AM csteck



END AREA CUT FILL VOLUME CUT FILL

APPROVED FOR CONSTRUCTION - 6/8/2010

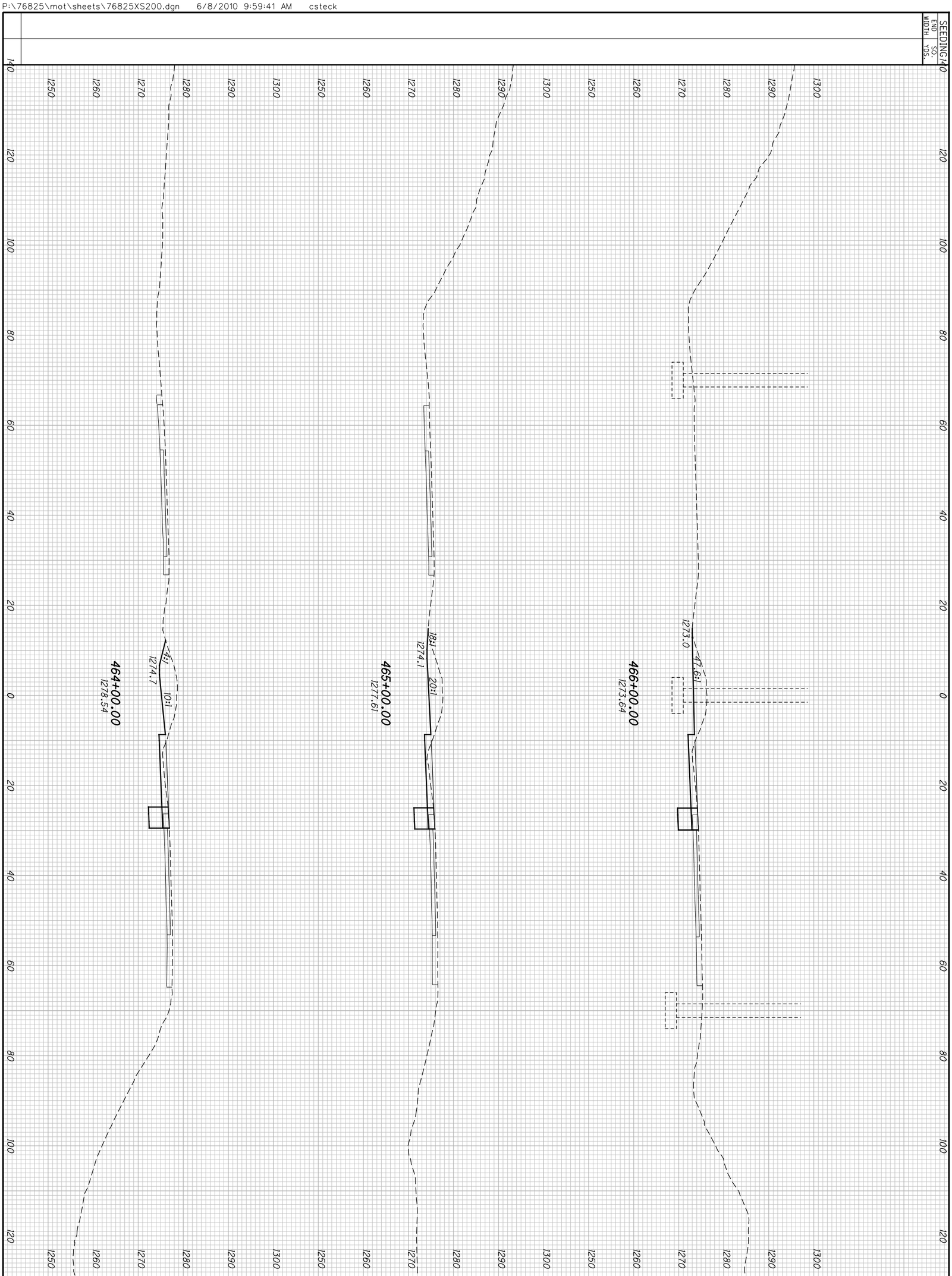
53
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 461+40.00 TO STA. 463+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 9:59:41 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

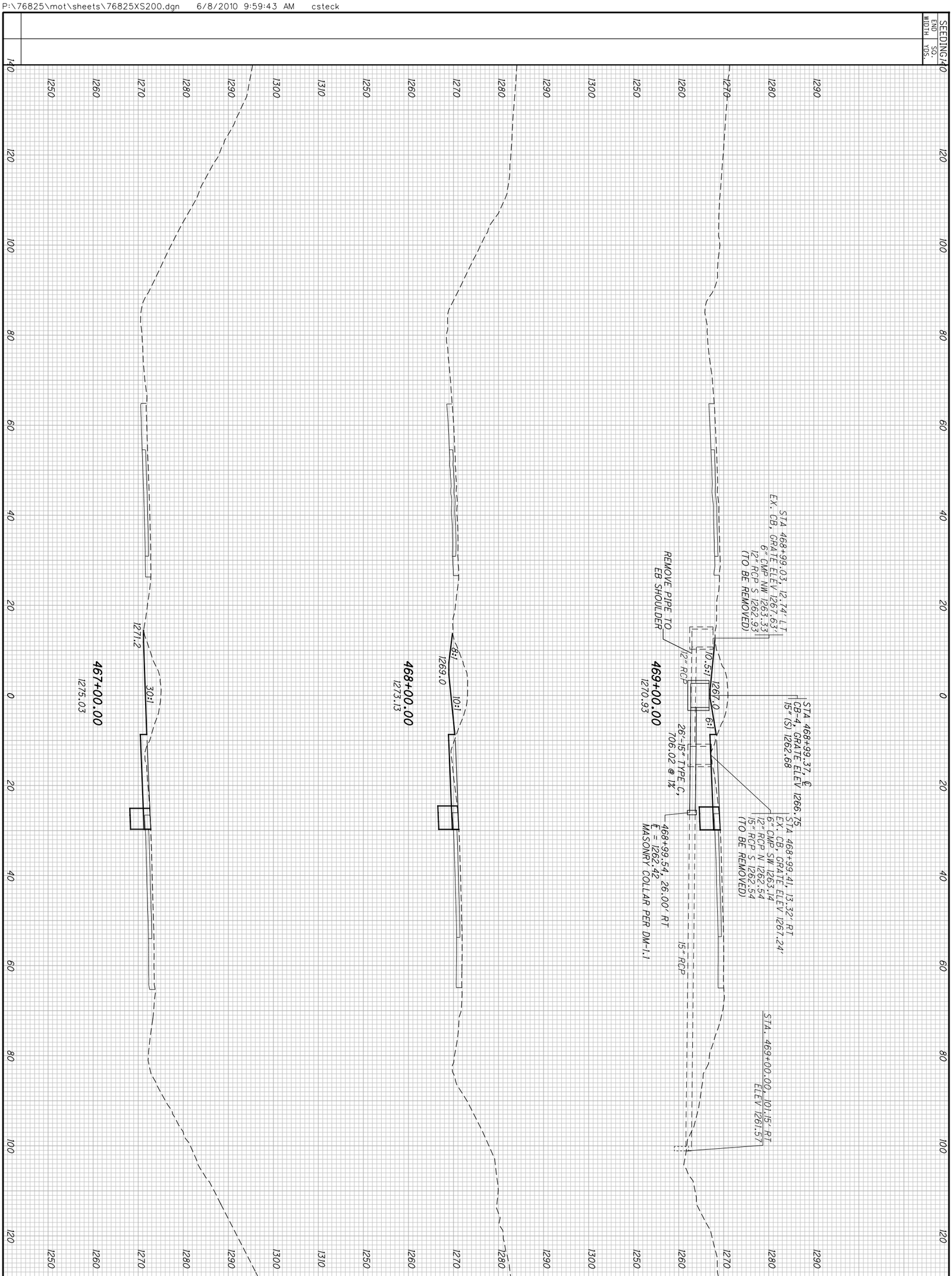
54
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 464+00.00 TO STA. 466+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 9:59:43 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

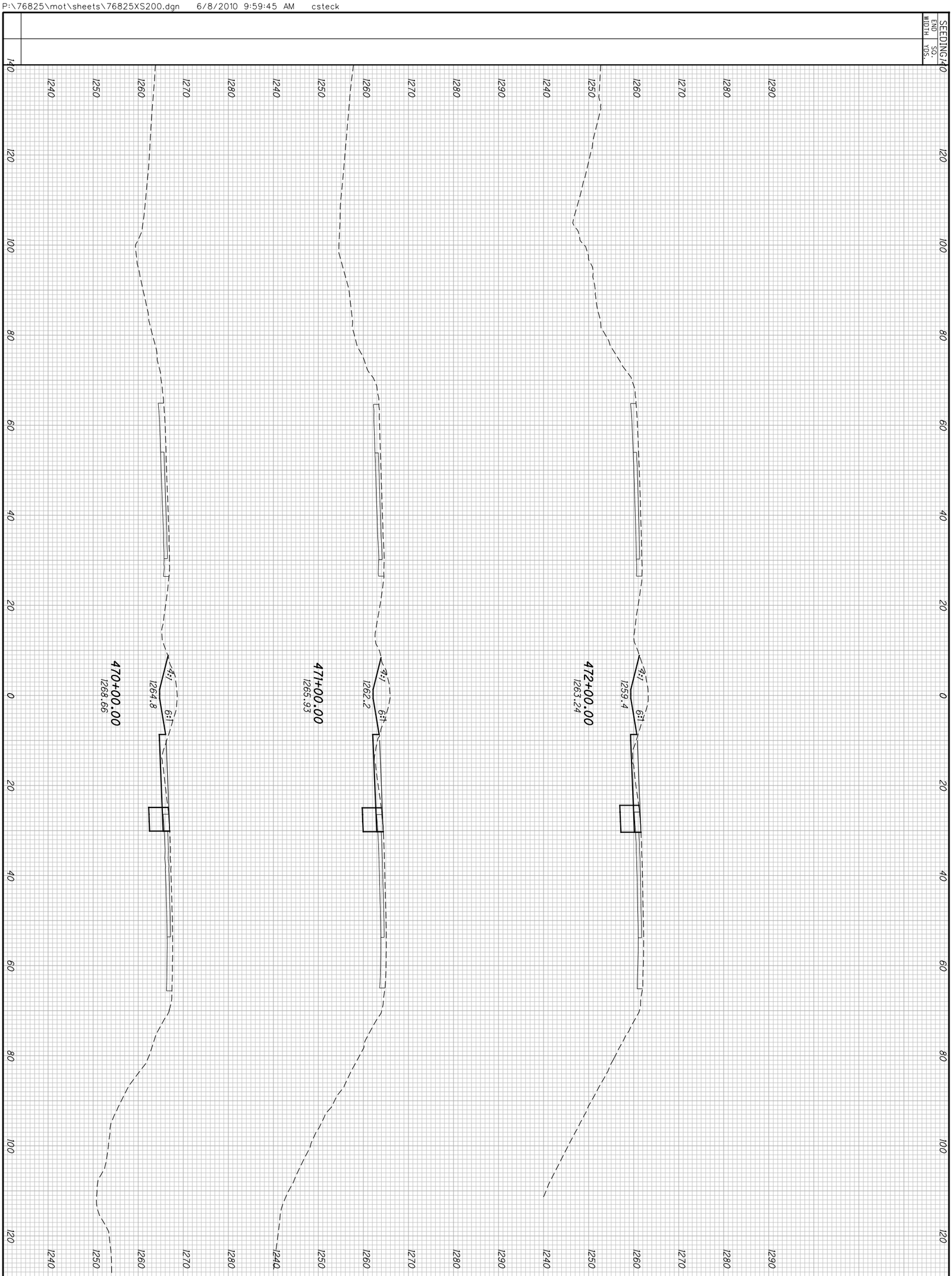
55
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 467+00.00 TO STA. 469+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 9:59:45 AM csteck



END AREA CUT FILL

VOLUME CUT FILL

APPROVED FOR CONSTRUCTION - 6/8/2010

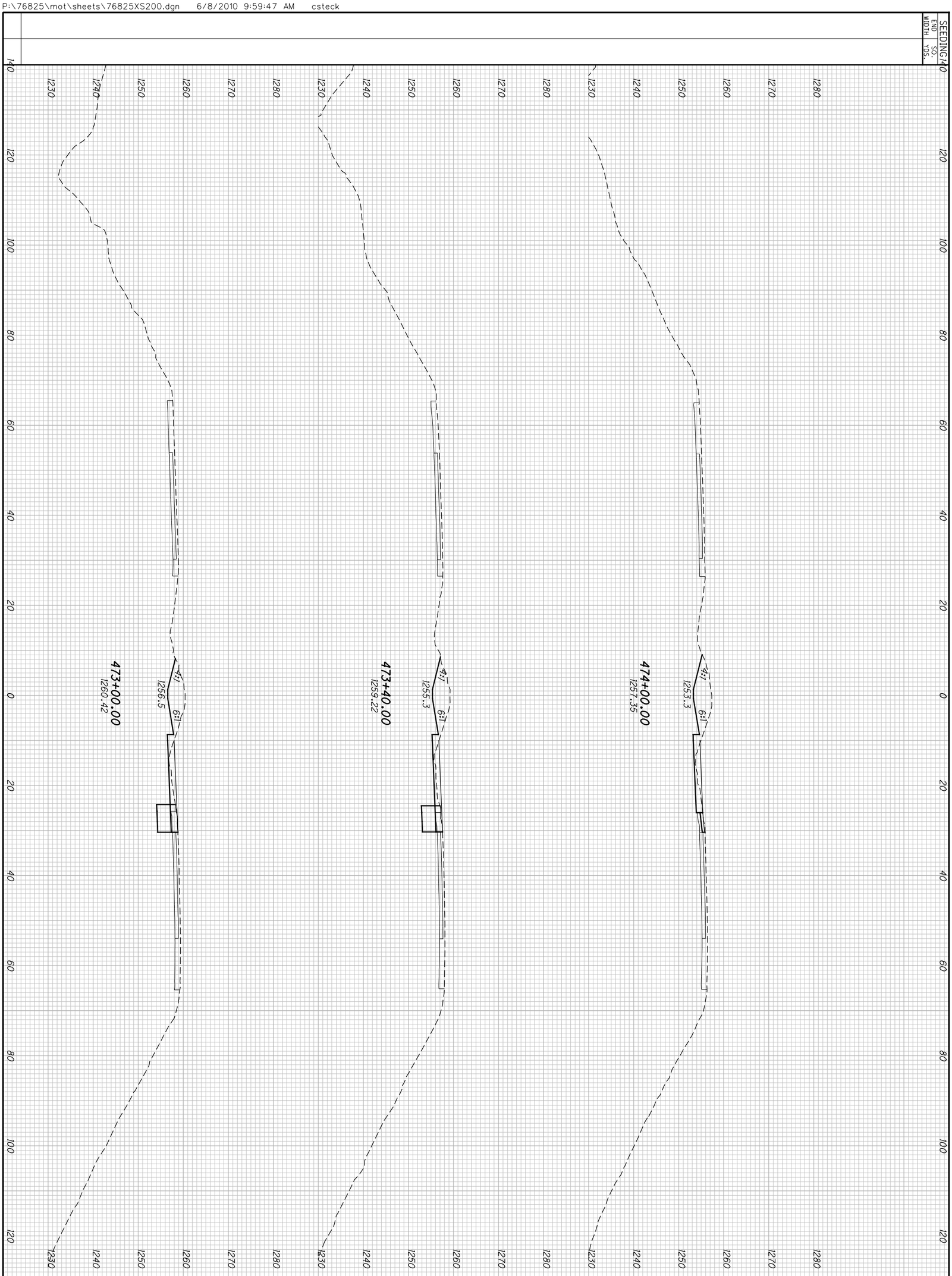
56
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 470+00.00 TO STA. 472+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 9:59:47 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

57
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 473+00.00 TO STA. 474+00.00

CALCULATED MJC
CHECKED BBD

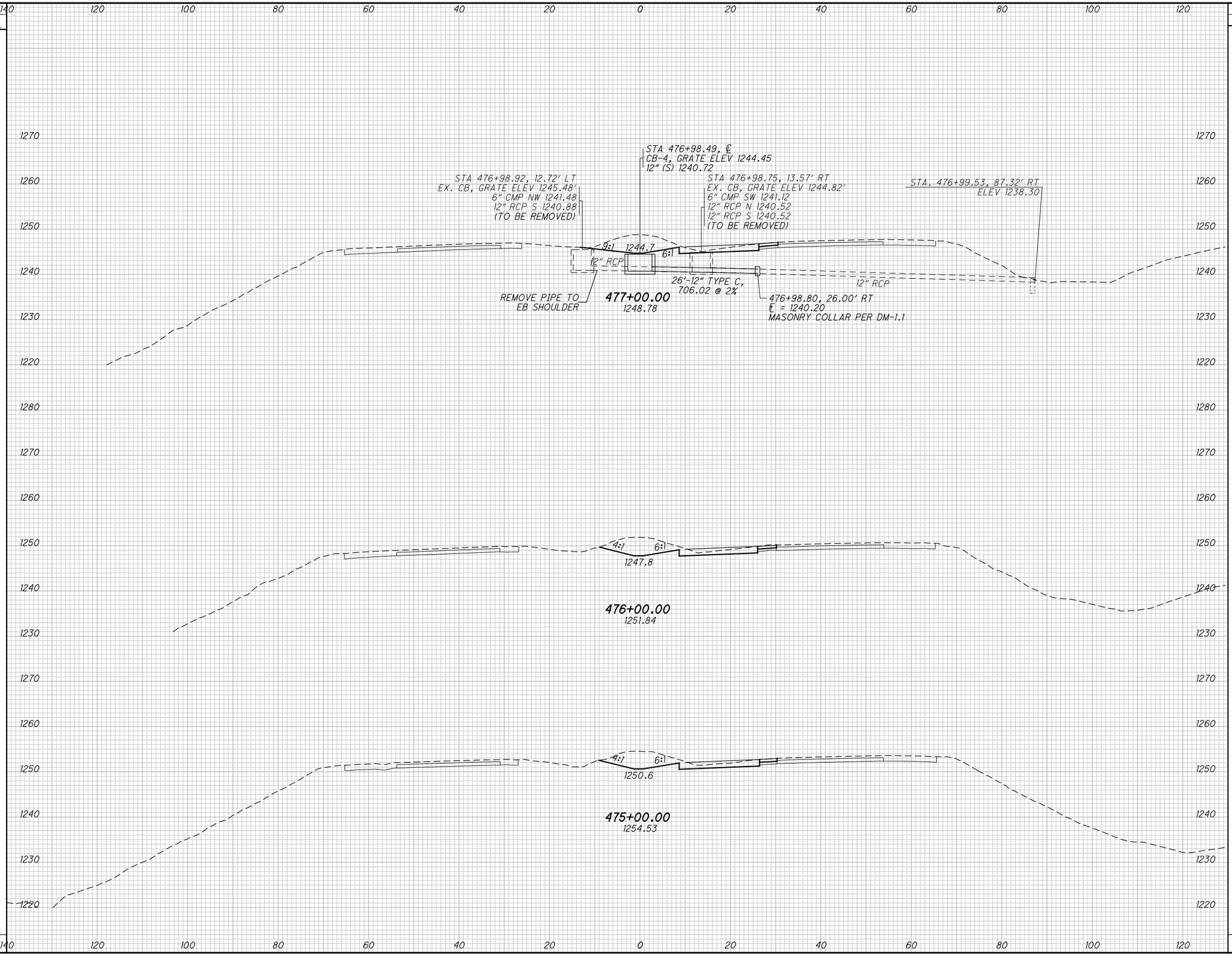
SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED MJC

CHECKED BBD

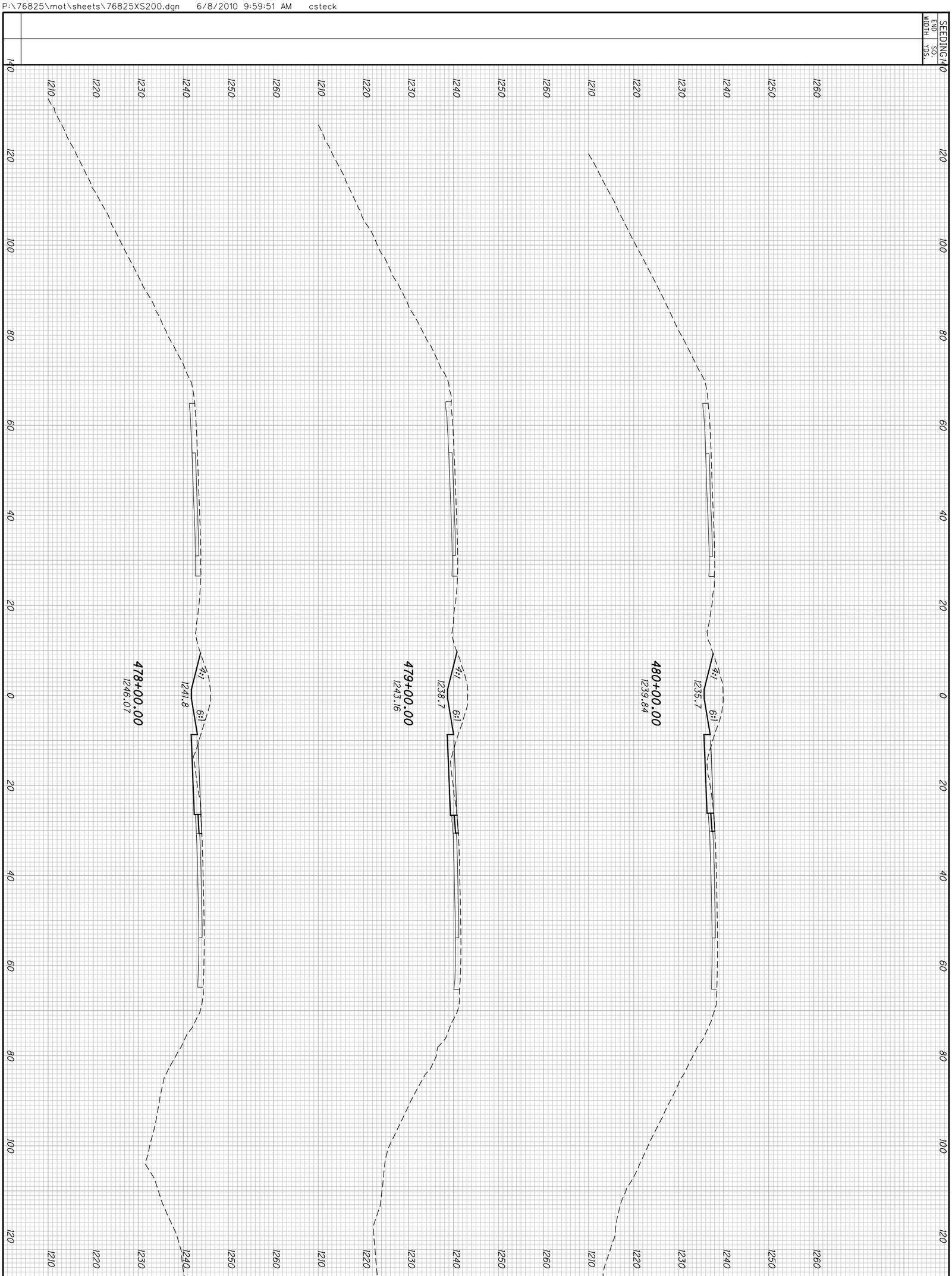


APPROVED FOR CONSTRUCTION - 6/8/2010

CROSS SECTIONS - I.R. 70 PHASE II
STA. 475+00.00 TO STA. 477+00.00

BEL-70-7.61

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 9:59:51 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

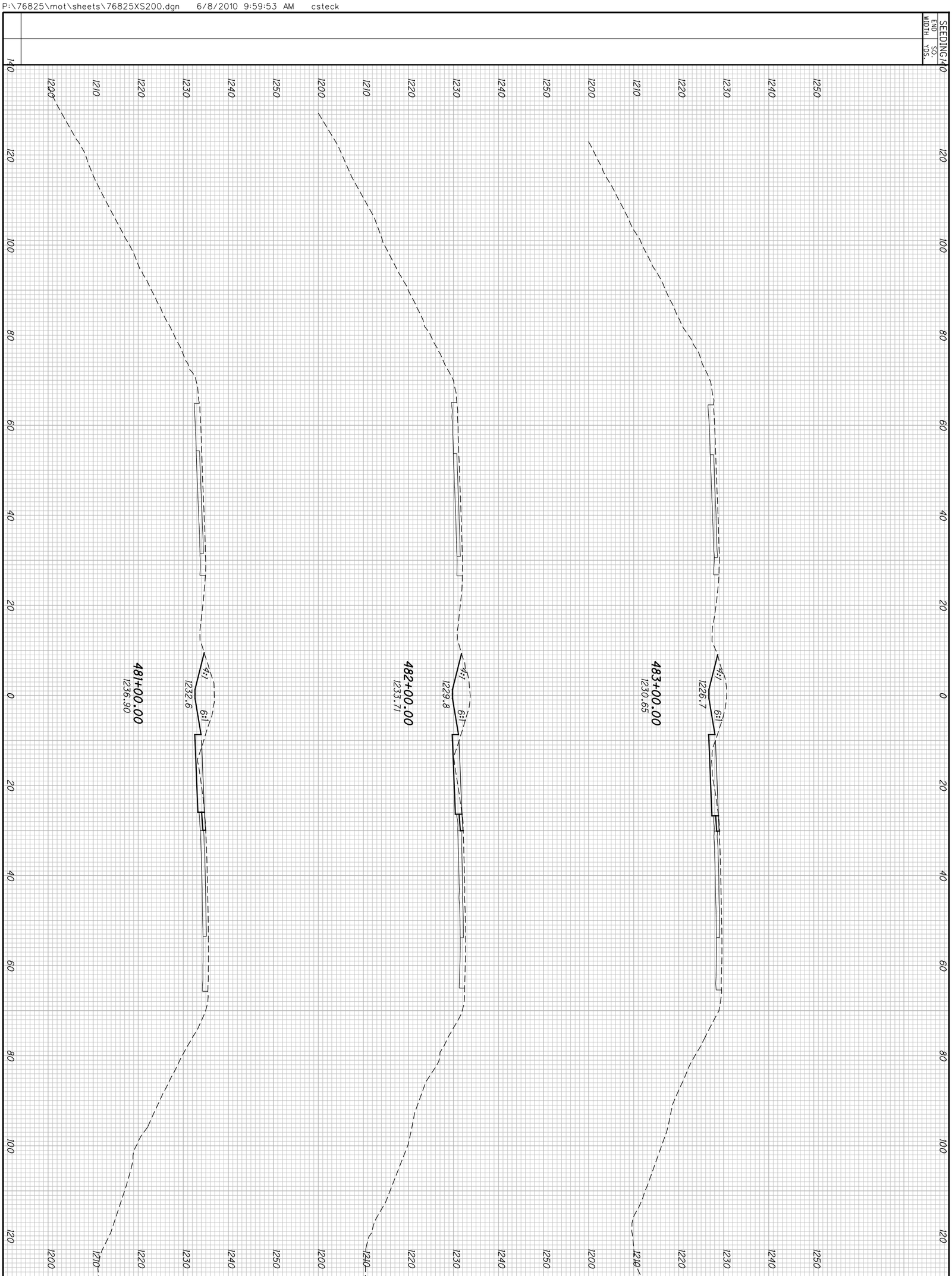
59
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 478+00.00 TO STA. 480+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 9:59:53 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

60 / 210	BEL-70-7.61	CROSS SECTIONS - I.R. 70 PHASE II STA. 481+00.00 TO STA. 483+00.00

CALCULATED MJC
CHECKED BBD

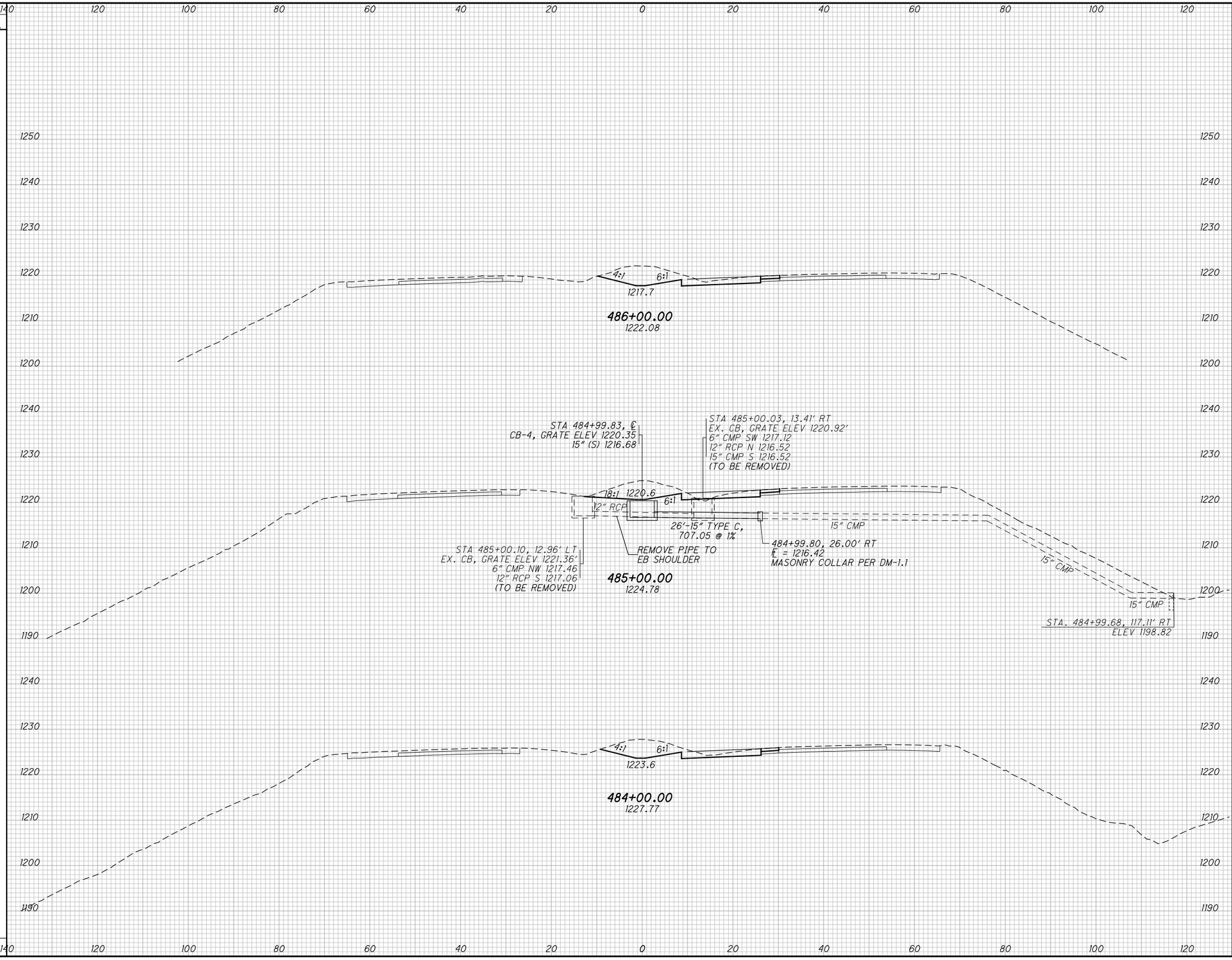
SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED MJC

CHECKED BBD



APPROVED FOR CONSTRUCTION - 6/8/2010

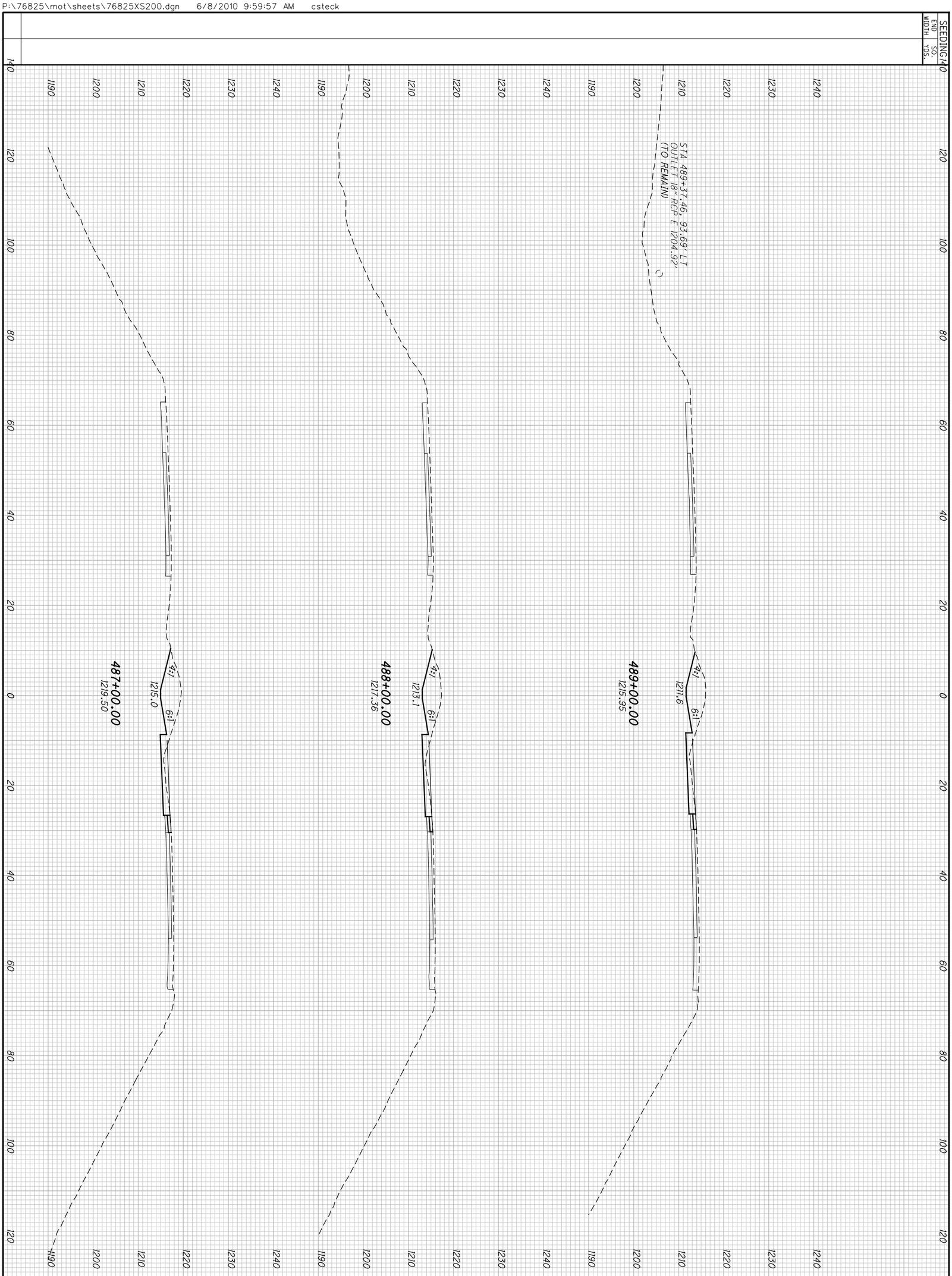
CROSS SECTIONS - I.R. 70 PHASE II

STA. 484+00.00 TO STA. 486+00.00

BEL-70-7.61

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 9:59:55 AM csteck

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 9:59:57 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

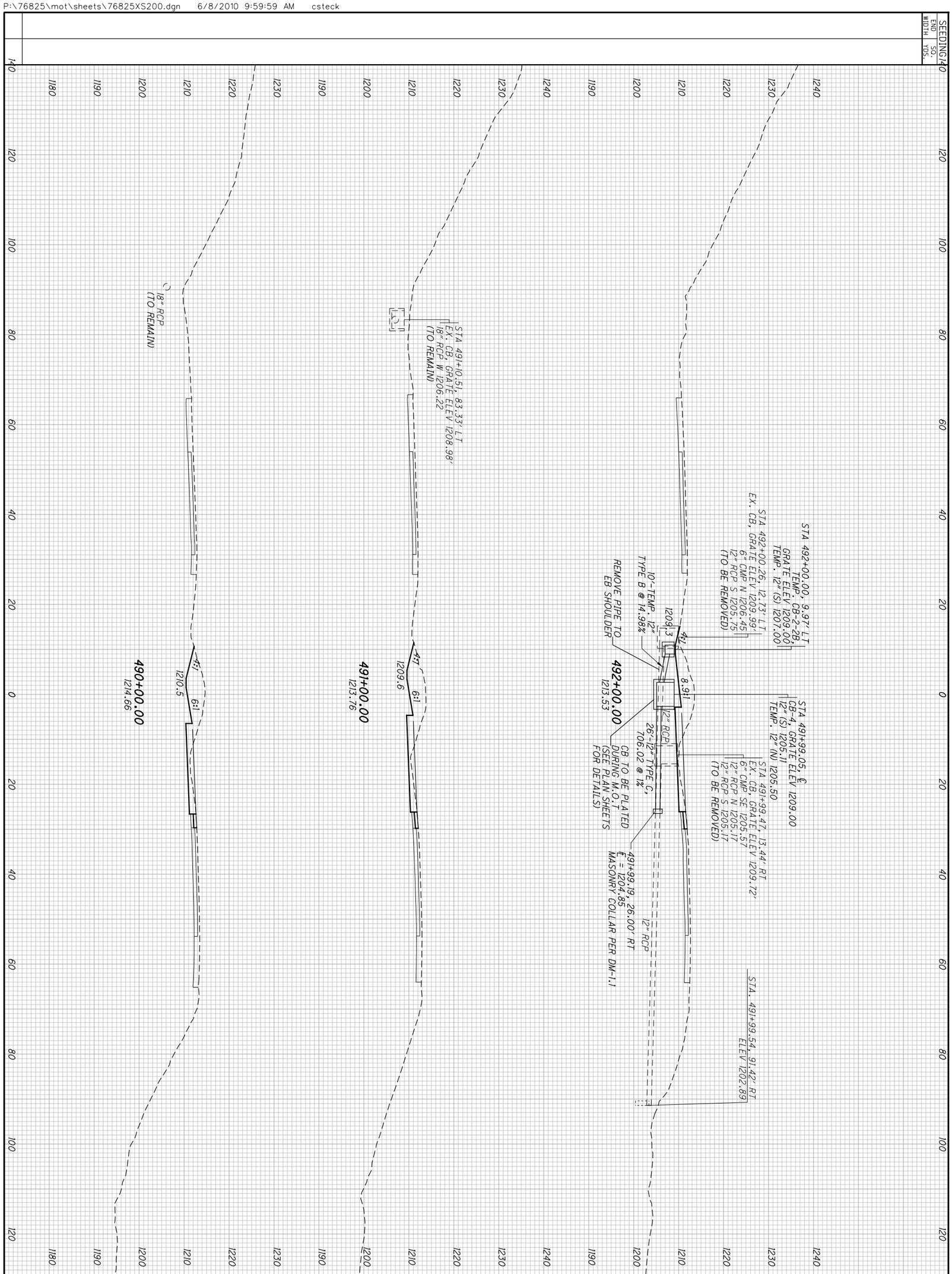
62
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 487+00.00 TO STA. 489+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 9:59:59 AM csteck

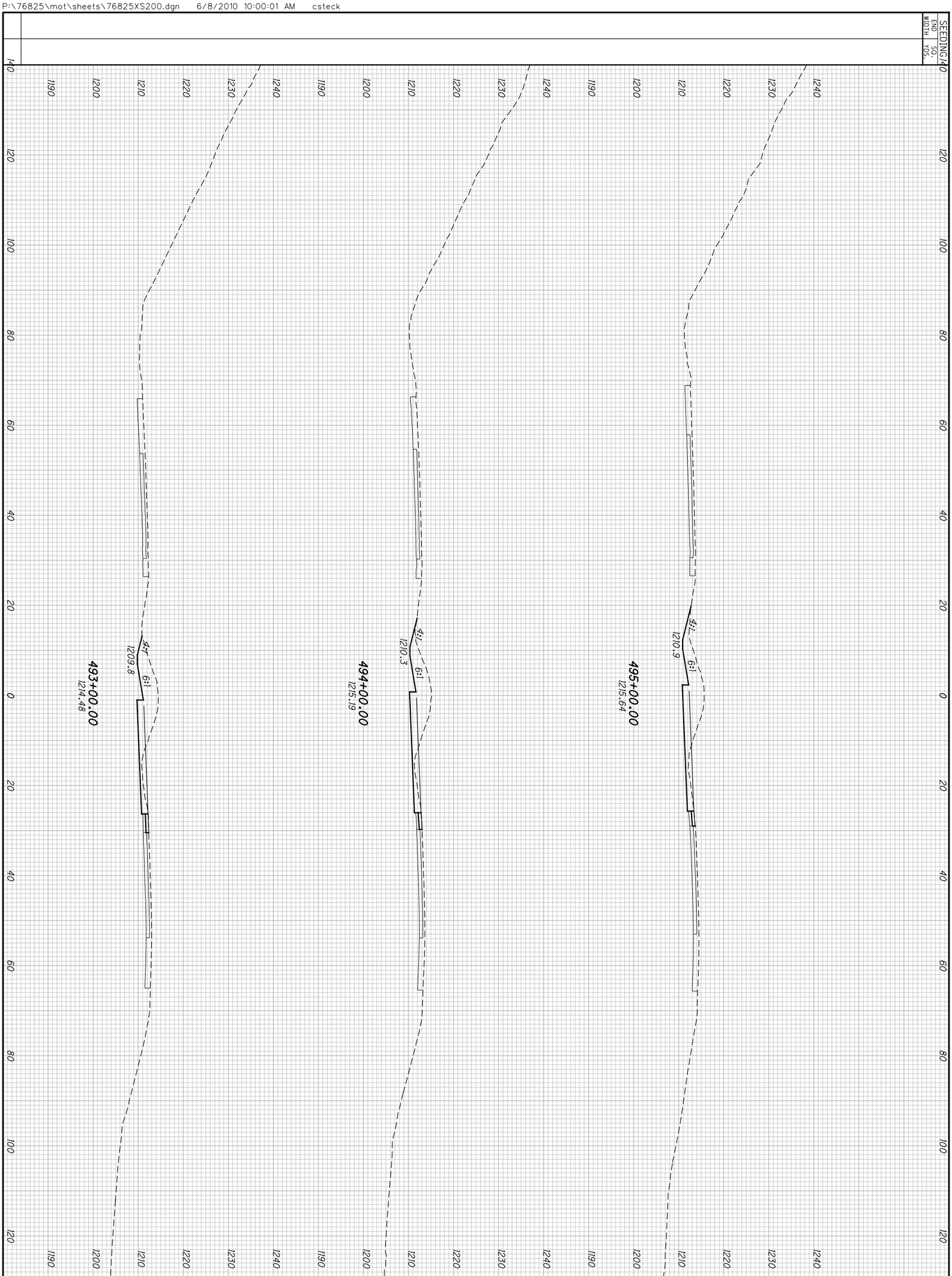


APPROVED FOR CONSTRUCTION - 6/8/2010

63 / 210	BEL-70-7.61	CROSS SECTIONS - I.R. 70 PHASE II STA. 490+00.00 TO STA. 492+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:00:01 AM csteck



END AREA CUT FILL VOLUME CUT FILL

APPROVED FOR CONSTRUCTION - 6/8/2010

64/210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 493+00.00 TO STA. 495+00.00

CALCULATED MJC
CHECKED BBD

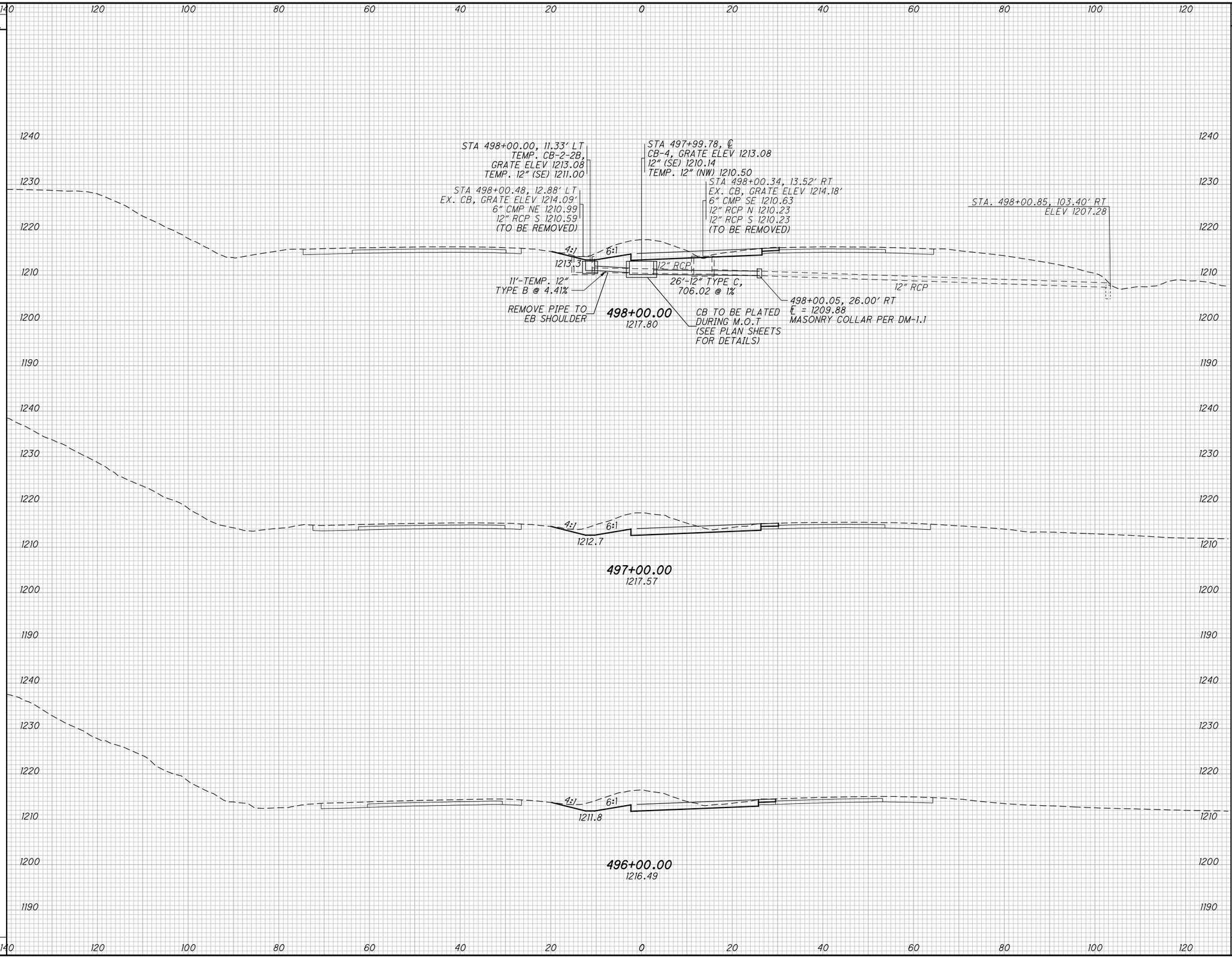
SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED MJC

CHECKED BBD



APPROVED FOR CONSTRUCTION - 6/8/2010

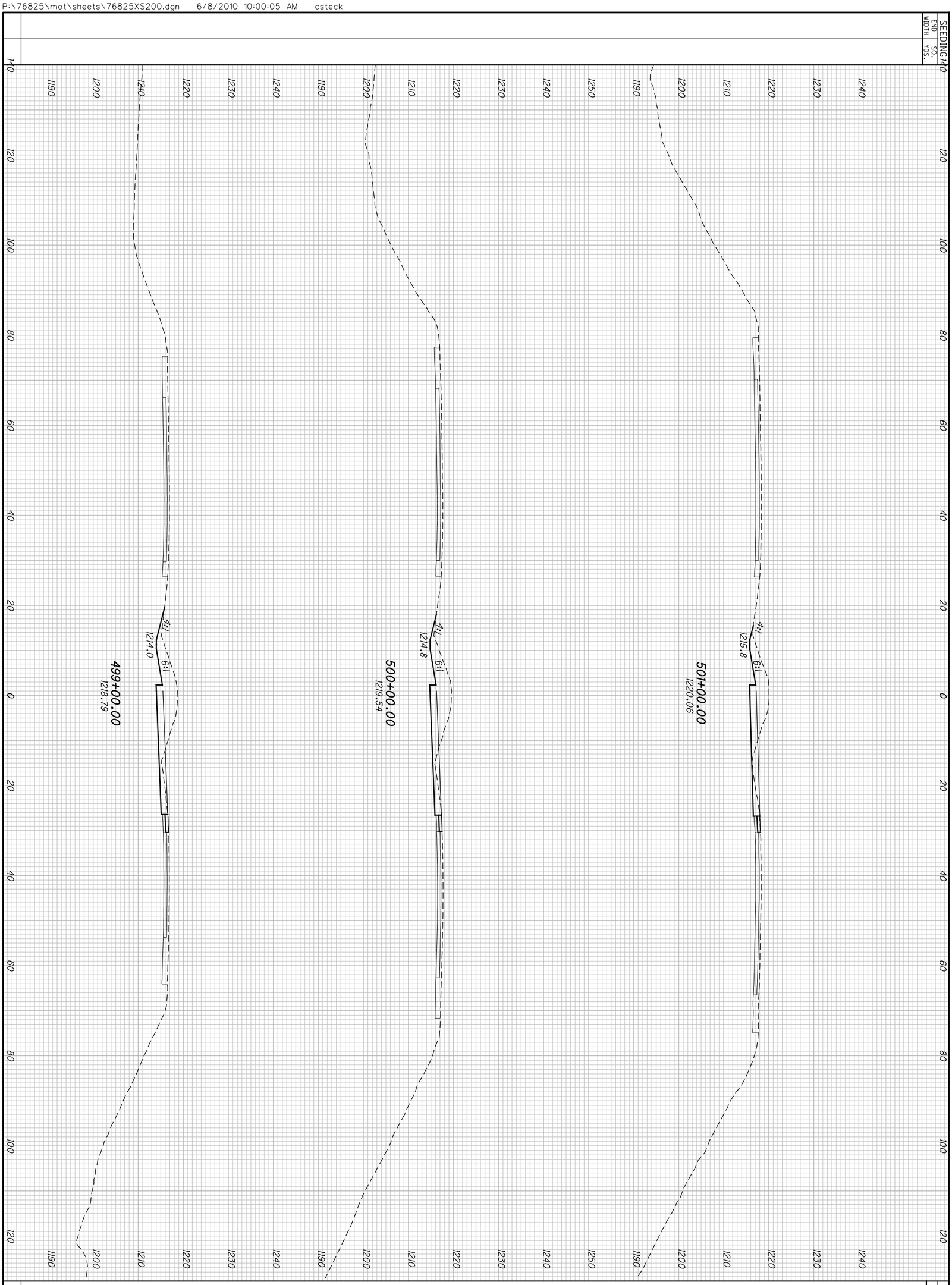
CROSS SECTIONS - I.R. 70 PHASE II

STA. 496+00.00 TO STA. 498+00.00

BEL-70-7.61

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:00:03 AM csteck

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:00:05 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

66
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 499+00.00 TO STA. 501+00.00

CALCULATED MJC
CHECKED BBD

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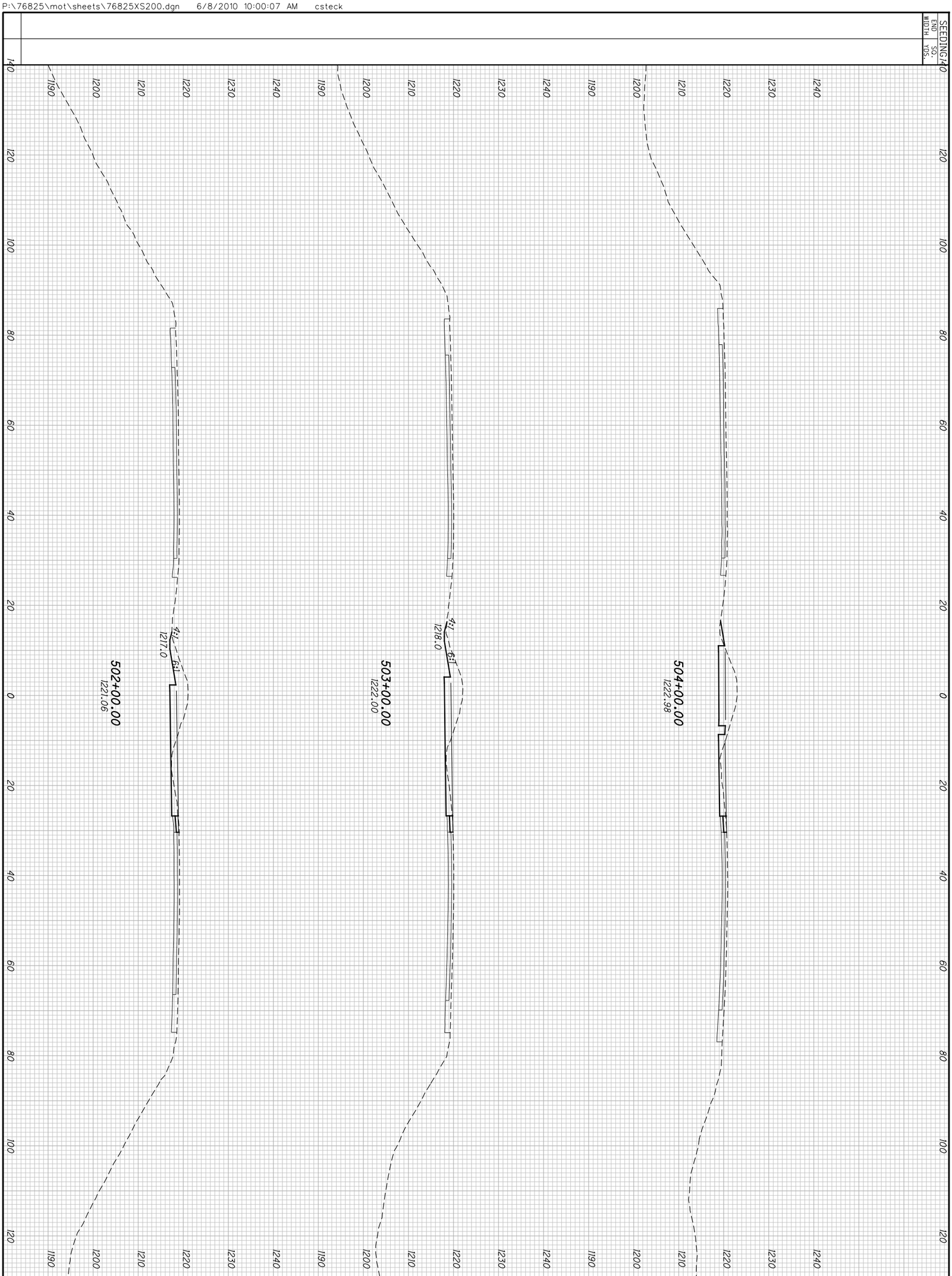


END AREA CUT FILL VOLUME CUT FILL

APPROVED FOR CONSTRUCTION - 6/8/2010

67
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 502+00.00 TO STA. 504+00.00

CALCULATED MJC
CHECKED BBD

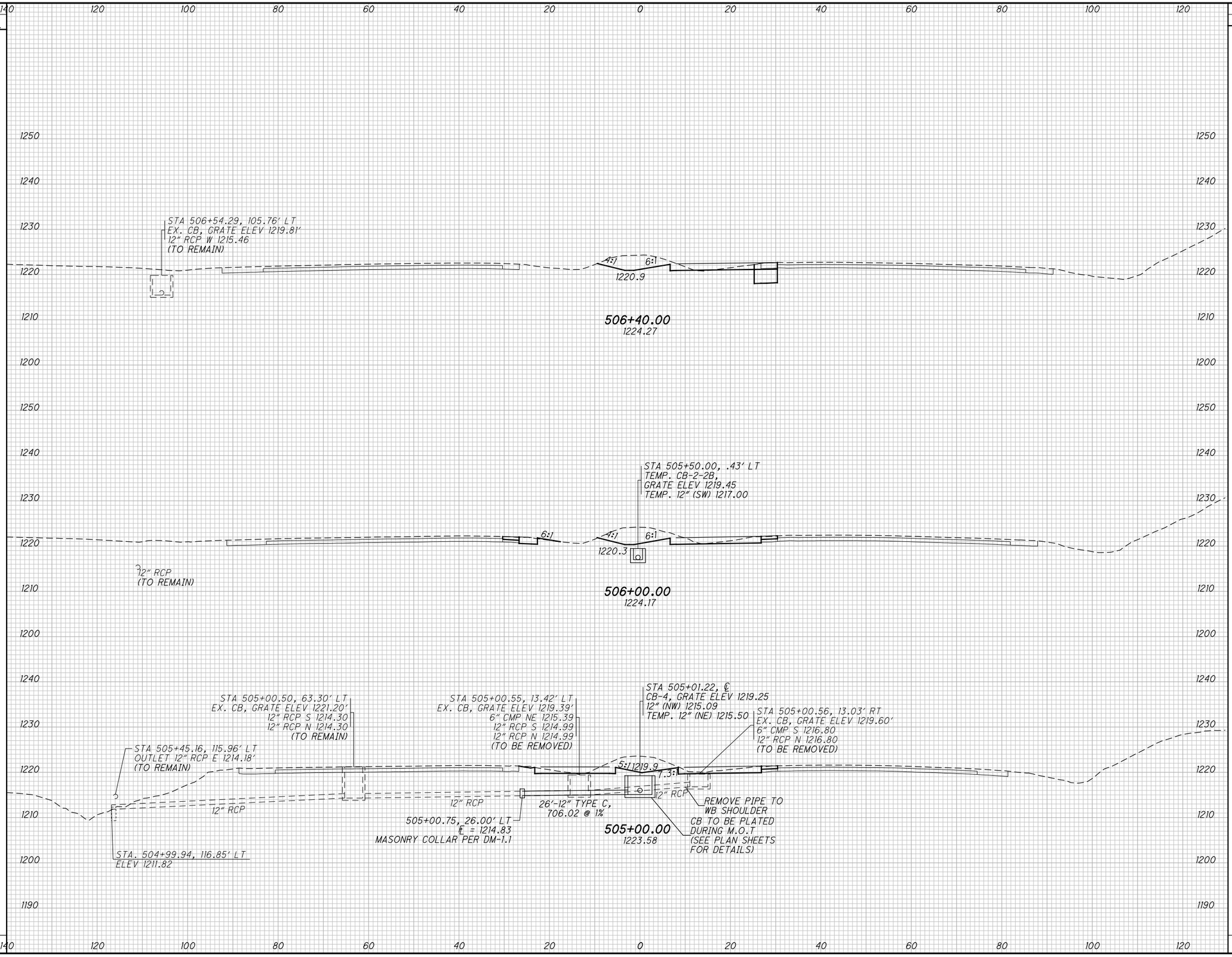
SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED MJC

CHECKED BBD



APPROVED FOR CONSTRUCTION - 6/8/2010

CROSS SECTIONS - I.R. 70 PHASE II

STA. 505+00.00 TO STA. 506+40.00

BEL-70-7.61

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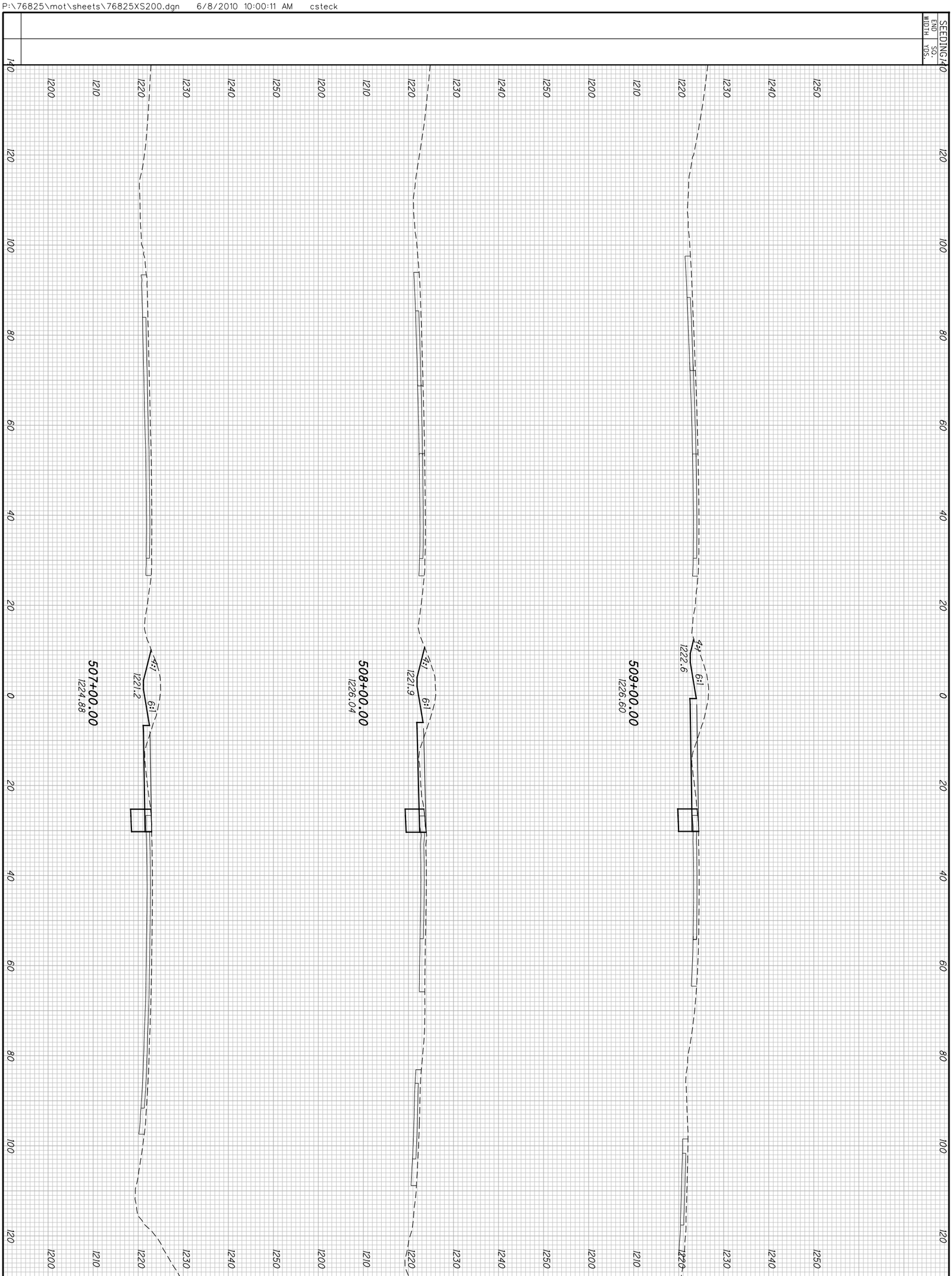
P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:00:11 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

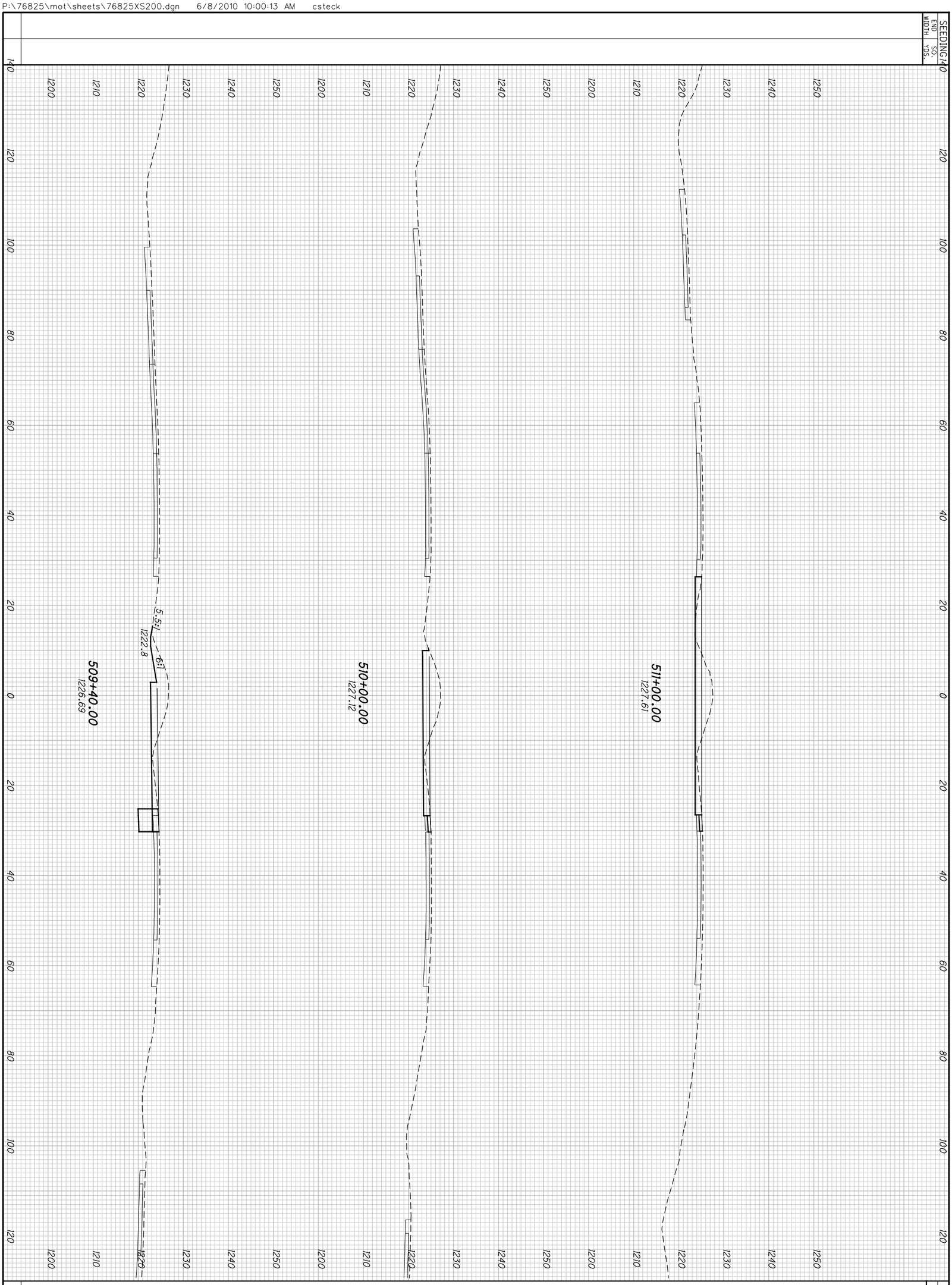
69
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 507+00.00 TO STA. 509+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:00:13 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

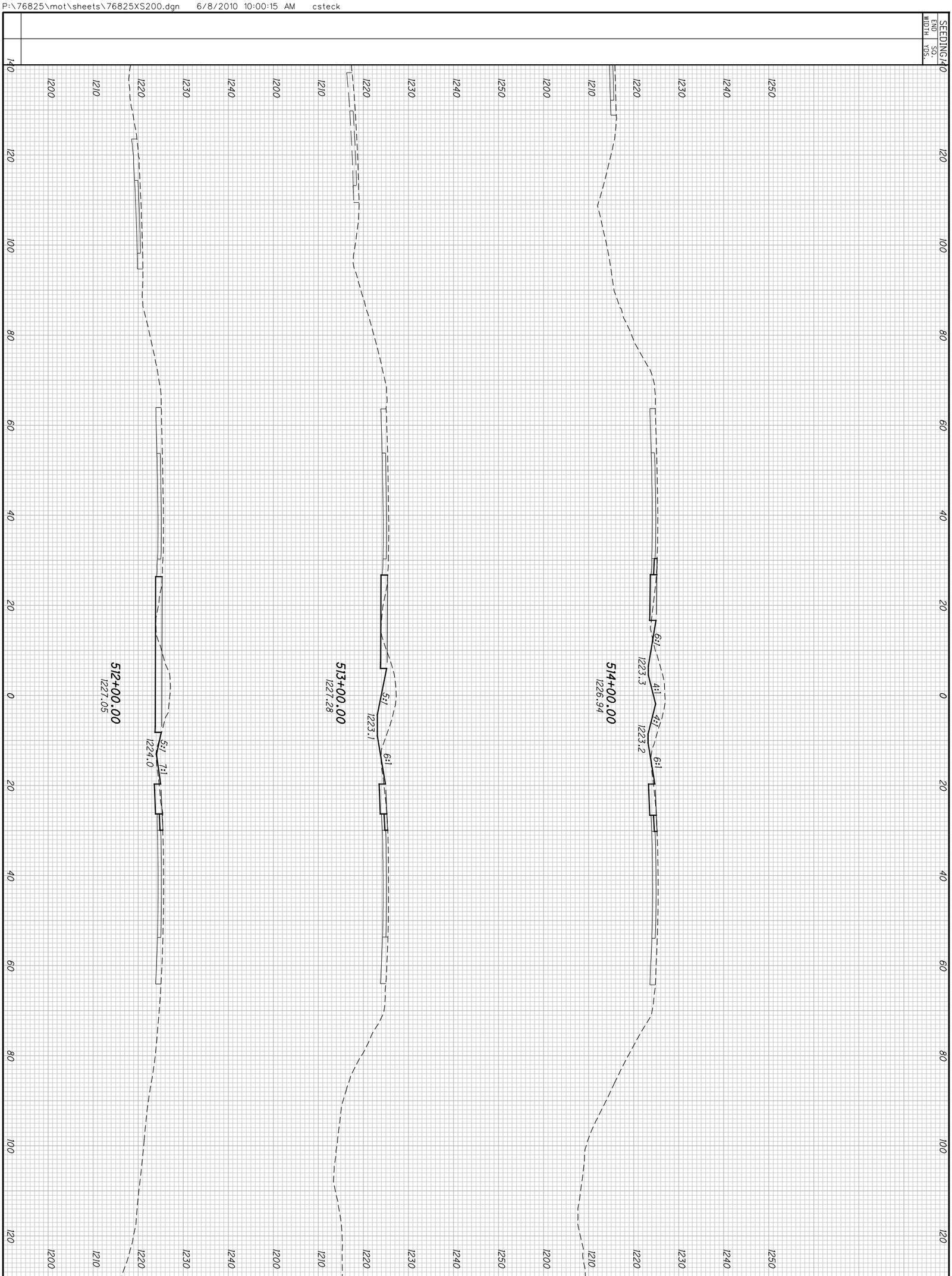
70
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 509+40.00 TO STA. 511+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:00:15 AM csteck



END AREA CUT FILL VOLUME CUT FILL

APPROVED FOR CONSTRUCTION - 6/8/2010

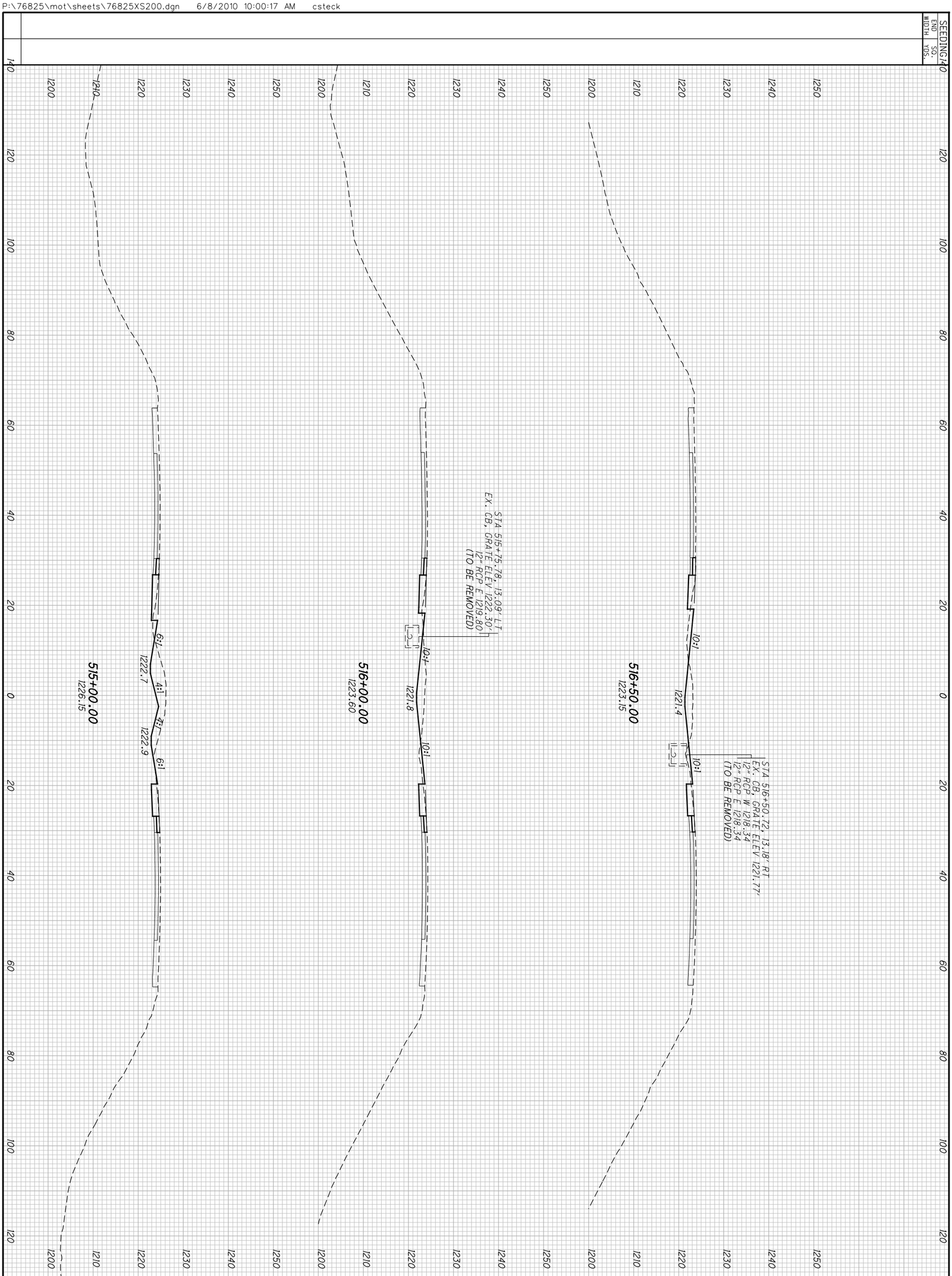
71
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 512+00.00 TO STA. 514+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:00:17 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

72/210	BEL-70-7.61	CROSS SECTIONS - I.R. 70 PHASE II STA. 515+00.00 TO STA. 516+50.00	CALCULATED MJC CHECKED BBD

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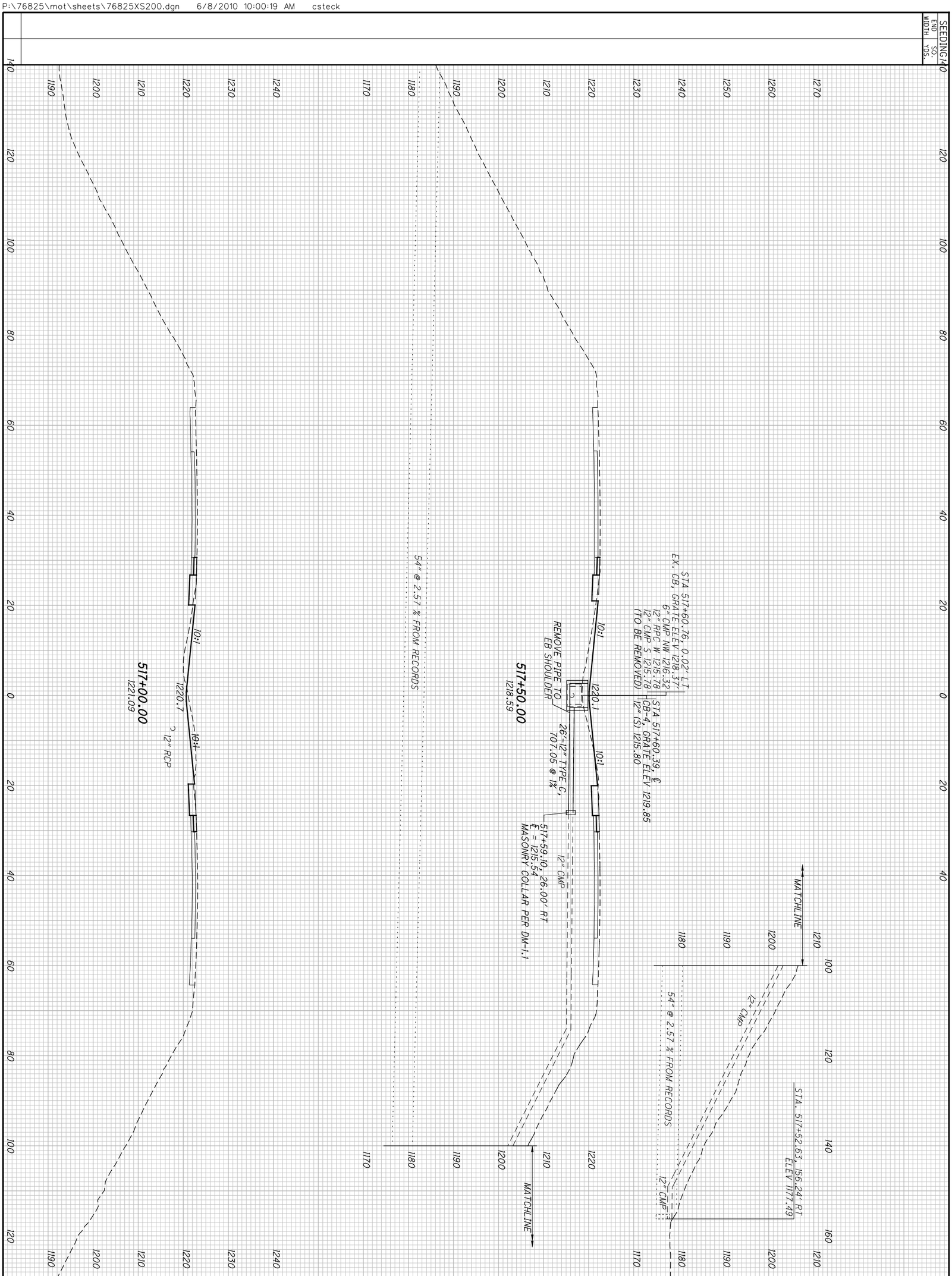


APPROVED FOR CONSTRUCTION - 6/8/2010

73 / 210	BEL-70-7.61	CROSS SECTIONS - I.R. 70 PHASE II STA. 517+00.00 TO STA. 517+50.00

CALCULATED MJC
CHECKED BBD

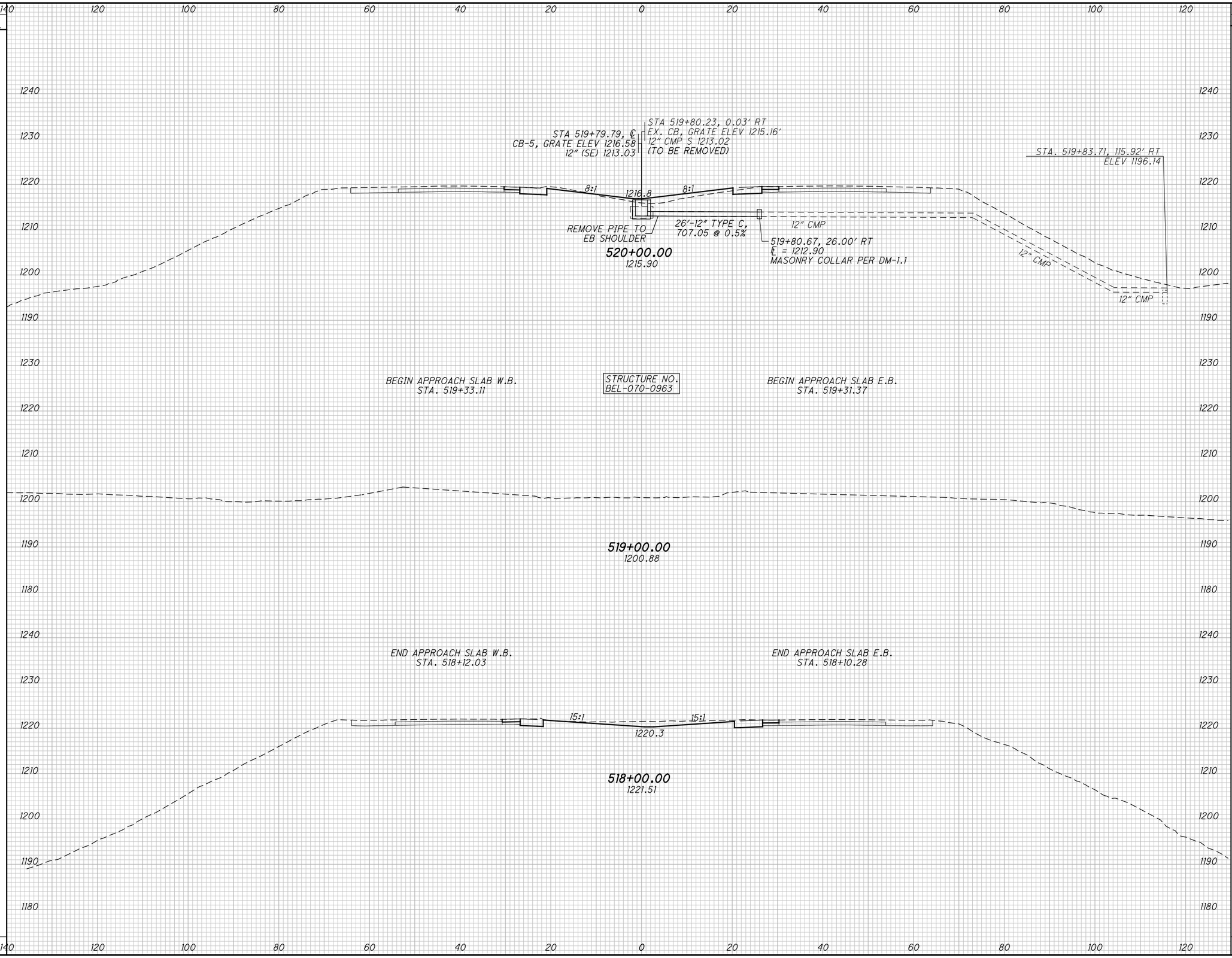
SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED MJC

CHECKED BBD



APPROVED FOR CONSTRUCTION - 6/8/2010

CROSS SECTIONS - I.R. 70 PHASE II

STA. 518+00.00 TO STA. 520+00.00

BEL-70-7.61

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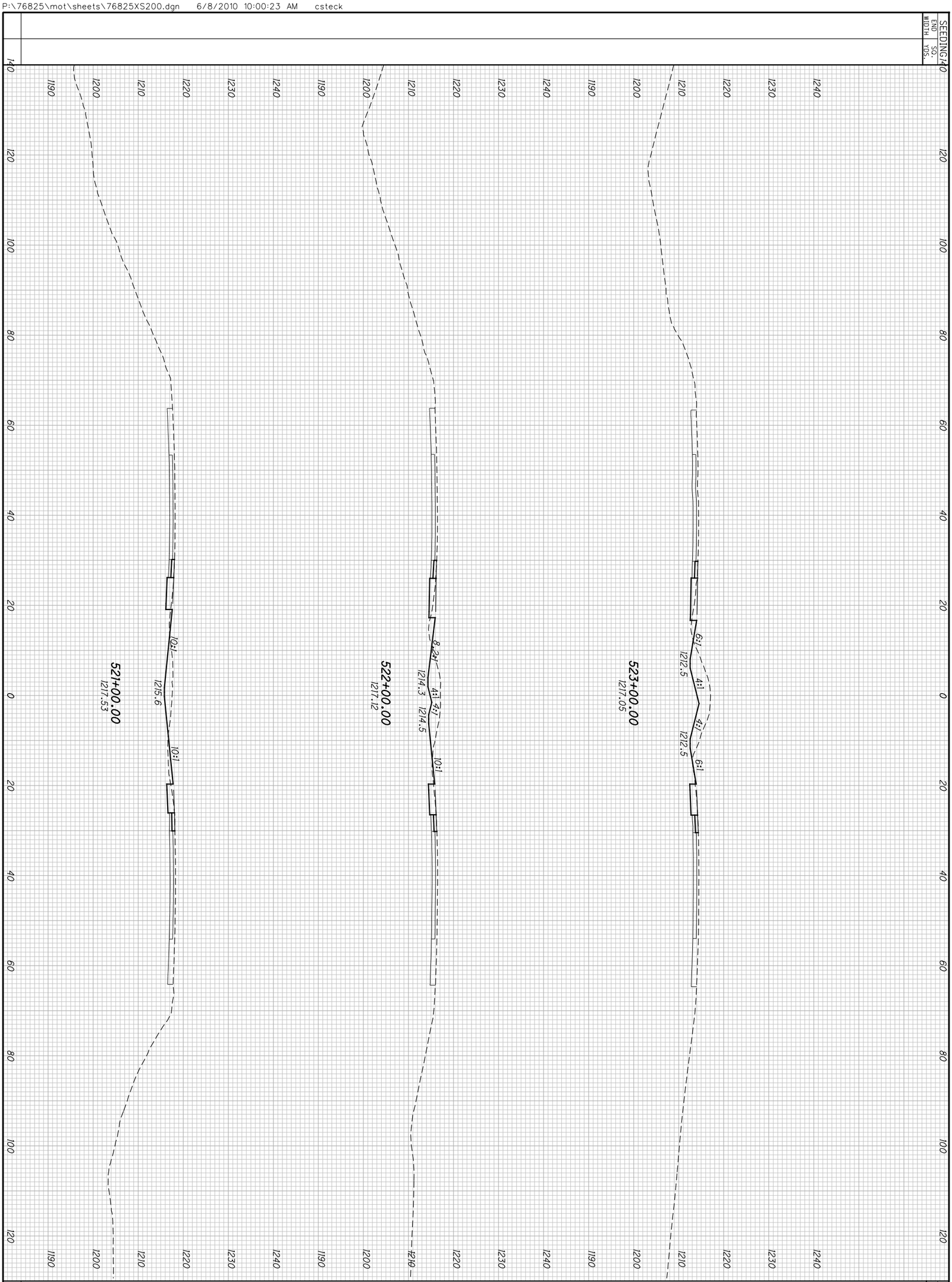

