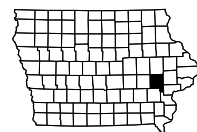


JOHNSON CO.
PCC PAVEMENT - GRADE AND REPLACE
NHS-080-6(371)239--11-52
 LETTING DATE
 07-30-2019

INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	Title Sheets
A.1	Title Sheet
* A.2	Location Map Sheet
A.3	Existing Bridge Information
B Sheets	Typical Cross Sections and Details
B.1 - 17	Typical Cross Sections and Details
C Sheets	Quantities and General Information
C.1	Estimated Project Quantities
C.2 - 4	Estimate Reference Information
C.5	Standard Road Plans
C.5	General Notes
C.6 - 26	Tabulations
CD Sheets	Drainage Tabulations
CD.1 - 3	Drainage Tabulations
CS Sheets	Soils Tabulations
CS.1 - 4	Soils Tabulations
D Sheets	Mainline Plan and Profile Sheets
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - 15	I-80
E Sheets	Side Road Plan and Profile Sheets
* E.1 - 10	I-380
* E.10 - 12	Barn Entrance
* E.13 - 14	U.S. 6 Entrance
F Sheets	Detour or Temporary Pavement Sheets
* F.1	Detour Ramp B1
* F.2	Detour Ramp B2
G Sheets	Survey Sheets
G.1 - 21	Reference Ties and Bench Marks
G.22 - 27	Horizontal Control Tab. & Super for all Alignments
H Sheets	Right-of-Way Sheets
H.1 - 7	I-80
HE.1 - 5	I-380/US218
J Sheets	Traffic Control and Staging Sheets
* J.1 - 2	Traffic Control Plan
* J.4 - 6	Staging Notes
* J.7	Staging Locations
* J.50 - 52	Staging Typical
* JA.0	Traffic Control & Staging Legend & Symbol Info. Sheet
* JA.1 - 32	Staging and Traffic Control Sheets Stage 2A
* JB.1 - 32	Staging and Traffic Control Sheets Stage 2B
* JC.1 - 32	Staging and Traffic Control Sheets Stage 2C
* JD.1 - 32	Staging and Traffic Control Sheets Stage 2D
* JE.1 - 32	Staging and Traffic Control Sheets Stage 2E
* J.101 - 12	Ingress/Egress
* J.201 - 228	Detours
* J.301 - 323	Detour Signing
* J.401 - 411	Traffic Details
K Sheets	Interchange Sheets
* K.1	Ireland Interchange Layout Sheets
* K.2	Ireland Ramp A Plan and Profile Sheet
* K.3 - 6	80/380 Interchange Layout Sheets
* K.7 - 19	RAMP Plan and Profile Sheets
* K.20	IA 965 Interchange Layout Sheets
* K.21 - 22	IA 965 RAMP B Plan and Profile Sheets
L Sheets	Geometric, Staking and Jointing Sheets
L.1	Geometric details "I-380/US218"
L.2 - 6	Staking details "I-380/US218"
L.7	Jointing "I-380/US218"
M Sheets	Storm Sewer Sheets
M.1 - 6	Storm Sewer Tabulations
M.7 - 28	Storm Sewer Plan and Profile Sheets
M.29 - 38	Storm Sewer Details
N Sheets	Utility Coordination Sheets
N.1 - 4	Fiber Optic Deployment "I-80 / I380/ US218"



Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

INTERSTATE ROAD SYSTEM

JOHNSON COUNTY

PCC PAVEMENT - GRADE AND REPLACE

I-80/380/US 218 Interchange near Iowa City

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.14 of the Specifications.



For Project Location Map
Refer to Sheet A.2

I-80	I-380	U.S. 218
DESIGN DATA RURAL	DESIGN DATA RURAL	DESIGN DATA RURAL
2025 AADT <u>48,900</u> V.P.D.	2025 AADT <u>62,800</u> V.P.D.	2025 AADT <u>41,200</u> V.P.D.
2045 AADT <u>84,900</u> V.P.D.	2045 AADT <u>92,300</u> V.P.D.	2045 AADT <u>61,100</u> V.P.D.
2045 DHV <u>8,770</u> V.P.H.	2045 DHV <u>9,530</u> V.P.H.	2045 DHV <u>6,310</u> V.P.H.
TRUCKS <u>31</u> %	TRUCKS <u>17</u> %	TRUCKS <u>11</u> %
Total	Total	Total
Design ESALs <u>--</u>	Design ESALs <u>--</u>	Design ESALs <u>--</u>

INDEX OF SEALS		
SHEET NO.	NAME	TYPE
A.1	Jason M. Holst	Primary Signature Block
CD.1	David Claman	Hydraulic Design
CS.1	Justin Humke	Geotechnical Design
M.1	Aaron D. Granquist	Hydraulic Design
RC.1	Aaron D. Granquist	
V.3	Jeff Segar	
V.20	Steven L. Seivert	Hydraulic Design

REVISIONS

TOTAL

1058

PROJECT IDENTIFICATION NUMBER

02-52-080-010

PROJECT NUMBER

NHS-080-6(371)239--11-52

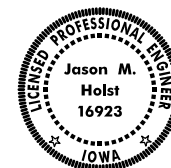
R.O.W. PROJECT NUMBER

IMN-080-6(236)239--0E-52

INDEX OF SHEETS

No.	DESCRIPTION
Q Sheets	Soils Sheets
Q.1	Soils Legend & Symbol Information Sheet
Q.2 - 49	Soils Sheets "I80, I80/US218 & Ramps A,B,C,D,E,F & H"
R Sheets	Erosion Control Sheets
RC.1 - 15	Erosion Control Tabulations
RR.1 - 14	Erosion Control Plan Sheets
T Sheets	Earthwork Quantity Sheets
T.1 - 51	Earthwork Quantity Sheets
U Sheets	500 Series, Mod.Stds. and Detail Sheets
U.1 - 12	Clearing and Grubbing I80 & I380/US218
U.13 - 22	Fencing layout I80 & I380/US219
U.23 - 26	South Cross Over
U.27 - 45	Ramp Staking Sheets
U.46 - 49	Ramp Taper Jointing Sheets
U.50 - 54	Modified SW-538
V Sheets	Bridge and Culvert Situation Plans
V.1 - 2	I-380 NB Temporary Retaining Wall
V.3 - 11	I-380 Temporary Retaining Wall
V.20	Stream Bank Stabilization Bank Lining
V.100 - 108	Berm Slope Location Tables
W Sheets	Mainline Cross Sections
W.1 - 89	I-80 Cross Sections
X Sheets	Side Road Cross Sections
X.1 - 138	U.S. 218/I-380 Cross Sections
X.139 - 144	Railroad Cross Sections
Y Sheets	Ramp Cross Sections
Y.1 - 185	Ramp Cross Sections
	* Color Plan Sheets

ROADWAY DESIGN

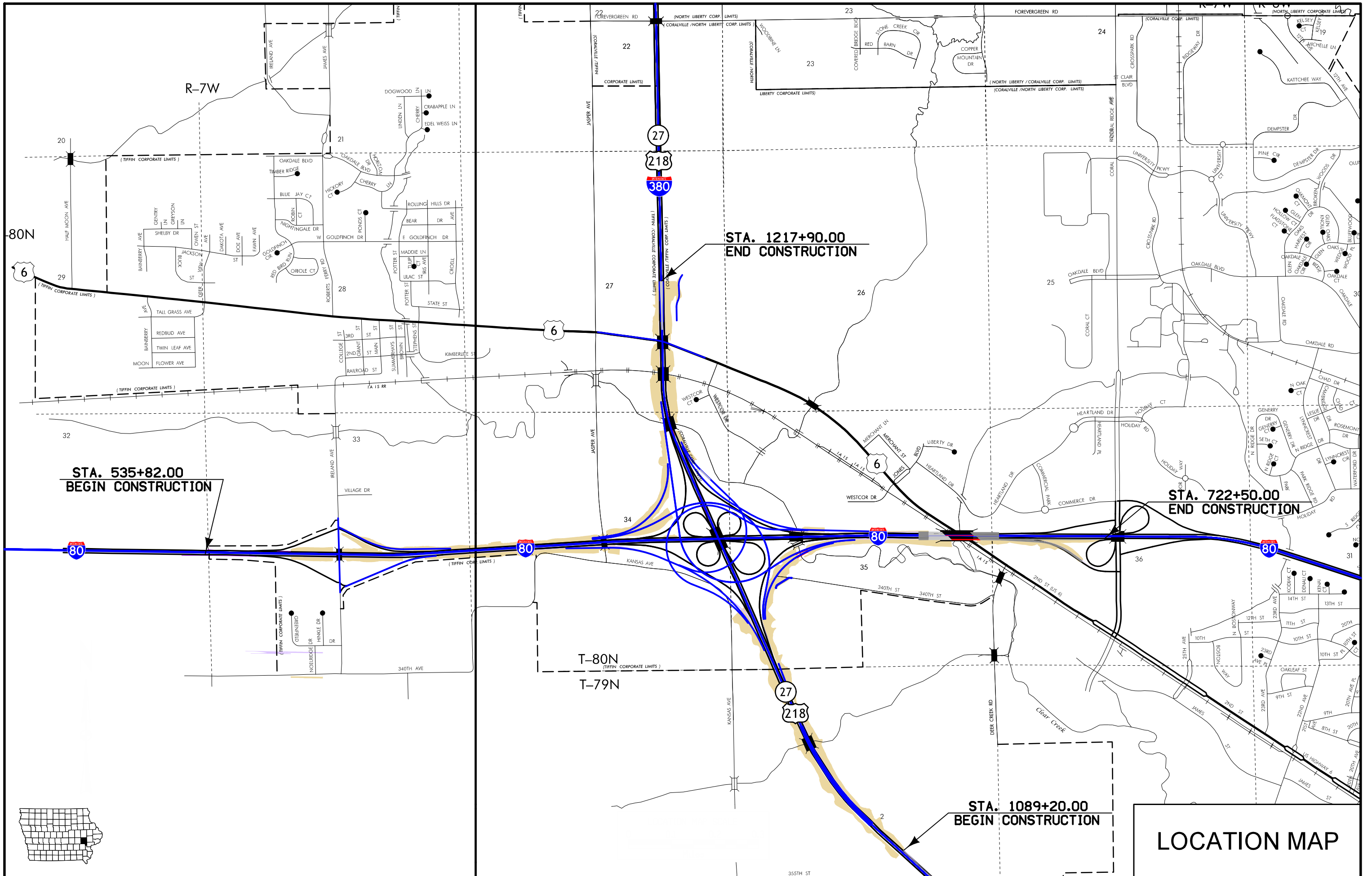


I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

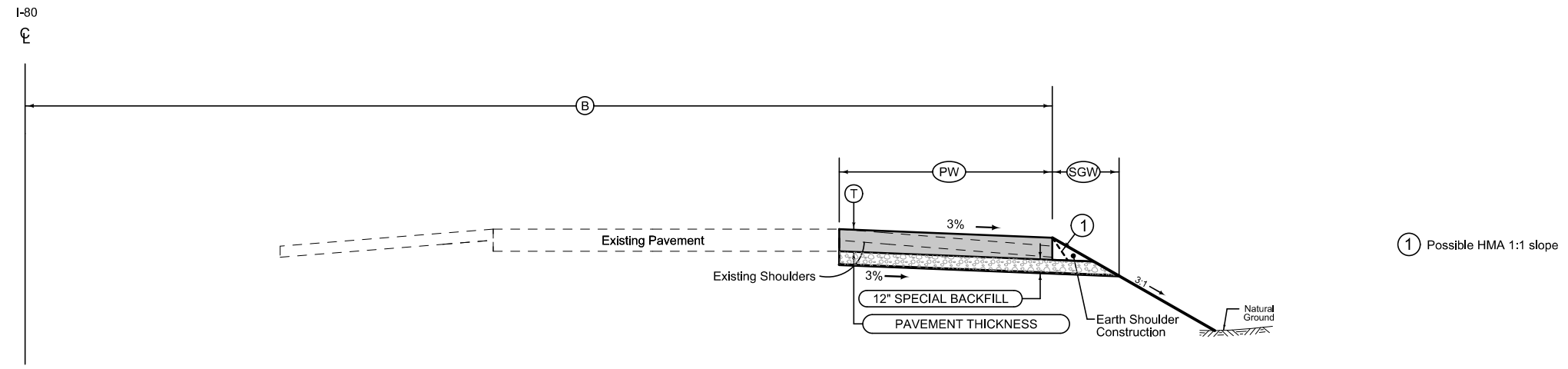
Signature Jason M. Holst Date 05-06-2019

Printed or Typed Name
My license renewal date is December 31, 2019

Pages or sheets covered by this seal: A1-A.3; B1-B.15; C1-C.26; D1-D.15; E1-E.14; F1-F.2; J1-J.7; JA1-JA.32; JB1-JB.32; JC1-JC.32; JD1-JD.32; JE1-JE.32; J50; J101-J.113; K1-K.22; L1-L.7; T1-T.51; U1-U.54; V1; V.3-V.11; V.100-V.115; W.1-W.89; X.1-X.144; Y.1-Y.185



LOCATION MAP



Section shown in the direction of traffic.

PCC Detour Jointing:
 Transverse joints: C at 15' spacing
 Longitudinal joint: L-2

HMA Detour Jointing:
 Longitudinal joint: B

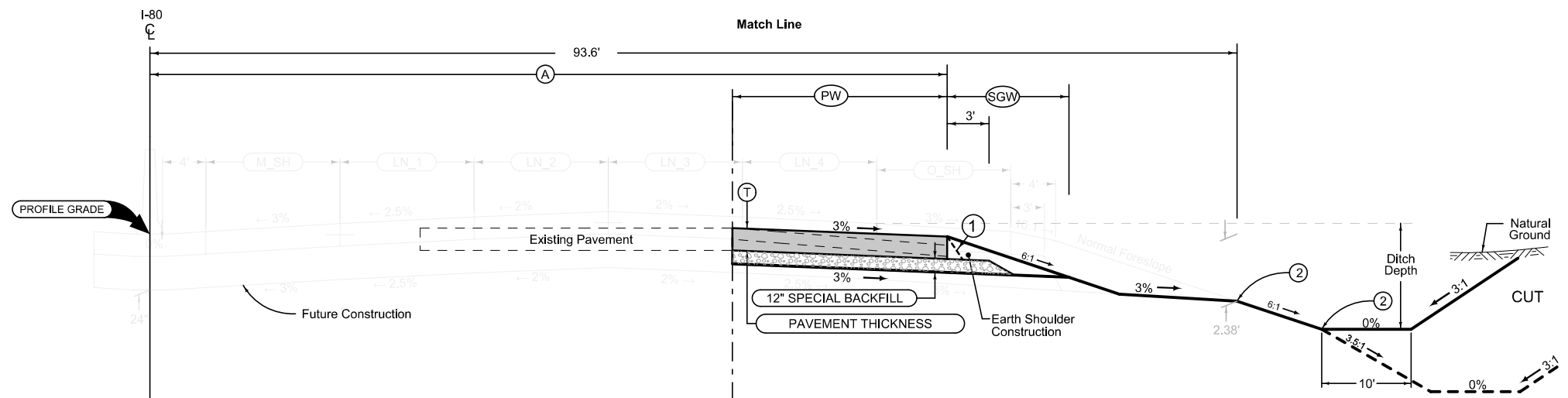
ROAD IDENTIFICATION	LOCATION STATION TO STATION		DIMENSIONS						Special Backfill Tons/Station	Earth Shoulder Construction Station
			HMA		PCC					
			(B) Feet	(PW) Feet	(T) Inches	(SGW) Feet	(T) Inches	(SGW) Feet		
I-80 WB	541+03.52	549+97.60	Vari.	Vari.	12.5	6.7	9.5	5.9	8.94	
I-80 WB	555+12.00	557+90.00	59	10	12.5	6.7	9.5	5.9	2.78	
I-80 WB	557+90.00	566+94.43	59	10	12.5	6.7	9.5	5.9	10.96	
I-80 WB	567+59.74	578+72.99	59	10	12.5	6.7	9.5	5.9	11.13	
I-80 EB	535+82.15	551+00.18	Vari.	Vari.	12.5	6.7	9.5	5.9	15.18	
I-80 EB	560+50.00	567+01.05	59	10	12.5	6.7	9.5	5.9	6.51	
I-80 EB	567+64.44	584+66.25	59	10	12.5	6.7	9.5	5.9	17.02	
I-80 WB	623+28.43	626+35.13	Vari.	10	12.5	6.7	9.5	5.9	3.04	
I-80 EB	621+69.99	623+58.56	Vari.	10	12.5	6.7	9.5	5.9	1.89	
I-80 WB	630+73.92	636+14.43	59	10	12.5	6.7	9.5	5.9	5.41	
I-80 WB	664+66.75	665+28.55	79-75	Vari.	12.5	6.7	9.5	5.9	0.62	
I-80 WB	665+28.55	685+00.00	Vari.	12-16	12.5	6.7	9.5	5.9	21.71	
I-80 EB	664+48.86	668+77.78	77.6-75	5-15	12.5	6.7	9.5	5.9	4.29	

Normal section shown may be modified appropriately in areas of super-elevated curves or other locations specifically designated by the Engineer.

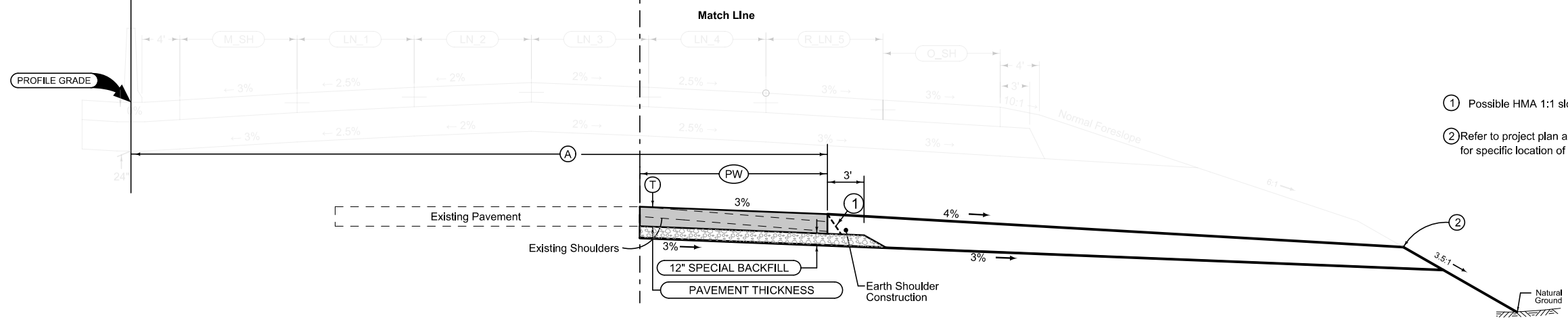
See Plan & Profiles sheets and cross sections for additional details of ditches and backslopes.

See Tab 100-24DET for pavement quantities.

I-80 Shoulder Strengthening Without Grading



ROAD IDENTIFICATION	LOCATION STATION TO STATION		DIMENSIONS						Special Backfill Tons/Station	Earth Shoulder Construction Station
			HMA		PCC		T Inches	SGW Feet		
			A Feet	PW Feet	T Inches	SGW Feet				
I-80 WB	584+66.25	585+16.25	62-59	Vari.	12.5	14.9	9.5	13.1		0.50
I-80 WB	585+16.25	620+88.81	59	10	12.5	14.9	9.5	13.1		35.73
I-80 WB	621+52.99	623+28.43	Vari.	10	12.5	14.9	9.5	13.1		1.75
I-80 EB	587+85.03	590+46.12	Vari.	10	12.5	14.9	9.5	13.1		2.61
I-80 EB	590+46.12	602+16.33	59	10	12.5	14.9	9.5	13.1		11.70
I-80 EB	602+16.33	605+49.66	59-67	10-18	12.5	14.9	9.5	13.1		3.33
I-80 EB	605+49.66	612+00.34	67	18	12.5	14.9	9.5	13.1		6.51
I-80 EB	612+00.34	615+33.67	67-59	18-10	12.5	14.9	9.5	13.1		3.33
I-80 EB	615+33.67	618+01.66	59	10	12.5	14.9	9.5	13.1		3.88

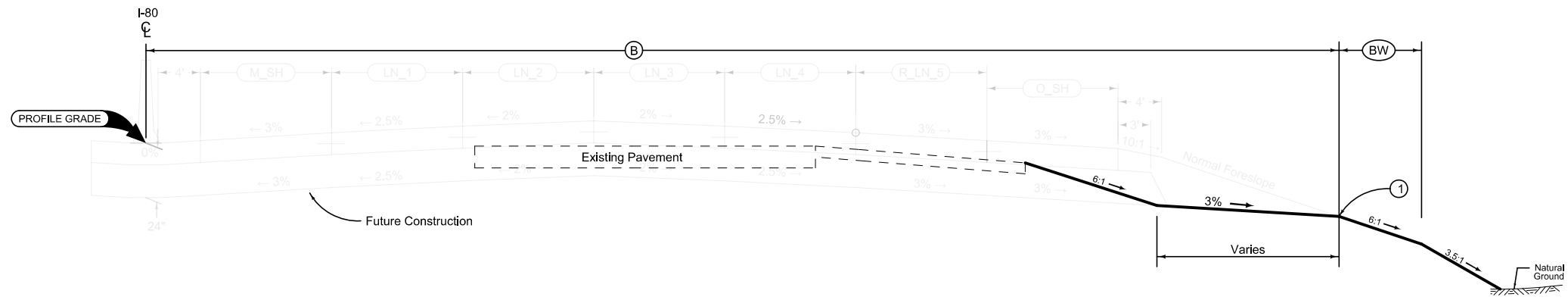


- ① Possible HMA 1:1 slope
- ② Refer to project plan and cross sections for specific location of foreslope change.

ROAD IDENTIFICATION	LOCATION STATION TO STATION		DIMENSIONS						Special Backfill Tons/Station	Earth Shoulder Construction Station
			HMA		PCC		T Inches	SGW Feet		
			A Feet	PW Feet	T Inches	SGW Feet				
I-80 EB	668+77.78	685+00.00	Vari (71)	Vari (23)	12.5		9.5			22.74

See Tab 100-24DET for pavement quantities.

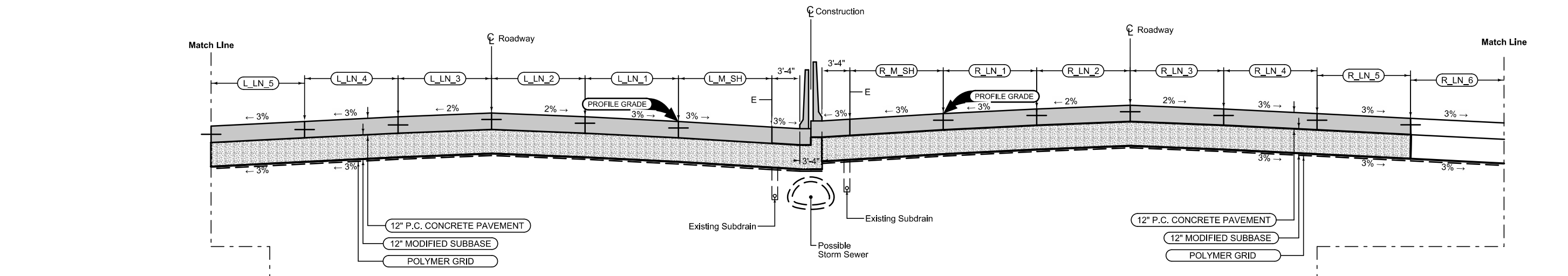
I-80 Grading with Shoulder Strengthening



LOCATION		DIMENSIONS				
ROAD IDENTIFICATION	STATION TO STATION		(B)	(BW)		
			Feet	Feet		
I-80 WB	582+81.28	584+66.25	127-118			
I-80 EB	557+90.00	560+50.00	79-76			
I-80 EB	584+94.89	587+85.03	95.6-93.6			

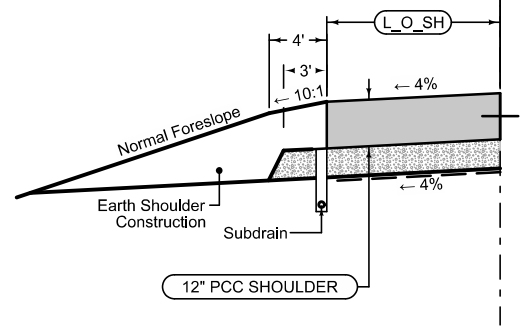
① Refer to project plan and cross sections for specific location of foreslope change.

**I-80 Grading
without Shoulder Strengthening**



Mainline Jointing:
 Transverse joints: CD at 17' spacing

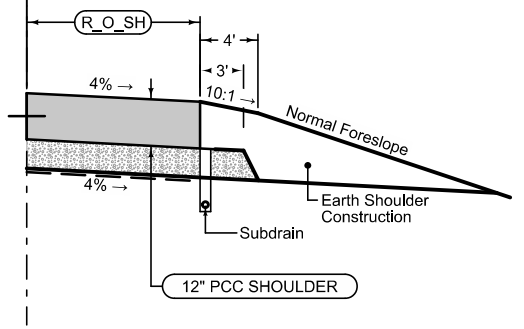
BEGIN STATION	END STATION	8DP_Closed_													
		L_LN_5 Feet	L_LN_4 Feet	L_LN_3 Feet	L_LN_2 Feet	L_LN_1 Feet	L_M_SH Feet	R_M_SH Feet	R_LN_1 Feet	R_LN_2 Feet	R_LN_3 Feet	R_LN_4 Feet	R_LN_5 Feet	R_LN_6 Feet	
687+00.00	689+02.66	12	12	12	12	12	8	8	12	12	12	12	12	--	
689+02.66	690+31.73	Bridge App.	Bridge App.	Bridge App.	Bridge App.	Bridge App.	Bridge App.	8	12	12	12	12	12	--	



Full Depth PCC Shoulder

Shoulder Jointing:
 Longitudinal joint: L-2 or KT-2
 Transverse joints: CD at 17' spacing

6D_Closed_P_FullPCC_		
BEGIN STATION	END STATION	L_O_SH Feet
687+00.00	689+02.66	12



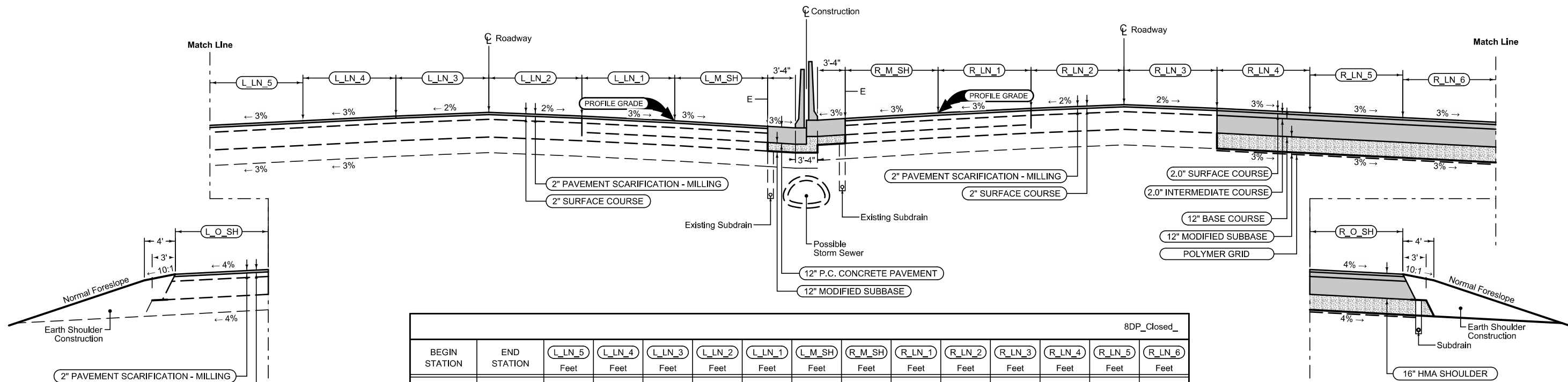
Full Depth PCC Shoulder

Shoulder Jointing:
 Longitudinal joint: L-2 or KT-2
 Transverse joints: CD at 17' spacing

6D_Closed_P_FullPCC_		
BEGIN STATION	END STATION	R_O_SH Feet
687+00.00	690+31.73	12

See Tab 100-24 for pavement quantities.
 Shoulder quantities included with mainline pavement.
 Refer to U-Sheets for concrete barrier details

INTERSTATE 80 PCC PAVING



Full Depth HMA Shoulder

6D_Closed_P_FullHMA_		
BEGIN STATION	END STATION	(L_O_SH) Feet
696+78.20	701+25.00	12

8DP_Closed_														
BEGIN STATION	END STATION	(L_LN_5) Feet	(L_LN_4) Feet	(L_LN_3) Feet	(L_LN_2) Feet	(L_LN_1) Feet	(L_M_SH) Feet	(R_M_SH) Feet	(R_LN_1) Feet	(R_LN_2) Feet	(R_LN_3) Feet	(R_LN_4) Feet	(R_LN_5) Feet	(R_LN_6) Feet
697+00.00	698+15.26	12	12	12	12	12	8	Bridge App.	Bridge App.	Bridge App.	Bridge App.	Bridge App.	Bridge App.	--
698+15.26	701+25.00	12	12	12	12	12	8	8	12	12	12	12	12	--
701+25.00	715+33.57							--	--	--	--	12	--	--
715+33.57	722+50.00							--	--	--	--	12-2	--	--

Full Depth HMA Shoulder

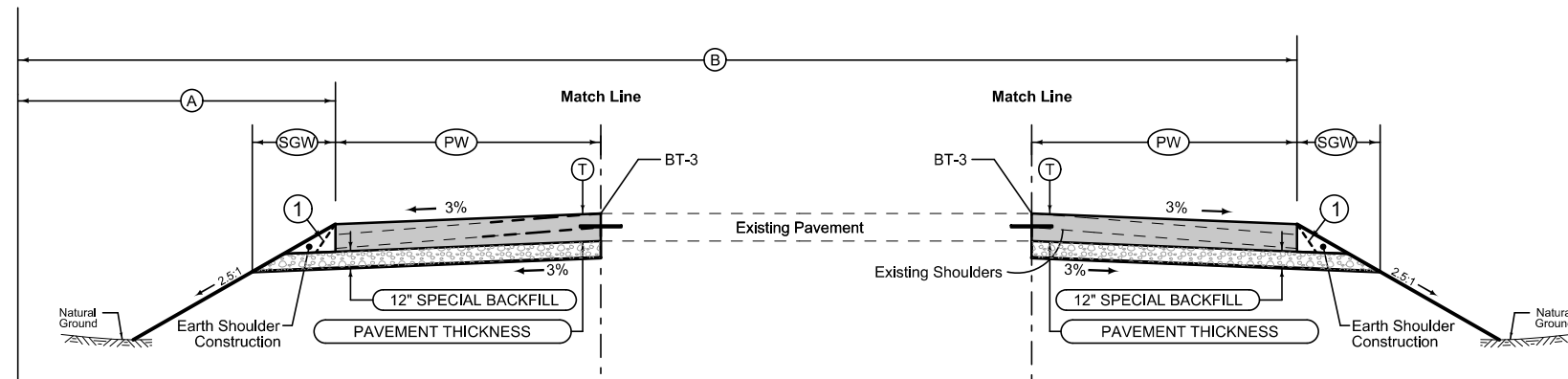
6D_Closed_P_FullHMA_		
BEGIN STATION	END STATION	(R_O_SH) Feet
698+15.26	701+25.00	12
708+33.07	722+50.00	12

See Tab 100-24 for pavement quantities.
Shoulder quantities included in the mainline pavement.
Refer to U-Sheets for concrete barrier details

INTERSTATE 80 HMA PAVING

I-380/US 218

℄



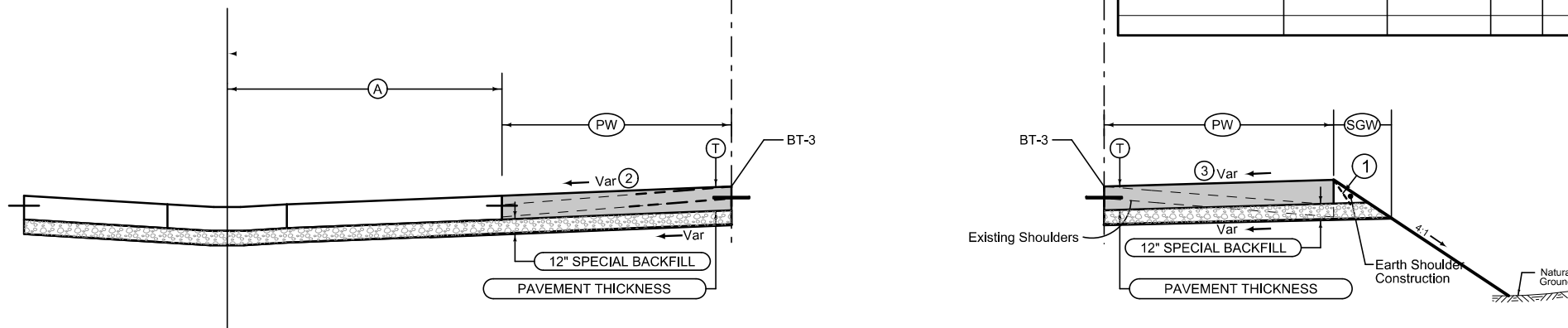
Section shown in the direction of traffic.

LOCATION			DIMENSIONS						Special Backfill Tons/Station	Earth Shoulder Construction Station
ROAD IDENTIFICATION	STATION TO STATION		HMA			PCC				
			(A) Feet	(PW) Feet	(T) Inches	(SGW) Feet	(T) Inches	(SGW) Feet		
US 218 NB	1088+79.22	1121+67.62	17	13-15	11.5	4.8	9.0	4.1	32.88	

LOCATION			DIMENSIONS						Special Backfill Tons/Station	Earth Shoulder Construction Station
ROAD IDENTIFICATION	STATION TO STATION		HMA			PCC				
			(B) Feet	(PW) Feet	(T) Inches	(SGW) Feet	(T) Inches	(SGW) Feet		
US 218 NB	1080+84.74	1089+20.00	61-71	6-15	11.5	6.5	9.0	5.8	8.35	
I-380 NB	1173+40.00	1176+67.00	64.5	10	11.5	6.5	9.0	5.8	3.27	
I-380 SB	1178+00.00	1182+18.00	64.5	10	11.5	6.5	9.0	5.8	2.43	
I-380 NB	1187+06.63	1187+84.98	65	10	11.5	6.5	9.0	5.8	0.78	
I-380 NB	1189+80.59	1190+47.00	65	10	11.5	6.5	9.0	5.8	0.66	

I-380/US 218

℄



LOCATION			DIMENSIONS						Special Backfill Tons/Station	Earth Shoulder Construction Station
ROAD IDENTIFICATION	STATION TO STATION		HMA			PCC				
			(A) Feet	(PW) Feet	(T) Inches	(SGW) Feet	(T) Inches	(SGW) Feet		
US 218 NB	1121+67.62	1126+48.78	17	13	11.5		9.0			

LOCATION			DIMENSIONS						Special Backfill Tons/Station	Earth Shoulder Construction Station
ROAD IDENTIFICATION	STATION TO STATION		HMA			PCC				
			(B) Feet	(PW) Feet	(T) Inches	(SGW) Feet	(T) Inches	(SGW) Feet		
I-380 SB	1185+21.00	1187+99.00	65-67	10	11.5	Var	9.0	Var	2.78	
I-380 SB	1190+15.00	1190+47.00	65	10	11.5	Var	9.0	Var	0.32	

① Possible HMA 1:1 slope

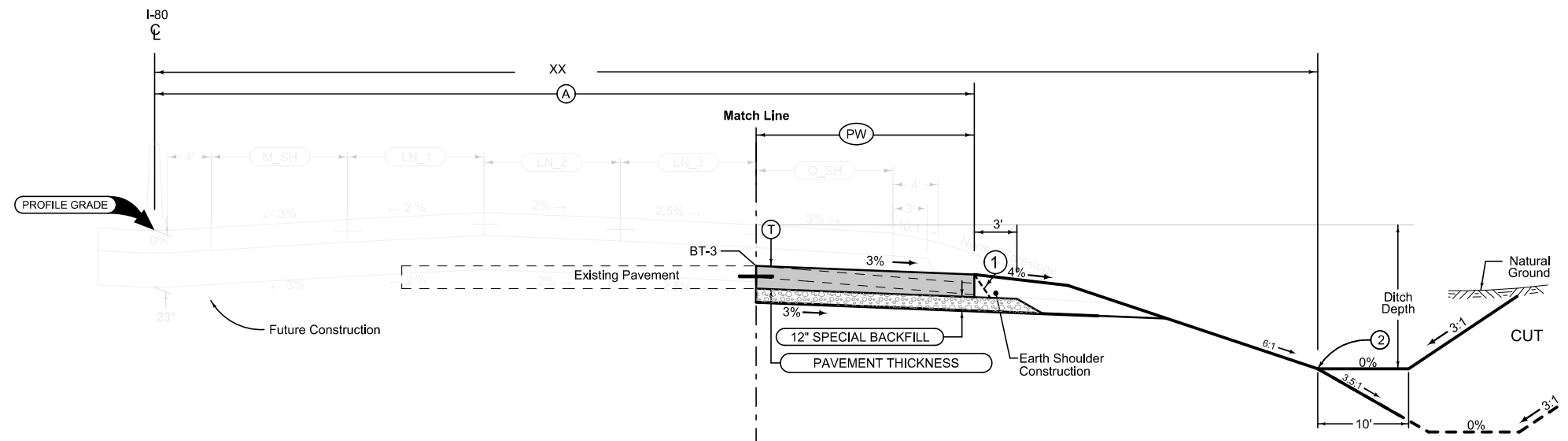
Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

See Plan & Profiles sheets and cross sections for additional details of ditches and backslopes.

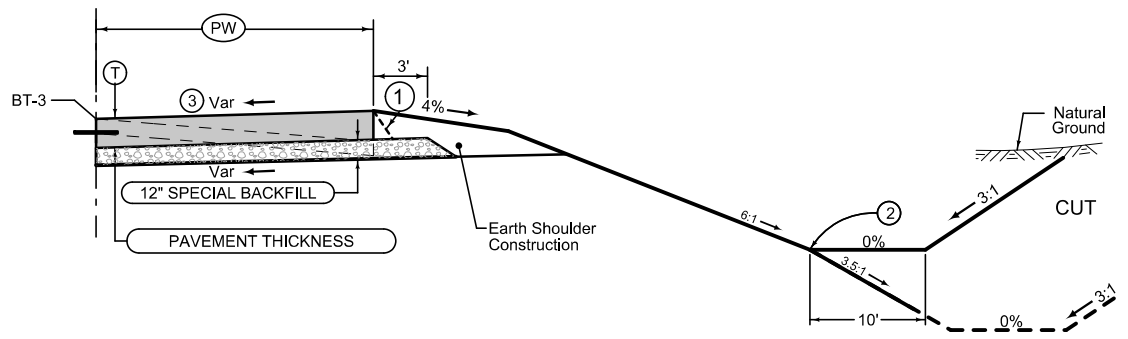
See Tab 100-24DET for pavement quantities.

- ② Modify slope to connect to proposed median pavement.
- ③ Match superelevation of mainline pavement.

I-380/US 218 Shoulder Strengthening



LOCATION		DIMENSIONS						Special Backfill	Earth Shoulder Construction
ROAD IDENTIFICATION	STATION TO STATION	(A)	(PW)	(T)	(SGW)	(T)	(SGW)		
		Feet	Feet	Inches	Feet	Inches	Feet	Tons/Station	Station
US 218 NB	1089+20.00 1126+23.64	71	15-17	11.5	6.5	9.0	5.8		37.04
US 218 SB	1121+67.62 1143+18.64	62-71	6.5-8.5	11.5	6.5	9.0	5.8		21.51
I-380 NB	1180+40.38 1187+06.63	62-71	Var.	11.5	6.5	9.0	5.8		6.66
I-380 NB	1190+46.99 1198+30.40	64	10	11.5	6.5	9.0	5.8		7.83
I-380 NB	1200+30.00 1204+41.50	64	10	11.5	6.5	9.0	5.8		4.11
I-380 SB	1200+28.00 1204+93.00	64	10	11.5	6.5	9.0	5.8		4.65
I-380 NB	1206+96.00 1224+75.00	64	10	11.5	6.5	9.0	5.8		17.79
I-380 SB	1206+96.00 1224+75.00	64	10	11.5	6.5	9.0	5.8		17.79

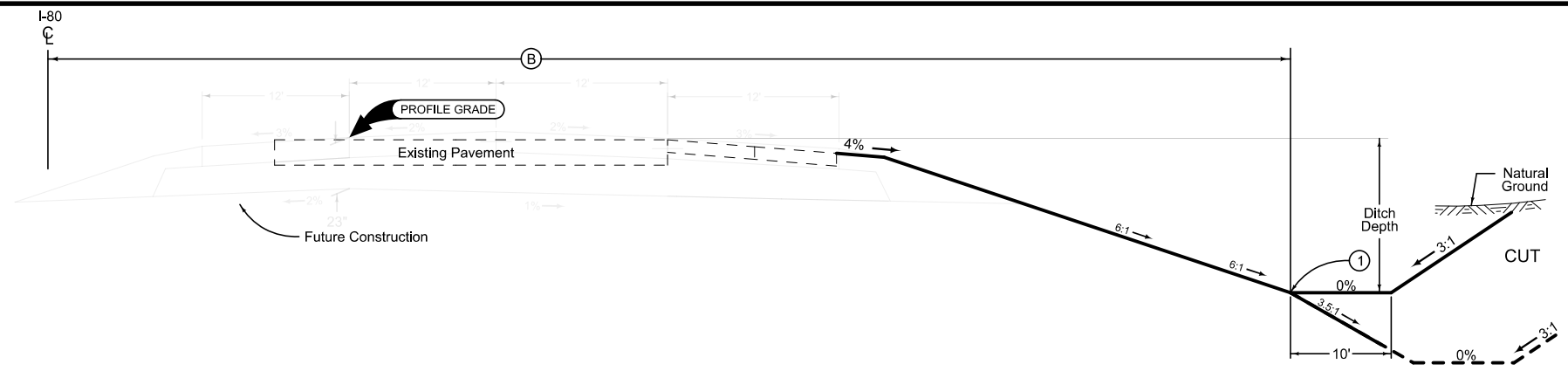


LOCATION		DIMENSIONS						Special Backfill	Earth Shoulder Construction
ROAD IDENTIFICATION	STATION TO STATION	(A)	(PW)	(T)	(SGW)	(T)	(SGW)		
		Feet	Feet	Inches	Feet	Inches	Feet	Tons/Station	Station
I-380 SB	1190+47.00 1198+63.00	64	10	11.5	Var	9.0	Var		8.16

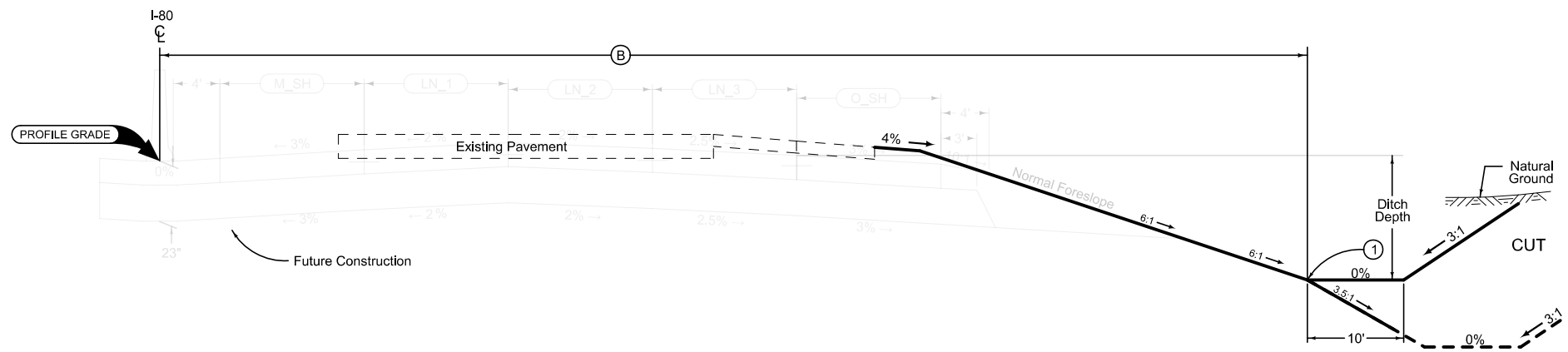
- ① Possible HMA 1:1 slope
- ② Refer to project plan and cross sections for specific location of foreslope change.
- ③ Match superelevation of mainline pavement.

See Tab 100-24DET for pavement quantities.

**I-380/US 218 Grading
with Shoulder Strengthening**



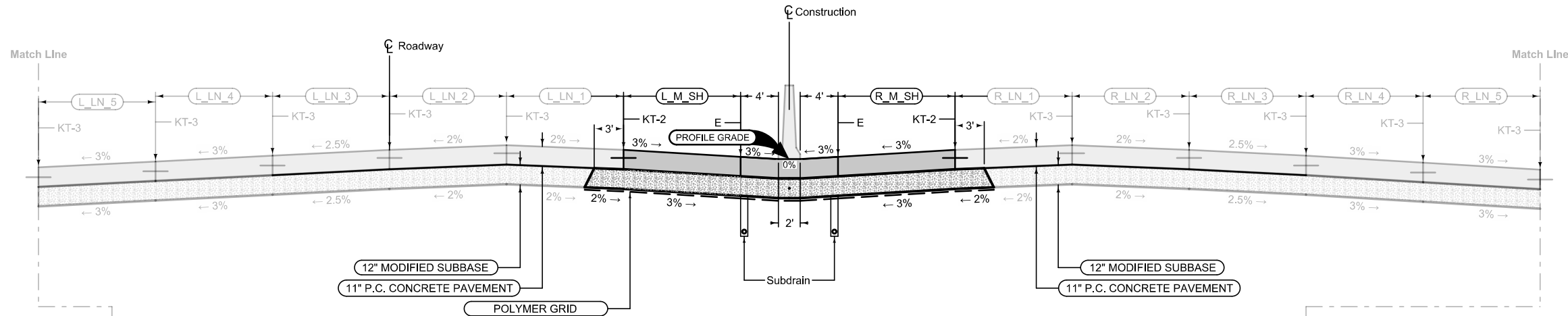
LOCATION		DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION	Ⓟ Feet			
		I-380 SB	1089+20.00	1121+67.62	Vari. (94.4-109)



LOCATION		DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION	Ⓟ Feet			
		I-380 NB	1126+23.64	1135+75.51	Vari. (94.4-128)

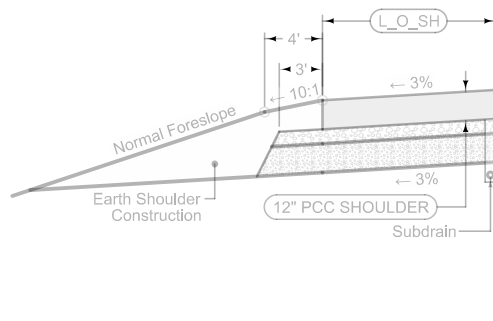
① Refer to project plan and cross sections for specific location of foreslope change.

**I-380/US 218 Grading
without Shoulder Strengthening**



Mainline Jointing:
 Transverse joints: CD at 17' spacing
 Refer to L and U-Sheets for additional transverse jointing details
 Polymer Grid:
 Extend minimum 24\"/>

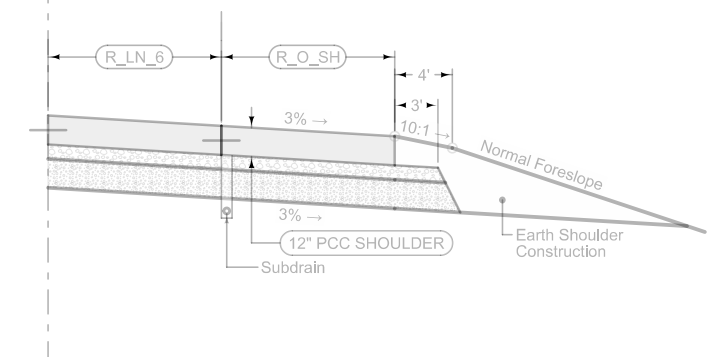
		6DP_Closed_												
BEGIN STATION	END STATION	L_LN_5 Feet	L_LN_4 Feet	L_LN_3 Feet	L_LN_2 Feet	L_LN_1 Feet	L_M_SH Feet	R_M_SH Feet	R_LN_1 Feet	R_LN_2 Feet	R_LN_3 Feet	R_LN_4 Feet	R_LN_5 Feet	
1121+67.62	1123+00.00	--	--	12	12	12	12	12	12	12	12	--	--	
1123+00.00	1127+75.00	--	0 - 9.5	12	12	12	12	12	12	12	12	--	--	
1127+75.00	1129+00.00	--	9.5 - 12	12	12	12	12	12	12	12	12	--	--	
1129+00.00	1135+75.40	--	12	12	12	12	12	12	12	12	12	--	--	
1135+75.40	1139+00.00	--	12	12	12	12	12	12	12	12	12	--	--	
1139+00.00	1143+18.64	--	--	12	12	12	12	12	12	12	12	--	--	
1143+18.64	1152+29.00	--	--	12	12	12	12	12	12	12	12	--	--	
1152+29.00	1168+53.75	--	--	12	12	12	12	12	12	12	12	--	--	
1168+53.75	1177+00.00	--	--	12	12	12	12	12	12	12	12	--	--	
1177+00.00	1180+40.38	--	--	12	12	12	12	12	12	12	12	--	--	
1180+40.38	1182+58.75	--	--	12	12	12	12	12	12	12	12	--	--	
1182+58.75	1184+50.00	--	--	12	12	12	12	12	12	12	12	12	12	
1184+50.00	1189+67.92	--	--	12	12	12	12	12	12	12	12	12	12	
1189+67.92	1194+50.00	--	--	12	12	12	12	12	12	12	12	12	12	
1194+50.00	1198+00.00	--	--	12	12	12	12	12	12	12	12	12	12	
1198+00.00	1201+32.37	12	12	12	12	12	12	12	12	12	12	12	12	
1201+32.37	1203+42.62	12 - 0	12	12	12	12	12	12	12	12	12	12	12	
1208+06.84	1210+00.00	--	12	12	12	12	12	12	12	12	12	12	12	
1210+00.00	1211+50.00	--	12 - 6	12	12	12	12-12.9	12-12.9	12	12	12	12	12	
1211+50.00	1213+00.00	--	6 - 0	12	12	12	12.9-15.5	12.9-15.5	12	12	12	12	12	
1213+00.00	1217+89.95	--	--	12	12	12	15.5-24	15.5-24	12	12	12	12	12	



Full Depth PCC Shoulder

Shoulder Jointing:
 Longitudinal joint: L-2 or KT-2
 Transverse joints: CD at 17' spacing

6D_Closed_P_FullPCC_04-19-11		
BEGIN STATION	END STATION	L_O_SH Feet
1089+20.00	1123+00.00	12
1123+00.00	1139+00.00	6
Ramp Taper		
1143+18.64	1189+67.92	12
Ramp Taper		
1192+46.51	1201+00.00	10
1201+00.00	1204+00.00	10 - 6
1204+00.00	1210+00.00	6
1210+00.00	1213+00.00	6 - 12
1213+00.00	1260+00.00	12



Full Depth PCC Shoulder

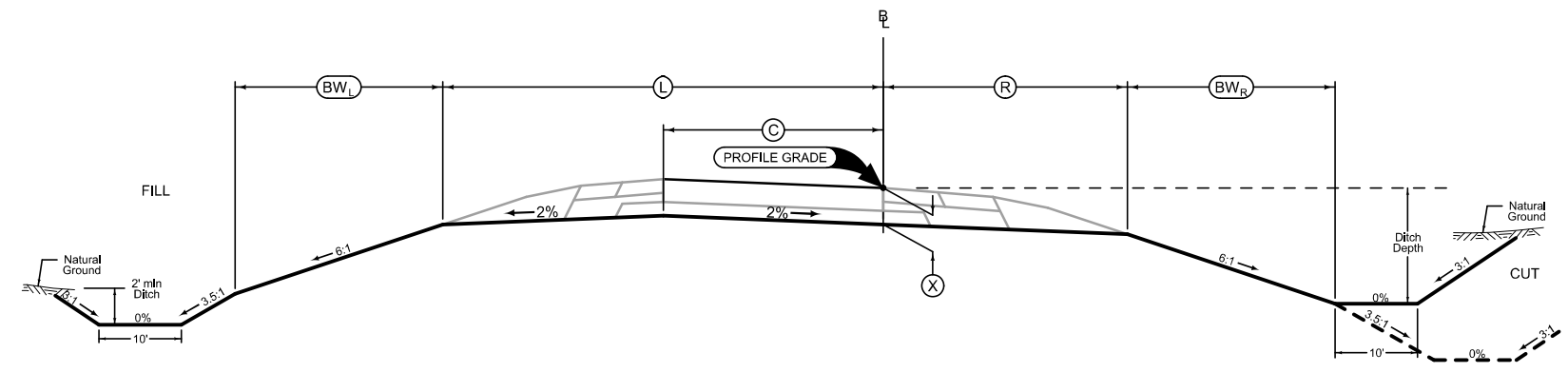
Shoulder Jointing:
 Longitudinal joint: L-2 or KT-2
 Transverse joints: CD at 17' spacing

6D_Closed_P_FullPCC_04-19-11			
BEGIN STATION	END STATION	R_LN_6 Feet	R_O_SH Feet
1089+20.00	1127+75.00		12
Ramp Taper			
1135+75.40	1180+40.38		12
Ramp Taper			
1186+06.00	1198+00.00	12	6
1198+00.00	1204+00.00	12 - 0	6
1204+00.00	1217+90.00		6

See Tab 100-24 for pavement quantities.

INTERSTATE 380 MEDIAN PAVING

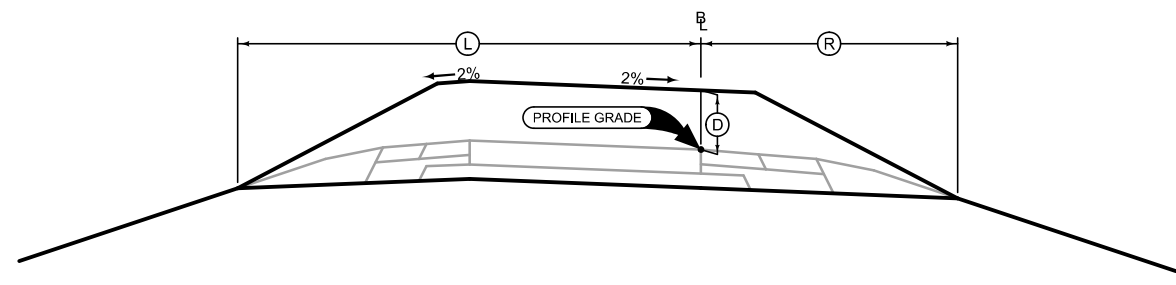
LOCATION			DIMENSIONS					
INTERCHANGE	RAMP	STATION TO STATION	(L) Feet	(R) Feet	(C) Feet	(X) Inches	(BW _L) Feet	(BW _R) Feet
	B	2552+45.00 2562+13.49			16	23		
	C	3525+38.55 3543+35.09			16	23		
	D	4545+00.00 4563.91.17			16	23		
	E	5523+28.22 5536+00.00			16	23		
	E	5574+70.63 5583+94.48			16	23		
	F	6508+50.00 6515+17.42			24	23		
	F	6556+50.00 6568+79.78			24	23		
	H	8574+00.00 8576+24.66			16	23		



RAMP GRADING

Section view is in direction of traffic.
Normal sections shown may be appropriately modified for areas specifically designated by the Engineer such as intersections or superelevated curves.

LOCATION				(D) Feet
INTERCHANGE	RAMP	STATION TO STATION		
I-80/I-380/US 218	B	2552+42.00 2557+95.82		4
I-80/I-380/US 218	D	4545+00.00 4547+50.00		4

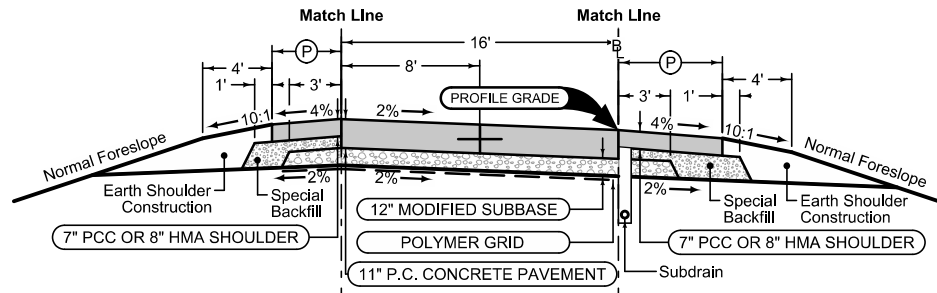


SURCHARGE

Paved Shoulder Alternates

PCC Shoulder Jointing:
 Longitudinal joint: BT-1 or BT-5
 Transverse joints: C at 15' spacing
 HMA Shoulder Jointing:
 Longitudinal joint: B

1R_P_ALT_10-16-18			
ROAD IDENTIFICATION	BEGIN STATION	END STATION	(P) Feet
I-380 Ramp B	2547+04.48	2552+45.00	4



Section shown in the direction of traffic.

Ramp Jointing:
 Transverse joints: CD at 15' spacing.
 Longitudinal joints: L-2

1RP_10-17-17			
ROAD IDENTIFICATION	BEGIN STATION	END STATION	
I-380 Ramp B	2547+04.48	2552+45.00	
I-380 Ramp H	8569+06.73	8572+00.00	

Paved Shoulder Alternates

PCC Shoulder Jointing:
 Longitudinal joint: BT-1 or BT-5
 Transverse joints: C at 15' spacing
 HMA Shoulder Jointing:
 Longitudinal joint: B

1R_P_ALT_10-16-18			
ROAD IDENTIFICATION	BEGIN STATION	END STATION	(P) Feet
I-380 Ramp B	2547+04.48	2552+45.00	6
I-380 Ramp H	8569+06.73	8572+00.00	6

See Tab 100-24 for pavement quantities.
 See Tab 112-9 for shoulder quantities.

ONE LANE RAMPS

Paved Shoulder Alternates

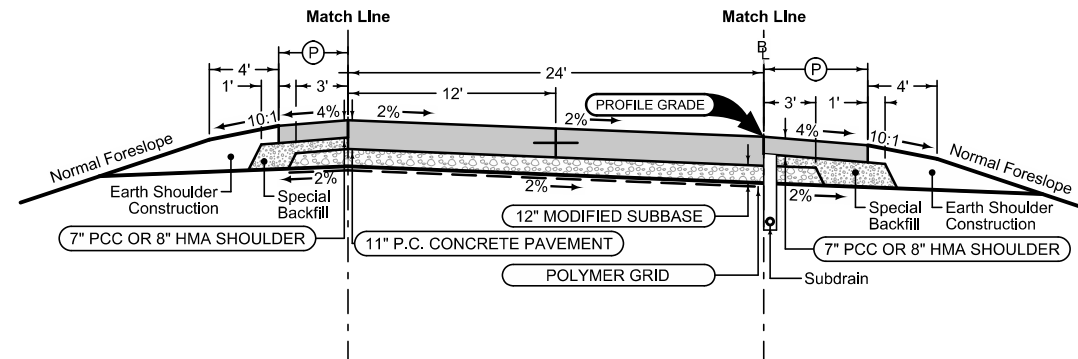
PCC Shoulder Jointing:
 Longitudinal joint: BT-1 or BT-5
 Transverse joints: C at 17' spacing
 HMA Shoulder Jointing:
 Longitudinal joint: B

1R_P_ALT_10-16-18			
ROAD IDENTIFICATION	BEGIN STATION	END STATION	(P) Feet
I-380 Ramp B	2523+00.00	2531+18.56	6

Paved Shoulder Alternates

PCC Shoulder Jointing:
 Longitudinal joint: BT-1 or BT-5
 Transverse joints: C at 17' spacing
 HMA Shoulder Jointing:
 Longitudinal joint: B

1R_P_ALT_10-16-18			
ROAD IDENTIFICATION	BEGIN STATION	END STATION	(P) Feet
I-380 Ramp B	2523+00.00	2531+18.56	10



Section shown in the direction of traffic.

Ramp Jointing:
 Transverse joints: CD at 17' spacing.
 Longitudinal joint: L-2

2RP_04-16-13		
ROAD IDENTIFICATION	BEGIN STATION	END STATION
I-380 Ramp B	2523+00.00	2531+18.56

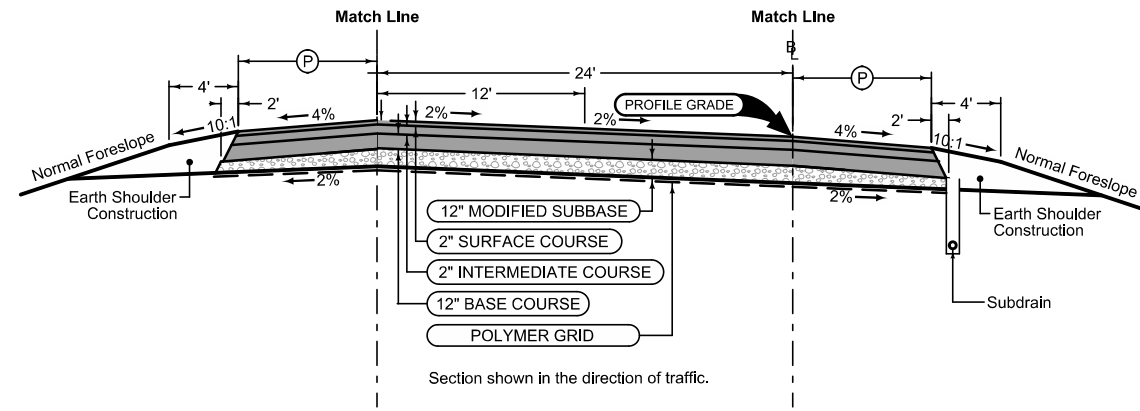
See Tab 100-24 for pavement quantities.
 See Tab 112-9 for shoulder quantities.

TWO LANE RAMPS

Full Depth HMA Shoulder

Shoulder Jointing:
Longitudinal joint: B

2_P_FullHMA_10-19-10		
STATION TO STATION		(P) Feet
2498+22.67	2518+95.00	6



2RH_	
BEGIN STATION	END STATION
2508+32.77	2518+95.00

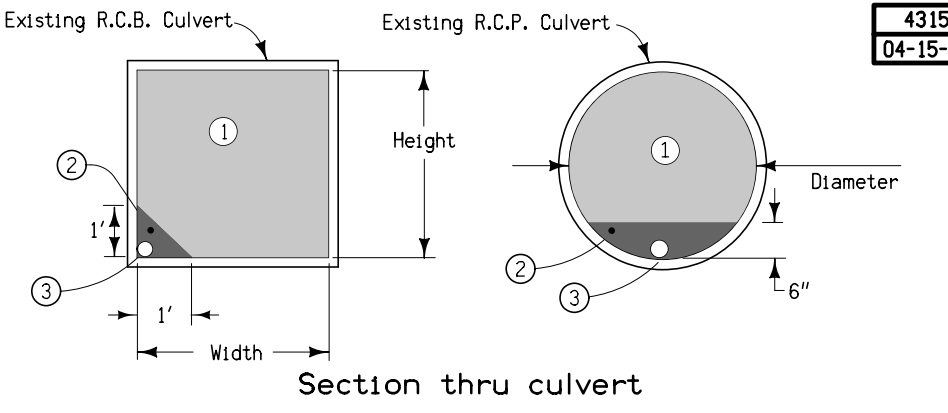
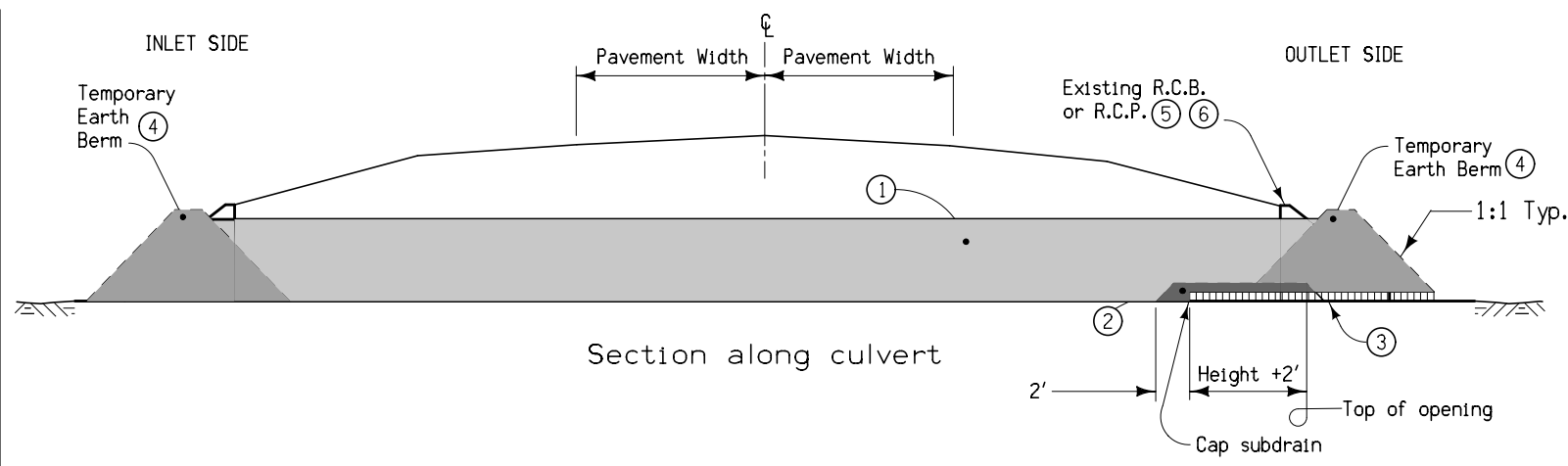
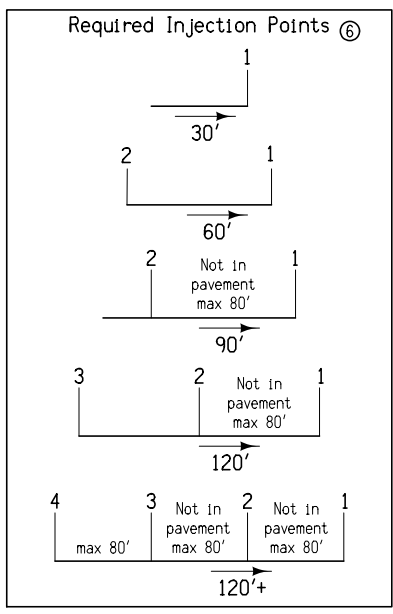
Full Depth HMA Shoulder

Shoulder Jointing:
Longitudinal joint: B

2_P_FullHMA_10-19-10		
STATION TO STATION		(P) Feet
2498+22.67	2518+95.00	10

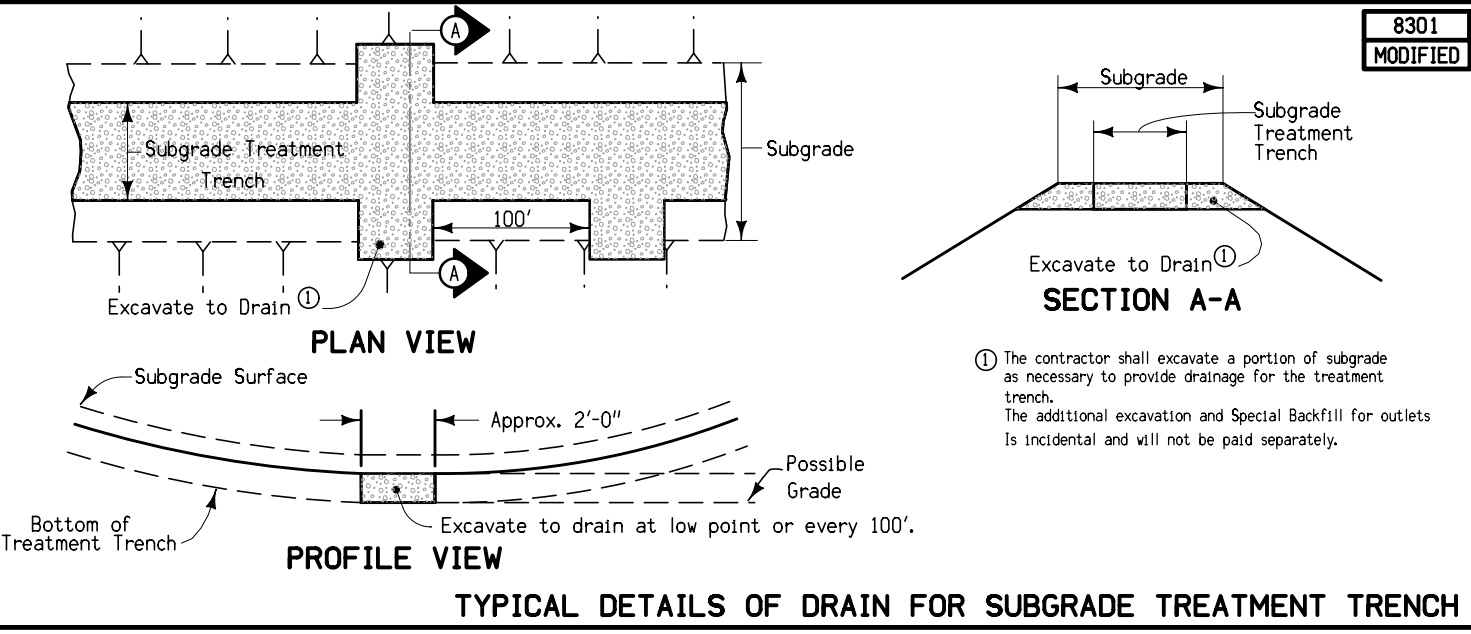
See Tab 100-24 or 100-25 for pavement quantities.
Shoulder quantities included with mainline pavement.

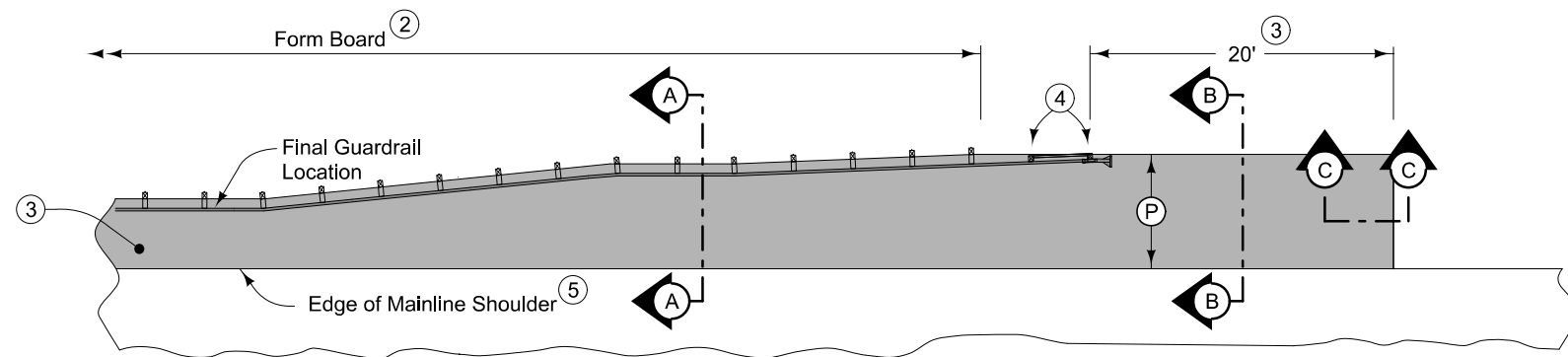
IA 965 RAMP B



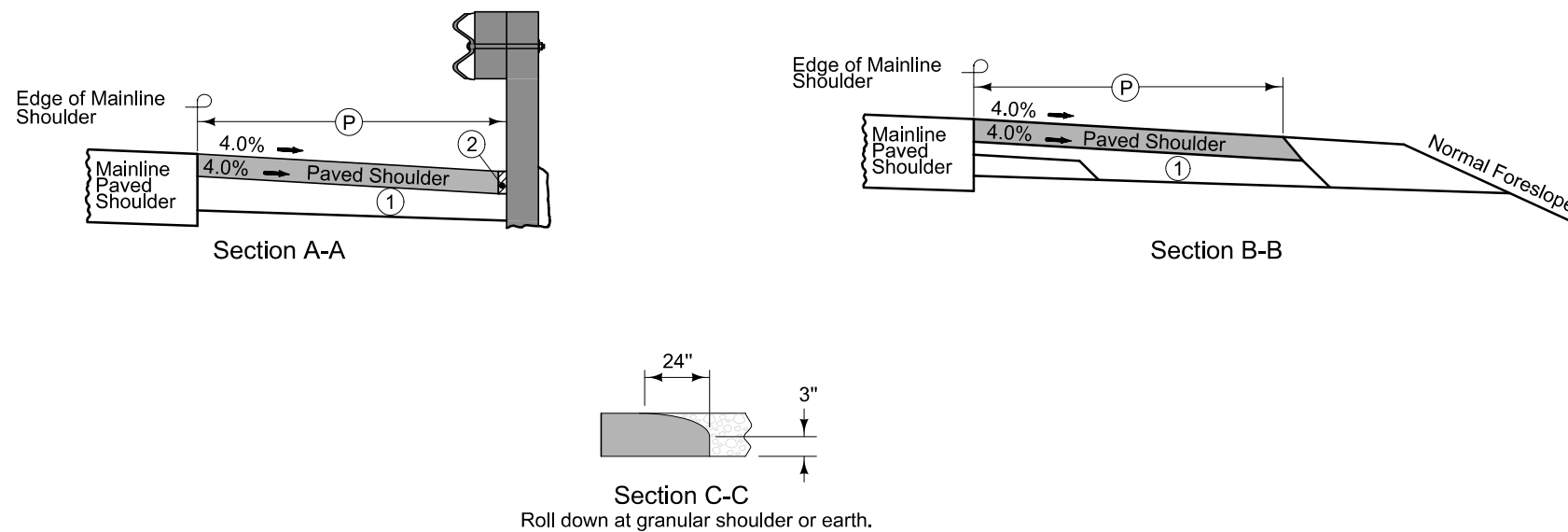
- ① Flowable Mortar.
- ② Granular Backfill.
- ③ 4" subdrain at flowline elevation of culvert shall be extended into the culvert a distance of 2' plus the height of the culvert. Granular Backfill covers subdrain and extends an additional 2'. Subdrain and granular backfill are incidental to flowable mortar.
- ④ Ends of culvert shall be plugged sufficiently to retain flowable mortar. Temporary earth berms are incidental to flowable mortar.
- ⑤ Removal of headwalls may be required.
- ⑥ Outlet shall be filled first. See injection point detail for additional information.

DETAILS OF CULVERT ABANDONMENT WITH FLOWABLE MORTAR
(Rectangular structures less than 8' in either height or width.
Circular structures less than 10' Dia.)





PLAN VIEW



6" HMA Paved Shoulder at guardrail. 6" PCC may be substituted with the following jointing layout:

Match mainline pavement joint spacing. When mainline pavement is 8" or greater in thickness, place additional transverse 'C' joints in shoulder at mid-panel of the mainline pavement. Place longitudinal 'C' joint at P/2 from edge of mainline pavement when P is greater than 10' wide. Terminate longitudinal joint at transverse joint less than 10' in length.

Compaction of HMA is required to face of guardrail post. Hand compaction will be allowed under guardrail. Removal and reinstallation of guardrail will be allowed with no additional payment.

Refer to Tabulation 112-9 for shoulder quantities.

- ① 6" Special Backfill.
- ② PCC option only: When guardrail posts are installed prior to construction of PCC paved shoulder, fasten form board to the face of guardrail posts for the length shown. Refer to note 4 for final 2 posts.
- ③ Continue paved shoulder to existing paved shoulder or 20 feet beyond the center of the first post.
- ④ Shoulder may be notched for final 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.
- ⑤ 'KT-1 joint for PCC shoulder.
'B' joint for HMA shoulder.

PAVED SHOULDER AT GUARDRAIL

PROJECT DESCRIPTION

100-1D
10-18-05

The intent of this project is to construct as much as possible in preparation for the final reconstruction of I-80/380 interchange. Work includes grading and shoulder strengthening for future paving, bridge construction, and its associated traffic control/staging. Outside embankments where the future profile is above current grade will only be constructed up to the current grade. Temporary pavement is to be placed in the median for a stretch of I-380 due to settlement issues.

**ESTIMATED PROJECT QUANTITIES
(1 DIVISION PROJECT)**

100-1A
07-15-97

Item No.	Item Code	Item	Unit	Total	As Built Qty.
1	2101-0850001	CLEARING AND GRUBBING	ACRE	51.9	
2	2102-0425071	SPECIAL BACKFILL	CY	25,189.7	
3	2102-2625001	EMBANKMENT-IN-PLACE, CONTRACTOR FURNISHED	CY	94,634.0	
4	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY	588,896.0	
5	2102-2712015	EXCAVATION, CLASS 12, BOULDERS OR ROCK FRAGMENTS	CY	150.0	
6	2102-2713070	EXCAVATION, CLASS 13, ROADWAY AND BORROW	CY	745.0	
7	2104-2710020	EXCAVATION, CLASS 10, CHANNEL	CY	851.9	
8	2105-8425005	TOPSOIL, FURNISH AND SPREAD	CY	36,293.0	
9	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD	CY	72,477.0	
10	2107-0875100	COMPACTION WITH MOISTURE CONTROL	CY	541,164.0	
11	2107-3825025	GRANULAR MATERIAL FOR BLANKET AND SUBDRAIN	CY	1,420.6	
12	2112-0000100	WICK DRAIN	LF	131,950.0	
13	2113-0001100	SUBGRADE STABILIZATION MATERIAL, POLYMER GRID	SY	60,559.7	
14	2115-0100000	MODIFIED SUBBASE	CY	20,079.9	
15	2121-7425010	GRANULAR SHOULDERS, TYPE A	TON	165.0	
16	2122-5190501	PAVED SHOULDER, PORTLAND CEMENT CONCRETE (PAVED SHOULDER PAN EL FOR BRIDGE END DRAIN)	SY	23.9	
17	2122-5500060	PAVED SHOULDER, HOT MIX ASPHALT MIXTURE, 6 IN.	SY	445.1	
18	2123-7450000	SHOULDER CONSTRUCTION, EARTH	STA	433.38	
19	2301-1034110	STANDARD OR SLIP FORM PORTLAND CEMENT CONCRETE PAVEMENT, CLASS 3I DURABILITY, 11 IN.	SY	30,781.2	
20	2301-1034120	STANDARD OR SLIP FORM PORTLAND CEMENT CONCRETE PAVEMENT, CLASS 3I DURABILITY, 12 IN.	SY	5,615.2	
21	2303-1051750	HOT MIX ASPHALT VERY HIGH TRAFFIC, BASE COURSE, 3/4 IN. MIX	TON	9,739.40	
22	2303-1052500	HOT MIX ASPHALT VERY HIGH TRAFFIC, INTERMEDIATE COURSE 1/2 I N. MIX	TON	1,693.20	
23	2303-1053502	HOT MIX ASPHALT VERY HIGH TRAFFIC, SURFACE COURSE, 1/2 IN. M IX, FRICTION L-2	TON	2,553.00	
24	2303-1258285	ASPHALT BINDER, PG 58-28V, VERY HIGH TRAFFIC	TON	584.40	
25	2303-1258286	ASPHALT BINDER, PG 58-28E, EXTREMELY HIGH TRAFFIC	TON	254.80	
26	2304-0100000	DETOUR PAVEMENT 8 IN. PCC OR 9 IN. HMA	SY	3,816.9	
27	2304-0100000	DETOUR PAVEMENT 9 IN. PCC OR 11.5 IN. HMA	SY	34,251.2	
28	2304-0100000	DETOUR PAVEMENT 9.5 IN. PCC OR 12.5 IN. HMA	SY	26,861.6	
29	2315-8275025	SURFACING, DRIVEWAY, CLASS A CRUSHED STONE	TON	531.4	
30	2401-6745650	REMOVAL OF EXISTING STRUCTURES	LS	1.00	
31	2401-6745830	REMOVAL OF P.C. CONCRETE MEDIAN BARRIER	LF	790.0	
32	2402-0425040	FLOODED BACKFILL	CY	447.0	
33	2402-2720100	EXCAVATION, CLASS 20, FOR ROADWAY PIPE CULVERT	CY	722.0	
34	2416-0100024	APRONS, CONCRETE, 24 IN. DIA.	EACH	10	
35	2416-0100030	APRONS, CONCRETE, 30 IN. DIA.	EACH	5	
36	2416-0100036	APRONS, CONCRETE, 36 IN. DIA.	EACH	6	
37	2416-0100042	APRONS, CONCRETE, 42 IN. DIA.	EACH	6	
38	2416-0100048	APRONS, CONCRETE, 48 IN. DIA.	EACH	7	
39	2416-0100066	APRONS, CONCRETE, 66 IN. DIA.	EACH	1	
40	2416-0101036	REMOVE AND REINSTALL CONCRETE PIPE APRONS LESS THAN OR EQUAL TO 36 IN.	EACH	4	
41	2416-0101136	REMOVE AND REINSTALL CONCRETE PIPE APRONS GREATER THAN 36 IN .	EACH	1	
42	2416-0102284	APRON, LOW CLEARANCE CONCRETE, EQUIVALENT DIAMETER 84 IN.	EACH	1	
43	2416-1180024	CULVERT, CONCRETE ROADWAY PIPE, 24 IN. DIA.	LF	388	
44	2416-1180030	CULVERT, CONCRETE ROADWAY PIPE, 30 IN. DIA.	LF	174	
45	2416-1180036	CULVERT, CONCRETE ROADWAY PIPE, 36 IN. DIA.	LF	175	
46	2416-1180042	CULVERT, CONCRETE ROADWAY PIPE, 42 IN. DIA.	LF	180	
47	2416-1180048	CULVERT, CONCRETE ROADWAY PIPE, 48 IN. DIA.	LF	46	
48	2416-1180066	CULVERT, CONCRETE ROADWAY PIPE, 66 IN. DIA.	LF	154	
49	2416-1200284	CULVERT, LOW CLEARANCE CONCRETE ROADWAY PIPE, EQUIVALENT DIA METER 84 IN.	LF	44	
50	2416-1262018	CULVERT, CONCRETE PIPE, 2000D, TRENCHLESS, 18 IN. DIA.	LF	92	
51	2416-1262030	CULVERT, CONCRETE PIPE, 2000D, TRENCHLESS, 30 IN. DIA.	LF	392	
52	2416-1262036	CULVERT, CONCRETE PIPE, 2000D, TRENCHLESS, 36 IN. DIA.	LF	685	
53	2416-1262042	CULVERT, CONCRETE PIPE, 2000D, TRENCHLESS, 42 IN. DIA.	LF	286	
54	2416-1262048	CULVERT, CONCRETE PIPE, 2000D, TRENCHLESS, 48 IN. DIA.	LF	428	
55	2417-0225024	APRONS, METAL, 24 IN. DIA.	EACH	1	
56	2417-0225030	APRONS, METAL, 30 IN. DIA.	EACH	1	
57	2417-1060024	CULVERT, CORRUGATED METAL ROADWAY PIPE, 24 IN. DIA.	LF	52	
58	2417-1060030	CULVERT, CORRUGATED METAL ROADWAY PIPE, 30 IN. DIA.	LF	124	
59	2417-2307030	DRAIN, CORRUGATED METAL SLOTTED PIPE, 30 IN., W/6 IN. GRATE	LF	226	
60	2417-5895018	BEVELED PIPE AND GUARD, 18 INCH	EACH	2	
61	2422-1723018	CULVERT, UNCLASSIFIED ROADWAY PIPE, 18 IN. DIA.	LF	122	

**ESTIMATED PROJECT QUANTITIES
(1 DIVISION PROJECT)**

100-1A
07-15-97

Item No.	Item Code	Item	Unit	Total	As Built Qty.
62	2432-0000100	MECHANICALLY STABILIZED EARTH RETAINING WALL	SF	8740	
63	2435-0140148	MANHOLE, STORM SEWER, SW-401, 48 IN.	EACH	1	
64	2435-0900000	BRIDGE END DRAIN, SW-538	EACH	1	
65	2502-8212304	SUBDRAIN, STANDARD, PERFORATED, 4 IN., AS PER PLAN	LF	1,700.0	
66	2505-4008120	REMOVAL OF STEEL BEAM GUARDRAIL	LF	3,385.0	
67	2505-4008130	REMOVAL OF CABLE GUARDRAIL	LF	4,122.0	
68	2505-4008300	STEEL BEAM GUARDRAIL	LF	912.5	
69	2505-4008410	STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION, BA-201	EACH	2	
70	2505-4021010	STEEL BEAM GUARDRAIL END ANCHOR, BOLTED	EACH	2	
71	2505-4021020	STEEL BEAM GUARDRAIL END ANCHOR, W-BEAM	EACH	1	
72	2505-4021720	STEEL BEAM GUARDRAIL TANGENT END TERMINAL, BA-205	EACH	3	
73	2506-4984000	FLOWABLE MORTAR	CY	611.3	
74	2507-3250005	ENGINEERING FABRIC	SY	2,840.1	
75	2507-6800061	REVTMENT, CLASS E	TON	1,512.9	
76	2507-8029000	EROSION STONE	TON	950.5	
77	2510-6745850	REMOVAL OF PAVEMENT	SY	56,945.5	
78	2518-0470005	CROSSOVER BARRICADE	EACH	1	
79	2518-6891810	PERMANENT ROAD CLOSURE, RURAL, SI-181	LF	52	
80	2518-6910000	SAFETY CLOSURE	EACH	25	
81	2519-1001000	FENCE, CHAIN LINK, VINYL COATED	LF	16,240.5	
82	2519-2000010	FENCE, CHANNEL CROSSING, TYPE A	LF	237.2	
83	2519-2000100	FENCE, CHANNEL CROSSING, CHAIN LINK, AS PER PLAN	LF	246.2	
84	2519-3000000	FLOOD PLAIN FENCE	LF	1,605.4	
85	2519-3280000	FENCE, FIELD	LF	15,047.1	
86	2519-3300400	FIELD FENCE BRACE PANELS	EACH	275	
87	2519-3300600	FENCE, SAFETY	LF	4,007.0	
88	2526-8285000	CONSTRUCTION SURVEY	LS	1.00	
89	2527-9263109	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	STA	4,948.16	
90	2527-9263131	WET RETROREFLECTIVE REMOVABLE TAPE MARKINGS	STA	3,052.62	
91	2527-9263180	PAVEMENT MARKINGS REMOVED	STA	1,138.37	
92	2528-3800000	MODULAR GLARE SCREEN SYSTEM	LF	33,900.0	
93	2528-4983200	MONITORING WITH INCIDENT RESPONSE	CDAY	See Proposal	
94	2528-8400048	TEMPORARY BARRIER RAIL, CONCRETE	LF	91,475.0	
95	2528-8445110	TRAFFIC CONTROL	LS	1.00	
96	2528-8445113	FLAGGERS	EACH	See Proposal	
97	2528-9290050	PORTABLE DYNAMIC MESSAGE SIGN (PDMS)	CDAY	See Proposal	
98	2533-4980005	MOBILIZATION	LS	1.00	
99	2551-0000110	TEMP CRASH CUSHION	EACH	28	
100	2551-0000130	TEMP CRASH CUSHION, SEVERE USE (SU)	EACH	11	
101	2599-9999005	('EACH' ITEM) MOBILIZATION FOR RESURFACING	EACH	1	
102	2599-9999009	('LINEAR FEET' ITEM) CULVERT, CONCRETE PIPE, 4000D, 48 IN. DIA.	LF	54.0	
103	2599-9999009	('LINEAR FEET' ITEM) CULVERT, CONCRETE PIPE, 4000D, TRENCHLESS, 48 IN. DIA.	LF	372.0	
104	2599-9999009	('LINEAR FEET' ITEM) CULVERT, STEEL CASING, 1 INCH, TRENCHLESS, 72 IN. DIA.	LF	66.0	
105	2599-9999009	('LINEAR FEET' ITEM) CULVERT, STEEL CASING, 27/32 INCH, TRENCHLESS, 60 IN. DIA.	LF	54.0	
106	2599-9999010	('LUMP SUM' ITEM) CONSTRUCTION PROGRESS SCHEDULE	LS	1.00	
107	2602-0000150	STABILIZED CONSTRUCTION ENTRANCE, EC-303	LF	4,800.0	
Alternate AA Option 1: PCC Shoulders					
108	2102-0425071	SPECIAL BACKFILL	CY	599.5	
109	2122-5190007	PAVED SHOULDER, P.C. CONCRETE, 7 IN.	SY	1,733.4	
Alternate AA Option 2: HMA Paved Shoulders					
110	2102-0425071	SPECIAL BACKFILL	CY	538.2	
111	2122-5500080	PAVED SHOULDER, HOT MIX ASPHALT MIXTURE, 8 IN.	SY	1,733.4	
Addendum					
112	2214-5145150	PAVEMENT SCARIFICATION	SY	3,560.4	
113	2402-2725000	INTERMEDIATE FOUNDATION IMPROVEMENTS	LS	1.00	
114	2402-2725002	INTERMEDIATE FOUNDATION IMPROVEMENTS VERIFICATION TESTING	LS	1.00	
115	2416-1262024	CULVERT, CONCRETE PIPE, 2000D, TRENCHLESS, 24 IN. DIA.	LF	216	

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
1	2101-0850001	CLEARING AND GRUBBING Refer to U-sheets for locations. Includes 3.8 acres of clearing only and 48.1 acres of clearing and grubbing. Includes 18,487 LF of field fence removal.
2	2102-0425071	SPECIAL BACKFILL Refer to B sheets and Tab 100-24DET on C-sheets for details. Material shall be crushed stone, crushed PCC, or crushed composite pavement. Includes 24,236.9 CY for detour pavement. Refer to Tab 100-24DET for locations. Refer to B-sheets for details. Includes 878 CY for Median Crossover. Refer to Tab 112-8. Refer to U-sheets for Details. Includes 74.8 CY for guardrail shoulders. Refer to Tab. 112-9 for quantities. Refer Typical 7156 on B-sheets.
3	2102-2625001	EMBANKMENT-IN-PLACE, CONTRACTOR FURNISHED Item includes 160 CY for Crash Cushions. Refer to Tab 108-30 on C-sheets. Item includes 608 CY for Guardrail. Refer to Tab 107-23 on C-sheets. Item includes 308 CY for Median Cross-over. Refer to Tab 112-8 on C-sheets.
4	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW Includes 581,896 CY of Template Cut. Embankment surcharge is included with template quantities. Includes additional 7,000 CY for removal of embankment surcharge. Item includes 8 Settlement Plates. Refer to Tab. 103-5 on sheet CS-sheets for locations and details. Refer to T-sheets for details. Overhaul is incidental and will not be paid for seperately. The Contractor shall ensure that all borrow and disposal sites for excess material are in compliance with Iowa DOT contract specifications. The Contactor shall provide a map showing the source and location of borrow material to be imported to the site. Borrow material originating offsite shall be cleared by the Contractor ensuring the site does not have potential to contain cultural or historic sites, threatened and endangered species, wetlands or Waters of the U.S., and whether the site contains unsuitable materials. Excess material generated by the project must be disposed of in an upland, non-wetland location. The Contractor shall provide the DOT with information on any proposed disposal locations for verification with the Corps of Engineers.
5	2102-2712015	EXCAVATION, CLASS 12, BOULDERS OR ROCK FRAGMENTS Refer to Tab. 103-7 on CS-sheets. Dispose of excess material according to Article 1106.07 of the current specifications.
6	2102-2713070	EXCAVATION, CLASS 13, ROADWAY AND BORROW Refer to Tab 112-8 on C-sheets.
7	2104-2710020	EXCAVATION, CLASS 10, CHANNEL Item is for bank stabilization. Refer to Sheet V.20 for details.
8	2105-8425005	TOPSOIL, FURNISH AND SPREAD
9	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD Refer to T-sheets and Tab 103-10 on CS-sheets for details.
10	2107-0875100	COMPACTION WITH MOISTURE CONTROL Refer to Tab. 103-6 on CS-sheets. Cubic yards shown on the contract documents as determined by the template fill volume. Shrinkage will not be included in the moisture control quantity.
11	2107-3825025	GRANULAR MATERIAL FOR BLANKET AND SUBDRAIN Includes 250.6 CY for Subdrains. Includes 1170 CY for Wick Drains. Refer to Tab 104-5C and Tab 104-6 on CS-sheets for details.
12	2112-0000100	WICK DRAIN Refer to Tab 104-6 on CS-sheets for details.
13	2113-0001100	SUBGRADE STABILIZATION MATERIAL, POLYMER GRID Includes 44,542.1 CY on Tab. 100-24. Refer to B-sheets for additional details. Includes 16,017.6 CY on Tab 100-25. Refer to B-sheets for additional details.
14	2115-0100000	MODIFIED SUBBASE Includes 14,196.6 CY on Tab. 100-24. Refer to B-sheets for additional details. Includes 5,883.3 CY on Tab 100-25. Refer to B-sheets for additional details.

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
15	2121-7425010	GRANULAR SHOULDERS, TYPE A Item is for construction of median crossover. Refer to Tab 112-8. Refer to U-sheets for Details.
16	2122-5190501	PAVED SHOULDER, PORTLAND CEMENT CONCRETE (PAVED SHOULDER PAN EL FOR BRIDGE END DRAIN) Refer to Tab 104-8 on C Sheets for location and details.
17	2122-5500060	PAVED SHOULDER, HOT MIX ASPHALT MIXTURE, 6 IN. This item is for paved shoulder at guardrail. Refer to Typical 7156 for details. Refer to Tab. 112-9 for shoulder quantities.
18	2123-7450000	SHOULDER CONSTRUCTION, EARTH Includes 402.68 STA adjacent to shoulder strengthening. Refer to Tab 100-24DET. Refer to B-sheets for details. Includes 30.7 STA adjacent to shoulders. Refer to Tab 112-9.
19	2301-1034110	STANDARD OR SLIP FORM PORTLAND CEMENT CONCRETE PAVEMENT, CLA SS C, CLASS 3I DURABILITY, 11 IN.
20	2301-1034120	STANDARD OR SLIP FORM PORTLAND CEMENT CONCRETE PAVEMENT, CLA SS C, CLASS 3I DURABILITY, 12 IN. Refer to B sheets and Tab 100-24 on C-Sheets for details.
21	2303-1051750	HOT MIX ASPHALT VERY HIGH TRAFFIC, BASE COURSE, 3/4 IN. MIX
22	2303-1052500	HOT MIX ASPHALT VERY HIGH TRAFFIC, INTERMEDIATE COURSE 1/2 I N. MIX
23	2303-1053502	HOT MIX ASPHALT VERY HIGH TRAFFIC, SURFACE COURSE, 1/2 IN. M IX, FRICTION L-2
24	2303-1258285	ASPHALT BINDER, PG 58-28V, VERY HIGH TRAFFIC
25	2303-1258286	ASPHALT BINDER, PG 58-28E, EXTREMELY HIGH TRAFFIC Refer B Sheets and Tab 100-25 on C-Sheets for details.
26	2304-0100000	DETOUR PAVEMENT 8 IN. PCC OR 9 IN. HMA Refer to Tab 100-24DET for locations. Refer to B-sheets for details.
27	2304-0100000	DETOUR PAVEMENT 9 IN. PCC OR 11.5 IN. HMA Includes 4,337 SY for Median Crossover. Refer to Tab 112-8 on C-sheets. Refer to U-sheets for details. Includes 29,914.2 SY detour pavement. Refer to Tab 100-24DET for locations. Refer to B-sheets for details.
28	2304-0100000	DETOUR PAVEMENT 9.5 IN. PCC OR 12.5 IN. HMA Refer to Tab 100-24DET for locations. Refer to B-sheets for details.
29	2315-8275025	SURFACING, DRIVEWAY, CLASS A CRUSHED STONE Refer to Tab. 102-3.
30	2401-6745650	REMOVAL OF EXISTING STRUCTURES Refer to Tab. 110-2.
31	2401-6745830	REMOVAL OF P.C. CONCRETE MEDIAN BARRIER Item includes half-sections from STA. 696+85 to 699+50 EB and 696+00 to 699+50 WB and full section from 699+50 to 701+25. Barrier shall not be reused on the project and shall become property of the Contractor. Method of Measurement: The Engineer will measure the length of Median Barrier removed. Basis of Payment: Linear feet of Removal of Concrete Median Barrier measured. Payment is full compensation for all material, equipment, and labor necessary to remove the barrier from the project site.

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
32	2402-0425040	FLOODED BACKFILL
33	2402-2720100	EXCAVATION, CLASS 20, FOR ROADWAY PIPE CULVERT
34	2416-0100024	APRONS, CONCRETE, 24 IN. DIA.
35	2416-0100030	APRONS, CONCRETE, 30 IN. DIA.
36	2416-0100036	APRONS, CONCRETE, 36 IN. DIA.
37	2416-0100042	APRONS, CONCRETE, 42 IN. DIA.
38	2416-0100048	APRONS, CONCRETE, 48 IN. DIA.
39	2416-0100066	APRONS, CONCRETE, 66 IN. DIA.
40	2416-0101036	REMOVE AND REINSTALL CONCRETE PIPE APRONS LESS THAN OR EQUAL TO 36 IN.
41	2416-0101136	REMOVE AND REINSTALL CONCRETE PIPE APRONS GREATER THAN 36 IN .
42	2416-0102284	APRON, LOW CLEARANCE CONCRETE, EQUIVALENT DIAMETER 84 IN.
43	2416-1180024	CULVERT, CONCRETE ROADWAY PIPE, 24 IN. DIA.
44	2416-1180030	CULVERT, CONCRETE ROADWAY PIPE, 30 IN. DIA.
45	2416-1180036	CULVERT, CONCRETE ROADWAY PIPE, 36 IN. DIA.
46	2416-1180042	CULVERT, CONCRETE ROADWAY PIPE, 42 IN. DIA.
47	2416-1180048	CULVERT, CONCRETE ROADWAY PIPE, 48 IN. DIA.
48	2416-1180066	CULVERT, CONCRETE ROADWAY PIPE, 66 IN. DIA.
49	2416-1200284	CULVERT, LOW CLEARANCE CONCRETE ROADWAY PIPE, EQUIVALENT DIA METER 84 IN.
50	2416-1262018	CULVERT, CONCRETE PIPE, 2000D, TRENCHLESS, 18 IN. DIA.
51	2416-1262030	CULVERT, CONCRETE PIPE, 2000D, TRENCHLESS, 30 IN. DIA.
52	2416-1262036	CULVERT, CONCRETE PIPE, 2000D, TRENCHLESS, 36 IN. DIA.
53	2416-1262042	CULVERT, CONCRETE PIPE, 2000D, TRENCHLESS, 42 IN. DIA.
54	2416-1262048	CULVERT, CONCRETE PIPE, 2000D, TRENCHLESS, 48 IN. DIA.
55	2417-0225024	APRONS, METAL, 24 IN. DIA.
56	2417-0225030	APRONS, METAL, 30 IN. DIA.
57	2417-1060024	CULVERT, CORRUGATED METAL ROADWAY PIPE, 24 IN. DIA.
58	2417-1060030	CULVERT, CORRUGATED METAL ROADWAY PIPE, 30 IN. DIA. Refer to Tab 104-3 and 104-5B on C and CD sheets for details
-	-	-
59	2417-2307030	DRAIN, CORRUGATED METAL SLOTTED PIPE, 30 IN., W/6 IN. GRATE
60	2417-5895018	BEVELED PIPE AND GUARD, 18 INCH
61	2422-1723018	CULVERT, UNCLASSIFIED ROADWAY PIPE, 18 IN. DIA. Refer to Tab. 112-8 and to U-sheets for median crossover details.
-	-	-
-	2417-2307030	DRAIN, CORRUGATED METAL SLOTTED PIPE, 30 IN., W/6 IN. GRATE Refer to Slotted Drain for Median Crossovers on U-sheets for details.
-	-	-
62	2432-0000100	MECHANICALLY STABILIZED EARTH RETAINING WALL This item is for construction of temporary retaining walls to be left in place in the median on I-380. Item includes 4405 SF for NB wall. Item includes 4335 SF for SB wall. Refer to V-sheets for location, details, and additional specifications.
-	-	-
63	2435-0140148	MANHOLE, STORM SEWER, SW-401, 48 IN. Refer to Tab 104-5B on C Sheets for details.
-	-	-
64	2435-0900000	BRIDGE END DRAIN, SW-538 Refer to sheet U.46-U.50 and Tab 104-8 on the C Sheets for location and details.
-	-	-
65	2502-8212304	SUBDRAIN, STANDARD, PERFORATED, 4 IN., AS PER PLAN Refer to Tab. 104-6 on CS-sheets.
-	-	-
66	2505-4008120	REMOVAL OF STEEL BEAM GUARDRAIL Refer to Tab. 110-7A on C-sheets.
-	-	-
67	2505-4008130	REMOVAL OF CABLE GUARDRAIL Refer to Tab. 110-7B on C-sheets.
-	-	-
68	2505-4008300	STEEL BEAM GUARDRAIL Refer to Tabs. 108-8A and 108-8C.
-	-	-
69	2505-4008410	STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION, BA-201
70	2505-4021010	STEEL BEAM GUARDRAIL END ANCHOR, BOLTED Refer to Tab. 108-8A.
-	-	-
71	2505-4021020	STEEL BEAM GUARDRAIL END ANCHOR, W-BEAM Refer to Tabs. 108-8C.
-	-	-
72	2505-4021720	STEEL BEAM GUARDRAIL TANGENT END TERMINAL, BA-205 Refer to Tabs. 108-8A and 108-8C.
-	-	-
73	2506-4984000	FLOWABLE MORTAR Item is for Culvert Abandonment. Refer to Tab 110-9 on C-sheets and Typical 4315 on B-sheets for details.
-	-	-
74	2507-3250005	ENGINEERING FABRIC Includes 1450.6 SY for Rock Erosion Control. Refer to Tab 100-23 on C-sheets for details. Includes 1389.5 SY for streambank stabilization. Refer to Sheet V.20 for details.
-	-	-

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
75	2507-6800061	REVETMENT, CLASS E Includes 150 ton for Rock Erosion Control. Refer to Tab 100-23 on C-sheets for details.
-	-	-
-	-	Includes 1,362.9 tons for streambank stabilization. Refer to Sheet V.20 for details.
76	2507-8029000	EROSION STONE Refer to Tab 100-23 on C-sheets.
-	-	-
77	2510-6745850	REMOVAL OF PAVEMENT Refer to Tab 110-1 on C Sheets for details. Includes 920.9 SY for median crossover. Refer to Tab. 112-8. Refer to U-sheets for crossover details.
-	-	-
78	2518-0470005	CROSSOVER BARRICADE Item is for median crossover at on US 218 at Sta. 1083+80. Refer to U-sheets for Details of Barricade at Crossover.
-	-	-
79	2518-6891810	PERMANENT ROAD CLOSURE, RURAL, SI-181 Item is for closure of Jasper Ave over I-80. Refer to Tab 102-4 on C-sheets for details.
-	-	-
80	2518-6910000	SAFETY CLOSURE Refer to Tab. 108-13 on C-sheets. Refer to J-sheets for additional details.
-	-	-
81	2519-1001000	FENCE, CHAIN LINK, VINYL COATED Refer to Tab 100-7 on C-sheets. Refer to Fencing Layout on U-sheets for locations. Vinyl coated chain link fence shall be either zinc (ASTM A392) or aluminum (ASTM A491) coated fabric, 2 in. mesh, 1 3/4 in. wires, with knuckled selvages top and bottom. Fence fabric is to be PVC coated black per ASTM F668 Class 2B, with color matching Federal Standard Color Number 27038. All ferrous metal framework and fittings are to be galvanized and coated with PVC to match the fence fabric. Existing DOT-ICN fiber optic shall not be disturbed.
-	-	-
82	2519-2000010	FENCE, CHANNEL CROSSING, TYPE A Refer to Tab 100-7 on C-sheets. Refer to Fencing Layout on U-sheets for locations. Existing DOT-ICN fiber optic shall not be disturbed.
-	-	-
83	2519-2000100	FENCE, CHANNEL CROSSING, CHAIN LINK, AS PER PLAN Refer to Tab 100-7 on C-sheets. Refer to Fencing Layout on U-sheets for locations. Refer to Standard Road Plan MI-104 for details of Channel Crossing Fence - Type "A" for Chain Link Fence. Use vinyl coated chain link for this item. Vinyl coated chain link fence shall be either zinc (ASTM A392) or aluminum (ASTM A491) coated fabric, 2 in. mesh, 1 3/4 in. wires, with knuckled selvages top and bottom. Fence fabric is to be PVC coated black per ASTM F668 Class 2B, with color matching Federal Standard Color Number 27038. All ferrous metal framework and fittings are to be galvanized and coated with PVC to match the fence fabric.
-	-	-
84	2519-3000000	FLOOD PLAIN FENCE
85	2519-3280000	FENCE, FIELD
86	2519-3300400	FIELD FENCE BRACE PANELS
87	2519-3300600	FENCE, SAFETY Refer to Tab 100-7 on C-sheets. Refer to Fencing Layout on U-sheets for locations. Existing DOT-ICN fiber optic shall not be disturbed.
-	-	-
-	2519-3300600	FENCE, SAFETY This item is for temporary fence that will be replaced with final fence by others on future projects.
-	-	-
88	2526-8285000	CONSTRUCTION SURVEY
-	-	-
89	2527-9263109	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED
90	2527-9263131	WET RETROREFLECTIVE REMOVABLE TAPE MARKINGS Quantity includes multiple applications. Refer to Tab 108-22 on C-sheets and to J-sheets for locations.
-	-	-

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
91	2527-9263180	PAVEMENT MARKINGS REMOVED Water blasting for pavement marking removal is required. Refer to Tab 108-22 on C-sheets for specific locations Refer to Tab 108-22 on C-sheets and to J-sheets for locations.
92	2528-3800000	MODULAR GLARE SCREEN SYSTEM Refer to Tab 108-33 on C-sheets and J-sheets for locations. 18,875 LF left in-place at end of project.
93	2528-4983200	MONITORING WITH INCIDENT RESPONSE This item will cover the project limits of NHS-080-6(371)239--11-52 and NHS-380-6(373)1--11-52. In addition to the standard specification requirements, the contractor shall attend two workshop meetings in the Iowa City, Iowa area to integrate the contractor with the first responders in the region: one (1) 4-hour SHRP2 Traffic Incident Management Responder training and one (1) 2-hour Johnson County Traffic Incident Management Working Group meeting. The Engineer will coordinate specific dates and times with the contractor post-Letting.
94	2528-8400048	TEMPORARY BARRIER RAIL, CONCRETE Refer to Tab 108-33 on C-sheets and J-sheets for locations. 21,275 LF left in-place at the end of project.
95	2528-8445110	TRAFFIC CONTROL Refer to J-sheets.
96	2528-8445113	FLAGGERS Item is included for temporary road closures on U.S. 6 for beam placement per Standard Road Plan TC-251. Also included for a haul route across U.S. 6 per Modified Standard Road TC-272.
97	2528-9290050	PORTABLE DYNAMIC MESSAGE SIGN (PDMS)
98	2533-4980005	MOBILIZATION
99	2551-0000110	TEMP CRASH CUSHION Refer to Tab 108-30 on C-sheets and J-sheets for locations. 3 left in-place at end of project.
100	2551-0000130	TEMP CRASH CUSHION, SEVERE USE (SU) Refer to Tab 108-30 on C-sheets and J-sheets for locations. 6 left in-place at end of project.
101	2599-9999005	('EACH' ITEM) MOBILIZATION FOR RESURFACING Item is for HMA resurfacing needed due to settlement. Method of Measurement: Measurement shall be by count for each resurfacing operation Basis of Payment: Section 2533 of the Standard Specifications applies
102	2599-9999009	('LINEAR FEET' ITEM) CULVERT, CONCRETE PIPE, 4000D, 48 IN. DIA.
103	2599-9999009	('LINEAR FEET' ITEM) CULVERT, CONCRETE PIPE, 4000D, TRENCHLESS, 48 IN. DIA. Refer to Tab 104-3 on sheet CD.1-CD.2 for details.
104	2599-9999009	('LINEAR FEET' ITEM) CULVERT, STEEL CASING, 1 INCH, TRENCHLESS, 72 IN. DIA.
105	2599-9999009	('LINEAR FEET' ITEM) CULVERT, STEEL CASING, 27/32 INCH, TRENCHLESS, 60 IN. DIA. Refer to E Sheets and Tab 104-3 on sheet CD.1-CD-2 for details. Section 2416 and 2553 of the Standard Specifications shall apply.
106	2599-9999010	('LUMP SUM' ITEM) CONSTRUCTION PROGRESS SCHEDULE Refer to Special Provision.
107	2602-0000150	STABILIZED CONSTRUCTION ENTRANCE, EC-303 Item includes 3000 LF at approximate locations identified on Ingress/Egress details on J-sheets. Item includes 1800 LF at locations adjacent to highway traffic. Refer to Temporary Construction Access detail on J-sheets. Refer to approximate locations identified on Ingress/Egress details on J-sheets.

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
108	2102-0425071	Alternate AA Option 1: PCC Shoulders
109	2122-5190007	SPECIAL BACKFILL PAVED SHOULDER, P.C. CONCRETE, 7 IN. Refer to B-sheet for typicals. Refer to Tab. 112-9 for quantities.
110	2102-0425071	Alternate AA Option 2: HMA Paved Shoulders
111	2122-5500080	SPECIAL BACKFILL PAVED SHOULDER, HOT MIX ASPHALT MIXTURE, 8 IN. Refer to B-sheet for typicals. Refer to Tab. 112-9 for quantities.
112	2214-5145150	PAVEMENT SCARIFICATION Refer to Tab 100-25 and 102-16 on sheet C.9 for details.
113	2402-2725000	INTERMEDIATE FOUNDATION IMPROVEMENTS
114	2402-2725002	INTERMEDIATE FOUNDATION IMPROVEMENTS VERIFICATION TESTING Refer to the "Special Provisions for Intermediate Foundation Improvements" and sheets Q.14 and Q.15 for details.
115	2416-1262024	CULVERT, CONCRETE PIPE, 2000D, TRENCHLESS, 24 IN. DIA. Refer to Tab 104-3 and 104-5B on C and CD sheets for details.

STANDARD ROAD PLANS		
The following Standard Road Plans apply to construction work on this project.		
Number	Date	Title
BA-401	04-16-13	Temporary Barrier Rail (Precast Concrete)
BA-500	04-19-16	Temporary Crash Cushions Sand Barrel
DR-101	04-18-17	Pipe Culvert (Bedding and Backfill)
DR-102	04-21-15	Pipe Culvert (Cover and Camber)
DR-103	04-21-15	Pipe Culvert (Installation Details)
DR-104	04-19-16	Depth of Cover Tables for Concrete and Corrugated Pipe
DR-121	10-17-17	Connected Pipe Joints
DR-122	10-18-16	Construction of Type "C" Concrete Adaptors for Pipe Culvert Connections
DR-141	04-18-17	Pipe Bends and Half Pipe
DR-201	10-16-18	Concrete Aprons
DR-202	04-21-15	Low Clearance Concrete Pipe Aprons
DR-203	04-21-15	Metal Pipe Aprons and Beveled Ends
DR-205	10-16-18	Concrete Apron with End Wall
DR-301	10-17-17	Subdrains for Fill or Foundation Drainage (Standard)
DR-303	10-17-17	Subdrains (Longitudinal)
DR-305	04-17-18	Subdrain Outlets (Standard Subdrain, Pressure Release and Special)
DR-306	10-16-18	Precast Concrete Headwall for Subdrain Outlets
EC-303	10-16-18	Stabilized Construction Entrance
EW-101	10-17-17	Embankment and Rebuilding Embankments
EW-102	10-20-15	Allowable Placement of Unsuitable Soil in Embankments
EW-103	10-20-15	Embankment Subgrade Treatment, Moisture Density Control and Special Compaction
EW-110	10-20-15	Ditch Blocks and Dikes
EW-201	04-19-16	Bridge Berm Grading without Recoverable Slope (Barnroof Section)
EW-212	10-20-15	Settlement Plate
EW-301	10-20-15	Guardrail Grading
EW-401	10-20-15	Temporary Stream Crossing, Causeway, or Equipment Pad
EW-403	04-18-17	Temporary Erosion Control Measures
EW-501	10-20-15	Rural Entrance
MI-101	10-20-15	Fencing Layout
MI-102	10-20-15	Chain Link Fence Construction
MI-103	10-20-15	Deer Fence and Field Fence Construction
MI-104	10-17-17	Fence Construction at Channel Crossings, Flood Plains, and Minor Ground Depressions
PM-110	10-16-18	Line Types
PR-201	10-21-14	Runouts for Resurfacing
PV-101	10-16-18	Joints
PV-202	04-16-13	Hot Mix Asphalt Resurfacing
PV-302	04-17-12	Superelevation Details Four Lane Roadway Depressed Median
PV-303	04-19-11	Superelevation Details Ramps
PV-305	04-17-12	Superelevation Details Six Lane Roadway Closed Median
SI-173	04-19-16	Object Markers
SI-181	10-18-16	Permanent Road Closure - Rural
SI-211	10-18-16	Object Marker and Delineator Placement with Guardrail
SI-881	10-17-17	Special Signs for Workzones
TC-1	04-16-13	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-251	04-17-12	Temporary Road Closure
TC-252	04-19-16	Routes Closed to Traffic
TC-272	10-18-16	Unsignalized Equipment Crossing
TC-402	04-21-15	Work Within 15 ft of Traveled Way
TC-416	04-17-12	Partial Lane Closure on Ramps
TC-417	04-16-13	Ramp Closure
TC-418	04-17-18	Lane Closure on Divided Highway
TC-420	10-16-18	Lane Closure at Ramps
TC-433	10-17-17	Pavement Marking Operations
TC-454	10-17-17	Temporary Detour Using Ramps on Divided Highway

105-4
10-18-11

UTILITIES (POINT 25 PROJECT)
This is a POINT 25 project and is subject to the provisions of IAC 761-115.25.

262-5
10-18-05

MEDIAN CROSSOVER
The Contractor is prohibited from using any established or other type median crossover on this project unless specifically designated for the Contractor's use by this plan.

253-1
10-18-11

SECTION 404 PERMIT AND CONDITIONS
Construct this project according to the requirements of U.S. Army Corps of Engineers Individual Permit No. 2017-1049. A copy of this permit is available from the Iowa DOT website (http://www.envpermits.iowadot.gov/). The U.S. Army Corps of Engineers reserves the right to visit the site without prior notice.

281-1
10-18-16

COORDINATION REQUIREMENTS WITH MIDAMERICAN ENERGY COMPANY
<p>*** Overhead Electrical Transmission Line ***</p> <p>The proposed bridge reconstruction and grading work near the Interstate 80 and Interstate 380 interchange are in close proximity to an existing 161,000 Volt (161 kV) overhead electric transmission line ("transmission line") owned by MidAmerican Energy Company. The energized transmission line runs northwesterly to southeasterly paralleling an Iowa Interstate rail line.</p> <p>*** Overhead Electrical Transmission Line Clearances ***</p> <p>The Contractor shall not work within the minimum distance specified by the Occupational Safety and Health Administration (OSHA) of any conductor while the line is energized. If a transmission line is de-energized, the Contractor shall not work within 2 feet of any conductor.</p> <p>This facility is an important part of the MidAmerican Energy Company electric transmission network serving the region. The Contractor shall be required to configure its crane/equipment setup to avoid impacting the transmission line, or the operation thereof, except that short, intermittent transmission line outages may be possible as provided below.</p> <p>*** Overhead Electrical Transmission Line Outages ***</p> <p>The MidAmerican Energy Company system control coordinator requires a minimum of 15 calendar days in advance of any request for an outage of this transmission line. Depending on electric system circumstances, line outages may not be available. Additional advanced notice may increase the likelihood for outage approval. The Contractor is required to plan and schedule possible outages with MidAmerican Energy Company. Without early coordination with MidAmerican Energy Company, the transmission line outage request cannot be granted.</p> <p>The Contractor shall coordinate all needed line outages with MidAmerican Energy Company as a means to maintain the project construction schedule. MidAmerican Energy Company reserves the right to cancel any outages and re-energize the transmission line due to unforeseen conditions or storms that threaten the reliability of the transmission system, and will give as much advanced notice as possible to the Contractor. To coordinate all potential transmission line outages, the contractor shall call Shane Gross at phone number (563) 320-1925 at MidAmerican Energy Company to request and coordinate transmission line outages. De-energizing the transmission line between the time period of May 15 through September 15 may be restricted due to electric system circumstances.</p>

PROPOSED POSTED SPEED LIMIT						
Road Identification	Begin Station	End Station	Proposed Posted Speed Limit			Remarks
			35 or less	40 - 45	over 45	
I-80					X	
I-380					X	
US 218					X	
All Ramps					X	

100-27
04-17-18

EXISTING PAVEMENT

No.	Location					Year	Type	Project Number	Surface		Base		Subbase		Removal		Coarse Aggregate			Reinforcement	Remarks					
	County	Route	Dir. of Travel	Begin Ref. Loc. Sign	End Ref. Loc. Sign				Type	Depth	Type	Depth	Type	Depth	Type	Depth	Type	Depth	Source			Type	Durability Class	Type		
																									IN	IN
52	I-80	EB	228.93	239.5	2009	L	IMX-080-6(270)226--02-48	HMA	2	BAC	2	BAC	15	MIL	2	KLEIN	DEEL RAPIDS	C.LST.								
					1996		IM-80-6(167)240--13-52	AAC	2																	
					1991		IR-80-6(137)229	AAC	4																	
					1968		I-IG-80-6(56)230--04-52	AAC	0.5												AAC	1.5				
					1964		I-80-6(14)230	AAC	3												ATB	14	SAS	6	CONKLIN	C.LST.
52	I-80	EB	239.5	240.22	2003	L	IM-80-6(233)241--13-52	AAC	2	AAC	2.5	BAC	15	MIL	1.5	KLEIN	DELL RAPIDS	C.LST.								
					1996		IM-80-6(167)240--13-52	AAC	2	BAC	2															
					1996		IM-80-6(167)240--13-52	AAC	2	BAC	2															
					1991		IR-80-6(137)229	AAC	4																	
					1968		I-IG-80-6(56)230--04-52	AAC	0.5	AAC	1.5															
					1964		I-80-6(14)230	AAC	3	ATB	14										SAS	6	CONKLIN	C.LST.		
52	I-80	EB	240.22	240.83	2003	W	IM-80-6(233)241--13-52	AAC	2	AAC	2.5	BAC	14.5			KLEIN	KLEIN	C.LST.								
					2003		IM-80-6(233)241--13-52	AAC	2	AAC	2.5															
					1995		IMN-80-6(173)242--0E-52	AAC	2																	
					1963		I-IG-80-6(5)245	PCC	10	GSB	4										CONKLIN	C.LST.	I	GND 1988		
52	I-80	WB	228.93	239.48	2009		IMX-080-6(283)226--02-48	HMA	2					MIL	2	KLEIN	CONKLIN	C.LST.								
					1991		IR-80-6(137)229--12-52	AAC	4																	
					1968		I-IG-80-6(56)230--04-52	AAC	0.5												AAC	1.5				
					1964		I-80-6(14)230	AAC	3												ATB	14	SAS	6	CONKLIN	C.LST.
52	I-80	WB	239.48	240.22	2003	W	IM-80-6(233)241--13-52	AAC	2	AAC	2.5			MIL	1.5	LKEIN	CONKLIN	C.LST.								
					1998		IM-80-6(174)243--12-52	PCC	12.5	GSB	16															
					1991		IR-80-6(137)229-12-52	AAC	4																	
					1968		I-IG-80-6(56)230--04-52	AAC	0.05	AAC	1.5															
					1964		I-80-6(14)230	AAC	3	ATB	14										SAS	6	CONKLIN	C.LST.		
52	I-80	WB	240.22	240.83	2003	W	IM-80-6(233)241--13-52	AAC	2	AAC	2.5					KLEIN	CONKLIN	C.LST.								
					1998		IM-80-6(174)243--12-52	PCC	12.5	GSB	16															
					1995		IMN-80-6(173)242--0E-52	AAC	2																	
					1963		I-IG-80-6(5)245	PCC	10	GSB	4										CONKLIN	C.LST.	I	GND 1988		
52	US-218	NB	90.08	96.98	2009		NHSX-218-4(35)--3H-52	HMA	1.5	HMA	1.5					KLEIN	CONKLIN	C.LST.	I							
					1983		F-518-4(12)--20-52	PCC	9	CTB	4															
52	US-218	SB	90.08	96.98	2009		NHSX-218-4(35)--3H-52	HMA	1.5	HMA	1.5					KLEIN	CONKLIN	C.LST.	I							
					1983		F-518-4(12)--20-52	PCC	9	CTB	4															
52	I-380	NB	0	4.68	2008		IM-380-6(240)0--13-52	HMA	2	HMA	2			SCR	2	CEDAR RAPIDS	CONKLIN	C.LST.								
					1991		IM-380-6(172)243--12-52	AAC	5.5																	
					1973		EACI-IG-380-6(19)243--19-52	PCC	8	ATB	4										CONKLIN	C.LST.	I	SOME 305MM PC CRC		
52	I-380	SB	0	4.68	2008		IM-380-6(240)0--13-52	HMA	2	HMA	2			SCR	2	CEDAR RAPIDS	CONKLIN	C.LST.								
					1992		IM-380-6(179)243	AAC	5.5																	
					1973		EACI-IG-380-6(19)243--19-52	PCC	8	ATB	4										CONKLIN	C.LST.	I	CRC		

110-1 04-16-13 REMOVAL OF PAVEMENT Refer to Tabulation 102-5						
Begin Station	End Station	Side	Pavement Type	Area		Remarks
				SY	LF	
535+82.00	551+00.00	EB OUT	HMA	1783.6	1537.0	
560+50.00	567+01.00	EB OUT	HMA	733.0	671.0	
567+64.00	583+41.00	EB OUT	HMA	1708.5	1597.0	
583+41.00	584+66.00	EB OUT	HMA	85.6	255.0	
587+85.00	620+98.00	EB OUT	HMA	4420.0	3333.0	
620+98.00	621+62.00	EB OUT	PCC	71.1	64.0	Reinforced concrete shoulders. Includes removal of 64' of concrete barrier (incidental cost).
621+62.00	622+07.45	EB OUT	HMA	50.5	65.4	
664+48.00	687+00.00	EB OUT	HMA	2295.1	2256.0	
687+00.00	690+83.65	EB	HMA	2301.9	821.3	
690+83.65	691+51.00	EB	PCC	242.3	196.5	Bridge approach
696+69.73	697+36.37	EB	PCC	239.3	238.0	Bridge approach
697+36.37	700+72.69	EB OUT	HMA	373.7	346.3	
709+29.29	722+50.00	EB OUT	HMA	1518.5	1340.7	
541+04.00	550+00.00	WB OUT	HMA	946.6	916.0	
555+12.00	566+96.00	WB OUT	HMA	1311.4	1204.0	
567+60.00	578+73.00	WB OUT	HMA	1169.6	1133.0	
584+66.25	620+89.00	WB OUT	HMA	3895.3	3642.8	
621+53.00	626+35.00	WB OUT	HMA	500.6	502.0	
630+73.00	636+15.00	WB OUT	HMA	603.5	562.0	
664+67.00	687+00.00	WB OUT	HMA	2882.1	2253.0	
687+00.00	689+24.00	WB	HMA	1991.1	528.0	
689+24.00	690+48.00	WB	PCC	726.1	400.0	Bridge approach
695+37.20	696+44.87	WB	PCC	589.9	217.7	Bridge approach
696+44.87	696+79.12	WB	HMA	289.2	110.3	
687+00.00	691+51.00	MED	PCC	501.1	463.0	Median Barrier pad. Includes removal of concrete barrier
695+37.20	701+25.00	MED	PCC	653.1	599.8	Median Barrier pad. Includes removal of concrete barrier
1080+84.74	1126+24.00	NB OUT	HMA	3026.2	4551.3	
1173+40.00	1176+67.00	NB OUT	HMA	269.6	347.0	
1180+40.00	1187+85.00	NB OUT	HMA	623.1	765.0	
1189+80.00	1198+30.00	NB OUT	HMA	915.6	870.0	
1200+30.00	1204+41.50	NB OUT	HMA	457.2	431.5	
1206+96.00	1224+75.00	NB OUT	HMA	1976.7	1799.0	
1168+80.00	1172+40.00	NB MED	HMA	240.0	372.0	
1088+79.77	1126+49.00	NB MED	HMA	1256.4	3775.2	
1183+50.00	1188+00.00	NB MED	HMA	475.0	470.0	Includes approx. 175 sq yds CRC. (Mainline Pavement)
1189+60.00	1197+10.00	NB MED	HMA	791.7	770.0	Includes approx. 300 sq yds CRC. (Mainline Pavement)
1212+60.00	1217+89.85	NB MED	HMA	323.8	540.9	Includes approx. 150 sq yds CRC. (Mainline Pavement)
1121+67.00	1143+19.00	SB OUT	HMA	1434.7	2164.0	
1143+91.73	1146+90.59	SB OUT	HMA	199.2	310.9	
1178+00.00	1180+43.00	SB OUT	HMA	270.0	263.0	
1180+43.00	1182+18.00	SB OUT	HMA	194.4	360.0	May include 30 sq yds CRC. (Gore Area)
1185+21.00	1187+99.00	SB OUT	HMA	308.9	298.0	
1190+15.00	1198+63.00	SB OUT	HMA	942.2	868.0	
1200+28.00	1204+93.00	SB OUT	HMA	516.7	485.0	
1206+06.00	1224+75.00	SB OUT	HMA	2076.7	1889.0	
1168+70.00	1177+20.00	SB MED	HMA	850.0	868.0	Includes approx. 300 sq yds CRC. (Mainline Pavement)
1213+00.00	1217+90.00	SB MED	HMA	299.4	501.0	Includes approx. 150 sq yds CRC. (Mainline Pavement)
2510+31.00	2522+15.00	IN	Temp	1306.7	1192.0	IA 965 Ramp B
2501+12.47	2519+00.00	EB	HMA	5387.8	2256.6	IA 965 Ramp B
Total:				56024.6		

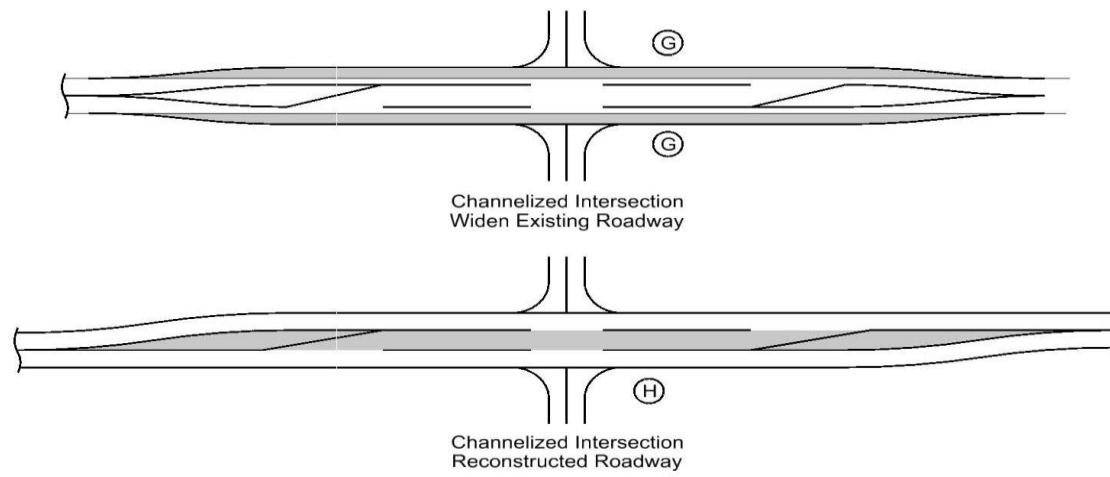
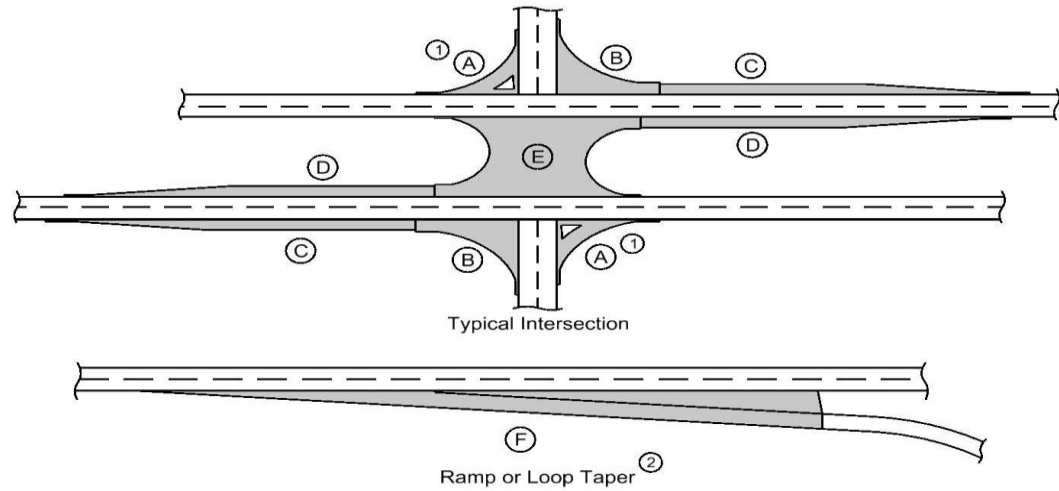
110-2 04-16-13 REMOVAL OF EXISTING STRUCTURES		
Location	Description	Remarks
I-80 606+26.9 - Rt	Remove Headwall to Face of Parapet	
606+26.9 - Lt	Remove Headwall to Face of Parapet	
635+33.4 - Lt	Remove Flume	
Ireland Ave Ramp A 1572+83 - Rt	Remove Headwall to Face of Parapet	Cut Perpendicular to Barrel
1572+83 - Lt	Remove Headwall to Face of Parapet	

110-9 10-18-11 CULVERT ABANDONMENT Refer to Details 4315 and 4316 * Not a bid item					
Location Station	Description	Fill Material		4"	Remarks
		Flowable Mortar	Granular Backfill*	Perforated Subdrain*	
		CY	TON	LF	
569+42.40	48"x173.9' RCP	80.9	0.4	14.0	
569+62.90	48"x174.9' RCP	81.4	0.4	14.0	
576+02.10	36"x150.7' RCP	39.4	0.3	12.0	
586+93.10	24"x207.2' RCP	24.5	0.2	10.0	
589+84.50	42"x163.7' RCP	24.9	0.4	13.0	Plug and Abandon South of Median Pipe
601+42.50	30"x192.9' RCP	35.1	0.3	11.0	
618+02.20	30"x161.1' RCP	13.6	0.3	11.0	Plug and Abandon South of Median Pipe
1099+85.30	4'x4'x409.0' RCB	242.4	0.3	14.0	
1099+85.30	24"x48.5' RCP	5.6	0.2	10.0	
1099+85.30	30"x20.4' Plastic Pipe	3.7	0.3	11.0	Plastic Pipe Extension
Rail Road	60"x32.9' RCP	23.9	0.5	16.0	West of I-380
Rail Road	72"x34.3' RCP	35.9	0.7	18.0	East of I-380
Totals		611.3	4.3	154.0	

110-7B 10-19-10 REMOVAL OF CABLE GUARDRAIL * Not a bid item									
① Lane(s) to which the installation is adjacent									
No.	Direction of Traffic	Location		Type (High/Low Tension)	Cable	Post * Footings, Concrete	End Terminal*	Remarks	
		Station to Station	Side		Remove	Remove	Remove		
					LF	Yes/No	No.		
1	NB	1165+25.00	1186+44.00	Med	High Tension	2119.0		2	
2	SB	1191+84.00	1198+47.00	Med	High Tension	663.0		2	
3	SB	1202+02.00	1204+60.00	Med	High Tension	258.0		2	
4	NB	1207+08.00	1217+90.00	Med	High Tension	1082.0		2	
Totals					4122.0				

110-7A 04-17-12 REMOVAL OF STEEL BEAM GUARDRAIL					
① Lane(s) to which the installation is adjacent.					
② Includes length of End Terminals and End Anchors.					
No.	Direction of Traffic	Location		Side	Removal of Guardrail
		Station to Station	Side		LF
					LF
1	EB	619+82.00	621+02.00	Out	120.0
2	EB	619+38.00	621+43.00	Med	205.0
3	Both	30619+55.00	30620+25.00	LT	70.0
4	Both	30619+58.00	30620+28.00	RT	70.0
5	Both	30622+33.00	30623+03.00	LT	70.0
6	Both	30622+34.00	30623+04.00	RT	70.0
7	WB	666+33.00	667+10.00	Out	77.0
8	EB	678+15.00	679+60.00	Out	145.0
9	EB	689+63.00	691+38.00	Out	175.0
10	EB	704+25.00	705+60.00	Out	135.0
11	NB	1137+12.00	1138+55.00	Med	143.0
12	NB	1137+12.00	1138+55.00	Out	143.0
13	NB	1159+35.00	1161+58.00	Med	223.0
14	SB	1165+25.00	1167+45.00	Med	220.0
15	SB	1183+88.00	1184+80.00	Med	92.0
16	SB	1183+88.00	1184+80.00	Out	92.0
17	NB	1185+84.00	1188+09.00	Med	225.0
18	SB	1190+10.00	1192+30.00	Med	220.0
19	NB	1196+21.00	1198+44.00	Med	223.0
20	SB	1200+25.00	1202+50.00	Med	225.0
21	NB	1202+30.00	1204+52.00	Med	222.0
22	SB	1207+15.00	1209+35.00	Med	220.0
Total					3385.0

DETOUR PAVEMENT



- ① Does not include raised island area or curb. Refer to tabulation 112-4 for quantities.
- ② Refer to PV-410, PV-411, PV-412, and PV-414.
- ③ Quantity includes Pavement Header.

Road Identification	Location Direction of Travel	Station to Station	Mainline			Area ③								Total Area By Pavement Thickness		Special Backfill CY	Modified Subbase CY	Granular Subbase SY	Remarks		
			Width	Length	Area	A ①	B	C	D	E	F ②	G	H	9 IN	9% IN						
			FT	FT	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY						
I-80																					
Outside Shoulder	EB	535+82.00	551+00.00	9-11	1518.0	1783.6									1783.6	791.3				Pavement 9.5 IN PCC or 12.5 IN HMA	
Outside Shoulder	EB	560+50.00	567+01.00	10.0	651.0	733.0									733.0	328.7				Pavement 9.5 IN PCC or 12.5 IN HMA	
Outside Shoulder	EB	567+64.00	583+41.00	10.0	1577.0	1708.5									1708.5	773.9				Pavement 9.5 IN PCC or 12.5 IN HMA	
Outside Shoulder	EB	583+41.00	584+66.00	10-2.6	125.0	85.6									85.6	44.7				Pavement 9.5 IN PCC or 12.5 IN HMA	
Outside Shoulder	EB	587+85.00	618+01.66	10.0	3016.7	4086.7									4086.7	1753.3				Pavement 9.5 IN PCC or 12.5 IN HMA	
Outside Shoulder	EB	664+48.00	685+00.00	5-27	2052.0	4566.3									4566.3	1788.1				Pavement 9.5 IN PCC or 12.5 IN HMA	
Outside Shoulder	EB	685+00.00	687+00.00	29.5-26	200.0	616.7									616.7	231.5				Pavement 9.5 IN PCC or 12.5 IN HMA	
Outside Shoulder	WB	541+04.00	550+00.00	6-11	896.0	946.6									946.6	431.7				Pavement 9.5 IN PCC or 12.5 IN HMA	
Outside Shoulder	WB	555+12.00	557+90.00	10.0	278.0	307.7									307.7	138.6				Pavement 9.5 IN PCC or 12.5 IN HMA	
Outside Shoulder	WB	557+90.00	566+96.00	10.0	906.0	1003.6									1003.6	452.0				Pavement 9.5 IN PCC or 12.5 IN HMA	
Outside Shoulder	WB	567+60.00	578+73.00	10.0	1113.0	1169.6									1169.6	534.1				Pavement 9.5 IN PCC or 12.5 IN HMA	
Outside Shoulder	WB	584+66.25	620+89.00	10.0	3622.8	3895.3									3895.3	1768.1				Pavement 9.5 IN PCC or 12.5 IN HMA	
Outside Shoulder	WB	621+53.00	626+35.00	10.0	482.0	500.6									500.6	229.4				Pavement 9.5 IN PCC or 12.5 IN HMA	
Outside Shoulder	WB	630+73.00	636+15.00	10.0	542.0	603.5									603.5	271.4				Pavement 9.5 IN PCC or 12.5 IN HMA	
Outside Shoulder	WB	664+67.00	685+00.00	6-16.3	2033.0	3547.6									3547.6	1446.1				Pavement 9.5 IN PCC or 12.5 IN HMA	
IA 965 Ramp B	EB	2510+31.00	2522+15.00	4-15	1184.0	1306.7									1306.7	589.1				Pavement 9.5 IN PCC or 12.5 IN HMA	
US 218 Outside Shoulder	NB	1080+84.74	1089+20.00	6-15	835.3	900.7									900.7	408.5				Pavement 9 IN PCC or 11.5 IN HMA	
US 218 Outside Shoulder	NB	1089+20.00	1126+24.00	15-17	3704.0	6426.2									6426.2	2622.2				Pavement 9 IN PCC or 11.5 IN HMA	
I-380 Outside Shoulder	NB	1173+40.00	1176+67.00	10.0	327.0	382.8									382.8	170.0				Pavement 9 IN PCC or 11.5 IN HMA	
I-380 Outside Shoulder	NB	1180+40.00	1187+85.00	6-10.5	745.0	623.1									623.1	304.3				Pavement 9 IN PCC or 11.5 IN HMA	
I-380 Outside Shoulder	NB	1189+80.00	1198+30.00	10.0	850.0	915.6									915.6	415.4				Pavement 9 IN PCC or 11.5 IN HMA	
I-380 Outside Shoulder	NB	1200+30.00	1204+41.50	10.0	411.5	457.2									457.2	205.8				Pavement 9 IN PCC or 11.5 IN HMA	
I-380 Outside Shoulder	NB	1206+96.00	1224+75.00	10.0	1779.0	1976.7									1976.7	889.5				Pavement 9 IN PCC or 11.5 IN HMA	
US 218 Median Shoulder	NB	1088+79.77	1121+67.62	15-13	3287.8	5979.0									5979.0	2419.2				Pavement 9 IN PCC or 11.5 IN HMA	
US 218 Median Shoulder	NB	1121+67.62	1126+49.00	13.0	481.4	695.3									695.3	294.2				Pavement 9 IN PCC or 11.5 IN HMA	
US 218 Outside Shoulder	SB	1121+67.00	1143+19.00	10.0	2152.0	3753.3									3753.3	1530.1				Pavement 9 IN PCC or 11.5 IN HMA	
I-380 Outside Shoulder	SB	1178+00.00	1182+18.00	10.0	418.0	277.8									277.8	146.8				Pavement 9 IN PCC or 11.5 IN HMA	
I-380 Outside Shoulder	SB	1185+21.00	1187+99.00	10.0	278.0	280.8									280.8	129.6				Pavement 9 IN PCC or 11.5 IN HMA	
I-380 Outside Shoulder	SB	1190+15.00	1198+63.00	10.0	848.0	967.6									967.6	432.5				Pavement 9 IN PCC or 11.5 IN HMA	
I-380 Outside Shoulder	SB	1200+28.00	1204+93.00	10.0	465.0	489.5									489.5	223.4				Pavement 9 IN PCC or 11.5 IN HMA	
I-380 Outside Shoulder	SB	1206+06.00	1224+75.00	10.0	1869.0	1971.5									1971.5	899.5				Pavement 9 IN PCC or 11.5 IN HMA	
Ramp B to I-80	EB	12518+00.00	12522+05.00	9.3-32	405.0						811.1				811.1	322.9				Pavement 8 IN PCC or 9 IN HMA	
Ramp B to I-80	EB	12522+05.00	12523+95.00	20.0	190.0	422.2									422.2	190.0				Pavement 8 IN PCC or 9 IN HMA	
Ramp B to I-80	EB	12523+95.00	12524+50.00	24.0	55.0	146.7									146.7	63.1				Pavement 8 IN PCC or 9 IN HMA	
Ramp B to I-80	EB	12524+50.00	12528+28.43	28.5-6	378.4						555.8				555.8	234.3				Pavement 8 IN PCC or 9 IN HMA	
Ramp B to US 218	SB	12546+83.36	12550+81.84	4-28	398.5						527.3				527.3	227.4				Pavement 8 IN PCC or 9 IN HMA	
Ramp B to US 218	SB	12550+81.84	12554+42.13	24.0	360.3	960.8									960.8	367.0				Pavement 8 IN PCC or 9 IN HMA	
Ramp B to US 218	SB	12554+42.13	12557+38.37	28-4.3	296.2						393.0				393.0	169.4				Pavement 8 IN PCC or 9 IN HMA	
															TOTAL	29914.2	26861.4	24236.9			

ROCK EROSION CONTROL

Refer to EC-301 and Detail 570-8

Location			Rock Erosion Control (REC)					Material Bid Quantities			Remarks			
Road Identification	Begin Station	End Station	Side Lt./Rt.	(L)	(W)	Type 1	Type 2	Type 3	Type 4	Type 5		Eng. Fabric	Class E Revetment	Erosion Stone
				FT	FT	Rock Ditch Check	Rock Ditch	Rock Flume	Rock Splash Basin	Rock Slope Protection		SY	TON	TON
I-80	558+52.00		Lt.	11	11				X			25.0		14.5
	569+90.00		Lt.	14	14				X		36.0		23.5	
	570+10.00		Lt.	14	14				X		36.0		23.5	
	582+20.00		Lt.	14	14				X		36.0		23.5	
	586+93.00		Lt.	11	11				X		25.0		14.5	
	589+84.00		Lt.	14	14				X		36.0		23.5	
	590+08.00		Lt.	14	14				X		36.0		23.5	
	599+02.00		Rt.	11	40				X		73.5		53.0	
	600+55.00		Lt.	12	12				X		28.5		17.5	
	605+02.00		Rt.	11	28				X		53.5		37.0	
	606+27.00		Lt.	15	15				X		40.0		27.0	
	606+27.00		Rt.	45	66				X		381.0		356.5	
	617+79.00		Lt.	12	12				X		28.5		17.5	
	618+02.00		Lt.	12	65				X		122.5		93.5	
	622+50.00		Rt.	13	13				X		32.0		20.5	
	685+00.00		Rt.	13	20				X		45.5		31.0	
I-380	1099+70.00		Lt.	30	30				X		180.0	150.0	3' Deep	
	1117+70.00		Lt.	11	11				X		25.0		14.5	
	1127+70.00		Lt.	11	11				X		25.0		14.5	
	1128+00.00		Lt.	11	20				X		40.0		26.5	
	1135+87.00		Rt.	13	13				X		32.0		20.5	
Ireland Ave. Ramp A	1572+83.00		Lt.	15	15				X		40.1		27.0	
	1575+74.00		Lt.	14	14				X		36.0		23.5	
I-80/I-380 Ramp B	2531+07.55		Rt.	10	20				X		37.5		24.0	
Totals:											1450.6	150.0	950.5	

ACCESS POINTS AND SAFETY RAMPS

Refer to Cross-Sections

Length of unclassified pipe calculated is based on using Reinforced Concrete Pipe.

- ① Refer to MI-210
- ② Refer to EW-501.
- ③ Refer to EW-501 or EW-502.

*Predetermined for access point not constructed with this project.

Location		Type	Length of Opening ①			W	① PR ②	② SR	Pipe Culvert ③					Aprons	Driveway Surface Area		Driveway Surfacing Material	Remarks
Station	Side	A, B, C, Safety Ramp, or Predetermined*	Case	1 1/2" Dropped Curb	3" Dropped Curb				H	Size	Pipe Length	Lt.	Rt.		No.	HMA		
			1 or 2	LF	LF	FT	IN	LF	LF	LF		SY	SY	TON				
233+20 (US 6)	N	C				18.0									324.101			
BARN	W	C				15.0									207.312			

GRADING FOR GUARDRAIL INSTALLATIONS

① Lane(s) to which the installation is adjacent.

Refer to EW-301

Location				Foreslope at Guardrail	Dimensions (Feet)									Earthwork		Remarks
No.	Direction of Traffic	Station	Side		(X1)	(Y1)	(X2)	(Y2)	(X3)	(Y3)	(X4)	(Y4)	(Z)	Excavation Class 10	Embankment In Place	
I-80																
	EB	691+58.47	OUT	6:1	90.0	6.6	114.9	9.1	527.4	9.1	577.3	10.6	637.0		286.0	
	WB	695+52.45	OUT	6:1	77.5	6.6	139.7	8.9	289.7	8.9	339.7	10.4	398.4		180.0	
	EB	704+00.61	OUT	6:1	162.5	7.3					212.5	8.8	262.6		142.0	
TOTAL															608.0	

STEEL BEAM GUARDRAIL AT CONCRETE BARRIER OR BRIDGE RAIL END SECTION

Possible Standards: BA-200, BA-201, BA-202, BA-205, BA-206, BA-210, BA-211, BA-221, BA-225, BA-250, BA-260, LS-625, LS-626, LS-630, LS-635, SI-172, SI-173 and SI-211.

① Lane(s) to which the obstacle is adjacent.

② Not a bid item. Incidental to guardrail installation.

Location				Offset	Layout Lengths				Long-Span System	Delineators and Object Markers ②						Bid Items								Remarks	
No.	Direction of Traffic	Side	Station		BA-250, BA-260, LS-630, or LS-635					SI-211	Delineator SI-172	Object Marker SI-173			Bolted End Anchor	Post Adapter	Steel Beam Guardrail	Barrier Transition Section	BA-250 or LS-630				BA-260 or LS-635		
					(VT1)	(VF)	(VT2)	(ET)				Type 1	Type 2	Type 3					End Terminal		Barrier Transition Section	End Terminal			
				FT	LF	LF	LF	LF	STATION	TYPE	TYPE	White	OM2-2	OM3-L	OM3-R	BA-202	BA-210	BA-200	BA-201	Tangent	Flared	Tangent	Flared	BA-221	BA-225
I-80																									
1	EB	0	691+58.47	85.8	90.625	25.00	412.50	47.7			3				1	A	1		487.5	1	1				
2	WB	0	695+52.45	81.8	78.125	62.50	150.00	47.7			2		12		1	A	1		250.0	1	1				
TOTAL															2				737.5	2	2				

STEEL BEAM GUARDRAIL FOR SIDE OBSTACLE (ONE-WAY PROTECTION)

Possible Standards: BA-200, BA-203, BA-205, BA-206, BA-210, BA-211, BA-252, LS-625, LS-626, LS-632, SI-172, SI-173, and SI-211.

① Lane(s) to which the obstacle is adjacent.

Location				O _L	D ₀	Layout Lengths					Long-Span System	Delineators and Object Markers				Bid Items			Remarks				
No.	Direction of Traffic	Side	Station			BA-252 or LS-632						SI-211	Delineator SI-172	Object Marker SI-173			Steel Beam Guardrail	W-Beam End Anchor		End Terminal		Post Adapter	
						(ET)	(VT2 _A)	(VF _A)	(VT1 _A)	(VT1 _T)				(EA)	Type 1	Type 2				Type 3	Standard		Count
				FT	FT	LF	LF	LF	LF	LF	STATION	TYPE	TYPE	White	OM2-2	OM3-L	OM3-R	BA-200	BA-203	BA-210			
-80 Exit Taper																							
1	EB	0	704+00.64	5.00	11.00	47.7	0.00	0.00	162.50	18.75	9.375		5					1	175.0	1	BA-205	1	

TEMPORARY BARRIER RAIL

Possible Standards: BA-400, BA-401

* Not a bid item. Anchorage requirements are based on TBR locations shown in the plans. TBR alignments that vary from what is shown in the plans may result in additional TBR sections requiring anchorage.

No.	Station to Station	Length LF	(Select One)		Anchored* (Y/N)	Modular Glare Screen System (Y/N)	Remarks	
			Steel BA-400	Concrete BA-401				
*** Stage 2A***								
I380 NB (Median)								
	1150+70.00	1170+25.00	1962.5		X	No	Yes	Left in Place
	1196+35.00	1210+35.00	1400.0		X	No	Yes	Stage 2A
I380 SB (Outside)								
	1089+00.00	1149+50.00	6050.0		X	No	No	Stage 2A
I380 SB (Median)								
	1150+65.00	1170+35.00	1975.0		X	No	Yes	Left in Place
	1196+00.00	1211+70.00	1575.0		X	No	Yes	Left in Place
I80 EB (Outside)								
	555+50.00	582+75.00	2725.0		X	No	No	Stage 2A
	584+35.00	621+00.00	3675.0		X	No	No	Stage 2A
	667+00.00	698+60.00	3162.5		X	No	No	Stage 2A
	708+27.60	722+58.84	1437.5		X	No	No	Stage 2A
I80 EB (Median)								
	634+60.00	637+60.00	300.0		X	No	Yes	Stage 2A
	641+00.43	647+13.80	625.0		X	No	Yes	Stage 2A
I80 WB (Outside)								
	556+00.00	579+00.00	2300.0		X	No	No	Stage 2A
	582+00.00	628+00.00	4600.0		X	No	No	Stage 2A
	647+00.00	660+20.00	1325.0		X	No	No	Stage 2A
	666+00.00	686+00.00	2000.0		X	No	No	Stage 2A
I80 WB (Median)								
	635+25.00	638+25.00	300.0		X	No	Yes	Stage 2A
	643+36.25	646+74.62	350.0		X	No	No	Left in Place
I380 Ramp A (SUR080) (Outside)								
	658+50.00	666+00.00	750.0		X	No	No	Stage 2A
I380 Ramp C (SUR080) (Outside)								
	628+00.00	657+60.00	2962.5		X	No	No	Stage 2A
I380 Loop E (SUR080) (Outside)								
	647+00.00	649+15.00	225.0		X	No	No	Stage 2A
Ramp IA965B (Inside)								
	2508+25.00	2521+10.00	1287.5		X	No	Yes	Stage 2A
Ireland Ave. Ramp A (IRLA) (Outside)								
	566+50.00	582+00.00	1550.0		X	No	No	Stage 2A
Ireland Ave. Ramp A (IRLA) (Inside)								
	575+00.00	579+00.00	400.0		X	No	No	Stage 2A
US 6 (Under I-80)								
	EB		400.0		X	No	No	Stages 2A to 2C
	WB		700.0		X	No	No	Stages 2A to 2C
*** Stage 2B***								
I380 NB (Outside)								
	1180+75.00	1218+00.00	3725.0		X	No	No	Stage 2B
I380 NB (Median)								
	1121+00.00	1151+25.00	3025.0		X	No	Yes	Left in Place
	1185+00.00	1191+00.00	600.0		X	Yes	Yes	Left in Place
	1192+80.00	1211+00.00	1825.0		X	No	Yes	Stages 2B and 2C
I380 SB (Median)								
	1121+50.00	1150+65.00	2925.0		X	No	Yes	Left in Place
I380 SB (Outside)								
	1185+90.00	1218+50.00	3262.5		X	Yes	No	Stage 2B
I80 EB (Outside)								
	684+35.00	704+10.00	1975.0		X	Yes	No	Stage 2B
I80 EB (Median)								
	634+60.00	637+60.00	300.0		X	No	No	Left in Place
	642+40.00	645+50.00	312.5		X	No	No	Left in Place

TEMPORARY BARRIER RAIL

Possible Standards: BA-400, BA-401

* Not a bid item. Anchorage requirements are based on TBR locations shown in the plans. TBR alignments that vary from what is shown in the plans may result in additional TBR sections requiring anchorage.

No.	Station to Station	Length LF	(Select One)		Anchored* (Y/N)	Modular Glare Screen System (Y/N)	Remarks		
			Steel BA-400	Concrete BA-401					
Ramp IA965B (Outside)									
	2504+10.00	2519+31.00	1525.0			X	Yes	No	Stage 2B
US 6 (Under I-380)									
	229+50.00	232+00.00	250.0			X	No	No	Stage 2B, WB
	229+00.00	231+25.00	225.0			X	No	No	Stage 2B, EB
*** Stage 2C***									
I380 NB (Median)									
	1211+00.00	1218+25.00	725.0			X	No	Yes	Left in Place
I380 SB (Median)									
	1211+00.00	1218+25.00	725.0			X	No	Yes	Left in Place
I80 EB (Outside)									
	708+20.00	714+50.00	637.5			X	No	No	Stage 2C
I80 EB (Median)									
	683+90.00	701+25.00	1737.5			X	No	Yes	Stage 2C
I80 WB (Median)									
	685+00.00	703+00.00	1800.0			X	No	Yes	Stage 2C
Ramp IA965B (Median)									
	2508+20.00	2521+05.00	1287.5			X	No	Yes	Stages 2C and 2D
*** Stage 2D***									
I380 NB (Outside)									
	1082+75.00	1142+00.00	5925.0			X	No	No	Stage 2D
I380 NB (Median)									
	1168+60.00	1185+35.00	1675.0			X	Yes	Yes	Left in Place
	1197+50.00	1216+50.00	1900.0			x	No	Yes	Left in Place
I380 SB (Median)									
	1163+00.00	1173+20.00	1025.0			X	No	Yes	Left in Place
	1175+00.00	1217+00.00	4200.0			X	No	Yes	Left in Place
I80 EB (Outside)									
	619+40.00	628+50.00	912.5			X	No	No	Left in Place; Partially on Ramp B
	699+15.00	709+40.00	1025.0			X	No	No	Stage 2D
I80 WB (Outside)									
	684+50.00	702+50.00	1800.0			X	No	No	Stage 2D
I80 Both (Median)									
	696+00.00	697+62.50	162.5			X	No	No	Left in Place
	697+40.00	701+40.00	400.0			X	No	No	Left in Place
	684+95.00	690+20.00	525.0			X	No	No	Left in Place, (1)
Ramp IA965B (Median)									
	2499+15.00	2509+30.00	1025.0			X	No	Yes	Stage 2D
			Totals			91475		33900	
(1) Includes the removal of existing temporary concrete barrier rail. Removed barrier rail is considered property of the contractor. Removed barrier rail cannot be used as it no longer meets the required specifications. UAC TBR west of Sta. 685+00.									

CRASH CUSHIONS

- * Bid Item
- ① Lane(s) to which the installation is adjacent.
- ② Complete this section when using the Temporary Crash Cushion bid item and Earthwork is needed for Sand Barrel placement. Refer to BA-500

No.	Direction of Traffic	Location Station	Side	Obstacle Width FT	Crash Cushion (Select One)*					Sand Barrel Details ②					Earthwork*		Spare Parts Kit (Select One)*		Obstacle Description	Remarks		
					Temporary	Temporary Redirective	Temporary Severe Use	Permanent	Permanent Severe Use	V	W	X	Y	Z	Excavation Class 10 CY	Embankment in Place CY	Permanent EACH	Permanent Severe Use EACH				
										Length FT	Length FT	Length FT	Length FT	Length FT								
*** Stage 2A***																						
I-380																						
1	NB	1150+68.93	med		X														TBR	Stg 2A		
2	NB	1196+35.00	med		X														TBR	Stg 2A		
3	SB	1149+50.00	out		X														TBR	2A		
4	SB	1170+35.00	med		X													20.0	TBR	Stg 2A-2C		
5	SB	1189+00.00	out		X														TBR	Stg 2A		
6	SB	1211+65.00	med		X													20.0	TBR	Stg 2A-2B		
I-80																						
7	EB	584+35.00	out		X														20.0	TBR	Stg 2A	
8	EB	634+60.00	med		X															TBR	Stg 2A	
9	EB	641+00.00	med		X															TBR	Stg 2A	
10	EB	708+30.00	out																	TBR	Stg 2A	
11	WB	646+75.00	med																20.0	TBR	Stg 2A-2E; Leave in place, to become DOT property	
12	WB	660+20.00	out		X															TBR	Stg 2A	
13	WB	685+90.00	out		X															TBR	Stg 2A	
I-380 Ramp D (SUR080)																						
14		655+00.00	out		X														20.0	TBR	Stg 2A	
I-380 Loop E (SUR080)																						
15		648+90.00	out		X														20.0	TBR	Stg 2A	
US 6 (Under I-80)																						
16	EB	North of I-80	out		X															TBR	Stg 2A-2C	
17	WB	South of I-80	out		X															TBR	Stg 2A-2C	
*** Stage 2B***																						
I-380																						
18	NB	1121+00.00	out		X														20.0	TBR	Stg 2B	
19	NB	1185+00.00	med		X															TBR	Stg 2B-2E	
20	NB	1192+80.00	med		X															TBR	Stg 2B-2C	
I-80																						
21	EB	634+60.00	med																	TBR	Stg 2B-2E; Leave in place, to become DOT property	
22	EB	642+40.00	med																	TBR	Stg 2B-2E; Leave in place, to become DOT property	
23	EB	684+35.00	out		X															TBR	Stg 2B	
US 6 (Under I-380)																						
24	EB	229+00.00	out		X															TBR	Stg 2B	
25	WB	232+00.00	out		X															TBR	Stg 2B	
*** Stage 2C***																						
I-380																						
26	SB	1146+10.00	out		X															20.0	TBR	Stg 2C
27	SB	1218+50.00	med																		TBR	Stg 2C-2E;; Leave in place, to become DOT property
I-80																						
28	EB	683+90.00	med		X																TBR	Stg 2C
29	EB	708+20.00	out																			X
30	WB	702+90.00	med		X																	
*** Stage 2D ***																						
I-380																						
31	NB	1082+75.00	med		X																	TBR
32	NB	1168+00.00	med																			TBR
33	SB	1173+15.00	med																			TBR
34	SB	1218+50.00	out		X																	TBR
I-80																						
35	EB	619+40.00	out																			TBR
36	EB	699+20.00	out																			TBR
37	WB	702+45.00	out		X																	TBR
38	EB	555+50.00	out		X																	TBR
39	WB	579+00.00	out																			TBR

CRASH CUSHIONS

* Bid Item
 ① Lane(s) to which the installation is adjacent.
 ② Complete this section when using the Temporary Crash Cushion bid item and Earthwork is needed for Sand Barrel placement. Refer to BA-500

No.	Direction of Traffic	Location Station	Side	Obstacle Width FT	Crash Cushion (Select One)*					Sand Barrel Details ②					Earthwork*		Spare Parts Kit (Select One)*		Obstacle Description	Remarks
					Temporary	Temporary Redirective	Temporary Severe Use	Permanent	Permanent Severe Use	V	W	X	Y	Z	Excavation Class 10 CY	Embankment in Place CY	Permanent EACH	Permanent Severe Use EACH		
										Length FT	Length FT	Length FT	Length FT	Length FT						
Totals:					28	11							160.0							

SAFETY CLOSURES

Refer to Section 2518 of the Standard Specifications

Station	Closure Type		Remarks
	Road Qty.	Hazard Qty.	
2515+90.00		x	Ramp B
2523+00.00		x	Ramp B
2551+60.00		x	Ramp B
2560+30.00		x	Ramp B
617+00, 77'LT		x	Ramp C / I 80
5520+80.00		x	Ramp E
5584+00.00		x	Ramp E
5588+75.00		x	Ramp E
6502+50.00		x	Ramp F
6572+25.00		x	Ramp F
8572+00.00		x	Ramp H
12524+00	x		Ramp B1 Detour
Coral Ridge	x		Coral Ridge WB On-ramp
Jasper Road	x		Jasper Rd just S. of I-80
Jasper Road	x		Jasper Rd just N. of I-80
19+20	x		Barn Entrance
B US6@Park Rd	x		temp closure for bridge
B US6 @ I-380	x		temp closure for bridge
SB US6 @ I-80	x		temp closure for bridge
NB US6 @ I-80	x		temp closure for bridge
Ireland RampD	x		temp closure for bridge
Existing RampC	x		temp closure for bridge
Loop E @ I-380	x		temp closure for bridge
Loop F @ I-380	x		temp closure for bridge
FEG Ramp C	x		temp closure for bridge
	14	11	Totals

LOCATIONS OF ROAD CLOSURE BARRICADES

Refer to SI-181 and SI-182.

No.	Location Station	W	SI-181	SI-182	Remarks
		LF	LF	No.	
1	30619+30.00	26.0	26		Exist. Jasper Ave
2	30623+25.00	26.0	26		Exist. Jasper Ave

FENCING

* Bid Item

Refer to MI-101, MI-102, MI-103, MI-104, 510-3, and 510-5

Location				Side	Chain Link				Deer				Field				Channel Crossing		Remarks
From		To			Fence		Gate		Fence Length*	Brace Panels*	Gate		Fence Length*	Brace Panels*	Gate		Length*	Type	
Station	Offset	Station	Offset		Length*	Type	No.*	Type			No.*	Type			No.*	Type			
					LF		EACH		LF	EACH	EACH		LF	EACH	EACH	LF			
1567+63.10	67.4	1571+13.50	68.8	LT	350.4	72 IN.													
1571+13.50	68.8	1572+89.70	118.2	LT	178.0	72 IN.													
1572+89.70	118.2	1573+30.50	117.5	LT	38.0	72 IN.													
1573+30.50	117.5	1573+37.70	99.1	LT	19.7	72 IN.													
1573+37.70	99.1	1573+51.00	90.8	LT	15.0	72 IN.													
1573+51.00	90.8	1573+94.30	114.6	LT	47.2	72 IN.													
1573+94.30	114.6	1575+51.60	97.7	LT	148.4	72 IN.													
1575+51.60	97.7	1575+66.70	64.7	LT	36.0	72 IN.													
1575+66.70	64.7	1575+81.30	64.7	LT	14.0	72 IN.													
1575+81.30	64.7	1576+02.50	89.2	LT	31.8	72 IN.													
1576+02.50	89.2	1576+42.20	81.5	LT	38.5	72 IN.													
1576+42.20	81.5	1577+54.30	58.9	LT	109.8	72 IN.													
1577+54.30	58.9	1579+58.90	55.6	LT	197.6	72 IN.													
1579+58.90	55.6	1580+24.90	56.6	LT	63.9	72 IN.													
1580+24.90	56.6	1581+13.50	71.0	LT	89.1	72 IN.													
1581+13.50	71.0	582+17.20	177.6	LT											100.0	A	Chain Link - Type A Crossing		
582+17.20	177.6	585+64.90	169.0	LT	347.0	72 IN.													
585+64.90	169.0	587+34.90	139.0	LT	172.6	72 IN.													
587+34.90	139.0	588+64.40	139.0	LT	129.4	72 IN.													
588+64.40	139.0	589+64.50	138.9	LT											100.0	A	Chain Link - Type A Crossing		
589+64.50	138.9	597+80.10	145.4	LT	816.0	72 IN.													
597+80.10	145.4	598+50.10	159.0	LT	71.4	72 IN.													
598+50.10	159.0	600+69.80	174.0	LT	220.2	72 IN.													
600+69.80	174.0	601+14.70	149.0	LT	51.5	72 IN.													
601+14.70	149.0	604+30.10	149.0	LT	315.4	72 IN.													
604+30.10	149.0	604+75.20	159.0	LT															
604+75.20	159.0	605+03.20	149.0	LT	30.0	72 IN.													
605+03.20	149.0	606+03.20	139.0	LT	100.6	72 IN.													
606+03.20	139.0	610+40.10	139.0	LT	436.8	72 IN.													
610+40.10	139.0	611+60.10	154.0	LT	121.0	72 IN.													
611+60.10	154.0	618+20.10	164.0	LT	660.1	72 IN.													
618+20.10	164.0	619+96.90	187.2	LT	178.3	72 IN.													
619+96.90	187.2	620+12.70	250.7	LT	65.4	72 IN.													
620+12.70	250.7	622+12.30	270.6	LT	202.0	SAFETY FENCE													
622+12.30	270.6	623+25.10	284.0	LT	115.0	72 IN.													
623+25.10	284.0	626+65.40	304.0	LT	345.3	72 IN.													
626+65.40	304.0	632+15.70	849.1	LT	780.3	72 IN.													
632+15.70	849.1	1179+99.10	559.1	LT	467.5	72 IN.													
1179+99.10	559.1	1181+70.10	473.8	LT	191.1	72 IN.													
1181+70.10	473.8	1182+29.10	523.8	LT	77.4	72 IN.													
1182+29.10	523.8	1183+39.30	869.3	LT	122.9	72 IN.													
1183+39.30	869.3	1183+89.30	369.1	LT	112.0	72 IN.													
1183+89.30	369.1	1187+10.60	296.2	LT	353.9	72 IN.													
1187+10.60	296.2	1188+44.30	65.3	LT	270.6	SAFETY FENCE													
1190+22.40	65.9	1191+27.70	257.4	LT	221.1	SAFETY FENCE													
1191+27.70	257.4	1195+05.00	284.0	LT	409.2	72 IN.													
1195+05.00	284.0	1199+01.60	289.0	LT	418.0	72 IN.													
1199+01.60	289.0	1198+64.30	65.7	LT	226.4	SAFETY FENCE													
1200+31.60	67.7	1200+49.70	264.0	LT	197.2	SAFETY FENCE													
1200+49.70	264.0	1203+19.20	245.3	LT	270.2	72 IN.													
1203+19.20	245.3	1204+80.70	65.6	LT	241.7	SAFETY FENCE													
1200+06.70	65.4	1199+58.20	249.0	RT	190.8	SAFETY FENCE													
1199+58.20	249.0	1203+10.60	226.0	RT	353.1	72 IN.													
1203+10.60	226.0	1204+43.10	65.7	RT	208.1	SAFETY FENCE													
1189+58.80	65.6	1189+80.70	221.0	RT	156.9	SAFETY FENCE													
1189+80.70	221.0	1190+80.30	254.1	RT	99.2	72 IN.													
1190+80.30	254.1	1193+17.20	259.0	RT	218.6	72 IN.													
1193+17.20	259.0	1194+25.10	264.0	RT	99.4	72 IN.													
1194+25.10	264.0	1197+98.60	275.0	RT	346.7	72 IN.													
1197+98.60	275.0	1198+35.00	68.8	RT	209.5	SAFETY FENCE													

FENCING

* Bid Item

Refer to MI-101, MI-102, MI-103, MI-104, 510-3, and 510-5

Location				Side	Chain Link				Deer				Field				Channel Crossing		Remarks
From		To			Fence		Gate		Fence Length*	Brace Panels*	Gate		Fence Length*	Brace Panels*	Gate		Length*	Type	
Station	Offset	Station	Offset		Length*	Type	No.*	Type			No.*	Type			No.*	Type			
					LF		EACH		LF	EACH	EACH		LF	EACH	EACH		LF		
1187+90.00	66.0	1186+68.00	177.0	RT	161.6	SAFETY FENCE													
1186+68.00	177.0	1186+57.10	178.9	RT				12.6					2						
1186+57.10	178.9	1185+80.10	160.5	RT				73.6					4						
1185+80.10	160.5	1183+34.80	172.6	RT				239.4					6						
1183+34.80	172.6	1179+24.70	289.0	RT				426.3					6						
1179+24.70	289.0	1173+04.70	599.0	RT				693.2					5						
1173+04.70	599.0	649+90.30	701.7	LT				530.0					5						
649+90.30	701.7	653+49.30	499.2	LT				412.2					6						
653+49.30	499.2	653+84.40	449.2	LT				61.1					4						
653+84.40	449.2	655+52.00	392.2	LT											177.1	FLOOD PLAIN	Field Fence - Flood Plain		
655+52.00	392.2	655+62.20	359.1	LT											34.6	FLOOD PLAIN	Field Fence - Flood Plain		
655+62.20	359.1	658+41.10	294.1	LT											286.5	FLOOD PLAIN	Field Fence - Flood Plain		
658+41.10	294.1	658+95.70	197.5	LT											111.0	FLOOD PLAIN	Field Fence - Flood Plain		
661+56.00	158.7	661+55.50	232.6	LT	73.8	SAFETY FENCE													
661+55.50	232.6	666+64.60	196.4	LT	510.4	SAFETY FENCE													
666+64.60	196.4	668+40.00	184.0	LT	175.8	SAFETY FENCE													
668+40.00	184.0	673+10.30	184.0	LT	470.3	SAFETY FENCE													
584+94.80	154.8	593+81.00	139.0	RT	886.4	72 IN.													
593+81.00	139.0	598+00.10	174.0	RT	420.5	72 IN.													
598+00.10	174.0	606+62.40	196.2	RT	830.2	72 IN.													
620+25.40	229.0	622+38.10	244.0	RT	212.1	SAFETY FENCE													
1089+20.00	183.5	1089+94.70	199.0	LT				76.3					4						
1089+94.70	199.0	1095+34.60	199.0	LT				539.9					5						
1095+34.60	199.0	1096+14.10	198.6	LT				79.5					2						
1096+14.10	198.6	1098+91.90	199.0	LT				282.6					6						
1098+91.90	199.0	1099+41.90	274.0	LT				91.3					4						
1099+41.90	274.0	1100+41.20	274.0	LT											104.0	A	Field Fence - Type A Crossing		
1100+41.20	274.0	1102+41.20	178.9	LT				228.6					6						
1102+41.20	178.9	1103+25.20	182.6	LT				86.7					4						
1103+25.20	182.6	1105+30.10	249.0	LT				222.7					6						
1105+30.10	249.0	1105+58.70	244.0	LT				30.3					2						
1105+58.70	244.0	1109+39.90	259.0	LT				398.2					5						
1109+39.90	259.0	1110+89.80	218.5	LT				161.3					6						
1110+89.80	218.5	1117+35.50	222.0	LT				670.2					6						
1117+35.50	222.0	1117+67.90	193.5	LT				44.0					4						
1117+67.90	193.5	1118+19.90	180.7	LT				55.2					4						
1118+19.90	180.7	1119+32.20	267.0	LT															
1119+32.20	267.0	1120+69.90	218.7	LT				117.2					4						
1120+69.90	218.7	1130+60.10	234.8	LT				151.4					4						
1130+60.10	234.8	1132+99.90	279.0	LT				992.6					7						
1132+99.90	279.0	1135+28.50	173.8	LT				243.8					5						
1135+28.50	173.8	1136+35.20	177.6	LT	106.7	72 IN.													
1136+35.20	177.6	1137+45.20	219.0	LT	117.5	72 IN.													
1137+45.20	219.0	1138+04.90	224.0	LT	59.9	72 IN.													
1138+04.90	224.0	1139+14.90	187.7	LT	115.8	72 IN.													
1139+14.90	187.7	1140+85.40	193.9	LT	170.6	72 IN.													
1140+85.40	193.9	1141+25.40	224.0	LT	50.1	72 IN.													
1141+25.40	224.0	1141+84.90	229.0	LT	59.7	72 IN.													
1141+84.90	229.0	1142+64.80	200.4	LT	85.0	72 IN.													
1142+64.80	200.4	1143+30.70	202.7	LT	65.9	72 IN.													
1143+30.70	202.7	1143+65.80	284.4	LT	88.9	72 IN.													
1143+65.80	284.4	1144+60.30	354.0	LT	117.4	72 IN.													
1144+60.30	354.0	1145+01.40	354.0	LT	41.1	72 IN.													
1145+01.40	354.0	1148+26.90	483.3	LT	350.2	72 IN.													
1090+94.10	159.0	1096+60.50	207.8	RT				568.5					6						
1096+60.50	207.8	1097+00.50	259.0	RT				65.0					4						
1097+00.50	259.0	1097+79.00	259.0	RT											77.3	A	Field Fence - Type A Crossing		
1097+79.00	259.0	1097+79.00	217.8	RT				41.1					4						
1097+79.00	217.8	1099+05.60	225.6	RT				122.0					4						
1099+05.60	225.6	1099+40.60	284.0	RT				67.3					4						
1099+40.60	284.0	1099+99.40	284.0	RT											55.9	A	Field Fence - Type A Crossing		
1099+99.40	284.0	1100+34.00	229.6	RT				63.7					4						
1100+34.00	229.6	1104+91.30	199.1	RT				441.2					5						
1104+91.30	199.1	1109+41.40	154.1	RT				438.4					5						
1109+41.40	154.1	1111+00.20	166.9	RT				155.0					3						
1111+00.20	166.9	1117+00.00	219.0	RT				581.7					5						
1117+00.00	219.0	1117+55.50	178.7	RT				67.0					4						

STORM SEWER

① Diameter or equivalent diameter

* Bid Item

** For SW-545

INTAKES AND UTILITY ACESSES						PIPES														
						Design Length, Slope, and Flowlines are calculated from inside wall to inside wall along CL of pipe. An additional 2 ft length is added to each side of the Design Length to account for estimated length to center of structures.														
No.	Location Station and Offset	*Type or Standard Road Plan	Form Grade	Bottom Well	Extension Length**	Notes	Line Number	Intake/Utility Access No.		Class 'D'	Pipe Size	Bid* Length	Design Length	Slope %	Connected Pipe Joint (DR-121) Type	Flow Lines			Pipe Profile Sheet No.	Notes
			Elev.	Elev.	FT			From	To		IN	FT	FT			Inlet Elevation	Outlet Elevation	Other Elevation		
20	Ramp B 2549+00 - 218.28' LT	SW-401	741.1	735.44			P-10	Inlet	20		18	92	90.0	1.06		737.52	736.57			Trenchless (1)
							P-20	20	Outlet		18	122	120.0	2.37		736.37	735.11			(1) Jack from 2549+00-216.55' Lt to 2549+00-126.55' Lt

DRAINAGE STRUCTURE BY ROAD CONTRACTOR

Length of unclassified pipe calculated is based on using Reinforced Concrete Pipe.

- * Not a bid item
- ① Diameter or equivalent diameter
- ② UNCL = Unclassified Pipe CMP = Corrugated Metal Pipe RCP = Reinforced Concrete Pipe LCP = Arch or Elliptical Low Clearance Pipe SARC = Steel Arch Pipe
- ③ Backfill according to DR-101

Drainage Area ACRE	Location	Type	Size ① IN	Kind Of Pipe ②	Length New Const. LF	Bedding Class	Design Cover (H)		Apron No.		Apron Guard* (DR-213) No.	Elbow* (DR-141) No.	Diaphragm* (DR-501) No.	Tee Section* (DR-142) No.	"D" Section* (DR-141) No.	Reducer*	Type 'C' Connections* (DR-122)		Connected Pipe Joint* (DR-121) Type	4" Perforated Subdrain*	Flow Line Elevations				Dimensions Lin. Ft.				Skew Ahead Degrees		Dike			Class 20 CY	Flowable Mortar CY	Floodable* Backfill (A) CY	Porous* Backfill (B) CY	Flooded Backfill (A+B) CY	Remarks			
							FT	FT	IN	OUT							Type	No.			Lt.	Rt.	Other	Other	Total		Extensions		Lt.	Rt.	Lt.	Rt.	Rt.							Location Station	Top Elevation	Type
Ramps																																										
IrelandRampA																																										
63F-R	1572+83.0 Lt	DR-621	66	RCP	46	B	7.0	0.17		1							C-2	1	Type 3		719.55		719.55																	(18)		
	1572+83.0 Rt	DR-621	66	RCP	40	B	9.0	0.17		1							C-2	1	Type 3				730.30		729.76															(19)		
18F-R	1575+74.00	DR-601	42	RCP	126	B	11.0	0.25		1	1								Type 3		726.40		735.74		72.7	69.0														(20)		
I-380 Ramp C																																										
5 R-H	3539+00.00	DR-641	24	RCP	80	B	7.0	0.17		1							C-3	1	Type 3				713.09																	(17)		
	3539+00.00	DR-641	24	CMP	52	B	7.0	0.17		1											701.76				80.7		59.6															
Remarks:																																										
(17) A=80 B=32 C=2 E=18 L=3.5. two 15 degree CMP elbows																																										
(18) Remove Existing Headwalls to Face of Parapet. Ditch Outlet.																																										
(19) Remove Existing Headwalls to Face of Parapet																																										
(20) Jack 92' from 30.79' LT 729.16 to 61.01' RT 735.21																																										
IA Interstate RR																																										
	51196+71.97	DR-601	60	Steel	54	B	6.5															673.20		672.90		29.0	25.0												Trenchless			
	51201+82.28	DR-601	72	Steel	66	B	6.5															672.60		672.00		25.0	41.0												Trenchless			

103-5
10-15-13

SETTLEMENT PLATES

Refer to Standard Road Plan EW-212

No.	Location		Remarks
	Station	Offset	
1	4559+50	Rt. 15	Ramp D over Clear Creek, West Abutment
2	4562+50	Lt. 20	Ramp D over Clear Creek, East Abutment
3	6559+50	Rt. 13	Ramp F over Clear Creek, West Abutment
4	6562+40	Lt. 45	Ramp F over Clear Creek, East Abutment
5	4545+50	Rt. 20	Ramp D Embankment
6	2553+00	Lt. 15	Ramp B Embankment
7	690+00	Rt. 115	I-80 over US6 & RR, W. Abutment
8	698+00	Rt. 100	I-80 over US6 & RR, E. Abutment

103-6
10-17-17

EMBANKMENT WITH MOISTURE CONTROL

Moisture Control is required for all Class 10 fill placed in all locations and depths. Stability berms placed outside the normal foreslope template and topsoil will not require Moisture Control.

Staged Construction-1

Staged Construction

Road Identification	Location			Stage Number	Stage Height	Estimated Time In-Place Prior to Next Stage	Remarks
	Dir. of Traffic	Begin Station	End Station				
				feet	feet	days	
I-380	NB	1193+50	1198+00	1	10.0	21	Wait 21 days before placing Stage 2
				2	10.0	21	Wait 21 days before placing Stage 3
				3	To Grade	NA	

Surcharge-1

Embankment Surcharge

Road Identification	Location			Thickness	Quantity	Estimated Time In-Place	Remarks
	Dir. of Traffic	Begin Station	End Station				
				feet	cubic yards	days	
Ramp B	NA	2552+42.00	2557+95.82	4.0	3685.0	60	
Ramp D	NA	4545+00.00	4547+50.00	4.0	1006.0	250	

104-5C
10-17-17

LIST OF SUBDRAIN WORK

Possible Standards: DR-121, DR-201, DR-203, DR-301, DR-302, DR-303, DR-305 and DR-306. Possible Detail: 500-10.

* Not a bid item

No.	Location		Pipe			Aprons		Outlets			Connected Pipe Joints*		Trench Drain	Granular Material	Porous Backfill*	Class "A" Crushed Stone*	Remarks
	Station to Station	Type of Installation	Concrete, C.M.P., or Plastic	Dia.	Length	DR-201	DR-203	500-10	DR-305		DR-306	DR-121					
						No.	No.	No.	Type	No.	No.	Type	No.	LF	Blanket CY	CY	
1	1118+32	1119+02	DR-301, DR-302, DR-303	IN	LF												1-Foot Granular Material for Working Blanket
2	1118+93	1119+74															1-Foot Granular Material for Working Blanket

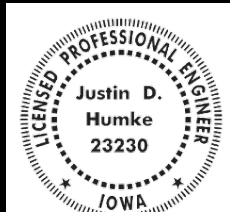
103-7
08-01-08

SHRINKAGE DATA

Material	%	Remarks
Topsoil	40%	Shrinkage
Unsui table Type B	35%	Shrinkage
Unsui table Type C	35%	Shrinkage
Class 10	30%	Shrinkage
Select Clay	20%	Shrinkage
Boulders		150 Cubic Yards (Estimate)

SPECIAL ATTENTION (SLIVER FILL)

Special attention should be given to Article 2107.03.C, of the current Standard Specification Series, on this project.



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Justin Humke 5/3/2019
Signature Date

Justin Humke
Printed or Typed Name

My license renewal date is December 31, 20 19

Pages or sheets covered by this seal: CS.1 - CS.4, 0.1 - 0.49

TOPSOIL STRIPPING AND PLACEMENT

Road Identification	Location			Topsoil Stripping	Topsoil Placement	Remarks
	Dir. of Traffic	Begin Station	End Station	Thickness	Thickness	
				IN	IN	
ML 80	East/West	557+90.05	596+50.00	6.0	8.0	
ML 80	East/West	596+50.00	601+50.00	18.0	8.0	
ML 80	East/West	601+50.00	617+00.00	6.0	8.0	
ML 80	East/West	617+00.00	618+50.00	18.0	8.0	
ML 80	East/West	618+50.00	631+00.00	12.0	8.0	
ML 80	East/West	631+00.00	664+50.00	6.0	8.0	
ML 80	East/West	664+50.00	669+00.00	12.0	8.0	
ML 80	East/West	669+00.00	671+00.00	6.0	8.0	
ML 80	East/West	671+00.00	678+00.00	12.0	8.0	
ML 80	East/West	678+00.00	687+00.00	6.0	8.0	
ML 80	East/West	687+00.00	691+00.00	12.0	8.0	
ML 80	East/West	691+00.00	700+50.00	6.0	8.0	
ML 380	North/South	1089+20.00	1096+50.00	6.0	8.0	
ML 380	North/South	1096+50.00	1098+00.00	18.0	8.0	
ML 380	North/South	1098+00.00	1103+50.00	6.0	8.0	
ML 380	North/South	1103+50.00	1106+00.00	12.0	8.0	
ML 380	North/South	1106+00.00	1110+00.00	6.0	8.0	
ML 380	North/South	1110+00.00	1119+00.00	12.0	8.0	
ML 380	North/South	1119+00.00	1132+50.00	6.0	8.0	
ML 380	North/South	1132+50.00	1137+50.00	12.0	8.0	
ML 380	North/South	1137+50.00	1175+70.00	6.0	8.0	
ML 380	North/South	1175+70.00	1187+00.00	12.0	8.0	
ML 380	North/South	1187+00.00	1191+00.00	24.0	8.0	
ML 380	North/South	1191+00.00	1192+50.00	12.0	8.0	
ML 380	North/South	1192+50.00	1209+50.00	6.0	8.0	
ML 380	North/South	1209+50.00	1212+00.00	12.0	8.0	
ML 380	North/South	1212+00.00	1217+90.00	6.0	8.0	
Ramp A	West	1558+20.51	1566+00.00	12.0	8.0	
Ramp B	East	2520+73.00	2524+00.00	12.0	8.0	
Ramp B	South	2552+45.00	2554+00.00	12.0	8.0	
Ramp B	South	2554+00.00	2562+13.49	6.0	8.0	
Ramp C	East/North	3525+38.55	3537+50.00	8.0	8.0	
Ramp C	East/North	3537+50.00	3543+35.08	12.0	8.0	
Ramp D	East/South	4545+00.00	4549+50.00	8.0	8.0	
Ramp D	East/South	4549+50.00	4562+25.00	12.0	8.0	
Ramp E	East/South	5523+28.22	5536+00.00	10.0	8.0	
Ramp E	East/South	5574+70.59	5578+00.00	12.0	8.0	
Ramp E	East/South	5578+00.00	5583+94.48	6.0	8.0	
Ramp F	East	6556+50.00	6568+79.78	12.0	8.0	
Ramp H	North	8574+00.00	8576+24.66	12.0	8.0	
Ireland A	West	1566+43.79	1572+79.70	6.0	8.0	

WICK DRAIN OR SAND DRAIN FIELDS

Possible Standards: DR-301 and DR-305, Detail 500-10, and Tabulation 104-5C.

* Not a bid item.

Location	Sand Drains		Wick Drains		Horizontal Strip Drains			Granular Material for Blanket and Subdrain	Drain DR-301 Type 2	Porous Backfill *	Subdrain Outlets			Remarks	
	Station to Station	Number of Drains*	Total Length	Number of Drains*	Total Length	Longitudinal	Transverse				Total Length	500-10	DR-305		
												NO.	TYPE		NO.
Ramp B 2552+45.00 Ramp B 2555+00.00		LF	1885	131950.0	LF	LF	LF	CY	LF	CY	NO.	TYPE	NO.	Drainage Blanket should be Specification Section 4188, Gradation No. 3	
														Note 1: Limits of Drainage Blanket extend 4 feet beyond the wick drain installation area. See Q. 49 for more details.	
														Note 2: Length of Drainage Blanket drains may vary at the time of construction, use 4" diameter pipe. See sheet Q. 49 for proposed limits and outlet locations	

SURVEY SYMBOLS

- TDC Tree Deciduous
- D Centerline Draw or Stream (Down)
- EG Edge of Gravel Road
- Linn County REC
- BNK Stream Bank
- EP Edge of Paved Roads (ML or SR)
- EW Edge of Water
- ENU Edge Unpaved Entrance & Parking
- TEV Evergreen Tree
- HDG Hedge Row
- SNP Unpaved Shoulder
- WM Wind Mill
- SI Sign
- TV Satellite TV Dish
- IN Storm Sewer Intake
- MH Utility Access (Manhole)
- LUM Luminaire
- LP Tank
- GP Guard Post (Less Than 4 Posts)
- SCR Section Corner
- DU Centerline Draw or Stream (Up)
- OUT Tile Outlet
- FW Wire Fence
- ROW Right of Way Rail
- DIK Centerline of Dike or Dam
- RIP Rip-Rap
- GDL Guard Rail Steel
- PRISER Power Riser Pole
- INB Storm Sewer Beehive Intake
- LC Lot Corner
- ITC Midwest (Formerly Alliant Energy)
- SWP Swamp or Marsh
- ENT Centerline BL of Entrance
- FHD Fire Hydrants
- RET Retaining Walls
- STP Stump
- WV Water Valve
- FCL Chain Link and Security Fence
- WEL Well
- TPA Telephone Pole Co. 1
- FWD Wood Fence
- RR Centerline of Railroad Tracks
- MidAmerican Energy
- BM Bench Mark
- C Centerline BL of Road (ML or SR)
- BIN Grain Bin
- SI Sign
- TFR Tree Fruit
- SHR Shrub
- MM Mile Marker Post
- GP Guard Post (Less Than 4 Posts)
- FLG Flag Poles
- EB Electrical Box
- TPD Telephone Pedestal
- WHD Water Hydrant
- SL Speed Limit Sign
- CIS Cistern
- SEP Septic Tank
- Central Iowa Power Coop (CIPCO)
- TP Telephone Pole
- TVP TV Pedestal Symbol
- WV Water Valve
- WH Water Hydrant
- GUY Guy Wire
- EB Electrical Box
- UB Utility Box
- LUM Luminaire
- INT Storm Sewer Intake
- HT Highline Tower
- INTBH Intake (Beehive)
- INTBH Storm Sewer Intake (Beehive)
- MH Electrical Manhole
- MH Storm Sewer Manhole
- MH Sanitary Sewer Manhole
- MH Fiber Optic Manhole
- MH Manhole

UTILITY LEGEND

- Linn County REC
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- City of Tiffin
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bcarhoff@hart-frederick.com

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.	Description
Green	(2)	Existing Topographic Features and Labels
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)	Existing Utilities
SHADING		
Design Color No.	Description	
Yellow	(4)	Highlight for Critical Notes or Features
Red	(3)	Delineates Restricted Areas
Lavender	(9)	Temporary Pavement Shading
Gray, Light	(48)	Proposed Pavement Shading
Gray, Med	(80)	Proposed Granular Shading
Gray, Dark	(112)	Proposed Grade and Pave Shading "In conjunction with a paving project"
Brown, Light	(236)	Grading Shading
Tan	(8)	Proposed Sidewalk Shading
Blue, Light	(230)	Proposed Sidewalk Landing Shading
Pink	(11)	Proposed Sidewalk Ramp Shading

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.	Description
Green	(2)	Existing Ground Line Profile
Blue	(1)	Proposed Profile and Annotation
Magenta	(5)	Existing Utilities
Blue, Light	(230)	Proposed Ditch Grades, Left
Black	(0)	Proposed Ditch Grades, Median
Rust	(14)	Proposed Ditch Grades, Right

Reference Point

Station Survey Line

Section Corner

Ground Line Intercept

Saw Cut

Guardrail

Trench Drain

HighTension Cable Guardrail

Sheet Pile

Pavement Removal Clearing & Grubbing Area

RIGHT-OF-WAY LEGEND

- Proposed Right-of-Way
- Existing Right of Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Easement (Temporary)
- Easement
- Access Control
- Property Line

Conduit Run ID	Approximate Station and Offset Range		Sheet	Note
	From	To		
27C	593+30, 125' RT	594+10, RT 125'	D.4	Existing DOT-ICN Fiber Optic - Protect in Place (27C)
29D	-	-	D.6	Existing DOT-ICN Fiber Optic - Coordinate Conduit Lowering Required. See N Sheets (29D)
30B	-	-	D.10	Existing DOT-ICN Fiber Optic - Coordinate Conduit Lowering Required. See N Sheets (30B)
24B	1089+81, 185' LT	1090+83, 187' LT	E.1	Existing DOT-ICN Fiber Optic - Protect in Place (24B)
23C	1099+50, 175' LT	1100+50, 175' LT	E.1	Existing DOT-ICN Fiber Optic - Protect in Place (23C)
22C	1118+00, 187' LT	1118+80, 163' LT	E.3	Existing DOT-ICN Fiber Optic - Protect in Place (22C)
22A	1129+00, 208' LT	1130+00, 218' LT	E.3	Existing DOT-ICN Fiber Optic - Protect in Place (22A)
21G	1133+00, 258' LT	1134+00, 211' LT	E.3	Existing DOT-ICN Fiber Optic - Protect in Place (21G)
21C	1135+12, 75' LT	1135+22, 153' LT	E.5	Existing DOT-ICN Fiber Optic - Protect in Place (21C)
20C	1143+90, 122' LT	1144+90, 168' LT	E.5	Existing DOT-ICN Fiber Optic - Protect in Place (20C)
20D	1146+25, 194' LT	1147+05, 204' LT	E.5	Existing DOT-ICN Fiber Optic - Protect in Place (20D)
15B	1184+00, 354' LT	1185+55, 312' LT	E.7	Existing DOT-ICN Fiber Optic - Protect in Place (15B)

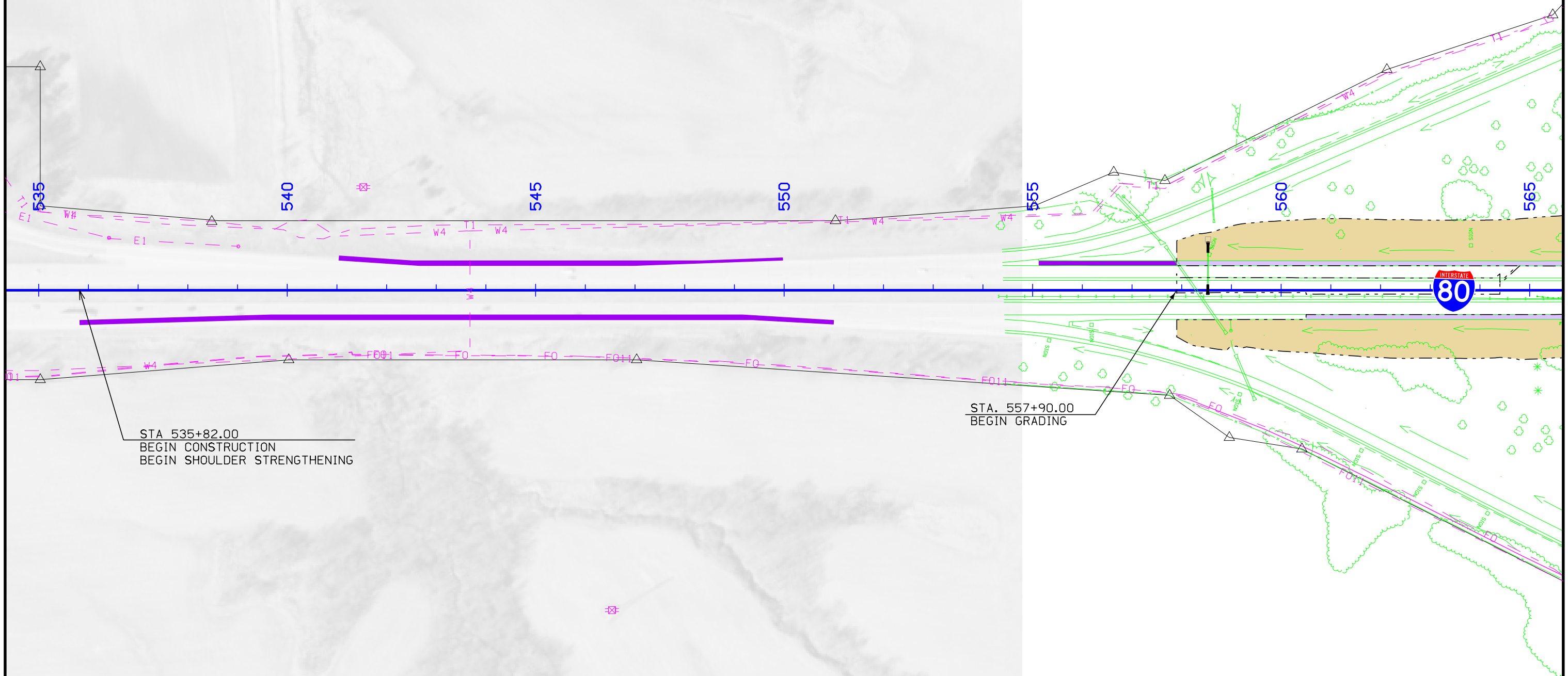
PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES D, E, F, & K)

CLEAR CREEK TWP.
T-80N R-7W
SEC. 32

CLEAR CREEK TWP.
T-80N R-7W
SEC. 33

Sta. 558+52.3, 10.4' Lt.
24" x 66.3' Conc. Pipe
DA = Median Only
Extend LT
with 24" x 16' RCP
F.L. = Lt. 734.39
Rt. U.A.C.

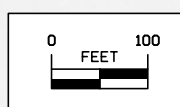


STA 535+82.00
BEGIN CONSTRUCTION
BEGIN SHOULDER STRENGTHENING

STA. 557+90.00
BEGIN GRADING

Sta. 558+29.1
Skew 35° Rt. Ah.
48" x 199.2' Conc. Pipe
DA = 29 Ac. - F-R
Extend RT
with 48" x 12' RCP
F.L. = Lt. U.A.C.
Rt. 734.61

I-80



Sta. 569+42.4
Skew 30° Lt. Ah.
48" x 173.9' Conc. Pipe
DA = Part of 58 Ac. - F-R
Fill & Abandon

Sta. 569+62.9,
Skew 30° Lt. Ah.
48" x 174.9' Conc. Pipe
DA = Part of 58 Ac. - F-R
Fill & Abandon

Sta. 578+02.1, 10.7 Rt.
24" x 56.1' Conc. Pipe
DA = Median Only
Extend RT
with 24" x 4' RCP
Lt. U.A.C.
F.L. = Rt. 740.68
Other

CLEAR CREEK TWP.
T-80N R-7W
SEC. 33

Sta. 589+26.8
15" x 55.4' C.M.P.
DA = Median Only
U.A.C.

Existing Overhead Utility
- Protect in Place
Approx. Sta. 568+15

Existing Buried Utilities
- Protect in Place
Approx. Sta. 567+85 to 568+50

Existing Overhead Utility
- Protect in Place
Approx. Sta. 593+00

Existing DOT-ICN Fiber Optic - Protect
in Place (Conduit Run 27C)
Approx. Sta. 593+30, 125' RT
to 594+10, 125' RT

Curve Data
Δ = 4° 26' 53.84" (LT)
T = 333.79
L = 667.24
R = 8,594.37
E = 6.48

Sta. 589+84.5
Skew 30° Rt. Ah.
42" x 163.67' Conc. Pipe
DA = 19 Ac. - R

Extend LT
with 42" RCP
Lt. 736.55
F.L. = Rt. U.A.C.
Other
Fill & Abandon RT

Sta. 586+93.1
Skew 30° Rt. Ah.
24" x 207.2' Conc. Pipe
DA = 5 Ac. - R
Fill & Abandon

Sta. 582+20.0
Skew 15° Rt. Ah.
48" x 213.3' Conc. Pipe
DA = 22 Ac. - R

Extend LT
with 48" x 46'
Lt. 731.46
F.L. = Rt. U.A.C.

Sta. 586+63.57
Install 24" x 306' RCP
Skew = 35° Rt. Ahd.
F.L. = Lt. 732.20
Rt. 740.20
(216' Trenchless)

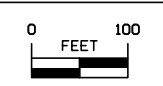
Sta. 590+08.00
Install 42" x 236' RCP
Skew = 31° Rt. Ahd.
F.L. = Lt. 736.81
Rt. 737.90
(194' Trenchless)

Sta. 569+90.00
Install 48" x 214' RCP
Skew = 30° Lt. Ahd.
F.L. = Lt. 731.80
Rt. 737.00
(Trenchless)

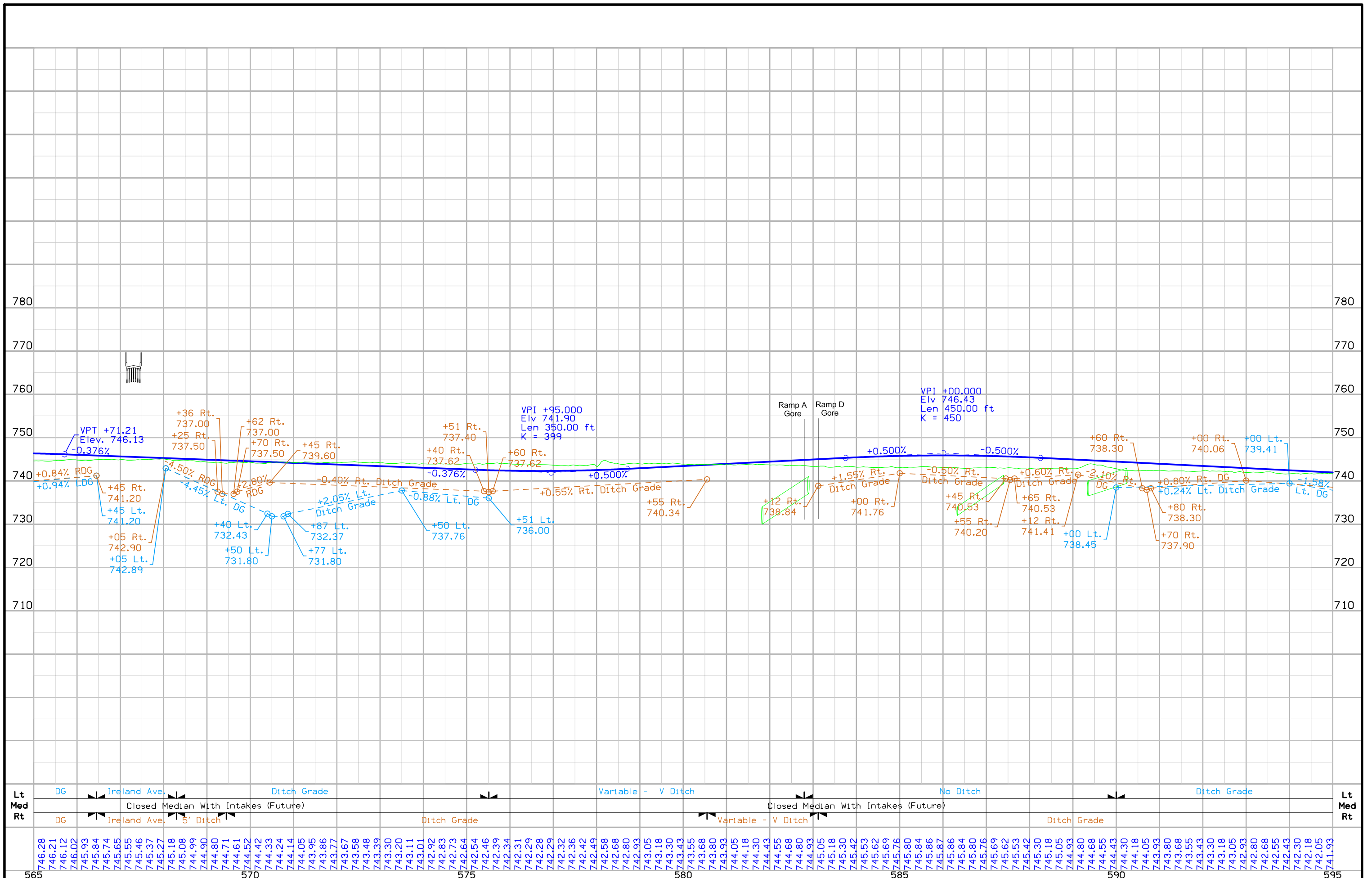
Sta. 570+10.00
Install 48" x 214' RCP
Skew = 30° Lt. Ahd.
F.L. = Lt. 731.80
Rt. 737.00
(Trenchless)

Sta. 575+51.26
Install 36" x 168' RCP
F.L. = Lt. 736.03
Rt. 737.17
(Trenchless)

Sta. 576+02.1,
36" x 150.7' Conc. Pipe
DA = 17 Ac. - F-R
Fill & Abandon



I-80



Sta. 606+27.0
 Skew 45° Rt. Ah.
 5' x 5' X 241.1' R.C.B.
 DA = 72 Ac. - R

Extend RT
 with 66" x 68' RCP
 Lt. 727.80
 F.L. = Rt. N/A
 Other 727.80

Extend LT
 with 102"x62"x44' RF-41 arch pipe
 Lt. N/A
 F.L. = Rt. 731.68
 Other 731.68

Sta. 609+03.0, 11.6' Lt.
 24" X 62.3' Conc. Pipe
 DA = Median Only

Extend LT
 with 24" x 40' RCP
 Lt. 740.32
 F.L. = Rt. 740.32
 Other

CLEAR CREEK TWP.
 T-80N R-7W
 SEC. 34

Sta. 618+02.2
 Skew 30° Rt. Ah.
 30" x 161.1' Conc. Pipe
 DA = 7 Ac. - R

Extend LT
 with 24" x 10' RCP
 Lt. 757.41
 F.L. = Rt. 757.67
 Other

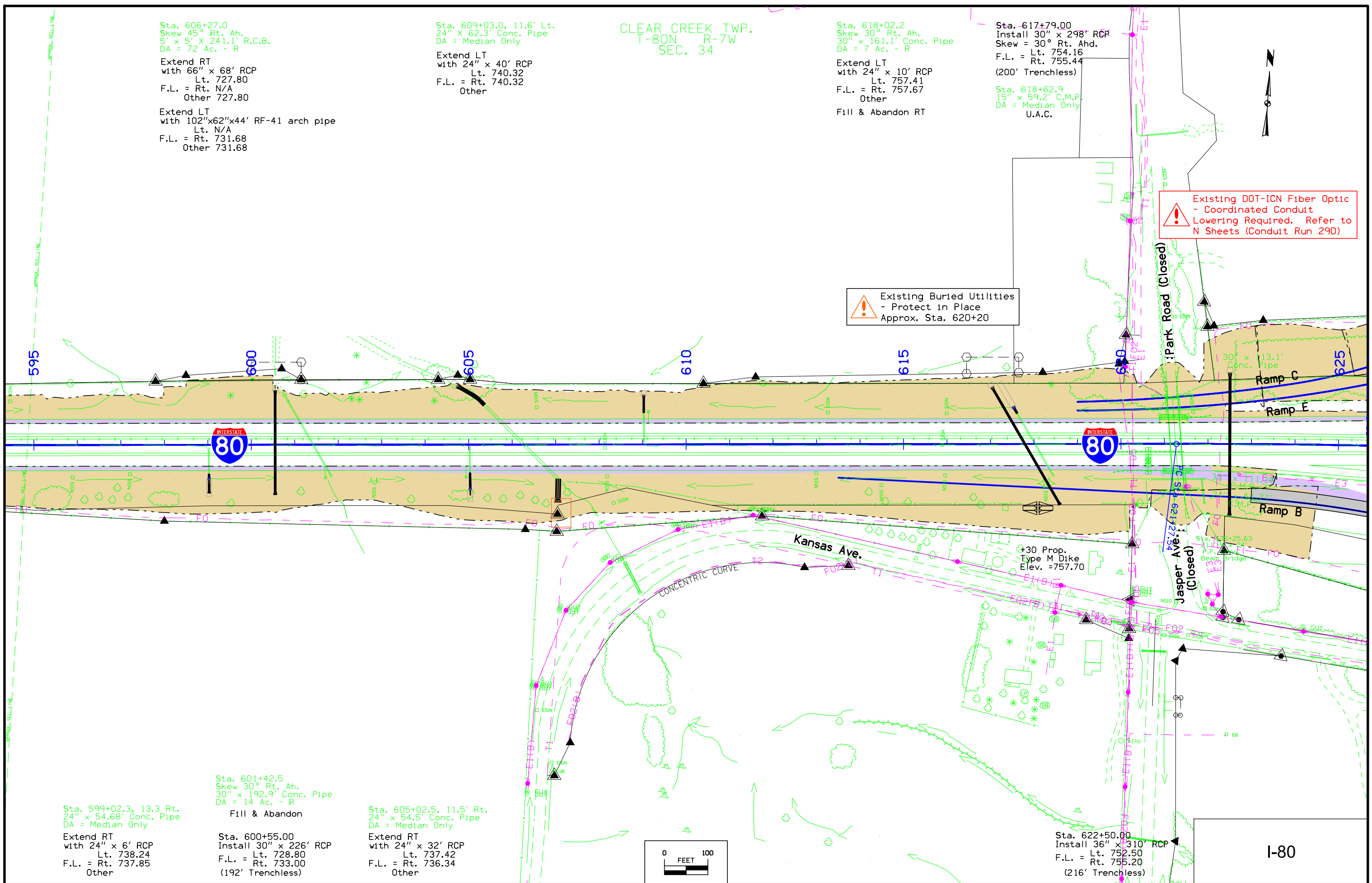
Fill & Abandon RT

Sta. 617+79.00
 Install 30" x 298' RCP
 Skew = 30° Rt. Ahd.
 F.L. = Lt. 754.16
 Rt. 755.44
 (200' Trenchless)

Sta. 618+62.9
 15" x 59.2' C.M.P.
 DA = Median Only
 U.A.C.

Existing DOT-ICN Fiber Optic
 - Coordinated Conduit
 Lowering Required. Refer to
 N Sheets (Conduit Run 29D)

Existing Buried Utilities
 - Protect in Place
 Approx. Sta. 620+20



Sta. 599+02.3, 13.3 Rt.
 24" x 54.68' Conc. Pipe
 DA = Median Only

Extend RT
 with 24" x 6' RCP
 Lt. 738.24
 F.L. = Rt. 737.85
 Other

Sta. 601+42.5
 Skew 30° Rt. Ah.
 30" x 192.9' Conc. Pipe
 DA = Median Only

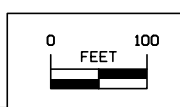
Fill & Abandon

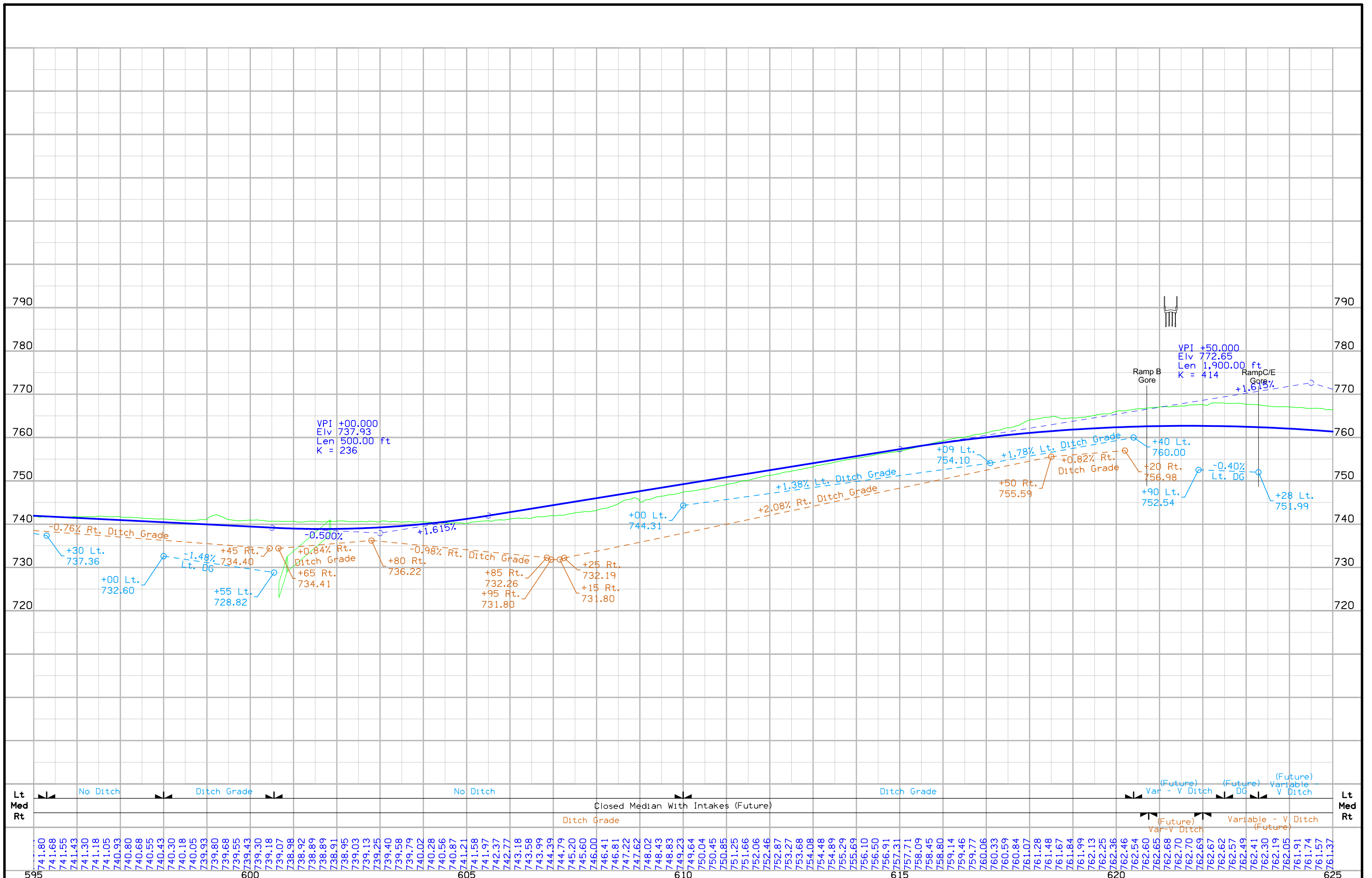
Sta. 600+55.00
 Install 30" x 226' RCP
 Lt. 728.80
 F.L. = Rt. 733.00
 (192' Trenchless)

Sta. 605+02.5, 11.5' Rt.
 24" x 54.5' Conc. Pipe
 DA = Median Only

Extend RT
 with 24" x 32' RCP
 Lt. 737.42
 F.L. = Rt. 736.34
 Other

Sta. 622+50.00
 Install 36" x 310' RCP
 F.L. = Lt. 752.50
 Rt. 755.20
 (216' Trenchless)





CLEAR CREEK TWP.
T-80N R-7W
SEC. 34

CLEAR CREEK TWP.
T-80N R-7W
SEC. 35

Sta. 633+40.8
Skew 15° Lt. Ah.
3' x 3' x 543.7' R.C.B.
DA = 7 Ac. - F-R
U.A.C.

Sta. 635+33.4
Skew 10° Lt. Ah.
24" x 150.3' Conc. Pipe
DA = 4 Ac. - F-R
Extended RT
With 24" x 24' RCP
Skew = 10°
U.A.C.

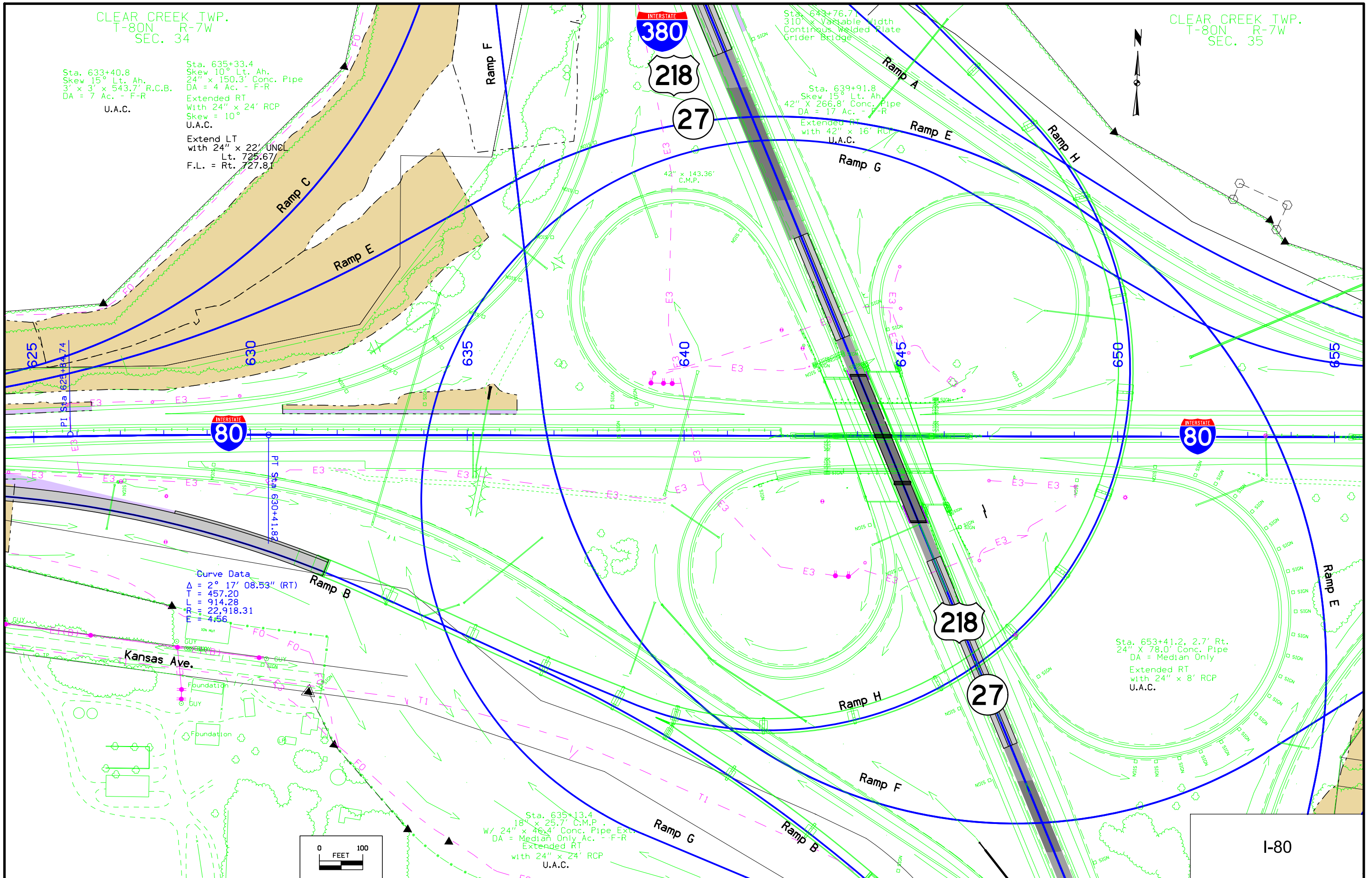
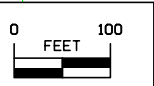
Extend LT
with 24" x 22' UNCL
Lt. 725.67'
F.L. = Rt. 727.81'

Sta. 639+91.8
Skew 15° Lt. Ah.
42" x 266.8' Conc. Pipe
DA = 17 Ac. - F-R
Extended RT
with 42" x 16' RCP
U.A.C.

Sta. 653+41.2, 2.7' Rt.
24" x 78.0' Conc. Pipe
DA = Median Only
Extended RT
with 24" x 8' RCP
U.A.C.

Sta. 635+13.4
18" x 25.7' C.M.P.
W/ 24" x 46.4' Conc. Pipe Ext.
DA = Median Only Ac. - F-R
Extended RT
with 24" x 24' RCP
U.A.C.

Curve Data
Δ = 2° 17' 08.53" (RT)
T = 457.20
L = 914.28
R = 22,918.31
E = 4.56





FILE NO.	ENGLISH	DESIGN TEAM	JOHNSON COUNTY	PROJECT NUMBER	SHEET NUMBER
		Holst \ Prindle		NHS-080-6(371)239--11-52	D.9

Sta. 658+94.5, 1.1' Rt.
24" X 77.1' Conc. Pipe
DA = Median Only
Extended RT
with 24" x 30' RCP
U.A.C.

Sta. 660+50 WB
159'-2" x 57'-3"
P.P. Conc. Beam Bridge
U.A.C.
Sta. 660+50 EB
159'-2" x 73'-2"
P.P. Conc. Beam Bridge
U.A.C.

Sign Cantilever
LT
(By Other Plan)

CLEAR CREEK TWP.
T-80N R-7W
SEC. 35

Sta. 672+00.5, 1.6' Rt.
24" X 92.2' Conc. Pipe
DA = Median Only
U.A.C.

Sta. 676+00.3, 3.3' Rt.
24" Conc. Pipe
DA = Median Only
U.A.C.

Sign Cantilever
LT
(By Other Plan)

Sta. 682+59.9
24" Conc. Pipe
DA = Median Only
U.A.C.

STA 685+00.00
BEGIN GRADE & PAVE

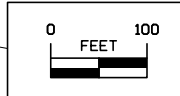
Curve Data
Δ = 1° 32' 54.91" (RT)
T = 309.74
L = 619.43
R = 22,918.31
E = 2.09

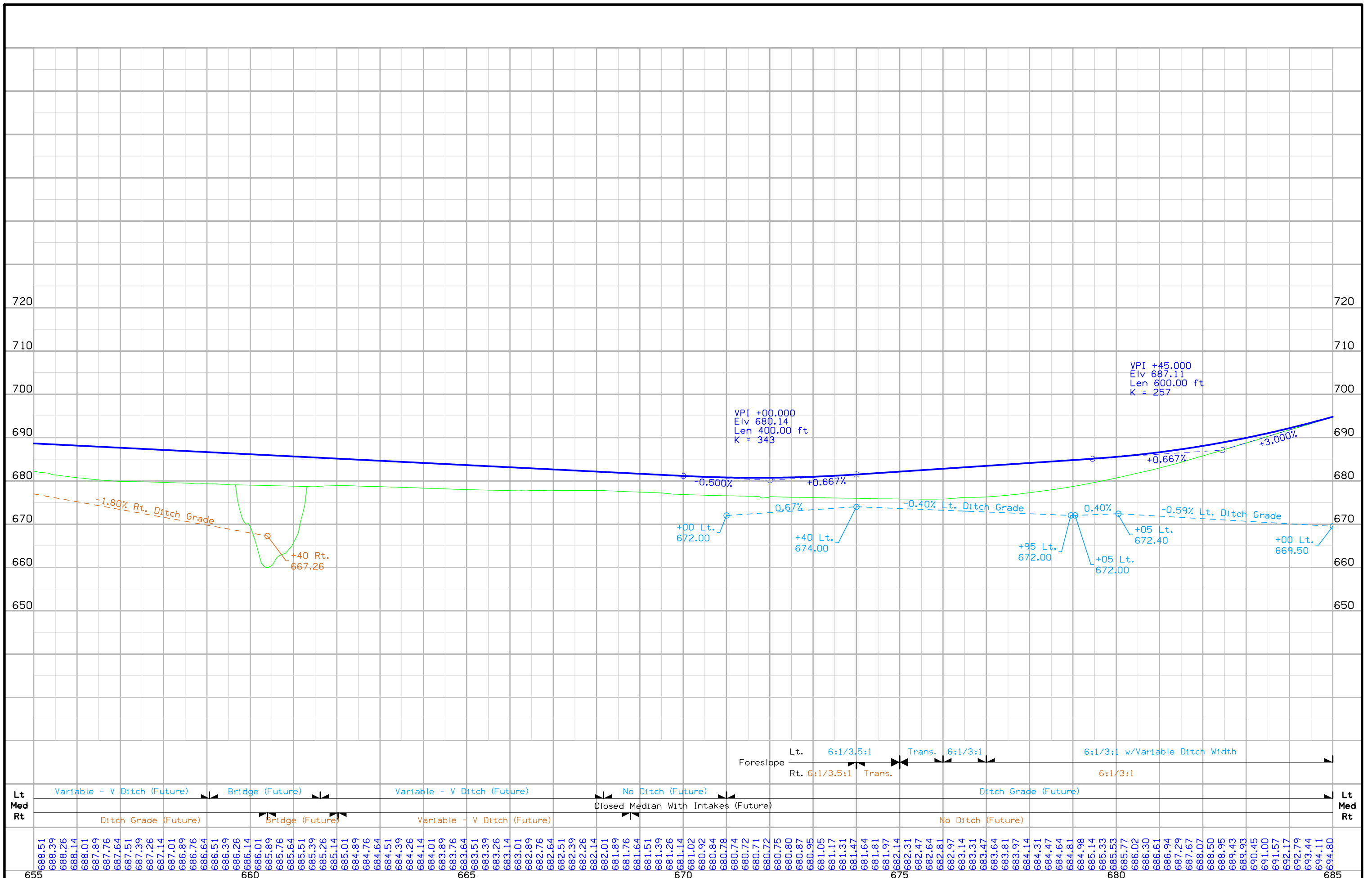
Existing Buried Utility - Protect in Place
Approx. Sta. 676+05

Existing DOT-ICN Fiber Optic
- Coordinated Conduit
Lowering Required. Refer to
N Sheets (Conduit Run 30B)

Sta. 678+99.7
4' x 4' x 152' R.C.B.
W/ 54" x 33.5' Conc. Pipe Ext. Lt.
W/ 36" x 42' Plastic Pipe Ext. Rt.
DA = 49 Ac. - R
Extend RT
with 36" x 46' UNCL
Lt. 663.48
F.L. = Rt. 663.48

I-80





FILE NO.	ENGLISH	DESIGN TEAM	JOHNSON COUNTY	PROJECT NUMBER	SHEET NUMBER
		Holst \ Prindle		NHS-080-6(371)239--11-52	D.11

CLEAR CREEK TWP.
T-80N R-7W
SEC. 35

Sta. 697+10.1, 2.4' Rt.
24" Conc. Pipe
DA = Median Only
U.A.C.

24" x 40' C.M.P.
W/ 30" x 12.6' C.M.P. Ext.
U.A.C

Sta. 706+90.5
24" Conc. Pipe
DA = Median Only
U.A.C.

Sta. 710+24.7
24" x 187.1' Conc. Pipe
DA = 1 Ac. - F-R
Extend with Storm Sewer

CLEAR CREEK TWP.
T-80N R-7W
SEC. 36

Sign Truss
Median Foundation Only
(By Other Plan)

Existing Buried Utility Envelopes - Protect in Place
Approx. Sta. 689+00 to 696+00
Refer to Bridge Plans NHS-080-6(379)239--11-52 and
NHS-080-6(361)239--11-52

STA. 690+31.73
END PCC GRADE & PAVE

STA. 696+78.20
BEGIN HMA WIDENING
BEGIN HMA OVERLAY

STA. 701+25.00
END HMA OVERLAY

Utility Relocation and/or Abandonment
Contractor to Verify Final Location and
Protect in Place.
Approx. Sta. 685+00 to 689+00

Existing Buried Utility - Protect in Place
Approx. Sta. 701+00

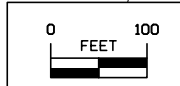
Sign Cantilever
RT
(By Other Plan)

Sta. 685+00.00
Install 36" x 336' RCP
F.L. = Lt. 669.50
Rt. 667.80
(301' Trenchless)

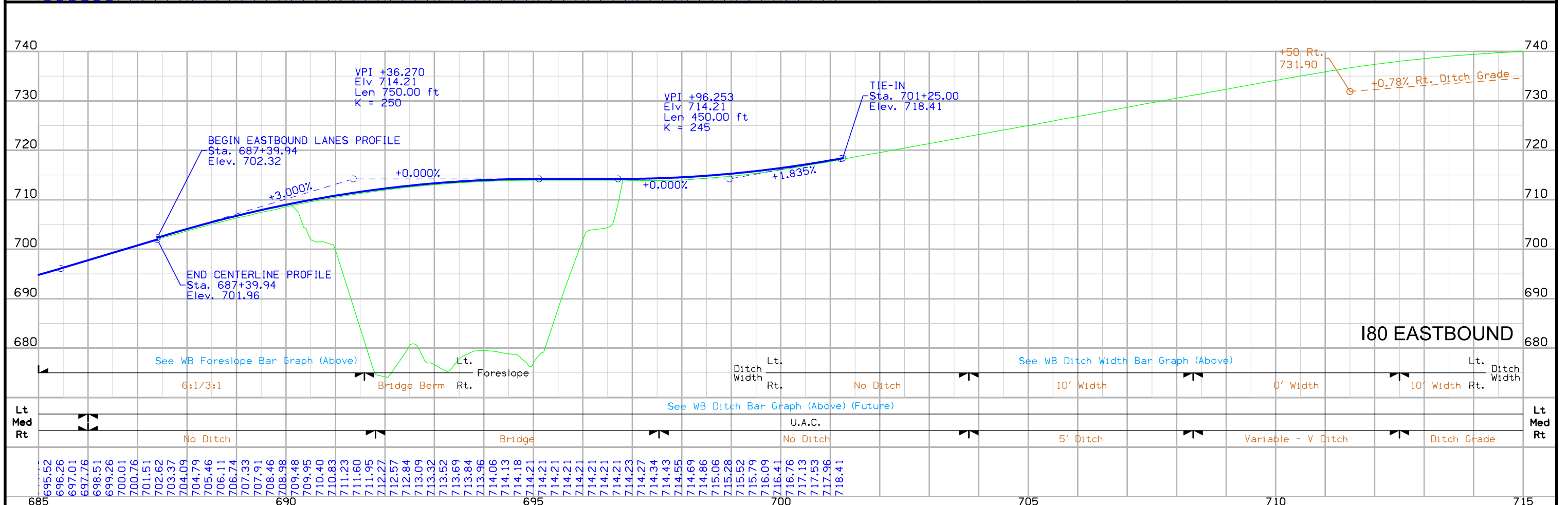
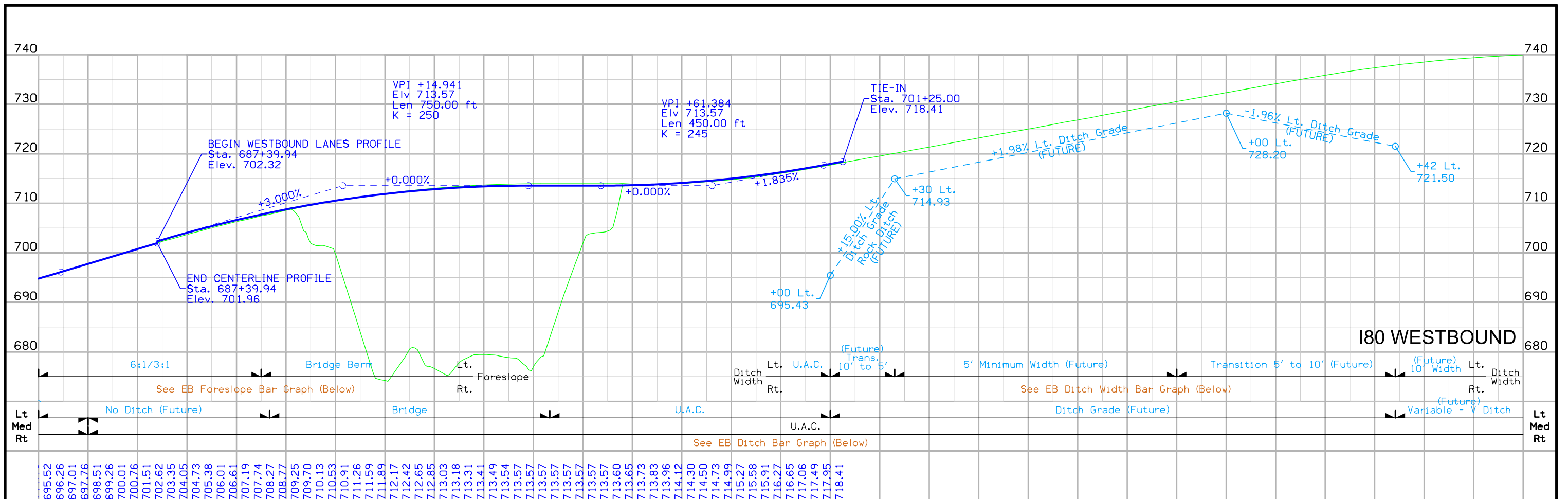
Sta. 693+00.0
562'-0" x 66'
CONTINUOUS WELDED
GRIDER BRIDGE
Sta. 689+39.7, 81.0' Lt.
24" C.M.P.
DA = Median Only
U.A.C.

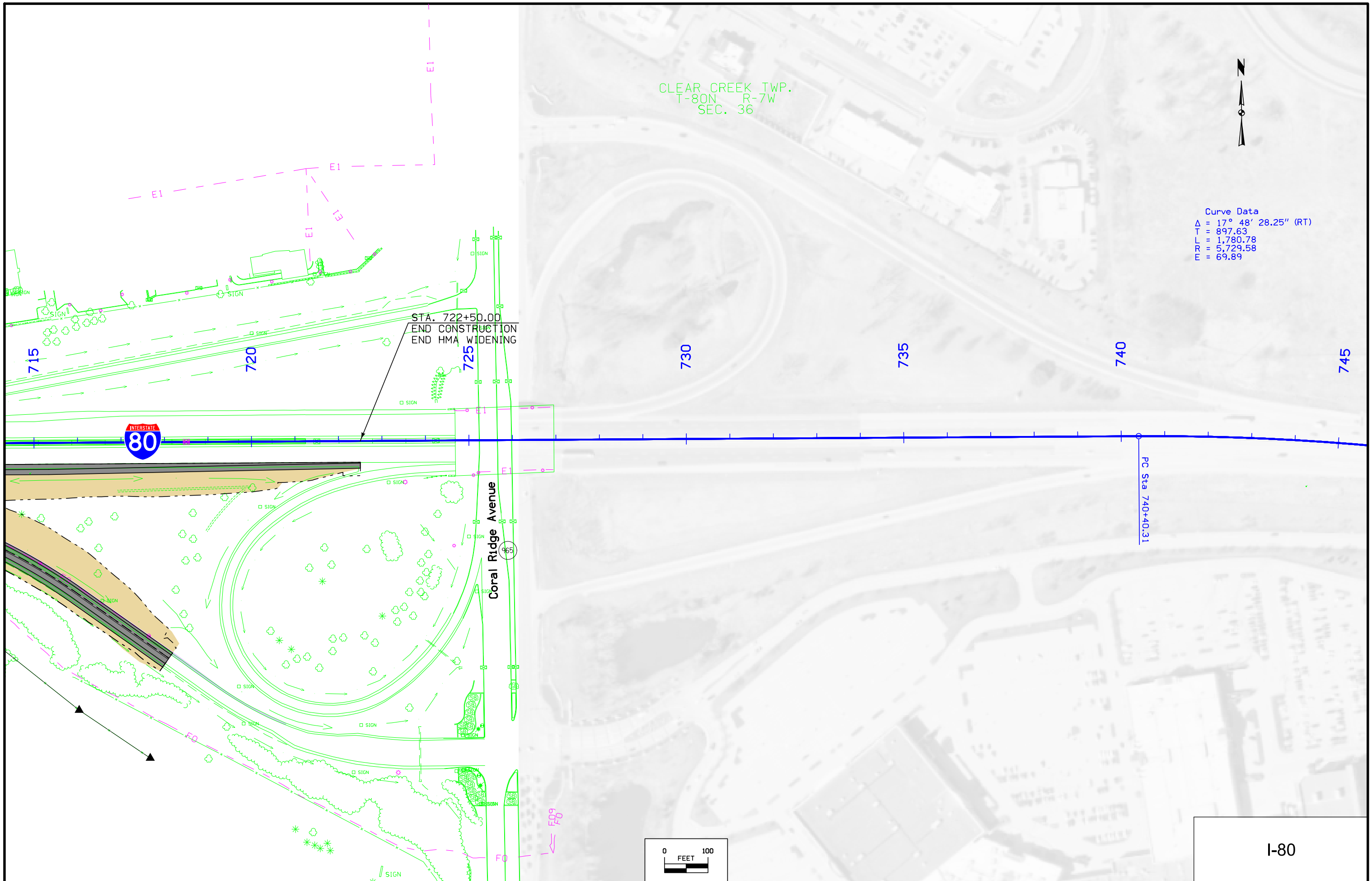
Sta. 711+27.3
Skew 30° Lt. Ah.
3' x 3' x 352' R.C.B.
W/ 42" x 52' Conc. Pipe Ext. Lt.
DA = 5 Ac. - F-R
Extend RT 3'x3'x352' RCB
with 42" x 72' RCP
Lt. U.A.C.
F.L. = Rt. 692.50
Other 692.5

Sign Cantilever
RT
(By Other Plan)

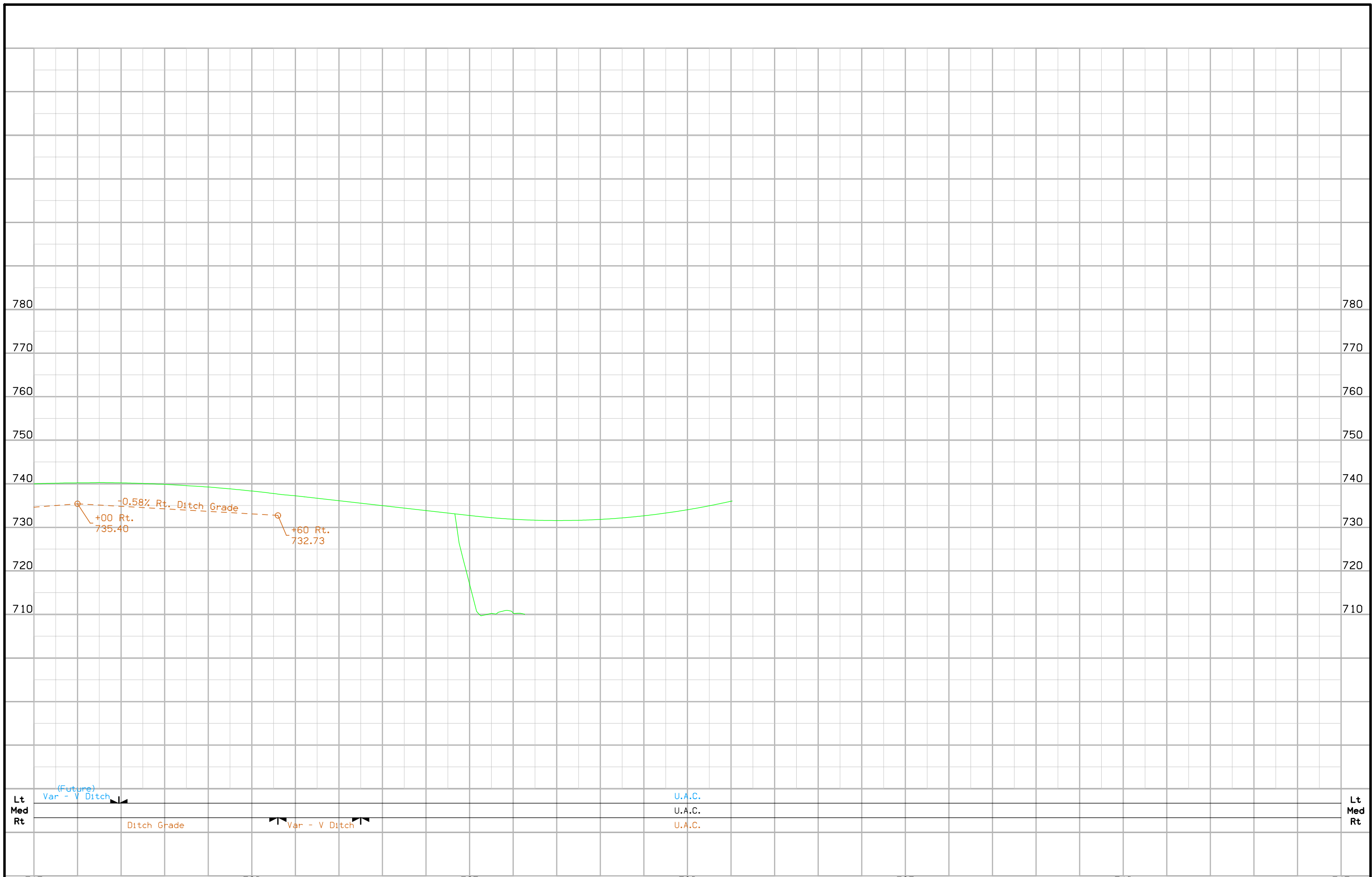


I-80





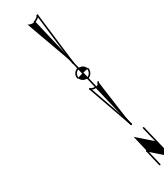
I-80



CLEAR CREEK TWP.
T-79N R-7W
SEC. 2

Sta. 1099+70.00
Install 48" x 426' RCP
F.L. = Lt. 699.90
Rt. 697.68
(372' Trenchless)

Sta. 1100+20.00
Install 24"x234' RCP
F.L. = Lt. 702.67
Rt. 724.91
(200' Trenchless)



Existing DOT-ICN Fiber Optic - Protect in Place (Conduit Run 24B)
Approx. Sta. 1089+81, 185' LT to 1090+83, 187' LT

Existing DOT-ICN Fiber Optic - Protect in Place (Conduit Run 23C)
Approx. Sta. 1099+50, 175' LT to 1100+50, 175' LT

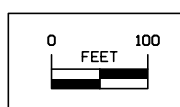
Existing High-Pressure Gas Line - Protect in Place
Approx. Sta. 1093+50

Curve Data
Δ = 23° 44' 52.81" (RT)
T = 1,204.70
L = 2,374.80
R = 5,729.58
E = 125.28

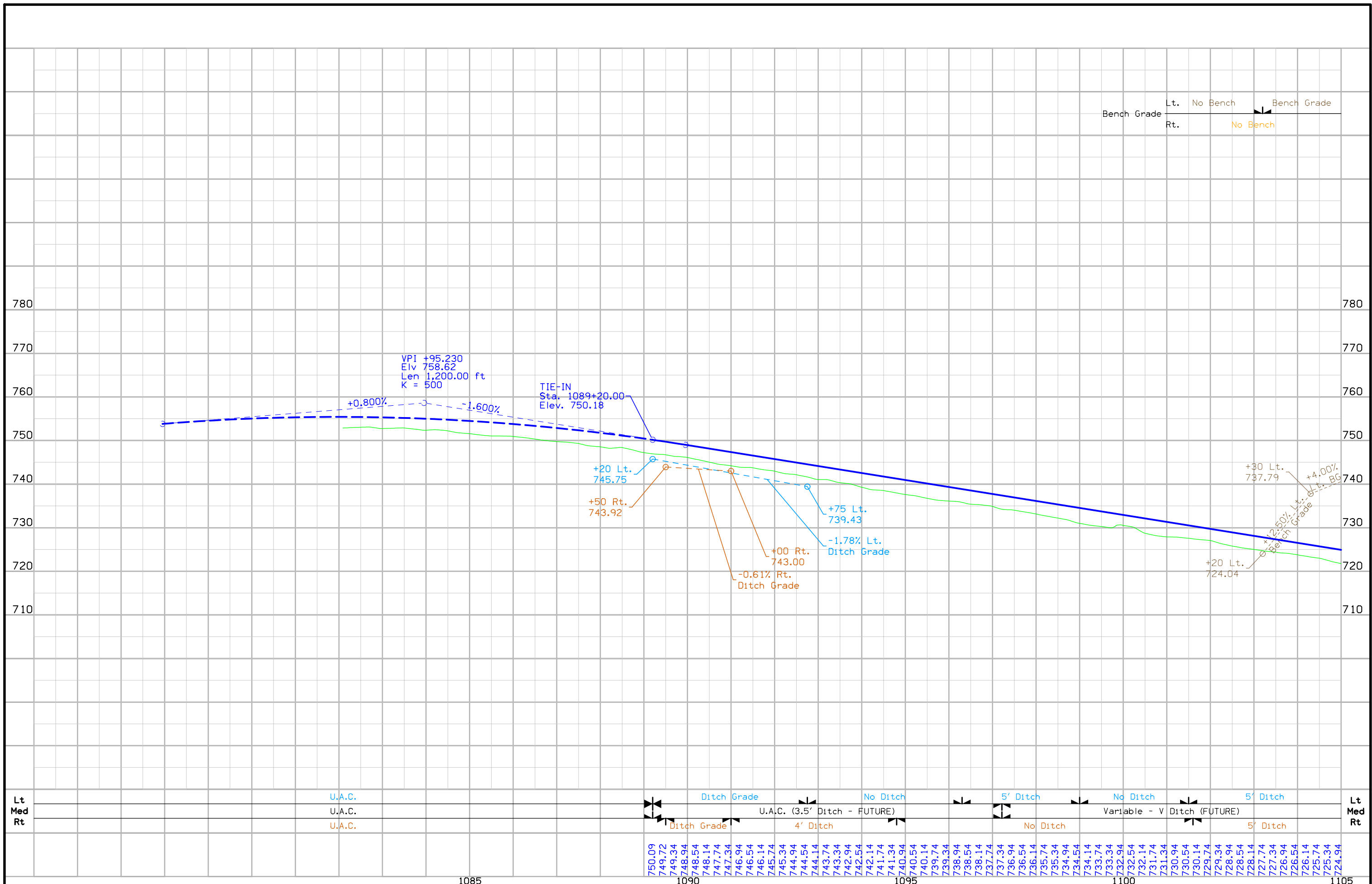
Sta. 1087+82.2
Skew 30° Rt. Ah.
30" X 451.2' Conc. Pipe
W/ 29.6' Flume Outlet
DA = 10 Ac. - R
U.A.C.

Sta. 1095+94.8
Skew 30° Rt. Ah.
3' x 3' x 346.0' R.C.B.
W/ Flume Outlet
DA = 13 Ac. - R
Sta. 1095+94.80
Build 3'x3'x46' RCB Extension RT
Skew = 30° Rt. Ahd.
F.L. = Lt. U.A.C.
Rt. 704.99
Design No. 0719
(By Other Plan)

Sta. 1099+85.3
4' x 4' x 409.0' R.C.B.
Outlet Under Water
DA = 76 Ac. - R
Fill & Abandon
Sta. 1099+85.3, 18.5' Rt.
24" x 48.5' Conc. Pipe
W/ 30" x 20.4' Plastic Pipe Ext.
DA = Median Only
Fill & Abandon



US 218



Bench Grade	Lt.	No Bench	Bench Grade
	Rt.	No Bench	

VPI +95.230
Elev 758.62
Len 1,200.00 ft
K = 500

TIE-IN
Sta. 1089+20.00
Elev. 750.18

+0.800%

-1.600%

+20 Lt.
745.75

+50 Rt.
743.92

+00 Rt.
743.00

-0.61% Rt.
Ditch Grade

+75 Lt.
739.43

-1.78% Lt.
Ditch Grade

+20 Lt.
724.04

+30 Lt.
737.79

+4.00% Lt.
Bench Grade

Lt	U.A.C.	Ditch Grade	No Ditch	5' Ditch	No Ditch	5' Ditch	Lt																																																										
Med	U.A.C.	U.A.C. (3.5' Ditch - FUTURE)	Variable - V	Ditch (FUTURE)			Med																																																										
Rt	U.A.C.	Ditch Grade	4' Ditch	No Ditch		5' Ditch	Rt																																																										
		750.09	749.72	749.34	748.94	748.54	748.14	747.74	747.34	746.94	746.54	746.14	745.74	745.34	744.94	744.54	744.14	743.74	743.34	742.94	742.54	742.14	741.74	741.34	740.94	740.54	740.14	739.74	739.34	738.94	738.54	738.14	737.74	737.34	736.94	736.54	736.14	735.74	735.34	734.94	734.54	734.14	733.74	733.34	732.94	732.54	732.14	731.74	731.34	730.94	730.54	730.14	729.74	729.34	728.94	728.54	728.14	727.74	727.34	726.94	726.54	726.14	725.74	725.34	724.94

CLEAR CREEK TWP.
T-79N R-7W
SEC. 2

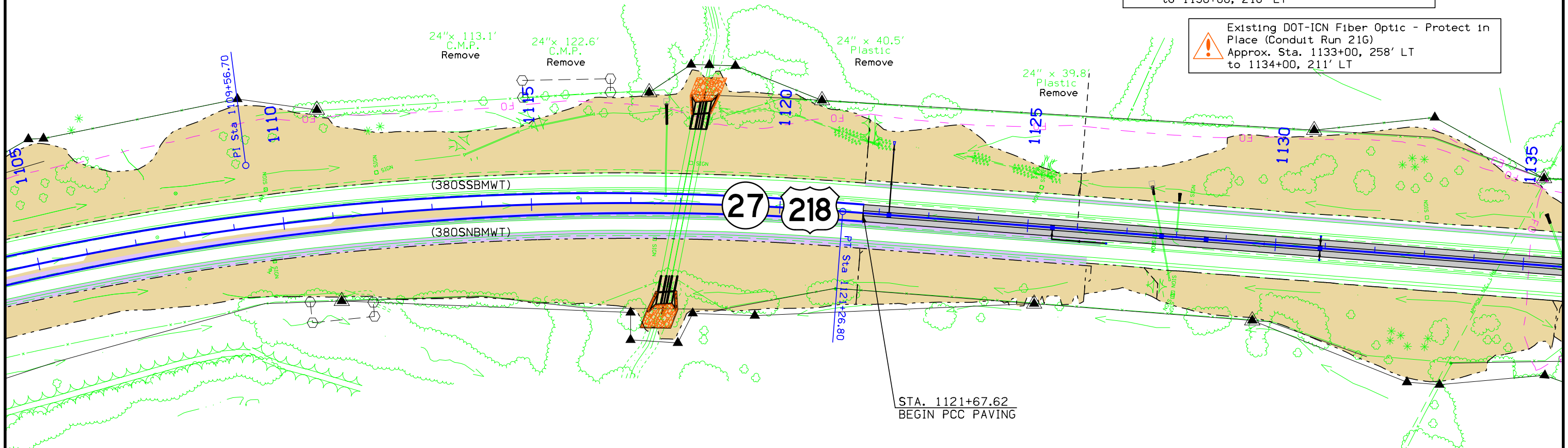
Sta. 1118+05.9
Skew 10° Lt. Ah.
Triple
10' x 12' x 300.1' R.C.B.
DA = 9 Sq. Miles - R
Extend Triple 10'x12'x300' RCB LT
with Trip 10'x12'x31' RCB
Lt. 670.60
F.L. = Rt. N/A
Other 670.60
Design No. 0520
(By Other Plan)

Extend Triple 10'x12'x300' RCB RT
with Trip 10'x12'x32' RCB
Lt. N/A
F.L. = Rt. 668.85
Other 668.85
Design No. 0919
(By Other Plan)

Existing DOT-ICN Fiber Optic - Protect in Place (Conduit Run 22C)
Approx. Sta. 1118+00, 187' LT to 1118+80, 163' LT

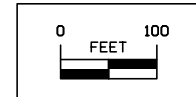
Existing DOT-ICN Fiber Optic - Protect in Place (Conduit Run 22A)
Approx. Sta. 1129+00, 208' LT to 1130+00, 218' LT

Existing DOT-ICN Fiber Optic - Protect in Place (Conduit Run 21G)
Approx. Sta. 1133+00, 258' LT to 1134+00, 211' LT



STA. 1121+67.62
BEGIN PCC PAVING

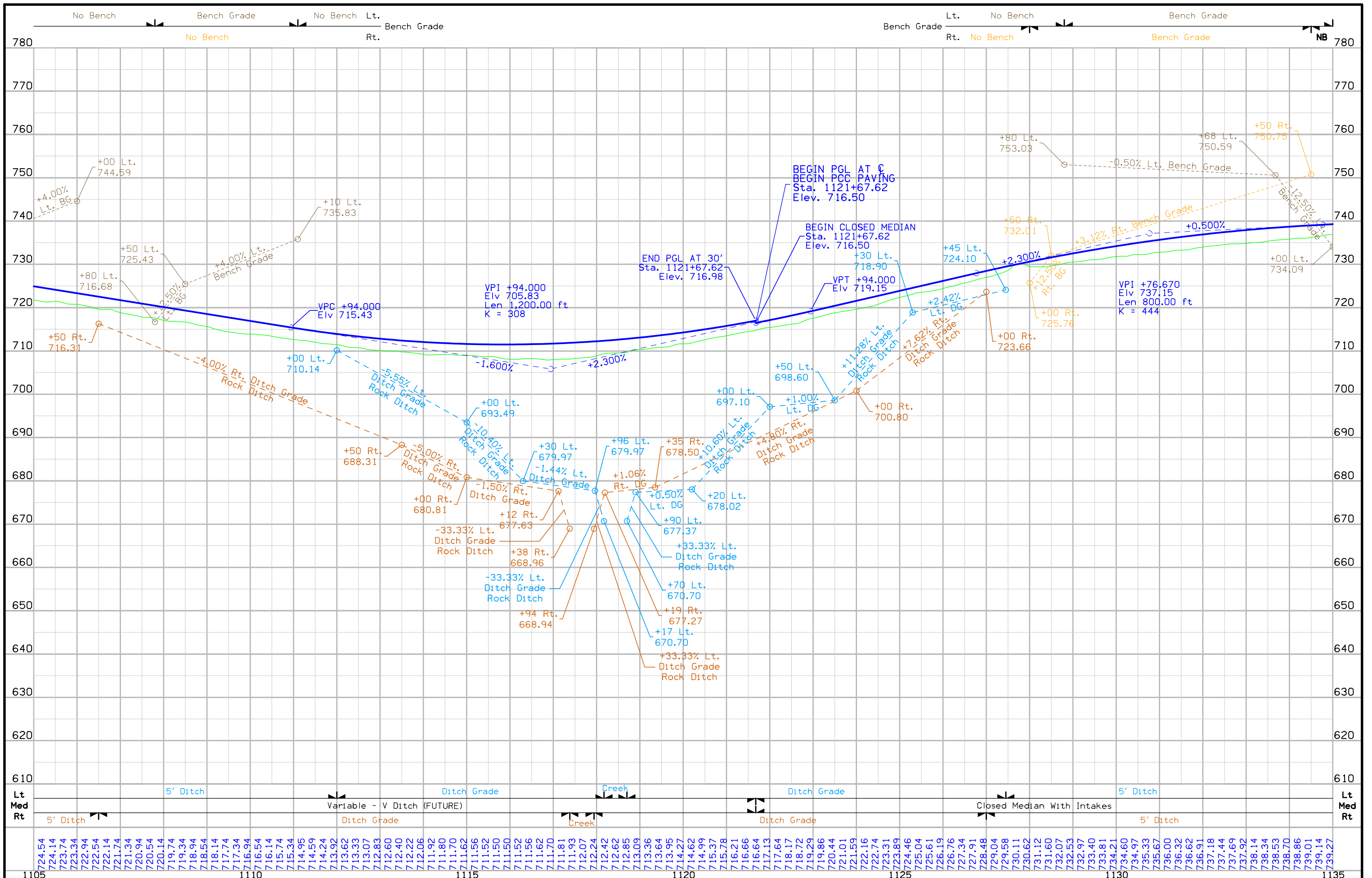
Sta. 1117+70.0, 20.1' Lt.
24" x 139.6' Conc. Pipe
w/ 24" x 9.4' C.M.P. Ext.
DA = Median Only
Remove 24" x 9.4' CMP
Extend 24" x 139.6' RCP
with 24" x 34' RCP
Lt. 678.13
F.L. = Rt. UAC
Other 679.17



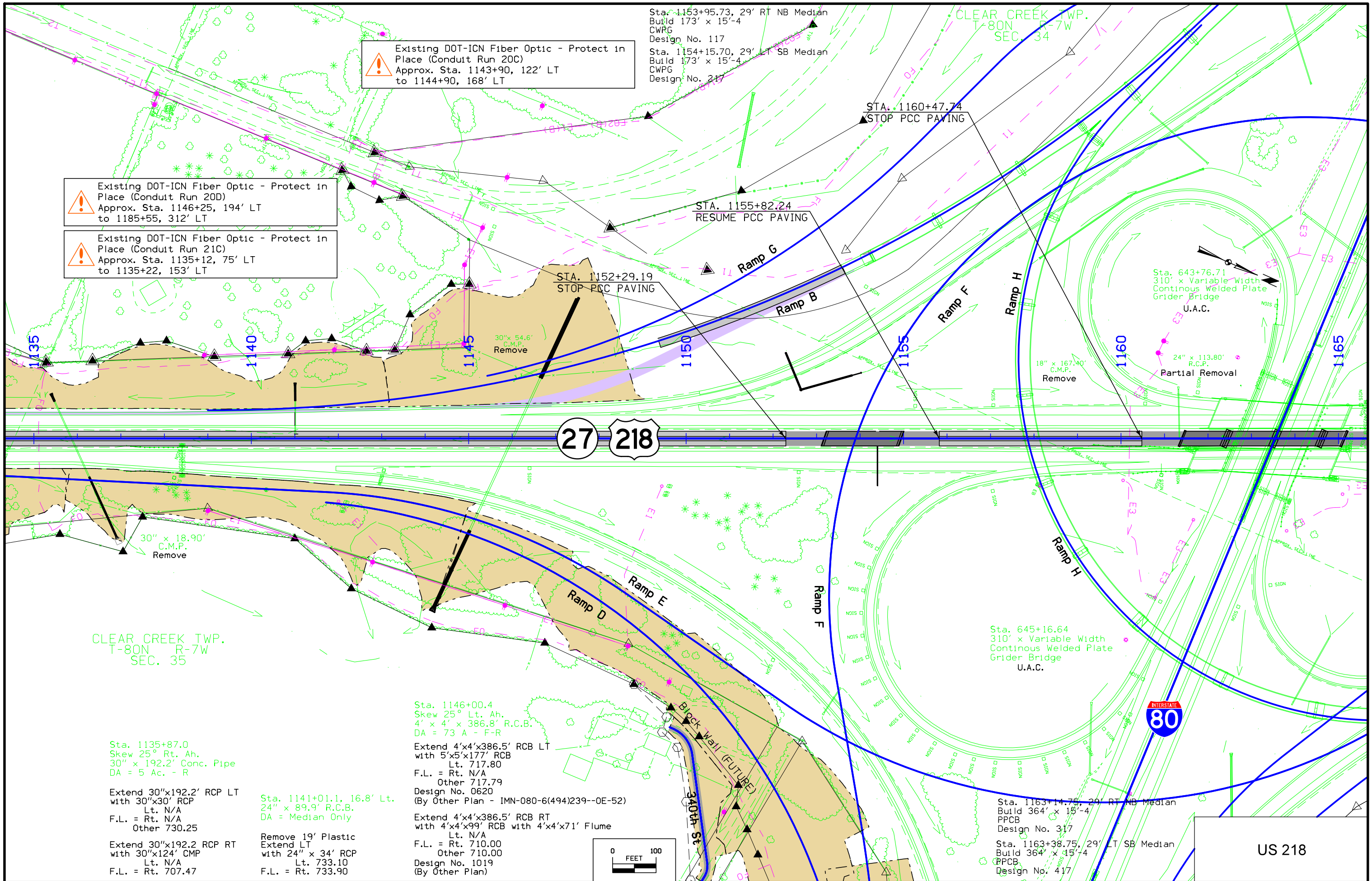
Sta. 11127+70.1
Skew 15° Rt. Ah.
24" x 170.8' Conc. Pipe
DA = 2 Ac. - R
Extend 24" x 170.8' RCP
with 24" x 10' RCP
Lt. 724.18
F.L. = Rt. UAC
Other 724.18

Sta. 1128+00.00
24" x 64.2' Conc. Pipe
DA = Median Only
Replace 2 Sections
& Apron at Outlet

US 218



FILE NO.	ENGLISH	DESIGN TEAM	JOHNSON COUNTY	PROJECT NUMBER	SHEET NUMBER
		Holst \ Prindle		NHS-080-6(371)239--11-52	E.4



Existing DOT-ICN Fiber Optic - Protect in Place (Conduit Run 20C)
 Approx. Sta. 1143+90, 122' LT to 1144+90, 168' LT

Existing DOT-ICN Fiber Optic - Protect in Place (Conduit Run 20D)
 Approx. Sta. 1146+25, 194' LT to 1185+55, 312' LT

Existing DOT-ICN Fiber Optic - Protect in Place (Conduit Run 21C)
 Approx. Sta. 1135+12, 75' LT to 1135+22, 153' LT

Sta. 1153+95.73, 29' RT NB Median
 Build 173' x 15'-4"
 CWRG
 Design No. 117

Sta. 1154+15.70, 29' LT SB Median
 Build 173' x 15'-4"
 CWRG
 Design No. 217

STA. 1160+47.74
 STOP PCC PAVING

STA. 1155+82.24
 RESUME PCC PAVING

STA. 1152+29.19
 STOP PCC PAVING

Sta. 643+76.71
 310' x Variable Width
 Continuous Welded Plate
 Grider Bridge
 U.A.C.

24" x 113.80'
 R.C.P.
 Partial Removal

18" x 167.40'
 C.M.P.
 Remove

Sta. 645+16.64
 310' x Variable Width
 Continuous Welded Plate
 Grider Bridge
 U.A.C.

Sta. 1163+14.75, 29' RT NB Median
 Build 364' x 15'-4"
 PPCB
 Design No. 317

Sta. 1163+38.75, 29' LT SB Median
 Build 364' x 15'-4"
 PPCB
 Design No. 417

Sta. 1135+87.0
 Skew 25° Rt. Ah.
 30" x 192.2' Conc. Pipe
 DA = 5 Ac. - R

Extend 30"x192.2' RCP LT
 with 30"x30' RCP
 Lt. N/A
 F.L. = Rt. N/A
 Other 730.25

Extend 30"x192.2' RCP RT
 with 30"x124' CMP
 Lt. N/A
 F.L. = Rt. 707.47

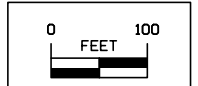
Sta. 1141+01.1, 16.8' Lt.
 24" x 89.9' R.C.B.
 DA = Median Only

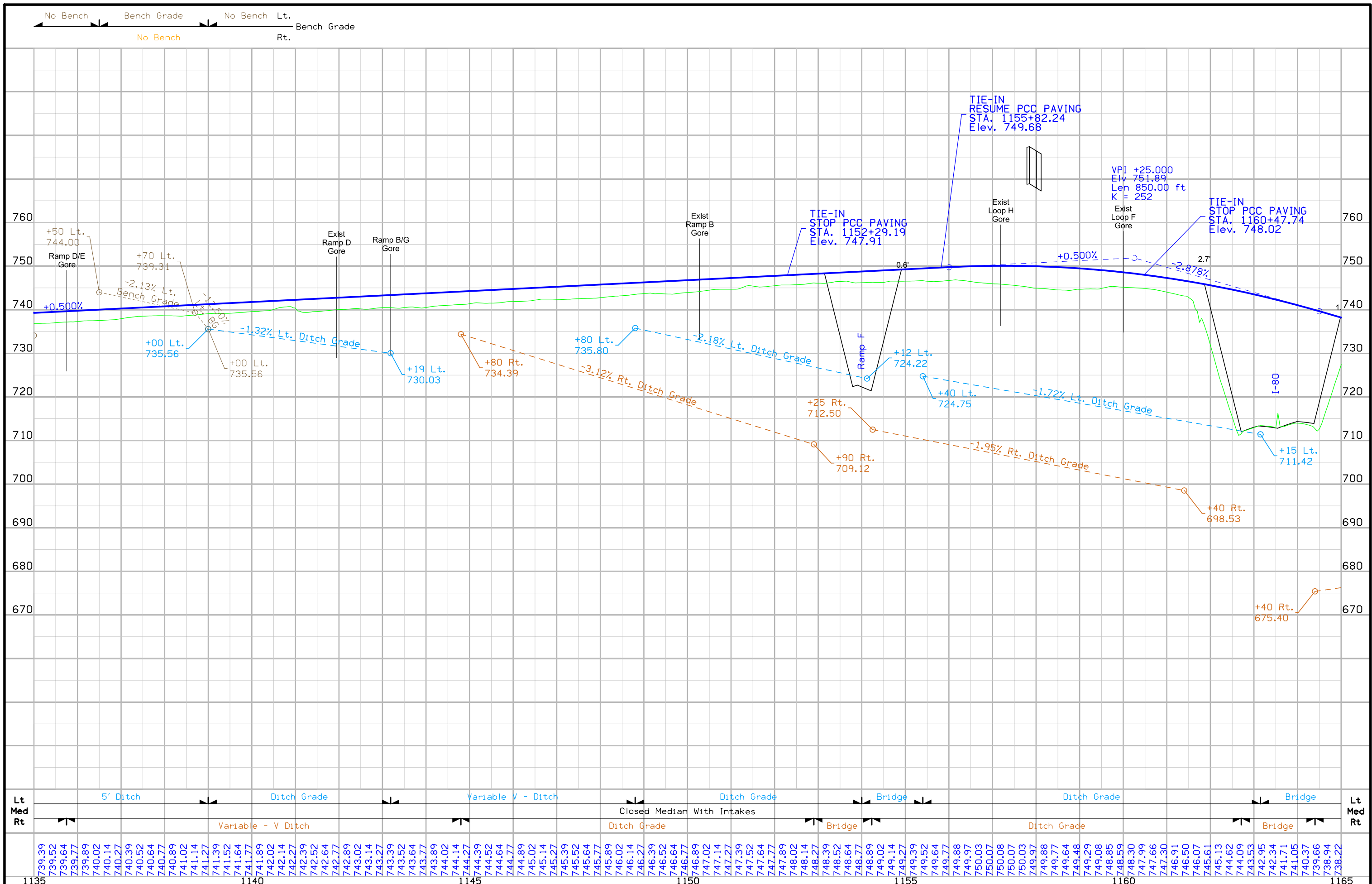
Remove 19' Plastic
 Extend LT
 with 24" x 34' RCP
 Lt. 733.10
 F.L. = Rt. 733.90

Sta. 1146+00.4
 Skew 25° Lt. Ah.
 4' x 4' x 386.8' R.C.B.
 DA = 73 A - F-R

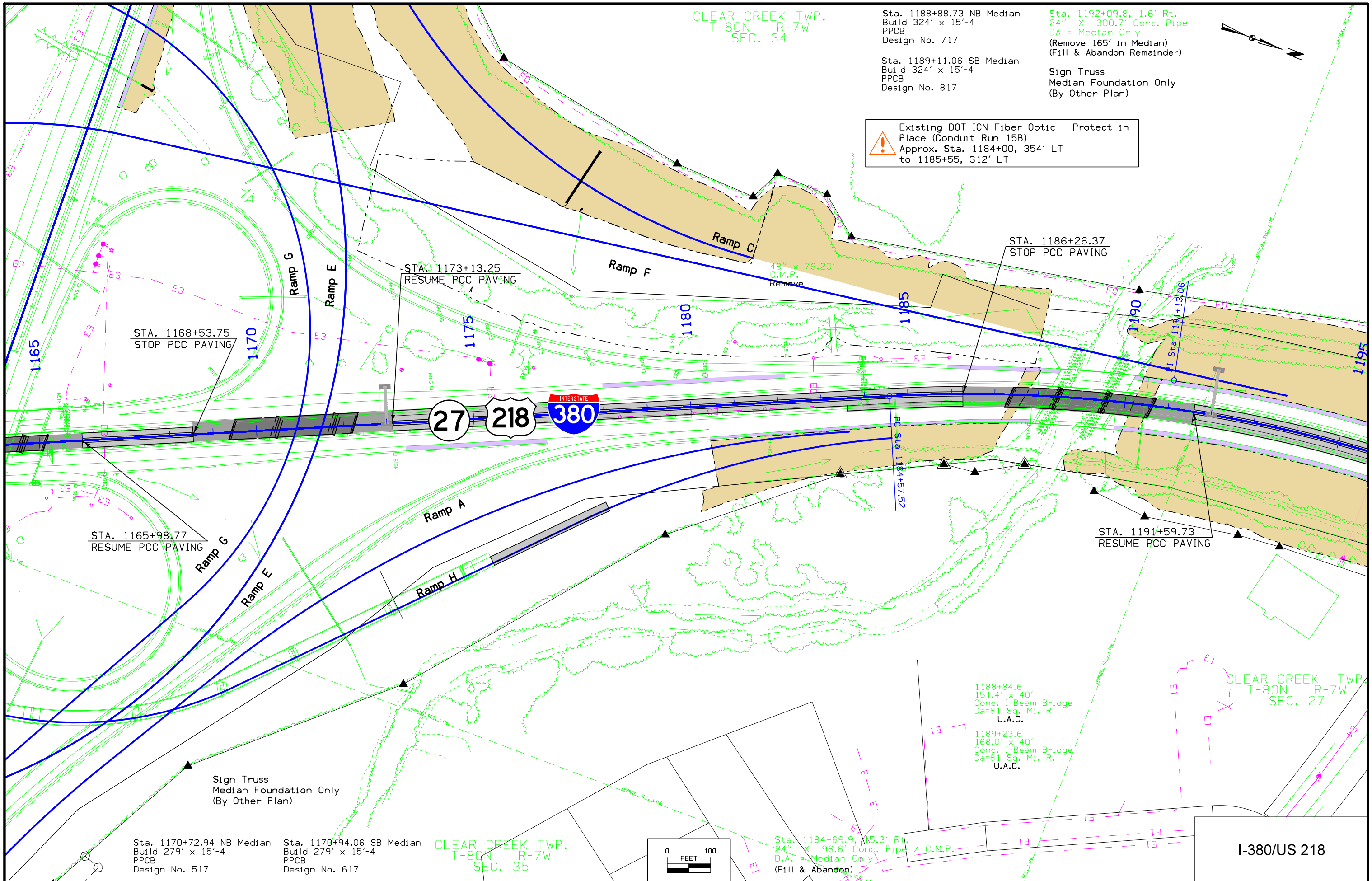
Extend 4'x4'x386.5' RCB LT
 with 5'x5'x177' RCB
 Lt. 717.80
 F.L. = Rt. N/A
 Other 717.79
 Design No. 0620
 (By Other Plan - IMN-080-6(494)239--0E-52)

Extend 4'x4'x386.5' RCB RT
 with 4'x4'x99' RCB with 4'x4'x71' Flume
 Lt. N/A
 F.L. = Rt. 710.00
 Other 710.00
 Design No. 1019
 (By Other Plan)





FILE NO.	ENGLISH	DESIGN TEAM	JOHNSON COUNTY	PROJECT NUMBER	SHEET NUMBER
		Holst \ Prindle		NHS-080-6(371)239--11-52	E.6



CLEAR CREEK TWP.
T-80N R-7W
SEC. 34

Sta. 1188+88.73 NB Median
Build 324' x 15'-4"
PPCB
Design No. 717

Sta. 1189+11.06 SB Median
Build 324' x 15'-4"
PPCB
Design No. 817

Sta. 1192+09.8, 1.6' Rt.
24" X 300.7' Conc. Pipe
DA = Median Only
(Remove 165' in Median)
(Fill & Abandon Remainder)

Sign Truss
Median Foundation Only
(By Other Plan)

Existing DOT-ICN Fiber Optic - Protect in Place (Conduit Run 15B)
Approx. Sta. 1184+00, 354' LT to 1185+55, 312' LT

27 218 380

1188+84.6
151.4' x 40'
Conc. I-Beam Bridge
Da=81 Sq. Mi. R
U.A.C.

1189+23.6
168.0' x 40'
Conc. I-Beam Bridge
Da=81 Sq. Mi. R
U.A.C.

CLEAR CREEK TWP.
T-80N R-7W
SEC. 27

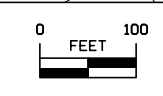
Sta. 1170+72.94 NB Median
Build 279' x 15'-4"
PPCB
Design No. 517

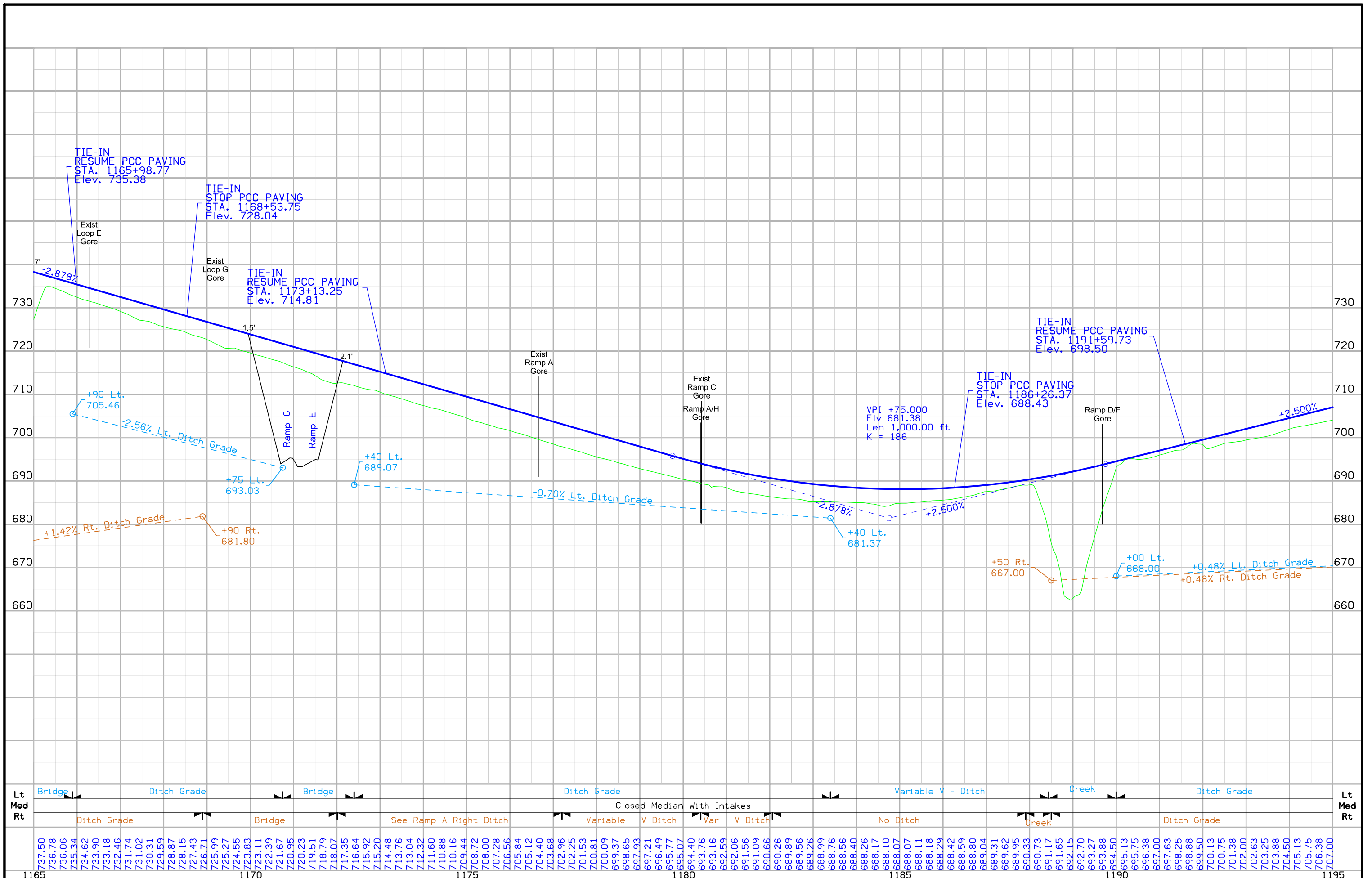
Sta. 1170+94.06 SB Median
Build 279' x 15'-4"
PPCB
Design No. 617

CLEAR CREEK TWP.
T-80N R-7W
SEC. 35

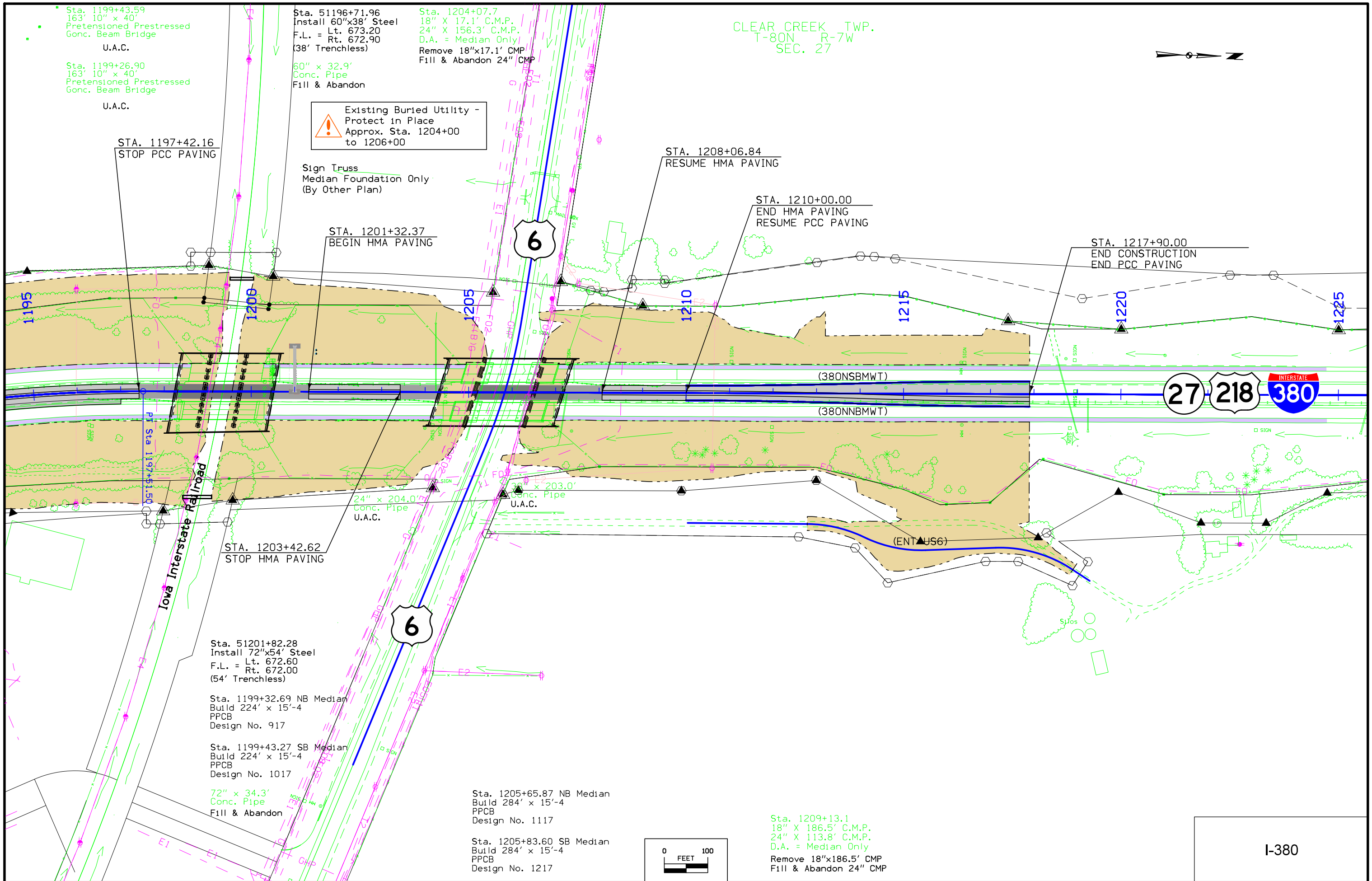
Sta. 1184+69.9, 15.3' Rt.
24" X 96.6' Conc. Pipe / C.M.P.
D.A. = Median Only
(Fill & Abandon)

I-380/US 218





Lt	Bridge	Ditch Grade	Bridge	Ditch Grade	Variable V - Ditch	Creek	Ditch Grade	Lt
Med								Med
Rt	Ditch Grade	Bridge	See Ramp A Right Ditch	Variable - V Ditch	Var - V Ditch	No Ditch	Creek	Ditch Grade
	737.50	736.78	736.06	735.34	734.62	733.90	733.18	732.46
	731.74	731.02	730.31	729.59	728.87	728.15	727.43	726.71
	725.99	725.27	724.55	723.83	723.11	722.39	721.67	720.95
	720.23	719.51	718.79	718.07	717.35	716.64	715.92	715.20
	714.48	713.76	713.04	712.32	711.60	710.88	710.16	709.44
	708.72	708.00	707.28	706.56	705.84	705.12	704.40	703.68
	702.96	702.25	701.53	700.81	700.09	699.37	698.65	697.93
	697.21	696.49	695.77	695.05	694.33	693.61	692.89	692.17
	691.45	690.73	690.01	689.29	688.57	687.85	687.13	686.41
	685.65	684.93	684.21	683.49	682.77	682.05	681.33	680.61
	680.89	680.17	679.45	678.73	678.01	677.29	676.57	675.85
	680.17	679.45	678.73	678.01	677.29	676.57	675.85	675.13
	680.11	679.39	678.67	677.95	677.23	676.51	675.79	675.07
	680.18	679.46	678.74	678.02	677.30	676.58	675.86	675.14
	680.29	679.57	678.85	678.13	677.41	676.69	675.97	675.25
	680.42	679.70	678.98	678.26	677.54	676.82	676.10	675.38
	680.59	679.87	679.15	678.43	677.71	676.99	676.27	675.55
	680.80	680.08	679.36	678.64	677.92	677.20	676.48	675.76
	680.94	680.22	679.50	678.78	678.06	677.34	676.62	675.90
	680.31	679.59	678.87	678.15	677.43	676.71	675.99	675.27
	680.62	679.90	679.18	678.46	677.74	677.02	676.30	675.58
	680.95	680.23	679.51	678.79	678.07	677.35	676.63	675.91
	680.33	679.61	678.89	678.17	677.45	676.73	676.01	675.29
	690.73	690.01	689.29	688.57	687.85	687.13	686.41	685.69
	691.17	690.45	689.73	689.01	688.29	687.57	686.85	686.13
	691.65	689.93	689.21	688.49	687.77	687.05	686.33	685.61
	692.15	689.43	688.71	687.99	687.27	686.55	685.83	685.11
	692.70	689.98	689.26	688.54	687.82	687.10	686.38	685.66
	693.27	690.55	689.83	689.11	688.39	687.67	686.95	686.23
	693.88	691.17	690.45	689.73	689.01	688.29	687.57	686.85
	694.50	691.79	691.07	690.35	689.63	688.91	688.19	687.47
	695.13	692.41	691.69	690.97	690.25	689.53	688.81	688.09
	695.75	693.03	692.31	691.59	690.87	690.15	689.43	688.71
	696.38	693.66	692.94	692.22	691.50	690.78	690.06	689.34
	697.00	694.28	693.56	692.84	692.12	691.40	690.68	689.96
	697.63	694.91	694.19	693.47	692.75	692.03	691.31	690.59
	698.25	695.53	694.81	694.09	693.37	692.65	691.93	691.21
	698.88	696.16	695.44	694.72	694.00	693.28	692.56	691.84
	699.50	696.78	696.06	695.34	694.62	693.90	693.18	692.46
	700.13	697.41	696.69	695.97	695.25	694.53	693.81	693.09
	700.75	698.03	697.31	696.59	695.87	695.15	694.43	693.71
	701.38	698.66	697.94	697.22	696.50	695.78	695.06	694.34
	702.00	699.28	698.56	697.84	697.12	696.40	695.68	694.96
	702.63	699.91	699.19	698.47	697.75	697.03	696.31	695.59
	703.25	700.54	699.82	699.10	698.38	697.66	696.94	696.22
	703.88	701.17	700.45	699.73	699.01	698.29	697.57	696.85
	704.50	701.79	701.07	700.35	699.63	698.91	698.19	697.47
	705.13	702.42	701.70	700.98	700.26	699.54	698.82	698.10
	705.75	703.04	702.32	701.60	700.88	700.16	699.44	698.72
	706.38	703.67	702.95	702.23	701.51	700.79	700.07	699.35
	707.00	704.29	703.57	702.85	702.13	701.41	700.69	699.97



CLEAR CREEK TWP.
T-80N R-7W
SEC. 27



Existing Buried Utility -
Protect in Place
Approx. Sta. 1204+00
to 1206+00

Sign Truss
Median Foundation Only
(By Other Plan)

Sta. 1199+43.59
163' 10" x 40'
Prestensioned Prestressed
Conc. Beam Bridge
U.A.C.

Sta. 1199+26.90
163' 10" x 40'
Prestensioned Prestressed
Conc. Beam Bridge
U.A.C.

Sta. 51196+71.96
Install 60"x38' Steel
F.L. = Lt. 673.20
Rt. 672.90
(38' Trenchless)

60" x 32.9'
Conc. Pipe
Fill & Abandon

Sta. 1204+07.7
18" X 17.1' C.M.P.
24" X 156.3' C.M.P.
D.A. = Median Only
Remove 18"x17.1' CMP
Fill & Abandon 24" CMP

STA. 1197+42.16
STOP PCC PAVING

STA. 1208+06.84
RESUME HMA PAVING

STA. 1210+00.00
END HMA PAVING
RESUME PCC PAVING

STA. 1217+90.00
END CONSTRUCTION
END PCC PAVING

STA. 1201+32.37
BEGIN HMA PAVING

STA. 1203+42.62
STOP HMA PAVING

Sta. 51201+82.28
Install 72"x54' Steel
F.L. = Lt. 672.60
Rt. 672.00
(54' Trenchless)

Sta. 1199+32.69 NB Median
Build 224' x 15'-4
PPCB
Design No. 917

Sta. 1199+43.27 SB Median
Build 224' x 15'-4
PPCB
Design No. 1017

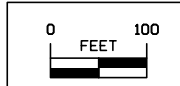
72" x 34.3'
Conc. Pipe
Fill & Abandon

36" x 203.0'
Conc. Pipe
U.A.C.

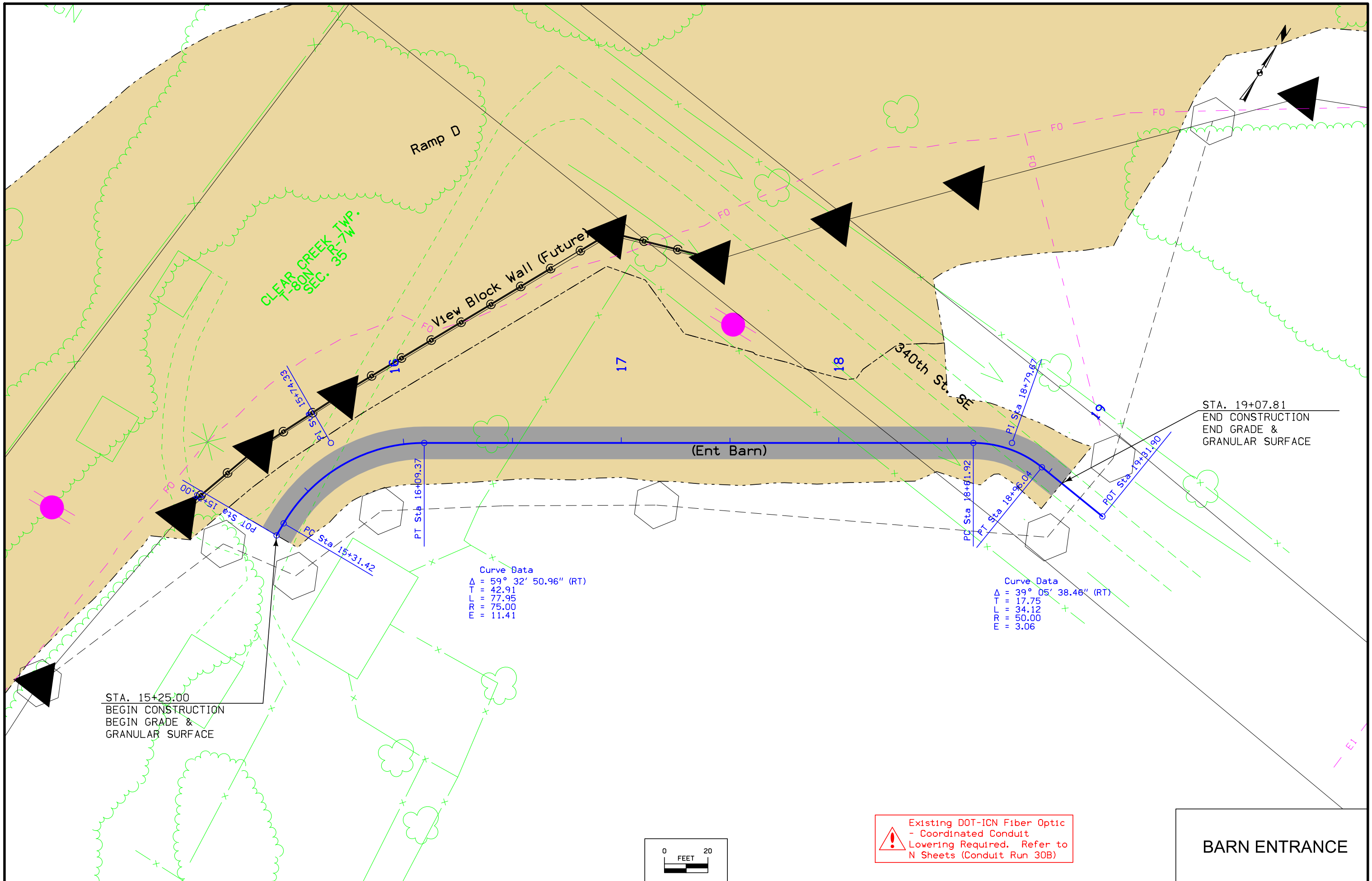
Sta. 1205+65.87 NB Median
Build 284' x 15'-4
PPCB
Design No. 1117

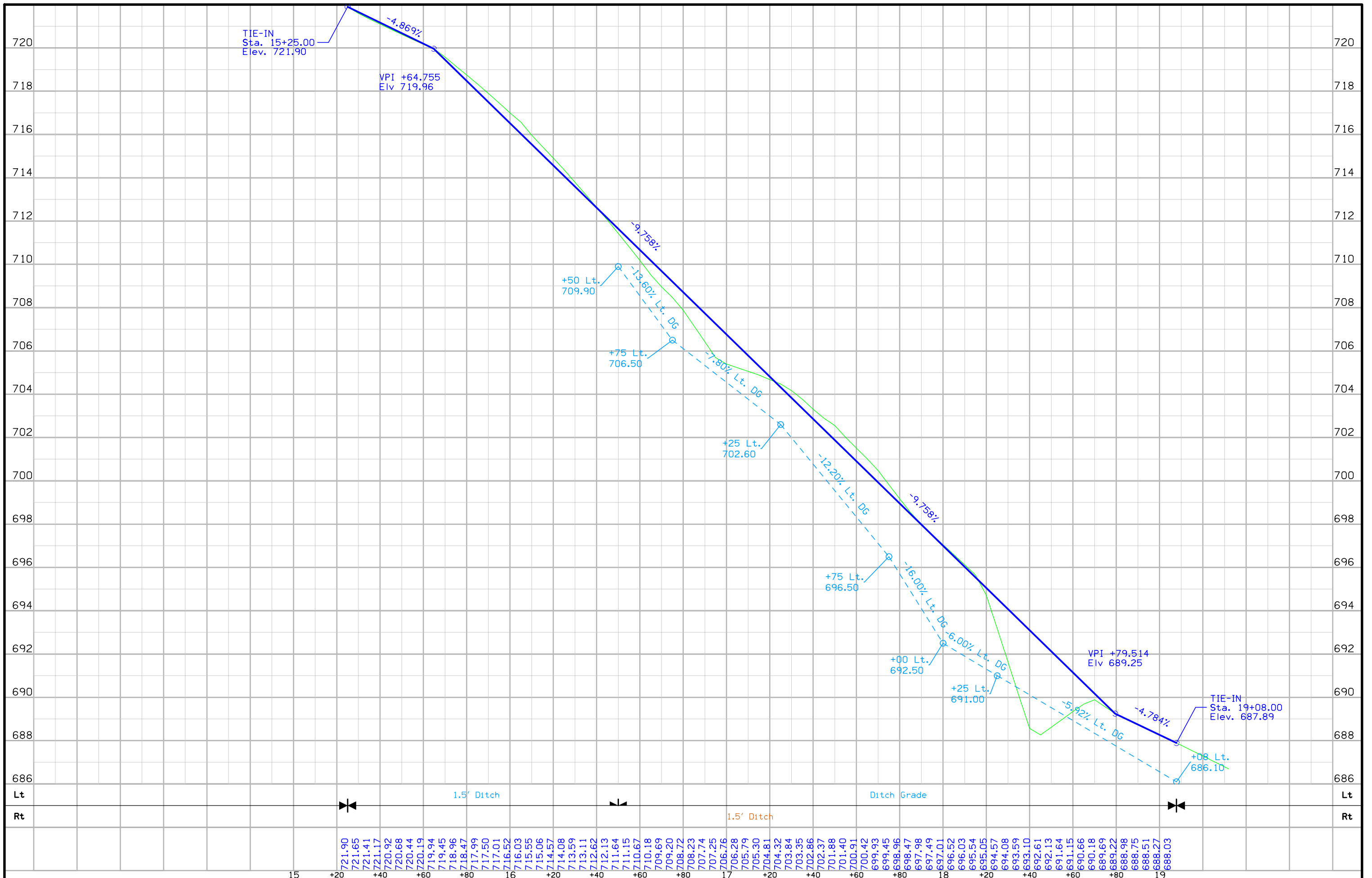
Sta. 1205+83.60 SB Median
Build 284' x 15'-4
PPCB
Design No. 1217

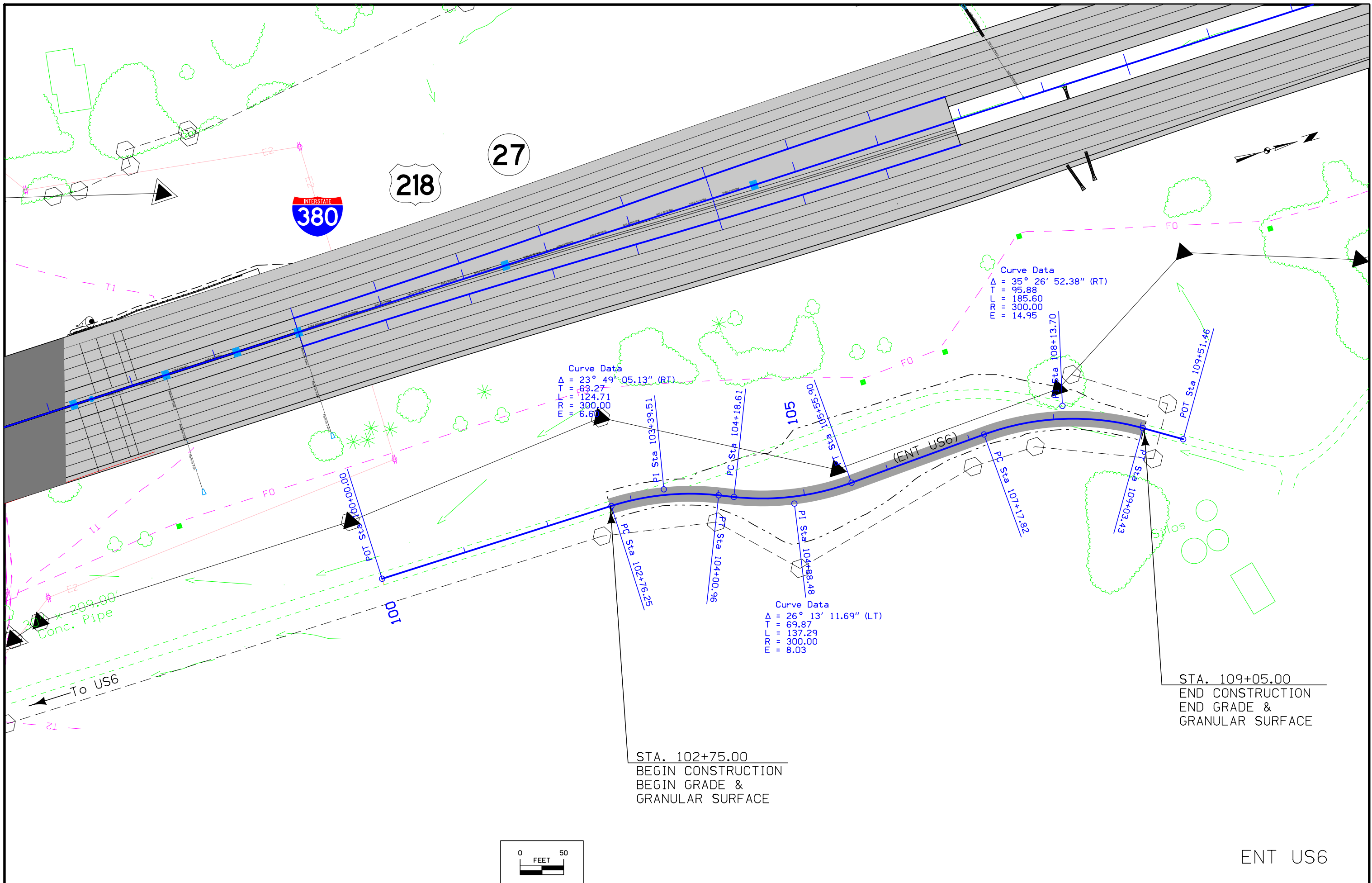
Sta. 1209+13.1
18" X 186.5' C.M.P.
24" X 113.8' C.M.P.
D.A. = Median Only
Remove 18"x186.5' CMP
Fill & Abandon 24" CMP

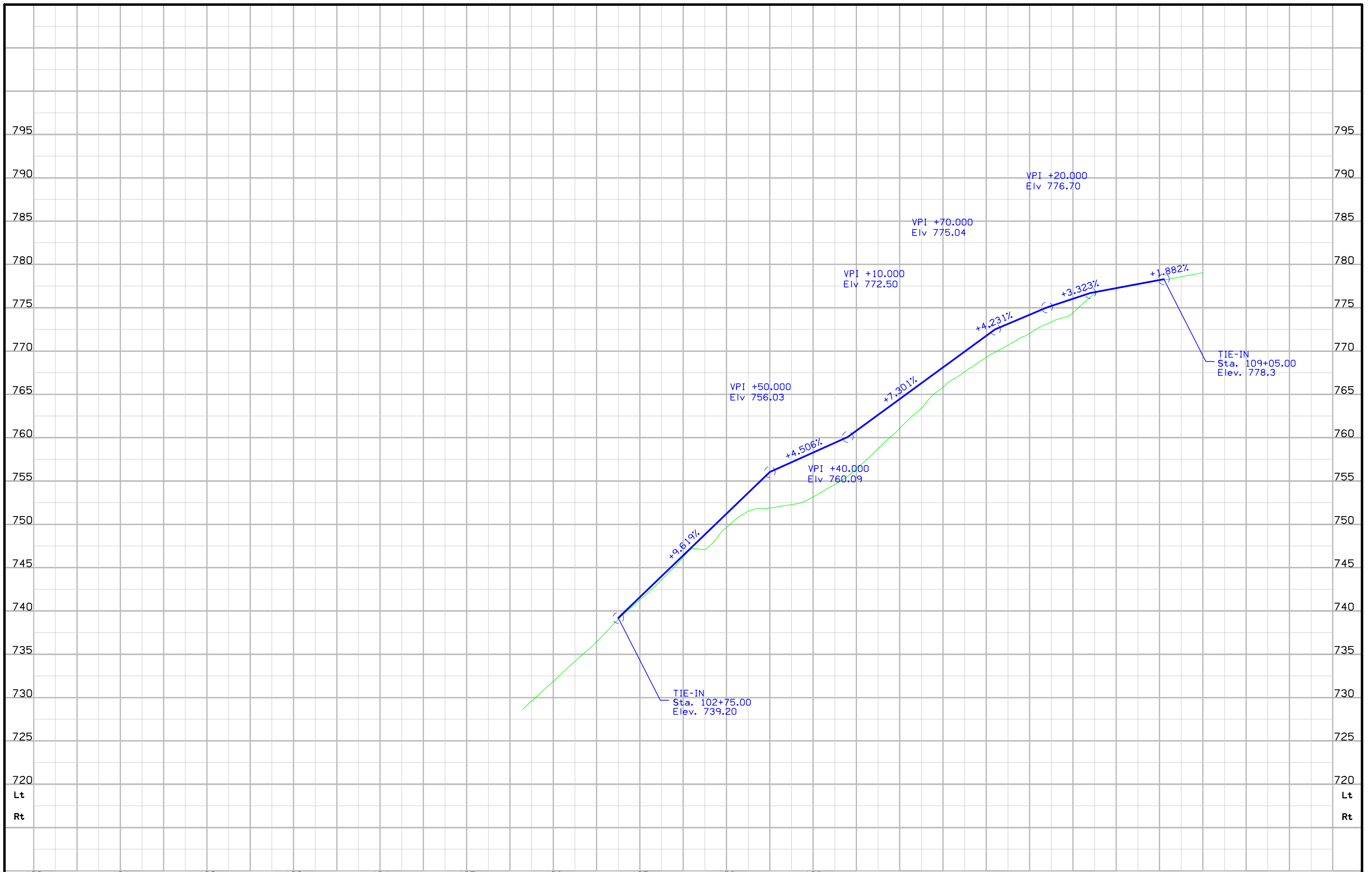


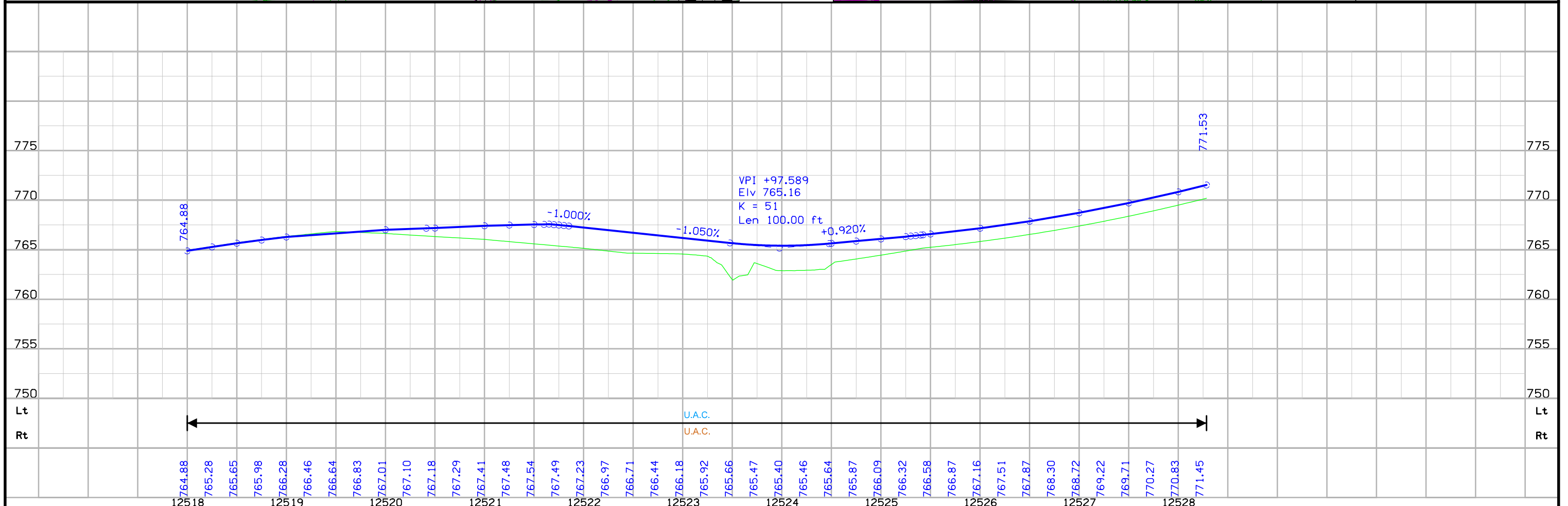
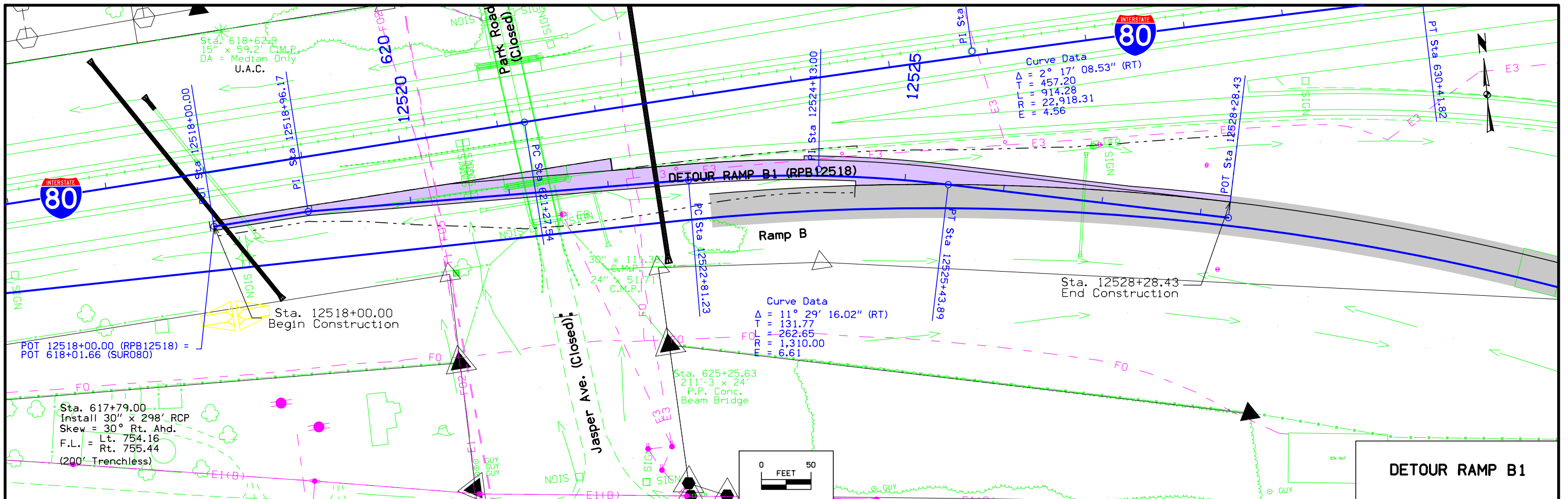
I-380

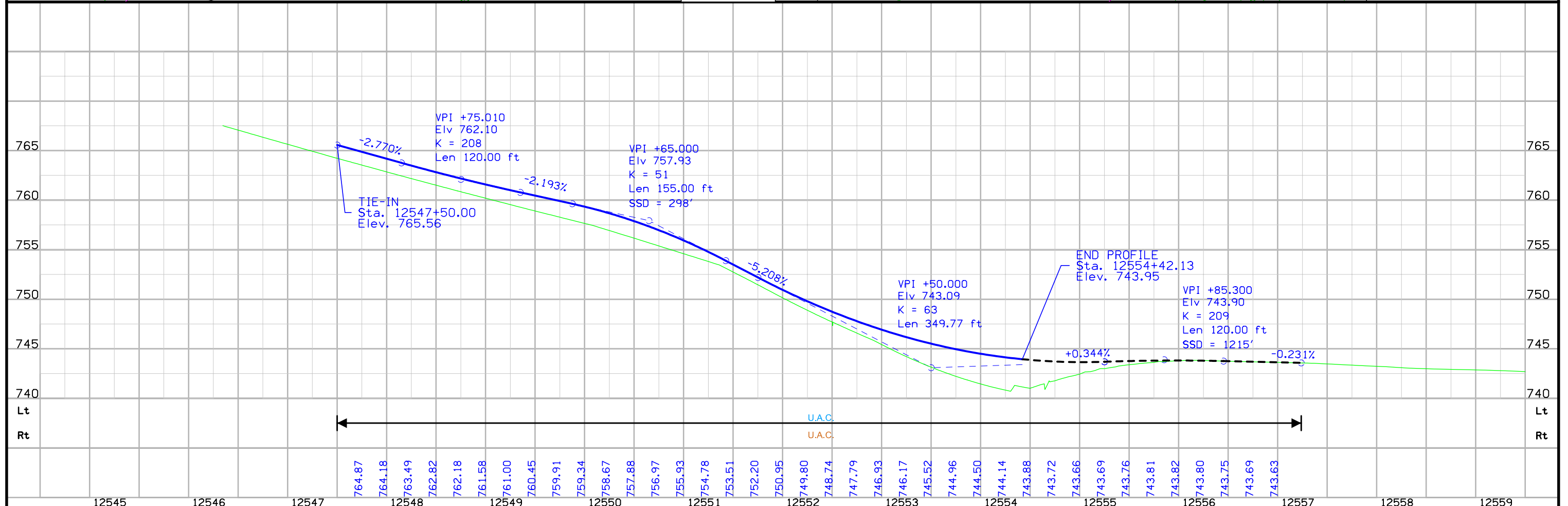
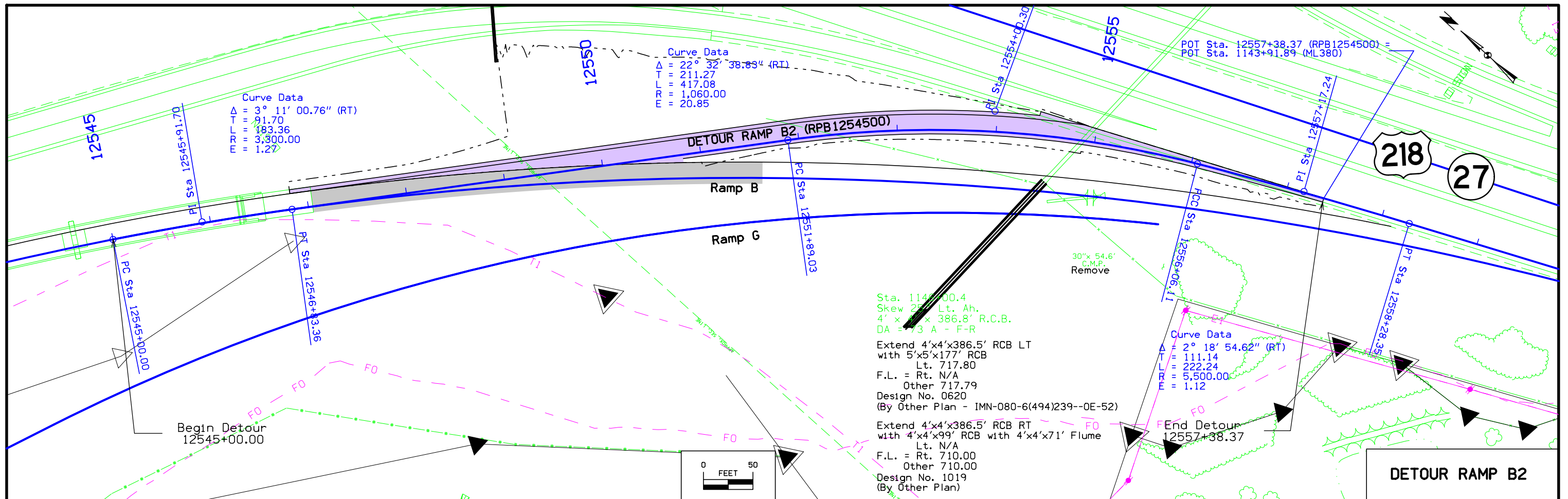












Survey Information
Johnson County
IMN-080-6(235)2390E-52
I-80/I-380/US-218 Interchange near
Iowa City
PIN 02-52-080-010
Sap-0411.4
Sap-0411.5

2003 Vertical Control Information

This survey is relative to NAVD88 vertical datum. Three wire bench level loops were run throughout this project. All bench loops originated and closed on one project benchmark #566 a 3rd order USGS mark called 26FDR 1964 682. Note the vertical datum difference between NGVD 88 and NAVD 29 is 0.10 feet in this area. The 29 datum is 0.10 higher than 88. Benchmark elevations were validated in the 2013/2014 survey. A few updates were needed.

Vertical equations to the project datum Bench Marks and other benches along this survey are as follows:

BM # 566	This survey	EL=682.046
= BM # 566	Johnson County 2000 survey	EL=682.046
= USGS BM #26	26FDR 1964 682	EL=682.046
BM #625	This survey	EL=685.519
=BM #14	1986 AB plan F-518-4(26)--20-52	
EL=685.56		
=BM # 1	Paving plan I-G-380-6(19)243--04-52	
EL=685.56		
BM #517	This survey	EL=737.314
=BM # 3	Paving plan I-G-380-6(19)243--04-52	
EL=737.37		
BM #520	This survey	EL=699.144
=BM # 19	Paving plan I-G-380-6(19)243--04-52	
EL=699.26		
BM #536	This survey	EL=691.494
=BM # 22	Paving plan I-G-380-6(19)243--04-52	
EL=691.61		
BM #636	This survey	EL=691.493
=BM #521	2000 Carlson survey IMN-80-6(21)240--00-52 (88 Datum)	
EL=691.493		
=BM # 22	Paving plan I-G-380-6(19)243--04-52 (29 Datum)	
EL=691.61		
=BM #22	1986 AB Plan F-518-4(12)--20-52 (29 Datum)	
EL=691.61		
BM #608	This survey	EL=804.915
=BM # 37	1986 AB Plan F-518-4(12)--20-52 (29 Datum)	
EL=804.85		
BM #582	This survey	EL=758.068
=BM # 39	1986 AB Plan F-518-4(12)--20-52 (29 Datum)	
EL=758.03		
BM #502	This survey	EL=738.113
=BM #502	2000 Carlson survey IMN-80-6(21)240--00-52 (88 Datum)	
EL=738.113		
=BM # 51A	I-80-6(12)238 Grading Plan (29 Datum)	
EL=738.36		
BM #512	This survey	EL=789.582
=BM #512	2000 Carlson survey IMN-80-6(21)240--00-52 (88 Datum)	
EL=789.582		
=BM # 60A	I-80-6(12)238 Grading Plan (29 Datum)	
EL=789.74		
=BM # 500	IM-80-6(171)240--13-52 Plan (29 Datum)	
EL=789.96		
BM #633	This survey	EL=684.221
=BM # 21A	F-289(6) 1970 AB PLAN (Datum unknown)	
EL=703.62		
BM #634	This survey	EL=682.904
=BM # 21B	F-289(6) 1970 AB PLAN (Datum unknown)	
EL=702.26		

General Information

Measurement units for this survey are US survey feet. This survey is for proposed reconstruction of the systems interchange. This field survey including mobile lidar pavement survey is supplemented with aerial survey to create the entire dtm. As of Jan. 2015 the entire surface model tin is located at <pw:\projectwise.dot.int.lan:PWMMain\Documents\Projects\5208001002\Photo\52080243.tin>
 The 2013/2014 survey was made to update previous surveys to current mapping standards and to check previous survey control, drainage structures, existing pavement and utilities.

Survey file locations in ProjectWise as of Jan 2015

Year 2000 2006 I-80 SAP 321 files (SDMS Data collection)
<pw:\projectwise.dot.int.lan:PWMMain\Documents\Projects\5208001098\Photo\SURVEY\>
 Year 2003 I-380 SAP 411.0 to SAP 411.3 files (SDMS Data collection)
pw:\projectwise.dot.int.lan:PWMMain\Documents\Projects\5208001002\PrelimSurvey\0411\O\LD\102913\2003_SDMS_Survey\
 Year 2013/2014 SAP 411.4 files (Current standards)
<pw:\projectwise.dot.int.lan:PWMMain\Documents\Projects\5208001002\PrelimSurvey\04114\>
 Year 2013 SAP 411.5 files (Mobile lidar)
<pw:\projectwise.dot.int.lan:PWMMain\Documents\Projects\5208001002\PrelimSurvey\04115\>

Date(s) of Survey(s)

I-80

SAP 321 Aug. 2000
 SAP 321.1 Aug. 2001 Additional Survey
 SAP 321.2 April 2006 Additional Survey-Dubuque St.
 SAP 411.4 2013-2014 Update survey to current standards and building floor elev. survey
 SAP 411.5 Fall 2013 Mobile Lidar pavement survey (R.E.Y.)

I-380/US-218

SAP 411,411.1,411.2,411.3- April 2003
 SAP 411.4 2013-2014 Update survey to current standards and building floor elev. survey
 SAP 411.5 Fall 2013 Mobile Lidar pavement survey (R.E.Y.)

2003 Horizontal Control

The GPS Network along this project was collected by IDOT Preliminary Survey Crews. Information about that network can be found in the 0411gpspoints.doc file included with this survey in NAD83(1996) Modified State Plane Project Coordinates.

As of Jan. 2015 see control report at:

pw:\projectwise.dot.int.lan:PWMMain\Documents\Projects\5208001002\PrelimSurvey\0411\O\LD\102913\2003_SDMS_Survey\0411gpspoints.doc

Twelve section corners were found and included in this survey. None of the section corners coded as SCR in this survey have been certified by District 6 office. This survey was measured in English Units.

This survey intersects a 2000 Preliminary Survey along I-80. The 2000 survey data used Sap 0321. A revised GPS network was observed in 2002 for this project that includes all 2000 network control with approximately fourteen additional points added along the I-380 corridor north and south of I-80. The project control for this project is identical to the 2000 network control survey. Station equations to all as-built PI points are in the Horizontal datum information included below. Project control was validated in 2013/2014 survey.

Alignment Information

The mainline alignment of the I 80 survey is a retrace of GRADING PLANS NO. 80-6(12)238.

2000 survey stationing relates to the Grading Plans as follows:

PI-676+17.64-THIS-SURVEY=

PI 676+17.60 ORLINS FEB

1995 SURVEY PROJ. NUMBER IM-80-6(171)240--13-52 =

PI 670+17.6 GRADING PLANS PROJ NO 80-6(12)238

FOUND IRON PIN

The mainline alignment of the I 380 survey is a retrace of the as-built plans # F -518-4(12) 20-52 1986 AB plans (centerline of median).

2003 Survey stationing relates to as built plan stationing as follows:

BOP POT Sta 11082+95.29 this survey =

POT Sta 1684+00.22 F-518-4(12)--20-52 As-Built Plans

CP Point 11097+51.08, 0.14 feet right this survey =

=PC Sta 1698+56.76 F-518-4(12)--20-52 As-Built Plans Back

=PC Sta 1698+60.00 F-518-4(12)--20-52 As-Built Plans Ahead

PI Sta 11109+54.89 this survey =

PI Sta 1710+60.76 F-518-4(12)--20-52 As-Built Plans

PI Sta 11127+45.33 this survey =

=POT Sta. 1127+45.33 IMN-80-6(211)2400E-52 2000 Preliminary Survey

=POT Sta 1728+54.9 F-518-4(12)--20-52 As-Built Plans Back

=POT Sta 1127+44.85 F-518-4(12)--20-52 As-Built Plans Ahead

POT Sta 11163+54.20 This Survey I-380 Stationing (Not Set in Field)

=POT Sta. 644+59.06 This Survey I-80 Stationing

=POT Sta. 644+59.06 IMN-80-6(211)2400E-52 2000 Preliminary Survey I-80

Stationing

=POT Sta. 644+50.24 IM-80-6(167)24013-52 Feb 1996 Grading Plan I-80

Stationing

=POT Sta. 638+56.24 F-518-4(12)--20-52 As-Built Plans I-80 Stationing

=POT Sta. 638+56.24 I-IG-380-6(19)243-04-52 As-Built Plans I-80 Stationing

=POT Sta 1163+53.95 F-518-4(12)--20-52 As-Built Plans I-380 Stationing

=POT Sta 1163+53.95 I-IG-380-6(19)243-04-52 As-Built Plans I-380 Stationing

POT Sta 11183+81.20 This survey

= TS Sta 1183+81.20 F-518-4(12)--20-52 As-Built Plans

= TS Sta 1183+81.20 I-IG-380-6(19)243-04-52 As-Built Plans

= TS Sta 1183+81.20 IMN-80-6(211)2400E-52 2000 Preliminary Survey

PI Sta 11191+13.01 this survey =

PI Sta 1191+12.08 I-IG-380-6(19)243-04-52 As-Built Plans

PI Sta 11271+13.95 this survey =

PI Sta 1271+13.52 I-IG-380-6(19)243-04-52 As-Built Plans

PI Sta 11324+10.95 this survey =

PI Sta 1324+11.21 I-IG-380-6(19)243-04-52 As-Built Plans

POT Sta 11404+97.20 this survey =

PC Sta 1404+96.91 I-IG-380-6(19)243-04-52 As-Built Plans

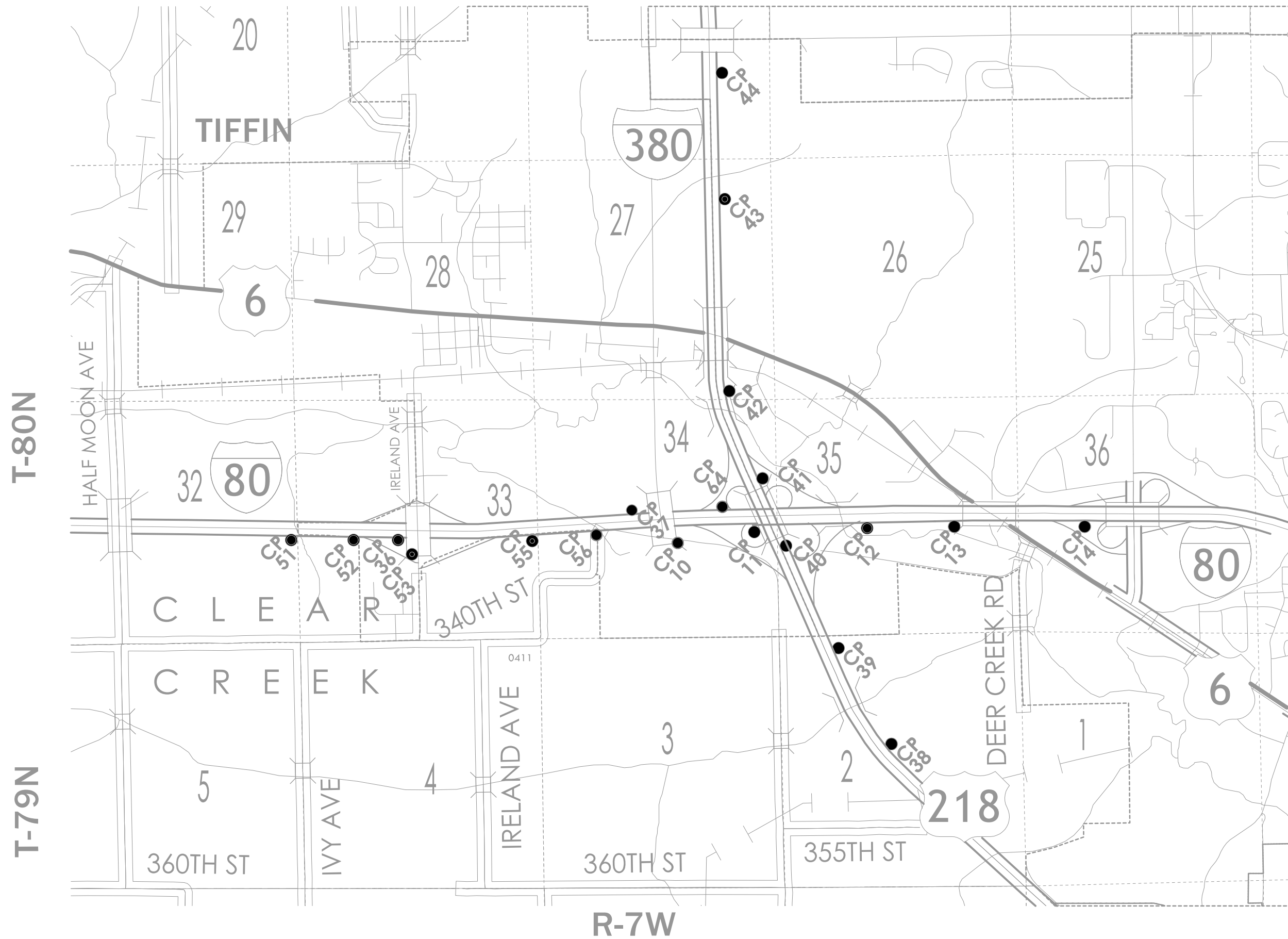
Utility Information

Sub-Surface Utility Mapping Quality Level is in accordance with C/ASCE 38-02 Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data.

The 2013/2014 utility survey information is too extensive to be reported in this index. For complete utility survey information as of Jan. 2015 see:

<pw:\projectwise.dot.int.lan:PWMain\Documents\Projects\5208001002\PrelimSurvey\04114\ 04114 Dewey\UtilityInfo>

GPS BASE STATION CONTROL POINT VICINITY MAP - SEE REF. SHEETS FOR MORE INFO.



I - 80 Benchmarks

Table with columns: BENCHMARKS, ELEVATION. Contains benchmark data for I-80, including stationing, descriptions, and elevations.

I - 80 Benchmarks

Table with columns: BENCHMARKS, ELEVATION. Contains benchmark data for I-80, including stationing, descriptions, and elevations.

I - 380 Benchmarks

Table with columns: BENCHMARKS, ELEVATION. Contains benchmark data for I-380, including stationing, descriptions, and elevations.

US 6 Benchmarks

Table with columns: BENCHMARKS, ELEVATION. Contains benchmark data for US 6, including stationing, descriptions, and elevations.

Forever Green Rd. Benchmarks

Table with columns: BENCHMARKS, ELEVATION. Contains benchmark data for Forever Green Rd., including stationing, descriptions, and elevations.

Kansas Ave. N. of Forever Green Rd. Benchmarks

Table with columns: BENCHMARKS, ELEVATION. Contains benchmark data for Kansas Ave. N. of Forever Green Rd., including stationing, descriptions, and elevations.

SW Kansas Ave. South of I 80 Benchmarks

Table with columns: BENCHMARKS, ELEVATION. Contains benchmark data for SW Kansas Ave. South of I 80, including stationing, descriptions, and elevations.

270th. Ave. Benchmarks

Table with columns: BENCHMARKS, ELEVATION. Contains benchmark data for 270th. Ave., including stationing, descriptions, and elevations.

Jasper Ave. Benchmarks

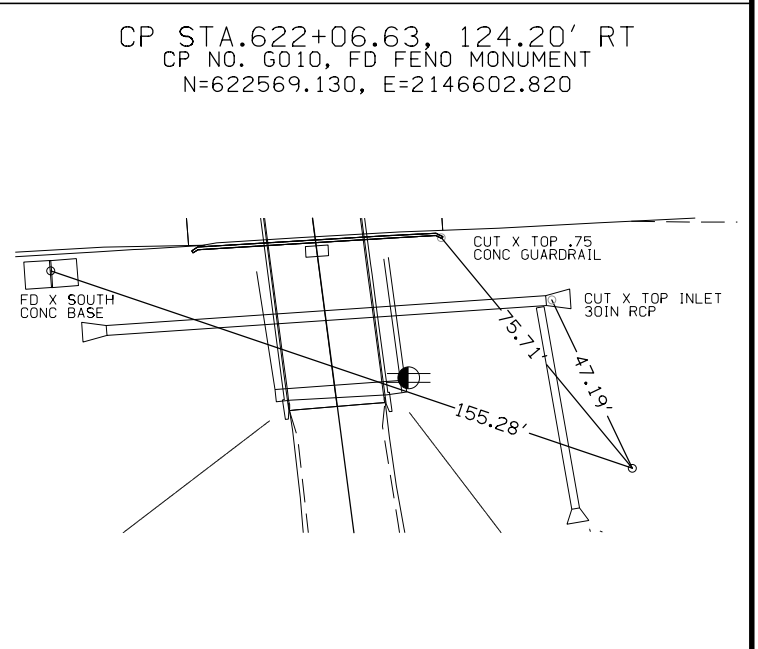
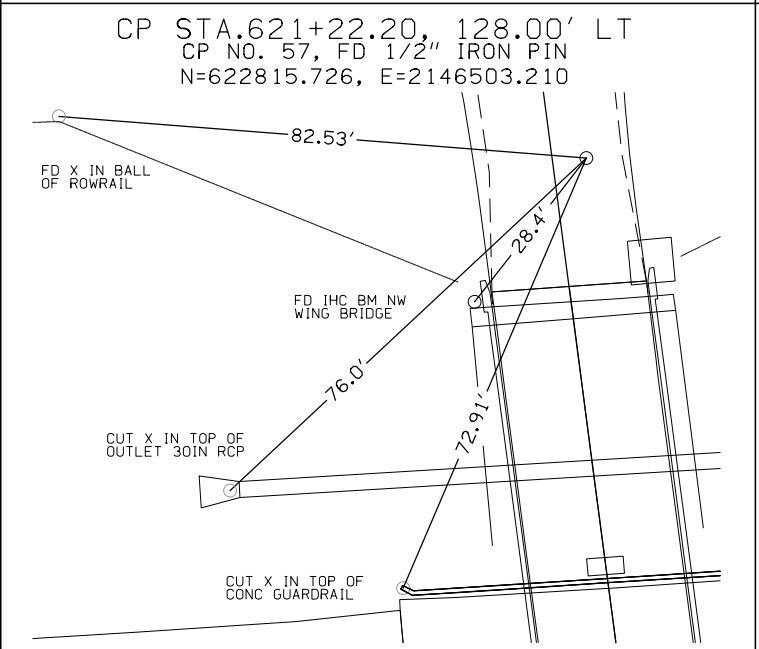
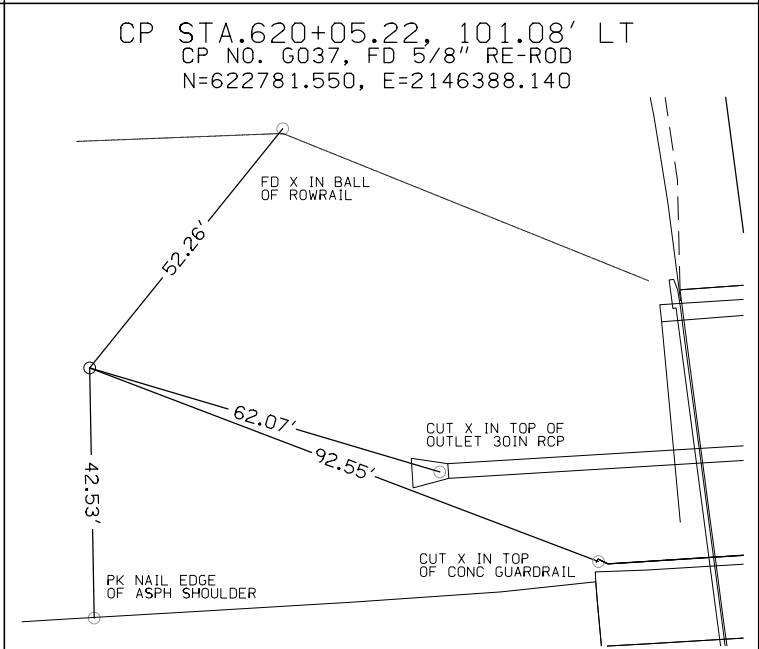
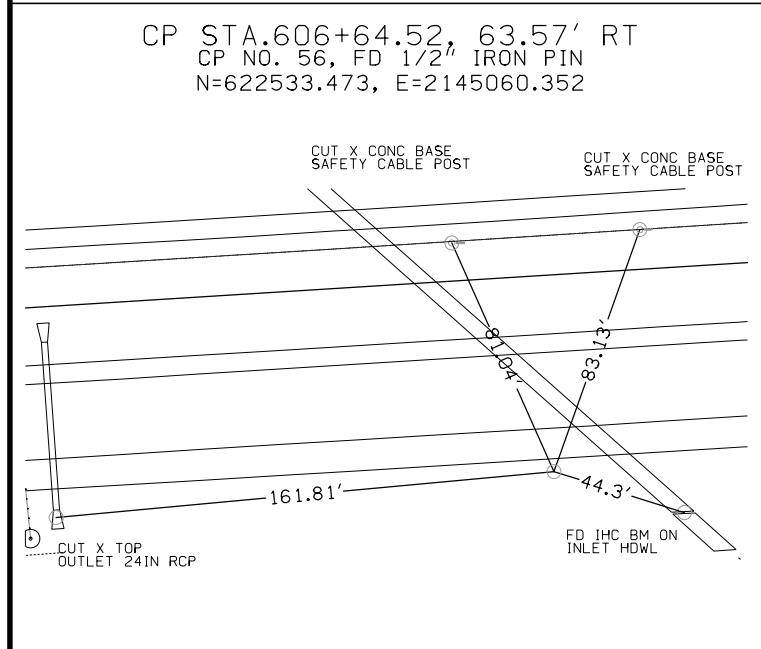
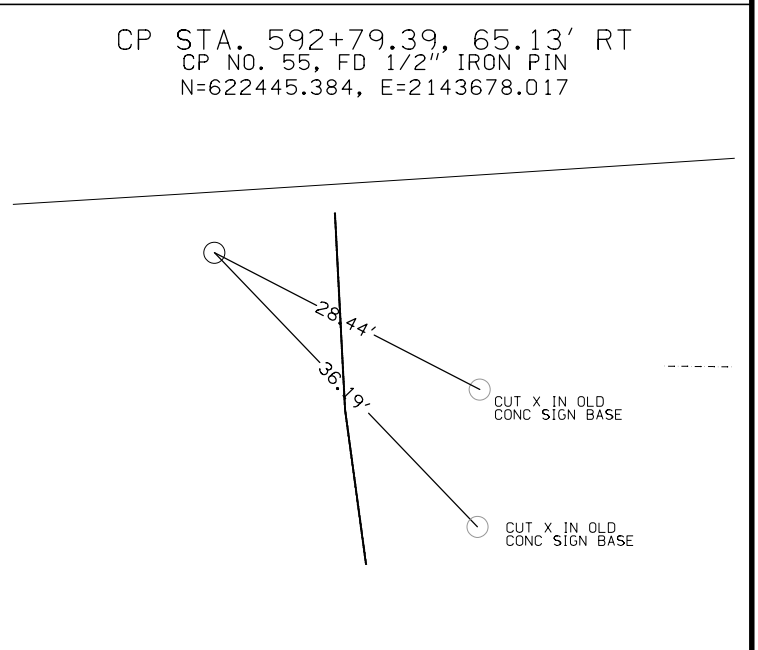
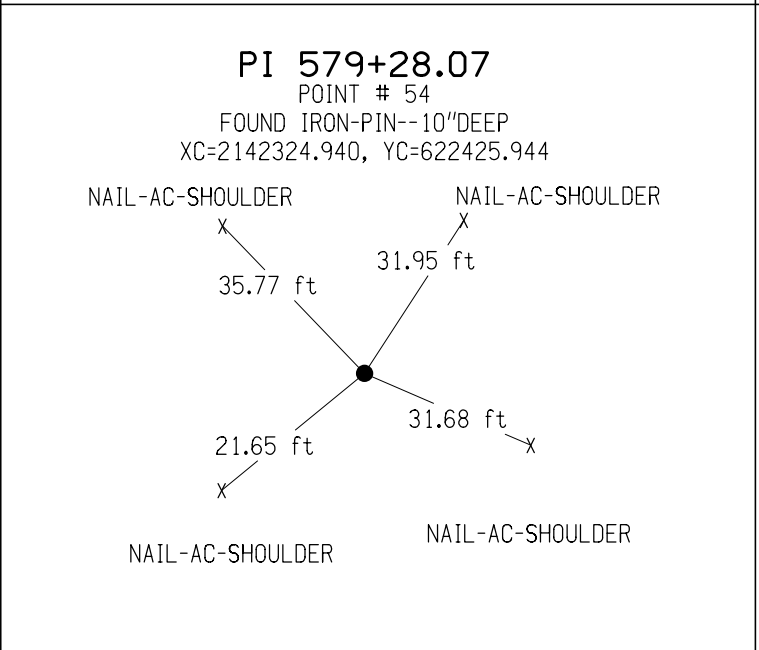
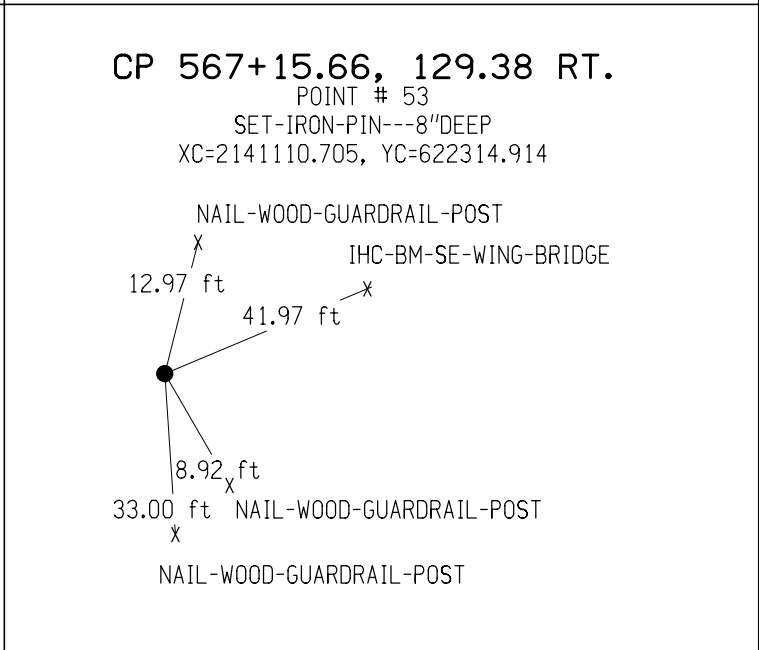
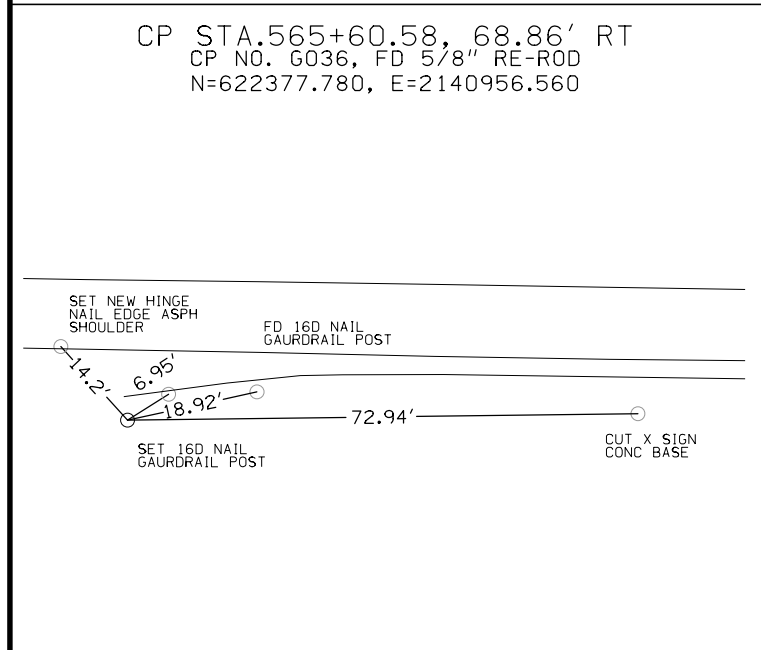
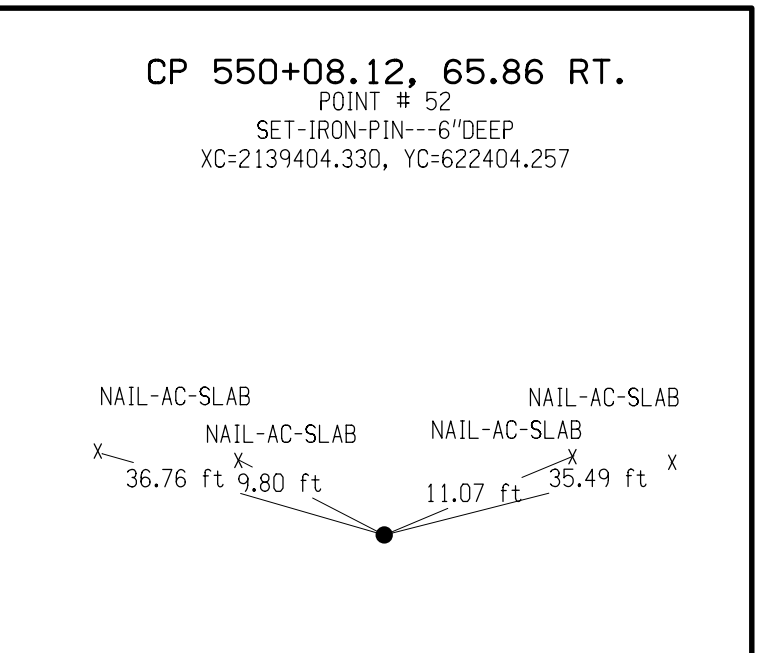
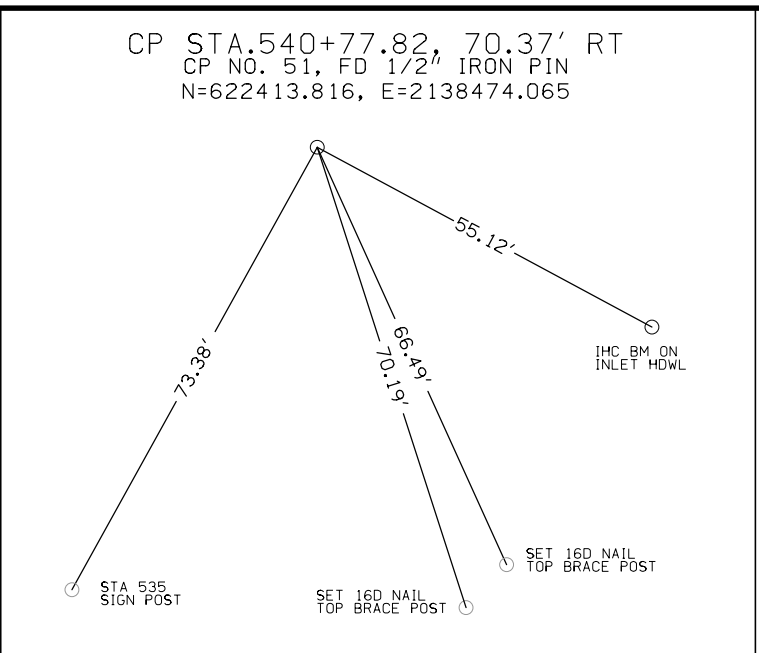
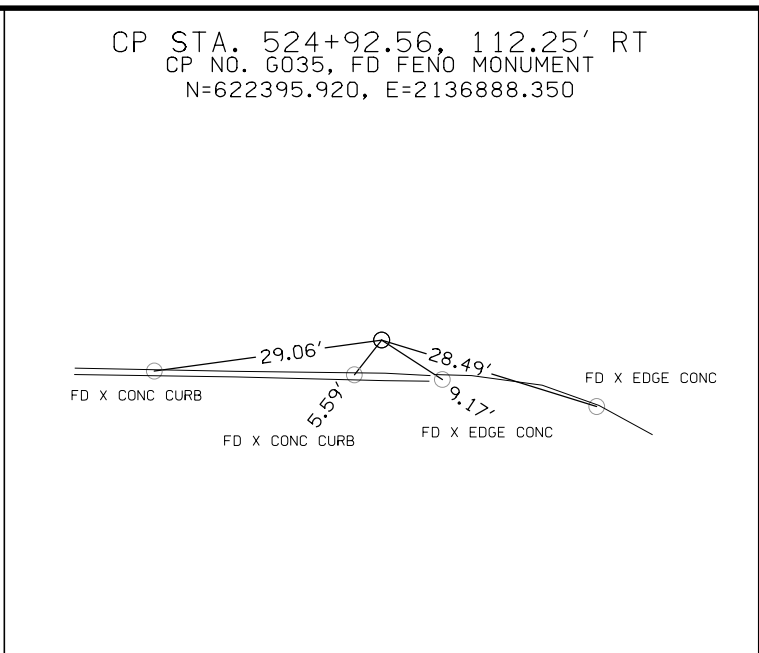
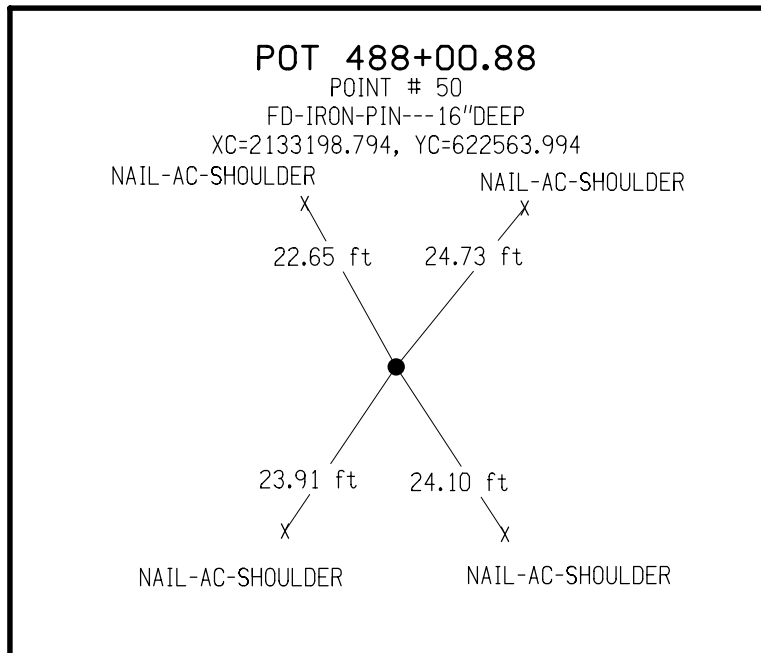
Table with columns: BENCHMARKS, ELEVATION. Contains benchmark data for Jasper Ave., including stationing, descriptions, and elevations.