APPROVED FOR CONSTRUCTION - 6/8/2010

75
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 521+00.00 TO STA. 523+00.00

CALCULATED MJC
CHECKED BBD

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED MJC

CHECKED BBD

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

1240 1230 1220 1210 1200 1190

526+00.00
1209.25

STA 525+26.93, ℄
CB-4, GRATE ELEV 1206.76
15" (N) 1204.59
TEMP. 12" (SW) 1204.60

STA 525+00.00, 10.40' RT
TEMP. CB-2-2B,
GRATE ELEV 1206.40
TEMP. 12" (NE) 1204.73

STA 525+26.32, 13.11' LT
EX. CB, GRATE ELEV 1207.25'
6" CMP NE 1204.98
12" RCP S 1204.58
15" RCP N 1204.58
(TO BE REMOVED)

STA 525+26.67, 13.15' RT
EX. CB, GRATE ELEV 1207.55'
12" RCP N 1205.18
(TO BE REMOVED)

STA. 525+25.78, 82.14' LT
ELEV 1203.94

3:1 3.1:1

12" RCP

1206.6

15" RCP

525+26.56, 26.00' LT
℄ = 1204.48
MASONRY COLLAR PER DM-1.1

26'-15" TYPE C,
706.02 @ 0.42%

29'-TEMP. 12"
TYPE B @ 0.45%

REMOVE PIPE TO
WB SHOULDER

CB TO BE PLATED
DURING M.O.T
(SEE PLAN SHEETS
FOR DETAILS)

525+00.00
1211.77

6:1 4:1 4:1 6:1

1210.1 1210.1

524+00.00
1214.37

APPROVED FOR CONSTRUCTION - 6/8/2010

CROSS SECTIONS - I.R. 70 PHASE II

STA. 524+00.00 TO STA. 526+00.00

BEL-70-7.61

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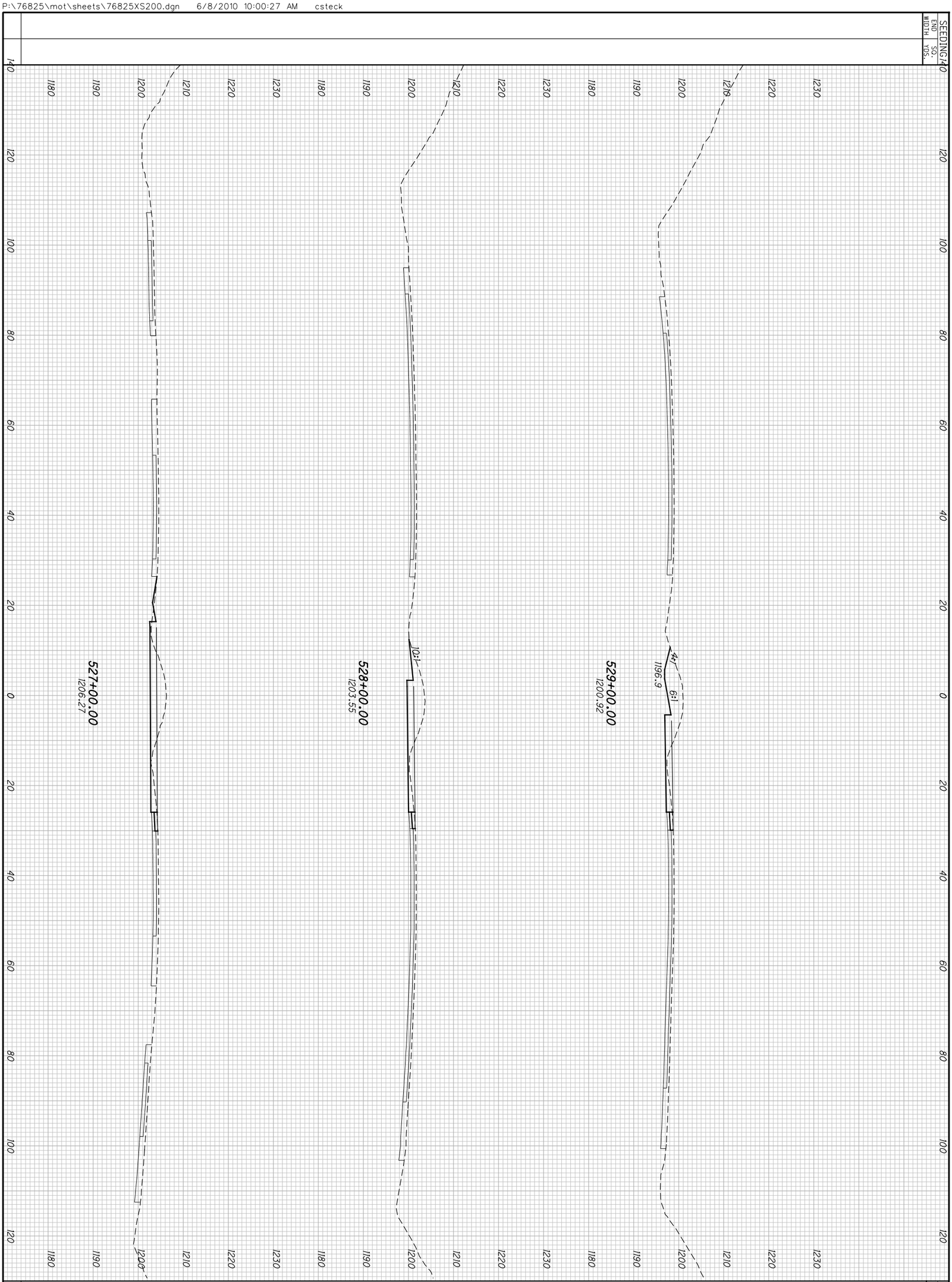


APPROVED FOR CONSTRUCTION - 6/8/2010

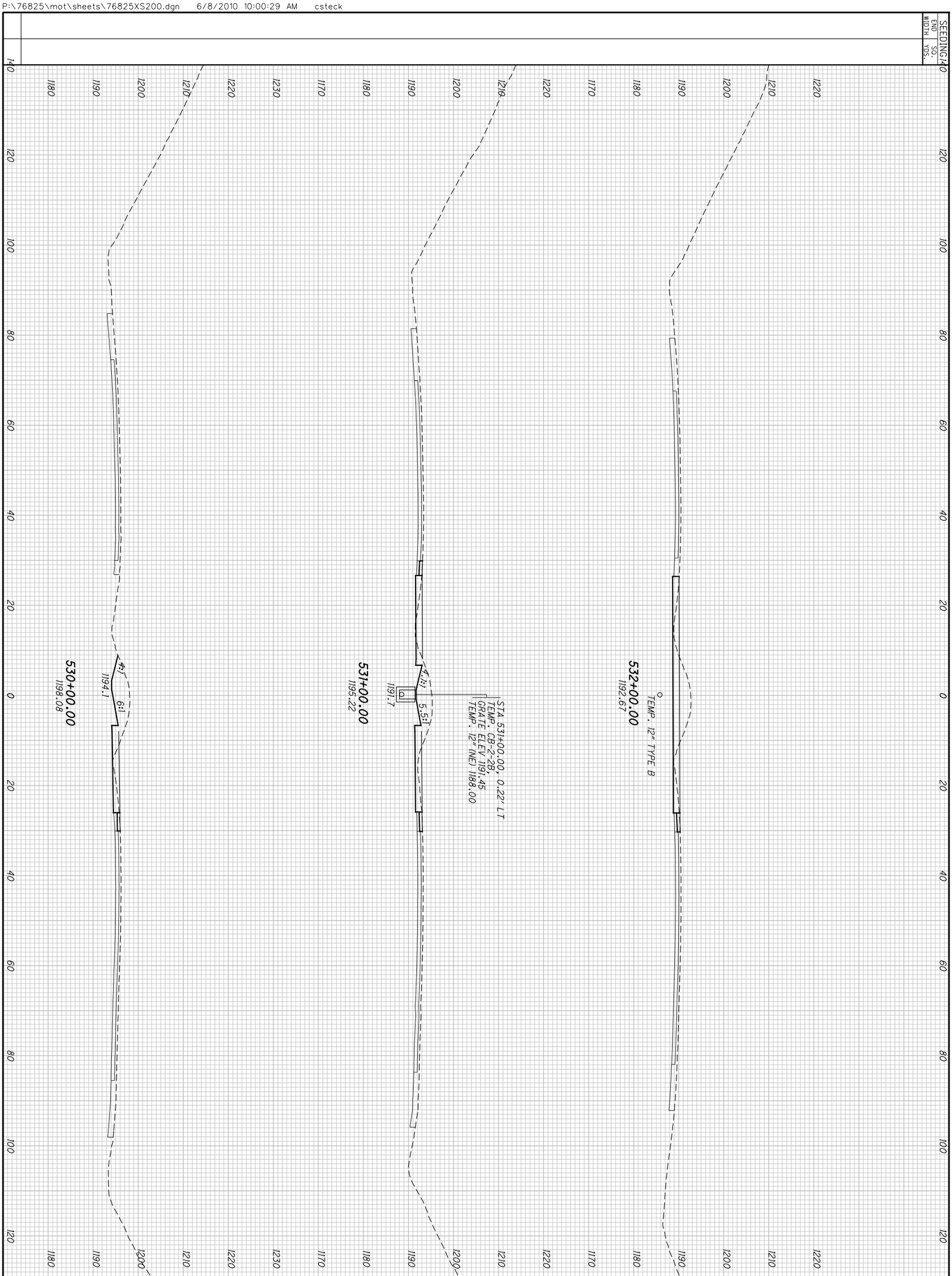
77
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 527+00.00 TO STA. 529+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:00:29 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

78
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 530+00.00 TO STA. 532+00.00

CALCULATED MJC
CHECKED BBD

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED MJC
CHECKED BBD

APPROVED FOR CONSTRUCTION - 6/8/2010

CROSS SECTIONS - I.R. 70 PHASE II
STA. 533+00.00 TO STA. 535+00.00

BEL-70-7.61

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

1210 1200 1190 1180 1170 1160 1220

535+00.00
1183.66

4:1 6:1
1180.1

STA. 534+00.88, 99.87' LT
ELEV 1178.67

STA 534+00.31, 13.30' LT
EX. CB, GRATE ELEV 1182.66'
6" CMP NW 1180.26
12" RCP S 1179.87
15" RCP N 1179.78
(TO BE REMOVED)

STA 534+00.70, ℄
CB-4, GRATE ELEV 1182.01
15" (NW) 1179.83
TEMP. 12" (SW) 1179.83

STA 534+00.10, 13.07' RT
EX. CB, GRATE ELEV 1182.84'
6" CMP S 1180.74
12" RCP N 1180.25
(TO BE REMOVED)

8:1 1182.2 4:1

15" RCP

534+00.74, 26.00' LT
℄ = 1179.64
MASONRY COLLAR PER DM-1.1

CB TO BE PLATED
DURING M.O.T
(SEE PLAN SHEETS
FOR DETAILS)

26'-15" TYPE C
706.02 @ 0.73%

12" RCP

REMOVE PIPE TO
WB SHOULDER

534+00.00
1186.84

TEMP. 12" TYPE B

533+00.00
1190.06

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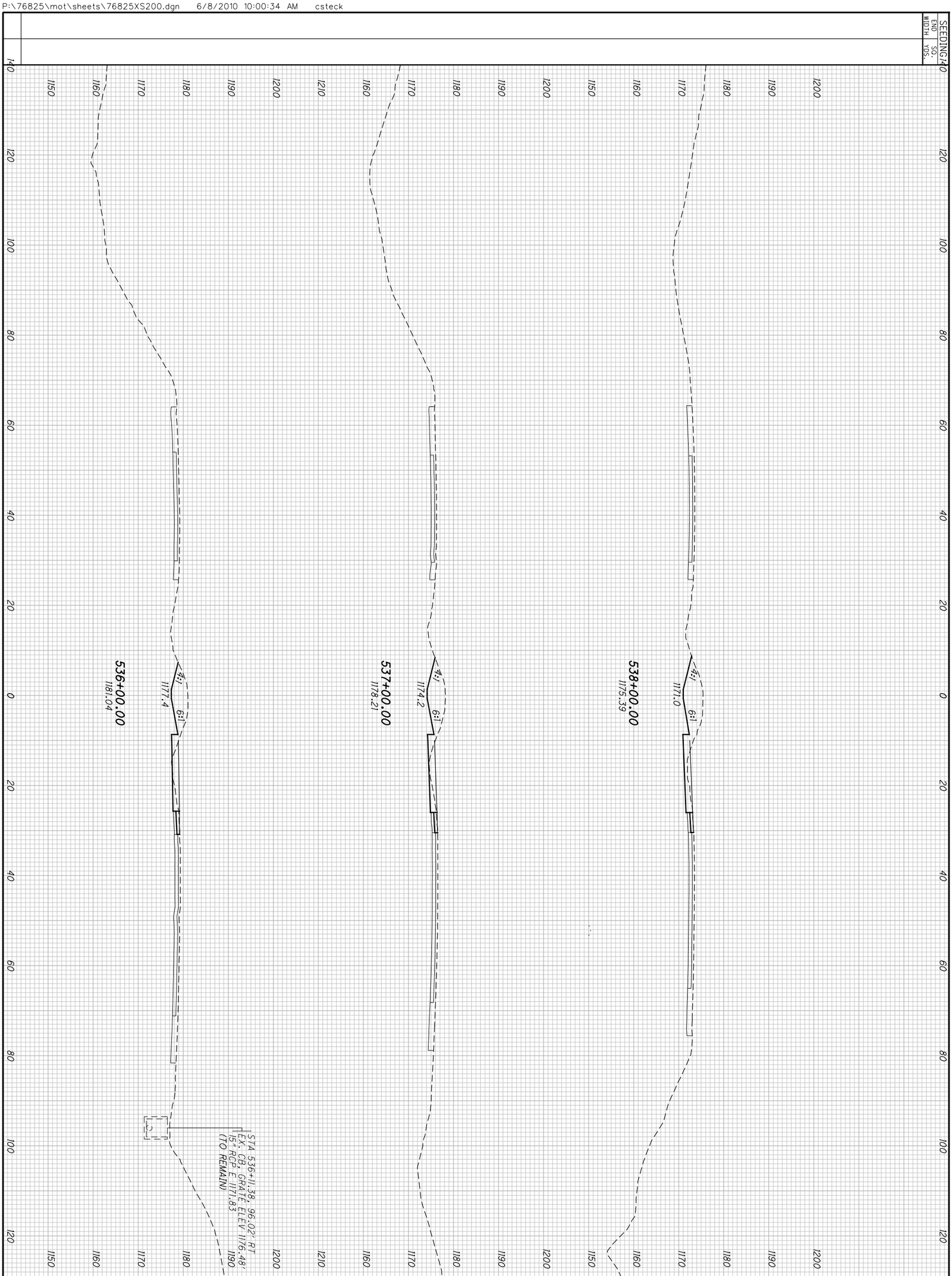
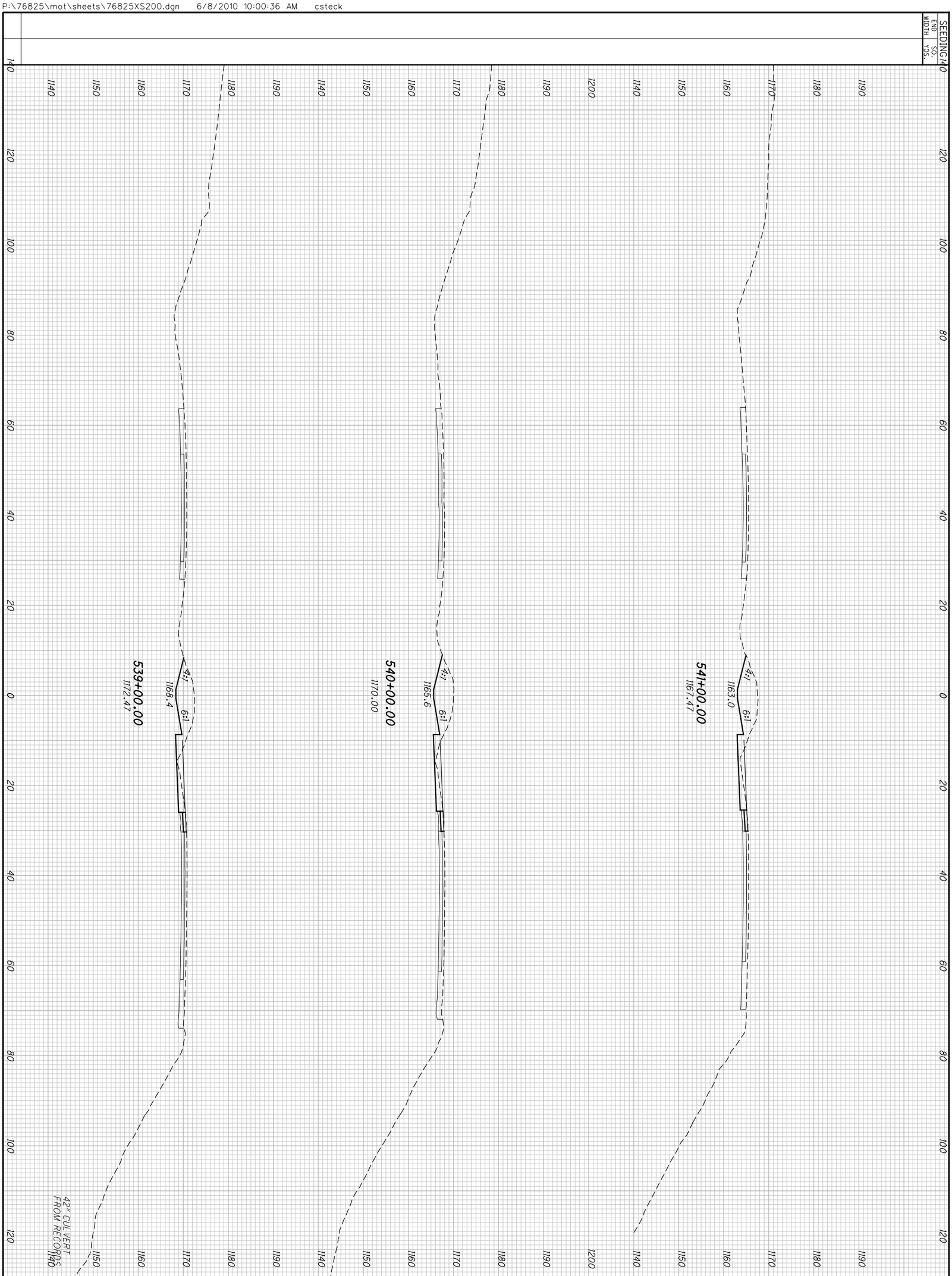


APPROVED FOR CONSTRUCTION - 6/8/2010

80 / 210	BEL-70-7.61	CROSS SECTIONS - I.R. 70 PHASE II STA. 536+00.00 TO STA. 538+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:00:36 AM csteck



END AREA CUT FILL | VOLUME CUT FILL

APPROVED FOR CONSTRUCTION - 6/8/2010

81/210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 539+00.00 TO STA. 541+00.00

CALCULATED MJC
CHECKED BBD

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED MJC

CHECKED BBD

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

1180 1170 1160 1150 1140 1130

4:1 6:1
1158.6

544+00.00
1162.72

80" @ 1.48 % FROM RECORDS

4:1 6:1
1159.7

543+00.00
1163.85

STA 542+00.11, 14.39' LT
EX. CB, GRATE ELEV 1161.38'
6" CMP NW 1157.78
12" RCP S 1157.38
12" CMP N 1157.38
(TO BE REMOVED)

STA 542+00.43, ℄
CB-4, GRATE ELEV 1160.97
12" (NW) 1157.59

STA 541+99.75, 13.89' RT
EX. CB, GRATE ELEV 1161.67'
12" RCP N 1158.75
(TO BE REMOVED)

20:1 1161.2 6:1

12" CMP

542+00.57, 26.00' LT
℄ = 1157.26
MASONRY COLLAR PER DM-1.1

26'-12" TYPE C,
707.05 @ 1.27%

12" RCP

REMOVE PIPE TO WB SHOULDER

542+00.00
1165.29

12" CMP

12" CMP

12" CMP

STA. 542+01.04, 99.83' LT
ELEV 1147.68

APPROVED FOR CONSTRUCTION - 6/8/2010

CROSS SECTIONS - I.R. 70 PHASE II
STA. 542+00.00 TO STA. 544+00.00

BEL-70-7.61

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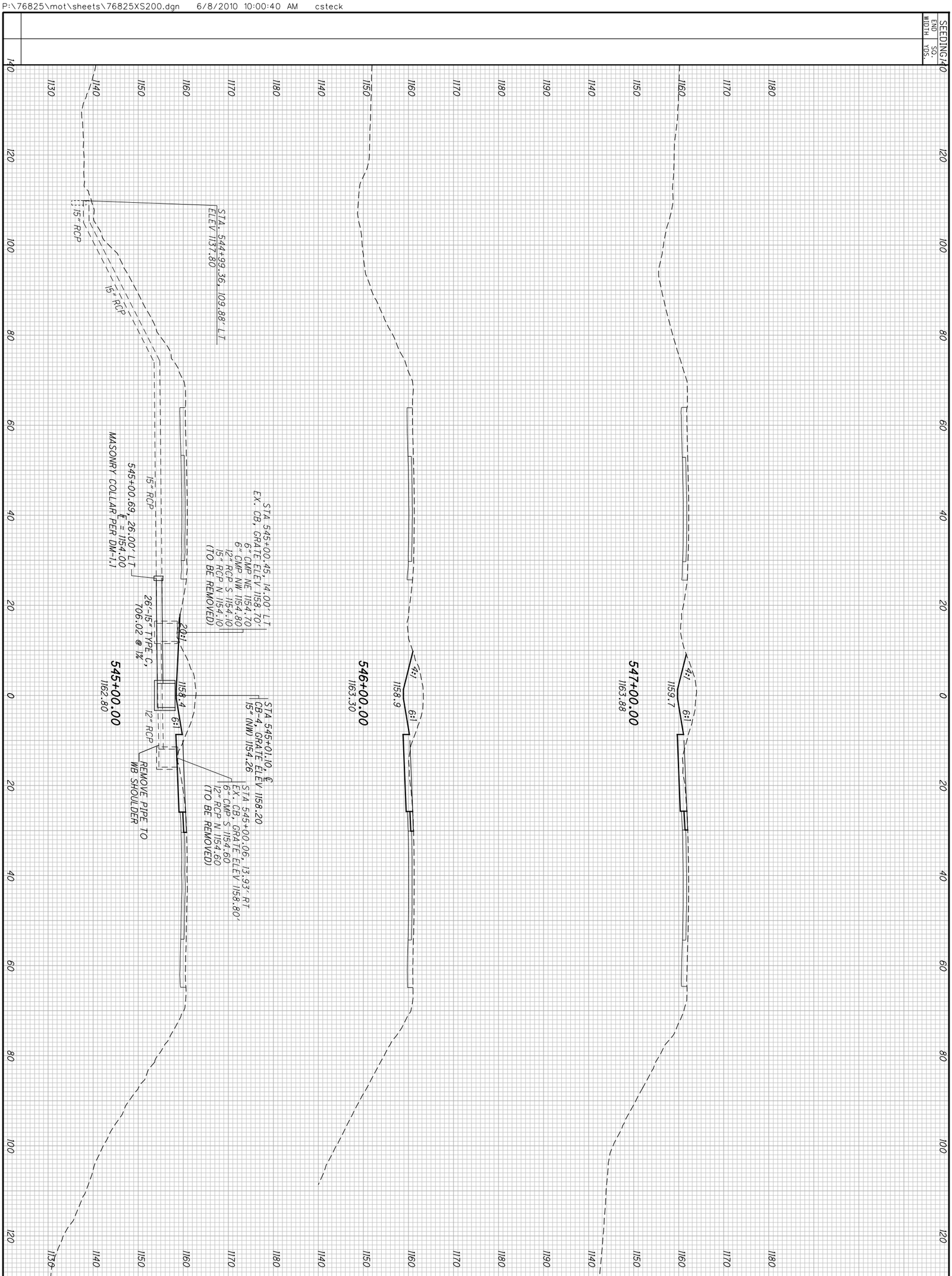
P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:00:40 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

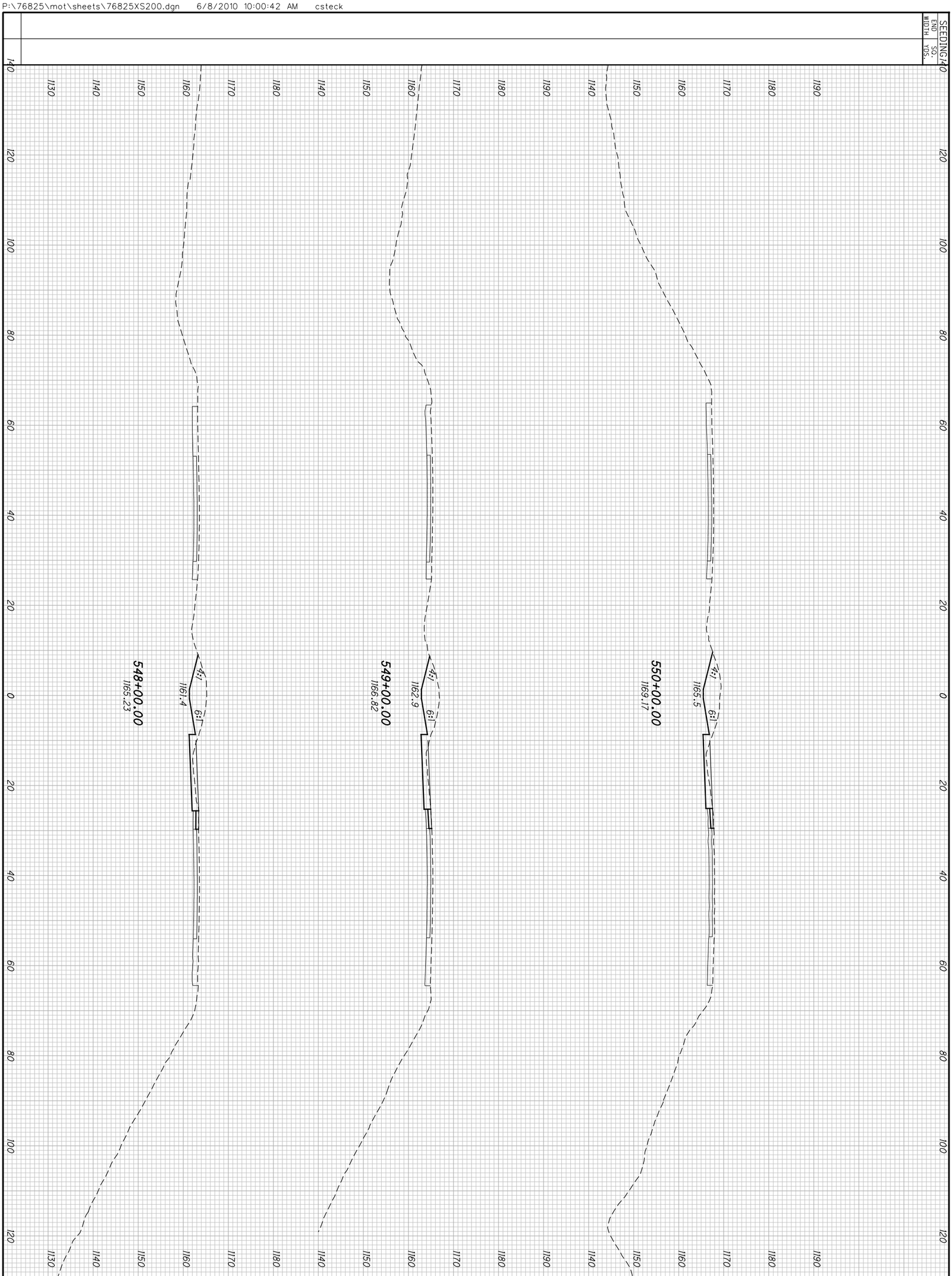
83
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 545+00.00 TO STA. 547+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:00:42 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

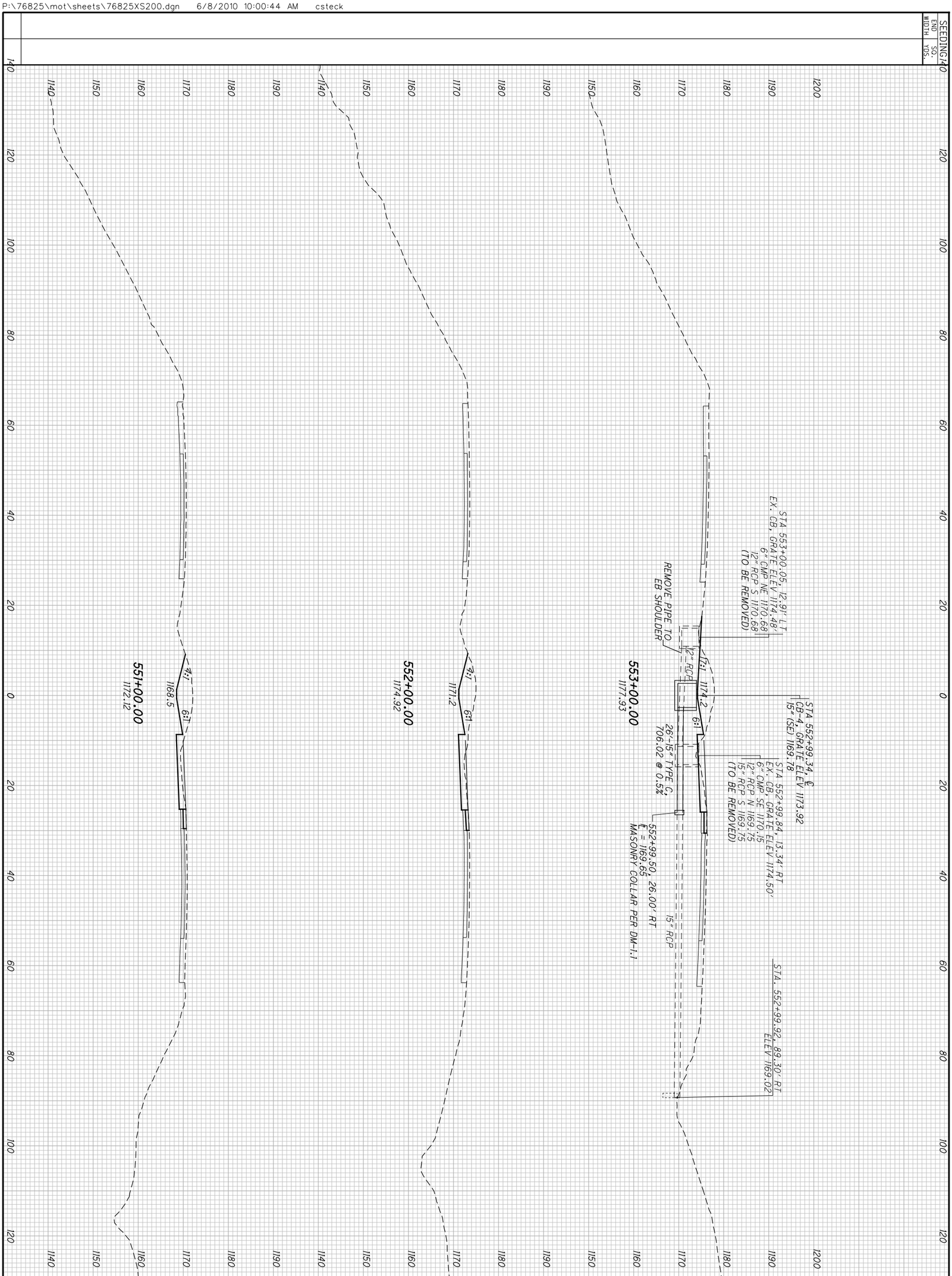
84
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 548+00.00 TO STA. 550+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:00:44 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

85 / 210	BEL-70-7.61	CROSS SECTIONS - I.R. 70 PHASE II STA. 551+00.00 TO STA. 553+00.00

CALCULATED MJC
CHECKED BBD

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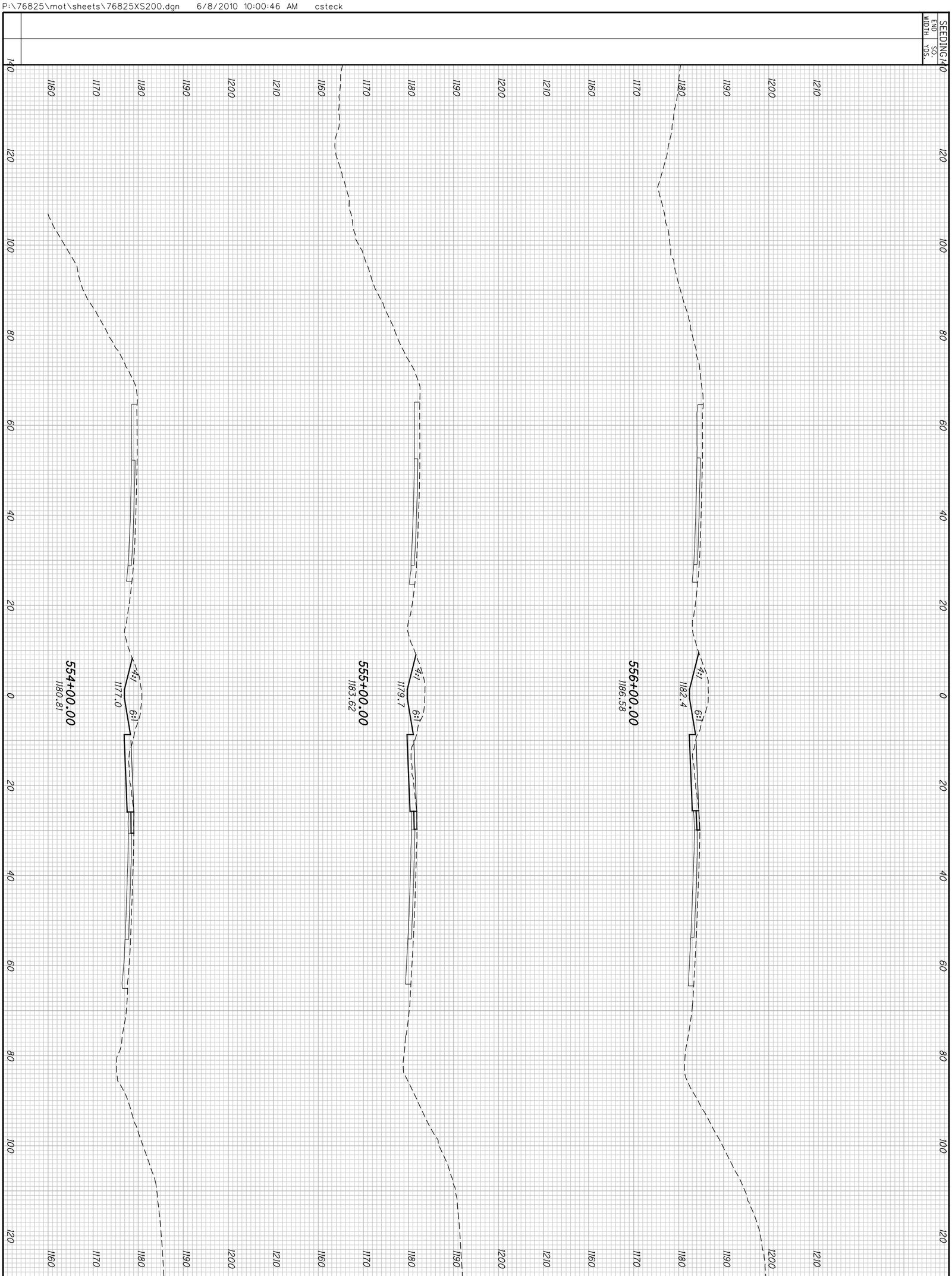


END AREA CUT FILL

VOLUME CUT FILL

APPROVED FOR CONSTRUCTION - 6/8/2010

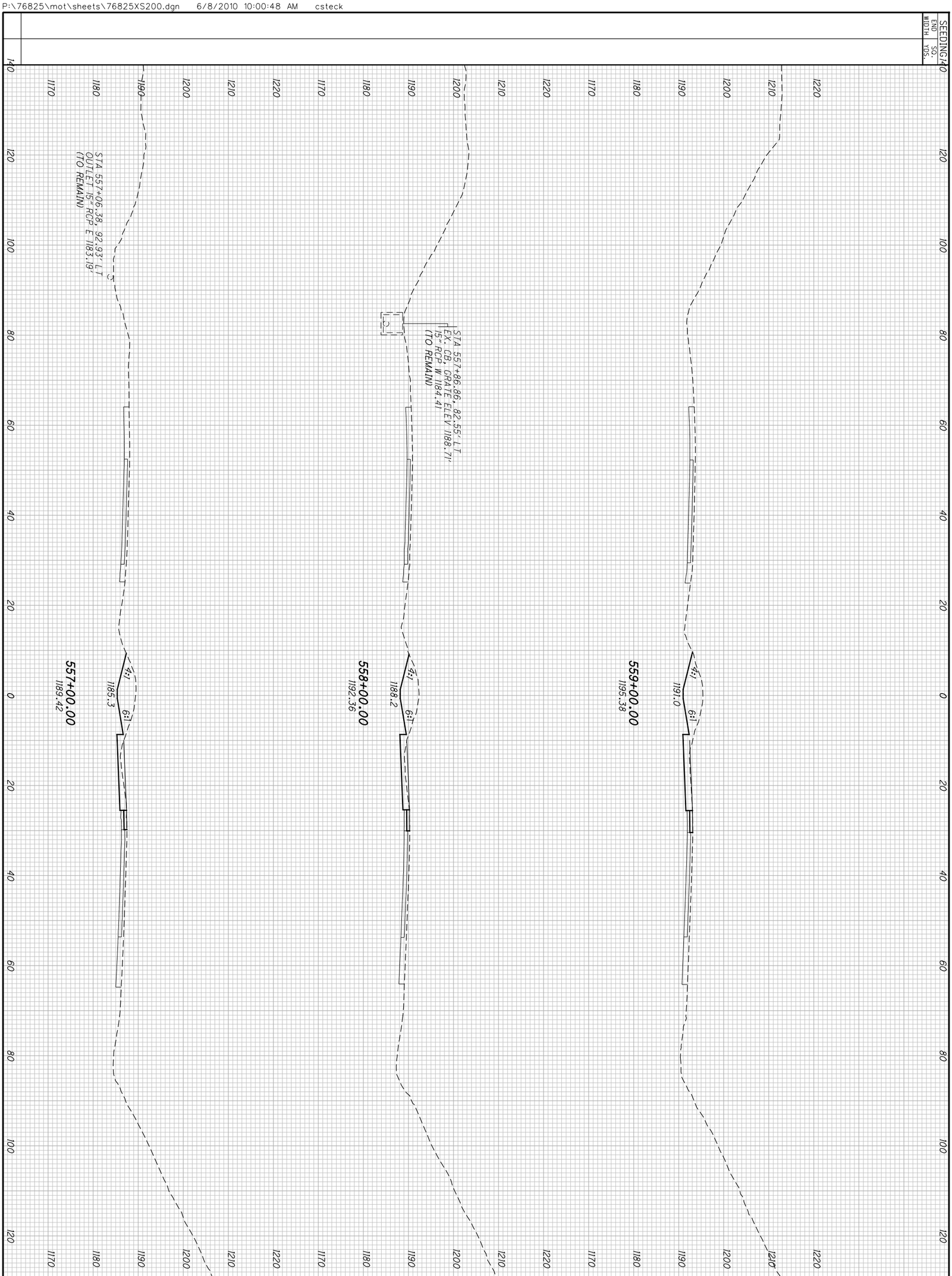
86
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 554+00.00 TO STA. 556+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:00:48 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

87
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 557+00.00 TO STA. 559+00.00

CALCULATED MJC
CHECKED BBD

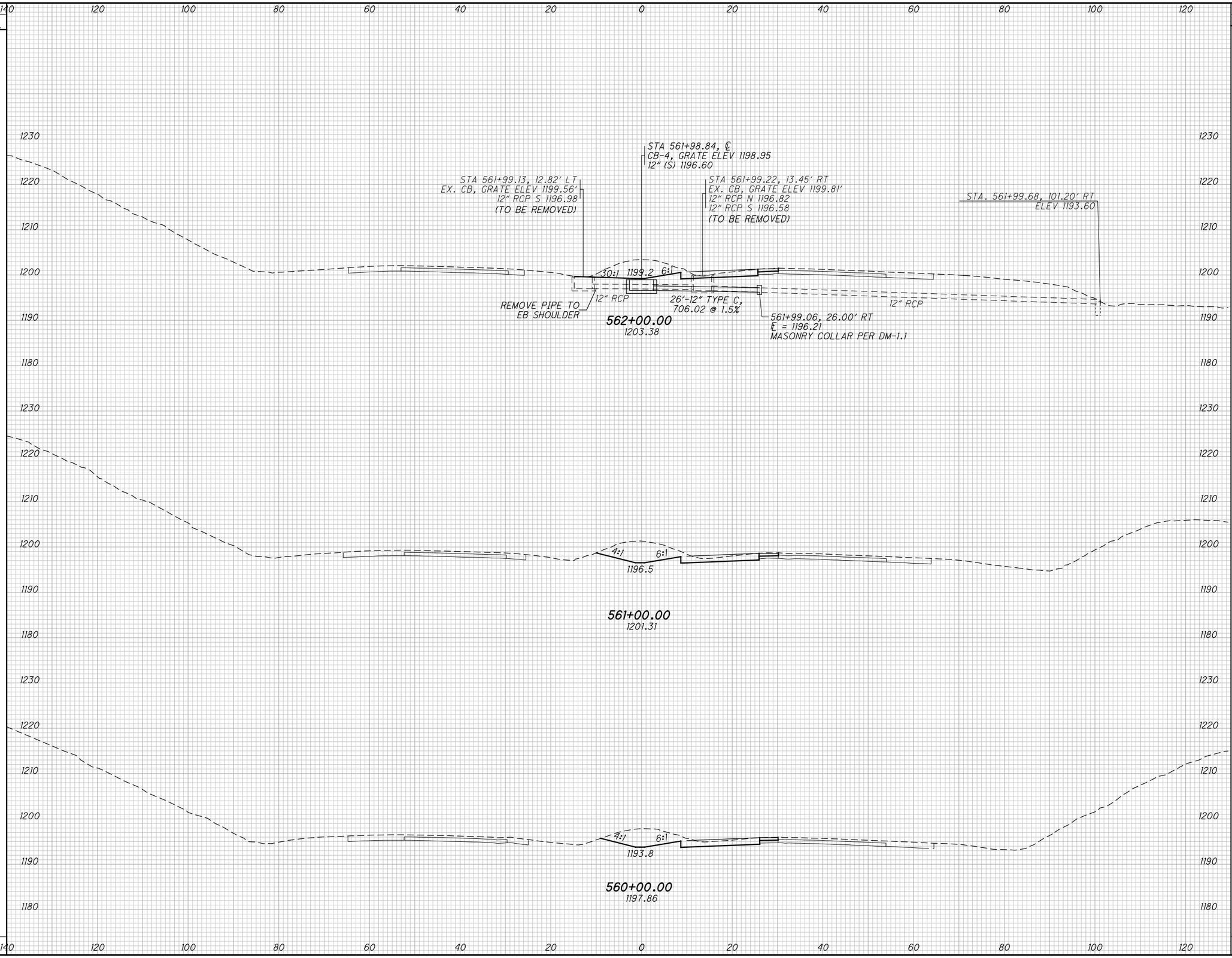
SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED MJC

CHECKED BBD



APPROVED FOR CONSTRUCTION - 6/8/2010

CROSS SECTIONS - I.R. 70 PHASE II

STA. 560+00.00 TO STA. 562+00.00

BEL-70-7.61

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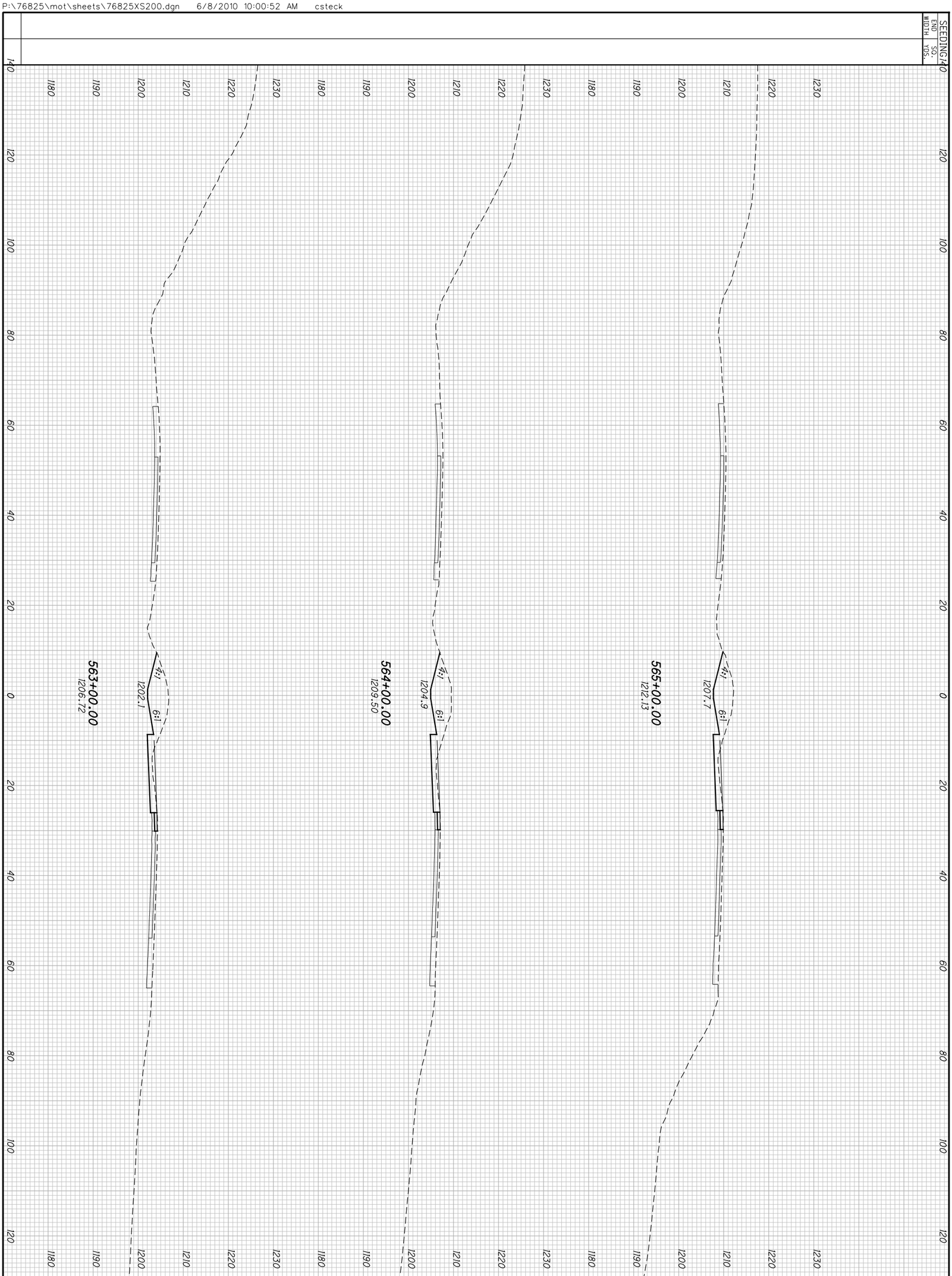
P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:00:52 AM csteck



END AREA CUT FILL VOLUME CUT FILL

APPROVED FOR CONSTRUCTION - 6/8/2010

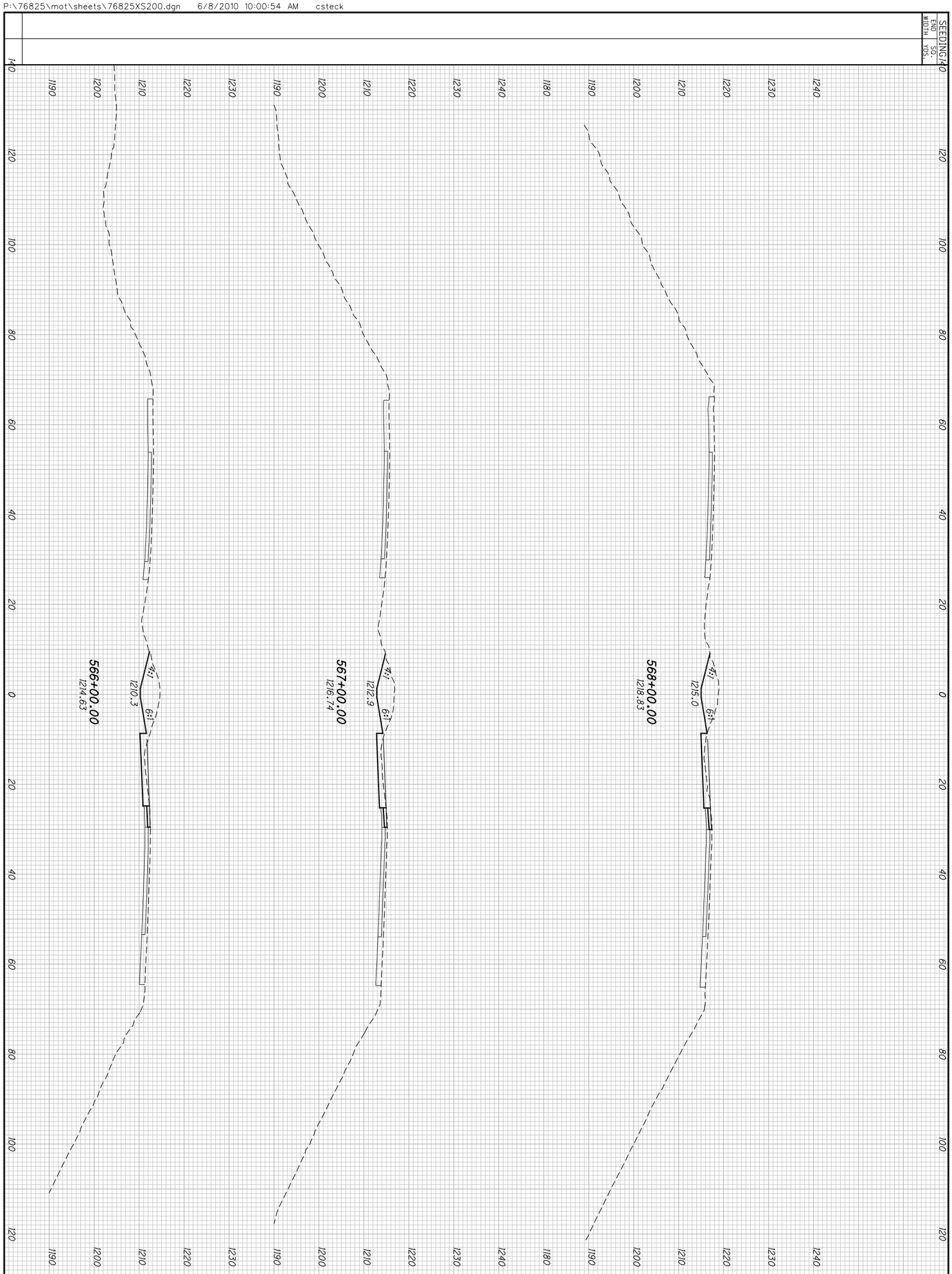
89
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 563+00.00 TO STA. 565+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:00:54 AM csteck

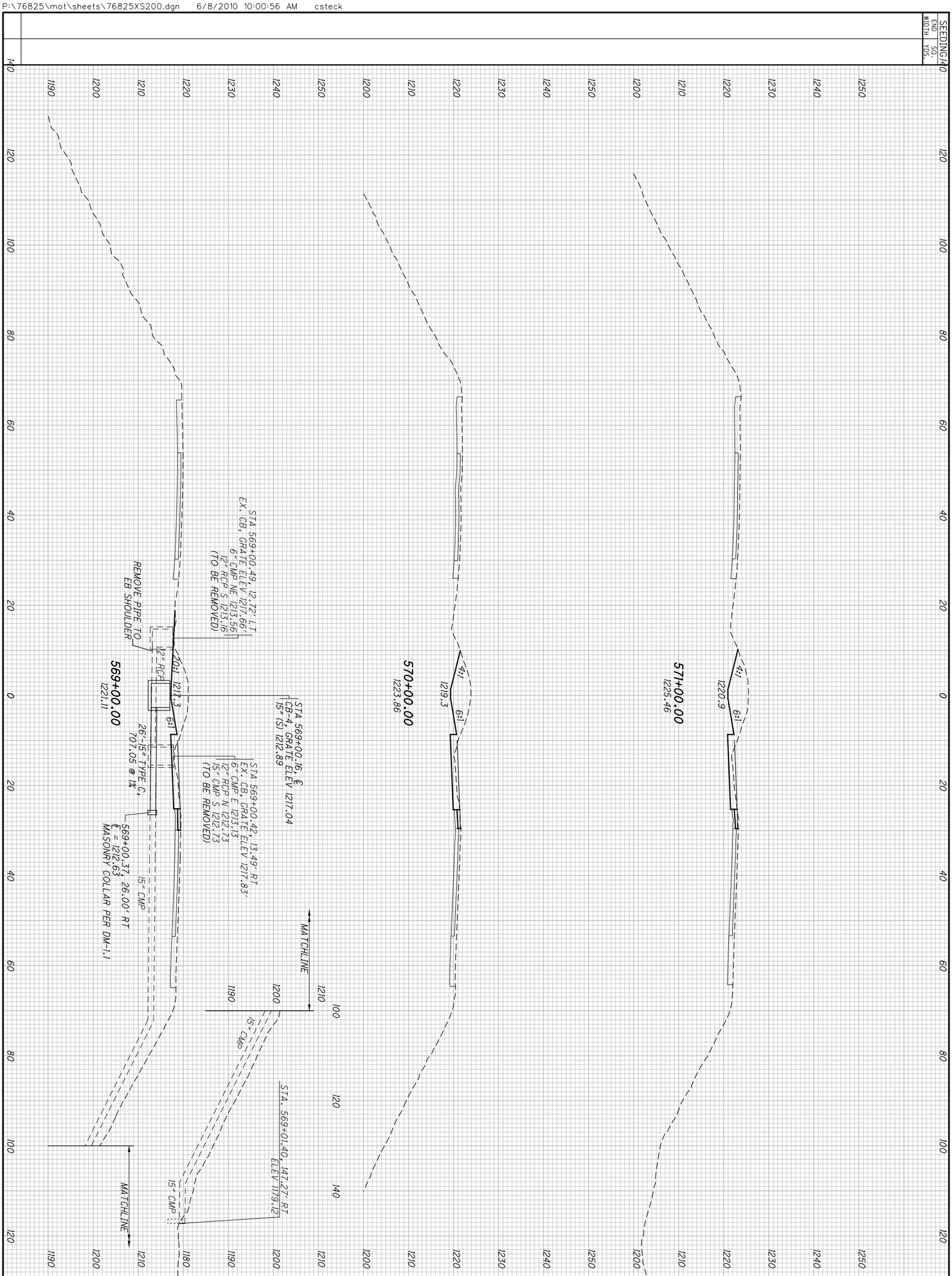


APPROVED FOR CONSTRUCTION - 6/8/2010

90 / 210	BEL-70-7.61	CROSS SECTIONS - I.R. 70 PHASE II STA. 566+00.00 TO STA. 568+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:00:56 AM csteck

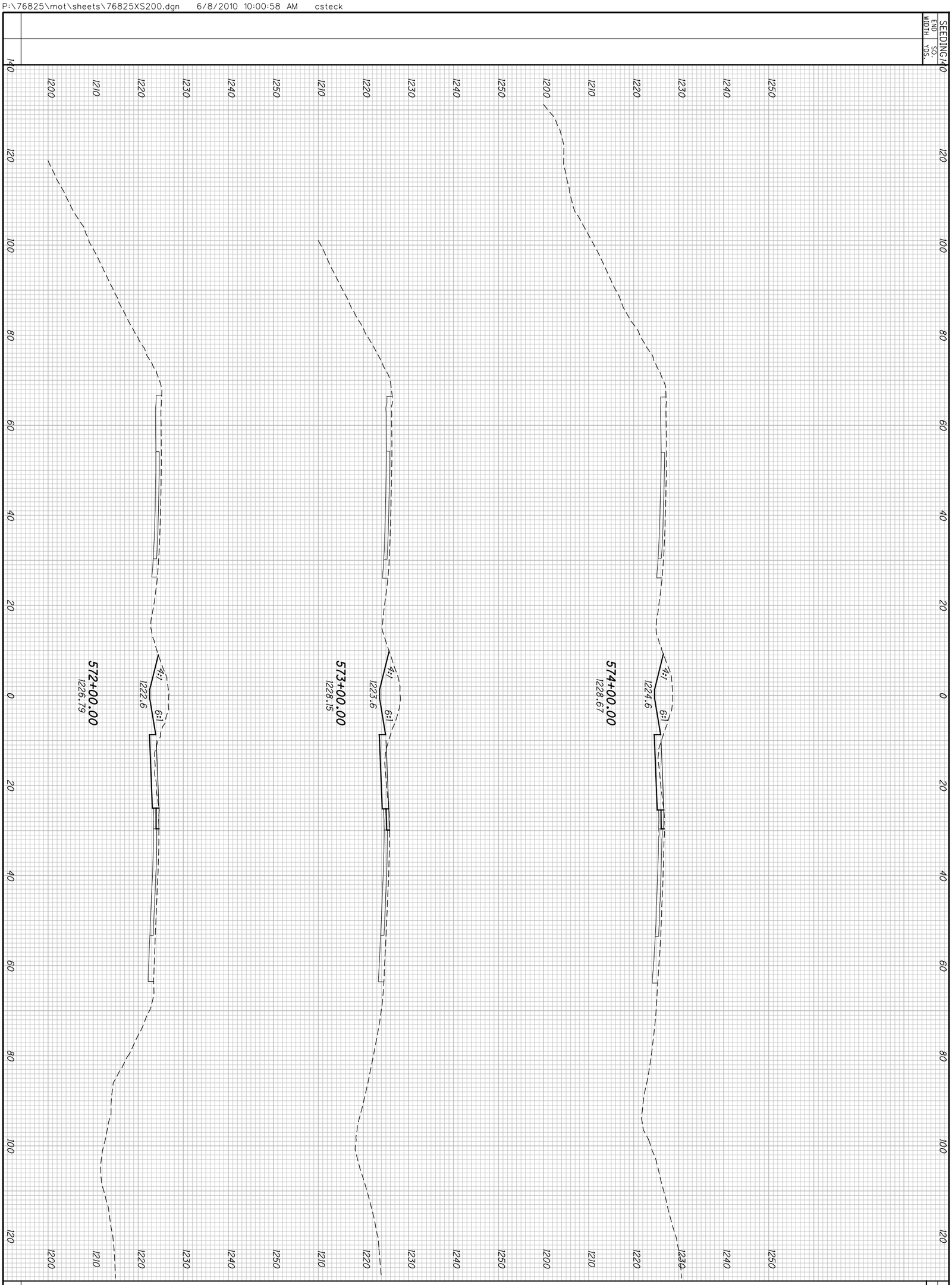


APPROVED FOR CONSTRUCTION - 6/8/2010

91 / 210	BEL-70-7.61	CROSS SECTIONS - I.R. 70 PHASE II STA. 569+00.00 TO STA. 571+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:00:58 AM csteck



END AREA CUT FILL VOLUME CUT FILL

APPROVED FOR CONSTRUCTION - 6/8/2010

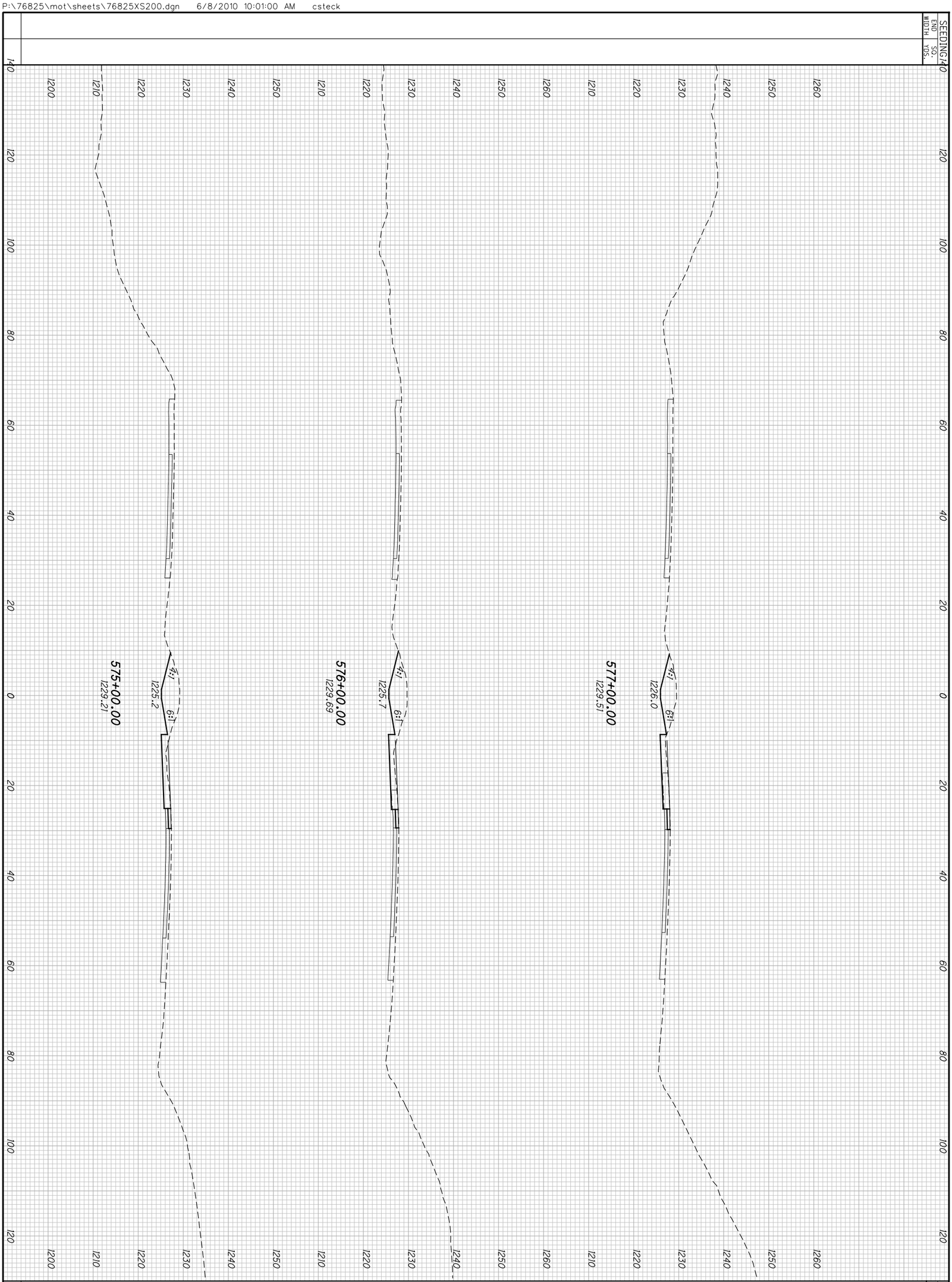
92
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 572+00.00 TO STA. 574+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:01:00 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

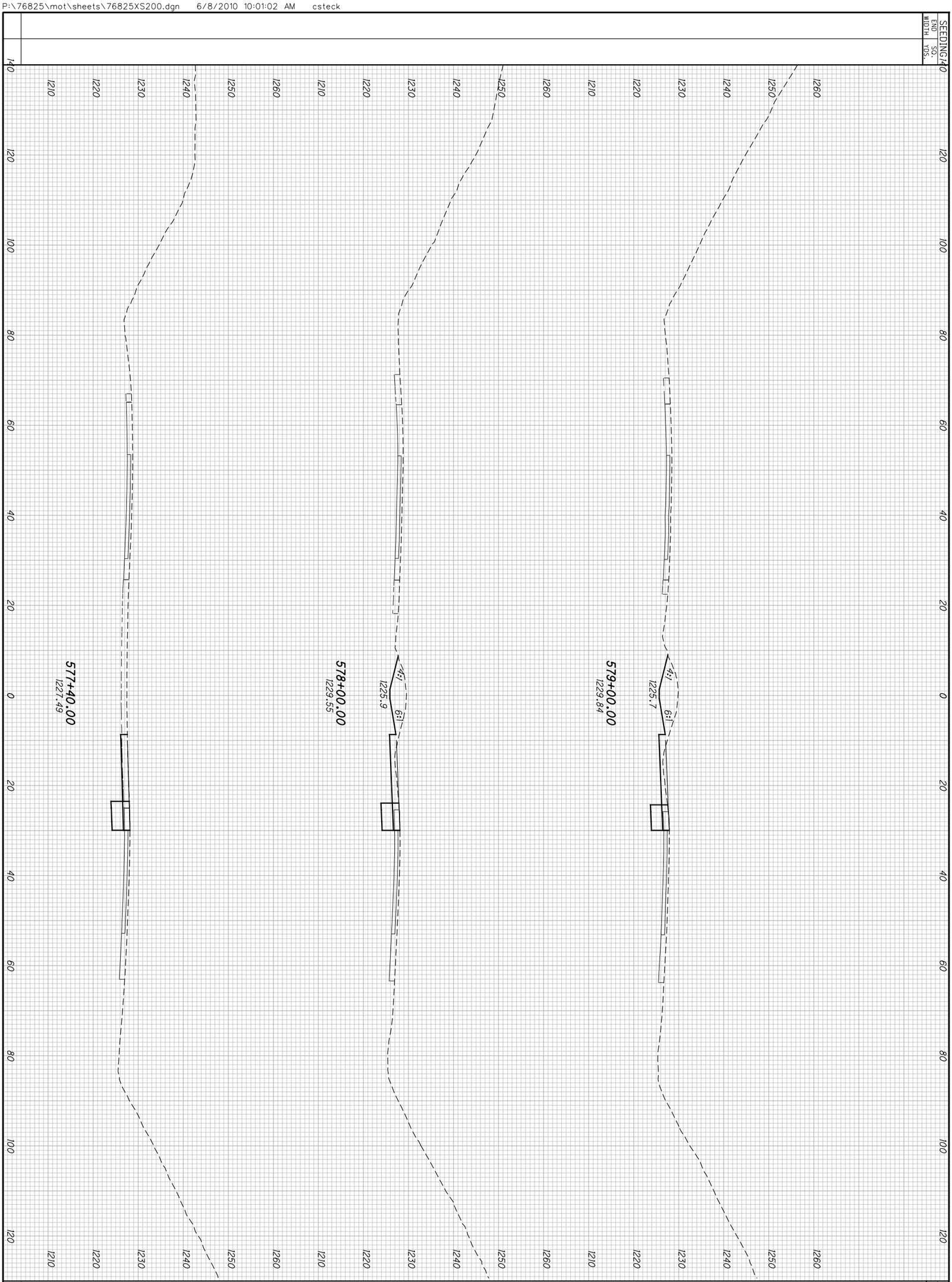
93
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 575+00.00 TO STA. 577+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:01:02 AM csteck

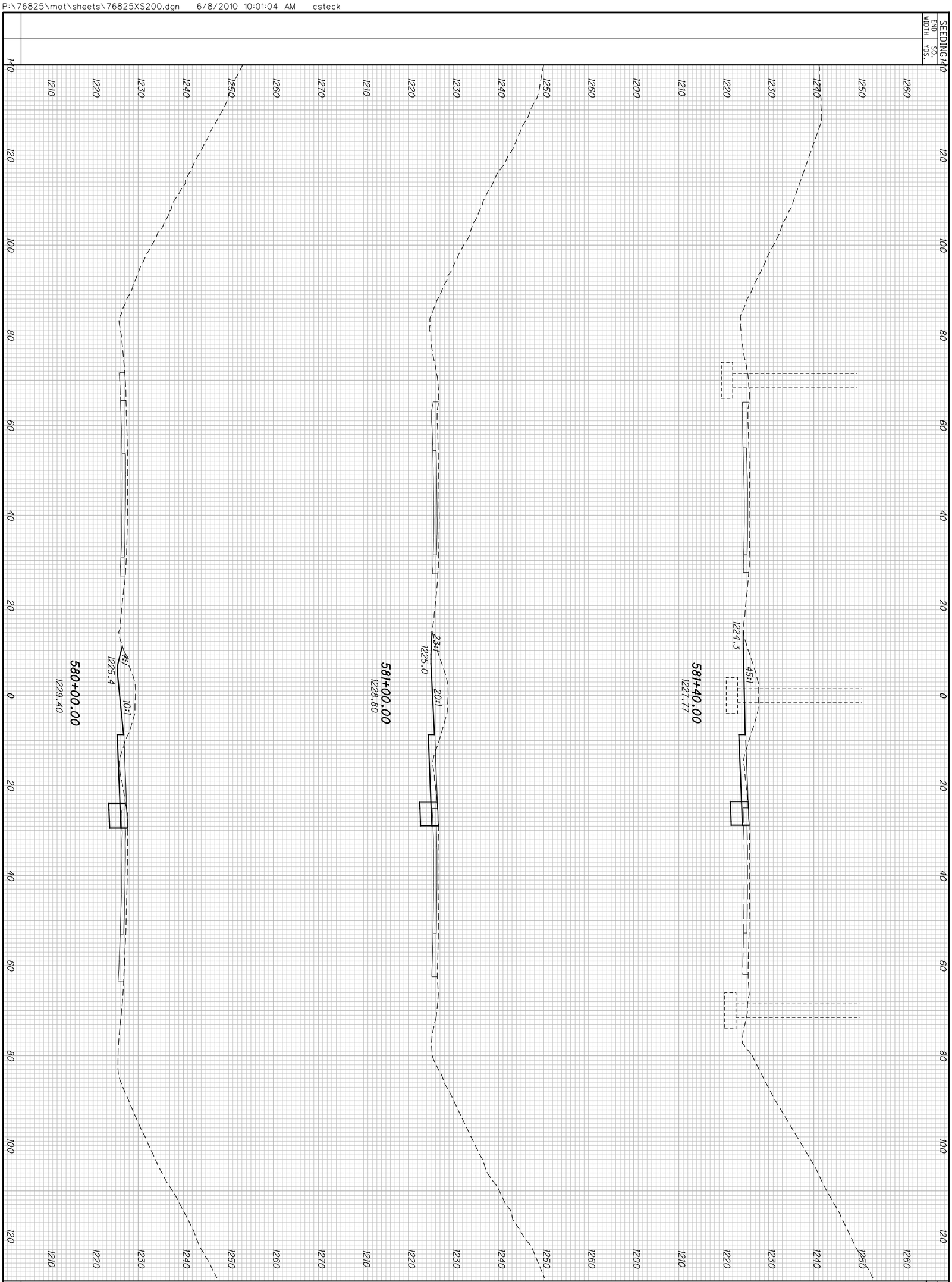


APPROVED FOR CONSTRUCTION - 6/8/2010

94 / 210	BEL-70-7.61	CROSS SECTIONS - I.R. 70 PHASE II STA. 577+40.00 TO STA. 579+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:01:04 AM csteck

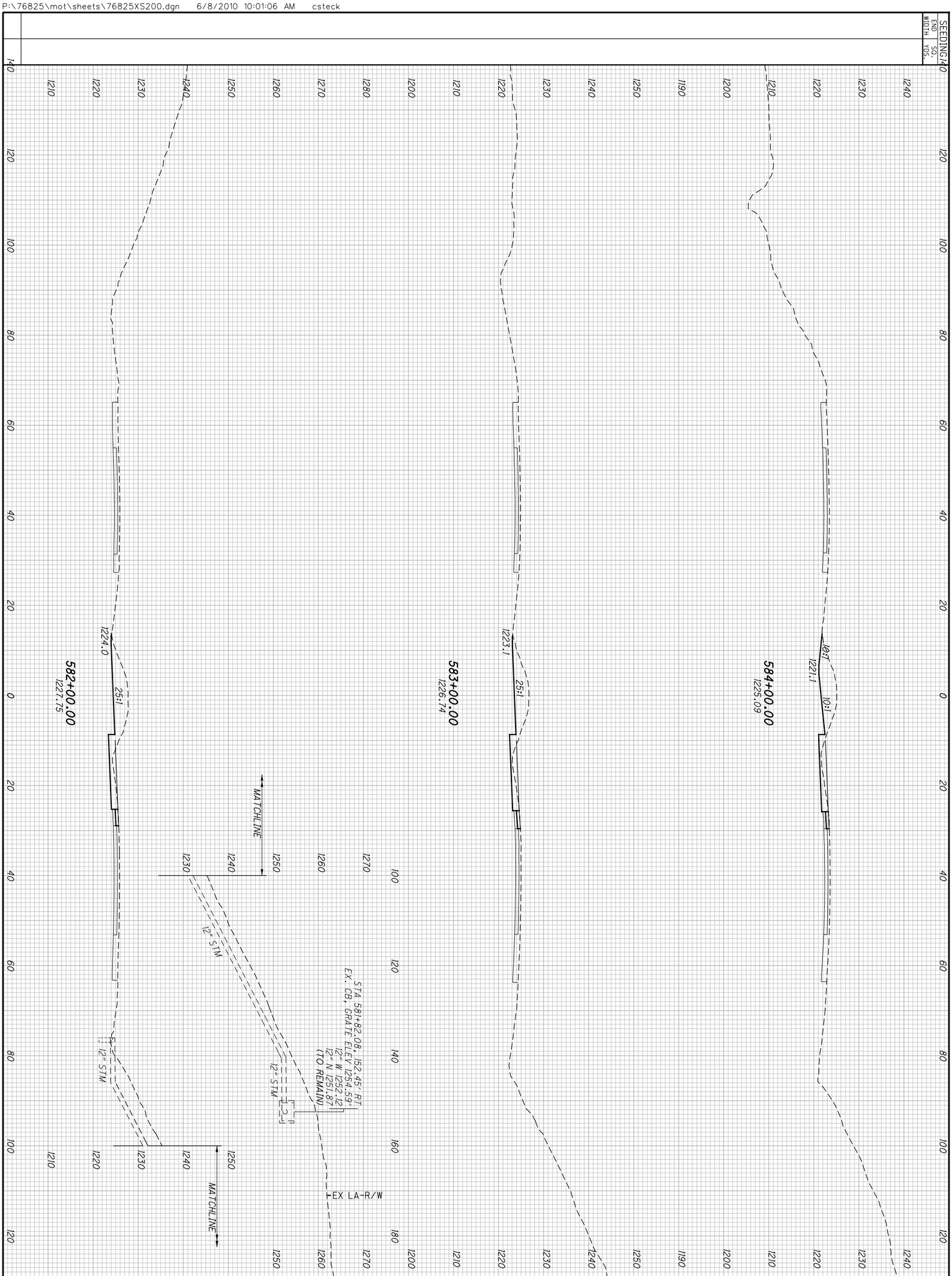


APPROVED FOR CONSTRUCTION - 6/8/2010

95 / 210	BEL-70-7.61	CROSS SECTIONS - I.R. 70 PHASE II STA. 580+00.00 TO STA. 581+40.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:01:06 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

96
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 582+00.00 TO STA. 584+00.00

CALCULATED MJC
CHECKED BBD

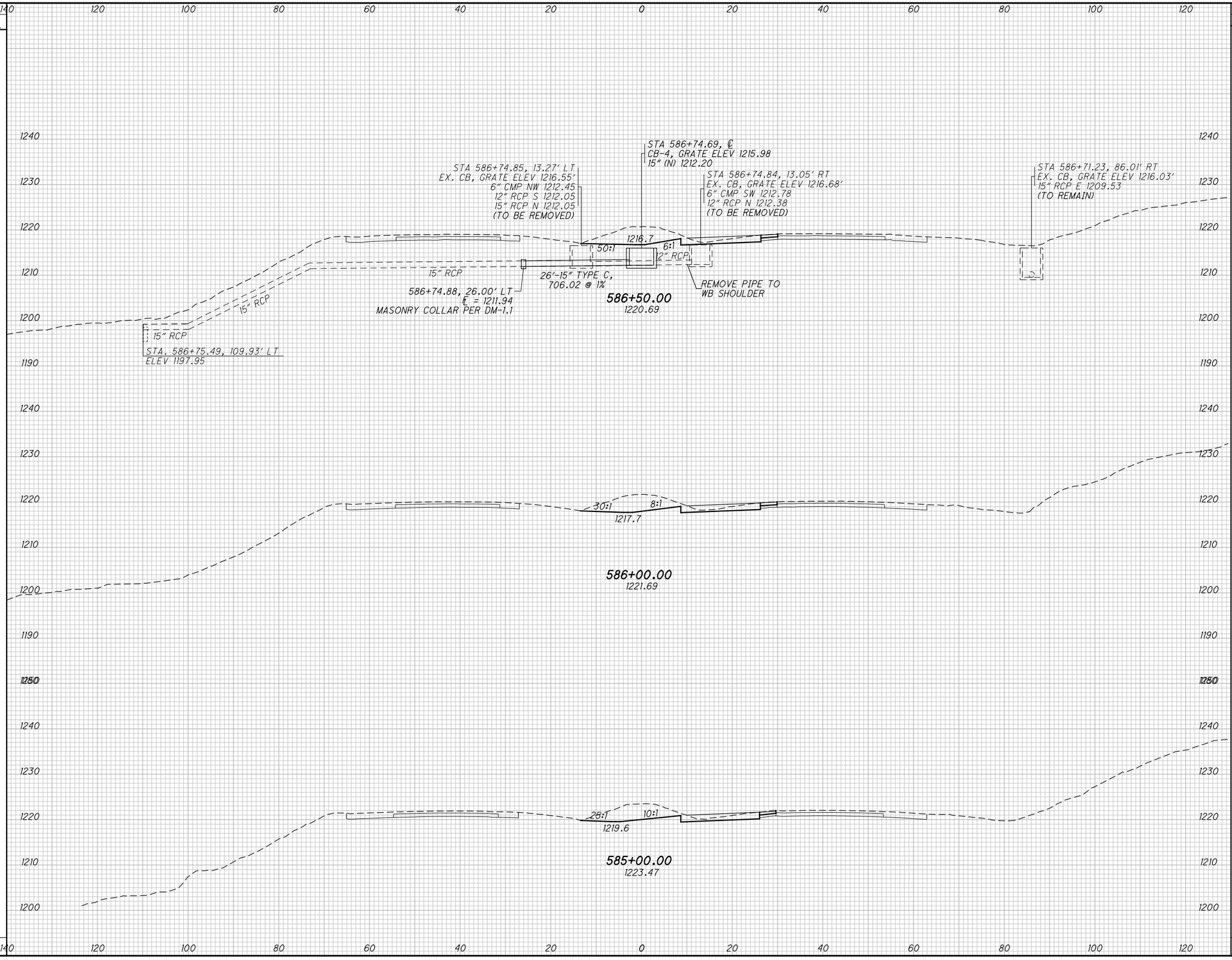
SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED MJC

CHECKED BBD



APPROVED FOR CONSTRUCTION - 6/8/2010

CROSS SECTIONS - I.R. 70 PHASE II

STA. 585+00.00 TO STA. 586+50.00

BEL-70-7.61

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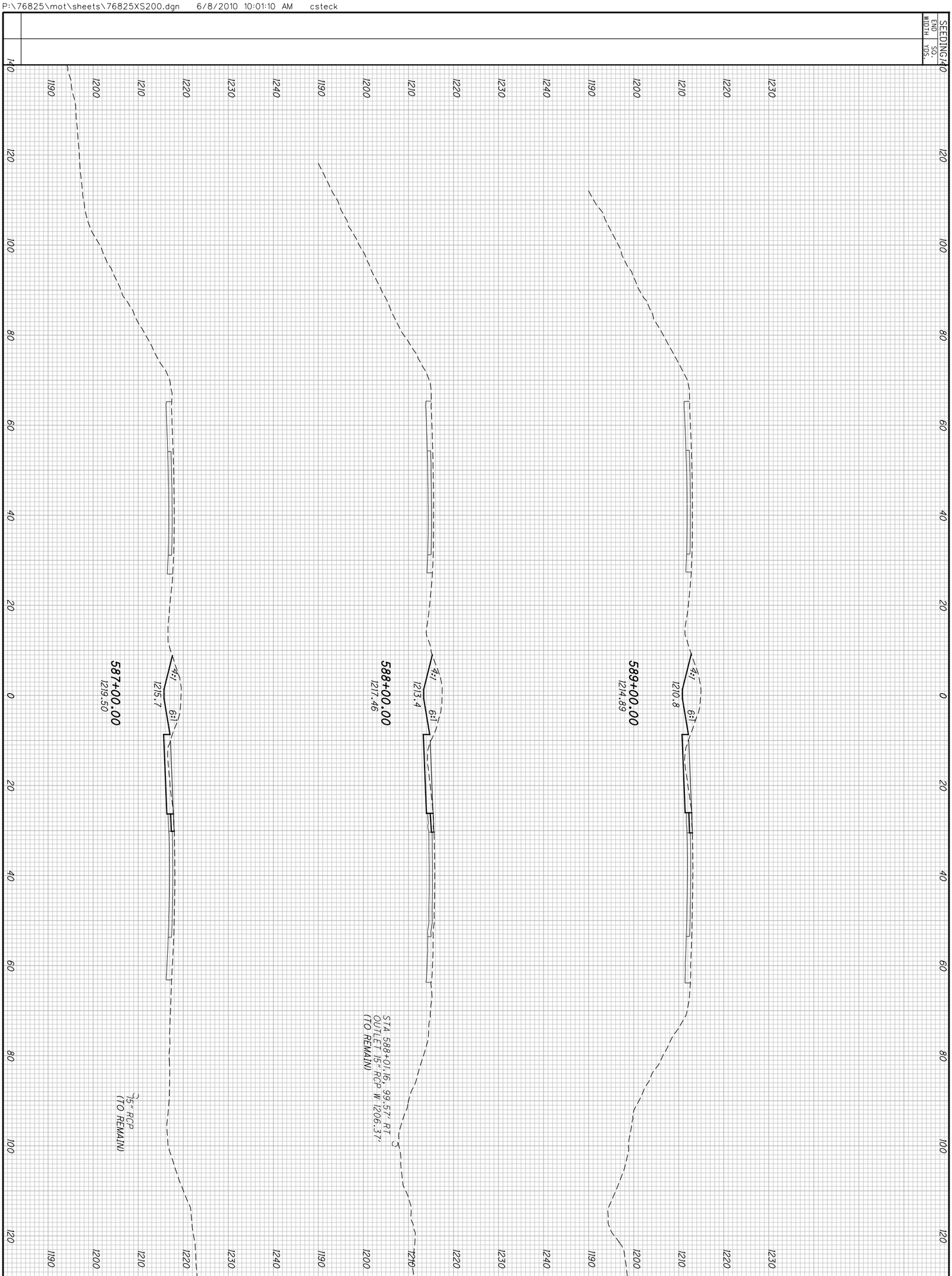
P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:01:10 AM csteck

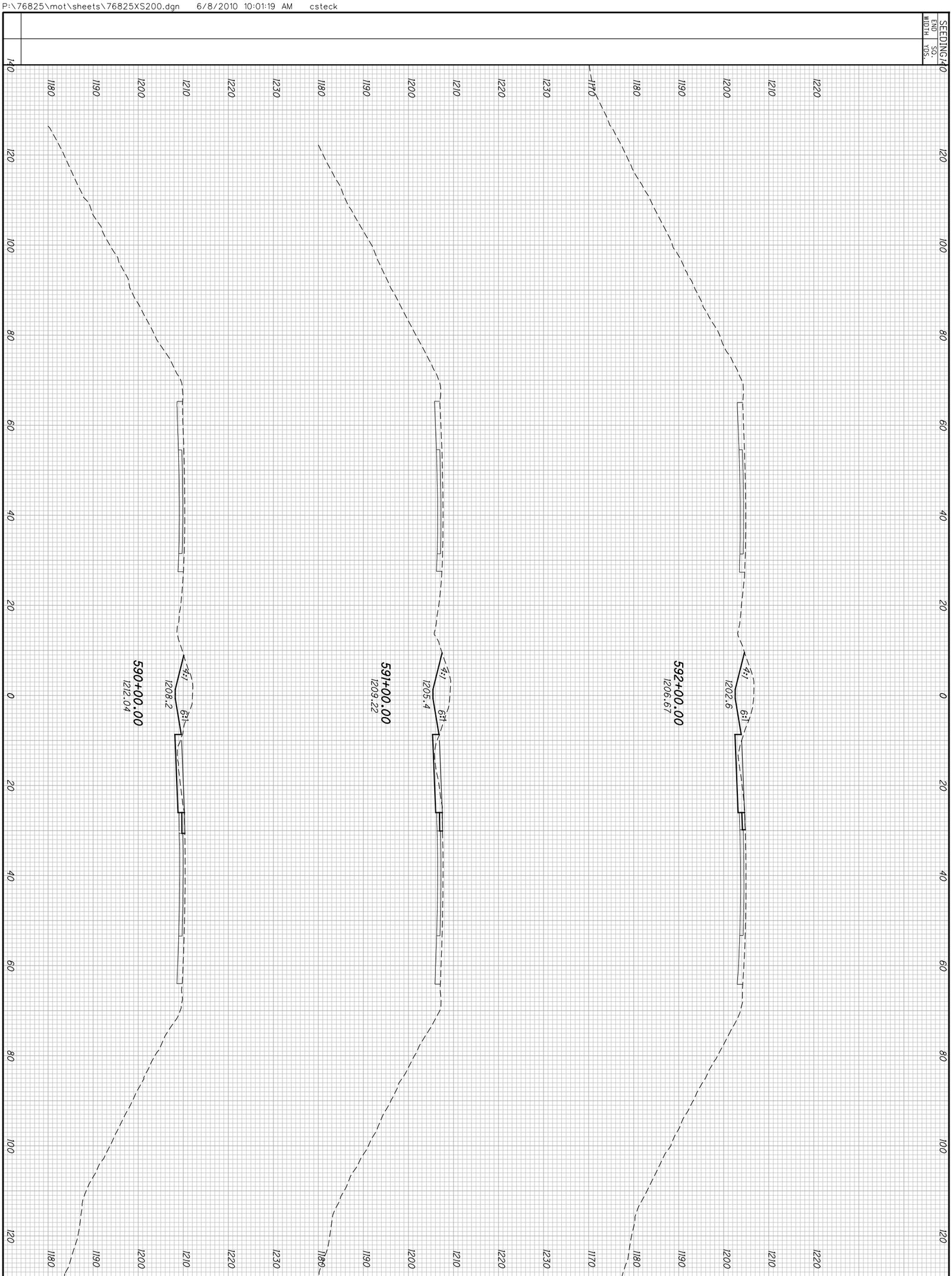


APPROVED FOR CONSTRUCTION - 6/8/2010

S8 / 210	BEL-70-7.61	CROSS SECTIONS - I.R. 70 PHASE II STA. 587+00.00 TO STA. 589+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:01:19 AM csteck



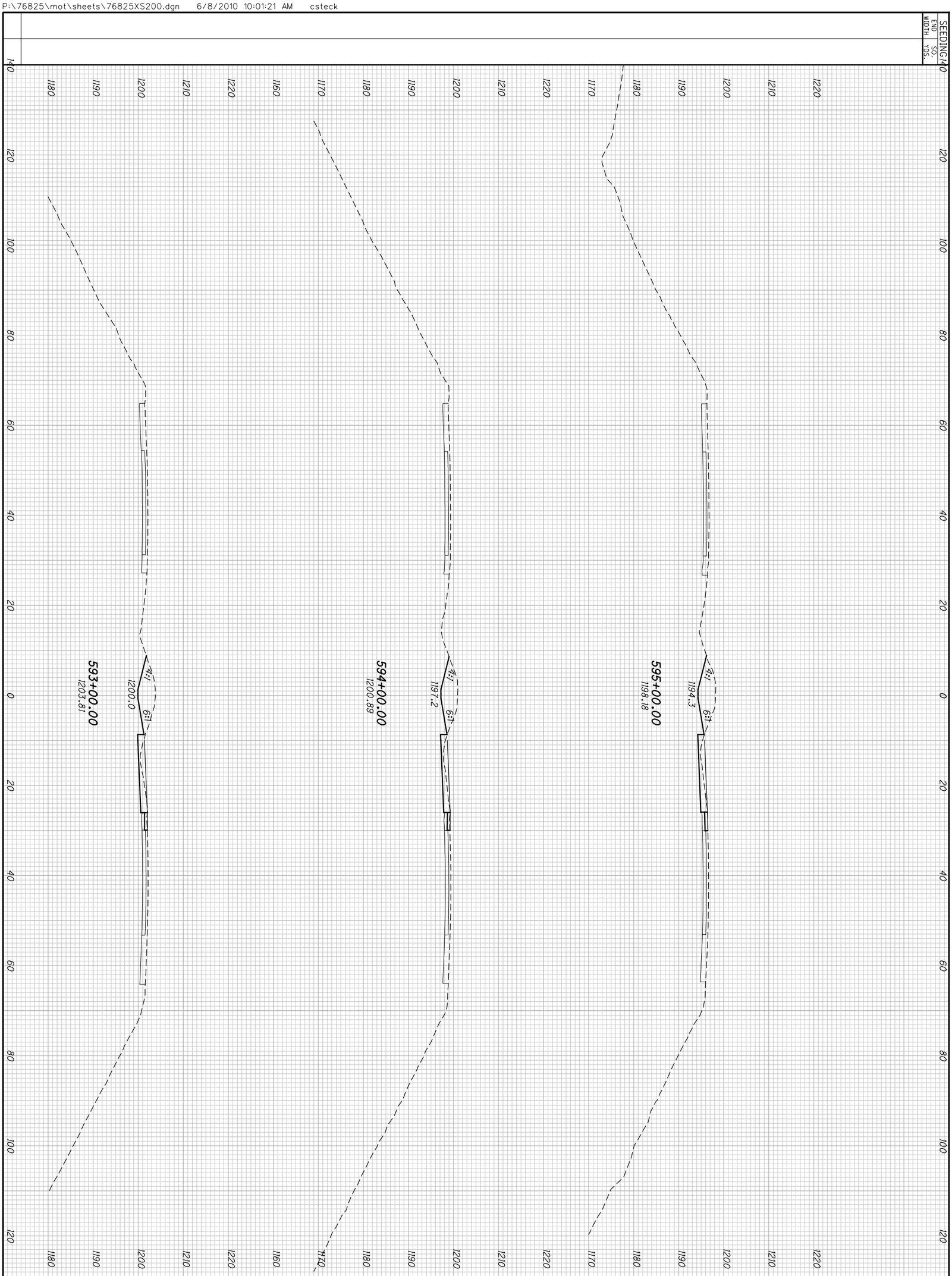
END AREA CUT FILL VOLUME CUT FILL

APPROVED FOR CONSTRUCTION - 6/8/2010

69 / 210	BEL-70-7.61	CROSS SECTIONS - I.R. 70 PHASE II STA. 590+00.00 TO STA. 592+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:01:21 AM csteck



END AREA
CUT
FILL
VOLUME
CUT
FILL

APPROVED FOR CONSTRUCTION - 6/8/2010

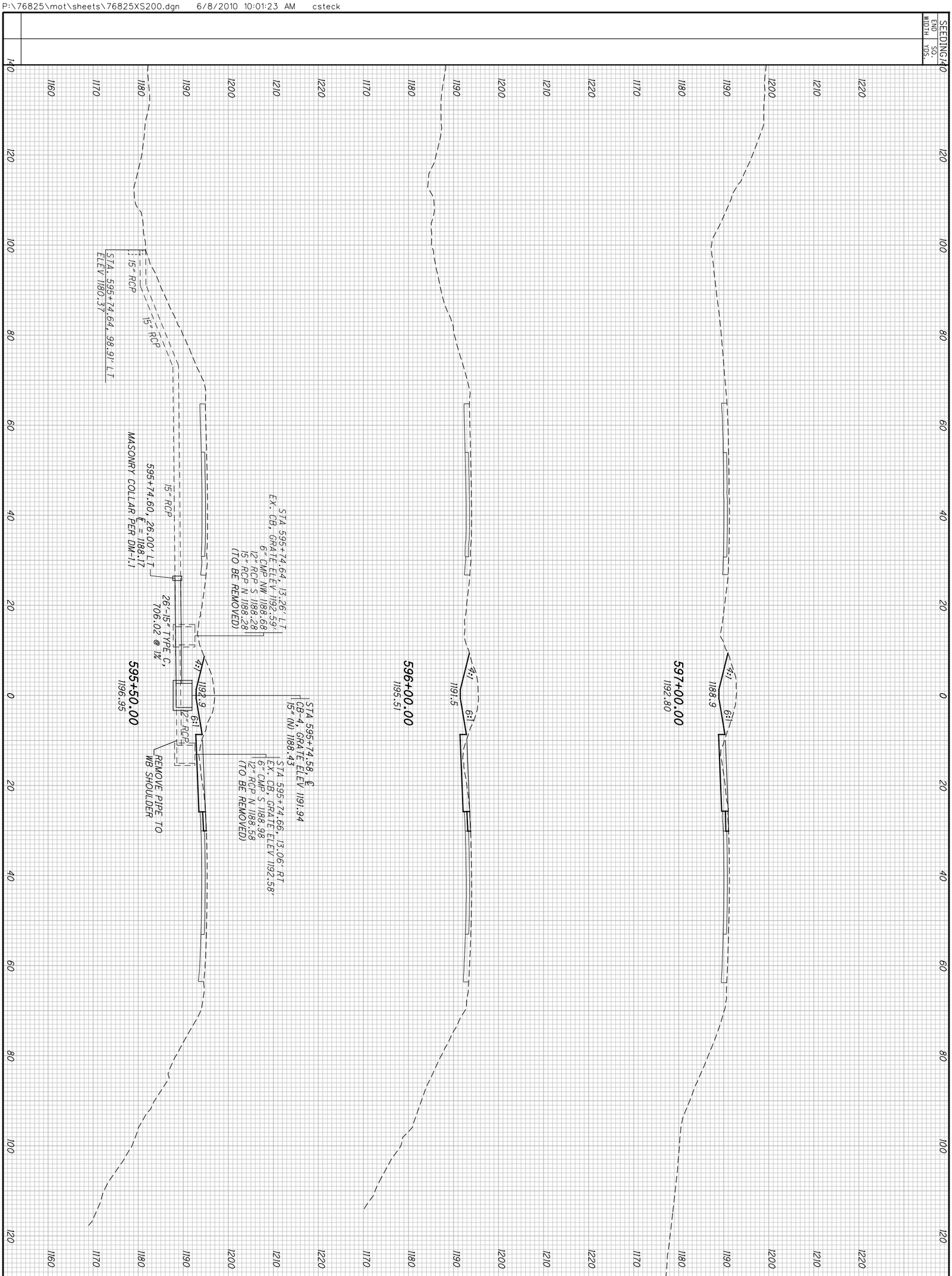
100
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 593+00.00 TO STA. 595+00.00

CALCULATED
MJC
CHECKED
BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:01:23 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

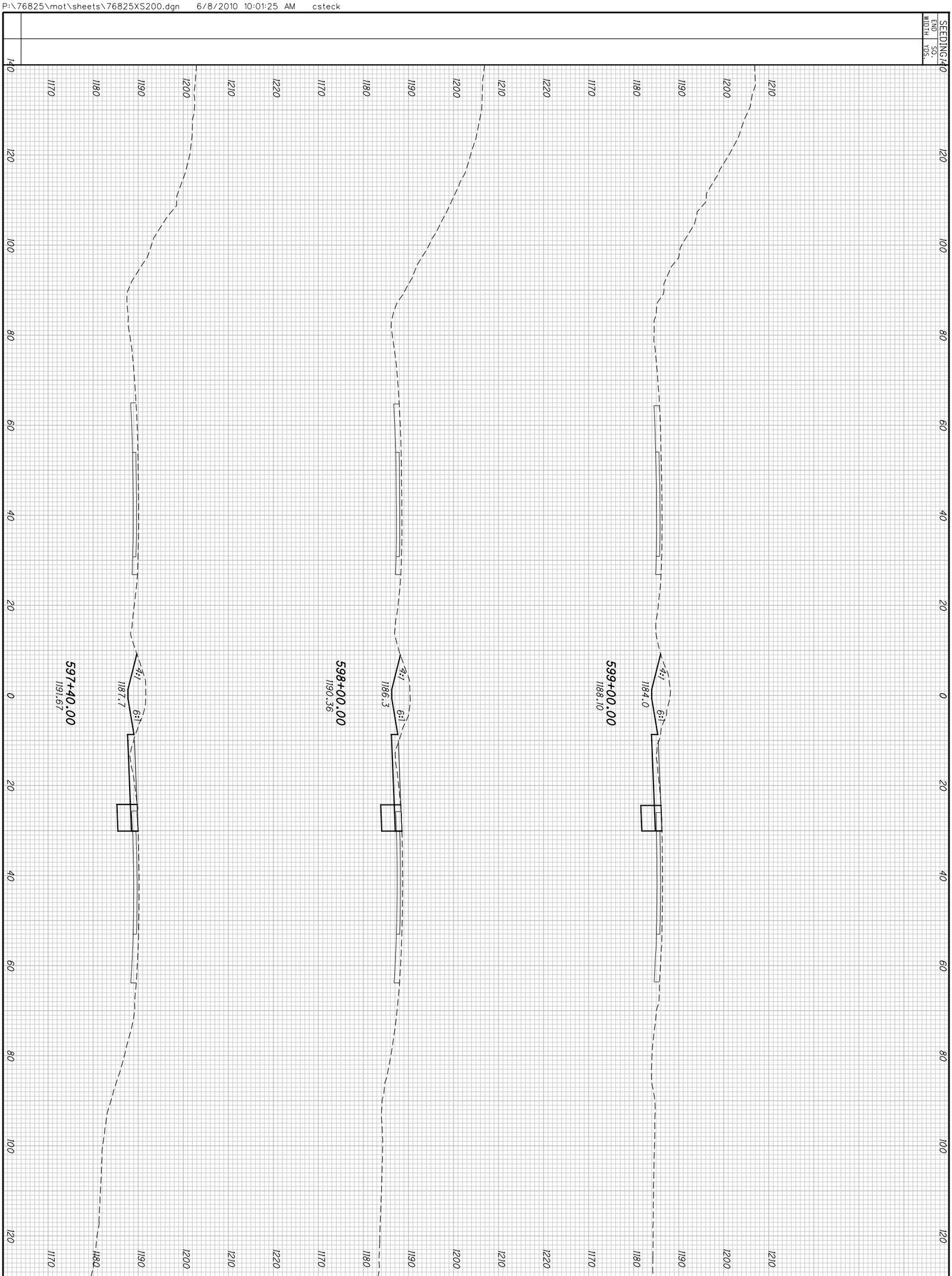
101
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 595+50.00 TO STA. 597+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:01:25 AM csteck



END AREA CUT FILL VOLUME CUT FILL

APPROVED FOR CONSTRUCTION - 6/8/2010

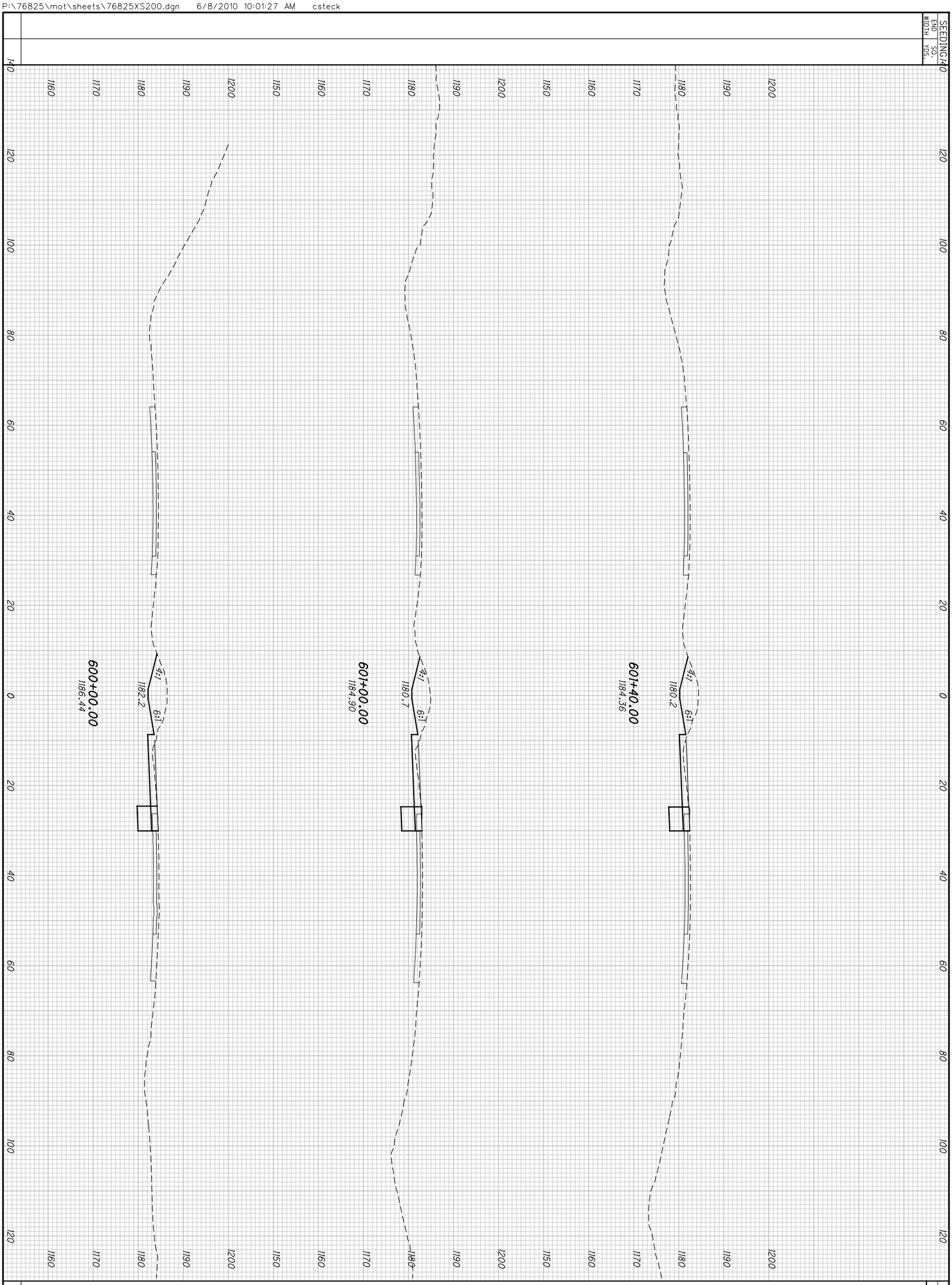
102
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 597+40.00 TO STA. 599+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:01:27 AM csteck



END AREA CUT FILL

VOLUME CUT FILL

APPROVED FOR CONSTRUCTION - 6/8/2010

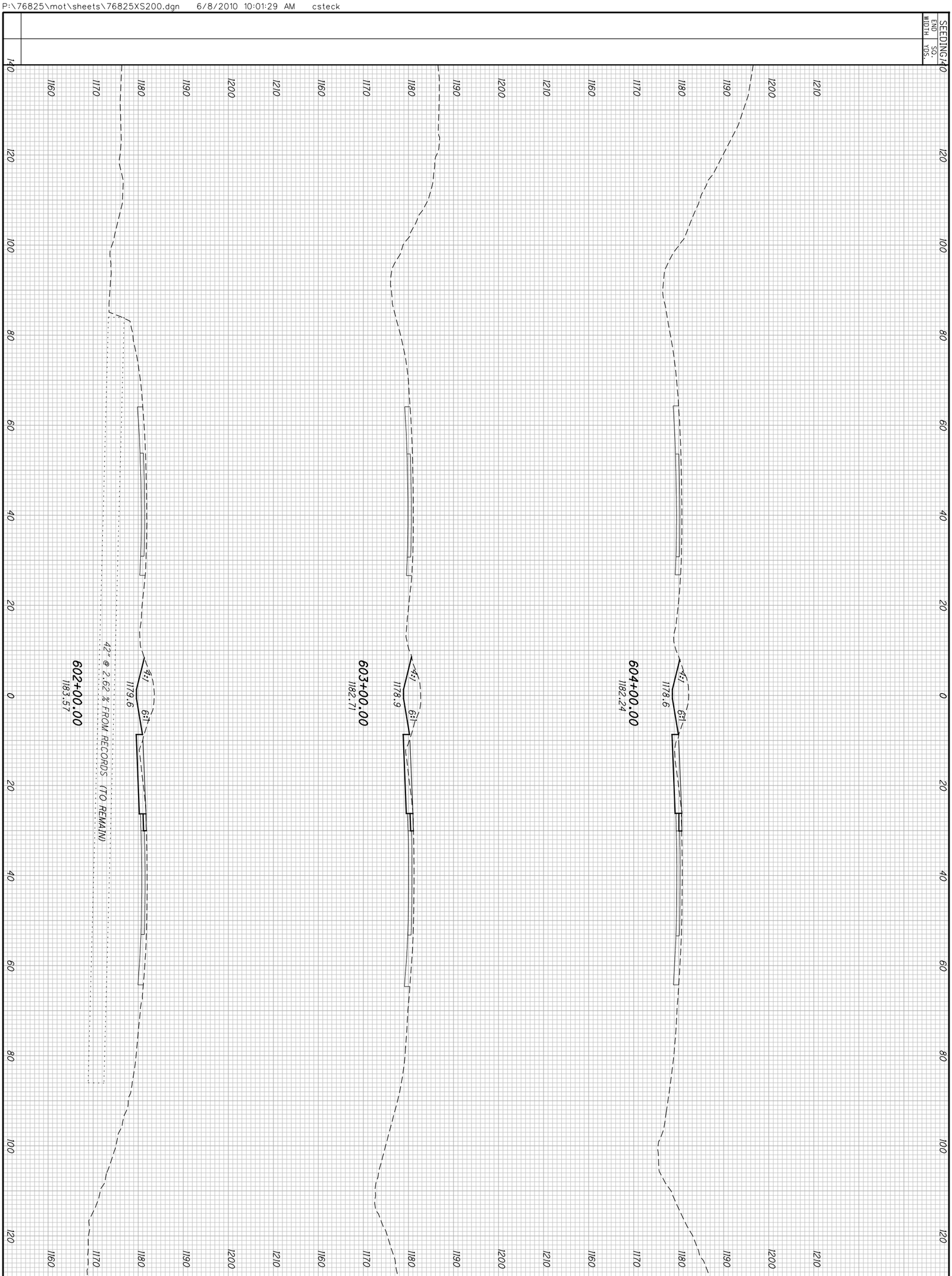
103
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 600+00.00 TO STA. 601+40.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:01:29 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

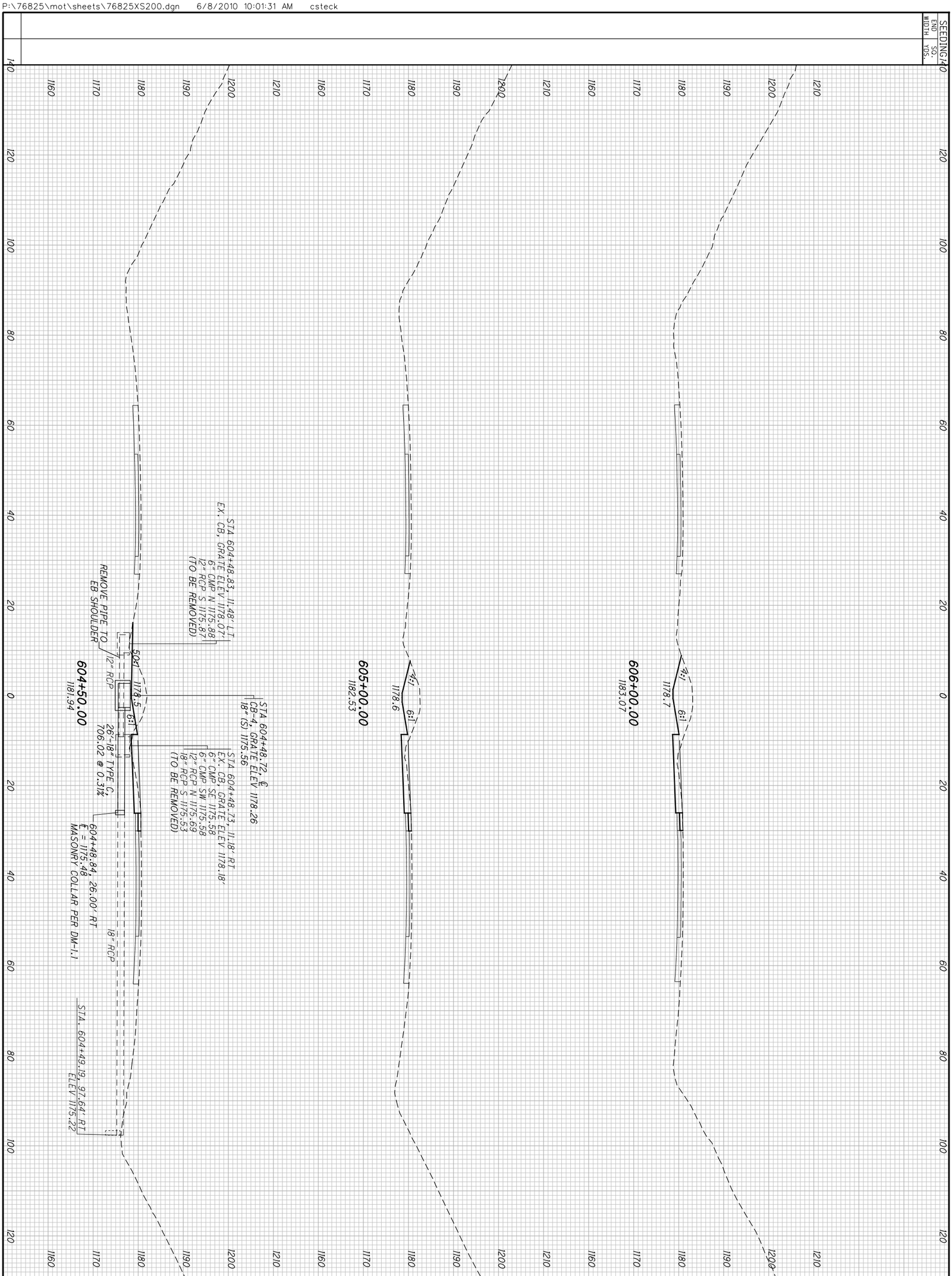
104
210

BEL-70-7.61

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

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:01:31 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

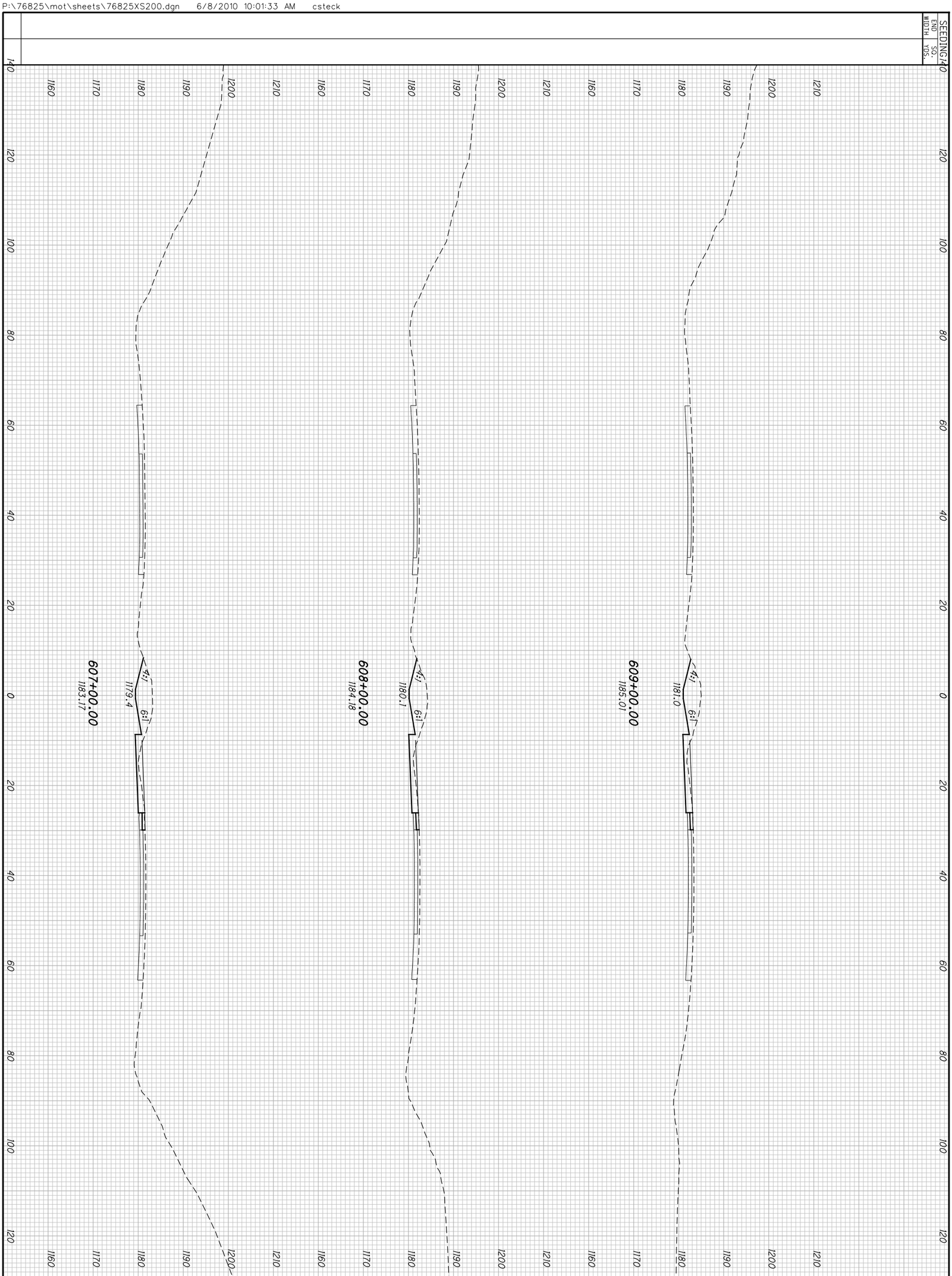
105
210

BEL-70-7.61

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

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:01:33 AM csteck



END AREA CUT FILL VOLUME CUT FILL

APPROVED FOR CONSTRUCTION - 6/8/2010

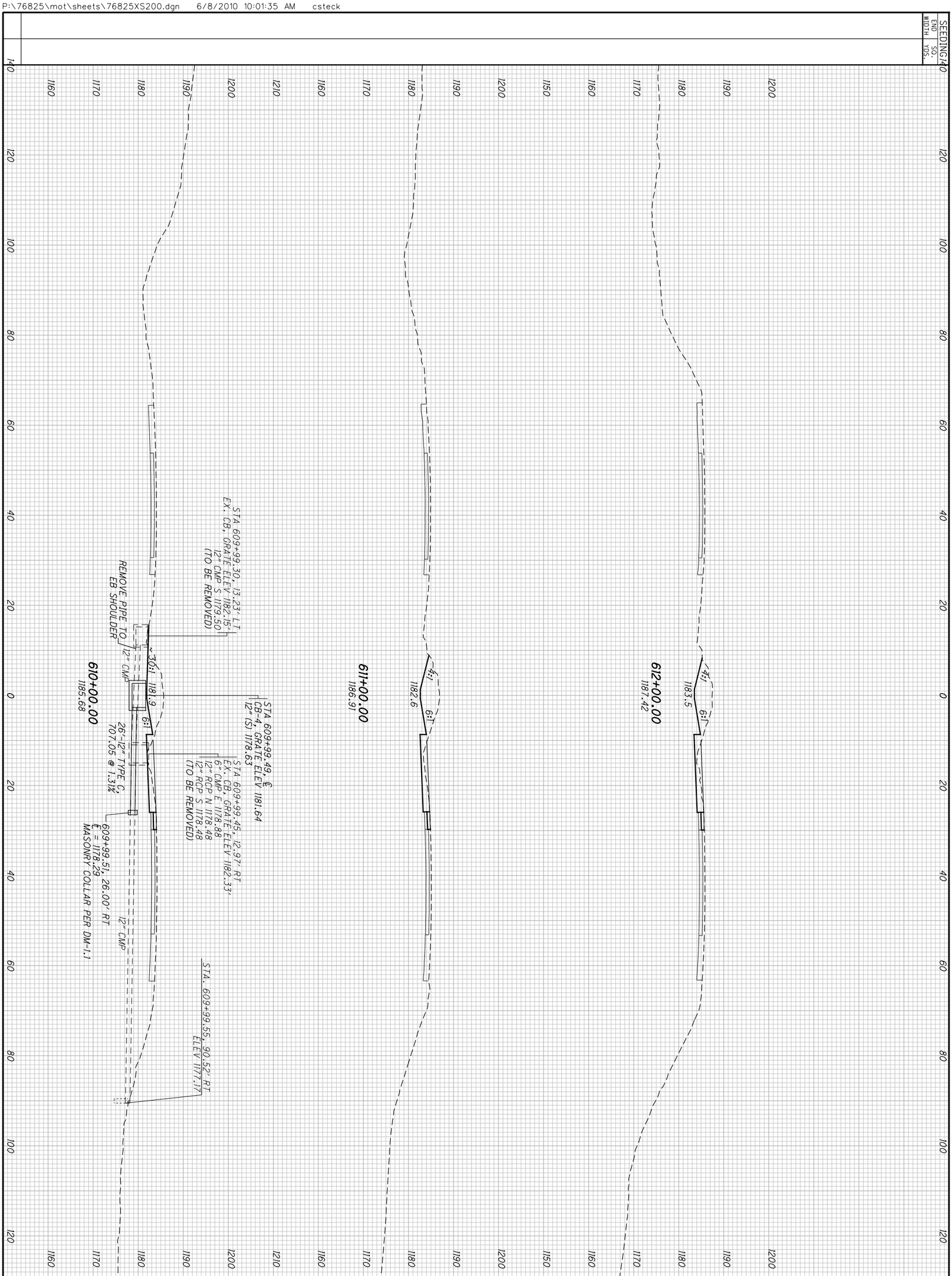
106
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 607+00.00 TO STA. 609+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:01:35 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

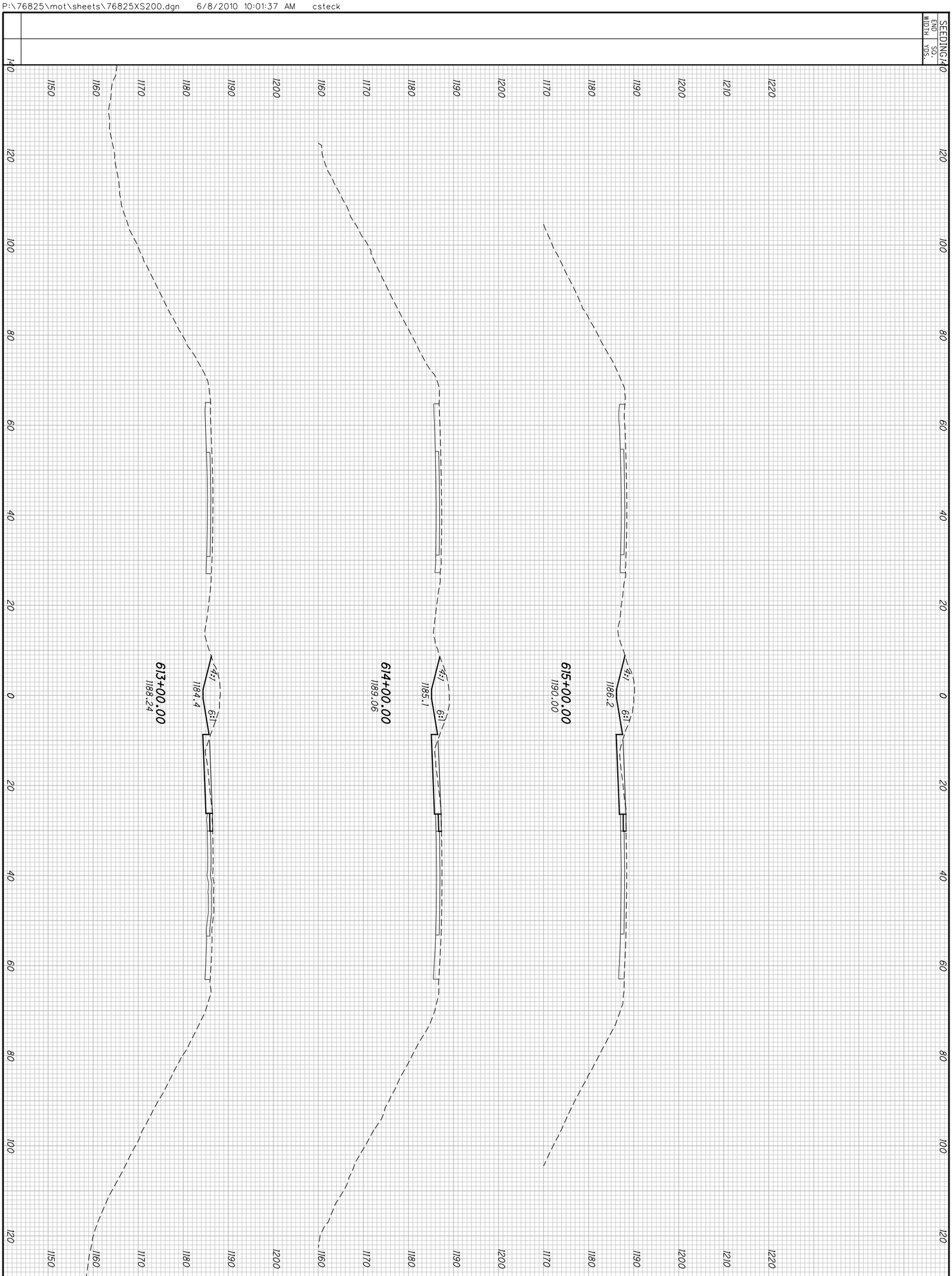
107
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 610+00.00 TO STA. 612+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:01:37 AM csteck



END AREA CUT FILL VOLUME CUT FILL

APPROVED FOR CONSTRUCTION - 6/8/2010

108/210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 613+00.00 TO STA. 615+00.00

CALCULATED MJC
CHECKED BBD

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

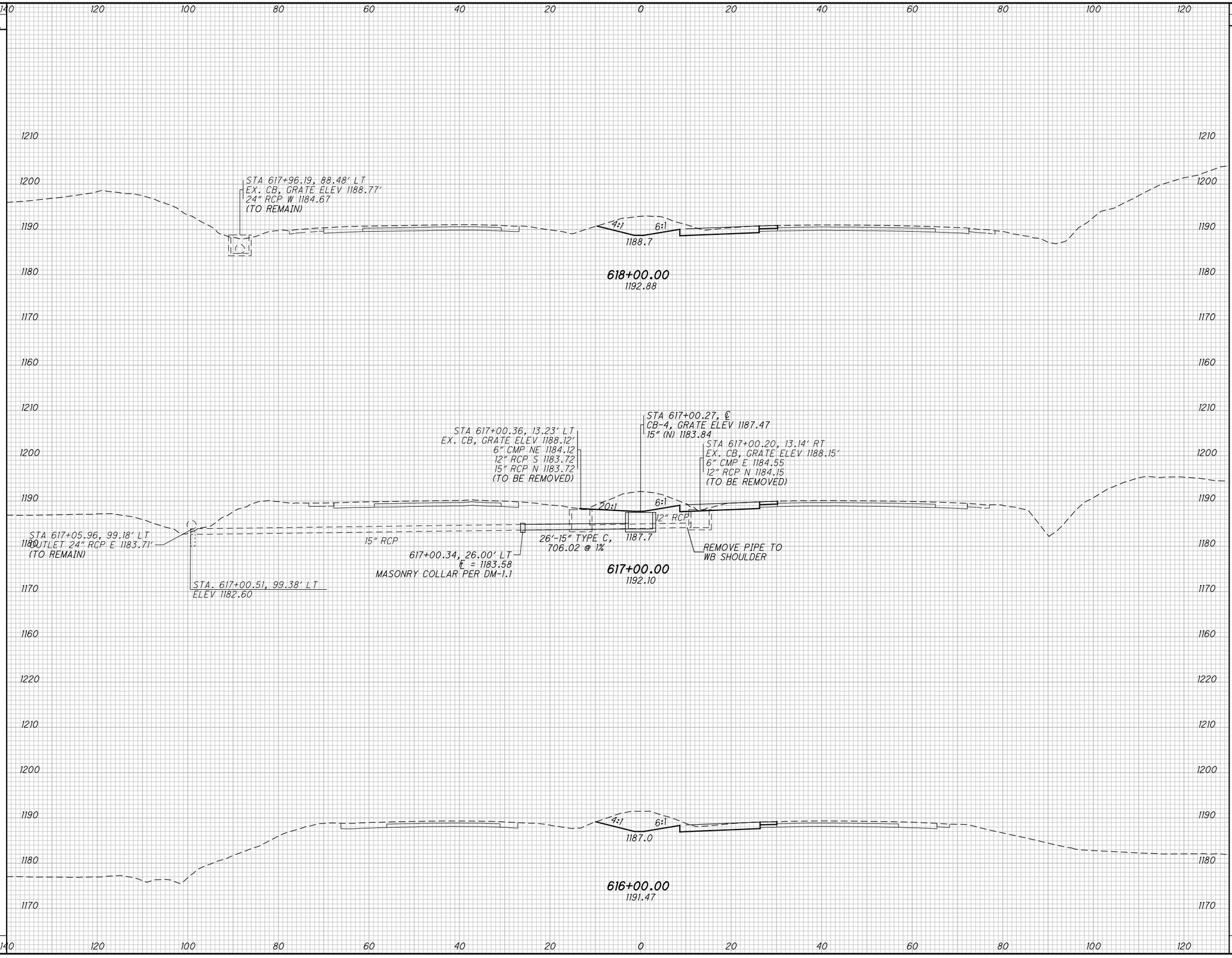
CALCULATED MJC

CHECKED BBD

APPROVED FOR CONSTRUCTION - 6/8/2010

CROSS SECTIONS - I.R. 70 PHASE II

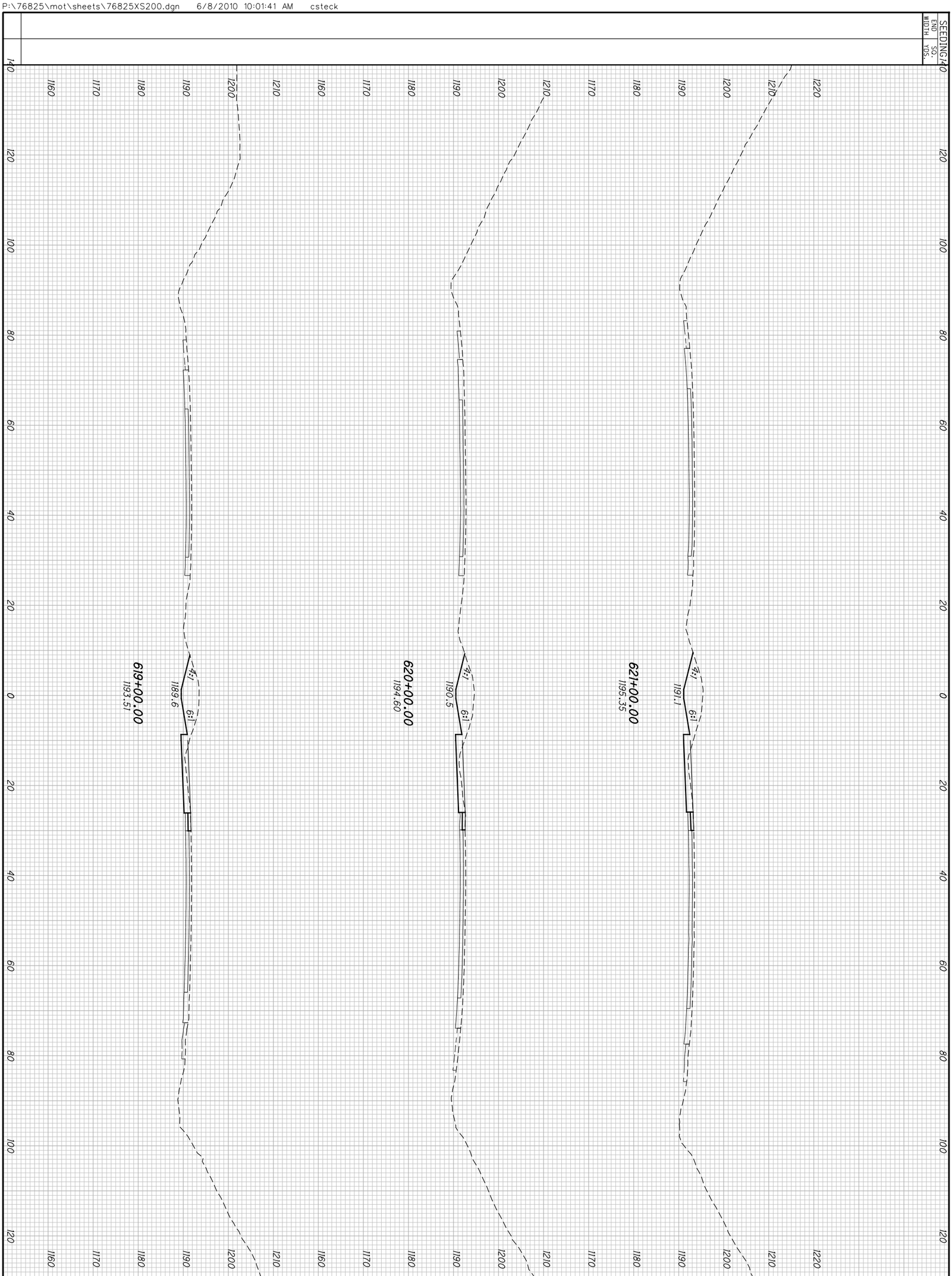
STA. 616+00.00 TO STA. 618+00.00



BEL-70-7.61

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:01:39 AM csteck

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:01:41 AM csteck

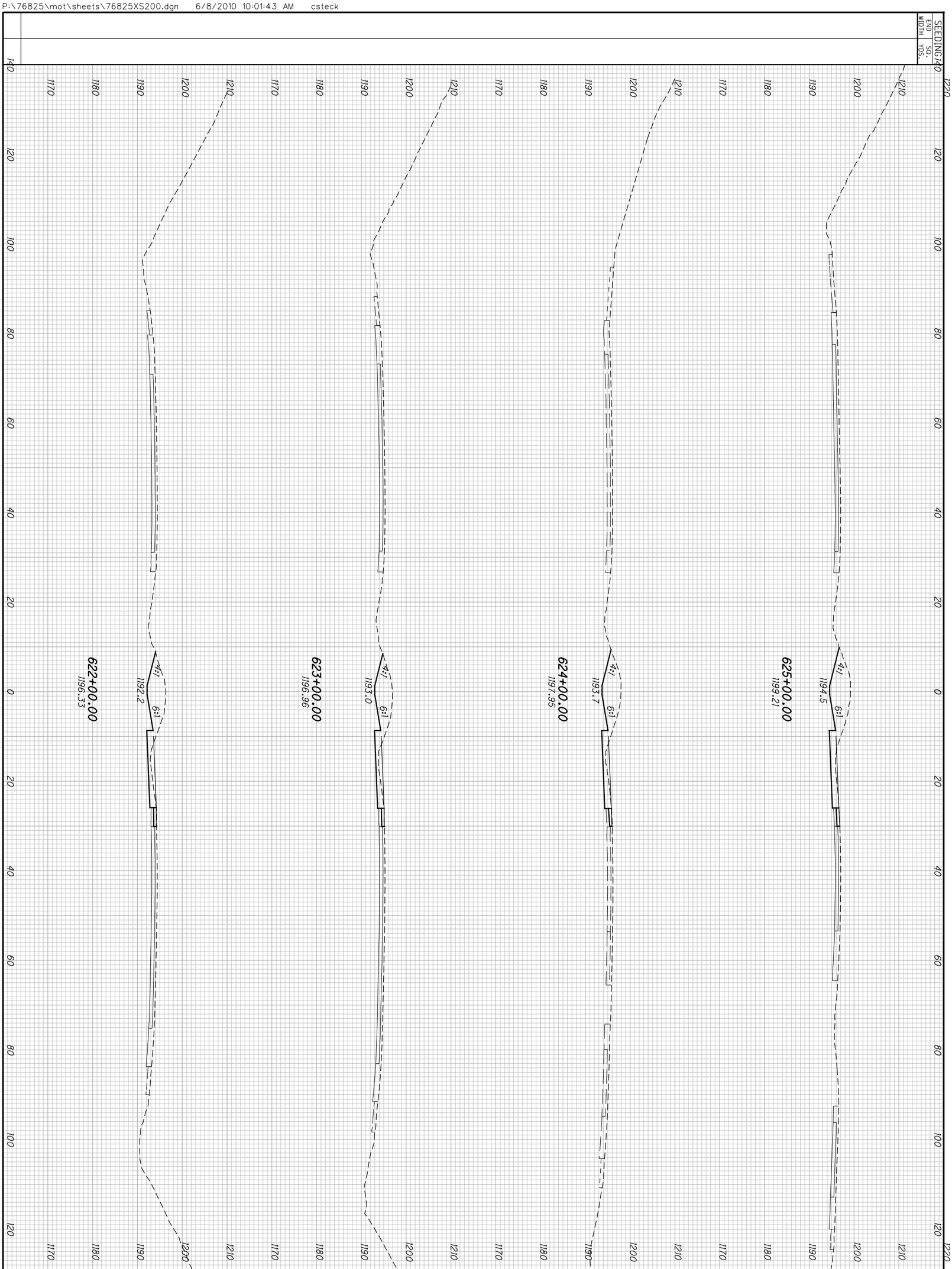


APPROVED FOR CONSTRUCTION - 6/8/2010

110 / 210	BEL-70-7.61	CROSS SECTIONS - I.R. 70 PHASE II STA. 619+00.00 TO STA. 621+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:01:43 AM csteck



SEEDING
END WIDTH
SQ. YDS.

END AREA
CUT
FILL

VOLUME
CUT
FILL

APPROVED FOR CONSTRUCTION - 6/8/2010

111
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 622+00.00 TO STA. 625+00.00

CALCULATED MJC
CHECKED BBD

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED MJC

CHECKED BBD

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

1220 1210 1200 1190 1180 1170

4:1 6:1
1197.1

628+00.00
1201.43

4:1 6:1
1196.3

627+00.00
1200.59

1250 1240 1230 1220 1210 1200 1190 1180 1170

STA 626+00.34, 14.54' LT
EX. CB, GRATE ELEV 1195.90'
6" M NE 1193.30
12" RCP N 1193.56
12" RCP S 1193.16
(TO BE REMOVED)

STA 625+99.96, ℄
CB-4, GRATE ELEV 1195.25
15" (S) 1192.81

STA 625+99.91, 13.83' RT
EX. CB, GRATE ELEV 1195.85'
6" CMP SE 1193.65
12" RCP N 1193.01
15" RCP S 1192.72
(TO BE REMOVED)

STA 626+00.01, 82.67' RT
EX. CB, GRATE ELEV 1194.61'
6" CMP NW 1192.41
15" RCP N 1192.54
18" RCP SW 1192.19
(TO REMAIN)

20:1 1195.5 6:1

12" RCP ABANDONED

REMOVE PIPE TO WB SHOULDER

12" RCP

26'-15" TYPE C,
706.02 @ 0.46%

15" RCP

625+99.96, 26.00' RT
℄ = 1192.69
MASONRY COLLAR PER DM-1.1

REMOVE PIPE TO EB SHOULDER

18" RCP

626+00.00
1199.81

APPROVED FOR CONSTRUCTION - 6/8/2010

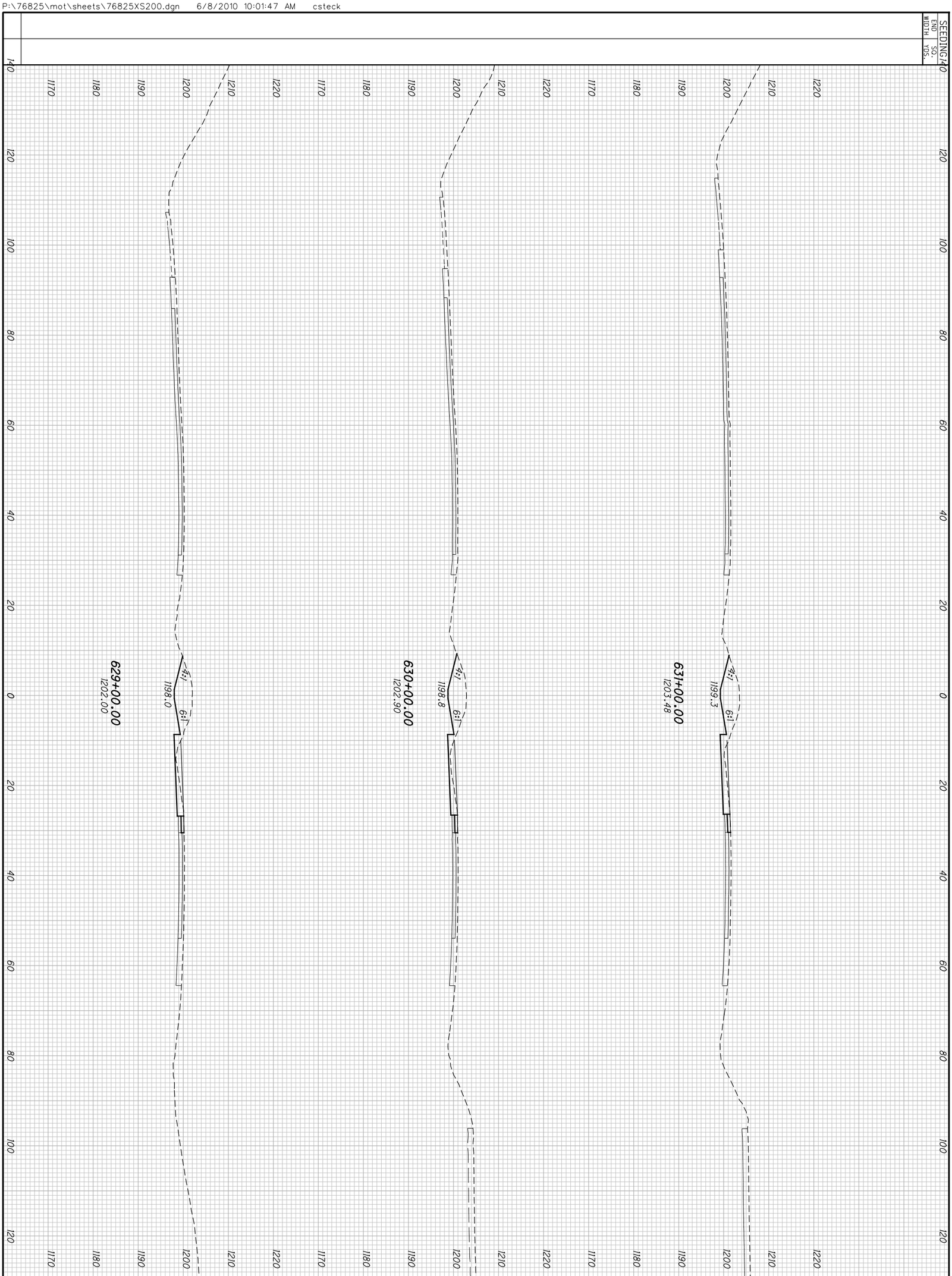
CROSS SECTIONS - I.R. 70 PHASE II
STA. 626+00.00 TO STA. 628+00.00

BEL-70-7.61

112
210

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:01:45 AM csteck

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:01:47 AM csteck

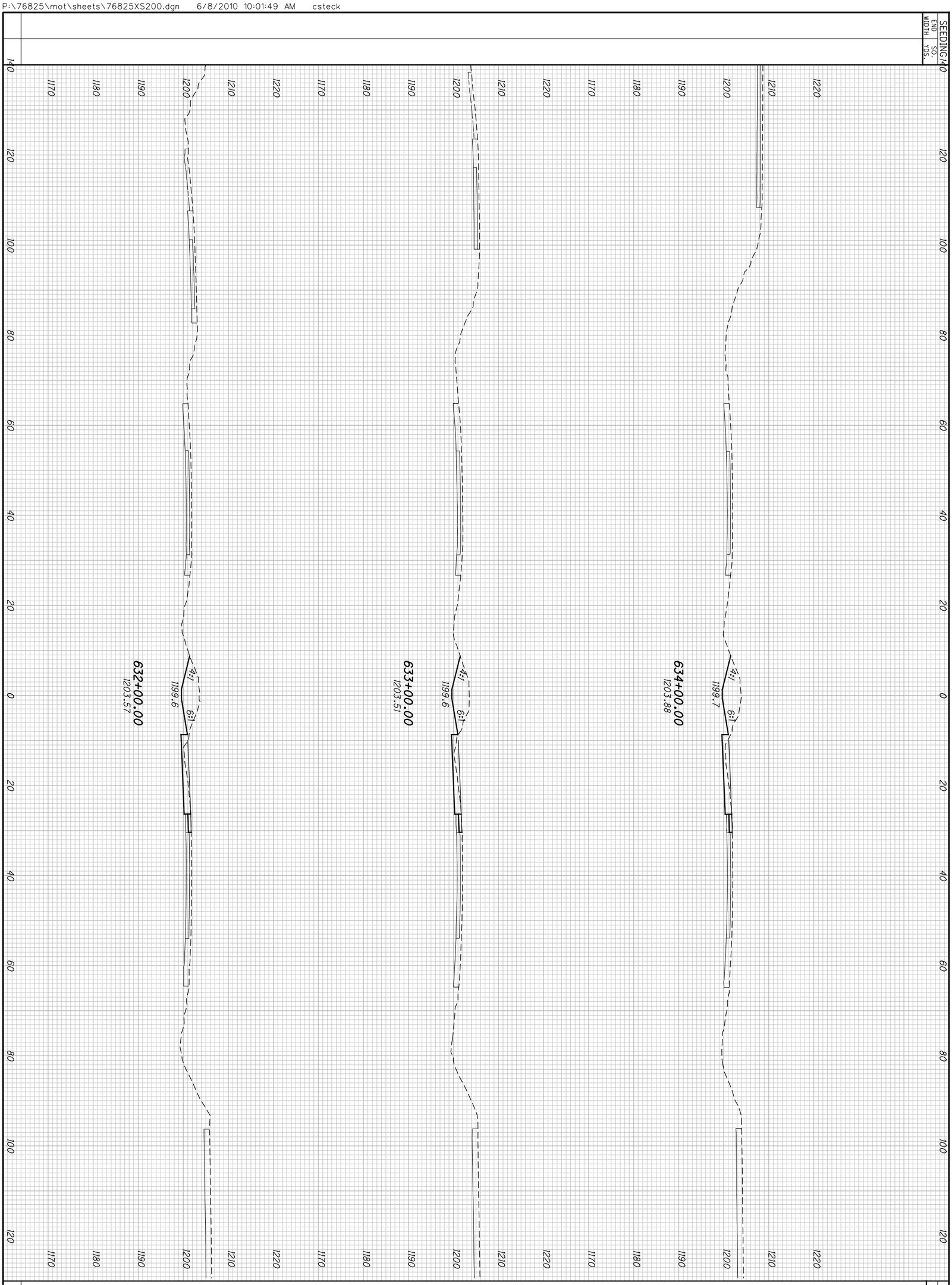


APPROVED FOR CONSTRUCTION - 6/8/2010

113 / 210	BEL-70-7.61	CROSS SECTIONS - I.R. 70 PHASE II STA. 629+00.00 TO STA. 631+00.00

CALCULATED MJC
CHECKED BBD

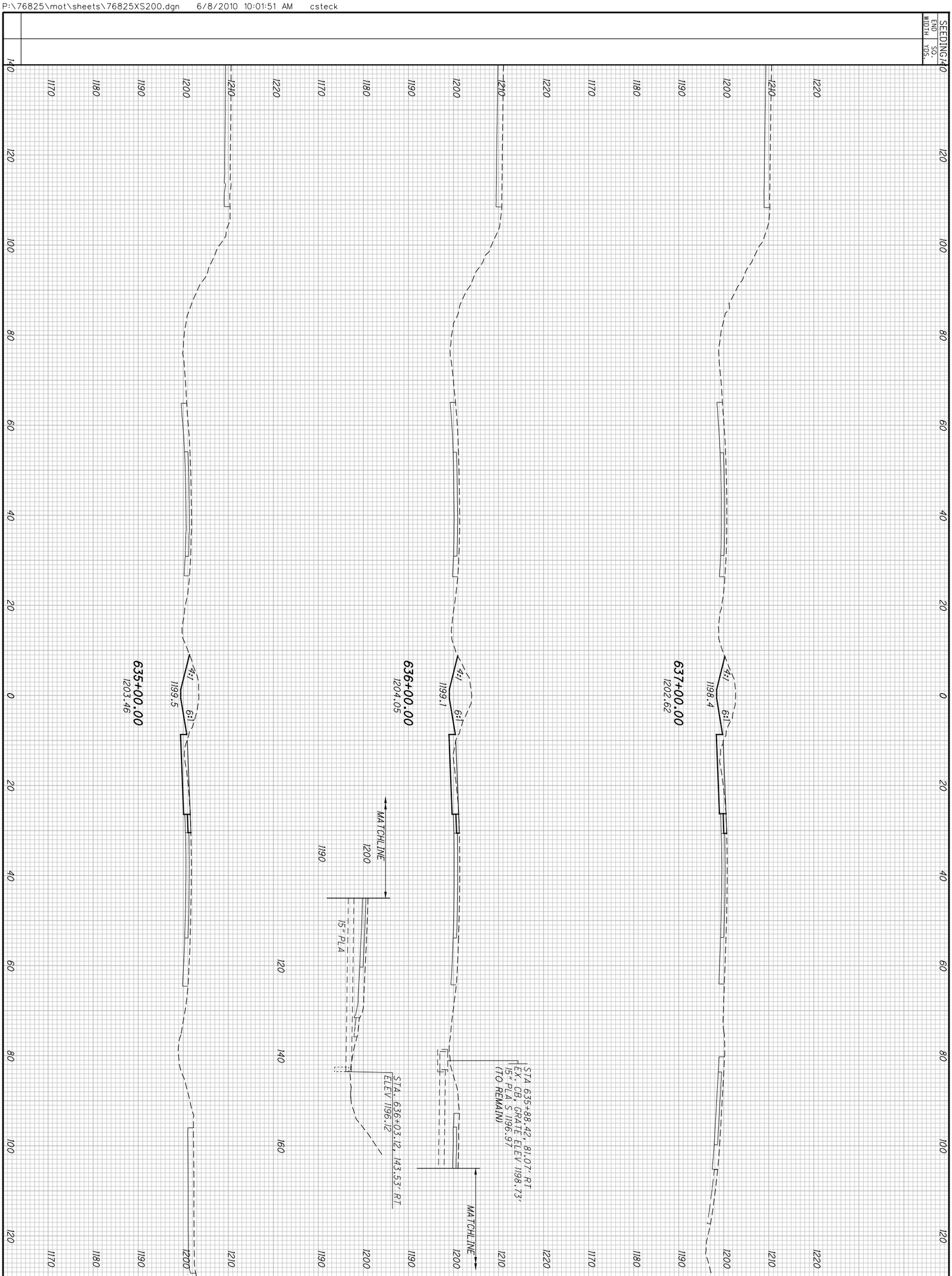
P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:01:49 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

114 / 210	BEL-70-7.61	CROSS SECTIONS - I.R. 70 PHASE II STA. 632+00.00 TO STA. 634+00.00	CALCULATED MJC CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:01:51 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

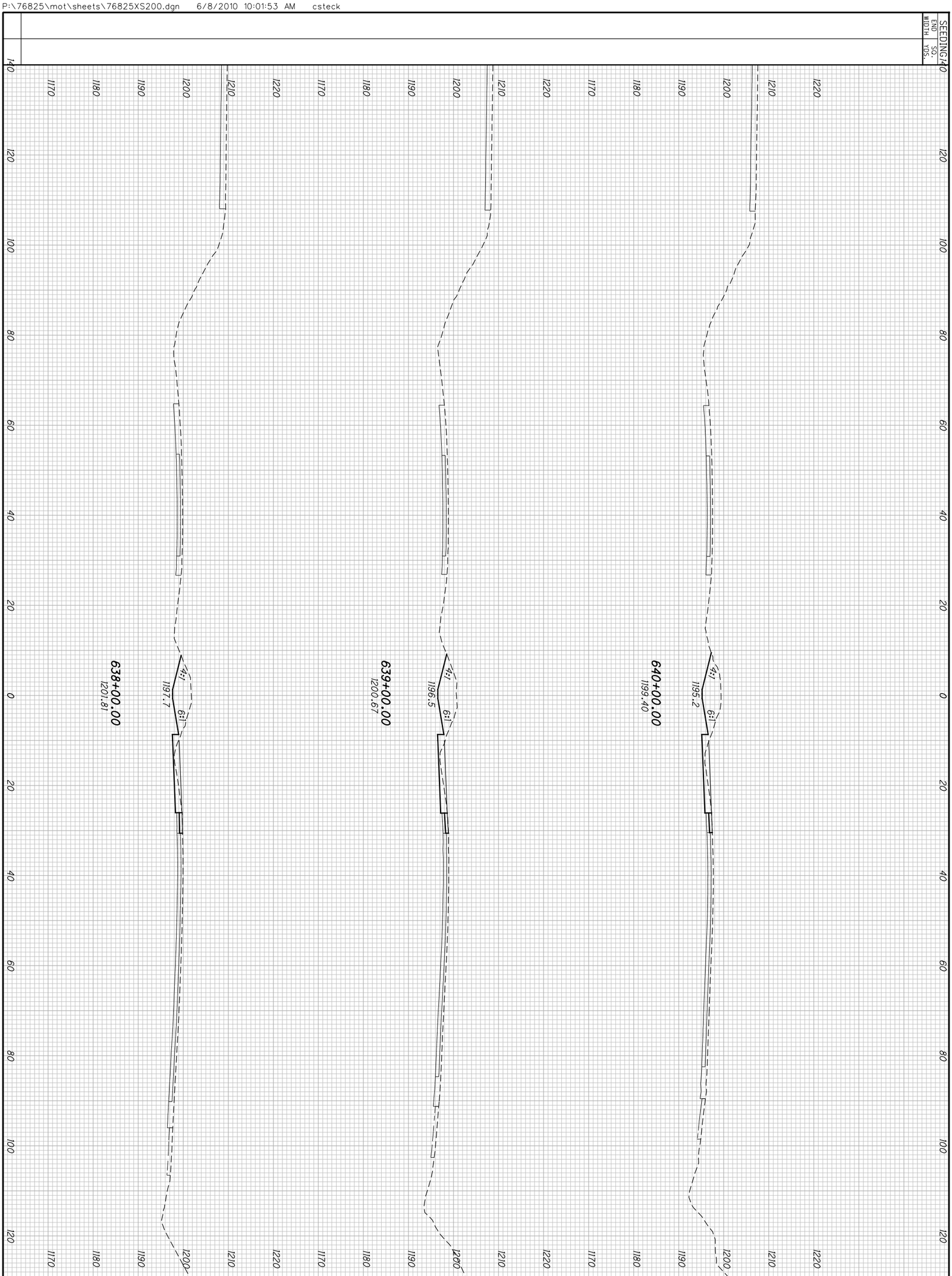
115
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 635+00.00 TO STA. 637+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:01:53 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

116 / 210	BEL-70-7.61	CROSS SECTIONS - I.R. 70 PHASE II STA. 638+00.00 TO STA. 640+00.00

CALCULATED MJC
CHECKED BBD

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED MJC

CHECKED BBD

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

1210 1200 1190 1180 1170 1160

8" SAN
(TO REMAIN)

4:1 6:1
1190.8

643+00.00
1194.59

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, 13.81' LT
EX. CB, GRATE ELEV 1192.32'
15" PLA N 1189.06
15" PLA S 1189.06
(TO BE REMOVED)

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

STA 642+25.38, 13.14' RT
EX. CB, GRATE ELEV 1192.04'
15" PLA N 1189.17
12" PLA S 1189.17
(TO BE REMOVED)

15" PLA

15" PLA

12" PLA

4:1 1192.3 6:1

8" SAN

642+25.54, 26.00' LT
℄ = 1188.99
MASONRY COLLAR PER DM-1.1

642+25.38, 26.00' RT
℄ = 1189.75
MASONRY COLLAR PER DM-1.1

STA. 642+25.42, 98.02' LT
ELEV 1188.50

26'-15" TYPE C,
707.33 @ 1.46%

642+00.00
1196.44

26'-12" TYPE C,
707.33 @ 1.46%

REMOVE PIPE TO
WB SHOULDER

REMOVE PIPE TO
EB SHOULDER

STA 642+49.59, 91.37' RT
EX. SAN MH, T/C ELEV 1192.58'
8" W 1187.01
8" N 1186.91
(TO REMAIN)

4:1 6:1
1193.8

641+00.00
1197.96

APPROVED FOR CONSTRUCTION - 6/8/2010

CROSS SECTIONS - I.R. 70 PHASE II
STA. 641+00.00 TO STA. 643+00.00

BEL-70-7.61

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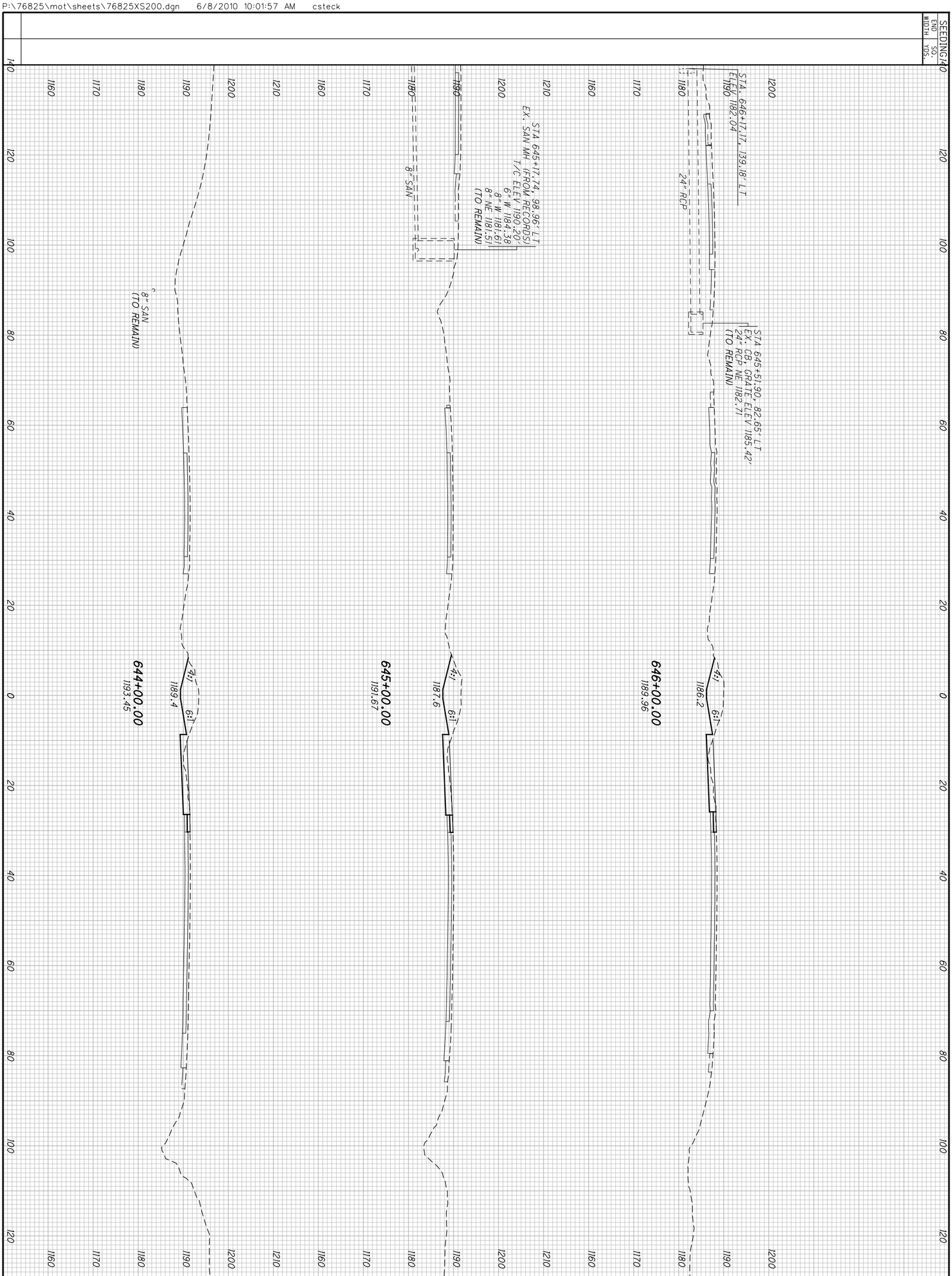
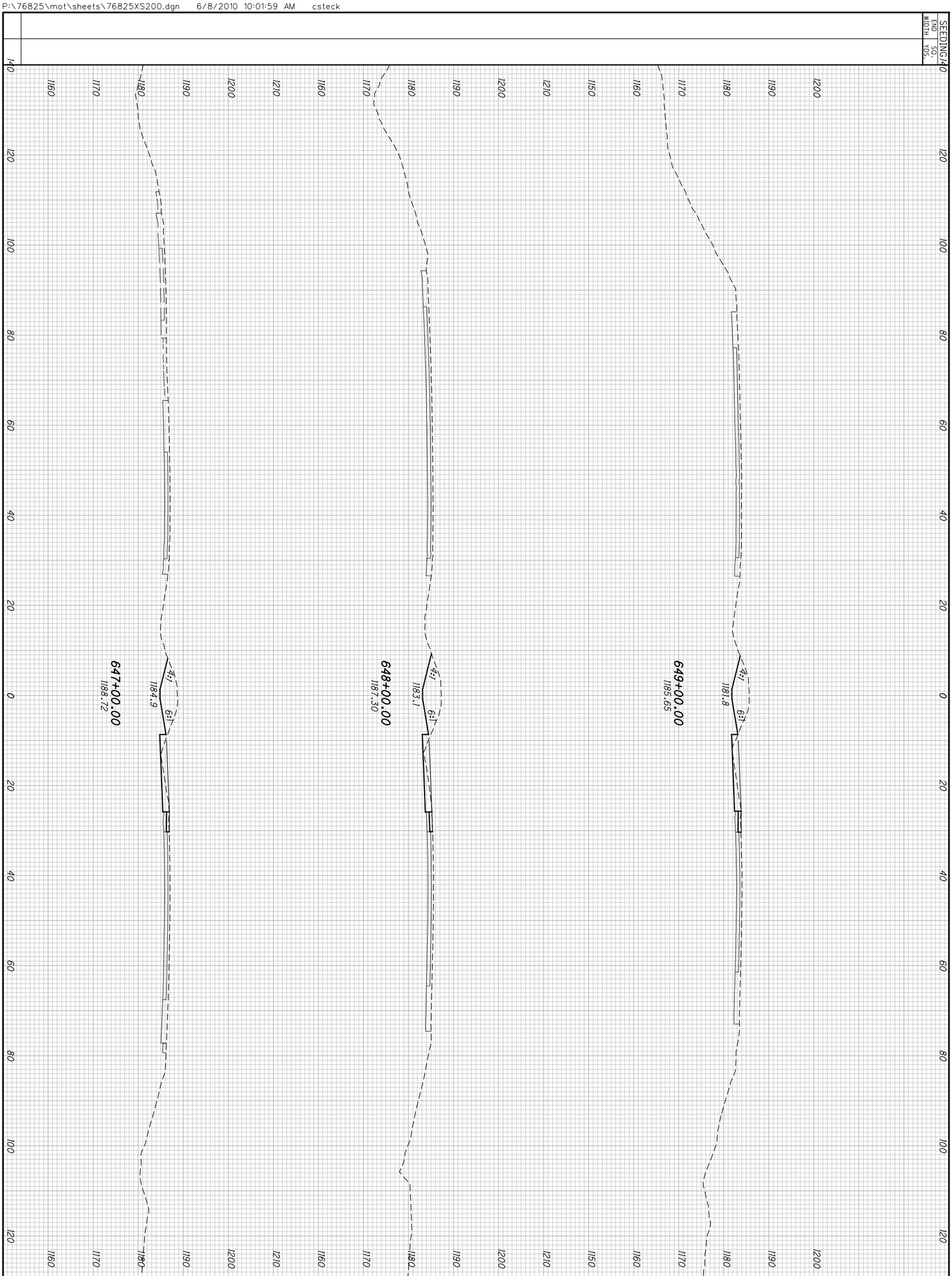
P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:01:57 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

118 / 210	BEL-70-7.61	CROSS SECTIONS - I.R. 70 PHASE II STA. 644+00.00 TO STA. 646+00.00
		CALCULATED MJC CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:01:59 AM csteck



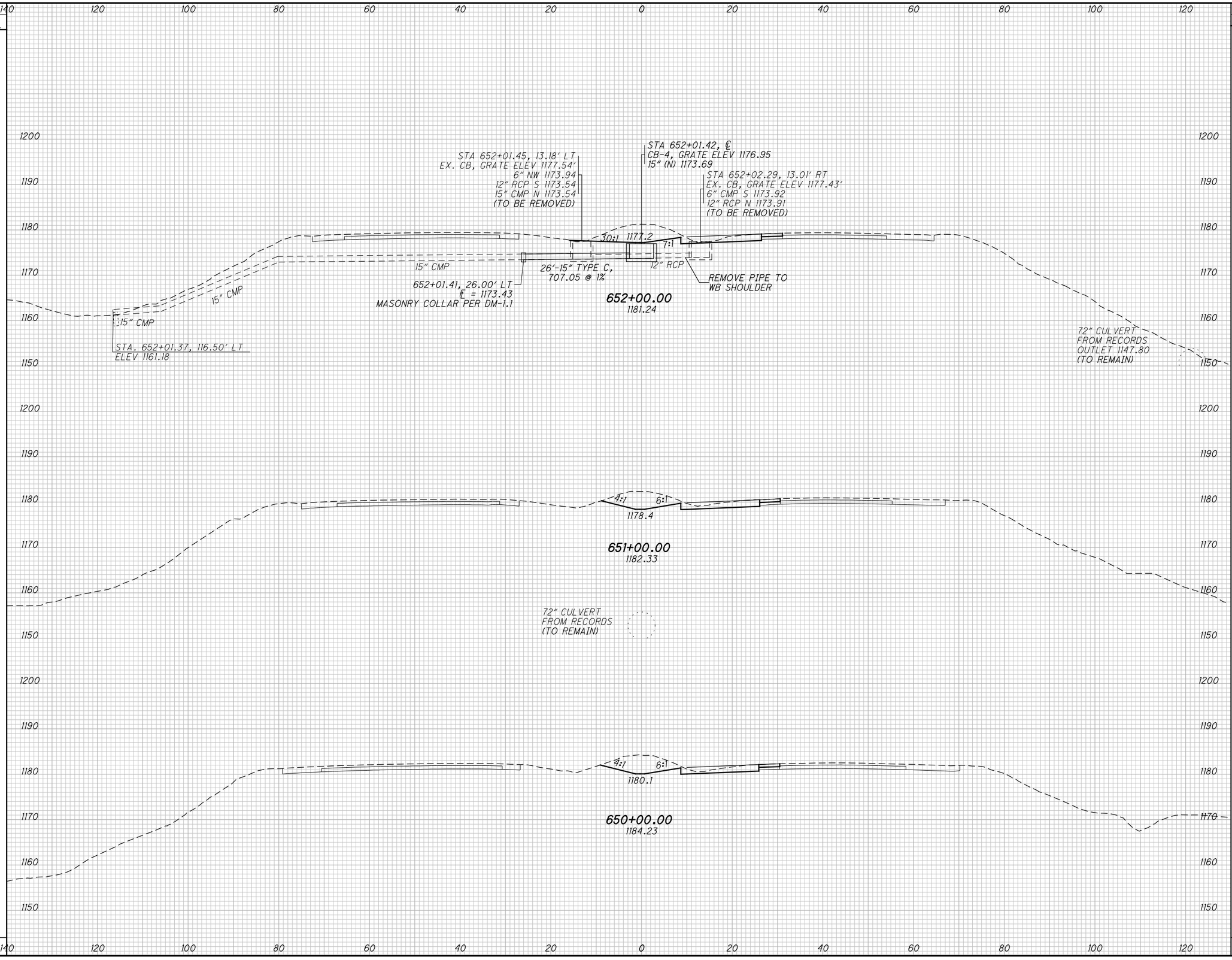
APPROVED FOR CONSTRUCTION - 6/8/2010

119 / 210	BEL-70-7.61	CROSS SECTIONS - I.R. 70 PHASE II STA. 647+00.00 TO STA. 649+00.00	CALCULATED MJC CHECKED BBD

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED MJC
CHECKED BBD



APPROVED FOR CONSTRUCTION - 6/8/2010

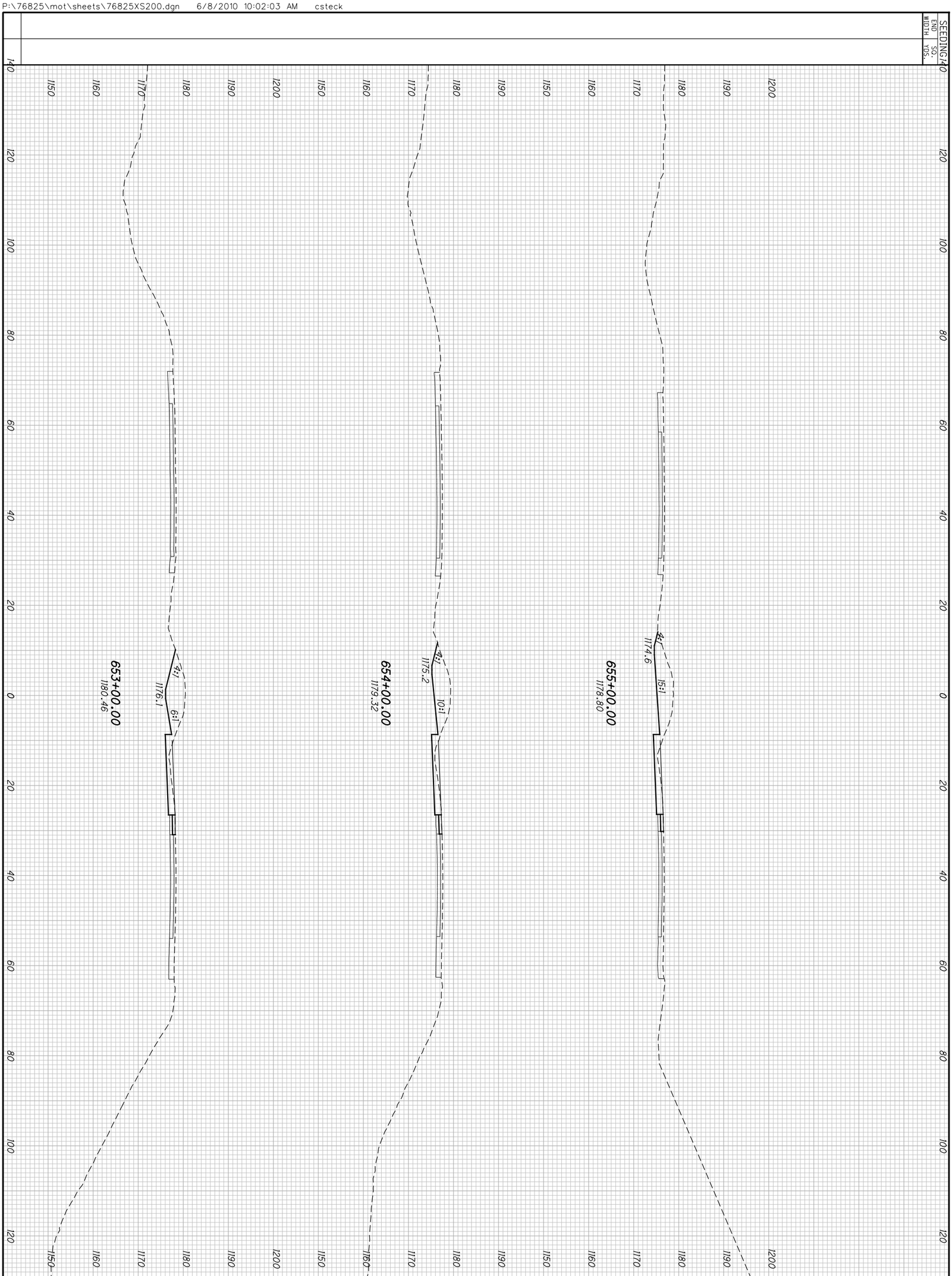
CROSS SECTIONS - I.R. 70 PHASE II
STA. 650+00.00 TO STA. 652+00.00

BEL-70-7.61

120
210

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:02:01 AM csteck

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:02:03 AM csteck



SEEDING
END AREA
CUT
FILL
VOLUME
CUT
FILL
END
WIDTH
SQ.
YDS.