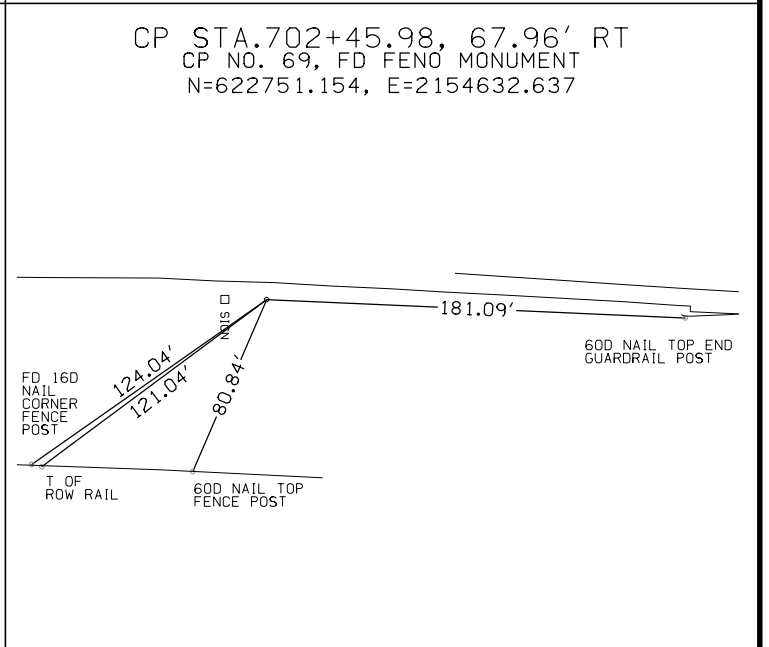
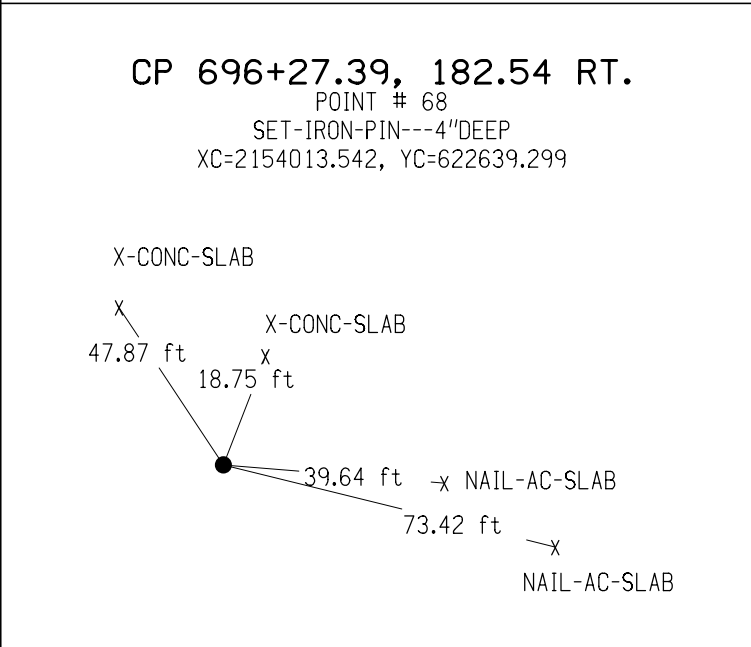
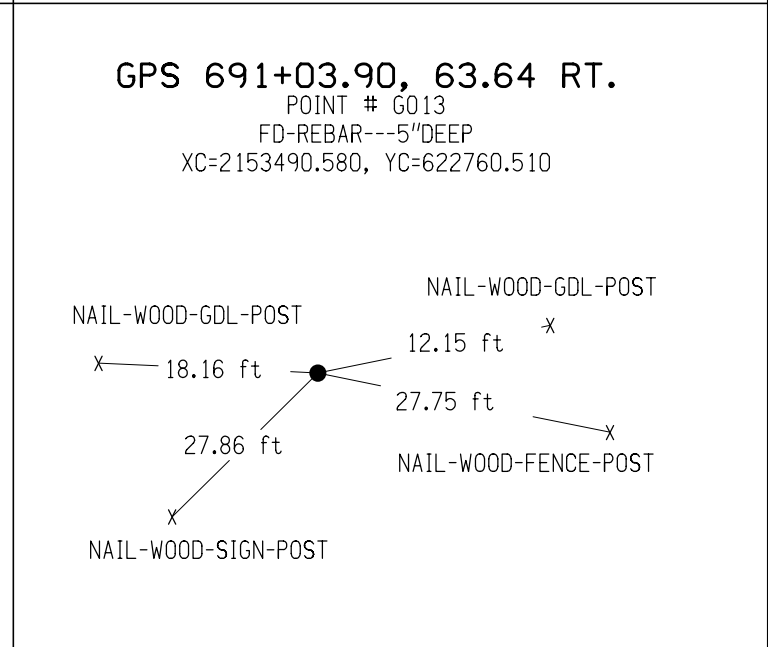
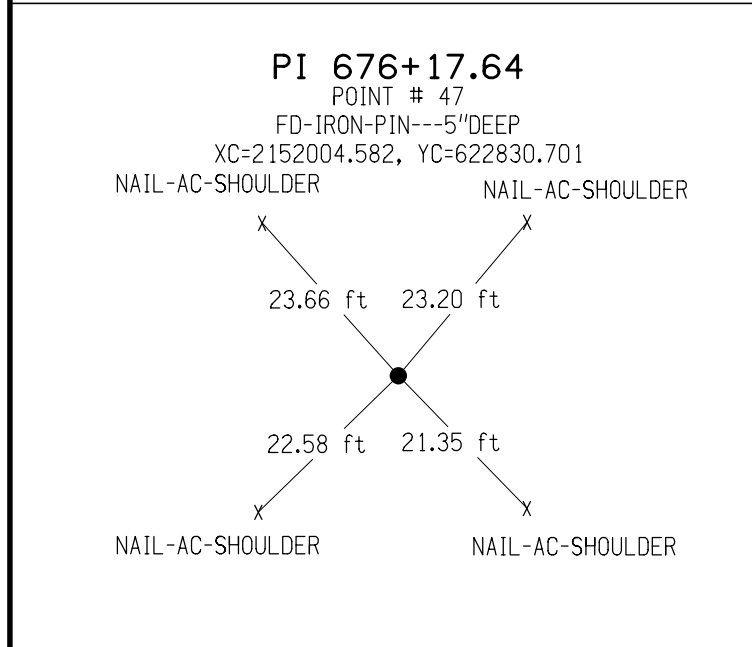
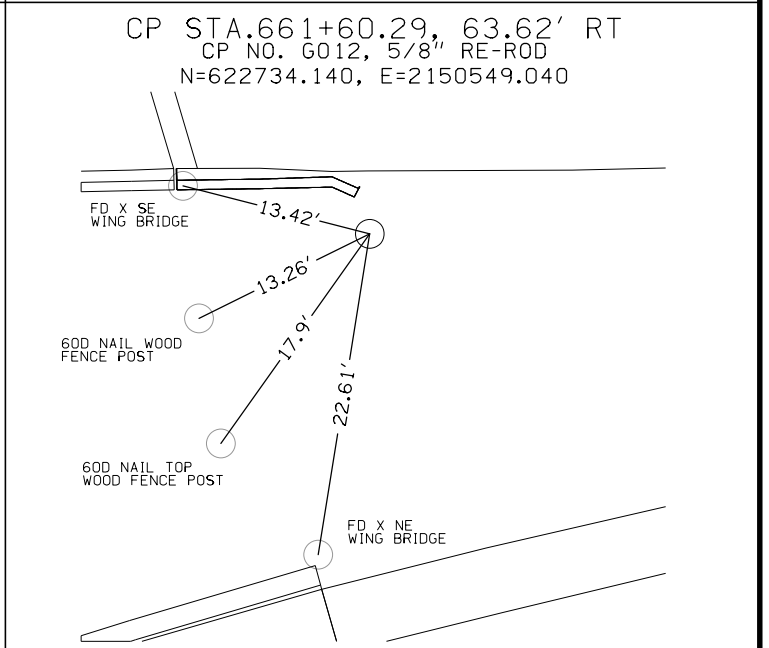
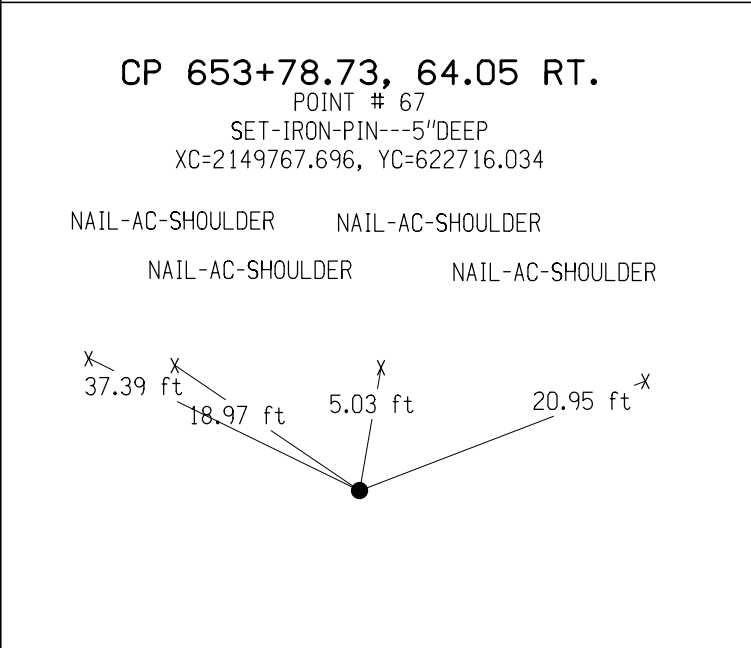
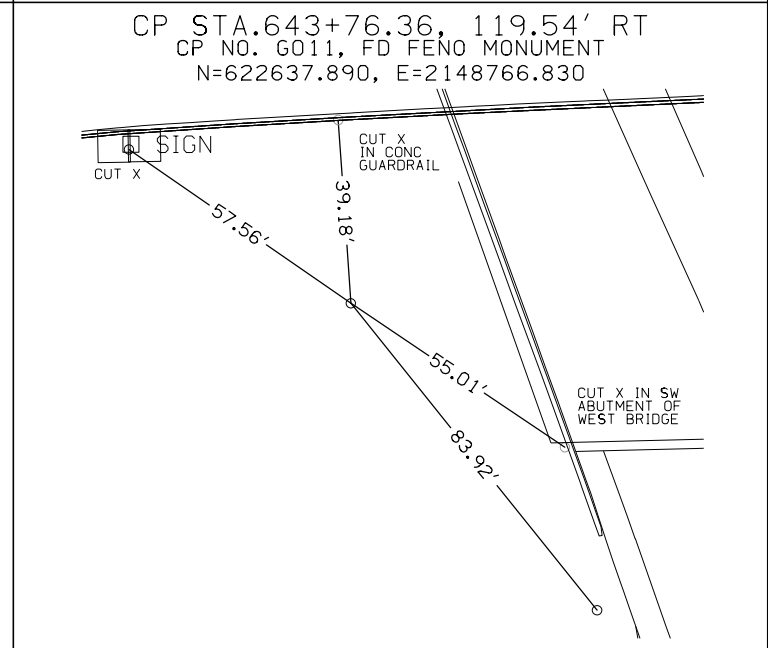
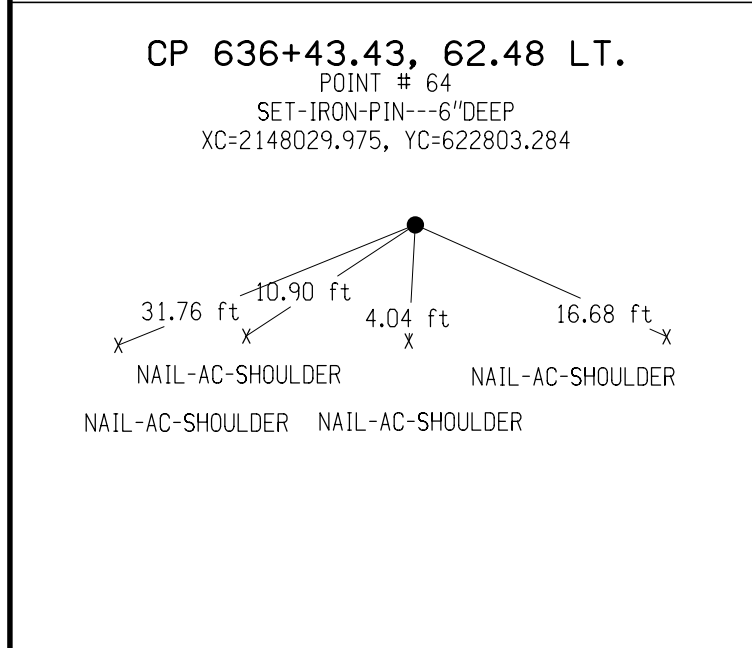
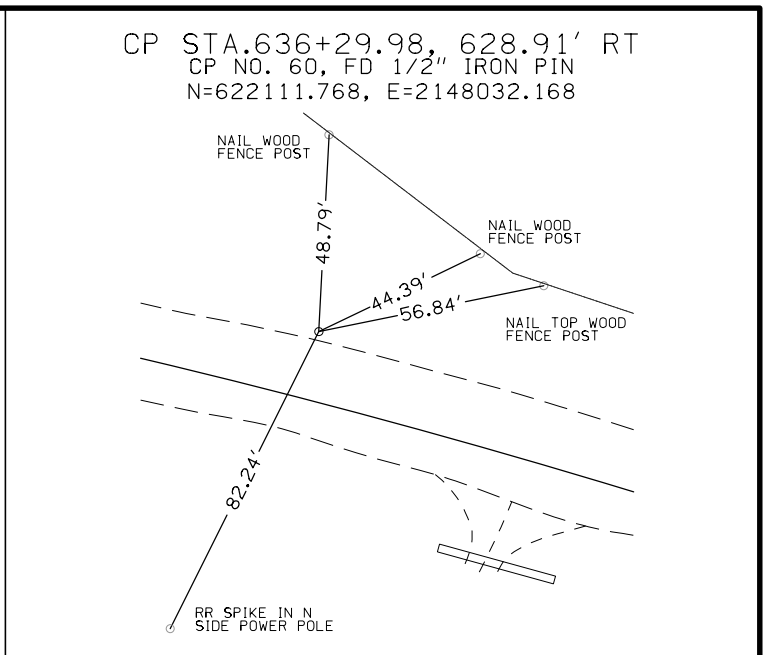
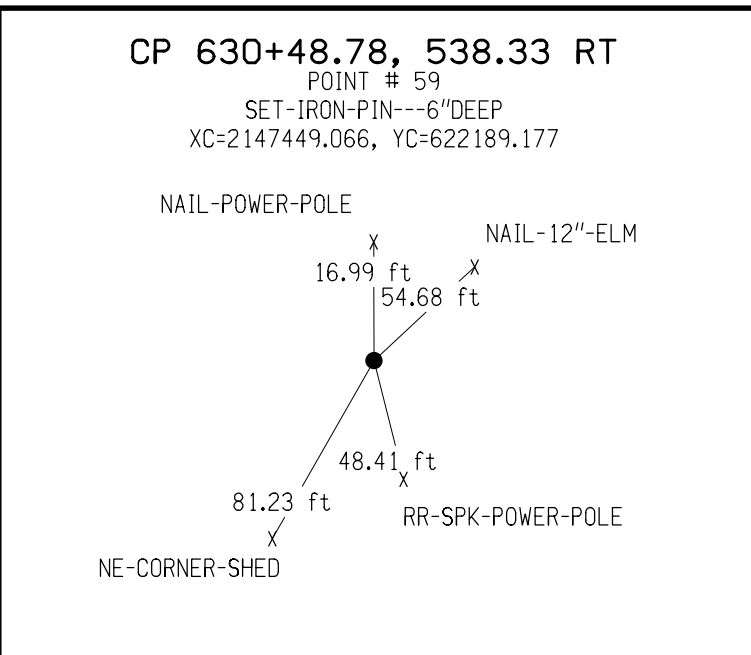
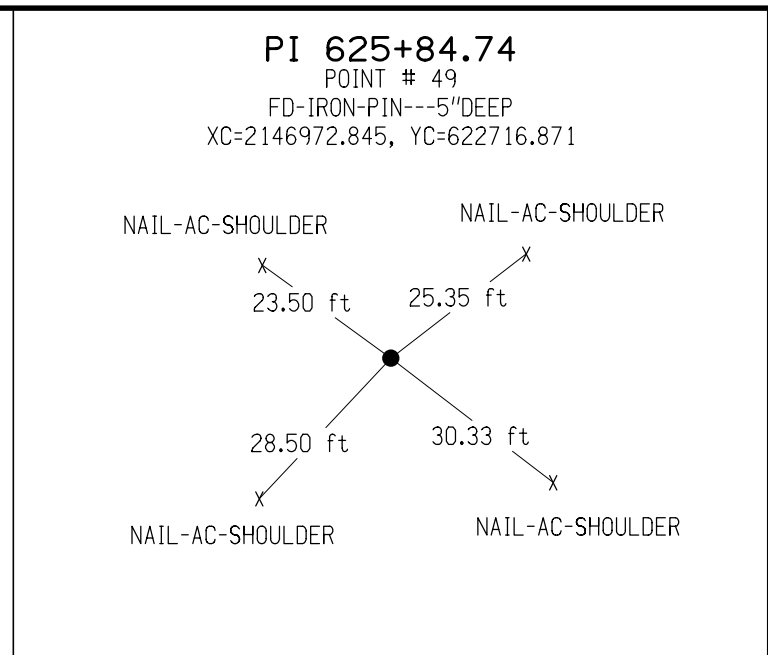
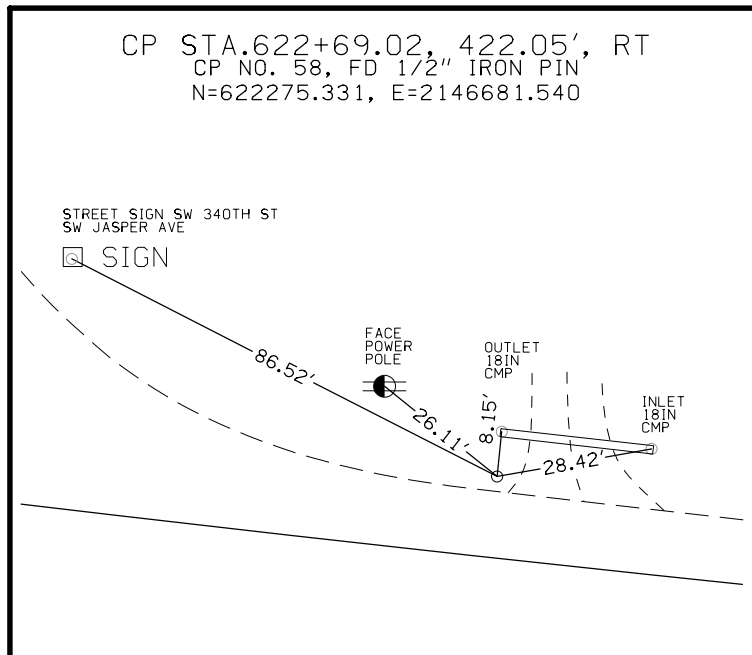
Co. Rd. F 28 Benchmarks

Table with columns: BENCHMARKS, ELEVATION. Contains benchmark data for Co. Rd. F 28, including stationing, descriptions, and elevations.

I - 380 Benchmarks

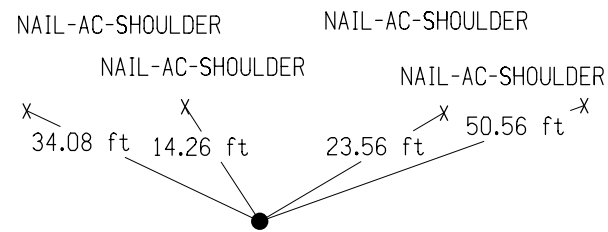
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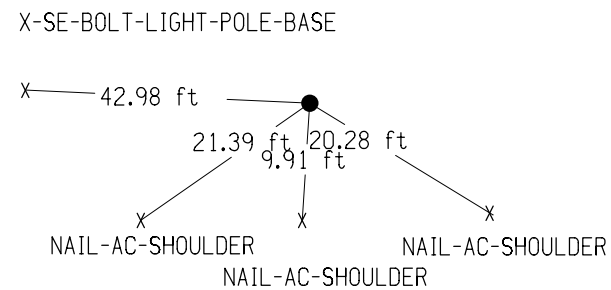
GPS 714+90.54, 70.59 RT.

POINT # G014
FD-REBAR---7"DEEP
XC=2155877.170, YC=622743.040



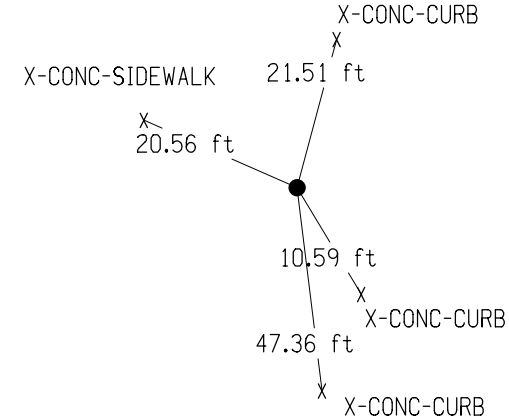
CP 723+72.19, 74.01 LT.

POINT # 70
SET-IRON-PIN---4"DEEP
XC=2156759.449, YC=622883.747



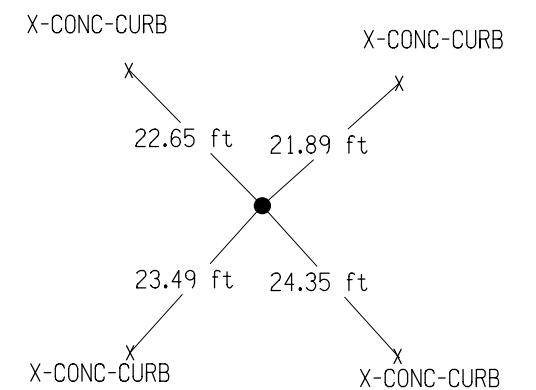
CP 725+28.79, 849.21 RT

POINT # 71
SET-IRON-PIN---4"DEEP
XC=2156911.976, YC=621959.843



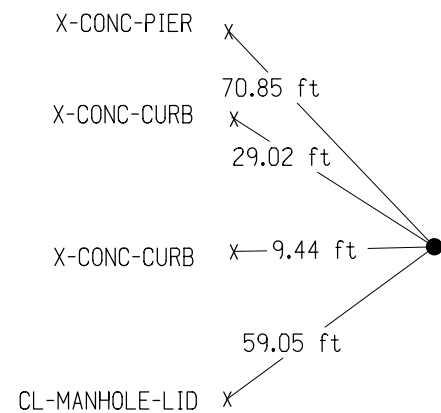
CP 725+70.68, 892.11 LT

POINT # 73
SET-IRON-PIN---4"DEEP
XC=2156961.548, YC=623700.957



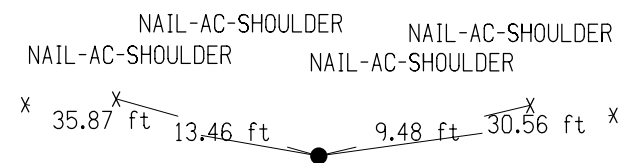
CP 726+50.69, 130.32 RT.

POINT # 72
SET-IRON-PIN---4"DEEP
XC=2157037.044, YC=622678.188



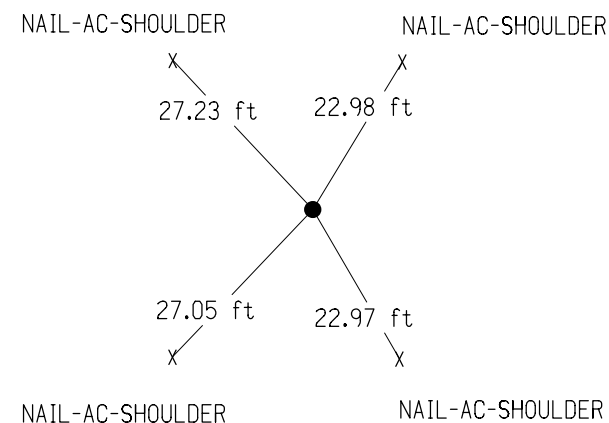
CP 733+40.52, 62.80 RT.

POINT # 74
SET-IRON-PIN---6"DEEP
XC=2157727.165, YC=622742.670



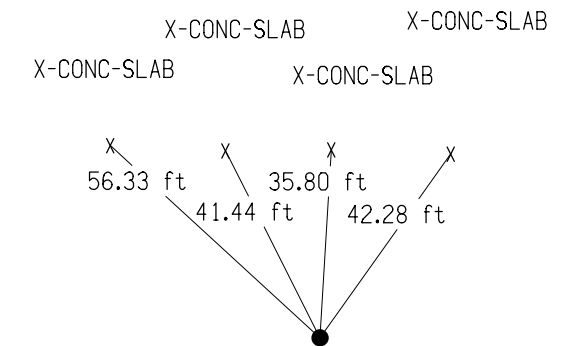
CP 740+38.90, 0.76 RT

POINT # 1
FD-REBAR---1"DEEP
XC=2158425.814, YC=622801.630



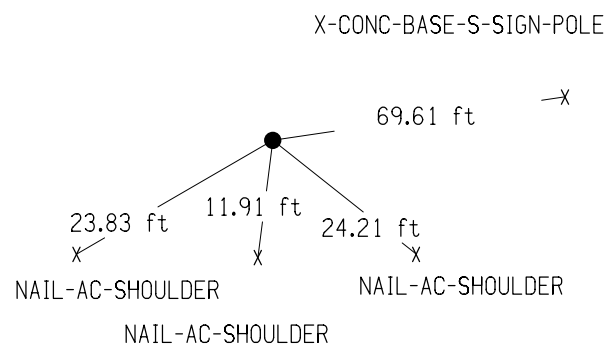
GPS 744+32.20, 104.94 RT.

POINT # G015
FD-REBAR---8"DEEP
XC=2158811.110, YC=622682.600



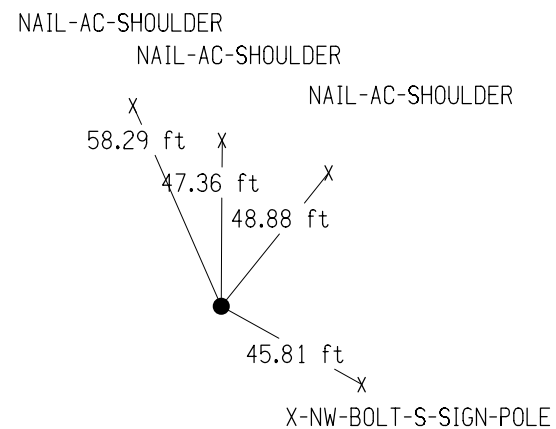
PI 749+37.94

POINT # 46
FD/CONC MONU---4"DEEP
XC=2159324.850, YC=622798.423



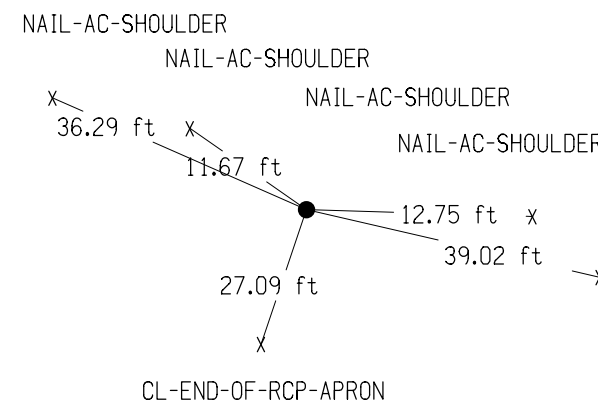
CP 755+99.57, 104.09 RT.

POINT # 75
SET-IRON-PIN---4"DEEP
XC=2159937.950, YC=622484.594



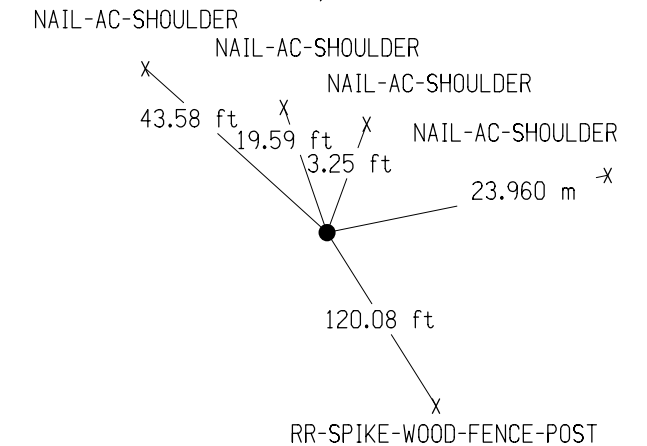
GPS 764+95.39, 62.39 RT

POINT # G016
FD-REBAR---8"DEEP
XC=2160799.980, YC=622251.780



CP 775+01.71, 62.29 RT

POINT # 76
SET-IRON-PIN---5"DEEP
XC=2161756.755, YC=621939.895

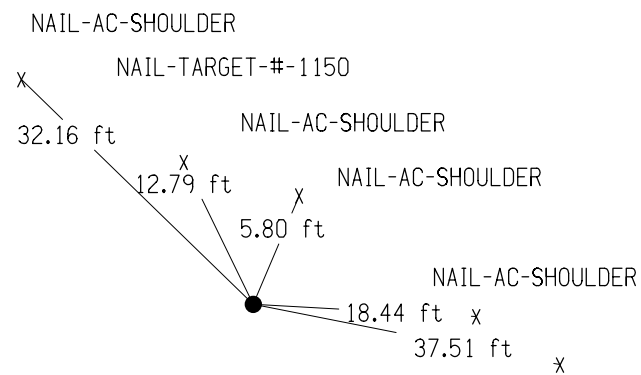


GPS 783+42.19, 63.51 RT

POINT # G017

FD-REBAR---8"DEEP

XC=2162555.440, YC=621678.170

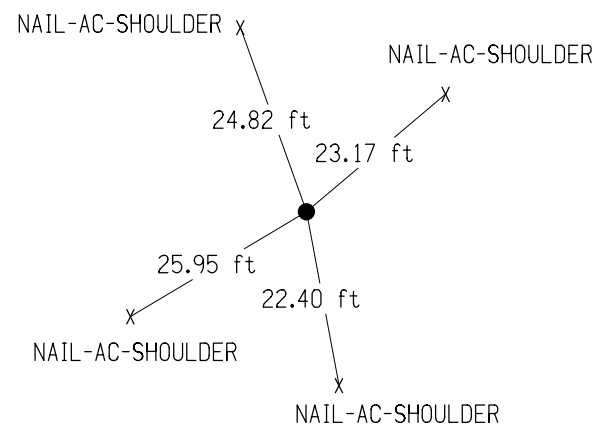


CP 784+42.93, 0.20 RT

POINT # 3

FD-REBAR---14"DEEP

XC=2162670.850, YC=621707.128

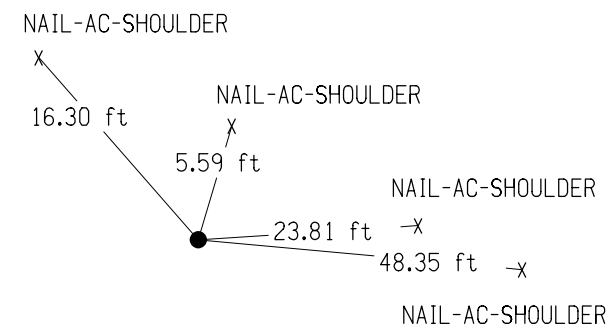


CP 791+34.67, 61.62 RT

POINT # 77

SET-IRON-PIN---4"DEEP

XC=2163309.464, YC=621434.275

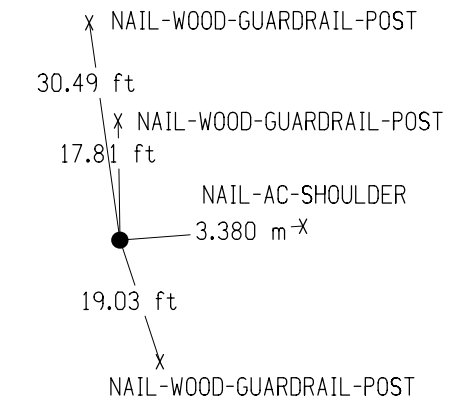


CP 800+78.11, 125.02 LT

POINT # 78

SET-IRON-PIN---4"DEEP

XC=2164264.285, YC=621319.237

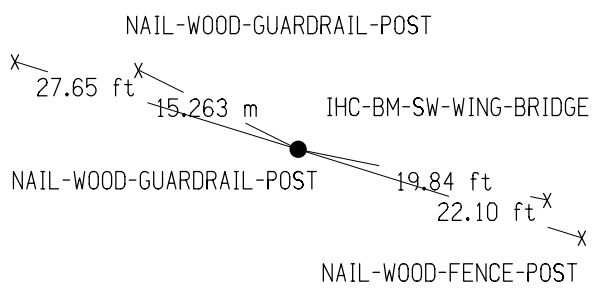


GPS 804+02.83, 62.15 RT

POINT # G018

FD-REBAR---9"DEEP

XC=2164514.980, YC=621040.620

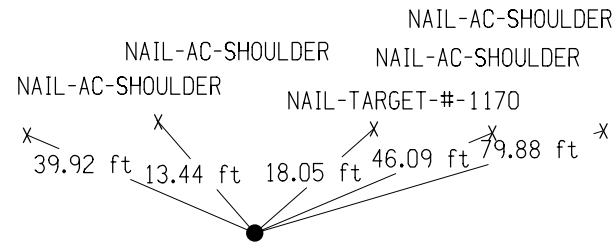


CP 813+57.46, 62.01 RT

POINT # 79

SET-IRON-PIN---3"DEEP

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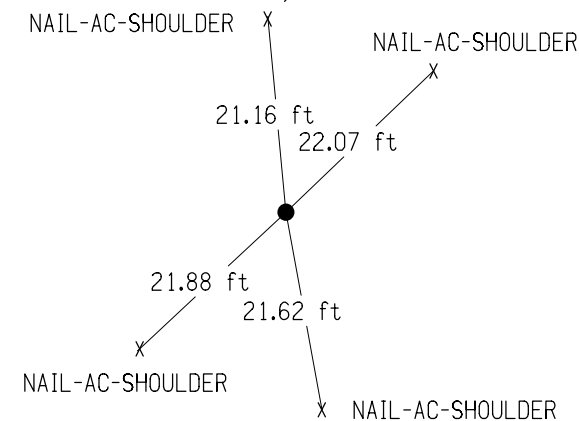


POST 820+22.36

POINT # 4

FD-REBAR---10"DEEP

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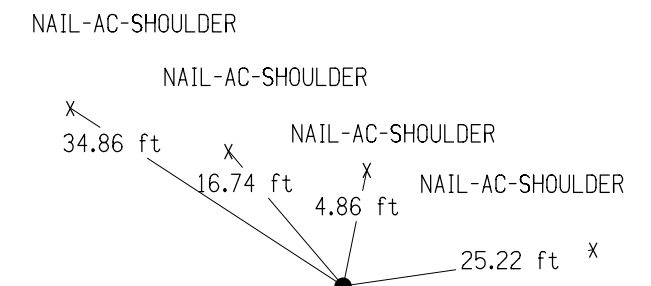


GPS 823+04.29, 63.52 RT

POINT # G019

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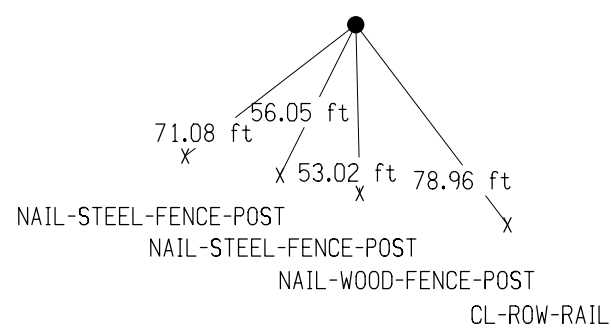


PI 839+10.31

POINT # 9

SET-IRON-PIN---4"DEEP

XC=2167868.913, YC=620012.313

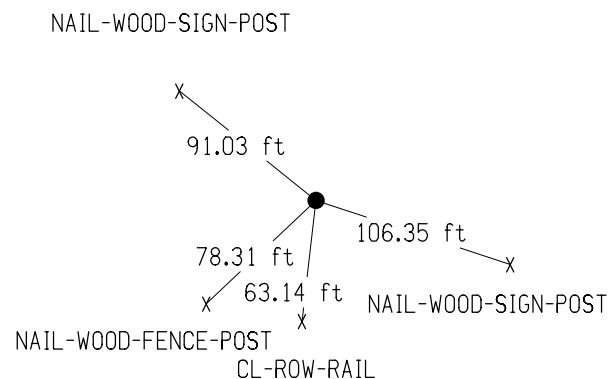


POST 839+47.97, 146.41 RT

POINT # 45

FD-IRON-PIN---2"DEEP

XC=2167924.978, YC=620013.005

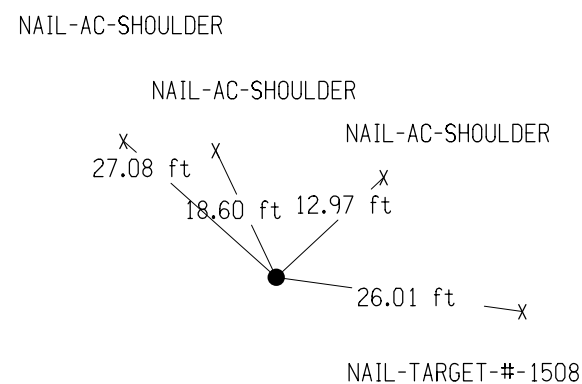


CP 839+53.58, 120.32 RT

POINT # 80

SET-IRON-PIN---4"DEEP

XC=2167934.390, YC=620037.983

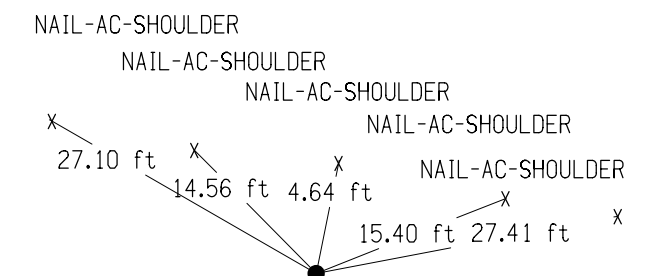


GPS 841+51.48, 63.59 RT

POINT # G020

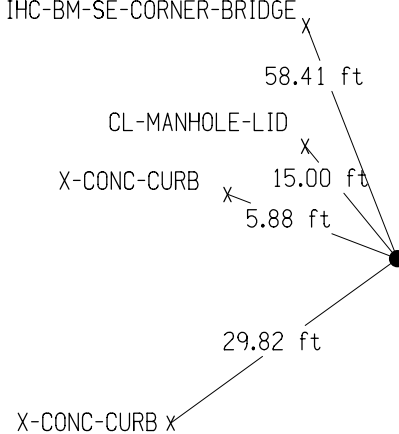
FD-REBAR---7"DEEP

XC=2168139.770, YC=620066.830



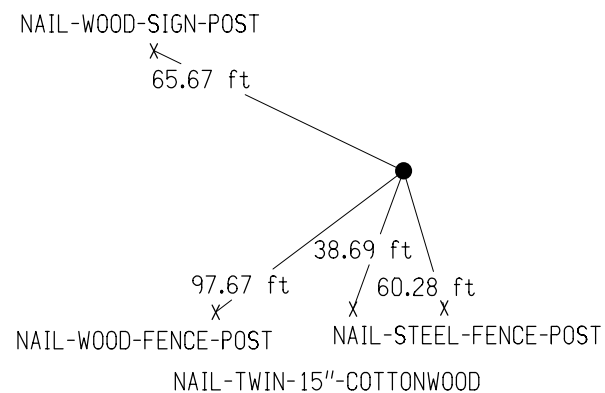
CP 850+37.65, 162.30 RT

POINT # 81
SET-IRON-PIN---4"DEEP
XC=2169021.930, YC=619887.959
IHC-BM-SE-CORNER-BRIDGE



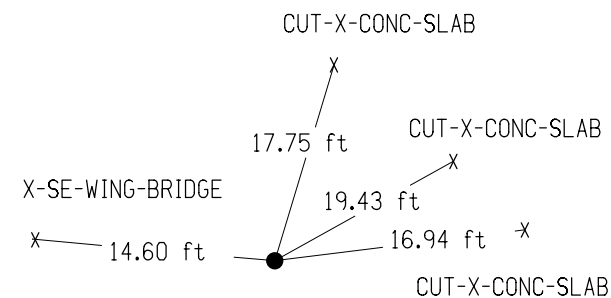
CP 860+12.24, 119.66 RT

POINT # 82
SET-IRON-PIN---6"DEEP
XC=2170006.079, YC=619919.014



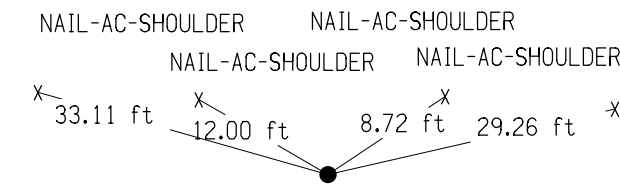
GPS 872+79.25, 69.39 RT

POINT # G021
FD-REBAR-8"DEEP
XC=2171272.370, YC=619984.900



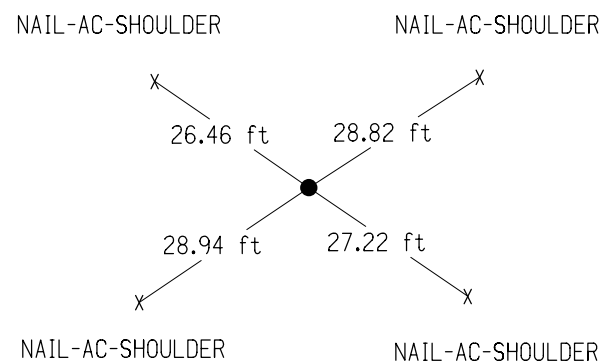
CP 884+13.63, 63.09 RT

POINT # 83
SET-IRON-PIN---7"DEEP
XC=2172406.582, YC=620005.198



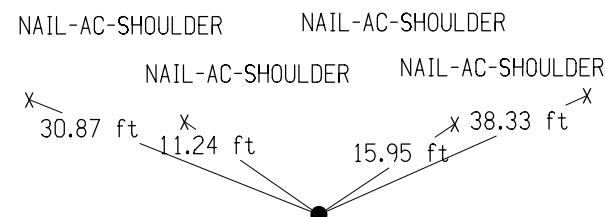
POST 889+89.37

POINT # 44
FD-REBAR---6"DEEP
XC=2172981.506, YC=620075.383



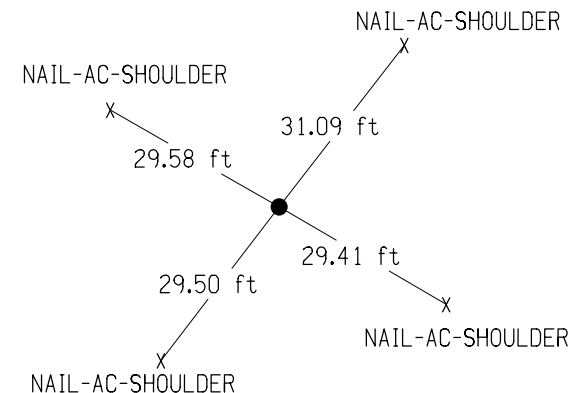
PI 895+41.62

POINT # 111
SET-HINGE-NAIL
XC=2173533.713, YC=620082.195



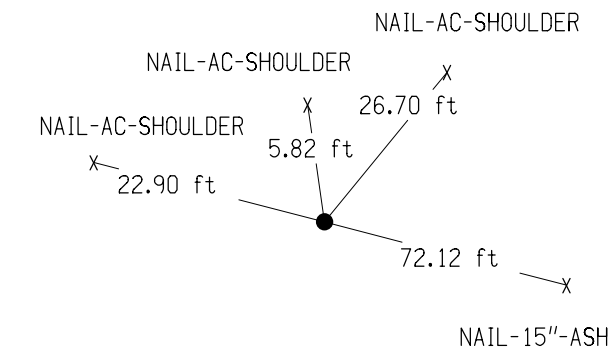
POT 900+92.24

POINT # 43
FD-IRON-PIN---4"DEEP
XC=2174076.154, YC=620194.995



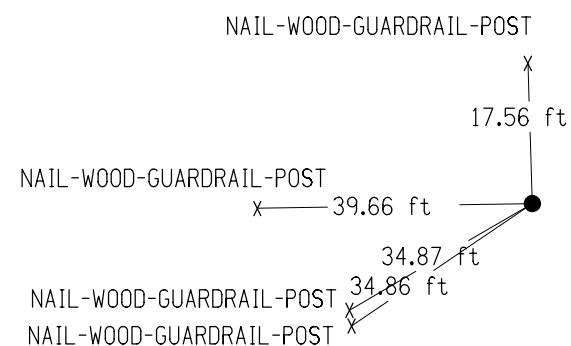
GPS 910+12.51, 63.26RT

POINT # G022
FD-REBAR-6"DEEP
XC=2174990.030, YC=620320.420



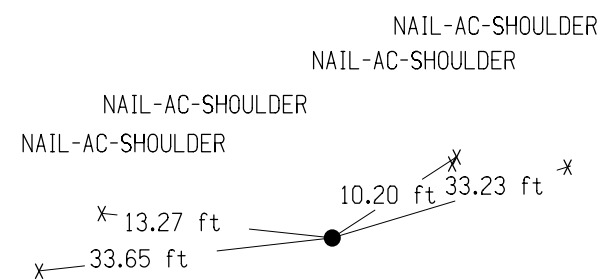
CP 917+95.14, 127.06 LT

POINT # 84
SET-IRON-PIN---4"DEEP
XC=2175717.520, YC=620666.093



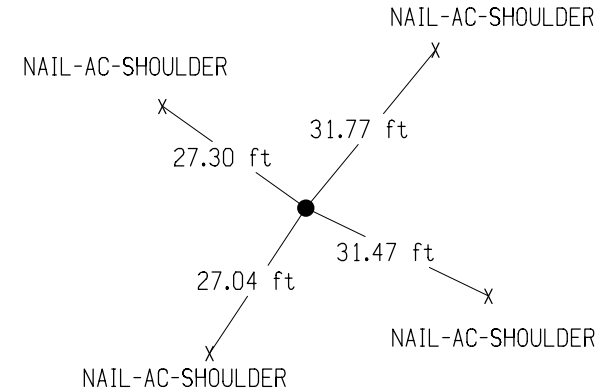
CP 925+15.16, 61.69 RT

POINT # 85
SET-IRON-PIN---4"DEEP
XC=2176460.891, YC=620627.886



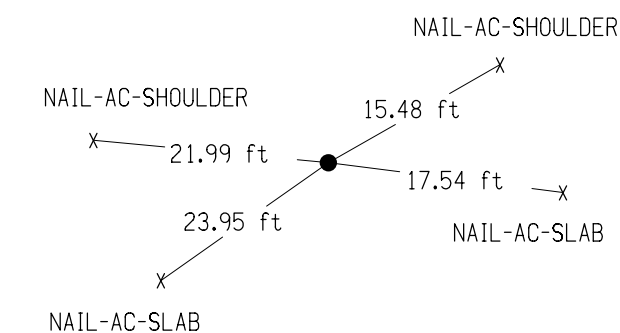
PC 930+00.13

POINT # 103
SET-IRON-PIN---8"DEEP
XC=2176923.143, YC=620787.022

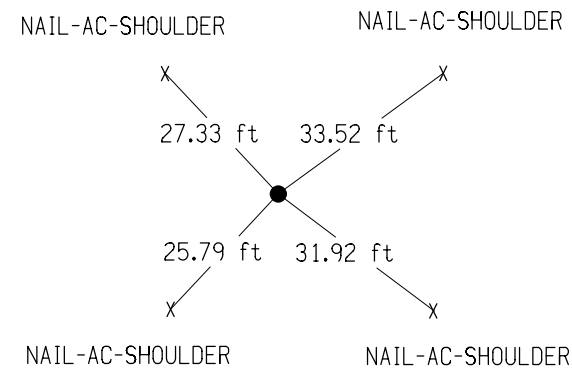


GPS 932+86.52, 63.74 RT

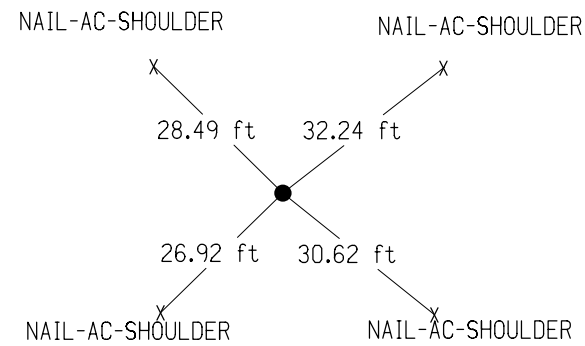
POINT # G023
FD-REBAR-6"DEEP
XC=2177214.720, YC=620775.320



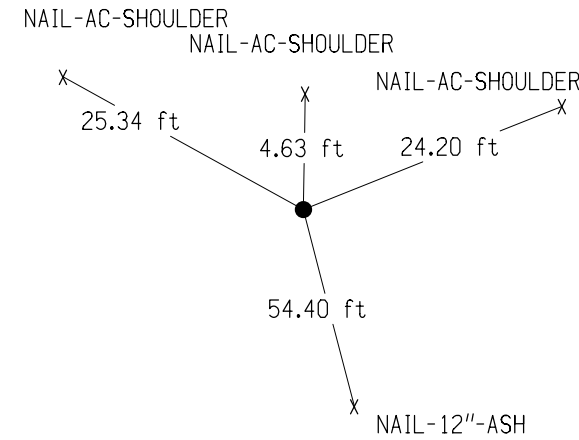
PT 942+21.91
 POINT # 105
 SET-IRON-PIN---6"DEEP
 XC=2178136.704, YC=620906.832



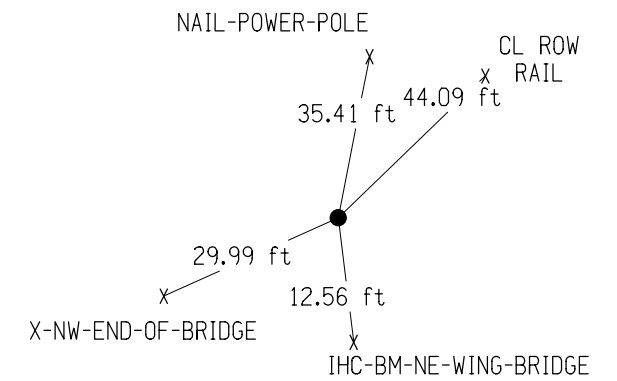
POT 942+23.53
 POINT # 42
 FD-REBAR-3"-DEEP
 XC=2178138.331, YC=620906.818



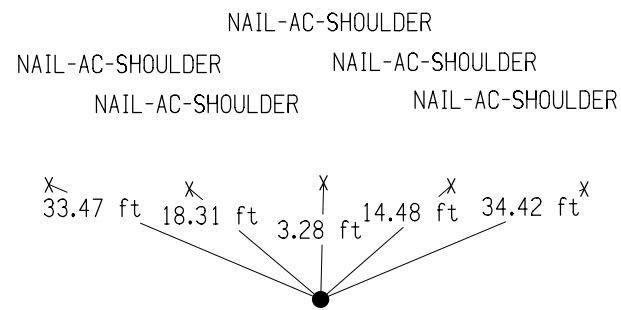
GPS 949+63.99, 60.67 RT
 POINT # G024
 FD-REBAR-8"-DEEP
 XC=2178878.260, YC=620840.070



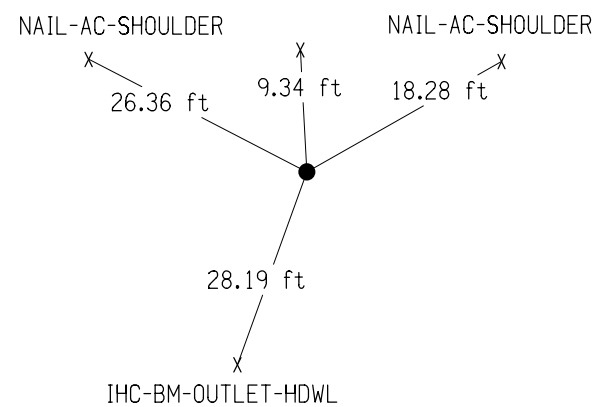
CP 960+42.86, 122.56 LT
 POINT # 86
 SET-IRON-PIN---6"DEEP
 XC=2179958.600, YC=621014.436



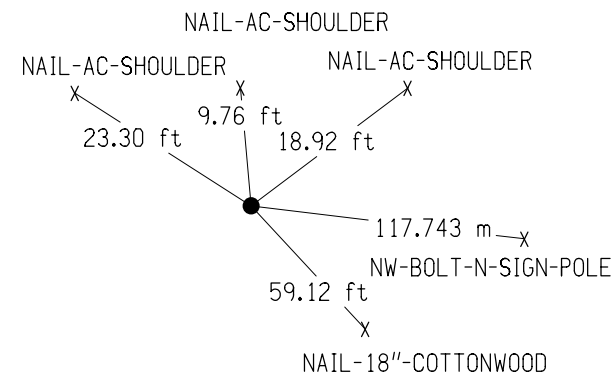
CP 966+18.31, 60.60 RT
 POINT # 87
 SET-IRON-PIN---5"DEEP
 XC=2180532.527, YC=620826.554



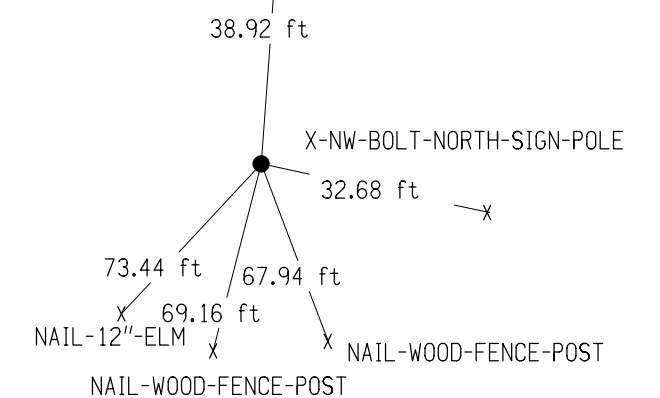
CP 977+54.38, 66.74 RT
 POINT # 88
 SET-IRON-PIN---5"DEEP
 XC=2181668.512, YC=620811.082



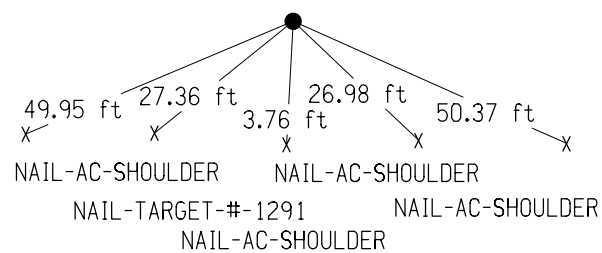
GPS 986+64.53, 67.25 RT
 POINT # G025
 FD-REBAR-6"-DEEP
 XC=2182578.630, YC=620803.100



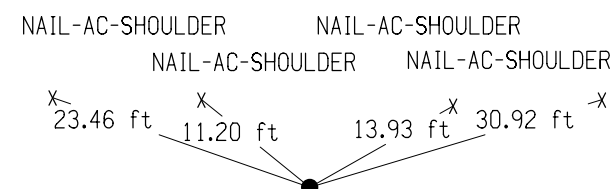
CP 995+73.44, 97.14 RT
 POINT # 89
 SET-IRON-PIN---6"DEEP
 XC=2183487.263, YC=620765.738



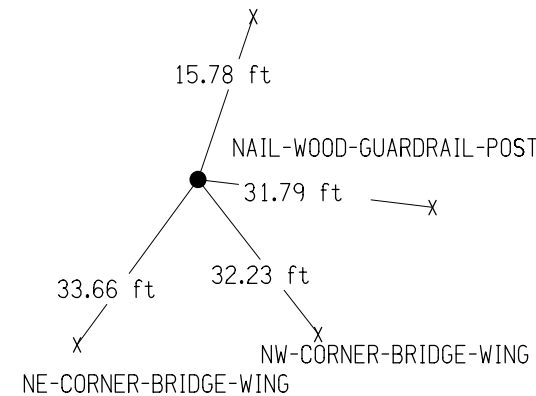
CP 1011+08.02, 62.78 LT
 POINT # 90
 SET-IRON-PIN---6"DEEP
 XC=2185023.099, YC=620913.049



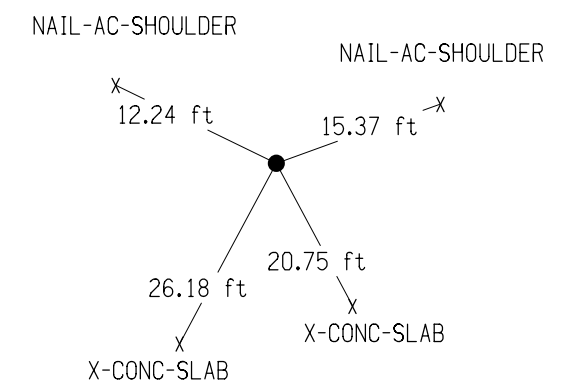
GPS 1018+29.48, 64.44 RT
 POINT # G026
 FD-REBAR---8"DEEP
 XC=2185743.490, YC=620779.910



CP 1029+52.64, 134.67 LT
 POINT # 91
 SET-IRON-PIN---5"DEEP
 XC=2186868.254, YC=620969.789

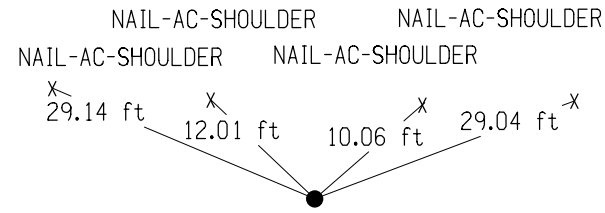


CP 1039+73.96, 62.62 RT
 POINT # 92
 SET-IRON-PIN---5"DEEP
 XC=2187887.913, YC=620764.114



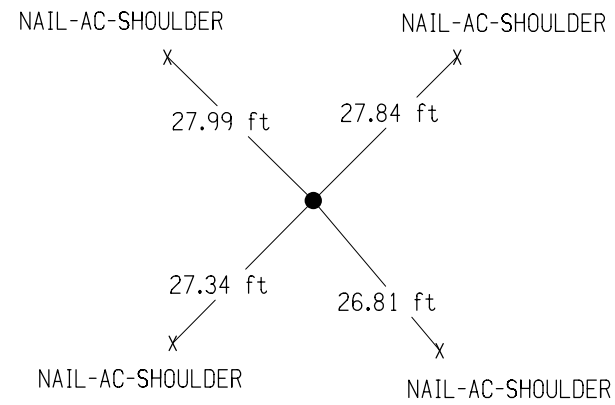
GPS 1049+99.14, 64.43 RT

POINT # G027
FD-REBAR---8"DEEP
XC=2188913.050, YC=620753.890



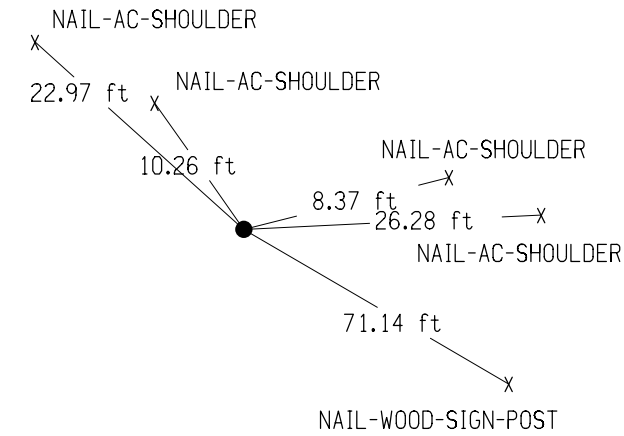
POST 1054+10.67

POINT # 93
FD-REBAR---6"DEEP
XC=2189325.090, YC=620814.936



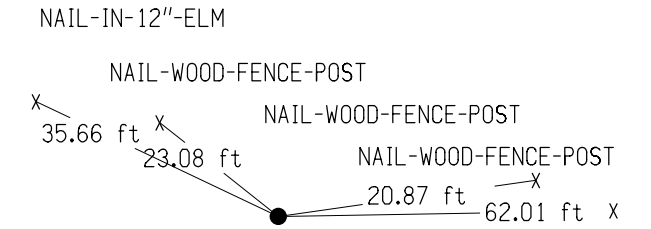
GPS 1065+84.20, 61.90 RT

POINT # G028
FD-REBAR---8"DEEP
XC=2190476.310, YC=620625.020



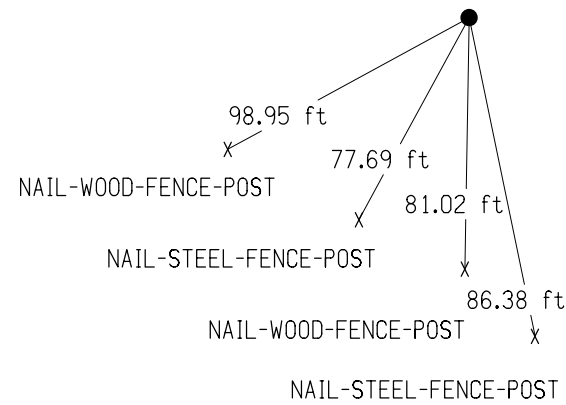
PI 1066+45.52

POINT # 100
SET-IRON-PIN---5"DEEP
XC=2190559.895, YC=620804.794



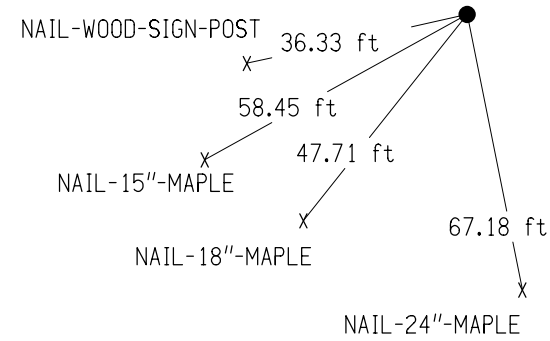
CP 1071+34.39, 61.20 RT

POINT # 94
SET-IRON-PIN---6"DEEP
XC=2191002.120, YC=620485.238



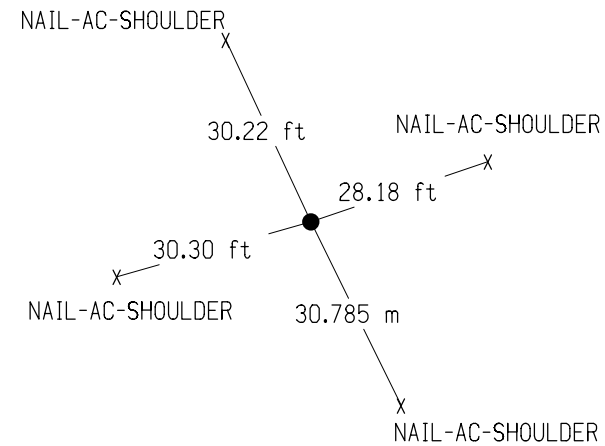
GPS 1076+49.17, 61.80 RT

POINT # G029
FD-REBAR---8"DEEP
XC=2191479.420, YC=620308.180



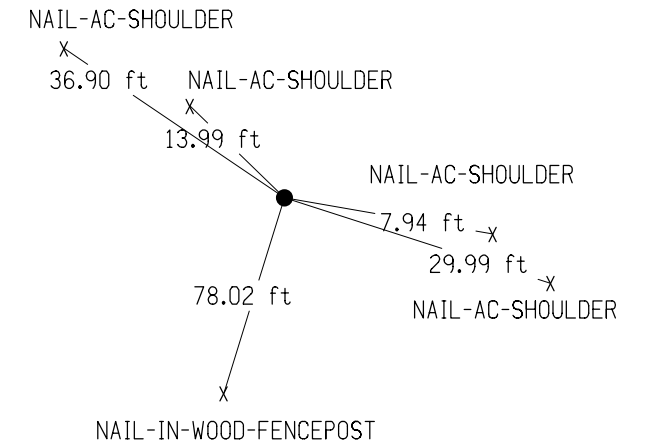
POT 1078+44.97

POINT # 41
FD-REBAR---2"DEEP
XC=2191682.508, YC=620285.996



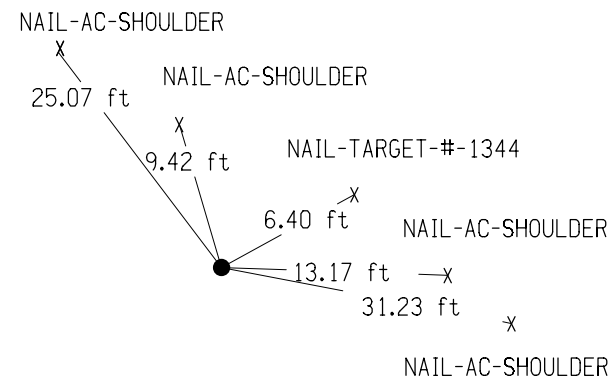
CP 1088+94.23, 61.10 RT

POINT # 95
SET-IRON-PIN---4"DEEP
XC=2192609.348, YC=619790.364



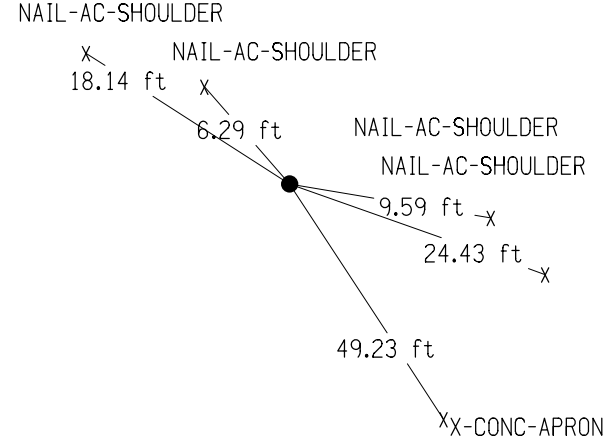
GPS 1100+29.11, 63.50 RT

POINT # G030
FD-REBAR---8"DEEP
XC=2193638.530, YC=619312.100



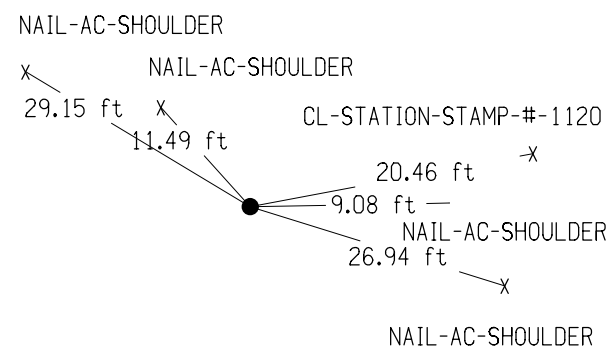
CP 1110+21.59, 60.28 RT

POINT # 96
SET-IRON-PIN---5"DEEP
XC=2194540.809, YC=618898.673



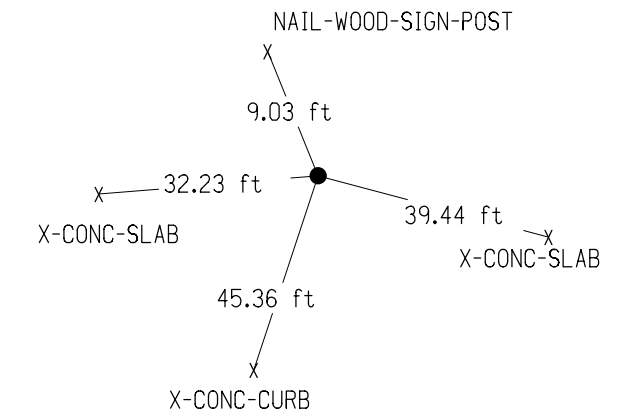
CP 1121+55.38, 61.23 RT

POINT # 97
SET-IRON-PIN---6"DEEP
XC=2195569.617, YC=618422.175

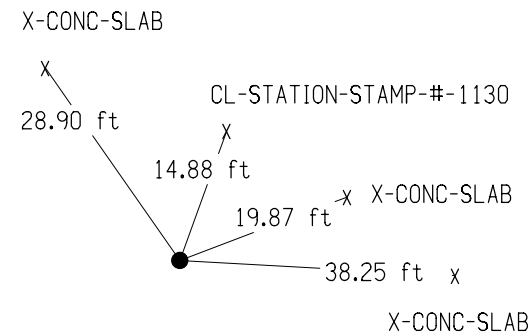


POT 1127+45.33

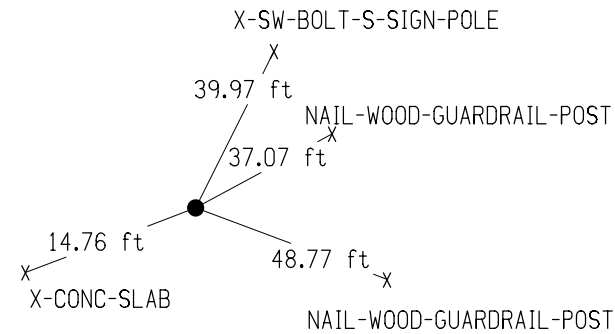
POINT # 61
FD-REBAR---17"DEEP
XC=2150301.567, YC=619456.592



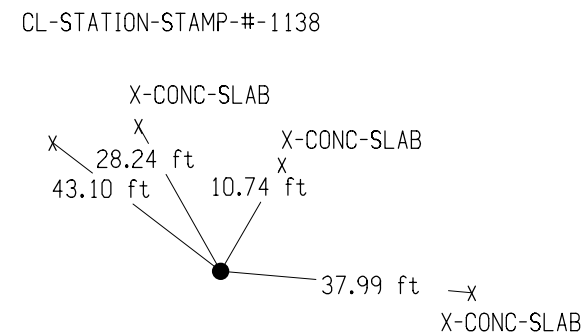
GPS 1131+73.12, 64.73 RT
 POINT # G031
 FD-REBAR---9"DEEP
 XC=2196492.000, YC=617992.060



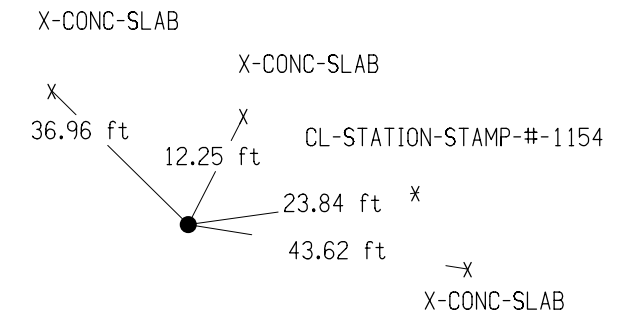
CP 1138+11.57, 16.44 LT
 POINT # 62
 SET-IRON-PIN---6"DEEP
 XC=2149856.717, YC=620425.741



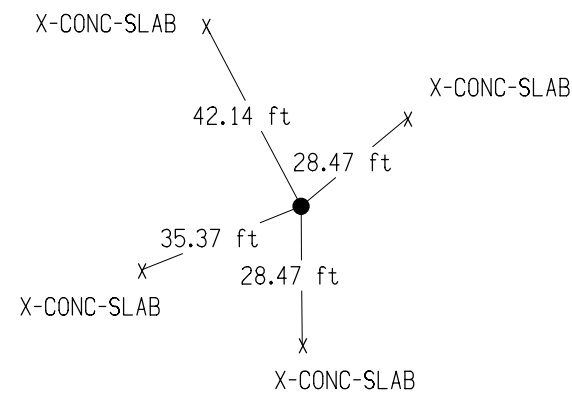
CP 1140+14.50, 61.20 RT
 POINT # 98
 SET-IRON-PIN---6"DEEP
 XC=2197257.252, YC=617642.293



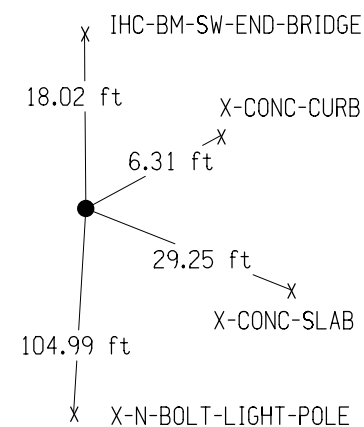
GPS 1155+51.73, 62.61 RT
 POINT # G032
 FD-REBAR---6"DEEP
 XC=2198652.080, YC=616996.140



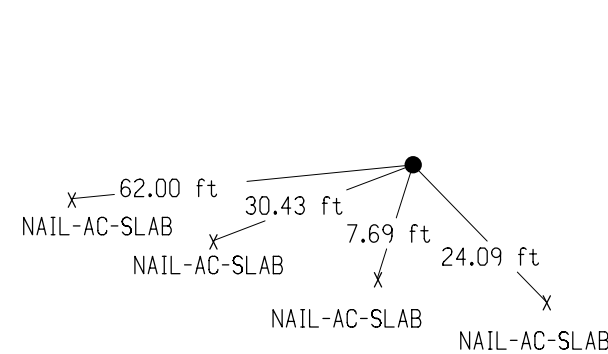
POT 1155+97.06
 POINT # 39
 FD-IRON-PIN---4"DEEP
 XC=2198719.495, YC=617033.962



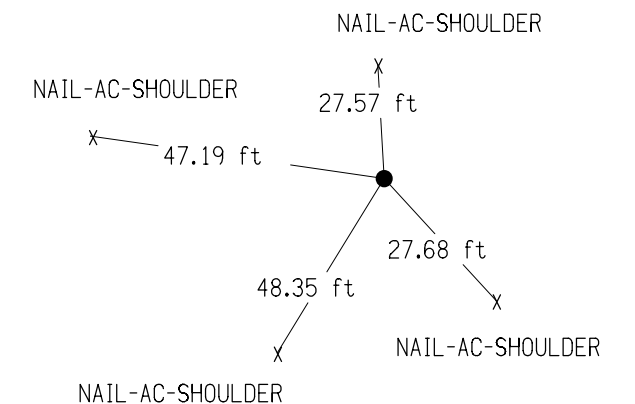
CP 1161+94.29, 100.45 LT
 POINT # 63
 SET-IRON-PIN---5"DEEP
 XC=2148819.348, YC=622572.435



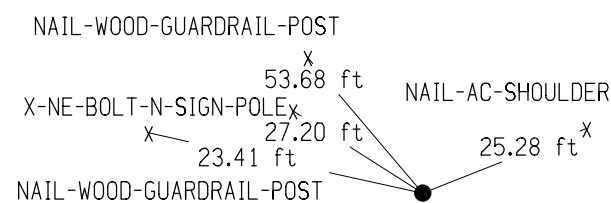
CP 1167+66.68, 471.49 RT
 POINT # 66
 SET-IRON-PIN---5"DEEP
 XC=2149112.026, YC=623326.805



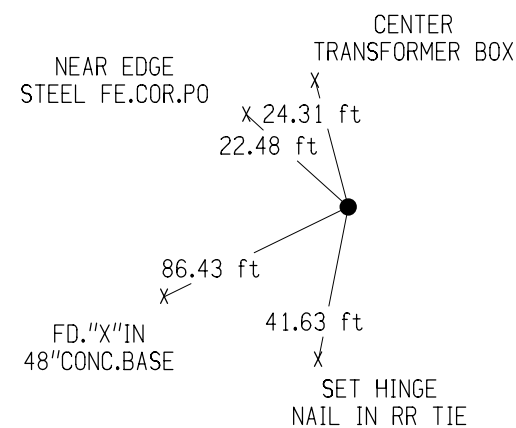
CP 1180+19.46, 15.10 RT
 POINT # 65
 SET-IRON-PIN---6"DEEP
 XC=2148189.359, YC=624289.321



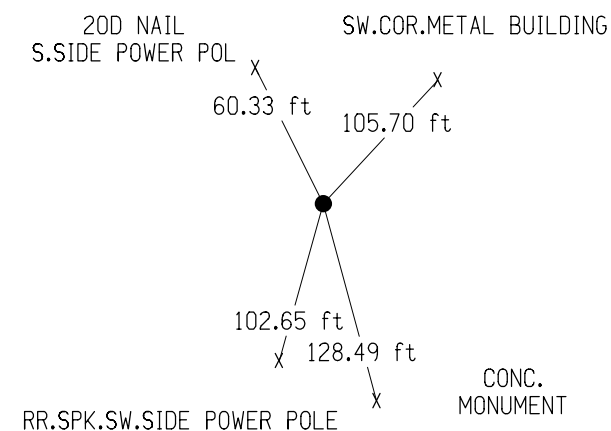
TS 1183+81.20
 POINT # 48
 FD-ROW-RAIL---12"DEEP
 XC=2148029.718, YC=624614.281



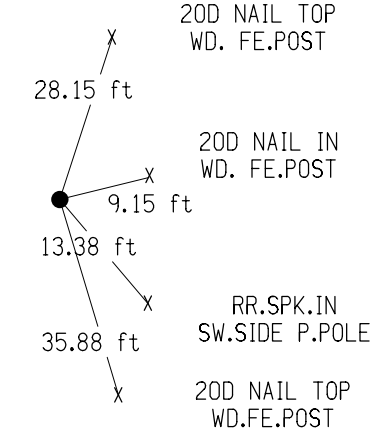
CP STA
 CP,SET IRON PIN 0.4' DEEP
 CP NO. 368
 XC=2149688.768, YC=625463.294

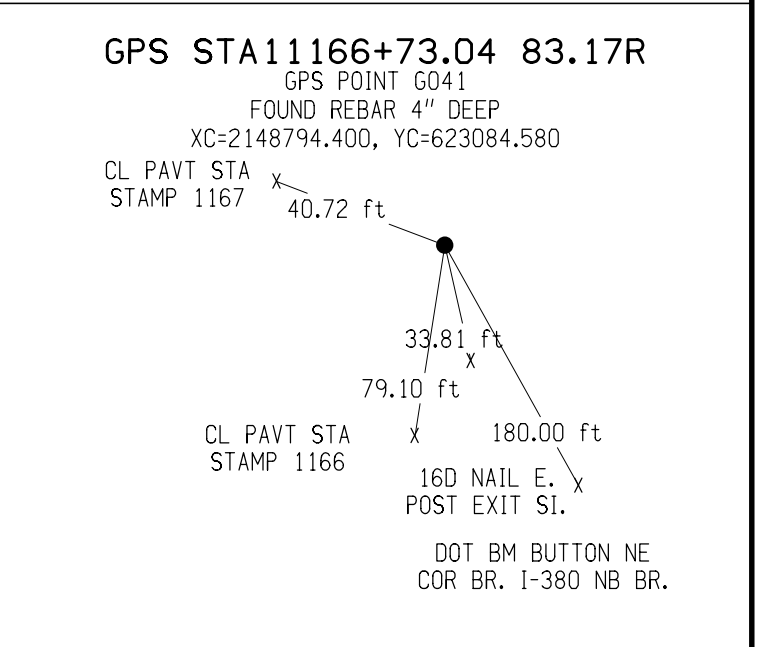
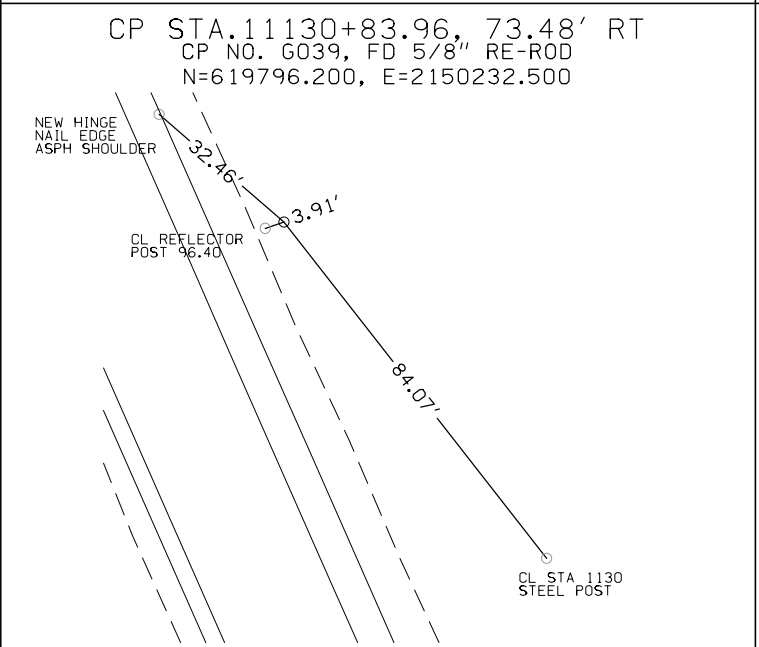
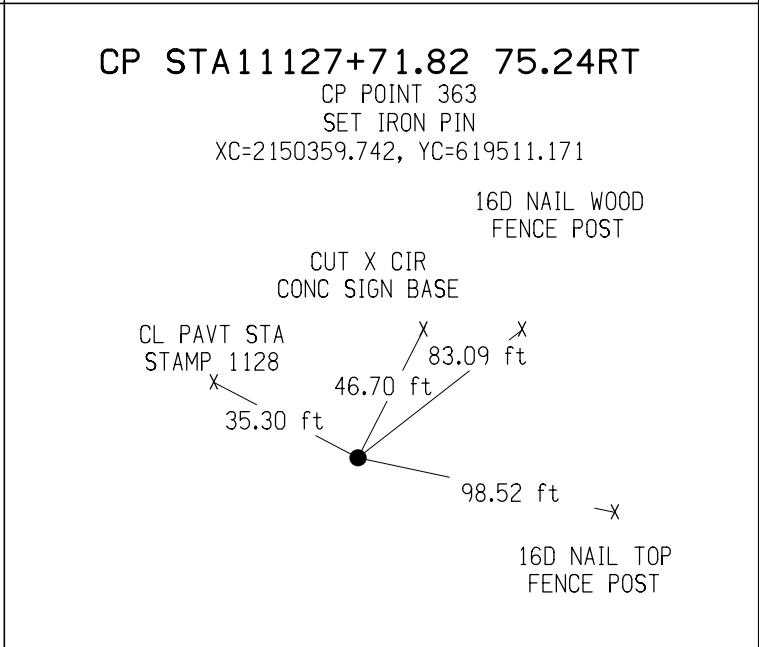
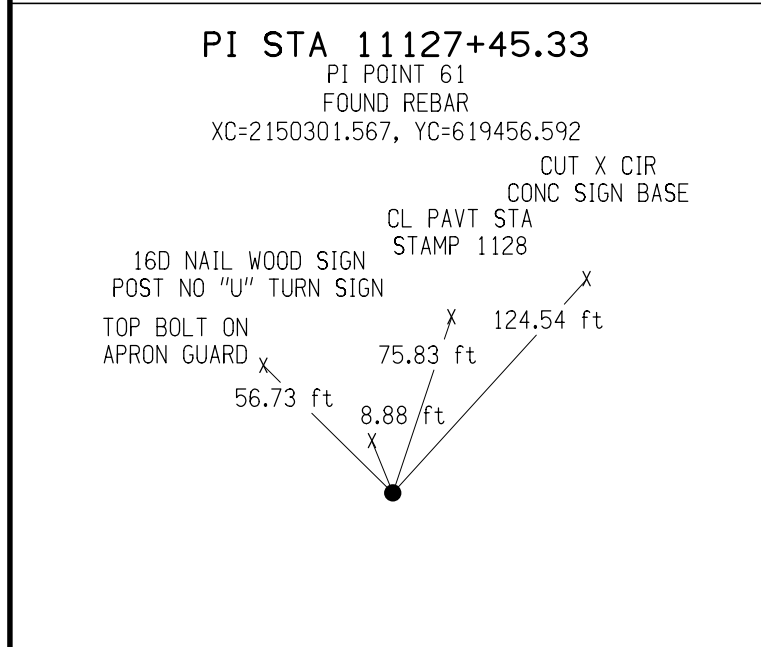
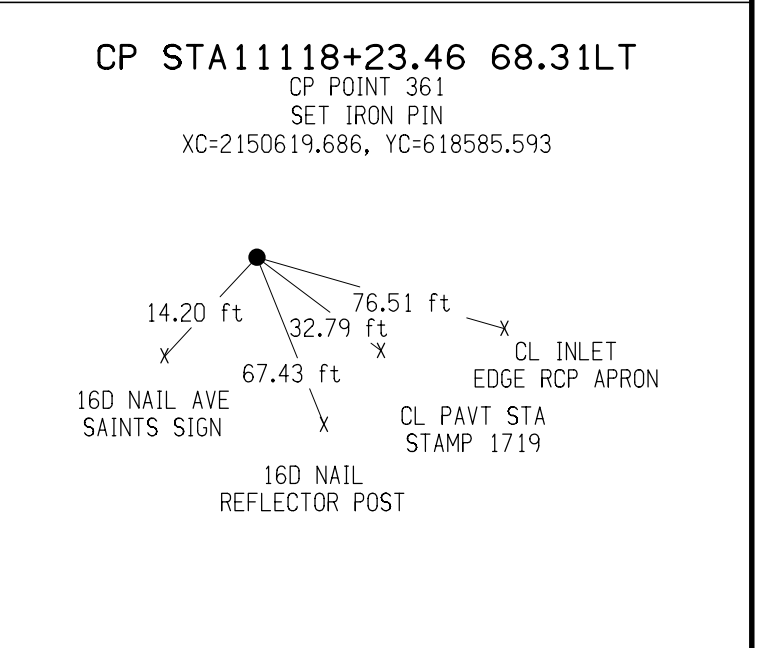
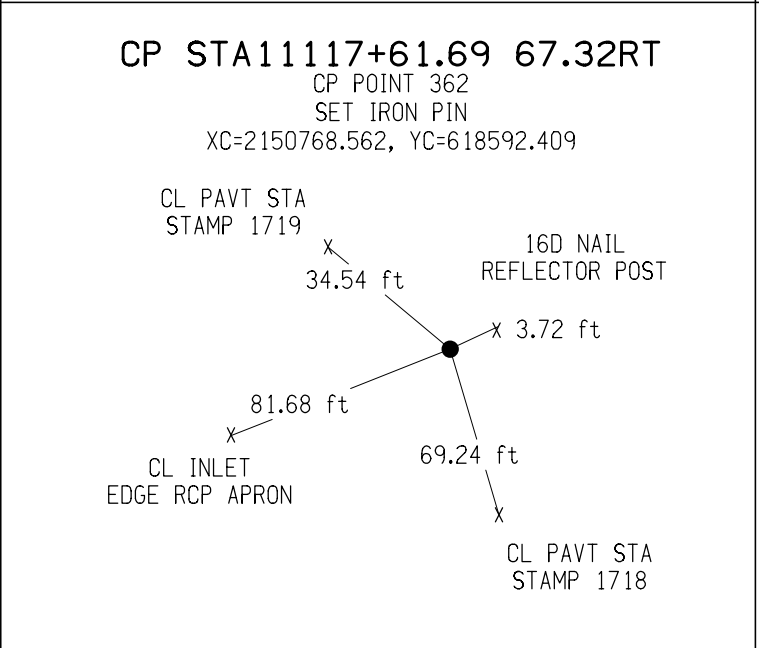
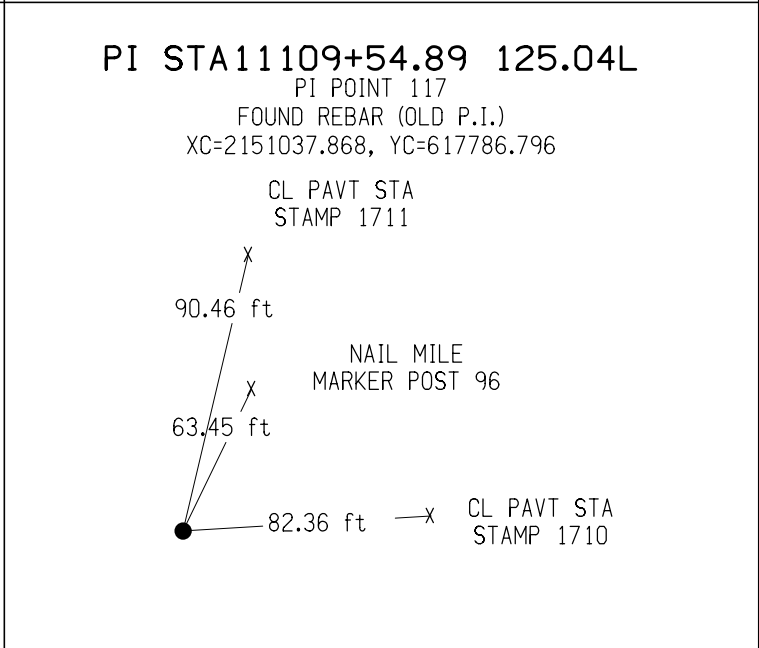
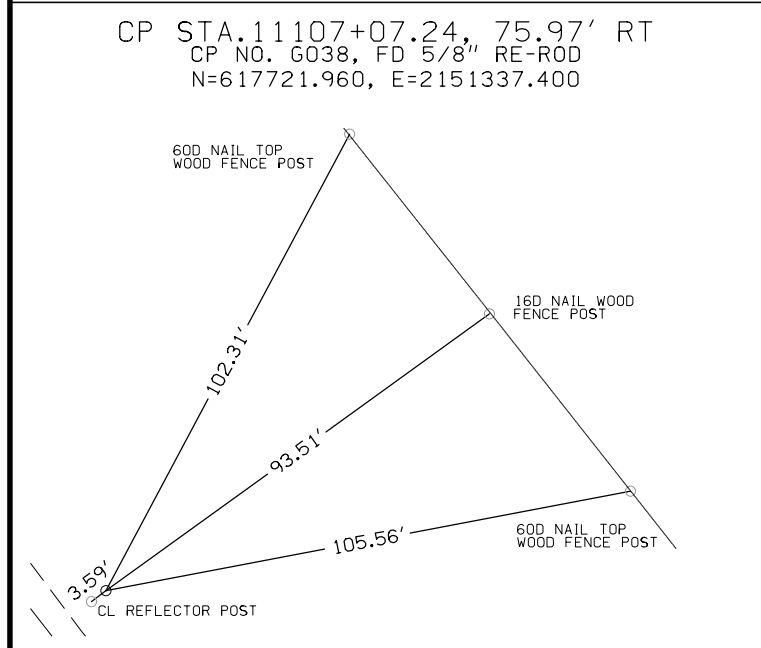
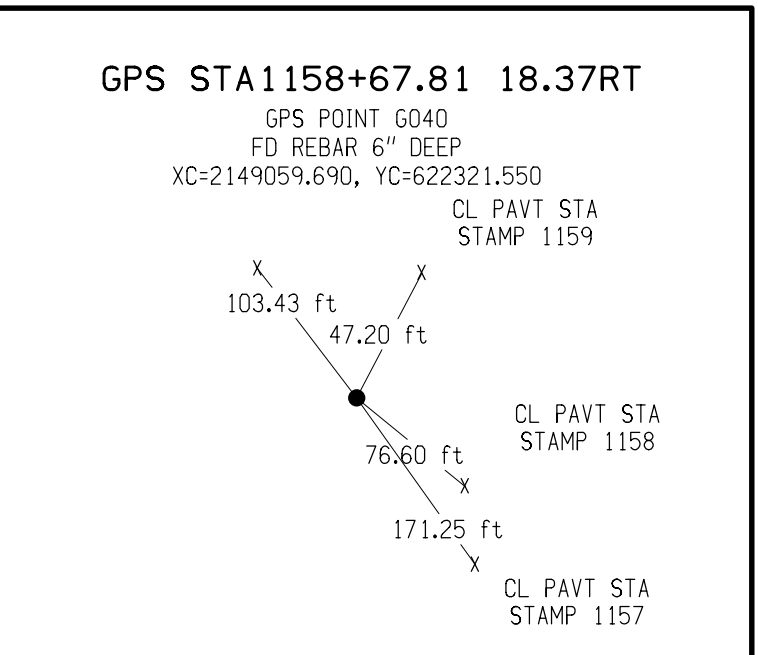
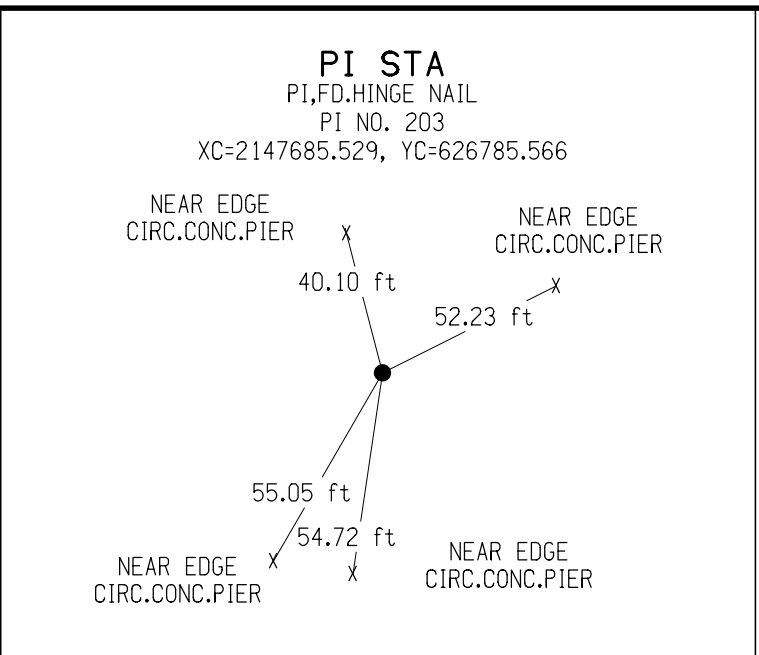
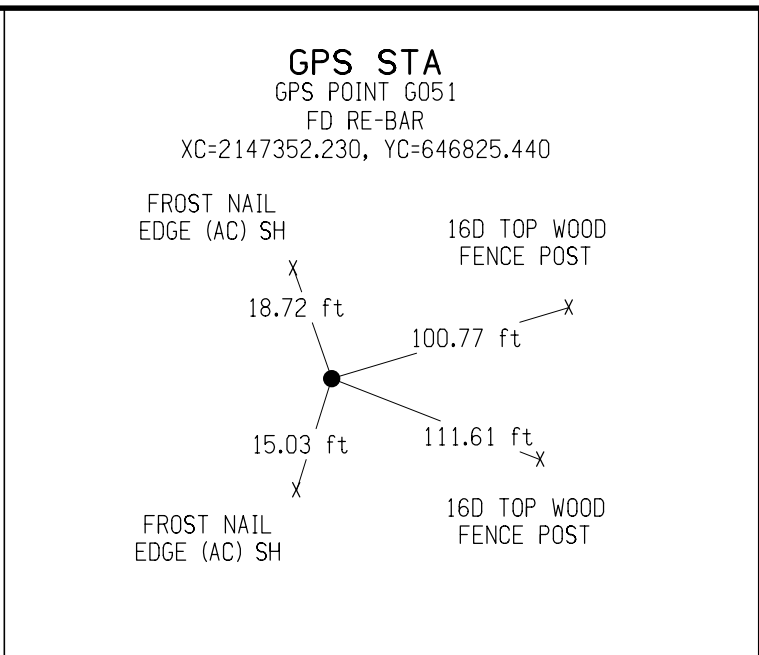
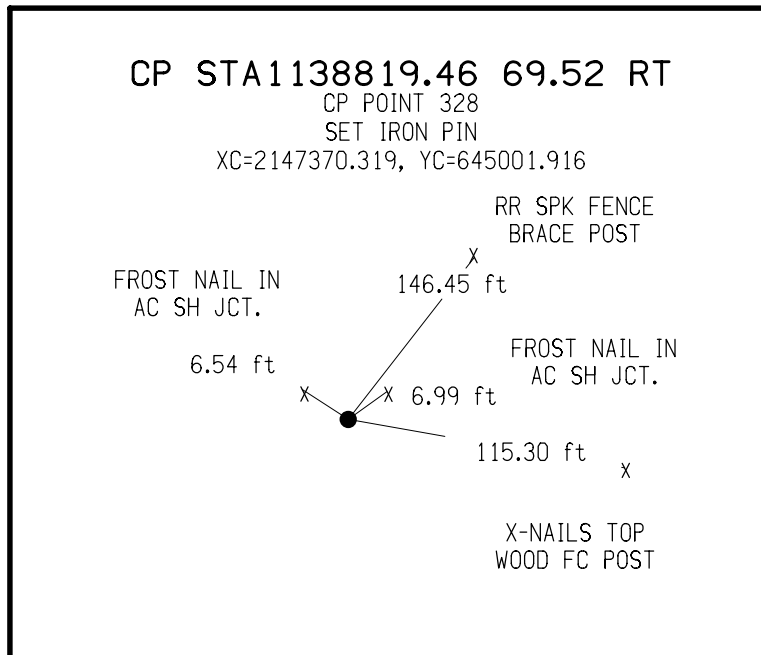


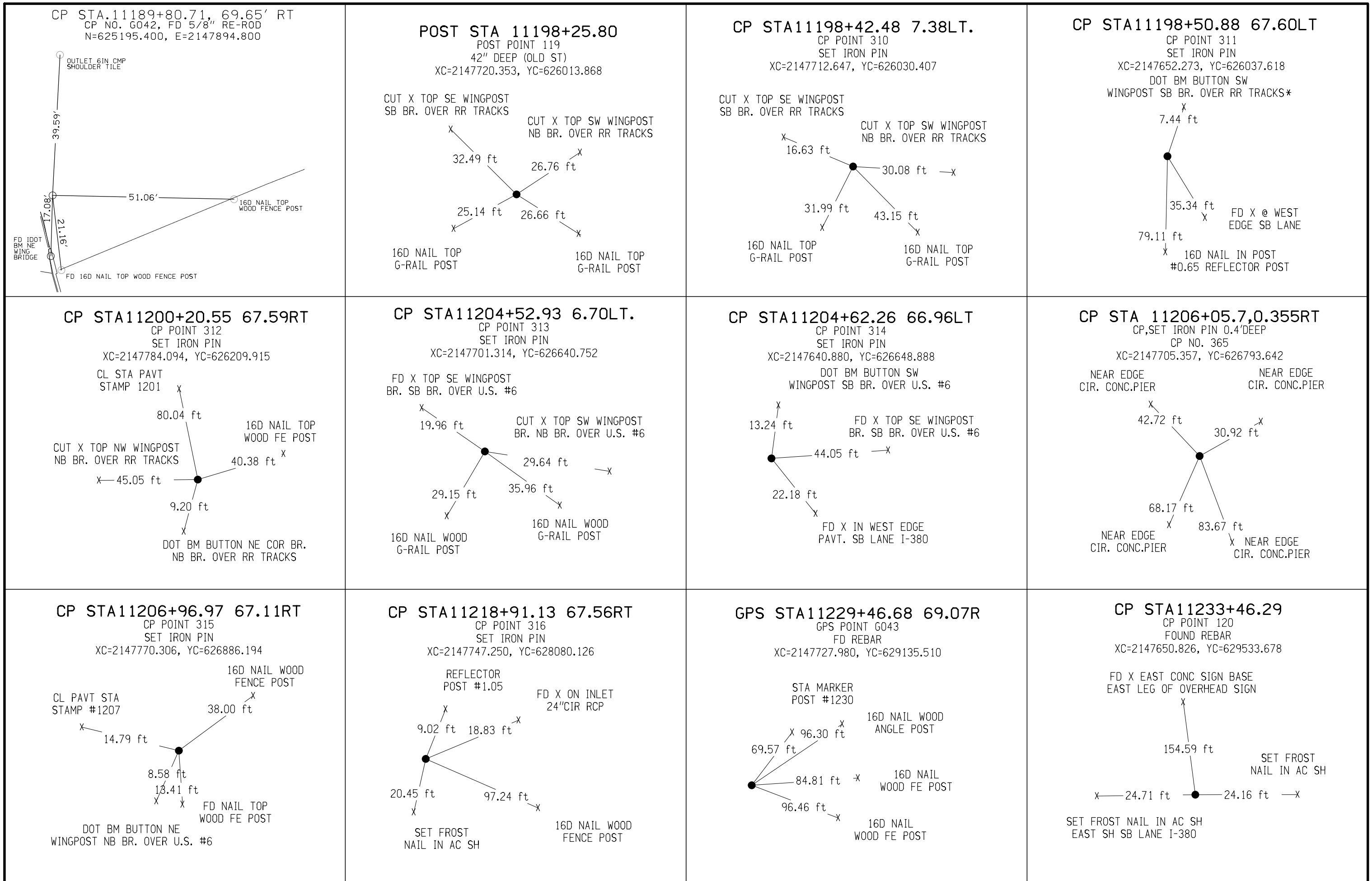
CP STA
 CP,SET IRON PIN 0.5' DEEP
 CP NO. 367
 XC=2149842.545, YC=625965.820



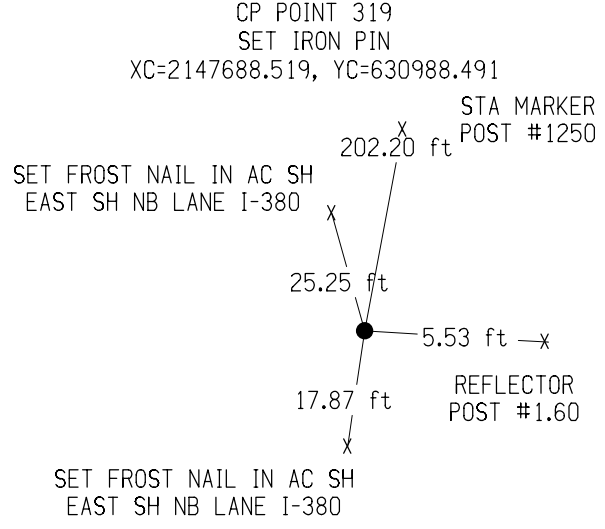
CP STA
 CP,SET IRON PIN 0.6' DEEP
 CP NO. 359
 XC=2149158.353, YC=619695.551



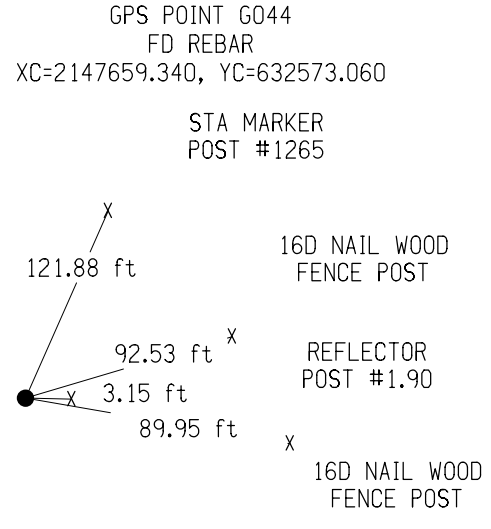




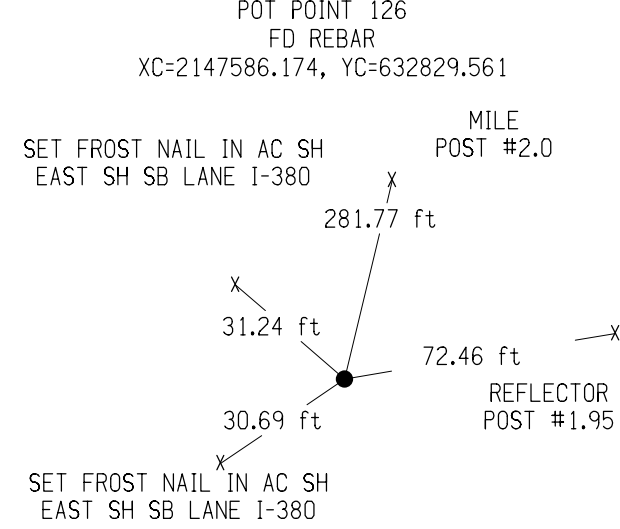
CP STA11248+00.08 66.09RT



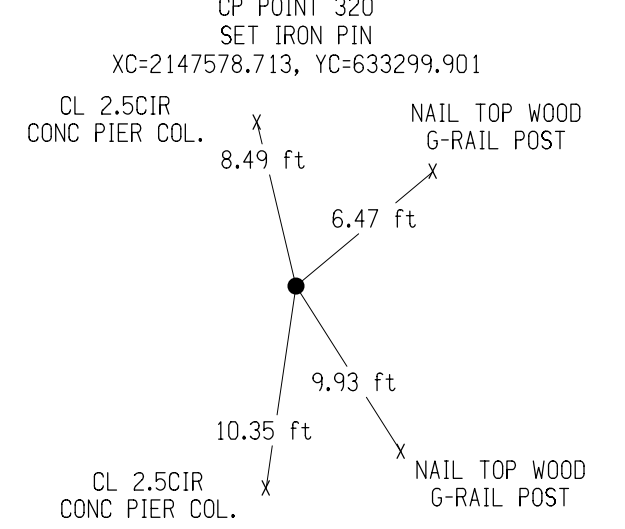
GPS STA11263+84.92 68.10R



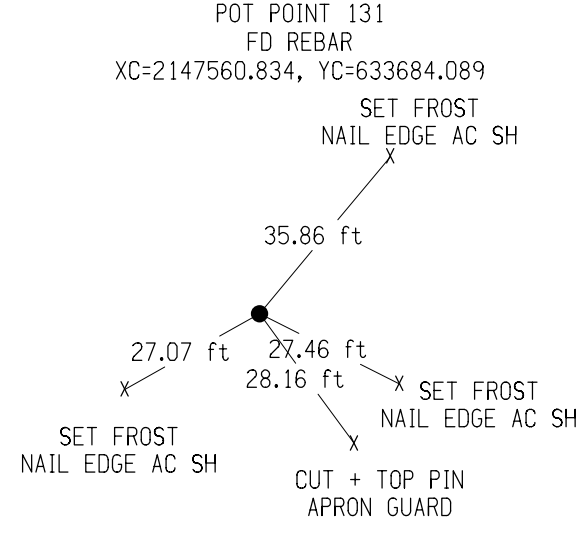
POT STA 11266+42.81



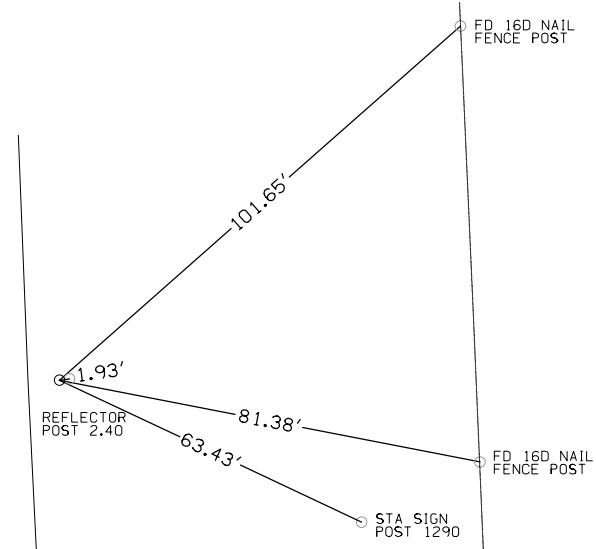
CP STA11271+13.17 3.91RT.



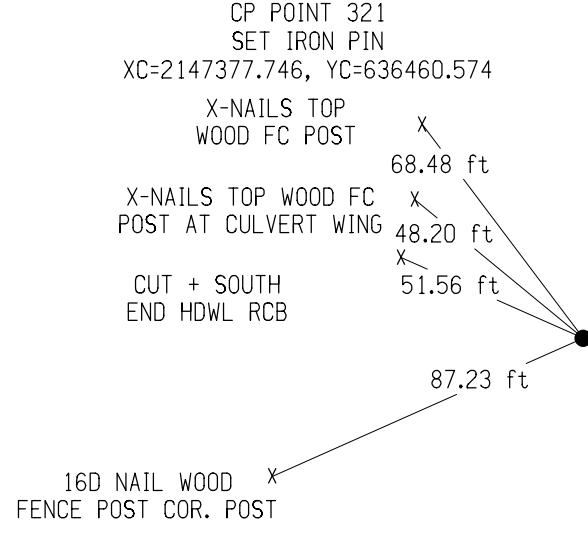
POT STA 11274+97.73



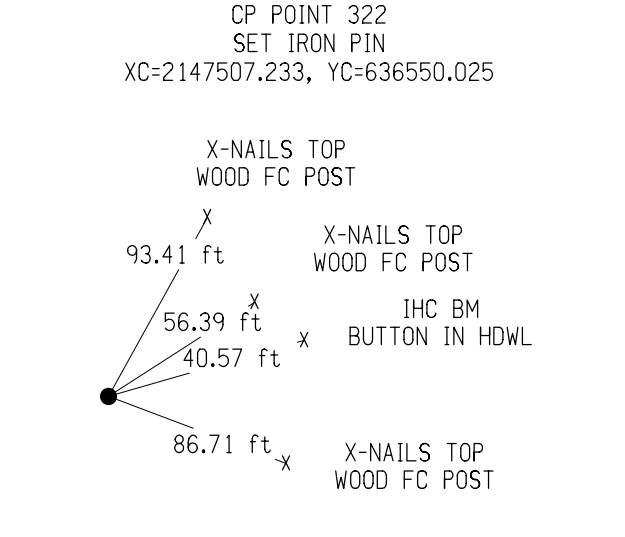
CP STA. 11290+26.94, 70.00' RT



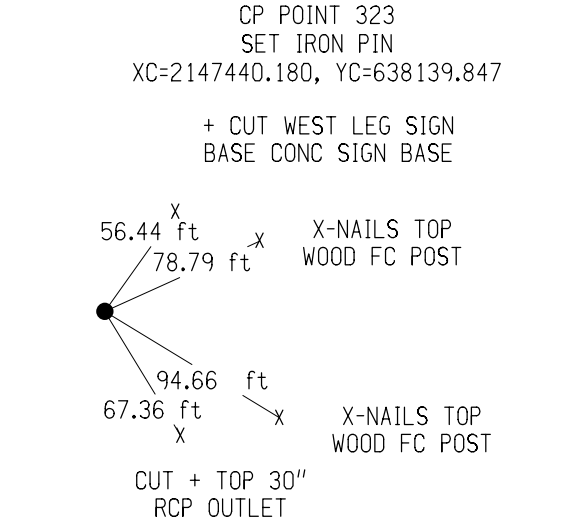
CP STA11302+79.45 66.70LT



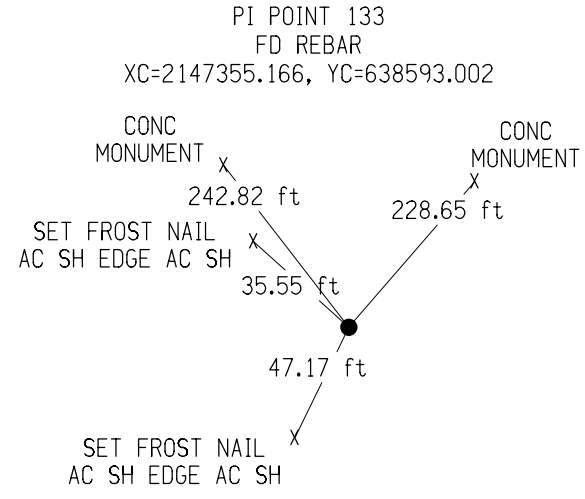
CP STA11303+63.40 66.41RT



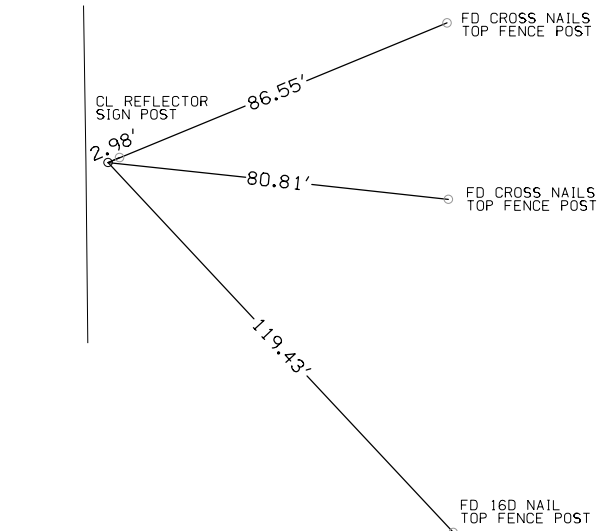
CP STA11319+54.64 65.97RT



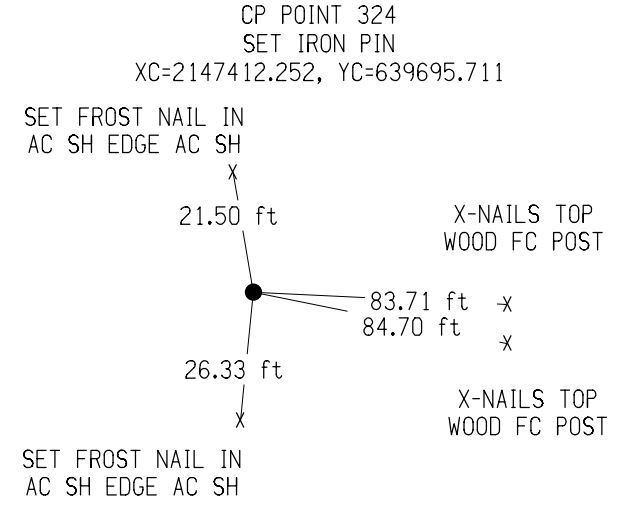
PI STA 11324+10.95



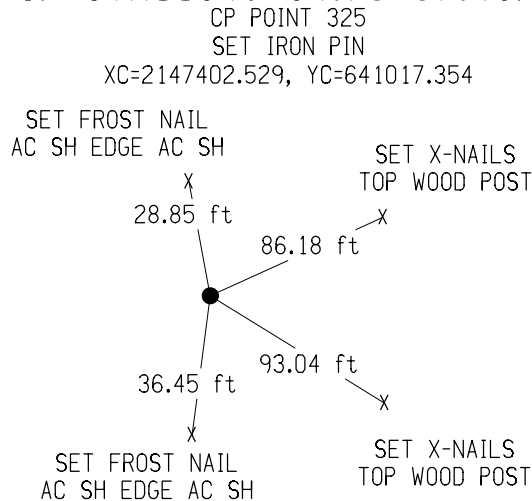
CP STA. 11327+21.80, 69.80' RT



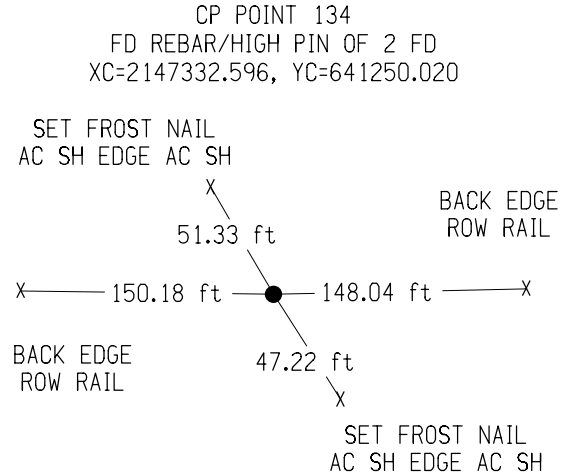
CP STA11335+13.07 66.44RT



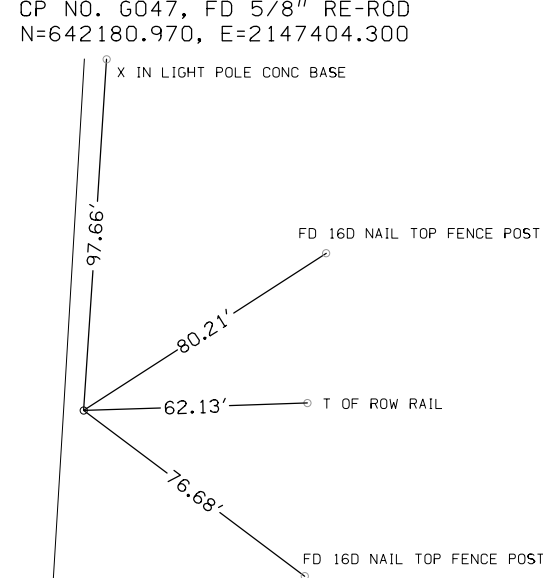
CP STA11348+34.75 67.93RT



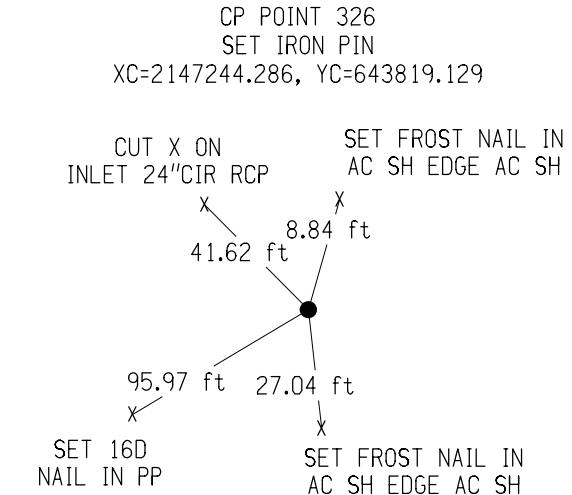
CP STA11350+68.00



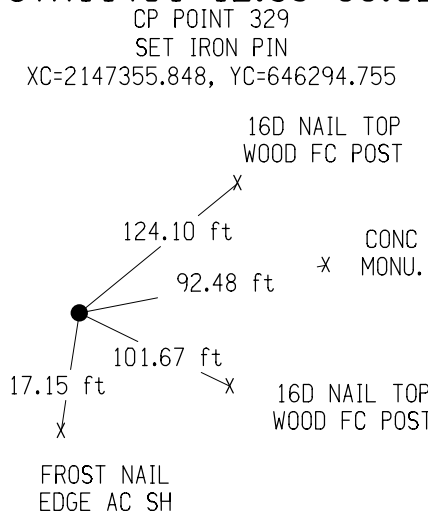
CP STA. 11359+98.30, 79.57' RT



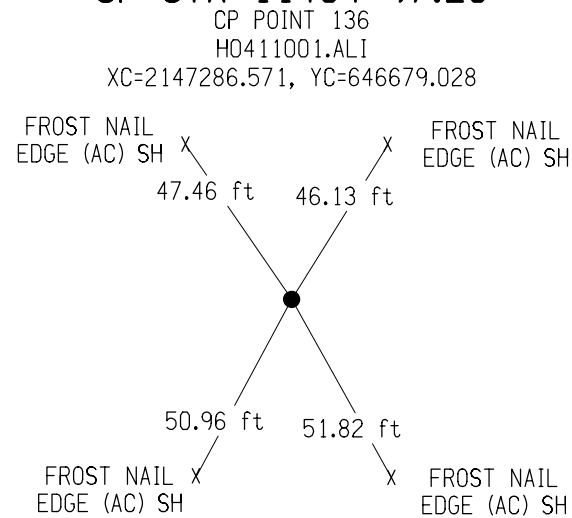
CP STA11376+37.76 66.54LT



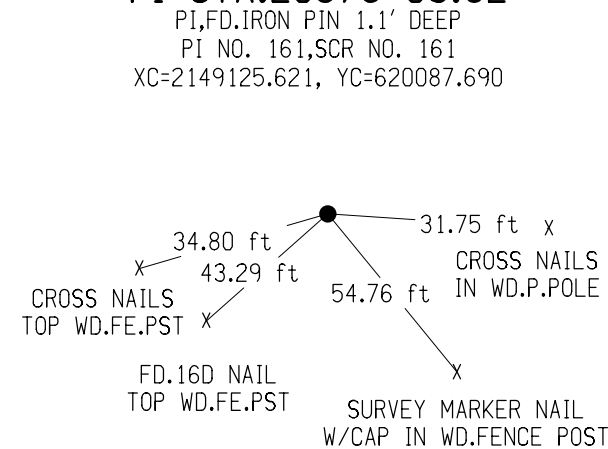
CP STA11401+12.35 66.02RT



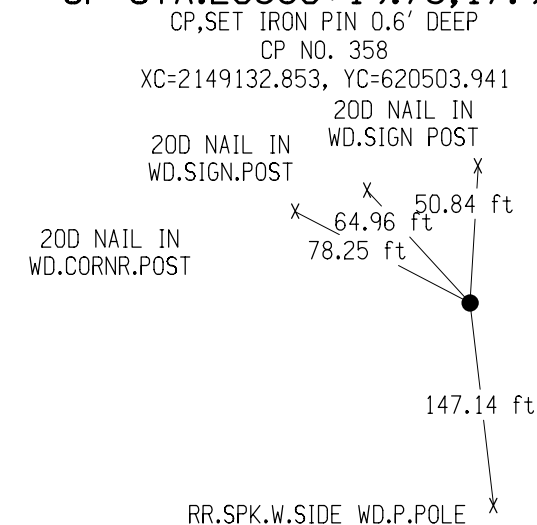
CP STA 11404+97.20



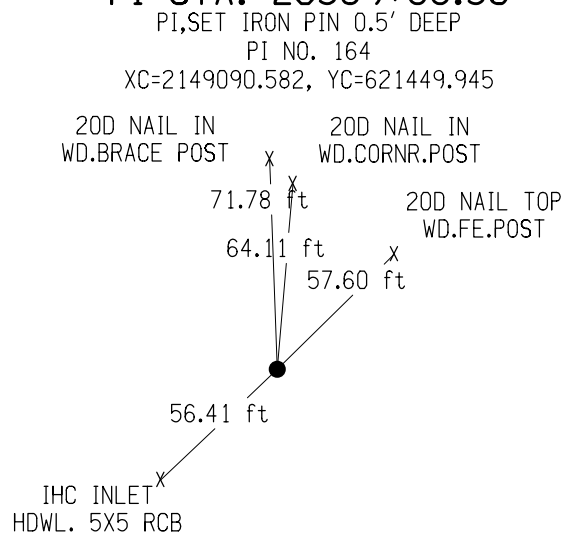
PI STA.20576+03.82



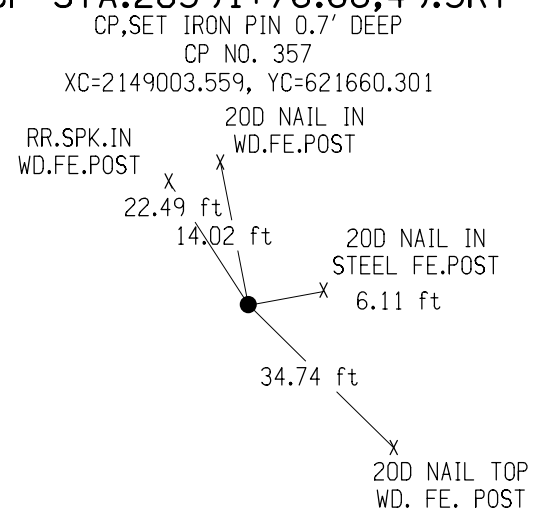
CP STA.20580+19.75,17.9RT



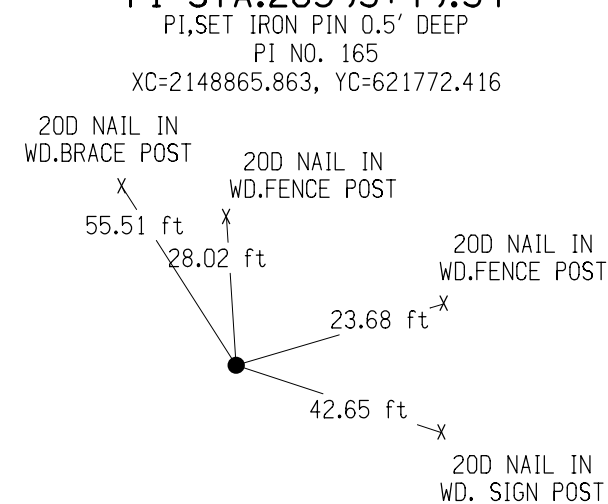
PI STA. 20589+66.53



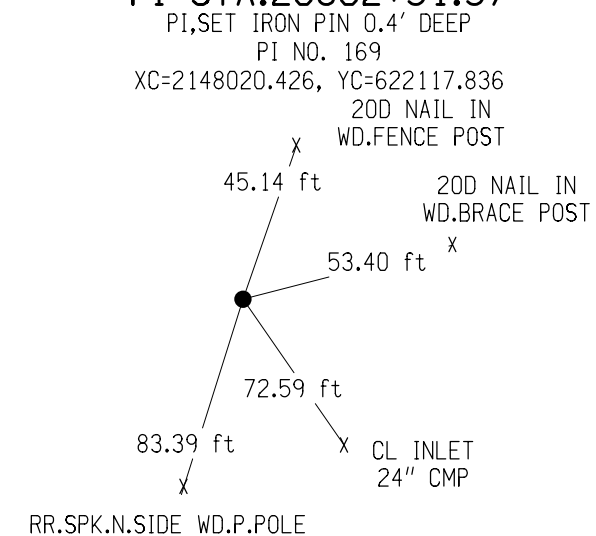
CP STA.20591+76.66,49.5RT

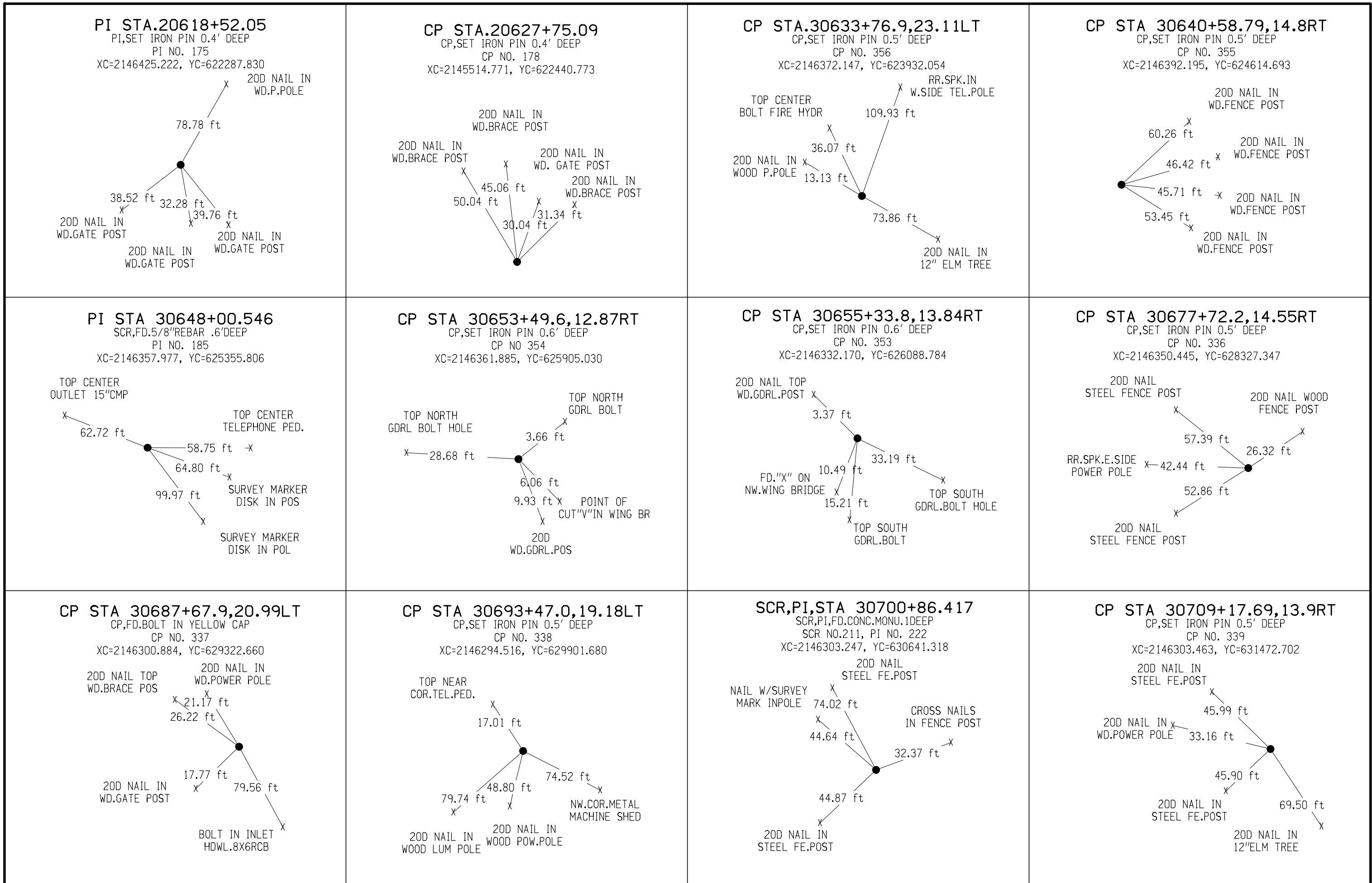


PI STA.20593+49.34



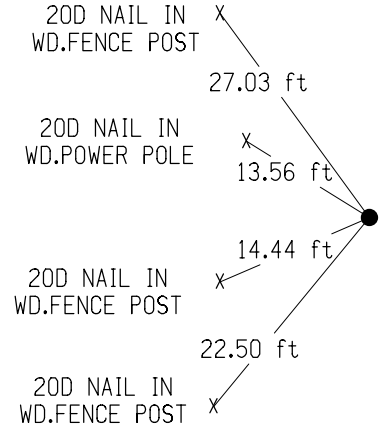
PI STA.20602+51.57





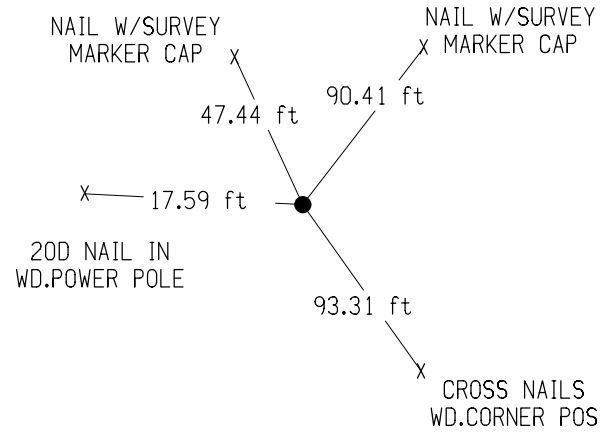
CP STA 30721+82.12,13.5LT

CP,SET IRON PIN 1.0' DEEP
CP NO. 340
XC=2146249.399, YC=632736.009



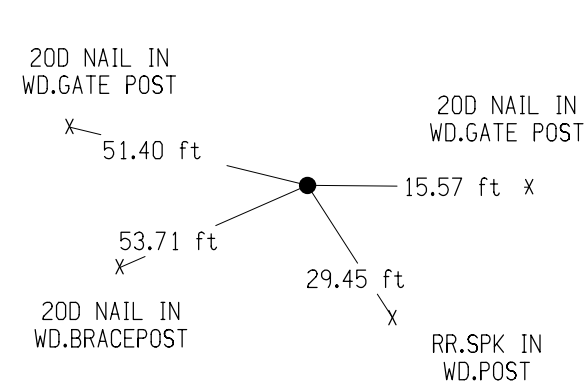
CP STA 30727+39.61,13.0LT

CP,SET IRON PIN 0.8' DEEP
CP NO. 341
XC=2146227.007, YC=633293.419



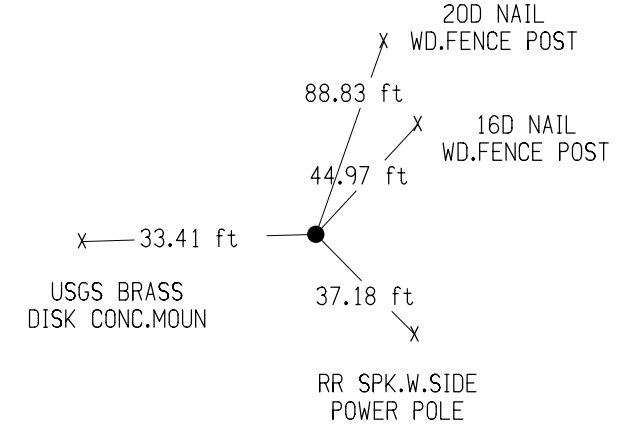
CP STA 30740+69.31,17.3RT

CP,SET IRON PIN 0.5' DEEP
CP NO. 342
XC=2146240.250, YC=634623.400



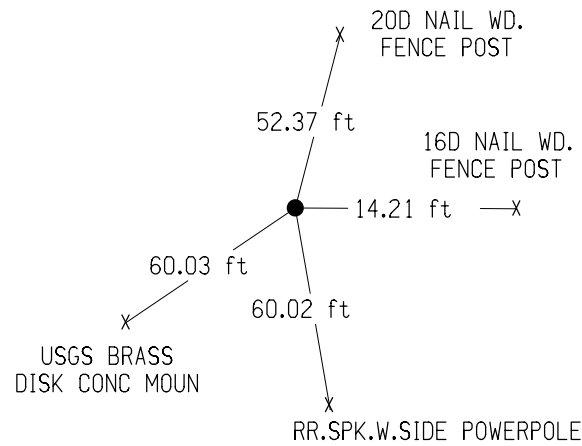
SCR STA 30753+73.552

PI,FD.5/8" REBAR
SCR,PI, NO.218
XC=2146206.162, YC=635927.312



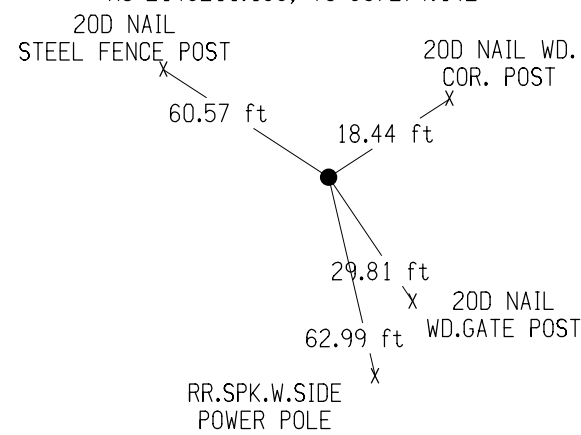
CP STA 30754+06.49,16.6RT

CP SET IRON PIN 0.6' DEEP
CP NO. 343
XC=2146222.458, YC=635960.400



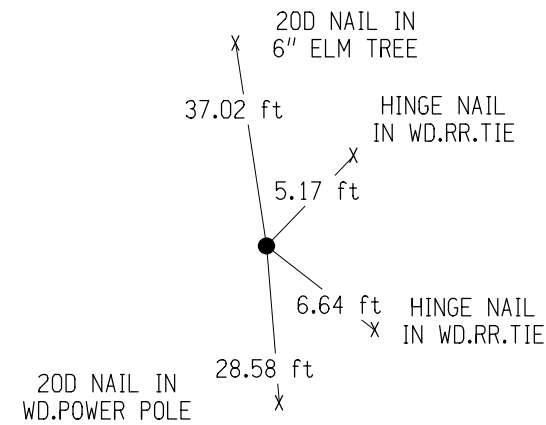
CP STA 30767+20.33,17.2RT

CP,SET IRON PIN 0.6' DEEP
CP NO. 344
XC=2146211.155, YC=637274.192



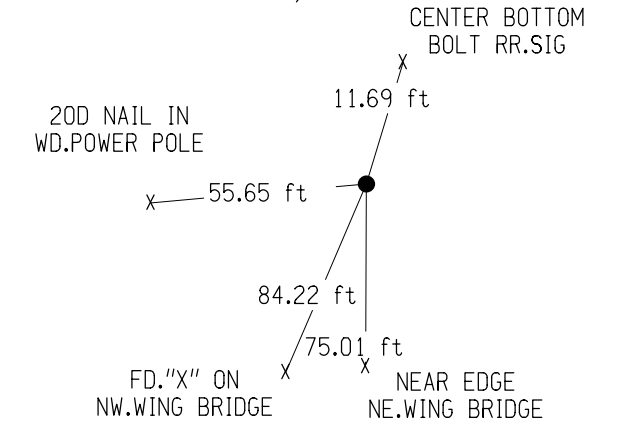
CP STA 41158+82.185

CP,SET HINGE NAIL CL RR.
CP NO. 187
XC=2143674.441, YC=626035.039



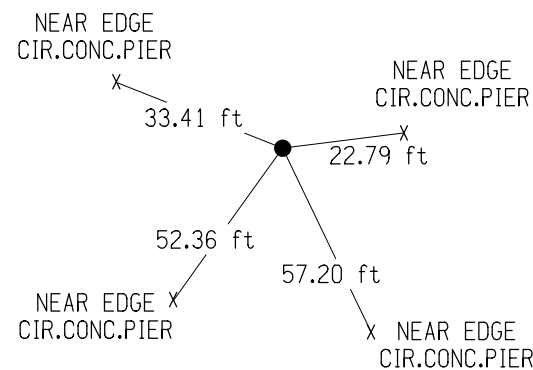
CP STA 41185+73.6,27.66RT

CP,SET IRON PIN 0.5' DEEP
CP NO. 371
XC=2146363.214, YC=626155.905



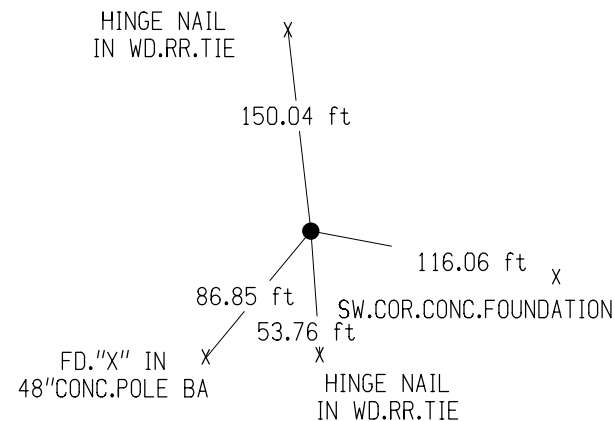
CP STA 41199+34.8,19.15LT

CP,SET IRON PIN 0.5' DEEP
CP NO. 370
XC=2147721.817, YC=626141.182



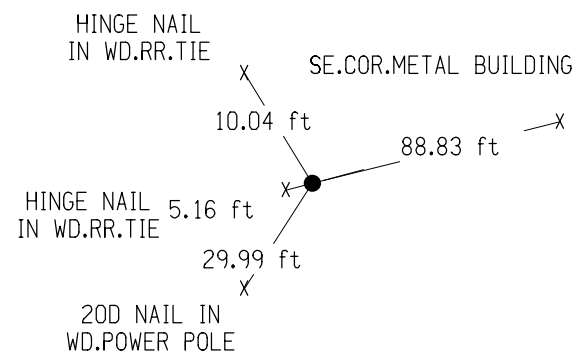
CP STA 41210+54.0,55.25LT

CP,SET IRON PIN 0.5' DEEP
CP NO. 369
XC=2148818.137, YC=625887.760



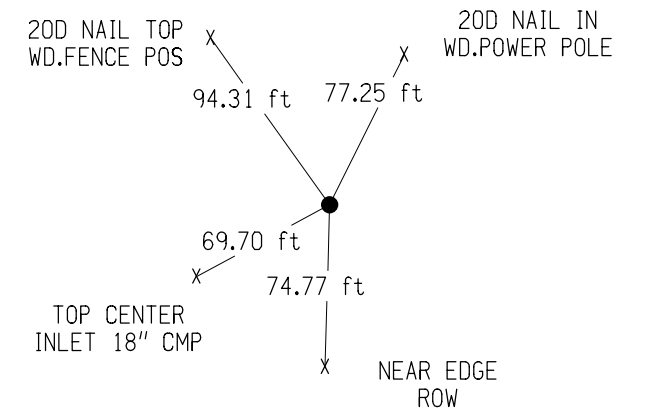
CP STA 41238+20.068

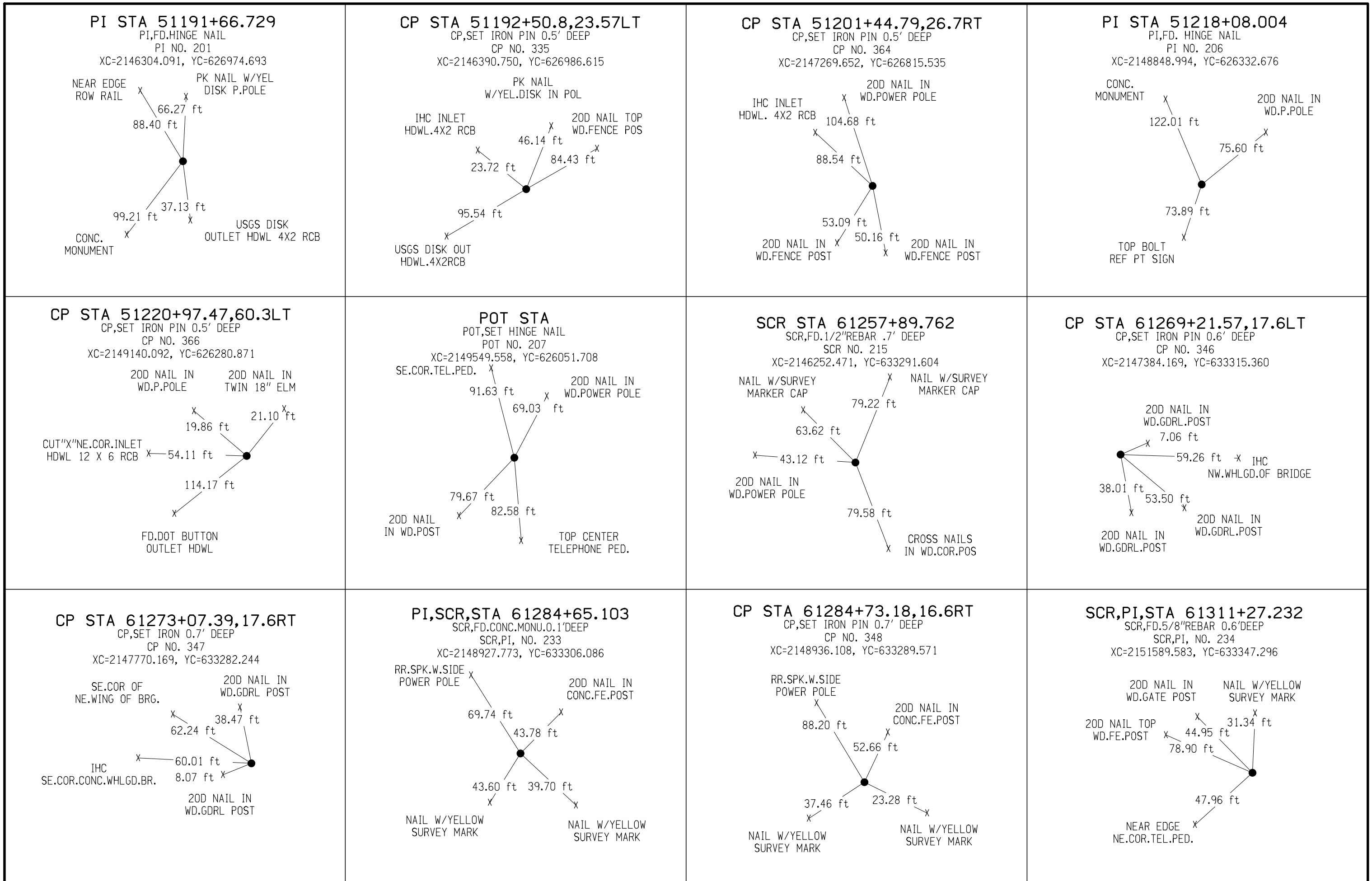
CP,SET HINGE NAIL CL RR.
CP NO. 195
XC=2151181.050, YC=624444.083



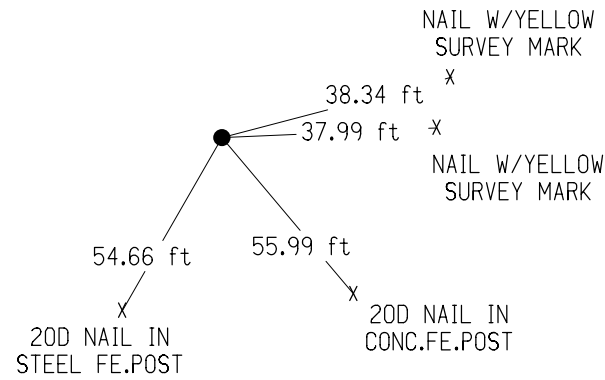
POT STA 51184+89.902

POT,SET HINGE NAIL
POT NO. 200
XC=2145627.561, YC=626994.742

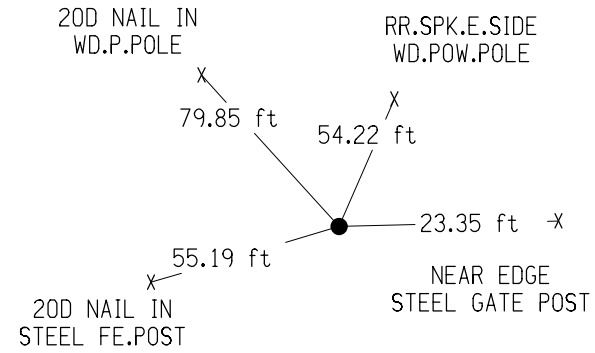




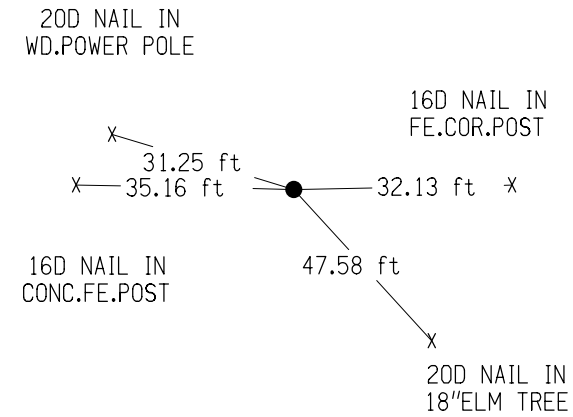
CP STA 71297+91.37,3.97LT
 SCR FD.T.P.W/CAP STAMPED
 #8165
 XC=2148909.133, YC=634632.231



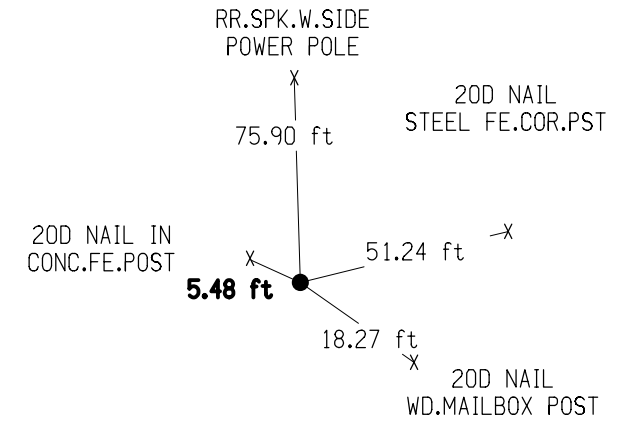
CP STA 71299+83.64,21.7RT
 CP,SET IRON PIN 0.8' DEEP
 CP NO. 349
 XC=2148932.657, YC=634824.774



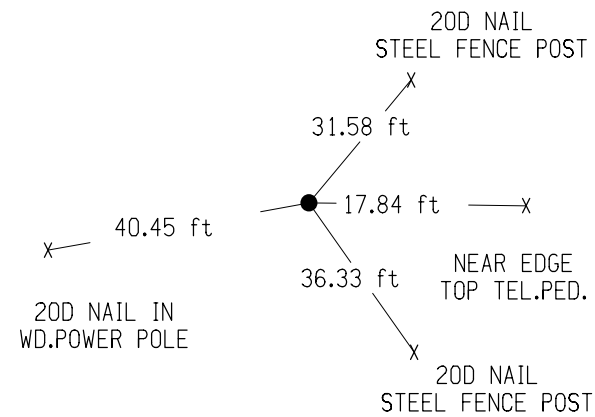
PI,SCR STA 71311+17.641
 PI,SCR,FD.BRASS CAP CON.
 MONU.
 XC=2148890.691, YC=635958.341



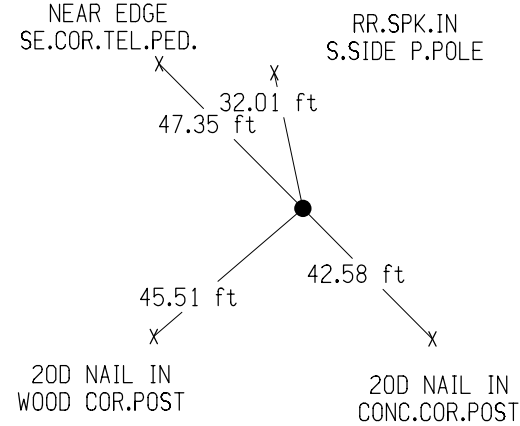
CP STA 71313+16.08,32.3LT
 CP,SET IRON PIN 1.0'DEEP
 CP NO. 350
 XC=2148855.659, YC=636156.322



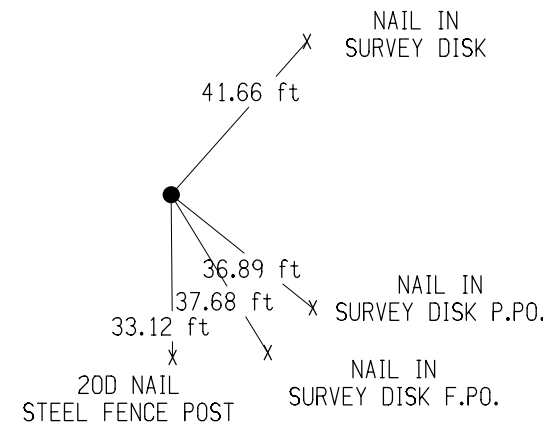
CP STA 71322+40.24,6.60RT
 CP,SET IRON PIN 0.8'DEEP
 CP NO. 351
 XC=2148882.089, YC=637080.925



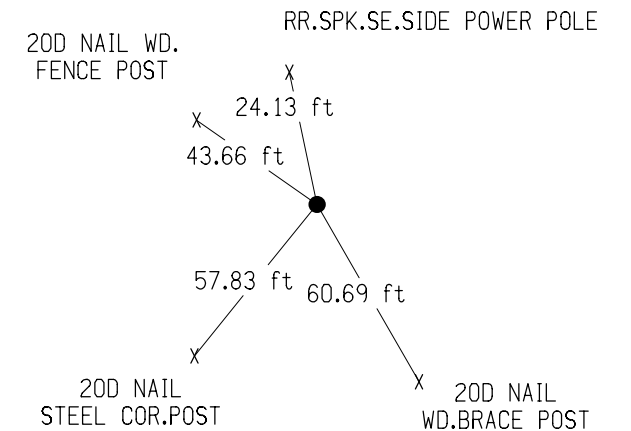
SCR,PI STA 71337+73.367
 SCR,PI FD.1/2\"/>



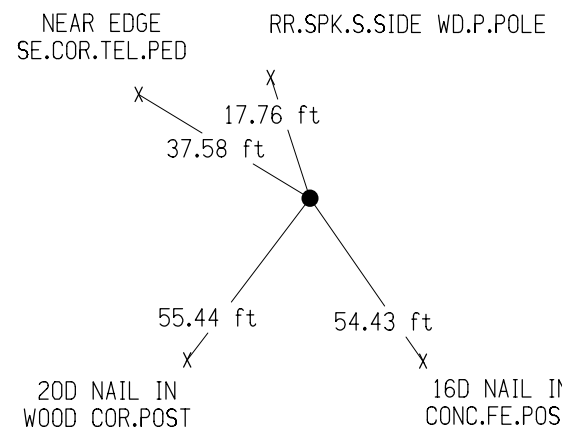
SCR,PI STA 81285+54.765
 SCR,PI FD.BRASS DISK.9'DE
 SCR,PI NO. 221
 XC=2143502.302, YC=638571.775



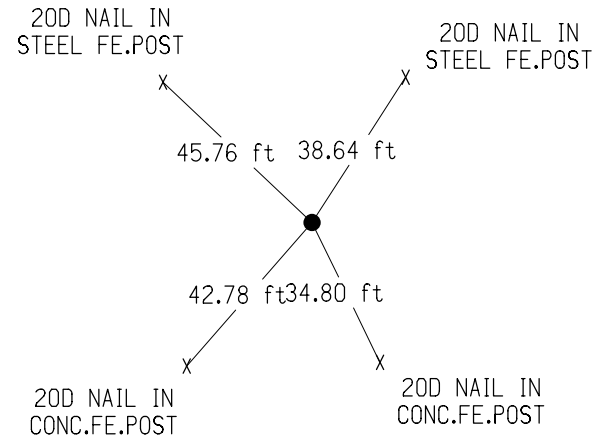
CP STA 81312+37.78,2.85LT
 CP,SET IRON PIN 0.5' DEEP
 CP NO. 345
 XC=2146185.264, YC=638589.407



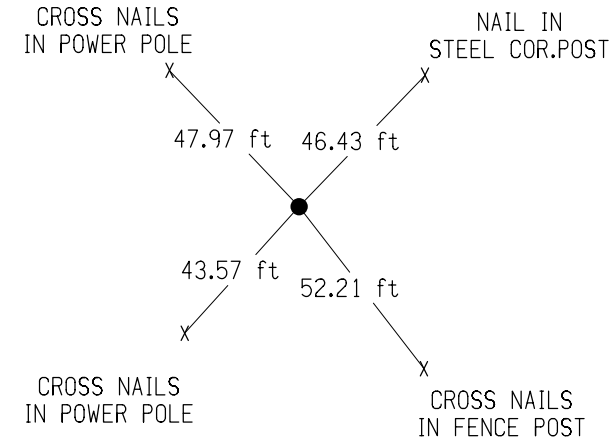
CP STA 81339+06.59,14.5LT
 CP,SET IRON PIN 0.8' DEEP
 CP NO. 352
 XC=2148853.726, YC=638628.315



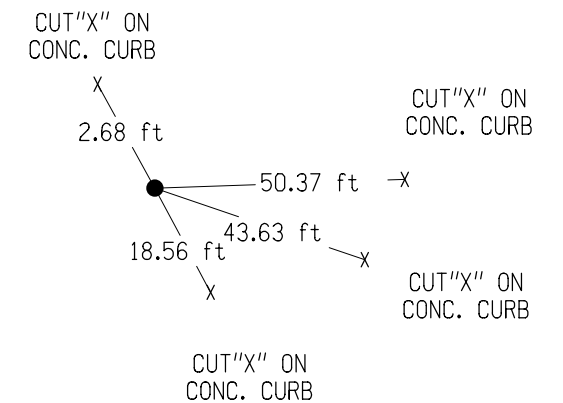
CP STA 81349+77.496
 CP,SET IRON PIN 0.5' DEEP
 CP NO. 239
 XC=2149924.573, YC=638637.272



SCR STA. 91338+70.774
 SCR,FOUND PIPE 0.8' DEEP
 SCR NO.222
 XC=2143444.415, YC=643885.336

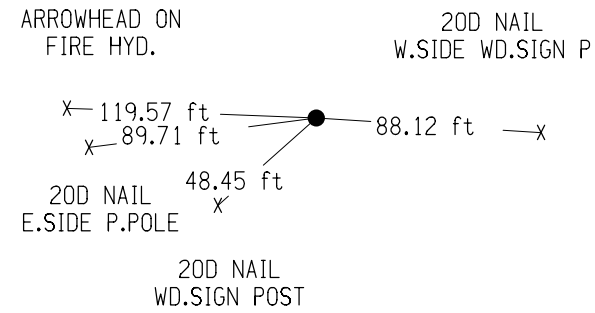


GPS STA 91358+40.4,30.0RT
 GPS,FD.REBAR 0.4' DEEP
 GPS POINT G048
 XC=2145414.040, YC=643875.420



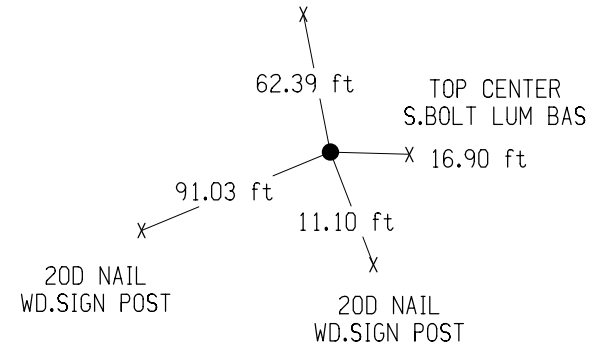
CP STA 91366+64.64,27.4RT

CP,SET IRON PIN 0.5'DEEP
CP NO.330
XC=2146238.248, YC=643880.691



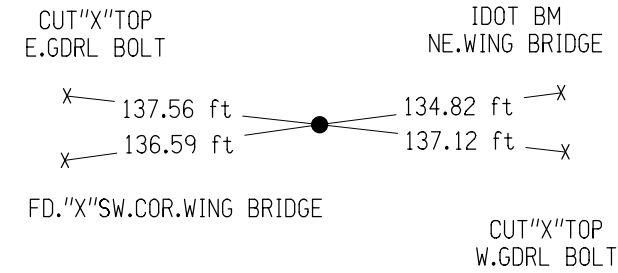
CP STA 91372+20.93,25.3RT

CP,SET IRON PIN 0.5 DEEP
CP NO.331
XC=2146794.698, YC=643887.714
20D NAIL
WD.SIGN POST



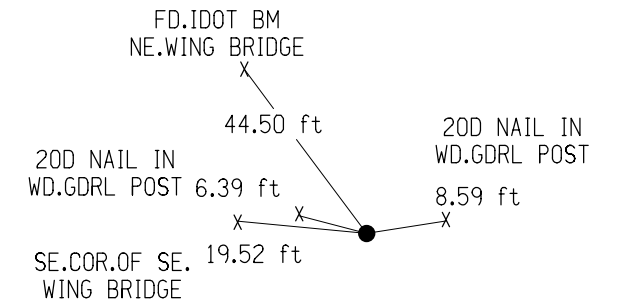
CP STA 91377+36.352,.25RT

CP,FD."X"
CP NO. 135
XC=2147309.832, YC=643918.189



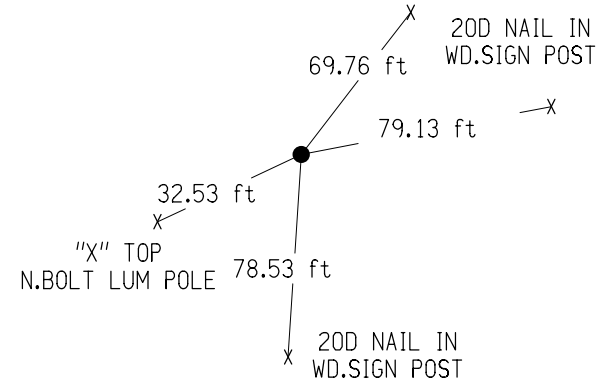
CP STA 91378+96.34,19.3RT

CP,SET IRON PIN 0.7' DEEP
CP NO. 332
XC=2147470.011, YC=643900.838



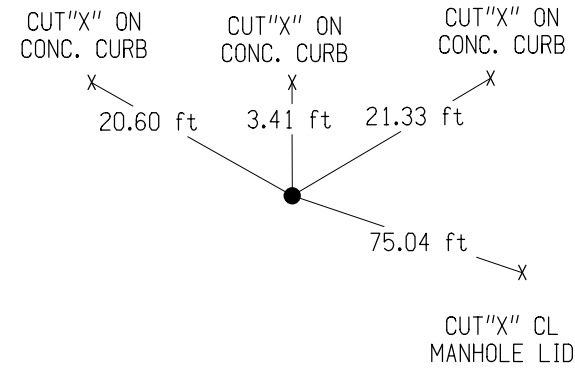
CP STA 91382+66.99,42.1LT

CP,SET IRON PIN 0.6'DEEP
CP NO. 333
XC=2147840.000, YC=643966.070
"X" TOP
S.BOLT LUM POLE



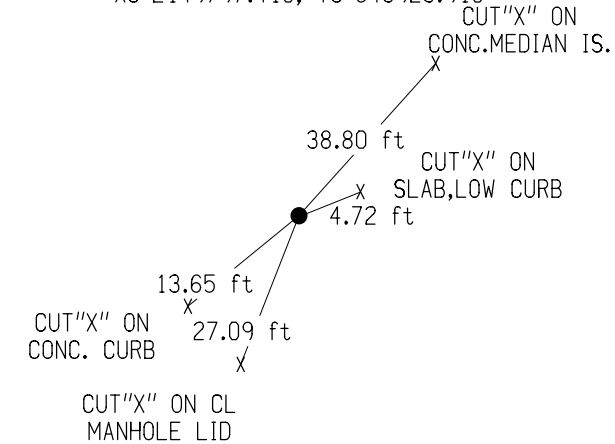
CP STA 91390+81.48,29.9RT

CP,SET IRON PIN 0.4' DEEP
CP NO. 334
XC=2148655.339, YC=643905.841



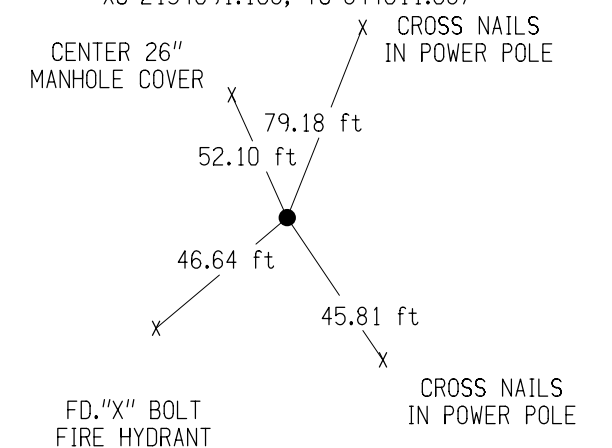
GPS STA 91402+23.8,28.0RT

GPS,FD.REBAR 0.3' DEEP
GPS POINT G050
XC=2149797.410, YC=643923.910



SCR STA 91445+18.268

SCR,FD.PK NAIL IN CONC.
SCR NO. 245
XC=2154091.106, YC=644011.067



ALIGNMENT COORDINATES

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
US 6 (SUR006A)																			
119	SUR006A	51184+89.90	626994.74	2145627.56															
CUR17	SUR006A						51190+79.53	626944.28	2146216.93	51191+66.73	626974.69	2146304.09	51192+53.76	626962.87	2146390.48				
CUR18	SUR006A						51204+10.49	626805.97	2147536.52	51205+60.89	626785.57	2147685.53	51207+09.90	626731.01	2147825.68				
CUR19	SUR006A						51215+07.99	626441.50	2148569.42	51218+08.00	626332.68	2148848.99	51221+08.01	626221.00	2149127.45				
120	SUR006A	51225+62.81	626051.71	2149549.56															
I-80 (SUR080)																			
15	ML080	488+00.88	622563.99	2133198.79															
C11	ML080						575+94.28	622430.99	2141991.19	579+28.07	622425.94	2142324.94	582+61.53	622446.80	2142658.08				
C12	ML080						621+27.54	622688.31	2146516.54	625+84.74	622716.87	2146972.84	630+41.82	622727.21	2147429.93				
C13	ML080						673+07.90	622823.70	2151694.93	676+17.64	622830.70	2152004.58	679+27.34	622829.34	2152314.32				
C14	ML080						740+40.31	622802.38	2158427.23	749+37.94	622798.42	2159324.85	758+21.10	622520.14	2160178.25				
C15	ML080						820+16.63	620599.40	2166068.53	839+10.31	620012.31	2167868.91	857+70.08	620035.67	2169762.46				
C16	ML080						889+87.89	620075.36	2172980.02	895+41.62	620082.19	2173533.71	900+91.93	620194.93	2174075.85				
C17	ML080						930+00.13	620787.02	2176923.14	936+13.34	620911.87	2177523.51	942+21.91	620906.83	2178136.70				
C18	ML080						1054+10.26	620814.94	2189324.68	1066+45.52	620804.79	2190559.90	1078+43.53	620286.60	2191681.20				
11	ML080	1155+97.06	617033.96	2198719.50															
I-80 Eastbound Median With Transition West End (80WEBMWT)																			
50301	80WEBMWT						12557+90.00	622433.29	2140186.73	12559+51.26	622430.85	2140347.97	12561+12.50	622432.41	2140509.22				
50302	80WEBMWT						2561+12.50	622432.41	2140509.22	12562+73.76	622433.97	2140670.47	2564+35.00	622431.53	2140831.71				
I-80 Eastbound Median With Transition East End (80EEBMWT)																			
50400	80EEBMWT	12671+60.12	622803.36	2151547.56															
50401	80EEBMWT						12674+55.69	622810.04	2151843.06	12677+65.42	622817.05	2152152.71	12680+75.12	622815.68	2152462.45				
I-80 Westbound Median With Transition West End (80WBMWT)																			
50306	80WBMWT						22557+90.00	622483.28	2140187.49	22559+51.26	622480.84	2140348.73	22561+12.50	622474.40	2140509.86				
50307	80WBMWT						22561+12.50	622474.40	2140509.86	22562+73.76	622467.97	2140670.99	22564+35.00	622465.53	2140832.22				
I-80 Westbound Median With Transition East End (80EWBMWT)																			
50406	80EWBMWT						22671+60.12	622837.35	2151546.80	22674+69.86	622844.35	2151856.45	22677+79.55	622842.99	2152166.18				
50407	80EWBMWT	22680+75.93	622841.68	2152462.56															
I-380 (ML380)																			
50000	ML380	1076+00.00	615521.14	2153512.16															
50001	ML380						1097+52.00	616974.45	2151925.03	1109+56.70	617788.01	2151036.54	1121+26.80	618890.49	2150550.92				
50002	ML380						1184+57.52	624684.08	2147998.98	1191+13.06	625284.00	2147734.72	1197+51.50	625939.42	2147721.82				
50003	ML380						1267+32.71	632919.28	2147584.41	1271+14.12	633300.61	2147576.90	1274+95.49	633681.68	2147560.94				
50004	ML380						1320+28.47	638210.69	2147371.18	1324+11.12	638593.00	2147355.17	1327+93.70	638975.64	2147351.92				
50030	ML380	1404+97.37	646679.03	2147286.57															
I-380 North Northbound Median Width Transition (380NNBMWT)																			
50106	380NNBMWT						11210+00.00	627188.01	2147714.24	11211+97.51	627385.48	2147710.35	11213+94.98	627582.98	2147712.47				
50107	380NNBMWT						11213+94.98	627582.98	2147712.47	11215+92.49	627780.47	2147714.58	11217+89.97	627977.94	2147710.69				
I-380 North Southbound Median Width Transition (380NSBMWT)																			
50206	380NSBMWT						21210+00.00	627187.34	2147680.25	21211+97.51	627384.81	2147676.36	21213+94.98	627582.07	2147666.48				
50207	380NSBMWT						21213+94.98	627582.07	2147666.48	21215+92.49	627779.33	2147656.59	21217+89.97	627976.80	2147652.70				
I-380 South Northbound Median Width Transition (380SNBMWT)																			
50100	380SNBMWT	11097+21.48	616977.44	2151969.14															
50101	380SNBMWT						11097+82.52	617018.66	2151924.13	11109+87.21	617832.22	2151035.64	11121+57.32	618934.71	2150550.02				
I-380 South Southbound Median Width Transition (380SSBMWT)																			
50201	380SSBMWT						21097+21.48	616930.24	2151925.93	21109+26.18	617743.80	2151037.44	21120+96.29	618846.29	2150551.82				
50202	380SSBMWT	21121+77.93	618921.00	2150518.91															
I-380 Ramp A (ML380A)																			
51003	Ramp A						1530+63.64	624625.87	2148108.75	1538+80.74	623878.10	2148438.13	1546+44.73	623462.62	2149141.71				
51002	Ramp A						1549+82.45	623290.90	2149432.52	1556+43.04	622955.00	2150001.34	1562+75.00	622938.80	2150661.73				
50100	Ramp A	1577+27.34	622903.16	2152113.64															
I-380 Ramp B (ML380B)																			
52000	Ramp B	2513+50.00	622562.89	2145745.33															
52001	Ramp B						2522+50.00	622574.18	2146645.26	2527+86.01	622580.91	2147181.23	2533+06.52	622370.50	2147674.21				
52003	Ramp B						2537+06.52	622213.48	2148042.10	2549+45.93	621726.96	2149182.03	2560+77.75	620610.31	2149719.84				
52004	Ramp B						2560+77.75	620610.31	2149719.84	2561+45.63	620549.16	2149749.29	2562+13.49	620487.04	2149776.65				
I-380 Ramp C (ML380C)																			
53003	Ramp C						3519+00.00	622770.91	2146283.38	3521+39.23	622790.62	2146521.80	3523+77.89	622838.61	2146756.16				
53002	Ramp C						3523+77.89	622838.61	2146756.16	3535+46.16	623072.98	2147900.69	3542+95.09	624238.17	2147815.84				
53002	Ramp C	3543+35.09	624278.06	2147812.93															
I-380 Ramp D (ML380D)																			
54001	Ramp D						4541+82.66	620820.97	2149861.04	4552+43.13	621825.94	2149522.45	4559+73.17	622379.81	2150426.80				
54002	Ramp D						4559+73.17	622379.81	2150426.80	4563+80.85	622592.73	2150774.47	4567+79.79	622670.14	2151174.74				

ALIGNMENT COORDINATES

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
I-380 Ramp E (ML380E)																			
55004	Ramp E						5519+00.00	622750.94	2146284.63	5520+87.64	622762.67	2146471.91	5522+75.00	622791.87	2146657.26				
55003	Ramp E						5522+75.00	622791.87	2146657.26	5528+37.10	622879.34	2147212.50	5533+86.31	623161.90	2147698.42				
55002	Ramp E						5536+96.31	623317.73	2147966.41	5565+04.08	624729.14	2150393.65	5566+14.89	621972.75	2149859.00				
55001	Ramp E						5570+54.89	621540.80	2149775.21	5574+34.84	621167.79	2149702.86	5577+95.08	620812.86	2149838.47				
55000	Ramp E	5591+95.08	619505.06	2150338.13															
I-380 Ramp F (ML380F)																			
56000	Ramp F	6502+50.06	625538.70	2147676.63															
56001	Ramp F						6529+95.06	622820.27	2148057.66	6547+37.09	621095.12	2148299.47	6552+11.72	622055.04	2149753.15				
56003	Ramp F						6555+42.03	622237.05	2150028.79	6564+06.30	622713.30	2150750.00	6572+25.00	622732.84	2151614.05				
I-380 Ramp G (ML380G)																			
57003	Ramp G						7504+21.04	621043.13	2149445.04	7510+11.90	621522.40	2149099.47	7515+70.07	621736.93	2148548.93				
57002	Ramp G						7518+20.07	621827.69	2148315.99	7652+15.67	616964.06	2160797.46	7545+40.49	623336.56	2149014.71				
57001	Ramp G						7550+90.49	623074.91	2149498.49	7553+44.97	622953.85	2149722.33	7555+90.00	622947.61	2149976.74				
57000	Ramp G	7562+75.00 R2	622930.80	2150661.53															
I-380 Ramp H (ML380H)																			
58000	Ramp H	8537+06.52	622220.84	2148045.24															
58001	Ramp H						8539+56.52	622130.42	2148278.32	8581+13.80	620626.78	2152154.15	8562+44.01	623507.60	2149156.84				
58002	Ramp H						8571+33.34	624123.87	2148515.65	8575+07.94	624383.45	2148245.57	8578+73.96	624723.18	2148087.74				
IA 965 Ramp B (IA965B)																			
42001	IA965 Ramp B	2501+12.47	622746.70	2154499.10															
42003	IA965 Ramp B						2508+81.53	622704.91	2155267.03	2512+73.09	622683.63	2155658.01	2516+43.12	622453.90	2155975.08				
42005	IA965 Ramp B						2520+28.34	622227.89	2156287.03	2522+99.10	622069.04	2156506.29	2525+51.30	622072.27	2156777.02				
42006	IA965 Ramp B	2525+51.31	622072.27	2156777.02															
Ireland Ave Ramp A (IRLA)																			
21005	IRL Ramp A	1566+30.20	622995.25	2141112.78															
21001	IRL Ramp A						1572+38.93	622723.91	2141657.69	1576+50.04	622540.66	2142025.71	1580+45.67	622545.82	2142436.79				
21000	IRL Ramp A	1590+00.00	622557.80	2143391.05															
Entrance off of US 6 (ENT US6)																			
30190	ENT US6	100+00.00	627198.17	2147995.98															
ENTUS6 C1	ENT US6						102+76.25	627474.39	2147991.92	103+39.51	627537.65	2147991.00	104+00.96	627595.90	2148015.69				
ENTUS6 C2	ENT US6						104+18.61	627612.15	2148022.58	104+88.48	627676.48	2148049.86	105+55.90	627746.23	2148045.90				
ENTUS6 C3	ENT US6						107+17.82	627907.90	2148036.74	108+13.70	628003.62	2148031.32	109+03.43	628084.75	2148082.42				
30194	ENT US6	109+51.46	628125.40	2148108.02															
Temporary I-80 to Ramp B Connection (RPB12518)																			
RPB125181	RPB12518	12518+00.00	622613.06	2146194.73															
RPB125183	RPB12518	12518+96.17	622619.07	2146290.72															
RPB12518 5	RPB12518						12522+81.23	622614.46	2146975.75	12524+13.00	622612.88	2146807.51	12525+43.89	622585.09	2146936.31				
RPB125187	RPB12518	12528+28.43	622525.08	2147214.47															
Temporary Ramp B to US 218 Connection (RPB1254500)																			
RPB12545001	RPB1254500						12545+00.00	621817.68	2148727.61	12545+91.70	621762.63	2148800.95	12546+83.36	621703.60	2148871.13				
RPB12545004	RPB1254500						12551+89.03	621378.06	2149258.08	12554+00.30	621242.05	2149419.75	12556+06.11	621054.46	2149516.92				
RPB12545005	RPB1254500						12556+06.11	621054.46	2149516.92	12557+17.24	620955.77	2149568.03	12558+28.35	620855.10	2149615.12				
RPB12545007	RPB1254500	12562+78.57	620447.29	2149508.87															
Barn Entrance (ENT_BARN)																			
EB2	ENT_BARN	15+25.00	621752.92	2150015.39															
ENT_BARN 3	ENT_BARN						15+31.42	621759.34	2150015.26	15+74.33	621802.24	2150014.35	16+09.37	621824.76	2150050.87				
ENT_BARN 6	ENT_BARN						18+61.92	621957.31	2150265.84	18+79.67	621966.63	2150280.95	18+96.04	621964.33	2150298.55				
EB3	ENT_BARN	19+31.90	621959.69	2150334.12															

SPIRAL OR CIRCULAR CURVE DATA

Name	Location	ΔSCS	Horizontal Alignment Data												Remarks			
			Spiral Data						Curve Data									
			θS	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	ΔC	T	L	R		E		
SUR006A																		
CUR17	US 6																	
CUR18	US 6																	
CUR19	US 6																	
I-80 (SUR080)																		
C11	ML080																	
C12	ML080																	
C13	ML080																	
C14	ML080																	
C15	ML080																	
C16	ML080																	
C17	ML080																	
C18	ML080																	
I-80 Eastbound Median With Transition West End (80WEBMWT)																		
T2037xt																		
T2037xt																		
I-80 Eastbound Median With Transition East End (80EEBMT)																		
T2037xt																		
I-80 Westbound Median With Transition West End (80WBMWT)																		
T2037xt																		
T2037xt																		
I-80 Westbound Median With Transition East End (80EWBMWT)																		
T2038xt																		
I-380 (ML380)																		
T2036xt	ML380																	
T2036xt	ML380																	
T2036xt	ML380																	
T2036xt	ML380																	
I-380 North Northbound Median Width Transition (380NNBMWT)																		
T2037xt	380NNBMWT																	
T2037xt	380NNBMWT																	
I-380 North Southbound Median Width Transition (380NSBMWT)																		
T2037xt	380NSBMWT																	
T2037xt	380NSBMWT																	
I-380 South																		
T2037xt	380SNBMWT																	
I-380 South																		
T2037xt	380SSBMWT																	
I-380 Ramp A (ML380A)																		
T2039xt	Ramp A																	
T2039xt	Ramp A																	
I-380 Ramp B (ML380B)																		
T2042xt	Ramp B																	
T2042xt	Ramp B																	
T2042xt	Ramp B																	
I-380 Ramp C (ML380C)																		
T2045xt	Ramp C																	
T2045xt	Ramp C																	
I-380 Ramp D (ML380D)																		
T2047xt	Ramp D																	
T2047xt	Ramp D																	
I-380 Ramp E (ML380E)																		
T2050xt	Ramp E																	
T2050xt	Ramp E																	
T2050xt	Ramp E																	
T2050xt	Ramp E																	
I-380 Ramp F (ML380F)																		
T2053xt	Ramp F																	
T2053xt	Ramp F																	
I-380 Ramp G (ML380G)																		
T2056xt	Ramp G																	
T2056xt	Ramp G																	
T2056xt	Ramp G																	

SPIRAL OR CIRCULAR CURVE DATA

Name	Location	ΔSCS	Horizontal Alignment Data												Remarks			
			Spiral Data						Curve Data									
			θS	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	ΔC	T	L	R		E		
I-380 Ramp H (ML380H)																		
T2058xt	Ramp H												157°20'21.3" LT	4157.285	2287.491	833	3406.918	
T2058xt	Ramp H												21°13'01.5" RT	374.599	740.616	2000	34.779	
IA 965 Ramp B (IA965B)																		
T2014xt	IA965B												32°48'32.3" RT	391.553	761.591	1330	56.439	
T2015xt	IA965B												36°36'26.5" LT	270.755	522.961	819	43.619	
Ireland Ave Ramp A (IRLA)																		
T1957xt	IRLA												27°11'23.6" LT	411.114	806.740	1700	49.004	
Entrance off of US 6 (ENT_US6)																		
ENTUS6_C1	ENT_US6												23°49'05.1" RT	63.269	124.711	300	6.599	
ENTUS6_C2	ENT_US6												26°13'11.7" LT	69.867	137.287	300	8.028	
ENTUS6_C3	ENT_US6												35°26'52.4" RT	95.880	185.605	300	14.949	
Temporary I-80 to Ramp B Connection (RPB12518)																		
RPB12518_5	RPB12518												11°29'16.02" RT	131.769	262.654	1310	6.61	
Temporary Ramp B to US 218 Connection (RPB1254500)																		
RPB12545001	RPB1254500												3°11'00.76" RT	91.703	183.359	3300	1.274	
RPB12545004	RPB1254500												22°32'38.83" RT	211.271	417.077	1060	20.85	
RPB12545005	RPB1254500												2°18'54.62" RT	111.136	222.241	5500	1.123	
Barn Entrance (ENT_BARN)																		
ENT_BARN_3	ENT_BARN												59°32'51.0" RT	42.907	77.947	75	11.406	
ENT_BARN_6	ENT_BARN												39°05'38.5" RT	17.752	34.166	50	3.058	

SUPERELEVATION DATA

See PV-300 Series

Road Identification	Circular Curve or Spiral Curve Name	Radius FT	Superelevation Data			Standard Road Plan	Section A-A	Section B-B	Section C-C	Section D-D	Section E-E	Section F-F	Case A	Case B	Case C	Case S	Case T	Case U	Remarks	
			e %	L FT	x FT															
I80	C11	8594	2.4	180	188	PV-305	572+80.28 585+75.53	573+17.88 585+37.93	574+68.28 583+87.53	576+18.68 582+37.13	576+48.76 582+07.05	576+48.28 582+07.53			575+94.28 582+61.53					
I80	C12	22918	NC	0	0	PV-306														
I80 Eastbound Median Width Transition West End																				
I80	50301	13000	NC	0	0	PV-302														
I80	50302	13000	NC	0	0	PV-302														
I80 Eastbound Median Width Transition East End																				
I80	50401	22918	NC	0	0	PV-306														
I80 Westbound Median Width Transition West End																				
I80	50306	13000	NC	0	0	PV-302														
I80	50307	13000	NC	0	0	PV-302														
I80 Westbound Median Width Transition East End																				
I80	50406	22918	NC	0	0	PV-306														
I380	50001	5730																		
I380	50002	3274	5.2	312	150	PV-305	1180+89.12 1201+19.90	1181+19.12 1200+89.90	1182+39.12 1199+69.90	1183+59.12 1198+49.90	1183+89.12 1198+19.90	1185+51.12 1196+57.90	1184+57.52 1197+51.50		1184+19.12 1197+89.90	1185+39.12 1196+69.90				
I380	50003	34377																		
I380	50004	22918																		
Ramp A	51003	2540	5.0	200	80	PV-303	1530+03.64		1530+63.64	1531+23.64					1530+83.64	1530+83.64				
	51002	2540	5.0	200	80	PV-303	1563+35.00		1562+75.00	1562+15.00					1562+55.00	1562+55.00				
Ramp B	52001	2540	5.0	155	62	PV-303	2522+03.50 2533+53.02		2522+50.00 2533+06.52	2522+96.50 2532+60.02					2522+65.50 2532+91.02	2522+65.50 2532+91.02				
Ramp B	52003	3300	4.2	131	62	PV-303	2532+76.82		2533+06.52	2533+45.82					2533+39.58	2533+39.58 +06.24				
Ramp B	52004	4000	3.6	112	62	PV-303														
Ramp C	53003	4000	3.6	112	62	PV-303														
Ramp C	53002	1330	6.0	186	62	PV-303	3543+63.29		3542+95.09	3524+33.69 3542+39.29					3543+01.29	3523+71.69 3543+01.29				
Ramp D	54001	1330	6.0	186	62	PV-303														
Ramp D	54002	2250	5.2	162	62	PV-303				4559+17.37 4560+21.77					4559+79.37 4559+84.39	4559+79.37 4559+84.39				
Ramp E	55003	3000	4.4	137	62	PV-303	5535+43.79	5534+81.79	5533+86.31	5533+45.21					5533+57.66	5533+57.66				
Ramp E	55002	1275	5.6	157	56	PV-303	5567+80.65	5567+24.79	5536+96.31	5537+43.41					5536+98.55	5536+98.55				
Ramp E	55001	1330	6.0	186	62	PV-303	5569+86.69 5578+63.28		5566+14.89 5570+54.89	5565+67.79 5571+10.69					5566+12.65 5570+48.69	5566+12.65 5570+48.69				
Ramp F	56001	1100	5.8	209	72	PV-303	6529+20.76 6554+29.88	6552+86.02	6529+95.06 6552+11.72	6530+57.76 6551+49.02					6529+92.90 6552+13.88	6529+92.90 6552+13.88				
Ramp F	56003	3000	4.4	176	80	PV-303		6554+98.83	6555+42.03	6555+94.83					6555+78.83	6555+78.83				

SUPERELEVATION DATA

See PV-300 Series

Road Identification	Circular Curve or Spiral Curve Name	Radius FT	Superelevation Data			Standard Road Plan	Section A-A	Section B-B	Section C-C	Section D-D	Section E-E	Section F-F	Case A	Case B	Case C	Case S	Case T	Case U	Remarks
			e	L	x														
			%	FT	FT														
Ramp H	58002	2000	5.4	168	62	PV-303	8570+77.74		8571+33.34	8571+83.74					8571+40.18	8571+40.18			
IA965 Ramp B	42003	1330	6.0	240	80	PV-303	2509+36.28	2518+86.35	2509+82.08 2516+06.17	2510+50.78 2515+42.66					2509+70.78 2516+22.66	2509+70.78 2516+22.66			
RPB12518	RPB12518_5	1310	5.9	173	60	PV-303			12522+47.27	12523+00.15 12525+31.00					12522+44.44 12525+86.71	12522+44.44 12525+86.71			
RPB1254500	RPB1254500_4	1060	4.8	116	48	PV-303	12551+55.83		12551+89.03	12552+23.83 12554+75.78					12552+04.50 12554+95.11	12552+04.50 12554+95.11			

CLEAR CREEK TWP.
T-80N R-7W
SEC. 32

CLEAR CREEK TWP.
T-80N R-7W
SEC. 33

Sta. 558+52.3, 10.4' Lt.
24" x 66.3' Conc. Pipe
DA = Median Only



WBL Curve Data
 $\Delta = 1^\circ 25' 16.93''$ (RT)
 $T = 161.26$
 $L = 322.50$
 $R = 13,000.00$
 $E = 1.00$
 $L = NC$
 $E = 0'$
 $x = 0'$
 $e = 0'$

WBL Curve Data
 $\Delta = 1^\circ 25' 16.93''$ (LT)
 $T = 161.26$
 $L = 322.50$
 $R = 13,000.00$
 $E = 1.00$
 $L = NC$
 $E = 0'$
 $x = 0'$
 $e = 0'$

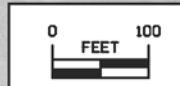
PC Sta 22557+90.00
 = POT Sta 22557+90.00
 P Sta 22559+51.26
 PRC Sta 22561+12.50
 PI Sta 22562+73.76
 PT Sta 22564+35.00
 = POT Sta 22564+34.93

EBL Curve Data
 $\Delta = 1^\circ 25' 16.93''$ (LT)
 $T = 161.26$
 $L = 322.50$
 $R = 13,000.00$
 $E = 1.00$
 $L = NC$
 $E = 0'$
 $x = 0'$
 $e = 0'$

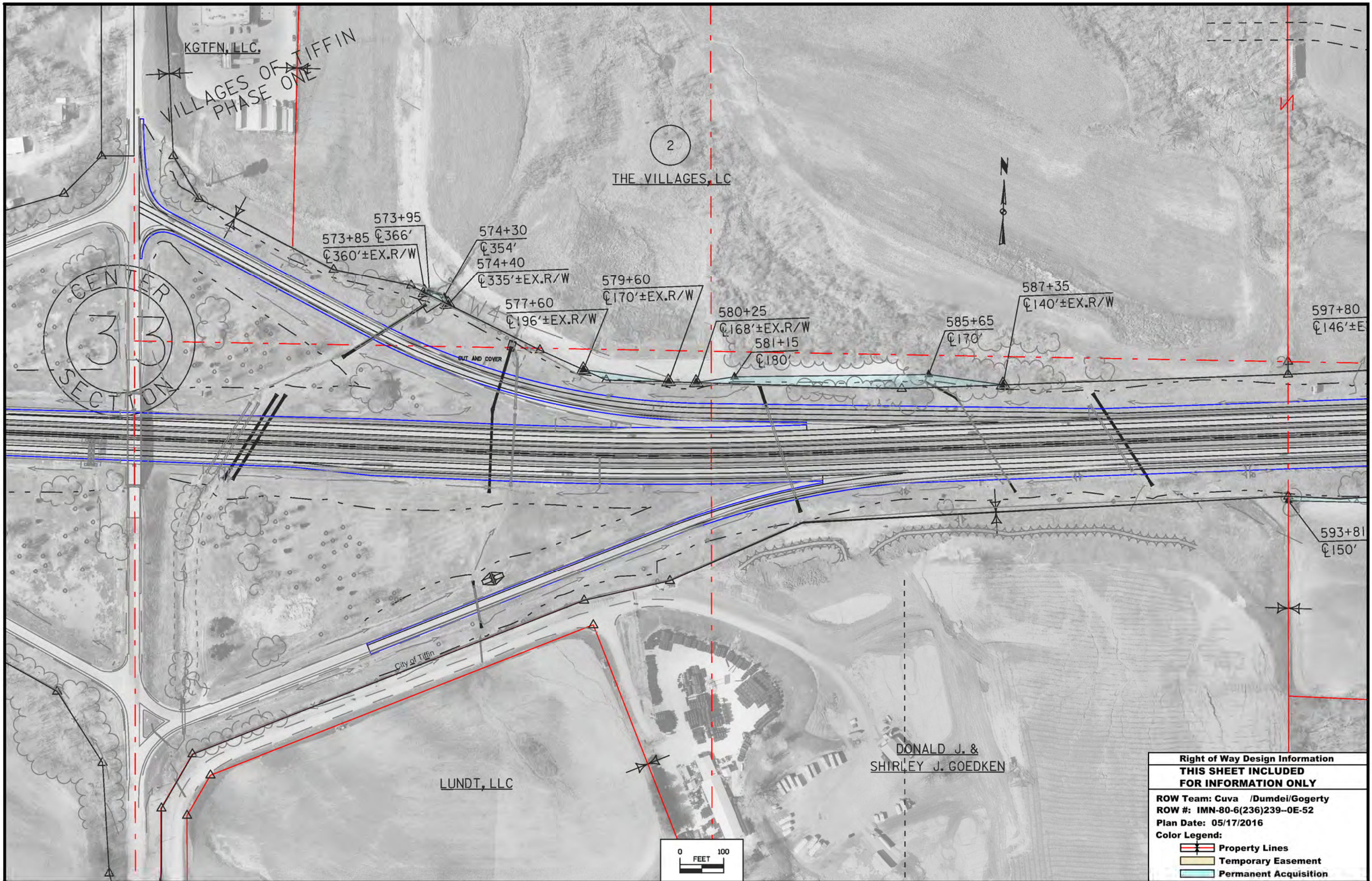
EBL Curve Data
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 $E = 1.00$
 $L = NC$
 $E = 0'$
 $x = 0'$
 $e = 0'$

STA. 557+90.00
 BEGIN CONSTRUCTION
 BEGIN PCC GRADE & PAVE

Extend 48" x 199.2' RCP
 with 12' RCP
 Lt. N/A
 F.L. = Rt. 734.61
 Other 734.30
 Sta. 558+29.1
 Skew 35° Rt. Ah.
 48" x 199.2' Conc. Pipe
 DA = 29 Ac. - F-R



Right of Way Design Information	
THIS SHEET INCLUDED FOR INFORMATION ONLY	
ROW Team: Cuva /Dumdei/Gogerty	
ROW #: IMN-80-6(236)239--0E-52	
Plan Date: 05/17/2016	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition



Right of Way Design Information	
THIS SHEET INCLUDED FOR INFORMATION ONLY	
ROW Team: Cuva /Dumdei/Gogerty	
ROW #: IMN-80-6(236)239--0E-52	
Plan Date: 05/17/2016	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition



REVISED	5-01-17	PAR 6
REVISED	3-14-17	PAR 7

Right of Way Design Information
THIS SHEET INCLUDED
FOR INFORMATION ONLY

ROW Team: Cuva /Dumdei/Gogerty
ROW #: IMN-80-6(236)239-0E-52
Plan Date: 5/01/2017
Color Legend:

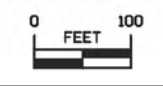
- Property Lines
- Temporary Easement
- Permanent Acquisition

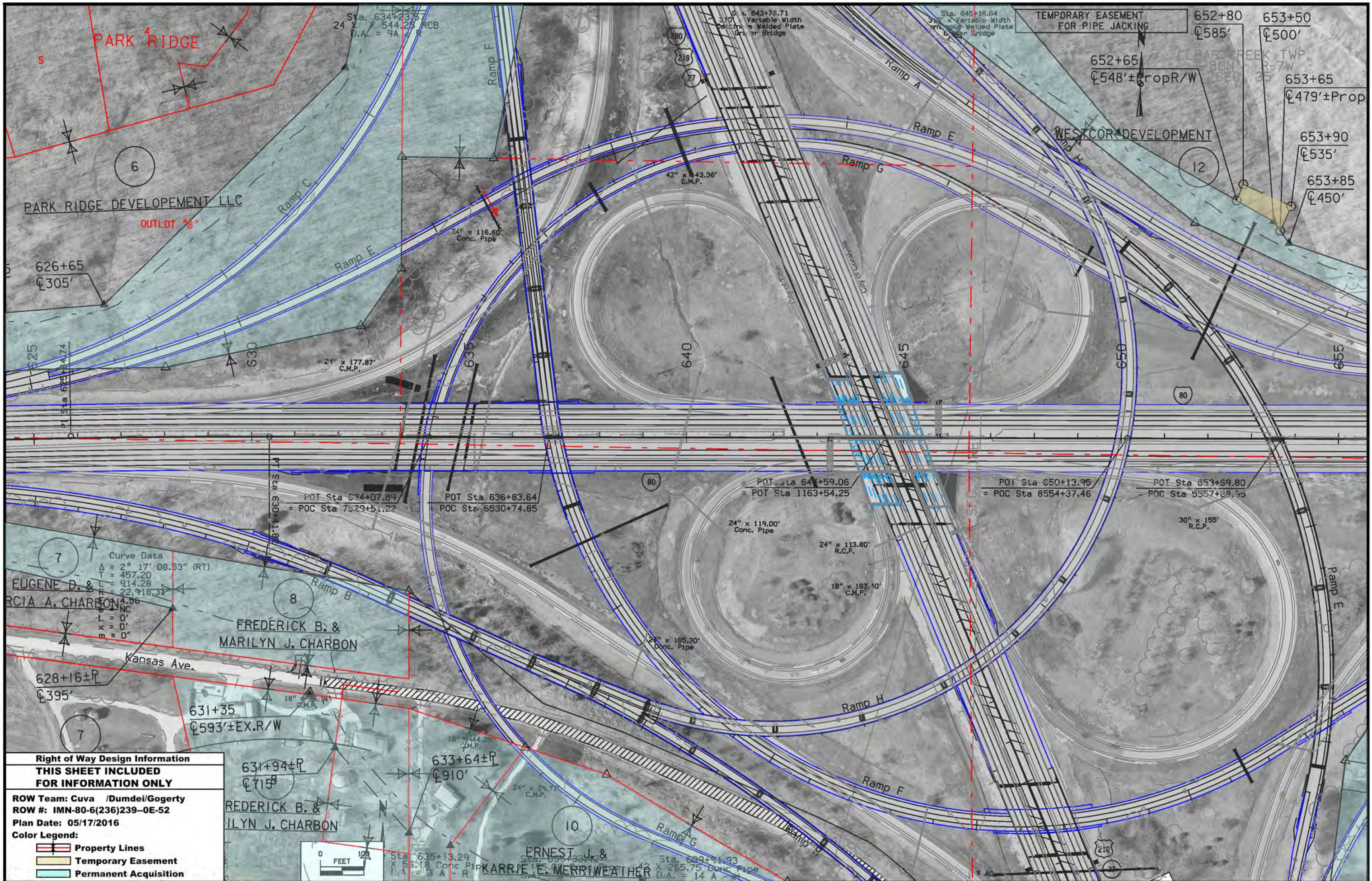
Sta. 600+55.00
 Install 30" x 226' RCP
 Lt. 728.80
 F.L. = Rt. 733.00

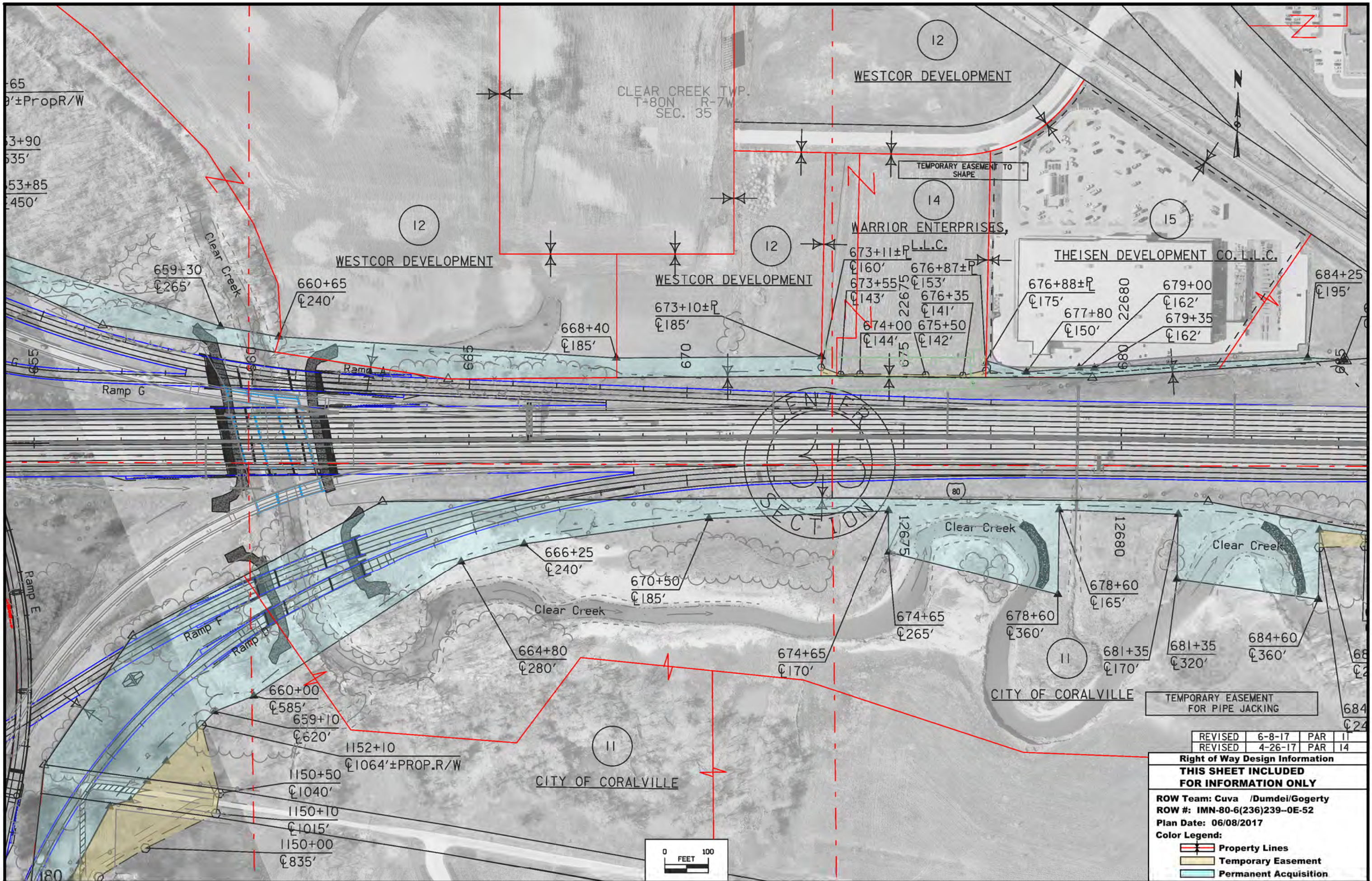
Sta. 601+42.5
 Skew 30° Rt. Ah.
 Pipe 30" x 192.9' Conc. Pipe
 DA = 14 Ac. - R

Extend 5'x5'x241.1' RCB
 with 102"x62"x44' RF-41 arch pipe
 Lt. N/A
 F.L. = Rt. 731.68
 Other 731.68

Sta. 605+02.5, 11.5' Rt.
 24" x 54.5' Conc. Pipe
 DA = Median Only





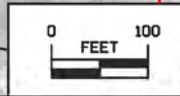


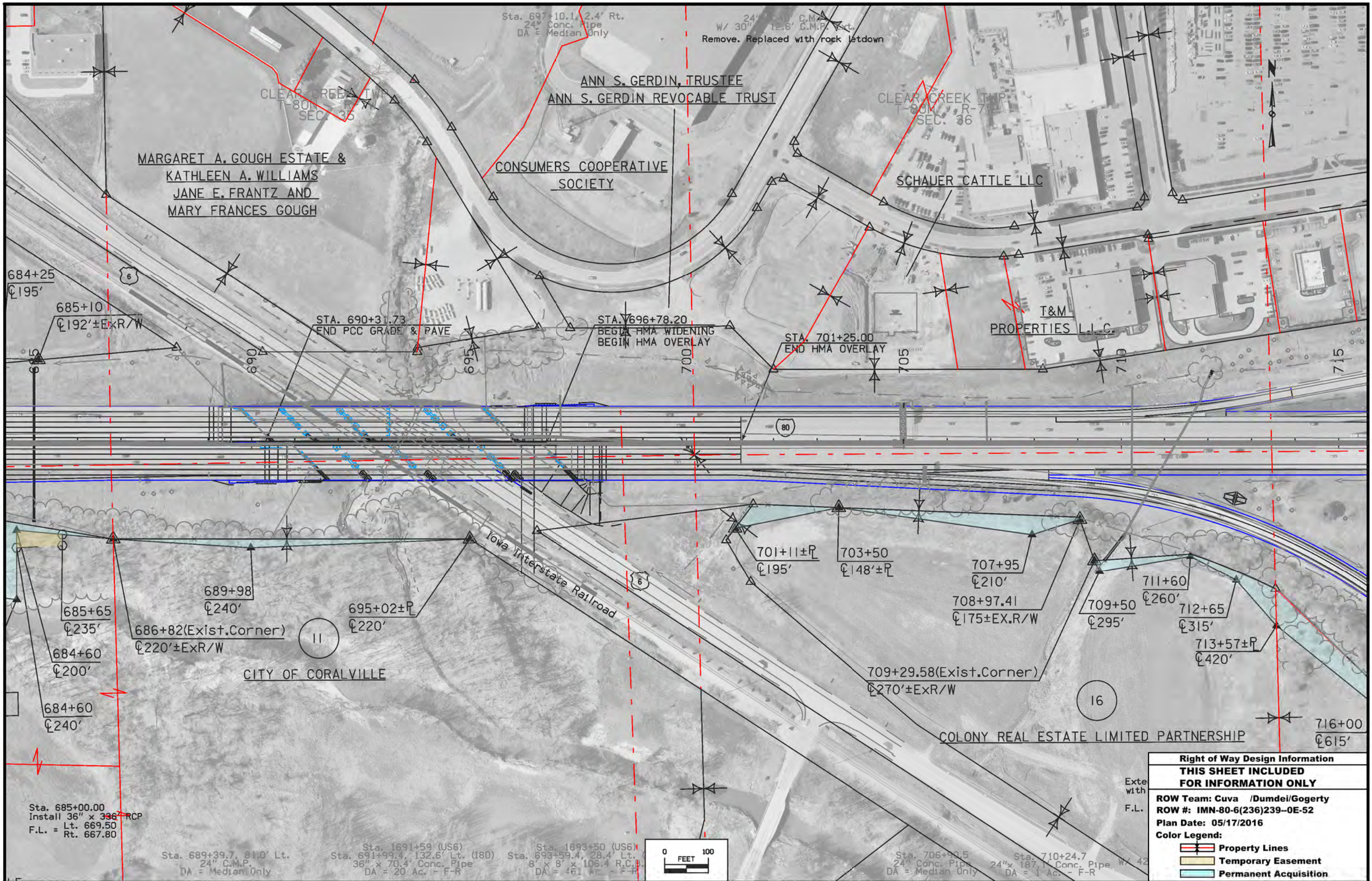
REVISED	6-8-17	PAR	11
REVISED	4-26-17	PAR	14

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Cuva /Dumdei/Gogerty
 ROW #: IMN-80-6(236)239--0E-52
 Plan Date: 06/08/2017
 Color Legend:

- Property Lines
- Temporary Easement
- Permanent Acquisition



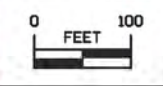


Sta. 685+00.00
Install 36" x 36" RCP
Lt. 669.50
F.L. = Rt. 667.80

Sta. 689+39.7, 81.0' Lt.
24" C.M.P.
DA = Median Only

Sta. 691+99.4, 132.6' Lt. (I80)
36" x 70.4' Conc. Pipe
DA = 20' Ac. - F-R

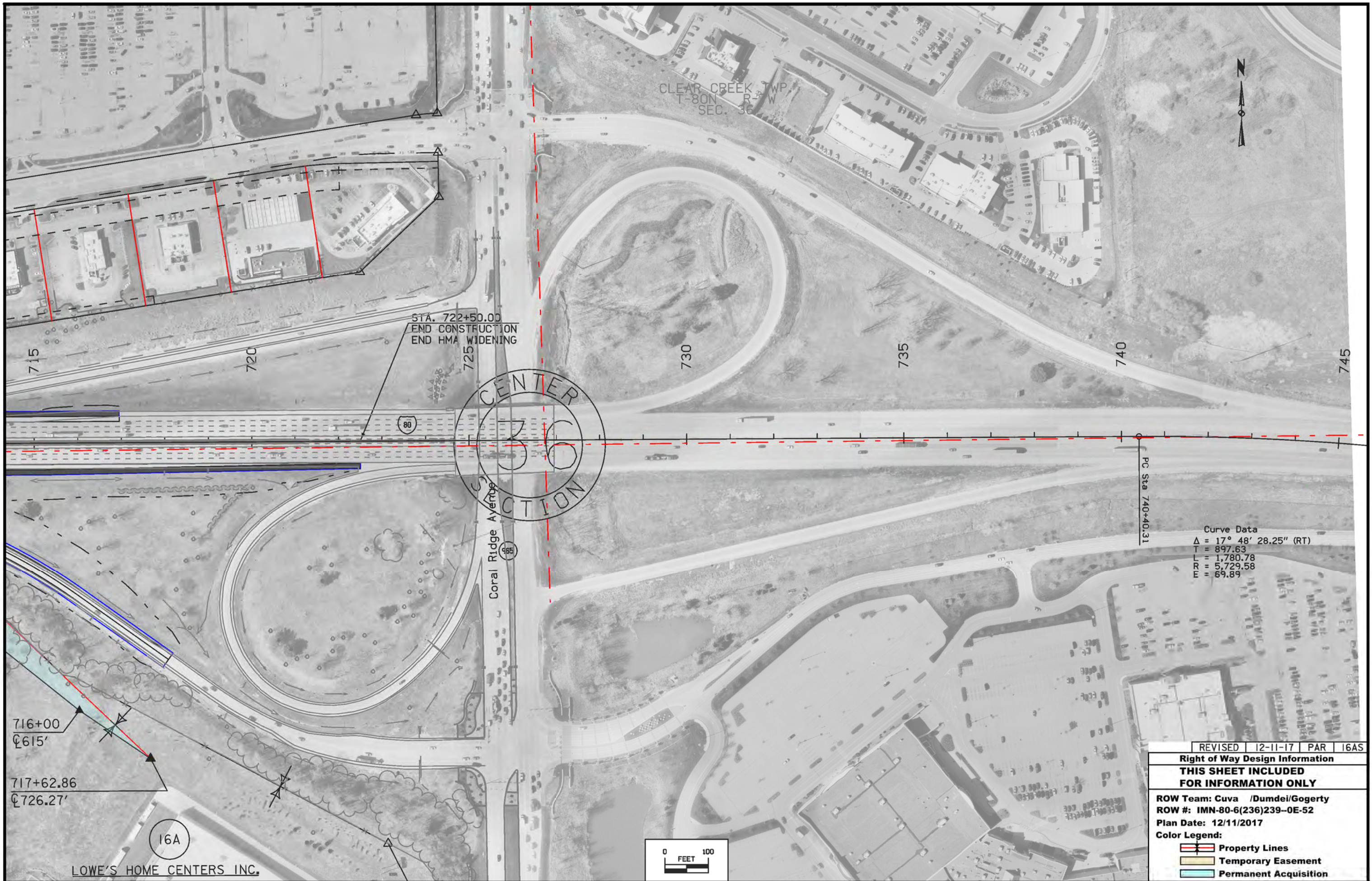
Sta. 693+59.4, 28.4' Lt.
8' x 8' x 106.4' R.C.P.
DA = 461' Ac. - F-R



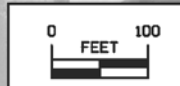
Sta. 706+90.5
24" Conc. Pipe
DA = Median Only

Sta. 710+24.7
24" x 187.7' Conc. Pipe W/ 42"
DA = 1' Ac. - F-R

Right of Way Design Information	
THIS SHEET INCLUDED FOR INFORMATION ONLY	
ROW Team: Cuva /Dumdei/Gogerty	
ROW #: IMN-80-6(236)239-0E-52	
Plan Date: 05/17/2016	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition



REVISED	12-11-17	PAR	16AS
Right of Way Design Information			
THIS SHEET INCLUDED FOR INFORMATION ONLY			
ROW Team: Cuva /Dumdei/Gogerty			
ROW #: IMN-80-6(236)239--0E-52			
Plan Date: 12/11/2017			
Color Legend:			
	Property Lines		
	Temporary Easement		
	Permanent Acquisition		



CLEAR CREEK TWP.
T-79N R-7W
SEC. 2

Sta. 11095+94.8
Skew 30° Rt. Ahd.
3' x 3' x 346.0' R.C.B.
W/ Flume Outlet
DA = 13 Ac. - R

Sta. 1094+50.00
Install 24"x148' RCP
Lt. 724.60
F.L. = Rt. 734.06

Sta. 1100+20.00
Install 24"x234' RCP
Lt. 702.67
F.L. = Rt. 724.91

TEMPORARY EASEMENT
FOR PIPE JACKING

TEMPORARY EASEMENT
FOR PIPE JACKING

19
DEAN W. &
TERESA M. PHINNEY

STEVEN C. BRANIN
JAYNE L. MCQUILLEN

STA. 1089+20.00
BEGIN CONSTRUCTION
BEGIN PCC GRADE & PAVE

TEMPORARY EASEMENT
FOR PIPE JACKING

THE RIVER PRODUCTS COMPANY, INC.

TEMPORARY EASEMENT
FOR PIPE JACKING

THE RIVER PRODUCTS COMPANY, INC.

Sta. 1089+50.00
Install 24"x238' RCP
Lt. 742.04
F.L. = Rt. 717.18

Sta. 1095+94.80
Build 3'x3'x46' RCB Extension
Skew = 30° Rt. Ahd.
F.L. = Lt. N/A
Rt. 704.99
Design No. 0719

Sta. 1099+70.00
Install 48" x 426' RCP
Lt. 699.90
F.L. = Rt. 697.68

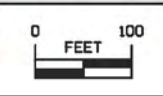
Sta. 11087+82.2
Skew 30° Rt. Ahd.
30" X 451.2' Conc. Pipe
W/ 29.6' Flume Outlet
DA = 10 Ac. - R

Sta. 11095+94.8
Skew 30° Rt. Ahd.
3' x 3' x 346.0' R.C.B.
W/ Flume Outlet
DA = 13 Ac. - R

Sta. 11099+85.3
3' x 3' x 409.0' R.C.B.
Outlet Under Water
DA = 76 Ac. - R

Sta. 11099+85.3, 18.5' Rt.
24" x 48.5' Conc. Pipe
W/ 30" x 20.4' Plastic Pipe Ext.
DA = Median Only

Sta. 1106+00.00
Install 24"x94' RCP
Lt. 717.11
F.L. = Rt. 717.11

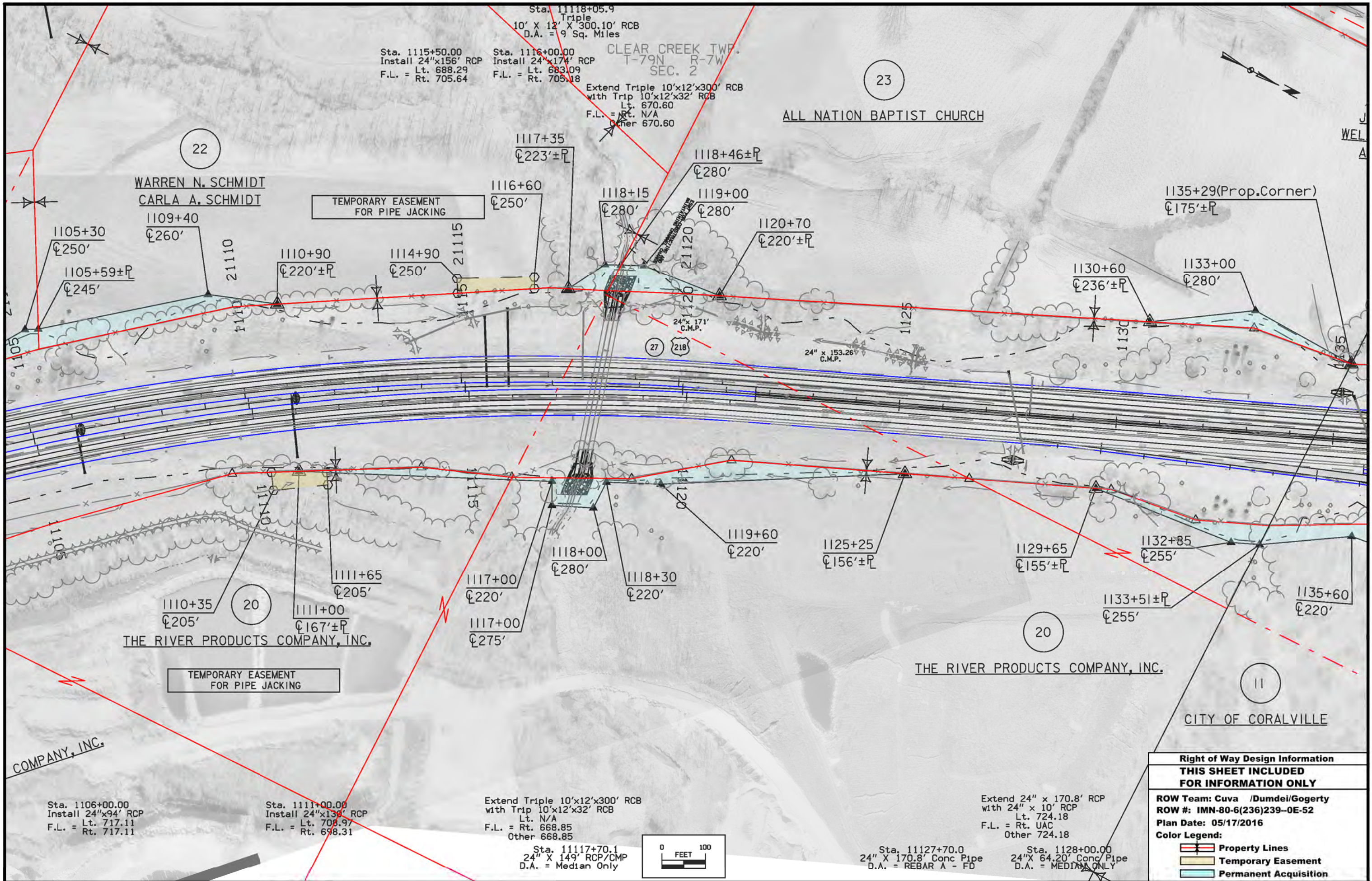


Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Cuva /Dumdei/Gogerty
ROW #: IMN-80-6(236)239-0E-52
Plan Date: 05/17/2016

Color Legend:

- Property Lines
- Temporary Easement
- Permanent Acquisition



Sta. 1118+05.9
Triple
10' X 12' X 300.10' RCB
D.A. = 9 Sq. Miles

Sta. 1115+50.00
Install 24"x156' RCP
Lt. 688.29
F.L. = Rt. 705.64

Sta. 1116+00.00
Install 24"x174' RCP
Lt. 683.09
F.L. = Rt. 705.18

Extend Triple 10'x12'x300' RCB
with Trip 10'x12'x32' RCB
Lt. 670.60
F.L. = Rt. N/A
Other 670.60

CLEAR CREEK TWP.
T-79N R-7W
SEC. 2

ALL NATION BAPTIST CHURCH

WARREN N. SCHMIDT
CARLA A. SCHMIDT

TEMPORARY EASEMENT
FOR PIPE JACKING

THE RIVER PRODUCTS COMPANY, INC.

THE RIVER PRODUCTS COMPANY, INC.

CITY OF CORALVILLE

Sta. 1106+00.00
Install 24"x94' RCP
Lt. 717.11
F.L. = Rt. 717.11

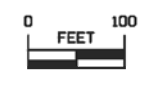
Sta. 1111+00.00
Install 24"x130' RCP
Lt. 708.97
F.L. = Rt. 698.31

Extend Triple 10'x12'x300' RCB
with Trip 10'x12'x32' RCB
Lt. N/A
F.L. = Rt. 668.85
Other 668.85

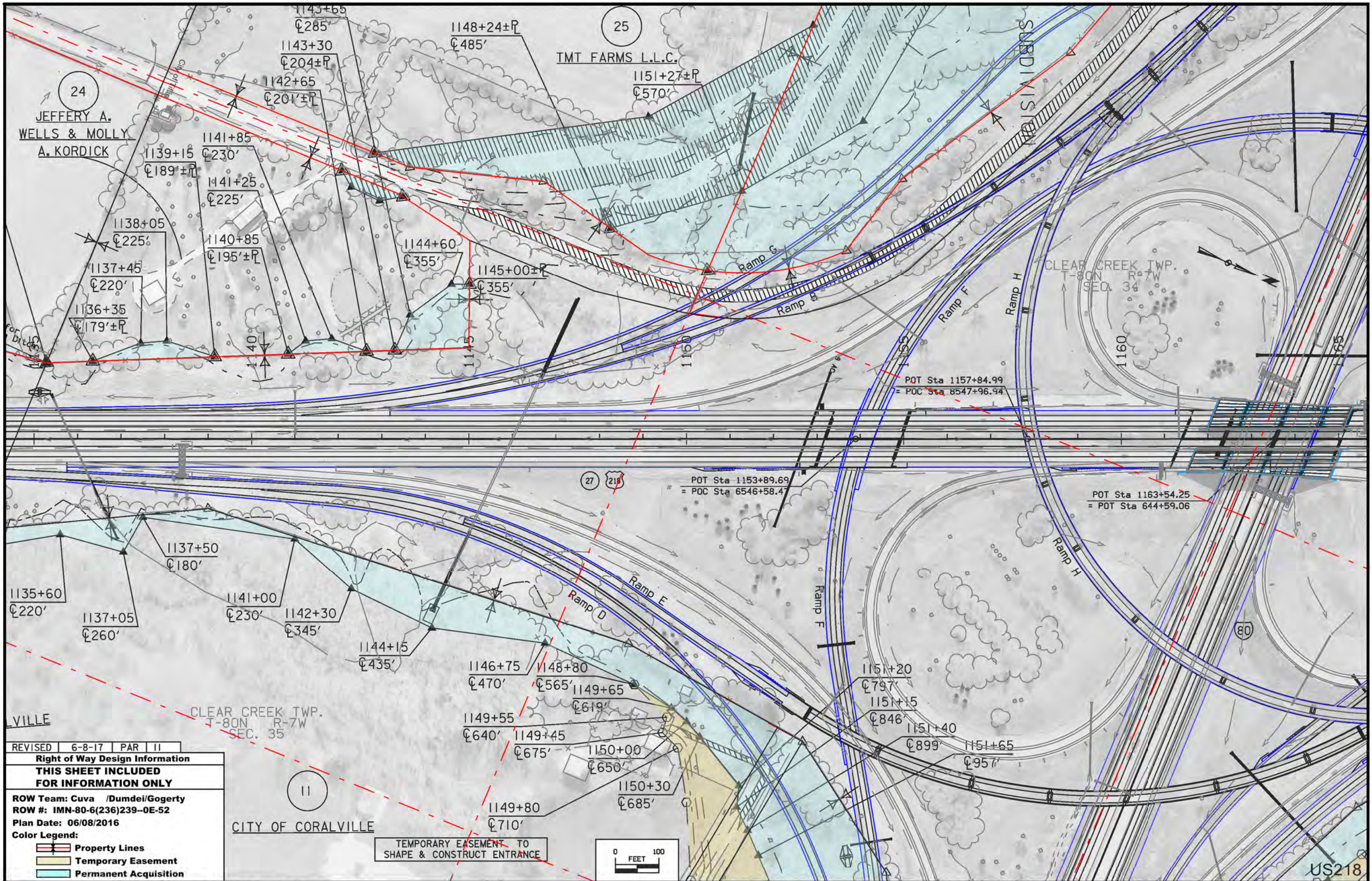
Extend 24" x 170.8' RCP
with 24" x 10' RCP
Lt. 724.18
F.L. = Rt. UAC
Other 724.18

Sta. 1117+70.1
24" X 149' RCP/CMP
D.A. = Median Only

Sta. 1128+00.00
24" X 64.20' Conc Pipe
D.A. = MEDIAN ONLY



Right of Way Design Information	
THIS SHEET INCLUDED FOR INFORMATION ONLY	
ROW Team: Cuva /Dumdei/Gogerty	
ROW #: IMN-80-6(236)239--0E-52	
Plan Date: 05/17/2016	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition



REVISED 6-8-17 PAR II

Right of Way Design Information

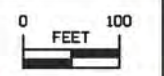
THIS SHEET INCLUDED FOR INFORMATION ONLY

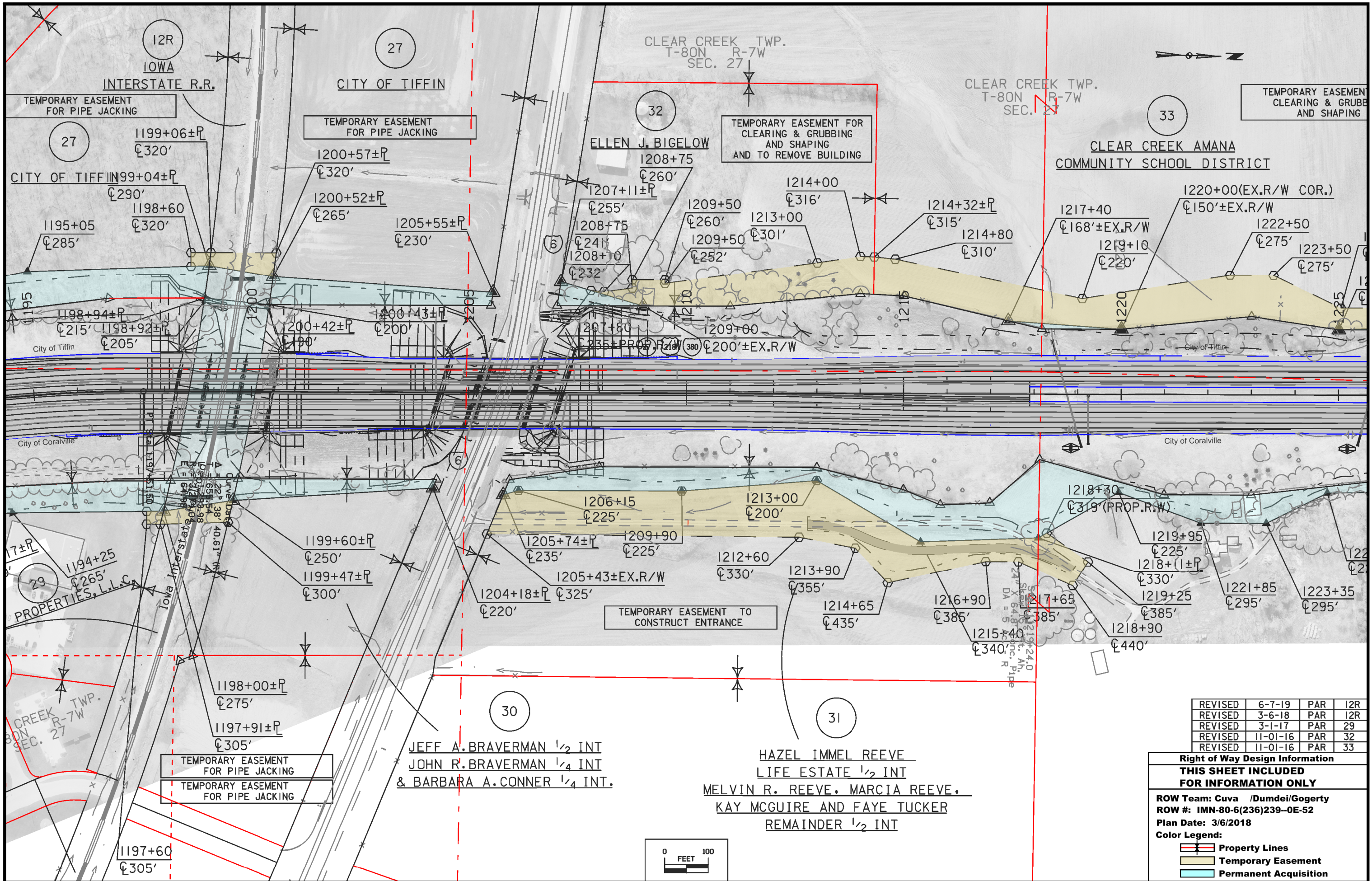
ROW Team: Cuva /Dumdei/Gogerty
 ROW #: IMN-80-6(236)239-0E-52
 Plan Date: 06/08/2016

Color Legend:

- Property Lines
- Temporary Easement
- Permanent Acquisition

TEMPORARY EASEMENT TO SHAPE & CONSTRUCT ENTRANCE





REVISED	6-7-19	PAR	12R
REVISED	3-6-18	PAR	12R
REVISED	3-1-17	PAR	29
REVISED	11-01-16	PAR	32
REVISED	11-01-16	PAR	33

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Cuva /Dumdei/Gogerty
 ROW #: IMN-80-6(236)239--0E-52
 Plan Date: 3/6/2018

Color Legend:

- Property Lines
- Temporary Easement
- Permanent Acquisition

TRAFFIC CONTROL PLAN

GENERAL:

1. The Contractor's proposed full closures will be subject to Lane Rental Assessment Rates as outlined in the "Special Provisions for Lane Rental".
2. All lanes of traffic on I-80, I-380, US 218 and all associated ramps and local roadways shall be maintained at all times except as provided in the Summary of Lane Closures identified within the Traffic Control Notes. Modifications to the Summary of Lane Closures will be made for the following:
 - a) Special event and large venue entertainment at the University of Iowa such as football and basketball games.
 - b) The Iowa Department of Transportation reserves the right to modify these hours as necessary to accommodate special event traffic or unexpected traffic volume.
3. The Contractor shall submit any requests for full closures or traffic control modifications to the Engineer for review and approval 2 weeks prior to any changes being made. Traffic control layouts for closures and detours not shown in the plans will be the responsibility of the Contractor to provide to the Engineer for review and approval.
4. Only one direction of either I-80, I-380 or US 218 may be fully closed at one time with the exception of setting bridge beams over existing traffic lanes.
5. The Contractor shall provide notification to the Statewide Traffic Management Center (515-237-3300) immediately prior to deployment and upon removal of lane closures. If a planned lane closure does not occur at the scheduled time immediately contact the Statewide Traffic Management Center.
6. The Contractor shall coordinate traffic control with other projects as described in Tab 111-01.
7. PDMS shall be fully integrated with the Statewide Traffic Management Center system and deployed 3 days prior to any overnight closures of ramps or interstate mainline. All PDMS units shall be furnished, maintained and removed by the contractor. The contractor shall coordinate with the Engineer to determine appropriate locations and messaging.
8. Traffic control devices shall not be placed in the traveled way before the permitted times shown.
9. Traffic control devices shall be removed from the traveled way before the ending times shown.
10. The Contractor shall provide, install, maintain, and remove traffic control for detours. Refer to the detour maps provided on the J-sheets for route and sign location details. Existing alternate route signs that conflict with active detours shall be covered by the Contractor for the duration of the detour.
11. Signal timing at detour intersections will be adjusted by others while the respective detours are in operation. Refer to the detour routes in the J Sheets. The Contractor shall coordinate with the Engineer when this shall occur.
12. Ingress/Egress locations shall utilize the following traffic control:
 - a) I-80, I-380, and US 218 locations with less than 10' of paved shoulder adjacent to thru traffic shall utilize a lane closure per TC-418.
 - b) I-80, I-380, and US 218 locations with 10' or more paved shoulder adjacent to thru traffic shall utilize TC-402.
 - c) Ramp and loop locations shall utilize partial lane closure TC-416.
 - d) At all I-80, I-380, US 218 and ramp ingress/egress locations, include the following signs to the traffic control:
 Include "TRUCKS TURNING AHEAD" sign 500' ahead of ingress locations.
 Include "TRUCKS ENTERING ROADWAY" within 500' of egress locations.
13. Ingress/Egress via shoulder closure off of I-80, I-380, US 218, and Interchange Ramps will only be allowed during non-peak hours. Peak hours are defined as 6:00 AM to 9:00 AM and 3:00 PM to 6:00 PM, Monday through Sunday.
14. Ingress/Egress via lane closure off of I-80, I-380, US 218, and Ramps will only be during permitted single lane closure times. Refer to the Summary of Lane Closures.
15. Ingress/Egress via 340th St. SE near Creekside Park will be allowed except at the following times:
 - From April 1 to November 15
 - Sunday all day
 - Monday night 4:30 PM to 12:00 AM
 - Tuesday night 4:30 PM to 12:00 AM
 - Wednesday night 4:30 PM to 12:00 AM
 - Thursday night 4:30 PM to 12:00 AM
 - Friday night 4:30 PM to 12:00 AM
 - Saturday all day
 - All Holidays

TRAFFIC CONTROL PLAN

SUMMARY OF LANE CLOSURES

Lanes on I-80

1. Through traffic will be maintained on the project at all times except as shown below.
 - Single lane closures will be permitted from:
 - o Sunday night 8:00 p.m. to Monday morning 6:00 a.m.
 - o Monday night 7:00 p.m. to Tuesday morning 6:00 a.m.
 - o Tuesday night 7:00 p.m. to Wednesday morning 6:00 a.m.
 - o Wednesday night 7:00 p.m. to Thursday morning 6:00 a.m.
 - o Thursday night 7:00 p.m. to Friday morning 6:00 a.m.
 - o Friday night 9:00 p.m. to Saturday morning 7:00 a.m.
 - o Saturday night 7:00 p.m. to Sunday morning 9:00 a.m.
 - Double lane closures, in locations where 3 or more lanes are available, will be permitted from:
 - o Sunday night 9:00 p.m. to Monday morning 5:30 a.m.
 - o Monday night 10:30 p.m. to Tuesday morning 5:30 a.m.
 - o Tuesday night 10:30 p.m. to Wednesday morning 5:30 a.m.
 - o Wednesday night 10:30 p.m. to Thursday morning 5:30 a.m.
 - o Thursday night 10:30 p.m. to Friday morning 5:30 a.m.
 - o Friday night 10:30 p.m. to Saturday morning 5:30 a.m.
 - o Saturday night 10:00 p.m. to Sunday morning 8:00 a.m.
 - Full closures of one direction will be permitted from:
 - o Sunday night 11:00 p.m. to Monday morning 5:00 a.m.
 - o Monday night 11:00 p.m. to Tuesday morning 5:00 a.m.
 - o Tuesday night 11:00 p.m. to Wednesday morning 5:00 a.m.
 - o Wednesday night 11:00 p.m. to Thursday morning 5:00 a.m.
 - o Thursday night 11:00 p.m. to Friday morning 5:00 a.m.
 - o Friday night 11:00 p.m. to Saturday morning 6:00 a.m.
 - o Saturday night 11:00 p.m. to Sunday morning 7:00 a.m.

Lanes on US 218/I-380: North of Station 1125+00

1. Through traffic will be maintained on the project at all times except as shown below.
 - Single lane closures will be permitted from:
 - o Sunday night 8:00 p.m. to Monday morning 6:00 a.m.
 - o Monday night 8:00 p.m. to Tuesday morning 6:00 a.m.
 - o Tuesday night 8:00 p.m. to Wednesday morning 6:00 a.m.
 - o Wednesday night 8:00 p.m. to Thursday morning 6:00 a.m.
 - o Thursday night 8:00 p.m. to Friday morning 6:00 a.m.
 - o Friday night 9:00 p.m. to Saturday morning 7:00 a.m.
 - o Saturday night 8:30 p.m. to Sunday morning 9:00 a.m.
 - Full closures of one direction will be permitted from:
 - o Sunday night 11:00 p.m. to Monday morning 5:00 a.m.
 - o Monday night 11:00 p.m. to Tuesday morning 5:00 a.m.
 - o Tuesday night 11:00 p.m. to Wednesday morning 5:00 a.m.
 - o Wednesday night 11:00 p.m. to Thursday morning 5:00 a.m.
 - o Thursday night 11:00 p.m. to Friday morning 5:00 a.m.
 - o Friday night 11:30 p.m. to Saturday morning 6:00 a.m.
 - o Saturday night 11:30 p.m. to Sunday morning 7:00 a.m.

Lanes on US 218: Northbound South of Station 1125+00

1. Through traffic will be maintained on the project at all times except as shown below.
 - Single lane closures will be permitted from:
 - o Sunday night 6:00 p.m. to Monday afternoon 2:00 p.m.
 - o Monday night 6:00 p.m. to Tuesday afternoon 2:00 p.m.
 - o Tuesday night 6:00 p.m. to Wednesday afternoon 2:00 p.m.
 - o Wednesday night 6:00 p.m. to Thursday afternoon 2:00 p.m.
 - o Thursday night 6:00 p.m. to Friday afternoon 2:00 p.m.
 - o Friday night 7:30 p.m. to Saturday night 6:00 p.m.
 - o Saturday night 6:00 p.m. to Sunday night 6:00 p.m.
 - Full closures of one direction will be permitted from:
 - o Sunday night 11:00 p.m. to Monday morning 5:00 a.m.
 - o Monday night 11:00 p.m. to Tuesday morning 5:00 a.m.
 - o Tuesday night 11:00 p.m. to Wednesday morning 5:00 a.m.
 - o Wednesday night 11:00 p.m. to Thursday morning 5:00 a.m.
 - o Thursday night 11:00 p.m. to Friday morning 5:00 a.m.
 - o Friday night 10:00 p.m. to Saturday morning 7:00 a.m.
 - o Saturday night 10:00 p.m. to Sunday morning 9:00 a.m.

TRAFFIC CONTROL PLAN

Lanes on US 218: Southbound South of Station 1125+00

1. Through traffic will be maintained on the project at all times except as shown below.
 - Single lane closures will be permitted from:
 - o Sunday night 6:00 p.m. to Monday morning 6:00 a.m. and Monday daytime 9:00 a.m. to 2:00 p.m.
 - o Monday night 6:00 p.m. to Tuesday morning 6:00 a.m. and Tuesday daytime 9:00 a.m. to 2:00 p.m.
 - o Tuesday night 6:00 p.m. to Wednesday morning 6:00 a.m. and Wednesday daytime 9:00 a.m. to 2:00 p.m.
 - o Wednesday night 6:00 p.m. to Thursday morning 6:00 a.m. and Thursday daytime 9:00 a.m. to 2:00 p.m.
 - o Thursday night 6:00 p.m. to Friday morning 6:00 a.m. and Friday daytime 9:00 a.m. to 2:00 p.m.
 - o Friday night 7:30 p.m. to Saturday night 6:00 p.m.
 - o Saturday night 6:00 p.m. to Sunday Saturday night 6:00 p.m.
 - Full closures of one direction will be permitted from:
 - o Sunday night 11:00 p.m. to Monday morning 5:00 a.m.
 - o Monday night 11:00 p.m. to Tuesday morning 5:00 a.m.
 - o Tuesday night 11:00 p.m. to Wednesday morning 5:00 a.m.
 - o Wednesday night 11:00 p.m. to Thursday morning 5:00 a.m.
 - o Thursday night 11:00 p.m. to Friday morning 5:00 a.m.
 - o Friday night 10:00 p.m. to Saturday morning 7:00 a.m.
 - o Saturday night 10:00 p.m. to Sunday morning 9:00 a.m.

Lanes on US 6

1. Through traffic will be maintained on the project at all times except as shown below.
 - Full closures under I-80 and I-380 will not be allowed simultaneously.
 - Full closures will be permitted from:
 - o Sunday night 8:00 p.m. to Monday morning 6:00 a.m.
 - o Monday night 8:00 p.m. to Tuesday morning 6:00 a.m.
 - o Tuesday night 8:00 p.m. to Wednesday morning 6:00 a.m.
 - o Wednesday night 8:00 p.m. to Thursday morning 6:00 a.m.
 - o Thursday night 8:00 p.m. to Friday morning 6:00 a.m.
 - o Friday night 8:00 p.m. to Saturday morning 6:00 a.m.
 - o Saturday night 8:00 p.m. to Sunday morning 6:00 a.m.
- Ramps and Loops:
1. Additional partial lane closures on interchange ramps and loops will be allowed during non-peak hours, provided at least one 12' travel lane is maintained. Peak hours are defined as 6:00 AM to 9:00 AM and 3:00 PM to 6:00 PM, Monday through Sunday.
 2. Only 1 ramp or loop can be closed at a time with the exception of setting bridge beams over existing traffic lanes.
 - Full closures of 1 ramp or loop will be permitted from:
 - o Sunday night 10:00 p.m. to Monday morning 6:00 a.m.
 - o Monday night 10:00 p.m. to Tuesday morning 6:00 a.m.
 - o Tuesday night 10:00 p.m. to Wednesday morning 6:00 a.m.
 - o Wednesday night 10:00 p.m. to Thursday morning 6:00 a.m.
 - o Thursday night 10:00 p.m. to Friday morning 6:00 a.m.
 - o Friday night 10:00 p.m. to Saturday morning 8:00 a.m.
 - o Saturday night 10:00 p.m. to Sunday morning 10:00 a.m.

Shoulder Closures:

1. A shoulder closure is defined as work within 15' of the traveled way.
 - Shoulder closures will be allowed during non-peak hours, unless otherwise approved by the Engineer.

Peak hours are defined as:

 - o Monday 6:00 a.m. to 9:00 a.m. and 3:00 p.m. to 6:00 p.m.
 - o Tuesday 6:00 a.m. to 9:00 a.m. and 3:00 p.m. to 6:00 p.m.
 - o Wednesday 6:00 a.m. to 9:00 a.m. and 3:00 p.m. to 6:00 p.m.
 - o Thursday 6:00 a.m. to 9:00 a.m. and 3:00 p.m. to 6:00 p.m.
 - o Friday 6:00 a.m. to 9:00 a.m. and 3:00 p.m. to 6:00 p.m.

***** Delete (per Addenda) *****

TRAFFIC RESTRICTIONS

The Winter Period is defined as 11/15/2019 through 4/1/2020.

The following configurations shall not be in place during the Winter Period:

- ~~Stage 2A Traffic configuration for I-80 EB at I-380 from approximately 641+00 to 647+00.~~
- Stage 2B Traffic configuration for I-80 EB at US 6/IAIS Railroad from approximately 684+00 to 701+00.

TRAFFIC CONTROL PLAN

TBR REMOVAL FOR WINTER

The Winter Period is defined as 11/15/2019 through 4/1/2020.

TBR placed on the outside shoulder shall not be in place during the Winter period for the following configurations:

- Stage 2B Traffic configuration for I-380 NB from approximately 1185+00 to 1211+00.
- Stage 2B Traffic configuration for I-380 SB from approximately 1190+00 to 1219+00.
- Stage 2D and 2E Traffic configuration for I-80 WB at US 6/IAIS Railroad from approximately 684+00 to 703+00.
- Stage 2D and 2E Traffic configuration for US 218 NB from approximately 1121+00 to 1140+00.

511 TRAVEL RESTRICTIONS

Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No., Structure ID, or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
			None Anticipated									

111-01
04-17-12

COORDINATED OPERATIONS

Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.

Project	Type of Work
NHS-80-6(336)239--11-52	Bridge New - PPCB
NHS-80-6(339)239--11-52	Bridge Replacement - PPCB
NHS-80-6(354)239--11-52	Bridge New - PPCB
NHS-80-6(357)239--11-52	Bridge New - PPCB
NHS-80-6(359)239--11-52	Bridge New - PPCB
NHS-80-6(361)239--11-52	Bridge Widening
NHS-80-6(379)239--11-52	Bridge Widening
NHS-80-6(329)239--11-52	Bridge New - Steel Girder
NHS-80-6(332)239--11-52	Bridge Replacement - PPCB
NHS-80-6(342)239--11-52	Bridge Replacement - PPCB
NHS-80-6(345)239--11-52	Bridge Replacement - PPCB
NHS-218-4(40)--19-52	RCB Culvert Extension - Triple
NHS-218-4(41)--19-52	RCB Culvert Extension - Triple
NHS-380-6(373)1--11-52	Grading
IM-380-6(346)2--13-52	Pavement - New
IM-380-6(305)2--13-52	Traffic Signs
IM-380-6(306)2--13-52	Lighting
IM-80-6(399)239--13-52	Traffic Signs
IM-80-6(400)239--13-52	Lighting
IM-80-6(392)239--13-52	Bridge Widening
IMN-80-6(494)239--0E-52	RCB Culvert Extension - Single
ITS-80-6(465)239--25-52	Dynamic Message Signs
MPIN-80-6(721)205--0N-48	PCC Patching
IMN-80-6(394)226--0E-48	Microsurfacing
MPIN-380-6(712)0--0N-52	PCC Patching
MB-000-6(509)0--77-00	HMA Resurfacing
IMN-80-6(425)239--0E-52	Stream Mitigation
ITS-80-6(432)239--25-52	Dynamic Message Signs
NHS-80-6(393)239--11-52	Noise Wall
NHS-80-6(348)239--11-52	Bridge Replacement - PPCB
NHS-80-6(372)239--11-52	PCC Pavement - Grade & Replace
NHS-80-6(403)239--11-52	Traffic Signs
NHS-80-6(404)239--11-52	Lighting
IMN-380-6(314)0--0E-52	PCC Patching
IM-NHS-380-6(326)1--03-52	Pavement - Grade & Replace
NHS-380-6(327)1--11-52	Traffic Signs
IM-NHS-380-6(328)1--03-52	Pavement - Grade & Replace
IM-NHS-380-6(329)1--03-52	Traffic Signs
IMN-380-6(307)2--0E-52	Erosion Control
IMN-80-6(391)229--0E-52	Pipe Culverts

STAGING NOTES

Description of Specific Locations:

Location 0 - General

- All ramps, side roads, and berms not impacting traffic
- Work includes grading all ramps and constructing bridges that do not impacting traffic

LOCATION 1 - Sta. 536 (BOP) to Sta. 627

- I-80 west end of project and Ireland Interchange
- Work includes grading, temporary paving, and bridge removal

LOCATION 2 - Sta. 627 to Sta. 659

- I-80 through the I-80/I-380 Interchange
- Work includes bridge construction coordination
- Coordinate Location 2 with Location 5 work

LOCATION 3 - Sta. 659 to Sta. 722 (EOP)

- I-80 over US 6/RR and Coral Ridge Interchange
- Work includes bridge construction, grading, and paving

LOCATION 4 - Sta. 1080 (BOP) to Sta. 1150

- US 218 near Begin of Project
- Work includes grading and temporary paving on south end of project

LOCATION 5 - Sta. 1150 to Sta. 1222

- US 218/I-380 through the I-80/I-380 Interchange
- Work includes bridge construction, grading, and paving
- Coordinate Location 5 with Location 2 work

STAGING

Stage 1 - Work performed by others

- Work performed in Stage 1 is to be completed by previously Let projects. Refer to:
IM-080-6(355)239--13-52 Let July 2018 with anticipated completion Fall 2020
IM-080-6(392)239--13-52 Let December 2018 with anticipated completion early Fall 2019

LOCATION 0: General

Stage 2A

- Traffic:
- Maintain traffic in all directions

Construction:

- Ramp A
 - Grade connection to I-80
 - Bridge over Clear Creek - Construct new bridge
- Ramp B
 - Grade connection to I-80
 - Grade connection to US 218
 - Grade temporary connection to US 218
- Ramp C - Grade from Ramp E to Ramp F
- Ramp D
 - Grade from south of Clear Creek to Ramp F
 - Bridge over Clear Creek - Construct new bridge
 - Construct RCB Extension near Sta. 4545+00 (refer to refer to NHS-218-4(40)--19-52)
- Ramp E - Grade west from I-80 connection to existing Ramp C
- Ramp F
 - Grade from south of Clear Creek to I-80 EB
 - Bridge over Clear Creek - Construct new bridge
- View Block Wall berm and 340th St. SE
 - Grade berm
 - Relocate entrance behind berm

Stage 2B

- Traffic:
- Maintain traffic in all directions

Construction:

- Ramp D - Grade remaining south end of ramp
- Ramp H - Grade north end connection to I-380

Stage 2E

- Traffic:
- Maintain traffic in all directions

Construction:

- Ramp B - Pave from Sta. 2523+00 to western bridge approach
- Ramp B - Grade and pave temporary connection to I-80
- Ramp B - Pave from southern bridge approach to Sta. 2551+60
- Ramp B - Pave temporary connection to US 218
- Ramp H - Pave from northern bridge approach to Sta. 8572+00

STAGING NOTES

LOCATION 1 - Sta. 536 (BOP) to Sta. 627

Stage 2A thru Stage 2E

Traffic:

- Maintain I-80 WB (2 lanes)
- Maintain I-80 WB (2 lanes)
- Maintain all Ireland Interchange Ramps

Construction:

- I-80 WB Roadway (The following sequence may vary pending Engineer's approval)
 - Grade outside (requires TBR)
 - Install culverts (requires TBR)
 - Temporary pavement widening outside under a single lane closure during permitted times at night (TC-418) (does not require TBR)
- I-80 EB Roadway (The following sequence may vary pending Engineer's approval)
 - Grade outside (requires TBR)
 - Install culverts (requires TBR)
 - Temporary pavement widening outside under a single lane closure during permitted times at night (TC-418) (does not require TBR)
- Ireland Ramp A
 - Grade outside

Stage 2E

Traffic:

- Refer to Traffic Control Plan for allowable closure times of I-80
- Refer to Traffic Control Plan for allowable closure times of Ramp and Loop Traffic
- Permanently close Jasper Ave./Park Road

Construction:

- Remove Jasper Ave./Park Road bridge over I-80
- Grade temporary connection to new Ramp B
- Pave temporary connection to new Ramp B

LOCATION 2 - Sta. 627 to Sta. 659

Stage 2A

Traffic:

- Maintain I-80 WB (2 lanes)
- Shift I-80 EB to outside then back to normal condition (2 lanes to Sta. 642, 3 lanes from Sta. 642)
- Maintain I-80 Ramp A
- Maintain I-80 Ramp B
- Maintain I-80 Ramp C
- Maintain I-80 Ramp D
- Maintain I-80 Loop E
- Shift I-80 Loop F at I-80 entrance taper
- Maintain I-80 Loop G
- Shift I-80 Loop H at I-80 exit taper

Construction:

- I-380 Bridge over I-80 - Construct new median bridge piers and substructure
- Ramp F Bridge over I-80 - Construct new median bridge pier
- I-80 EB and loop tapers
 - Remove existing pavement markings with high pressure water blasting

Stage 2B

Traffic:

- Maintain I-80 WB (2 lanes)
- Shift I-80 EB to normal conditions (2 lanes to Sta. 637, 3 lanes from Sta. 637)
- Maintain I-80 Ramp A
- Maintain I-80 Ramp B
- Maintain I-80 Ramp C
- Maintain I-80 Ramp D
- Maintain I-80 Loop E
- Shift I-80 Loop F at I-80 entrance taper to normal conditions
- Maintain I-80 Loop G
- Shift I-80 Loop H at I-80 exit taper to normal conditions

Construction:

- I-380 Bridge over I-80 - Finish new median bridge
- I-80 EB and loop tapers
 - Remove all pavement markings with high pressure water blasting

STAGING NOTES

LOCATION 3 - Sta. 659 to Sta. 722 (EOP)

Stage 2A

Traffic:

- Maintain I-80 WB (3 lanes + Auxiliary Lane)
- Maintain I-80 EB (3 lanes)
- Maintain IA 965 Ramp B
- Maintain IA 965 Ramp C
- Maintain US 6 under I-80

Construction:

- I-80 WB Roadway (The following sequence may vary pending Engineer's approval)
 - Grade outside (requires TBR)
 - Install culverts (requires TBR)
 - Temporary pavement widening outside under a single lane closure during permitted times at night (TC-418) (does not require TBR)
- I-80 EB Bridge over US 6/RR - Construct outside widening
- I-80 EB Roadway
- I-80 EB Roadway (The following sequence may vary pending Engineer's approval)
 - Grade outside West of US 6 bridge (requires TBR)
 - Install culverts (requires TBR)
 - Temporary pavement widening outside under a single lane closure during permitted times at night (TC-418) (does not require TBR)
 - Pave full depth HMA outside lanes from Sta. 709 to Sta. 722
- IA 965 Ramp B
 - Temporary grading on inside
 - Temporary pavement widening on inside

Stage 2B

Traffic:

- Maintain I-80 WB (3 lanes + Auxiliary Lane)
- Maintain I-80 EB (3 lanes on previous shift)
- Shift IA 965 Ramp B inside
- Maintain IA 965 Ramp C
- Maintain US 6 under I-80

Construction:

- I-80 EB Bridge - Continue widening construction
- I-80 EB Roadway
 - Grade outside lane from Sta. 698 to Sta. 701
 - PCC (final) outside lanes from Sta. 687 to Sta. 690
 - Pave full depth HMA outside lanes from Sta. 698 to Sta. 701
 - Temporary pavement widening outside lane from Sta. 685 to Sta. 687
 - Construct Bridge Approaches
- IA 965 Ramp B
 - Grade outside lane
 - Pave full depth HMA outside lane

Stage 2C

Traffic:

- Shift I-80 WB to outside (Close 1 lane, shift 2 lanes + Auxiliary Lane)
- Shift I-80 EB to outside (3 lanes)
- Shift IA 965 Ramp B to outside
- Maintain IA 965 Ramp C
- Maintain US 6 under I-80

Construction:

- I-80 WB Bridge over US 6/RR - Construct median widening
- I-80 WB Roadway
 - Install median storm sewer and outlets
 - Grade inside lanes and median
 - Pave HMA runout inside lanes and median from Sta. 685 to Sta. 687
 - Pave PCC inside lanes and median from Sta. 687 to Sta. 690
 - Construct Bridge Approaches
 - Pave full depth HMA inside lanes and median from Sta. 698 to Sta. 701
- I-80 EB Roadway
 - Grade inside lanes and median
 - Pave HMA runout inside lanes and median from Sta. 685 to Sta. 687
 - Pave PCC inside lanes and median from Sta. 687 to Sta. 690
 - Construct Bridge Approaches
 - Pave full depth HMA inside lanes and median from Sta. 698 to Sta. 701
- IA 965 Ramp B
 - Remove pavement inside lane

Stage 2D

Traffic:

- Shift I-80 WB to median (Close 1 lane, shift 2 lanes, close auxiliary lane)
- Close IA 965 Ramp C
- Maintain US 6 under I-80

Construction:

- I-80 WB Roadway
 - Pave outside lanes and bridge approach

STAGING NOTES

Stage 2E

Traffic:

- Shift I-80 EB to final lanes (close 1 lane Sta. 696 to Sta. 712, shift 2 lanes)
- Maintain IA 965 Ramp B (on previous shift)
- Maintain US 6 under I-80

Construction:

- I-80 EB Roadway
 - Pave outside lane from Sta. 701 to Sta. 709
- IA 965 Ramp B
 - Grade inside lane
 - Pave inside Lane

Stage 2 Final Condition

Traffic:

- Shift I-80 WB to normal operating conditions (3 lanes + Auxiliary Lane)
- Shift I-80 EB to normal operation conditions (3 lanes)
- Shift IA 965 Ramp B to normal operating conditions (2 lanes)
- Open IA 965 Ramp C to normal operating conditions (1 lanes)

LOCATION 4 - Sta. 1080 (BOP) to Sta. 1150

Stage 2A

Traffic:

- Maintain US 218 SB (2 lanes)
- Maintain US 218 NB (2 lanes)

Construction:

- US 218 SB Roadway
 - Install trenchless median pipe
 - Grade outside

Stage 2B

Traffic: Sta. 1076 to Sta. 1090

- Close US 218 SB inside lane and maintain outside lane (1 lane) during permitted single lane closure times (TC-418)
- Close US 218 NB inside lane and maintain outside lane (1 lane) during permitted single lane closure times (TC-418)

Construction:

- US 218 Median
 - Construct median crossover during permitted single lane closure times (TC-418). Install temporary backfill wedges prior to opening for traffic
 - Grade from Sta. 1121+67.62 to south approach of Median Bridge over Ramp F

Stage 2C

Traffic: Sta. 1080 to Sta. 1127

- Maintain US 218 SB (2 lanes)
- Close US 218 NB inside lane and maintain outside lane (1 lane) during permitted single lane closure times (TC-418)

Construction:

- US 218 RCB and culverts
 - Construct RCBs
 - Install trenchless pipes
- US 218 NB Roadway
 - Grade median foreslope
 - Temporary pavement widening inside during permitted single lane closure times (TC-418)
- US 218 Median
 - Pave from Sta. 1121+67.62 to south approach of Median Bridge over Ramp F

Stage 2D

Traffic: Sta. 1080 to Sta. 1127

- Close US 218 SB inside lane and maintain outside lane (1 lane) during permitted single lane closure times (TC-418)
- Maintain US 218 NB (2 lanes)

Construction:

- US 218 SB Roadway
 - Temporary pavement widening outside during permitted single lane closure times (TC-418)
- US 218 NB Roadway
 - Grade outside

Stage 2E

Traffic: Sta. 1080 to Sta. 1127

- Maintain US 218 SB (2 lanes)
- Close US 218 NB inside lane and maintain outside lane (1 lane) during permitted single lane closure times (TC-418)

Construction:

- US 218 NB Roadway
 - Temporary pavement widening outside during permitted single lane closure times (TC-418)

STAGING NOTES

Stage 2 Final Condition

- Traffic:
- Maintain US 218 SB (2 lanes)
 - Maintain US 218 NB (2 lanes)

LOCATION 5 - Sta. 1150 to Sta. 1222

Stage 2A

- Traffic:
- Maintain US 218/I-380 SB (2 lanes)
 - Shift US 218/I-380 NB (2 lanes) from Sta. 1149 to Sta. 1218 to accommodate contractor access lane and Clear Creek bridge construction (2 lanes)
 - Shoulder strengthening must be completed prior to shifting traffic for contractor lane.
 - Maintain all I-80 Interchange Ramps and Loops
 - Maintain US 6 under I-380

Construction:

- I-380 Bridge over I-80 - Construct new median bridge piers and substructure
- I-380 Bridge over RR - Construct new median bridge piers and substructure
- US 218/I-380 Roadway
 - Shoulder Strengthen outside during permitted single lane closure times (TC-418)
 - Shoulder strengthening must be completed prior to shifting traffic
- US 218/I-380 Median
 - Grade median from Sta. 1152 to Sta. 1168
 - Gap from Sta. 1168 to Sta. 1191 requires lane shift in Stage 2B
 - Grade median from Sta. 1191 to Sta. 1210
 - Gap from Sta. 1210 to Sta. 1218 requires lane shift in Stage 2C

Stage 2B

- Traffic:
- Shift US 218/I-380 SB (2 lanes) from Sta. 1170 to Sta. 1218 to accommodate contractor access lane and Clear Creek bridge construction (2 lanes)
 - Maintain previous shift US 218/I-380 NB (2 lanes)
 - Maintain all I-80 Interchange Ramps and Loops
 - Maintain US 6 under I-380

Construction:

- I-380 Bridge over I-80 - Finish new median bridge
- I-380 Bridge over RR - Finish new median bridge
- I-380 Bridge over US 6 - Construct new median bridge
- I-380 Bridge over Clear Creek - Construct new median bridge
- US 218/I-380 SB Roadway
 - Grade outside
- US 218/I-380 NB Roadway
 - Grade outside
- US 218/I-380 Median
 - Finish grading from Clear Creek bridge to Sta 1210

Stage 2C

- Traffic:
- Maintain previous shift US 218/I-380 SB (2 lanes)
 - Maintain previous shift US 218/I-380 NB (2 lanes)
 - Maintain all I-80 Interchange Ramps and Loops
 - Maintain US 6 under I-380

Construction:

- I-380 Bridge over Ramp F - Construct new median bridge
- US 218/I-380 median
 - Grade median from Sta. 1210 to Sta. 1218
 - Pave median from Clear Creek to Sta. 1210 - Requires 30 day holding time after completion of median and outside grading prior to paving due to settlement impacts

Stage 2D

- Traffic:
- Shift US 218/I-380 SB (2 lanes) out from Sta. 1163 to Sta. 1181 and maintain previous shift
 - Maintain previous shift US 218/I-380 NB (2 lanes)
 - Maintain all I-80 Interchange Ramps and Loops
 - Maintain US 6 under I-380

Construction:

- I-380 Bridge over Ramps E/G - Construct new median bridge
- US 218/I-380 median
 - Grade median from Sta. 1167 to Sta. 1186+50
 - Pave median from Sta. 1210 to Sta. 1218

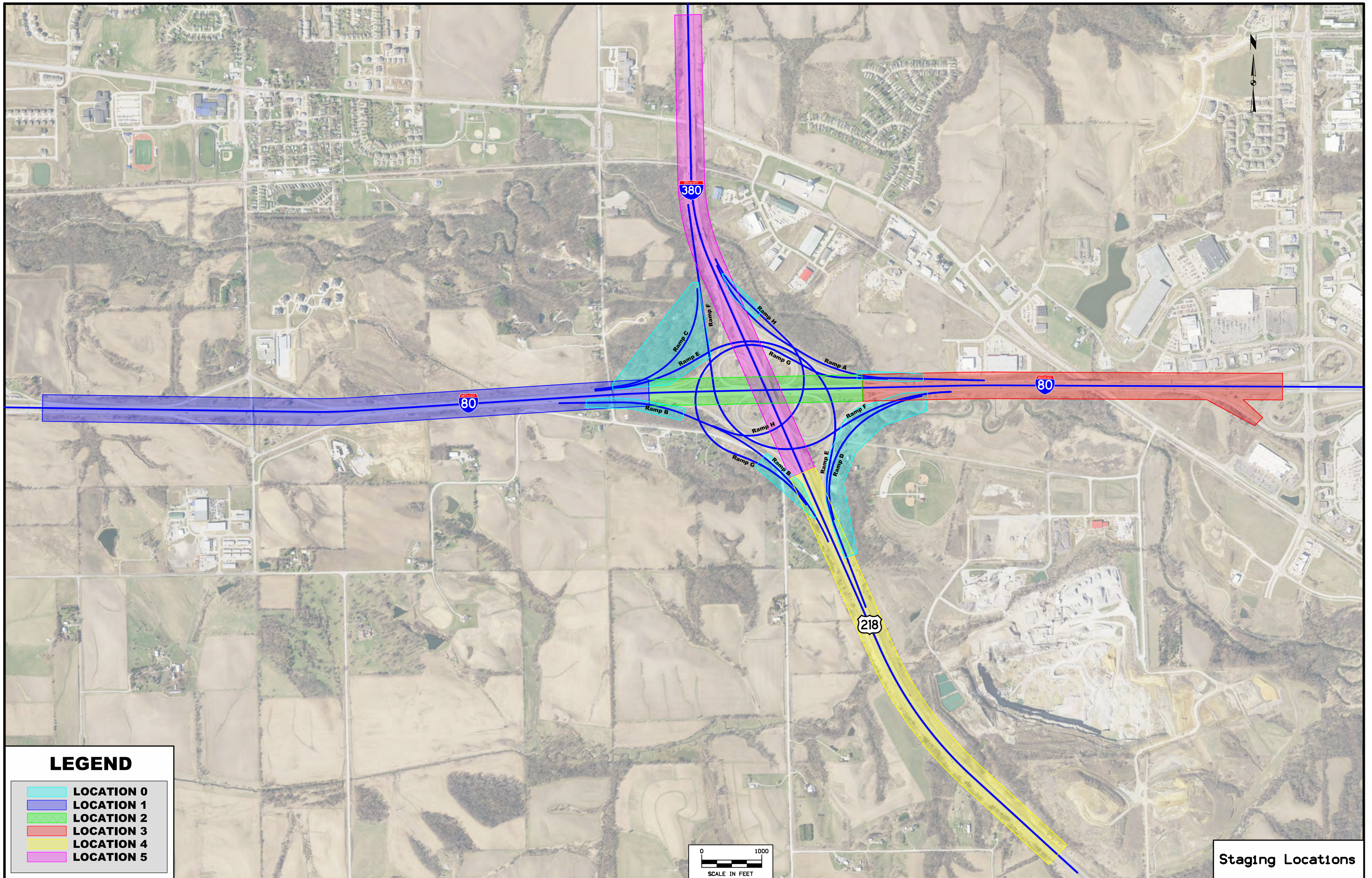
STAGING NOTES

Stage 2E

- Traffic:
- Maintain US 218/I-380 SB (2 lanes) with previous shifts
 - Maintain US 218/I-380 NB (2 lanes) with previous shifts
 - Maintain all I-80 Interchange Ramps and Loops
 - Maintain US 6 under I-380

Construction:

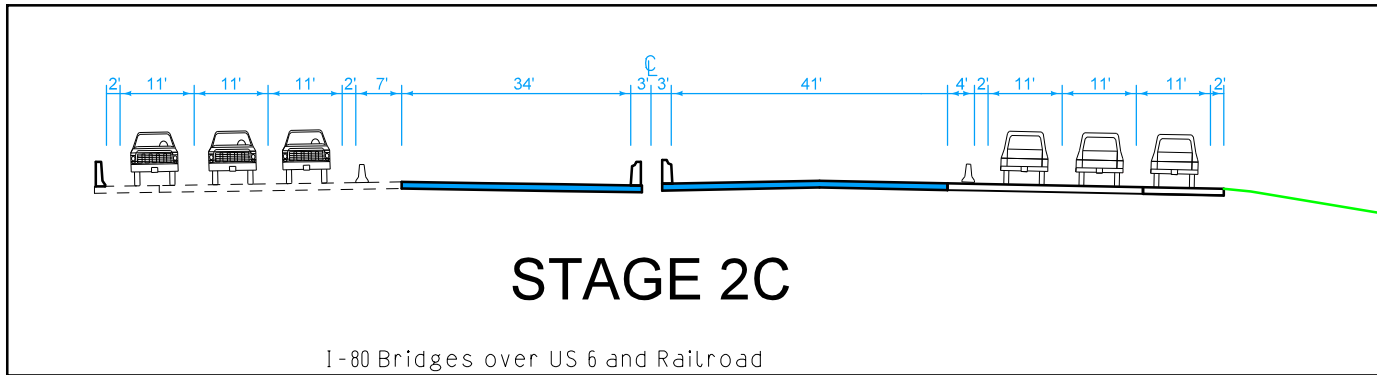
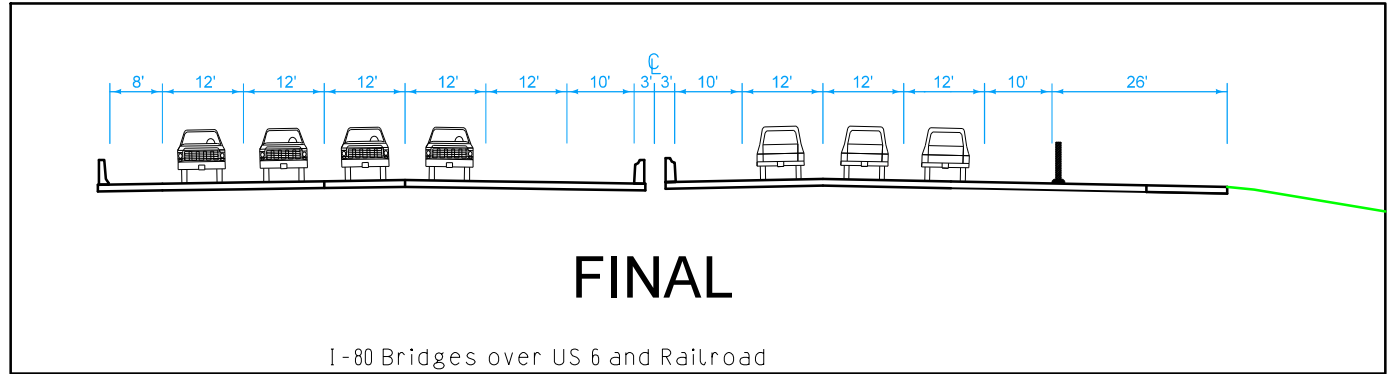
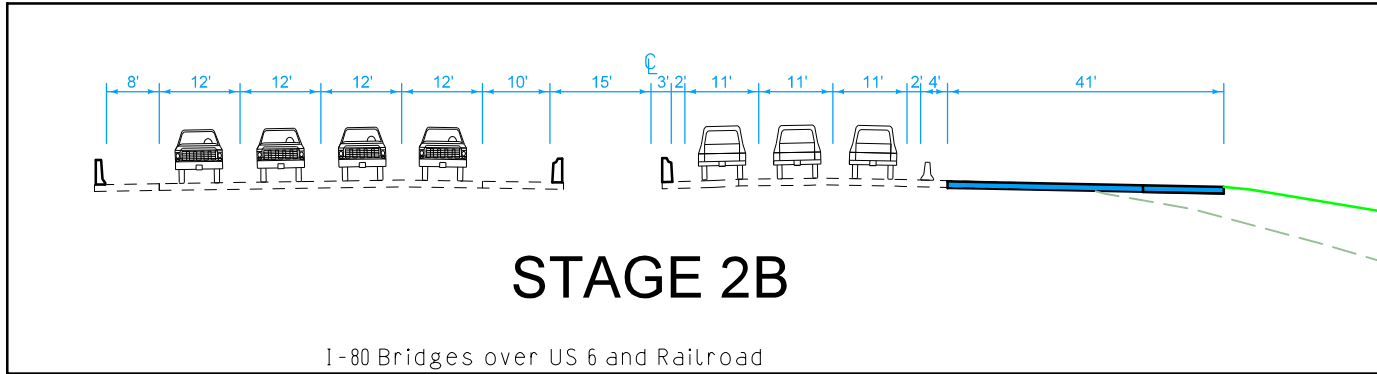
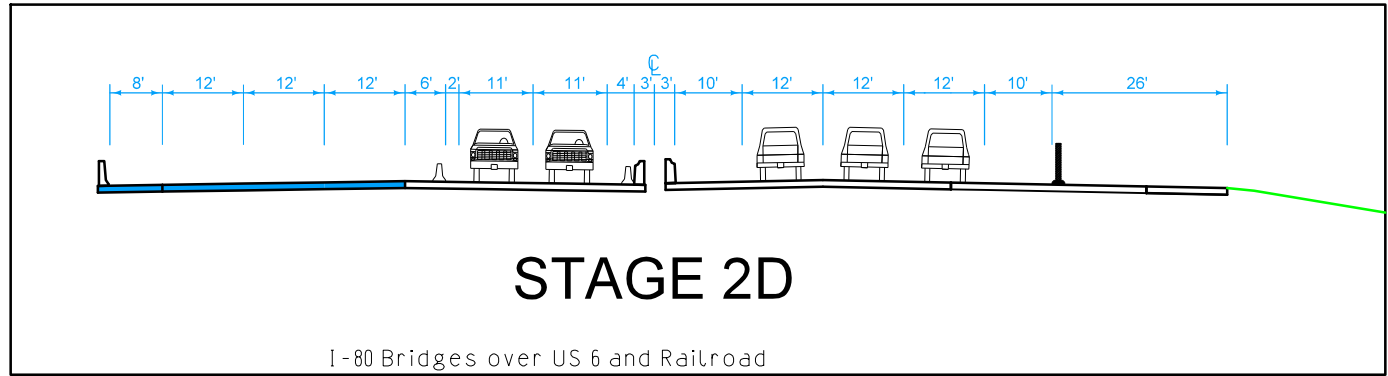
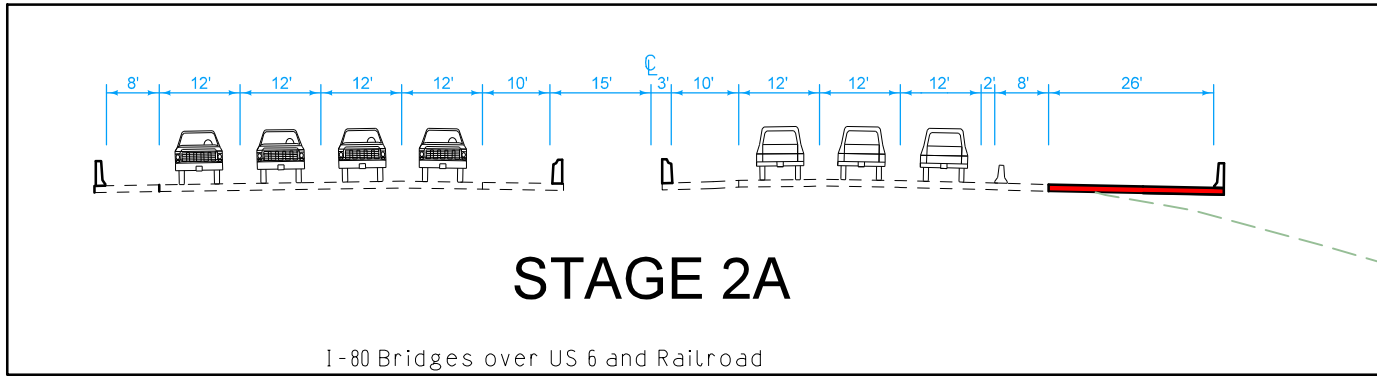
- US 218/I-380 median
 - Pave median from Sta. 1152 to Clear Creek - Requires 30 day holding time after completion of median and outside grading prior to paving due to settlement impacts



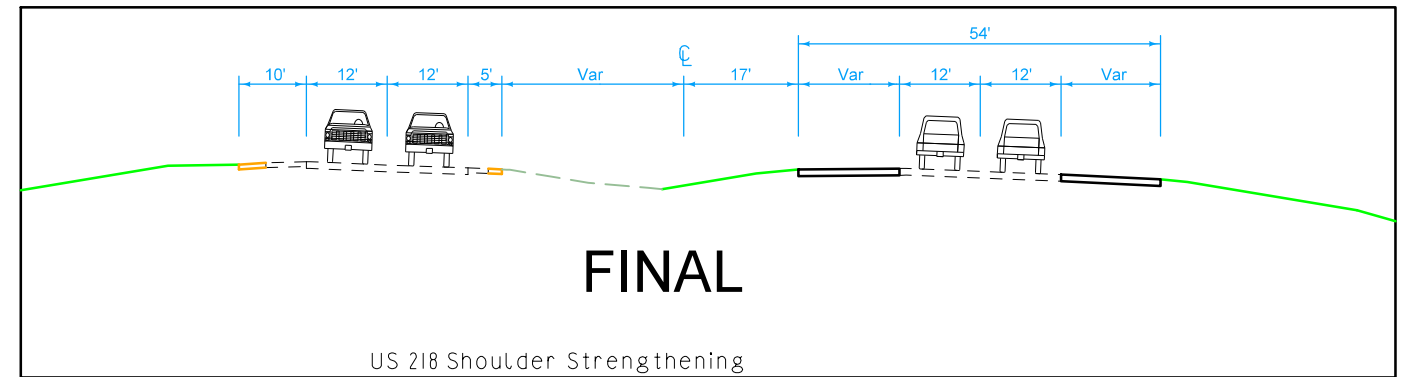
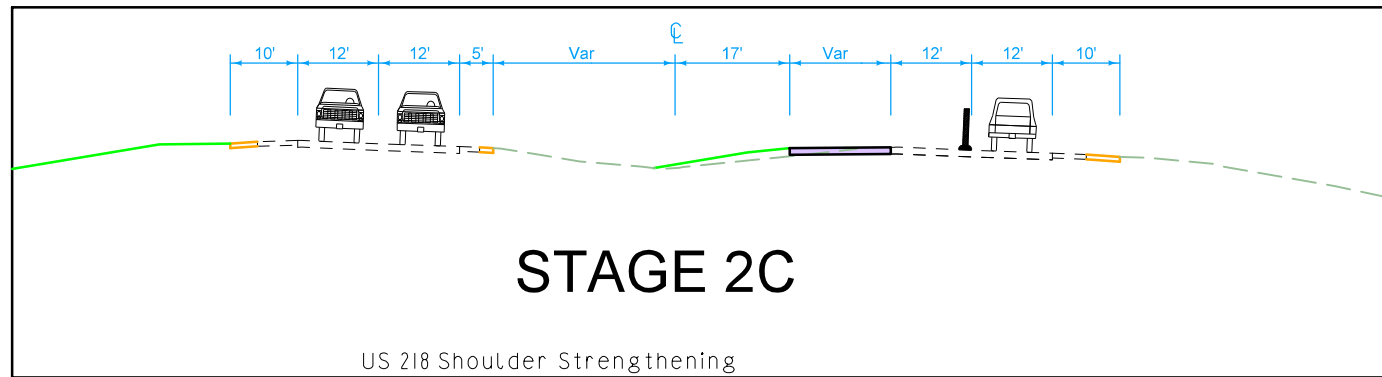
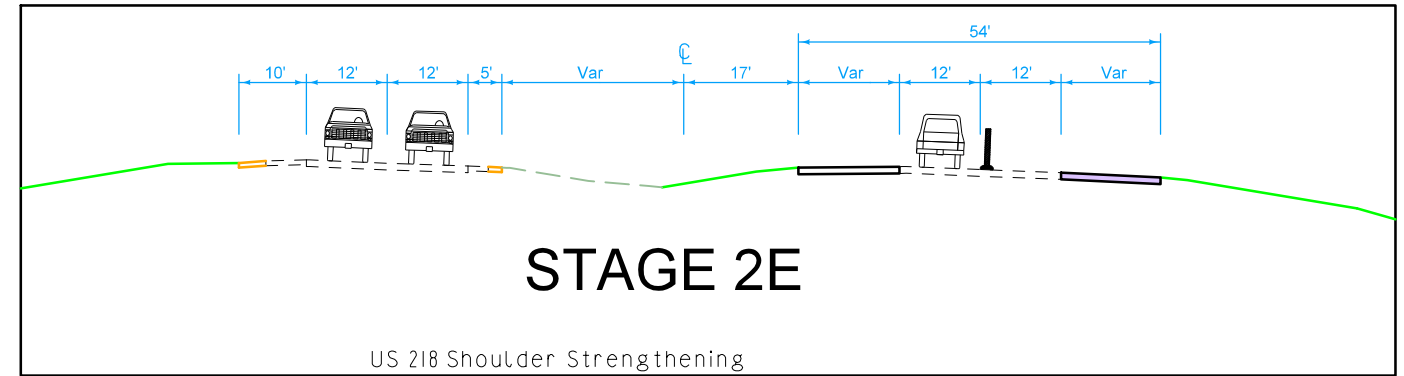
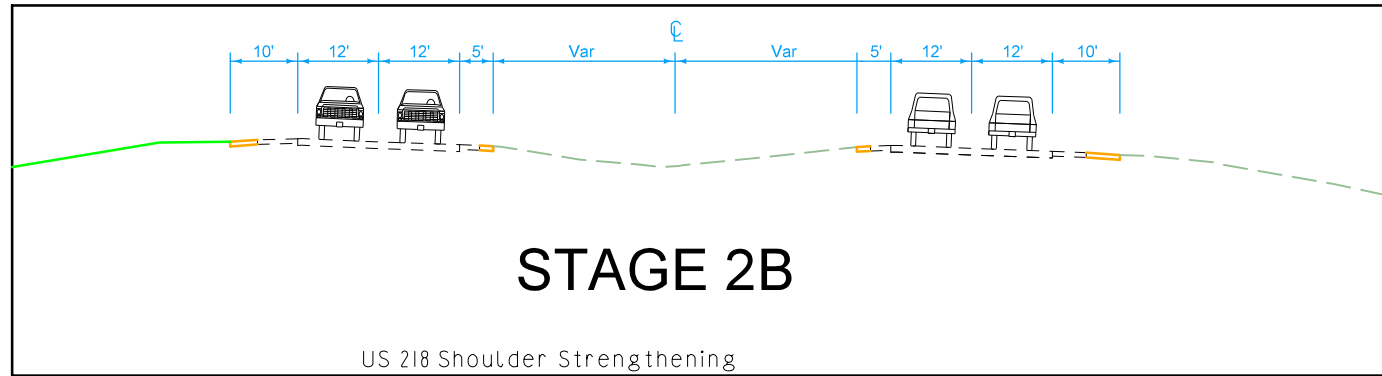
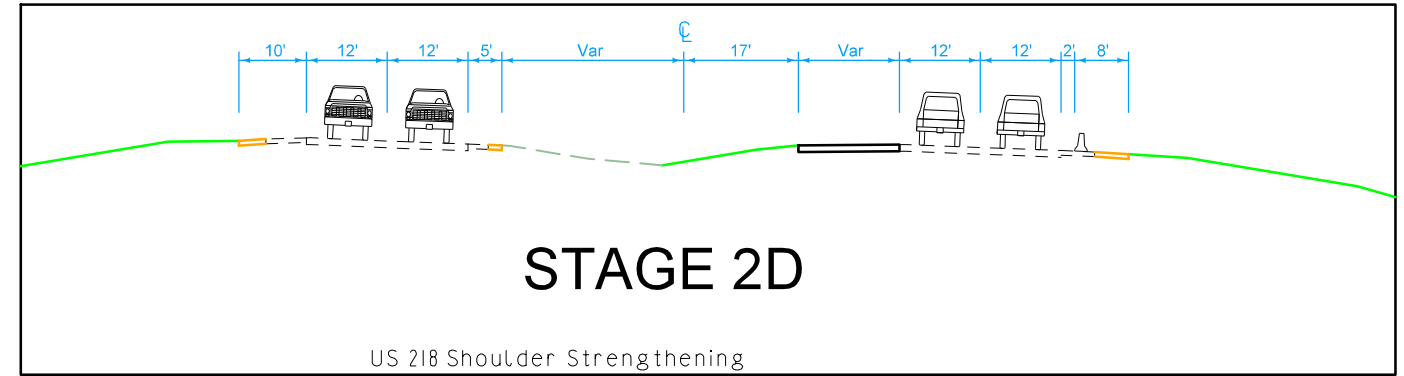
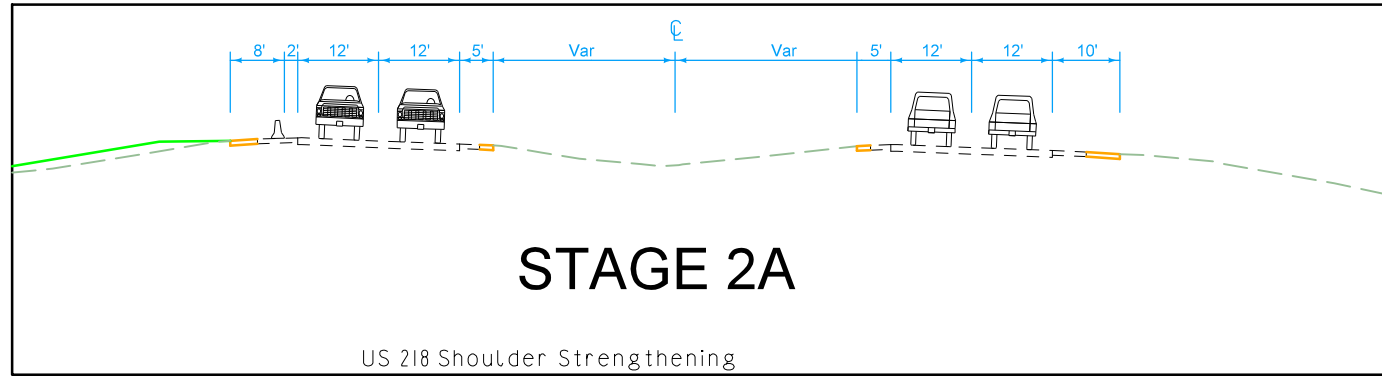
LEGEND

- LOCATION 0
- LOCATION 1
- LOCATION 2
- LOCATION 3
- LOCATION 4
- LOCATION 5

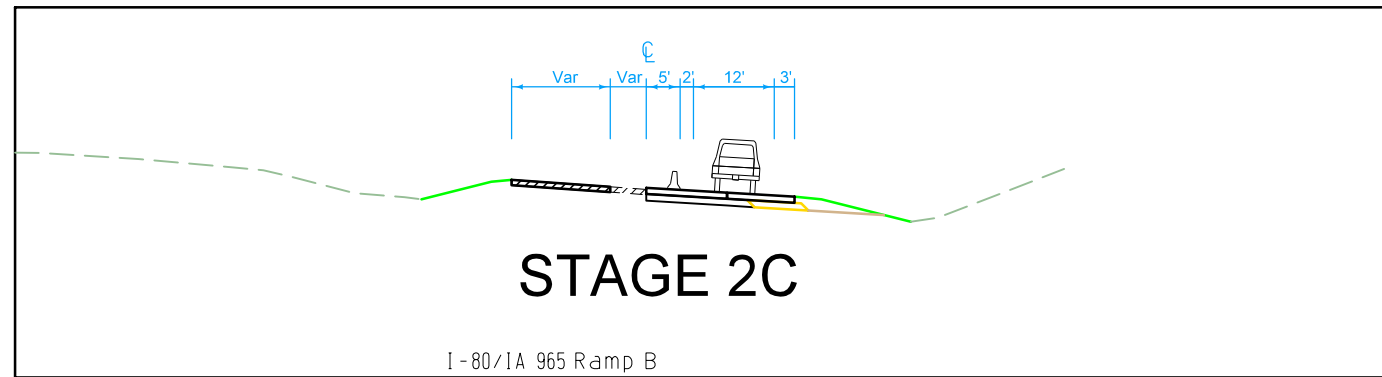
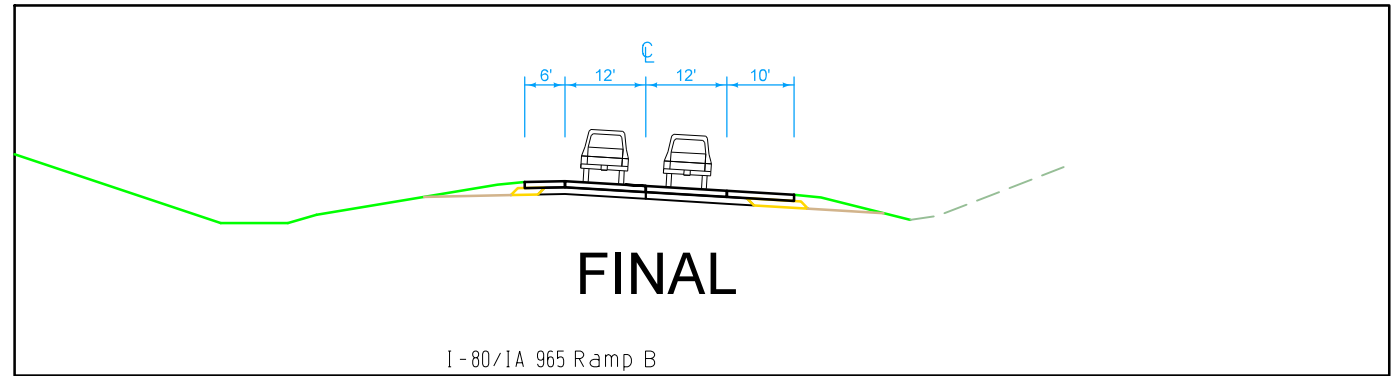
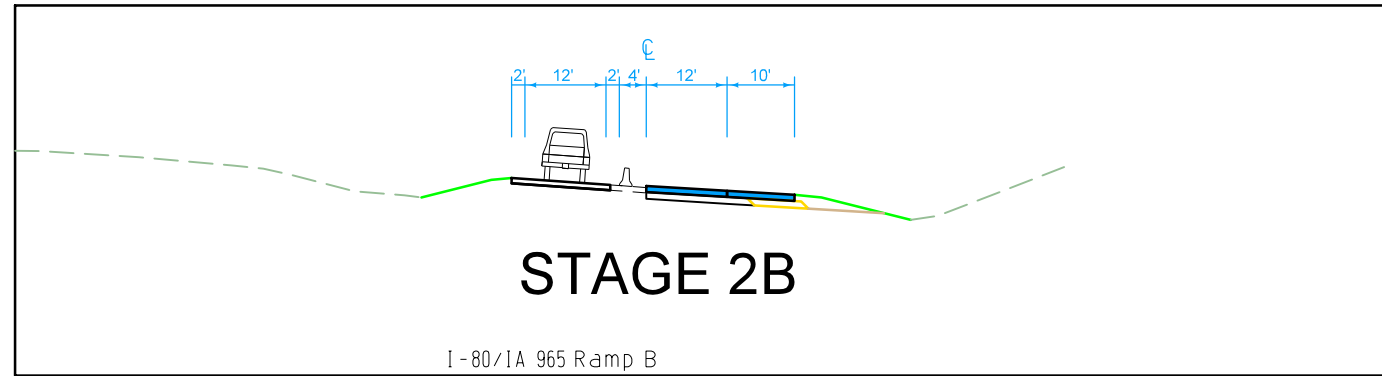
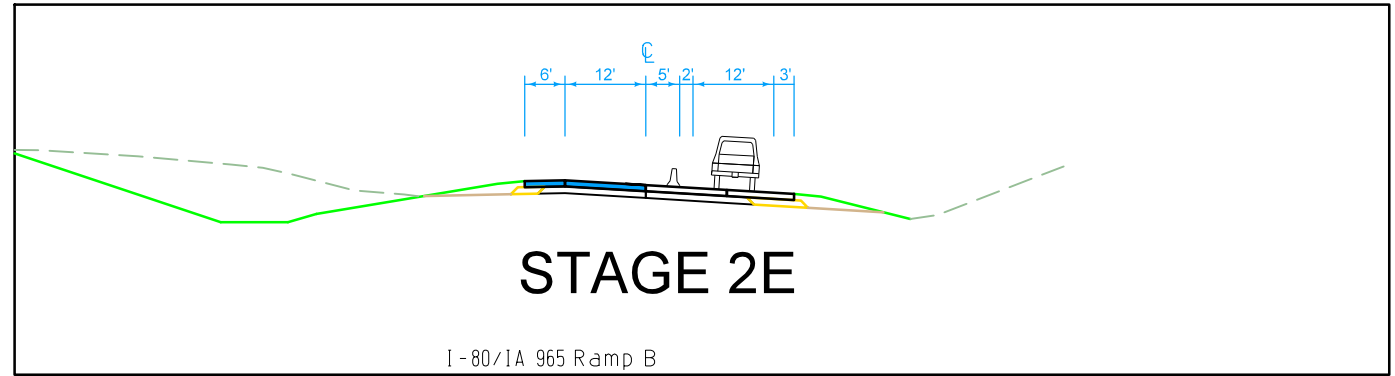
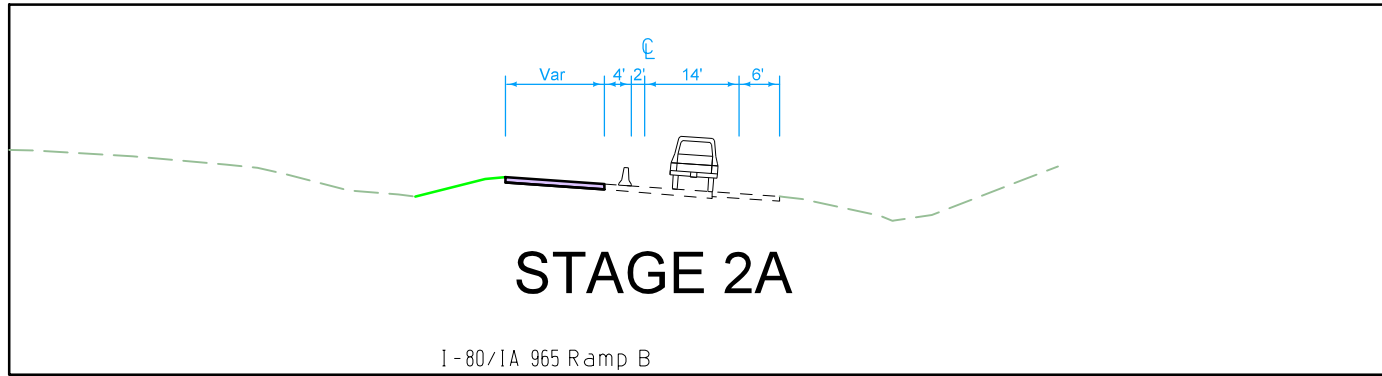
Staging Locations



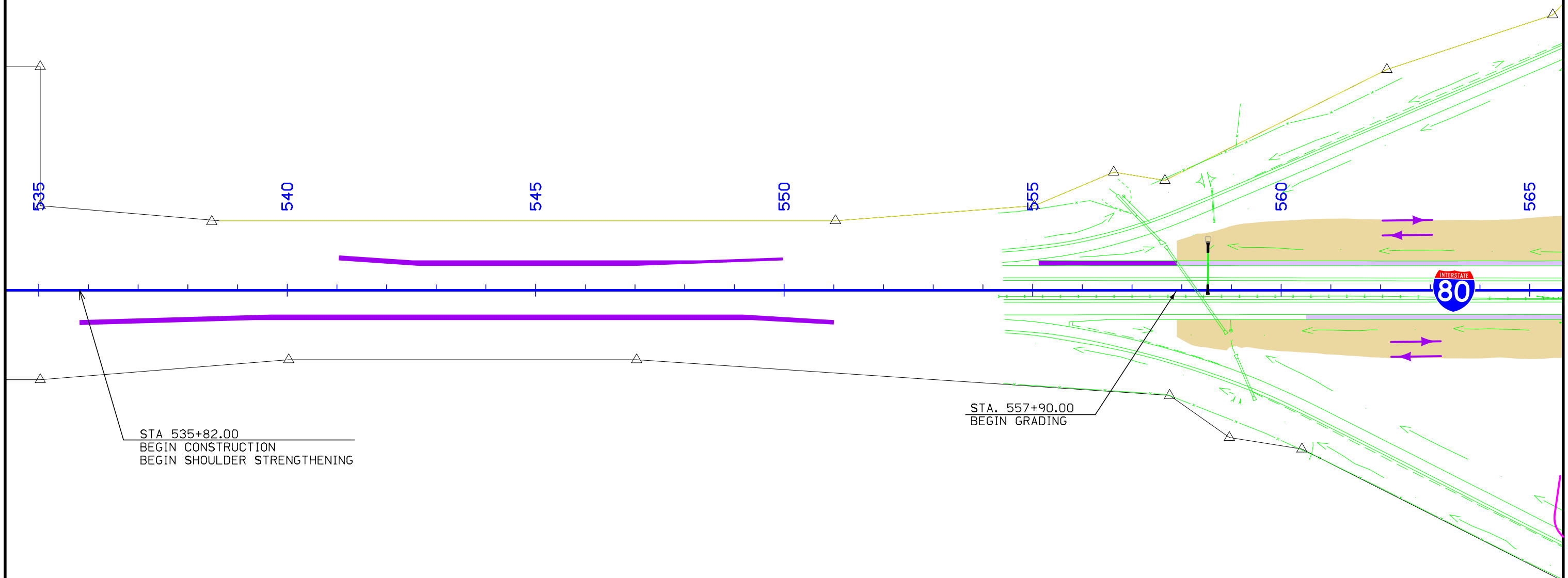
**STAGING TYPICALS
I-80 over US 6**



**STAGING TYPICALS
US 218 Shoulder Strengthening**



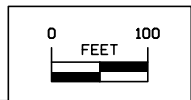
**STAGING TYPICALS
IA 965 Ramp B**



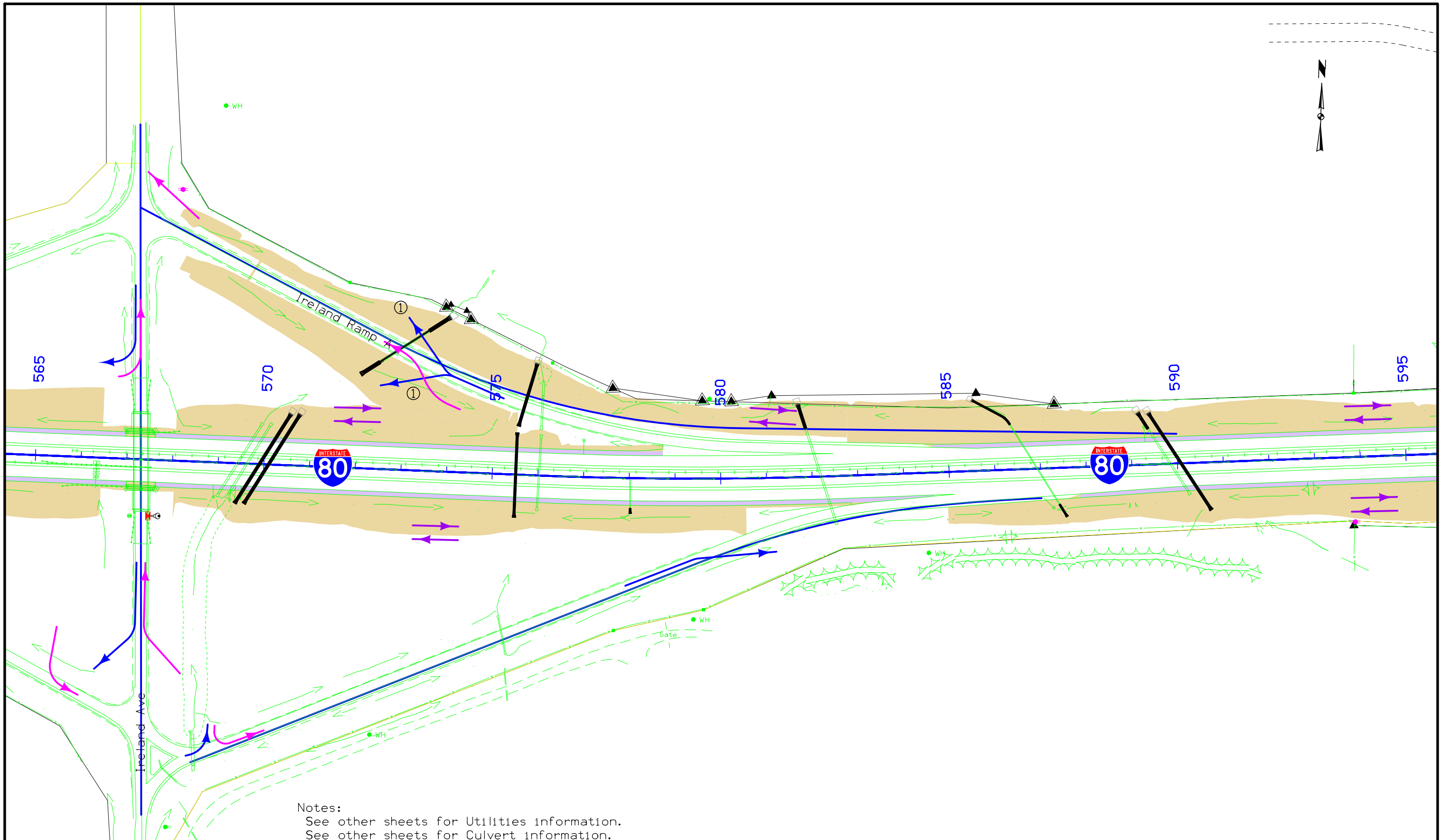
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Possible Haul Route	
Ingress	
Egress	

Notes:
 See other sheets for Utilities information.
 See other sheets for Culvert information.



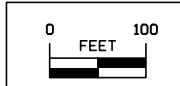
I-80
 Ingress/Egress
 Sheet 1 of 12



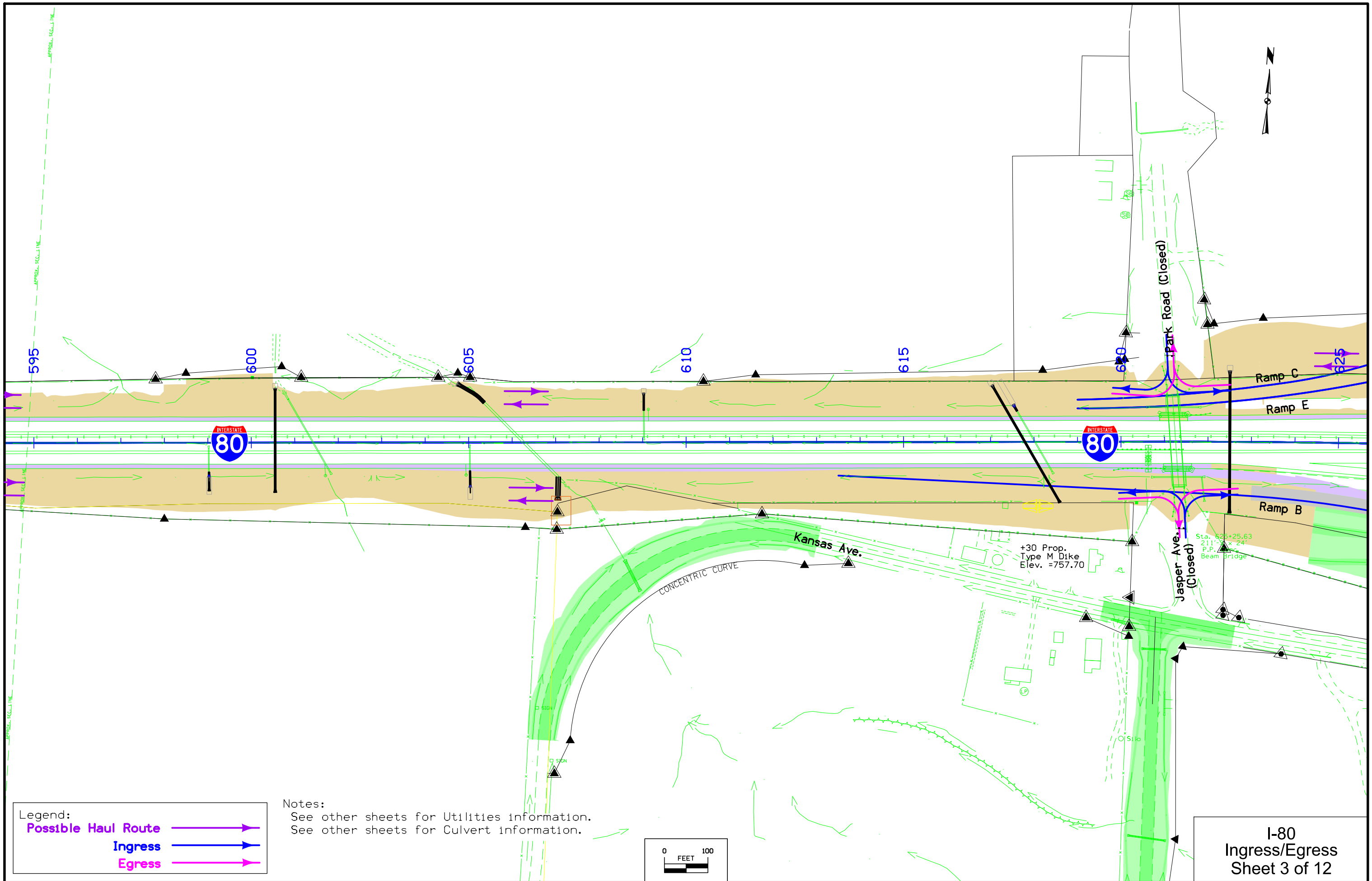
Notes:
 See other sheets for Utilities information.
 See other sheets for Culvert information.
 ① Access is only allowed on one side of the ramp at a time.

Legend:

- Possible Haul Route
- Ingress
- Egress



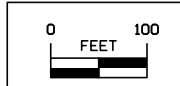
I-80
 Ingress/Egress
 Sheet 2 of 12



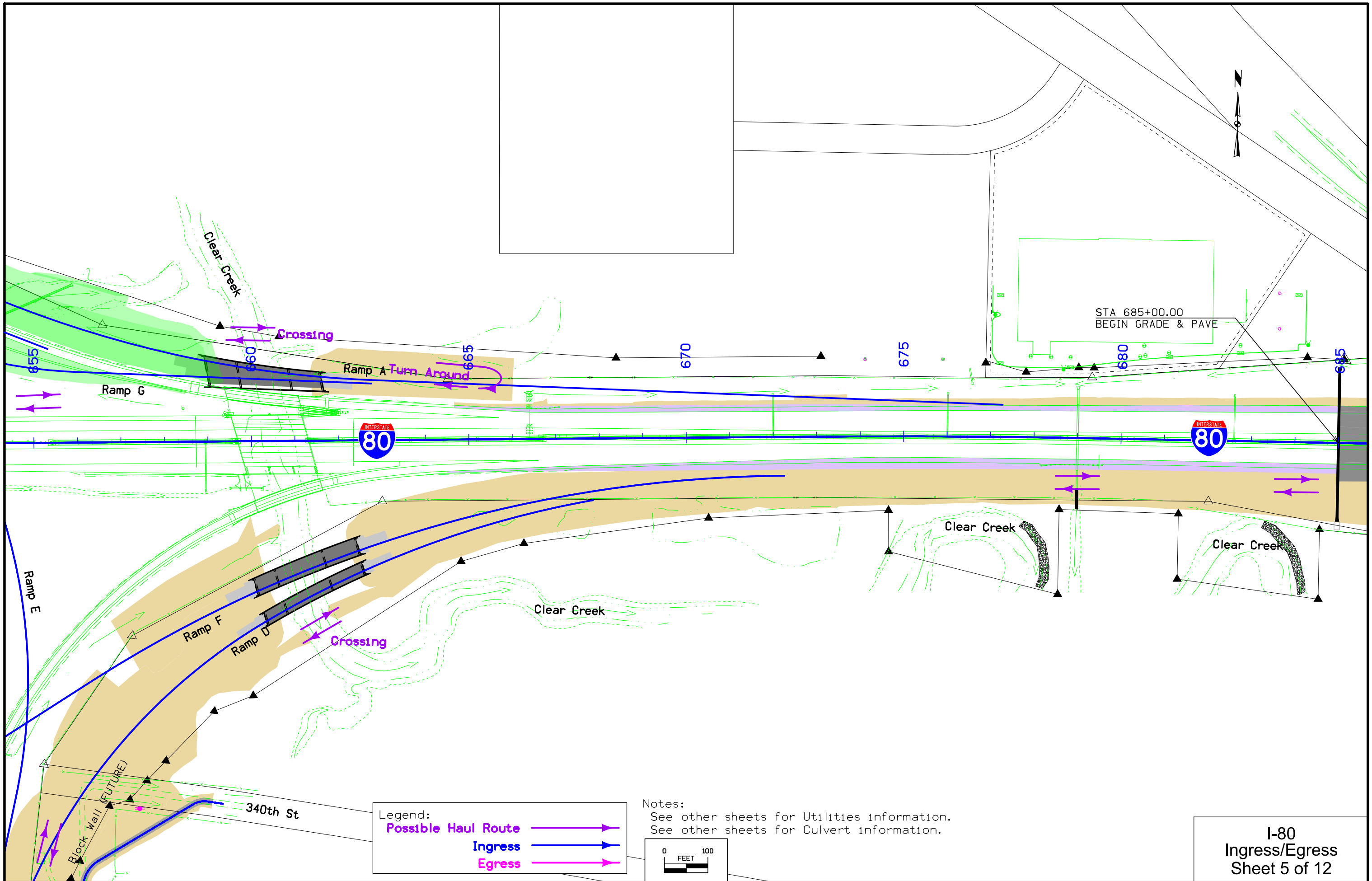
Legend:

- Possible Haul Route
- Ingress
- Egress

Notes:
 See other sheets for Utilities information.
 See other sheets for Culvert information.



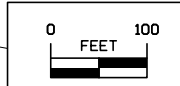
I-80
 Ingress/Egress
 Sheet 3 of 12



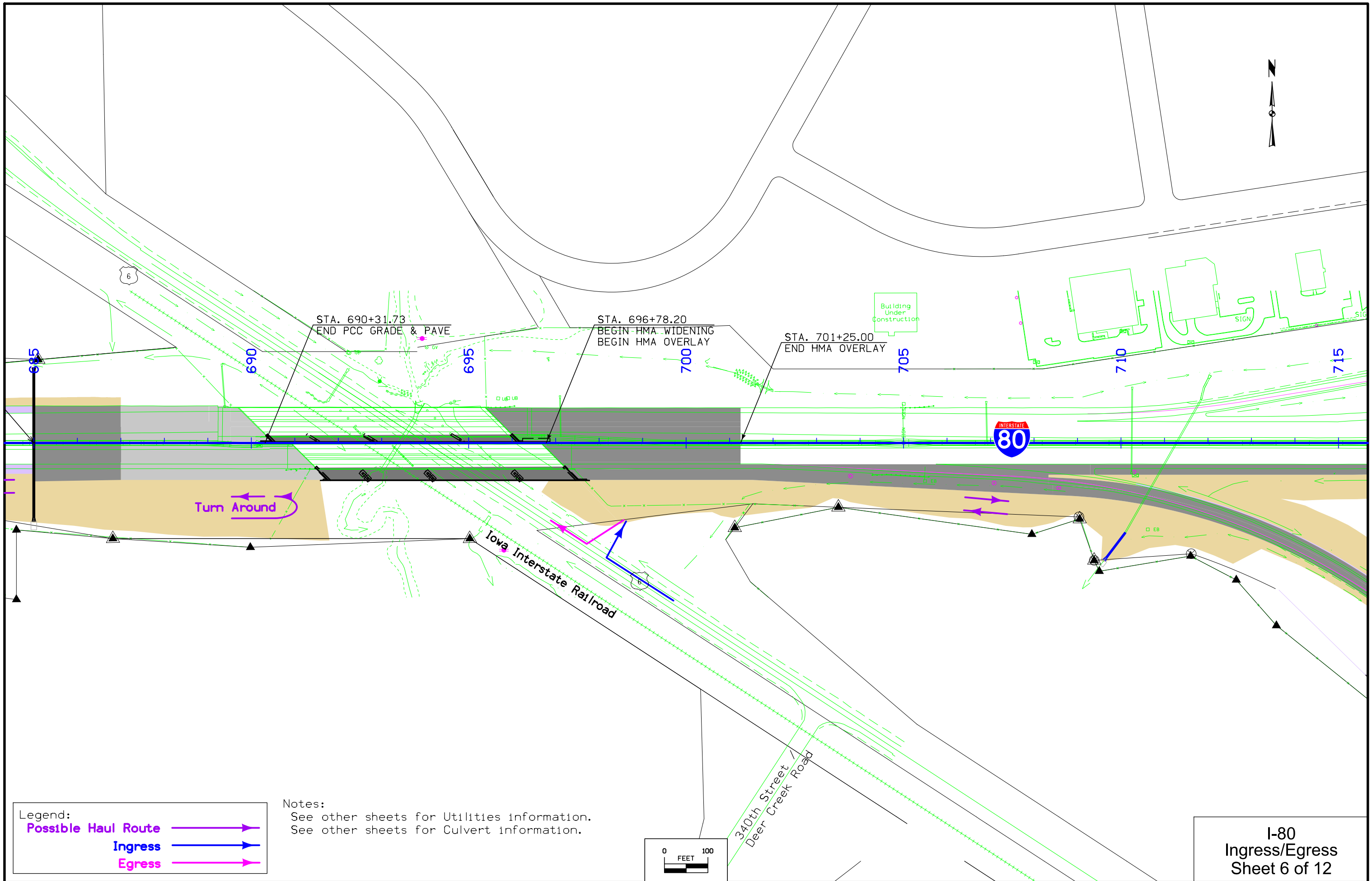
Legend:

- Possible Haul Route
- Ingress
- Egress

Notes:
 See other sheets for Utilities information.
 See other sheets for Culvert information.



I-80
 Ingress/Egress
 Sheet 5 of 12

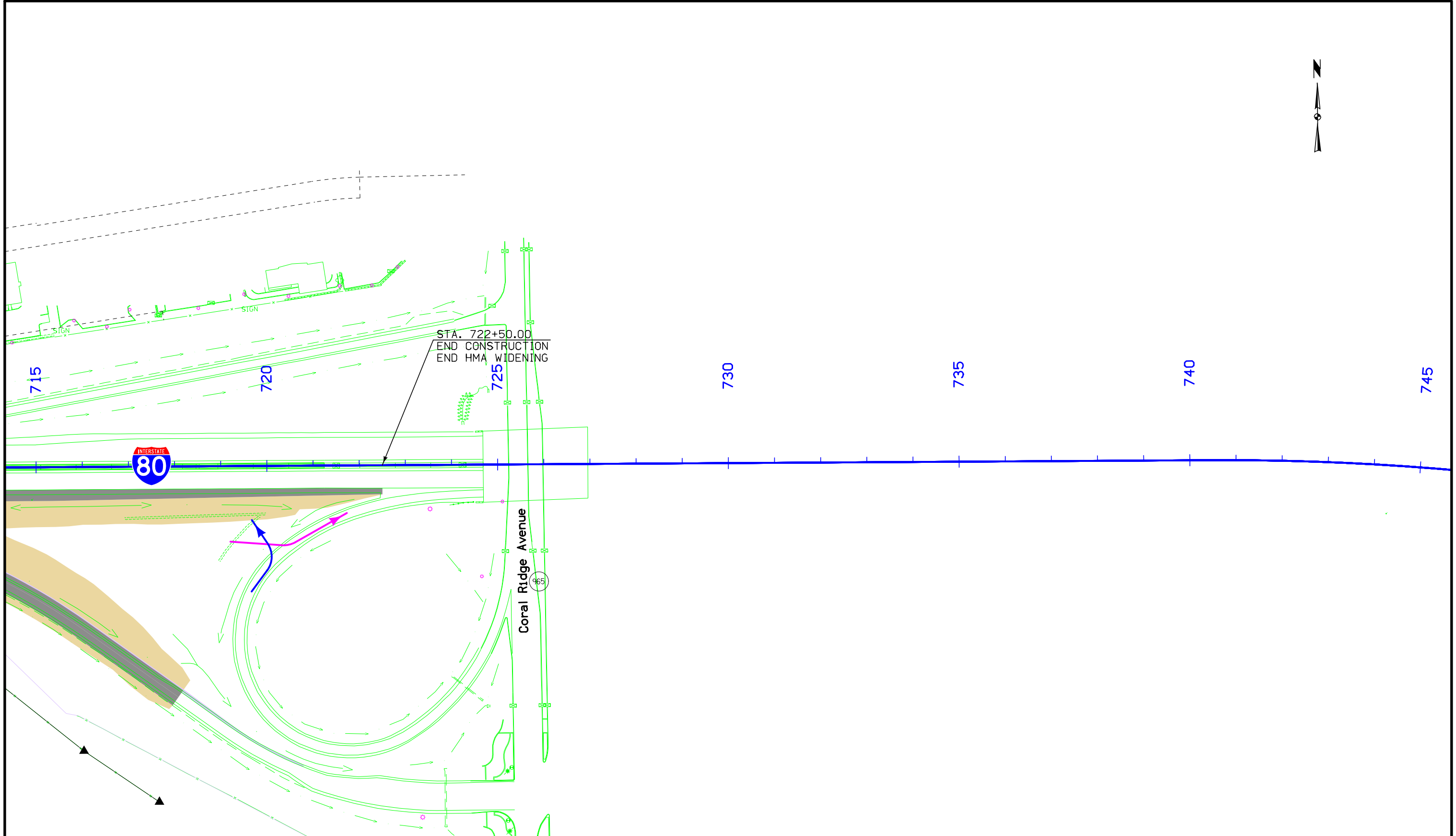


Legend:

- Possible Haul Route
- Ingress
- Egress

Notes:
 See other sheets for Utilities information.
 See other sheets for Culvert information.

I-80
 Ingress/Egress
 Sheet 6 of 12

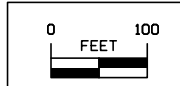


STA. 722+50.00
 END CONSTRUCTION
 END HMA WIDENING

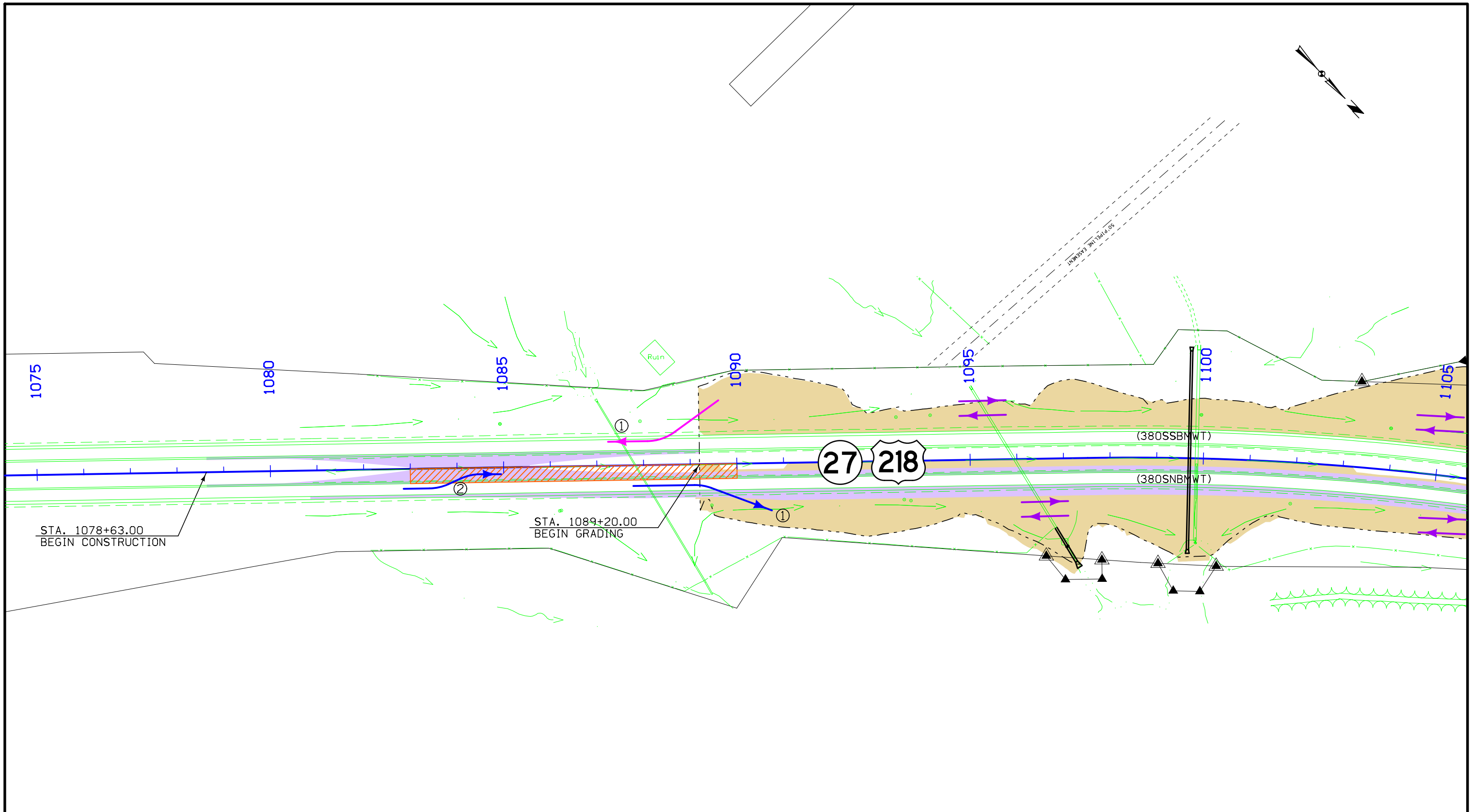
Coral Ridge Avenue

Legend:	
Possible Haul Route	
Ingress	
Egress	




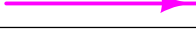
Notes:
 See other sheets for Utilities information.
 See other sheets for Culvert information.



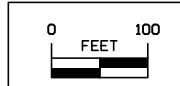
I-80
 Ingress/Egress
 Sheet 7 of 12



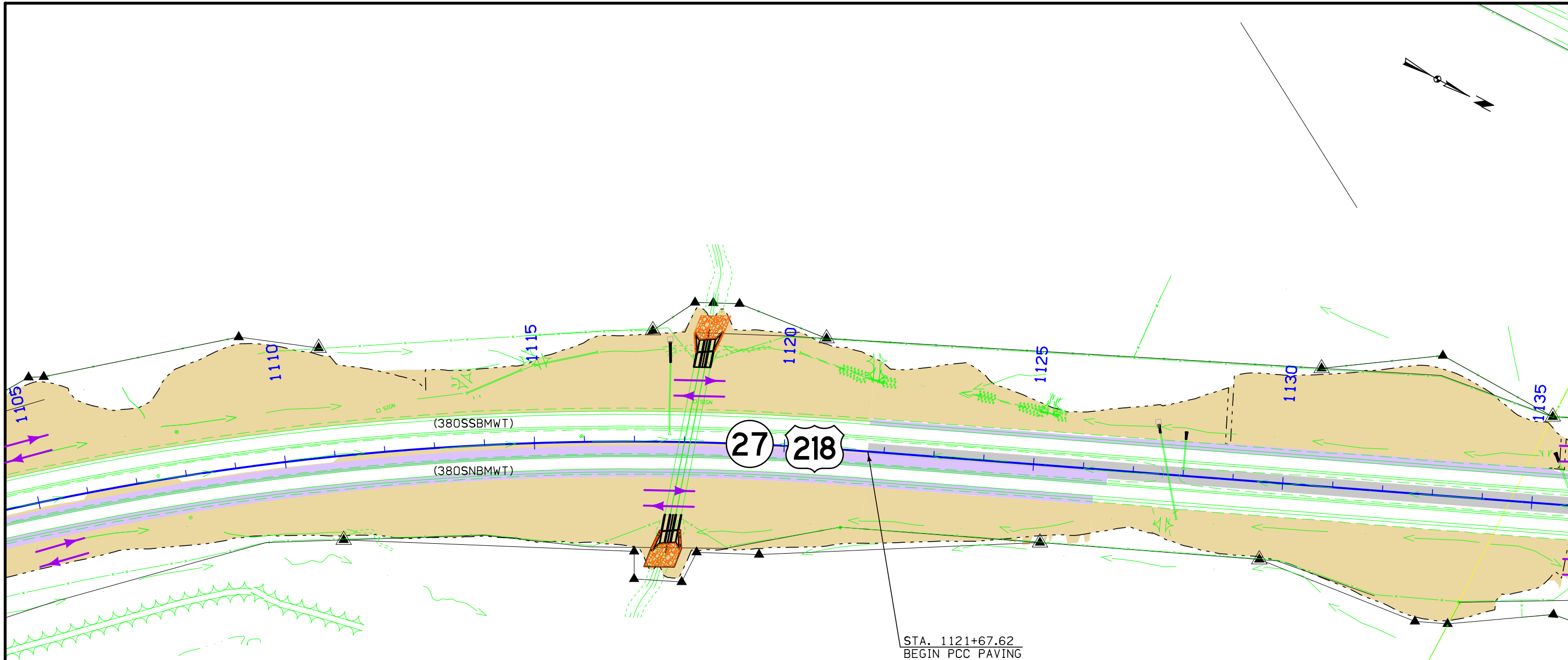
Legend:

Temporary Construction Access	
Possible Haul Route	
Ingress	
Egress	

Notes:
 See other sheets for Utilities information.
 See other sheets for Culvert information.
 ① Access is only allowed on side at a time.
 ② Refer to Temporary Construction Access Detail on J-Sheets.



US 218
 Ingress/Egress
 Sheet 8 of 12



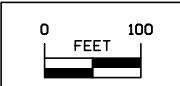
27 218

STA. 1121+67.62
BEGIN PCC PAVING

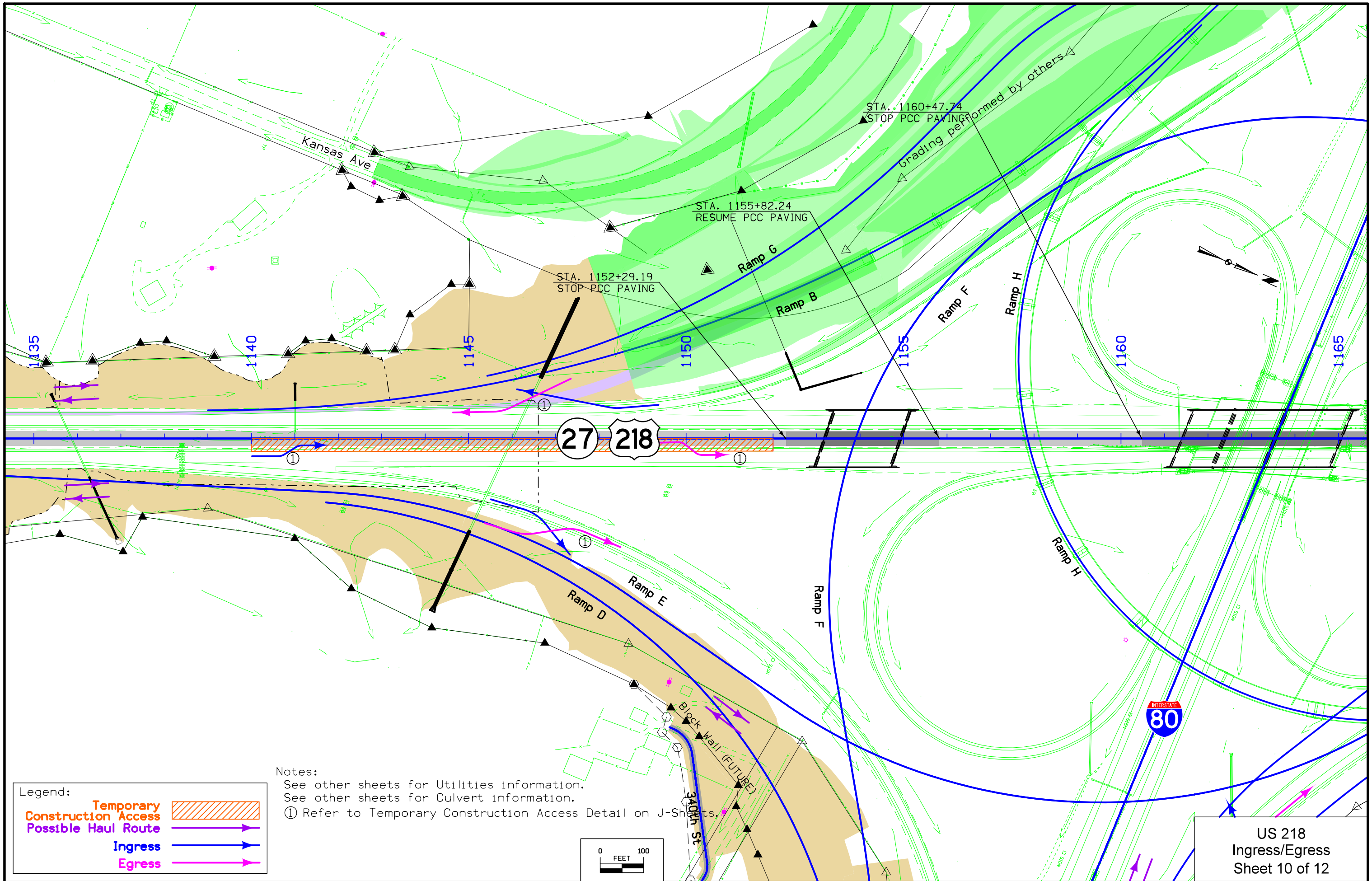
Legend:

- Possible Haul Route
- Ingress
- Egress

Notes:
See other sheets for Utilities information.
See other sheets for Culvert information.

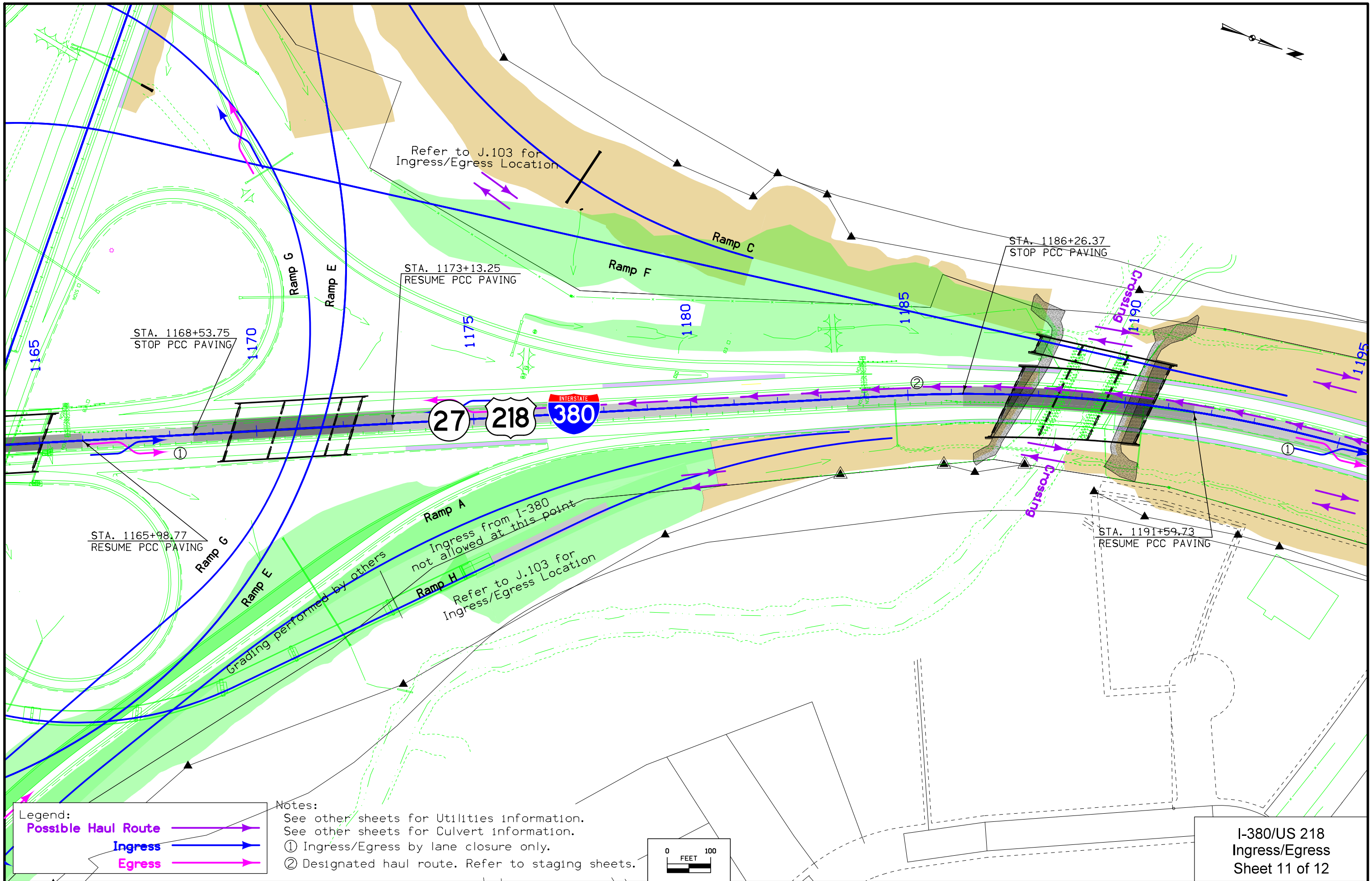


US 218
Ingress/Egress
Sheet 9 of 12



Notes:
 See other sheets for Utilities information.
 See other sheets for Culvert information.
 ① Refer to Temporary Construction Access Detail on J-Sheets.

US 218
 Ingress/Egress
 Sheet 10 of 12



Refer to J.103 for
Ingress/Egress Location

STA. 1173+13.25
RESUME PCC PAVING

STA. 1186+26.37
STOP PCC PAVING

STA. 1168+53.75
STOP PCC PAVING

STA. 1165+98.77
RESUME PCC PAVING

STA. 1191+59.73
RESUME PCC PAVING

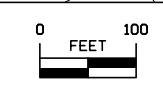
Ramp A
Ingress from I-380
not allowed at this point
Ramp H
Refer to J.103 for
Ingress/Egress Location

Grading performed by others

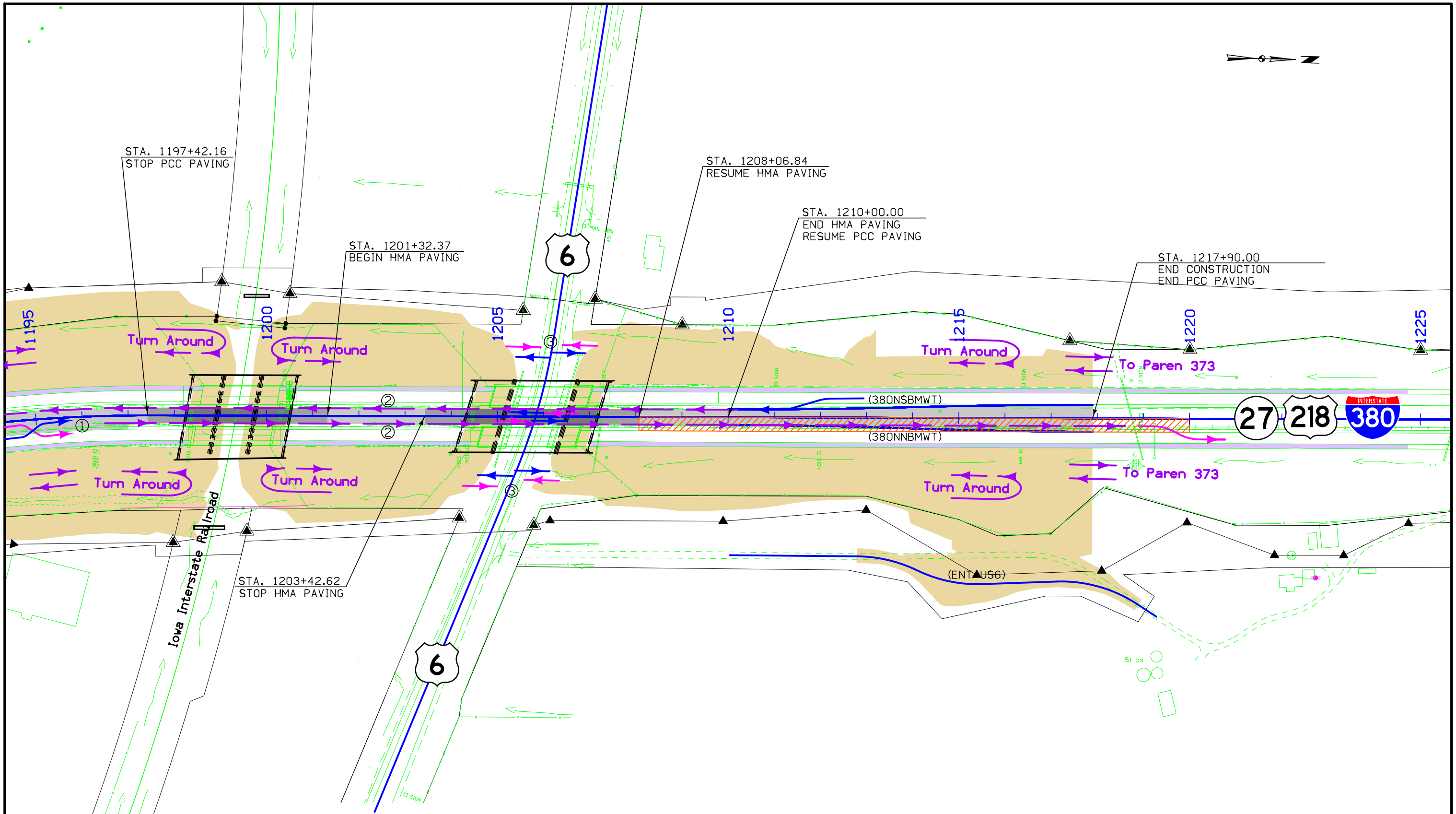
Legend:

- Possible Haul Route
- Ingress
- Egress

Notes:
 See other sheets for Utilities information.
 See other sheets for Culvert information.
 ① Ingress/Egress by lane closure only.
 ② Designated haul route. Refer to staging sheets.