APPROVED FOR CONSTRUCTION - 6/8/2010

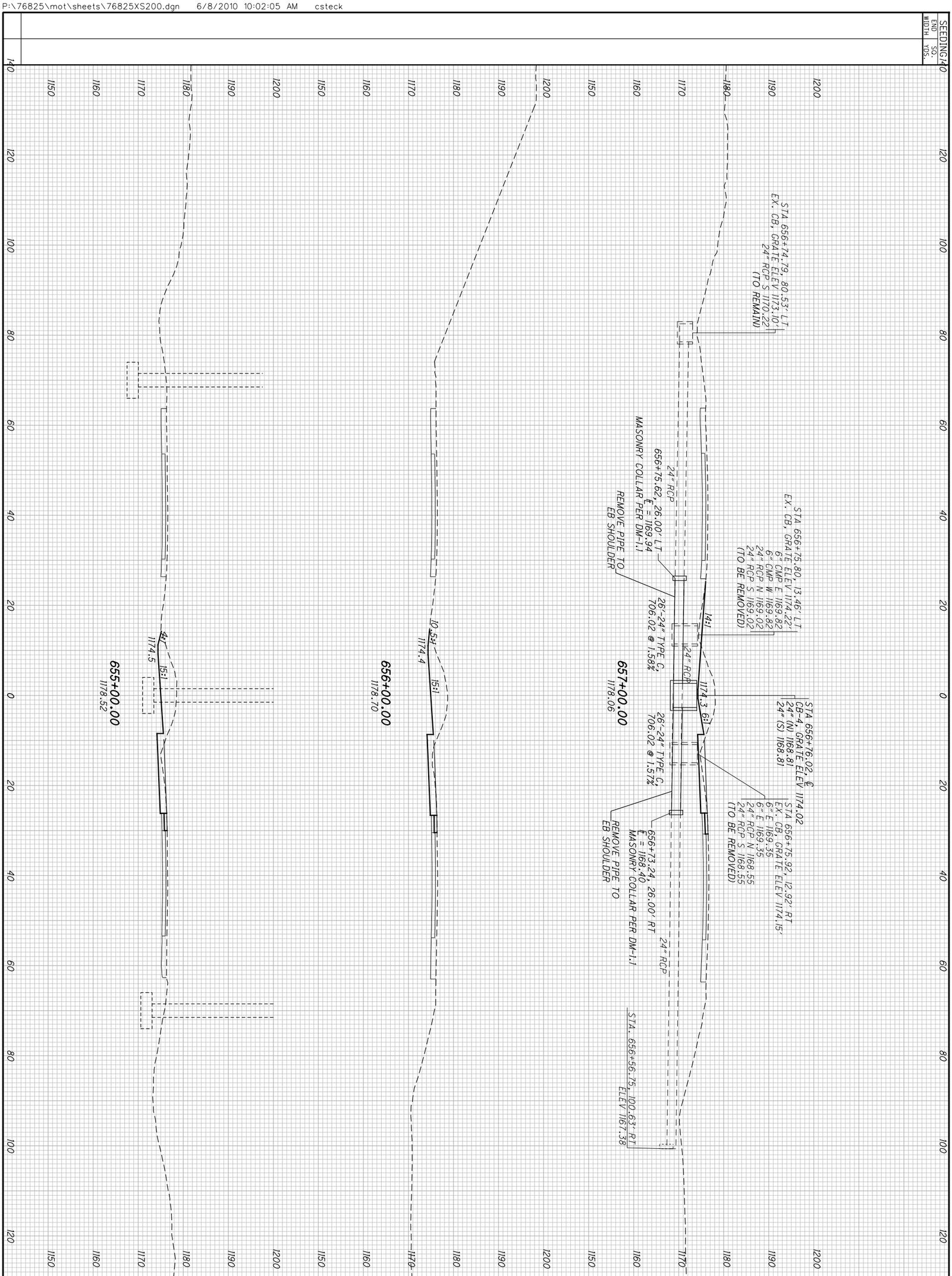
121
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 653+00.00 TO STA. 655+00.00

CALCULATED
MJC
CHECKED
BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:02:05 AM csteck

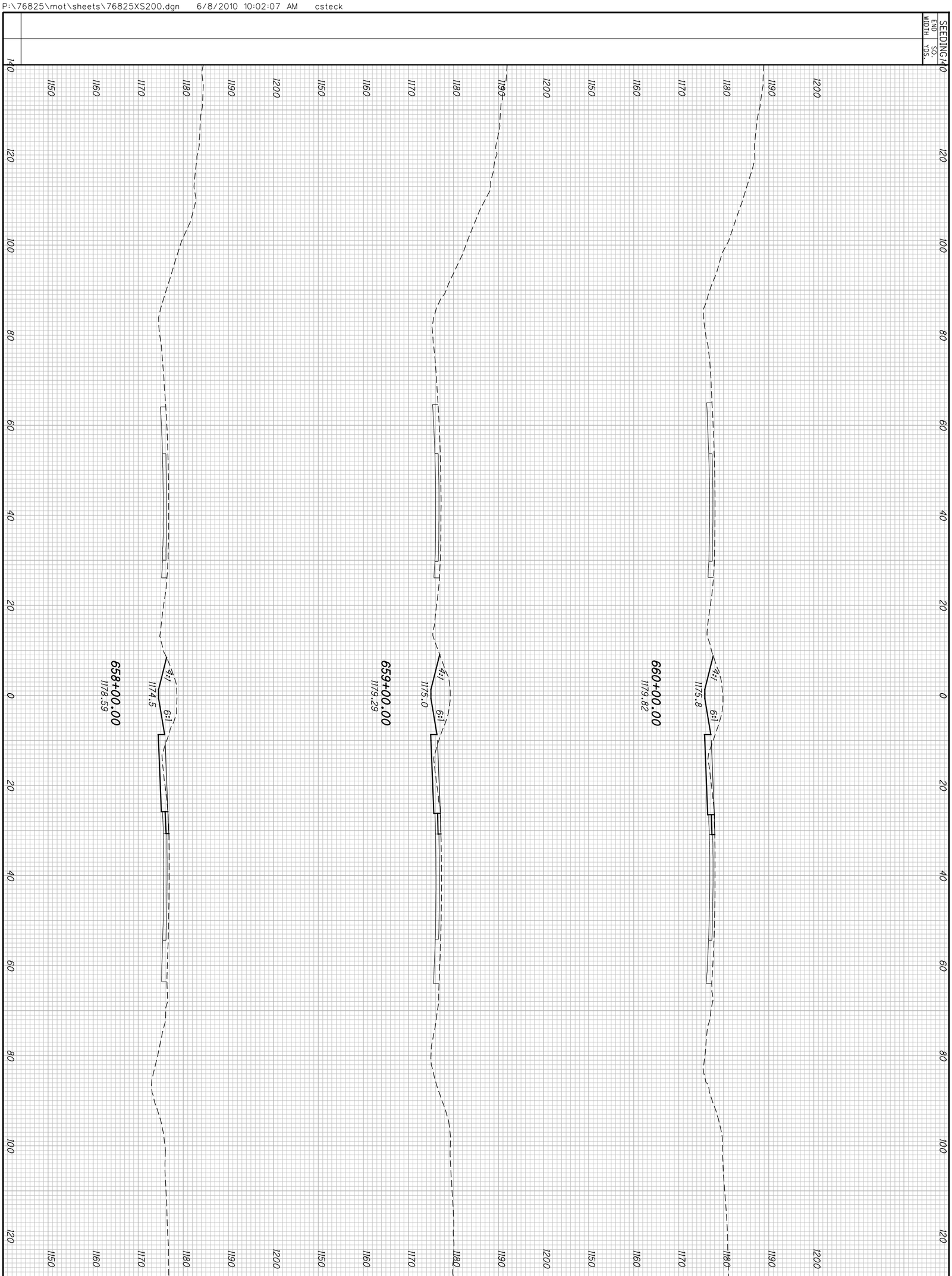


APPROVED FOR CONSTRUCTION - 6/8/2010

122 / 210	BEL-70-7.61	CROSS SECTIONS - I.R. 70 PHASE II STA. 655+50.000 TO STA. 657+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:02:07 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

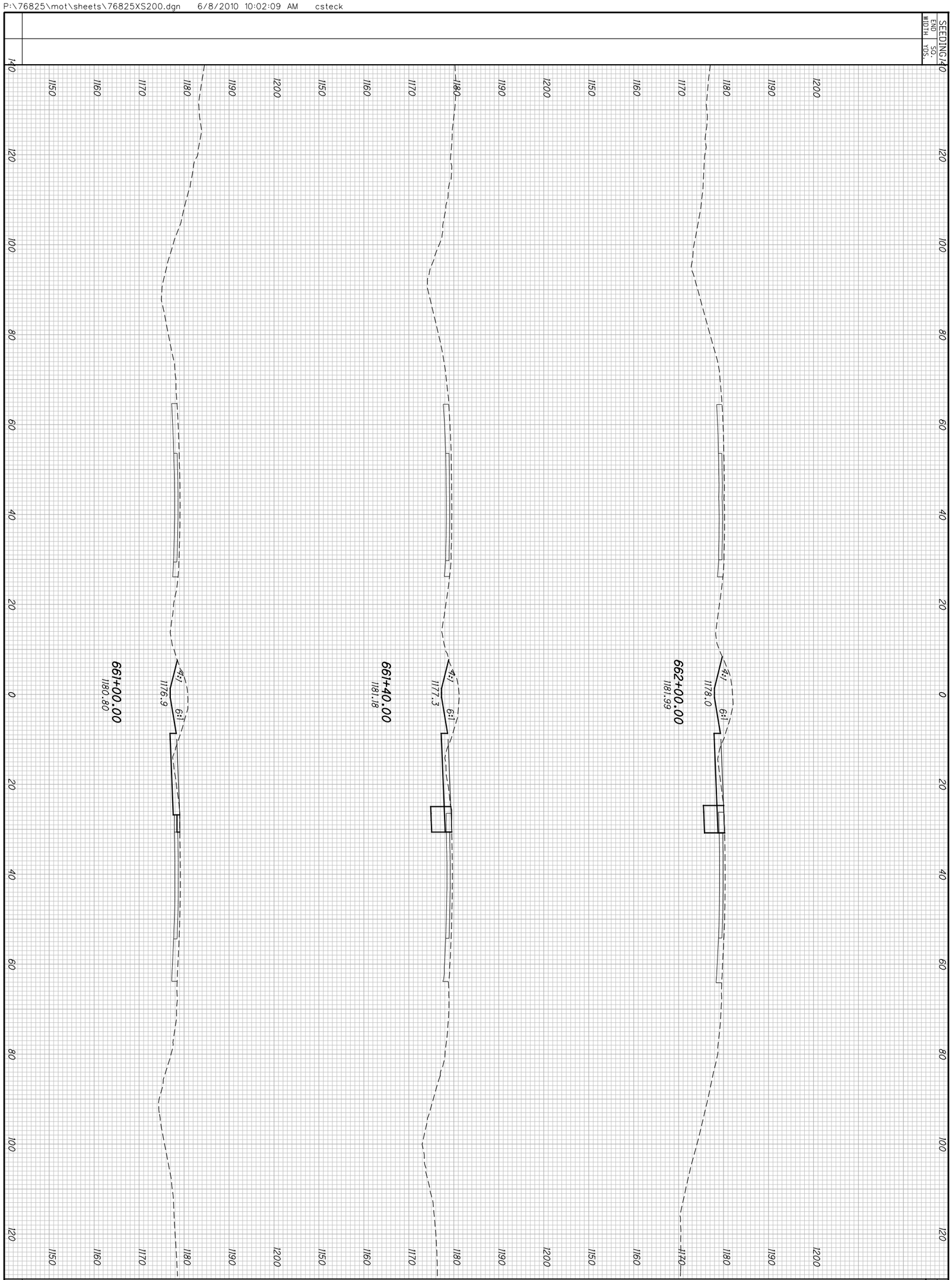
123
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 658+00.00 TO STA. 660+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:02:09 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

124
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 661+00.00 TO STA. 662+00.00

CALCULATED MJC
CHECKED BBD

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED MJC
CHECKED BBD

APPROVED FOR CONSTRUCTION - 6/8/2010

CROSS SECTIONS - I.R. 70 PHASE II
STA. 663+00.00 TO STA. 665+00.00

BEL-70-7.61

125
210

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

1210
1200
1190
1180
1170
1160
1150

4:1 6:1
1181.4

STA 664+61.38, 94.95' LT
OUTLET 12" RCP E 1175.91'
(TO REMAIN)

665+00.00
1185.30

STA 664+01.42, 13.04' LT
EX. CB, GRATE ELEV 1180.58'
6" M SW 1176.78
15" RCP N 1176.38
12" RCP S 1176.38
(TO BE REMOVED)

STA 664+01.34, ℄
CB-4, GRATE ELEV 1180.01
15" (N) 1176.53

STA 664+01.48, 13.19' RT
EX. CB, GRATE ELEV 1180.53'
6" M NE 1176.93
12" RCP N 1176.53
(TO BE REMOVED)

1180.3
20:1 6:1
15" RCP
12" RCP
26'-15" TYPE C,
706.02 @ 1%
664+01.60, 26.00' LT
℄ = 1176.27
MASONRY COLLAR PER DM-1.1
REMOVE PIPE TO
WB SHOULDER
15" RCP
15" RCP
STA. 664+02.34, 99.75' LT
ELEV 1168.02

664+00.00
1183.91

4:1 6:1
1179.0

663+00.00
1183.04

48" @ 3.143 % FROM RECORDS (TO REMAIN)

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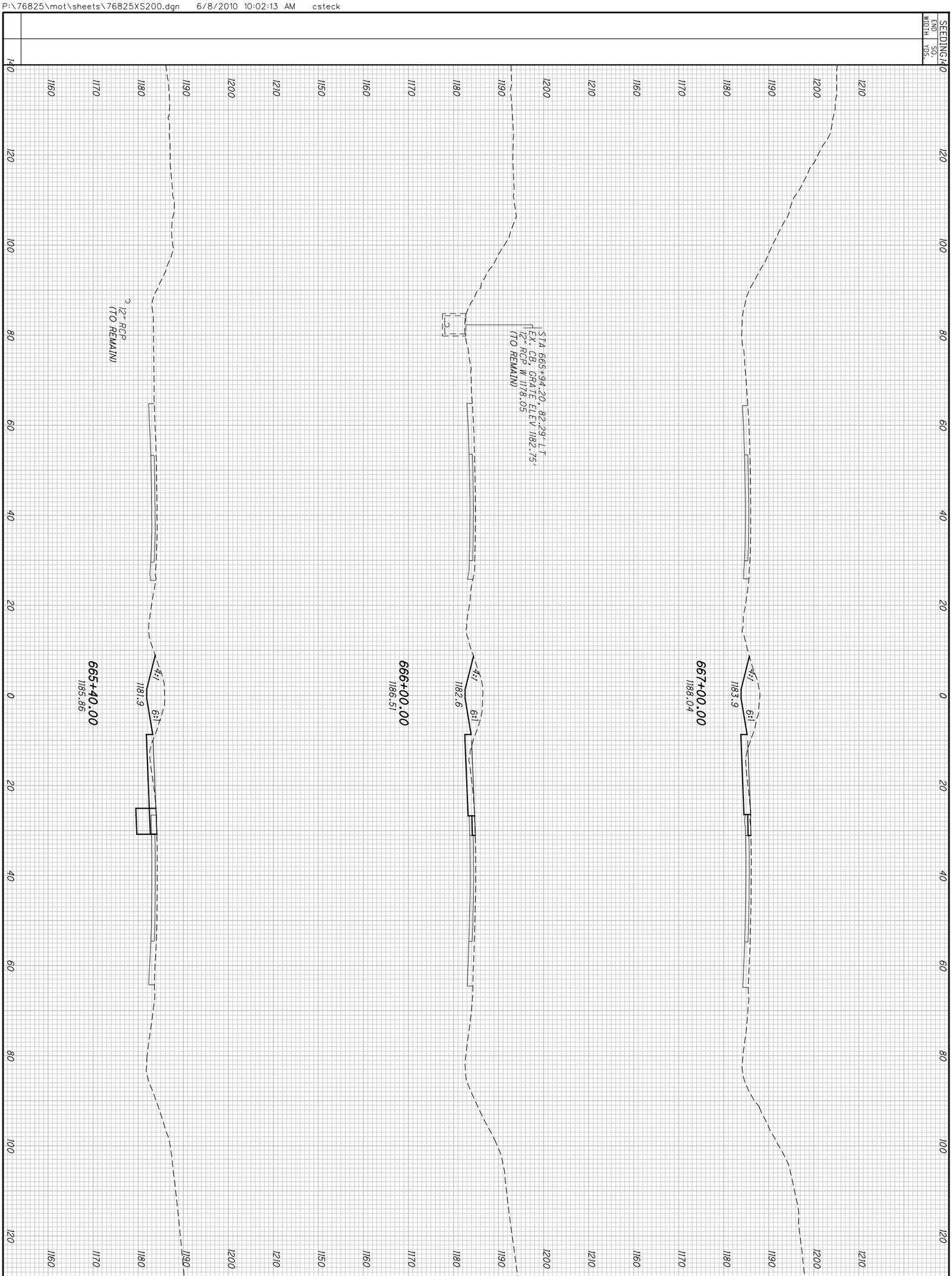
P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:02:13 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

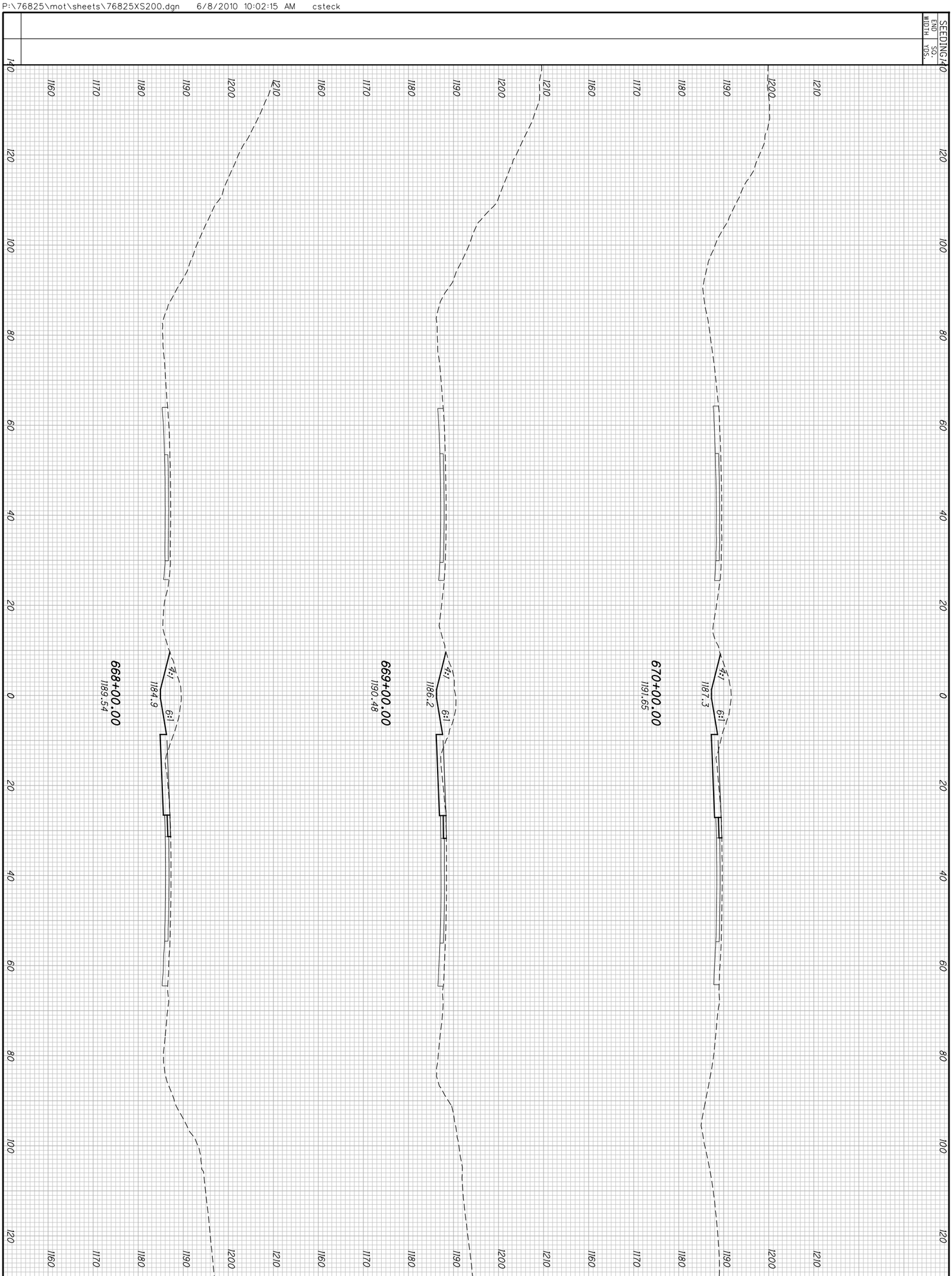
126
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 665+40.00 TO STA. 667+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:02:15 AM csteck



END AREA CUT FILL VOLUME CUT FILL

APPROVED FOR CONSTRUCTION - 6/8/2010

127
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 668+00.00 TO STA. 670+00.00

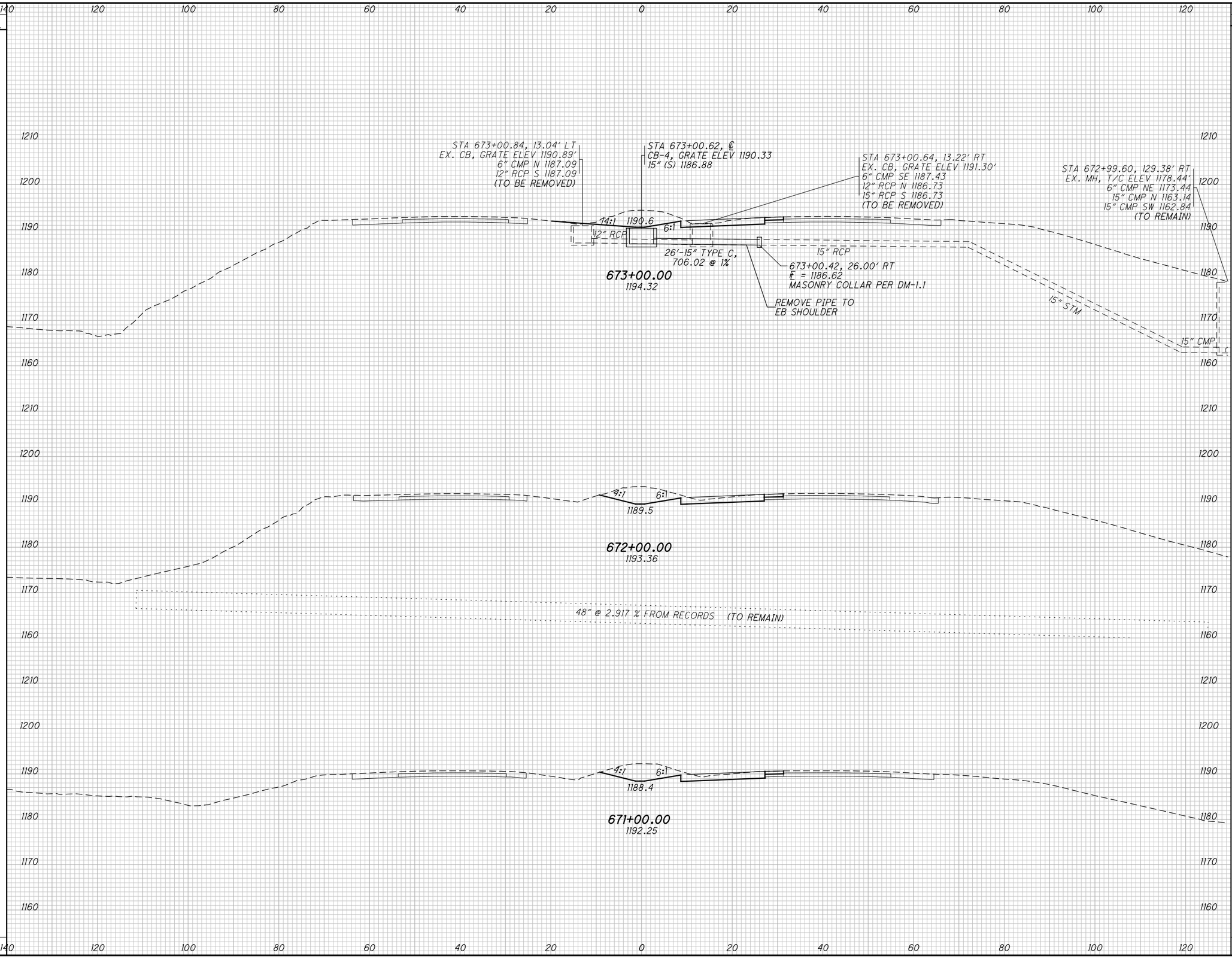
CALCULATED MJC
CHECKED BBD

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED	CHECKED
MJC	BBD



APPROVED FOR CONSTRUCTION - 6/8/2010

CROSS SECTIONS - I.R. 70 PHASE II
STA. 671+00.00 TO STA. 673+00.00

BEL-70-7.61

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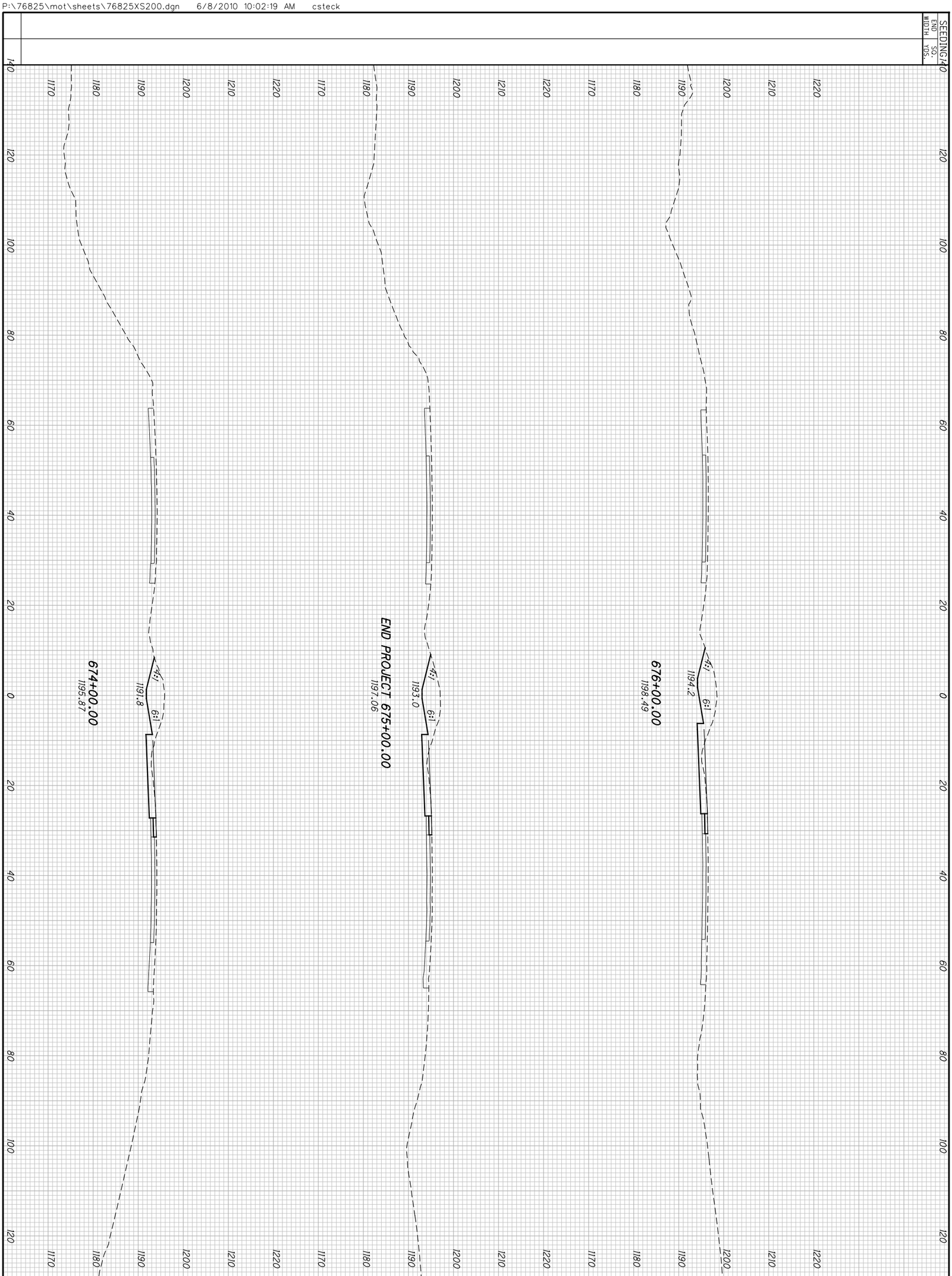
P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:02:19 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

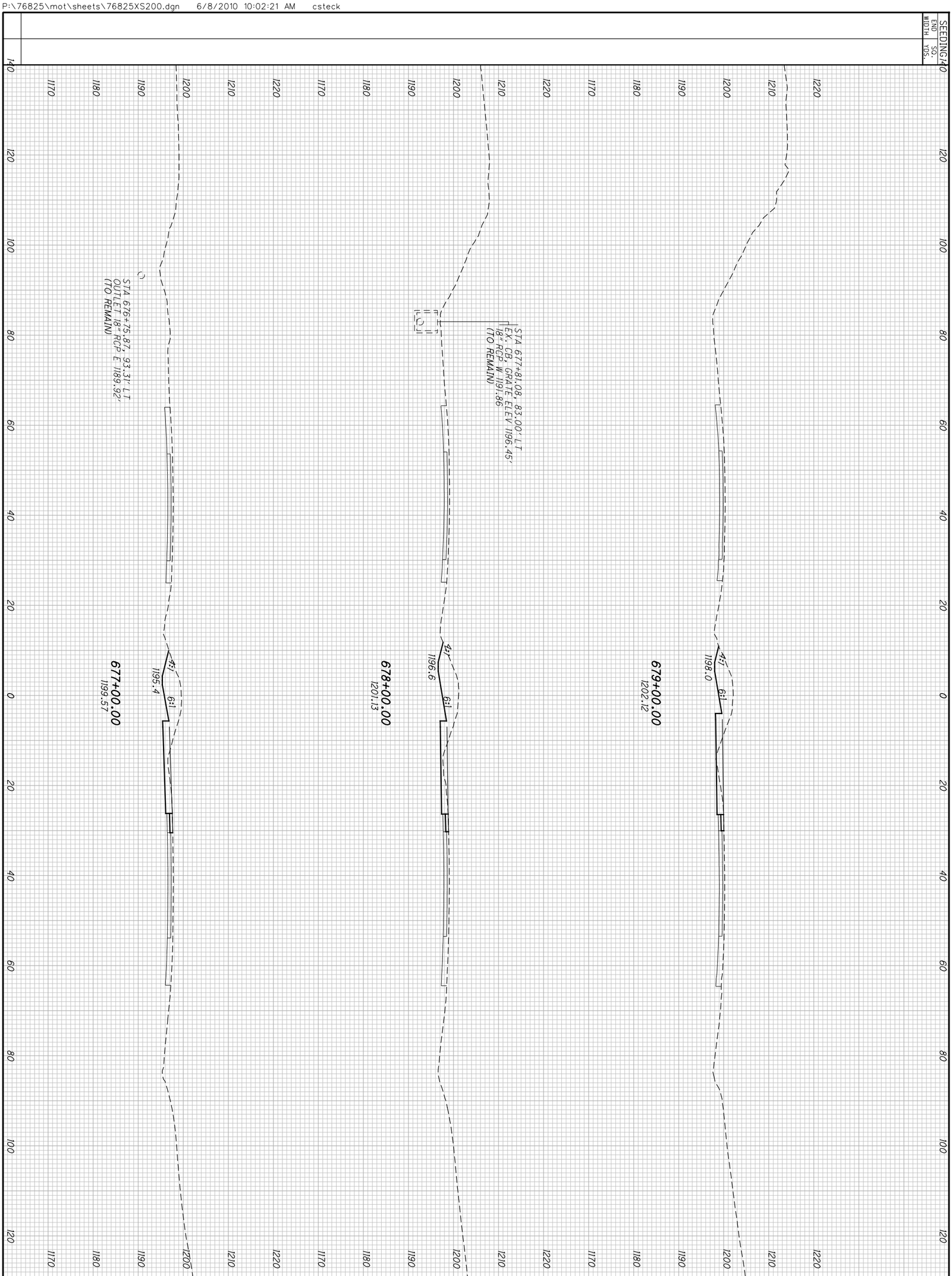
129
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 674+00.00 TO STA. 676+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:02:21 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

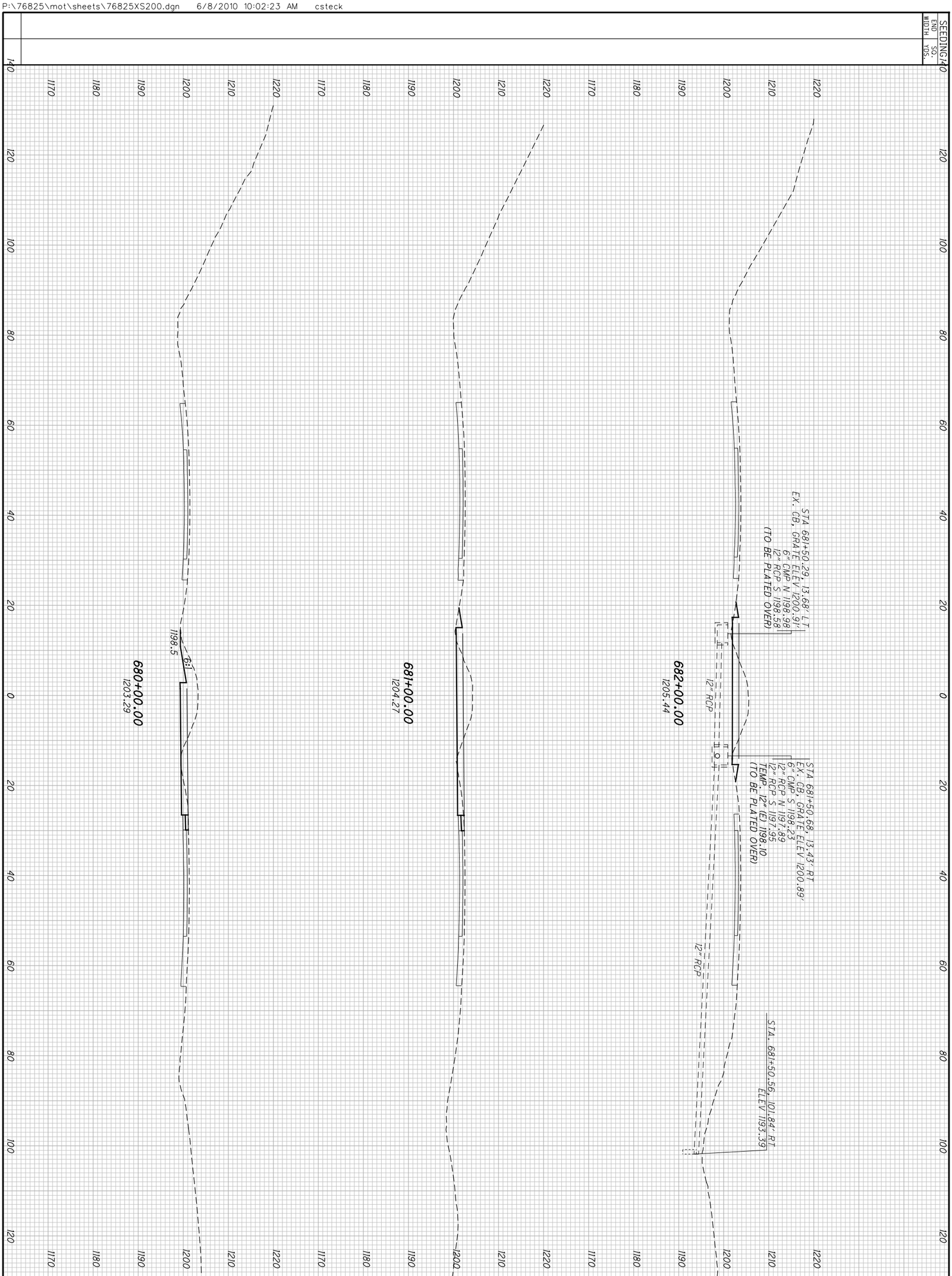
130
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 677+00.00 TO STA. 679+00.00

CALCULATED MJC
CHECKED BBD

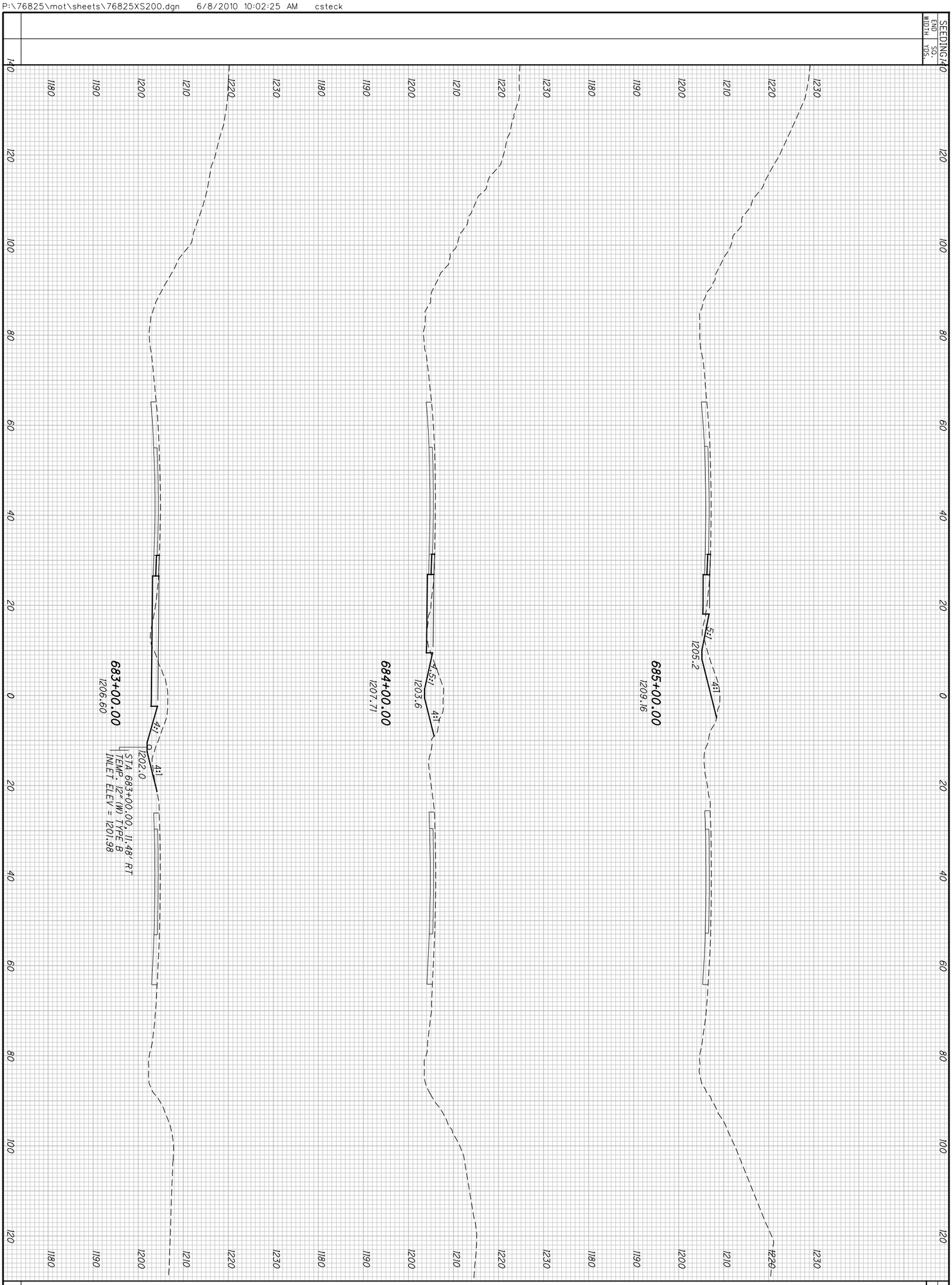
P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:02:23 AM csteck



131 / 210	BEL-70-7.61	CROSS SECTIONS - I.R. 70 PHASE II STA. 680+00.00 TO STA. 682+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:02:25 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

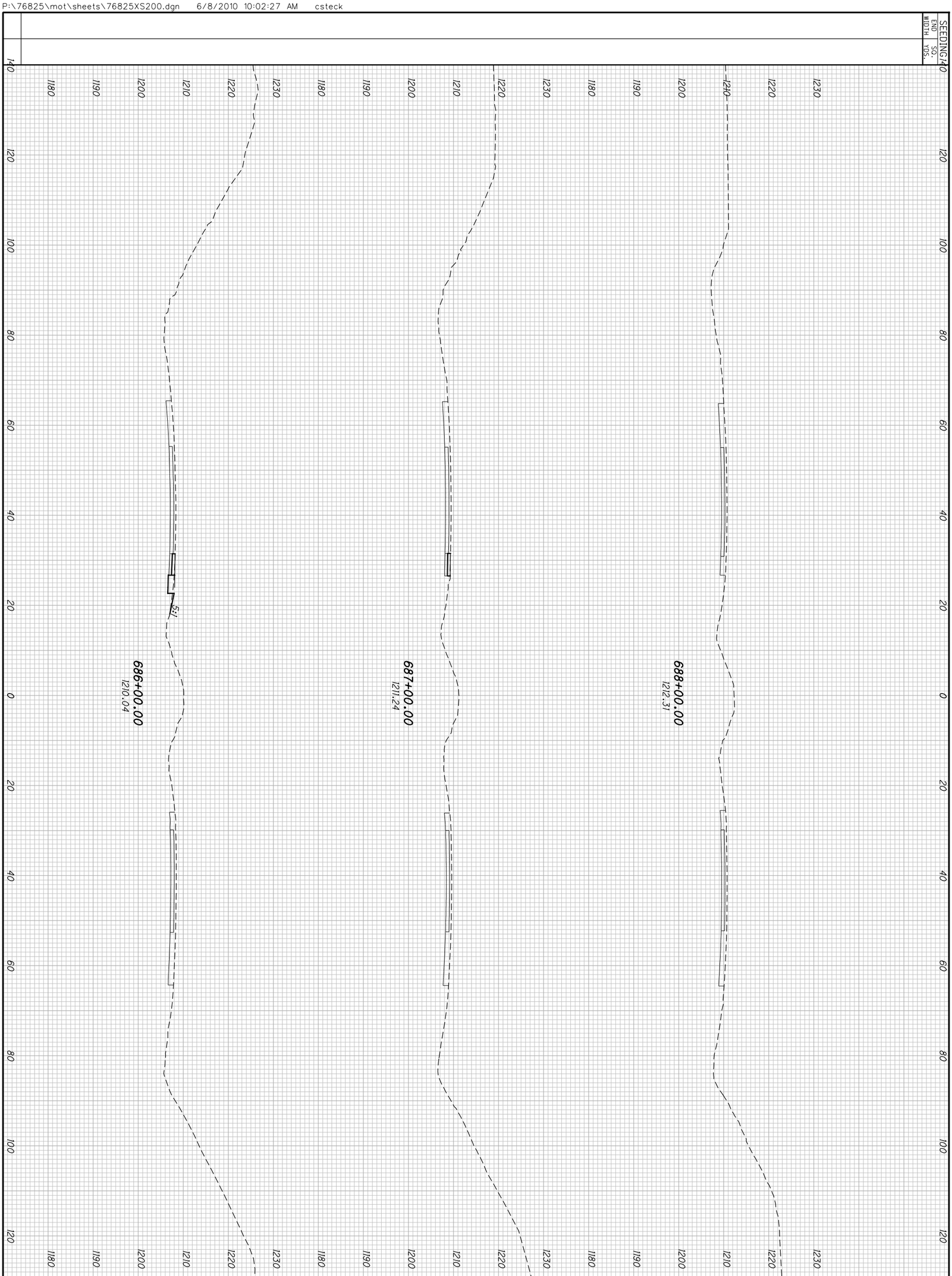
132
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 683+00.00 TO STA. 685+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:02:27 AM csteck



END AREA CUT FILL VOLUME CUT FILL

APPROVED FOR CONSTRUCTION - 6/8/2010

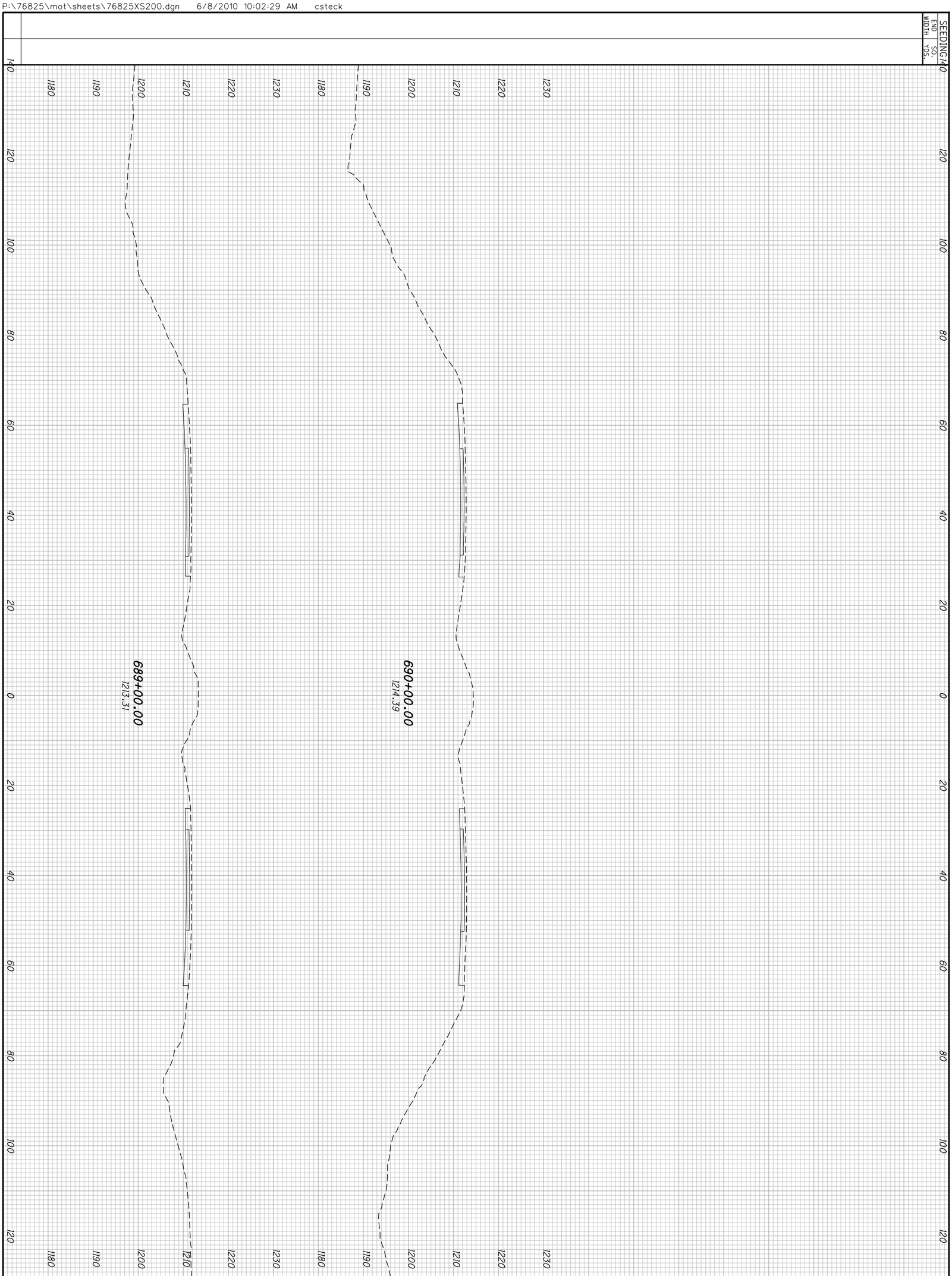
133
210

BEL-70-7.61

CROSS SECTIONS - I.R. 70 PHASE II
STA. 686+00.00 TO STA. 688+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS200.dgn 6/8/2010 10:02:29 AM csteck

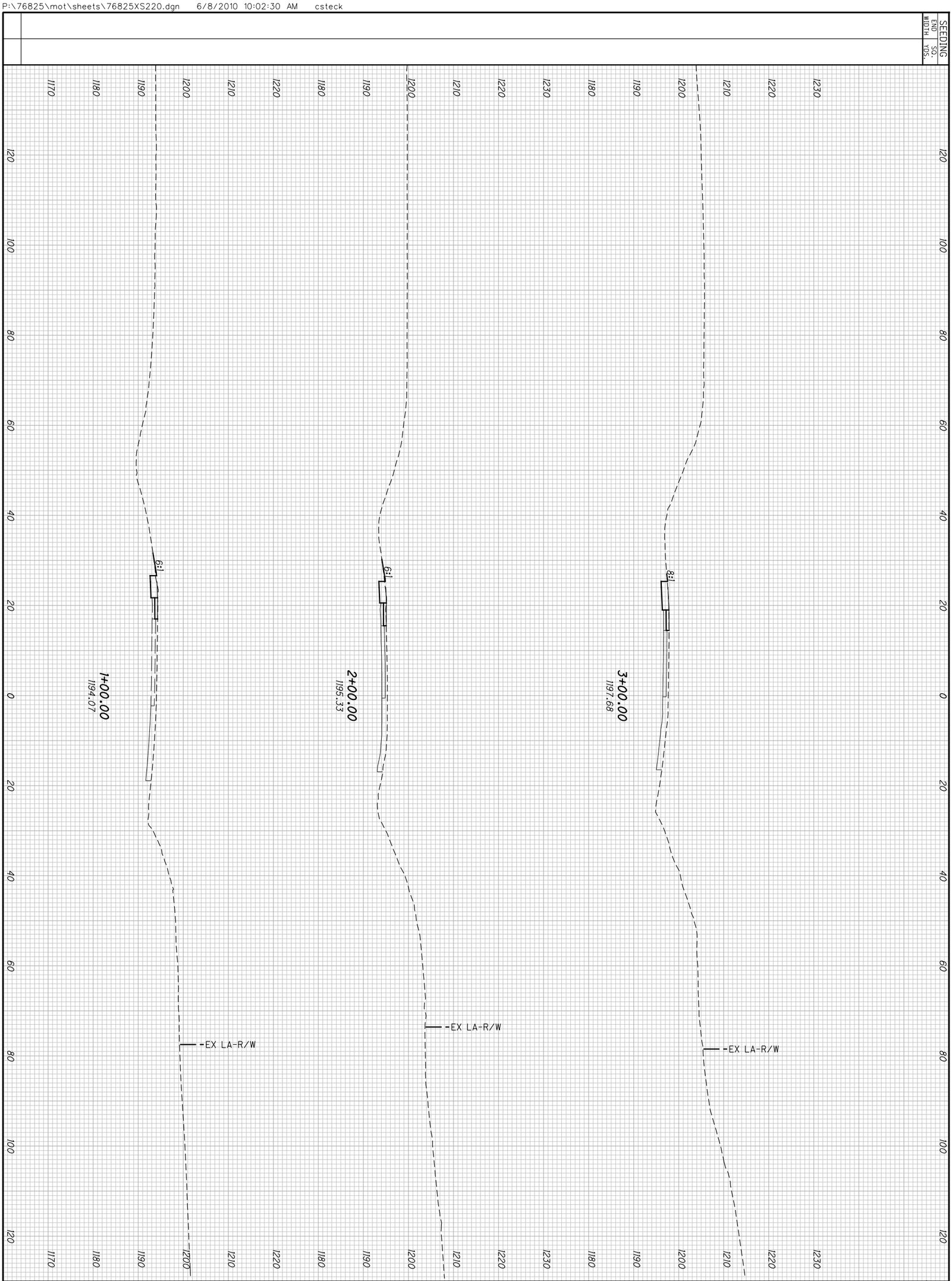


APPROVED FOR CONSTRUCTION - 6/8/2010

134 / 210	BEL-70-7.61	CROSS SECTIONS - I.R. 70 PHASE II STA. 689+00.00 TO STA. 690+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS220.dgn 6/8/2010 10:02:30 AM csteck

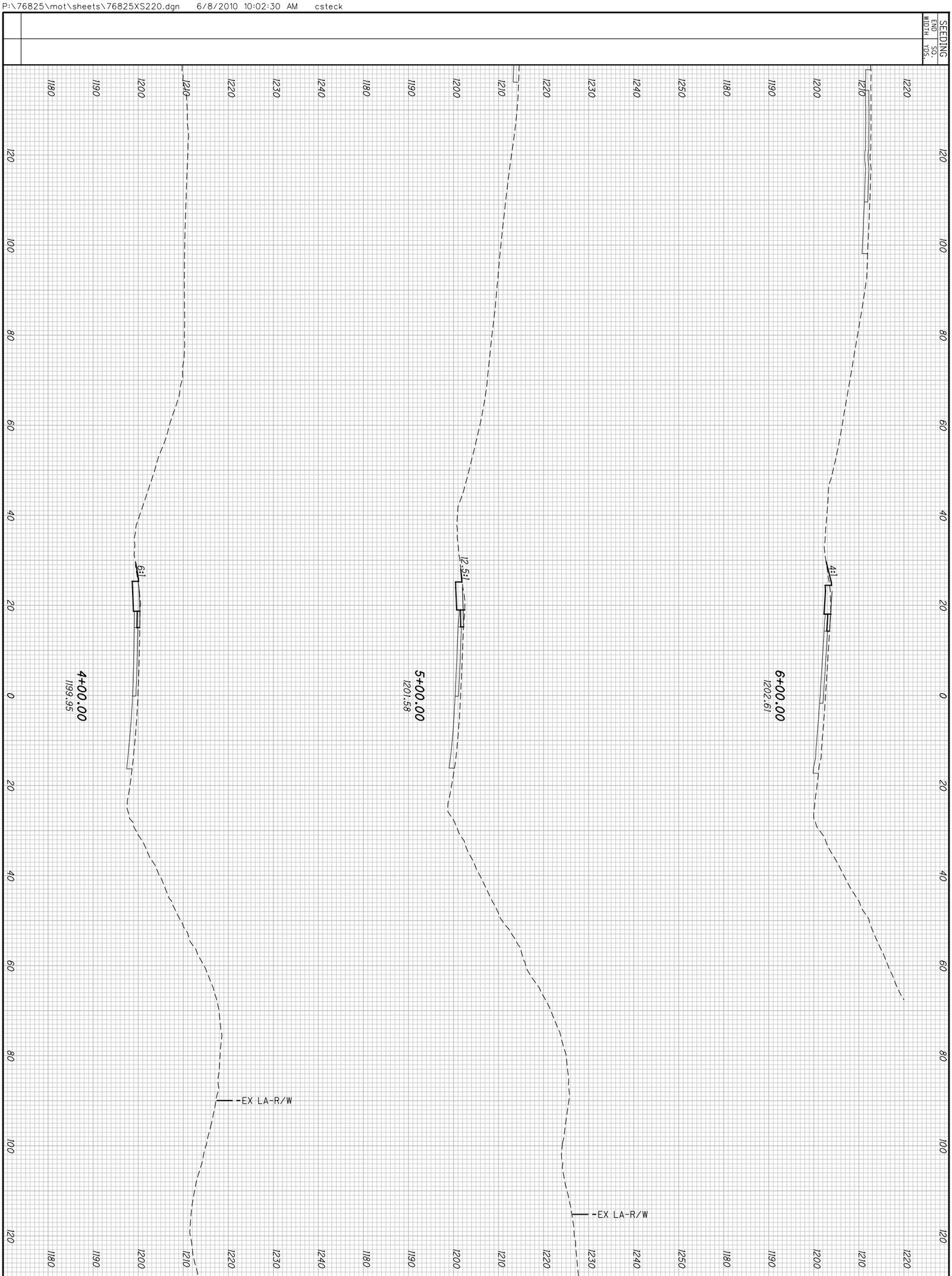


APPROVED FOR CONSTRUCTION - 6/8/2010

135 / 210	BEL-70-7.61	CROSS SECTIONS - RAMP B PHASE II STA. 1+00.00 TO STA. 3+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS220.dgn 6/8/2010 10:02:30 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

136
210

BEL-70-7.61

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

CALCULATED MJC
CHECKED BBD

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED MJC

CHECKED BBD

APPROVED FOR CONSTRUCTION - 6/8/2010

CROSS SECTIONS - RAMP B PHASE II

STA. 7+00.00 TO STA. 8+00.00

BEL-70-7.61

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

1220
1210
1200
1190
1180
1230

6:1

8+00.00
1202.81

4:1

7+00.00
1203.02

IR 70, STA 525+26.32, 13.11' LT
EX. CB, GRATE ELEV 1207.25'
6" CMP NE 1204.98
12" RCP S 1204.58
12" RCP N 1204.58
(TO BE REMOVED)

IR 70, STA 525+26.67, 13.15' RT
EX. CB, GRATE ELEV 1207.55'
12" RCP N 1205.18
(TO BE REMOVED)

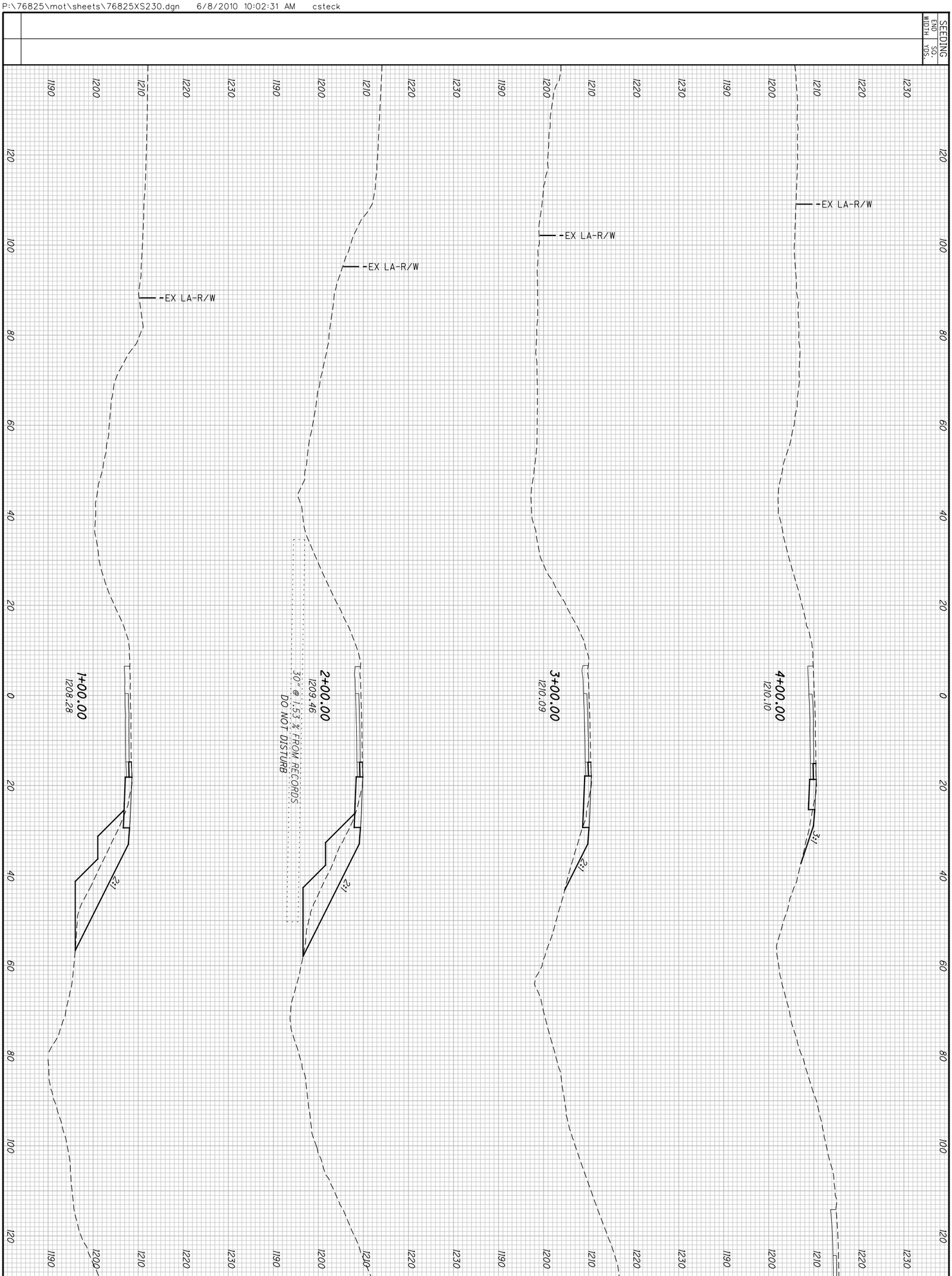
12" RCP

IR 70, STA 525+00.00, 10.40' RT
TEMP. CB-2-2B,
GRATE ELEV 1206.40
TEMP. 12" (NE) 1204.73

IR 70, STA 525+26.93, ℄
CB-4, GRATE ELEV 1206.76
15" (N) 1204.59
TEMP. 12" (SW) 1204.60

P:\76825\mot\sheets\76825XS220.dgn 6/8/2010 10:02:31 AM csteck

P:\76825\mot\sheets\76825XS230.dgn 6/8/2010 10:02:31 AM csteck



END AREA CUT FILL

VOLUME CUT FILL

APPROVED FOR CONSTRUCTION - 6/8/2010

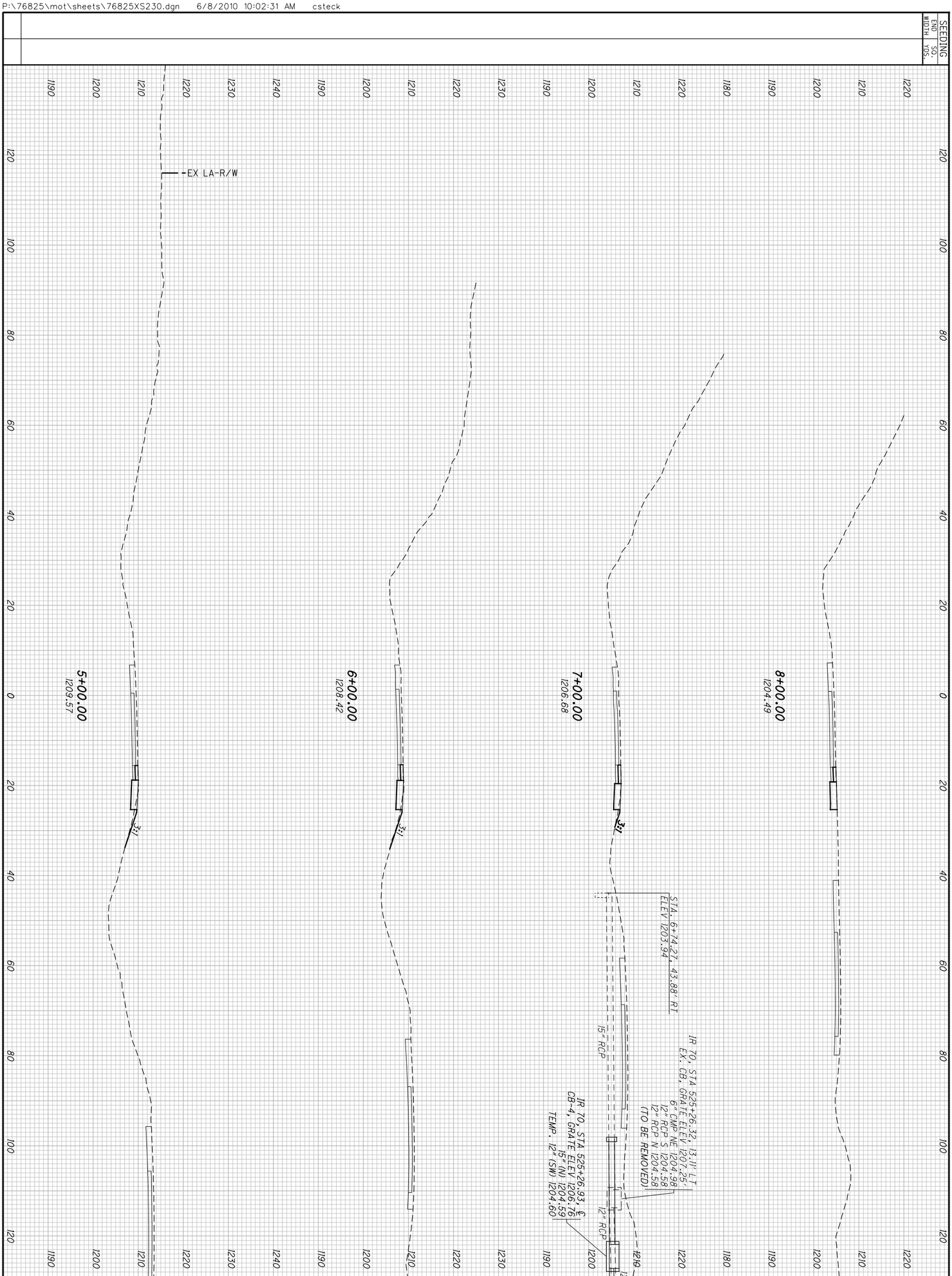
138
210

BEL-70-7.61

CROSS SECTIONS - RAMP C PHASE II
STA. 1+00.00 TO STA. 4+00.00

CALCULATED MJC
CHECKED BBD

P:\76825\mot\sheets\76825XS230.dgn 6/8/2010 10:02:31 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

139
210

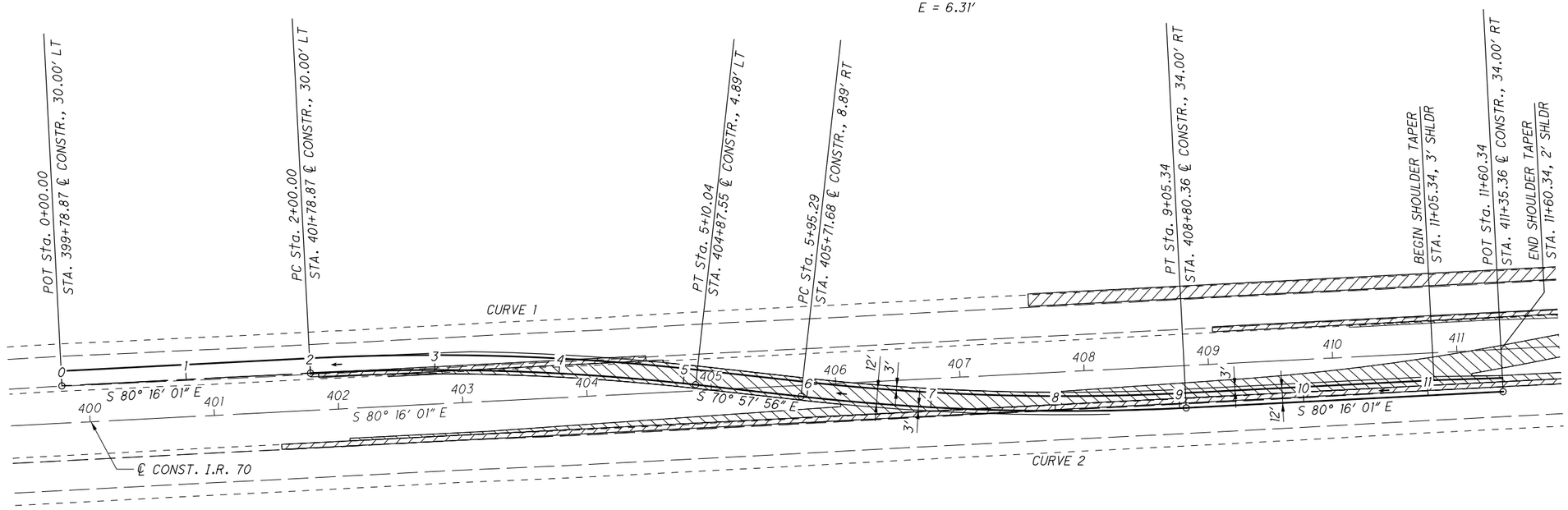
BEL-70-7.61

CROSS SECTIONS - RAMP C PHASE II
STA. 5+00.00 TO STA. 8+00.00

CALCULATED MJC
CHECKED BBD

SINGLE LANE CROSSOVER
CURVE 2

P.I.= Sta. 7+50.66
Δ = 9° 18′ 05″ (LT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 155.36′
L = 310.04′
E = 6.31′

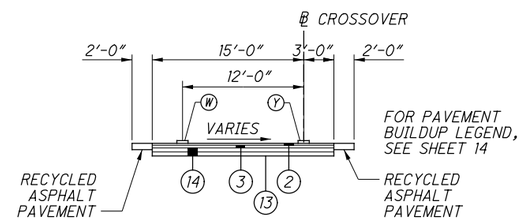


LEGEND:

- TRAFFIC FLOW DIRECTION
- WORK ZONE/SHOULDER RECONSTRUCTION
- WORK ZONE/FULL DEPTH TEMP. PAVEMENT
- WORK ZONE/SHOULDER REPLACEMENT WITH STABILIZATION

SINGLE LANE CROSSOVER
CURVE 1

P.I.= Sta. 3+55.36
Δ = 9° 18′ 05″ (RT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 155.36′
L = 310.04′
E = 6.31′



SINGLE LANE CROSSOVER
TYPICAL SECTION

FOR CROSSOVER PAVEMENT DETAIL, SEE SHEET 156

APPROVED FOR CONSTRUCTION - 6/8/2010

MAINTENANCE OF TRAFFIC - I.R. 70
CROSSOVER DETAILS

CALCULATED MJC
CHECKED BBD

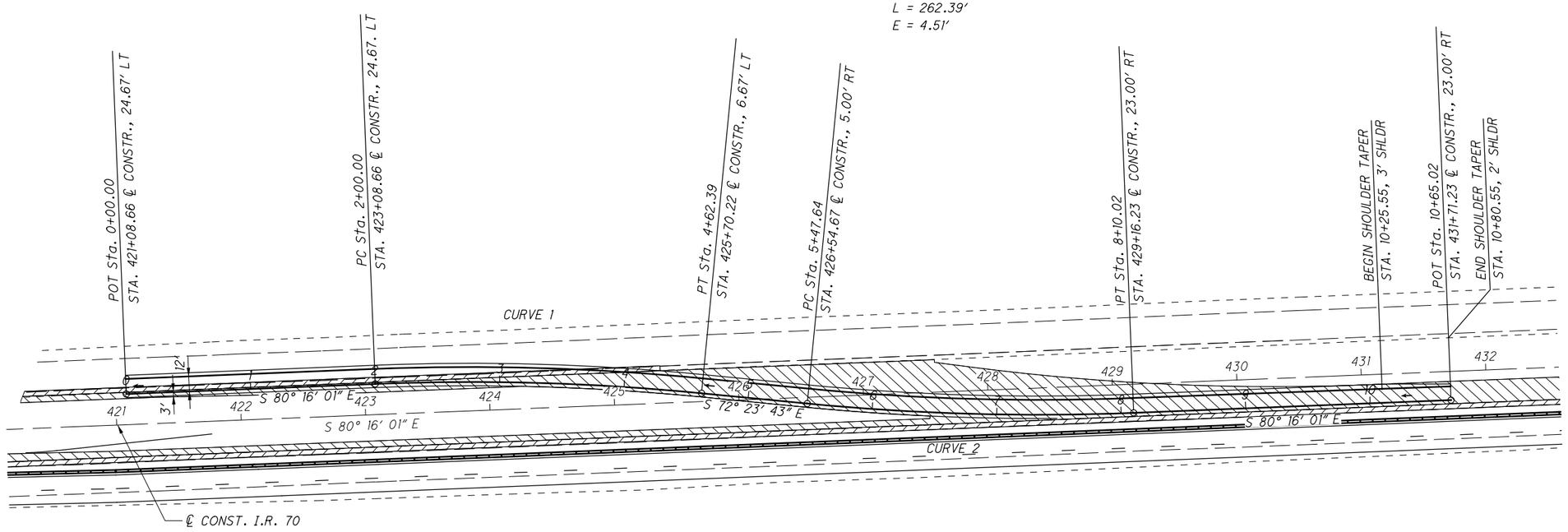
HORIZONTAL SCALE IN FEET
0 25 50 100

BEL-70-7.61

P:\76825\mot\sheets\76825MD201.dgn 6/8/2010 10:02:35 AM csteck

SINGLE LANE CROSSOVER
CURVE 2

P.I.= Sta. 6+79.04
Δ = 7° 52′ 18″ (LT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 131.40′
L = 262.39′
E = 4.51′

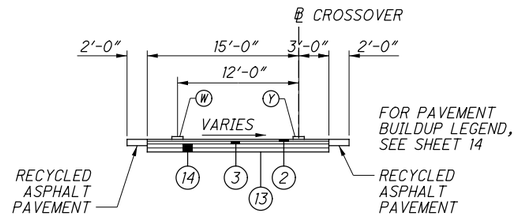


LEGEND:

- TRAFFIC FLOW DIRECTION
- WORK ZONE/SHOULDER RECONSTRUCTION
- WORK ZONE/FULL DEPTH TEMP. PAVEMENT
- WORK ZONE/SHOULDER REPLACEMENT WITH STABILIZATION

SINGLE LANE CROSSOVER
CURVE 1

P.I.= Sta. 3+31.40
Δ = 7° 52′ 18″ (RT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 131.40′
L = 262.39′
E = 4.51′



SINGLE LANE CROSSOVER
TYPICAL SECTION

FOR CROSSOVER PAVEMENT DETAIL, SEE SHEET 158

APPROVED FOR CONSTRUCTION - 6/8/2010

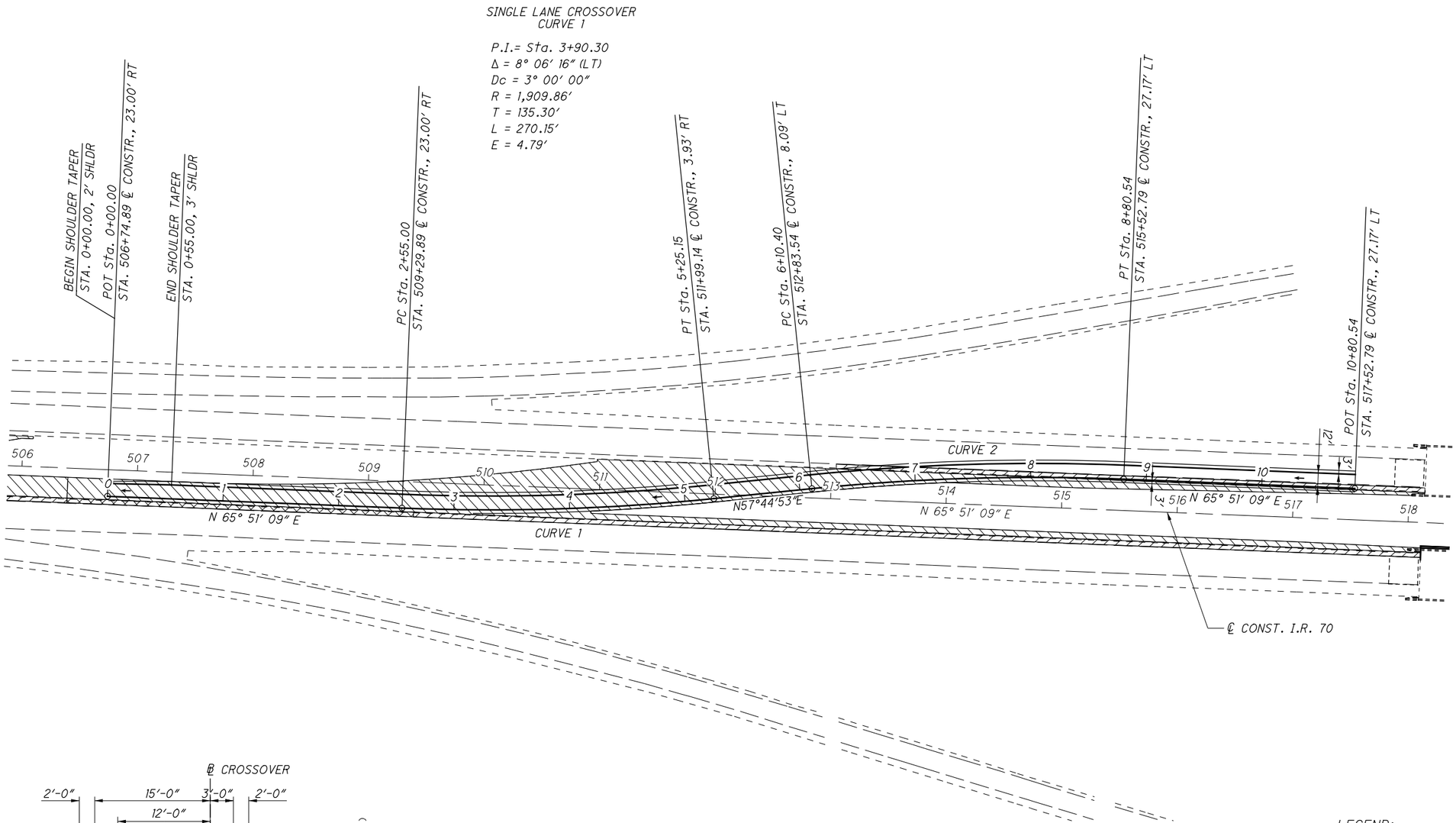
MAINTENANCE OF TRAFFIC - I.R. 70
CROSSOVER DETAILS

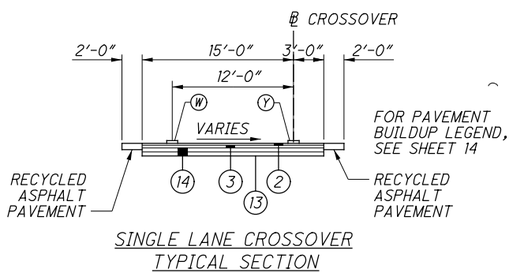
CALCULATED MJC
CHECKED BBD

HORIZONTAL SCALE IN FEET
0 25 50 100

BEL-70-7.61

P:\76825\mot\sheets\76825MD202.dgn 6/8/2010 10:02:36 AM csteck





SINGLE LANE CROSSOVER
TYPICAL SECTION

SINGLE LANE CROSSOVER
CURVE 2

P.I.= Sta. 7+45.70
Δ = 8° 06′ 16″ (RT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 135.30′
L = 270.15′
E = 4.79′

LEGEND:

- TRAFFIC FLOW DIRECTION
- WORK ZONE/SHOULDER RECONSTRUCTION
- WORK ZONE/FULL DEPTH TEMP. PAVEMENT
- WORK ZONE/SHOULDER REPLACEMENT WITH STABILIZATION

FOR CROSSOVER PAVEMENT DETAIL, SEE SHEET 159

APPROVED FOR CONSTRUCTION - 6/8/2010

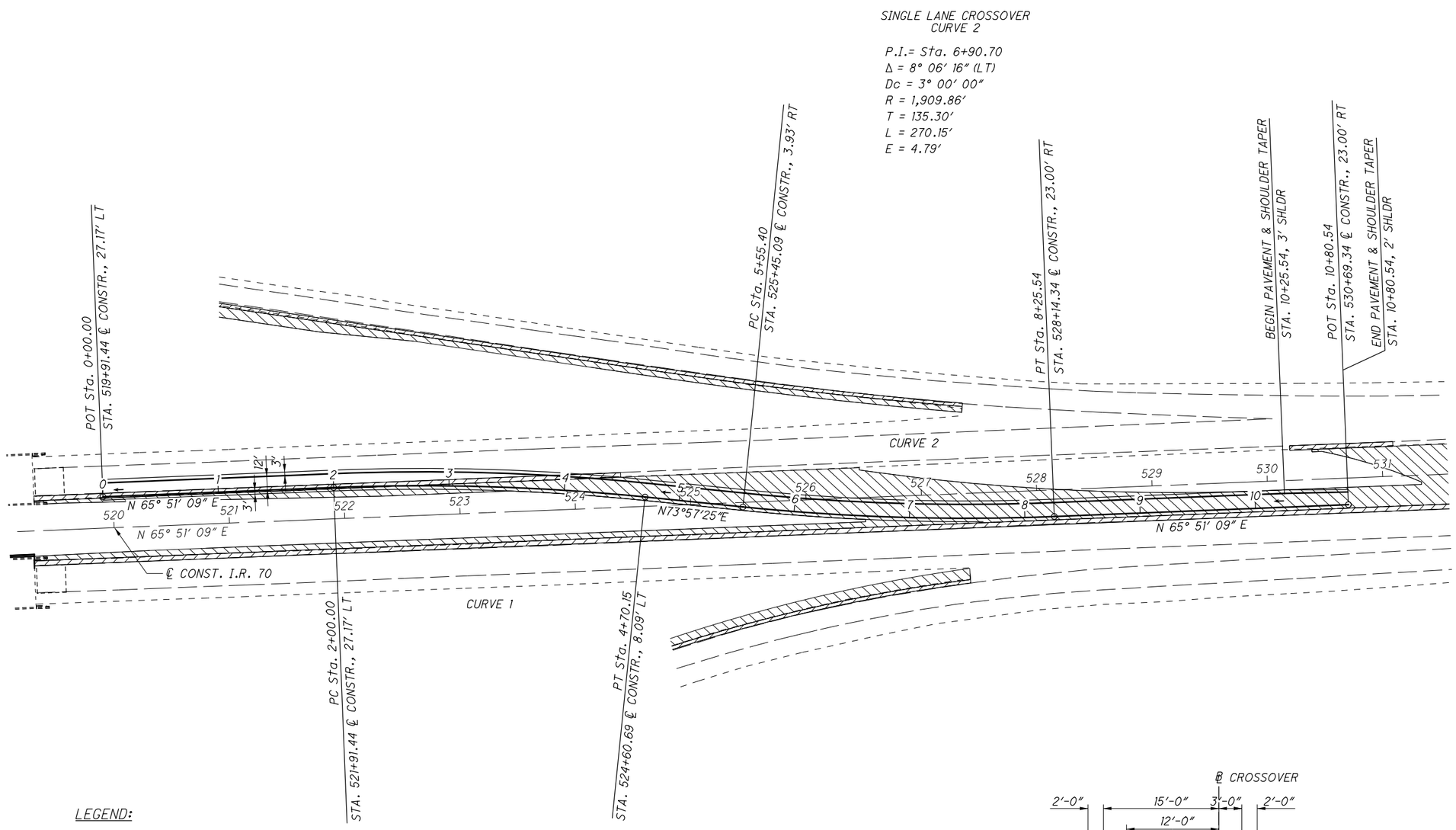
HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MJC
CHECKED BBD

MAINTENANCE OF TRAFFIC - I.R. 70
CROSSOVER DETAILS

BEL-70-7.61

P:\76825\mot\sheets\76825MD203.dgn 6/8/2010 10:02:36 AM csteck

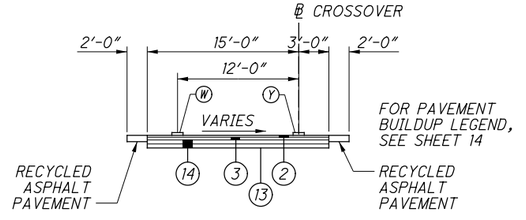


LEGEND:

- TRAFFIC FLOW DIRECTION
- WORK ZONE/SHOULDER RECONSTRUCTION
- WORK ZONE/FULL DEPTH TEMP. PAVEMENT
- WORK ZONE/SHOULDER REPLACEMENT WITH STABILIZATION

SINGLE LANE CROSSOVER
CURVE 1

P.I.= Sta. 3+35.30
Δ = 8° 06′ 16″ (RT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 135.30′
L = 270.15′
E = 4.79′



SINGLE LANE CROSSOVER
TYPICAL SECTION

FOR CROSSOVER PAVEMENT DETAIL, SEE SHEET 160

APPROVED FOR CONSTRUCTION - 6/8/2010

MAINTENANCE OF TRAFFIC - I.R. 70
CROSSOVER DETAILS

CALCULATED MJC
CHECKED BBD

HORIZONTAL SCALE IN FEET
0 25 50 100

BEL-70-7.61

LEGEND:

TRAFFIC FLOW DIRECTION

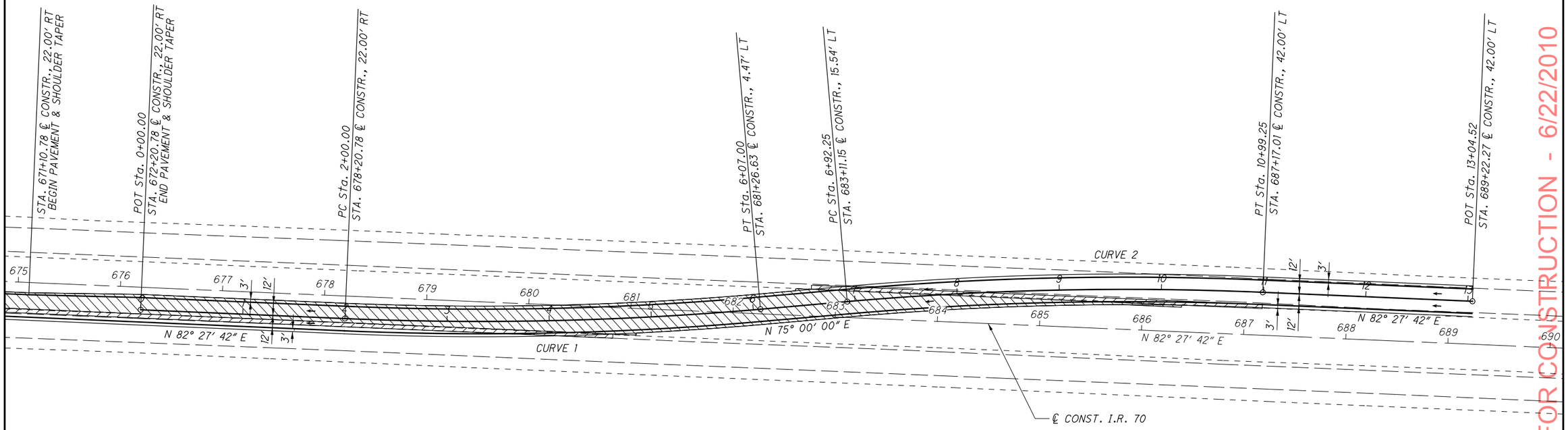
WORK ZONE/SHOULDER RECONSTRUCTION

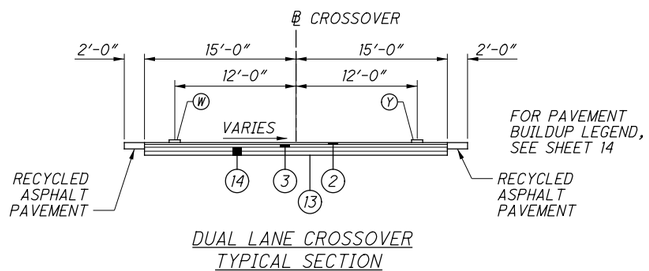
WORK ZONE/FULL DEPTH TEMP. PAVEMENT

WORK ZONE/SHOULDER REPLACEMENT WITH STABILIZATION

DUAL LANE CROSSOVER
CURVE 1

P.I.= Sta. 4+03.79
Δ = 7° 27′ 42″ (LT)
Dc = 1° 50′ 00″
R = 3,125.22′
T = 203.79′
L = 407.00′
E = 6.64′





DUAL LANE CROSSOVER TYPICAL SECTION

FOR CROSSOVER PAVEMENT DETAIL, SEE SHEET 161

DUAL LANE CROSSOVER
CURVE 2

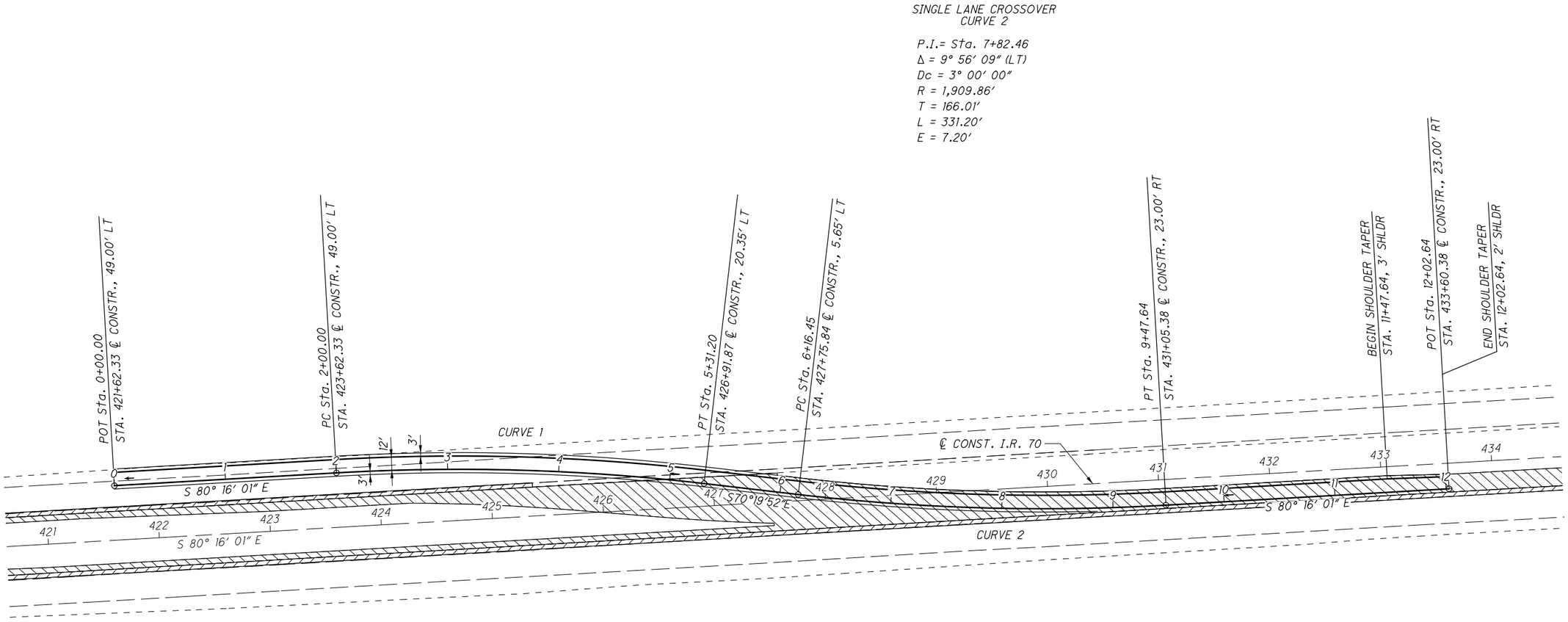
P.I.= Sta. 8+96.04
Δ = 7° 27′ 42″ (RT)
Dc = 1° 50′ 00″
R = 3,125.22′
T = 203.79′
L = 407.00′
E = 6.64′

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MJC
CHECKED BBD

MAINTENANCE OF TRAFFIC - I.R. 70
CROSSOVER DETAILS

BEL-70-7.61



SINGLE LANE CROSSOVER
CURVE 2

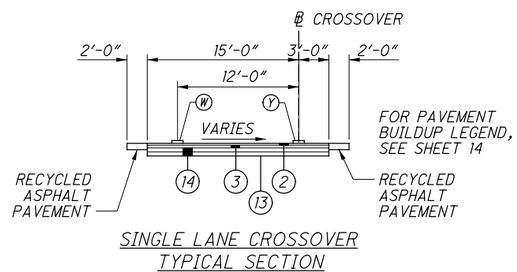
P.I.= Sta. 7+82.46
Δ = 9° 56' 09" (LT)
Dc = 3° 00' 00"
R = 1,909.86'
T = 166.01'
L = 331.20'
E = 7.20'

LEGEND:

- TRAFFIC FLOW DIRECTION
- WORK ZONE/SHOULDER RECONSTRUCTION
- WORK ZONE/FULL DEPTH TEMP. PAVEMENT
- WORK ZONE/SHOULDER REPLACEMENT WITH STABILIZATION

SINGLE LANE CROSSOVER
CURVE 1

P.I.= Sta. 3+66.01
Δ = 9° 56' 09" (RT)
Dc = 3° 00' 00"
R = 1,909.86'
T = 166.01'
L = 331.20'
E = 7.20'



SINGLE LANE CROSSOVER
TYPICAL SECTION

FOR CROSSOVER PAVEMENT DETAIL, SEE SHEET 158

APPROVED FOR CONSTRUCTION - 6/8/2010

MAINTENANCE OF TRAFFIC - I.R. 70
CROSSOVER DETAILS

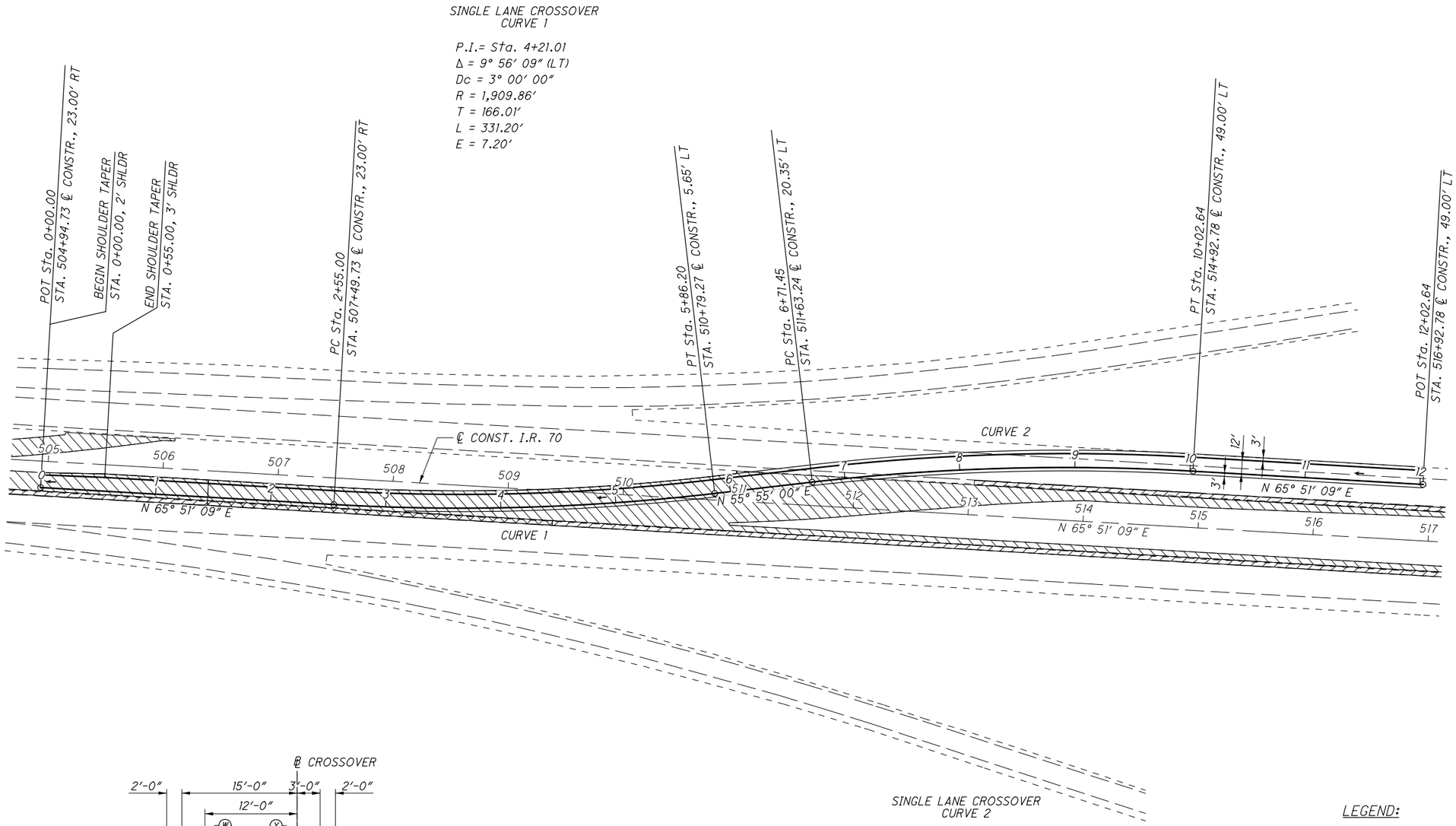
CALCULATED MJC
CHECKED BBD

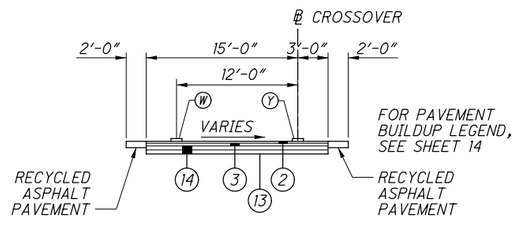
HORIZONTAL SCALE IN FEET
0 25 50 100

BEL-70-7.61

145
210

P:\76825\mot\sheets\76825MD211.dgn 6/8/2010 10:02:38 AM csteck





SINGLE LANE CROSSOVER TYPICAL SECTION

SINGLE LANE CROSSOVER
CURVE 2

P.I.= Sta. 8+37.46
Δ = 9° 56′ 09″ (RT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 166.01′
L = 331.20′
E = 7.20′

LEGEND:

- TRAFFIC FLOW DIRECTION
- WORK ZONE/SHOULDER RECONSTRUCTION
- WORK ZONE/FULL DEPTH TEMP. PAVEMENT
- WORK ZONE/SHOULDER REPLACEMENT WITH STABILIZATION

FOR CROSSOVER PAVEMENT DETAIL, SEE SHEET 159

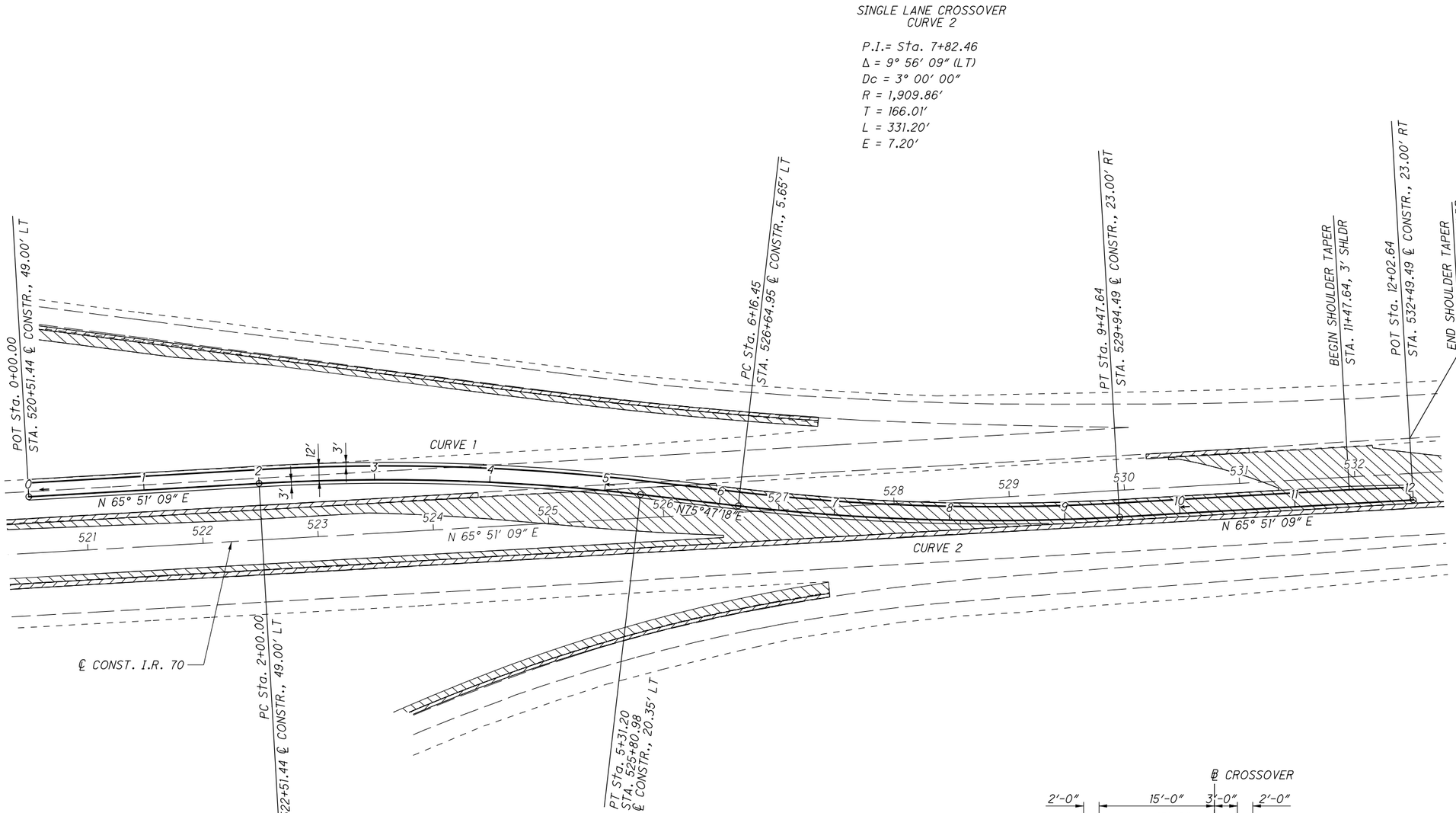
APPROVED FOR CONSTRUCTION - 6/8/2010

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MJC
CHECKED BBD

MAINTENANCE OF TRAFFIC - I.R. 70
CROSSOVER DETAILS

BEL-70-7.61



SINGLE LANE CROSSOVER
CURVE 2

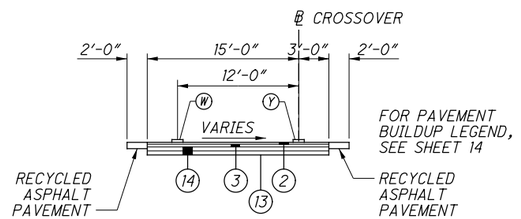
P.I.= Sta. 7+82.46
Δ = 9° 56' 09" (LT)
Dc = 3° 00' 00"
R = 1,909.86'
T = 166.01'
L = 331.20'
E = 7.20'

SINGLE LANE CROSSOVER
CURVE 1

P.I.= Sta. 3+66.01
Δ = 9° 56' 09" (RT)
Dc = 3° 00' 00"
R = 1,909.86'
T = 166.01'
L = 331.20'
E = 7.20'

LEGEND:

- TRAFFIC FLOW DIRECTION
- WORK ZONE/SHOULDER RECONSTRUCTION
- WORK ZONE/FULL DEPTH TEMP. PAVEMENT
- WORK ZONE/SHOULDER REPLACEMENT WITH STABILIZATION



SINGLE LANE CROSSOVER
TYPICAL SECTION

FOR CROSSOVER PAVEMENT DETAIL, SEE SHEET 160

APPROVED FOR CONSTRUCTION - 6/8/2010

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MJC
CHECKED BBD

MAINTENANCE OF TRAFFIC - I.R. 70
CROSSOVER DETAILS

BEL-70-7.61

147
210

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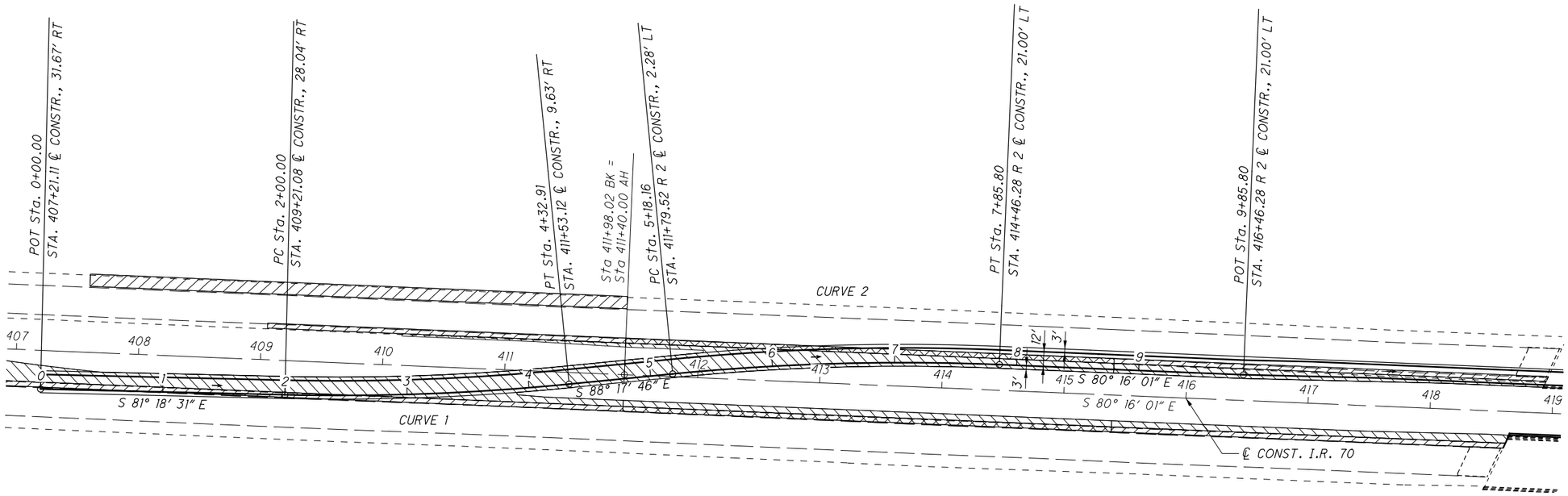
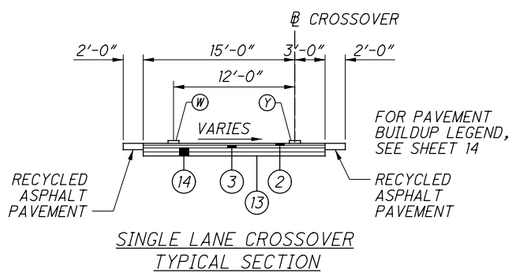
SINGLE LANE CROSSOVER
CURVE 1

P.I.= Sta. 3+16.60
Δ = 6° 59′ 15″ (LT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 116.60′
L = 232.91′
E = 3.56′





SINGLE LANE CROSSOVER
TYPICAL SECTION

FOR CROSSOVER PAVEMENT DETAIL, SEE SHEET 157

SINGLE LANE CROSSOVER
CURVE 2

P.I.= Sta. 6+52.20
Δ = 8° 01′ 45″ (RT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 134.04′
L = 267.63′
E = 4.70′

LEGEND:

- TRAFFIC FLOW DIRECTION
- WORK ZONE/SHOULDER RECONSTRUCTION
- WORK ZONE/FULL DEPTH TEMP. PAVEMENT
- WORK ZONE/SHOULDER REPLACEMENT WITH STABILIZATION

APPROVED FOR CONSTRUCTION - 6/8/2010

MAINTENANCE OF TRAFFIC - I.R. 70
CROSSOVER DETAILS

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MJC
CHECKED BBD

BEL-70-7.61

148
210

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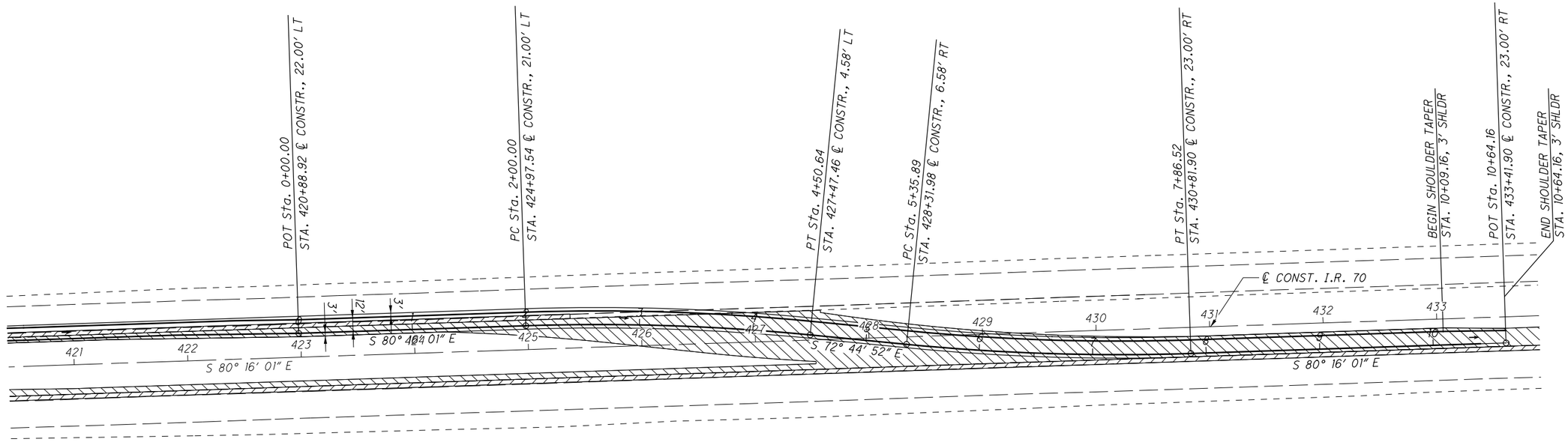
SINGLE LANE CROSSOVER
CURVE 2

P.I.= Sta. 6+61.38
Δ = 7° 31′ 09″ (LT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 125.50′
L = 250.64′
E = 4.12′

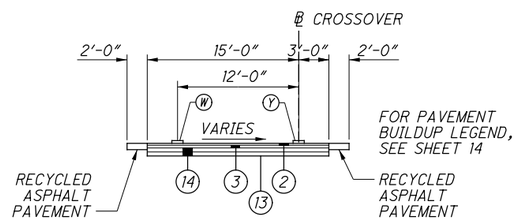


LEGEND:

- TRAFFIC FLOW DIRECTION
- WORK ZONE/SHOULDER RECONSTRUCTION
- WORK ZONE/FULL DEPTH TEMP. PAVEMENT
- WORK ZONE/SHOULDER REPLACEMENT WITH STABILIZATION

SINGLE LANE CROSSOVER
CURVE 1

P.I.= Sta. 3+25.50
Δ = 7° 31′ 09″ (RT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 125.50′
L = 250.64′
E = 4.12′



SINGLE LANE CROSSOVER
TYPICAL SECTION

FOR CROSSOVER PAVEMENT DETAIL, SEE SHEET 158

APPROVED FOR CONSTRUCTION - 6/8/2010

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MJC
CHECKED BBD

MAINTENANCE OF TRAFFIC - I.R. 70
CROSSOVER DETAILS

BEL-70-7.61

149
210

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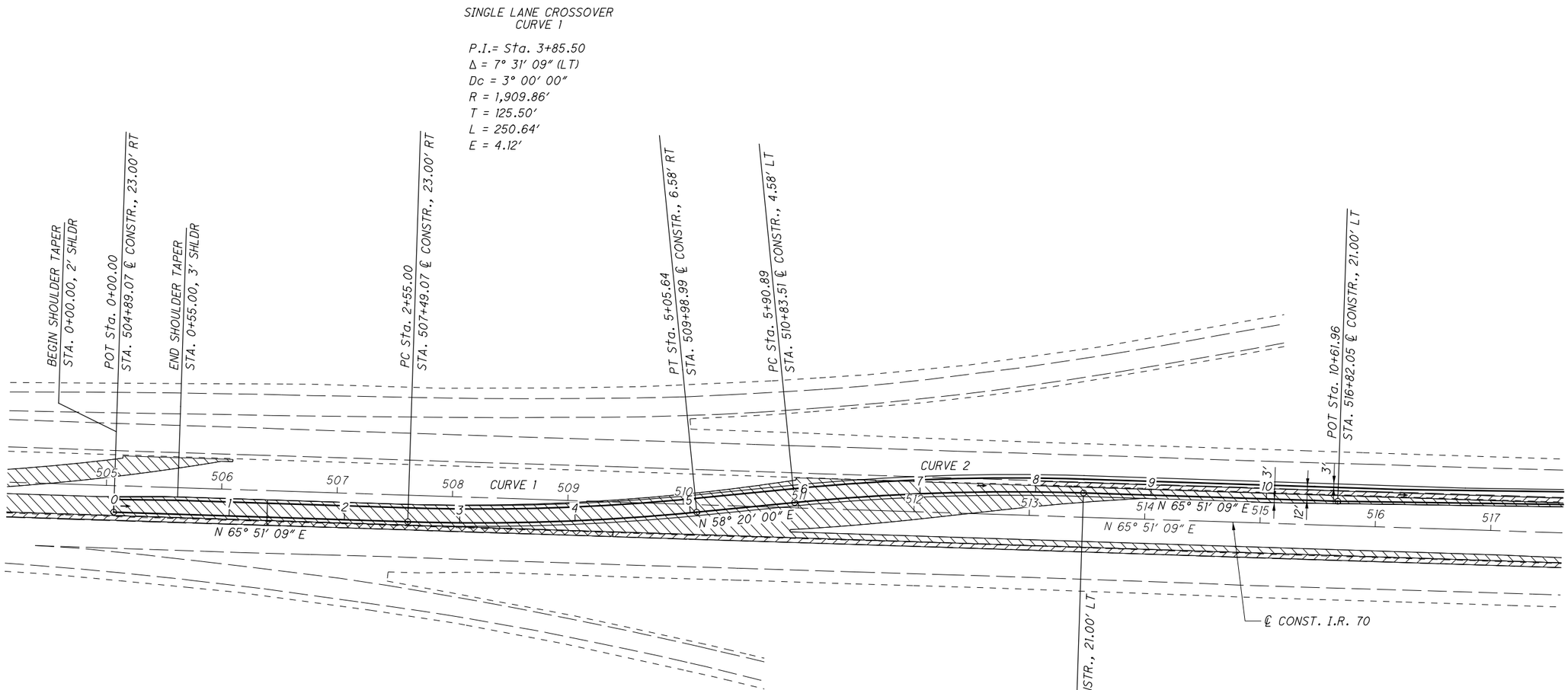
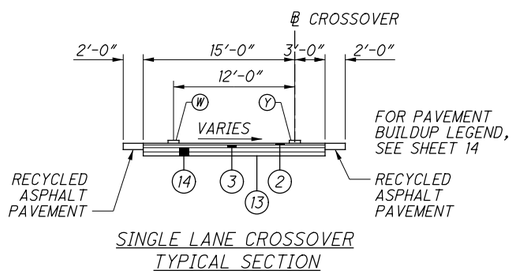
SINGLE LANE CROSSOVER
CURVE 1

P.I.= Sta. 3+85.50
Δ = 7° 31′ 09″ (LT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 125.50′
L = 250.64′
E = 4.12′





SINGLE LANE CROSSOVER
TYPICAL SECTION

SINGLE LANE CROSSOVER
CURVE 2

P.I.= Sta. 7+16.38
Δ = 7° 31′ 09″ (RT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 125.50′
L = 250.64′
E = 4.12′

LEGEND:

- TRAFFIC FLOW DIRECTION
- WORK ZONE/SHOULDER RECONSTRUCTION
- WORK ZONE/FULL DEPTH TEMP. PAVEMENT
- WORK ZONE/SHOULDER REPLACEMENT WITH STABILIZATION

FOR CROSSOVER PAVEMENT DETAIL, SEE SHEET 159

APPROVED FOR CONSTRUCTION - 6/8/2010

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MJC
CHECKED BBD

MAINTENANCE OF TRAFFIC - I.R. 70
CROSSOVER DETAILS

BEL-70-7.61

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SINGLE LANE CROSSOVER
CURVE 1

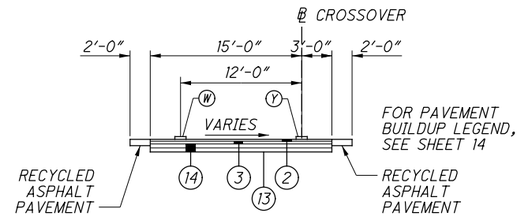
P.I.= Sta. 3+45.93
Δ = 7° 31′ 09″ (RT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 125.50′
L = 250.64′
E = 4.12′

SINGLE LANE CROSSOVER
CURVE 2

P.I.= Sta. 6+81.82
Δ = 7° 31′ 09″ (LT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 125.50′
L = 250.64′
E = 4.12′

LEGEND:

- TRAFFIC FLOW DIRECTION
- WORK ZONE/SHOULDER RECONSTRUCTION
- WORK ZONE/FULL DEPTH TEMP. PAVEMENT
- WORK ZONE/SHOULDER REPLACEMENT WITH STABILIZATION



SINGLE LANE CROSSOVER
TYPICAL SECTION

FOR CROSSOVER PAVEMENT DETAIL, SEE SHEET 160

APPROVED FOR CONSTRUCTION - 6/8/2010

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MJC
CHECKED BBD

MAINTENANCE OF TRAFFIC - I.R. 70
CROSSOVER DETAILS

BEL-70-7.61

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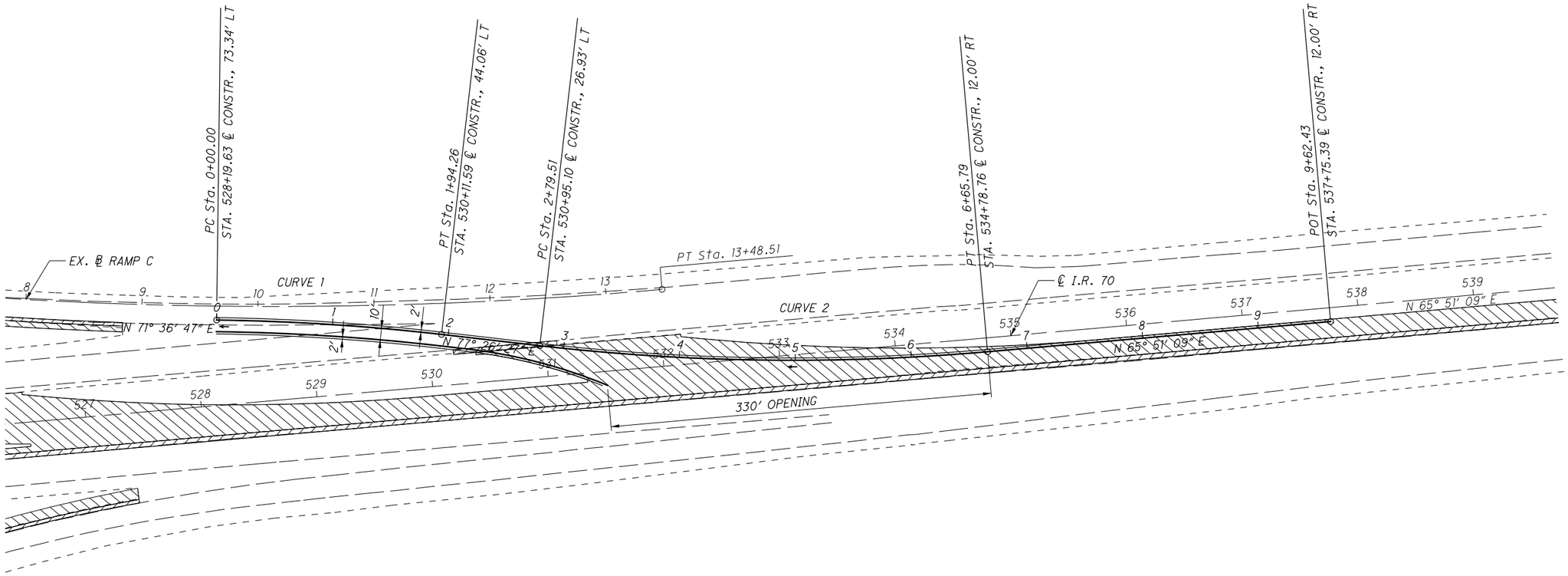
LEGEND:

- TRAFFIC FLOW DIRECTION
- WORK ZONE/SHOULDER RECONSTRUCTION
- WORK ZONE/FULL DEPTH TEMP. PAVEMENT
- WORK ZONE/SHOULDER REPLACEMENT WITH STABILIZATION

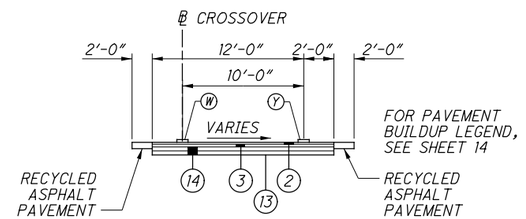
RAMP C
SINGLE LANE CROSSOVER
CURVE 2

P.I.= Sta. 4+73.32
Δ = 11° 35′ 18″ (LT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 193.80′
L = 386.28′
E = 9.81′



RAMP C
SINGLE LANE CROSSOVER
CURVE 1

P.I.= Sta. 0+97.22
Δ = 5° 49′ 40″ (RT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 97.22′
L = 194.26′
E = 2.47′



SINGLE LANE CROSSOVER
TYPICAL SECTION

FOR CROSSOVER PAVEMENT DETAIL, SEE SHEET 162

APPROVED FOR CONSTRUCTION - 6/22/2010

MAINTENANCE OF TRAFFIC - RAMP C
CROSSOVER DETAILS

CALCULATED MJC
CHECKED BBD

HORIZONTAL SCALE IN FEET
0 25 50 100

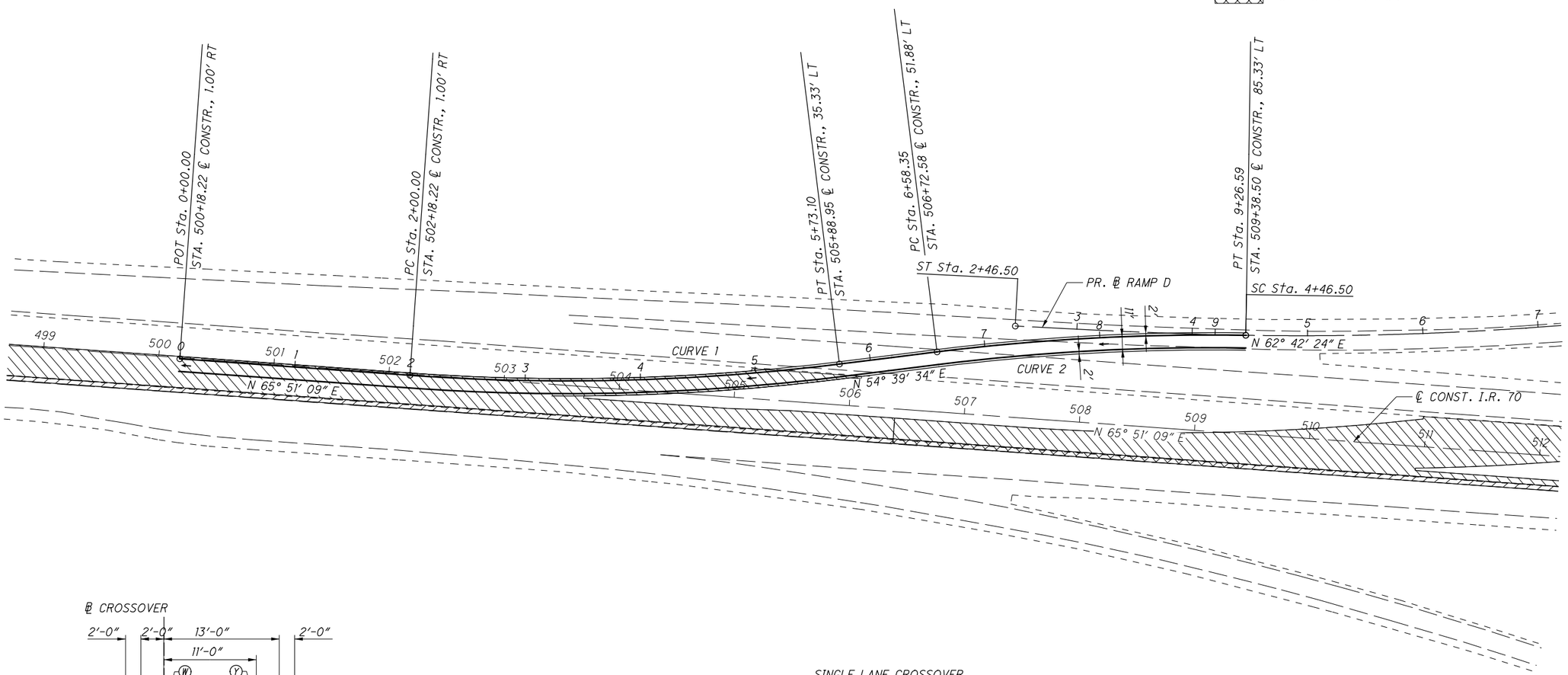
BEL-70-7.61

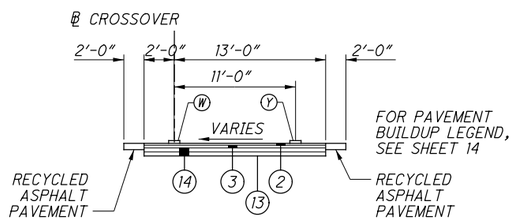
SINGLE LANE CROSSOVER
CURVE 1

P.I.= Sta. 3+84.15
Δ = 11° 11′ 35″ (LT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 187.15′
L = 373.10′
E = 9.15′

LEGEND:

- TRAFFIC FLOW DIRECTION
- WORK ZONE/SHOULDER RECONSTRUCTION
- WORK ZONE/FULL DEPTH TEMP. PAVEMENT
- WORK ZONE/SHOULDER REPLACEMENT WITH STABILIZATION





SINGLE LANE CROSSOVER
TYPICAL SECTION

SINGLE LANE CROSSOVER
CURVE 2

P.I.= Sta. 7+92.69
Δ = 8° 02′ 50″ (RT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 134.34′
L = 268.24′
E = 4.72′

FOR CROSSOVER PAVEMENT DETAIL, SEE SHEET 163

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MJC
CHECKED BBD

APPROVED FOR CONSTRUCTION - 6/8/2010

MAINTENANCE OF TRAFFIC - RAMP D
CROSSOVER DETAILS

BEL-70-7.61

153
210

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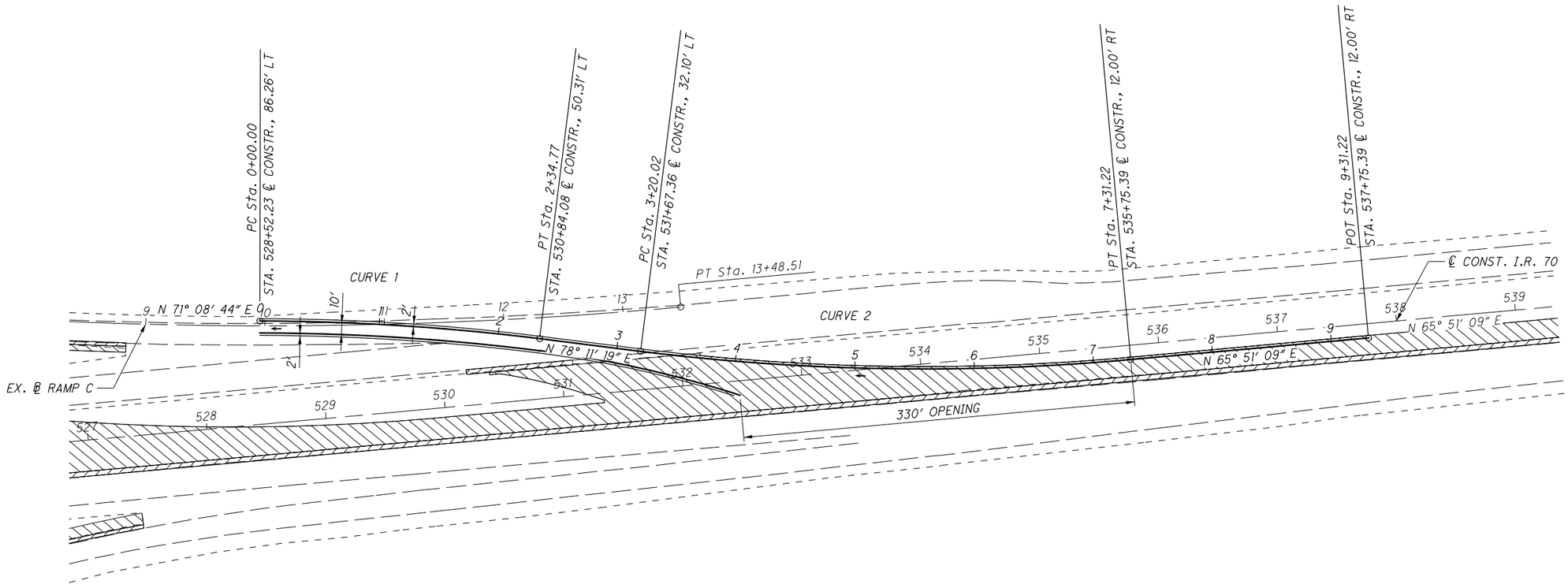
LEGEND:

- TRAFFIC FLOW DIRECTION
- WORK ZONE/SHOULDER RECONSTRUCTION
- WORK ZONE/FULL DEPTH TEMP. PAVEMENT
- WORK ZONE/SHOULDER REPLACEMENT WITH STABILIZATION

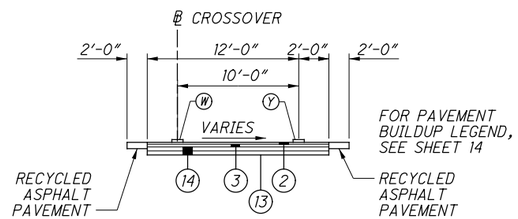
RAMP C
SINGLE LANE CROSSOVER
CURVE 2

P.I.= Sta. 5+26.42
Δ = 12° 20′ 10″ (LT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 206.40′
L = 411.20′
E = 11.12′



RAMP C
SINGLE LANE CROSSOVER
CURVE 1

P.I.= Sta. 1+17.53
Δ = 7° 02′ 35″ (RT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 117.53′
L = 234.77′
E = 3.61′



SINGLE LANE CROSSOVER
TYPICAL SECTION

FOR CROSSOVER PAVEMENT DETAIL, SEE SHEET 162

APPROVED FOR CONSTRUCTION - 6/22/2010

MAINTENANCE OF TRAFFIC - RAMP C
CROSSOVER DETAILS

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MJC
CHECKED BBD

BEL-70-7.61

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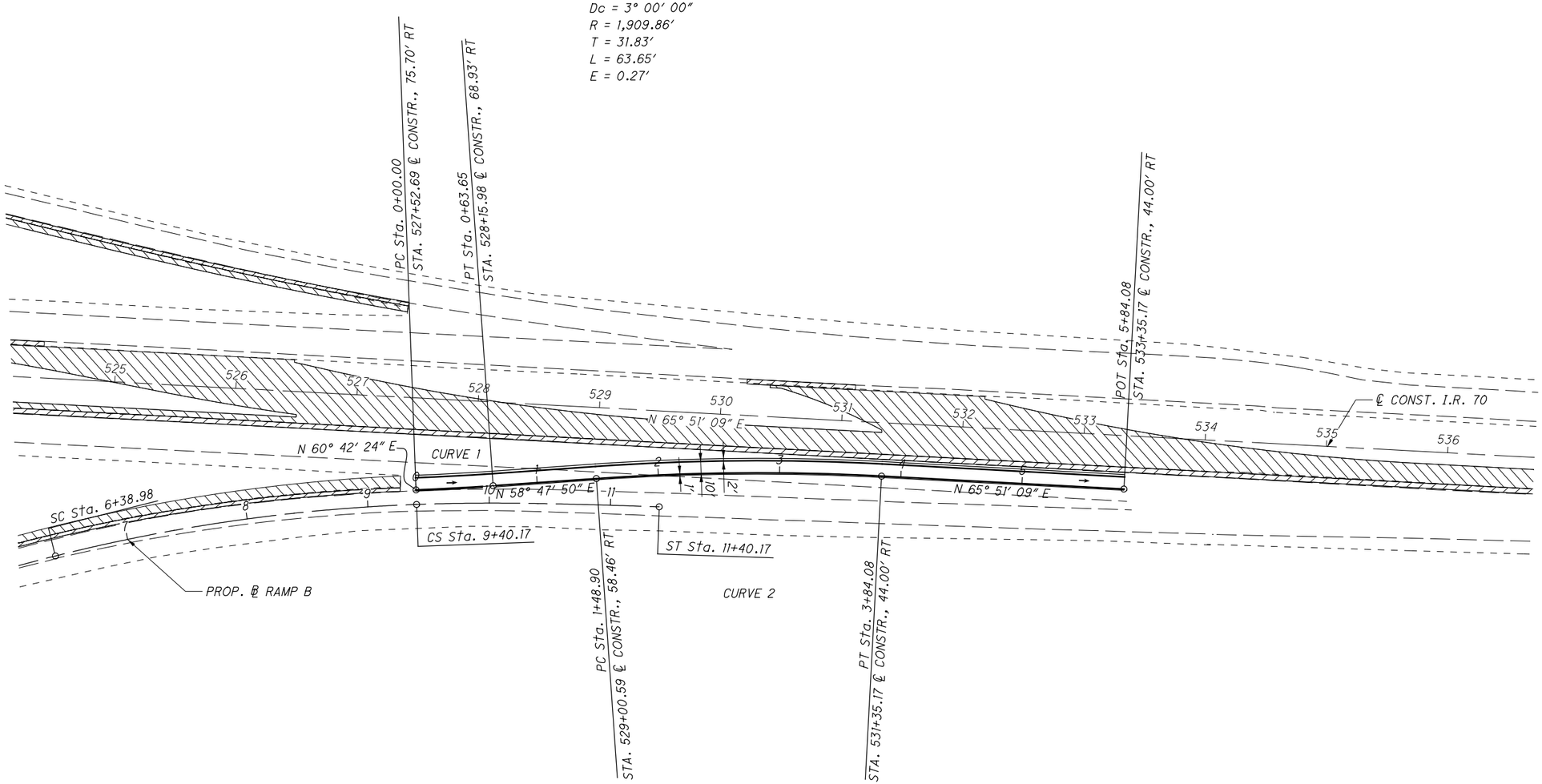
RAMP B
SINGLE LANE CROSSOVER
CURVE 1

P.I.= Sta. 0+31.83
Δ = 1° 54′ 36″ (LT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 31.83′
L = 63.65′
E = 0.27′

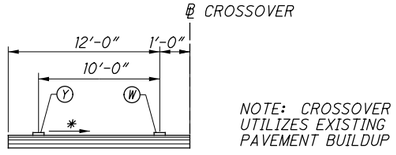


RAMP B
SINGLE LANE CROSSOVER
CURVE 2

P.I.= Sta. 2+66.64
Δ = 7° 03′ 19″ (RT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 117.74′
L = 235.18′
E = 3.63′

LEGEND:

- TRAFFIC FLOW DIRECTION
- WORK ZONE/SHOULDER RECONSTRUCTION
- WORK ZONE/FULL DEPTH TEMP. PAVEMENT
- WORK ZONE/SHOULDER REPLACEMENT WITH STABILIZATION



NOTE: CROSSOVER UTILIZES EXISTING PAVEMENT BUILDUP

SINGLE LANE CROSSOVER
TYPICAL SECTION

* VARIES TO MATCH EXISTING PAVEMENT ELEVATIONS

APPROVED FOR CONSTRUCTION - 6/8/2010

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MJC
CHECKED BBD

MAINTENANCE OF TRAFFIC - RAMP B
CROSSOVER DETAILS

BEL-70-7.61

155
210

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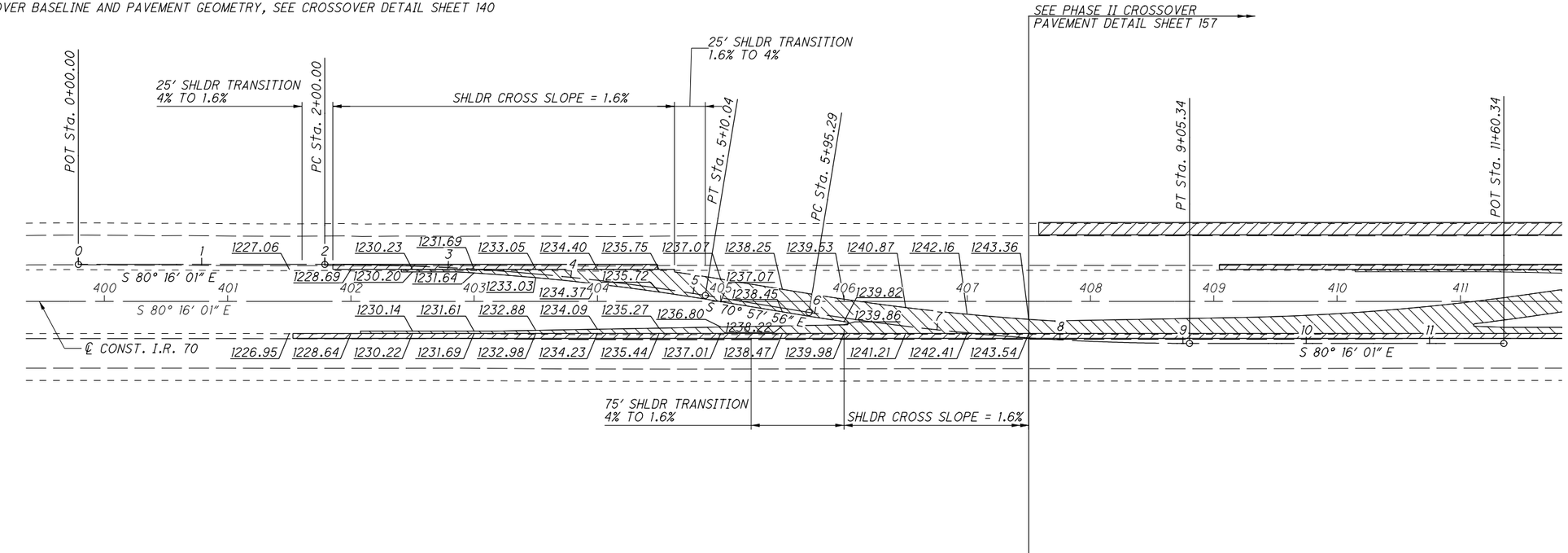
NOTE:

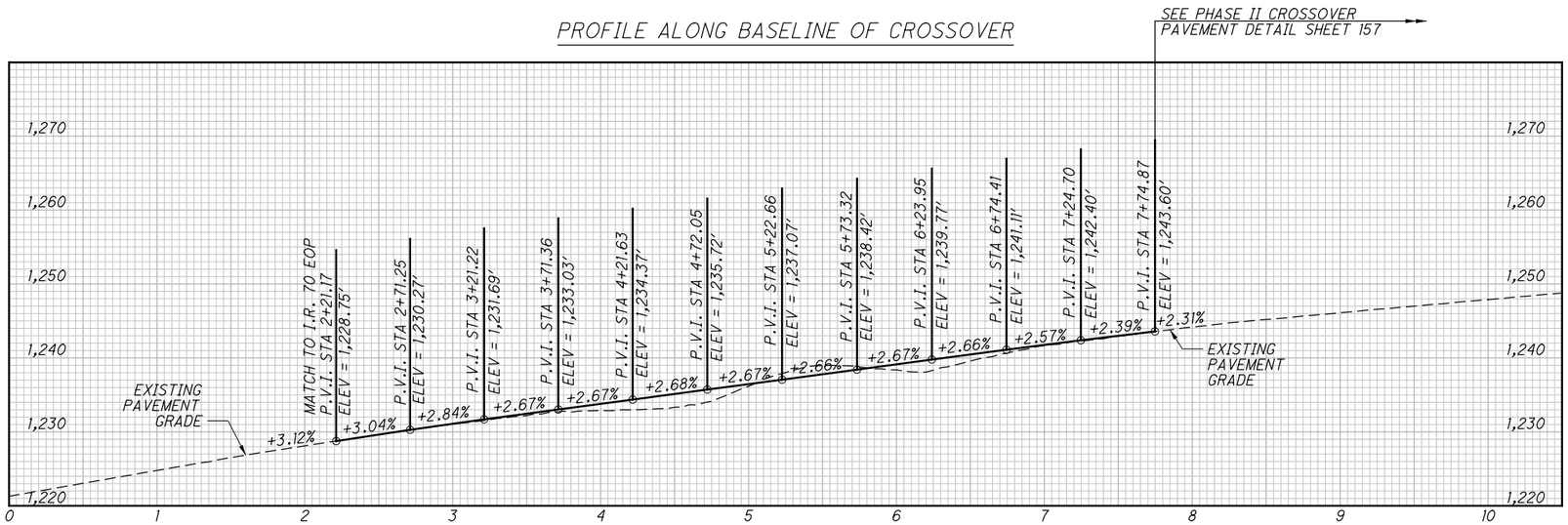
ELEVATIONS ARE SPACED AT 50' INTERVALS BASED ON THE ℄ OF CONSTRUCTION OF I.R. 70 UNLESS OTHERWISE NOTED.

UNLESS OTHERWISE NOTED, EXISTING SHOULDERS ARE TO BE RECONSTRUCTED AT 4% CROSS SLOPE.

FOR CROSSOVER BASELINE AND PAVEMENT GEOMETRY, SEE CROSSOVER DETAIL SHEET 140



PROFILE ALONG BASELINE OF CROSSOVER



APPROVED FOR CONSTRUCTION - 6/22/2010

MAINTENANCE OF TRAFFIC - I.R. 70

PHASE II - CROSSOVER PAVEMENT DETAILS

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MJC
CHECKED BBD

BEL-70-7.61

156
210

P:\76825\mot\sheets\76825MD251.dgn 6/22/2010 9:11:11 AM csteck

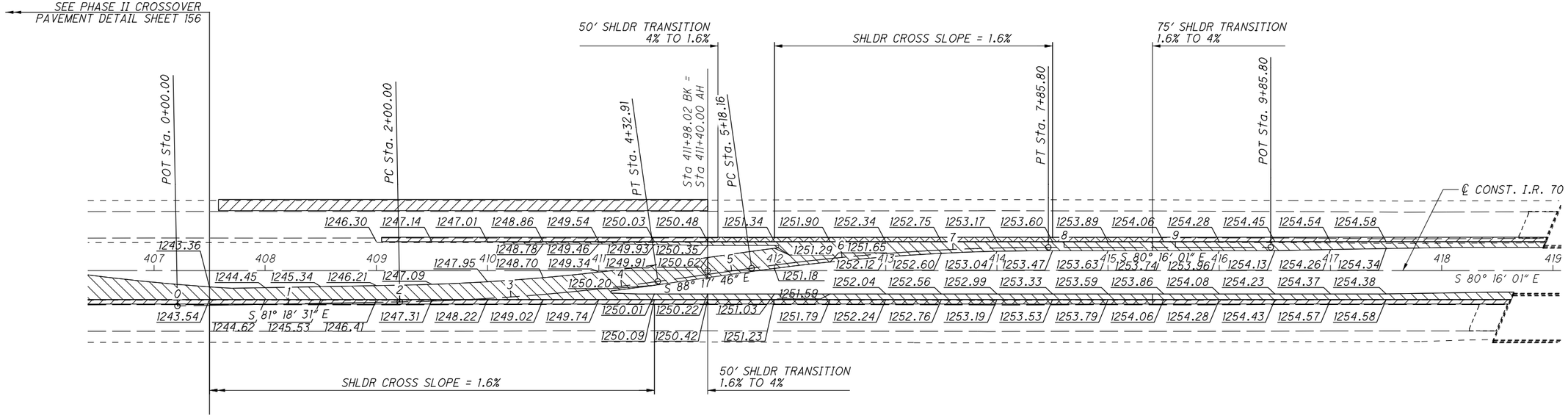
NOTE:

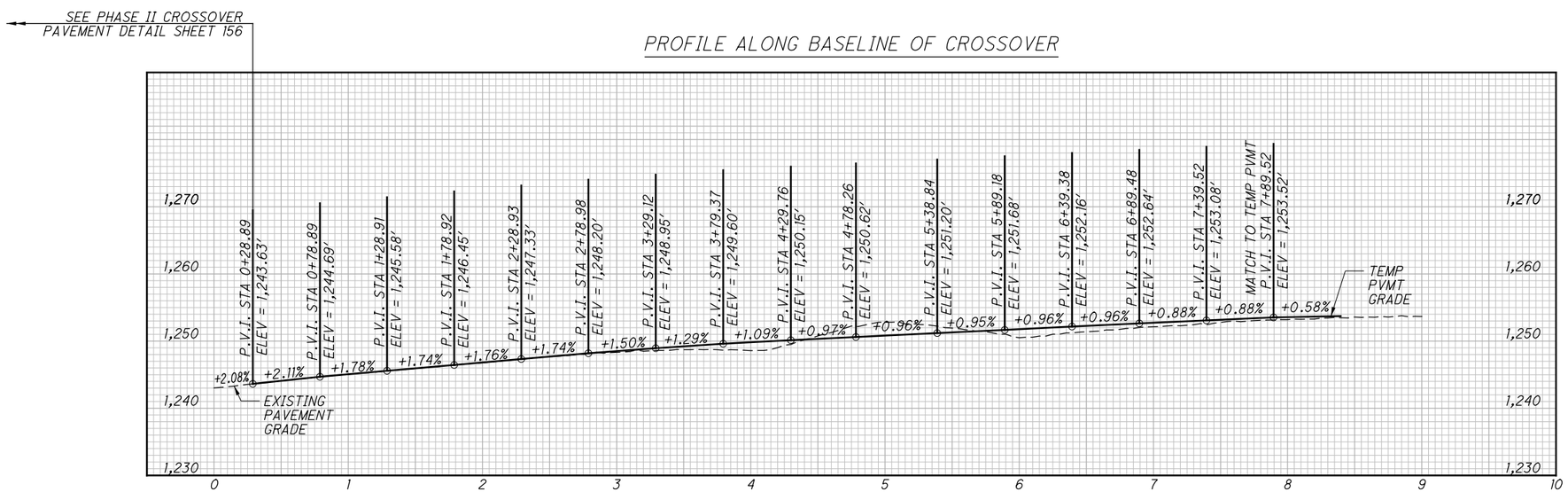
ELEVATIONS ARE SPACED AT 50' INTERVALS BASED ON THE ℄ OF CONSTRUCTION OF I.R. 70 UNLESS OTHERWISE NOTED.

UNLESS OTHERWISE NOTED, EXISTING SHOULDERS ARE TO BE RECONSTRUCTED AT 4% CROSS SLOPE.

ELEVATIONS ARE SHOWN TO MEET THE EXISTING WESTBOUND EDGE OF SHOULDER ELEVATIONS IN ORDER TO INCLUDE CONSTRUCTION OF THE CROSSOVER WITH TEMPORARY PAVEMENT DURING PHASE II. THE CROSSOVER IS TO BE UTILIZED BY TRAFFIC DURING PHASE III AND AFTER PLACEMENT OF PERMANENT PAVEMENT IN PHASE III. FOLLOWING THE PLACEMENT OF PERMANENT WESTBOUND PAVEMENT IN PHASE III, A WEDGE COURSE WILL BE APPLIED SUCH THAT FINAL CROSSOVER ELEVATIONS WILL MEET THE PROPOSED PAVEMENT. SEE PHASE III CROSSOVER PAVEMENT DETAILS FOR FINAL ELEVATIONS.

FOR CROSSOVER BASELINE AND PAVEMENT GEOMETRY, SEE CROSSOVER DETAIL SHEET 148





APPROVED FOR CONSTRUCTION - 6/22/2010

MAINTENANCE OF TRAFFIC - I.R. 70
PHASE II - CROSSOVER PAVEMENT DETAILS

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MJC
CHECKED BBD

BEL-70-7.61

157
210

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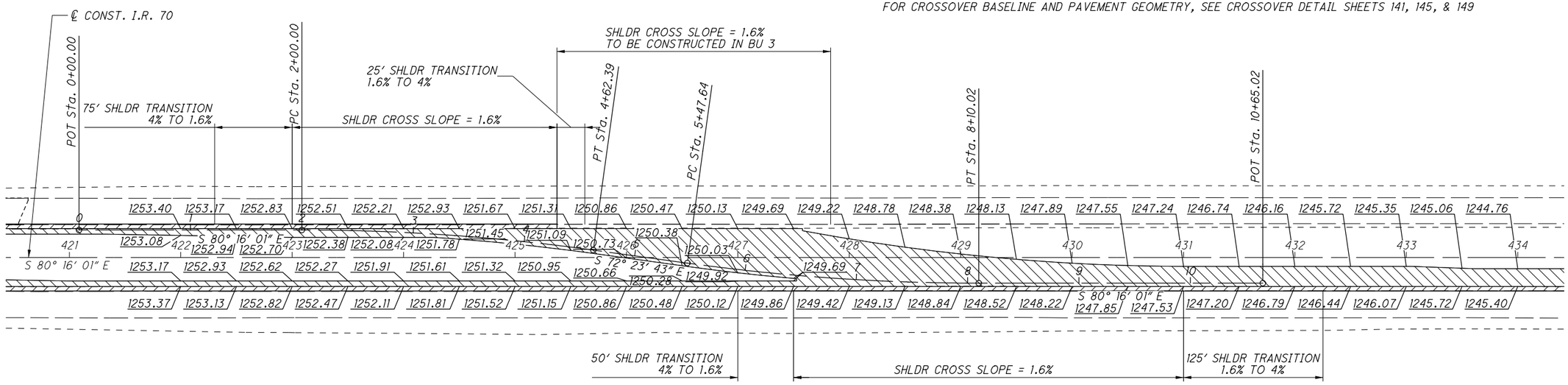
NOTE:

ELEVATIONS ARE SPACED AT 50' INTERVALS BASED ON THE ℄ OF CONSTRUCTION OF I.R. 70 UNLESS OTHERWISE NOTED.

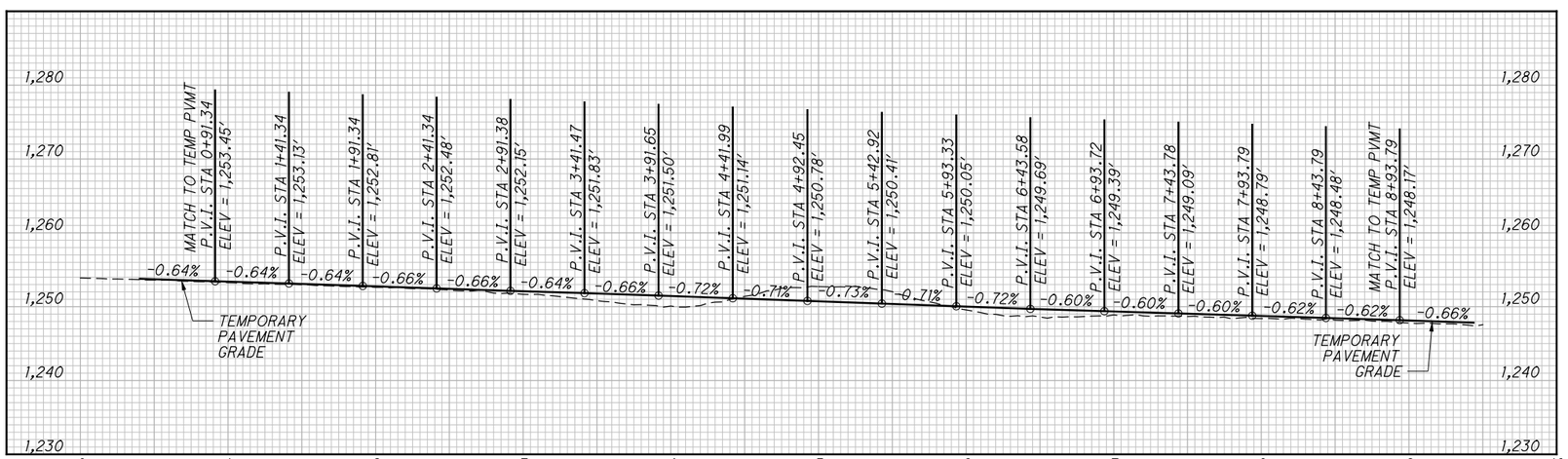
UNLESS OTHERWISE NOTED, EXISTING SHOULDERS ARE TO BE RECONSTRUCTED AT 4% CROSS SLOPE.

ELEVATIONS ARE SHOWN TO MEET THE EXISTING WESTBOUND EDGE OF SHOULDER ELEVATIONS IN ORDER TO INCLUDE CONSTRUCTION OF THE CROSSOVER WITH TEMPORARY PAVEMENT DURING PHASE II. THE CROSSOVER IS TO BE UTILIZED BY TRAFFIC DURING PHASE III AND AFTER PLACEMENT OF PERMANENT PAVEMENT IN PHASE III. FOLLOWING THE PLACEMENT OF PERMANENT WESTBOUND PAVEMENT IN PHASE III, A WEDGE COURSE WILL BE APPLIED SUCH THAT FINAL CROSSOVER ELEVATIONS WILL MEET THE PROPOSED PAVEMENT. SEE PHASE III CROSSOVER PAVEMENT DETAILS FOR FINAL ELEVATIONS.

FOR CROSSOVER BASELINE AND PAVEMENT GEOMETRY, SEE CROSSOVER DETAIL SHEETS 141, 145, & 149



PROFILE ALONG BASELINE OF CROSSOVER



APPROVED FOR CONSTRUCTION - 6/22/2010

MAINTENANCE OF TRAFFIC - I.R. 70
PHASE II - CROSSOVER PAVEMENT DETAILS

CALCULATED MJC | CHECKED BBD

HORIZONTAL SCALE IN FEET
0 25 50 100

BEL-70-7.61

158
210

P:\76825\mot\sheets\76825MD253.dgn 6/22/2010 9:11:13 AM csteck

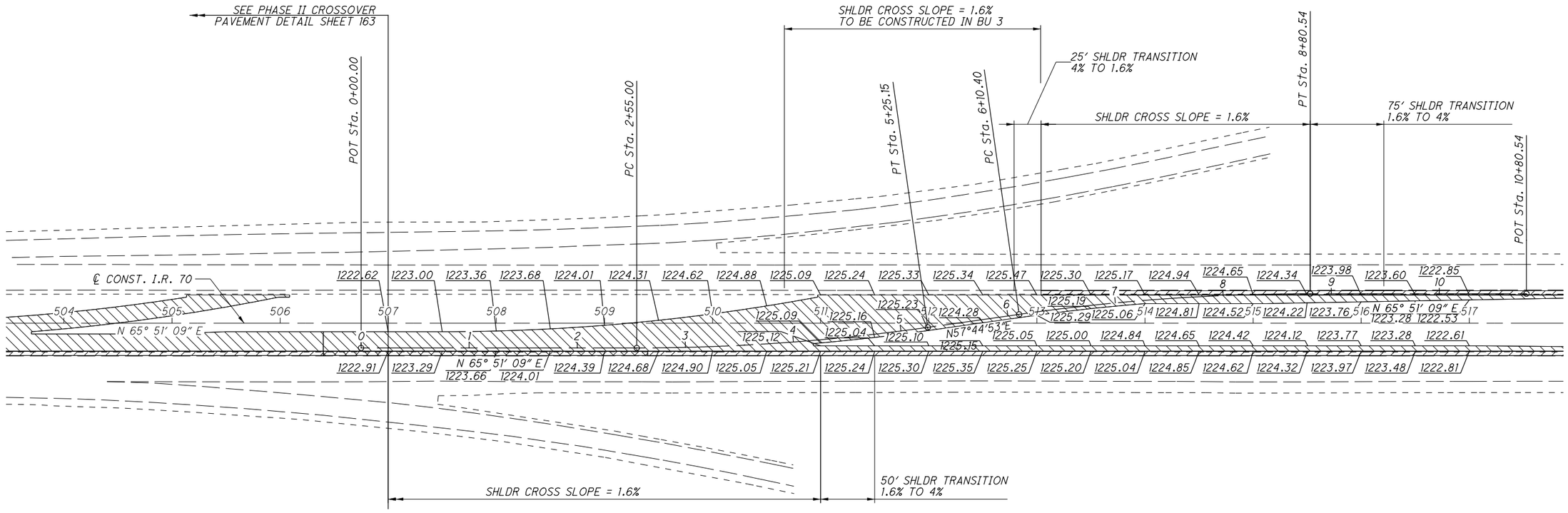
NOTE:

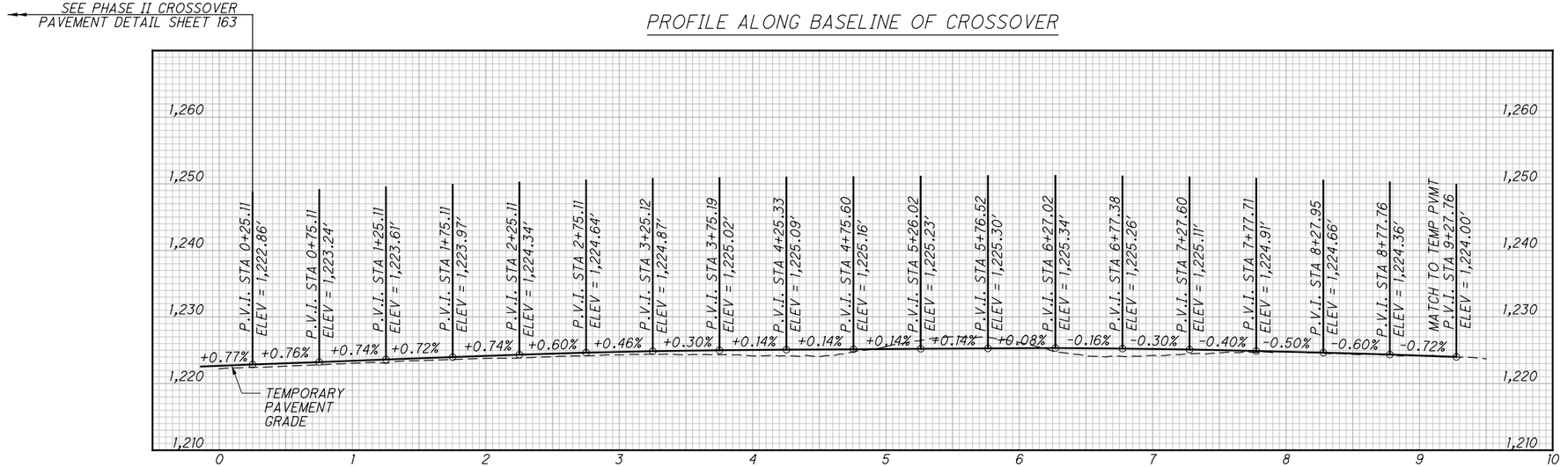
ELEVATIONS ARE SPACED AT 50' INTERVALS BASED ON THE ℄ OF CONSTRUCTION OF I.R. 70 UNLESS OTHERWISE NOTED.

UNLESS OTHERWISE NOTED, EXISTING SHOULDERS ARE TO BE RECONSTRUCTED AT 4% CROSS SLOPE.

ELEVATIONS ARE SHOWN TO MEET THE EXISTING WESTBOUND EDGE OF SHOULDER ELEVATIONS IN ORDER TO INCLUDE CONSTRUCTION OF THE CROSSOVER WITH TEMPORARY PAVEMENT DURING PHASE II. THE CROSSOVER IS TO BE UTILIZED BY TRAFFIC DURING PHASE III AND AFTER PLACEMENT OF PERMANENT PAVEMENT IN PHASE III. FOLLOWING THE PLACEMENT OF PERMANENT WESTBOUND PAVEMENT IN PHASE III, A WEDGE COURSE WILL BE APPLIED SUCH THAT FINAL CROSSOVER ELEVATIONS WILL MEET THE PROPOSED PAVEMENT. SEE PHASE III CROSSOVER PAVEMENT DETAILS FOR FINAL ELEVATIONS.

FOR CROSSOVER BASELINE AND PAVEMENT GEOMETRY, SEE CROSSOVER DETAIL SHEETS 142, 146, & 150





APPROVED FOR CONSTRUCTION - 6/22/2010

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED MJC CHECKED BBD

MAINTENANCE OF TRAFFIC - I.R. 70
PHASE II - CROSSOVER PAVEMENT DETAILS

BEL-70-7.61

159
210

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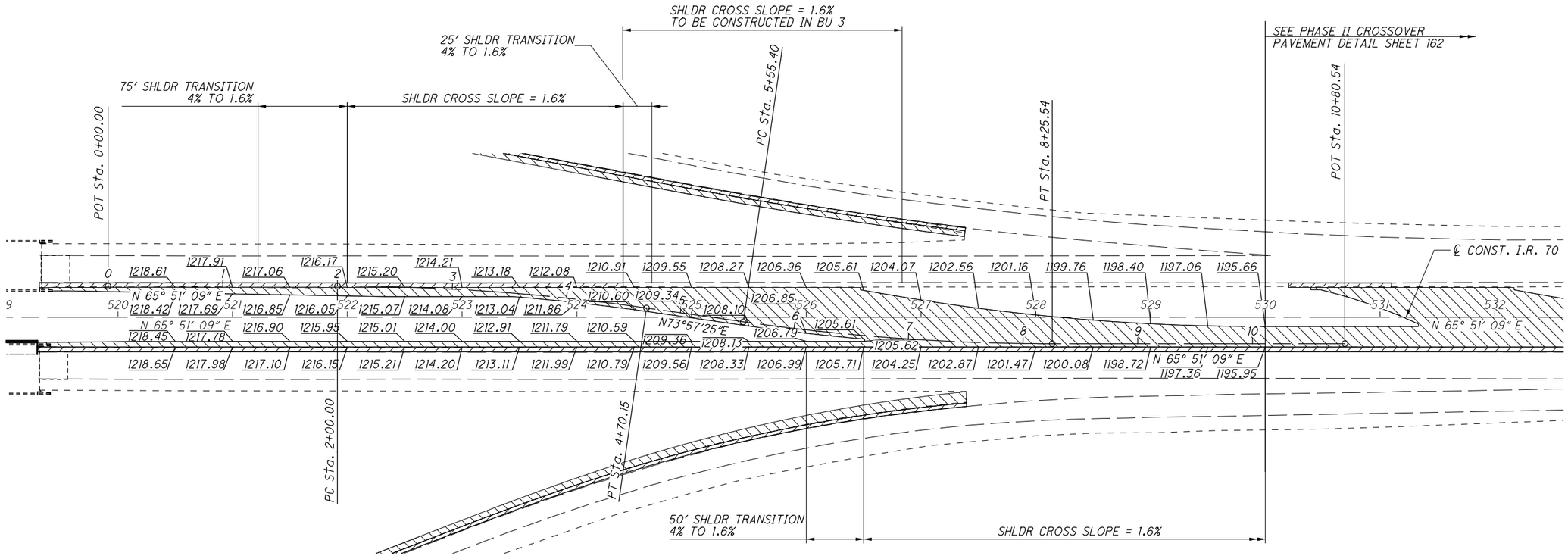
NOTE:

ELEVATIONS ARE SPACED AT 50' INTERVALS BASED ON THE ℄ OF CONSTRUCTION OF I.R. 70 UNLESS OTHERWISE NOTED.

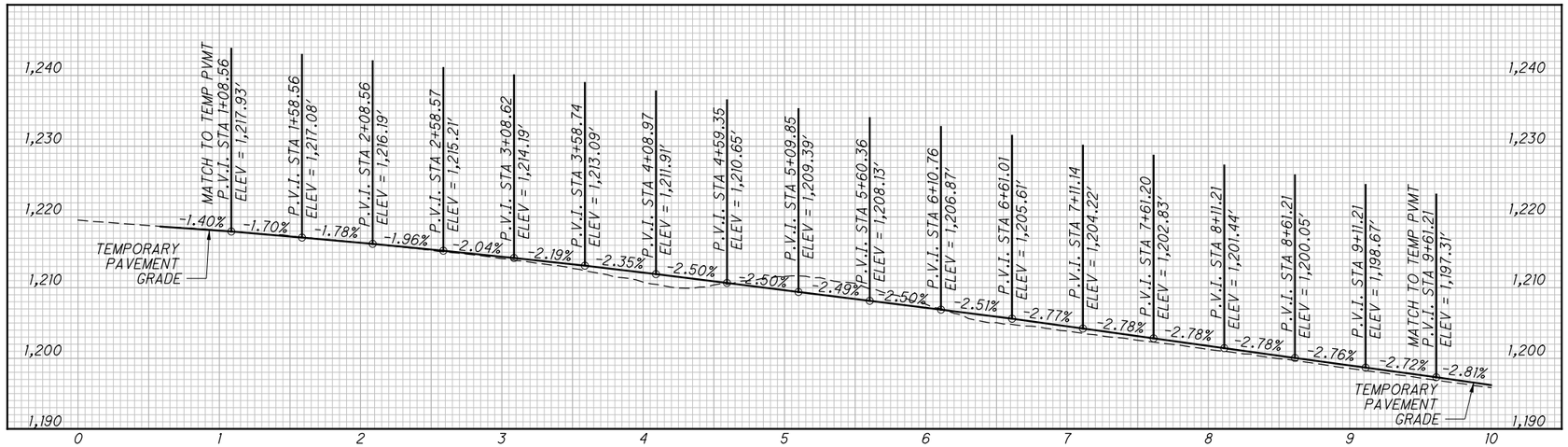
UNLESS OTHERWISE NOTED, EXISTING SHOULDERS ARE TO BE RECONSTRUCTED AT 4% CROSS SLOPE.

ELEVATIONS ARE SHOWN TO MEET THE EXISTING WESTBOUND EDGE OF SHOULDER ELEVATIONS IN ORDER TO INCLUDE CONSTRUCTION OF THE CROSSOVER WITH TEMPORARY PAVEMENT DURING PHASE II. THE CROSSOVER IS TO BE UTILIZED BY TRAFFIC DURING PHASE III AND AFTER PLACEMENT OF PERMANENT PAVEMENT IN PHASE III. FOLLOWING THE PLACEMENT OF PERMANENT WESTBOUND PAVEMENT IN PHASE III, A WEDGE COURSE WILL BE APPLIED SUCH THAT FINAL CROSSOVER ELEVATIONS WILL MEET THE PROPOSED PAVEMENT. SEE PHASE III CROSSOVER PAVEMENT DETAILS FOR FINAL ELEVATIONS.

FOR CROSSOVER BASELINE AND PAVEMENT GEOMETRY, SEE CROSSOVER DETAIL SHEETS 143, 147, & 151



PROFILE ALONG BASELINE OF CROSSOVER



APPROVED FOR CONSTRUCTION - 6/22/2010

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MJC
CHECKED BBD

MAINTENANCE OF TRAFFIC - I.R. 70
PHASE II - CROSSOVER PAVEMENT DETAILS

BEL-70-7.61

160
210

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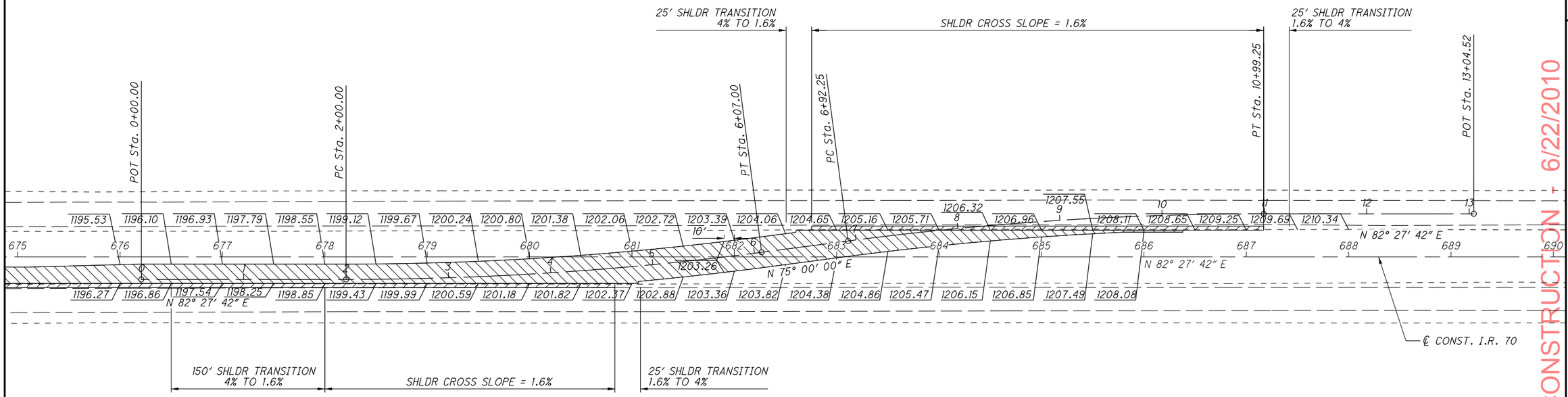
NOTE:

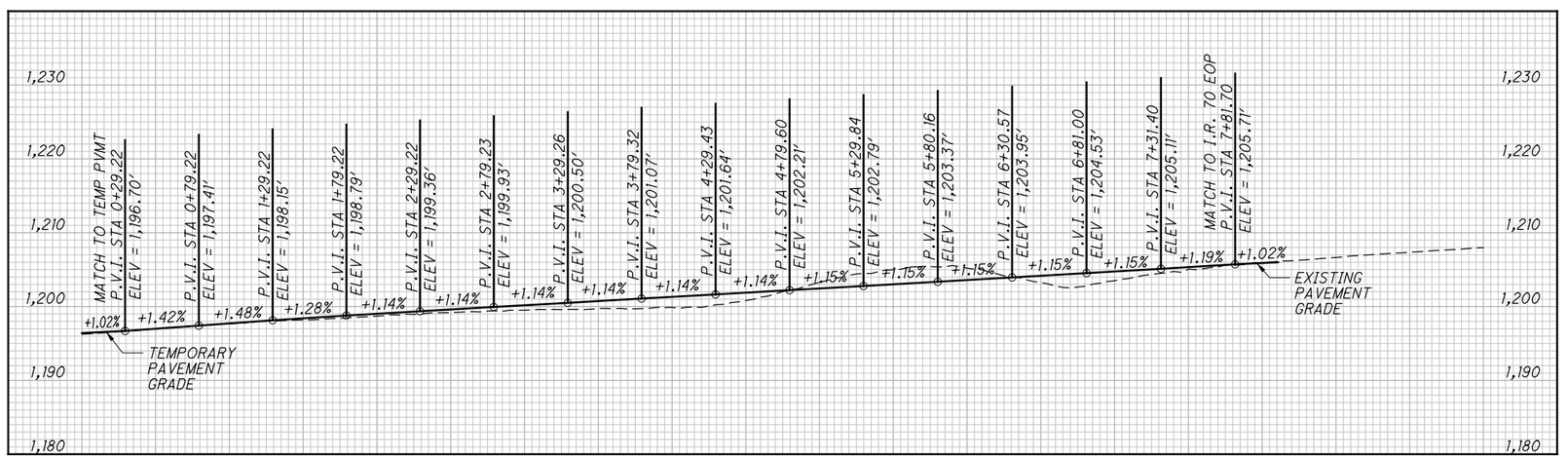
ELEVATIONS ARE SPACED AT 50' INTERVALS BASED ON THE ℄ OF CONSTRUCTION OF I.R. 70 UNLESS OTHERWISE NOTED.