I-380/US 218
Ingress/Egress
Sheet 11 of 12



STA. 1197+42.16
STOP PCC PAVING

STA. 1201+32.37
BEGIN HMA PAVING

STA. 1208+06.84
RESUME HMA PAVING

STA. 1210+00.00
END HMA PAVING
RESUME PCC PAVING

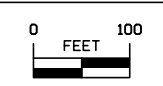
STA. 1217+90.00
END CONSTRUCTION
END PCC PAVING

STA. 1203+42.62
STOP HMA PAVING

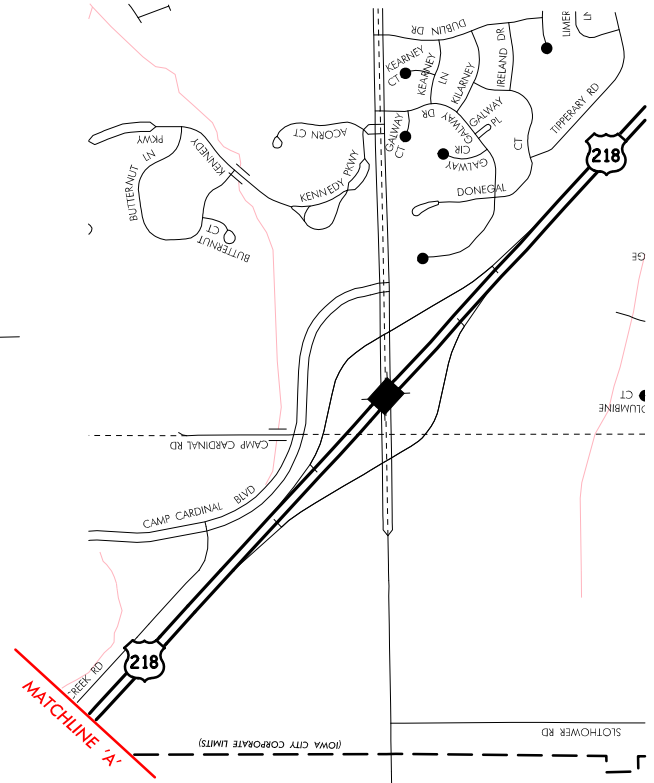
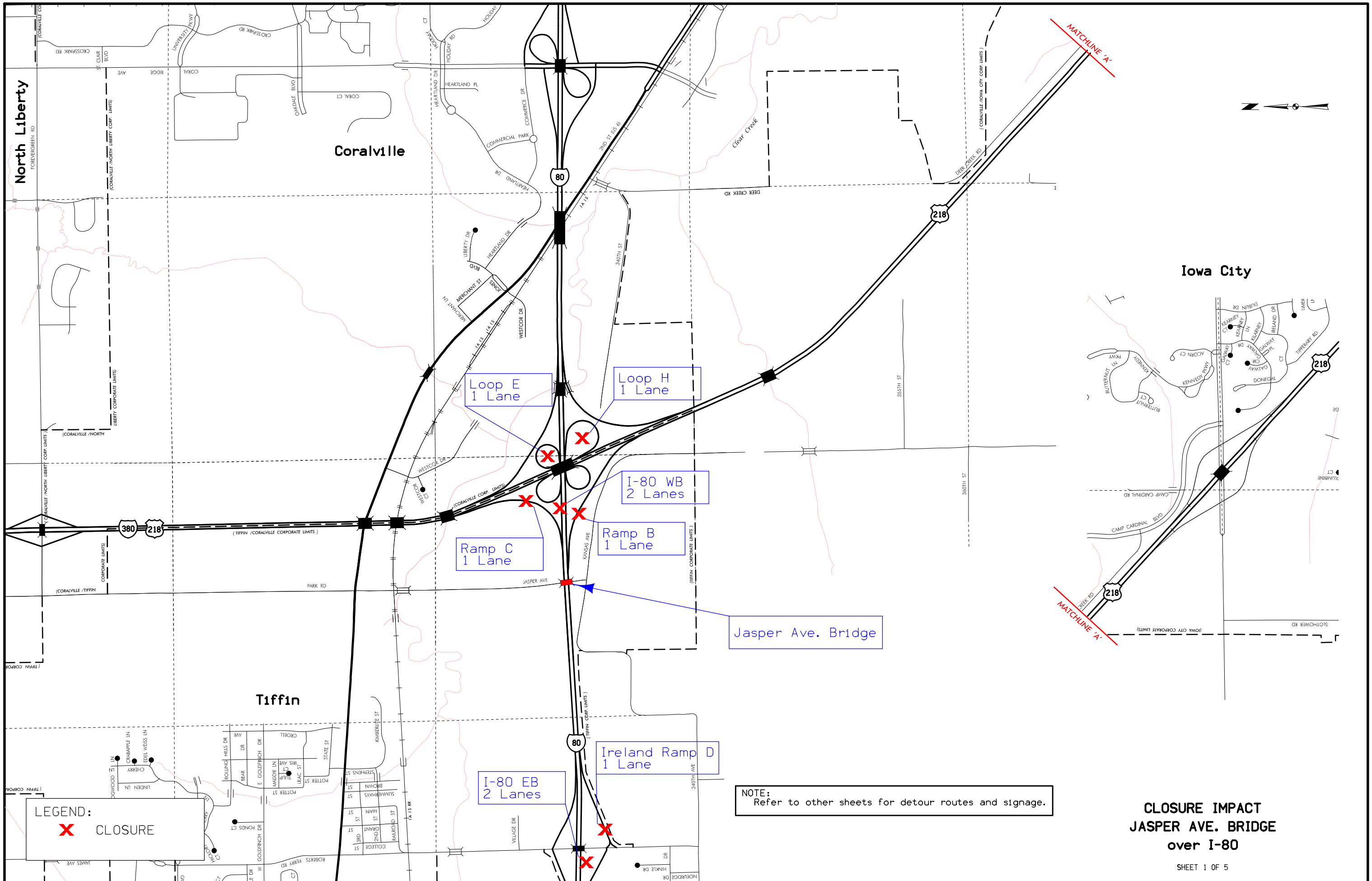
Legend:

Temporary Construction Access	
Possible Haul Route	
Ingress	
Egress	

- Notes:
- See other sheets for Utilities information.
 - See other sheets for Culvert information.
 - ① Ingress/Egress by lane closure only.
 - ② Designated haul route. Refer to staging sheets.
 - ③ Haul route crossing US6 shall utilize modified TC-272 for unsignalized equipment crossing.



I-380/US 218
Ingress/Egress
Sheet 12 of 12

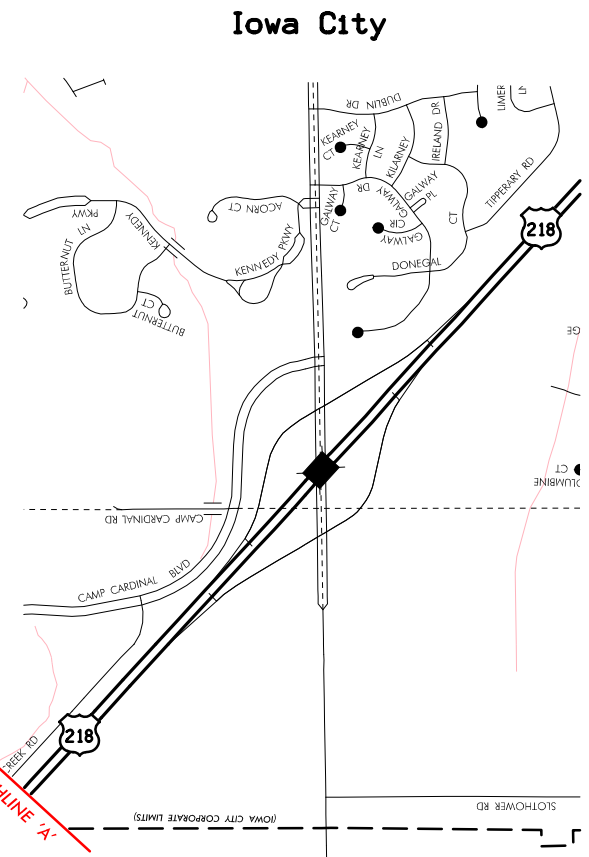
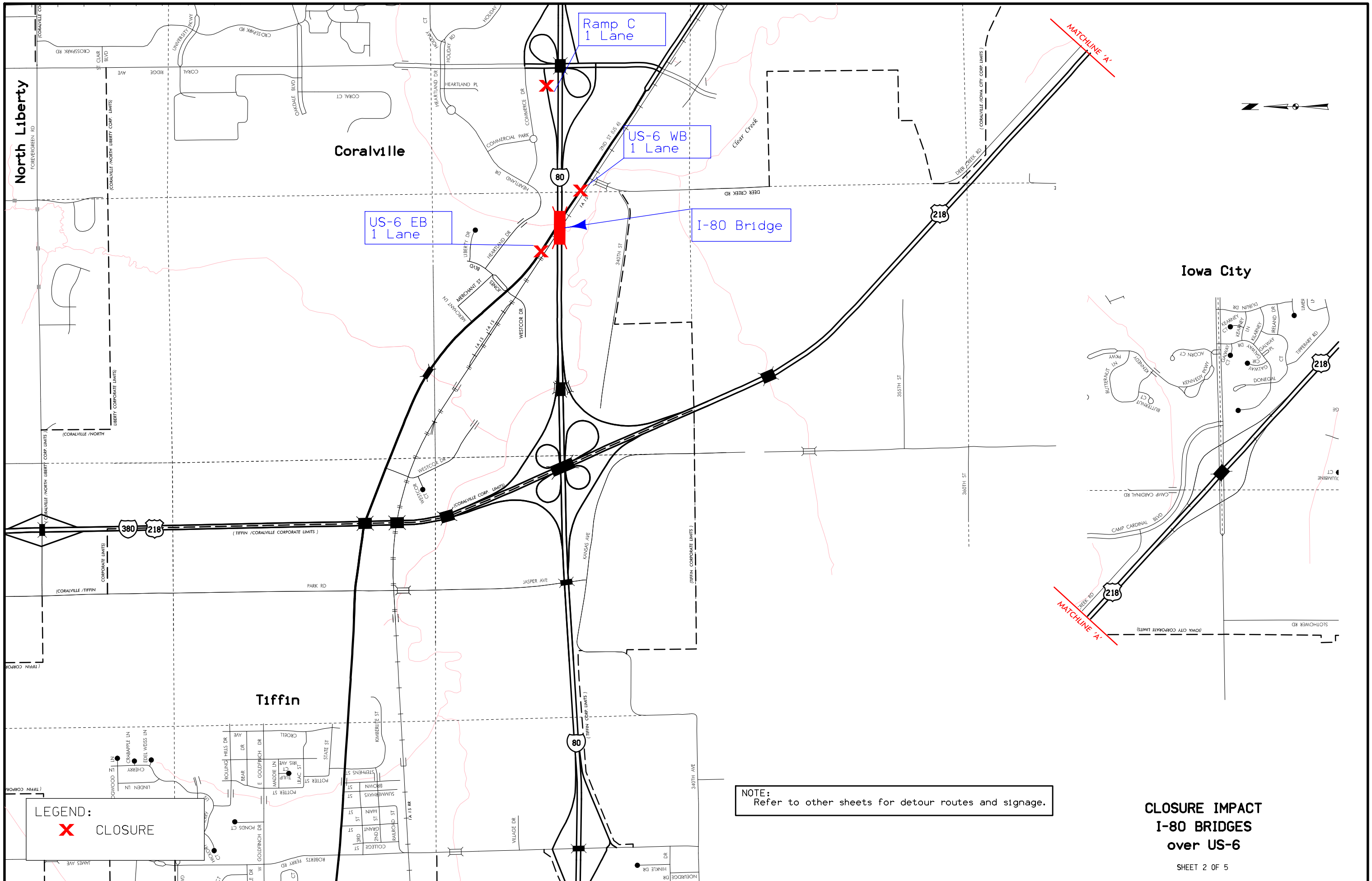


LEGEND:
 X CLOSURE

NOTE:
 Refer to other sheets for detour routes and signage.

**CLOSURE IMPACT
 JASPER AVE. BRIDGE
 over I-80**

SHEET 1 OF 5

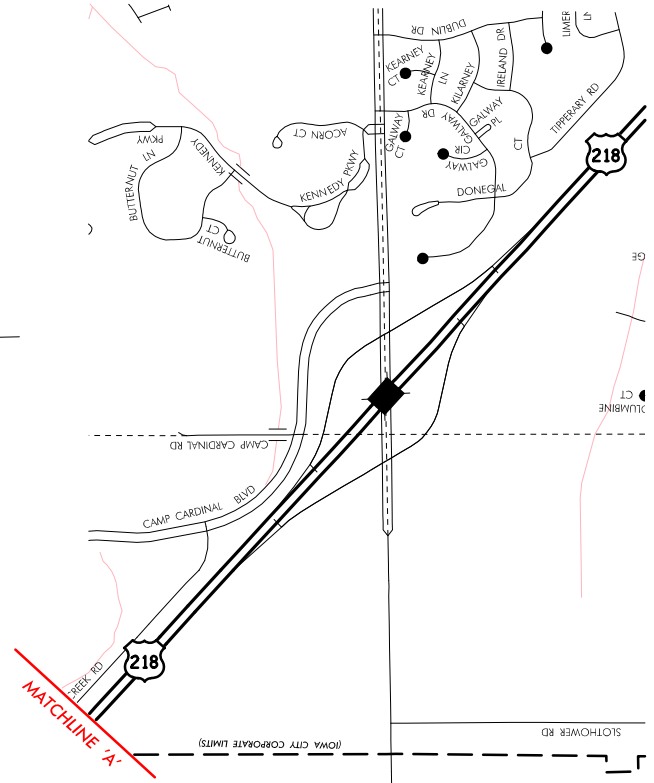
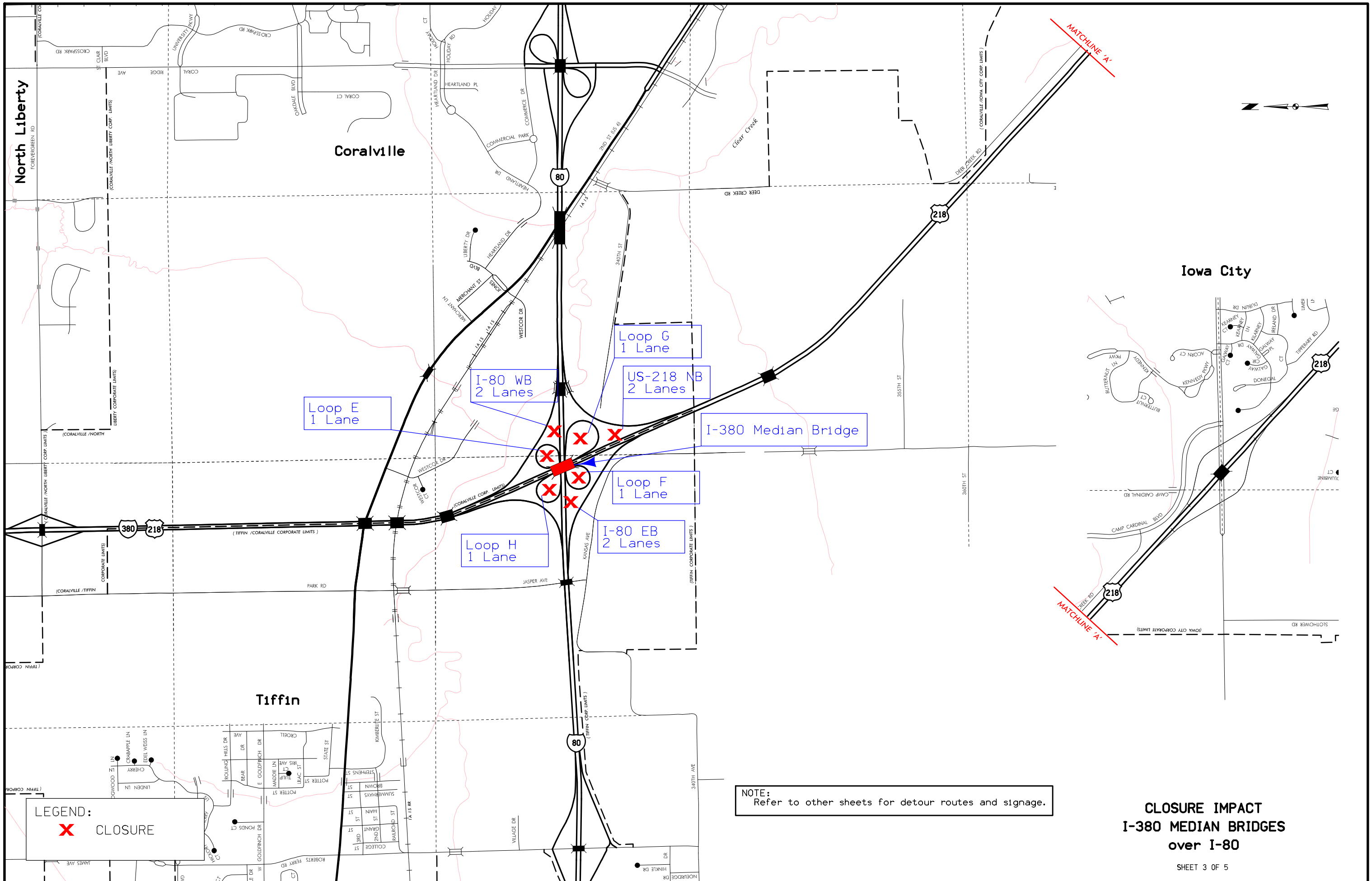


NOTE:
Refer to other sheets for detour routes and signage.

**CLOSURE IMPACT
I-80 BRIDGES
over US-6**

SHEET 2 OF 5

LEGEND:
X CLOSURE

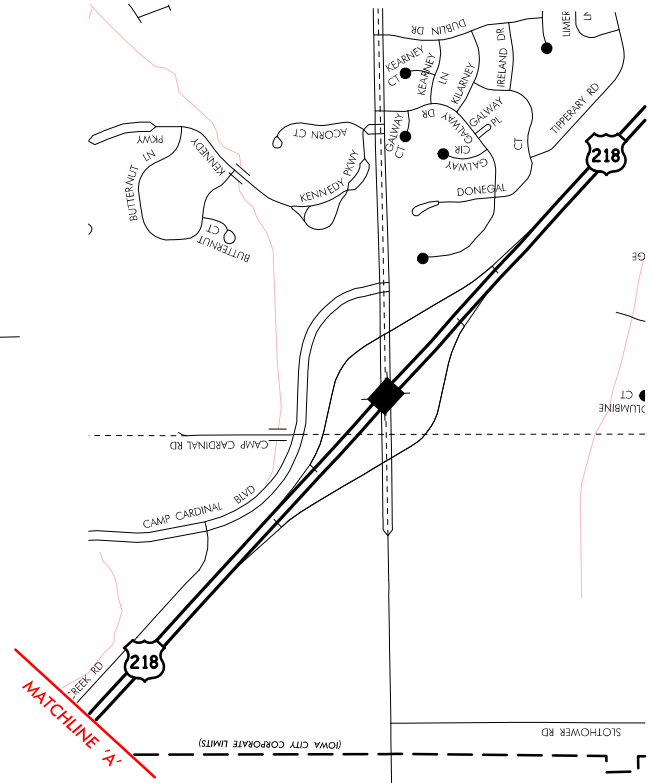
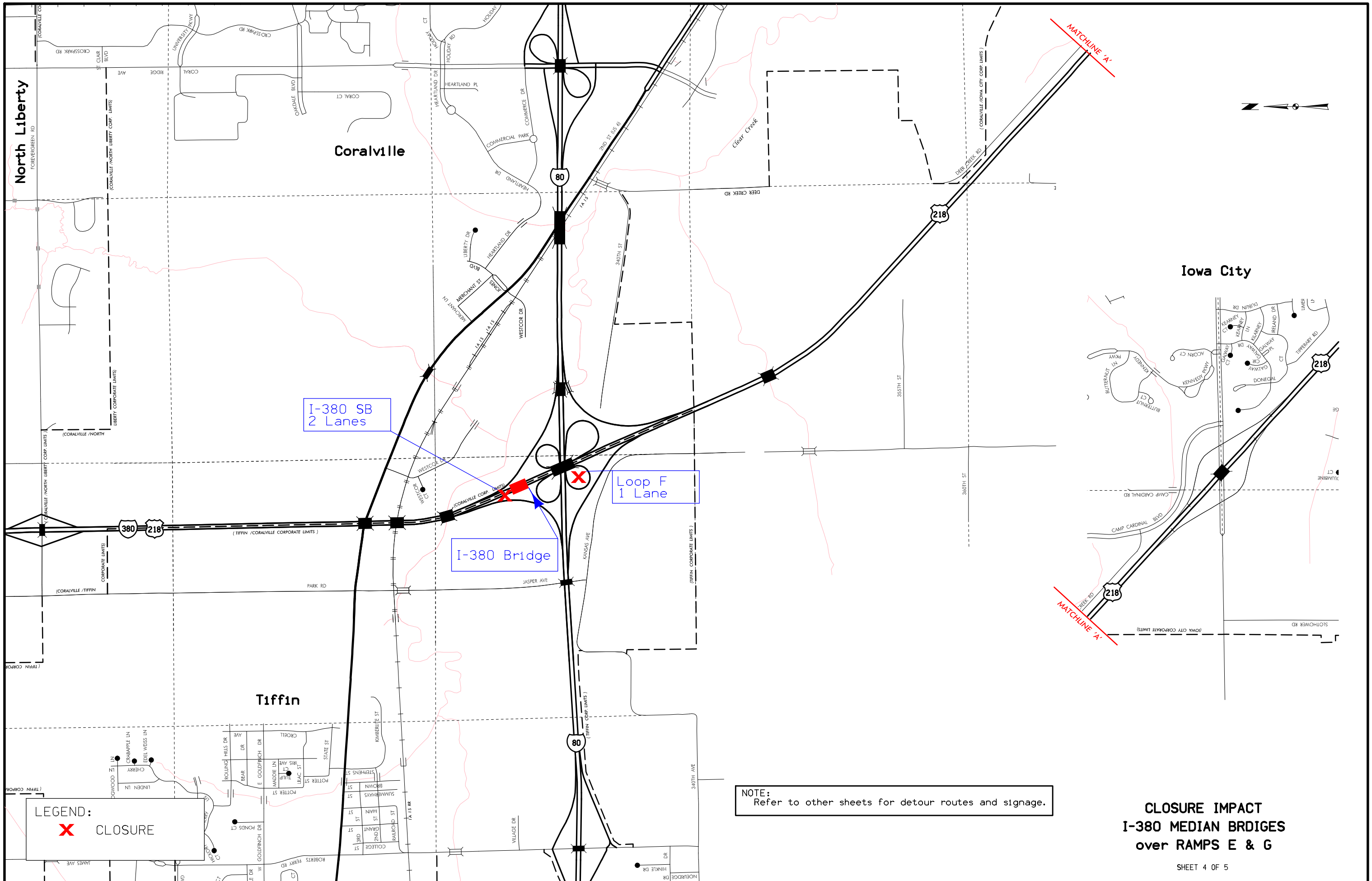


NOTE:
Refer to other sheets for detour routes and signage.

LEGEND:
X CLOSURE

**CLOSURE IMPACT
I-380 MEDIAN BRIDGES
over I-80**

SHEET 3 OF 5

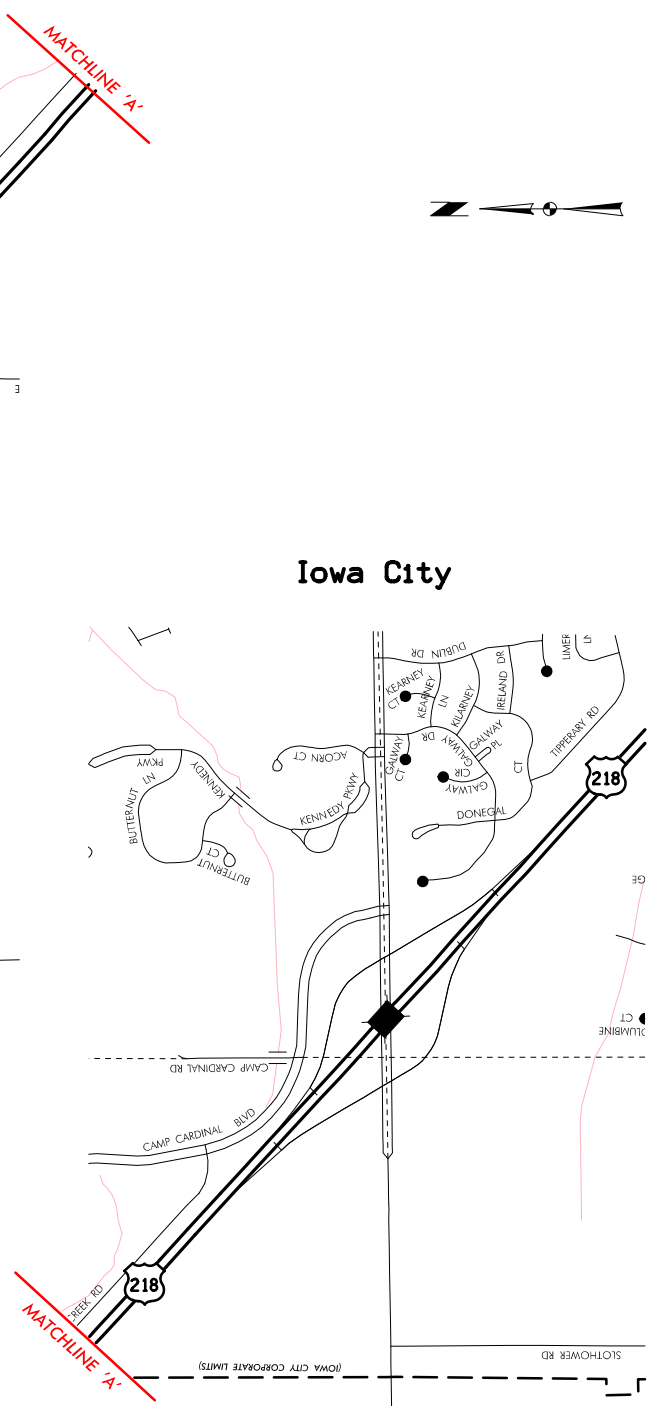
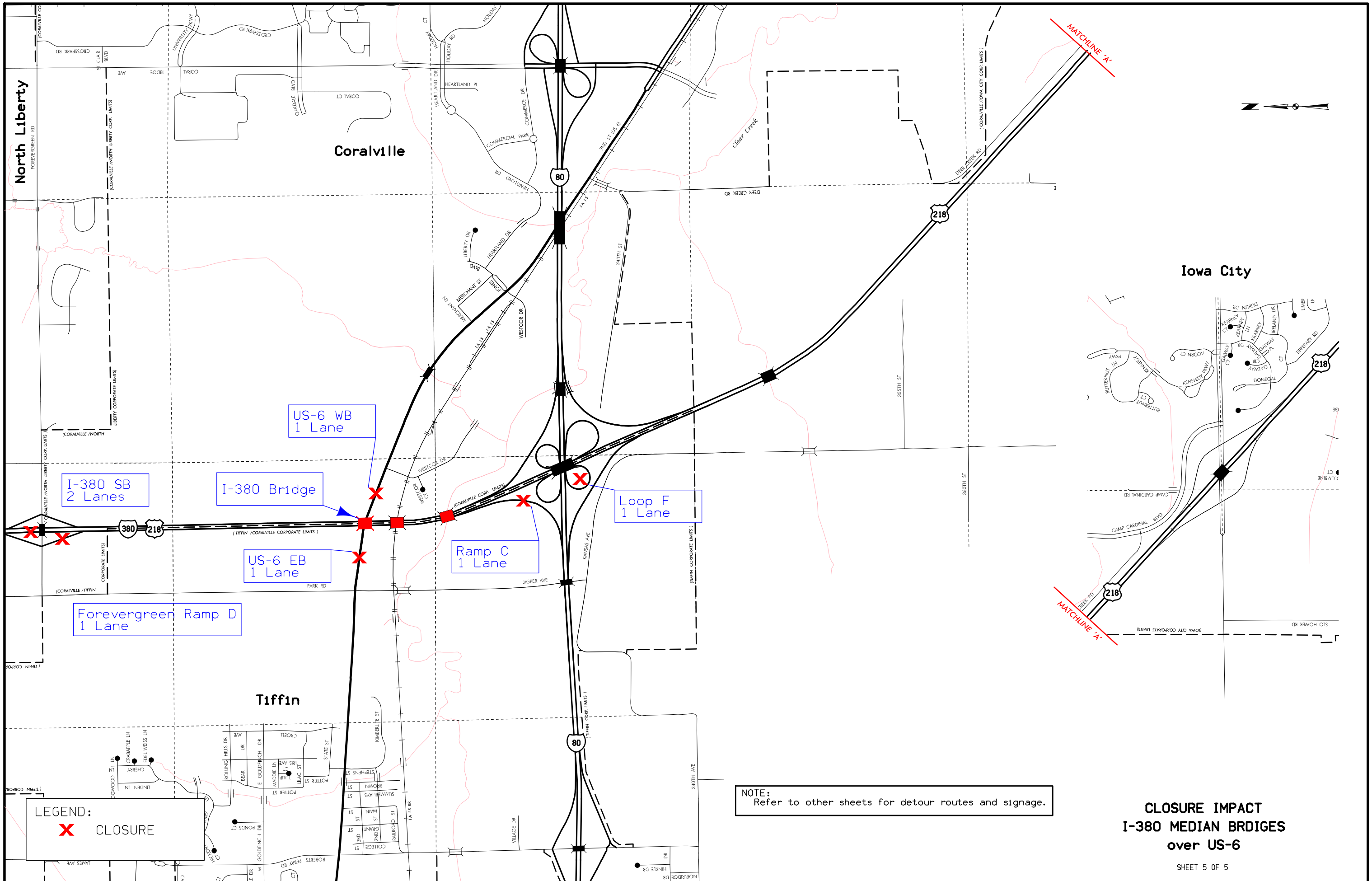


NOTE:
Refer to other sheets for detour routes and signage.

LEGEND:
X CLOSURE

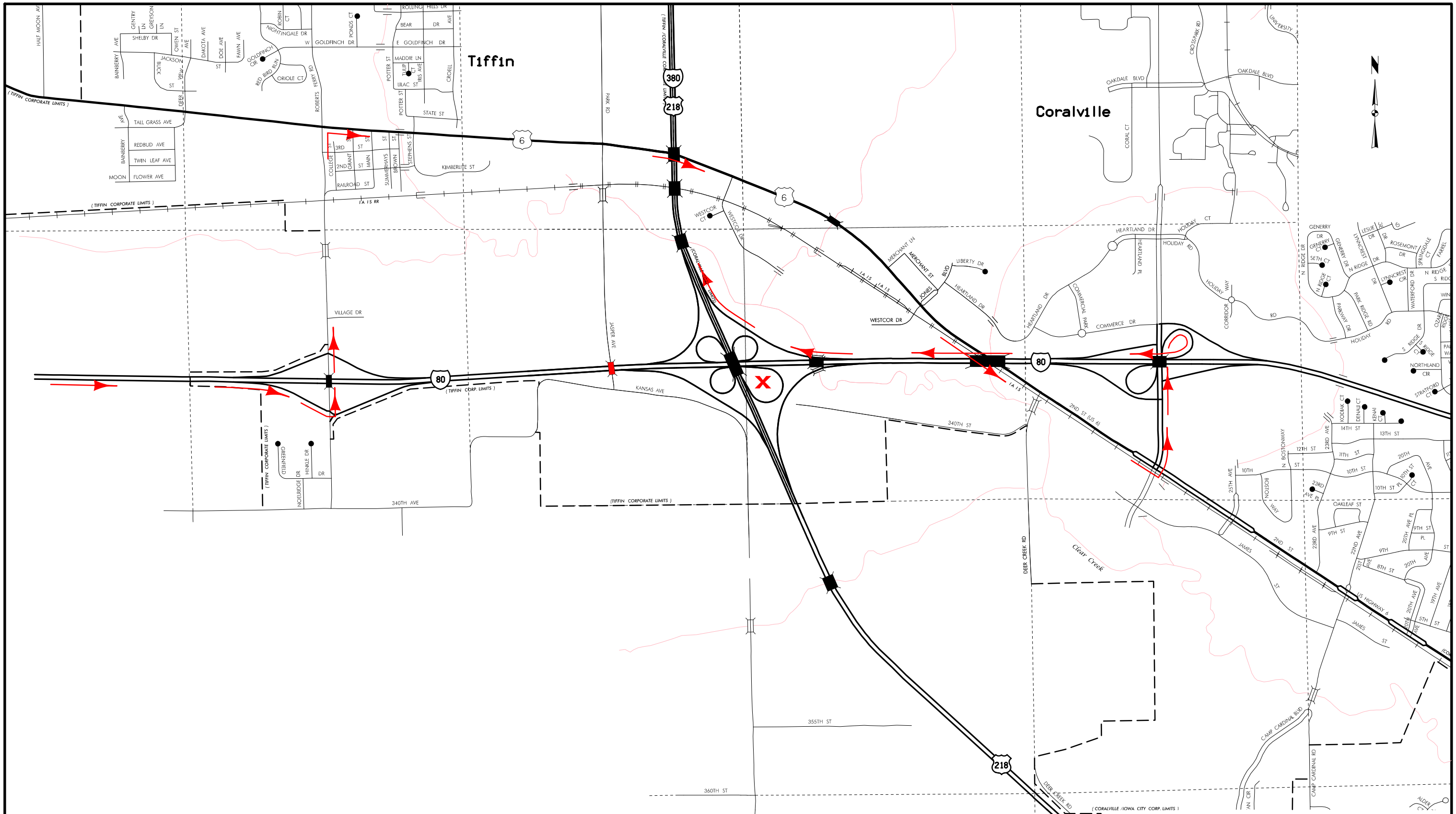
**CLOSURE IMPACT
I-380 MEDIAN BRIDGES
over RAMPS E & G**

SHEET 4 OF 5



**CLOSURE IMPACT
 I-380 MEDIAN BRIDGES
 over US-6**

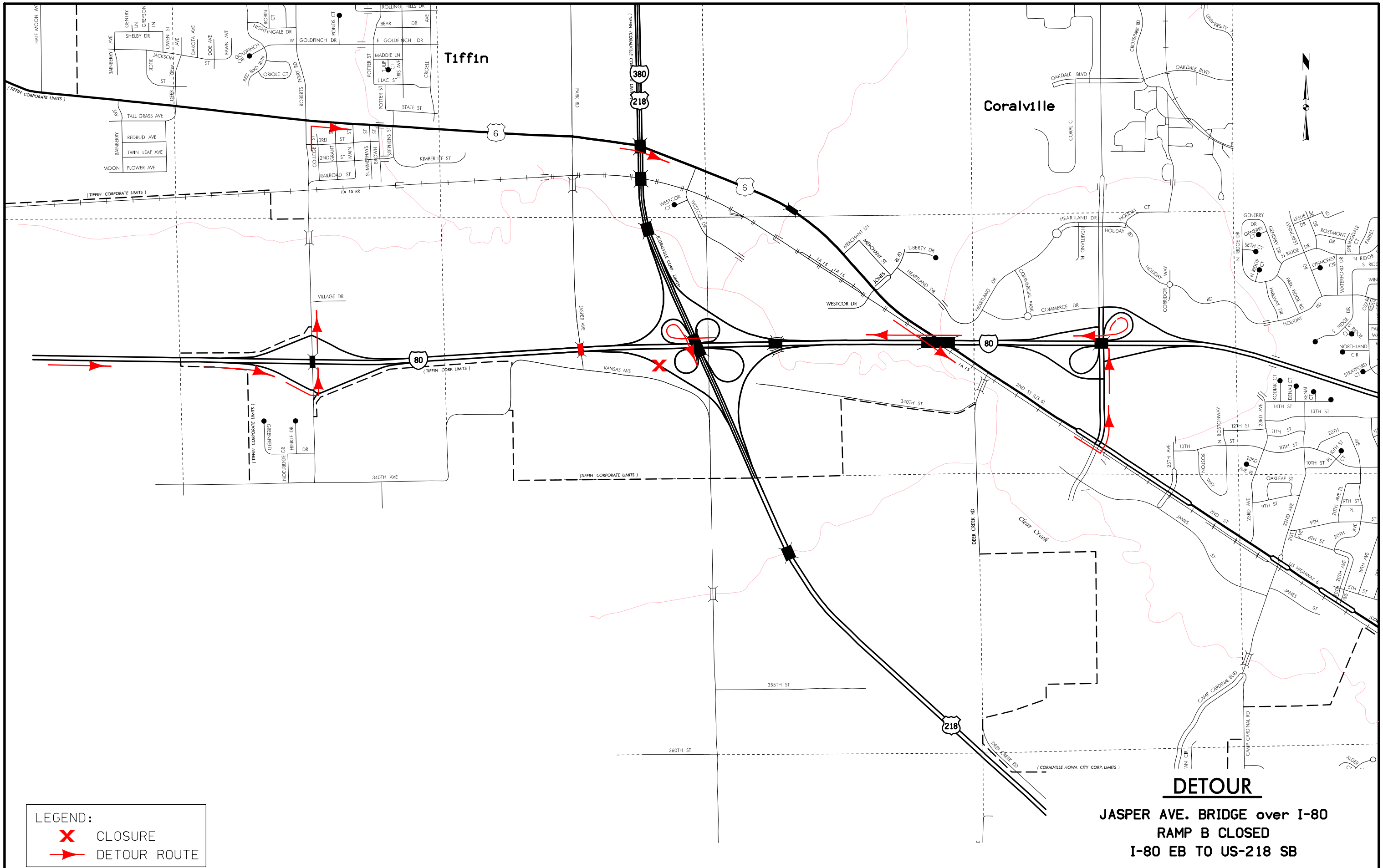
SHEET 5 OF 5



LEGEND:
 X CLOSURE
 → DETOUR ROUTE

DETOUR
JASPER AVE. BRIDGE over I-80
LOOP H CLOSED
I-80 EB TO I-380 NB

SHEET 2 OF 9

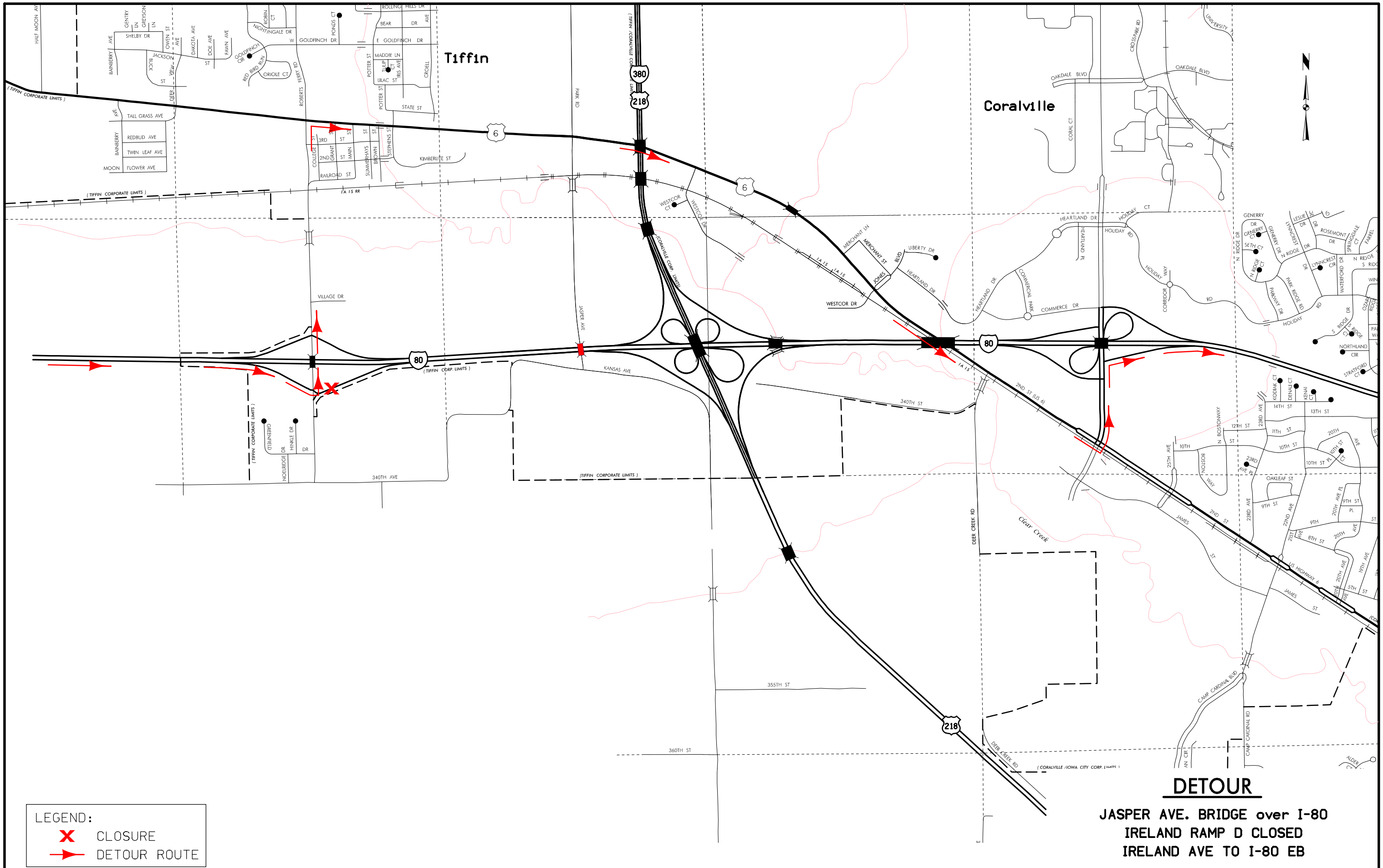


LEGEND:

- X CLOSURE
- ➔ DETOUR ROUTE

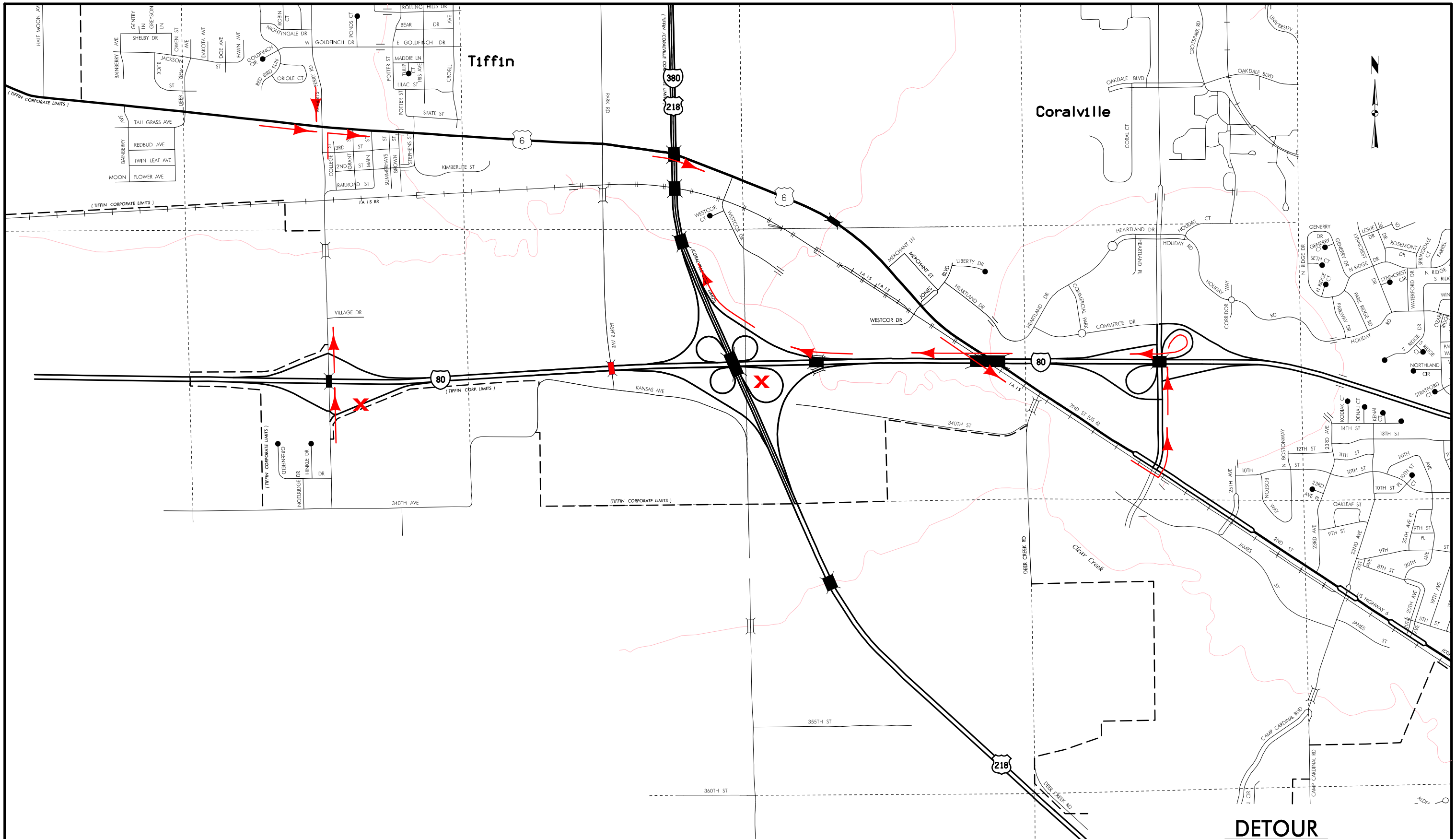
DETOUR
JASPER AVE. BRIDGE over I-80
RAMP B CLOSED
I-80 EB TO US-218 SB

SHEET 3 OF 9



LEGEND:
 CLOSURE
 DETOUR ROUTE

DETOUR
JASPER AVE. BRIDGE over I-80
IRELAND RAMP D CLOSED
IRELAND AVE TO I-80 EB



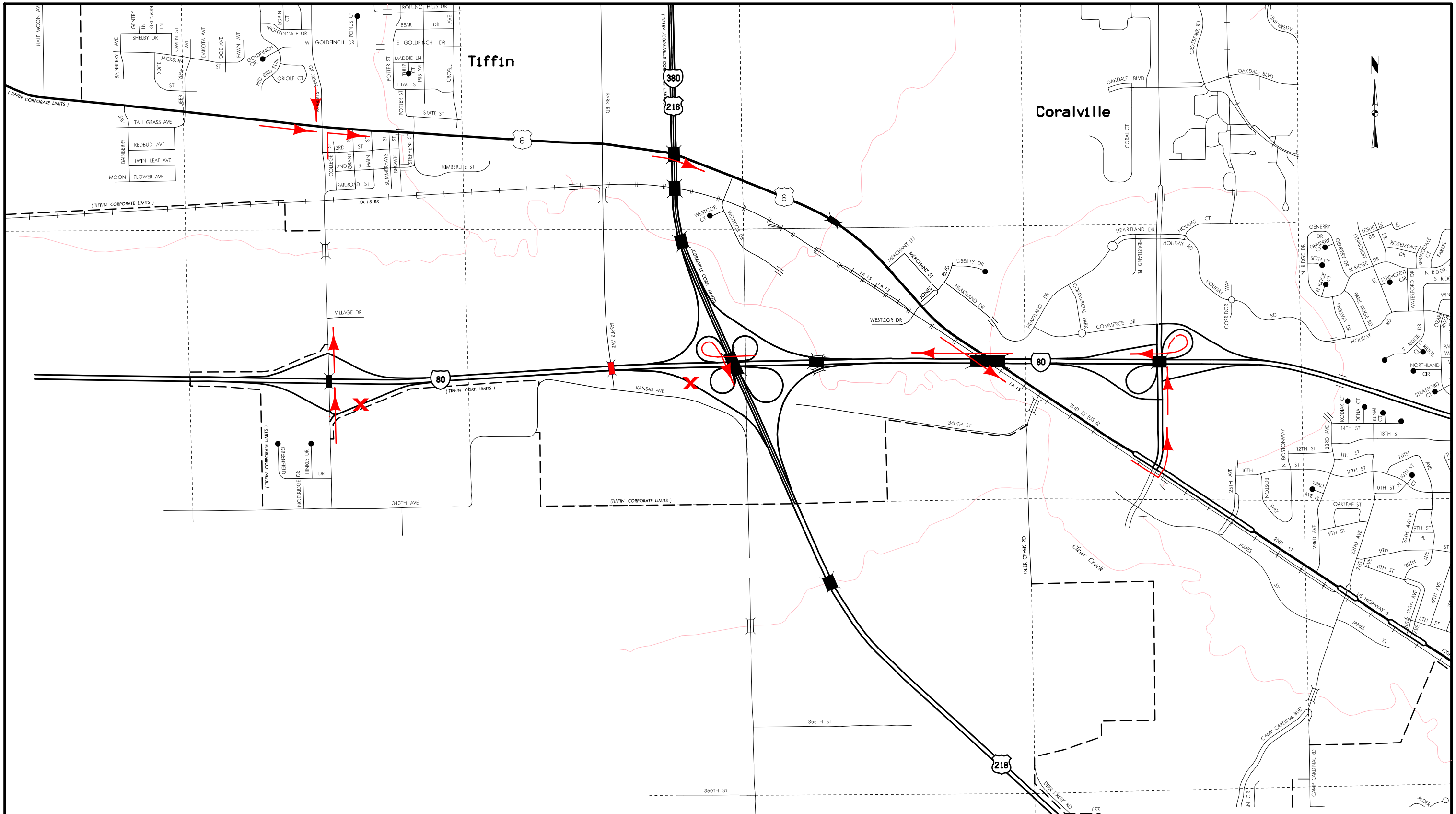
LEGEND:

- X CLOSURE
- ➔ DETOUR ROUTE

DETOUR

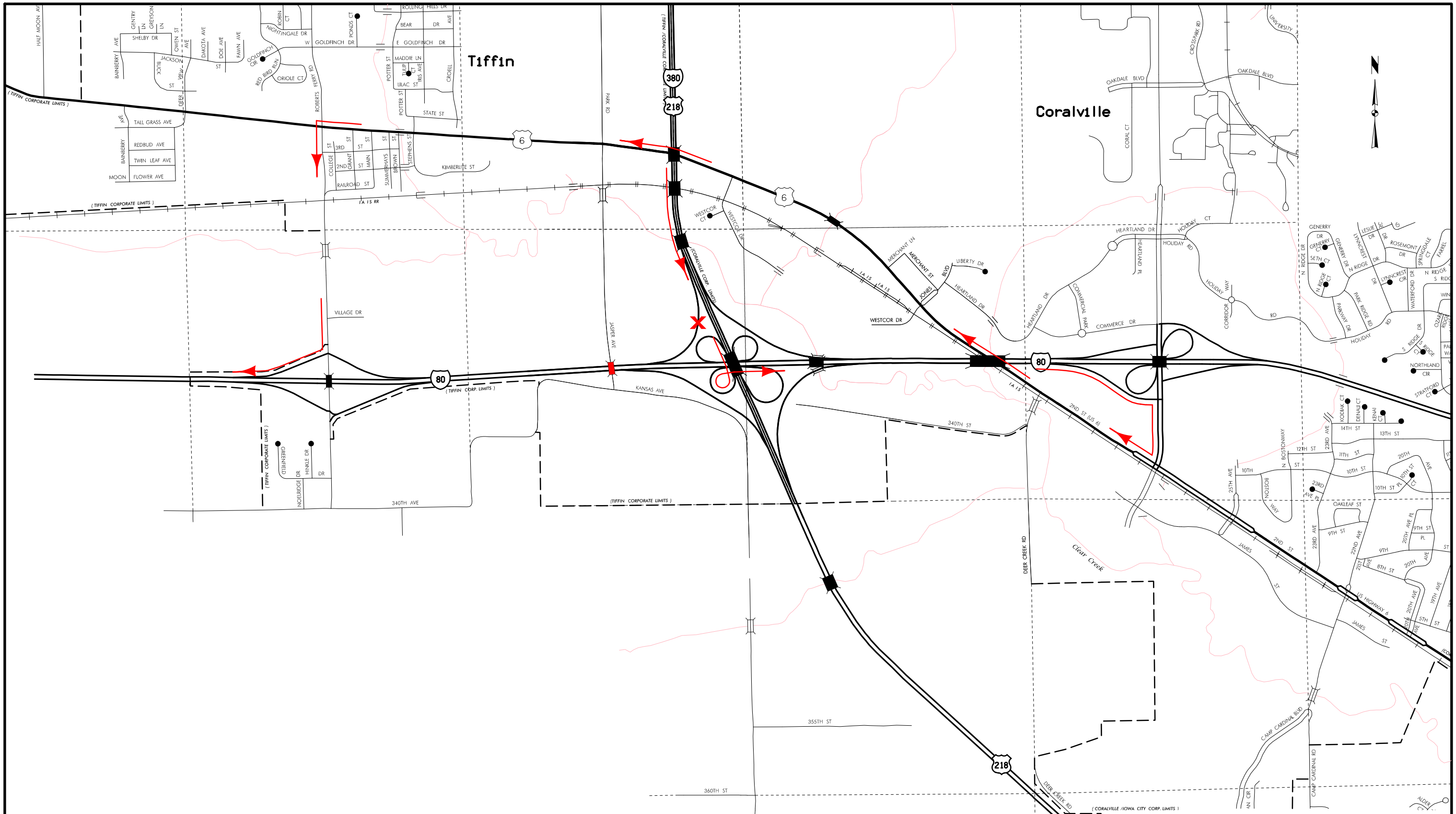
JASPER AVE. BRIDGE over I-80
IRELAND RAMP D AND I-380 LOOP H CLOSED
IRELAND AVE TO I-80 EB TO I-380 NB

SHEET 5 OF 9



LEGEND:
 X CLOSURE
 → DETOUR ROUTE

DETOUR
JASPER AVE. BRIDGE over I-80
IRELAND RAMP D AND I-380 RAMP B CLOSED
IRELAND AVE TO I-80 EB TO US-218 SB

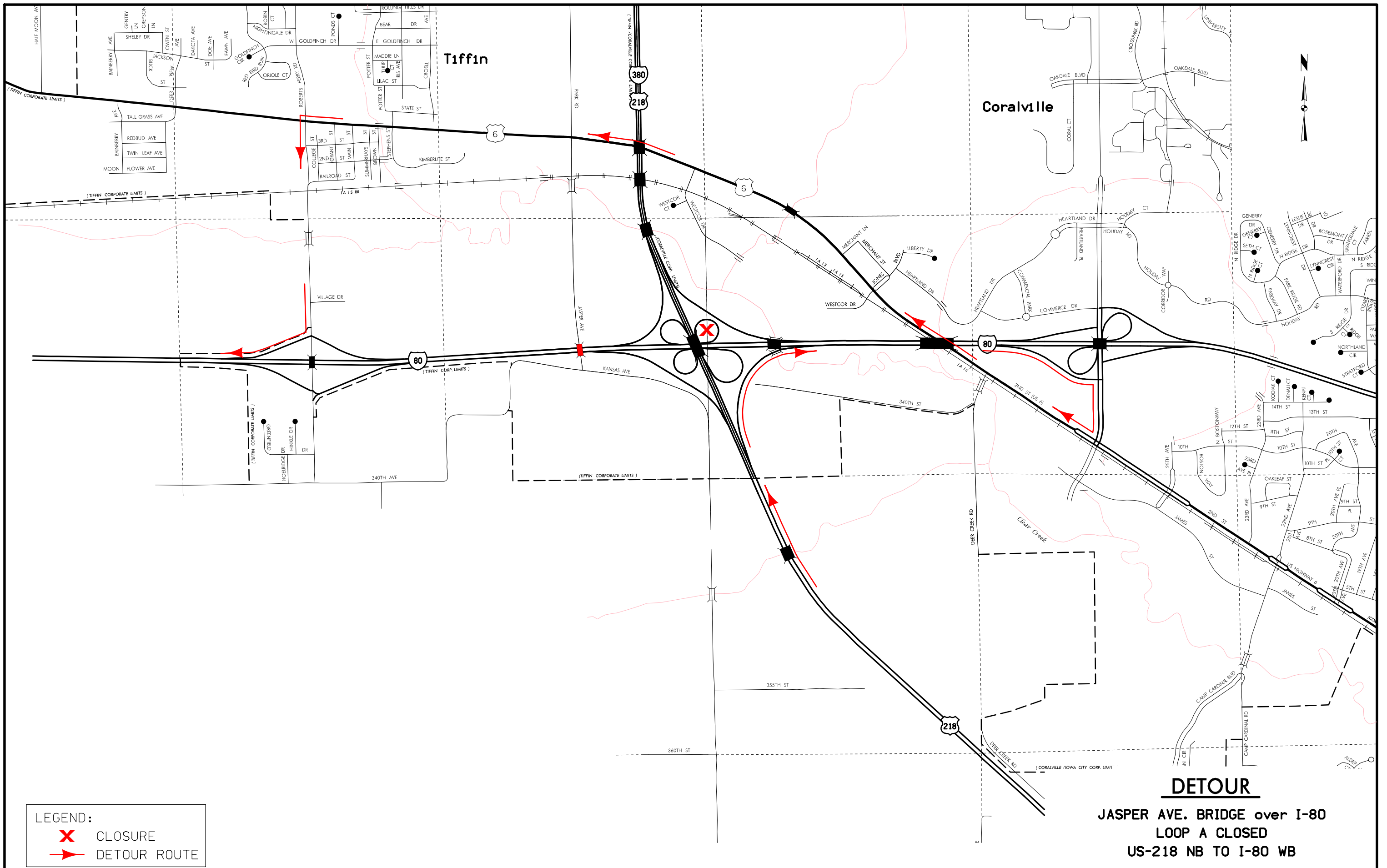


LEGEND:

- X CLOSURE
- ➔ DETOUR ROUTE

DETOUR
JASPER AVE. BRIDGE over I-80
RAMP C CLOSED
I-380 SB TO I-80 WB

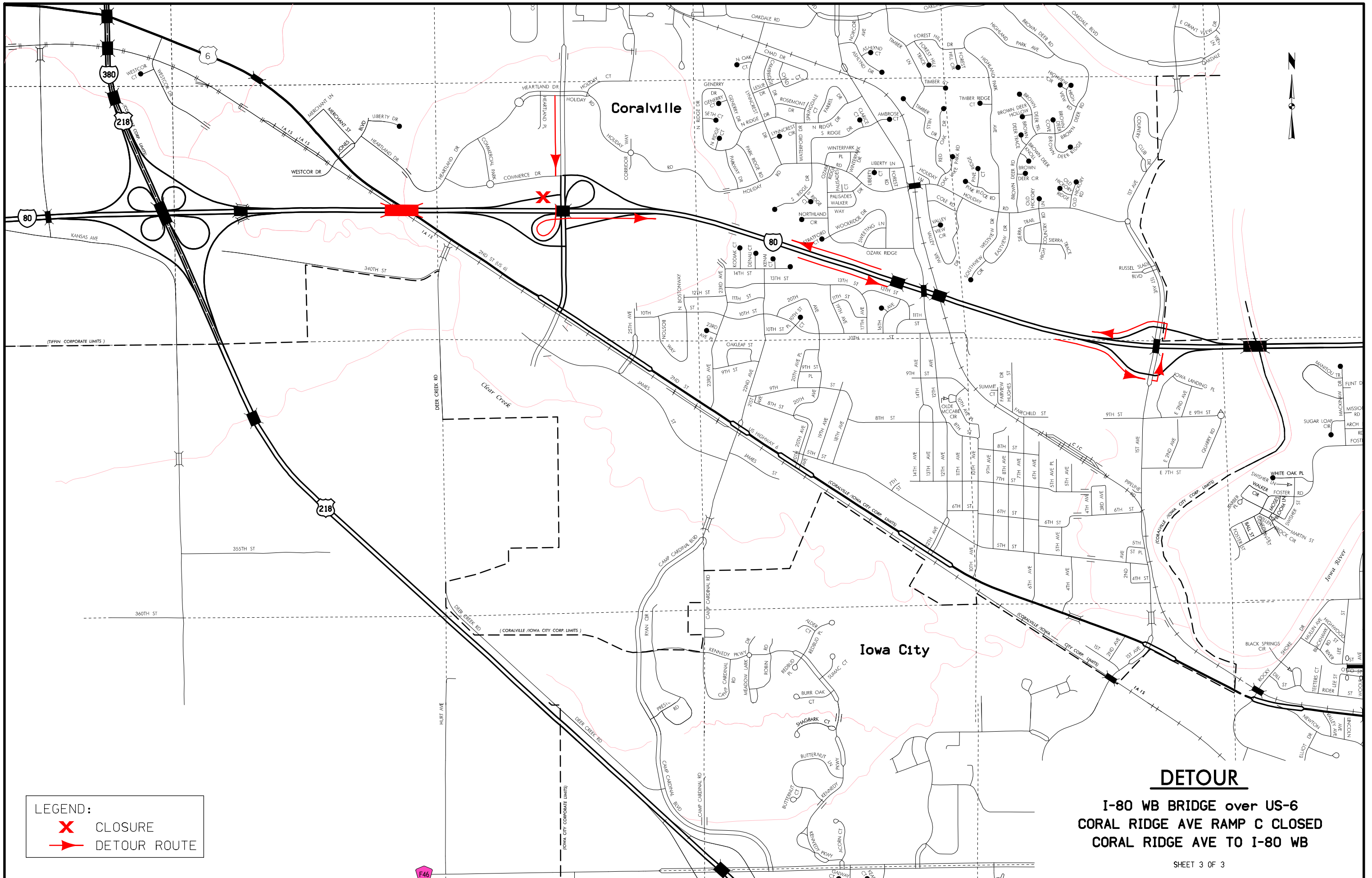
SHEET 8 OF 9



LEGEND:
 X CLOSURE
 → DETOUR ROUTE

DETOUR

**JASPER AVE. BRIDGE over I-80
 LOOP A CLOSED
 US-218 NB TO I-80 WB**



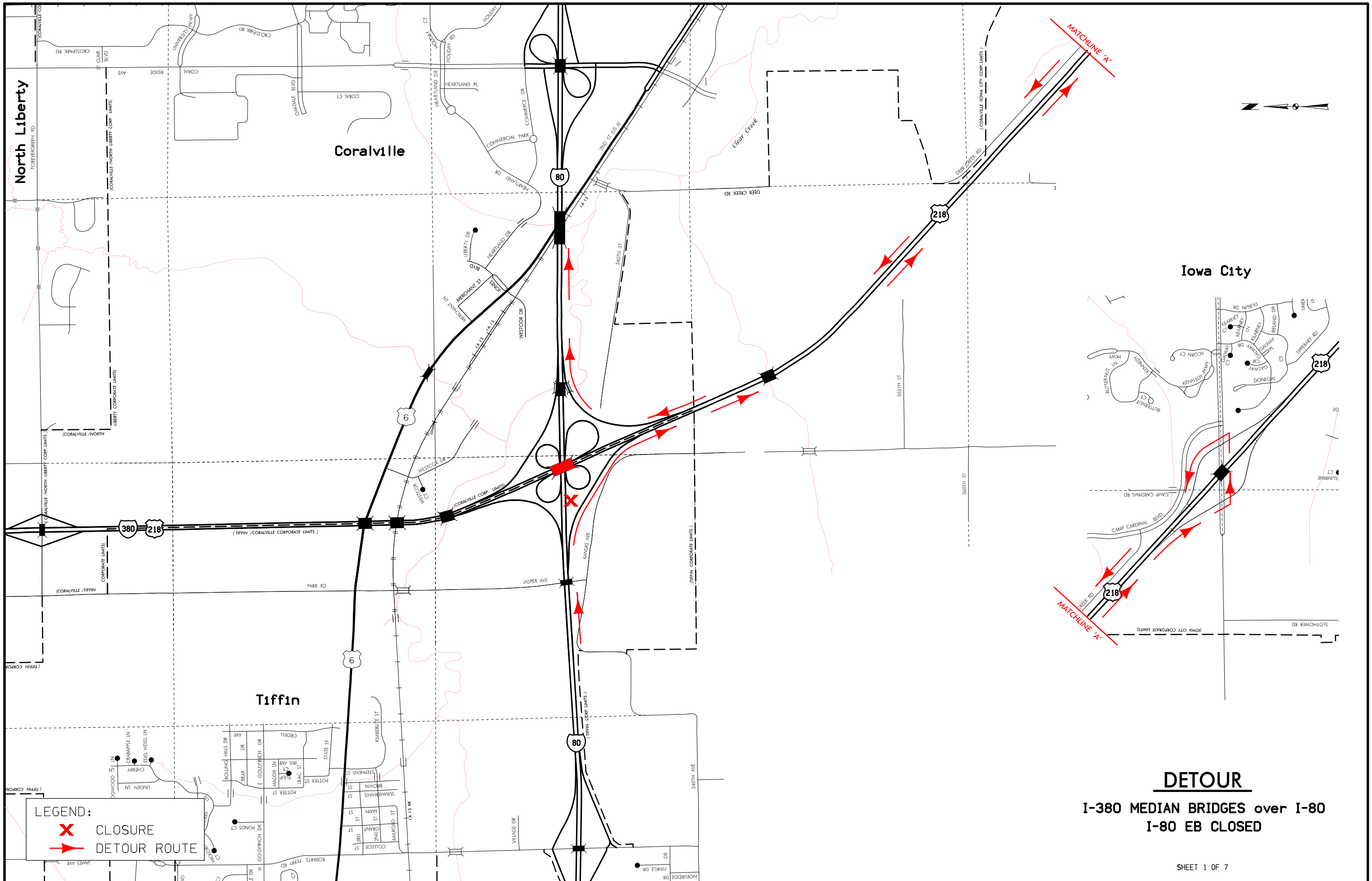
LEGEND:

- X CLOSURE
- ➔ DETOUR ROUTE

DETOUR

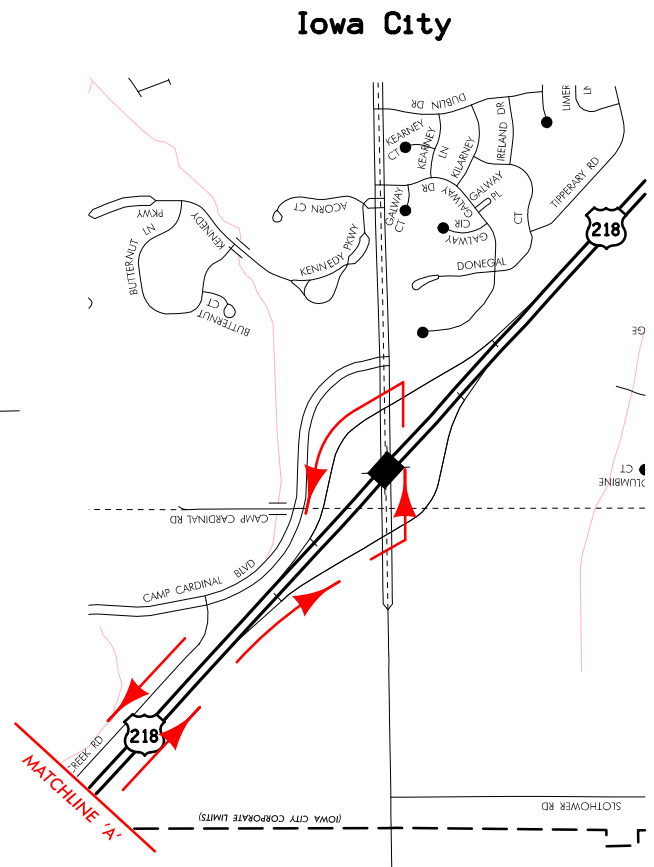
**I-80 WB BRIDGE over US-6
CORAL RIDGE AVE RAMP C CLOSED
CORAL RIDGE AVE TO I-80 WB**

SHEET 3 OF 3

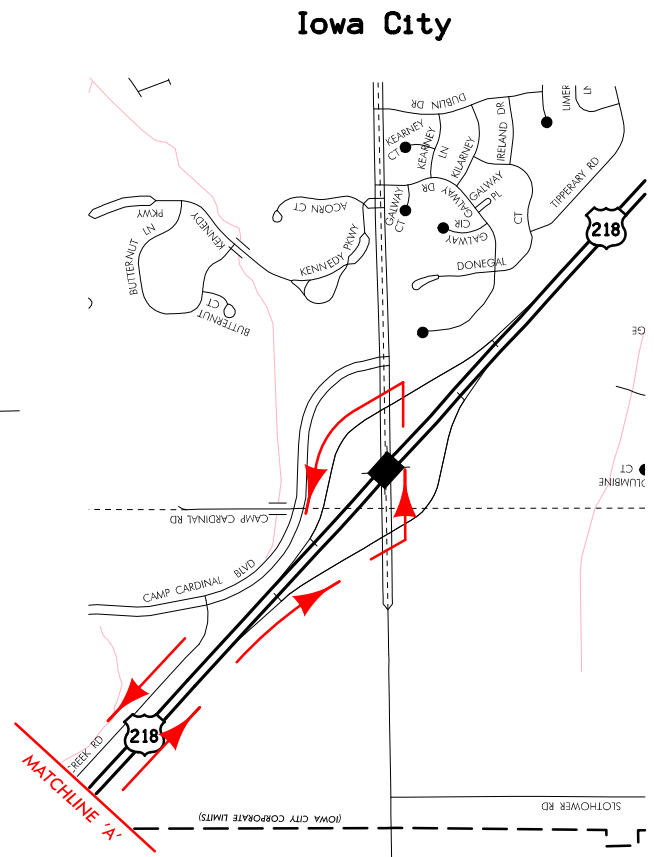
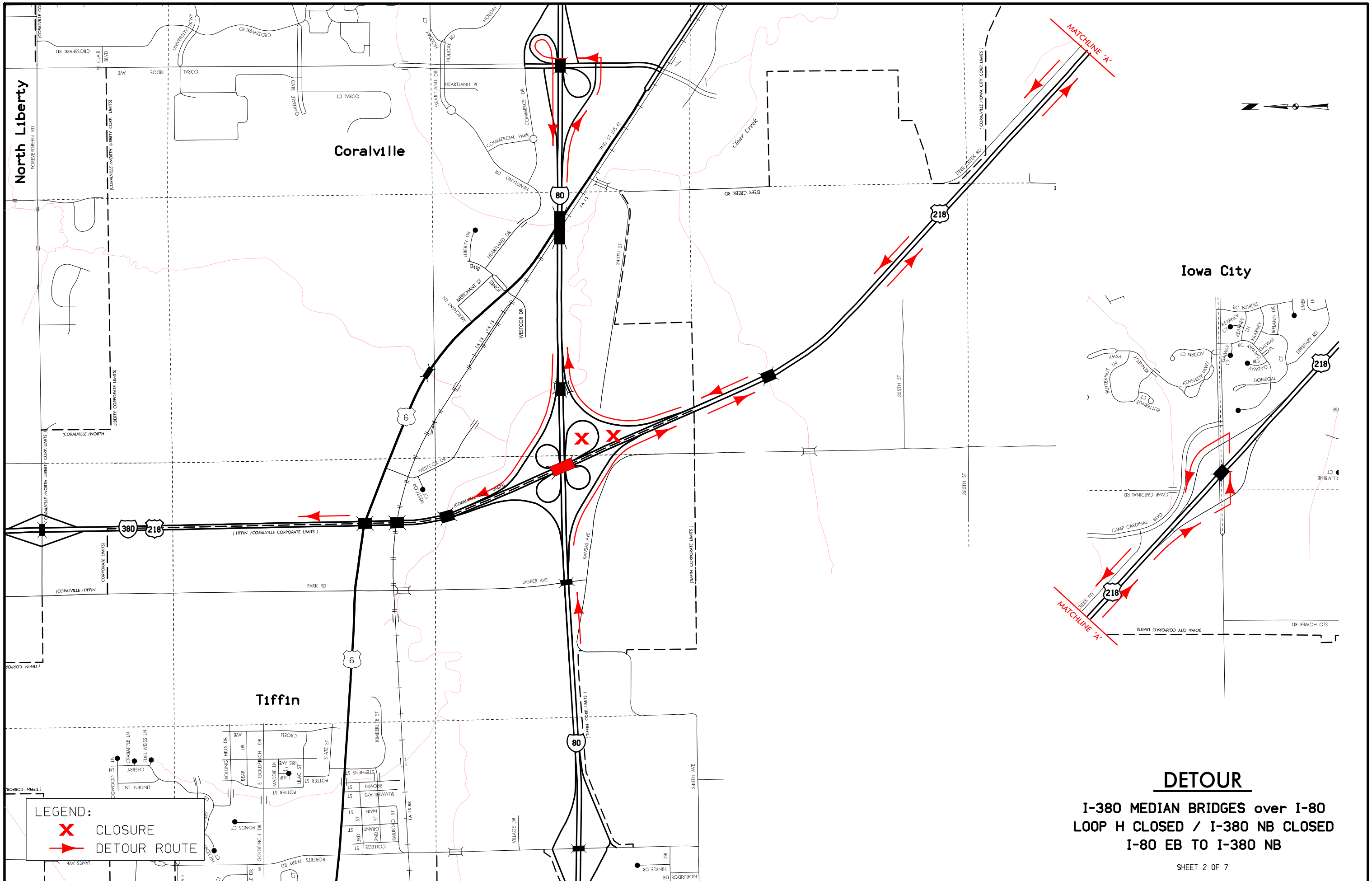


LEGEND:

- X CLOSURE
- ➔ DETOUR ROUTE



DETOUR
I-380 MEDIAN BRIDGES over I-80
I-80 EB CLOSED



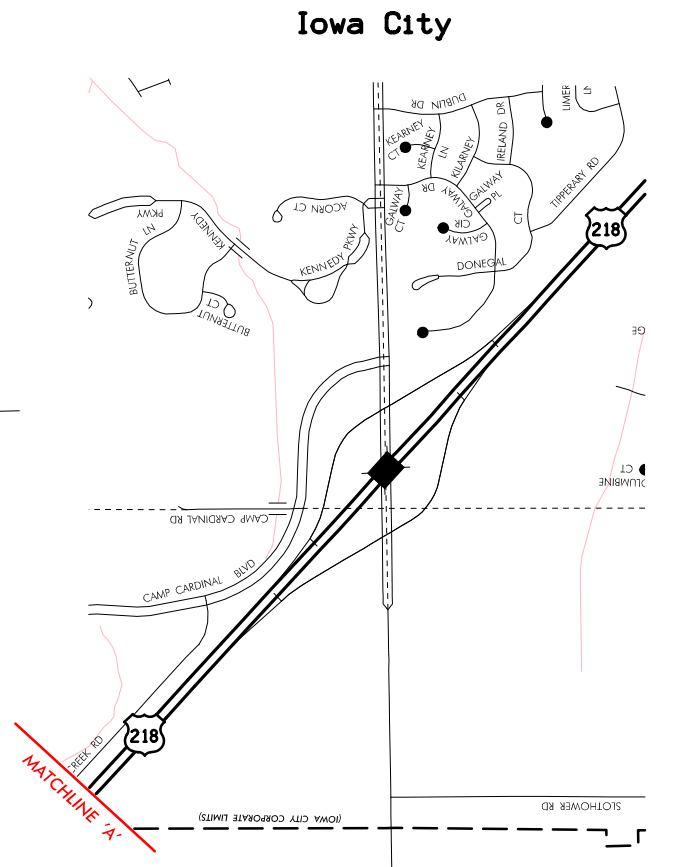
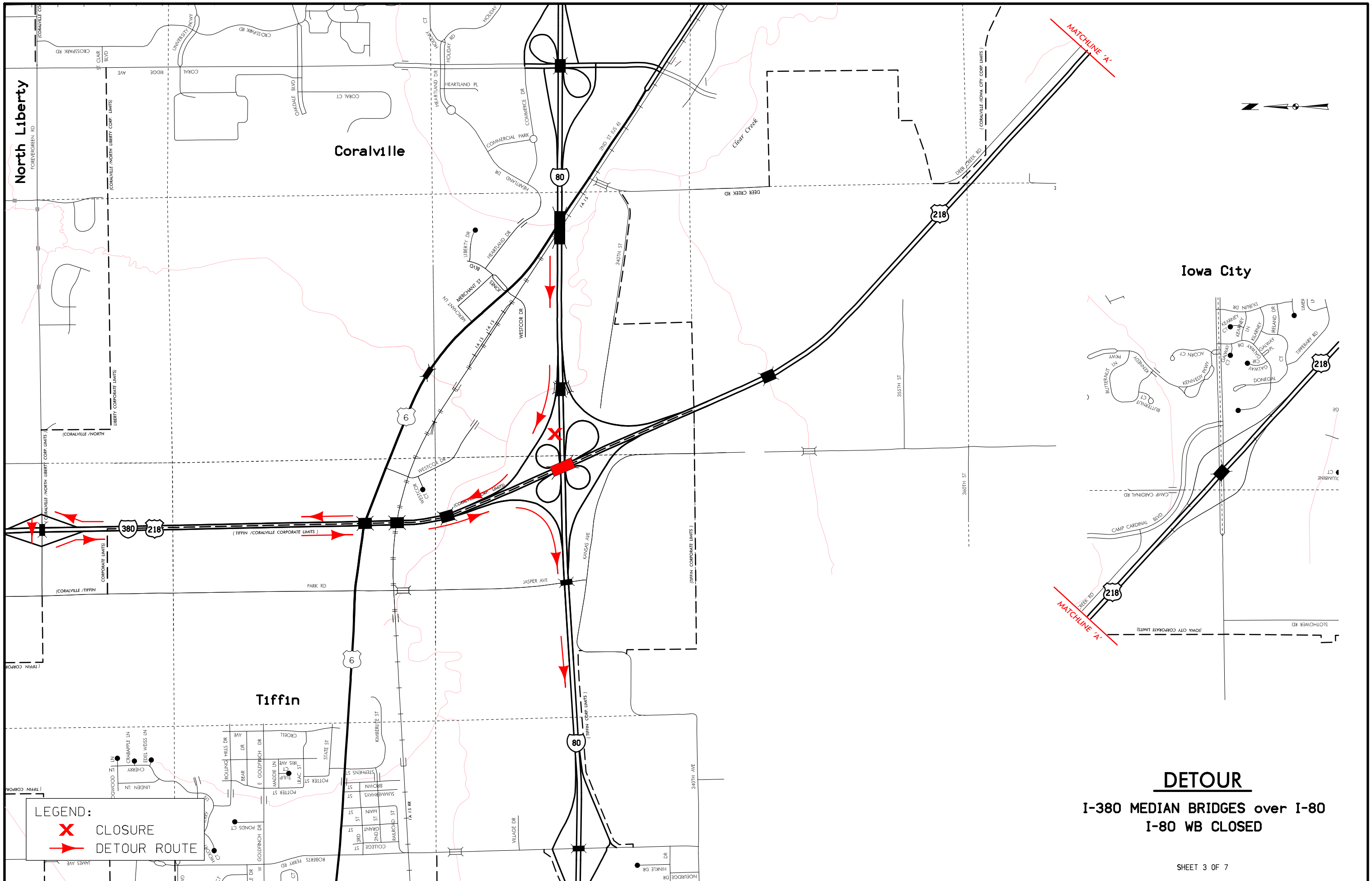
LEGEND:

- X CLOSURE
- ➔ DETOUR ROUTE

DETOUR

**I-380 MEDIAN BRIDGES over I-80
 LOOP H CLOSED / I-380 NB CLOSED
 I-80 EB TO I-380 NB**

SHEET 2 OF 7

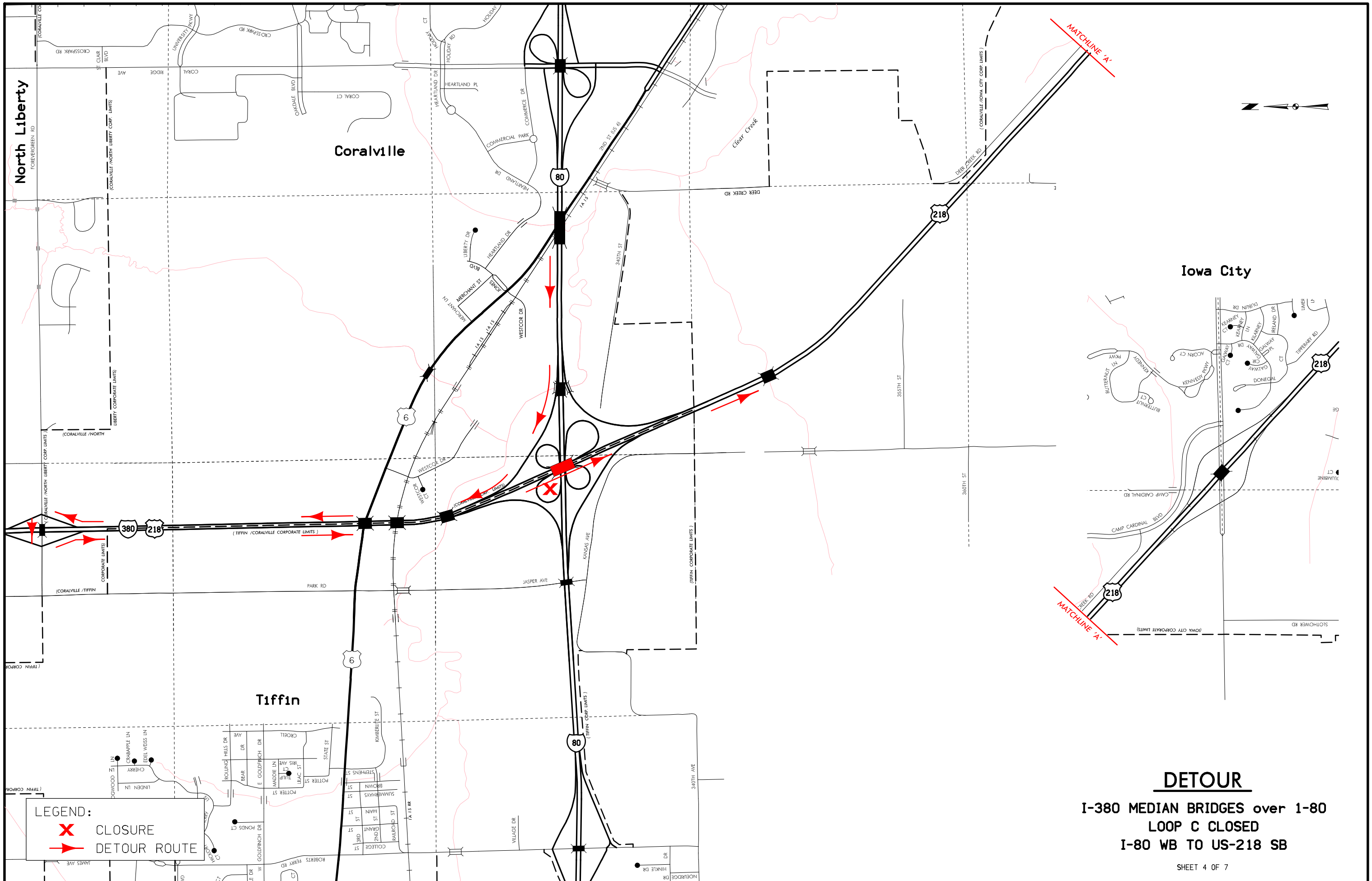


DETOUR

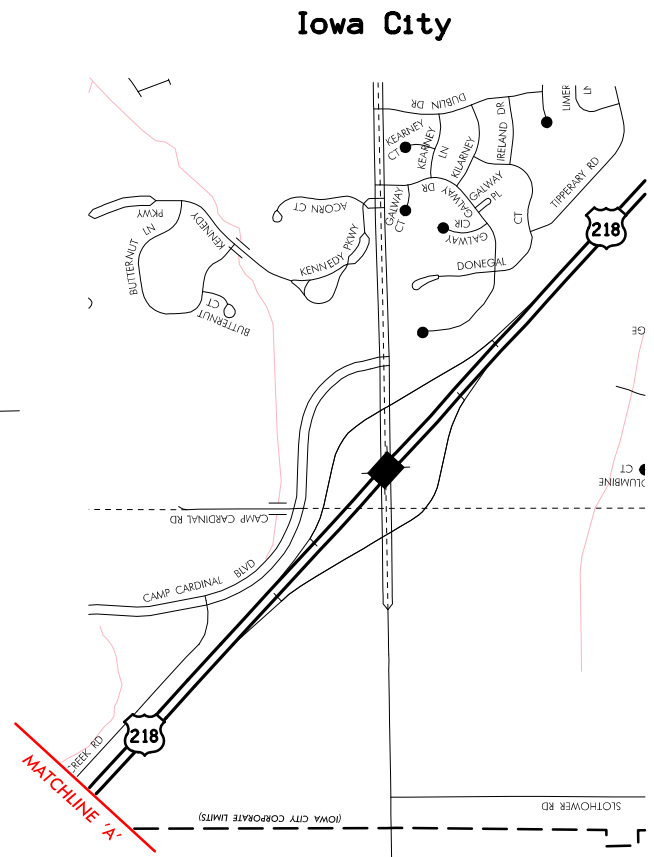
**I-380 MEDIAN BRIDGES over I-80
I-80 WB CLOSED**

SHEET 3 OF 7

FILE NO.	ENGLISH	DESIGN TEAM	JOHNSON COUNTY	PROJECT NUMBER	SHEET NUMBER
3:03:57 PM 5/20/2019	kschroc	Holst \ Prindle		NHS-080-6(371)239--11-52	J.220

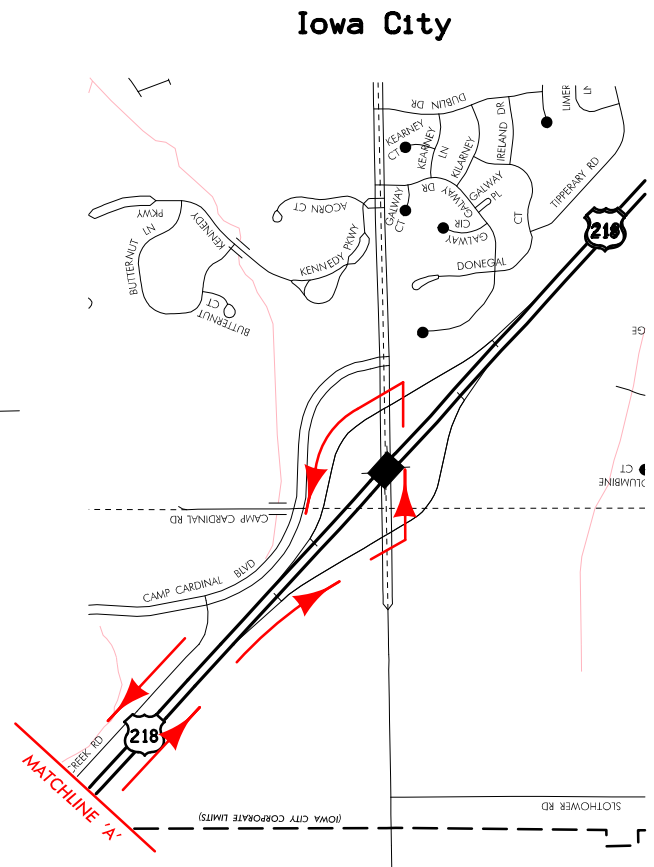
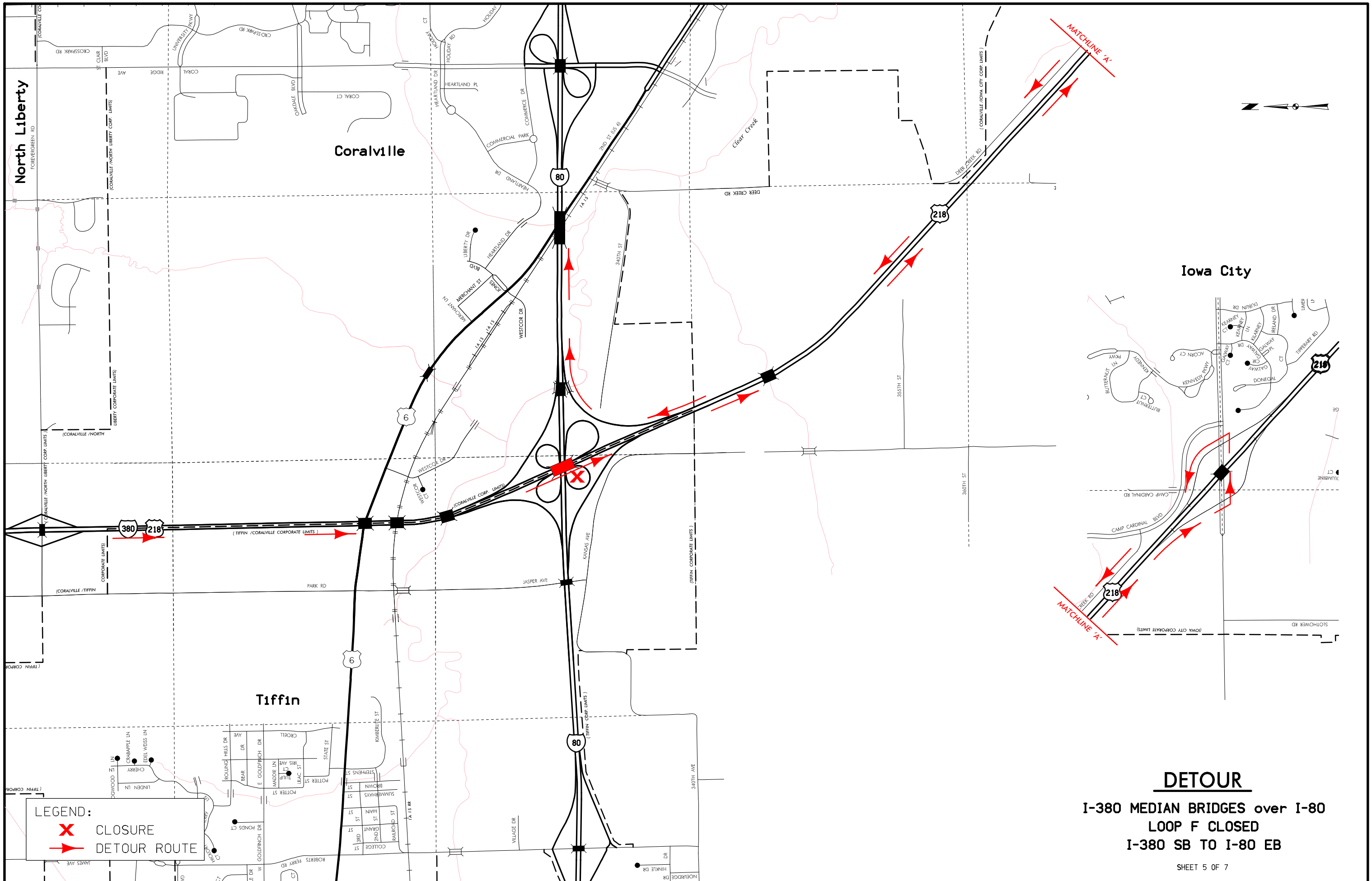


LEGEND:
 CLOSURE
 DETOUR ROUTE



DETOUR
I-380 MEDIAN BRIDGES over I-80
LOOP C CLOSED
I-80 WB TO US-218 SB

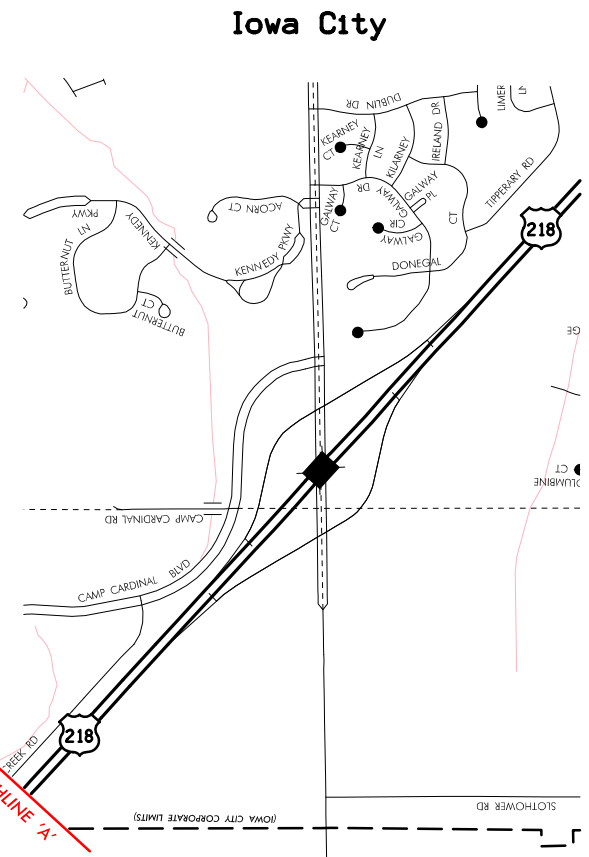
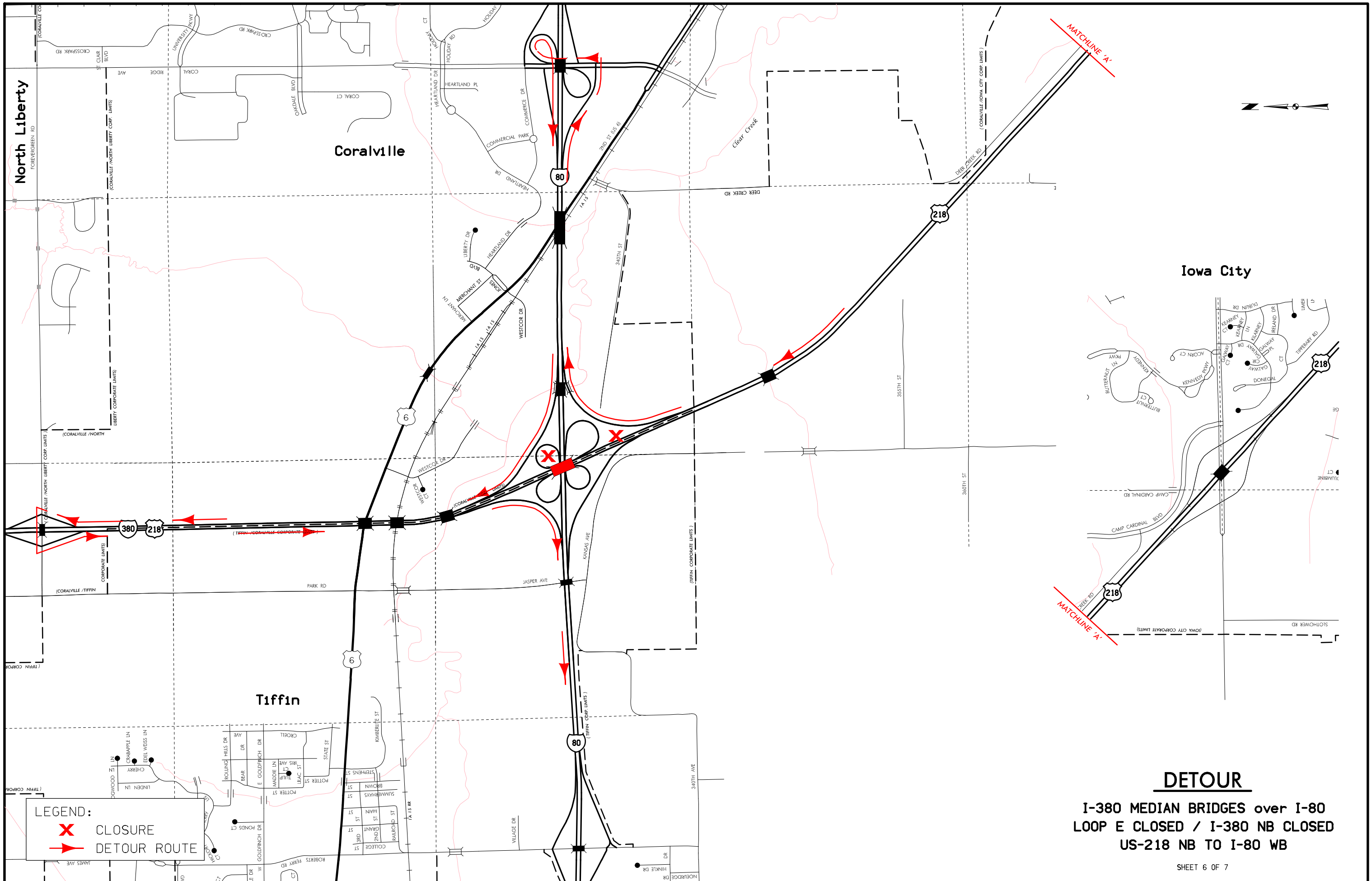
SHEET 4 OF 7



LEGEND:
 CLOSURE
 DETOUR ROUTE

DETOUR
I-380 MEDIAN BRIDGES over I-80
LOOP F CLOSED
I-380 SB TO I-80 EB

SHEET 5 OF 7



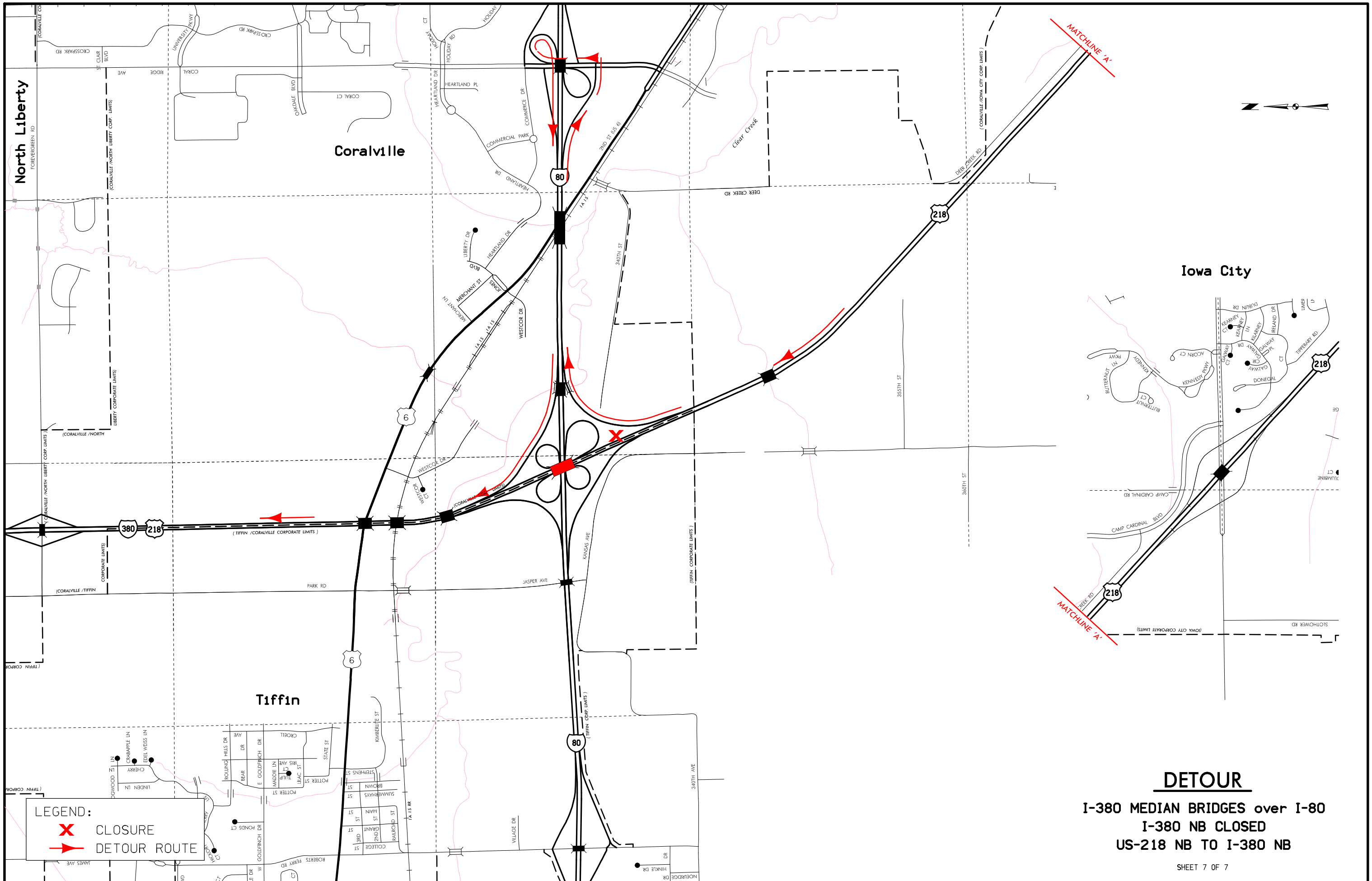
LEGEND:

- X CLOSURE
- ➔ DETOUR ROUTE

DETOUR

**I-380 MEDIAN BRIDGES over I-80
 LOOP E CLOSED / I-380 NB CLOSED
 US-218 NB TO I-80 WB**

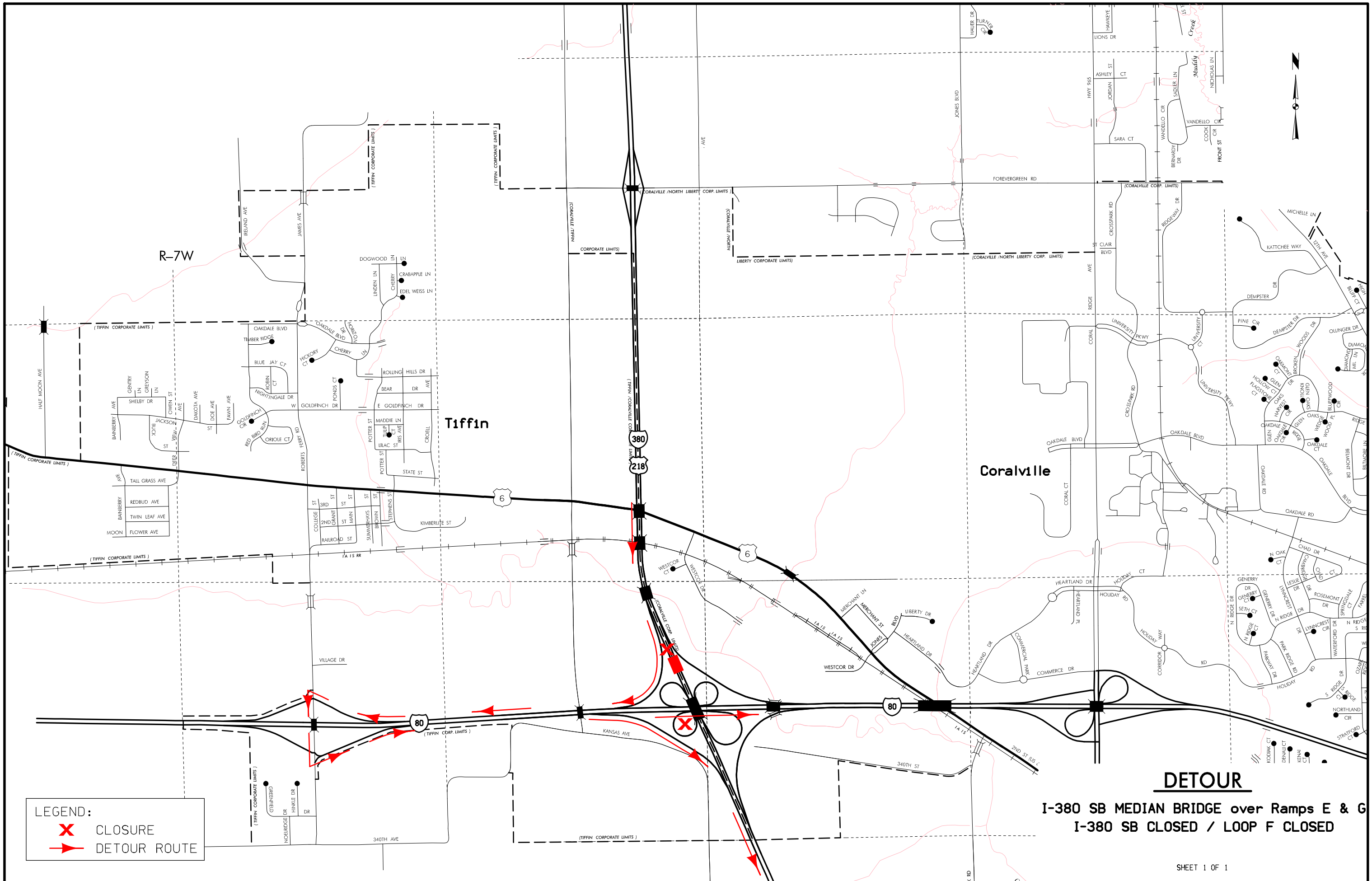
SHEET 6 OF 7



DETOUR

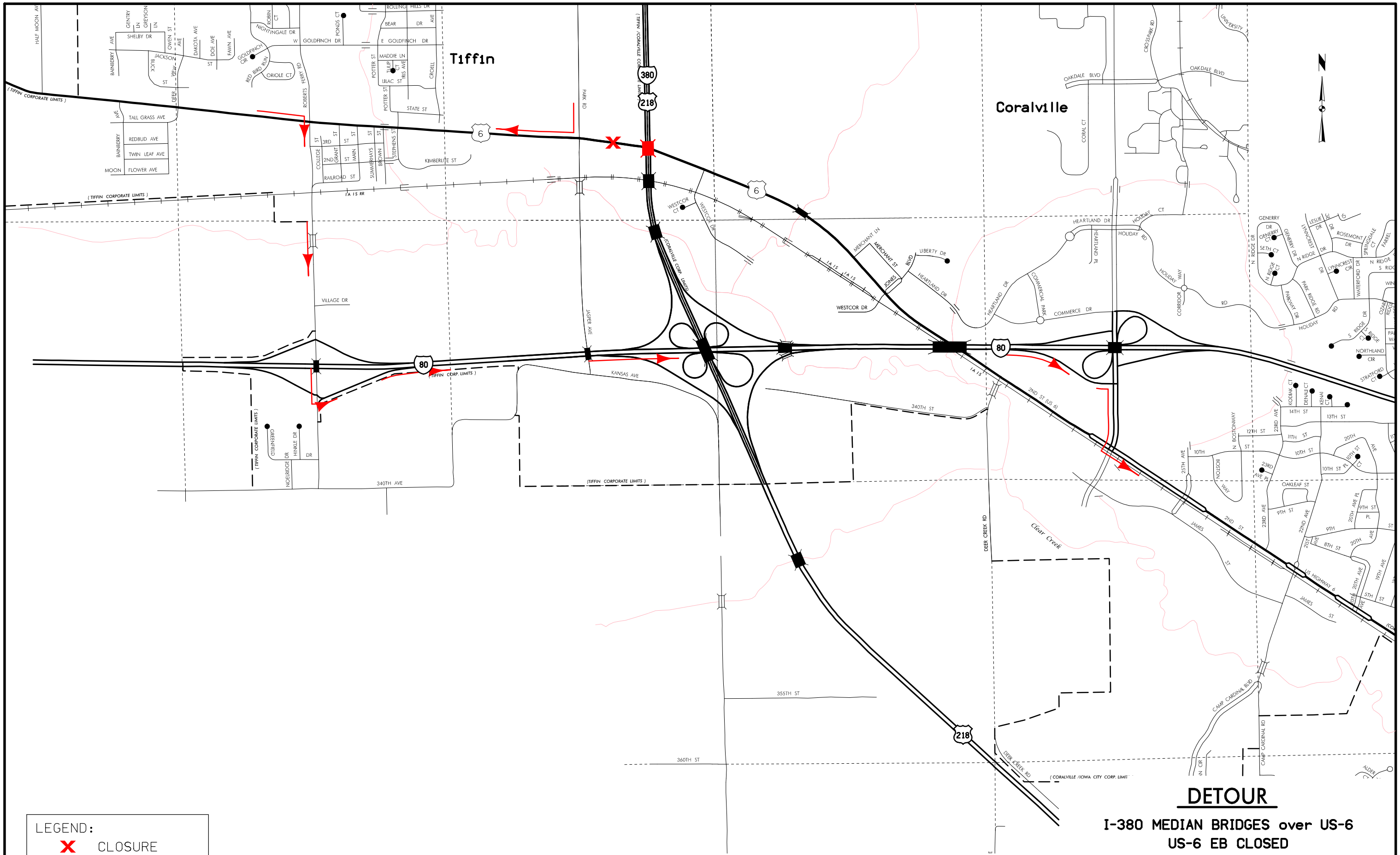
**I-380 MEDIAN BRIDGES over I-80
I-380 NB CLOSED
US-218 NB TO I-380 NB**

SHEET 7 OF 7



LEGEND:
 X CLOSURE
 → DETOUR ROUTE

DETOUR
 I-380 SB MEDIAN BRIDGE over Ramps E & G
 I-380 SB CLOSED / LOOP F CLOSED

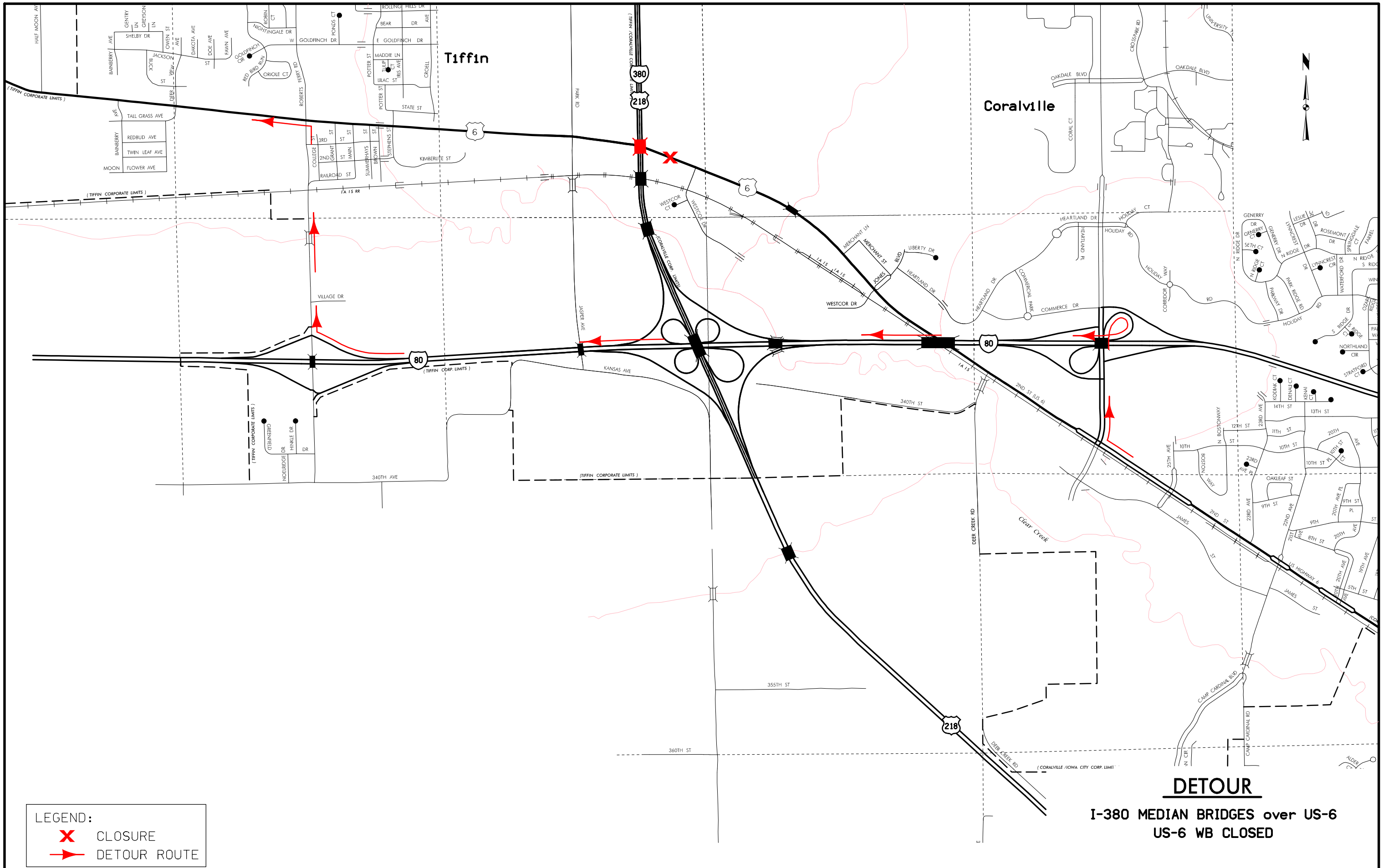


LEGEND:

- X CLOSURE
- ➔ DETOUR ROUTE

DETOUR
I-380 MEDIAN BRIDGES over US-6
US-6 EB CLOSED

FILE NO.	ENGLISH	DESIGN TEAM Holst \ Prindle	JOHNSON COUNTY	PROJECT NUMBER NHS-080-6(371)239--11-52	SHEET NUMBER J.226
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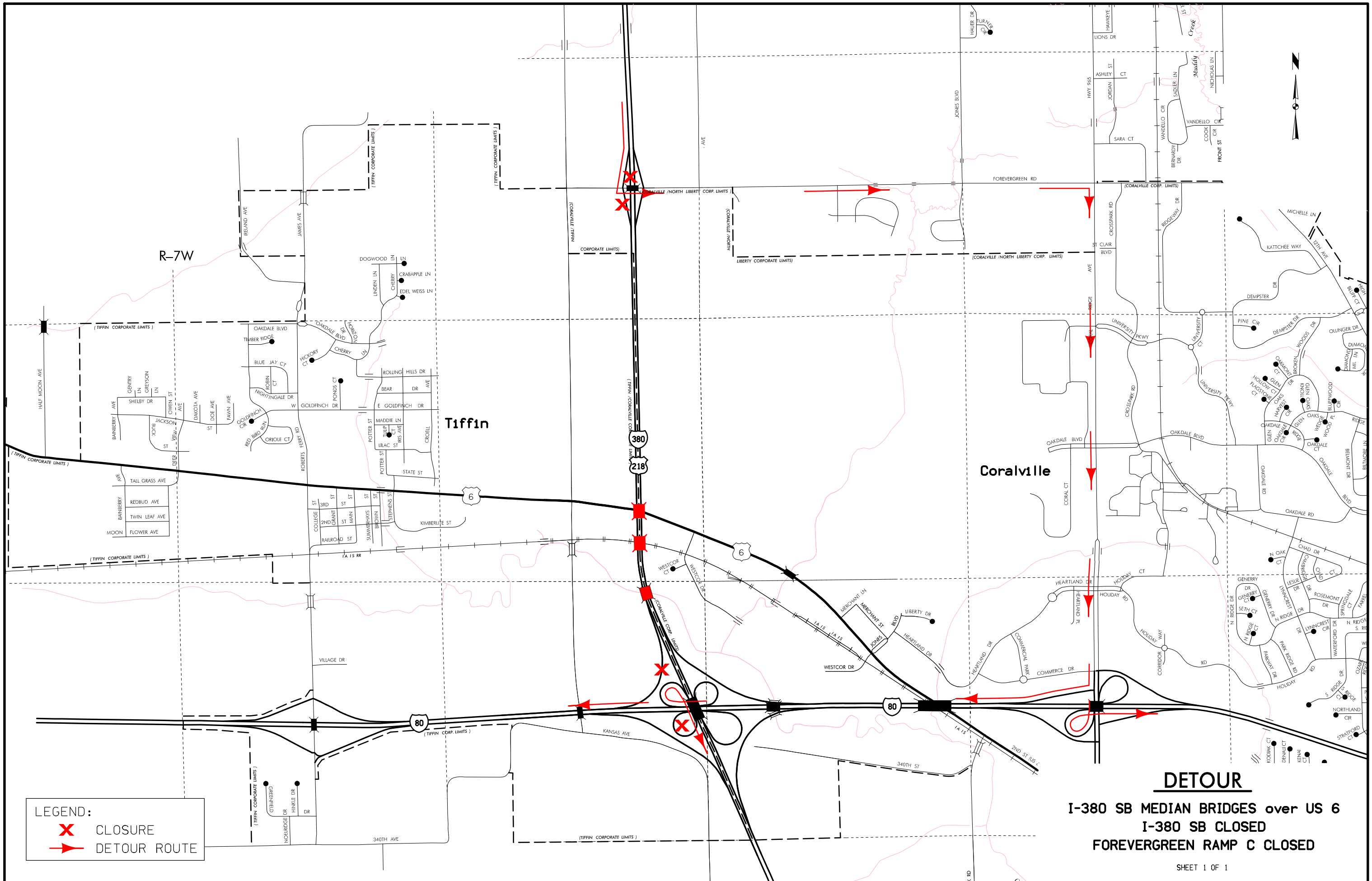


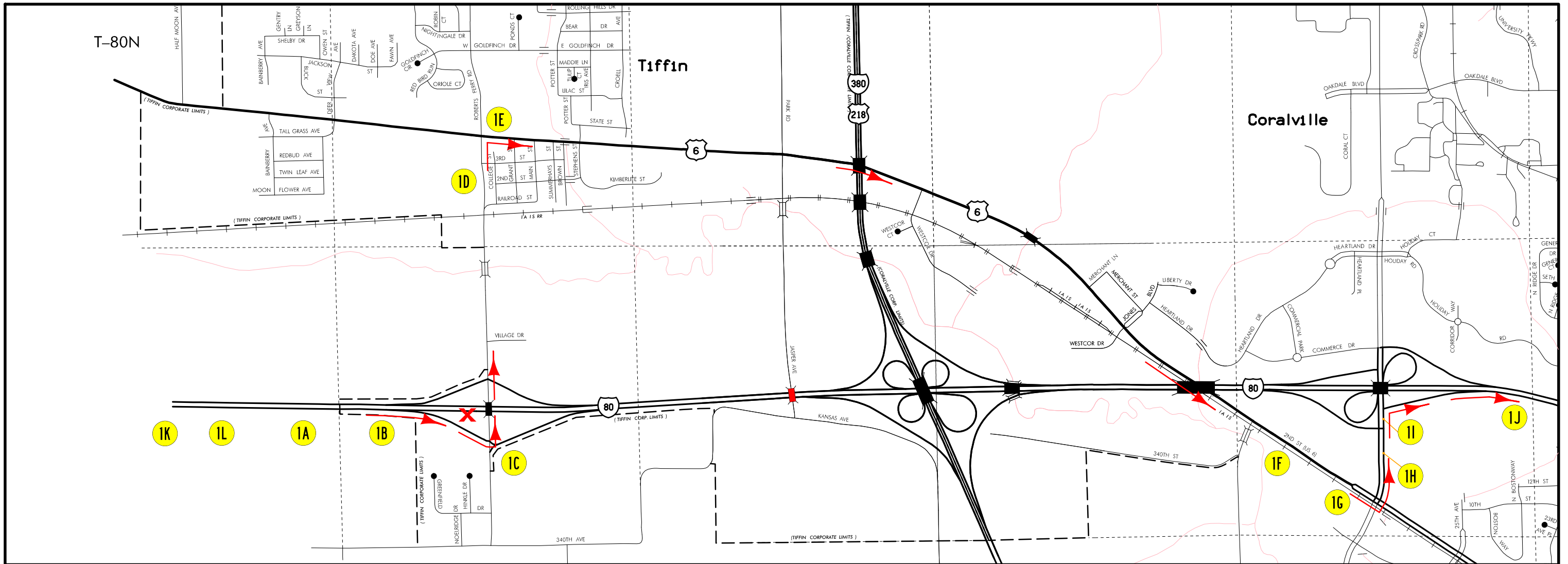
LEGEND:

- X CLOSURE
- ➔ DETOUR ROUTE

DETOUR
I-380 MEDIAN BRIDGES over US-6
US-6 WB CLOSED

FILE NO.	ENGLISH	DESIGN TEAM Holst \ Prindle	JOHNSON COUNTY	PROJECT NUMBER NHS-080-6(371)239--11-52	SHEET NUMBER J.227
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1H

DETOUR
M4-8, 30" X 15"

EAST
M3-2i, 36" X 18"

INTERSTATE
80
M1-1, 36" X 36"

↑
M6-3i, 30" X 21"

1B

DETOUR
M4-8, 30" X 15"

EAST
M3-2i, 36" X 18"

INTERSTATE
80
M1-1, 36" X 36"

↗
M6-2iR, 30" X 21"

1E 1I

DETOUR
M4-8, 30" X 15"

EAST
M3-2i, 36" X 18"

INTERSTATE
80
M1-1, 36" X 36"

→
M6-1i, 30" X 21"

1D

DETOUR
M4-8, 30" X 15"

EAST
M3-2i, 36" X 18"

INTERSTATE
80
M1-1, 36" X 36"

↘
M5-1iR, 30" X 21"

1L

DETOUR AHEAD
W20-2, 48" X 48"

1A

DETOUR
M4-8, 30" X 15"

EAST
M3-2i, 36" X 18"

INTERSTATE
80
M1-1, 36" X 36"

↘
M5-2iR, 30" X 21"

1C 1G

DETOUR
M4-8, 30" X 15"

EAST
M3-2i, 36" X 18"

INTERSTATE
80
M1-1, 36" X 36"

←
M6-1i, 30" X 21"

1F

DETOUR
M4-8, 30" X 15"

EAST
M3-2i, 36" X 18"

INTERSTATE
80
M1-1, 36" X 36"

↙
M5-1iL, 30" X 21"

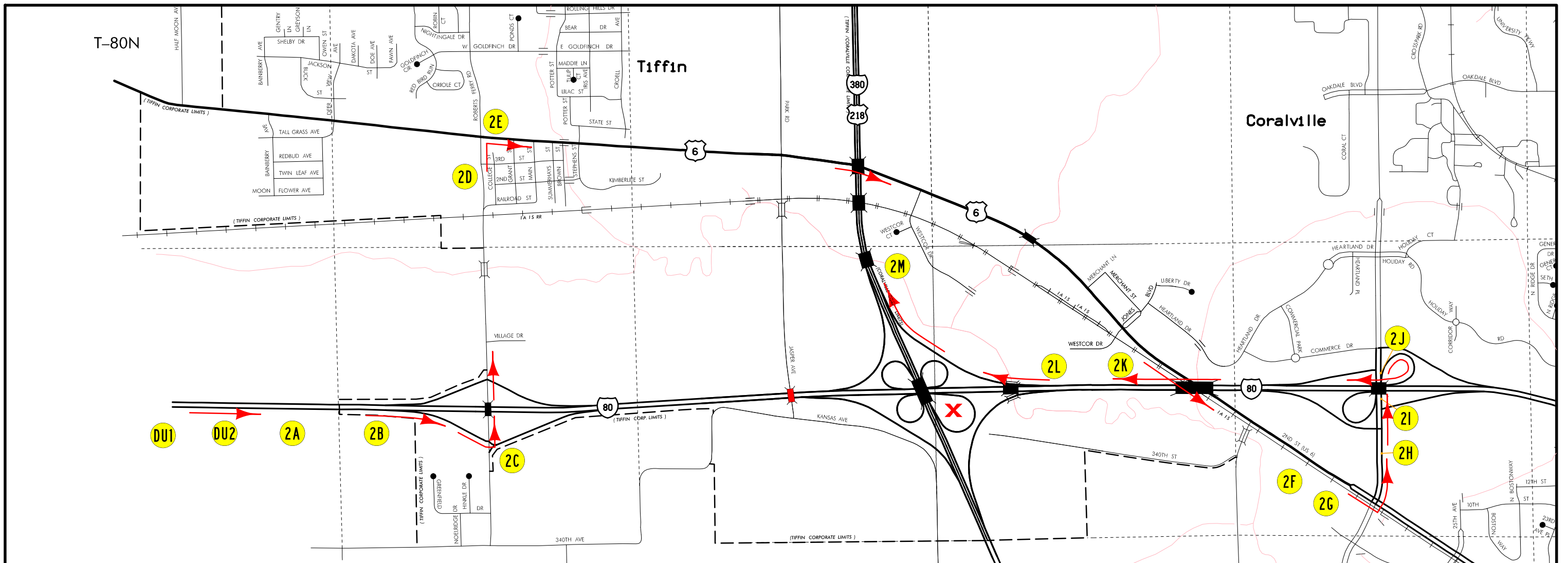
1J

END DETOUR
M4-8A, 24" X 18"

1K

ROAD CLOSED AHEAD
W20-3, 48" X 48"

(Not to Scale)	
LEGEND	
Closed	X
Detour Route	→
Detour Signing Details JASPER AVE over I-80 I-80 EB	



2H

DETOUR

NORTH

INTERSTATE

380

↑

M4-8, 30" X 15"

M3-1i, 36" X 18"

M1-1, 45" X 36"

M6-3i, 30" X 21"

2B 2J

DETOUR

NORTH

INTERSTATE

380

↗

M4-8, 30" X 15"

M3-1i, 36" X 18"

M1-1, 45" X 36"

M6-2iR, 30" X 21"

2E

DETOUR

NORTH

INTERSTATE

380

→

M4-8, 30" X 15"

M3-1i, 36" X 18"

M1-1, 45" X 36"

M6-1i, 30" X 21"

2D

DETOUR

NORTH

INTERSTATE

380

↘

M4-8, 30" X 15"

M3-1i, 36" X 18"

M1-1, 45" X 36"

M5-1iR, 30" X 21"

DU2

DETOUR AHEAD

W20-2, 48" X 48"

2A 2I

DETOUR

NORTH

INTERSTATE

380

↗

M4-8, 30" X 15"

M3-1i, 36" X 18"

M1-1, 45" X 36"

M5-2iR, 30" X 21"

2C 2G

DETOUR

NORTH

INTERSTATE

380

←

M4-8, 30" X 15"

M3-1i, 36" X 18"

M1-1, 45" X 36"

M6-1i, 30" X 21"

2F

DETOUR

NORTH

INTERSTATE

380

↙

M4-8, 30" X 15"

M3-1i, 36" X 18"

M1-1, 45" X 36"

M5-1iL, 30" X 21"

2M

END

DETOUR

M4-8A, 24" X 18"

DU1

ROAD

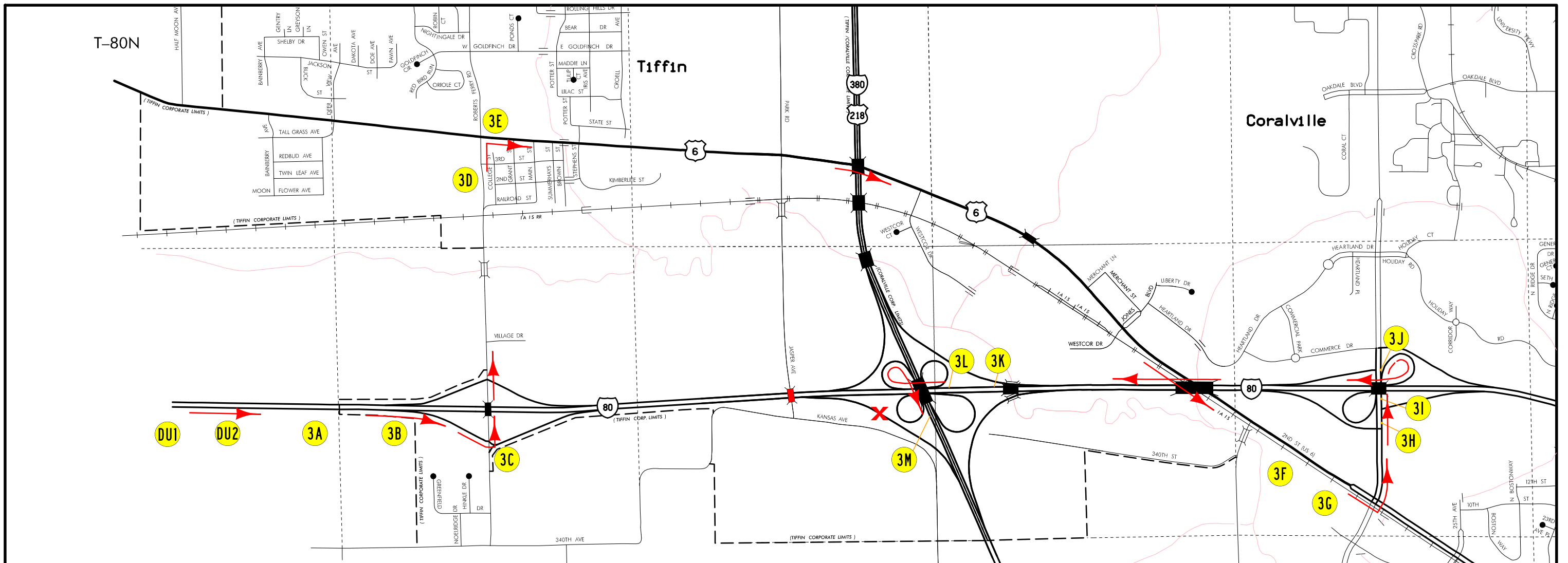
CLOSED

AHEAD

W20-3, 48" X 48"

(Not to Scale)	
LEGEND	
Closed	X
Detour Route	→
Detour Signing Details JASPER AVE over I-80 I-80 EB TO I-380 NB	

Duplicate (DU) signs installed on other detour routes do not need to be installed separately. Refer to other sheets in plans for additional locations.



3H

DETOUR

SOUTH

218

↑

M4-8, 30" X 15"
M3-3, 36" X 18"
M1-4, 45" X 36"
M6-3, 30" X 21"

3B 3J

DETOUR

SOUTH

218

↗

3L

M4-8, 30" X 15"
M3-3, 36" X 18"
M1-4, 45" X 36"
M6-2R, 30" X 21"

3E

DETOUR

SOUTH

218

→

M4-8, 30" X 15"
M3-3, 36" X 18"
M1-4, 45" X 36"
M6-1, 30" X 21"

3D

DETOUR

SOUTH

218

↘

M4-8, 30" X 15"
M3-3, 36" X 18"
M1-4, 45" X 36"
M5-1R, 30" X 21"

DU2

DETOUR AHEAD

W20-2, 48" X 48"

3A 3I

DETOUR

SOUTH

218

↘

3K

M4-8, 30" X 15"
M3-3, 36" X 18"
M1-4, 45" X 36"
M5-2R, 30" X 21"

3C 3G

DETOUR

SOUTH

218

←

M4-8, 30" X 15"
M3-3, 36" X 18"
M1-4, 45" X 36"
M6-1, 30" X 21"

3F

DETOUR

SOUTH

218

↙

M4-8, 30" X 15"
M3-3, 36" X 18"
M1-4, 45" X 36"
M5-1L, 30" X 21"

3M

END DETOUR

M4-8A, 24" X 18"

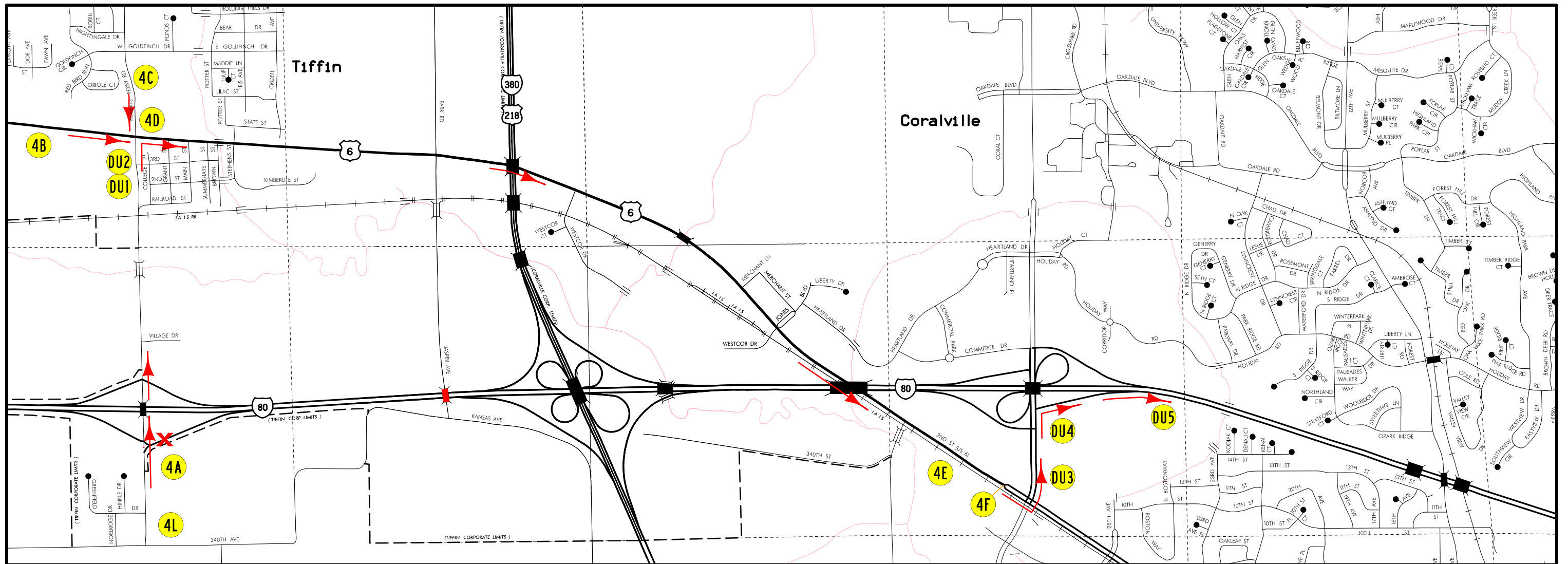
DU1

ROAD CLOSED AHEAD

W20-3, 48" X 48"

(Not to Scale)	
LEGEND	
Closed	X
Detour Route	→
Detour Signing Details JASPER AVE over I-80 I-80 EB TO US-218 SB	

Duplicate (DU) signs installed on other detour routes do not need to be installed separately. Refer to other sheets in plans for additional locations.



4A 4B
DU3

DETOUR	M4-8, 30" X 15"
EAST	M3-2i, 36" X 18"
INTERSTATE	
80	M1-1, 36" X 36"
↑	M6-3i, 30" X 21"

DU2 DU4

DETOUR	M4-8, 30" X 15"
EAST	M3-2i, 36" X 18"
INTERSTATE	
80	M1-1, 36" X 36"
→	M6-1i, 30" X 21"

DU1

DETOUR	M4-8, 30" X 15"
EAST	M3-2i, 36" X 18"
INTERSTATE	
80	M1-1, 36" X 36"
↘	M5-1iR, 30" X 21"

4D 4F

DETOUR	M4-8, 30" X 15"
EAST	M3-2i, 36" X 18"
INTERSTATE	
80	M1-1, 36" X 36"
←	M6-1i, 30" X 21"

4C 4E

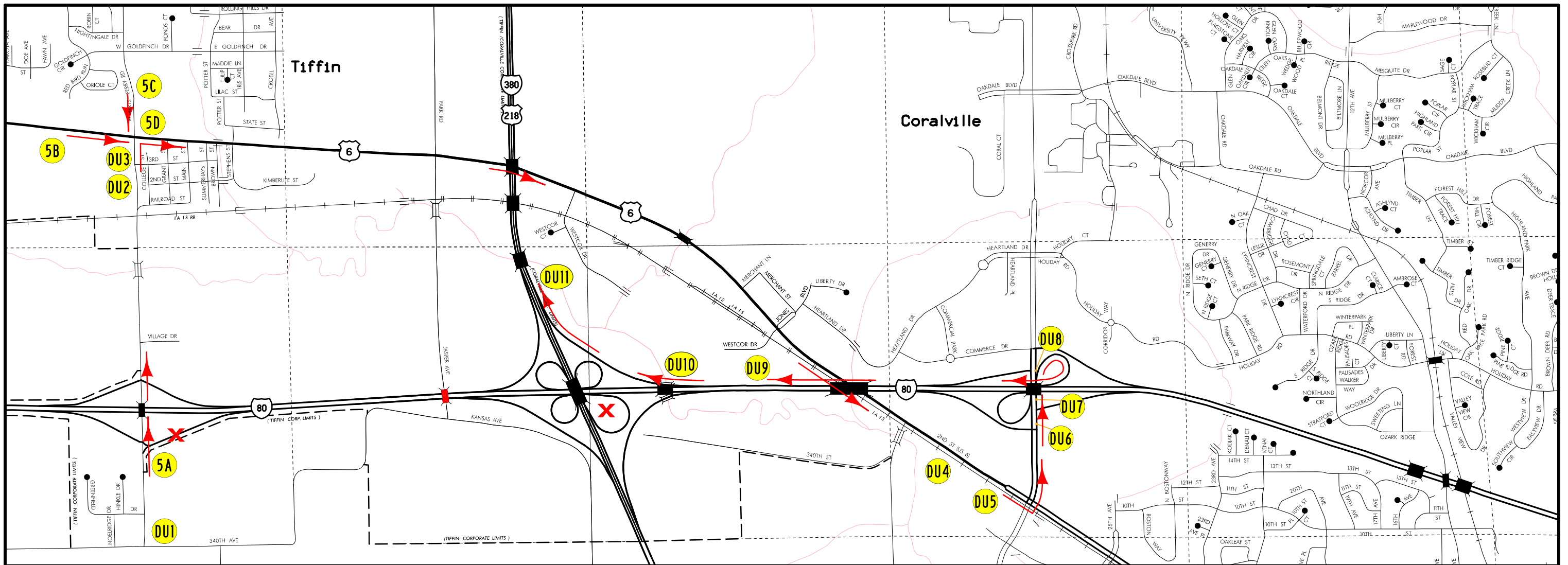
DETOUR	M4-8, 30" X 15"
EAST	M3-2i, 36" X 18"
INTERSTATE	
80	M1-1, 36" X 36"
↙	M5-1iL, 30" X 21"

DU5

END	M4-8A, 24" X 18"
DETOUR	
EXIT	
CLOSED	E5-2a, 48" X 36"

(Not to Scale)	
LEGEND	
Closed	X
Detour Route	→
Detour Signing Details	
JASPER AVE over I-80	
IRELAND AVE TO I-80 EB	

Duplicate (DU) signs installed on other detour routes do not need to be installed separately. Refer to other sheets in plans for additional locations.



5A, 5B, DU6	DETOUR NORTH INTERSTATE 380 ↑	M4-8, 30" X 15" M3-1i, 36" X 18" M1-1, 45" X 36" M6-3i, 30" X 21"	DU8, DU10	DETOUR NORTH INTERSTATE 380 ↗	M4-8, 30" X 15" M3-1i, 36" X 18" M1-1, 45" X 36" M6-2iR, 30" X 21"	DU3	DETOUR NORTH INTERSTATE 380 →	M4-8, 30" X 15" M3-1i, 36" X 18" M1-1, 45" X 36" M6-1i, 30" X 21"	DU2	DETOUR NORTH INTERSTATE 380 ↘	M4-8, 30" X 15" M3-1i, 36" X 18" M1-1, 45" X 36" M5-1iR, 30" X 21"
DU7, DU9	DETOUR NORTH INTERSTATE 380 ↗	M4-8, 30" X 15" M3-1i, 36" X 18" M1-1, 45" X 36" M5-2iR, 30" X 21"	5D, DU5	DETOUR NORTH INTERSTATE 380 ←	M4-8, 30" X 15" M3-1i, 36" X 18" M1-1, 45" X 36" M6-1i, 30" X 21"	5C, DU4	DETOUR NORTH INTERSTATE 380 ↙	M4-8, 30" X 15" M3-1i, 36" X 18" M1-1, 45" X 36" M5-1iL, 30" X 21"	DU11	END DETOUR	M4-8A, 24" X 18"
DU1	EXIT CLOSED	E5-2a, 48" X 36"									

(Not to Scale)

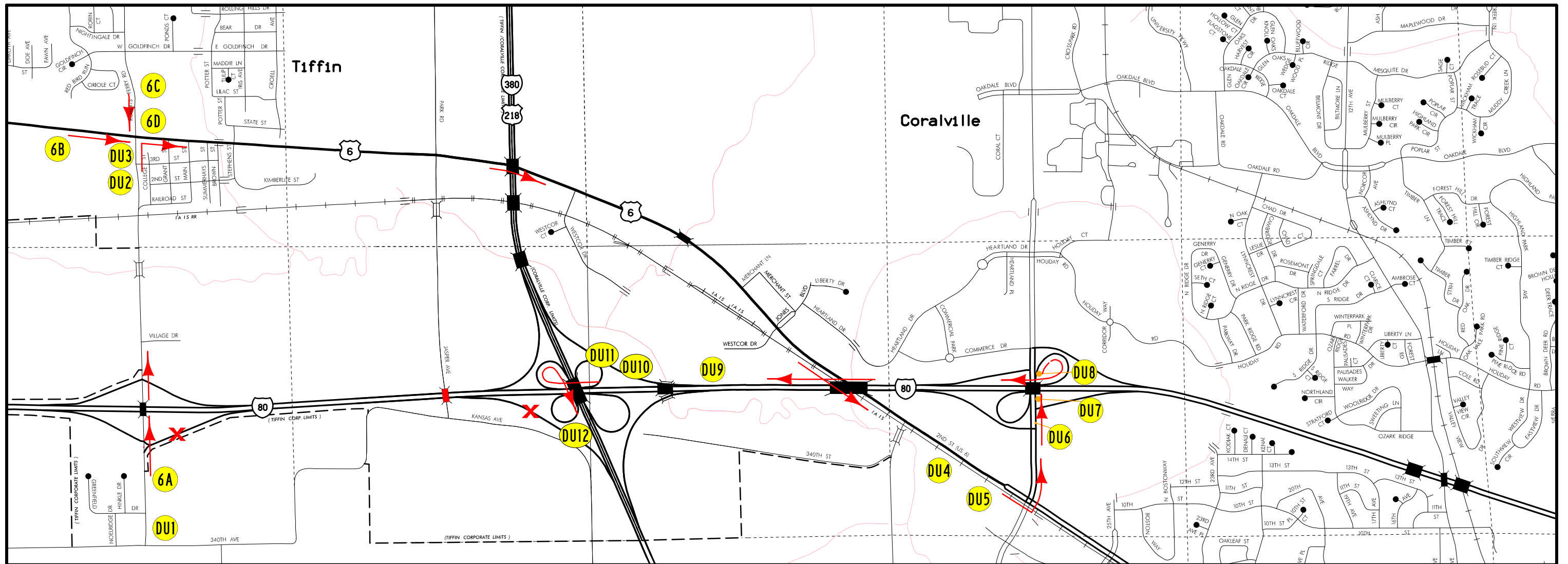
LEGEND

Closed X

Detour Route →

Detour Signing Details
JASPER AVE over I-80
IRELAND AVE TO I-380 NB

Duplicate (DU) signs installed on other detour routes do not need to be installed separately. Refer to other sheets in plans for additional locations.



<p>6A 6B DU6 DU9</p> <p>DETOUR</p> <p>SOUTH</p> <p>218</p> <p>↑</p>	<p>M4-8, 30" X 15"</p> <p>M3-3, 36" X 18"</p> <p>M1-4, 45" X 36"</p> <p>M6-3, 30" X 21"</p>	<p>DU8 DU11</p> <p>DETOUR</p> <p>SOUTH</p> <p>218</p> <p>↗</p>	<p>M4-8, 30" X 15"</p> <p>M3-3, 36" X 18"</p> <p>M1-4, 45" X 36"</p> <p>M6-2R, 30" X 21"</p>	<p>DU3</p> <p>DETOUR</p> <p>SOUTH</p> <p>218</p> <p>→</p>	<p>M4-8, 30" X 15"</p> <p>M3-3, 36" X 18"</p> <p>M1-4, 45" X 36"</p> <p>M6-1, 30" X 21"</p>	<p>DU2</p> <p>DETOUR</p> <p>SOUTH</p> <p>218</p> <p>↘</p>	<p>M4-8, 30" X 15"</p> <p>M3-3, 36" X 18"</p> <p>M1-4, 45" X 36"</p> <p>M5-1R, 30" X 21"</p>
<p>6L DU10</p> <p>DETOUR</p> <p>SOUTH</p> <p>218</p> <p>↘</p>	<p>M4-8, 30" X 15"</p> <p>M3-3, 36" X 18"</p> <p>M1-4, 45" X 36"</p> <p>M5-2R, 30" X 21"</p>	<p>6D DU5</p> <p>DETOUR</p> <p>SOUTH</p> <p>218</p> <p>←</p>	<p>M4-8, 30" X 15"</p> <p>M3-3, 36" X 18"</p> <p>M1-4, 45" X 36"</p> <p>M6-1, 30" X 21"</p>	<p>6C DU4</p> <p>DETOUR</p> <p>SOUTH</p> <p>218</p> <p>↙</p>	<p>M4-8, 30" X 15"</p> <p>M3-3, 36" X 18"</p> <p>M1-4, 45" X 36"</p> <p>M5-1L, 30" X 21"</p>	<p>DU12</p> <p>END DETOUR</p> <p>M4-8A, 24" X 18"</p>	<p>DU1</p> <p>EXIT CLOSED</p> <p>E5-2a, 48" X 36"</p>

(Not to Scale)

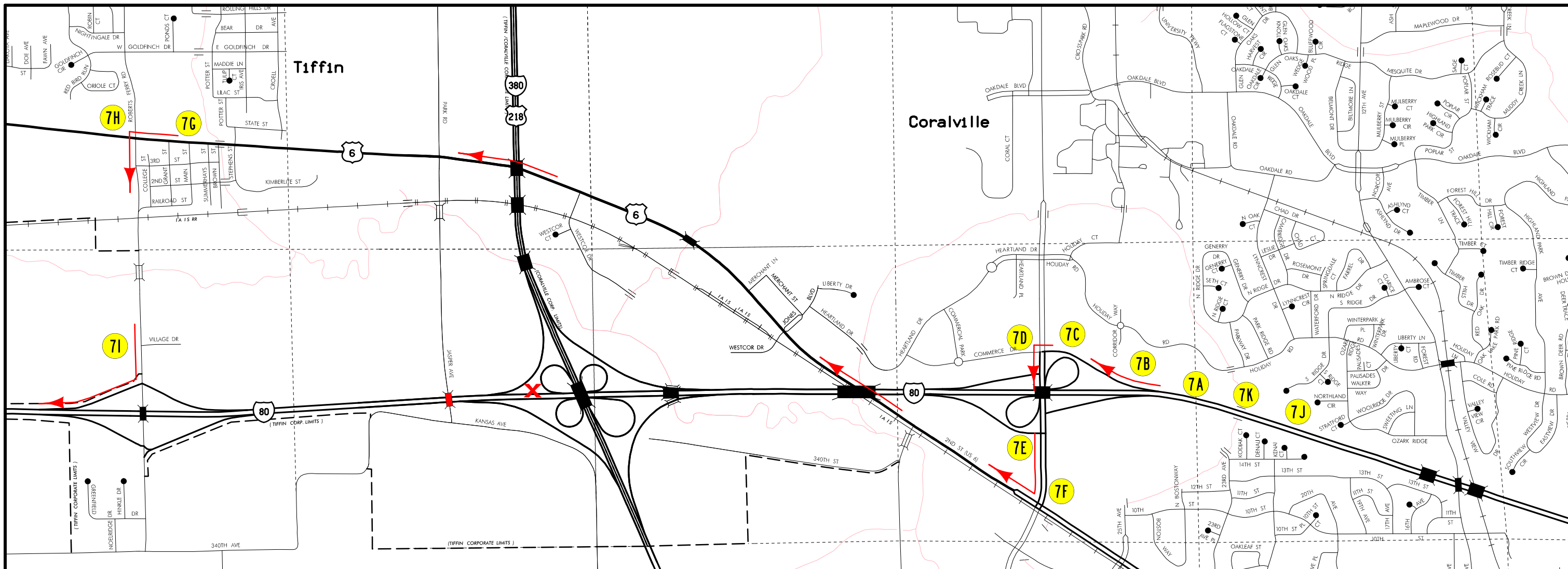
LEGEND

Closed X

Detour Route →

Detour Signing Details
JASPER AVE over I-80
IRELAND AVE TO US-218 SB

Duplicate (DU) signs installed on other detour routes do not need to be installed separately. Refer to other sheets in plans for additional locations.



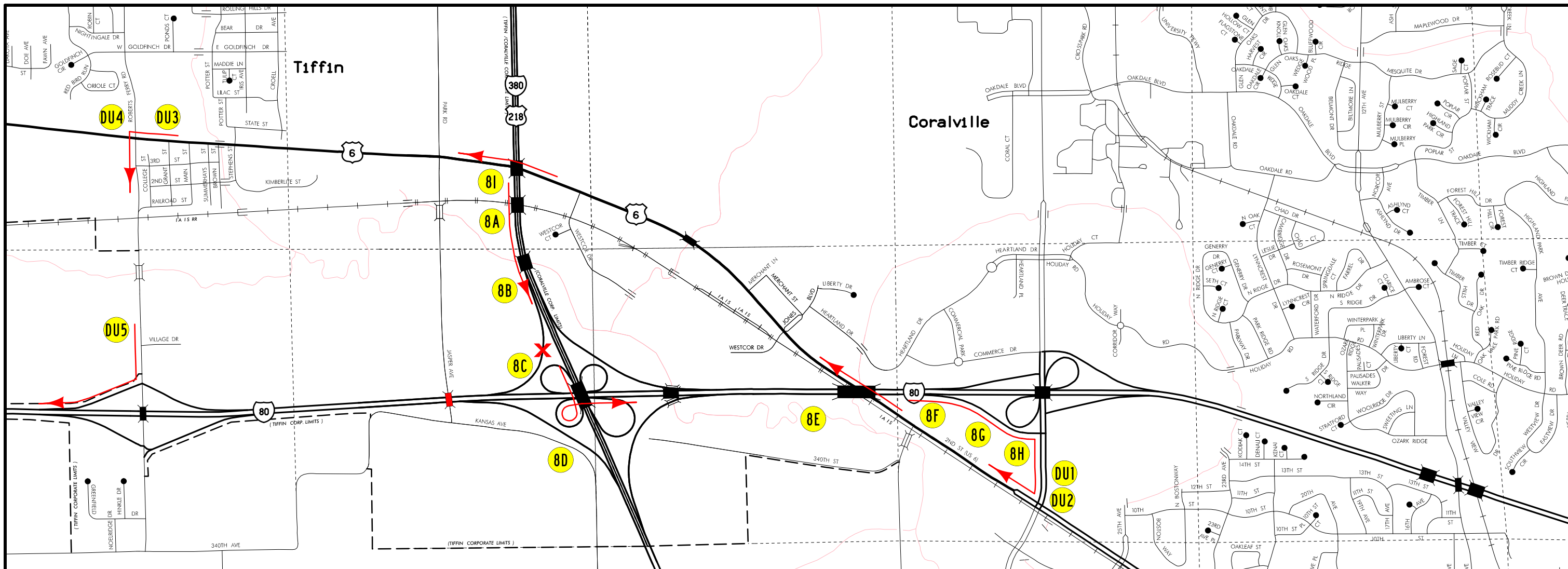
7A	 DETOUR WEST INTERSTATE 80 	M4-8, 30" X 15" M3-4i, 36" X 18" M1-1, 36" X 36" M5-2iR, 30" X 21"	7D 7H	 DETOUR WEST INTERSTATE 80 	M4-8, 30" X 15" M3-4i, 36" X 18" M1-1, 36" X 36" M6-1i, 30" X 21"	7C 7G	 DETOUR WEST INTERSTATE 80 	M4-8, 30" X 15" M3-4i, 36" X 18" M1-1, 36" X 36" M5-1iL, 30" X 21"	7E	 DETOUR WEST INTERSTATE 80 	M4-8, 30" X 15" M3-4i, 36" X 18" M1-1, 36" X 36" M5-1iR, 30" X 21"	7K	 DETOUR AHEAD	W20-2, 48" X 48"
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(Not to Scale)

LEGEND

Closed	
Detour Route	

Detour Signing Details
JASPER AVE over I-80
I-80 WB



<p>8A 8B</p> <p>DETOUR</p> <p>WEST</p> <p>INTERSTATE</p> <p>80</p> <p>↑</p> <p>M4-8, 30" X 15"</p> <p>M3-4i, 36" X 18"</p> <p>M1-1, 36" X 36"</p> <p>M6-3i, 30" X 21"</p>	<p>8D 8F</p> <p>DETOUR</p> <p>WEST</p> <p>INTERSTATE</p> <p>80</p> <p>↗</p> <p>M4-8, 30" X 15"</p> <p>M3-4i, 36" X 18"</p> <p>M1-1, 36" X 36"</p> <p>M6-2iR, 30" X 21"</p>	<p>8H DU2</p> <p>DETOUR</p> <p>WEST</p> <p>INTERSTATE</p> <p>80</p> <p>→</p> <p>M4-8, 30" X 15"</p> <p>M3-4i, 36" X 18"</p> <p>M1-1, 36" X 36"</p> <p>M6-1i, 30" X 21"</p>	<p>8G DU1</p> <p>DETOUR</p> <p>WEST</p> <p>INTERSTATE</p> <p>80</p> <p>↘</p> <p>M4-8, 30" X 15"</p> <p>M3-4i, 36" X 18"</p> <p>M1-1, 36" X 36"</p> <p>M5-1iR, 30" X 21"</p>
<p>8C 8E</p> <p>DETOUR</p> <p>WEST</p> <p>INTERSTATE</p> <p>80</p> <p>↗</p> <p>M4-8, 30" X 15"</p> <p>M3-4i, 36" X 18"</p> <p>M1-1, 36" X 36"</p> <p>M5-2iR, 30" X 21"</p>	<p>DU4</p> <p>DETOUR</p> <p>WEST</p> <p>INTERSTATE</p> <p>80</p> <p>←</p> <p>M4-8, 30" X 15"</p> <p>M3-4i, 36" X 18"</p> <p>M1-1, 36" X 36"</p> <p>M6-1i, 30" X 21"</p>	<p>DU3</p> <p>DETOUR</p> <p>WEST</p> <p>INTERSTATE</p> <p>80</p> <p>↙</p> <p>M4-8, 30" X 15"</p> <p>M3-4i, 36" X 18"</p> <p>M1-1, 36" X 36"</p> <p>M5-1iL, 30" X 21"</p>	<p>DU5</p> <p>END</p> <p>DETOUR</p> <p>M4-8A, 24" X 18"</p>
<p>8I</p> <p>EXIT</p> <p>CLOSED</p> <p>E5-2a, 48" X 36"</p>			

(Not to Scale)

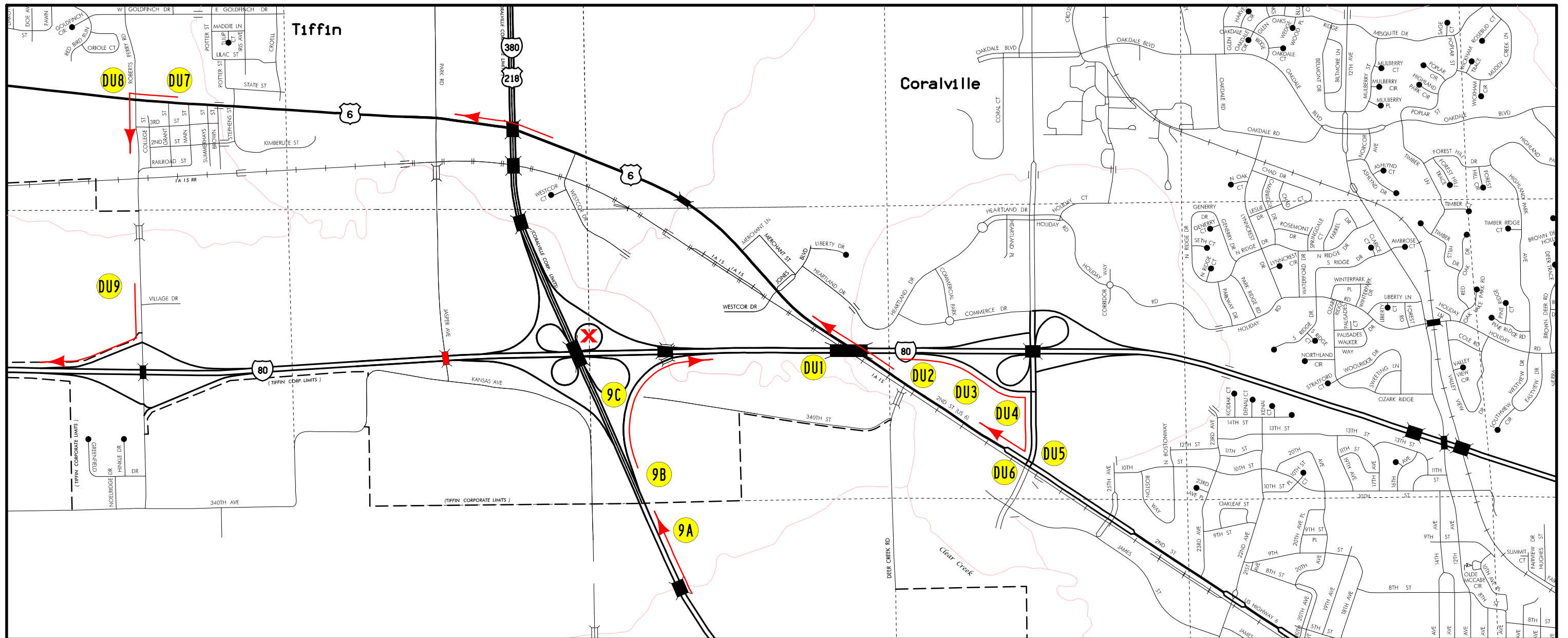
LEGEND

Closed X

Detour Route →

Detour Signing Details
JASPER AVE over I-80
I-380 SB TO I-80 WB

Duplicate (DU) signs installed on other detour routes do not need to be installed separately. Refer to other sheets in plans for additional locations.



9B DU2	DETOUR WEST M4-8, 30" X 15" M3-4i, 36" X 18" INTERSTATE 80 M1-1, 36" X 36" M6-2iR, 30" X 21"	DU4 DU6	DETOUR WEST M4-8, 30" X 15" M3-4i, 36" X 18" INTERSTATE 80 M1-1, 36" X 36" M6-1i, 30" X 21"	DU3 DU5	DETOUR WEST M4-8, 30" X 15" M3-4i, 36" X 18" INTERSTATE 80 M1-1, 36" X 36" M5-1iR, 30" X 21"
9A DU1	DETOUR WEST M4-8, 30" X 15" M3-4i, 36" X 18" INTERSTATE 80 M1-1, 36" X 36" M5-2iR, 30" X 21"	DU8	DETOUR WEST M4-8, 30" X 15" M3-4i, 36" X 18" INTERSTATE 80 M1-1, 36" X 36" M6-1i, 30" X 21"	DU7	DETOUR WEST M4-8, 30" X 15" M3-4i, 36" X 18" INTERSTATE 80 M1-1, 36" X 36" M5-1iL, 30" X 21"
				DU9	END DETOUR M4-8A, 24" X 18"
				9C	EXIT CLOSED E5-2a, 48" X 36"

(Not to Scale)

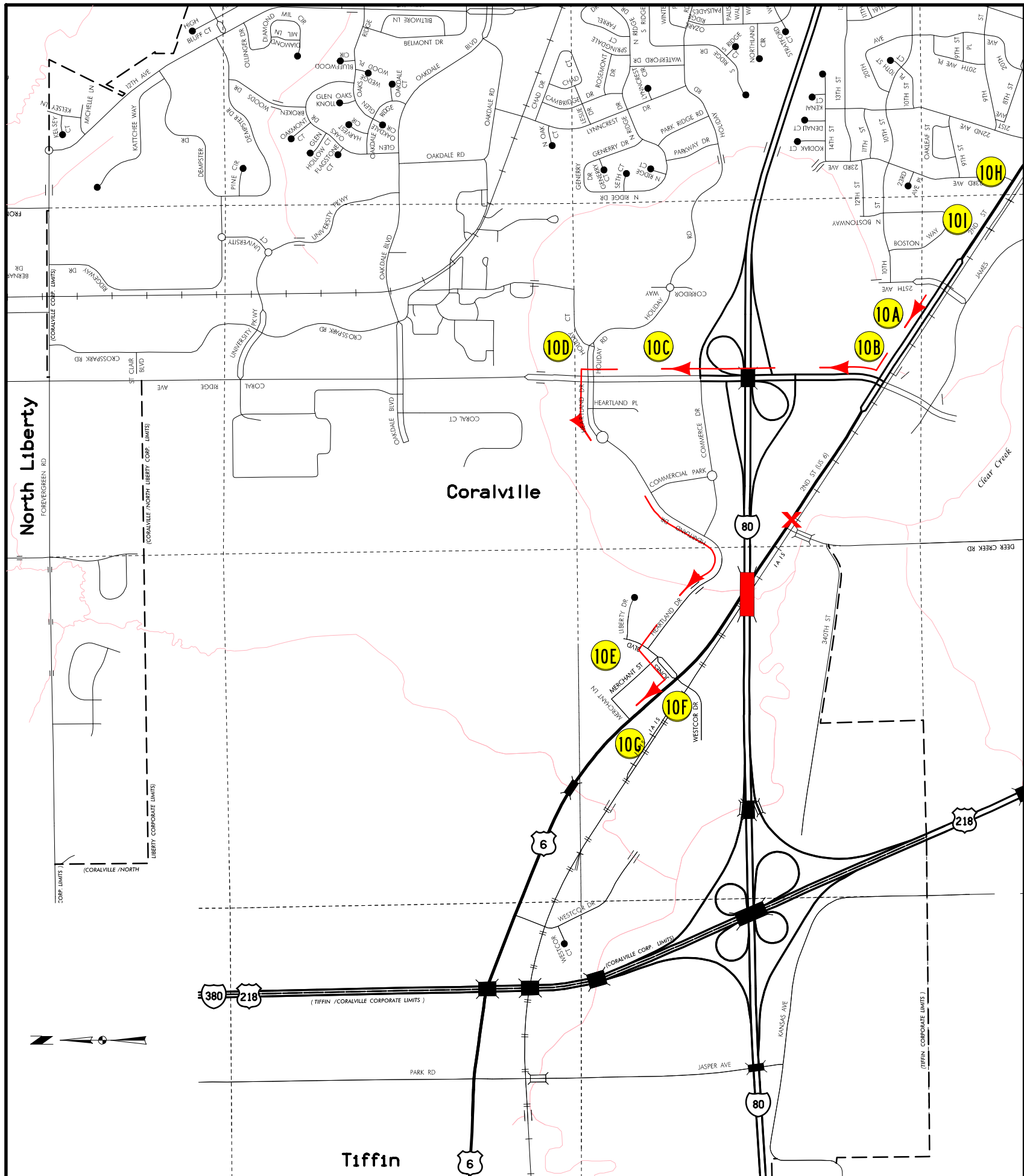
LEGEND

Closed

Detour Route

Detour Signing Details
JASPER AVE over I-80
US-218 NB TO I-80 WB

Duplicate (DU) signs installed on other detour routes do not need to be installed separately. Refer to other sheets in plans for additional locations.



- 10B
10F

DETOUR

WEST

6

→

M4-8, 30" X 15"

M3-4, 36" X 18"

M1-4, 24" X 24"

M6-1, 30" X 21"

- 10A

DETOUR

WEST

6

↘

M4-8, 30" X 15"

M3-4, 36" X 18"

M1-4, 24" X 24"

M5-1R, 30" X 21"

- 10D
10E

DETOUR

WEST

6

←

M4-8, 30" X 15"

M3-4, 36" X 18"

M1-4, 24" X 24"

M6-1, 30" X 21"

- 10C

DETOUR

WEST

6

↙

M4-8, 30" X 15"

M3-4, 36" X 18"

M1-4, 24" X 24"

M5-1L, 30" X 21"

- 10G

END
DETOUR

M4-8A, 24" X 18"

- 10H

ROAD
CLOSED
AHEAD

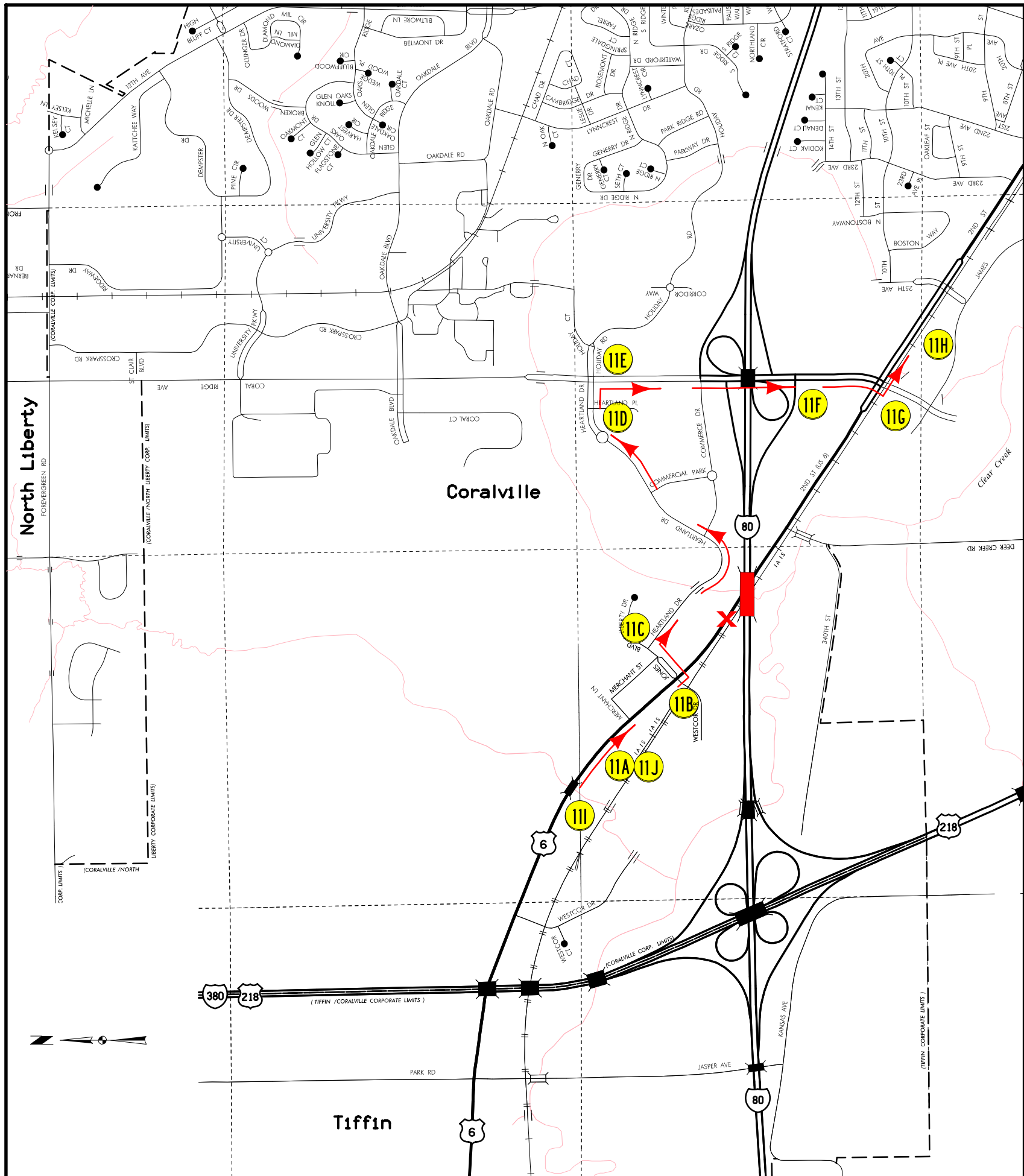
W20-3, 48" X 48"

- 10I

DETOUR
AHEAD

W20-2, 48" X 48"

(Not to Scale)	
LEGEND	
Closed	X
Detour Route	→
Detour Signing Details I-80 MEDIAN BRIDGES over US-6 US-6 WB	



- 11C
11E

DETOUR

EAST

6

→

M4-8, 30" X 15"

M3-2, 36" X 18"

M1-4, 24" X 24"

M6-1, 30" X 21"

- 11D

DETOUR

EAST

6

↘

M4-8, 30" X 15"

M3-2, 36" X 18"

M1-4, 24" X 24"

M5-1R, 30" X 21"

- 11B
11G

DETOUR

EAST

6

←

M4-8, 30" X 15"

M3-2, 36" X 18"

M1-4, 24" X 24"

M6-1, 30" X 21"

- 11A
11F

DETOUR

EAST

6

↙

M4-8, 30" X 15"

M3-2, 36" X 18"

M1-4, 24" X 24"

M5-1L, 30" X 21"

- 11H

END
DETOUR

M4-8A, 24" X 18"

- 11I

ROAD
CLOSED
AHEAD

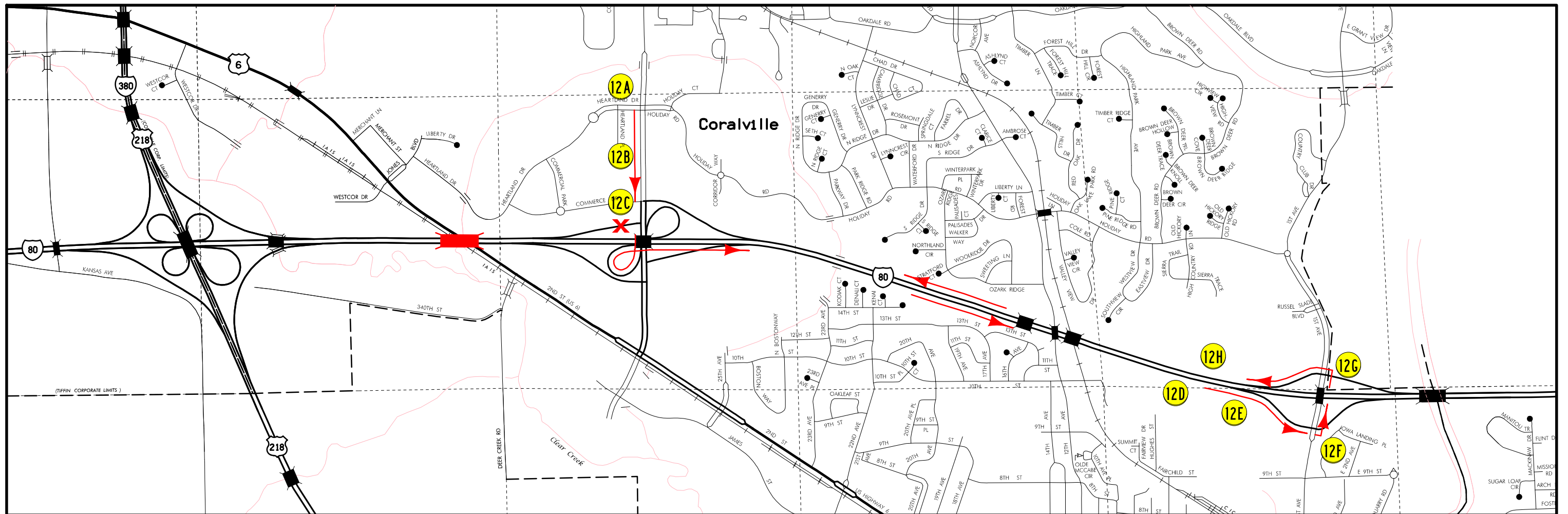
W20-3, 48" X 48"

- 11J

DETOUR
AHEAD

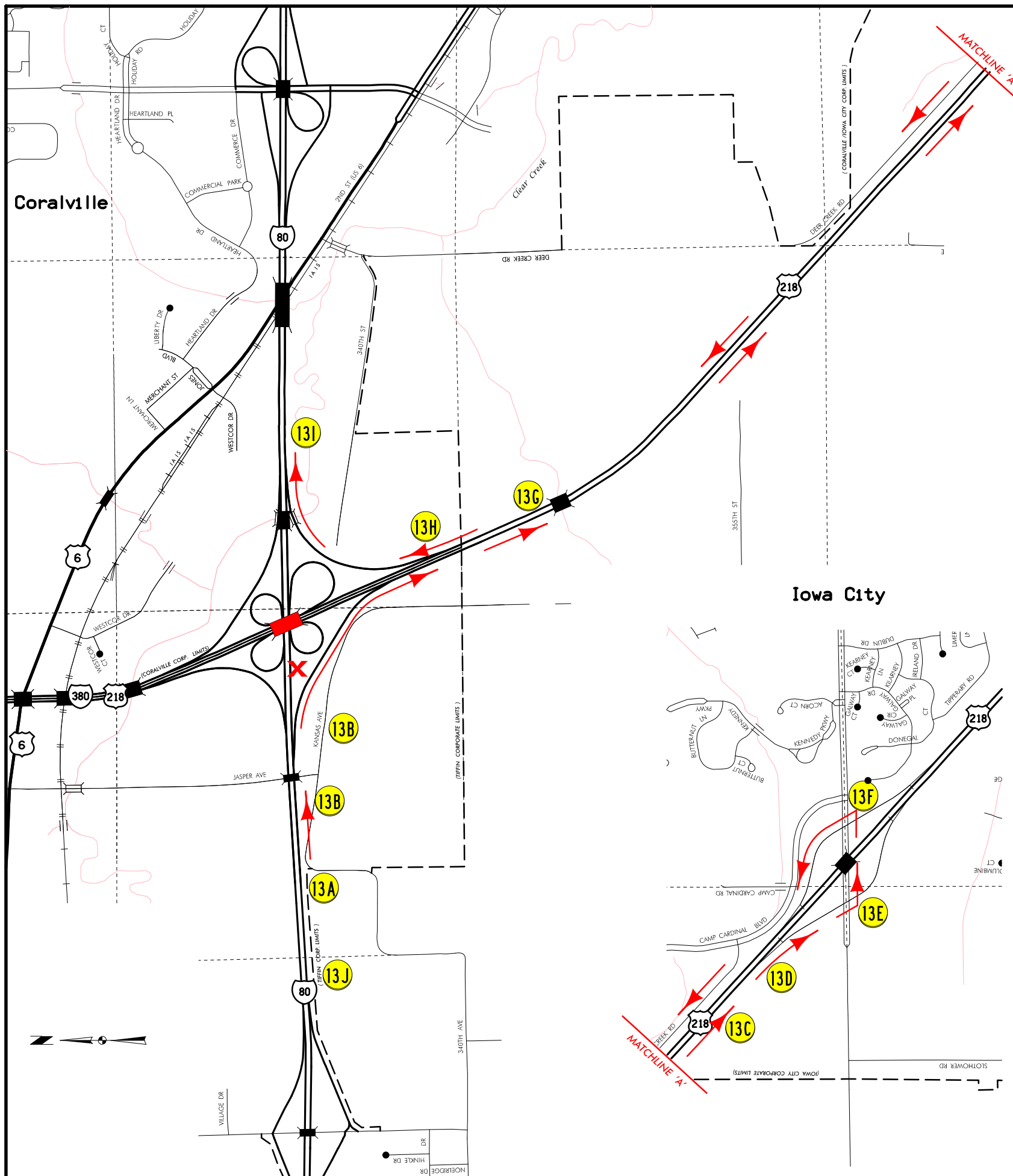
W20-2, 48" X 48"


(Not to Scale)	
LEGEND	
Closed	X
Detour Route	→
Detour Signing Details I-80 MEDIAN BRIDGES over US-6 US-6 EB	





12A	DETOUR	M4-8, 30" X 15"	12C 12E	DETOUR	M4-8, 30" X 15"	12H	END DETOUR	M4-8A, 24" X 18"
	WEST	M3-4i, 36" X 18"		WEST	M3-4i, 36" X 18"			
	INTERSTATE	M1-1, 36" X 36"		INTERSTATE	M1-1, 36" X 36"			
	80	M1-1, 36" X 36"		80	M1-1, 36" X 36"			
	↑	M6-3i, 30" X 21"		↗	M6-2iR, 30" X 21"			
12B 12D	DETOUR	M4-8, 30" X 15"	12F 12G	DETOUR	M4-8, 30" X 15"			
	WEST	M3-4i, 36" X 18"		WEST	M3-4i, 36" X 18"			
	INTERSTATE	M1-1, 36" X 36"		INTERSTATE	M1-1, 36" X 36"			
	80	M1-1, 36" X 36"		80	M1-1, 36" X 36"			
	↗	M5-2iR, 30" X 21"		←	M6-1i, 30" X 21"			


(Not to Scale)	
LEGEND	
Closed	X
Detour Route	➔
Detour Signing Details	
I-80 MEDIAN BRIDGES over US-6	
I-80 WB (IA-965 Ramp C)	





- 13A
13C

M4-8, 30" X 15"
M3-2i, 36" X 18"
M1-1, 36" X 36"
M5-2iR, 30" X 21"

- 13B
13D
13H

M4-8, 30" X 15"
M3-2i, 36" X 18"
M1-1, 36" X 36"
M6-2iR, 30" X 21"

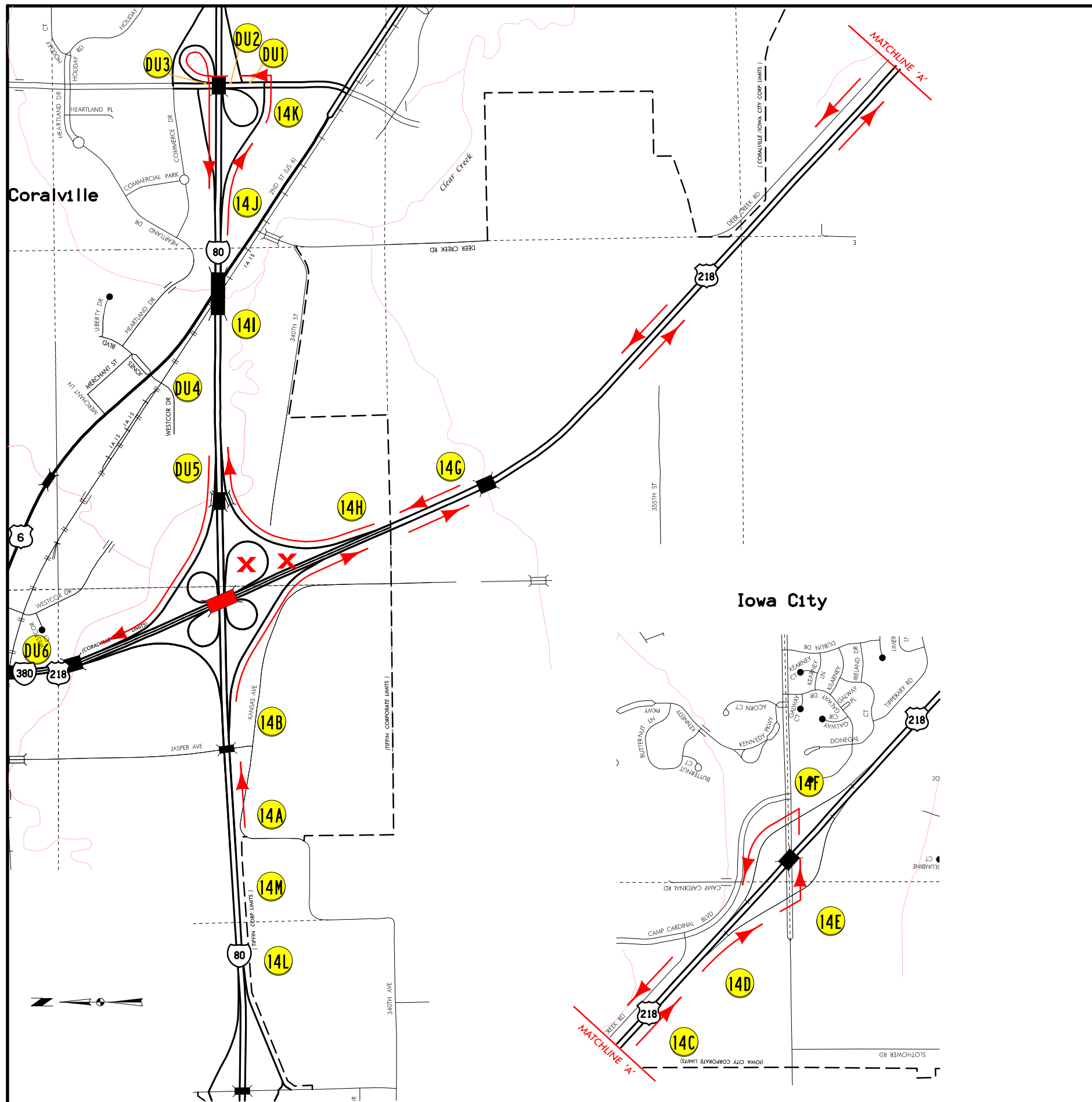
- 13E
13F

M4-8, 30" X 15"
M3-2i, 36" X 18"
M1-1, 36" X 36"
M6-1i, 30" X 21"

- 13I

M4-8A, 24" X 18"

- 13J

W20-3, 48" X 48"

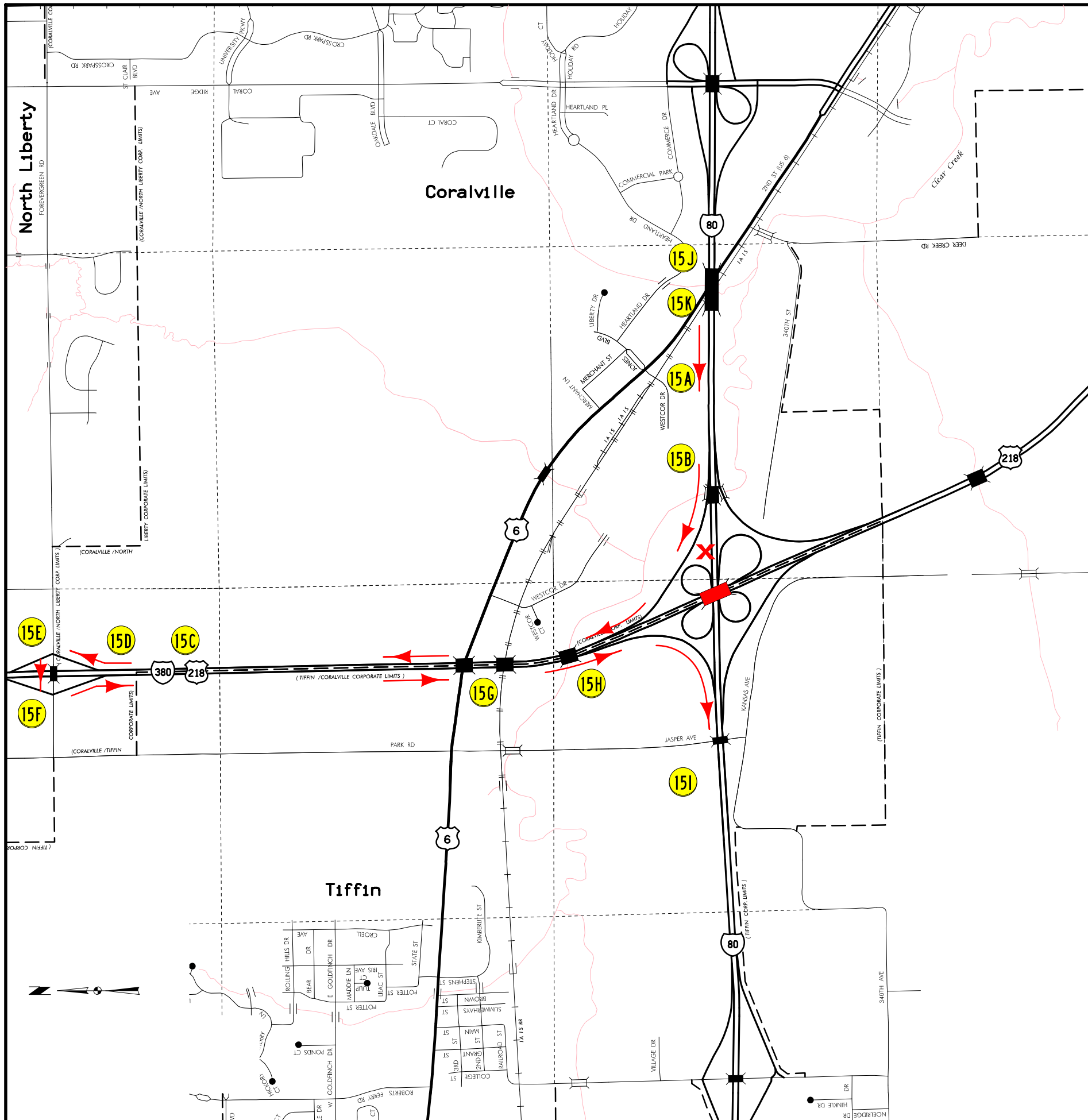
- 13K

W20-2, 48" X 48"

(Not to Scale)	
LEGEND	
Closed	X
Detour Route	➔
Detour Signing Details I-380 MEDIAN BRIDGES over I-80 I-80 EB	



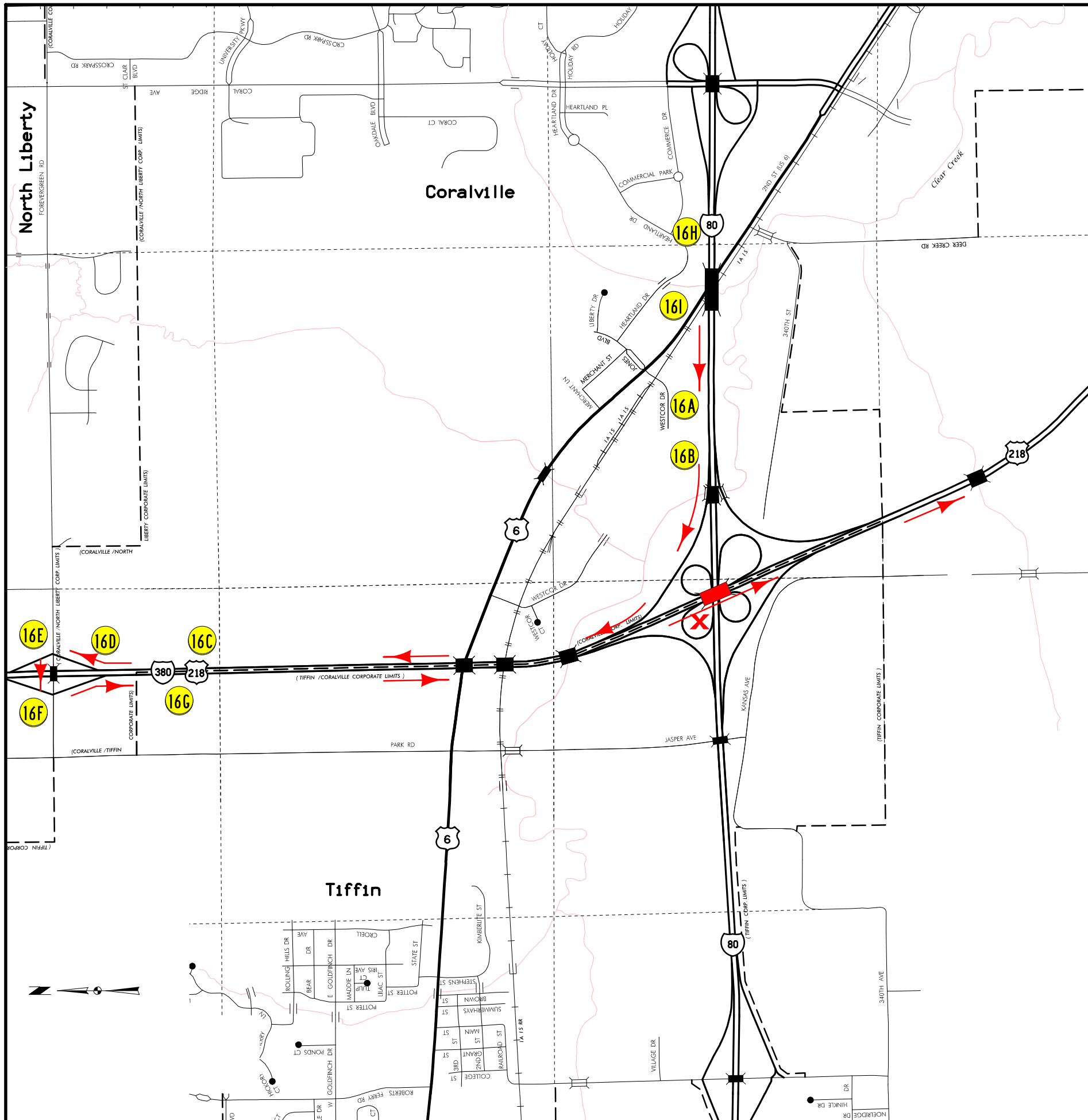
DU1		M4-8, 30" X 15" M3-1i, 36" X 18" M1-1, 45" X 36" M6-3i, 30" X 21"	DU6		M4-8A, 24" X 18"
14A 14C 14G 14I DU2 DU4		M4-8, 30" X 15" M3-1i, 36" X 18" M1-1, 45" X 36" M5-2iR, 30" X 21"	14L		W20-3, 48" X 48"
14B 14D 14H 14J DU3 DU5		M4-8, 30" X 15" M3-1i, 36" X 18" M1-1, 45" X 36" M6-2iR, 30" X 21"	14M		W20-2, 48" X 48"
14E 14F 14K		M4-8, 30" X 15" M3-1i, 36" X 18" M1-1, 45" X 36" M6-1i, 30" X 21"			

(Not to Scale)	
LEGEND	
Closed	
Detour Route	
Detour Signing Details I-380 MEDIAN BRIDGES over I-80 I-80 EB TO I-380 NB	



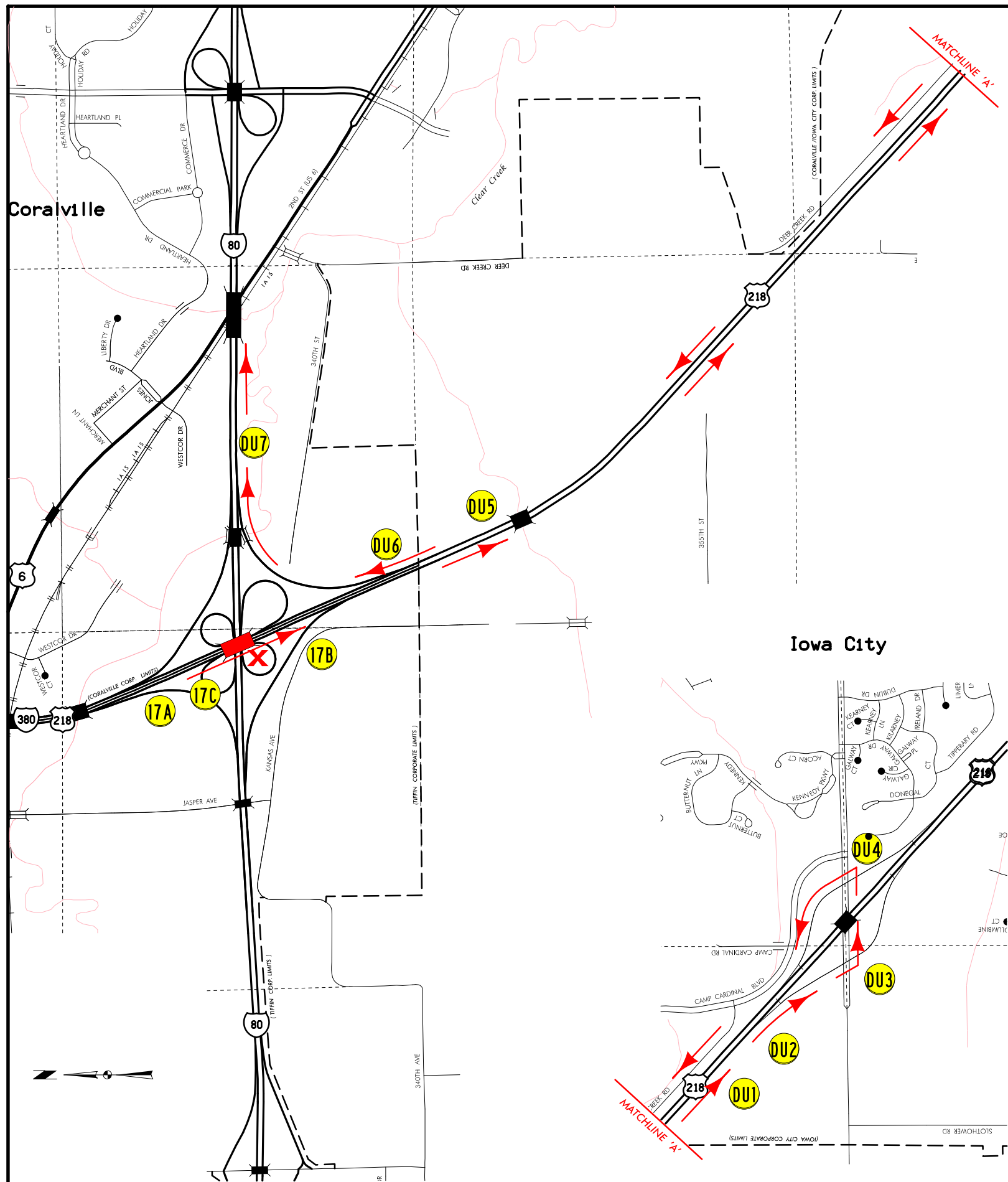
- 15I END DETOUR M4-8A, 24" X 18"
- 15J ROAD CLOSED AHEAD W20-3, 48" X 48"
- 15K DETOUR AHEAD W20-2, 48" X 48"
- 15A 15C DETOUR WEST INTERSTATE 80 M4-8, 30" X 15"
- 15G DETOUR WEST INTERSTATE 80 M3-4i, 36" X 18"
- 15A M1-1, 36" X 36"
- 15B M5-2iR, 30" X 21"
- 15H 15D DETOUR WEST INTERSTATE 80 M4-8, 30" X 15"
- 15B DETOUR WEST INTERSTATE 80 M3-4i, 36" X 18"
- 15H DETOUR WEST INTERSTATE 80 M1-1, 36" X 36"
- 15E 15F DETOUR WEST INTERSTATE 80 M6-2iR, 30" X 21"
- 15E DETOUR WEST INTERSTATE 80 M4-8, 30" X 15"
- 15F DETOUR WEST INTERSTATE 80 M3-4i, 36" X 18"
- 15E DETOUR WEST INTERSTATE 80 M1-1, 36" X 36"
- 15F M6-1i, 30" X 21"

(Not to Scale)	
LEGEND	
Closed	
Detour Route	
Detour Signing Details I-380 MEDIAN BRIDGES over I-80 I-80 WB	



- 16C
END
DETOUR M4-8A, 24" X 18"
- 16H
ROAD
CLOSED
AHEAD W20-3, 48" X 48"
- 16I
DETOUR
AHEAD W20-2, 48" X 48"
- 16A 16C
DETOUR M4-8, 30" X 15"
SOUTH
218
↗ M3-3, 36" X 18"
M1-4, 45" X 36"
M5-2R, 30" X 21"
- 16B 16D
DETOUR M4-8, 30" X 15"
SOUTH
218
↘ M3-3, 36" X 18"
M1-4, 45" X 36"
M6-2R, 30" X 21"
- 16E 16F
DETOUR M4-8, 30" X 15"
SOUTH
218
← M3-3, 36" X 18"
M1-4, 45" X 36"
M6-1, 30" X 21"

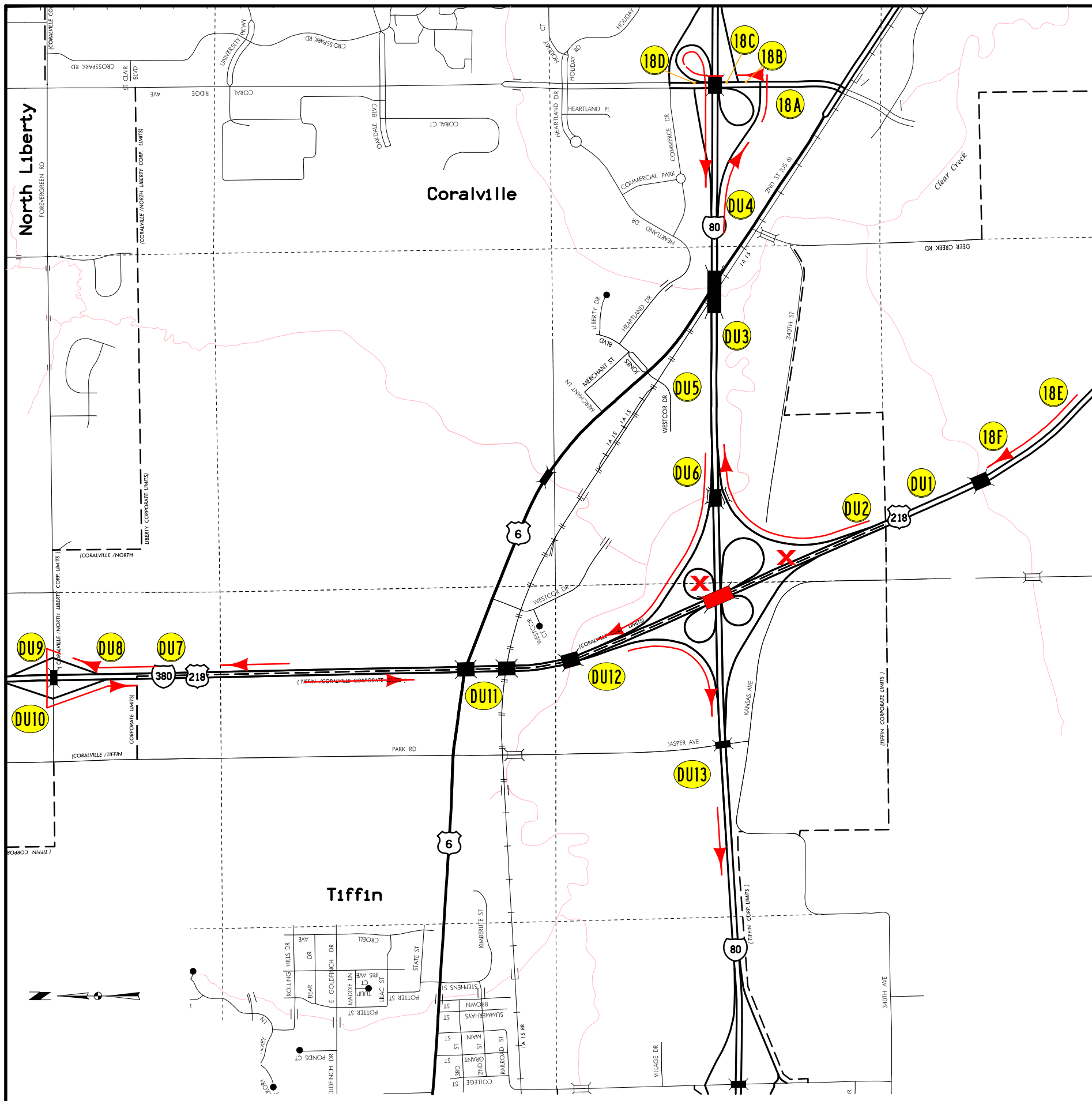
(Not to Scale)	
LEGEND	
Closed	X
Detour Route	→
Detour Signing Details I-380 MEDIAN BRIDGES over I-80 I-80 WB TO US-218 SB	



Duplicate (DU) signs installed on other detour routes do not need to be installed separately. Refer to other sheets in plans for additional locations.

17A 17B		M4-8, 30" X 15"	DU7		M4-8A, 24" X 18"
		M3-2i, 36" X 18"			
		M1-1, 36" X 36"	17C		E5-2a, 48" X 36"
		M6-3i, 30" X 21"			
DU1 DU5		M4-8, 30" X 15"			
		M3-2i, 36" X 18"			
		M1-1, 36" X 36"			
		M5-2iR, 30" X 21"			
DU2 DU6		M4-8, 30" X 15"			
		M3-2i, 36" X 18"			
		M1-1, 36" X 36"			
		M6-2iR, 30" X 21"			
DU3 DU4		M4-8, 30" X 15"			
		M3-2i, 36" X 18"			
		M1-1, 36" X 36"			
		M6-1i, 30" X 21"			

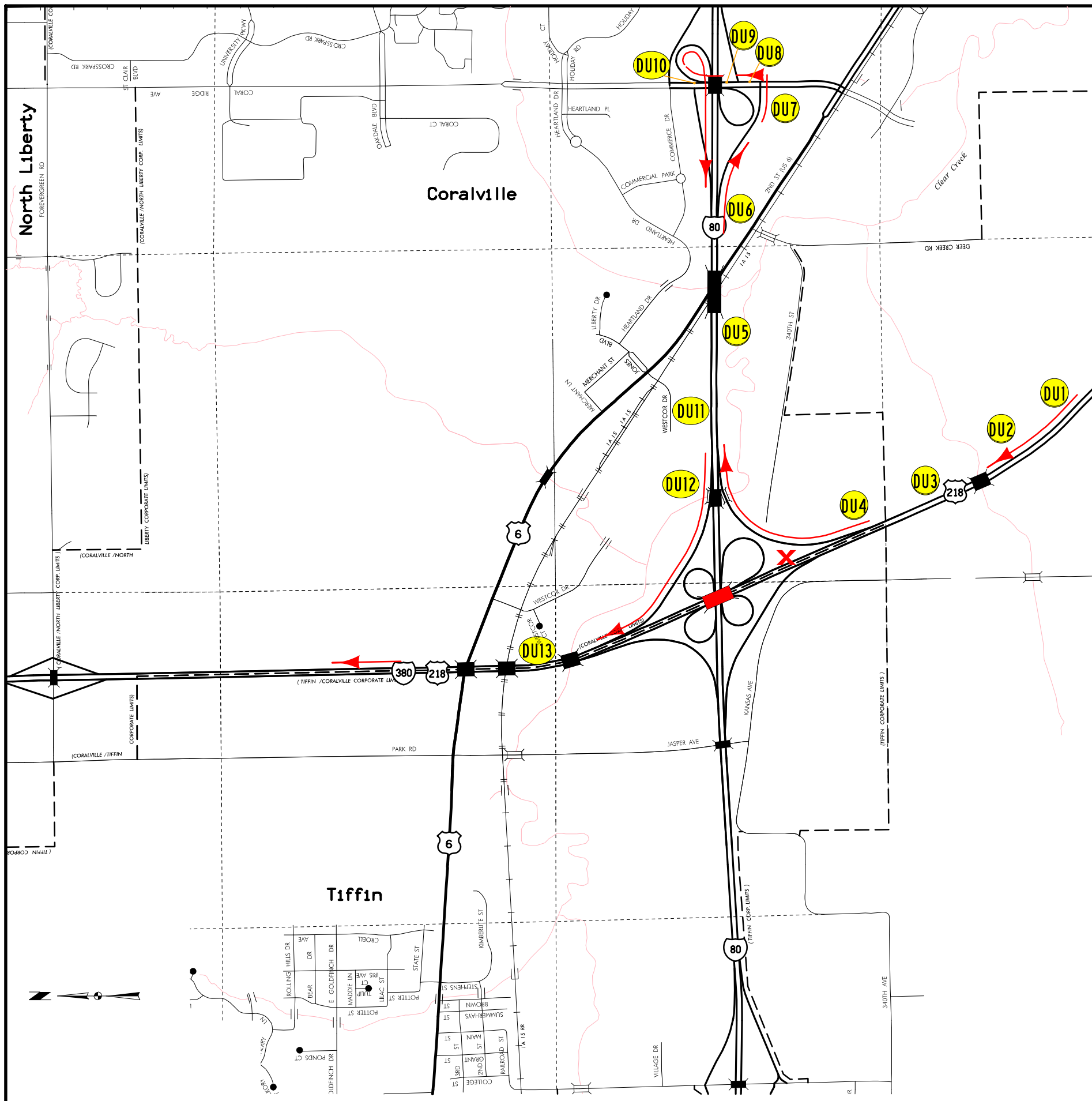
(Not to Scale)	
LEGEND	
Closed	
Detour Route	
Detour Signing Details I-380 MEDIAN BRIDGES over I-80 I-380 SB TO I-80 EB	



18B	DETOUR WEST INTERSTATE 80 ↑	M4-8, 30" X 15" M3-4i, 36" X 18" M1-1, 36" X 36" M6-3i, 30" X 21"	DU13	END DETOUR	M4-8A, 24" X 18"
DU1 DU3 18C DU5 DU7 DU11	DETOUR WEST INTERSTATE 80 ↗	M4-8, 30" X 15" M3-4i, 36" X 18" M1-1, 36" X 36" M5-2iR, 30" X 21"	18E	ROAD CLOSED AHEAD	W20-3, 48" X 48"
DU2 DU4 18D DU6 DU8 DU12	DETOUR WEST INTERSTATE 80 ↘	M4-8, 30" X 15" M3-4i, 36" X 18" M1-1, 36" X 36" M6-2iR, 30" X 21"	18F	DETOUR AHEAD	W20-2, 48" X 48"
18A DU9 DU10	DETOUR WEST INTERSTATE 80 ←	M4-8, 30" X 15" M3-4i, 36" X 18" M1-1, 36" X 36" M6-1i, 30" X 21"			

(Not to Scale)	
LEGEND	
Closed	X
Detour Route	→
Detour Signing Details I-380 MEDIAN BRIDGES over I-80 US-218 NB TO I-80 WB	

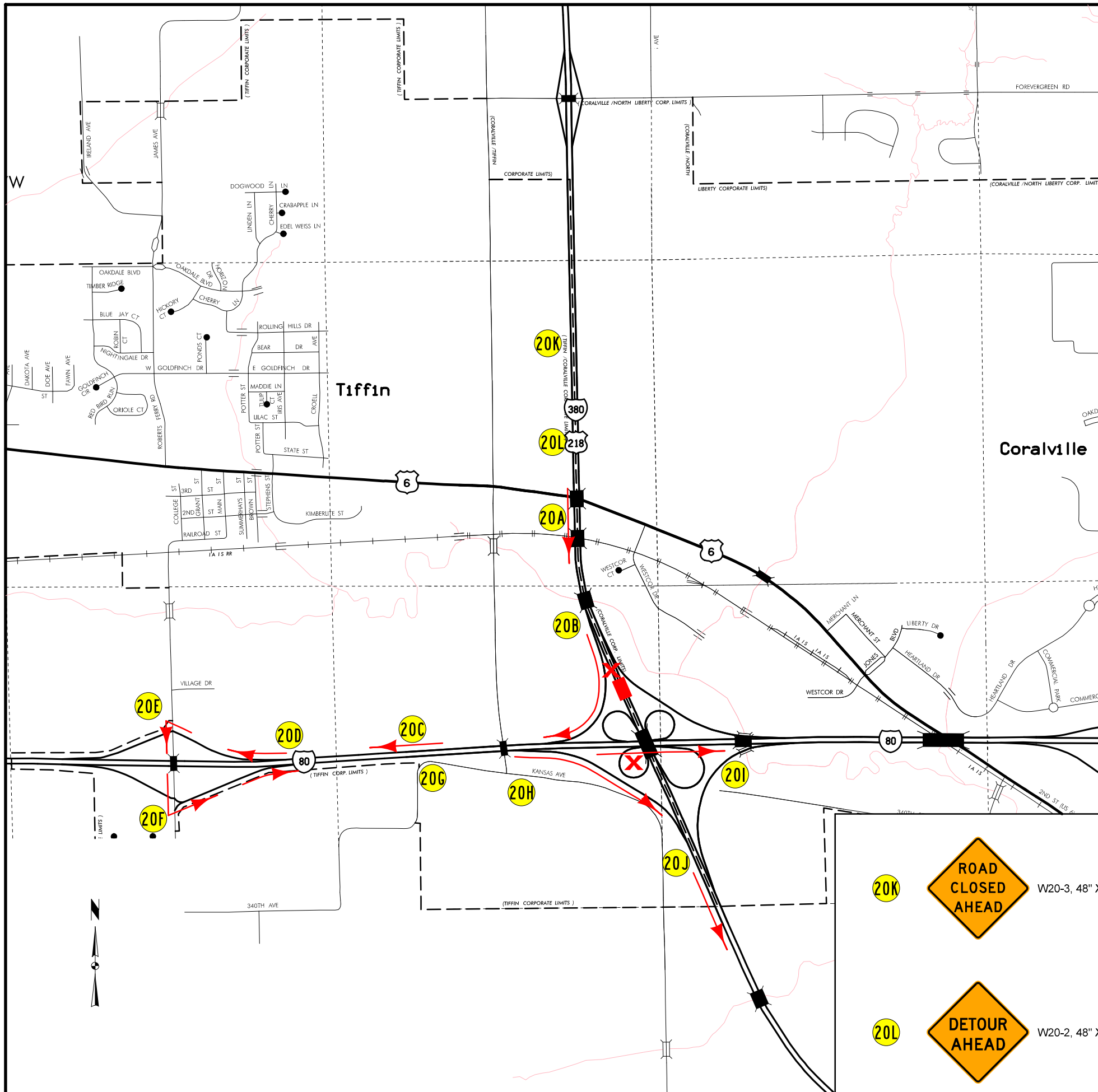
Duplicate (DU) signs installed on other detour routes do not need to be installed separately. Refer to other sheets in plans for additional locations.



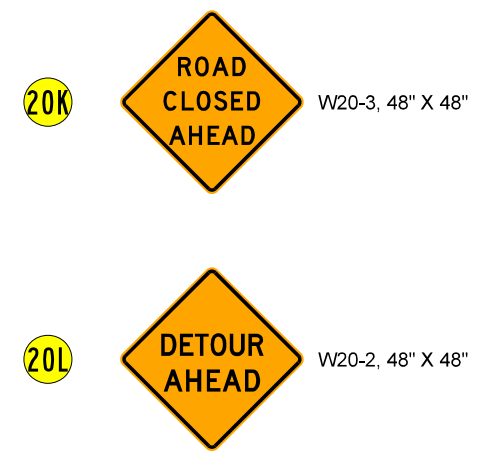
- | | | | | | |
|------------------------------------|---|---|-------------|--------------------------|------------------|
| DU8 | DETOUR NORTH INTERSTATE 380
↑ | M4-8, 30" X 15"
M3-1i, 36" X 18"
M1-1, 45" X 36"
M6-3i, 30" X 21" | DU13 | END DETOUR | M4-8A, 24" X 18" |
| DU3 DU5
DU9 DU11 | DETOUR NORTH INTERSTATE 380
↗ | M4-8, 30" X 15"
M3-1i, 36" X 18"
M1-1, 45" X 36"
M5-2iR, 30" X 21" | DU1 | ROAD CLOSED AHEAD | W20-3, 48" X 48" |
| DU4 DU6
DU10 DU12 | DETOUR NORTH INTERSTATE 380
↗ | M4-8, 30" X 15"
M3-1i, 36" X 18"
M1-1, 45" X 36"
M6-2iR, 30" X 21" | DU2 | DETOUR AHEAD | W20-2, 48" X 48" |
| DU7 | DETOUR NORTH INTERSTATE 380
← | M4-8, 30" X 15"
M3-1i, 36" X 18"
M1-1, 45" X 36"
M6-1i, 30" X 21" | | | |

(Not to Scale)	
LEGEND	
Closed	X
Detour Route	→
Detour Signing Details I-380 MEDIAN BRIDGES over I-80 US-218 NB TO I-380 NB	

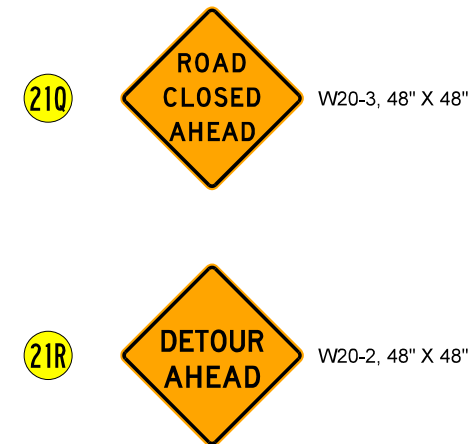
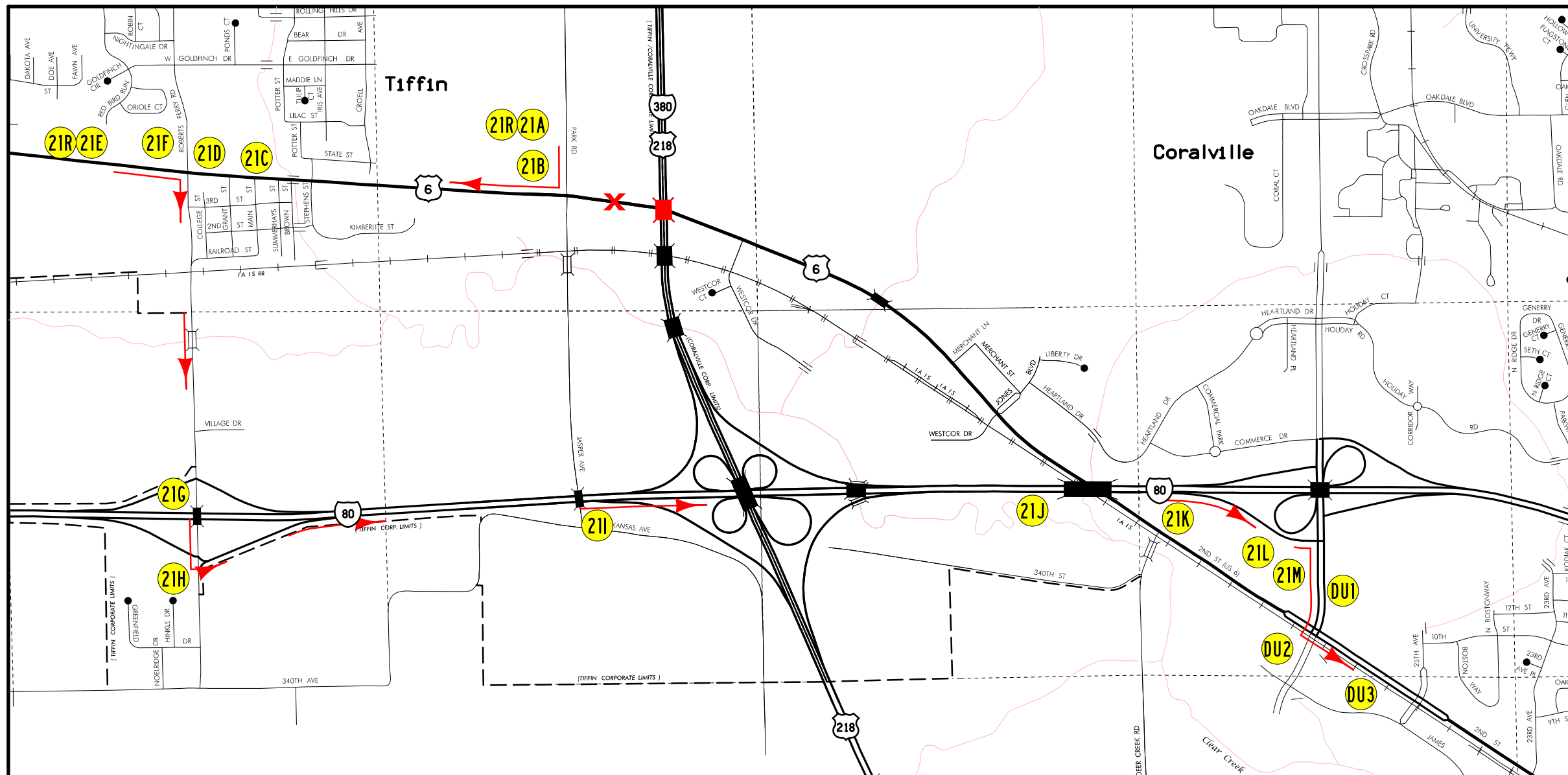
Duplicate (DU) signs installed on other detour routes do not need to be installed separately. Refer to other sheets in plans for additional locations.



20A 20C	DETOUR	M4-8, 30" X 15"	20A 20C	DETOUR	M4-8, 30" X 15"
20C	SOUTH 218	M3-3, 36" X 18"	20B 20D	EAST INTERSTATE 80	M3-2i, 36" X 18"
		M1-4, 45" X 36"			M1-1, 36" X 36"
		M5-2R, 30" X 21"			M5-2iR, 30" X 21"
20B 20D	DETOUR	M4-8, 30" X 15"	20E 20F	DETOUR	M4-8, 30" X 15"
20H	SOUTH 218	M3-3, 36" X 18"		EAST INTERSTATE 80	M3-2i, 36" X 18"
		M1-4, 45" X 36"			M1-1, 36" X 36"
		M6-2R, 30" X 21"			M6-2iR, 30" X 21"
20E 20F	DETOUR	M4-8, 30" X 15"	20I 20J	END DETOUR	M4-8A, 24" X 18"
	SOUTH 218	M3-3, 36" X 18"			
		M1-4, 45" X 36"			
		M6-1, 30" X 21"			



(Not to Scale)	
LEGEND	
Closed	X
Detour Route	→
Detour Signing Details I-380 MEDIAN BRIDGES over RAMPS E & G I-380 SB / I-380 SB TO I-80 WB	



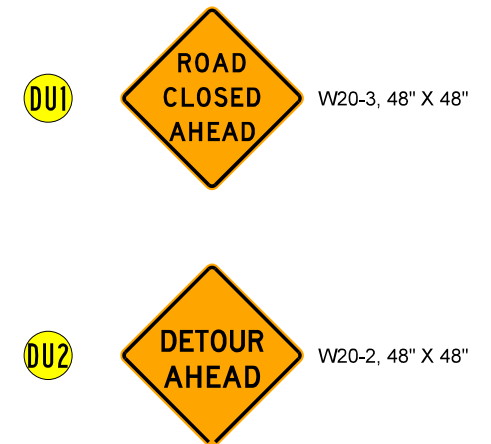
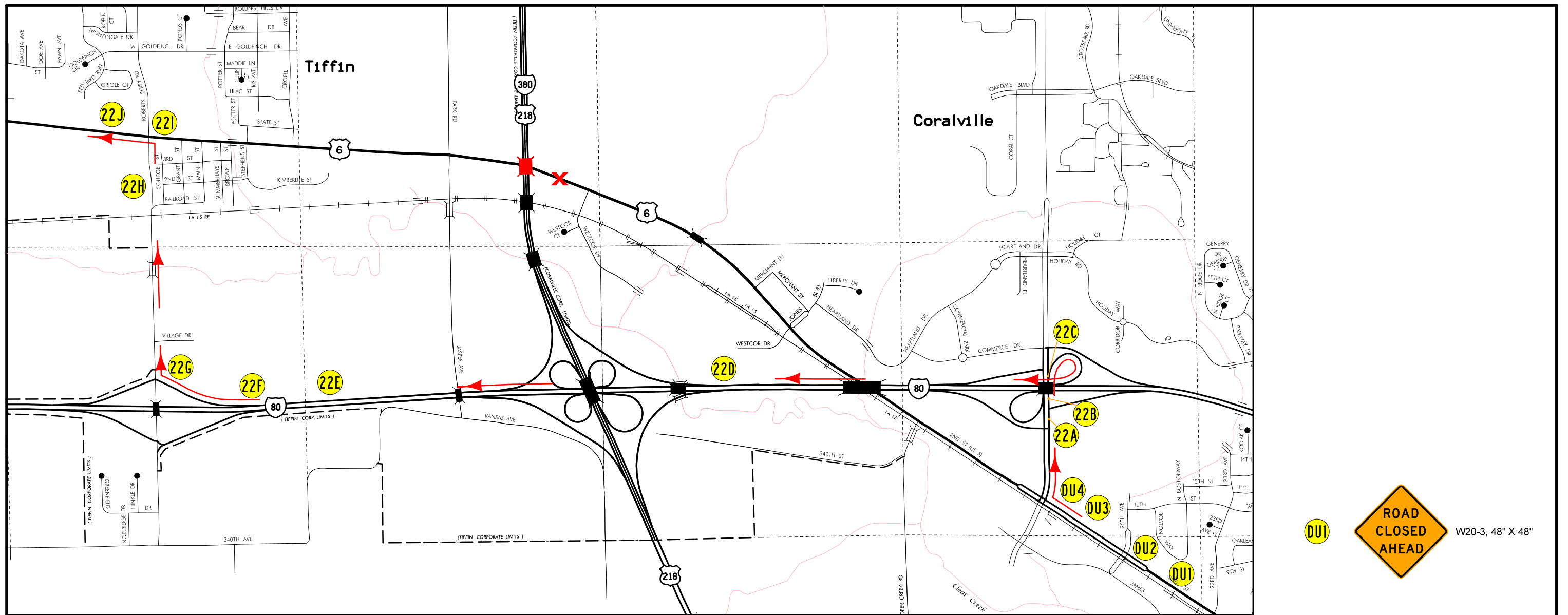
<p>21I</p> <p>DETOUR EAST</p> <p>6</p> <p>↑</p> <p>M4-8, 30" X 15" M3-2, 36" X 18" M1-4, 36" X 36" M6-3, 30" X 21"</p>	<p>21J</p> <p>DETOUR EAST</p> <p>6</p> <p>↗</p> <p>M4-8, 30" X 15" M3-2, 36" X 18" M1-4, 36" X 36" M5-2R, 30" X 21"</p>	<p>21B 21F</p> <p>DETOUR EAST</p> <p>6</p> <p>→</p> <p>M4-8, 30" X 15" M3-2, 36" X 18" M1-4, 36" X 36" M6-1, 30" X 21"</p>	<p>21A 21E</p> <p>DETOUR EAST</p> <p>6</p> <p>↘</p> <p>M4-8, 30" X 15" M3-2, 36" X 18" M1-4, 36" X 36" M5-1R, 30" X 21"</p>	<p>DU3</p> <p>END DETOUR</p> <p>M4-8A, 24" X 18"</p>	<p>21R</p> <p>DETOUR AHEAD</p> <p>W20-2, 48" X 48"</p>	
<p>21K</p> <p>DETOUR EAST</p> <p>6</p> <p>↙</p> <p>M4-8, 30" X 15" M3-2, 36" X 18" M1-4, 36" X 36" M6-2R, 30" X 21"</p>	<p>21D DU2</p> <p>DETOUR EAST</p> <p>6</p> <p>←</p> <p>M4-8, 30" X 15" M3-2, 36" X 18" M1-4, 36" X 36" M6-1, 30" X 21"</p>	<p>21C DU1</p> <p>DETOUR EAST</p> <p>6</p> <p>↖</p> <p>M4-8, 30" X 15" M3-2, 36" X 18" M1-4, 36" X 36" M5-1L, 30" X 21"</p>				

(Not to Scale)

LEGEND

Closed	X
Detour Route	→

Detour Signing Details
I-380 MEDIAN BRIDGES over US-6
US-6 EB



<p>22A 22D</p> <p>DETOUR WEST</p> <p>6</p> <p>↑</p> <p>M4-8, 30" X 15" M3-4, 36" X 18" M1-4, 36" X 36" M6-3, 30" X 21"</p>	<p>22B 22E</p> <p>DETOUR WEST</p> <p>6</p> <p>↗</p> <p>M4-8, 30" X 15" M3-4, 36" X 18" M1-4, 36" X 36" M5-2R, 30" X 21"</p>	<p>DU4 22C</p> <p>DETOUR WEST</p> <p>6</p> <p>→</p> <p>M4-8, 30" X 15" M3-4, 36" X 18" M1-4, 36" X 36" M6-1, 30" X 21"</p>	<p>DU3</p> <p>DETOUR WEST</p> <p>6</p> <p>↗</p> <p>M4-8, 30" X 15" M3-4, 36" X 18" M1-4, 36" X 36" M5-1R, 30" X 21"</p>	<p>22J</p> <p>END DETOUR</p> <p>M4-8A, 24" X 18"</p>	<p>DU2</p> <p>DETOUR AHEAD</p> <p>W20-2, 48" X 48"</p>
<p>22C 22F</p> <p>DETOUR WEST</p> <p>6</p> <p>↘</p> <p>M4-8, 30" X 15" M3-4, 36" X 18" M1-4, 36" X 36" M6-2R, 30" X 21"</p>	<p>22I</p> <p>DETOUR WEST</p> <p>6</p> <p>←</p> <p>M4-8, 30" X 15" M3-4, 36" X 18" M1-4, 36" X 36" M6-1, 30" X 21"</p>	<p>22H</p> <p>DETOUR WEST</p> <p>6</p> <p>↙</p> <p>M4-8, 30" X 15" M3-4, 36" X 18" M1-4, 36" X 36" M5-1L, 30" X 21"</p>			

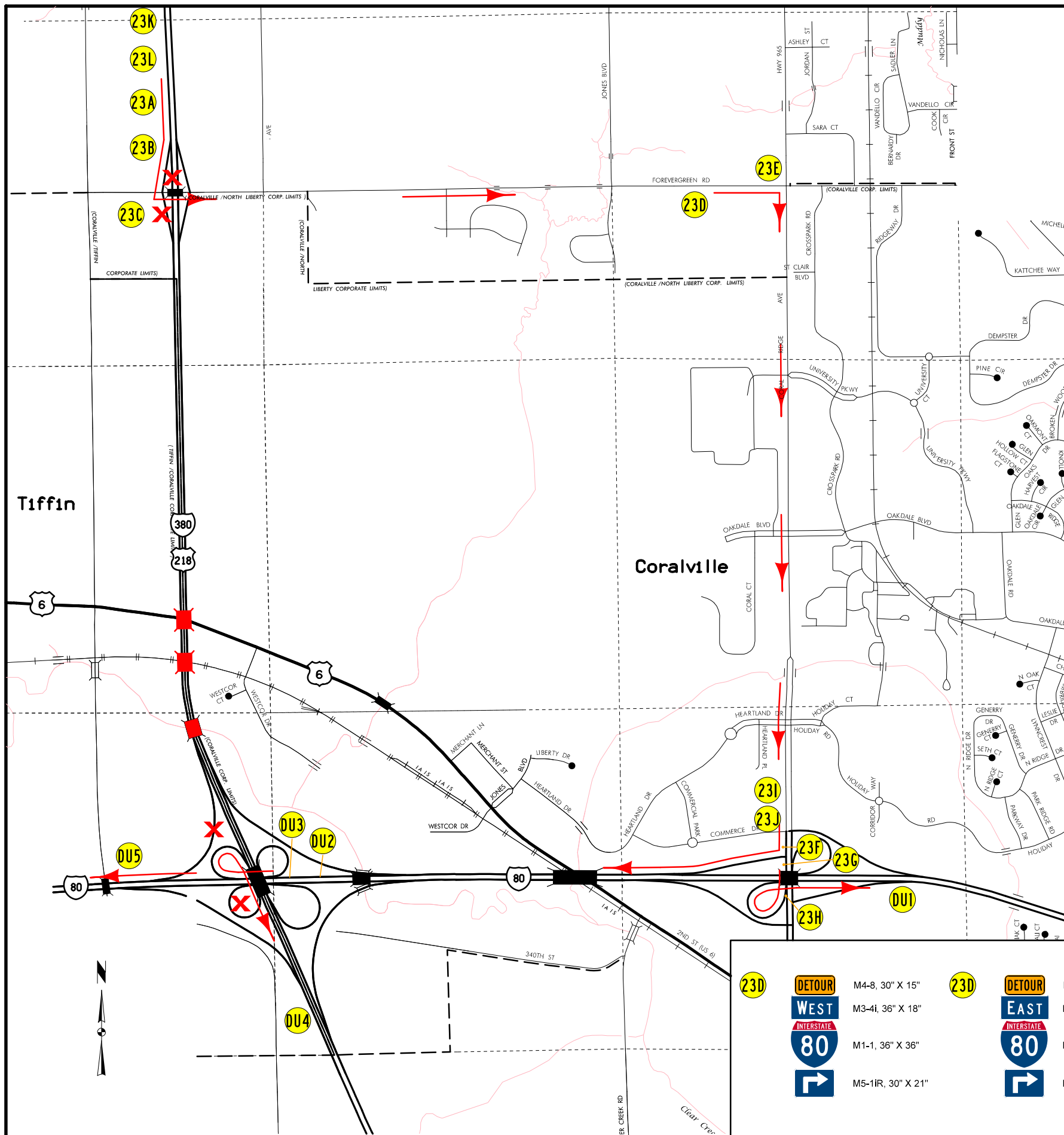
(Not to Scale)

LEGEND

Closed

Detour Route

Detour Signing Details
I-380 MEDIAN BRIDGES over US-6
US-6 WB



DU1 DU4 DU5	END DETOUR M4-8A, 24" X 18"	23K ROAD CLOSED AHEAD W20-3, 48" X 48"	23L DETOUR AHEAD W20-2, 48" X 48"
23A	DETOUR WEST INTERSTATE 80 M4-8, 30" X 15" M3-4i, 36" X 18" M1-1, 36" X 36" M5-2iR, 30" X 21"	23F DETOUR EAST INTERSTATE 80 M4-8, 30" X 15" M3-2i, 36" X 18" M1-1, 36" X 36" M6-3i, 30" X 21"	23I DETOUR SOUTH 218 M4-8, 30" X 15" M3-3, 36" X 18" M1-4, 45" X 36" M5-2R, 30" X 21"
23B	DETOUR WEST INTERSTATE 80 M4-8, 30" X 15" M3-4i, 36" X 18" M1-1, 36" X 36" M6-2iR, 30" X 21"	23B DETOUR EAST INTERSTATE 80 M4-8, 30" X 15" M3-2i, 36" X 18" M1-1, 36" X 36" M6-2iR, 30" X 21"	23B DETOUR SOUTH 218 M4-8, 30" X 15" M3-3, 36" X 18" M1-4, 45" X 36" M6-2R, 30" X 21"
23C	DETOUR WEST INTERSTATE 80 M4-8, 30" X 15" M3-4i, 36" X 18" M1-1, 36" X 36" M6-1i, 30" X 21"	23C DETOUR EAST INTERSTATE 80 M4-8, 30" X 15" M3-2i, 36" X 18" M1-1, 36" X 36" M6-1i, 30" X 21"	23C DETOUR SOUTH 218 M4-8, 30" X 15" M3-3, 36" X 18" M1-4, 45" X 36" M6-1, 30" X 21"
23E	DETOUR WEST INTERSTATE 80 M4-8, 30" X 15" M3-4i, 36" X 18" M1-1, 36" X 36" M6-1i, 30" X 21"	23E DETOUR EAST INTERSTATE 80 M4-8, 30" X 15" M3-2i, 36" X 18" M1-1, 36" X 36" M6-1i, 30" X 21"	23E DETOUR SOUTH 218 M4-8, 30" X 15" M3-3, 36" X 18" M1-4, 45" X 36" M6-1, 30" X 21"

23D DETOUR WEST INTERSTATE 80 M4-8, 30" X 15" M3-4i, 36" X 18" M1-1, 36" X 36" M5-1iR, 30" X 21"	23D DETOUR EAST INTERSTATE 80 M4-8, 30" X 15" M3-2i, 36" X 18" M1-1, 36" X 36" M5-1iR, 30" X 21"	23D DETOUR SOUTH 218 M4-8, 30" X 15" M3-3, 36" X 18" M1-4, 45" X 36" M5-1R, 30" X 21"
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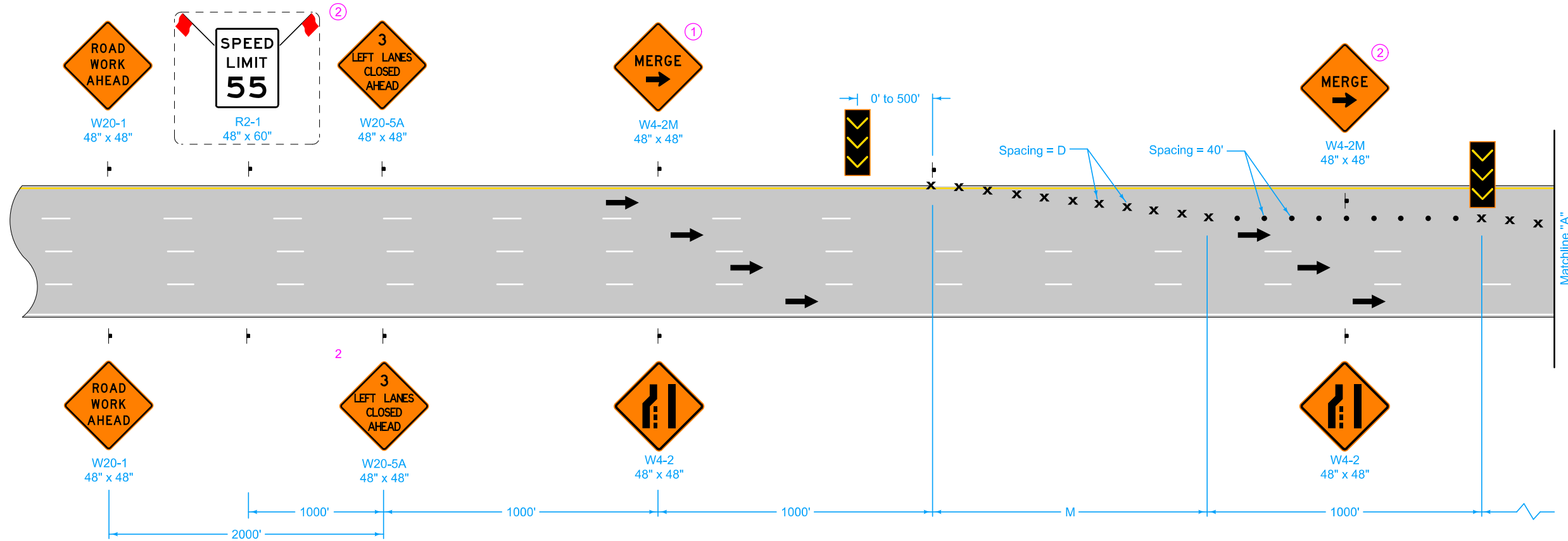
(Not to Scale)

LEGEND

Closed

Detour Route

Detour Signing Details
I-380 MEDIAN BRIDGES over US-6
I-80 EB / I-80 WB / US-218 SB



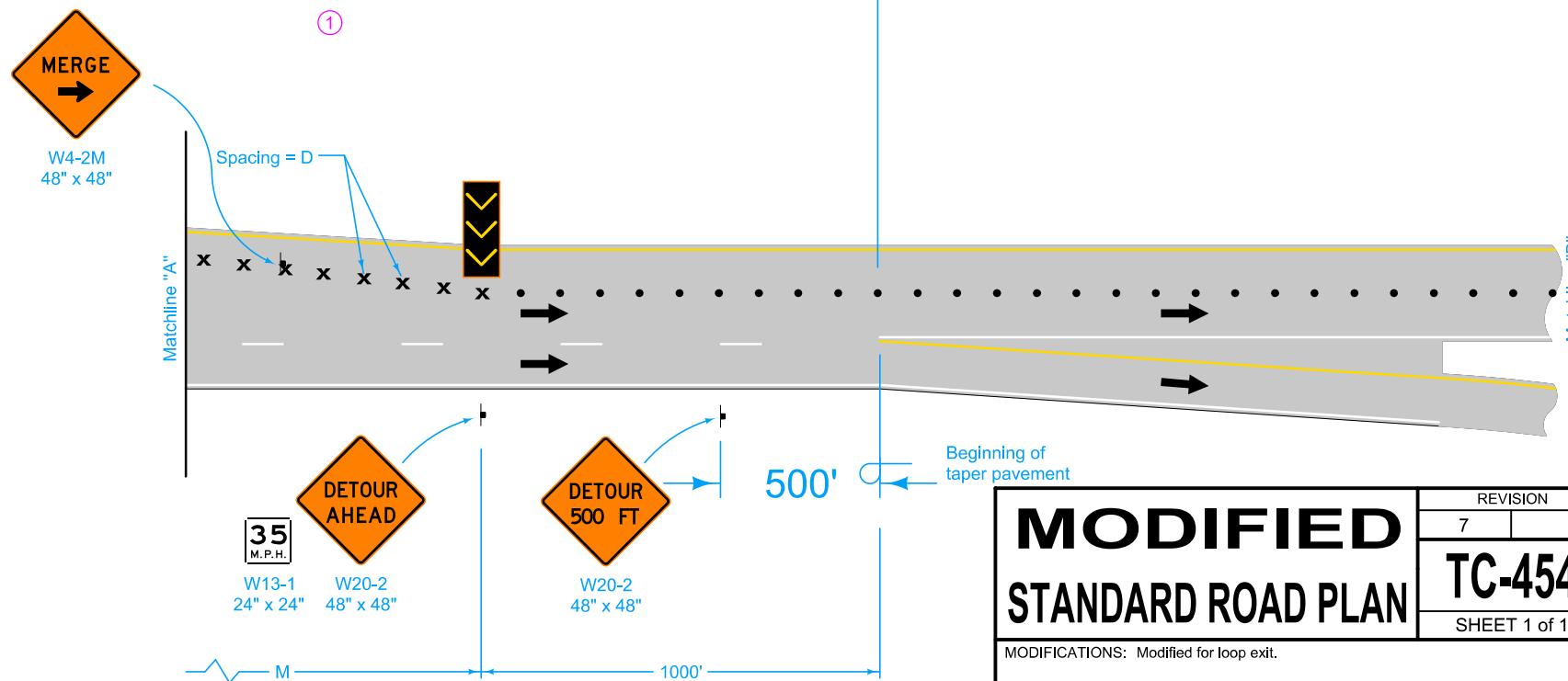
Give priority to mainline traffic on the ramp.

① Refer to SI-881 for sign details.

SPEED LIMIT (mph)	M	D
65 - 70	910'	65'

LEGEND

- x Drum
- † Traffic Sign
- 42" Channelizer
- ▶▶▶ Arrow Board
- ▨ Work Area
- ➔ Direction of Traffic

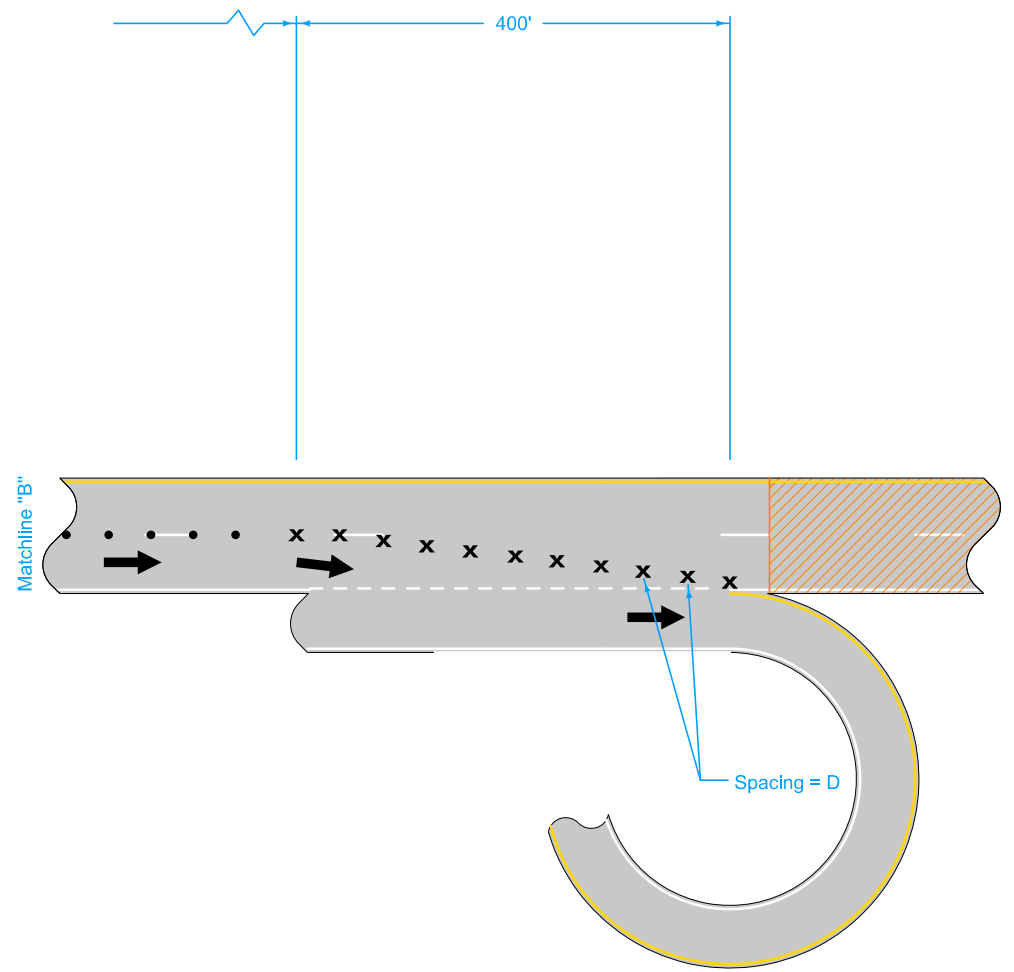


Possible Contract Items:
Traffic Control

MODIFIED STANDARD ROAD PLAN	REVISION	
	7	
	TC-454	
SHEET 1 of 1		

MODIFICATIONS: Modified for loop exit.

**TEMPORARY DETOUR USING
RAMPS ON DIVIDED HIGHWAY**



SPEED LIMIT (mph)	M	D
65 - 70	910'	65'

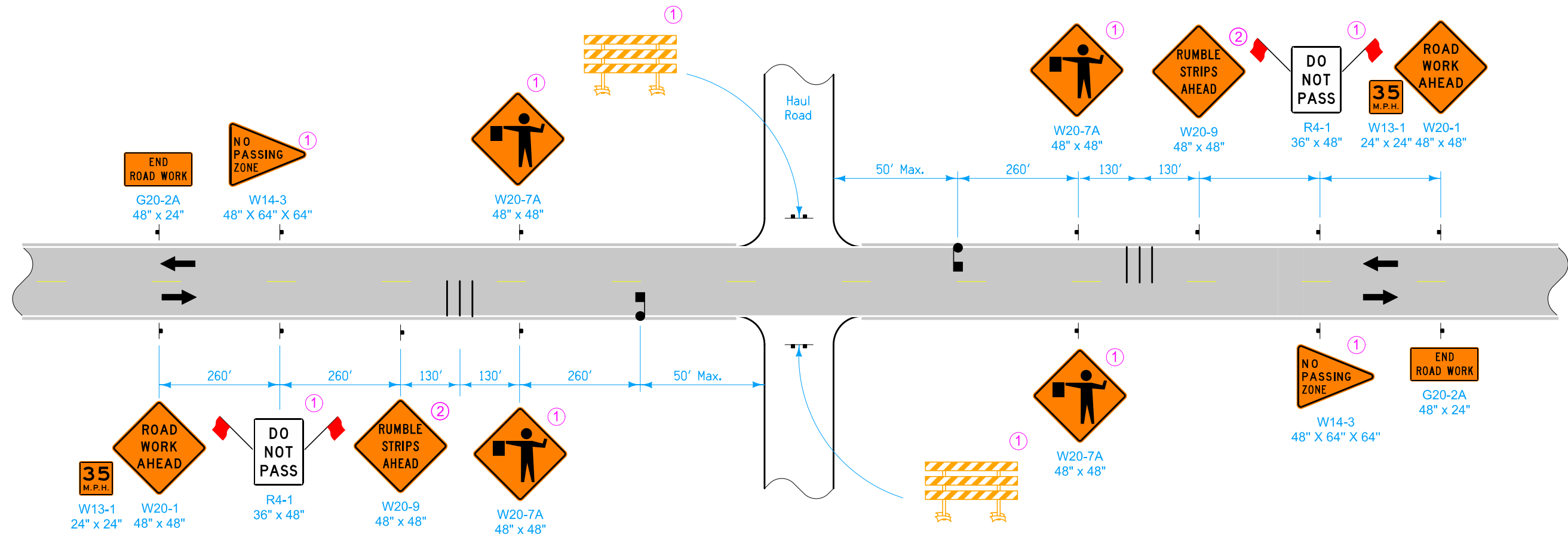
LEGEND	
x	Drum
⊣	Traffic Sign
•	42" Channelizer
◀◀◀	Arrow Board
▨	Work Area
➔	Direction of Traffic

Possible Contract Items:
Traffic Control

MODIFIED STANDARD ROAD PLAN	REVISION	
	7	
		TC-454
		SHEET 1 of 1

MODIFICATIONS: Modified for loop exit.

**TEMPORARY DETOUR USING
RAMPS ON DIVIDED HIGHWAY**



LEGEND

- Traffic Sign
- Type III Barricade
- Flagger
- Direction of Traffic
- Portable Rumble Strip Panel

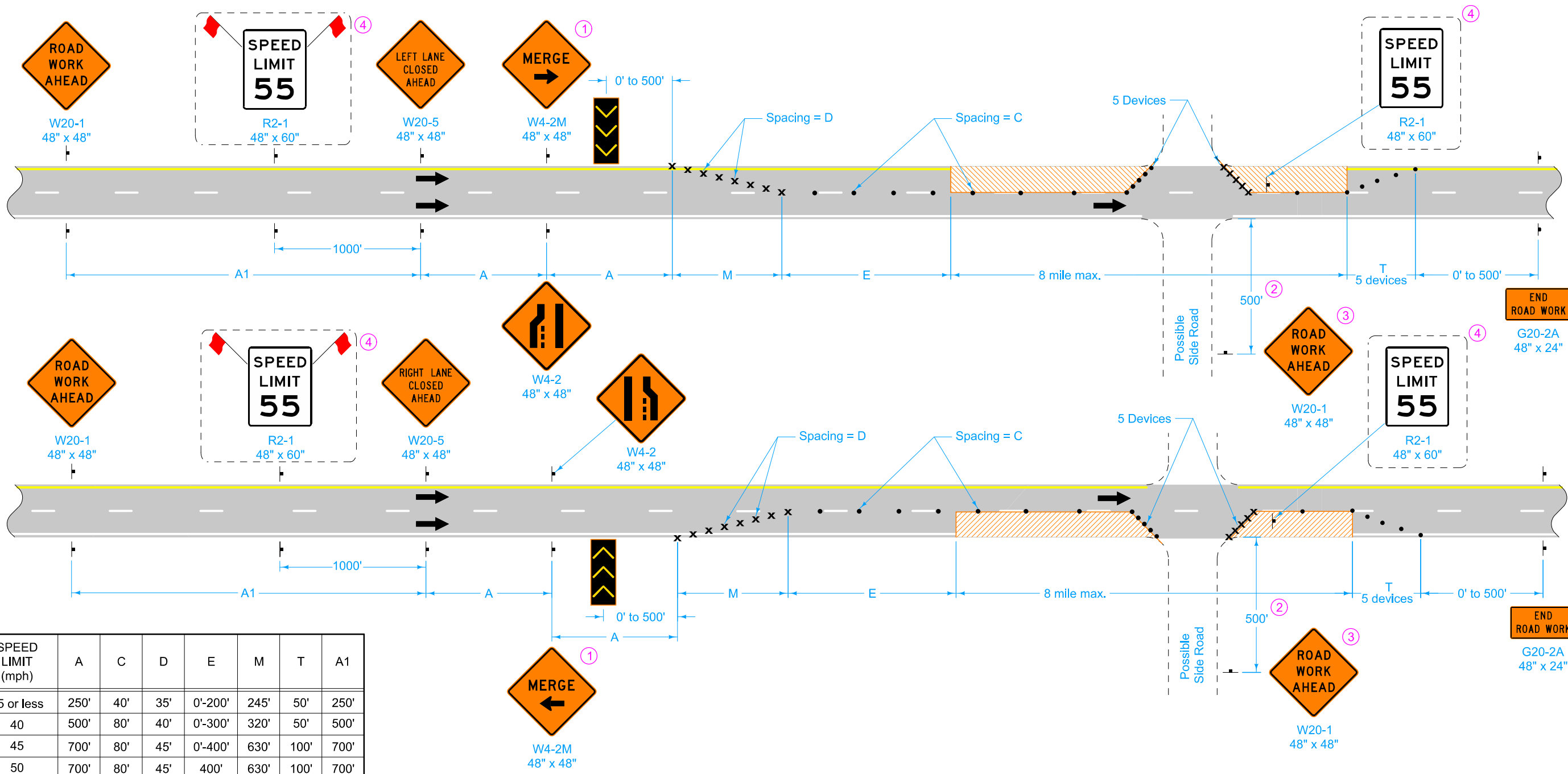
- ① During nighttime hours or when the haul road is not in use, Type III Barricades shall be placed as shown and DO NOT PASS, NO PASSING ZONE and Flagger Symbol signs shall be covered or removed.
- ② Refer to [SI-881](#) for sign details.

Possible Contract Items:
Traffic Control
Flaggers

MODIFIED STANDARD ROAD PLAN	REVISION	
	3	10-18-16
TC-272		SHEET 1 of 1

MODIFICATIONS: Added rumble strips and signing.

**UNSIGNALIZED EQUIPMENT CROSSING
ACROSS US 6**



SPEED LIMIT (mph)	A	C	D	E	M	T	A1
35 or less	250'	40'	35'	0'-200'	245'	50'	250'
40	500'	80'	40'	0'-300'	320'	50'	500'
45	700'	80'	45'	0'-400'	630'	100'	700'
50	700'	80'	45'	400'	630'	100'	700'
55 - 60	1000'	100'	55'	600'	770'	100'	2000'
65 - 70	1000'	100'	65'	700'	910'	100'	2000'

LEGEND

- ➔ Direction Of Traffic
- ⊣ Traffic Sign
- ✕ Drum
- 42" Channelizer
- ➔➔➔➔ Arrow Board
- ▨ Work Area

When the Average Daily Traffic (ADT) exceeds 20,000 vehicles per day or when a traffic queue extends beyond the advanced signing, place RIGHT/LEFT LANE CLOSED 4 MILES and RIGHT/LEFT LANE CLOSED 2 MILES signs (W20-5) on both sides of the roadway 4 miles and 2 miles in advance of the lane closure, respectively, as appropriate.

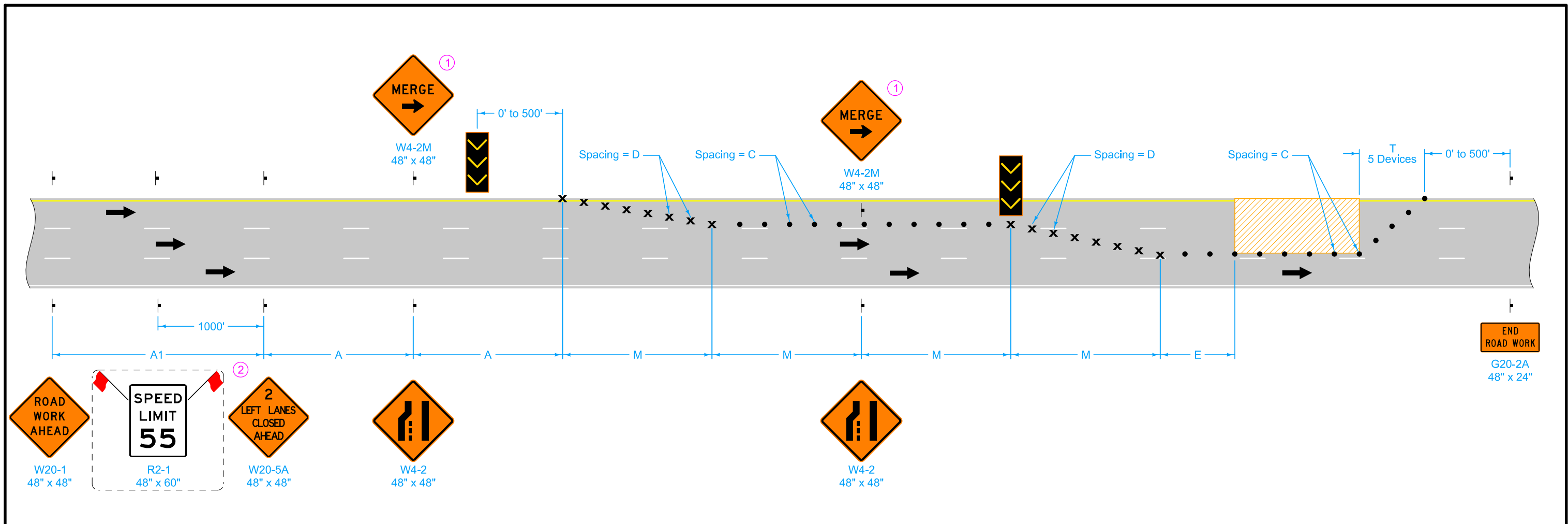
Where there is a lane line drop-off or rise, do not allow traffic to cross over the drop-off or rise, except for ramp locations where a BUMP (W8-1) sign is placed.

Lane line drop-offs greater than a nominal 4 inches are not allowed during non-working hours.

- ① Refer to SI-881 for sign details.
- ② Where side road speed limit is 40 mph or less, a distance of 200 feet is allowed.
- ③ Place a ROAD WORK AHEAD sign on the opposite side of the intersection in a similar location.
- ④ For roadways with a posted speed limit of 60 mph or greater before road work:
Place SPEED LIMIT 55 signs prior to the lane closure as shown.
When the length of closure is greater than 1 mile, install SPEED LIMIT 55 signs in the closed lane at 1-mile intervals.
Remove or cover all existing signs that conflict with 55 mph speed limit while 55 mph speed limit is in effect.

Possible Contract Item:
Traffic Control

MODIFIED STANDARD ROAD PLAN	REVISION	
	10	04-17-18
TC-418		
SHEET 1 of 1		
MODIFICATIONS: Changed		
LANE CLOSURE ON DIVIDED HIGHWAY		



When the Average Daily Traffic (ADT) exceeds 20,000 vehicles per day or when a traffic queue extends beyond the advanced signing, place RIGHT/LEFT LANE CLOSED 4 MILES and RIGHT/LEFT LANE CLOSED 2 MILES signs (W20-5) on both sides of the roadway 4 miles and 2 miles in advance of the lane closure, respectively, as appropriate.

Where there is a lane line drop-off or rise, do not allow traffic to cross over the drop-off or rise, except for ramp locations where a BUMP (W8-1) sign is placed.

Lane line drop-offs greater than a nominal 4 inches are not allowed during non-working hours.

Possible Contract Item:
Traffic Control

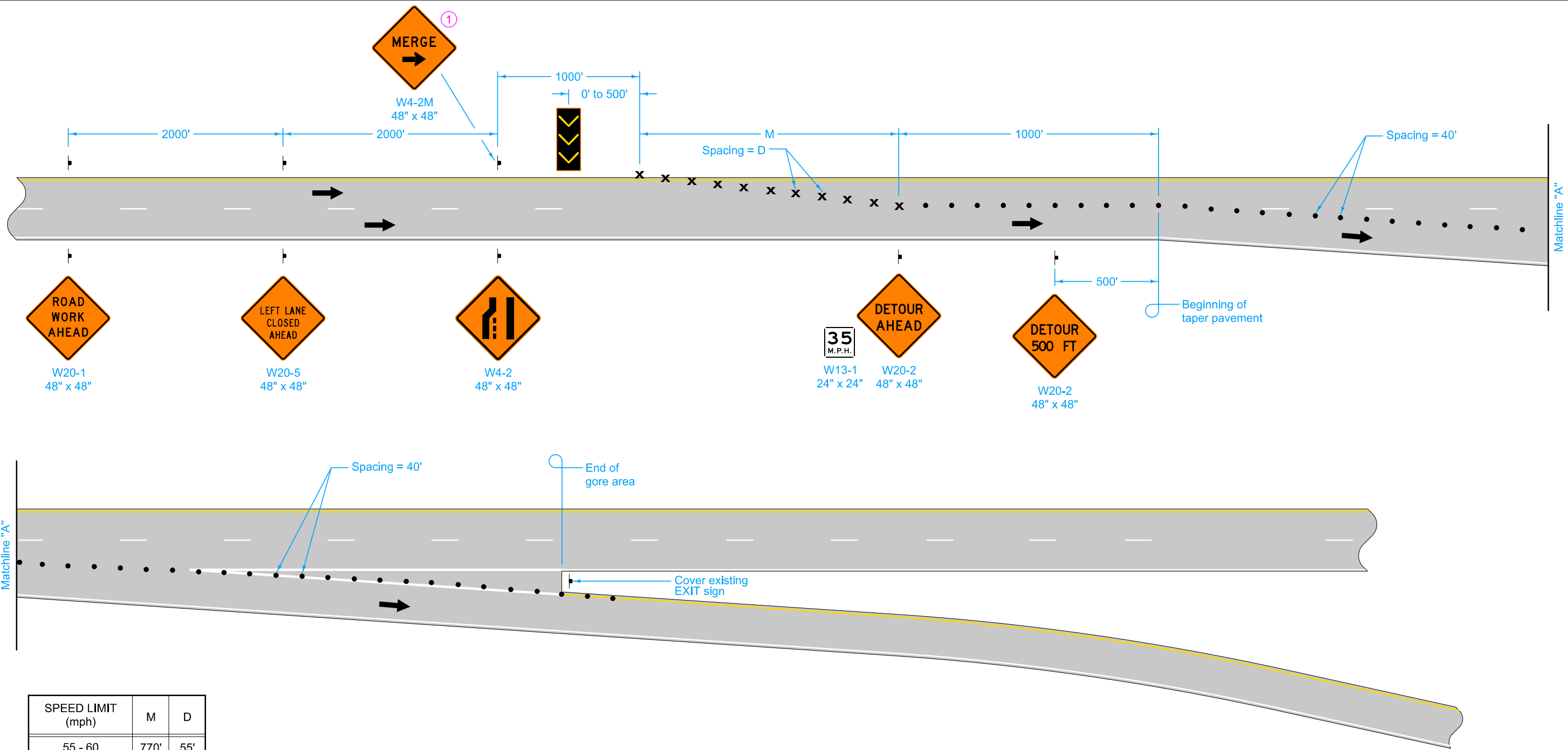
LEGEND

- Direction Of Traffic
- Traffic Sign
- Drum
- 42" Channelizer
- Arrow Board
- Work Area

SPEED LIMIT (mph)	A	C	D	E	M	T	A1
35 or less	250'	40'	35'	0'-200'	245'	50'	250'
40	500'	80'	40'	0'-300'	320'	50'	500'
45	700'	80'	45'	0'-400'	630'	100'	700'
50	700'	80'	45'	400'	630'	100'	700'
55 - 60	1000'	100'	55'	600'	770'	100'	2000'
65 - 70	1000'	100'	65'	700'	910'	100'	2000'

- ① Refer to [SI-881](#) for sign details.
- ② For roadways with a posted speed limit of 60 mph or greater before road work:
Place SPEED LIMIT 55 signs prior to the lane closure as shown.
When the length of closure is greater than 1 mile, install SPEED LIMIT 55 signs in the closed lane at 1-mile intervals.
Remove or cover all existing signs that conflict with 55 mph speed limit while 55 mph speed limit is in effect.

MODIFIED STANDARD ROAD PLAN	REVISION	
	10	04-17-18
TC-422		
SHEET 1 of 1		
MODIFICATIONS: Changed		
CLOSURE OF TWO ADJACENT LANES ON DIVIDED HIGHWAY		



SPEED LIMIT (mph)	M	D
55 - 60	770'	55'
65 - 70	910'	65'

LEGEND

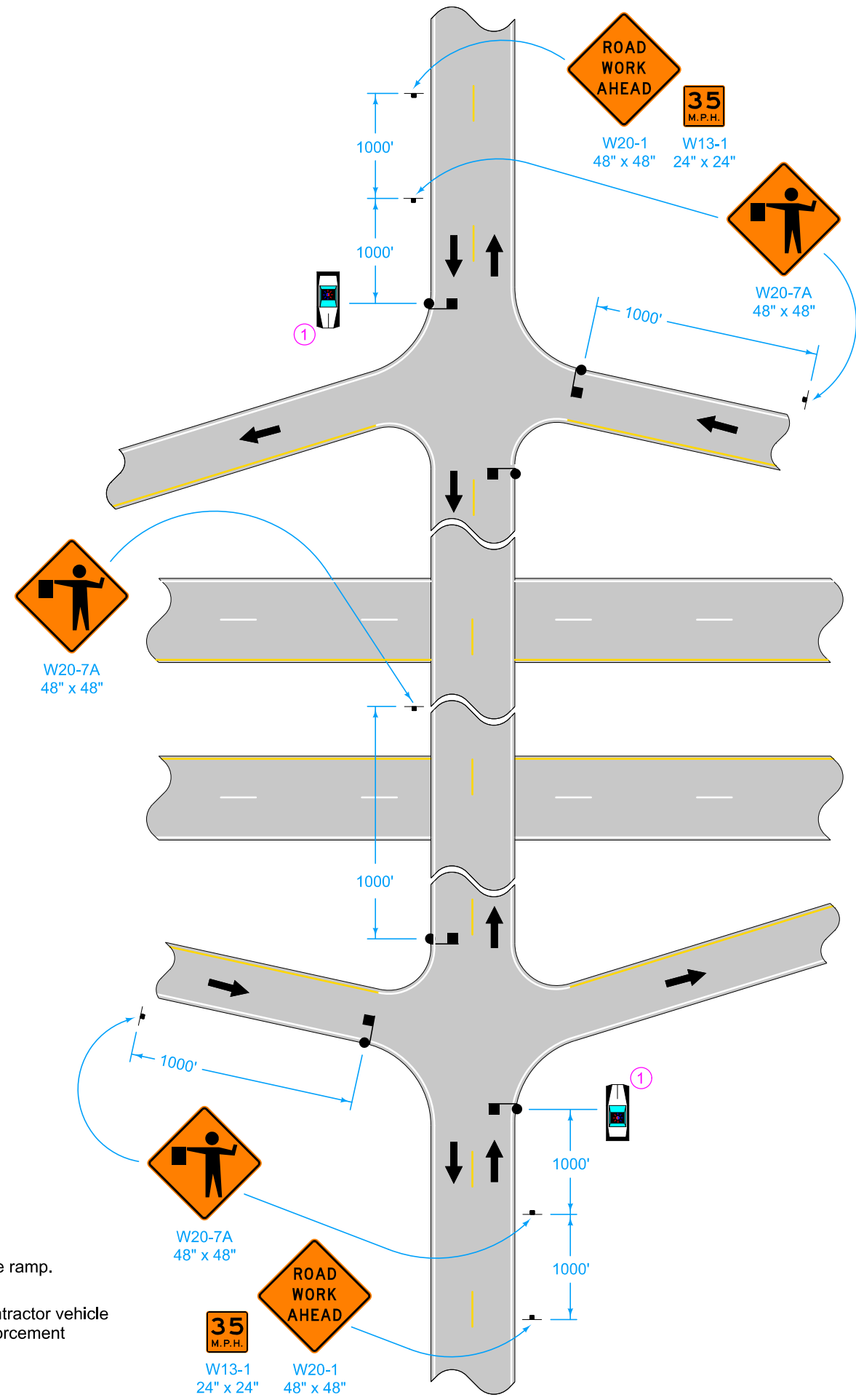
- x** Drum
- |** Traffic Sign
- 42" Channelizer
- ▶▶▶** Arrow Board
- ▨** Work Area
- ➔** Direction of Traffic

Give priority to mainline traffic on the ramp.
 Stop side road traffic before mainline traffic is rerouted onto ramp.

① Refer to SI-881 for sign details.

Possible Contract Items:
 Traffic Control

TRAFFIC DETAIL	TCP-1
TEMPORARY DETOUR USING RAMP ON DIVIDED HIGHWAY WITH CLOSURE OF MAINLINE	



LEGEND

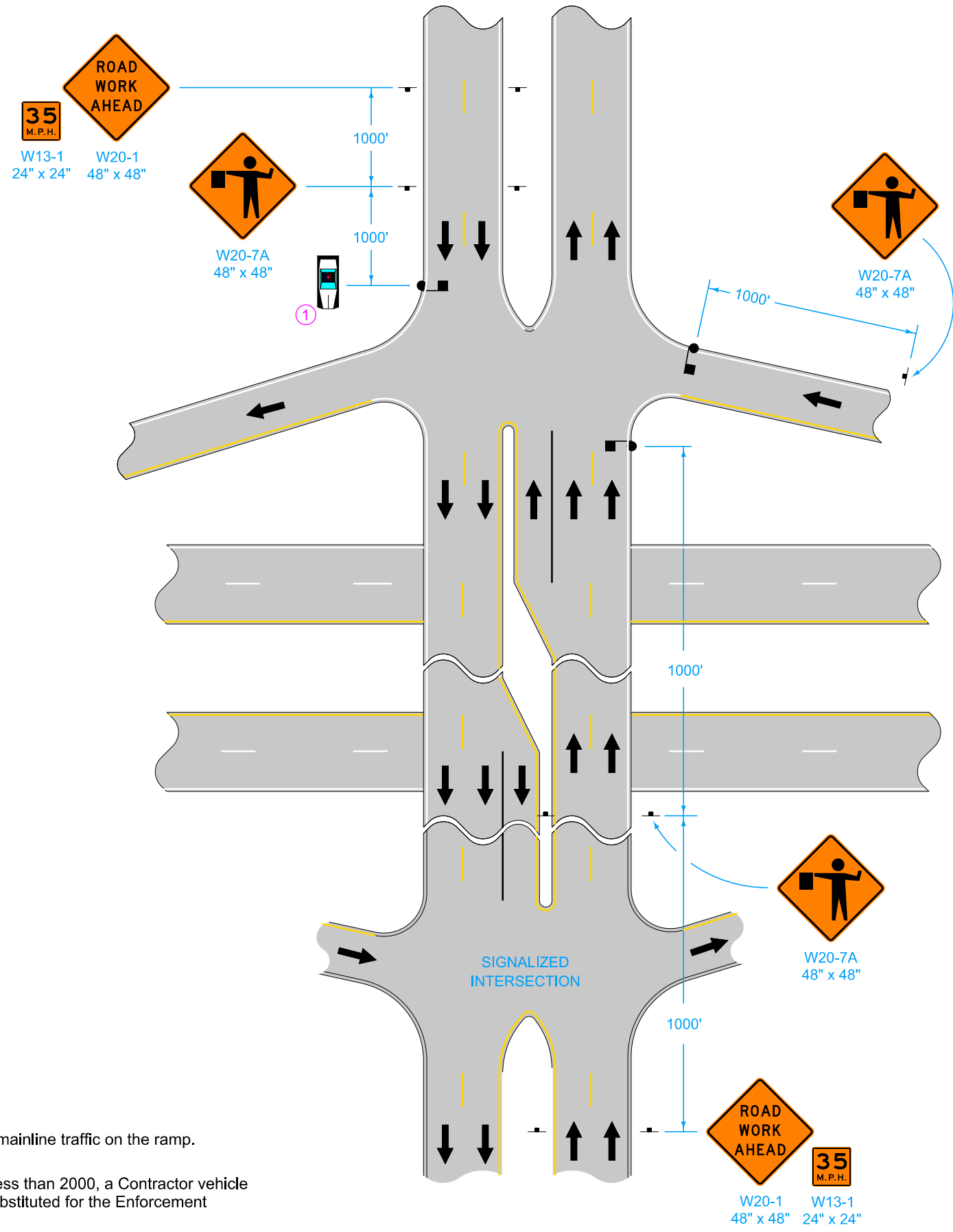
	Traffic Sign
	Law Enforcement Vehicle
	Flagger
	Direction of Traffic

Give priority to mainline traffic on the ramp.

① For ADT less than 2000, a Contractor vehicle may be substituted for the Enforcement vehicle.

Possible Contract Items:
 Flaggers
 Traffic Control

TRAFFIC DETAIL	TCP-2
TEMPORARY DETOUR USING RAMPS AND SIDE ROAD ON DIVIDED HIGHWAY	



LEGEND

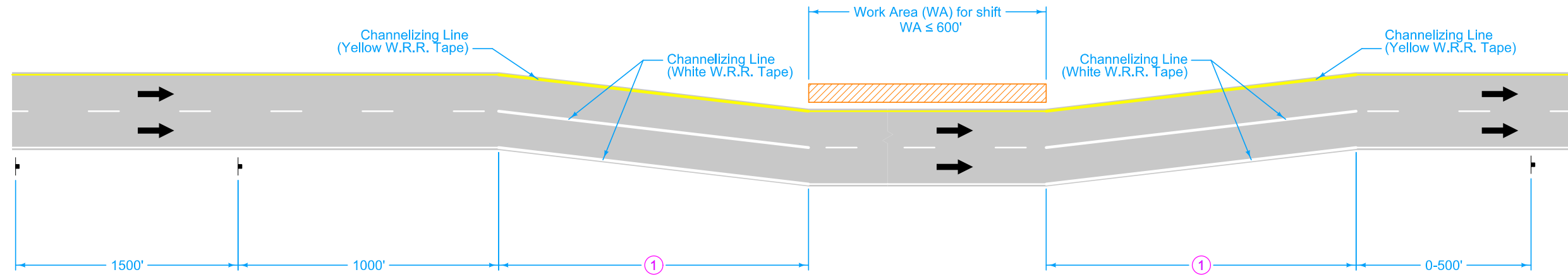
- Traffic Sign
- Law Enforcement Vehicle
- Flagger
- Direction of Traffic

Give priority to mainline traffic on the ramp.

① For ADT less than 2000, a Contractor vehicle may be substituted for the Enforcement vehicle.

Possible Contract Items:
 Flaggers
 Traffic Control

TRAFFIC DETAIL	TCP-3
TEMPORARY DETOUR USING RAMPS AND DIVIDED SIDE ROAD ON DIVIDED HIGHWAY	



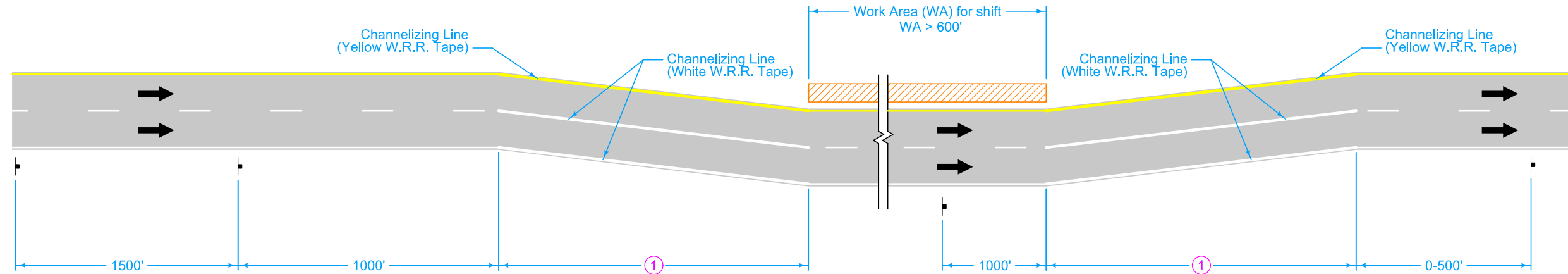
ROAD WORK AHEAD
W20-1 (2)
48" x 48"

W24-1A (3)
48" x 48"

ALL LANES
W24-1cP
30" x 30"

END ROAD WORK
G20-2A (2)
48" x 24"

LANE SHIFT FOR WA ≤ 600'



ROAD WORK AHEAD
W20-1 (2)
48" x 48"

W1-4R (3)
48" x 48"

ALL LANES
W24-1cP
30" x 30"

W1-4L (3)
48" x 48"

ALL LANES
W24-1cP
30" x 30"

END ROAD WORK
G20-2A (2)
48" x 24"

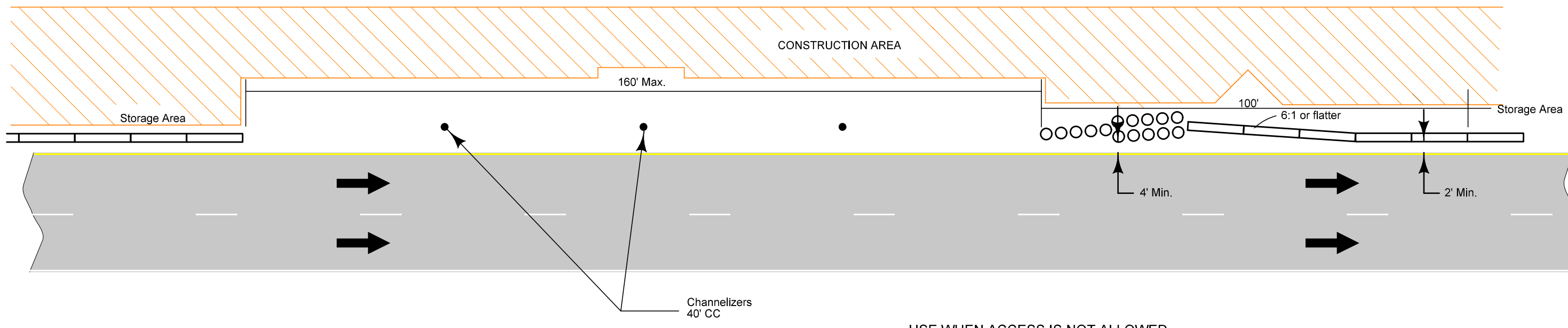
LANE SHIFT FOR WA > 600'

- ① Refer to Staging Sheets.
- ② If applicable.
- ③ If work area is on the outside, use applicable signs to show the shift

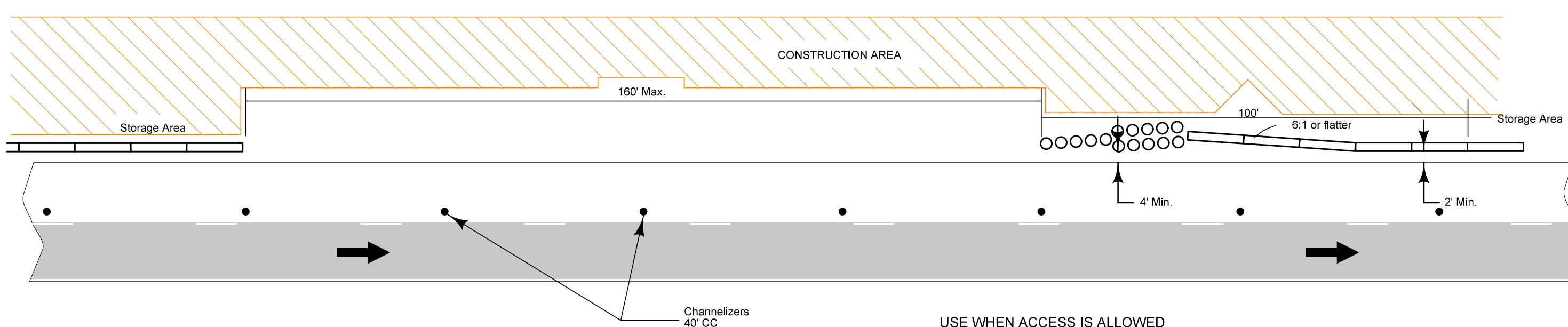
LEGEND

- Traffic Sign
- Work Area
- Direction of Traffic

LANE SHIFT TRAFFIC CONTROL



USE WHEN ACCESS IS NOT ALLOWED



USE WHEN ACCESS IS ALLOWED

GENERAL NOTES:

This sheet details the placement and installation of Temporary Barrier Rail openings with crash cushions.

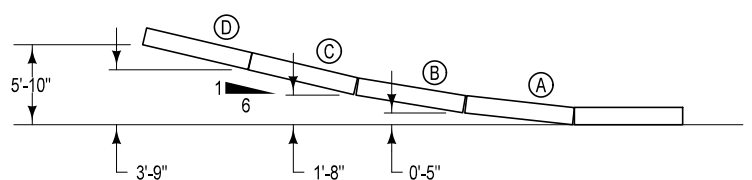
Refer to Traffic Control Plan for access times.

The Temporary Barrier Rail opening is to be used in accordance with a lane closure. Refer to Road Standard TC-418 for details.

Final Temporary Barrier Rail opening location to be approved by the Engineer.

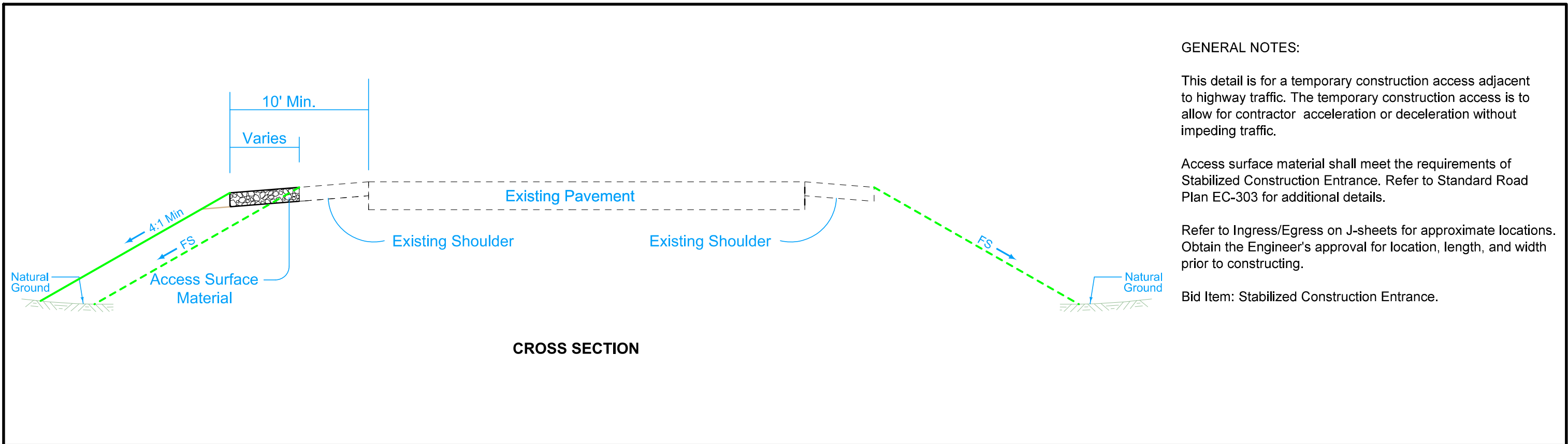
Place Channelizers 40' C-C Spaced across opening when access is not in use.

For details of crash cushion, refer to Standard Road Plan BA-500



BARRIER OFFSETS FOR FLARE SECTIONS

**DETAILS OF
TEMPORARY BARRIER RAIL
OPENINGS**



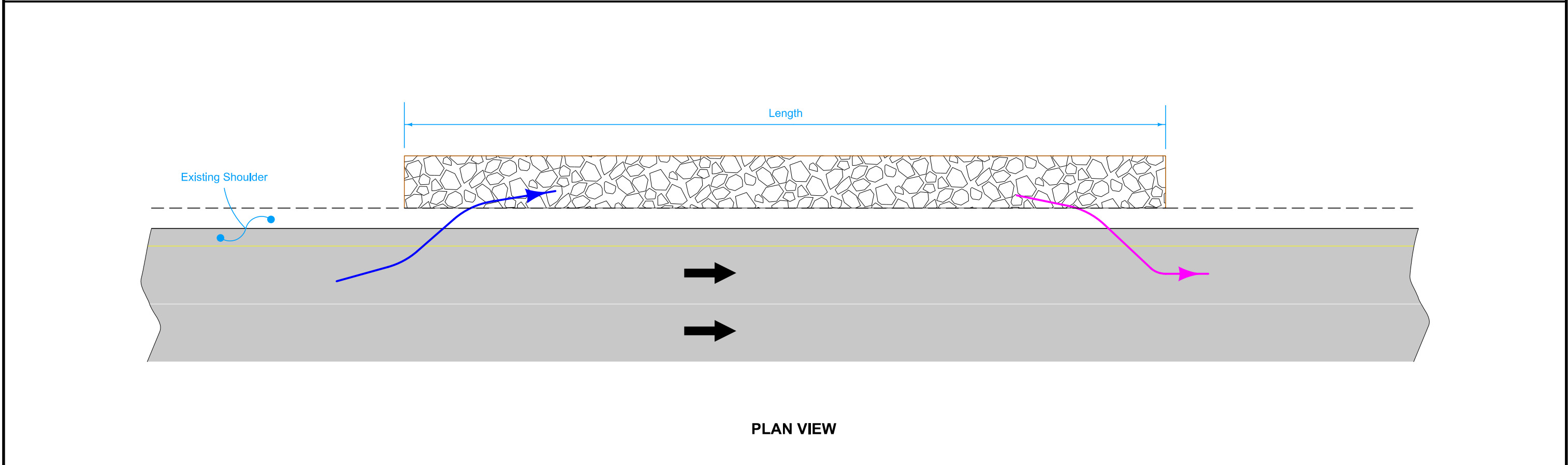
GENERAL NOTES:

This detail is for a temporary construction access adjacent to highway traffic. The temporary construction access is to allow for contractor acceleration or deceleration without impeding traffic.

Access surface material shall meet the requirements of Stabilized Construction Entrance. Refer to Standard Road Plan EC-303 for additional details.

Refer to Ingress/Egress on J-sheets for approximate locations. Obtain the Engineer's approval for location, length, and width prior to constructing.

Bid Item: Stabilized Construction Entrance.












**TEMPORARY
CONSTRUCTION ACCESS**

**CROSS SECTION VIEW COLOR LEGEND
OF TRAFFIC CONTROL AND STAGING SHEETS**

SHADING	Design Color No.	
Green, Light	(225)	Existing Pavement Shading
Gray, Light	(48)	Previously Constructed Pavement Shading
Gray, Med	(80)	Previously Constructed Granular Surface Shading
Blue, Light	(230)	Proposed Pavement Shading
Lavender	(9)	Temporary Pavement Shading
Brown, Med	(237)	Future Proposed Pavement Shading

**CROSS SECTION VIEW PATTERN AND SYMBOL LEGEND
OF TRAFFIC CONTROL AND STAGING SHEETS**













	Pavement Removal		Proposed Granular Shoulder
	Proposed Granular Subbase		Temporary Shoulder
	Proposed Special Backfill		Existing Shoulder Strengthening
	Temporary Barrier Rail		Permanent Barrier Rail
			Channelizing Device

PLAN VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Topographic Features and Labels
Magenta	(5)	Pavement Marking Call Outs
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Yellow	(4)	Pavement Markings, Yellow
Off White	(254)	Pavement Markings, White
Violet	(15)	Temporary barrier rail, Unpinned
Flush Orange	(228)	Temporary barrier rail, Pinned

SHADING	Design Color No.	
Green, Light	(225)	Existing Pavement Shading
Gray, Light	(48)	Previously Constructed Pavement Shading
Gray, Med	(80)	Proposed Granular Surface Shading
Gray, Med	(80)	Previously Constructed Granular Surface Shading
Blue, Light	(230)	Proposed Pavement Shading
Lavender	(9)	Temporary Pavement Shading
Brown, Light	(236)	Proposed Grading Limits Shading
Pink, Dark	(13)	Proposed MSE or CIP Wall Shading
Red	(3)	Proposed Bridge Shading and Sign Trusses
Black w/Gray, Light Fill	(0,48)	Previously Constructed Structure

**PLAN VIEW PATTERN AND SYMBOL LEGEND
OF TRAFFIC CONTROL AND STAGING SHEETS**

●	Channelizing Device		Crash Cushion (Temp or Perm)
✕	Drum		Traffic Signal
■	Temporary Lane Separator		Flagger
◆	Tubular Marker		Temporary Floodlighting
♦	Channelizer Marker		Traffic Sign
△	Concrete Barrier Marker		Type III Barricade
◁	Delineator		Type A Warning Light
—	Temporary Barrier Rail		Direction of Traffic
	Pavement Removal		Safety Closure
	Sand Barrel Layout		Lane Identification

NOTE: Device spacing according to Standard Road Plans unless specifically dimensioned.

**TRAFFIC CONTROL
AND
STAGING
LEGEND AND SYMBOL
INFORMATION SHEET**

(COVERS SHEET SERIES J)

CLEAR CREEK TWP.
T-80N R-7W
SEC. 32

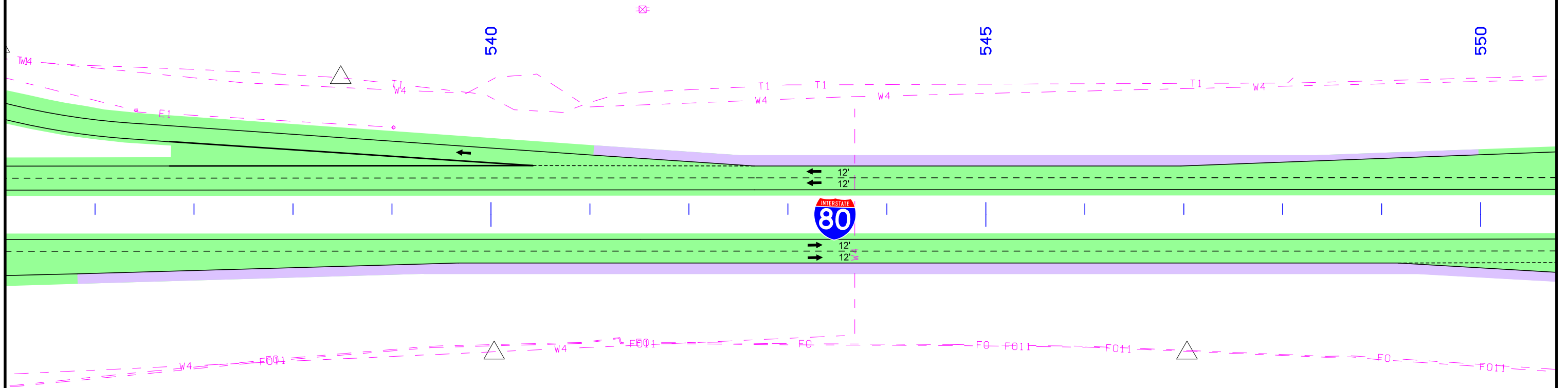
CLEAR CREEK TWP.
T-80N R-7W
SEC. 33



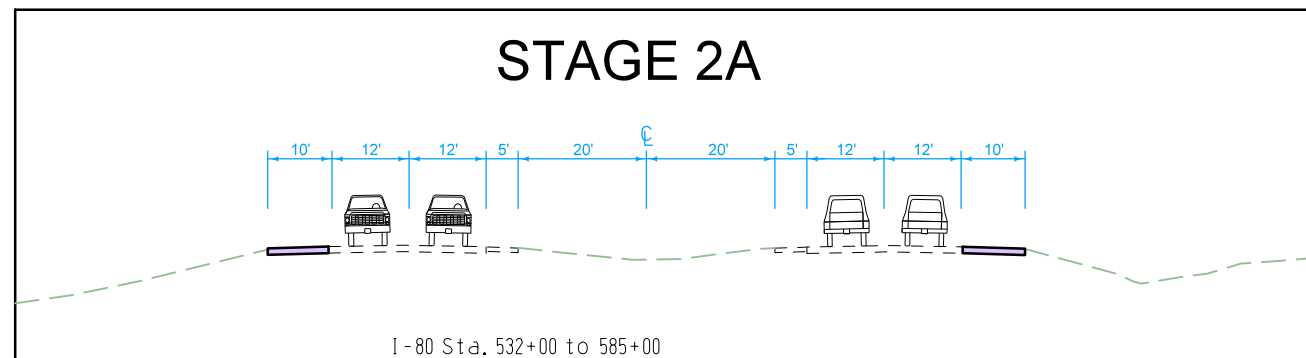
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545

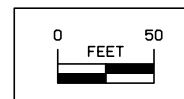
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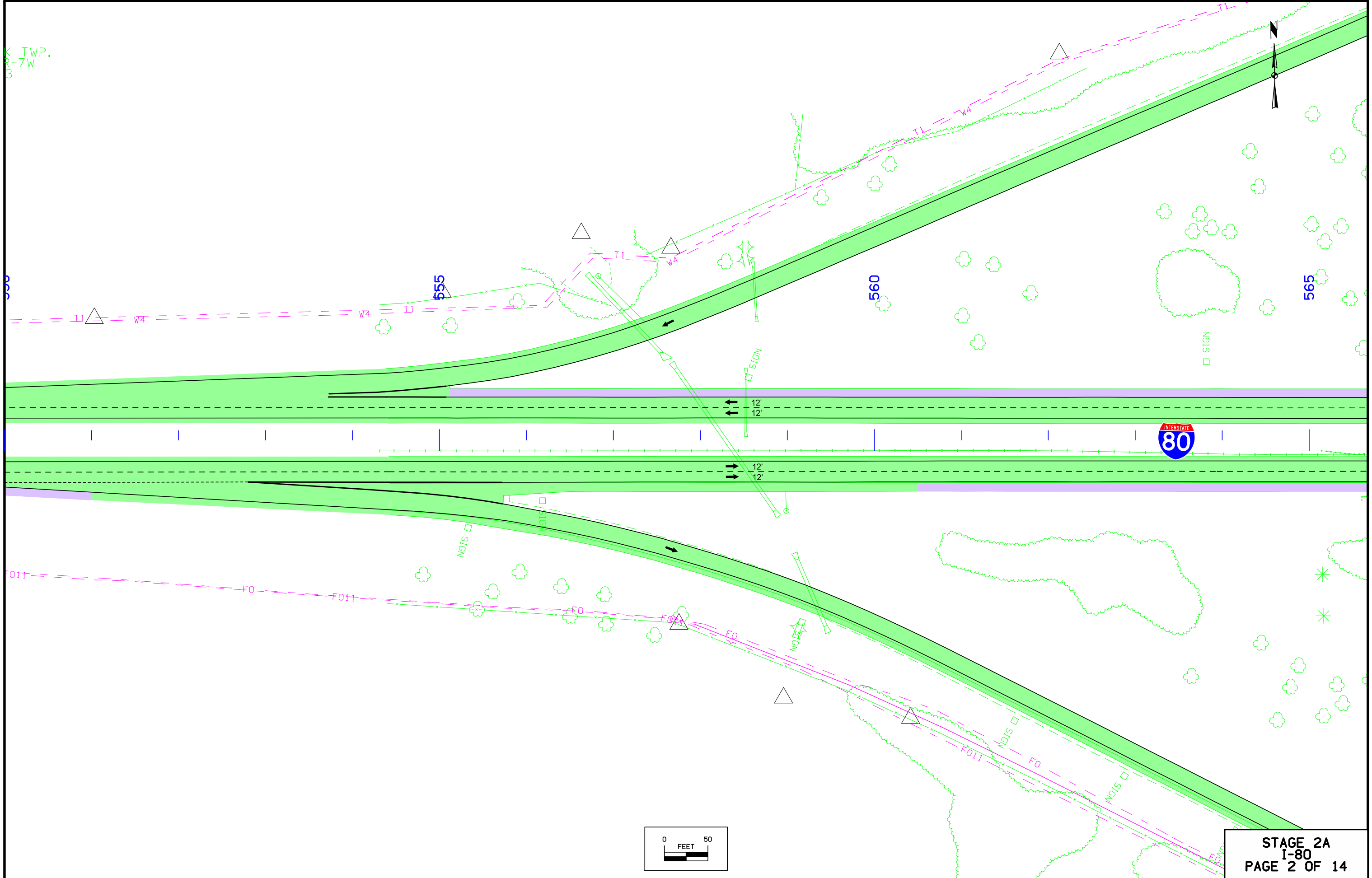
STAGE 2A



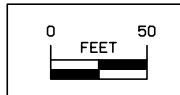
I-80 Sta. 532+00 to 585+00



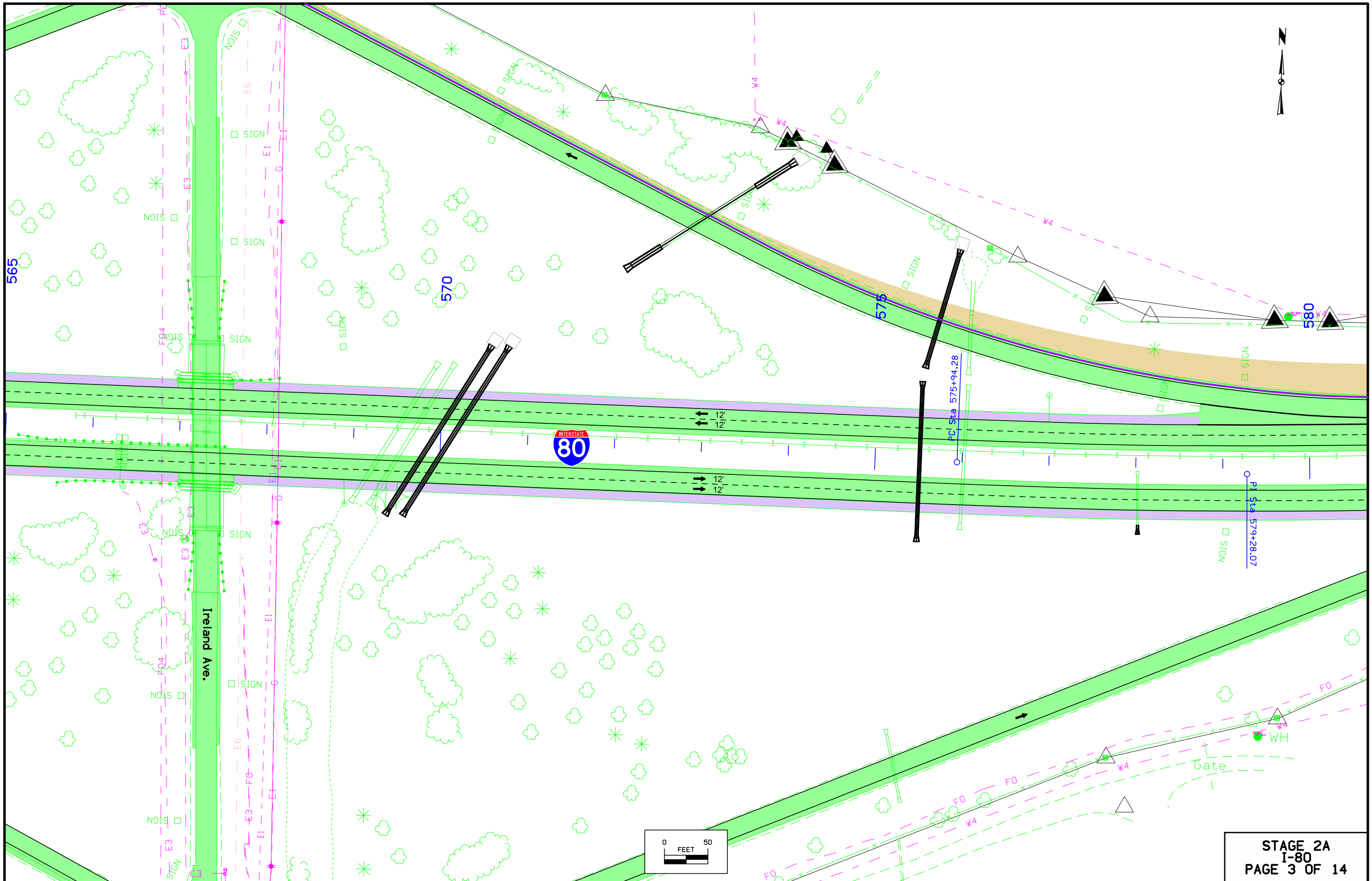
STAGE 2A
I-80
PAGE 1 OF 14



K TWP.
R-7W
S



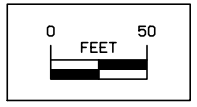
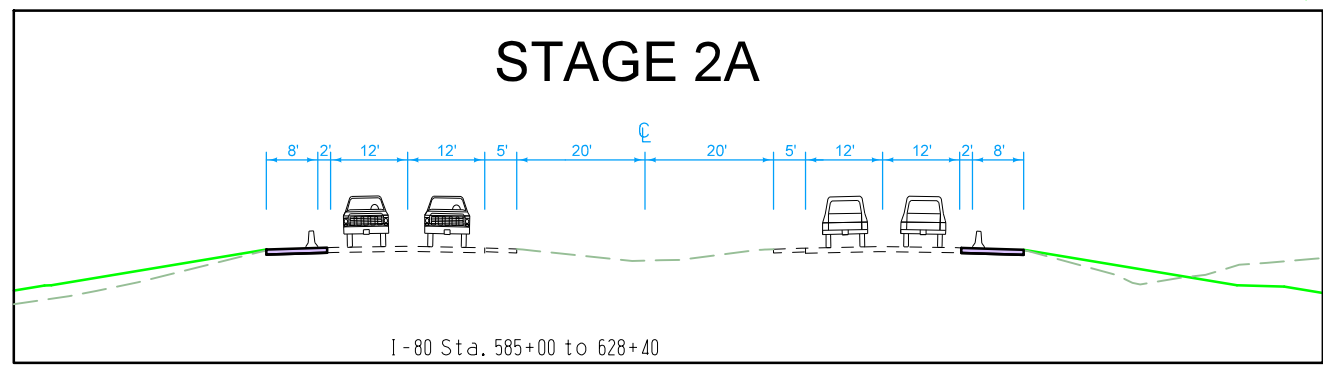
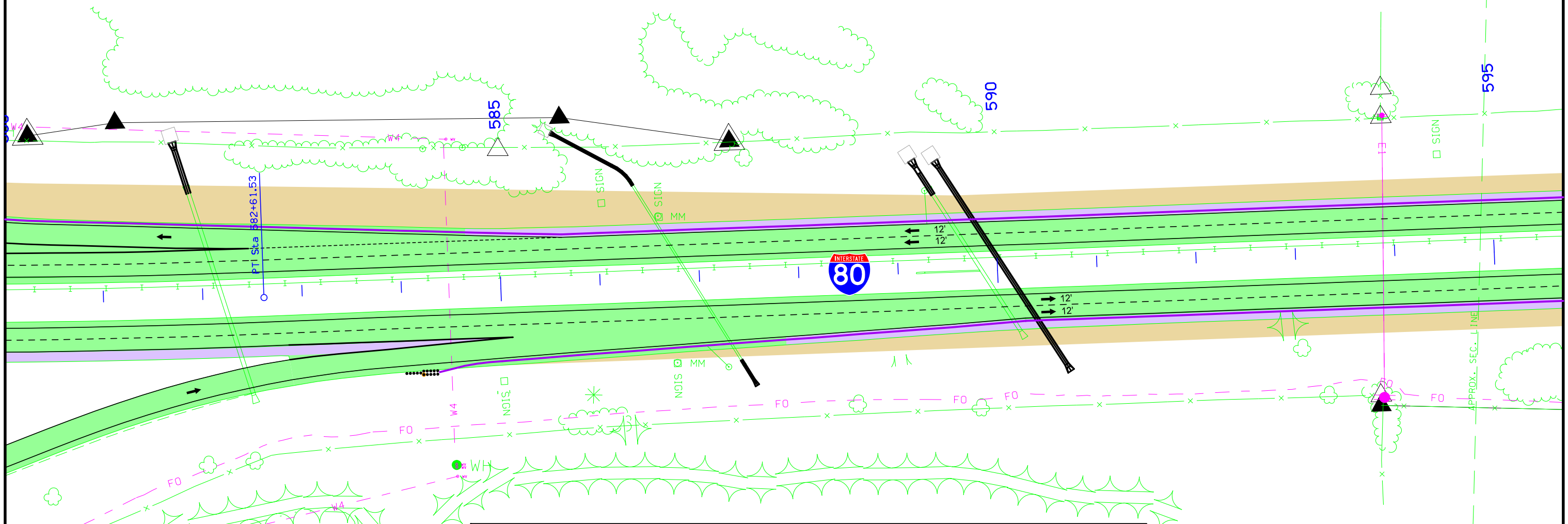
STAGE 2A
I-80
PAGE 2 OF 14



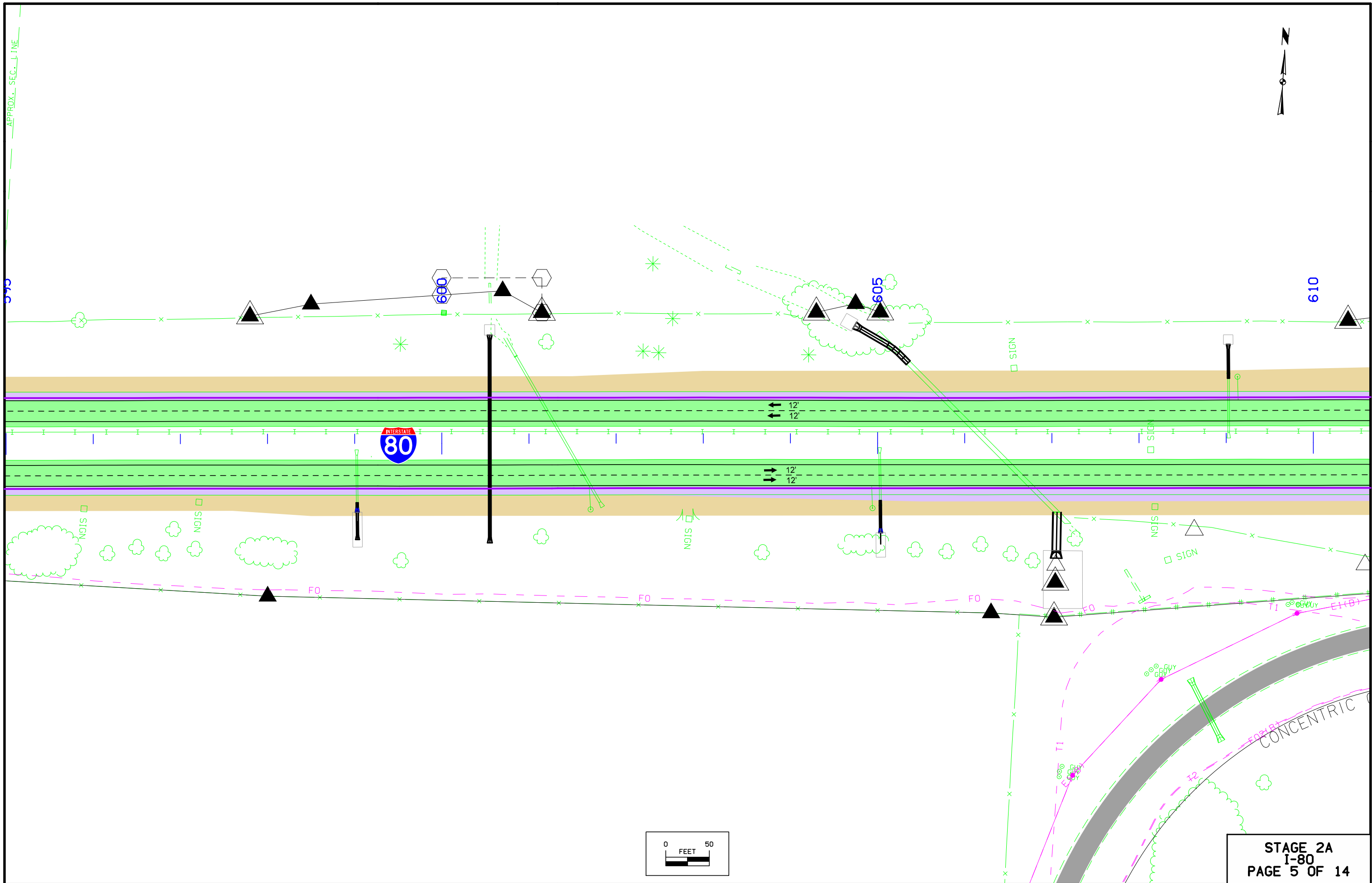
CLEAR CREEK TWP.
T-80N R-7W
SEC. 33



APPROX. SEC. LINE

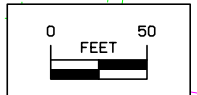
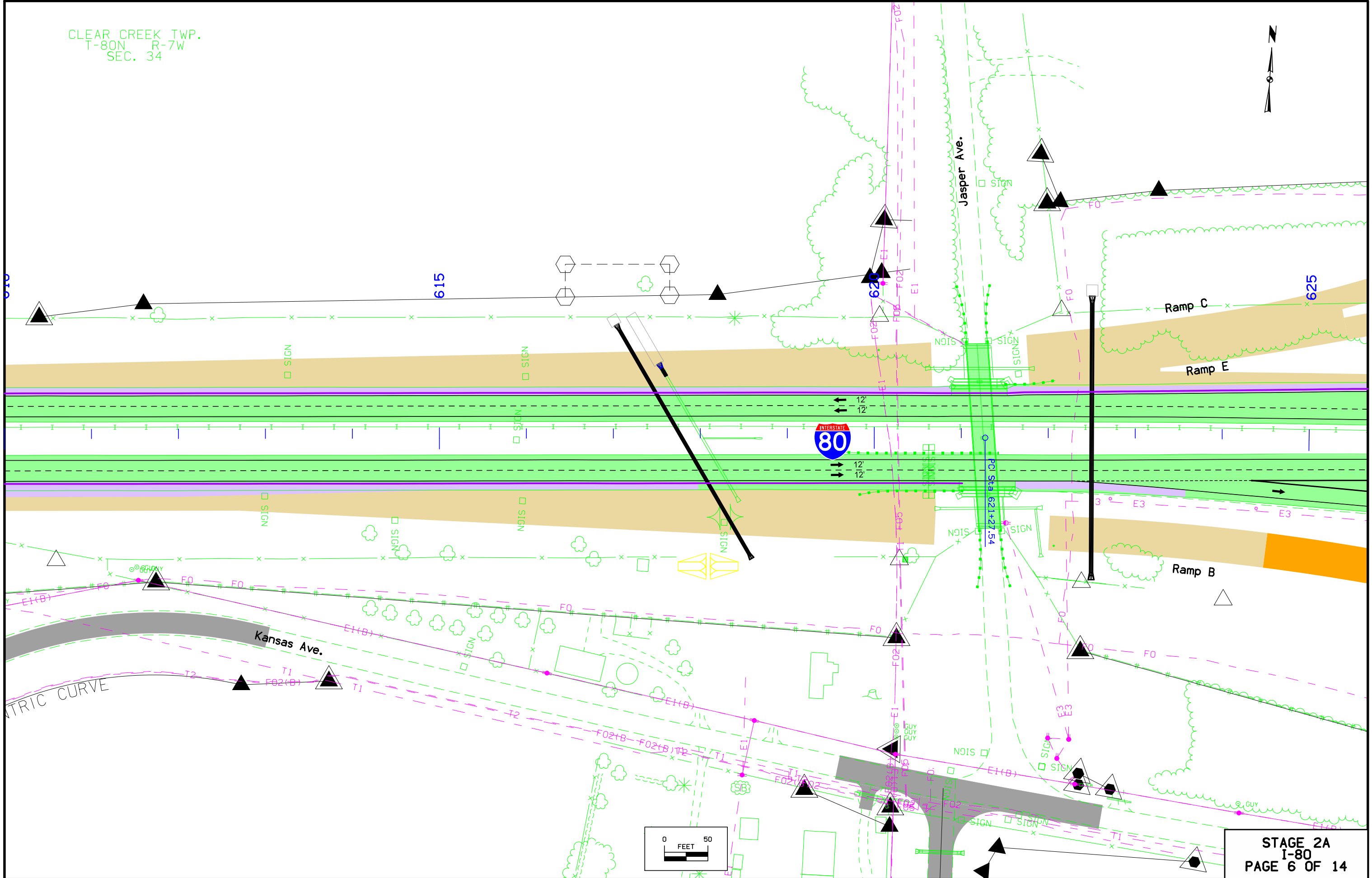


STAGE 2A
I-80
 PAGE 4 OF 14

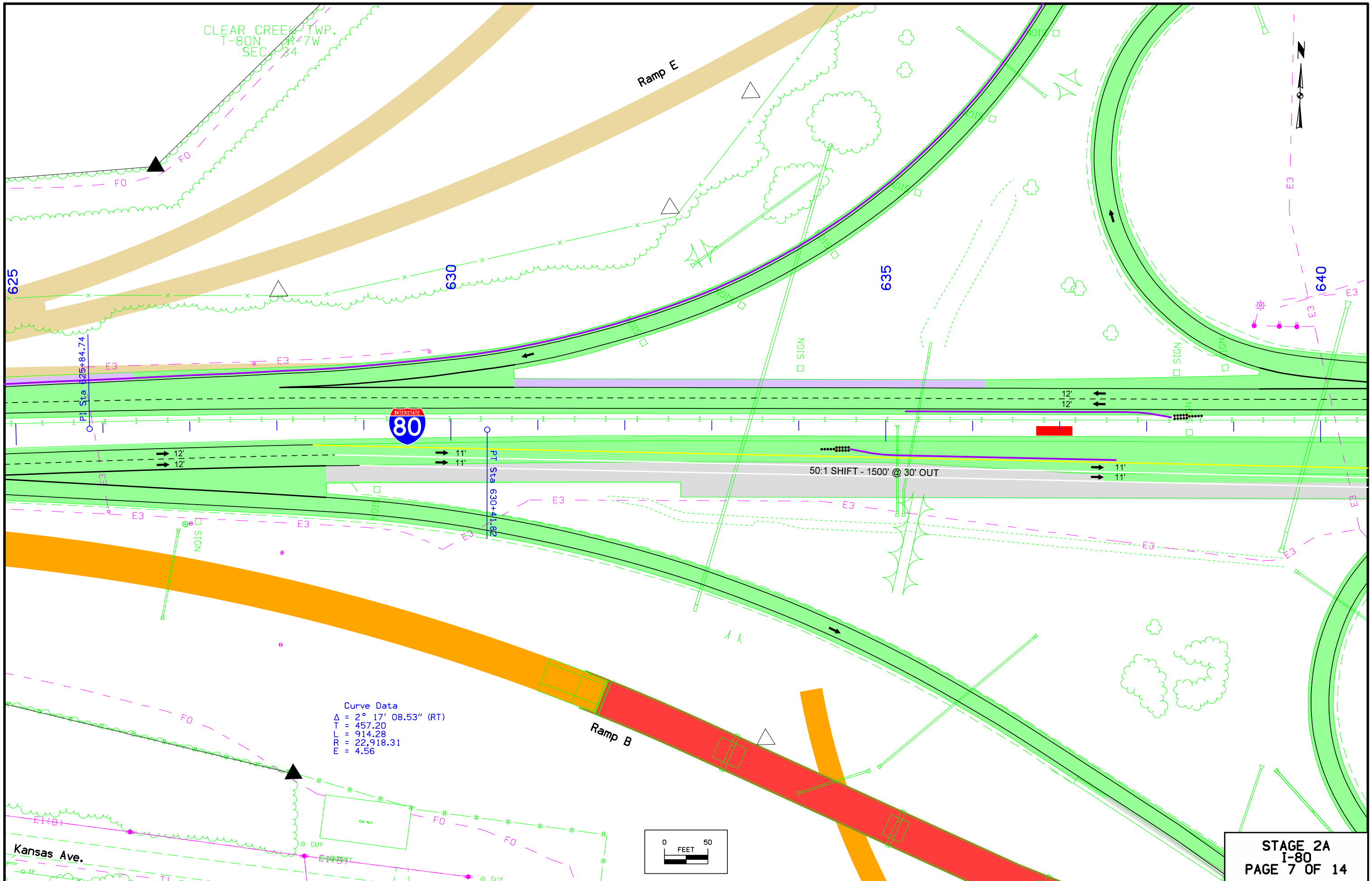


STAGE 2A
I-80
PAGE 5 OF 14

CLEAR CREEK TWP.
T-80N R-7W
SEC. 34



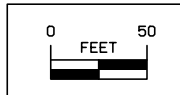
STAGE 2A
I-80
PAGE 6 OF 14



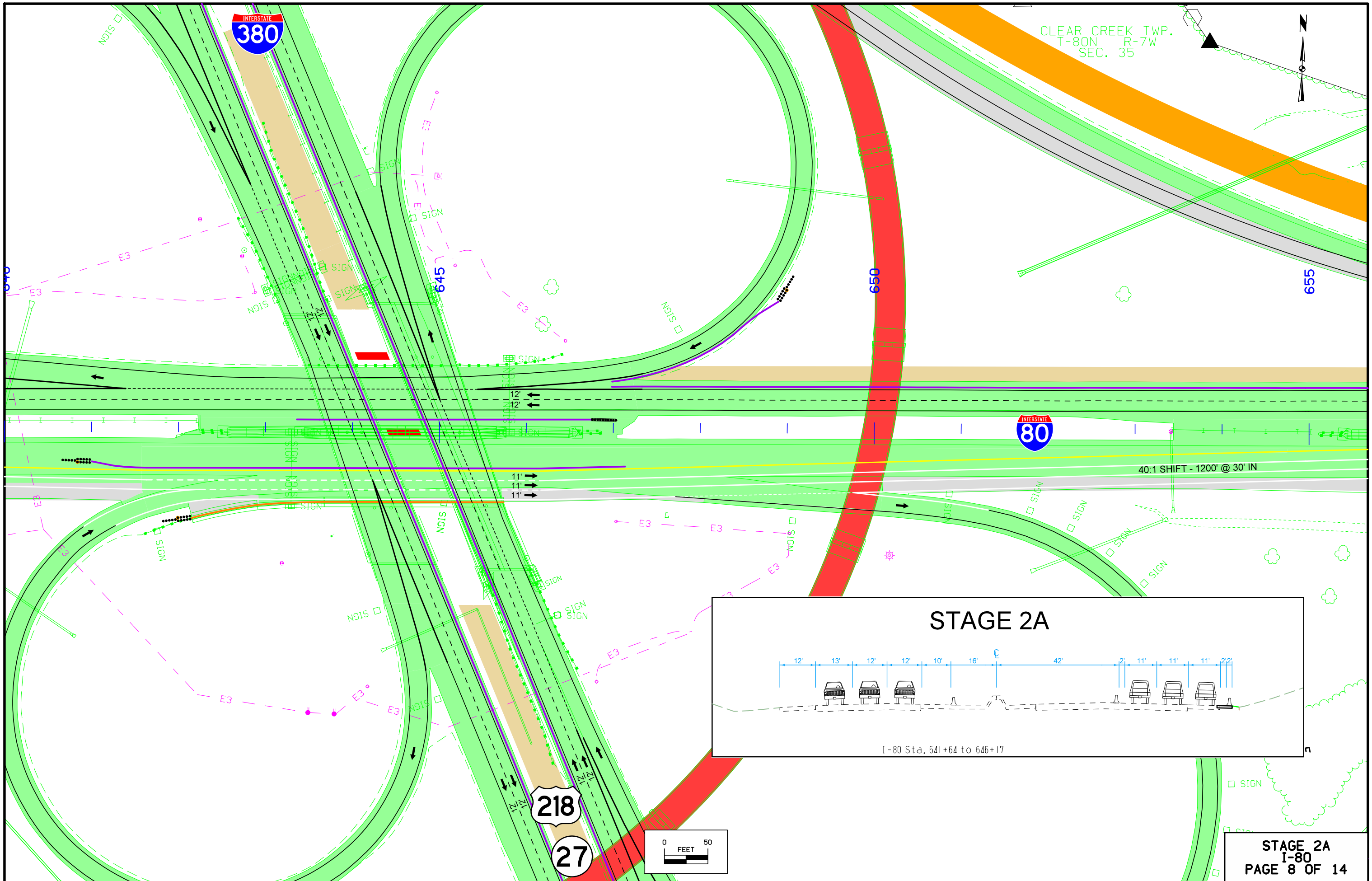
CLEAR CREEK TWP.
T-80N R-7W
SEC. 34



Curve Data
 $\Delta = 2^\circ 17' 08.53''$ (RT)
 $T = 457.20$
 $L = 914.28$
 $R = 22,918.31$
 $E = 4.56$



STAGE 2A
I-80
PAGE 7 OF 14



CLEAR CREEK TWP.
T-80N R-7W
SEC. 35

INTERSTATE
380

INTERSTATE
80

218

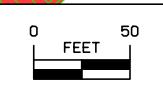
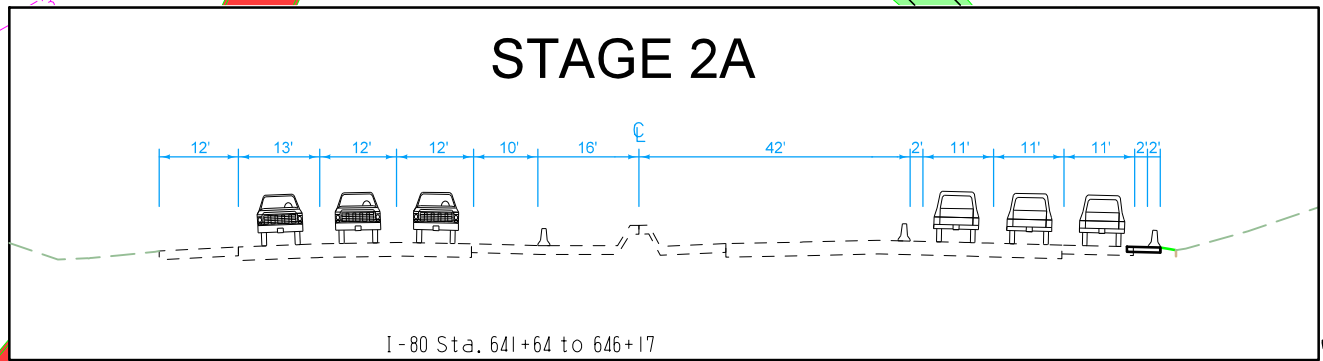
27

645

650

655

40:1 SHIFT - 1200' @ 30' IN

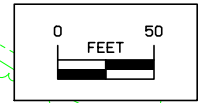
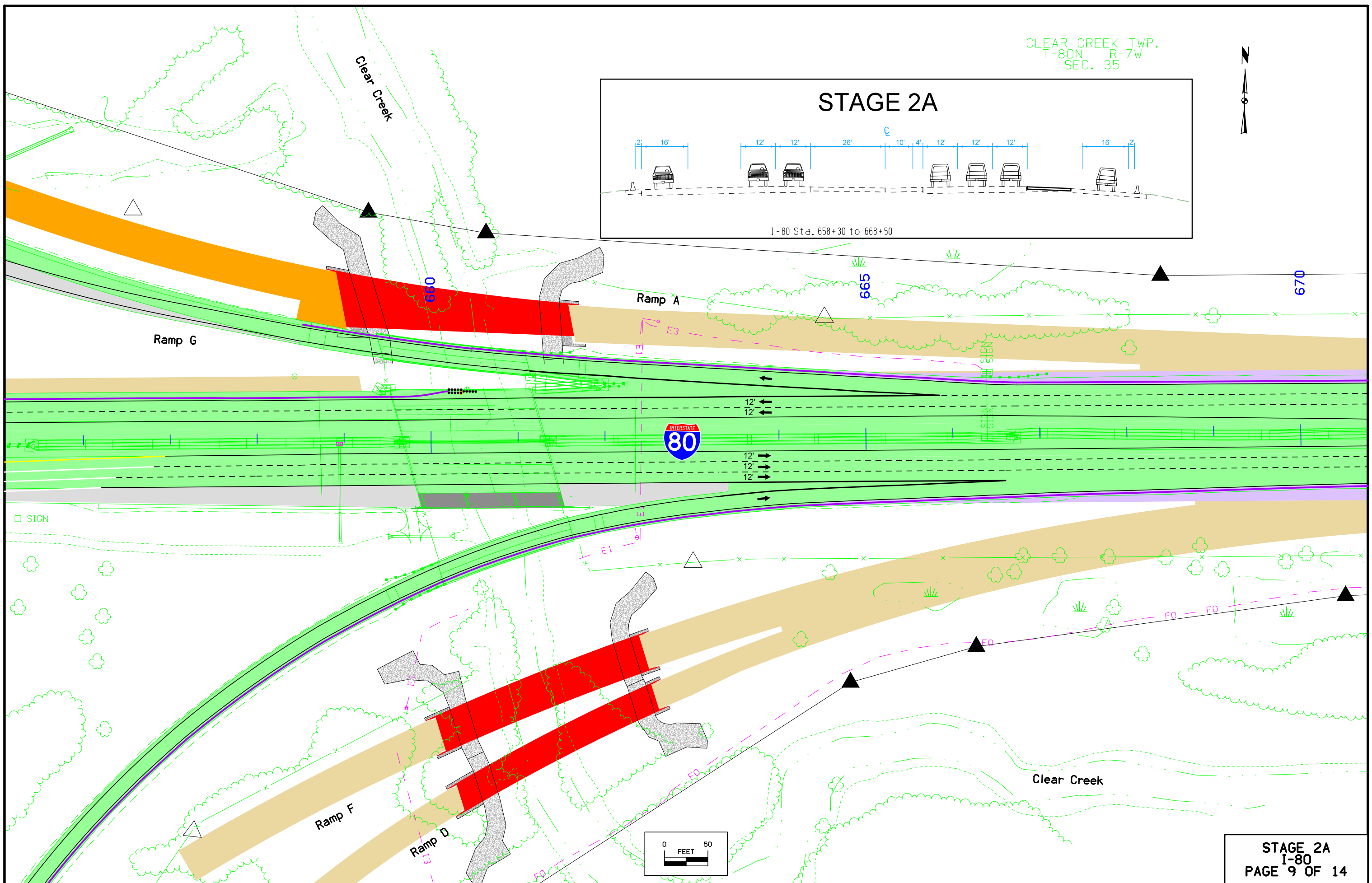
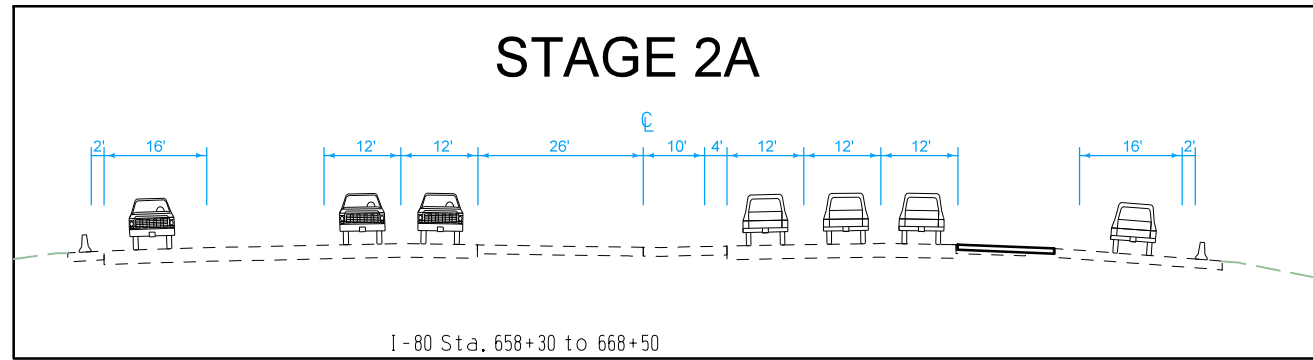


STAGE 2A
I-80
PAGE 8 OF 14

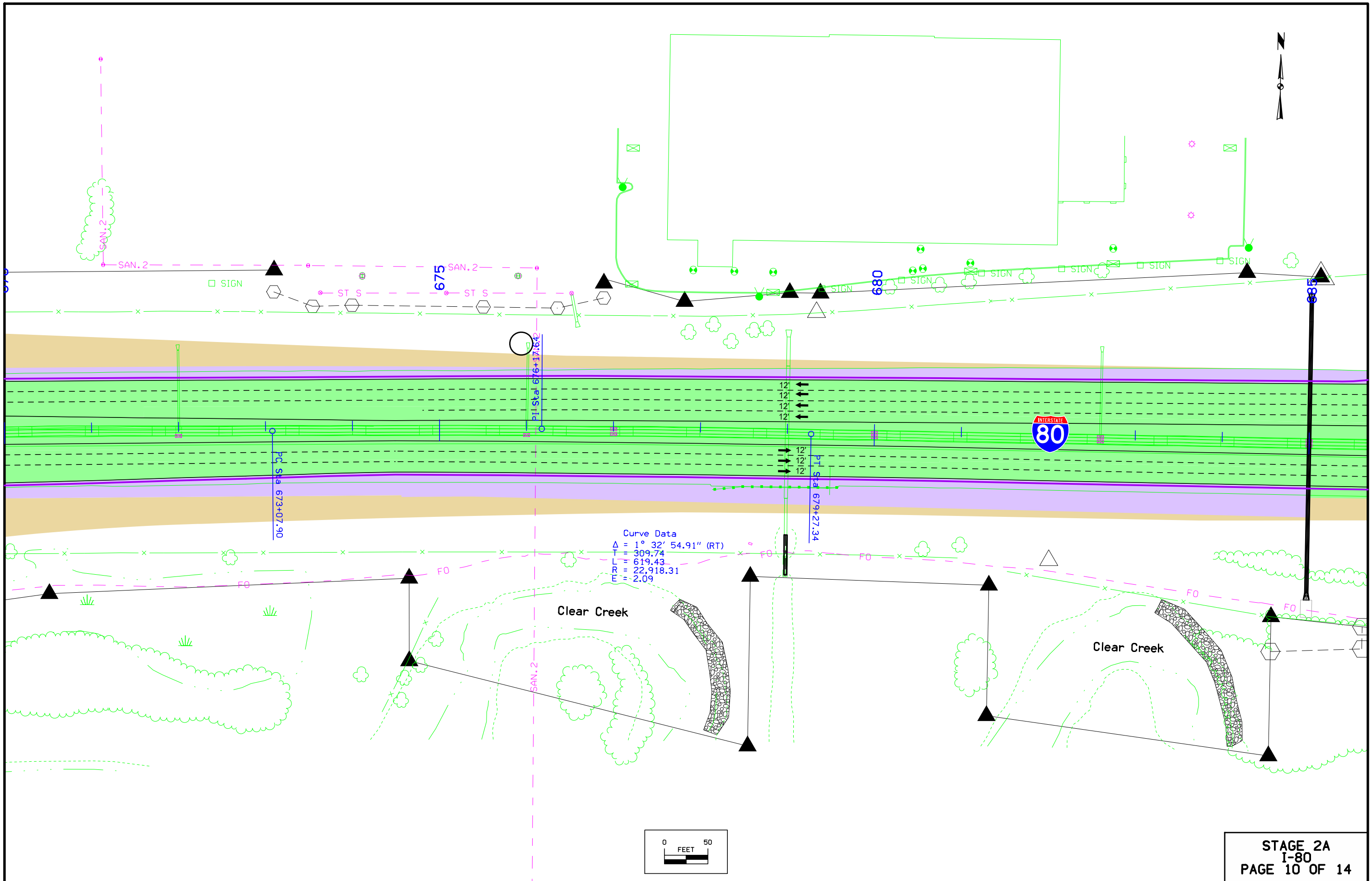
CLEAR CREEK TWP.
T-80N R-7W
SEC. 35



STAGE 2A

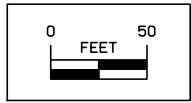
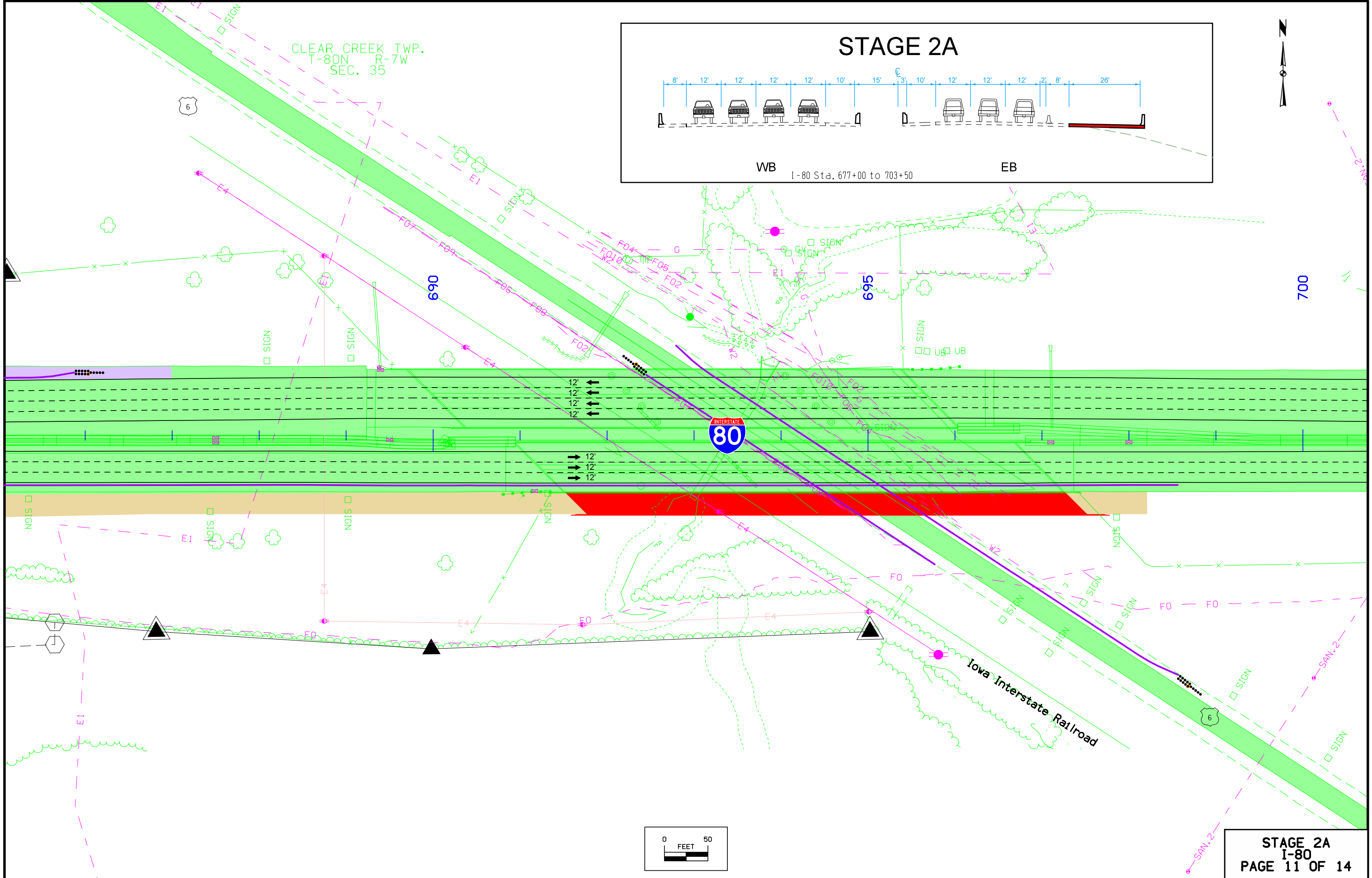
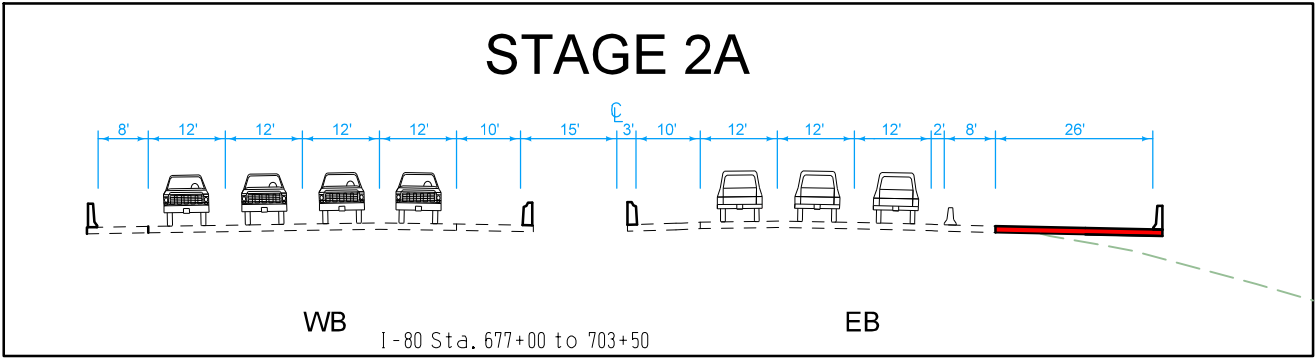


STAGE 2A
I-80
PAGE 9 OF 14

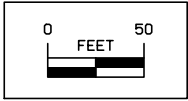
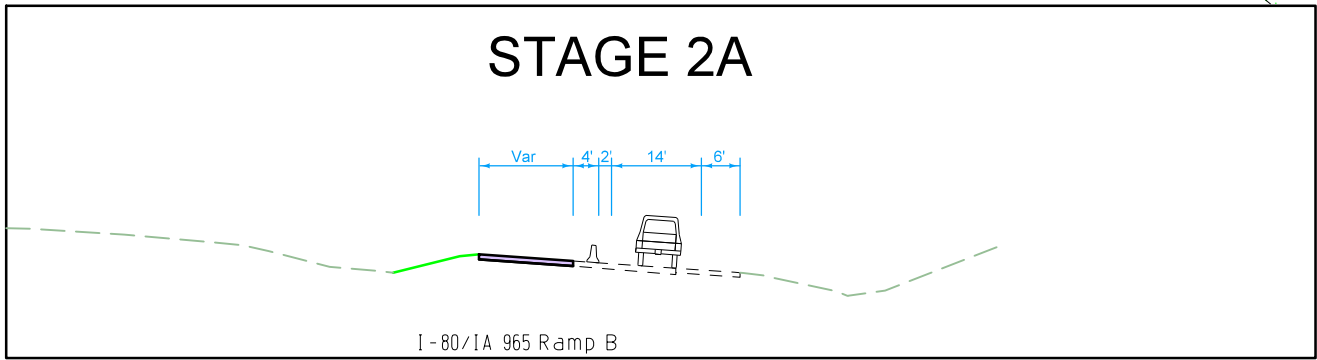
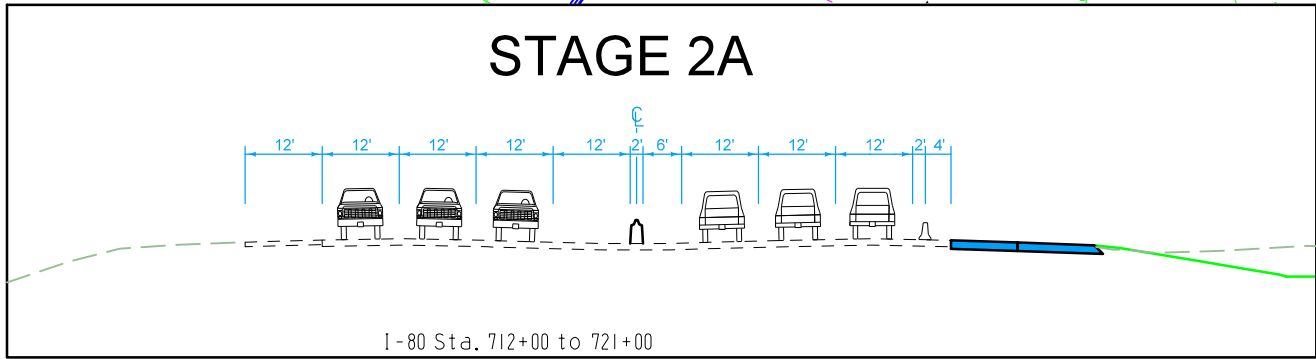
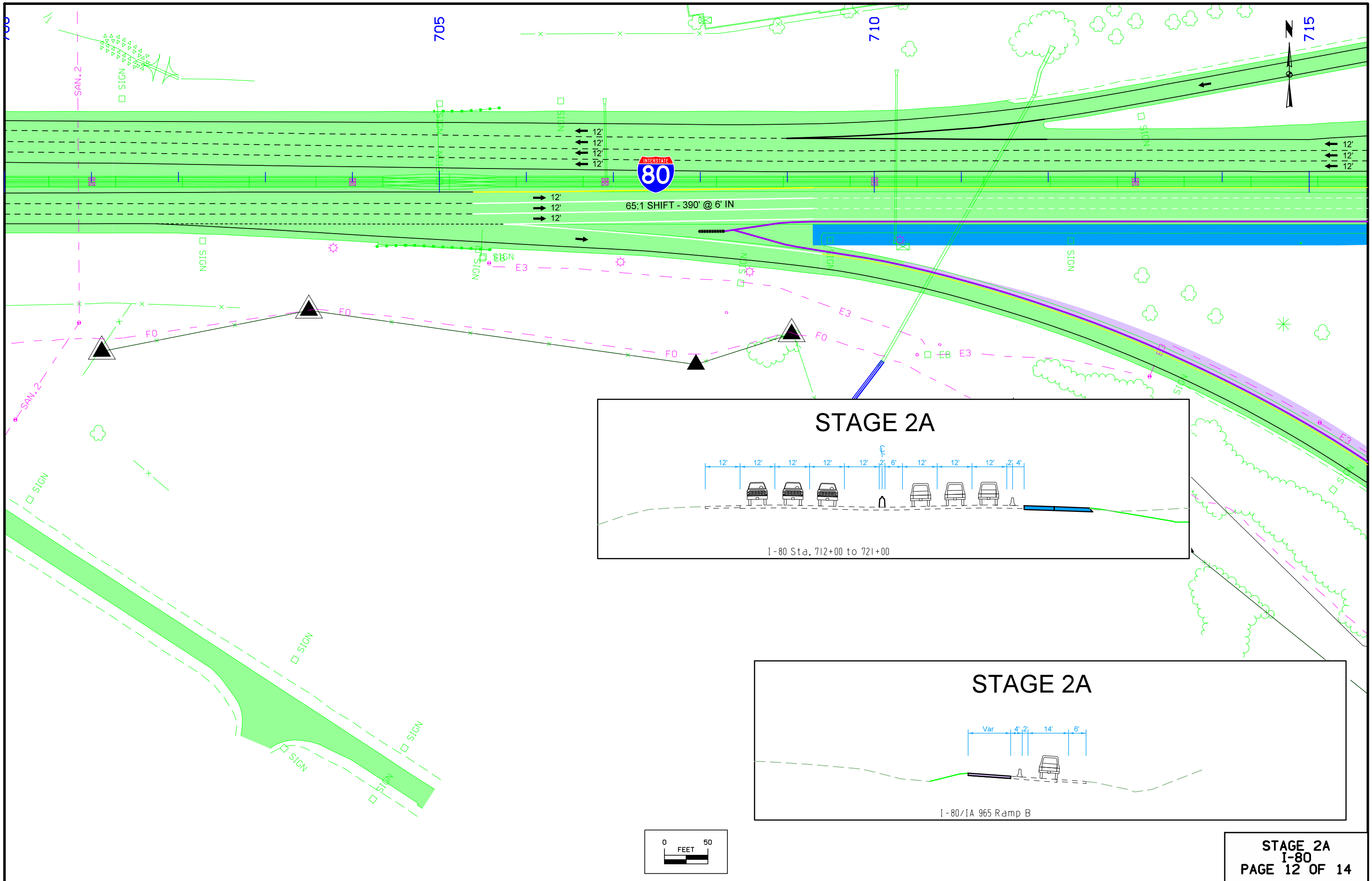


CLEAR CREEK TWP.
T-80N R-7W
SEC. 35

STAGE 2A



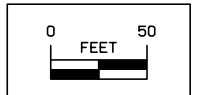
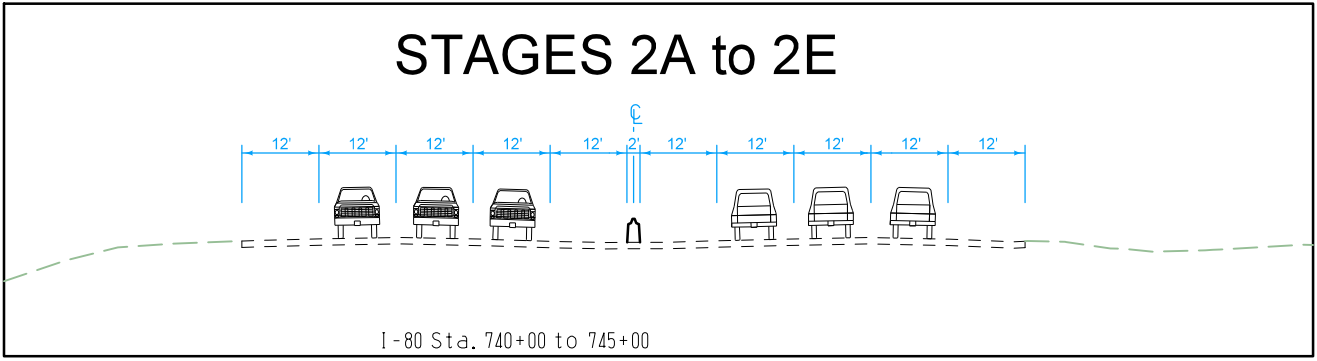
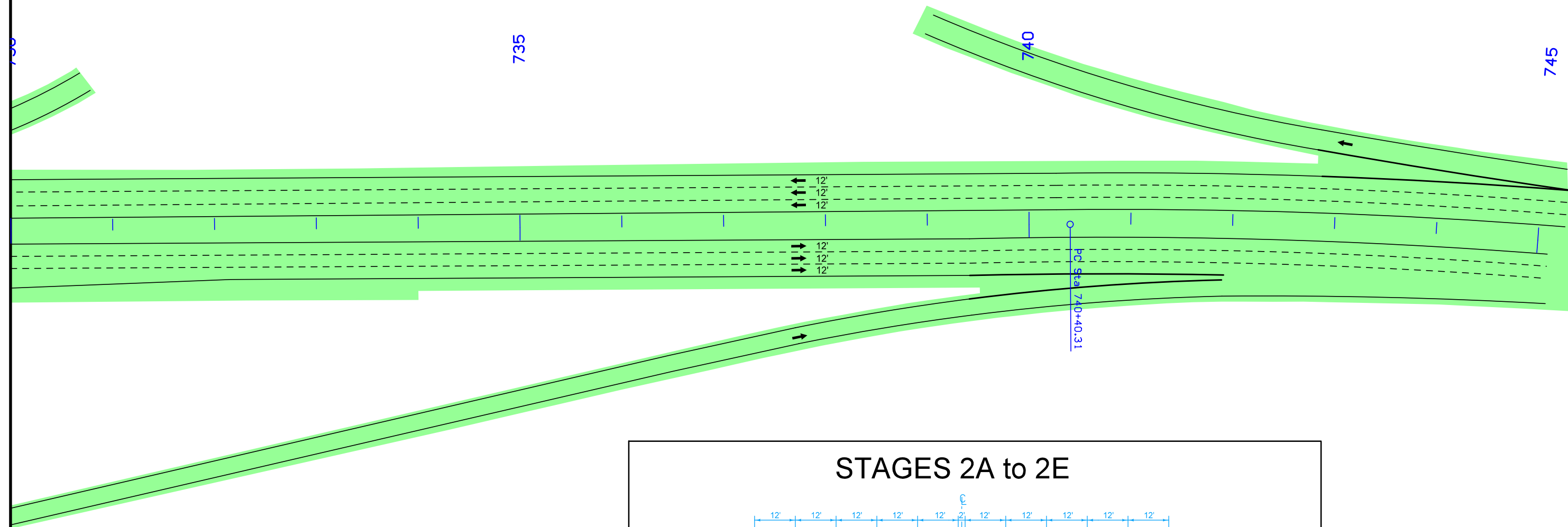
STAGE 2A
I-80
PAGE 11 OF 14



STAGE 2A
I-80
PAGE 12 OF 14

CLEAR CREEK TWP.
T-80N R-7W
SEC. 36

Curve Data
 $\Delta = 17^\circ 48' 28.25''$ (RT)
T = 897.63
L = 1,780.78
R = 5,729.58
E = 69.89



STAGE 2A
I-80
PAGE 14 OF 14

CLEAR CREEK TWP.
T-79N R-7W
SEC. 2

Ruin

1080

1085

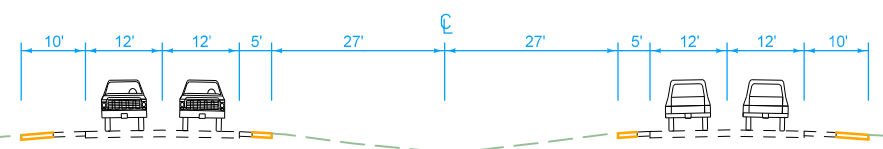
1090

POTI Sta. 1076+00.00

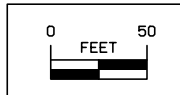
27 218

SIGN SIGN

STAGE 2A

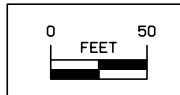
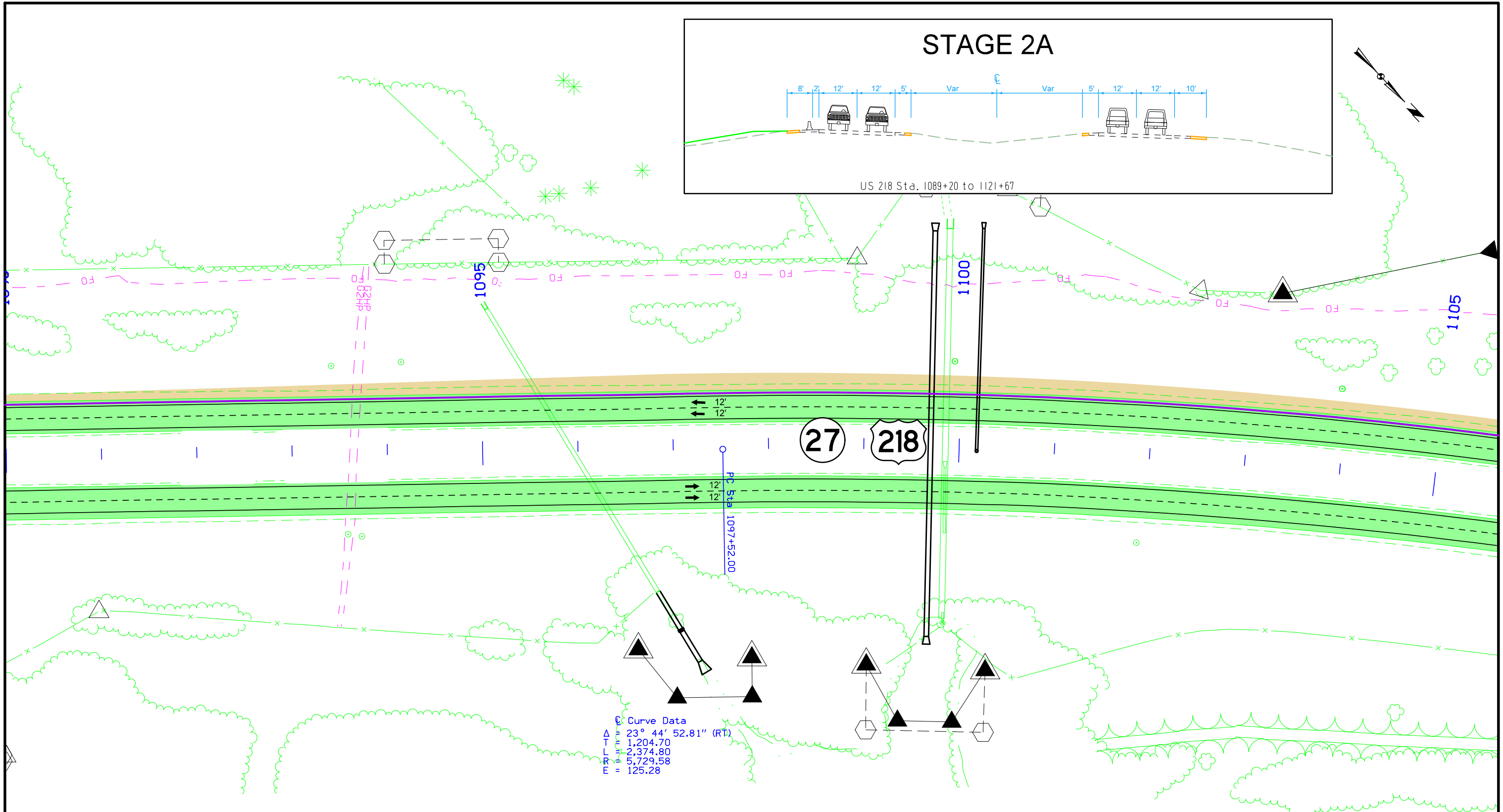
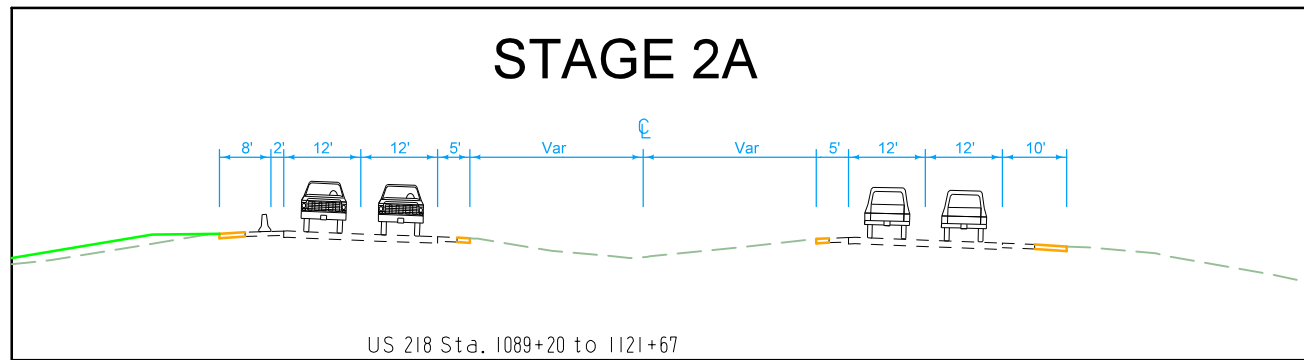


US 218 Sta. 1079+00 to 1089+20

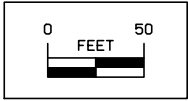
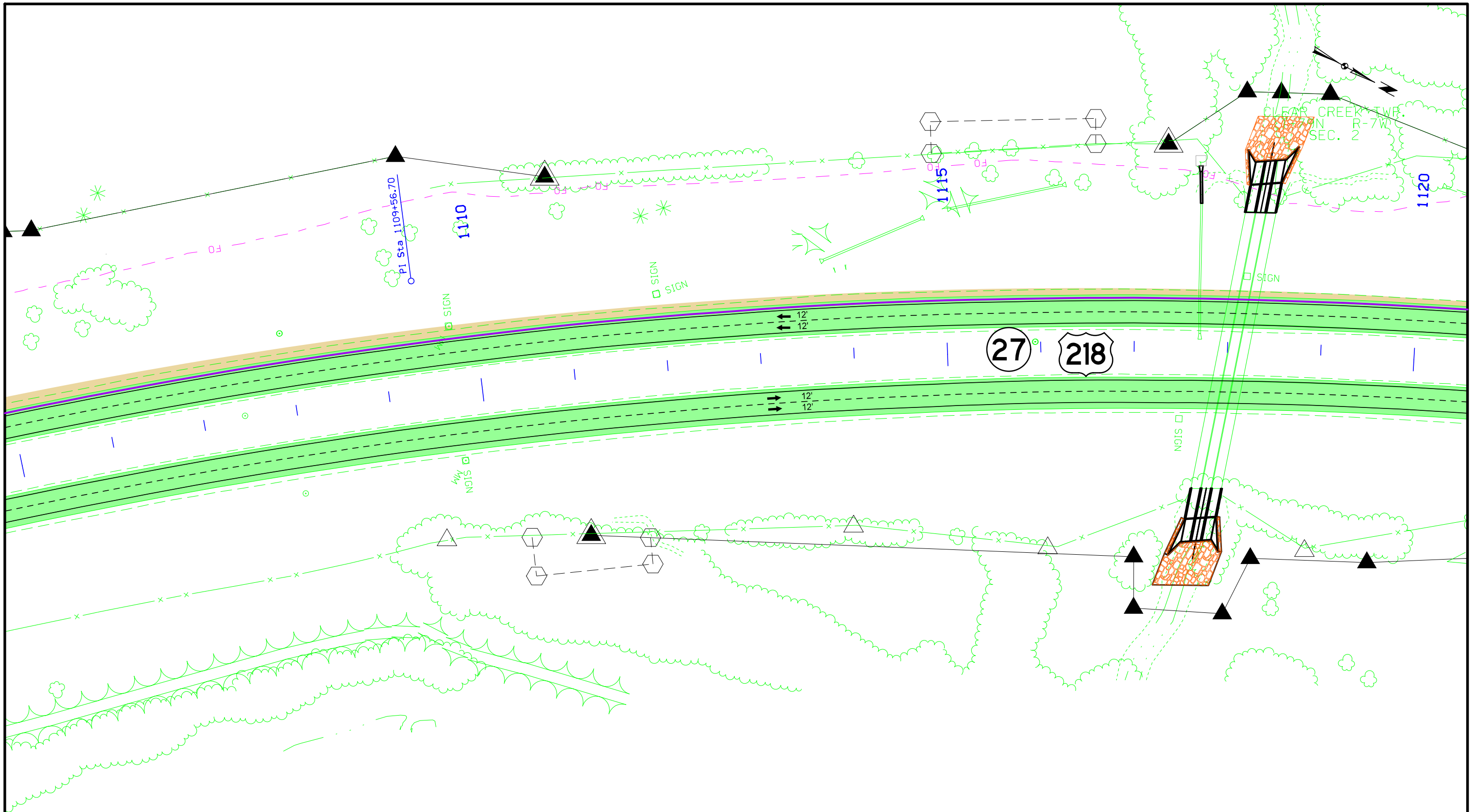


STAGE 2A
I-380/US 218
PAGE 1 OF 18

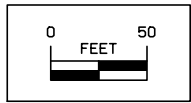
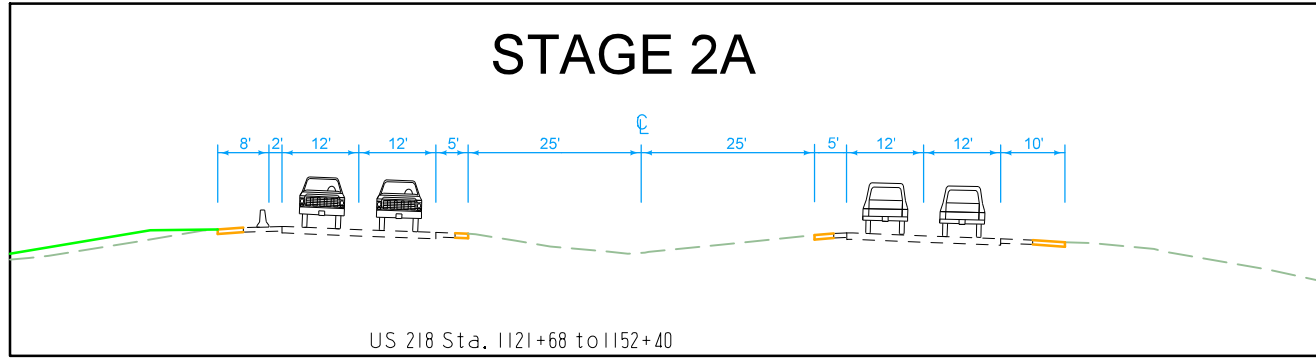
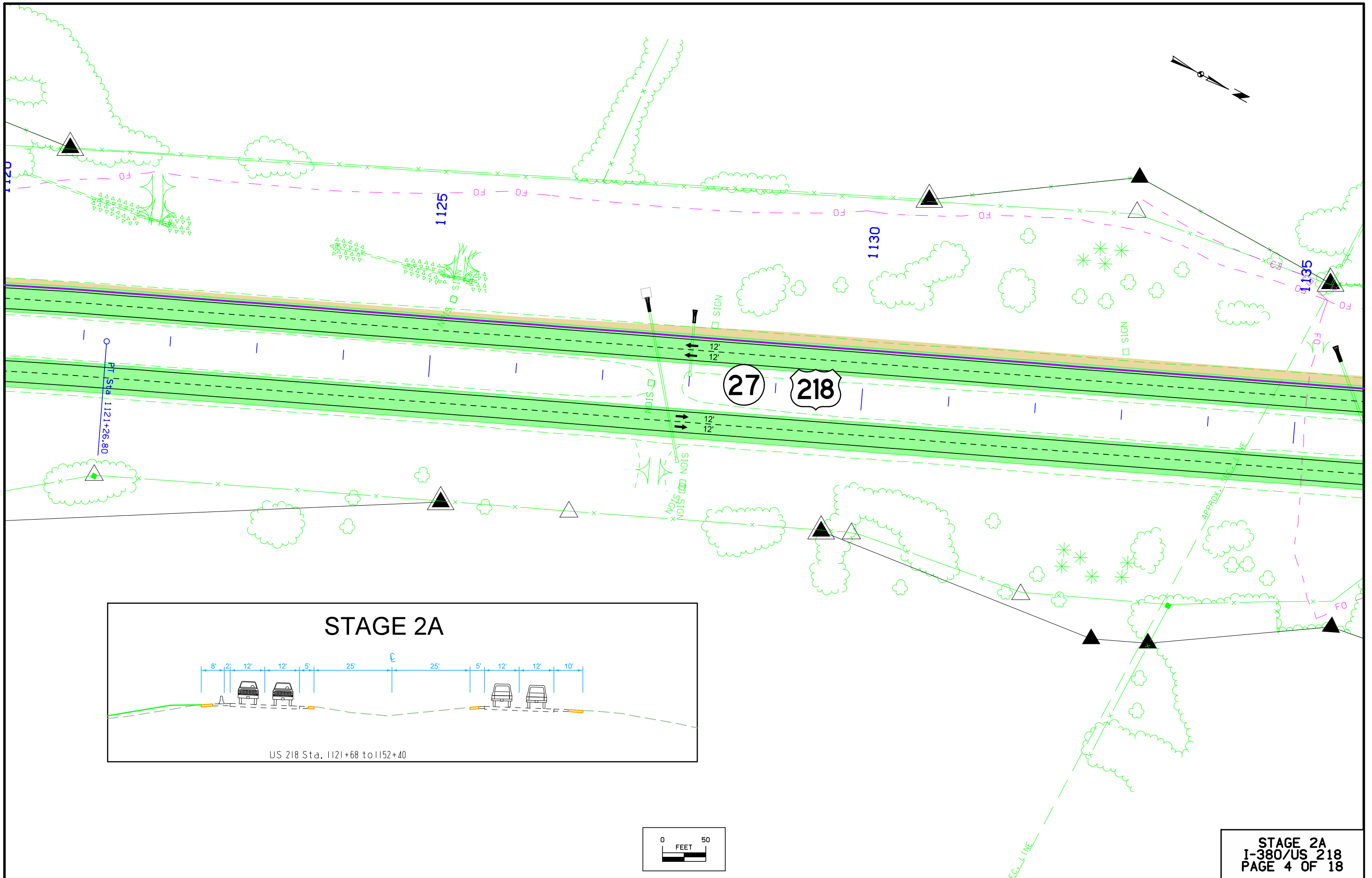
STAGE 2A



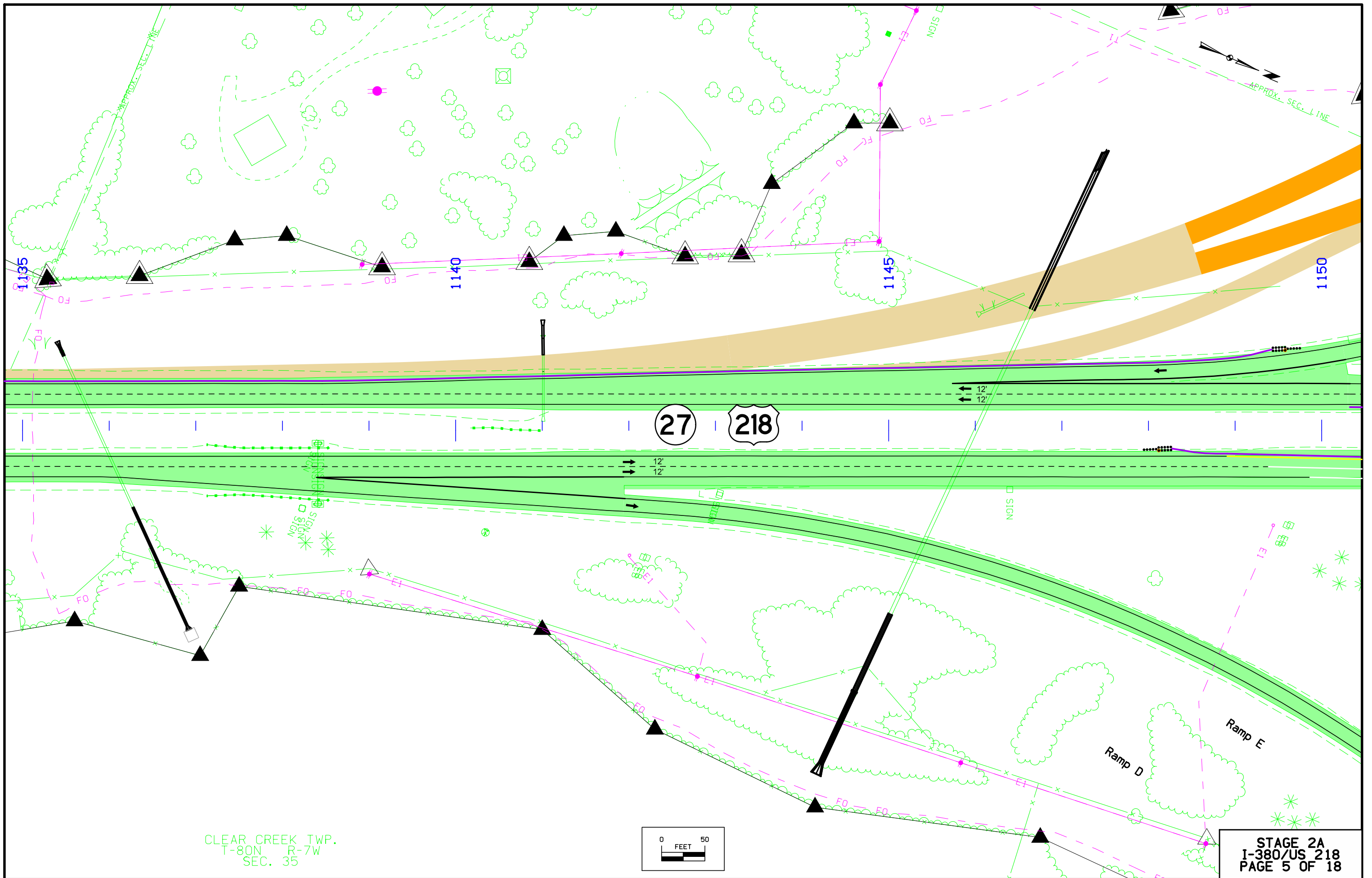
STAGE 2A
 I-380/US 218
 PAGE 2 OF 18



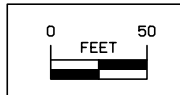
STAGE 2A
 I-380/US 218
 PAGE 3 OF 18



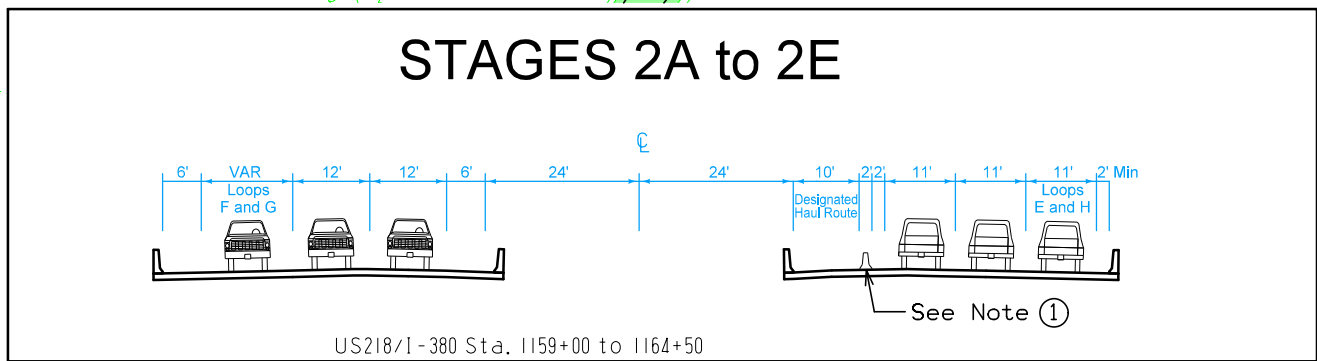
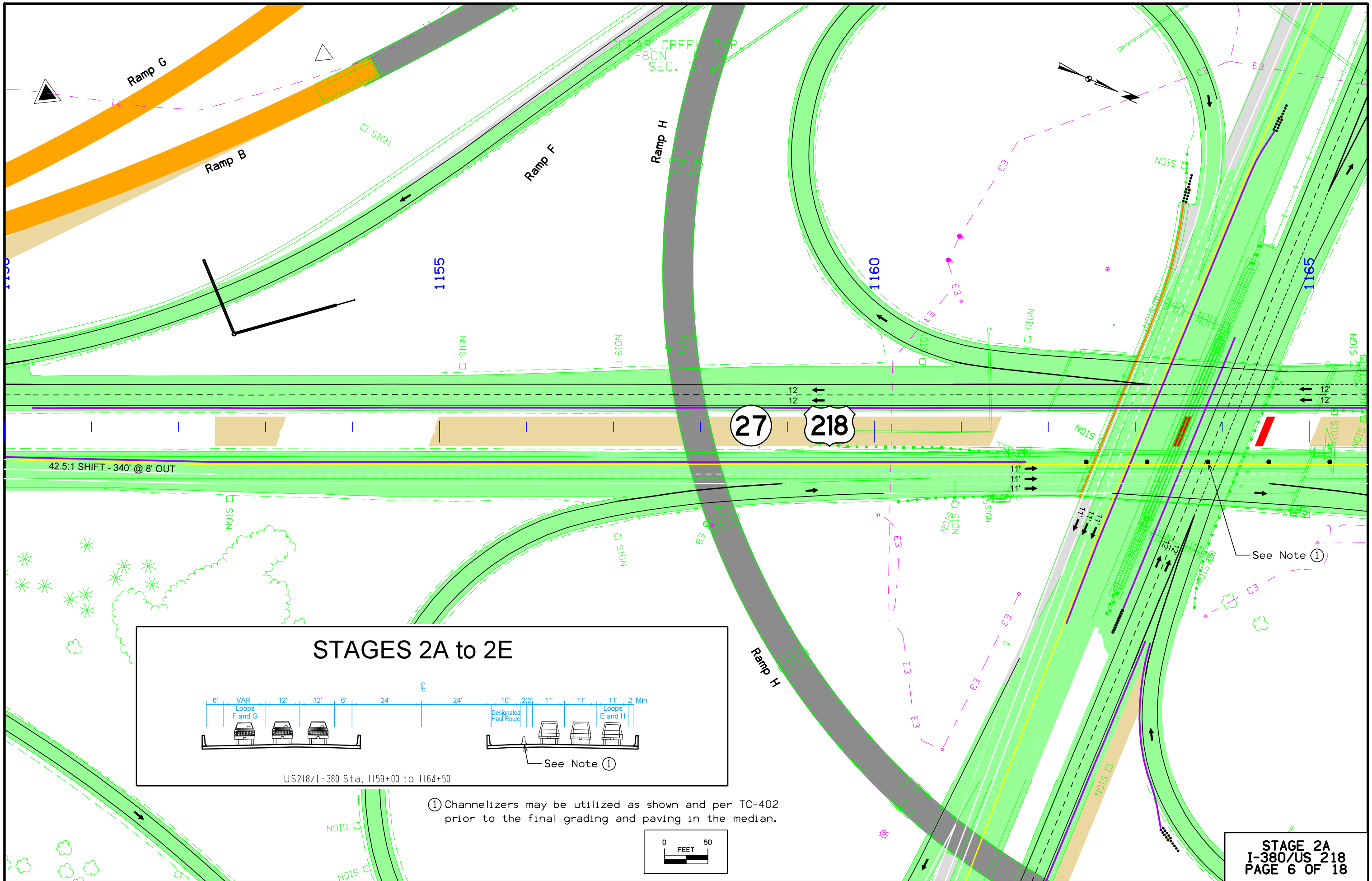
STAGE 2A
I-380/US 218
 PAGE 4 OF 18



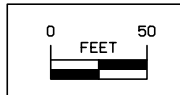
CLEAR CREEK TWP.
T-80N R-7W
SEC. 35



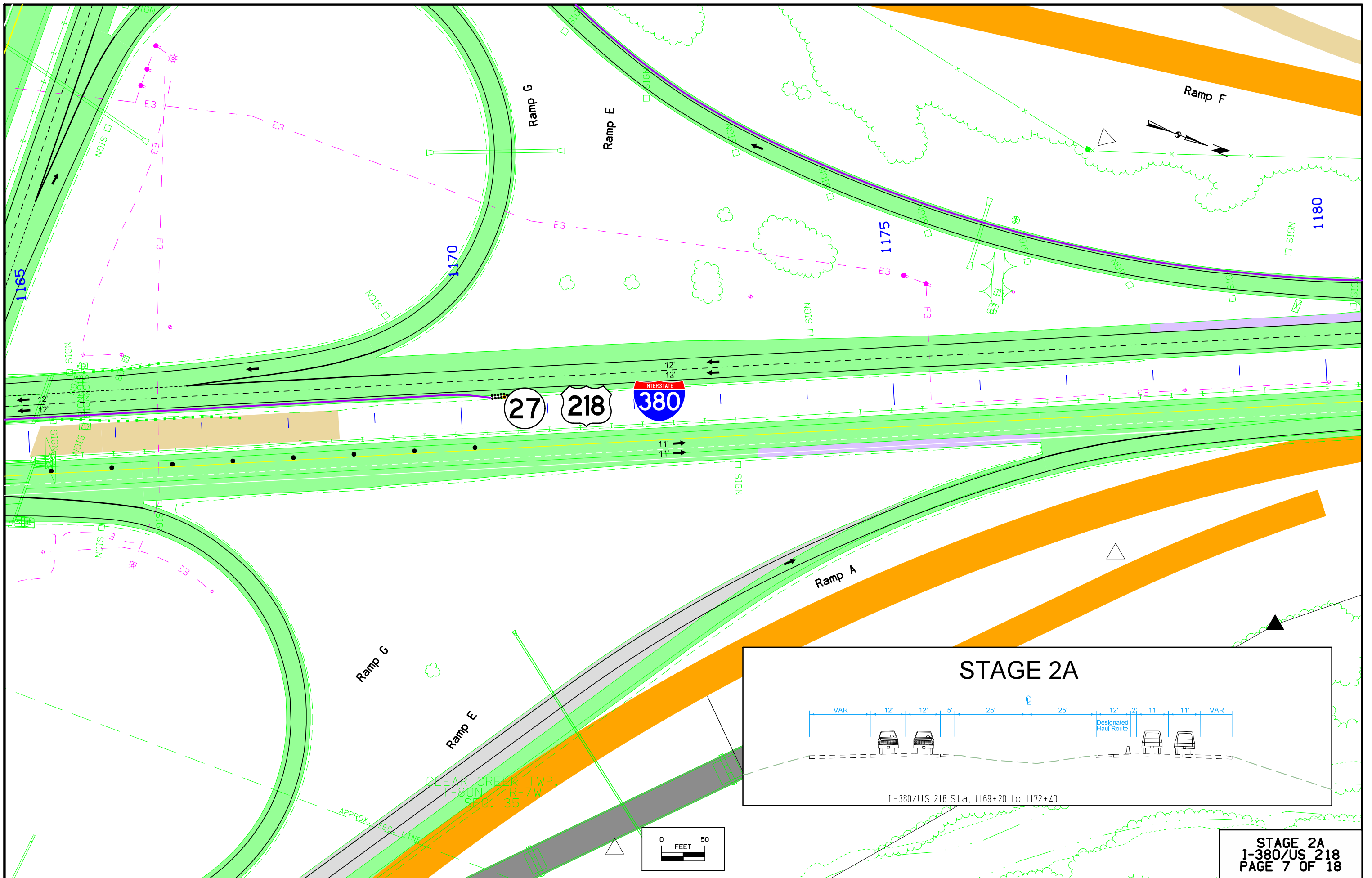
STAGE 2A
I-380/US 218
PAGE 5 OF 18



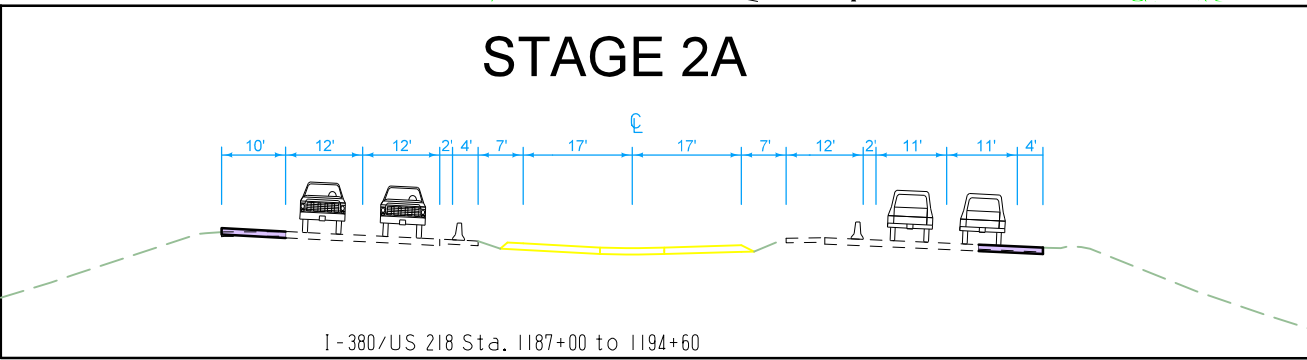
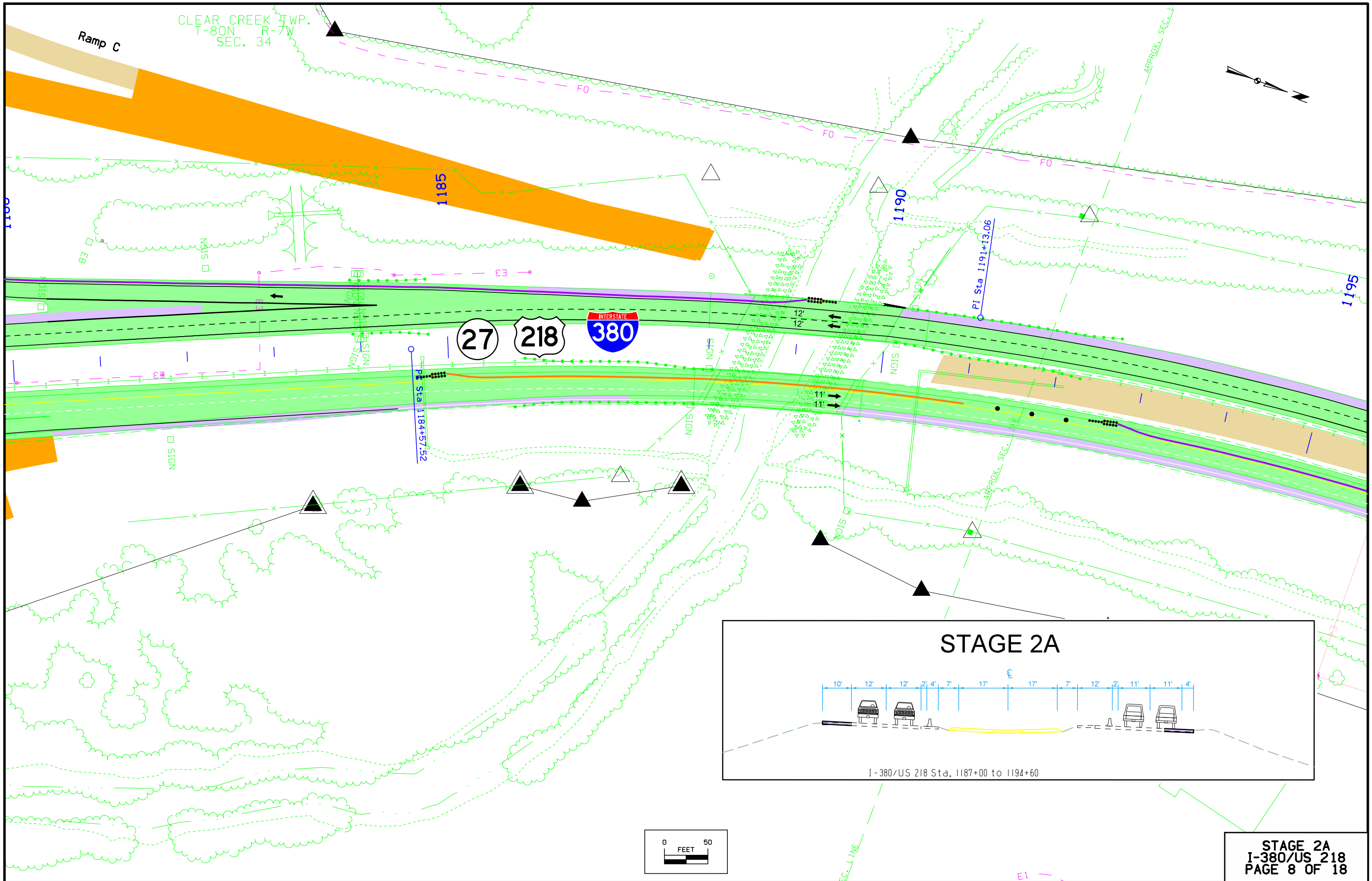
① Channelizers may be utilized as shown and per TC-402 prior to the final grading and paving in the median.



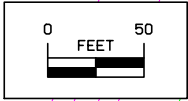
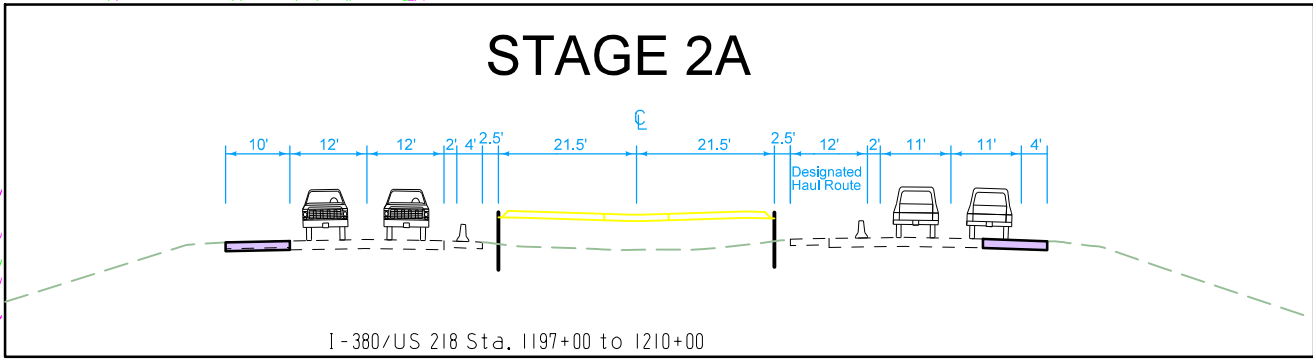
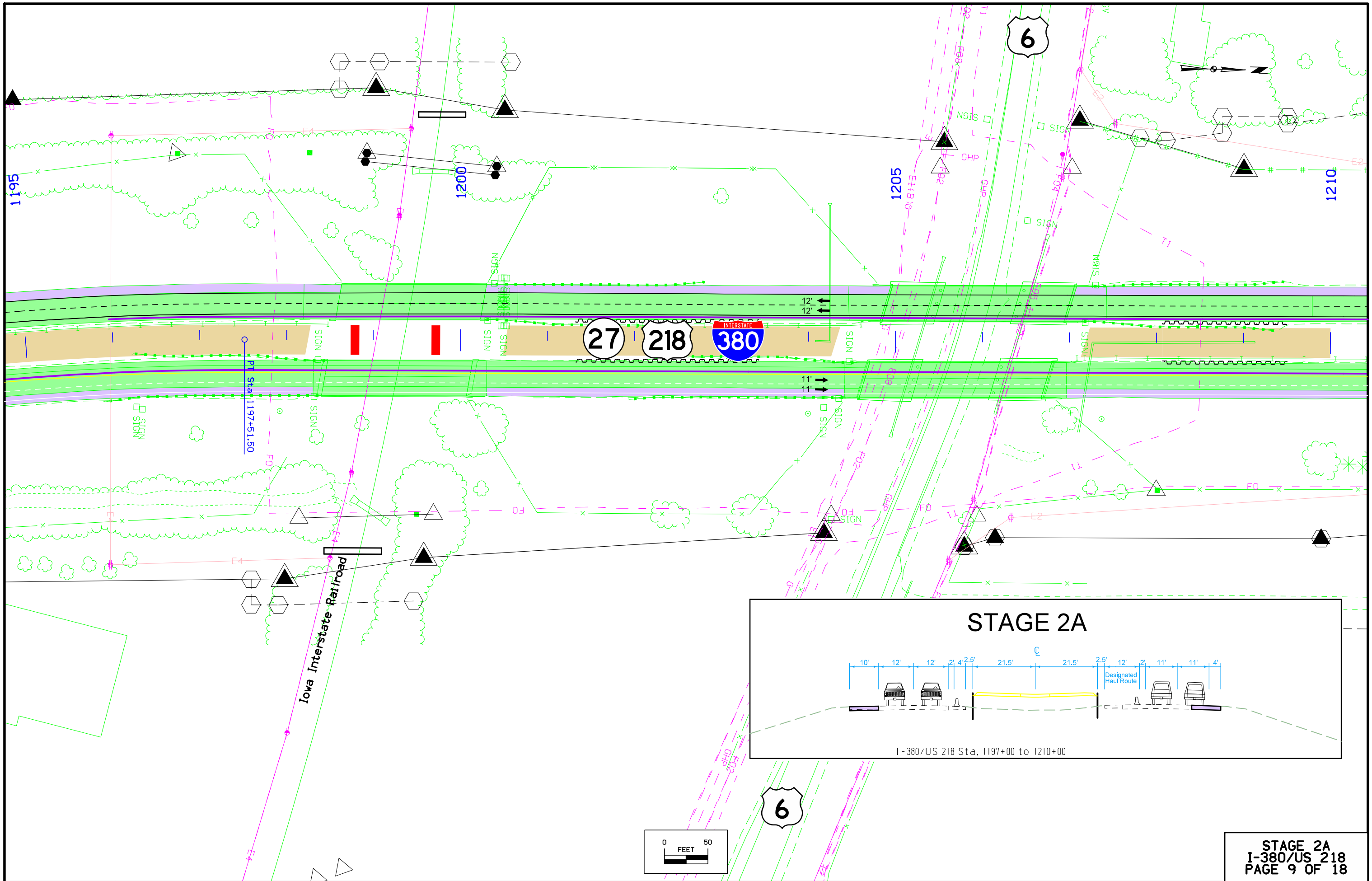
STAGE 2A
I-380/US 218
PAGE 6 OF 18



Changed by Addenda

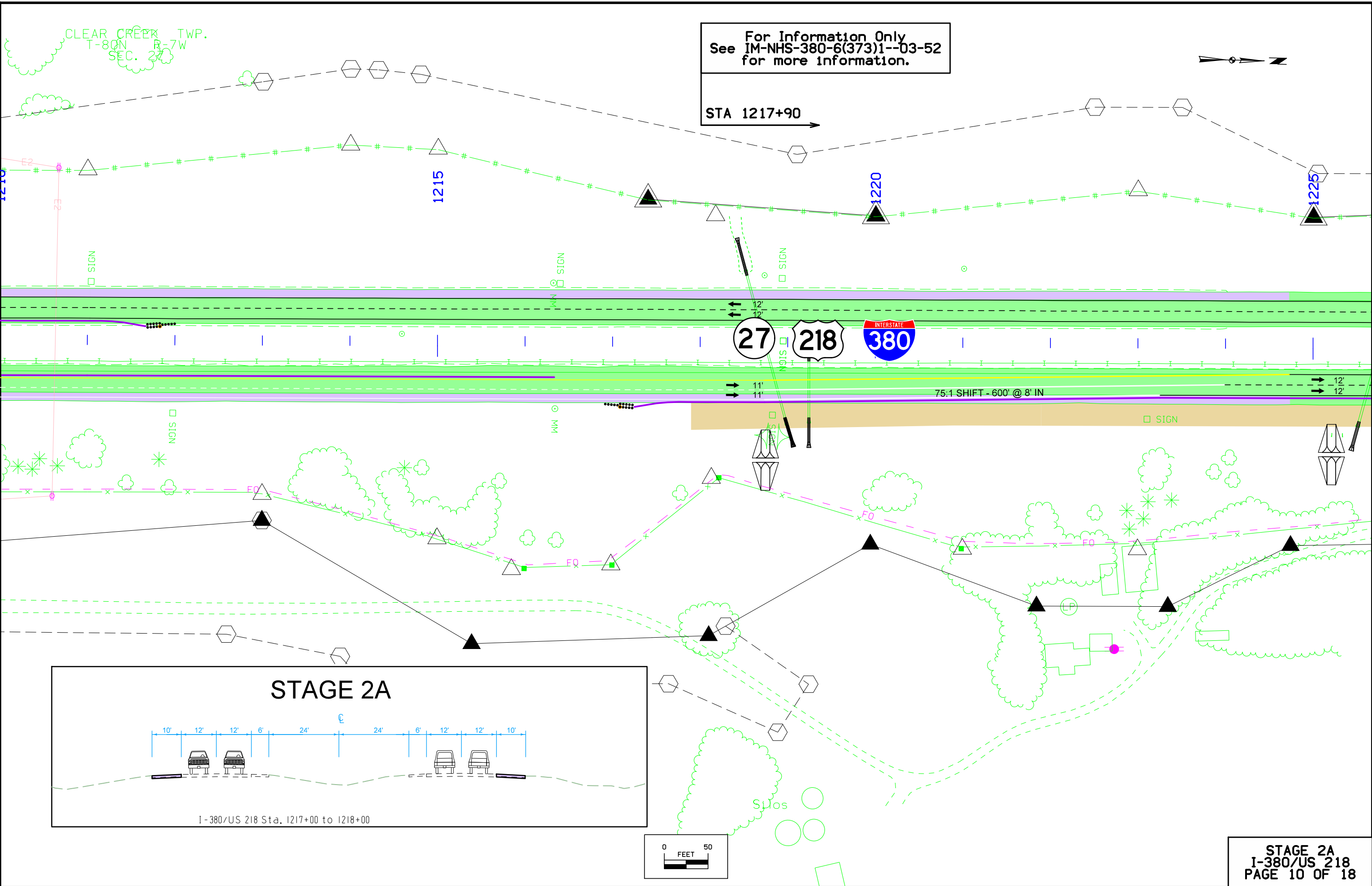


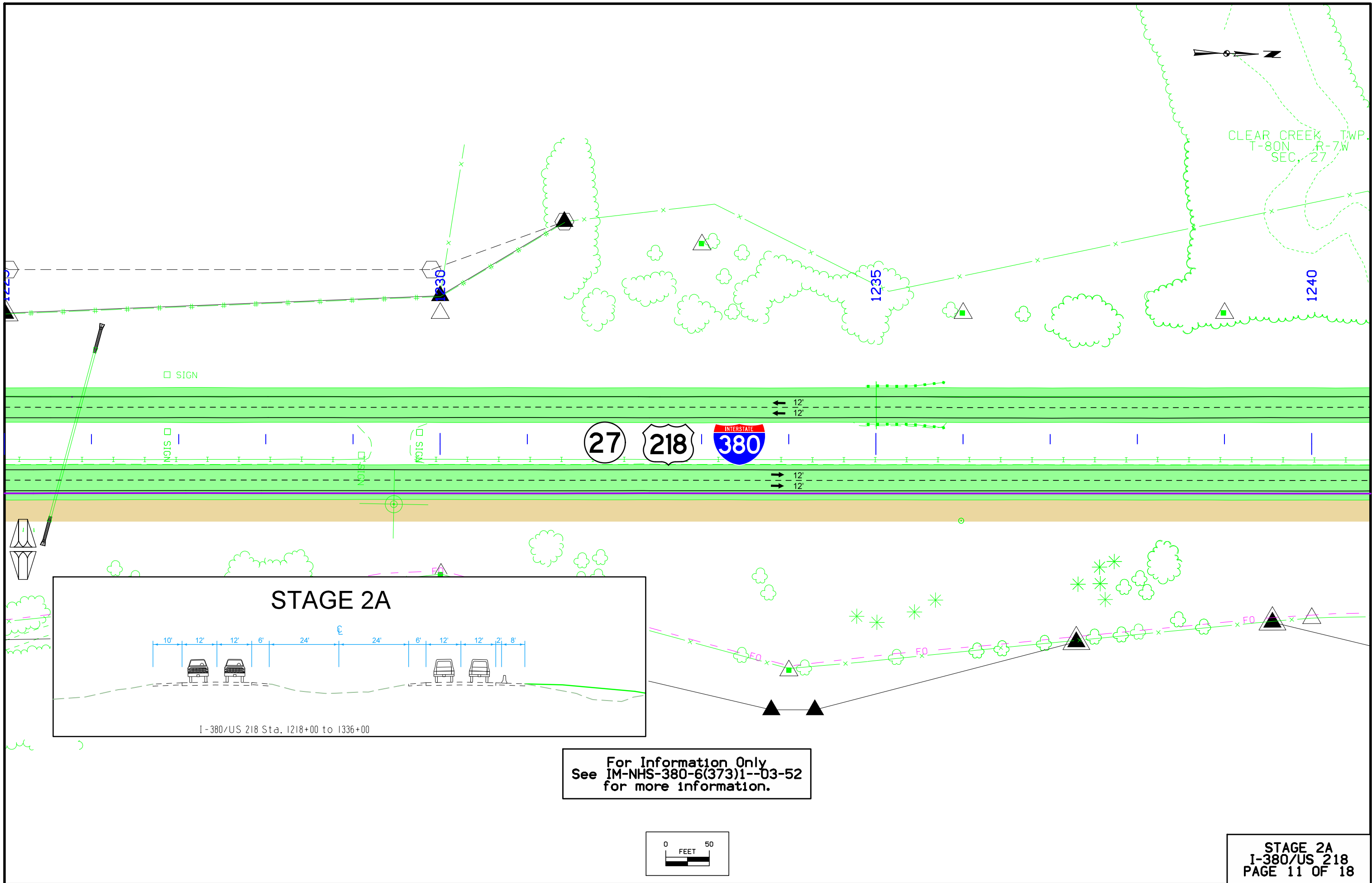
STAGE 2A
I-380/US 218
PAGE 8 OF 18



STAGE 2A
I-380/US 218
PAGE 9 OF 18

Changed by Addenda





CLEAR CREEK TWP.
T-80N R-7W
SEC 27

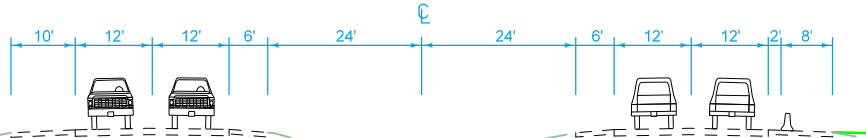
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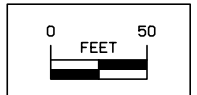
27 218 380 INTERSTATE

STAGE 2A

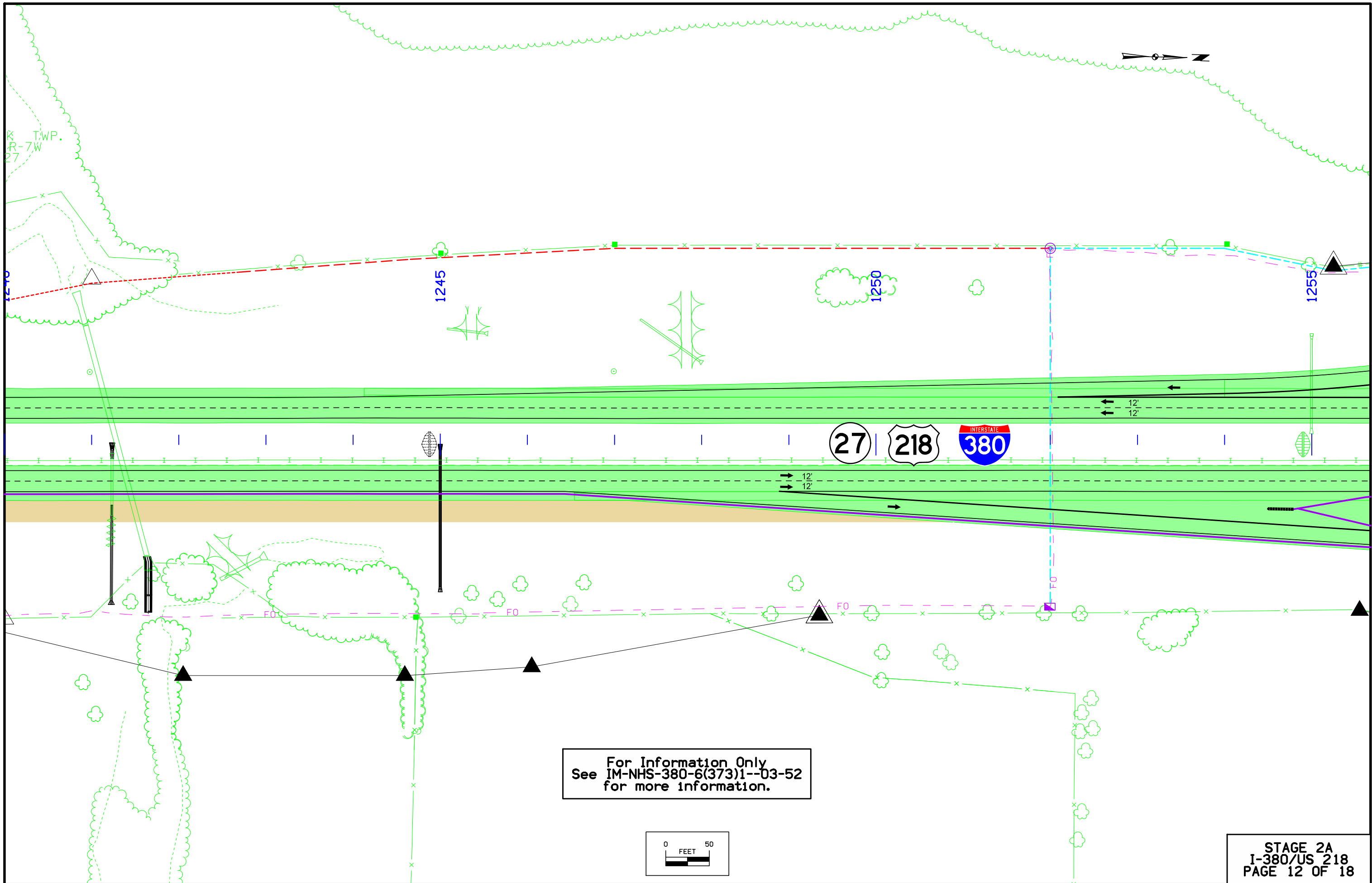


I-380/US 218 Sta. 1218+00 to 1336+00

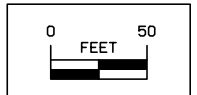
For Information Only
See IM-NHS-380-6(373)1--03-52
for more information.



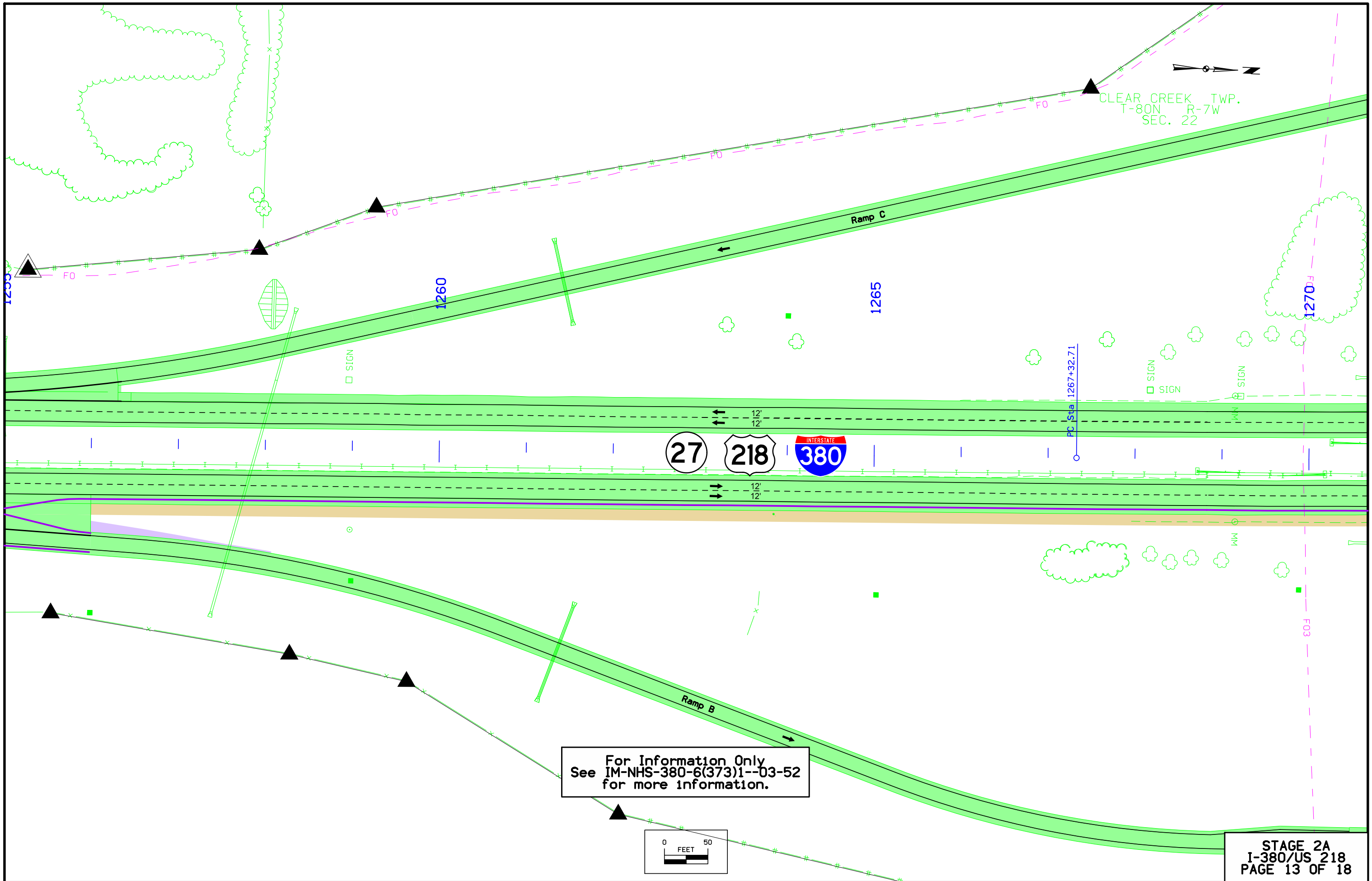
STAGE 2A
I-380/US 218
PAGE 11 OF 18



For Information Only
 See IM-NHS-380-6(373)1--03-52
 for more information.

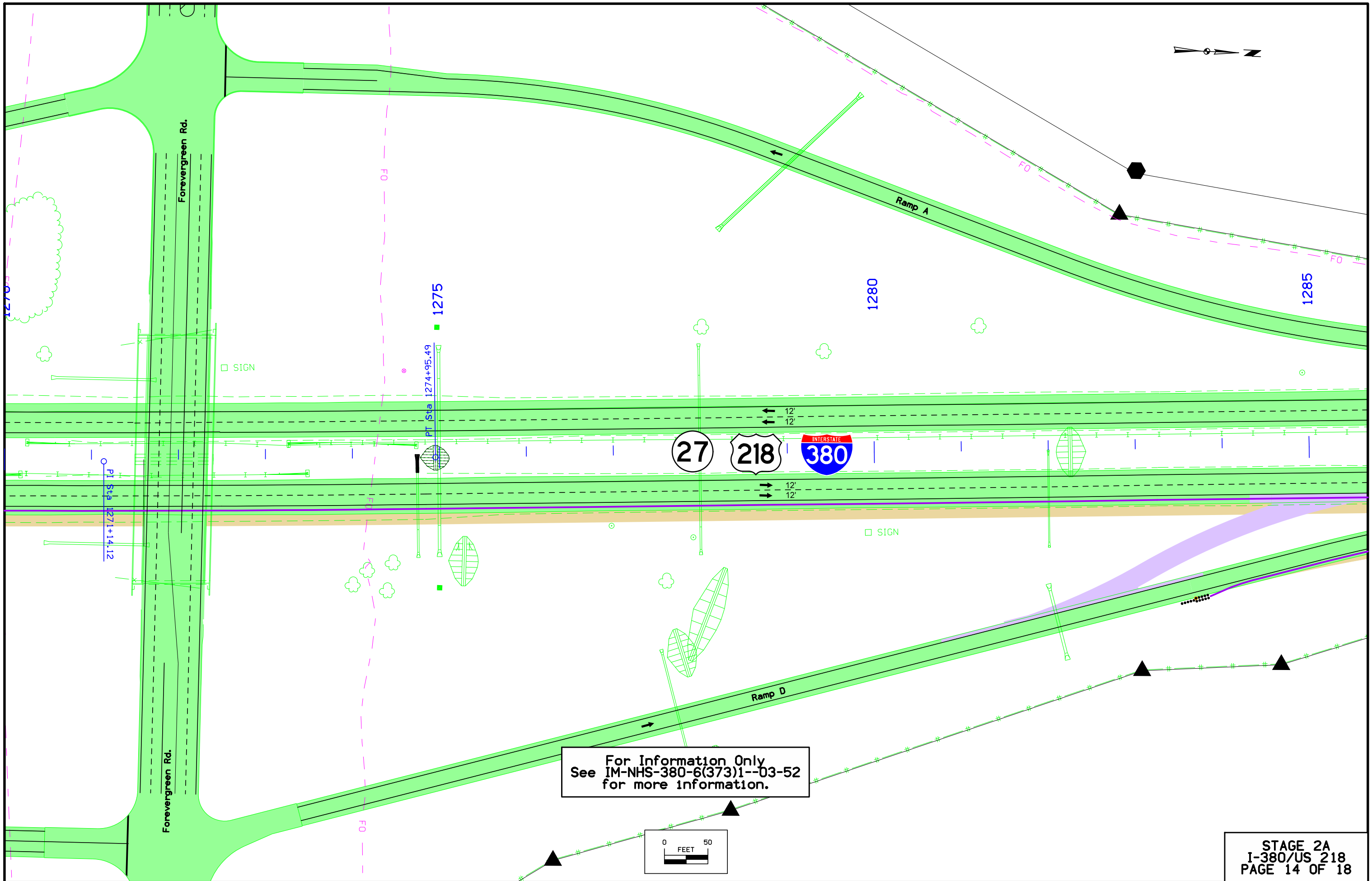


STAGE 2A
 I-380/US 218
 PAGE 12 OF 18

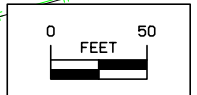


For Information Only
See IM-NHS-380-6(373)1--03-52
for more information.

STAGE 2A
I-380/US 218
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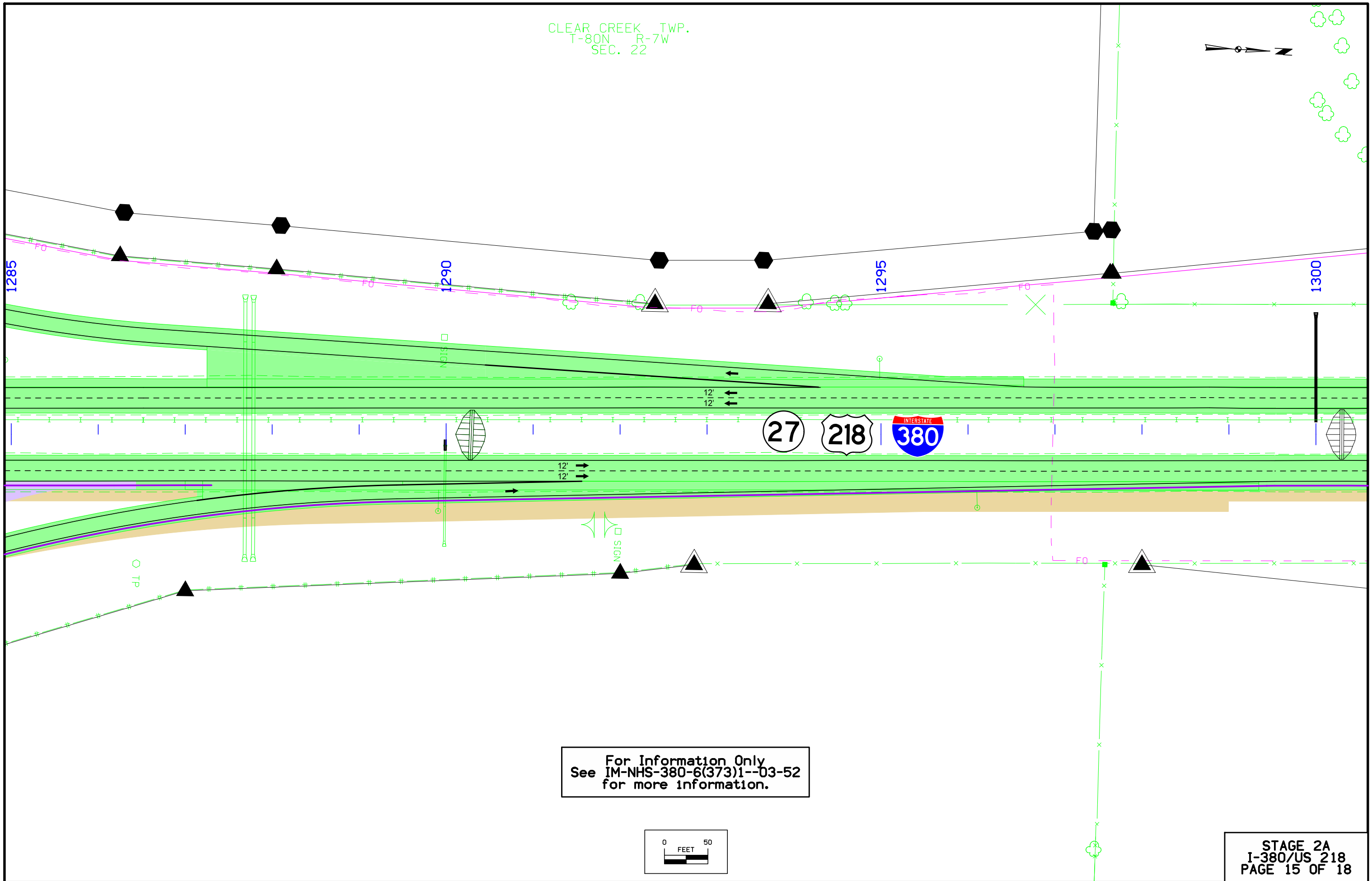
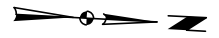


For Information Only
 See IM-NHS-380-6(373)1--03-52
 for more information.

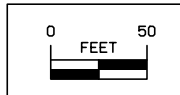


STAGE 2A
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CLEAR CREEK TWP.
T-80N R-7W
SEC. 22

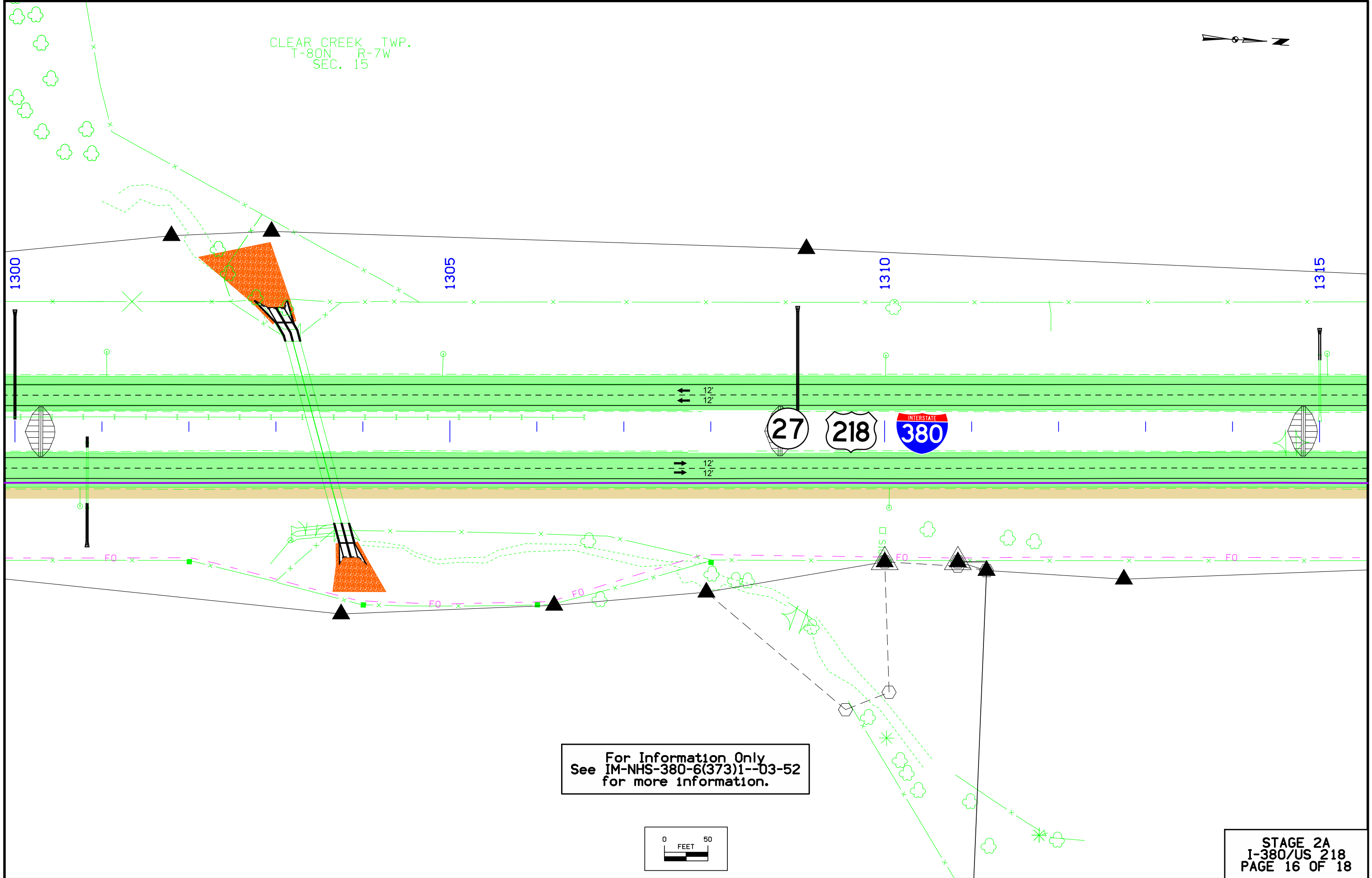
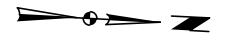


For Information Only
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for more information.

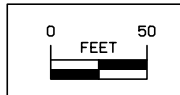


STAGE 2A
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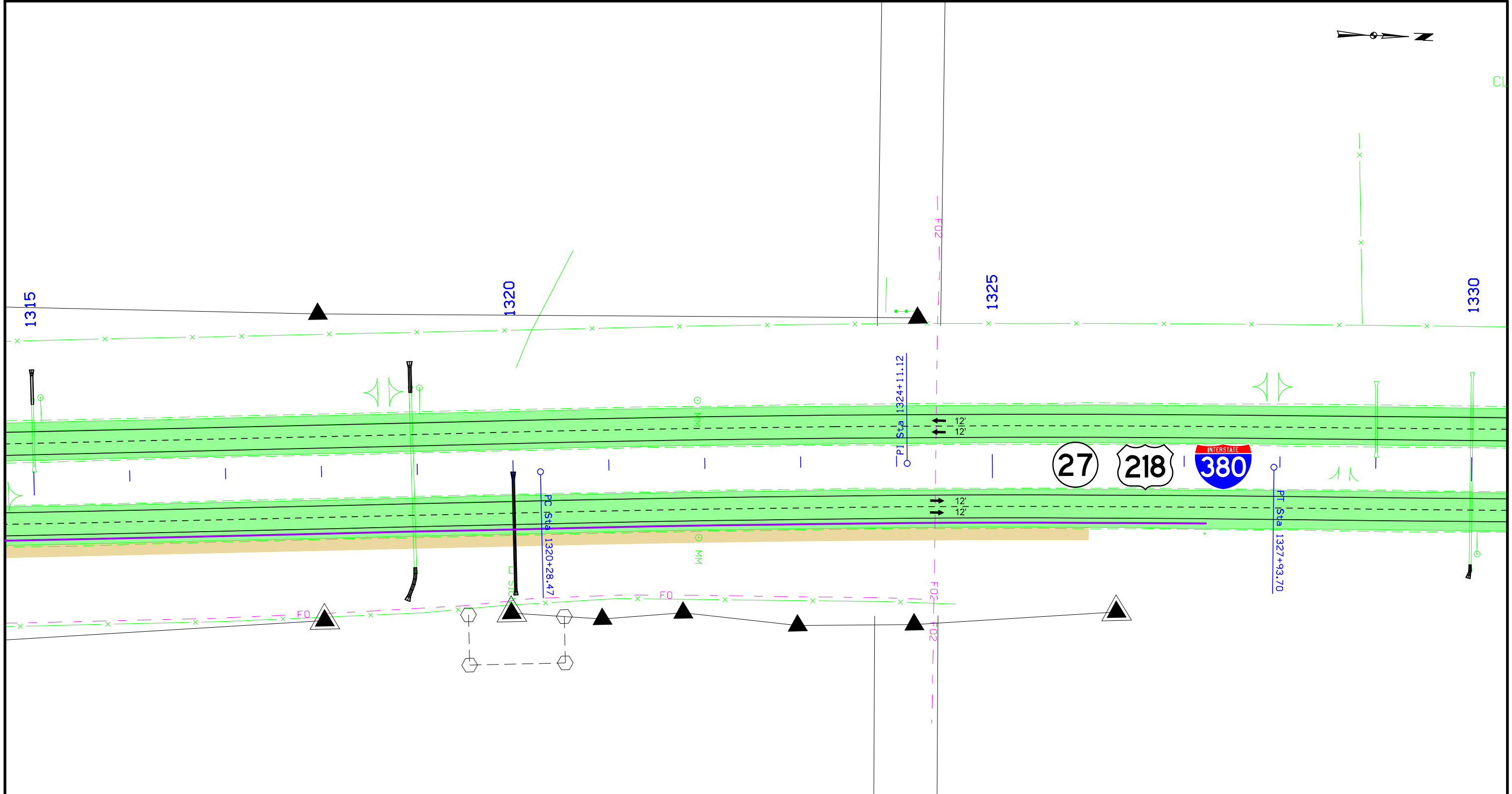
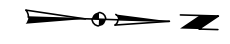
CLEAR CREEK TWP.
T-80N R-7W
SEC. 15



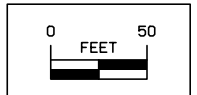
For Information Only
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for more information.



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 for more information.



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CLEAR CREEK TWP.
T-80N R-7W
SEC. 15

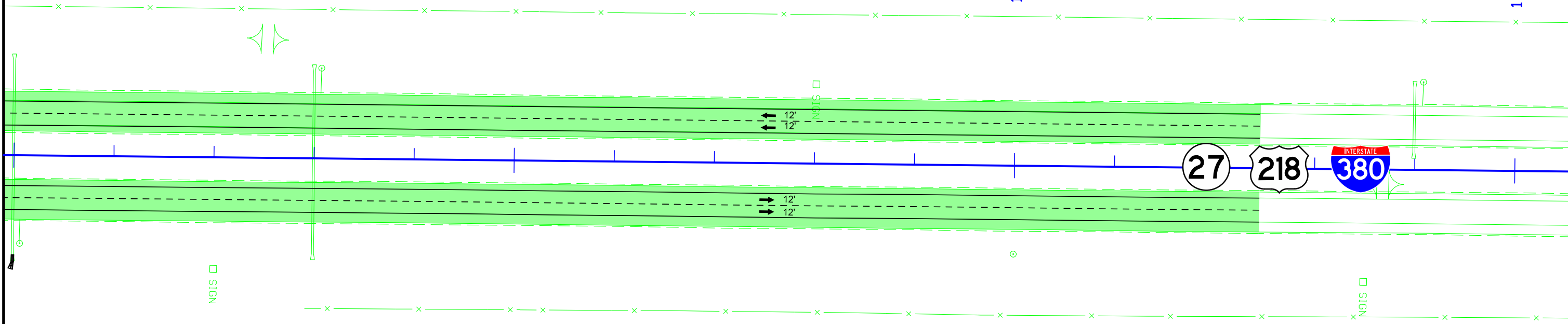


1330

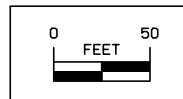
1335

1340

1345



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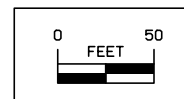
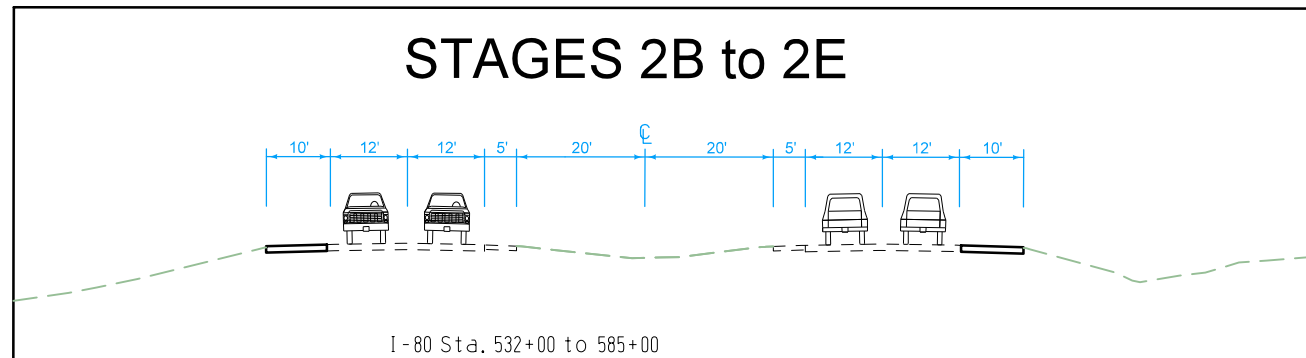
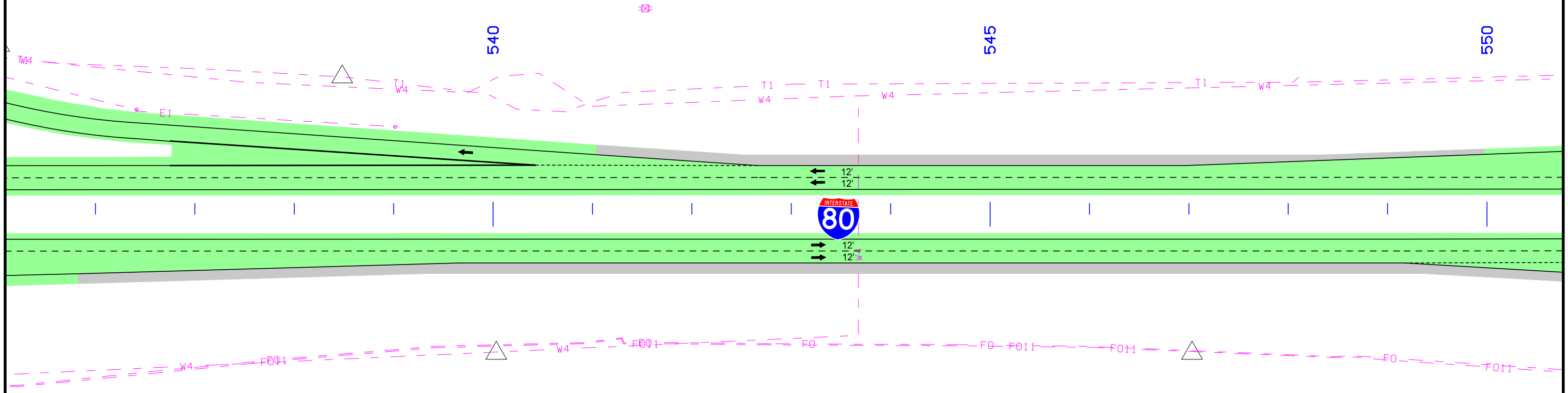
CLEAR CREEK TWP.
T-80N R-7W
SEC. 32

CLEAR CREEK TWP.
T-80N R-7W
SEC. 33

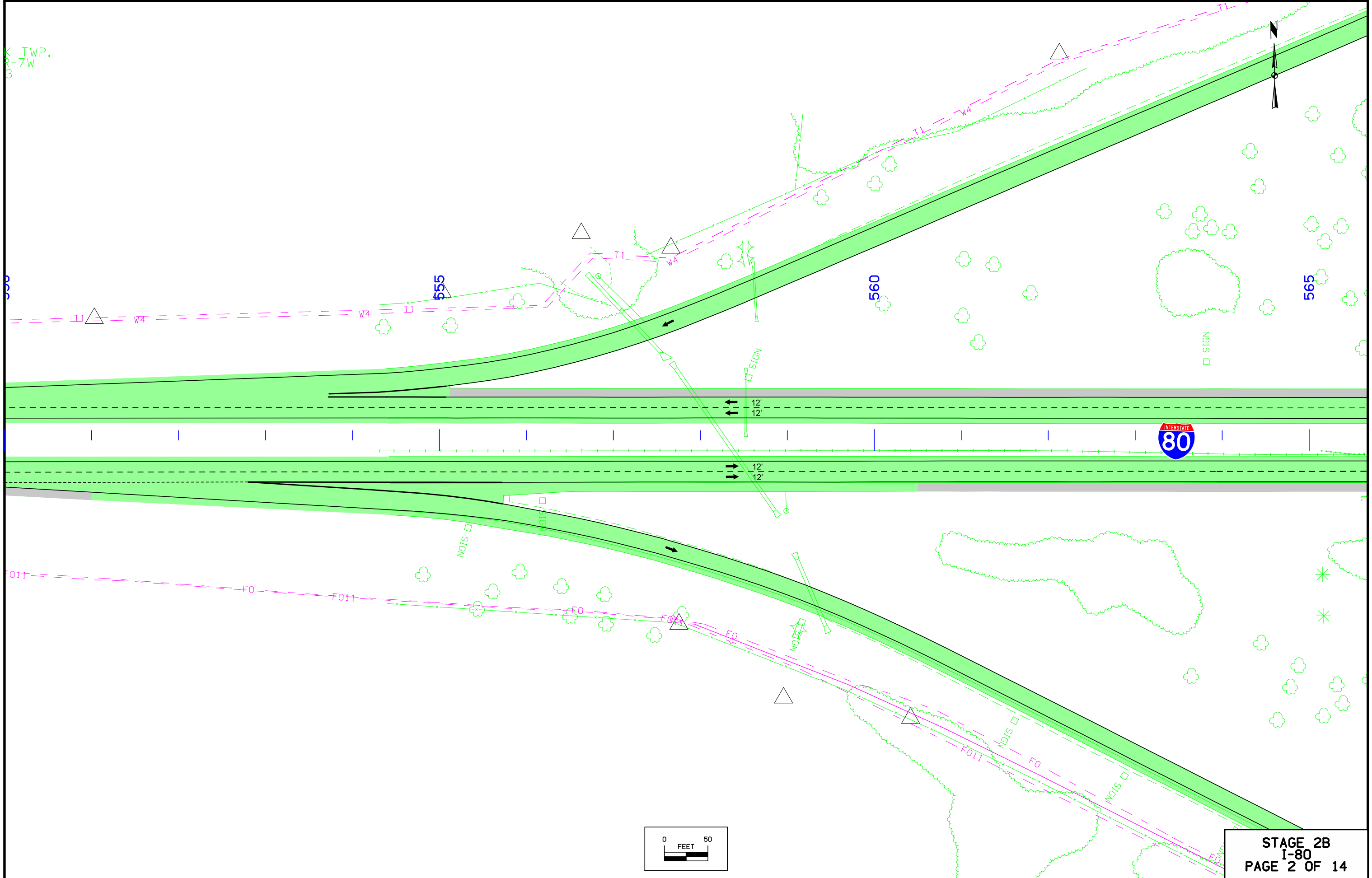
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545

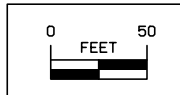
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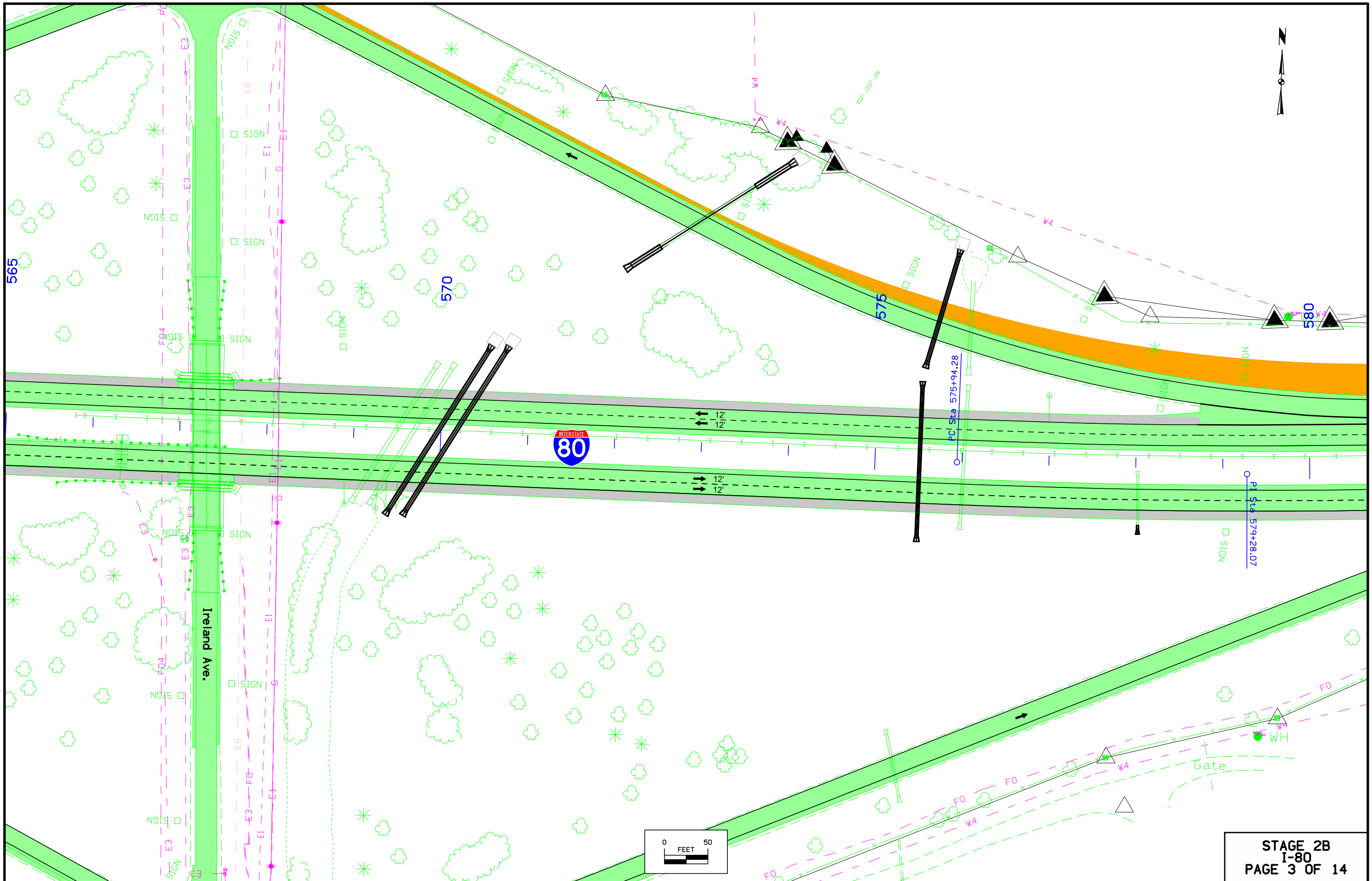
STAGE 2B
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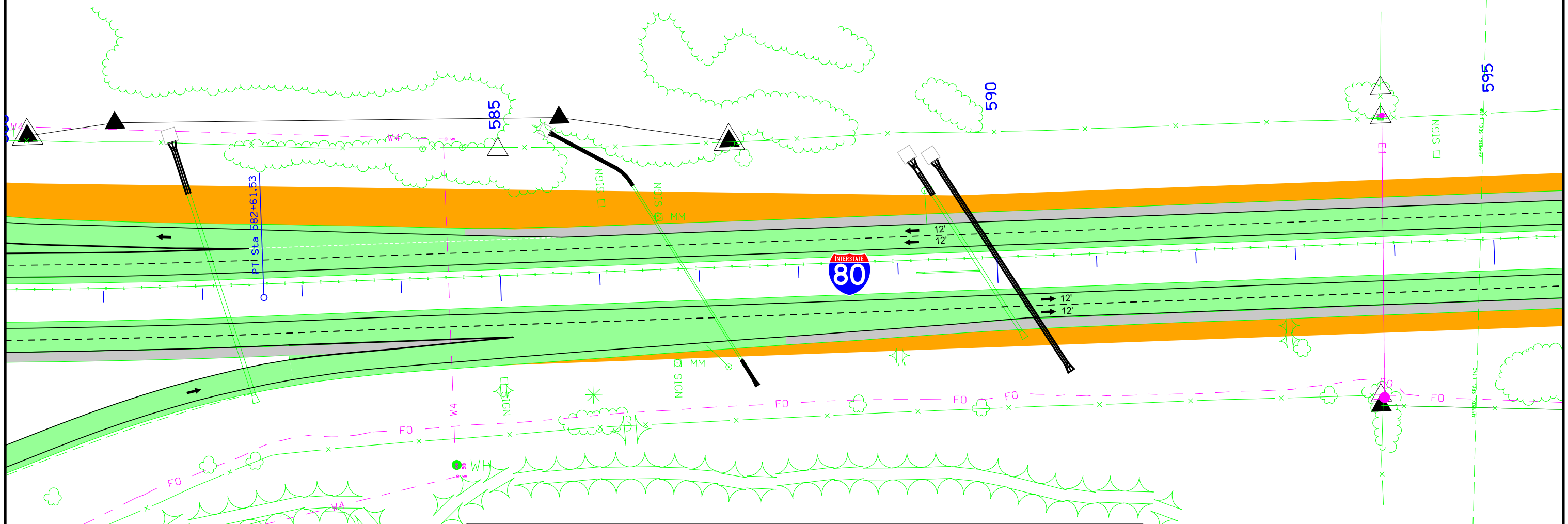
K TWP.
R-7W
S



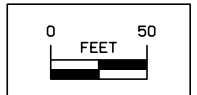
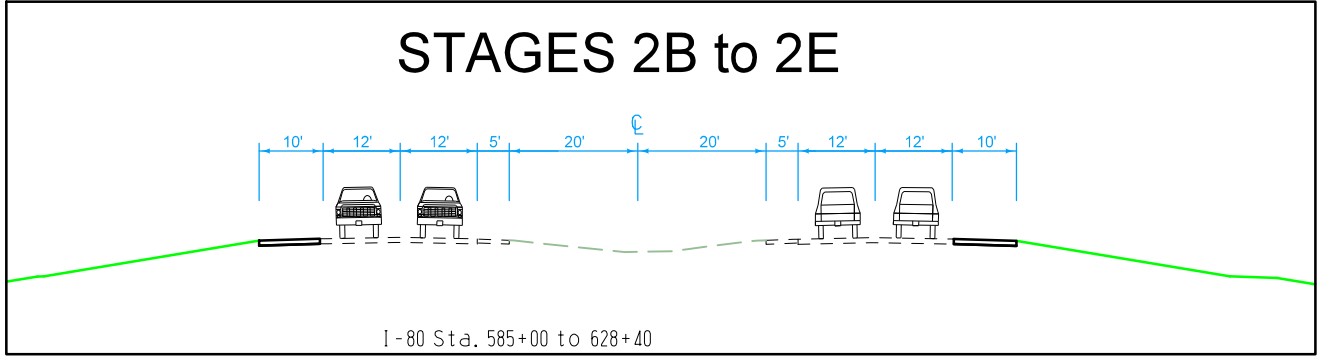
STAGE 2B
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PAGE 2 OF 14



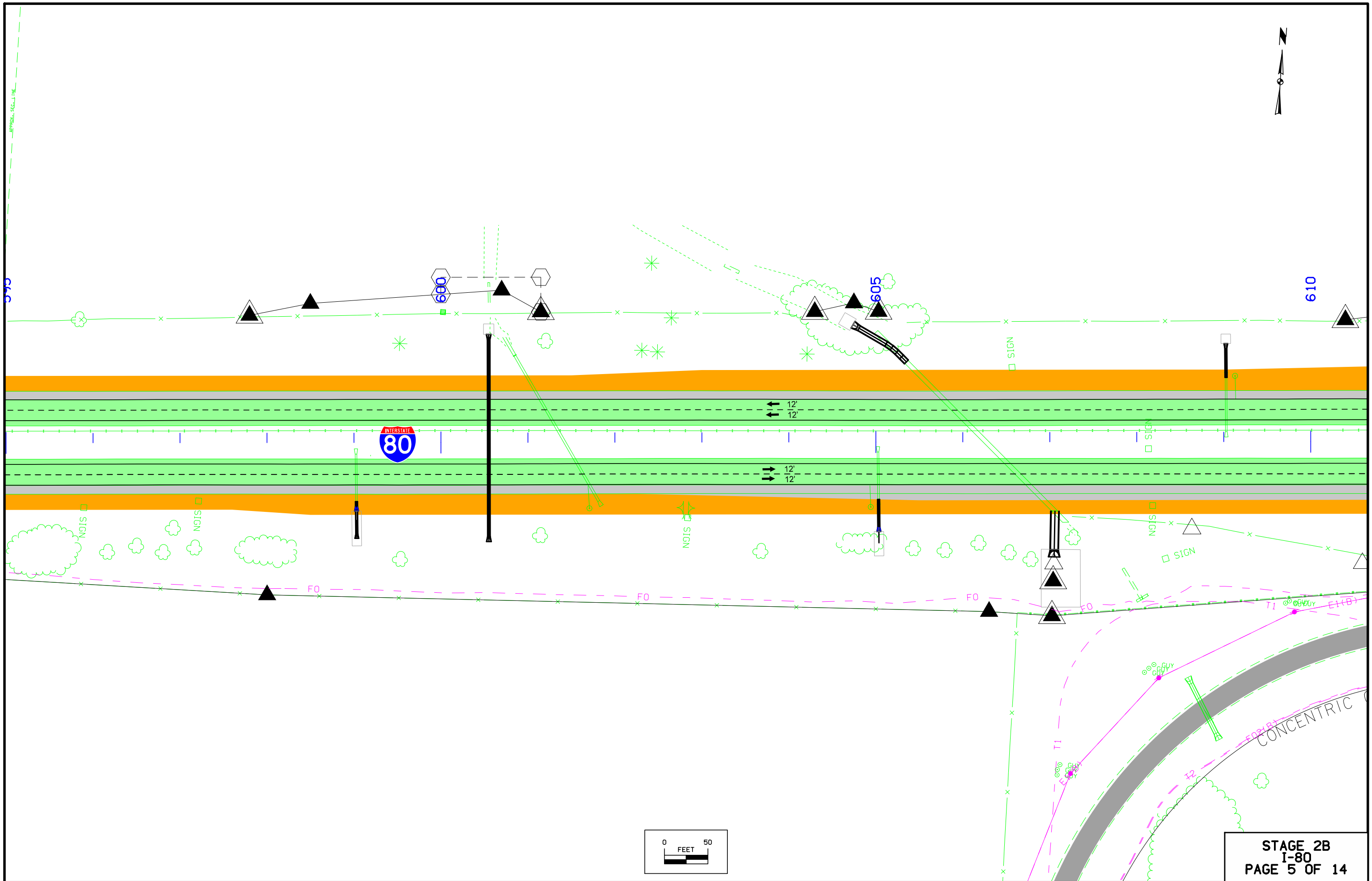
CLEAR CREEK TWP.
T-80N R-7W
SEC. 33



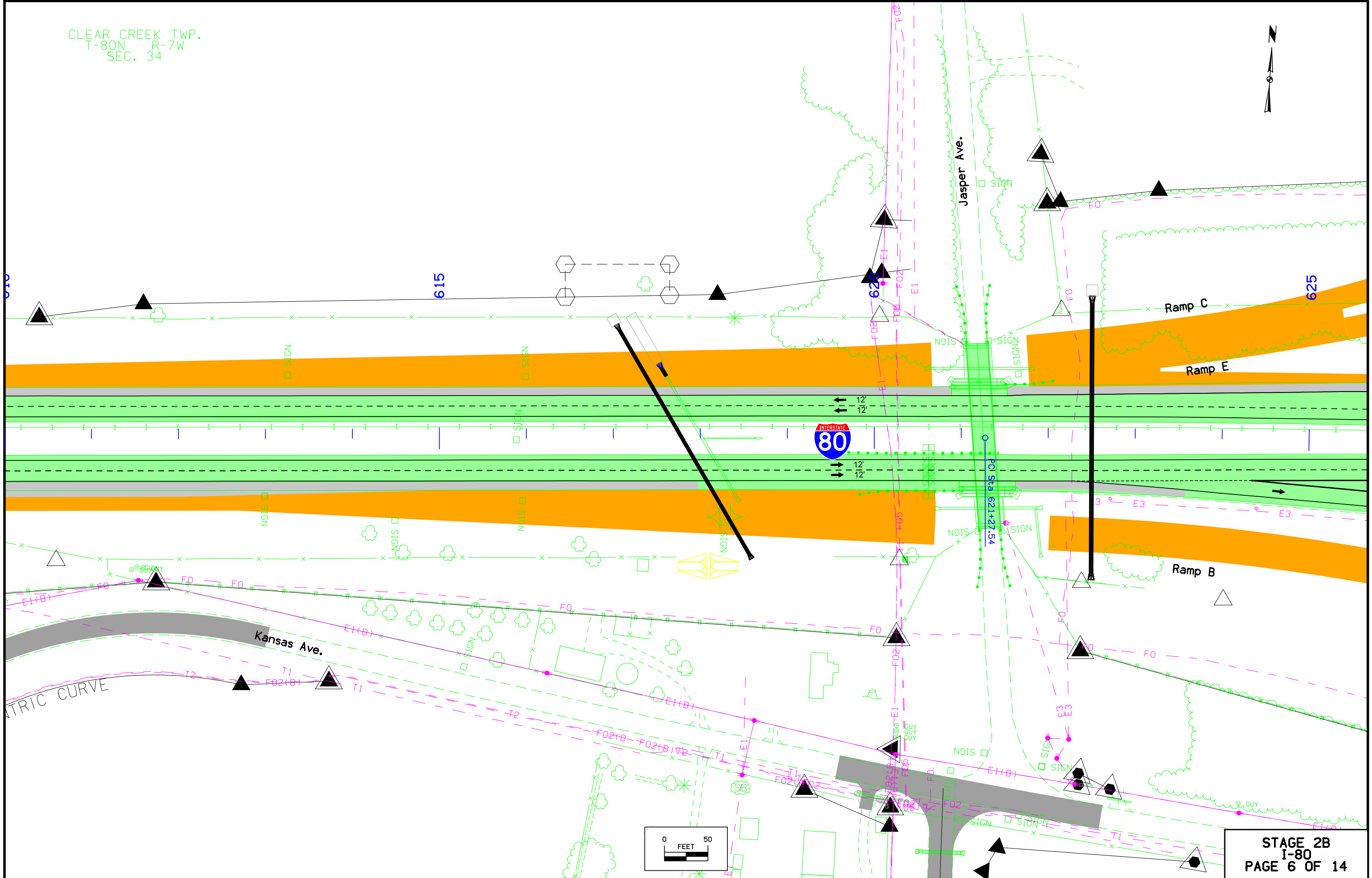
Curve Data
 $\Delta = 4^\circ 26' 53.84''$ (LT)
 $T = 333.79$
 $L = 667.24$
 $R = 8,594.37$
 $E = 6.48$



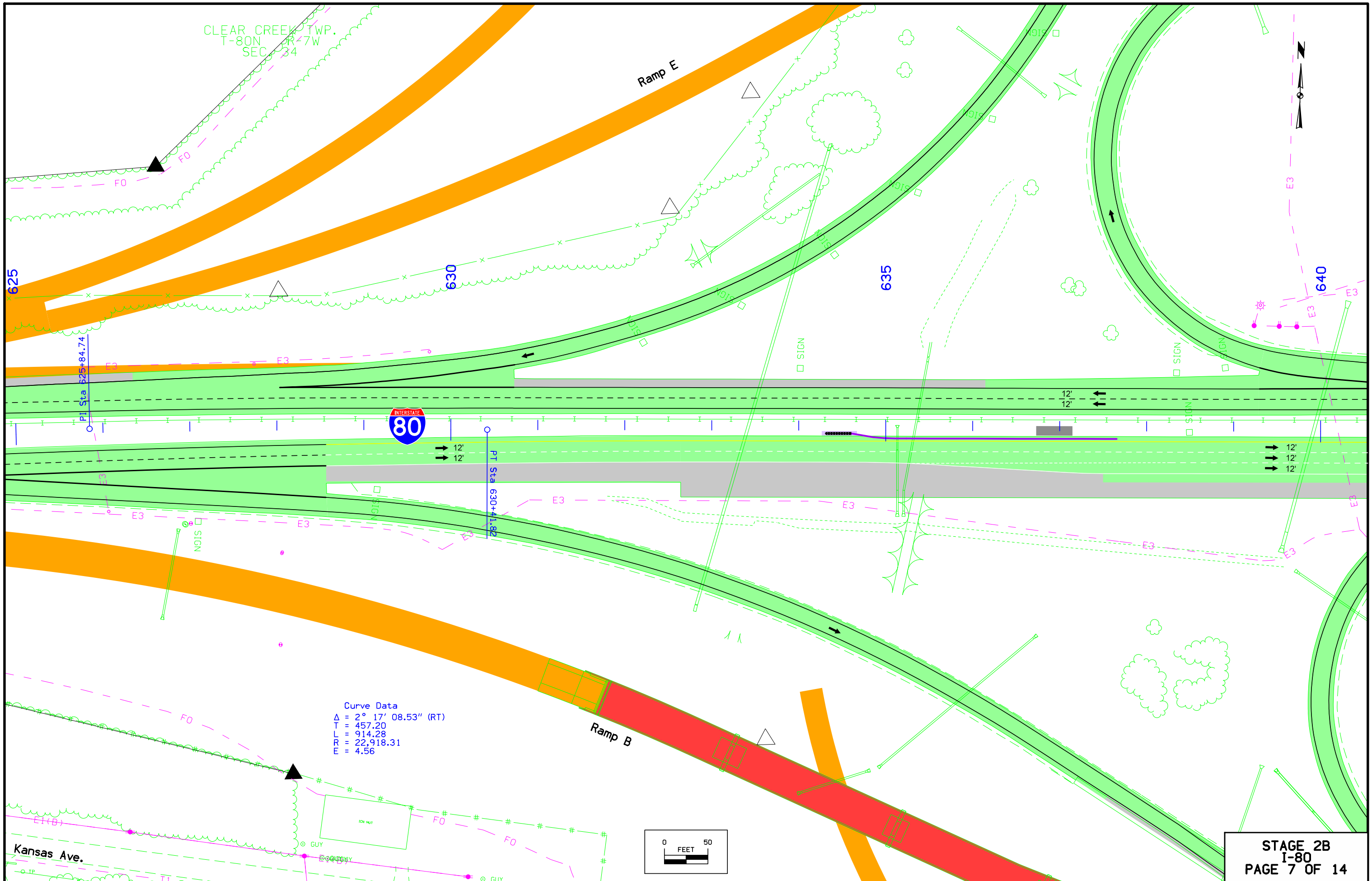
STAGE 2B
I-80
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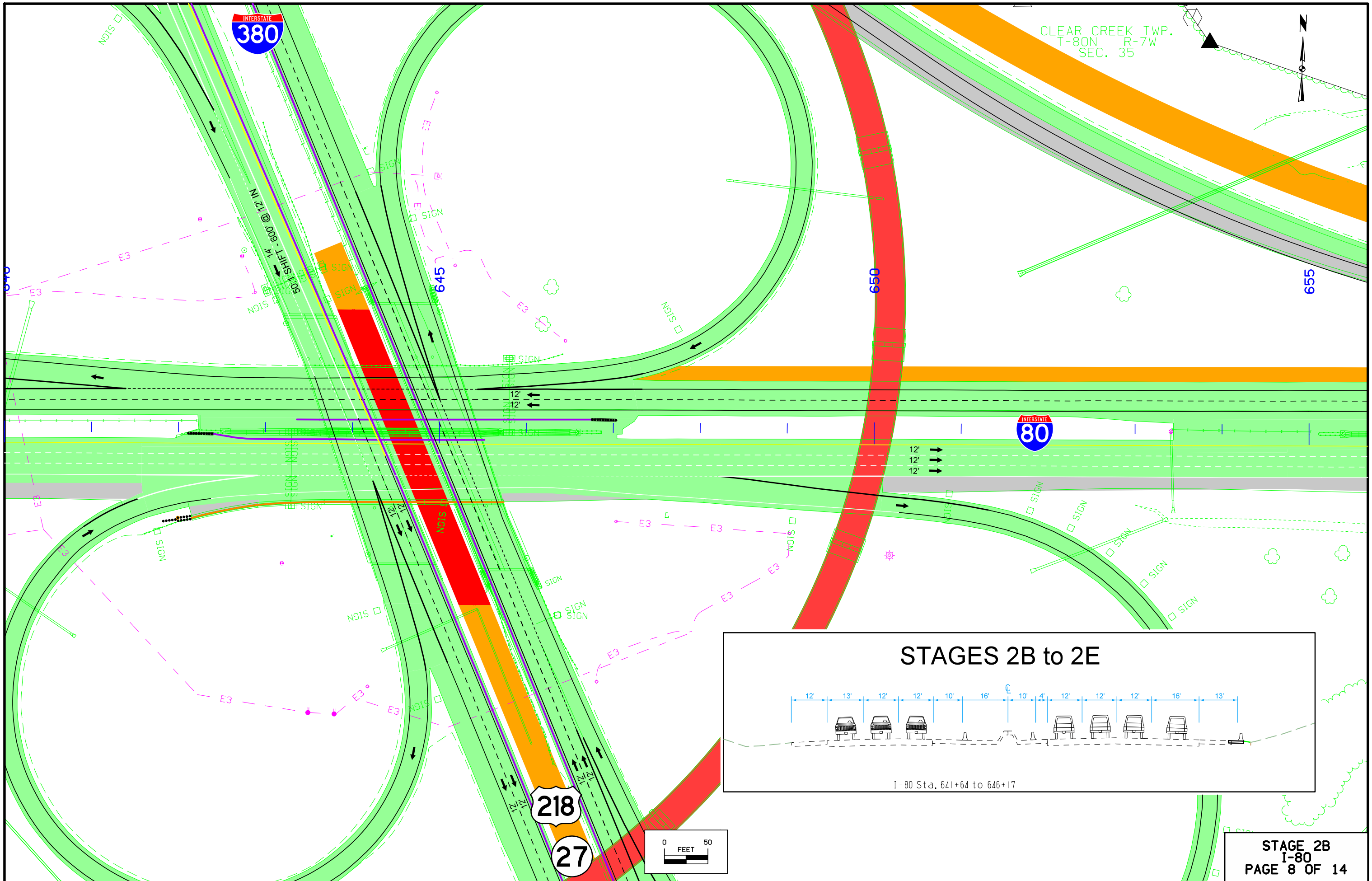
CLEAR CREEK TWP.
T-80N R-7W
SEC. 34



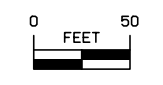
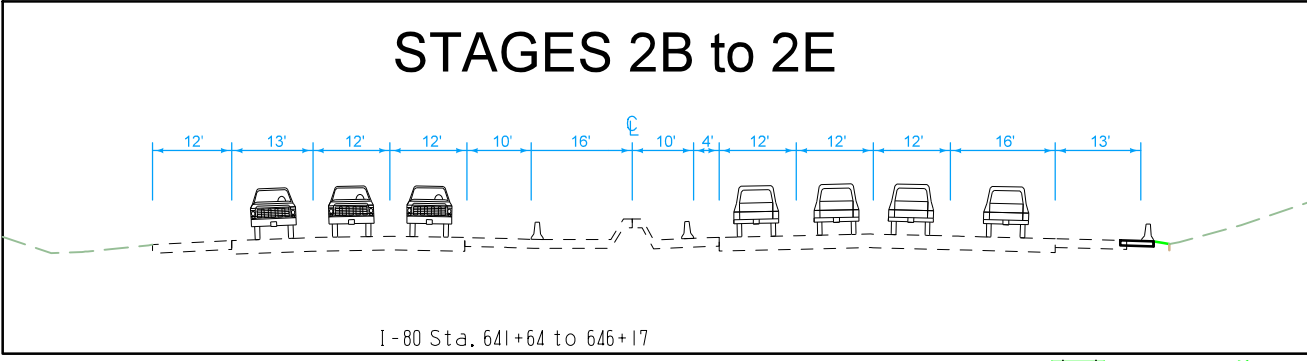
STAGE 2B
I-80
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STAGE 2B
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CLEAR CREEK TWP.
T-80N R-7W
SEC. 35

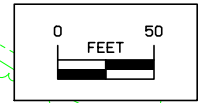
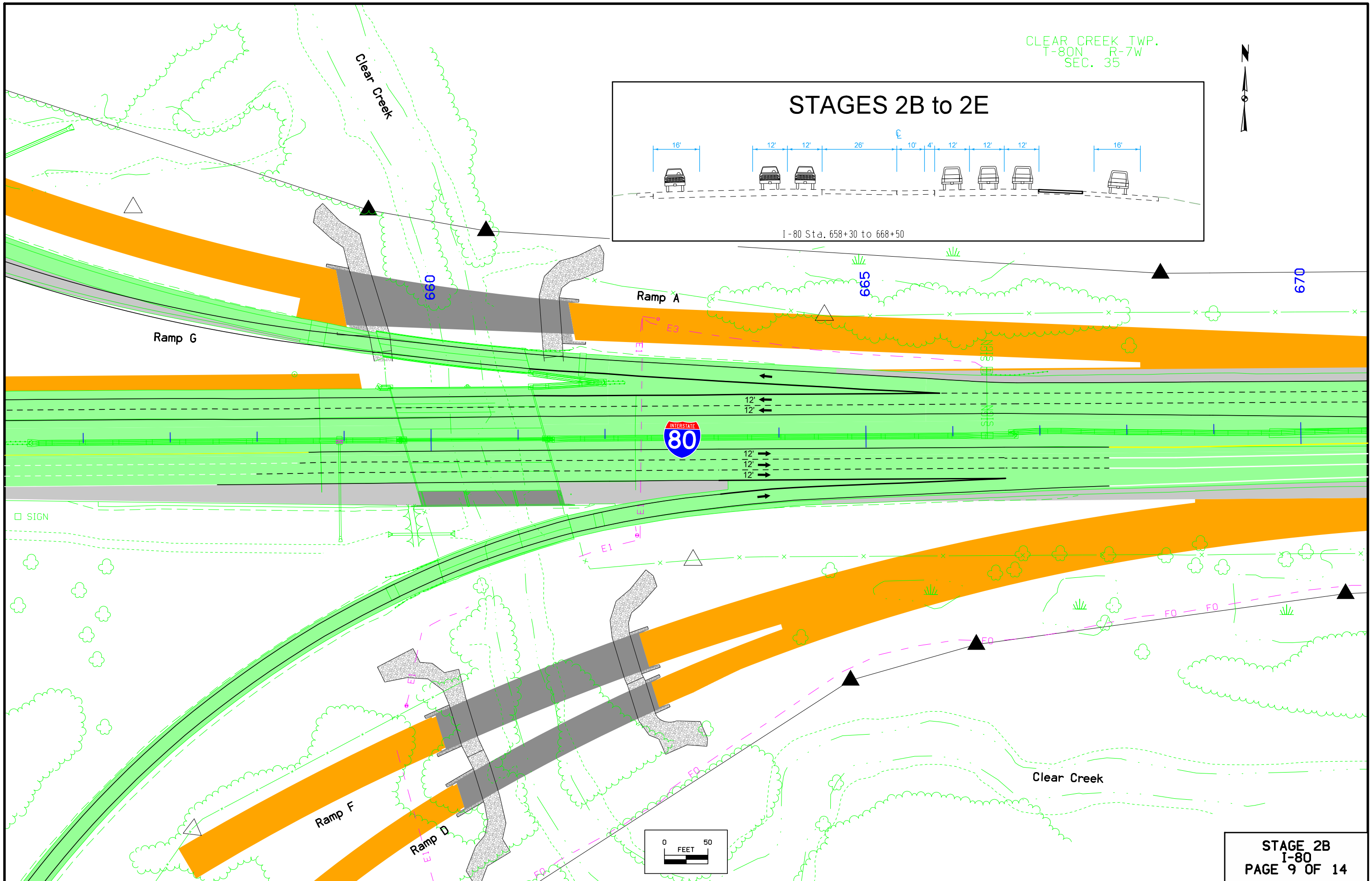
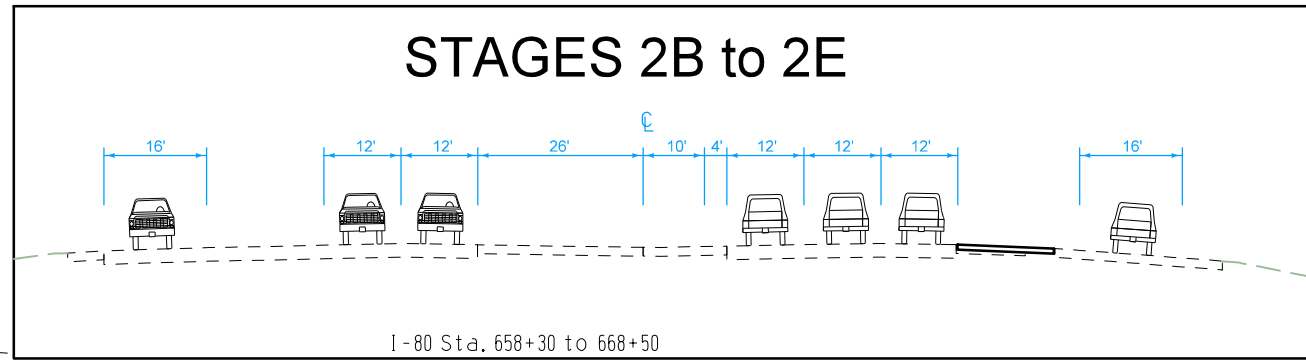


STAGE 2B
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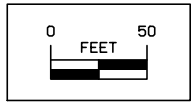
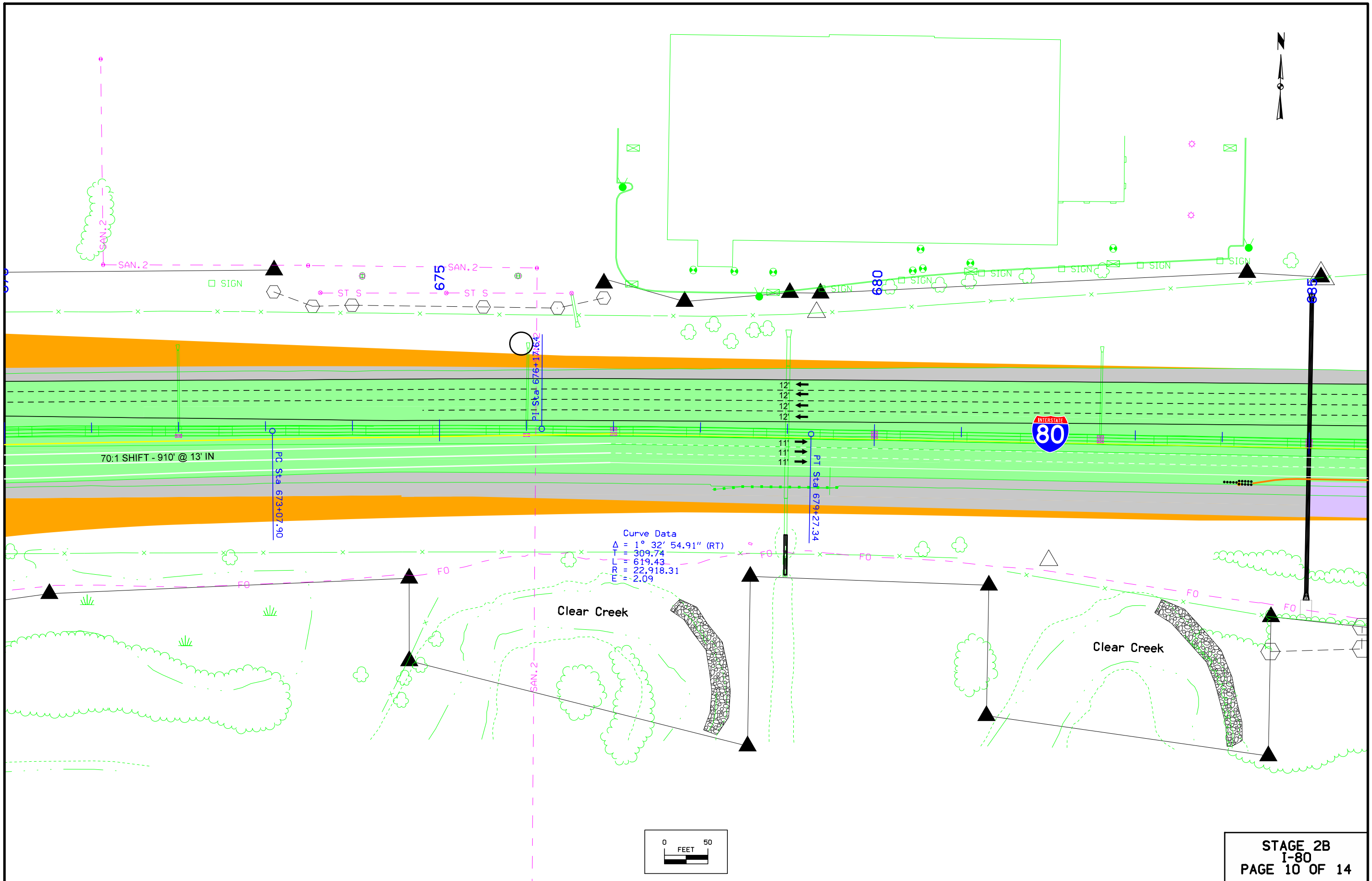
CLEAR CREEK TWP.
T-80N R-7W
SEC. 35



STAGES 2B to 2E

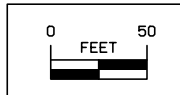
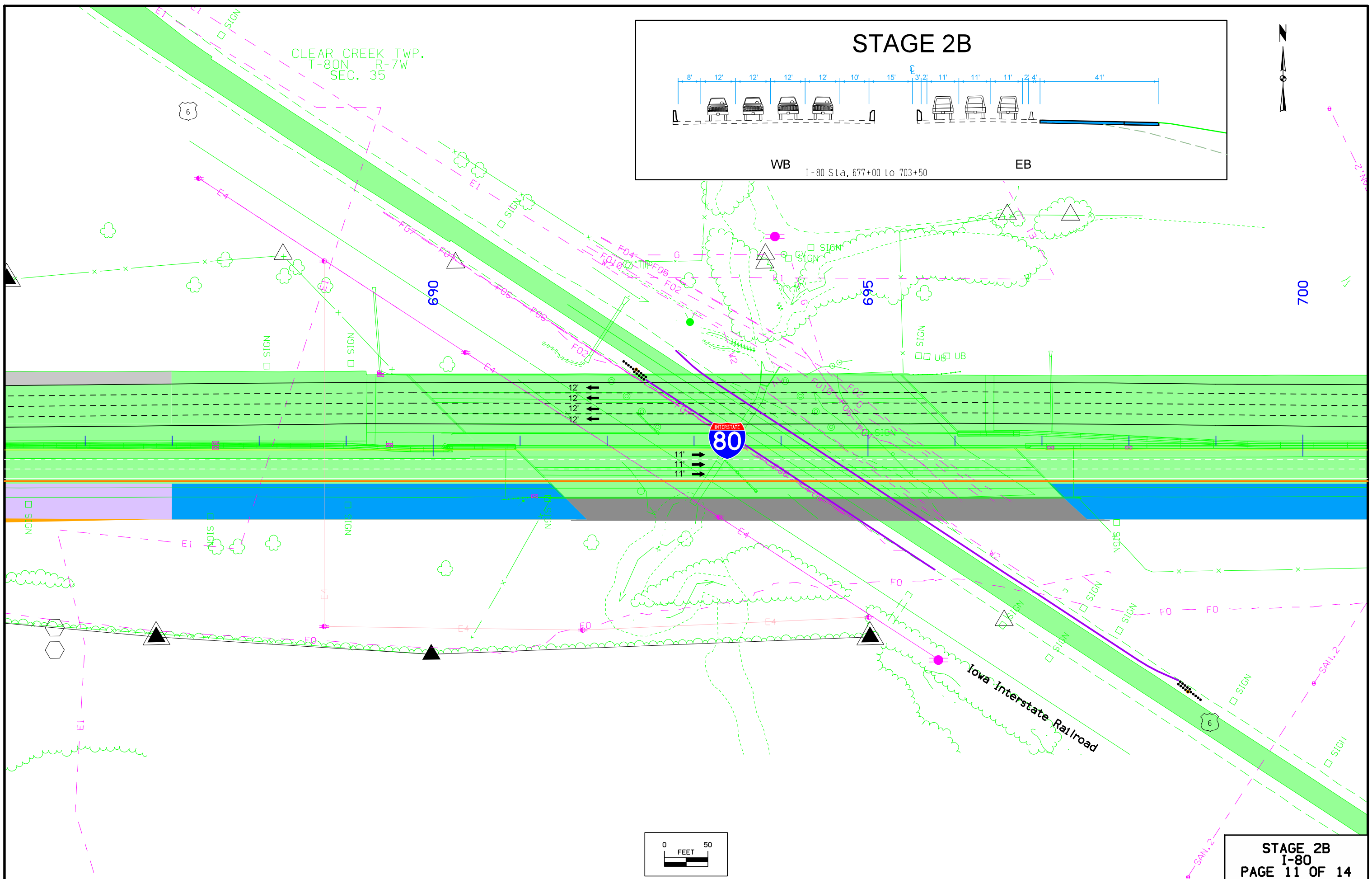
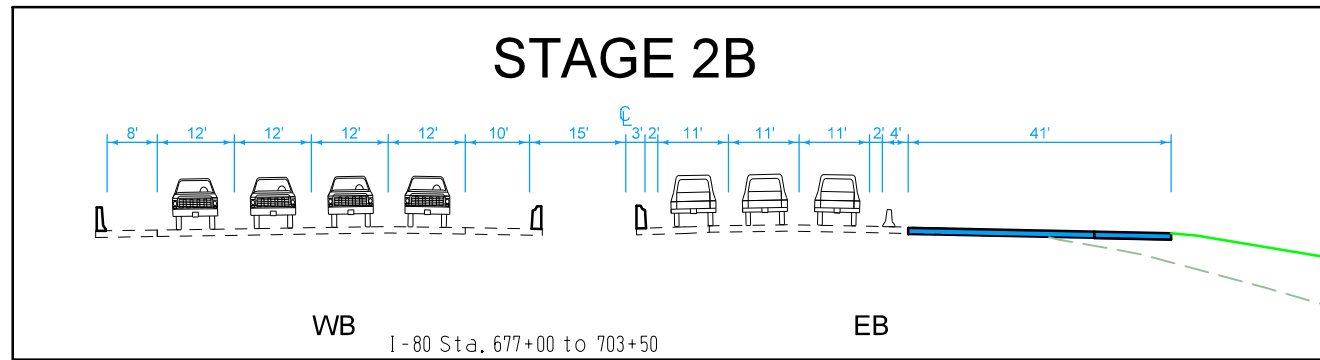


STAGE 2B
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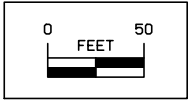
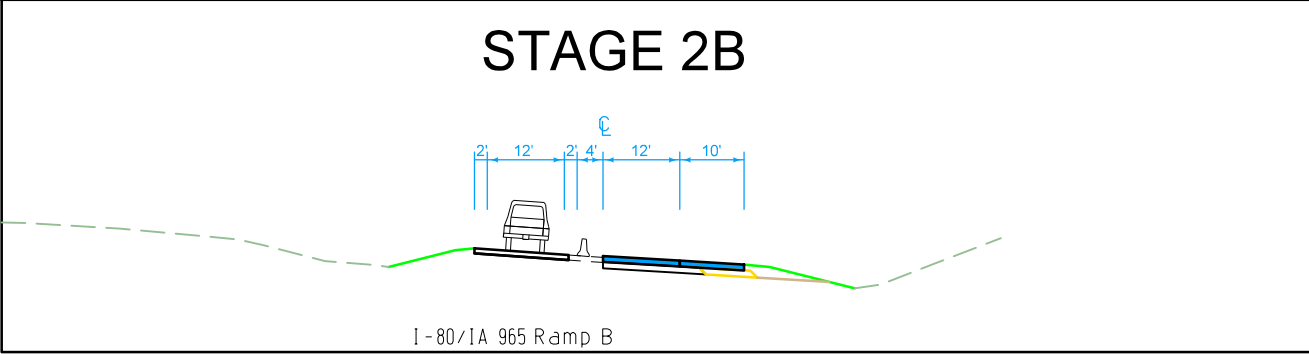
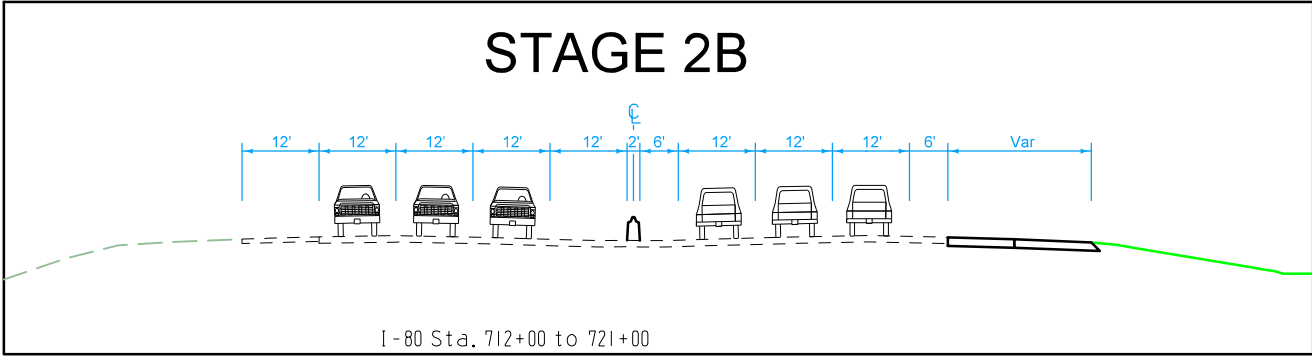
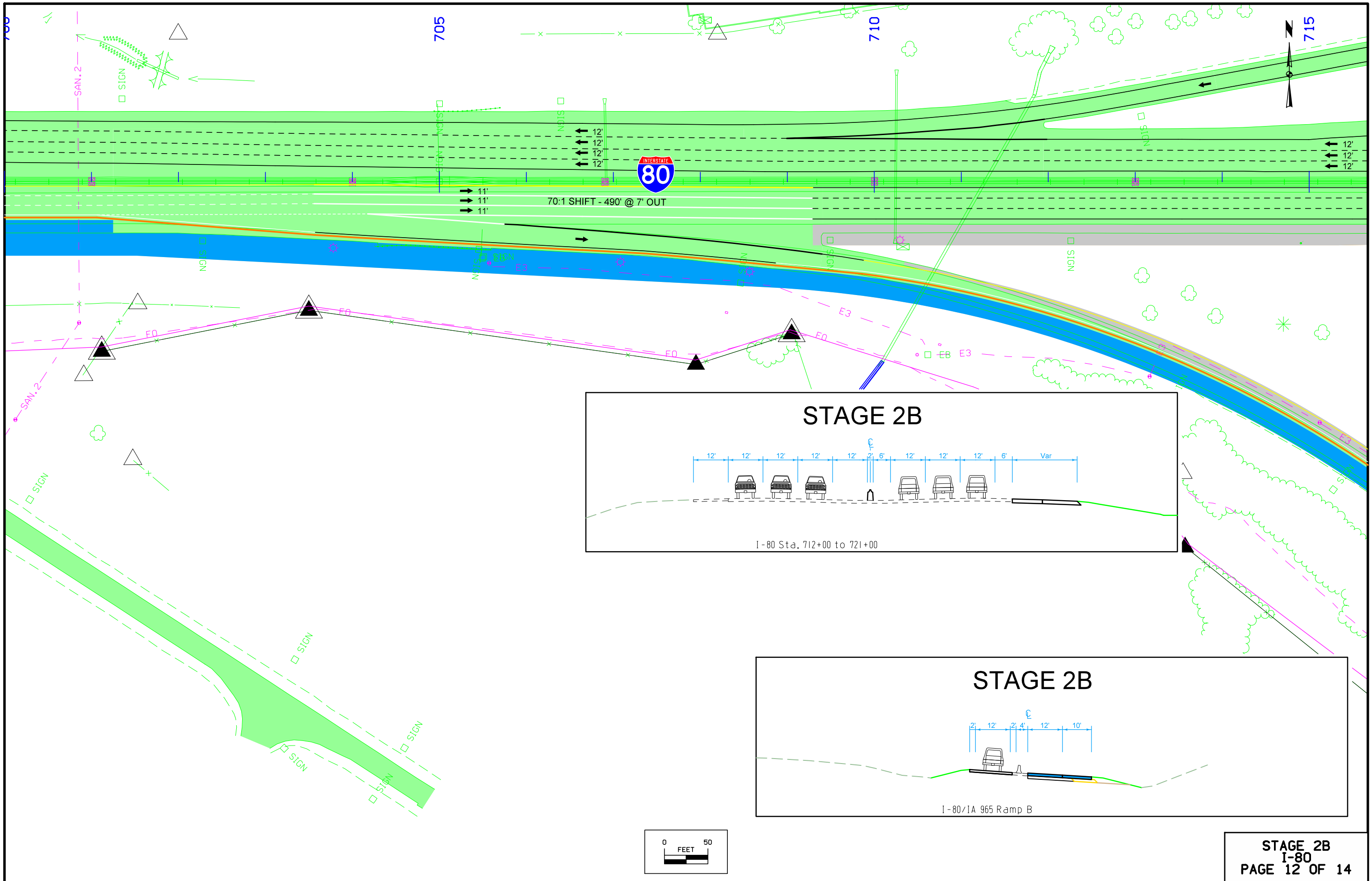


CLEAR CREEK TWP.
T-80N R-7W
SEC. 35

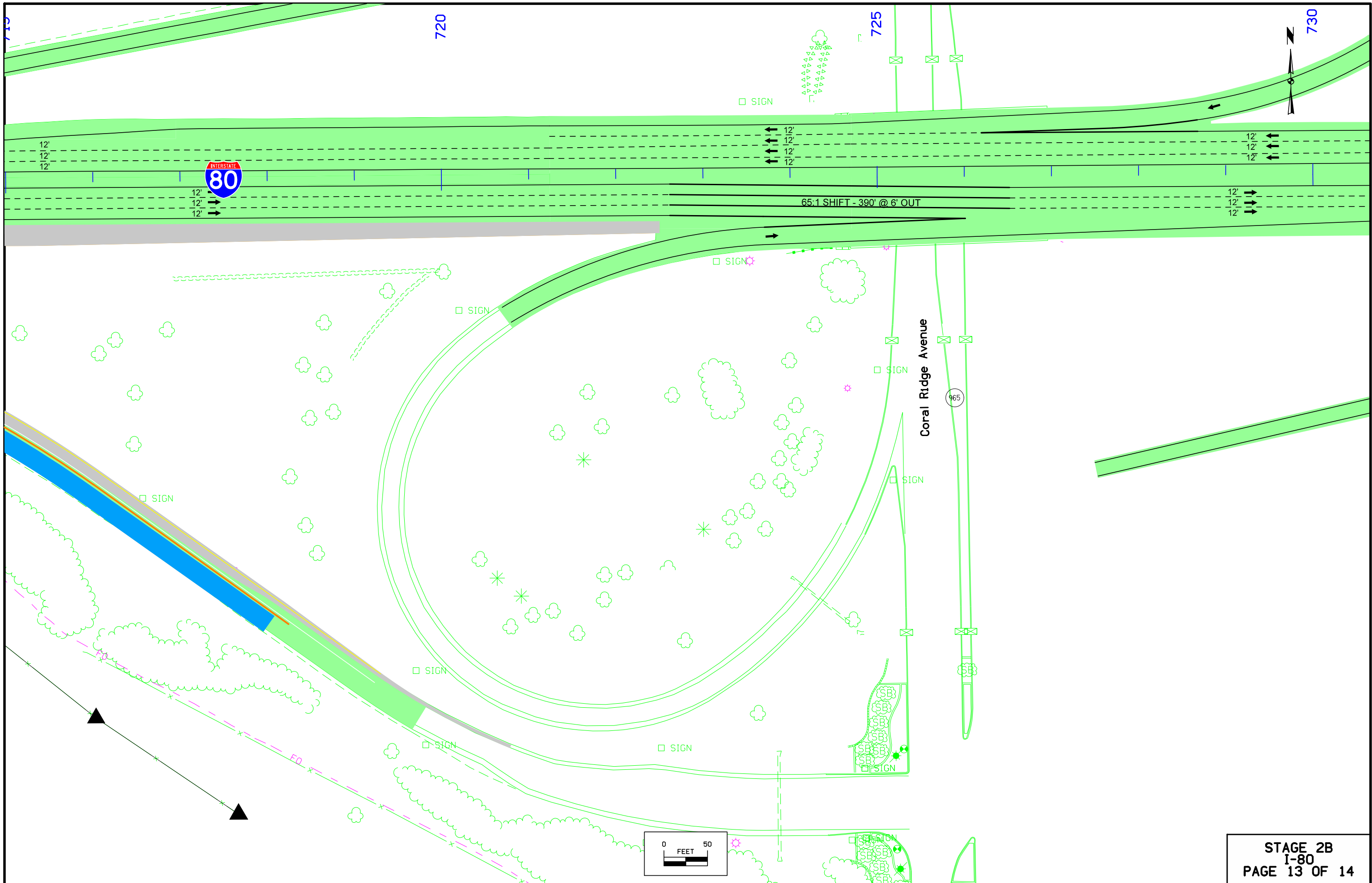
STAGE 2B



STAGE 2B
I-80
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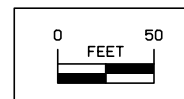
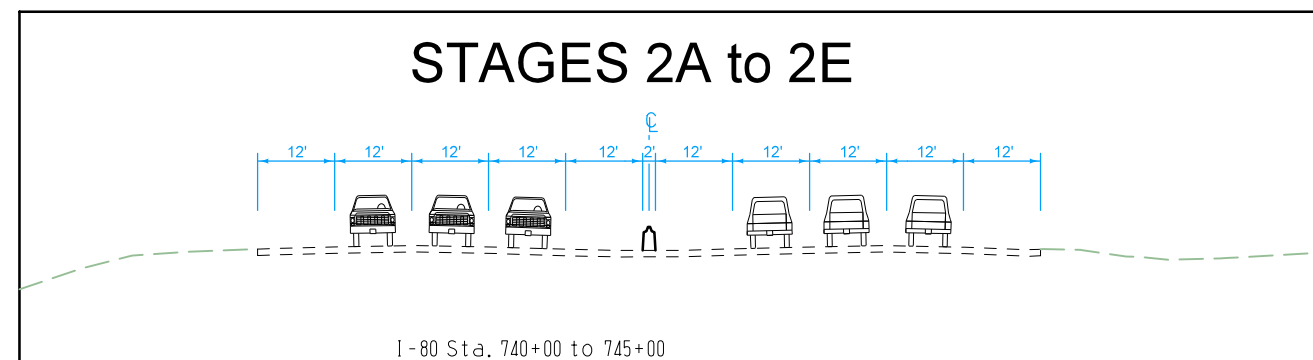
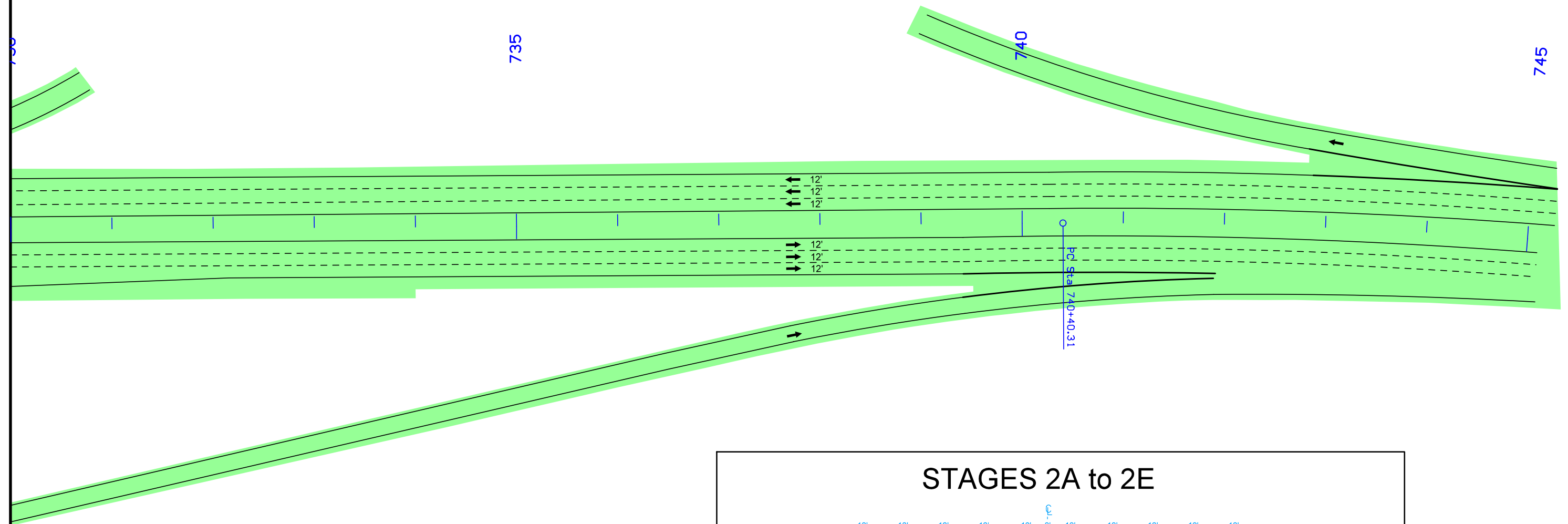


STAGE 2B
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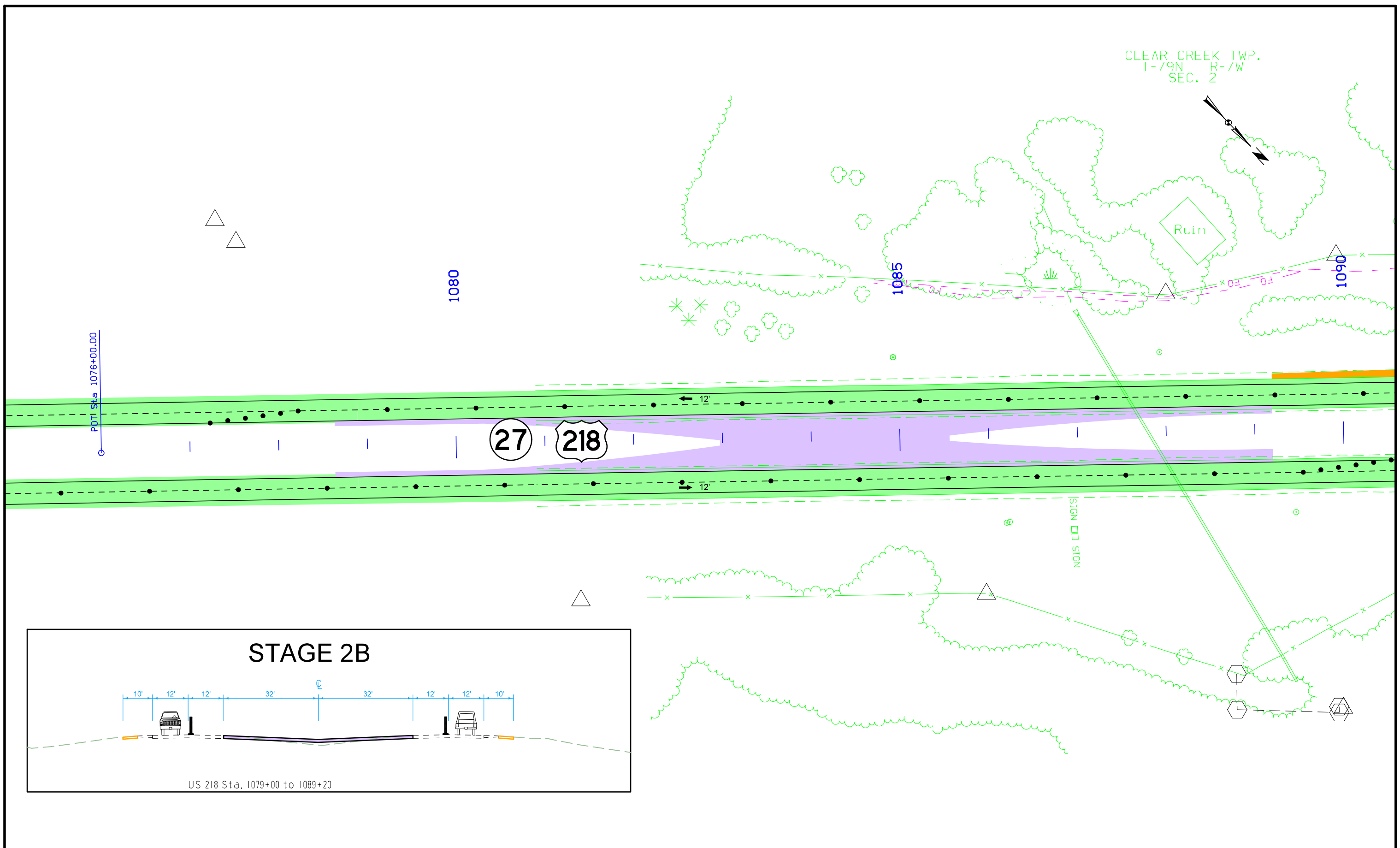
CLEAR CREEK TWP.
T-80N R-7W
SEC. 36

Curve Data
 $\Delta = 17^\circ 48' 28.25''$ (RT)
T = 897.63
L = 1,780.78
R = 5,729.58
E = 69.89

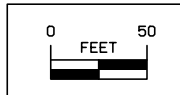
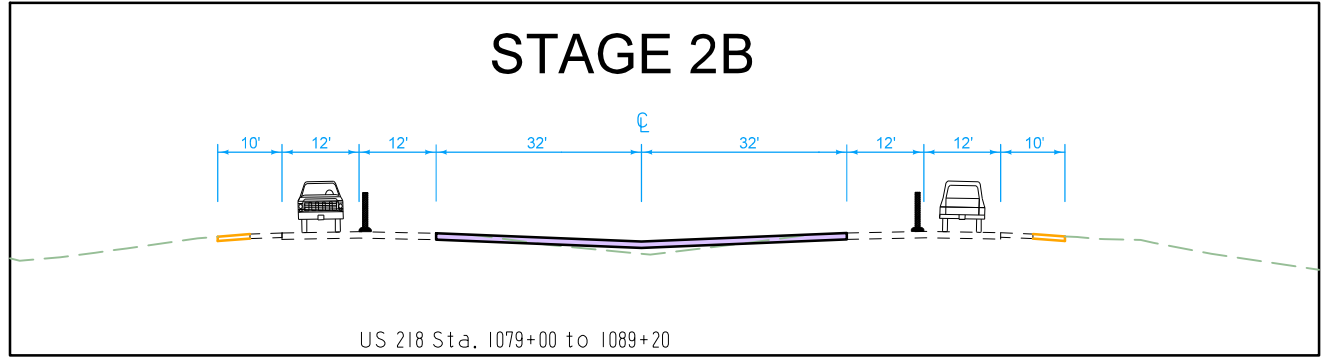


STAGE 2B
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PAGE 14 OF 14

CLEAR CREEK TWP.
T-79N R-7W
SEC. 2

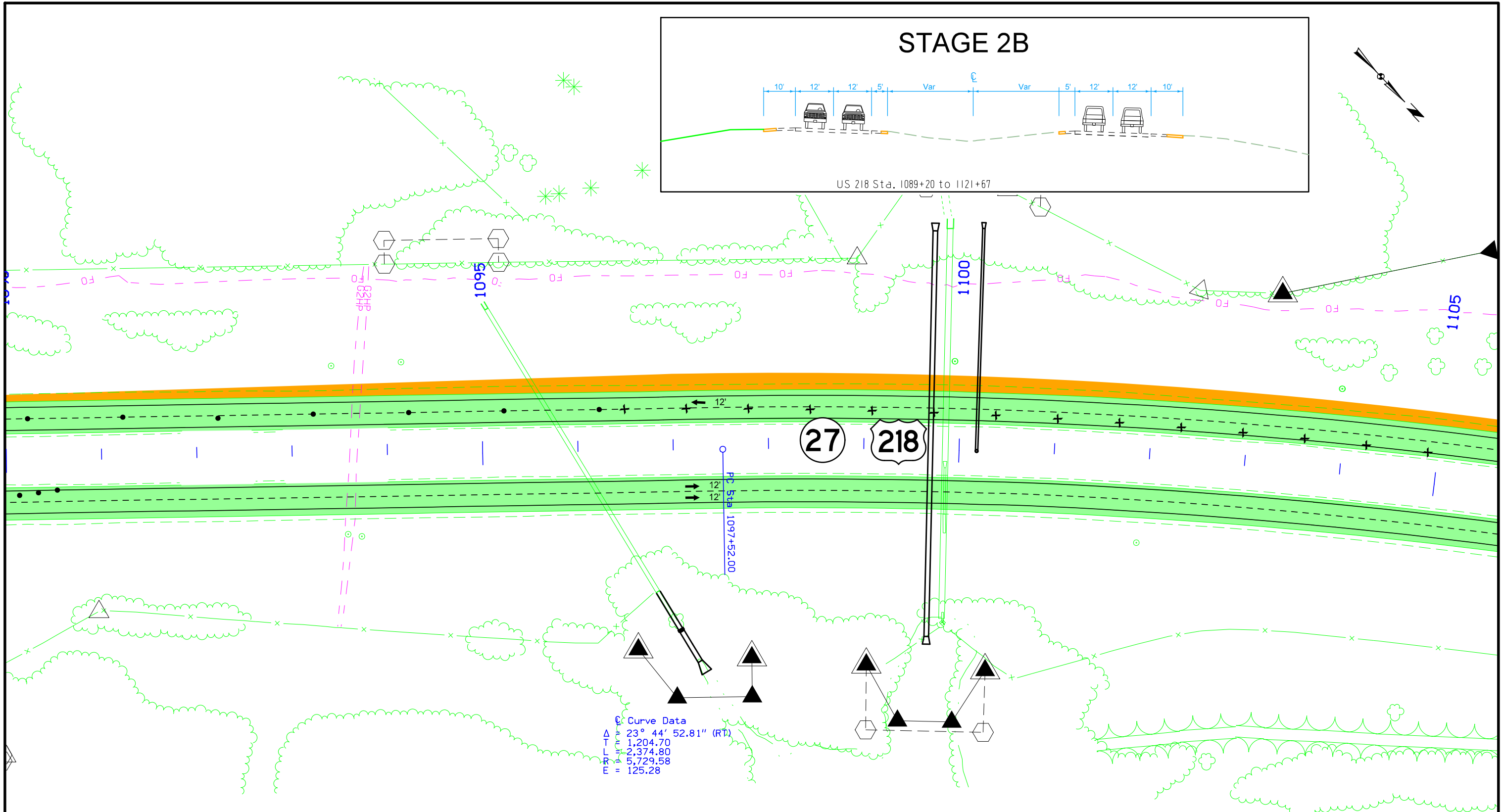
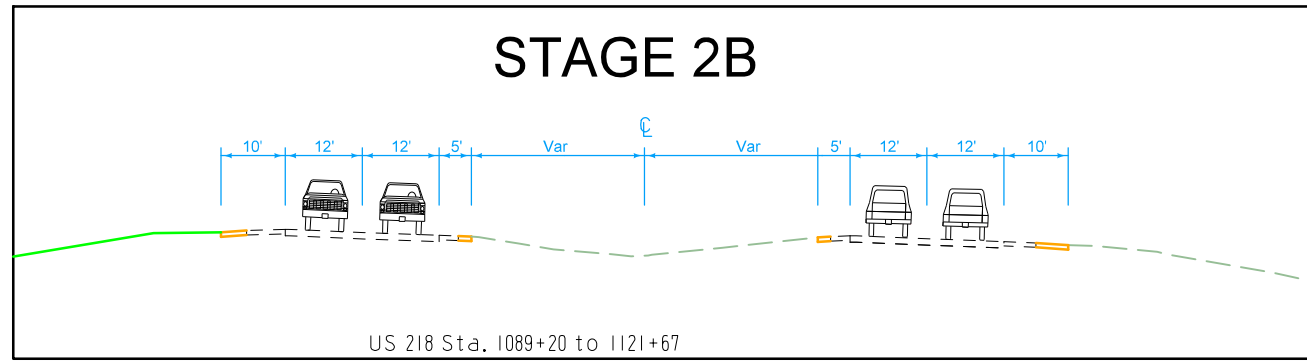


STAGE 2B

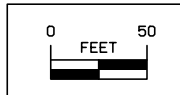


STAGE 2B
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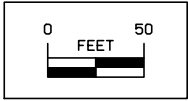
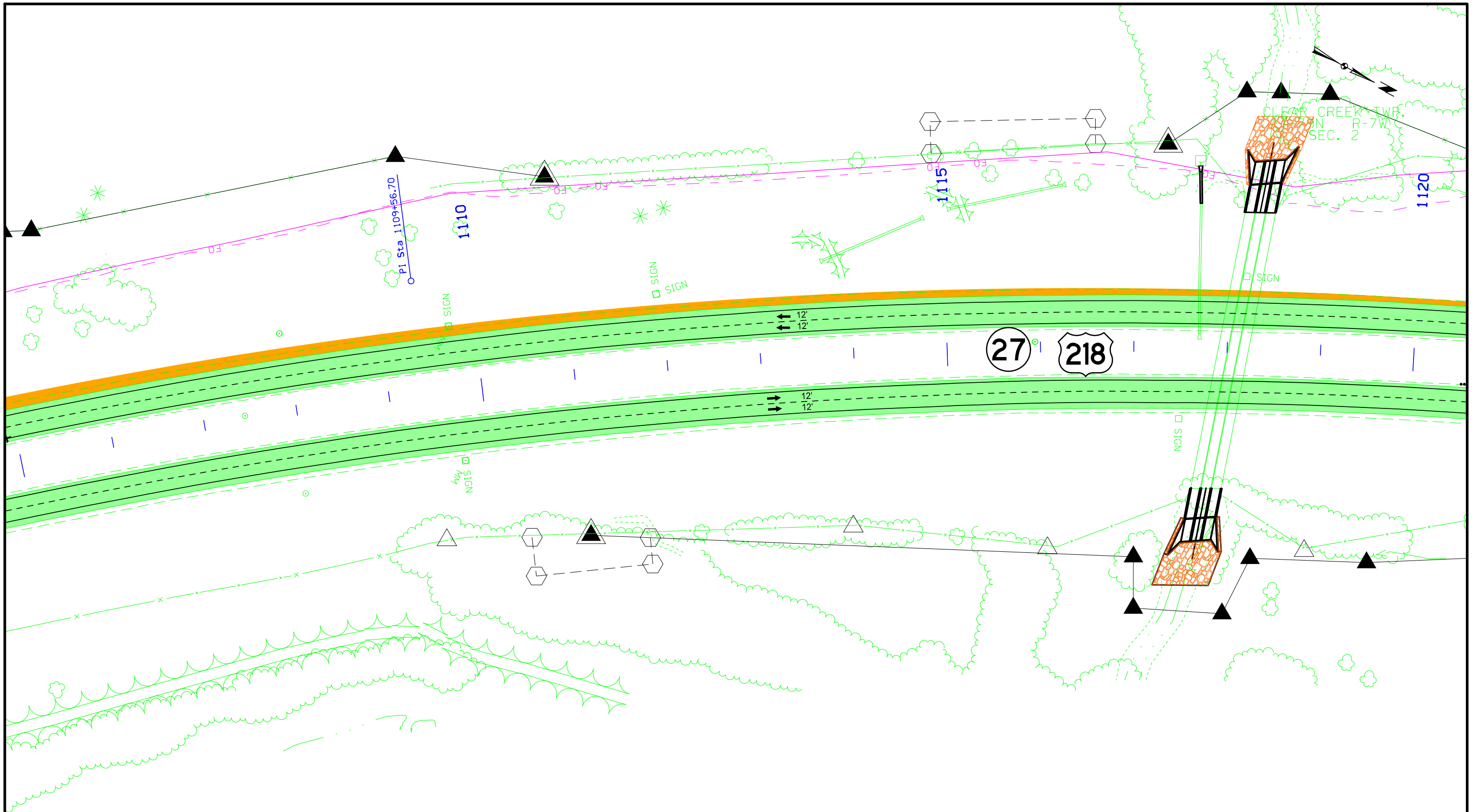
STAGE 2B



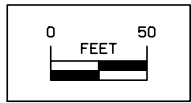
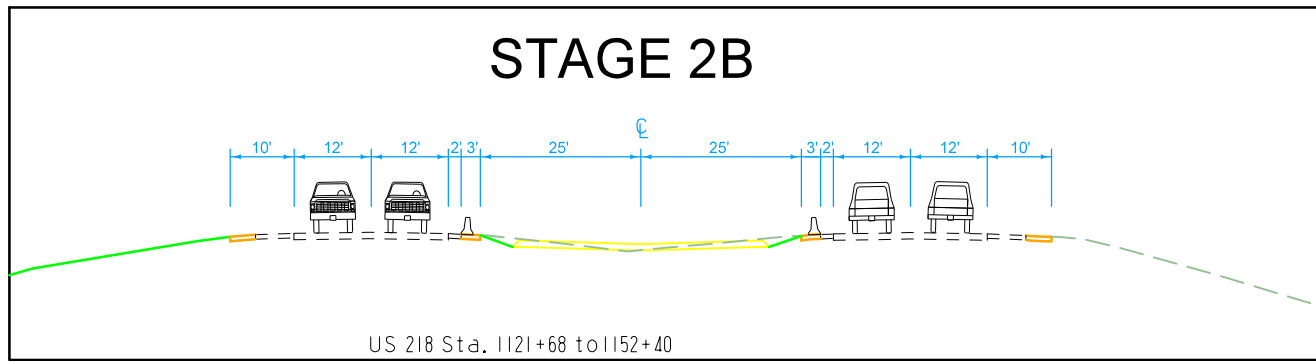
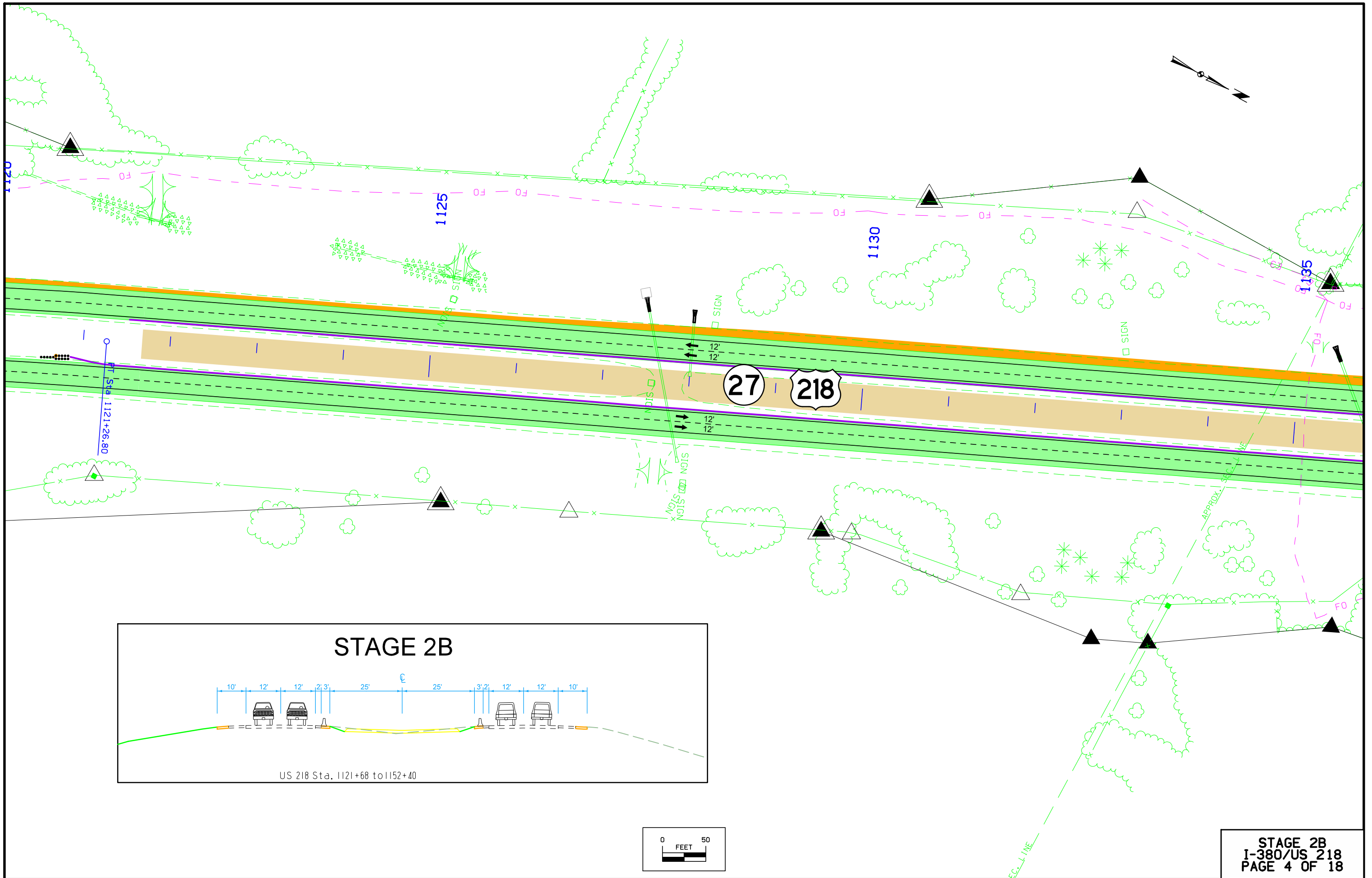
Curve Data
 $\Delta = 23^\circ 44' 52.81''$ (RT)
 $T = 1,204.70$
 $L = 2,374.80$
 $R = 5,729.58$
 $E = 125.28$



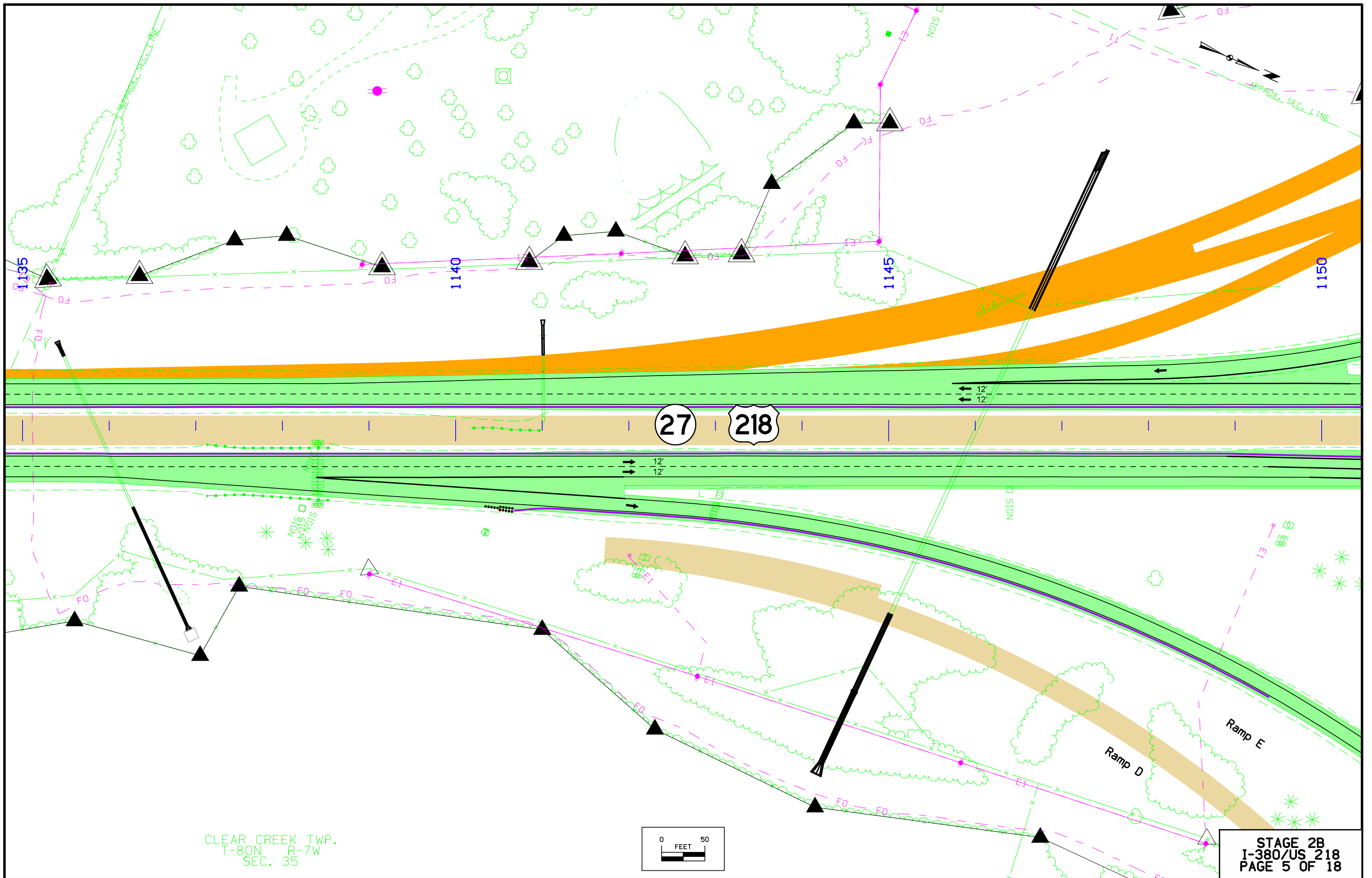
STAGE 2B
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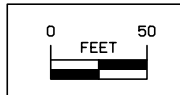
STAGE 2B
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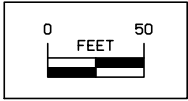
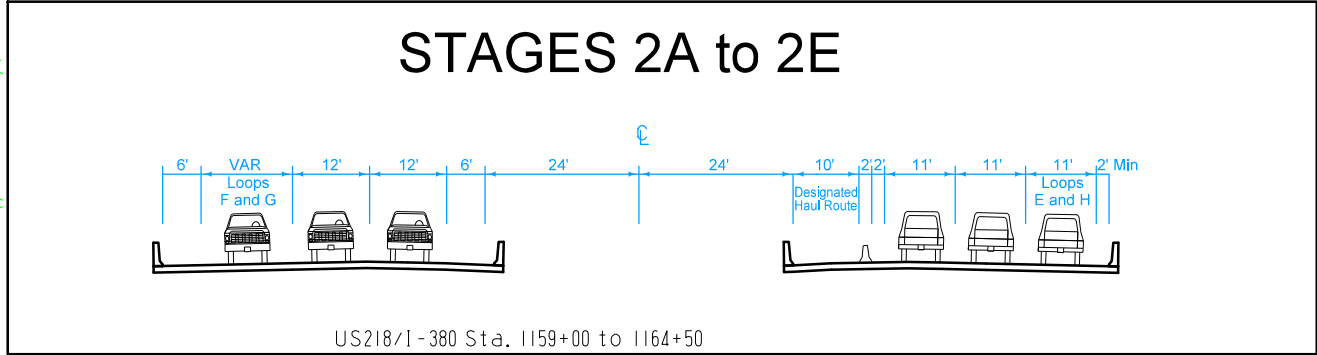
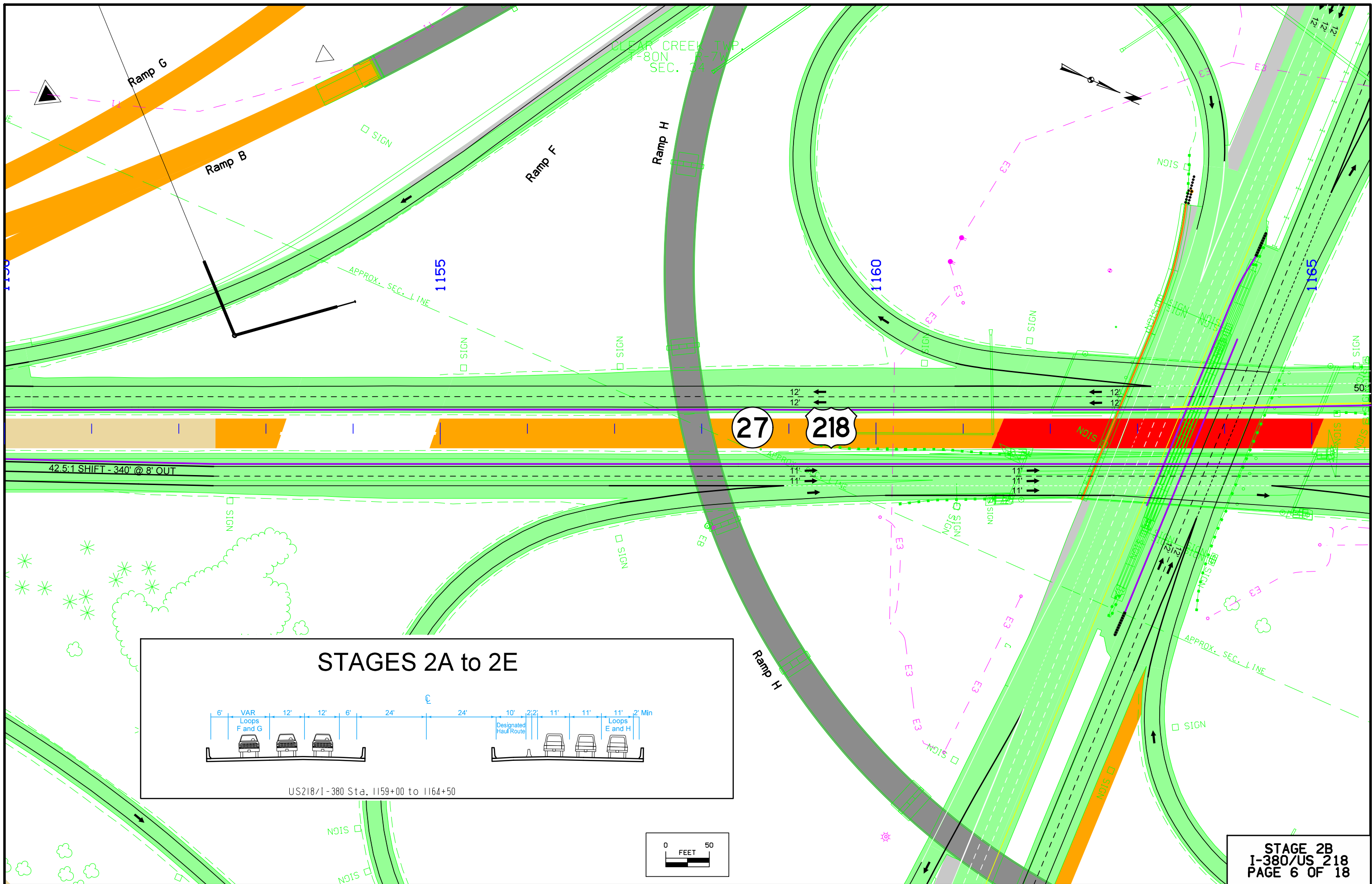
STAGE 2B
I-380/US 218
PAGE 4 OF 18



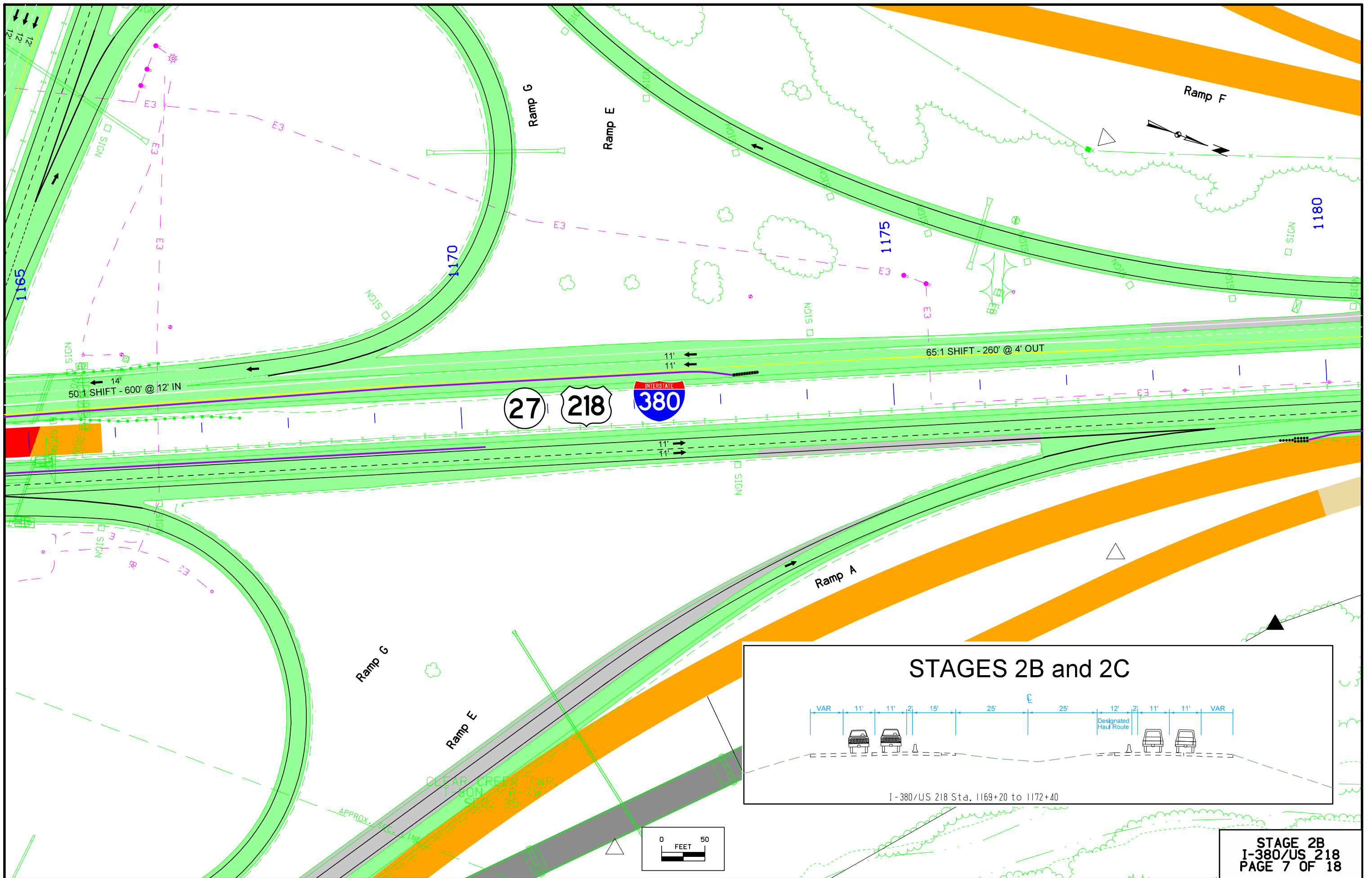
CLEAR CREEK TWP.
T-80N R-7W
SEC. 35

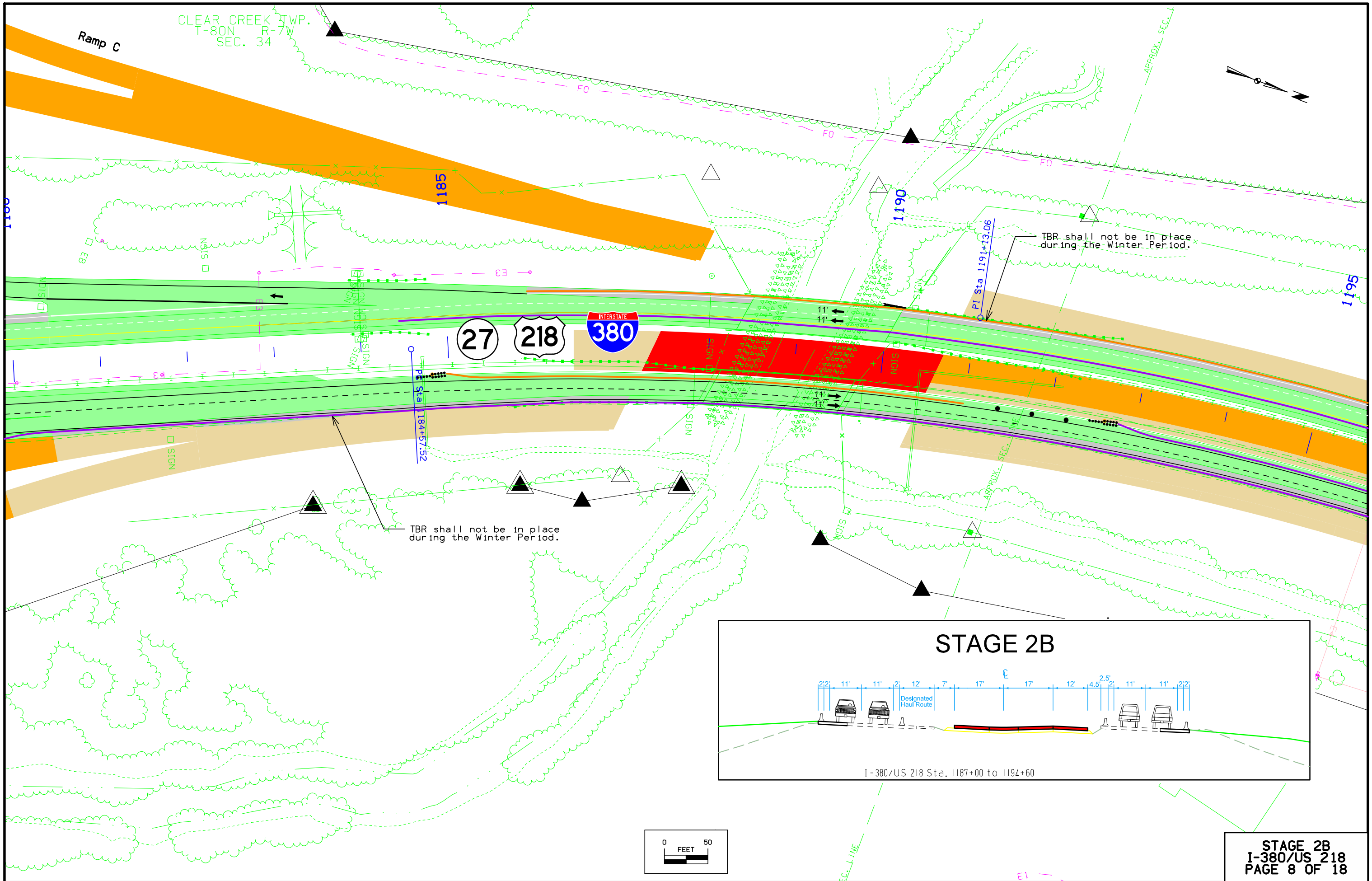


STAGE 2B
I-380/US 218
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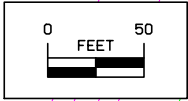
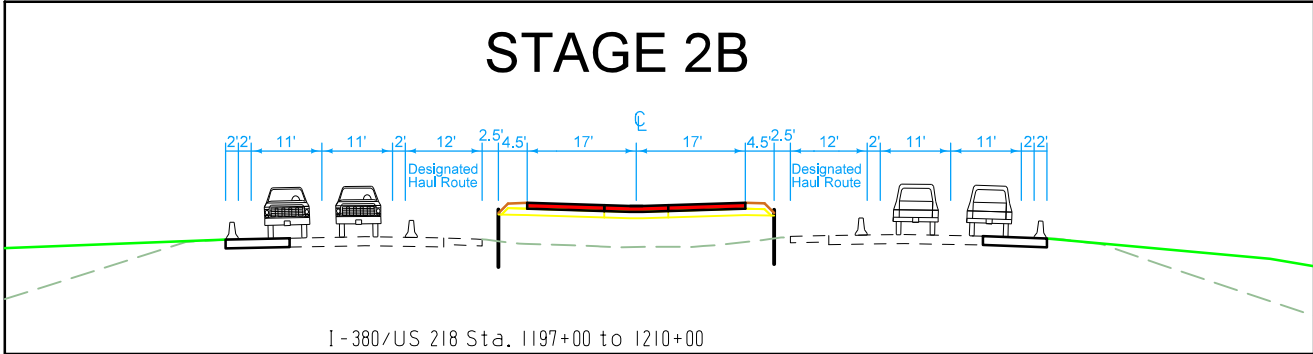
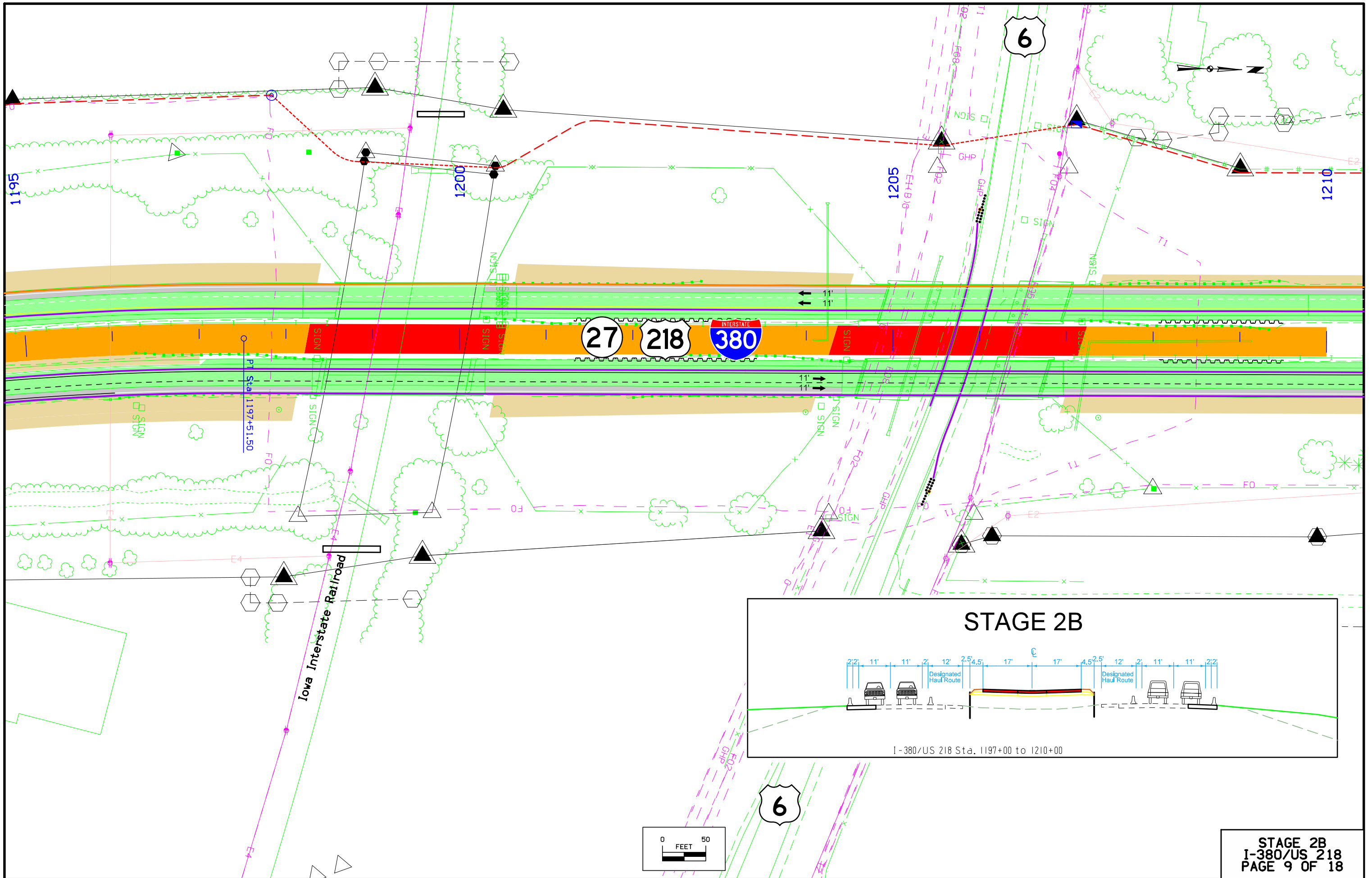


STAGE 2B
I-380/US 218
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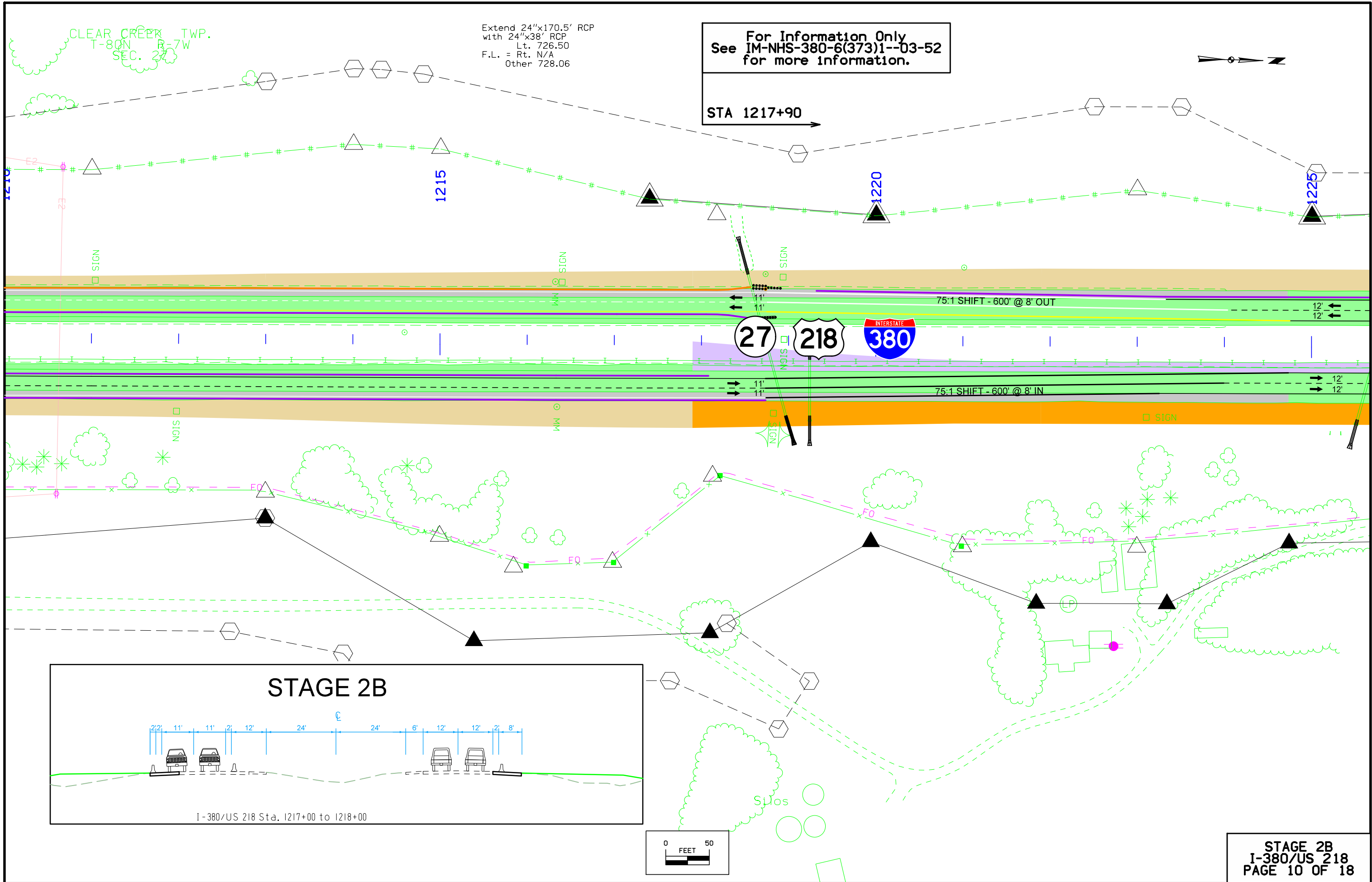




Changed by Addenda



STAGE 2B
I-380/US 218
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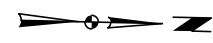


CLEAR CREEK TWP.
T-80N R-7W
SEC. 27

Extend 24"x170.5' RCP
with 24"x38' RCP
Lt. 726.50
F.L. = Rt. N/A
Other 728.06

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STA 1217+90



1215

1220

1225

27

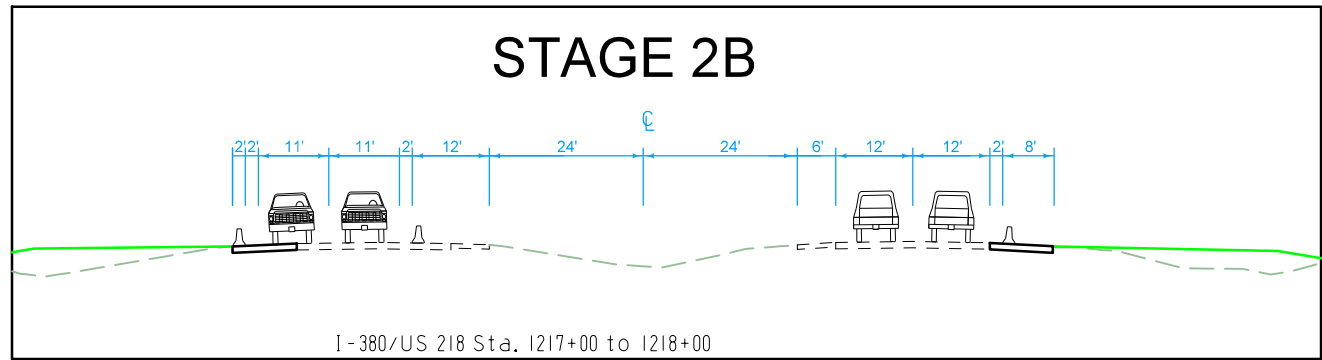
218

380

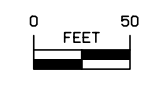
75:1 SHIFT - 600' @ 8' OUT

75:1 SHIFT - 600' @ 8' IN

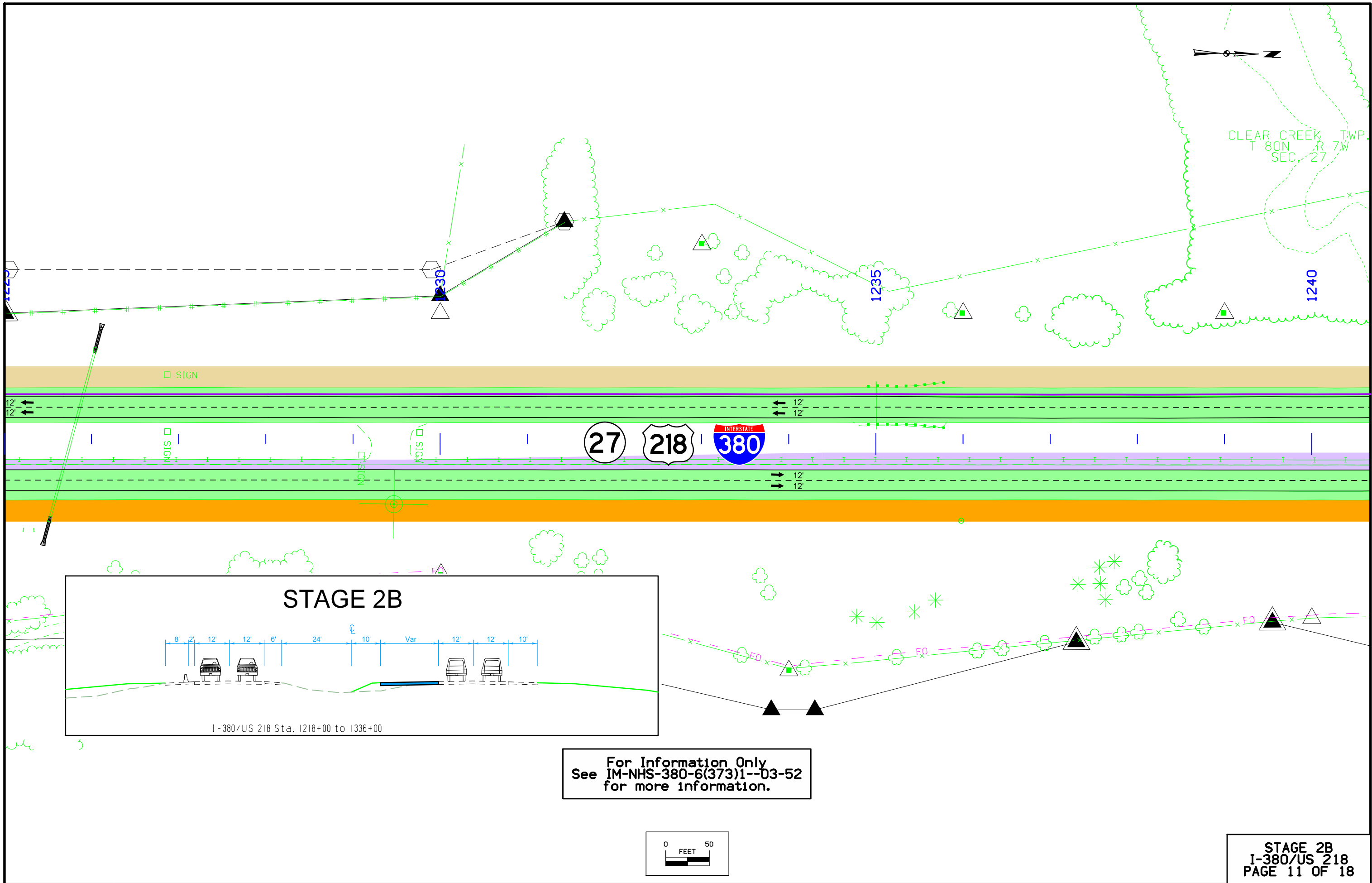
STAGE 2B



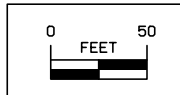
I-380/US 218 Sta. 1217+00 to 1218+00



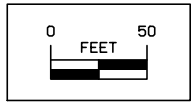
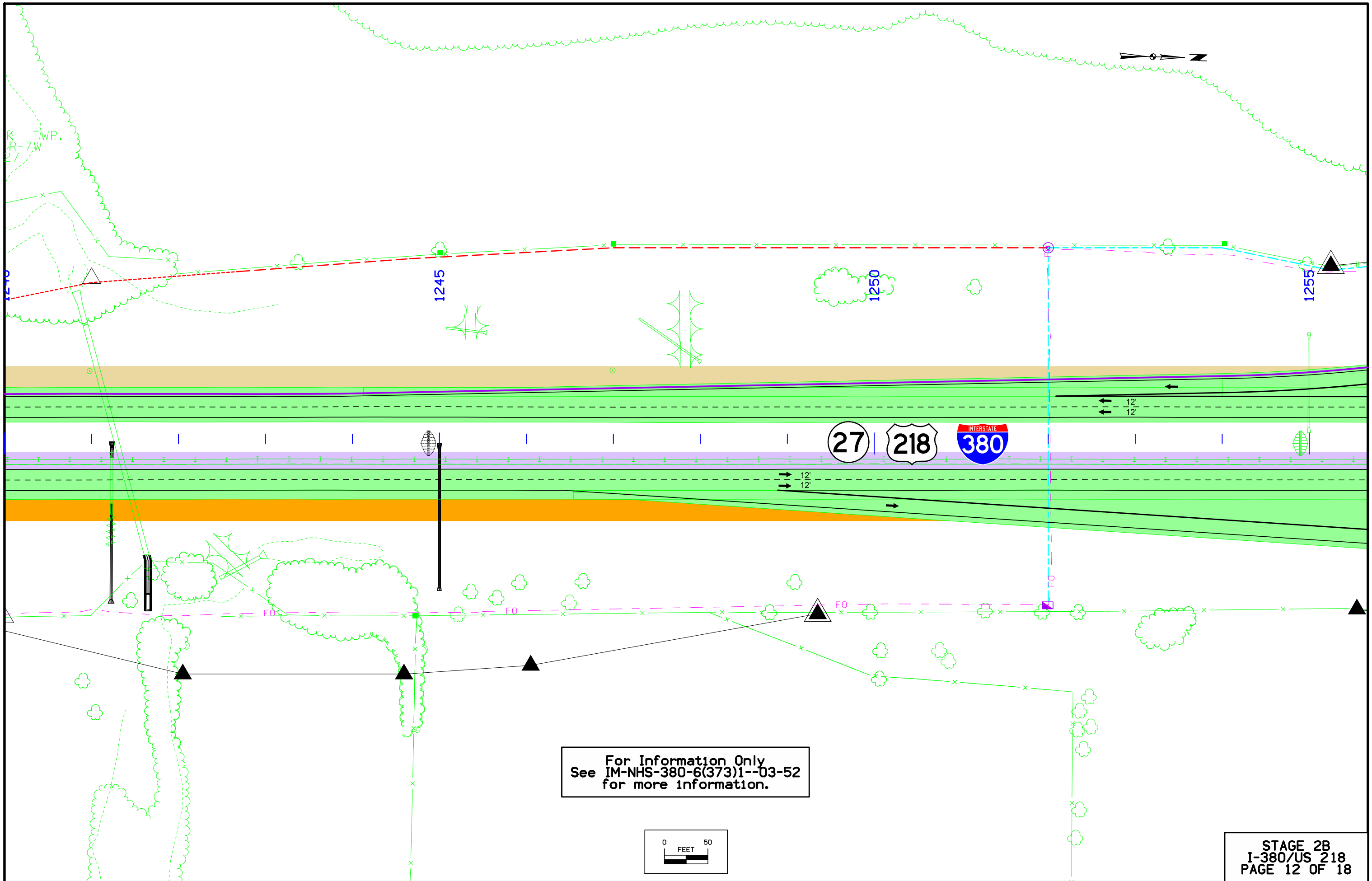
STAGE 2B
I-380/US 218
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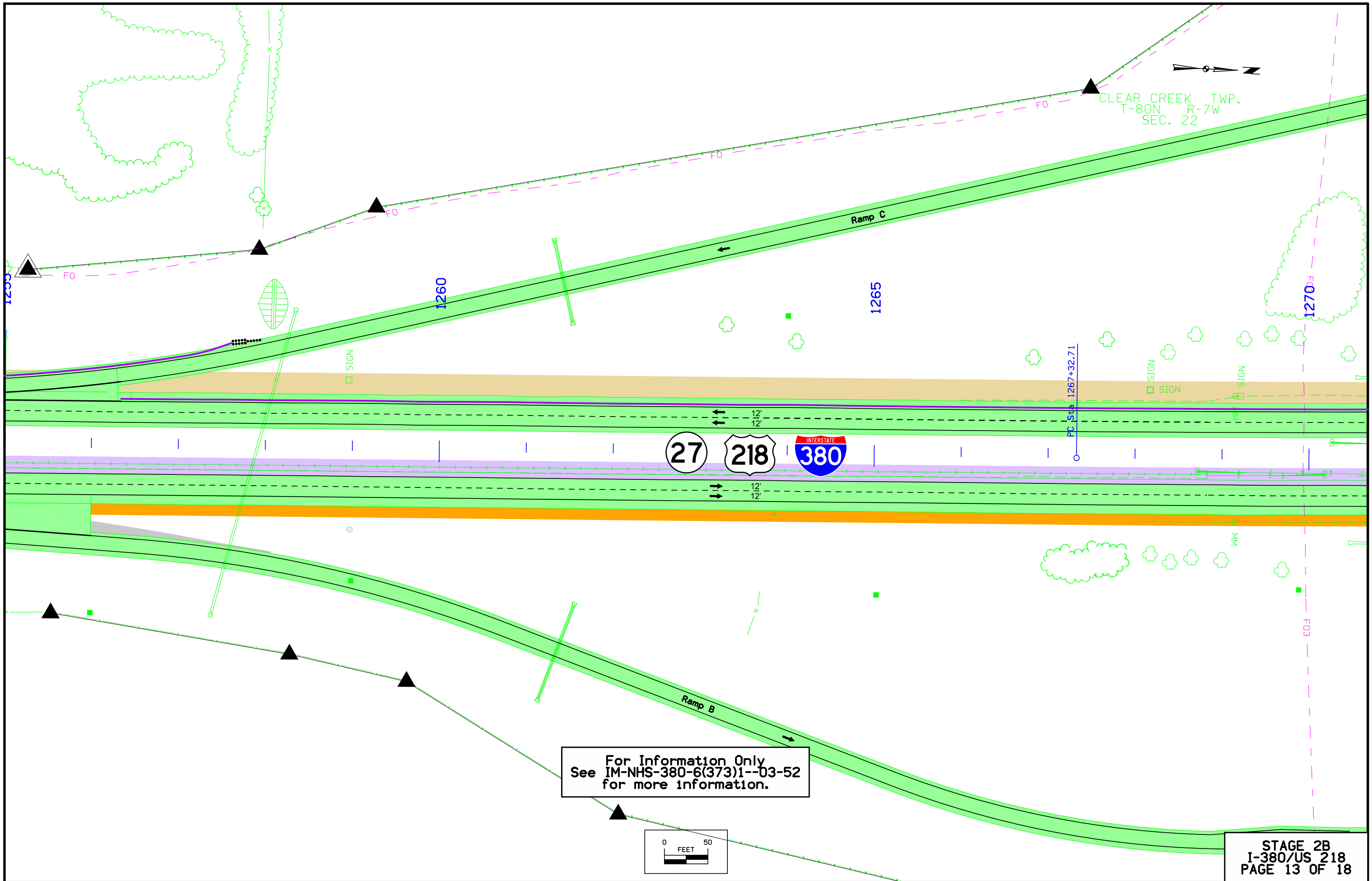
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STAGE 2B
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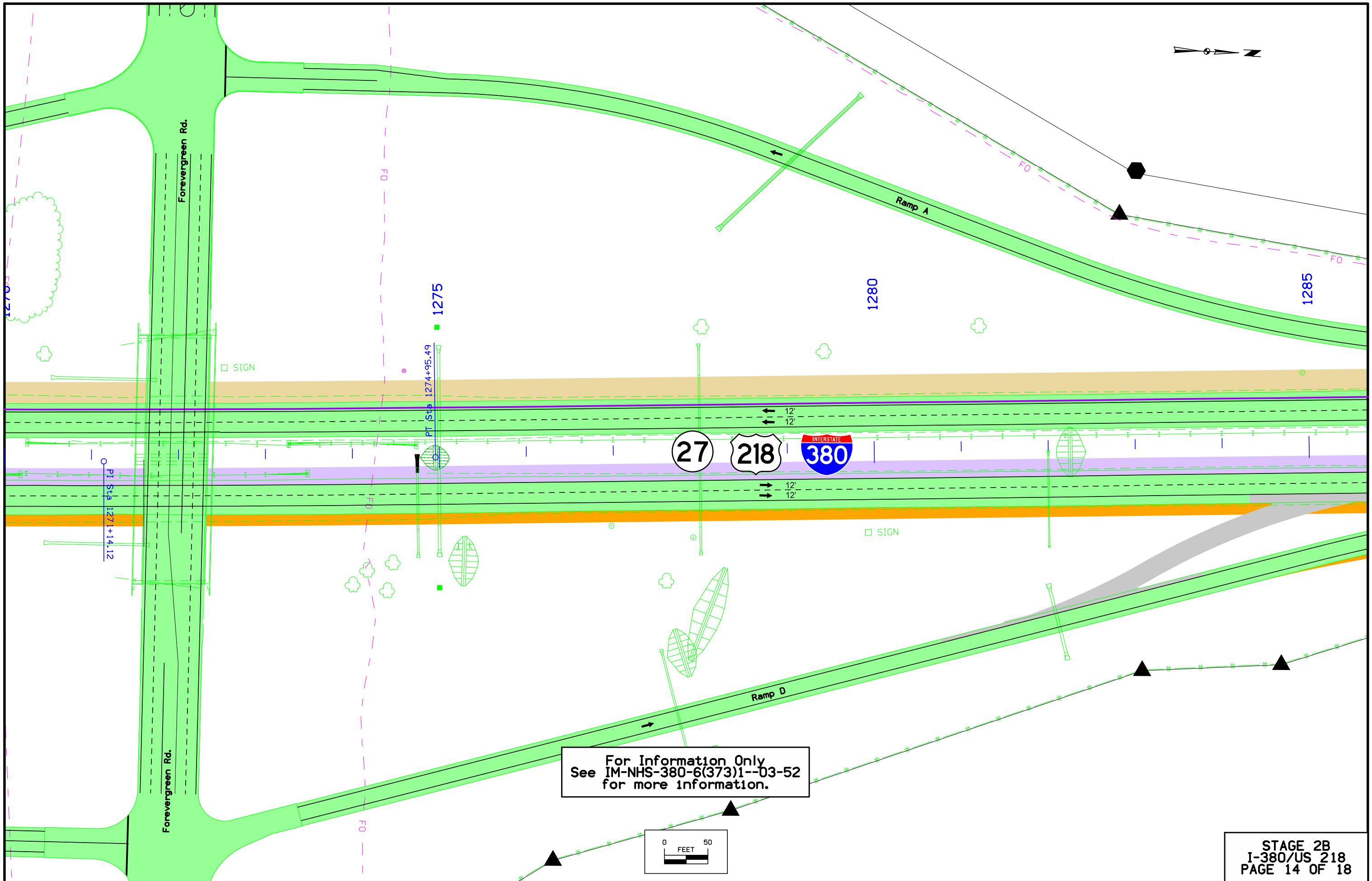


STAGE 2B
I-380/US 218
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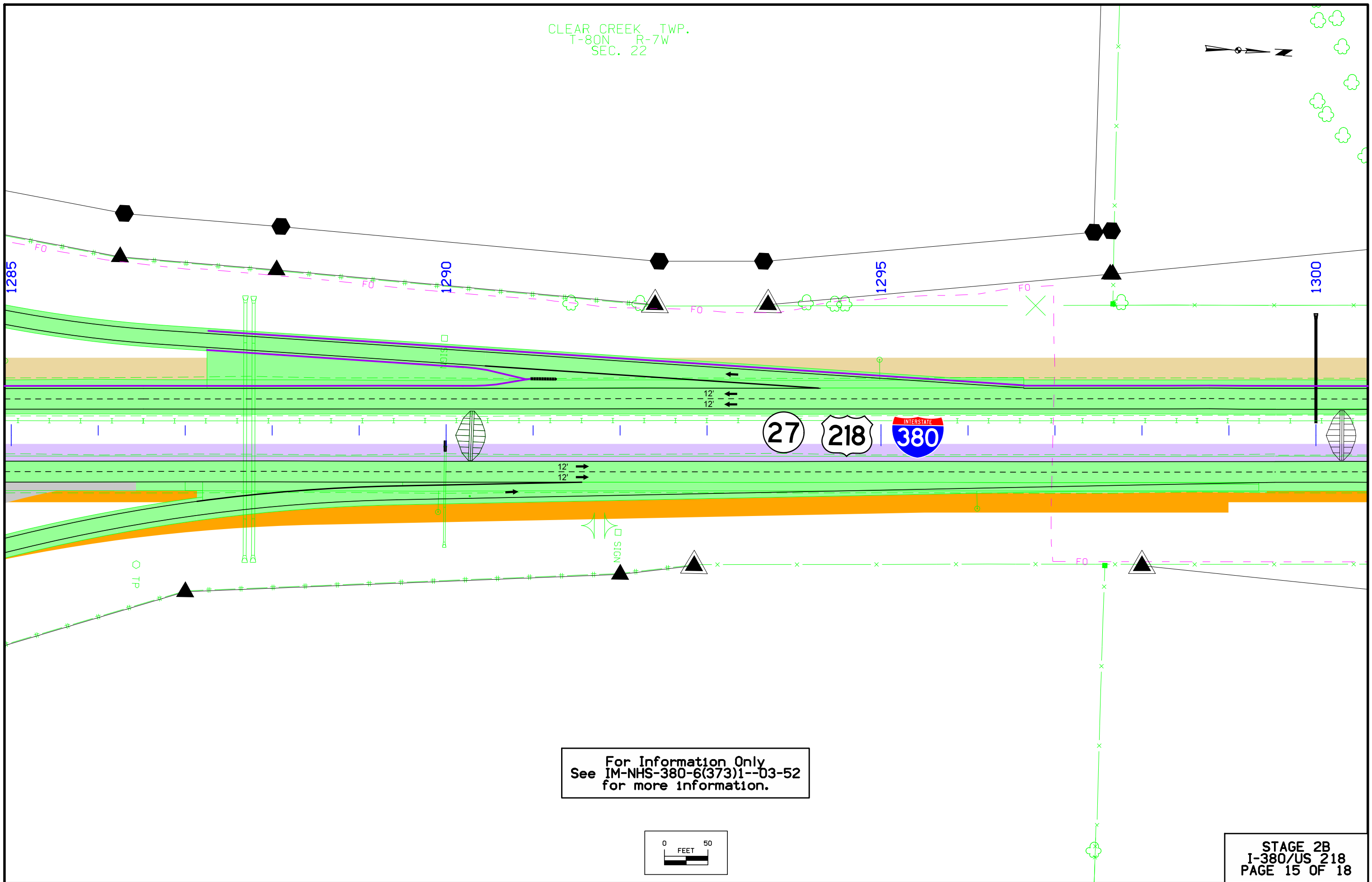
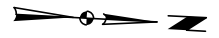
STAGE 2B
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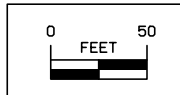
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 for more information.

STAGE 2B
 I-380/US 218
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CLEAR CREEK TWP.
T-80N R-7W
SEC. 22

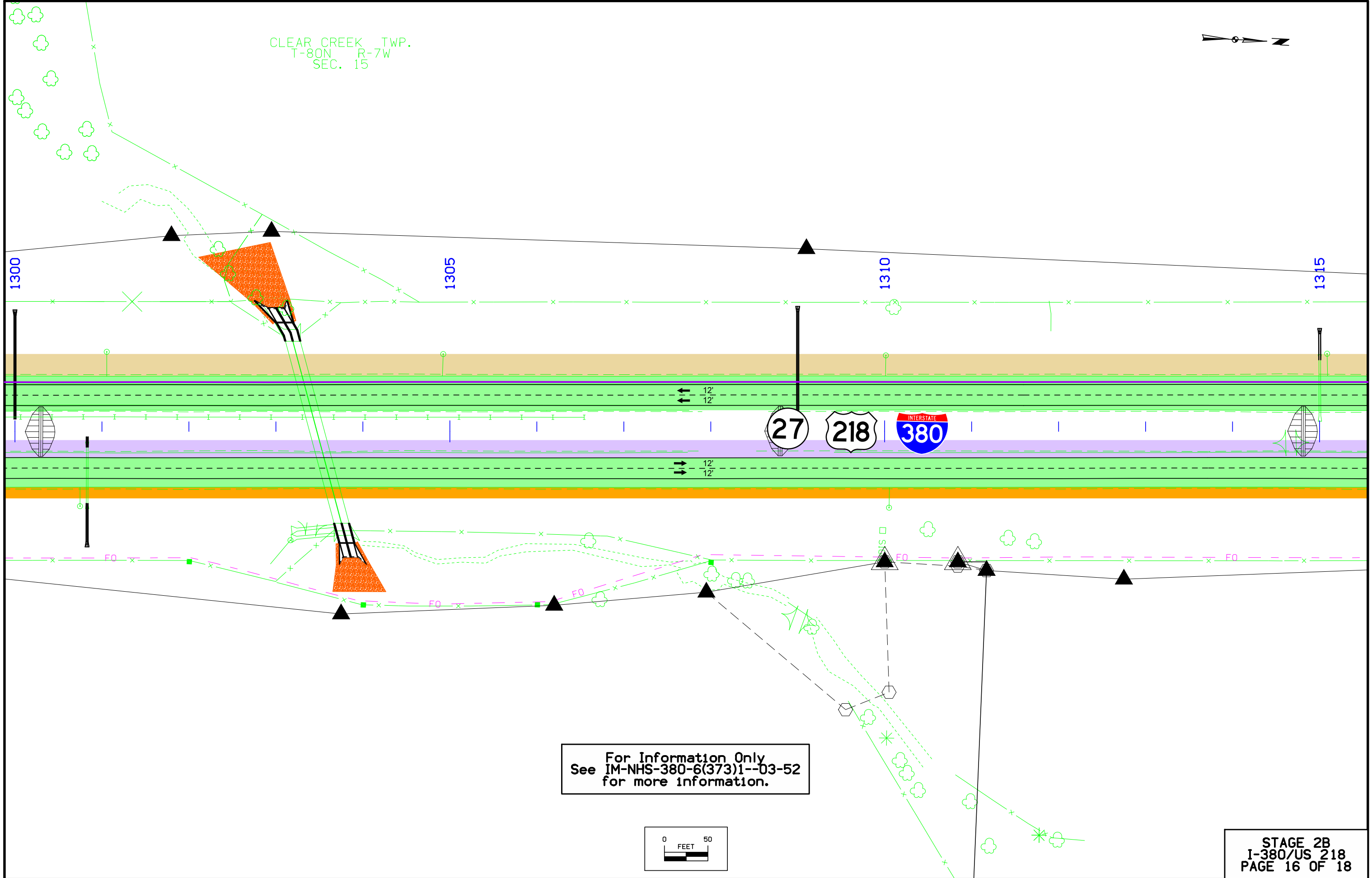
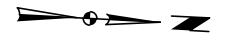


For Information Only
See IM-NHS-380-6(373)1--03-52
for more information.

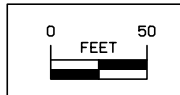


STAGE 2B
I-380/US 218
PAGE 15 OF 18

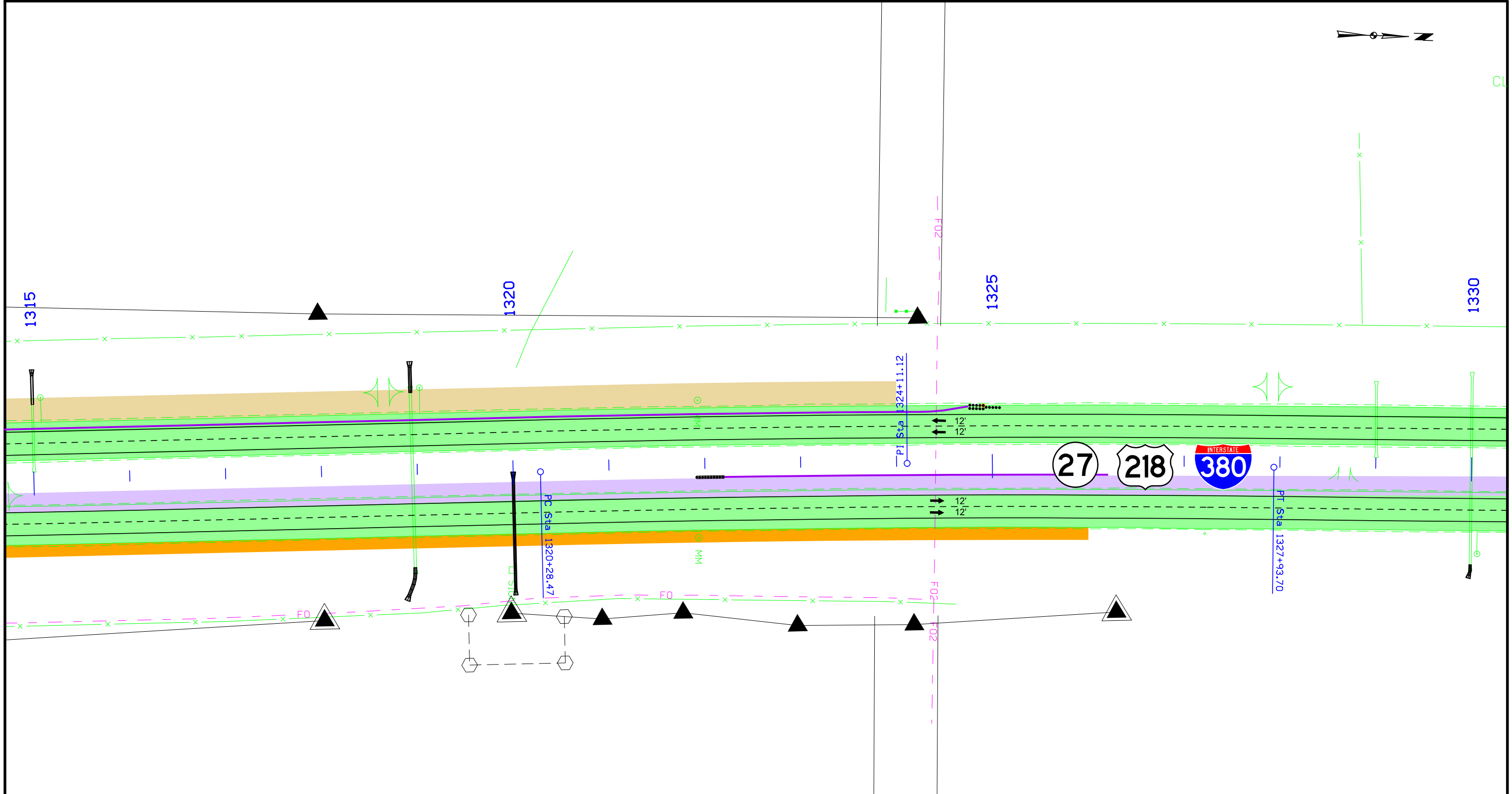
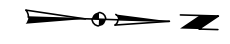
CLEAR CREEK TWP.
T-80N R-7W
SEC. 15



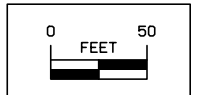
For Information Only
See IM-NHS-380-6(373)1--03-52
for more information.



STAGE 2B
I-380/US 218
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For Information Only
 See IM-NHS-380-6(373)1--03-52
 for more information.



STAGE 2B
 I-380/US 218
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CLEAR CREEK TWP.
T-80N R-7W
SEC. 15

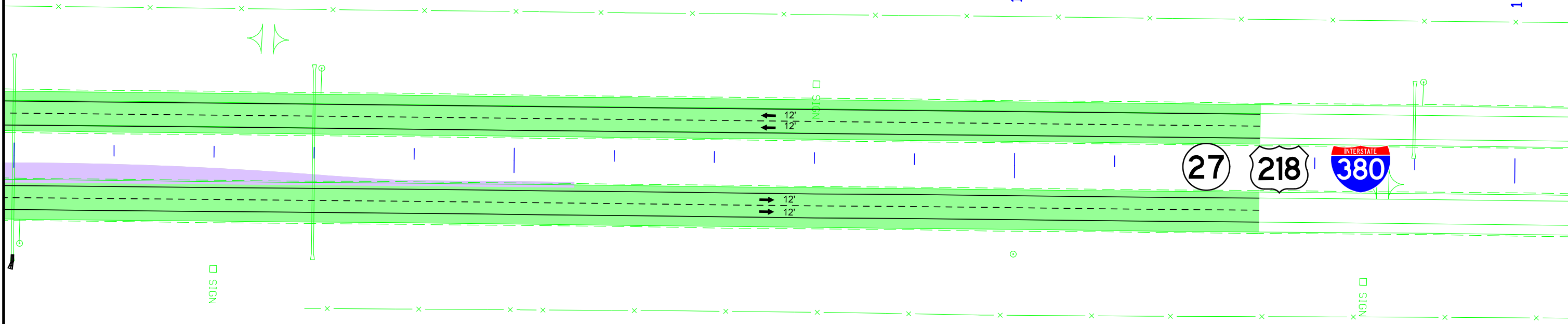


1330

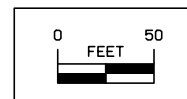
1335

1340

1345



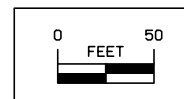
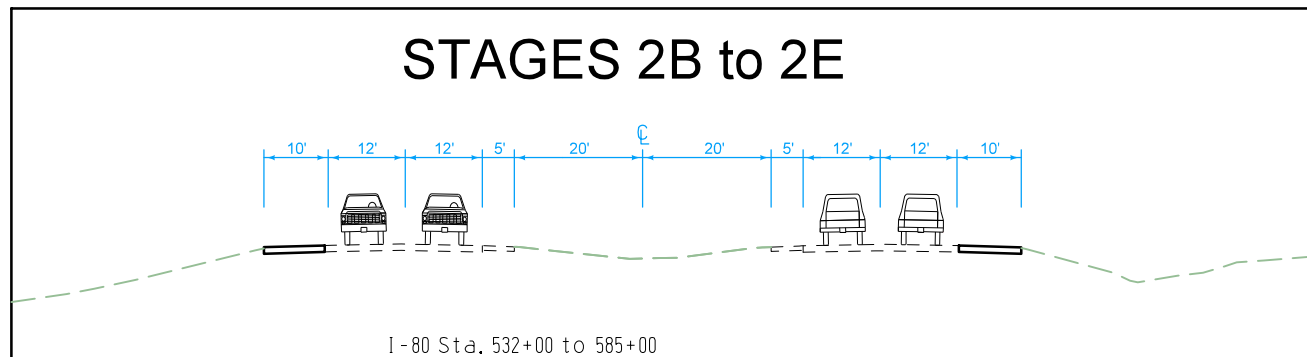
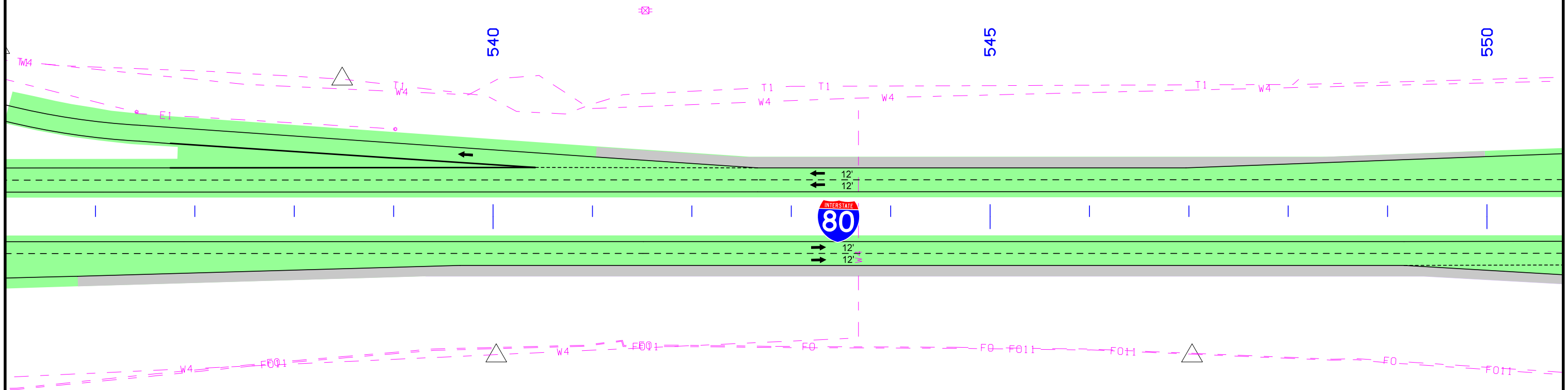
For Information Only
See IM-NHS-380-6(373)1--03-52
for more information.



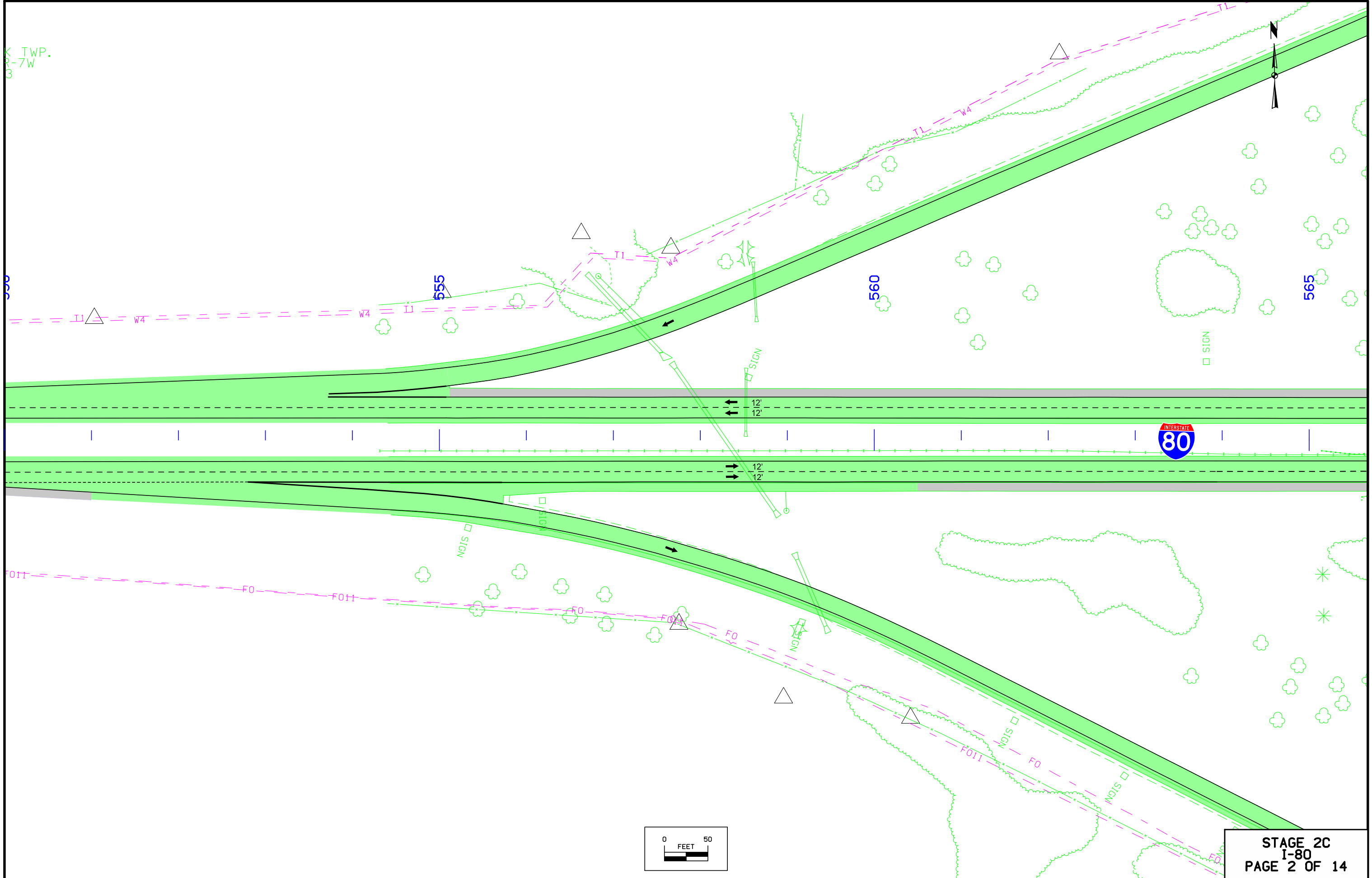
STAGE 2B
I-380/US 218
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CLEAR CREEK TWP.
T-80N R-7W
SEC. 32

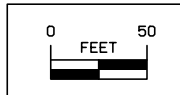
CLEAR CREEK TWP.
T-80N R-7W
SEC. 33



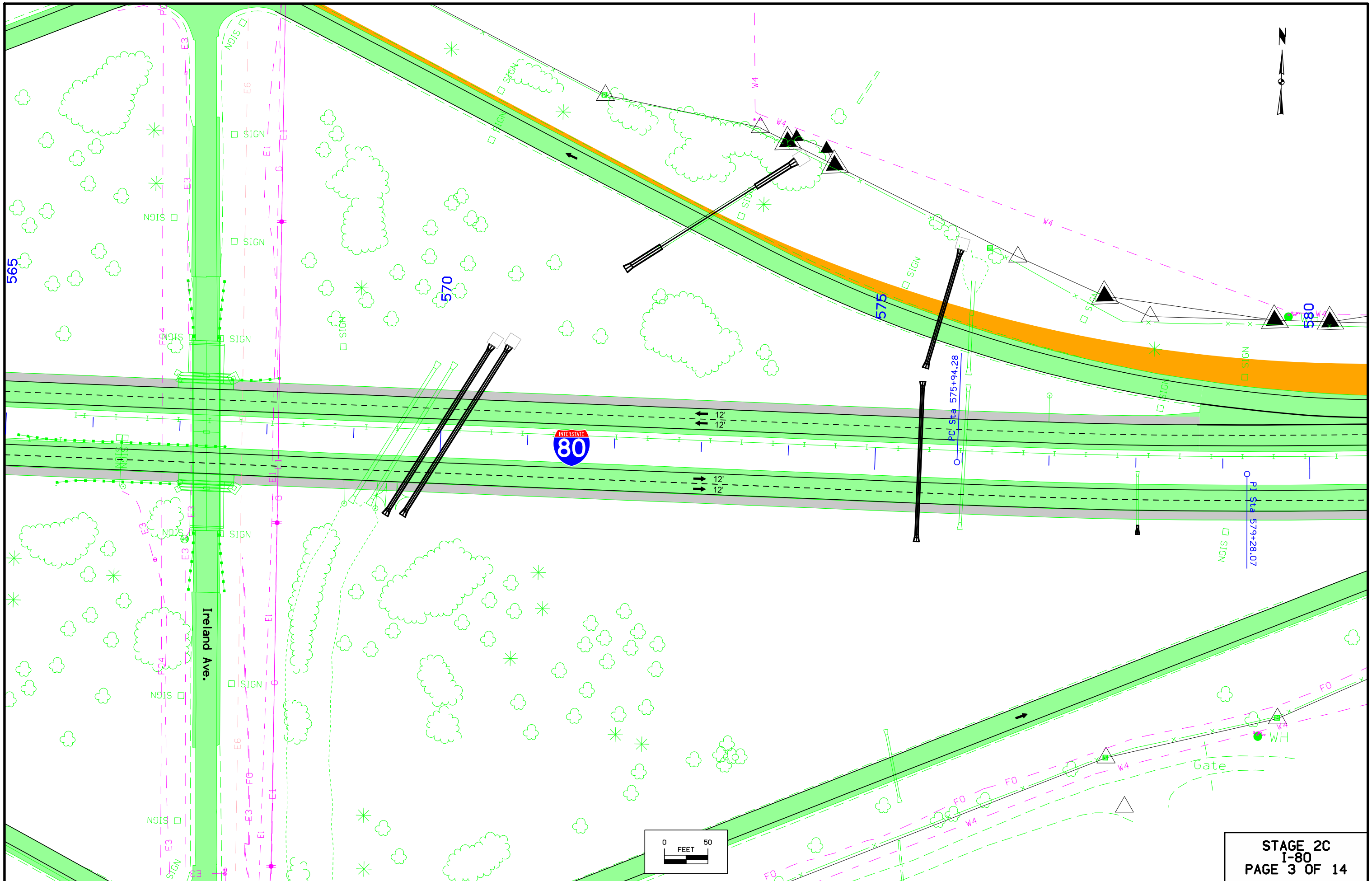
STAGE 2C
I-80
PAGE 1 OF 14



K TWP.
R-7W
S

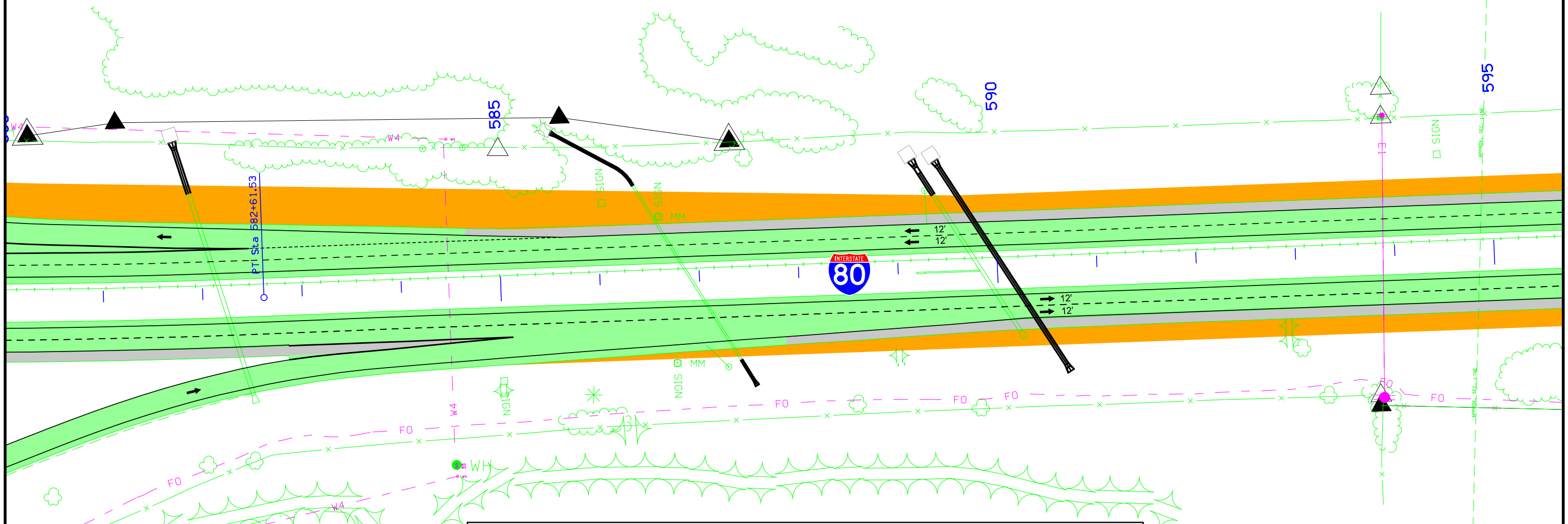


STAGE 2C
I-80
PAGE 2 OF 14

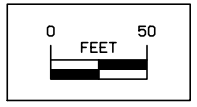
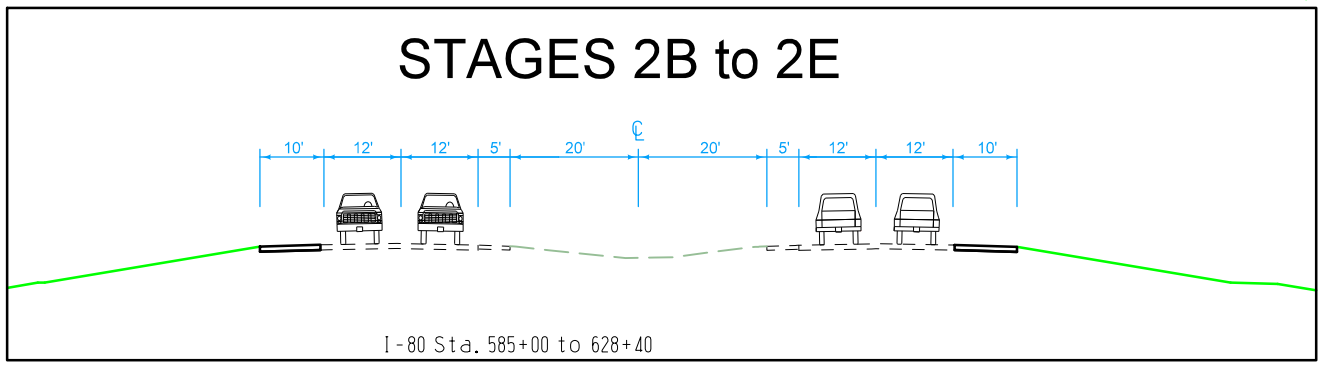


STAGE 2C
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PAGE 3 OF 14

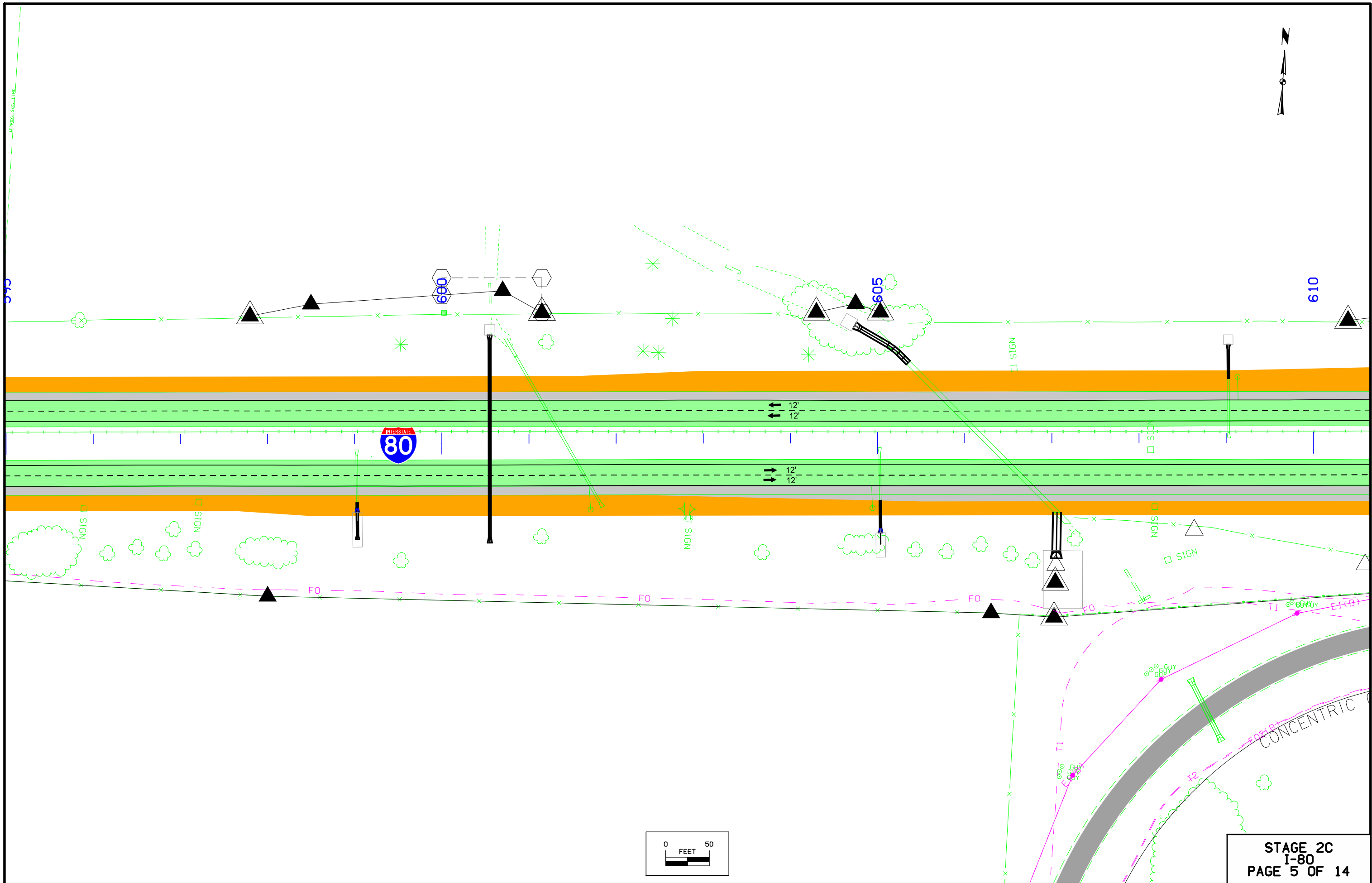
CLEAR CREEK TWP.
T-80N R-7W
SEC. 33



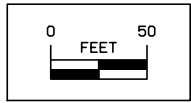
Curve Data
 $\Delta = 4^\circ 26' 53.84''$ (LT)
 $T = 333.79$
 $L = 667.24$
 $R = 8,594.37$
 $E = 6.48$



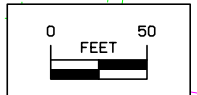
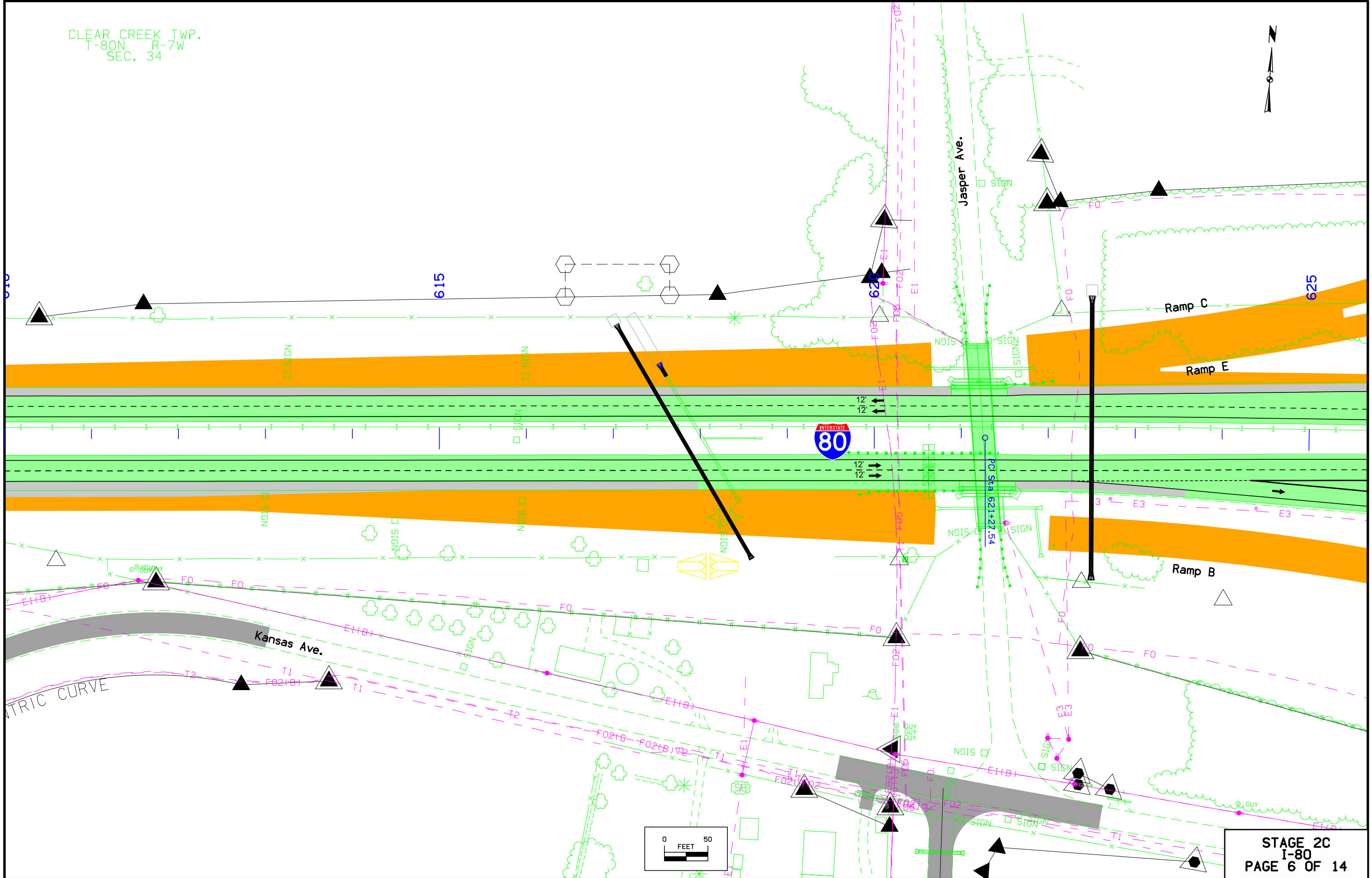
STAGE 2C
I-80
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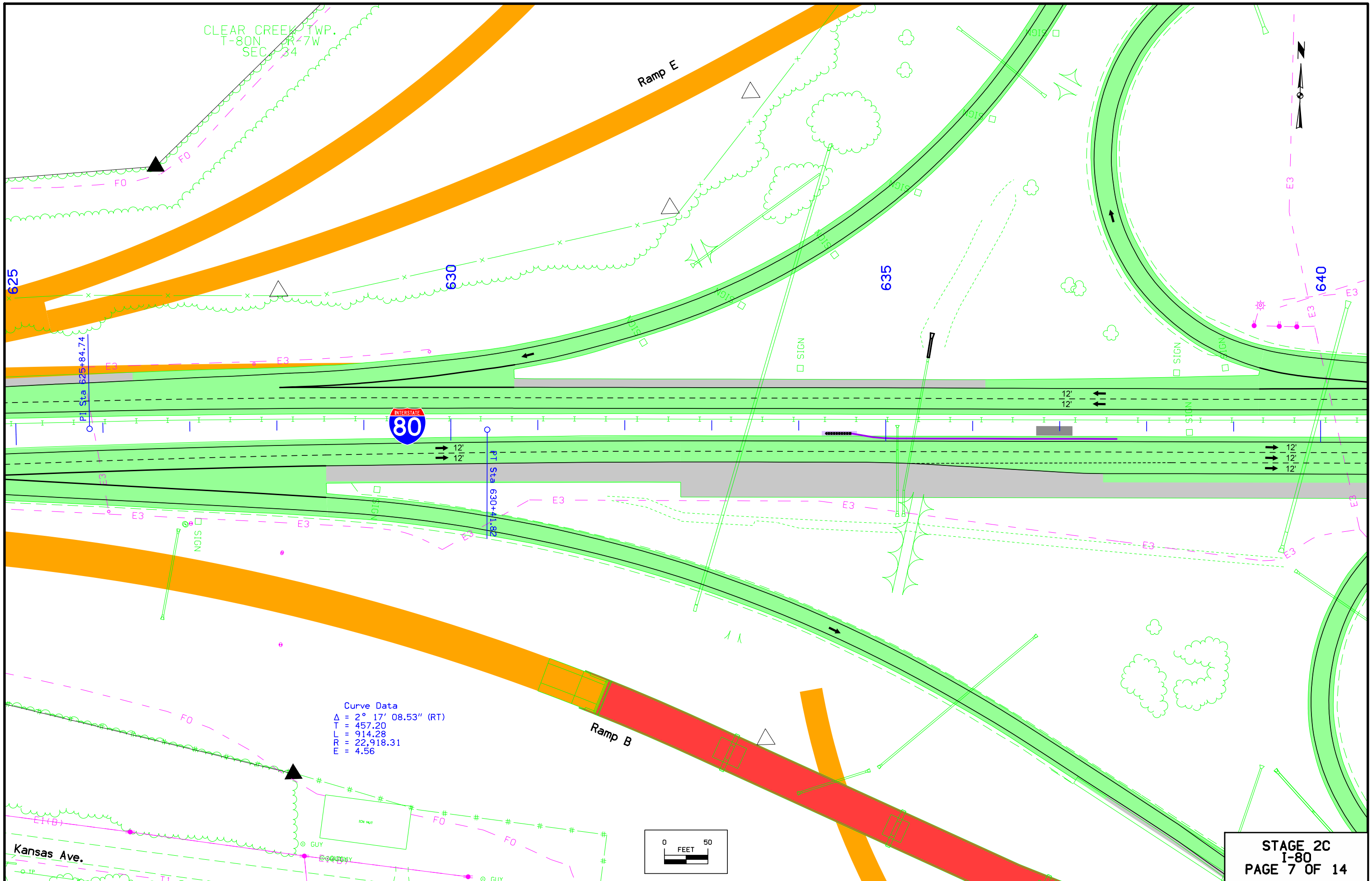
STAGE 2C
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PAGE 5 OF 14



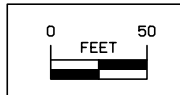
CLEAR CREEK TWP.
T-80N R-7W
SEC. 34



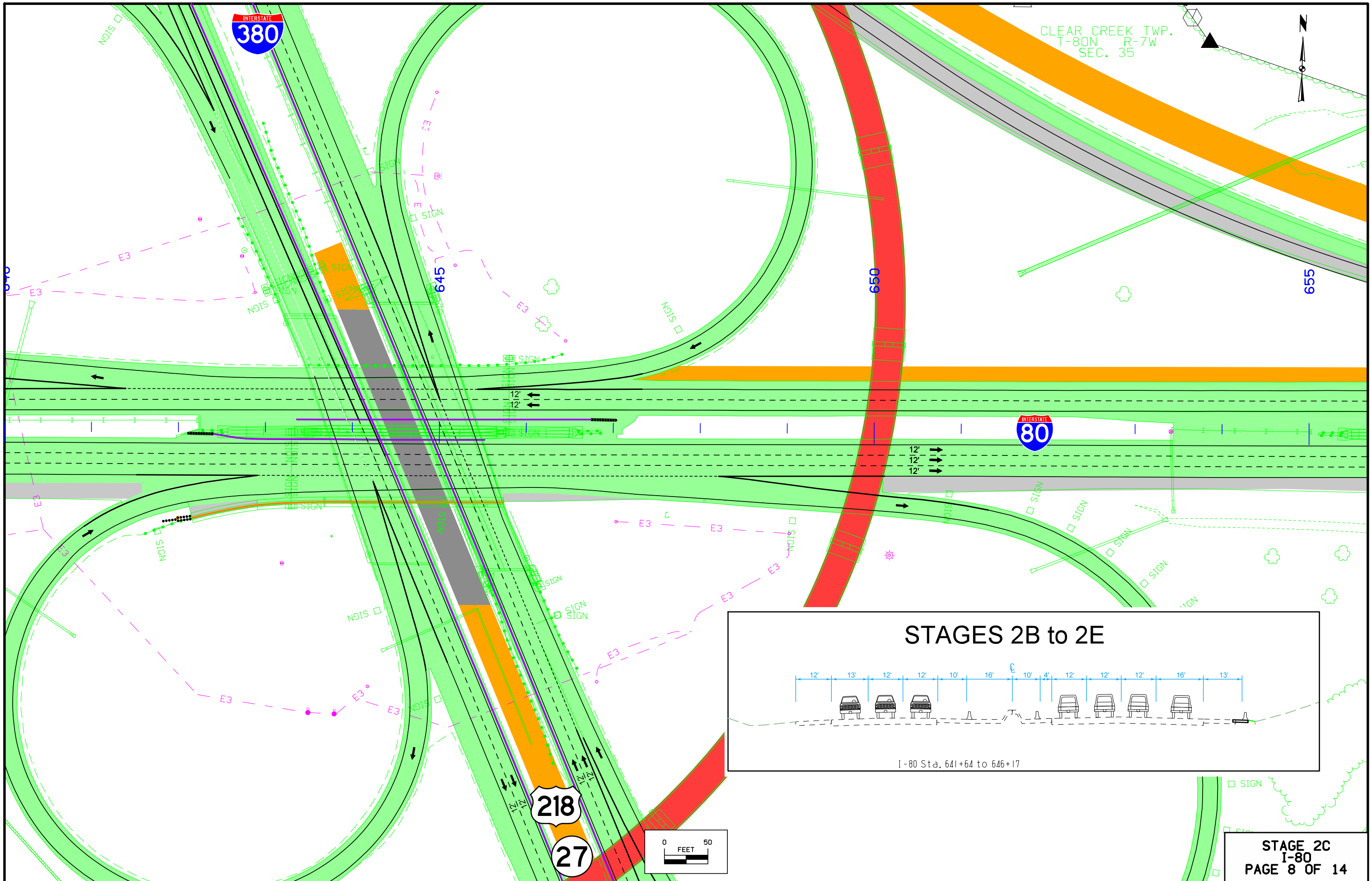
STAGE 2C
I-80
PAGE 6 OF 14



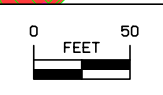
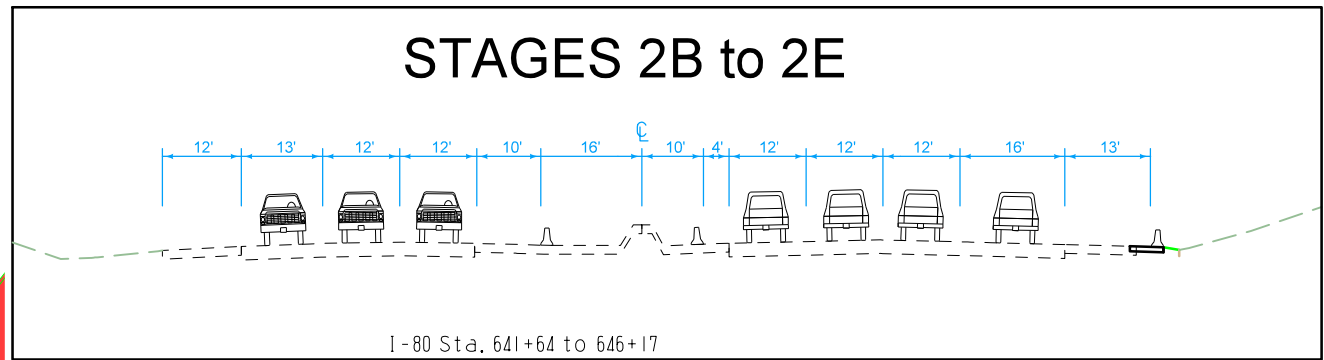
Curve Data
 $\Delta = 2^\circ 17' 08.53''$ (RT)
 T = 457.20
 L = 914.28
 R = 22,918.31
 E = 4.56



STAGE 2C
 I-80
 PAGE 7 OF 14



CLEAR CREEK TWP.
T-80N R-7W
SEC. 35

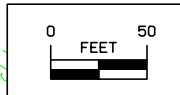
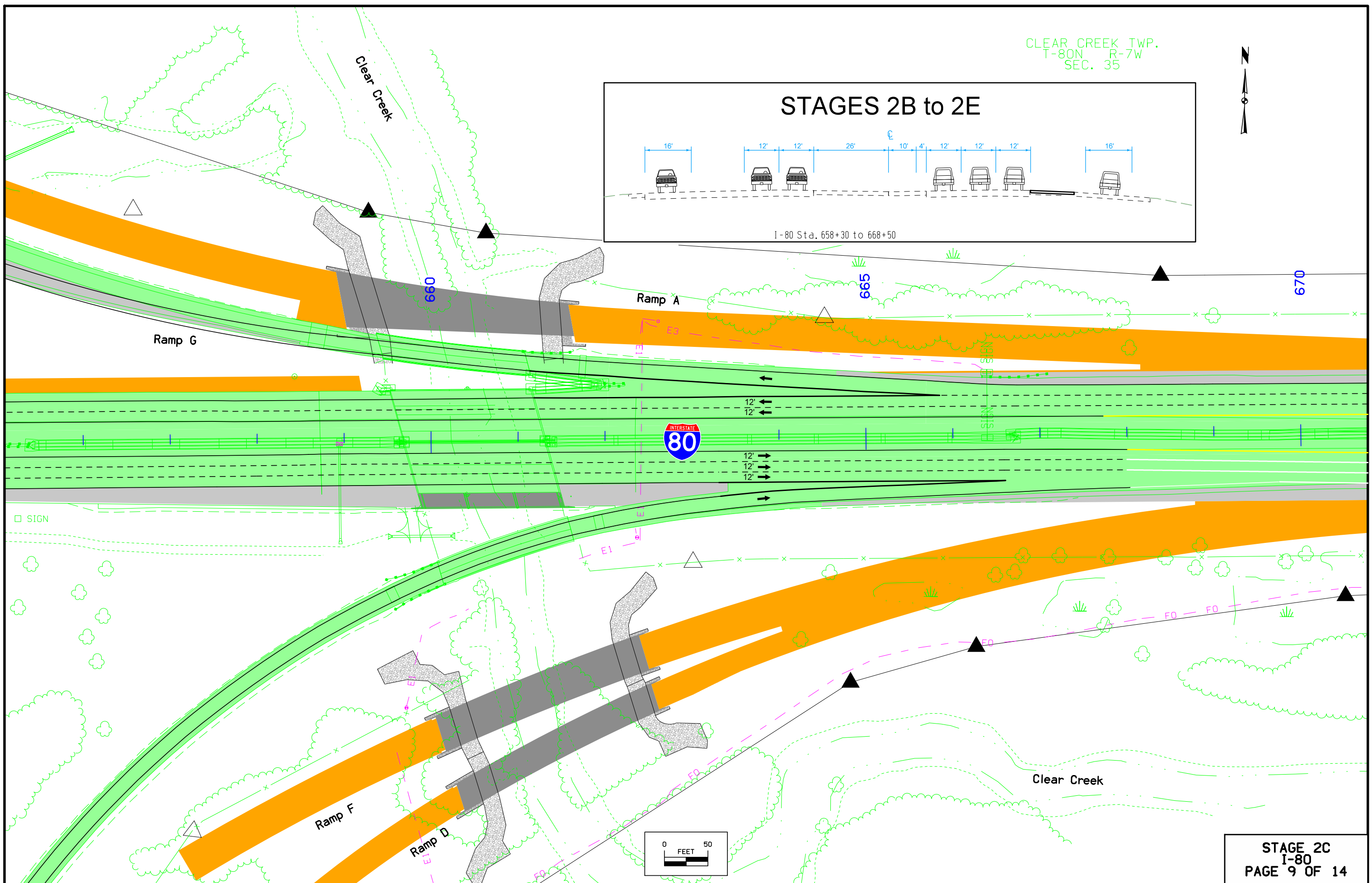
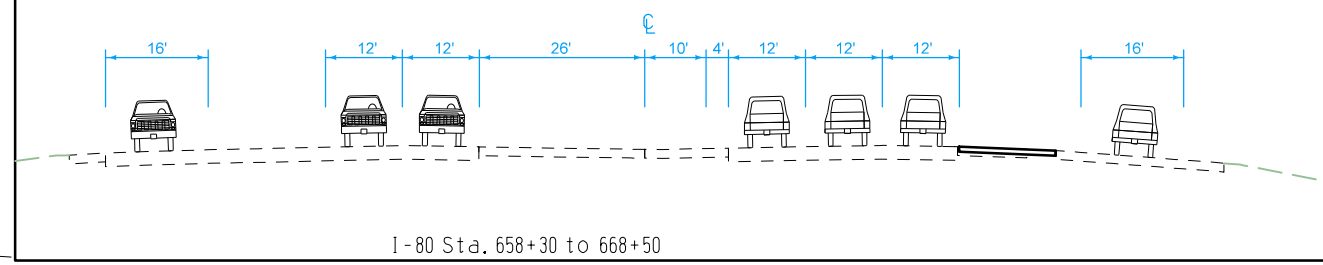


STAGE 2C
I-80
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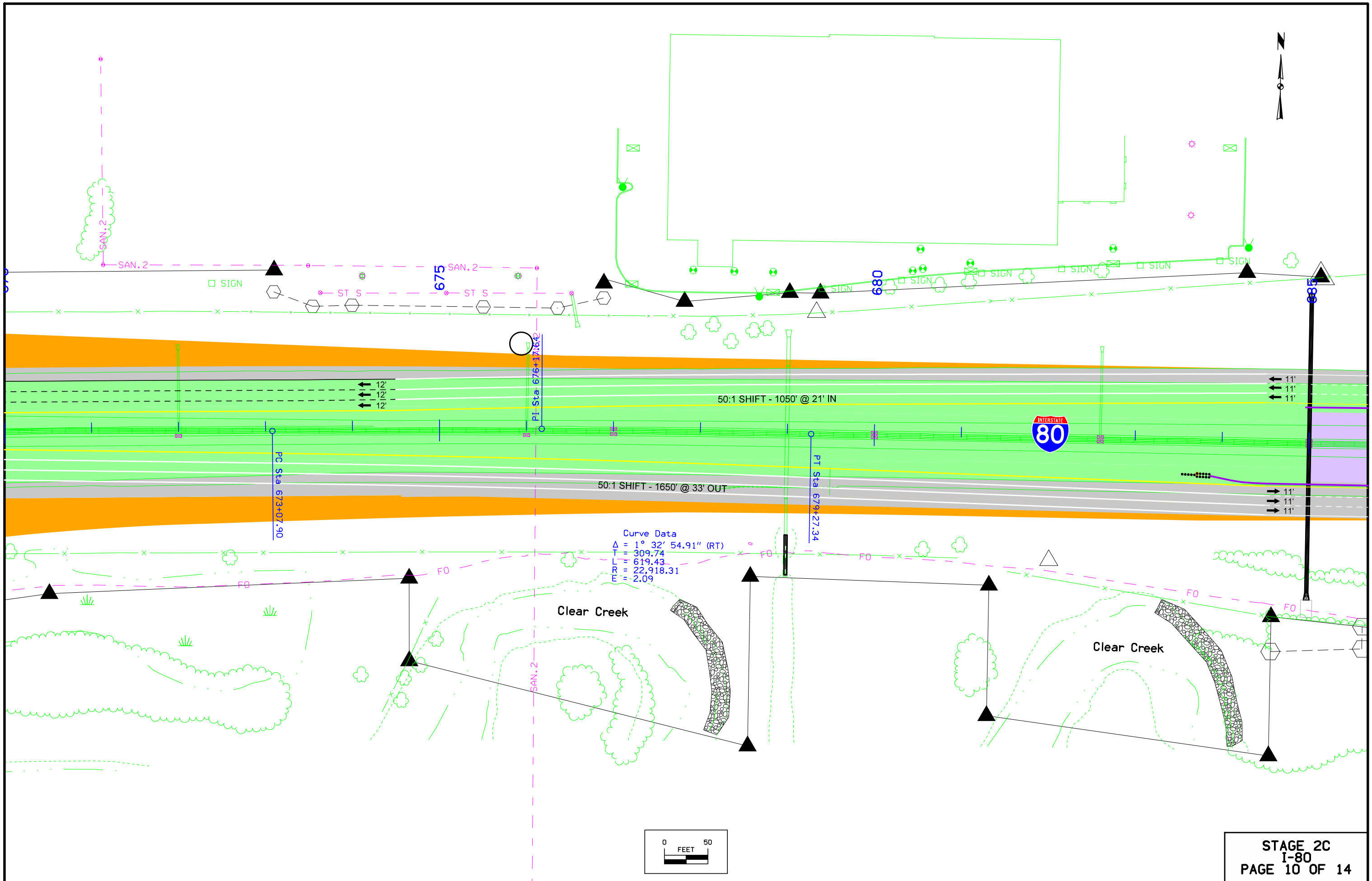
CLEAR CREEK TWP.
T-80N R-7W
SEC. 35



STAGES 2B to 2E

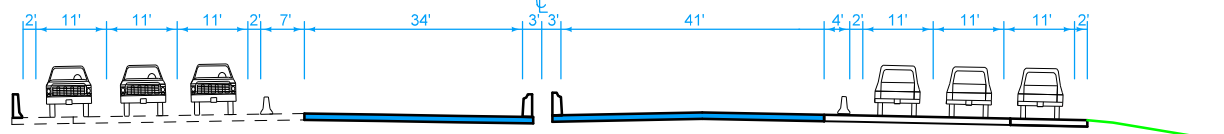


STAGE 2C
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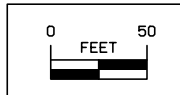
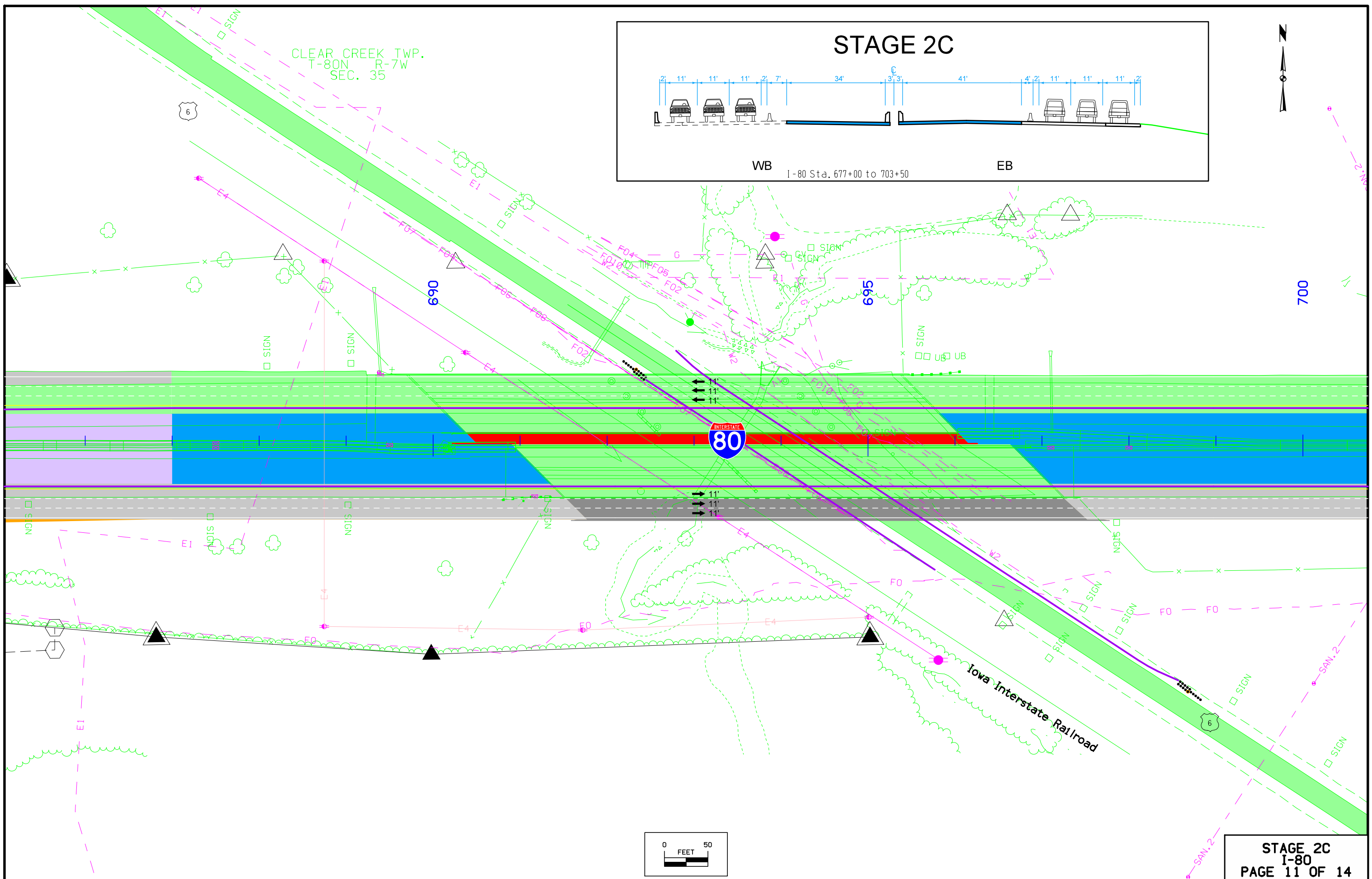
CLEAR CREEK TWP.
T-80N R-7W
SEC. 35

STAGE 2C

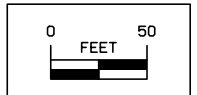
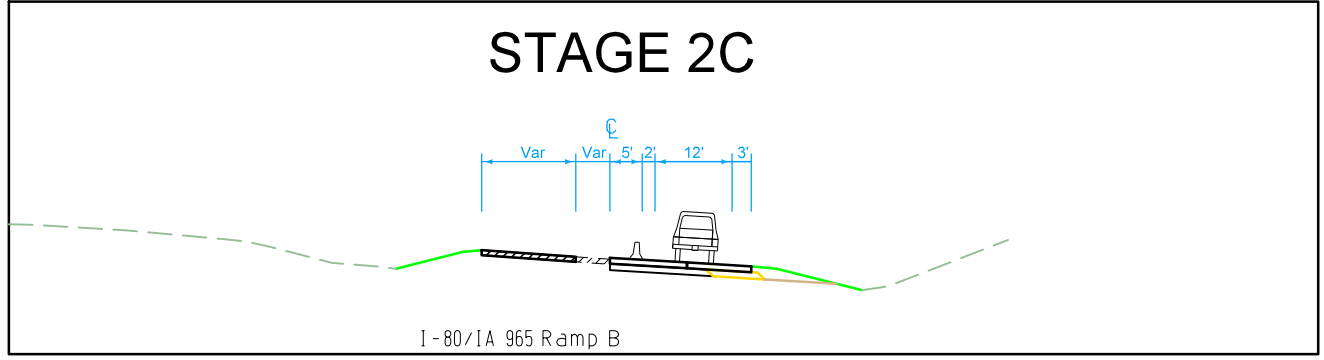
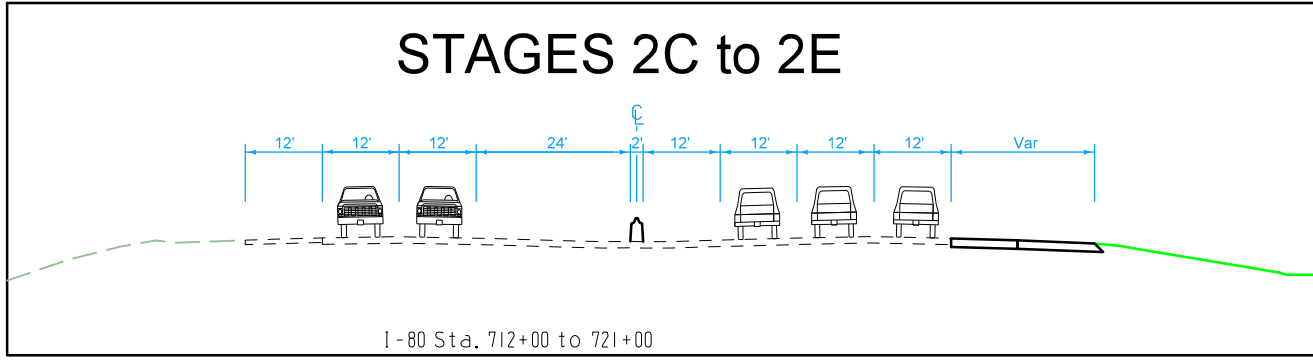
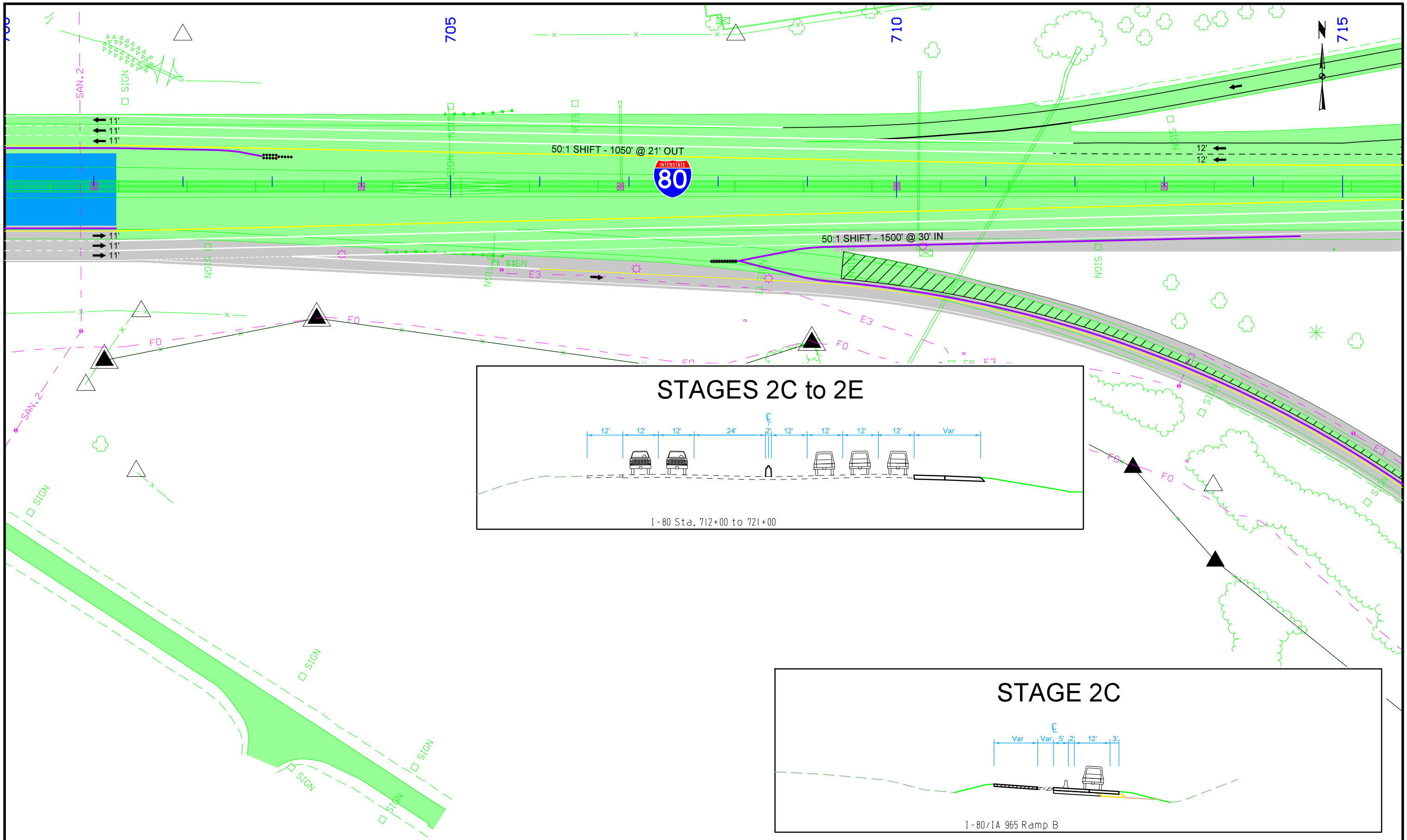


WB I-80 Sta. 677+00 to 703+50

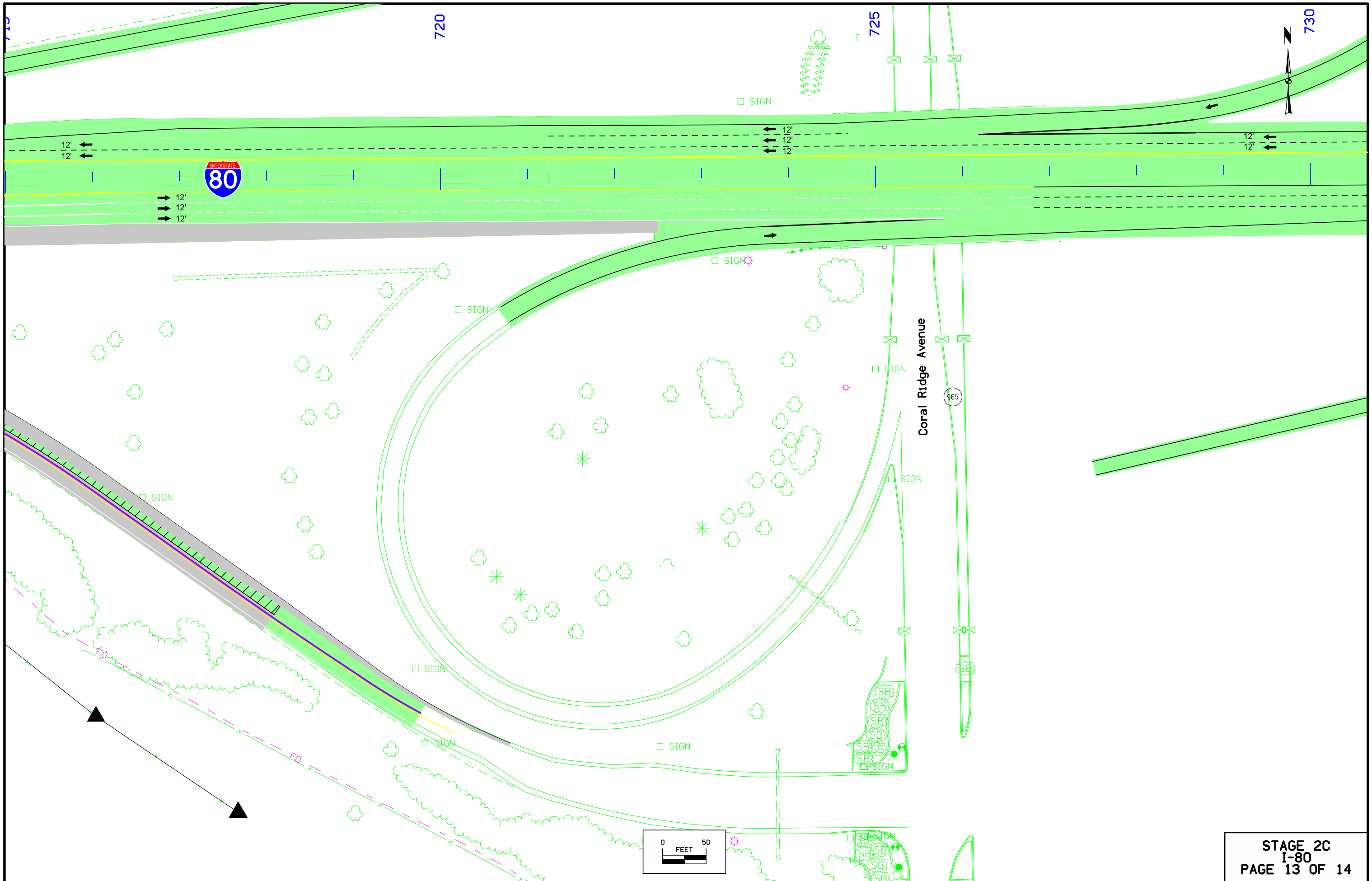
EB



STAGE 2C
I-80
PAGE 11 OF 14

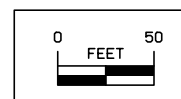
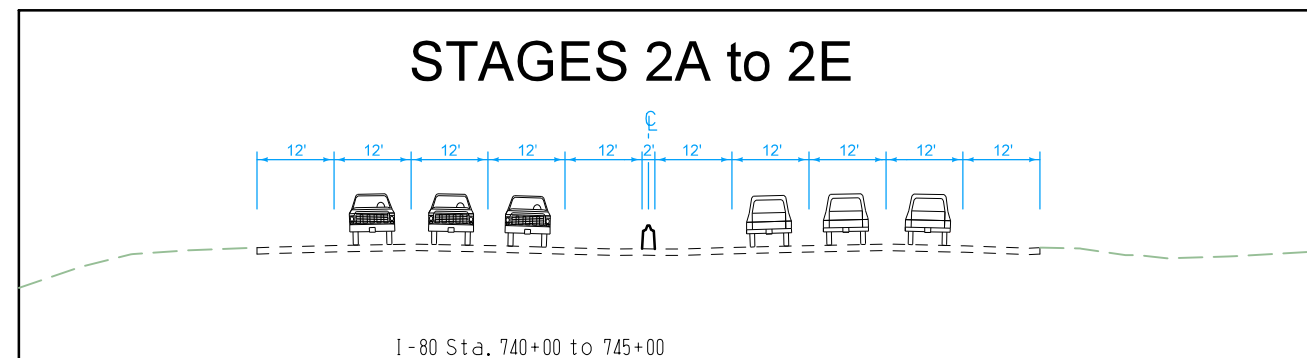
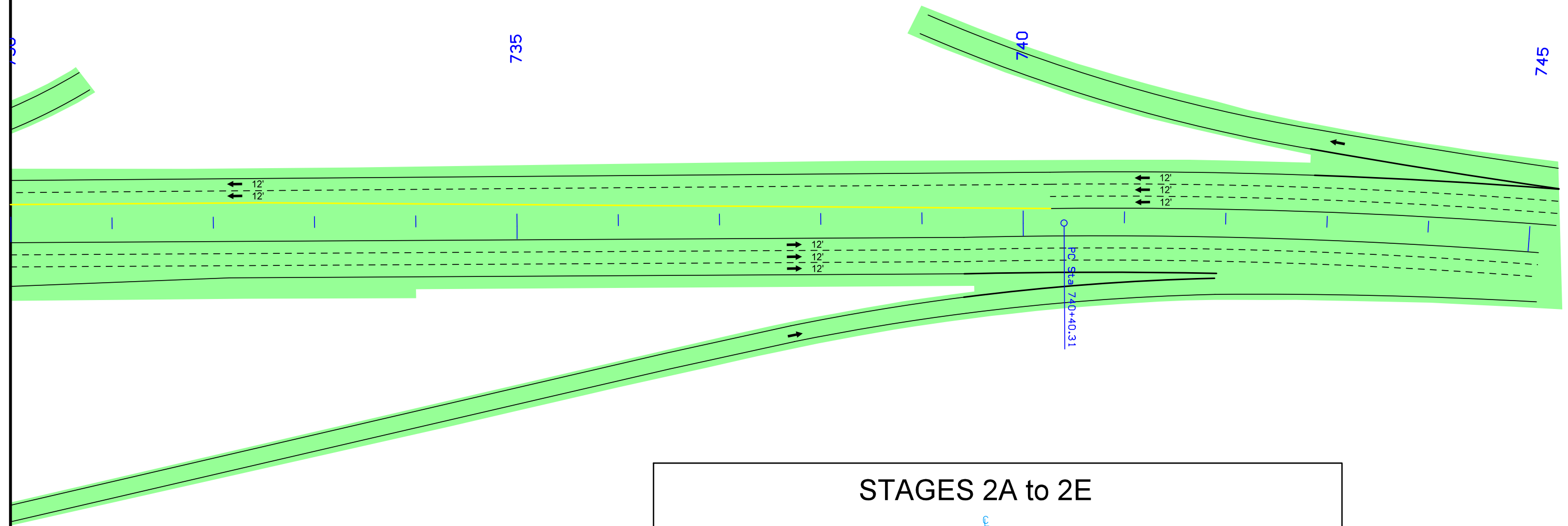


STAGE 2C
I-80
PAGE 12 OF 14



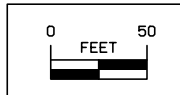
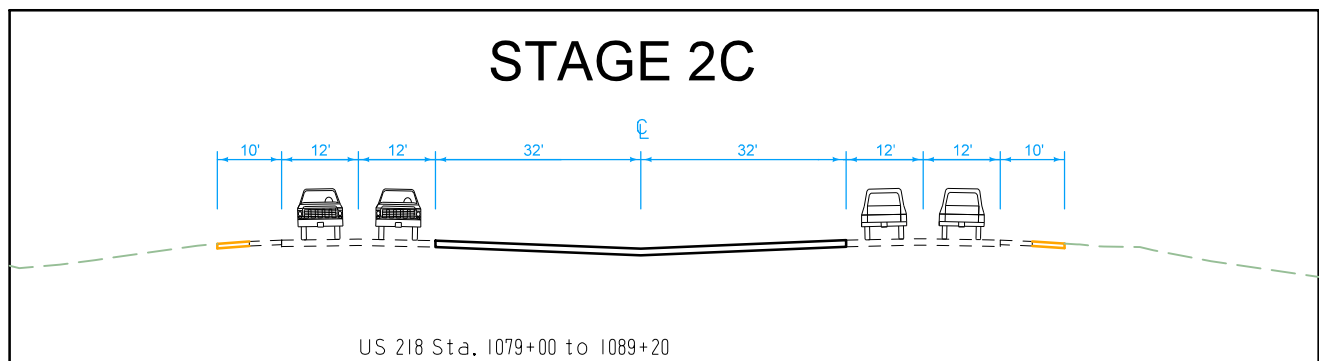
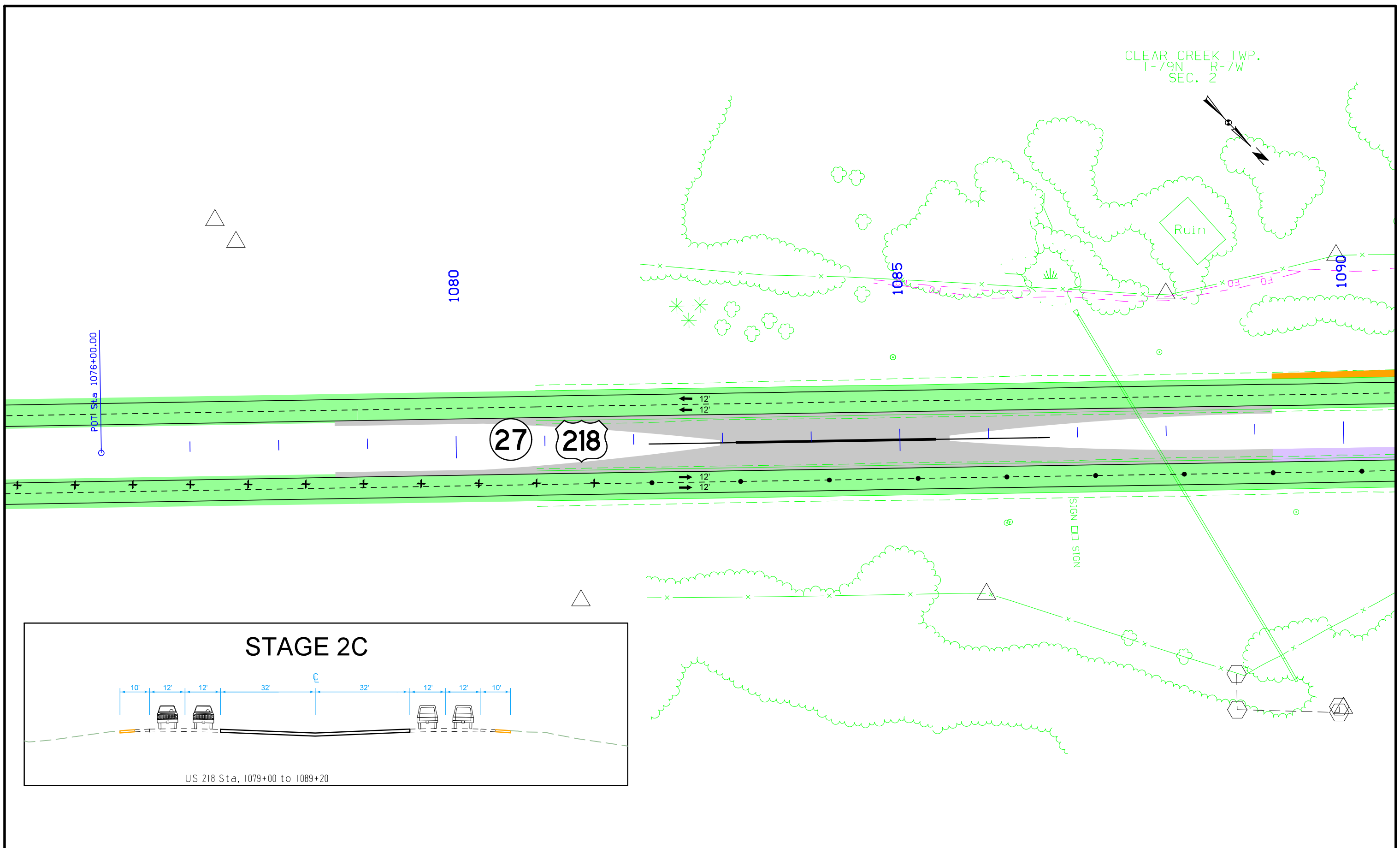
CLEAR CREEK TWP.
T-80N R-7W
SEC. 36

Curve Data
 $\Delta = 17^\circ 48' 28.25''$ (RT)
T = 897.63
L = 1,780.78
R = 5,729.58
E = 69.89



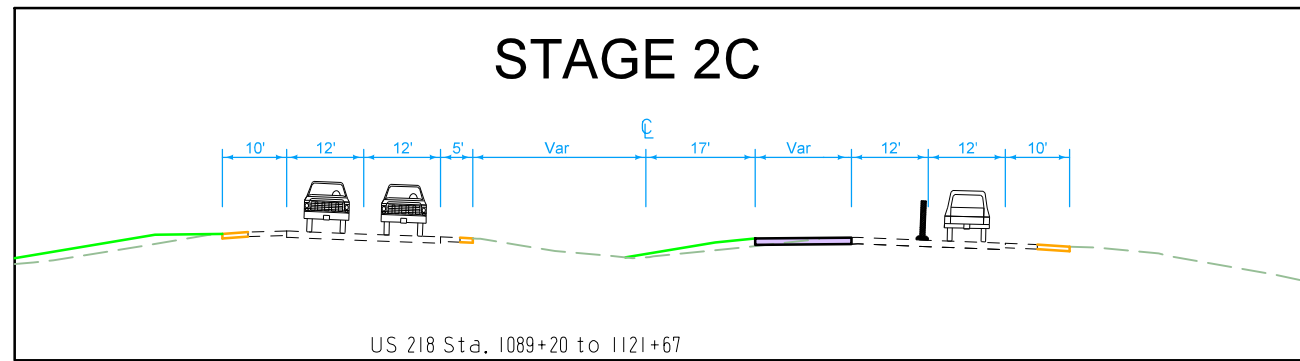
STAGE 2C
I-80
PAGE 14 OF 14

CLEAR CREEK TWP.
T-79N R-7W
SEC. 2

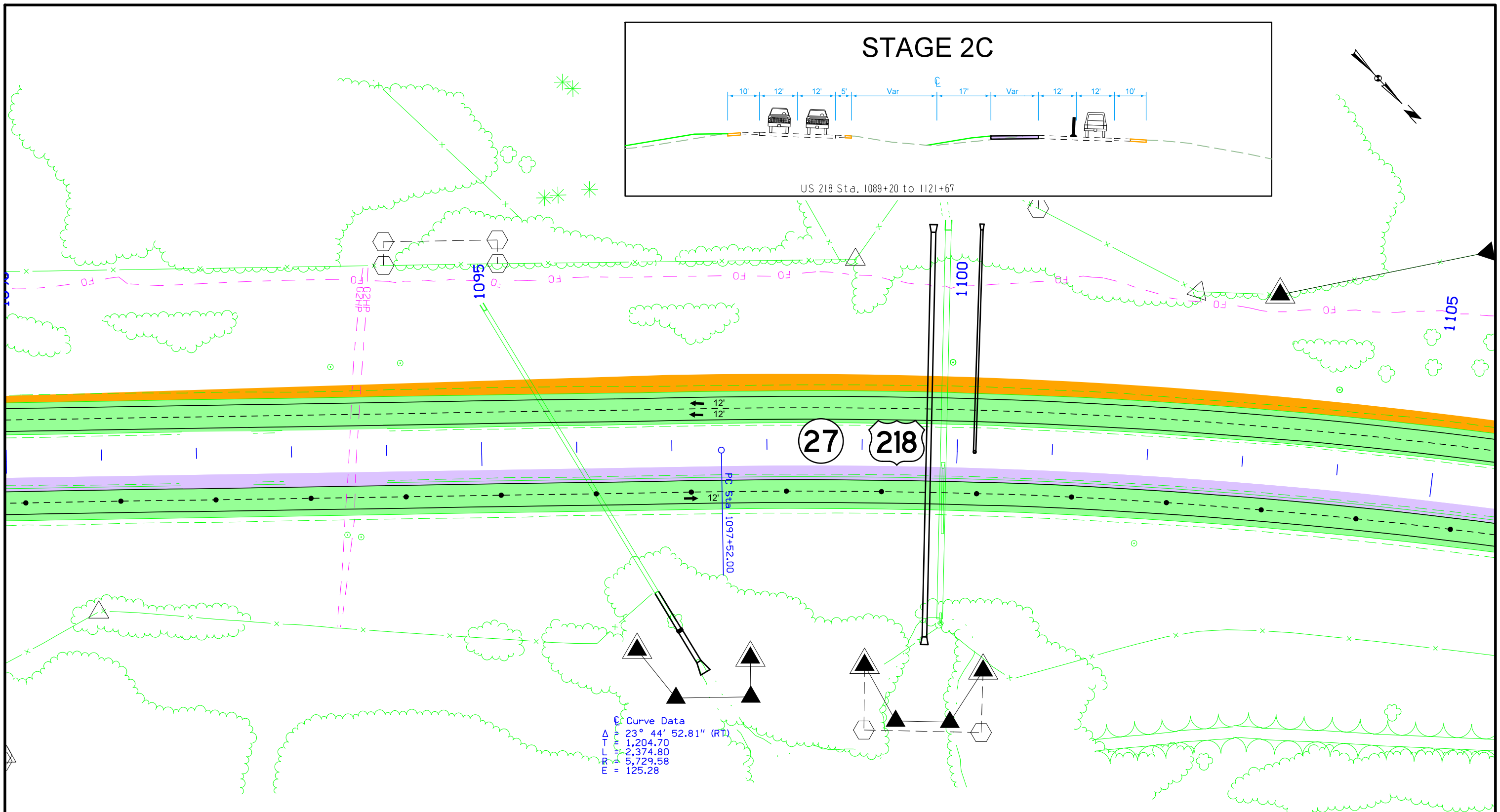


STAGE 2C
I-380/US 218
PAGE 1 OF 18

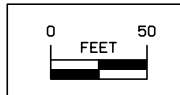
STAGE 2C



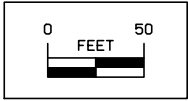
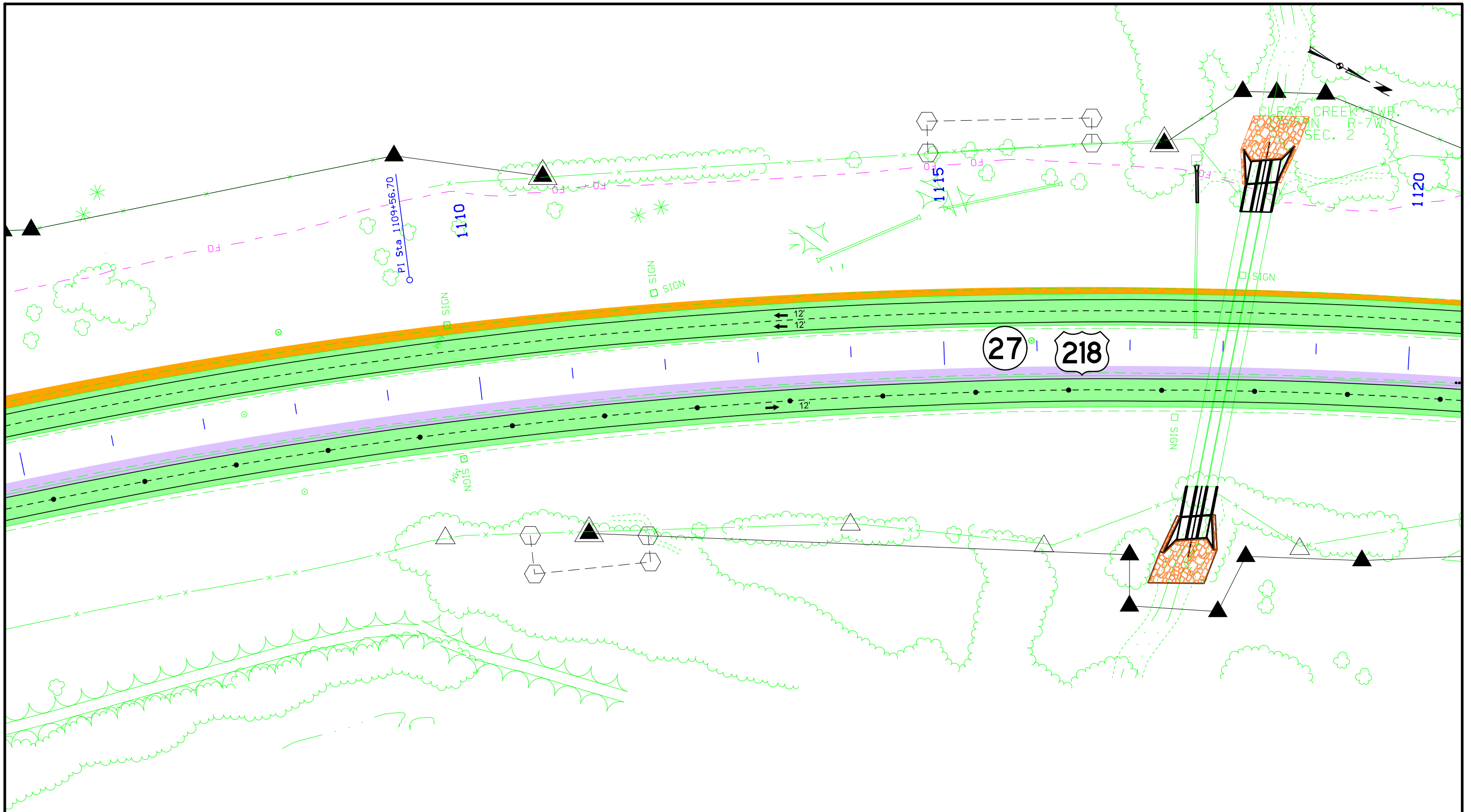
US 218 Sta. 1089+20 to 1121+67



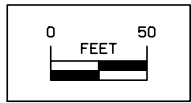
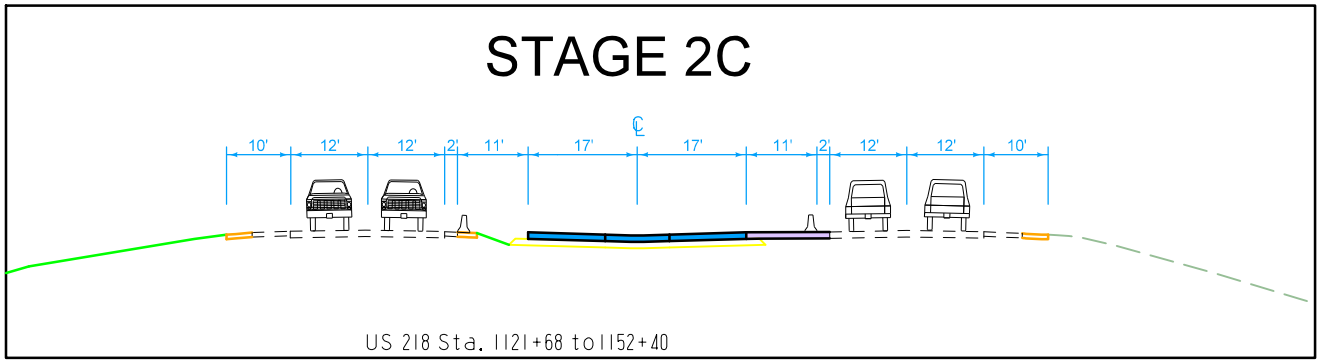
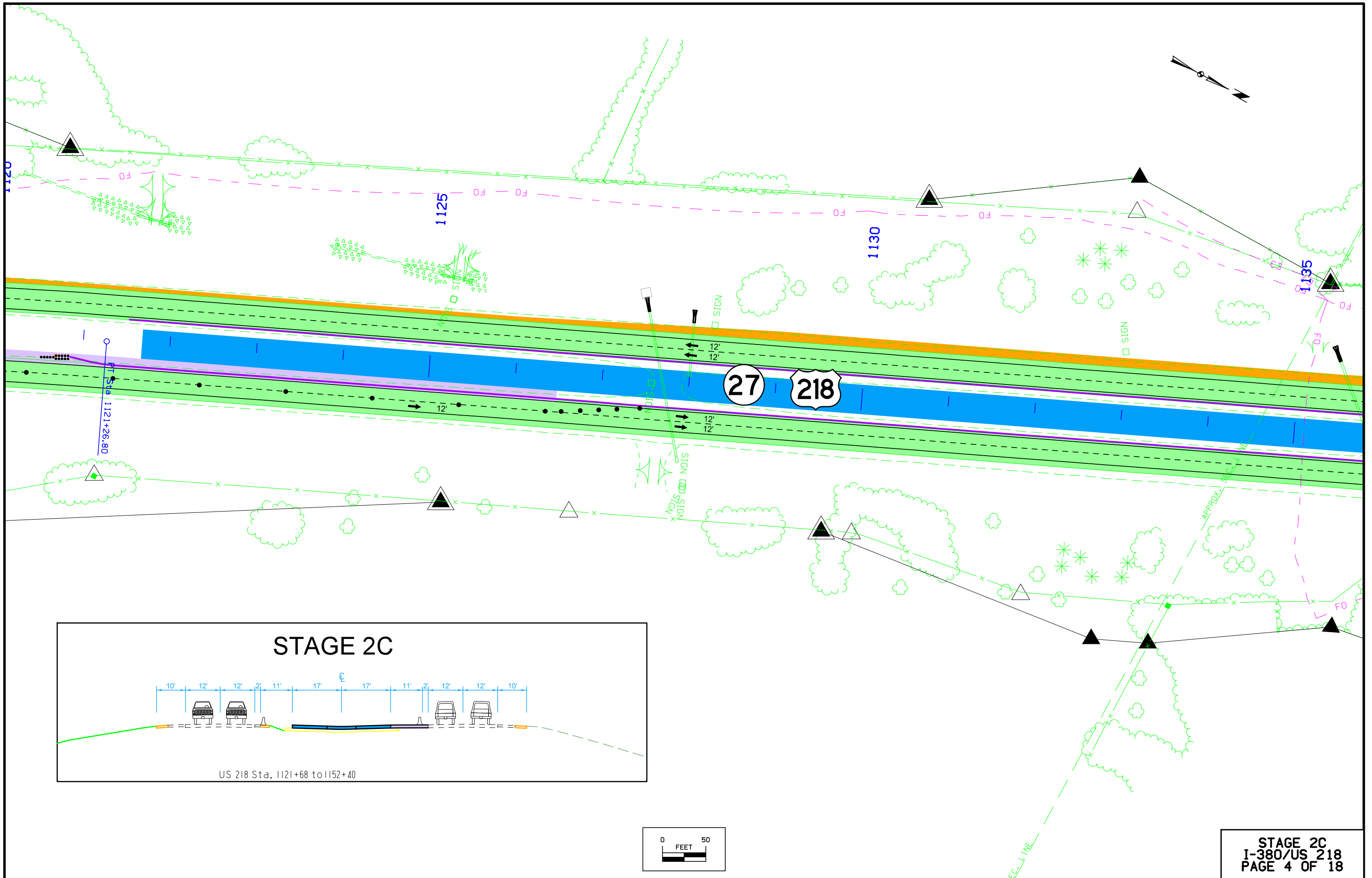
Curve Data
 $\Delta = 23^\circ 44' 52.81''$ (RT)
 $T = 1,204.70$
 $L = 2,374.80$
 $R = 5,729.58$
 $E = 125.28$



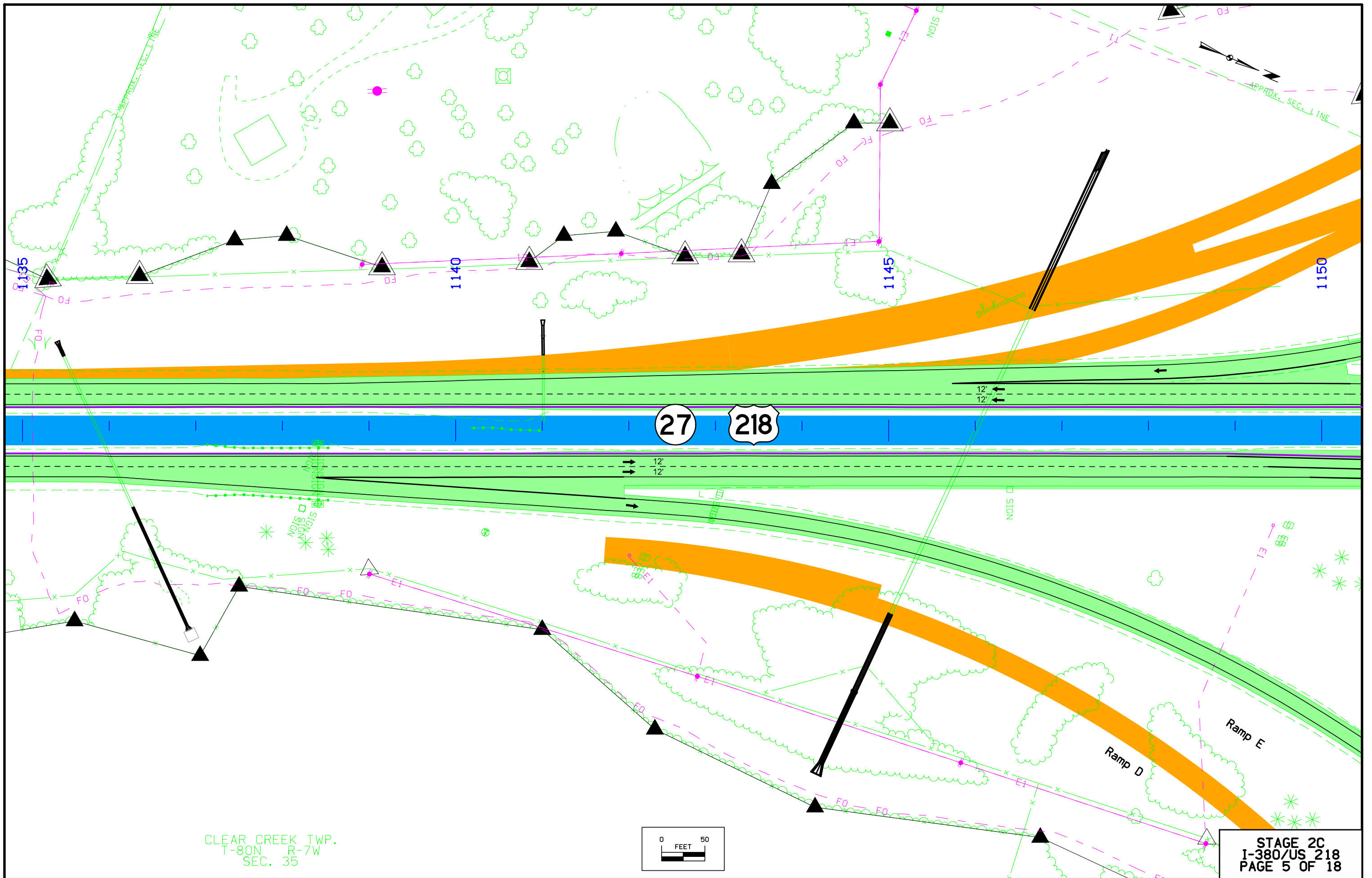
STAGE 2C
 I-380/US 218
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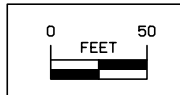
STAGE 2C
 I-380/US 218
 PAGE 3 OF 18



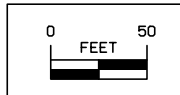
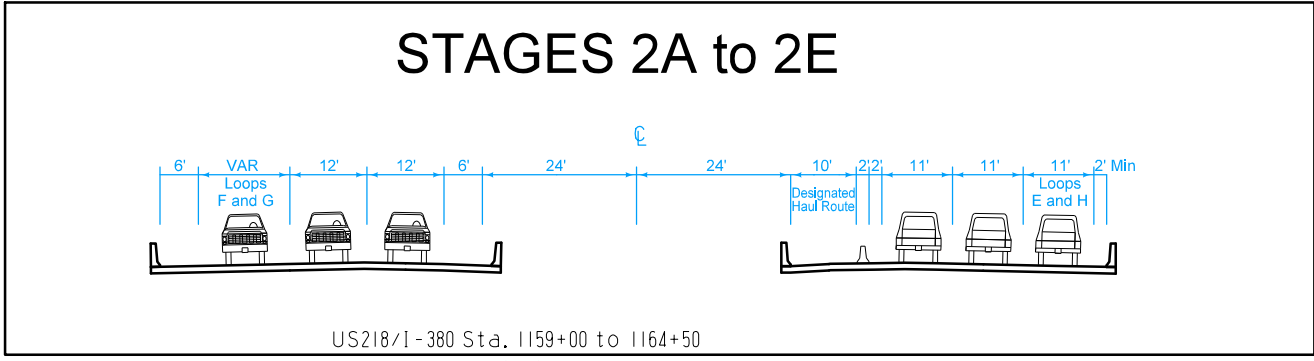
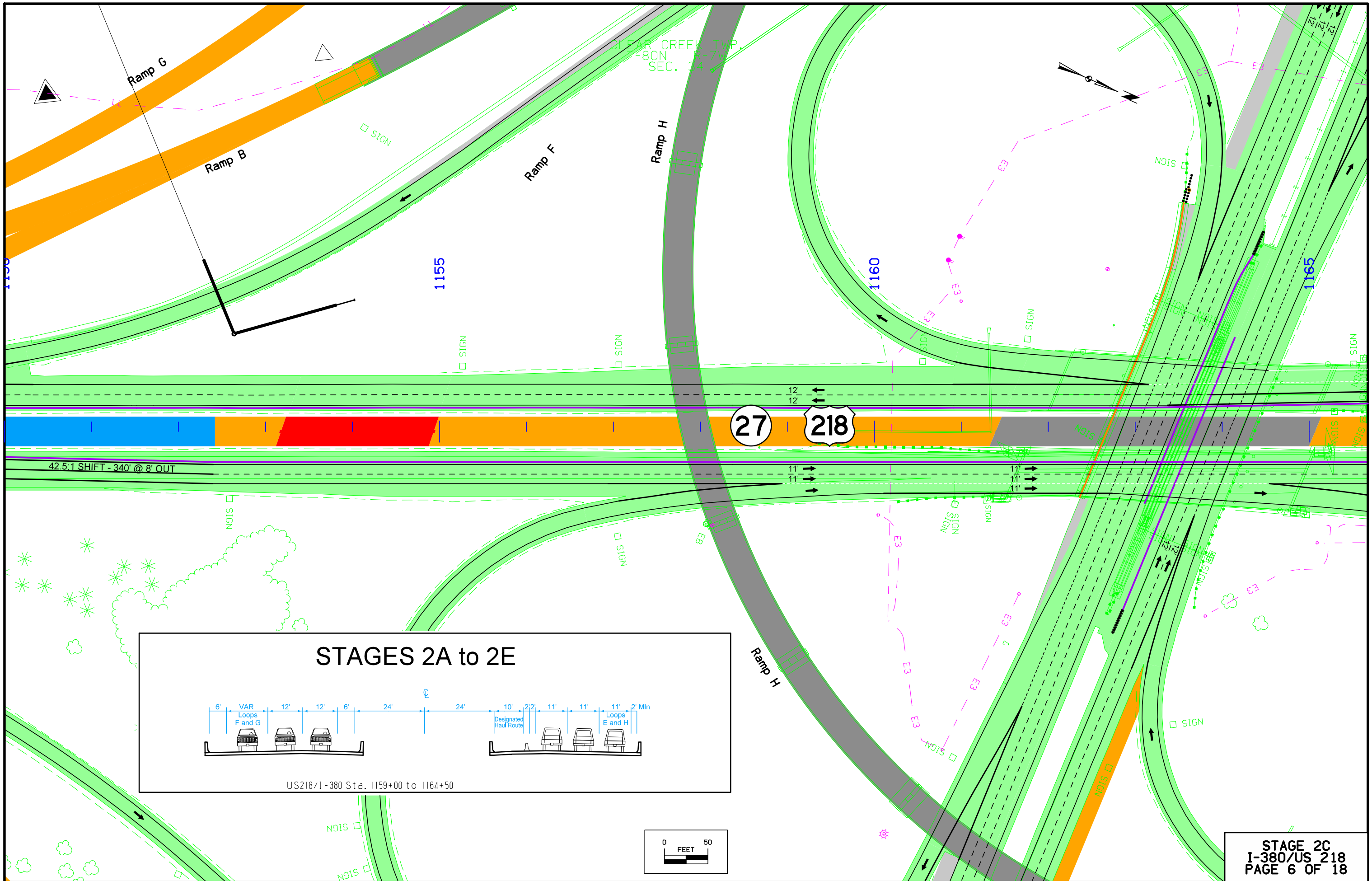
STAGE 2C
I-380/US 218
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CLEAR CREEK TWP.
T-80N R-7W
SEC. 35

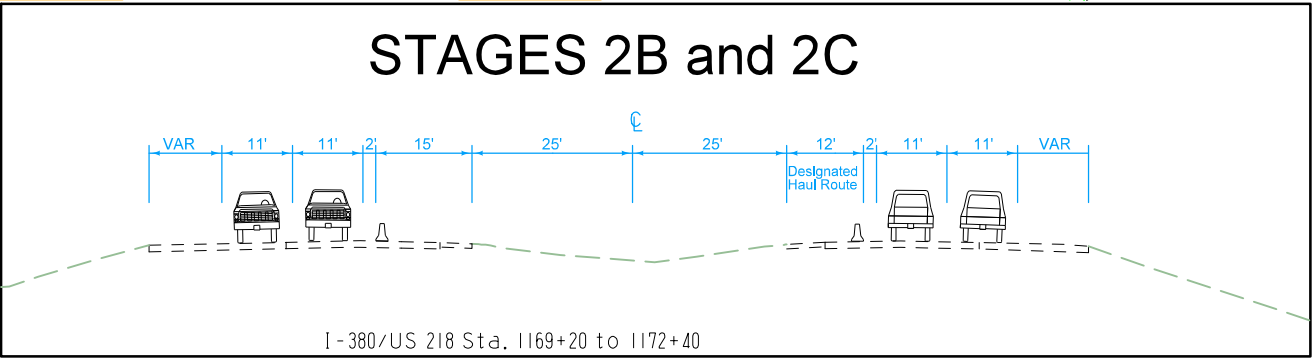
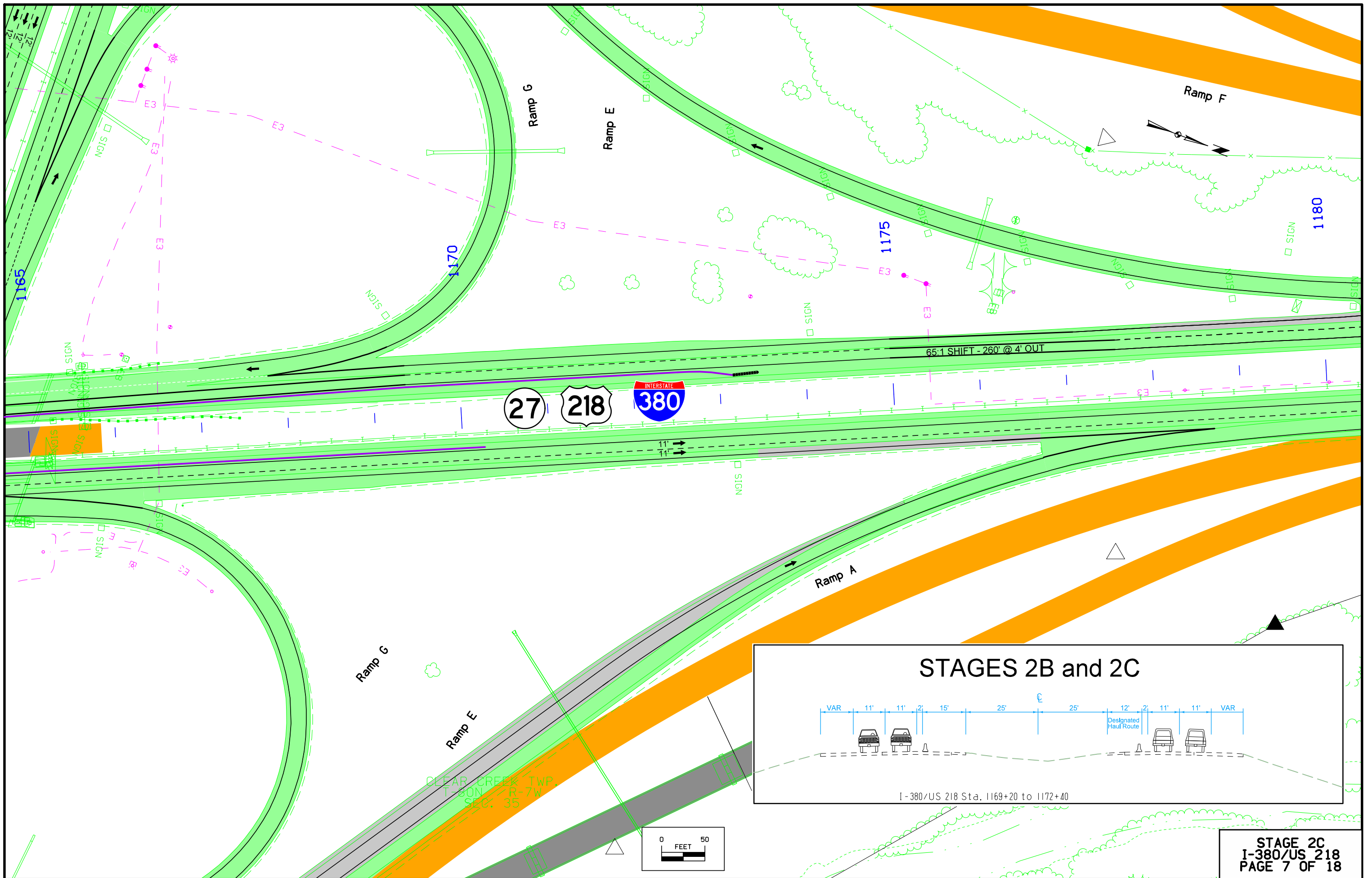


STAGE 2C
I-380/US 218
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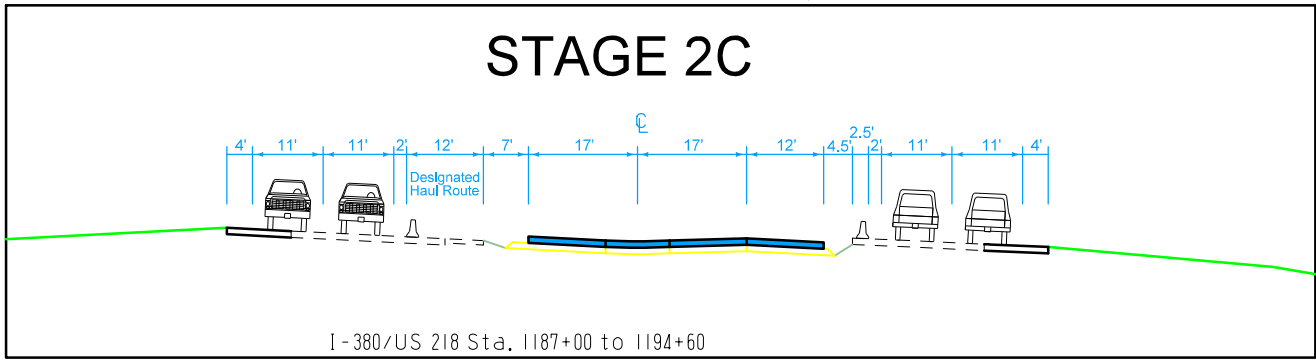
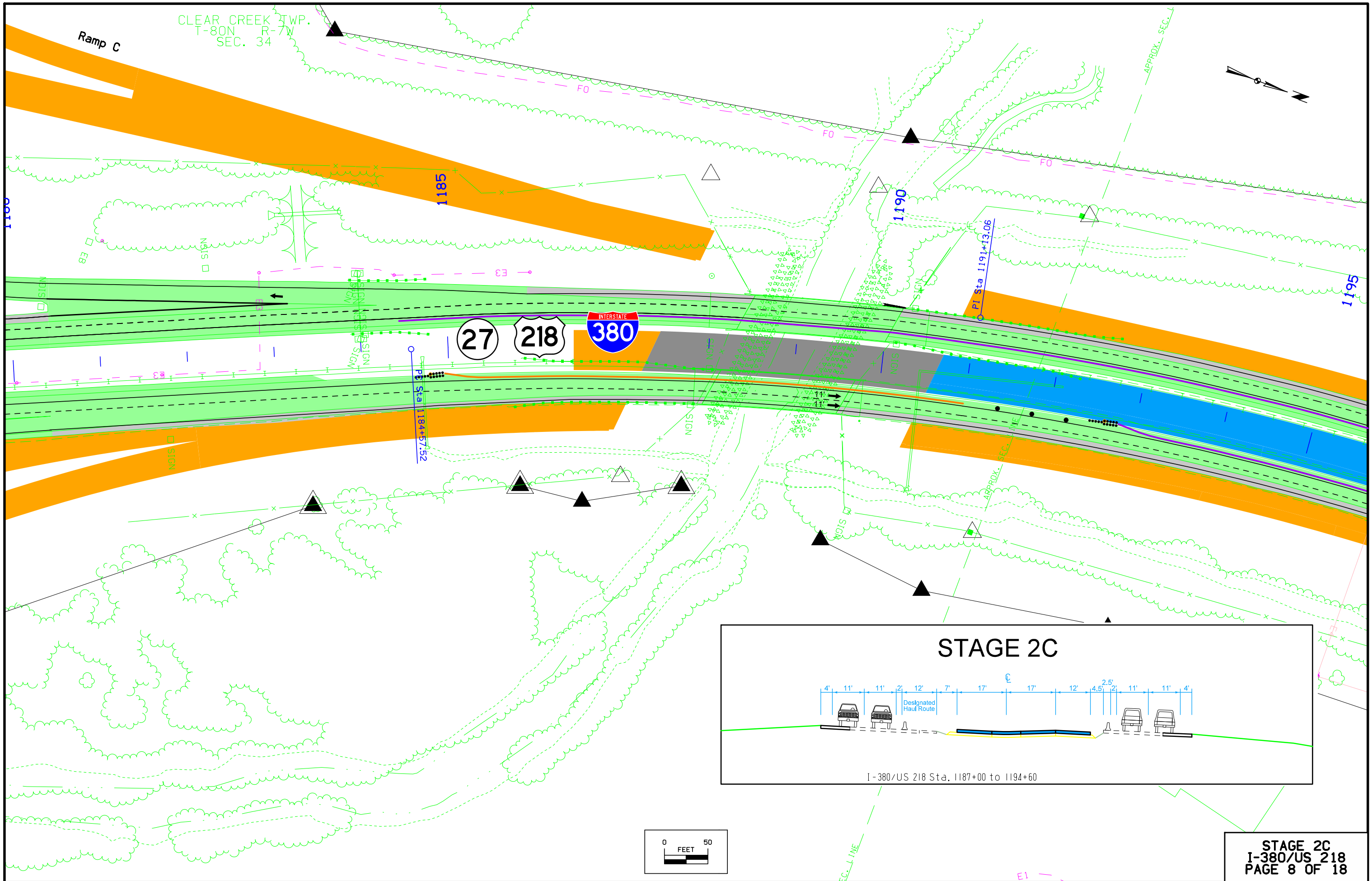


STAGE 2C
I-380/US 218
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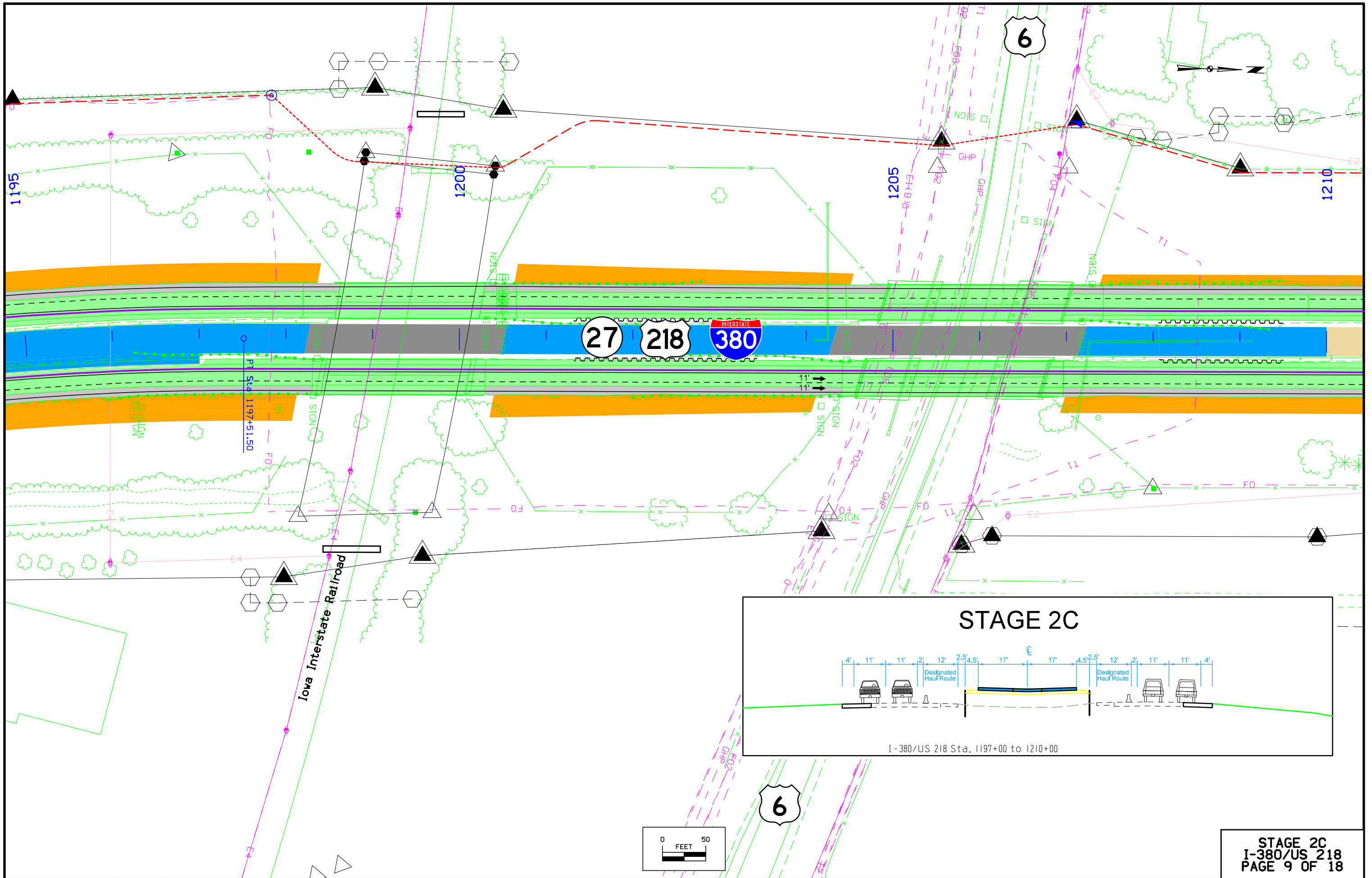
Changed by Addenda

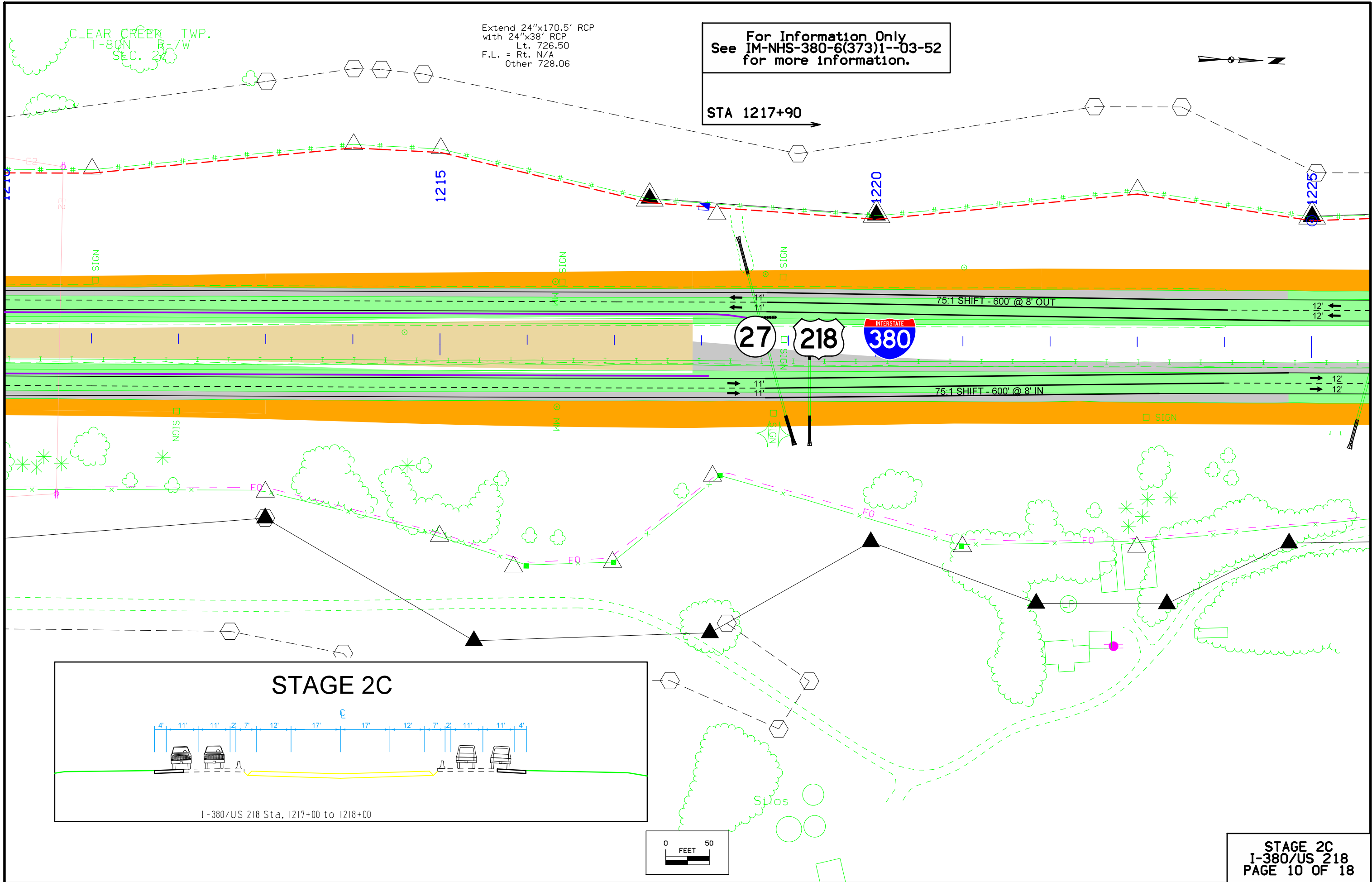


STAGE 2C
I-380/US 218
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STAGE 2C
I-380/US 218
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CLEAR CREEK TWP.
T-80N R-7W
SEC. 27

Extend 24"x170.5' RCP
with 24"x38' RCP
Lt. 726.50
F.L. = Rt. N/A
Other 728.06

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for more information.

STA 1217+90

1215

1220

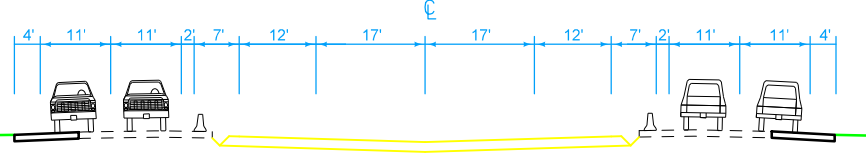
1225

75:1 SHIFT - 600' @ 8' OUT

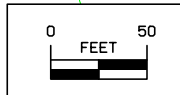
75:1 SHIFT - 600' @ 8' IN

27 218 380

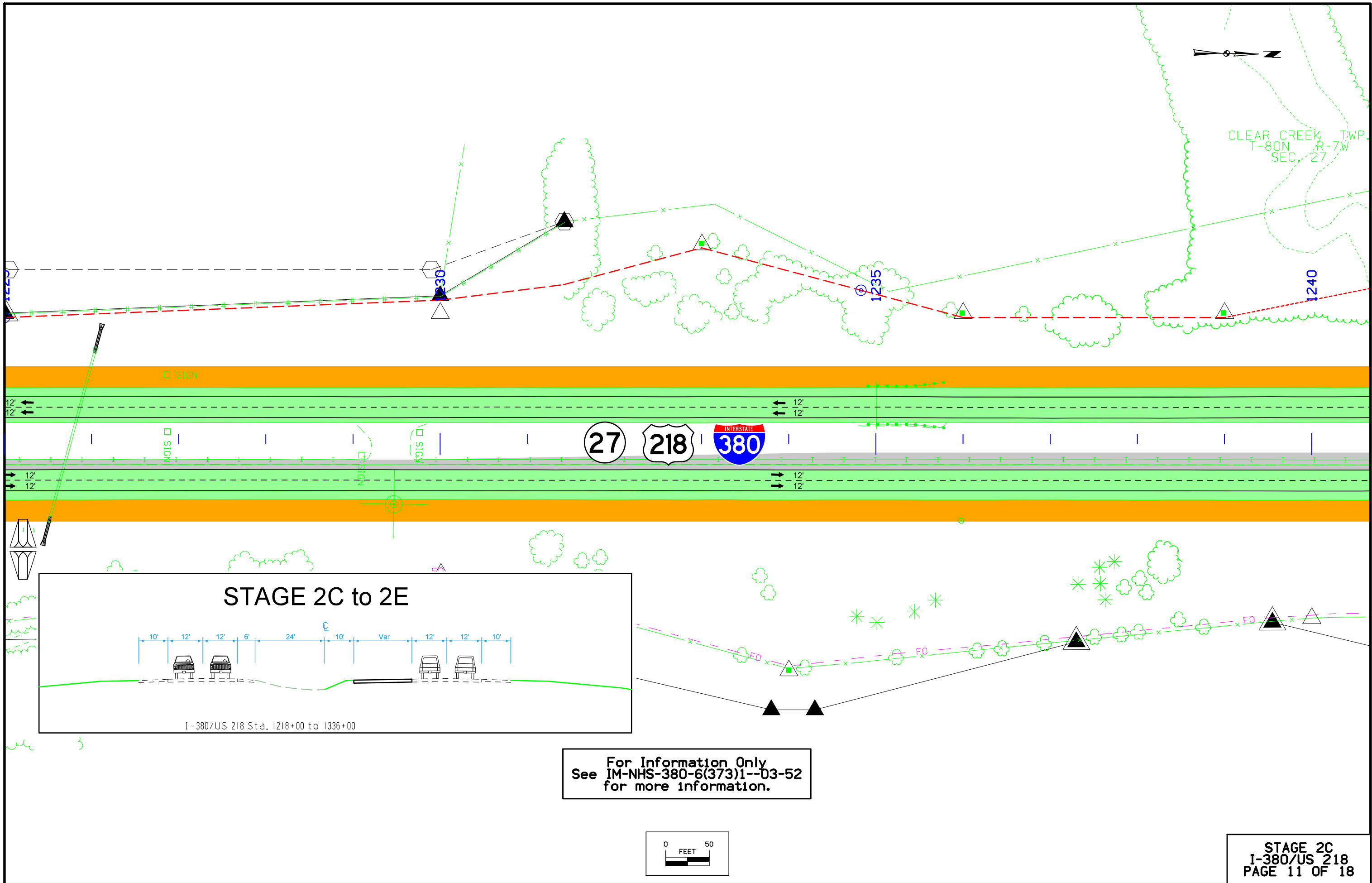
STAGE 2C



I-380/US 218 Sta. 1217+00 to 1218+00

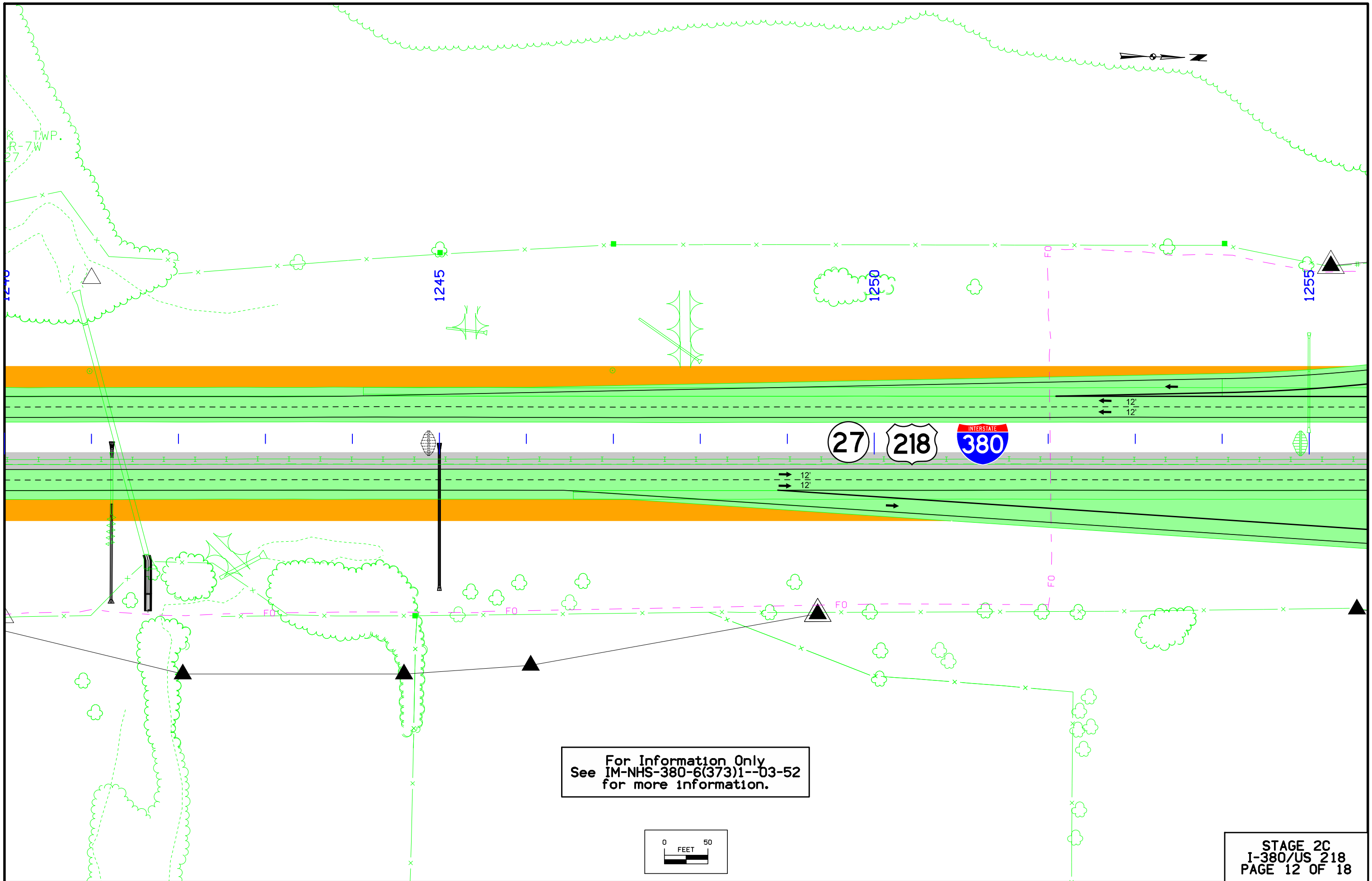


STAGE 2C
I-380/US 218
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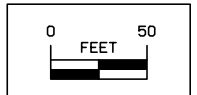


For Information Only
 See IM-NHS-380-6(373)1--03-52
 for more information.

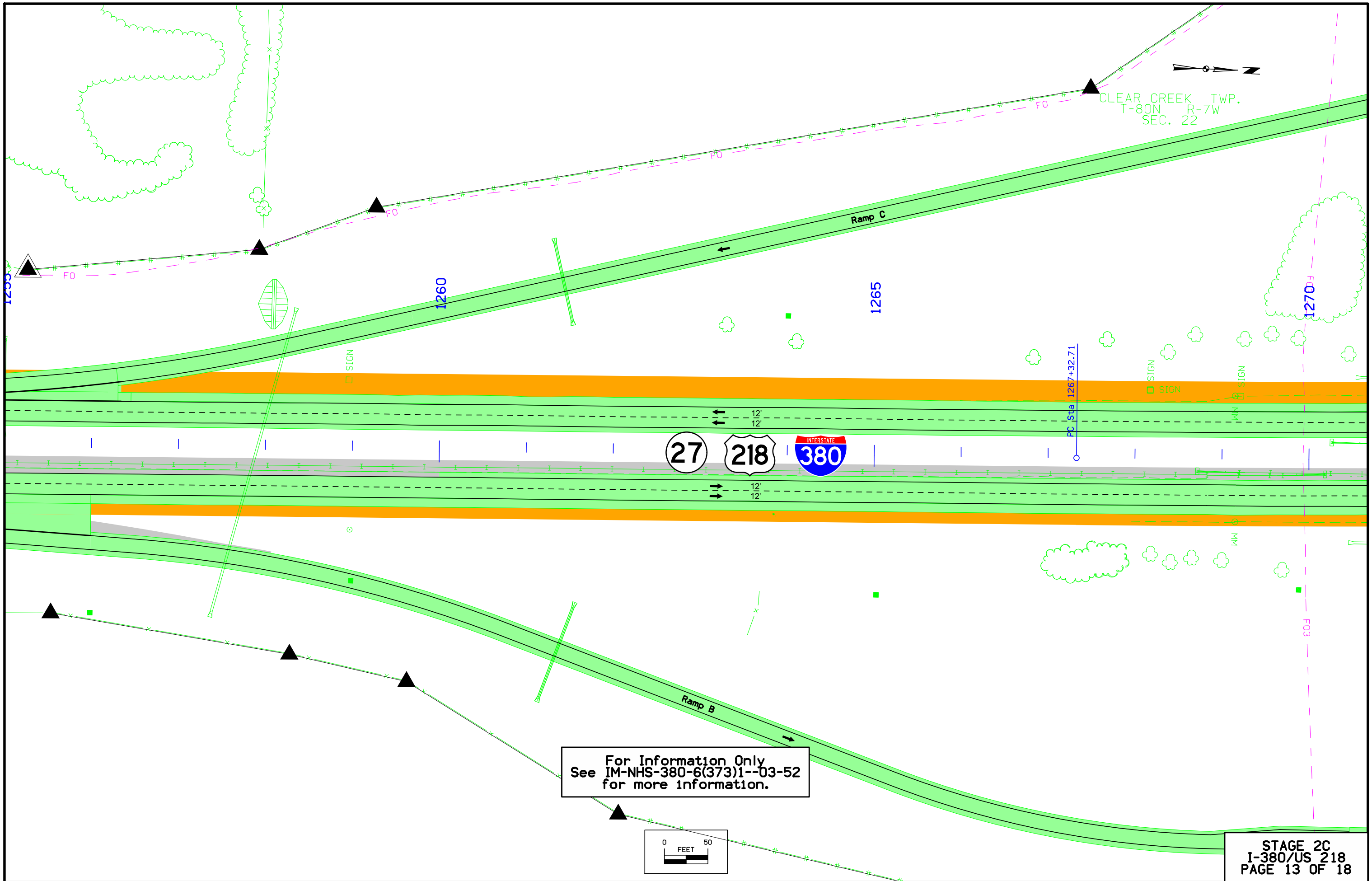
STAGE 2C
 I-380/US 218
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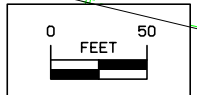
For Information Only
 See IM-NHS-380-6(373)1--03-52
 for more information.