UNLESS OTHERWISE NOTED, EXISTING SHOULDERS ARE TO BE RECONSTRUCTED AT 4% CROSS SLOPE.

FOR CROSSOVER BASELINE AND PAVEMENT GEOMETRY, SEE CROSSOVER DETAIL SHEET 144



PROFILE ALONG BASELINE OF CROSSOVER



APPROVED FOR CONSTRUCTION - 6/22/2010

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MJC
CHECKED BBD

MAINTENANCE OF TRAFFIC - I.R. 70
PHASE II - CROSSOVER PAVEMENT DETAILS

BEL-70-7.61

161
210

P:\76825\mot\sheets\76825MD256.dgn 6/22/2010 9:11:14 AM csteck

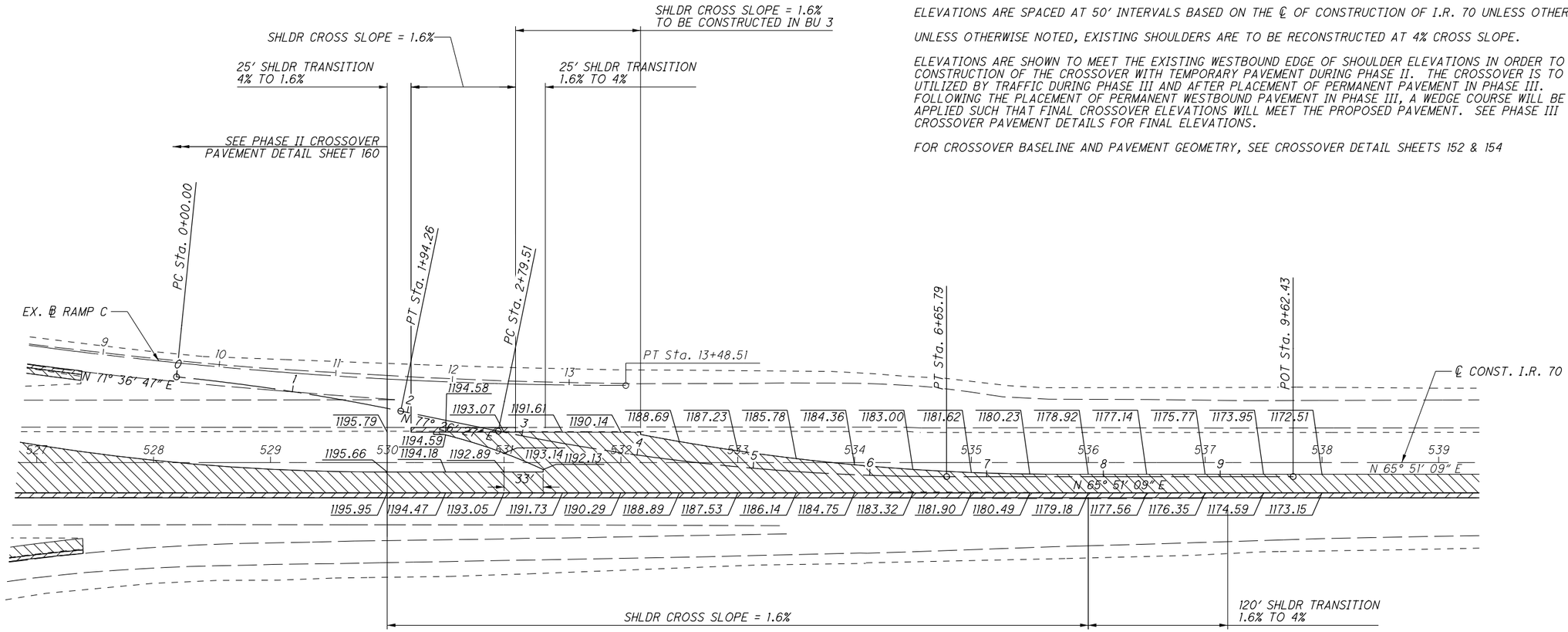
NOTE:

ELEVATIONS ARE SPACED AT 50' INTERVALS BASED ON THE ℄ OF CONSTRUCTION OF I.R. 70 UNLESS OTHERWISE NOTED.

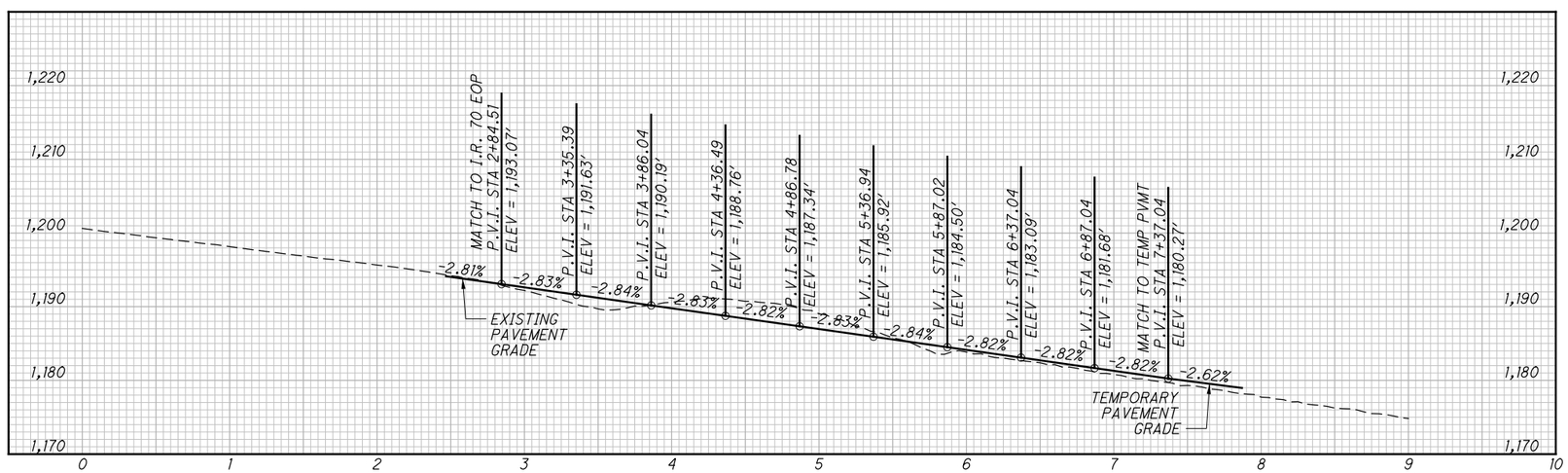
UNLESS OTHERWISE NOTED, EXISTING SHOULDERS ARE TO BE RECONSTRUCTED AT 4% CROSS SLOPE.

ELEVATIONS ARE SHOWN TO MEET THE EXISTING WESTBOUND EDGE OF SHOULDER ELEVATIONS IN ORDER TO INCLUDE CONSTRUCTION OF THE CROSSOVER WITH TEMPORARY PAVEMENT DURING PHASE II. THE CROSSOVER IS TO BE UTILIZED BY TRAFFIC DURING PHASE III AND AFTER PLACEMENT OF PERMANENT PAVEMENT IN PHASE III. FOLLOWING THE PLACEMENT OF PERMANENT WESTBOUND PAVEMENT IN PHASE III, A WEDGE COURSE WILL BE APPLIED SUCH THAT FINAL CROSSOVER ELEVATIONS WILL MEET THE PROPOSED PAVEMENT. SEE PHASE III CROSSOVER PAVEMENT DETAILS FOR FINAL ELEVATIONS.

FOR CROSSOVER BASELINE AND PAVEMENT GEOMETRY, SEE CROSSOVER DETAIL SHEETS 152 & 154



PROFILE ALONG BASELINE OF CROSSOVER



APPROVED FOR CONSTRUCTION - 6/22/2010

MAINTENANCE OF TRAFFIC - RAMP C
PHASE II - CROSSOVER PAVEMENT DETAILS

BEL-70-7.61

162
210

CALCULATED MJC
CHECKED BBD

HORIZONTAL SCALE IN FEET
0 25 50 100

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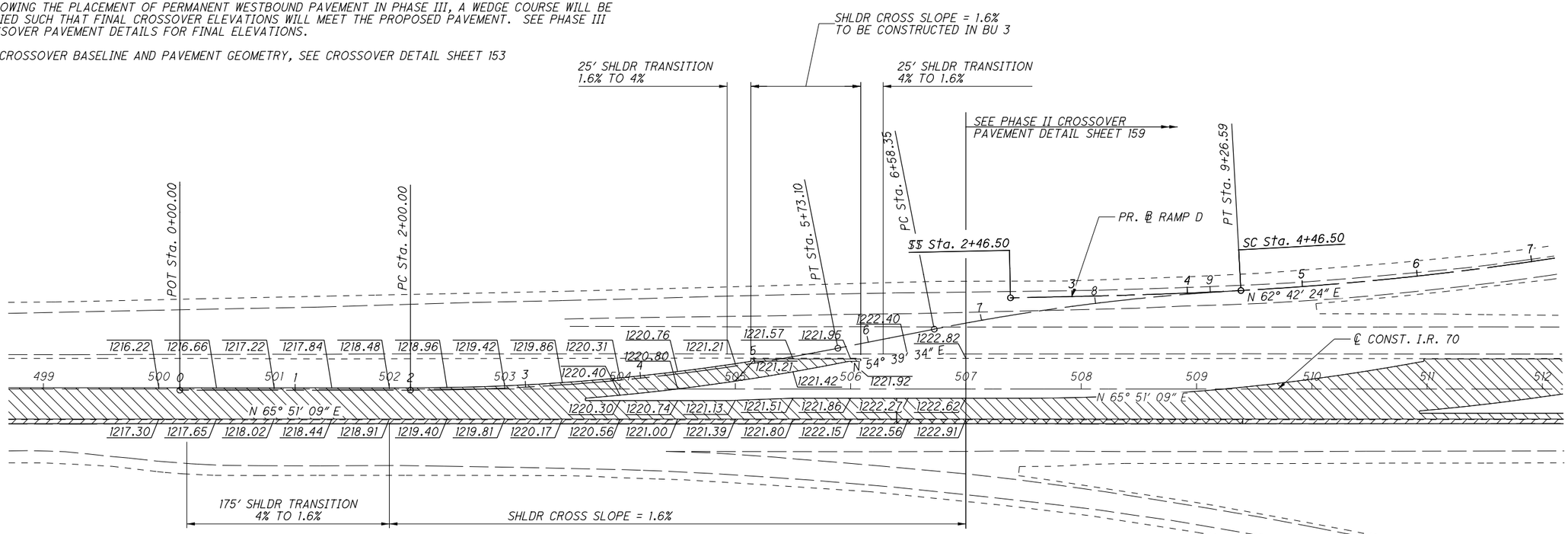
NOTE:

ELEVATIONS ARE SPACED AT 50' INTERVALS BASED ON THE ℄ OF CONSTRUCTION OF I.R. 70 UNLESS OTHERWISE NOTED.

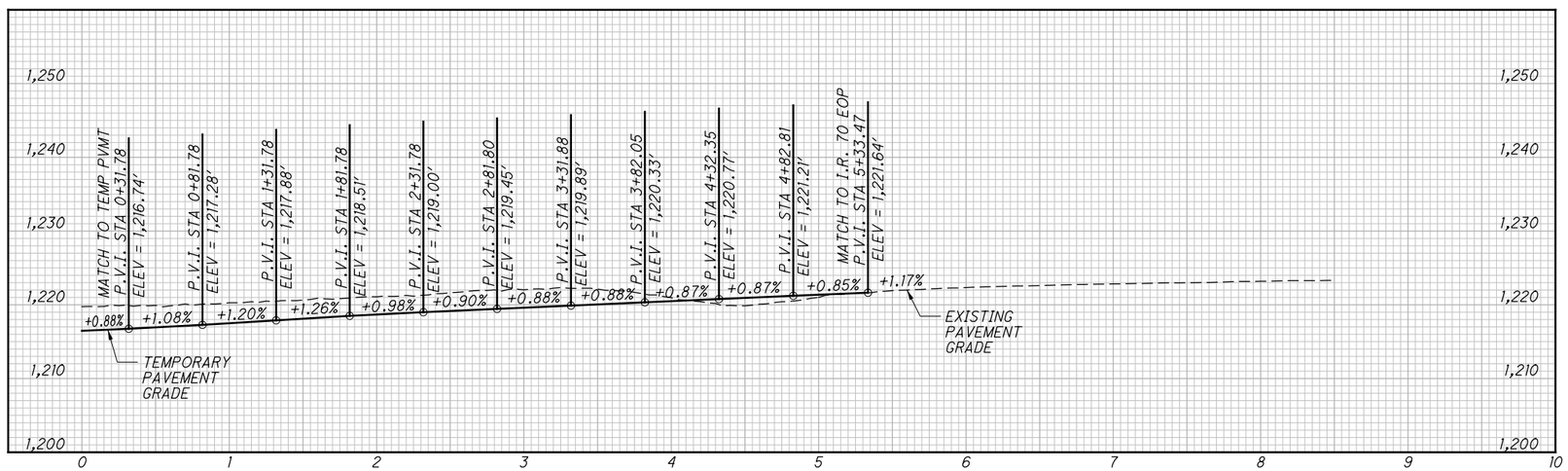
UNLESS OTHERWISE NOTED, EXISTING SHOULDERS ARE TO BE RECONSTRUCTED AT 4% CROSS SLOPE.

ELEVATIONS ARE SHOWN TO MEET THE EXISTING WESTBOUND EDGE OF SHOULDER ELEVATIONS IN ORDER TO INCLUDE CONSTRUCTION OF THE CROSSOVER WITH TEMPORARY PAVEMENT DURING PHASE II. THE CROSSOVER IS TO BE UTILIZED BY TRAFFIC DURING PHASE III AND AFTER PLACEMENT OF PERMANENT PAVEMENT IN PHASE III. FOLLOWING THE PLACEMENT OF PERMANENT WESTBOUND PAVEMENT IN PHASE III, A WEDGE COURSE WILL BE APPLIED SUCH THAT FINAL CROSSOVER ELEVATIONS WILL MEET THE PROPOSED PAVEMENT. SEE PHASE III CROSSOVER PAVEMENT DETAILS FOR FINAL ELEVATIONS.

FOR CROSSOVER BASELINE AND PAVEMENT GEOMETRY, SEE CROSSOVER DETAIL SHEET 153



PROFILE ALONG BASELINE OF CROSSOVER



APPROVED FOR CONSTRUCTION - 6/22/2010

MAINTENANCE OF TRAFFIC - RAMP D
PHASE II - CROSSOVER PAVEMENT DETAILS

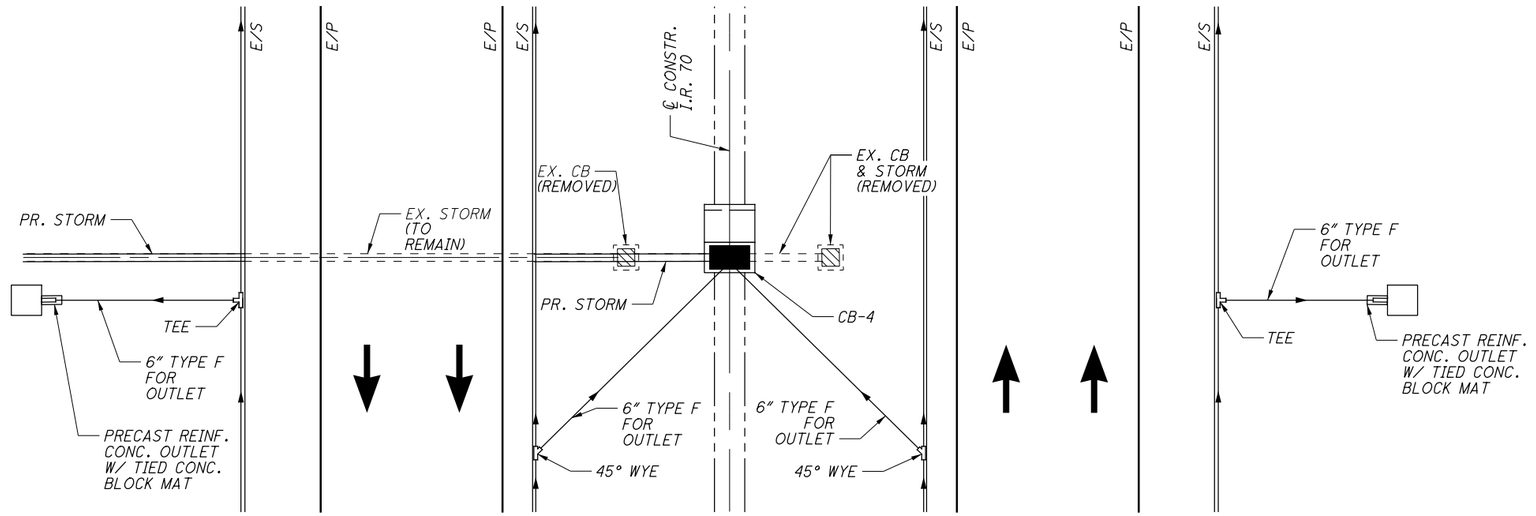
HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MJC
CHECKED BBD

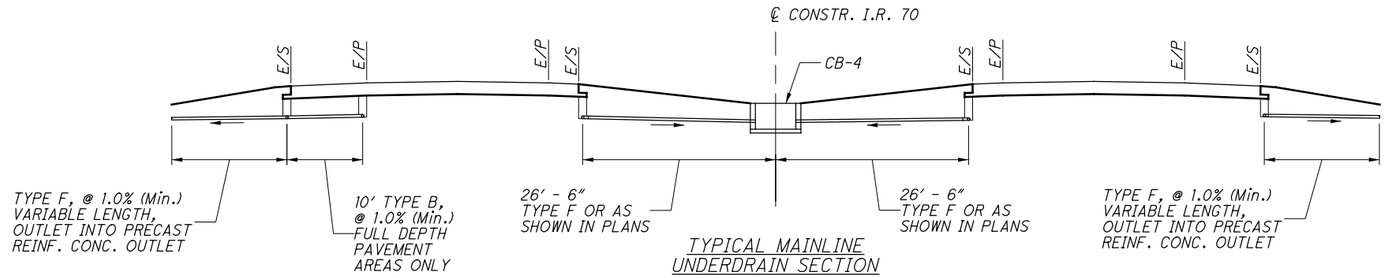
BEL-70-7.61

163
210

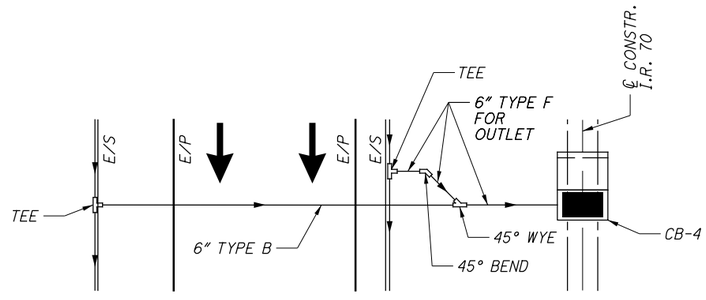
P:\76825\mot\sheets\76825MD258.dgn 6/22/2010 9:11:16 AM csteck



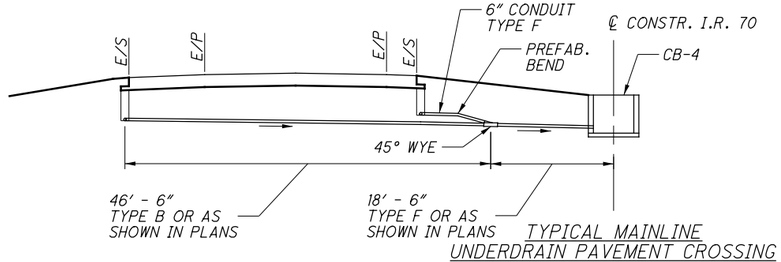
MAINLINE PLAN VIEW



TYPICAL MAINLINE UNDERDRAIN SECTION



MAINLINE PLAN VIEW



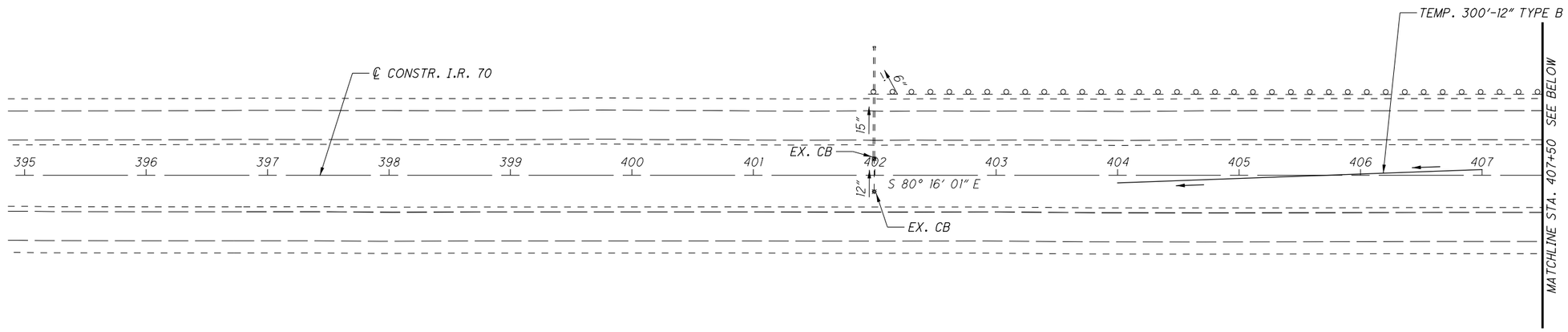
TYPICAL MAINLINE UNDERDRAIN PAVEMENT CROSSING

APPROVED FOR CONSTRUCTION - 6/8/2010

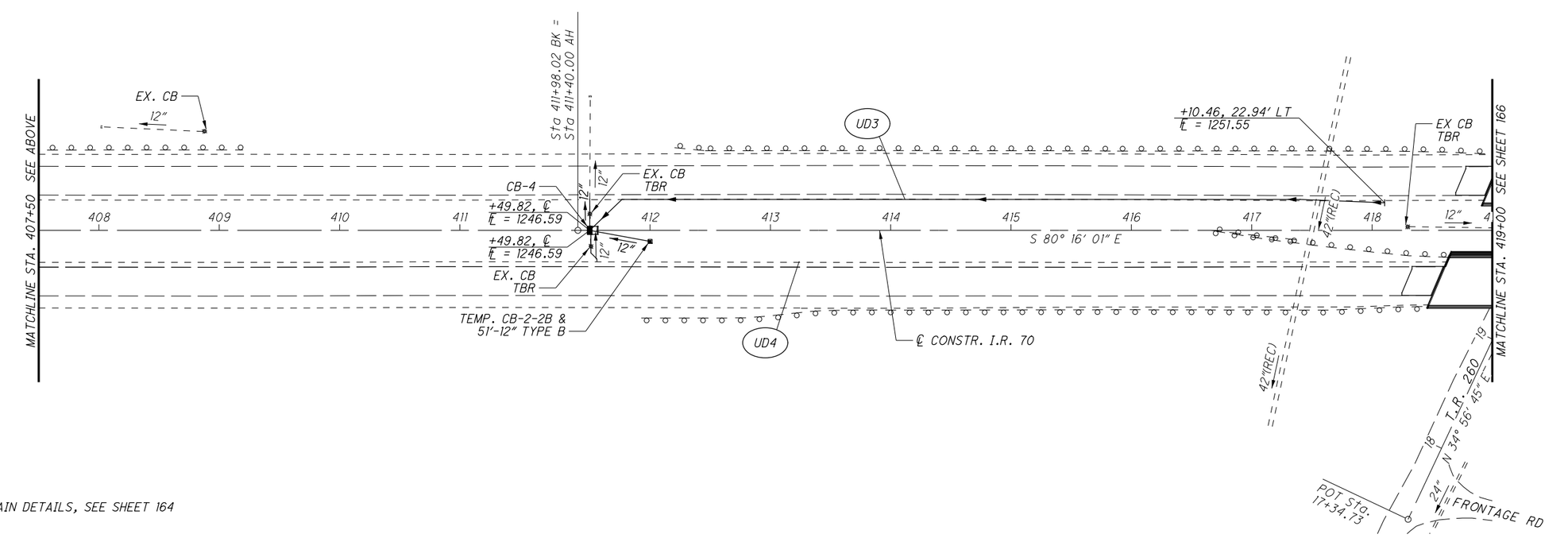
CALCULATED CDS
CHECKED BBD

UNDERDRAINS DETAILS

BEL-70-7.61



NOTE: START INVERTS ARE 18" BELOW EXISTING SUBGRADE, OR
18" BELOW PROPOSED SUBGRADE IN FULL DEPTH PAVEMENT AREAS.



FOR UNDERDRAIN DETAILS, SEE SHEET 164

APPROVED FOR CONSTRUCTION - 6/8/2010

HORIZONTAL SCALE IN FEET
0 25 50 100

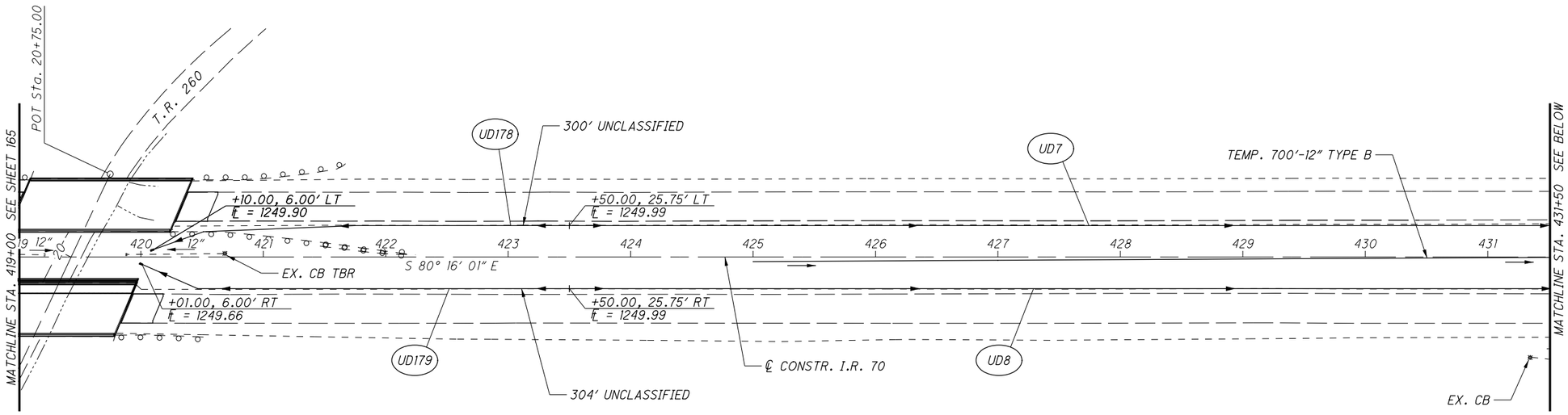
CALCULATED CDS
CHECKED BBD

UNDERDRAIN DETAILS
PHASE II - STA. 395+00 TO STA. 419+00

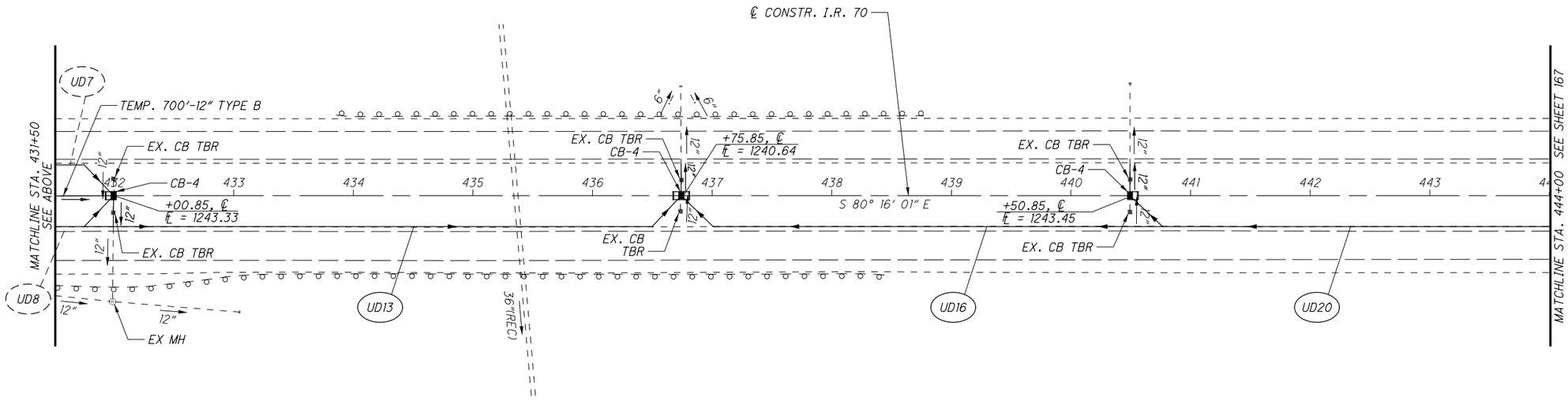
BEL-70-7.61

165
210

P:\76825\drainage\sheets\76825DD201.dgn 6/8/2010 10:02:55 AM csteck



NOTE: START INVERTS ARE 18" BELOW EXISTING SUBGRADE, OR
18" BELOW PROPOSED SUBGRADE IN FULL DEPTH PAVEMENT AREAS.



FOR UNDERDRAIN DETAILS, SEE SHEET 164

APPROVED FOR CONSTRUCTION - 6/8/2010

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED CDS
CHECKED BBD

UNDERDRAIN DETAILS
PHASE II - STA. 419+00 TO STA. 444+00

BEL-70-7.61

166
210

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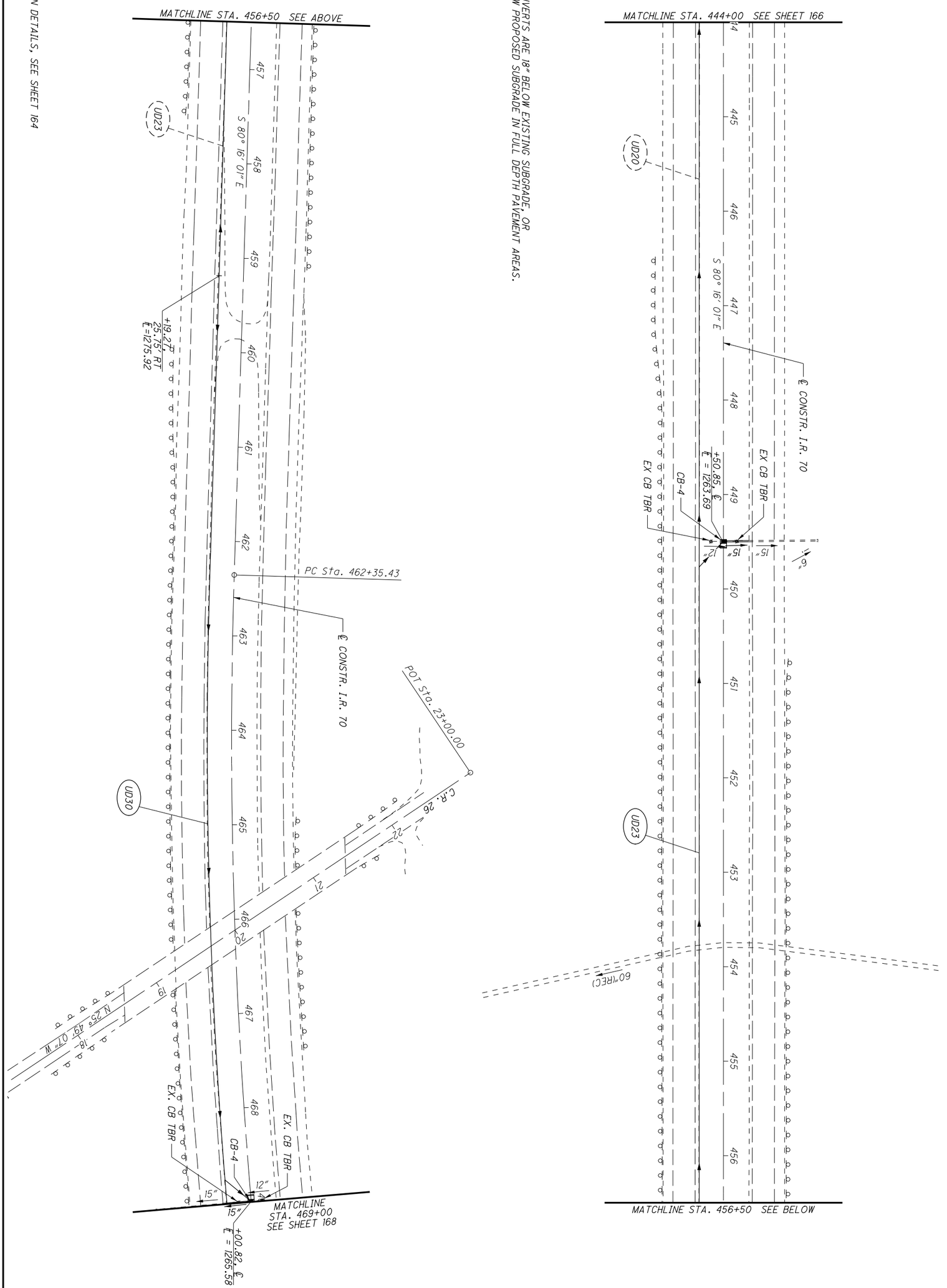
FOR UNDERDRAIN DETAILS, SEE SHEET 164

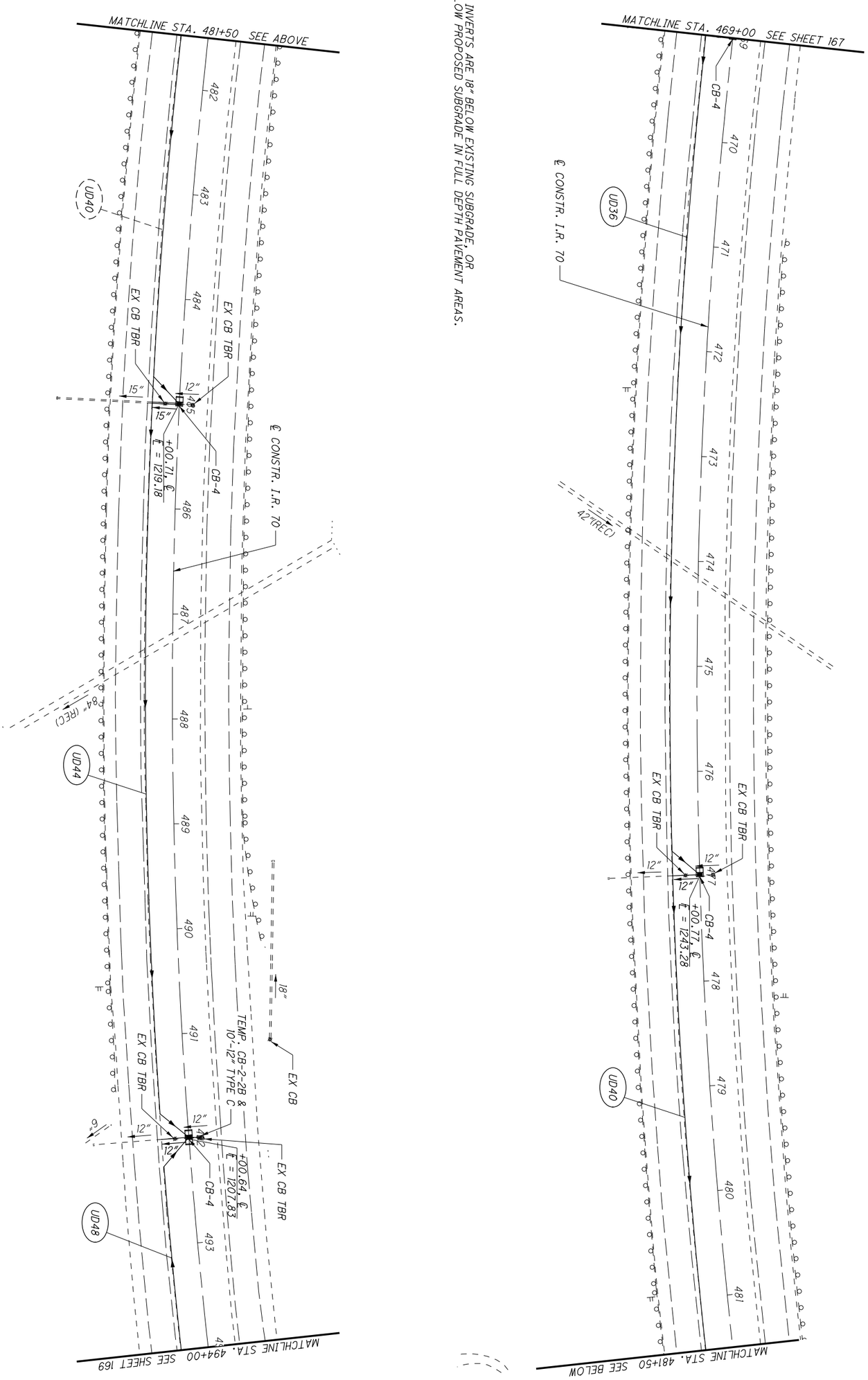
NOTE: START INVERTS ARE 18" BELOW EXISTING SUBGRADE, OR 18" BELOW PROPOSED SUBGRADE IN FULL DEPTH PAVEMENT AREAS.



167 / 210	BEL-70-7.61	UNDERDRAIN DETAILS PHASE II - STA. 444+00 TO STA. 469+00	CALCULATED CDS CHECKED BBD	0 50 25 100 HORIZONTAL SCALE IN FEET

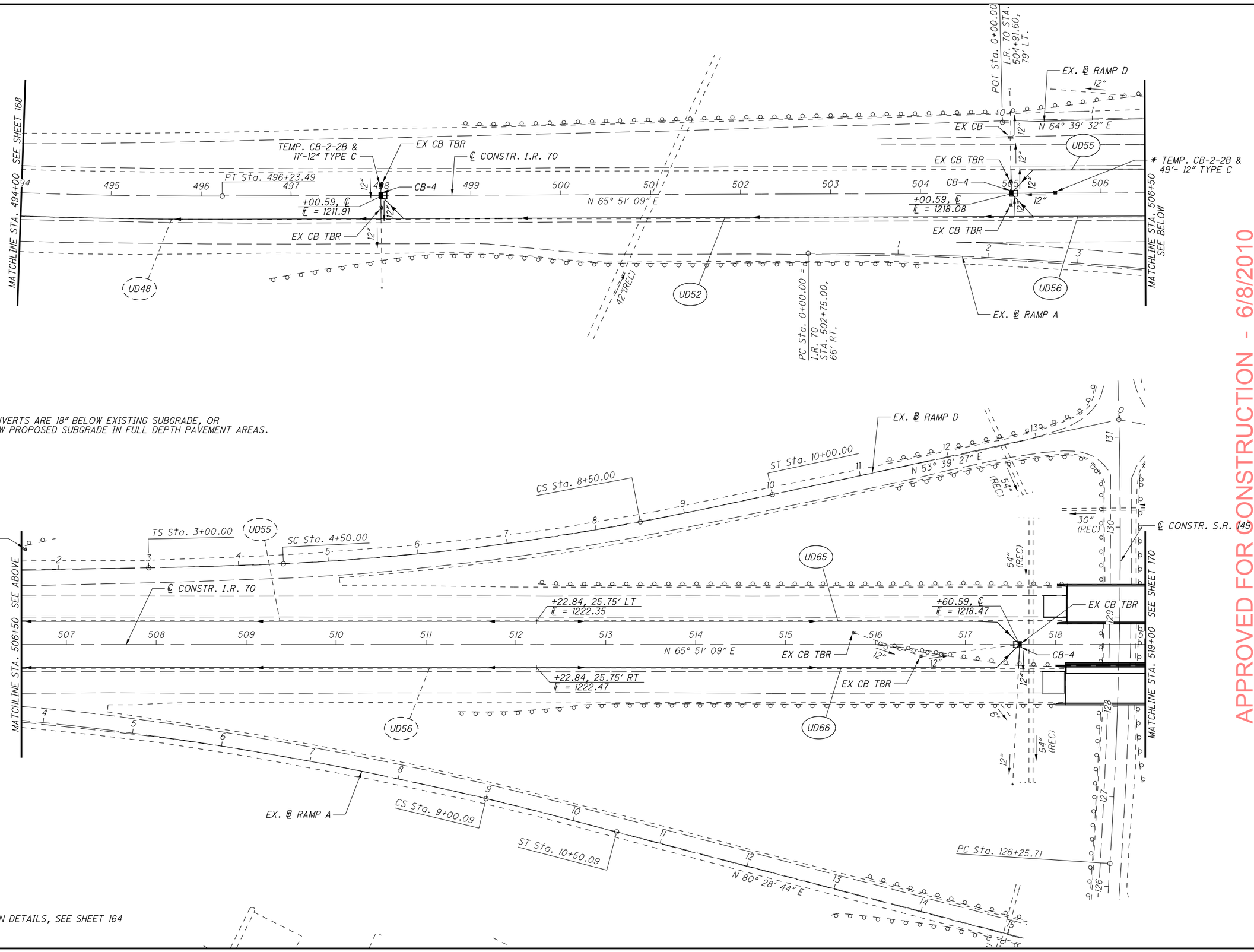
NOTE: START INVERTS ARE 18" BELOW EXISTING SUBGRADE, OR 18" BELOW PROPOSED SUBGRADE IN FULL DEPTH PAVEMENT AREAS.

FOR UNDERDRAIN DETAILS, SEE SHEET 164



APPROVED FOR CONSTRUCTION - 6/8/2010

168 / 210	BEL-70-7.61	UNDERDRAIN DETAILS PHASE II - STA. 469+00 TO STA. 494+00	CALCULATED CDS CHECKED BBD	0 50 25 100 HORIZONTAL SCALE IN FEET



NOTE: START INVERTS ARE 18" BELOW EXISTING SUBGRADE, OR 18" BELOW PROPOSED SUBGRADE IN FULL DEPTH PAVEMENT AREAS.

FOR UNDERDRAIN DETAILS, SEE SHEET 164

APPROVED FOR CONSTRUCTION - 6/8/2010

HORIZONTAL SCALE IN FEET
0 25 50 100

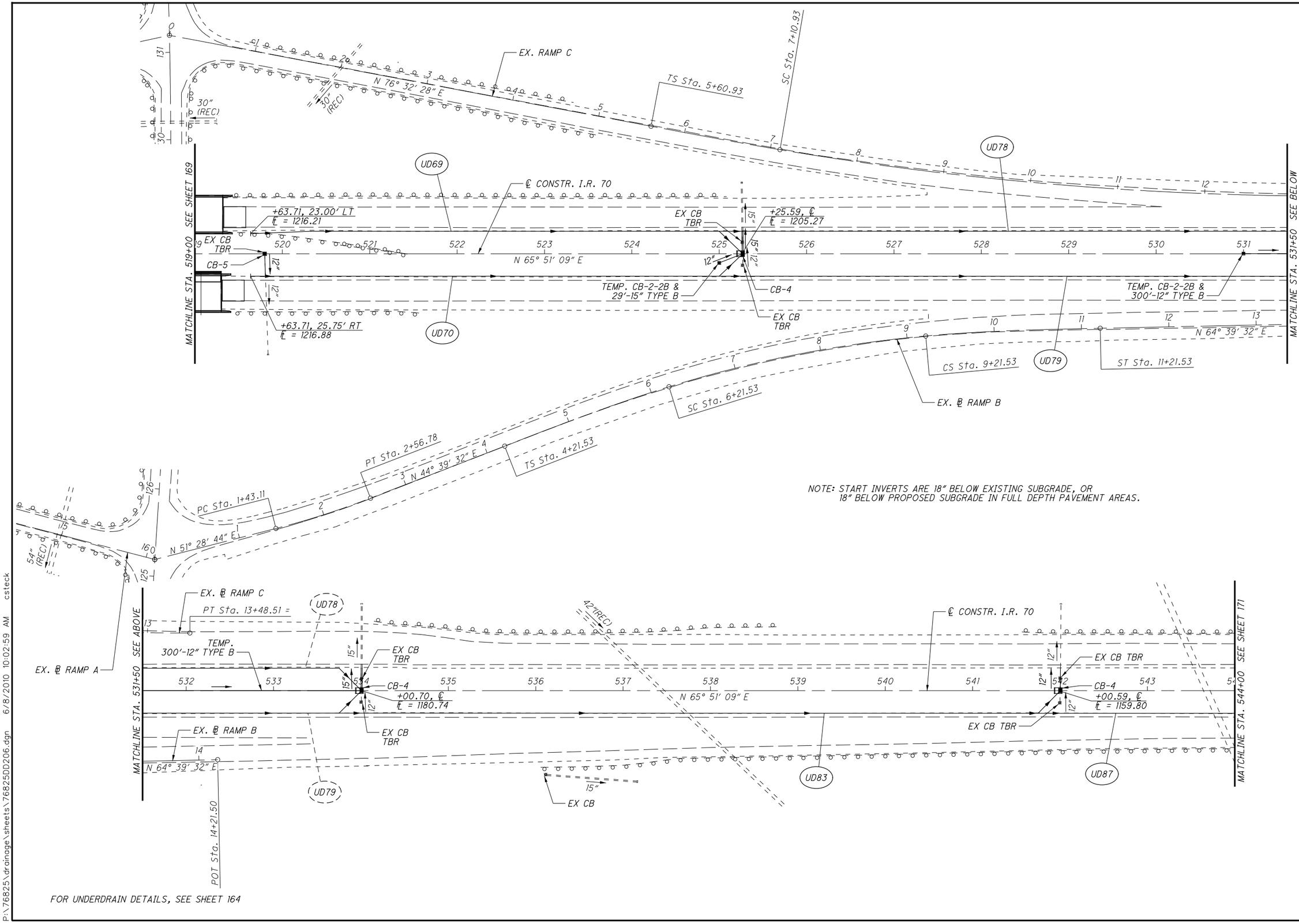
CALCULATED CDS
CHECKED BBD

UNDERDRAIN DETAILS
PHASE II - STA. 494+00 TO STA. 519+00

BEL-70-7.61

169
210

P:\76825\drainage\sheets\76825DD205.dgn 6/8/2010 10:02:58 AM csteck



NOTE: START INVERTS ARE 18" BELOW EXISTING SUBGRADE, OR
18" BELOW PROPOSED SUBGRADE IN FULL DEPTH PAVEMENT AREAS.

FOR UNDERDRAIN DETAILS, SEE SHEET 164

APPROVED FOR CONSTRUCTION - 6/8/2010

HORIZONTAL SCALE IN FEET
0 25 50 100

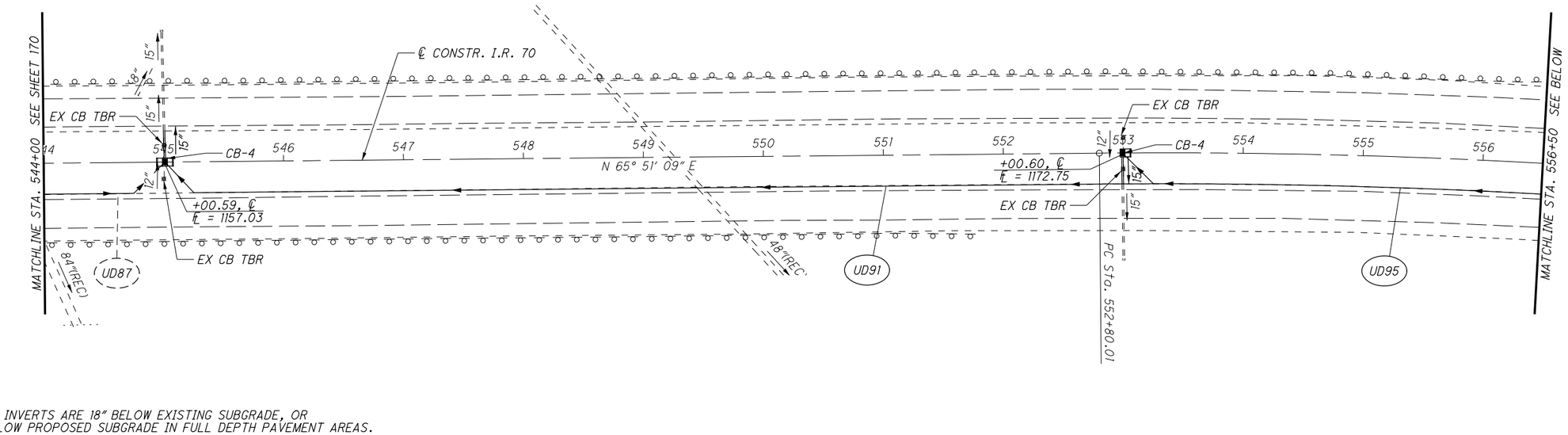
CALCULATED CDS
CHECKED BBD

UNDERDRAIN DETAILS
PHASE II - STA. 519+00 TO STA. 544+00

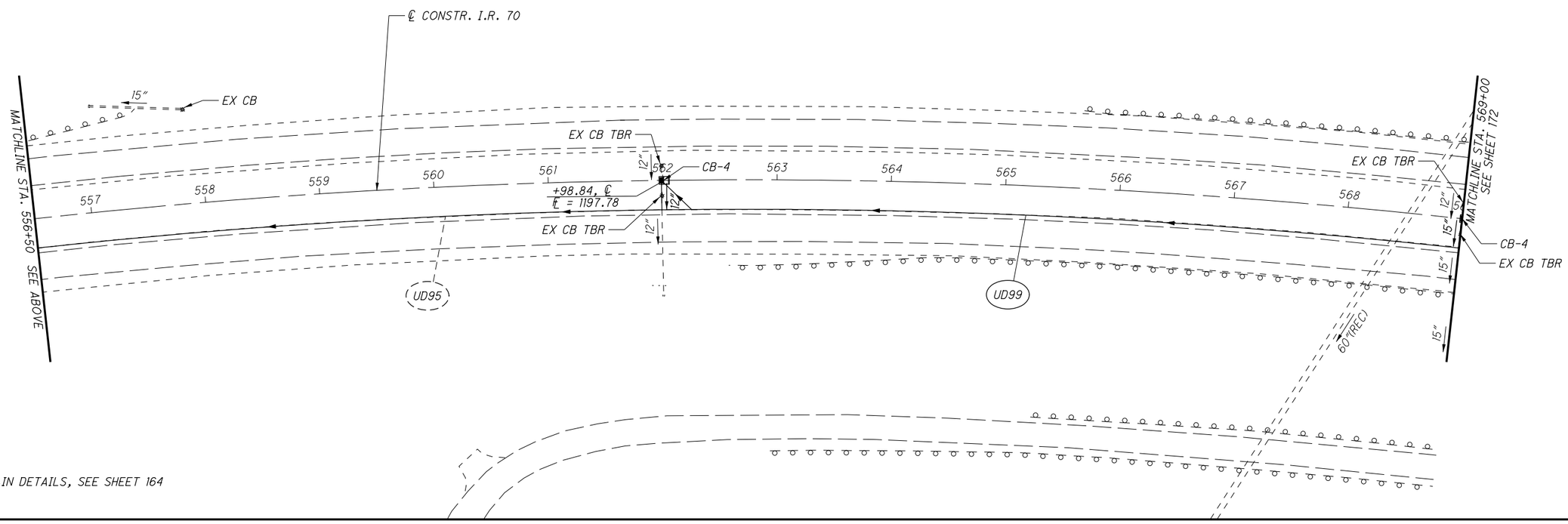
BEL-70-7.61

170
210

P:\76825\drainage\sheets\76825DD206.dgn 6/8/2010 10:02:59 AM csteck



NOTE: START INVERTS ARE 18" BELOW EXISTING SUBGRADE, OR
18" BELOW PROPOSED SUBGRADE IN FULL DEPTH PAVEMENT AREAS.



FOR UNDERDRAIN DETAILS, SEE SHEET 164

APPROVED FOR CONSTRUCTION - 6/8/2010

UNDERDRAIN DETAILS

PHASE II - STA. 544+00 TO STA. 569+00

BEL-70-7.61

CALCULATED CDS
CHECKED BBD

HORIZONTAL SCALE IN FEET
0 25 50 100

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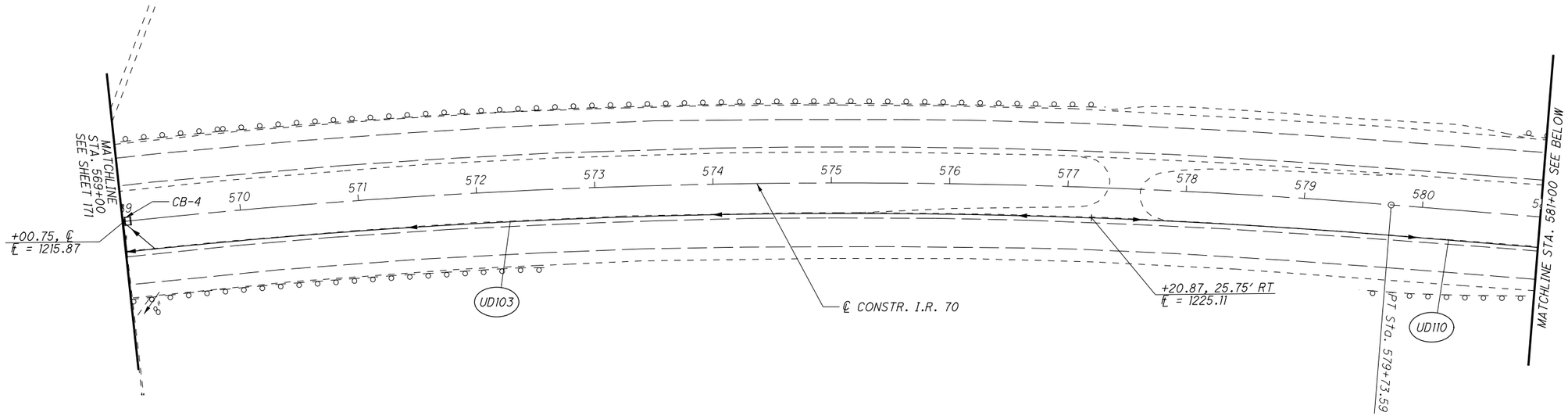
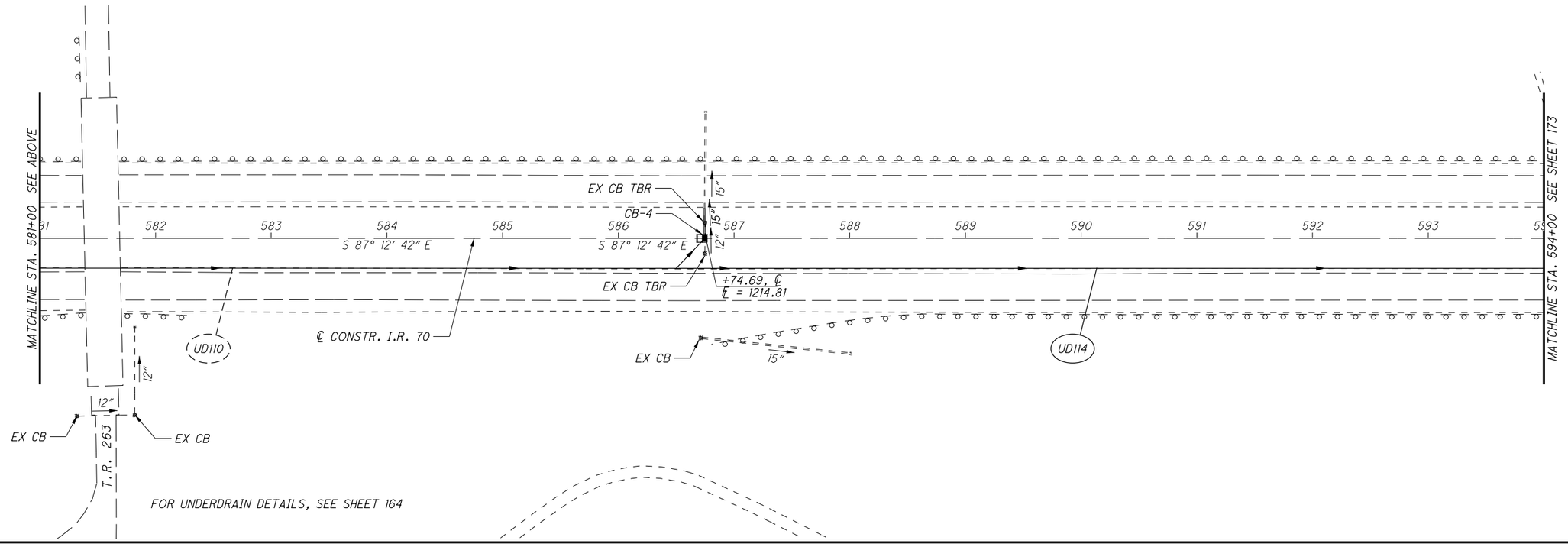


NOTE: START INVERTS ARE 18" BELOW EXISTING SUBGRADE, OR
18" BELOW PROPOSED SUBGRADE IN FULL DEPTH PAVEMENT AREAS.



APPROVED FOR CONSTRUCTION - 6/8/2010

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED CDS
CHECKED BBD

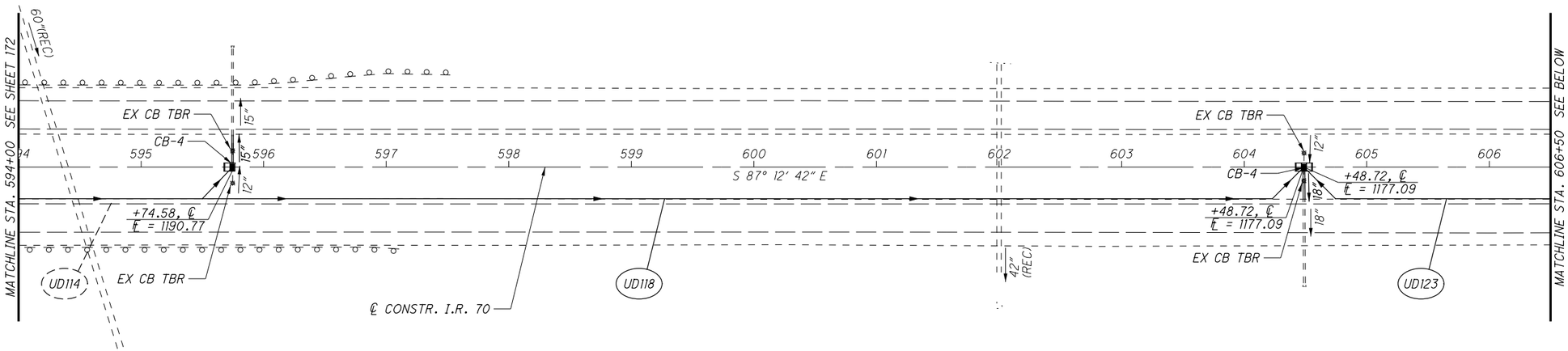
UNDERDRAIN DETAILS

PHASE II - STA. 569+00 TO STA. 594+00

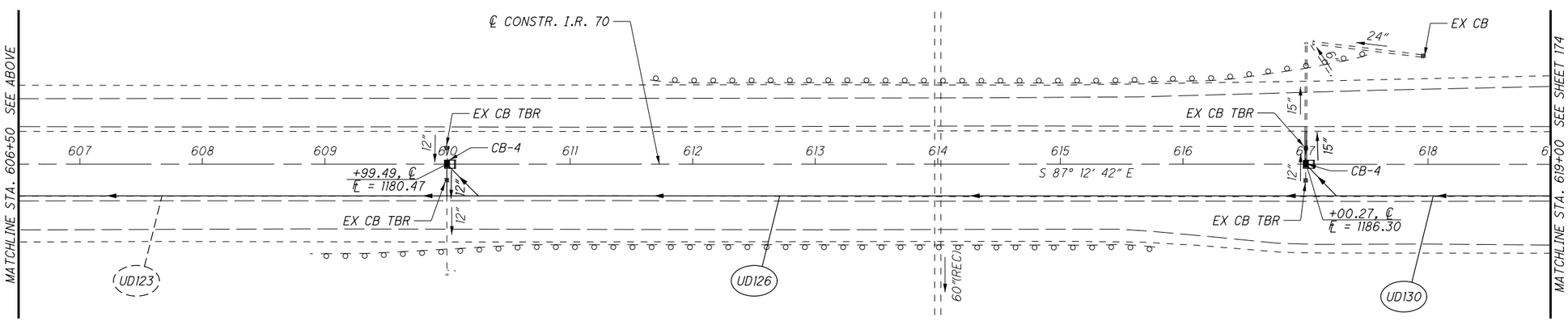
BEL-70-7.61

172
210

P:\76825\drainage\sheets\76825DD208.dgn 6/8/2010 10:03:00 AM csteck



NOTE: START INVERTS ARE 18" BELOW EXISTING SUBGRADE, OR
18" BELOW PROPOSED SUBGRADE IN FULL DEPTH PAVEMENT AREAS.



FOR UNDERDRAIN DETAILS, SEE SHEET 164

APPROVED FOR CONSTRUCTION - 6/8/2010

HORIZONTAL SCALE IN FEET
0 25 50 100

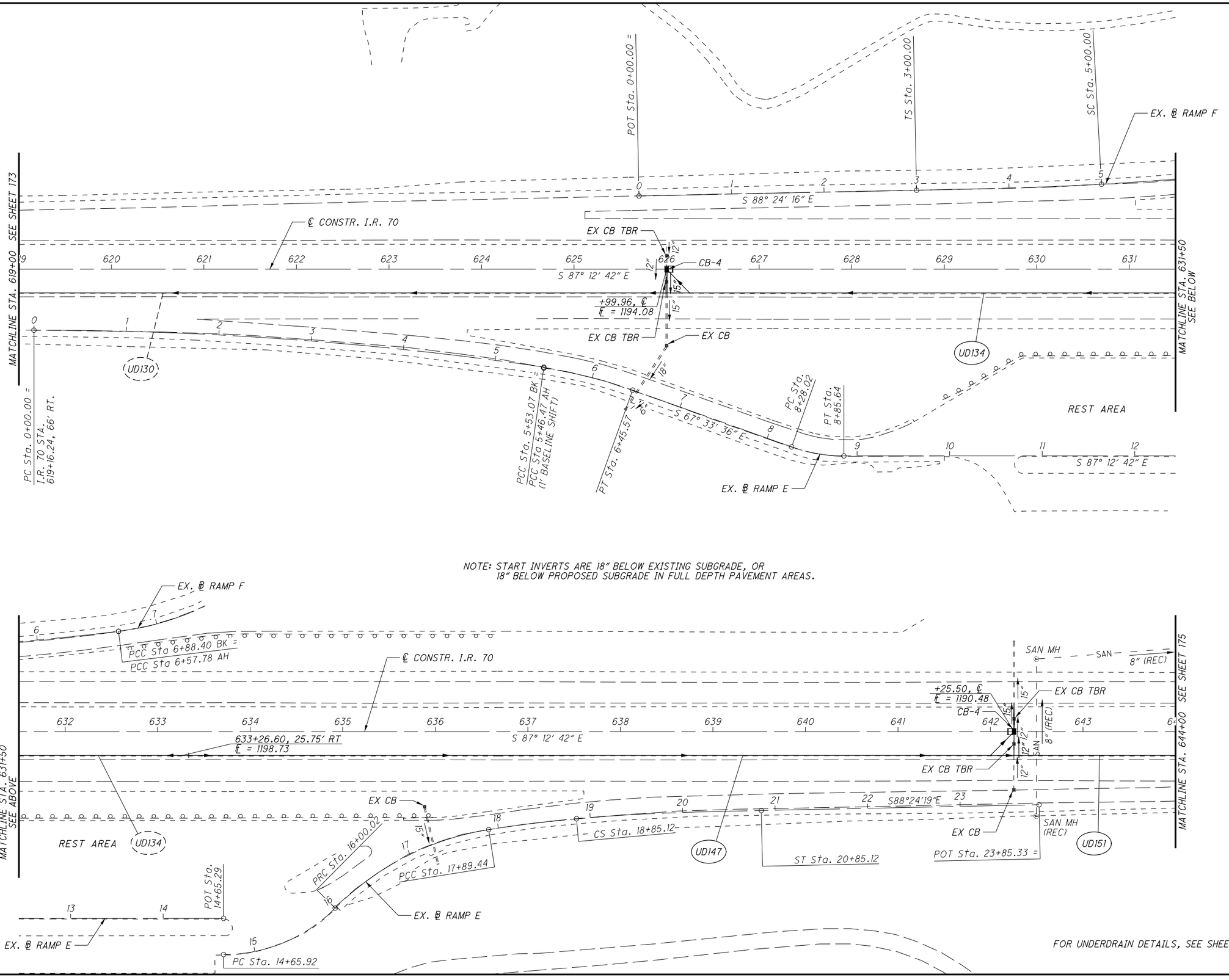
CALCULATED CDS
CHECKED BBD

UNDERDRAIN DETAILS
PHASE II - STA. 594+00 TO STA. 619+00

BEL-70-7.61

173
210

P:\76825\drainage\sheets\76825DD209.dgn 6/8/2010 10:03:01 AM csteck



APPROVED FOR CONSTRUCTION - 6/8/2010

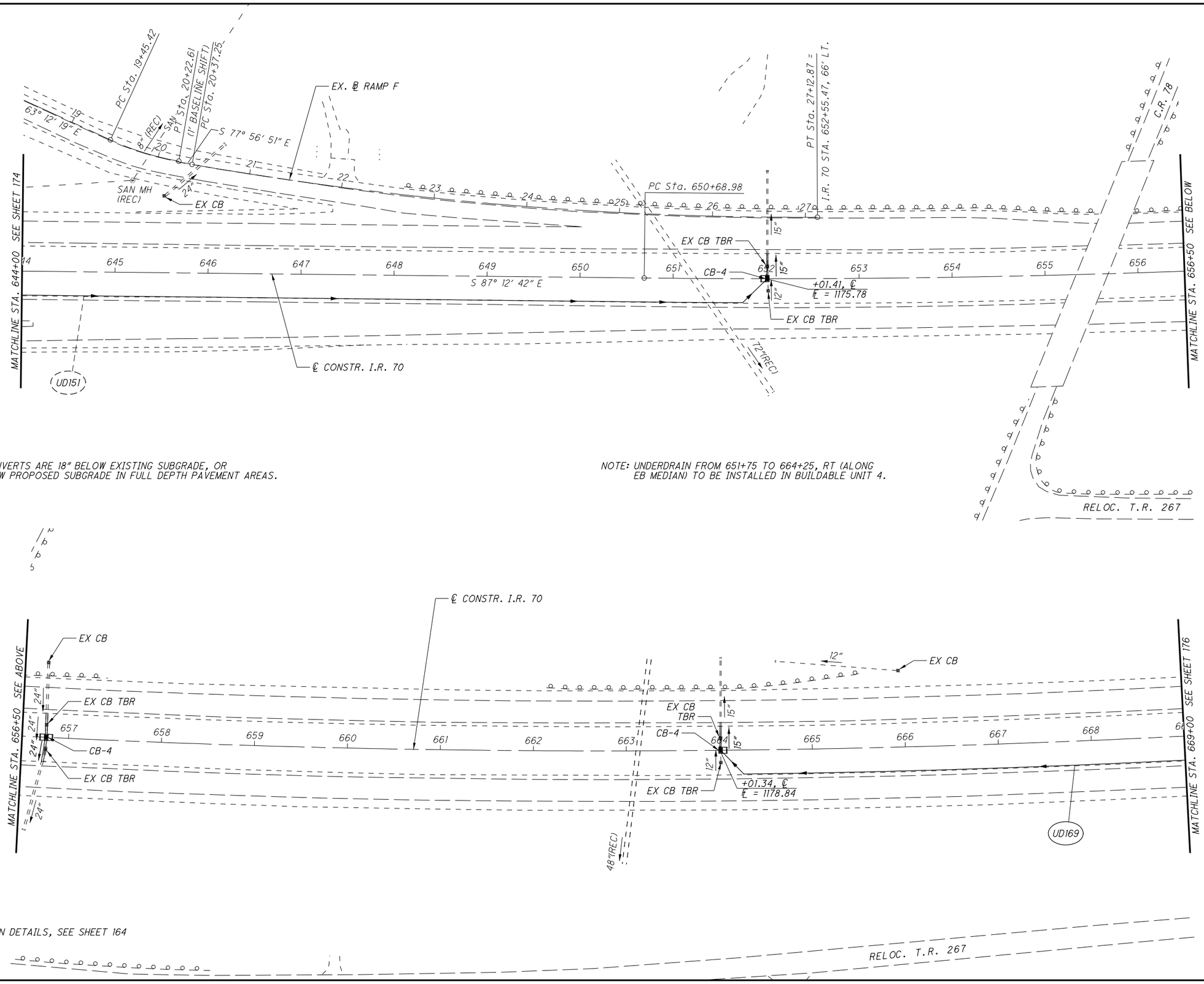
UNDERDRAIN DETAILS

PHASE II - STA. 619+00 TO STA. 644+00

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED CDS
CHECKED BBD

BEL-70-7.61



NOTE: START INVERTS ARE 18" BELOW EXISTING SUBGRADE, OR 18" BELOW PROPOSED SUBGRADE IN FULL DEPTH PAVEMENT AREAS.

NOTE: UNDERDRAIN FROM 651+75 TO 664+25, RT (ALONG EB MEDIAN) TO BE INSTALLED IN BUILDABLE UNIT 4.

FOR UNDERDRAIN DETAILS, SEE SHEET 164

APPROVED FOR CONSTRUCTION - 6/8/2010

HORIZONTAL SCALE IN FEET
0 25 50 100

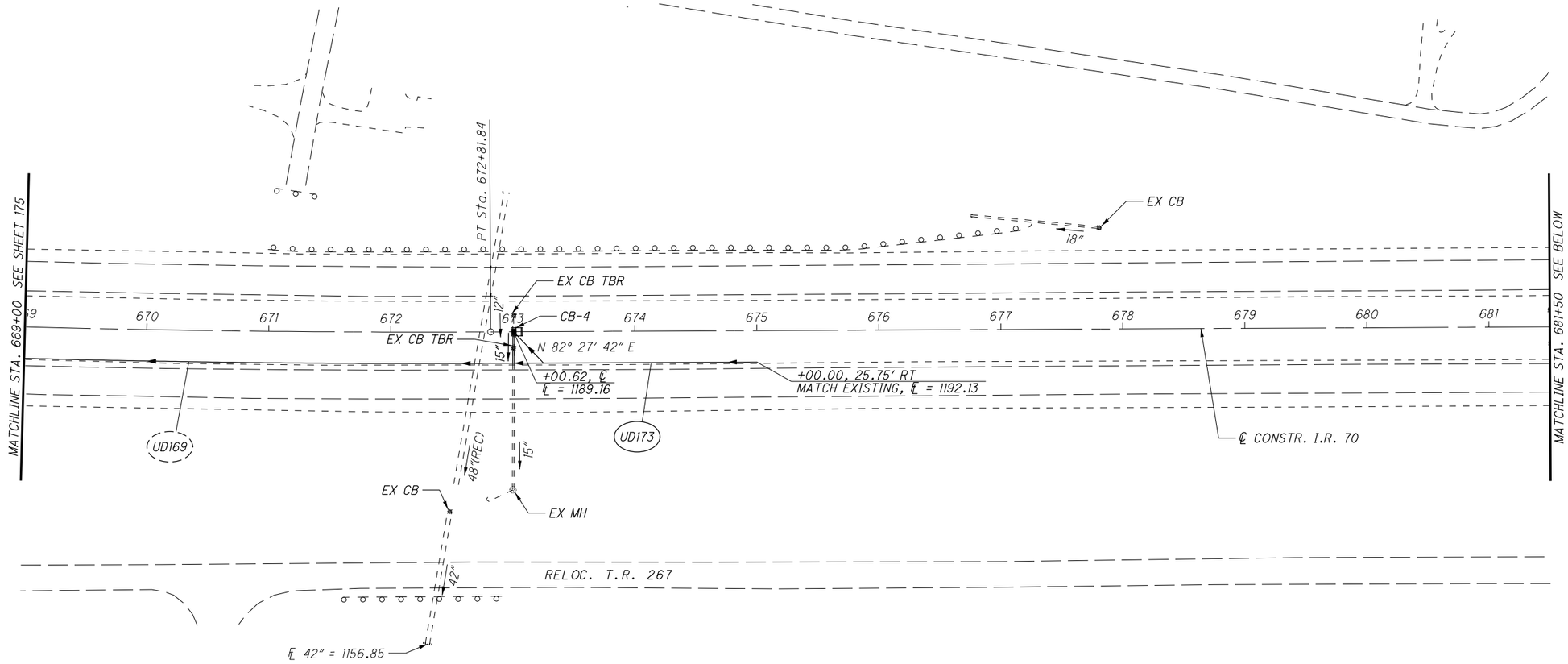
CALCULATED CDS
CHECKED BBD

UNDERDRAIN DETAILS
PHASE II - STA. 644+00 TO STA. 669+00

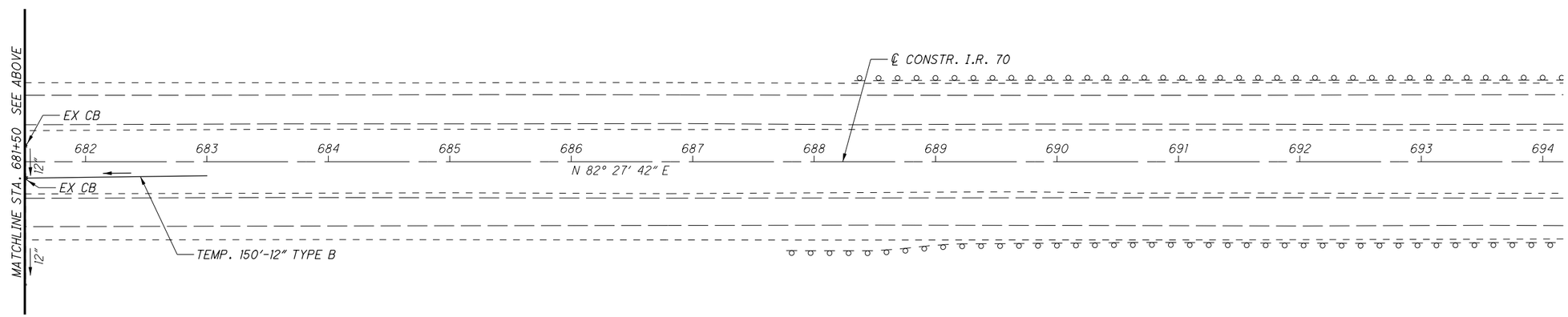
BEL-70-7.61

175
210

P:\76825\drainage\sheets\76825DD211.dgn 6/8/2010 10:03:02 AM csteck



NOTE: START INVERTS ARE 18" BELOW EXISTING SUBGRADE, OR
18" BELOW PROPOSED SUBGRADE IN FULL DEPTH PAVEMENT AREAS.



FOR UNDERDRAIN DETAILS, SEE SHEET 164

APPROVED FOR CONSTRUCTION - 6/8/2010

UNDERDRAIN DETAILS
PHASE II - STA. 669+00 TO STA. 694+00

CALCULATED CDS
CHECKED BBD

HORIZONTAL SCALE IN FEET
0 25 50 100

BEL-70-7.61

176
210

P:\76825\drainage\sheets\76825DD212.dgn 6/8/2010 10:03:03 AM csteck

GROUNDING AND BONDING

THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS) AND THE HL AND TC SERIES OF STANDARD CONSTRUCTION DRAWINGS ARE MODIFIED AS FOLLOWS:

1. ALL METALLIC PARTS CONTAINING ELECTRICAL CONDUCTORS SHALL BE PERMANENTLY JOINED TO FORM AN EFFECTIVE GROUND FAULT CURRENT PATH BACK TO THE GROUNDED CONDUCTOR IN THE POWER SERVICE DISCONNECT SWITCH.
   - A. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUITS (725.04) IN ADDITION TO THE CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS GROUNDING CONDUCTOR.
   - B. WHEN AN EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED IN PLASTIC CONDUIT (725.05), THE INSTALLATION SHALL INCLUDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN ADDITION TO THE CONDUCTORS SPECIFIED.
   - C. METALLIC CONDUIT CARRYING THE LOOP WIRES FROM IN THE PAVEMENT TO THE PULL BOX SPLICE LOCATION WILL ONLY BE BONDED AT THE PULL BOX END, AND WILL NOT CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR.
   - D. METAL PULL BOX LIDS SHALL BE BONDED BY ATTACHMENT OF THE EQUIPMENT GROUNDING CONDUCTOR TO THE FRAME DIAGONAL AS PROVIDED ON HL-30.11.
   - E. IF MULTIPLE CONDUIT RUNS BEGIN AND END AT THE SAME POINTS, ONLY ONE EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED.
   - F. IF AN EQUIPMENT GROUNDING CONDUCTOR IS NEEDED IN CONDUIT BETWEEN SIGNALIZED INTERSECTIONS FOR UNDERGROUND INTERCONNECT CABLE, THE GROUNDING SYSTEM FOR EACH SIGNALIZED INTERSECTION WILL BE SEPARATED ABOUT MIDWAY BETWEEN THE INTERSECTIONS.
   - G. THE MESSENGER WIRE AT SIGNALIZED INTERSECTIONS WILL BE USED AS THE CONDUCTIVE PATH FROM CORNER TO CORNER IF CONDUIT IS NOT PROVIDED UNDER THE ROADWAY. WHEN CONDUIT CONNECTS THE CORNERS OF AN INTERSECTION, AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE USED IN THE CONDUIT.

2. CONDUITS.
   - A. THE 725.04 CONDUIT SHALL HAVE GROUNDING BUSHINGS INSTALLED AT ALL TERMINATION POINTS. THE BUSHING MATERIAL SHALL BE COMPATIBLE WITH GALVANIZED STEEL CONDUIT AND THE GROUNDING LUG MATERIAL SHALL BE COMPATIBLE FOR USE WITH COPPER WIRE. THREADED OR COMPRESSION TYPE BUSHINGS MAY BE USED.
   - B. THE 725.05 CONDUIT SHALL HAVE THE INSIDE AND OUTSIDE DIAMETERS OF THE CONDUIT DEBURRED AT ALL TERMINATION POINTS.
   - C. BOTH ENDS OF METALLIC CONDUIT SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.
   - D. METALLIC CONDUIT MAY BE BONDED TO METALLIC BOXES THROUGH THE USE OF CONDUIT FITTINGS UL APPROVED FOR THIS TYPE OF CONNECTION, WITH THE BOX BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.

3. WIRE FOR GROUNDING AND BONDING.
   - A. USE INSULATED, COPPER WIRE FOR THE EQUIPMENT GROUNDING CONDUCTOR. BONDING JUMPERS IN BOXES AND ENCLOSURES MAY BE BARE OR INSULATED COPPER WIRE. WIRE SIZE SHALL BE AS FOLLOWS:
     - I. USE 4 AWG BETWEEN THE POWER SERVICE AND SUPPORTS, POLES, PEDESTALS, CONTROLLER OR FLASHER CABINETS.
     - II. USE A MINIMUM 8 AWG BETWEEN LOOP DETECTOR PULL BOXES AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.
     - III. USE A MINIMUM 8 AWG BETWEEN THE "PREPARE TO STOP WHEN FLASHING" INSTALLATION (INCLUDING SUPPORT) AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.
     - IV. THE INSULATION SHALL BE GREEN OR GREEN WITH YELLOW STRIPE(S). FOR 4 AWG OR LARGER, INSULATION MAY ALSO BE BLACK WITH GREEN TAPE/LABELS INSTALLED AT ALL ACCESS POINTS.
   - B. IN A HIGHWAY LIGHTING SYSTEM, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE THE SAME WIRE SIZE AS THE DUCT CABLE OR DISTRIBUTION CABLE CIRCUIT CONDUCTORS, WITH THE MINIMUM CONDUCTOR SIZE OF 4 AWG. BONDING JUMPERS WILL BE MINIMUM SIZE 4 AWG.

4. GROUND ROD.
   - A. A 3/4 INCH SCHEDULE 40 PVC CONDUIT WILL BE USED IN FOUNDATIONS AND CONCRETE WALLS FOR THE GROUNDING CONDUCTOR (GROUND WIRE) RACEWAY TO THE GROUND ROD. SHOULD METALLIC CONDUIT BE USED, BOTH ENDS OF THE CONDUIT SHALL BE BONDED TO THE GROUNDING CONDUCTOR.
   - B. THE TYPICAL GROUNDING CONDUCTOR (GROUND WIRE) SHALL BE 4 AWG INSULATED, COPPER.

5. THE GREEN CONDUCTOR IN SIGNAL CABLES (CONDUCTOR #4) SHALL NOT BE USED TO SUPPLY POWER TO A SIGNAL INDICATION. IT WILL BE CONNECTED TO THE SIGNAL BODY AS AN EQUIPMENT GROUND IN ALUMINUM HEADS AND IT WILL BE UNUSED IN PLASTIC HEADS. UNUSED CONDUCTORS SHALL BE GROUNDED IN THE CABINET. TYPICAL USE OF CONDUCTORS IS AS FOLLOWS:

COND. NO.	COLOR	VEHICLE SIGNAL	PEDESTRIAN SIGNAL
1	BLACK	GREEN BALL	#1 WALK
2	WHITE	AC NEUTRAL	AC NEUTRAL
3	RED	RED BALL	#1 DW/FDW
4	GREEN	EQUIPMENT GROUND	EQUIPMENT GROUND
5	ORANGE	YELLOW BALL	#2 DW/FDW
6	BLUE	GREEN ARROW	#2 WALK
7	WHITE/BLACK STRIPE	YELLOW ARROW	NOT USED

6. POWER SERVICE AND DISCONNECT SWITCH.
   - A. AT THE POWER SERVICE LOCATION, THE GROUNDING CONDUCTOR (GROUND WIRE) FROM THE DISCONNECT SWITCH NEUTRAL (AC-) BAR TO THE GROUND ROD SHALL BE A CONTINUOUS, UNSPLICED CONDUCTOR. IF SPLICED, IT SHALL BE AN EXOTHERMIC WELD BUTT SPLICE.
   - B. THE SERVICE NEUTRAL (AC-) SHALL ONLY BE CONNECTED TO GROUND AT THE PRIMARY POWER SERVICE DISCONNECT SWITCH.
     - I. NEMA CONTROLLER CABINETS: IF A POWER SERVICE DISCONNECT SWITCH IS LOCATED BEFORE THE CONTROLLER CABINET, THE NEUTRAL (AC-) AND THE GROUNDING BARS IN THE CONTROLLER CABINET SHALL NOT BE CONNECTED TOGETHER AS SHOWN IN NEMA TS-2, FIGURE 5-4.
     - II. IF SECONDARY DISCONNECT SWITCHES ARE CONNECTED AFTER THE PRIMARY DISCONNECT SWITCH, THE NEUTRAL (AC-) SHALL ONLY BE GROUNDED AT THE PRIMARY SWITCH. EQUIPMENT GROUNDING CONDUCTORS SHALL BE BROUGHT TO THE PRIMARY SWITCH, BUT SHALL BE GROUNDED AT BOTH SECONDARY AND PRIMARY SWITCHES.

7. STRUCTURE GROUNDING: HL-50.21 SHOWS A 1/0 AWG STRANDED COPPER CABLE USED FOR STRUCTURE GROUNDING. ADDITIONALLY, THIS SAME CABLE SHALL BE INSULATED AND ANY CONNECTIONS AND BARE COPPER STRANDS EXPOSED TO CONCRETE SHALL BE COVERED WITH MASTIC TO PREVENT CONTACT WITH THE CONCRETE.

8. PAYMENT.
   - A. ALL MATERIALS AND WORK REQUIRED TO COMPLETE THE EFFECTIVE GROUND FAULT CURRENT PATH SYSTEM ARE INCIDENTAL TO THE CONDUCTORS INSTALLED BY CONTRACT.
   - B. WORK ON BRIDGES MAY BE INCLUDED IN THE BID ITEM FOR "ITEM 625, STRUCTURE GROUNDING."
   - C. IN A 3-WIRE HIGHWAY LIGHTING SYSTEM, THE THIRD CONDUCTOR OF THE DUCT CABLE OR DISTRIBUTION CABLE WILL BE USED AS THE EQUIPMENT GROUNDING CONDUCTOR AND MAY AS SUCH BE PART OF THE CABLE BID ITEM.