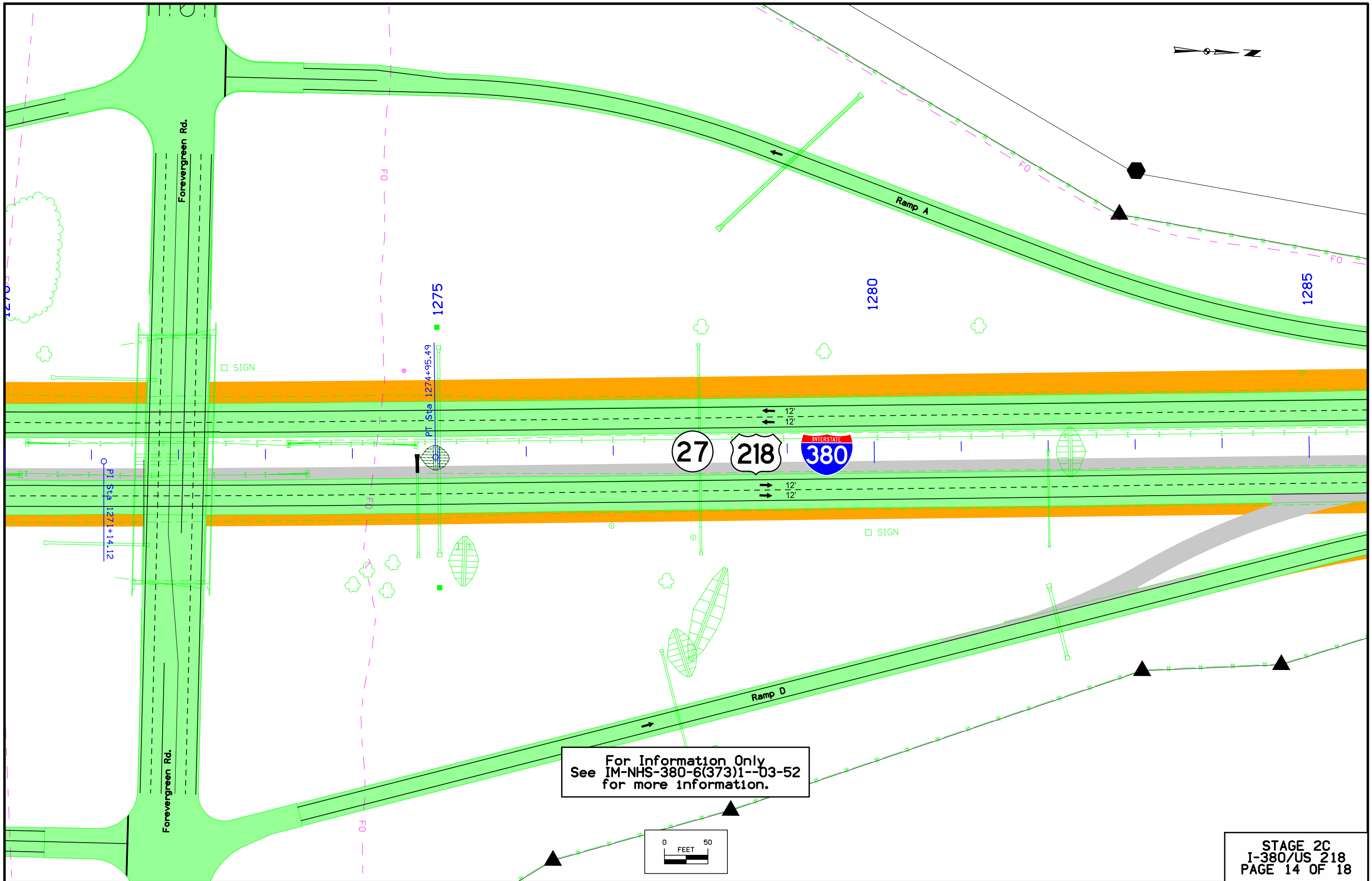
STAGE 2C
 I-380/US 218
 PAGE 12 OF 18



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 See IM-NHS-380-6(373)1--03-52
 for more information.



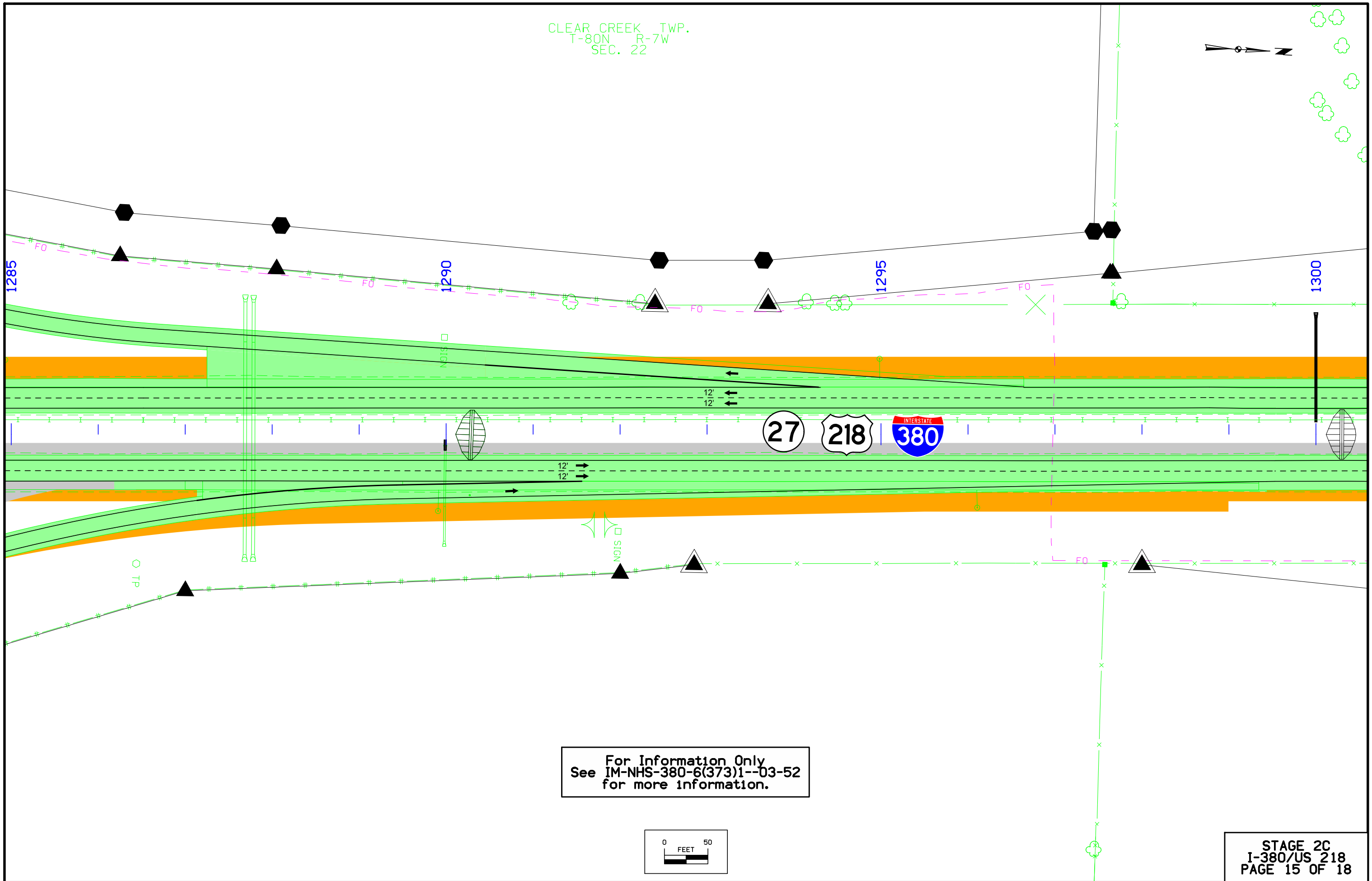
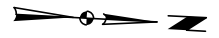
STAGE 2C
 I-380/US 218
 PAGE 13 OF 18



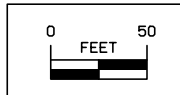
For Information Only
 See IM-NHS-380-6(373)1--03-52
 for more information.

STAGE 2C
 I-380/US 218
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CLEAR CREEK TWP.
T-80N R-7W
SEC. 22

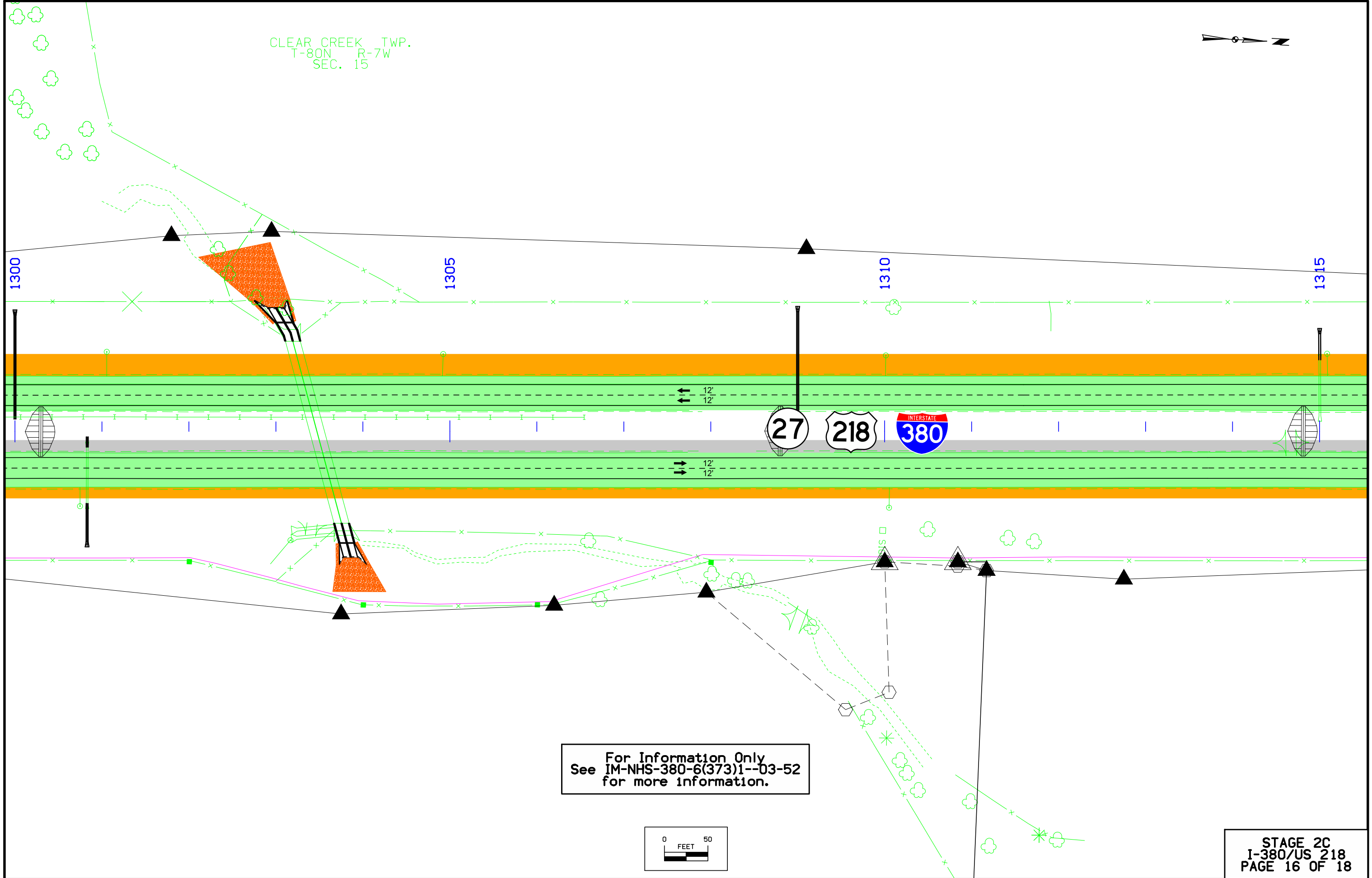
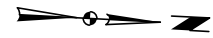


For Information Only
See IM-NHS-380-6(373)1--03-52
for more information.

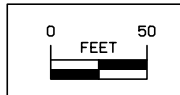


STAGE 2C
I-380/US 218
PAGE 15 OF 18

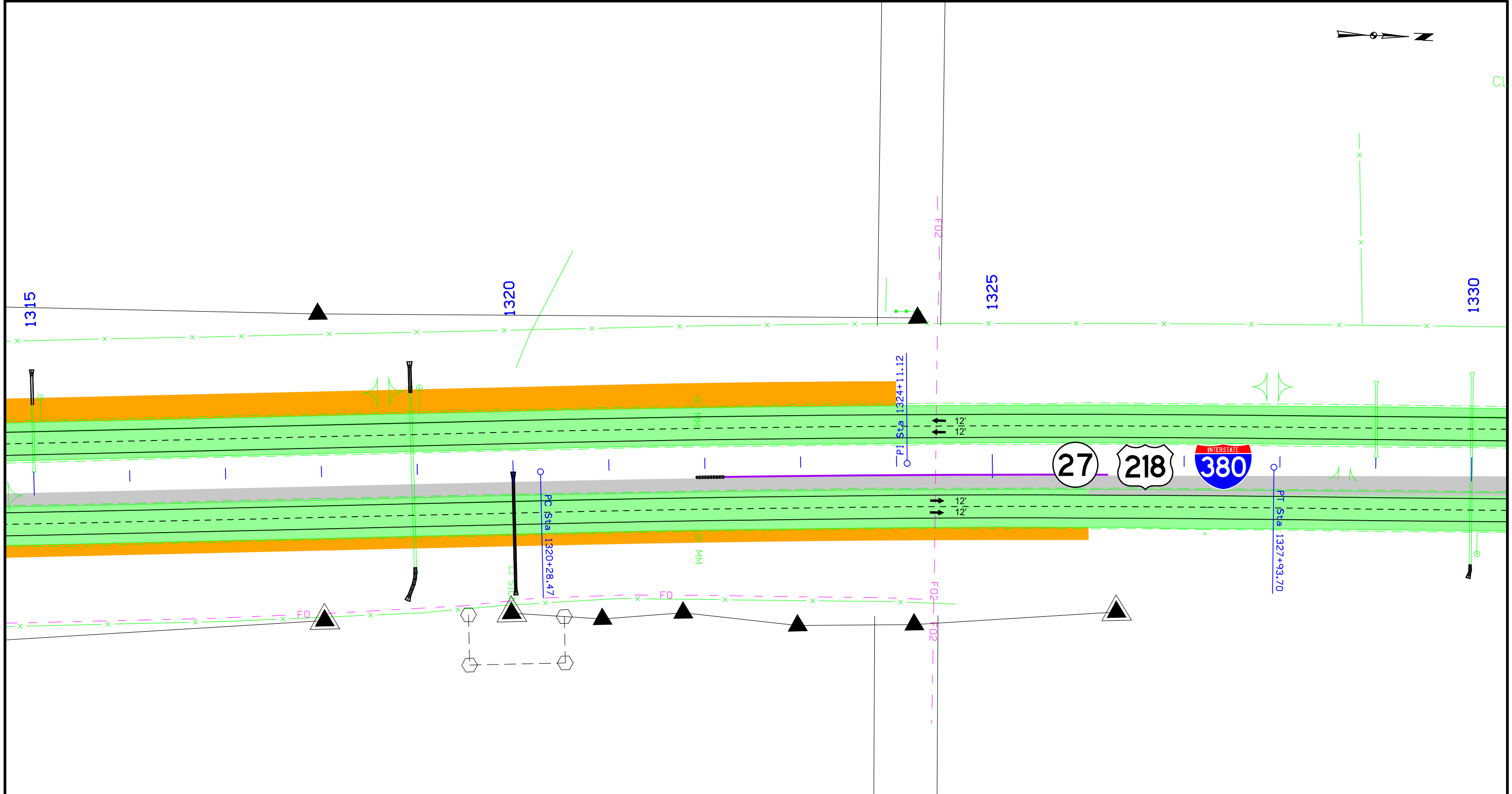
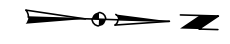
CLEAR CREEK TWP.
T-80N R-7W
SEC. 15



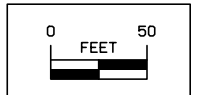
For Information Only
See IM-NHS-380-6(373)1--03-52
for more information.



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I-380/US 218
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For Information Only
 See IM-NHS-380-6(373)1--03-52
 for more information.



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CLEAR CREEK TWP.
T-80N R-7W
SEC. 15

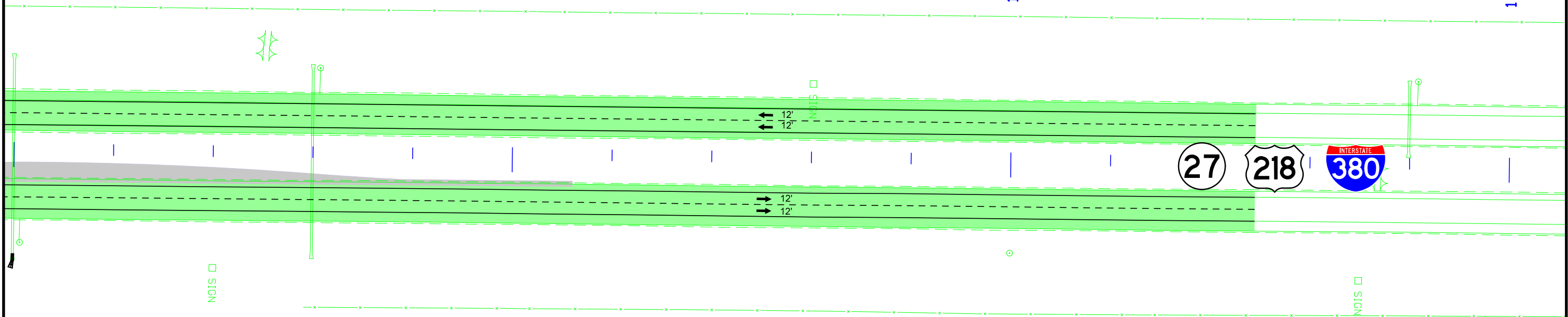


1330

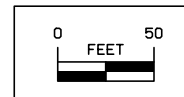
1335

1340

1345



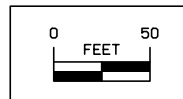
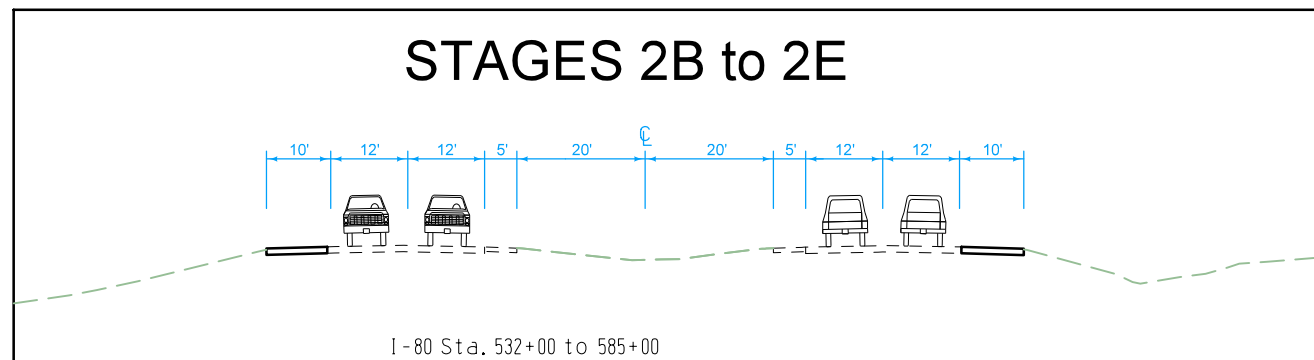
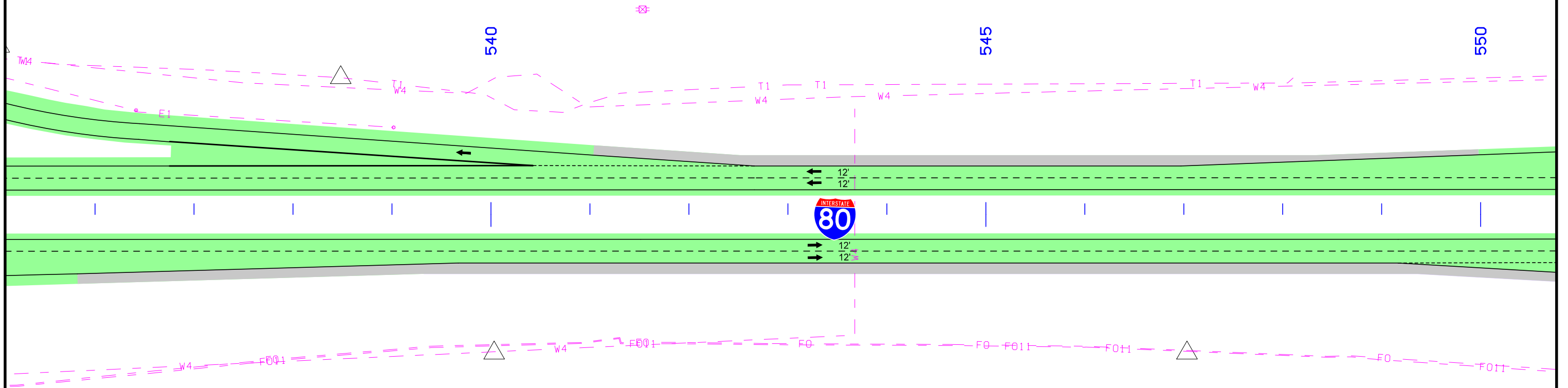
For Information Only
See IM-NHS-380-6(373)1--03-52
for more information.



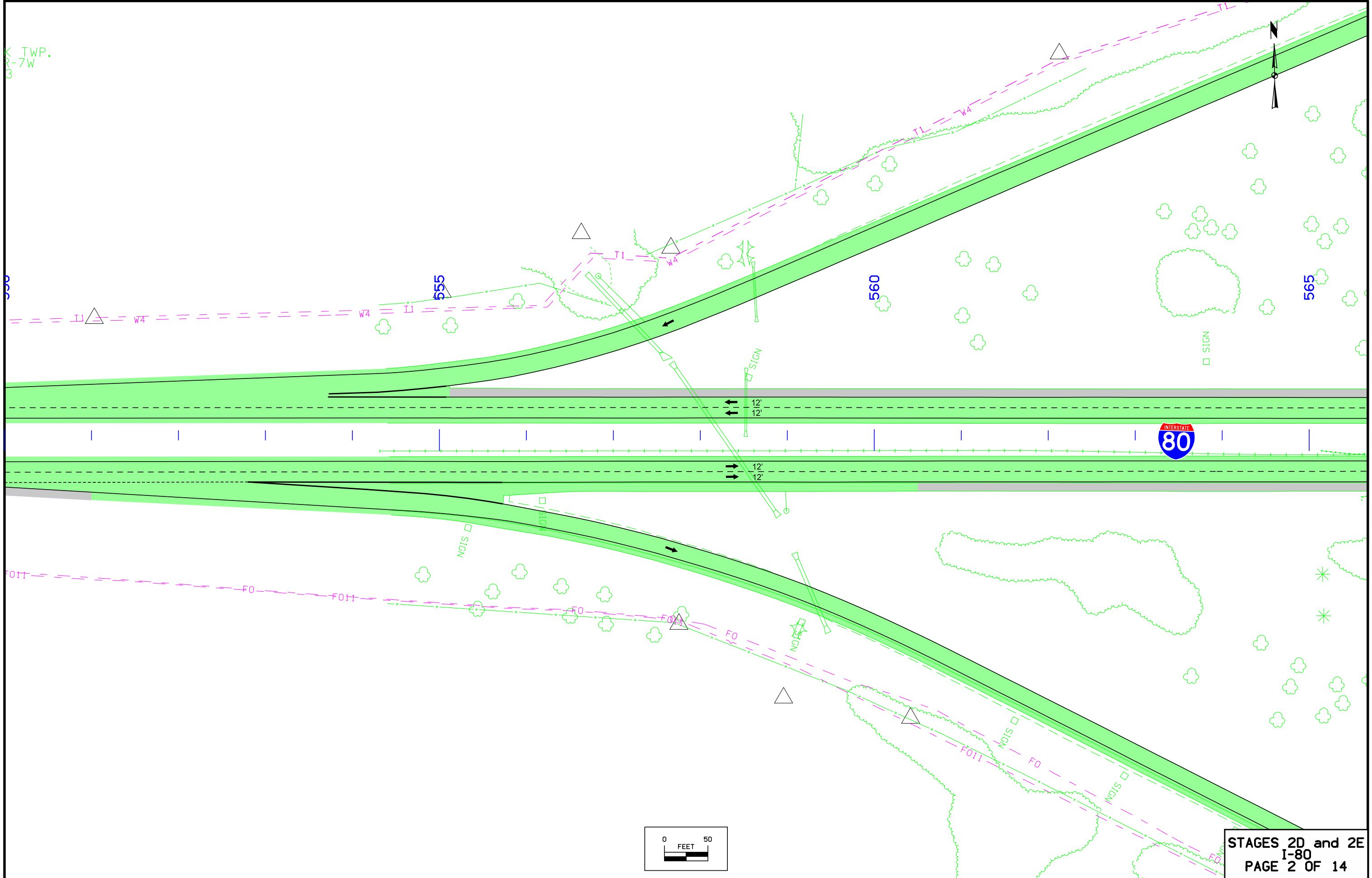
STAGE 2C
I-380/US 218
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CLEAR CREEK TWP.
T-80N R-7W
SEC. 32

CLEAR CREEK TWP.
T-80N R-7W
SEC. 33

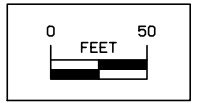


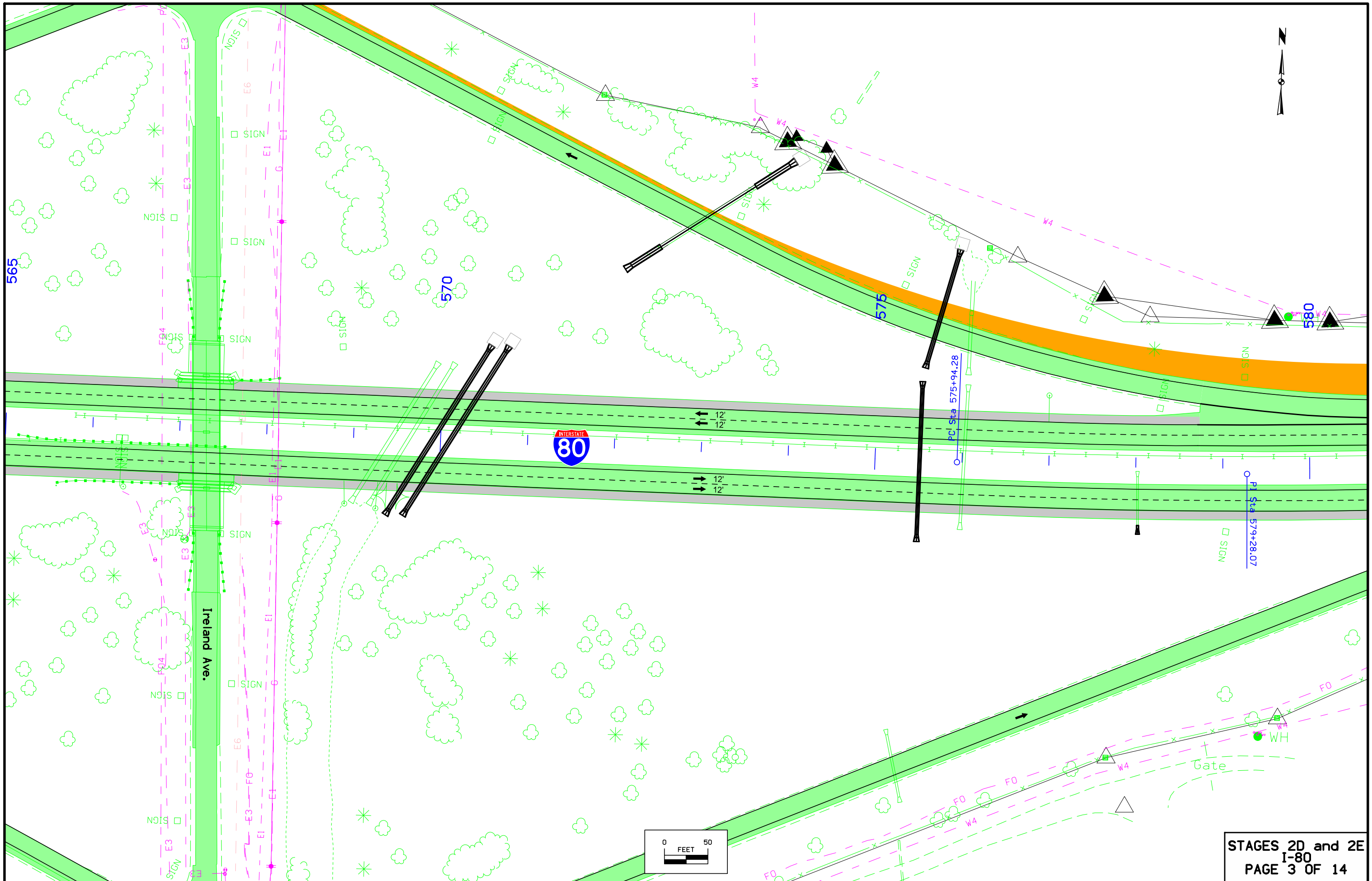
STAGES 2D and 2E
I-80
PAGE 1 OF 14



K TWP.
R-7W
S

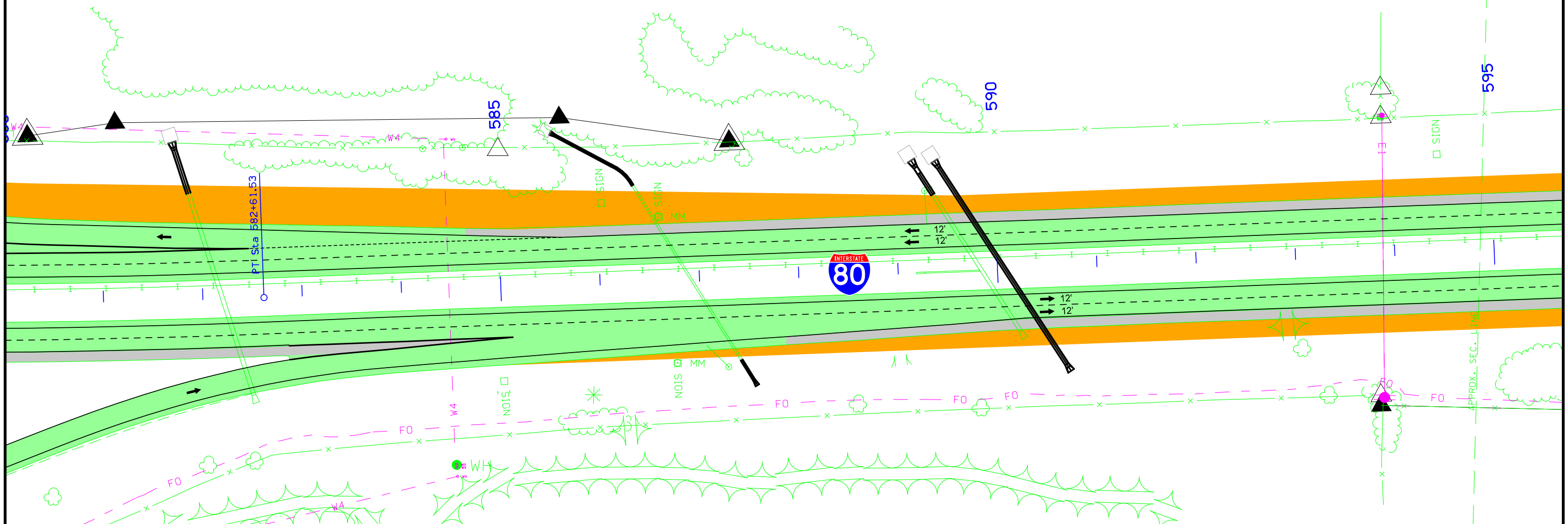
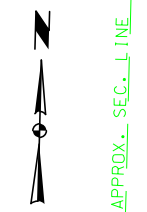
STAGES 2D and 2E
I-80
PAGE 2 OF 14



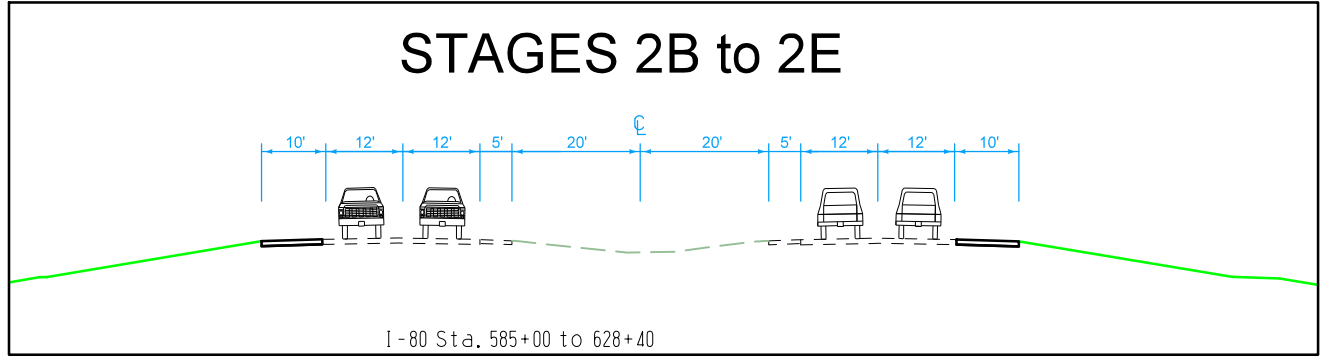


STAGES 2D and 2E
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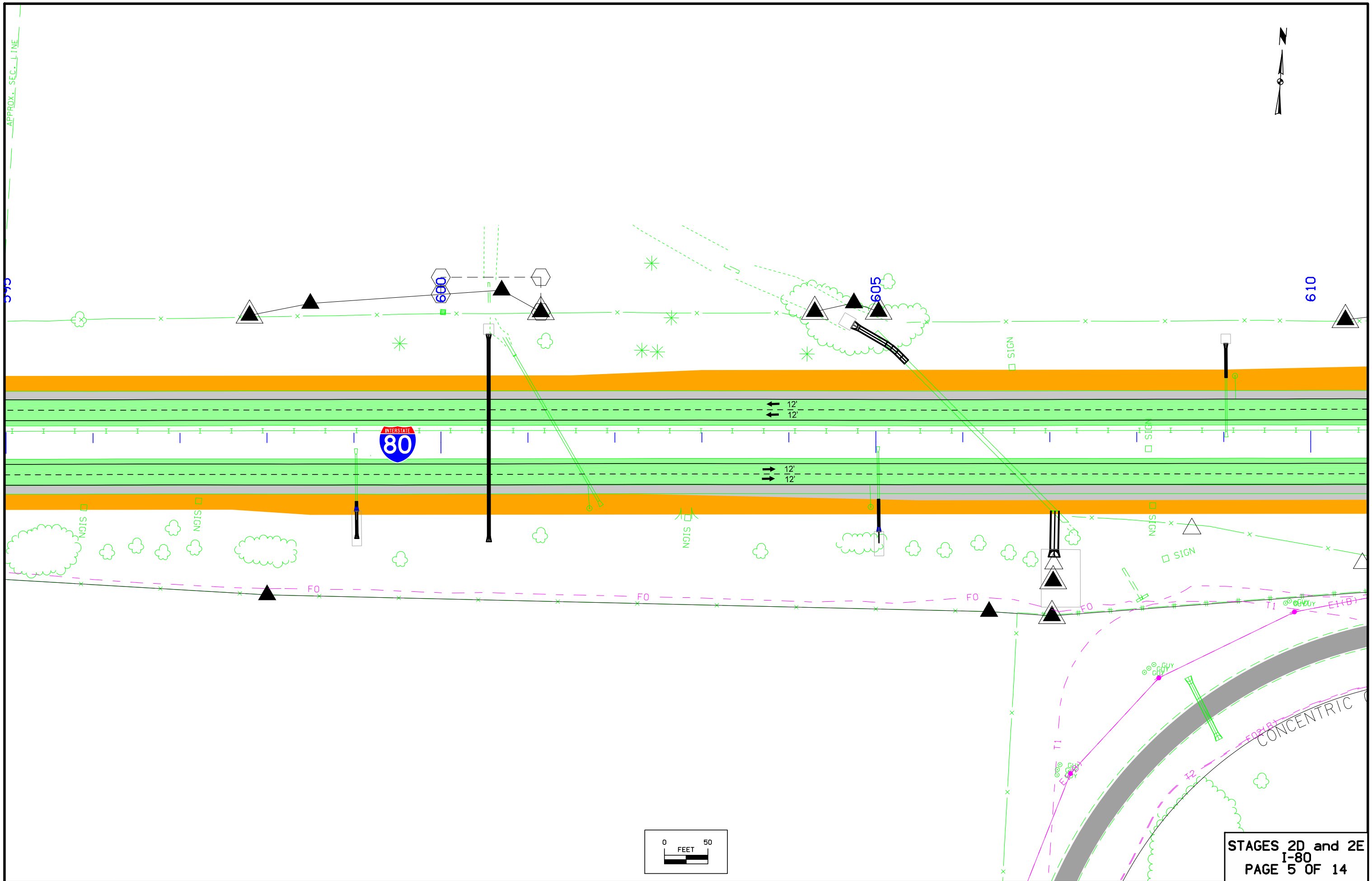
CLEAR CREEK TWP.
T-80N R-7W
SEC. 33



Curve Data
 $\Delta = 4^\circ 26' 53.84''$ (LT)
 $T = 333.79$
 $L = 667.24$
 $R = 8,594.37$
 $E = 6.48$

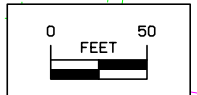
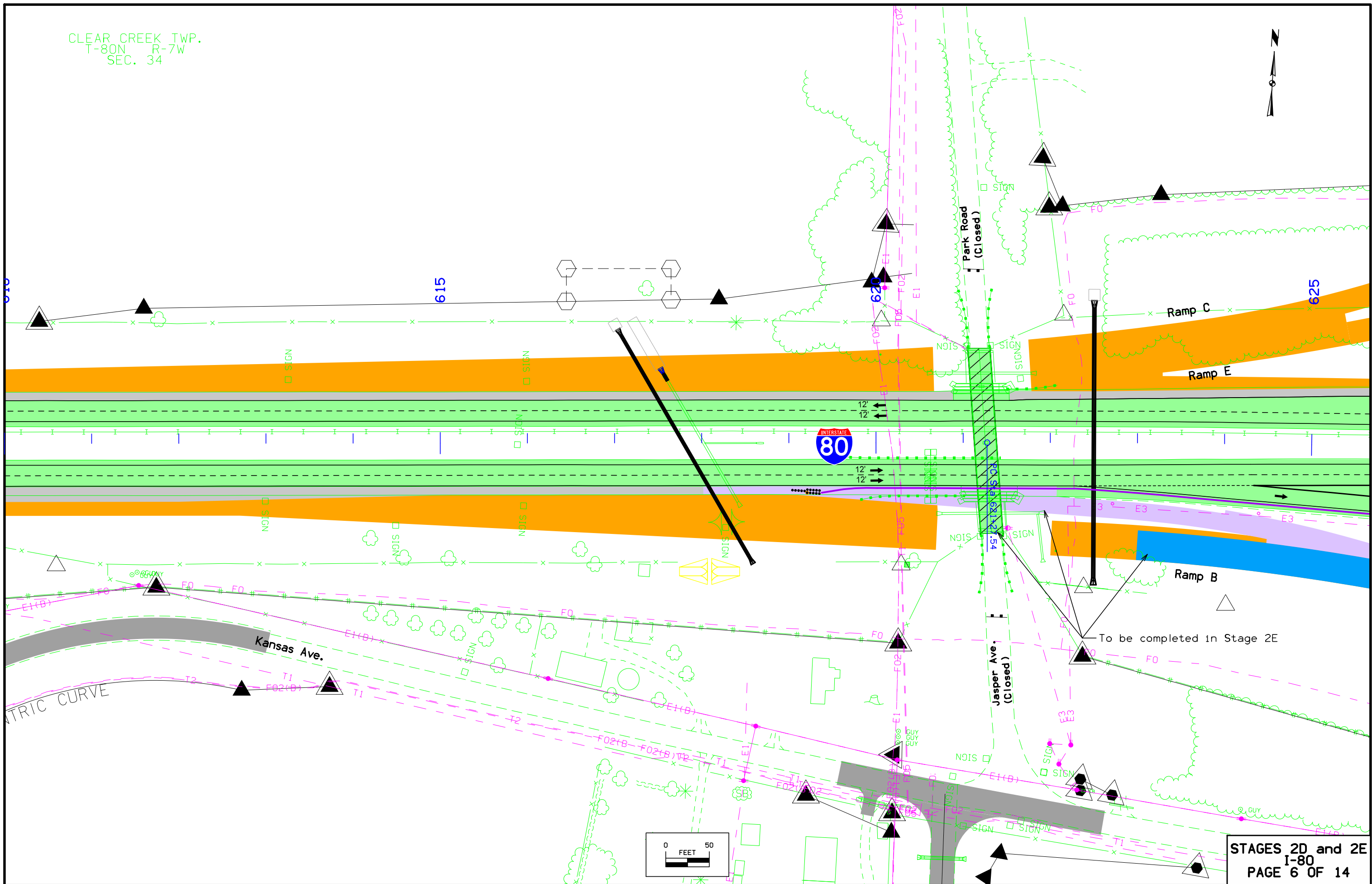


STAGES 2D and 2E
I-80
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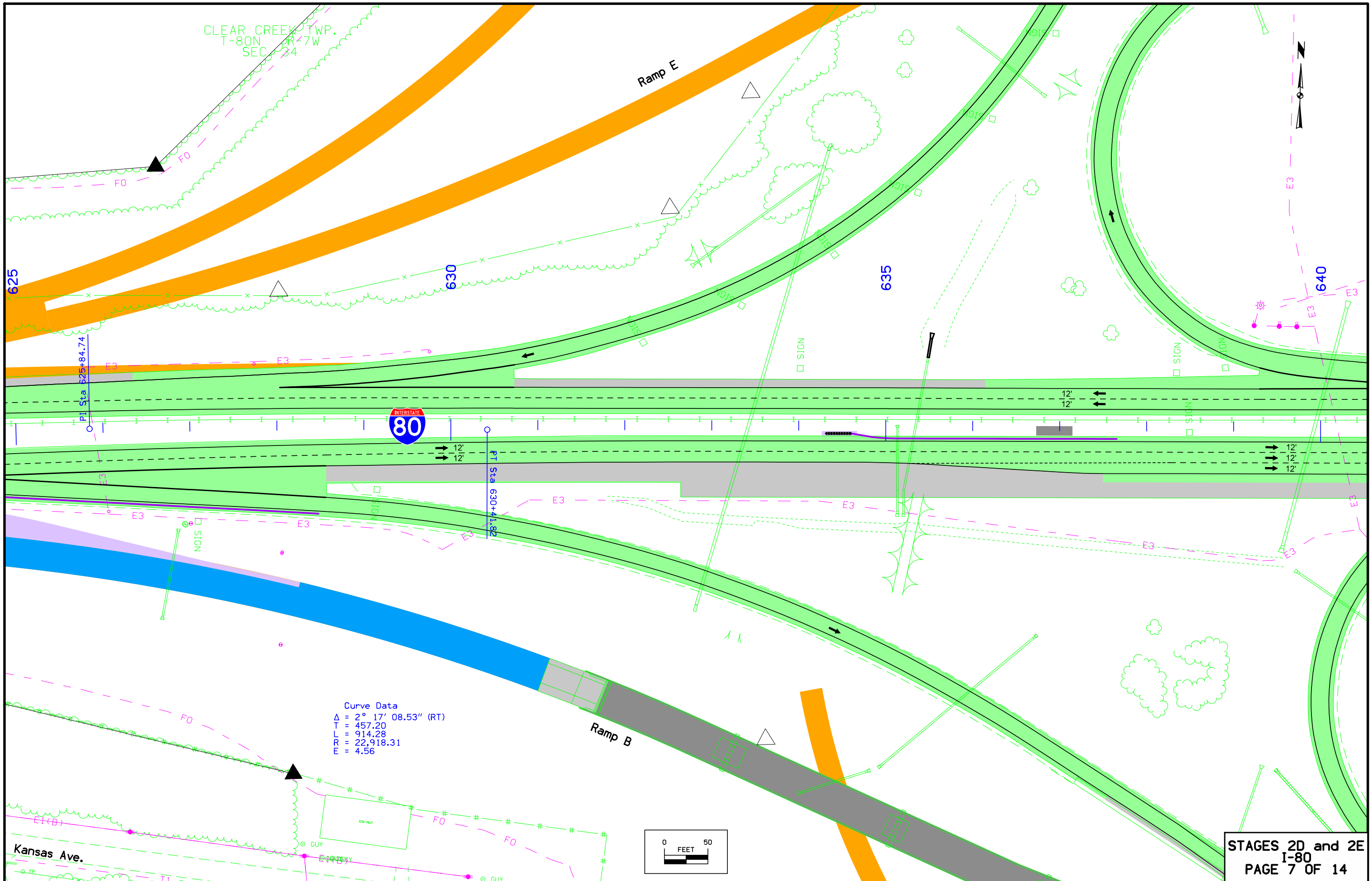


STAGES 2D and 2E
 I-80
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CLEAR CREEK TWP.
T-80N R-7W
SEC. 34



STAGES 2D and 2E
I-80
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CLEAR CREEK TWP.
T-80N R-7W
SEC. 34

Ramp E

625

630

635

640



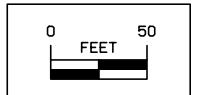
PI Sta 625+84.74

PT Sta 630+41.82

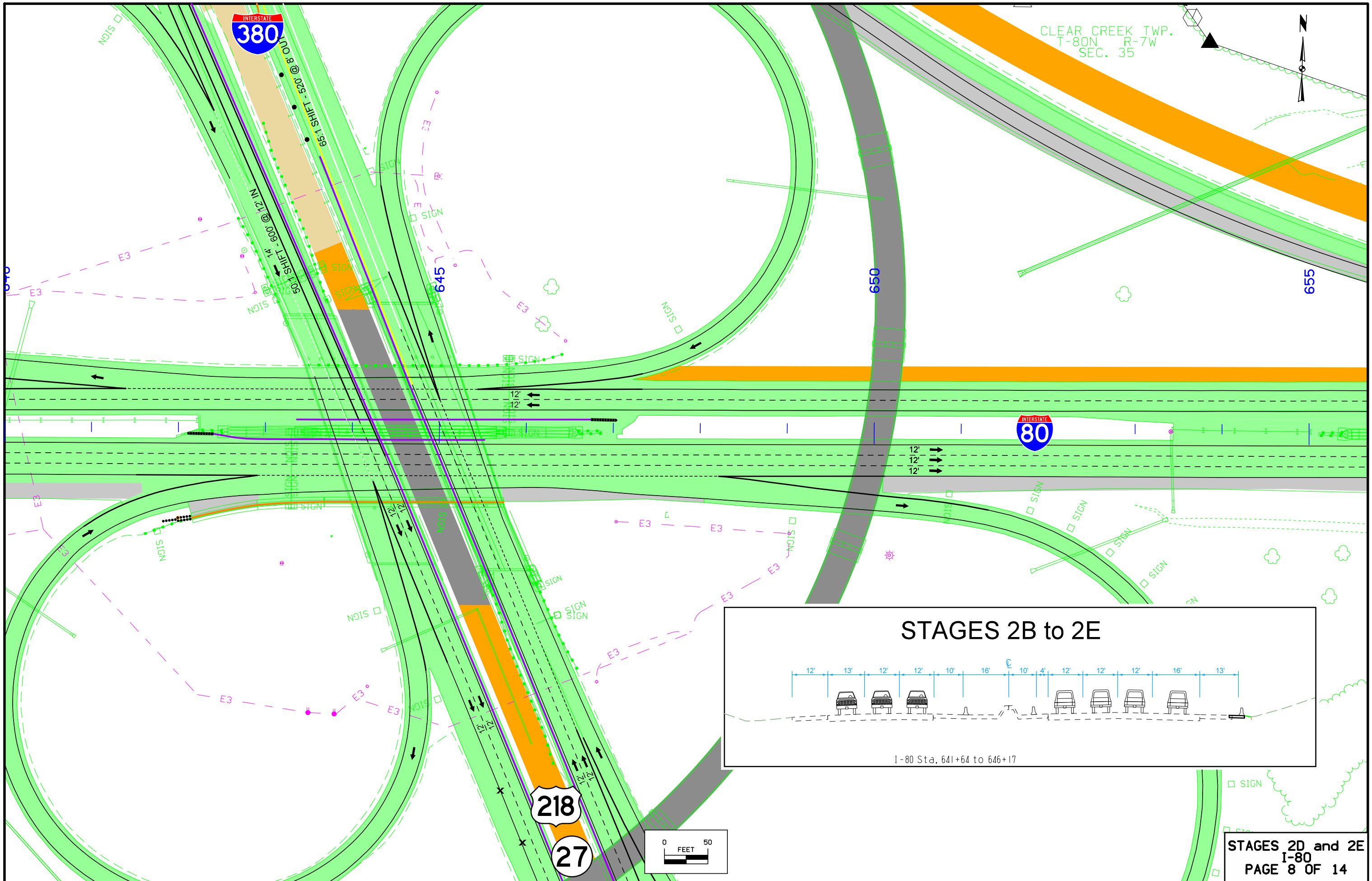
Curve Data
 $\Delta = 2^\circ 17' 08.53''$ (RT)
 T = 457.20
 L = 914.28
 R = 22,918.31
 E = 4.56

Ramp B

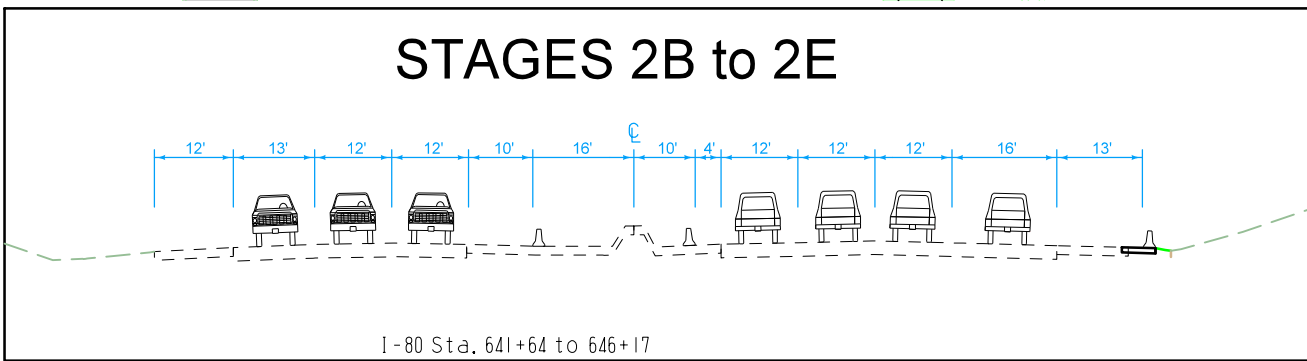
Kansas Ave.



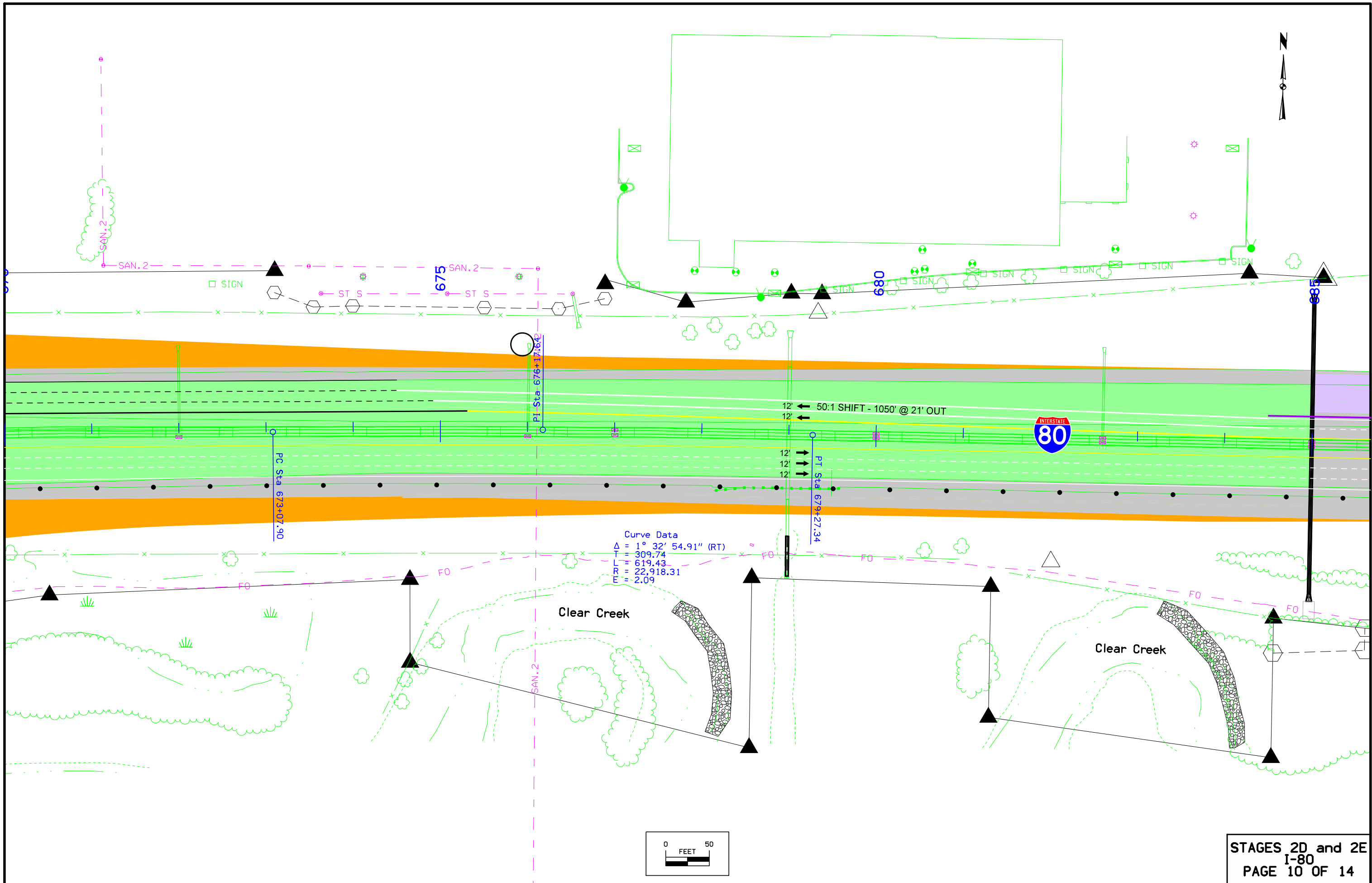
STAGES 2D and 2E
 I-80
 PAGE 7 OF 14



CLEAR CREEK TWP.
T-80N R-7W
SEC. 35

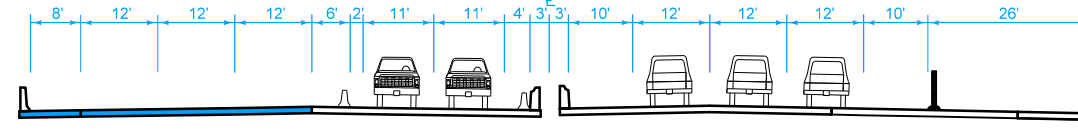


STAGES 2D and 2E
I-80
PAGE 8 OF 14



CLEAR CREEK TWP.
T-80N R-7W
SEC. 35

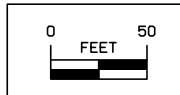
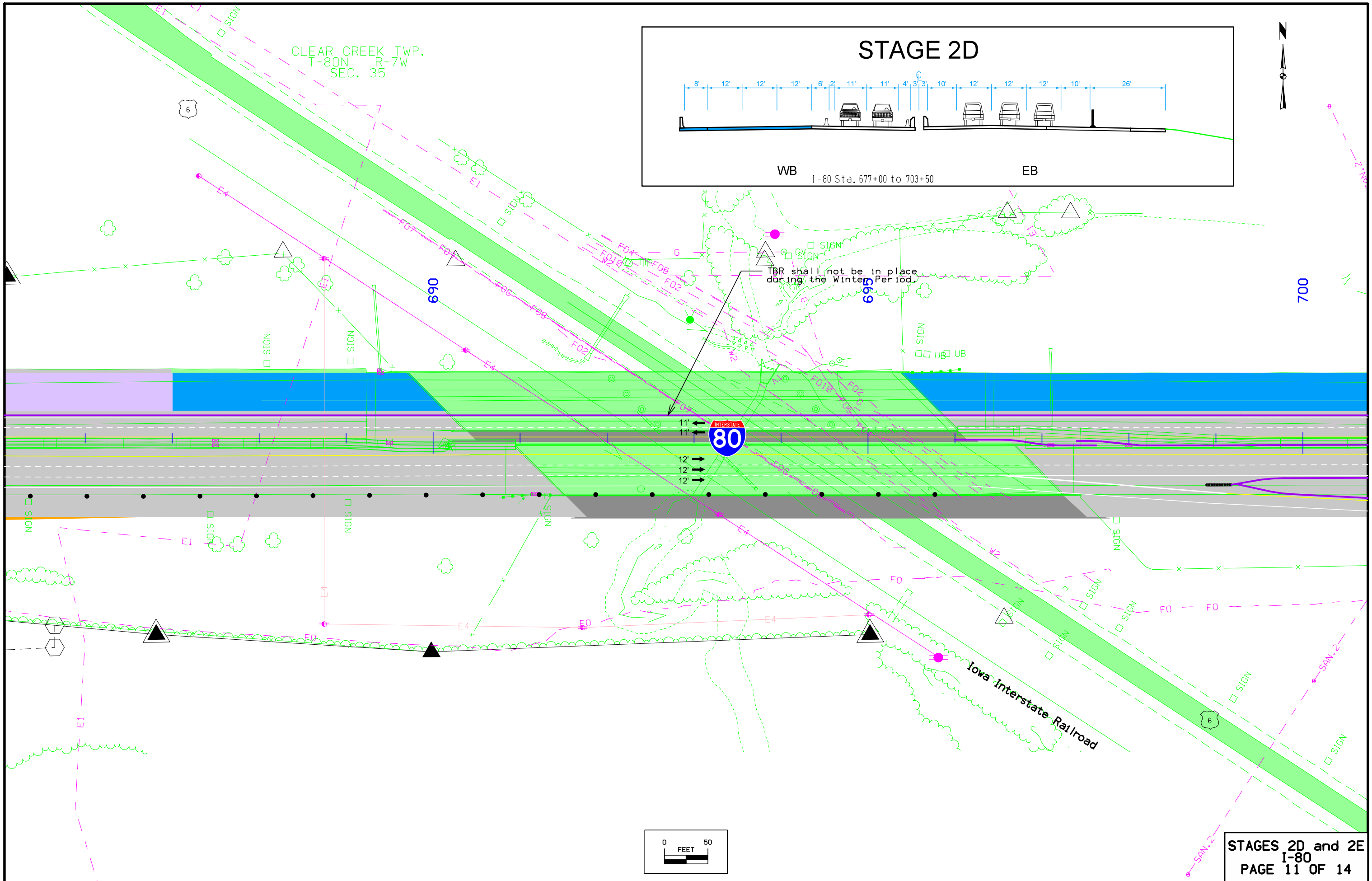
STAGE 2D



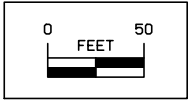
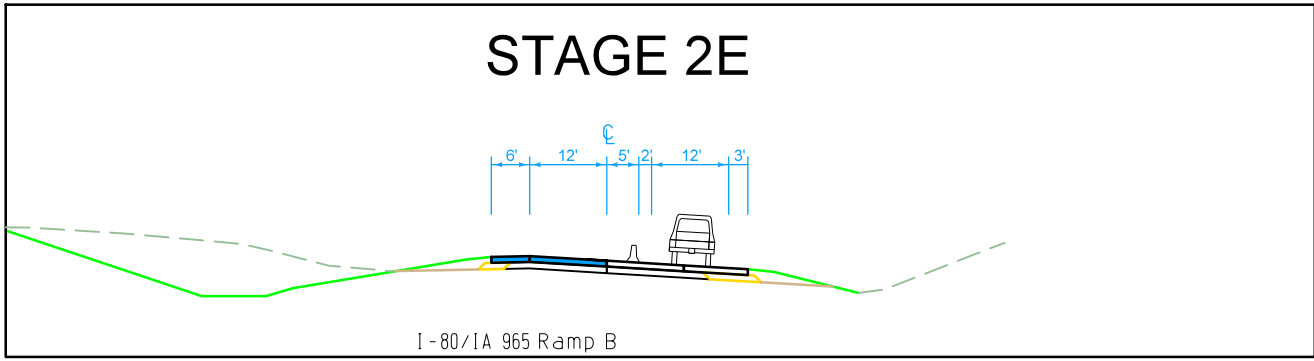
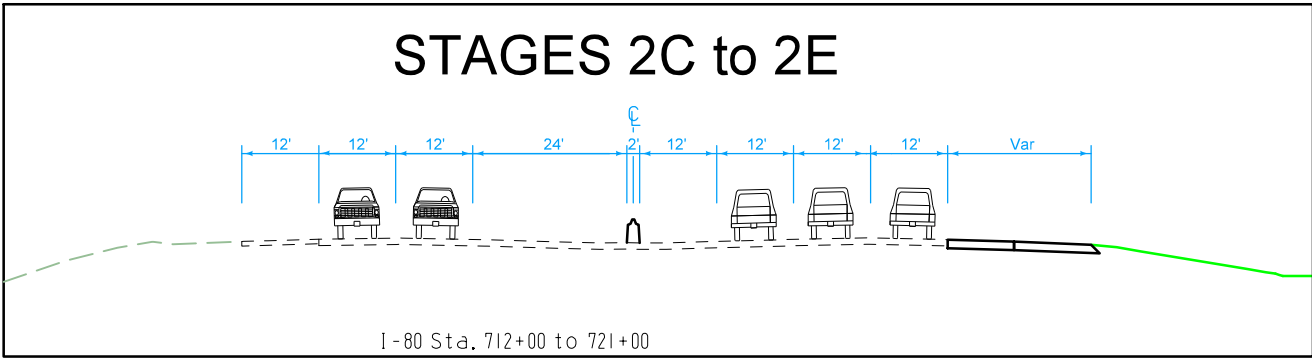
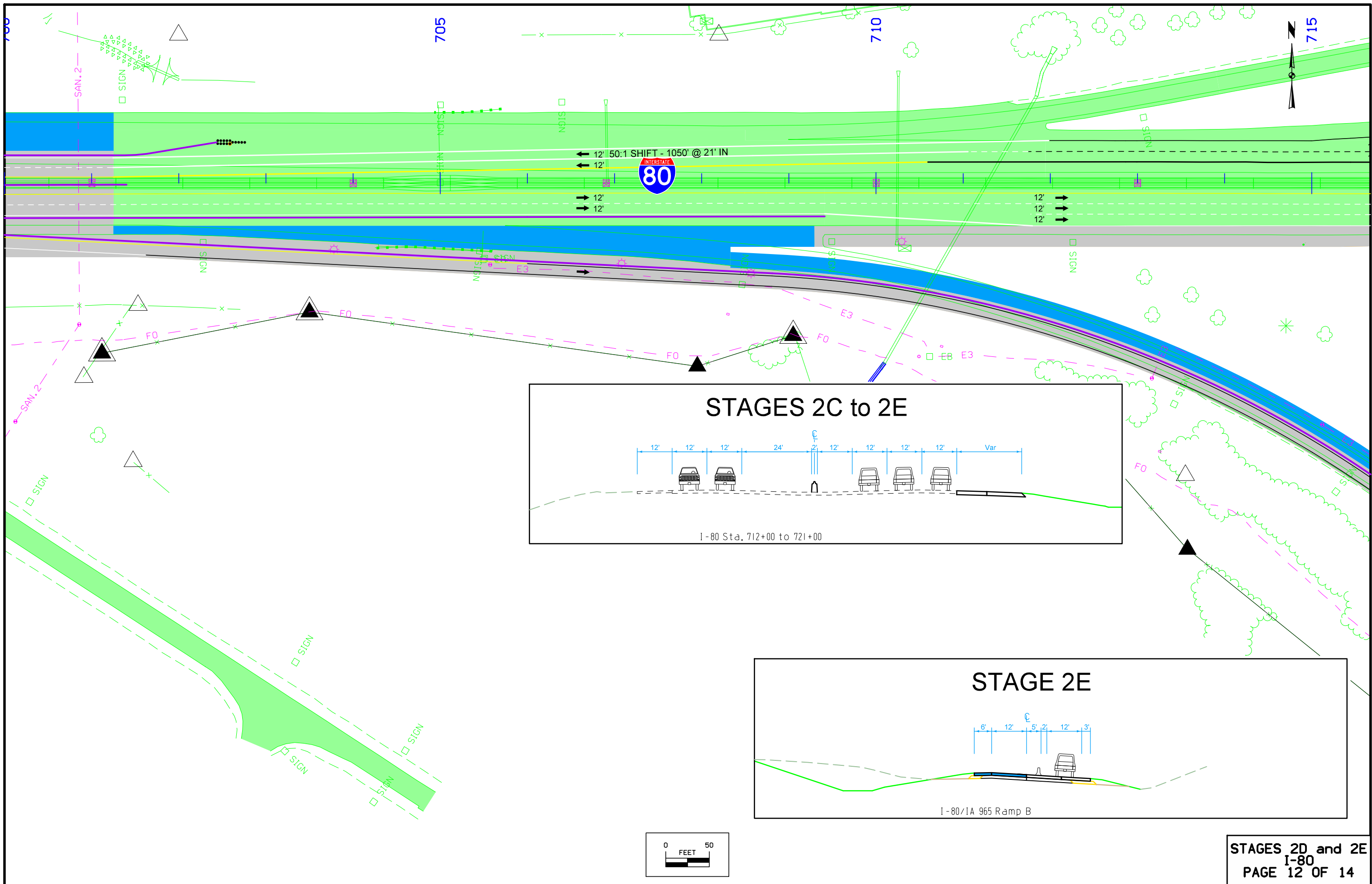
WB I-80 Sta. 677+00 to 703+50

EB

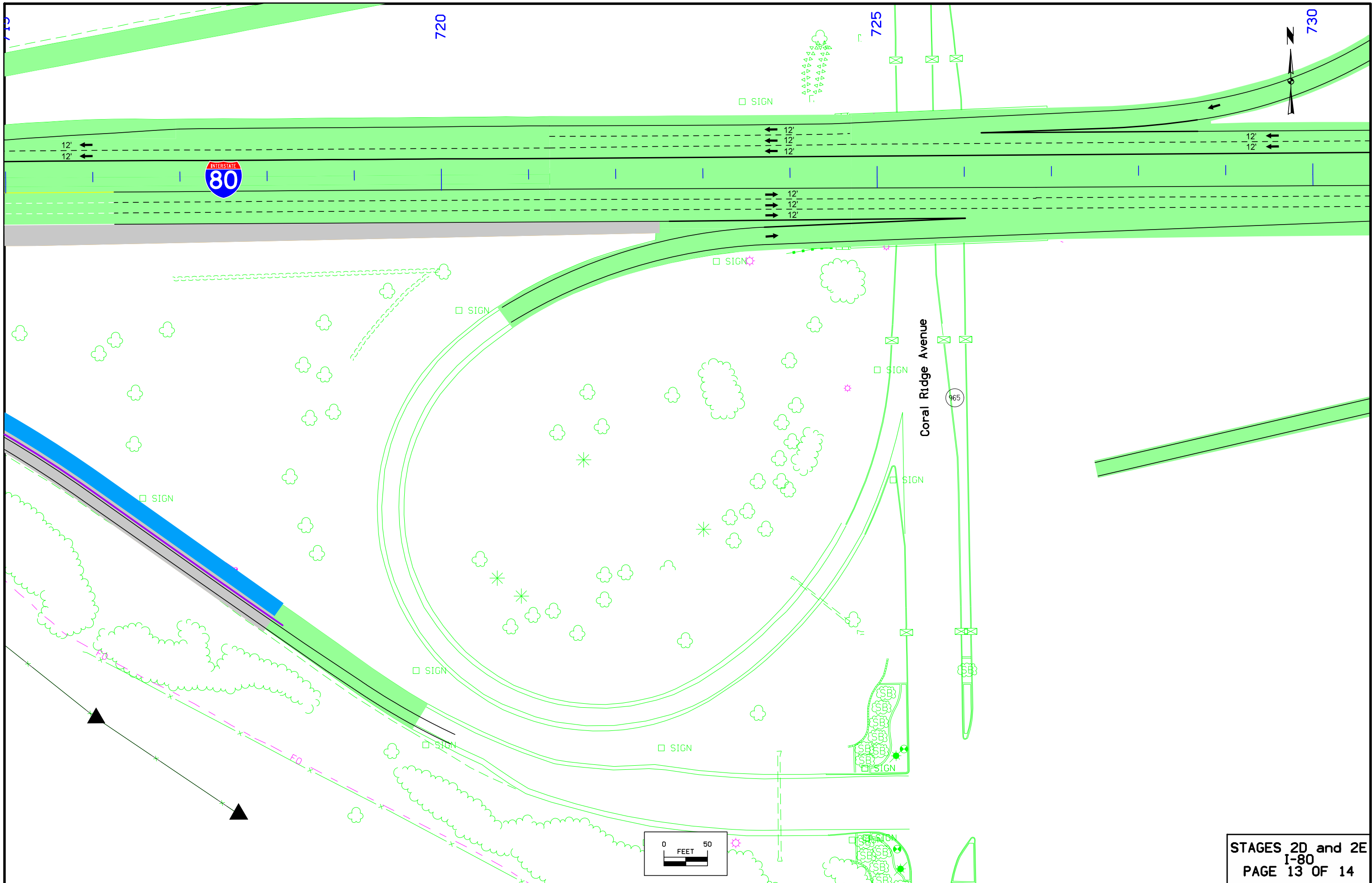
TBR shall not be in place during the Winter Period.



STAGES 2D and 2E
I-80
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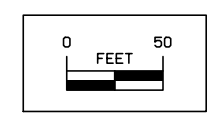
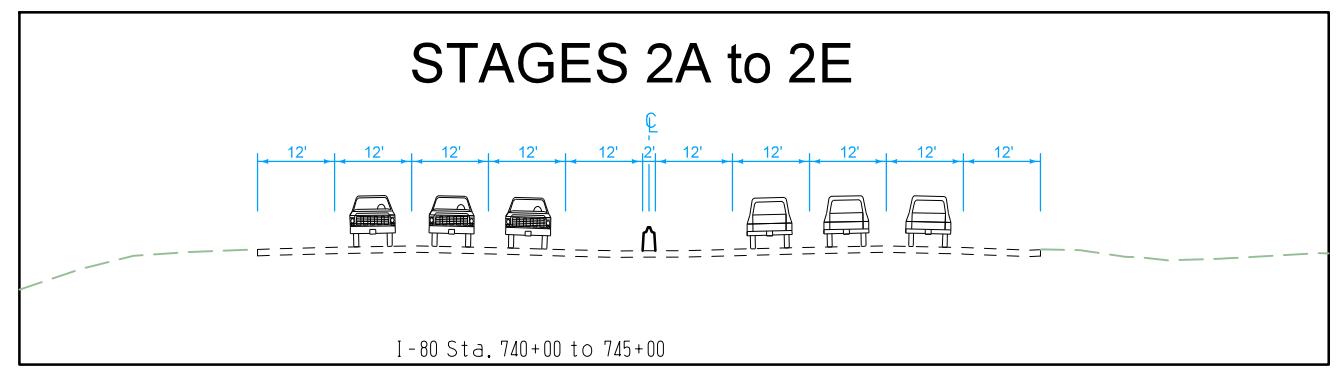
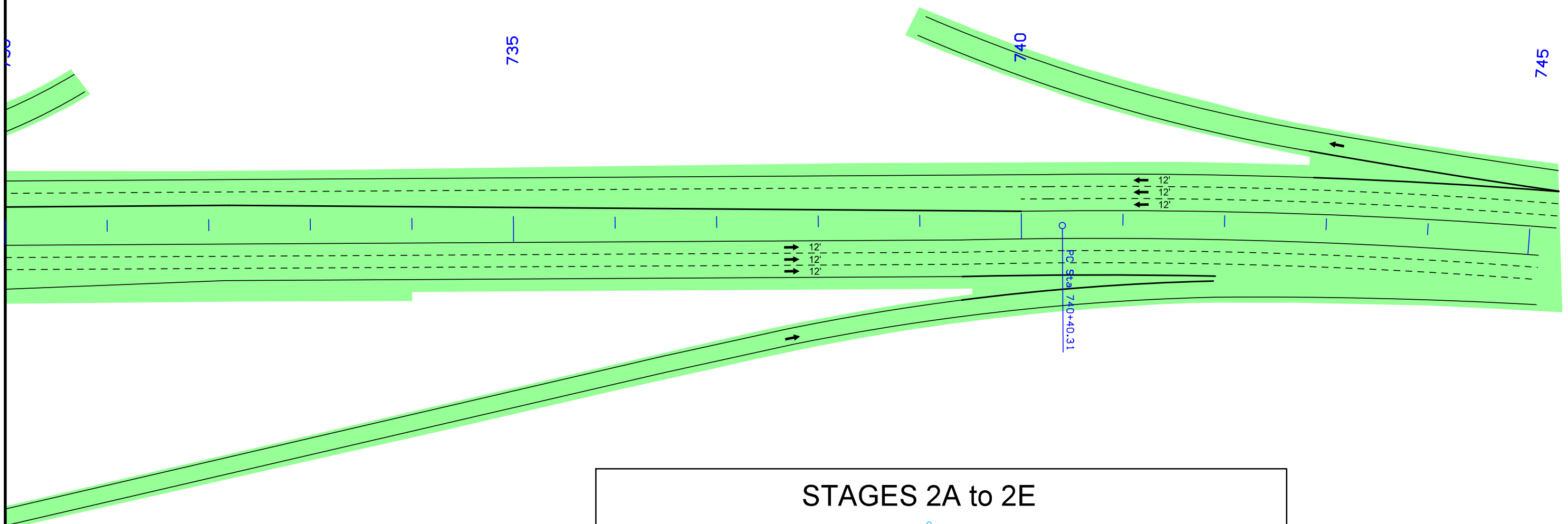
STAGES 2D and 2E
I-80
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STAGES 2D and 2E
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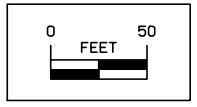
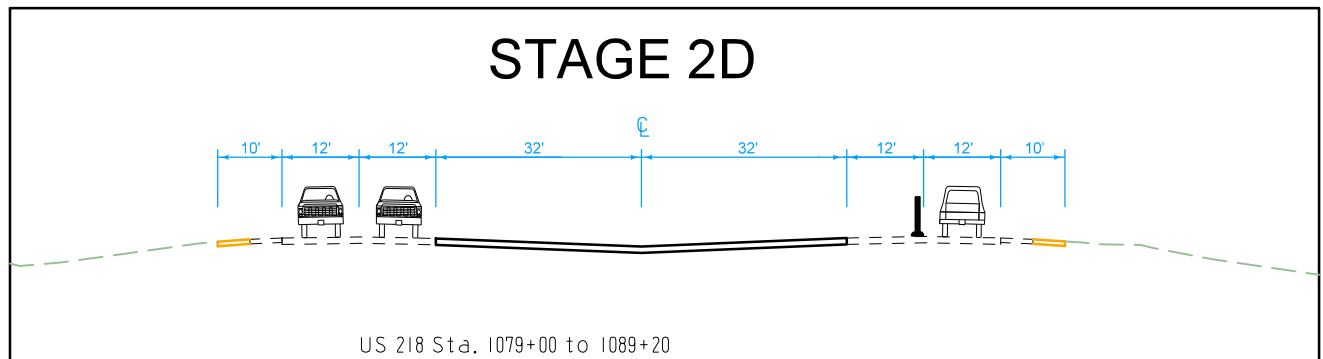
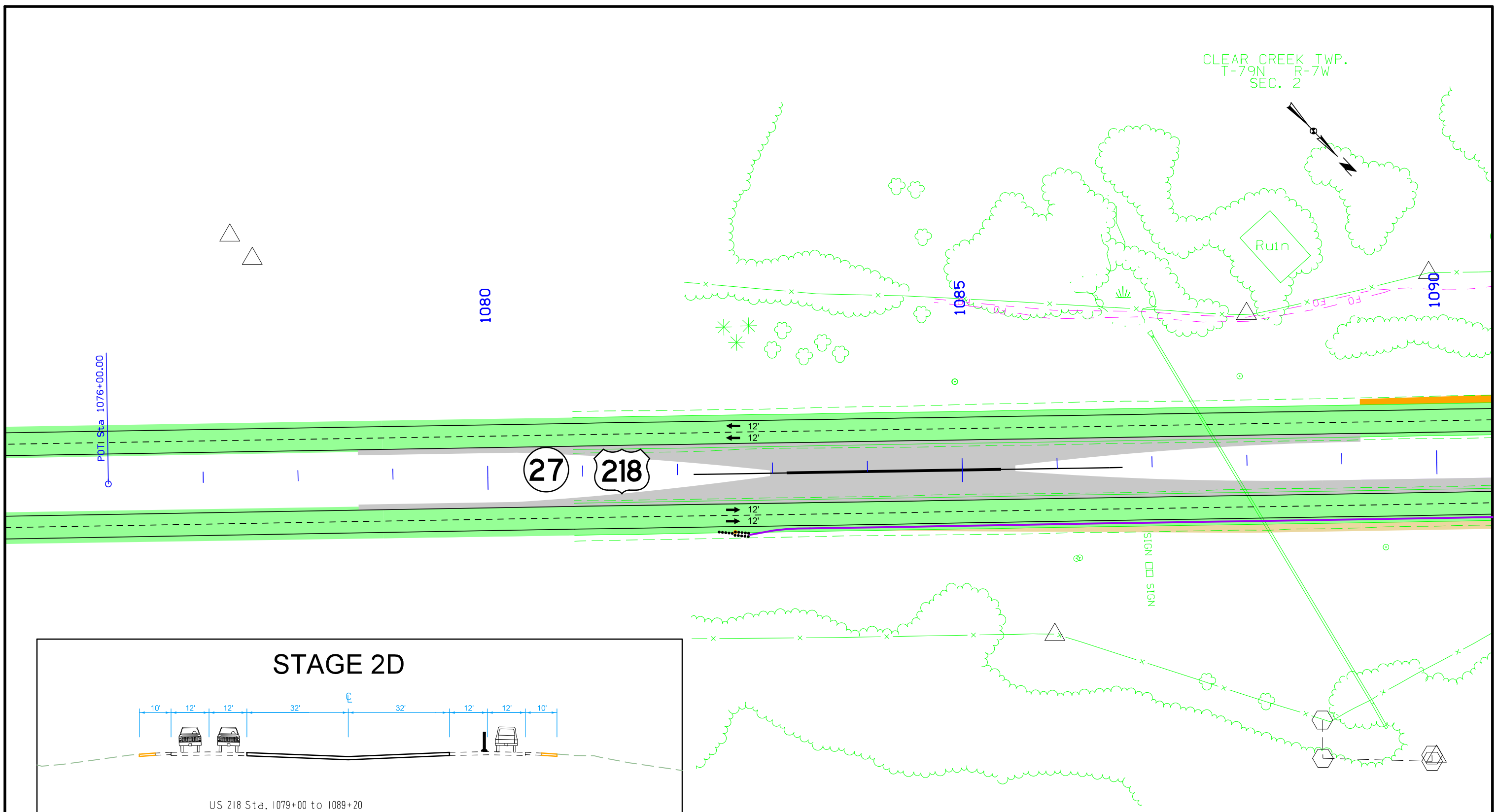
CLEAR CREEK TWP.
T-80N R-7W
SEC. 36

Curve Data
 $\Delta = 17^\circ 48' 28.25''$ (RT)
 T = 897.63
 L = 1,780.78
 R = 5,729.58
 E = 69.89



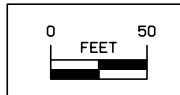
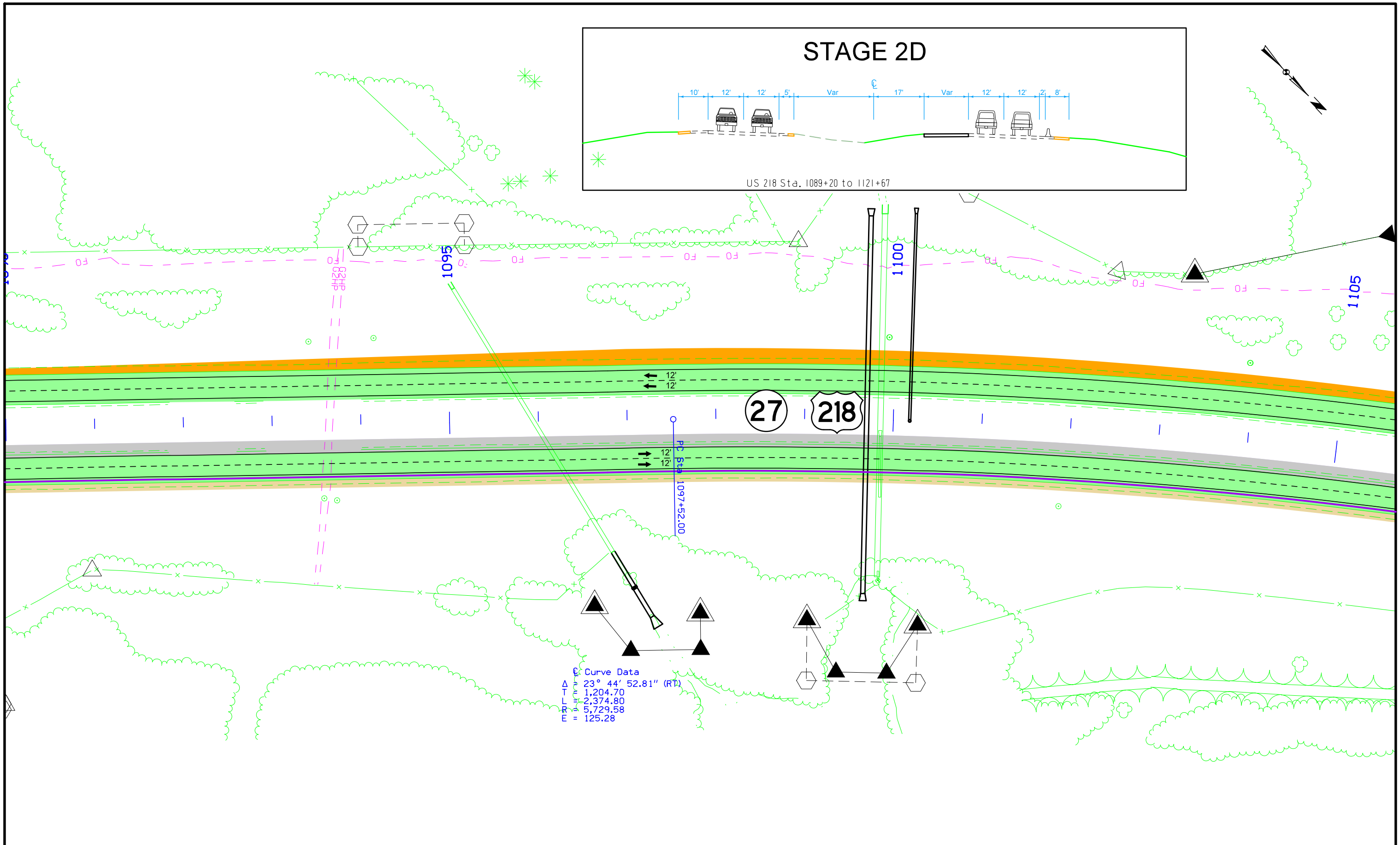
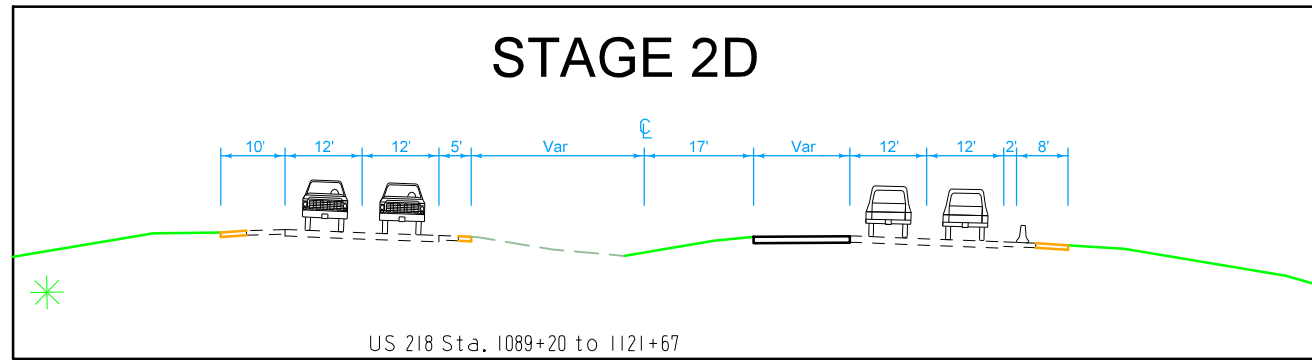
STAGES 2D and 2E
I-80
PAGE 14 OF 14

CLEAR CREEK TWP.
T-79N R-7W
SEC. 2

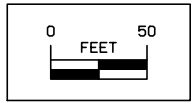
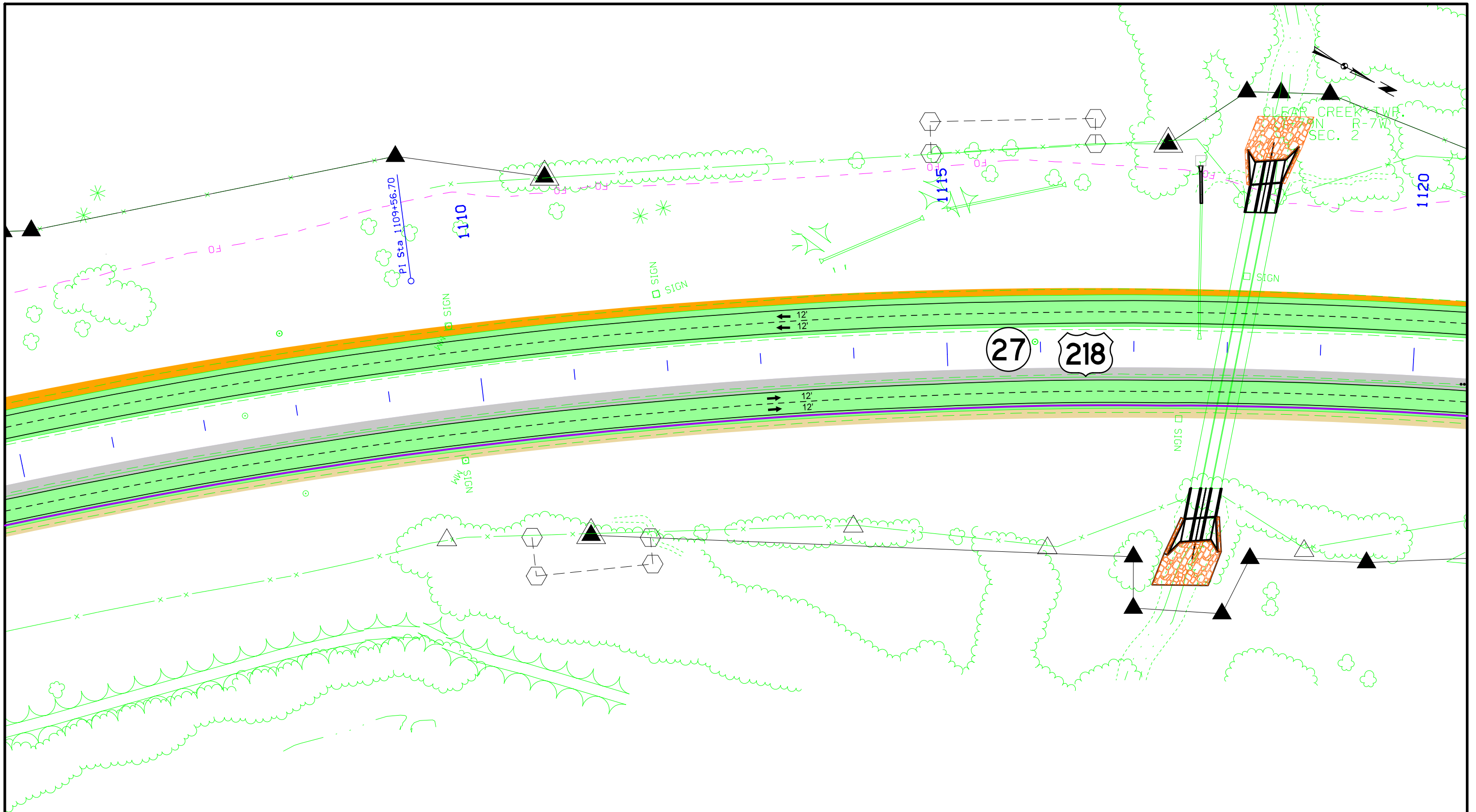


STAGE 2D
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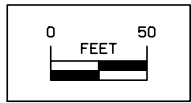
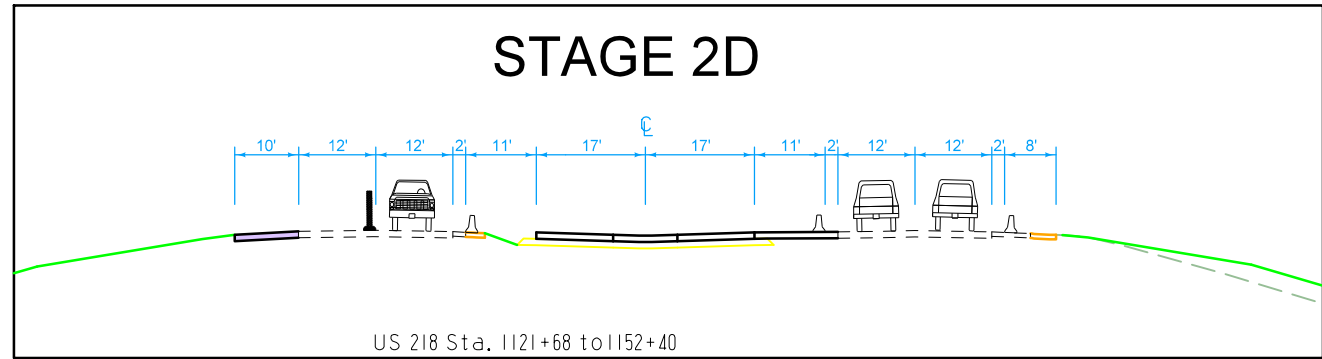
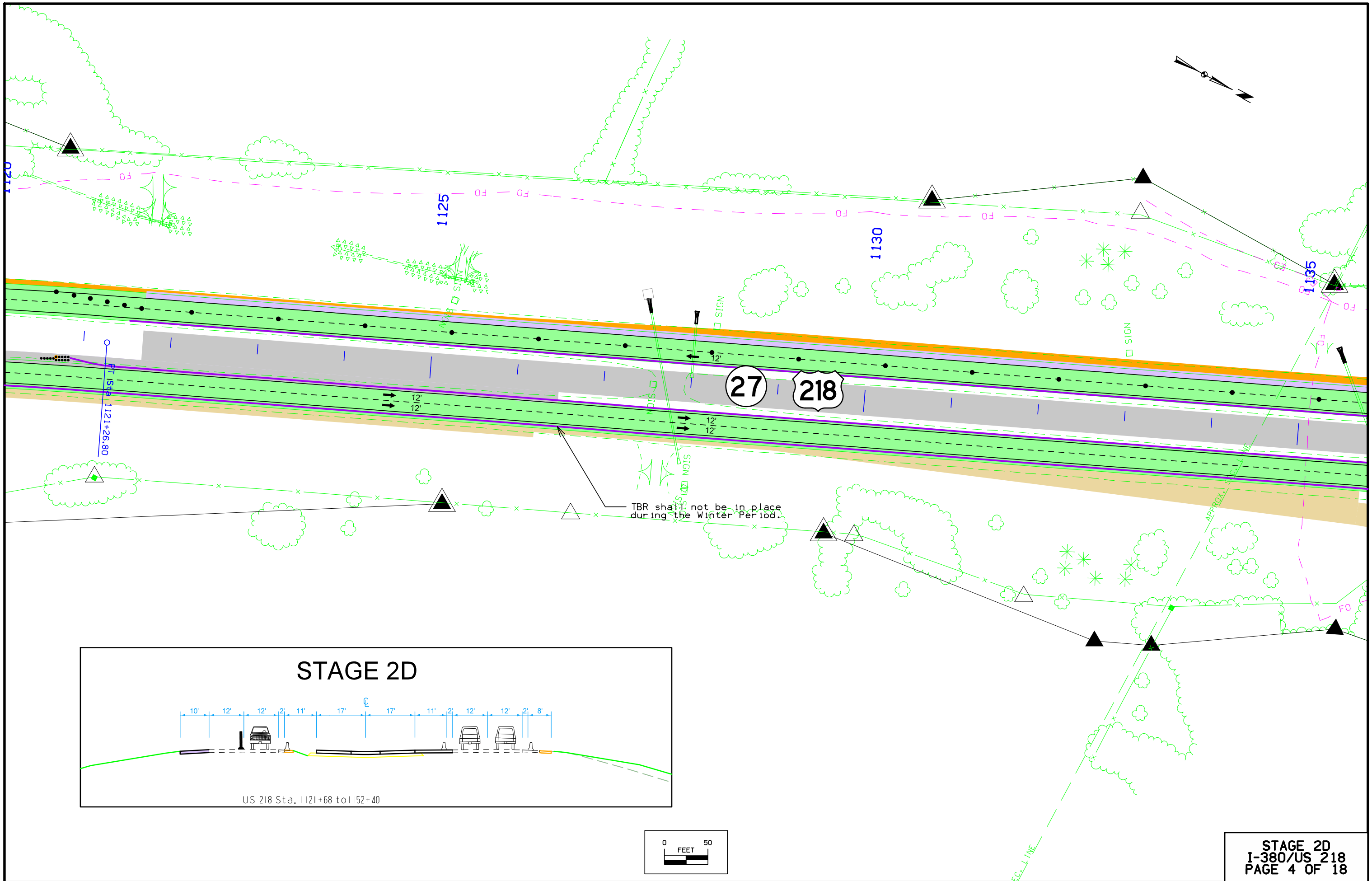
STAGE 2D



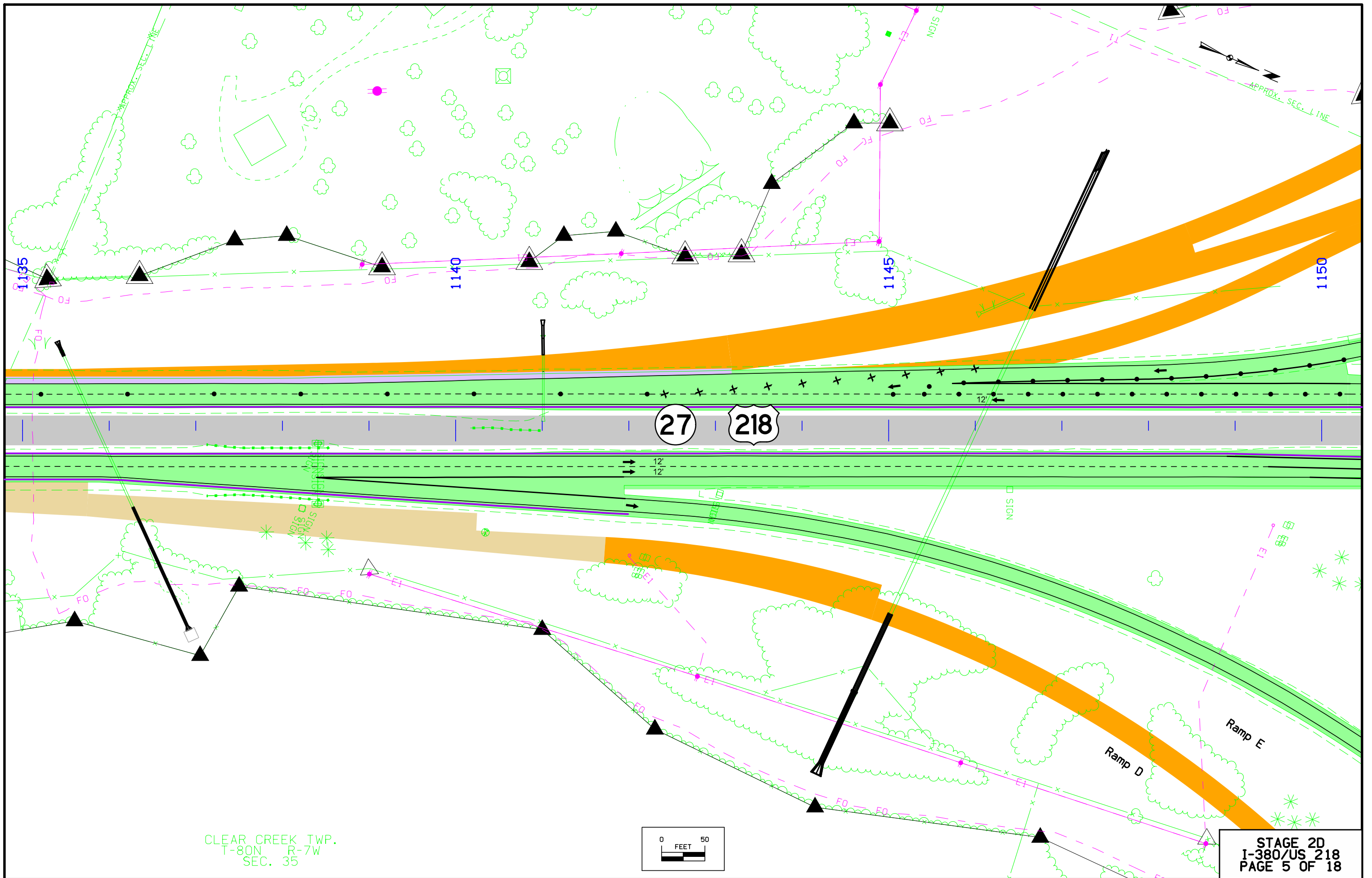
STAGE 2D
 I-380/US 218
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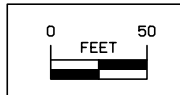
STAGE 2D
 I-380/US 218
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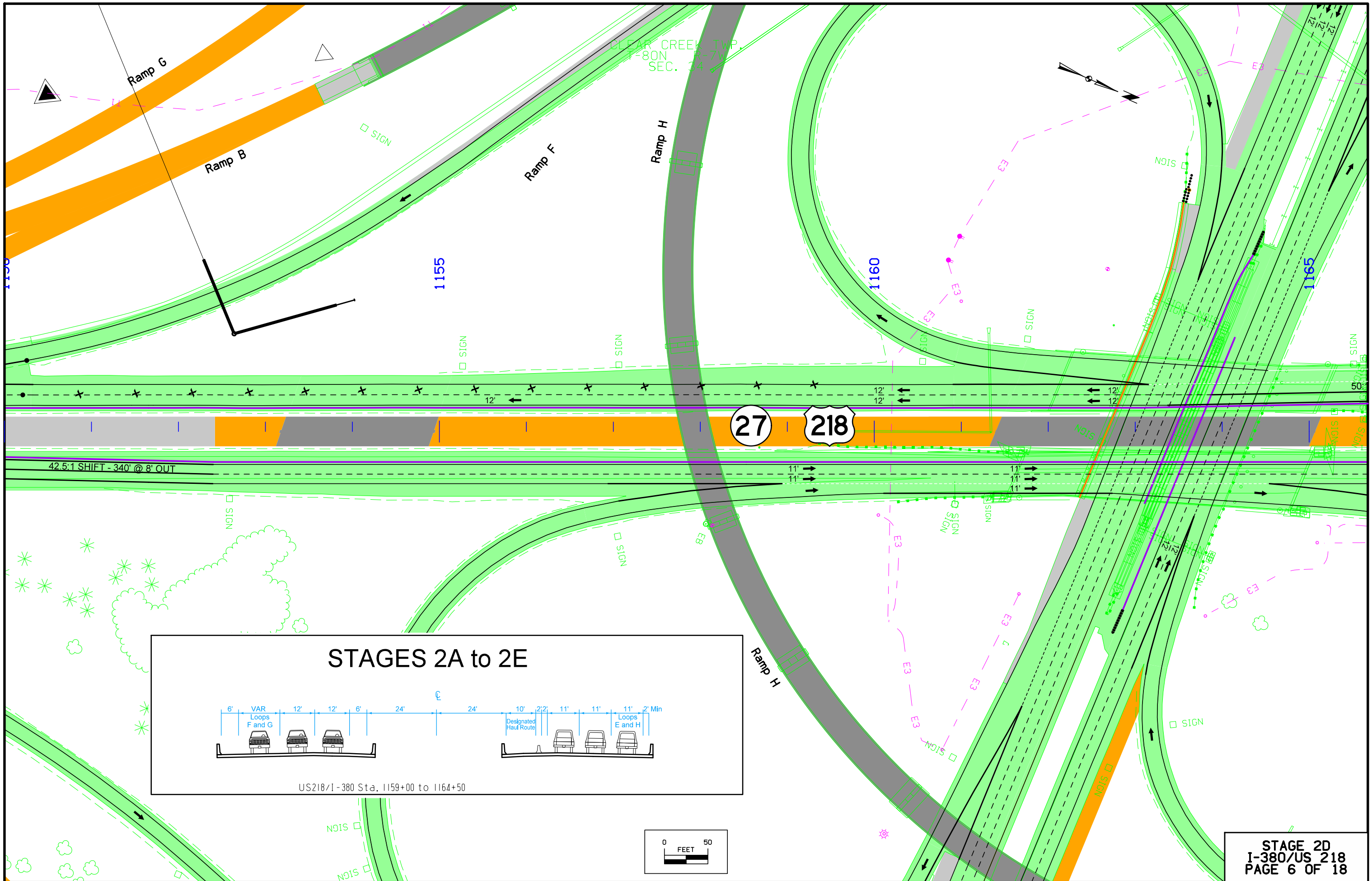
STAGE 2D
I-380/US 218
PAGE 4 OF 18



CLEAR CREEK TWP.
T-80N R-7W
SEC. 35



STAGE 2D
I-380/US 218
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CLEAR CREEK TWP.
T-80N R-7W
SEC. 34

Ramp G

Ramp B

Ramp F

Ramp H

27

218

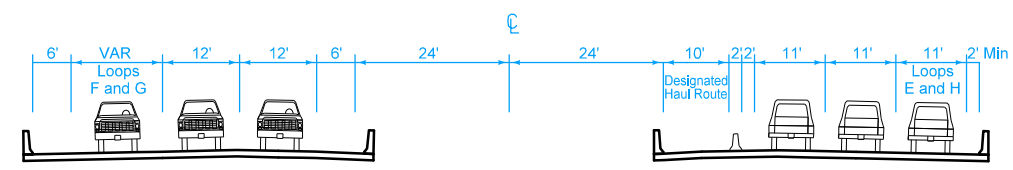
1155

1160

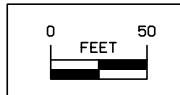
1165

42.5:1 SHIFT - 340' @ 8' OUT

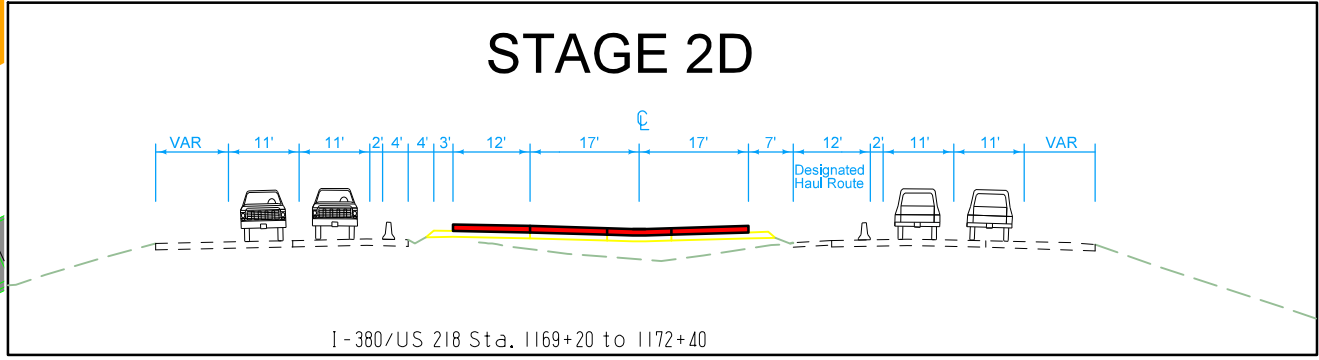
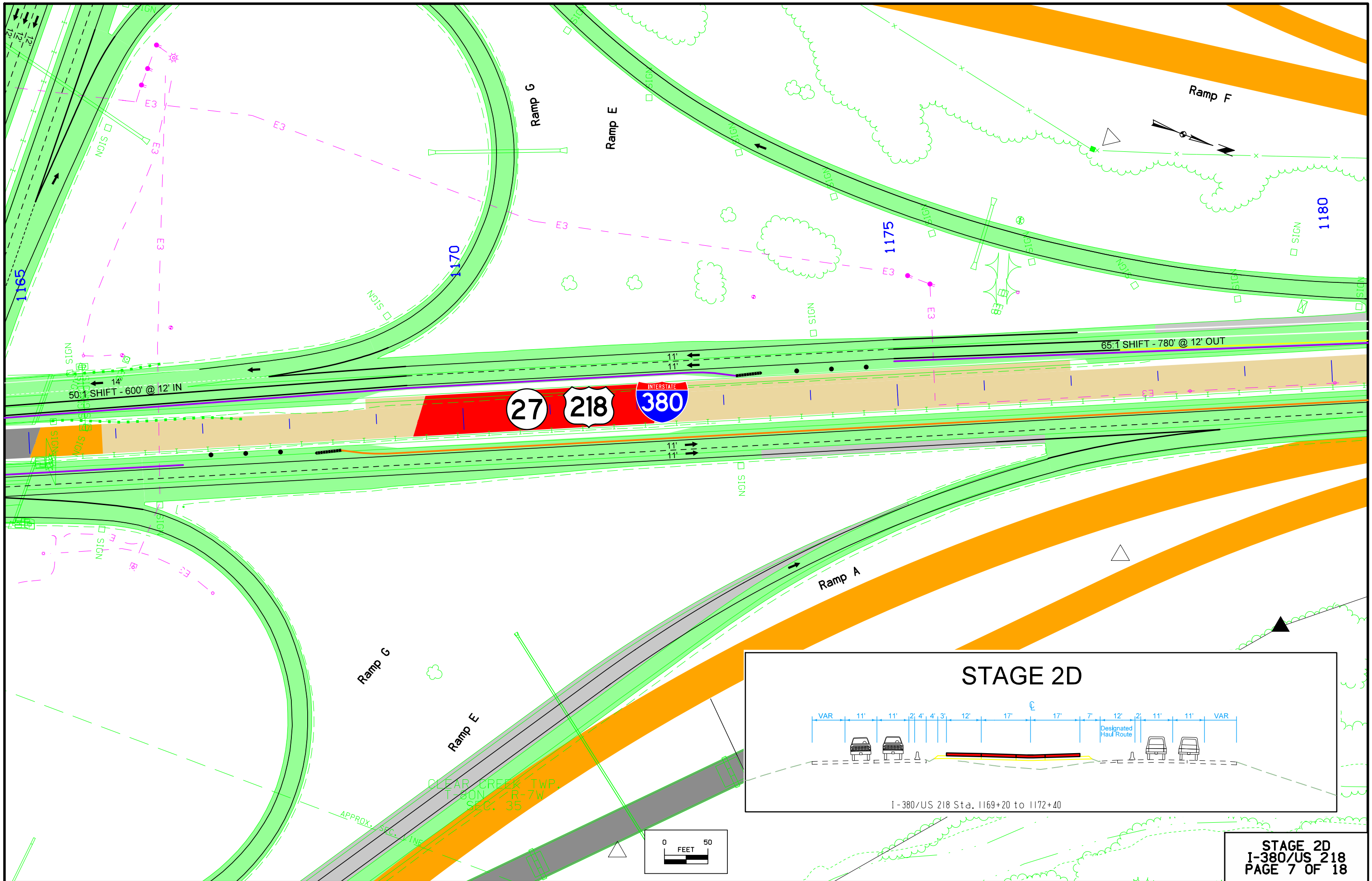
STAGES 2A to 2E



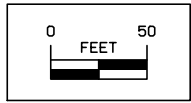
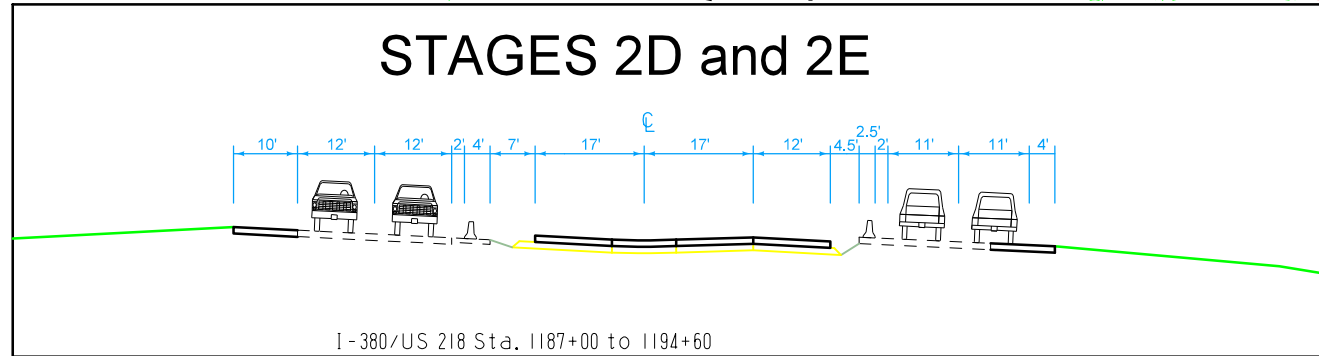
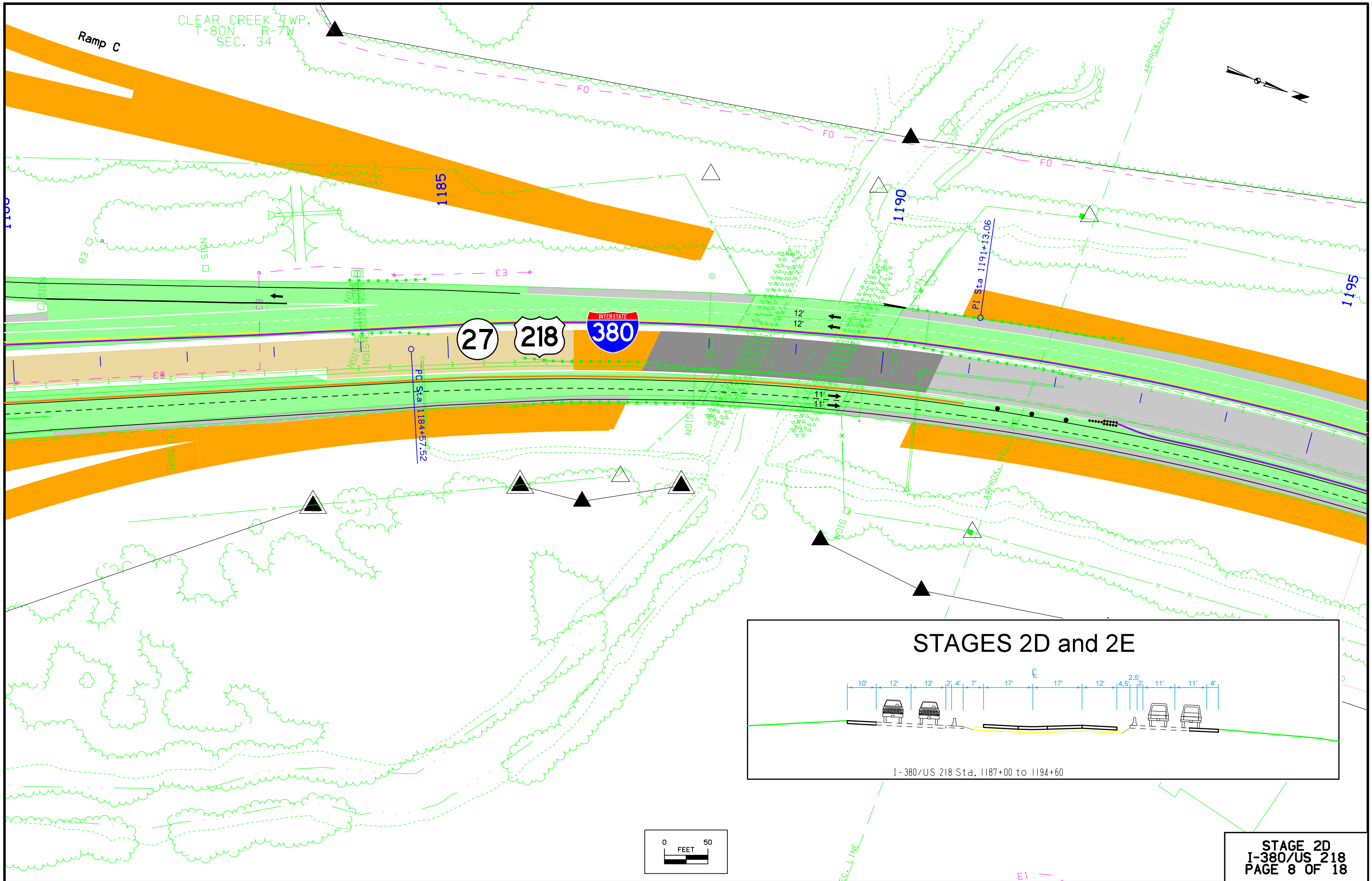
US218/I-380 Sta. 1159+00 to 1164+50



STAGE 2D
I-380/US 218
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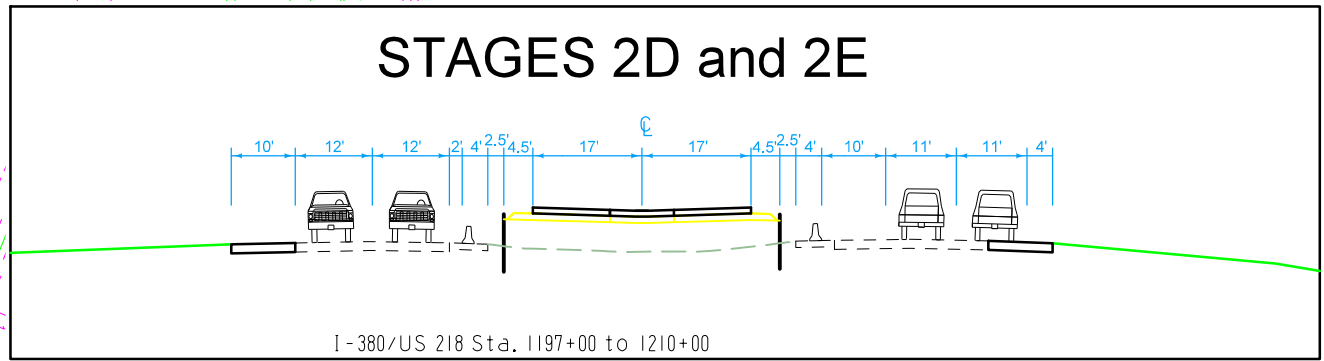
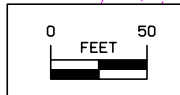
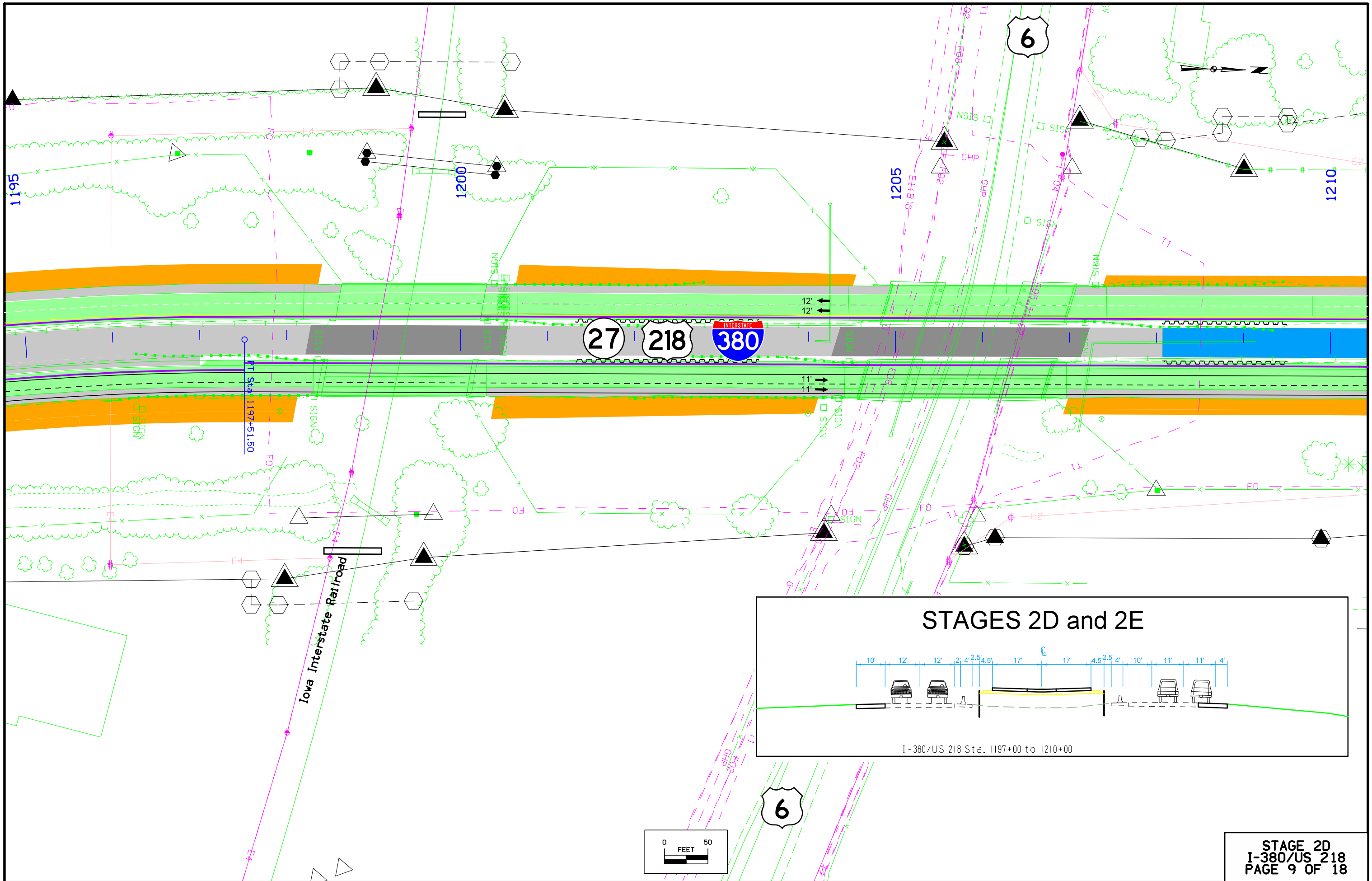


STAGE 2D
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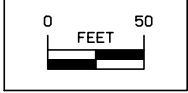
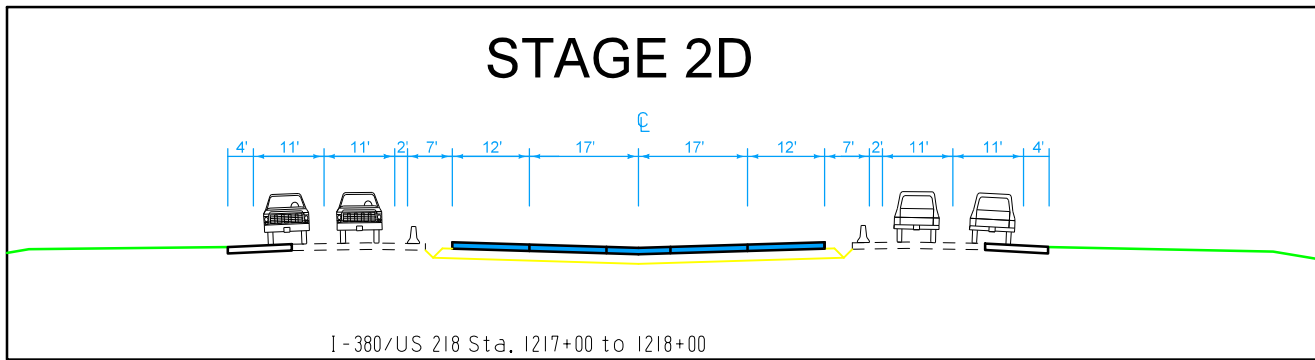
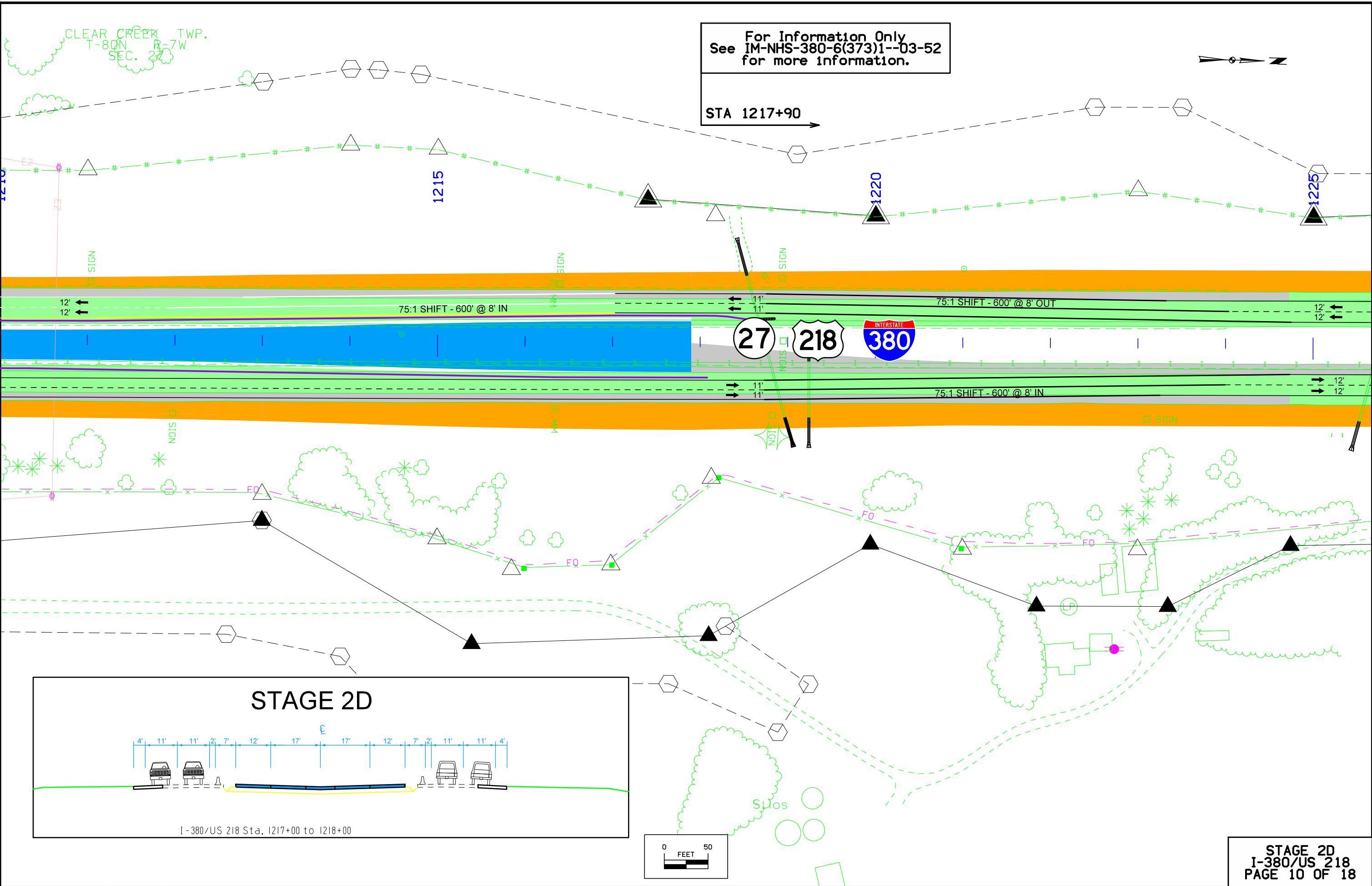


STAGE 2D
I-380/US 218
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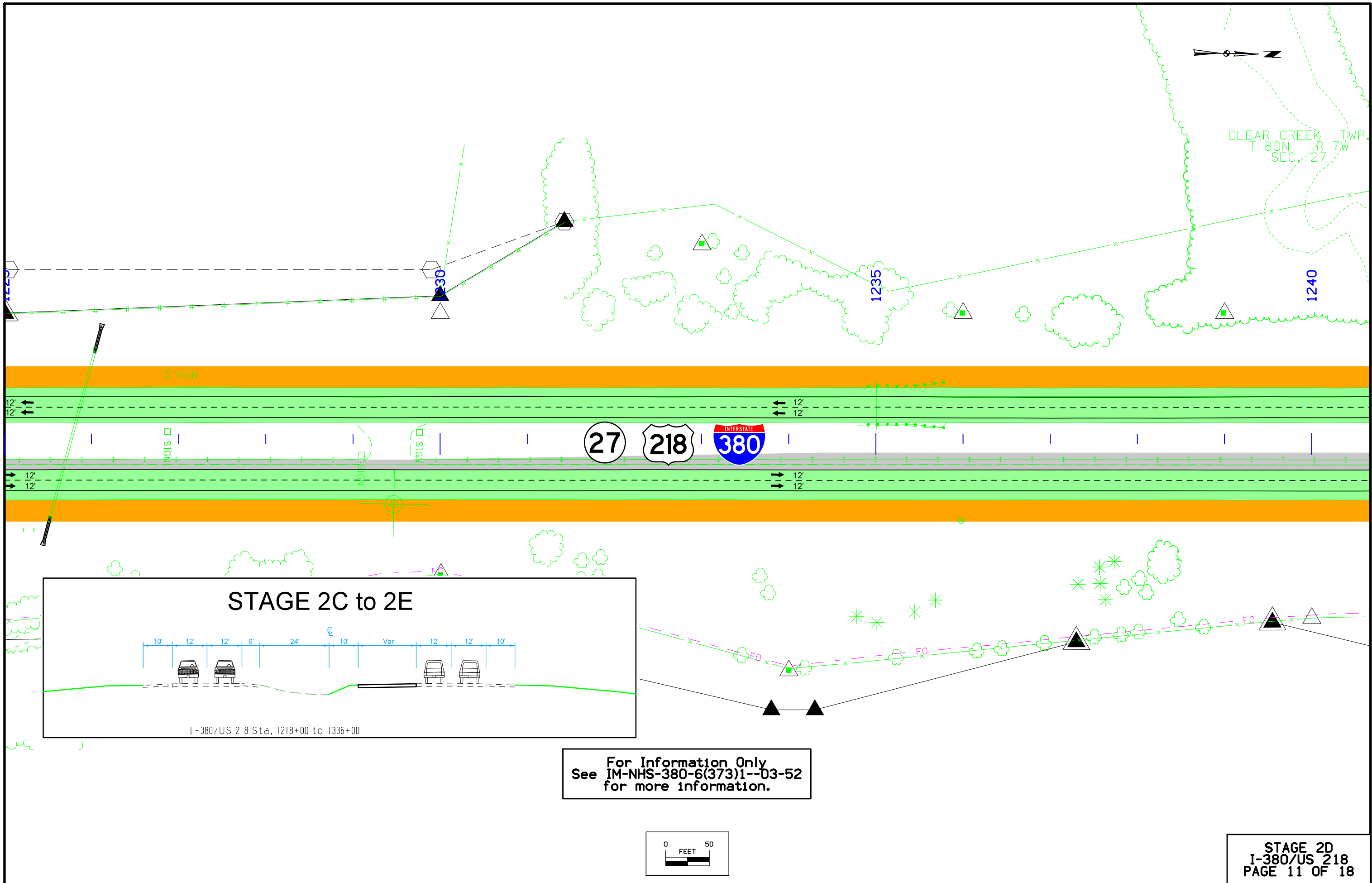
Changed by Addenda

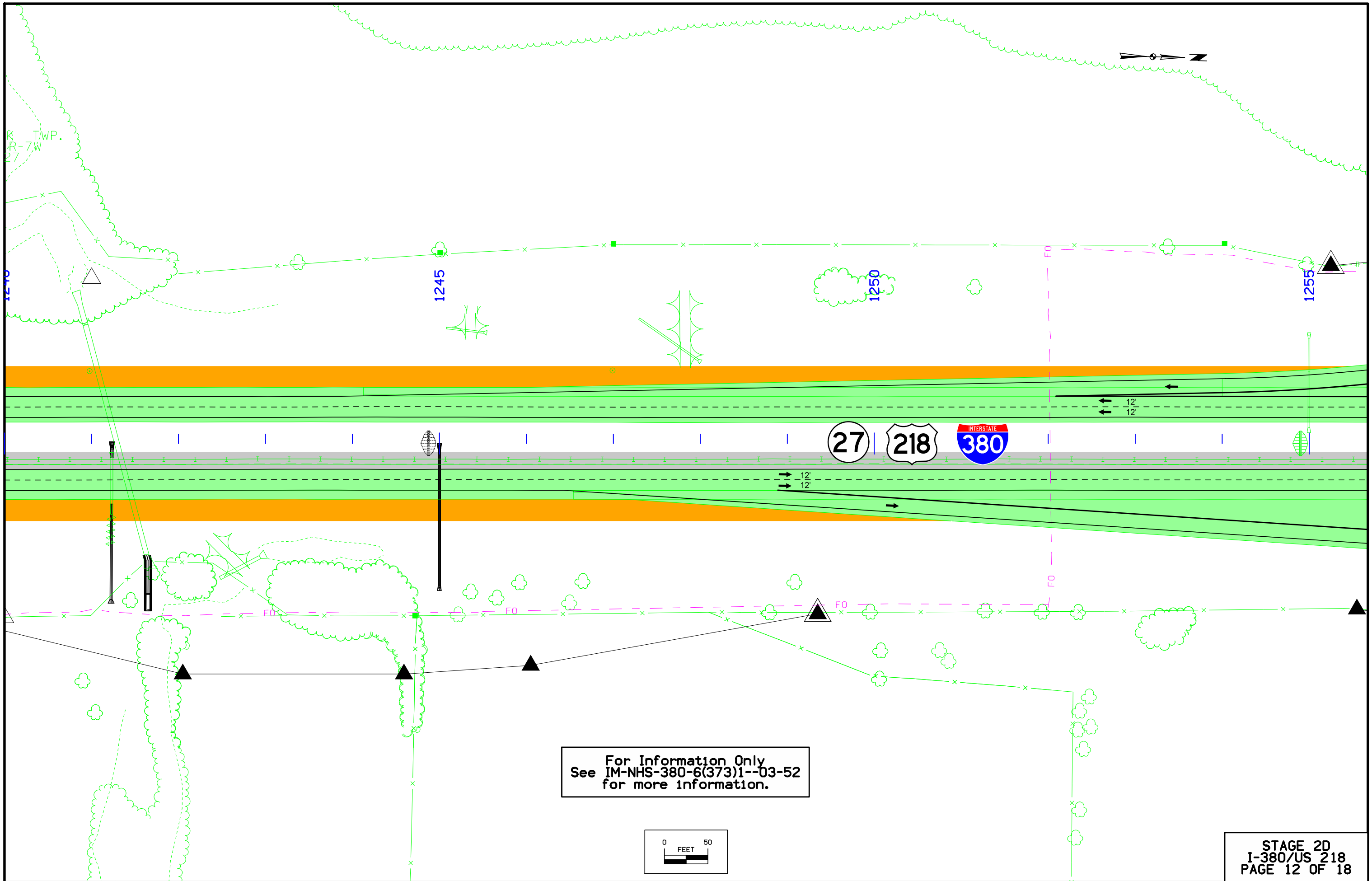


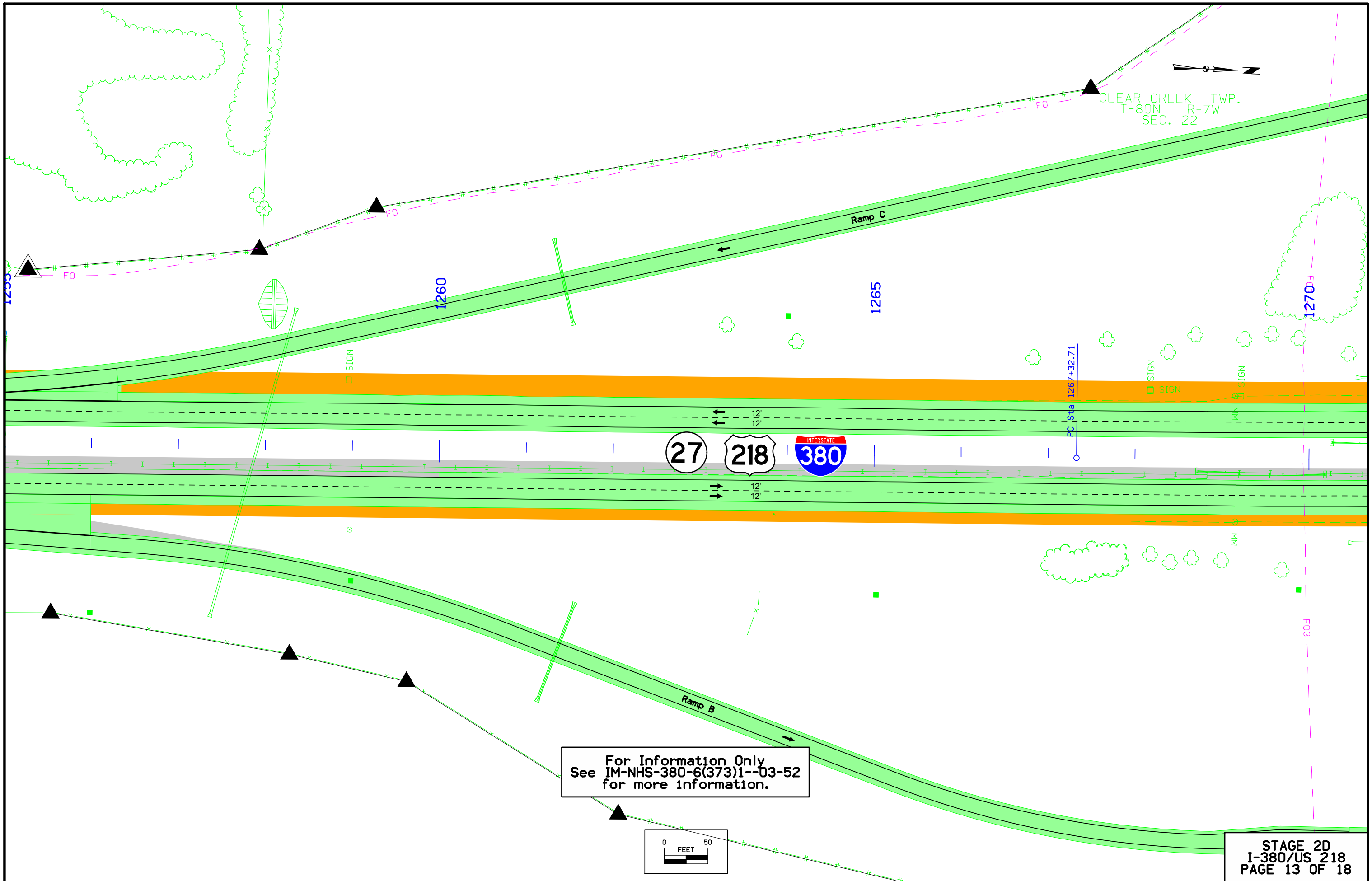
STAGE 2D
I-380/US 218
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STAGE 2D
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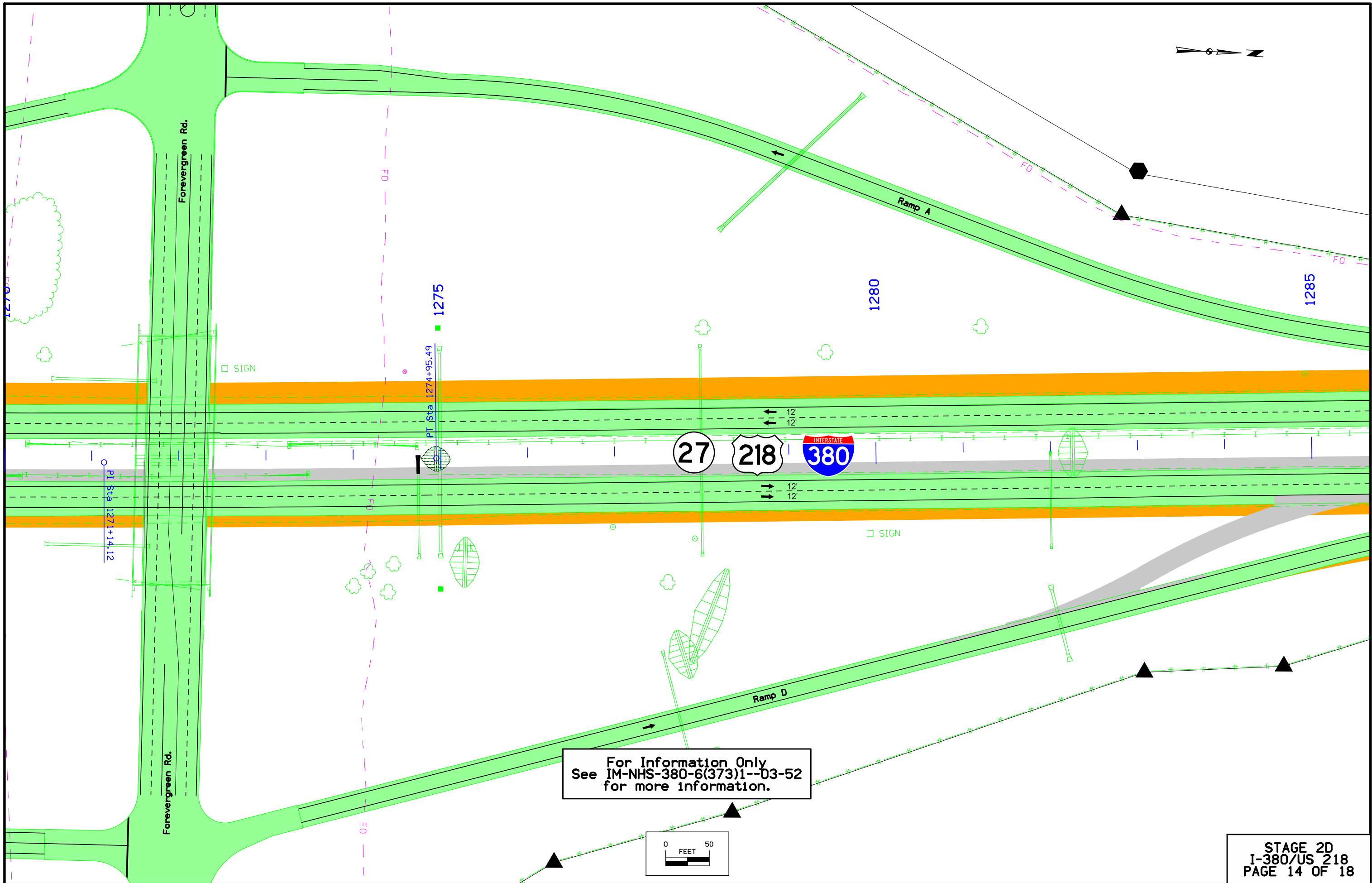




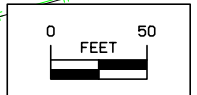


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 for more information.

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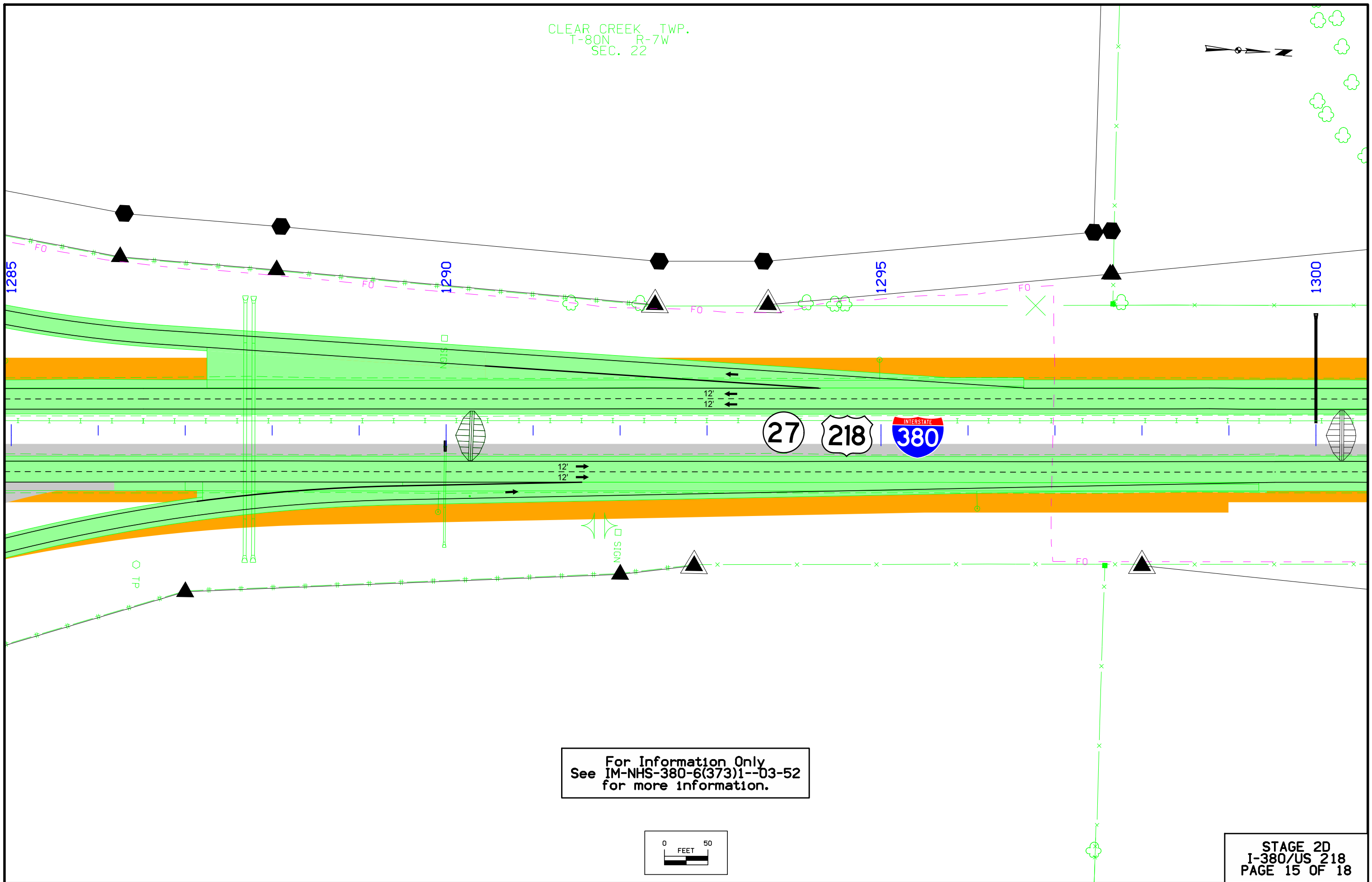
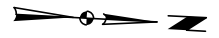


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 for more information.

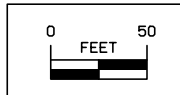


STAGE 2D
 I-380/US 218
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CLEAR CREEK TWP.
T-80N R-7W
SEC. 22

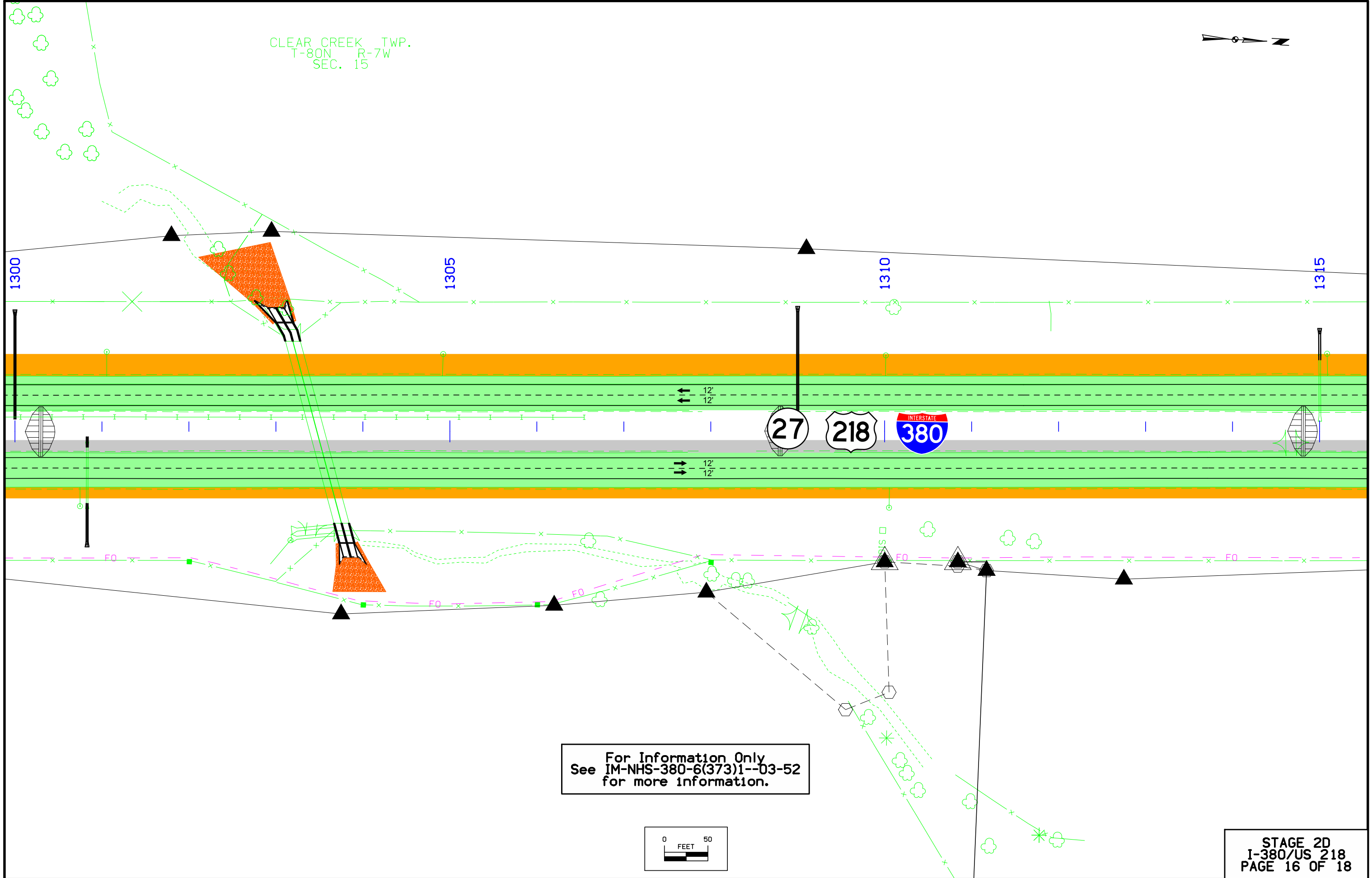
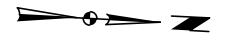


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See IM-NHS-380-6(373)1--03-52
for more information.



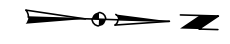
STAGE 2D
I-380/US 218
PAGE 15 OF 18

CLEAR CREEK TWP.
T-80N R-7W
SEC. 15

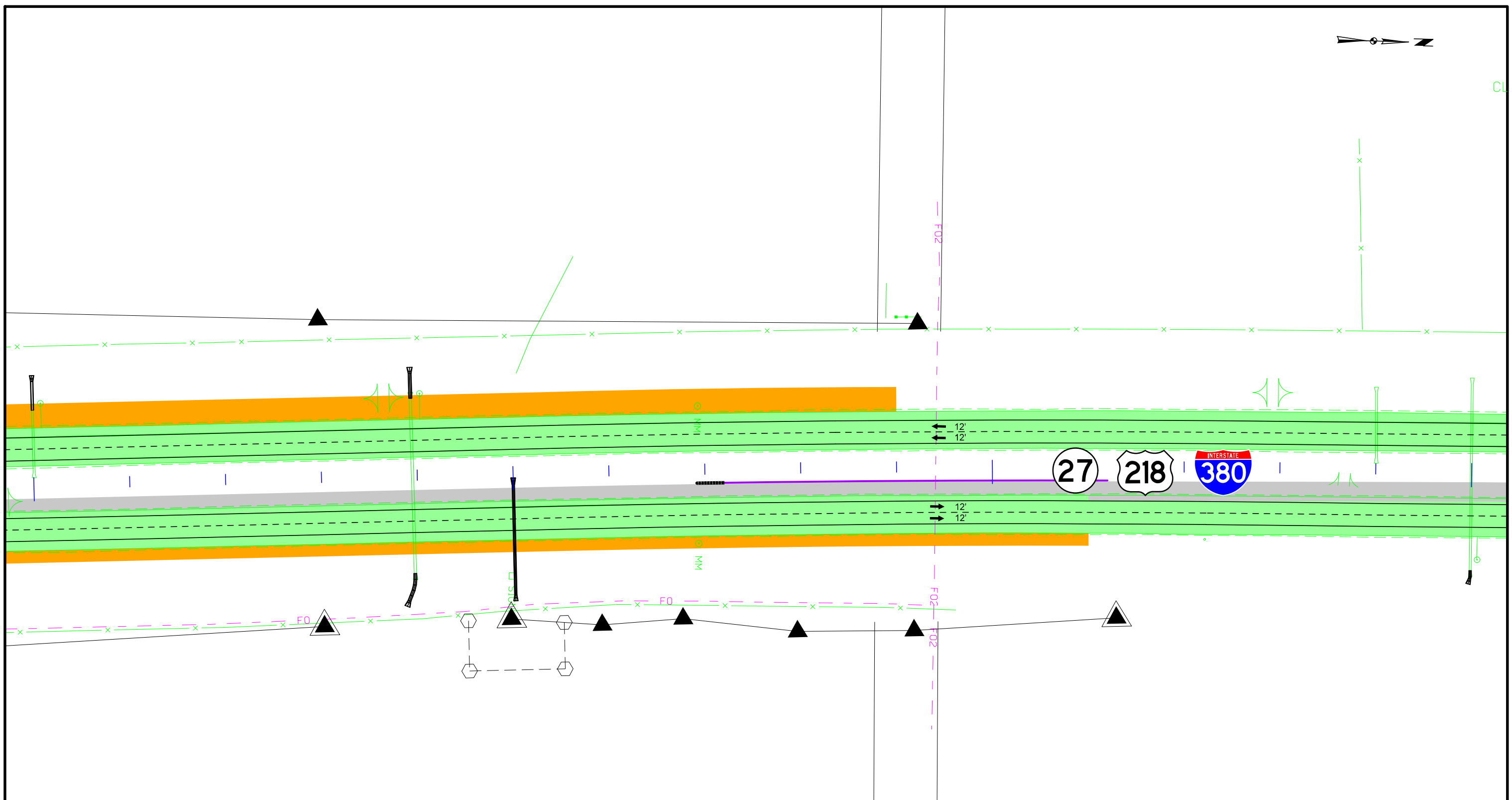


For Information Only
See IM-NHS-380-6(373)1--03-52
for more information.

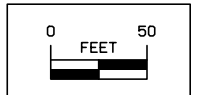
STAGE 2D
I-380/US 218
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CLEAR CREEK TWP.
T-80N R-7W
SEC. 15

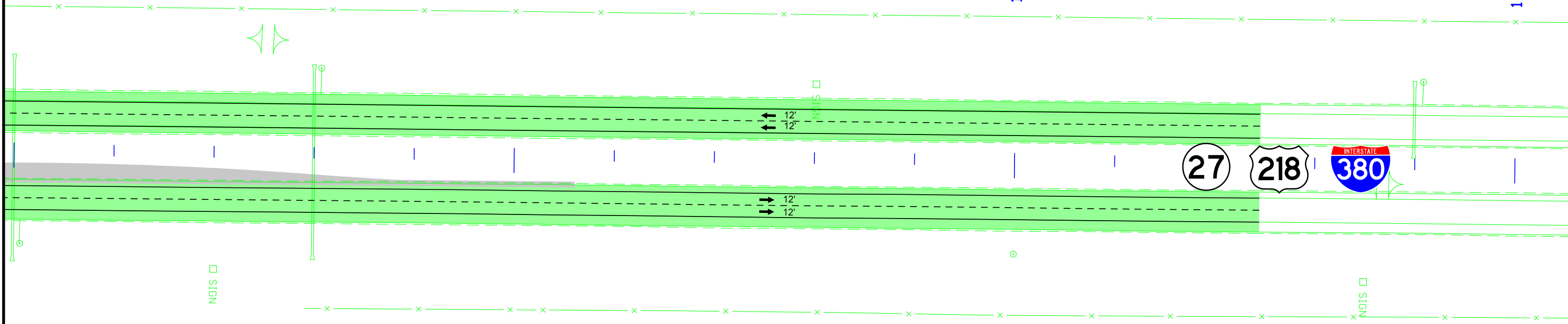


1330

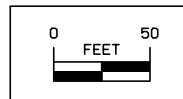
1335

1340

1345



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for more information.



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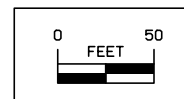
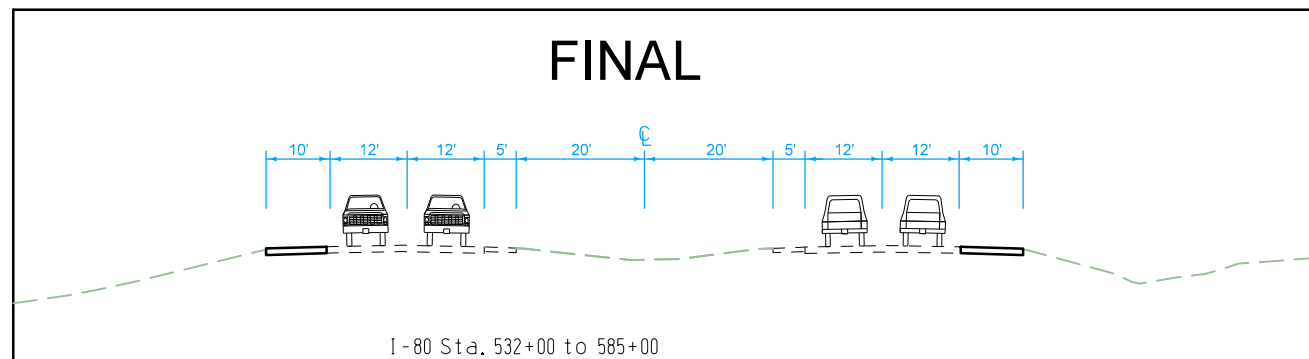
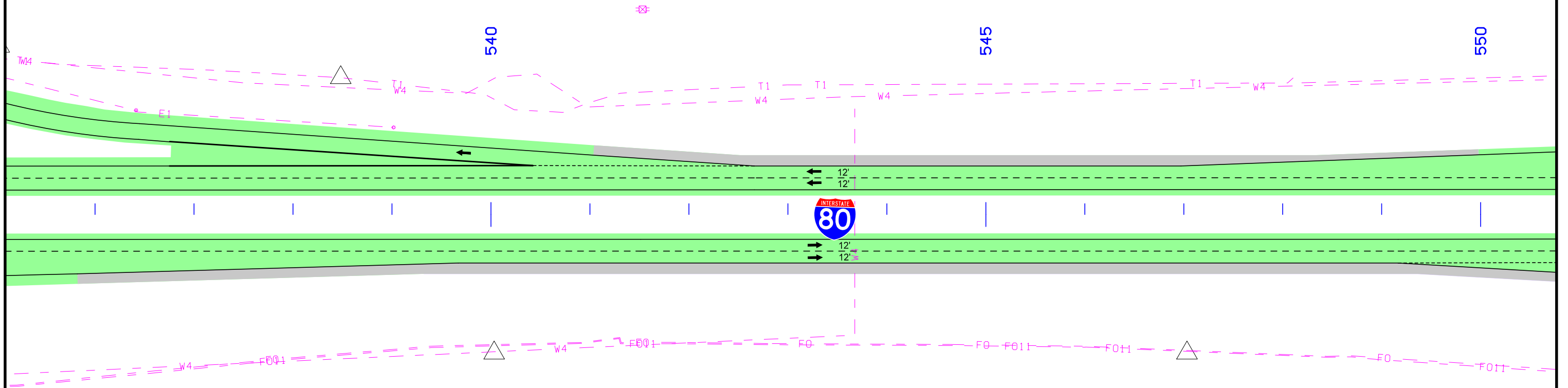
CLEAR CREEK TWP.
T-80N R-7W
SEC. 32

CLEAR CREEK TWP.
T-80N R-7W
SEC. 33

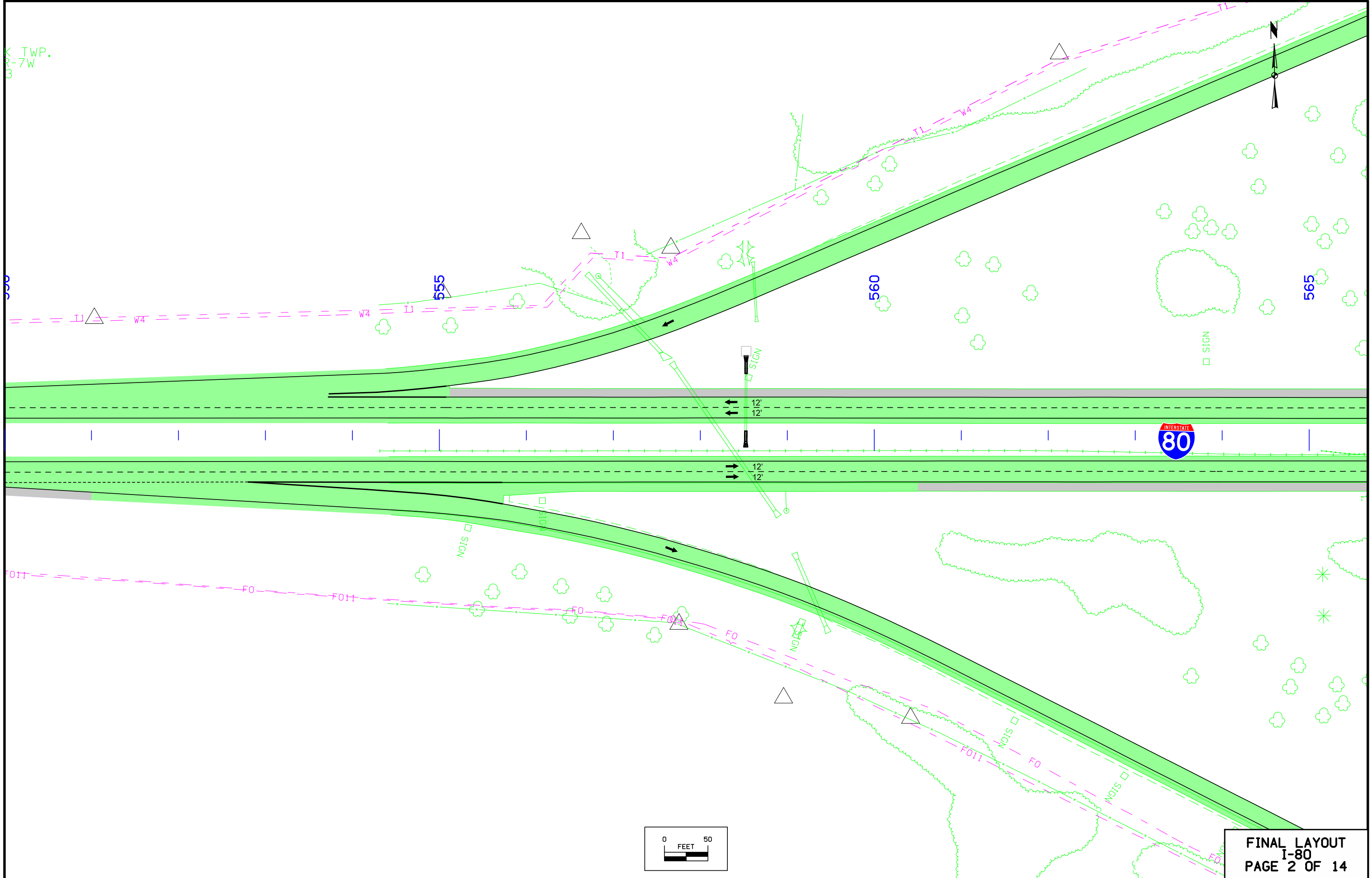
540

545

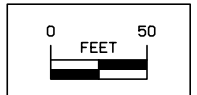
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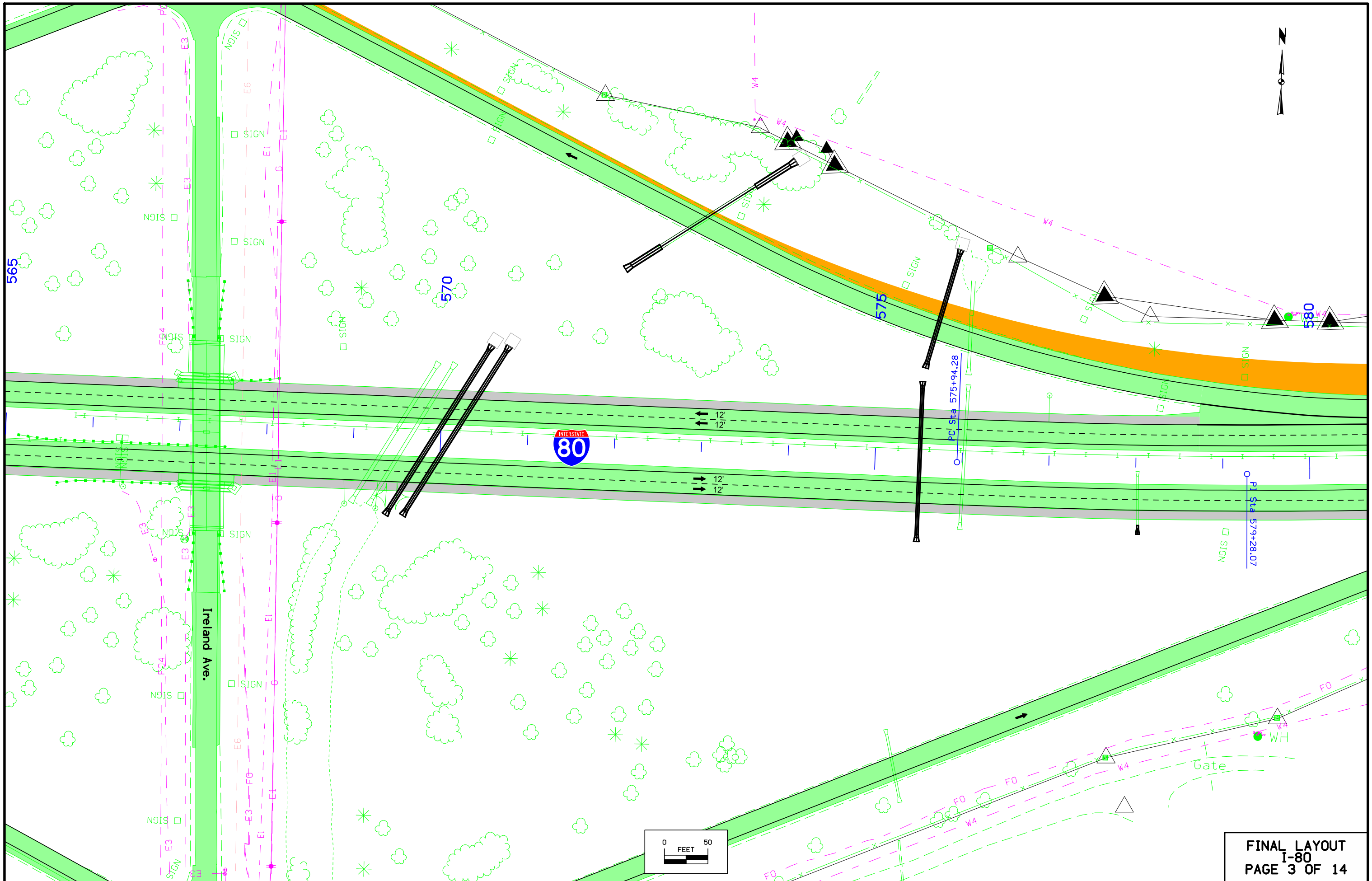
FINAL LAYOUT
I-80
PAGE 1 OF 14



K TWP.
R-7W
S

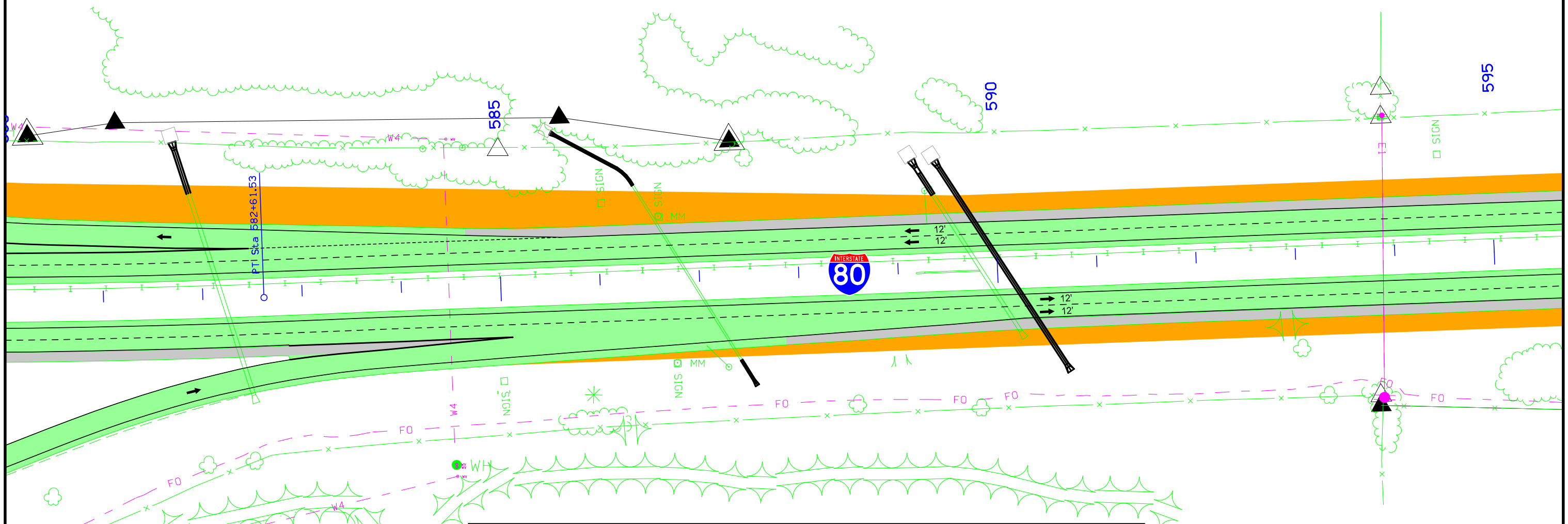


FINAL LAYOUT
I-80
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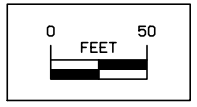
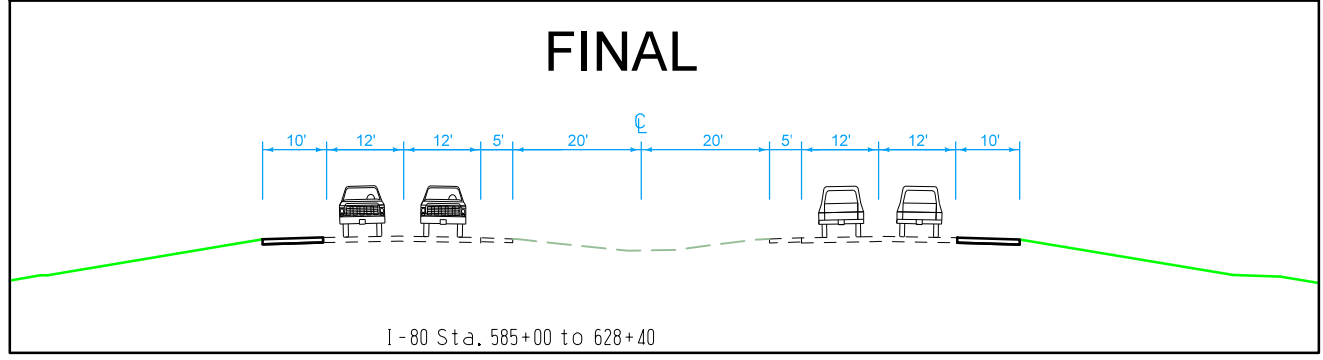


FINAL LAYOUT
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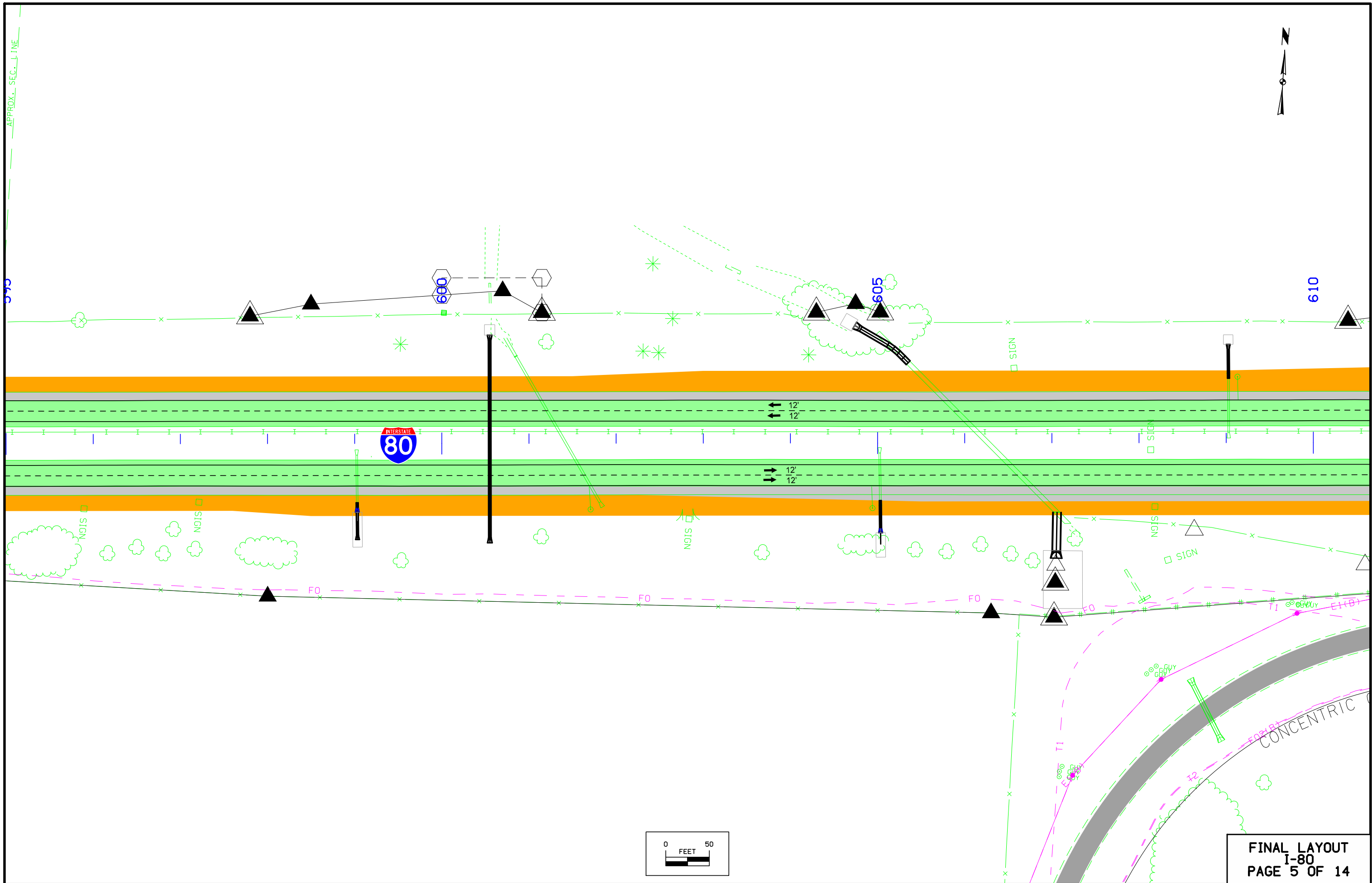
CLEAR CREEK TWP.
T-80N R-7W
SEC. 33



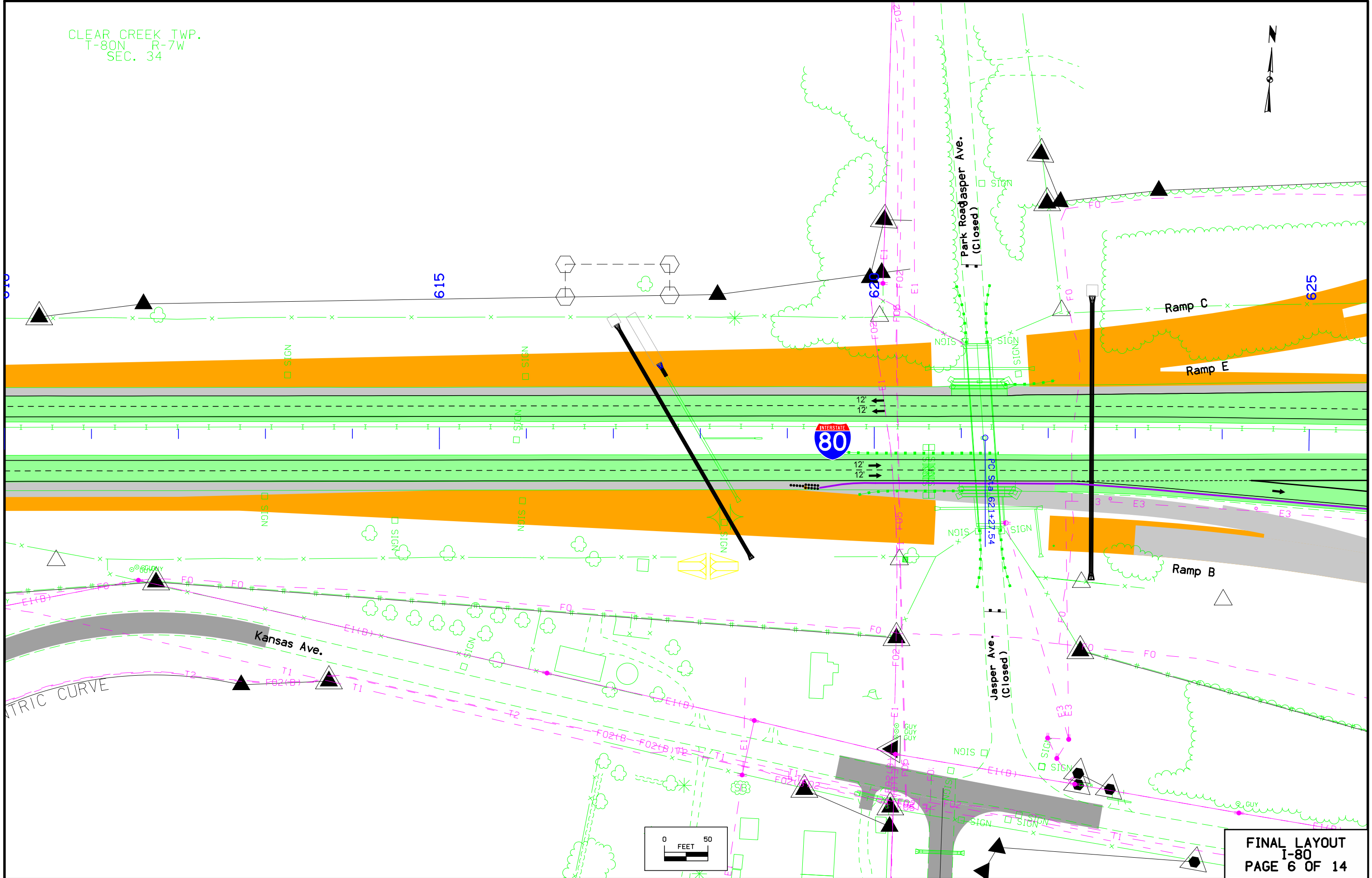
Curve Data
 $\Delta = 4^\circ 26' 53.84''$ (LT)
 $T = 333.79$
 $L = 667.24$
 $R = 8,594.37$
 $E = 6.48$



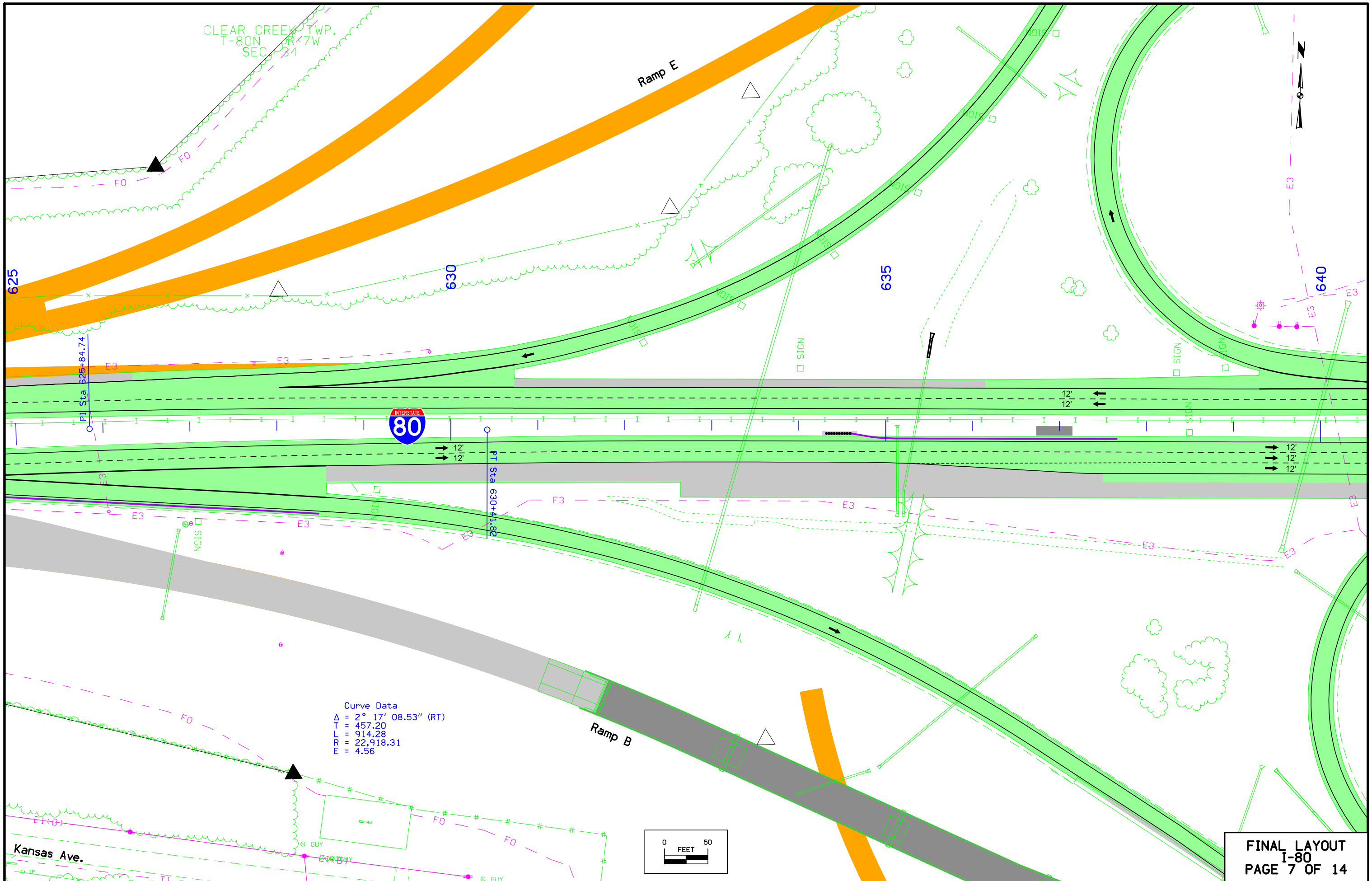
FINAL LAYOUT
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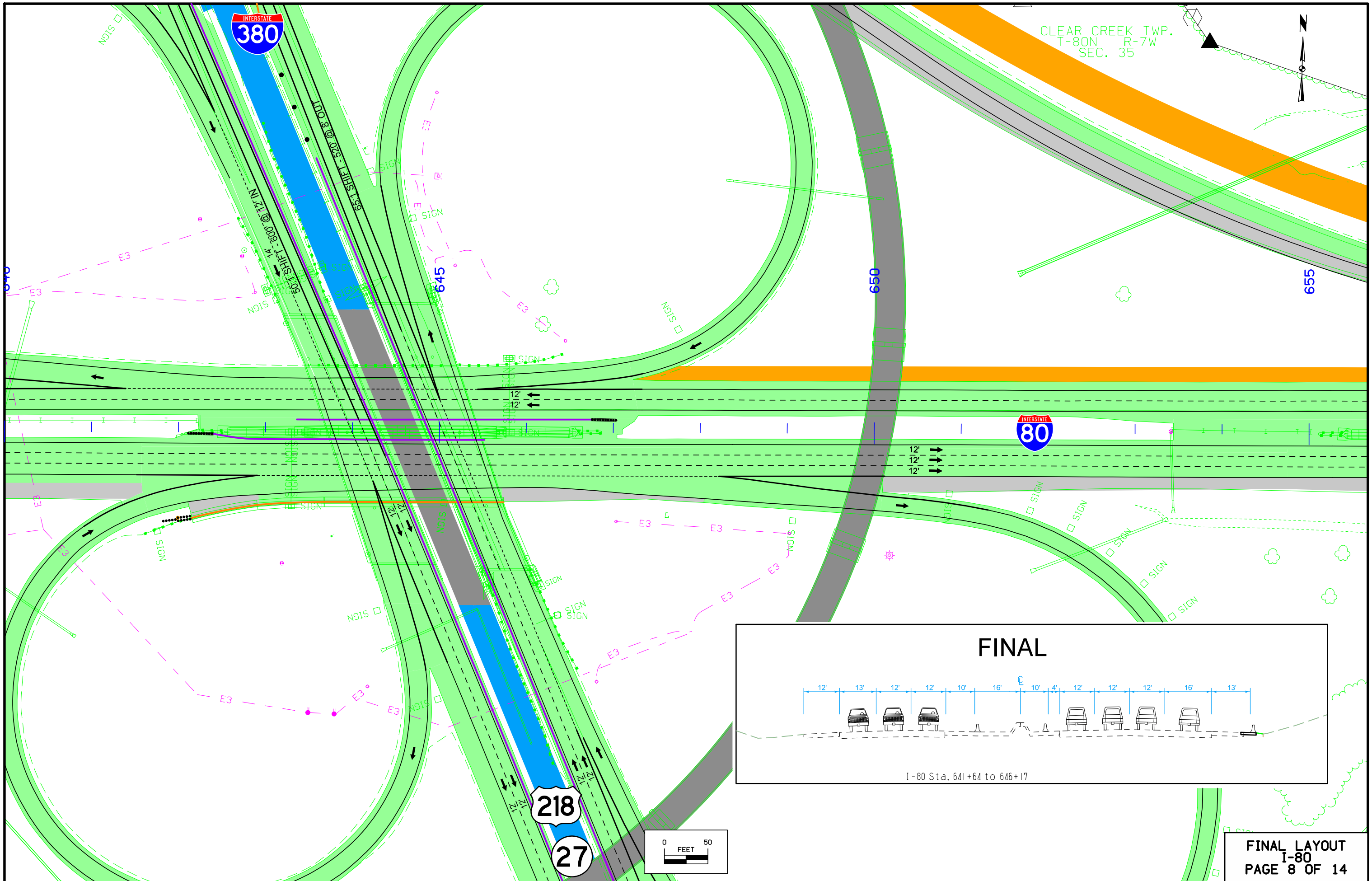


CLEAR CREEK TWP.
T-80N R-7W
SEC. 34

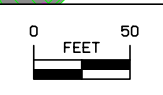
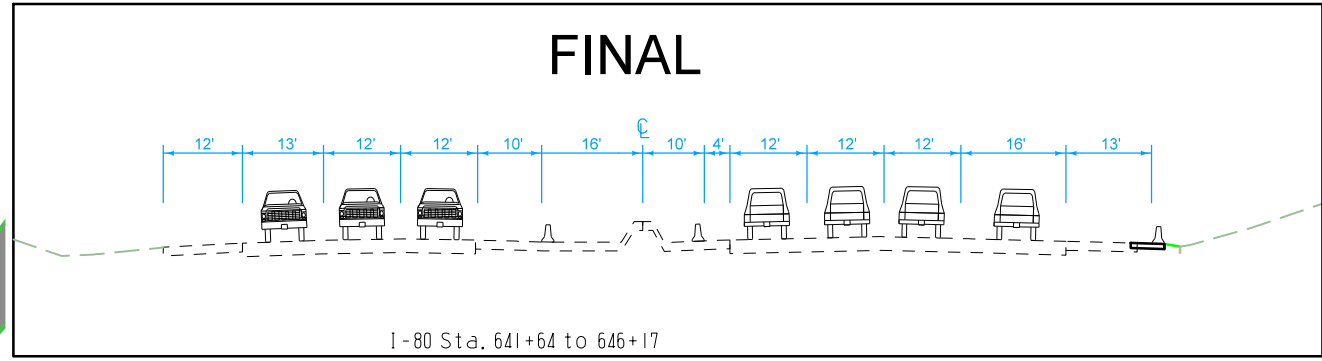
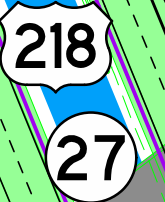


FINAL LAYOUT
I-80
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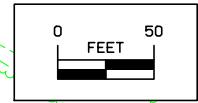
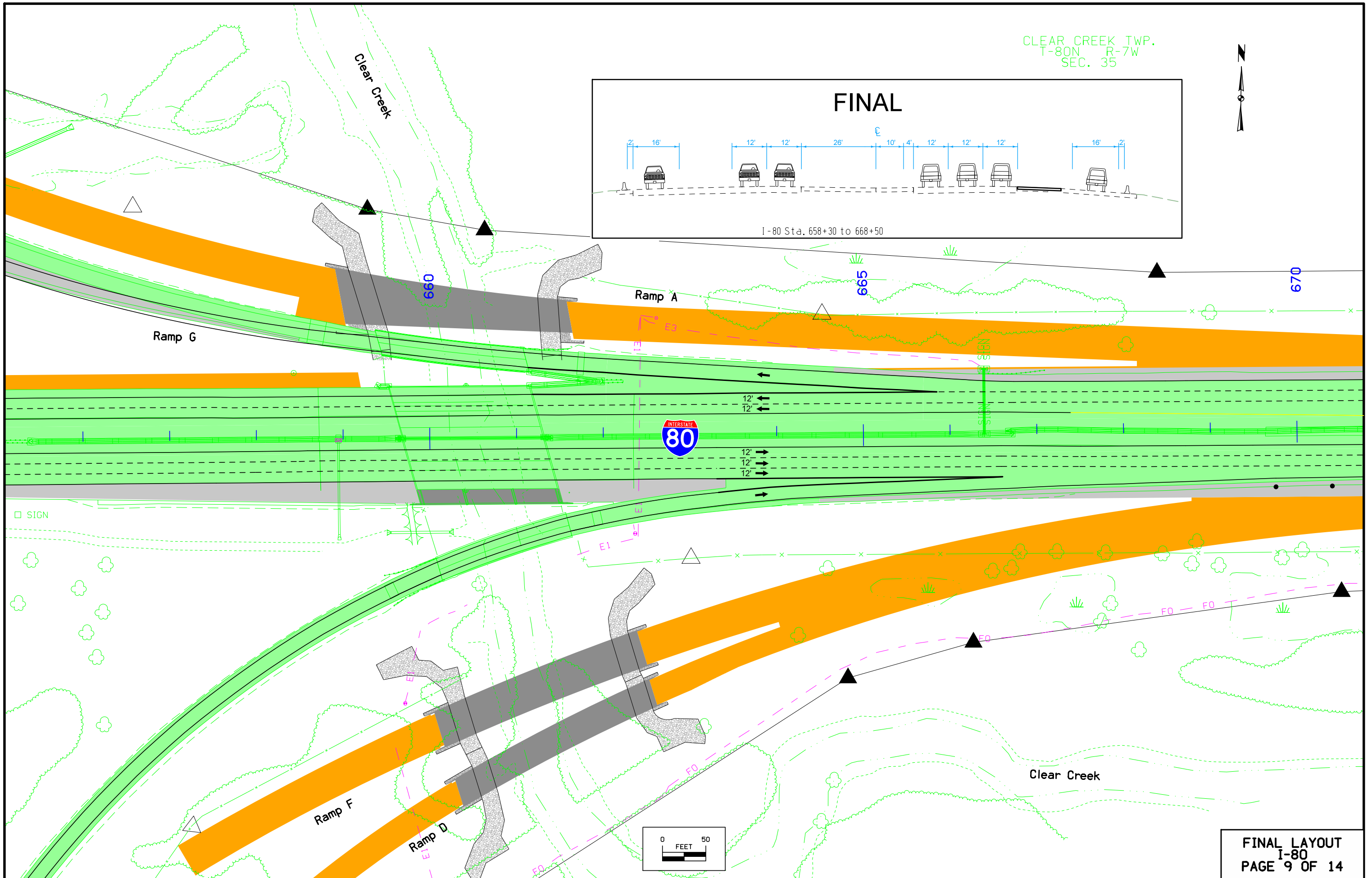
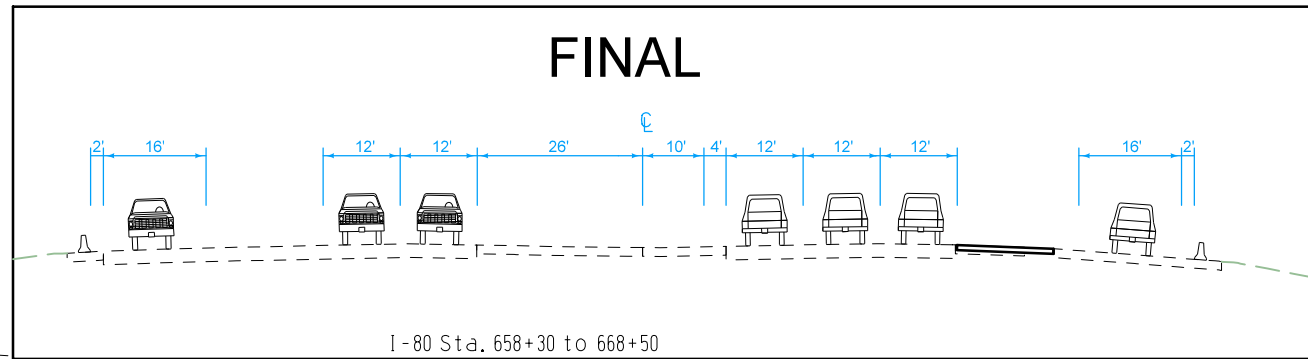


CLEAR CREEK TWP.
T-80N R-7W
SEC. 35



FINAL LAYOUT
I-80
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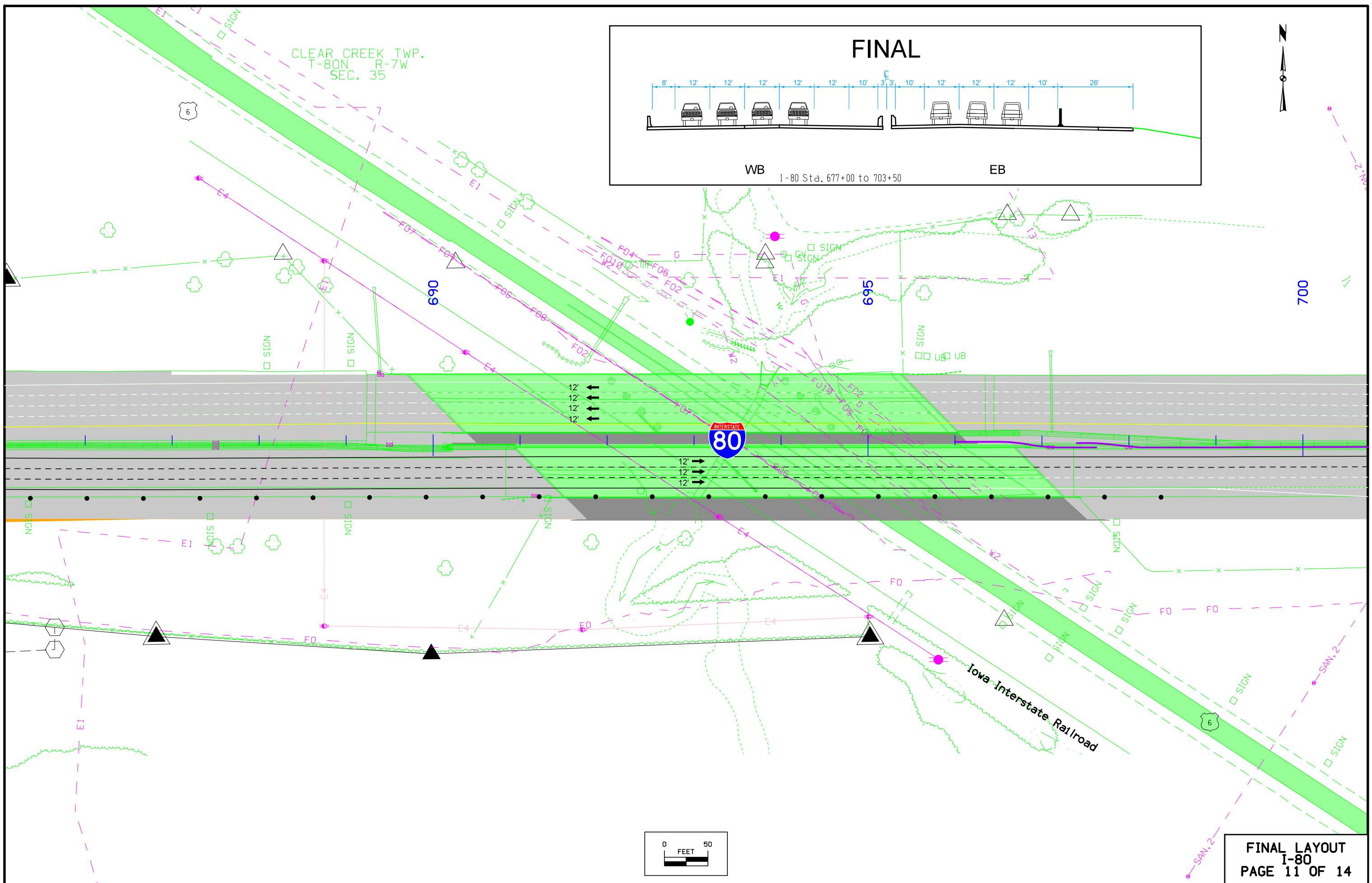
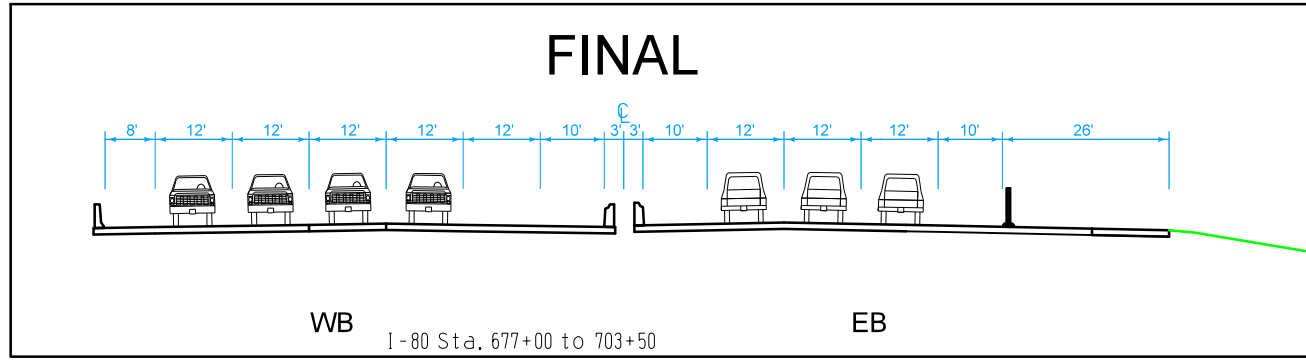
CLEAR CREEK TWP.
T-80N R-7W
SEC. 35



FINAL LAYOUT
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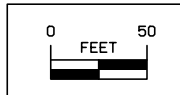
CLEAR CREEK TWP.
T-80N R-7W
SEC. 35

FINAL

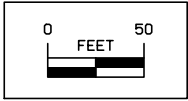
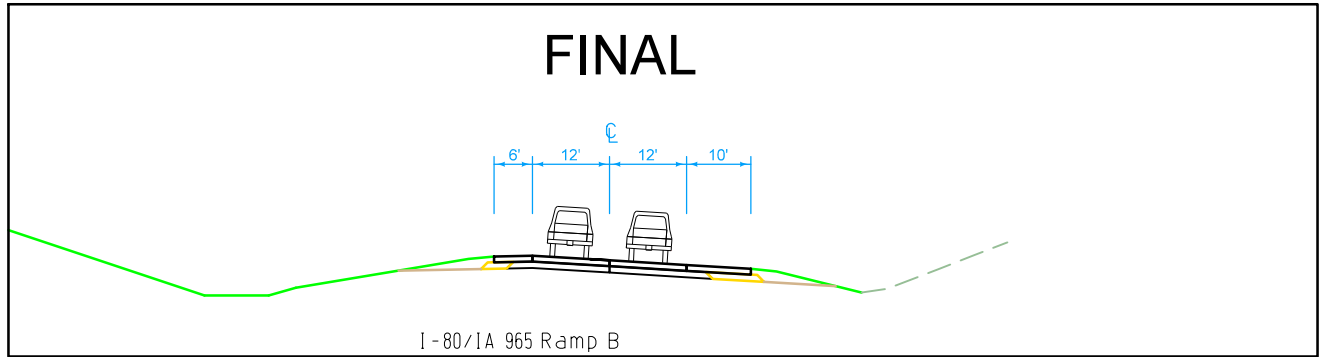
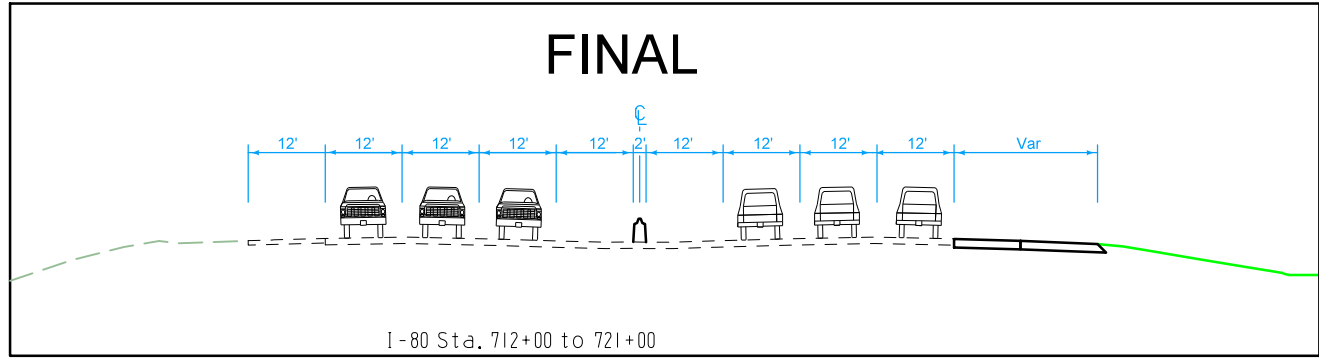
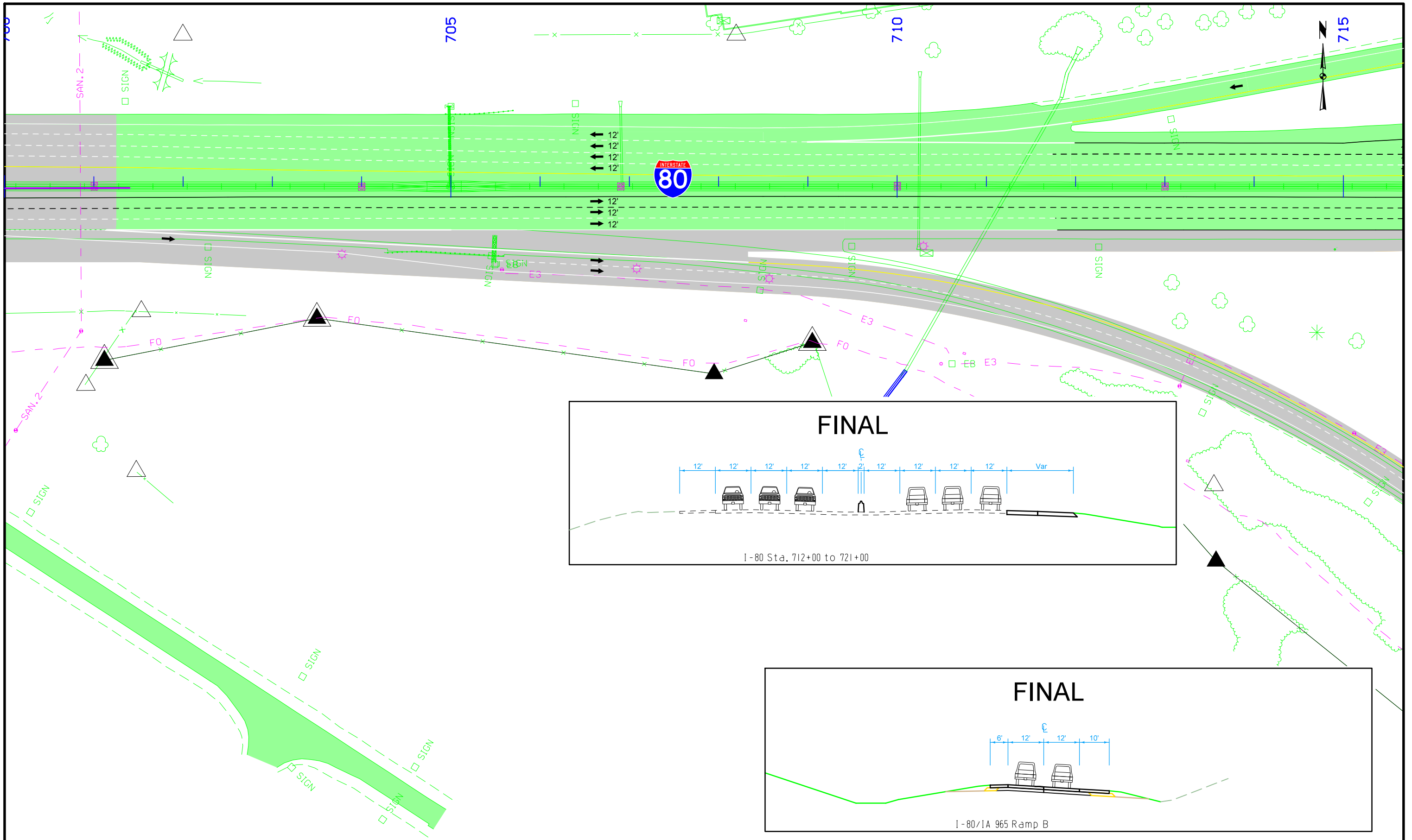


12'
12'
12'
12'

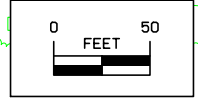
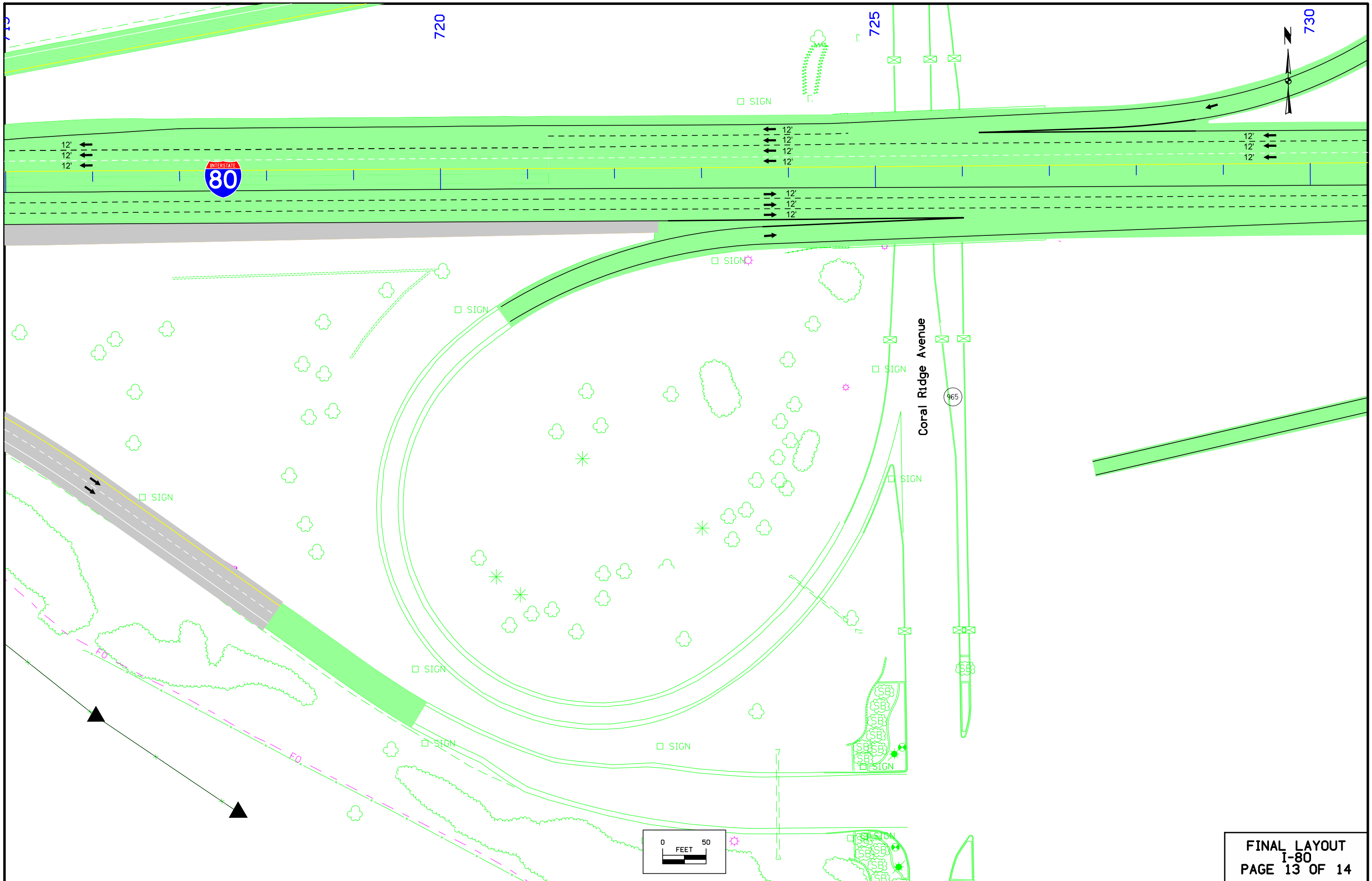
12'
12'
12'



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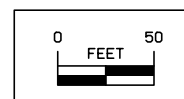
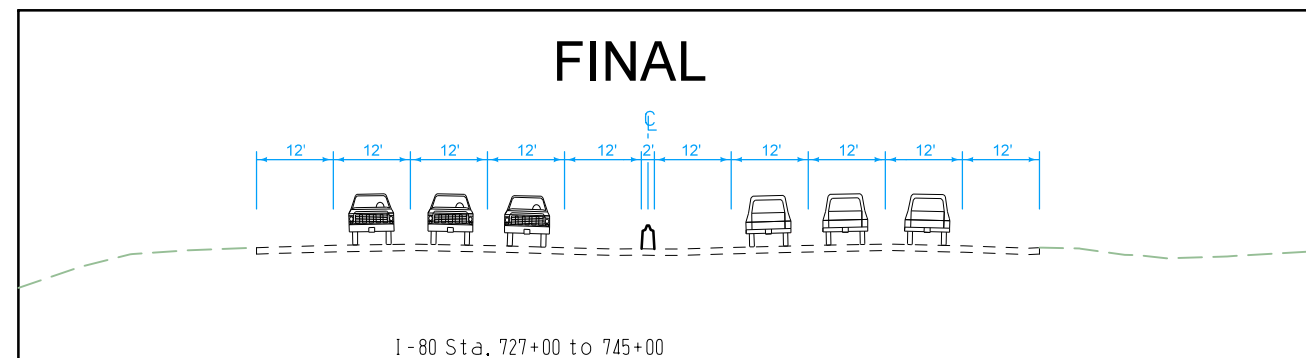
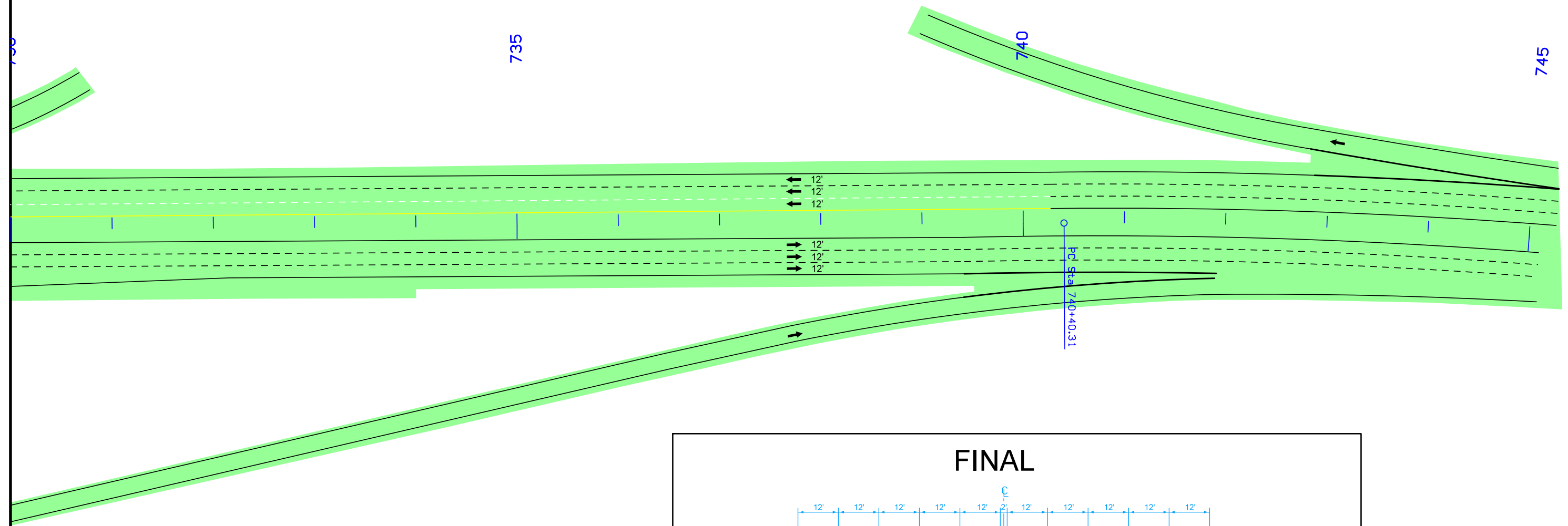
FINAL LAYOUT
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FINAL LAYOUT
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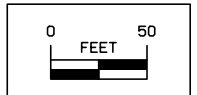
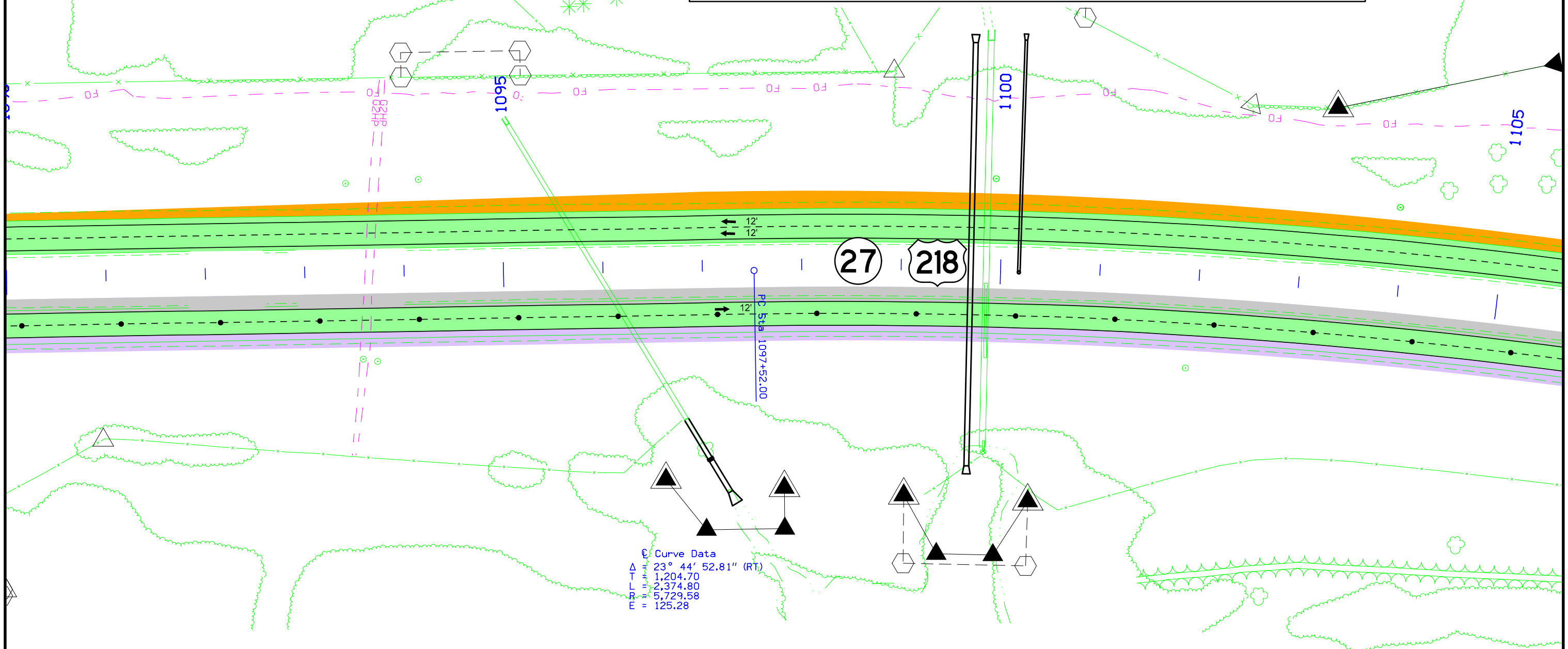
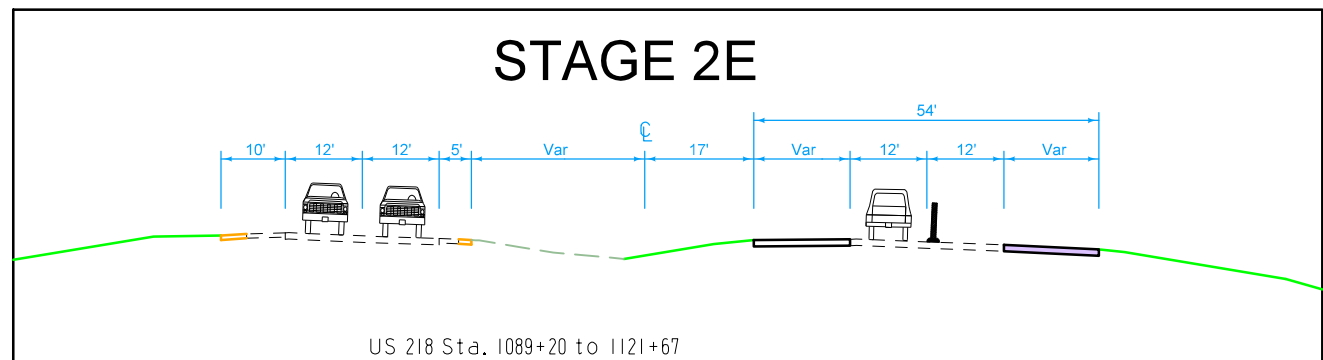
CLEAR CREEK TWP.
T-80N R-7W
SEC. 36

Curve Data
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 T = 897.63
 L = 1,780.78
 R = 5,729.58
 E = 69.89

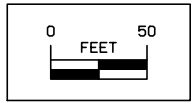
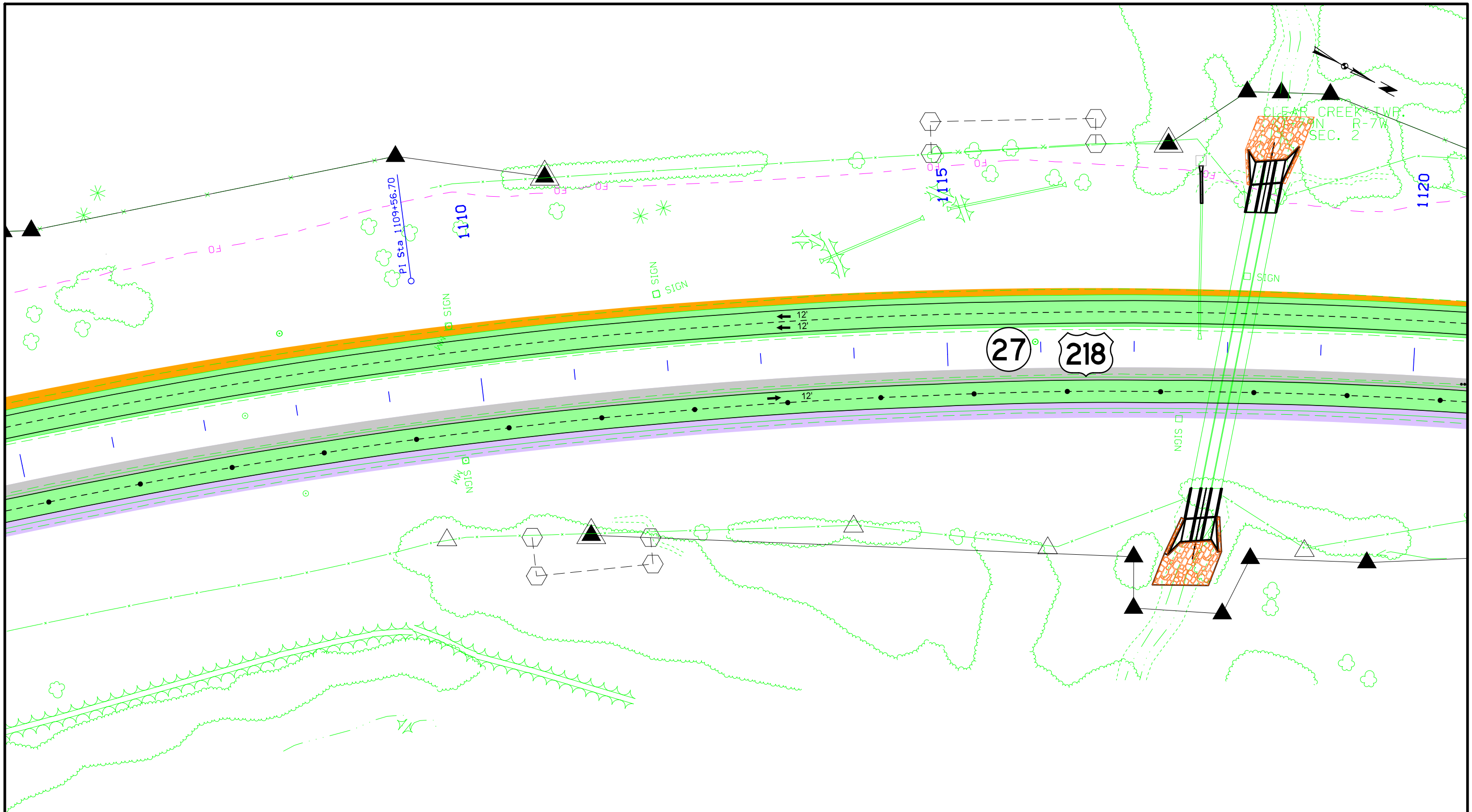


FINAL LAYOUT
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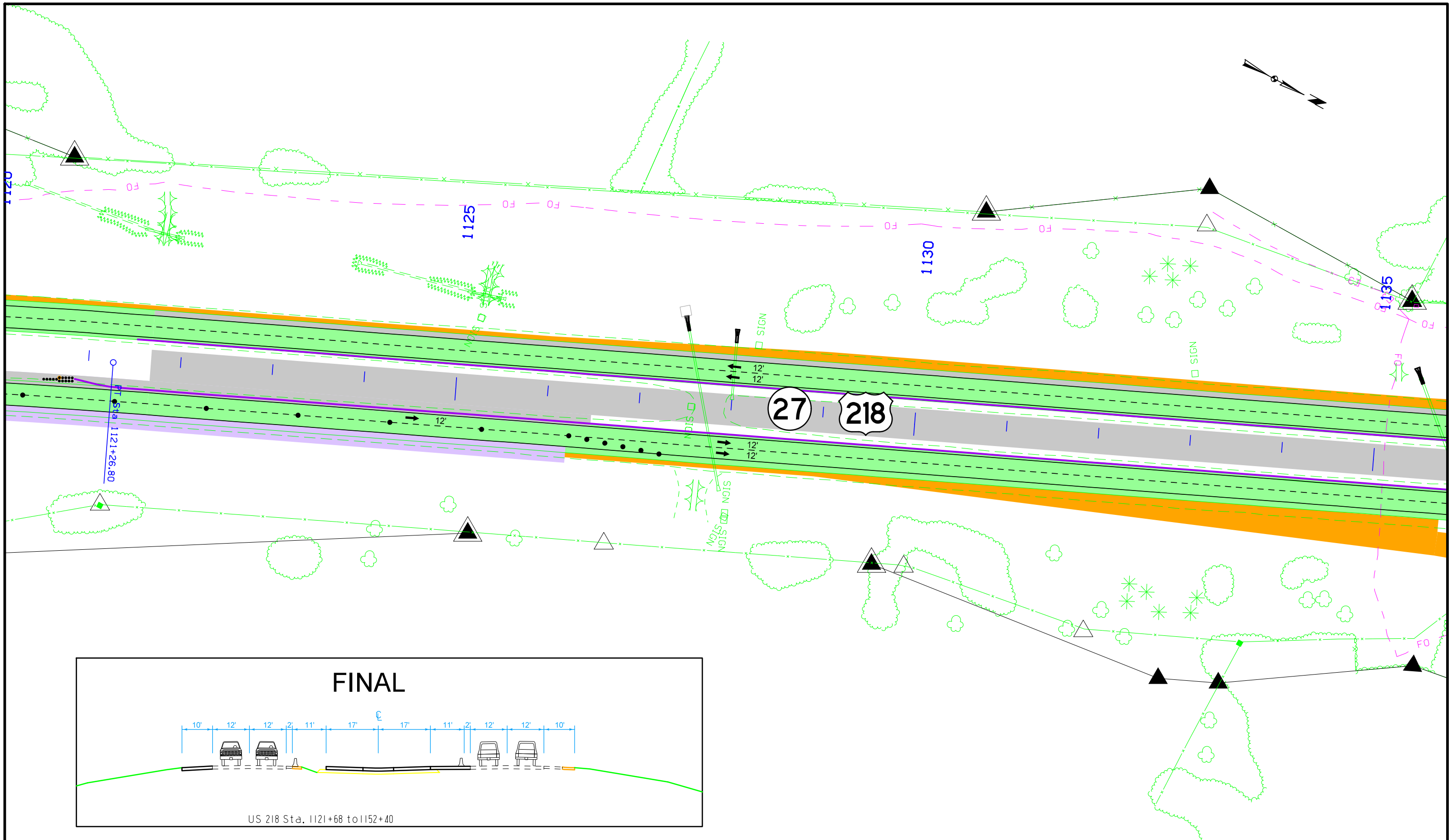
STAGE 2E

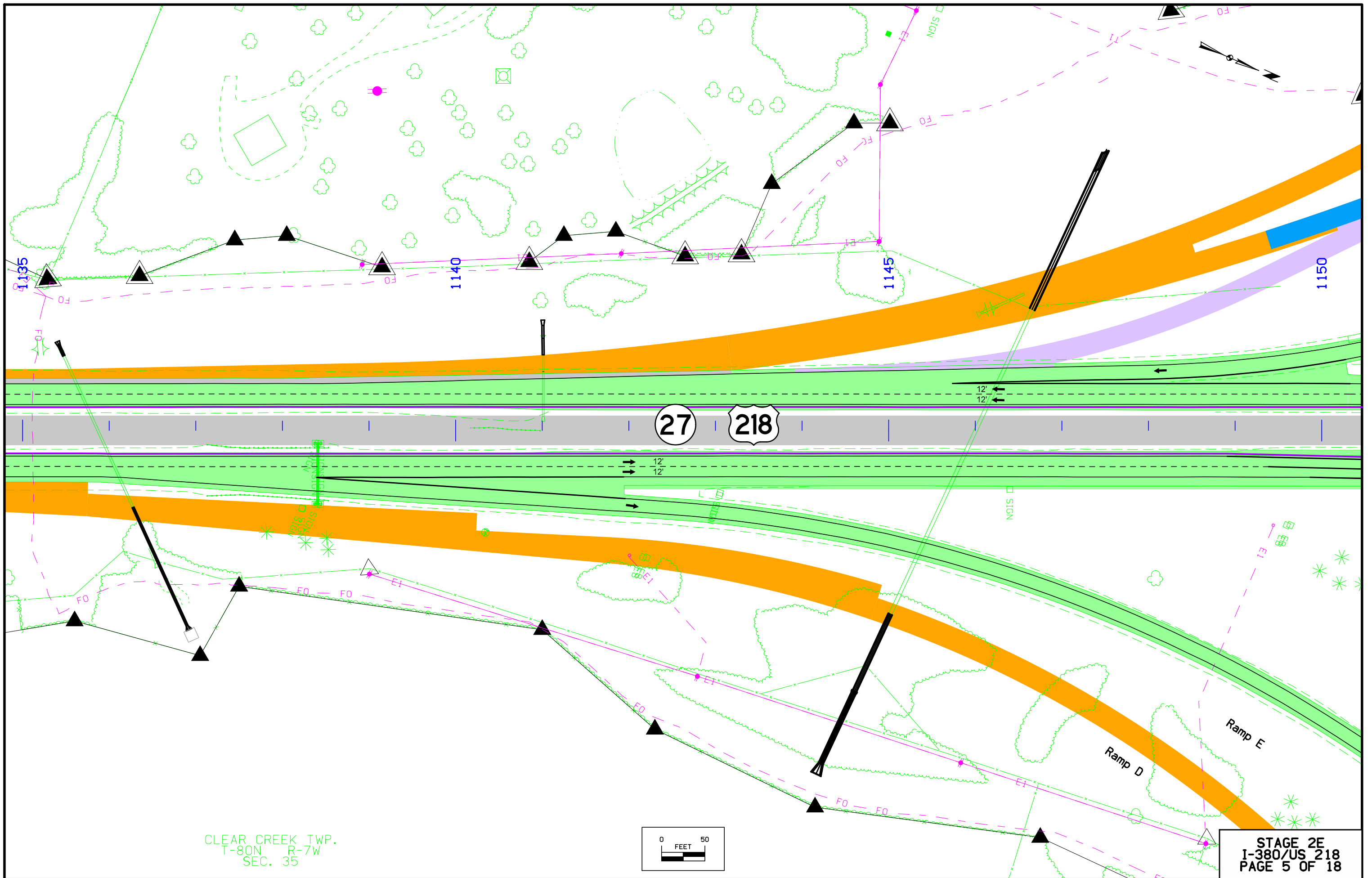


STAGE 2E
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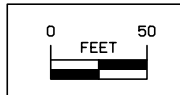


STAGE 2E
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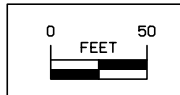
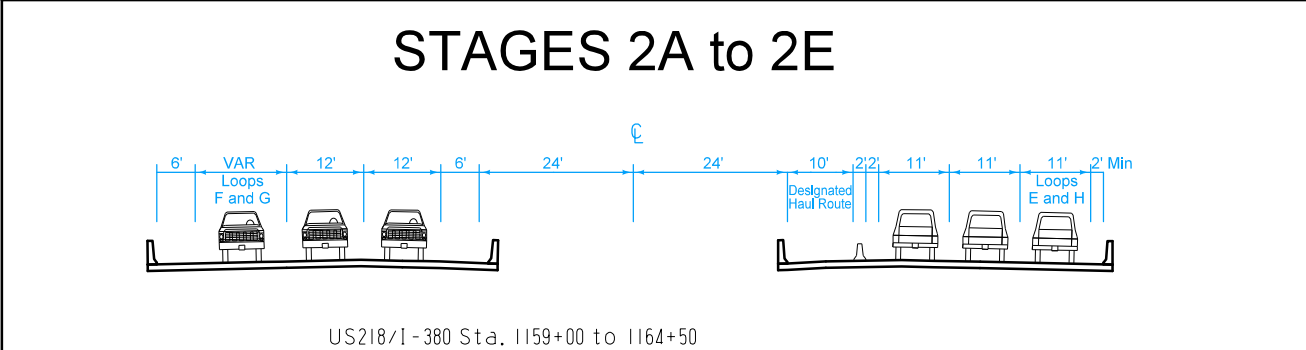
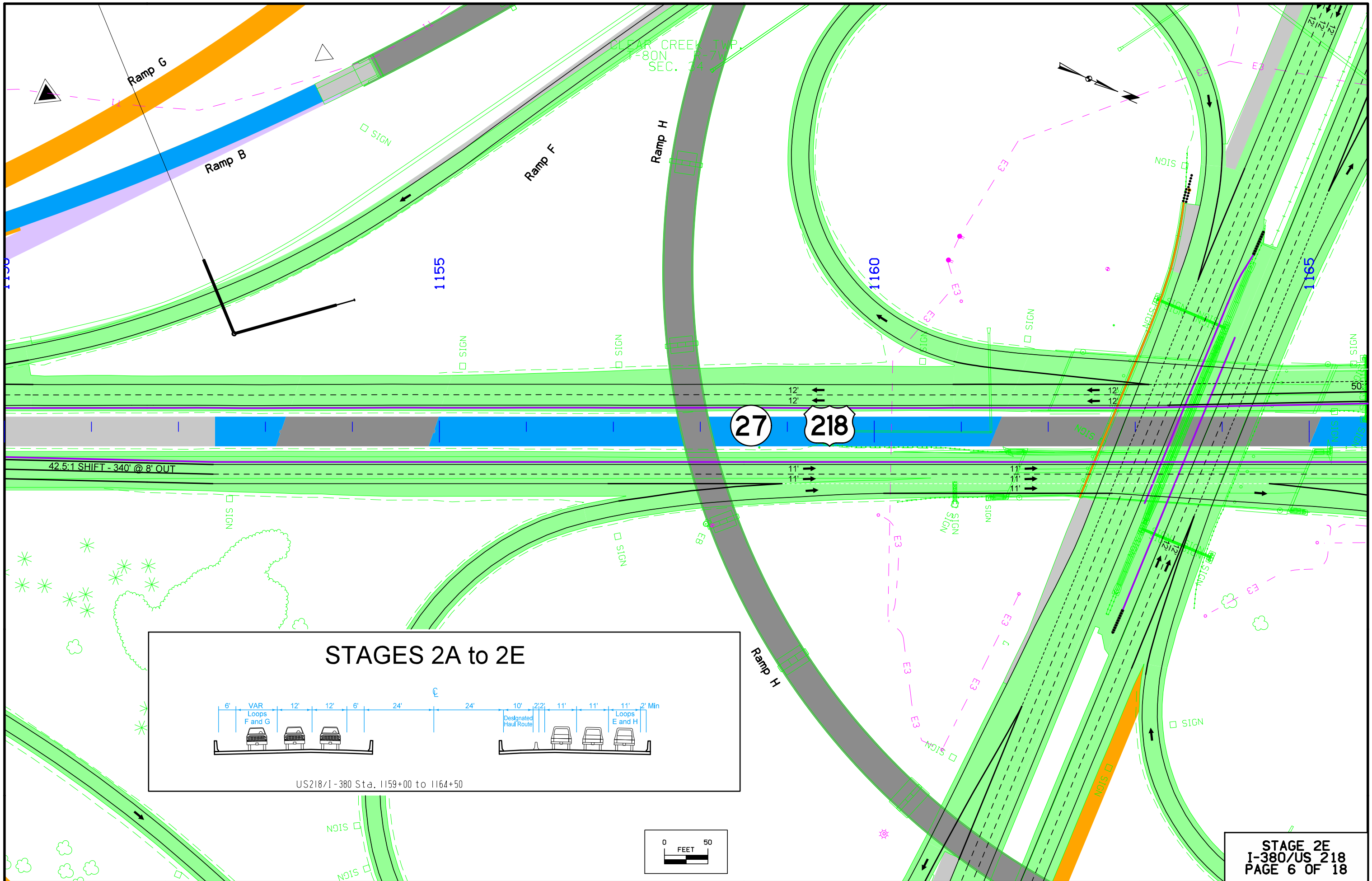




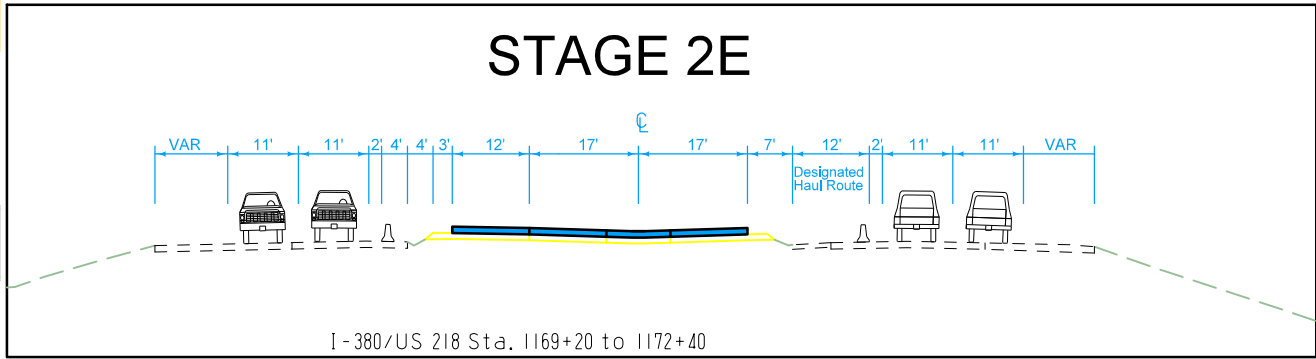
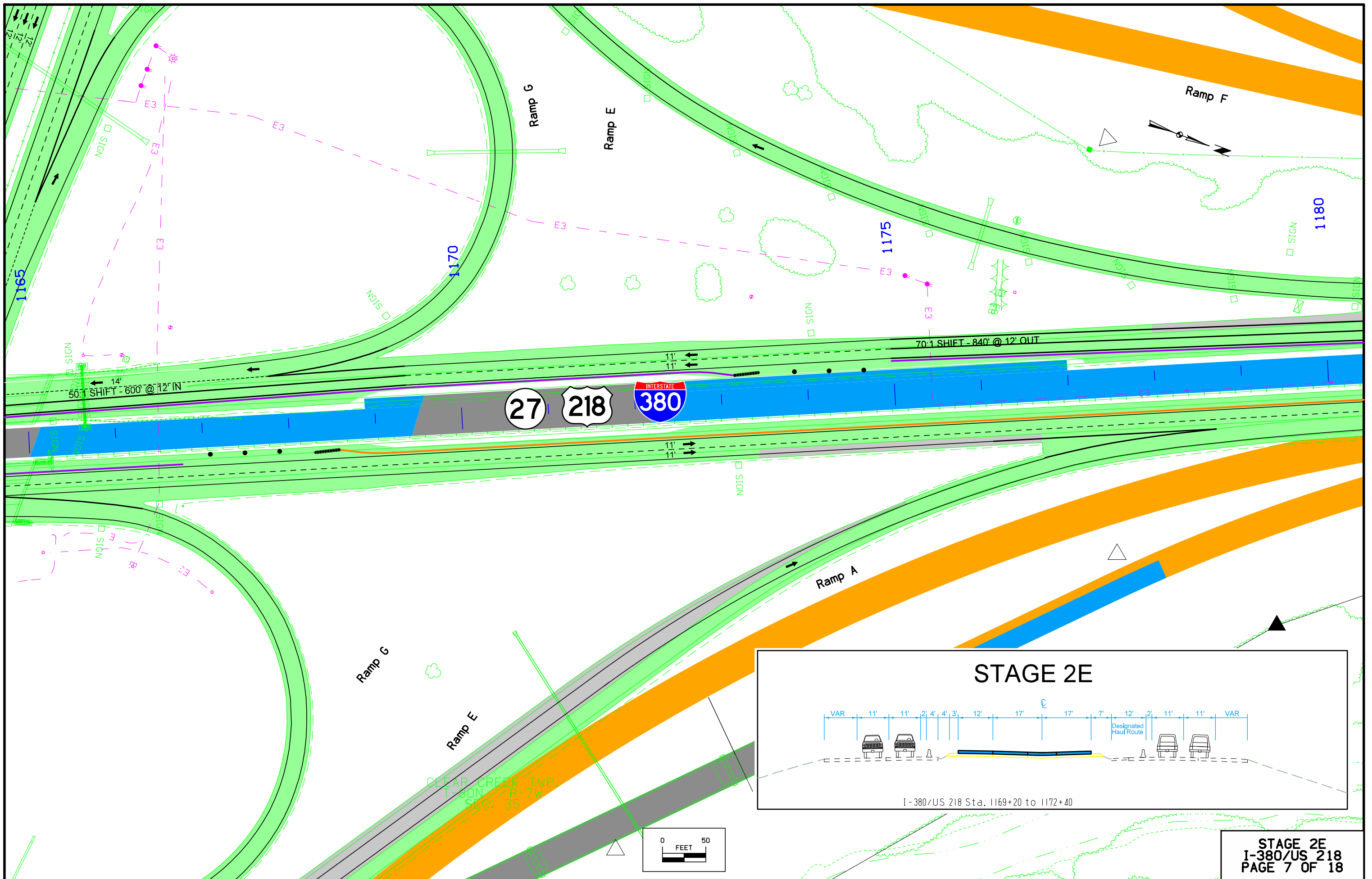
CLEAR CREEK TWP.
T-80N R-7W
SEC. 35



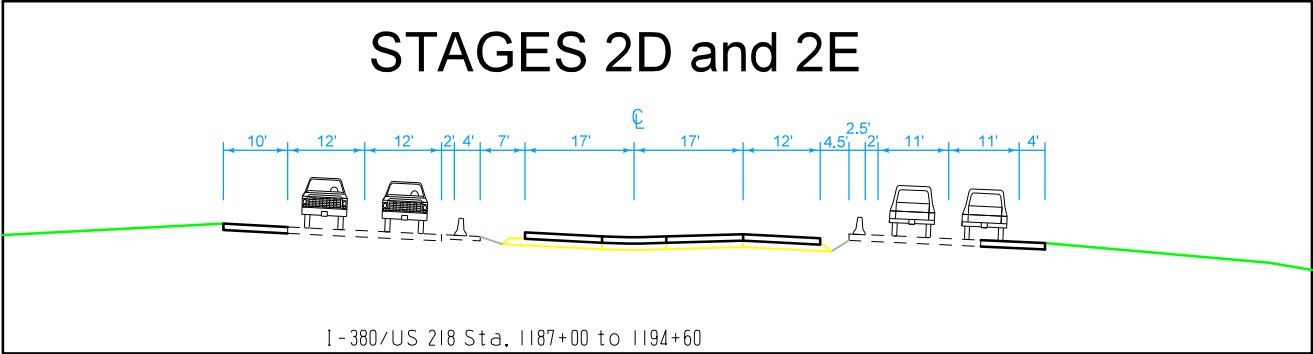
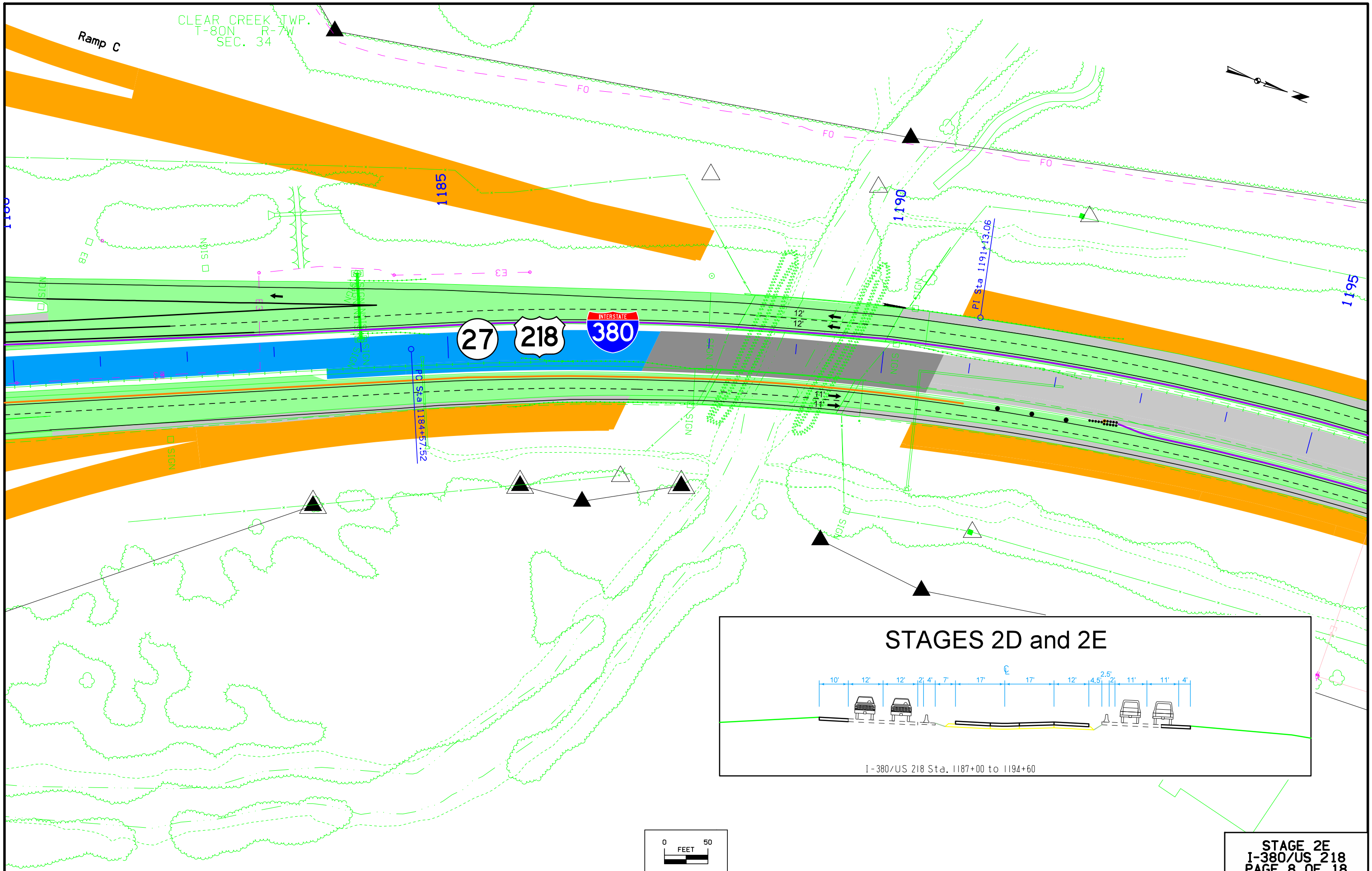
STAGE 2E
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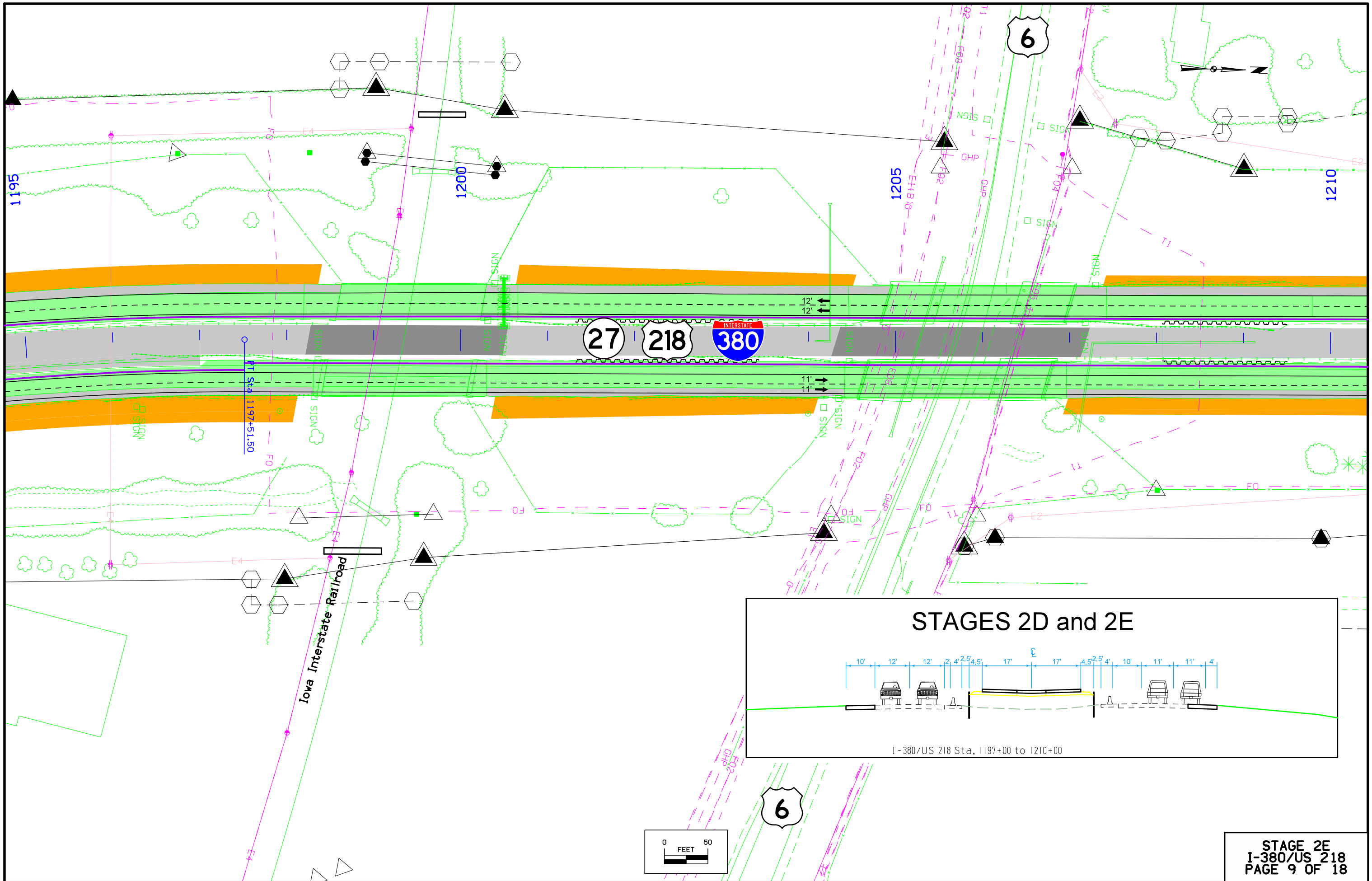
STAGE 2E
I-380/US 218
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STAGE 2E
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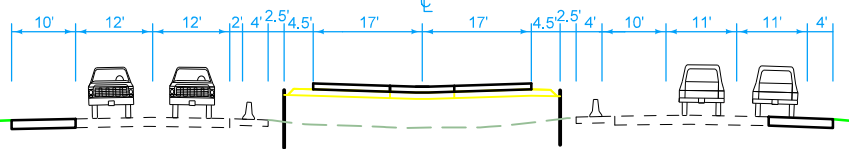
27 218 380

6

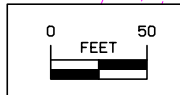
6

Iowa Interstate Railroad

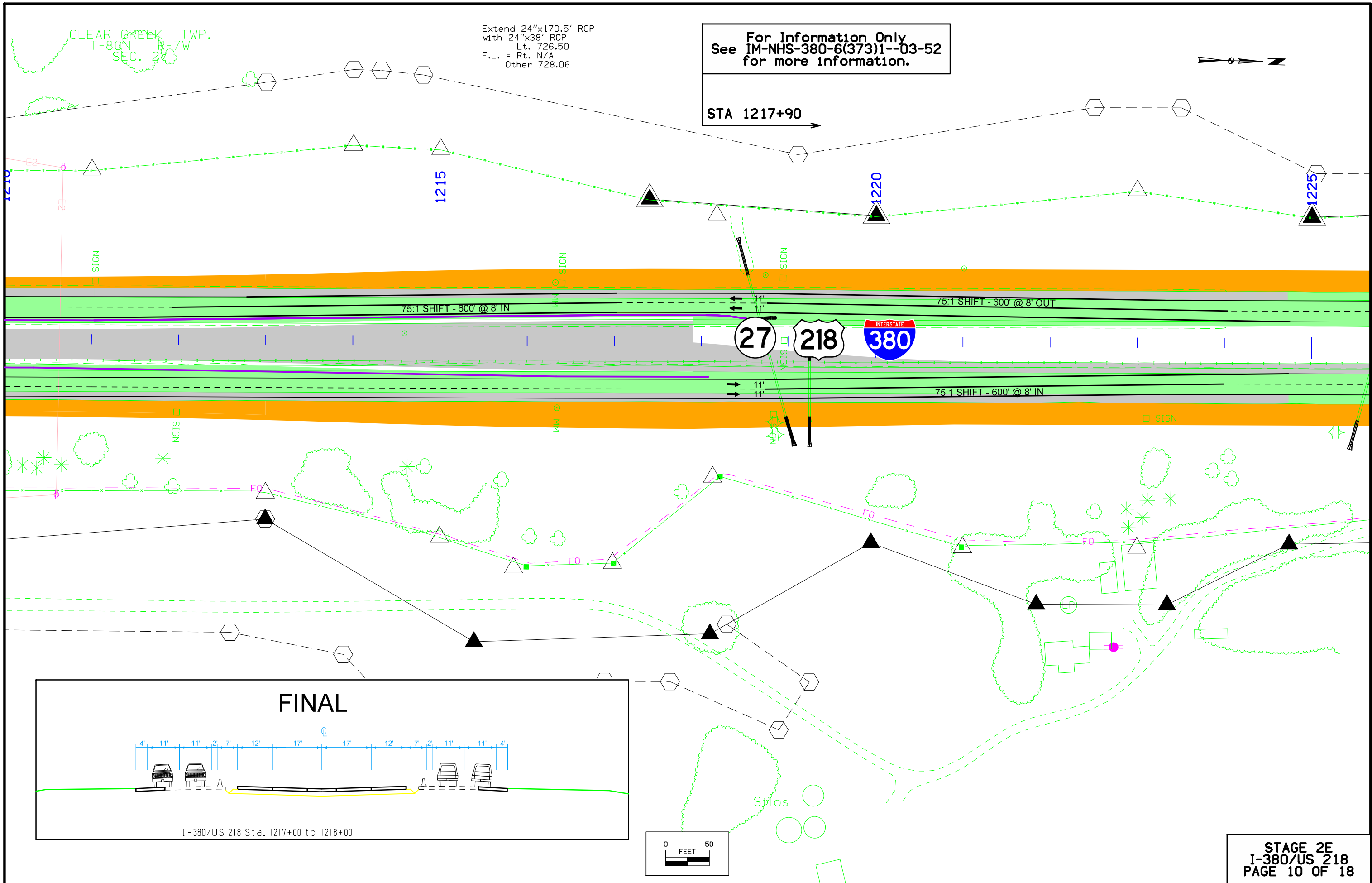
STAGES 2D and 2E

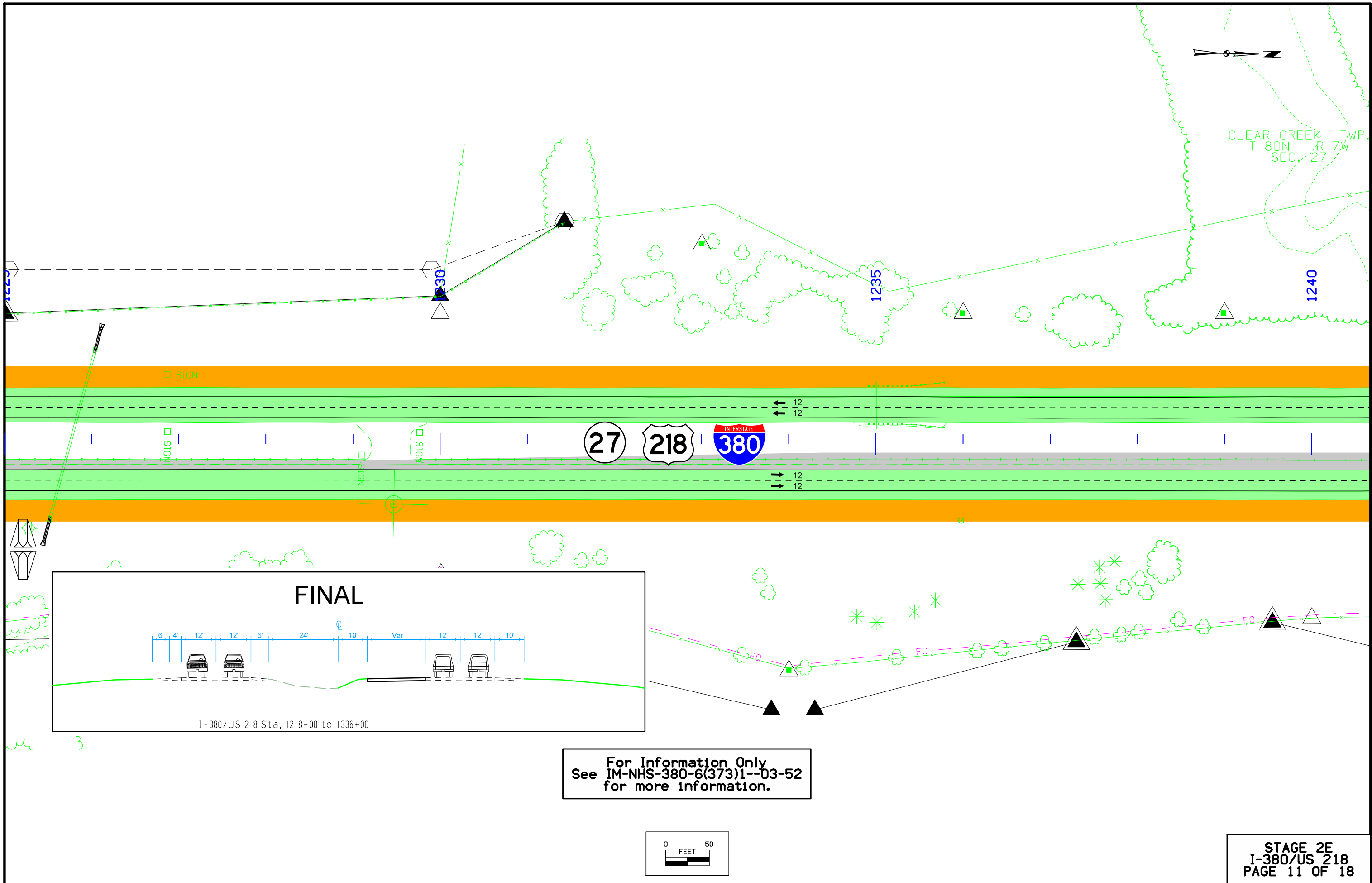


I-380/US 218 Sta. 1197+00 to 1210+00

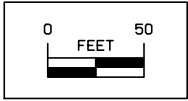


STAGE 2E
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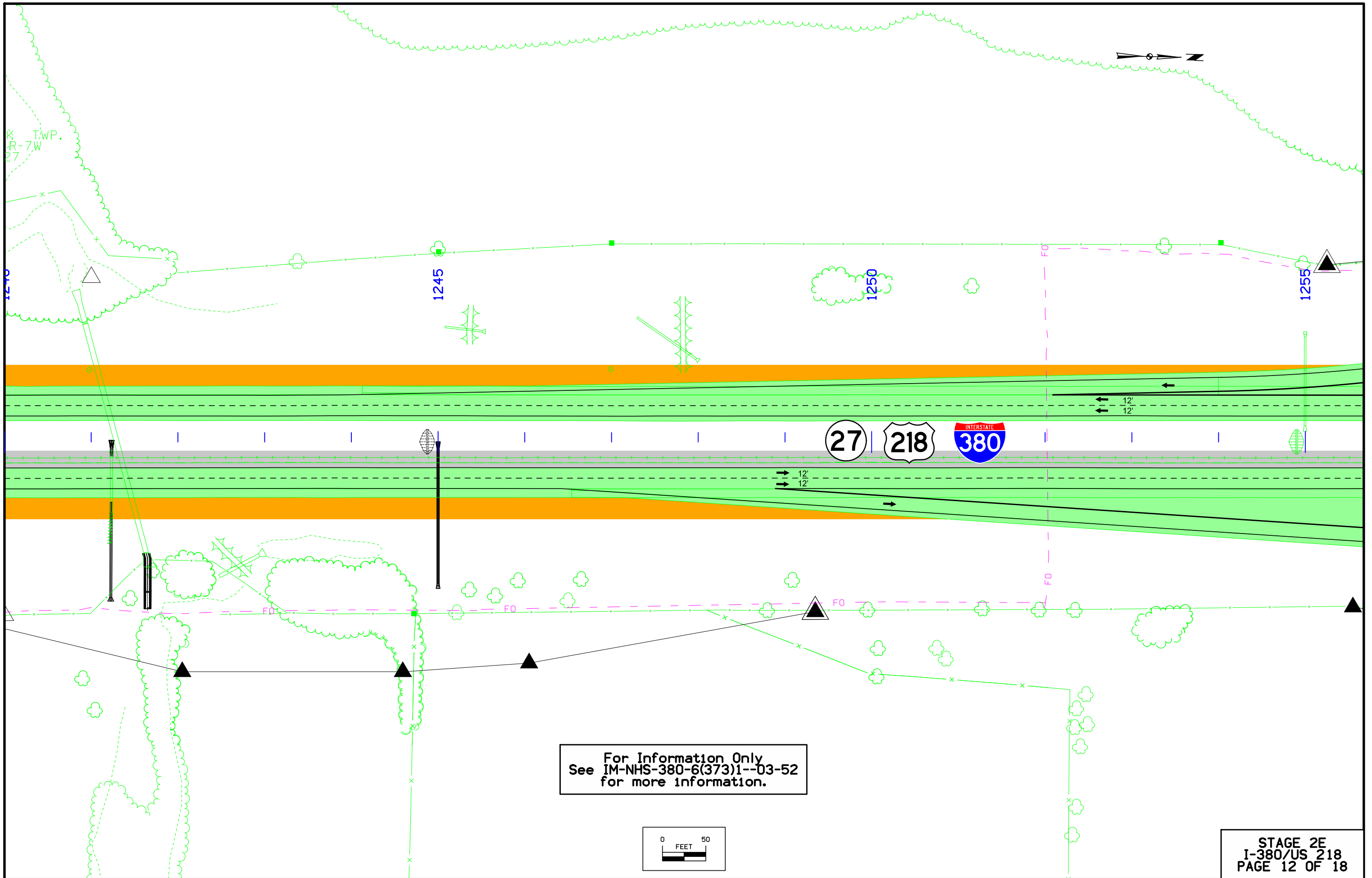




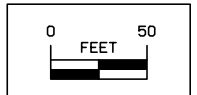
For Information Only
 See IM-NHS-380-6(373)1--03-52
 for more information.



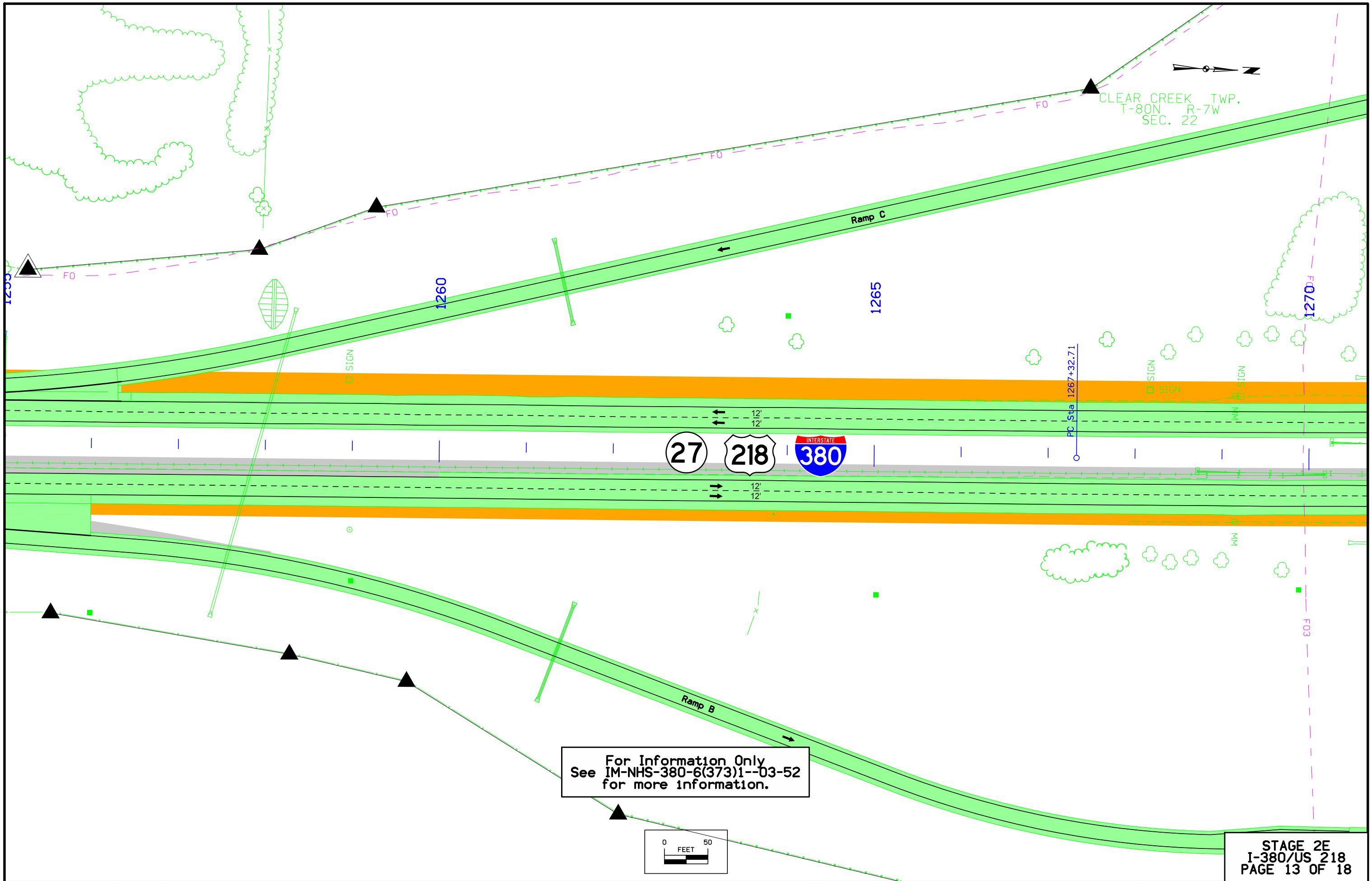
STAGE 2E
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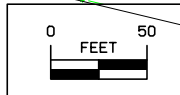
For Information Only
 See IM-NHS-380-6(373)1--03-52
 for more information.



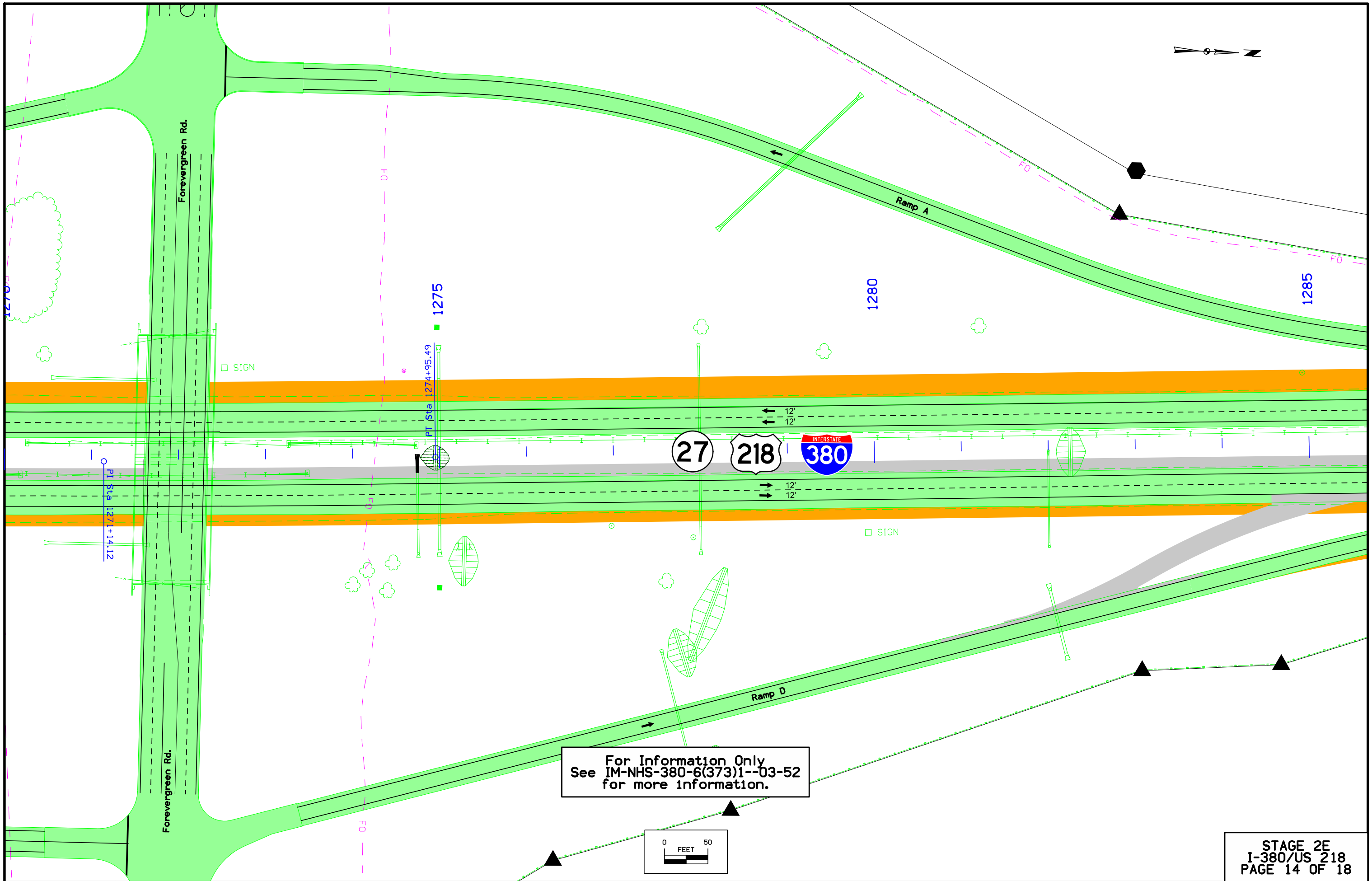
STAGE 2E
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 for more information.



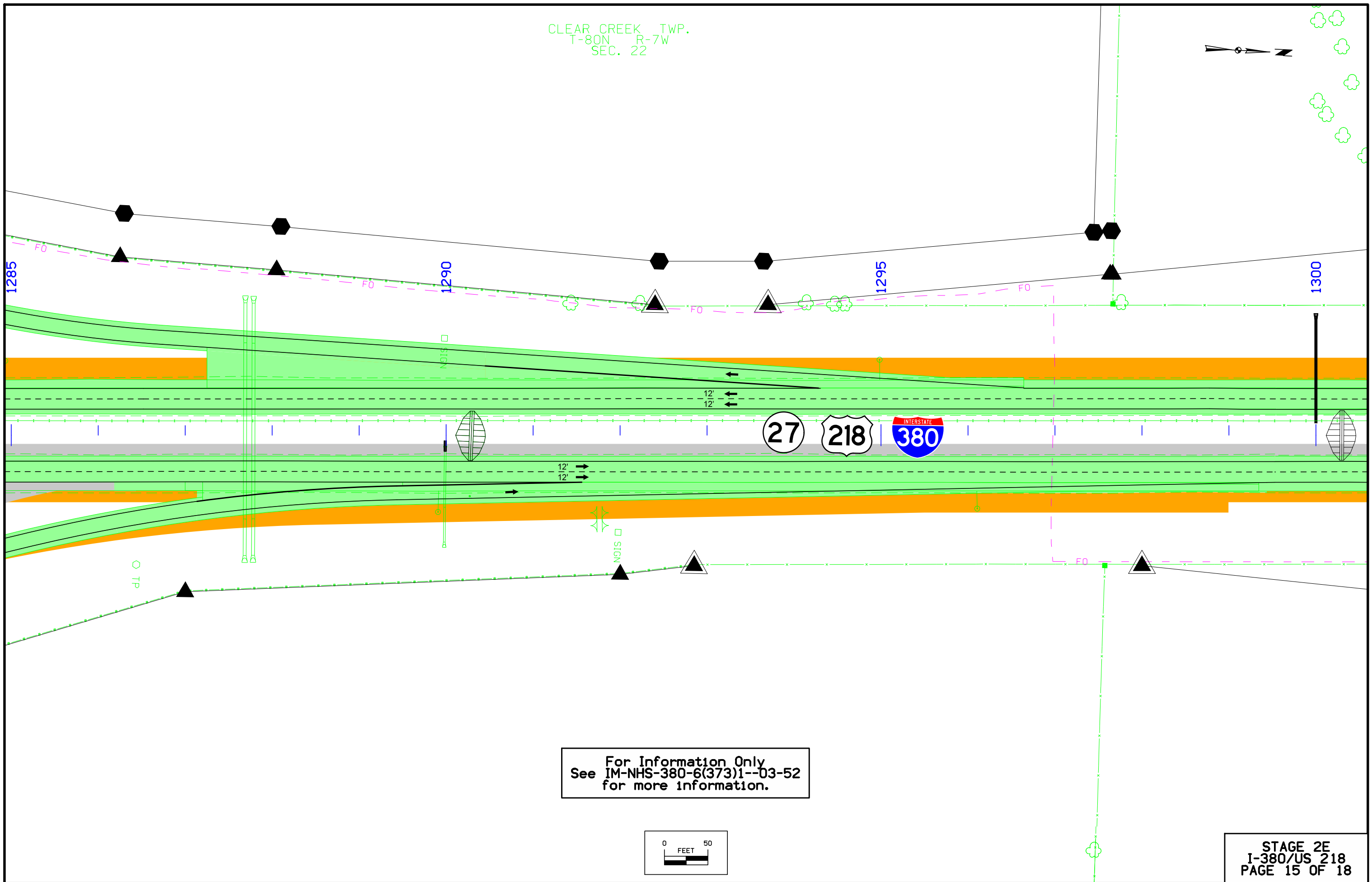
STAGE 2E
 I-380/US 218
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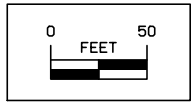
For Information Only
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 for more information.

STAGE 2E
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CLEAR CREEK TWP.
T-80N R-7W
SEC. 22

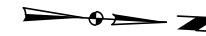


For Information Only
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for more information.



STAGE 2E
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CLEAR CREEK TWP.
T-80N R-7W
SEC. 15

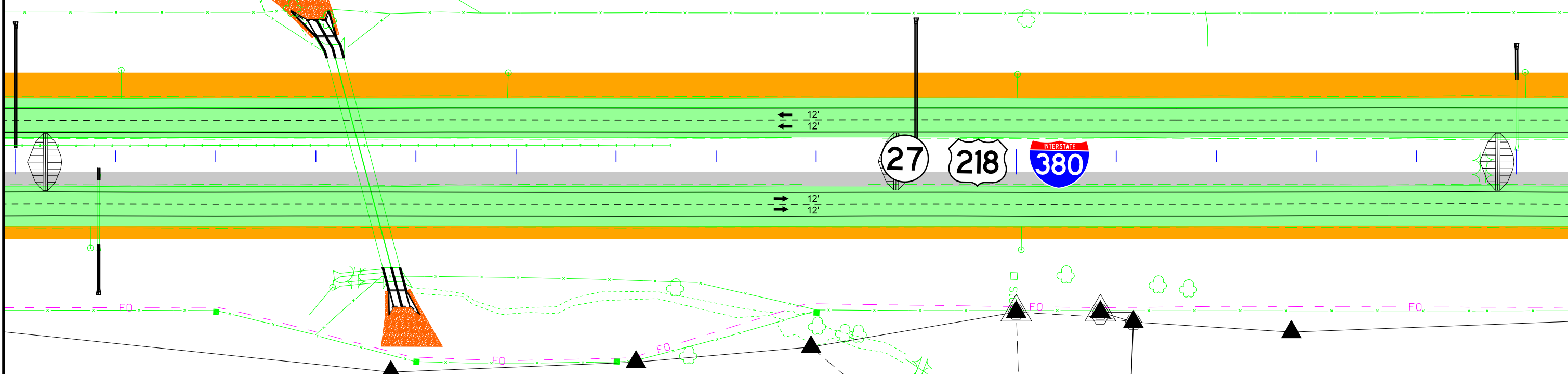


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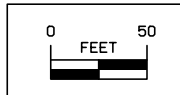
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1310

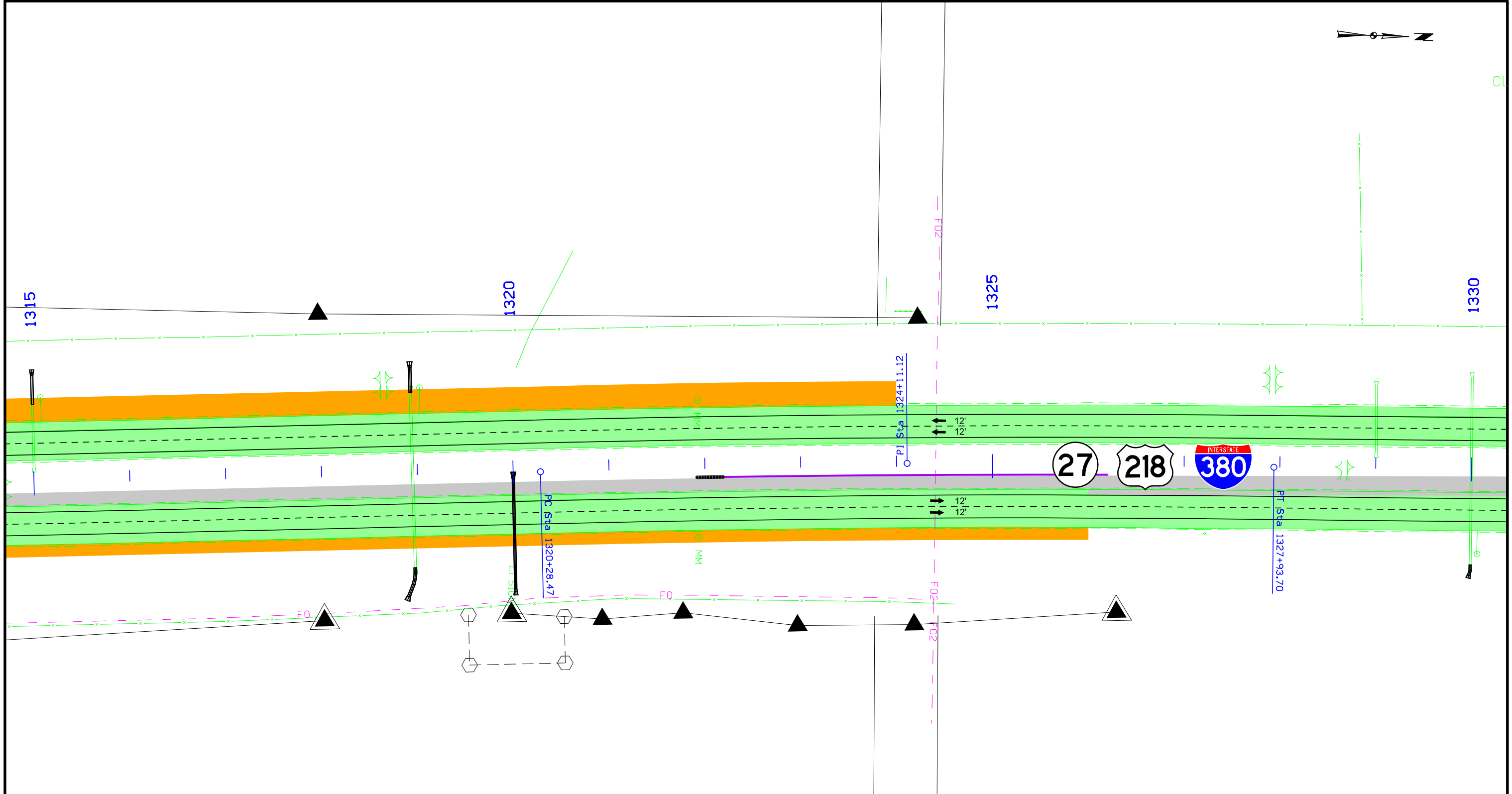
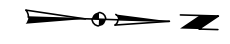
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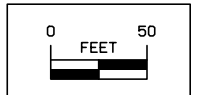
For Information Only
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for more information.



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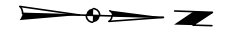


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 for more information.



STAGE 2E
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CLEAR CREEK TWP.
T-80N R-7W
SEC. 15

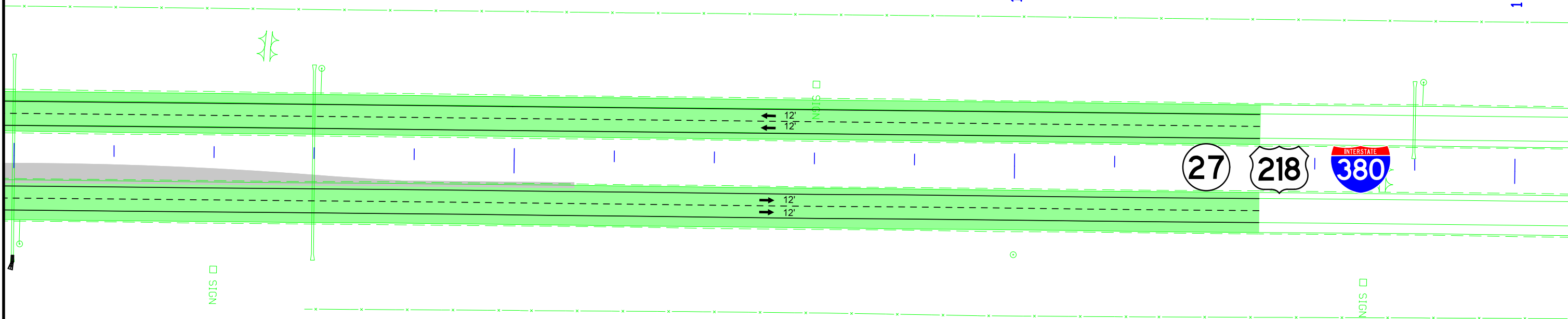


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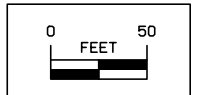
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1340

1345

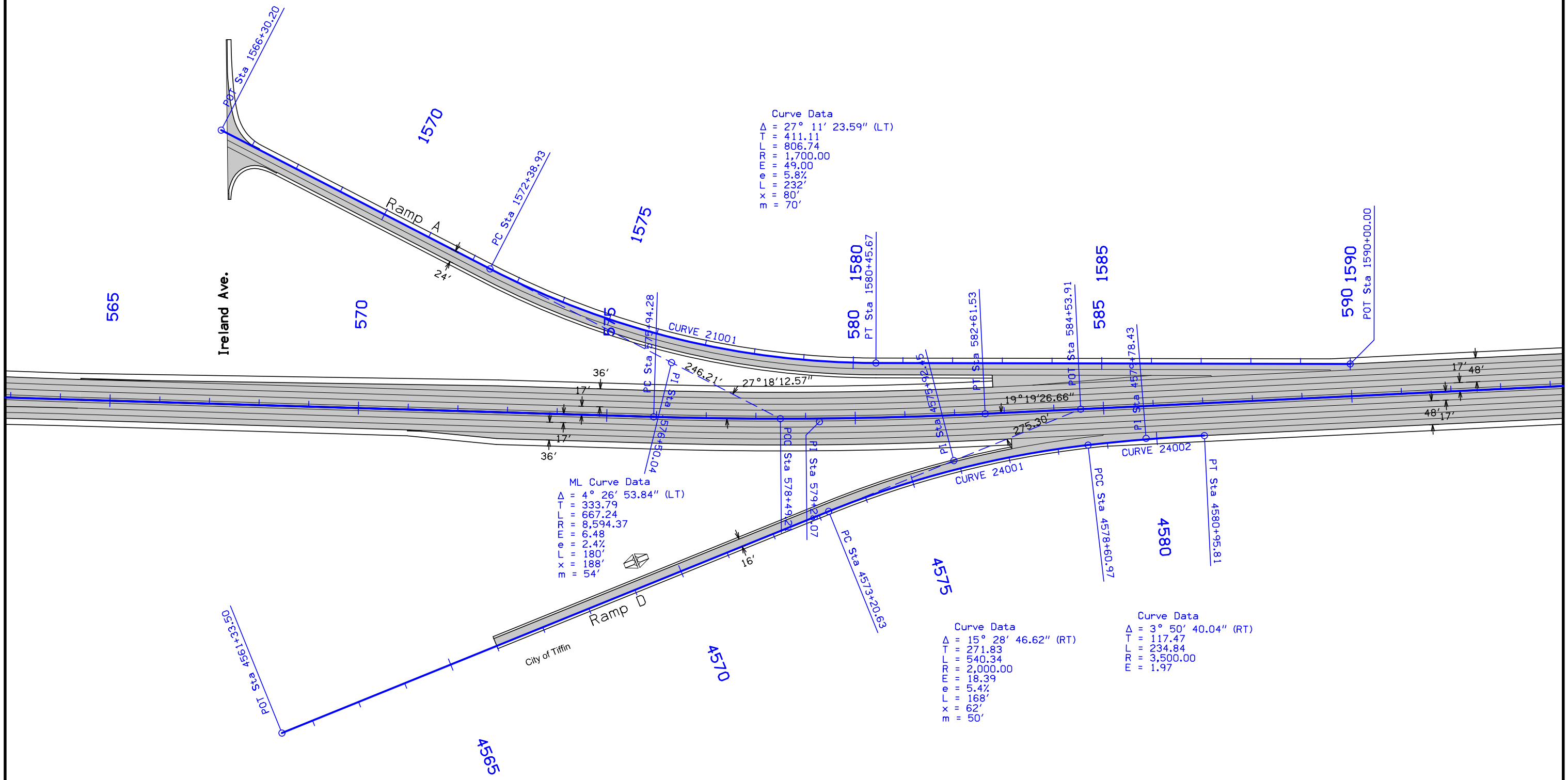


For Information Only
See IM-NHS-380-6(373)1--03-52
for more information.



STAGE 2E
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CLEAR CREEK TWP.
T-80N R-7W
SEC. 33

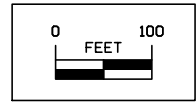


Curve Data
 $\Delta = 27^\circ 11' 23.59''$ (LT)
 $T = 411.11$
 $L = 806.74$
 $R = 1,700.00$
 $E = 49.00$
 $e = 5.8\%$
 $L = 232'$
 $x = 80'$
 $y = 70'$

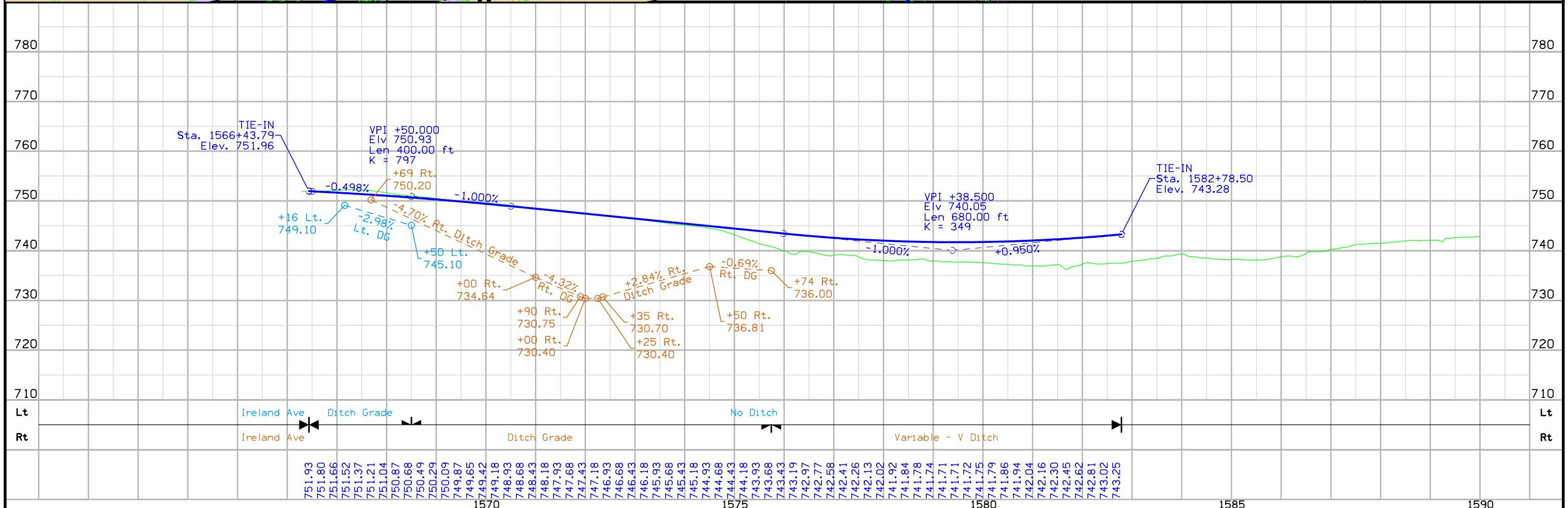
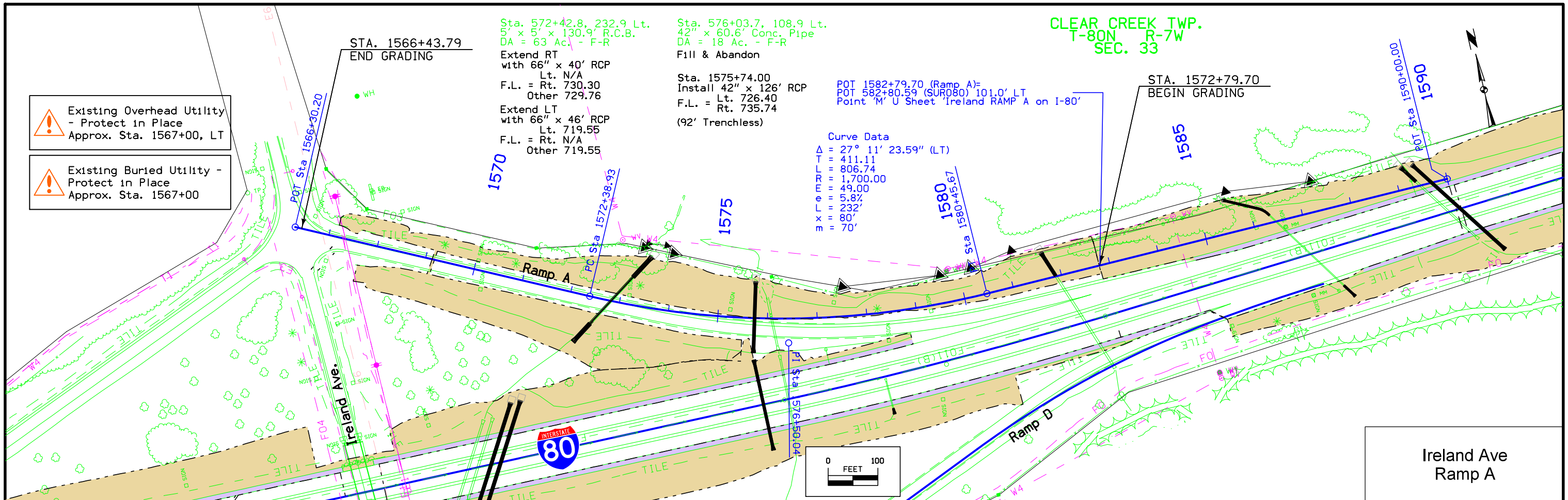
ML Curve Data
 $\Delta = 4^\circ 26' 53.84''$ (LT)
 $T = 333.79$
 $L = 667.24$
 $R = 8,594.37$
 $E = 6.48$
 $e = 2.4\%$
 $L = 180'$
 $x = 188'$
 $y = 54'$

Curve Data
 $\Delta = 15^\circ 28' 46.62''$ (RT)
 $T = 271.83$
 $L = 540.34$
 $R = 2,000.00$
 $E = 18.39$
 $e = 5.4\%$
 $L = 168'$
 $x = 62'$
 $y = 50'$

Curve Data
 $\Delta = 3^\circ 50' 40.04''$ (RT)
 $T = 117.47$
 $L = 234.84$
 $R = 3,500.00$
 $E = 1.97$



Geometric Plan
Interstate 80 with Ireland Ave
Johnson County



CLEAR CREEK TWP.
T-80N R-7W
SEC. 34



Ramp C Curve 53002 Data
 $\Delta = 82^\circ 35' 32.27''$ (LT)
 $T = 1,168.28$
 $L = 1,917.21$
 $R = 1,330.00$
 $E = 440.24$
 $e = 6.0\%$
 $L = 186'$
 $x = 62'$
 $m = 56'$

Ramp C Curve 53003 Data
 $\Delta = 6^\circ 50' 42.79''$ (LT)
 $T = 239.23$
 $L = 477.89$
 $R = 4,000.00$
 $E = 7.15$

Ramp E Curve 55003 Data
 $\Delta = 21^\circ 13' 27.84''$ (LT)
 $T = 562.10$
 $L = 1,111.31$
 $R = 3,000.00$
 $E = 52.20$
 $e = 4.4\%$
 $L = 137'$
 $x = 62'$
 $m = 41'$

Ramp E Curve 54004 Data
 $\Delta = 5^\circ 22' 17.33''$ (LT)
 $T = 187.64$
 $L = 375.00$
 $R = 4,000.00$
 $E = 4.40$

Ramp G Curve 57002 Data
 $\Delta = 187^\circ 07' 00.01''$ (RT)
 $T = 13,395.59$
 $L = 2,720.41$
 $R = 833.00$
 $E = 14,254.47$
 $e = 6.0\%$
 $L = 168'$
 $x = 50'$

Ramp F Curve 56000 Data
 $\Delta = 115^\circ 27' 33.49''$ (LT)
 $T = 1,742.02$
 $L = 2,216.66$
 $R = 1,100.00$
 $E = 960.25$
 $e = 5.8\%$
 $L = 162'$
 $x = 56'$
 $m = 49'$

Ramp B Curve 52001 Data
 $\Delta = 23^\circ 49' 56.31''$ (RT)
 $T = 536.01$
 $L = 1,056.52$
 $R = 2,540.00$
 $E = 55.94$
 $e = 5.0\%$
 $L = 200'$
 $x = 80'$
 $m = 60'$

180 Curve Data
 $\Delta = 2^\circ 17' 08.53''$ (RT)
 $T = 457.20$
 $L = 914.28$
 $R = 22,918.31$
 $E = 4.56$
 $e = NC$
 $L = 0'$
 $x = 0'$
 $m = 0'$

PC Sta 3519+00.00 97.00' LT =
POT Sta 619+00.00

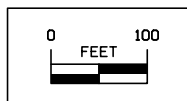
PC Sta 5519+00.00 77.00' LT =
POT Sta 619+00.00

1000' Taper 50:1 Ratio

720' Taper 15:1 Ratio

PC Sta 2520+71.50 113.00' LT =
POT Sta 620+70.60

Geometric Plan
Interstate 80 with I380 & US218
Johnson County



CLEAR CREEK TWP.
T-80N R-7W
SEC. 35



Ramp G Curve 57001 Data
 $\Delta = 27^\circ 00' 00.00''$ (LT)
 $T = 254.48$
 $L = 499.51$
 $R = 1,060.00$
 $E = 30.12$
 $L = 5.8\%$
 $L = 162'$
 $X = 56'$
 $E = 49'$

Ramp A Curve 51002 Data
 $\Delta = 29^\circ 09' 22.90''$ (LT)
 $T = 660.59$
 $L = 1,292.54$
 $R = 2,540.00$
 $E = 84.50$
 $L = 5.0\%$
 $L = 200'$
 $X = 80'$
 $E = 60'$

Ramp H Curve 58001 Data
 $\Delta = 157^\circ 20' 21.27''$ (LT)
 $T = 4,157.28$
 $L = 2,287.49$
 $R = 833.00$
 $E = 3,406.92$
 $L = 6.0\%$
 $L = 168'$
 $X = 56'$
 $E = 50'$

I80 Curve Data
 $\Delta = 1^\circ 32' 54.91''$ (RT)
 $T = 309.74$
 $L = 619.43$
 $R = 22,918.31$
 $E = 2.09$

Ramp E Curve 55002 Data
 $\Delta = 131^\circ 09' 16.97''$ (RT)
 $T = 2,807.77$
 $L = 2,918.58$
 $R = 1,275.00$
 $E = 1,808.70$
 $L = 5.6\%$
 $L = 157'$
 $X = 56'$
 $E = 47'$

Ramp F Curve 56001 Data
 $\Delta = 32^\circ 08' 32.50''$ (RT)
 $T = 864.27$
 $L = 1,682.97$
 $R = 3,000.00$
 $E = 122.01$
 $L = 4.4\%$
 $L = 137'$
 $X = 62'$
 $E = 41'$

Ramp D Curve 54002 Data
 $\Delta = 20^\circ 32' 25.78''$ (RT)
 $T = 407.69$
 $L = 806.62$
 $R = 2,250.00$
 $E = 36.64$
 $L = 5.25$
 $L = 162'$
 $X = 62'$
 $E = 49'$

PT Sta 4567+79.79 20.00' RT =
POC Sta 6567+79.79

PT Sta 6572+25.00 89.00' RT =
POT Sta 672+25.00

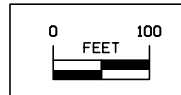
POT Sta 7562+75.00 8.00' RT
POT Sta 1562+75.00

POT Sta 1568+14.05 113.03' RT
POT Sta 668+16.04

POT Sta 650+13.95
= POC Sta 8554+37.46

POT Sta 653+69.80
= POC Sta 5557+88.95

910' Taper 21.2:1 Ratio



Geometric Plan
Interstate 80 with I380 & US218
Johnson County

CLEAR CREEK TWP.
T-79N R-7W
SEC. 2

CLEAR CREEK TWP.
T-80N R-7W
SEC. 34

CLEAR CREEK TWP.
T-80N R-7W
SEC. 35

Ramp G Curve 57003 Data
 $\Delta = 32^\circ 55' 03.02''$ (LT)
T = 590.86
L = 1,149.04
R = 2,000.00
E = 85.45
e = 5.4%
L = 168'
x = 62'
m = 56'

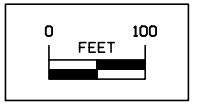
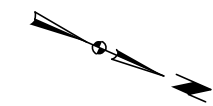
Ramp B Curve 52003 Data
 $\Delta = 41^\circ 10' 12.77''$ (RT)
T = 1,239.41
L = 2,371.23
R = 3,300.00
E = 225.07
e = 4.2%
L = 131'
x = 62'
m = 40'

Ramp B Curve 52004 Data
 $\Delta = 1^\circ 56' 39.43''$ (RT)
T = 67.87
L = 135.74
R = 4,000.00
E = 0.58
PC Sta 7504+21.04 20.00' RT
POC Sta 2555+63.38

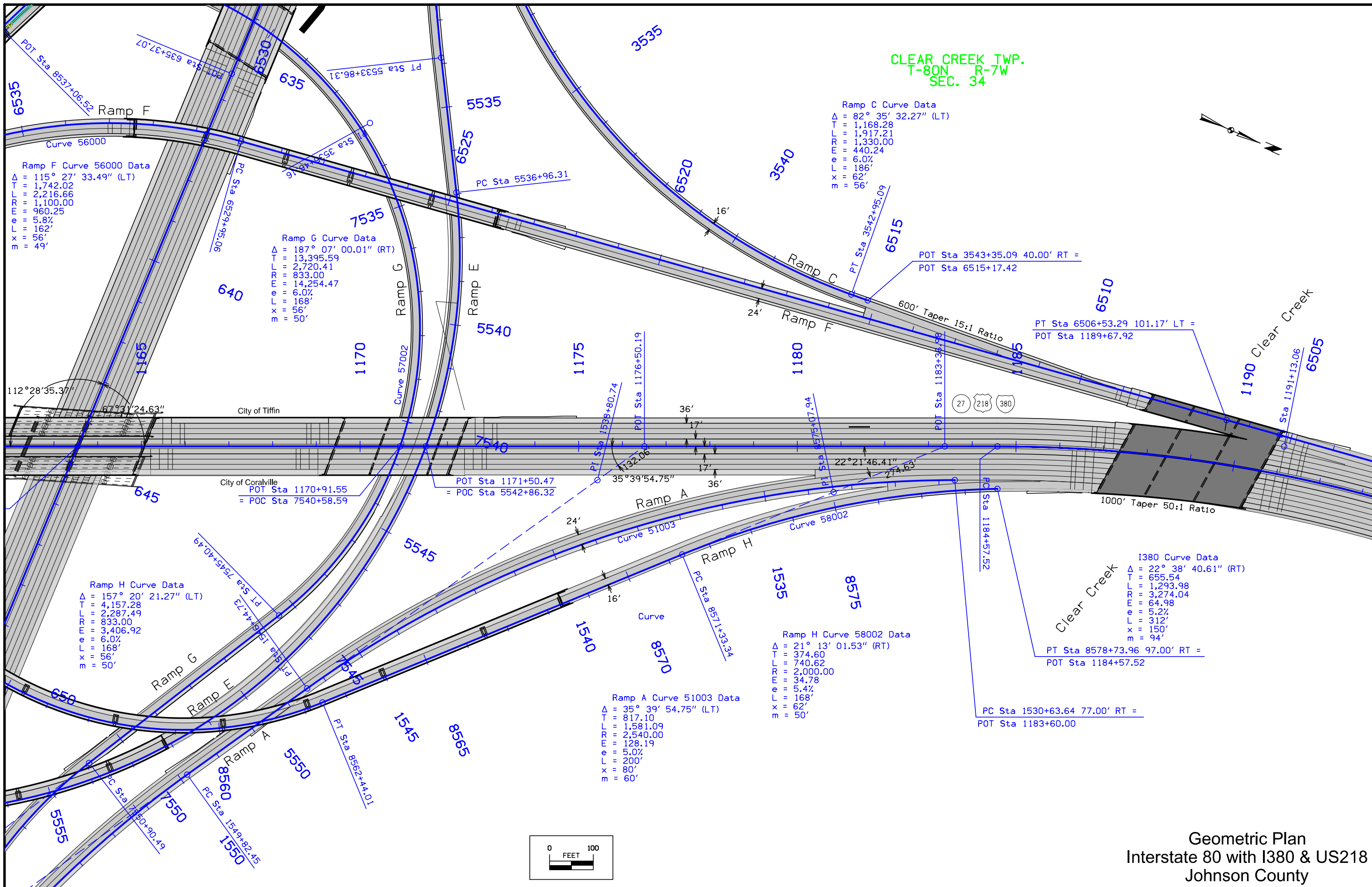
Ramp E Curve 55001 Data
 $\Delta = 31^\circ 53' 13.98''$ (LT)
T = 379.96
L = 740.19
R = 1,330.00
E = 53.21
e = 6.0%
L = 186'
x = 62'
m = 56'

Ramp D Curve 54001 Data
 $\Delta = 77^\circ 08' 03.54''$ (RT)
T = 1,060.48
L = 1,790.51
R = 1,330.00
E = 371.03
e = 6.0%
L = 186'
x = 62'
m = 56'

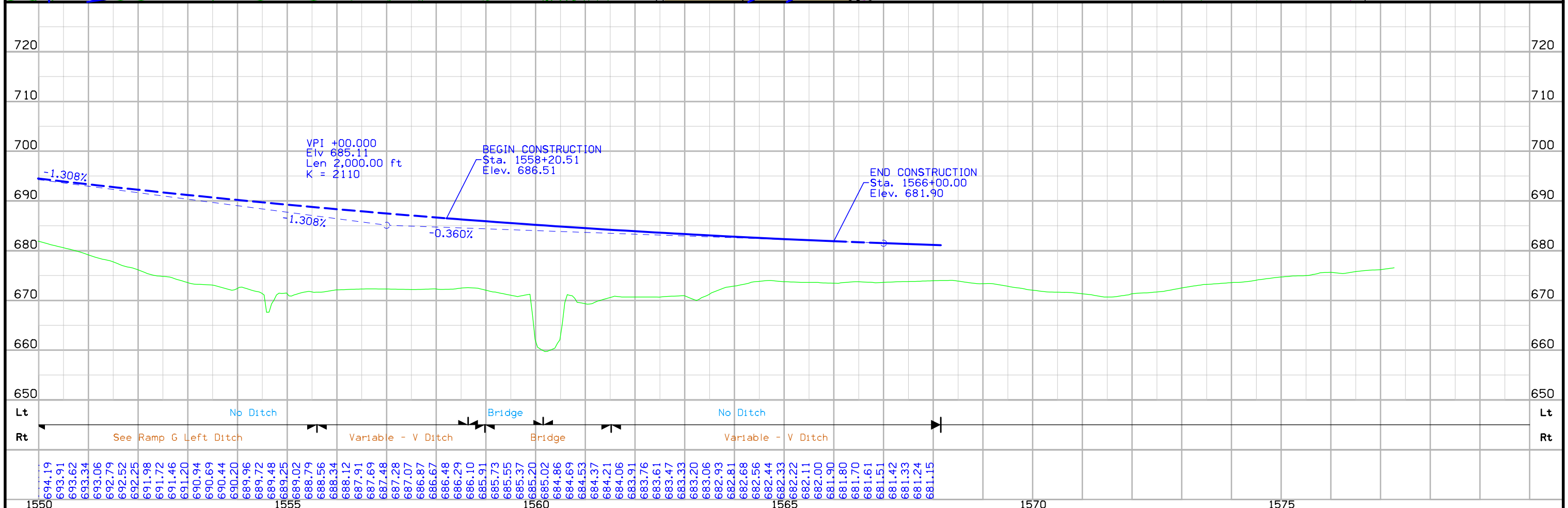
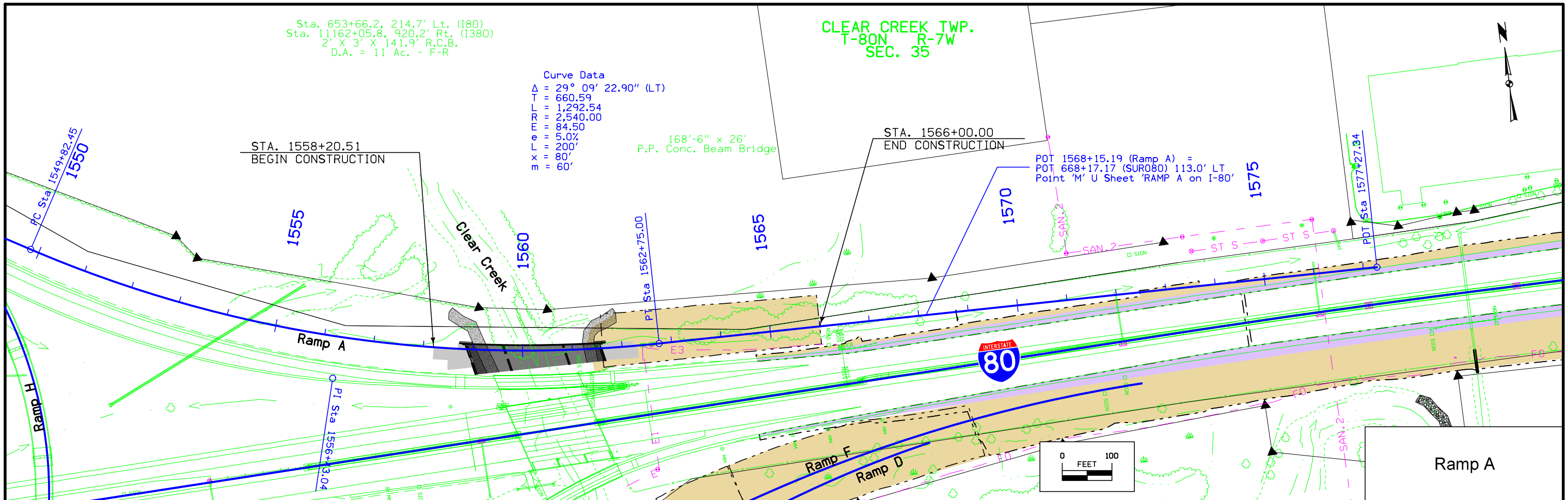
Ramp E Curve 55002 Data
 $\Delta = 131^\circ 09' 16.97''$ (RT)
T = 2,807.77
L = 2,918.58
R = 1,275.00
E = 1,808.70
e = 5.6%
L = 157'
x = 56'
m = 47'

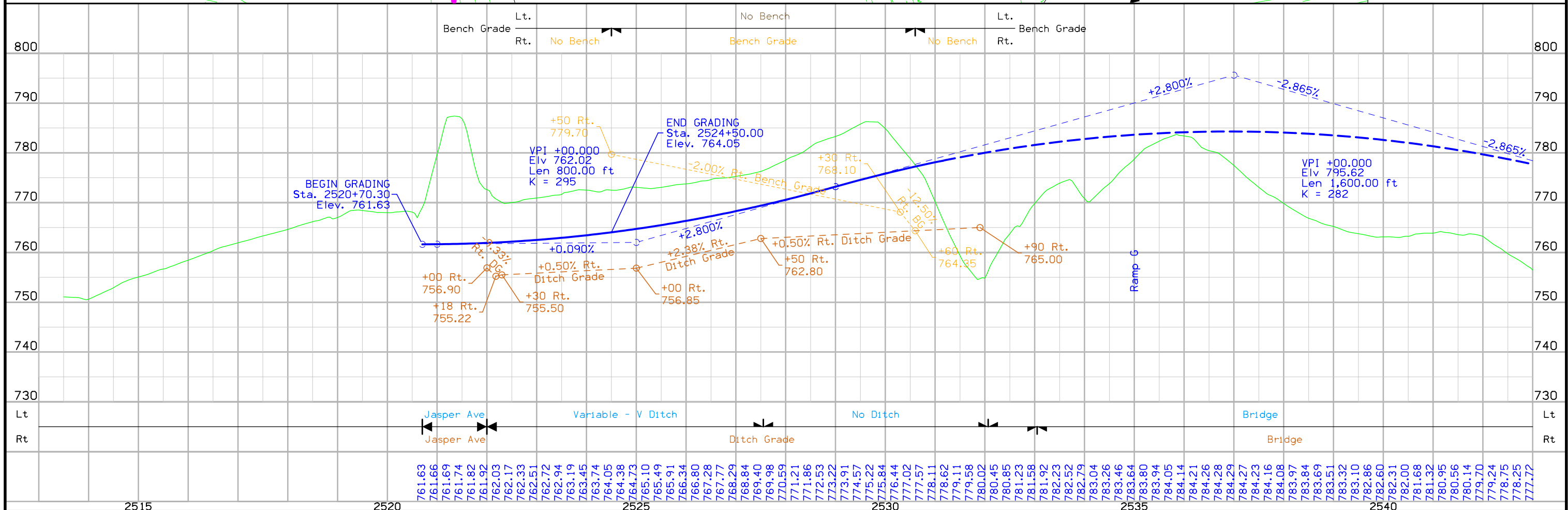
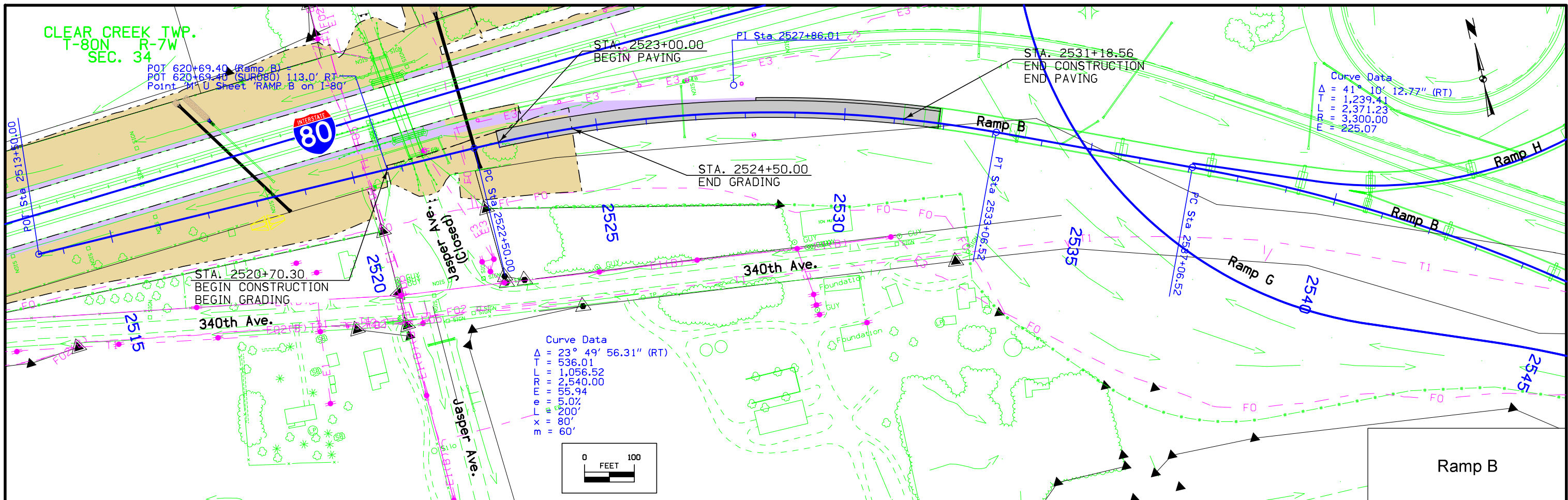


Geometric Plan
Interstate 80 with I380 & US218
Johnson County

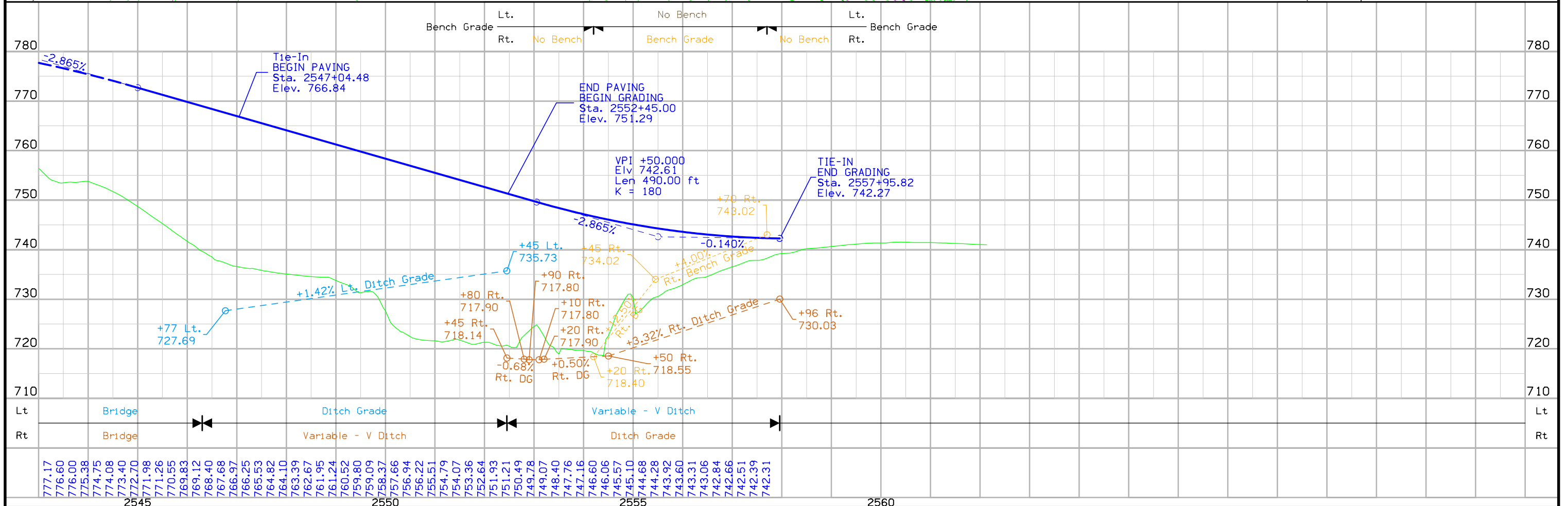
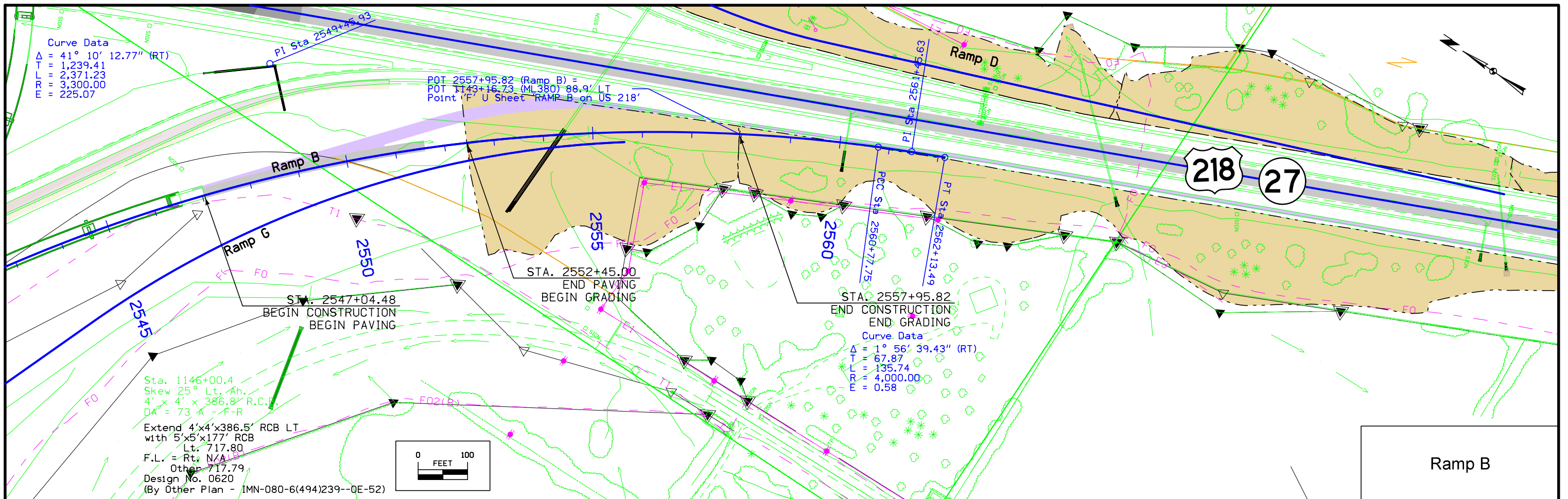


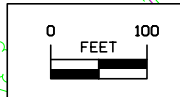
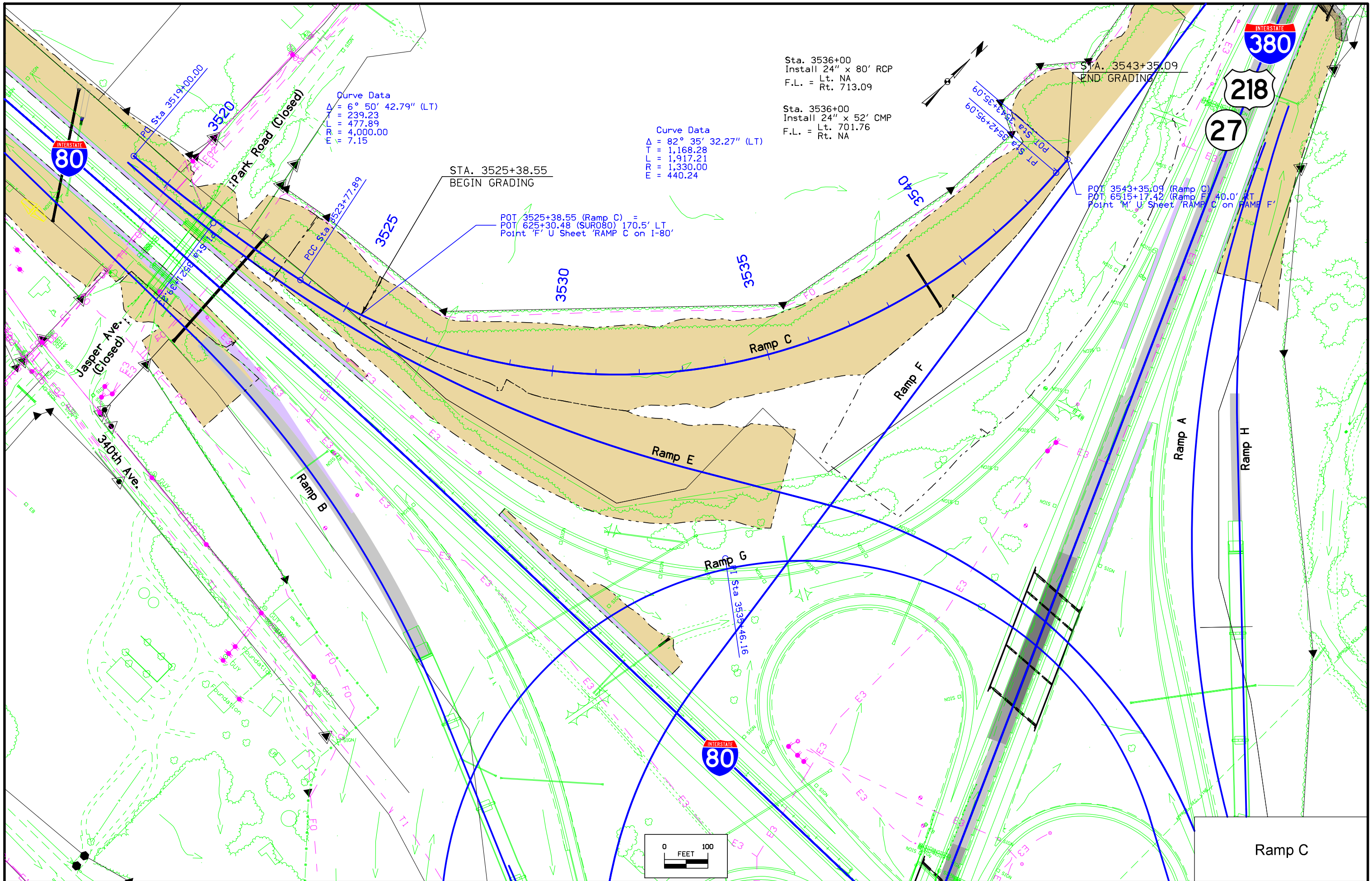
Geometric Plan
 Interstate 80 with I380 & US218
 Johnson County

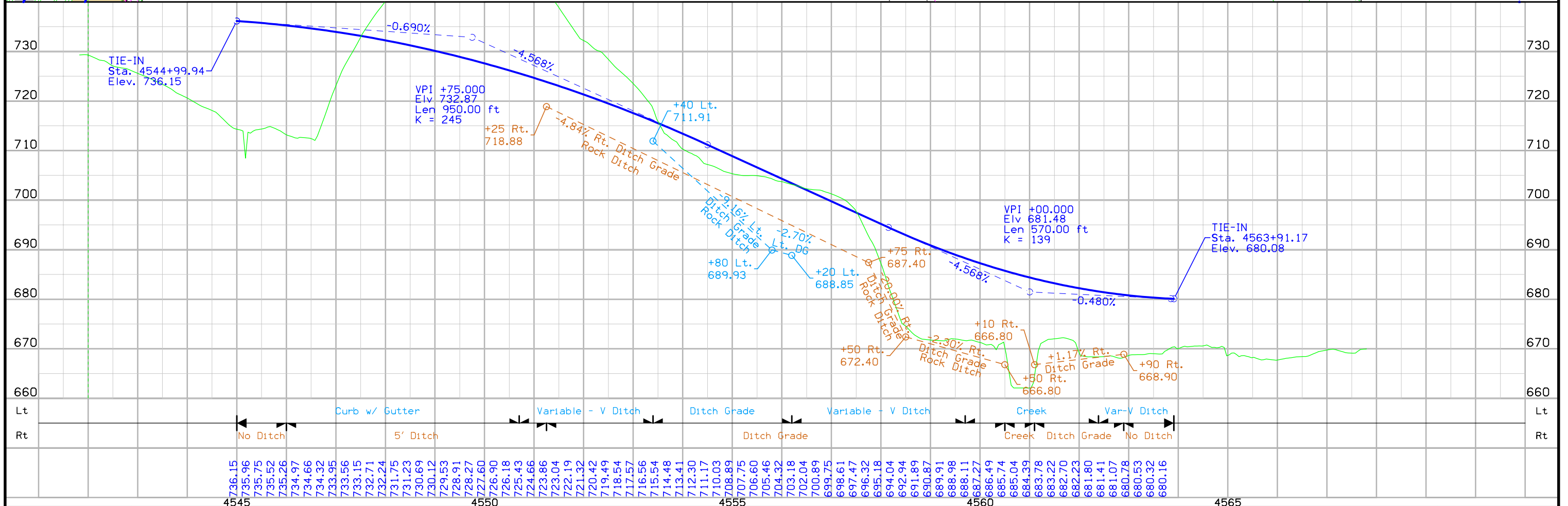
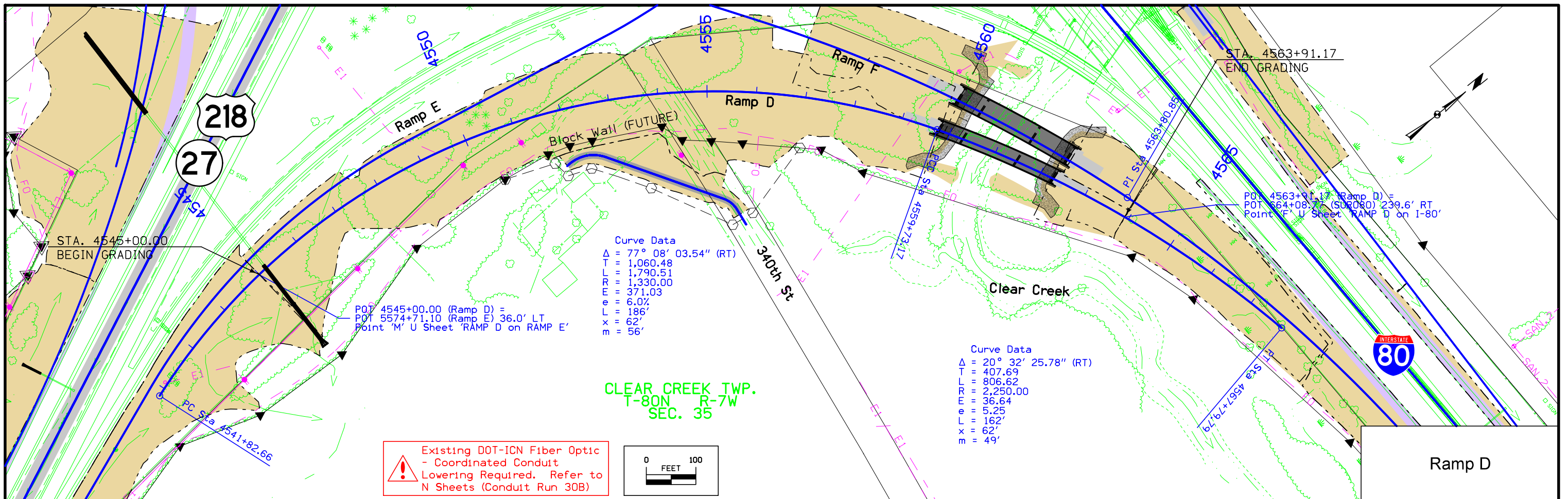


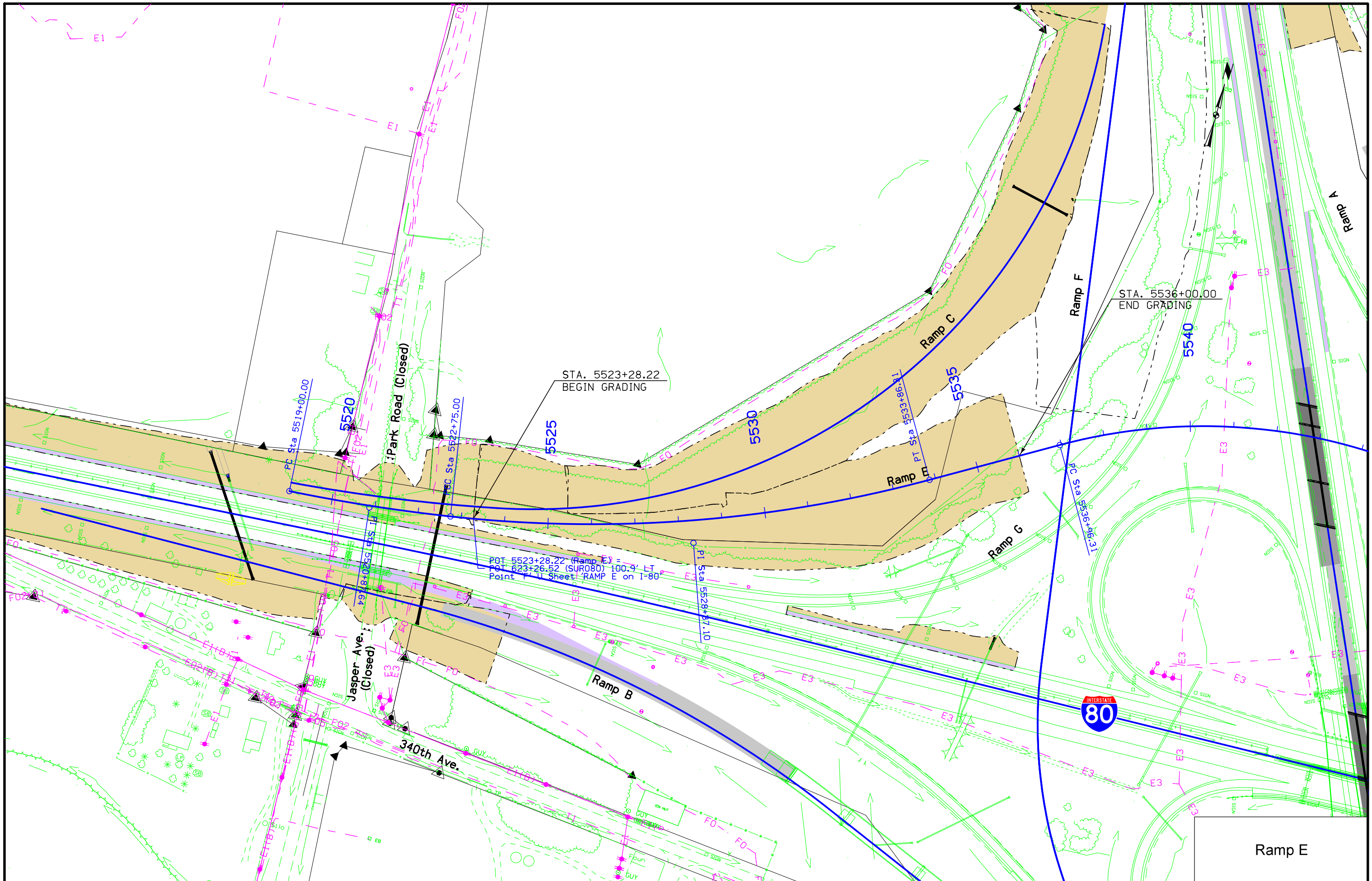


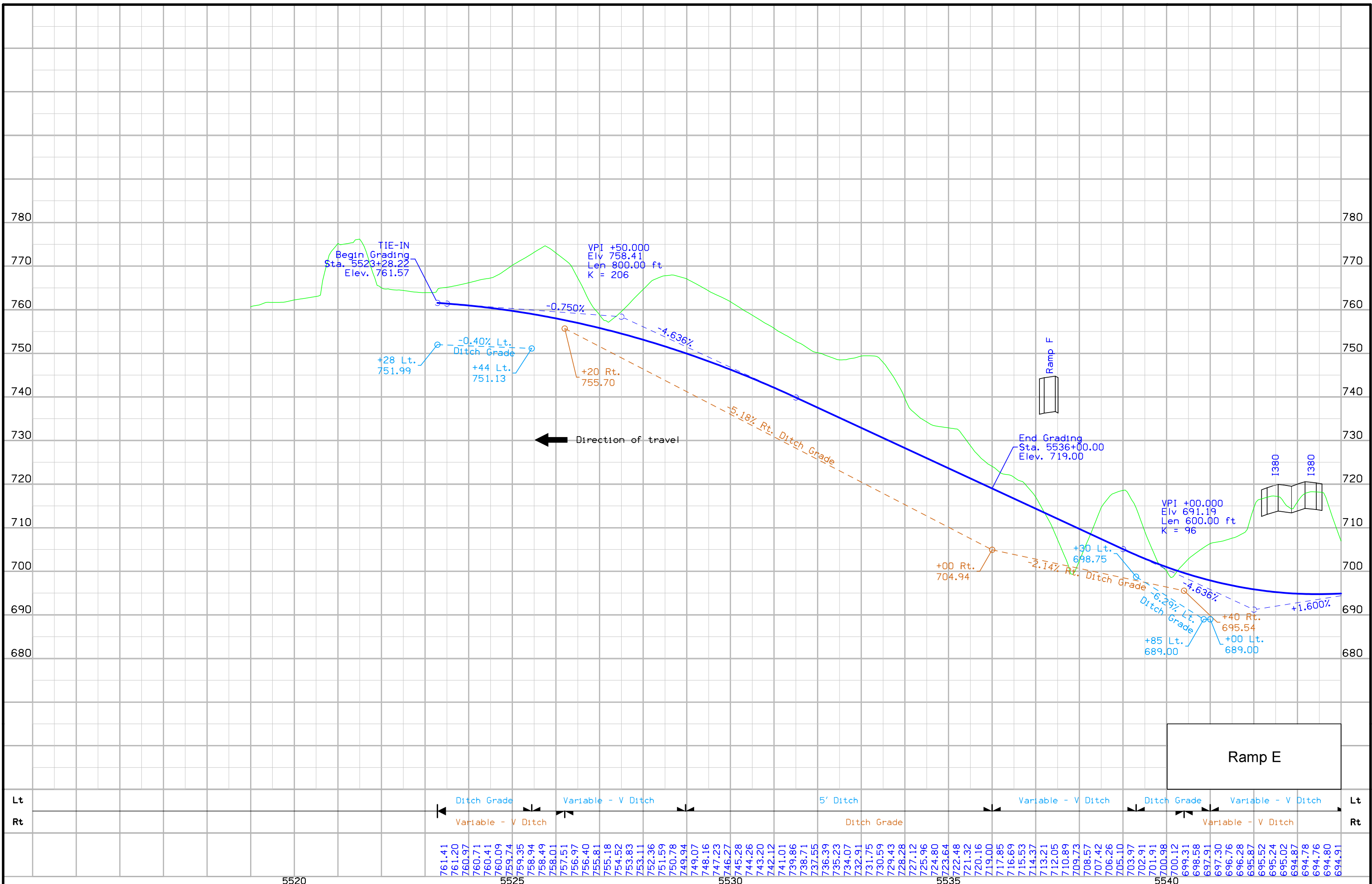
FILE NO.	ENGLISH	DESIGN TEAM	JOHNSON COUNTY	PROJECT NUMBER	SHEET NUMBER
		Holst \ Prindle		NHS-080-6(371)239--11-52	K.8



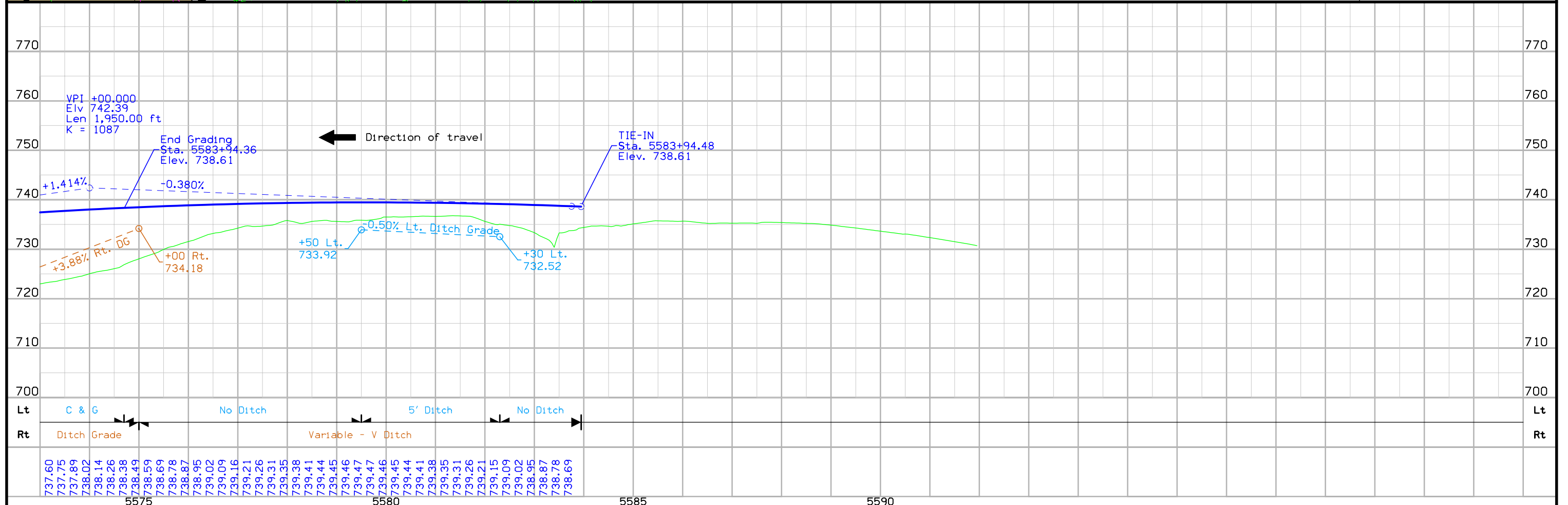
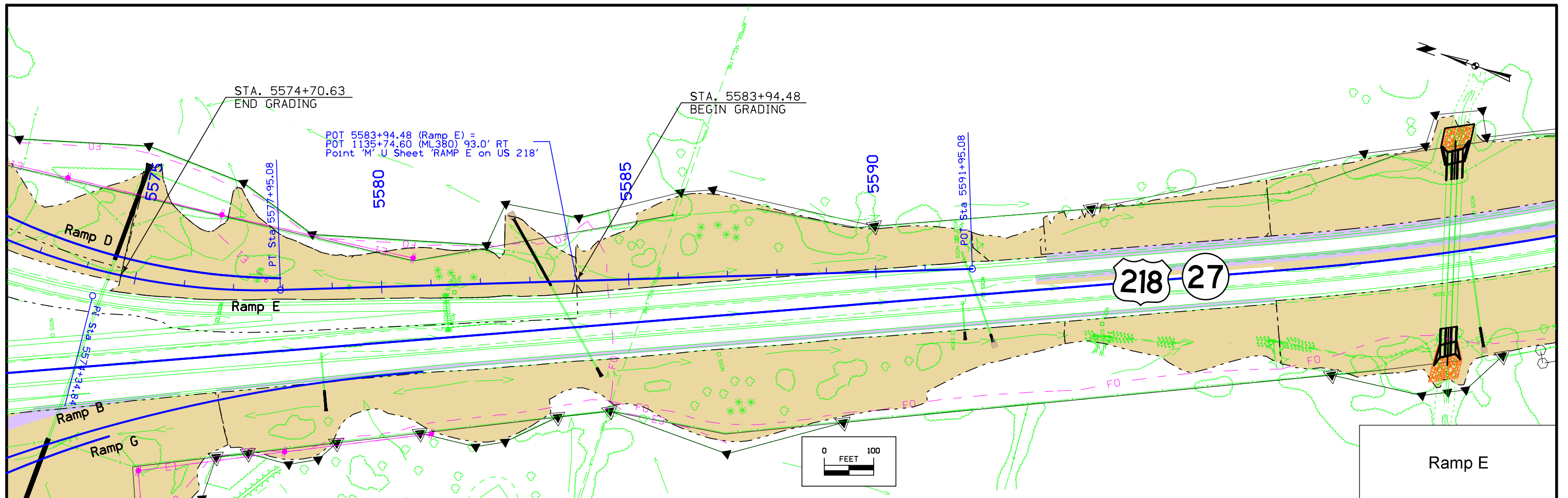


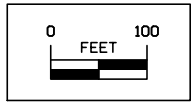
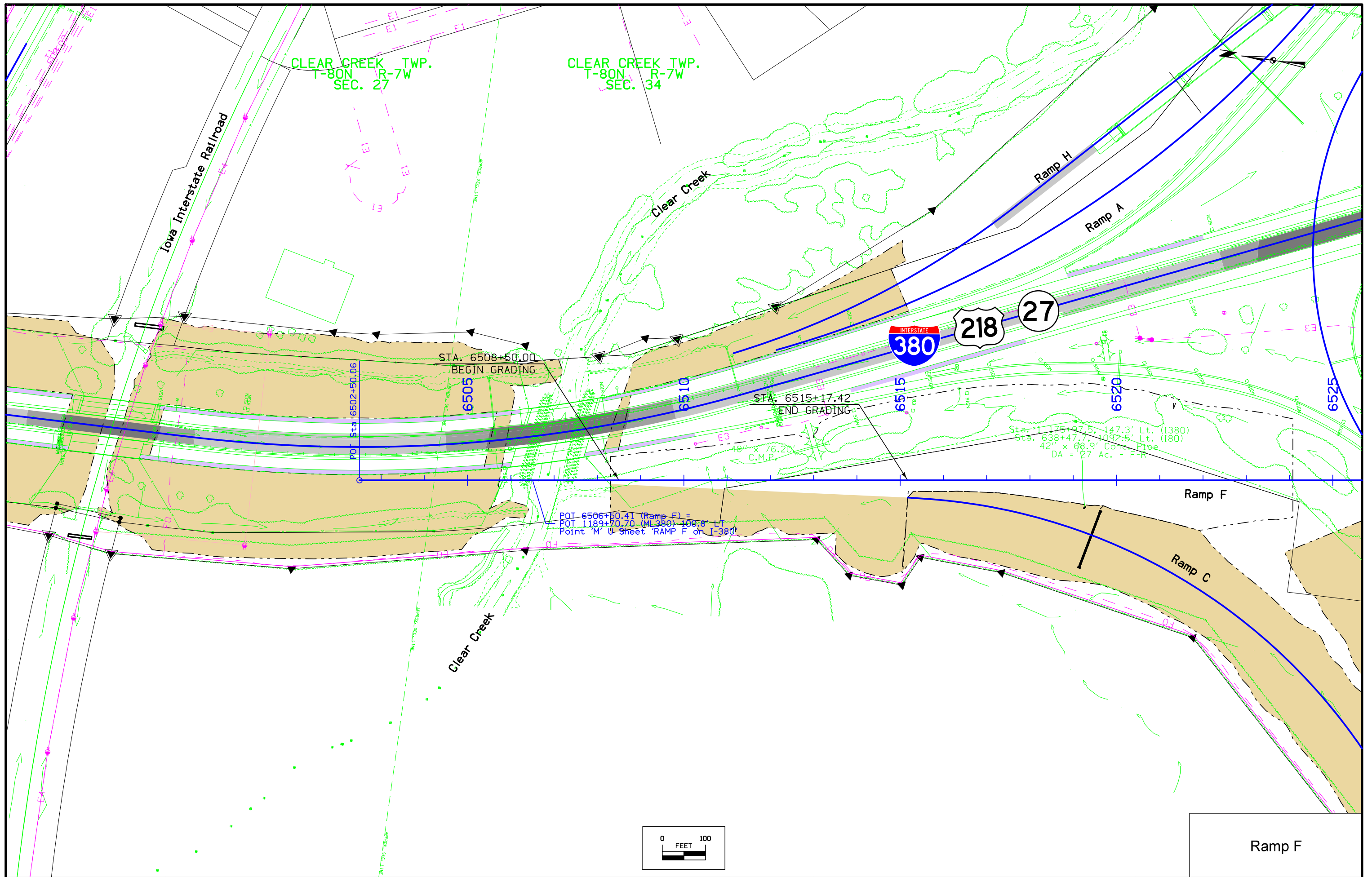




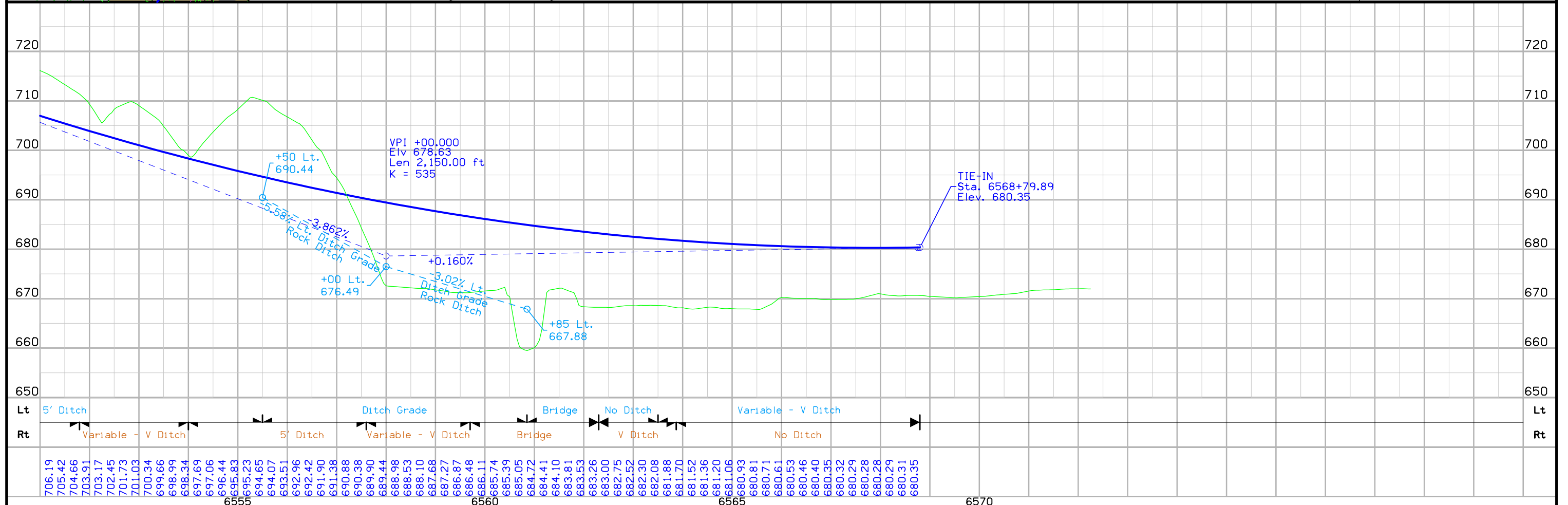
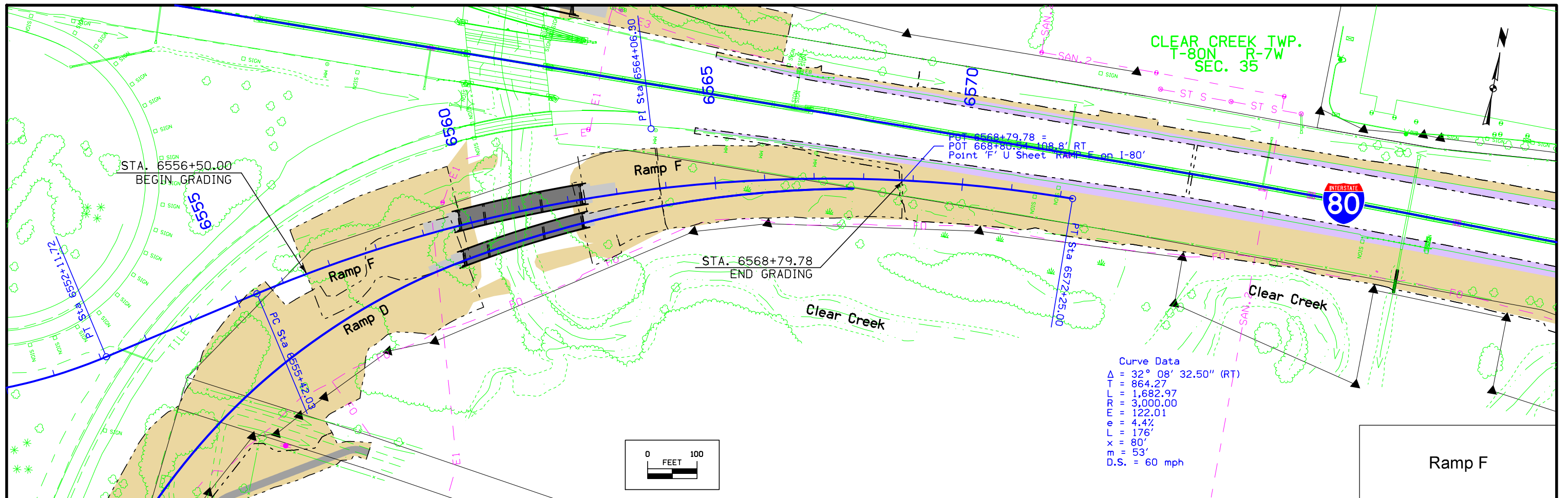


Lt	Ditch Grade		Variable - V Ditch		5' Ditch		Variable - V Ditch		Ditch Grade		Variable - V Ditch		Rt
	761.41	761.20	760.97	760.71	760.41	760.09	759.74	759.35	758.94	758.49	758.01	757.51	
	756.40	755.81	755.18	754.52	753.83	753.11	752.36	751.59	750.78	749.94	749.07	748.16	
	747.23	746.27	745.28	744.26	743.20	742.12	741.01	739.86	738.71	737.55	736.39	735.23	
	734.07	732.91	731.75	730.59	729.43	728.28	727.12	725.96	724.80	723.64	722.48	721.32	
	720.16	719.00	717.85	716.69	715.53	714.37	713.21	712.05	710.89	709.73	708.57	707.42	
	705.10	703.97	702.91	701.91	700.98	700.12	699.31	698.58	697.91	697.30	696.76	696.28	
	695.87	695.52	695.24	695.02	694.87	694.76	694.80	694.91					

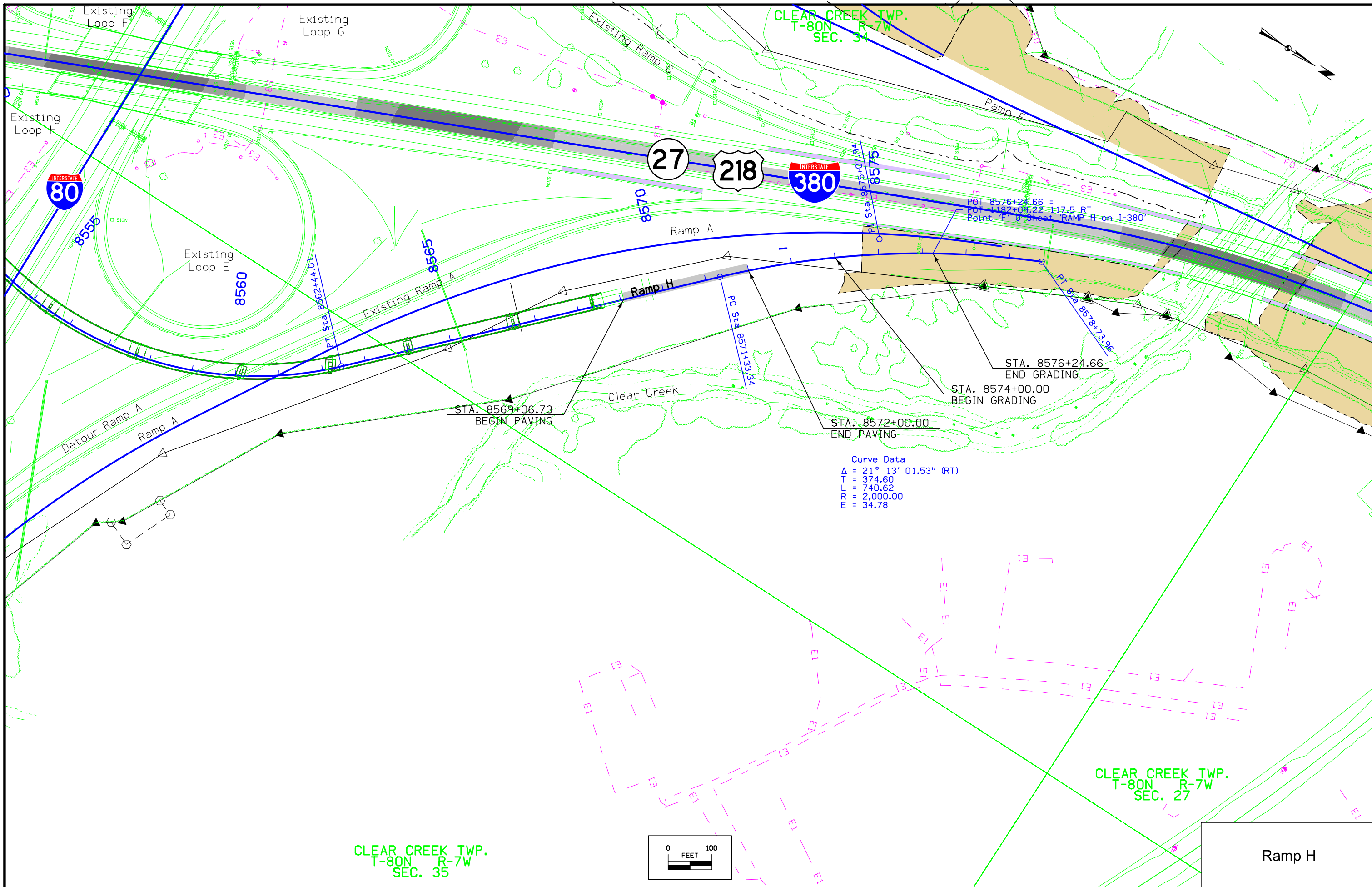


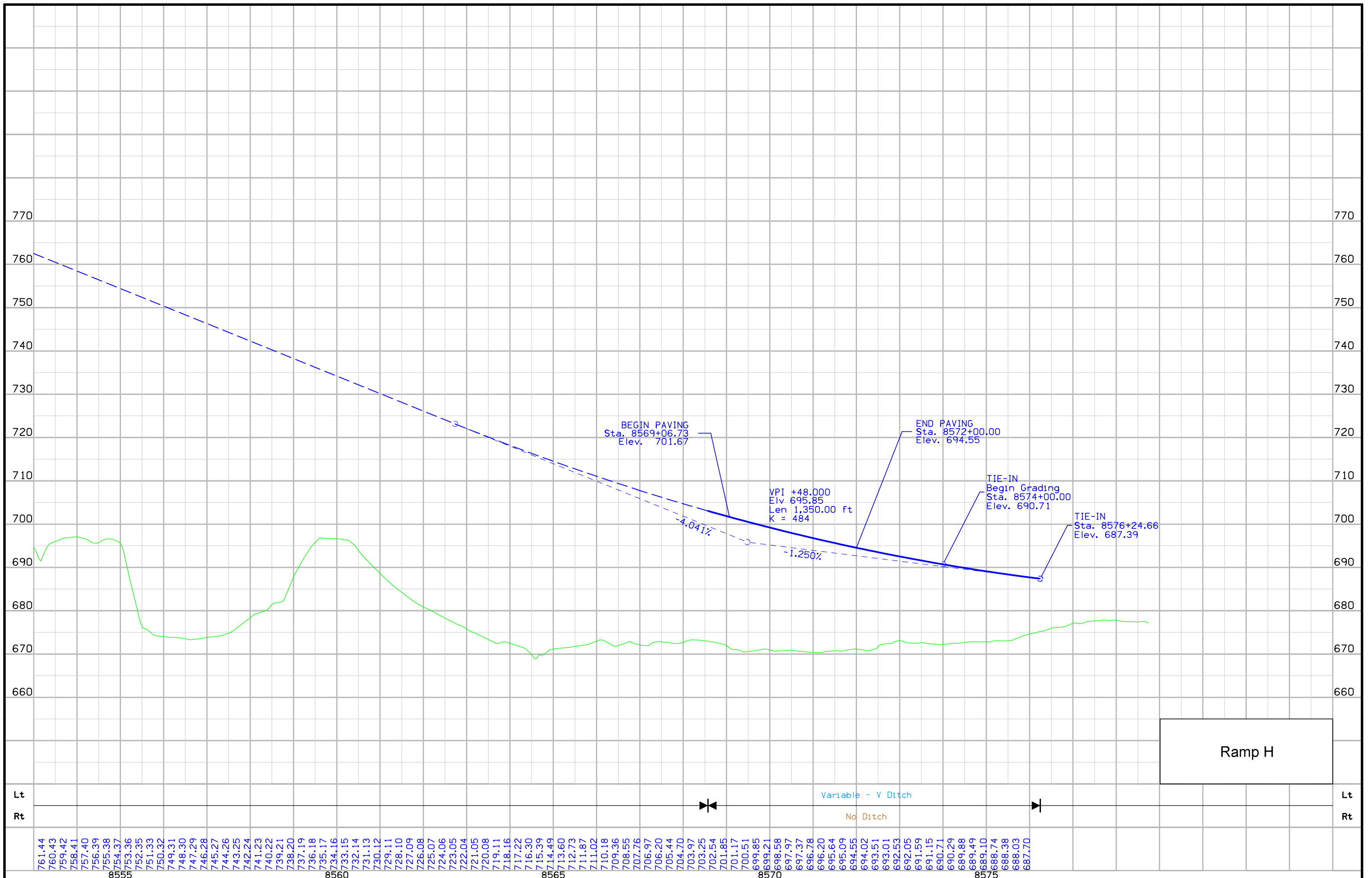


Ramp F



FILE NO.	ENGLISH	DESIGN TEAM	JOHNSON COUNTY	PROJECT NUMBER	SHEET NUMBER
		Holst \ Prindle		NHS-080-6(371)239--11-52	K.18





T-80N R-7W
SEC. 36

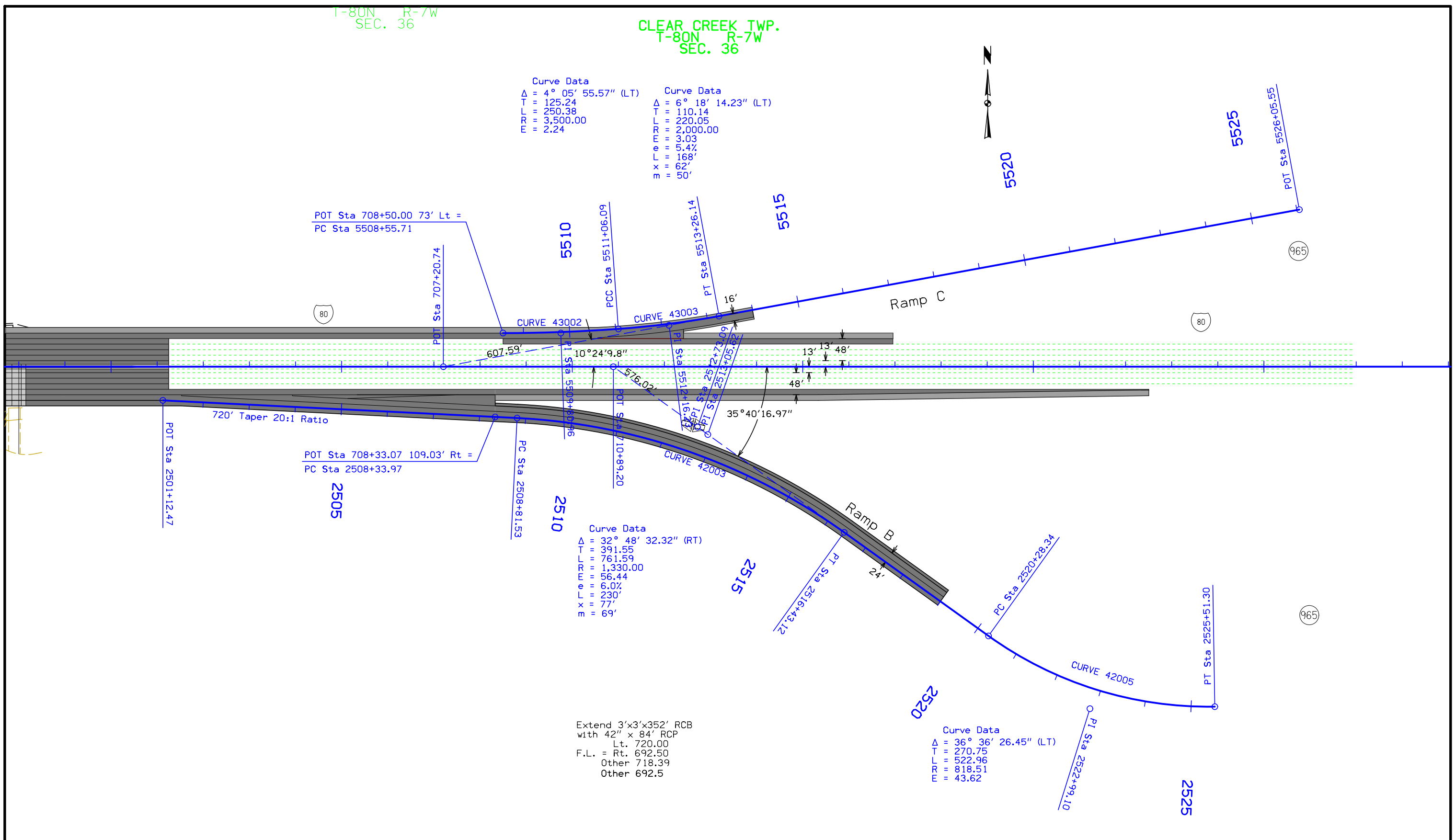
CLEAR CREEK TWP.
T-80N R-7W
SEC. 36

Curve Data

Δ = 4° 05' 55.57" (LT)
T = 125.24
L = 250.38
RR = 3,500.00
E = 2.24

Curve Data
Δ = 6° 18' 14.23" (LT)
T = 110.14
L = 220.05
RR = 2,000.00
E = 3.03

LR = 5.4%
GR = 16.8%
X = 62'
E = 50'



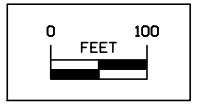
POT Sta 708+50.00 73' Lt =
PC Sta 5508+55.71

POT Sta 708+33.07 109.03' Rt =
PC Sta 2508+33.97

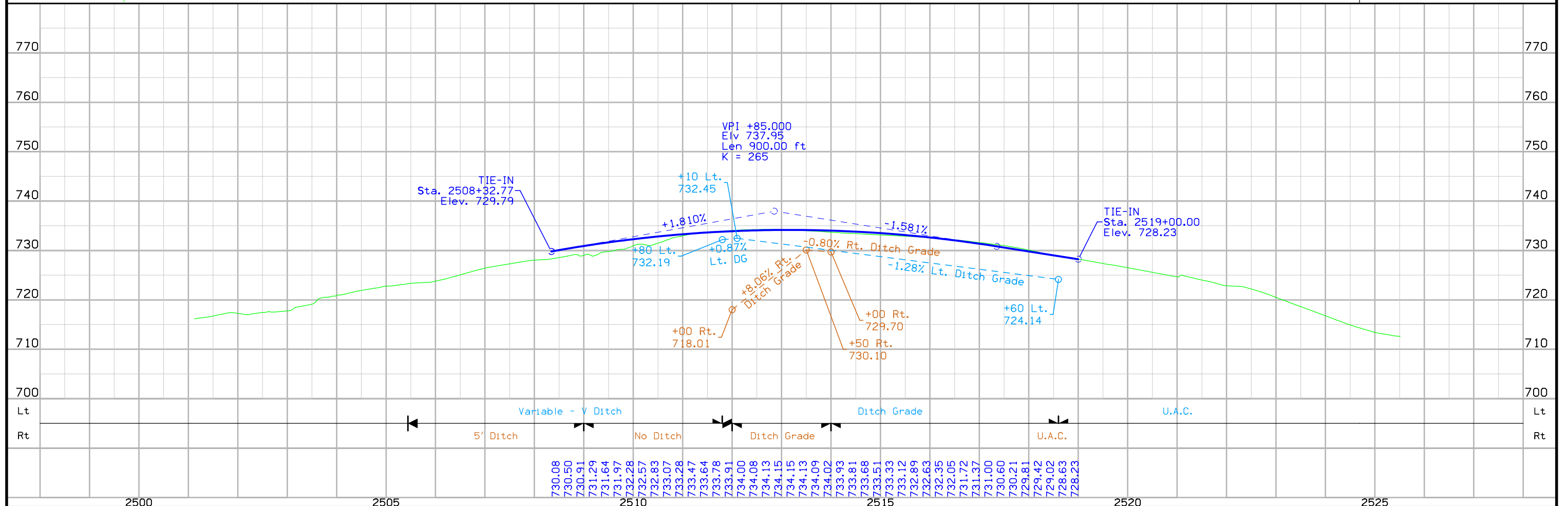
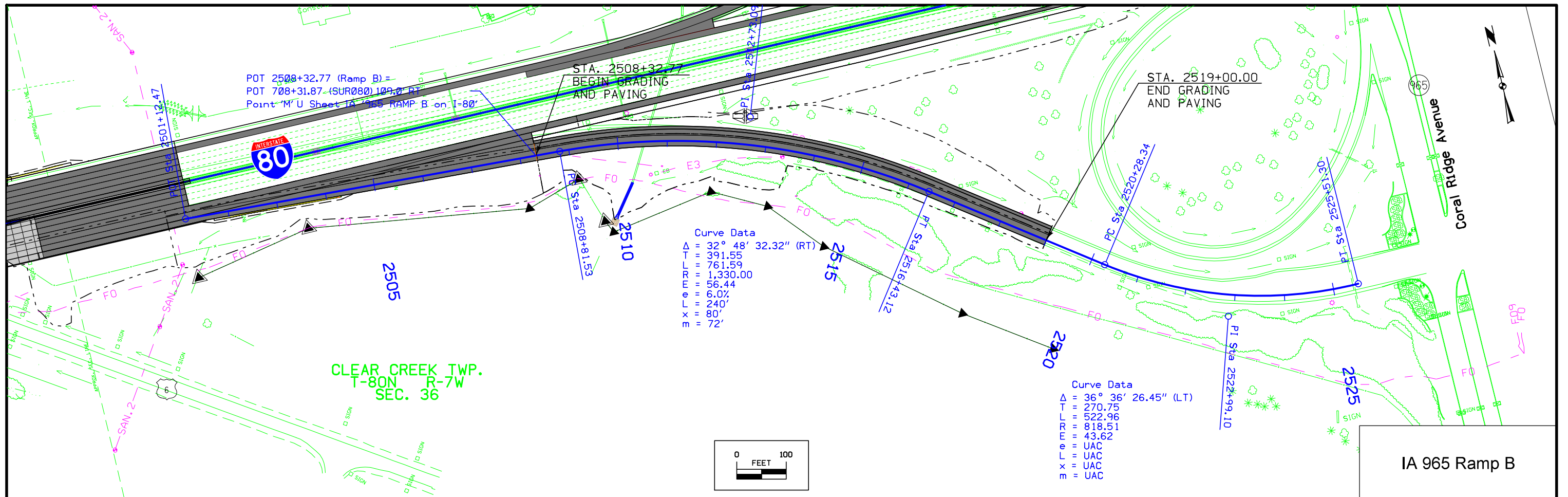
Curve Data
Δ = 32° 48' 32.32" (RT)
T = 391.55
L = 761.59
RR = 1,330.00
E = 56.44
LR = 6.0%
GR = 230'
X = 77'
E = 69'

Extend 3'x3'x352' RCB
with 42" x 84' RCP
Lt. 720.00
F.L. = Rt. 692.50
Other 718.39
Other 692.5

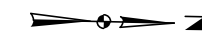
Curve Data
Δ = 36° 36' 26.45" (LT)
T = 270.75
L = 522.96
RR = 818.51
E = 43.62



Geometric Plan
Interstate 80 with IA 965
Johnson County



CLEAR CREEK TWP.
T-80N R-7W
SEC. 27

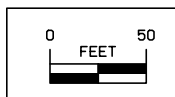
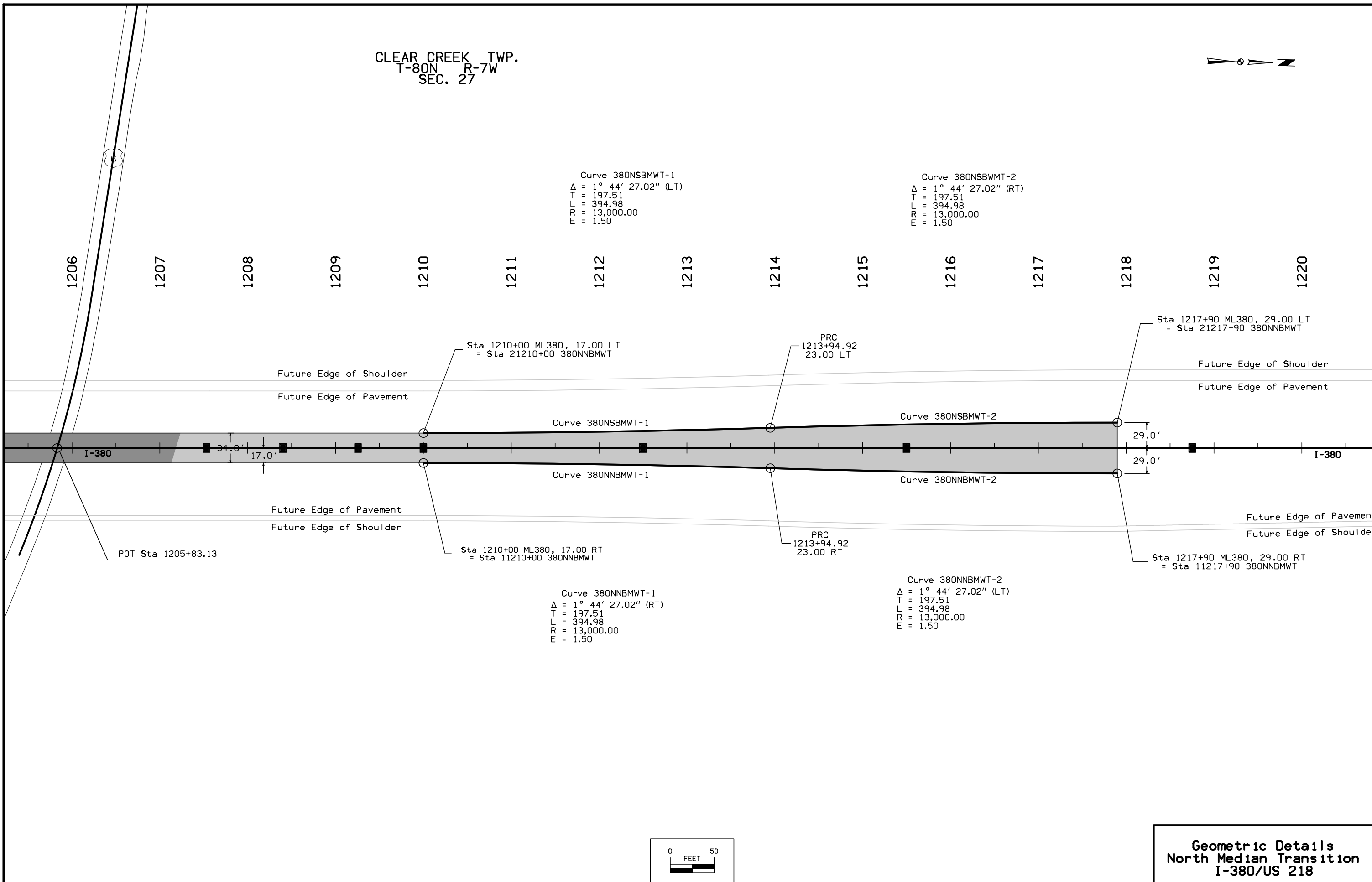


Curve 380NSBWT-1
 $\Delta = 1^\circ 44' 27.02''$ (LT)
 T = 197.51
 L = 394.98
 R = 13,000.00
 E = 1.50

Curve 380NSBWT-2
 $\Delta = 1^\circ 44' 27.02''$ (RT)
 T = 197.51
 L = 394.98
 R = 13,000.00
 E = 1.50

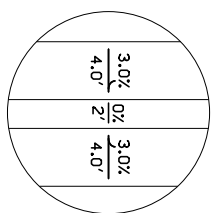
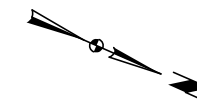
Curve 380NNBWT-1
 $\Delta = 1^\circ 44' 27.02''$ (RT)
 T = 197.51
 L = 394.98
 R = 13,000.00
 E = 1.50

Curve 380NNBWT-2
 $\Delta = 1^\circ 44' 27.02''$ (LT)
 T = 197.51
 L = 394.98
 R = 13,000.00
 E = 1.50



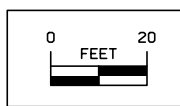
Geometric Details
North Median Transition
I-380/US 218

CLEAR CREEK TWP.
T-80N R-7W
SEC. 27



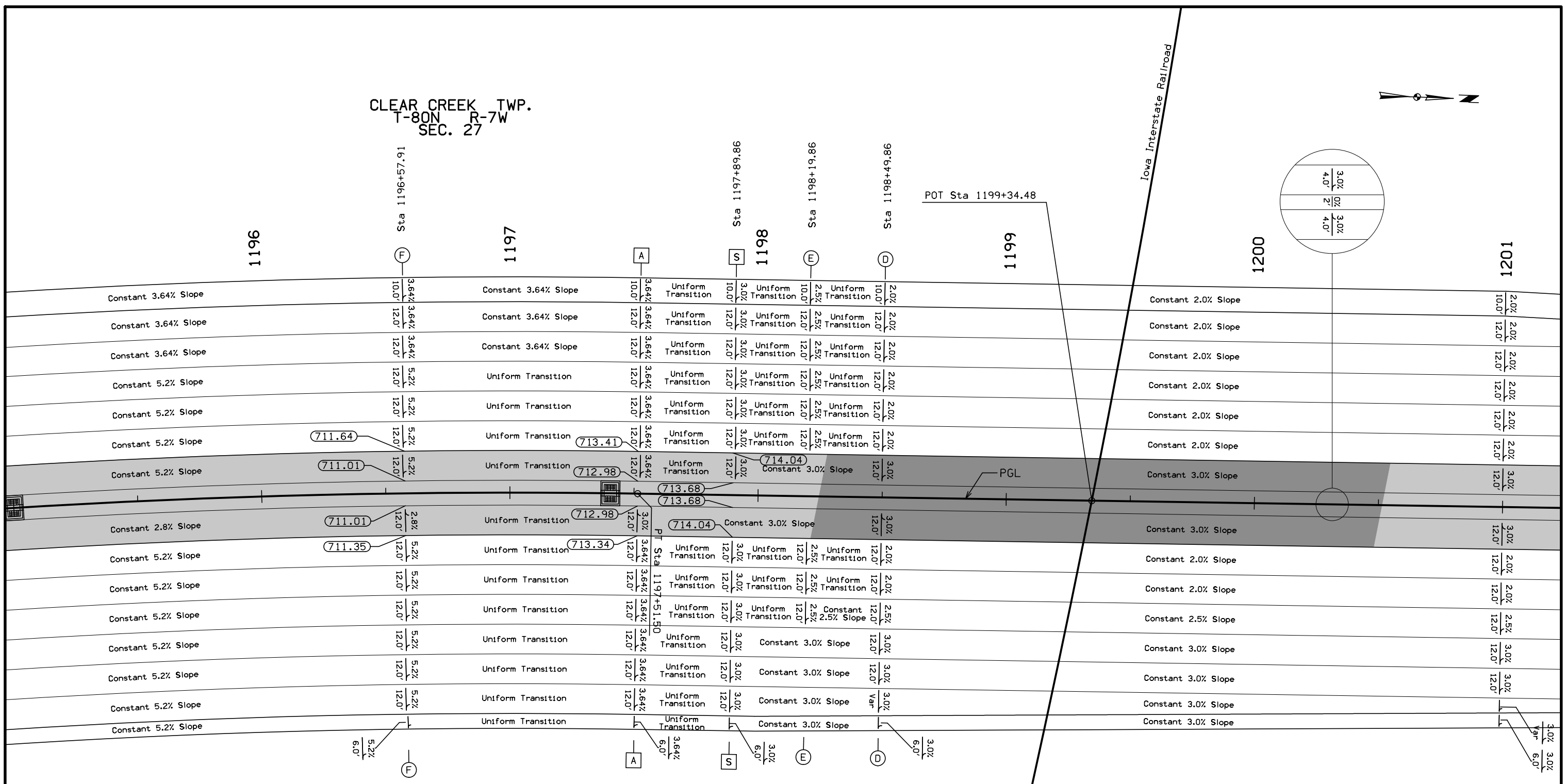
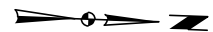
	Sta 1180+89.12	Sta 1181+19.12	Sta 1182+39.12	Sta 1183+59.12	Sta 1183+89.12	Sta 1184+19.12	Sta 1185+39.12	Sta 1185+51.12	
	(A)	(B)	(C)		(D)	(E)	(S)	(A)	(T)
	1181		1182		1183	1184		1185	
3.0%	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope
2.5%	Constant 2.5% Slope	Uniform Transition	Uniform Transition	Uniform Transition	Uniform Transition	Uniform Transition	Uniform Transition	Uniform Transition	Uniform Transition
2.0%	Constant 2.0% Slope	Constant 2.0% Slope	Constant 2.0% Slope	Constant 2.0% Slope	Constant 2.0% Slope	Constant 2.0% Slope	Constant 2.0% Slope	Constant 2.0% Slope	Constant 2.0% Slope
2.0%	Constant 2.0% Slope	Constant 2.0% Slope	Constant 2.0% Slope	Constant 2.0% Slope	Constant 2.0% Slope	Constant 2.0% Slope	Constant 2.0% Slope	Constant 2.0% Slope	Constant 2.0% Slope
3.0%	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope
3.0%	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope
2.0%	Constant 2.0% Slope	Constant 2.0% Slope	Uniform Transition	Uniform Transition	Uniform Transition	Uniform Transition	Uniform Transition	Uniform Transition	Uniform Transition
2.0%	Constant 2.0% Slope	Constant 2.0% Slope	Constant 2.0% Slope	Constant 2.0% Slope	Constant 2.0% Slope	Constant 2.0% Slope	Constant 2.0% Slope	Constant 2.0% Slope	Constant 2.0% Slope
2.5%	Constant 2.5% Slope	Constant 2.5% Slope	Constant 2.5% Slope	Constant 2.5% Slope	Constant 2.5% Slope	Constant 2.5% Slope	Constant 2.5% Slope	Constant 2.5% Slope	Constant 2.5% Slope
3.0%	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope
3.0%	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope	Constant 3.0% Slope
2.8%	Constant 2.8% Slope	Constant 2.8% Slope	Constant 2.8% Slope	Constant 2.8% Slope	Constant 2.8% Slope	Constant 2.8% Slope	Constant 2.8% Slope	Constant 2.8% Slope	Constant 2.8% Slope
5.2%	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope
5.2%	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope
5.2%	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope
5.2%	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope
5.2%	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope	Constant 5.2% Slope

- Notes:
- Points (A) (B) (C) (D) (E) (F) are superelevation transition points. See PV-305.
 - Points (A) (S) (T) are shoulder crown break points. See PV-305.
 - See U Sheets for Ramp Taper Staking Information.