LIGHT POLE REMOVED

THIS ITEM OF WORK SHALL CONSIST OF REMOVING AN EXISTING LIGHT POLE. THE LIGHT POLE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF OF THE PROJECT SITE.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM 202, "LIGHT POLE REMOVED" FOR EACH POLE REMOVED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

LIGHT POLE FOUNDATION REMOVED

THIS ITEM OF WORK SHALL CONSIST OF REMOVING AN EXISTING LIGHT POLE FOUNDATION TO A MINIMUM OF 1 FOOT (0.3 METER) BELOW FINISHED GRADE, OR REMOVING THE FOUNDATION COMPLETELY, BACKFILLING THE RESULTANT DEPRESSION WITH COMPACTED SOIL AND RESTORING THE DISTURBED AREA.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM 202, "LIGHT POLE FOUNDATION REMOVED" FOR EACH FOUNDATION REMOVED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

PULL BOX REMOVED

THIS ITEM OF WORK WILL CONSIST OF REMOVING AND PROPERLY DISPOSING OF AN EXISTING PULL BOX. THE RESULTANT OPENING SHALL THEN BE BACKFILLED TO GRADE WITH SUITABLE COMPACTED SOIL AND RESTORED TO MATCH THE SURROUNDING AREA.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM 202, "PULL BOX REMOVED" FOR EACH PULL BOX REMOVED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

CALCULATED MJH CHECKED KAE

LIGHTING AND TRAFFIC SIGNAL GENERAL NOTES

BEL-70-7.61

POWER SERVICE REMOVED, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF THE REMOVAL AND DISPOSAL OF AN EXISTING POWER SERVICE. INCLUDED FOR REMOVAL WILL BE ALL POWER SERVICE COMPONENTS SUCH AS THE WOOD POLE, WEATHER HEAD AND ALL ABOVE GRADE WIRING, CONTROL CENTER ENCLOSURE, PHOTOELECTRIC CELL AND ALL OTHER APPURTENANCES. THE CABLE ENCLOSED IN THE 2-INCH (50-MILLIMETER) CONDUIT WHICH RUNS INTO THE GROUND SHALL BE CUT WHERE IT EXITS THE 2-INCH (50-MILLIMETER) CONDUIT, APPROXIMATELY 2 FEET (0.6 METER) BELOW THE GROUND, AND SHALL BE REMOVED WITH THE 2-INCH (50-MILLIMETER) CONDUIT. THE REMAINING BURIED CABLE SHALL BE ABANDONED. ALL DISTURBED AREAS SHALL BE RESTORED TO MATCH THE SURROUNDING AREA. ALL POWER SERVICE COMPONENTS INCLUDING THE CONTROL CENTER, POLE, PHOTOELECTRIC CELL, 2-INCH (50-MILLIMETER) CONDUIT, WEATHER HEAD AND ALL ABOVE-GROUND WIRING SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF THE PROJECT SITE. THIS ITEM WILL ALSO COMPENSATE THE CONTRACTOR FOR COORDINATING WITH THE POWER COMPANY TO ENSURE THAT THE COMPANY DISCONNECTS THE SERVICE, AND THAT ITEMS WHICH BELONG TO THE POWER COMPANY AND ARE REMOVED BY THE CONTRACTOR SUCH AS THE METER BASE SHALL BE RETURNED TO THE POWER COMPANY.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM 202, "POWER SERVICE REMOVED, AS PER PLAN" FOR EACH SERVICE REMOVED WHICH SHALL INCLUDE ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

LUMINAIRE, CONVENTIONAL, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ODOT'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, LUMINAIRES FOR CONVENTIONAL LIGHTING UNITS SHALL BE AS FOLLOWS: LUMINAIRES FOR CONVENTIONAL LIGHTING UNITS WITH AN IES II-M-SC DISTRIBUTION AND 200 WATT HIGH PRESSURE SODIUM LAMPS SHALL BE AMERICAN ELECTRIC "SERIES 126" WITH PHOTOMETRIC DISTRIBUTION AE38491, COOPER "OVD" WITH PHOTOMETRIC DISTRIBUTION OVD2S2F, GENERAL ELECTRIC "M-400" WITH PHOTOMETRIC DISTRIBUTION 1014, OR EQUAL AS APPROVED BY THE ENGINEER.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH CMS ITEM 625, "LUMINAIRE, CONVENTIONAL, AS PER PLAN" FOR EACH LUMINAIRE WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

UNDERDRAINS FOR PULL BOXES

REFERENCE IS MADE TO THE STANDARD DRAWINGS FOR DETAILS OF DRAINING PULL BOXES. UNDERDRAINS FOR PULL BOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED APPROXIMATELY 20 FEET (6.1 METERS). AN ANIMAL GUARD SHALL BE INCLUDED AT THE OUTLET END OF THE DRAIN.

CALCULATED MJH | CHECKED KAE

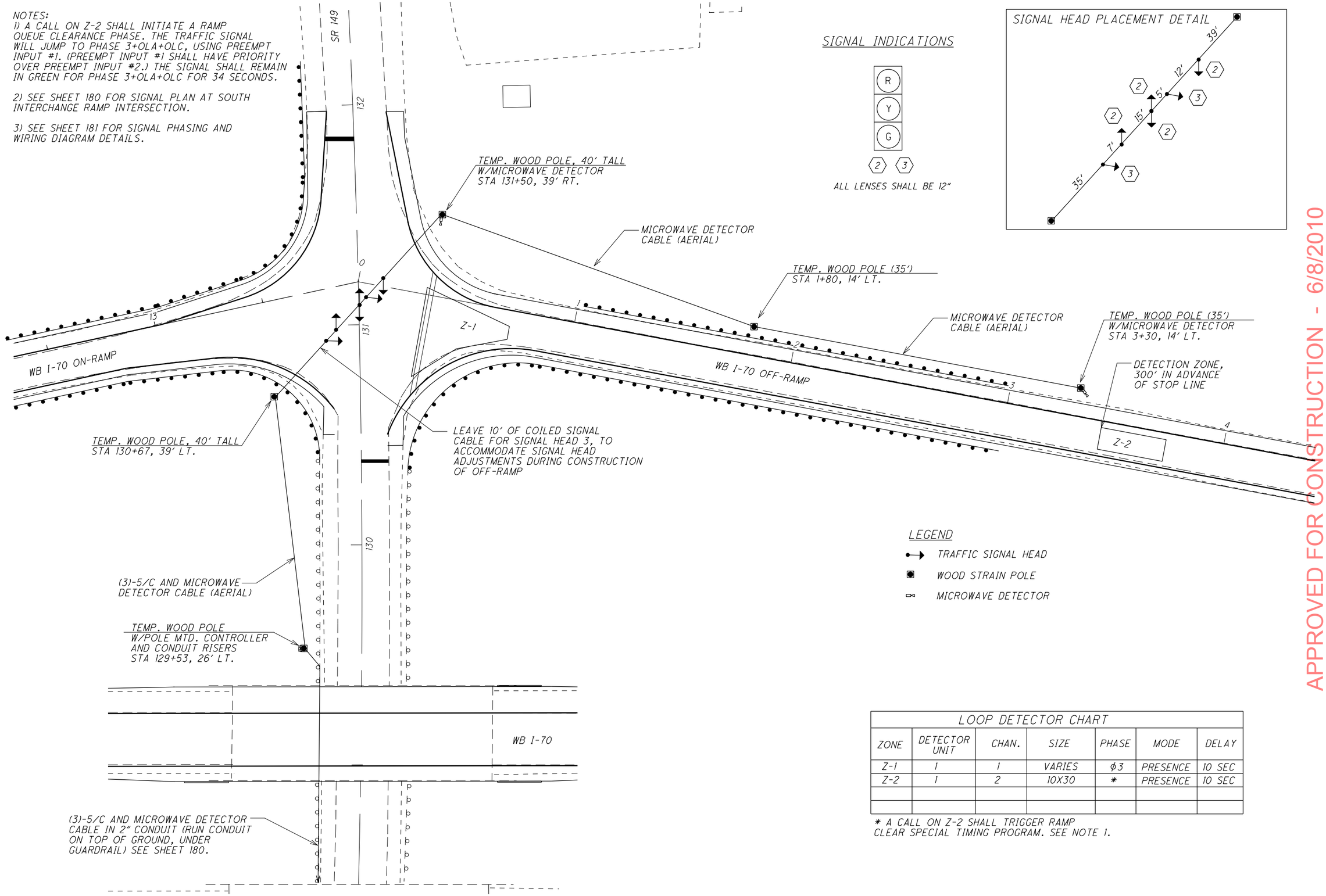
LIGHTING AND TRAFFIC SIGNAL GENERAL NOTES

BEL-70-7.61

NOTES:
1) A CALL ON Z-2 SHALL INITIATE A RAMP QUEUE CLEARANCE PHASE. THE TRAFFIC SIGNAL WILL JUMP TO PHASE 3+OLA+OLC, USING PREEMPT INPUT #1. (PREEMPT INPUT #1 SHALL HAVE PRIORITY OVER PREEMPT INPUT #2.) THE SIGNAL SHALL REMAIN IN GREEN FOR PHASE 3+OLA+OLC FOR 34 SECONDS.

2) SEE SHEET 180 FOR SIGNAL PLAN AT SOUTH INTERCHANGE RAMP INTERSECTION.

3) SEE SHEET 181 FOR SIGNAL PHASING AND WIRING DIAGRAM DETAILS.



SIGNAL INDICATIONS

ALL LENSES SHALL BE 12"

SIGNAL HEAD PLACEMENT DETAIL

LEGEND

- TRAFFIC SIGNAL HEAD
- WOOD STRAIN POLE
- MICROWAVE DETECTOR

LOOP DETECTOR CHART

ZONE	DETECTOR UNIT	CHAN.	SIZE	PHASE	MODE	DELAY
Z-1	1	1	VARIES	ϕ3	PRESENCE	10 SEC
Z-2	1	2	10X30	*	PRESENCE	10 SEC

* A CALL ON Z-2 SHALL TRIGGER RAMP CLEAR SPECIAL TIMING PROGRAM. SEE NOTE 1.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MJH
CHECKED KAE

TEMPORARY SIGNAL PLAN
NORTH INTERCHANGE RAMP

BEL-70-7.61

NOTES:
1) A CALL ON Z-4 SHALL INITIATE A RAMP QUEUE CLEARANCE PHASE. THE TRAFFIC SIGNAL WILL JUMP TO PHASE 4+OLB+OLD, USING THE PREEMPT INPUT #2. (PREEMPT INPUT #1 SHALL HAVE PRIORITY OVER PREEMPT INPUT #2.) THE SIGNAL SHALL REMAIN IN GREEN FOR PHASE 4+OLB+OLD FOR 34 SECONDS.

2) SEE SHEET 179 FOR SIGNAL PLAN AT NORTH INTERCHANGE RAMP INTERSECTION.

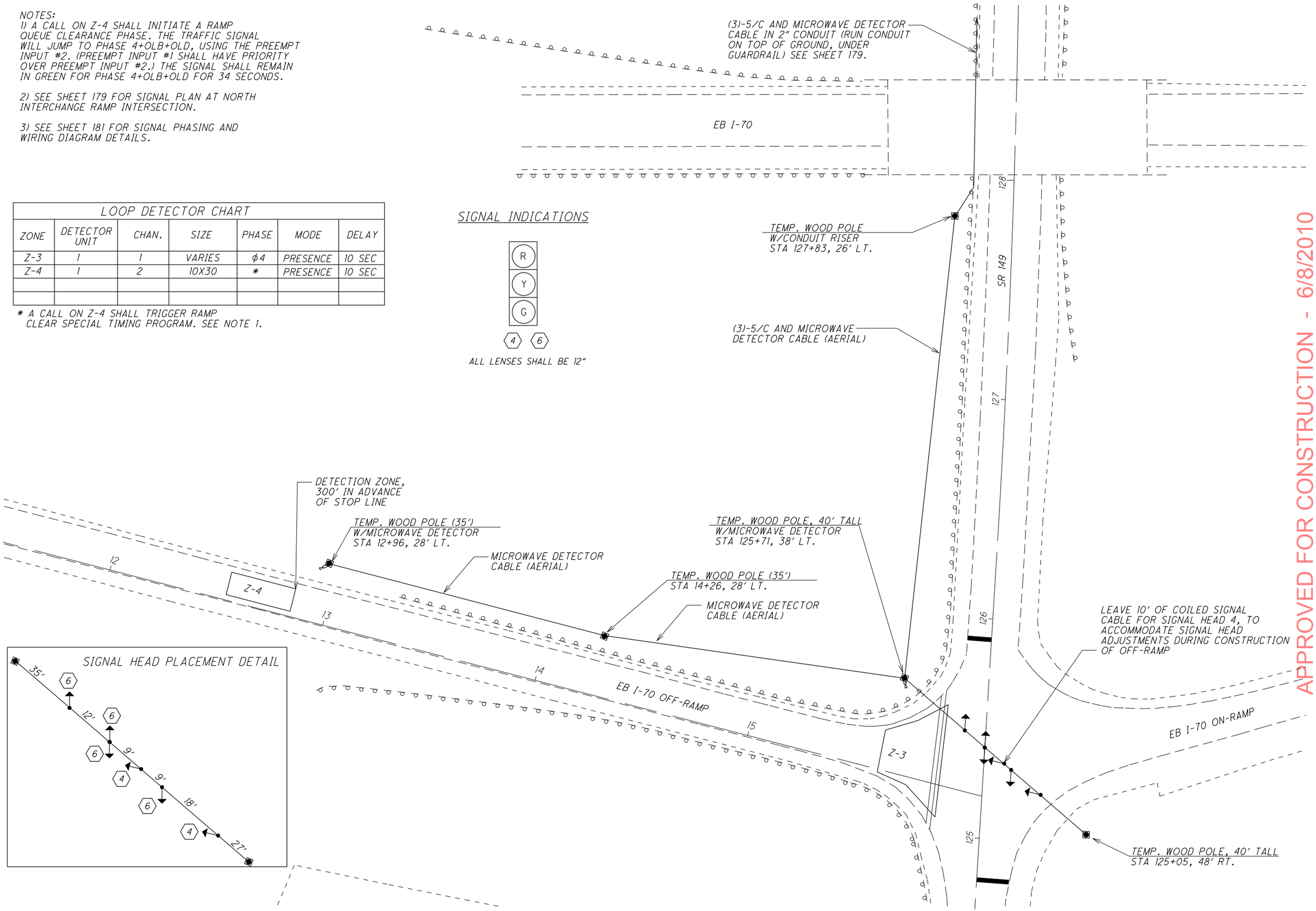
3) SEE SHEET 181 FOR SIGNAL PHASING AND WIRING DIAGRAM DETAILS.

LOOP DETECTOR CHART						
ZONE	DETECTOR UNIT	CHAN.	SIZE	PHASE	MODE	DELAY
Z-3	1	1	VARIES	ϕ4	PRESENCE	10 SEC
Z-4	1	2	10X30	*	PRESENCE	10 SEC

* A CALL ON Z-4 SHALL TRIGGER RAMP CLEAR SPECIAL TIMING PROGRAM. SEE NOTE 1.

SIGNAL INDICATIONS

ALL LENSES SHALL BE 12"



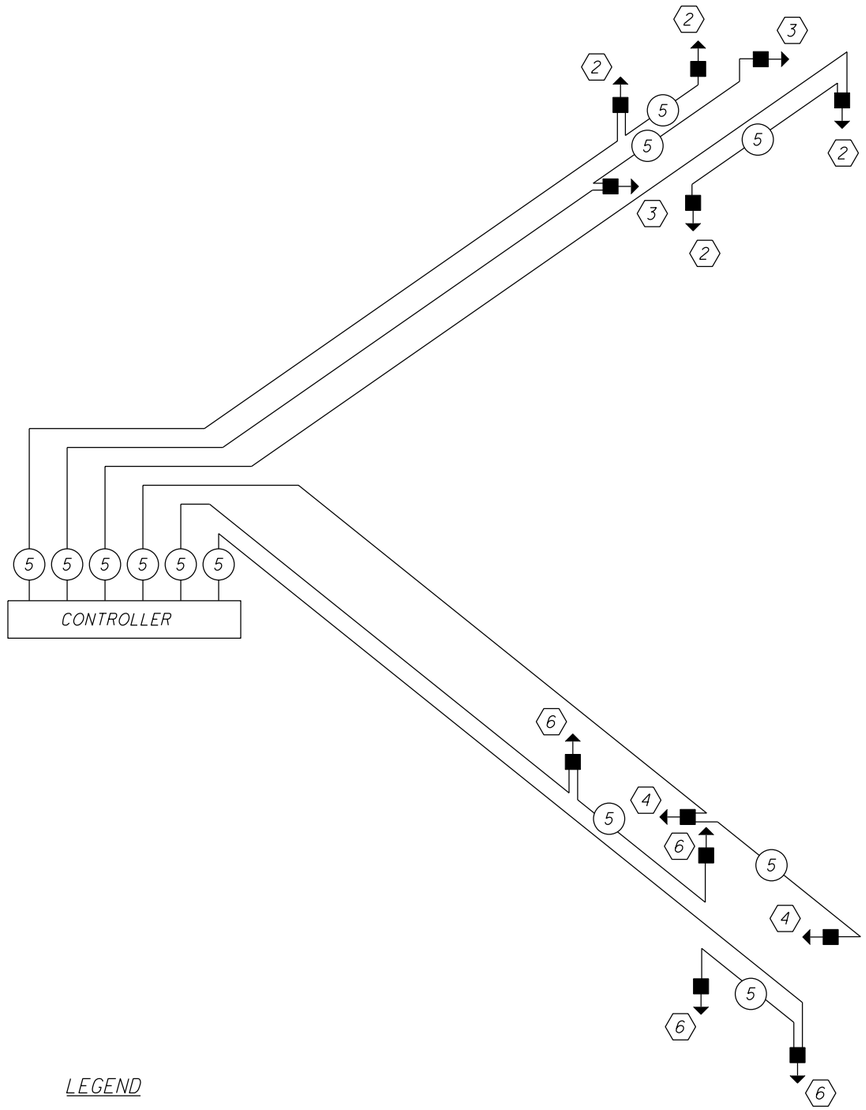
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MJH
CHECKED KAE

APPROVED FOR CONSTRUCTION - 6/8/2010

TEMPORARY SIGNAL PLAN
SOUTH INTERCHANGE RAMP

BEL-70-7.61

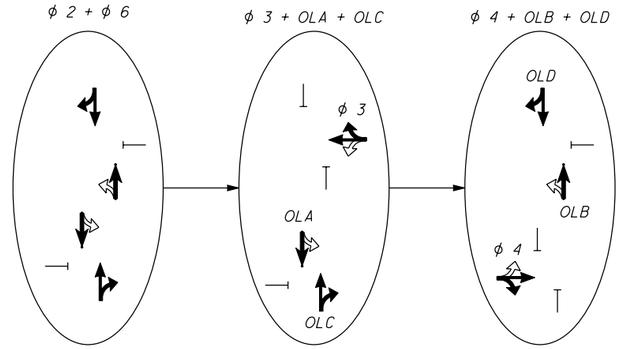


LEGEND

- 3-SECTION SIGNAL HEAD
- 1 — SIGNAL HEAD ID NUMBER
- 5 — 5/C #14 AWG

SIGNAL DISPLAY SCHEDULE															FLASH
	ϕ2+ϕ6					ϕ3+OLA+OLC					ϕ4+OLB+OLD				
SIGNAL	R/W	CLEAR TO ϕ3		CLEAR TO ϕ4		R/W	CLEAR TO ϕ4		CLEAR TO ϕ2+ϕ6		R/W	CLEAR			
2	G	Y	R	G	G	R	R	R	R	R	G	G	G		Y
3	R	R	R	R	R	G	Y	R	Y	R	R	R	R		R
4	R	R	R	R	R	R	R	R	R	R	G	Y	R		R
6	G	G	G	Y	R	G	Y	R	G	G	R	R	R		Y

PHASE DIAGRAM



SIGNAL TIMING			
FUNCTION	PHASE		
	ϕ2+ϕ6	ϕ3	ϕ4
MINIMUM	20.0	7.0	7.0
MAXIMUM	-	20.0	20.0
EXTENSION	-	2.0	2.0
FLASH	Y	R	R
YELLOW CHANGE	5.0	5.0	5.0
ALL RED	2.0	2.0	2.0
RECALL	VEH	-	-

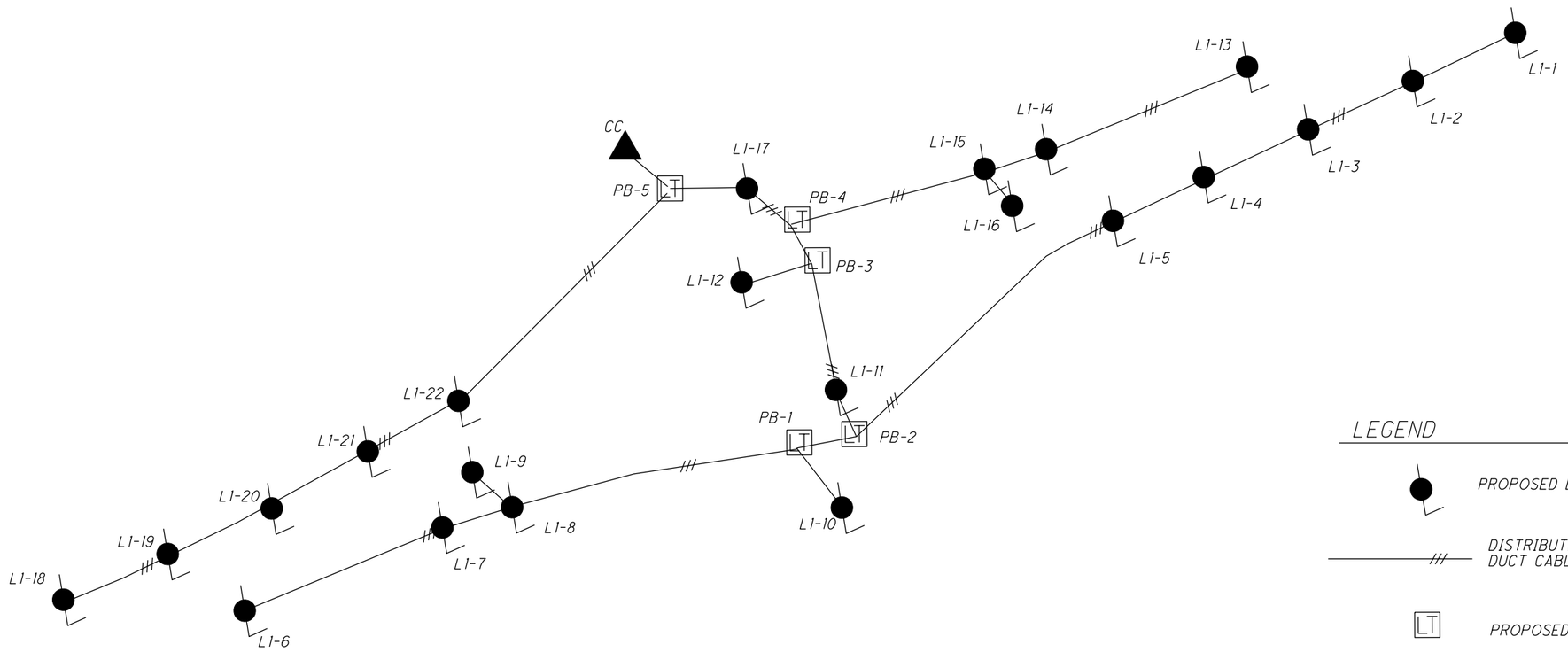
APPROVED FOR CONSTRUCTION - 6/8/2010

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MJH
CHECKED KAE

TEMPORARY SIGNAL PLAN
SIGNAL PHASING AND WIRING DIAGRAM

BEL-70-7.61



CONTROL CENTER DATA									
CONTROL CENTER	LINE VOLTS	CONNECTED LOAD (KVA)	SERVICE ENTRANCE CONDUCTOR SIZE - AWG	ENCLOSURE RATING (AMPS)	CIRCUIT NO.	CIRCUIT LOAD AMPS	CIRCUIT FUSE SIZE AMPS	CIRCUIT CABLE SIZE AWG	MAINTAINING AGENCY
S.R. 149 STA. 132+41	480V	5.9	2/0 AWG	60	1	12.28	60	4 AWG	ODOT

NOTE: FOR ADDITIONAL CONTROL CENTER DETAILS, SEE STANDARD DRAWINGS

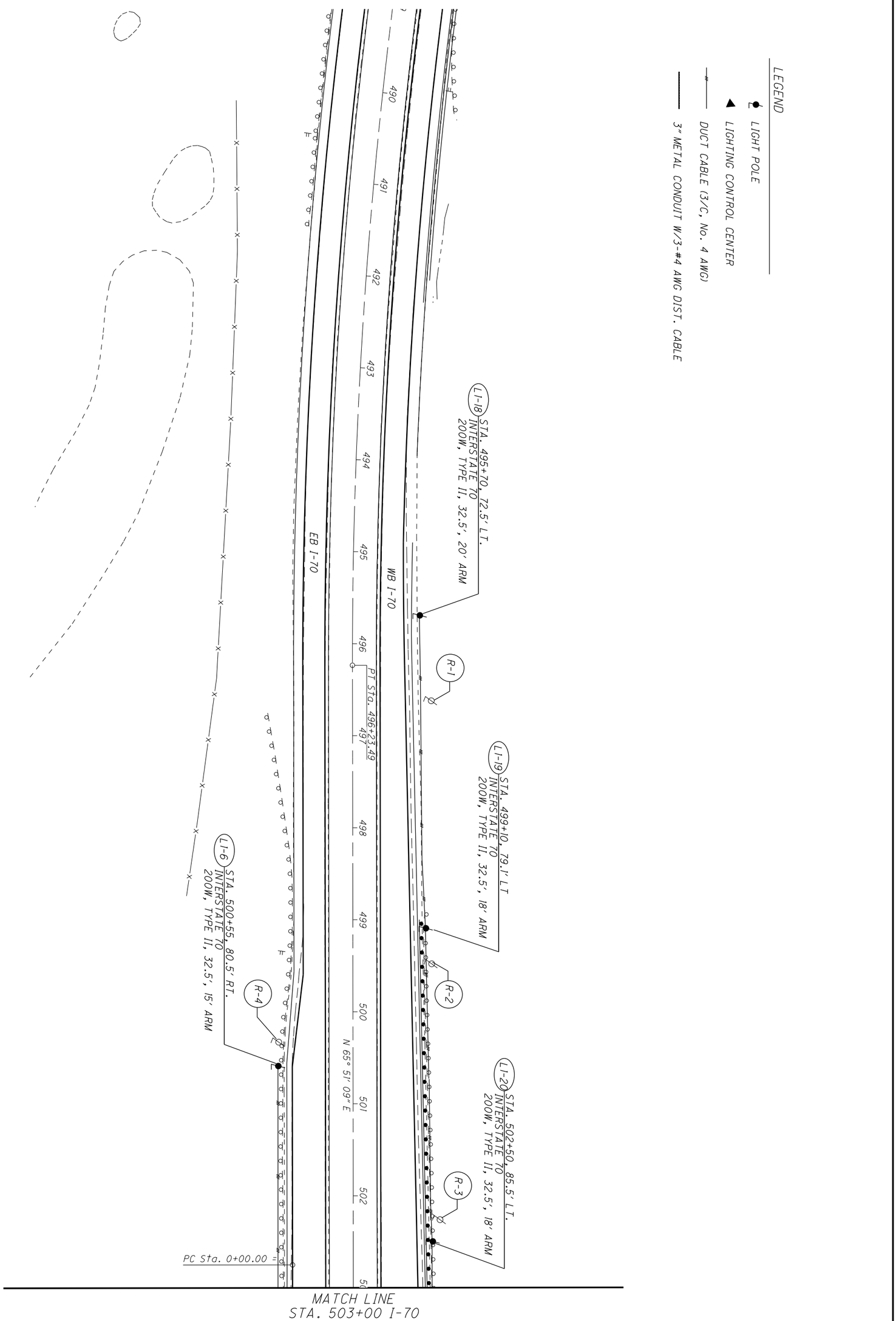
SCHEMATIC NOT TO SCALE

CALCULATED MJH
CHECKED KAE

APPROVED FOR CONSTRUCTION - 6/8/2010

LIGHTING CIRCUIT DIAGRAM

BEL-70-7.61

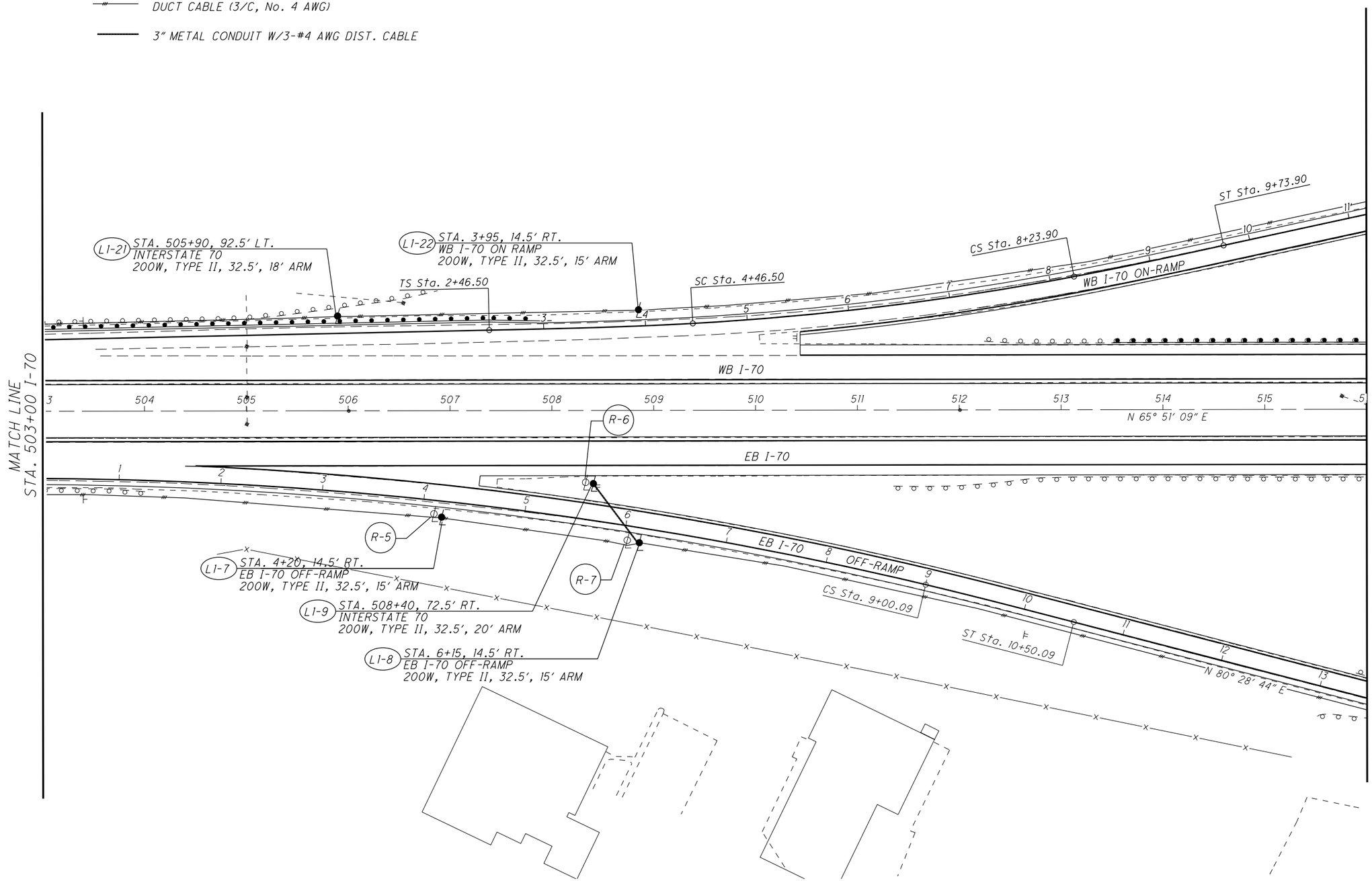


APPROVED FOR CONSTRUCTION - 6/8/2010

183 / 210	BEL-70-7.61	LIGHTING PLAN STA. 489+00 TO STA. 503+00	CALCULATED MJH CHECKED KAE	0 50 25 100 HORIZONTAL SCALE IN FEET

LEGEND

- LIGHT POLE
- LIGHTING CONTROL CENTER
- DUCT CABLE (3/C, No. 4 AWG)
- 3" METAL CONDUIT W/3-#4 AWG DIST. CABLE



HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED MJH
CHECKED KAE

APPROVED FOR CONSTRUCTION - 6/8/2010

LIGHTING PLAN
STA. 503+00 TO STA. 516+00

BEL-70-7.61

CC STA. 132+41, 50.0' LT.
STATE ROUTE 149
LIGHTING CONTROL CENTER

R-8

PB-5 PULL BOX, 24"
W/(3)-CABLE SPLICE KITS
STA. 132+30, 24' LT.
STATE ROUTE 149

R-9

STA. 131+90, 31.5' RT. L1-17
STATE ROUTE 149
200W, TYPE II, 32.5', 15' ARM

PULL BOX, 18" PB-4
W/(3)-CABLE SPLICE KITS
STA. 131+29, 47' RT.
STATE ROUTE 149

N 53° 39' 32" E WB I-70 ON-RAMP

R-10

PULL BOX, 24" PB-3
W/(3)-CABLE SPLICE KITS
STA. 130+58, 24' RT.
STATE ROUTE 149

L1-12 STA. 130+30, 28.5' LT.
STATE ROUTE 149
200W, TYPE II, 32.5', 18' ARM

N 76° 32' 28" E
WB I-70 OFF-RAMP

TS Sta. 5+60.93

SC Sta. 7+10.93

STA. 7+35, 14.5' LT. L1-15
WB I-70 OFF-RAMP
200W, TYPE II, 32.5', 15' ARM

STA. 526+40, 72.5' LT. L1-16
INTERSTATE 70
200W, TYPE II, 32.5', 20' ARM

R-13

STA. 9+25, 16.5' LT. L1-14
WB I-70 OFF-RAMP
200W, TYPE II, 32.5', 18' ARM

R-15

WB I-70

N 65° 51' 09" E

R-14

EB I-70

MATCH LINE
STA. 516+00 I-70

MATCH LINE
STA. 530+00 I-70

SR 149

STA. 126+13, 28.7' RT. L1-11
STATE ROUTE 149
200W, TYPE II, 32.5', 18' ARM

PC Sta. 126+25.71

R-11

PC Sta. 1+43.11

PT Sta. 2+56.78

TS Sta. 4+38.98

SC Sta. 6+38.98

EB I-70 ON-RAMP

CS Sta. 9+40.17

ST Sta

L1-5 STA. 10+75, 14.5' RT.
EB I-70 ON-RAMP
200W, TYPE II, 32.5', 15' ARM

N44°39'32"E

EB I-70 OFF-RAMP

N51°28'44"E

PB-1 PULL BOX, 24"
W/(3)-CABLE SPLICE KITS
STA. 125+02, 41.0' LT.
STATE ROUTE 149

R-12

PULL BOX, 24" PB-2
W/(3)-CABLE SPLICE KITS
STA. 125+02, 45.0' RT.
STATE ROUTE 149

N 20° 31' 16" W

POT Sta. 124+00.00

L1-10 STA. 124+81, 31.8' LT.
STATE ROUTE 149
200W, TYPE II, 32.5', 18' ARM

LEGEND

- LIGHT POLE
- LIGHTING CONTROL CENTER
- DUCT CABLE (3/C, No. 4 AWG)
- 3" METAL CONDUIT W/3-#4 AWG DIST. CABLE

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MJH
CHECKED KAE

APPROVED FOR CONSTRUCTION - 6/8/2010

LIGHTING PLAN
STA. 516+00 TO STA. 530+00

BEL-70-7.61

185
210

LEGEND

- LIGHT POLE
- LIGHTING CONTROL CENTER
- DUCT CABLE (3/C, No. 4 AWG)
- 3" METAL CONDUIT W/3-#4 AWG DIST. CABLE

MATCH LINE
STA. 530+00 I-70

STA. 534+45, 82.5' LT.
INTERSTATE 70
200W, TYPE II, 32.5', 18' ARM
L1-13

R-16

PT Sta. 13+48.51 =

12

13

WB I-70

530 531 532 533 534 535 536 537 538 539 540 541 542 543

N 65° 51' 09" E

EB I-70

R-17

R-18

R-19

L1-4 STA. 531+90, 90.9' RT.
INTERSTATE 70
200W, TYPE II, 32.5', 18' ARM

L1-3 STA. 535+30, 84.5' RT.
INTERSTATE 70
200W, TYPE II, 32.5', 18' ARM

L1-2 STA. 538+70, 77.2' RT.
INTERSTATE 70
200W, TYPE II, 32.5', 18' ARM

L1-1 STA. 542+10, 72.5' RT.
INTERSTATE 70
200W, TYPE II, 32.5', 20' ARM

HORIZONTAL SCALE IN FEET
0 25 50 100

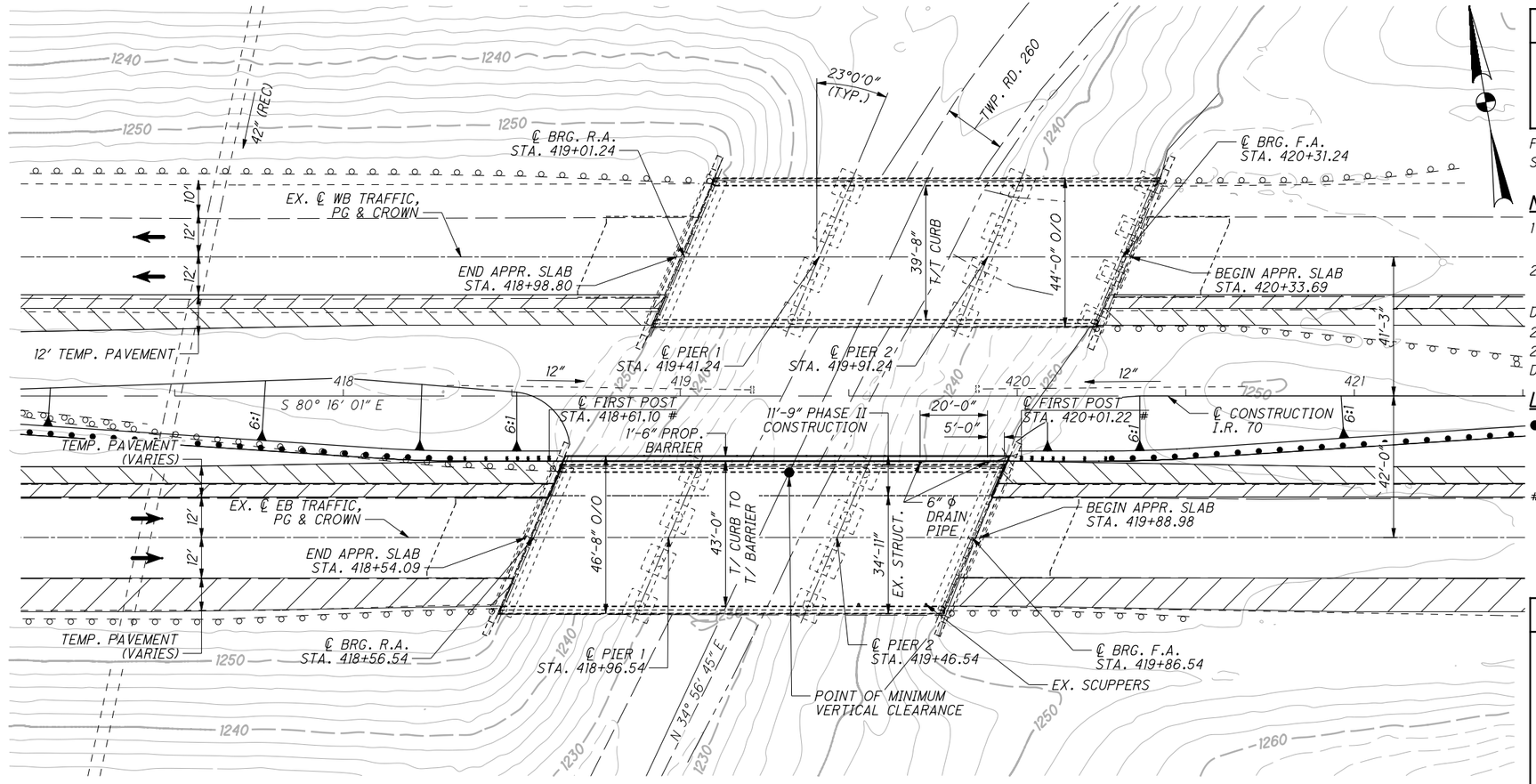
CALCULATED MJH
CHECKED KAE

APPROVED FOR CONSTRUCTION - 6/8/2010

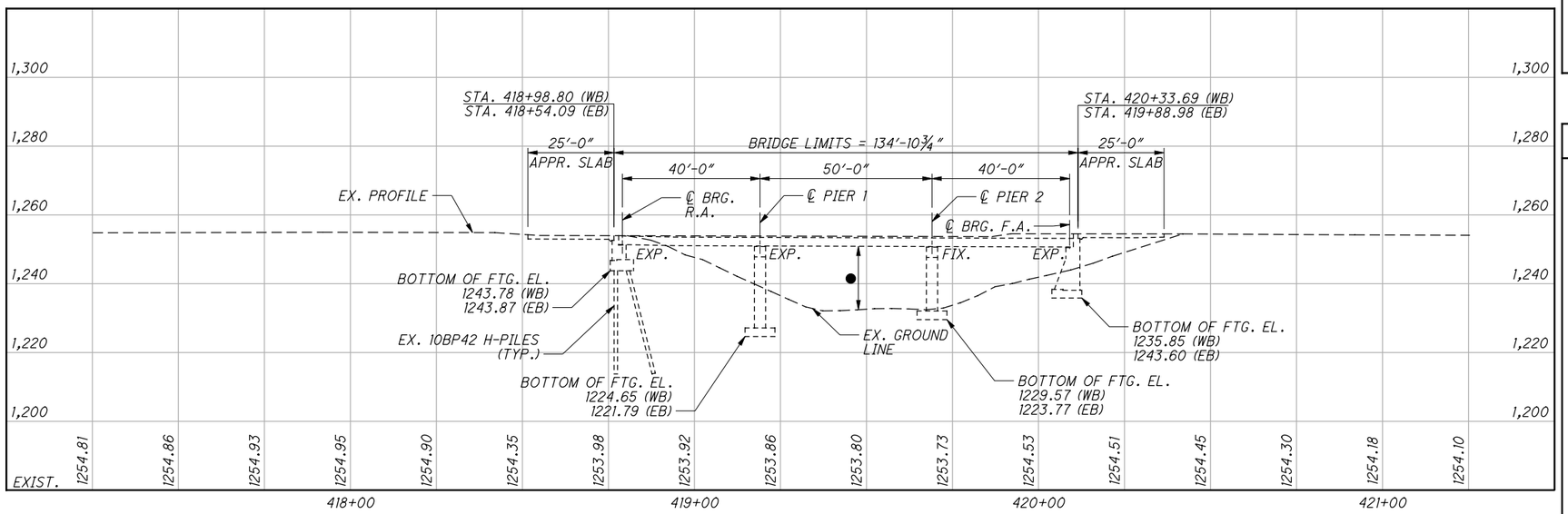
LIGHTING PLAN
STA. 530+00 TO STA 544+00

BEL-70-7.61

186
210



PLAN



PROFILE ALONG EB PROFILE GRADE

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 4A/210

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. 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

● - 15.7' EXISTING MINIMUM VERTICAL CLEARANCE BOTH BRIDGES
15.7' PROPOSED MINIMUM VERTICAL CLEARANCE BOTH BRIDGES
15.5' REQUIRED MINIMUM VERTICAL CLEARANCE BOTH BRIDGES

BRIDGE TERMINAL ASSEMBLY TYPE 1 BRIDGE TERMINAL ASSEMBLIES ARE INCLUDED WITH ROADWAY QUANTITIES FOR PAYMENT

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
LOADING: CF 2000 (57)
SKEW: 23°00'00" LF
APPROACH SLABS: AS-1-54 (25' LONG)
WEARING SURFACE: MICROSILICA MODIFIED CONCRETE OVERLAY
ALIGNMENT: TANGENT
CROWN: 0.0156
STRUCTURAL FILE NUMBER: 0702137L/0702161R
DATE BUILT: 1964

PROPOSED STRUCTURE (EB)

PROPOSED WORK: REMOVE PORTIONS OF EXISTING EASTBOUND BRIDGE. WIDEN CONCRETE DECK.
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/SAFETY CURB TO T/BARRIER (EB)
LOADING: HS20 AND THE ALTERNATE MILITARY LOADING
SKEW: 23°00'00" LF
APPROACH SLABS: AS-1-54 (25' LONG)
WEARING SURFACE: 1" MONOLITHIC CONCRETE AND MICROSILICA MODIFIED CONCRETE OVERLAY
ALIGNMENT: TANGENT
CROWN: 0.0156
COORDINATES: LATITUDE 40°3'32" N
LONGITUDE 81°5'14" W

APPROVED FOR CONSTRUCTION - 6/8/2010

E.L. ROBINSON
The Challenge to be Choice.
1901 Watermark Drive, Suite 310 - Columbus, Ohio 43215

DESIGNED DTA/BMG | DRAWN FIB | REVIEWED DFT | DATE 3/10
CHECKED AME | REVISED | STRUCTURE FILE NUMBER 0702137L/0702161R

BELMONT COUNTY (WESTBOUND)
STA. 418+98.80
STA. 420+33.69

BELMONT COUNTY (EASTBOUND)
STA. 418+54.09
STA. 419+88.98

SITE PLAN
BRIDGE NO. BEL-70-0775 L/R
I.R. 70 OVER TWP. RD. 260

BEL-70-7.61
PID No. 76825

1 / 11

187/210

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REFER TO THE FOLLOWING STANDARD DRAWINGS:

PCB-91	REVISED 7-19-02
SBR-1-99	REVISED 7-19-02

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAYS AND TRANSPORTATION OFFICIALS 2002, 17th EDITION AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN DATA:

DESIGN LOADING -
SUPERSTRUCTURE - HS20, CASE I AND THE ALTERNATE MILITARY LOADING

CONCRETE CLASS S - COMPRESSIVE STRENGTH 4500 PSI
(SUPERSTRUCTURE)

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

DECK PROTECTION METHOD:

3½" CONCRETE COVER

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.

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.

MAINTENANCE OF TRAFFIC

SEE ROADWAY PLANS FOR ADDITIONAL MAINTENEANCE OF TRAFFIC NOTES AND DETAILS.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

THIS WORK CONSISTS OF THE REMOVAL OF CONCRETE DECKS INCLUDING PARAPETS AND OTHER APPURTENANCES FROM STEEL SUPPORTING SYSTEMS (BEAMS, GIRDERS, CROSS FRAMES, ETC.). THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS501.05.

PROTECTION OF STEEL SUPPORT SYSTEMS:

BEFORE DECK SLAB CUTTING IS PERMITTED, DRAW THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK ON THE SURFACE OF THE DECK. DRILL SMALL DIAMETER PILOT HOLES 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF FLANGE EDGES. DECK CUTS OVER OR WITHIN 2 INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 2 INCHES OF FLANGE EDGES MAY EXTEND THE FULL DEPTH OF THE DECK. PERFORM WORK CAREFULLY DURING CUTTING OF THE DECK SLAB TO AVOID DAMAGING STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURE. REPLACE OR REPAIR STEEL MEMBERS DAMAGED BY THE DECK SLAB CUTTING OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE DIRECTOR. OBTAIN THE DIRECTOR'S APPROVAL BEFORE PERFORMING REPAIR.

REMOVAL METHODS:

THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS AROUND THE EXPANSION JOINTS, THE CONTRACTOR MUST USE HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS OVER STRUCTURAL MEMBERS, THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO EXCEED 90 POUNDS UNLESS APPROVED BY THE ENGINEER. REMOVAL METHODS OVER STRUCTURAL MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STRUCTURAL MEMBERS.

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.

MEASUREMENT & PAYMENT

THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

E.L. ROBINSON
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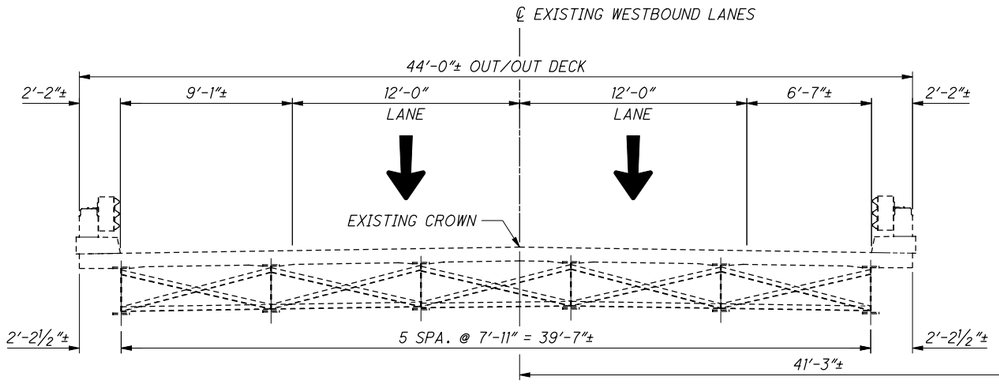
1901 Watermark Drive, Suite 310 - Columbus, Ohio 43215

DESIGNED	DRAWN	REVIEWED	DATE
DTA	DTA	DFT	3/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
AME		0702137L/0702161R	

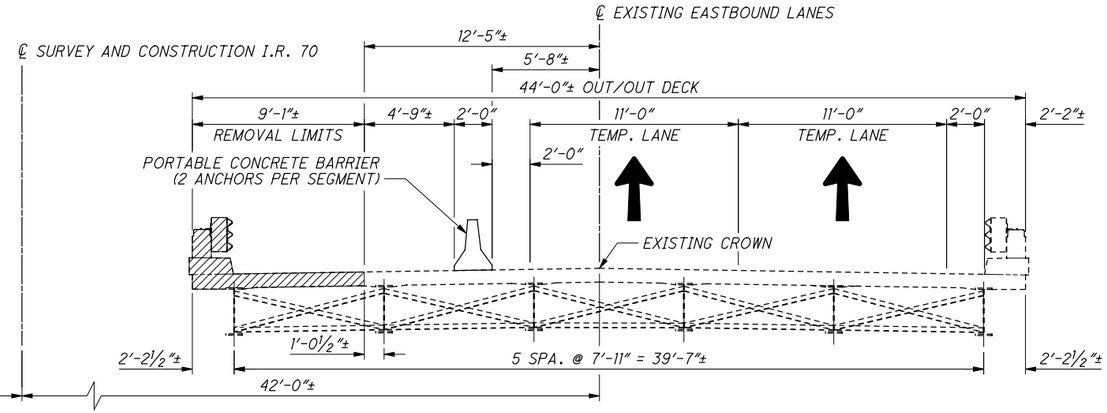
GENERAL NOTES

BRIDGE NO. BEL-70-0775 L/R
I.R. 70 OVER TWP. RD. 260

BEL-70-7.61
PID No. 76825

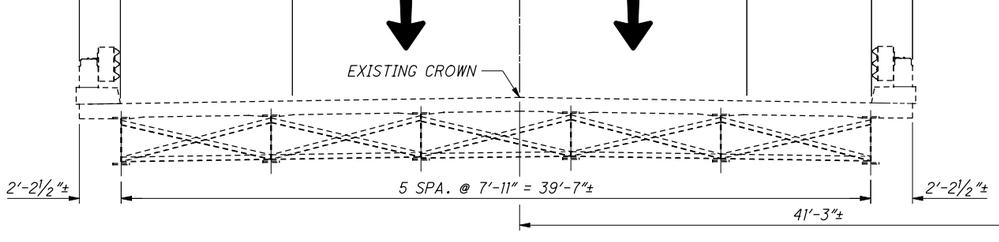


LEFT BRIDGE
(WESTBOUND)

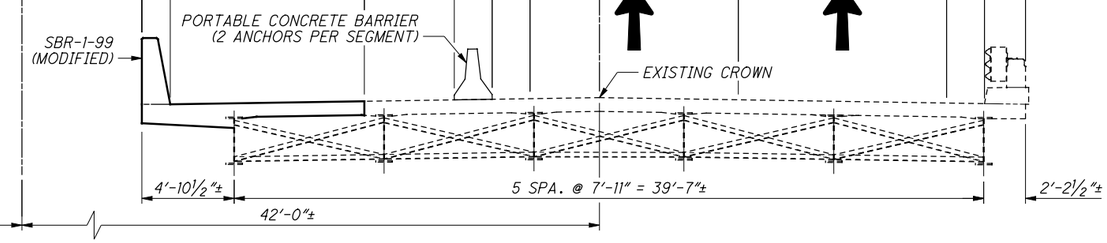


RIGHT BRIDGE
(EASTBOUND)

PHASE II - REMOVAL



LEFT BRIDGE
(WESTBOUND)



RIGHT BRIDGE
(EASTBOUND)

PHASE II - CONSTRUCTION

PHASE II - REMOVAL

1. INSTALL PORTABLE CONCRETE BARRIERS. DIRECT EASTBOUND TRAFFIC AS REQUIRED.
2. REMOVE EXISTING DECK SLAB TO THE LIMITS SHOWN IN THE PLANS. SALVAGE THE EXISTING EXPANSION JOINT ARMOR AND STRIP SEAL DURING DECK REMOVAL.

PHASE II - CONSTRUCTION

1. CONSTRUCT TEMPORARY EMBANKMENT AND TEMPORARY ROADWAY PAVEMENT AT BRIDGE APPROACHES.
2. CONSTRUCT WIDENED DECK AND PROPOSED PARAPET TO THE LIMITS SHOWN IN THE PLANS.

LEGEND:

LIMITS OF REMOVAL

APPROVED FOR CONSTRUCTION - 6/8/2010

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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

3 / 11

189
210

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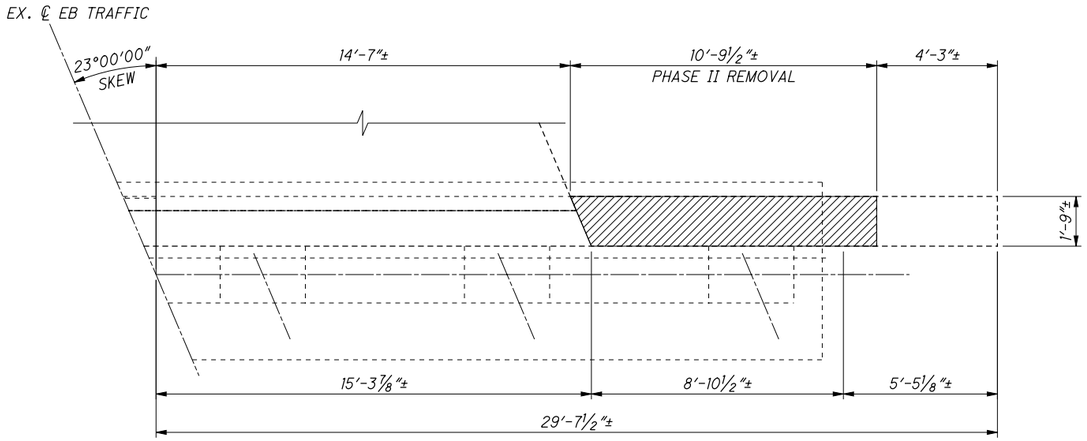
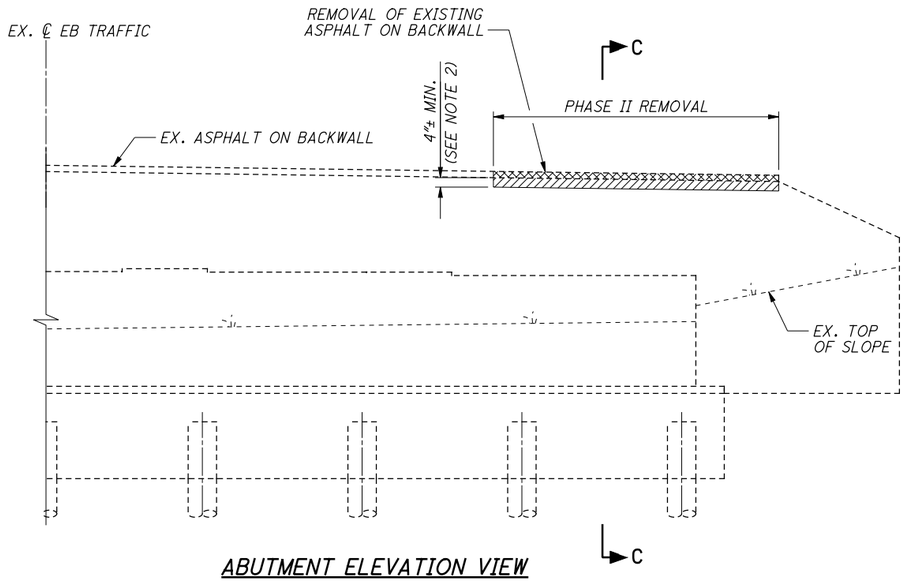


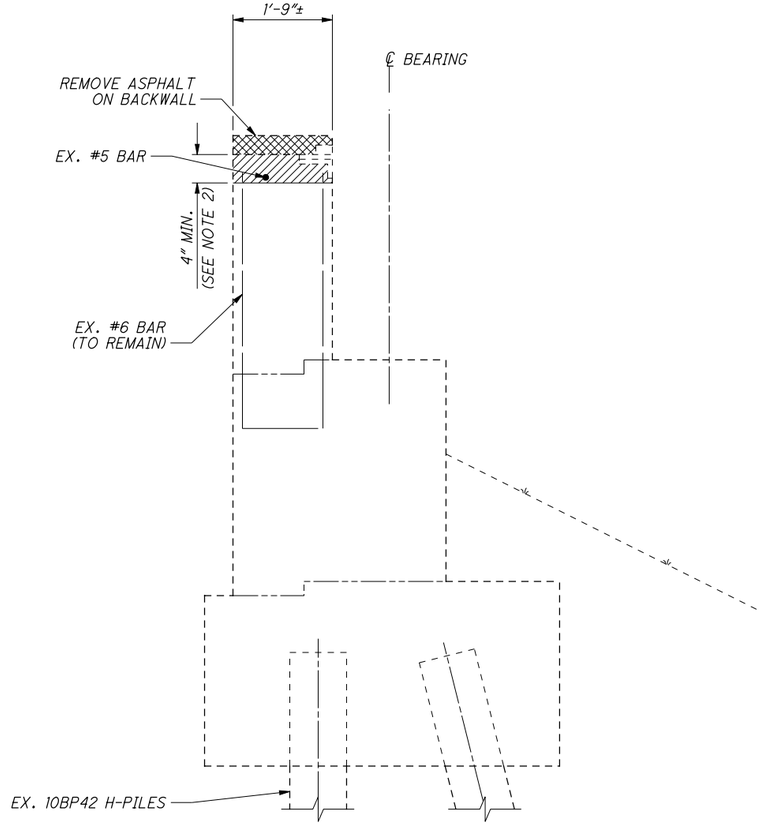
ABUTMENT PLAN VIEW

(REAR ABUTMENT SHOWN, FORWARD ABUTMENT OPPOSITE HAND)



ABUTMENT ELEVATION VIEW

(REAR ABUTMENT SHOWN, FORWARD ABUTMENT OPPOSITE HAND)



SECTION C-C

LEGEND:

- ASPHALT REMOVED
- PORTIONS OF STRUCTURE REMOVED

NOTES:

1. SALVAGE THE EXISTING EXPANSION JOINT ARMOR AND STRIP SEAL DURING DECK REMOVAL AND REINCORPORATE INTO THE PROPOSED DECK AND BACKWALL.
2. REMOVE BACKWALL CONCRETE TO A DEPTH NOT LESS THAN ½ INCH BELOW HORIZONTAL #5 REINFORCING STEEL.

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AME		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

4 / 11

190
210

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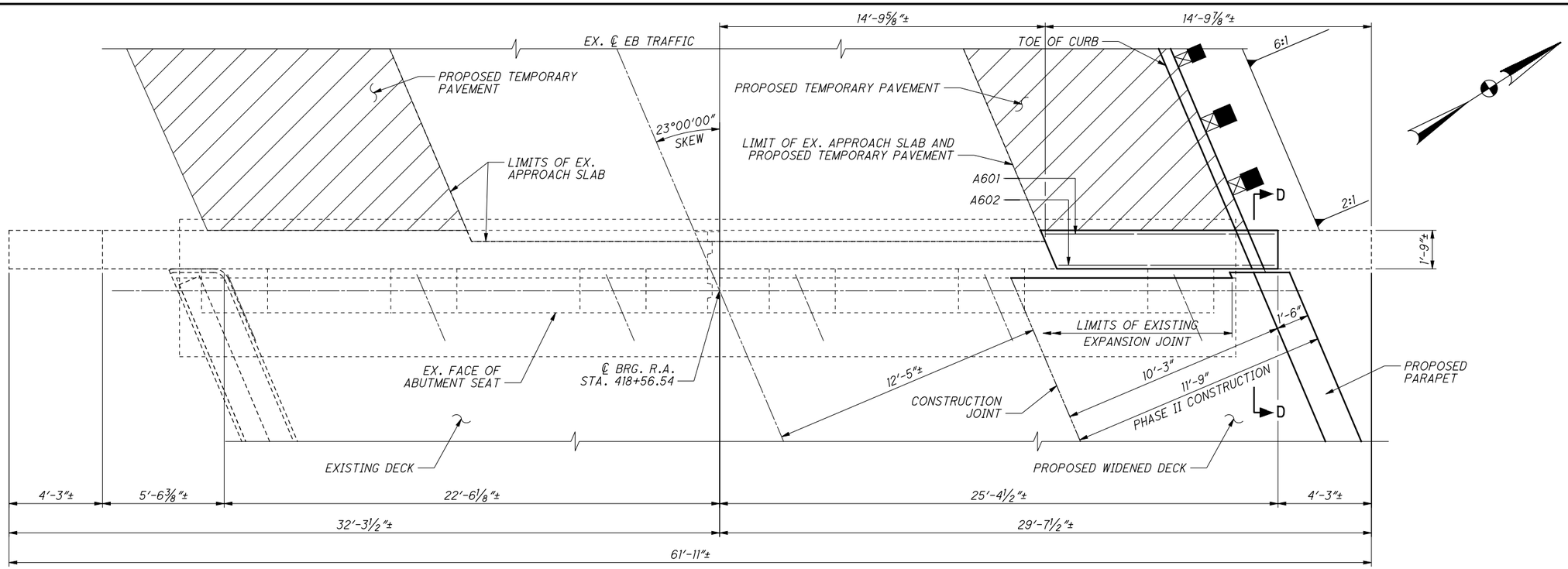
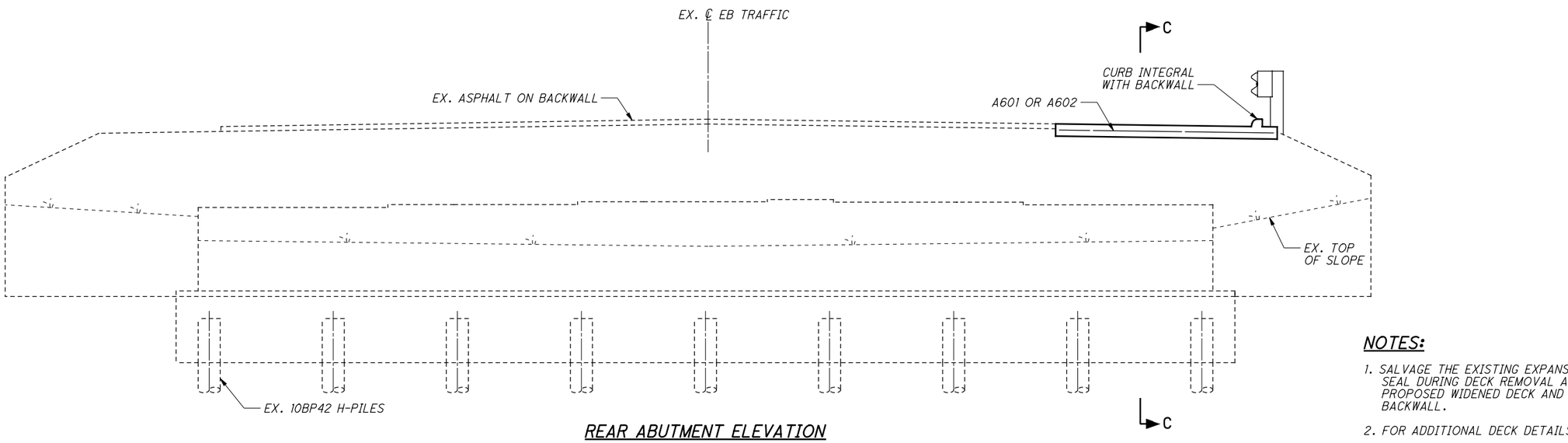


REAR ABUTMENT PLAN
RIGHT BRIDGE



REAR ABUTMENT ELEVATION
RIGHT BRIDGE

NOTES:

1. SALVAGE THE EXISTING EXPANSION JOINT ARMOR AND STRIP SEAL DURING DECK REMOVAL AND REINCORPORATE INTO THE PROPOSED WIDENED DECK AND TEMPORARY PAVEMENT ON BACKWALL.
2. FOR ADDITIONAL DECK DETAILS SEE SHEET 9/11.
3. FOR SECTIONS C-C AND D-D SEE SHEET 7/11.

APPROVED FOR CONSTRUCTION - 6/8/2010

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the Challenge to be Chosen
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AME		0702137L/0702161R	

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

5 / 11

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210

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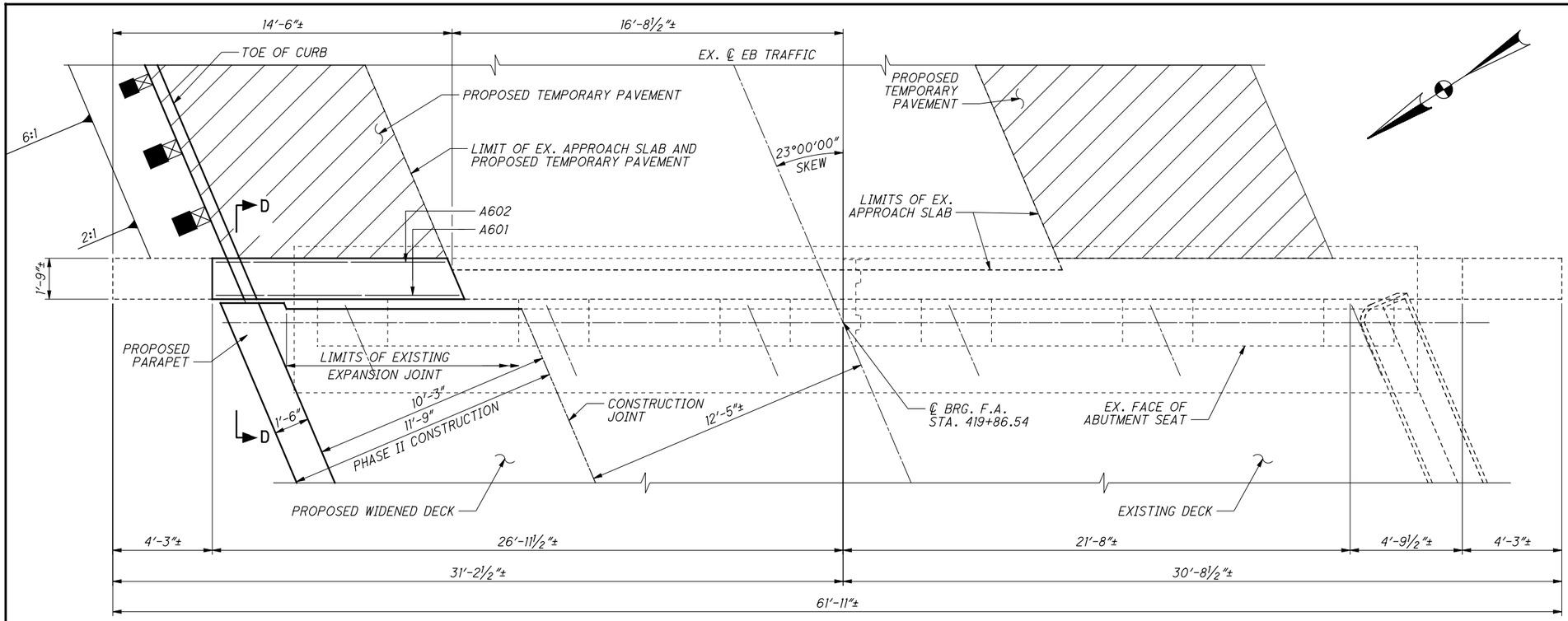
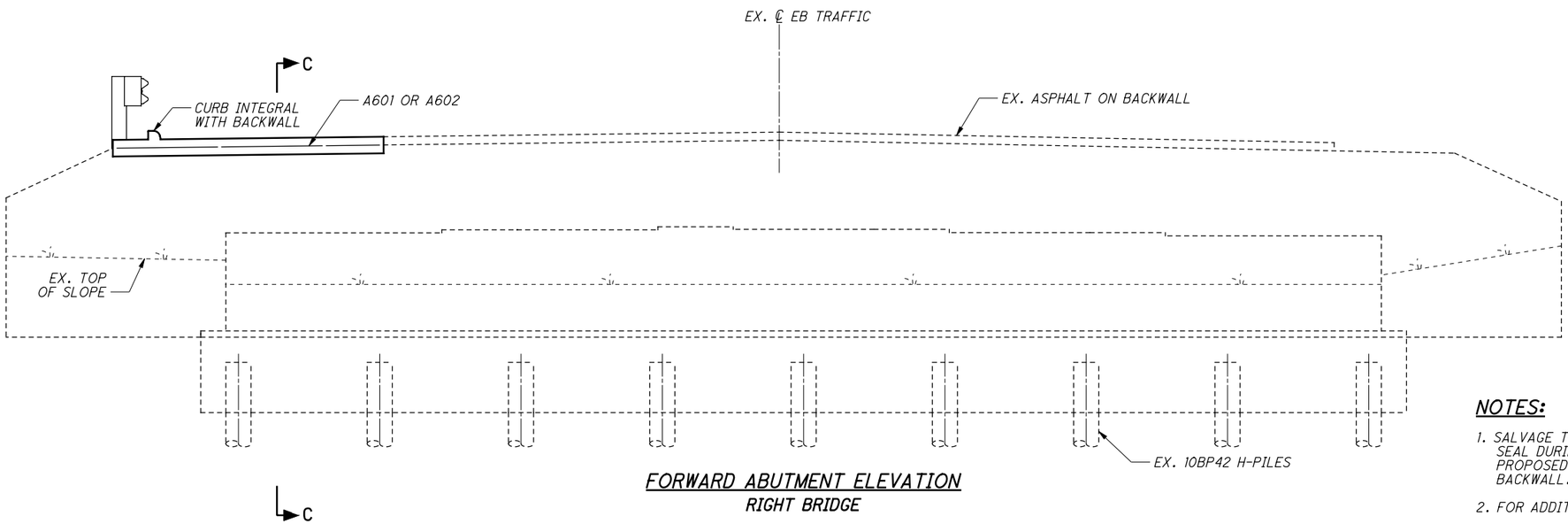


FORWARD ABUTMENT PLAN
RIGHT BRIDGE



FORWARD ABUTMENT ELEVATION
RIGHT BRIDGE

NOTES:

1. SALVAGE THE EXISTING EXPANSION JOINT ARMOR AND STRIP SEAL DURING DECK REMOVAL AND REINCORPORATE INTO THE PROPOSED WIDENED DECK AND TEMPORARY PAVEMENT ON BACKWALL.
2. FOR ADDITIONAL DECK DETAILS SEE SHEET 9/11.
3. FOR SECTIONS C-C AND D-D SEE SHEET 7/11.

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FORWARD 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

6 / 11

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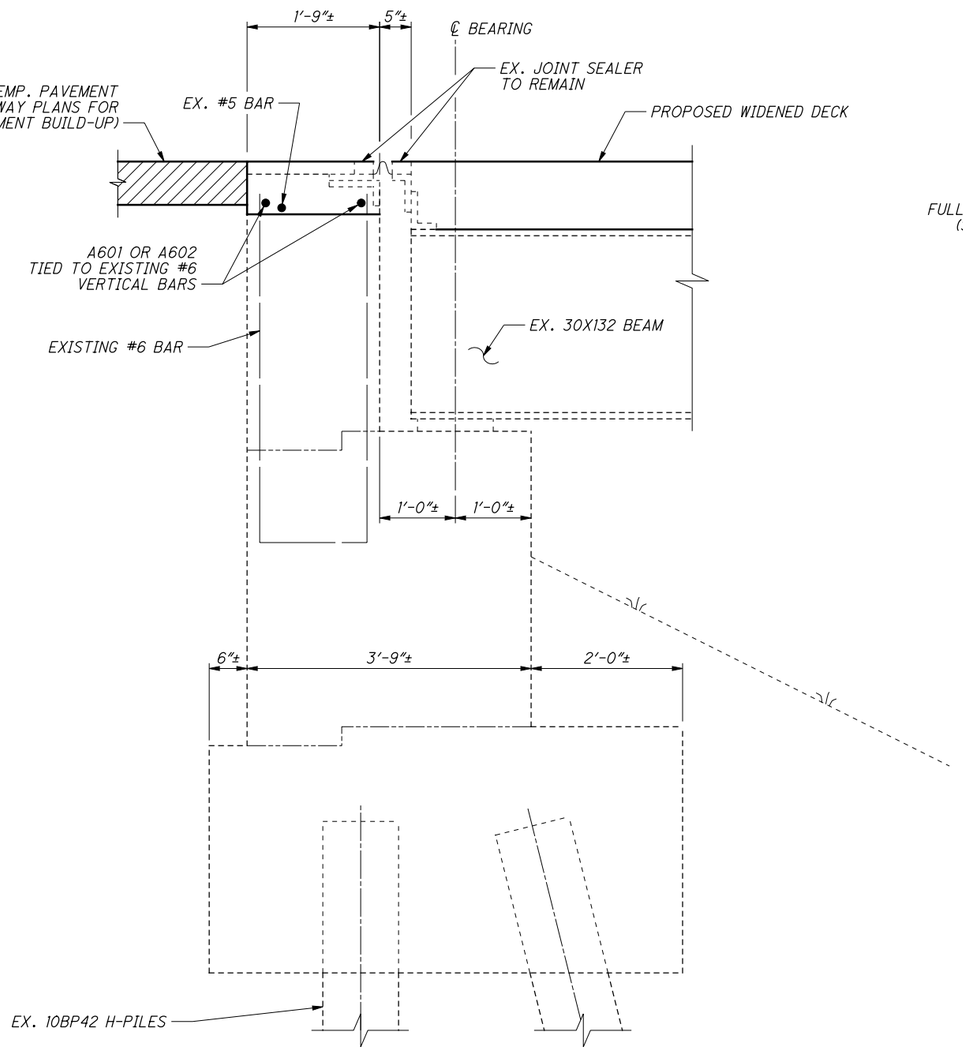
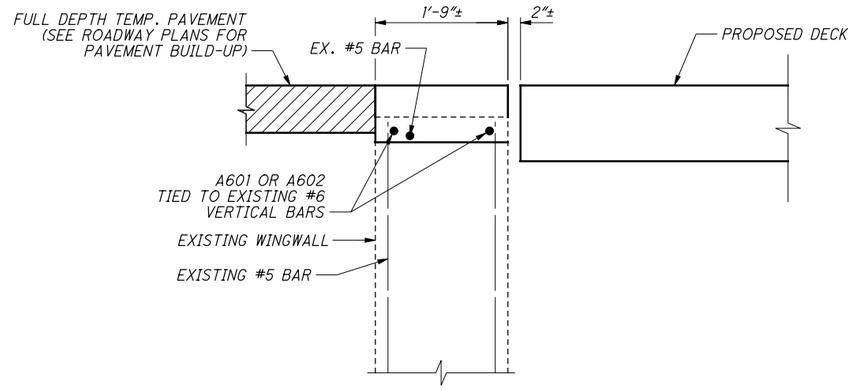


SECTION C-C



SECTION D-D

NOTES:

FOR LOCATION OF SECTIONS C-C AND D-D SEE SHEET 5/11 & 6/11.

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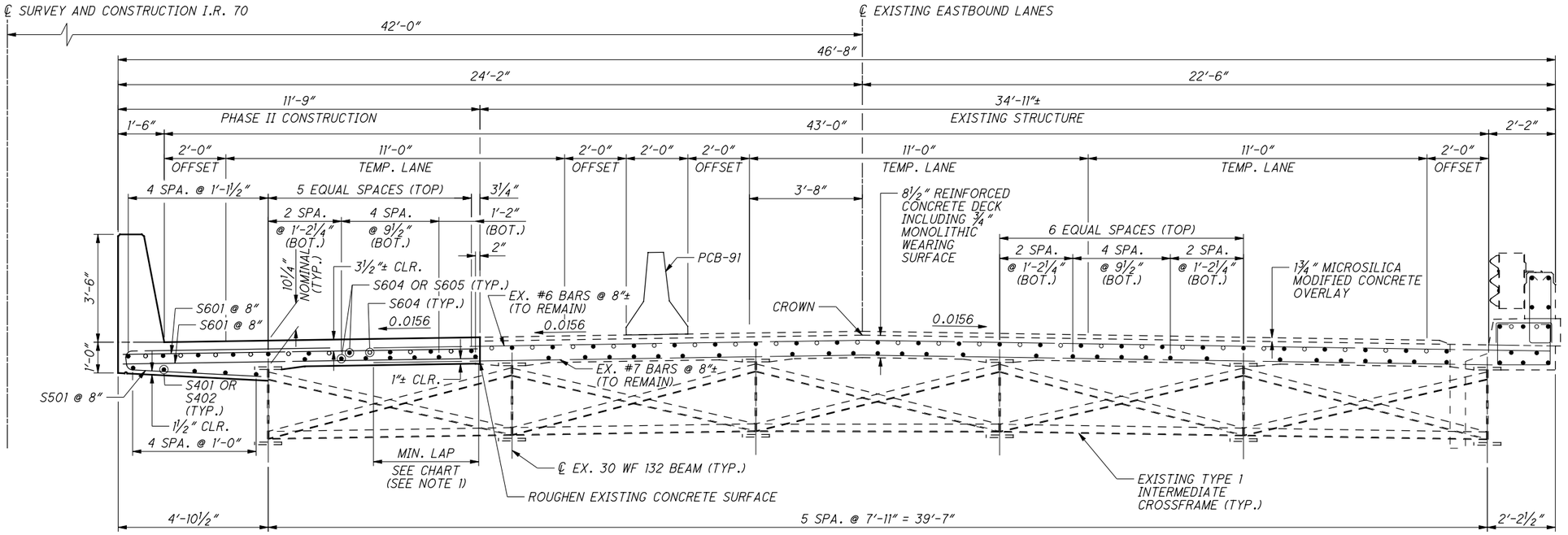
DESIGNED	DRAWN	REVIEWED	DATE
DTA	DTA	DFT	3/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
AME		0702137L/0702161R	

ABUTMENT DETAILS - RIGHT BRIDGE

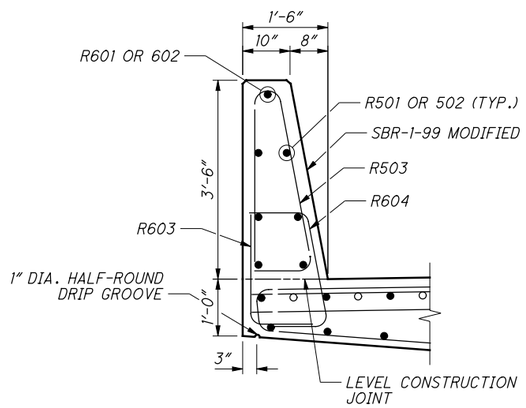
BRIDGE NO. BEL-70-0775 L/R
I.R. 70 OVER TWP. RD. 260

BEL-70-7.61
PID No. 76825



TRANSVERSE SECTION

REQUIRED LAP LENGTHS	
NO. 6 & 7 BARS	3'-1" MIN.



PARAPET DETAIL

(THE CONTRACTOR SHALL HAVE THE OPTION OF USING THE STANDARD SBR-1-99)

NOTES:

1. RETAIN A SUFFICIENT LENGTH OF THE EXISTING TRANSVERSE #6 AND #7 BARS TO ACHIEVE THE MINIMUM LAP LENGTHS INDICATED IN THE TABLE ABOVE.
2. FOR PARAPET REINFORCING DETAILS SEE SHEETS 9/11 AND 10/11 .
3. FOR SLAB PLAN, SEE SHEET 9/11 .
4. FOR DECK ELEVATIONS, SEE SHEET 9/11 .
5. FOR REINFORCEMENT SCHEDULE, SEE SHEET 11/11 .

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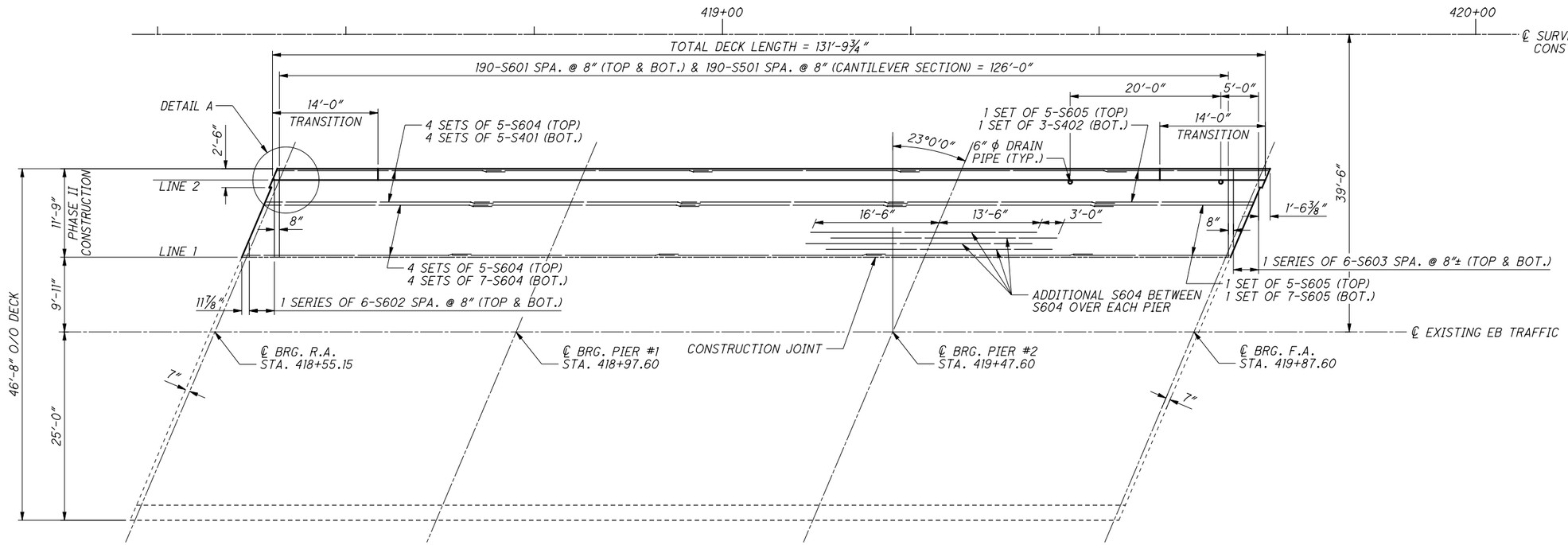
DESIGNED	DRAWN	REVIEWED	DATE
TJE	TJE	DFT	3/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
AME		070213TL/070216IR	

TRANSVERSE SECTION - RIGHT BRIDGE

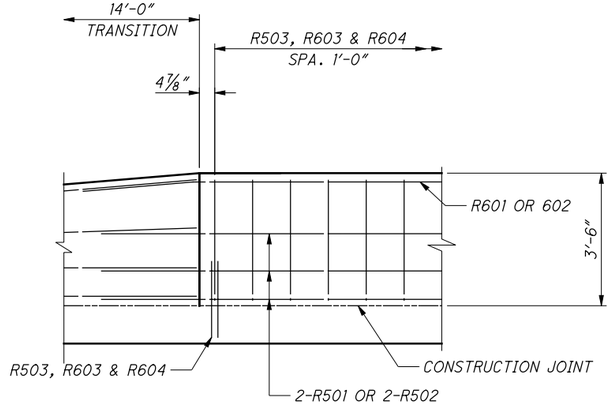
BRIDGE NO. BEL-70-0775 L/R
I.R. 70 OVER TWP. RD. 260

BEL-70-7.61
PID No. 76825



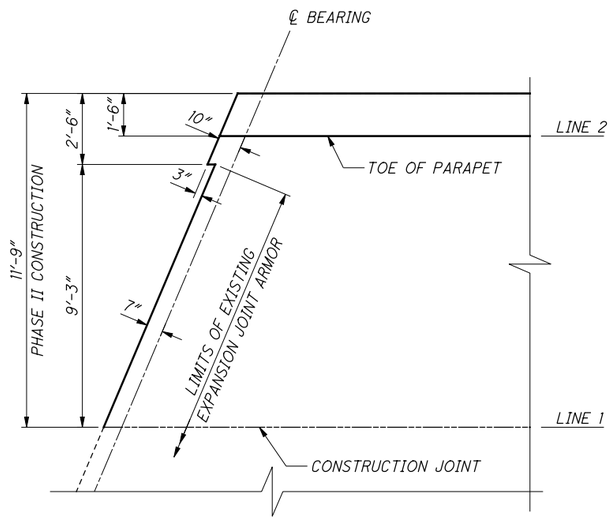
DECK PLAN

FINAL DECK ELEVATION TABLE					
LOCATION		LINE 1		LINE 2	
		STATION	EL.	STATION	EL.
SPAN 1	0.00L	418+61.81	1254.68	418+66.16	1254.52
	0.25L	418+71.81	1254.70	418+76.16	1254.54
	0.50L	418+81.81	1254.65	418+86.16	1254.49
	0.75L	418+91.81	1254.64	418+96.16	1254.48
SPAN 2	0.00L	419+01.81	1254.65	419+06.16	1254.49
	0.25L	419+14.31	1254.60	419+18.66	1254.44
	0.50L	419+26.81	1254.58	419+31.16	1254.42
	0.75L	419+39.31	1254.51	419+43.66	1254.35
SPAN 3	0.00L	419+51.81	1254.50	419+56.16	1254.34
	0.25L	419+61.81	1254.51	419+66.16	1254.35
	0.50L	419+71.81	1254.49	419+76.16	1254.33
	0.75L	419+81.81	1254.43	419+86.16	1254.27
	0.00L	419+91.81	1254.39	419+96.16	1254.23



PARAPET ELEVATION

REQUIRED LAP LENGTHS	
NO. 4 BARS	2'-0" MIN.
NO. 5 BARS	2'-6" MIN.
NO. 6 BARS	3'-1" MIN.