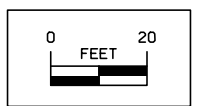
Staking Details
Median Paving
I-380/US 218

CLEAR CREEK TWP.
T-80N R-7W
SEC. 27



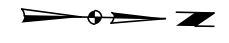
Curve Data
 $\Delta = 22^\circ 38' 40.61''$ (RT)
 T = 655.54
 L = 1,293.98
 R = 3,274.04
 E = 64.98
 $e = 5.2\%$
 L' = 312'
 x = 150'
 m = 94'

- Notes:
 1. Points (A) (B) (C) (D) (E) (F) are superelevation transition points. See PV-306.
 2. Points (A) (S) (T) are shoulder crown break points. See PV-306.



**Staking Details
 Median Paving
 I-380/US 218**

CLEAR CREEK TWP.
T-80N R-7W
SEC. 27



1202

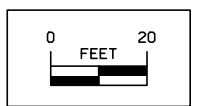
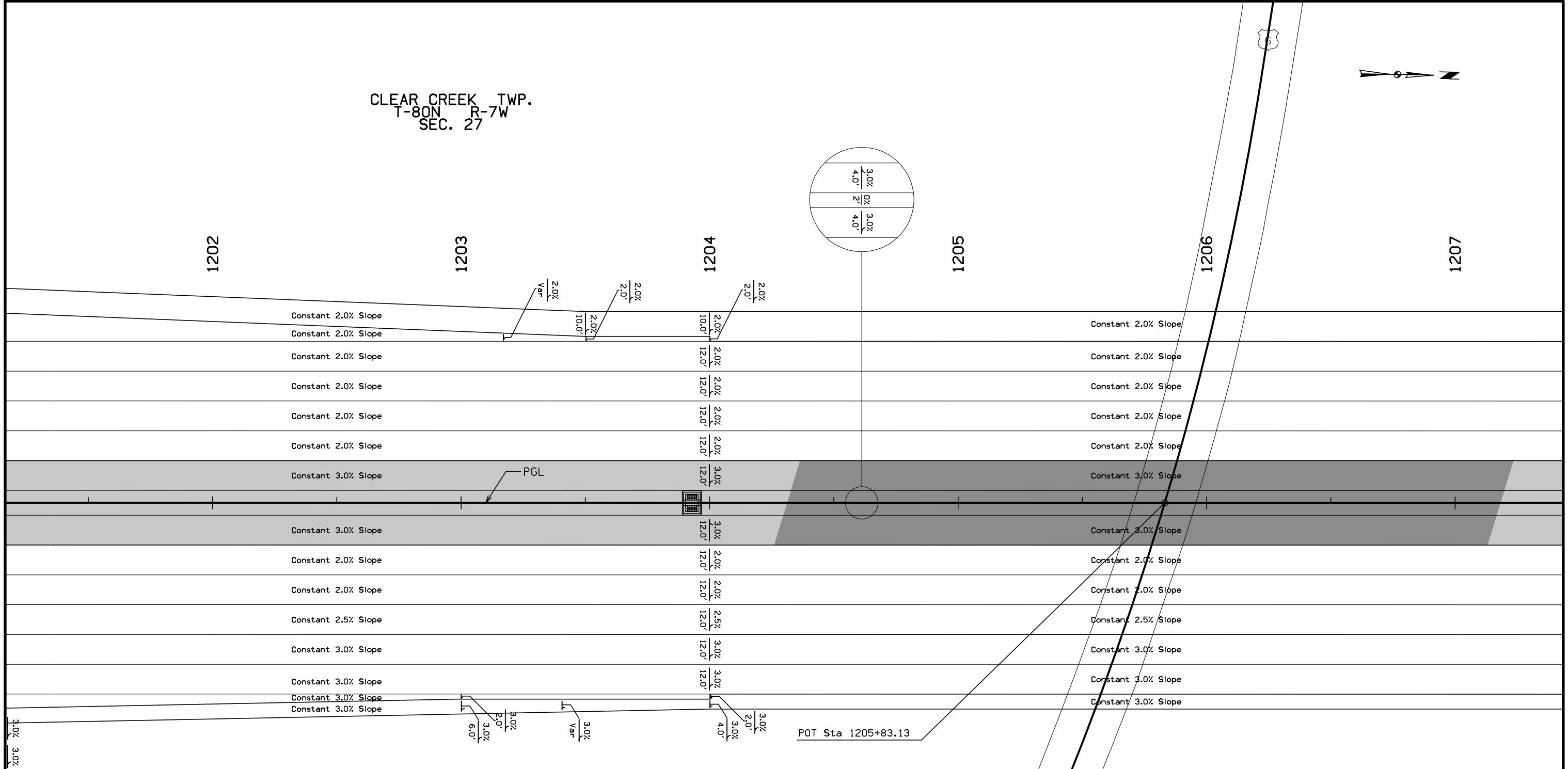
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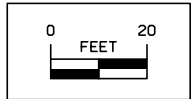
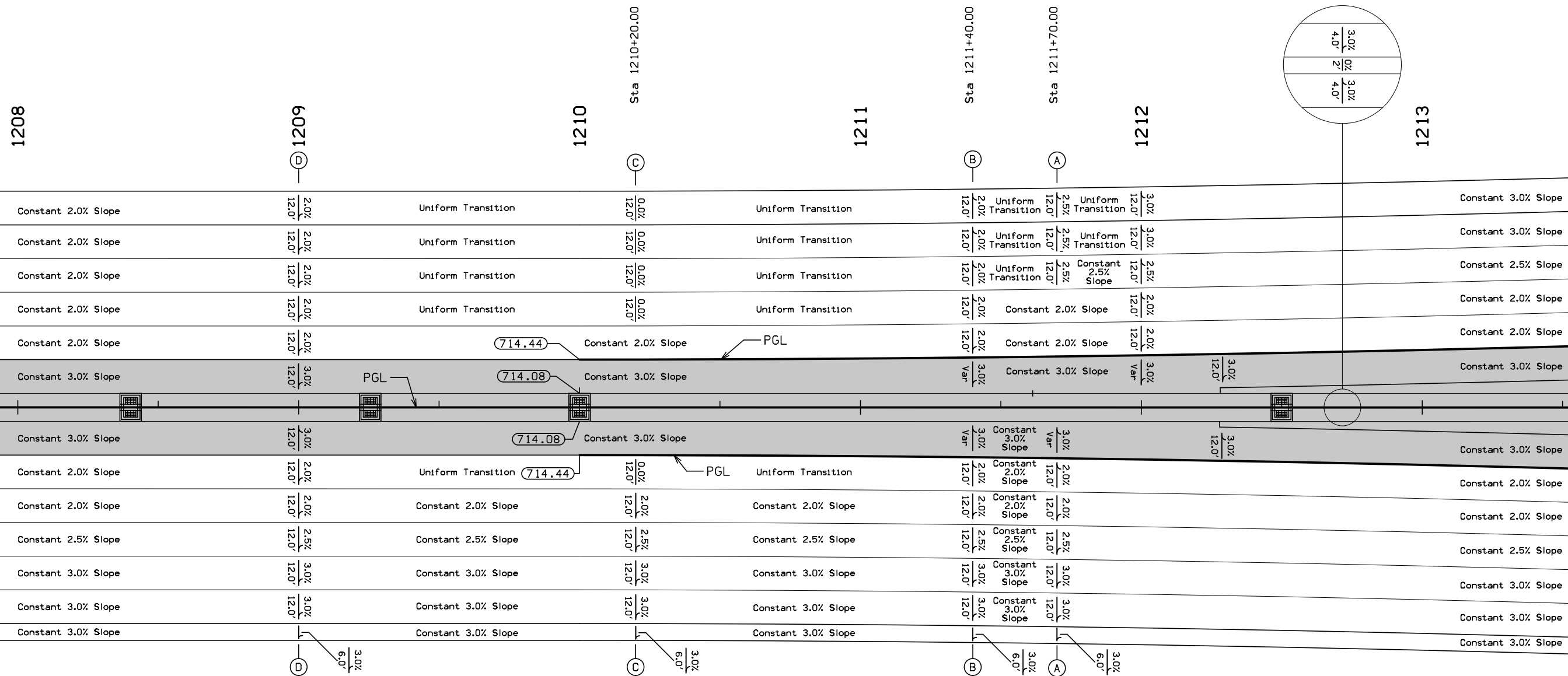
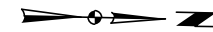
1206

1207



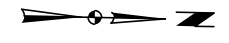
Staking Details
Median Paving
I-380/US 218

CLEAR CREEK TWP.
T-80N R-7W
SEC. 27



**Staking Details
Median Paving
I-380/US 218**

CLEAR CREEK TWP.
T-80N R-7W
SEC. 27



1214

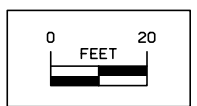
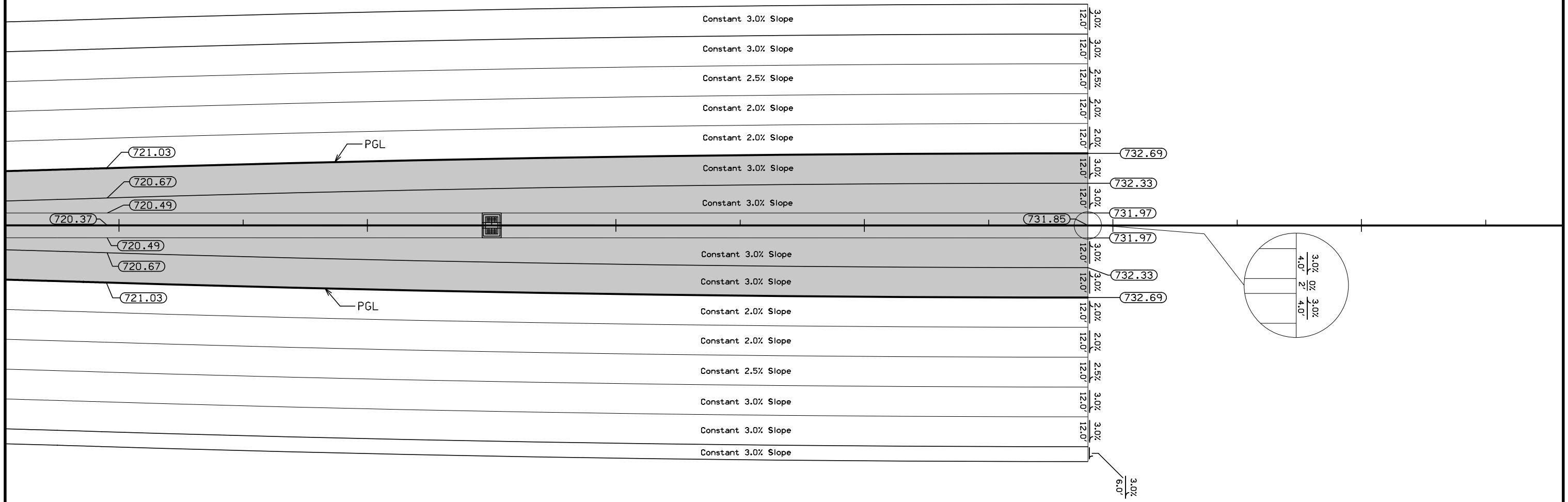
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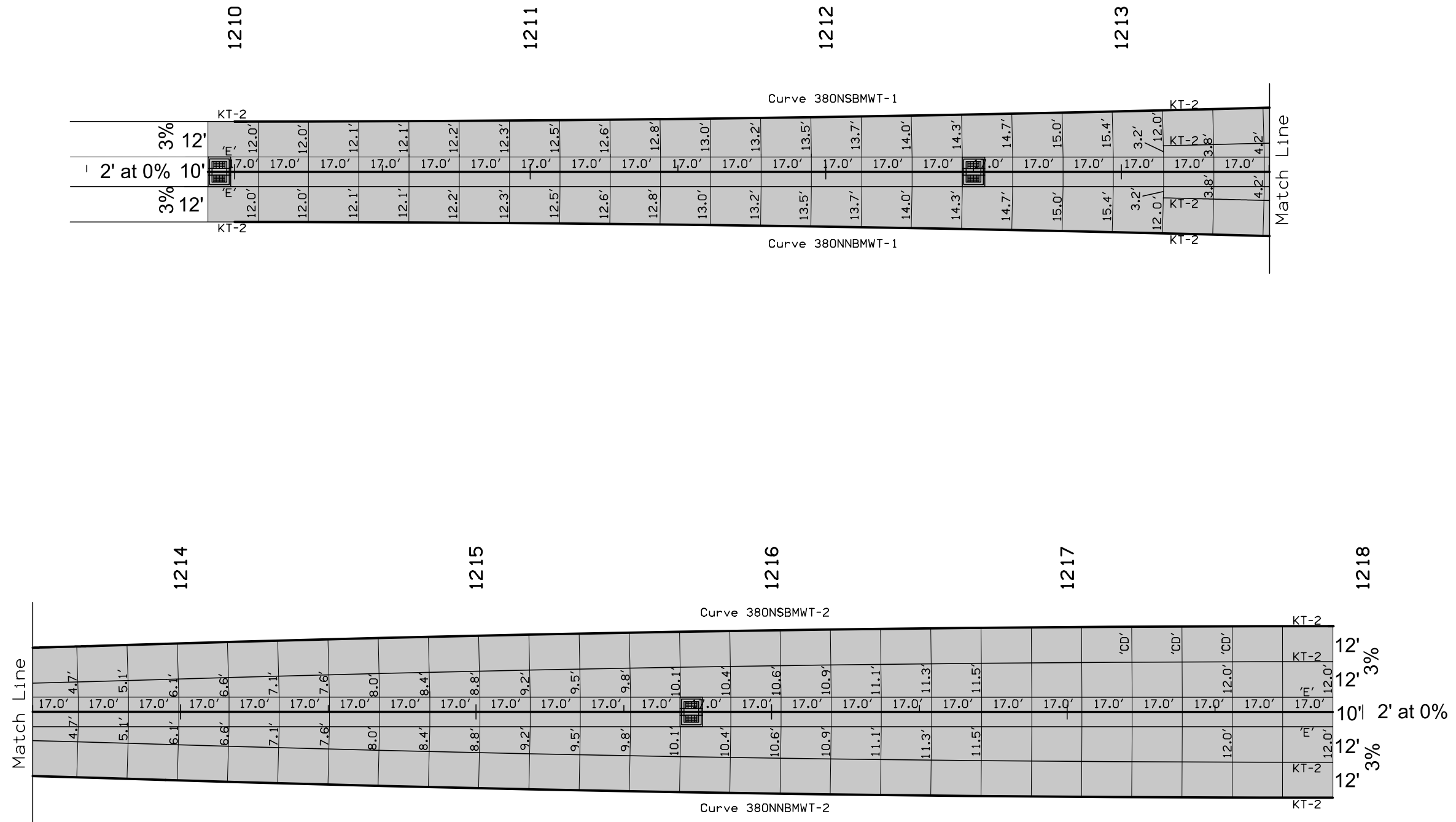
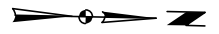
1218

1219



**Staking Details
Median Paving
I-380/US 218**

CLEAR CREEK TWP.
T-80N R-7W
SEC. 27



Jointing Details
North Median Transition
I-380/US 218

**ESTIMATED ROADWAY QUANTITIES
(1 DIVISION PROJECT)**

100_0A
2/3/2019

Item No.	Item Code	Item	Unit	Total	As Built Qty.
1	2401-6745065	REMOVAL OF BRIDGE END DRAINS	EACH	1	
2	2416-0100024	APRONS, CONCRETE, 24 IN. DIA.	EACH	21	
3	2416-0102224	APRON, LOW CLEARANCE CONCRETE, EQUIVALENT DIAMETER 24 IN.	EACH	1	
4	2435-0140160	MANHOLE, STORM SEWER, SW-401, 60 IN.	EACH	1	
5	2435-0250702	INTAKE, SW-507, WELL ONLY	EACH	5	
6	2435-0250900	INTAKE, SW-509	EACH	1	
7	2435-0251224	INTAKE, SW-512, 24 IN.	EACH	3	
8	2435-0254700	BARRIER INTAKE, SW-547	EACH	24	
9	2435-0254710	BARRIER INTAKE, SW-547 MODIFIED	EACH	9	
10	2435-0254900	BARRIER INTAKE, SW-549	EACH	3	
11	2435-0254910	BARRIER INTAKE, SW-549 MODIFIED	EACH	1	
12	2435-0256202	INTAKE, SW-562, WELL ONLY	EACH	1	
13	2435-0256210	INTAKE, SW-562 MODIFIED	EACH	2	
14	2435-0600120	INTAKE ADJUSTMENT, MAJOR	EACH	2	
15	2501-8400172	TEMPORARY SHORING	LS	1	
16	2502-8212415	SUBDRAIN, STANDARD, NON-PERFORATED, 15 IN., AS PER PLAN	LF	347	
17	2503-0114215	STORM SEWER GRAVITY MAIN, TRENCHED, REINFORCED CONCRETE PIPE (RCP), 2000D (CLASS III), 15 IN.	LF	560	
18	2503-0114218	STORM SEWER GRAVITY MAIN, TRENCHED, REINFORCED CONCRETE PIPE (RCP), 2000D (CLASS III), 18 IN.	LF	47	
19	2503-0114224	STORM SEWER GRAVITY MAIN, TRENCHED, REINFORCED CONCRETE PIPE (RCP), 2000D (CLASS III), 24 IN.	LF	4408	
20	2503-0116324	STORM SEWER GRAVITY MAIN, TRENCHED, 2000D LOW CLEARANCE CONCRETE PIPE, EQUIVALENT DIAMETER 24 IN.	LF	741	
21	2503-0124224	STORM SEWER GRAVITY MAIN, TRENCHLESS, REINFORCED CONCRETE PIPE (RCP), 2000D (CLASS III), 24 IN.	LF	1767	
22	2503-0200036	REMOVE STORM SEWER PIPE LESS THAN OR EQUAL TO 36 IN.	LF	474	
23	2503-0200341	STORM SEWER ABANDONMENT, PLUG, LESS THAN OR EQUAL TO 36 IN. DIA.	LF	430	
24	2510-6750600	REMOVAL OF INTAKES AND UTILITY ACCESSES	EACH	3	
25	2529-5070110	PATCH, FULL-DEPTH FINISH, BY AREA	SY	9	
26	2529-5070120	PATCH, FULL-DEPTH FINISH, BY COUNT	EACH	11	
27	2599-9999005	BRIDGE END DRAIN, SW-539	EACH	1	
28	2599-9999005	SUBDRAIN RISER, 15 IN., WITH NYLOPLAST BEEHIVE CASTING	EACH	18	
29	2599-9999009	DRAIN, CORRUGATED METAL SLOTTED PIPE, 12 IN., W/7.5 IN. GRATE	LF	5150	

ESTIMATE REFERENCE INFORMATION

100_4A
2/3/2019

Item No.	Item Code	Description
1	2401-6745065	REMOVAL OF BRIDGE END DRAINS Refer to tab 100-15 in the M sheets. Coordinate with bridge contractor.
2	2416-0100024	APRONS, CONCRETE, 24 IN. DIA. Refer to tab 104-5B in the M sheets.
3	2416-0102224	APRON, LOW CLEARANCE CONCRETE, EQUIVALENT DIAMETER 24 IN. Refer to tab 104-5B in the M sheets.
4	2435-0140160	MANHOLE, STORM SEWER, SW-401, 60 IN. Refer to Tab. 104-5B in the M sheets.
5	2435-0250702	INTAKE, SW-507, WELL ONLY 1- Refer to Tab. 104-5B in the M sheets. 2- Top well will be constructed during a future project.
6	2435-0250900	INTAKE, SW-509 Refer to Tab. 104-5B in the M sheets.
7	2435-0251224	INTAKE, SW-512, 24 IN. Refer to Tab. 104-5B in the M sheets.
8	2435-0254700	BARRIER INTAKE, SW-547 Refer to Tab. 104-5B in the M sheets.
9	2435-0254710	BARRIER INTAKE, SW-547 MOD Refer to Tab. 104-5B in the M sheets. Refer to the M sheets for Modified Standard Road Plans.
10	2435-0254900	BARRIER INTAKE, SW-549 Refer to Tab. 104-5B in the M sheets.
11	2435-0254910	BARRIER INTAKE, SW-549 MOD Refer to Tab. 104-5B in the M sheets. Refer to the M sheets for Modified Standard Road Plans.
12	2435-0256202	INTAKE, SW-562, WELL ONLY Refer to Tab. 104-5B and plan view in the M sheets. Cover the bottom well with a secured, steel plate prior to constructing Ramp B detour embankment.

ESTIMATE REFERENCE INFORMATION

100_4A
2/3/2019

Item No.	Item Code	Description
13	2435-0256210	INTAKE, SW-562 MOD Refer to Tab. 104-5B in the M sheets. Refer to the M sheets for Modified Standard Road Plans.
14	2435-0600120	INTAKE ADJUSTMENT, MAJOR Refer to Tab. 104-5B in the M sheets.
15	2501-8400172	TEMPORARY SHORING This item covers all of the temporary shoring needed for storm sewer removal and installation.
16	2502-8212415	SUBDRAIN, STANDARD, NON-PERFORATED, 15 IN., AS PER PLAN Refer to Tab. 104-5B in the M sheets.
17	2503-0114215	STORM SEWER GRAVITY MAIN, TRENCHED, REINFORCED CONCRETE PIPE (RCP), 2000D (CLASS III), 15 IN. Refer to Tab. 104-5B in the M sheets.
18	2503-0114218	STORM SEWER GRAVITY MAIN, TRENCHED, REINFORCED CONCRETE PIPE (RCP), 2000D (CLASS III), 18 IN. Refer to Tab. 104-5B in the M sheets.
19	2503-0114224	STORM SEWER GRAVITY MAIN, TRENCHED, REINFORCED CONCRETE PIPE (RCP), 2000D (CLASS III), 24 IN. Refer to Tab. 104-5B in the M sheets.
20	2503-0116324	STORM SEWER GRAVITY MAIN, TRENCHED, 2000D LOW CLEARANCE CONCRETE PIPE, EQUIVALENT DIAMETER 24 IN. Refer to Tab. 104-5B in the M sheets.
21	2503-0124224	STORM SEWER GRAVITY MAIN, TRENCHLESS, REINFORCED CONCRETE PIPE (RCP), 2000D (CLASS III), 24 IN. Refer to Tab. 104 5B in the M sheets.
22	2503-0200036	REMOVE STORM SEWER PIPE LESS THAN OR EQUAL TO 36 IN. Refer to Tab. 110-14 in the M sheets.
23	2503-0200341	STORM SEWER ABANDONMENT, PLUG, LESS THAN OR EQUAL TO 36 IN. DIA. Refer to Tab. 110-14 in the M sheets.
24	2510-6750600	REMOVAL OF INTAKES AND UTILITY ACCESSES Refer to Tab. 110-15 in the M sheets.
25	2529-5070110	PATCH, FULL-DEPTH FINISH, BY AREA
26	2529-5070120	PATCH, FULL-DEPTH FINISH, BY COUNT These two items cover patching of existing mainline I-380 pavement needed after installing temporary drainage structures and temporary inlet openings near existing pavement along I-380.
27	2599-9999005	BRIDGE END DRAIN, SW-539 1- Refer to Tab. 104-5B and plan view in the M sheets. 2- Refer to Standard Road Plan SW-539. 3- Measurement will be for each SW-539. 4- Payment will be per unit price of each SW-539 and is full compensation for excavation, furnishing (if required) and placing bedding and backfill material, compaction, base, structural concrete, reinforcing steel, precast units (if used), fillets, pipe connections, infiltration barriers, castings, and adjustment rings when applicable. HDPE pipe is considered incidental to Intake for Bridge End Drain and will not be paid for separately.
28	2599-9999005	SUBDRAIN RISER, 15 IN., WITH NYLOPLAST BEEHIVE CASTING Subdrain risers are used as interim drainage intakes during this project and future projects until they are removed. Contractor shall maintain those intakes and prevent any debris that could cause clogging to the opening of the intake. Measurement and payment shall be made for each subdrain riser and will include a nyloplast beehive casting, and inlet/outlet adapter as shown in the detail in the M sheets. All pipe bends, fittings, trenching, backfill, and all related work shall be incidental to subdrain riser installation.
29	2599-9999009	DRAIN, CORRUGATED METAL SLOTTED PIPE, 12 IN., W/7.5 IN. GRATE 1- Refer to Median Slotted Drain detail in the M sheets 2- Refer to Tab. HRG 01 in the M sheets. 3- Measured in linear feet along the centerline of the pipe from the beginning of slotted drain to the center of intake. Lengths of elbows and tees are included in the length of pipe measured. 4- Payment will be made at the unit price of the CMP slotted drain per linear foot including the slotted drain extender plates, #4 rebar, and PCC or HMA pavement associated with pipe installation. 5- Unit price includes, but is not limited to, slotted drain extender plates and grates, rebar, PCC or HMA pavement matching adjacent pavement, trench excavation, dewatering, furnishing bedding material, placing bedding and backfill material, joint wrapping, wyes and other fittings, pipe joints, pipe connections, testing, and inspection



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Aaron D. Granquist 7/23/2019
AARON D. GRANQUIST, P.E. DATE

License Number: 17560
My license renewal date is DECEMBER 31, 2020
Pages or sheets covered by this seal:
All M sheets

① Diameter or equivalent diameter
 ② XSTS = Existing Structure IS = Interim Structure IP = Interim Pipe TS = Temporary Structure TP = Temporary Pipe
 * Bid Item

STORM SEWER

INTAKES AND UTILITY ACCESSES							PIPES													
Design Length, Slope, and Flowlines are calculated from inside wall to inside wall along CL of pipe. An additional 2 ft length is added to each side of the Design Length to account for estimated length to center of structures.																				
No.	Location Station and Offset	*Type or Standard Road Plan	Form Grade	Bottom Well	Other	Notes	Line Number	Intake/Utility Access No.		Class 'D'	Pipe Size	Bid* Length	Design Length	Slope %	Connected Pipe Joint (DR-121) Type	Flow Lines			Pipe Profile Sheet No.	Notes
			Elev.	Elev.				From	To							Inlet Elevation	Outlet Elevation	Other Elevation		
								IN	FT							FT				
08093	689+50.00, 0.00 (ML080)	INTAKE ADJUSTMENT, MAJOR	707.58	-		Note 15, 25	P-08093a	08093	08094	RCAP	29x18			2.87+/-		703.20+/-	697.60+/-		M.18	Note 1
08094	687+50.00, 0.00 (ML080)	INTAKE ADJUSTMENT, MAJOR	702.26	-		Note 15	P-08094a	08094	EX-01	RCAP	29x18			2.75+/-		697.40+/-	690.65+/-		M.18	Note 1
EX-01	684+99.95, 0.00 (ML080)	-	-	-		Note 1														
080107	689+37.50, 85.00 Lt (ML080)	SW-509	707.26	-	-4.00%	Note 3, 5, 14, 28	P-080107a	080107	EX-02	RCP	24			Unknown		unknown	677.50		M.19	Note 1, 2, 14
EX-02	689+32.26, 181.67 Lt (ML080)	-	-	-		Note 1														
080103	696+64.39, 4.75 Lt (ML080)	SW-549 MOD	713.37	707.95		Note 4, 6	P-080103	080103	080104	2000	24	47.0	42.6	0.23		708.45	708.35		M.18	Note 6
080104	697+12.00, 3.33 Lt (ML080)	SW-549	713.40	707.69			P-080104a	080104	EX-03	RCP	24			1.00+/-		708.19+/-	707.24+/-		M.19	Note 2
EX-03	697+10.00, 108.65 Lt (ML080)	-	-	-		Note 1														
EX-04	701+00.00, 0.00 (ML080)	-	-	-		Note 1														
08098	700+45.00, 0.00 (ML080)	SW-211	FL = 712.73	-			P-08098a	EX-04	08098	RCAP	29x18			1.08+/-		713.30+/-	712.73+/-		M.18	Note 1
08099	699+00.00, 1.88 Lt (ML080)	SW-549	714.65	708.20		Note 8	P-08099	08099	08099	2000	29x18	147.0	142.5	2.50		712.73+/-	709.17		M.18	Note 9
080100	698+19.20, 1.88 Rt (ML080)	SW-549	714.33	707.50		Note 8	P-08099	08099	080100	2000	24	81.0	76.1	0.50		708.70	708.32		M.18	
080101	698+20.00, 130 Lt (ML080)	SW-211	FL = 696.20	-			P-080100	080100	080101	2000 J	24	136.0	131.1	9.00		708.00	696.20		M.19	
080102	698+20.00, 152 Lt (ML080)	DR-201 (24")	FL = 696.08	-			P-080101	080101	080102	2000	24	18.0	15.9	0.50		696.20	696.12		M.19	
080111	711+45.00, 101.50 (ML080)	DR-206 (29" x 18")	FL = 731.20	-			P-080111	080111	080112	2000	29x18	116.0	113.2	0.40		730.45	730.06		M.19	
080112	710+24.00, 80.00 Rt (ML080)	SW-401 (60")	733.44	729.56			P-080112	080112	080113	2000	24	18.0	13.3	1.00		730.06	729.93+/-		M.19	Note 9
080113	710+24.16, 64.72 Rt (ML080)	SW-211	FL = 729.93	-			P-080113a	080113	EX-05	RCP	24			-		729.93+/-	-		M.19	Note 1
EX-05	710+25.59, 128.56 Lt (ML080)	-	-	-		Note 1														
080115	690+65.50, 84.83 Rt (ML080)	SW-539	709.19	703.30		Note 23	P-080115	-	-	-	-	-	-	-		-	-		-	Note 23
370-049	1126+60.00, 23.50 Rt (ML380)	SUBDRAIN RISER, 15"	FL = 726.50	-		Note 4, 11, 21	P-371-049	370-049	370-050	2000	15	113.0	109.0	3.00		725.08	721.81		M.11	
371-050	1125+50.00, 23.50 Rt (ML380)	SW-211	FL = 721.81	-			P-371-050	371-050	38009	2000	15	24.0	20.0	2.00		721.81	721.41		M.11	
38009	1125+50.00, 0.00 (ML380)	SW-547	725.04	718.30		Note 27	P-38009	38009	38010	2000	24	329.0	325.0	2.30		718.80	711.32		M.07	
38010	1122+20.00, 0.00 (ML380)	SW-547	717.54	710.39		Note 27	P-38010	38010	38011	2000 J	24	126.0	121.5	11.00		710.89	697.53		M.11	
38011	1122+20.00, 125.00 Lt (ML380)	SW-211	FL = 697.53	-			P-38011	38011	38013	2000	24	19.0	16.9	1.00		697.53	697.36		M.11	
38013	1122+20.00, 148.00 Lt (ML380)	DR-201 (24")	FL = 697.30	-																
371-046	1130+90.00, 23.50 Rt (ML380)	SUBDRAIN RISER, 15"	734.35	-		Note 4, 11, 21	P-371-046	371-046	38018	2000	15	23.0	19.0	0.50		731.89	731.80		M.11	
371-047	1130+90.00, 23.50 Lt (ML380)	SUBDRAIN RISER, 15"	734.35	-		Note 4, 11, 21	P-371-047	371-047	38018	2000	15	23.0	19.0	0.50		731.89	731.80		M.11	
38018	1130+90.00, 0.00 (ML380)	SW-547	735.54	728.98		Note 27	P-38018	38018	38019	2000	29x18	229.0	225.0	1.50		729.48	726.10		M.07	
38019	1128+60.00, 0.00 (ML380)	SW-547	731.79	725.09		Note 27	P-38019	38019	38020	2000	24	89.0	84.9	0.50		725.59	725.17		M.07	
38020	1127+70.10, 0.00 (ML380)	SW-547	730.00	724.37		Note 24	P-38020	38020	-	RCP	24	-	-	-		724.87+/-	-			See X-Sections
38025	1135+87.00, 0.00 (ML380)	SW-547	739.70	731.80		Note 24, 27	P-38025	38025	-	RCP	30	-	-	-		732.30 +/-	-			See X-Sections
38034	1151+00.00, 0.00 (ML380)	SW-547	747.27	740.50		Note 27	P-38034	38034	38035	2000	24	274.0	270.0	0.50		741.00	739.65		M.08	
371-040	1148+25.00, 22.50 Rt (ML380)	SUBDRAIN RISER, 15"	744.60	-		Note 4, 11, 21	P-371-040	371-040	38035	2000	15	22.0	18.0	0.50		742.00	741.90		M.11	
371-041	1148+25.00, 22.50 Lt (ML380)	SUBDRAIN RISER, 15"	744.60	-		Note 4, 11, 21	P-371-041	371-041	38035	2000	15	22.0	18.0	0.50		742.00	741.90		M.11	
38035	1148+25.00, 0.00 (ML380)	SW-547	745.89	738.85		Note 27	P-38035	38035	38036	2000	24	359.0	354.5	0.50		739.35	737.58		M.08	
38036	1144+68.00, 0.00 (ML380)	SW-547	744.11	736.78		Note 27	P-38036	38036	38037	2000	24	387.0	383.0	0.50		737.28	735.36		M.08	
371-043	1140+80.00, 23.50 Rt (ML380)	SUBDRAIN RISER, 15"	741.00	-		Note 4, 11, 21	P-371-043	371-043	38037	2000	15	23.0	19.0	0.50		738.10	738.00		M.11	
371-044	1140+80.00, 23.00 Lt (ML380)	SUBDRAIN RISER, 15"	741.00	-		Note 4, 11, 21	P-371-044	371-044	38037	2000	15	23.0	18.5	0.50		738.10	738.00		M.11	
38037	1140+80.00, 0.00 (ML380)	SW-547	742.17	733.84		Note 27	P-371-044	371-044	38037	2000	15	23.0	18.5	0.50		738.10	738.00		M.11	
38039	1140+80.00, 126.00 Lt (ML380)	DR-201 (24")	FL = 733.14	-			P-38037	38037	38039	2000 J	24	119.0	116.4	1.00		734.34	733.18		M.11	
38040	1160+43.90, 0.00 (ML380)	SW-547 MOD	748.07	741.57		Note 4, 27														
371-001	1161+15.00, 23.00 Rt (ML380)	SUBDRAIN RISER, 15"	744.05	-		Note 4, 11, 21	P-38040	38040	371-002	2000 J	24	22.0	19.5	19.00		742.07	738.37		M.12	
371-002	1160+43.90, 23.00 Rt (ML380)	SW-211	FL = 738.70	-		Note 10, 21	P-38040-2	371-002	38041	2000 J	24	201.0	199.0	19.00		738.37	700.56		M.12	
38041	1160+43.90, 222.00 Rt (ML380)	SW-211	FL = 700.55	-			P-371-001	371-001	371-002	2000	15	75.0	70.1	4.00		741.40	738.70		M.12	
38042	1160+43.90, 243.00 Rt (ML380)	DR-201 (24")	FL = 700.40	-		Note 12	P-38041	38041	38042	2000	24	17.0	14.9	1.00		700.56	700.43		M.12	
371-004	1161+33.80, 23.00 Lt (ML380)	SUBDRAIN RISER, 15"	743.64	-		Note 4, 11, 16, 21														
EX-11	1161+31.72, 119.08 Lt (ML380)	-	-	-		Note 1	P-371-004a	371-004	EX-11	RCP	24			-		-	-		M.12	Note 1, 14
38045	1166+02.60, 0.00 (ML380)	SW-547 MOD	735.27	728.85		Note 4	P-38045	38045	38050	2000	24	265.0	260.4	3.40		729.35	720.50		M.09	
371-006	1168+68.00, 23.00 Lt (ML380)	SUBDRAIN RISER, 15"	725.73	-		Note 4, 11, 21	P-371-006	371-006	38050	2000	15	23.0	18.5	2.00		724.37	724.00		M.13	
371-007	1168+68.00, 23.00 Rt (ML380)	SUBDRAIN RISER, 15"	725.81	-		Note 4, 11, 21	P-371-007	371-007	38050	2000	15	23.0	18.5	2.00		724.41	724.08		M.13	
38050	1168+68.00, 0.00 (ML380)	SW-547 MOD	727.63	719.89		Note 4, 27	P-371-007	371-007	38050	2000	15	23.0	18.5	2.00		724.41	724.08		M.13	
371-008	1168+84.00, 165.00 Rt (ML380)	DR-201 (24")	FL = 691.18	-		Note 13	P-38050	38050	371-008	2000 J	24	165.0	162.3	18.00		720.39	691.18		M.13	

① Diameter or equivalent diameter
 ② XSTS = Existing Structure IS = Interim Structure IP = Interim Pipe TS = Temporary Structure TP = Temporary Pipe

STORM SEWER

* Bid Item

INTAKES AND UTILITY ACCESSES

PIPES

Design Length, Slope, and Flowlines are calculated from inside wall to inside wall along CL of pipe. An additional 2 ft length is added to each side of the Design Length to account for estimated length to center of structures.

No.	Location Station and Offset	*Type or Standard Road Plan	Form Grade		Bottom Well	Other	Notes	Line Number	Intake/Utility Access No.		Class 'D'	Pipe Size	Bid* Length	Design Length	Slope %	Connected Pipe Joint (DR-121)	Flow Lines			Pipe Profile Sheet No.	Notes
			Elev.	Elev.					From	To							Inlet Elevation	Outlet Elevation	Other Elevation		
38060	1173+50.00, 0.00 (ML380)	SW-547	713.76	707.51				P-38060	38060	371-010	2000 J	24	124	121.5	12.50		708.01	692.82		M.13	
371-010	1173+50.00, 125.00 Rt (ML380)	DR-201 (24")	692.82	-			Note 13														
371-011	1178+60.00, 23.5 (ML380)	SUBDRAIN RISER, 15"	696.33	693.69			Note 4, 11, 21	P-371-011	371-011	38065	2000	15	23.0	19.0	1.00		694.19	694.00		M.14	
38065	1178+60.00, 0.00 (ML380)	SW-547	699.08	691.16			Note 27	P-38065	38065	38066	2000	24	189.0	185.0	2.90		691.66	686.29		M.09	
38066	1180+50.00, 0.00 (ML380)	SW-547	693.76	685.46			Note 27	P-38066	38066	38067	2000	29x18	249.0	245.0	1.40		685.96	682.53		M.09	
371-012	1183+00.00, 23.00 Rt (ML380)	SUBDRAIN RISER, 15"	687.43	-			Note 4, 11, 21	P-371-012	371-012	38067	2000	15	23.0	18.5	2.00		684.77	684.40		M.14	
38067	1183+00.00, 0.00 (ML380)	SW-547	689.26	681.93			Note 27	P-38067	38067	371-013	2000 J	24	23.0	18.5	0.80		682.43	682.28		M.14	
371-013	1183+00.00, 23.00 Lt (ML380)	SUBDRAIN RISER, 15"	687.43	-			Note 4, 10, 11, 21	P-38067-2	371-013	38068	2000 J	24	76.0	73.4	0.80		682.28	681.70		M.14	
38068	1183+00.00, 103.50 Lt (ML380)	DR-201 (24")	FL = 681.63	-																	
371-015	1184+40.00, 23.00 Lt (ML380)	SW-512 (24")	686.91	683.27			Note 21	P-371-015	371-015	38073	2000	18	24.0	19.1	4.00		683.77	683.00		M.14	
371-016	1184+35.00, 23.00 Rt (ML380)	SW-512 (24")	686.86	682.69			Note 27	P-371-016	371-016	38073	2000	18	23.0	18.5	1.00		683.19	683.00		M.14	
38073	1184+35.00, 0.00 (ML380)	SW-547	688.22	680.30			Note 27	P-38073	38073	38074	2000	24	77.0	72.3	0.50		680.80	680.44		M.09	
38070	1186+98.00, 0.00 (ML380)	SW-547 MOD	689.02	682.76			Note 4	P-38070	38070	38071	2000	24	75.0	70.5	0.90		683.26	682.63		M.09	
38071	1186+22.50, 0.00 (ML380)	SW-547 MOD	688.41	681.84			Note 4	P-38071	38071	38072	2000	24	30.0	26.0	0.50		682.34	682.21		M.09	
38072	1185+91.53, 0.00 (ML380)	SW-547	688.25	681.16			Note 27	P-38072	38072	38074	2000	24	81.0	76.7	1.50		681.66	680.51		M.09	
38074	1185+09.80, 0.00 (ML380)	SW-547	688.07	679.59			Note 27	P-38074	38074	38075	2000 J	24	128.0	123.5	4.60		680.09	674.41		M.14	
38075	1185+09.80, 127.00 Rt (ML380)	SW-211	FL = 674.41	-				P-38075	38075	38076	2000	24	18.0	15.3	0.50		674.41	674.33		M.14	
38076	1185+09.80, 148.40 Rt (ML380)	DR-201 (24")	FL = 674.30	-																	
371-020	1191+41.50, 23.00 Lt (ML380)	SUBDRAIN RISER, 15"	698.22	-			Note 4, 11, 21	P-371-020	371-020	38080	2000	15	23.0	18.5	5.00		694.43	693.50		M.15	
38080	1191+41.50, 0.00 (ML380)	SW-547 MOD	698.04	692.00			Note 4	P-38080	38080	38082	2000 J	24	160.0	155.4	15.40		692.50	668.57		M.15	
38082	1191+41.50, 158.89 Rt (ML380)	SW-211	FL = 668.57	-				P-38082	38082	38083	2000	24	24.0	22.0	0.5		668.57	668.46		M.15	
38083	1191+41.50, 187.00 Rt (ML380)	DR-201 (24")	FL = 668.43	-																	
38085	1197+38.30, 0.00 (ML380)	SW-547 MOD	712.60	705.86			Note 4	P-38085	38085	38086	2000	24	238.0	233.3	3		706.36	699.36		M.10	
371-021	1195+00.00, 23.00 Rt (ML380)	SUBDRAIN RISER, 15"	707.32	-			Note 4, 11, 19, 21	p-371-021	371-021	38086	2000	15	23.0	18.5	3.00		703.06	702.50		M.14	
38086	1195+00.00, 0.00 (ML380)	SW-547	707.00	698.56			Note 27	P-38086	38086	38087	2000	24	199.0	195.0	2.30		699.06	694.58		M.09	
38087	1193+00.00, 0.00 (ML380)	SW-547	702.00	693.78			Note 27	P-38087	38087	38089	2000 J	24	172.0	167.5	14.90		694.28	669.32		M.15	
38089	1193+00.00, 171.00 Rt (ML380)	SW-211	FL = 669.32	-				P-38089	38089	38090	2000	24	22.0	19.9	0.70		669.32	669.18		M.15	
38090	1193+00.00, 197.00 Rt (ML380)	DR-201 (24")	FL = 669.16	-																	
371-023	1203+62.80, 23.00 Rt (ML380)	OPEN PIPE INLET	FL = 711.77	-			Note 19,20	P-371-023	371-023	38095	2000	15	23.0	18.5	0.40		710.50	710.43		M.16	
38095	1203+62.80, 0.00 (ML380)	SW-547 MOD	716.98	709.76			Note 4, 27	P-38095	38095	371-022	2000 J	24	24.0	19.5	16.60		710.26	707.03		M.16	
371-022	1203+62.80, 23.00 Lt (ML380)	SUBDRAIN RISER, 15"	711.32	-			Note 4, 11, 19, 21	P-38095-2	371-022	38097	2000 J	24	171.0	167.0	16.60		707.03	679.30		M.16	
38097	1203+62.80, 190.00 Lt (ML380)	SW-211	FL = 679.30	-				P-38097	38097	38098	2000	24	31.0	28.9	0.50		679.30	679.16		M.16	
38098	1203+62.80, 225.00 Lt (ML380)	DR-201 (24")	FL = 679.10	-																	
380100	1207+64.80, 0.00 (ML380)	SW-547 MOD	713.84	706.32			Note 4	P-380100	380100	380102	2000	24	75.0	70.4	1.00		706.82	706.00		M.10	
380102	1208+40.18, 0.00 (ML380)	SW-547	713.36	705.20			Note 27	P-380102	380102	380107	2000	24	87.0	82.8	0.50		705.70	705.29		M.10	
380104	1215+72.85, 0.00 (ML380)	SW-547	725.67	719.14			Note 27	P-380104	380104	380105	2000	24	322.0	317.9	2.80		719.64	710.74		M.10	
380105	1212+50.00, 0.00 (ML380)	SW-547	717.25	709.84			Note 22, 27	P-380105	380105	380106	2000	24	255.0	250.2	1.50		710.34	706.59		M.10	
380106	1209+94.85, 0.00 (ML380)	SW-547	713.93	705.84			Note 27	P-380106	380106	380107	2000	24	69.0	64.4	0.50		706.34	706.02		M.10	
371-030	1207+55.00, 23.00 Lt (ML380)	BEGINNING OF SUBDRAIN	709.09	-			Note 18, 21	P-371-030	371-030	371-031	SUBDRAIN	15	173.0	168.5	1.00		708.38	706.69		M.16	Note 17
371-031	1209+25.50, 23.00 Lt (ML380)	SUBDRAIN RISER, 15"	710.29	-			Note 4, 11, 21	P-371-031	371-031	380107	2000	15	23.0	18.5	1.00		706.69	706.50		M.17	
371-032	1207+55.00, 23.00 Rt (ML380)	BEGINNING OF SUBDRAIN	709.34	-			Note 18, 21	P-371-032	371-032	371-033	SUBDRAIN	15	174.0	169.5	2.3		708.38	704.48		M.17	Note 17
380107	1209+25.50, 0.00 (ML380)	SW-547	713.53	704.2			Note 10, 21	P-380107	380107	371-033	2000 J	24	24.0	19.5	4.6		704.70	704.07		M.17	
371-033	1209+25.50, 23.00 Rt (ML380)	SW-211	FL = 704.48	-			Note 10, 21	P-380107-2	371-033	380108	2000 J	24	96.0	92.0	4.6		704.07	699.84		M.17	
380108	1209+25.50, 115.00 Rt (ML380)	SW-211	FL = 699.84	-				P-380108	380108	380113	2000	24	20.0	17.9	0.5		699.84	699.75		M.17	
380113	1209+25.50, 139.00 Rt (ML380)	DR-201 (24")	FL = 699.73	-																	
380115	1218+75.23, 0.00 (ML380)	SW-562 MOD	734.40	-			Note 2, 4, 26, 27	P-380115a	380115	380116	RCP	24	-	-	-		728.96+/-	727.06+/-		M.17	Note 1
380116	1218+41.77, 123.89 Lt (ML380)	-	-	-			Note 1														

① Diameter or equivalent diameter
 ② XSTS = Existing Structure IS = Interim Structure IP = Interim Pipe TS = Temporary Structure TP = Temporary Pipe
 * Bid Item

STORM SEWER

INTAKES AND UTILITY ACCESSES

PIPES

Design Length, Slope, and Flowlines are calculated from inside wall to inside wall along CL of pipe. An additional 2 ft length is added to each side of the Design Length to account for estimated length to center of structures.

No.	Location Station and Offset	*Type or Standard Road Plan	Form Grade Elev.	Bottom Well Elev.	Other	Notes	Line Number	Intake/Utility Access No.		Class 'D'	Pipe Size IN	Bid* Length FT	Design Length FT	Slope %	Connected Pipe Joint (DR-121) Type	Flow Lines			Pipe Profile Sheet No.	Notes
								From	To							Inlet Elevation	Outlet Elevation	Other Elevation		
Notes:																				
1	For Information Only - U.A.C.																			
2	Field verify existing pipe size/elevation. Connection of existing pipe shall be incidental to the associated proposed structure, including field bends as needed. When applicable, removal of existing pipe within the structure shall be incidental to the associated proposed structure.																			
3	Extend curb and insert from intake opening to the bridge barrier.																			
4	Refer to M sheets for Modified Standard Road Plans and Special Details																			
5	Slope of top of structure is shown in the "Other" column. Positive grade represents slope towards the roadway and negative grade represents slope away from the roadway.																			
6	Coordinate with the bridge contractor for structures and longitudinal pipes placed near bridge and retaining walls.																			
7	Use of DR-121, Type 2 (Connected Pipe Joints) required for all pipe joints.																			
8	Refer to M sheets for Details of Typical Jointing for Grate Barrier Intake in Median Shoulder.																			
9	Refer to removals plan view and tabulations 110-14, 110-15 in the M Sheets. SW-211 Pipe Collar Connection shall be used to connect existing pipe to proposed pipe. Connection is considered incidental to associated proposed pipe construction. Adjacent proposed pipe lengths are measured to centerline of connection. Field determine existing pipe location and elevation.																			
10	Connect interim drainage pipe or structure to proposed trenchless pipe																			
11	Standpipe construction to be paid for with item "SUBDRAIN RISER, 15 IN., WITH NYLOPLAST BEEHIVE CASTING" and includes all bends, fittings, connections to associated drainage elements and pipe modifications. Pipe slope shall maintain minimum 0.4% slope.																			
12	Grade a ditch at the outlet of the apron to drain north east to tie with the ditch along the existing exit ramp.																			
13	Connection shall be made using collar which can be removed during future stage without damaging proposed pipe.																			
14	Storm Sewer pipe requires as-built survey. Refer to bid item "CONSTRUCTION SURVEY" in the C sheets.																			
15	Remove and replace top, paid for by "INTAKE ADJUSTMENT, MAJOR".																			
16	Remove the upstream portion of the existing pipe and connect a standpipe for interim drainage purposes. Place sandbags on the downstream end of the openings to prevent bypass.																			
17	Pipe construction to paid by "SUBDRAIN, STANDARD, NON-PERFORATED, 15 IN., AS PER PLAN" and includes all bends, fittings, connection to associated drainage elements and pipe modifications. Pipe slope shall maintain minimum 0.4% slope.																			
18	Cut the top of the subdrain at this location to allow better water flow into the subdrain pipe.																			
19	Place sandbags on the downstream end of the openings to prevent bypass.																			
20	Place an orange safety fence around the pipe opening.																			
21	Removal of existing pavement might be required for the installation of the structure and the associated pipe. Where applicable, patching will be paid for with item "PATCH, FULL-DEPTH FINISH, BY AREA" and/or item "PATCH, FULL-DEPTH FINISH, BY COUNT".																			
22	Extend the top of structure end to match the adjacent longitudinal shoulder joint.																			
23	Refer to Standar Road Plan SW-539. The following are the flow line elevations and the dimensions in feet: A = 709.09, B = 703.34, C = 703.08, D = 670.5, E = 670.10, L1 = 1.58, L2 = 8.55, L3 = 110.62, L4 = 9.92																			
24	Connect to existing RCP. Removal of existing pipe within proposed structure is considered incidental to structure construction. The circular option of SW-547 is recommended. See cross sections for profile view.																			
25	Adjust the intake top to be against the nearest bridge approach transverse joint. Coordinate with bridge contractor. Use the modified SW-547 top.																			
26	Coordinate with project IM-NHS-380-6(373)1--03-52 contractor.																			
27	Slotted drain will connect to this intake. Refer to the Median Slotted Drain tab and detail in the M sheets. For connection intakes that are within the bridge approach. End the slotted drain prior to the bridge approach pavement.																			
28	Removal of existing pipe within proposed structure, and pipe bends and fittings are considered incidental to structure placement.																			
29	Intake top will be placed during a future project. Cover the intake well with a steel plate. The elevation provided under the "Form Grade" column is the actual form grade elevation of the structure after placing the intake top.																			
30	Use SW-604 Type 4B casting.																			
GN:																				
1	Pipe class "2000 J" refers to pipes that will require trenchless "Jacking" construction.																			
2	Coordinate with bridge contractors for all intakes and pipes installation within bridge approach areas.																			

SANITARY OR STORM SEWER ABANDONMENT OR REMOVAL

110-14
02/03/2019

* Not a bid item

Location/Description	Sanitary or Storm Sewer	Abandonment, Plug Only or Abandonment, Plug and Fill or Removal	Length of Pipe		Fill Material*	Remarks
			≤ 36 inch diameter	> 36 inch diameter	Flowable Mortar or CLSM	
			LF	LF	CY	
589+84.55, 0.00' RT to 590+25.26, 68.84' RT	Storm Sewer	Abandonment, Plug Only		80		R-0005
618+02.21, 0.00' RT to 618+44.59, 73.17' RT	Storm Sewer	Abandonment, Plug Only	85			R-0008
620+69.58, 81.30' RT to 621+93.45, 80.51' RT	Storm Sewer	Removal	124			R-0009
621+85.67, 82.16' RT to 621+92.00, 137.00' RT	Storm Sewer	Removal	109			R-0010
620+58.83, 79.81' LT to 621+84.05, 79.61' LT	Storm Sewer	Removal	125			R-0011
697+12.00, 7.54' LT to 698+00.22, 2.25' RT	Storm Sewer	Removal	98			R-0100
68+02.00, 0.00 to 700+45.00, 0.00	Storm Sewer	Removal	240			R-0101
1159+66.85, 0.41' LT to 1160+74.00, 0.00' RT	Storm Sewer	Removal	107			R-0020
1160+74.00, 0.00' RT to 1161+34.28, 1.62' RT	Storm Sewer	Removal	60			R-0021
1184+69.94, 9.37' RT to 1184+70.30, 115.55' RT	Storm Sewer	Abandonment, Plug Only	106			R-0022
1190+44.68, 29.00' RT to 1190+46.35, 143.48' RT	Storm Sewer	Abandonment, Plug Only	114			R-0023
1190+44.68, 29.00' RT to 1192+09.92, 1.30' LT	Storm Sewer	Removal	190			R-0024
1204+07.85, 0.53' LT to 1204+25.11, 17.00' LT	Storm Sewer	Removal	34			R-0025
1204+25.11, 17.00' LT to 1204+24.31, 158.32' LT	Storm Sewer	Abandonment, Plug Only	142			R-0026
1207+10.84, 103.89' RT to 1207+23.22, 17.00' RT	Storm Sewer	Abandonment, Plug Only	88			R-0027
1207+23.22, 17.00' RT to 1208+40.18, 0.00' LT	Storm Sewer	Removal	132			R-0028
		REMOVAL	1219			
		ABANDONMENT, PLUG ONLY	535	80		

Median Slotted Drain

HRG.01
4/2019

Refer to Median Slotted Drain detail in the M Sheets

Beginning of Slotted Drain Station	Connection Intake	Length (FT)
1124+65.00	38010	240
1126+90.00	38009	140
1130+15.00	38019	151
1135+10.00	38018	417
1139+90.00	38025	400
1143+95.00	38037	312
1147+40.00	38036	270
1150+40.00	38035	210
1152+29.00	38034	126
1158+15.00	38040	225
1166+40.00	38050	224
1174+15.00	38065	440
1179+35.00	38066	112
1181+05.00	38067	191
1183+40.00	38073	91
1184+50.00	38074	56
1185+75.00	38074	61
1194+50.00	38087	146
1196+90.00	38086	183
1202+40.00	38095	119
1208+07.00	380102	30
1209+00.00	380102	56
1212+21.00	380106	217
1215+00.00	380105	246
1217+30.00	380104	226
1221+40.00	380115	261
	Total	5150

REMOVAL OF INTAKES AND UTILITY ACCESSES

110-15
02/03/2019

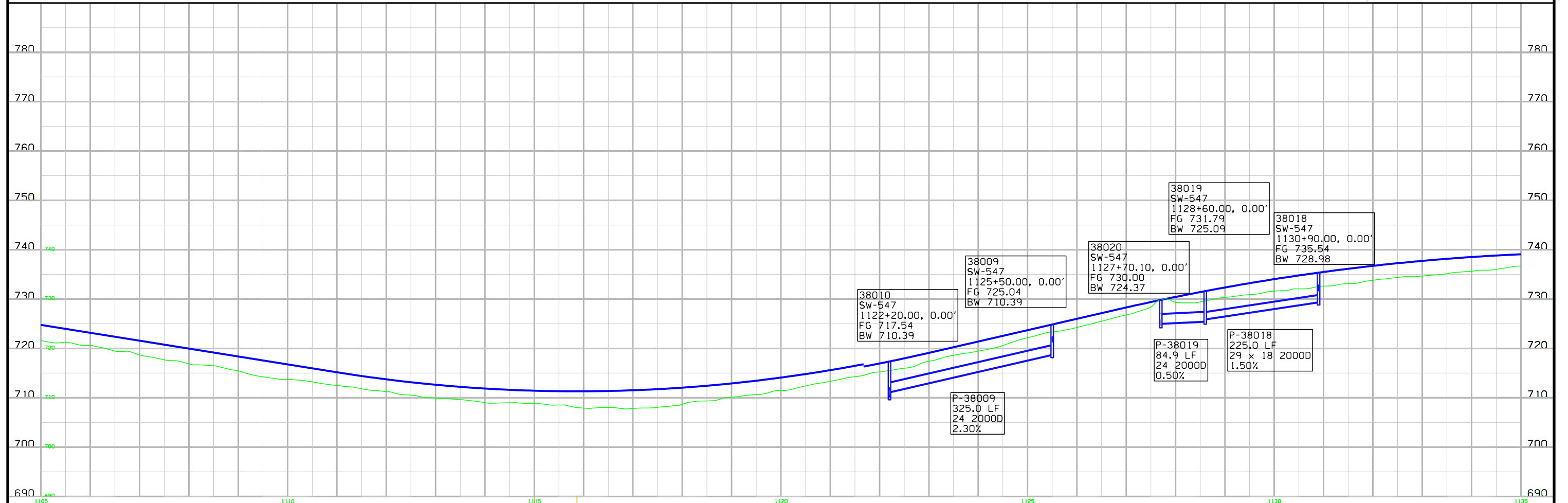
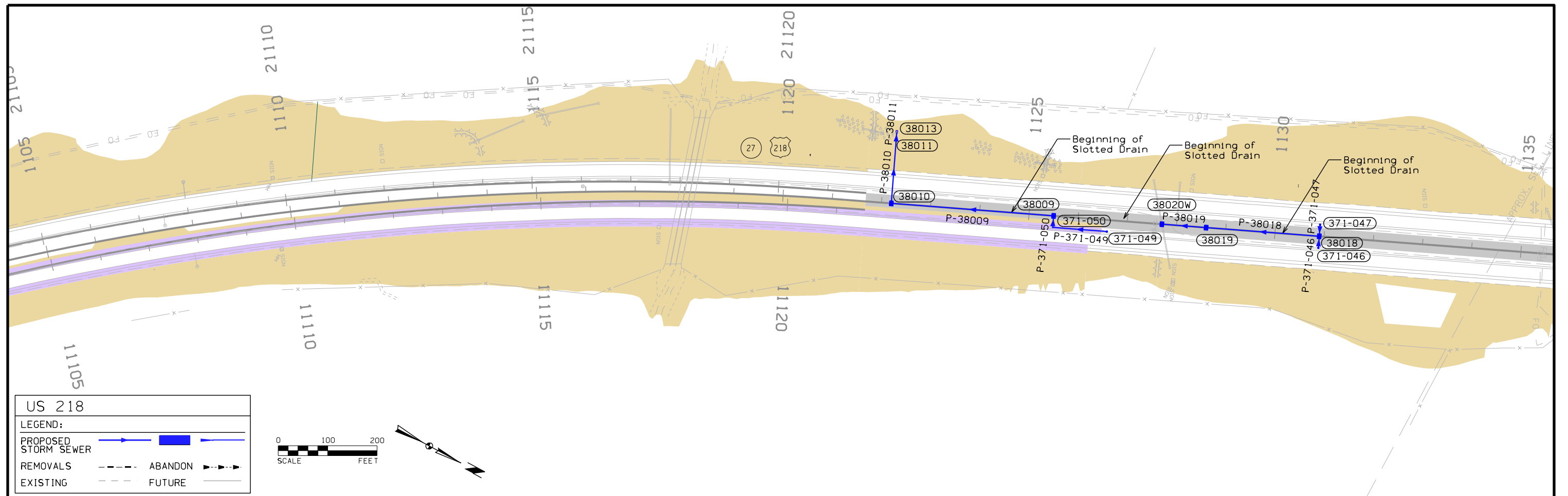
No.	Location/Description	Type	Remarks
R-1000	689+39.71, 80.92' LT	Intakes	
R-1001	691+16.84, 58.37' RT	Intakes	
R-1002	697+10.10, 2.44' RT	Intakes	
R-1003	697+99.96, 2.38' RT	Intakes	

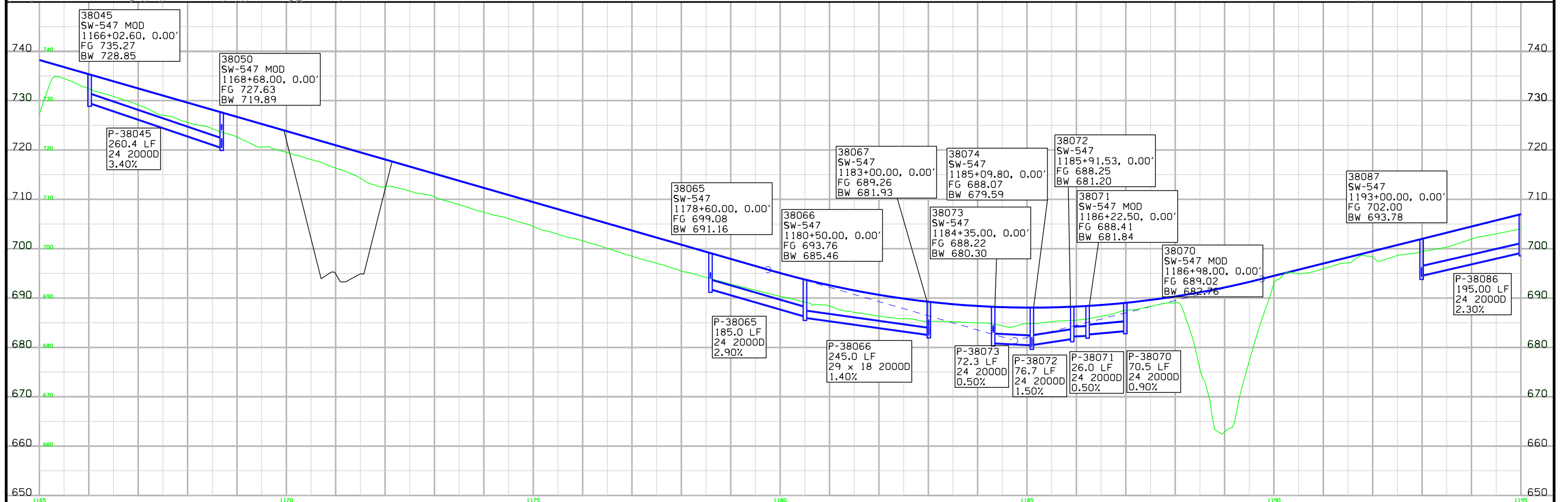
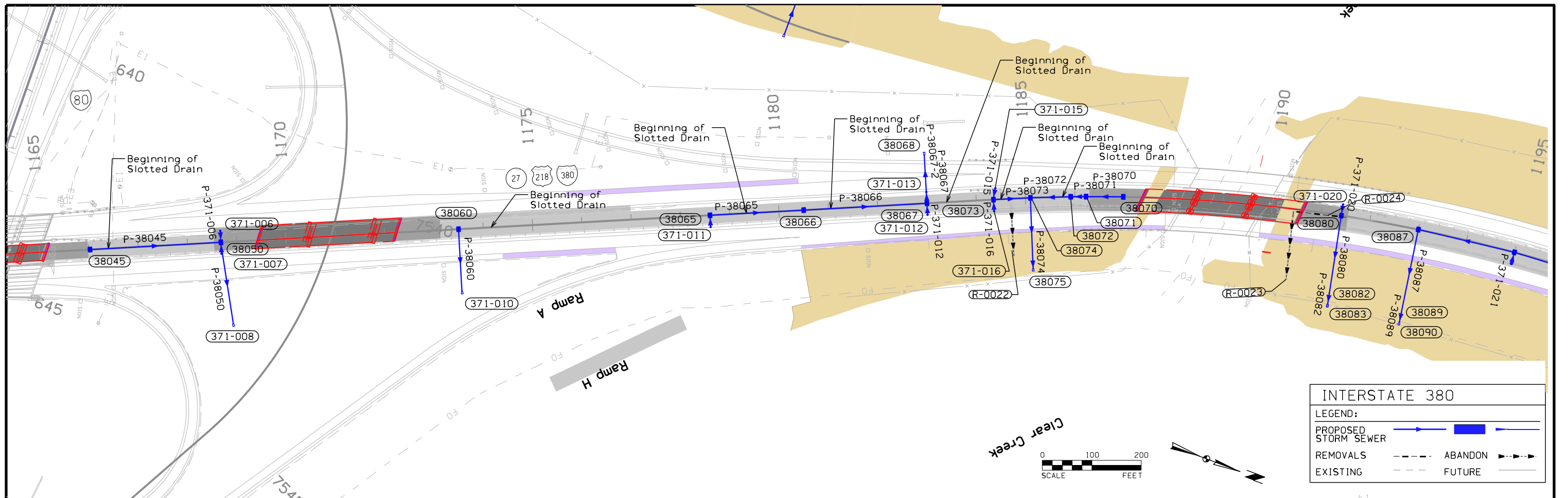
STANDARD ROAD PLANS

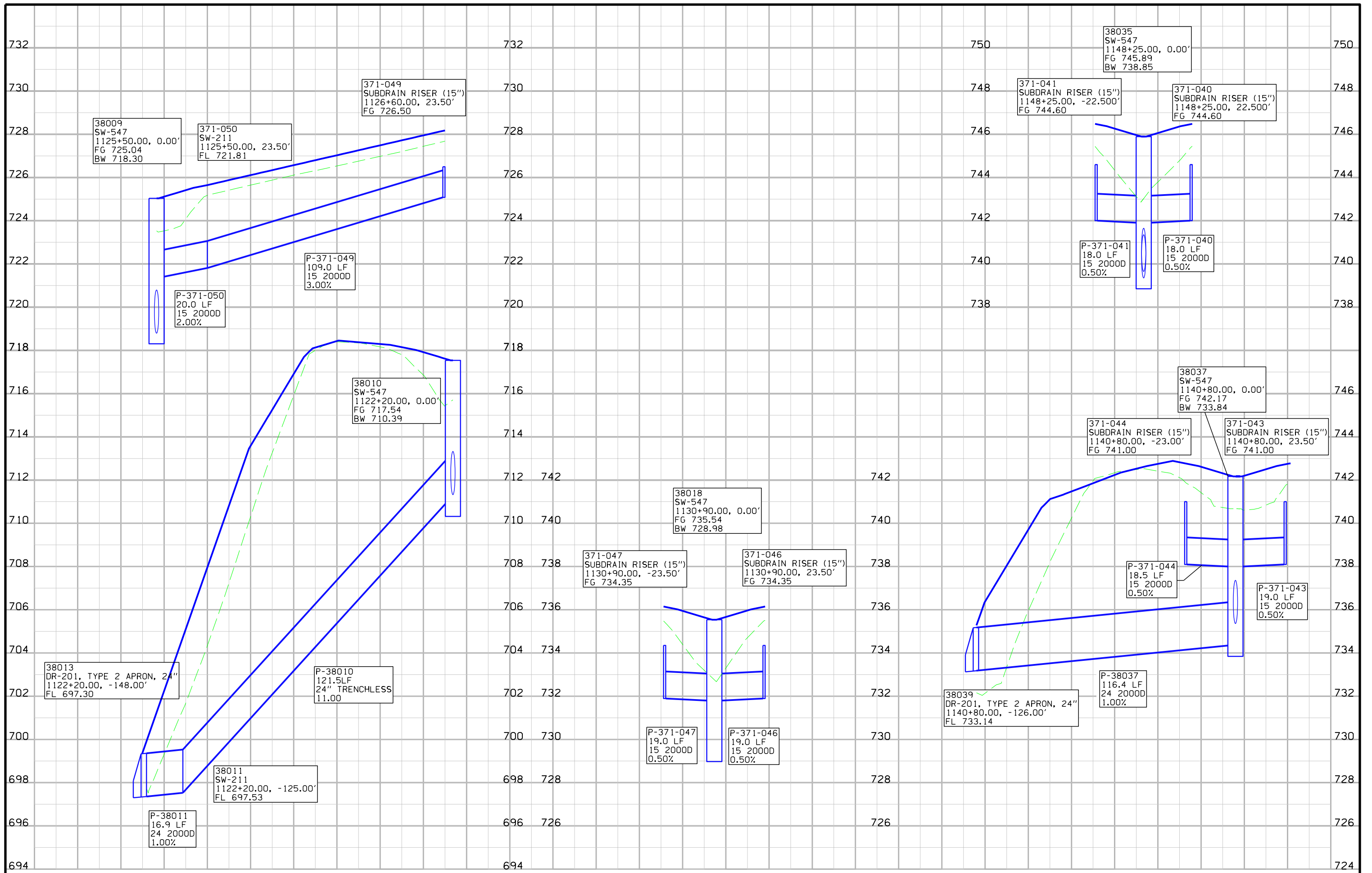
105_OA
3/12/2019

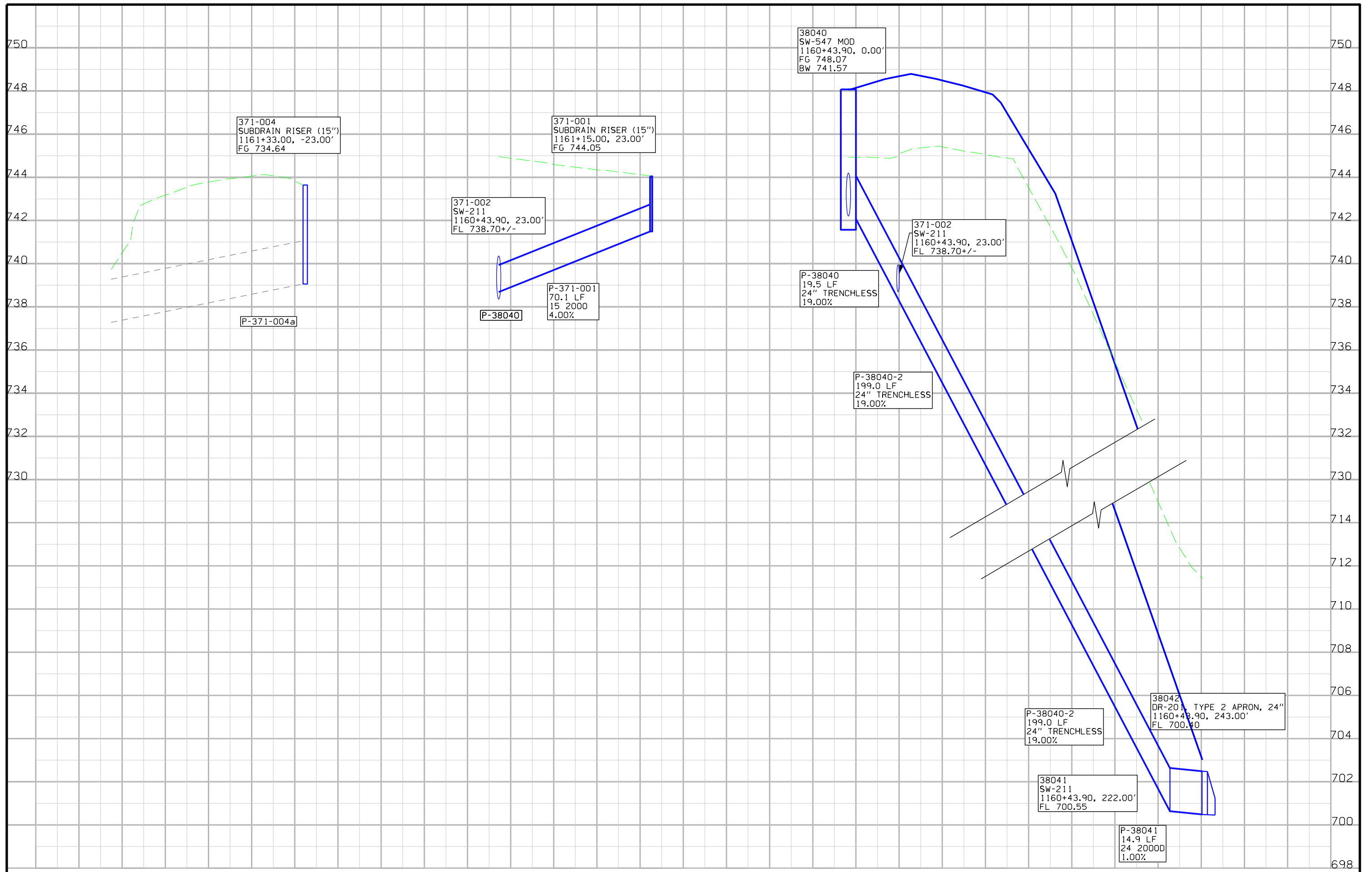
The following Standard Road Plans apply to construction work on this project.

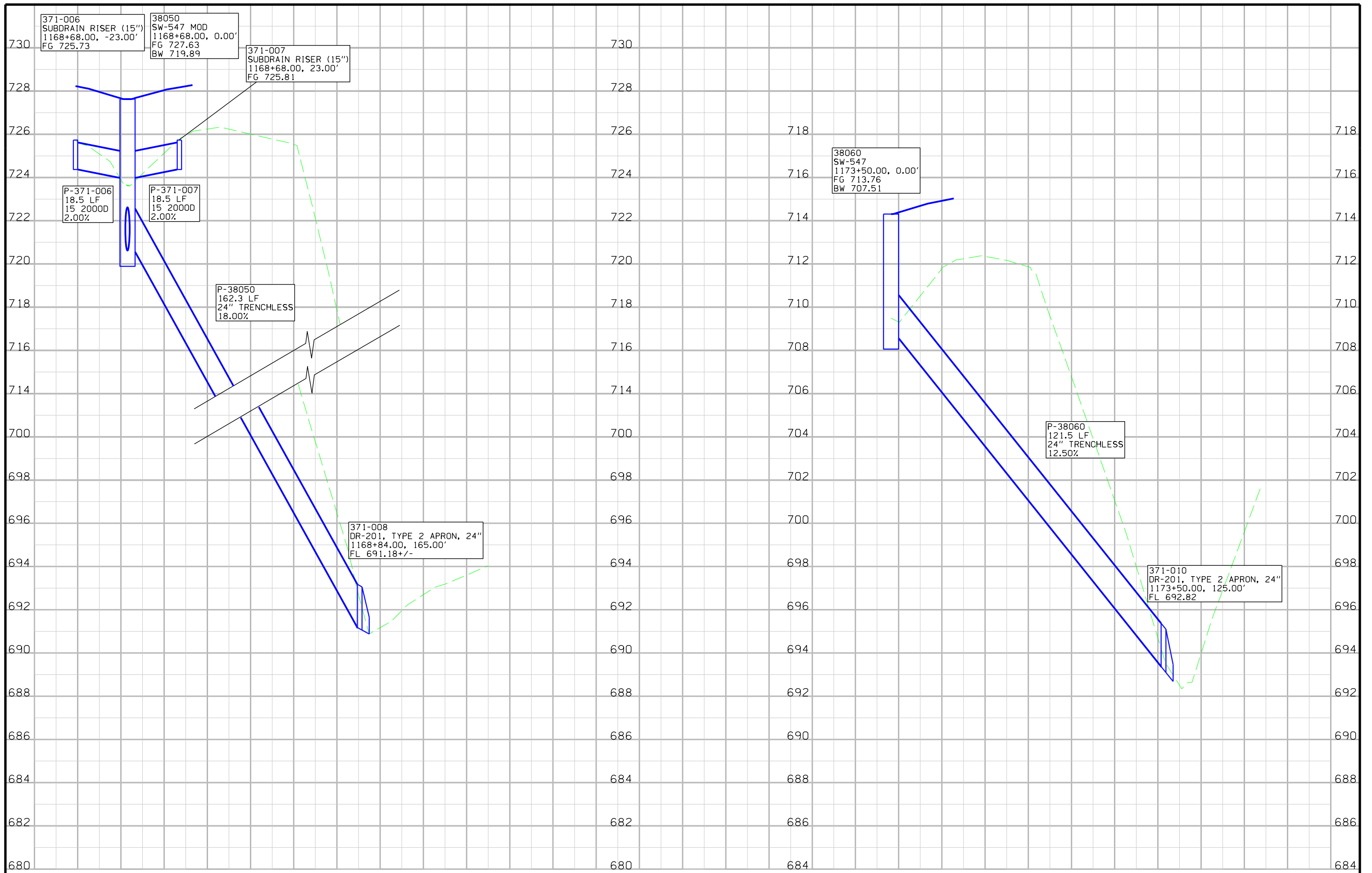
Number	Date	Title
DR-121	10-17-17	Connected Pipe Joints
DR-122	10-18-16	Construction of Type "C" Concrete Adaptors for Pipe Culvert Connections
DR-141	04-18-17	Pipe Bends and Half Pipe
DR-201	10-16-18	Concrete Aprons
DR-202	04-21-15	Low Clearance Concrete Pipe Aprons
DR-206	04-19-16	Low Clearance Concrete Pipe Apron With End Wall
SW-101	04-17-18	Trench Bedding and Backfill Zones
SW-102	04-16-19	Rigid Gravity Pipe Trench Bedding
SW-103	04-16-19	Flexible Gravity Pipe Trench Bedding
SW-211	04-17-18	Special Pipe Connections for Storm Sewer
SW-401	04-17-18	Circular Storm Sewer Manhole
SW-507	04-17-18	Single Open-Throat Intake, Small Box
SW-509	04-17-18	Double Open-Throat Curb Intake, Small Box
SW-512	04-17-18	Circular Area Intake
SW-514	04-17-18	Boxouts for Grate Intakes
SW-539	04-16-19	Intake For Bridge End Drain (With Letdown)
SW-547	04-17-18	Triple-Grate Barrier Intake
SW-549	04-17-18	Single-Grate Barrier Intake, Rectangular
SW-602	04-21-15	Castings for Storm Sewer Manholes
SW-603	10-16-18	Castings for Grate Intakes
SW-604	04-17-18	Castings for Area Intakes

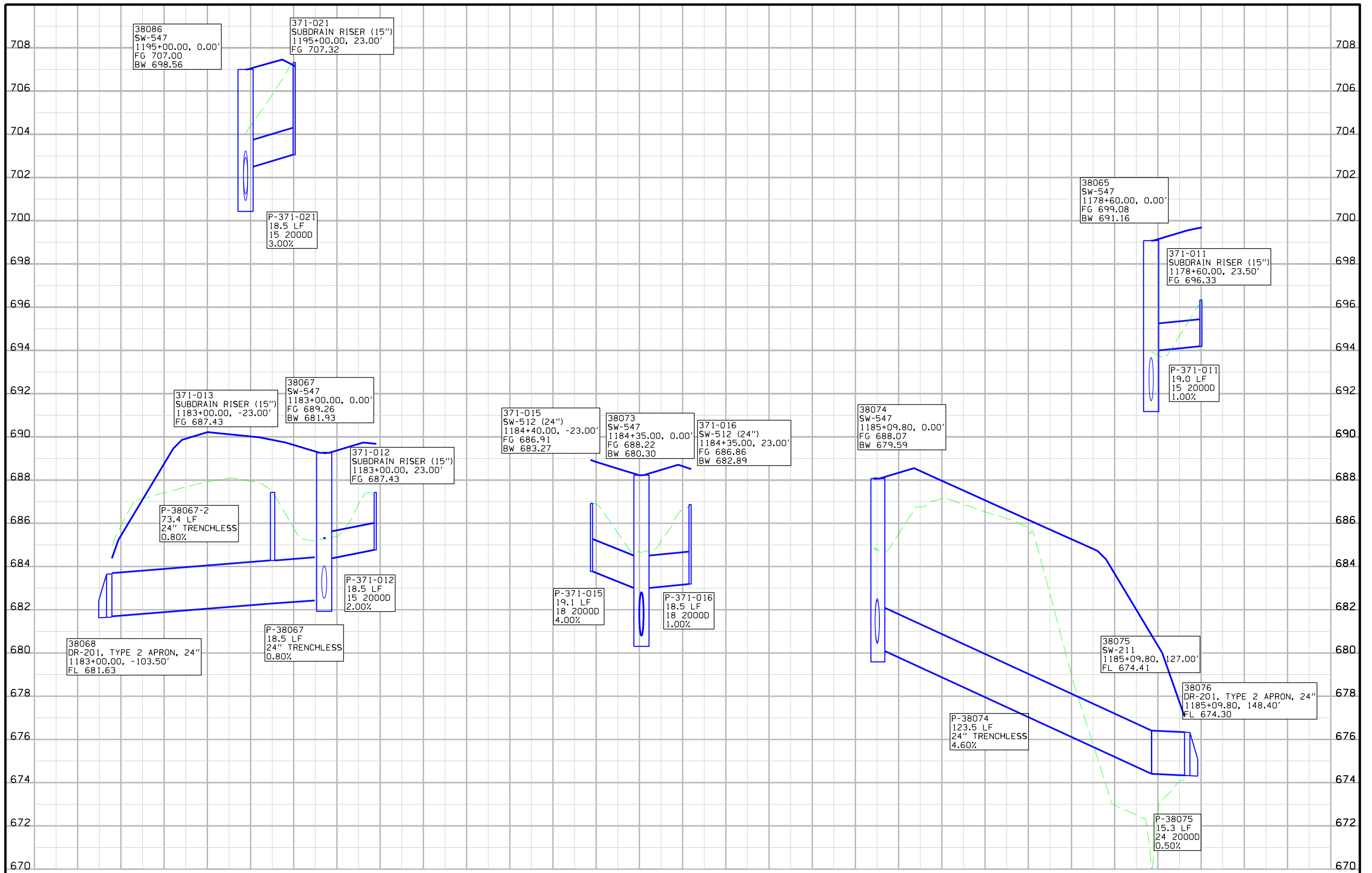












38086
SW-547
1195+00.00, 0.00'
FG 707.00
BW 698.56

371-021
SUBDRAIN RISER (15")
1195+00.00, 23.00'
FG 707.32

P-371-021
18.5 LF
15 20000
3.00%

38065
SW-547
1178+60.00, 0.00'
FG 699.08
BW 691.16

371-011
SUBDRAIN RISER (15")
1178+60.00, 23.50'
FG 696.33

P-371-011
19.0 LF
15 20000
1.00%

371-013
SUBDRAIN RISER (15")
1183+00.00, -23.00'
FG 687.43

38067
SW-547
1183+00.00, 0.00'
FG 689.26
BW 681.93

P-38067-2
73.4 LF
24" TRENCHLESS
0.80%

371-012
SUBDRAIN RISER (15")
1183+00.00, 23.00'
FG 687.43

P-371-012
18.5 LF
15 20000
2.00%

371-015
SW-512 (24")
1184+40.00, -23.00'
FG 686.91
BW 683.27

38073
SW-547
1184+35.00, 0.00'
FG 688.22
BW 680.30

371-016
SW-512 (24")
1184+35.00, 23.00'
FG 686.86
BW 682.89

P-371-015
19.1 LF
18 20000
4.00%

P-371-016
18.5 LF
18 20000
1.00%

38074
SW-547
1185+09.80, 0.00'
FG 688.07
BW 679.59

38075
SW-211
1185+09.80, 127.00'
FL 674.41

38076
DR-201, TYPE 2 APRON, 24"
1185+09.80, 148.40'
FL 674.30

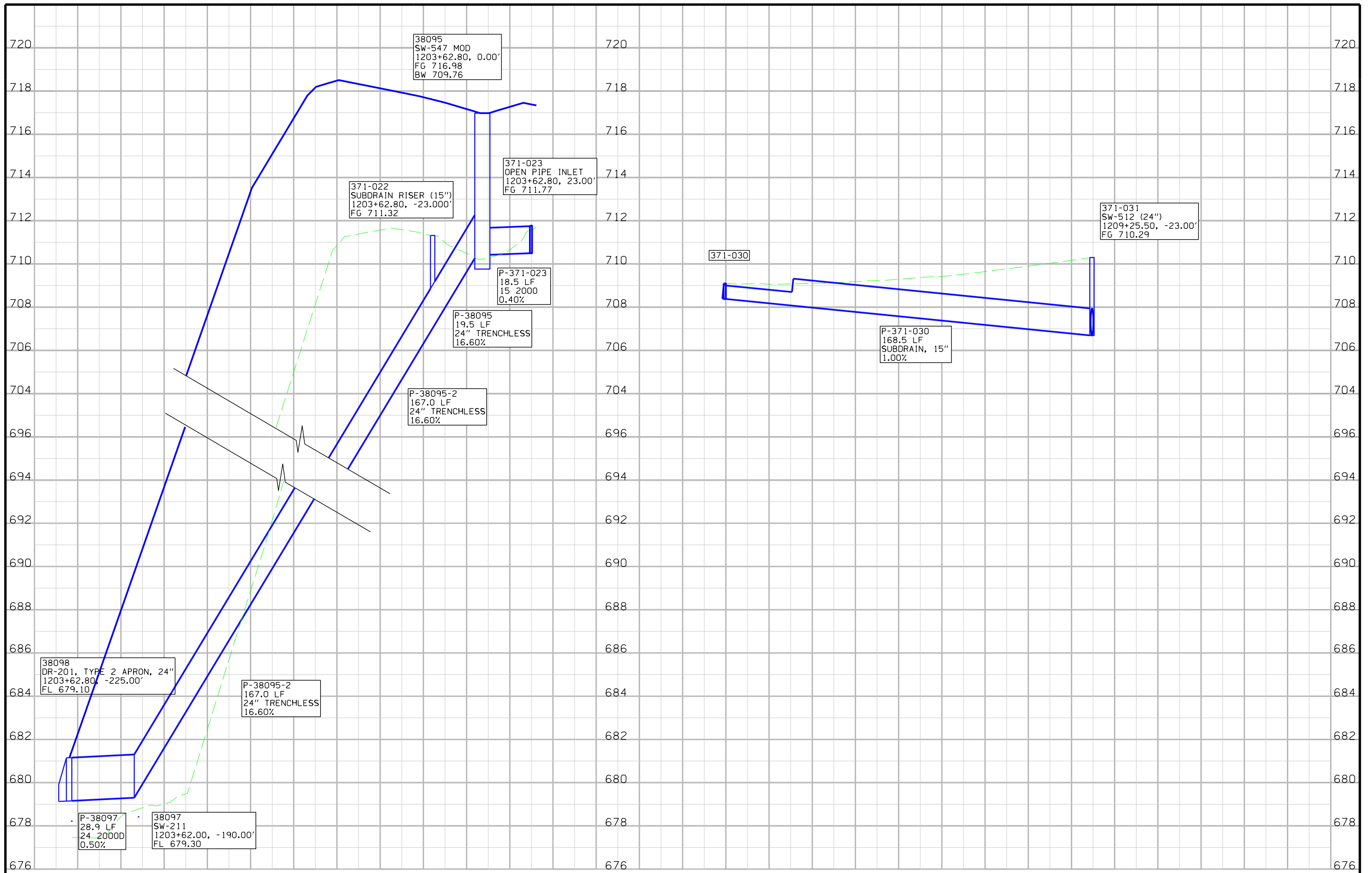
P-38074
123.5 LF
24" TRENCHLESS
4.60%

P-38075
15.3 LF
24 20000
0.50%

38068
DR-201, TYPE 2 APRON, 24"
1183+00.00, -103.50'
FL 681.63

P-38067
18.5 LF
24" TRENCHLESS
0.80%





38095
SW-547 MOD
1203+62.80, 0.00'
FG 716.98
BW 709.76

371-022
SUBDRAIN RISER (15")
1203+62.80, -23.00'
FG 711.32

371-023
OPEN PIPE INLET
1203+62.80, 23.00'
FG 711.77

P-371-023
18.5 LF
15 2000
0.40%

P-38095
19.5 LF
24" TRENCHLESS
16.60%

P-38095-2
167.0 LF
24" TRENCHLESS
16.60%

371-031
SW-512 (24")
1209+25.50, -23.00'
FG 710.29

371-030

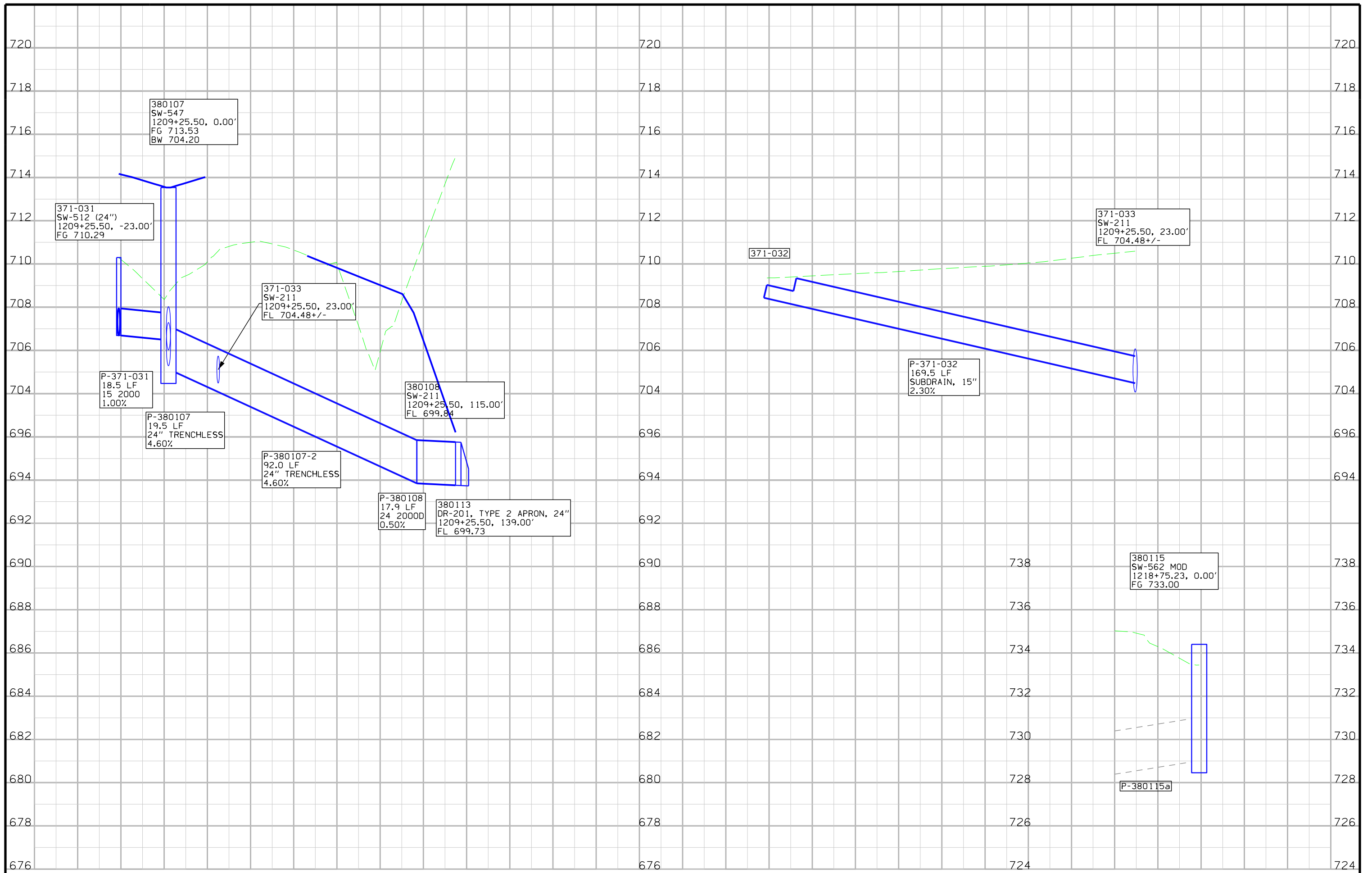
P-371-030
168.5 LF
SUBDRAIN, 15"
1.00%

38098
DR-201, TYPE 2 APRON, 24"
1203+62.80, -225.00'
FL 679.10

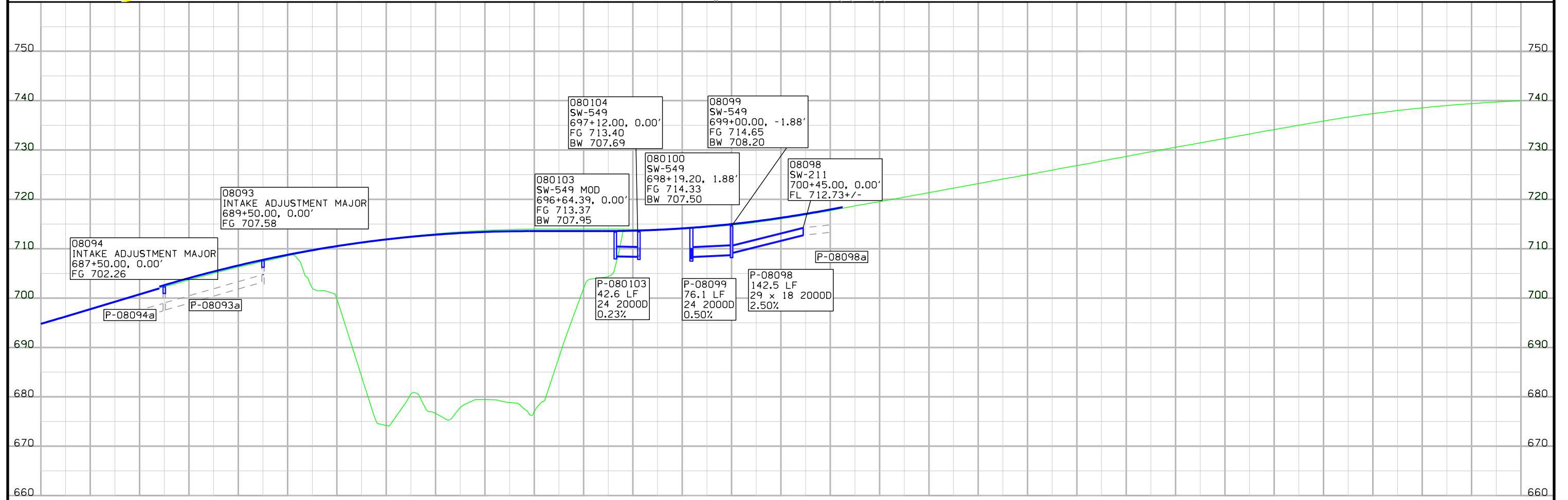
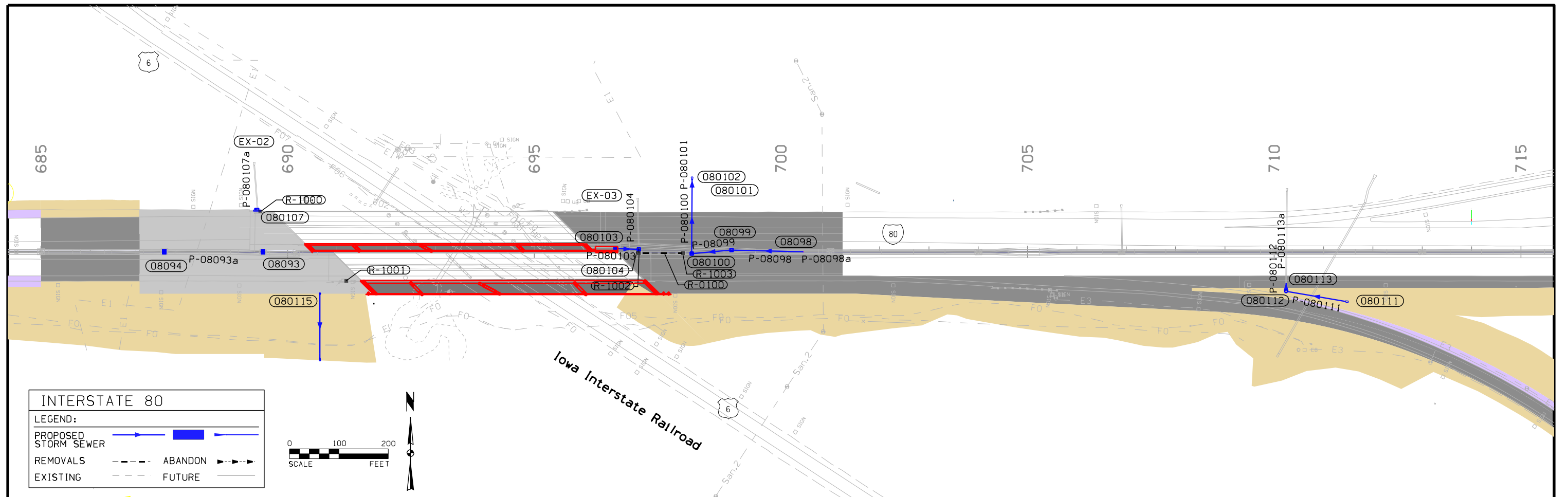
P-38095-2
167.0 LF
24" TRENCHLESS
16.60%

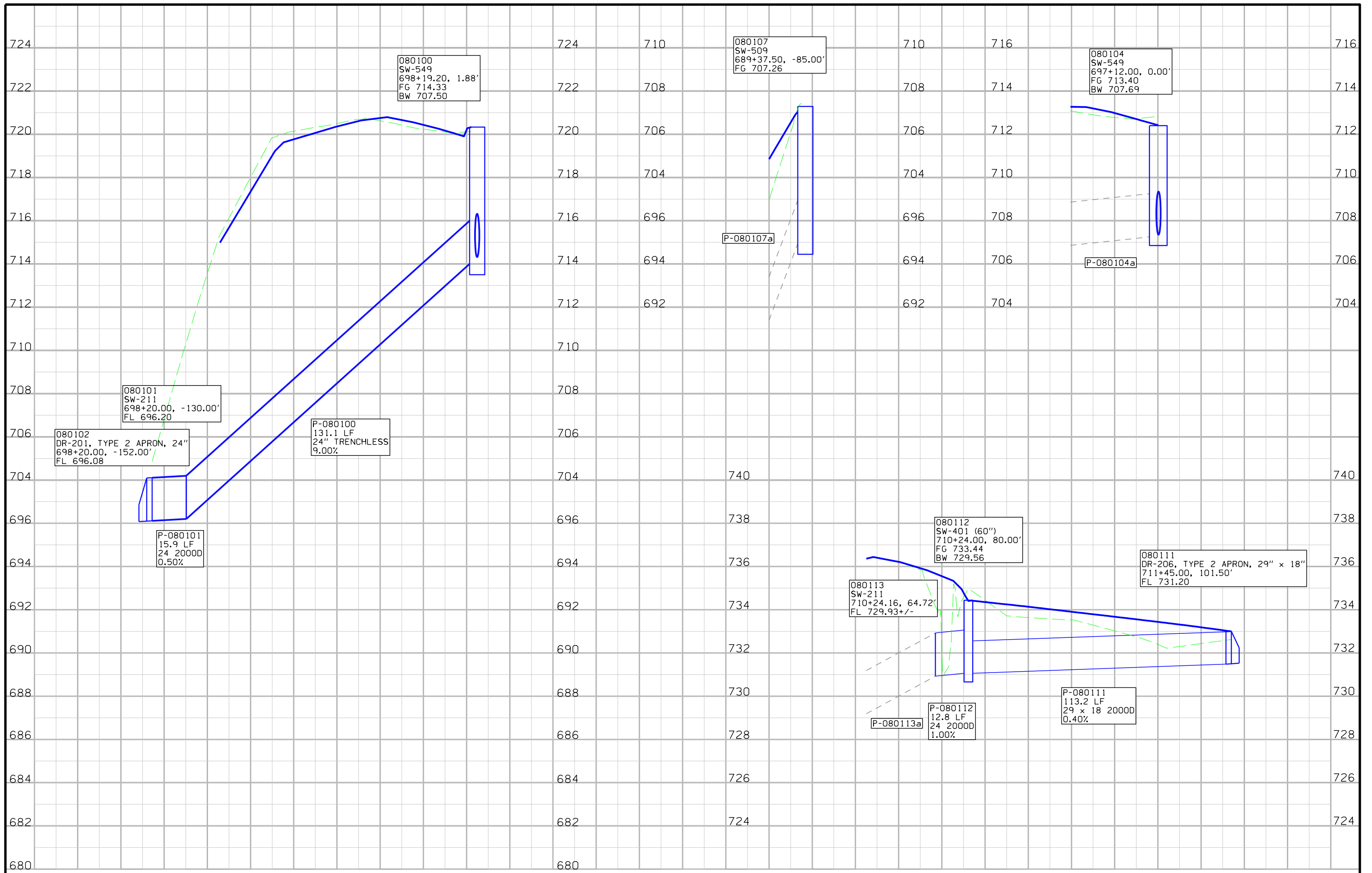
P-38097
28.9 LF
24 20000
0.50%

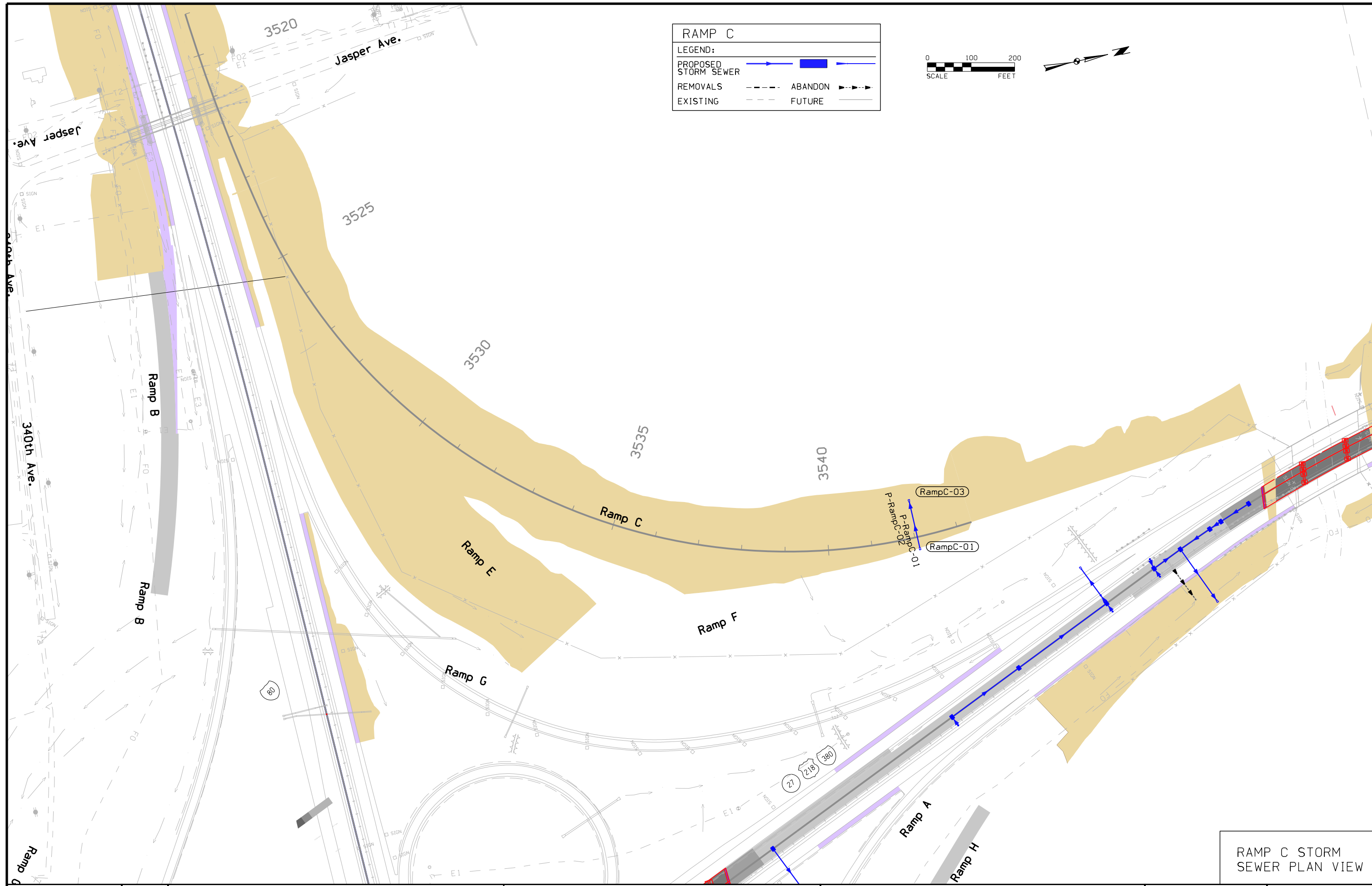
38097
SW-211
1203+62.00, -190.00'
FL 679.30



FILE NO.	ENGLISH	DESIGN TEAM	HR GREEN, INC.	JOHNSON COUNTY	PROJECT NUMBER	NHS-080-6(371)239-11-52	SHEET NUMBER	M.17
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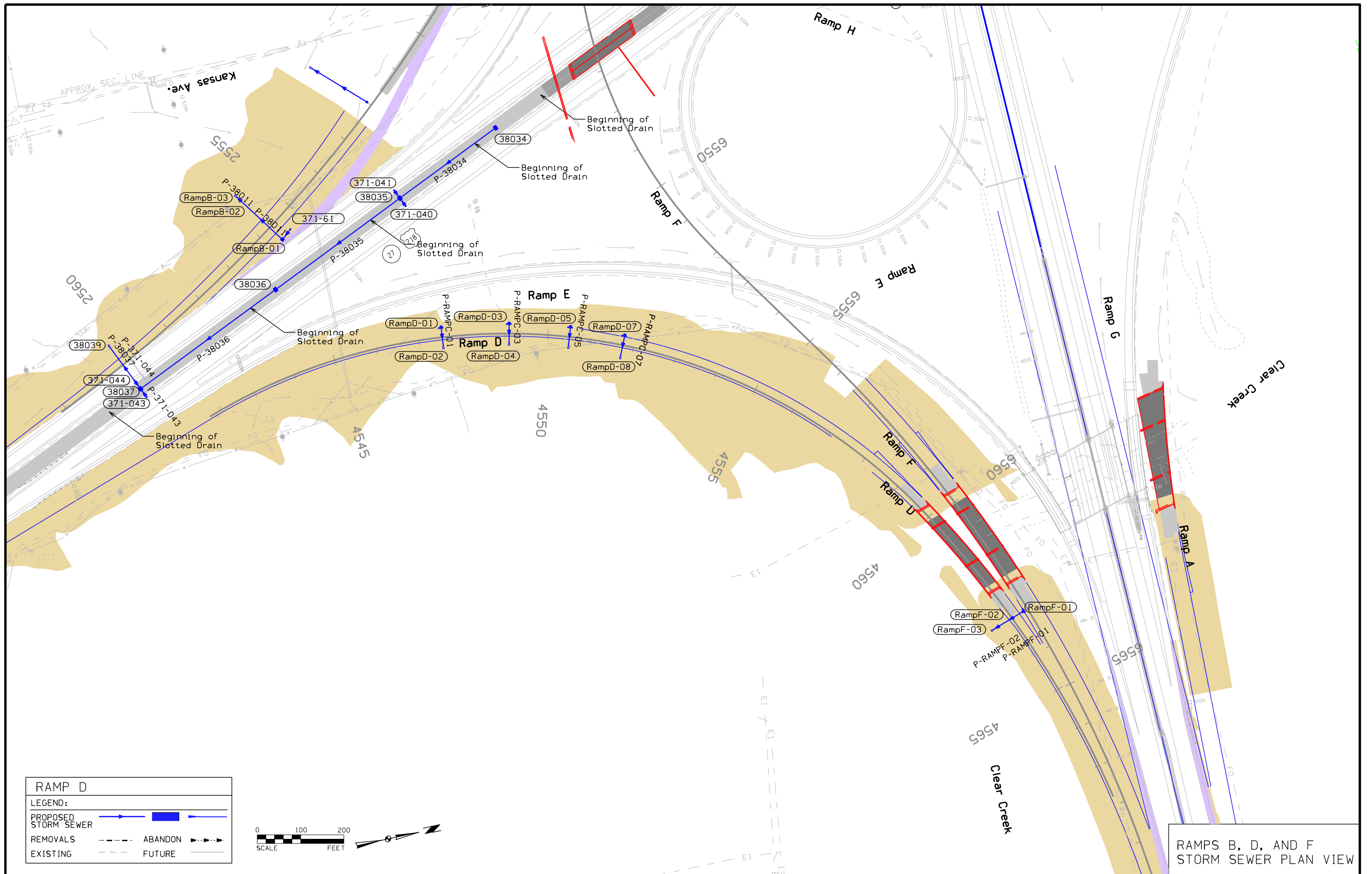
RAMP C

LEGEND:

PROPOSED STORM SEWER	
REMOVALS	
EXISTING	
	ABANDON
	FUTURE



RAMP C STORM SEWER PLAN VIEW



RAMP D

LEGEND:

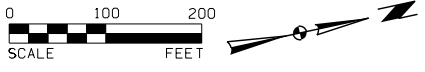
PROPOSED STORM SEWER

REMOVALS

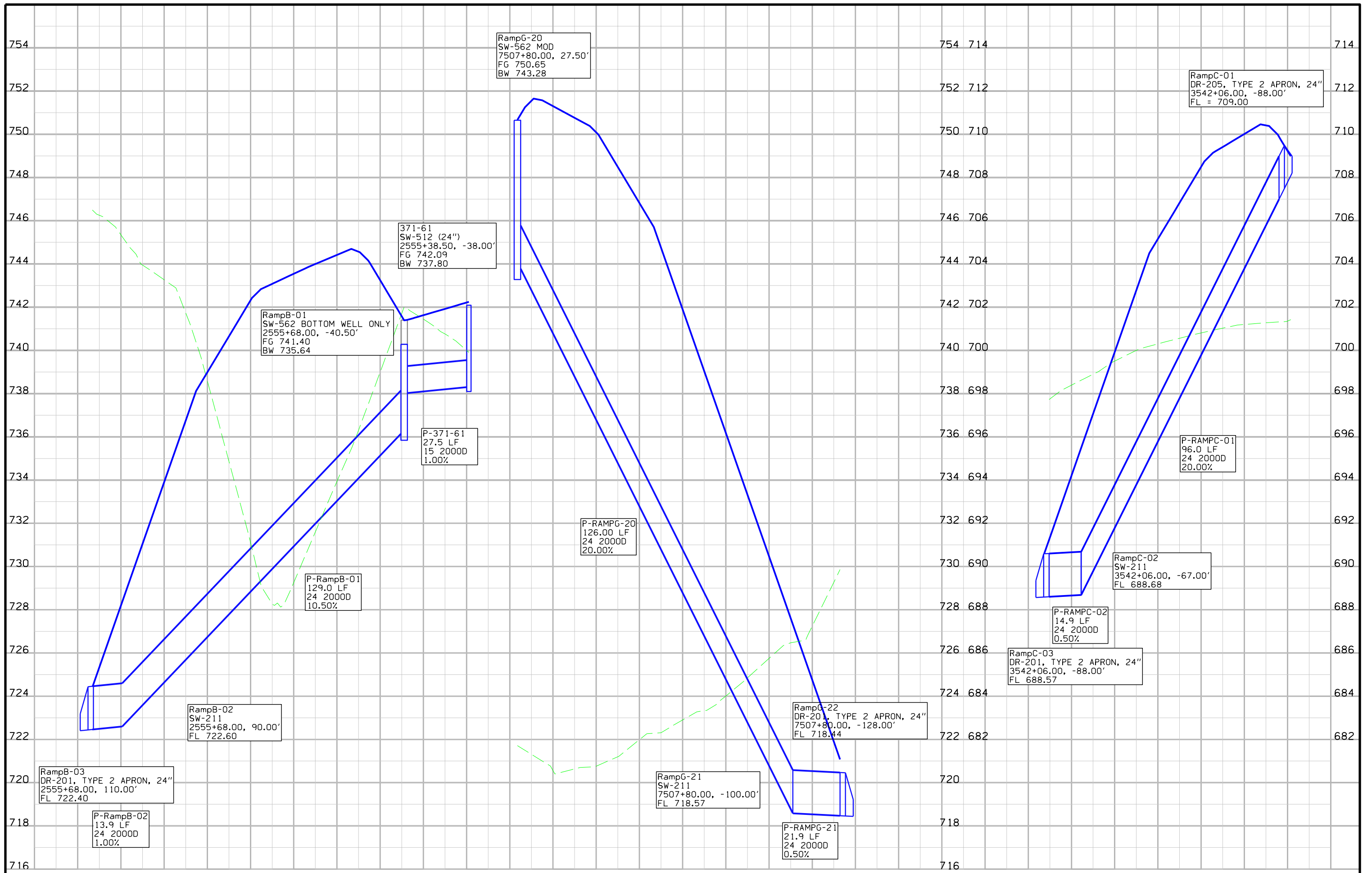
EXISTING

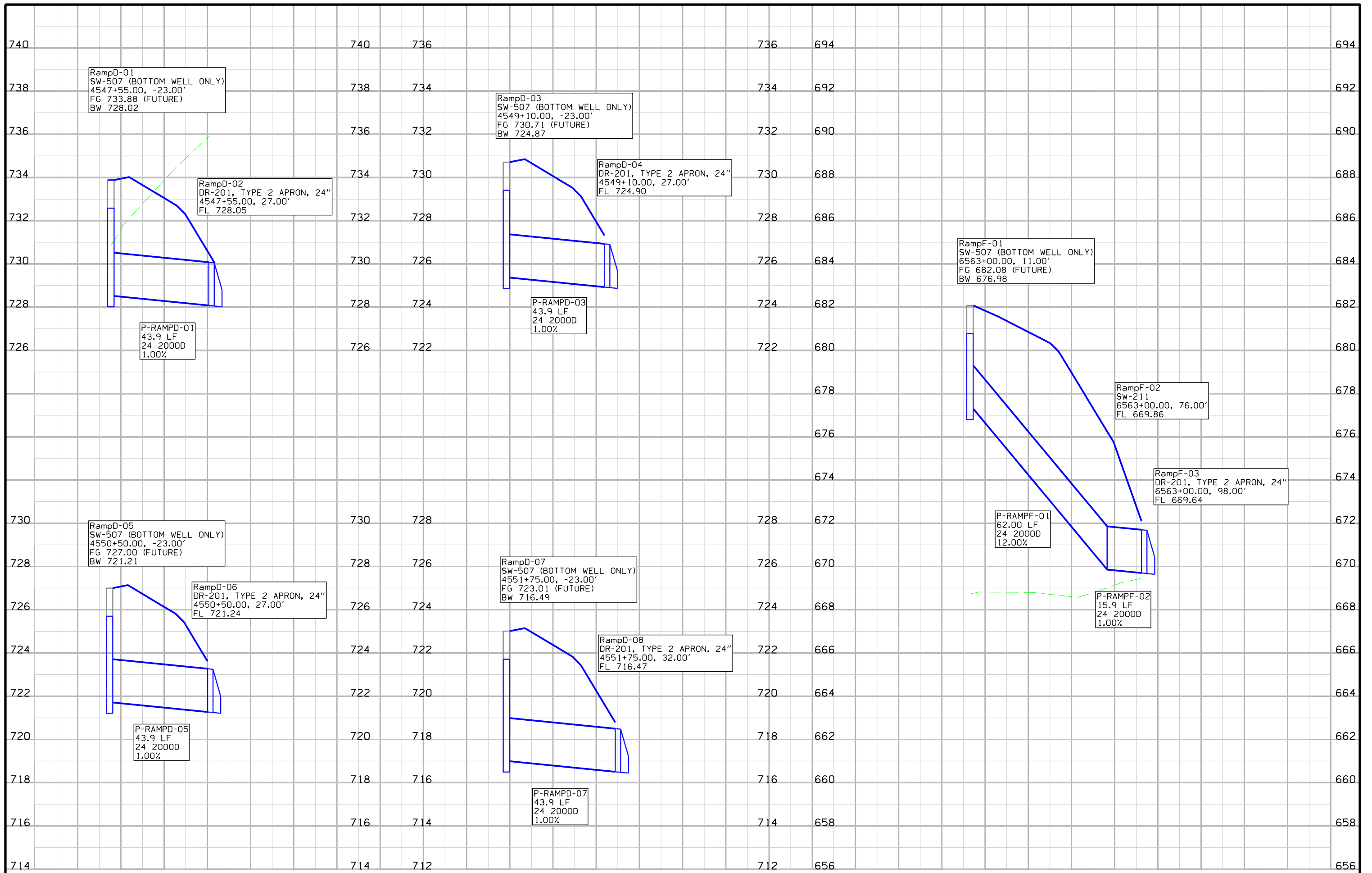
ABANDON

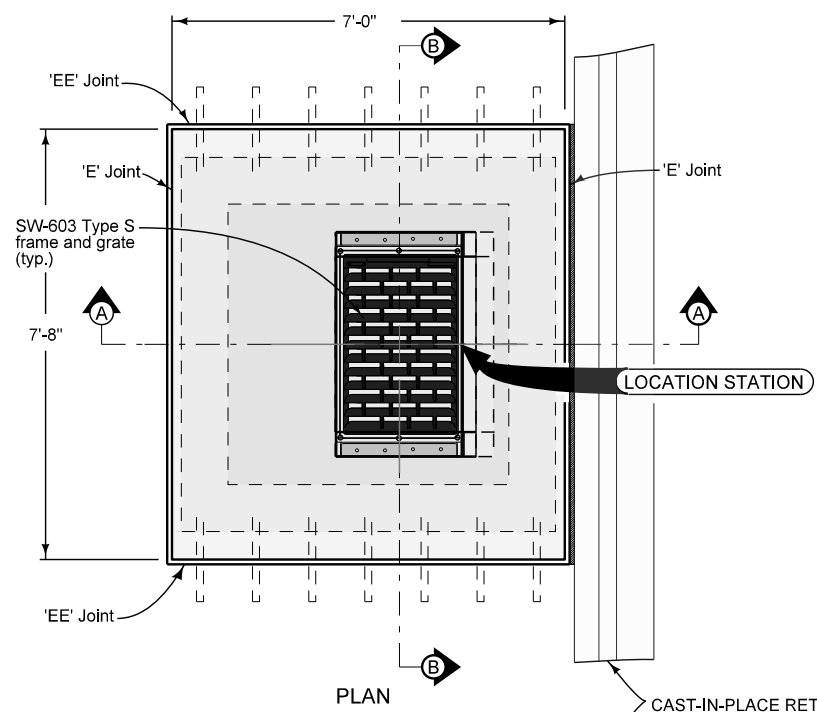
FUTURE



RAMPS B, D, AND F
STORM SEWER PLAN VIEW







Cover plate and edge armor steel to be ASTM A 36, galvanized after fabrication.

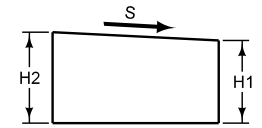
Remove cover plate before constructing concrete barrier.

Cast frames into intake top so tops of grates are $\frac{1}{4}$ " below Form Grade Elevation. Bolt intake frames together on both sides with four $\frac{1}{2}$ " x 4" bolts.

For joint details, refer to PV-101.

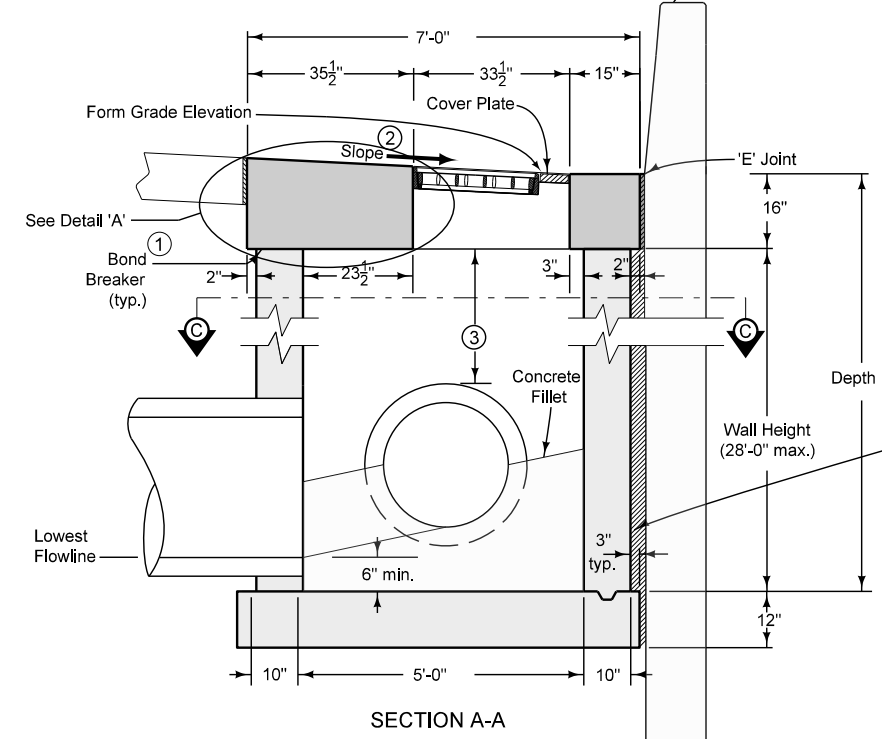
Maximum pipe diameter is 48 inches.

Dimensions		
"S" (%)	"H1" (In.)	"H2" (In.)
1	16.33	16.69
2	16.67	17.38
3	17.00	18.07
4	17.33	18.76
5	17.67	19.45
6	18.00	20.14

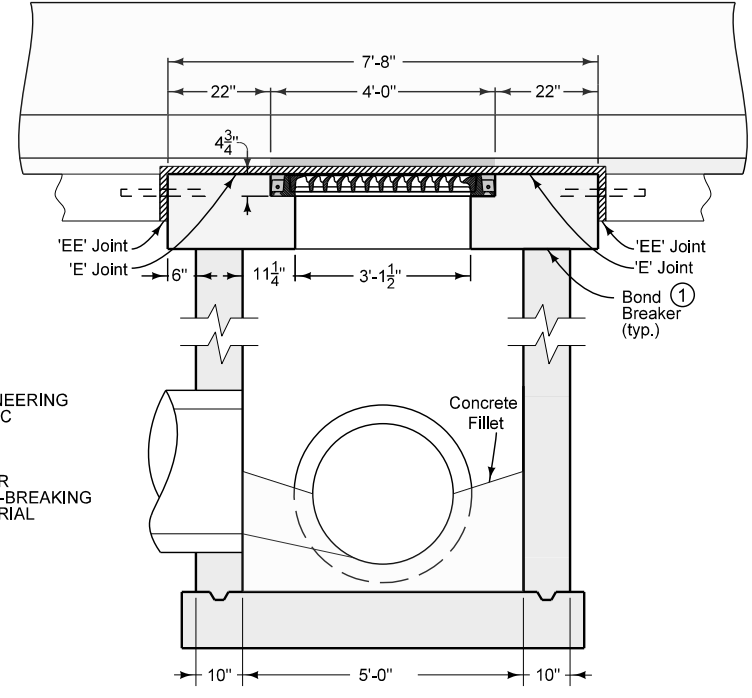


DETAIL 'A'

- ① Trowel smooth and place two layers of 30 pound roofing felt to prevent bond.
- ② Match slope of top and grade to slope of adjacent pavement.
- ③ 12 inch minimum wall height above all pipes.



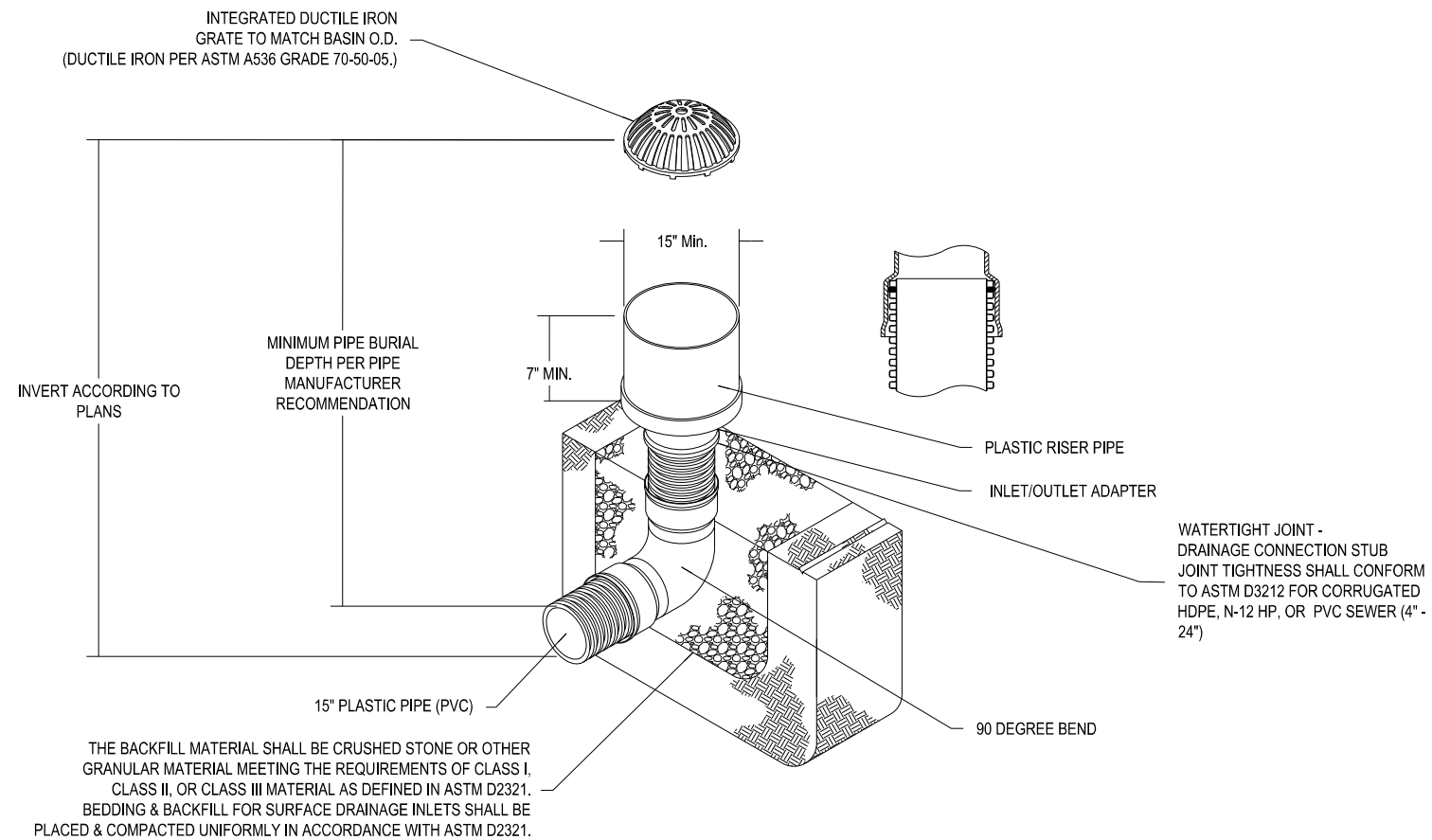
SECTION A-A



SECTION B-B

This modified detail applies to structure 080103

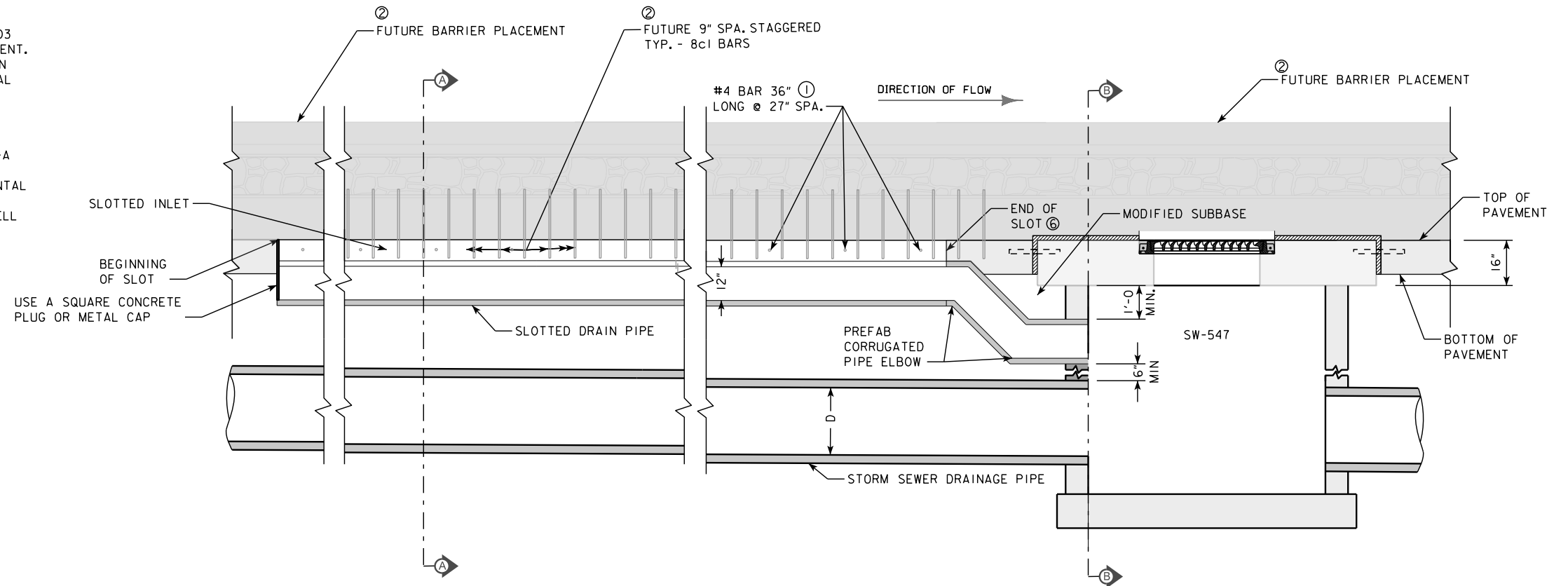
SW-549 MODIFIED



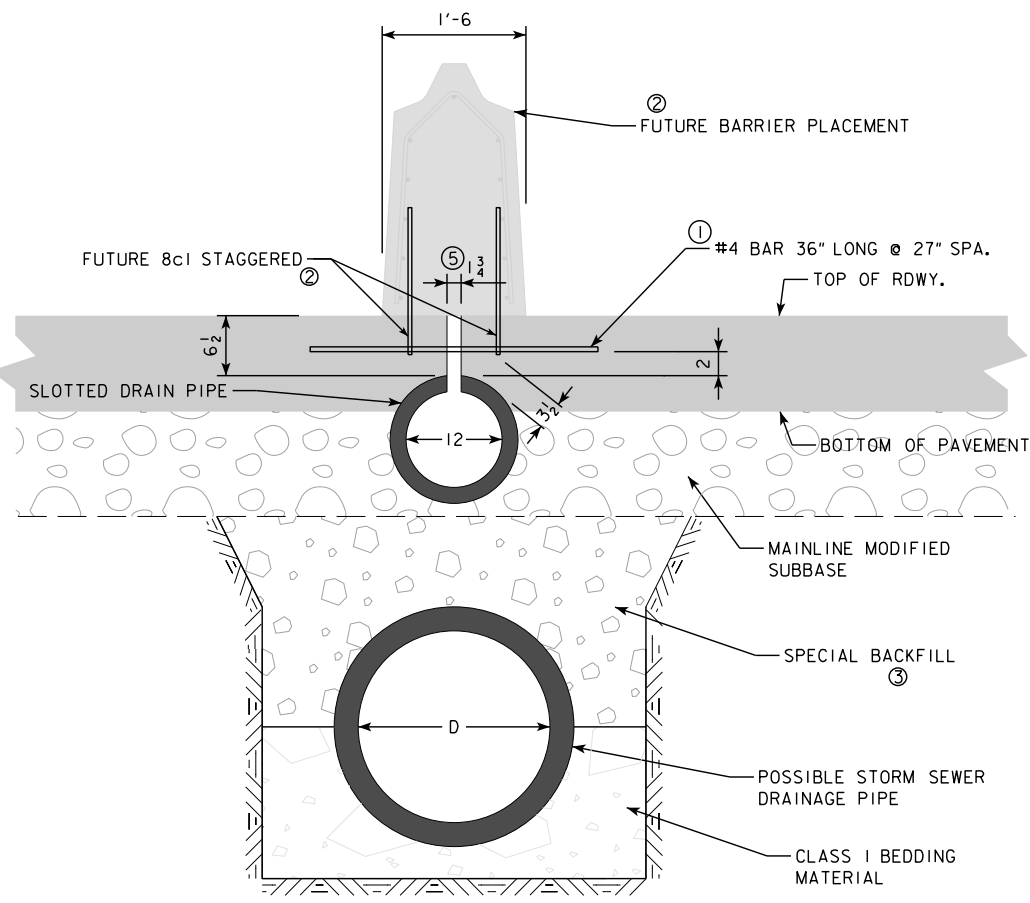
**SUBDRAIN RISER
DETAIL**

NOTES:

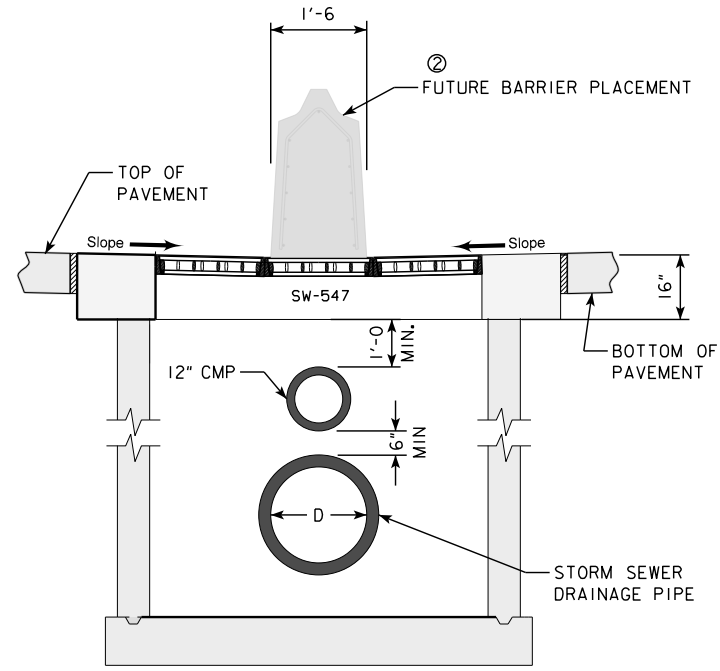
- ① USE EPOXY COATED REBAR ACCORDING TO THE IOWA DOT ARTICLE 4151.03 PLACE EPOXY COATED REBAR ONLY IN AREAS OF PERMANENT PCC PAVEMENT. ESTIMATED NUMBER OF REINFORCING STEEL BARS IS 2,096, RESULTING IN A WEIGHT OF 4,213 LBS. INCIDENTAL TO ITEM "DRAIN, CORRUGATED METAL SLOTTED PIPE, 12 IN., W/7.5 IN. GRATE"
- ② DURING A FUTURE CONSTRUCTION STAGE, THE SLOTTED DRAIN INLET AND THE SLOTTED DRAIN PIPE WILL BE FILLED WITH FLOWABLE MORTAR AND THE MEDIAN BARRIER WILL BE INSTALLED WITH TWO TYPE 8ci BARS STAGGERED AT 9" SPACING AS SHOWN IN PROFILE VIEW AND SECTION A-A
- ③ REFER TO STANDARD ROAD PLAN SW-102 FOR MORE DETAILS. SPECIAL BACKFILL MATERIAL AND INSTALLATION IS CONSIDERED INCIDENTAL TO STORM SEWER PIPE INSTALLATION.
- ④ PIPE OPENING INVERT SHALL BE 2'3" BELOW THE TOP OF THE INTAKE WELL UNLESS OTHERWISE SPECIFIED
- ⑤ TEMPORARILY SEAL SLOTTED DRAIN GRATE DURING PAVING OPERATIONS
- ⑥ END SLOTTED DRAIN 10 FEET UPSTREAM OF THE BEGINNING OF THE CONNECTION STRUCTURE. IF THE INTAKE IS WITHIN BRIDGE APPROACH, END SLOTTED DRAIN AT THE BEGINNING OF BRIDGE APPROACH



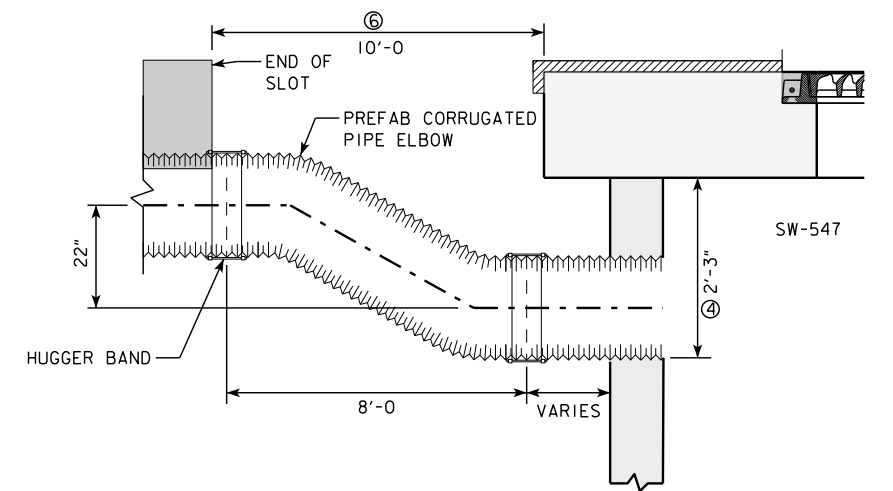
SLOTTED DRAIN INSTALLATION AND CONNECTIONS
PROFILE VIEW



CROSS SECTION VIEW
SECTION A-A



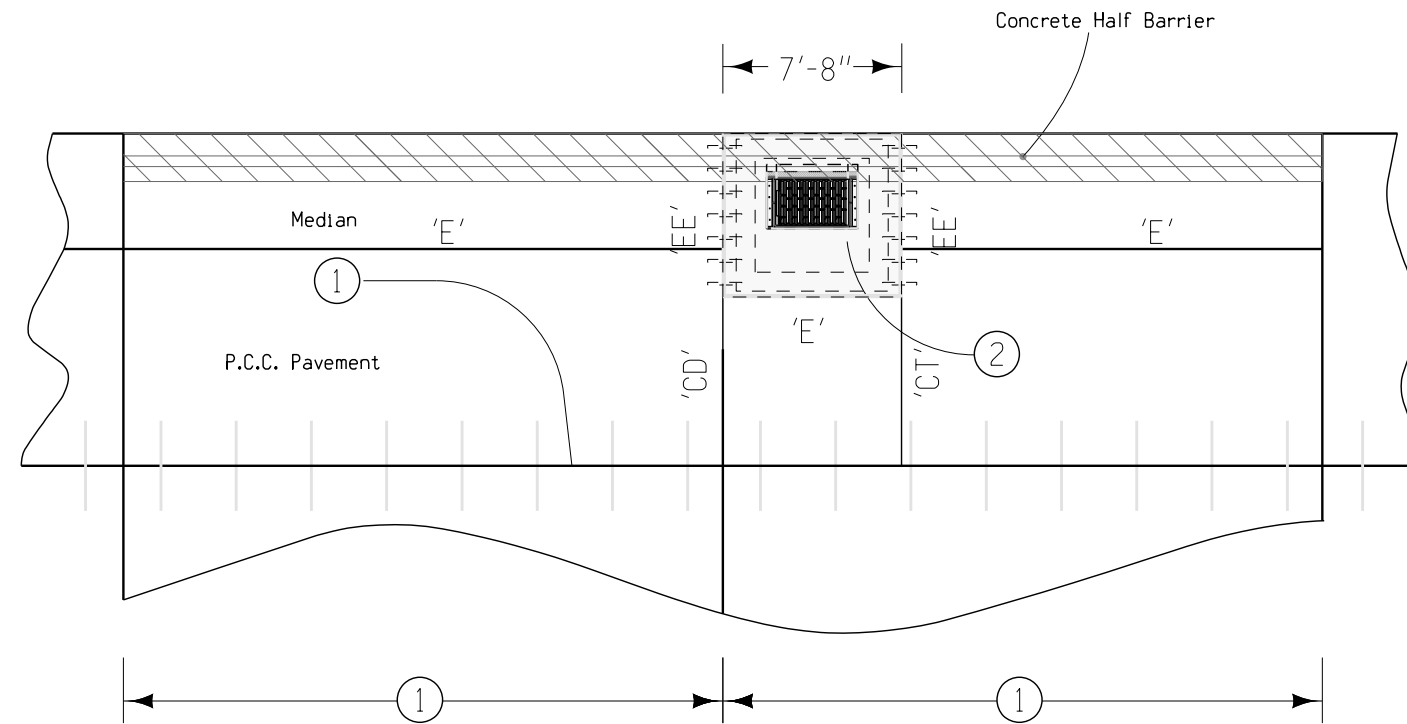
CONNECTION TO MEDIAN INTAKE
CROSS SECTION VIEW
SECTION B-B



CMP PIPE ELBOW DETAIL

MEDIAN SLOTTED DRAIN

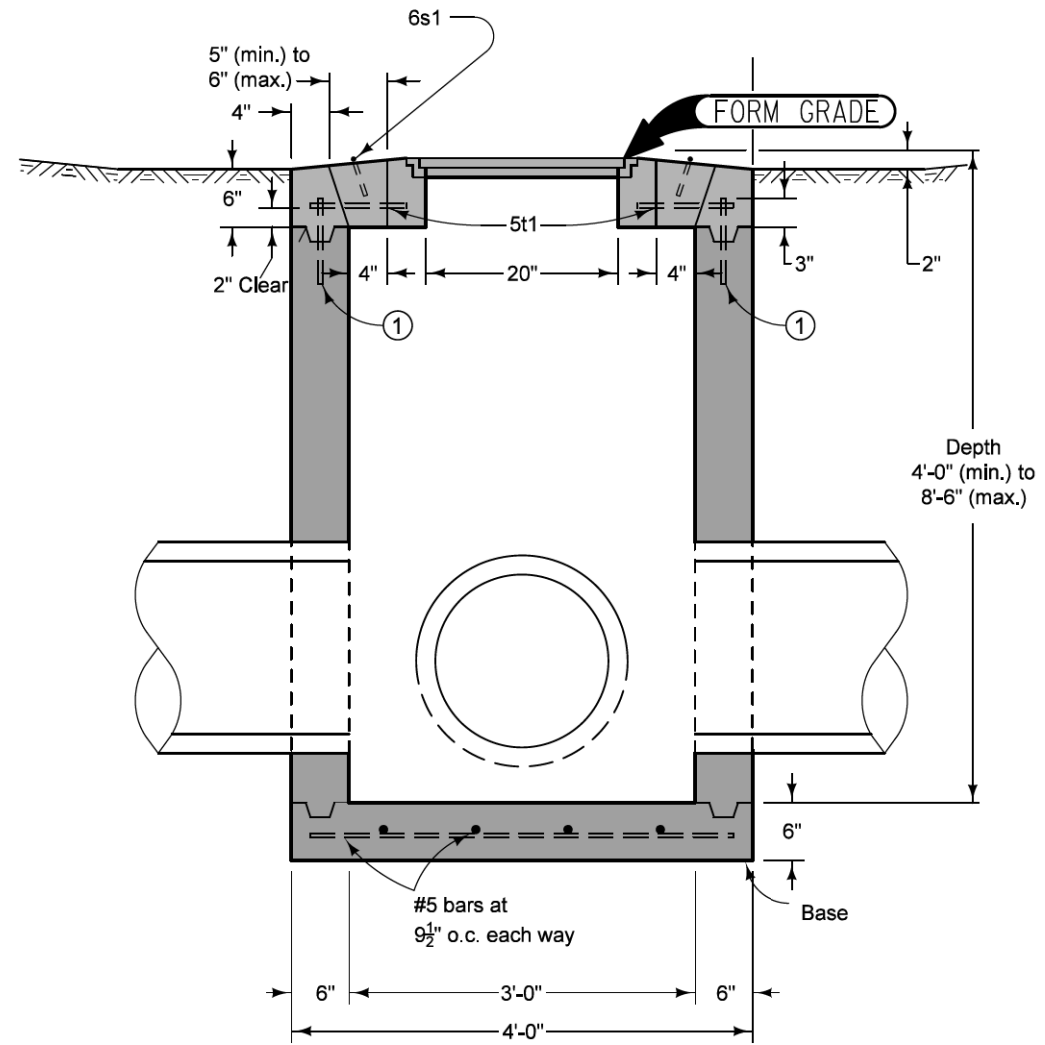
- ① Refer to L-Sheets for jointing details
- ② Refer to Standard Road Plan SW-549 for intake details.



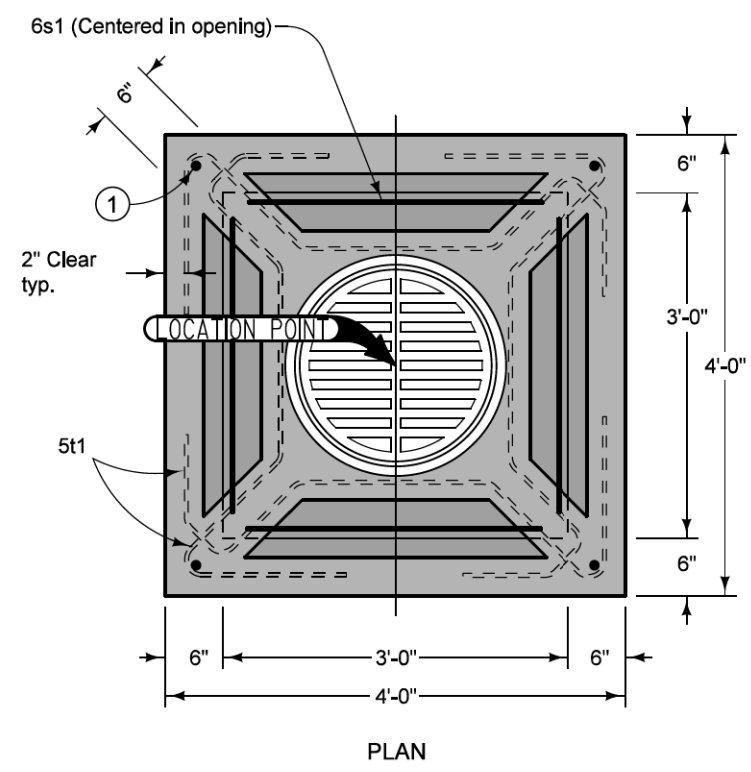
INSIDE SHOULDER WITH MEDIAN BARRIER

Related Structures:
08098, 080100

**DETAILS OF TYPICAL JOINTING
FOR GRATE BARRIER INTAKE
IN MEDIAN SHOULDER**



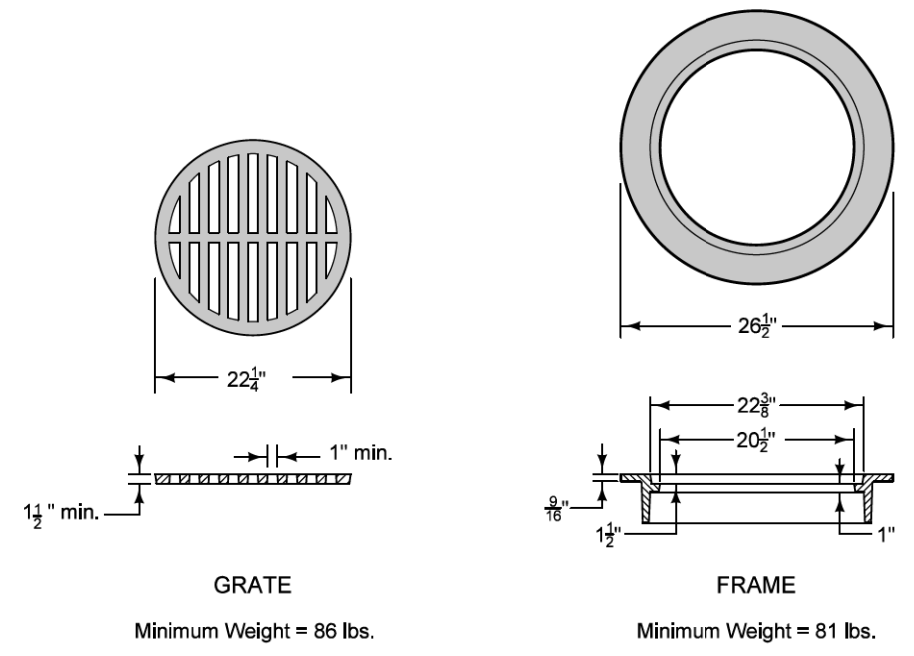
TYPICAL SECTION



PLAN

Top of intake may be poured in the field or precast. For precast units, place a 1 inch diameter X 3 inch deep alignment hole 3 inches from each side of the corners of the unit.

① Four #6 X 9 inch alignment pins (precast tops only).

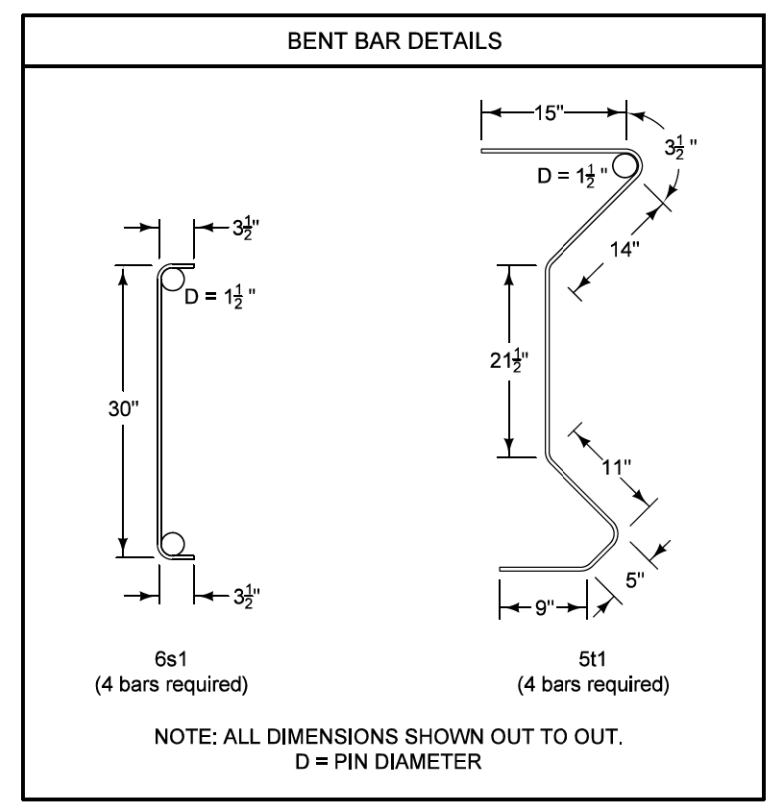


GRATE

Minimum Weight = 86 lbs.

FRAME

Minimum Weight = 81 lbs.



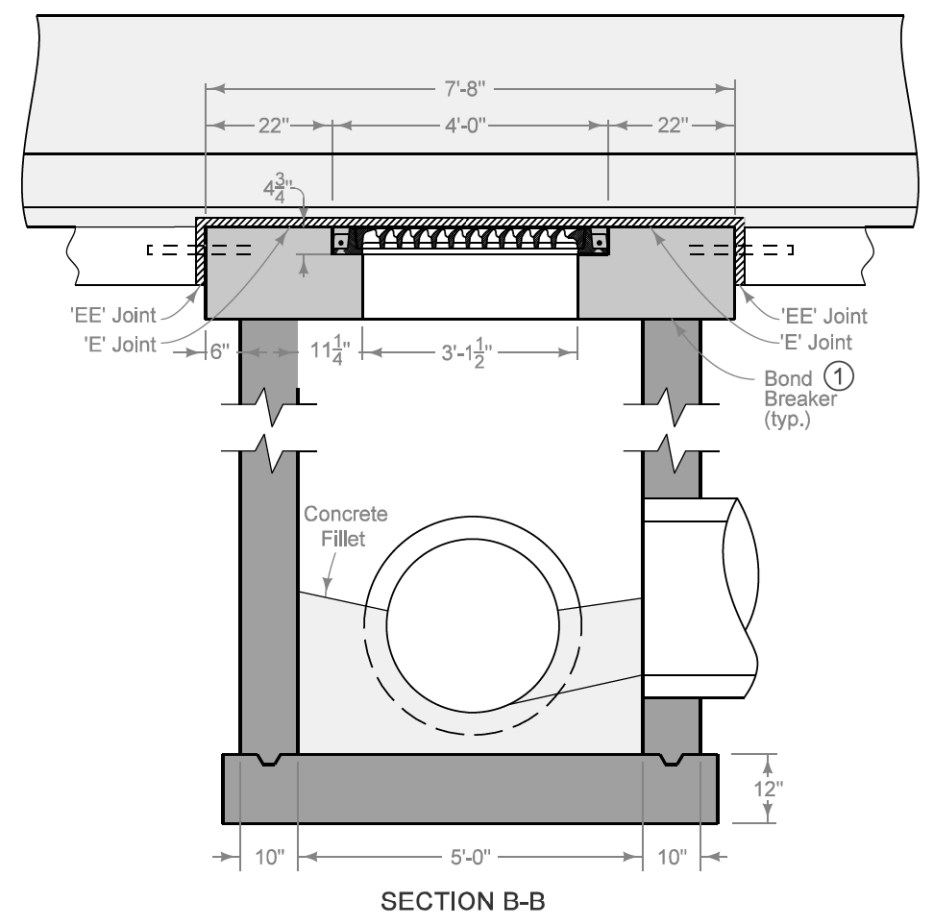
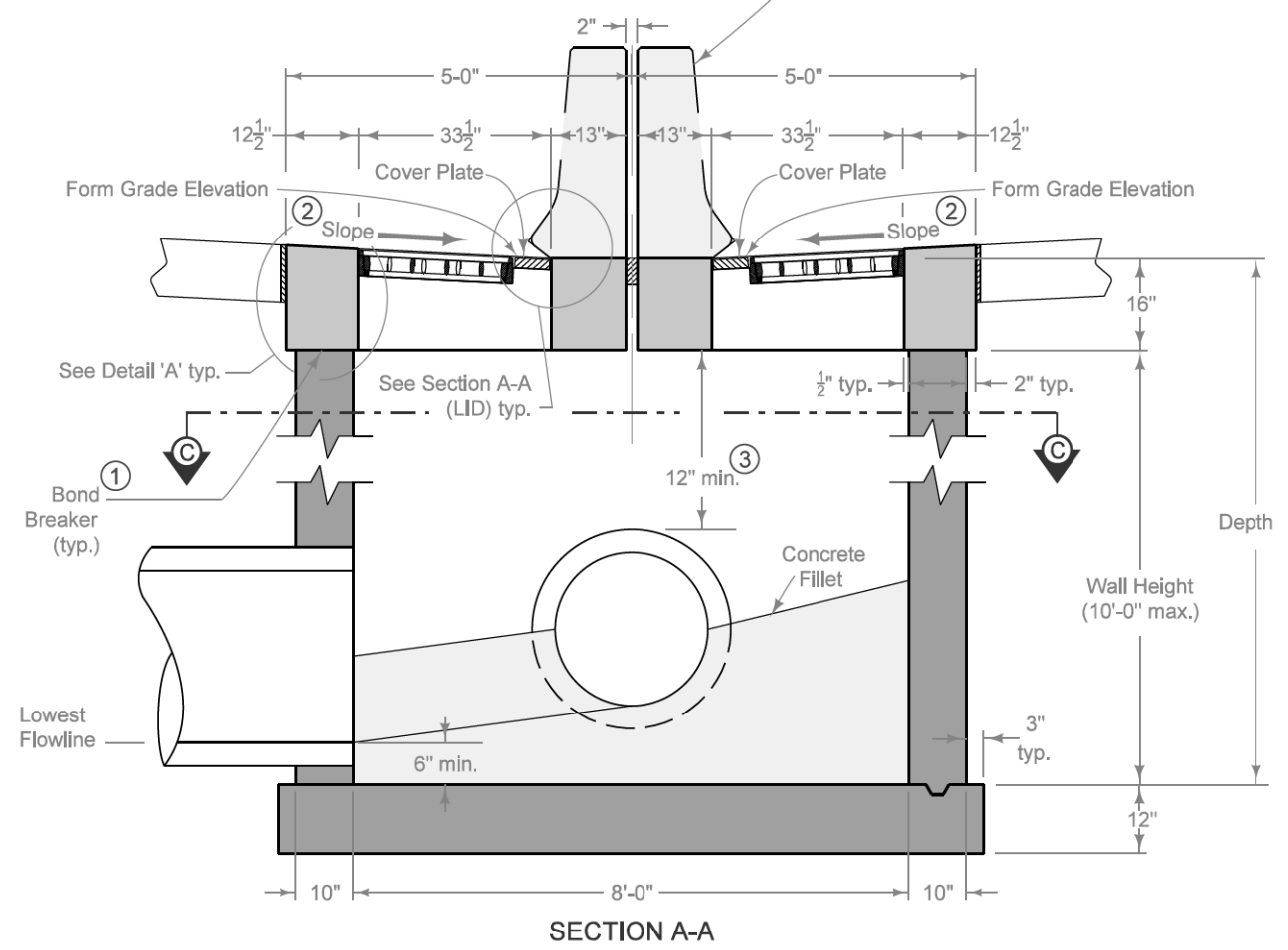
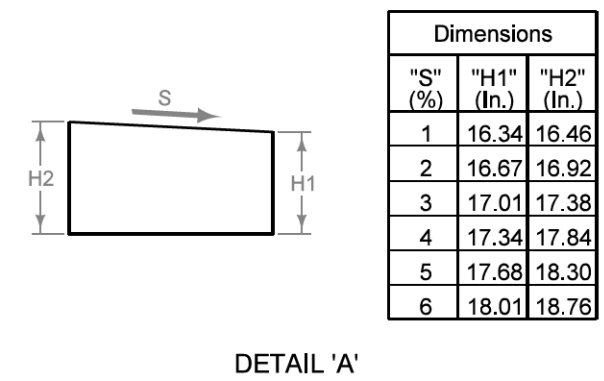
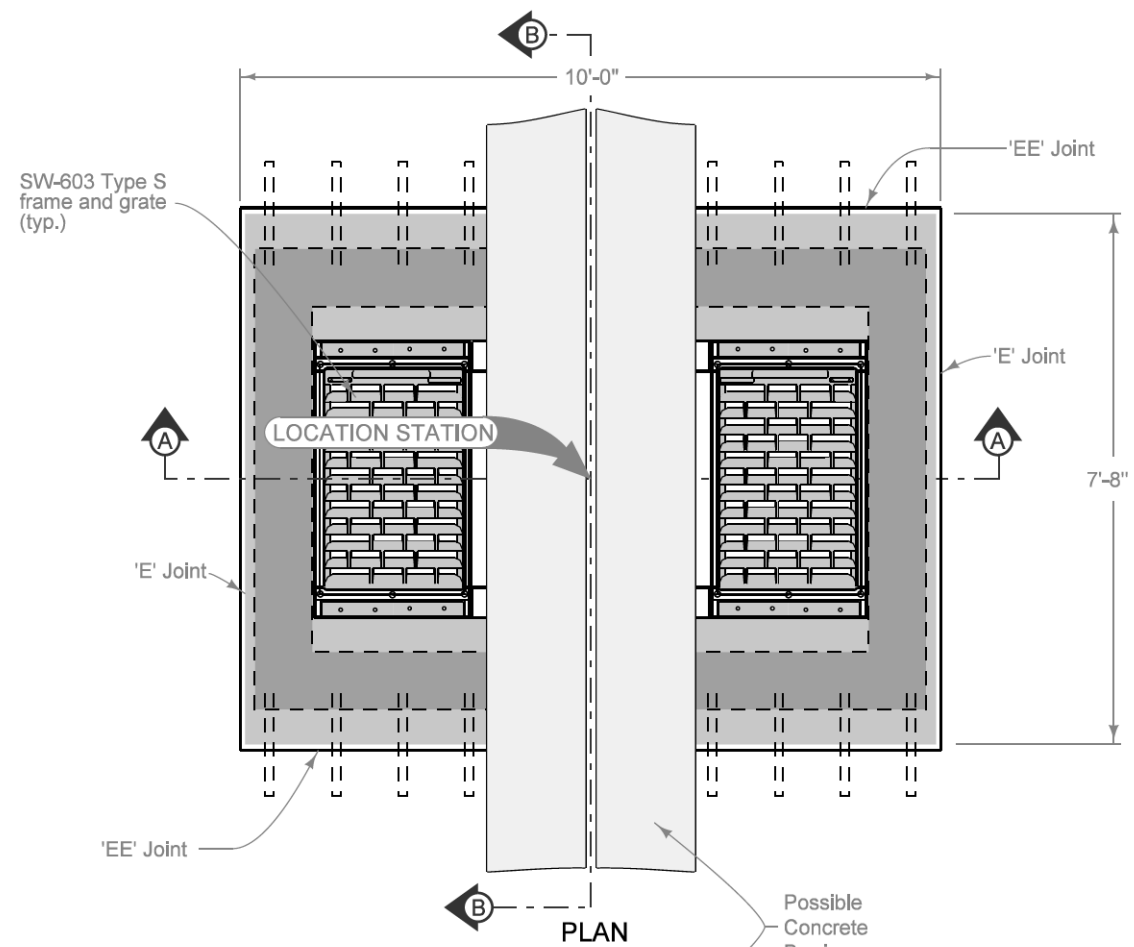
BENT BAR DETAILS

6s1
(4 bars required)

5t1
(4 bars required)

NOTE: ALL DIMENSIONS SHOWN OUT TO OUT.
D = PIN DIAMETER

<h1>MODIFIED STANDARD ROAD PLAN</h1>	REVISION	
	1	10-20-15
	SW-562	
SHEET 1 of 1		
MODIFICATIONS: Removed concrete apron.		
VERTICAL THROAT AREA INTAKE		



Cover plate and edge armor steel to be ASTM A 36, galvanized after fabrication.

Remove cover plate before constructing concrete barrier.

Cast frames into intake top so tops of grates are 1/4" below Form Grade Elevation. Bolt intake frames together on both sides with four 1/2" x 4" bolts.

For joint details, refer to PV-101.

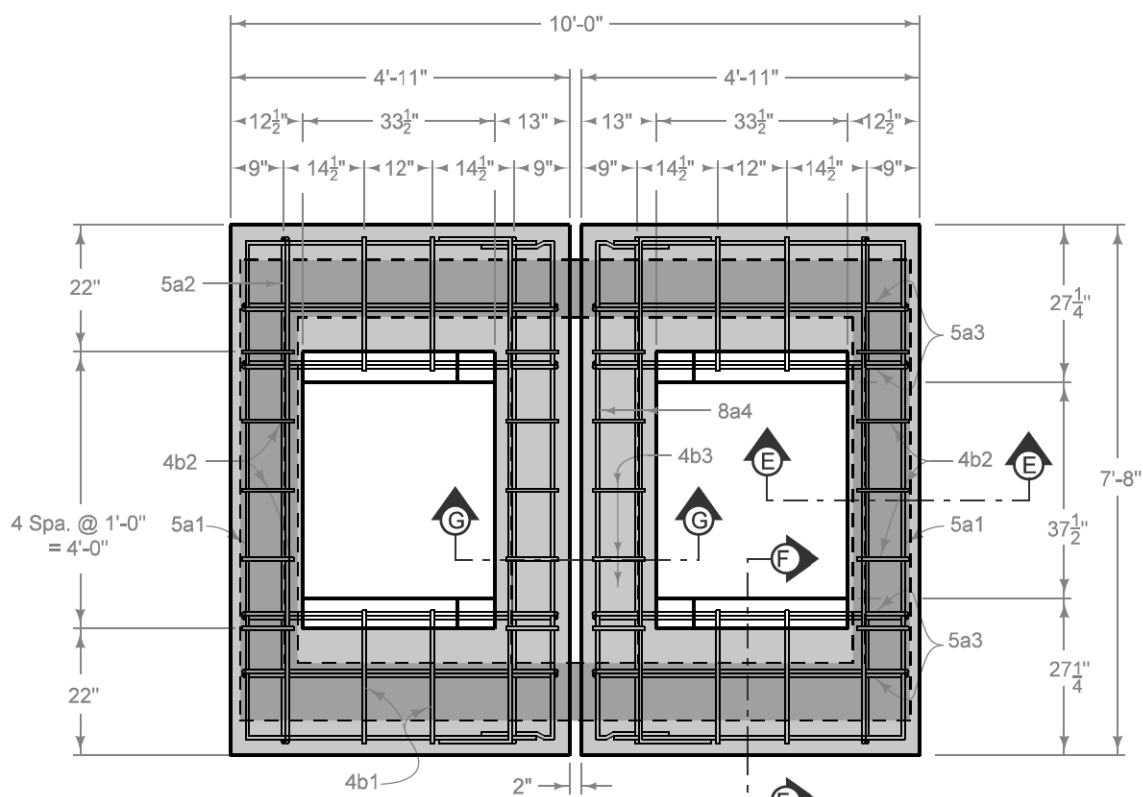
Maximum pipe diameter in 5'-0" walls is 48 inches.

Use epoxy-coated Grade 60 reinforcing bars in lids.

Provide 2 inches minimum cover.

- ① Trowel smooth and place two layers of 30 pound roofing felt to prevent bond.
- ② Match slope of top and grate to adjacent pavement.
- ③ 12 inch minimum wall height above all pipes.

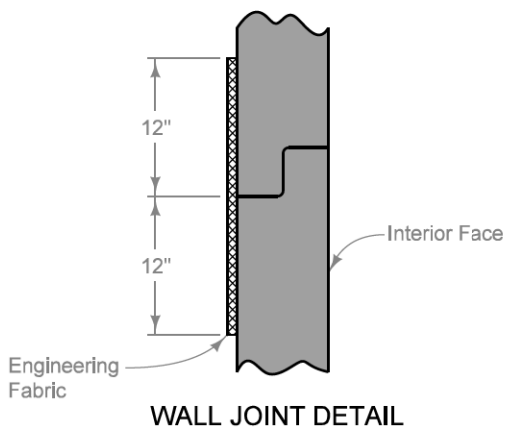
MODIFIED STANDARD ROAD PLAN	REVISION NEW 04-17-18
	SW-547 SHEET 1 of 5
MODIFICATIONS: Modified lid, bottom well and wall dimensions and reinforcing.	
DUAL-GRATE SPLIT BARRIER INTAKE	



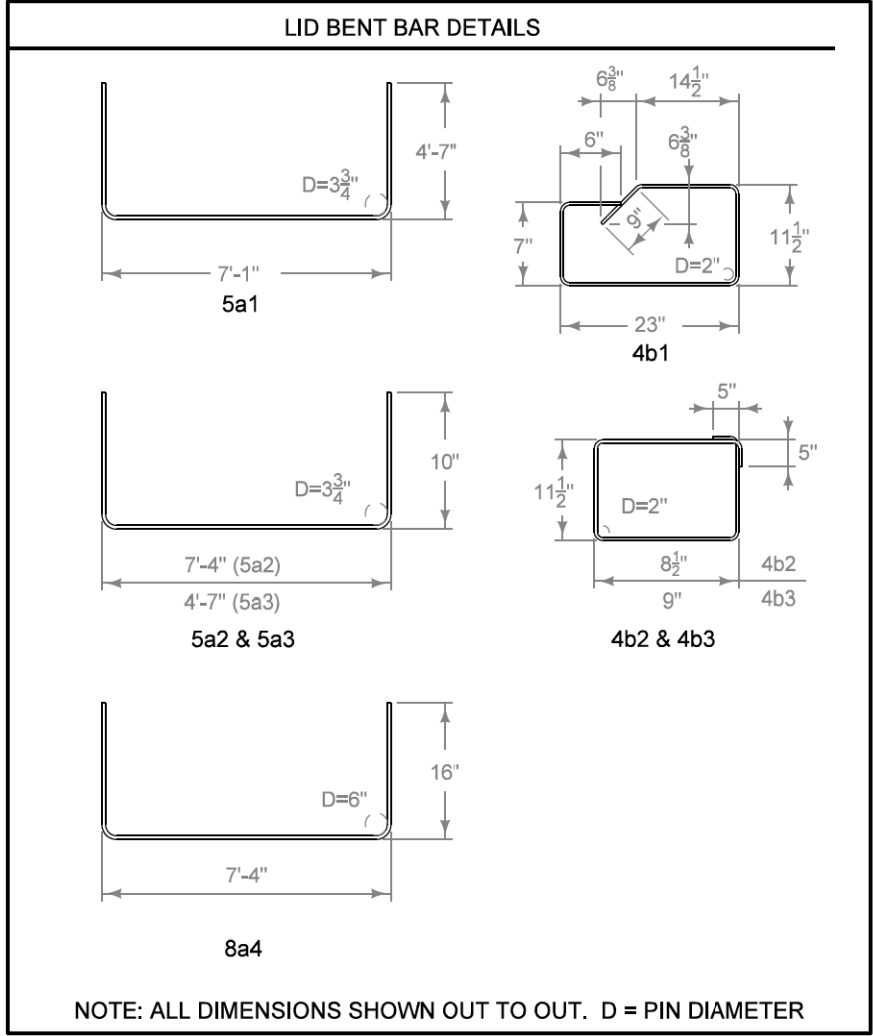
LIDS (2) PLAN

LIDS (2) QUANTITY SUMMARY	
Concrete	2.9 CY
Epoxy Coated Reinforcing Steel	618 LB

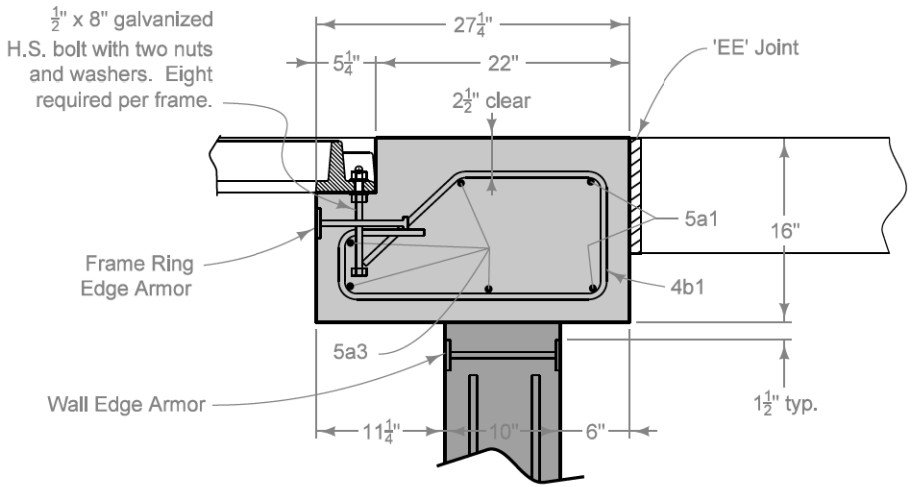
LIDS (2) REINFORCING BAR LIST - EPOXY COATED					
BAR	LOCATION	SHAPE	NO.	LENGTH	WEIGHT
5a1	Lid, Exterior, Edge	U	4	16'-3"	68
5a2	Lid, Interior, Longitudinal	U	4	9'-0"	38
5a3	Lid, Interior, Transverse	U	16	6'-3"	104
8a4	Lid, Interior Beam	U	12	10'-0"	320
4b1	Lid Hoop	□	8	5'-11"	32
4b2	Lid Hoop	□	10	4'-2"	28
4b3	Lid Hoop	□	10	4'-3"	28
EPOXY COATED REINFORCING STEEL - TOTAL					618



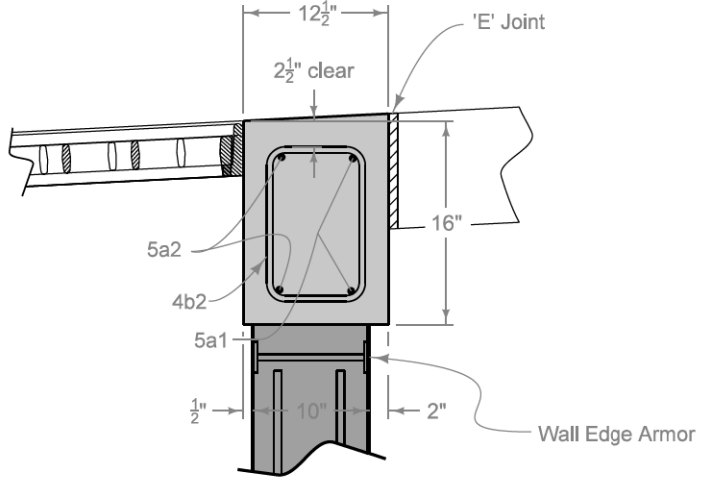
WALL JOINT DETAIL



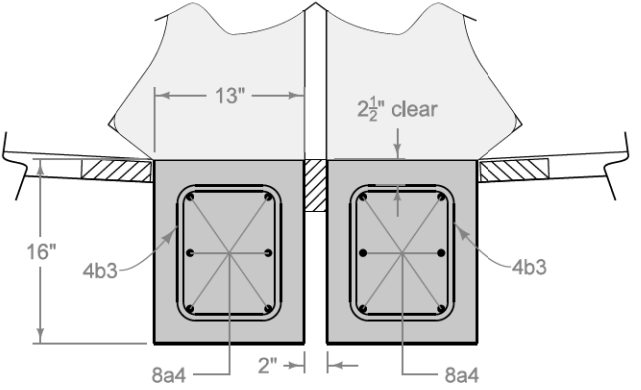
NOTE: ALL DIMENSIONS SHOWN OUT TO OUT. D = PIN DIAMETER



SECTION F-F

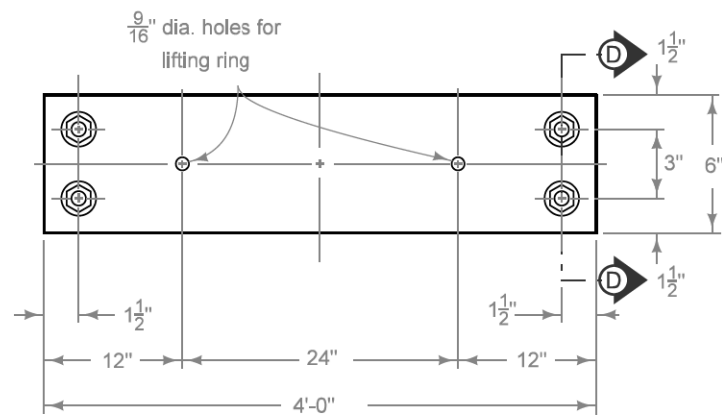


SECTION E-E

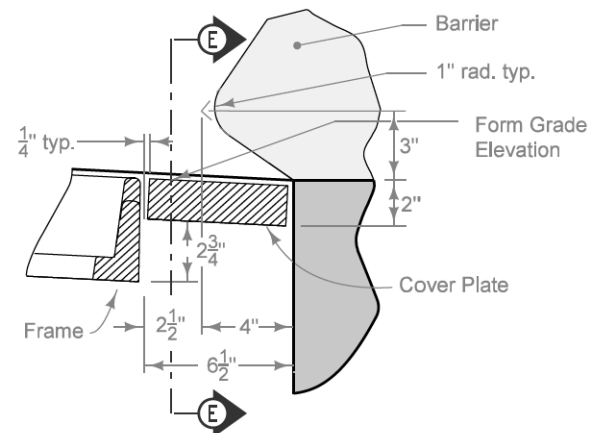


SECTION G-G

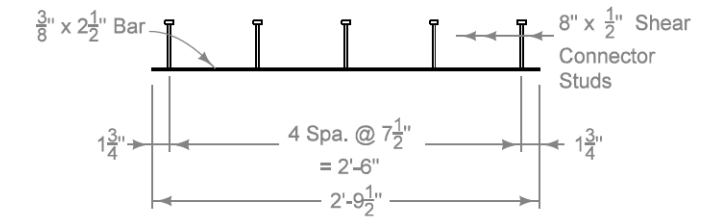
MODIFIED	REVISION
	NEW 04-17-18
STANDARD ROAD PLAN	SW-547
SHEET 2 of 5	
MODIFICATIONS:	
Modified lid, bottom well and wall dimensions and reinforcing.	
DUAL-GRATE SPLIT BARRIER INTAKE	



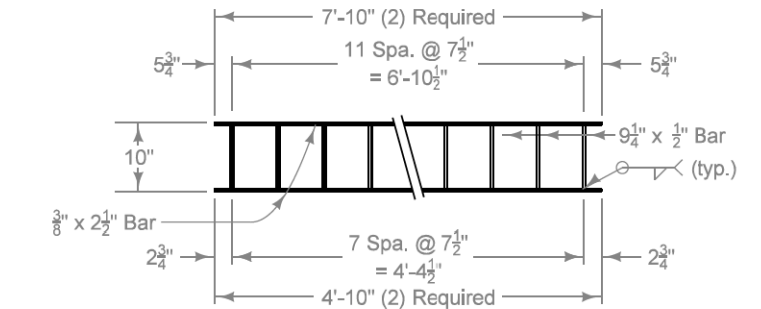
PLAN



SECTION A-A (LID)

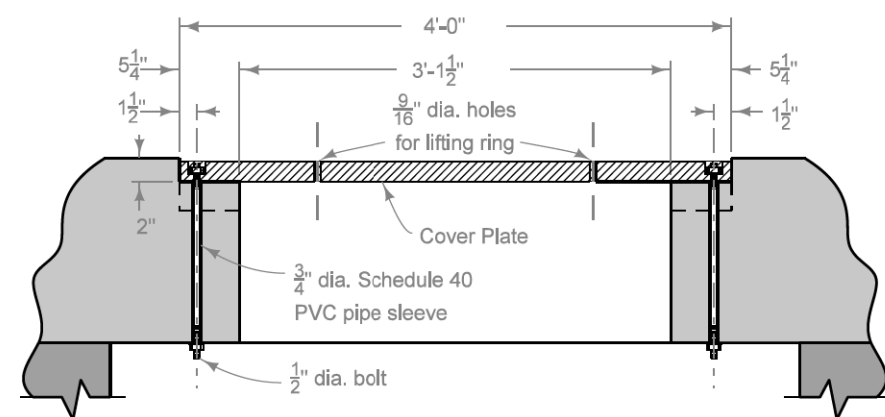


FRAME RING (4 required)

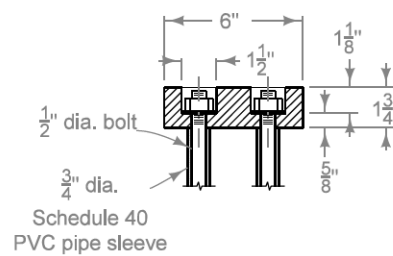


WALL

EDGE ARMOR



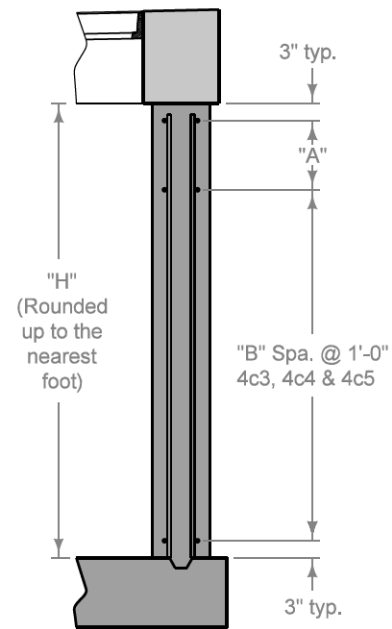
SECTION E-E



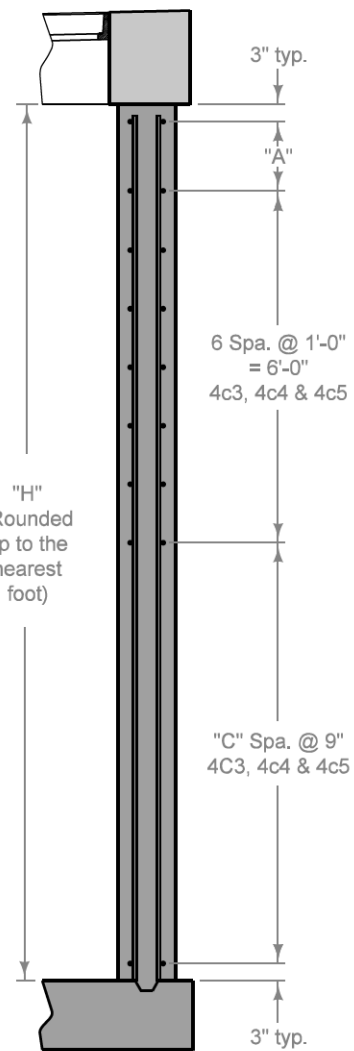
SECTION D-D

COVER PLATE

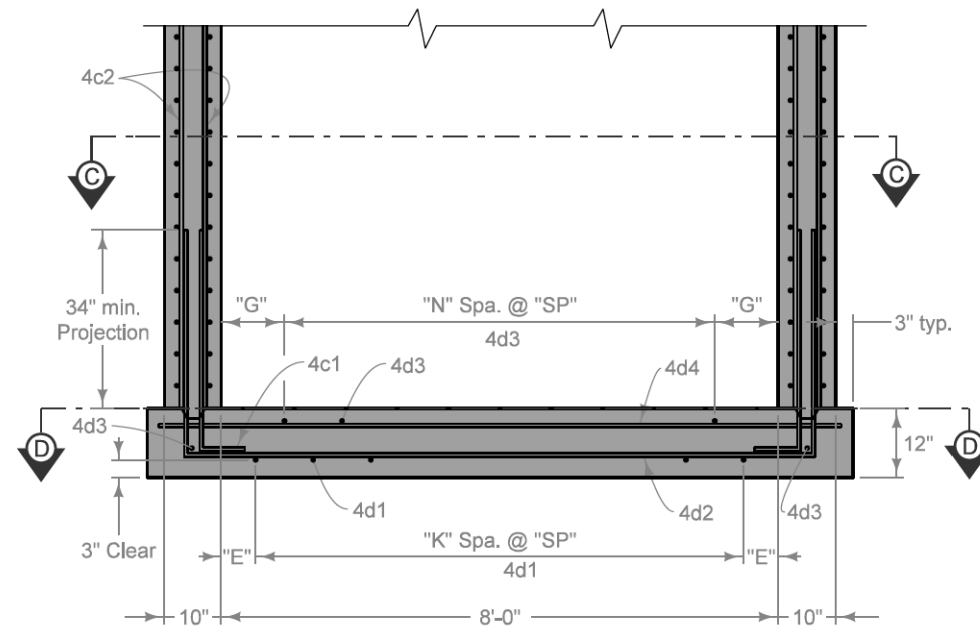
MODIFIED	REVISION	
	NEW	04-17-18
STANDARD ROAD PLAN		SW-547
		SHEET 3 of 5
MODIFICATIONS:		
Modified lid, bottom well and wall dimensions and reinforcing.		
DUAL-GRATE SPLIT BARRIER INTAKE		



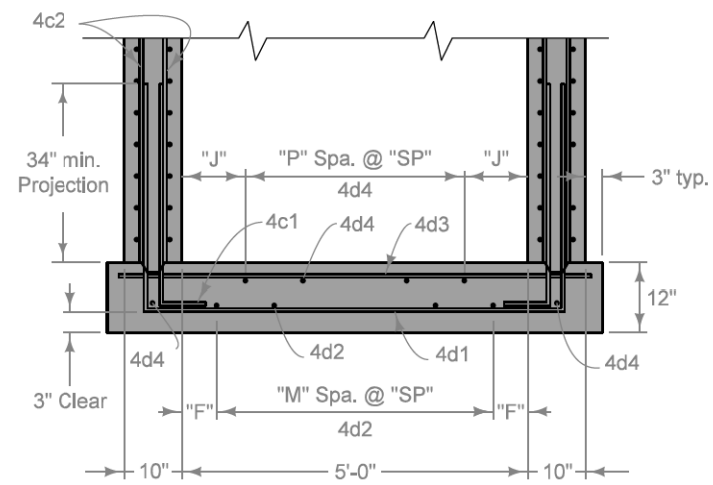
PART SECTION A-A
(Where H = 3' to 7')



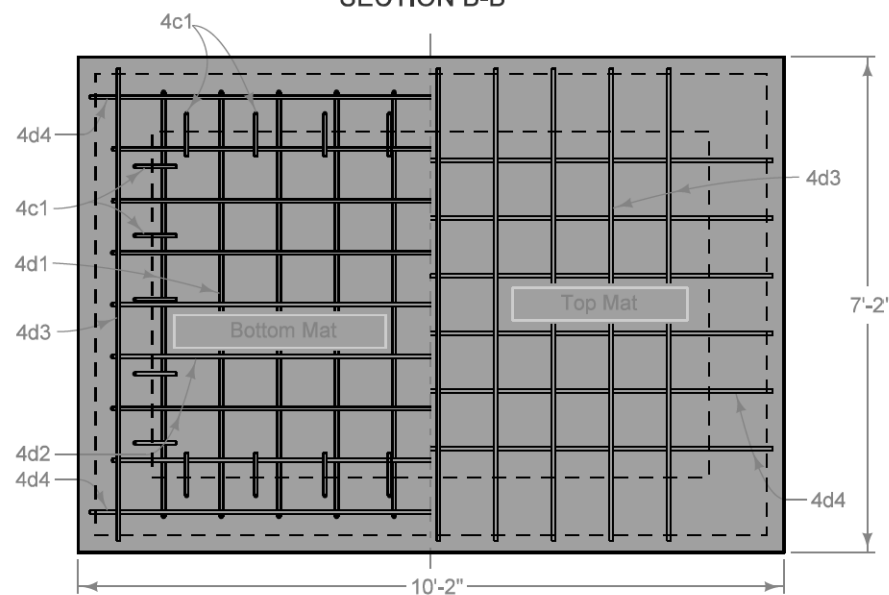
PART SECTION A-A
(Where H = 8' to 10')



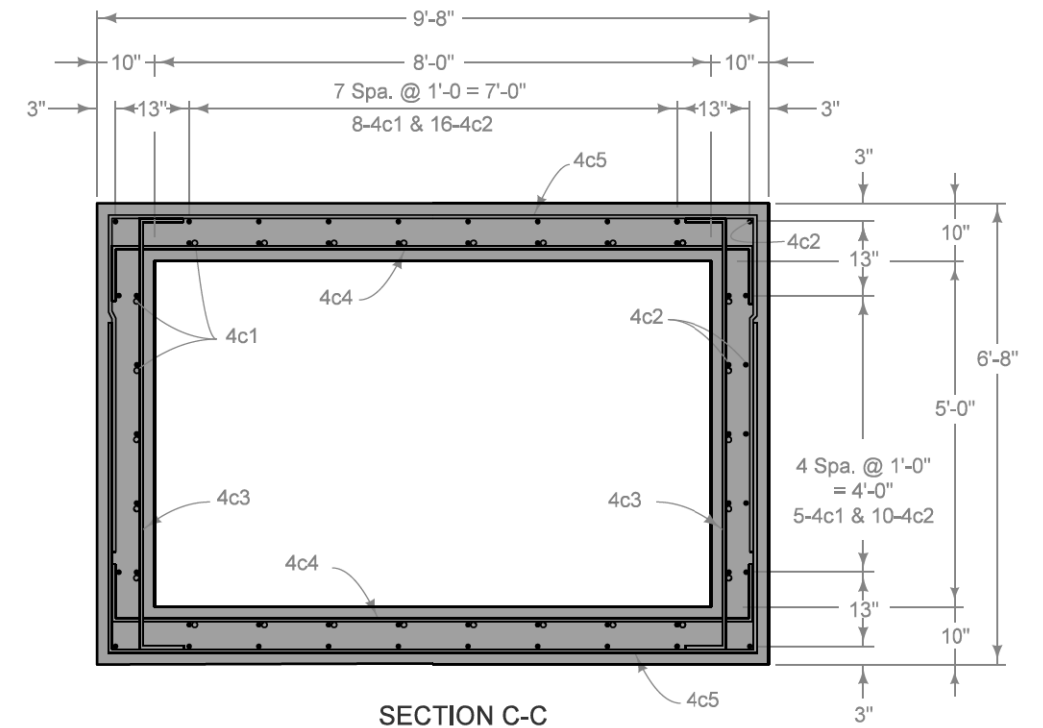
SECTION A-A



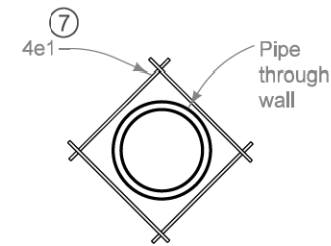
SECTION B-B



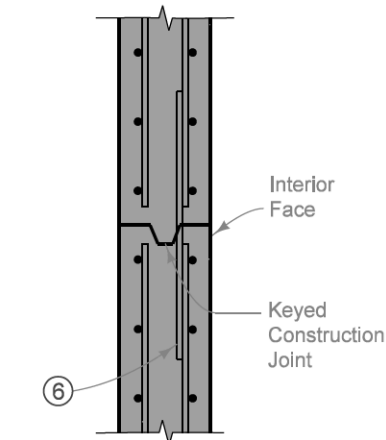
SECTION D-D
BASE REINFORCING
WALLS



SECTION C-C



PIPE REINFORCING



C.I.P. Wall
CONSTRUCTION JOINT

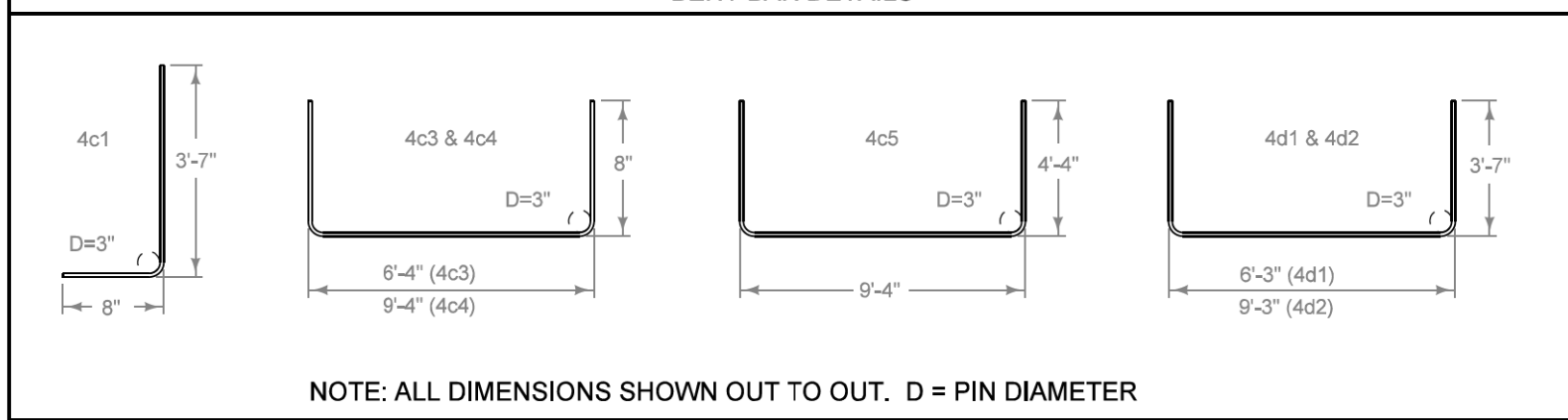
- ⑥ Install one set of 4r1 x 3'-0" dowel bars @ 12 inch spacing at any wall joints. Twenty-eight 4r1 bars required per joint, total weight = 56 lbs.
- ⑦ 4e1 bar length to be pipe diameter plus 12 inches. Place 4e1 bar inside of vertical reinforcing. Shift main reinforcing bars as required for pipe entrance. Field cut bars to maintain 3 inch clearance from bottom and 2 inch clearance from face of walls. Eight 4e1 bars required per pipe entrance.

MODIFIED STANDARD ROAD PLAN	REVISION NEW 04-17-18
	SW-547 SHEET 4 of 5
MODIFICATIONS: Modified lid, bottom well and wall dimensions and reinforcing.	
DUAL-GRATE SPLIT BARRIER INTAKE	

VARIABLE DIMENSIONS AND QUANTITIES

Dimensions						Bar List																				Quantities																			
"H" (Ft.)	"A" (In.)	"E" (In.)	"F" (In.)	"G" (In.)	"J" (In.)	4c1		4c2		4c3 ⑨			4c4 ⑨			4c5 ⑨			4d1		4d2		4d3		4d4		Concrete - Cu. Yds.				Steel ⑩ Total lbs.														
						No.	L	No.	L	No. of Spaces			No.	L	No. of Spaces			No.	L	SP	"K"	No.	L	SP	"M"	No.	L	SP	"N"	No.		L	SP	"P"	No.	L	Base	Lid	Walls	Total					
										"B"	"C"	"D"			"B"	"C"	"D"																								"B"	"C"	"D"		
3	6	3"	0"	8"	5"	26	4'-3"	-	-	2	-	-	8	7'-8"	2	-	-	8	10'-8"	2	-	-	8	18'-0"	10"	9	10	13'-5"	10"	6	7	16'-5"	10"	8	11	6'-10"	10"	5	8	9'-10"	2.7	2.9	2.7	8.3	1,155
4	6	3"	0"	8"	5"	26	4'-3"	56	3'-10"	3	-	-	10	7'-8"	3	-	-	10	10'-8"	3	-	-	10	18'-0"	10"	9	10	13'-5"	10"	6	7	16'-5"	10"	8	11	6'-10"	10"	5	8	9'-10"	2.7	2.9	3.6	9.2	1,347
5	6	2"	0"	7"	5"	26	4'-3"	56	4'-10"	4	-	-	12	7'-8"	4	-	-	12	10'-8"	4	-	-	12	18'-0"	10"	9	10	13'-5"	10"	6	7	16'-5"	10"	8	11	6'-10"	10"	5	8	9'-10"	2.7	2.9	4.5	10.1	1,433
6	6	3"	0"	8"	5"	26	4'-3"	56	5'-10"	5	-	-	14	7'-8"	5	-	-	14	10'-8"	5	-	-	14	18'-0"	10"	9	10	13'-5"	10"	6	7	16'-5"	10"	8	11	6'-10"	10"	5	8	9'-10"	2.7	2.9	5.4	11.0	1,519
7	6	4"	2"	8"	6"	26	4'-3"	56	6'-10"	6	-	-	16	7'-8"	6	-	-	16	10'-8"	6	-	-	16	18'-0"	8"	11	12	13'-5"	8"	7	8	16'-5"	8"	10	13	6'-10"	8"	6	9	9'-10"	2.7	2.9	6.3	11.9	1,650
8	9	4"	2"	8"	6"	26	4'-3"	56	7'-10"	6	1	-	18	7'-8"	6	1	-	18	10'-8"	6	1	-	18	18'-0"	8"	11	12	13'-5"	8"	7	8	16'-5"	8"	10	13	6'-10"	8"	6	9	9'-10"	2.7	2.9	7.2	12.8	1,735
9	12	4"	2"	8"	6"	26	4'-3"	56	8'-10"	6	2	-	20	7'-8"	6	2	-	20	10'-8"	6	2	-	20	18'-0"	8"	11	12	13'-5"	8"	7	8	16'-5"	8"	10	13	6'-10"	8"	6	9	9'-10"	2.7	2.9	8.1	13.7	1,821
10	6	4"	2"	8"	6"	26	4'-3"	56	9'-10"	6	4	-	24	7'-8"	6	4	-	24	10'-8"	6	4	-	24	18'-0"	8"	11	12	13'-5"	8"	7	8	16'-5"	8"	10	13	6'-10"	8"	6	9	9'-10"	2.7	2.9	9.1	14.7	1,956

BENT BAR DETAILS



- ⑧ A = First bar spacing at top of wall. Minimum spacing is 3 inches. Maximum spacing is 12 inches. Adjust as necessary.
- ⑨ See Part Section A-A on sheet 4 for spacing.
- ⑩ Quantity includes 618 lbs. for lids.

MODIFIED	REVISION	
	NEW	04-17-18
STANDARD ROAD PLAN		SW-547
		SHEET 5 of 5

MODIFICATIONS:
Modified lid, bottom well and wall dimensions and reinforcing.

DUAL-GRATE SPLIT BARRIER INTAKE

REINFORCEMENT

UNIQUE SYMBOLS FOR THIS PROJECT		
EXISTING	PROPOSED	DESCRIPTIONS
		Iowa DOT Plowed Conduit
		Iowa DOT Trenched Conduit
		Existing Iowa DOT/ICN Fiber
		Iowa DOT Handhole, Type FOR27
		Iowa DOT Handhole, Type IV
		Iowa DOT ITS Device Cabinet, Pole Mount
		Iowa DOT ITS Device Cabinet, Ground Mount
		Iowa DOT Device Pole

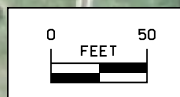
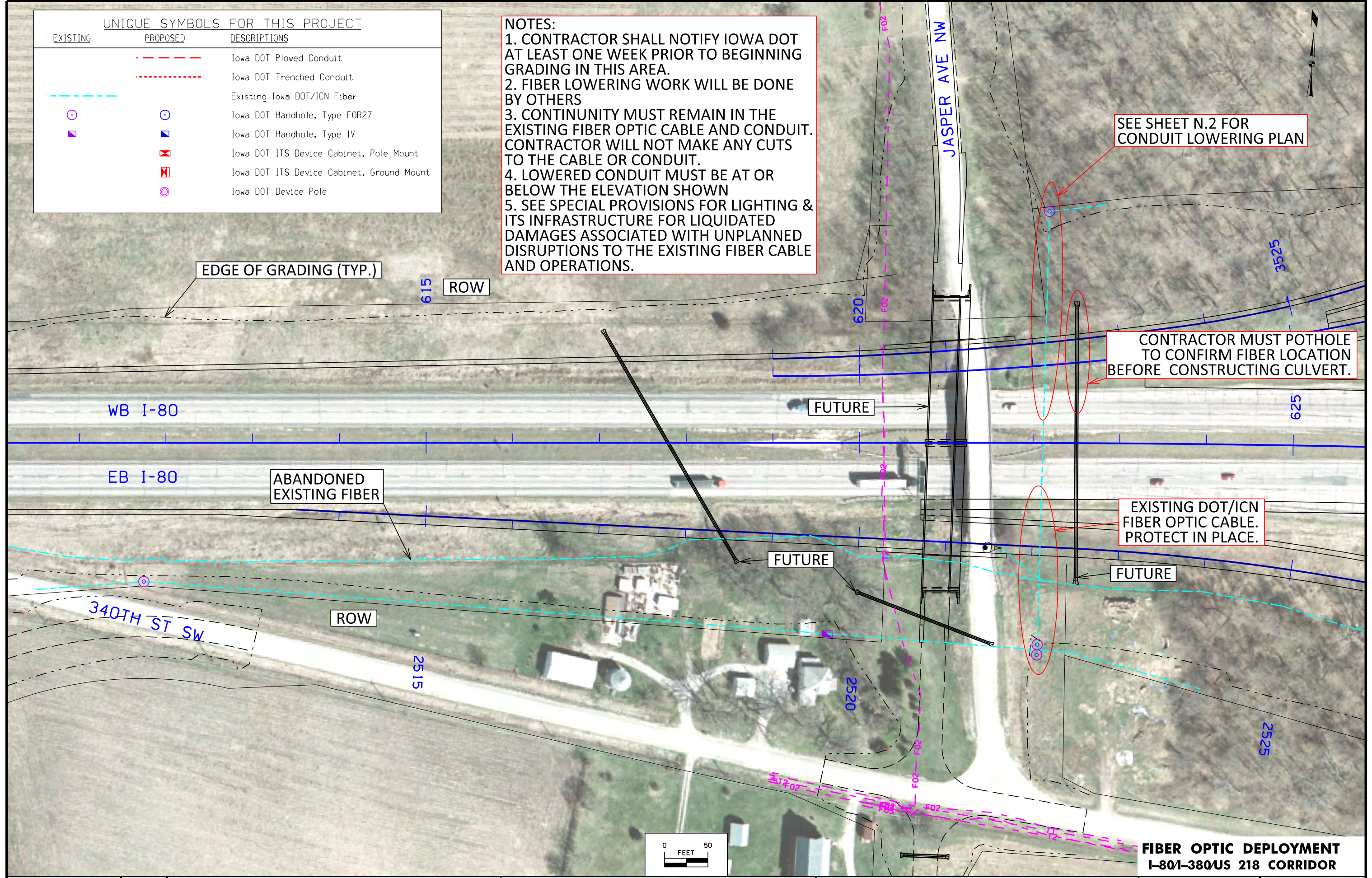
NOTES:

1. CONTRACTOR SHALL NOTIFY IOWA DOT AT LEAST ONE WEEK PRIOR TO BEGINNING GRADING IN THIS AREA.
2. FIBER LOWERING WORK WILL BE DONE BY OTHERS
3. CONTINUITY MUST REMAIN IN THE EXISTING FIBER OPTIC CABLE AND CONDUIT. CONTRACTOR WILL NOT MAKE ANY CUTS TO THE CABLE OR CONDUIT.
4. LOWERED CONDUIT MUST BE AT OR BELOW THE ELEVATION SHOWN
5. SEE SPECIAL PROVISIONS FOR LIGHTING & ITS INFRASTRUCTURE FOR LIQUIDATED DAMAGES ASSOCIATED WITH UNPLANNED DISRUPTIONS TO THE EXISTING FIBER CABLE AND OPERATIONS.




SEE SHEET N.2 FOR CONDUIT LOWERING PLAN

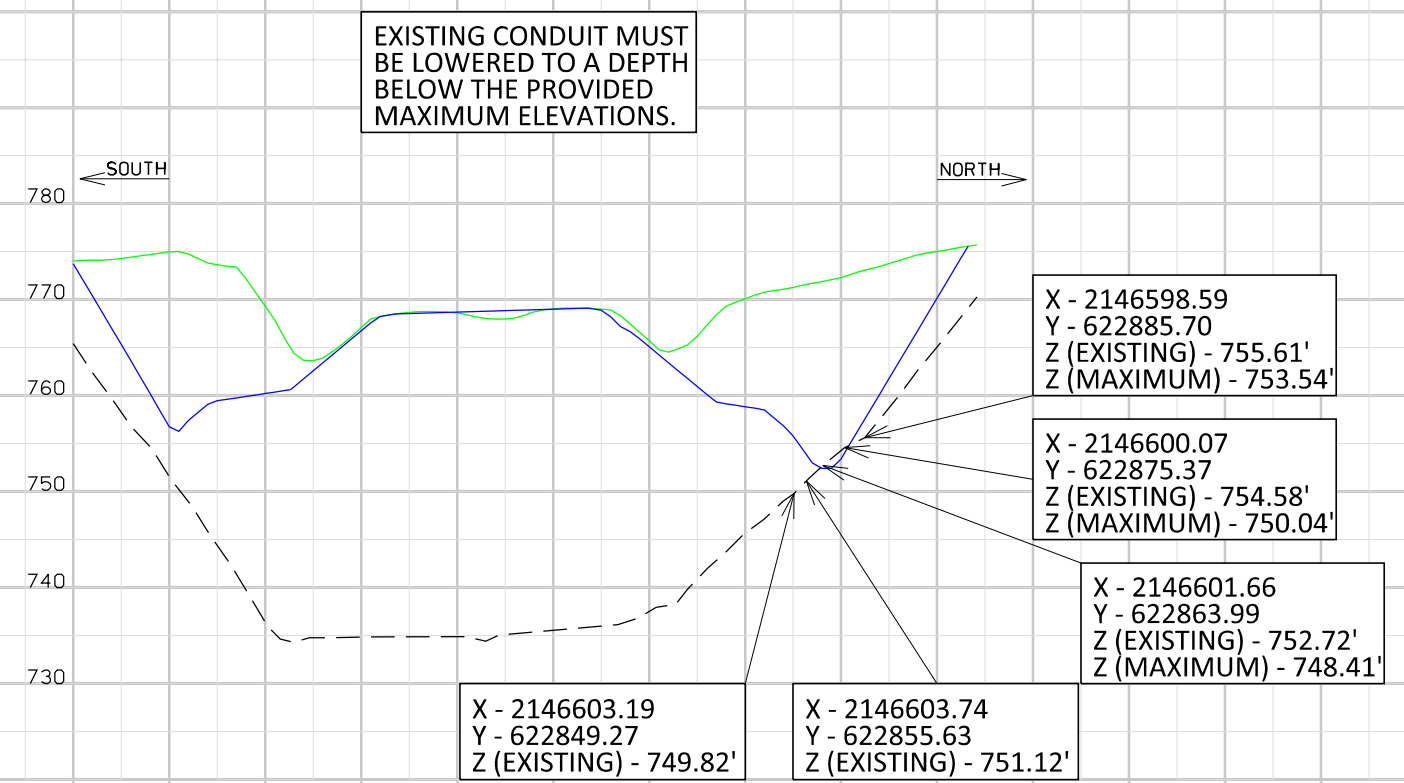
CONTRACTOR MUST POTHOLE TO CONFIRM FIBER LOCATION BEFORE CONSTRUCTING CULVERT.

EXISTING DOT/ICN FIBER OPTIC CABLE. PROTECT IN PLACE.

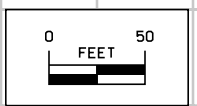


**FIBER OPTIC DEPLOYMENT
I-80I-380US 218 CORRIDOR**

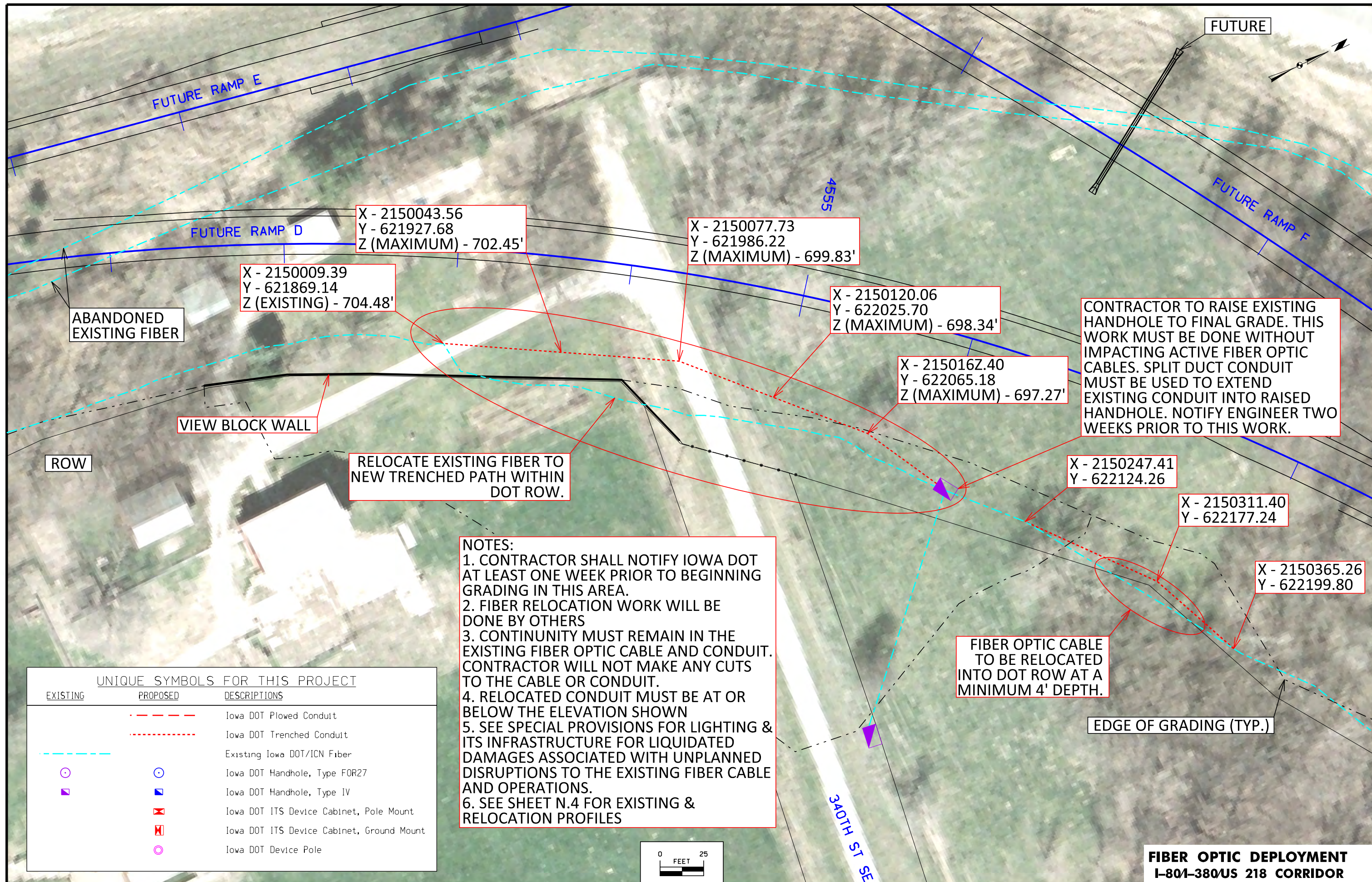
LEGEND	
	EXISTING GROUND
	PROPOSED GROUND
	EXISTING BORE



AS BUILT PROFILE 29D



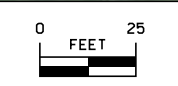
**FIBER OPTIC DEPLOYMENT
I-80I-380US 218 CORRIDOR**



NOTES:

1. CONTRACTOR SHALL NOTIFY IOWA DOT AT LEAST ONE WEEK PRIOR TO BEGINNING GRADING IN THIS AREA.
2. FIBER RELOCATION WORK WILL BE DONE BY OTHERS
3. CONTINUITY MUST REMAIN IN THE EXISTING FIBER OPTIC CABLE AND CONDUIT. CONTRACTOR WILL NOT MAKE ANY CUTS TO THE CABLE OR CONDUIT.
4. RELOCATED CONDUIT MUST BE AT OR BELOW THE ELEVATION SHOWN
5. SEE SPECIAL PROVISIONS FOR LIGHTING & ITS INFRASTRUCTURE FOR LIQUIDATED DAMAGES ASSOCIATED WITH UNPLANNED DISRUPTIONS TO THE EXISTING FIBER CABLE AND OPERATIONS.
6. SEE SHEET N.4 FOR EXISTING & RELOCATION PROFILES

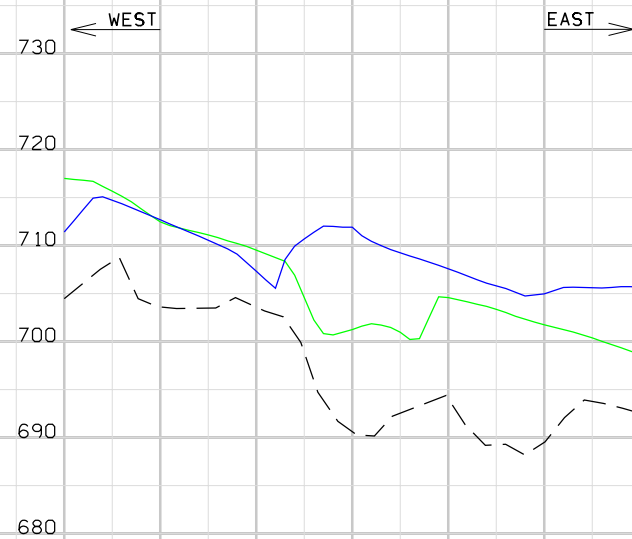
UNIQUE SYMBOLS FOR THIS PROJECT		
EXISTING	PROPOSED	DESCRIPTIONS
- - - - -	- - - - -	Iowa DOT Plowed Conduit
- - - - -	- - - - -	Iowa DOT Trenched Conduit
- - - - -	- - - - -	Existing Iowa DOT/ICN Fiber
○	○	Iowa DOT Handhole, Type F0R27
■	■	Iowa DOT Handhole, Type IV
⊠	⊠	Iowa DOT ITS Device Cabinet, Pole Mount
⊠	⊠	Iowa DOT ITS Device Cabinet, Ground Mount
○	○	Iowa DOT Device Pole



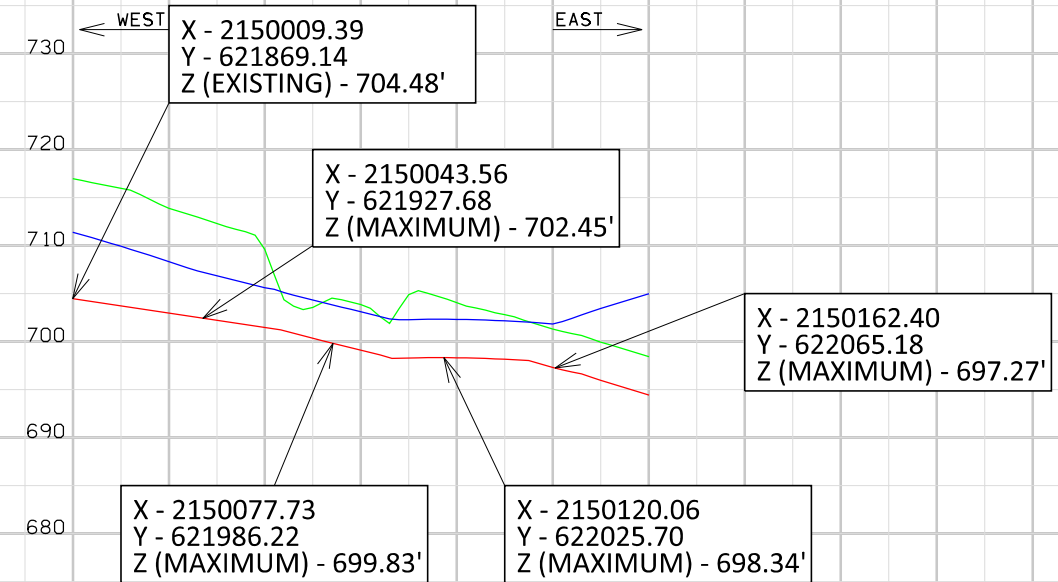
**FIBER OPTIC DEPLOYMENT
I-80I-380US 218 CORRIDOR**

LEGEND

- EXISTING GROUND
- PROPOSED GROUND
- - - - EXISTING BORE
- MAXIMUM CONDUIT ELEVATION

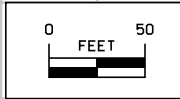


EXISTING PROFILE 30B



RELOCATED PROFILE 30B

EXISTING CONDUIT MUST BE LOWERED TO A DEPTH BELOW THE PROVIDED MAXIMUM ELEVATIONS.



**FIBER OPTIC DEPLOYMENT
I-80I-380US 218 CORRIDOR**

SURVEY SYMBOLS
(See sheet D.1 for additional legend information)

	SAA Sanitary Sewer Line Co. 1		SL Speed Limit Sign
	TLA Underground Telephone Line Co. 1		MH Utility Access (Manhole)
	ELA Underground Electric Line Co. 1		FHD Fire Hydrants
	TLB Underground Telephone Line Co. 2		WV Water Valve
	TVA Underground TV Cable Co. 1		RET Retaining Walls
	GLA Underground Gas Line Co. 1		FCL Chain Link and Security Fence
	FOA Underground Fiber Optic Co. 1		CUL Culvert
	TLC Underground Telephone Line Co. 3		EB Electrical Box
	FOB Underground Fiber Optic Co. 2		SHR Shrub
	ELB Underground Electric Line Co. 2		SEP Septic Tank
	FOC Underground Fiber Optic Co. 3		TEV Evergreen Tree
	GLB Underground Gas Line Co. 2		TLNL Tree Line Left
	STA Storm Sewer Line Co. 1		BIN Grain Bin
	FOD Underground Fiber Optic Co. 4		LP L.P. Tank
	GLC Underground Gas Line Co. 3		FWD Wood Fence
	DU Centerline Draw or Stream (Up)		GV Gas Valve
	D Centerline Draw or Stream (Down)		WEL Well
	EP Edge of Paved Roads (ML or SR)		GDL Guard Rail Steel
	SNP Unpaved Shoulder		FLG Flag Poles
	CU Back of Curb		WHD Water Hydrant
	DIK Centerline of Dike or Dam		HDG Hedge Row
	RIP Rip-Rap		BB Billboard
	GU Gutter In Front of Curb		OUT Tile Outlet
	SWK Sidewalk		GP Guard Post (Less Than 4 Posts)
	CON Concrete or A/C Slab		TV Satellite TV Dish
	ENP Edge Paved Entrance & Park Lot		MM Mile Marker Post
	ENT Centerline BL of Entrance		TVP TV Pedestal
	ENU Edge Unpaved Entrance & Parking		LC Lot Corner
	BNK Stream Bank		INB Storm Sewer Beehive Intake
	EG Edge of Gravel Road		TFR Tree Fruit
	EW Edge of Water		
	SH Paved Shoulder		
	SNK Sink Hole		
	TPD Telephone Pedestal		
	PPA Power Pole Co. 1		
	SI Sign		
	PIP Pipe Culvert		
	FW Wire Fence		
	PLG Location of General Photo		
	TLNR Tree Line Right		
	IN Storm Sewer Intake		
	MIS Miscellaneous		
	LUM Luminaire		
	TDC Tree Deciduous		
	BLD Building or Foundation		
	PR Electric Riser Pole		
	UB Utility Box		

UTILITY LEGEND
(See sheet D.1 for additional legend information)

This is a POINT 25 Project and is subject to the provisions of IAC 761-115.25.

	Windstream Dan Cole One Martha's Way Hiawatha, IA 52233 319-790-7123 dan.d.cole@windstream.com
	Windstream Communications of Iowa Dale Graff 614 West Street South Grinnell, IA 50112-0330 641-990-3297 dale.a.graff@windstream.com
	Linn County Rural Electric Cooperative Kim Colberg 5695 REC Drive Marion, IA 52302-0069 319-377-1587 kcolberg@linncountyrec.com
	Alliant Energy Jason A. Hogan 4902 North Biltmore Madison, WI 53707-1007 608-458-4871 jasonhogan@alliantenergy.com
	Century Link (formerly Qwest) Steve Parker 2103 E. University Ave Des Moines, IA 50317 515-265-0968 Steven.Parker4@CenturyLink.com
	TLB Underground Telephone Line Co. 2
	GLA Underground Gas Line Co. 1
	ELA Underground Electric Line Co. 1
	PR Electric Riser Pole
	TLC Underground Telephone Line Co. 3
	TLD Underground Telephone Line Co. 4
	ELB Underground Electric Line Co. 2

PLAN VIEW COLOR LEGEND OF SOILS SHEETS

LINEWORK	Design	Color No.	Description
Green	(2)		Existing Topographic Features and Labels
Purple (Halo)	(15)		Backslope Drains
Blue	(1)		Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
SHADING	Design	Color No.	Description
Brown, Light	(236)		Core Out

PROFILE VIEW COLOR LEGEND OF SOILS SHEETS

LINEWORK	Design	Color No.	Description
Blue	(1)		Proposed Alignment, Stationing, and Alignment Annotation
Green	(2)		Existing Ground Line Profile
Green, Med	(227)		Topsoil
Green, Med	(227)		Slope Dressing Only
Orange	(6)		Loam
Brown, Dark	(238)		Class 10
Brown, Med	(237)		Sand
Red	(3)		Unsuitable A
Pink, Dark	(13)		Unsuitable B
Pink	(11)		Unsuitable C
Red	(3)		Shale
Red	(3)		Waste
Gray, Light	(48)		Broken and Weathered Rock
Gray, Med	(80)		Rock
Gray, V.Dark	(128)		Boulders

PATTERN AND SYMBOL LEGEND OF SOILS SHEETS

	Drill		Dig/Core	Soils Book No. Braun Intertec
	Water		Treatment	Date(s) Drilled 2013-2018
	Dry		Sand Blanket	
	Sample		Soil Remediation Area	
	Plugged		Select Soil	
	Moisture		Select Sand	
	Shelby		Slope Dressing Only	
	Blow Count		Broken and Weathered Rock	
	Dens. Core		Rock	

	Reference Point
	Station
	Survey Line
	Section Corner
	Ground Line Intercept
	Saw Cut
	Guardrail
	Clearing & Grubbing Area
	Pavement Removal

RIGHT-OF-WAY LEGEND

	Proposed Right-of-Way
	Existing and Proposed Right-of-Way
	Easement and Existing Right-of-Way
	Borrow
	Easement (Temporary)
	Easement
	Excess
	A/C Access Control

NOTE: Sounding and test boring data shown in the plans were accumulated for designing and estimating purposes. Their appearance on the plans does not constitute a guarantee that conditions other than those indicated will be encountered. Details and notes shown elsewhere shall be used for roadway and structure construction.

SOILS LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES Q)

CLEAR CREEK TWP.
T-80N R-7W
SEC. 33



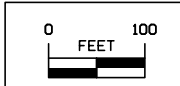
Existing Overhead Utility
- Protect in Place
Approx. Sta. 568+15

Existing Buried Utilities
- Protect in Place
Approx. Sta. 567+85 to 568+50

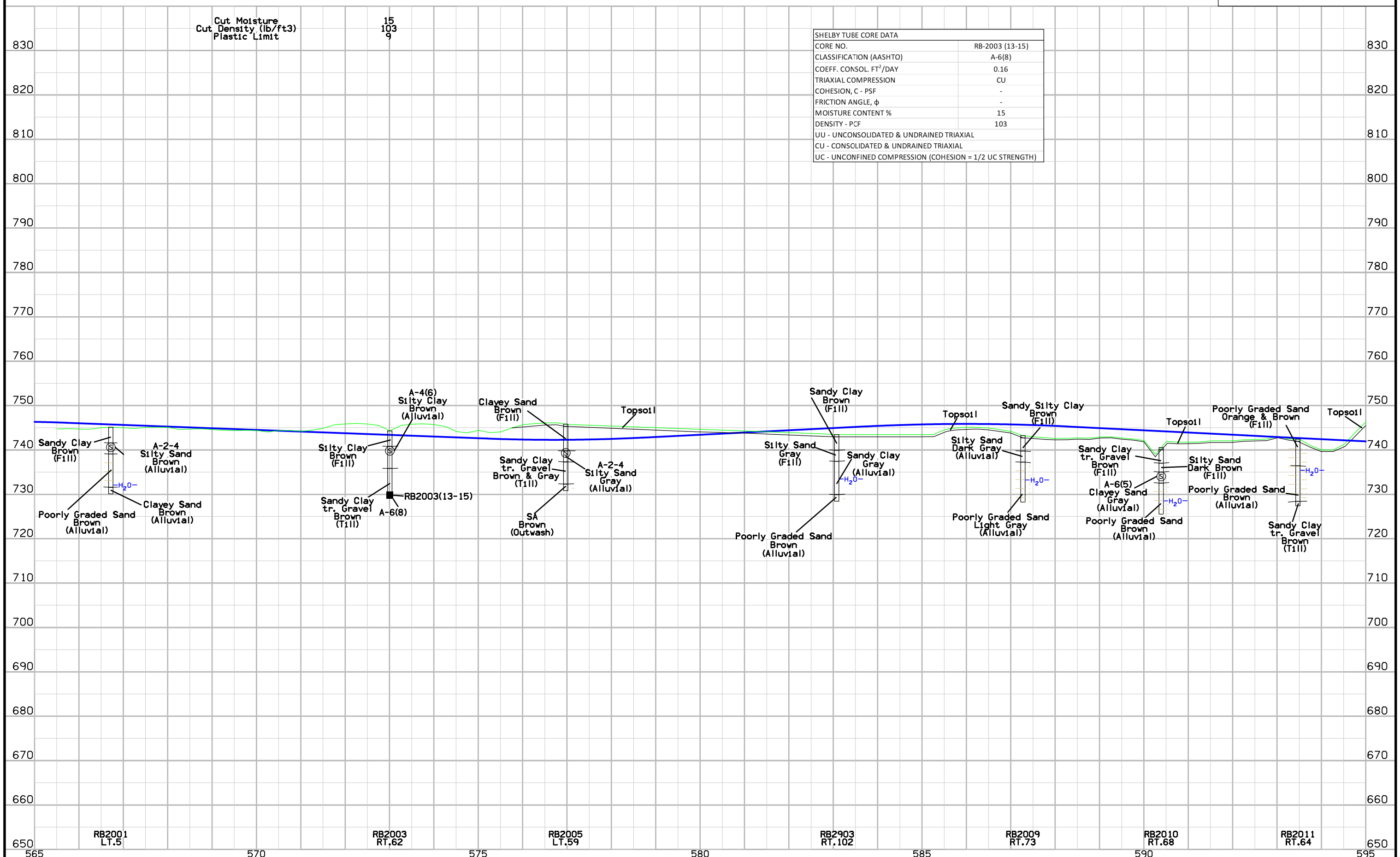
Existing Overhead Utility
- Protect in Place
Approx. Sta. 593+00

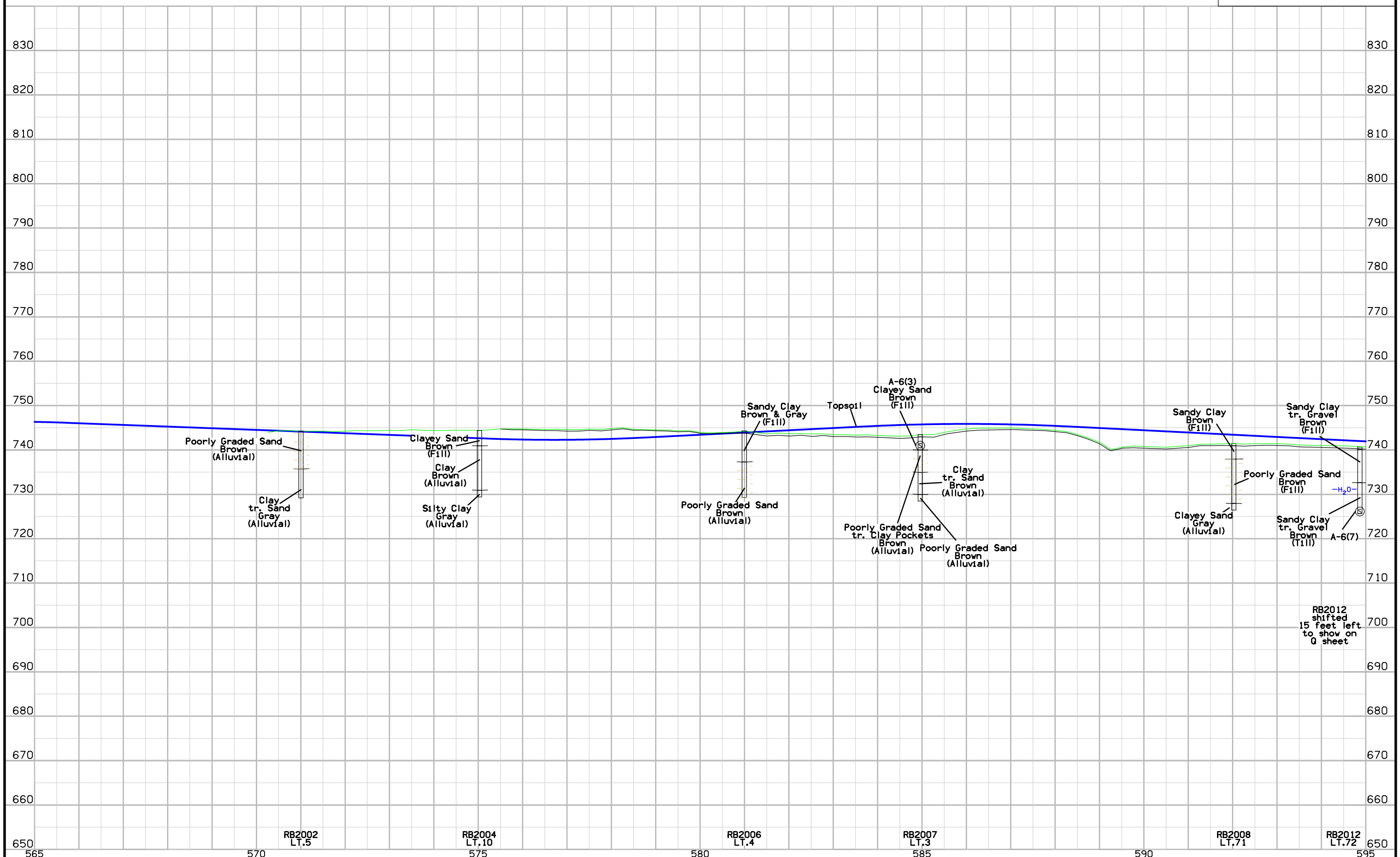
Existing DOT-ICN Fiber Optic - Protect
in Place (Conduit Run 27C)
Approx. Sta. 593+30, 125' RT
to 594+10, 125' RT

Curve Data
 $\Delta = 4^\circ 26' 53.84''$ (LT)
T = 333.79
L = 667.24
R = 8,594.37
E = 6.48



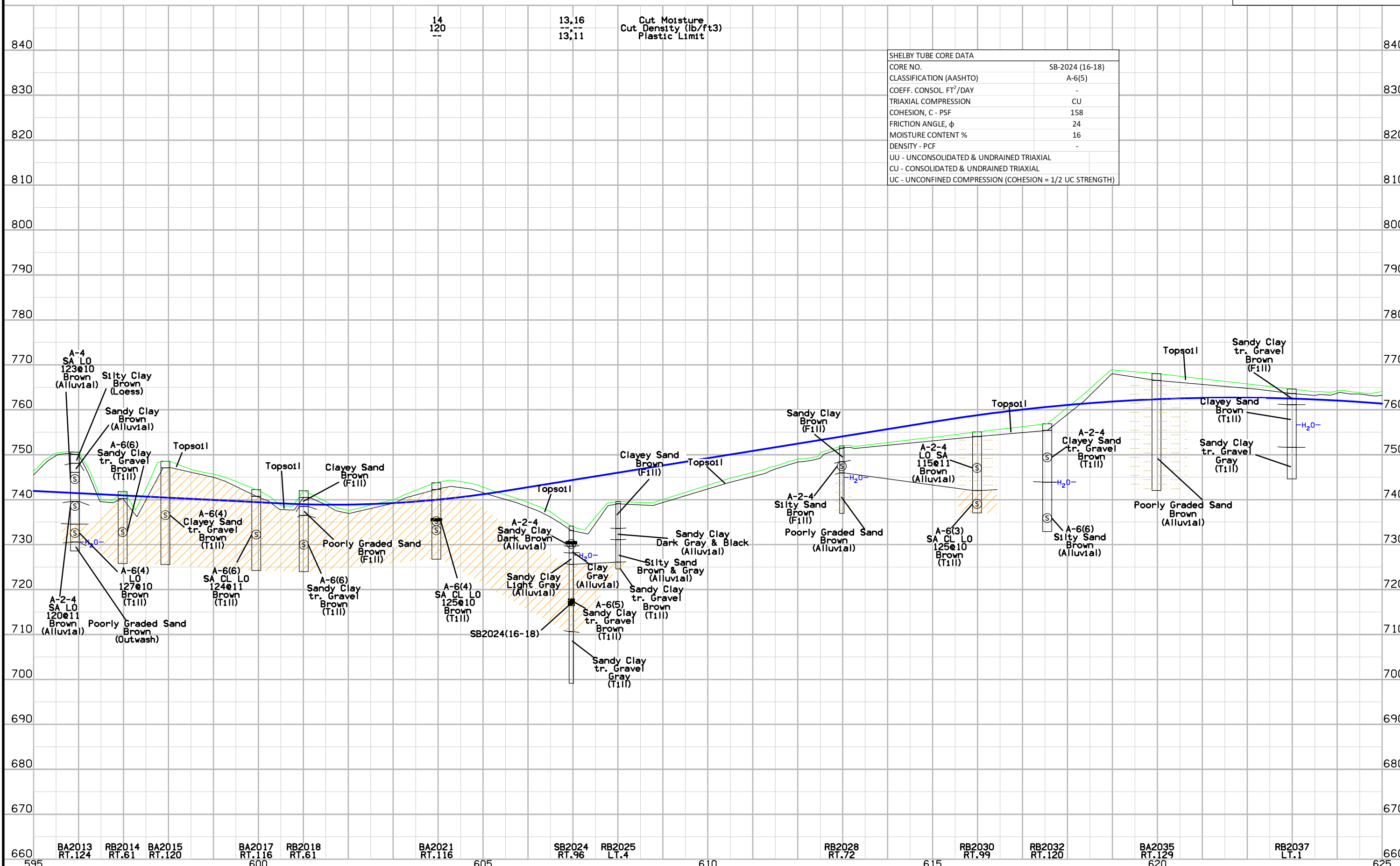
I-80





14
120
Cut Moisture
Cut Density (lb/ft³)
Plastic Limit

SHELBY TUBE CORE DATA	
CORE NO.	SB-2024 (16-18)
CLASSIFICATION (AASHTO)	A-6(5)
COEFF. CONSOL. FT ² /DAY	-
TRIAXIAL COMPRESSION	CU
COHESION, C - PSF	158
FRICTION ANGLE, φ	24
MOISTURE CONTENT %	16
DENSITY - PCF	-
UU - UNCONSOLIDATED & UNDRAINED TRIAXIAL	
CU - CONSOLIDATED & UNDRAINED TRIAXIAL	
UC - UNCONFINED COMPRESSION (COHESION = 1/2 UC STRENGTH)	



Cut Moisture
Cut Density (lb/ft³)
Plastic Limit

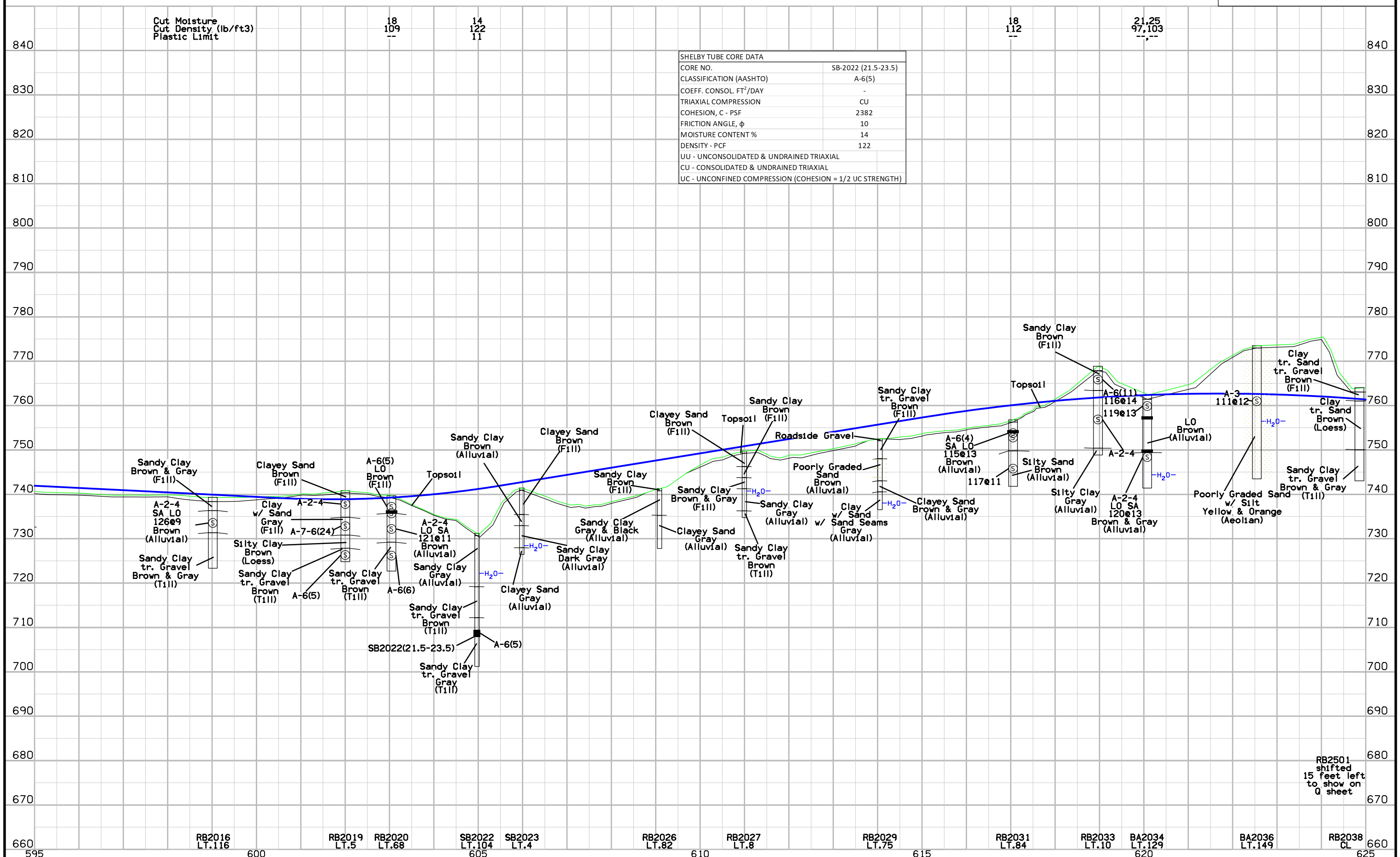
18
109
--

14
122
11

18
112
--

21,25
97,103
--

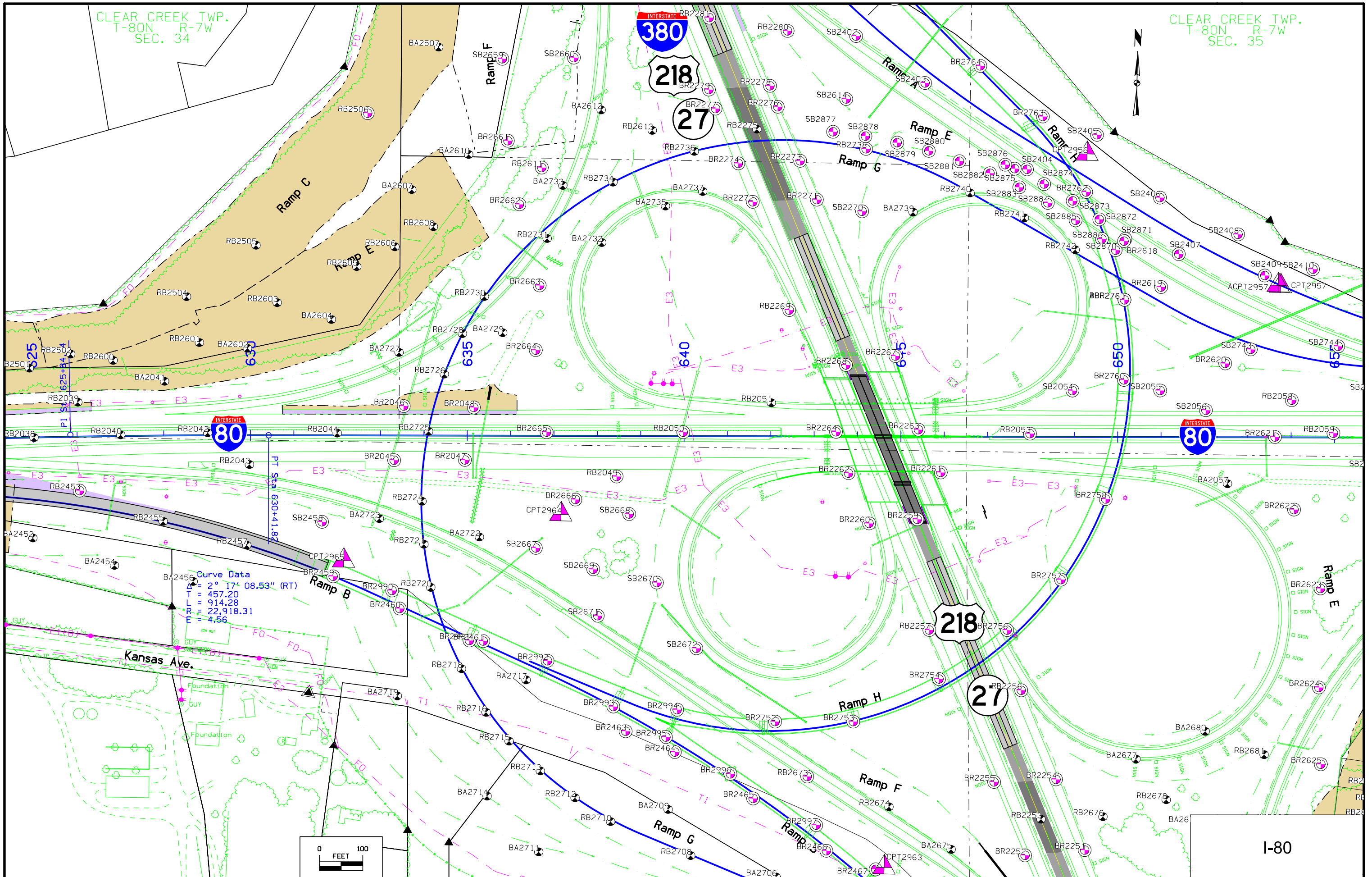
SHELBY TUBE CORE DATA	
CORE NO.	SB-2022 (21.5-23.5)
CLASSIFICATION (AASHTO)	A-6(5)
COEFF. CONSOL. FT ² /DAY	-
TRIAxIAL COMPRESSION	CU
COHESION, C - PSF	2382
FRICTION ANGLE, φ	10
MOISTURE CONTENT %	14
DENSITY - PCF	122
UU - UNCONSOLIDATED & UNDRAINED TRIAXIAL	
CU - CONSOLIDATED & UNDRAINED TRIAXIAL	
UC - UNCONFINED COMPRESSION (COHESION = 1/2 UC STRENGTH)	

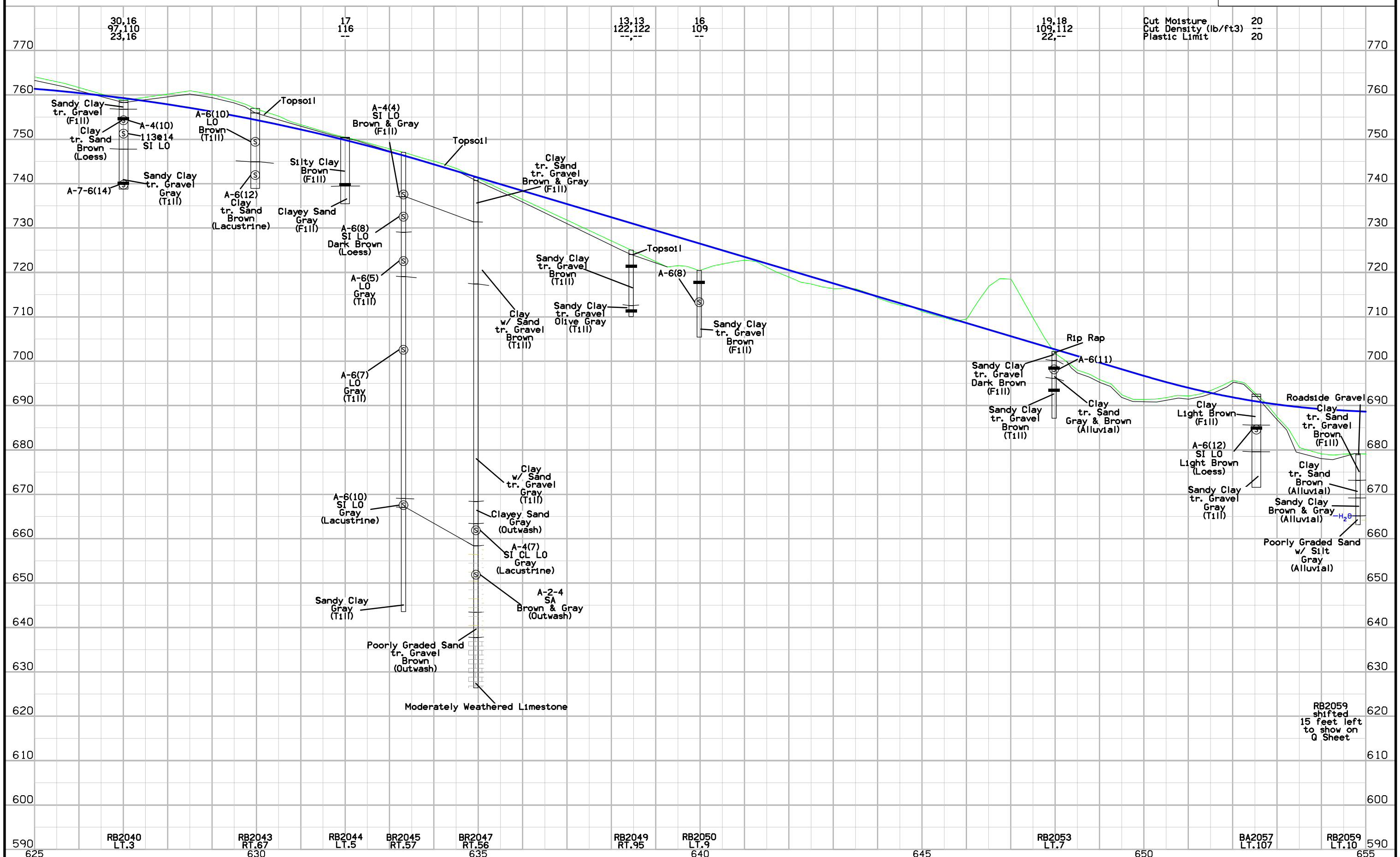


RB2501 shifted 15 feet left to show on Q sheet

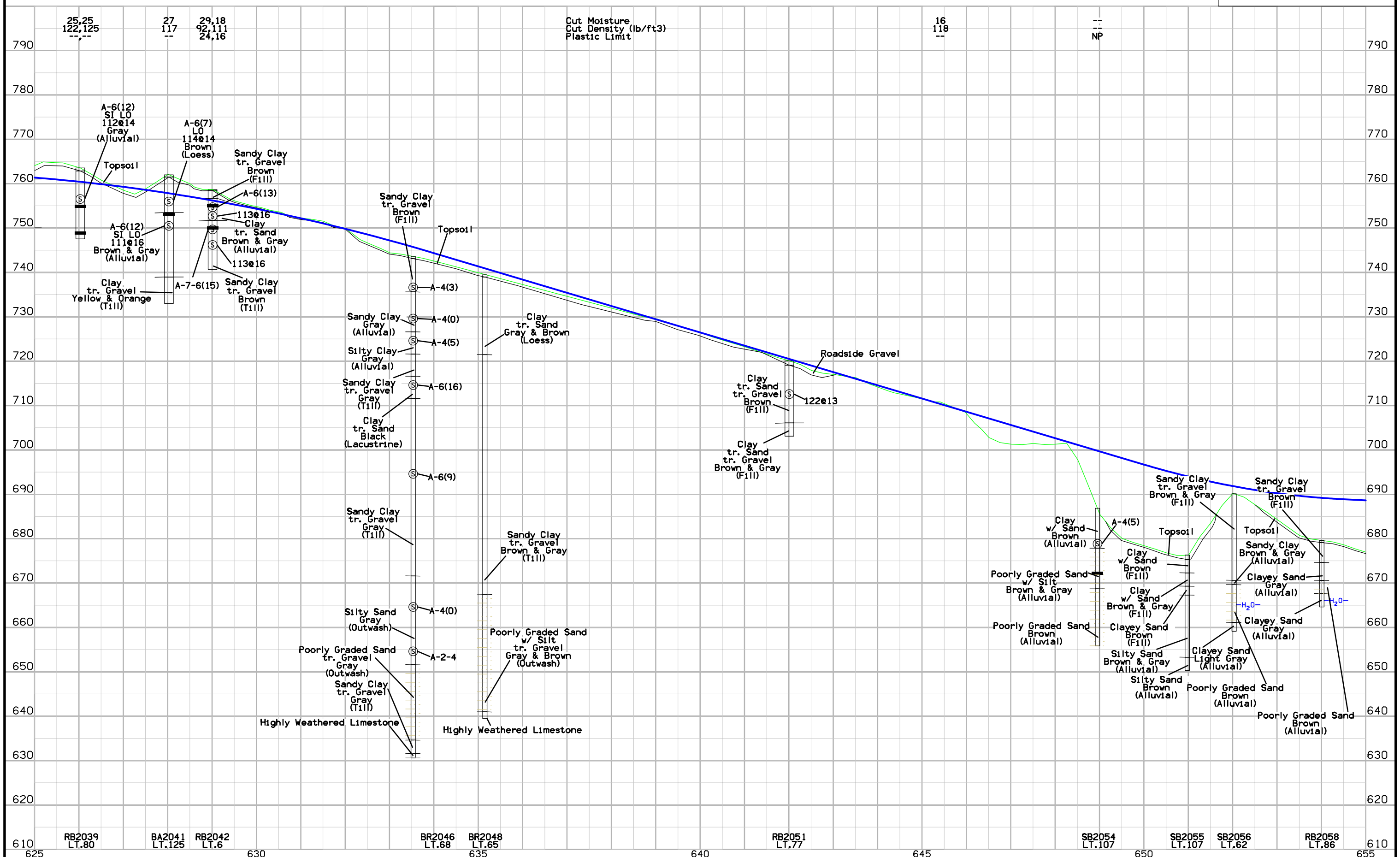
CLEAR CREEK TWP.
T-80N R-7W
SEC. 34

CLEAR CREEK TWP.
T-80N R-7W
SEC. 35





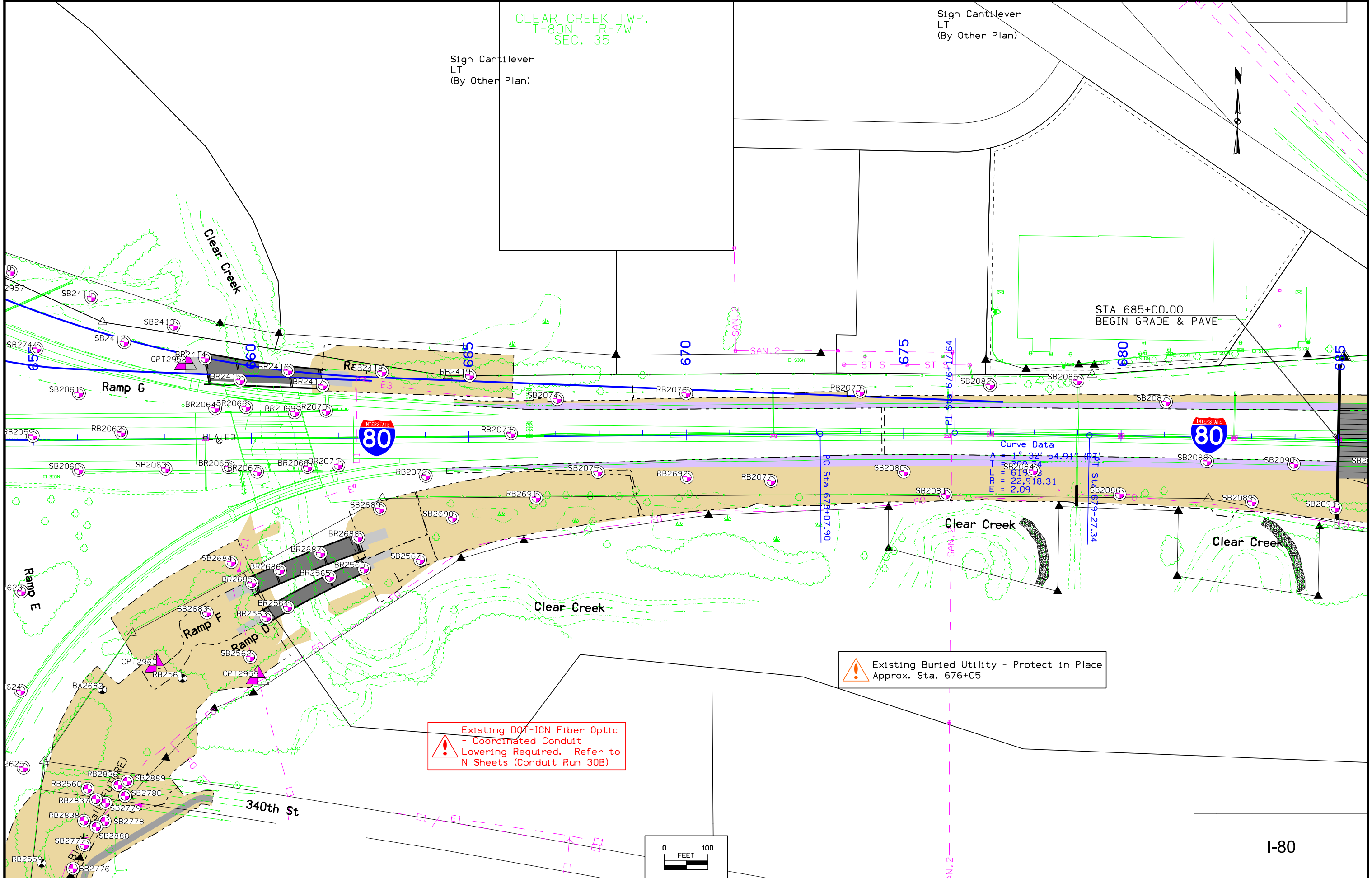
Cut Moisture 20
 Cut Density (lb/ft³) --
 Plastic Limit 20



CLEAR CREEK TWP.
T-80N R-7W
SEC. 35

Sign Cantilever
LT
(By Other Plan)

Sign Cantilever
LT
(By Other Plan)



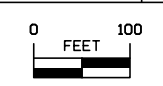
STA 685+00.00
BEGIN GRADE & PAVE

Curve Data

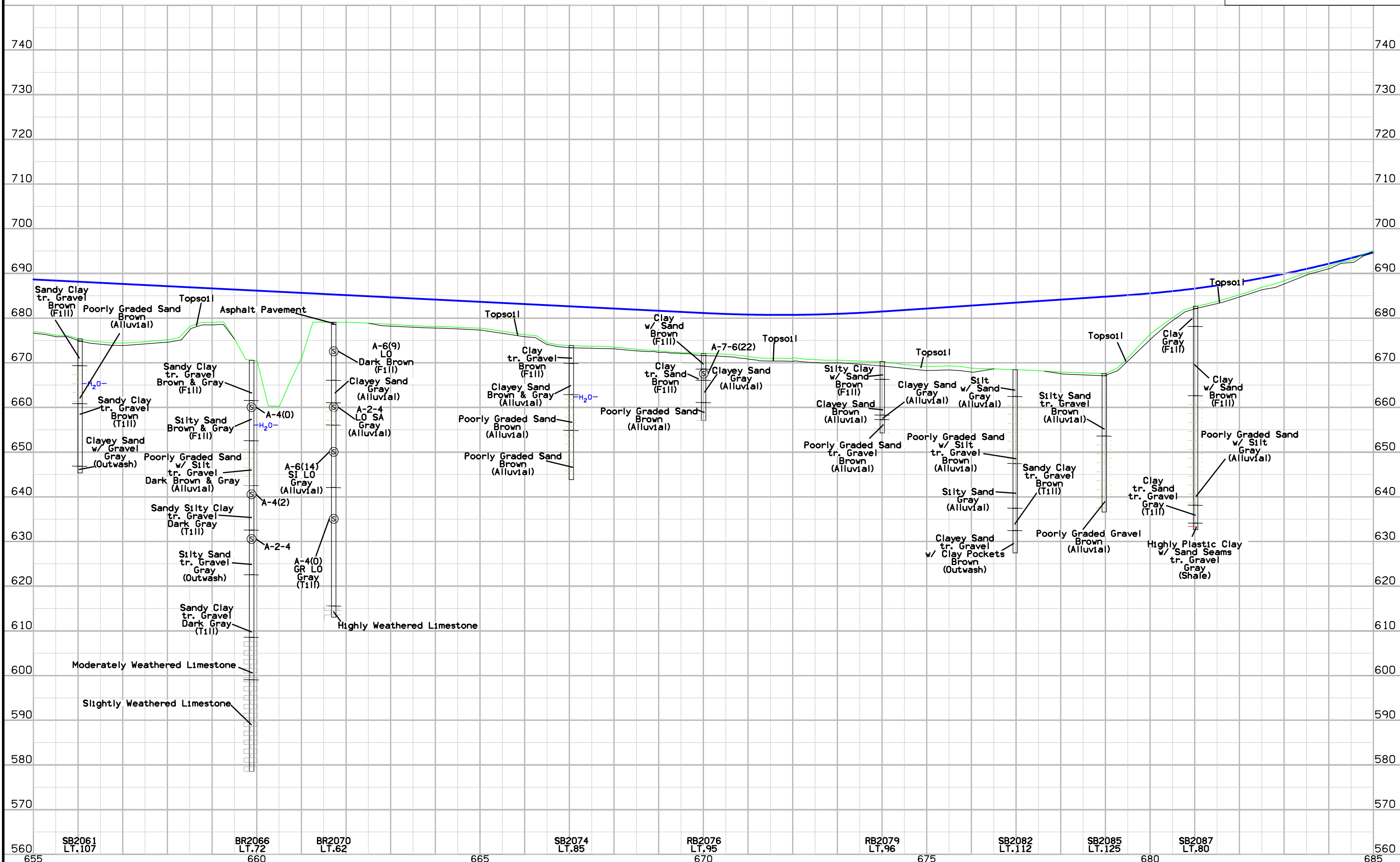
Δ	1° 32' 54.91"
L	619.74
R	22,918.31
E	2.09

Existing Buried Utility - Protect in Place
Approx. Sta. 676+05

Existing DOT-ICN Fiber Optic
- Coordinated Conduit
Lowering Required. Refer to
N Sheets (Conduit Run 30B)



I-80



CLEAR CREEK TWP.
T-80N R-7W
SEC. 35

CLEAR CREEK TWP.
T-80N R-7W
SEC. 36

Sign Truss
Median Foundation Only
(By Other Plan)

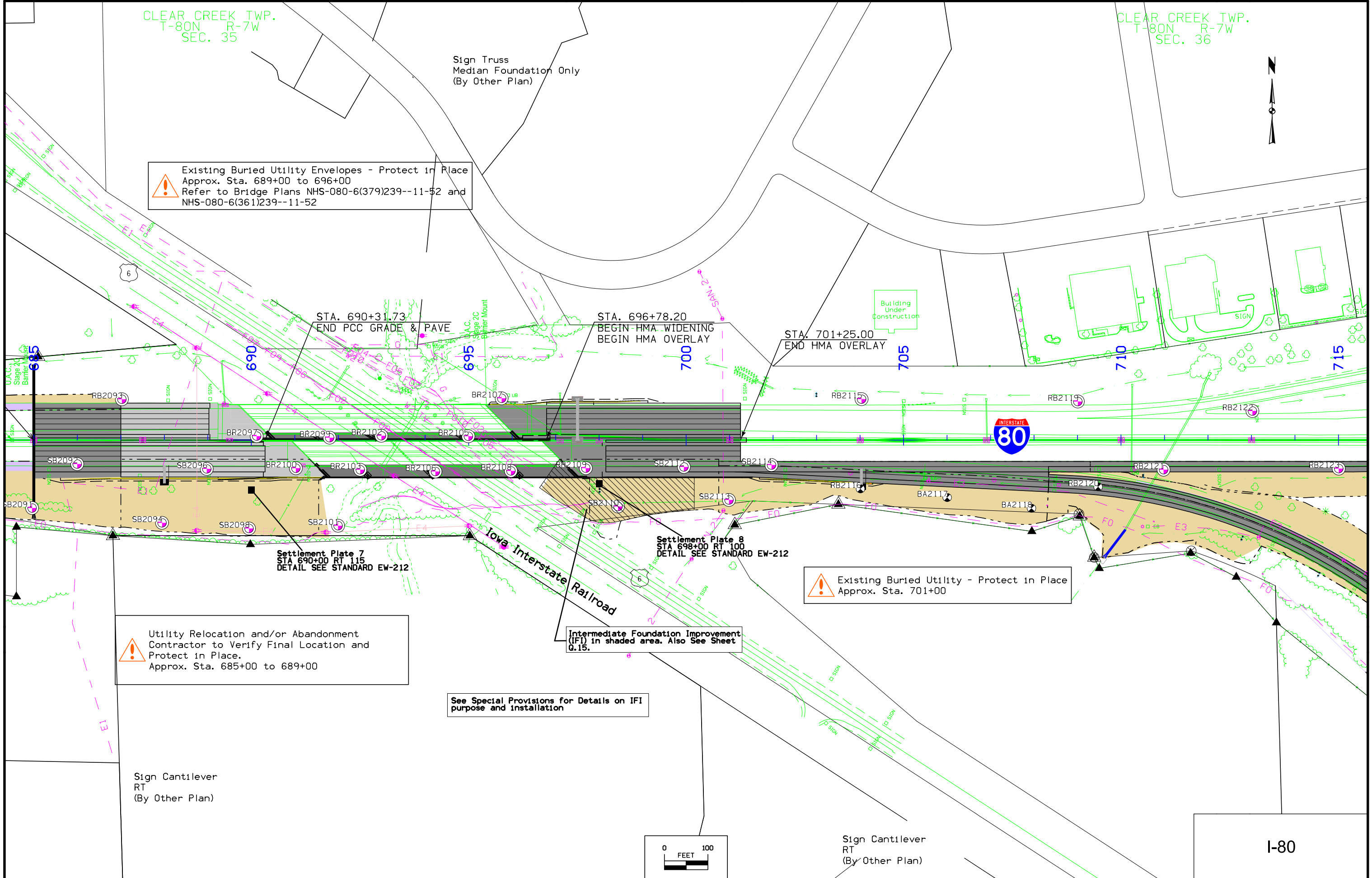
Existing Buried Utility Envelopes - Protect in Place
Approx. Sta. 689+00 to 696+00
Refer to Bridge Plans NHS-080-6(379)239--11-52 and
NHS-080-6(361)239--11-52

STA. 690+31.73
END PCC GRADE & PAVE

STA. 696+78.20
BEGIN HMA WIDENING
BEGIN HMA OVERLAY

STA. 701+25.00
END HMA OVERLAY

Building
Under
Construction



Settlement Plate 7
STA 690+00 RT 115
DETAIL SEE STANDARD EW-212

Settlement Plate 8
STA 698+00 RT 100
DETAIL SEE STANDARD EW-212

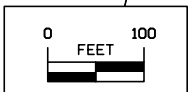
Existing Buried Utility - Protect in Place
Approx. Sta. 701+00

Utility Relocation and/or Abandonment
Contractor to Verify Final Location and
Protect in Place.
Approx. Sta. 685+00 to 689+00

Intermediate Foundation Improvement
(IFI) in shaded area. Also See Sheet
Q.15.

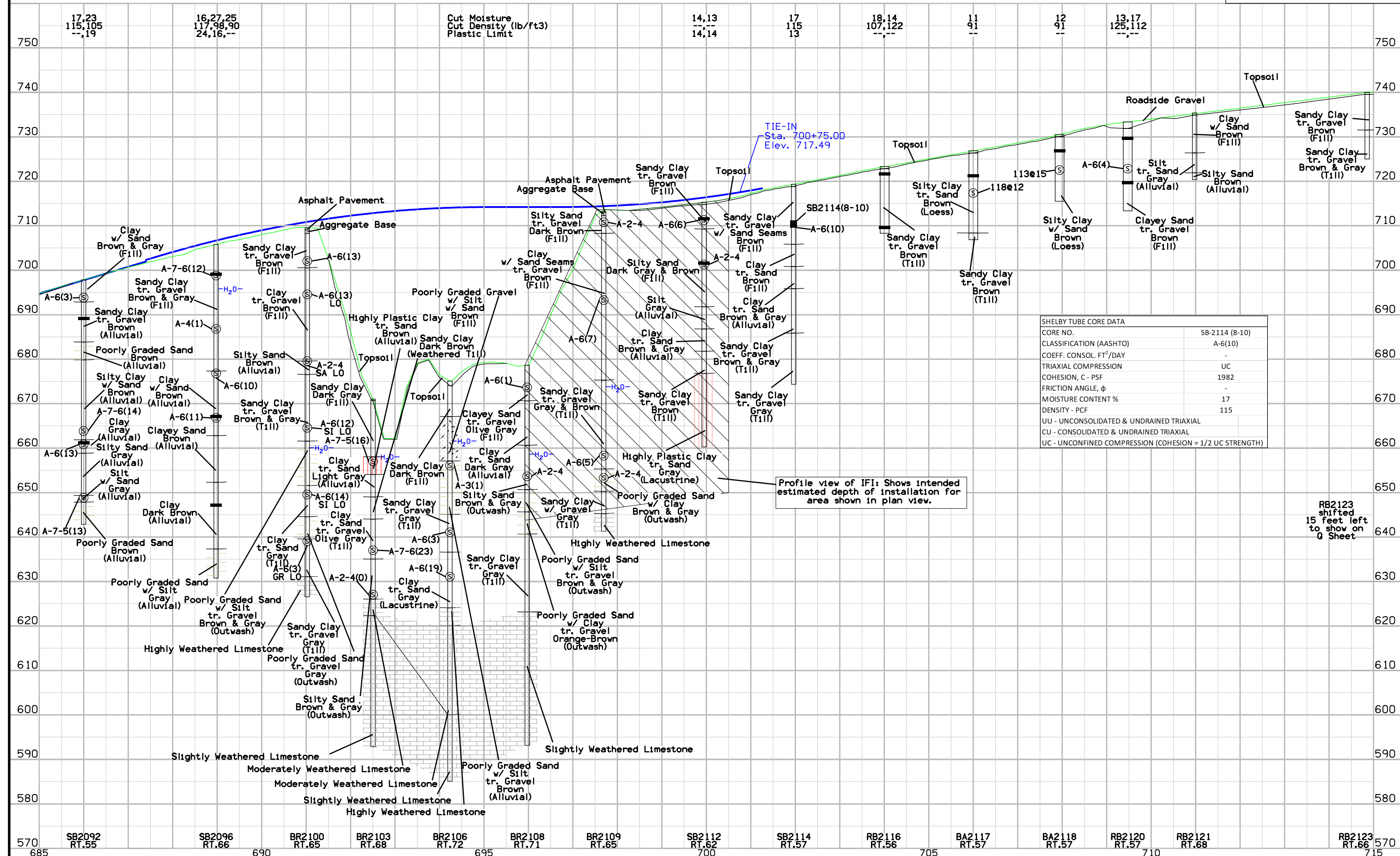
See Special Provisions for Details on IFI
purpose and installation

Sign Cantilever
RT
(By Other Plan)



Sign Cantilever
RT
(By Other Plan)

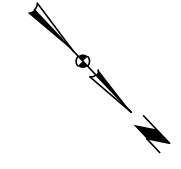
I-80



Profile view of IFI: Shows intended estimated depth of installation for area shown in plan view.

RB2123 shifted 15 feet left to show on Q Sheet

CLEAR CREEK TWP.
T-79N R-7W
SEC. 2

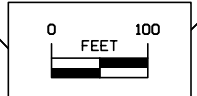


Existing DOT-ICN Fiber Optic - Protect in Place (Conduit Run 24B)
Approx. Sta. 1089+81, 185' LT
to 1090+83, 187' LT

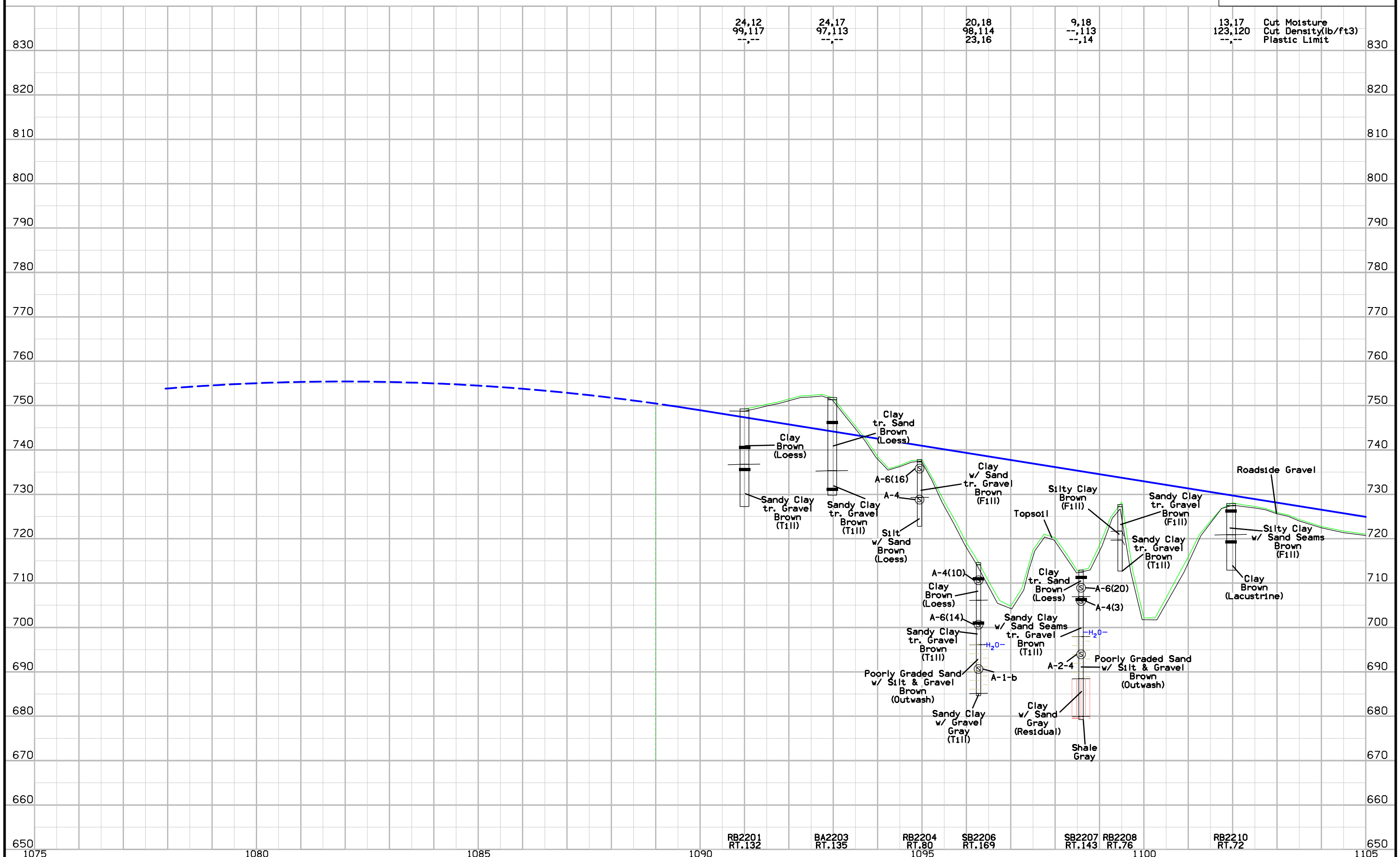
Existing DOT-ICN Fiber Optic - Protect in Place (Conduit Run 23C)
Approx. Sta. 1099+50, 175' LT
to 1100+50, 175' LT

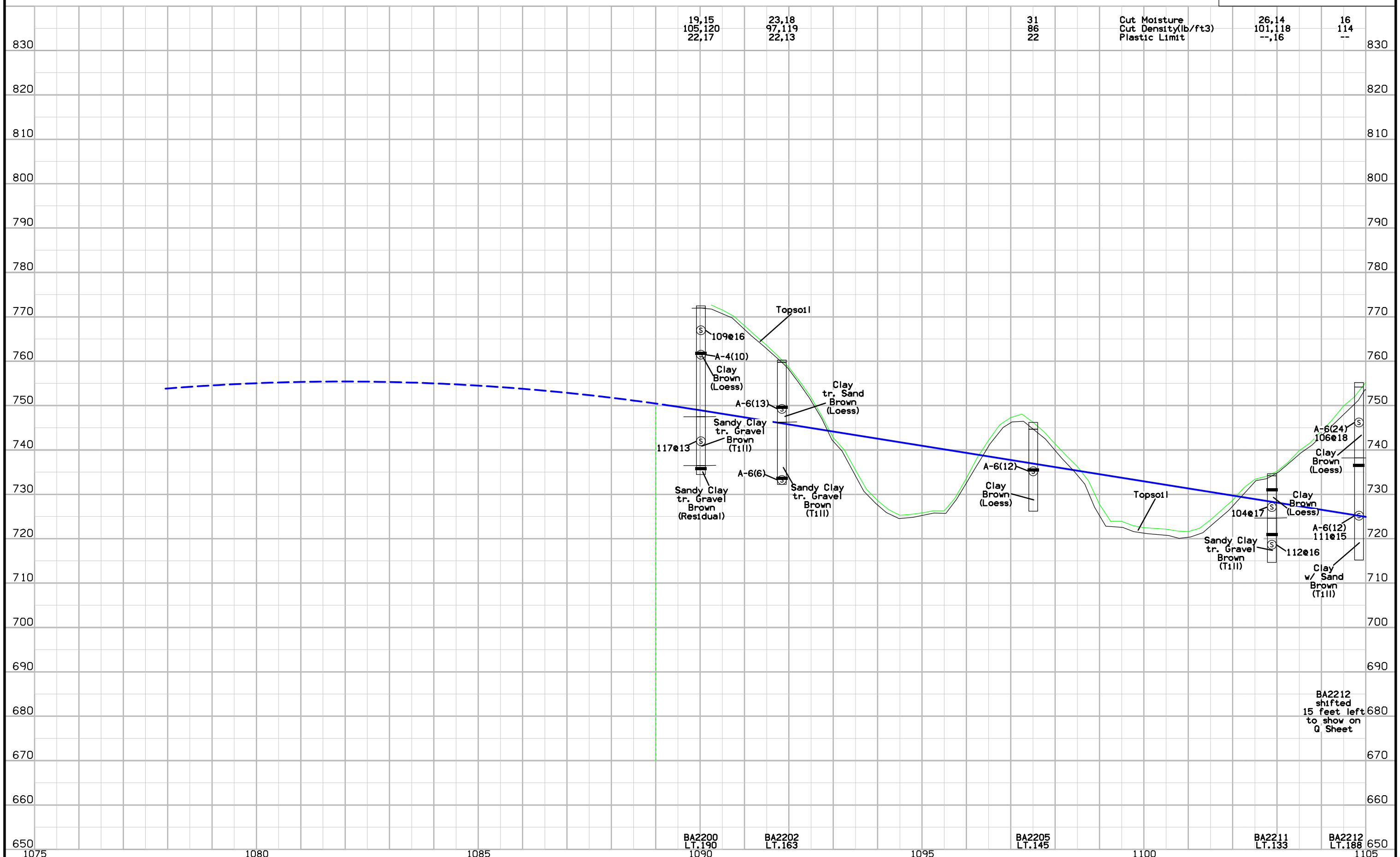
Existing High-Pressure Gas Line - Protect in Place
Approx. Sta. 1093+50

Curve Data
 $\Delta = 23^\circ 44' 52.81''$ (RT)
T = 1,204.70
L = 2,374.80
R = 5,729.58
E = 125.28



US 218





BA2200
LT.190

BA2202
LT.163

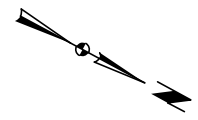
BA2205
LT.145

BA2211
LT.133

BA2212
LT.188

BA2212
shifted
15 feet left
to show on
Q Sheet

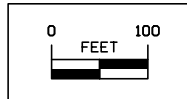
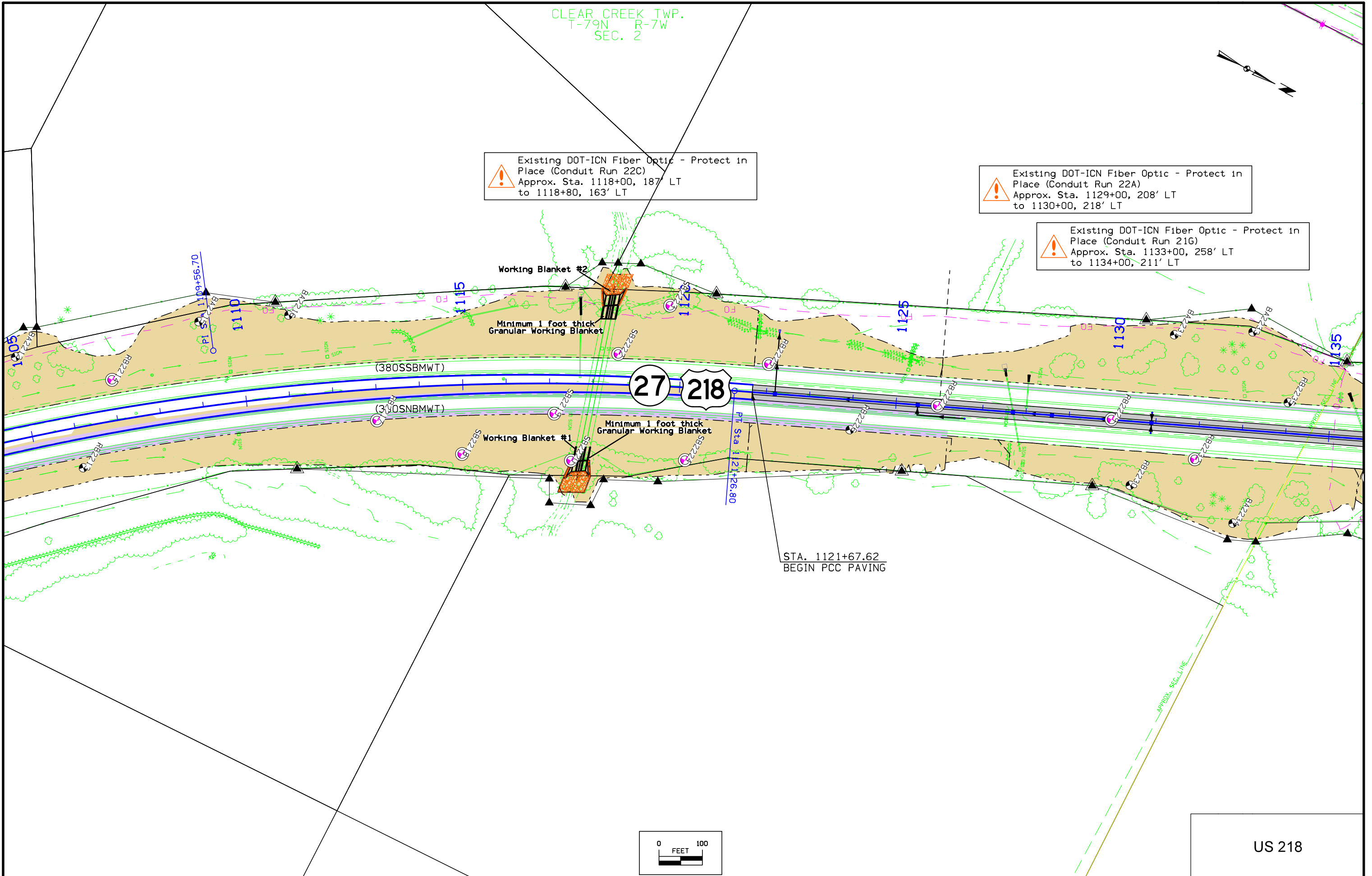
CLEAR CREEK TWP.
T-79N R-7W
SEC. 2



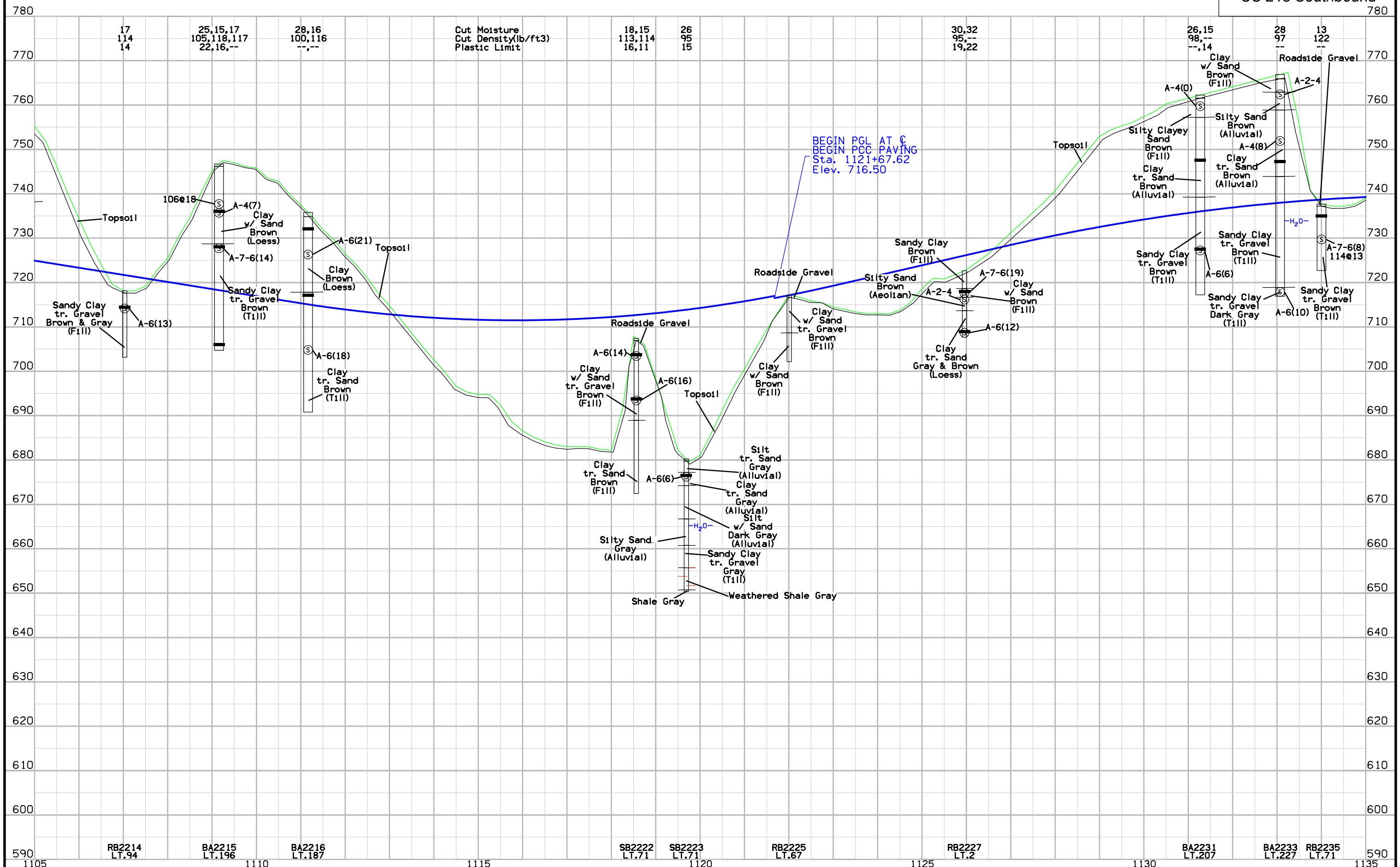
Existing DOT-ICN Fiber Optic - Protect in Place (Conduit Run 22C)
Approx. Sta. 1118+00, 187' LT to 1118+80, 163' LT

Existing DOT-ICN Fiber Optic - Protect in Place (Conduit Run 22A)
Approx. Sta. 1129+00, 208' LT to 1130+00, 218' LT

Existing DOT-ICN Fiber Optic - Protect in Place (Conduit Run 21G)
Approx. Sta. 1133+00, 258' LT to 1134+00, 211' LT



US 218

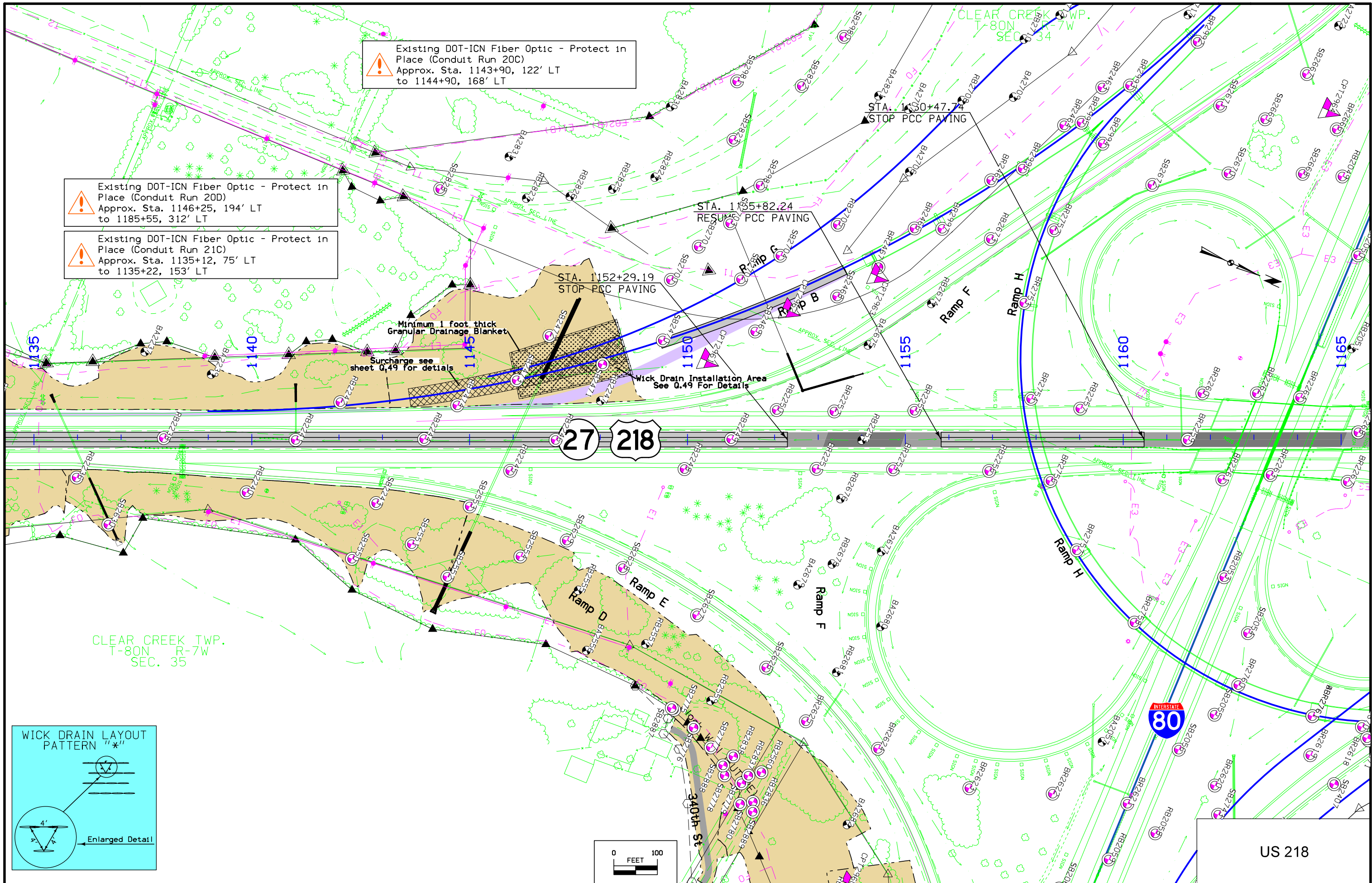


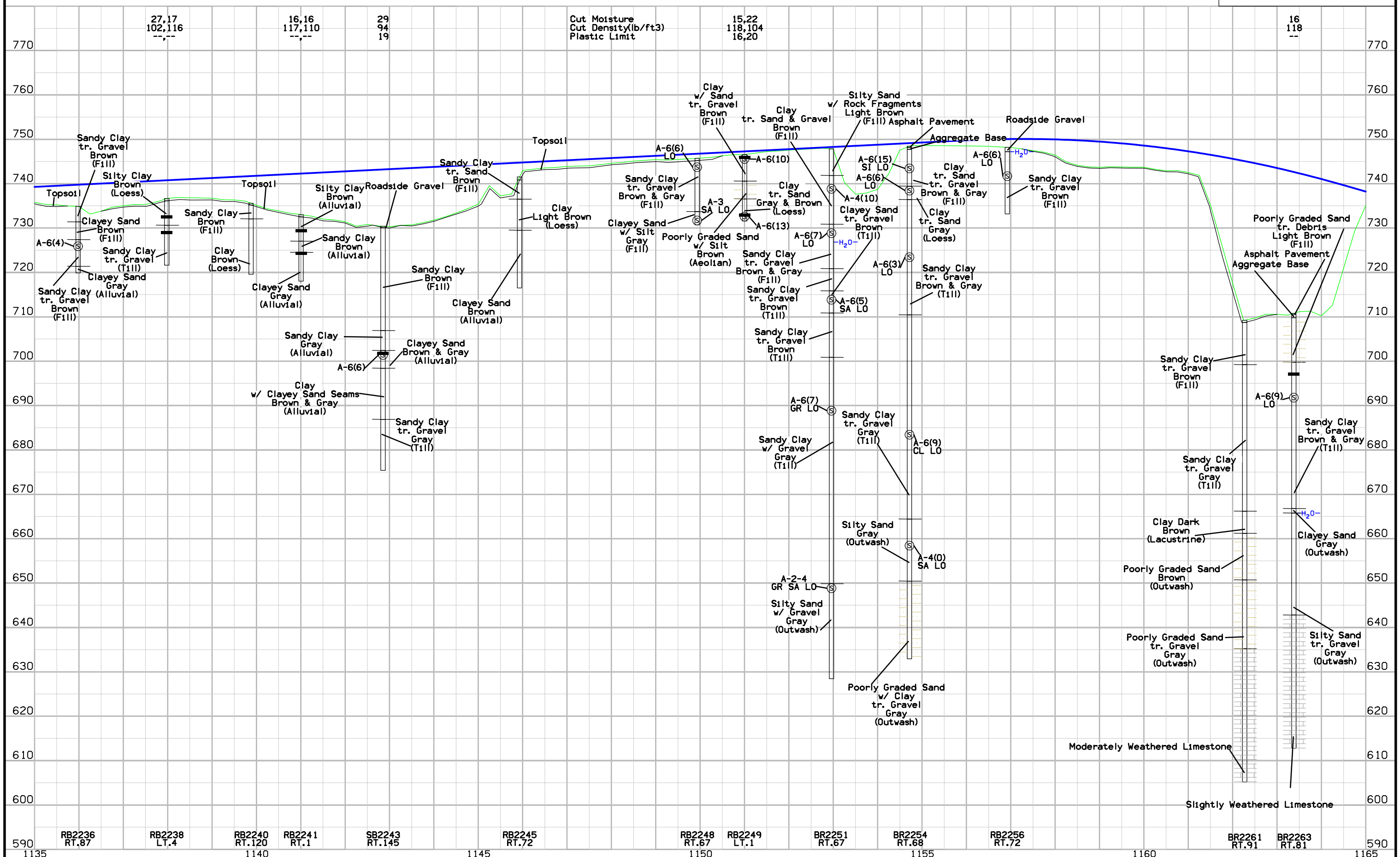
780
770
760
750
740
730
720
710
700
690
680
670
660
650
640
630
620
610
600
590

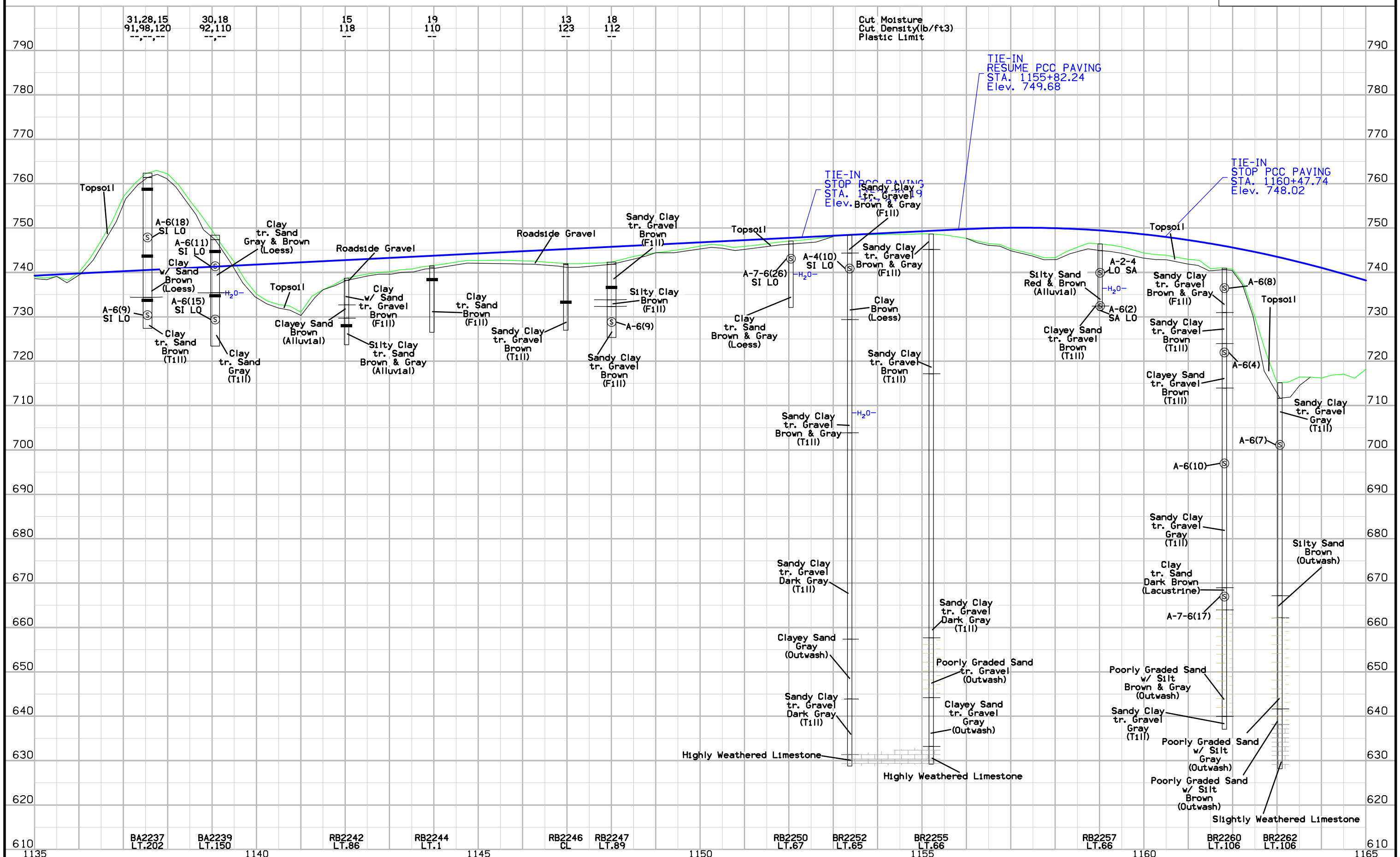
780
770
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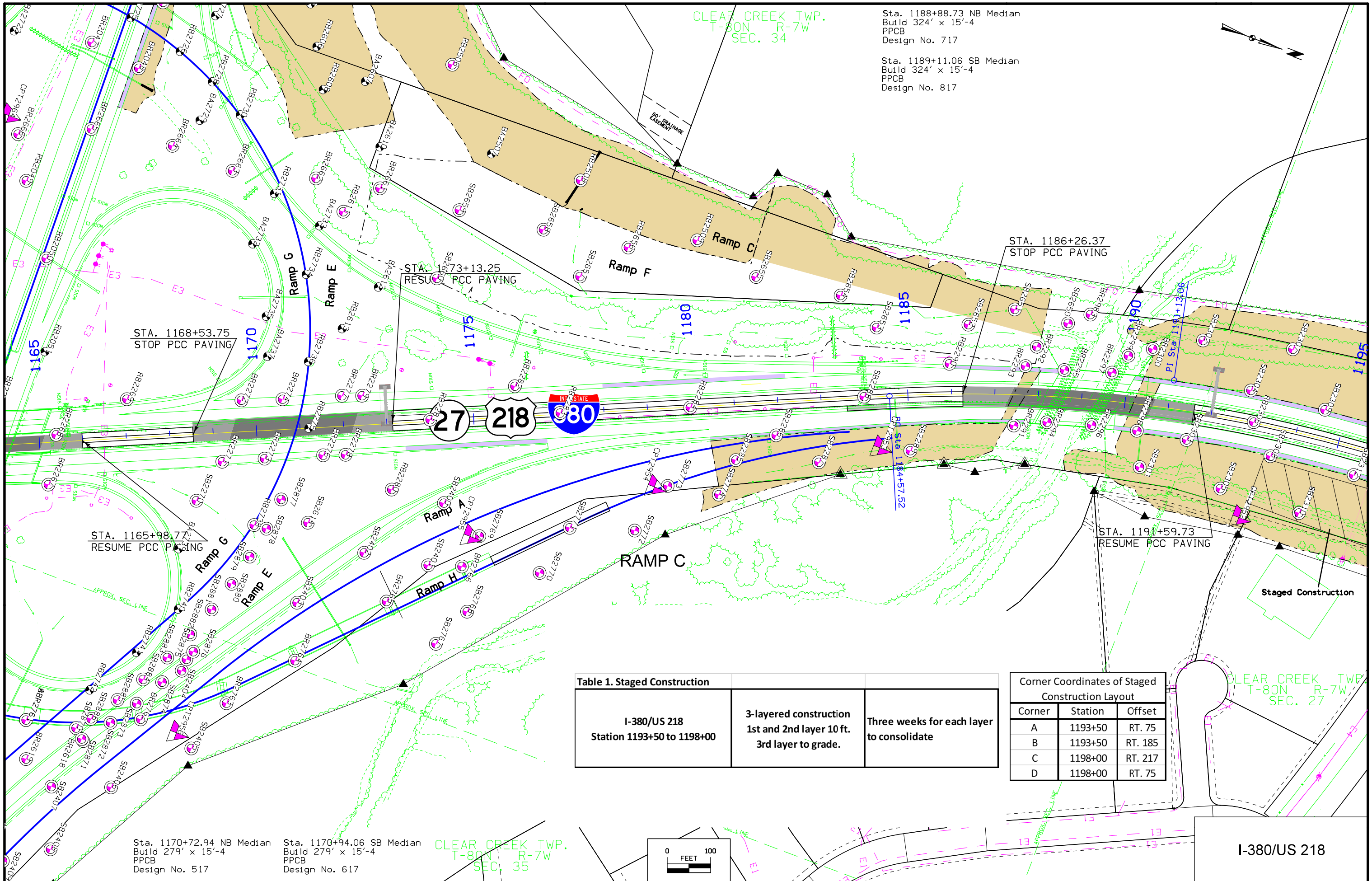
17 114 14	25,15,17 105,118,117 22,16,--	28,16 100,116 --,--	Cut Moisture Cut Density(lb/ft3) Plastic Limit	18,15 113,114 16,11	26 95 15	30,32 95,-- 19,22	26,15 98,-- --,14	28 97 --	13 122 --
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1105 RB2214 LT.94 1110 BA2215 LT.196 BA2216 LT.187 1115 SB2222 LT.71 SB2223 LT.71 1120 RB2225 LT.67 1125 RB2227 LT.2 1130 BA2231 LT.207 BA2233 LT.227 RB2235 LT.71 1135









Sta. 1188+88.73 NB Median
 Build 324' x 15'-4"
 PPCB
 Design No. 717

Sta. 1189+11.06 SB Median
 Build 324' x 15'-4"
 PPCB
 Design No. 817

STA. 1168+53.75
 STOP PCC PAVING

STA. 1173+13.25
 RESUME PCC PAVING

STA. 1186+26.37
 STOP PCC PAVING

STA. 1165+98.77
 RESUME PCC PAVING

STA. 1191+59.73
 RESUME PCC PAVING

Table 1. Staged Construction

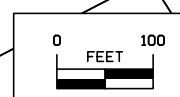
I-380/US 218 Station 1193+50 to 1198+00	3-layered construction 1st and 2nd layer 10 ft. 3rd layer to grade.	Three weeks for each layer to consolidate
--	---	--

Corner Coordinates of Staged Construction Layout

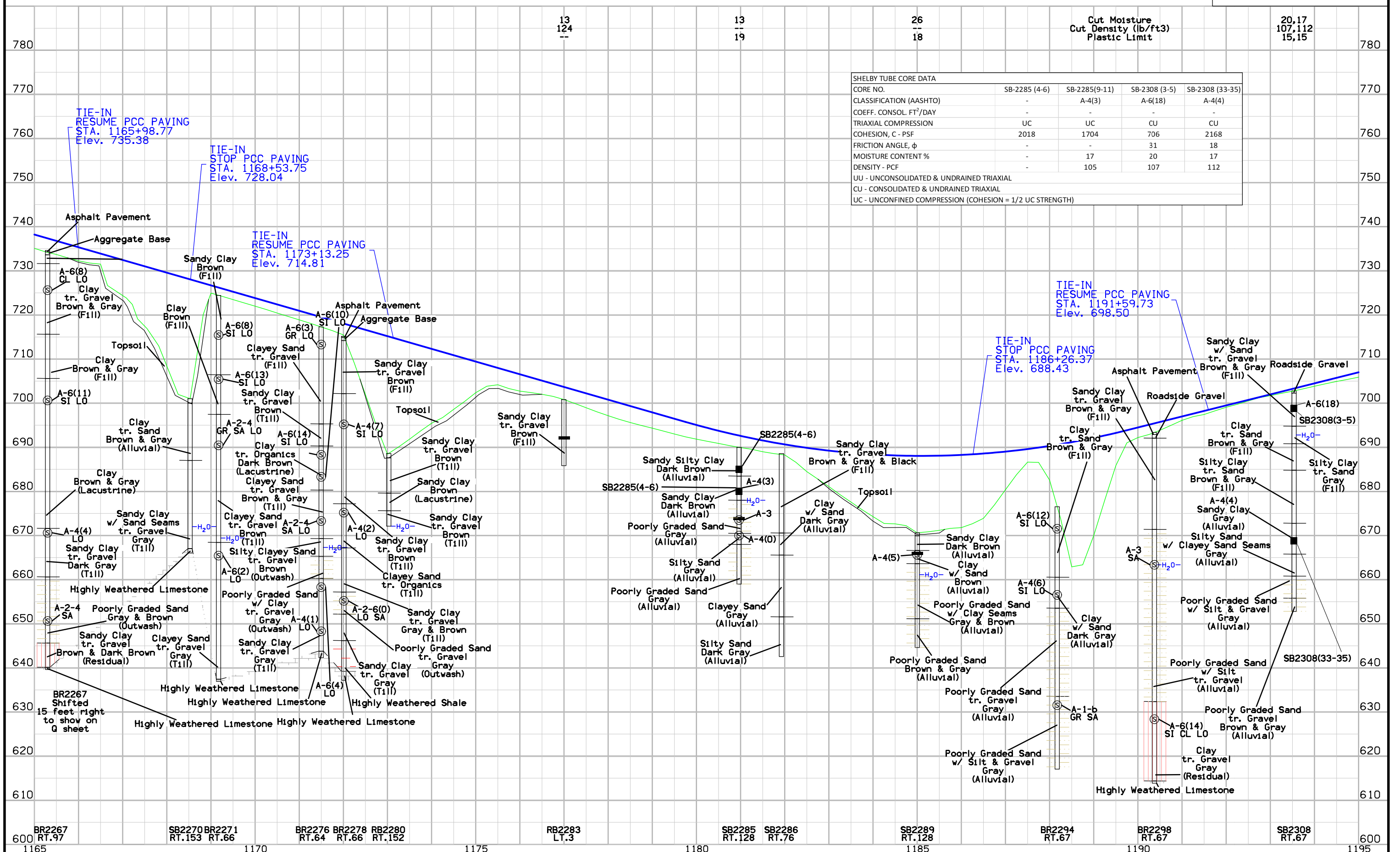
Corner	Station	Offset
A	1193+50	RT. 75
B	1193+50	RT. 185
C	1198+00	RT. 217
D	1198+00	RT. 75

Sta. 1170+72.94 NB Median
 Build 279' x 15'-4"
 PPCB
 Design No. 517

Sta. 1170+94.06 SB Median
 Build 279' x 15'-4"
 PPCB
 Design No. 617



I-380/US 218



SHELBY TUBE CORE DATA				
CORE NO.	SB-2285 (4-6)	SB-2285(9-11)	SB-2308 (3-5)	SB-2308 (33-35)
CLASSIFICATION (AASHTO)	-	A-4(3)	A-6(18)	A-4(4)
COEFF. CONSOL. FT ² /DAY	-	-	-	-
TRIAxIAL COMPRESSION	UC	UC	CU	CU
COHESION, C - PSF	2018	1704	706	2168
FRICTION ANGLE, φ	-	-	31	18
MOISTURE CONTENT %	-	17	20	17
DENSITY - PCF	-	105	107	112
UU - UNCONSOLIDATED & UNDRAINED TRIAXIAL CU - CONSOLIDATED & UNDRAINED TRIAXIAL UC - UNCONFINED COMPRESSION (COHESION = 1/2 UC STRENGTH)				

Cut Moisture
Cut Density (lb/ft³)
Plastic Limit

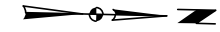
13
124

13
19

26
18

20,17
107,112
15,15

CLEAR CREEK TWP.
T-80N R-7W
SEC. 27



Existing Buried Utility -
Protect in Place
Approx. Sta. 1204+00
to 1206+00

Sign Truss
Median Foundation Only
(By Other Plan)

STA. 1197+42.16
STOP PCC PAVING

STA. 1208+06.84
RESUME HMA PAVING

STA. 1201+32.37
BEGIN HMA PAVING

STA. 1210+00.00
END HMA PAVING
RESUME PCC PAVING

STA. 1217+90.00
END CONSTRUCTION
END PCC PAVING

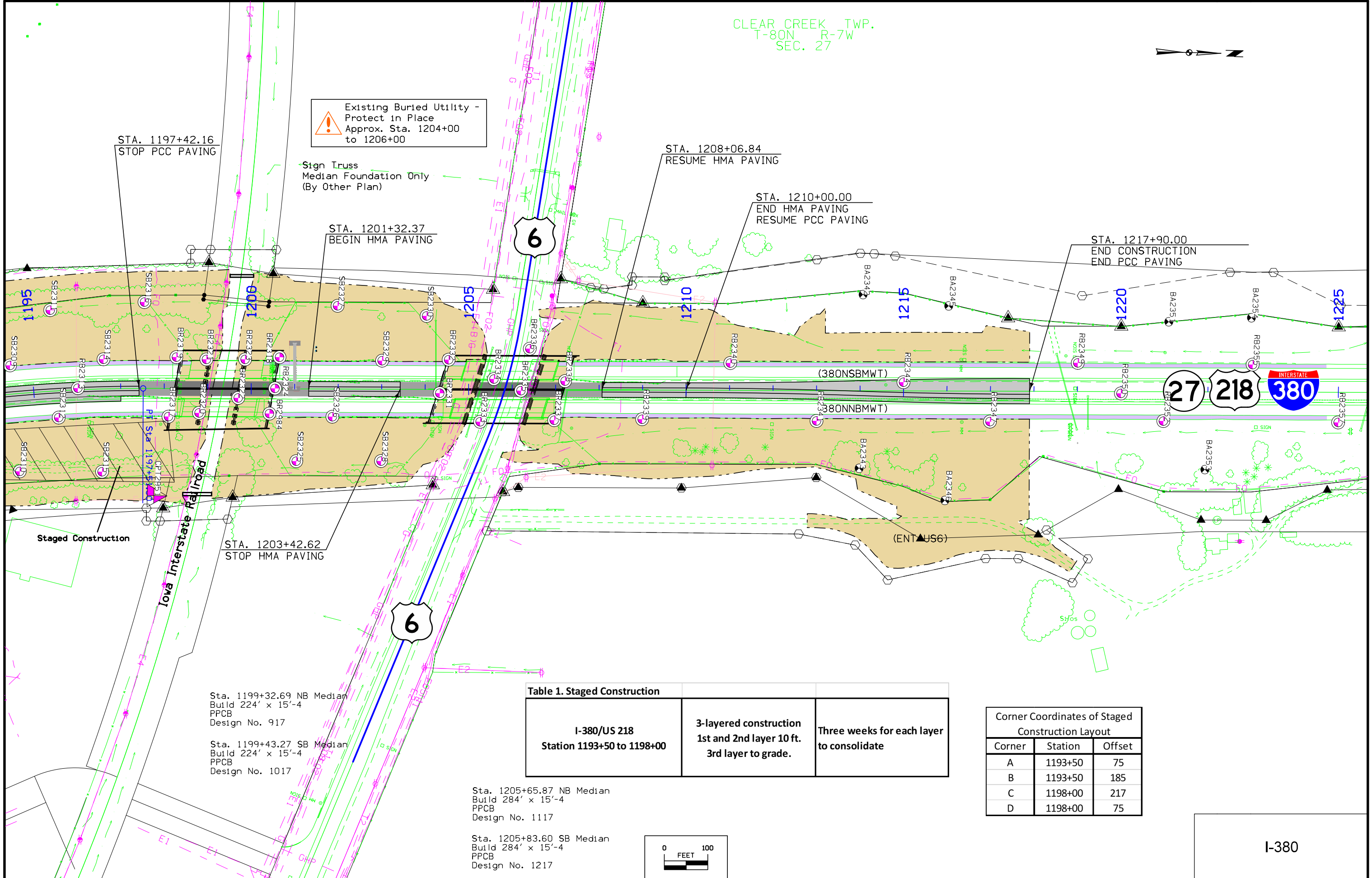


Table 1. Staged Construction

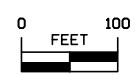
I-380/US 218 Station 1193+50 to 1198+00	3-layered construction 1st and 2nd layer 10 ft. 3rd layer to grade.	Three weeks for each layer to consolidate
--	---	--

Sta. 1199+32.69 NB Median
Build 224' x 15'-4
PPCB
Design No. 917

Sta. 1199+43.27 SB Median
Build 224' x 15'-4
PPCB
Design No. 1017

Sta. 1205+65.87 NB Median
Build 284' x 15'-4
PPCB
Design No. 1117

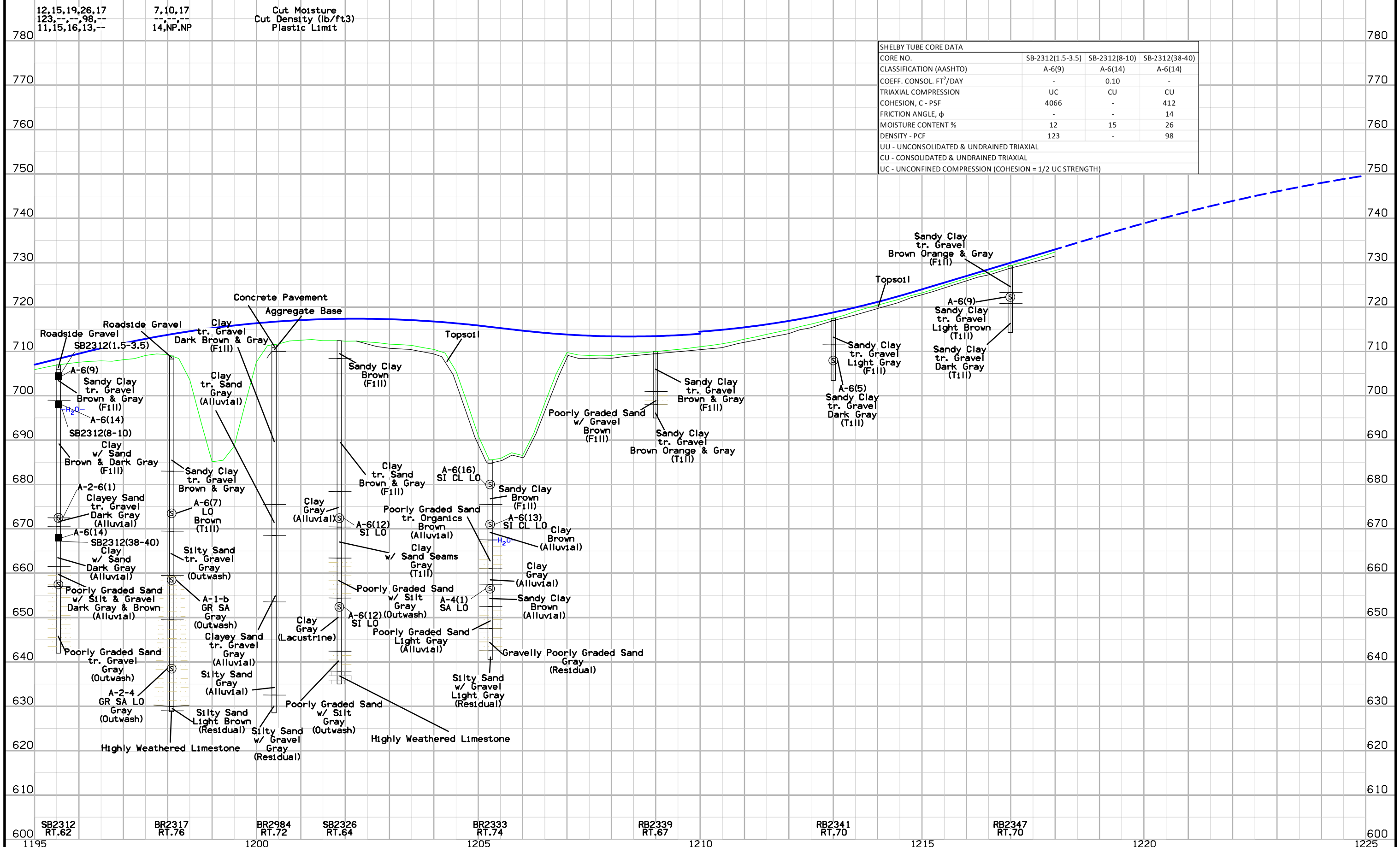
Sta. 1205+83.60 SB Median
Build 284' x 15'-4
PPCB
Design No. 1217



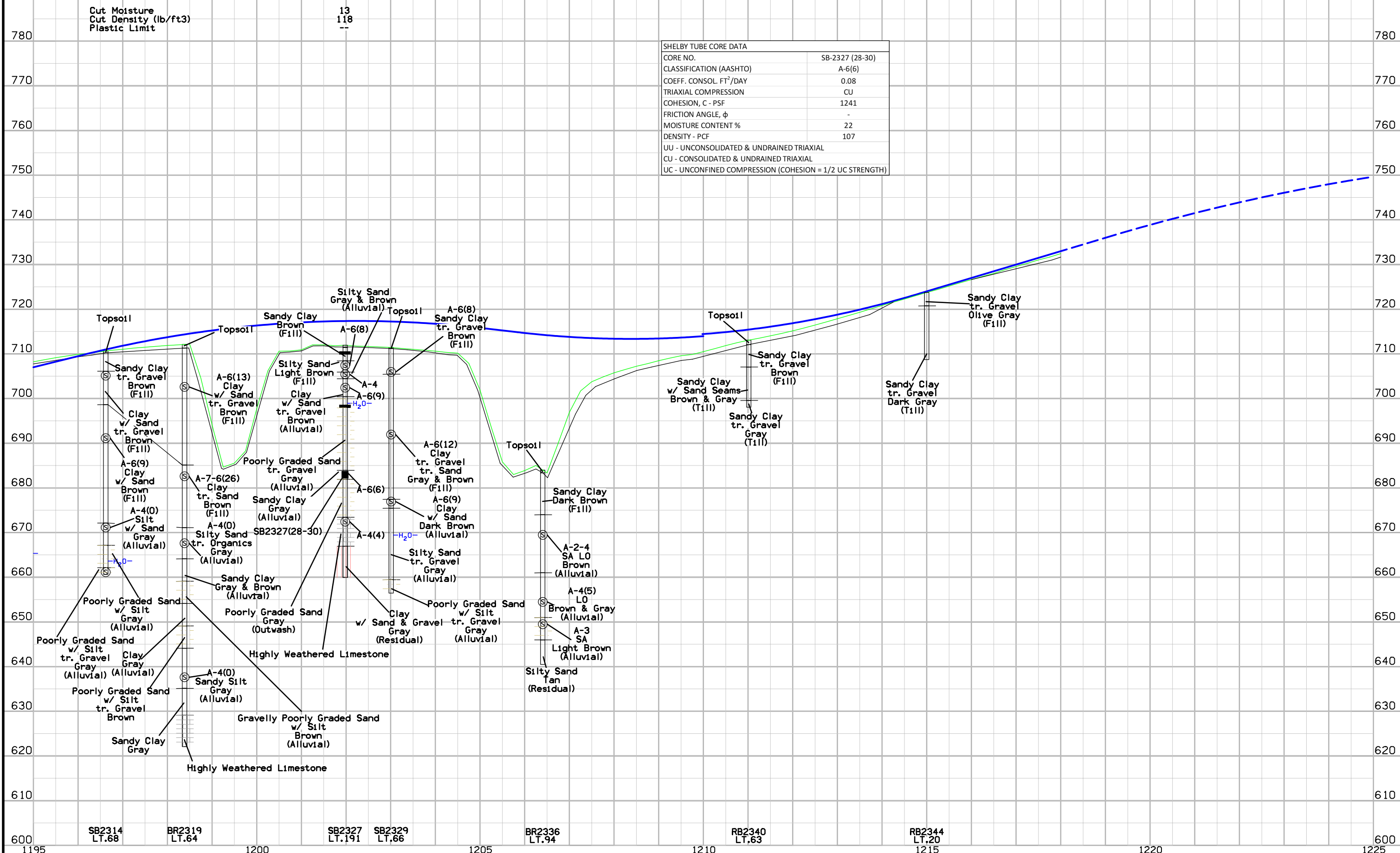
Corner Coordinates of Staged Construction Layout

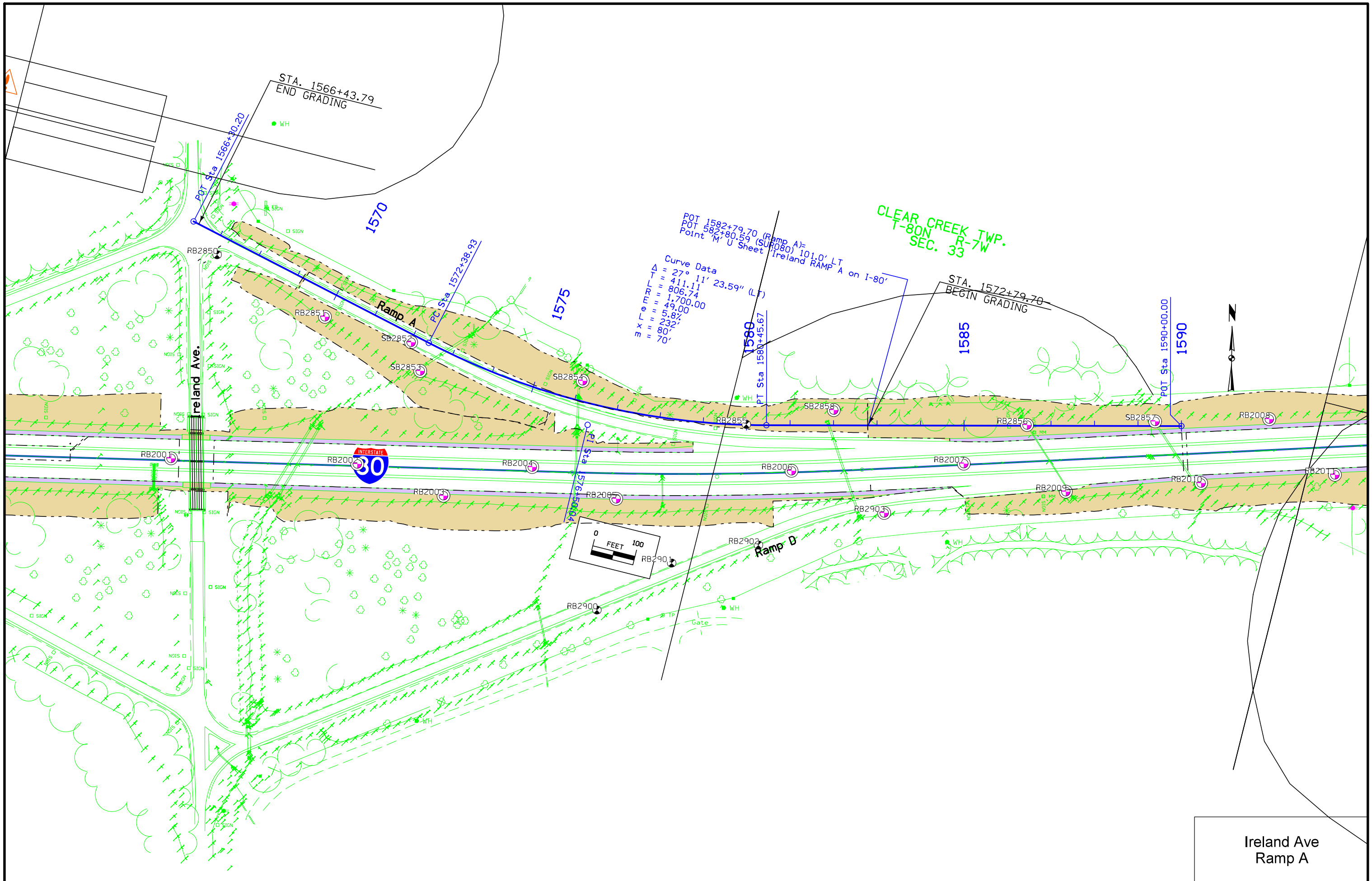
Corner	Station	Offset
A	1193+50	75
B	1193+50	185
C	1198+00	217
D	1198+00	75

I-380



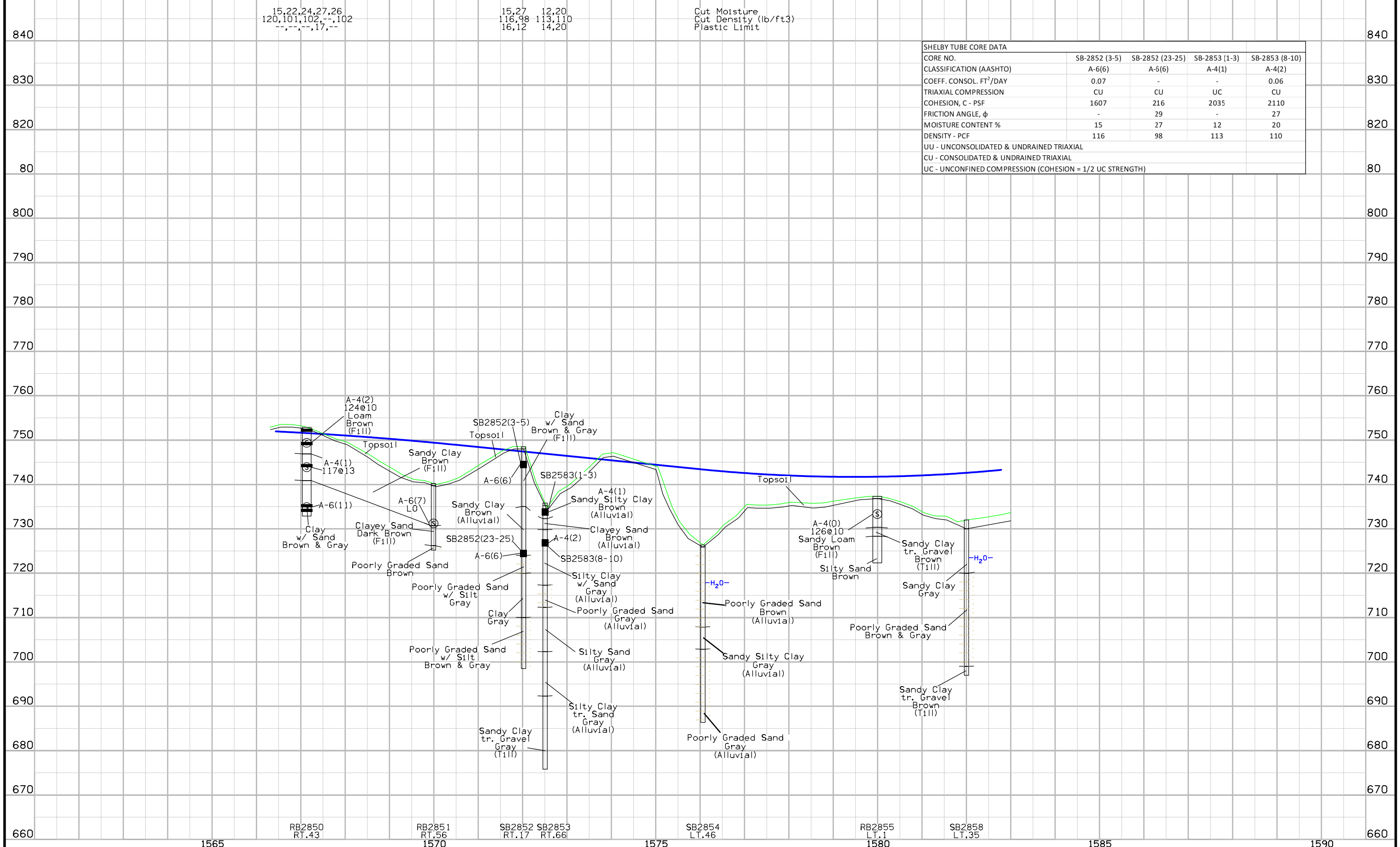
SHELBY TUBE CORE DATA			
CORE NO.	SB-2312(1.5-3.5)	SB-2312(8-10)	SB-2312(38-40)
CLASSIFICATION (AASHTO)	A-6(9)	A-6(14)	A-6(14)
COEFF. CONSOL. FT ² /DAY	-	0.10	-
TRIAxIAL COMPRESSION	UC	CU	CU
COHESION, C - PSF	4066	-	412
FRICTION ANGLE, φ	-	-	14
MOISTURE CONTENT %	12	15	26
DENSITY - PCF	123	-	98
UU - UNCONSOLIDATED & UNDRAINED TRIAXIAL			
CU - CONSOLIDATED & UNDRAINED TRIAXIAL			
UC - UNCONFINED COMPRESSION (COHESION = 1/2 UC STRENGTH)			





Ireland Ave Ramp A

Ireland Ave
Ramp A Profile

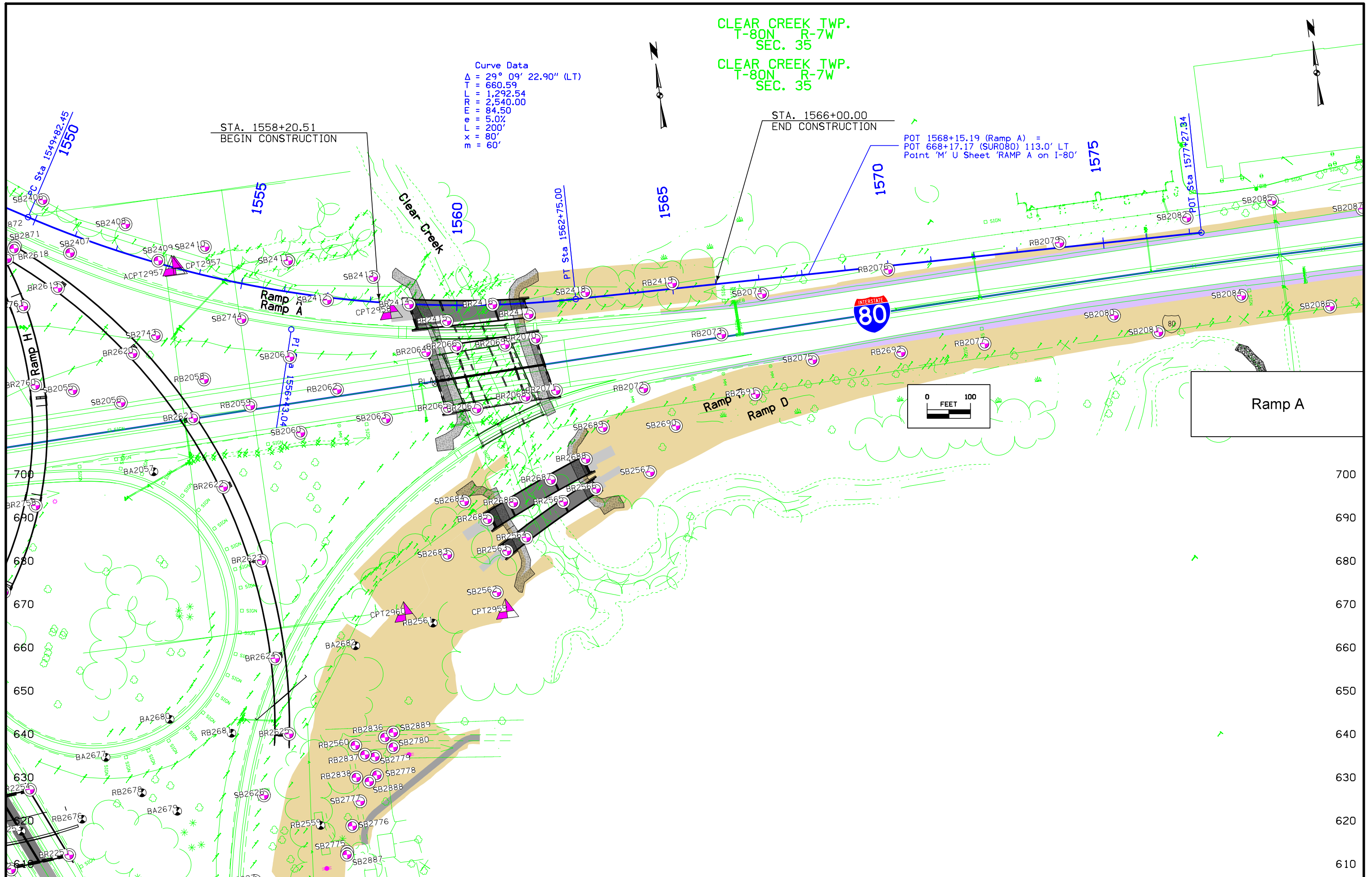


15,22,24,27,26
120,101,102,107,102

15,27 12,20
116,98 113,110
16,12 14,20

Cut Moisture
Cut Density (lb/ft³)
Plastic Limit

SHELBY TUBE CORE DATA				
CORE NO.	SB-2852 (3-5)	SB-2852 (23-25)	SB-2853 (1-3)	SB-2853 (8-10)
CLASSIFICATION (AASHTO)	A-6(6)	A-5(6)	A-4(1)	A-4(2)
COEFF. CONSOL. FT ² /DAY	0.07	-	-	0.06
TRIAXIAL COMPRESSION	CU	CU	UC	CU
COHESION, C - PSF	1607	216	2035	2110
FRICTION ANGLE, φ	-	29	-	27
MOISTURE CONTENT %	15	27	12	20
DENSITY - PCF	116	98	113	110
UU - UNCONSOLIDATED & UNDRAINED TRIAXIAL				
CU - CONSOLIDATED & UNDRAINED TRIAXIAL				
UC - UNCONFINED COMPRESSION (COHESION = 1/2 UC STRENGTH)				



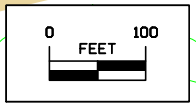
Curve Data
 $\Delta = 29^\circ 09' 22.90''$ (LT)
 $\Delta = 660.59$
 $L = 1,292.54$
 $E = 2,540.00$
 $M = 84.50$
 $e = 5.0\%$
 $P = 200'$
 $x = 80'$
 $y = 60'$

CLEAR CREEK TWP.
 T-80N R-7W
 SEC. 35
 CLEAR CREEK TWP.
 T-80N R-7W
 SEC. 35

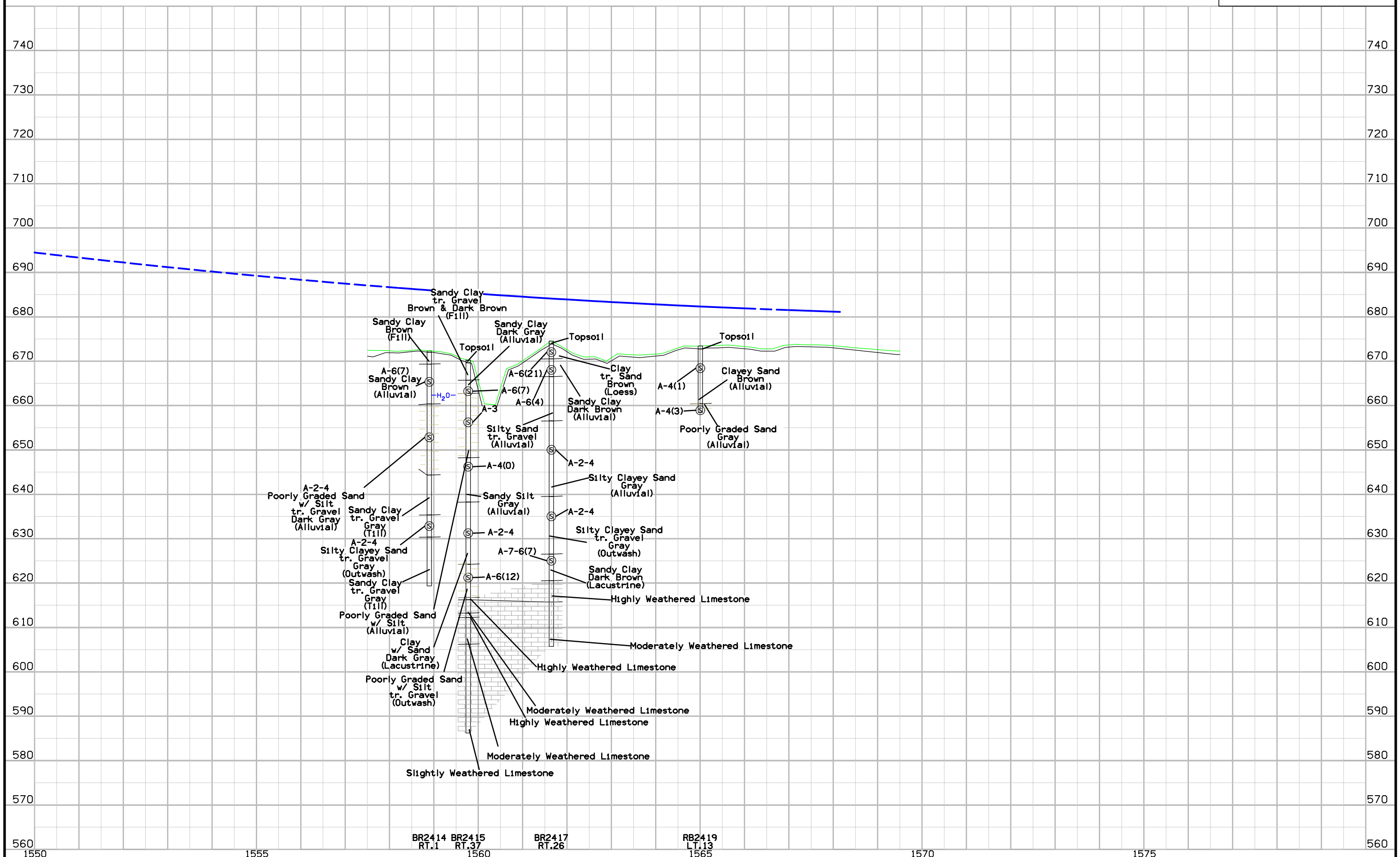
STA. 1558+20.51
 BEGIN CONSTRUCTION

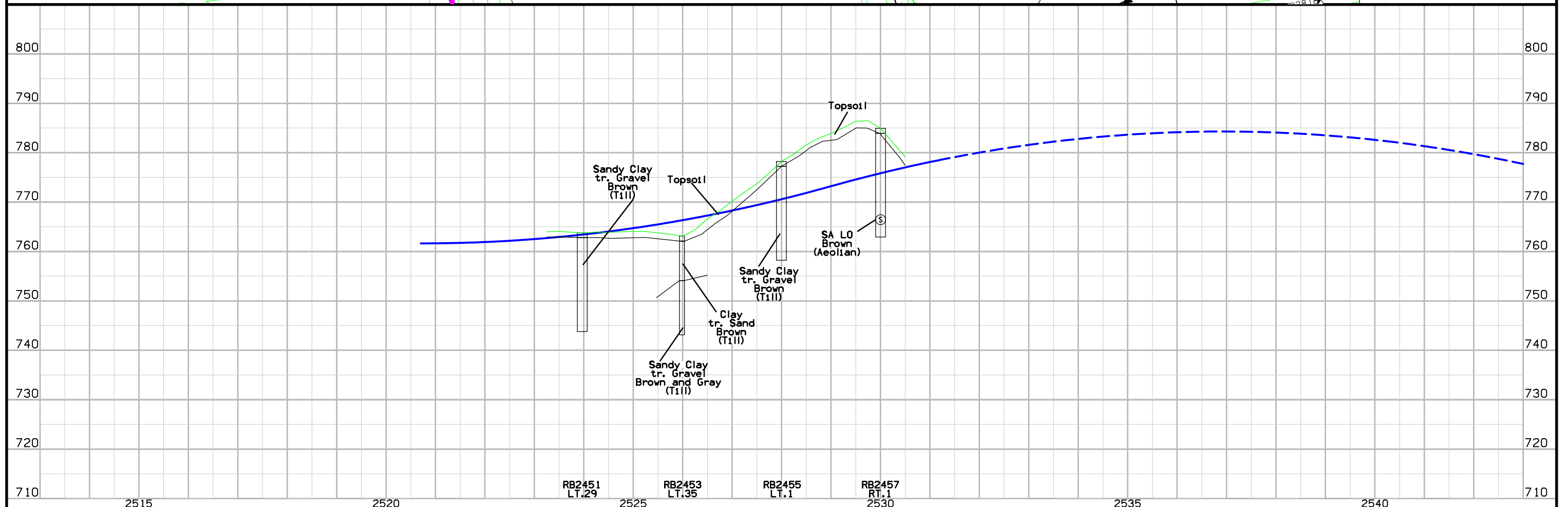
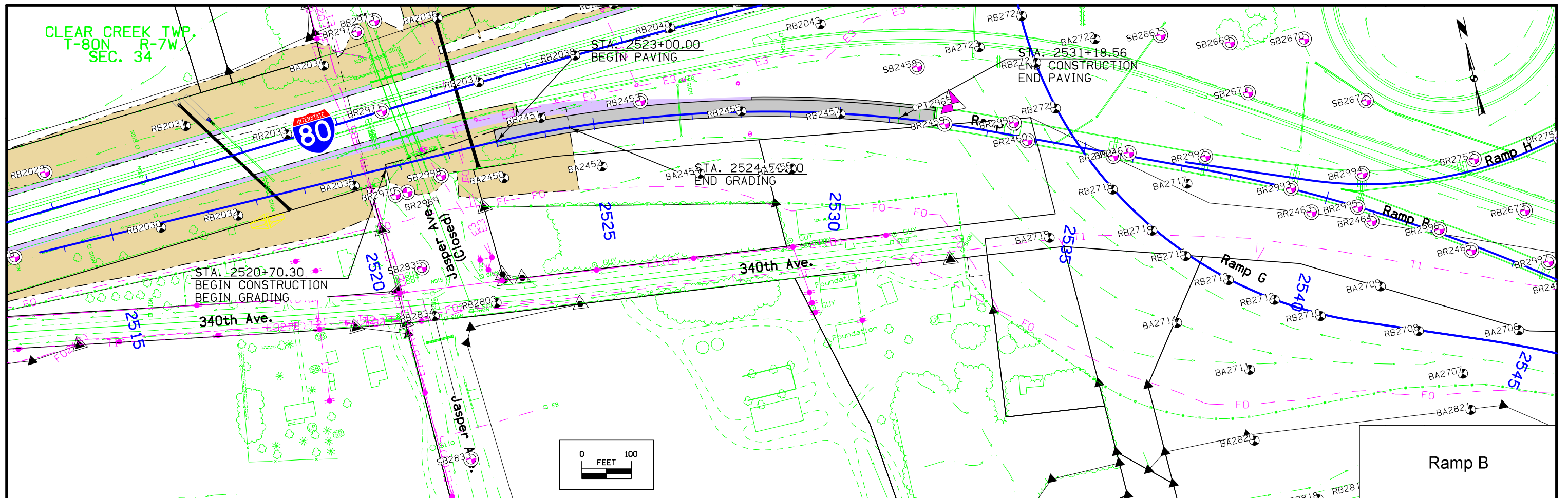
STA. 1566+00.00
 END CONSTRUCTION

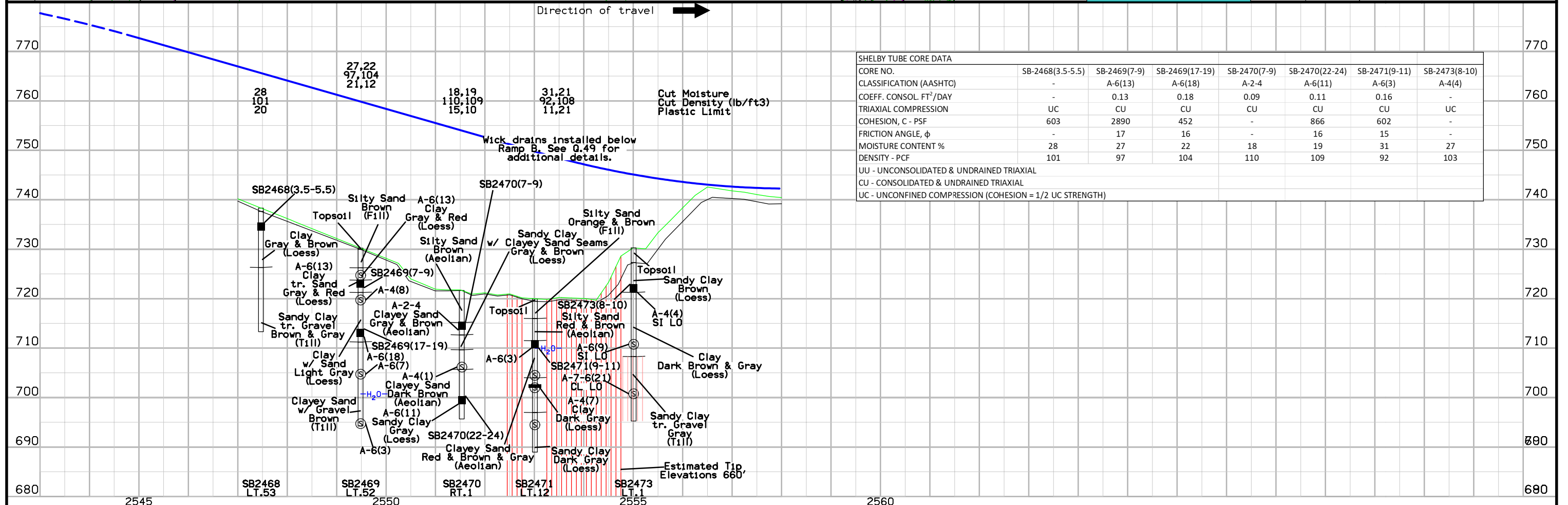
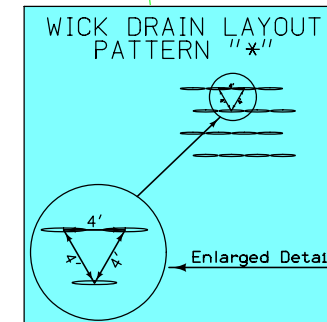
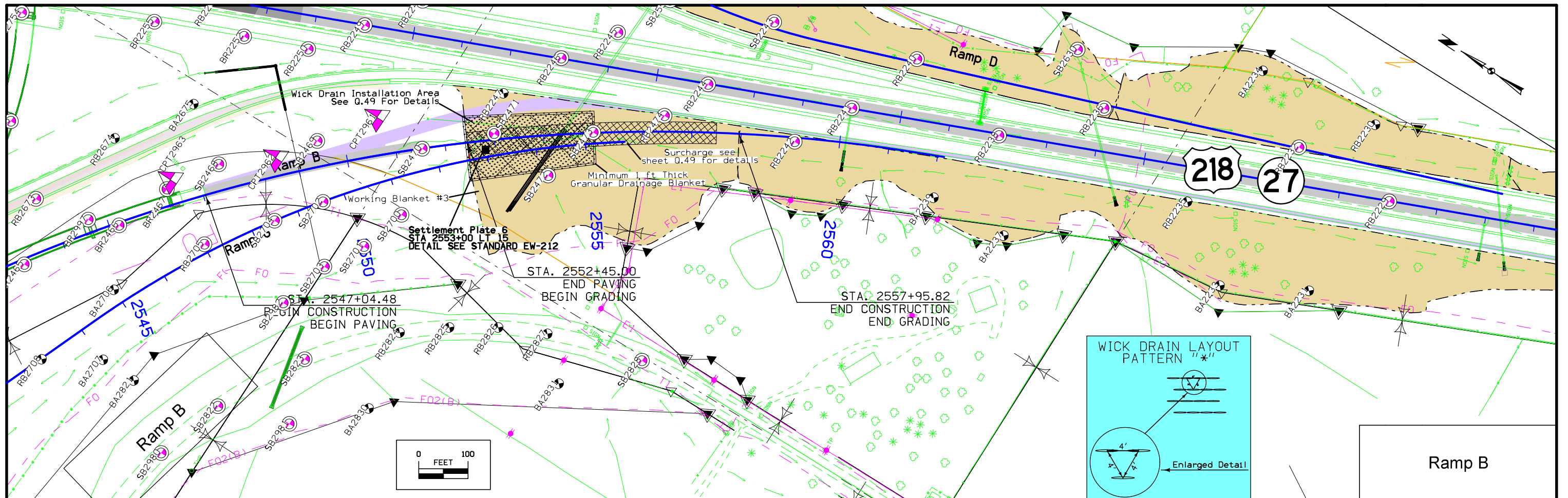
POT 1568+15.19 (Ramp A) =
 POT 668+17.17 (SUR080) 113.0' LT
 Point 'M' U Sheet 'RAMP A on I-80'

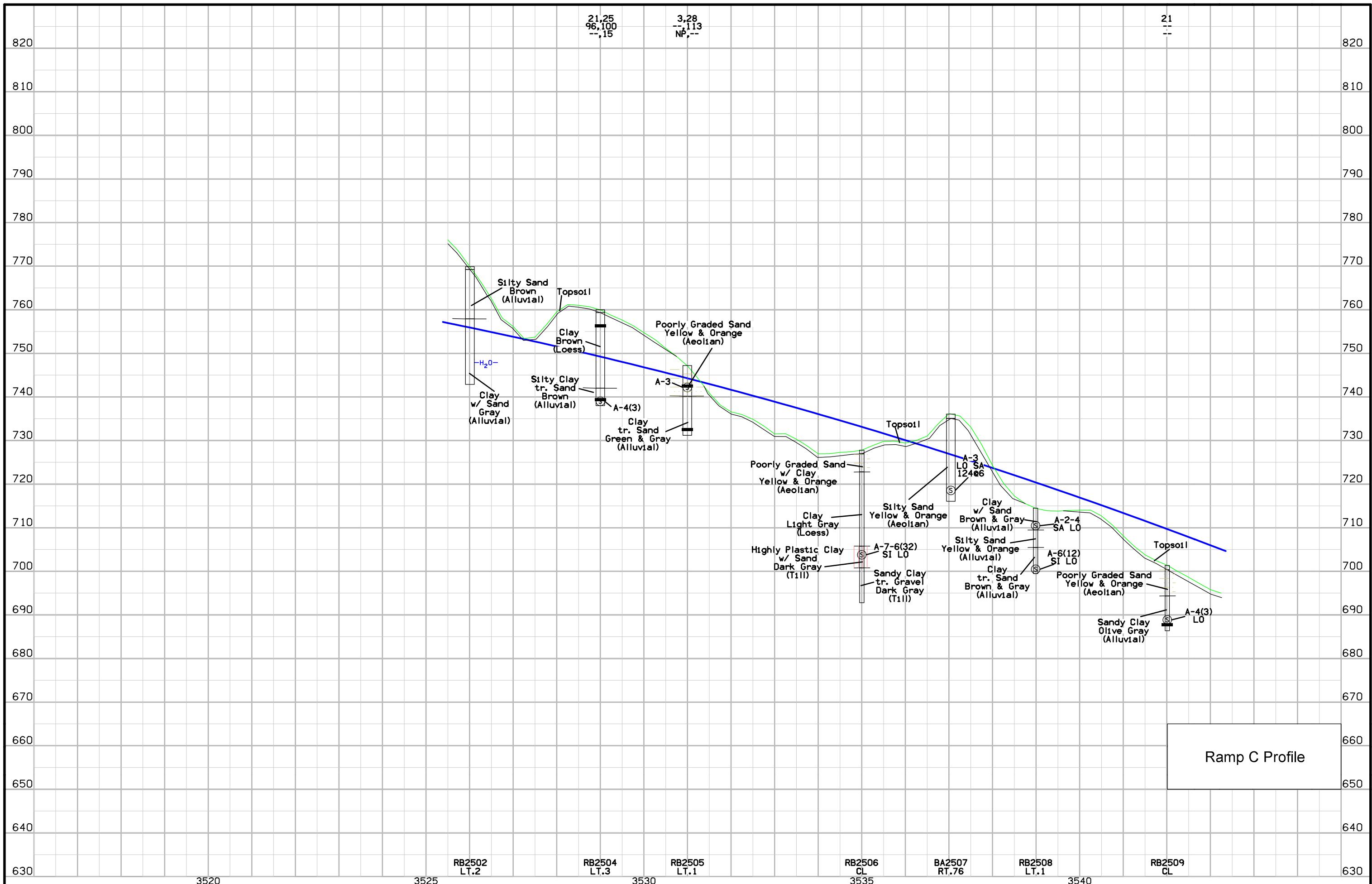


Ramp A

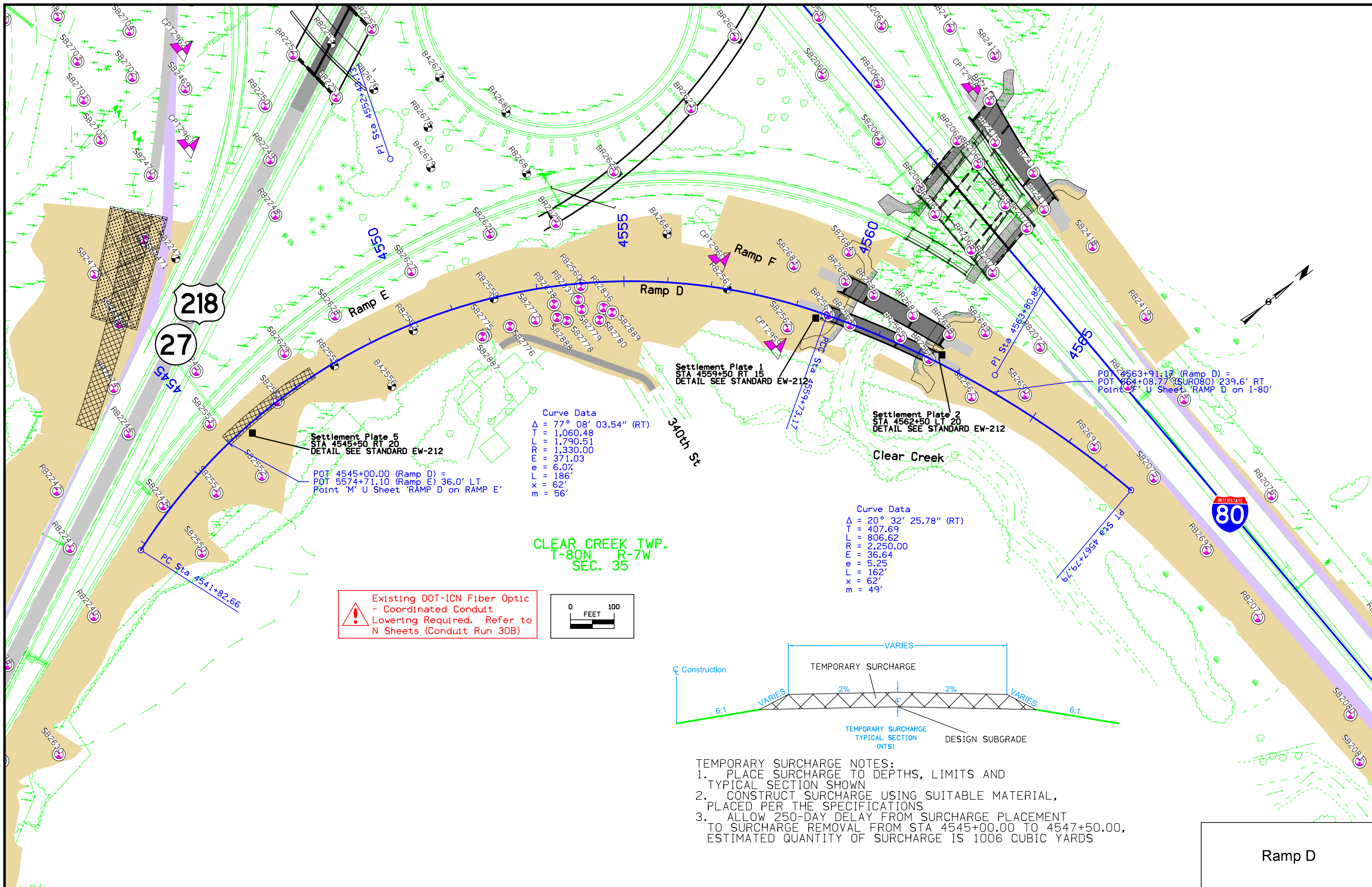




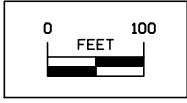




Ramp C Profile

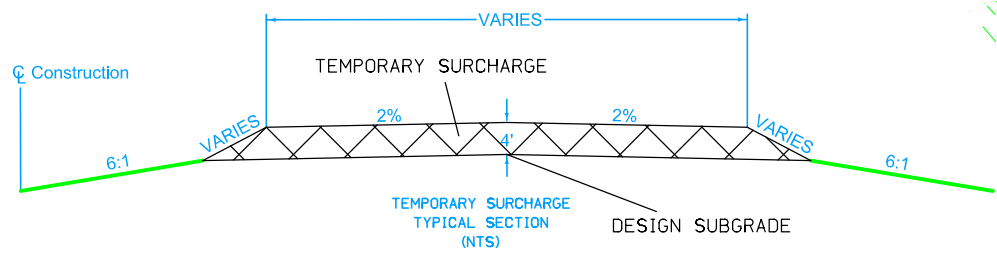


Existing DOT-ICN Fiber Optic
 - Coordinated Conduit
 Lowering Required. Refer to
 N Sheets (Conduit Run 30B)



Curve Data
 $\Delta = 77^\circ 08' 03.54''$ (RT)
 $T = 1,060.48$
 $L = 1,790.51$
 $R = 1,330.00$
 $E = 371.03$
 $e = 6.0\%$
 $L = 186'$
 $x = 62'$
 $m = 56'$

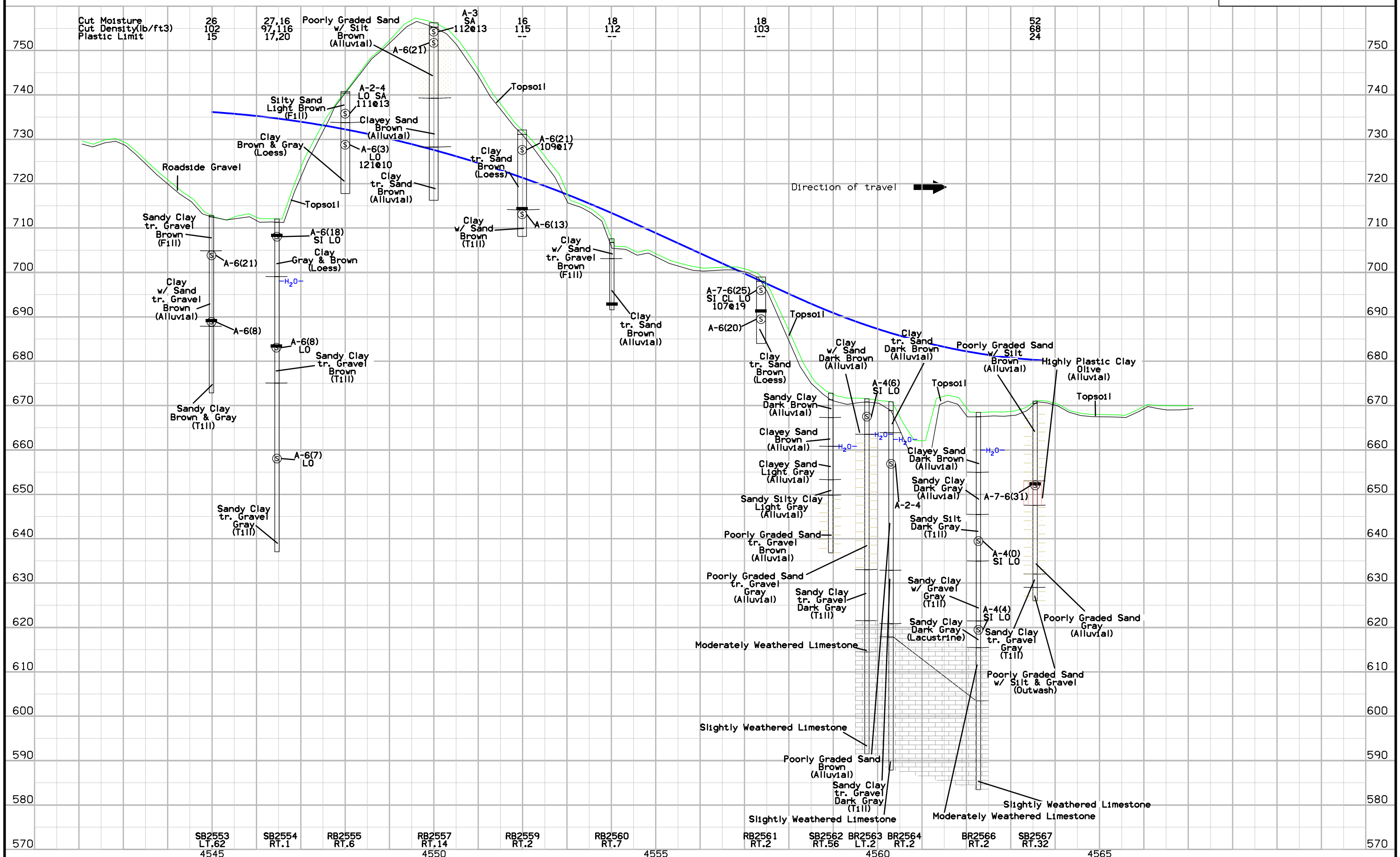
Curve Data
 $\Delta = 20^\circ 32' 25.78''$ (RT)
 $T = 407.69$
 $L = 806.62$
 $R = 2,250.00$
 $E = 36.64$
 $e = 5.25$
 $L = 162'$
 $x = 62'$
 $m = 49'$

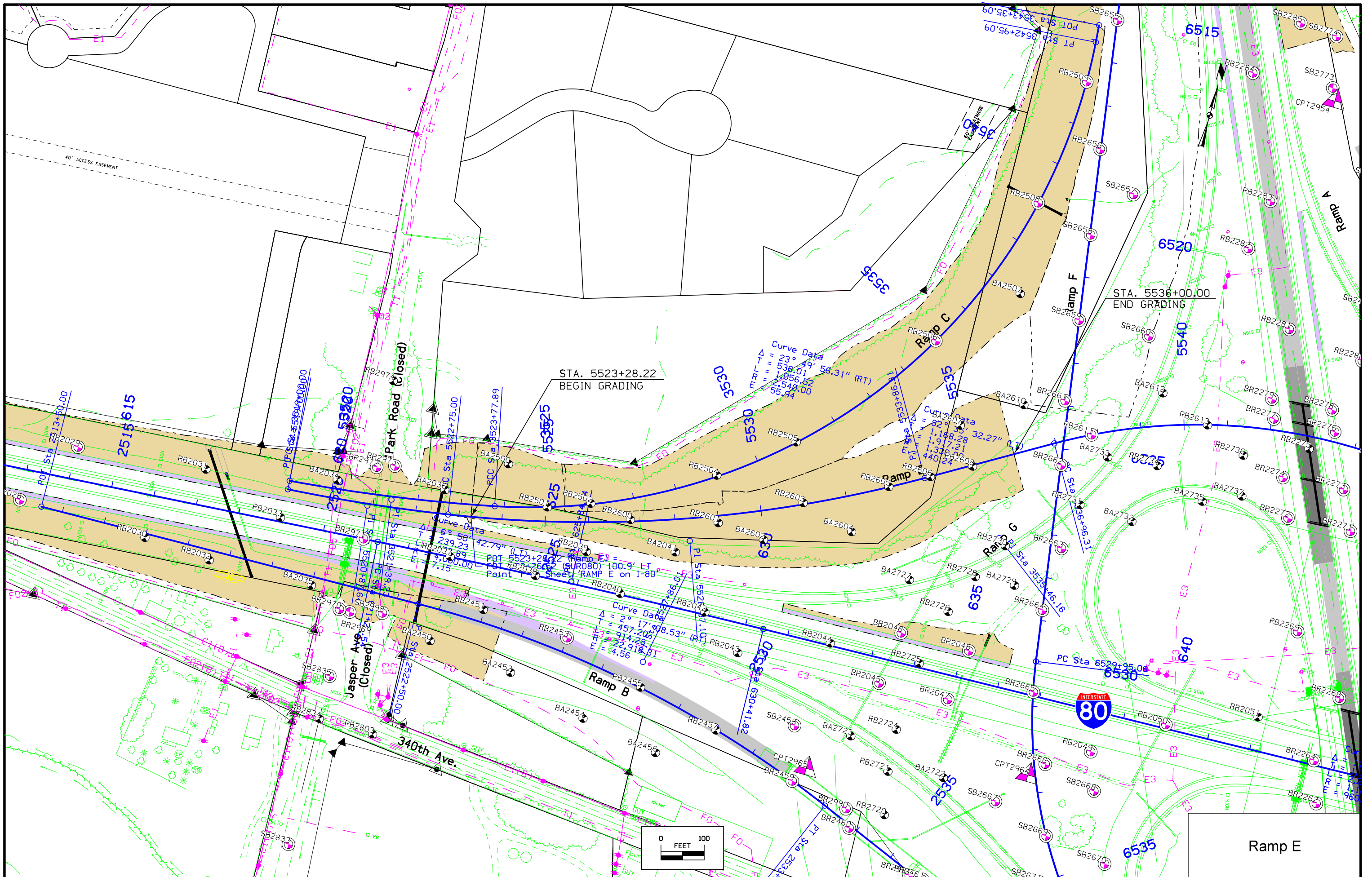


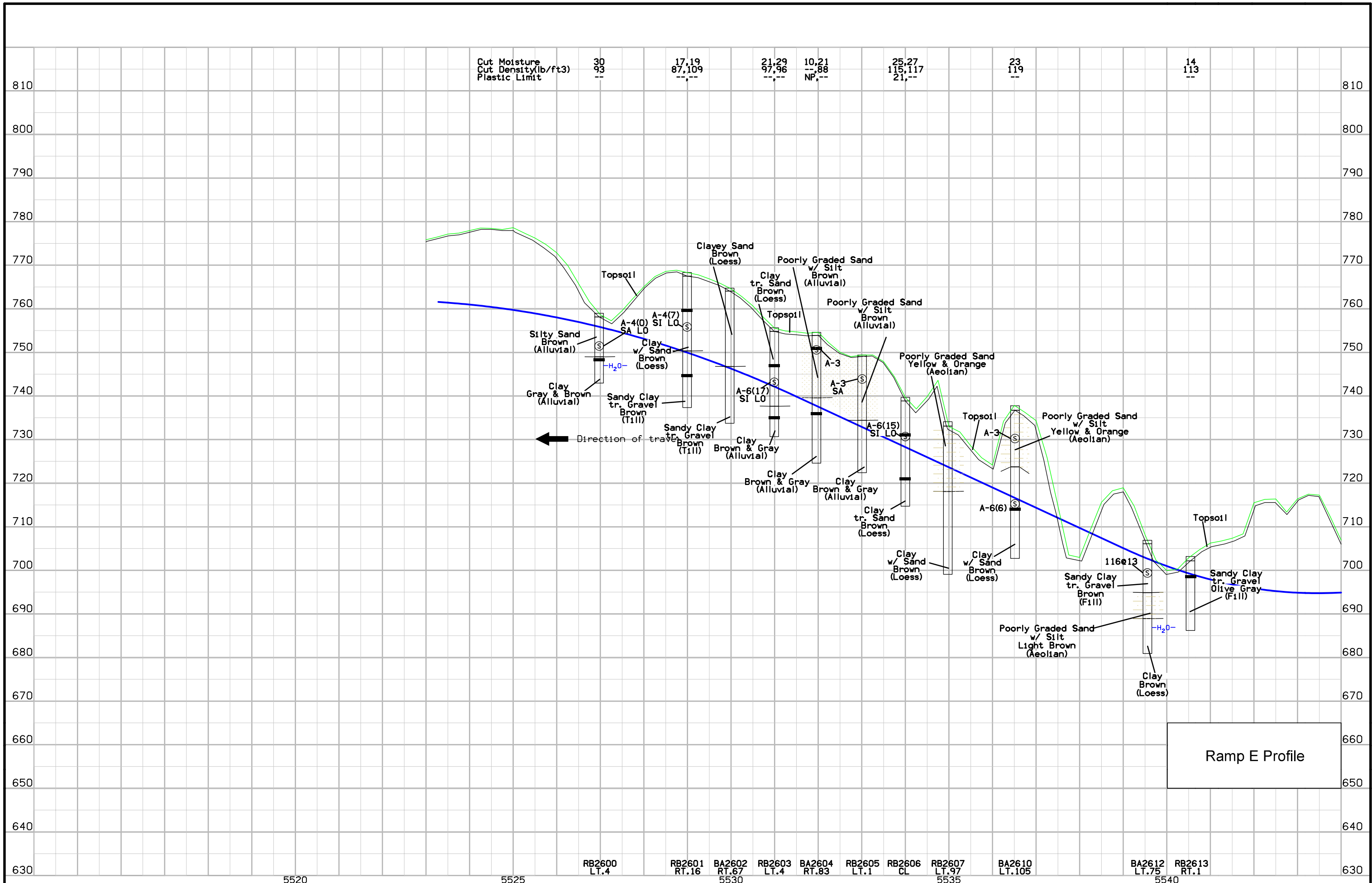
TEMPORARY SURCHARGE NOTES:
 1. PLACE SURCHARGE TO DEPTHS, LIMITS AND TYPICAL SECTION SHOWN
 2. CONSTRUCT SURCHARGE USING SUITABLE MATERIAL, PLACED PER THE SPECIFICATIONS
 3. ALLOW 250-DAY DELAY FROM SURCHARGE PLACEMENT TO SURCHARGE REMOVAL FROM STA 4545+00.00 TO 4547+50.00, ESTIMATED QUANTITY OF SURCHARGE IS 1006 CUBIC YARDS

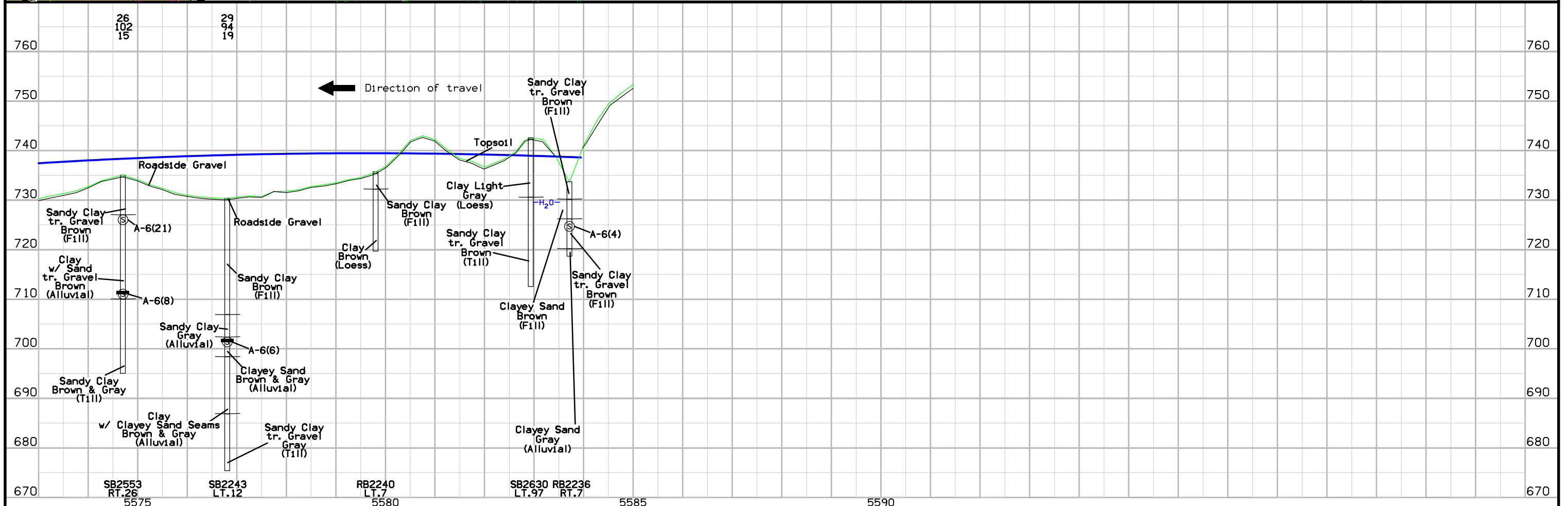
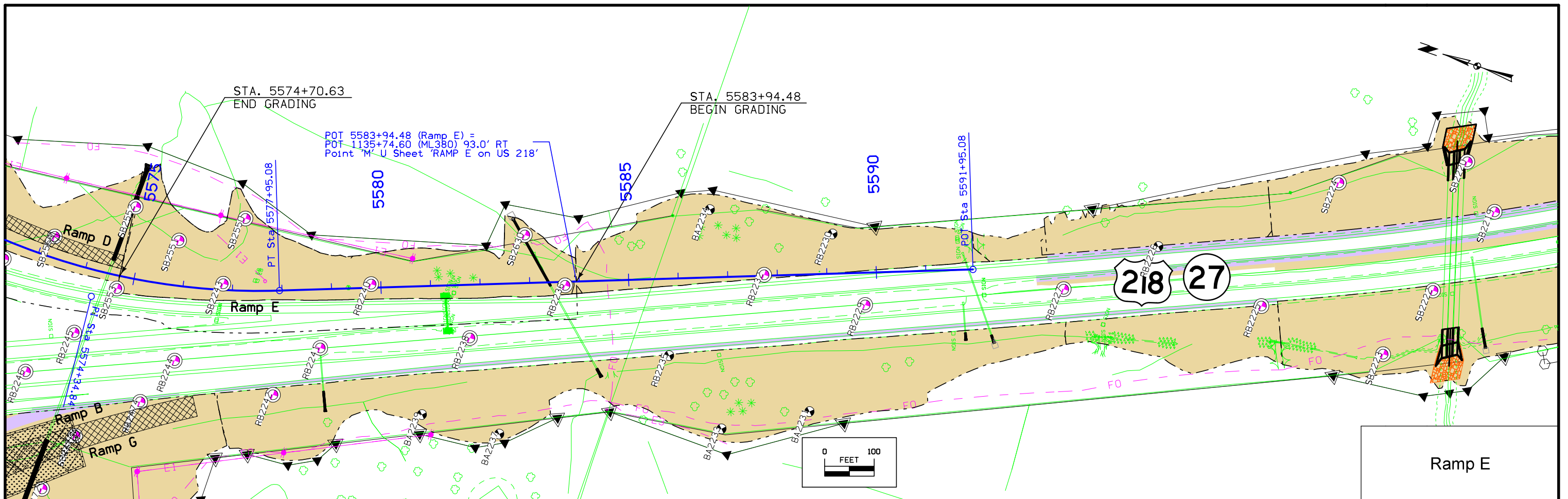
Ramp D

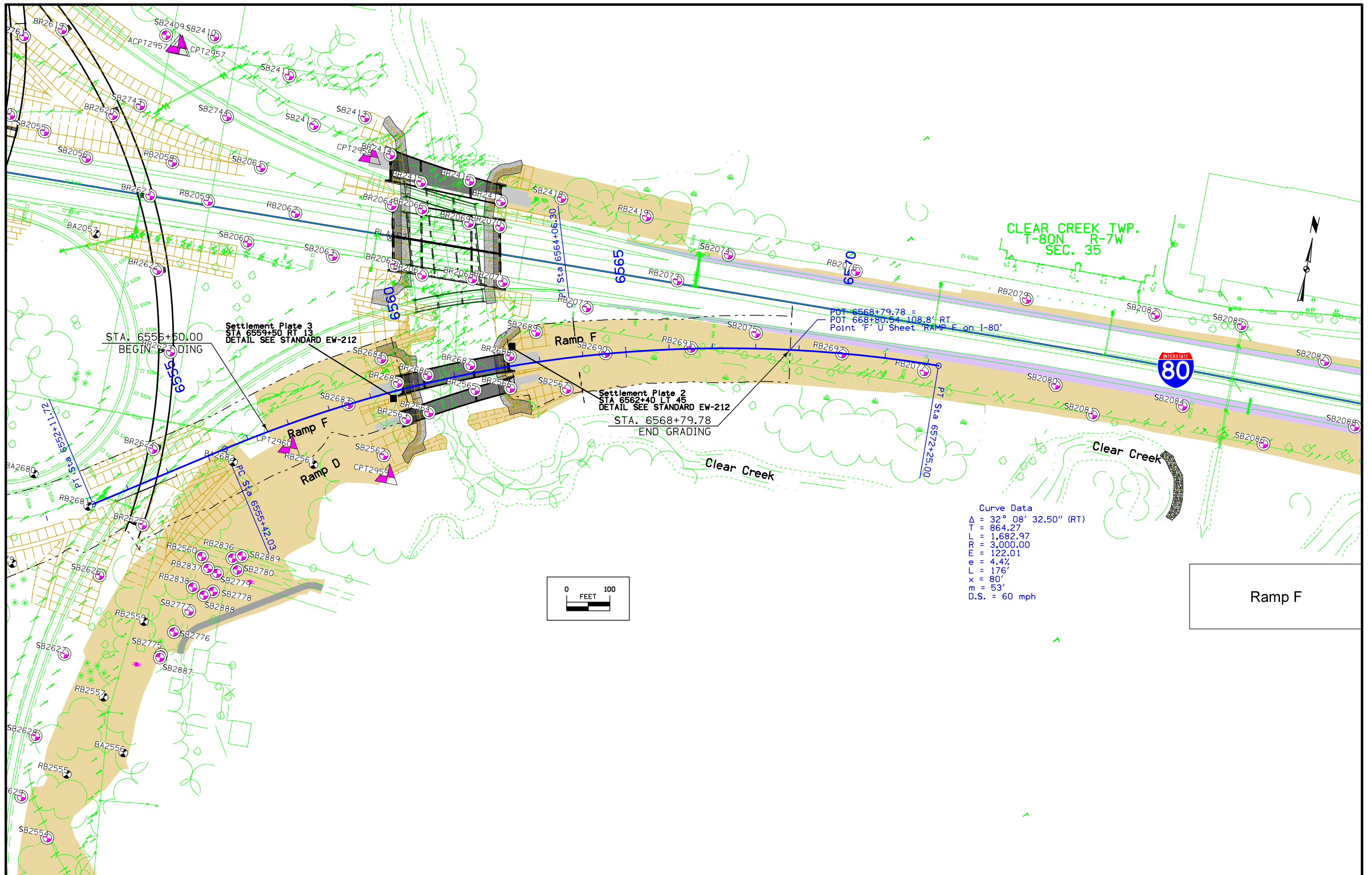
Ramp D Profile





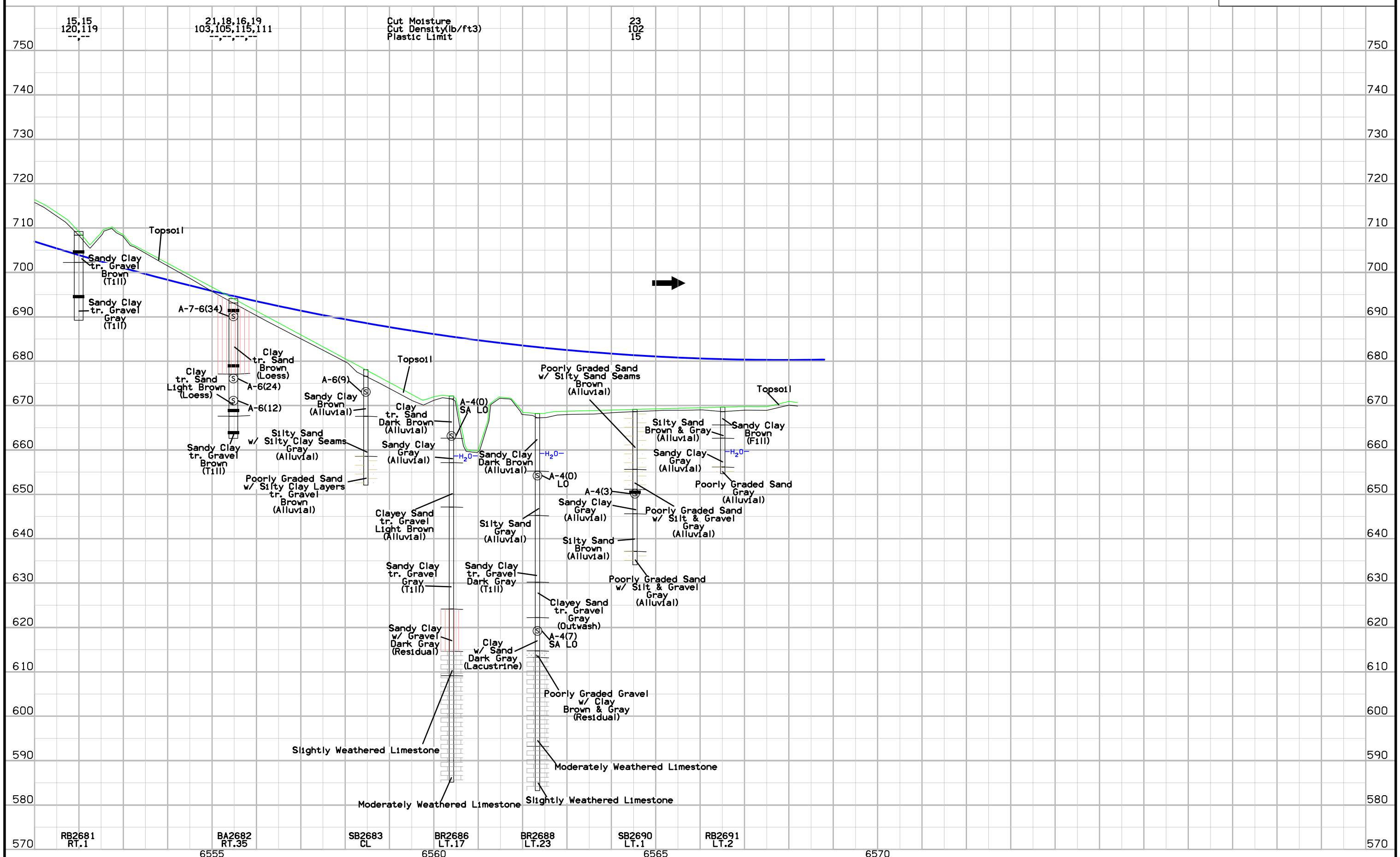


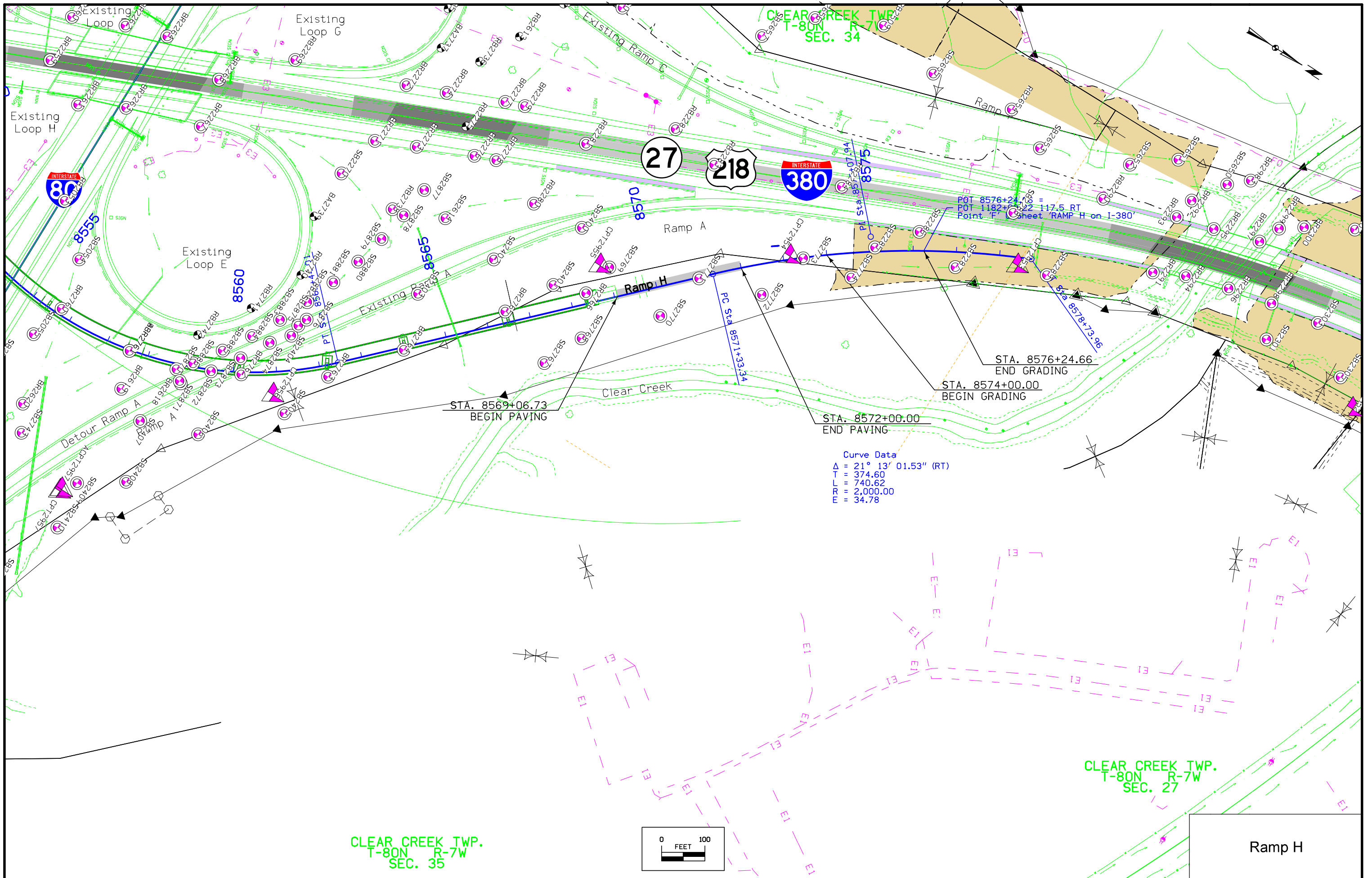




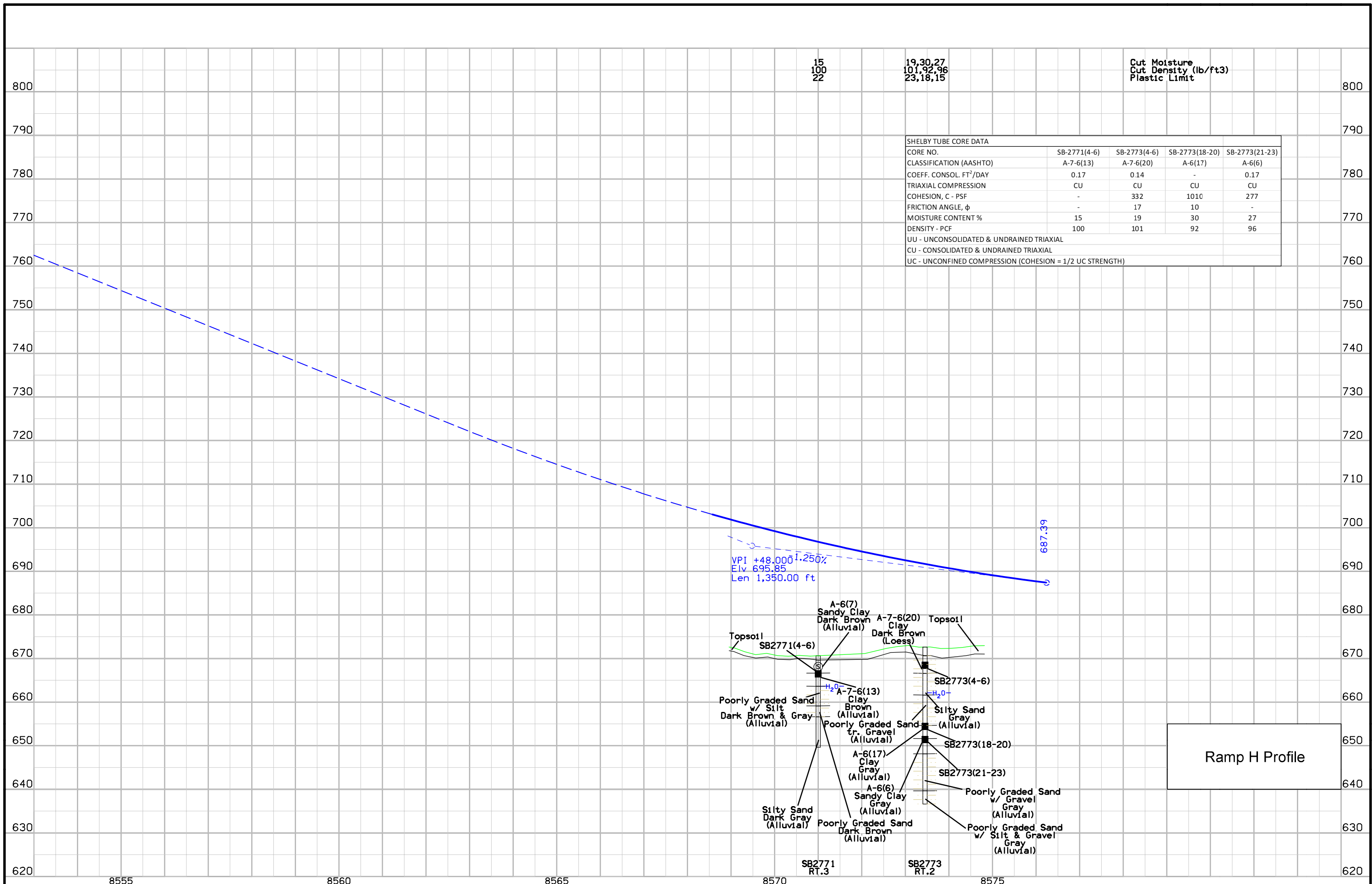
Ramp F

Ramp F Profile





FILE NO.	ENGLISH	DESIGN TEAM	Holst \ Prindle \ Braun Intertec	JOHNSON COUNTY	PROJECT NUMBER	NHS-080-6(371)239--11-52	SHEET NUMBER	Q.47
5:09:03 PM	7/5/2019	Oscar Soto	pw:\projectwise.dot.int.lan:PWMain\Documents\Projects\5208001002\Soils\drawings\FY20\371\SR_S0L-BI_380_52080371SPS		Changed by	Addenda		



Granular Blanket Note

Install 1-foot thick Granular Blanket with horizontal subdrains. Extend granular drainage blanket 4 feet horizontally beyond limits of wick drain area on all sides. This grading shall be incidental to wick drain installation. Blankets will be drained by DR-301 subdrains.

Approximate limits of Granular Blanket. Extend granular drainage blanket 4 feet horizontally beyond limits of wick drains on all sides

NO.1, DR-301 subdrains outlet to toe of final embankment slope

Settlement Plate 6
STA 2553+00 LT 15
DETAIL SEE STANDARD EW-212

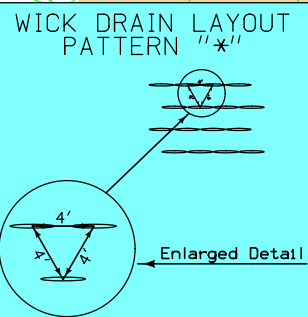


Table 1. Corner Coordinates of Wick Drain Layout

Corner	Station	Offset
A	2555+00	60
B	2552+45	75
C	2552+45	-50
D	2555+00	-40

Table 2. Table of Wick Drain Installation Spacing

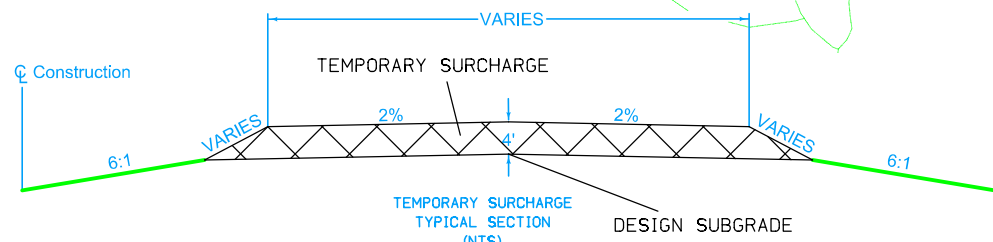
Station to Station Area	Center to Center Spacing	Approx. Number of Wick Drains	Est. Avg. Tip Elev. (ft)	Est. Avg. Length of Wick Drains (including extensions) (ft)
A-B-C-D	4.0' (triangular pattern)	1885	660 (see Q.37)	70

The settlement waiting period shall be 60 days following completion of embankment construction, contingent on settlement plate readings. Settlement plate readings should be reviewed by IDOT Soils Design.
* If full depth installation becomes difficult due to stiffer soil layers at depth, contact IDOT Soils Design to allow reassessment of tip elevations.

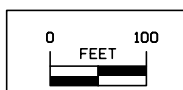
See sheet CS.4 for a tabular summary of the following information. See also sheets Q.23 and Q.37.
From Station 2552+45 to Station 2555+00 install 1885 prefabricated vertical (wick) drains in a triangular pattern with center-to-center spacing as shown in Table 2. Install the wick drains from the ground surface through the existing embankment, and/or compressible cohesive soils. There is an estimated 131,950 lineal feet of vertical wick drains.

The existing pavement and underlying granular materials shall be removed to facilitate wick drain installation. Predrilling through the new embankment and/or existing embankment may be necessary and will be acceptable if the annulus is properly backfilled with sand.

Wick Drain Details




- TEMPORARY SURCHARGE NOTES:
1. PLACE SURCHARGE TO DEPTHS, LIMITS AND TYPICAL SECTION SHOWN
 2. CONSTRUCT SURCHARGE USING SUITABLE MATERIAL, PLACED PER THE SPECIFICATIONS
 3. ALLOW 60-DAY DELAY FROM SURCHARGE PLACEMENT TO SURCHARGE REMOVAL FROM STA 2552+45.00 TO 2557+50.00, ESTIMATED QUANTITY OF SURCHARGE IS 3685 CUBIC YARDS



ESTIMATED PROJECT QUANTITIES (1 DIVISION PROJECT)					100_0A 2/3/2019
Item No.	Item Code	Item	Unit	Total	As Built Qty.
1	2503-0500402	BRIDGE END DRAIN, DR-402	EACH	19	
2	2507-3250005	ENGINEERING FABRIC	SY	1184	
3	2507-6800061	REVTMENT, CLASS E	TON	617	
4	2610-0000214	MULCH, WOOD CHIP BERMS, PLACEMENT	CY	3000	
5	2601-2634100	MULCHING	ACRE	147.2	
6	2601-2634105	MULCHING, BONDED FIBER MATRIX	ACRE	8	
7	2601-2636015	NATIVE GRASS SEEDING	ACRE	99	
8	2601-2636043	SEEDING AND FERTILIZING (RURAL)	ACRE	15	
9	2601-2636070	HYDRAULIC SEEDING	ACRE	8	
10	2601-2638352	SLOPE PROTECTION, WOOD EXCELSIOR MAT	SQ	6684	
11	2601-2640350	SPECIAL DITCH CONTROL, WOOD EXCELSIOR MAT	SQ	246	
12	2601-2642100	STABILIZING CROP - SEEDING AND FERTILIZING	ACRE	114	
13	2601-2643110	WATERING FOR SOD, SPECIAL DITCH CONTROL, OR SLOPE PROTECTION	MGAL	1039.5	
14	2601-2643300	MOBILIZATION FOR WATERING	EACH	3	
15	2602-0000010	SILT DITCHES	LF	570	
16	2602-0000020	SILT FENCE	LF	35229	
17	2602-0000030	SILT FENCE FOR DITCH CHECKS	LF	12408	
18	2602-0000040	SILT DIKES	LF	448	
19	2602-0000050	SILT BASINS	EACH	97	
20	2602-0000071	REMOVAL OF SILT FENCE OR SILT FENCE FOR DITCH CHECKS	LF	23968	
21	2602-0000080	REMOVAL OF SILT BASINS	EACH	49	
22	2602-0000101	MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK	LF	4794	
23	2602-0000130	TEMPORARY SEDIMENT CONTROL BASIN	EACH	14	
24	2602-0000135	REMOVAL OF TEMPORARY SEDIMENT CONTROL BASIN	EACH	14	
25	2602-0000140	MAINTENANCE OF TEMPORARY SEDIMENT CONTROL BASIN	EACH	42	
26	2602-0000160	ROCK CHECK DAM	LF	1742	
27	2602-0000170	MAINTENANCE OF ROCK CHECK DAM	EACH	306	
28	2602-0000180	REMOVAL OF ROCK CHECK DAM	EACH	102	
29	2602-0000320	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 20 IN. DIA.	LF	10200	
30	2602-0000350	REMOVAL OF PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE	LF	10200	
31	2602-0000400	TEMPORARY INTAKE OR MANHOLE COVER ASSEMBLY	EACH	29	
32	2602-0000410	MAINTENANCE OF TEMPORARY INTAKE OR MANHOLE COVER ASSEMBLY	EACH	29	
33	2602-0000420	REMOVAL OF TEMPORARY INTAKE OR MANHOLE COVER ASSEMBLY	EACH	29	
34	2602-0000530	GRATE INTAKE SEDIMENT FILTER BAG	EACH	3	
35	2602-0000540	MAINTENANCE OF GRATE INTAKE SEDIMENT FILTER BAG	EACH	3	
36	2602-0000550	REMOVAL OF GRATE INTAKE SEDIMENT FILTER BAG	EACH	3	
37	2602-0010010	MOBILIZATIONS, EROSION CONTROL	EACH	1	
38	2602-0010020	MOBILIZATIONS, EMERGENCY EROSION CONTROL	EACH	1	
39	2599-9999001	DEEP TILLAGE	ACRE	114	

ESTIMATE REFERENCE INFORMATION			100_4A 2/3/2019
Item No.	Item Code	Description	
1	2503-0500402	BRIDGE END DRAIN, DR-402 Refer to RR Sheets for location. Refer to Tab. 104-8A for more details.	
2	2507-3250005	ENGINEERING FABRIC Engineering fabric shall be material as specified for embankment erosion control in accordance with Article 4196.01,B,3, of the Standard Specifications. Refer to Tabulation 100-23.	
3	2507-6800061	REVTMENT, CLASS E Estimated at 1.6 ton/cu yd. Refer to Tabulation 100-23. Refer to RR Sheets for plan view.	
4	2610-0000214	MULCH, WOOD CHIP BERMS, PLACEMENT Approximately 3000 CY of slash mulch is stockpiled in the NW quadrant of the project site. Use this slash mulch as an alternative to revetment, erosion stone, and other erosion control measures as directed by engineer.	
5	2601-2634100	MULCHING Mulch all seeding areas according to Article 2601, E, 2. except the areas covered with wood excelsior mats or hydraulic mulching. Anchor mulch into the soil using mulch anchoring equipment with a minimum of two passes. Included for areas requiring reshaping and seedbed preparation. Mulch shall be Certified Noxious Weed Seed Free Mulch as certified by the Iowa Crop Improvement Association or adjacent states Crop Improvement Associations. Mulch Rate: 1 1/2 tons of dry cereal straw or native grass straw per acre.	
6	2601-2634105	MULCHING, BONDED FIBER MATRIX Use hydraulic mulch in wet areas, difficult to access areas, medians and along the area adjacent to the shoulder of interstate projects if needed.	
7	2601-2636015	NATIVE GRASS SEEDING Use permanent native seeding in the backslopes, outside ditches, and foreslopes. Finalize seeding the backslope immediately after grading operations and tillage are complete within the preferred seeding timeframe. Do not seed until areas are no longer needed for construction access. Areas in the foreslopes that are within 8 feet off of the edge of shoulder should not be seeded with native seeding, refer to bid item "SEEDING AND FERTILIZING (RURAL)".	
8	2601-2636043	SEEDING AND FERTILIZING (RURAL) Seed and fertilize with rural permanent seeding in areas within 8 feet ofset off of the edge of the shoulder. Do not seed until areas are no longer needed for construction access.	
9	2601-2636070	HYDRAULIC SEEDING Use rural stabilizing crop seeding and fertilizing mixture. Add rural seeding for median ditch and for areas within 8 feet from the edge of the shoulder where hydraulic mulch is used. Use native grass seeding mixture in foreslopes, outside ditches, and backslopes where hydraulic mulch is used.	
10	2601-2638352	SLOPE PROTECTION, WOOD EXCELSIOR MAT	
11	2601-2640350	SPECIAL DITCH CONTROL, WOOD EXCELSIOR MAT Refer to Tabulation 100-22. Prepare seedbed according to Article 2601.03,B,4 of the Standard Specifications. Install mat according to Article 2601.03,H,2 of the Standard Specifications. Seed according to Article 2601.03,H,2 of the Standard Specifications. Refer to Table 2601.03-7 for seed mixture.	
12	2601-2642100	STABILIZING CROP - SEEDING AND FERTILIZING Finalize seeding all backslopes, foreslopes, and ditches immediately after grading operations are complete.	
13	2601-2643110	WATERING FOR SOD, SPECIAL DITCH CONTROL, OR SLOPE PROTECTION Estimated quantity based on a maximum of 50 gallons of water per SQ applied initially, then over 3 separate mobilizations, as described below.	
14	2601-2643300	MOBILIZATION FOR WATERING 3 Mobilizations. See Article 2601.05, A, 13 for further detail.	
15	2602-0000010	SILT DITCHES Refer to Tabulation 100-13.	
16	2602-0000020	SILT FENCE Refer to Tabulation HRG-01 in the R Sheets. Refer to plan view in the R Sheets. The HRG-01 tabulation includes estimated locations and elevations for placement of "Silt Fence for foreslope". Silt fence flare ups at the endings of each 200 FT long segment of continues silt fence (per Standard Road Plan EC-201) are not shown in the erosion and sediment control plan view in the R Sheets, but are accounted for in the quantities. Column "# of Silt Fences in Series" in Tab. HRG 01 contains the number of 200 FT long silt fence segments for each continues silt fence at a specific contour elevation. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 25% additional quantity for field adjustments and replacements. Silt fence placement for boring and receiving pits are considered incidental to the boring operations.	
17	2602-0000030	SILT FENCE FOR DITCH CHECKS Refer to Tab. 100-18. The tabulation includes estimated locations for placement of Silt Fence for Ditch Checks to address possible erosion during construction. Verify the specific locations with the Engineer	

STANDARD ROAD PLANS			105_4 2/3/2019
The following Standard Road Plans apply to construction work on this project.			
Number	Date	Title	
EC-101	04-19-16	Wood Excelsior Mat for Ditch Protection	
EC-103	04-21-15	Wood Excelsior Mat for Slope Protection	
EC-201	10-16-18	Silt Fence	
EC-204	04-18-17	Perimeter and Slope Sediment Control Devices	
EC-301	10-18-16	Rock Erosion Control (REC)	
EC-302	10-16-18	Rock Check Dam	
EC-601	10-16-18	Temporary Sediment Control Basin	
EW-403	04-18-17	Temporary Erosion Control Measures	
TC-1	04-16-13	Work Not Affecting Traffic (Two-Lane or Multi-Lane)	
DR-402	04-17-18	Rock Flume For Bridge End Drain	
570-5	04-18-17	EROSION CONTROL FOR INTAKE OR MANHOLE WELL	
570-7	04-18-17	GRATE INTAKE SEDIMENT FILTER BAG	
570-11	10-15-19	TEMPORARY SEDIMENT CONTROL FOR CULVERT EXTENSION WITH EXPOSED SOIL	



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Aaron D. Granquist 07/10/2019
AARON D. GRANQUIST, P.E. DATE
License Number: 17560
My license renewal date is DECEMBER 31, 2020
Pages or sheets covered by this seal:
All R sheets

Changed by Addenda

ESTIMATE REFERENCE INFORMATION			100_4A 2/3/2019
Item No.	Item Code	Description	
		prior to beginning placement. Bid item includes 50% additional quantity for field adjustments and replacements. All silt fences listed in this tabulation follow Type 1 installation per Standard Road Plan EC-201 unless specified otherwise. Each row in the tabulation show the station range for which a number of silt fences listed under column "Total # of Silt Fences" shall be placed at spacing of the value listed under column "Spacing". For each row in the tabulation, begin silt fence count starting from the downstream end. Refer to plan view in the R Sheets.	
18	2602-000040	SILT DIKES Refer to Tabulation 100-15.	
19	2602-000050	SILT BASINS Refer to Tab. 100-14. The tabulation includes estimated locations for placement of Silt Basins to address possible erosion during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 100% additional quantity for field adjustments and maintenance.	
20	2602-000071	REMOVAL OF SILT FENCE OR SILT FENCE FOR DITCH CHECKS Refer to Tabulations 100-18 and HRG-01. This item is included for silt fence and silt fence for ditch check removal required for staging reasons, for replacement (replacement to be paid separately), or for areas that have achieved 70% permanent growth.	
21	2602-000080	REMOVAL OF SILT BASINS Refer to Tabulation 100-14.	
22	2602-0000101	MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK Refer to Tabulations 100-18 and HRG-01. This item is included for cleanout and repair of the silt fence and silt fence for ditch checks during the project.	
23	2602-0000130	TEMPORARY SEDIMENT CONTROL BASIN	
24	2602-0000135	REMOVAL OF TEMPORARY SEDIMENT CONTROL BASIN	
25	2602-0000140	MAINTENANCE OF TEMPORARY SEDIMENT CONTROL BASIN A total of 3 cleanouts were assumed for each temporary sediment control basin. Refer to Tabulation 100-33 .	
26	2602-0000160	ROCK CHECK DAM	
27	2602-0000170	MAINTENANCE OF ROCK CHECK DAM	
28	2602-0000180	REMOVAL OF ROCK CHECK DAM Refer to Tab. 100-32. Quantities include an additional 10% of the bid quantity of Silt Fence for Ditch Checks to reflect possible replacement for Silt Fence for Ditch Checks during the grading project. A total of 3 cleanouts for each rock check dam were assumed. Each rock check dam was assumed to be 16 linear feet.	
29	2602-0000320	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 20 IN. DIA.	
30	2602-0000350	REMOVAL OF PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE Refer to Tabulation 100-19.	
31	2602-0000400	TEMPORARY INTAKE OR MANHOLE COVER ASSEMBLY	
32	2602-0000410	MAINTENANCE OF TEMPORARY INTAKE OR MANHOLE COVER ASSEMBLY	
33	2602-0000420	REMOVAL OF TEMPORARY INTAKE OR MANHOLE COVER ASSEMBLY Refer to Tabulation 100-11. Payment is full compensation for inspecting fabric sock and replacing when flow capacity is reduced to 50%.	
34	2602-0000530	GRATE INTAKE SEDIMENT FILTER BAG	
35	2602-0000540	MAINTENANCE OF GRATE INTAKE SEDIMENT FILTER BAG	
36	2602-0000550	REMOVAL OF GRATE INTAKE SEDIMENT FILTER BAG Refer to Tabulation 100-37.	
37	2602-0010010	MOBILIZATIONS, EROSION CONTROL This item is included for a single or multiple erosion control mobilization performed by a single crew for this project. The quantity will be paid for at the unit price of \$500.00 each for Mobilizations, Erosion Control, which is full compensation for staged movement of labor, equipment, and materials; and labor, tools, equipment, and incidentals necessary to complete the movement. Additional mobilizations not outlined in the ECIP must be approved by the Engineer. Failure to mobilize when erosion control work is needed to comply with the ECIP or PPP, will result in the Engineer, by written order, direct mobilization within 72 hours of a written order. Failure to mobilize within such time period, will result in a deduction of \$750.00 per calendar day from payment due under the contract, except when Engineer extends such time period.	
38	2602-0010020	MOBILIZATIONS, EMERGENCY EROSION CONTROL This item is included for erosion control mobilization in case of a sudden occurrence of a serious and urgent nature which is beyond normal maintenance of erosion control items. Emergency work requires immediate mobilization and movement of necessary labor, for movement of labor, equipment and materials; and for labor, tools, equipment, and incidentals necessary to complete the movement. Mobilize with sufficient labor, equipment, and materials on job site within eight hours of Engineer's written order to install temporary erosion control items on an emergency basis. Engineer's written order will include a description of required work. Only one mobilization will be paid for work described in the written order. Failure to mobilize within eight hours of written order, will result in a deduction of \$1500.00 per calendar day from payment due under the contract, except when Engineer extends such time period.	
39	2599-9999001	DEEP TILLAGE Equip tillage equipment with arrowhead type shoe providing lateral displacement and limit movement of subsoil to the surface. Obtain Engineer's approval for equipment. It is intended that following subsoil tillage, the area remain in a loosened condition. Additional compaction or operation of heavy equipment, other than that	

ESTIMATE REFERENCE INFORMATION			100_4A 2/3/2019
Item No.	Item Code	Description	
		required for topsoil placement and shaping, will not be allowed on areas tilled. Till at 3 foot maximum centers and at right angles to finished slope. For ditch and foreslope areas, perform subsoil tillage after 8 inch top soil replacement. Tillage shall be done to an average depth of 18 inches. Deep tillage on ditch and foreslope areas should not be completed until areas are no longer needed for construction access; coordinate with the engineer regarding possible future access needs. For backslope areas, perform subsoil tillage to an average depth of 12 inches prior to placement of 8" topsoil and seeding.	

**EROSION CONTROL FOR
INTAKE OR MANHOLE WELL**
Possible Detail: 570-5

100_11
2/3/2019

Location Station	Side	Cover Assembly			Remarks
		Installation	Maintenance	Removal	
		EACH	EACH	EACH	
1160+74.00 (ML380)	C	1	1	1	SW-547
1166+02.60 (ML380)	C	1	1	1	SW-547
1168+68.00 (ML380)	C	1	1	1	SW-547
1173+50.00 (ML380)	C	1	1	1	SW-547
1178+00.00 (ML380)	C	1	1	1	SW-547
1180+50.00 (ML380)	C	1	1	1	SW-547
1183+00.00 (ML380)	C	1	1	1	SW-547
1184+35.00 (ML380)	C	1	1	1	SW-547
1186+98.00 (ML380)	C	1	1	1	SW-547
1186+25.00 (ML380)	C	1	1	1	SW-547
1185+91.53 (ML380)	C	1	1	1	SW-547
1185+09.80 (ML380)	C	1	1	1	SW-547
1191+41.50 (ML380)	C	1	1	1	SW-547
1197+40.48 (ML380)	C	1	1	1	SW-547
1195+00.00 (ML380)	C	1	1	1	SW-547
1193+00.00 (ML380)	C	1	1	1	SW-547
1203+92.86 (ML380)	C	1	1	1	SW-547
1207+53.00 (ML380)	C	1	1	1	SW-547
1208+40.18 (ML380)	C	1	1	1	SW-547
1215+50.00 (ML380)	C	1	1	1	SW-547
1212+50.00 (ML380)	C	1	1	1	SW-547
1210+00.00 (ML380)	C	1	1	1	SW-547
1209+25.50 (ML380)	C	1	1	1	SW-547
1218+75.23 (ML380)	C	1	1	1	SW-547
4547+55.00 (ML380D)	LT	1	1	1	SW-507 (BOTTOM WELL ONLY)
4549+10.00 (ML380D)	LT	1	1	1	SW-507 (BOTTOM WELL ONLY)
4550+50.00 (ML380D)	LT	1	1	1	SW-507 (BOTTOM WELL ONLY)
4551+75.00 (ML380D)	LT	1	1	1	SW-507 (BOTTOM WELL ONLY)
6563+00.00 (ML380F)	RT	1	1	1	SW-507 (BOTTOM WELL ONLY)
Total		29	29	29	

SILT DITCHES
Refer to EW-403

100_13
2/3/2019

Station to Station	Side	LF	Remarks
1092+90, 120'	1094+15, 157'	Lt	130.0 A-1
1561+60, 77'	1566+00, 70'	Lt	440.0 F-2, Note 1
Total		570.0	
Note 1			
1-	Grade silt ditch towards the creek		

GRATE INTAKE SEDIMENT FILTER BAG
Possible Detail: 570-7

100_37
2/3/2019

Location Station	Side	Installation	Maintenance	Removal	Remarks
		EACH	EACH	EACH	
1184+40.00	LT	1	1	1	SW-512 (24")
1184+43.00	RT	1	1	1	SW-512 (24")
7507+80.00	RT	1	1	1	SW-562 MOD
Total		3	3	3	

SILT DIKES				100_15
Refer to EW-403				2/3/2019
Location		Side	Length LF	Remarks
Station to Station				
1094+18, 121'	1095+09, 128'	Lt	92.0	Note 1 - Basin A-1 Storage = 570
1095+31, 135'	1096+31, 127'	Lt	100.0	Note 1 - Basin A-1 Storage = 750
1099+00, 135'	1101+50, 126'	Lt	256.0	Basin B-2 Storage = 1625
Total			448.0	

Notes:

1- Add additional compacted fill at the downstream end of the silt dike

GN:

1- The storage value provided is the calculated storage provided by the silt dike in cubic feet

TABULATION OF SILT FENCES				100_17
Refer to EC-201				2/3/2019
Location		Side	Length LF	Remarks
Begin Station	End Station			
1094+88.00	1096+33.00	Rt	300.0	Note 1, Basin B-3
1097+40.00	1099+50.00	Rt	380.0	Note 1, Basin B-3
1099+85.00	1100+85.00	Rt	210.0	Note 1, Basin B-3
1200+05.00	1204+65.00	Rt	920.0	Note 1, Basin E-3
1200+05.00	1203+85.00	Lt	770.0	Note 1, Basin E-4
2509+05.00	2513+40.00	Rt	920.0	Note 1, Basin Z-3
1139+08.00	4547+50.00	Rt	1574.0	Note 1, Basin S-2
Silt Fence Tab Total:			5074.0	
Silt Fence Bid Total:			6343	125% of Tab Total
Maintenance Total:			634	10% of Bid Total
Removal Total:			3171	50% of Bid Total

Notes:

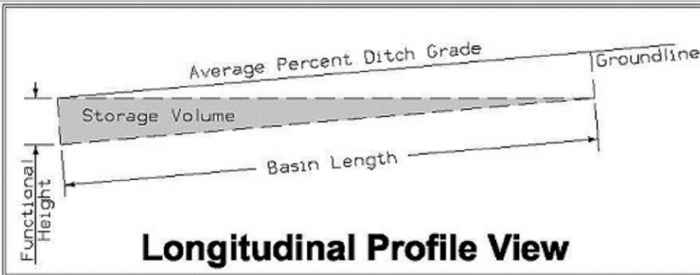
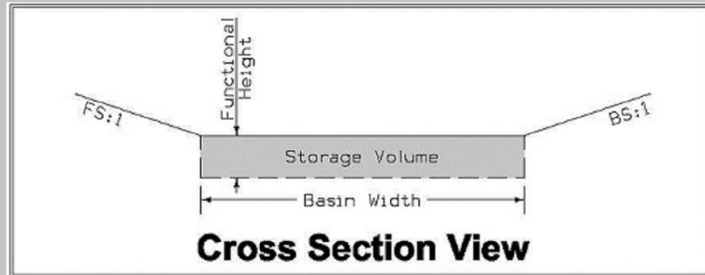
1- Length includes two rows of silt fence to be placed at the downstream end. Place silt fence prior to grading operations.

SILT BASINS										100_14
Possible Standard: EW-403										2/3/2019
<p>Cross Section View</p>					<p>Longitudinal Profile View</p>					
* The functional height used in the volume equation is 95% of effective height. Effective height is 3 feet as shown in EW-403.										
* Volume equation: $(0.5 * Length * (Width * Height + Width * (Height - Length * Avg\%Slope)))$										
Basin No.	Location	Bid Items		Stormwater Storage Volume Summary				Subtotal	Remarks	
		Installation EACH	Removal EACH	Basin Width FT	Basin Length FT	Height FT	Avg. % Slope			Volume* CF
C-3	1118+95 - 1119+45 Lt	1	1	10.0	50.0	2.85	1.1%	1287.5		
C-3	1118+35 - 1118+85 Rt	1	1	10.0	50.0	2.85	1.1%	1287.5		
C-4	1119+05 - 1119+55 Lt	1	1	10.0	50.0	2.85	0.5%	1362.5		
C-4	1119+65 - 1120+15 Lt	1	1	10.0	50.0	2.85	0.5%	1362.5		
C-4	1122+15 - 1122+65 Lt	1	1	10.0	50.0	2.85	1.0%	1300.0		
C-4	1122+85 - 1123+35 Lt	1	1	10.0	50.0	2.85	1.0%	1300.0		
C-5	1128+40 - 1128+90 Rt	1	1	10.0	50.0	2.85	1.7%	1212.5		
C-5	1129+75 - 1130+25 Rt	1	1	10.0	50.0	2.85	1.4%	1250.0		
E-2	1190+75 - 1191+25 LT	1	1	10.0	50.0	2.85	0.5%	1362.5		
E-2	1191+50 - 1192+00 LT	1	1	10.0	50.0	2.85	0.5%	1362.5		
E-2	1194+60 - 1195+10 LT	1	1	10.0	50.0	2.85	0.5%	1362.5		
E-1	1190+75 - 1191+25 RT	1	1	10.0	50.0	2.85	0.5%	1362.5		
E-1	1191+50 - 1192+00 RT	1	1	10.0	50.0	2.85	0.5%	1362.5		
E-1	1192+25 - 1192+75 RT	1	1	10.0	50.0	2.85	0.5%	1362.5		
E-1	1194+60 - 1195+10 RT	1	1	10.0	50.0	2.85	0.5%	1362.5		
K-6	1572+40 - 1572+75 Lt	1	1	10.0	30.0	2.85	1.5%	787.5		
O-2	599+75 - 600+25 Lt	1	1	10.0	50.0	2.85	1.5%	1237.5		
P-1	619+10 - 619+60 Rt	1	1	10.0	50.0	2.85	0.8%	1322.5		
P-2	610+25 - 610+75 Lt	1	1	10.0	50.0	2.85	1.4%	1250.0		
P-2	611+25 - 611+75 Lt	1	1	10.0	50.0	2.85	1.4%	1250.0		
P-2	612+25 - 612+75 Lt	1	1	10.0	50.0	2.85	1.4%	1250.0		
Q-2	5535+65 - 5536+15 Rt	1	1	10.0	50.0	2.85	5.1%	793.8		
Q-3	5533+75 - 5534+25 Lt	1	1	10.0	50.0	2.85	5.1%	793.8		
Q-3	5534+28 - 5534+63 Lt	1	1	10.0	35.0	2.85	5.1%	688.2		
Q-3	5534+70 - 5535+05 Lt	1	1	10.0	35.0	2.85	5.1%	688.2		
Q-3	5535+15 - 5535+50 Lt	1	1	10.0	35.0	2.85	5.1%	688.2		
Q-3	5535+55 - 5536+05 Lt	1	1	10.0	50.0	2.85	5.1%	793.8		
Q-4	6519+80 - 6520+30 Rt	1	1	10.0	50.0	2.85	4.0%	925.0		
Q-7	3536+55 - 3536+90 Lt	1	1	10.0	35.0	2.85	4.6%	714.5		
Q-7	3537+15 - 3537+50 Lt	1	1	10.0	35.0	2.85	4.6%	714.5		
Q-7	3537+75 - 3538+10 Lt	1	1	10.0	35.0	2.85	4.6%	714.5		
Q-7	3538+40 - 3538+75 Lt	1	1	10.0	35.0	2.85	4.6%	714.5		
Q-8	3539+85 - 3540+35 Lt	1	1	10.0	50.0	2.85	4.6%	847.5		
Q-8	3540+70 - 3541+25 Lt	1	1	10.0	50.0	2.85	4.6%	847.5		
Q-8	3541+56 - 3542+86 Lt	1	1	10.0	30.0	2.85	4.7%	643.5		
Q-8	3542+47 - 3542+97 Lt	1	1	10.0	50.0	2.85	4.7%	841.3		
Q-8	6514+62 - 6515+12 Rt	1	1	10.0	50.0	2.85	2.0%	1175.0		
Q-8	6513+44 - 6513+94 Rt	1	1	10.0	50.0	2.85	2.0%	1175.0		
Q-9	6512+23 - 6512+73 Rt	1	1	10.0	50.0	2.85	2.0%	1175.0		
Q-9	6511+05 - 6511+55 Rt	1	1	10.0	50.0	2.85	2.0%	1175.0		
Q-9	6509+87 - 6510+37 Rt	1	1	10.0	50.0	2.85	2.0%	1175.0		
Q-9	6508+69 - 6509+19 Rt	1	1	10.0	50.0	2.85	2.0%	1175.0		
R-3	4557+45 - 4557+95 Lt	1	1	10.0	50.0	2.85	2.0%	1175.0		
R-3	4558+10 - 4558+60 Lt	1	1	10.0	50.0	2.85	2.0%	1175.0		
S-1	2553+55 - 2554+05 Rt	1	1	17.5	50.0	2.85	0.5%	2375.6		

SILT BASINS

Possible Standard: EW-403

100_14
2/3/2019



* The functional height used in the volume equation is 95% of effective height. Effective height is 3 feet as shown in EW-403.
* Volume equation: $(0.5 * Length * (Width * Height + Width * (Height - Length * Avg\%Slope)))$

Basin No.	Location	Bid Items		Stormwater Storage Volume Summary					Subtotal	Remarks
		Installation EACH	Removal EACH	Basin Width FT	Basin Length FT	Height FT	Avg. % Slope	Volume* CF		
V-1	607+57 - 608+07 Rt	1	1	10.0	50.0	2.85	2.1%	1165.0		
V-1	608+30 - 608+80 Rt	1	1	10.0	50.0	2.85	2.1%	1165.0		
V-1	609+07 - 609+57 Rt	1	1	10.0	50.0	2.85	2.1%	1165.0		
V-2	606+00 - 606+50 Rt	1	1	10.0	50.0	2.85	1.0%	1302.5		
Total		48	48							

PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE

Possible Standards: EC-204

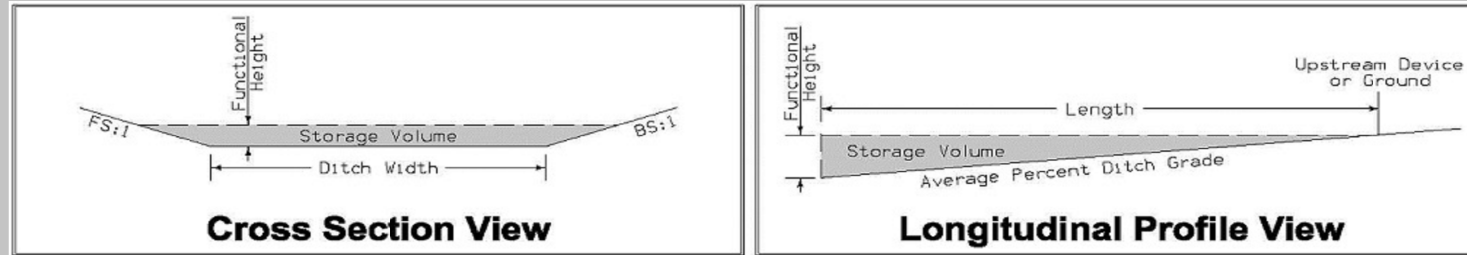
100_19
2/3/2019

Location			Length of Installation			Remarks
Begin Station	End Station	Side	9 inch Dia	12 inch Dia	20 inch Dia	
			LF	LF	LF	
711+45.00	(ML080)	LT			30.0	DR-206 (29" X 18")
1160+74.00	(ML380)	C			50.0	SW-547
1166+02.60	(ML380)	C			50.0	SW-547
1168+68.00	(ML380)	C			50.0	SW-547
1173+50.00	(ML380)	C			50.0	SW-547
1178+00.00	(ML380)	C			50.0	SW-547
1180+50.00	(ML380)	C			50.0	SW-547
1183+00.00	(ML380)	C			50.0	SW-547
1184+35.00	(ML380)	C			50.0	SW-547
1186+98.00	(ML380)	C			50.0	SW-547
1186+25.00	(ML380)	C			50.0	SW-547
1185+91.53	(ML380)	C			50.0	SW-547
1185+09.80	(ML380)	C			50.0	SW-547
1191+41.50	(ML380)	C			50.0	SW-547
1197+40.48	(ML380)	C			50.0	SW-547
1195+00.00	(ML380)	C			50.0	SW-547
1193+00.00	(ML380)	C			50.0	SW-547
1207+53.00	(ML380)	C			50.0	SW-547
1208+40.18	(ML380)	C			50.0	SW-547
1215+50.00	(ML380)	C			50.0	SW-547
1212+50.00	(ML380)	C			50.0	SW-547
1210+00.00	(ML380)	C			50.0	SW-547
1209+25.50	(ML380)	C			50.0	SW-547
1218+75.23	(ML380)	C			50.0	SW-547
3542+06.00	(ML380C)	RT			30.0	DR-205 (24")
4547+55.00	(ML380D)	LT			40.0	SW-507 (BOTTOM WELL ONLY)
4549+10.00	(ML380D)	LT			40.0	SW-507 (BOTTOM WELL ONLY)
4550+50.00	(ML380D)	LT			40.0	SW-507 (BOTTOM WELL ONLY)
4551+75.00	(ML380D)	LT			40.0	SW-507 (BOTTOM WELL ONLY)
6563+00.00	(ML380F)	RT			40.0	SW-507 (BOTTOM WELL ONLY)
ML080						
567+10.00	590+70.00	LT			2560.0	Place Along Toe of Slope
594+15.00	609+70.00	LT			1580.0	Place Along Toe of Slope
630+70.00	636+15.00	LT			550.0	Place Along Toe of Slope
697+75.00	703+40.00	RT			570.0	Place Along Toe of Slope
ML380						
1098+90.00	1101+70.00	LT			510.0	Place Along Toe of Slope
1099+05.00	110+30.00	RT			300.0	Place Along Toe of Slope
1137+30.00	1146+50.00	RT			1150.0	Place Along Toe of Slope
1180+10.00	1187+60.00	RT			750.0	Place Along Toe of Slope
ML380D						
4544+80.00	4547+50.00	LT			290.0	Place Along Toe of Slope
4551+40.00	4556+90.00	RT			530.0	Place Along Toe of Slope
Total					10200.0	

SILT FENCES FOR DITCH CHECKS

100_18
MODIFIED

Possible Standard: EC-201



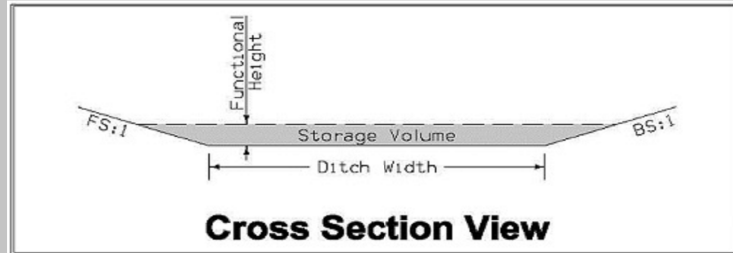
* The functional height used in the volume equation is 85% of effective height. Effective height is 1.58 feet as shown on EC-201.
* Volume equation: $[0.5 * Spacing * (0.5 * H^2 * FS + DW * H + 0.5 * H^2 * BS)]$

Basin No.	Location				Bid Items			Stormwater Storage Volume Summary								Ditch Length	Total # of Silt Fences	Total Volume	Remarks
	Station	To Station	Chain	Side	Installation LF	Maintenance LF	Removal LF	Foreslope FS:1	Backslope BS:1	Ditch Width FT	Avg. % Slope	Spacing	Down Stream	Volume* CF					
A-1	1089+45.00	1092+70.00	ML380	Lt	168.0	16.8	84.0	6.0	3.0	10.0	1.8%	75.0	21.5	808.0	325.0	4.0	3232.0		
A-1	1092+90.00	1093+61.00	ML380	Lt	66.0	6.6	33.0	3.0	3.0	10.0	5.9%	30.0	18.8	282.6	71.0	2.0	565.2	On silt ditch	
A-2	1089+45.00	1094+70.00	ML380	Rt	294.0	29.4	147.0	6.0	3.0	10.0	1.6%	75.0	21.5	808.0	525.0	7.0	5655.9		
B-1	1096+40.00	1098+70.00	ML380	Lt	84.0	8.4	42.0	6.0	3.0	10.0	1.1%	100.0	21.5	1077.3	230.0	2.0	2154.6		
C-1	1101+70.00	1106+50.00	ML380	Rt	252.0	25.2	126.0	6.0	3.0	10.0	1.6%	75.0	21.5	808.0	480.0	6.0	4847.9		
C-1	1106+50.00	1113+50.00	ML380	Rt	586.5	58.7	293.3	3.5	3.0	10.0	4.1%	40.0	19.3	385.8	700.0	17.0	6559.2		
C-1	1113+50.00	1115+00.00	ML380	Rt	172.5	17.3	86.3	3.5	3.0	10.0	5.2%	30.0	19.3	289.4	150.0	5.0	1446.9		
C-1	1115+00.00	1117+00.00	ML380	Rt	69.0	6.9	34.5	3.5	3.0	10.0	1.6%	100.0	19.3	964.6	200.0	2.0	1929.2		
C-2	1112+00.00	1115+00.00	ML380	Lt	420.0	42.0	210.0	6.0	3.0	10.0	5.4%	30.0	21.5	323.2	300.0	10.0	3232.0		
C-2	1101+85.00	1112+00.00	ML380	Lt	511.5	51.2	255.8	6.0	3.0	13.0	1.6%	90.0	25.6	1150.9	1015.0	11.0	12659.8		
C-3	1119+75.00	1124+00.00	ML380	Rt	345.0	34.5	172.5	3.5	3.0	10.0	4.8%	40.0	19.3	385.8	425.0	10.0	3858.4		
C-4	1125+30.00	1127+60.00	ML380	Lt	126.0	12.6	63.0	6.0	3.0	10.0	2.4%	60.0	21.5	646.4	230.0	3.0	1939.2		
C-4	1127+60.00	1134+92.00	ML380	Lt	294.0	29.4	147.0	6.0	3.0	10.0	1.3%	100.0	21.5	1077.3	732.0	7.0	7541.2		
C-5	1128+10.00	1135+45.00	ML380	Rt	168.0	16.8	84.0	6.0	3.0	10.0	1.0%	155.0	21.5	1669.8	735.0	4.0	6679.4		
D-1	1135+60.00	1138+75.00	ML380	Lt	42.0	4.2	21.0	6.0	3.0	10.0	0.4%	315.0	21.5	3393.6	315.0	1.0	3393.6		
D-3	1137+35.00	1140+15.00	ML380	Rt	42.0	4.2	21.0	6.0	3.0	10.0	0.5%	280.0	21.5	3016.5	280.0	1.0	3016.5		
E-1	1194+10.00	1198+40.00	ML380	Lt	33.0	3.3	16.5	3.0	3.0	10.0	0.5%	315.0	18.8	2967.4	430.0	1.0	2967.4		
E-2	1194+10.00	1198+70.00	ML380	Rt	34.5	3.5	17.3	3.5	3.0	10.0	0.5%	315.0	19.3	3038.5	460.0	1.0	3038.5		
F-2	1561+60.00	1566+00.00	ML080A	Lt	54.0	5.4	27.0	3.0	10.0	10.0	0.2%	315.0	25.2	3961.7	440.0	1.0	3961.7	See Tab. 100-13	
J-1	557+90.00	566+96.00	ML080	Lt	172.5	17.3	86.3	3.5	3.0	10.0	0.9%	155.0	19.3	1495.1	906.0	5.0	7475.6		
J-2	559+10.00	566+96.00	ML080	Rt	172.5	17.3	86.3	3.5	3.0	10.0	0.8%	155.0	19.3	1495.1	786.0	5.0	7475.6		
J-2	557+90.00	558+85.00	ML080	Rt	84.0	8.4	42.0	6.0	3.0	10.0	3.7%	40.0	21.5	430.9	95.0	2.0	861.9		
K-1	567+64.00	569+20.00	ML080	Rt	108.0	10.8	54.0	4.0	3.0	10.0	4.5%	40.0	19.7	394.9	156.0	3.0	1184.6		
K-2	569+70.00	570+44.00	ML080	Rt	72.0	7.2	36.0	4.0	3.0	10.0	2.8%	35.0	19.7	345.5	74.0	2.0	691.0		
K-3	567+59.00	570+30.00	ML080	Lt	207.0	20.7	103.5	3.5	3.0	10.0	4.5%	40.0	19.3	385.8	271.0	6.0	2315.0		
K-4	570+90.00	573+35.00	ML080	Lt	103.5	10.4	51.8	3.5	3.0	10.0	2.1%	75.0	19.3	723.4	245.0	3.0	2170.3		
K-5	1567+67.00	1571+91.00	IRLA	Rt	345.0	34.5	172.5	3.5	3.0	10.0	4.3%	40.0	19.3	385.8	424.0	10.0	3858.4		
K-6	1572+35.00	1574+50.00	IRLA	Rt	103.5	10.4	51.8	3.5	3.0	10.0	2.7%	60.0	19.3	578.8	215.0	3.0	1736.3		
K-7	570+44.00	575+40.00	ML080	Rt	84.0	8.4	42.0	6.0	3.0	10.0	0.4%	225.0	21.5	2424.0	496.0	2.0	4847.9		
K-8	575+65.00	581+74.00	ML080	Rt	84.0	8.4	42.0	6.0	3.0	10.0	0.5%	225.0	21.5	2424.0	609.0	2.0	4847.9		
K-9	573+35.00	575+40.00	ML080	Lt	99.0	9.9	49.5	6.0	3.0	15.0	1.3%	100.0	28.3	1413.1	205.0	2.0	2826.1		
K-10	1567+20.00	1568+30.00	IRLA	Lt	42.0	4.2	21.0	6.0	3.0	10.0	2.6%	60.0	21.5	646.4	110.0	1.0	646.4		
M-1	585+00.00	587+45.00	ML080	Rt	42.0	4.2	21.0	6.0	3.0	10.0	0.5%	245.0	21.5	2639.4	245.0	1.0	2639.4		
M-1	587+65.00	589+12.00	ML080	Rt	42.0	4.2	21.0	6.0	3.0	10.0	0.6%	147.0	21.5	1583.7	147.0	1.0	1583.7		
N-1	589+00.00	590+60.00	ML080	Rt	69.0	6.9	34.5	3.5	3.0	10.0	2.1%	60.0	19.3	578.8	160.0	2.0	1157.5		
N-1	590+95.00	593+00.00	ML080	Rt	34.5	3.5	17.3	3.5	3.0	10.0	0.8%	155.0	19.3	1495.1	205.0	1.0	1495.1		
N-2	590+00.00	594+00.00	ML080	Lt	42.0	4.2	21.0	6.0	3.0	10.0	0.3%	315.0	21.5	3393.6	400.0	1.0	3393.6		
O-1	593+00.00	600+35.00	ML080	Rt	168.0	16.8	84.0	6.0	3.0	10.0	0.8%	155.0	21.5	1669.8	735.0	4.0	6679.4		
O-1	600+75.00	602+80.00	ML080	Rt	42.0	4.2	21.0	6.0	3.0	10.0	0.8%	155.0	21.5	1669.8	205.0	1.0	1669.8		
O-2	594+20.00	600+40.00	ML080	Lt	207.0	20.7	103.5	3.5	3.0	10.0	1.5%	100.0	19.3	964.6	620.0	6.0	5787.6		
P-2	610+00.00	617+00.00	ML080	Lt	294.0	29.4	147.0	6.0	3.0	10.0	1.4%	100.0	21.5	1077.3	700.0	7.0	7541.2		
P-2	617+15.00	619+25.00	ML080	Lt	126.0	12.6	63.0	6.0	3.0	10.0	1.8%	70.0	21.5	754.1	210.0	3.0	2262.4		
Q-2	5527+90.00	5535+60.00	ML380E	Rt	759.0	75.9	379.5	3.5	3.0	10.0	5.1%	35.0	19.3	337.6	770.0	22.0	7427.4		
Q-3	5529+15.00	5533+70.00	ML380E	Lt	462.0	46.2	231.0	6.0	3.0	10.0	4.7%	40.0	21.5	430.9	455.0	11.0	4740.2		
Q-4	6520+35.00	6524+10.00	ML380F	Rt	310.5	31.1	155.3	3.5	3.0	10.0	4.0%	40.0	19.3	385.8	375.0	9.0	3472.5		

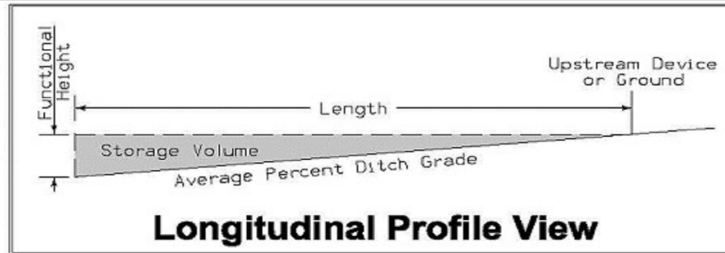
SILT FENCES FOR DITCH CHECKS

100_18
MODIFIED

Possible Standard: EC-201



Cross Section View



Longitudinal Profile View

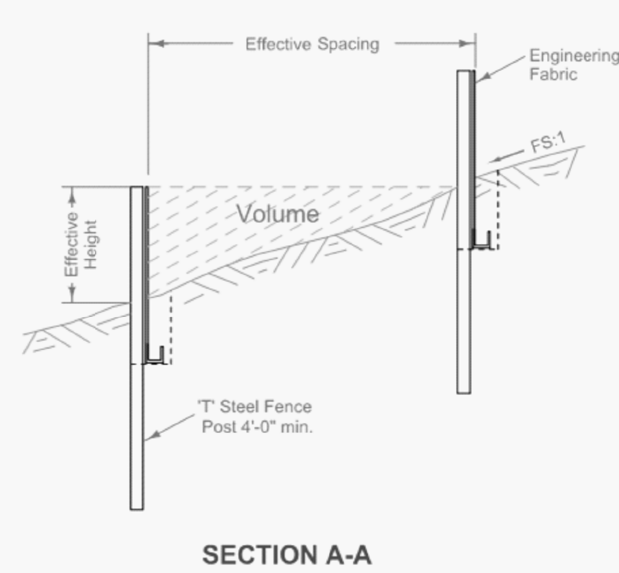
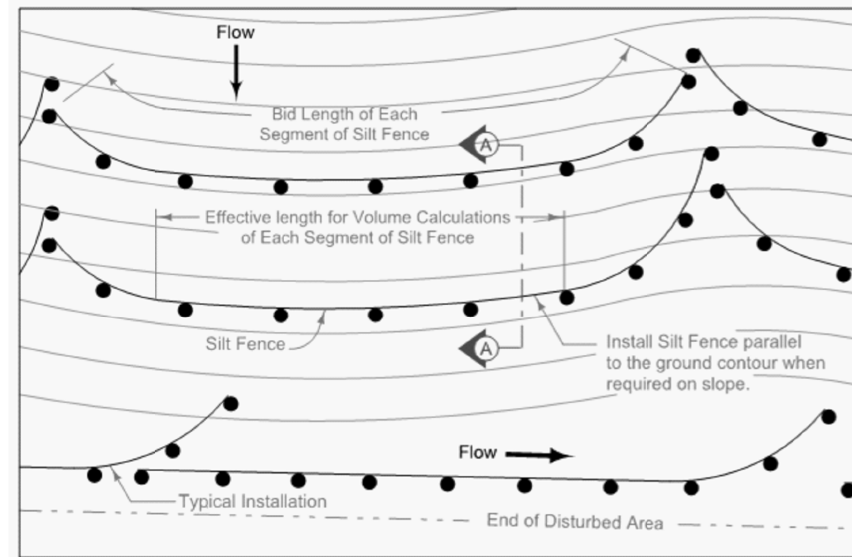
* The functional height used in the volume equation is 85% of effective height. Effective height is 1.58 feet as shown on EC-201.
* Volume equation: $[0.5 * Spacing * (0.5 * H^2 * FS + DW * H + 0.5 * H^2 * BS)]$

Basin No.	Location				Bid Items			Stormwater Storage Volume Summary										Ditch Length	Total # of Silt Fences	Total Volume	Remarks
	Station	To Station	Chain	Side	Installation	Maintenance	Removal	Foreslope	Backslope	Ditch Width	Avg. % Slope	Spacing	Down Stream	Volume*							
					LF	LF	LF	FS:1	BS:1	FT				CF							
Q-5	3530+30.00	3535+00.00	ML380C	Rt	396.0	39.6	198.0	6.0	1.0	10.0	3.9%	40.0	19.7	394.9	470.0	11.0	4343.4				
Q-5	3535+00.00	3538+20.00	ML380C	Rt	180.0	18.0	90.0	6.0	1.0	10.0	2.6%	60.0	19.7	592.3	320.0	5.0	2961.4				
Q-7	3521+95.00	3525+25.00	ML380C	Lt	34.5	3.5	17.3	3.5	3.0	10.0	0.4%	315.0	19.3	3038.5	330.0	1.0	3038.5				
Q-7	3525+25.00	3530+40.00	ML380C	Lt	345.0	34.5	172.5	3.5	3.0	10.0	3.0%	50.0	19.3	482.3	515.0	10.0	4823.0				
Q-7	3532+00.00	3536+40.00	ML380C	Lt	379.5	38.0	189.8	3.5	3.0	10.0	4.6%	40.0	19.3	385.8	440.0	11.0	4244.2				
R-2	4547+10.00	4551+25.00	ML380D	Rt	252.0	25.2	126.0	6.0	3.0	10.0	2.4%	60.0	21.5	646.4	415.0	6.0	3878.4				
R-2	4551+25.00	4557+70.00	ML380D	Rt	621.0	62.1	310.5	3.5	3.0	10.0	5.0%	35.0	19.3	337.6	645.0	18.0	6076.9				
R-2	4558+30.00	4558+86.00	ML380D	Rt	34.5	3.5	17.3	3.5	3.0	10.0	3.0%	50.0	19.3	482.3	56.0	1.0	482.3				
R-3	4550+65.00	4553+35.00	ML380D	Rt	207.0	20.7	103.5	3.5	3.0	10.0	3.5%	45.0	19.3	434.1	270.0	6.0	2604.4				
R-4	6556+50.00	6558+00.00	ML380F	Lt	172.5	17.3	86.3	3.5	3.0	10.0	5.4%	30.0	19.3	289.4	150.0	5.0	1446.9				
R-4	6558+00.00	6559+00.00	ML380F	Lt	69.0	6.9	34.5	3.5	3.0	10.0	2.9%	50.0	19.3	482.3	100.0	2.0	964.6				
S-1	2554+95.00	2558+00.00	ML380B	Rt	207.0	20.7	103.5	3.5	3.0	10.0	3.4%	45.0	19.3	434.1	305.0	6.0	2604.4				
S-1	2558+00.00	2562+13.00	ML380B	Rt	168.0	16.8	84.0	6.0	3.0	10.0	1.3%	100.0	21.5	1077.3	413.0	4.0	4309.3				
V-1	607+45.00	618+25.00	ML080	Rt	483.0	48.3	241.5	3.5	3.0	10.0	2.1%	75.0	19.3	723.4	1080.0	14.0	10128.2				
V-2	602+80.00	606+80.00	ML080	Rt	84.0	8.4	42.0	6.0	3.0	10.0	1.0%	155.0	21.5	1669.8	400.0	2.0	3339.7				
W-3	678+50.00		ML380	LT	19.5	2.0	9.8	3.0	3.0	1.0						1.0		For Vegetated Buffer			
W-3	678+75.00		ML380	LT	19.5	2.0	9.8	3.0	3.0	1.0						1.0					
W-3	679+25.00		ML380	LT	19.5	2.0	9.8	3.0	3.0	1.0						1.0					
W-3	679+50.00		ML380	LT	19.5	2.0	9.8	3.0	3.0	1.0						1.0					
Z-2	705+05.00	708+78.00	ML080	Rt	168.0	16.8	84.0	6.0	3.0	10.0	1.8%	75.0	21.5	808.0	373.0	4.0	3232.0				
Z-4	2513+50.00	2520+50.00	IA965B	Rt	114.0	11.4	57.0	4.0	4.0	3.0	0.6%	155.0	11.2	871.4	700.0	4.0	3485.5				
Z-5	2512+50.00	2518+60.00	IA965B	Lt	252.0	25.2	126.0	6.0	3.0	10.0	1.2%	100.0	21.5	1077.3	610.0	6.0	6463.9				
Z-6	711+60.00	716+00.00	ML080	Rt	84.0	8.4	42.0	6.0	3.0	10.0	0.8%	155.0	21.5	1669.8	440.0	2.0	3339.7				
Z-6	716+00.00	719+80.00	ML080	Rt	42.0	4.2	21.0	6.0	3.0	10.0	0.6%	315.0	21.5	3393.6	380.0	1.0	3393.6				
		Total			12408.0	1240.8	6204.0														

SILT FENCES FOR FORESLOPES

HRG 01
MODIFIED

Possible Standard: EC-201



- * The functional height used in the volume equation is 85% of effective height. The minimum effective height is 1.58 feet as shown on EC-201.
- * Minimum Spacing = FS:1 * Effective Height
- * Maximum continuous length of silt fence is 200 feet, the last 20 feet will be flared up, therefore the maximum effective length of 160 feet was used for detention volume computations
- * Silt fence shall be placed parallel to the ground contour lines in the disturbed area
- * The last 20 feet of each silt fence segment was assumed to be flared-up 45 degrees for the installation length calculation purposes
- * Volume equation: $[0.5 * (\text{Spacing}) * (\text{Effective height of Silt Fence}) * (\text{Total Effective Length of Silt Fence})]$

Basin No.	Station	Offset	To Station	Location				Bid Items			Length FT	Foreslope FS:1	Volume* CF	# of Silt Fences in Series	Remarks
				Offset	Chain	Elevation Contour	Side	Installation LF	Maintenance LF	Removal LF					
B-2	1099+31.00	-158.0	1101+55.00	169.0	ML380	719.00	Lt	387.5	38.8	193.8	230.0	6.0	1463.8	2.0	
B-2	1099+44.00	-173.0	1101+40.00	-177.0	ML380	716.00	Lt	356.3	35.6	178.1	205.0	6.7	1450.3	2.0	
F-1	1187+60.00	149.0	8573+99.00	73.0	ML080/ML380H	675.0	Lt	1137.5	113.8	568.8	750.0	3.5	2784.3	4.0	
F-1	1187+60.00	142.0	8573+99.00	66.0	ML080/ML380H	677.00	Lt	1137.5	113.8	568.8	750.0	3.5	2784.3	4.0	
F-1	1187+60.00	135.0	8573+99.00	59.0	ML080/ML380H	679.00	Lt	1137.5	113.8	568.8	750.0	3.5	2784.3	4.0	
K-10	1573+65.00	-97.0	1575+60.00	-86.0	IRLA	724.00	Lt	281.3	28.1	140.6	185.0	3.5	686.8	1.0	
K-10	1572+27.00	-89.0	1575+60.00	-76.0	IRLA	728.00	Lt	500.0	50.0	250.0	320.0	3.5	1188.0	2.0	
K-10	1571+87.00	-75.0	1577+37.00	-55.0	IRLA	732.00	Lt	812.5	81.3	406.3	530.0	3.5	1967.6	3.0	
K-10	1571+50.00	-63.0	1589+50.00	-56.0	IRLA	736.00	Lt	2675.0	267.5	1337.5	1740.0	3.5	6459.6	10.0	
K-10	1581+85.00	-55.0	1585+35.00	-66.0	IRLA	733.00	Lt	540.0	54.0	270.0	352.0	3.5	1306.8	2.0	
K-10	1568+33.00	-57.0	1571+60.00	-38.0	IRLA	743.00	Lt	507.5	50.8	253.8	326.0	3.5	1210.3	2.0	
K-10	1583+22.00	-25.0	1589+22.00	-34.0	IRLA	741.00	Lt	956.3	95.6	478.1	605.0	6.0	3850.3	4.0	
Q-6	6520+50.00	-195.0	6519+15.00	-142.0	ML380F	694.00	Lt	233.8	23.4	116.9	147.0	20.0	3118.4	1.0	
Q-6	6519+33.00	-225.0	6516+55.00	-116.0	ML380F	691.00	Lt	487.5	48.8	243.8	310.0	20.0	6576.3	2.0	
Q-6	6518+00.00	-233.0	6514+85.00	-99.0	ML380F	689.00	Lt	525.0	52.5	262.5	340.0	20.0	7212.7	2.0	
Q-6	6516+50.00	-240.0	6513+64.00	-90.0	ML380F	687.00	Lt	491.3	49.1	245.6	313.0	20.0	6639.9	2.0	
V-3	600+60.00	-104.0	607+25.00	-130.0	ML080	735.0	Lt	1033.8	103.4	516.9	667.0	6.0	4244.9	4.0	
V-3	605+67.00	-100.0	609+47.00	-134.0	ML080	740.00	Lt	552.5	55.3	276.3	362.0	6.0	2303.8	2.0	
W-2	6563+91.00	93.0	691+34.00	225.0	ML380F/ML080	669.00	Rt	4155.0	415.5	2077.5	2724.0	3.0	8668.0	15.0	
W-2	6562+24.00	107.0	691+33.00	220.0	ML380F/ML080	671.00	Rt	4437.5	443.8	2218.8	2910.0	3.0	9259.9	16.0	
W-2	6562+25.00	99.0	691+32.00	214.0	ML380F/ML080	673.00	Rt	4425.0	442.5	2212.5	2900.0	3.0	9228.0	16.0	
Z-1	697+78.00	148.0	701+38.00	164.0	ML080	699.00	Rt	551.3	55.1	275.6	361.0	3.5	1340.2	2.0	
Z-1	697+78.00	123.0	702+86.00	148.0	ML080	706.00	Rt	786.3	78.6	393.1	509.0	3.5	1889.6	3.0	
Z-1	697+78.00	105.0	703+13.00	136.0	ML080	710.00	Rt	820.0	82.0	410.0	536.0	3.5	1989.9	3.0	
Z-1	697+78.00	162.0	699+44.00	168.0	ML080	695.00	Rt	258.8	25.9	129.4	167.0	3.5	620.0	1.0	
						Total		29186	2919	14593	18989.0				

ROLLED EROSION CONTROL

Refer to EC-101, EC-103 and EC-104

100_22
2/3/2019

Location				L FT	W FT	Number of Squares	Turf Reinforcement Mat (TRM) (EC-104)				Slope Protection (EC-103) Squares	Special Ditch Control (EC-101) Squares	Remarks
Road Identification	Begin Station	End Station	Side				Type 1 Squares	Type 2 Squares	Type 3 Squares	Type 4 Squares			
ML380	1114+99	1116+34	LT	145	17	25					25		
ML380	1129+30	1122+02	LT	181	17	31					31		
ML380	1123+48	1125+28	LT	183	17	31					31		
ML380	1124+00	1127+00	RT	306	16	49					49		
ML380B	2554+25	2555+48	RT	117	23	27					27		
ML380D	4553+40	4555+80	LT	260	17	44					44		
ML380D	4557+70	4558+58	RT	87	15	13					13		
IA965B	2511+84	2513+48	RT	164	16	26					26		
ML080	684+02	692+15	RT							506		Shape is irregular. See Plans	
ML380	1089+19	1092+34	LT							168		Shape is irregular. See Plans	
ML380	1095+77	10+97.53	RT							118		Shape is irregular. See Plans	
ML380	1098+66	1100+62	RT							148		Shape is irregular. See Plans	
ML380	1104+61	1106+57	LT							91		Shape is irregular. See Plans	
ML380	1107+80	1+58.20	LT							158		Shape is irregular. See Plans	
ML380	1110+38	1111+74	LT							64		Shape is irregular. See Plans	
ML380	1113+29	1122+15	RT							599		Shape is irregular. See Plans	
ML380	1115+56	1121+65	LT							504		Shape is irregular. See Plans	
ML380	1128+13	1130+86	LT							145		Shape is irregular. See Plans	
ML380	1131+69	1133+73	LT							117		Shape is irregular. See Plans	
ML380	1132+41	1133+80	RT							76		Shape is irregular. See Plans	
ML380	1135+78	1137+26	RT							85		Shape is irregular. See Plans	
ML380	1137+21	1138+72	LT							80		Shape is irregular. See Plans	
ML380	1182+00	1183+47	LT							88		Shape is irregular. See Plans	
ML380	1190+47	1198+14	LT							767		Shape is irregular. See Plans	
ML380	1190+60	1198+02	RT							590		Shape is irregular. See Plans	
ML380	1200+11	1204+72	RT							443		Shape is irregular. See Plans	
ML380	1200+30	1204+10	LT							358		Shape is irregular. See Plans	
ML380B	2552+52	2554+94	RT							140		Shape is irregular. See Plans	
ML380B	2552+63	2554+05	RT							59		Shape is irregular. See Plans	
ML380B	2558+70	2560+26	RT							74		Shape is irregular. See Plans	
ML380C	3522+00	3526+64	LT							213		Shape is irregular. See Plans	
ML380D	4542+31	4543+79	RT							107		Shape is irregular. See Plans	
ML380D	4543+81	4546+50	RT							211		Shape is irregular. See Plans	
ML380D	4548+18	4549+79	RT							77		Shape is irregular. See Plans	
ML380F	6518+02	6524+09	LT							525		Shape is irregular. See Plans	
IA965B	2509+25	2512+34	RT							173		Shape is irregular. See Plans	
Total						246					6684	246	

ROCK EROSION CONTROL

Refer to EC-301 and Detail 570-8

100_23
2/3/2019

Location			Side Lt./Rt.	L FT	W FT	Rock Erosion Control (REC)					Material Bid Quantities			Remarks
Road Identification	Begin Station	End Station				Type 1	Type 2	Type 3	Type 4	Type 5	Eng. Fabric SY	Class E Revetment TON	Erosion Stone TON	
						Rock Ditch Check	Rock Ditch	Rock Flume	Rock Splash Basin	Rock Slope Protection				
ML080	558+48, 102'	558+58, 112'	Lt.	10.5	10.0				x		22.6	11.0		
ML080	570+52, 122'	570+70, 125'	Lt.	13.9	11.6				x		31.0	16.9		
ML080	570+72, 122'	570+90, 124'	Lt.	13.9	10.8				x		29.4	15.8		
ML080	575+45, 102'	575+62, 113'	Lt.	17.3	10.0				x		33.1	18.2		
ML080	577+96, 94'	578+08, 104'	Rt.	12.7	10.0				x		26.0	13.3		
ML080	581+63, 167'	581+80, 161'	Lt.	13.9	10.0				x		27.8	14.6		
ML080	585+44, 155'	585+58, 159'	Lt.	10.5	10.0				x		22.6	11.0		
ML080	589+07, 119'	589+23, 116'	Lt.	12.5	10.0				x		25.7	13.1		
ML080	589+30, 117'	589+46, 116'	Lt.	13.3	10.0				x		26.9	14.0		
ML080	598+98, 110'	599+08, 120'	Rt.	10.0	10.0				x		21.8	10.5		
ML080	600+49, 124'	600+61, 137'	Lt.	11.6	13.2				x		29.8	16.1		
ML080	604+62, 133'	604+78, 141'	Lt.	15.0	10.0				x		29.6	15.8		
ML080	604+99, 122'	605+09, 132'	Rt.	10.0	10.0				x		21.8	10.5		
ML080	608+98, 120'	607+07, 130'	Lt.	10.0	10.0				x		21.8	10.5		
ML080	616+92, 139'	617+09, 133'	Lt.	11.6	13.7				x		30.7	16.7		
ML080	617+15, 139'	617+31, 135'	Lt.	11.0	11.6				x		26.0	13.4		
ML080	622+44, 163'	622+56, 182'	Lt.	12.7	18.8				x		42.3	25.1		
ML080	676+48, 149'	676+62, 159'	Rt.	13.9	10.0				x		27.8	14.6		
ML080	684+94, 180'	685+06, 190'	Rt.	12.7	10.0				x		26.0	13.3		
ML080	709+50, 274'	709+67, 274'	Rt.	13.3	10.0				x		26.9	14.0		
ML380	1099+63, 204'	1099+77, 214'	Rt.	13.9	10.0				x		27.8	14.6		
ML380	1117+63, 202'	1117+72, 213'	Lt.	10.0	10.0				x		21.8	10.5		
ML380	1127+36, 108'	1127+49, 99'	Lt.	10.5	11.7				x		25.3	12.9		
ML380	1127+96, 110'	1128+06, 100'	Lt.	10.0	10.0				x		21.8	10.5		
ML380	1136+86, 233'	1137+02, 236'	Rt.	13.0	10.0				x		26.4	13.7		
ML380	1160+69, 243'	1160+79, 253'	Rt.	10.0	10.0				x		21.8	10.5		
ML380	1168+80, 172'	1168+90, 181'	Rt.	10.0	10.0				x		21.8	10.5		
ML380	1173+46, 132'	1173+56, 141'	Rt.	10.0	10.0				x		21.8	10.5		
ML380	1182+95, 104'	1183+05, 114'	Lt.	10.0	10.0				x		21.8	10.5		
ML380	1185+05, 148'	1185+15, 158'	Rt.	10.0	10.0				x		21.8	10.5		
ML380	1191+36, 187'	1191+47, 197'	Rt.	10.0	10.0				x		21.8	10.5		
ML380	1192+95, 197'	1193+05, 207'	Rt.	10.0	10.0				x		21.8	10.5		
ML380	1203+88, 227'	1203+98, 237'	Lt.	10.0	10.0				x		21.8	10.5		
ML380	1209+21, 139'	1209+31, 149'	Rt.	10.0	10.0				x		21.8	10.5		
IRLA	1573+38, 98'	1573+56, 99'	Lt.	13.9	10.0				x		27.8	14.6		
ML380C	3538+94, 81'	3539+06, 93'	Lt.	11.6	12.4				x		28.4	15.1		
ML380C	3542+01, 101'	3542+11, 88'	Rt.	10.0	13.3				x		26.9	14.0		
ML380D	4547+50, 27'	4547+60, 45'	Rt.	10.0	18.5				x		35.0	19.4		
ML380D	4549+05, 27'	4549+15, 45'	Rt.	10.0	18.5				x		35.0	19.4		
ML380D	4550+45, 27'	4550+55, 45'	Rt.	10.0	18.5				x		35.0	19.4		
ML380D	4551+70, 32'	4551+80, 48'	Rt.	10.0	16.0				x		31.1	16.8		
ML380E	5536+24, 77'	5536+36, 91'	Rt.	11.6	14.5				x		32.1	17.7		
ML380F	6512+93, 100'	6513+07, 117'	Rt.	13.9	17.2				x		42.2	25.1		
ML380F	6562+95, 98'	6563+05, 115'	Rt.	10.0	10.0				x		21.8	10.5		
Total											1184.0	617.0		

STORMWATER DRAINAGE BASIN AND STORAGE

Refer to EC Standards and 570s Details.

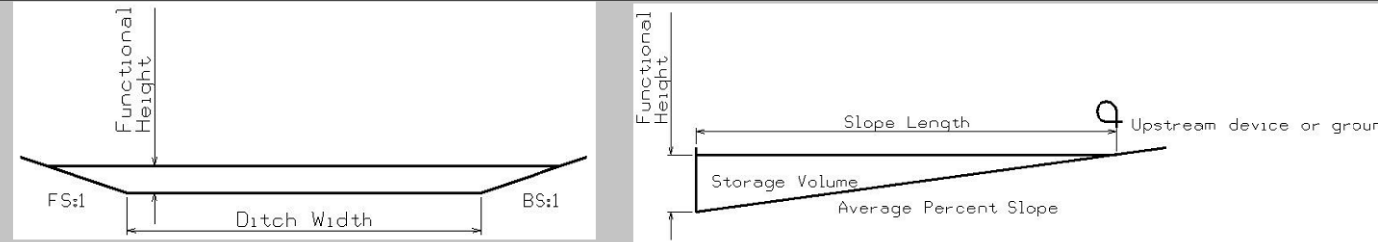
100_34
MODIFIED

Drainage Basin Location						Summary of Stormwater Storage											Remarks	
Basin No.	Station to Station		Side	Discharge Point		Total Disturbed Area Acres	Disturbed Area with Storage Provided Acres	Disturbed Area without Storage Provided Acres	Best Management Practices (CF)						Total Storage Volume Provided CF	Total Storage Volume Required CF		Storage Volume Met? Yes/No
				Station	Side				Temporary Sediment Control Basin (EC-601)	Silt Fence for Foreslope (EC-201)	Silt Fence for Ditch Check (EC-201)	Silt Basin (EW-403)	Rock Check Dam (EC-302)	Silt Dike (EW-403)				
A-1	1089+50.00	1096+33.00	Lt	1095+00.00	Lt	1.4	1.4	0.0	0.0	0.0	3797.2	0.0	570.6	1320.0	5687.8	5162.4	YES	See Tab. 100-13
A-2	1089+50.00	1094+90.00	Rt	1097+00.00	Rt	1.5	1.5	0.0	0.0	0.0	5655.9	0.0	0.0		5655.9	5328.0	YES	
B-1	1096+33.00	1098+80.00	Lt	1098+85.00	Lt	0.6	0.6	0.0	0.0	0.0	2154.6	0.0	0.0		2154.6	2070.0	YES	
B-2	1098+80.00	1101+46.00	Lt	1100+00.00	Lt	1.2	1.2	0.0	0.0	2914.1	0.0	0.0	0.0	1625.0	4539.1	4446.0	YES	
B-3	1094+90.00	1101+40.00	Rt	1099+70.00	Rt	2.2		2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7761.6	NO	Note 1
C-1	1100+45.00	1118+00.00	Rt	1118+00.00	Rt	4.1	4.1	0.0	0.0	0.0	14783.3	0.0	0.0		14783.3	14616.0	YES	
C-2	1101+50.00	1118+00.00	Lt	1118+00.00	Lt	5.4	5.4	0.0	3844.0	0.0	15891.8	0.0	0.0		19735.8	19332.0	YES	
C-3	1118+00.00	1127+75.00	Rt	1118+00.00	Rt	2.7	2.7	0.0	3224.0	0.0	3858.4	2575.0	0.0		9657.4	9612.0	YES	
C-4	1118+00.00	1135+25.00	Lt	1118+00.00	Lt	5.8	5.8	0.0	3331.5	0.0	9480.4	5325.0	3423.6		21560.5	20880.0	YES	
C-5	1127+75.00	1135+75.00	Rt	1128+00.00	Rt	2.5	2.5	0.0	0.0	0.0	6679.4	2462.5	0.0		9141.9	8856.0	YES	
D-1	1135+10.00	1138+60.00	Lt	1135+40.00	Lt	0.7	0.7	0.0	0.0	0.0	3393.6	0.0	0.0		3393.6	2502.0	YES	
D-2	1135+70.00	1137+28.00	Rt	No Ditch	Rt	0.4	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1533.6	NO	Note 1
D-3	1137+28.00	1140+22.00	Rt	1137+30.00	Rt	0.7	0.7	0.0	0.0	0.0	3016.5	0.0	0.0		3016.5	2412.0	YES	
S-1	2552+55.00	2562+13.00	Rt	2553+13.00	Rt	4.2	4.2	0.0	6459.0	0.0	6913.7	2375.6	0.0		15748.3	15228.0	YES	
S-2	1140+20.00	4547+04.00	Rt	No Ditch		2.2	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7848.0	NO	Note 1
E-1	1190+45.00	1198+40.00	Rt	1190+45.00	Rt	3.8	3.8	0.0	0.0	0.0	2967.4	5450.0	5706.0		14123.4	13680.0	YES	
E-2	1190+50.00	1198+70.00	Lt	1190+50.00	Lt	3.3	3.3	0.0	0.0	0.0	3038.5	4087.5	5706.0		12832.0	11880.0	YES	
E-3	1200+05.00	1204+10.00	Rt	1204+10.00	Lt	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5400.0	NO	Note 1
E-4	1200+05.00	1204+65.00	Lt	1204+65.00	Lt	1.7	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6120.0	NO	Note 1
F-1	1179+84.00	1187+60.00	Rt	Clear Creek		1.8	1.8	0.0	0.0	8353.0	0.0	0.0	0.0	0.0	8353.0	6480.0	YES	
F-2	1561+61.00	1566+00.00	Lt	Clear Creek		1.0	1.0	0.0	0.0	0.0	3961.7	0.0	0.0	0.0	3961.7	3708.0	YES	See Tab. 100-13
J-1	557+90.00	566+96.00	Rt	558+94.00	Rt	2.0	2.0	0.0	0.0	0.0	7475.6	0.0	0.0		7475.6	7200.0	YES	
J-2	557+90.00	566+96.00	Lt	557+67.00	Lt	1.6	1.6	0.0	0.0	0.0	8337.5	0.0	0.0		8337.5	5688.0	YES	
K-1	567+64.00	569+50.00	Rt	569+50.00	Rt	0.3	0.3	0.0	0.0	0.0	1184.6	0.0	0.0		1184.6	936.0	YES	
K-2	569+50.00	570+44.00	Rt	569+50.00	Rt	0.2	0.2	0.0	0.0	0.0	691.0	0.0	0.0		691.0	612.0	YES	
K-3	567+59.00	570+62.00	Lt	570+64.00	Lt	0.6	0.6	0.0	0.0	0.0	2315.0	0.0	0.0		2315.0	2160.0	YES	
K-4	570+62.00	573+35.00	Lt	570+64.00	Lt	0.6	0.6	0.0	0.0	0.0	2170.3	0.0	0.0		2170.3	2016.0	YES	
K-5	1567+67.00	1572+03.00	Rt	1572+25.00	Rt	1.0	1.0	0.0	0.0	0.0	3858.4	0.0	0.0		3858.4	3564.0	YES	
K-6	1572+03.00	1574+50.00	Rt	1572+25.00	Rt	0.5	0.5	0.0	0.0	0.0	1736.3	787.5	0.0		2523.8	1908.0	YES	
K-7	570+44.00	575+55.00	Rt	575+51.00	Rt	1.0	1.0	0.0	0.0	0.0	4847.9	0.0	0.0		4847.9	3564.0	YES	
K-8	575+55.00	581+74.00	Rt	575+51.00	Rt	1.1	1.1	0.0	0.0	0.0	4847.9	0.0	0.0		4847.9	3960.0	YES	
K-9	573+35.00	578+73.00	Lt	575+51.00	Lt	0.7	0.7	0.0	0.0	0.0	2826.1	0.0	0.0		2826.1	2466.0	YES	
K-10	1566+70.00	1589+50.00	Lt	No Ditch	Lt	4.4	4.4	0.0	0.0	16669.3	646.4	0.0	0.0		17315.7	15804.0	YES	
M-1	585+00.00	589+00.00	Rt	587+50.00	Rt	0.6	0.6	0.0	0.0	0.0	4223.1	0.0	0.0		4223.1	2052.0	YES	
N-1	589+00.00	593+00.00	Rt	590+68.00	Rt	0.7	0.7	0.0	0.0	0.0	2652.6	0.0	0.0		2652.6	2520.0	YES	
N-2	587+30.00	594+00.00	Lt	No Ditch	Lt	0.9	0.9	0.0	0.0	0.0	3393.6	0.0	0.0		3393.6	3240.0	YES	
O-1	593+00.00	603+00.00	Rt	600+54.00	Rt	2.2	2.2	0.0	0.0	0.0	8349.2	0.0	0.0		8349.2	7956.0	YES	
O-2	594+00.00	603+50.00	Lt	600+55.00	Lt	1.8	1.8	0.0	0.0	0.0	5787.6	1237.5	0.0		7025.1	6480.0	YES	
P-1	618+25.00	622+00.00	Rt	618+60.00	Rt	1.0	1.0	0.0	0.0	0.0	0.0	1322.5	3258.0		4580.5	3708.0	YES	
P-2	610+00.00	620+80.00	Lt	610+00.00	Lt	3.1	3.1	0.0	0.0	0.0	9803.6	3750.0	0.0		13553.6	11196.0	YES	
Q-1	630+70.00	636+14.00	Lt	-		0.7	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2340.0	NO	Vegetated buffer
Q-2	5527+75.00	5537+30.00	Rt	5536+30.00	Rt	2.5	2.5	0.0	989.6	0.0	7427.4	793.8	0.0		9210.7	9000.0	YES	
Q-3	5522+95.00	5536+35.00	Lt	5536+30.00	Lt	3.6	3.6	0.0	1268.4	0.0	4740.2	3652.1	2606.4		12267.0	13050.0	NO	Satisfied in Q-9
Q-4	6519+60.00	6524+70.00	Rt	6519+67.00	Rt	1.9	1.9	0.0	1954.4	0.0	3472.5	925.0	0.0		6351.9	6840.0	NO	
Q-5	3528+95.00	3539+00.00	Rt	3539+00.00	Rt	1.4	1.4	0.0	0.0	0.0	7304.8	0.0	0.0		7304.8	5130.0	YES	
Q-6	6508+17.00	6524+70.00	Lt	6513+00.00	Lt	5.0	5.0	0.0	0.0	23547.4	0.0	0.0	0.0		23547.4	17928.0	YES	
Q-7	3521+75.00	3538+95.00	Lt	Q-8		5.1	5.1	0.0	0.0	0.0	12105.6	2858.1	4136.9		19100.6	18252.0	YES	
Q-8	3538+95.00	6513+10.00	Lt	Q-9		3.3	3.3	0.0	2498.6	0.0	0.0	5529.8	4279.5		12307.9	11700.0	YES	
Q-9	6513+10.00	6508+20.00	Rt	Clear Creek	-	1.7	1.7	0.0	2498.6	0.0	0.0	4700.0	4279.5		11478.1	6156.0	YES	
R-1	4546+20.00	4550+70.00	Lt	Existing Ditch	-	0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1872.0	NO	Satisfied in R-3
R-2	4547+00.00	4559+90.00	Rt	Clear Creek	-	3.3	3.3	0.0	1665.7	0.0	10437.6	0.0	0.0		12103.3	11736.0	YES	
R-3	4550+70.00	4559+90.00	Lt	Clear Creek	-	2.8	2.8	0.0	0.0	0.0	2604.4	2350.0	6483.6		11438.0	10188.0	YES	
R-4	6556+50.00	6559+80.00	Lt	Clear Creek	-	1.1	1.1	0.0	1723.2	0.0	2411.5	0.0	0.0		4134.7	3852.0	YES	
V-1	607+05.00	618+25.00	Rt	607+25.00	Rt	3.4	3.4	0.0	0.0	0.0	10128.2	3495.0	0.0		13623.2	12240.0	YES	
V-2	602+80.00	607+05.00	Rt	607+05.00	Rt	1.1	1.1	0.0	0.0	0.0	3339.7	1302.5	0.0		4642.2	3996.0	YES	
V-3	601+50.00	610+00.00	Lt	No Ditch	Lt	1.5	1.5	0.0	0.0	6548.7	0.0	0.0	0.0		6548.7	5220.0	YES	

ROCK CHECK DAM

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Possible Standard: EC-302



* The functional height used in the volume equation is 90% of effective height. Effective height is 2 feet as shown in EC-302.

* Volume equation: $[0.5 * Spacing * (0.5 * H^2 * FS + DW * H + 0.5 * H^2 * BS)]$

Basin No.	Location			Bid Items			Stormwater Storage Volume Summary							Subtotal	Remarks
	Station	Side	Offset FT	Installation LF	Maintenance Each	Removal Each	Foreslope FS:1	Backslope BS:1	Ditch Width FT	Avg. % Slope	Spacing	Down Stream	Volume* CF		
A-1	1094+20.00	Lt	156	16	3	1	3.5	3.0	10.00	10.0%	20.0	28.5	285.3	On silt ditch, See Tab. 100-13	
A-1	1093+92.00	Lt	149	16	3	1	3.5	3.0	10.00	10.0%	20.0	28.5	285.3	On silt ditch, See Tab. 100-14	
C-4	1120+20.00	Lt	214	16	3	1	3.5	3.0	10.00	10.0%	20.0	28.5	285.3		
C-4	1122+00.00	Lt	155	21	3	1	3.5	3.0	10.00	1.0%	200.0	28.5	2853.0		
C-4	1123+50.00	Lt	160	16	3	1	3.5	3.0	10.00	11.2%	20.0	28.5	285.3		
E-1	1190+50.00	Rt	188	16	3	1	3.5	3.0	10.00	0.5%	400.0	28.5	5706.0		
E-2	1190+50.00	Lt	220	16	3	1	3.5	3.0	10.00	0.5%	400.0	28.5	5706.0		
P-1	618+80.00	Rt	149	16	3	1	6.0	3.0	10.00	0.8%	200.0	32.6	3258.0		
Q-3	5534+30.00	Lt	40.0	16	3	1	6.0	3.0	10.00	4.6%	40.0	32.6	651.6		
Q-3	5535+50.00	Lt	40.0	16	3	1	6.0	3.0	10.00	4.6%	40.0	32.6	651.6		
Q-3	5535+05.00	Lt	40.0	16	3	1	6.0	3.0	10.00	4.6%	40.0	32.6	651.6		
Q-3	5534+65.00	Lt	40.0	16	3	1	6.0	3.0	10.00	4.6%	40.0	32.6	651.6		
Q-7	3531+35.00	Lt	58.0	16	3	1	3.5	3.0	10.00	3.0%	65.0	28.5	927.2		
Q-7	3532+00.00	Lt	58.0	16	3	1	3.5	3.0	10.00	3.0%	65.0	28.5	927.2		
Q-7	3537+05.00	Lt	82	16	48	16	3.5	3.0	10.00	4.6%	40.0	28.5	570.6		
Q-7	3537+65.00	Lt	84	16	48	16	3.5	3.0	10.00	4.6%	40.0	28.5	570.6		
Q-7	3538+25.00	Lt	85	16	48	16	3.5	3.0	10.00	4.6%	40.0	28.5	570.6		
Q-7	3538+83.00	Lt	87	16	48	16	3.5	3.0	10.00	4.6%	40.0	28.5	570.6		
Q-8	3539+68.00	Lt	90	16	3	1	3.5	3.0	10.00	4.7%	40.0	28.5	570.6		
Q-8	3540+55.00	Lt	93	16	3	1	3.5	3.0	10.00	4.7%	40.0	28.5	570.6		
Q-8	3541+40.00	Lt	95	16	3	1	3.5	3.0	10.00	4.7%	40.0	28.5	570.6		
Q-8	3542+27.00	Lt	97	16	3	1	3.5	3.0	10.00	4.7%	40.0	28.5	570.6		
Q-8	3543+12.00	Lt	99	16	3	1	3.5	3.0	10.00	4.7%	40.0	28.5	570.6		
Q-8	6514+40.00	Rt	130	16	3	1	3.5	3.0	10.00	2.0%	100.0	28.5	1426.5		
Q-9	6511+89.00	Rt	101	16	3	1	3.5	3.0	10.00	2.0%	100.0	28.5	1426.5		
Q-9	6510+71.00	Rt	94	16	3	1	3.5	3.0	10.00	2.0%	100.0	28.5	1426.5		
Q-9	6509+53.00	Rt	93	16	3	1	3.5	3.0	10.00	2.0%	100.0	28.5	1426.5		
R-3	4557+40.00	Lt	67	16	3	1	6.0	6.0	10.00	2.3%	80.0	37.4	1497.6		
R-3	4558+00.00	Lt	59	16	3	1	6.0	6.0	10.00	2.0%	100.0	37.4	1872.0		
R-3	4558+70.00	Lt	50	16	3	1	6.0	6.0	10.00	2.0%	100.0	37.4	1872.0		
R-3	4559+76.00	Lt	40	16	3	1	6.0	6.0	3.00	2.0%	100.0	24.8	1242.0		
Total				501.0	273.0	91.0									

POLLUTION PREVENTION PLAN

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This project is regulated by the requirements of the Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) General Permit No. 2 OR an Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) individual storm water permit. The Contractor shall carry out the terms and conditions of this permit and the Pollution Prevention Plan (PPP).

This Base PPP includes information on Roles and Responsibilities, Project Site Description, Controls, Maintenance Procedures, Inspection Requirements, Non-Storm Water Controls, Potential Sources of Off Right-of-Way Pollution, and Definitions. This plan references other documents rather than repeating the information contained in the documents. A copy of this Base Pollution Prevention Plan, amended as needed per plan revisions or by contract modification, will be readily available for review.

All contractors shall conduct their operations in a manner that controls pollutants, minimizes erosion, and prevents sediments from entering waters of the state and leaving the highway right-of-way. The prime contractor shall be responsible for compliance and implementation of the PPP for their entire contract. This responsibility shall be further shared with subcontractors whose work is a source of potential pollution as defined in this PPP.

I. ROLES AND RESPONSIBILITIES

A. Designer:

1. Prepares Base PPP included in the project plan.
2. Prepares Notice of Intent (NOI) submitted to Iowa DNR.
3. Is signature authority on the Base PPP.

B. Contractor:

1. Signs a co-permittee certification statement adhering to the requirements of the NPDES permit and this PPP. All co-permittees are legally required under the Clean Water Act and the Iowa Administrative Code to ensure compliance with the terms and conditions of this PPP.
2. Designates a Water Pollution Control Manager (WPCM), who has the duties and responsibilities as defined in Section 2602 of the Standard Specifications.
3. Submits an Erosion Control Implementation Plan (ECIP) and ECIP updates according to Section 2602 of the Standard Specifications.
4. Installs and maintains appropriate controls. This work may be subcontracted.
5. Supervises and implements good housekeeping practices.
6. Conducts joint required inspections of the site with inspection staff. When Contractor is not mobilized on site, Contractor may delegate this responsibility to a trained or certified subcontractor. Contracting Authority also may waive joint inspection requirement during winter shutdown. In both circumstances, WPCM (or trained or certified delegate from the Contractor) is still responsible to review and sign inspection reports.
7. Complies with training and certification requirements of Section 2602 of the Standard Specifications.

C. Subcontractors:

1. Sign a co-permittee certification statement adhering to the requirements of the NPDES permit and this PPP if responsible for sediment or erosion controls or involved in land disturbing activities. All co-permittees are legally required under the Clean Water Act and the Iowa Administrative Code to ensure compliance with the terms and conditions of this PPP.
2. Implement good housekeeping practices.

D. RCE/Project Engineer:

1. Is Project Storm Water Manager.
2. On projects where DOT is the Contracting Authority, is current with erosion control training or certification.
3. Takes actions necessary to ensure compliance with storm water requirements including, where appropriate, issuing stop work orders, and directing additional inspections at construction project sites that are experiencing problems with achieving permit compliance.
4. Orders the taking of measures to cease, correct, prevent, or minimize the consequences of non-compliance with the storm water requirements of the Applicable Permit.
5. Supervises all work necessary to meet storm water requirements at the Project, including work performed by contractors and subcontractors.
6. Requires employees, contractors, and subcontractors to take appropriate responsive action to comply with storm water requirements, including requiring any such person to cease or correct a violation of storm water requirements, and to order or recommend such other actions as necessary to meet storm water requirements.
7. Is familiar with the Project PPP and storm water site map.
8. On projects where DOT is Contracting Authority, is responsible for monitoring inspection reports on a monthly basis, to determine whether deficiencies identified in inspection reports were adequately and timely addressed, and if not, has the authority and responsibility to direct immediate actions to correct the deficiencies.
9. Is the point of contact for the Project for regulatory officials, Inspector, contractors, and subcontractors regarding storm water requirements.
10. Is signature authority on Notice of Discontinuation.

E. Inspector:

1. Updates PPP whenever there is a change in design, construction, operation, or maintenance which has a significant effect on the discharge of pollutants from the project.
2. Maintains an up-to-date record that identifies contractors and subcontractors as co-permittees.
3. Makes these plans available to the DNR upon their request.
4. Conducts joint required inspections of the site with the contractor/subcontractor.
5. Completes an inspection report after each inspection.
6. Is signature authority on storm water inspection reports.

II. PROJECT SITE DESCRIPTION

- A. This Pollution Prevention Plan (PPP) is for the reconstruction of I-80/380/US 218 corridor from just west of Ireland Ave. to Coralridge Ave. and from approximately 1.2 miles out of I-80 to 1.2 miles North of Forevergreen Road. This includes construction the Forevergreen interchange and improving Forevergreen Road.
- B. This PPP covers approximately 280 acres with an estimated 152 acres being disturbed. The portion of the PPP covered by this contract has 152 acres disturbed.
- C. The PPP is located in an area of 4 soil association (Tama-Muscatine-Downs, Otley-Ladoga, Sparta-Chelsea, Fayette). The estimated weighted average runoff coefficient number for this PPP after completion will be 0.41.
- D. Storm Water Site Map is located in the R sheets. Proposed slopes are shown in cross sections, details, or standard road plans. Supplemental information is located in the Tabulations in the R, C, or CE sheets.

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- E. The base storm water site map is amended by contract modifications and progress payments (fieldbook entries) of completed erosion control work. Also, due to project phasing, erosion and sediment controls shown on project plans may not be installed until needed, based on site conditions. For example, silt fence ditch checks will typically not be installed until the ditch has been installed. Installed locations may also be modified from tabulation locations by field staff. Installed locations will be documented by fieldbook entries.
- F. Runoff from this work will flow into Clear Creek and its tributaries.

III. CONTROLS

- A. The Contractor's ECIP specified in Article 2602.03 of the Standard Specifications for accomplishment of storm water controls should clearly describe the intended sequence of major activities, and for each activity define the control measure and the timing during the construction process that the measure will be implemented.
- B. Preserve vegetation in areas not needed for construction.
- C. Sections 2601 and 2602 of the Standard Specifications define requirements to implement erosion and sediment control measures. Actual quantities used and installed locations may vary from the Base PPP and amendment of the plan will be documented via fieldbook entries or by contract modification. Additional erosion and sediment control items may be required as determined by the inspector and/or contractor during storm water monitoring inspections. If the work involved is not applicable to any contract items, the work will be paid for according to Article 1109.03 paragraph B of the Standard Specifications.

1. EROSION AND SEDIMENT CONTROLS

a. Stabilization Practices

- 1) Site plans will ensure that existing vegetation or natural buffers are preserved where attainable and disturbed portions of the site will be stabilized.
- 2) Initialize stabilization of disturbed areas immediately after clearing, grading, excavating, or other earth disturbing activities have:
 - a) Permanently ceased on any portion of the site, or
 - b) Temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days.
- 3) Staged permanent and/or temporary stabilizing seeding and mulching shall be completed as the disturbed areas are completed. Incomplete areas shall be stabilized according to paragraph III, C, 1, a, 2, b above.
- 4) Permanent and Temporary Stabilization practices to be used for this project are located in the storm water site map (when included), Estimated Project Quantities (100-0A, 100-1A, or 100-1C), and Estimate Reference Information (100-4A) located in the R sheets. Typical drawings detailing construction of the practices to be used on this project are referenced in the Standard Road Plans Tabulation (105-4) in the R sheets.
- 5) Preservation of existing vegetation within right-of-way or easements will act as vegetative buffer strips.
- 6) Preservation of topsoil: Bid items to be used for this project are located in the Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the R sheets. Additional information may be found in the Tabulations in the R, C, or T Tabulation sheets, or is referenced in Section 2105 of the Standard Specifications.

b. Structural Practices

- 1) Structural practices will be implemented to divert flows from exposed soils and detain or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Additionally, structural practices may include: silt basins that provide 3600 cubic feet of storage per acre drained or equivalent sediment controls, outlet structures that withdraw water from surface when discharging basins, and controls to direct storm water to vegetated areas.
- 2) Structural practices to be used for this project are located in the storm water site map (when included), Estimated Project Quantities (100-0A, 100-1A, or 100-1C), and Estimate Reference Information (100-4A) located in the R sheets, as well as all other item specific Tabulations. Typical drawings detailing construction of the devices to be used on this project can be found on the B sheets or are referenced in the Standard Road Plans Tabulation (105-4) located in the R sheets.

c. Storm Water Management

- 1) Measures shall be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. This may include velocity dissipation devices at discharge locations and along length of outfall channel as necessary to provide a non-erosion velocity flow from structure to water course. If included with this project, these items are located in the storm water site map (when included) and Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the R sheets, as well as all other item specific Tabulations. Typical drawings detailing construction of the practices to be used on this project are referenced in the Standard Road Plans Tabulation. The installation of these devices may be subject to Section 404 of the Clean Water Act.

2. OTHER CONTROLS

- a. Contractor disposal of unused construction materials and construction material wastes shall comply with applicable state and local waste disposal, sanitary sewer, or septic system regulations. In the event of a conflict with other governmental laws, rules and regulations, the more restrictive laws, rules or regulations shall apply.

- 1) Vehicle Entrances and Exits - Construct and maintain entrances and exits to prevent tracking of sediments onto roadways.
- 2) Material Delivery, Storage and Use - Implement practices to prevent discharge of construction materials during delivery, storage, and use.
- 3) Stockpile Management - Install controls to reduce or eliminate pollution of storm water from stockpiles of soil and paving.
- 4) Waste Disposal - Do not discharge any materials, including building materials, into waters of the state, except as authorized by a Section 404 permit.
- 5) Spill Prevention and Control - Implement chemical spill and leak prevention and response procedures to contain and clean-up spills and prevent material discharges to the storm drain system and waters of the state.
- 6) Concrete Residuals and Washout Wastes - Waste shall not be discharged to a surface water and is not allowed to adversely affect a water of the state. Designate temporary concrete washout facilities for rinsing out concrete trucks. Provide directions to truck drivers where designated washout facilities are located. Designated washout areas should be located at least 50 feet away from storm drains, streams or other water bodies. Care should be taken to ensure these facilities do not overflow during storm events.
- 7) Concrete Grooving/Grinding Slurry - Do not discharge slurry to a waterbody or storm drain. Slurry may be applied on foreslopes or removed from the project.
- 8) Vehicle and Equipment Storage and Maintenance Areas - Perform on site fueling and maintenance in accordance with all environment laws such as proper storage of onsite fuels and proper disposal of used engine oil or other fluids on site. Employ washing practices that prevent contamination of surface and ground water from wash water. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge.
- 9) Litter Management - Ensure employees properly dispose of litter. Minimize exposure of trash if exposure to precipitation or storm water would result in a discharge of pollutants.
- 10) Dewatering - Properly treat water to remove suspended sediment before it re-enters a waterbody or discharges off-site. Measures are also to be taken to prevent scour erosion at dewatering discharge point.

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3. APPROVED STATE OR LOCAL PLANS

During the course of this construction, it is possible that situations will arise where unknown materials will be encountered. When such situations are encountered, they will be handled according to all federal, state, and local regulations in effect at the time.

IV. MAINTENANCE PROCEDURES

The Contractor is required to maintain all temporary erosion and sediment control measures in proper working order, including cleaning, repairing, or replacing them throughout the contract period. This shall begin when the features have lost 50% of their capacity.

V. INSPECTION REQUIREMENTS

- A. Inspections shall be made jointly by the Contractor and the Contracting Authority at least once every seven calendar days. Storm water monitoring inspections will include:
 - 1. Date of the inspection.
 - 2. Summary of the scope of the inspection.
 - 3. Name and qualifications of the personnel making the inspection.
 - 5. Review of erosion and sediment control measures within disturbed areas for the effectiveness in preventing impacts to receiving waters.
 - 6. Major observations related to the implementation of the PPP.
 - 7. Identification of corrective actions required to maintain or modify erosion and sediment control measures.
- B. Include storm water monitoring inspection reports in the Amended PPP. Incorporate any additional erosion and sediment control measures determined as a result of the inspection. Immediately begin corrective actions on all deficiencies found within 3 calendar days of the inspection and complete within 7 calendar days following the inspection. If it is determined that making the corrections less than 72 hours after the inspection is impracticable, it should be documented why it is impracticable and indicate an estimated date by which the corrections will be made.

VI. NON-STORM WATER DISCHARGES

This includes subsurface drains (i.e. longitudinal and standard subdrains) and slope drains. The velocity of the discharge from these features may be controlled by the use of headwalls or blocks, Class A stone, erosion stone or other appropriate materials. This also includes uncontaminated groundwater from dewatering operations, which will be controlled as discussed in Section III of the PPP.

VII. POTENTIAL SOURCES OF OFF RIGHT-OF-WAY (ROW) POLLUTION

Silts, sediment, and other forms of pollution may be transported onto highway right-of-way (ROW) as a result of a storm event. Potential sources of pollution located outside highway ROW are beyond the control of this PPP. Pollution within highway ROW will be conveyed and controlled per this PPP.

VIII. DEFINITIONS

- A. Base PPP - Initial Pollution Prevention Plan.
- B. Amended PPP - May include Plan Revisions or Contract Modifications for new items, storm water monitoring inspection reports, and fieldbook entries made by the inspector.
- C. IDR - Inspector's Daily Report - this contains the inspector's daily diary and bid item postings.
- D. Controls - Methods, practices, or measures to minimize or prevent erosion, control sedimentation, control storm water, or minimize contaminants from other types of waste or materials. Also called Best Management Practices (BMPs).
- E. Signature Authority - Representative authorized to sign various storm water documents.

CERTIFICATION STATEMENT

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.















Signature

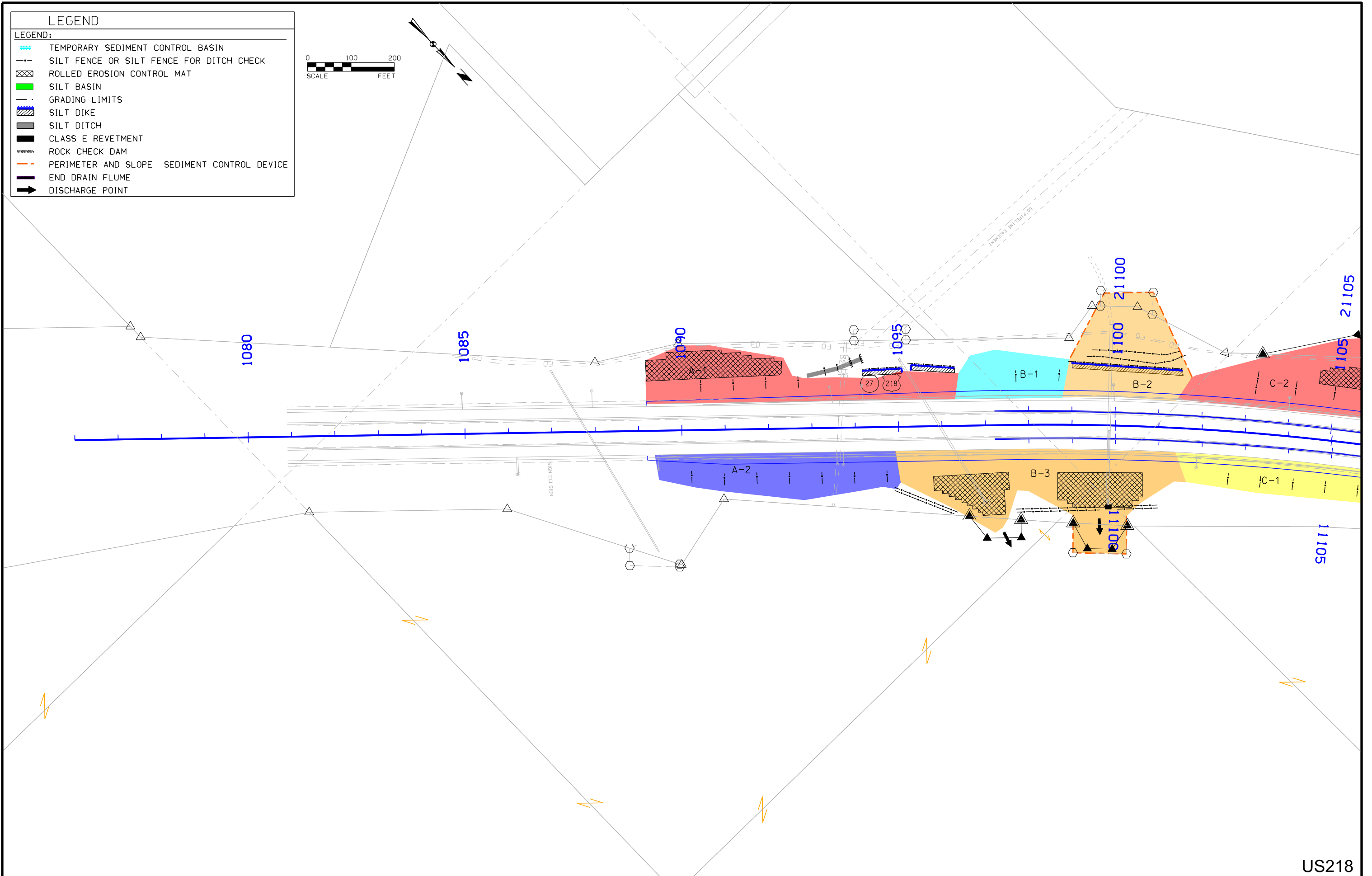
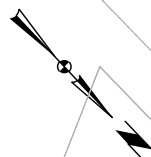
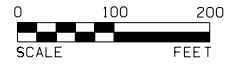
Aaron Granquist

Printed or Typed Name

Signature

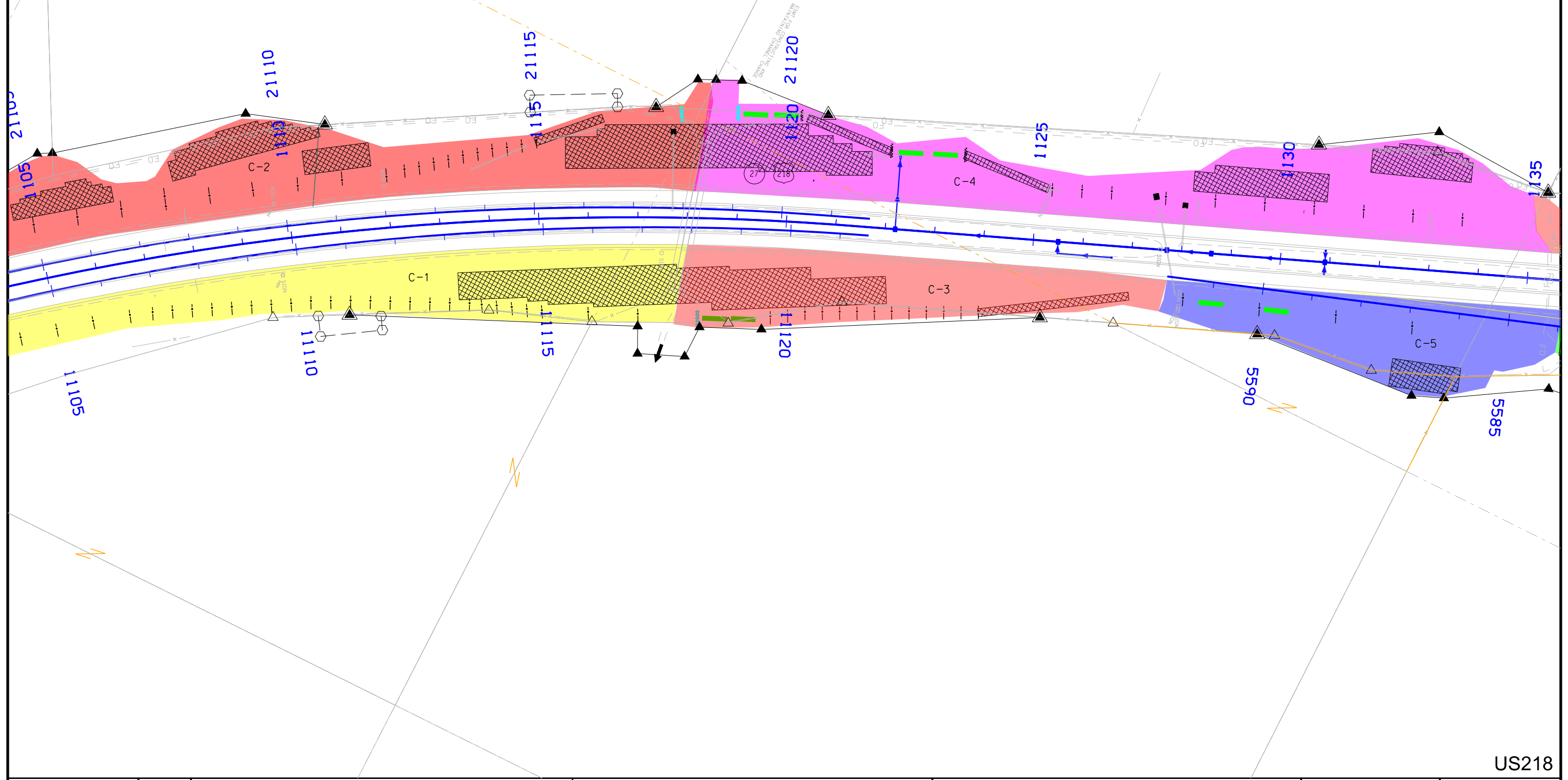
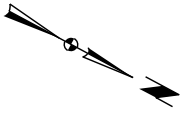
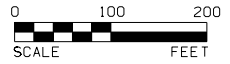
LEGEND

- LEGEND:
-  TEMPORARY SEDIMENT CONTROL BASIN
 -  SILT FENCE OR SILT FENCE FOR DITCH CHECK
 -  ROLLED EROSION CONTROL MAT
 -  SILT BASIN
 -  GRADING LIMITS
 -  SILT DIKE
 -  SILT DITCH
 -  CLASS E REVETMENT
 -  ROCK CHECK DAM
 -  PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE
 -  END DRAIN FLUME
 -  DISCHARGE POINT

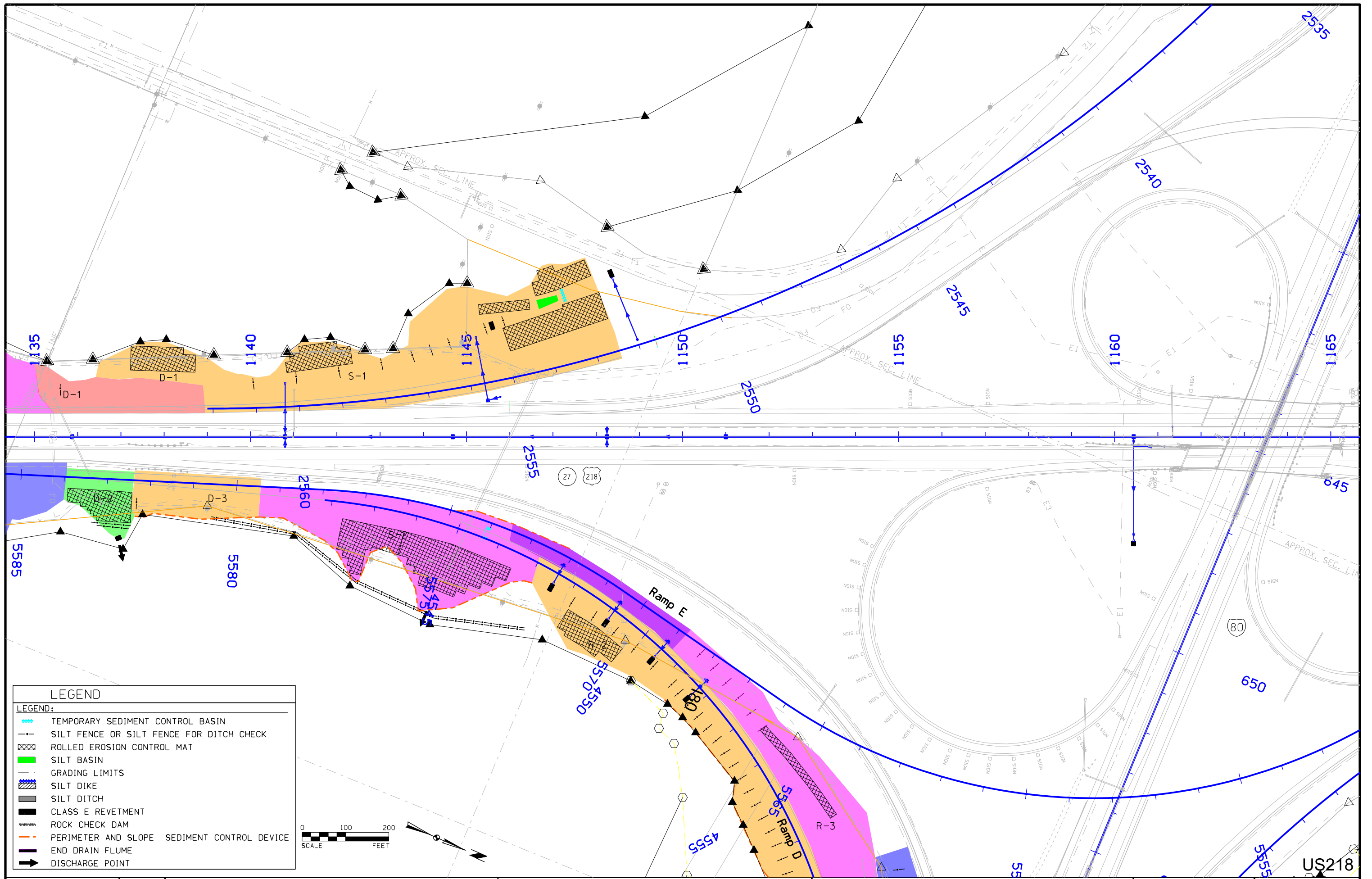


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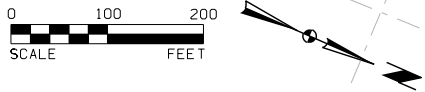
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	SILT FENCE OR SILT FENCE FOR DITCH CHECK
	ROLLED EROSION CONTROL MAT
	SILT BASIN
	GRADING LIMITS
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	END DRAIN FLUME
	DISCHARGE POINT



US218

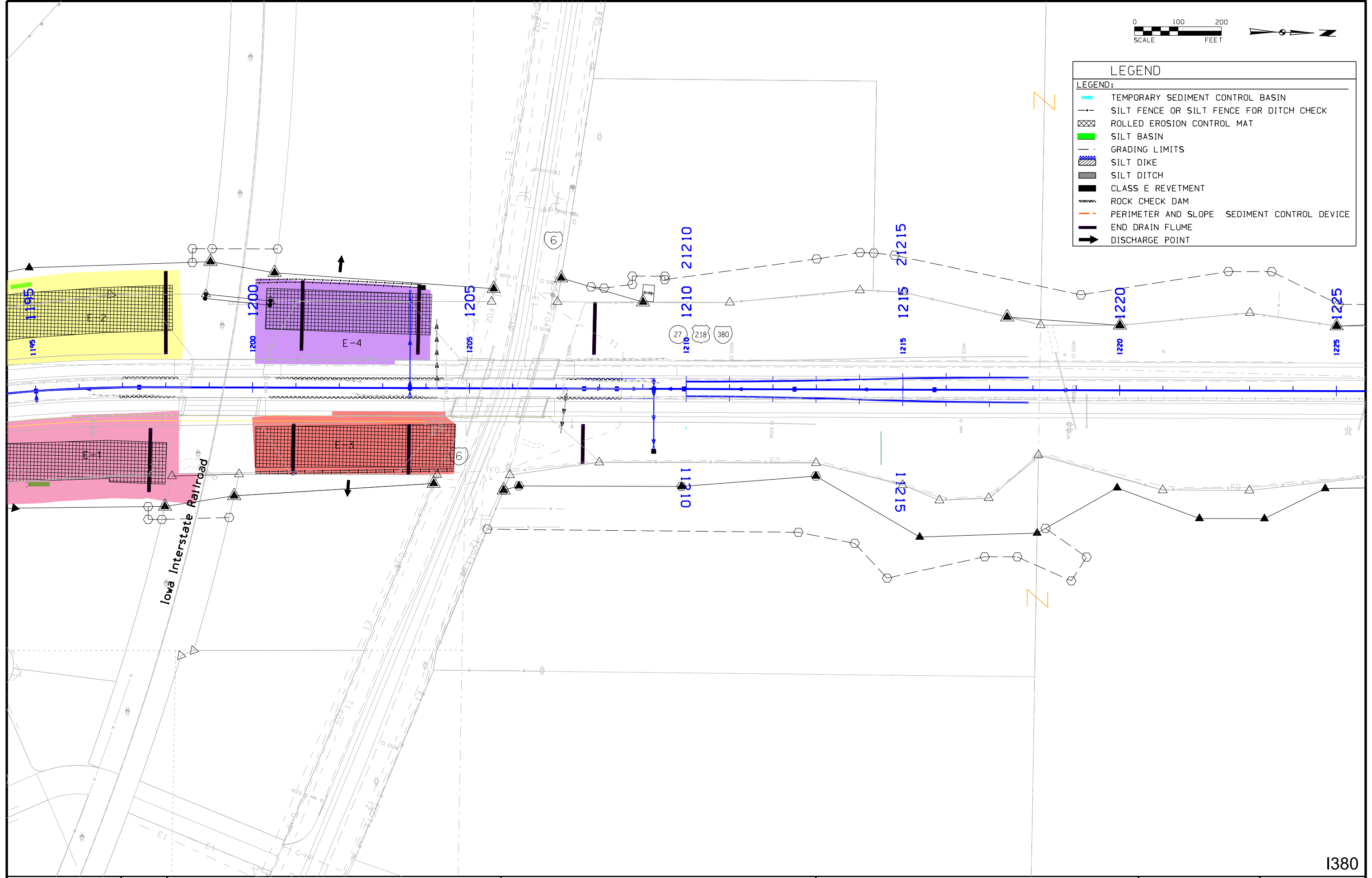


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	SILT FENCE OR SILT FENCE FOR DITCH CHECK
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	ROCK CHECK DAM
	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE
	END DRAIN FLUME
	DISCHARGE POINT



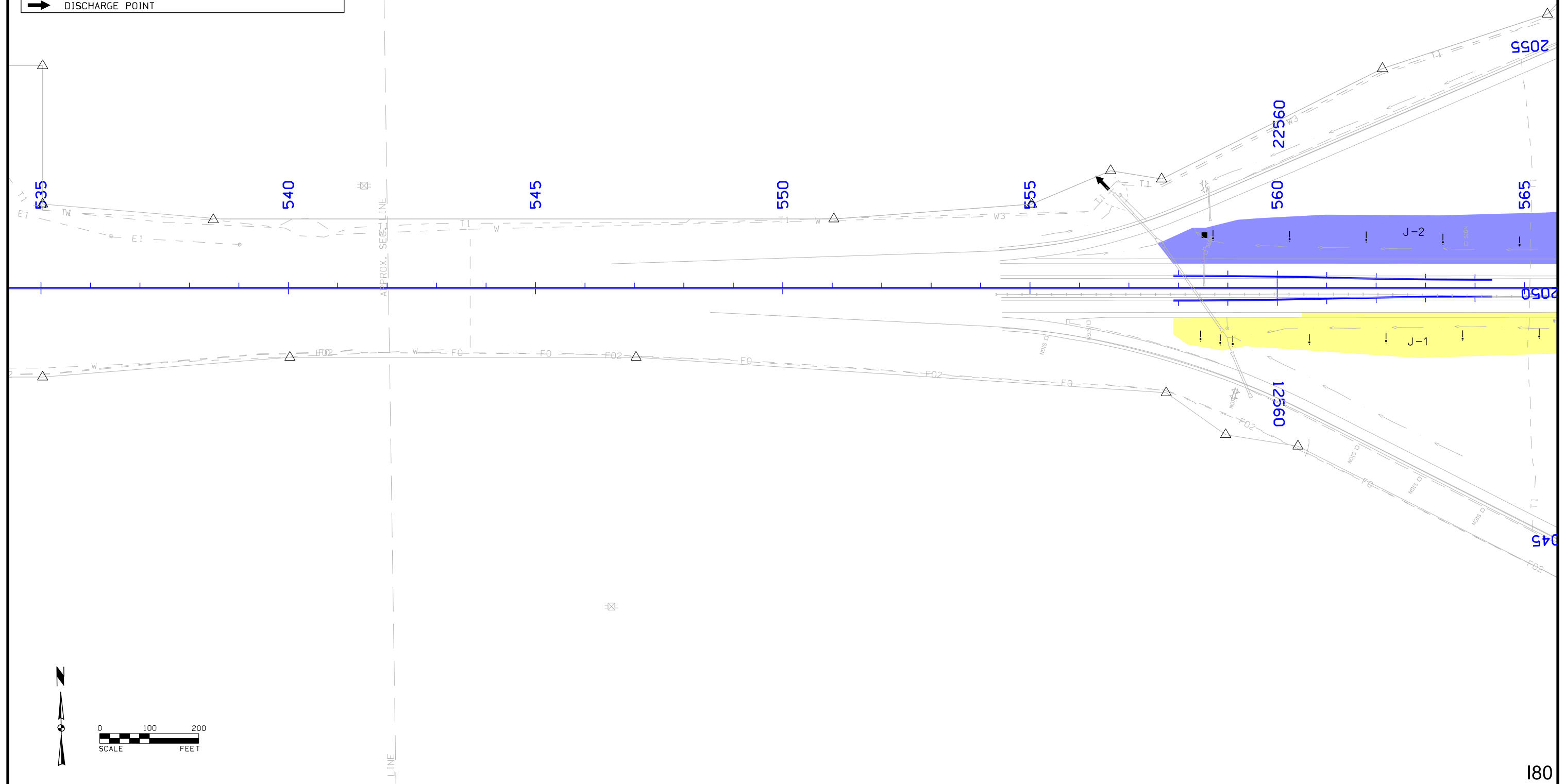


LEGEND	
	TEMPORARY SEDIMENT CONTROL BASIN
	SILT FENCE OR SILT FENCE FOR DITCH CHECK
	ROLLED EROSION CONTROL MAT
	SILT BASIN
	GRADING LIMITS
	SILT DIKE
	SILT DITCH
	CLASS E REVETMENT
	ROCK CHECK DAM
	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE
	END DRAIN FLUME
	DISCHARGE POINT

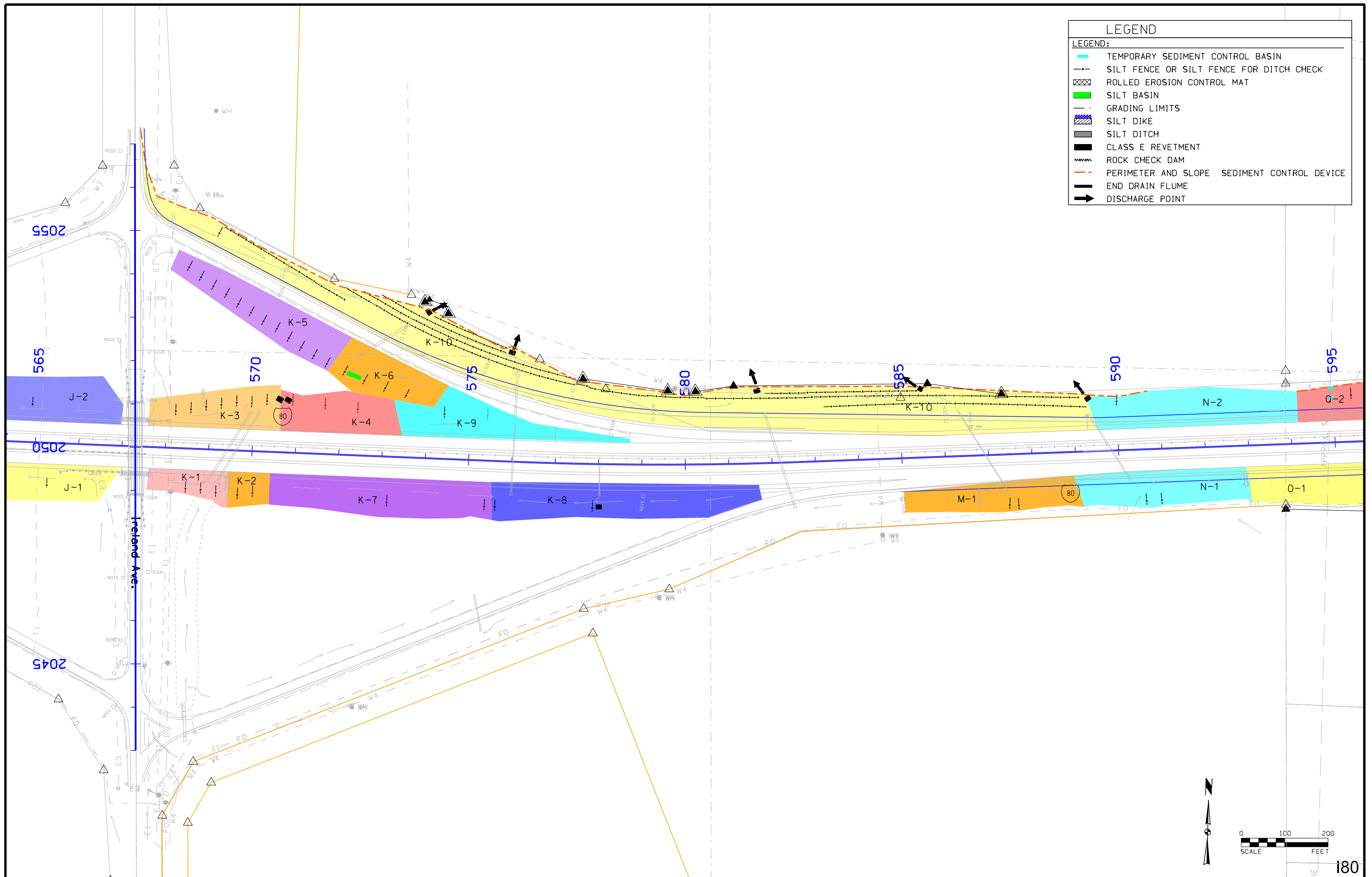


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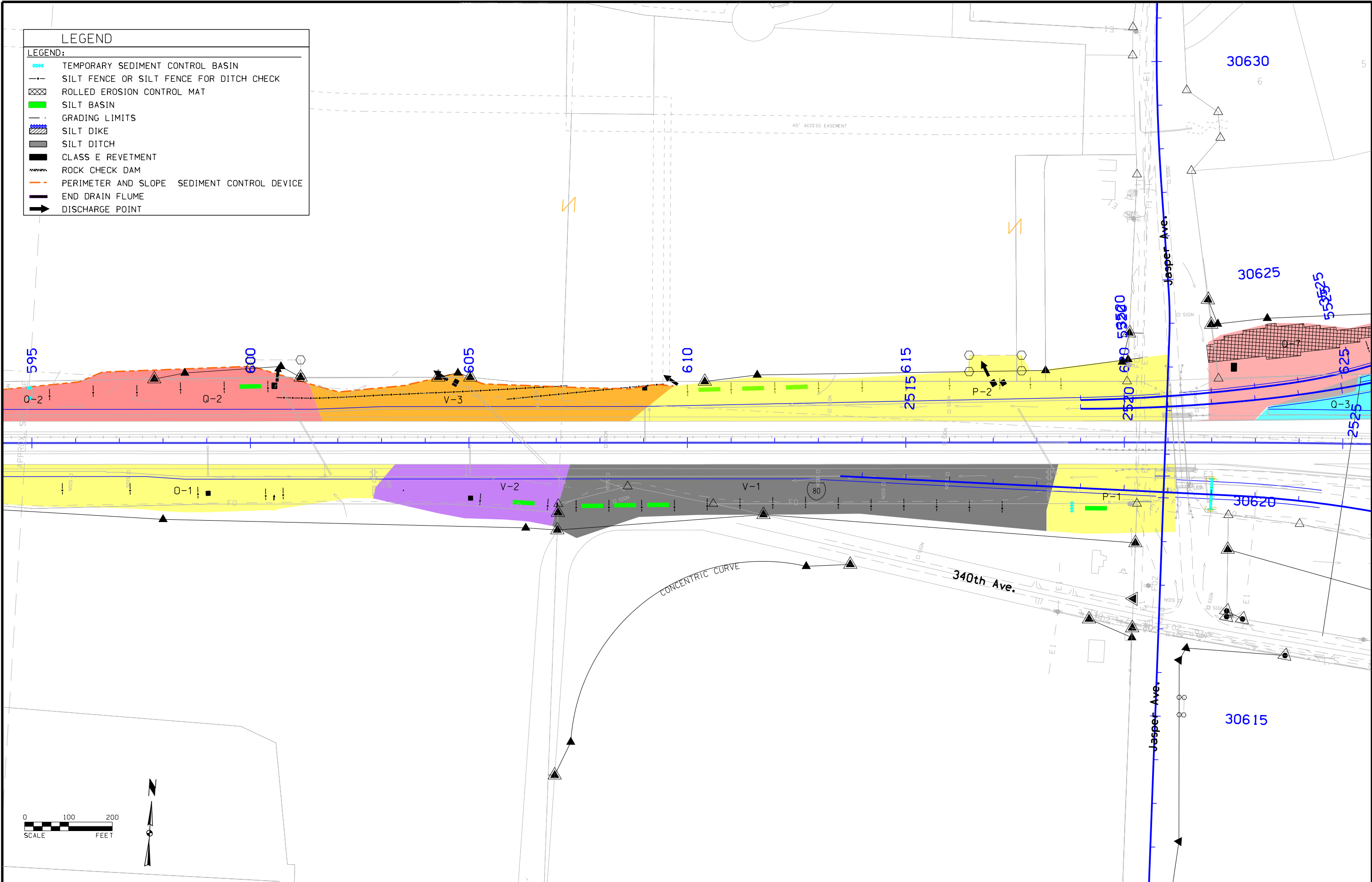
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	SILT FENCE OR SILT FENCE FOR DITCH CHECK
	ROLLED EROSION CONTROL MAT
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	ROCK CHECK DAM
	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE
	END DRAIN FLUME
	DISCHARGE POINT

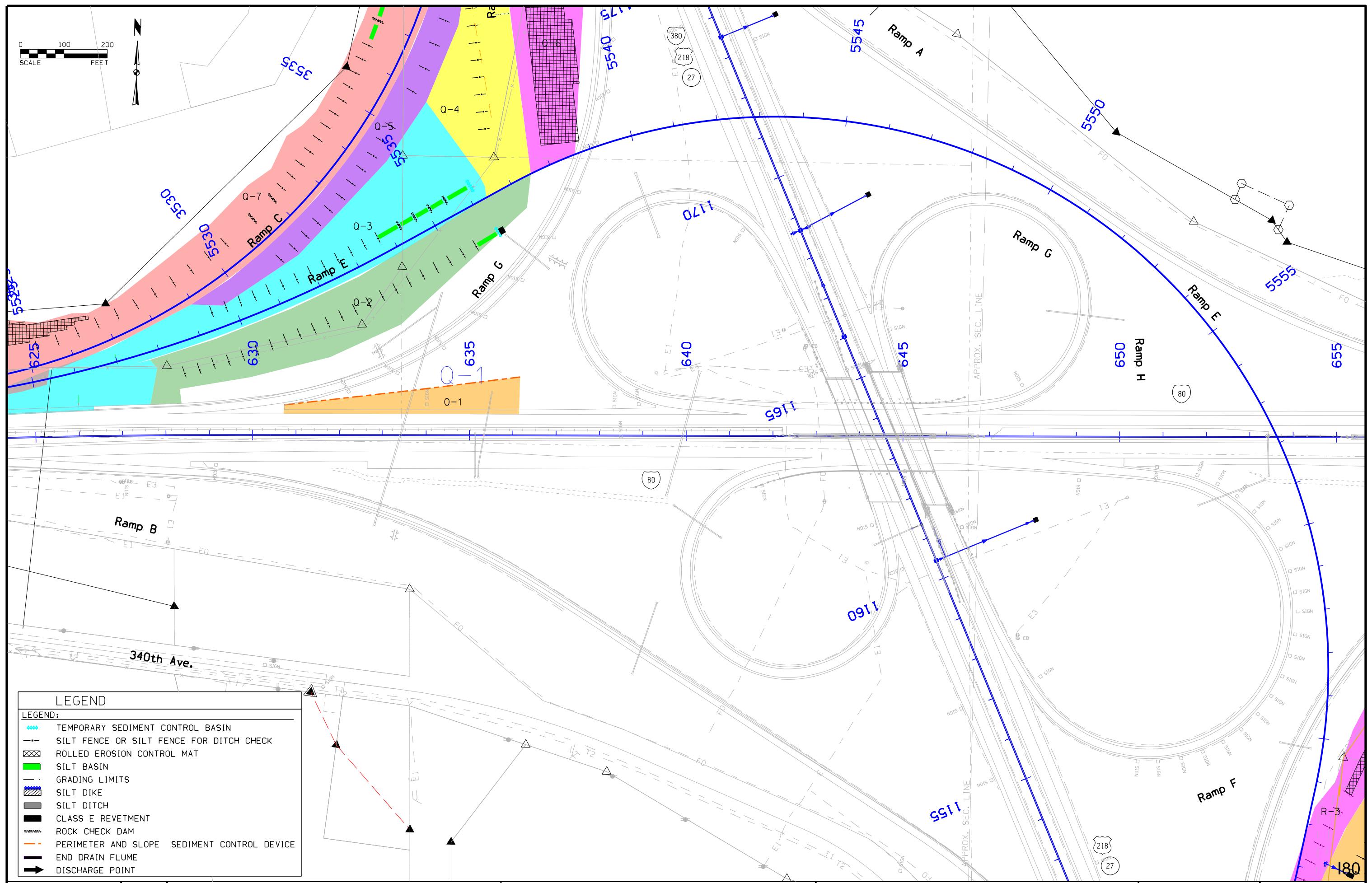
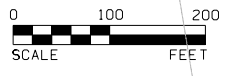


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	TEMPORARY SEDIMENT CONTROL BASIN
	SILT FENCE OR SILT FENCE FOR DITCH CHECK
	ROLLED EROSION CONTROL MAT
	SILT BASIN
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	DISCHARGE POINT















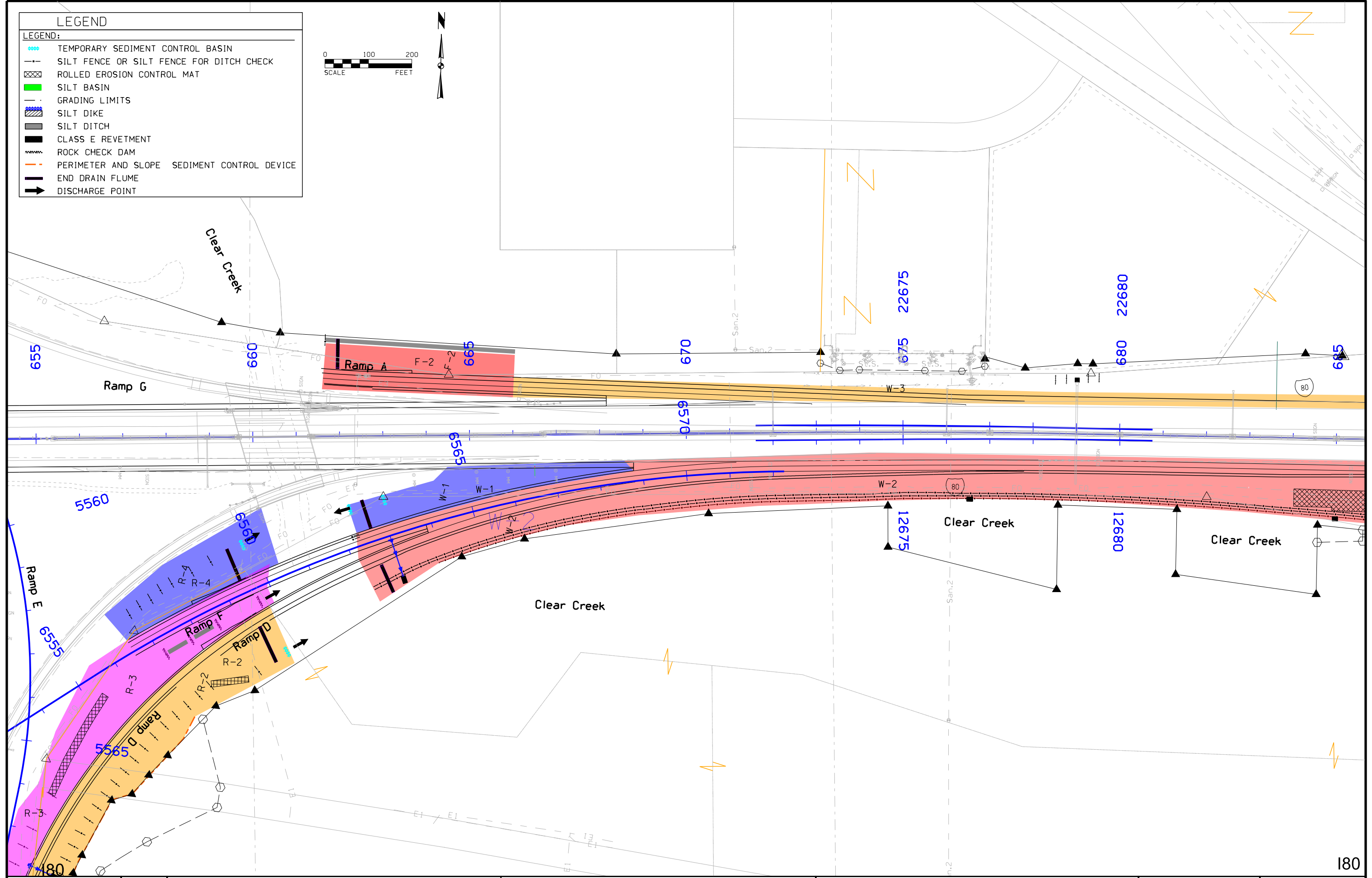
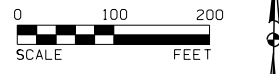


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	END DRAIN FLUME
	DISCHARGE POINT

LEGEND

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-  TEMPORARY SEDIMENT CONTROL BASIN
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-  ROCK CHECK DAM
-  PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE
-  END DRAIN FLUME
-  DISCHARGE POINT

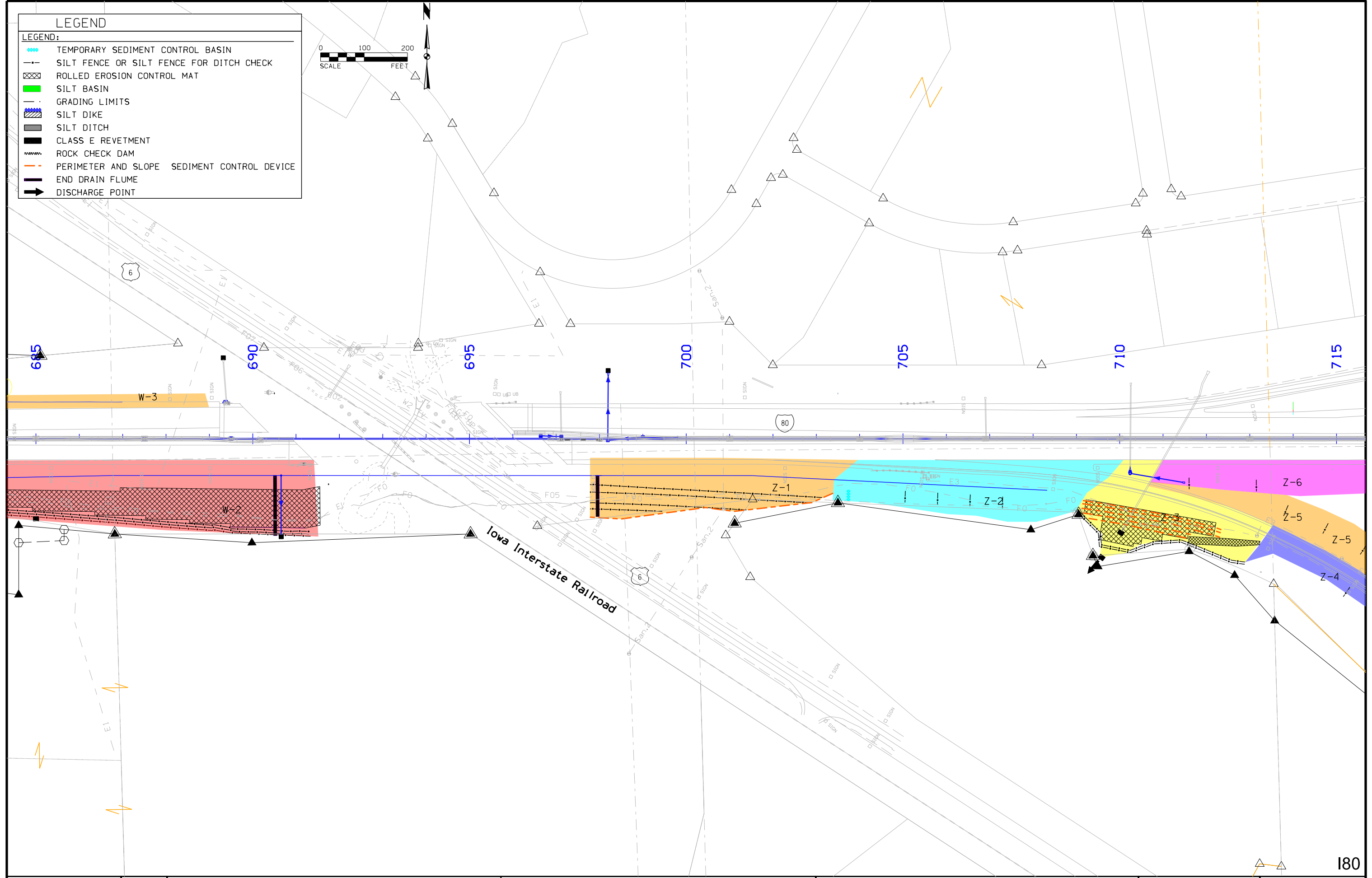
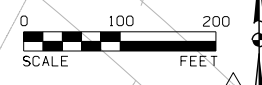


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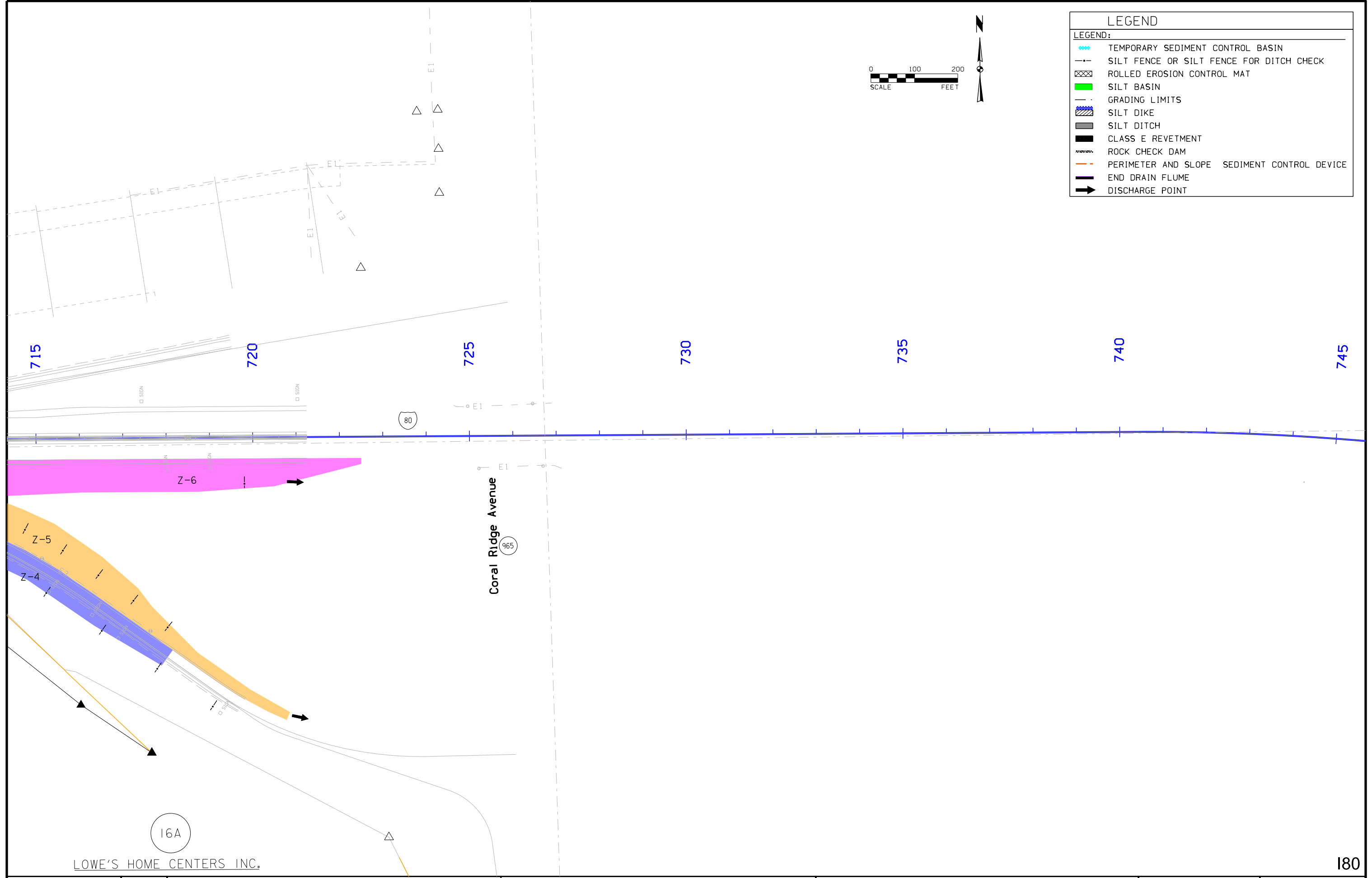
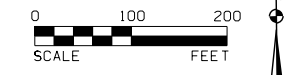
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- END DRAIN FLUME
- DISCHARGE POINT



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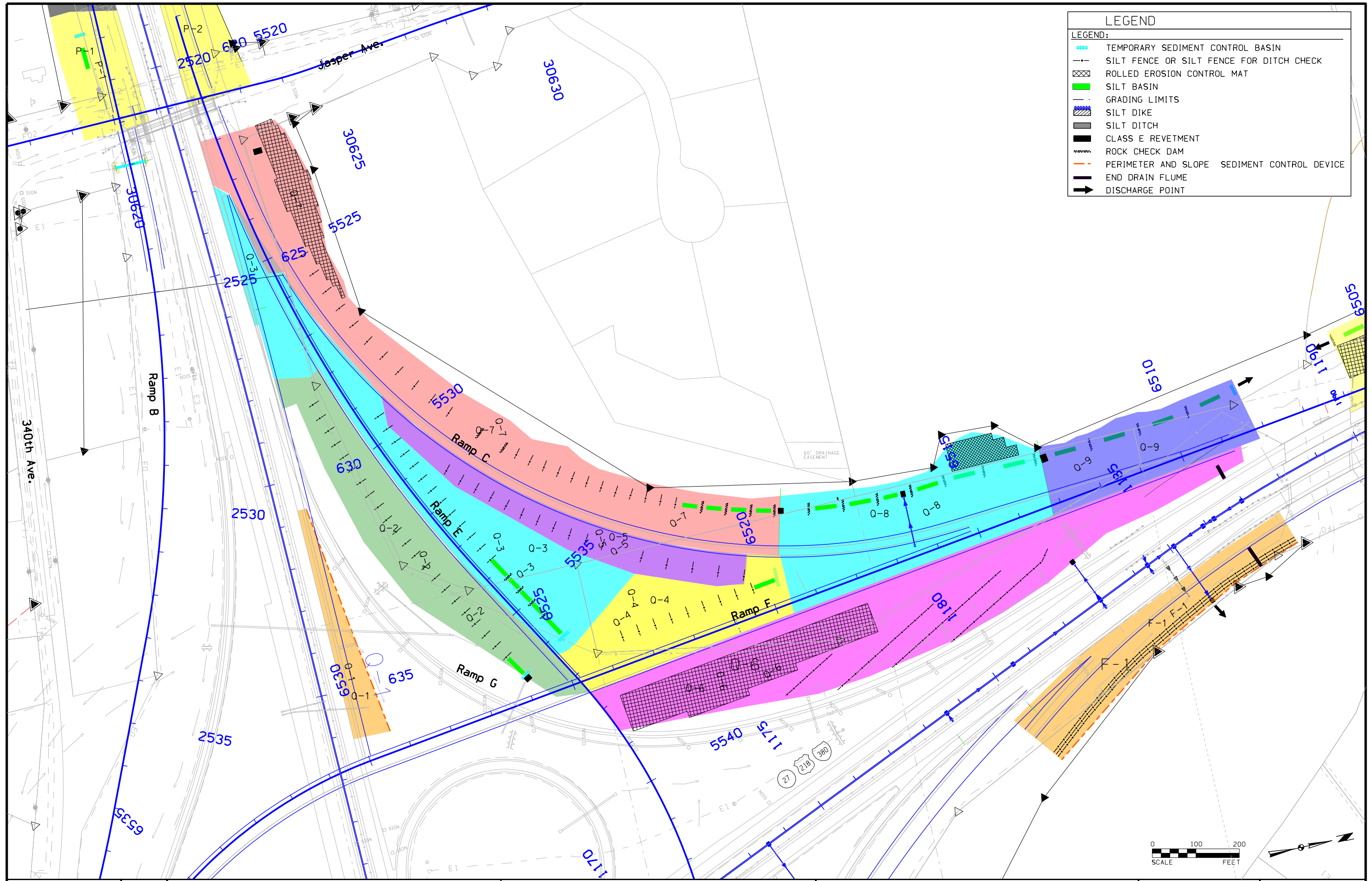
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	END DRAIN FLUME
	DISCHARGE POINT

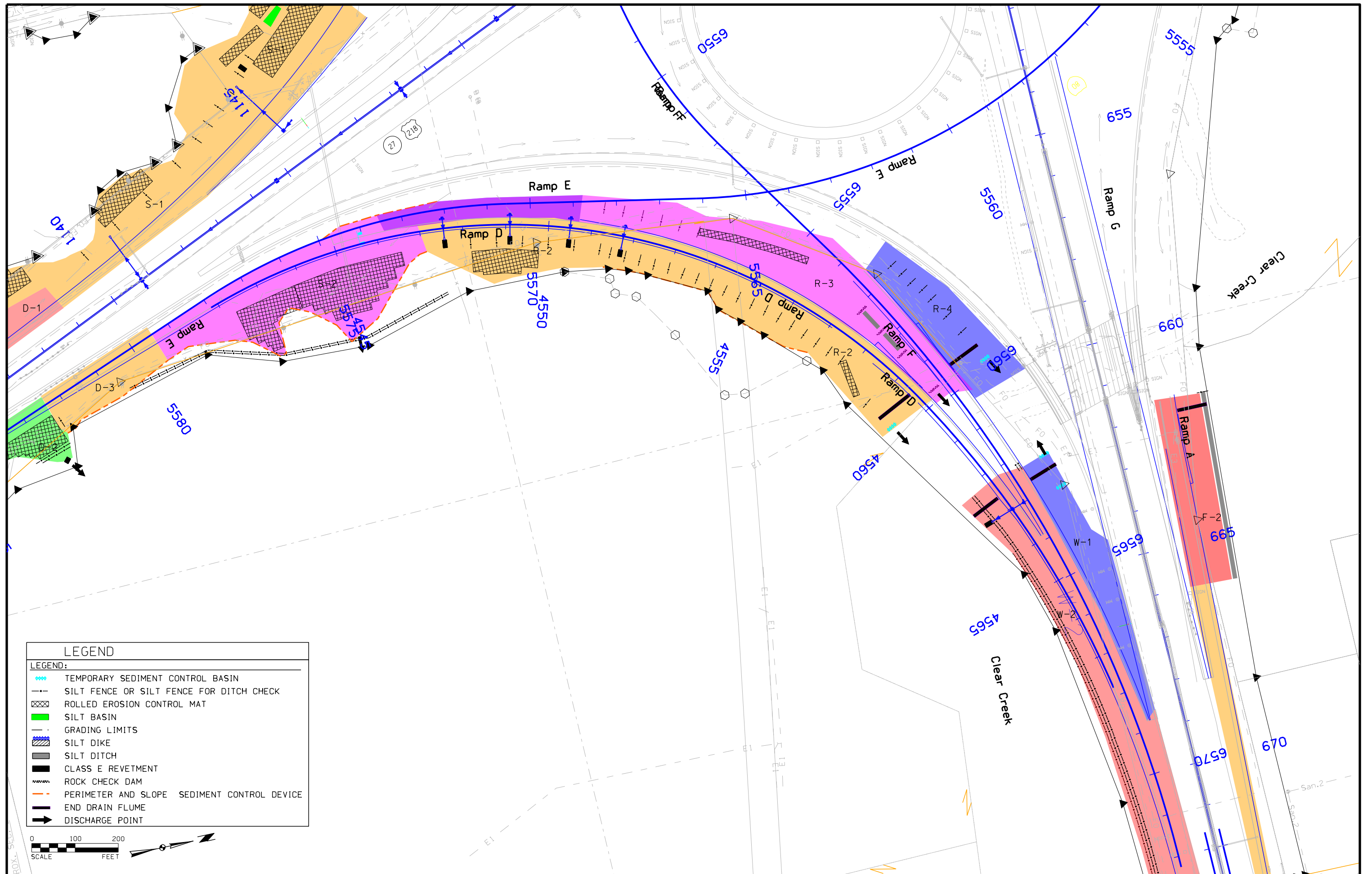


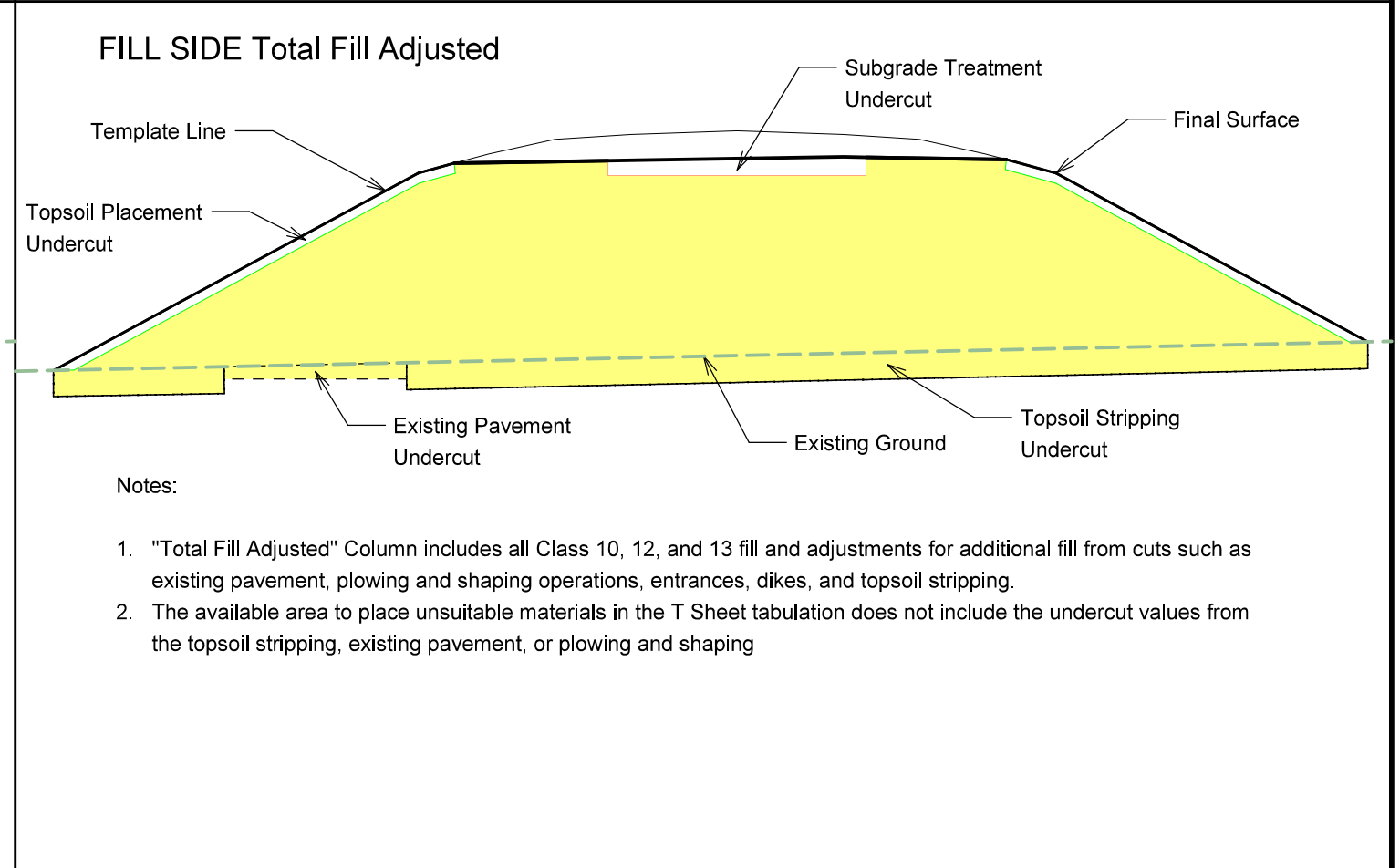
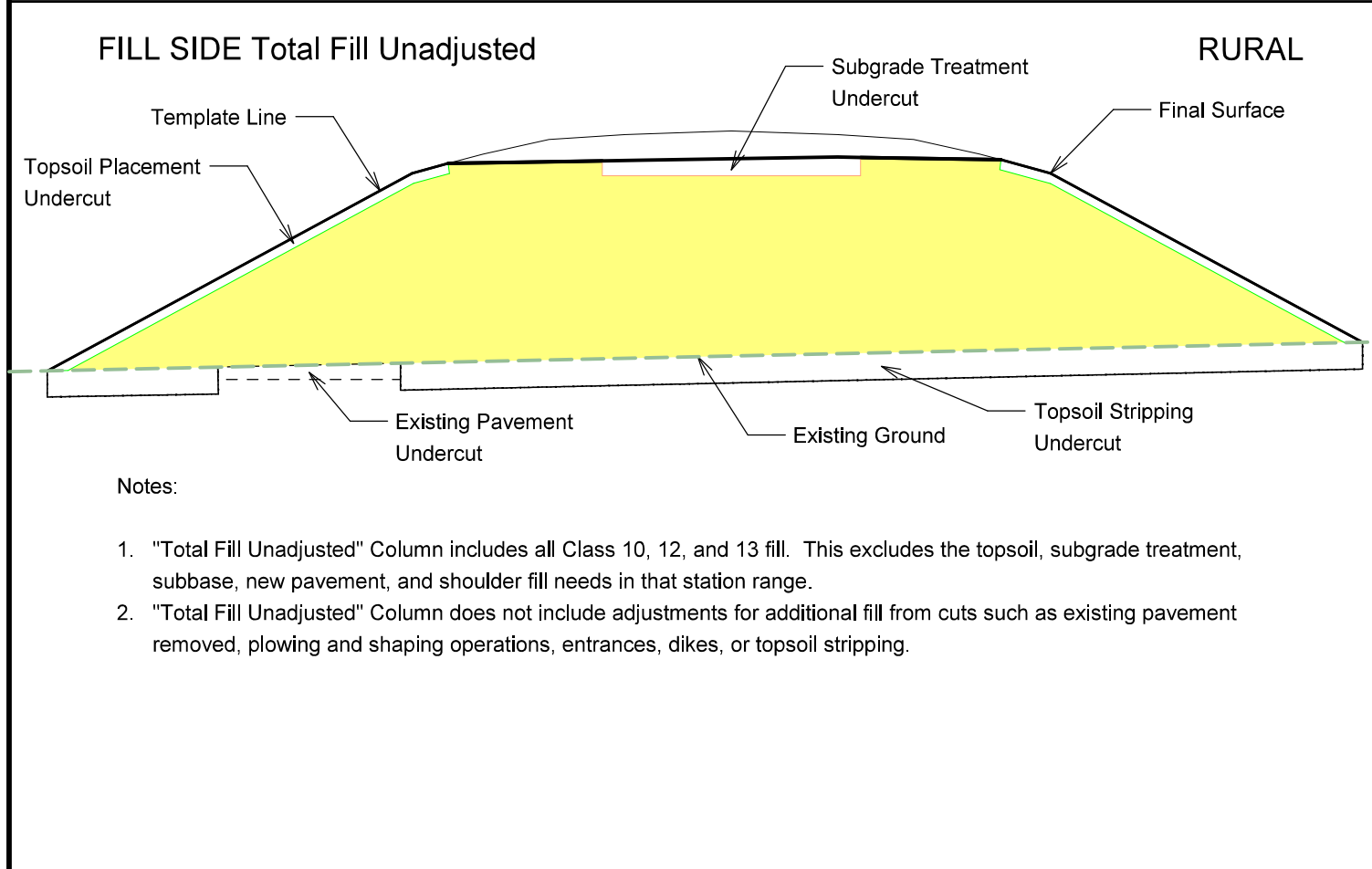
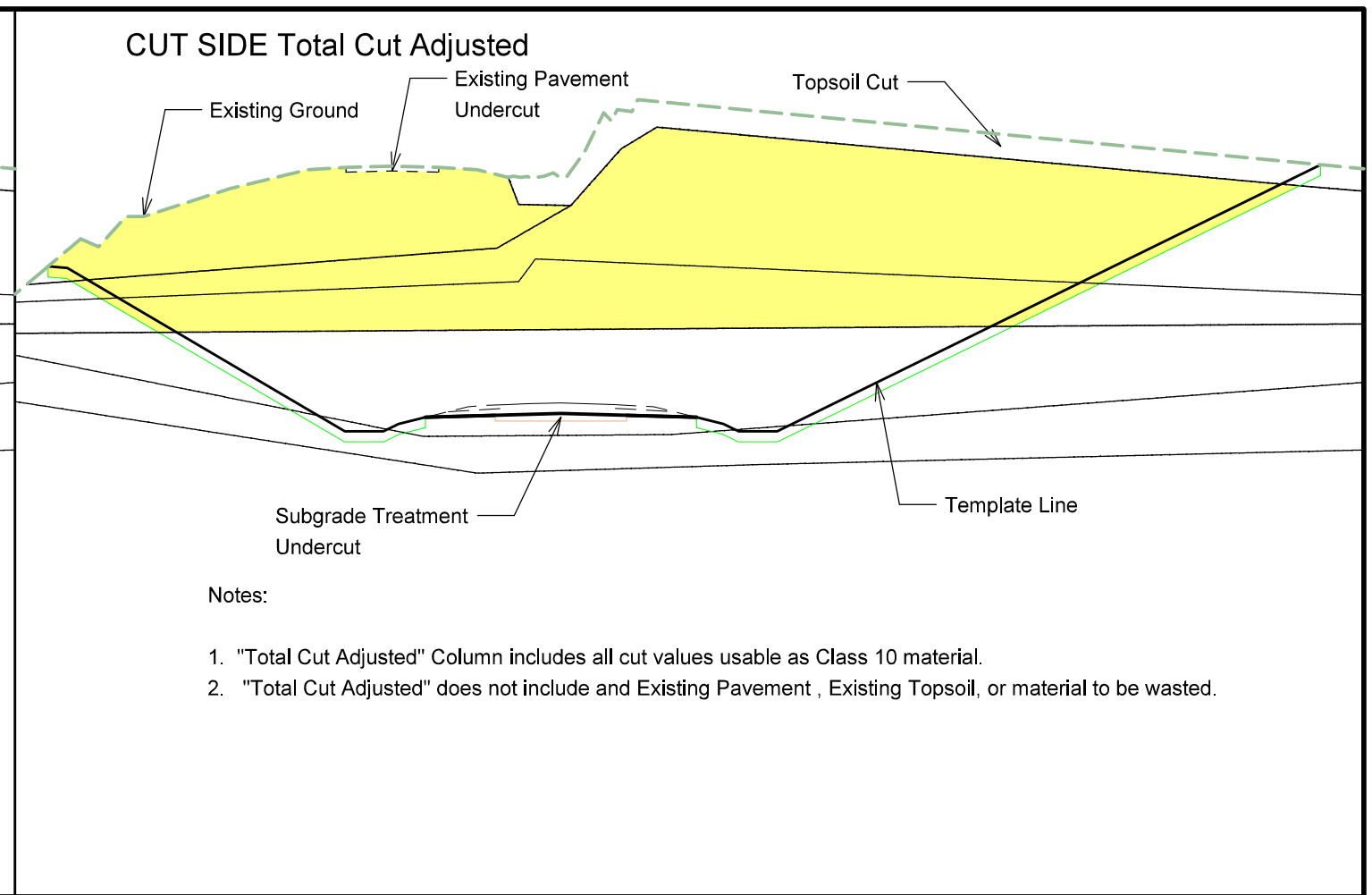
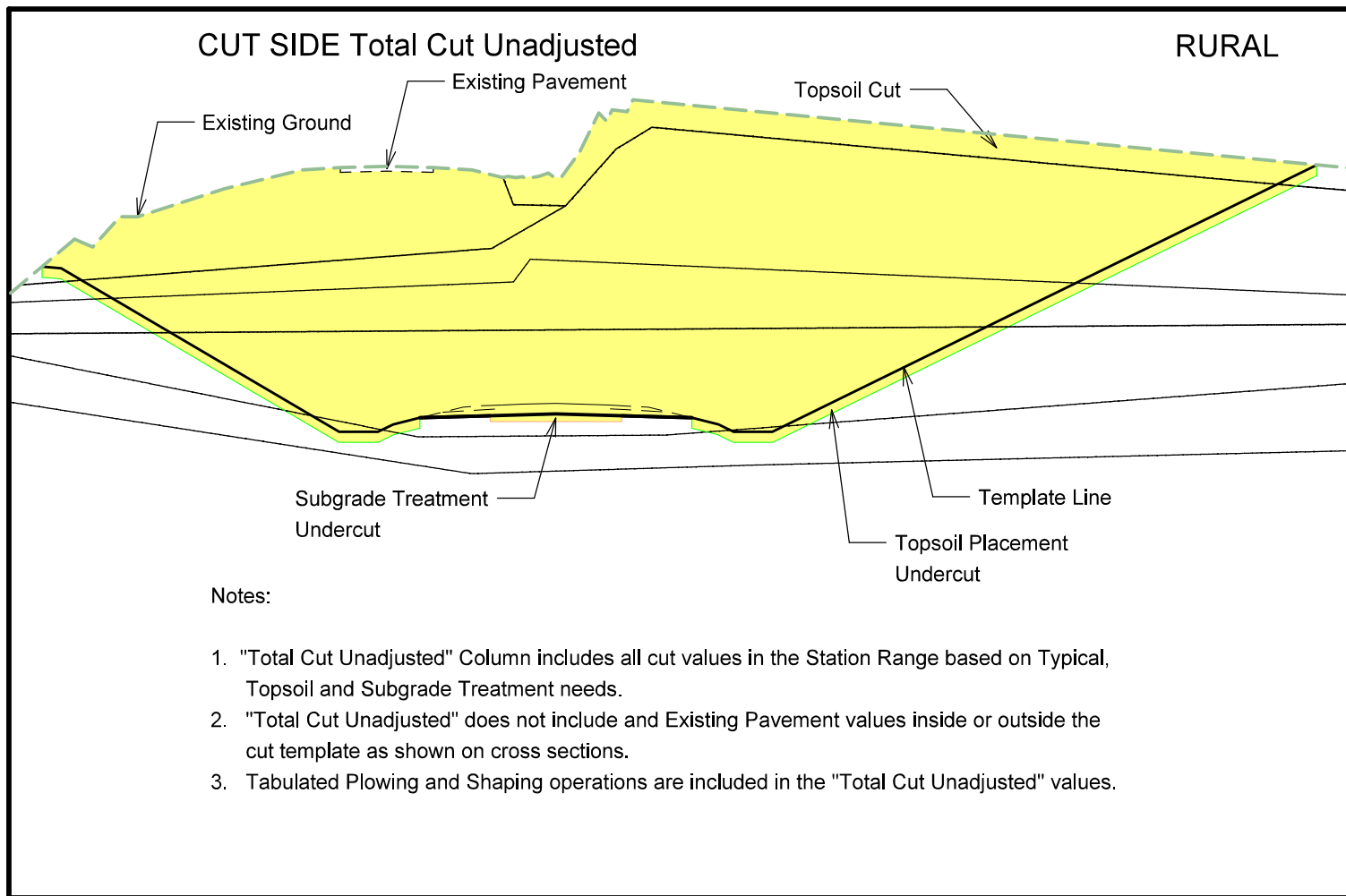
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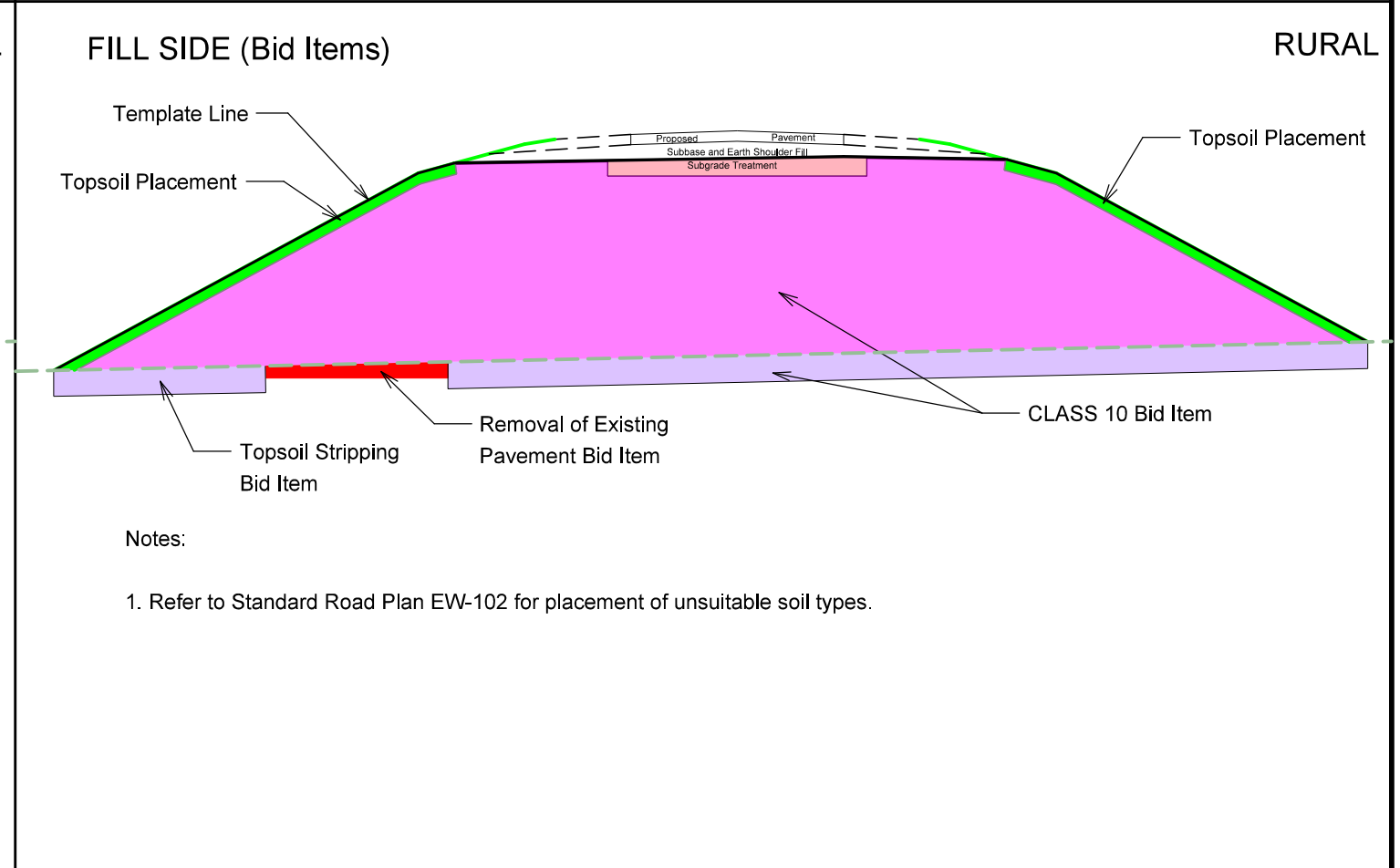
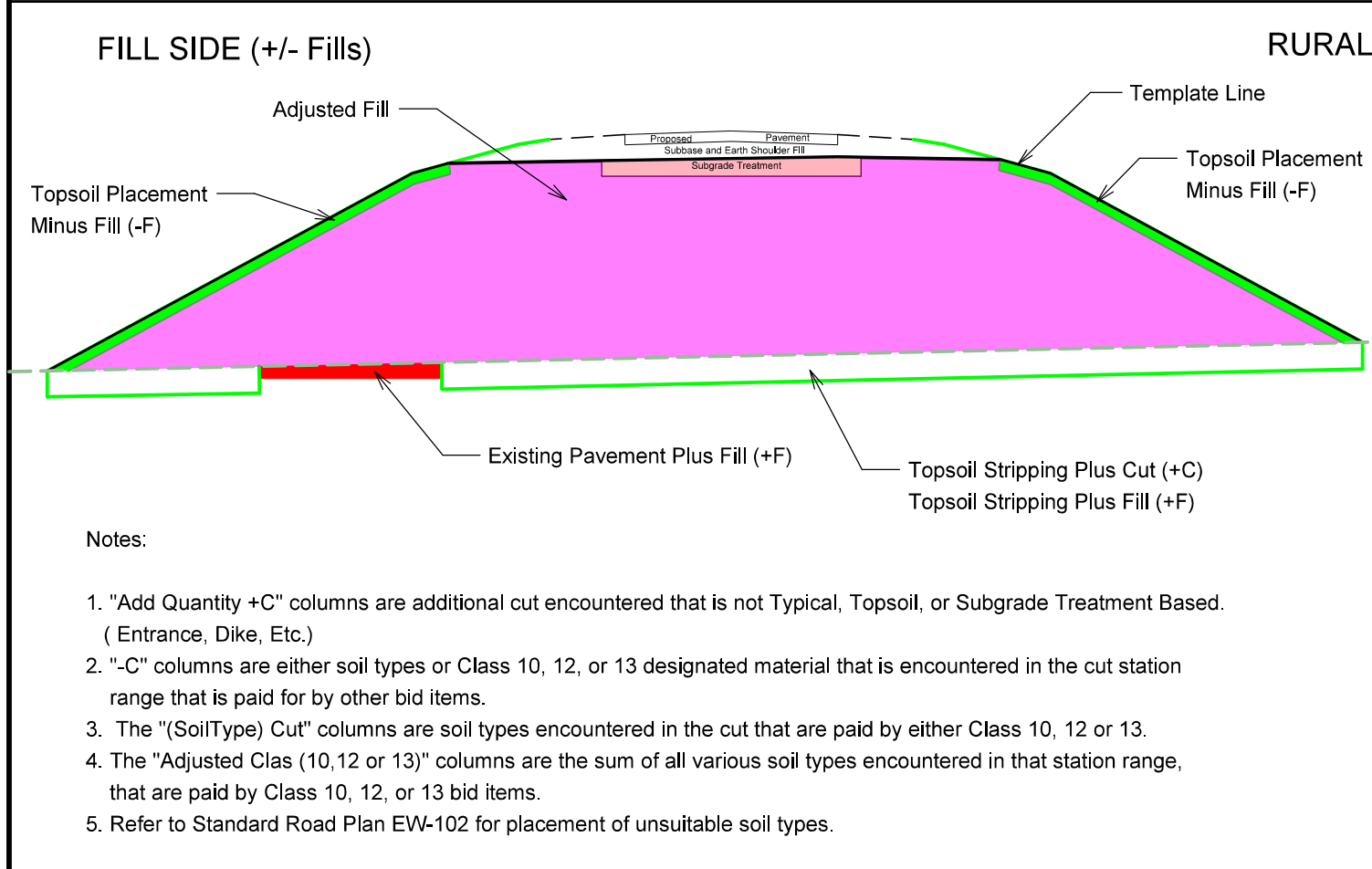
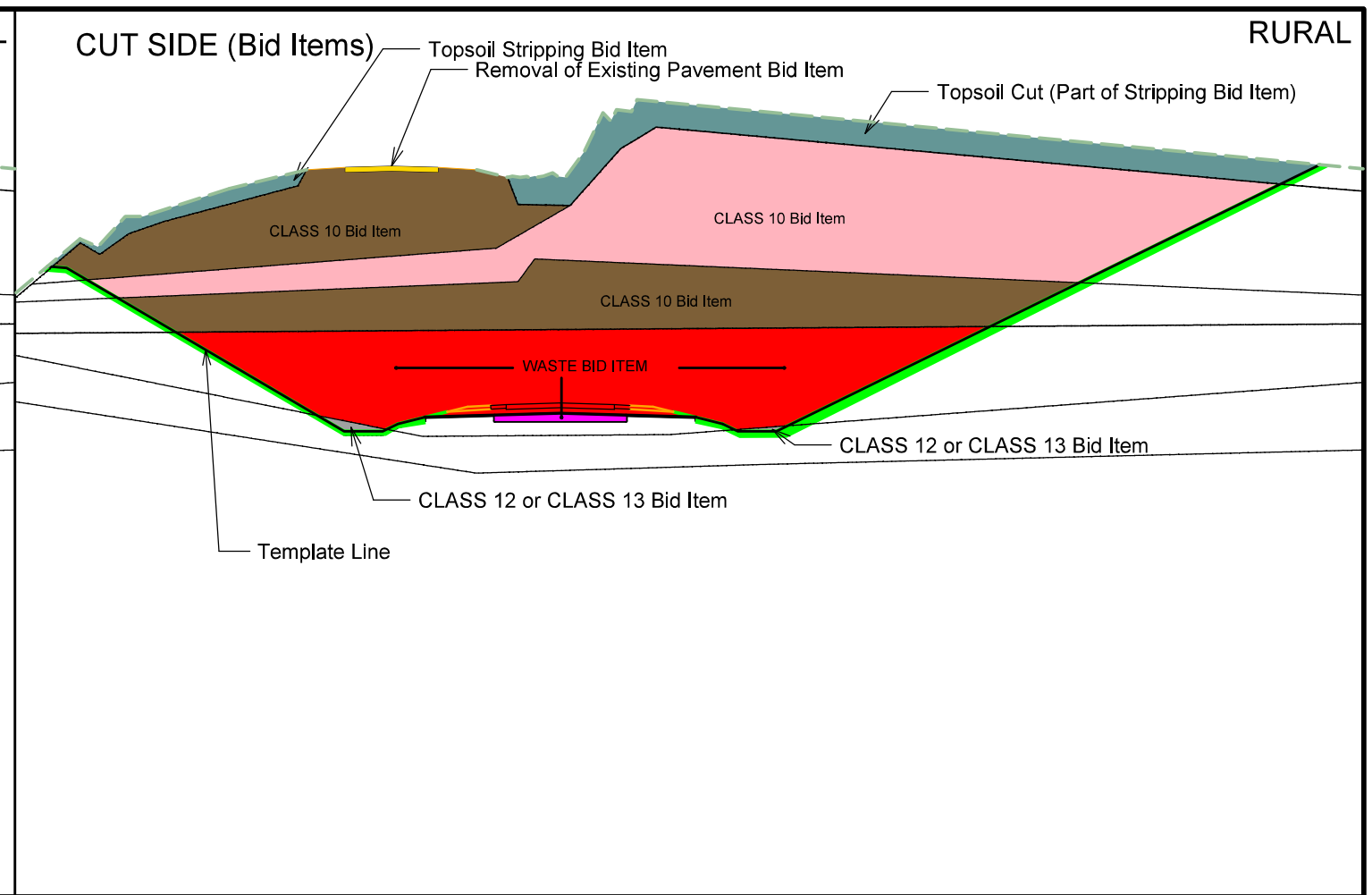
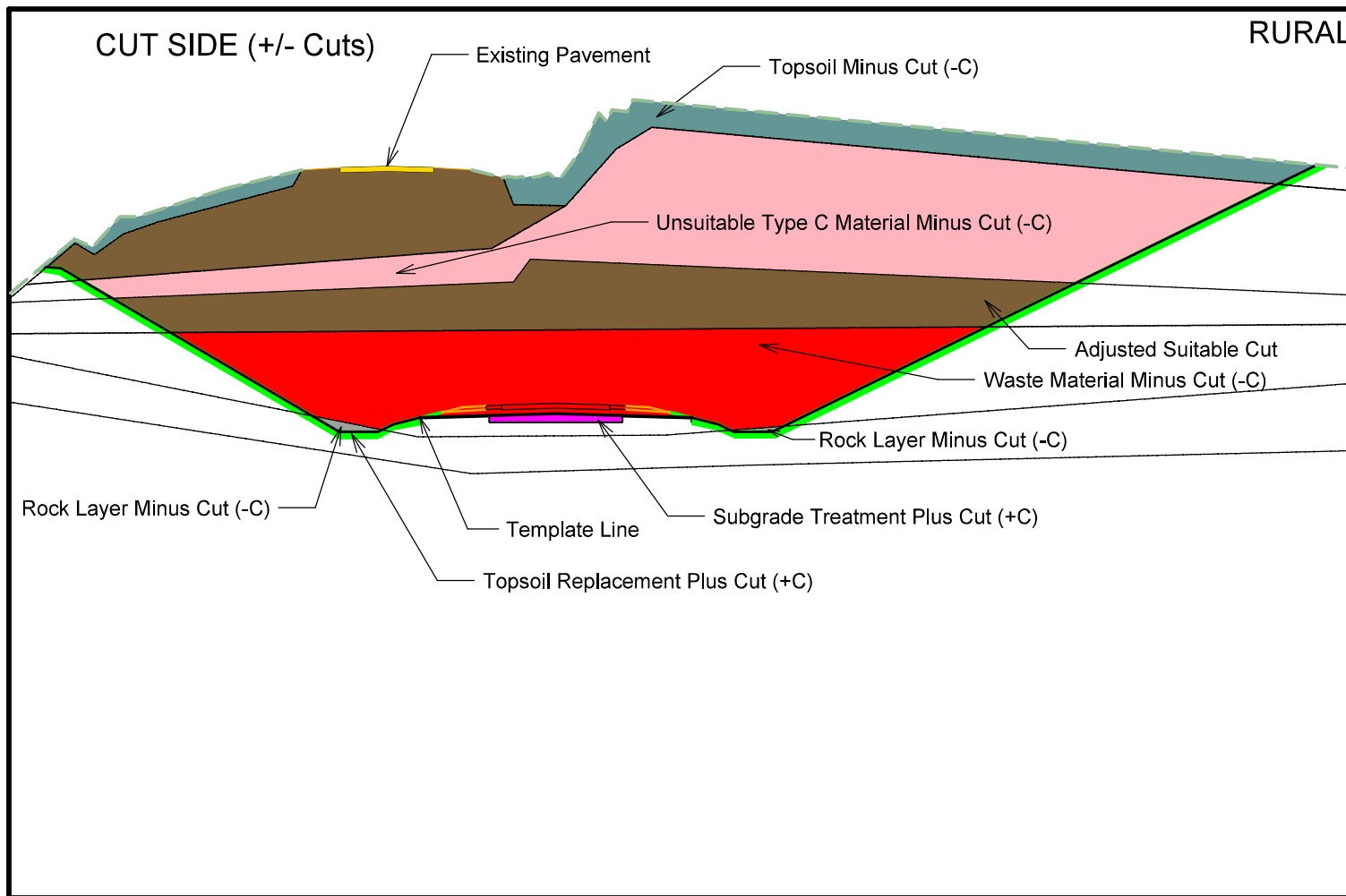
LOWE'S HOME CENTERS INC.

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TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil							
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink				
I-80 Section A																							
557+00.05	19	15	4	5	0	0	15	1	4	5	7	9	0	0	4	11	15	-11					
558+00.00	163	135	28	27	0	0	135	26	28	54	70	65	0	0	28	78	109	-81					
558+50.00	259	212	47	27	0	0	212	87	47	134	174	38	0	0	47	97	136	-89					
559+00.00	397	341	56	27	0	0	341	135	56	191	248	93	0	0	56	111	155	-99					
559+50.00	594	538	56	27	0	0	538	145	56	201	261	277	0	0	56	131	183	-127					
560+00.00	778	725	53	41	0	0	725	137	53	190	247	478	0	0	53	143	200	-147					
561+00.00	965	919	46	54	0	0	919	119	46	165	215	705	0	0	46	153	214	-168					
561+50.00	1,114	1,071	43	55	0	0	1,071	94	43	137	178	893	0	0	43	161	225	-182					
562+00.00	1,219	1,179	40	55	0	0	1,179	72	40	112	146	1,033	0	0	40	167	234	-194					
562+50.00	1,287	1,249	38	54	0	0	1,249	60	38	98	127	1,122	0	0	38	171	239	-201					
563+00.00	1,289	1,252	37	54	0	0	1,252	49	37	86	112	1,140	0	0	37	173	242	-205					
563+50.00	1,280	1,246	34	54	0	0	1,246	40	34	74	96	1,150	0	0	34	174	244	-210					
564+00.00	1,289	1,258	31	55	0	0	1,258	34	31	65	85	1,174	0	0	31	175	245	-214					
564+50.00	1,268	1,237	31	55	0	0	1,237	32	31	63	82	1,155	0	0	31	176	246	-215					
565+00.00	1,286	1,256	30	55	0	0	1,256	31	30	61	79	1,177	0	0	30	178	249	-219					
565+50.00	1,370	1,346	24	55	0	0	1,346	16	24	40	52	1,294	0	0	24	178	249	-225					
566+00.00	1,480	1,470	10	56	0	0	1,470	2	10	12	16	1,454	0	0	10	180	252	-242					
566+50.00	808	808	0	56	0	0	808	0	0	0	0	808	0	0	0	91	127	-127					
567+00.00	34	34	0	28	0	0	34	0	0	0	0	34	0	0	0	0	0	0					
567+50.00	1	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0					
568+00.00	37	37	0	28	0	0	37	0	0	0	0	37	0	0	0	0	0	0					
568+50.00	317	317	0	56	0	0	317	0	0	0	0	317	0	0	0	28	39	-39					
569+00.00	475	467	8	55	0	0	467	29	8	37	48	419	0	0	8	57	80	-72					
569+50.00	574	550	24	52	0	0	550	63	24	87	113	437	0	0	24	59	83	-59					
570+00.00	661	623	38	52	0	0	623	108	38	146	190	433	0	0	38	60	84	-46					
570+50.00	569	534	35	54	0	0	534	80	35	115	150	385	0	0	35	65	91	-56					
571+00.00	576	554	22	54	0	0	554	9	22	31	40	514	0	0	22	68	95	-73					
571+50.00	649	634	15	54	0	0	634	3	15	18	23	611	0	0	15	66	92	-77					
572+00.00	906	900	6	55	0	0	900	1	6	7	9	891	0	0	6	103	144	-138					
572+50.00	1,147	1,139	8	55	0	0	1,139	7	8	15	20	1,120	0	0	8	143	200	-192					
573+00.00	1,188	1,172	16	54	0	0	1,172	21	16	37	48	1,124	0	0	16	141	197	-181					
573+50.00	1,116	1,099	17	55	0	0	1,099	23	17	40	52	1,047	0	0	17	131	183	-166					
574+00.00	1,035	1,019	16	55	0	0	1,019	18	16	34	44	975	0	0	16	123	172	-156					
574+50.00	928	912	16	55	0	0	912	12	16	28	36	876	0	0	16	116	162	-146					
575+00.00	673	657	16	55	0	0	657	6	16	22	29	628	0	0	16	102	143	-127					
575+50.00	445	417	28	55	0	0	417	12	28	40	52	365	0	0	28	98	137	-109					
576+00.00	294	244	50	55	0	0	244	69	50	119	155	89	0	0	50	74	104	-54					
576+50.00	181	151	30	55	0	0	151	60	30	90	117	34	0	0	30	43	60	-30					
577+00.00	185	185	0	55	0	0	185	0	0	0	0	185	0	0	0	43	60	-60					
577+50.00	228	228	0	55	0	0	228	0	0	0	0	228	0	0	0	45	63	-63					
578+00.00	241	241	0	56	0	0	241	6	0	6	8	233	0	0	0	47	66	-66					
578+50.00	263	263	0	74	0	0	263	6	0	6	8	255	0	0	0	49	69	-69					
579+00.00	265	265	0	60	0	0	265	0	0	0	0	265	0	0	0	48	67	-67					
579+50.00	208	208	0	28	0	0	208	0	0	0	0	208	0	0	0	44	62	-62					
580+00.00	170	170	0	28	0	0	170	0	0	0	0	170	0	0	0	41	57	-57					
580+50.00	187	187	0	28	0	0	187	1	0	1	1	186	0	0	0	47	66	-66					
581+00.00	113	113	0	28	0	0	113	1	0	1	1	112	0	0	0	27	38	-38					
581+50.00	16	16	0	28	0	0	16	0	0	0	0	16	0	0	0	0	0	0					
582+00.00	16	16	0	29	0	0	16	0	0	0	0	16	0	0	0	0	0	0					
582+50.00	10	10	0	37	0	0	10	0	0	0	0	10	0	0	0	0	0	0					
583+00.00	48	6	42	35	0	0	6	290	42	332	432	-426	0	0	42	23	32	10					
583+50.00	89	7	82	26	0	0	7	559	82	641	833	-826	231	328	82	45	63	19					
584+00.00	89	6	83	22	0	0	6	521	83	604	785	-779	183	280	83	44	62	21					
584+50.00	91	4	87	14	0	0	4	604	87	691	898	-894	295	391	87	49	69	18					
585+00.00	119	24	95	15	0	0	24	754	95	849	1,104	-1,080	502	598	95	63	88	7					
585+50.00	143	37	106	24	0	0	37	862	106	968	1,258	-1,221	657	753	106	77	108	-2					
586+00.00	152	45	107	28	0	0	45	903	107	1,010	1,313	-1,268	710	806	107	81	113	-7					
586+50.00	182	81	101	28	0	0	81	809	101	910	1,183	-1,102	580	676	101	80	112	-11					
587+00.00	192	96	96	28	0	0	96	662	96	758	985	-889	384	480	96	76	106	-10					
587+50.00	167	75	92	28	0	0	75	541	92	633	823	-748	220	316	92	70	98	-6					
588+00.00	155	70	85	34	0	0	70	407	85	492	640	-570	36	133	85	62	87	-2					
588+50.00	150	73	77	42	0	0	73	291	77	368	478	-405	0	0	77	52	73	4					
589+00.00	149	78	71	48	0	0	78	236	71	307	399	-321	0	0	71	47	66	5					
589+50.00	175	108	67	53	0	0	108	212	67	279	363	-255	0	0	67	53	74	-7					
590+00.00	231	165	66	54	0	0	165	204	66	270	351	-186	0	0	66	65	91	-25					
590+50.00	279	212	67	55	0	0	212	211	67	278	361	-149	0	0	67	79	111	-44					
591+00.00	346	286	60	55	0	0	286	177	60	237	308	-22	0	0	60	85	119	-59					
Subtotals:	33,330	30,993	2,337	2,889	0	0	30,993	9,858	2,337	0	12,195	15,854	15,140	3,797	4,759	2,337	5,467	7,654	-5,317				

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil				[20]	[21]	[22]
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]			
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink			
591+00.00	465	416	49	54	0	0	416	112	49		161	209	207	0	0	49	89	125	-76			
591+50.00	538	493	45	53	0	0	493	85	45		130	169	324	0	0	45	91	127	-82			
592+00.00	545	501	44	54	0	0	501	68	44		112	146	355	0	0	44	88	123	-79			
592+50.00	574	545	29	54	0	0	545	33	29		62	81	464	0	0	29	83	116	-87			
593+00.00	621	599	22	54	0	0	599	14	22		36	47	552	0	0	22	80	112	-90			
593+50.00	690	661	29	54	0	0	661	18	29		47	61	600	0	0	29	81	113	-84			
594+00.00	778	747	31	54	0	0	747	23	31		54	70	677	0	0	31	85	119	-88			
594+50.00	822	784	38	54	0	0	784	35	38		73	95	689	0	0	38	90	126	-88			
595+00.00	844	794	50	54	0	0	794	69	50		119	155	639	0	0	50	80	112	-62			
595+50.00	860	802	58	54	0	0	802	98	58		156	203	599	0	0	58	68	95	-37			
596+00.00	881	819	62	53	0	0	819	136	62		198	257	562	0	0	62	69	97	-35			
596+50.00	1,003	416	137	53	451	0	867	157	137		294	382	485	0	0	137	70	98	39			
597+00.00	1,147	0	210	54	937	0	937	153	210		363	472	465	0	0	210	73	102	108			
597+50.00	1,226	15	201	55	1,010	0	1,025	132	201		333	433	592	0	0	201	101	141	60			
598+00.00	1,286	24	211	55	1,052	0	1,076	108	211		319	415	661	0	0	211	136	190	21			
598+50.00	1,301	19	241	55	1,041	0	1,060	134	241		375	488	573	0	0	241	154	216	25			
599+00.00	1,238	13	261	54	964	0	977	173	261		434	564	413	0	59	261	158	221	40			
599+50.00	1,123	155	278	54	690	0	845	195	278		473	615	230	13	109	278	154	216	62			
600+00.00	1,020	294	261	53	465	0	759	190	261		451	586	173	0	79	261	141	197	64			
600+50.00	865	247	224	54	394	0	641	150	224		374	486	155	0	0	224	106	148	76			
601+00.00	681	199	217	55	265	0	464	111	217		328	426	38	0	0	217	82	115	102			
601+50.00	475	103	143	55	229	0	332	115	143		258	335	-3	0	0	143	72	101	42			
602+00.00	347	19	63	54	265	0	284	109	63		172	224	60	0	0	63	64	90	-27			
602+50.00	378	19	62	52	296	0	315	107	62		169	220	95	0	0	62	65	91	-29			
603+00.00	511	17	66	52	428	0	445	167	66		233	303	142	0	0	66	78	109	-43			
603+50.00	841	414	162	53	265	0	679	249	162		411	534	145	0	30	162	99	139	23			
604+00.00	1,177	413	261	53	503	0	916	312	261		573	745	171	143	239	261	120	168	93			
605+00.00	1,227	15	180	53	1,032	0	1,047	442	180		622	809	238	207	303	180	136	190	-10			
605+50.00	1,107	15	91	54	1,000	0	1,015	541	91		632	822	193	218	315	91	139	195	-104			
606+00.00	1,018	15	93	55	909	0	924	552	93		645	839	86	235	332	93	128	179	-86			
606+50.00	949	416	95	55	438	0	854	610	95		705	917	-63	315	411	95	119	167	-72			
607+00.00	844	686	158	55	0	0	886	722	158		880	1,144	-458	541	637	158	109	153	6			
607+50.00	620	394	226	55	0	0	394	800	226		1,026	1,334	-940	732	828	226	92	129	97			
608+00.00	379	211	168	56	0	0	211	694	168		862	1,121	-910	519	615	168	78	109	59			
608+50.00	303	197	106	55	0	0	197	621	106		727	945	-748	343	439	106	76	106	-1			
609+00.00	303	195	108	53	0	0	195	658	108		766	996	-801	393	489	108	80	112	-4			
609+50.00	300	194	106	52	0	0	194	621	106		727	945	-751	343	439	106	80	112	-6			
610+00.00	290	186	104	54	0	0	186	564	104		668	868	-682	265	363	104	81	113	-10			
610+50.00	310	211	99	53	0	0	211	504	99		603	784	-573	181	277	99	89	125	-26			
611+00.00	394	303	91	53	0	0	303	430	91		521	677	-374	75	172	91	100	140	-49			
611+50.00	481	392	89	54	0	0	392	383	89		472	614	-222	12	108	89	110	154	-65			
612+00.00	534	447	87	52	0	0	447	355	87		442	575	-128	0	69	87	116	162	-75			
612+50.00	562	479	83	52	0	0	479	322	83		405	527	-48	0	21	83	116	162	-79			
613+00.00	578	496	82	51	0	0	496	288	82		370	481	15	0	0	82	115	161	-79			
613+50.00	605	523	82	52	0	0	523	244	82		326	424	99	0	0	82	113	158	-76			
614+00.00	707	637	70	54	0	0	637	180	70		250	325	312	0	0	70	114	160	-90			
614+50.00	869	815	54	54	0	0	815	134	54		188	244	571	0	0	54	119	167	-113			
615+00.00	1,072	1,025	47	54	0	0	1,025	113	47		160	208	817	0	0	47	124	174	-127			
615+50.00	1,271	1,225	46	54	0	0	1,225	111	46		157	204	1,021	0	0	46	128	179	-133			
616+00.00	1,448	1,375	73	53	0	0	1,375	123	73		196	255	1,120	0	0	73	130	182	-109			
616+50.00	1,647	1,551	96	53	0	0	1,551	123	96		219	285	1,266	0	0	96	133	186	-90			
617+00.00	1,833	1,765	68	53	0	0	1,765	124	68		192	250	1,515	0	0	68	137	192	-124			
617+50.00	2,097	2,007	90	53	0	0	2,007	113	90	Dike 10	203	264	1,743	0	0	90	142	199	-109			
618+00.00	2,416	2,282	134	52	0	0	2,282	80	134		224	291	1,991	0	0	134	147	206	-72			
618+50.00	2,694	2,563	131	50	0	0	2,563	64	131		195	254	2,310	0	0	131	151	211	-80			
619+00.00	2,995	2,892	103	51	0	0	2,892	67	103		170	221	2,671	0	0	103	157	220	-117			
619+50.00	3,167	3,092	75	54	0	0	3,092	64	75		139	181	2,911	0	0	75	170	238	-163			
620+00.00	3,018	2,944	74	58	0	0	2,944	57	74		131	170	2,774	0	0	74	172	241	-167			
620+50.00	2,062	1,993	69	58	0	0	1,993	48	69		117	152	1,841	0	0	69	83	116	-47			
621+00.00	2,719	2,684	35	54	0	0	2,684	23	35		58	75	2,609	0	0	35	0	0	35			
621+50.00	3,879	3,879	0	59	0	0	3,879	0	0		0	0	3,879	0	0	0	0	0	0			
622+00.00	3,333	3,321	12	63	0	0	3,321	3	12		15	20	3,302	0	0	12	65	91	-79			
622+50.00	3,629	3,617	12	55	0	0	3,617	3	12		15	20	3,598	0	0	12	140	196	-184			
623+00.00	4,669	4,650	19	51	0	0	4,650	0	19		19	25	4,625	0	0	19	155	217	-198			
I-80 Section A Totals:	111,896	90,213	9,048	6,339	12,634	0	102,847	23,892	9,048	10	32,950	42,835	60,012	8,332	11,092	9,048	12,188	17,064	-8,016			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink			
I-80 Section B																						
630+73.92	11	10	0	14	0	0	10	0			0	0	10	0	0	0	0	0	0			
631+00.00	21	21	0	27	0	0	21	0			0	0	21	0	0	0	0	0	0			
631+50.00	18	19	0	27	0	0	19	0			0	0	19	0	0	0	0	0	0			
632+00.00	12	11	0	27	0	0	11	0			0	0	11	0	0	0	0	0	0			
632+50.00	9	9	0	27	0	0	9	0			0	0	9	0	0	0	0	0	0			
633+00.00	10	10	0	25	0	0	10	7			7	9	1	0	0	0	0	0	0			
634+00.00	41	11	30	22	0	0	11	22	23		45	59	-48	0	29	30	0	0	30			
634+50.00	46	11	35	22	0	0	11	35	28		63	82	-71	21	52	35	0	0	35			
635+00.00	47	9	38	24	0	0	9	51	32		83	108	-99	47	78	38	0	0	38			
635+50.00	45	7	38	27	0	0	7	182	33		215	280	-273	220	251	38	0	0	38			
636+00.00	41	7	34	27	0	0	7	163	29		192	250	-243	189	220	34	0	0	34			
636+14.43	1	1	0	4	0	0	1	3			3	4	-3	0	0	0	0	0	0			
I-80 Section B Totals:	302	126	175	273	0	0	126	463	145	0	608	791	-665	476	630	175	0	0	175			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil				[20]	[21]	[22]	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]				
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink				
I-80 Section F-2 Lt																							
684+99.99	49	49	0	45	0	0	49	0			0	0	49	0	0	0	0	0	0				
685+50.00	50	51	0	43	0	0	51	0			0	0	51	0	0	0	0	0	0				
686+00.00	49	49	0	42	0	0	49	0			0	0	49	0	0	0	0	0	0				
686+50.00	46	46	0	41	0	0	46	0			0	0	46	0	0	0	0	0	0				
687+00.00																							
I-80 Section F-2 Lt Totals:	194	195	0	171	0	0	195	0	0	0	0	0	195	0	0	0	0	0	0				

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil				[20]	[21]	[22]	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]				
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink				
I-80 Sec F-2 Rt																							
685+00.00	131	26	106	54	0	0	26	1,047	100		1,147	1,491	-1,465	902	1,322	106	104	146	-40				
685+50.00	140	30	110	43	0	0	30	1,118	104		1,222	1,589	-1,559	902	1,418	110	111	155	-45				
686+00.00	140	23	116	43	0	0	23	1,209	112		1,321	1,717	-1,694	902	1,547	116	121	169	-53				
686+50.00	140	20	120	41	0	0	20	1,265	116		1,381	1,795	-1,775	0	0	120	128	179	-59				
686+99.99																							
I-80 Sec F-2 Rt																							
Totals:	551	99	452	181	0	0	99	4,639	432	0	5,071	6,593	-6,494	2,707	4,288	452	464	650	-198				

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink			
I-80 Sec G Lt Stg 2																						
687+00.00	358	358	0	205	0	0	358	0			0	0	358	0	0	0	0	0	0			
687+50.00	356	355	0	206	0	0	355	0			0	0	355	0	0	0	0	0	0			
688+00.00	316	315	0	245	0	0	315	0			0	0	315	0	0	0	0	0	0			
688+50.00	318	318	0	245	0	0	318	0			0	0	318	0	0	0	0	0	0			
689+00.00	368	368	0	198	0	0	368	0			0	0	368	0	0	0	0	0	0			
689+50.00	389	389	0	180	0	0	389	0			0	0	389	0	0	0	0	0	0			
690+00.00	299	299	0	142	0	0	299	0			0	0	299	0	0	0	0	0	0			
690+50.00	181	181	0	104	0	0	181	0			0	0	181	0	0	0	0	0	0			
691+00.00	56	56	0	32	0	0	56	1			1	1	55	0	0	0	0	0	0			
691+33.95																						
I-80 Sec G Lt Stg 2 Totals:	2,641	2,639	0	1,557	0	0	2,639	1	0	0	1	2	2,638	0	0	0	0	0	0			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink			
I-80 Sec G Lt Stg 3																						
687+00.00	55	55	0	33	0	0	55	0			0	0	55	0	0	0	0	0	0			
687+50.00	54	54	0	33	0	0	54	0			0	0	54	0	0	0	0	0	0			
688+00.00	54	54	0	33	0	0	54	0			0	0	54	0	0	0	0	0	0			
688+50.00	53	53	0	33	0	0	53	0			0	0	53	0	0	0	0	0	0			
689+00.00	52	52	0	33	0	0	52	0			0	0	52	0	0	0	0	0	0			
689+50.00	54	54	0	33	0	0	54	0			0	0	54	0	0	0	0	0	0			
690+00.00	8	8	0	5	0	0	8	0			0	0	8	0	0	0	0	0	0			
690+13.90																						
I-80 Sec G Lt Stg 3																						
Totals:	330	330	0	203	0	0	330	0	0	0	0	0	330	0	0	0	0	0	0			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink			
I-80 Sec G Rt																						
697+11.05	41	8	34	6	0	0	8	242	29		271	352	-344	13	164	34	39	55	-21			
697+50.00	140	26	113	17	0	0	26	1,389	99		1,488	1,934	-1,908	1,131	1,694	113	125	175	-62			
698+00.00	149	28	121	19	0	0	28	1,673	104		1,777	2,310	-2,282	1,131	2,068	121	127	178	-57			
698+50.00	121	23	98	19	0	0	23	1,051	81		1,132	1,472	-1,449	1,037	1,230	98	97	136	-38			
699+00.00	111	23	89	19	0	0	23	875	72		947	1,231	-1,208	797	989	89	85	119	-30			
699+50.00	105	23	82	18	0	0	23	773	64		837	1,088	-1,065	654	846	82	77	108	-26			
700+00.00	98	21	77	18	0	0	21	666	58		724	941	-920	508	701	77	71	99	-22			
700+50.00	49	10	39	9	0	0	10	314	29		343	446	-436	0	0	39	37	52	-13			
I-80 Sec G Rt																						
Totals:	814	162	653	125	0	0	162	6,983	536	0	7,519	9,775	-9,613	5,272	7,693	653	658	922	-269			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink			
I-80 Sec H Stg 1																						
709+29.30	27	27	0	9	0	0	27	0			0	0	27	0	0	0	0	0	0			
709+50.00	57	56	0	3	0	0	56	0			0	0	56	0	0	0	0	0	0			
710+00.00	43	43	0	3	0	0	43	0			0	0	33	0	0	0	0	0	0			
710+50.00	67	52	15	3	0	0	52	24			24	31	21	0	0	15	1	1	14			
711+00.00	73	54	19	4	0	0	54	32	2		34	44	10	0	0	19	8	11	8			
711+50.00	76	58	19	4	0	0	58	27			27	35	23	0	0	19	21	29	-10			
712+00.00	107	94	13	4	0	0	94	19			19	25	69	0	0	13	32	45	-32			
712+50.00	168	161	8	4	0	0	161	14			14	18	143	0	0	8	38	53	-45			
713+00.00	242	234	8	4	0	0	234	8			8	10	224	0	0	8	43	60	-52			
713+50.00	302	298	4	5	0	0	298	2			2	3	295	0	0	4	48	67	-63			
714+00.00	340	339	0	4	0	0	339	0			0	0	339	0	0	0	51	71	-71			
714+50.00	360	361	0	4	0	0	361	0			0	0	361	0	0	0	50	70	-70			
715+00.00	370	370	0	4	0	0	370	0			0	0	370	0	0	0	49	69	-69			
715+50.00	350	350	0	4	0	0	350	0			0	0	350	0	0	0	47	66	-66			
716+00.00	322	323	0	4	0	0	323	0			0	0	323	0	0	0	45	63	-63			
716+50.00	316	316	0	5	0	0	316	0			0	0	316	0	0	0	45	63	-63			
717+00.00	330	330	0	6	0	0	330	0			0	0	330	0	0	0	46	64	-64			
717+50.00	346	347	0	7	0	0	347	0			0	0	347	0	0	0	48	67	-67			
718+00.00	320	320	0	13	0	0	320	0			0	0	320	0	0	0	47	66	-66			
718+50.00	276	276	0	17	0	0	276	0			0	0	276	0	0	0	46	64	-64			
719+00.00	231	230	0	14	0	0	230	1			1	1	229	0	0	0	44	62	-62			
719+50.00	176	176	0	14	0	0	176	5			5	7	170	0	0	0	41	57	-57			
720+00.00	112	112	0	16	0	0	112	11			11	14	98	0	0	0	36	50	-50			
720+50.00	58	59	0	21	0	0	59	14			14	18	41	0	0	0	22	31	-31			
721+00.00	36	37	0	24	0	0	37	9			9	12	25	0	0	0	9	13	-13			
721+50.00	38	38	0	23	0	0	38	2			2	3	35	0	0	0	3	4	-4			
722+00.00	44	44	0	25	0	0	44	0			0	0	44	0	0	0	0	0	0			
I-80 Sec H Stg 1 Totals:	5,187	5,105	86	248	0	0	5,105	176	2	0	178	232	4,874	0	0	86	820	1,148	-1,062			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink			
I-80 Sec H Stg 2																						
700+75.00	54	15	39	0	0	0	15	594	28		622	809	-794	651	711	39	39	55	-16			
701+00.00	112	31	81	0	0	0	31	695	60		755	982	-951	668	789	81	80	112	-31			
701+50.00	108	32	76	0	0	0	32	628	55		683	888	-856	575	694	76	72	101	-25			
702+00.00	101	30	72	0	0	0	30	468	52		520	676	-646	363	484	72	62	87	-15			
702+50.00	92	28	64	0	0	0	28	297	46		343	446	-418	133	254	64	49	69	-5			
703+00.00	75	32	44	0	0	0	32	135	22		157	204	-172	0	12	44	28	39	5			
704+00.00	124	108	16	0	0	0	108	31			31	40	68	0	0	16	24	34	-18			
704+50.00	291	291	0	1	0	0	291	0			0	0	291	0	0	0	36	50	-58			
705+00.00	491	492	0	1	0	0	492	0			0	0	492	0	0	0	43	60	-60			
705+50.00	698	698	0	1	0	0	698	0			0	0	698	0	0	0	50	70	-70			
706+00.00	901	901	0	1	0	0	901	0			0	0	901	0	0	0	55	77	-77			
706+50.00	1,039	1,039	0	0	0	0	1,039	0			0	0	1,039	0	0	0	58	81	-81			
707+00.00	1,225	1,225	0	0	0	0	1,225	0			0	0	1,225	0	0	0	64	90	-90			
707+50.00	1,570	1,570	0	0	0	0	1,570	0			0	0	1,570	0	0	0	72	101	-101			
708+00.00	1,688	1,688	0	4	0	0	1,688	0			0	0	1,688	0	0	0	76	106	-106			
708+33.07	881	881	0	2	0	0	881	0			0	0	881	0	0	0	45	63	-63			
I-80 Sec H Stg 2 Totals:	9,450	9,061	392	10	0	0	9,061	2,848	263	0	3,111	4,045	5,017	2,390	2,944	392	853	1,195	-803			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink			
I-380 Section C2																						
1189+00.00	9	9	0	2	0	0	9	0			0	0	9	0	0	0	0	0	0			
1190+00.00	581	285	296	14	0	0	285	1,701	166		1,867	2,427	-2,142	1,271	1,776	296	137	192	104			
1190+50.00	1,105	518	586	18	0	0	518	3,427	311		3,738	4,859	-4,341	3,702	4,208	586	289	405	181			
1191+00.00	1,061	675	386	19	0	0	675	3,518	183		3,701	4,811	-4,136	3,654	4,160	386	310	434	-48			
1191+50.00	1,075	782	293	19	0	0	782	3,627	131		3,758	4,885	-4,103	3,728	4,234	293	319	447	-154			
1192+00.00	1,128	714	414	19	0	0	714	3,675	201		3,876	5,039	-4,325	3,883	4,389	414	327	458	-44			
1192+50.00	1,052	725	327	18	0	0	725	3,727	166		3,893	5,061	-4,336	3,658	4,410	327	335	469	-142			
1193+00.00	958	731	227	19	0	0	731	3,865	121		3,986	5,182	-4,451	3,658	4,531	227	340	476	-249			
1193+50.00	950	713	236	19	0	0	713	4,028	131		4,159	5,407	-4,694	3,658	4,755	236	348	487	-251			
1194+00.00	936	691	245	19	0	0	691	4,174	138		4,312	5,606	-4,915	3,658	4,954	245	358	501	-256			
1194+50.00	884	632	252	19	0	0	632	4,395	149		4,544	5,907	-5,275	3,658	5,256	252	362	507	-255			
1195+00.00	829	573	256	19	0	0	573	4,624	161		4,785	6,221	-5,648	3,658	5,571	256	360	504	-248			
1195+50.00	799	538	261	19	0	0	538	6,173	170		6,343	8,246	-7,708	3,658	7,596	261	357	500	-239			
1196+00.00	788	517	271	19	0	0	517	6,365	184		6,549	8,514	-7,997	3,658	7,862	271	356	498	-227			
1196+50.00	740	486	255	18	0	0	486	5,293	180		5,473	7,115	-6,629	3,658	6,465	255	355	497	-242			
1197+00.00	698	439	259	18	0	0	439	5,675	189		5,864	7,623	-7,184	3,658	6,973	259	354	496	-237			
1197+50.00	734	447	287	18	0	0	447	6,121	212		6,333	8,233	-7,786	3,658	7,583	287	351	491	-204			
1198+00.00	310	195	116	7	0	0	195	2,576	85		2,661	3,459	-3,264	0	0	116	140	196	-80			
1198+40.32																						
I-380 Section C2 Totals:	14,637	9,670	4,967	303	0	0	9,670	72,964	2,878	0	75,842	98,595	-88,925	56,480	84,723	4,967	5,398	7,558	-2,591			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil				[20]	[21]	[22]	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]				
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink				
I-380 Sec C2.5 Rt																							
1199+40.00	7	0	7	0	0	0	0	15	7		22	29	-29	0	0	7	0	0	7				
1199+50.00	145	0	145	0	0	0	0	591	144		735	956	-956	306	571	145	56	78	67				
1200+00.00	22	0	22	0	0	0	0	107	22		129	168	-168	103	129	22	11	15	7				
1200+05.00	242	0	242	0	0	0	0	1,909	241		2,150	2,795	-2,795	2,209	2,447	242	113	158	84				
1200+50.00	316	0	316	0	0	0	0	3,127	314		3,441	4,473	-4,473	2,118	4,087	316	136	190	126				
1201+00.00	314	0	314	0	0	0	0	3,092	312		3,404	4,425	-4,425	2,118	4,040	314	134	188	126				
1201+50.00	311	0	311	0	0	0	0	3,004	309		3,313	4,307	-4,307	2,118	3,921	311	131	183	128				
1202+00.00	305	0	305	0	0	0	0	2,854	304		3,158	4,105	-4,105	2,118	3,719	305	128	179	126				
1202+50.00	296	0	296	0	0	0	0	2,652	295		2,947	3,831	-3,831	2,118	3,446	296	123	172	124				
1203+00.00	285	0	285	0	0	0	0	2,421	284		2,705	3,517	-3,517	2,118	3,130	285	117	164	121				
1203+50.00	269	0	269	0	0	0	0	2,191	268		2,459	3,197	-3,197	2,118	2,811	269	108	151	118				
1204+00.00	253	0	253	0	0	0	0	2,099	251		2,350	3,055	-3,055	2,405	2,669	253	91	127	126				
1204+50.00	89	0	89	0	0	0	0	649	88		737	958	-958	724	819	89	23	32	57				
1204+68.00	42	0	42	0	0	0	0	253	41		294	382	-382	0	0	42	8	11	31				
1204+85.00																							
I-380 Sec C2.5 Rt																							
Totals:	2,896	0	2,896	0	0	0	0	24,964	2,880	0	27,844	36,198	-36,198	20,570	31,789	2,896	1,179	1,651	1,246				

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil				[20]	[21]	[22]	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]				
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink				
I-380 Sec C2.5 Lt																							
1199+75.00	26	0	26	0	0	0	0	212	26		238	309	-309	0	79	26	23	32	-6				
1200+00.00	19	0	19	0	0	0	0	207	19		226	294	-294	217	247	19	9	13	6				
1200+05.00	251	0	251	0	0	0	0	3,328	250		3,578	4,651	-4,651	2,220	4,239	251	107	150	101				
1200+50.00	283	0	283	0	0	0	0	4,001	282		4,283	5,568	-5,568	2,467	5,110	283	148	207	76				
1201+00.00	183	0	183	0	0	0	0	3,776	182		3,958	5,145	-5,145	2,467	4,689	183	144	202	-19				
1201+50.00	83	1	83	0	0	0	1	3,589	82		3,671	4,772	-4,771	2,467	4,315	83	142	199	-116				
1202+00.00	124	0	123	0	0	0	0	3,468	122		3,590	4,667	-4,667	2,467	4,209	123	141	197	-74				
1202+50.00	163	0	162	0	0	0	0	3,385	161		3,546	4,610	-4,610	2,467	4,152	162	140	196	-34				
1203+00.00	162	0	161	0	0	0	0	3,272	160		3,432	4,462	-4,462	2,467	4,004	161	138	193	-32				
1203+50.00	161	0	160	0	0	0	0	3,123	159		3,282	4,267	-4,267	2,467	3,809	160	134	188	-28				
1204+00.00	32	0	32	0	0	0	0	609	32		641	833	-833	493	741	32	27	38	-6				
1204+10.00	25	0	25	0	0	0	0	485	25		510	663	-663	394	589	25	22	31	-6				
1204+18.00	200	0	200	0	0	0	0	3,846	198		4,044	5,257	-5,257	0	0	200	171	239	-39				
I-380 Sec C2.5 Lt																							
Totals:	1,712	1	1,708	0	0	0	1	33,301	1,698	0	34,999	45,499	-45,498	20,596	36,185	1,708	1,346	1,885	-177				

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink			
I-380 Section C3																						
1206+50.00	188	106	82	0	0	0	106	881	56		937	1,218	-1,112	569	909	82	62	87	-5			
1206+82.00	215	126	89	0	0	0	126	1,162	60		1,222	1,589	-1,463	320	1,414	89	78	109	-20			
1207+00.00	673	447	226	0	0	0	447	2,785	141		2,926	3,804	-3,357	891	3,322	226	234	328	-102			
1207+50.00	900	702	198	0	0	0	702	1,560	105		1,665	2,165	-1,463	891	1,682	198	223	312	-114			
1208+00.00	1,302	1,144	158	0	0	0	1,144	1,029	60		1,089	1,416	-272	621	935	158	218	305	-147			
1208+50.00	1,801	1,682	119	0	0	0	1,682	674	3		677	880	802	85	398	119	219	307	-188			
1209+00.00	2,268	2,172	96	0	0	0	2,172	491			491	638	1,534	0	0	96	221	309	-213			
1209+50.00	2,483	2,358	125	0	0	0	2,358	390			390	507	1,851	0	0	125	211	295	-170			
1210+00.00	2,441	2,285	157	0	0	0	2,285	313			313	407	1,878	0	0	157	195	273	-116			
1210+50.00	2,248	2,103	145	0	0	0	2,103	276			276	359	1,744	0	0	145	184	258	-113			
1211+00.00	1,919	1,776	142	0	0	0	1,776	271			271	352	1,424	0	0	142	173	242	-100			
1211+50.00	1,564	1,419	146	0	0	0	1,419	253			253	329	1,090	0	0	146	156	218	-72			
1212+00.00	1,307	1,196	111	0	0	0	1,196	231			231	300	896	0	0	111	139	195	-84			
1212+50.00	1,224	1,147	76	0	0	0	1,147	220			220	286	861	0	0	76	140	196	-120			
1213+00.00	1,357	1,288	69	3	0	0	1,288	209			209	272	1,016	0	0	69	154	216	-147			
1213+50.00	1,622	1,555	66	6	0	0	1,555	215			215	280	1,276	0	0	66	185	259	-193			
1214+00.00	2,025	1,955	70	6	0	0	1,955	220			220	286	1,669	0	0	70	223	312	-242			
1214+50.00	2,681	2,612	69	6	0	0	2,612	217			217	282	2,330	0	0	69	256	358	-289			
1215+00.00	3,399	3,330	68	6	0	0	3,330	224			224	291	3,039	0	0	68	278	389	-321			
1215+50.00	3,943	3,872	71	7	0	0	3,872	229			229	298	3,574	0	0	71	286	400	-329			
1216+00.00	4,352	4,277	74	7	0	0	4,277	228			228	296	3,981	0	0	74	294	412	-338			
1216+50.00	4,619	4,543	76	7	0	0	4,543	222			222	289	4,254	0	0	76	296	414	-338			
1217+00.00	4,548	4,470	78	7	0	0	4,470	202			202	263	4,207	0	0	78	290	406	-328			
1217+50.00	3,242	3,184	59	3	0	0	3,184	139			139	181	3,003	0	0	59	221	309	-250			
I-380 Section C3 Totals:	52,321	49,749	2,570	58	0	0	49,749	12,641	425	0	13,066	16,986	32,764	3,377	8,660	2,570	4,936	6,911	-4,341			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil				[20]	[21]	[22]	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]				
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink				
I-380 Sec B Outside																							
1121+67.62	86	23	63	0	0	0	23	98	35		133	173	-150	125	148	63	48	67	-4				
1122+00.00	232	63	169	0	0	0	63	292	108		400	520	-457	289	482	169	133	186	-17				
1122+50.00	226	62	164	0	0	0	62	268	113		381	495	-433	423	459	164	126	176	-12				
1123+00.00	215	55	161	0	0	0	55	228	116		344	447	-392	374	411	161	120	168	-7				
1123+50.00	196	38	158	0	0	0	38	189	119		308	400	-362	328	364	158	115	161	-3				
1124+00.00	176	22	154	0	0	0	22	146	122		268	348	-326	274	311	154	108	151	3				
1124+50.00	157	11	146	0	0	0	11	83	108		191	248	-237	176	212	146	107	150	-4				
1125+00.00	144	16	128	0	0	0	16	44	88		132	172	-156	98	134	128	97	136	-8				
1125+50.00	146	41	105	0	0	0	41	32	54		86	112	-71	39	75	105	90	126	-21				
1126+00.00	47	14	33	0	0	0	14	9	15		24	31	-17	0	0	33	27	38	-5				
1126+23.64																							
I-380 Sec B Outside Totals:	1,625	345	1,281	0	0	0	345	1,389	878	0	2,267	2,948	-2,603	2,125	2,597	1,281	971	1,360	-79				

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink			
I-380 Sec A Median																						
1122+00.00	166	166	0	0	0	0	166	0			0	0	166	0	0	0	0	0	0			
1122+50.00	167	167	0	0	0	0	167	0			0	0	167	0	0	0	0	0	0			
1123+00.00	173	173	0	0	0	0	173	0			0	0	173	0	0	0	0	0	0			
1123+50.00	170	170	0	0	0	0	170	0			0	0	170	0	0	0	0	0	0			
1124+00.00	163	163	0	0	0	0	163	0			0	0	163	0	0	0	0	0	0			
1124+50.00	169	169	0	0	0	0	169	0			0	0	169	0	0	0	0	0	0			
1125+00.00	175	176	0	0	0	0	176	0			0	0	176	0	0	0	0	0	0			
1125+50.00	170	170	0	0	0	0	170	0			0	0	170	0	0	0	0	0	0			
1126+00.00	167	167	0	0	0	0	167	0			0	0	167	0	0	0	0	0	0			
1126+50.00	170	171	0	0	0	0	171	0			0	0	171	0	0	0	0	0	0			
1127+00.00	196	196	0	0	0	0	196	0			0	0	196	0	0	0	0	0	0			
1127+50.00	200	200	0	0	0	0	200	0			0	0	200	0	0	0	0	0	0			
1128+00.00	170	170	0	0	0	0	170	0			0	0	170	0	0	0	0	0	0			
1128+50.00	157	157	0	0	0	0	157	0			0	0	157	0	0	0	0	0	0			
1129+00.00	151	151	0	0	0	0	151	0			0	0	151	0	0	0	0	0	0			
1129+50.00	143	143	0	0	0	0	143	0			0	0	143	0	0	0	0	0	0			
1130+00.00	134	133	0	0	0	0	133	0			0	0	133	0	0	0	0	0	0			
1130+50.00	125	124	0	0	0	0	124	0			0	0	124	0	0	0	0	0	0			
1131+00.00	116	116	0	0	0	0	116	0			0	0	116	0	0	0	0	0	0			
1131+50.00	115	114	0	0	0	0	114	0			0	0	114	0	0	0	0	0	0			
1132+00.00	114	113	0	0	0	0	113	0			0	0	113	0	0	0	0	0	0			
1132+50.00	110	110	0	0	0	0	110	0			0	0	110	0	0	0	0	0	0			
1133+00.00	110	110	0	0	0	0	110	0			0	0	110	0	0	0	0	0	0			
1133+50.00	112	112	0	0	0	0	112	0			0	0	112	0	0	0	0	0	0			
1134+00.00	117	117	0	0	0	0	117	0			0	0	117	0	0	0	0	0	0			
1134+50.00	123	123	0	0	0	0	123	0			0	0	123	0	0	0	0	0	0			
1135+00.00	125	125	0	0	0	0	125	0			0	0	125	0	0	0	0	0	0			
1135+50.00	123	123	0	0	0	0	123	0			0	0	123	0	0	0	0	0	0			
1136+00.00	127	127	0	0	0	0	127	0			0	0	127	0	0	0	0	0	0			
1136+50.00	140	140	0	0	0	0	140	0			0	0	140	0	0	0	0	0	0			
1137+00.00	151	151	0	0	0	0	151	0			0	0	151	0	0	0	0	0	0			
1137+50.00	148	148	0	0	0	0	148	0			0	0	148	0	0	0	0	0	0			
1138+00.00	138	138	0	0	0	0	138	0			0	0	138	0	0	0	0	0	0			
1138+50.00	133	133	0	0	0	0	133	0			0	0	133	0	0	0	0	0	0			
1139+00.00	127	127	0	0	0	0	127	0			0	0	127	0	0	0	0	0	0			
1139+50.00	119	119	0	0	0	0	119	0			0	0	119	0	0	0	0	0	0			
1140+00.00	121	121	0	0	0	0	121	0			0	0	121	0	0	0	0	0	0			
1140+50.00	115	115	0	0	0	0	115	0			0	0	115	0	0	0	0	0	0			
1141+00.00	96	96	0	0	0	0	96	0			0	0	96	0	0	0	0	0	0			
1141+50.00	93	93	0	0	0	0	93	0			0	0	93	0	0	0	0	0	0			
1142+00.00	99	99	0	0	0	0	99	0			0	0	99	0	0	0	0	0	0			
1142+50.00	96	96	0	0	0	0	96	0			0	0	96	0	0	0	0	0	0			
1143+00.00	90	90	0	0	0	0	90	0			0	0	90	0	0	0	0	0	0			
1143+50.00	83	83	0	0	0	0	83	0			0	0	83	0	0	0	0	0	0			
1144+00.00	77	77	0	0	0	0	77	0			0	0	77	0	0	0	0	0	0			
1144+50.00	81	81	0	0	0	0	81	0			0	0	81	0	0	0	0	0	0			
1145+00.00	88	89	0	0	0	0	89	0			0	0	89	0	0	0	0	0	0			
1145+50.00	91	92	0	0	0	0	92	0			0	0	92	0	0	0	0	0	0			
1146+00.00	94	95	0	0	0	0	95	0			0	0	95	0	0	0	0	0	0			
1146+50.00																						
I-380 Sec A Median Totals:	6,438	6,439	0	0	0	0	6,439	0	0	0	0	0	6,439	0	0	0	0	0	0			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink			
I-380 Sec B Median																						
1146+60.00	82	82	0	0	0	0	82	4			4	5	77	0	0	0	0	0	0			
1147+00.00	100	100	0	0	0	0	100	0			0	0	100	0	0	0	0	0	0			
1147+50.00	100	100	0	0	0	0	100	0			0	0	100	0	0	0	0	0	0			
1148+00.00	104	105	0	0	0	0	105	0			0	0	105	0	0	0	0	0	0			
1148+50.00	107	108	0	0	0	0	108	0			0	0	108	0	0	0	0	0	0			
1149+00.00	102	103	0	0	0	0	103	0			0	0	103	0	0	0	0	0	0			
1149+50.00	97	97	0	0	0	0	97	0			0	0	97	0	0	0	0	0	0			
1150+00.00	107	107	0	0	0	0	107	0			0	0	107	0	0	0	0	0	0			
1150+50.00	121	121	0	0	0	0	121	0			0	0	121	0	0	0	0	0	0			
1151+00.00	131	131	0	0	0	0	131	0			0	0	131	0	0	0	0	0	0			
1151+50.00	132	132	0	0	0	0	132	0			0	0	132	0	0	0	0	0	0			
1152+00.00	75	76	0	0	0	0	76	0			0	0	76	0	0	0	0	0	0			
1152+29.19																						
I-380 Sec B Median Totals:	1,258	1,262	0	0	0	0	1,262	4	0	0	4	6	1,257	0	0	0	0	0	0			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink			
I-380 Sec B2 Median																						
1154+80.00	39	38	0	0	0	0	38	0			0	0	38	0	0	0	0	0	0			
1155+00.00	84	84	0	0	0	0	84	0			0	0	84	0	0	0	0	0	0			
1155+50.00	66	66	0	0	0	0	66	0			0	0	66	0	0	0	0	0	0			
1156+00.00	41	42	0	0	0	0	42	1			1	1	41	0	0	0	0	0	0			
1156+50.00	18	18	0	0	0	0	18	3			3	4	14	0	0	0	0	0	0			
1157+00.00	29	6	23	0	0	0	6	13	7		20	26	-20	0	0	23	0	0	0			23
1157+50.00	32	2	30	0	0	0	2	33	21		54	70	-68	0	0	30	0	0	0			30
1158+00.00	35	1	35	0	0	0	1	49	29		78	101	-100	0	0	35	0	0	0			35
1158+50.00	41	0	41	0	0	0	0	50	37		87	113	-113	0	0	41	0	0	0			41
1159+00.00	44	0	44	0	0	0	0	35	40		75	98	-98	0	0	44	0	0	0			44
1159+50.00	27	1	27	0	0	0	1	18	9		27	35	-34	0	0	27	0	0	0			27
1160+00.00	11	4	7	0	0	0	4	13			13	17	-13	0	0	7	0	0	0			7
1160+50.00	14	4	10	0	0	0	4	13			13	17	-13	0	0	10	0	0	0			10
1161+00.00	19	2	16	0	0	0	2	11			11	14	-12	0	0	16	0	0	0			16
1161+50.00																						
I-380 Sec B2 Median Totals:	500	268	233	0	0	0	268	239	143	0	382	497	-229	0	0	233	0	0	233			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink			
I-380 Sec B3 Median																						
1165+50.00	58	58	0	0	0	0	58	4			4	5	53	0	0	0	0	0	0			
1166+00.00	33	34	0	0	0	0	34	5			5	7	28	0	0	0	0	0	0			
1166+50.00	26	26	0	0	0	0	26	5			5	7	20	0	0	0	0	0	0			
1167+00.00	22	21	0	0	0	0	21	4			4	5	16	0	0	0	0	0	0			
1167+50.00	28	16	12	0	0	0	16	4			4	5	11	0	0	12	0	0	0	12		
1168+00.00	61	22	39	0	0	0	22	3	8		11	14	8	0	0	39	0	0	0	39		
1168+50.00	73	34	39	5	0	0	34	2	6		8	10	24	0	0	39	0	0	0	39		
1169+00.00	55	39	15	10	0	0	39	7			7	9	30	0	0	15	0	0	0	15		
1169+50.00																						
I-380 Sec B3 Median Totals:	356	250	105	15	0	0	250	34	14	0	48	63	188	0	0	105	0	0	105			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil					[20]	[21]	[22]
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink				
I-380 Sec B4 Median																							
1172+20.00	26	5	21	7	0	0	5	37	17		54	70	-65	0	0	21	0	0	21				
1172+50.00	45	10	35	11	0	0	10	48	28		76	99	-89	0	0	35	0	0	35				
1173+00.00	46	12	34	11	0	0	12	43	26		69	90	-78	0	0	34	0	0	34				
1173+50.00	46	13	34	11	0	0	13	47	26		73	95	-82	0	0	34	0	0	34				
1174+00.00	47	12	35	11	0	0	12	48	28		76	99	-87	0	0	35	0	0	35				
1174+50.00	46	11	35	11	0	0	11	49	28		77	100	-89	0	0	35	0	0	35				
1175+00.00	45	9	35	12	0	0	9	57	29		86	112	-103	0	0	35	0	0	35				
1175+50.00	45	8	36	12	0	0	8	63	31		94	122	-114	0	0	36	0	0	36				
1176+00.00	44	9	36	12	0	0	9	65	30		95	124	-115	0	0	36	0	0	36				
1176+50.00	41	5	36	6	0	0	5	70	32		102	133	-128	0	0	36	0	0	36				
1177+00.00	37	0	37	0	0	0	0	76	35		111	144	-144	0	0	37	0	0	37				
1177+50.00	37	0	37	0	0	0	0	79	35		114	148	-148	0	0	37	0	0	37				
1178+00.00	37	0	37	0	0	0	0	78	35		113	147	-147	0	0	37	0	0	37				
1178+50.00	37	0	37	0	0	0	0	73	35		108	140	-140	0	0	37	0	0	37				
1179+00.00	37	0	37	0	0	0	0	67	35		102	133	-133	0	0	37	0	0	37				
1179+50.00	36	0	36	0	0	0	0	55	32		87	113	-113	0	0	36	0	0	36				
1180+00.00	34	1	33	0	0	0	1	43	27		70	91	-90	0	0	33	0	0	33				
1180+50.00	33	2	31	0	0	0	2	35	23		58	75	-73	0	0	31	0	0	31				
1181+00.00	32	3	29	0	0	0	3	29	19		48	62	-59	0	0	29	0	0	29				
1181+50.00	32	6	27	0	0	0	6	24	15		39	51	-45	0	0	27	0	0	27				
1182+00.00	34	9	25	0	0	0	9	18	11		29	38	-29	0	0	25	0	0	25				
1182+50.00	36	14	23	0	0	0	14	11	6		17	22	-8	0	0	23	0	0	23				
1183+00.00	72	21	50	0	0	0	21	5	26		31	40	-19	0	0	50	0	0	50				
1183+50.00	50	50	0	5	0	0	50	1			1	1	49	0	0	0	0	0	0				
1184+00.00	75	75	0	9	0	0	75	0			0	0	75	0	0	0	0	0	0				
1184+50.00	88	88	0	8	0	0	88	0			0	0	88	0	0	0	0	0	0				
1185+00.00	109	109	0	8	0	0	109	0			0	0	109	0	0	0	0	0	0				
1185+50.00	125	125	0	8	0	0	125	0			0	0	125	0	0	0	0	0	0				
1186+00.00	139	139	0	8	0	0	139	0			0	0	139	0	0	0	0	0	0				
1186+50.00	172	172	0	8	0	0	172	0			0	0	172	0	0	0	0	0	0				
1187+00.00	208	207	0	8	0	0	207	0			0	0	207	0	0	0	0	0	0				
1187+50.00																							
I-380 Sec B4 Median Totals:	1,891	1,115	776	166	0	0	1,115	1,121	609	0	1,730	2,249	-1,134	0	0	776	0	0	776				

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil				[20]	[21]	[22]	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink				
I-380 Sec B5 Median																							
1190+26.00	147	147	0	5	0	0	147	0			0	0	147	0	0	0	0	0	0				
1190+50.00	286	286	0	6	0	0	286	0			0	0	286	0	0	0	0	0	0				
1191+00.00	288	288	0	9	0	0	288	0			0	0	288	0	0	0	0	0	0				
1191+50.00	295	295	0	9	0	0	295	0			0	0	295	0	0	0	0	0	0				
1192+00.00	280	281	0	9	0	0	281	0			0	0	281	0	0	0	0	0	0				
1192+50.00	254	255	0	9	0	0	255	0			0	0	255	0	0	0	0	0	0				
1193+00.00	244	244	0	9	0	0	244	0			0	0	244	0	0	0	0	0	0				
1193+50.00	246	246	0	9	0	0	246	0			0	0	246	0	0	0	0	0	0				
1194+00.00	197	197	0	4	0	0	197	0			0	0	197	0	0	0	0	0	0				
1194+50.00	130	129	0	0	0	0	129	0			0	0	129	0	0	0	0	0	0				
1195+00.00	117	117	0	0	0	0	117	0			0	0	117	0	0	0	0	0	0				
1195+50.00	117	117	0	0	0	0	117	0			0	0	117	0	0	0	0	0	0				
1196+00.00	107	107	0	0	0	0	107	0			0	0	107	0	0	0	0	0	0				
1196+50.00	82	82	0	0	0	0	82	1			1	1	81	0	0	0	0	0	0				
1197+00.00	61	61	0	0	0	0	61	1			1	1	60	0	0	0	0	0	0				
1197+50.00	51	51	0	0	0	0	51	2			2	3	48	0	0	0	0	0	0				
1198+00.00	24	24	0	0	0	0	24	113			113	147	-123	0	0	0	0	0	0				
1198+50.00	0	0	0	0	0	0	0	44			44	57	-57	0	0	0	0	0	0				
1198+70.00																							
I-380 Sec B5 Median Totals:	2,926	2,927	0	69	0	0	2,927	161	0	0	161	210	2,718	0	0	0	0	0	0				

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink			
I-380 Sec B6 Median																						
1199+56.00	0	0	0	0	0	0	0	35			35	46	-46	0	0	0	0	0	0			
1200+00.00	0	0	0	0	0	0	0	53			53	69	-69	0	0	0	0	0	0			
1200+50.00	32	0	32	0	0	0	0	66	32		98	127	-127	0	0	32	0	0	32			
1201+00.00	40	0	40	0	0	0	0	128	40		168	218	-218	0	0	40	0	0	40			
1201+50.00	40	0	40	0	0	0	0	174	40		214	278	-278	0	0	40	0	0	40			
1202+00.00	40	0	40	0	0	0	0	201	40		241	313	-313	0	12	40	0	0	40			
1202+50.00	40	0	40	0	0	0	0	208	40		248	322	-322	0	20	40	0	0	40			
1203+00.00	40	0	40	0	0	0	0	213	40		253	329	-329	0	26	40	0	0	40			
1203+50.00	40	0	40	0	0	0	0	214	40		254	330	-330	0	29	40	0	0	40			
1204+00.00	24	0	24	0	0	0	0	173	24		197	256	-256	0	74	24	0	0	24			
1204+30.00	15	0	15	0	0	0	0	90	15		105	137	-137	0	16	15	0	0	15			
1204+50.00	27	8	19	0	0	0	8	45	19		64	83	-75	0	0	19	0	0	19			
1205+00.00	3	3	0	0	0	0	3	0			0	0	3	0	0	0	0	0	0			
1205+20.00																						
I-380 Sec B6 Median Totals:	341	11	330	0	0	0	11	1,600	330	0	1,930	2,509	-2,498	0	176	330	0	0	330			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink			
I-380 Sec B7 Median																						
1206+50.00	0	0	0	0	0	0	0	23			23	30	-30	0	0	0	0	0	0			
1206+82.00	5	0	5	0	0	0	0	24	5		29	38	-38	0	0	5	0	0	5			
1207+00.00	6	0	6	0	0	0	0	20	6		26	34	-34	0	0	6	0	0	6			
1207+13.00	4	0	4	0	0	0	0	8	4		12	16	-16	0	0	4	0	0	4			
1207+18.00	4	0	4	0	0	0	0	8	4		12	16	-16	0	0	4	0	0	4			
1207+23.50	21	0	21	0	0	0	0	37	21		58	75	-75	0	0	21	0	0	21			
1207+50.00	40	0	40	0	0	0	0	63	40		103	134	-134	0	0	40	0	0	40			
1208+00.00	40	0	40	0	0	0	0	41	39		80	104	-104	0	0	40	0	0	40			
1208+50.00	40	0	40	0	0	0	0	31	39		70	91	-91	0	0	40	0	0	40			
1209+00.00	40	0	40	0	0	0	0	40	39		79	103	-103	0	0	40	0	0	40			
1209+50.00	36	0	36	0	0	0	0	40	31		71	92	-92	0	0	36	0	0	36			
1210+00.00																						
I-380 Sec B7 Median Totals:	236	0	236	0	0	0	0	335	228	0	563	732	-732	0	0	236	0	0	236			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink			
I-80/380 Ramp A																						
1561+61.05	156	0	156	0	0	0	0	1,192	155		1,347	1,751	-1,751	1,093	1,375	156	30	42	114			
1562+00.00	197	0	197	0	0	0	0	1,472	196		1,668	2,168	-2,168	1,326	1,686	197	39	55	142			
1562+50.00	195	0	195	0	0	0	0	1,425	194		1,619	2,105	-2,105	1,261	1,622	195	41	57	138			
1563+00.00	193	0	193	0	0	0	0	1,379	192		1,571	2,042	-2,042	1,199	1,560	193	41	57	136			
1563+50.00	191	0	191	0	0	0	0	1,303	190		1,493	1,941	-1,941	1,099	1,460	191	40	56	135			
1564+00.00	188	0	188	0	0	0	0	1,168	187		1,355	1,762	-1,762	918	1,279	188	39	55	133			
1564+50.00	186	0	186	0	0	0	0	1,055	185		1,240	1,612	-1,612	768	1,130	186	38	53	133			
1565+00.00	185	0	185	0	0	0	0	1,004	184		1,188	1,544	-1,544	701	1,062	185	37	52	133			
1565+50.00	183	0	183	0	0	0	0	998	182		1,180	1,534	-1,534	0	0	183	37	52	131			
1566+00.00																						
I-80/380 Ramp A Totals:	1,674	0	1,674	0	0	0	0	10,996	1,665	0	12,661	16,460	-16,460	8,365	11,175	1,674	342	479	1,196			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink			
I-80/380 Ramp B																						
2520+73.00	758	758	0	16	0	0	758	0			0	0	758	0	0	0	26	36	-36			
2521+00.00	2,733	2,732	0	31	0	0	2,732	0			0	0	2,732	0	0	0	68	95	-95			
2521+50.00	2,888	2,888	0	32	0	0	2,888	0			0	0	2,888	0	0	0	75	105	-105			
2522+00.00	2,566	2,566	0	35	0	0	2,566	0			0	0	2,566	0	0	0	76	106	-106			
2522+50.00	2,816	2,816	0	35	0	0	2,816	0			0	0	2,816	0	0	0	81	113	-113			
2523+00.00	3,057	3,057	0	30	0	0	3,057	0			0	0	3,057	0	0	0	83	116	-116			
2524+00.00	3,359	3,359	0	14	0	0	3,359	0			0	0	3,359	0	0	0	87	122	-122			
2524+50.00	3,332	3,332	0	0	0	0	3,332	1			1	1	3,331	0	0	0	91	127	-127			
I-80/380 Ramp B Totals:	21,509	21,508	0	193	0	0	21,508	1	0	0	1	2	21,507	0	0	0	587	822	-822			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink			
I-80/380 Ramp D																						
4562+00.00	90	22	67	0	0	0	22	536	53		589	766	-744	399	582	67	26	36	31			
4562+25.35	98	21	77	0	0	0	21	627	62		689	896	-875	683	789	77	15	21	56			
4562+40.00	27	7	20	0	0	0	7	165	15		180	234	-227	161	198	20	3	4	16			
4562+45.00	22	8	14	0	0	0	8	115	9		124	161	-153	88	124	14	6	8	6			
4562+50.00	172	35	137	0	0	0	35	1,094	111		1,205	1,567	-1,532	844	1,205	137	42	59	78			
4563+00.00	129	0	129	0	0	0	0	925	128		1,053	1,369	-1,369	646	1,008	129	27	38	91			
4563+50.00	100	0	100	0	0	0	0	634	99		733	953	-953	0	0	100	19	27	73			
4563+91.17																						
I-80/380 Ramp D																						
Totals:	638	93	544	0	0	0	93	4,096	477	0	4,573	5,945	-5,852	2,821	3,906	544	138	194	351			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink			
80/380 Ramp D Taper																						
4544+99.94	0	0	0	0	0	0	0	9			9	12	-12	4	0	0	0	0	0			
4545+00.00	276	0	276	0	0	0	0	7,288	274		7,562	9,831	-9,831	3,310	8,987	276	210	294	-18			
4545+50.00	234	0	234	0	0	0	0	5,897	232		6,129	7,968	-7,968	3,310	7,125	234	171	239	-6			
4546+00.00	189	0	189	0	0	0	0	4,091	187		4,278	5,561	-5,561	3,310	4,718	189	130	182	7			
4546+50.00	147	0	147	0	0	0	0	2,393	144		2,537	3,298	-3,298	2,033	2,454	147	91	127	20			
4547+00.00	394	287	107	0	0	0	287	944	63		1,007	1,309	-1,022	44	465	107	93	130	-23			
4547+50.00	1,567	1,525	43	0	0	0	1,525	127			127	165	1,360	0	0	43	124	174	-131			
4548+00.00	3,481	3,482	0	0	0	0	3,482	0			0	0	3,482	0	0	0	149	209	-209			
4548+50.00	5,178	5,178	0	0	0	0	5,178	0			0	0	5,178	0	0	0	164	230	-230			
4549+00.00	6,156	6,156	0	0	0	0	6,156	0			0	0	6,156	0	0	0	163	228	-228			
4549+50.00	6,185	6,185	0	0	0	0	6,185	0			0	0	6,185	0	0	0	152	213	-213			
4550+00.00	5,621	5,621	0	0	0	0	5,621	0			0	0	5,621	0	0	0	142	199	-199			
4550+50.00	5,204	5,204	0	0	0	0	5,204	0			0	0	5,204	0	0	0	140	196	-196			
4551+00.00	4,674	4,675	0	0	0	0	4,675	0			0	0	4,675	0	0	0	137	192	-192			
4551+50.00	3,939	3,939	0	0	0	0	3,939	0			0	0	3,939	0	0	0	135	189	-189			
4552+00.00	3,345	3,344	0	0	0	0	3,344	0			0	0	3,344	0	0	0	138	193	-193			
4552+50.00	2,733	2,733	0	0	0	0	2,733	0			0	0	2,733	0	0	0	139	195	-195			
4553+00.00	1,741	1,741	0	0	0	0	1,741	0			0	0	1,741	0	0	0	131	183	-183			
4553+50.00	917	869	48	0	0	0	869	48			48	62	807	0	0	48	131	183	-135			
4554+00.00	939	833	106	0	0	0	833	166			166	216	617	0	0	106	149	209	-103			
4554+50.00	1,649	1,542	106	0	0	0	1,542	184			184	239	1,303	0	0	106	172	241	-135			
4555+00.00	2,469	2,390	80	0	0	0	2,390	80			80	104	2,286	0	0	80	193	270	-190			
4555+50.00	2,928	2,882	46	0	0	0	2,882	15			15	20	2,863	0	0	46	203	284	-238			
4556+00.00	1,999	1,993	7	0	0	0	1,993	1			1	1	1,992	0	0	7	169	237	-230			
4556+50.00	1,041	1,040	0	0	0	0	1,040	0			0	0	1,040	0	0	0	129	181	-181			
4557+00.00	931	931	0	0	0	0	931	0			0	0	931	0	0	0	119	167	-167			
4557+50.00	529	423	106	0	0	0	423	506			506	658	-235	0	0	106	114	160	-54			
4558+00.00	433	136	296	0	0	0	136	2,157	212		2,369	3,080	-2,944	1,816	2,237	296	132	185	111			
4558+50.00	465	85	380	0	0	0	85	3,315	297		3,612	4,696	-4,611	3,432	3,853	380	139	195	185			
4559+00.00	403	30	373	0	0	0	30	3,083	312		3,395	4,414	-4,384	3,150	3,571	373	126	176	197			
4559+50.00	172	7	164	0	0	0	7	1,364	146		1,510	1,963	-1,956	1,238	1,479	164	66	92	72			
4559+78.65	86	0	86	0	0	0	0	806	84		890	1,157	-1,157	616	797	86	44	62	24			
4560+00.00	50	0	50	0	0	0	0	463	49		512	666	-666	0	0	50	24	34	16			
4560+25.00																						
80/380 Ramp D Taper Totals:	66,075	63,231	2,844	0	0	0	63,231	32,937	2,000	0	34,937	45,419	17,813	22,263	35,688	2,844	4,319	6,047	-3,203			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink			
I-80/380 Ramp E																						
5523+28.23	2,262	2,262	0	0	0	0	2,262	0		0	0	2,262	0	0	0	66	92	-92				
5523+50.00	5,384	5,384	0	0	0	0	5,384	0		0	0	5,384	0	0	0	149	209	-209				
5524+00.00	5,411	5,411	0	0	0	0	5,411	0		0	0	5,411	0	0	0	139	195	-195				
5524+50.00	5,165	5,165	0	0	0	0	5,165	0		0	0	5,165	0	0	0	120	168	-168				
5525+00.00	3,153	3,153	0	0	0	0	3,153	0		0	0	3,153	0	0	0	54	76	-76				
5525+50.00	1,429	1,429	0	0	0	0	1,429	0		0	0	1,429	0	0	0	0	0	0				
5526+00.00	1,433	1,433	0	0	0	0	1,433	0		0	0	1,433	0	0	0	0	0	0				
5526+50.00	1,107	1,108	0	0	0	0	1,108	0		0	0	1,108	0	0	0	0	0	0				
5527+00.00	1,143	1,143	0	0	0	0	1,143	0		0	0	1,143	0	0	0	0	0	0				
5527+50.00	2,361	2,362	0	0	0	0	2,362	0		0	0	2,362	0	0	0	42	59	-59				
5528+00.00	3,975	3,976	0	0	0	0	3,976	0		0	0	3,976	0	0	0	92	129	-129				
5528+50.00	5,055	5,055	0	0	0	0	5,055	0		0	0	5,055	0	0	0	110	154	-154				
5529+00.00	5,831	5,831	0	0	0	0	5,831	0		0	0	5,831	0	0	0	135	189	-189				
5529+50.00	6,257	6,257	0	0	0	0	6,257	0		0	0	6,257	0	0	0	154	216	-216				
5530+00.00	6,460	6,460	0	0	0	0	6,460	0		0	0	6,460	0	0	0	169	237	-237				
5530+50.00	6,580	6,580	0	0	0	0	6,580	0		0	0	6,580	0	0	0	190	266	-266				
5531+00.00	6,655	6,655	0	0	0	0	6,655	0		0	0	6,655	0	0	0	209	293	-293				
5531+50.00	6,959	6,959	0	0	0	0	6,959	0		0	0	6,959	0	0	0	227	318	-318				
5532+00.00	7,222	7,222	0	0	0	0	7,222	0		0	0	7,222	0	0	0	237	332	-332				
5532+50.00	7,751	7,752	0	0	0	0	7,752	0		0	0	7,752	0	0	0	239	335	-335				
5533+00.00	7,979	7,980	0	0	0	0	7,980	0		0	0	7,980	0	0	0	235	329	-329				
5533+50.00	6,815	6,814	0	0	0	0	6,814	0		0	0	6,814	0	0	0	228	319	-319				
5534+00.00	5,250	5,251	0	0	0	0	5,251	0		0	0	5,251	0	0	0	224	314	-314				
5534+50.00	4,248	4,248	0	0	0	0	4,248	0		0	0	4,248	0	0	0	222	311	-311				
5535+00.00	3,697	3,697	0	0	0	0	3,697	3		3	4	3,693	0	0	0	229	321	-321				
5535+50.00	3,398	3,398	0	0	0	0	3,398	51		51	66	3,332	0	0	0	232	325	-325				
5536+00.00																						
I-80/380 Ramp E Totals:	122,980	122,985	0	0	0	0	122,985	54	0	0	54	71	122,915	0	0	0	3,702	5,183	-5,183			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil				[20]	[21]	[22]	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink				
80/380 Ramp E Taper																							
5574+70.59	284	0	284	0	0	0	0	4,540	284		4,824	6,271	-6,271	1,876	5,988	284	121	169	115				
5575+00.00	425	0	425	0	0	0	0	6,007	424		6,431	8,360	-8,360	3,189	7,879	425	176	246	179				
5575+50.00	323	0	323	0	0	0	0	4,038	322		4,360	5,668	-5,668	3,189	5,186	323	116	162	161				
5576+00.00	277	0	277	0	0	0	0	2,675	276		2,951	3,836	-3,836	2,813	3,355	277	91	127	150				
5576+50.00	347	0	347	0	0	0	0	2,794	345		3,139	4,081	-4,081	3,058	3,600	347	141	197	150				
5577+00.00	375	0	375	0	0	0	0	3,211	374		3,585	4,661	-4,661	3,637	4,178	375	163	228	147				
5578+00.00	283	0	283	0	0	0	0	2,377	282		2,659	3,457	-3,457	2,432	2,974	283	106	148	135				
5578+50.00	175	0	175	0	0	0	0	1,445	174		1,619	2,105	-2,105	1,082	1,624	175	71	99	76				
5579+00.00	93	0	93	0	0	0	0	760	90		850	1,105	-1,105	82	623	93	47	66	27				
5579+50.00	76	1	75	0	0	0	1	671	66		737	958	-957	0	476	75	35	49	26				
5580+00.00	158	110	48	0	0	0	110	472	20		492	640	-530	0	157	48	39	55	-7				
5580+50.00	414	387	27	0	0	0	387	39			39	51	336	0	0	27	49	69	-42				
5581+00.00	642	621	20	0	0	0	621	29			29	38	583	0	0	20	54	76	-56				
5581+50.00	624	605	19	0	0	0	605	19			19	25	580	0	0	19	52	73	-54				
5582+00.00	549	525	25	0	0	0	525	30			30	39	486	0	0	25	51	71	-46				
5582+50.00	308	264	44	0	0	0	264	237	19		256	333	-69	0	0	44	50	70	-26				
5583+00.00	73	0	73	0	0	0	0	1,128	69		1,197	1,556	-1,556	532	1,074	73	79	111	-38				
5583+50.00	71	1	71	0	0	0	1	1,322	68		1,390	1,807	-1,806	784	1,325	71	88	123	-52				
5583+94.48	45	1	44	0	0	0	1	522	43		565	735	-734	0	0	44	43	60	-16				
80/380 Ramp E Taper Totals:	5,542	2,515	3,028	0	0	0	2,515	32,316	2,856	0	35,172	45,724	-43,209	22,674	38,439	3,028	1,572	2,201	828				