DETAIL A

APPROVED FOR CONSTRUCTION - 6/8/2010

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DESIGNED DTA/BMG
DRAWN BMG
CHECKED AME
REVIEWED DFT
DATE 3/10
REVISED
STRUCTURE FILE NUMBER 070213TL/070216IR

DECK DETAILS - RIGHT BRIDGE
BRIDGE NO. BEL-70-0775 L/R
I.R. 70 OVER TWP. RD. 260

BEL-70-7.61
PID No. 76825

9 / 11

195
210

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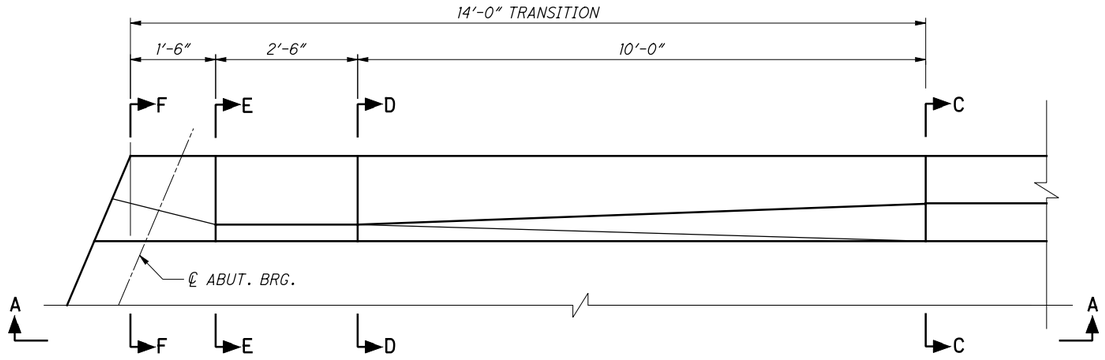
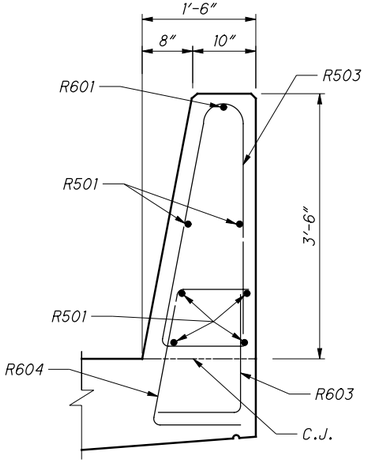
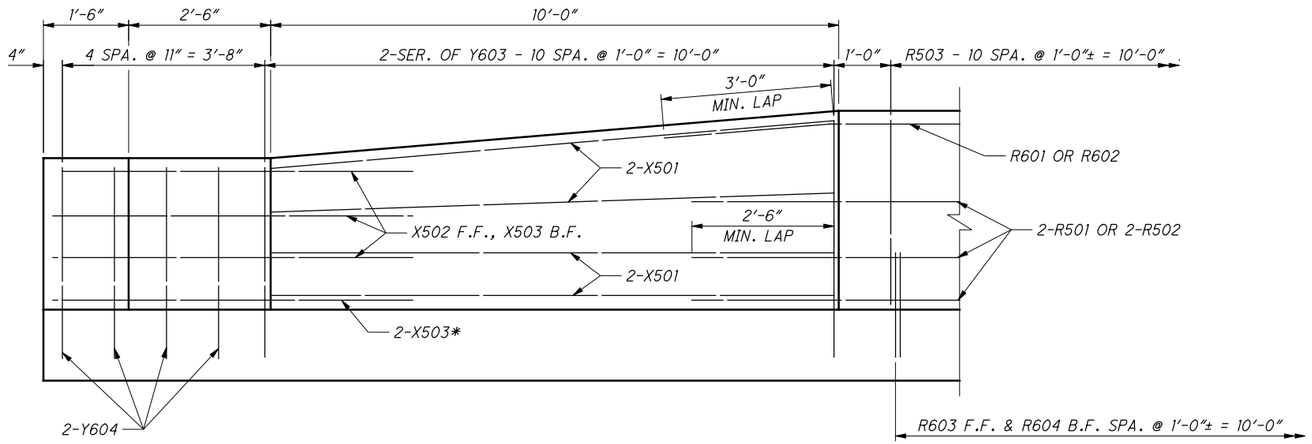


TYPICAL PARAPET TRANSITION DETAIL

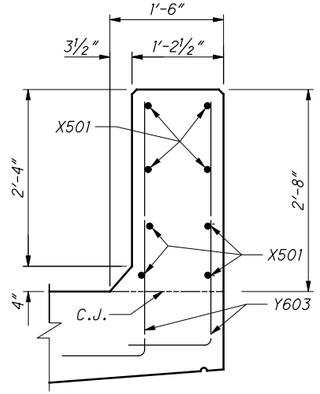
LEFT REAR PARAPET SHOWN, OTHER SIMILAR



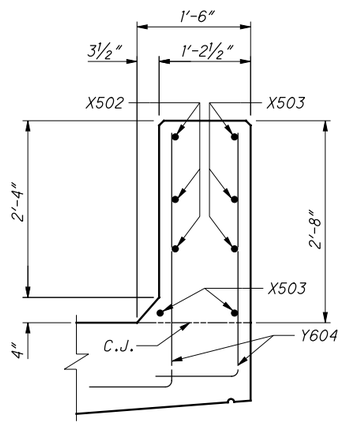
SECTION C-C



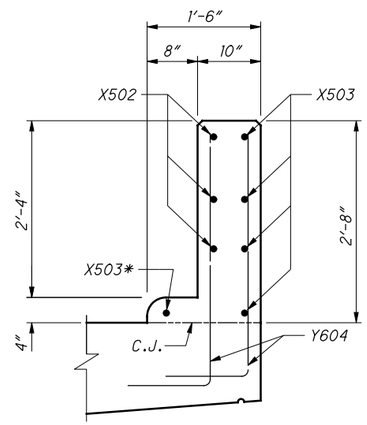
VIEW A-A



SECTION D-D



SECTION E-E



SECTION F-F

NOTES:

1. FOR NOTES AND DETAILS NOT SHOWN, SEE STD. DWG. SBR-1-99.
2. FOR BRIDGE TERMINAL ASSEMBLIES, SEE STANDARD CONSTRUCTION DRAWINGS GR-3.1 AND GR-3.2.

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AME		0702137L/0702161R	

PARAPET TRANSITION DETAILS

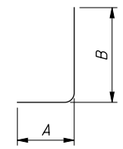
BRIDGE NO. BEL-70-0775 L/R
I.R. 70 OVER TWP. RD. 260

BEL-70-7.61
PID No. 76825

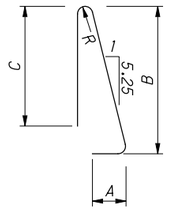
MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
SUPERSTRUCTURE - RIGHT BRIDGE											
S401	20	30'-0"	401	STR							
S402	5	19'-4"	65	STR							
S501	190	11'-3"	2229	34	6'-8"	7"	4"	4'-5"			
S601	380	11'-6"	6564	STR							
	2 SR	1'-10"									
S602	OF	TO	110	STR							1'-8 ½"
	6	10'-4"									
	2 SR	2'-4"									
S603	OF	TO	113	STR							1'-7"
	6	10'-3"									
S604	86	30'-0"	3875	STR							
S605	10	23'-10"	358	STR							
SUB-TOTAL			13,715								

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
PARAPET - RIGHT BRIDGE											
R501	24	30'-0"	751	STR							
R502	6	21'-6"	135	STR							
R503	104	7'-5"	805	23	1'-1"	3'-2"	3'-0"			2 ¾"	
R601	4	30'-0"	180	STR							
R602	1	23'-10"	36	STR							
R603	104	2'-10"	443	1	1'-1"	1'-11"					
R604	104	3'-9"	586	28	1'-11"	1'-1"					
X501	16	10'-0"	167	STR							
X502	6	5'-6"	34	25	1'-8"	2'-5"	1'-4"	1 ½"	5"		
X503	10	5'-6"	57	STR							
	4 SR	4'-2"				3'-4"					
Y603	OF	TO	303	1	1'-0"	TO					0'-1"
	11	5'-0"				4'-2"					
Y604	16	4'-2"	100	1	1'-0"	3'-4"					
SUB-TOTAL			3,597								

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
ABUTMENT - RIGHT BRIDGE											
A601	2	10'-5"	31	STR							
A602	2	9'-8"	29	STR							
SUB-TOTAL			60								



TYPE-1



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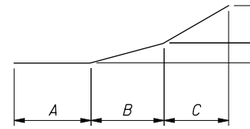
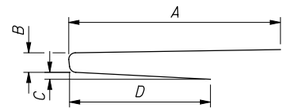


TYPE-25



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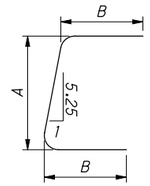

TYPE 28

APPROVED FOR CONSTRUCTION - 6/8/2010

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1901 Watermark Drive, Suite 310 - Columbus, Ohio 43215

DESIGNED	DRAWN	REVIEWED	DATE
BMG	BMG	DFT	3/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
AME		0702137L/0702161R	

REINFORCING STEEL LIST

BRIDGE NO. BEL-70-0775 L/R
I.R. 70 OVER TWP. RD. 260

BEL-70-7.61
PID No. 76825

11 / 11

197
210

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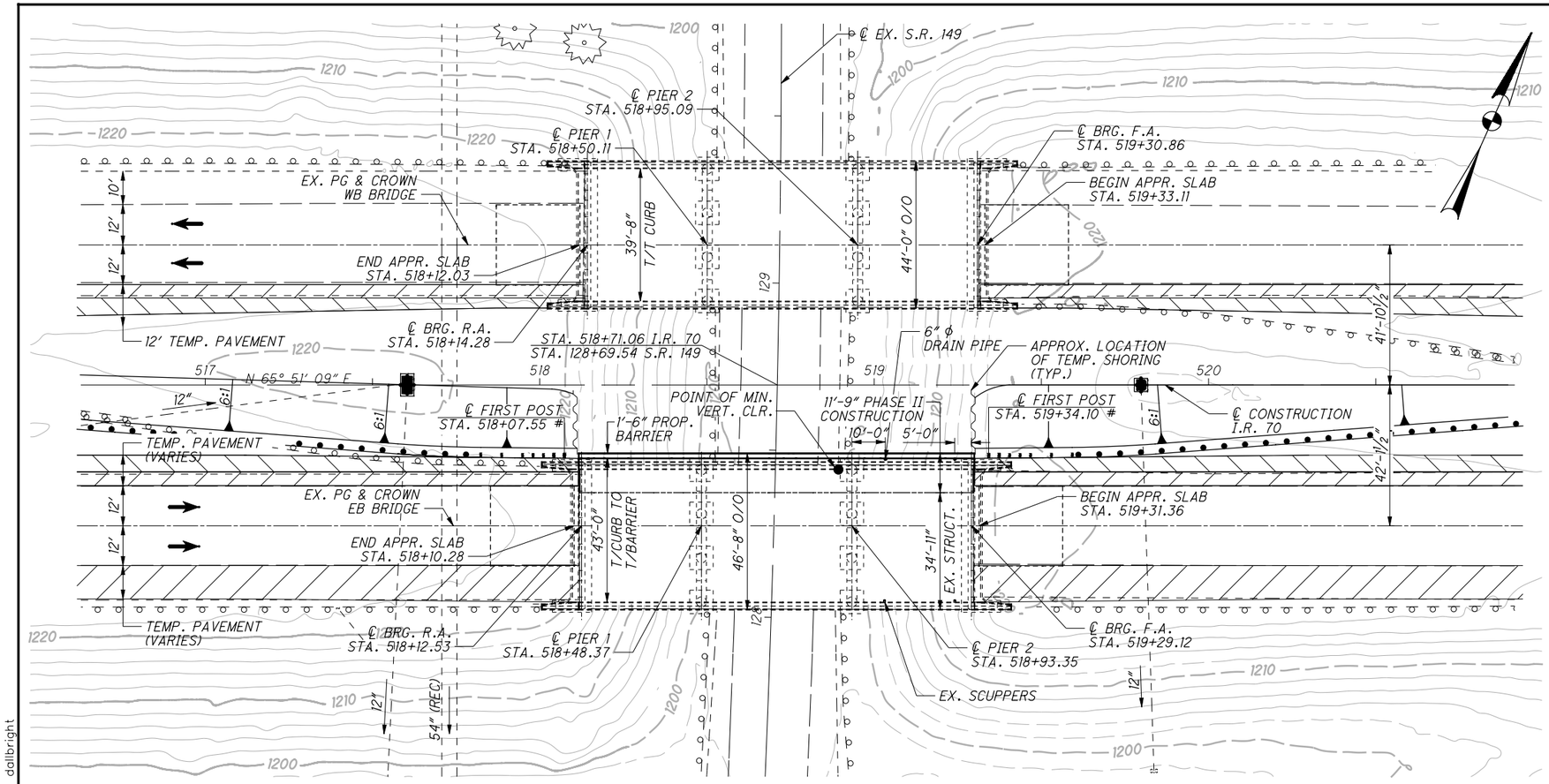
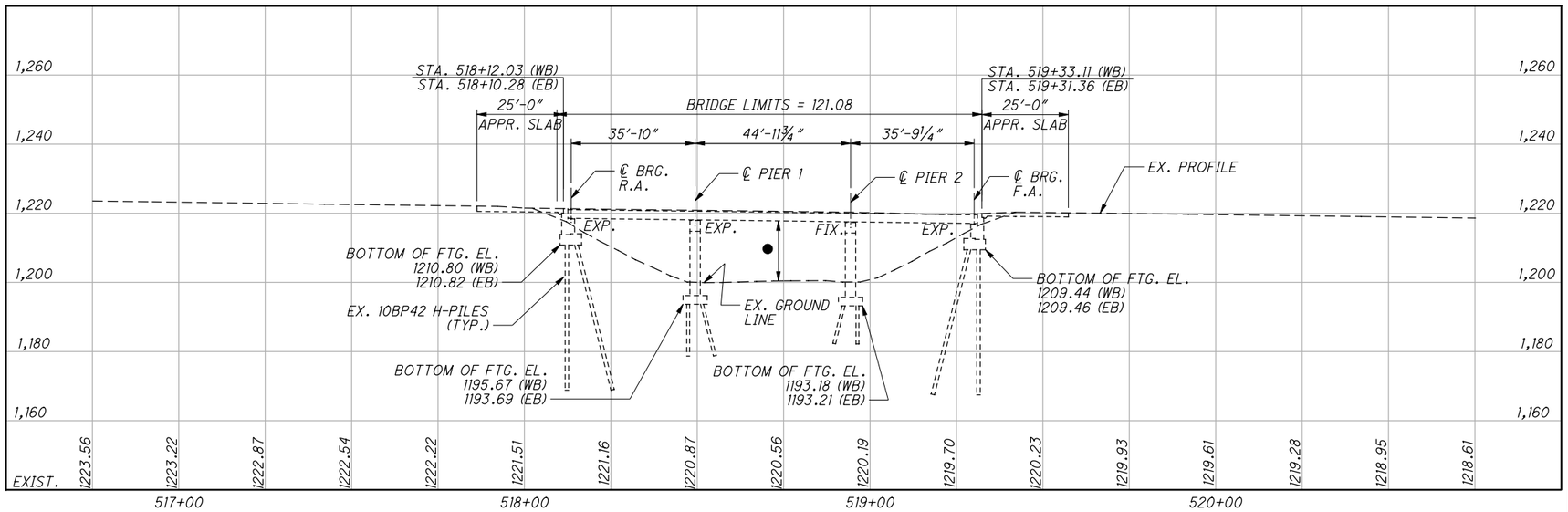


PLAN



PROFILE ALONG EB PROFILE GRADE

BENCHMARK DATA

BM #21 STA. 512+00.68, ELEV. 1226.57 , OFFSET 0.16' LT
CENTERLINE MONUMENT FOUND
BM #22 STA. 524+00.62, ELEV. 1213.74 , OFFSET 0.14' LT
CENTERLINE MONUMENT FOUND

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET 4A/210

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. ALL EXISTING DIMENSIONS ARE ±.

DESIGN TRAFFIC:
2010 ADT = 35870 2010 ADTT = 17935
2030 ADT = 46890 2030 ADTT = 23445
DIRECTIONAL DISTRIBUTION = 0.55

LEGEND

● - 14.8' EXISTING MINIMUM VERTICAL CLEARANCE LEFT BRIDGE
17.1' EXISTING MINIMUM VERTICAL CLEARANCE RIGHT BRIDGE
14.8' PROPOSED MINIMUM VERTICAL CLEARANCE LEFT BRIDGE
17.1' PROPOSED MINIMUM VERTICAL CLEARANCE RIGHT BRIDGE
15.5' REQUIRED MINIMUM VERTICAL CLEARANCE BOTH BRIDGES

BRIDGE TERMINAL ASSEMBLY TYPE 1 BRIDGE TERMINAL ASSEMBLIES ARE INCLUDED WITH ROADWAY QUANTITIES FOR PAYMENT

EXISTING STRUCTURE

TYPE: 3-SPAN CONTINUOUS STEEL BEAM WITH CONCRETE DECK AND SUBSTRUCTURE
SPANS: 35'-10"± - 44'-11¾"± - 35'-9¼"± C/C BEARINGS
ROADWAY: 39'-8" T/T SAFETY CURB
LOADING: CF 2000 (57)
SKEW: NONE
APPROACH SLABS: AS-1-54 (25' LONG)
WEARING SURFACE: MICROSILICA MODIFIED CONCRETE OVERLAY
ALIGNMENT: TANGENT
CROWN: 0.0156
STRUCTURAL FILE NUMBER: 0702226L/0702250R
DATE BUILT: 1964

PROPOSED STRUCTURE (EB)

PROPOSED WORK: REMOVE PORTIONS OF EXISTING EASTBOUND BRIDGE. WIDEN CONCRETE DECK. MODIFY EASTBOUND ABUTMENT TO ACCOMODATE TEMPORARY PAVEMENT AT APPROACHES.
TYPE: 3-SPAN CONTINUOUS STEEL BEAM WITH CONCRETE DECK AND SUBSTRUCTURE
SPANS: 35'-10"± - 44'-11¾"± - 35'-9¼"± C/C BEARINGS
ROADWAY: 39'-8" T/T SAFETY CURB (WB)
43'-0" T/SAFETY CURB TO T/BARRIER (EB)
LOADING: HS20 AND ALTERNATE MILITARY LOADING
SKEW: NONE
APPROACH SLABS: AS-1-54 (25' LONG)
WEARING SURFACE: 1" MONOLITHIC CONCRETE AND MICROSILICA MODIFIED CONCRETE OVERLAY
ALIGNMENT: TANGENT
CROWN: 0.0156
COORDINATES: LATITUDE 40°3'36" N
LONGITUDE 81°3'10" W

APPROVED FOR CONSTRUCTION - 6/8/2010

E.L. ROBINSON
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DESIGNED	DRAWN	REVIEWED	DATE
DTA/BMG	BMG	DFT	3/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
AME		0702226L/0702250R	

BELMONT COUNTY
(WESTBOUND)
STA. 518+12.03
STA. 519+33.11

BELMONT COUNTY
(EASTBOUND)
STA. 518+10.28
STA. 519+31.36

SITE PLAN
BRIDGE NO. BEL-70-0963 L/R
I.R. 70 OVER S.R. 149

BEL-70-7.61
PID No. 76825

1 / 12
199
210

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REFER TO THE FOLLOWING STANDARD DRAWINGS:

PCB-91	REVISED 7-19-02
SBR-1-99	REVISED 7-19-02

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAYS AND TRANSPORTATION OFFICIALS 2002, 17th EDITION AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN DATA:

DESIGN LOADING -
SUPERSTRUCTURE - HS20, CASE I AND THE ALTERNATE MILITARY LOADING

CONCRETE CLASS S - COMPRESSIVE STRENGTH 4500 PSI
(SUPERSTRUCTURE)

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

DECK PROTECTION METHOD:

3 ½" CONCRETE COVER

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.

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.

MAINTENANCE OF TRAFFIC

SEE ROADWAY PLANS FOR ADDITIONAL MAINTENEANCE OF TRAFFIC NOTES AND DETAILS.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

THIS WORK CONSISTS OF THE REMOVAL OF THE CONCRETE DECK INCLUDING PARAPETS AND OTHER APPURTENANCES FROM STEEL SUPPORTING SYSTEMS (BEAMS, GIRDERS, CROSS FRAMES, ETC.). THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING DECK REMOVAL TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS501.05.

PROTECTION OF STEEL SUPPORT SYSTEMS:

BEFORE DECK SLAB CUTTING IS PERMITTED, DRAW THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK ON THE SURFACE OF THE DECK. DRILL SMALL DIAMETER PILOT HOLES 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF FLANGE EDGES. DECK CUTS OVER OR WITHIN 2 INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 2 INCHES OF FLANGE EDGES MAY EXTEND THE FULL DEPTH OF THE DECK. PERFORM WORK CAREFULLY DURING CUTTING OF THE DECK SLAB TO AVOID DAMAGING STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURE. REPLACE OR REPAIR STEEL MEMBERS DAMAGED BY THE DECK SLAB CUTTING OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE DIRECTOR. OBTAIN THE DIRECTOR'S APPROVAL BEFORE PERFORMING REPAIR.

REMOVAL METHODS:

THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS AROUND THE EXPANSION JOINTS, THE CONTRACTOR MUST USE HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS OVER STRUCTURAL MEMBERS, THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO EXCEED 90 POUNDS UNLESS APPROVED BY THE ENGINEER. REMOVAL METHODS OVER STRUCTURAL MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STRUCTURAL MEMBERS.

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.

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.

MEASUREMENT & PAYMENT

THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

E.L. ROBINSON
The Challenge to be Choice.
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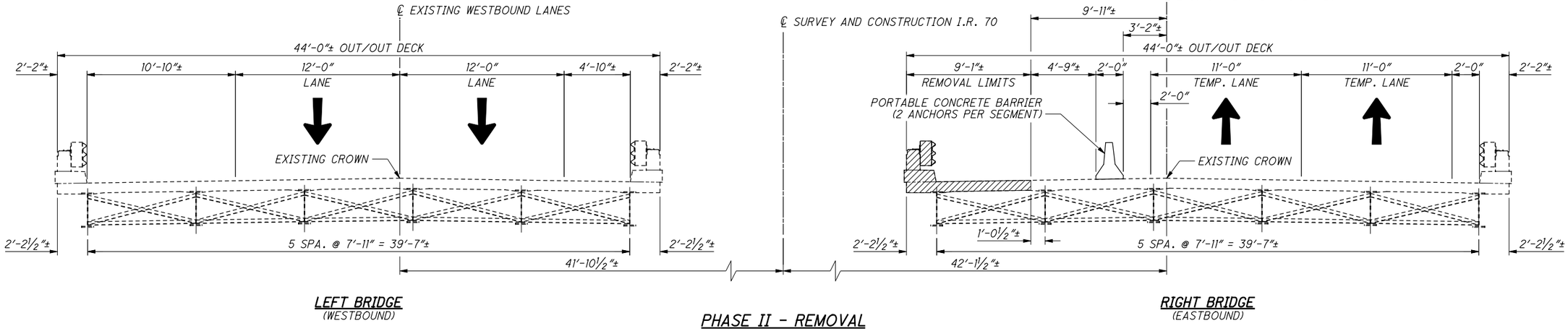
DESIGNED	DRAWN	REVIEWED	DATE
DTA	DTA	DFT	3/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
AME		070226L/0702250R	

GENERAL NOTES
BRIDGE NO. BEL-70-0963 L/R
I.R. 70 OVER S.R. 149

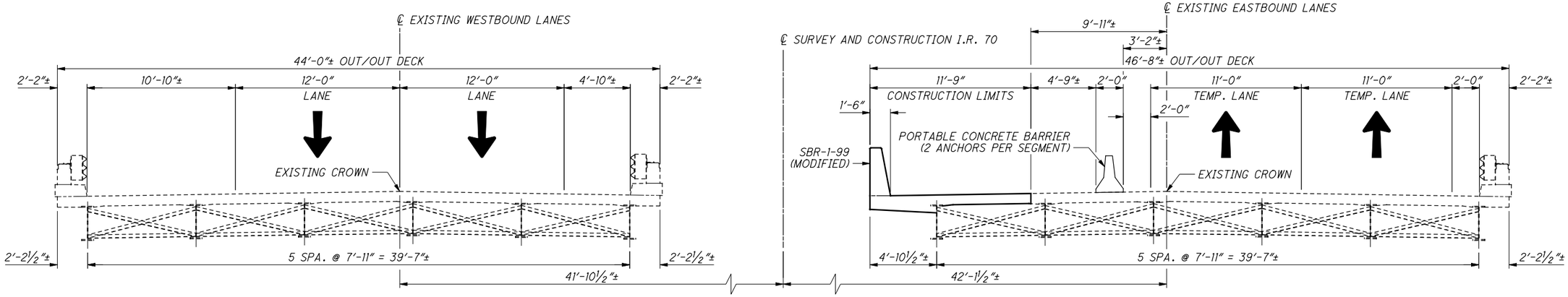
BEL-70-7.61
PID No. 76825



LEFT BRIDGE (WESTBOUND)

PHASE II - REMOVAL

RIGHT BRIDGE (EASTBOUND)



LEFT BRIDGE (WESTBOUND)

PHASE II - CONSTRUCTION

RIGHT BRIDGE (EASTBOUND)

PHASE II - REMOVAL

1. INSTALL PORTABLE CONCRETE BARRIERS. DIRECT EASTBOUND TRAFFIC AS REQUIRED.
2. REMOVE PORTIONS OF EXISTING ABUTMENTS TO THE LIMITS SHOWN IN THE PLANS.
3. REMOVE EXISTING DECK SLAB TO THE LIMITS SHOWN IN THE PLANS. SALVAGE THE EXISTING EXPANSION JOINT ARMOR AND STRIP SEAL DURING DECK REMOVAL.

PHASE II - CONSTRUCTION

1. INSTALL SHEET PILING AT ABUTMENTS.
2. CONSTRUCT TEMPORARY EMBANKMENT AND TEMPORARY ROADWAY PAVEMENT AT BRIDGE APPROACHES.
3. CONSTRUCT WIDENED DECK AND PROPOSED PARAPET TO THE LIMITS SHOWN IN THE PLANS.

LEGEND:

LIMITS OF REMOVAL

APPROVED FOR CONSTRUCTION - 6/8/2010

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The Challenge to a Choice.
1901 Watermark Drive, Suite 310 - Columbus, Ohio 43215

DESIGNED TJE | DRAWN TJE | REVIEWED DFT | DATE 3/10
CHECKED AME | REVISED | STRUCTURE FILE NUMBER 0702226L/0702250R

PHASE CONSTRUCTION DETAILS

BRIDGE NO. BEL-70-0963 L/R
I.R. 70 OVER S.R. 149

BEL-70-7.61
PID No. 76825

3 / 12

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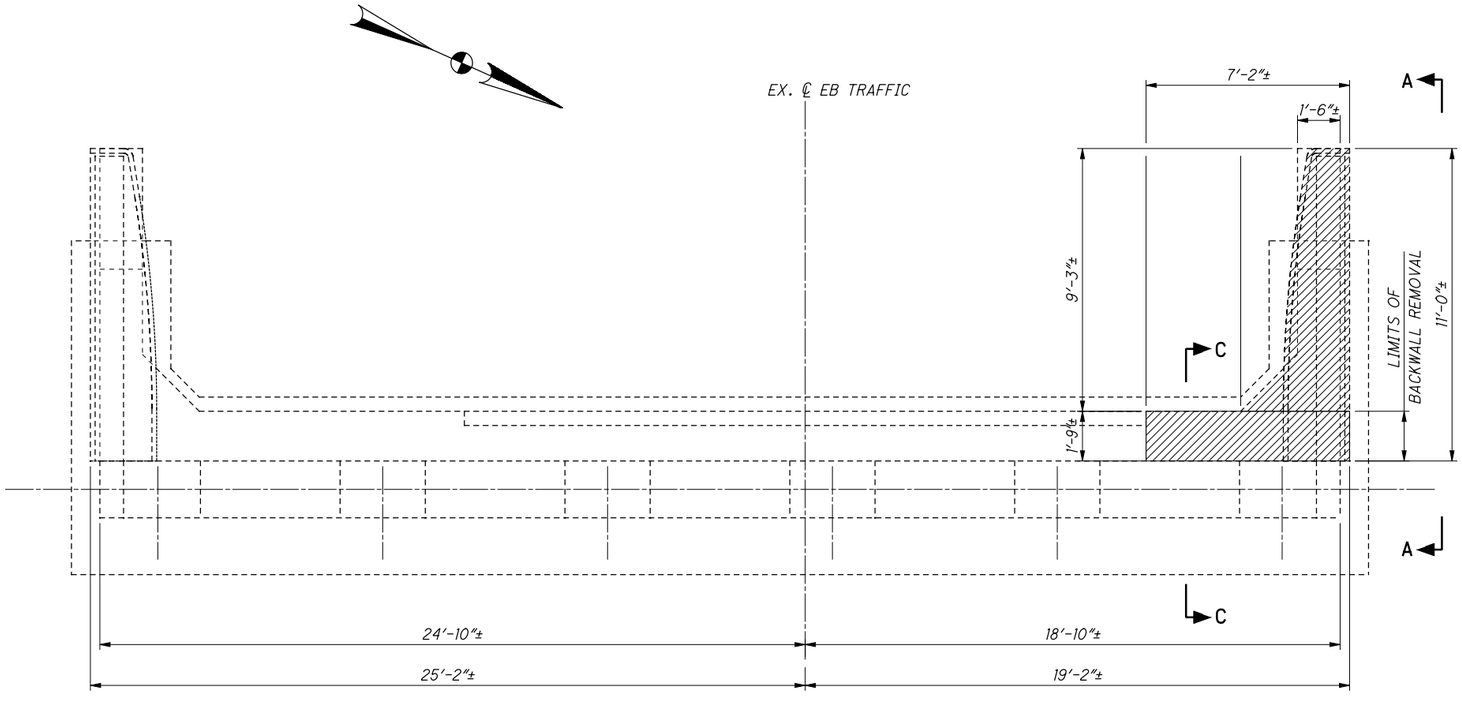
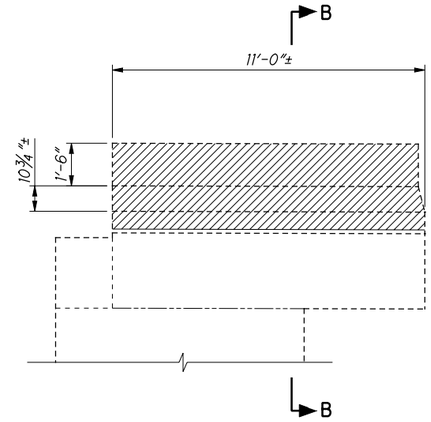
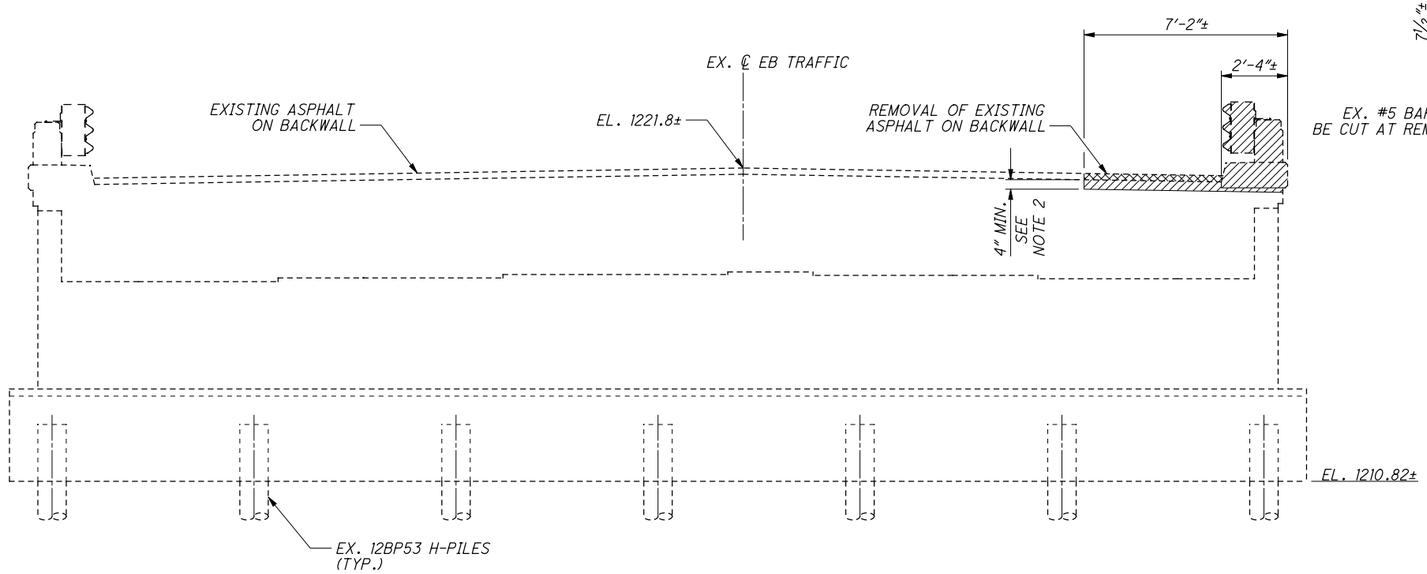
210



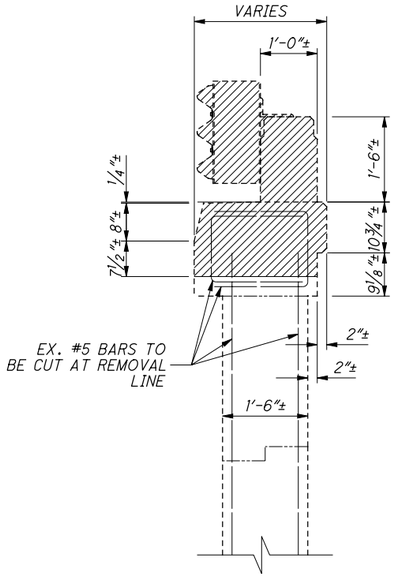
REAR ABUTMENT PLAN
RIGHT BRIDGE



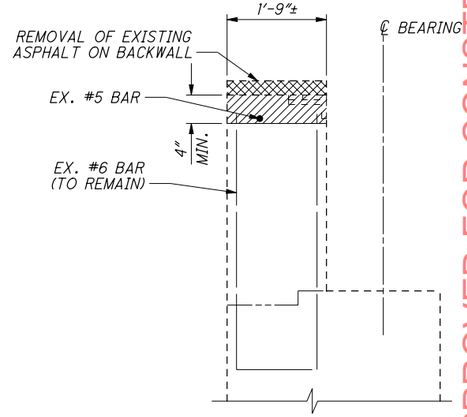
VIEW A-A



REAR ABUTMENT ELEVATION
RIGHT BRIDGE



SECTION B-B



SECTION C-C

LEGEND:

- ASPHALT REMOVED
- PORTIONS OF STRUCTURE REMOVED

NOTES:

1. SALVAGE THE EXISTING EXPANSION JOINT ARMOR AND STRIP SEAL DURING REMOVAL OF ASPHALT ON BACKWALL.
2. REMOVE BACKWALL CONCRETE TO A DEPTH OF NOT LESS THAN ½ INCH BELOW THE EXISTING LONGITUDINAL #5 BAR.

APPROVED FOR CONSTRUCTION - 6/8/2010

E.L. ROBINSON
The Challenge to be Chosen
1901 Watermark Drive, Suite 310 - Columbus, Ohio 43215

DESIGNED	DRAWN	REVIEWED	DATE
DTA/BMG	BMG	DFT	3/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
AME		0702226L/0702250R	

REAR ABUTMENT REMOVAL DETAILS - RIGHT BRIDGE
BRIDGE NO. BEL-70-0963 L/R
I.R. 70 OVER S.R. 149

BEL-70-7.61
PID No. 76825

4 / 12

202
210

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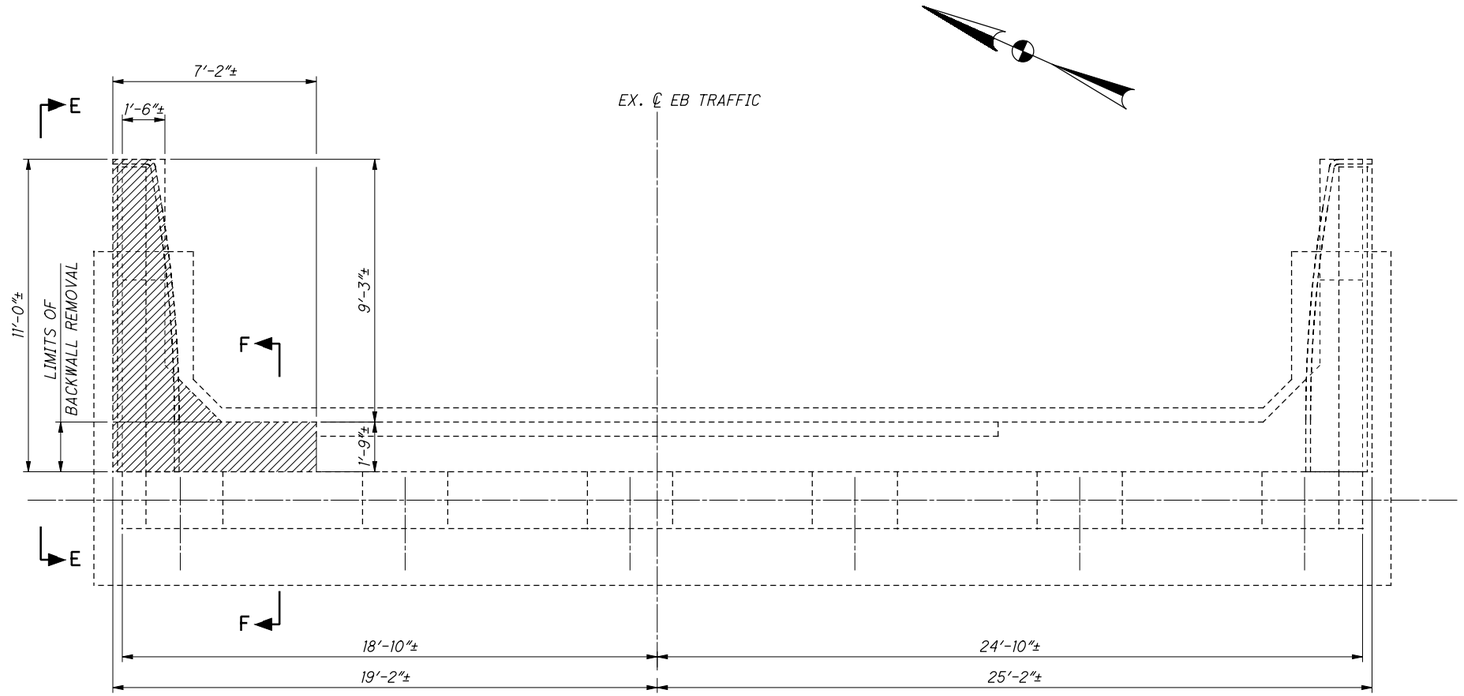
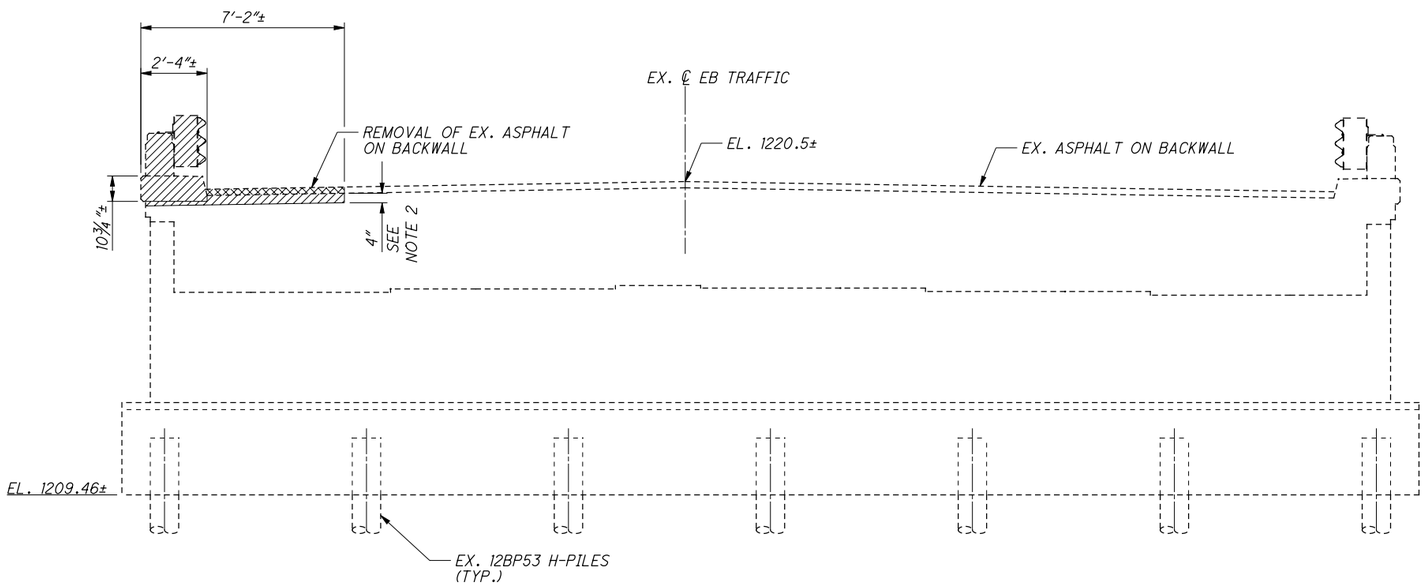
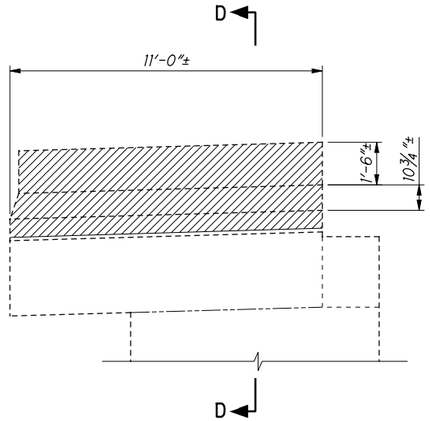


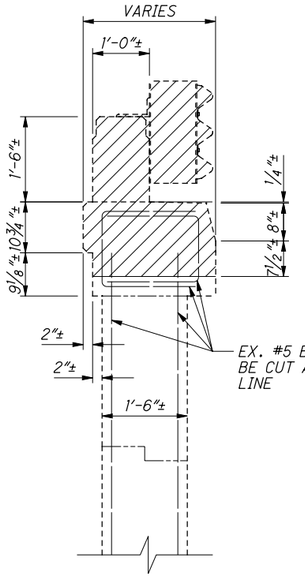
FORWARD ABUTMENT PLAN
RIGHT BRIDGE



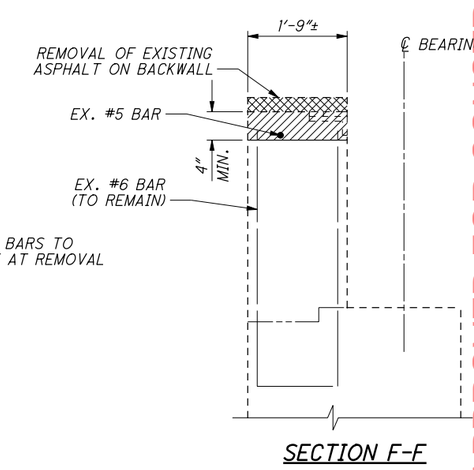
FORWARD ABUTMENT ELEVATION
RIGHT BRIDGE



VIEW E-E



SECTION D-D



SECTION F-F

LEGEND:

- ASPHALT REMOVED
- PORTIONS OF STRUCTURE REMOVED

NOTES:

1. SALVAGE THE EXISTING EXPANSION JOINT ARMOR AND STRIP SEAL DURING REMOVAL OF ASPHALT ON BACKWALL.
2. REMOVE BACKWALL CONCRETE TO A DEPTH OF NOT LESS THAN ½ INCH BELOW THE EXISTING LONGITUDINAL #5 BAR.

APPROVED FOR CONSTRUCTION - 6/8/2010

FORWARD ABUTMENT REMOVAL DETAILS - RIGHT BRIDGE

BRIDGE NO. BEL-70-0963 L/R
I.R. 70 OVER S.R. 149

E.L. ROBINSON
the Challenge to be Choice.
1901 Watermark Drive, Suite 310 - Columbus, Ohio 43215

DESIGNED	DRAWN	REVIEWED	DATE
DTA/BMG	BMG	DFT	3/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
AME		0702226L/0702250R	

BEL-70-7.61
PID No. 76825

5 / 12

203 / 210

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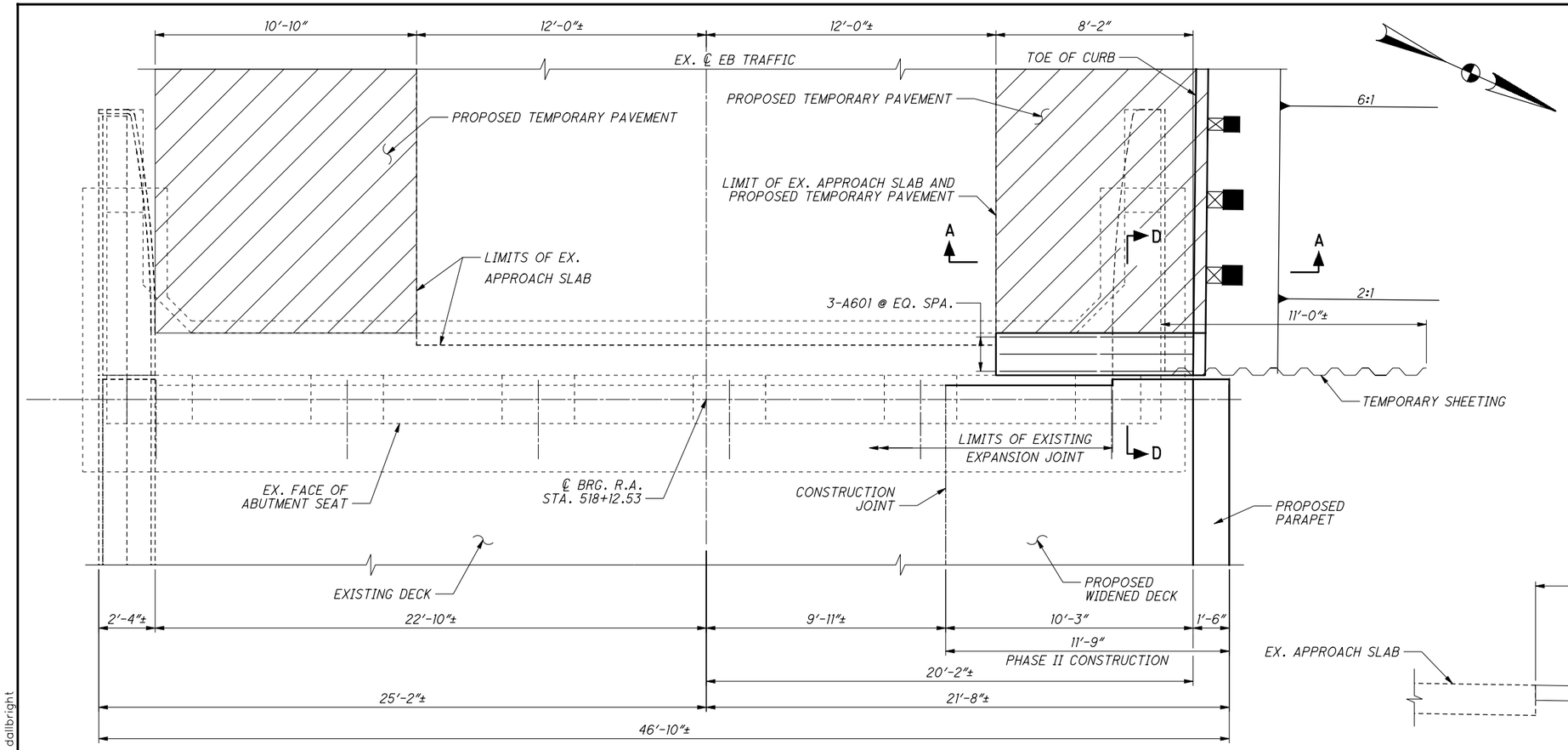
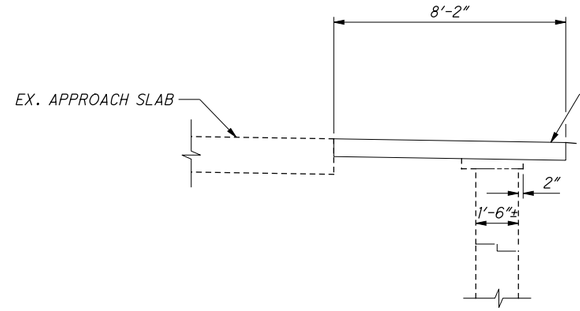
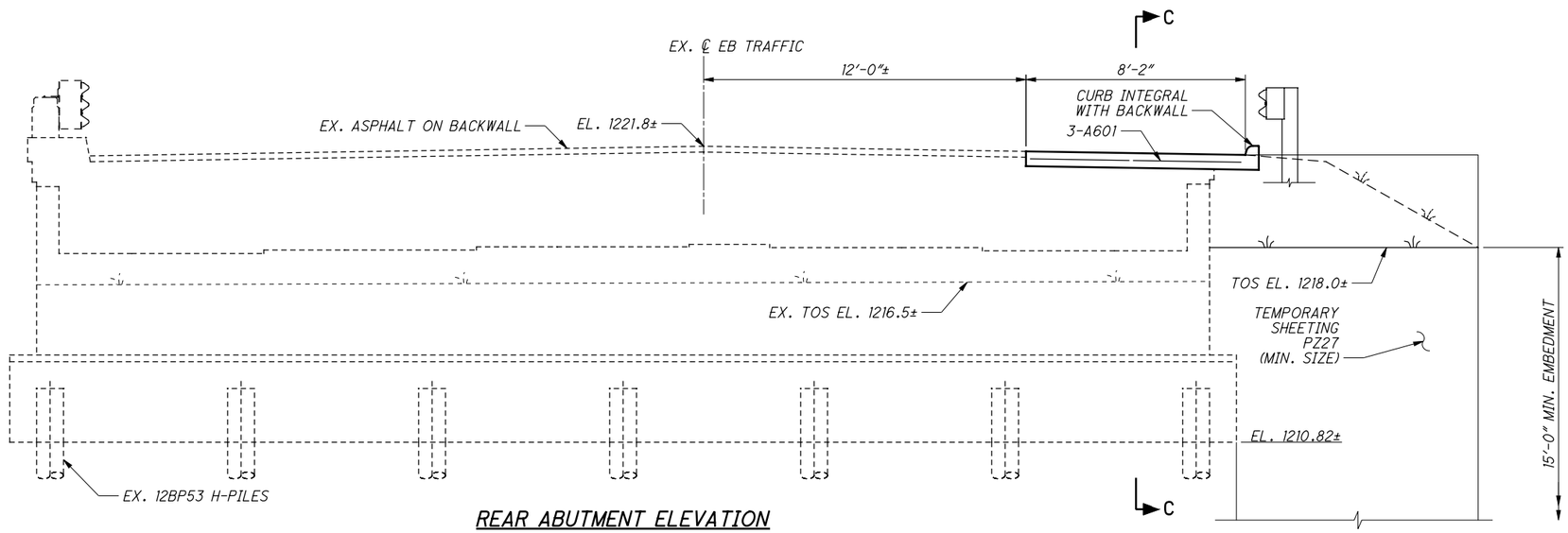


REAR ABUTMENT PLAN
RIGHT BRIDGE



SECTION A-A



REAR ABUTMENT ELEVATION
RIGHT BRIDGE

NOTES:

1. INCORPORATE THE EXISTING EXPANSION JOINT ARMOR INTO THE PROPOSED WIDENED DECK AND TEMPORARY PAVEMENT.
2. FOR ADDITIONAL DECK DETAILS SEE SHEET 10/12 .
3. FOR SECTIONS C-C AND D-D SEE SHEET 8/12 .

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AME		0702226L/0702250R	

REAR ABUTMENT DETAILS - RIGHT BRIDGE
BRIDGE NO. BEL-70-0963 L/R
I.R. 70 OVER S.R. 149

BEL-70-7.61
PID No. 76825

6 / 12

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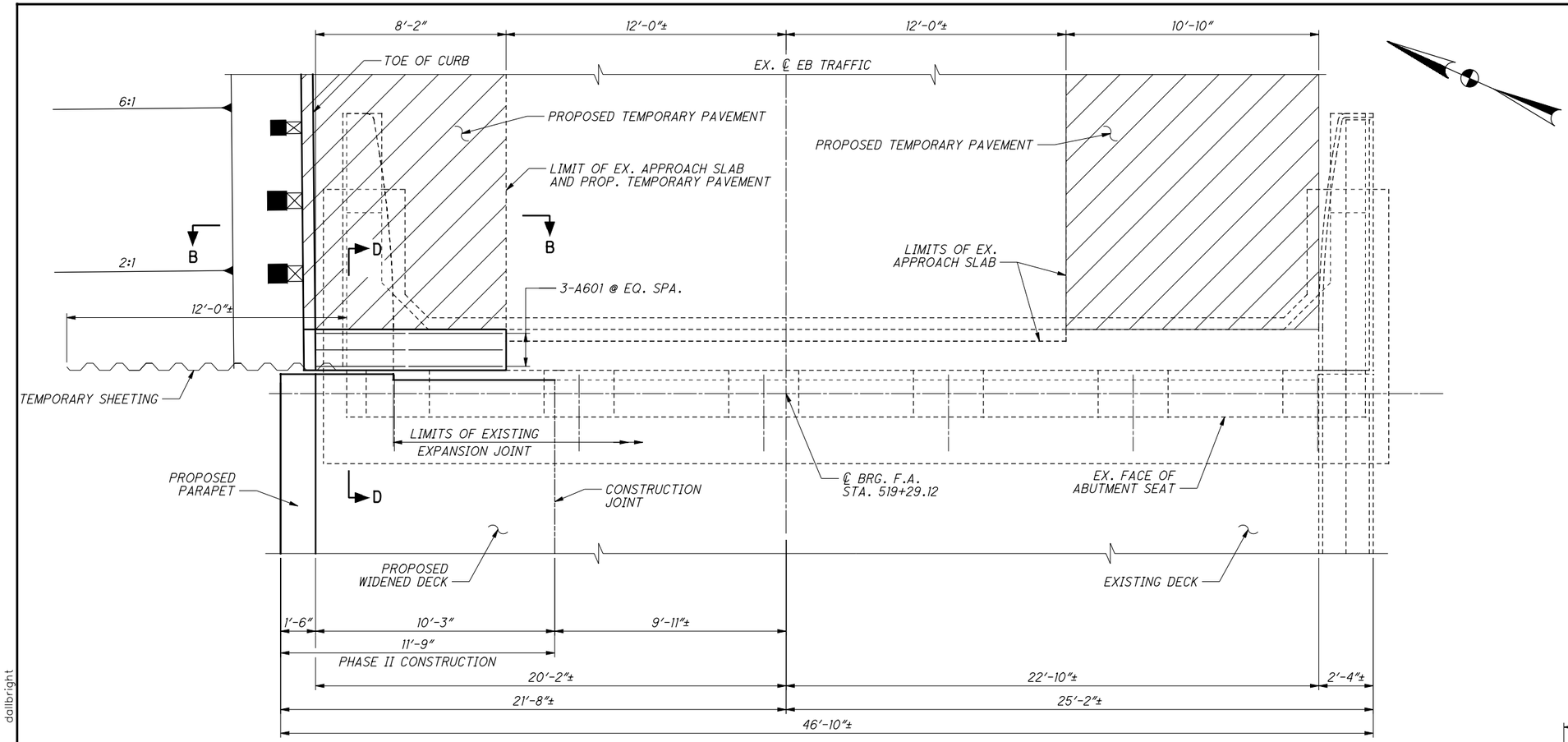
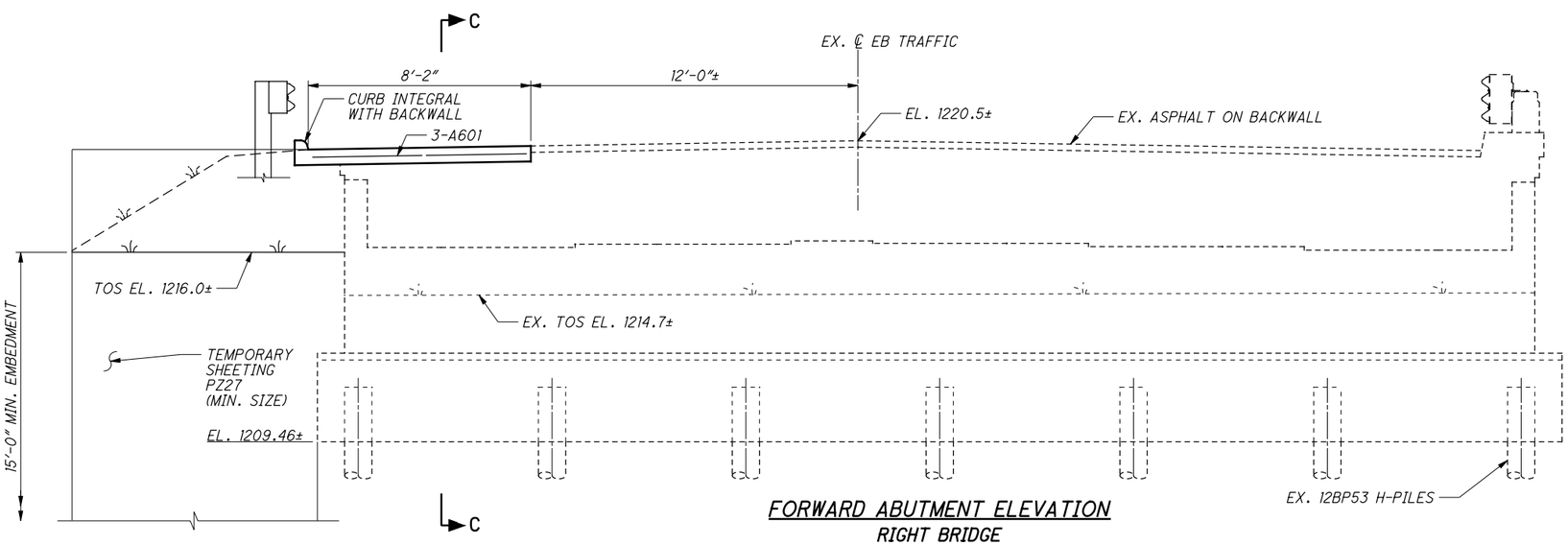
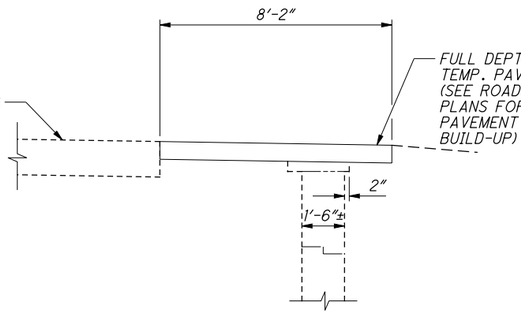


FORWARD ABUTMENT PLAN
RIGHT BRIDGE



FORWARD ABUTMENT ELEVATION
RIGHT BRIDGE



SECTION B-B

NOTES:

1. INCORPORATE THE EXISTING EXPANSION JOINT ARMOR INTO THE PROPOSED WIDENED DECK AND TEMPORARY PAVEMENT.
2. FOR ADDITIONAL DECK DETAILS SEE SHEET 10/12 .
3. FOR SECTIONS C-C AND D-D SEE SHEET 8/12 .

APPROVED FOR CONSTRUCTION - 6/8/2010

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
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FORWARD ABUTMENT DETAILS - RIGHT BRIDGE
BRIDGE NO. BEL-70-0963 L/R
I.R. 70 OVER S.R. 149

BEL-70-7.61
PID No. 76825

7 / 12

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210

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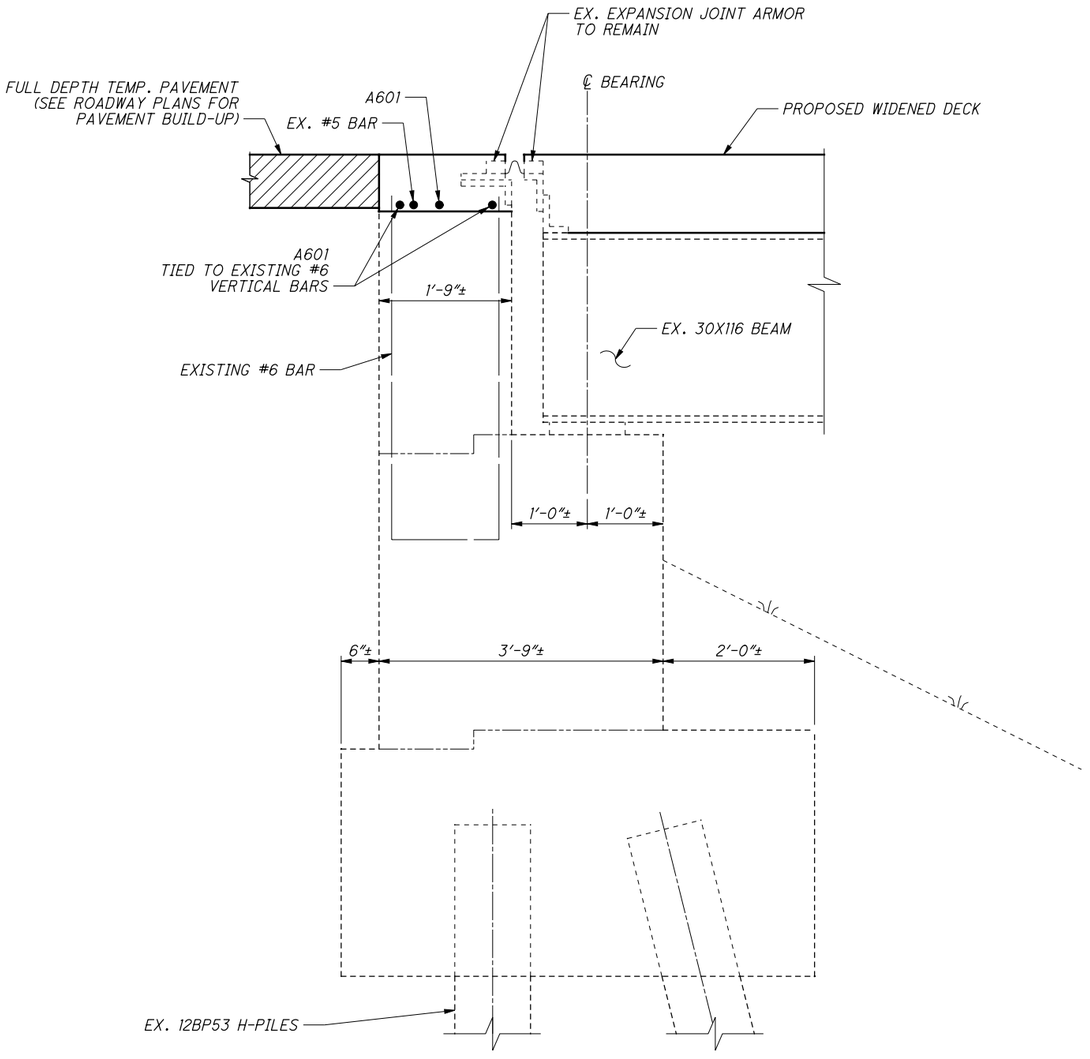
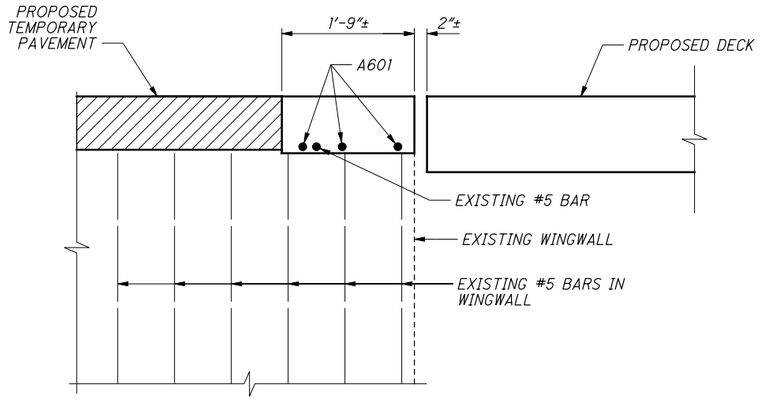


SECTION C-C



SECTION D-D

NOTES:

FOR LOCATION OF SECTIONS C-C & D-D SEE SHEETS 6/12 & 7/12.

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
AME		0702226L/0702250R	

ABUTMENT DETAILS - RIGHT BRIDGE

BRIDGE NO. BEL-70-0963 L/R
I.R. 70 OVER S.R. 149

BEL-70-7.61
PID No. 76825

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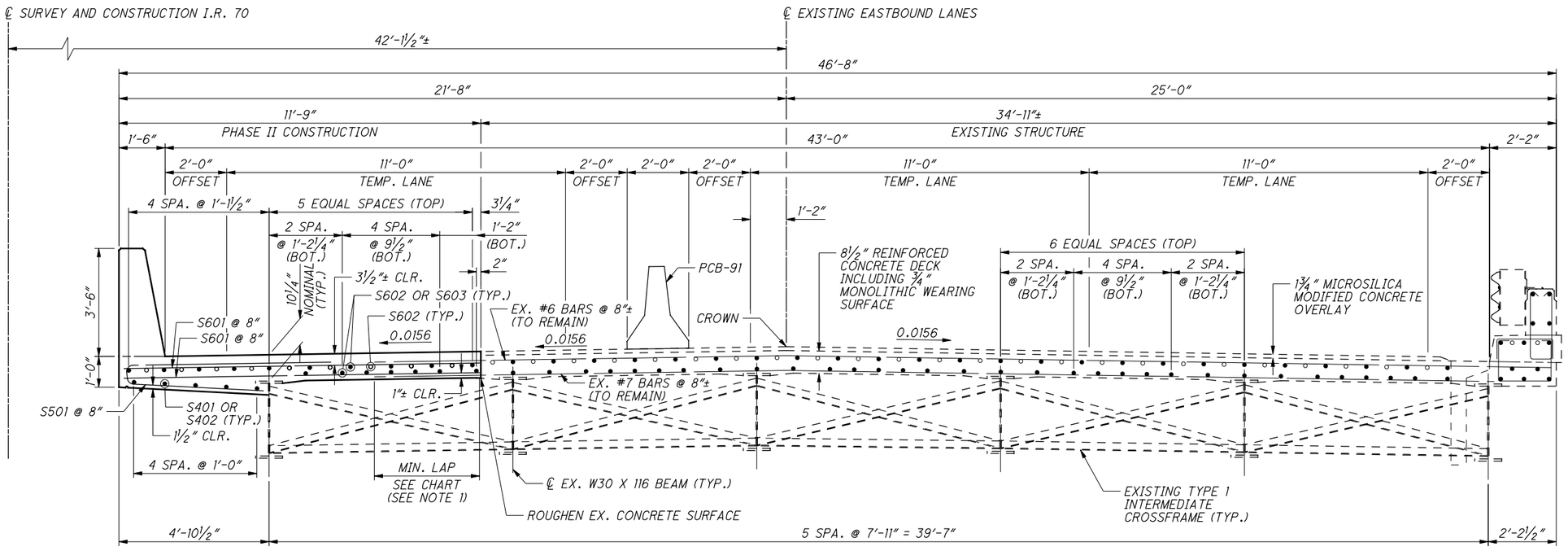
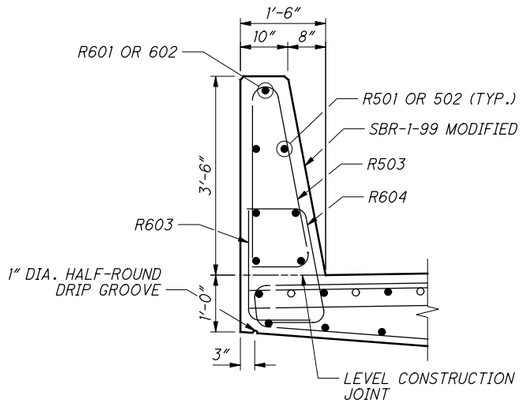


TRANSVERSE SECTION



PARAPET DETAIL

(THE CONTRACTOR SHALL HAVE THE OPTION OF USING THE STANDARD SBR-1-99)

REQUIRED LAP LENGTHS	
NO. 6 & 7 BARS	3'-1" MIN.

NOTES:

1. RETAIN A SUFFICIENT LENGTH OF THE EXISTING TRANSVERSE #6 AND #7 BARS TO ACHIEVE THE MINIMUM LAP LENGTHS INDICATED IN THE TABLE ABOVE.
2. FOR PARAPET REINFORCING DETAILS SEE SHEETS 10/12 AND 13/12 .
3. FOR SLAB PLAN, SEE SHEET 10/12 .
4. FOR DECK ELEVATIONS, SEE SHEET 10/12 .
5. FOR REINFORCEMENT SCHEDULE, SEE SHEET 12/12 .

APPROVED FOR CONSTRUCTION - 6/8/2010

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TJE	TJE	DFT	3/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
AME		0702226L/0702250R	

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

9 / 12

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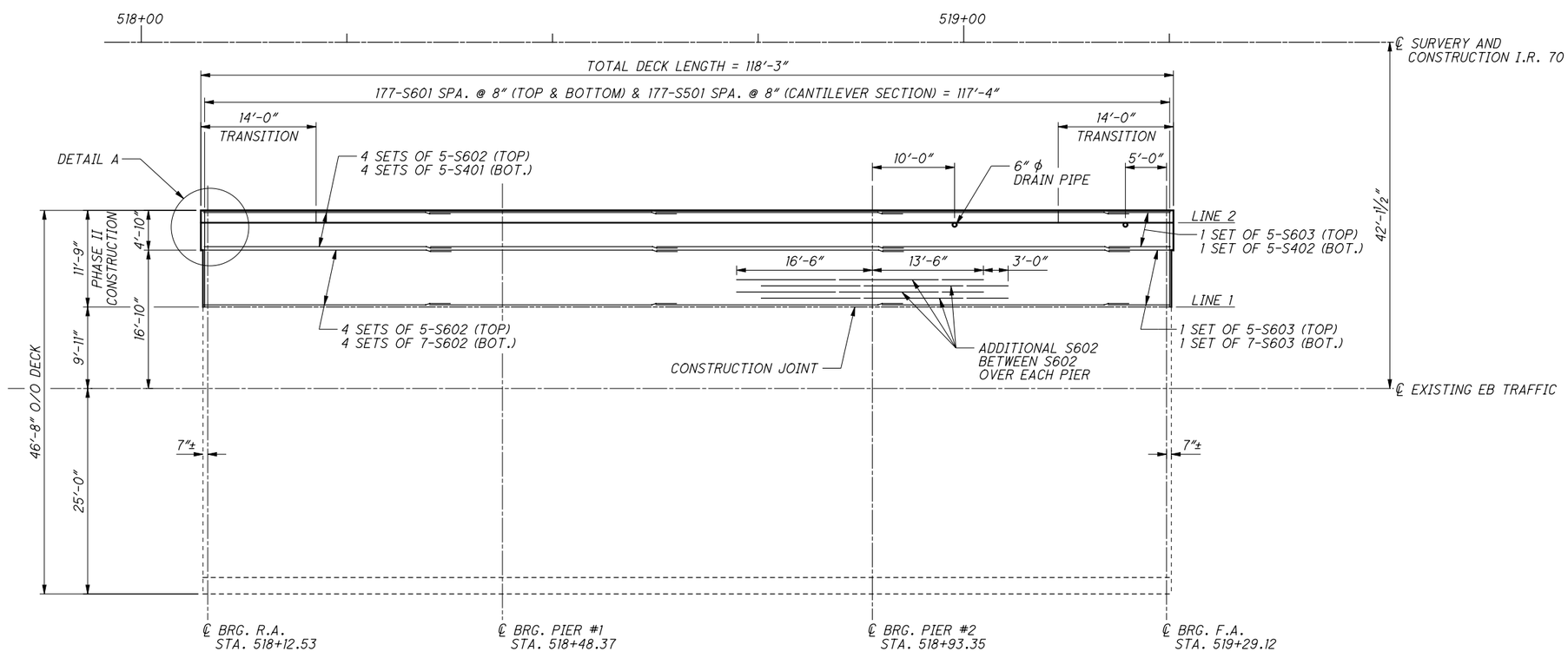
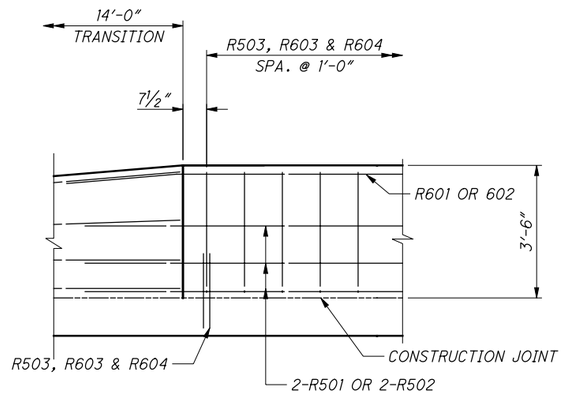


DECK PLAN

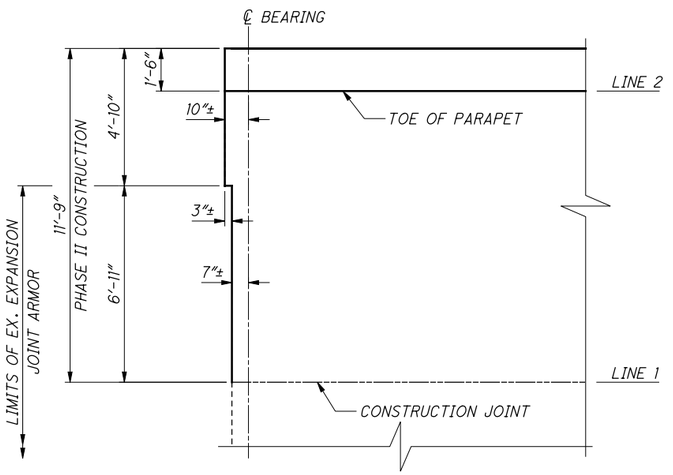
REQUIRED LAP LENGTHS	
NO. 4 BARS	2'-0" MIN.
NO. 5 BARS	2'-6" MIN.
NO. 6 BARS	3'-1" MIN.

FINAL DECK ELEVATION TABLE

LOCATION		LINE 1		LINE 2	
		STATION	EL.	STATION	EL.
SPAN 1	0.00L	518+12.53	1221.64	518+12.53	1221.48
	0.25L	518+21.49	1221.57	518+21.49	1221.41
	0.50L	518+30.45	1221.51	518+30.45	1221.35
	0.75L	518+39.41	1221.45	518+39.41	1221.29
SPAN 2	0.00L	518+48.37	1221.40	518+48.37	1221.24
	0.25L	518+59.61	1221.21	518+59.61	1221.05
	0.50L	518+70.86	1221.05	518+70.86	1220.89
	0.75L	518+82.10	1220.91	518+82.10	1220.75
SPAN 3	0.00L	518+93.35	1220.79	518+93.35	1220.63
	0.25L	519+02.29	1220.70	519+02.29	1220.54
	0.50L	519+11.23	1220.59	519+11.23	1220.43
	0.75L	519+20.17	1220.49	519+20.17	1220.33
	0.00L	519+29.12	1220.33	519+29.12	1220.17



PARAPET ELEVATION



DETAIL A

APPROVED FOR CONSTRUCTION - 6/8/2010

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DATE 3/10
REVISED
STRUCTURE FILE NUMBER 0702226L/0702250R

DECK DETAILS - RIGHT BRIDGE
BRIDGE NO. BEL-70-0963 L/R
I.R. 70 OVER S.R. 149

BEL-70-7.61
PID No. 76825

10 / 12

208
210

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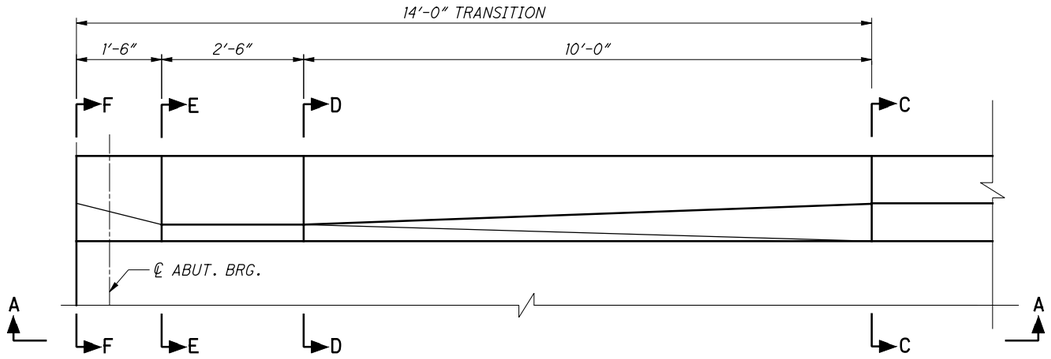
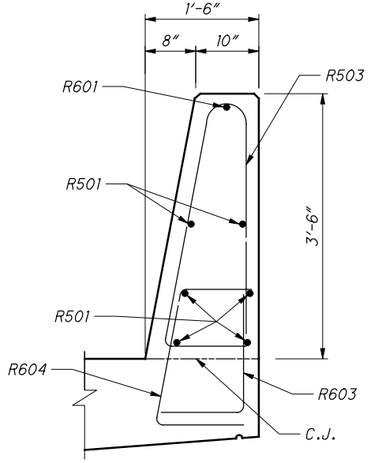
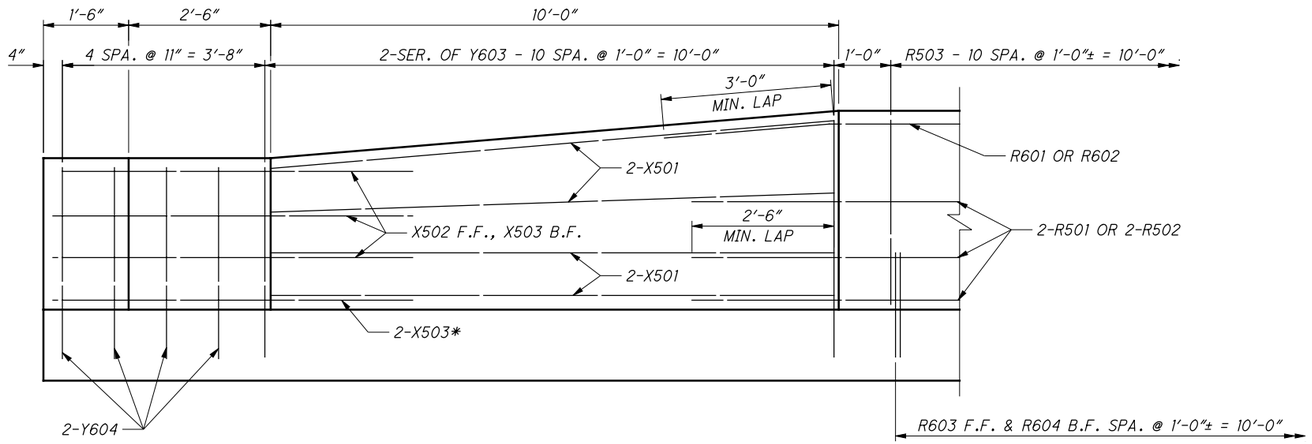


TYPICAL PARAPET TRANSITION DETAIL

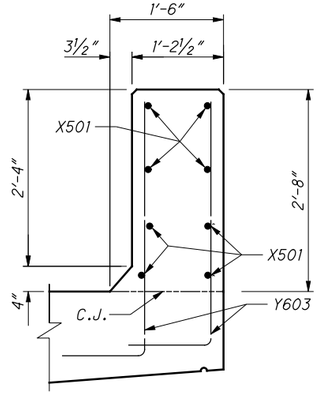
LEFT REAR PARAPET SHOWN, OTHER SIMILAR



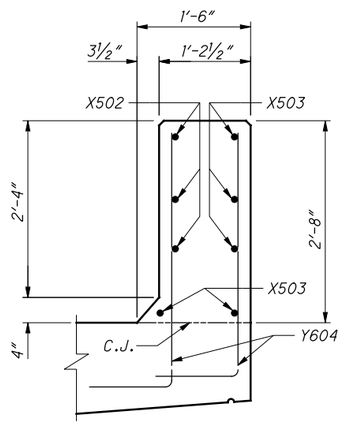
SECTION C-C



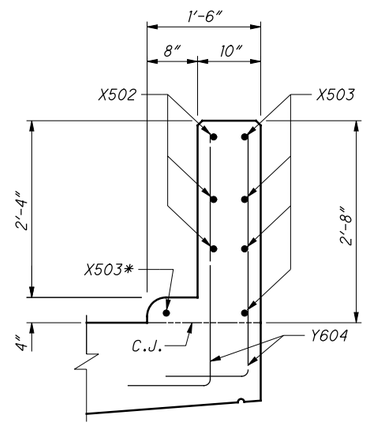
VIEW A-A



SECTION D-D



SECTION E-E



SECTION F-F

NOTES:

1. FOR NOTES AND DETAILS NOT SHOWN, SEE STD. DWG. SBR-1-99.
2. FOR BRIDGE TERMINAL ASSEMBLIES, SEE STANDARD CONSTRUCTION DRAWINGS GR-3.1 AND GR-3.2.

PARAPET TRANSITION DETAILS

BRIDGE NO. BEL-70-0963 L/R
I.R. 70 OVER S.R. 149

BEL-70-7.61 PID No. 76825

11 / 12

209
210

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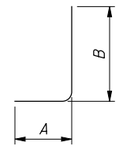
DESIGNED	DRAWN	REVIEWED	DATE
BMG	BMG	DFT	3/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
AME		0702226L/0702250R	

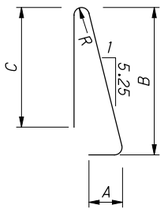
MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
SUPERSTRUCTURE - RIGHT BRIDGE											
S401	20	30'-0"	401	STR							
S402	5	5'-11"	31	STR							
S501	177	11'-3"	2077	34	6'-8"	7"	4"	4'-5"			
S601	354	11'-6"	6159	STR							
S602	86	30'-0"	3875	STR							
S603	17	10'-1"	258	STR							
SUB-TOTAL			12,801								

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
ABUTMENT - RIGHT BRIDGE											
A601	6	8'-6"	77	STR							
SUB-TOTAL			77								

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
PARAPET - RIGHT BRIDGE											
R501	24	30'-0"	751	STR							
R502	6	8'-0"	50	STR							
R503	90	7'-5"	696	23	1'-1"	3'-2"	3'-0"			2 3/4"	
R601	4	30'-0"	180	STR							
R602	1	10'-1"	15	STR							
R603	90	2'-10"	383	1	1'-1"	1'-11"					
R604	90	3'-9"	507	28	1'-11"	1'-1"					
X501	16	10'-0"	167	STR							
X502	6	5'-6"	35	25	1'-8"	2'-5"	1'-5"	1 1/2"	5"		
X503	10	5'-6"	57	STR							
	4 SR	4'-2"				3'-4"					
Y603	OF	TO	303	1	1'-0"	TO					1"
	11	5'-0"				4'-2"					
Y604	16	4'-2"	100	1	1'-0"	3'-4"					
SUB-TOTAL			3,244								



TYPE-1



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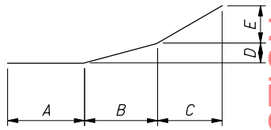

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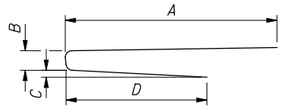
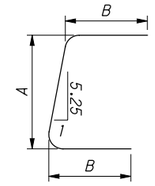


TYPE-34



TYPE 28

APPROVED FOR CONSTRUCTION - 6/8/2010

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The Challenge to be Choice.
1901 Watermark Drive, Suite 310 - Columbus, Ohio 43215

DESIGNED BMG | DRAWN BMG | CHECKED AME | REVIEWED DFT | DATE 3/10
REVISED
STRUCTURE FILE NUMBER 0702226L/0702250R

REINFORCING STEEL LIST
BRIDGE NO. BEL-70-0963 L/R
I.R. 70 OVER S.R. 149

BEL-70-7.61
PID No. 76825

12 / 12

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