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink			
I-80/380 Ramp F																						
6556+25.00	282	282	0	0	0	0	282	0			0	0	282	0	0	0	17	24	-24			
6556+50.00	827	747	80	0	0	0	747	294			294	382	365	0	0	80	77	108	-28			
6557+00.00	370	199	171	0	0	0	199	1,020	92		1,112	1,446	-1,247	481	915	171	90	126	45			
6557+50.00	256	45	211	0	0	0	45	2,053	154		2,207	2,869	-2,824	1,906	2,339	211	104	146	65			
6558+00.00	314	35	279	0	0	0	35	2,628	219		2,847	3,701	-3,666	2,738	3,171	279	109	153	126			
6558+50.00	344	6	338	0	0	0	6	2,583	290		2,873	3,735	-3,729	2,772	3,205	338	99	139	199			
6559+00.00	285	5	281	0	0	0	5	2,541	249		2,790	3,627	-3,622	2,664	3,098	281	94	132	149			
6559+50.00	143	8	134	0	0	0	8	1,503	116		1,619	2,105	-2,097	1,528	1,788	134	58	81	53			
6559+80.00	83	4	79	0	0	0	4	644	72		716	931	-927	545	719	79	20	28	51			
6560+00.00	17	0	17	0	0	0	0	73	17		90	117	-117	0	0	17	0	0	17			
6560+10.00																						
I-80/380 Ramp F Totals:	2,921	1,331	1,590	0	0	0	1,331	13,339	1,209	0	14,548	18,913	-17,582	12,633	15,234	1,590	668	936	655			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink			
I-80/380 Ramp F																						
6562+35.00	65	0	65	0	0	0	0	716	65		781	1,015	-1,015	689	833	65	12	17	48			
6562+50.00	211	0	211	0	0	0	0	2,241	210		2,451	3,186	-3,186	2,103	2,584	211	40	56	155			
6563+00.00	202	0	202	0	0	0	0	2,016	201		2,217	2,882	-2,882	1,799	2,280	202	39	55	147			
6563+50.00	251	0	251	0	0	0	0	1,889	251		2,140	2,782	-2,782	1,699	2,180	251	19	27	224			
6564+00.00	301	0	301	0	0	0	0	1,762	301		2,063	2,682	-2,682	1,598	2,080	301	0	0	301			
6564+50.00	293	0	293	0	0	0	0	1,605	293		1,898	2,467	-2,467	1,383	1,864	293	0	0	293			
6565+00.00	283	0	283	0	0	0	0	1,562	283		1,845	2,399	-2,399	1,313	1,795	283	0	0	283			
6565+50.00	276	0	276	0	0	0	0	1,383	276		1,659	2,157	-2,157	1,074	1,555	276	0	0	276			
6566+00.00	273	0	273	0	0	0	0	1,214	273		1,487	1,933	-1,933	850	1,331	273	0	0	273			
6566+50.00	264	0	264	0	0	0	0	1,201	264		1,465	1,905	-1,905	820	1,301	264	0	0	264			
6567+00.00	249	0	249	0	0	0	0	1,140	249		1,389	1,806	-1,806	722	1,203	249	0	0	249			
6567+50.00	231	0	231	0	0	0	0	972	231		1,203	1,564	-1,564	480	962	231	0	0	231			
6568+00.00	215	0	215	0	0	0	0	785	215		1,000	1,300	-1,300	216	698	215	0	0	215			
6568+50.00	125	0	125	0	0	0	0	445	125		570	741	-741	0	0	125	0	0	125			
6568+79.77																						
I-80/380 Ramp F Totals:	3,239	0	3,239	0	0	0	0	18,931	3,237	0	22,168	28,819	-28,819	14,746	20,668	3,239	110	154	3,085			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink			
80/380 Ramp H Taper																						
8574+00.00	78	0	78	0	0	0	0	1,143	76		1,219	1,585	-1,585	1,162	1,343	78	76	106	-28			
8574+50.00	71	0	71	0	0	0	0	950	69		1,019	1,325	-1,325	902	1,082	71	73	102	-31			
8575+00.00	62	0	62	0	0	0	0	786	61		847	1,101	-1,101	679	859	62	70	98	-36			
8575+50.00	52	0	52	0	0	0	0	651	51		702	913	-913	490	671	52	66	92	-40			
8576+00.00	28	0	28	0	0	0	0	315	27		342	445	-445	0	0	28	34	48	-20			
8576+28.23																						
80/380 Ramp H Taper Totals:	291	0	291	0	0	0	0	3,845	284	0	4,129	5,368	-5,368	3,234	3,955	291	319	447	-156			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil							
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink				
Ireland Ave Ramp A																							
1567+15.74	47	47	0	0	0	0	47	0			0	0	47	0	0	0	23	32	-32				
1567+50.00	209	205	3	0	0	0	205	1			1	0	204	0	0	3	68	95	-92				
1568+00.00	253	233	20	0	0	0	233	32			32	42	191	0	0	20	89	125	-105				
1568+50.00	175	130	45	0	0	0	130	116	8		124	161	-31	0	0	45	86	120	-75				
1569+00.00	141	80	61	0	0	0	80	232	36		268	348	-268	0	83	61	87	122	-61				
1569+50.00	123	55	69	0	0	0	55	332	47		379	493	-438	46	226	69	92	129	-60				
1570+00.00	106	28	77	0	0	0	28	424	60		484	629	-601	133	364	77	95	133	-56				
1570+50.00	96	10	85	0	0	0	10	528	72		600	780	-770	335	516	85	102	143	-58				
1571+00.00	105	10	95	0	0	0	10	621	82		703	914	-904	468	649	95	113	158	-63				
1571+50.00	124	12	111	0	0	0	12	744	97		841	1,093	-1,081	647	828	111	135	189	-78				
1572+00.00	229	105	125	0	0	0	105	926	99		1,025	1,333	-1,228	888	1,069	125	166	232	-107				
1572+50.00	458	332	126	0	0	0	332	994	80		1,074	1,396	-1,064	950	1,131	126	192	269	-143				
1573+00.00	560	440	120	0	0	0	440	1,004	68		1,072	1,394	-954	948	1,128	120	196	274	-154				
1573+50.00	494	377	117	0	0	0	377	1,019	73		1,092	1,420	-1,043	972	1,153	117	181	253	-136				
1574+00.00	344	233	111	0	0	0	233	920	78		998	1,297	-1,064	852	1,032	111	158	221	-110				
1574+50.00	189	86	103	0	0	0	86	786	82		868	1,128	-1,042	683	863	103	131	183	-80				
1575+00.00	111	22	88	0	0	0	22	678	77		755	982	-960	536	716	88	96	134	-46				
1575+50.00	75	0	75	0	0	0	0	831	71		902	1,173	-1,173	725	906	75	67	94	-19				
1576+00.00	68	0	67	0	0	0	0	747	66		813	1,057	-1,057	610	790	67	52	73	-6				
1576+50.00	55	0	55	0	0	0	0	386	54		440	572	-572	126	307	55	35	49	6				
1577+00.00	46	0	46	0	0	0	0	239	44		283	368	-368	0	103	46	23	32	14				
1577+50.00	44	0	44	0	0	0	0	171	42		213	277	-277	0	10	44	19	27	17				
1578+00.00	46	0	45	0	0	0	0	174	44		218	283	-283	0	18	45	20	28	17				
1578+50.00	46	0	45	0	0	0	0	175	44		219	285	-285	0	20	45	20	28	17				
1579+00.00	46	0	46	0	0	0	0	156	44		200	260	-260	0	0	46	18	25	21				
1579+50.00	46	0	46	0	0	0	0	148	44		192	250	-250	0	0	46	16	22	24				
1580+00.00	49	0	49	0	0	0	0	198	47		245	319	-319	0	55	49	18	25	24				
1580+50.00	59	0	59	0	0	0	0	344	58		402	523	-523	77	257	59	31	43	16				
1581+00.00	68	0	68	0	0	0	0	476	66		542	705	-705	259	439	68	43	60	8				
1581+50.00	70	0	69	0	0	0	0	523	68		591	768	-768	322	503	69	45	63	6				
1582+00.00	70	0	70	0	0	0	0	550	68		618	803	-803	358	538	70	45	63	7				
1582+50.00	41	0	41	0	0	0	0	320	40		360	468	-468	0	0	41	26	36	5				
1582+78.50																							
Ireland Ave Ramp A Totals:	4,593	2,405	2,181	0	0	0	2,405	14,795	1,759	0	16,554	21,521	-19,116	9,984	13,706	2,181	2,488	3,484	-1,303				

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink			
IA 965 Ramp B Stg 1																						
2510+32.22	3	3	0	4	0	0	3	0			0	0	3	0	0	0	0	0	0			
2510+50.00	11	6	5	12	0	0	6	2			2	3	3	0	0	5	0	0	5			
2511+00.00	18	6	12	12	0	0	6	13	7		20	26	-20	0	0	12	0	0	12			
2511+50.00	20	5	15	13	0	0	5	28	10		38	49	-44	0	0	15	0	0	15			
2512+00.00	20	5	15	13	0	0	5	32	10		42	55	-50	0	0	15	0	0	15			
2512+50.00	21	5	15	13	0	0	5	30	10		40	52	-47	0	0	15	0	0	15			
2513+00.00	26	10	16	7	0	0	10	28	8		36	47	-37	0	0	16	0	0	16			
2513+50.00	32	16	16	1	0	0	16	28	6		34	44	-28	0	0	16	0	0	16			
2514+00.00	27	11	16	7	0	0	11	31	8		39	51	-40	0	0	16	0	0	16			
2514+50.00	23	7	16	12	0	0	7	31	9		40	52	-45	0	0	16	0	0	16			
2515+00.00	29	11	17	6	0	0	11	41	9		50	65	-54	0	4	17	0	0	17			
2515+50.00	35	15	20	0	0	0	15	56	10		66	86	-71	0	26	20	0	0	20			
2516+00.00	36	15	21	0	0	0	15	57	11		68	88	-73	0	29	21	0	0	21			
2516+50.00	33	15	18	1	0	0	15	40	8		48	62	-47	0	1	18	0	0	18			
2517+00.00	31	17	15	1	0	0	17	24	4		28	36	-19	0	0	15	0	0	15			
2517+50.00	32	21	12	0	0	0	21	15			15	20	2	0	0	12	0	0	12			
2518+00.00	31	27	5	0	0	0	27	4			4	5	22	0	0	5	0	0	5			
2518+50.00	25	26	0	0	0	0	26	0			0	0	26	0	0	0	0	0	0			
2519+00.00	21	20	0	0	0	0	20	1			1	1	19	0	0	0	0	0	0			
2519+50.00	18	19	0	0	0	0	19	1			1	1	18	0	0	0	0	0	0			
2520+00.00	18	18	0	0	0	0	18	0			0	0	18	0	0	0	0	0	0			
2520+50.00	20	19	0	0	0	0	19	0			0	0	19	0	0	0	0	0	0			
2521+00.00	19	19	0	0	0	0	19	0			0	0	19	0	0	0	0	0	0			
2521+50.00	16	15	0	0	0	0	15	3			3	4	11	0	0	0	0	0	0			
2522+00.00	2	2	0	0	0	0	2	1			1	1	1	0	0	0	0	0	0			
2522+14.99																						
IA 965 Ramp B Stg 1																						
Totals:	567	333	234	102	0	0	333	466	110	0	576	749	-416	0	60	234	0	0	234			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil				[20]	[21]	[22]	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]				
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink				
IA 965 Ramp B Stg 2																							
2508+33.97	306	306	0	0	0	0	306	0			0	0	306	0	0	0	20	28	-28				
2508+50.00	442	423	19	4	0	0	423	50			50	65	358	0	0	19	38	53	-34				
2509+00.00	62	4	58	11	0	0	4	493	48		541	703	-699	317	485	58	42	59	-1				
2509+50.00	114	5	109	17	0	0	5	1,601	100		1,701	2,211	-2,206	1,660	1,994	109	107	150	-41				
2510+00.00	138	8	129	26	0	0	8	2,119	122		2,241	2,913	-2,905	1,660	2,696	129	135	189	-60				
2510+50.00	119	15	105	34	0	0	15	1,499	98		1,597	2,076	-2,061	1,690	1,859	105	105	147	-42				
2511+00.00	103	22	81	42	0	0	22	881	73		954	1,240	-1,218	855	1,023	81	81	113	-32				
2511+50.00	97	36	62	48	0	0	36	510	47		557	724	-688	338	507	62	73	102	-40				
2512+00.00	244	206	38	61	0	0	206	199	2		201	261	-55	0	44	38	74	104	-66				
2512+50.00	541	527	15	81	0	0	527	37			37	48	479	0	0	15	79	111	-96				
2513+00.00	362	357	6	85	0	0	357	4			4	5	352	0	0	6	46	64	-58				
2513+50.00	23	19	4	82	0	0	19	1			1	1	18	0	0	4	9	13	-9				
2514+00.00	16	8	7	80	0	0	8	3			3	4	4	0	0	7	7	10	-3				
2514+50.00	14	6	8	74	0	0	6	3	1		4	5	1	0	0	8	5	7	1				
2515+00.00	18	10	7	75	0	0	10	2			2	3	7	0	0	7	5	7	0				
2515+50.00	26	19	7	74	0	0	19	2			2	3	16	0	0	7	5	7	0				
2516+00.00	34	27	7	72	0	0	27	2			2	3	24	0	0	7	5	7	0				
2516+50.00	42	36	6	69	0	0	36	3			3	4	32	0	0	6	5	7	-1				
2517+00.00	51	47	3	62	0	0	47	2			2	3	44	0	0	3	3	4	-1				
2517+50.00	52	50	2	65	0	0	50	1			1	1	49	0	0	2	1	1	1				
2518+00.00	41	38	3	69	0	0	38	0			0	0	38	0	0	3	1	1	2				
2518+50.00	34	32	2	62	0	0	32	0			0	0	32	0	0	2	1	1	1				
2519+00.00																							
IA 965 Ramp B Stg 2 Totals:	2,879	2,201	678	1,193	0	0	2,201	7,412	491	0	7,903	10,274	-8,073	6,521	8,609	678	847	1,186	-508				

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink			
IA 965 Ramp B Stg 3																						
2508+33.98	3	3	0	16	0	0	3	0			0	0	3	0	0	0	0	0	0			
2508+50.00	9	9	0	51	0	0	9	0			0	0	9	0	0	0	0	0	0			
2509+00.00	18	18	0	53	0	0	18	0			0	0	18	0	0	0	0	0	0			
2509+50.00	36	36	0	64	0	0	36	0			0	0	36	0	0	0	0	0	0			
2510+00.00	50	50	0	65	0	0	50	0			0	0	50	0	0	0	0	0	0			
2510+50.00	60	60	0	51	0	0	60	0			0	0	60	0	0	0	1	1	-1			
2511+00.00	71	71	0	47	0	0	71	0			0	0	71	0	0	0	4	6	-6			
2512+00.00	85	85	0	47	0	0	85	0			0	0	85	0	0	0	9	13	-13			
2512+50.00	133	133	0	47	0	0	133	0			0	0	133	0	0	0	20	28	-28			
2513+00.00	224	223	0	47	0	0	223	0			0	0	223	0	0	0	37	52	-52			
2513+50.00	335	335	0	47	0	0	335	0			0	0	335	0	0	0	54	76	-76			
2514+00.00	452	452	0	47	0	0	452	0			0	0	452	0	0	0	68	95	-95			
2514+50.00	539	540	0	47	0	0	540	0			0	0	540	0	0	0	73	102	-102			
2515+00.00	586	586	0	47	0	0	586	0			0	0	586	0	0	0	75	105	-105			
2515+50.00	582	582	0	47	0	0	582	0			0	0	582	0	0	0	74	104	-104			
2516+00.00	586	587	0	28	0	0	587	0			0	0	587	0	0	0	75	105	-105			
2516+50.00	586	586	0	10	0	0	586	0			0	0	586	0	0	0	76	106	-106			
2517+00.00	538	538	0	12	0	0	538	0			0	0	538	0	0	0	71	99	-99			
2517+50.00	452	451	0	10	0	0	451	0			0	0	451	0	0	0	63	88	-88			
2518+00.00	296	296	0	11	0	0	296	0			0	0	296	0	0	0	51	71	-71			
2518+50.00	140	140	0	14	0	0	140	0			0	0	140	0	0	0	39	55	-55			
2519+00.00	64	63	0	20	0	0	63	0			0	0	63	0	0	0	17	24	-24			
IA 965 Ramp B Stg 3 Totals:	5,845	5,844	0	828	0	0	5,844	0	0	0	0	0	5,844	0	0	0	807	1,130	-1,130			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil				[20]	[21]	[22]	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]				
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink				
US 6 Entrance																							
102+75.00	6	4	2	0	0	0	4	3			3	4	0	0	0	2	8	11	-9				
103+00.00	25	8	17	0	0	0	8	13			19	25	-17	0	0	17	17	24	-7				
103+50.00	73	29	44	0	0	0	29	37	24		61	79	-50	0	0	44	36	50	-6				
104+00.00	119	35	84	0	0	0	35	155	58		213	277	-242	0	85	84	63	88	-4				
104+50.00	193	74	119	0	0	0	74	334	83		417	542	-468	205	350	119	92	129	-10				
105+00.00	286	167	119	0	0	0	167	354	72		426	554	-387	216	360	119	101	141	-22				
106+00.00	333	260	73	0	0	0	260	242	38		280	364	-104	27	172	73	84	118	-45				
106+50.00	387	354	33	0	0	0	354	137	9		146	190	164	0	0	33	68	95	-62				
107+00.00	432	407	25	0	0	0	407	72			72	94	313	0	0	25	60	84	-59				
107+50.00	403	381	22	0	0	0	381	57			57	74	307	0	0	22	66	92	-70				
108+00.00	266	245	21	0	0	0	245	48			48	62	183	0	0	21	60	84	-63				
108+50.00	101	86	14	0	0	0	86	23			23	30	56	0	0	14	36	50	-36				
109+00.00	24	18	7	0	0	0	18	1			1	1	17	0	0	7	23	32	-25				
109+05.00	0	0	0	0	0	0	0	0			0	0	0	0	0	0	1	1	-1				
US 6 Entrance Totals:	2,648	2,068	580	0	0	0	2,068	1,476	290	0	1,766	2,296	-228	449	966	580	715	1,001	-422				

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill						Checks (EW-102)		Topsoil				[20]	[21]	[22]	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]				
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink				
Barn Entrance																							
15+25.00	29	16	13	0	0	0	16	0			0	0	16	0	0	13	13	18	-5				
15+50.00	96	70	26	0	0	0	70	0			0	0	70	0	0	26	29	41	-15				
16+00.00	88	61	28	0	0	0	61	2			2	3	58	0	0	28	57	80	-52				
16+50.00	50	18	32	0	0	0	18	19			19	25	-7	0	0	32	95	133	-101				
17+00.00	78	47	31	0	0	0	47	17			17	22	25	0	0	31	86	120	-89				
17+50.00	109	82	27	0	0	0	82	0			0	0	82	0	0	27	51	71	-44				
18+00.00	88	50	38	0	0	0	50	60			60	78	-28	0	0	38	34	48	-10				
18+50.00	39	13	26	0	0	0	13	60	7		67	87	-74	0	0	26	25	35	-9				
19+00.00																							
Barn Entrance Totals:	577	357	221	0	0	0	357	158	7	0	165	215	143	0	0	221	390	546	-325				

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

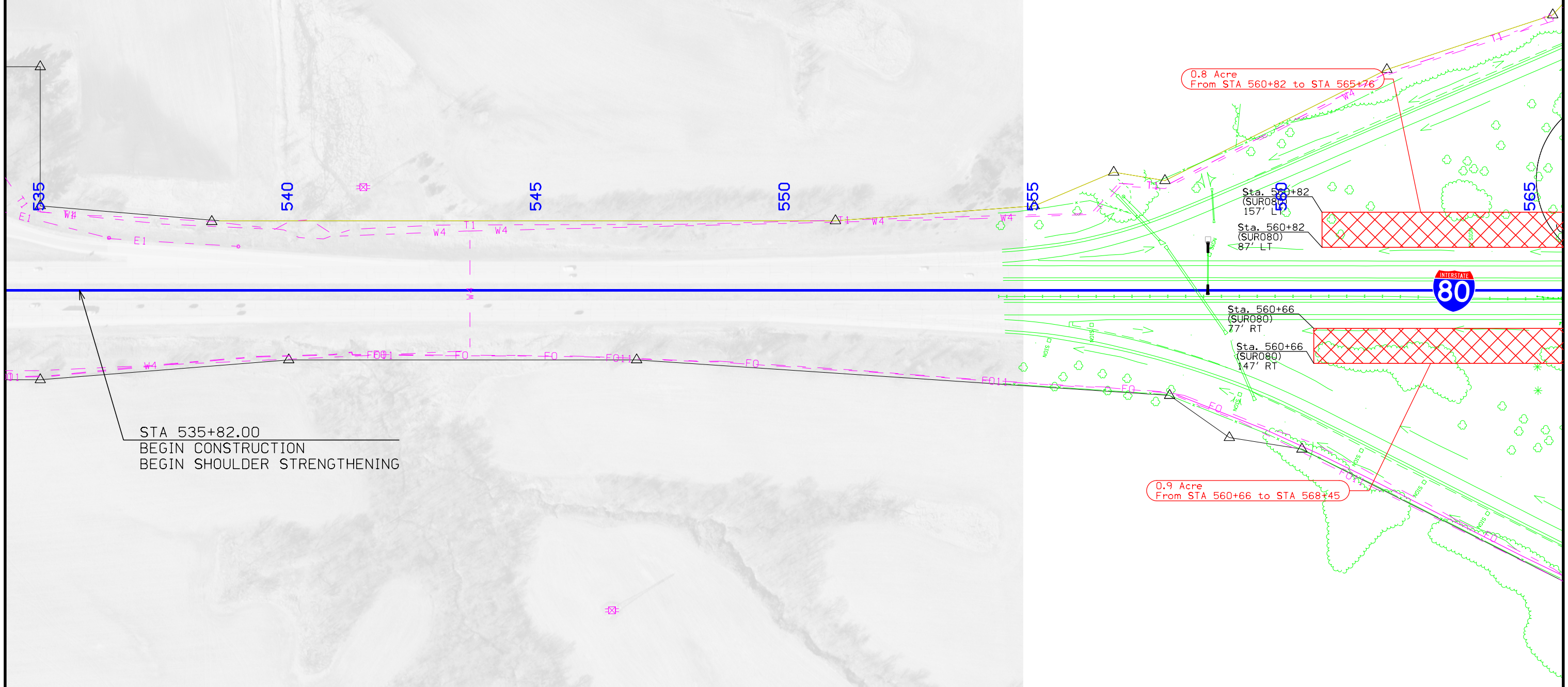
Station	Cut							Fill						Checks (EW-102)		Topsoil						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink			
80/380 Ramp B1 Det																						
12518+00.00	45	45	0	0	0	0	45	0			0	0	45	0	0	0	0	0	0			
12518+50.00	46	46	0	0	0	0	46	0			0	0	46	0	0	0	0	0	0			
12519+00.00	52	52	0	0	0	0	52	0			0	0	52	0	0	0	0	0	0			
12519+50.00	55	55	0	0	0	0	55	3			3	4	51	0	0	0	0	0	0			
12520+00.00	52	52	0	0	0	0	52	14			14	18	34	0	0	0	0	0	0			
12520+50.00	51	51	0	0	0	0	51	33			33	43	8	0	0	0	0	0	0			
12521+00.00	48	48	0	0	0	0	48	64			64	83	-35	0	0	0	0	0	0			
12521+50.00	52	52	0	0	0	0	52	85			85	111	-59	0	0	0	0	0	0			
12522+00.00	43	43	0	0	0	0	43	82			82	107	-64	0	0	0	0	0	0			
12522+50.00	36	36	0	0	0	0	36	58			58	75	-39	0	0	0	0	0	0			
12523+00.00	34	34	0	0	0	0	34	54			54	70	-36	0	0	0	0	0	0			
12523+50.00	30	30	0	0	0	0	30	47			47	61	-31	0	0	0	0	0	0			
12524+00.00	19	19	0	0	0	0	19	32			32	42	-23	0	0	0	0	0	0			
12524+50.00	3	3	0	0	0	0	3	53			53	69	-66	0	0	0	0	0	0			
12525+00.00	2	2	0	0	0	0	2	81			81	105	-103	0	0	0	0	0	0			
12525+50.00	2	2	0	0	0	0	2	101			101	131	-129	0	0	0	0	0	0			
12526+00.00	2	2	0	0	0	0	2	107			107	139	-137	0	0	0	0	0	0			
12526+50.00	3	3	0	0	0	0	3	108			108	140	-137	0	0	0	0	0	0			
12527+00.00	7	7	0	0	0	0	7	118			118	153	-146	0	0	0	0	0	0			
12527+50.00	9	9	0	0	0	0	9	152			152	198	-189	0	0	0	0	0	0			
12528+00.00																						
80/380 Ramp B1 Det Totals:	591	591	0	0	0	0	591	1,192	0	0	1,192	1,550	-959	0	0	0	0	0	0			

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill					Checks (EW-102)		Topsoil							
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Template Select Loam Volume	Template Shale Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink			
80/380 Ramp B2 Det																						
12546+83.36	3	3	0	0	0	0	3	0			0	0	3	0	0	0	0	0	0			
12547+00.00	10	10	0	0	0	0	10	0			0	0	10	0	0	0	0	0	0			
12547+50.00	9	9	0	0	0	0	9	0			0	0	9	0	0	0	0	0	0			
12548+00.00	7	7	0	0	0	0	7	1			1	1	6	0	0	0	0	0	0			
12548+50.00	4	4	0	0	0	0	4	9			9	12	-8	0	0	0	0	0	0			
12549+00.00	1	1	0	0	0	0	1	227			227	295	-294	0	0	0	0	0	0			
12550+00.00	0	0	0	0	0	0	0	518			518	673	-673	216	0	0	0	0	0			
12550+50.00	0	0	0	0	0	0	0	646			646	840	-840	216	0	0	0	0	0			
12551+00.00	5	5	0	0	0	0	5	699			699	909	-904	216	0	0	0	0	0			
12551+50.00	16	16	0	0	0	0	16	683			683	888	-872	216	0	0	0	0	0			
12552+00.00	24	24	0	0	0	0	24	637			637	828	-804	216	0	0	0	0	0			
12552+50.00	23	23	0	0	0	0	23	574			574	746	-723	216	0	0	0	0	0			
12553+00.00	18	18	0	0	0	0	18	429			429	558	-540	216	0	0	0	0	0			
12553+50.00	11	11	0	0	0	0	11	266			266	346	-335	0	0	0	0	0	0			
12554+00.00	5	5	0	0	0	0	5	161			161	209	-204	0	0	0	0	0	0			
12554+50.00	14	14	0	0	0	0	14	77			77	100	-86	0	0	0	0	0	0			
12555+00.00	30	30	0	0	0	0	30	20			20	26	4	0	0	0	0	0	0			
12555+50.00	37	37	0	0	0	0	37	1			1	1	36	0	0	0	0	0	0			
12556+00.00	38	38	0	0	0	0	38	0			0	0	38	0	0	0	0	0	0			
12556+50.00	37	37	0	0	0	0	37	0			0	0	37	0	0	0	0	0	0			
12557+00.00	32	32	0	0	0	0	32	0			0	0	32	0	0	0	0	0	0			
80/380 Ramp B2 Det Totals:	324	324	0	0	0	0	324	4,948	0	0	4,948	6,433	-6,109	1,511	0	0	0	0	0			

CLEAR CREEK TWP.
T-80N R-7W
SEC. 32




CLEAR CREEK TWP.
T-80N R-7W
SEC. 33



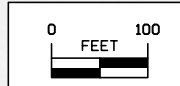
STA 535+82.00
BEGIN CONSTRUCTION
BEGIN SHOULDER STRENGTHENING

0.8 Acre
From STA 560+82 to STA 565+76

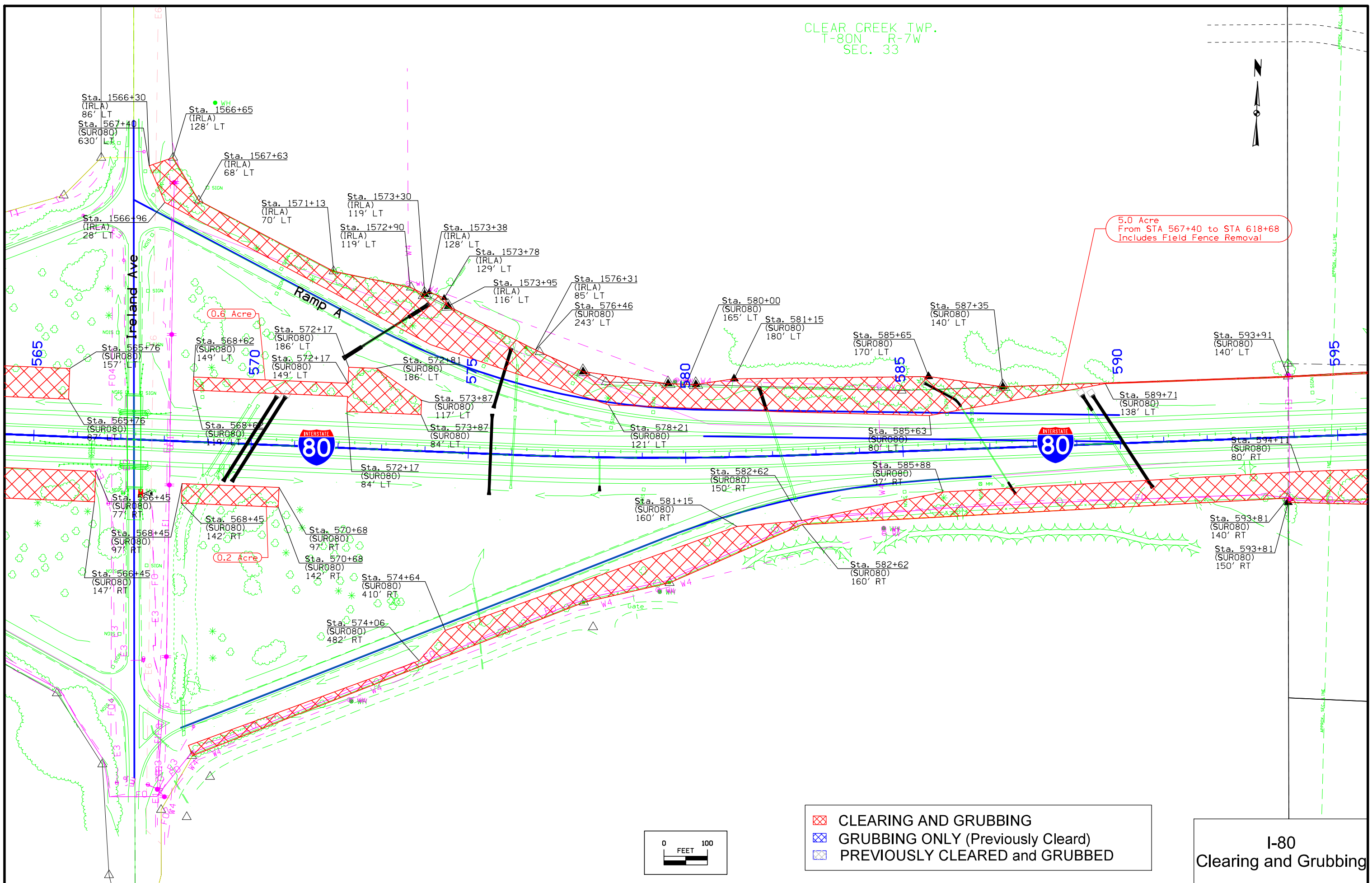
0.9 Acre
From STA 560+66 to STA 568+45

-  CLEARING AND GRUBBING
-  GRUBBING ONLY (Previously Cleard)
-  PREVIOUSLY CLEARED and GRUBBED

I-80
Clearing and Grubbing






CLEAR CREEK TWP.
T-80N R-7W
SEC. 33

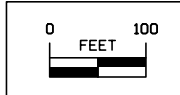


5.0 Acre
From STA 567+40 to STA 618+68
Includes Field Fence Removal

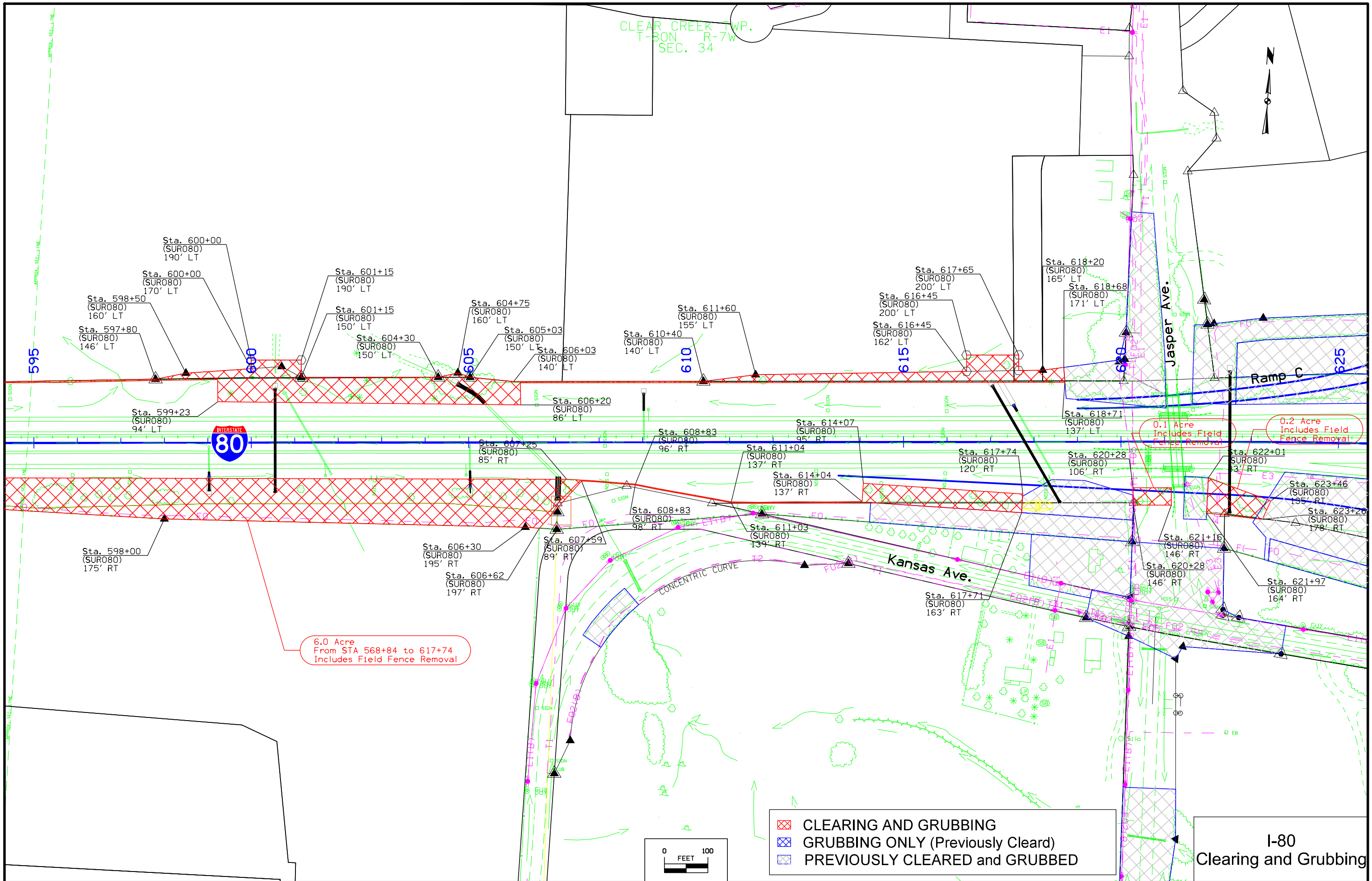
0.6 Acre

0.2 Acre

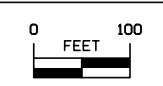
-  CLEARING AND GRUBBING
-  GRUBBING ONLY (Previously Cleared)
-  PREVIOUSLY CLEARED and GRUBBED



I-80
Clearing and Grubbing



CLEAR CREEK TWP.
T-30N R-7W
SEC. 34



- CLEARING AND GRUBBING
- GRUBBING ONLY (Previously Cleard)
- PREVIOUSLY CLEARED and GRUBBED

I-80
Clearing and Grubbing

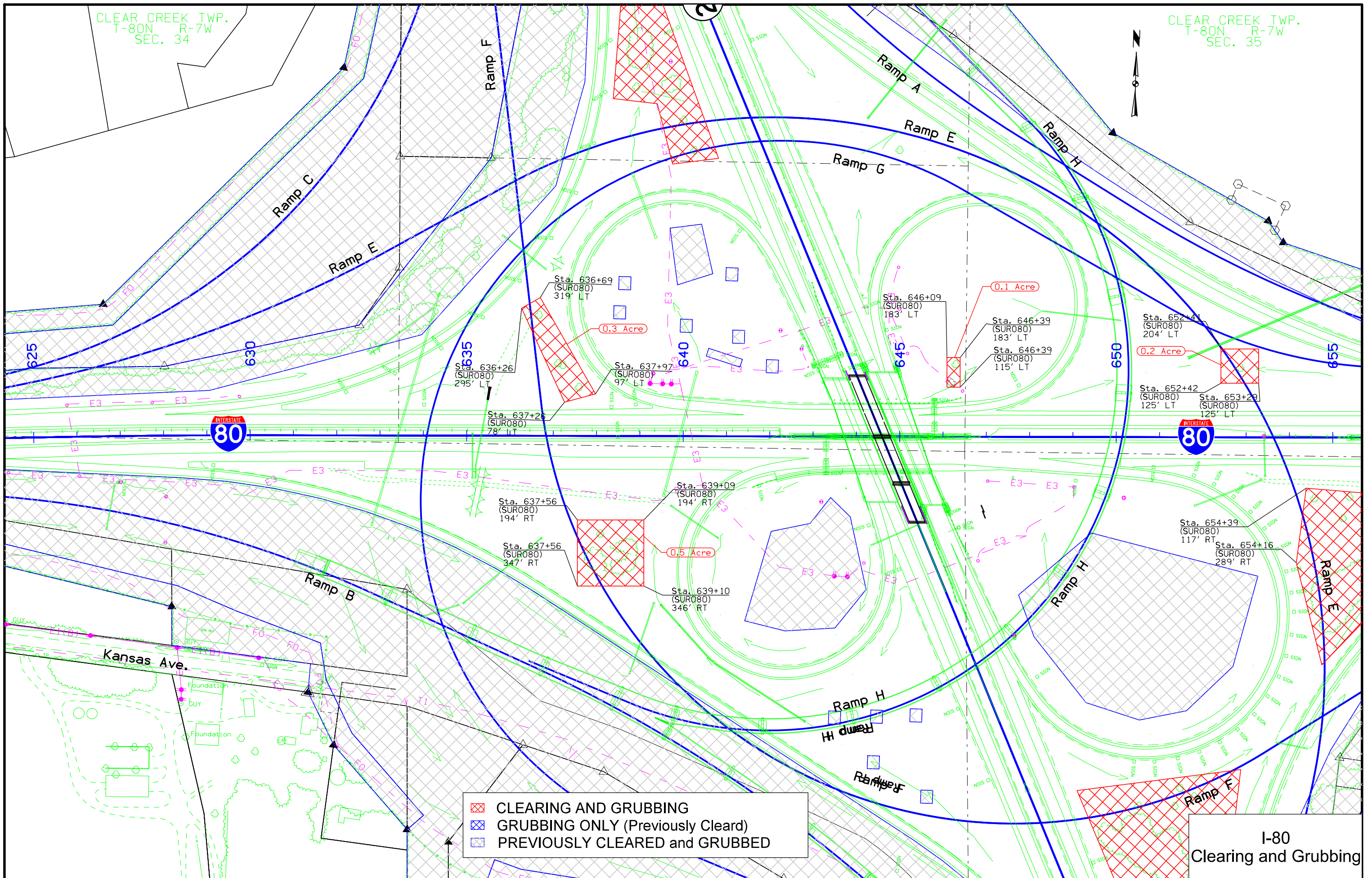
6.0 Acre
From STA 568+84 to 617+74
Includes Field Fence Removal

0.1 Acre
Includes Field
Fence Removal

0.2 Acre
Includes Field
Fence Removal

CLEAR CREEK TWP.
T-80N R-7W
SEC. 34

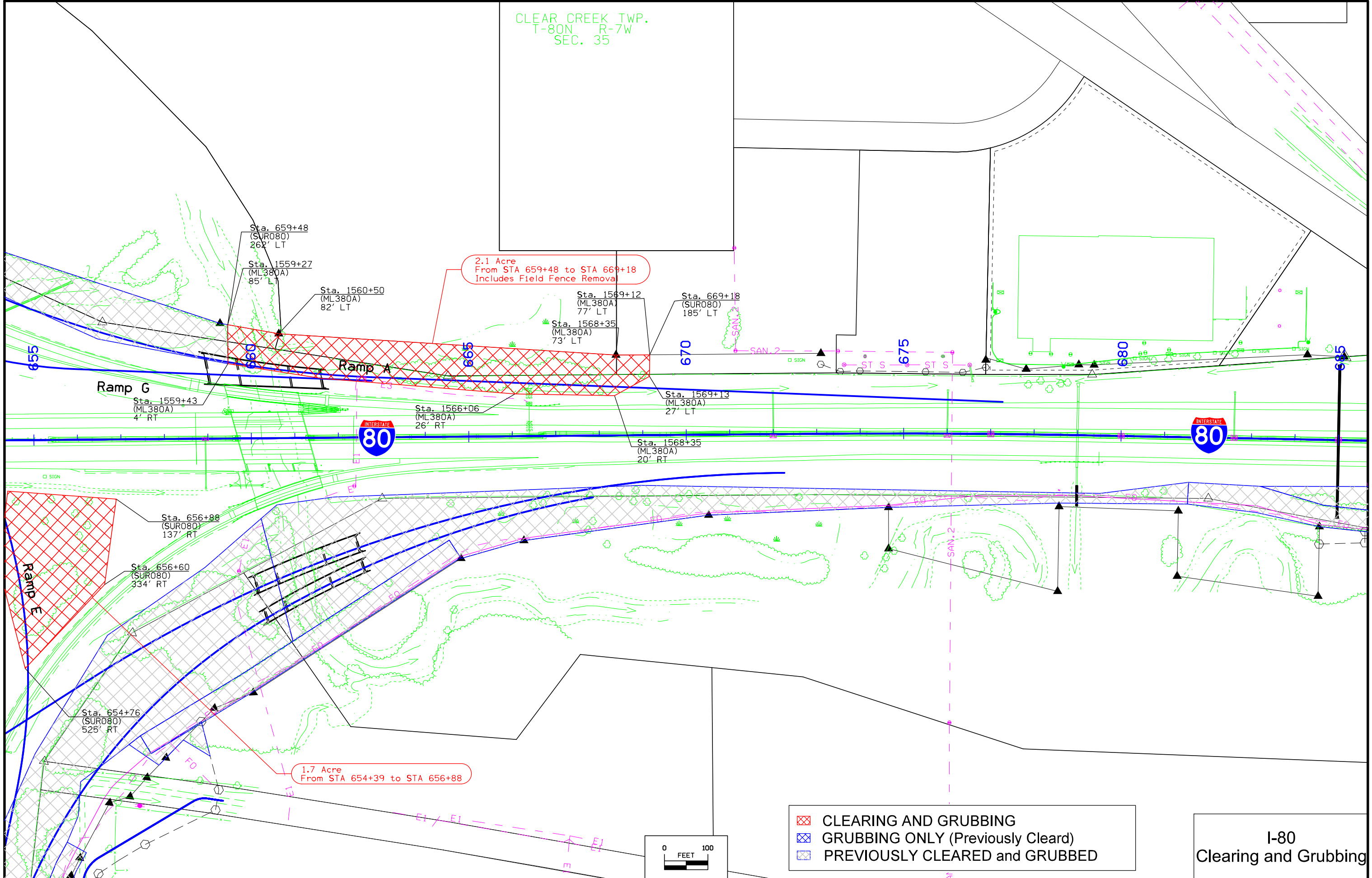
CLEAR CREEK TWP.
T-80N R-7W
SEC. 35



- CLEARING AND GRUBBING
- GRUBBING ONLY (Previously Cleard)
- PREVIOUSLY CLEARED and GRUBBED

I-80
Clearing and Grubbing

CLEAR CREEK TWP.
T-80N R-7W
SEC. 35

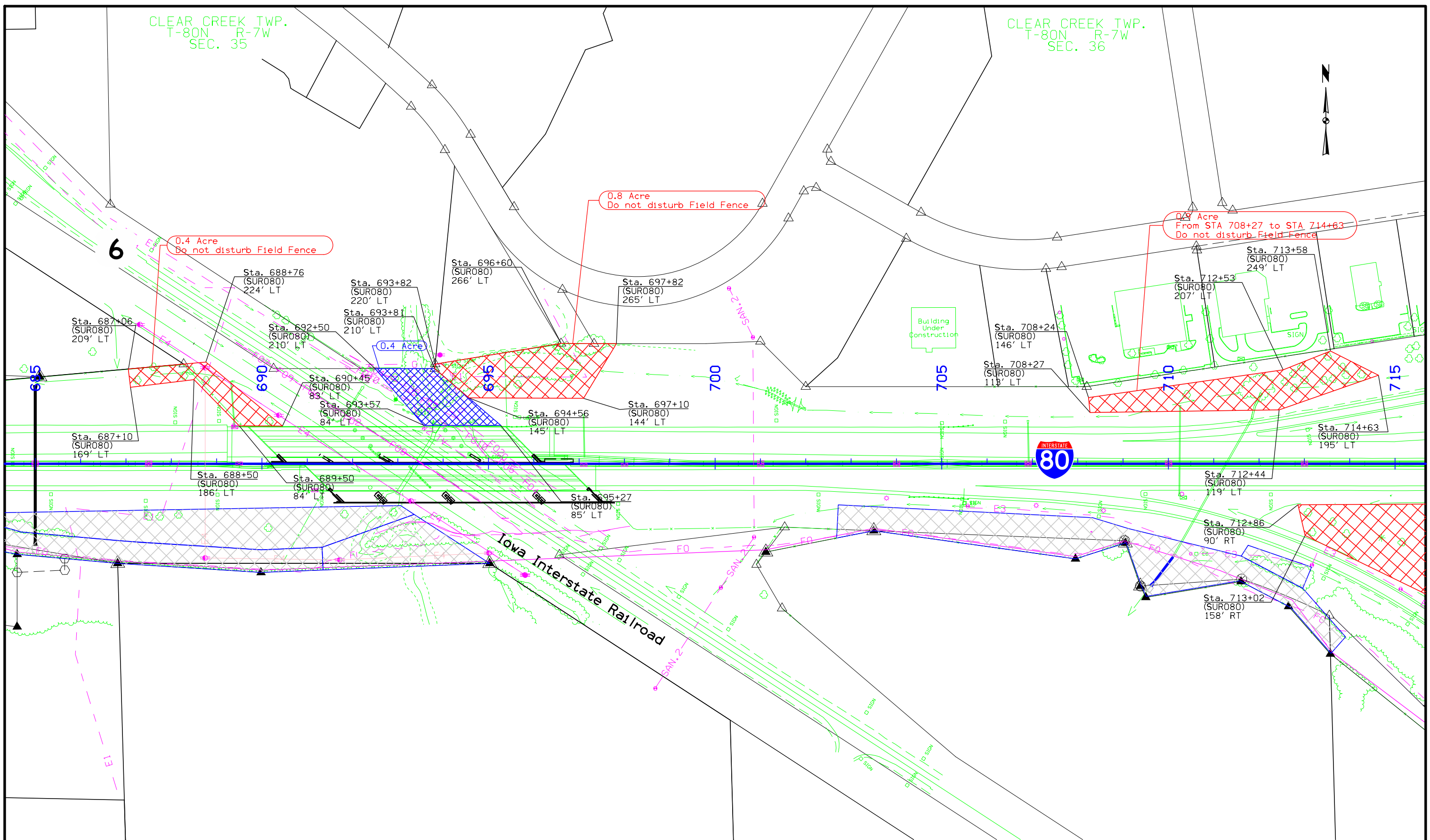


- CLEARING AND GRUBBING
- GRUBBING ONLY (Previously Cleard)
- PREVIOUSLY CLEARED and GRUBBED

I-80
Clearing and Grubbing

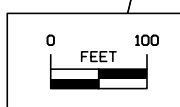
CLEAR CREEK TWP.
T-80N R-7W
SEC. 35

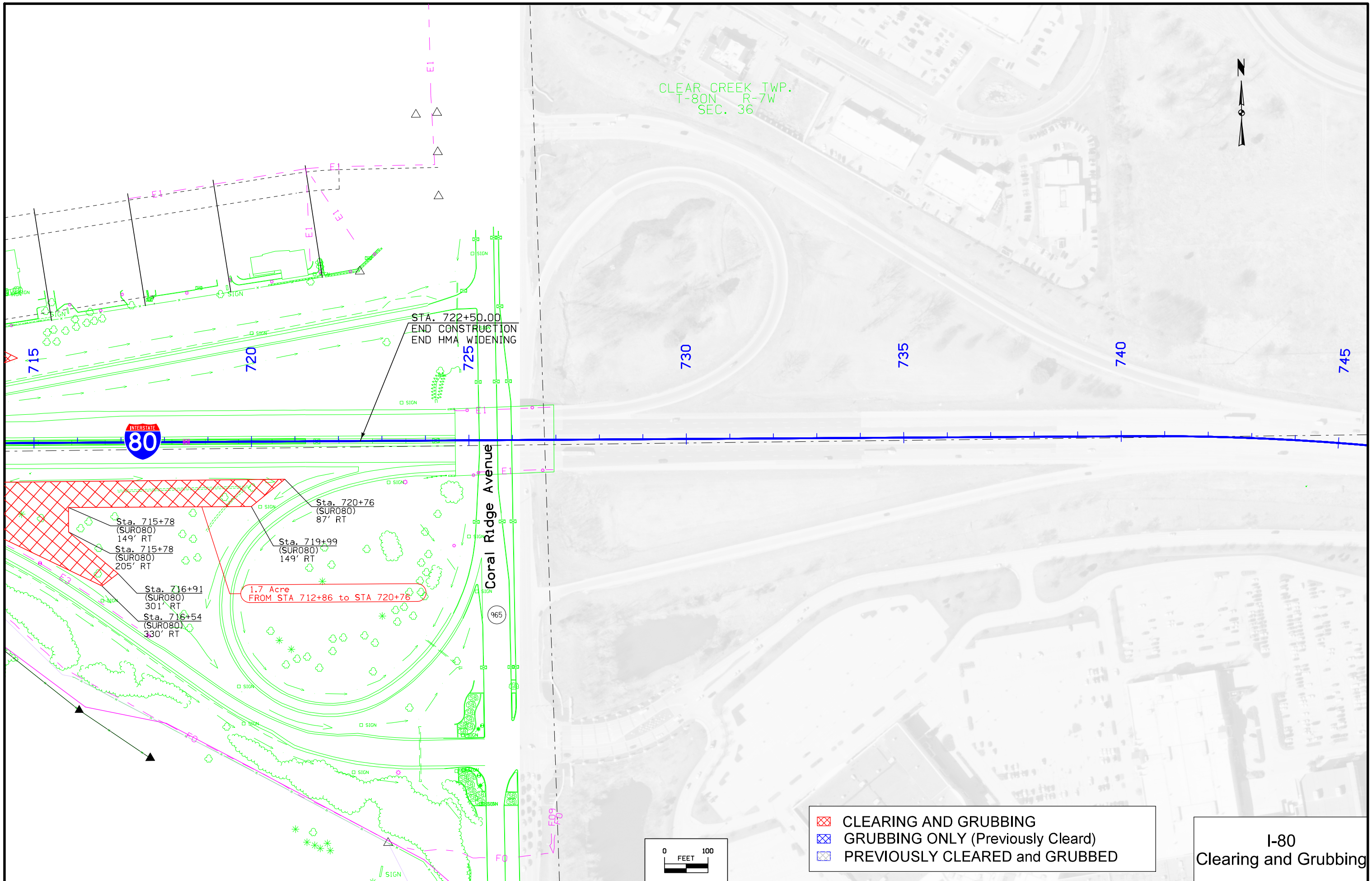
CLEAR CREEK TWP.
T-80N R-7W
SEC. 36



- CLEARING AND GRUBBING
- GRUBBING ONLY (Previously Cleared)
- PREVIOUSLY CLEARED and GRUBBED

I-80
Clearing and Grubbing





CLEAR CREEK TWP.
T-80N R-7W
SEC. 36

STA. 722+50.00
END CONSTRUCTION
END HMA WIDENING



Coral Ridge Avenue

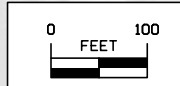
Sta. 715+78 (SUR080) 149' RT
Sta. 715+78 (SUR080) 205' RT
Sta. 716+91 (SUR080) 301' RT
Sta. 716+54 (SUR080) 330' RT

Sta. 720+76 (SUR080) 87' RT
Sta. 719+99 (SUR080) 149' RT

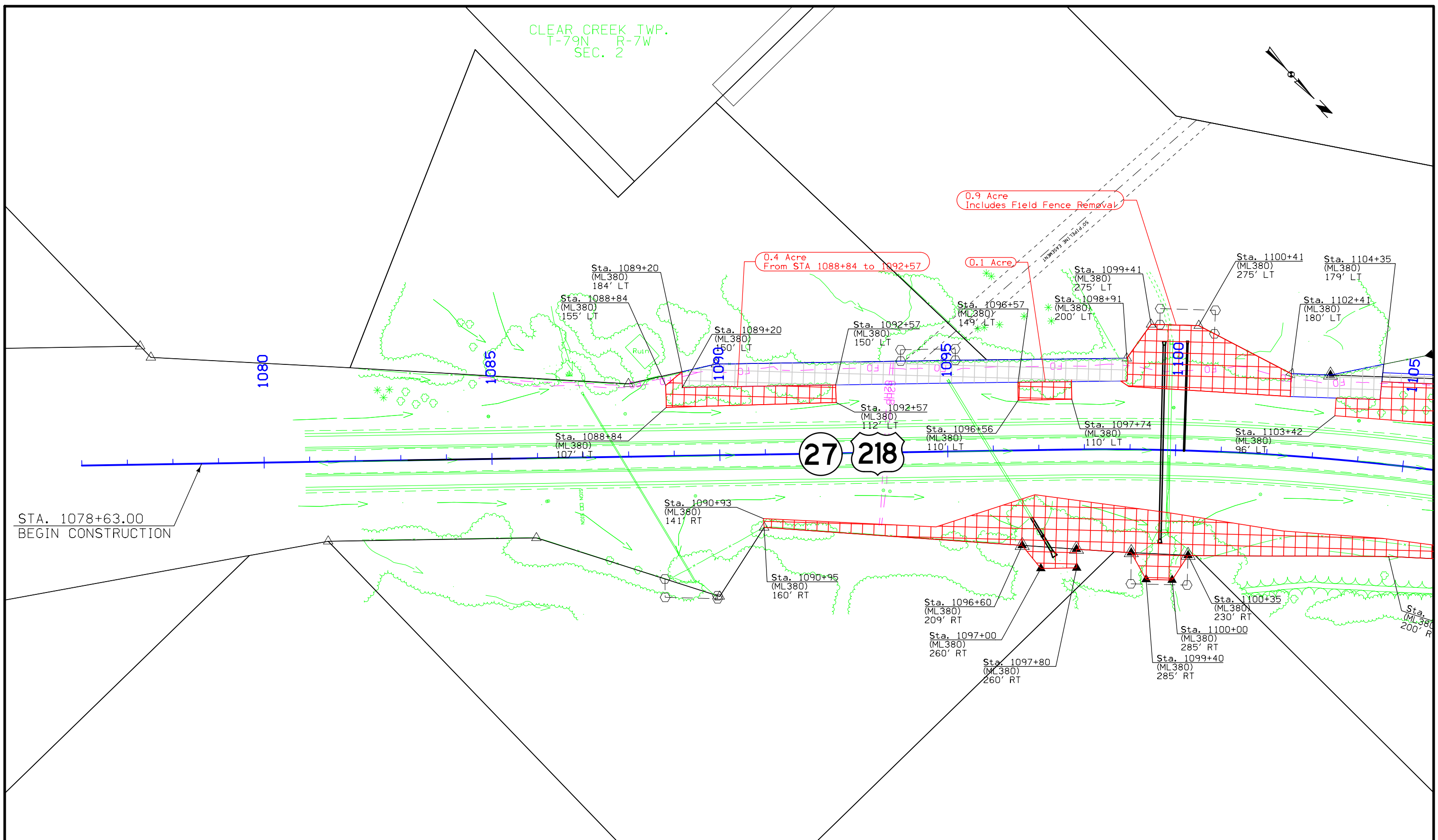
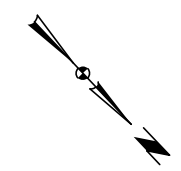
1.7 Acre
FROM STA 712+86 to STA 720+76

- CLEARING AND GRUBBING
- GRUBBING ONLY (Previously Cleared)
- PREVIOUSLY CLEARED and GRUBBED

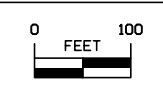
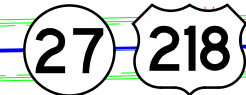
I-80
Clearing and Grubbing






CLEAR CREEK TWP.
T-79N R-7W
SEC. 2



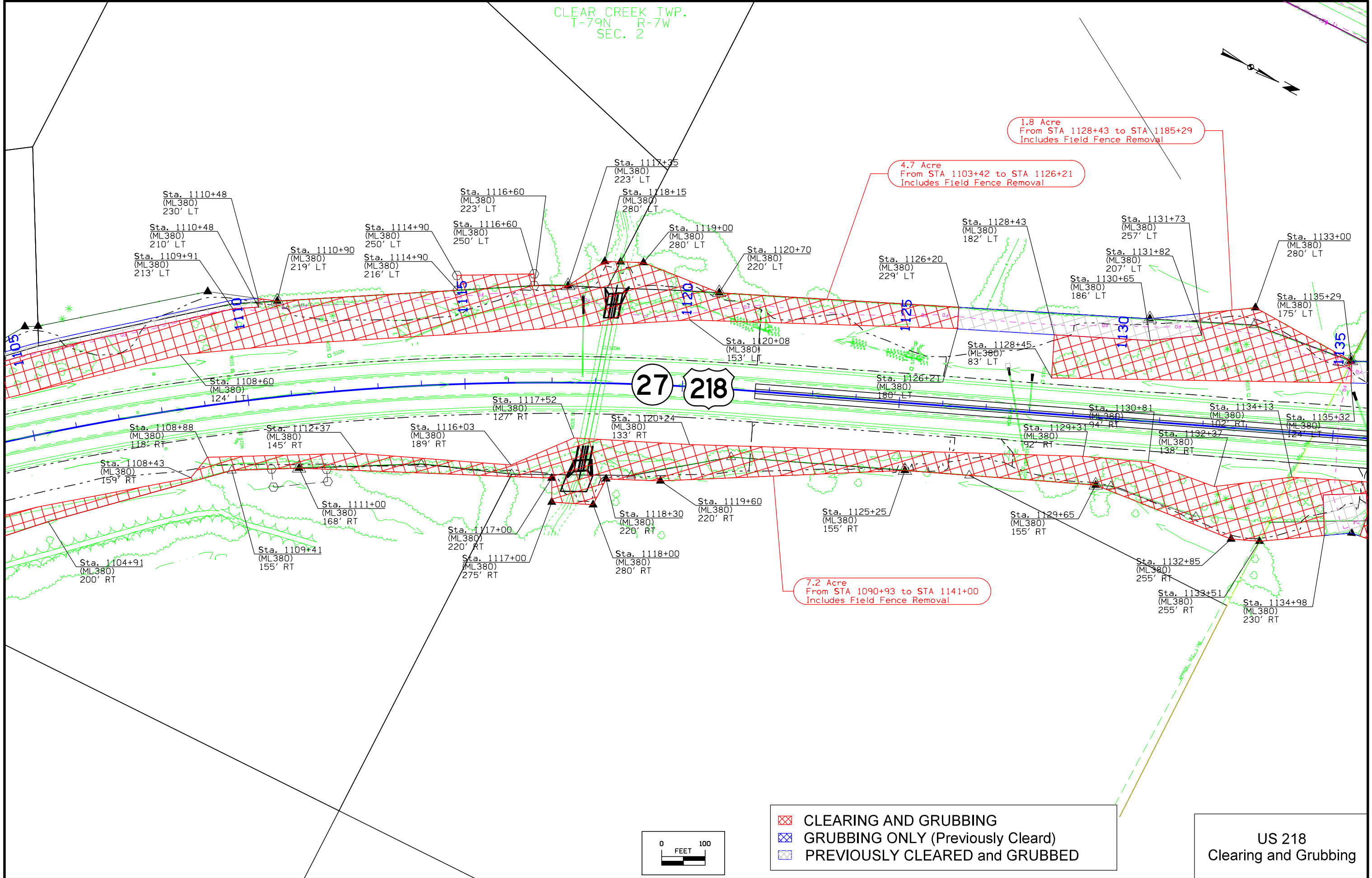
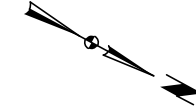
STA. 1078+63.00
BEGIN CONSTRUCTION



-  CLEARING AND GRUBBING
-  GRUBBING ONLY (Previously Cleard)
-  PREVIOUSLY CLEARED and GRUBBED

US 218
Clearing and Grubbing

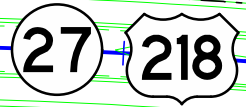
CLEAR CREEK TWP.
T-79N R-7W
SEC. 2






1.8 Acre
From STA 1128+43 to STA 1185+29
Includes Field Fence Removal

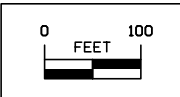
4.7 Acre
From STA 1103+42 to STA 1126+21
Includes Field Fence Removal

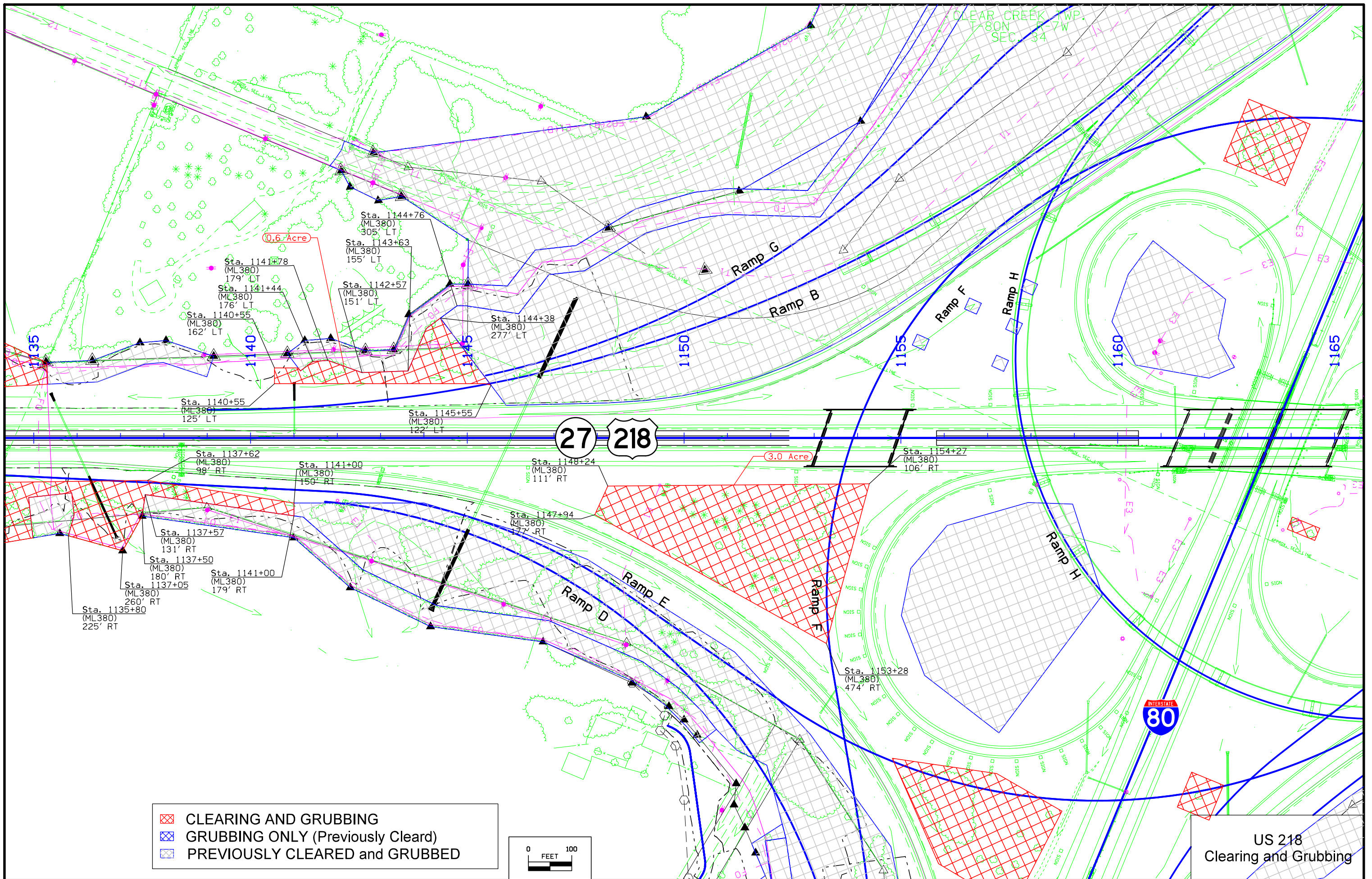
7.2 Acre
From STA 1090+93 to STA 1141+00
Includes Field Fence Removal



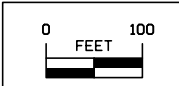
-  CLEARING AND GRUBBING
-  GRUBBING ONLY (Previously Cleard)
-  PREVIOUSLY CLEARED and GRUBBED

US 218
Clearing and Grubbing

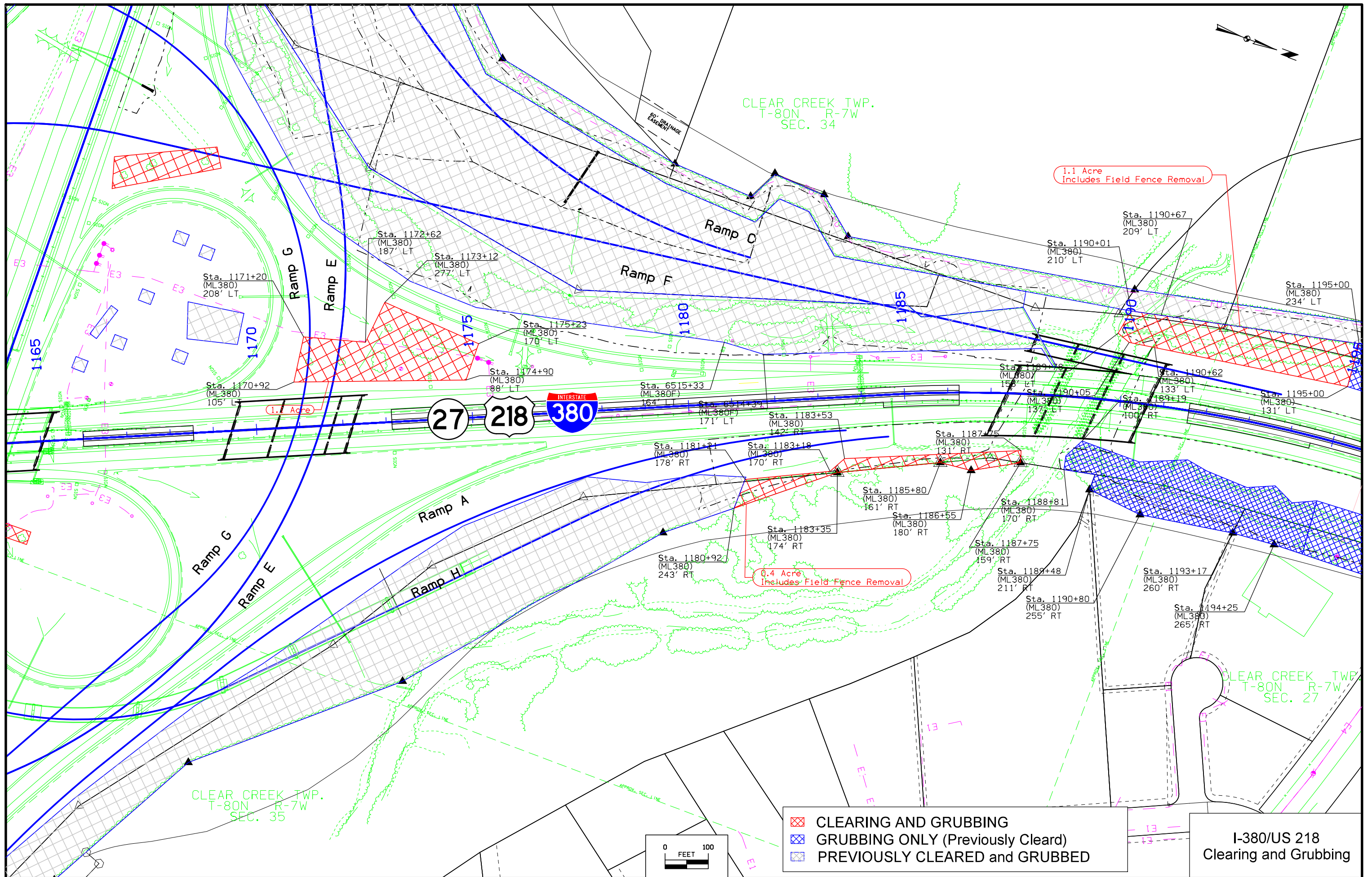




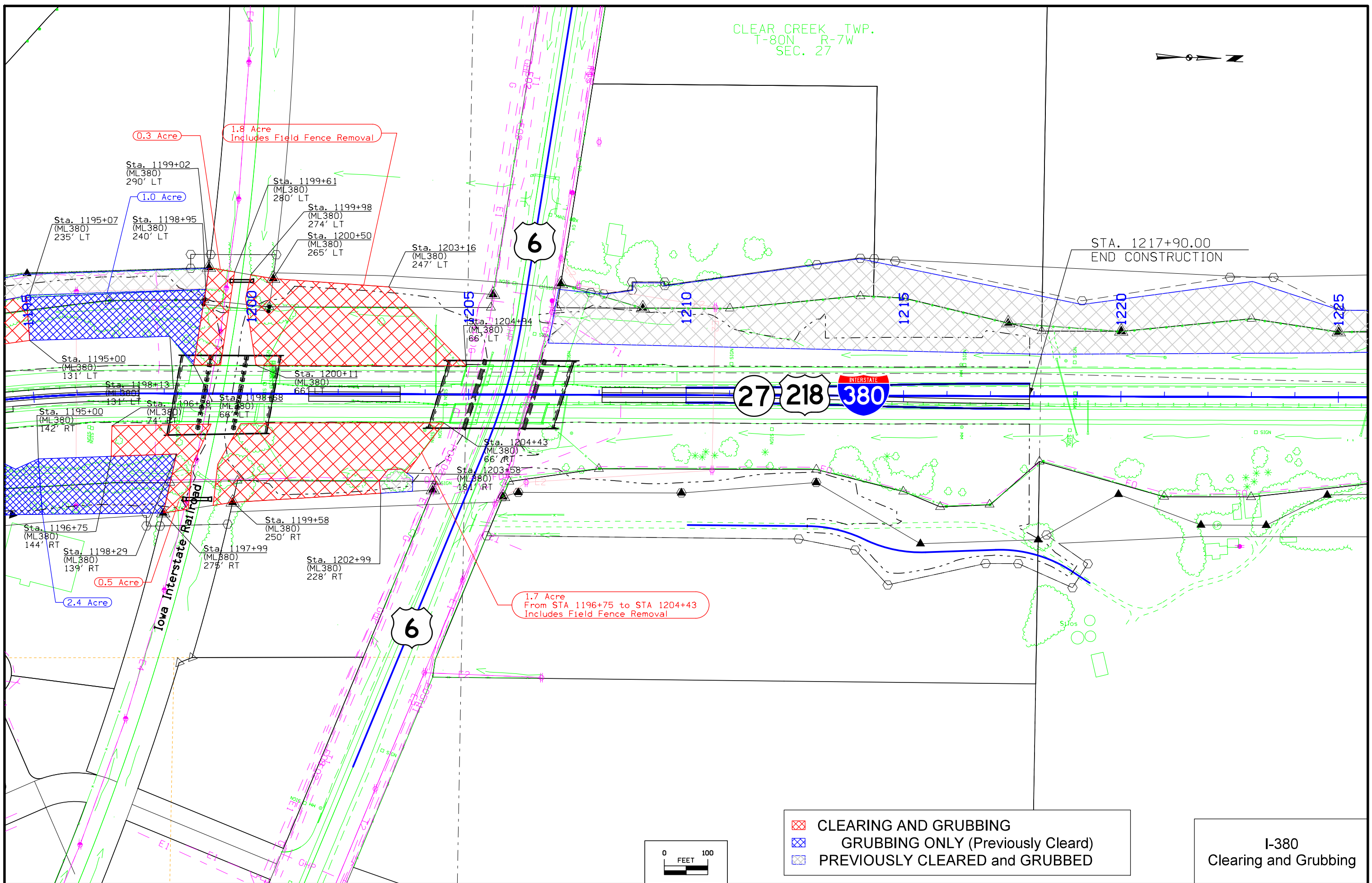
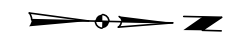
- CLEARING AND GRUBBING
- GRUBBING ONLY (Previously Cleard)
- PREVIOUSLY CLEARED and GRUBBED






US 218
Clearing and Grubbing

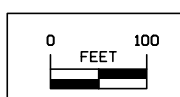


CLEAR CREEK TWP.
T-80N R-7W
SEC. 27



-  CLEARING AND GRUBBING
-  GRUBBING ONLY (Previously Cleared)
-  PREVIOUSLY CLEARED and GRUBBED

I-380
Clearing and Grubbing



CLEAR CREEK TWP.
T-80N R-7W
SEC. 33



Begin Chain Link Fence
1567+63.1
67.4 LT

Existing Overhead Utility
- Protect in Place
Approx. Sta. 568+15

Existing Buried Utilities
- Protect in Place
Approx. Sta. 567+85 to 568+50

Existing Overhead Utility
- Protect in Place
Approx. Sta. 593+00

Existing DOT-ICN Fiber Optic - Protect
in Place (Conduit Run 27C)
Approx. Sta. 593+30, 125' RT
to 594+10, 125' RT

565

570

575

580

585

590

595



Ireland Ave.

1573+37.7
99.1 LT

1573+51.0
90.8 LT

1575+66.7
64.7 LT

1575+81.3
64.7 LT

1573+94.3
114.6 LT

1575+51.6
97.7 LT

1576+02.5
89.2 LT

1576+42.2
81.5 LT

1577+54.3
58.9 LT

1579+58.9
55.6 LT

1580+24.9
56.6 LT

1581+13.5
71.0 LT

582+17.2
177.6 LT

585+64.9
169.0 LT

587+34.9
139.0 LT

588+64.4
139.0 LT

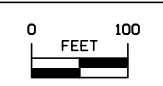
589+64.5
138.9 LT

593+81.0
139.0 RT

Begin Chain Link Fence
584+94.8
154.8 RT

Fencing Legend:
 -#- Fence
 -#- Flood Plain Fence
 -#- Safety Fence

NOTE: Existing DOT-ICN Fiber Optic - Protect in Place for all Proposed Fencing Project Wide.



FENCING LAYOUT
I-80
sheet 1 of 10

CLEAR CREEK TWP.
T-80N R-7W
SEC. 34



Existing DOT-ICN Fiber Optic
- Coordinated Conduit
Lowering Required. Refer to
N Sheets (Conduit Run 29D)

Existing Buried Utilities
- Protect in Place
Approx. Sta. 620+20

Channel Crossing Fence - Type "A"

597+80.1 145.4 LT
598+50.1 159.0 LT
600+69.8 174.0 LT
601+14.7 149.0 LT
604+30.1 149.0 LT
604+75.2 159.0 LT
605+03.2 149.0 LT
606+03.2 139.0 LT
610+40.1 139.0 LT
611+60.1 154.0 LT

End Chain Link Fence
Begin Safety Fence
620+12.7 250.7 LT
618+20.1 164.0 LT
619+96.9 187.2 LT
End Safety Fence
Begin Chain Link Fence
622+12.3 270.6 LT
623+25.1 284.0 LT

Begin Safety Fence
Tie Into Existing Chain Link
620+25.4 229.0 RT

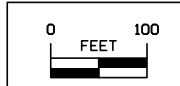
End Chain Link Fence
Tie Into Existing Chain Link
606+62.4 196.2 RT

End Safety Fence
Tie Into Existing Chain
622+38.1 244.0 RT

+30 Prop.
Type M Dike
Elev. =757.70

Fencing Legend:
-#- Fence
-#- Flood Plain Fence
-#- Safety Fence

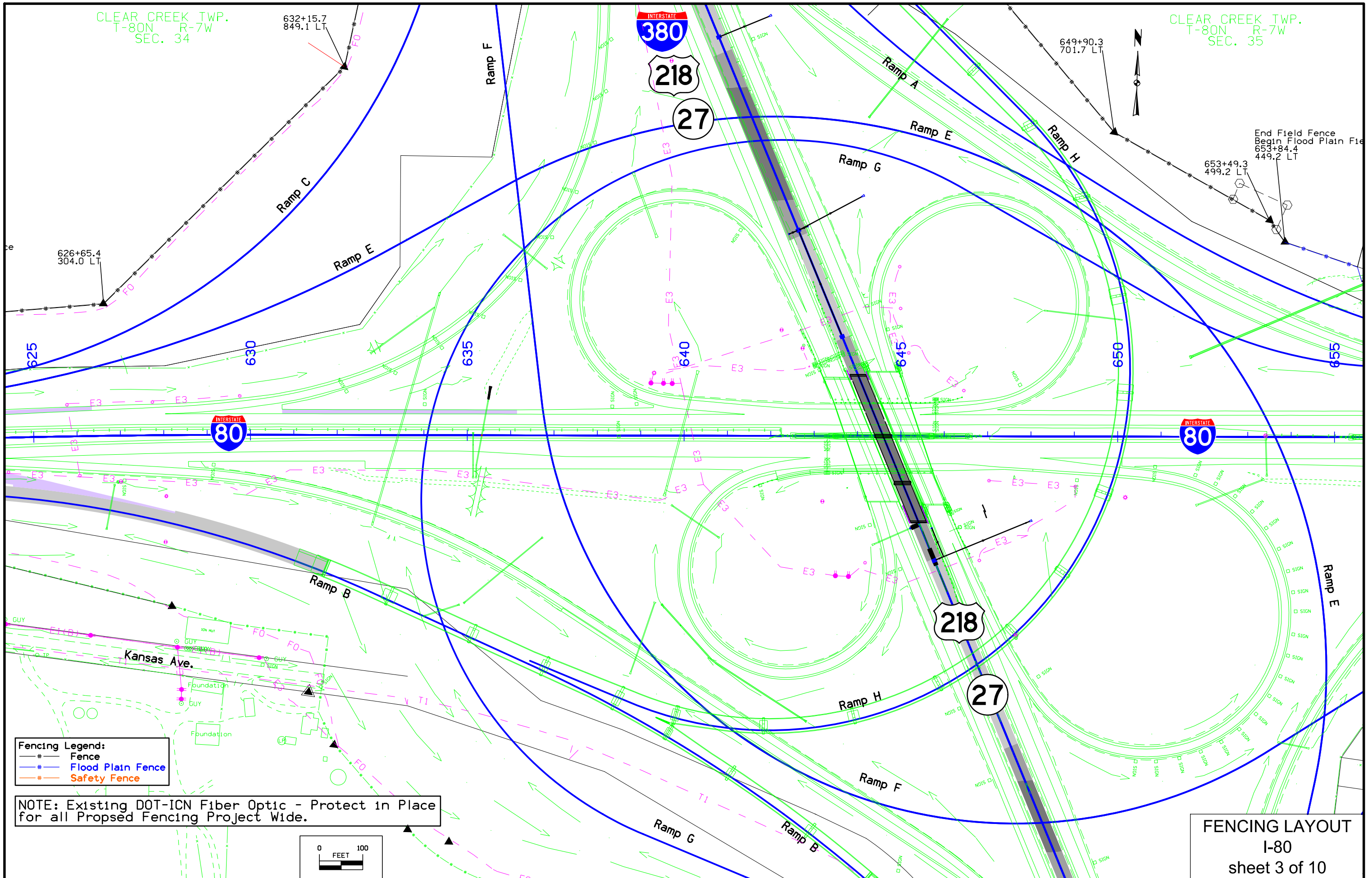
NOTE: Existing DOT-ICN Fiber Optic - Protect in Place
for all Propsed Fencing Project Wide.



FENCING LAYOUT
I-80
sheet 2 of 10

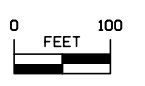
CLEAR CREEK TWP.
T-80N R-7W
SEC. 34

CLEAR CREEK TWP.
T-80N R-7W
SEC. 35



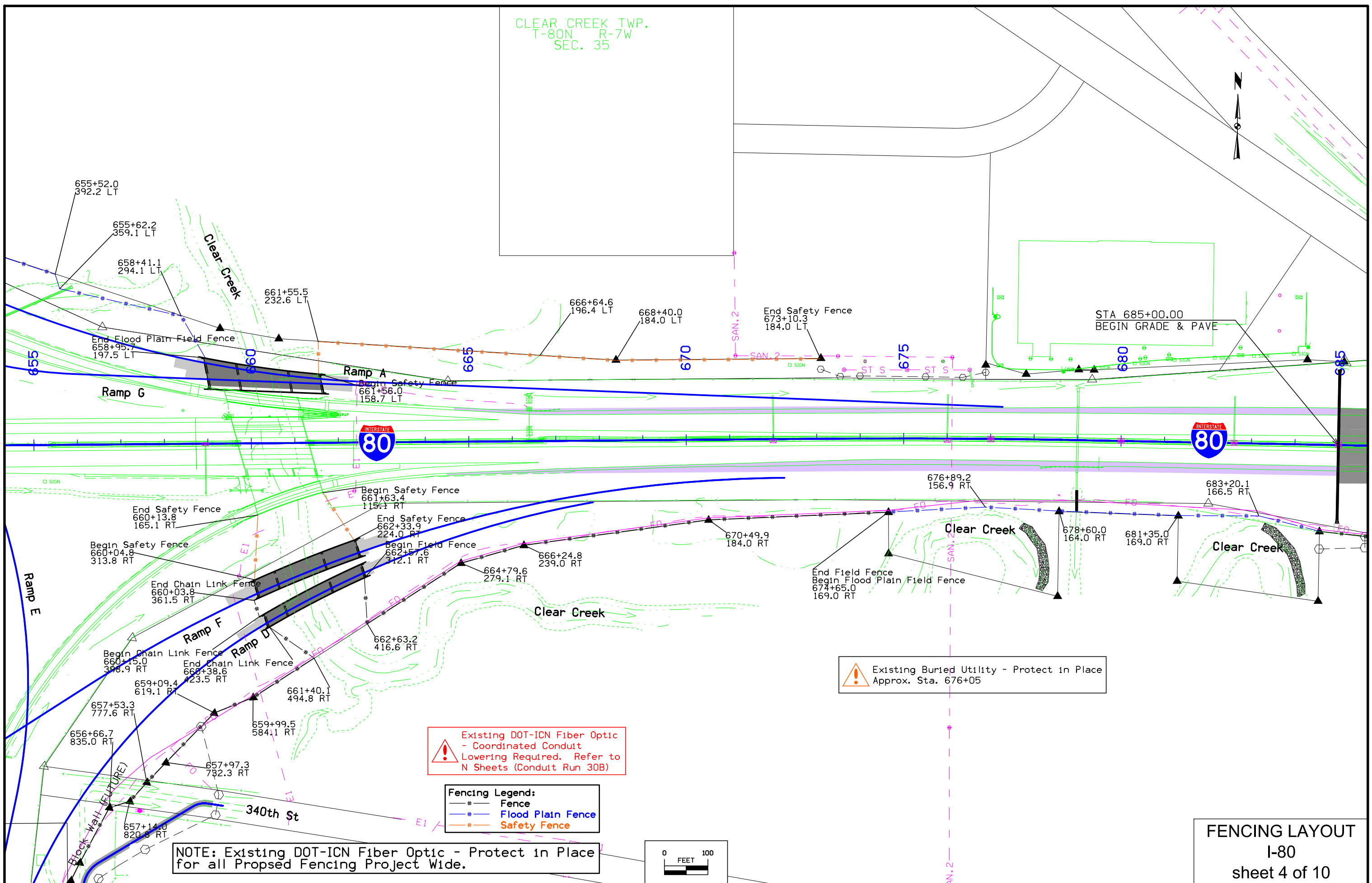
Fencing Legend:
 -#- Fence
 -#- Flood Plain Fence
 -#- Safety Fence

NOTE: Existing DOT-ICN Fiber Optic - Protect in Place for all Proposed Fencing Project Wide.



FENCING LAYOUT
 I-80
 sheet 3 of 10

CLEAR CREEK TWP.
T-80N R-7W
SEC. 35



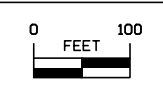
STA 685+00.00
BEGIN GRADE & PAVE

Existing Buried Utility - Protect in Place
Approx. Sta. 676+05

Existing DOT-ICN Fiber Optic
- Coordinated Conduit
Lowering Required. Refer to
N Sheets (Conduit Run 30B)

Fencing Legend:
 -#- Fence
 -#- Flood Plain Fence
 -#- Safety Fence

NOTE: Existing DOT-ICN Fiber Optic - Protect in Place
for all Propped Fencing Project Wide.



FENCING LAYOUT
I-80
sheet 4 of 10

CLEAR CREEK TWP.
T-80N R-7W
SEC. 35

CLEAR CREEK TWP.
T-80N R-7W
SEC. 36



Existing Buried Utility Envelopes - Protect in Place
Approx. Sta. 689+00 to 696+00
Refer to Bridge Plans NHS-080-6(379)239--11-52 and
NHS-080-6(361)239--11-52

STA. 690+31.73
END PCC GRADE & PAVE

STA. 696+78.20
BEGIN HMA WIDENING
BEGIN HMA OVERLAY

STA. 701+25.00
END HMA OVERLAY

Building Under Construction



Begin Field Fence
697+78.0
86.6 RT

End Field Fence
691+58.5
86.6 RT

End Flood Plain Field Fence
Begin Field Fence
684+60.2
199.0 RT

689+98.1
239.0 RT

698+15.7
136.4 RT

701+11.7
194.0 RT

703+50.0
146.9 RT

709+05.6
173.7 RT

709+26.6
233.6 RT

707+94.9
209.0 RT

709+96.1
286.3 RT

711+60.2
259.0 RT

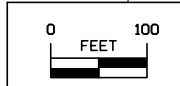
End Field Fence
712+65.6
314.2 RT

Utility Relocation and/or Abandonment
Contractor to Verify Final Location and
Protect in Place.
Approx. Sta. 685+00 to 689+00

Existing Buried Utility - Protect in Place
Approx. Sta. 701+00

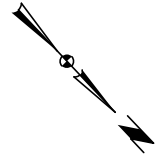
Fencing Legend:
Fence
Flood Plain Fence
Safety Fence

NOTE: Existing DOT-ICN Fiber Optic - Protect in Place
for all Proposed Fencing Project Wide.



FENCING LAYOUT
I-80
sheet 5 of 10

CLEAR CREEK TWP.
T-79N R-7W
SEC. 2



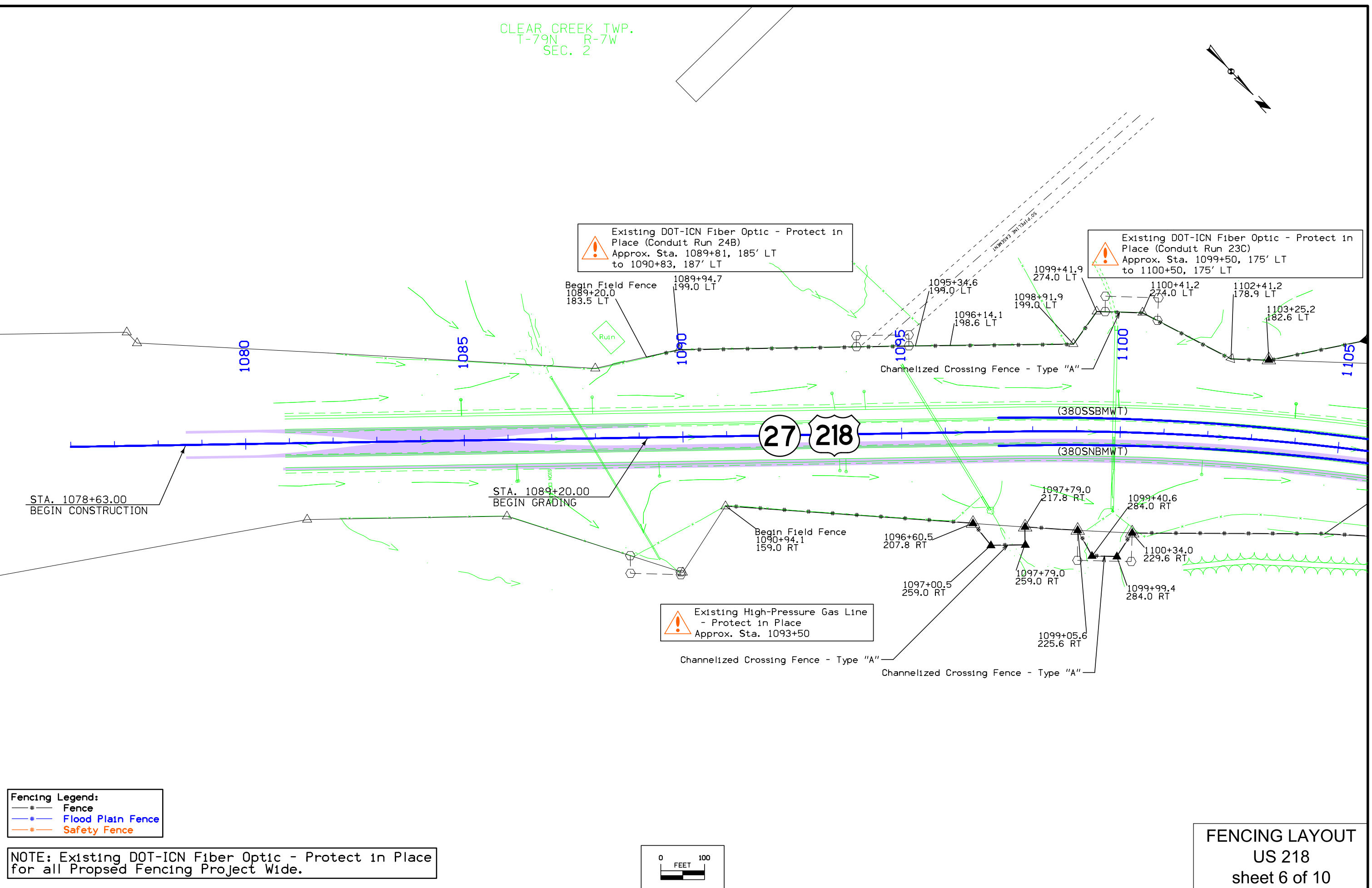
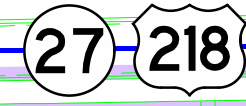
Existing DOT-ICN Fiber Optic - Protect in Place (Conduit Run 24B)
Approx. Sta. 1089+81, 185' LT to 1090+83, 187' LT

Existing DOT-ICN Fiber Optic - Protect in Place (Conduit Run 23C)
Approx. Sta. 1099+50, 175' LT to 1100+50, 175' LT

Existing High-Pressure Gas Line - Protect in Place
Approx. Sta. 1093+50

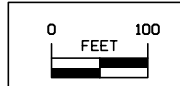
STA. 1078+63.00
BEGIN CONSTRUCTION

STA. 1089+20.00
BEGIN GRADING



Fencing Legend:
 -#- Fence
 -#- Flood Plain Fence
 -#- Safety Fence

NOTE: Existing DOT-ICN Fiber Optic - Protect in Place for all Proposed Fencing Project Wide.



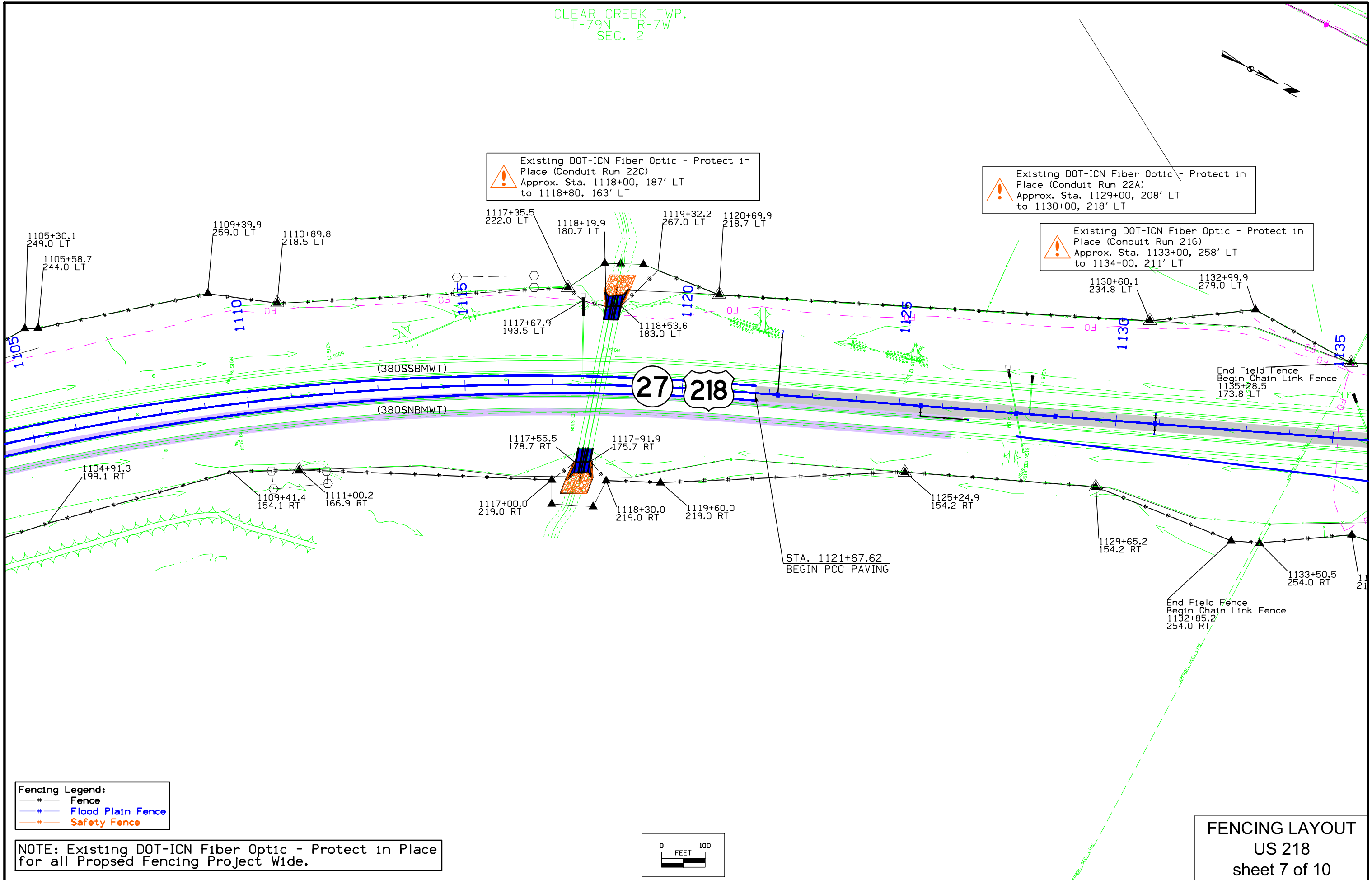
FENCING LAYOUT
US 218
sheet 6 of 10

CLEAR CREEK TWP.
T-79N R-7W
SEC. 2

Existing DOT-ICN Fiber Optic - Protect in Place (Conduit Run 22C)
Approx. Sta. 1118+00, 187' LT to 1118+80, 163' LT

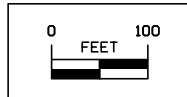
Existing DOT-ICN Fiber Optic - Protect in Place (Conduit Run 22A)
Approx. Sta. 1129+00, 208' LT to 1130+00, 218' LT

Existing DOT-ICN Fiber Optic - Protect in Place (Conduit Run 21G)
Approx. Sta. 1133+00, 258' LT to 1134+00, 211' LT

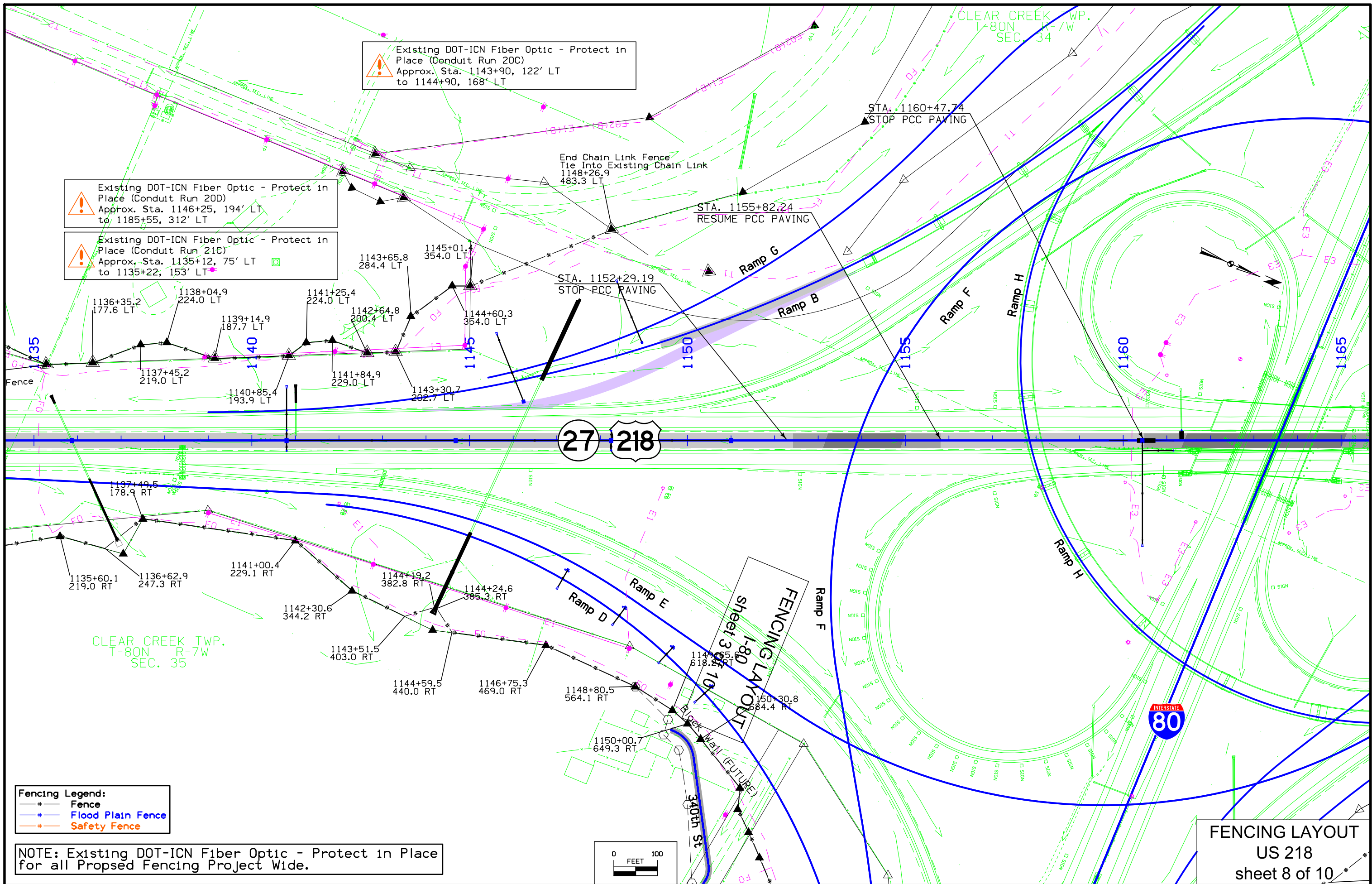


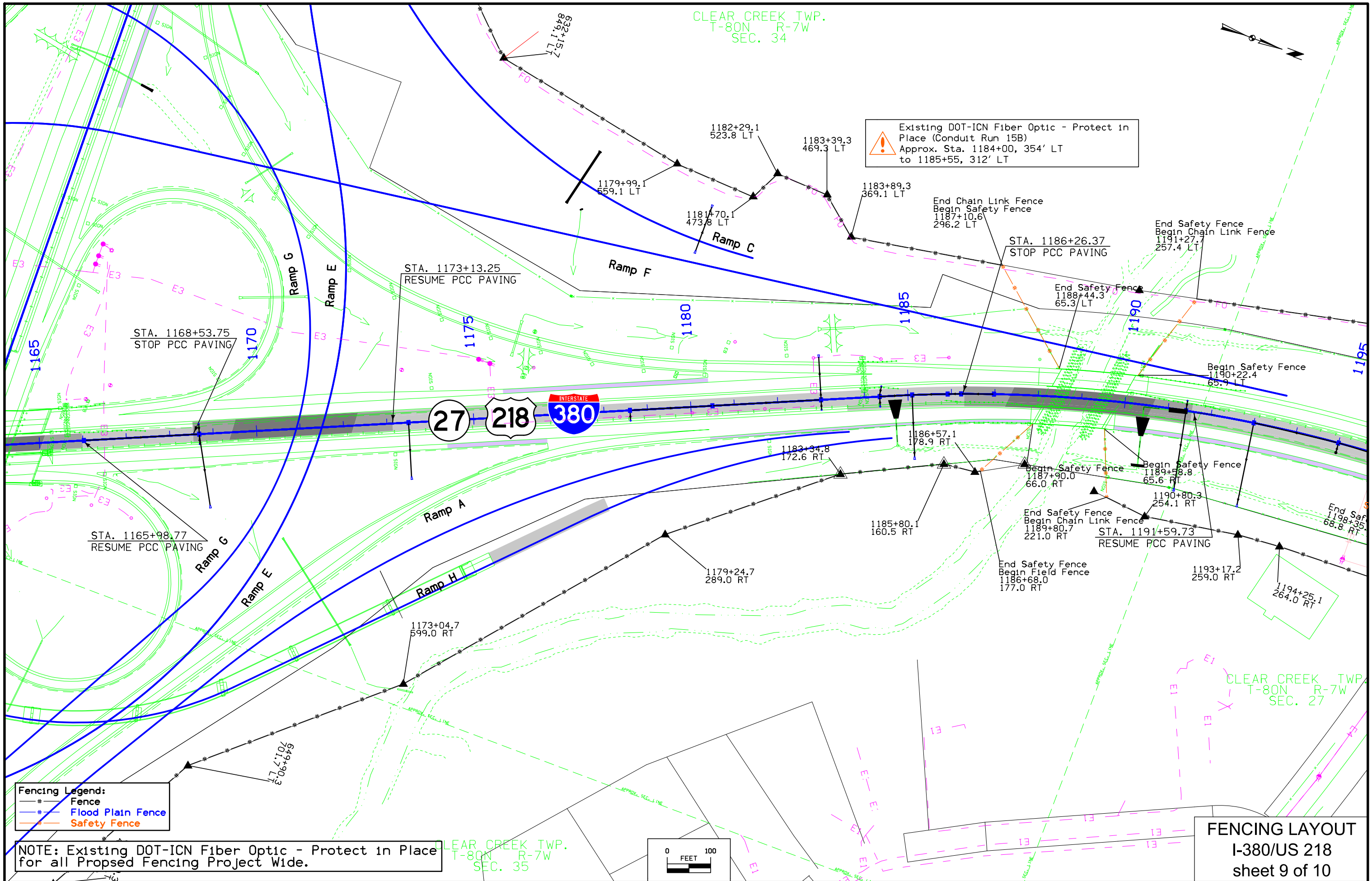
Fencing Legend:
 -#- Fence
 -#- Flood Plain Fence
 -#- Safety Fence

NOTE: Existing DOT-ICN Fiber Optic - Protect in Place for all Proposed Fencing Project Wide.



FENCING LAYOUT
 US 218
 sheet 7 of 10



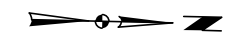


Fencing Legend:
 -#- Fence
 -#- Flood Plain Fence
 -#- Safety Fence

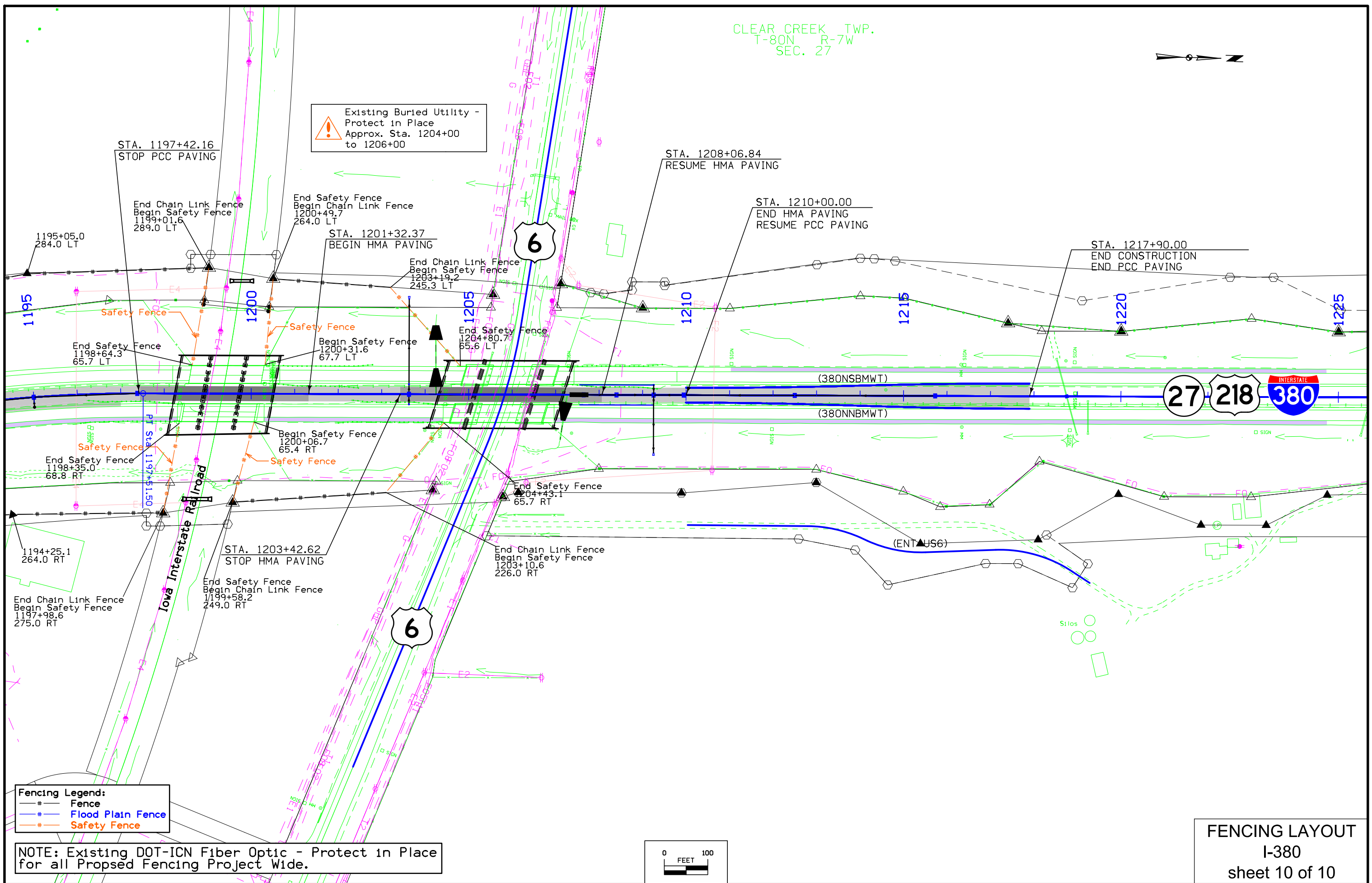
NOTE: Existing DOT-ICN Fiber Optic - Protect in Place for all Proposed Fencing Project Wide.

FENCING LAYOUT
 I-380/US 218
 sheet 9 of 10

CLEAR CREEK TWP.
T-80N R-7W
SEC. 27

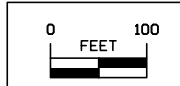


Existing Buried Utility -
Protect in Place
Approx. Sta. 1204+00
to 1206+00

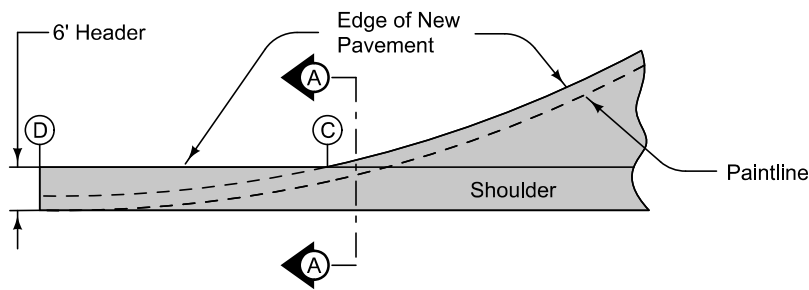


Fencing Legend:
-#- Fence
-#- Flood Plain Fence
-#- Safety Fence

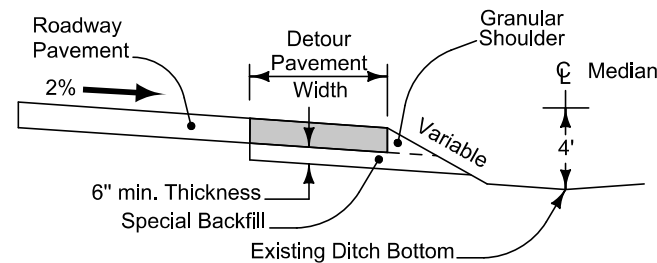
NOTE: Existing DOT-ICN Fiber Optic - Protect in Place
for all Proposed Fencing Project Wide.



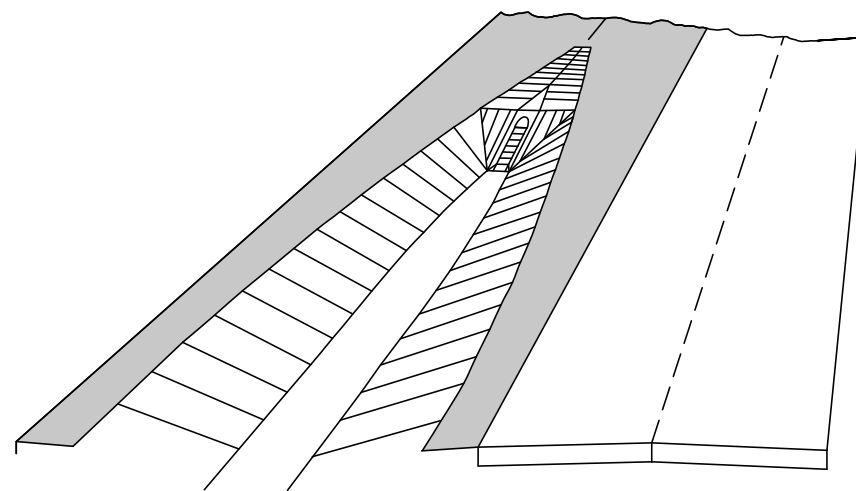
FENCING LAYOUT
I-380
sheet 10 of 10



DETAIL 'A'



SECTION A-A



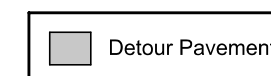
PERSPECTIVE VIEW
DITCH SLOPE AND BEVELED PIPE

Detour Pavement options: 9" PCC or 11.5" HMA

For joint details, see PV-101.

- ① Median crossover is asymmetrical about centerline.
- ② Beveled pipe and guard. See DR-212.
- ③ Slotted drain for median crossover. See Modified DR-502.
- ④ 'KT-2' or 'L-2' joint if mainline pavement is new construction. Bend bars out.
'BT-3' joint if mainline pavement is existing.
'B' joint if Detour Pavement is HMA.
- ⑤ For PCC Detour Pavement, 'L-2' or 'KT-2' spaced at one-quarter median width.
- ⑥ For PCC Detour Pavement, match existing roadway joints. 'CD' joints are required.
- ⑦ For PCC Detour Pavement, 2 foot 'C' Joint.

DESIGN QUANTITY TABLE		
Detour Pavement Sq. Yds.	Special Backfill CY	Granular Shoulder Tons
4337	878	165



Possible Contract Items:

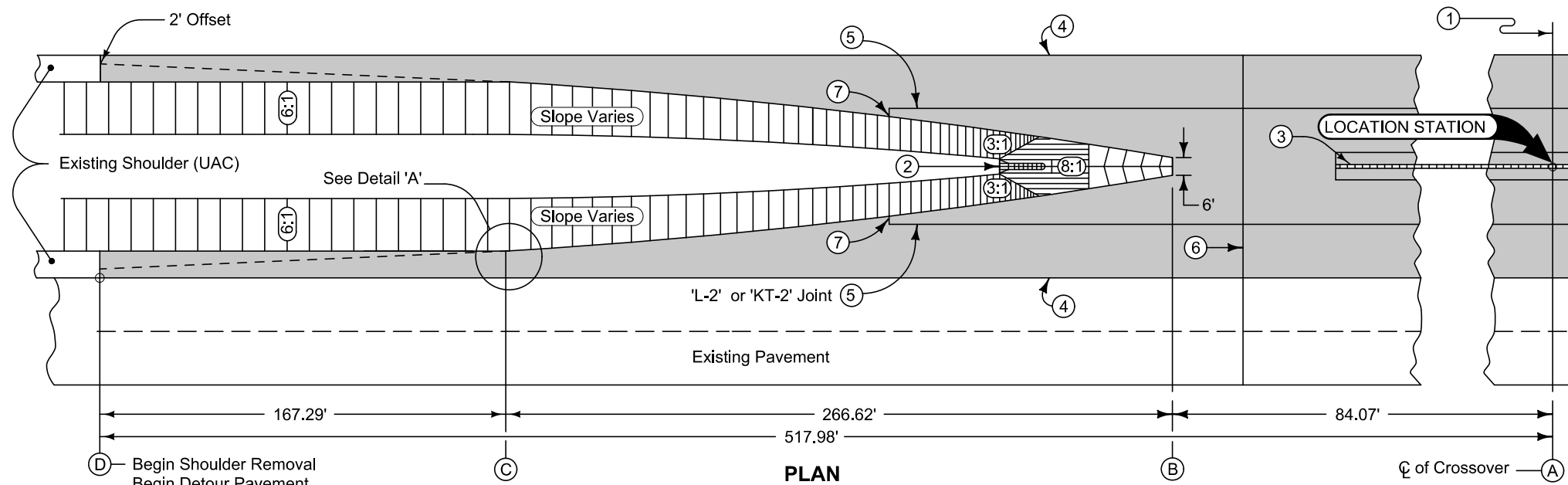
- Detour Pavement
- Embankment In Place
- Excavation, Class 10, Roadway and Borrow
- Excavation, Class 13, Roadway and Borrow
- Removal of Pavement
- Special Backfill
- Granular Shoulders, Type A

Possible Tabulation:
112-8

MODIFIED STANDARD ROAD PLAN	REVISION	
	5	04-21-15
	PV-503	
SHEET 1 of 2		

MODIFICATIONS: Changed
Median crossover symmetrical about center line to asymmetrical about center line
Revised quantities
Added second sheet with revised geometry

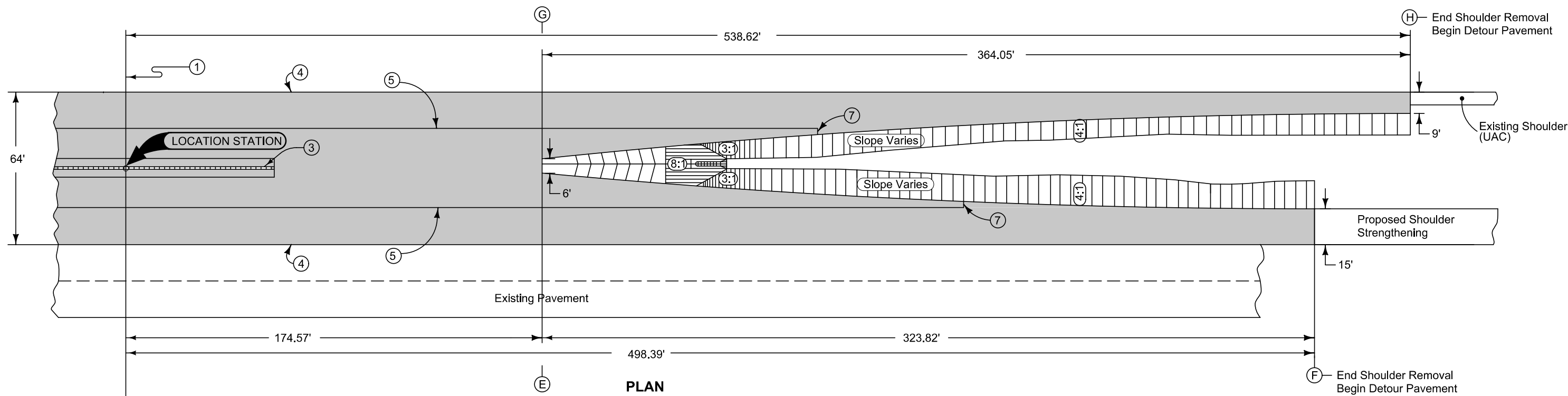
**MEDIAN CROSSOVER
(64' MEDIAN)**



PLAN

TABLE OF OFFSETS AND DROPS (PAVED SHOULDERS)																				
Distance from Location Station (Feet)	517.98	500	475	450	400	350.69	350	325	300	275	250	225	200	175	150	125	100	84.07	75.0	0
Offset from inside edge of Pavement (Feet)	6.00	6.00	6.00	6.00	6.00	6.00	6.03	7.32	8.79	10.44	12.27	14.28	16.47	18.84	21.40	24.13	27.05	29.00	32.00	32.00
Cross-Slope from inside edge of Pavement	4.00%	3.36%	2.47%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Drop from inside edge of Pavement (Feet)	0.24	0.20	0.15	0.12	0.12	0.12	0.12	0.15	0.18	0.21	0.25	0.29	0.33	0.38	0.43	0.48	0.54	0.58	0.64	0.64
POINT LOCATION	(D)					(C)												(B)		(A)

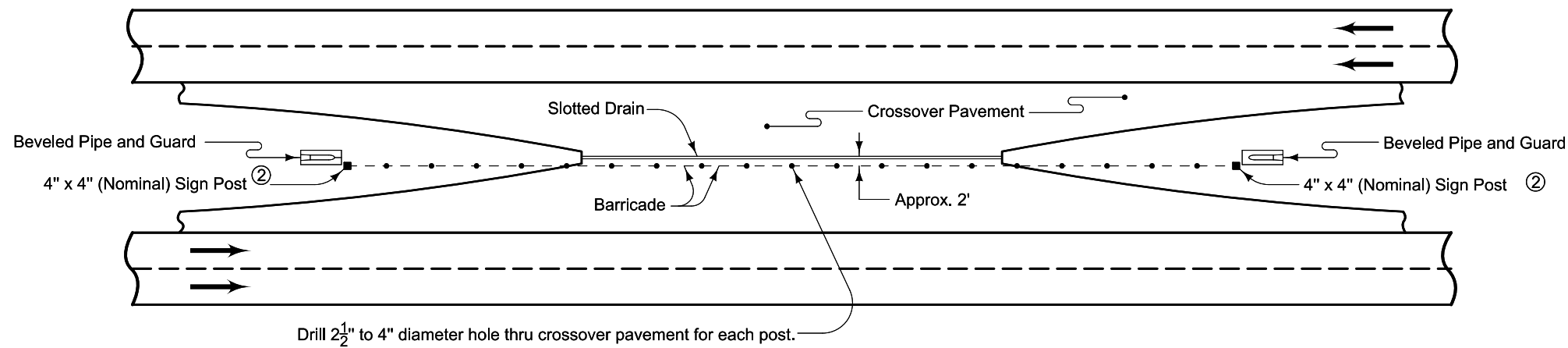
Distance from Location Station (Feet)	0	175.00	175.57	200	225	250	275	300	325	350	375	400	425	450	475	500	525	538.62		
Offset from inside edge of Pavement (Feet)	32.00	32.00	27.97	25.42	23.08	20.92	18.94	17.14	15.52	14.09	12.83	11.75	10.84	10.12	9.58	9.21	9.03	9		
Cross-Slope from inside edge of Pavement	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.62%	3.51%	4.00%		
Drop from inside edge of Pavement (Feet)	0.64	0.64	0.56	0.51	0.46	0.42	0.38	0.34	0.31	0.28	0.26	0.24	0.22	0.20	0.19	0.24	0.45	0.36		
POINT LOCATION	(A)		(G)															(H)		



Distance from Location Station (Feet)	0	175.00	175.57	200	225	250	275	300	325	350	375	400	425	450	475	498.39				
Offset from inside edge of Pavement (Feet)	32.00	32.00	30.01	27.74	25.69	23.82	22.13	20.62	19.30	18.15	17.17	16.38	15.76	15.33	15.01	15				
Cross-Slope from inside edge of Pavement	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.16%	15.00				
Drop from inside edge of Pavement (Feet)	0.64	0.64	0.60	0.55	0.51	0.48	0.44	0.41	0.39	0.36	0.34	0.33	0.32	0.31	0.32	0.45				
POINT LOCATION	(A)		(E)													(F)				

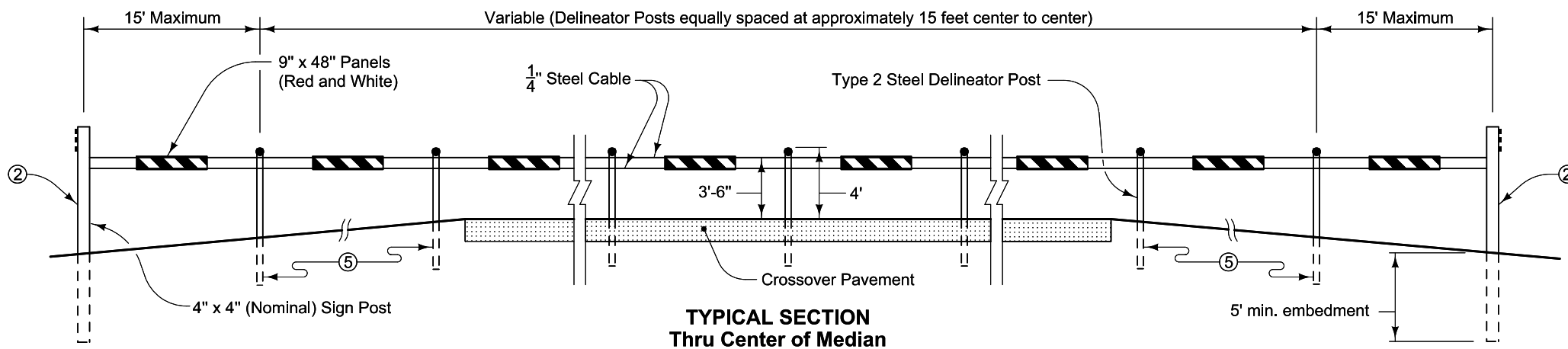
MODIFIED STANDARD ROAD PLAN	REVISION	
	5	04-21-15
	PV-503	
SHEET 1 of 2		
MODIFICATIONS: Changed Median crossover symmetrical about center line to asymmetrical about center line Added second sheet with revised geometry		
MEDIAN CROSSOVER (64' MEDIAN)		

The price bid for "Crossover Barricade", each, is considered full compensation for furnishing all materials and work necessary to construct the barricade as detailed hereon.



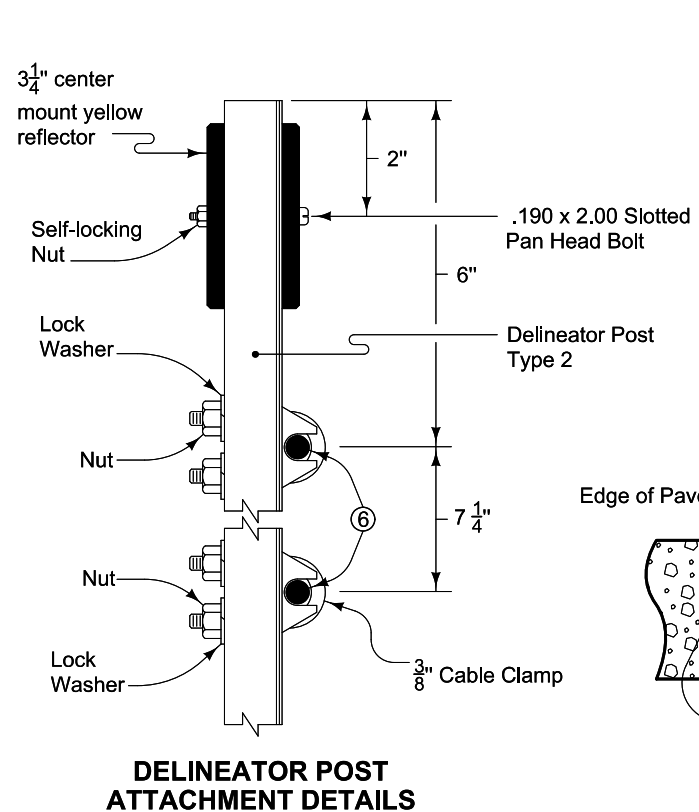
PLAN VIEW

- ① 3 1/4" center mount yellow reflector, attached to sign post with 0.190 x 1.25 slotted pan head screws.
- ② Extend the barricade to within 2 feet from the top end of the concrete collar.
- ③ 0.125 inch aluminum panel with Type III or IV retroreflective sheeting on both sides.
- ④ ReflectORIZED red stripes on both sides shall slope from upper left to lower right of panel.
- ⑤ Embed all delineator posts a minimum of 2'-6".
- ⑥ 1/4" inch diameter steel cable.

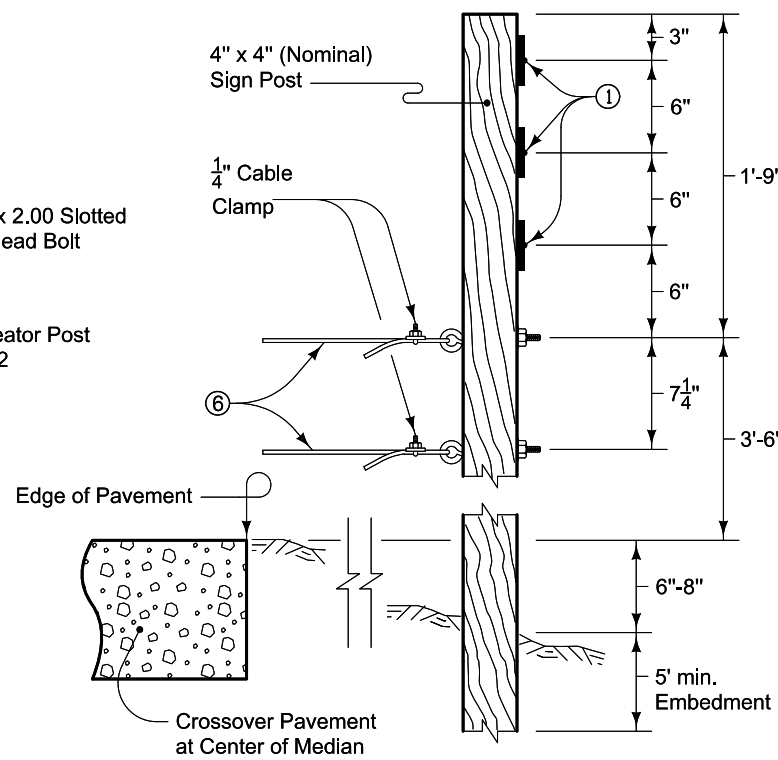


TYPICAL SECTION Thru Center of Median

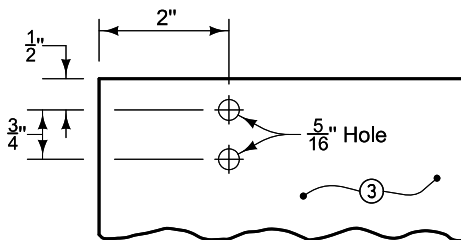
Quantities for Standard Road Plans			Items
PV-500	PV-503	PV-506	
25	19	18	Type 2 Steel Delineator Posts
2	2	2	4" x 4" (Nominal) Sign Post
56	44	42	3 1/4" Yellow Reflectors, center mounted
25	19	18	0.190 x 2.00 slotted pan head bolts and self-locking nuts
6	6	6	0.190 x 1.25 slotted pan head screws
26	20	19	9" x 48" Aluminum panels (red on white)
50	38	36	3/8" Cable clamps, lock washers and nuts
104	80	76	1/4" Cable clamps, neoprene washers and self-locking nuts
4	4	4	3/8" x 6" Eye bolts, washers and nuts
4	4	4	1/4" Cable clamps
820'	640'	610'	Approximate length of 1/4" diameter Steel Cable
405'	315'	300'	Distance from Sign Post to Sign Post based on Note ②



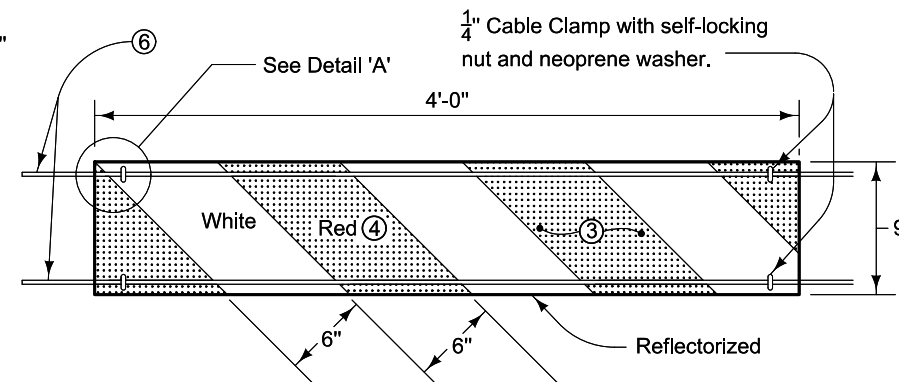
DELINEATOR POST ATTACHMENT DETAILS



SIGN POST ATTACHMENT DETAILS

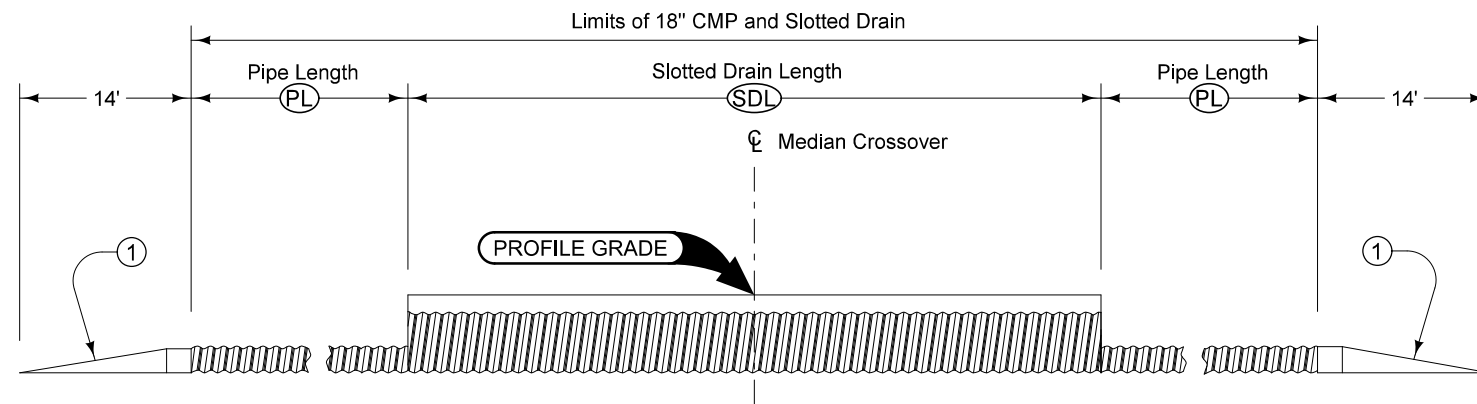


TYPICAL HOLE LOCATION DETAIL 'A'



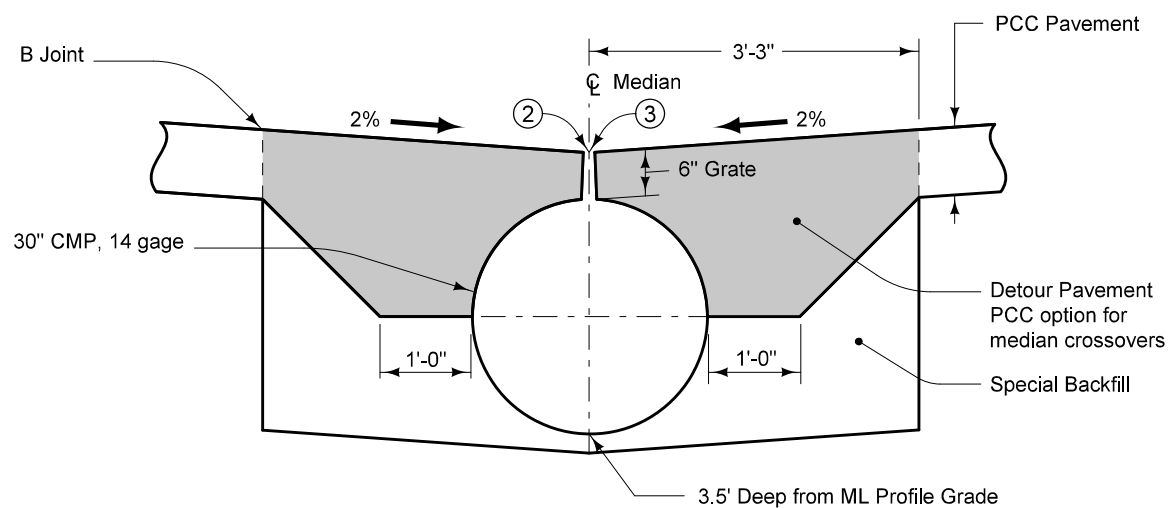
PANEL ATTACHMENT DETAILS

Highway Division		
DETAIL SHEET		540-13
REVISION: Changed RV designations to PV.	REVISION NO.	REVISION DATE
	9	10-19-10
DETAILS OF BARRICADE AT CROSSOVER		

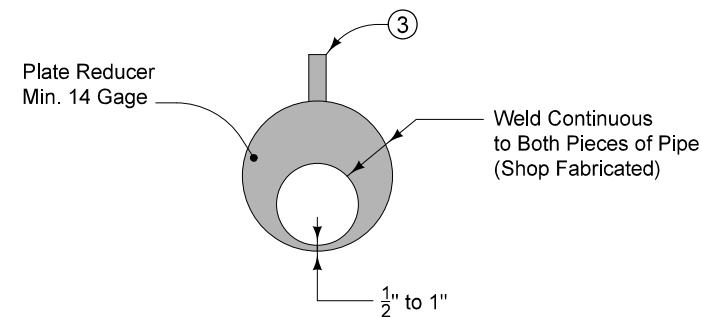


LONGITUDINAL SECTION THROUGH CMP SLOTTED DRAIN ASSEMBLY

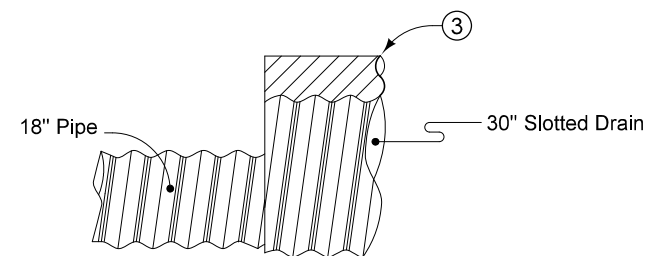
- ① Beveled pipe and guard. See DR-212.
- ② During construction of crossover pavement, cover slotted drain with duct tape or wood block.
- ③ Slotted grate 6 inches high x 1 3/4 inches opening width. Use 3/16 inch material for spacers and bearing bars (sides).



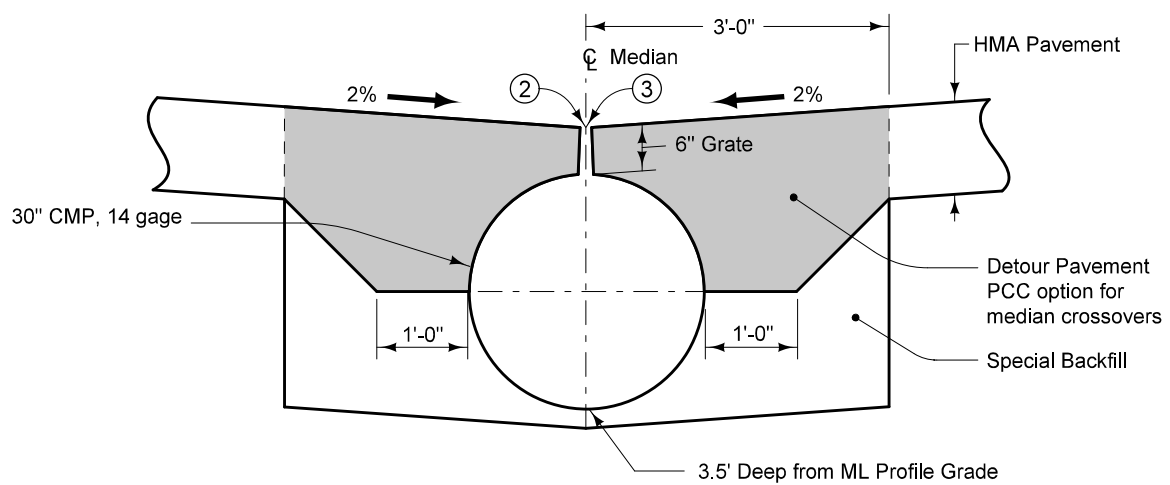
PCC PAVEMENT SITUATION



END VIEW OF PIPE REDUCER



SIDE VIEW OF PIPE REDUCER



HMA PAVEMENT SITUATION

Possible Contract Items:
 Beveled Pipe and Guard
 Culvert, Unclassified Roadway Pipe, 18" Dia.
 Detour Pavement
 Drain, Corrugated Metal Pipe Slotted, 30", w/6" Grate
 Special Backfill

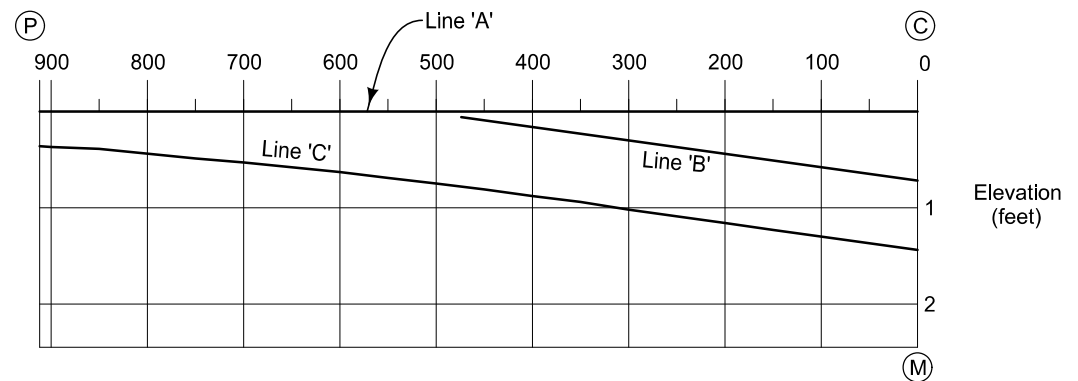
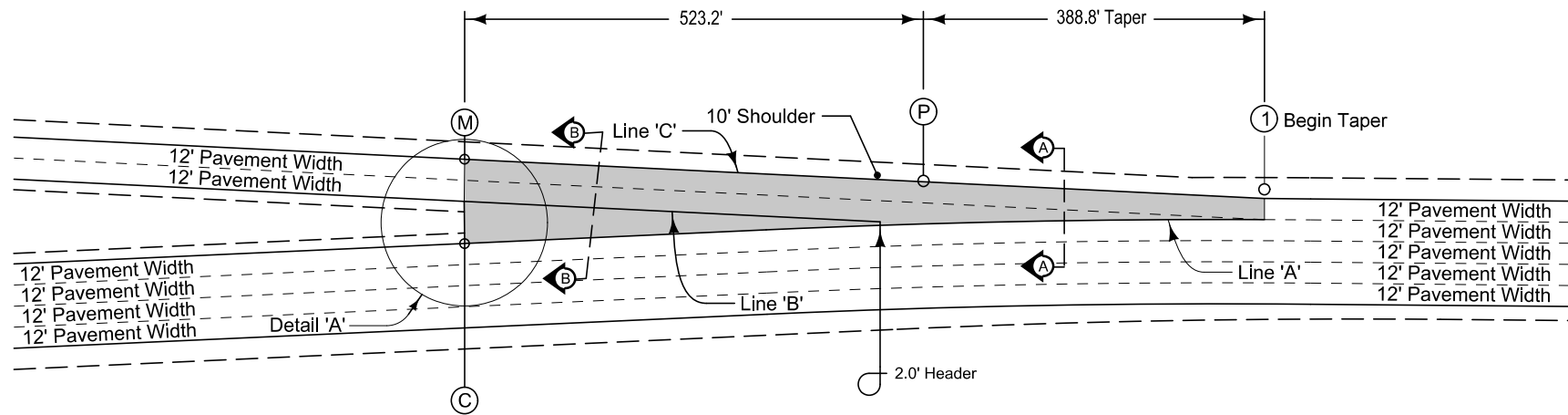
Possible Tabulation:
 112-8

TABLE OF QUANTITIES	
Bid Items	
30" Corrugated Metal Slotted Pipe Drain w/6" Grate	226'
18" dia. Corrugated Metal Roadway Pipe Culvert	198'

MODIFIED STANDARD ROAD PLAN	REVISION	
	1	10-18-16
	DR-502	
	SHEET 1 of 1	

MODIFICATIONS: Changed

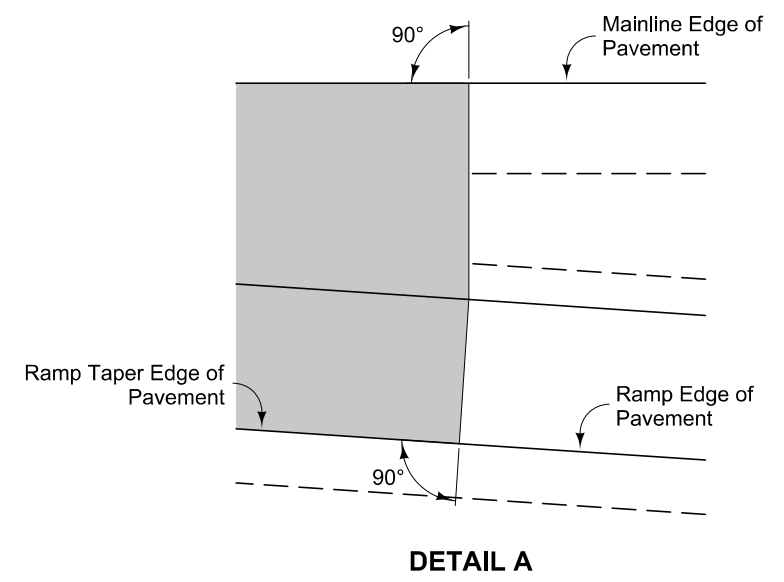
**SLOTTED DRAIN FOR
 MEDIAN CROSSOVERS**



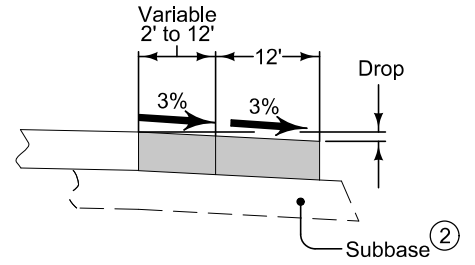
PROFILE

TABLE OF OFFSETS AND DROPS FOR 24' RAMP TAPER

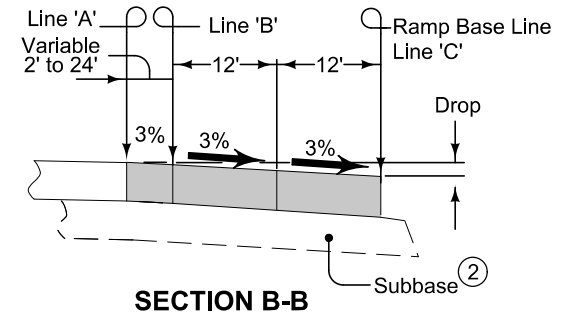
DISTANCE FROM POINT (C) ALONG LINE 'A' (Ft.)		912	900	875	850	825	800	775	750	725	700	675	650	625	600	575	550	525	523.9	500	475	473.8	450	425	400	375	350	325	300	275	250	225	200	175	150	125	100	75	50	25	0																									
From Line 'A' To Line 'B'	OFFSET (Ft.)																					2.00	3.00	4.80	5.19	6.32	7.48	8.66	9.84	11.02	12.20	13.38	14.56	15.74	16.92	18.10	19.28	20.46	21.64	22.82	24.00																									
	SLOPE (%)																						← Constant 3.0% Slope →																																											
	DROP (Ft.)																							0.06	0.09	0.14	0.16	0.19	0.22	0.26	0.30	0.33	0.37	0.40	0.44	0.47	0.51	0.54	0.58	0.61	0.65	0.68	0.72																							
From Line 'B' To Line 'C'	OFFSET (Ft.)																																																																	
	SLOPE (%)																							← Constant 24' Offset →																																										
	DROP (Ft.)																							0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72																			
From Line 'A' To Line 'C'	OFFSET (Ft.)	12.00	12.25	12.84	13.45	14.10	14.77	15.46	16.19	16.94	17.72	18.53	19.37	20.23	21.12	22.04	22.98	23.96	24.00	24.96	25.98																																													
	SLOPE (%)																							← Constant 3.0% Slope →																																										
	DROP (Ft.)	0.36	0.37	0.39	0.40	0.42	0.44	0.46	0.49	0.51	0.53	0.56	0.58	0.61	0.63	0.66	0.69	0.72	0.72	0.75	0.78		0.78	0.81	0.86	0.88	0.91	0.94	0.98	1.02	1.05	1.09	1.12	1.16	1.19	1.23	1.26	1.30	1.33	1.37	1.40	1.44																								



DETAIL A



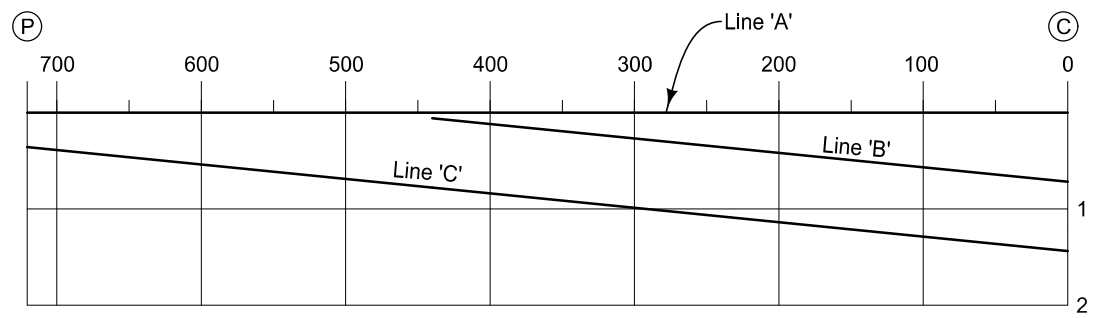
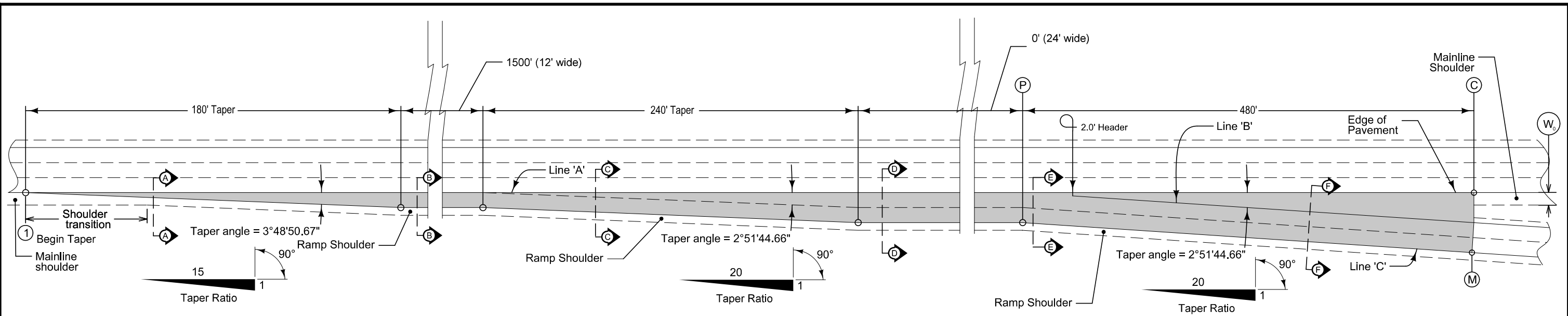
SECTION A-A



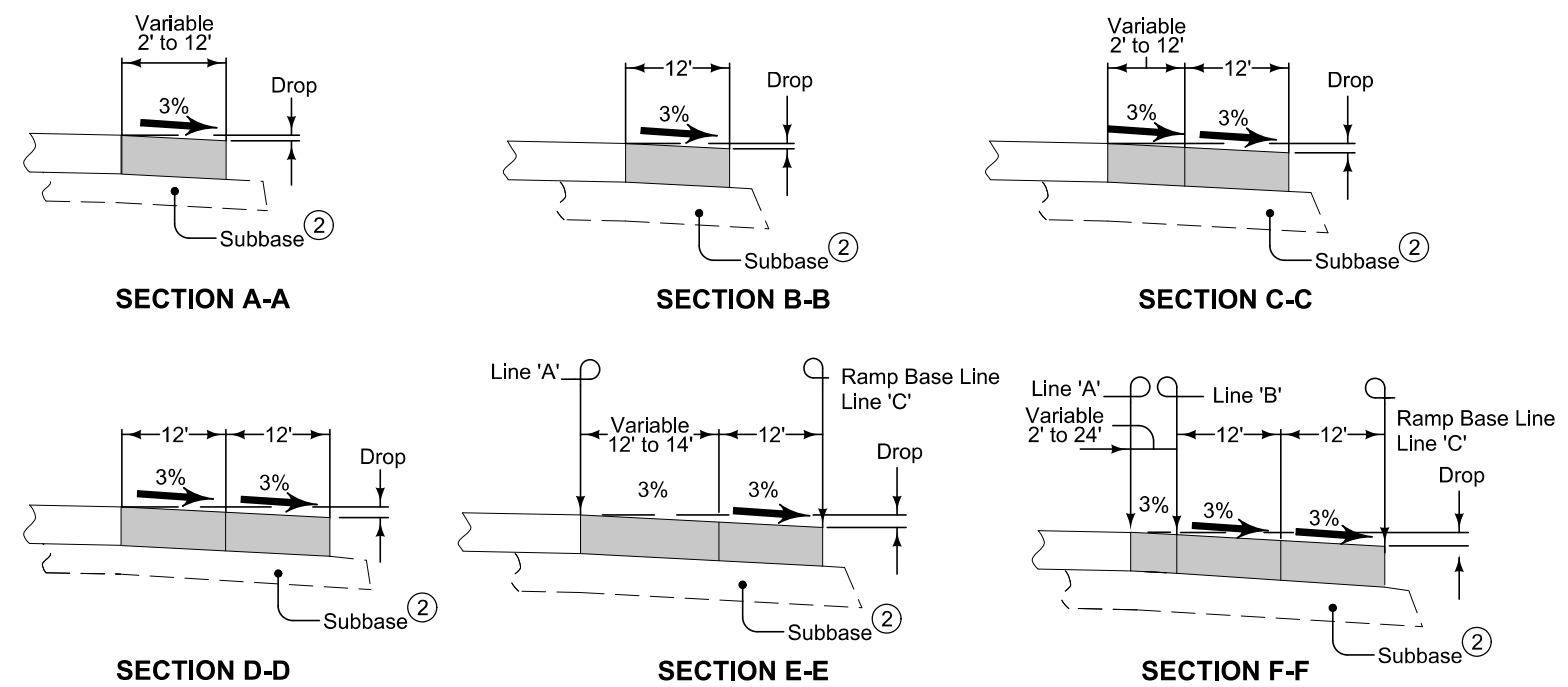
SECTION B-B

- Construct ramp exit pavement the same thickness as mainline pavement.
- For joint detail, see PV-101.
- ① For header construction detail at the end of taper See Typical 7101 or Typical 7102.
- ② Construct subbase for ramp exit pavement the same thickness as mainline subbase.

**PARALLEL DECELERATION TAPER
for RAMP A on I-80**



PROFILE



SECTION A-A

SECTION B-B

SECTION C-C

SECTION D-D

SECTION E-E

SECTION F-F

(P)

(C)

		TABLE OF OFFSETS AND DROPS FOR 24' RAMP TAPER																																				
DISTANCE FROM POINT (C) ALONG LINE 'A' (Ft.)		720	700	675	650	625	600	575	550	525	500	475	450	440	425	400	375	350	325	300	275	250	225	200	175	150	125	100	75	50	25	0						
From Line 'A' To Line 'B'	OFFSET (Ft.)													2.00	2.75	4.00	5.25	6.50	7.75	9.00	10.25	11.50	12.75	14.00	15.25	16.50	17.75	19.00	20.25	21.50	22.75	24.00						
	SLOPE (%)													← Constant 3.0% Slope →																								
	DROP (Ft.)														0.06	0.08	0.12	0.16	0.20	0.23	0.27	0.31	0.35	0.38	0.42	0.46	0.50	0.53	0.57	0.61	0.65	0.68	0.72					
From Line 'B' To Line 'C'	OFFSET (Ft.)																																					
	SLOPE (%)													← Constant 24' Offset →																								
	DROP (Ft.)														0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72					
From Line 'A' To Line 'C'	OFFSET (Ft.)	12.00	13.00	14.25	15.50	16.75	18.00	19.25	20.50	21.75	23.00	24.25	25.50																									
	SLOPE (%)	← Constant 3.0% Slope →																																				
	DROP (Ft.)	0.36	0.39	0.43	0.47	0.50	0.54	0.58	0.62	0.65	0.69	0.73	0.77	0.78	0.80	0.84	0.88	0.92	0.95	0.99	1.03	1.07	1.10	1.14	1.18	1.22	1.25	1.29	1.33	1.37	1.40	1.44						

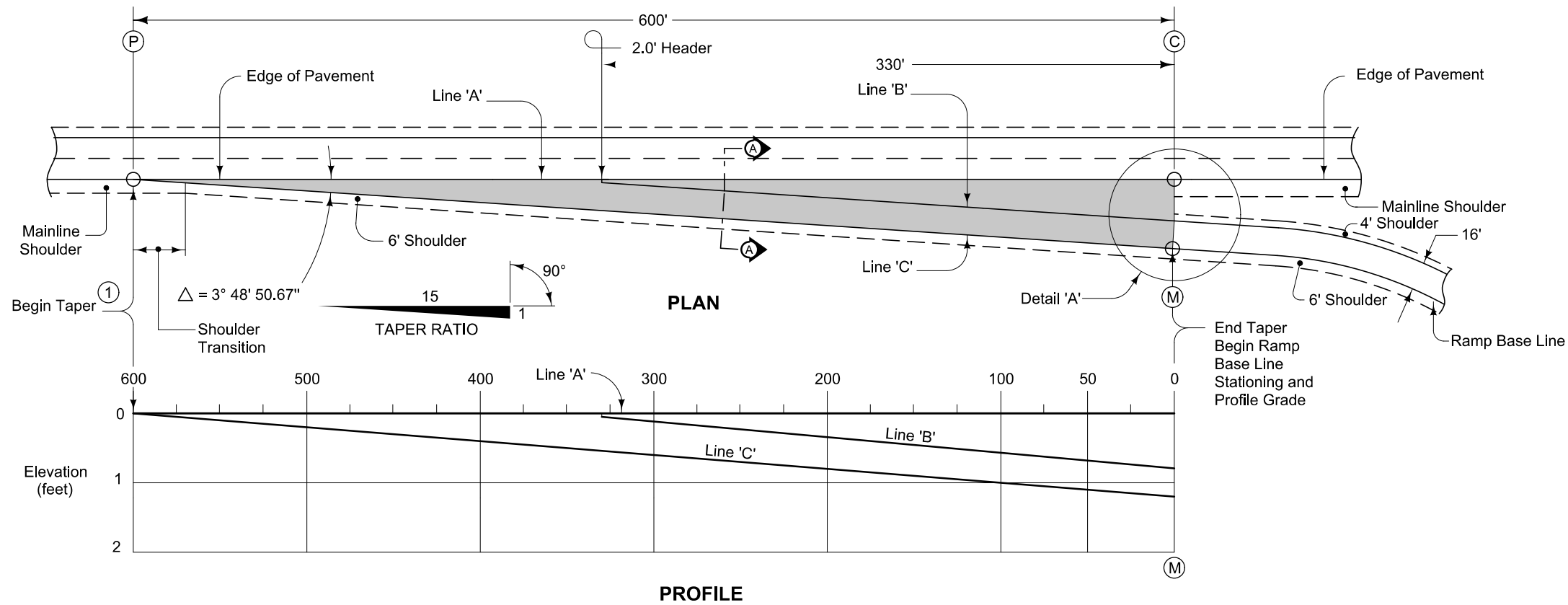
Construct ramp exit pavement the same thickness as mainline pavement.

For joint detail, see PV-101.

① For header construction detail at the end of taper See Typical 7101 or Typical 7102.

② Construct subbase for ramp exit pavement the same thickness as mainline subbase.

PARALLEL DECELERATION TAPER
for RAMP B on I-80



Construct ramp exit pavement the same thickness as mainline pavement.

For joint details, see PV-101.

- ① For header construction details at the beginning of taper, see Typical 7101 or Typical 7102.
- ② Construct subbase for ramp exit pavement the same thickness as mainline subbase.

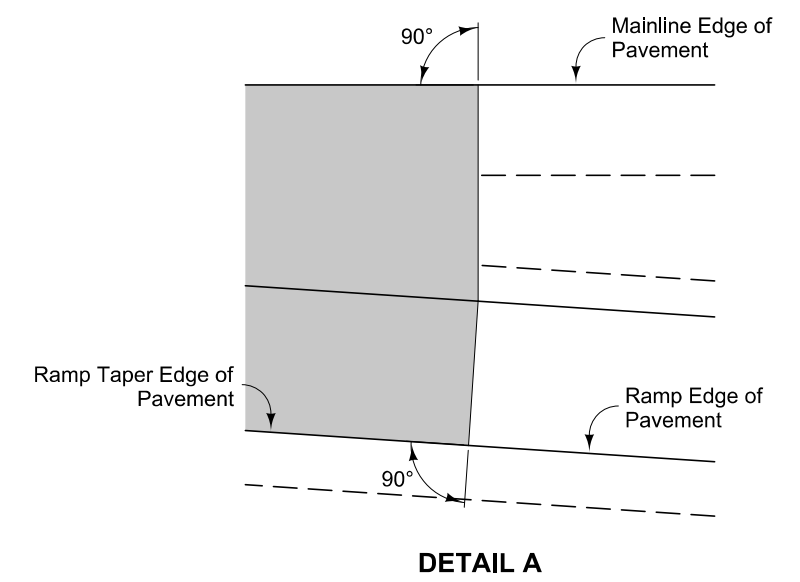
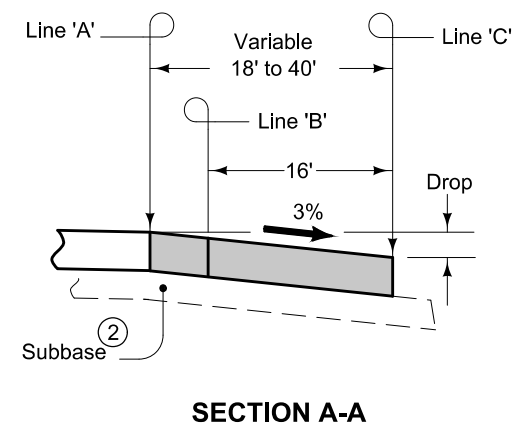
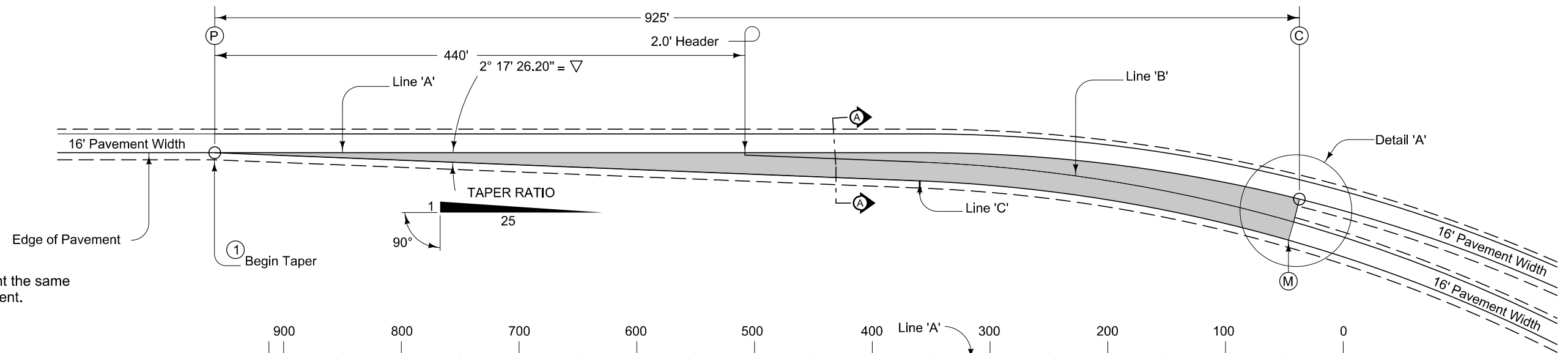


TABLE OF OFFSETS AND DROPS FOR 16' RAMP TAPER

DISTANCE FROM POINT (C) ALONG LINE 'A' (Ft.)		600	575	550	525	500	475	450	425	400	375	350	330	300	275	250	225	200	175	150	125	100	75	50	25	0
From Line 'A' To Line 'B'	OFFSET (Ft.)												2.00	4.00	5.67	7.33	9.00	10.67	12.33	14.00	15.67	17.33	19.00	20.67	22.33	24.00
	SLOPE (%)														← Constant 3.0% Slope →											
	DROP (Ft.)													0.06	0.12	0.17	0.22	0.27	0.32	0.37	0.42	0.47	0.52	0.57	0.62	0.67
From Line 'B' To Line 'C'	OFFSET (Ft.)														← Constant 16' Offset →											
	SLOPE (%)														← Constant 3.0% Slope →											
	DROP (Ft.)													0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
From Line 'A' To Line 'C'	OFFSET (Ft.)	0	1.67	3.33	5.00	6.67	8.33	10.00	11.67	13.33	15.00	16.67														
	SLOPE (%)	← Constant 3.0% Slope →																								
	DROP (Ft.)	0	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.56	0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.95	1.00	1.05	1.10	1.15	1.20



**DECELERATION TAPER
for RAMP C on RAMP F**



Construct ramp exit pavement the same thickness as mainline pavement.

For joint details, see PV-101.

① For header construction details at the beginning of taper, see Typical 7101 or Typical 7102.

② Construct subbase for ramp exit pavement the same thickness as mainline subbase.

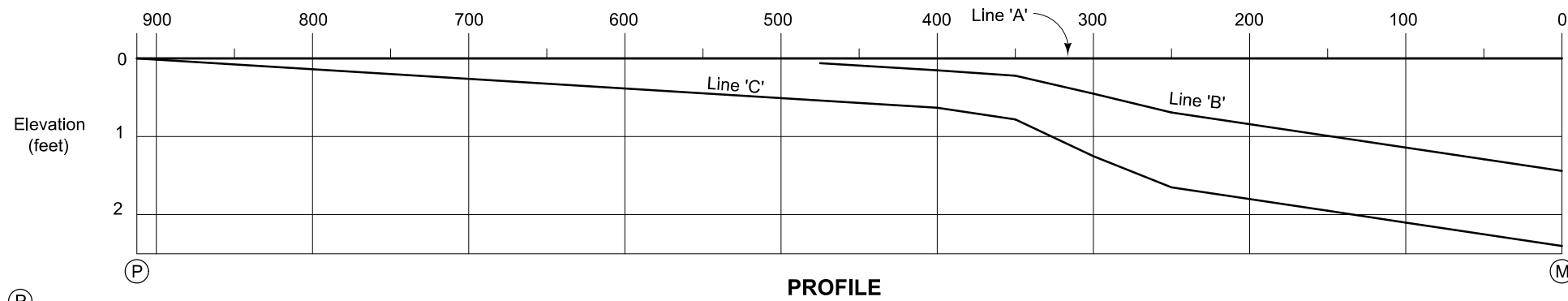
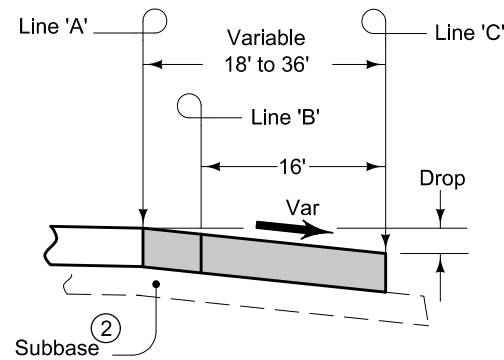
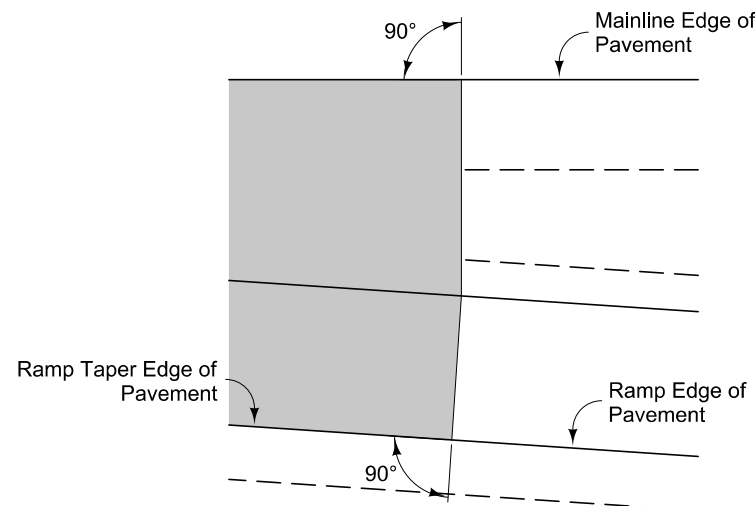


TABLE OF OFFSETS AND DROPS FOR 16' RAMP TAPER

DISTANCE FROM POINT (C) ALONG LINE 'A' (Ft.)		925	900	875	850	825	800	775	750	725	700	675	650	625	600	575	550	525	500	475	450	425	400	375	361.7	350	325	300	275	268.6	250	225	200	175	150	125	100	75	50	25	0																					
From Line 'A' To Line 'B'	OFFSET (Ft.)																			2.00	3.00	4.00	5.00	6.00	6.46	7.00	8.00	8.95	9.93	10.14	10.90	11.86	12.79	13.75	14.67	15.59	16.50	17.39	18.27	19.14	20.00																					
	SLOPE (%)																				3.0	3.0	3.0	3.0	3.0	3.0	3.38	4.18	4.99	5.80	← Constant 6.0% Slope →																															
	DROP (Ft.)																				0.06	0.09	0.12	0.15	0.18	0.19	0.24	0.33	0.45	0.58	0.61	0.65	0.71	0.77	0.83	0.88	0.94	0.99	1.04	1.10	1.15	1.20																				
From Line 'B' To Line 'C'	OFFSET (Ft.)																				← Constant 16' Offset →																																									
	SLOPE (%)																				3.0	3.0	3.0	3.0	3.0	3.0	3.38	4.18	4.99	5.80	← Constant 6.0% Slope →																															
	DROP (Ft.)																				0.48	0.48	0.48	0.48	0.48	0.48	0.54	0.67	0.80	0.93	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96																				
From Line 'A' To Line 'C'	OFFSET (Ft.)	0	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00																																											
	SLOPE (%)	← Constant 3.0% Slope →																																																												
	DROP (Ft.)	0	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.24	0.27	0.30	0.33	0.36	0.39	0.42	0.45	0.48	0.51	0.54	0.57	0.60	0.63	0.66	0.67	0.78	1.00	1.25	1.50	1.57	1.61	1.67	1.73	1.79	1.84	1.90	1.95	2.00	2.06	2.11	2.16																					

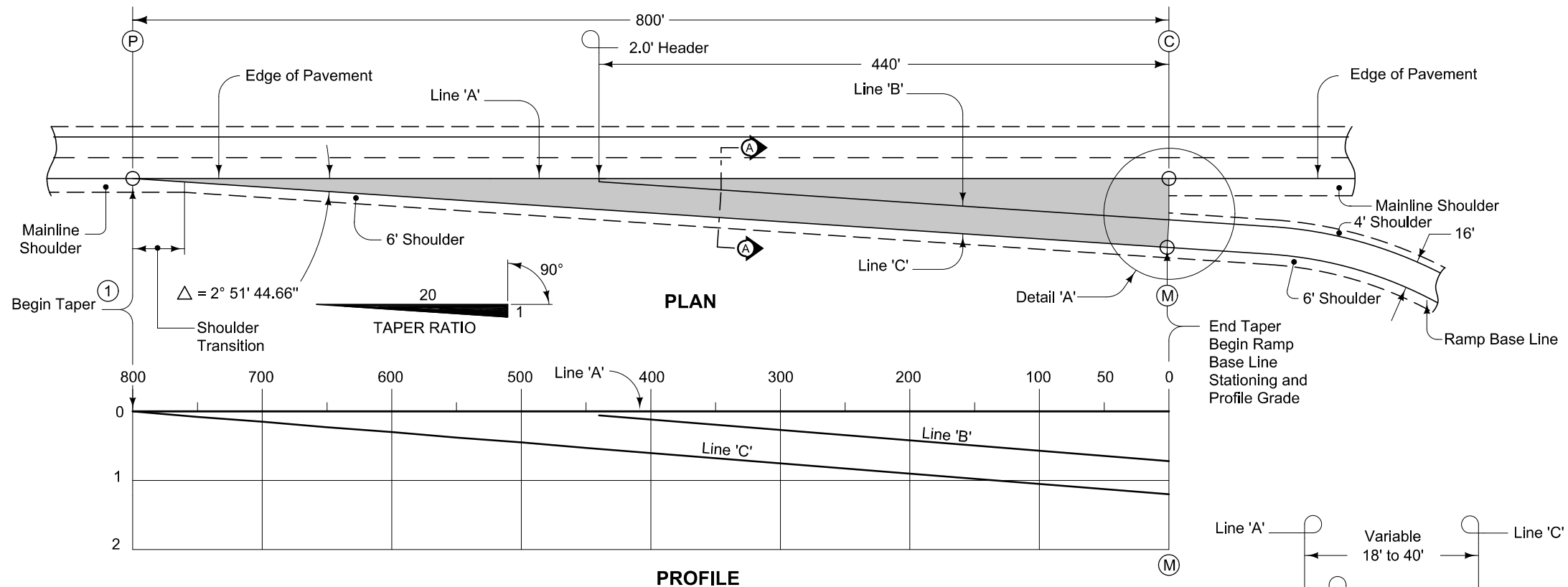


SECTION A-A



DETAIL A

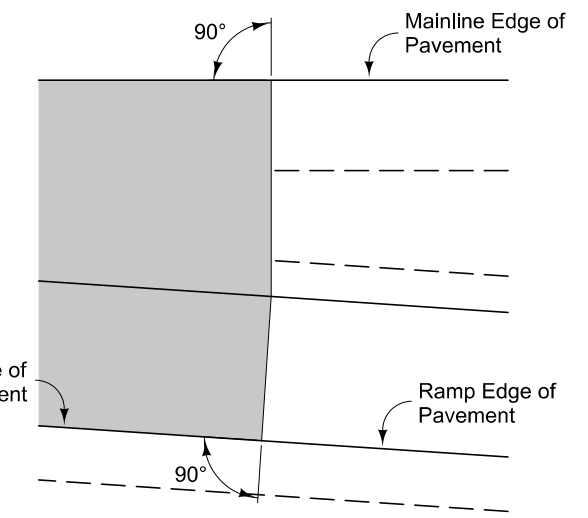
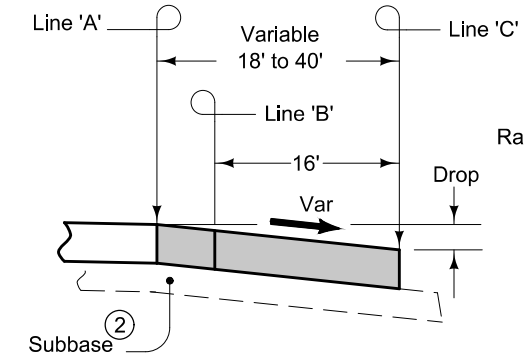
**DECELERATION TAPER
for RAMP D on RAMP E**



Construct ramp exit pavement the same thickness as mainline pavement.

For joint details, see PV-101.

- ① For header construction details at the beginning of taper, see Typical 7101 or Typical 7102.
- ② Construct subbase for ramp exit pavement the same thickness as mainline subbase.

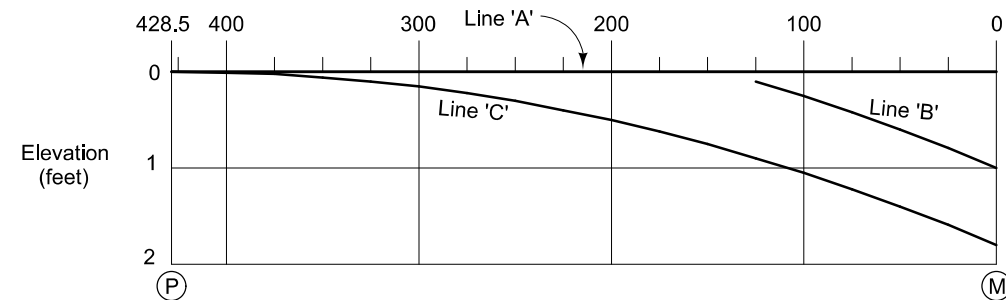
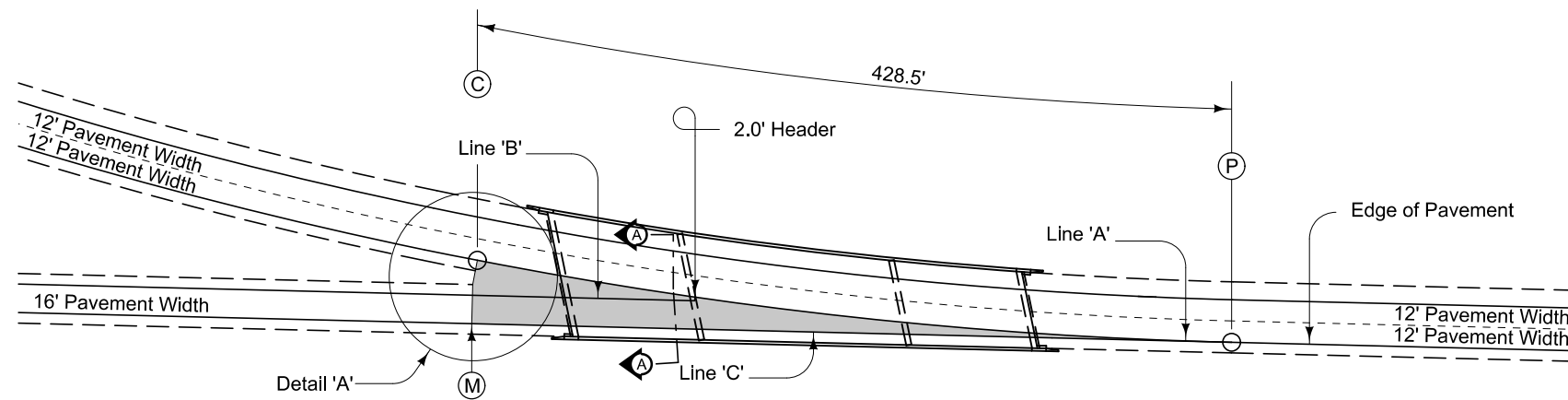


SECTION A-A

DETAIL A

TABLE OF OFFSETS AND DROPS FOR 16' RAMP TAPER																																					
DISTANCE FROM POINT (C) ALONG LINE 'A' (Ft.)		800	775	750	725	700	675	650	625	600	575	550	525	500	475	450	440	425	400	375	350	320	300	275	250	225	200	175	150	125	100	75	50	25	0		
From Line 'A' To Line 'B'	OFFSET (Ft.)																2.00	2.75	4.00	5.25	6.50	7.75	9.00	10.25	11.50	12.75	14.00	15.25	16.50	17.75	19.00	20.25	21.50	22.75	24.00		
	SLOPE (%)																	← Constant 3.0% Slope →																			
	DROP (Ft.)																	0.06	0.08	0.12	0.16	0.20	0.23	0.27	0.31	0.35	0.38	0.42	0.46	0.50	0.53	0.57	0.61	0.65	0.68	0.72	
From Line 'B' To Line 'C'	OFFSET (Ft.)																	← Constant 16' Offset →																			
	SLOPE (%)																	← Constant 3.0% Slope →																			
	DROP (Ft.)																	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	
From Line 'A' To Line 'C'	OFFSET (Ft.)	0	1.25	2.50	3.75	5.00	6.25	7.50	8.75	10.00	11.25	12.50	13.75	15.00	16.25	17.50																					
	SLOPE (%)	← Constant 3.0% Slope →																																			
	DROP (Ft.)	0	0.04	0.08	0.11	0.15	0.19	0.23	0.26	0.30	0.34	0.38	0.41	0.45	0.49	0.53	0.54	0.56	0.60	0.64	0.68	0.71	0.75	0.79	0.83	0.86	0.90	0.94	0.98	1.01	1.05	1.09	1.13	1.16	1.20		

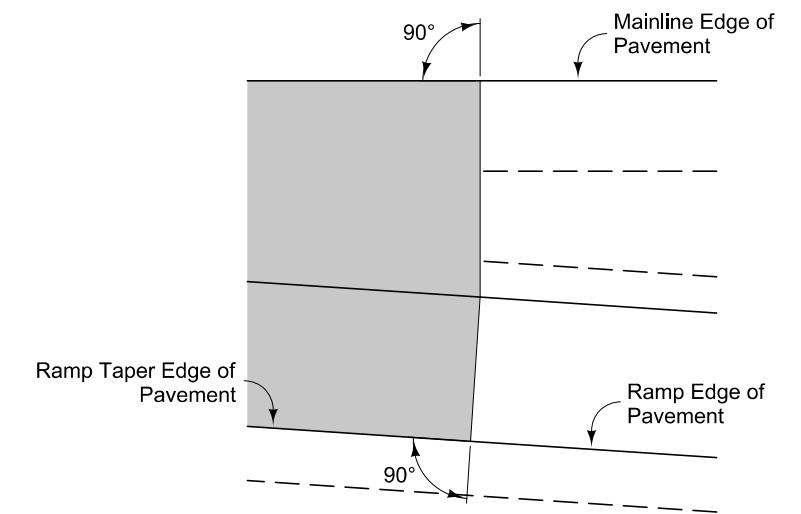
**DECELERATION TAPER
for RAMP E on US 218**



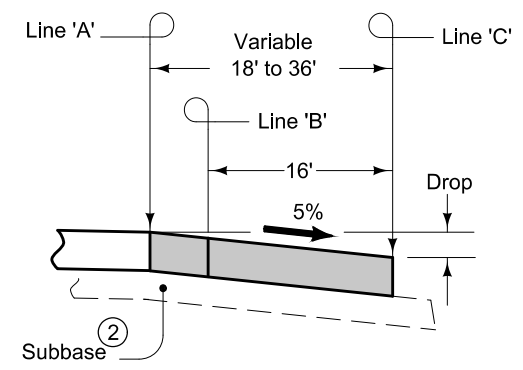
PROFILE

TABLE OF OFFSETS AND DROPS FOR 16' RAMP TAPER

DISTANCE FROM POINT C ALONG LINE 'A' (Ft.)		428.5	400	381.2	375	350	325	300	275	250	225	200	175	150	124.6	100	75	50	25	0	
From Line 'A' To Line 'B'	OFFSET (Ft.)														2.00	4.93	8.31	11.95	15.84	20.00	
	SLOPE (%)															← Constant 5.0% Slope →					
	DROP (Ft.)														0.10	0.25	0.42	0.60	0.79	1.00	
From Line 'B' To Line 'C'	OFFSET (Ft.)																				
	SLOPE (%)																				
	DROP (Ft.)														0.80	0.80	0.80	0.80	0.80	0.80	
From Line 'A' To Line 'C'	OFFSET (Ft.)	0	0.12	0.37	0.49	1.10	1.97	3.08	4.45	6.06	7.93	10.05	12.42	15.05							
	SLOPE (%)	3.9	4.5	← Constant 5.0% Slope →																	
	DROP (Ft.)	0	0.01	0.02	0.02	0.06	0.10	0.15	0.22	0.30	0.40	0.50	0.62	0.75	0.90	1.05	1.22	1.40	1.59	1.80	



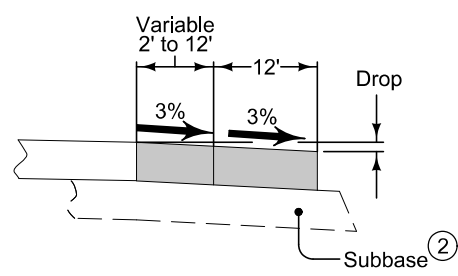
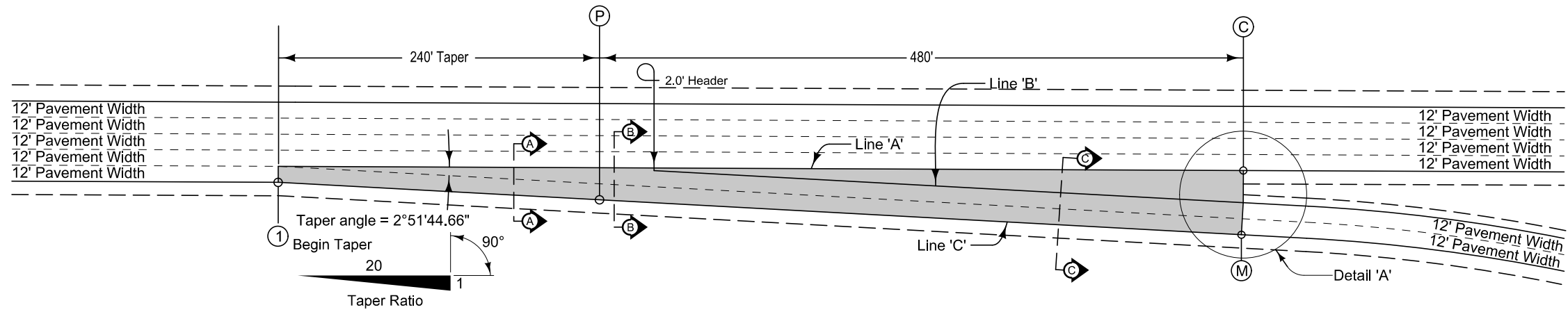
DETAIL A



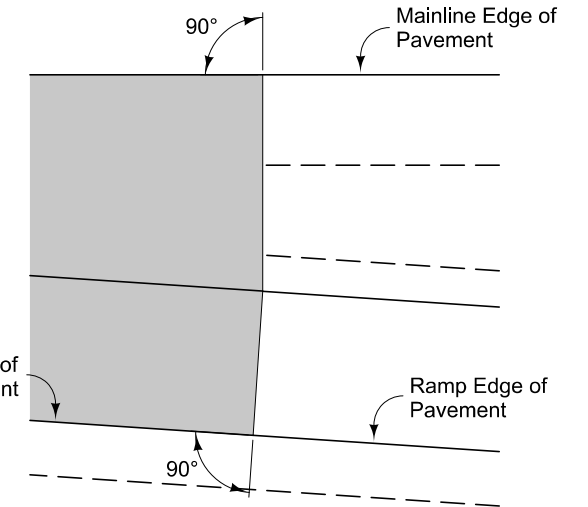
SECTION A-A

- Construct ramp exit pavement the same thickness as mainline pavement.
- For joint details, see PV-101.
- ① For header construction details at the beginning of taper, see Typical 7101 or Typical 7102.
 - ② Construct subbase for ramp exit pavement the same thickness as mainline subbase.

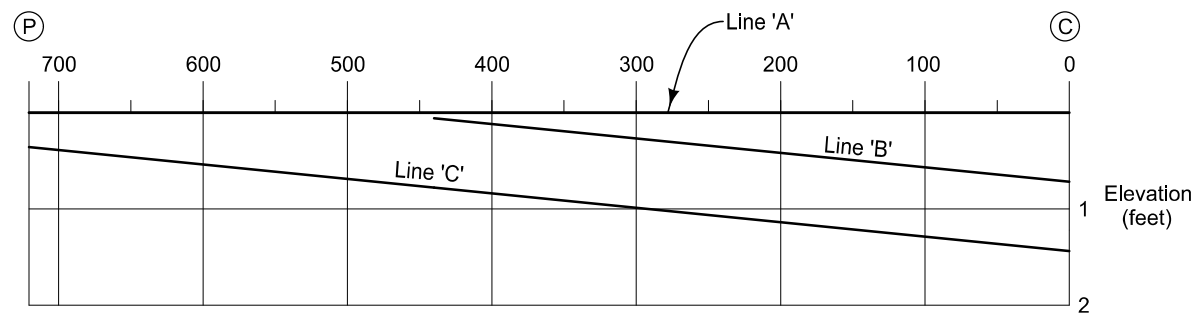
**DECELERATION TAPER
for RAMP G on RAMP A**



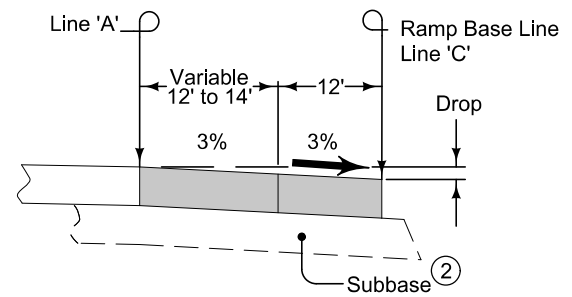
SECTION A-A



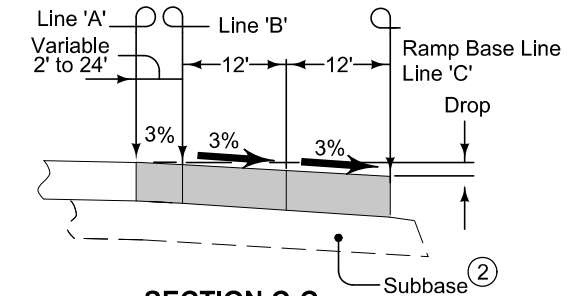
DETAIL A



PROFILE



SECTION B-B

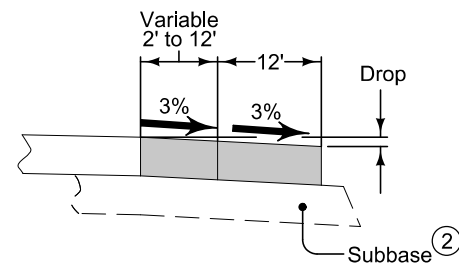
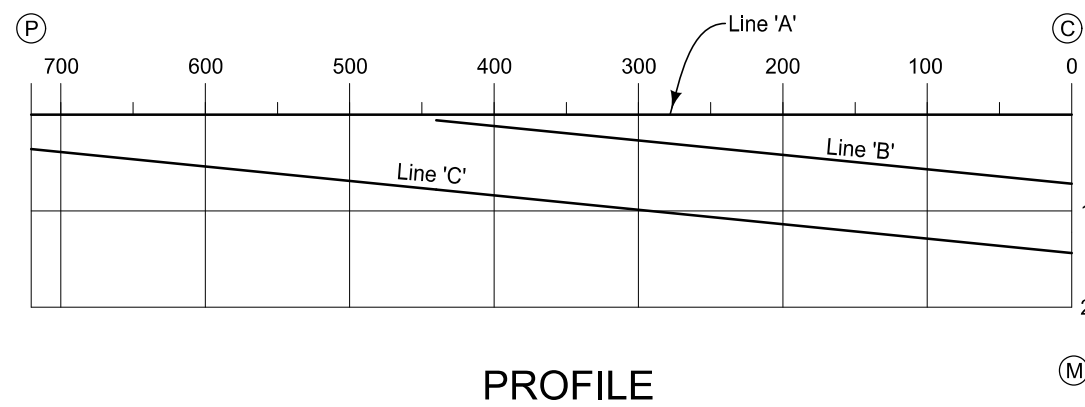
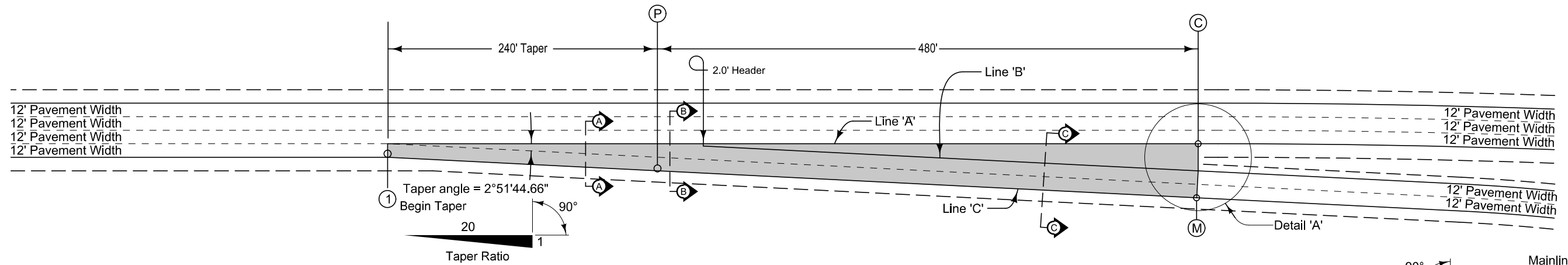


SECTION C-C

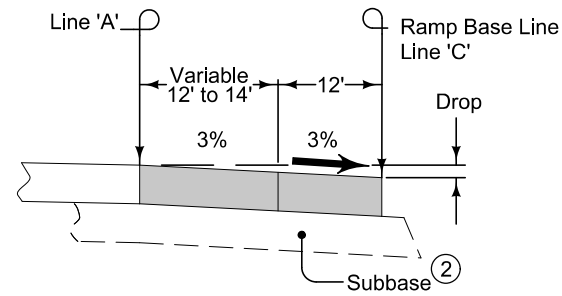
		TABLE OF OFFSETS AND DROPS FOR 24' RAMP TAPER																																				
DISTANCE FROM POINT C ALONG LINE 'A' (Ft.)		720	700	675	650	625	600	575	550	525	500	480	475	450	440	425	400	375	350	325	300	275	250	225	200	175	150	125	100	75	50	25	0					
From Line 'A' To Line 'B'	OFFSET (Ft.)														2.00	2.75	4.00	5.25	6.50	7.75	9.00	10.25	11.50	12.75	14.00	15.25	16.50	17.75	19.00	20.25	21.50	22.75	24.00					
	SLOPE (%)														Constant 3.0% Slope																							
	DROP (Ft.)														0.06	0.08	0.12	0.16	0.20	0.23	0.27	0.31	0.35	0.38	0.42	0.46	0.50	0.53	0.57	0.61	0.65	0.68	0.72					
From Line 'B' To Line 'C'	OFFSET (Ft.)														Constant 24' Offset																							
	SLOPE (%)														Constant 3.0% Slope																							
	DROP (Ft.)														0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72					
From Line 'A' To Line 'C'	OFFSET (Ft.)	12.00	13.00	14.25	15.50	16.75	18.00	19.25	20.50	21.75	23.00	24.00	24.25	25.50																								
	SLOPE (%)	Constant 3.0% Slope																																				
	DROP (Ft.)	0.36	0.39	0.43	0.47	0.50	0.54	0.58	0.62	0.65	0.69	0.72	0.73	0.77	0.78	0.80	0.84	0.88	0.92	0.95	0.99	1.03	1.07	1.10	1.14	1.18	1.22	1.25	1.29	1.33	1.37	1.40	1.44					

- Construct ramp exit pavement the same thickness as mainline pavement.
- For joint detail, see PV-101.
- ① For header construction detail at the end of taper See Typical 7101 or Typical 7102.
- ② Construct subbase for ramp exit pavement the same thickness as mainline subbase.

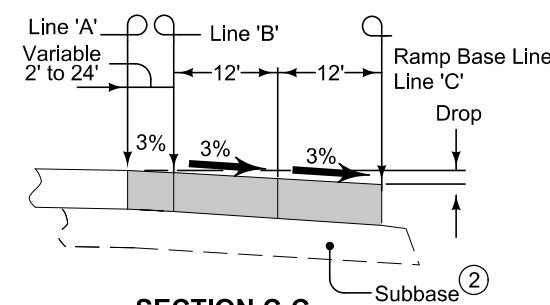
PARALLEL DECELERATION TAPER
for IA 965 RAMP B on I-80



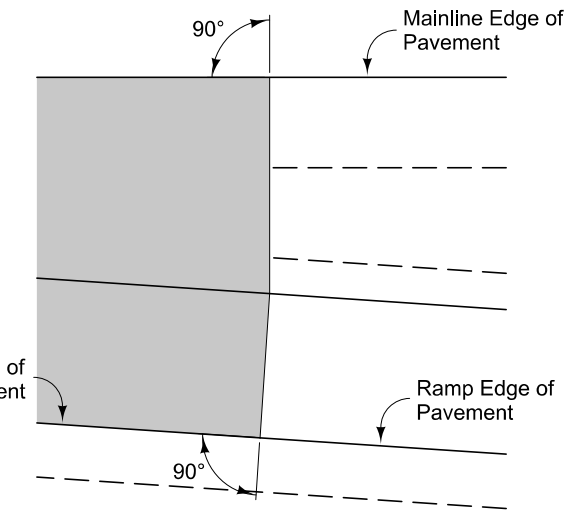
SECTION A-A



SECTION B-B



SECTION C-C



DETAIL A

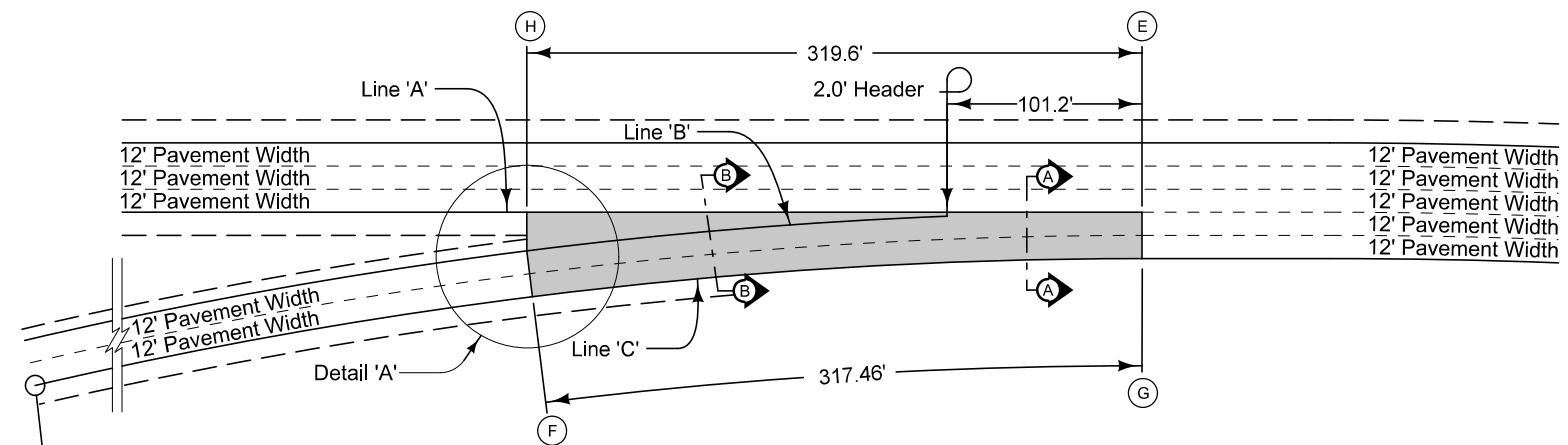
PROFILE

TABLE OF OFFSETS AND DROPS FOR 24' RAMP TAPER

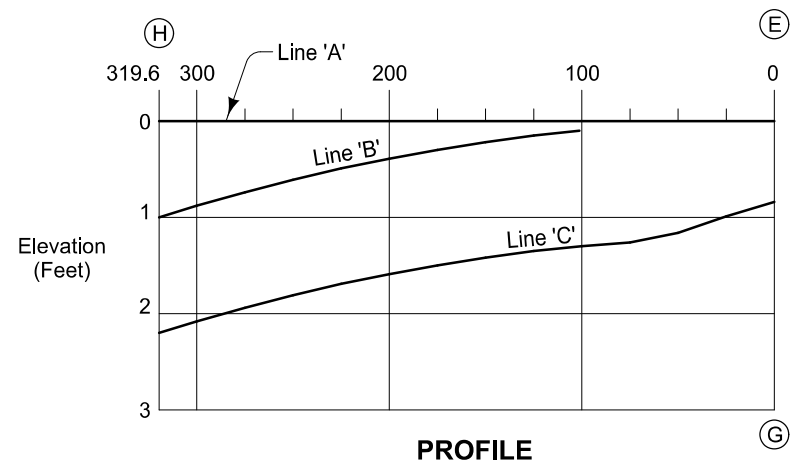
DISTANCE FROM POINT (C) ALONG LINE 'A' (Ft.)		720	700	675	650	625	600	575	550	525	500	480	475	450	440	425	400	375	350	325	300	275	250	225	200	175	150	125	100	75	50	25	0	
From Line 'A' To Line 'B'	OFFSET (Ft.)														2.00	2.75	4.00	5.25	6.50	7.75	9.00	10.25	11.50	12.75	14.00	15.25	16.50	17.75	19.00	20.25	21.50	22.75	24.00	
	SLOPE (%)	← Constant 3.0% Slope →																																
	DROP (Ft.)															0.06	0.08	0.12	0.16	0.20	0.23	0.27	0.31	0.35	0.38	0.42	0.46	0.50	0.53	0.57	0.61	0.65	0.68	0.72
From Line 'B' To Line 'C'	OFFSET (Ft.)	← Constant 24' Offset →																																
	SLOPE (%)	← Constant 3.0% Slope →																																
	DROP (Ft.)	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
From Line 'A' To Line 'C'	OFFSET (Ft.)	12.00	13.00	14.25	15.50	16.75	18.00	19.25	20.50	21.75	23.00	24.00	24.25	25.50																				
	SLOPE (%)	← Constant 3.0% Slope →																																
	DROP (Ft.)	0.36	0.39	0.43	0.47	0.50	0.54	0.58	0.62	0.65	0.69	0.72	0.73	0.77	0.78	0.80	0.84	0.88	0.92	0.95	0.99	1.03	1.07	1.10	1.14	1.18	1.22	1.25	1.29	1.33	1.37	1.40	1.44	

- Construct ramp exit pavement the same thickness as mainline pavement.
- For joint detail, see PV-101.
- ① For header construction detail at the end of taper See Typical 7101 or Typical 7102.
- ② Construct subbase for ramp exit pavement the same thickness as mainline subbase.

**PARALLEL DECELERATION TAPER
for Ireland RAMP A on I-80**



Pt. 'X' to Pt. 'G'
$\Delta = 35^\circ 39' 54.75''$
T = 817.10'
L = 1581.09'
E = 128.19'
R = 2540.00'

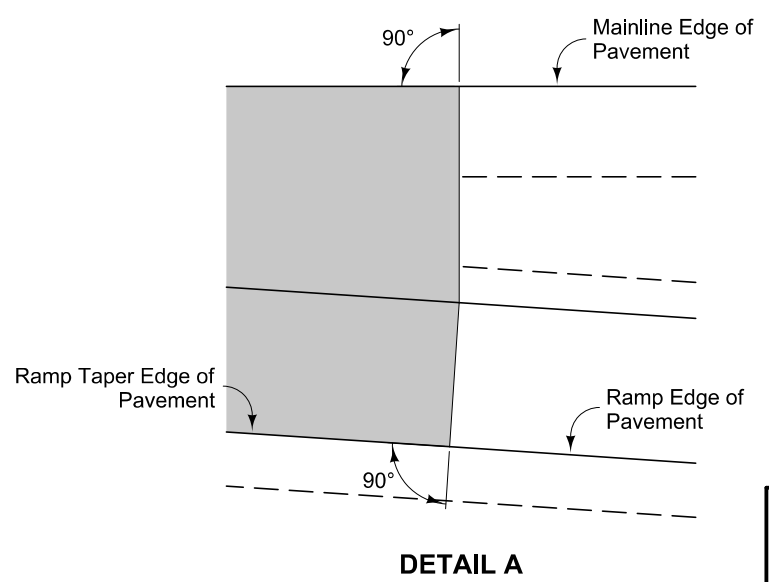
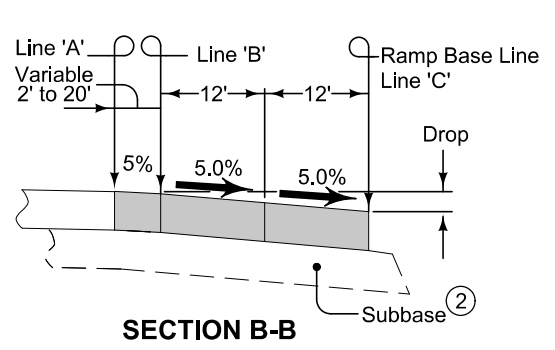
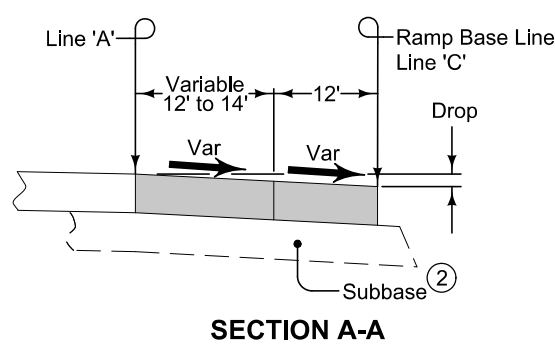


(H) (E)

TABLE OF OFFSETS AND DROPS FOR 16' RAMP TAPER

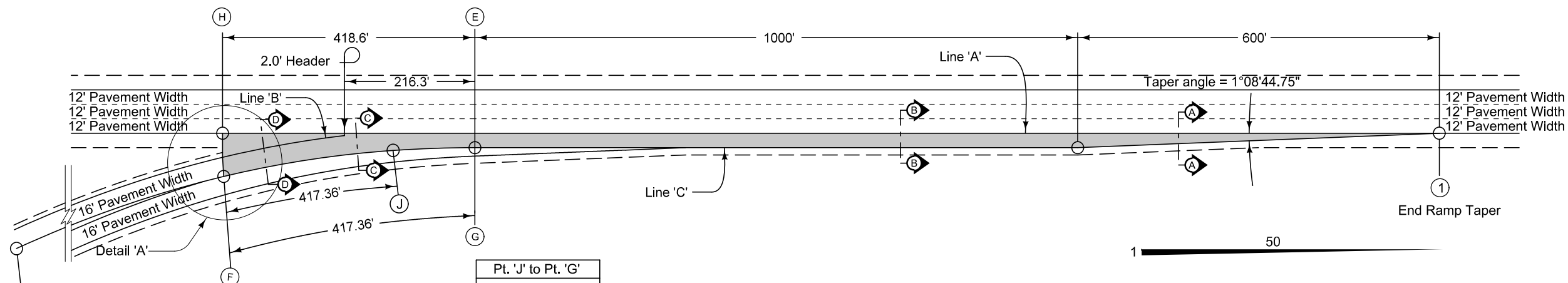
DISTANCE FROM POINT (H) ALONG LINE 'A' (Ft.)		319.6	300	275	250	225	200	175	150	125	101.2	100	75	60	50	25	0
From Line 'A' To Line 'B'	OFFSET (Ft.)	20.00	17.61	14.79	12.22	9.89	7.81	5.98	4.39	3.05	2.00						
	SLOPE (%)	← Constant 5.0% Slope →															
	DROP (Ft.)	1.00	0.88	0.74	0.61	0.49	0.39	0.30	0.22	0.15	0.10						
From Line 'B' To Line 'C'	OFFSET (Ft.)	← Constant 24' Offset →															
	SLOPE (%)	← Constant 5.0% Slope →															
	DROP (Ft.)	← Constant 1.20' Drop →															
From Line 'A' To Line 'C'	OFFSET (Ft.)											25.97	25.11	24.68	24.49	24.12	24.00
	SLOPE (%)											5.00	5.00	5.00	4.75	4.13	3.50
	DROP (Ft.)	2.20	2.08	1.94	1.81	1.69	1.59	1.50	1.42	1.35	1.30	1.30	1.26	1.23	1.16	0.99	0.84
DISTANCE FROM POINT (F) ALONG LINE 'C' (Ft.)		317.46	297.87	272.95	248.05	223.18	198.33	173.50	148.68	123.88	100.23	100.03	75.01	60.00	50.00	25.00	0.00

(F) (G)



- Construct ramp entrance pavement the same thickness as mainline pavement.
- For joint detail, see PV-101.
- ① For header construction detail at the end of taper See Typical 7101 or Typical 7102.
 - ② Construct subbase for ramp entrance pavement the same thickness as mainline subbase.

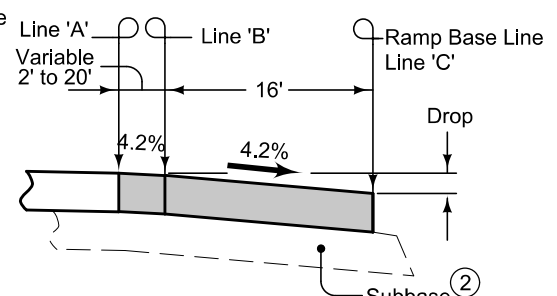
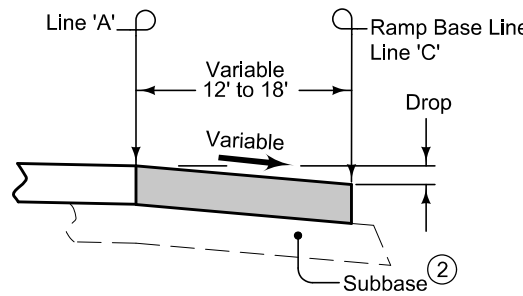
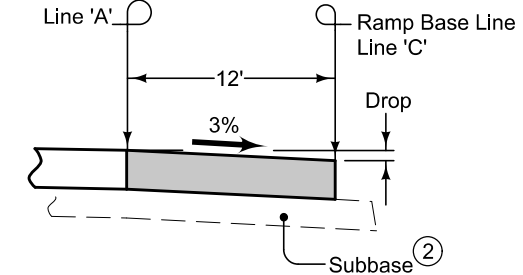
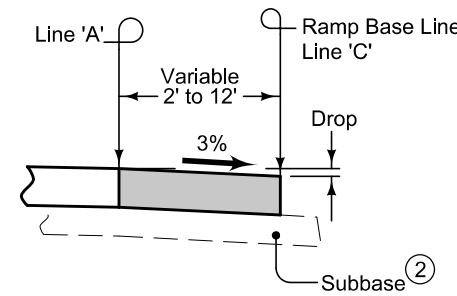
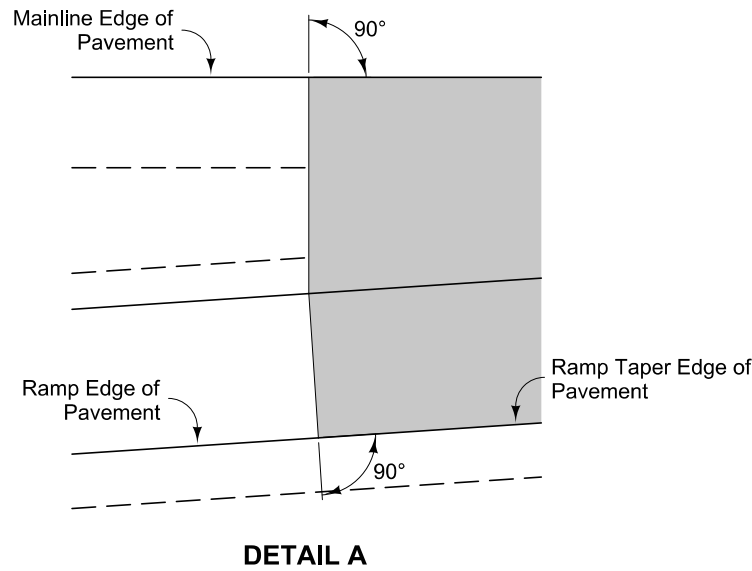
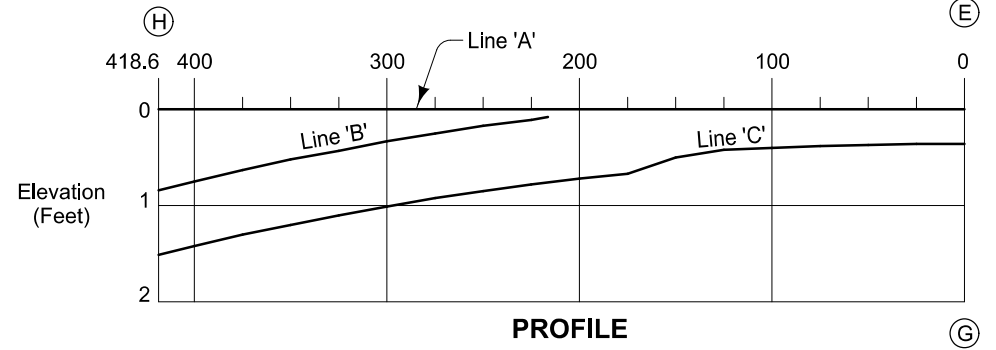
**PARALLEL ACCELERATION TAPER
RAMP A on I-380**



Pt. 'X' to Pt. 'J'
 $\Delta = 41^\circ 10' 12.77''$
 $T = 1239.41'$
 $L = 2371.23'$
 $E = 225.07'$
 $R = 3300.00'$

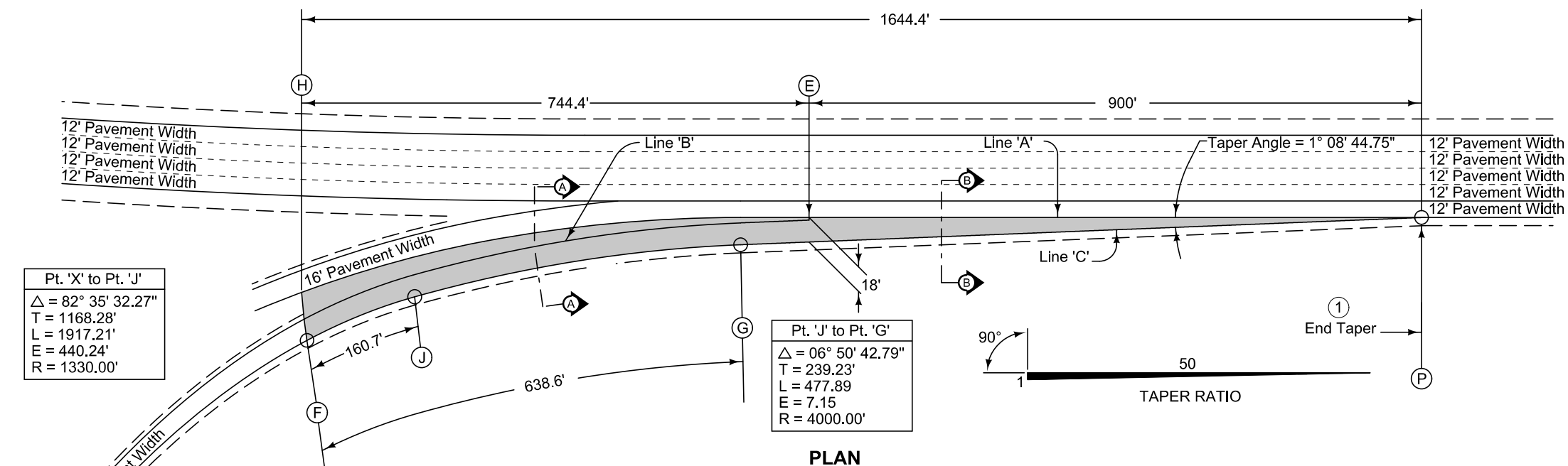
Pt. 'J' to Pt. 'G'
 $\Delta = 01^\circ 56' 39.43''$
 $T = 67.87'$
 $L = 135.74'$
 $E = 0.58'$
 $R = 4000.00'$

TABLE OF OFFSETS AND DROPS FOR 16' RAMP TAPER																						
DISTANCE FROM POINT (H) ALONG LINE 'A' (Ft.)		418.6	400	375	350	325	300	275	250	225	216.3	200	175	150	136.2	125	100	75	50	25	0	
From Line 'A' To Line 'B'	OFFSET (Ft.)	20.00	17.82	15.06	12.49	10.12	7.93	5.94	4.13	2.52	2.00											
	SLOPE (%)	Constant 4.2% Slope																				
	DROP (Ft.)	0.84	0.75	0.63	0.52	0.43	0.33	0.25	0.17	0.11	0.08											
From Line 'B' To Line 'C'	OFFSET (Ft.)	Constant 16' Offset																				
	SLOPE (%)	Constant 4.2% Slope																				
	DROP (Ft.)	Constant 0.67' Drop																				
From Line 'A' To Line 'C'	OFFSET (Ft.)											17.11	15.87	14.82	14.30	13.95	13.25	12.70	12.31	12.08	12.00	
	SLOPE (%)											4.20	4.20	3.39	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
	DROP (Ft.)	1.51	1.42	1.30	1.20	1.10	1.01	0.92	0.85	0.78	0.76	0.72	0.67	0.50	0.43	0.42	0.40	0.38	0.37	0.36	0.36	
DISTANCE FROM POINT (F) ALONG LINE 'C' (Ft.)		417.36	399.00	373.97	348.97	323.97	298.99	274.03	249.09	224.16	215.51	200.09	175.06	150.04	136.23	125.02	100.01	75.00	50.00	25.00	0.00	



Construct ramp entrance pavement the same thickness as mainline pavement.
 For joint detail, see PV-101.
 ① For header construction detail at the end of taper See Typical 7101 or Typical 7102.
 ② Construct subbase for ramp entrance pavement the same thickness as mainline subbase.

**PARALLEL ACCELERATION TAPER
 RAMP B on US 218**



Construct ramp entrance pavement the same thickness as mainline pavement.

For joint details, see PV-101

- ① For header construction details at the end of taper, see Typical 7101 or Typical 7102.
- ② Construct subbase for ramp entrance pavement the same thickness as mainline subbase.

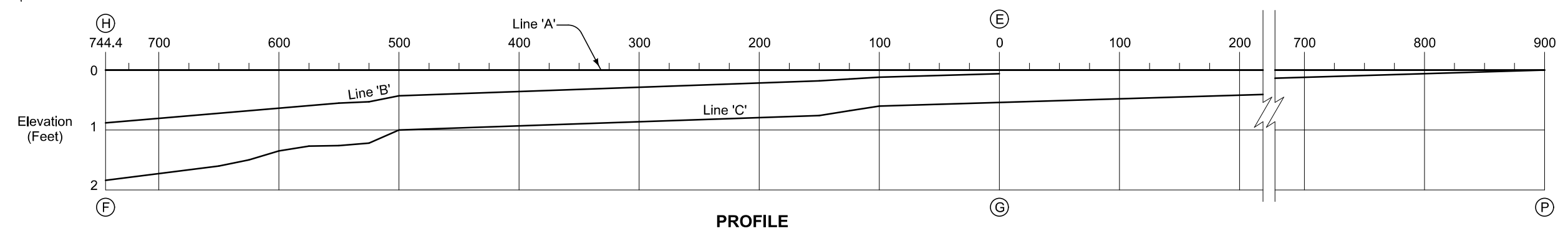
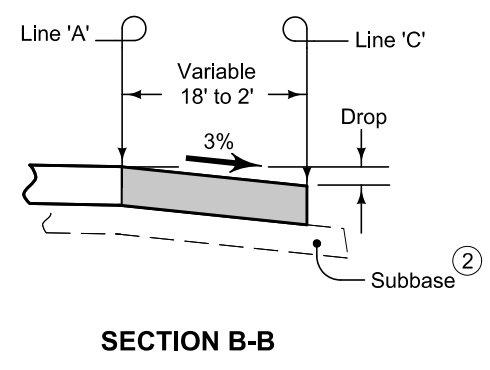
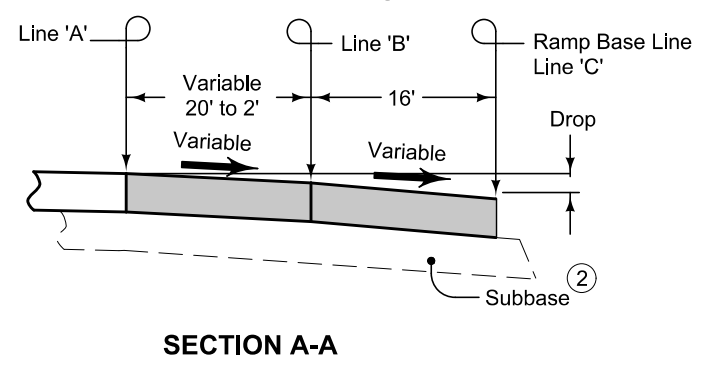


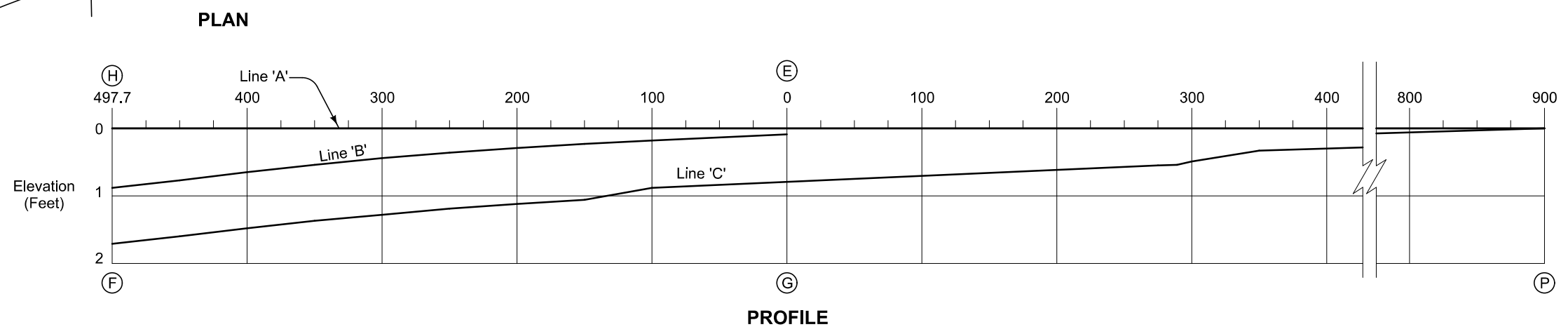
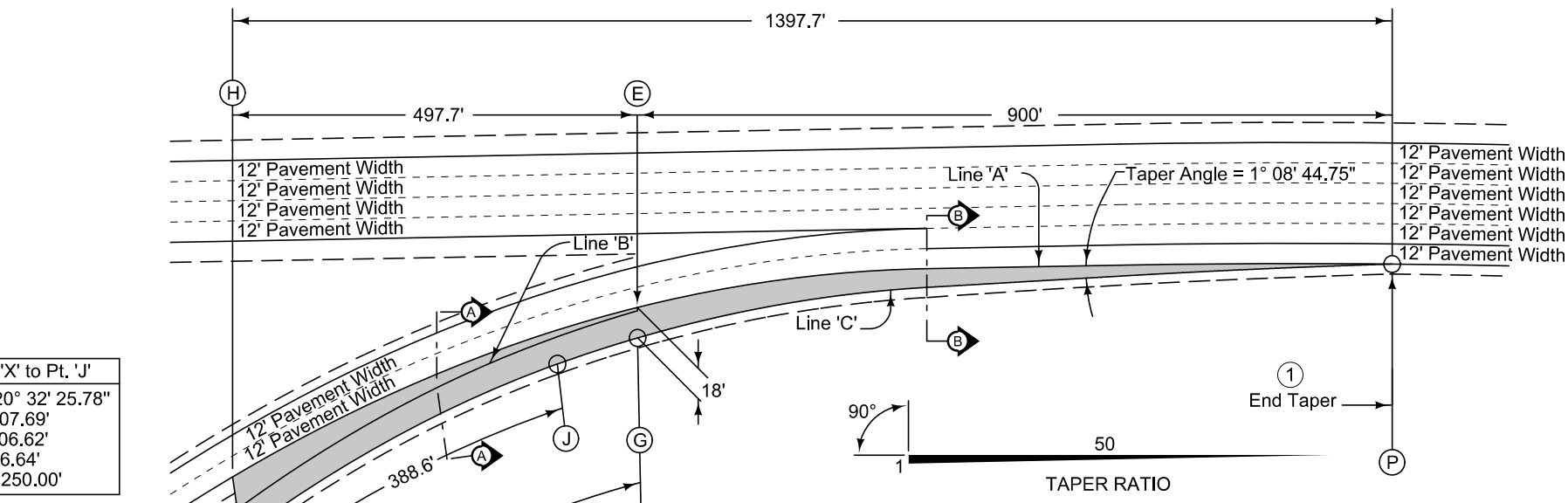
TABLE OF OFFSETS AND DROPS FOR 16' RAMP TAPER

Distance From Point (E) Along Line 'A' (Ft.)	744.4	725	700	675	650	637.4	625	600	575	550	527.6	503.4	475	450	425	400	375	350	325	300	275	250	225	200	175	150	134.2	125	115.6	100	75	50	25	0	100	200	300	400	500	600	700	800	900		
From Line 'A' To Line 'B'	Offset (Ft.)	20.00	18.59	17.01	15.67	14.59	14.16	13.77	13.19	12.86	12.57	12.26	11.87	11.36	10.87	10.39	9.90	9.42	8.93	8.44	7.95	7.46	6.97	6.47	5.98	5.49	4.99	4.67	4.49	4.30	4.00	3.50	3.00	2.50	2.00										
	Slope (%)	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.30	3.00	3.00	3.00	3.00	3.00	3.00	3.00										
	Drop (Ft.)	0.88	0.82	0.75	0.69	0.64	0.62	0.61	0.58	0.57	0.55	0.54	0.43	0.41	0.39	0.37	0.36	0.34	0.32	0.30	0.29	0.27	0.25	0.23	0.22	0.20	0.18	0.17	0.15	0.13	0.12	0.11	0.09	0.08	0.06										
From Line 'B' To Line 'C'	Offset (Ft.)	Constant 16.0' Offset																																											
	Slope (%)	6.00	6.00	6.00	6.00	6.00	6.00	5.60	4.79	4.40	4.40	4.40	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.30	3.00	3.00	3.00	3.00	3.00	3.00											
	Drop (Ft.)	0.96	0.96	0.96	0.96	0.96	0.96	0.90	0.77	0.70	0.70	0.70	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.53	0.48	0.48	0.48	0.48	0.48	0.48											
From Line 'A' To Line 'C'	Offset (Ft.)																																			16.0	14.0	12.0	10.0	8.0	6.0	4.0	2.0	0.0	
	Slope (%)																																		Constant 3.0% Slope										
	Drop (Ft.)	1.84	1.78	1.71	1.65	1.60	1.58	1.50	1.35	1.27	1.26	1.24	1.00	0.98	0.97	0.95	0.93	0.92	0.90	0.88	0.86	0.84	0.83	0.81	0.79	0.77	0.76	0.74	0.68	0.61	0.60	0.59	0.57	0.56	0.54	0.48	0.42	0.36	0.30	0.24	0.18	0.12	0.06	0.0	
Distance From Point (G) Along Line 'C' (Ft.)	738.9	719.8	695.1	670.5	645.9	633.5	621.3	596.7	572.1	547.3	525.0	497.7	472.9	448.1	423.2	398.4	373.5	348.7	323.8	299.0	274.1	249.3	224.4	199.5	174.7	149.8	134.1	124.9	115.5	100.0	75.0	50.0	25.0	0.0											



**PARALLEL ACCELERATION TAPER
RAMP C on I-80**

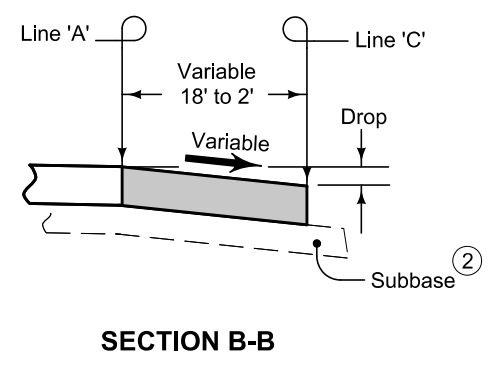
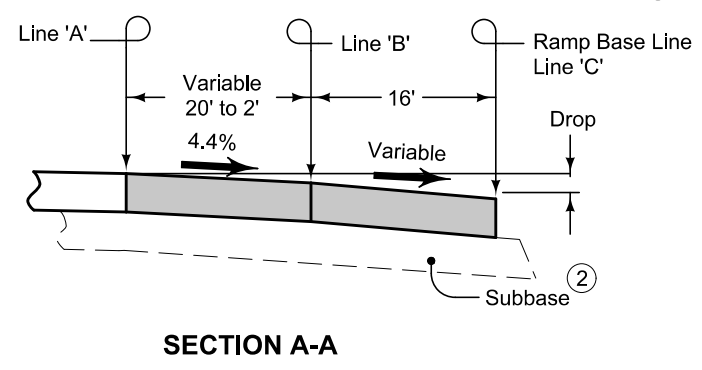
Pt. 'X' to Pt. 'J'
 $\Delta = 20^\circ 32' 25.78''$
 $T = 407.69'$
 $L = 806.62'$
 $E = 36.64'$
 $R = 2250.00'$



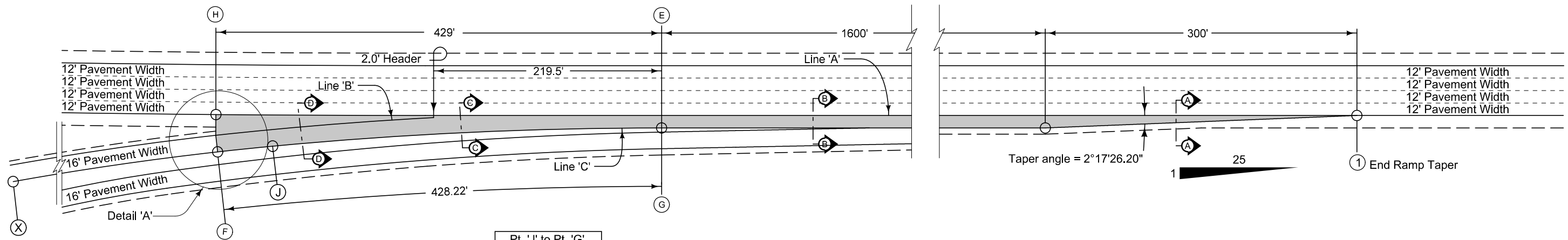
Construct ramp entrance pavement the same thickness as mainline pavement.
 For joint details, see PV-101
 ① For header construction details at the end of taper, see Typical 7101 or Typical 7102.
 ② Construct subbase for ramp entrance pavement the same thickness as mainline subbase.

TABLE OF OFFSETS AND DROPS FOR 16' RAMP TAPER

Distance From Point (E) Along Line 'A' (Ft.)	497.7	475	450	425	400	375	350	325	300	275	250	225	200	175	150	125	100	75	50	25	0	50	100	200	289.2	300	342.2	400	500	600	700	800	900																	
From Line 'A' To Line 'B'	Offset (Ft.)	20.00	18.93	17.47	16.08	14.75	13.49	12.29	11.17	10.10	9.11	8.18	7.31	6.52	5.79	5.12	4.53	4.00	3.50	3.00	2.50	2.00																												
	Slope (%)	Constant 4.4% Slope																																																
	Drop (Ft.)	0.88	0.83	0.77	0.71	0.65	0.59	0.54	0.49	0.44	0.40	0.36	0.32	0.29	0.25	0.23	0.20	0.18	0.15	0.13	0.11	0.09																												
From Line 'B' To Line 'C'	Offset (Ft.)	Constant 16.0' Offset																																																
	Slope (%)	Constant 5.2% Slope																																																
	Drop (Ft.)	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83																												
From Line 'A' To Line 'C'	Offset (Ft.)																						17.0	16.0	14.0	12.2	12.0	11.10	10.0	8.0	6.0	4.0	2.0	0.0																
	Slope (%)																						4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40																
	Drop (Ft.)	1.71	1.66	1.60	1.54	1.48	1.43	1.37	1.32	1.28	1.23	1.19	1.15	1.12	1.09	1.06	1.00	0.90	0.88	0.86	0.84	0.81	0.79	0.75	0.70	0.62	0.54	0.49	0.33	0.30	0.24	0.18	0.12	0.06	0.0															
Distance From Point (G) Along Line 'C' (Ft.)		488.32	470.79	446.08	421.35	396.62	371.88	347.14	322.39	297.63	272.86	248.10	223.32	198.54	173.76	148.97	124.18	99.39	74.54	49.70	24.85	0.0																												



**PARALLEL ACCELERATION TAPER
RAMP D on I-80**



Pt. 'X' to Pt. 'J'

Δ = 21° 13' 27.84"
T = 562.10'
L = 1111.31'
E = 52.20'
R = 3000.00'

Pt. 'J' to Pt. 'G'

Δ = 05° 22' 17.33"
T = 187.64'
L = 375.00'
E = 4.40'
R = 4000.00'

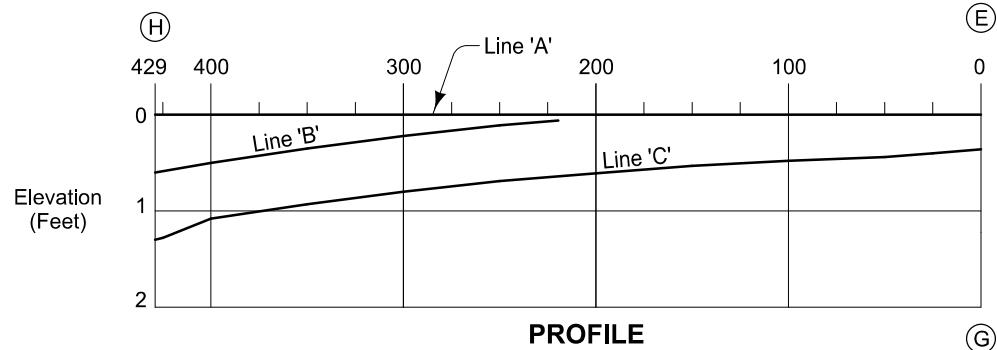
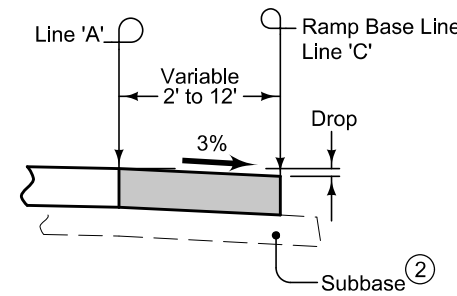
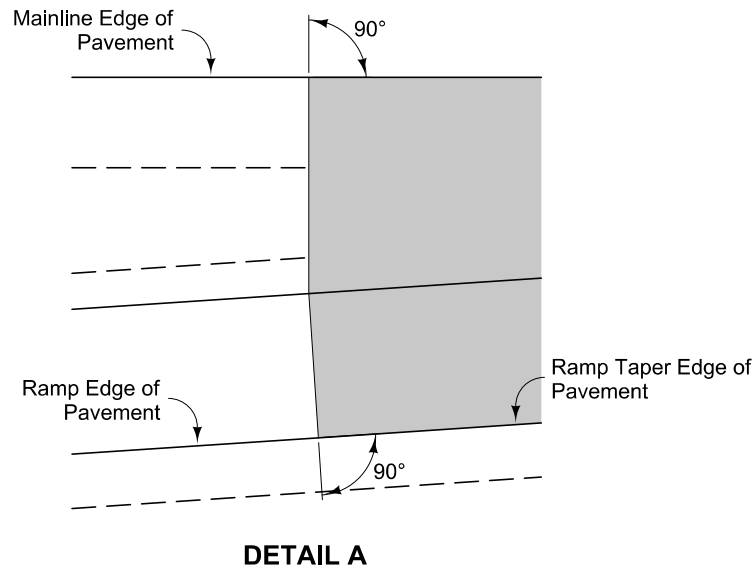
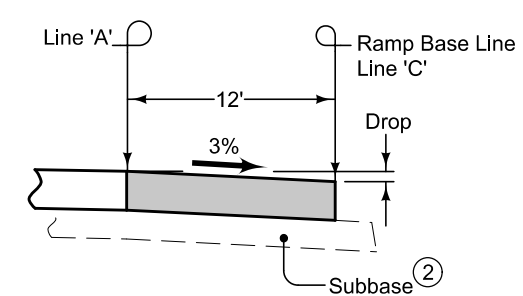


TABLE OF OFFSETS AND DROPS FOR 16' RAMP TAPER

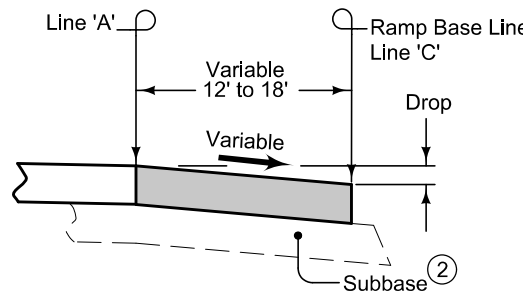
DISTANCE FROM POINT (H) ALONG LINE 'A' (Ft.)		429	425	403.4	375	350	325	300	275	250	225	219.5	200	175	150	125	100	75	50	34.2	25	15.6	0
From Line 'A' To Line 'B'	OFFSET (Ft.)	20.00	19.59	17.09	14.07	11.65	9.41	7.35	5.49	3.80	2.31	2.00											
	SLOPE (%)	Constant 3.0% Slope																					
	DROP (Ft.)	0.60	0.59	0.51	0.42	0.35	0.28	0.22	0.16	0.11	0.07	0.06											
From Line 'B' To Line 'C'	OFFSET (Ft.)	Constant 16' Offset																					
	SLOPE (%)	4.40	4.30	Constant 3.6% Slope																			
	DROP (Ft.)	0.70	0.69	Constant 0.58' Drop																			
From Line 'A' To Line 'C'	OFFSET (Ft.)												17.00	15.83	14.81	13.95	13.25	12.70	12.31	12.15	12.08	12.03	12.00
	SLOPE (%)												3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.30	3.00	3.00
	DROP (Ft.)	1.30	1.28	1.09	1.00	0.93	0.86	0.80	0.74	0.69	0.65	0.64	0.61	0.57	0.53	0.50	0.48	0.46	0.44	0.44	0.40	0.36	0.36
DISTANCE FROM POINT (F) ALONG LINE 'C' (Ft.)		428.22	424.77	403.05	374.56	349.46	324.38	299.31	274.27	249.23	224.22	218.69	200.08	175.06	150.04	125.02	100.01	75.00	50.00	34.20	25.00	15.60	0.00



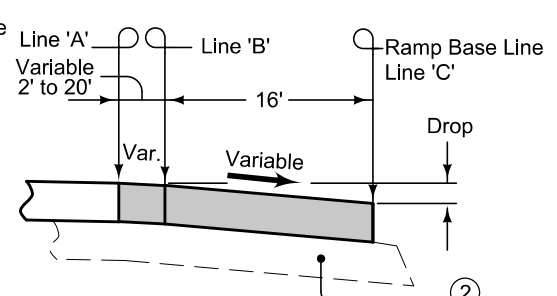
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

Construct ramp entrance pavement the same thickness as mainline pavement.
 For joint detail, see PV-101.
 ① For header construction detail at the end of taper See Typical 7101 or Typical 7102.
 ② Construct subbase for ramp entrance pavement the same thickness as mainline subbase.

**PARALLEL ACCELERATION TAPER
RAMP E on I-80**

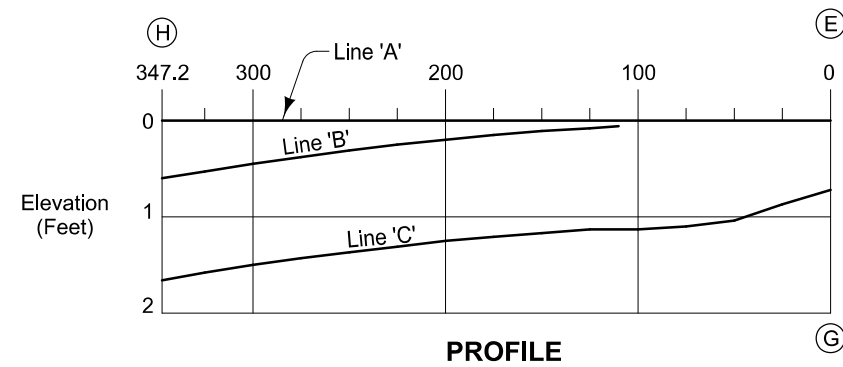
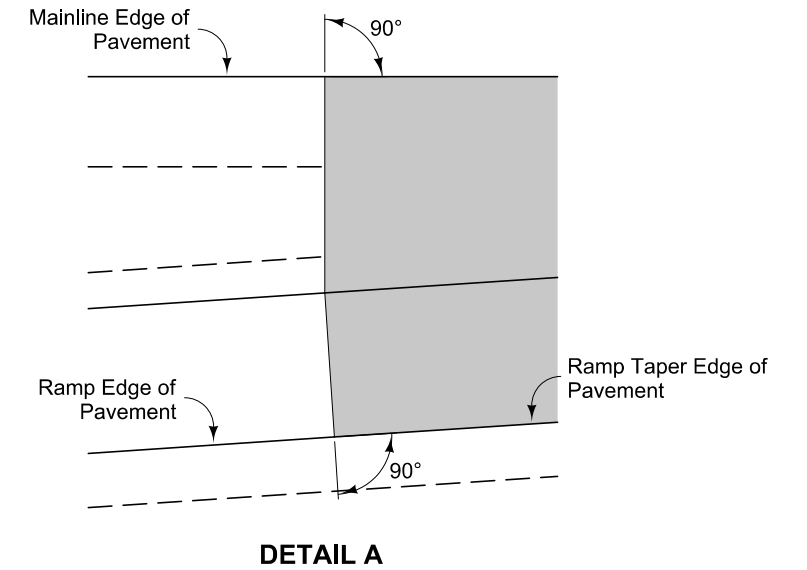
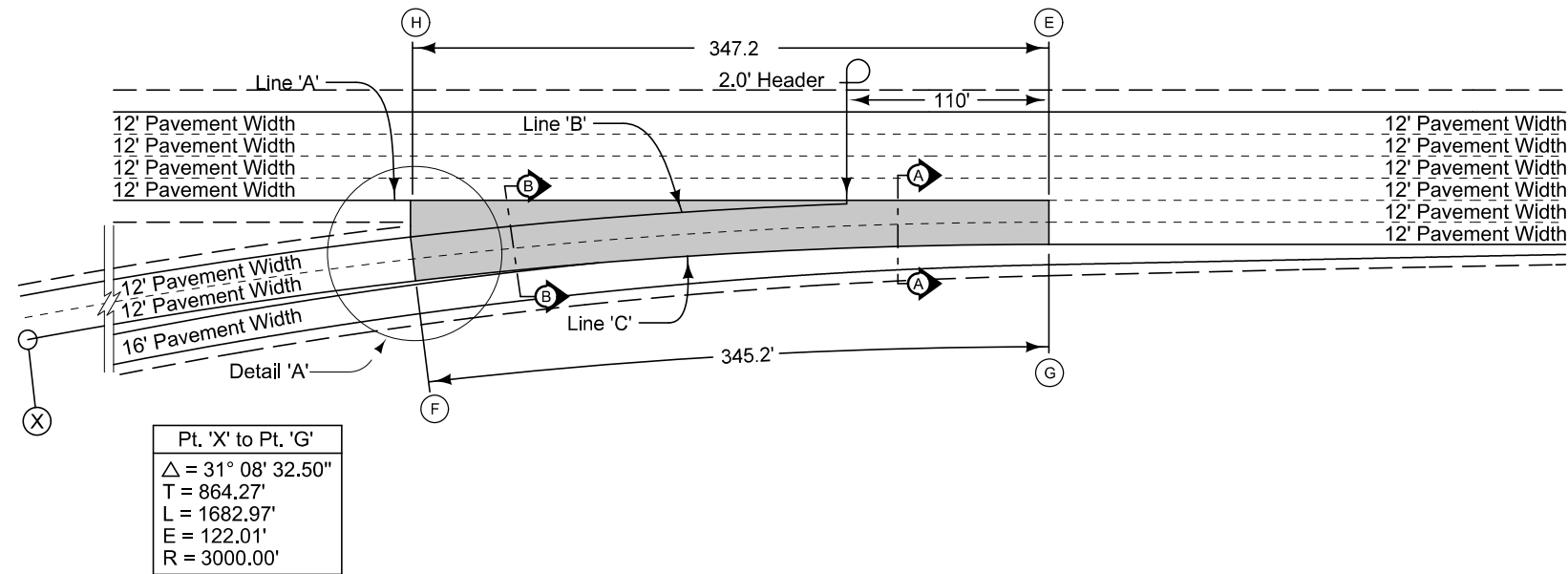
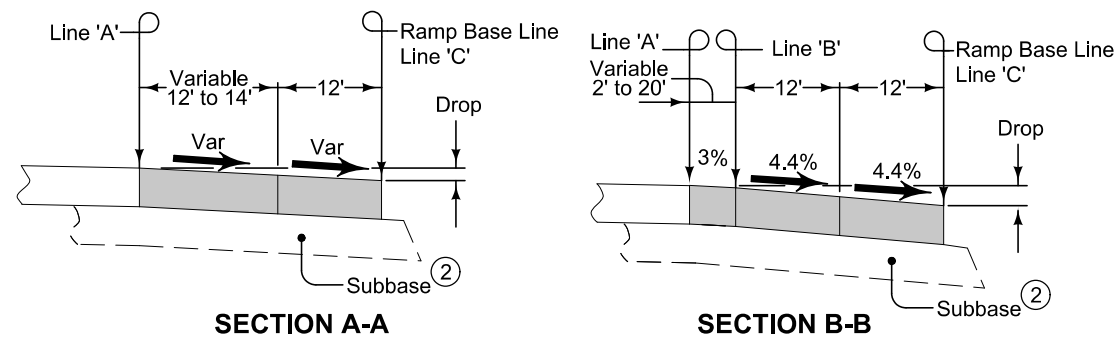
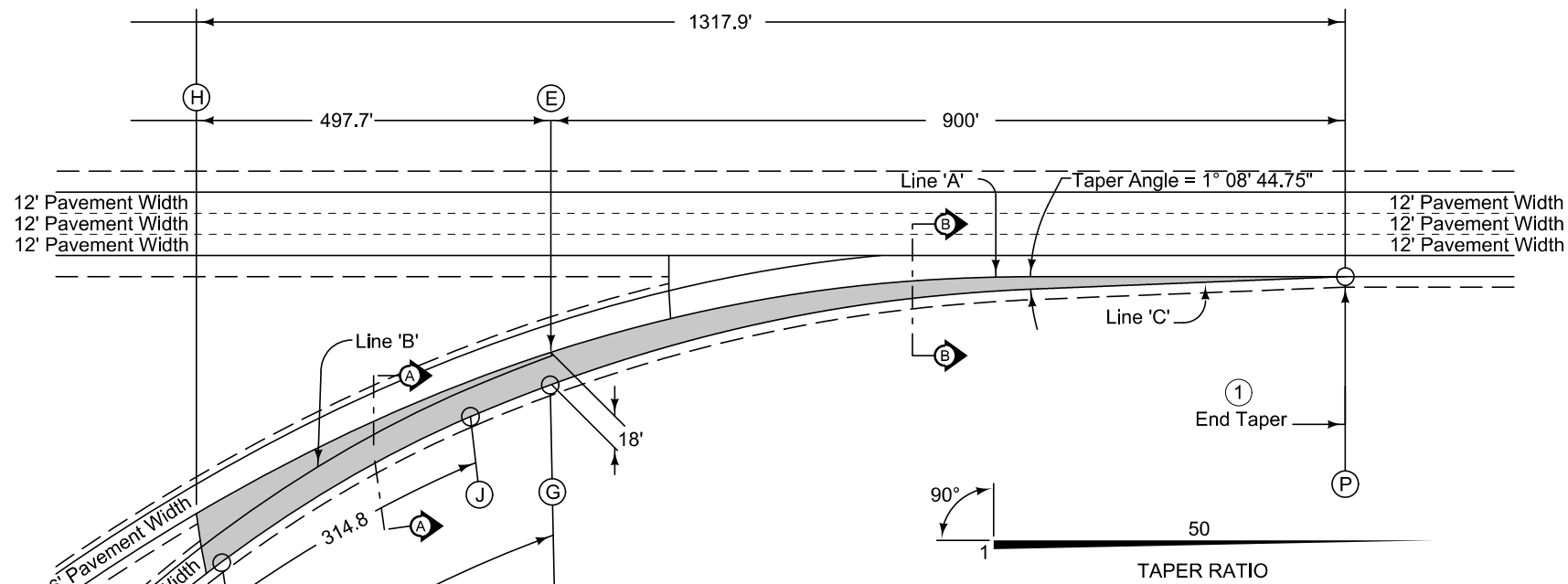


TABLE OF OFFSETS AND DROPS FOR 16' RAMP TAPER																								
DISTANCE FROM POINT (H) ALONG LINE 'A' (Ft.)		347.2	325	300	275	250	225	200	175	150	125	110	100	75	56	50	25	0						
From Line 'A' To Line 'B'	OFFSET (Ft.)	20.00	17.52	14.92	12.53	10.35	8.38	6.62	5.07	3.72	2.59	2.00												
	SLOPE (%)	← Constant 3.0% Slope →																						
	DROP (Ft.)	0.60	0.53	0.45	0.38	0.31	0.25	0.20	0.15	0.11	0.08	0.06												
From Line 'B' To Line 'C'	OFFSET (Ft.)	← Constant 24' Offset →																						
	SLOPE (%)	← Constant 4.4% Slope →																						
	DROP (Ft.)	← Constant 1.06' Drop →																						
From Line 'A' To Line 'C'	OFFSET (Ft.)																	25.67	24.94	24.52	24.42	24.10	24.00	
	SLOPE (%)																	4.40	4.40	4.40	4.25	3.63	3.00	
	DROP (Ft.)	1.66	1.58	1.50	1.43	1.37	1.31	1.25	1.21	1.17	1.13	1.12	1.12	1.13	1.10	1.08	1.04	0.87	0.72					
DISTANCE FROM POINT (F) ALONG LINE 'C' (Ft.)		345.22	323.05	298.11	273.20	248.30	223.42	198.56	173.71	148.87	124.04	109.12	100.02	75.01	56.00	50.00	25.00	0.00						

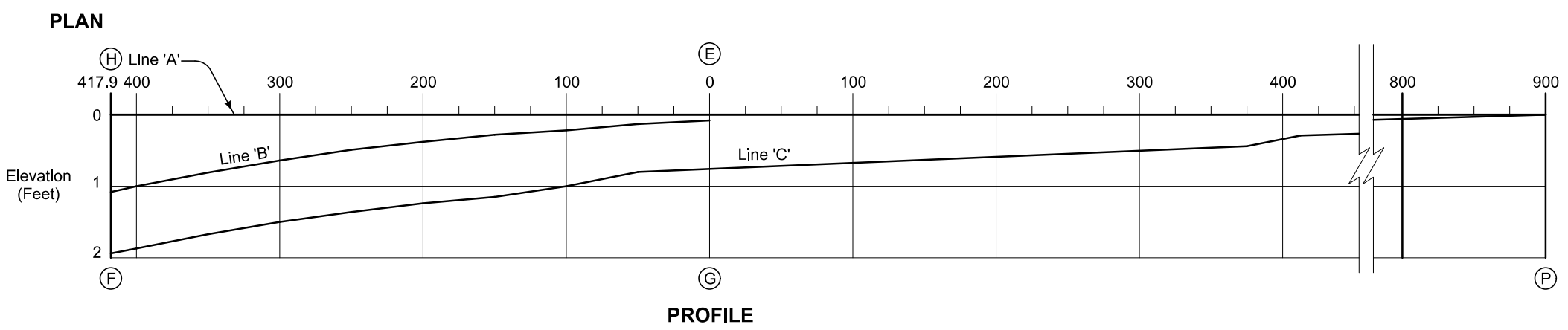


- Construct ramp entrance pavement the same thickness as mainline pavement.
- For joint detail, see PV-101.
- ① For header construction detail at the end of taper See Typical 7101 or Typical 7102.
 - ② Construct subbase for ramp entrance pavement the same thickness as mainline subbase.

**PARALLEL ACCELERATION TAPER
RAMP F on I-80**



Pt. 'X' to Pt. 'J'
 $\Delta = 32^\circ 55' 03.02''$
 $T = 590.86'$
 $L = 1149.04'$
 $E = 85.45'$
 $R = 2000.00'$

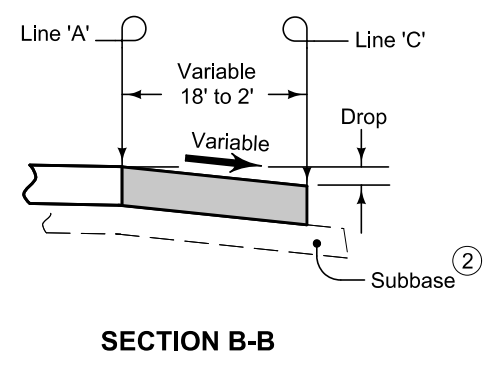
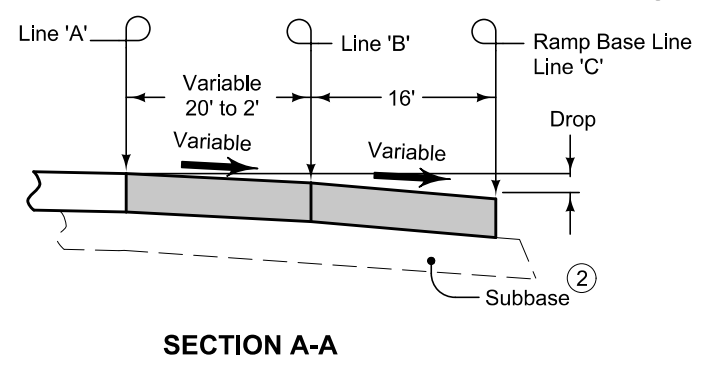


Construct ramp entrance pavement the same thickness as mainline pavement.

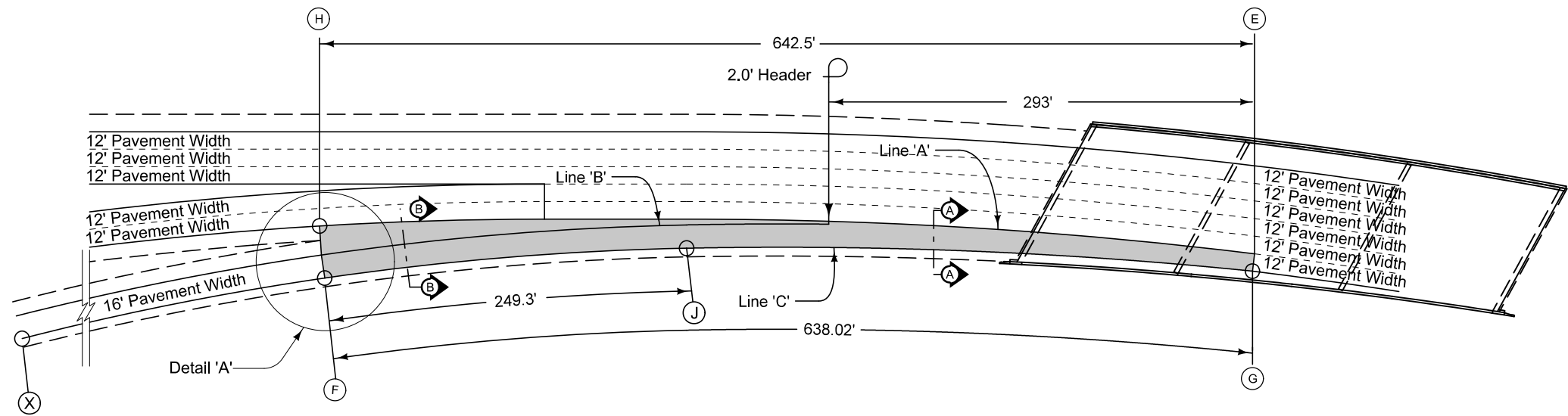
For joint details, see PV-101

- ① For header construction details at the end of taper, see Typical 7101 or Typical 7102.
- ② Construct subbase for ramp entrance pavement the same thickness as mainline subbase.

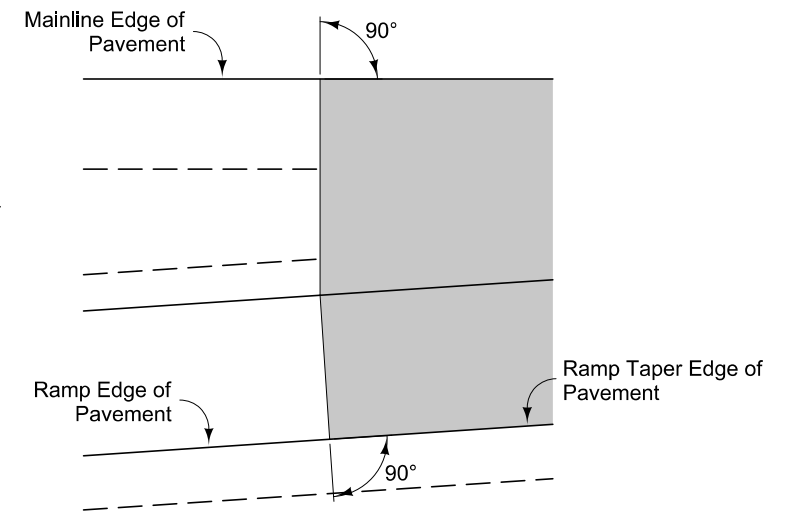
		TABLE OF OFFSETS AND DROPS FOR 16' RAMP TAPER																																		
Distance From Point (E) Along Line 'A' (Ft.)		417.9	400	375	350	325	300	275	250	225	200	175	150	125	100	75	62.7	50	25	0	50	100	200	300	375	400	412.2	500	600	700	800	900				
From Line 'A' To Line 'B'	Offset (Ft.)	20.00	18.58	16.71	14.96	13.32	11.81	10.41	9.14	7.98	6.95	6.03	5.23	4.56	4.00	3.50	3.26	3.00	2.50	2.00																
	Slope (%)	Constant 5.4% Slope																			4.59	4.20	4.20	4.20	4.20											
	Drop (Ft.)	1.08	1.00	0.90	0.81	0.72	0.64	0.56	0.49	0.43	0.38	0.33	0.28	0.25	0.22	0.16	0.14	0.13	0.11	0.08																
From Line 'B' To Line 'C'	Offset (Ft.)	Constant 16.0' Offset																																		
	Slope (%)	Constant 5.4% Slope																			4.59	4.20	4.20	4.20	4.20											
	Drop (Ft.)	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.73	0.67	0.67	0.67	0.67																
From Line 'A' To Line 'C'	Offset (Ft.)																				17.0	16.0	14.0	12.0	10.5	10.0	9.75	8.0	6.0	4.0	2.0	0.0				
	Slope (%)																				4.20	4.20	4.20	4.20	4.20	3.39	3.00	3.00	3.00	3.00	3.00	3.00				
	Drop (Ft.)	1.94	1.87	1.77	1.67	1.58	1.50	1.43	1.36	1.29	1.24	1.19	1.15	1.11	1.08	0.90	0.81	0.80	0.78	0.76	0.71	0.67	0.59	0.50	0.44	0.34	0.29	0.24	0.18	0.12	0.06	0.0				
Distance From Point (G) Along Line 'C' (Ft.)		414.38	396.60	371.89	347.11	322.36	297.36	272.85	248.09	223.33	198.56	173.79	149.02	124.25	99.31	74.61	62.38	49.76	24.90	0.0																



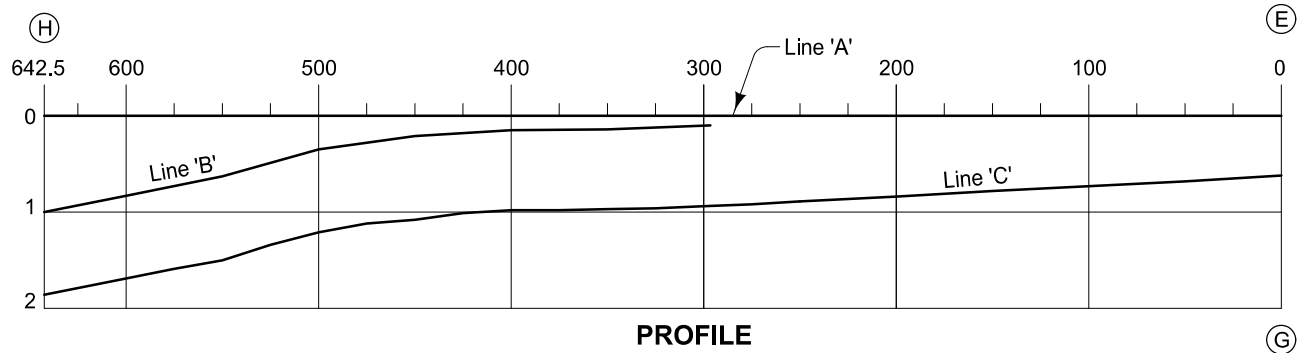
**PARALLEL ACCELERATION TAPER
RAMP G on US 218**



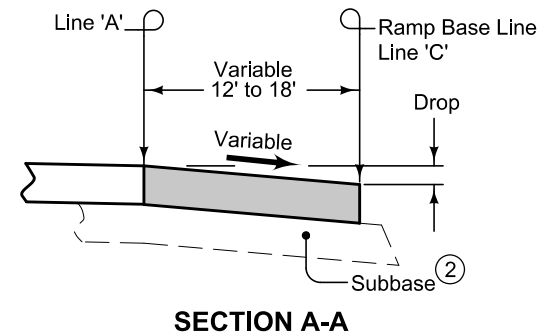
Pt. 'X' to Pt. 'J'	
Δ	= 21° 13' 02.53"
T	= 374.60'
L	= 740.62'
E	= 34.78'
R	= 2000.00'



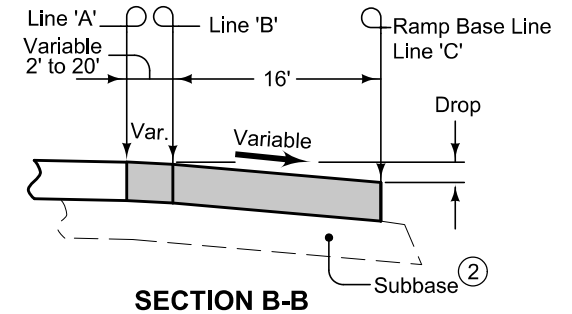
DETAIL A



PROFILE



SECTION A-A



SECTION B-B

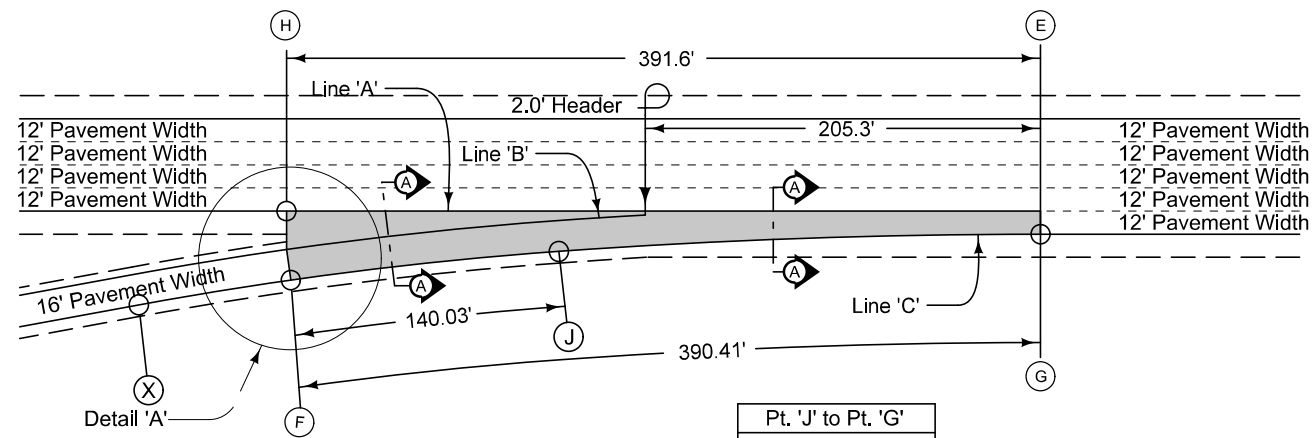
TABLE OF OFFSETS AND DROPS FOR 16' RAMP TAPER																																		
DISTANCE FROM POINT (H) ALONG LINE 'A' (Ft.)		642.5	625	600	575	550	525	500	475	450	425	400	390.9	375	350	325	300	293	275	250	225	200	175	150	125	100	75	50	25	0				
From Line 'A' To Line 'B'	OFFSET (Ft.)	20.00	18.53	16.51	14.57	12.68	10.85	9.09	7.42	6.03	4.96	4.20	4.00	3.68	3.17	2.65	2.14	2.00																
	SLOPE (%)	5.00	5.00	5.00	5.00	5.00	4.43	3.80	3.50	3.50	3.50	3.53	3.64	3.95	4.37	4.78	5.20	5.20																
	DROP (Ft.)	1.00	0.93	0.83	0.73	0.63	0.48	0.35	0.26	0.21	0.17	0.15	0.15	0.15	0.14	0.13	0.11	0.10																
From Line 'B' To Line 'C'	OFFSET (Ft.)	← Constant 16' Offset →																																
	SLOPE (%)	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.20	5.20																
	DROP (Ft.)	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.83	0.83																
From Line 'A' To Line 'C'	OFFSET (Ft.)																		17.63	17.12	16.61	16.10	15.58	15.07	14.56	14.05	13.54	13.02	12.51	12.00				
	SLOPE (%)																		3.60	3.30	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00				
	DROP (Ft.)	1.86	1.79	1.69	1.59	1.50	1.34	1.21	1.12	1.08	1.01	0.98	0.98	0.98	0.97	0.96	0.94	0.94	0.92	0.89	0.86	0.84	0.81	0.78	0.76	0.73	0.70	0.68	0.65	0.62				
DISTANCE FROM POINT (F) ALONG LINE 'C' (Ft.)		638.02	620.37	595.65	570.93	546.19	521.44	496.67	471.84	447.00	422.18	397.36	388.73	372.89	348.03	323.18	298.32	291.38	273.78	248.91	224.04	199.16	174.28	149.40	124.51	99.61	74.72	49.82	24.91	0.00				

Construct ramp entrance pavement the same thickness as mainline pavement.

For joint detail, see PV-101.

- ① For header construction detail at the end of taper See Typical 7101 or Typical 7102.
- ② Construct subbase for ramp entrance pavement the same thickness as mainline subbase.

**PARALLEL ACCELERATION TAPER
RAMP H on I-380**



Pt. 'X' to Pt. 'J'	
Δ = 06° 18' 14.23"	
T = 110.14'	
L = 220.05'	
E = 3.03'	
R = 2000.00'	

Pt. 'J' to Pt. 'G'	
Δ = 04° 05' 55.57"	
T = 125.24'	
L = 250.38'	
E = 2.24'	
R = 3500.00'	

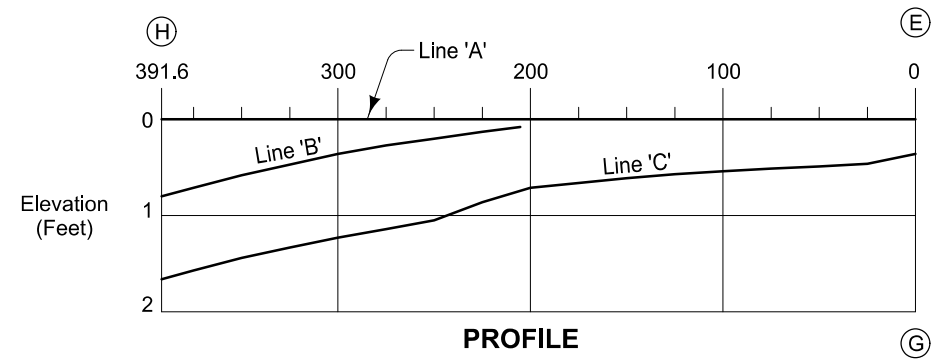
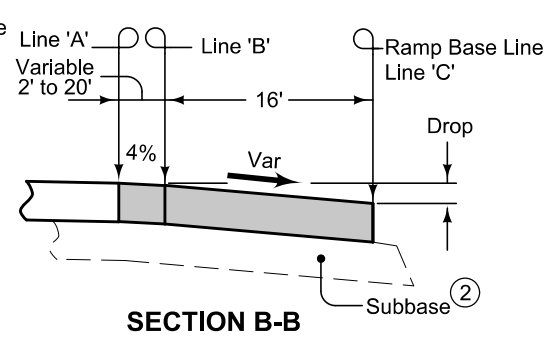
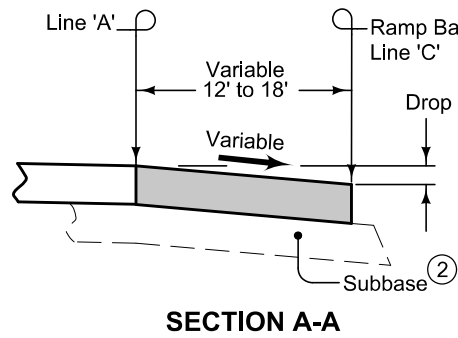
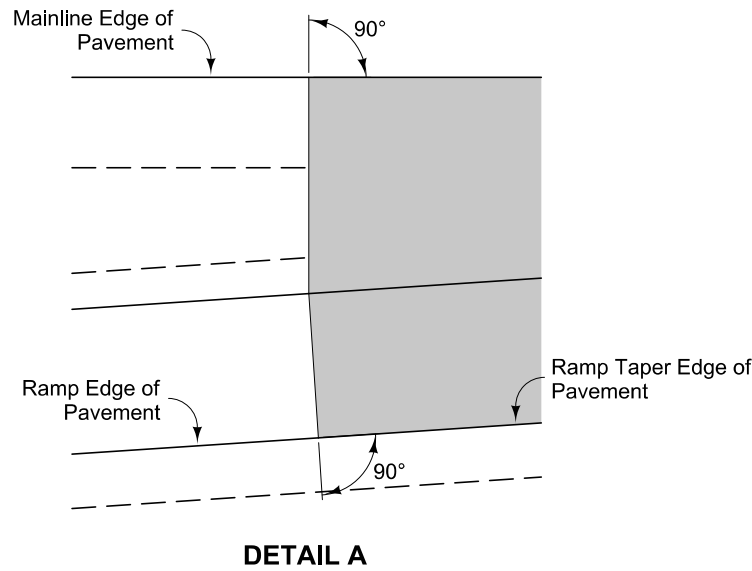
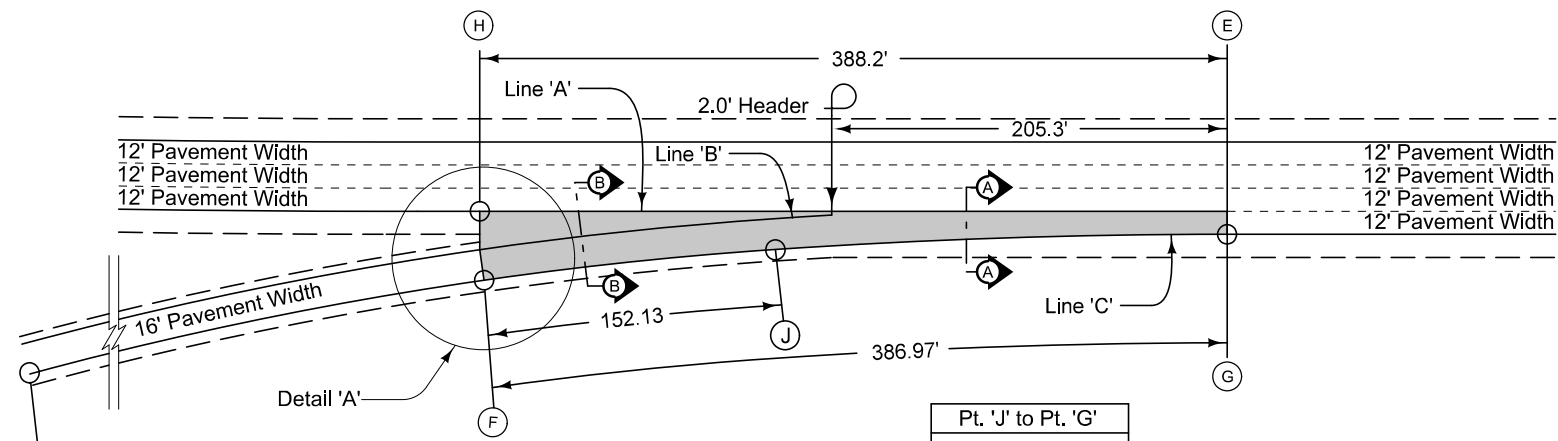


TABLE OF OFFSETS AND DROPS FOR 16' RAMP TAPER																					
DISTANCE FROM POINT (H) ALONG LINE 'A' (Ft.)		391.6	375	350	325	300	275	250	225	205.3	200	175	150	125	100	75	50	31	25	0	
From Line 'A' To Line 'B'	OFFSET (Ft.)	20.00	17.70	14.51	11.64	9.08	6.83	4.90	3.21	2.00											
	SLOPE (%)	Constant 4.0% Slope																			
	DROP (Ft.)	0.80	0.71	0.58	0.47	0.36	0.27	0.20	0.13	0.08											
From Line 'B' To Line 'C'	OFFSET (Ft.)	Constant 16' Offset																			
	SLOPE (%)	5.40	5.40	5.40	5.40	5.40	5.40	5.40	4.60	4.00											
	DROP (Ft.)	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.74	0.64											
From Line 'A' To Line 'C'	OFFSET (Ft.)										17.72	16.38	15.22	14.23	13.43	12.80	12.36	12.14	12.09	12.00	
	SLOPE (%)										4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	3.81	3.00	
	DROP (Ft.)	1.66	1.57	1.44	1.33	1.23	1.14	1.06	0.86	0.72	0.71	0.66	0.61	0.57	0.54	0.51	0.49	0.49	0.46	0.36	
DISTANCE FROM POINT (F) ALONG LINE 'C' (Ft.)		390.41	373.75	348.75	323.79	298.85	273.95	249.07	224.13	104.50	200.11	175.07	150.05	125.03	100.01	75.01	50.00	31.00	25.00	0.00	



- Construct ramp entrance pavement the same thickness as mainline pavement.
- For joint detail, see PV-101.
- ① For header construction detail at the end of taper See Typical 7101 or Typical 7102.
- ② Construct subbase for ramp entrance pavement the same thickness as mainline subbase.

**PARALLEL ACCELERATION TAPER
IA 965 RAMP C on I-80**



Pt. 'X' to Pt. 'J'
 $\Delta = 15^\circ 28' 46.62''$
 $T = 271.83'$
 $L = 234.84'$
 $E = 18.39'$
 $R = 2000.00'$

Pt. 'J' to Pt. 'G'
 $\Delta = 03^\circ 50' 40.04''$
 $T = 117.47'$
 $L = 234.84'$
 $E = 1.97'$
 $R = 3500.00'$

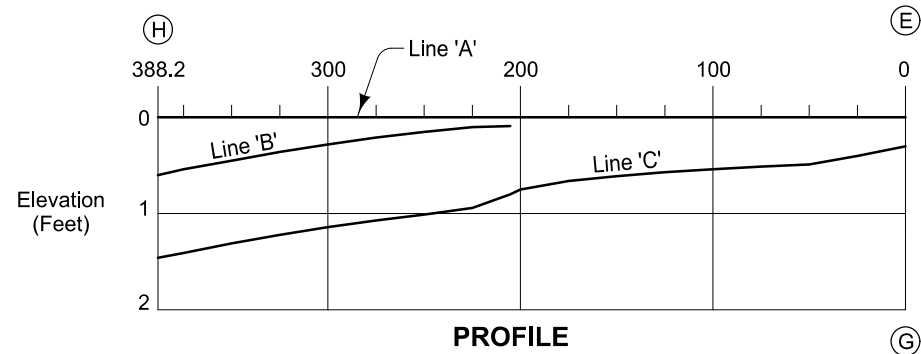


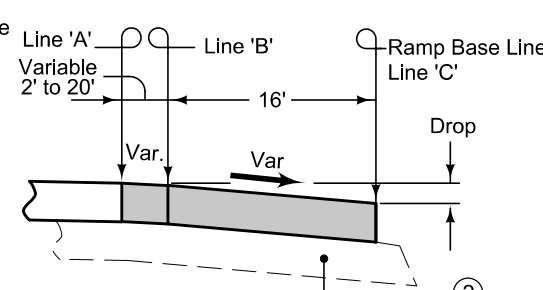
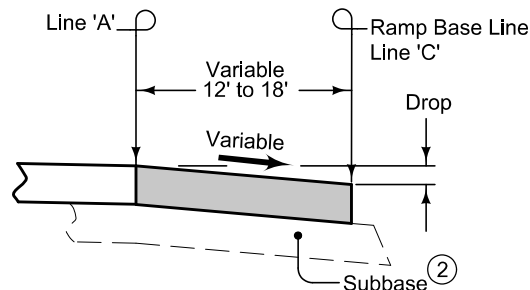
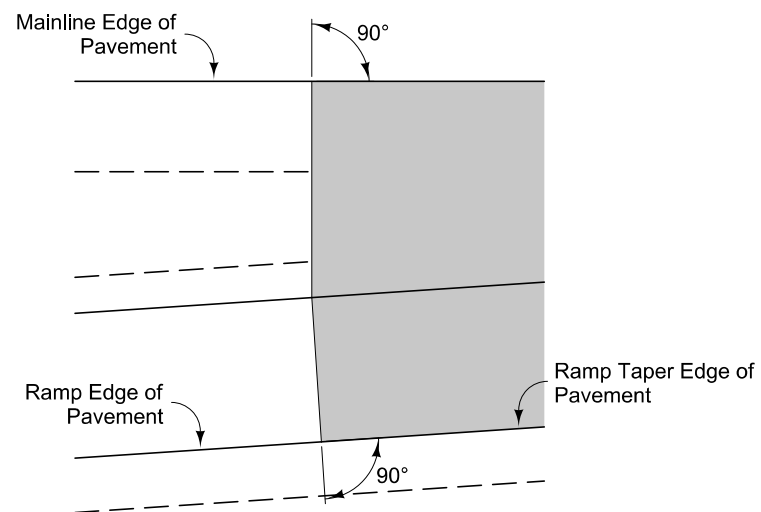
TABLE OF OFFSETS AND DROPS FOR 16' RAMP TAPER

DISTANCE FROM POINT (H) ALONG LINE 'A' (Ft.)		388.2	375	350	325	300	275	250	236.3	225	205.3	200	192.9	175	150	125	100	75	50	25	0	
From Line 'A' To Line 'B'	OFFSET (Ft.)	20.00	18.14	14.87	11.91	9.26	6.94	4.92	3.95	3.21	2.00											
	SLOPE (%)	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.23	4.40											
	DROP (Ft.)	0.60	0.54	0.45	0.36	0.28	0.21	0.15	0.12	0.10	0.09											
From Line 'B' To Line 'C'	OFFSET (Ft.)	← Constant 16' Offset →																				
	SLOPE (%)	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.23	4.40											
	DROP (Ft.)	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.84	0.70											
From Line 'A' To Line 'C'	OFFSET (Ft.)											17.72	17.37	16.38	15.22	14.23	13.43	12.80	12.36	12.09	12.00	
	SLOPE (%)											4.26	4.00	4.00	4.00	4.00	4.00	4.00	4.00	3.25	2.50	
	DROP (Ft.)	1.46	1.41	1.31	1.22	1.14	1.07	1.01	0.98	0.94	0.79	0.75	0.69	0.66	0.61	0.57	0.54	0.51	0.49	0.39	0.30	
DISTANCE FROM POINT (F) ALONG LINE 'C' (Ft.)		386.97	373.74	348.73	323.76	298.82	273.91	249.02	235.42	224.13	104.50	200.11	193.00	175.07	150.04	125.03	100.01	75.00	50.00	25.00	0.00	

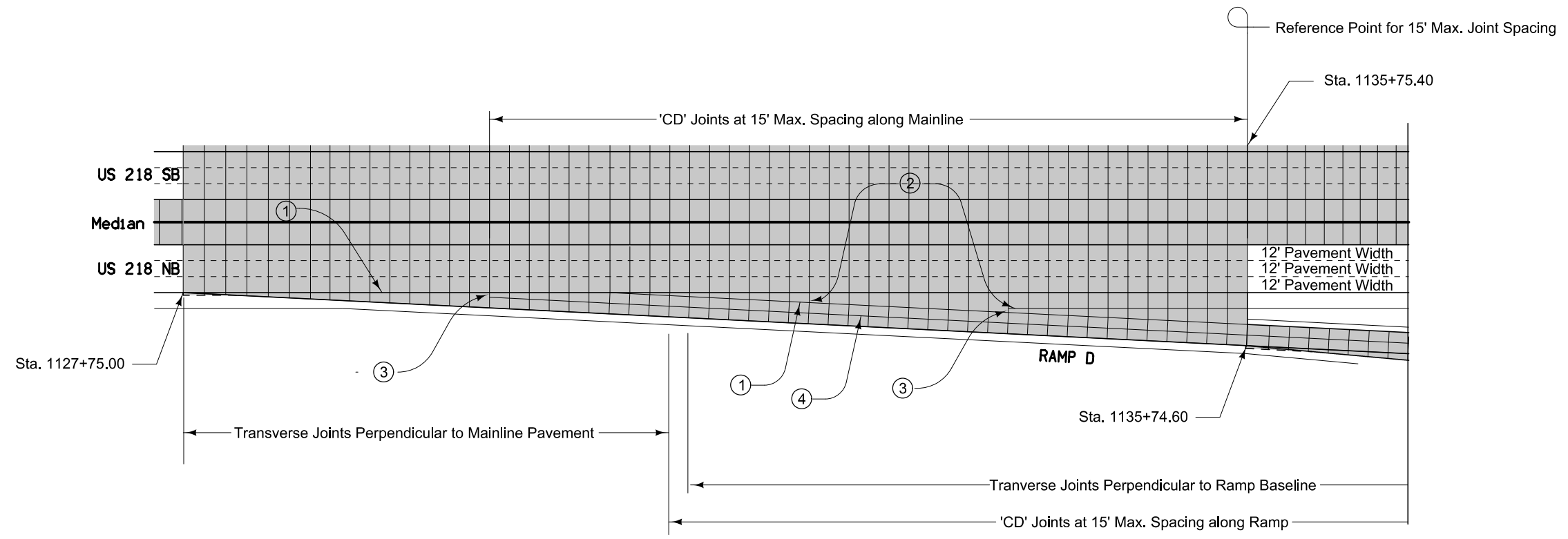
Construct ramp entrance pavement the same thickness as mainline pavement.

For joint detail, see PV-101.

- ① For header construction detail at the end of taper See Typical 7101 or Typical 7102.
- ② Construct subbase for ramp entrance pavement the same thickness as mainline subbase.



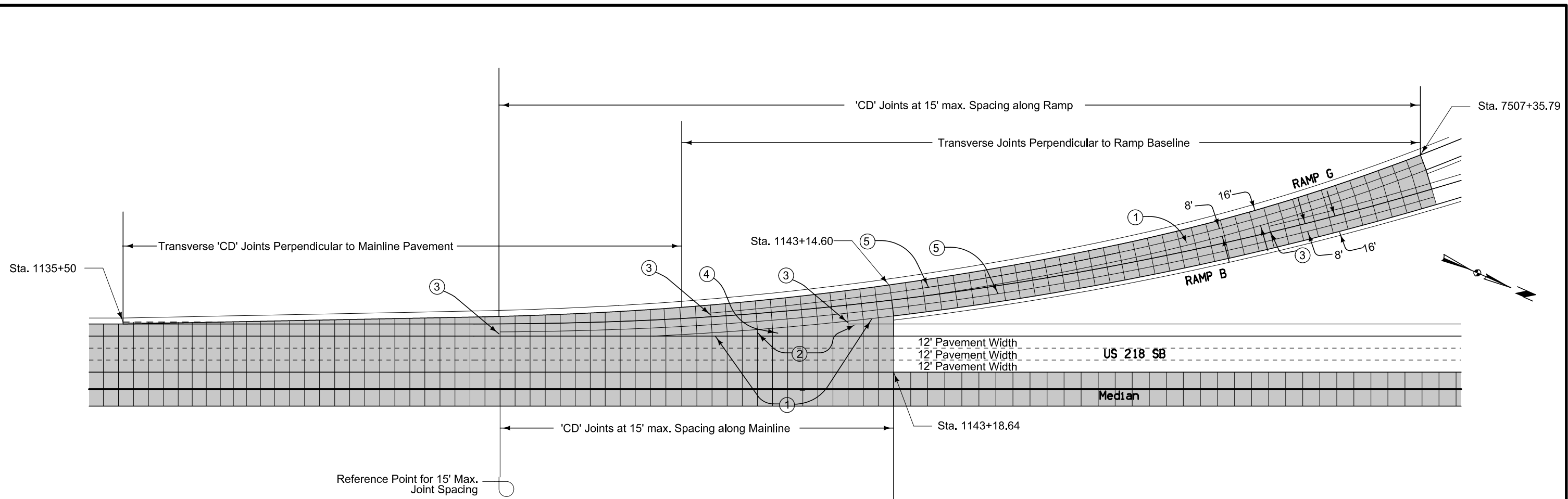
PARALLEL ACCELERATION TAPER
Ireland RAMP D on I-80



- ① 'BT-2' or 'KT-2' Joint.
- ② 'C' Joint.
- ③ 'B' Joint. 2' minimum. 4' maximum.
- ④ 'L-2' Joint.

This Sheet
For Information Only

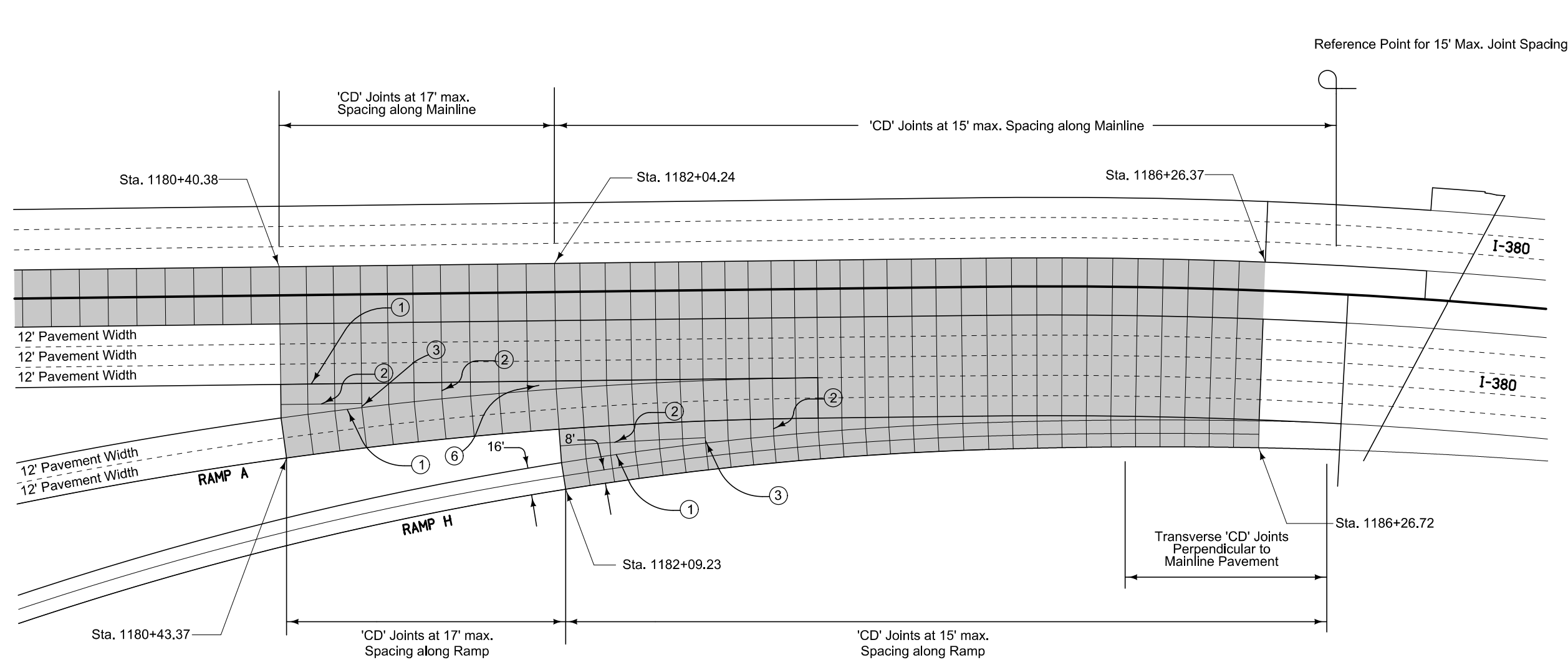
RAMP TAPER JOINTING
US-218 RAMP D



- ① 'BT-2' or 'KT-2' Joint.
- ② 'C' Joint.
- ③ 'B' Joint. 2' minimum, 4' maximum.
- ④ Construct transverse joints on the entrance ramp taper perpendicular to the tapered edge where the gore area is greater than 4 feet.
- ⑤ 'L-2' Joint.

This Sheet
For Information Only

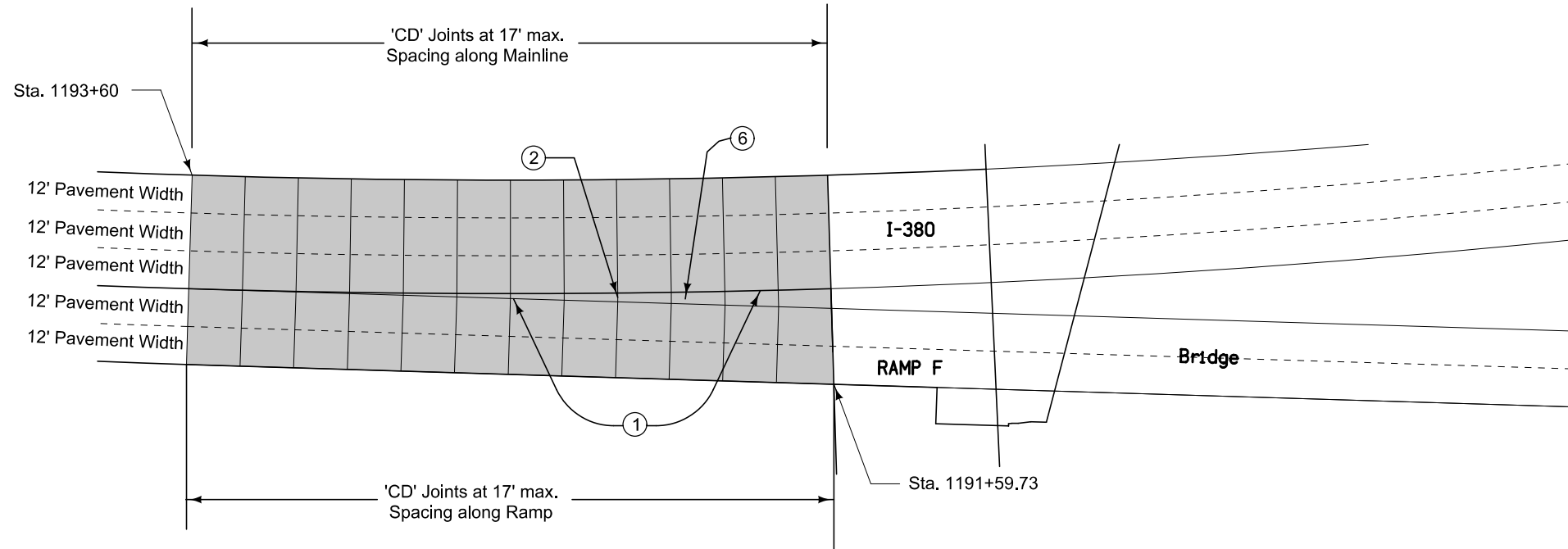
RAMP TAPER JOINTING
US-218 RAMP B and Ramp G



- ① 'BT-2' or 'KT-2' Joint.
- ② 'C' Joint.
- ③ 'B' Joint. 2' minimum, 4' maximum.
- ⑥ Construct transverse joints on the entrance ramp taper perpendicular to the tapered edge where the gore area is greater than 4 feet.

This Sheet
For Information Only

RAMP TAPER JOINTING
I-380 RAMP A and RAMP H



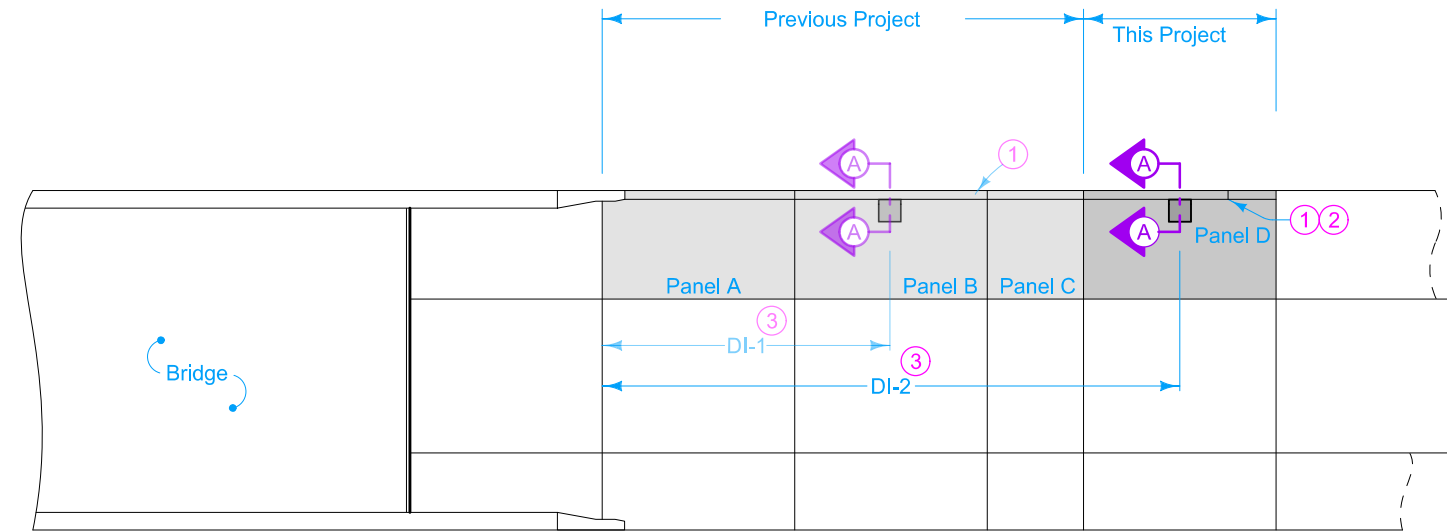
- ① 'BT-2' or 'KT-2' Joint.
- ② 'C' Joint.
- ⑥ Construct transverse joints on the entrance ramp taper perpendicular to the tapered edge where the gore area is greater than 4 feet.

This Sheet
For Information Only

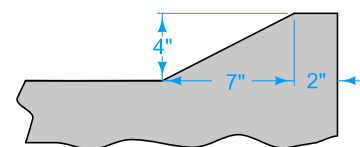
RAMP TAPER JOINTING
I-380 RAMP F

Price bid is full compensation for furnishing, installing, and constructing the Bridge End Drain as shown.

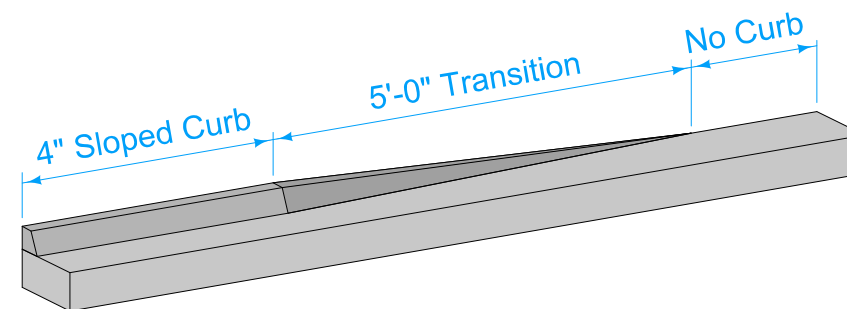
- ① Refer to Curb Detail for details of 4 inch sloped curb.
- ② Continue 4 inch Sloped Curb 5 feet beyond centerline of intake, then transition to no curb as shown in the Curb Drop Detail.
- ③ Distance is measured from joint.



PLAN

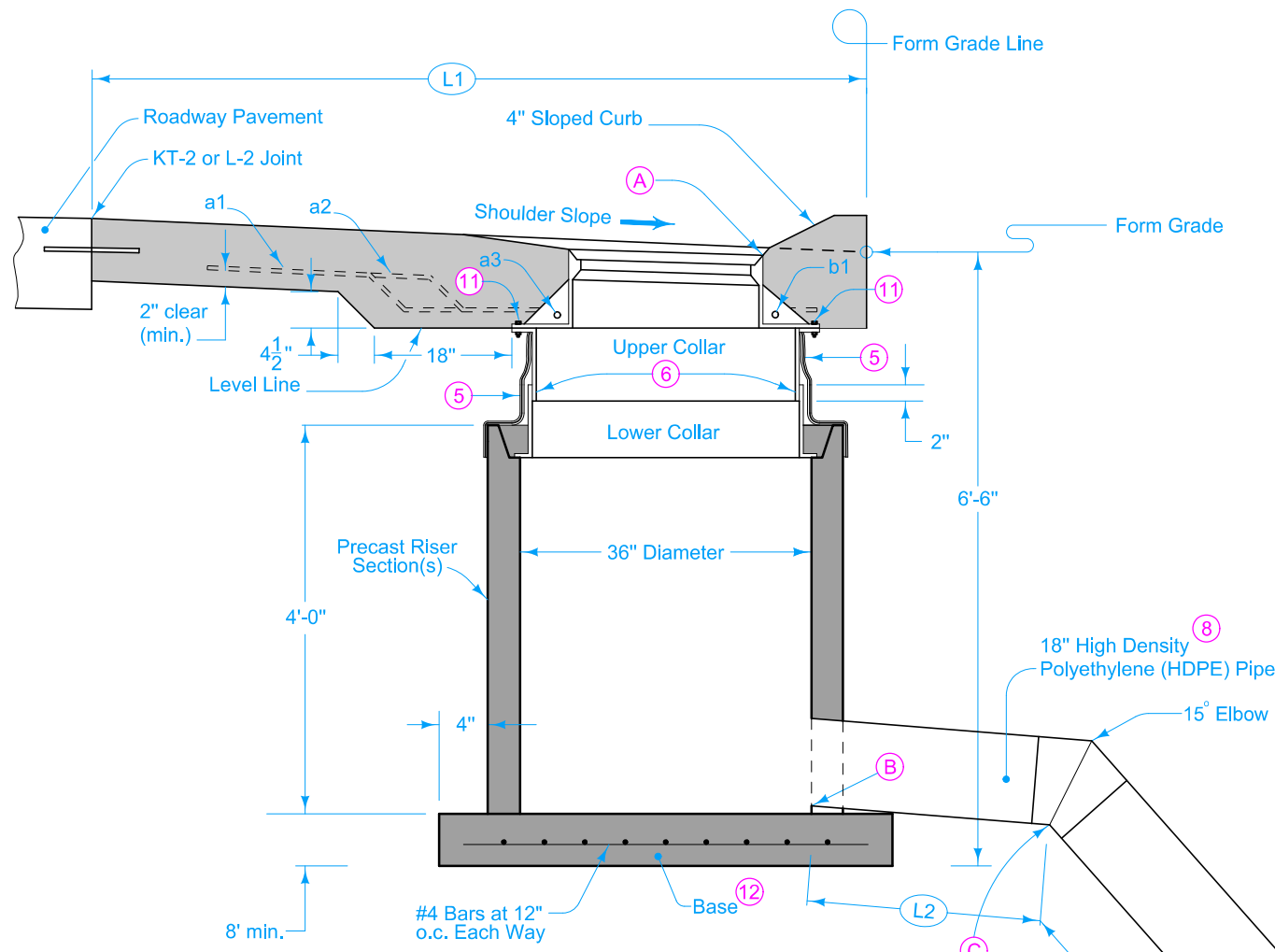


CURB DETAIL

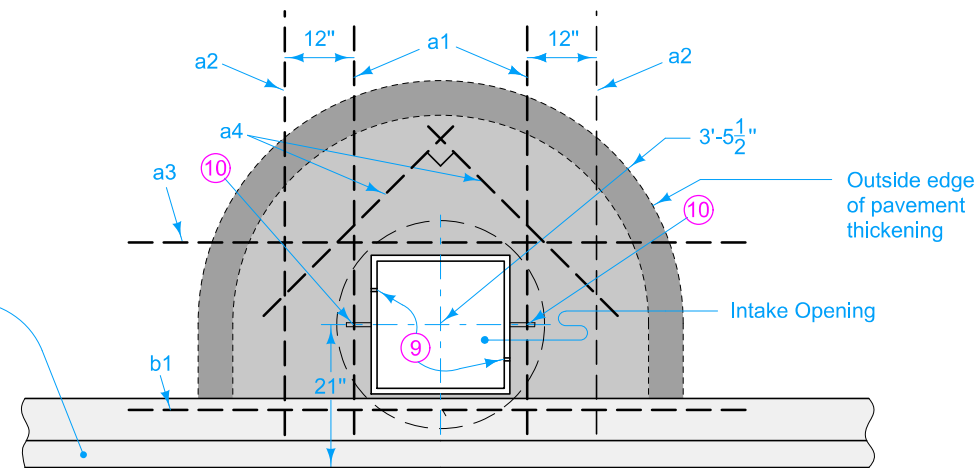


CURB DROP DETAIL

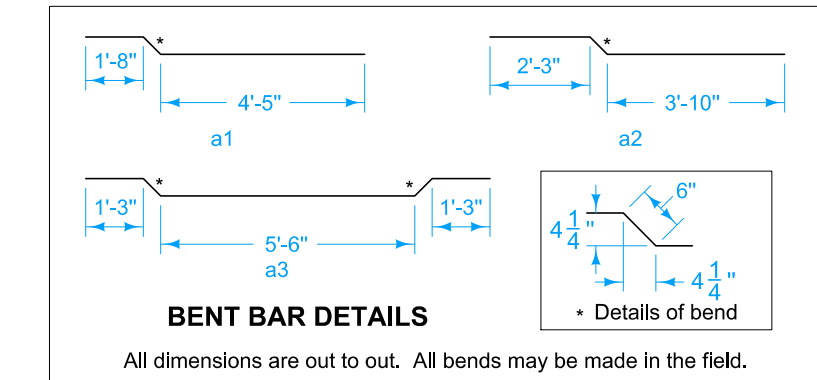
MODIFIED	REVISION	
	1	4-17-18
STANDARD ROAD PLAN		SW-538
		SHEET 1 of 5
REVISIONS: 1. Change of curb detail to match sheet 2 and notes and frame detail on Sheet 4 to reflect new frame design.		
APPROVED BY DESIGN METHODS ENGINEER		
INTAKE FOR BRIDGE END DRAIN		



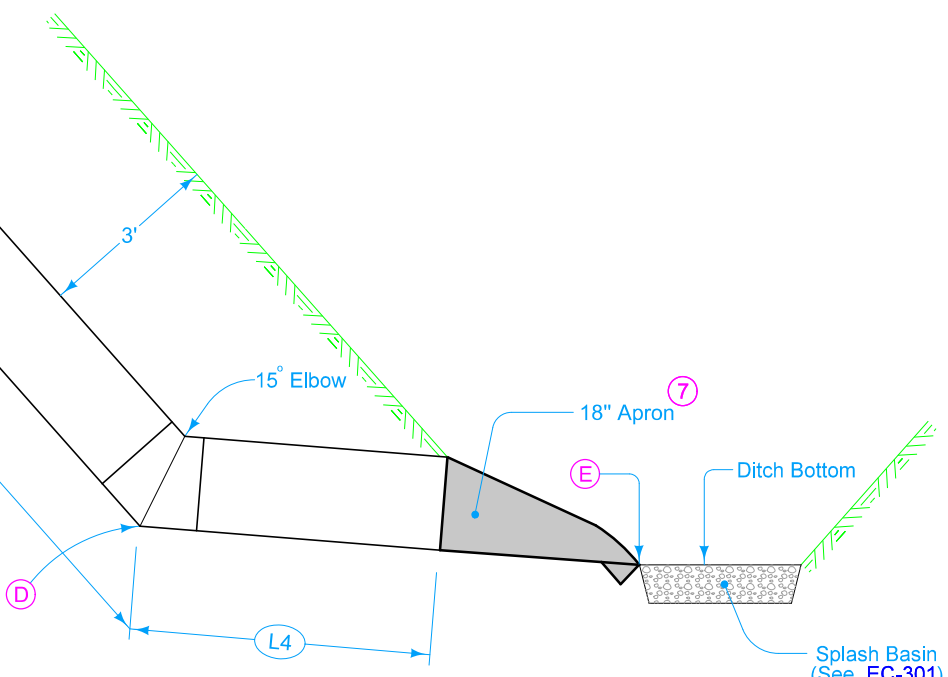
SECTION A-A THROUGH INTAKE



REINFORCING LAYOUT



REINFORCING BAR LIST						
MARK	SIZE	LOCATION	SHAPE	NO.	LENGTH	WEIGHT
a1 (10)	4	Shoulder		2	6'-7"	9
a2	4	Shoulder		2	6'-7"	9
a3 (10)	4	Shoulder		1	9'-0"	6
a4	4	Shoulder		2	4'-0"	5
b1 (10)	4	Curb		1	8'-9"	6
Total						35 lbs.



GRATE POSITIONING BOLT

Construct precast base using 4 in. x 4 in. No. 6 steel wire mesh reinforcing or equivalent.

Flow line (A) elevation is 0.10 feet below Form Grade Elevation.

Flow line (B) elevation is 5.75 feet below flow line (A).

Flow line (E) elevation is 0 - 0.5 feet above ditch grade.

Refer to project plans for actual flow line elevations of (A), (B), (C), (D), (E), and dimensions L1, L2, L3, and L4.

(5) Before backfilling around the intake assembly, wrap two thicknesses of engineering fabric around the settlement collar. Tape all the way around with 2 inch duct tape immediately below the flange of upper section and 4 inches below the top of well pipe.

(6) Fasten Slip joint temporarily with four 1/2 inch cap screws during pavement construction. Remove cap screws after pavement is hardened.

(7) Refer to DR-203. Apron is incidental to Intake for Bridge End Drain and will not be paid for separately.

(8) Connect to basin according to Section 2435 of the Standard Specifications. High Density Polyethylene (HDPE) Pipe is incidental to Intake for Bridge End Drain and will not be paid for separately.

(9) Field place 1/2 in. x 4 in. long bolt in upstream side and bend underside to prevent removal.

(10) Place bars a1, a3, and b1 through the appropriate holes in the intake frame.

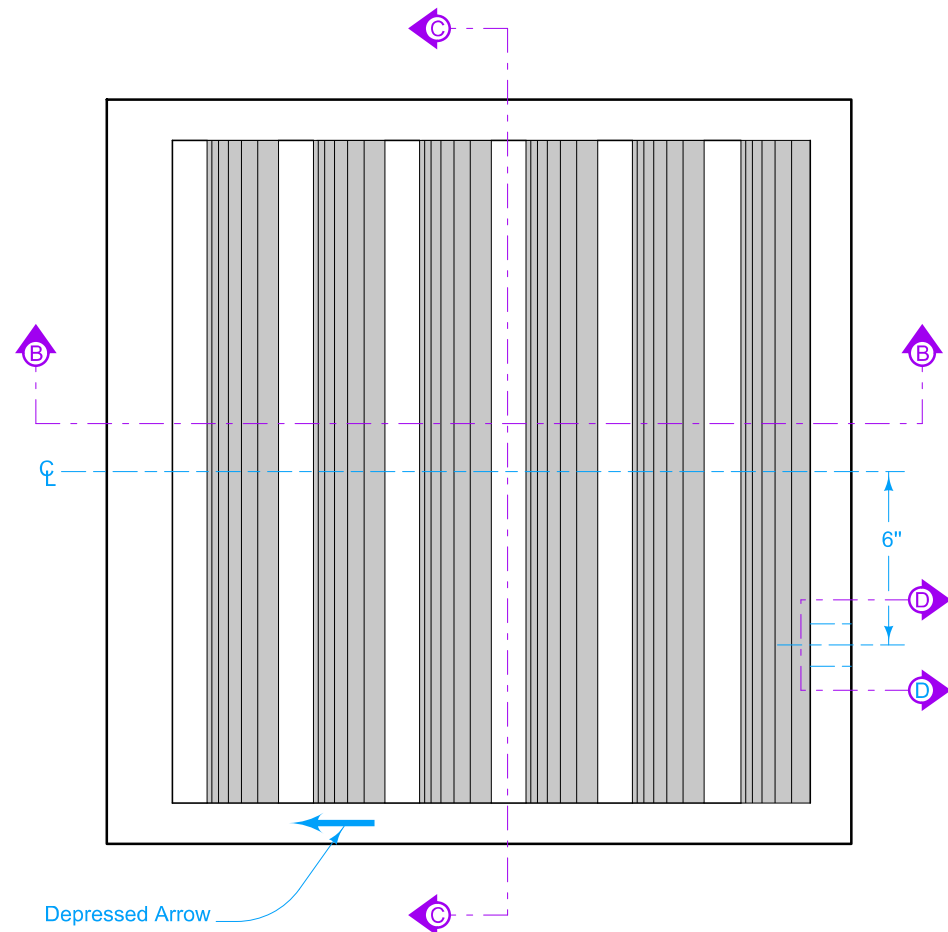
(11) Fasten frame casting to Upper Collar casting at four locations using 1/2 in. x 2 in. long hex bolts and 1/2 inch nuts.

(12) Cast-in-place base shown. Base may be square. If base is precast integral with walls, the footprint of the base is not required to extend beyond the outer edge of the walls.

MODIFIED	REVISION	
	2	04-17-18
STANDARD ROAD PLAN	SW-538	
	SHEET 2 of 5	
APPROVED BY DESIGN METHODS ENGINEER		

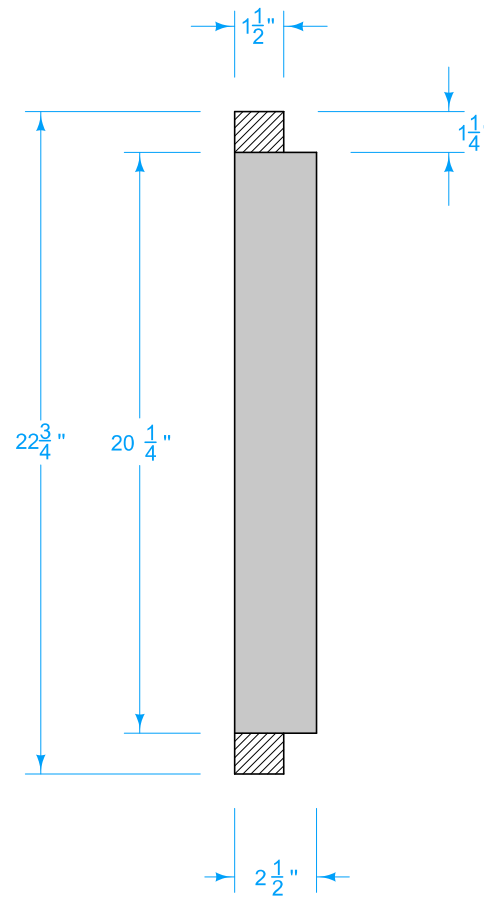
INTAKE FOR BRIDGE END DRAIN (WITH LETDOWN)

Minimum Weight = 90 lbs.

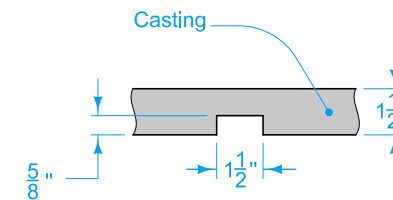


PLAN

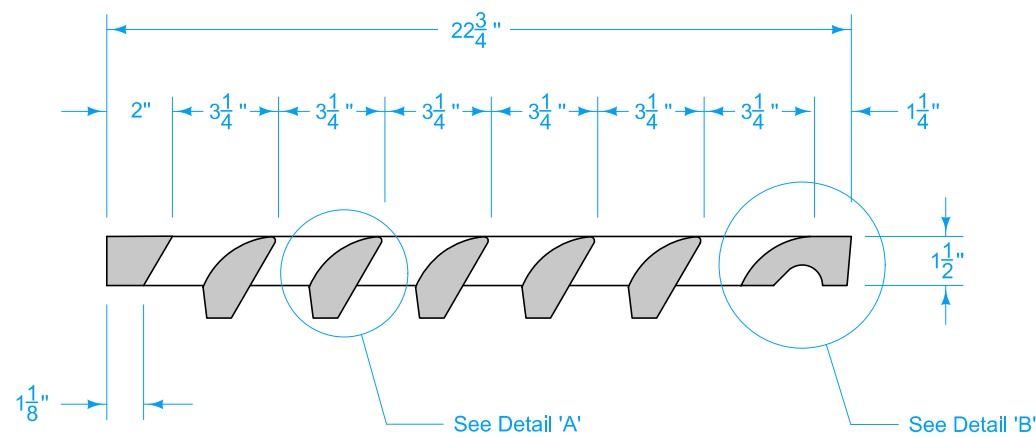
← Flow



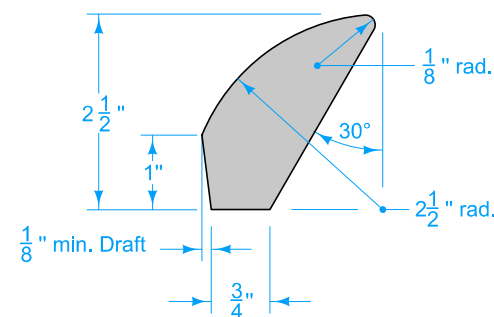
SECTION C-C



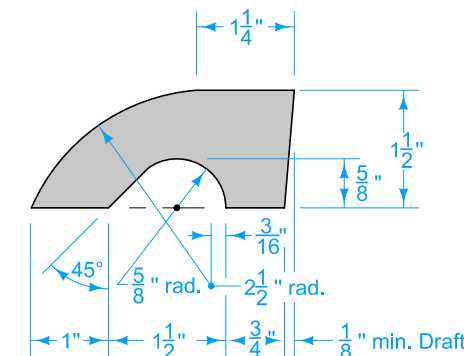
SECTION D-D



SECTION B-B



DETAIL 'A'



DETAIL 'B'

GRATE

MODIFIED	REVISION	
	2	04-17-18
STANDARD ROAD PLAN	SW-538	
SHEET 3 of 5		

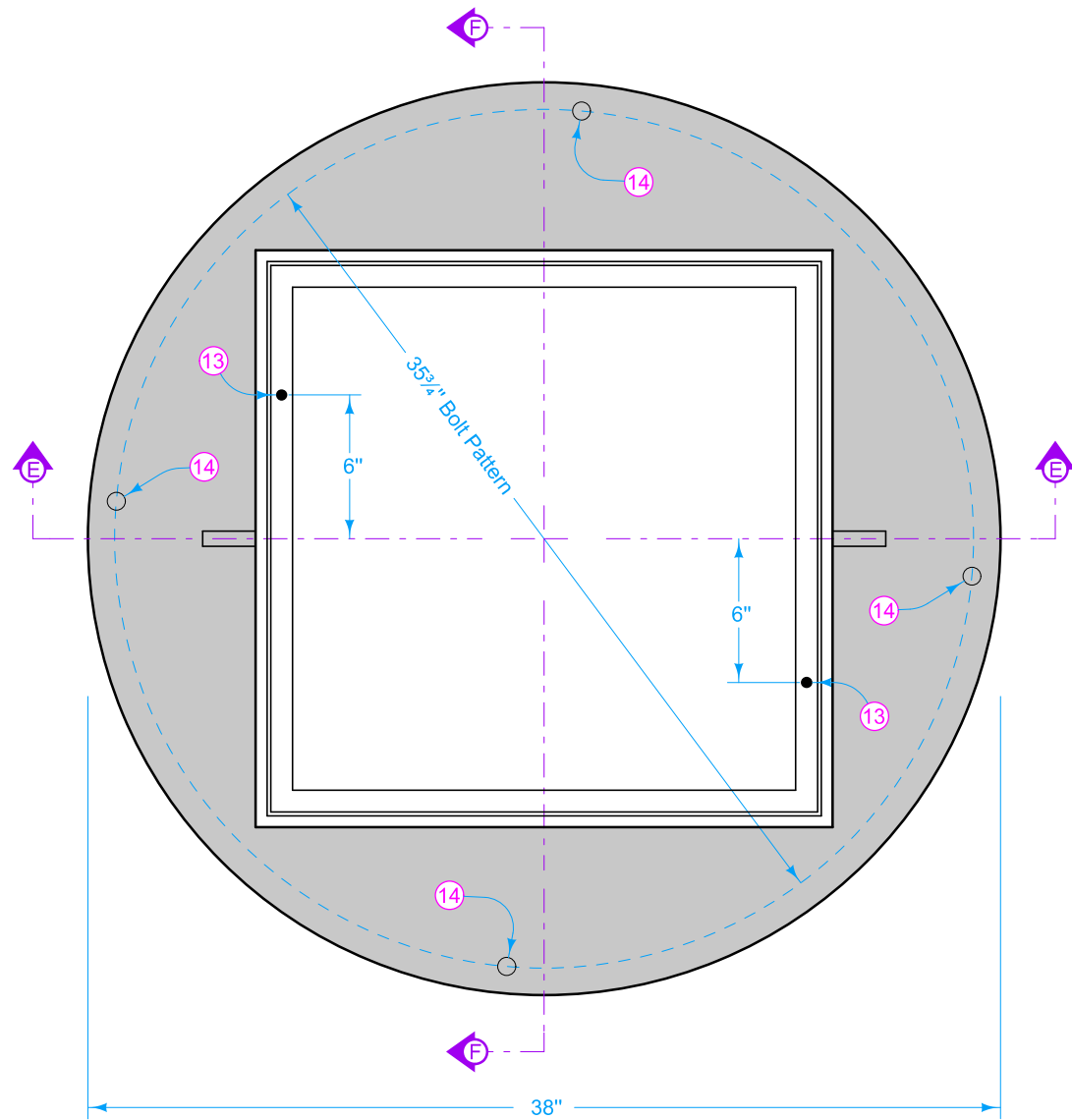
REVISIONS are to be placed on the drawing in blue ink.

APPROVED BY DESIGN METHODS ENGINEER

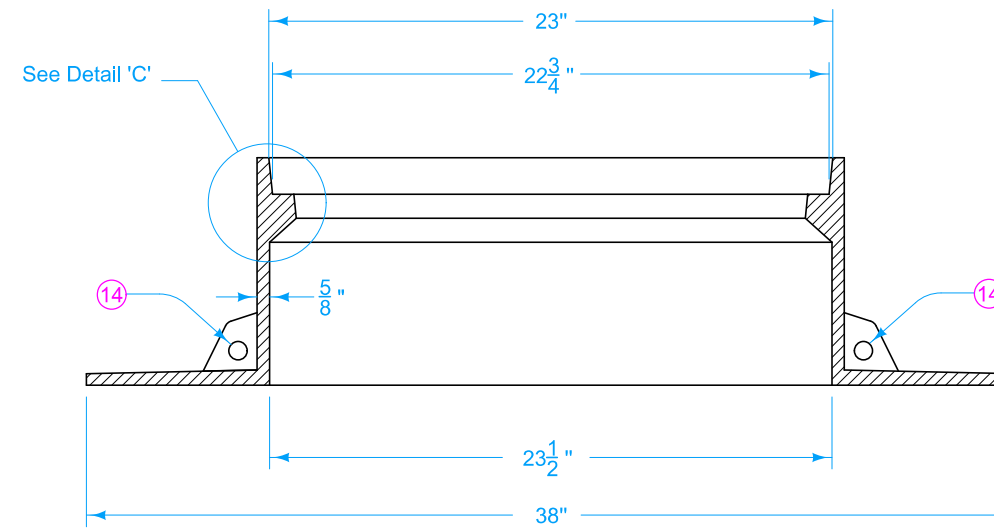
**INTAKE FOR BRIDGE END DRAIN
(WITH LETDOWN)**

Minimum Weight = 163 lbs.

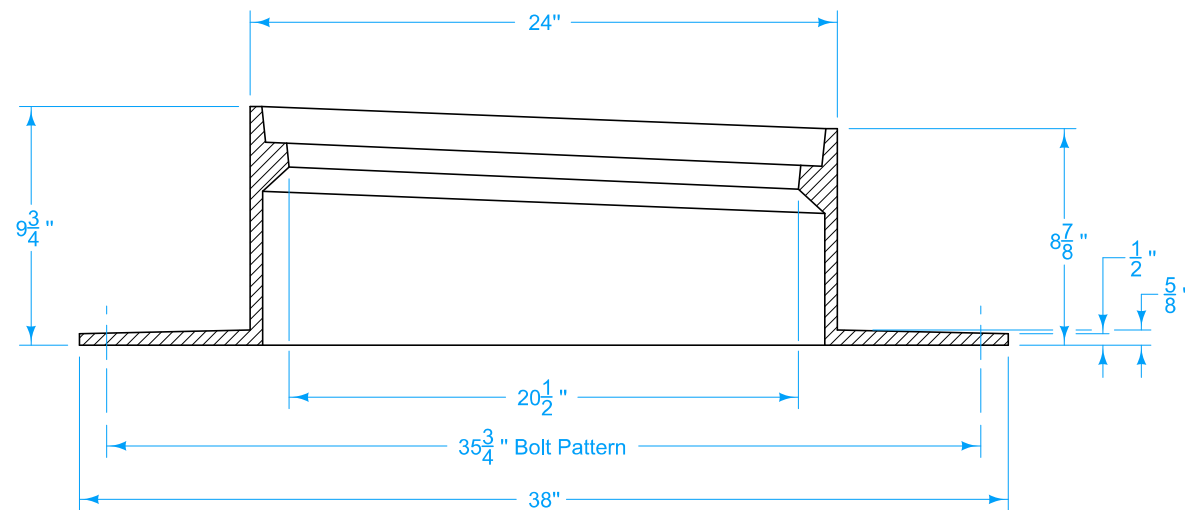
- ⑬ Provide $\frac{9}{16}$ inch diameter holes at locations indicated.
- ⑭ $\frac{3}{4}$ inch holes. Drill or core if not already existing.
- ⑮ DRAFT (Small Casting Taper) will be permitted.



PLAN

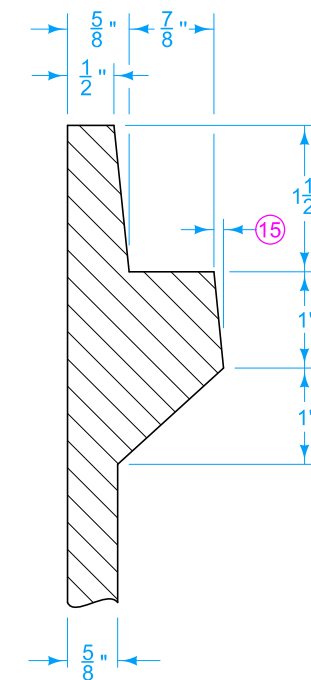


SECTION E-E



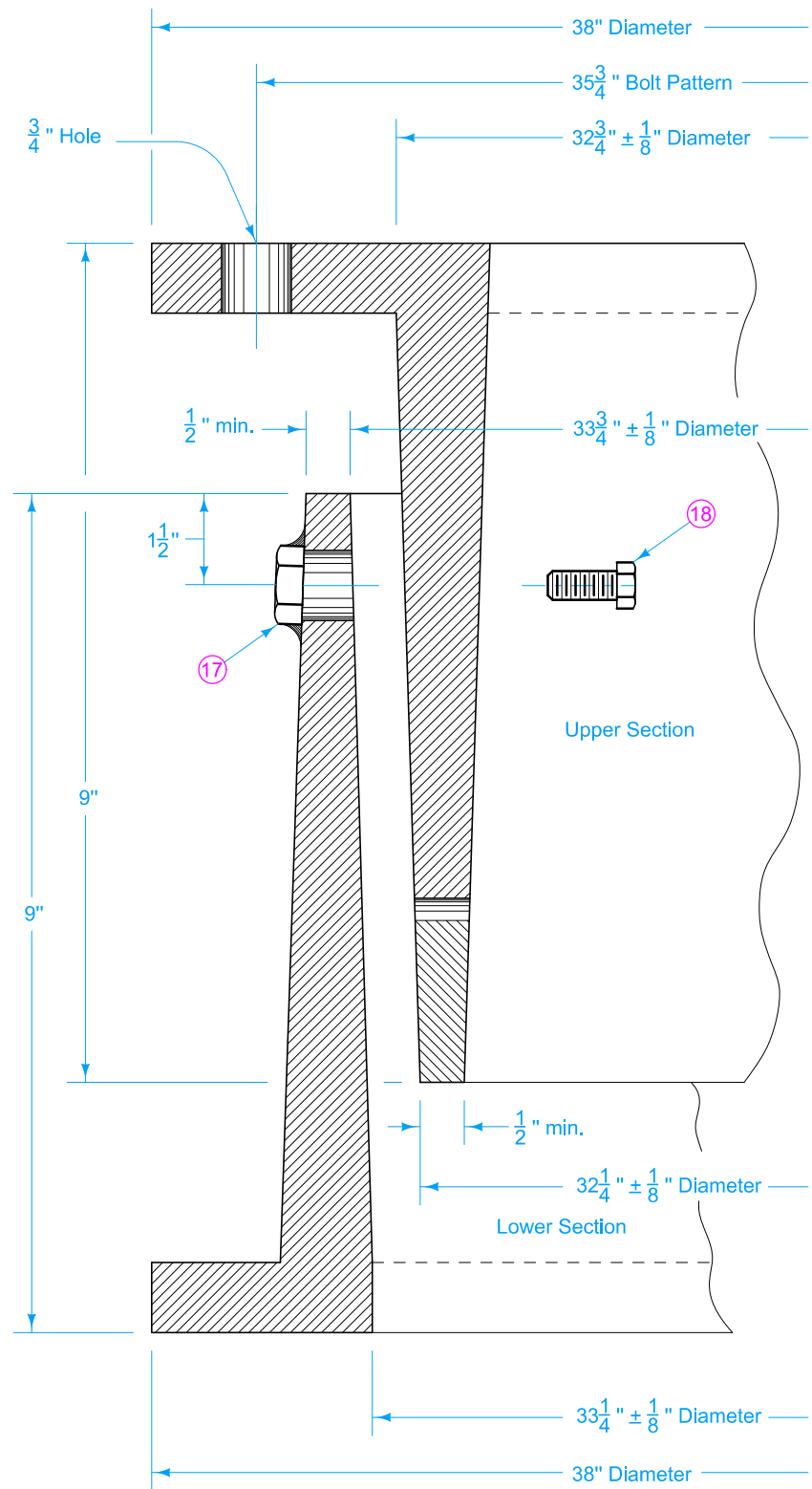
SECTION F-F

FRAME

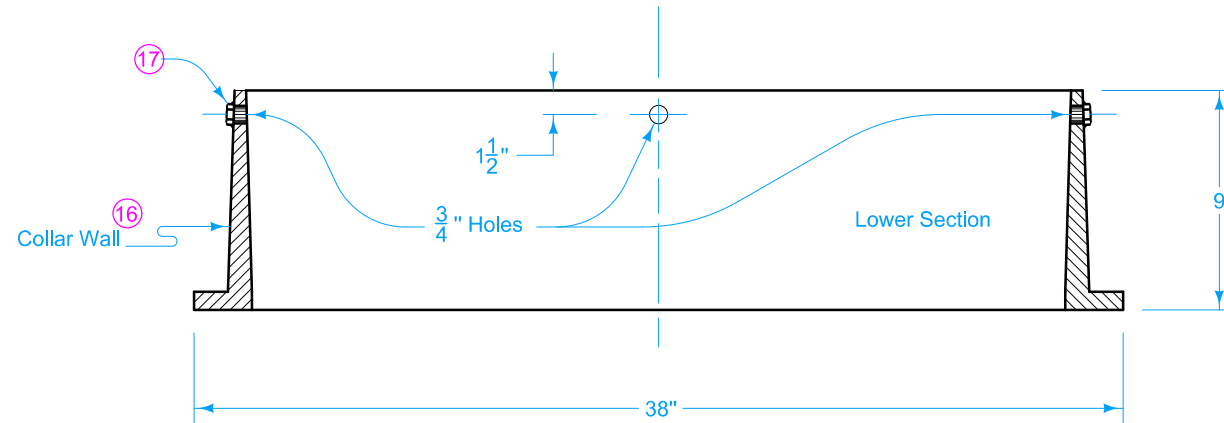
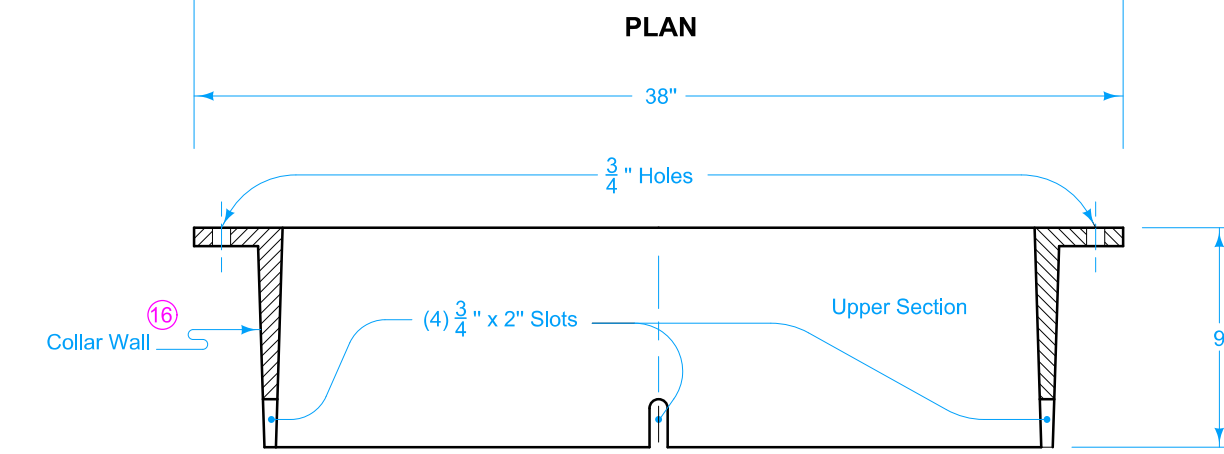
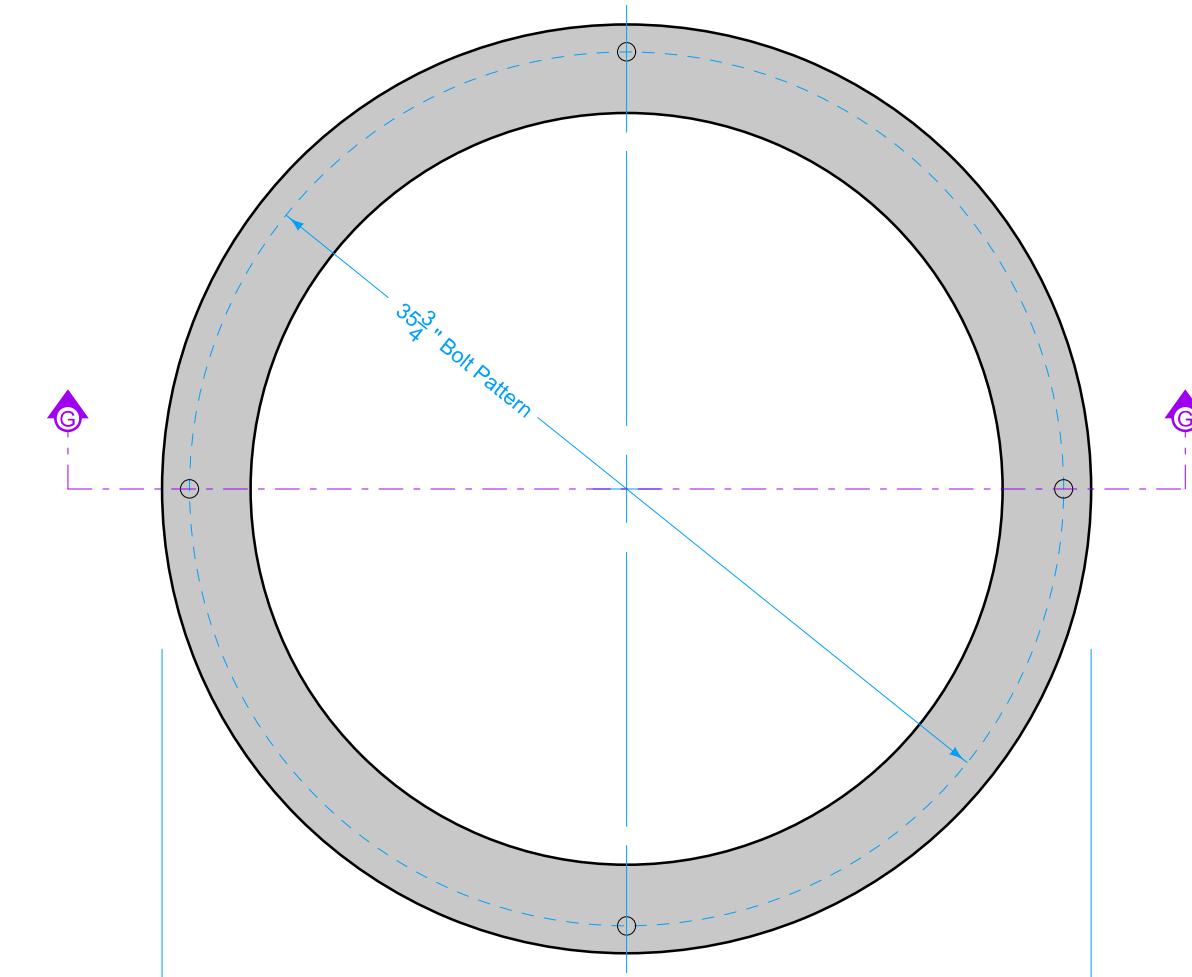


DETAIL 'C'

MODIFIED	REVISION	
	2	04-17-18
STANDARD ROAD PLAN	SW-538	
SHEET 4 of 5		
APPROVED BY DESIGN METHODS ENGINEER		
INTAKE FOR BRIDGE END DRAIN (WITH LETDOWN)		



SETTLEMENT COLLAR



SECTION G-G

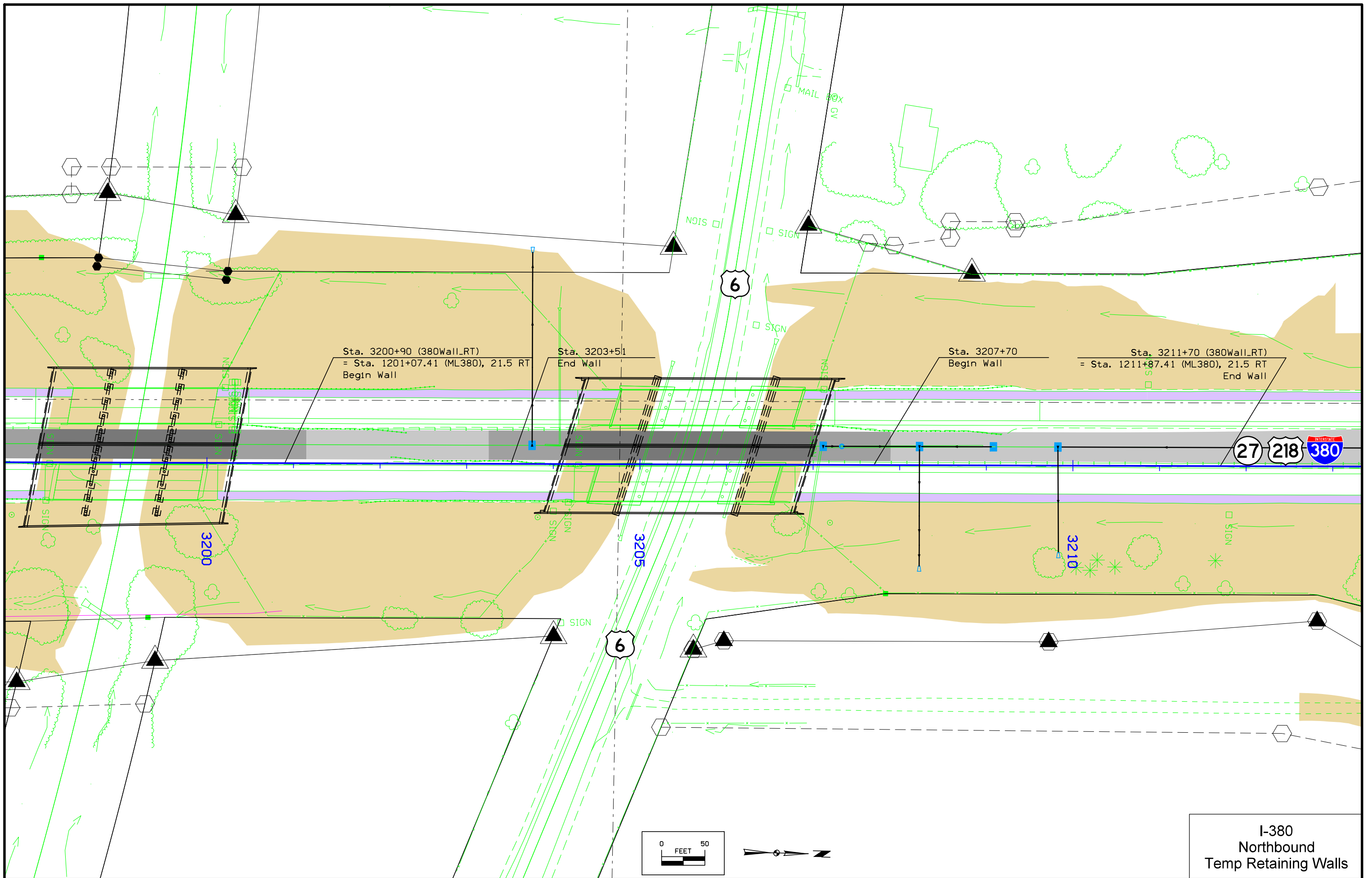
- 16 Wall thickness may vary uniformly from base to the top or bottom of the casting.
- 17 Tack weld four $\frac{1}{2}$ inch nuts to outside of bottom settlement collar or drill and tap four holes for $\frac{1}{2}$ inch Cap Screws in bottom settlement collar.
- 18 Remove the four $\frac{1}{2}$ inch Cap Screws after surrounding concrete has set.

MINIMUM WEIGHT	
Upper Section	210 lbs.
Lower Section	210 lbs.

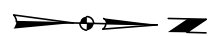
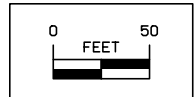
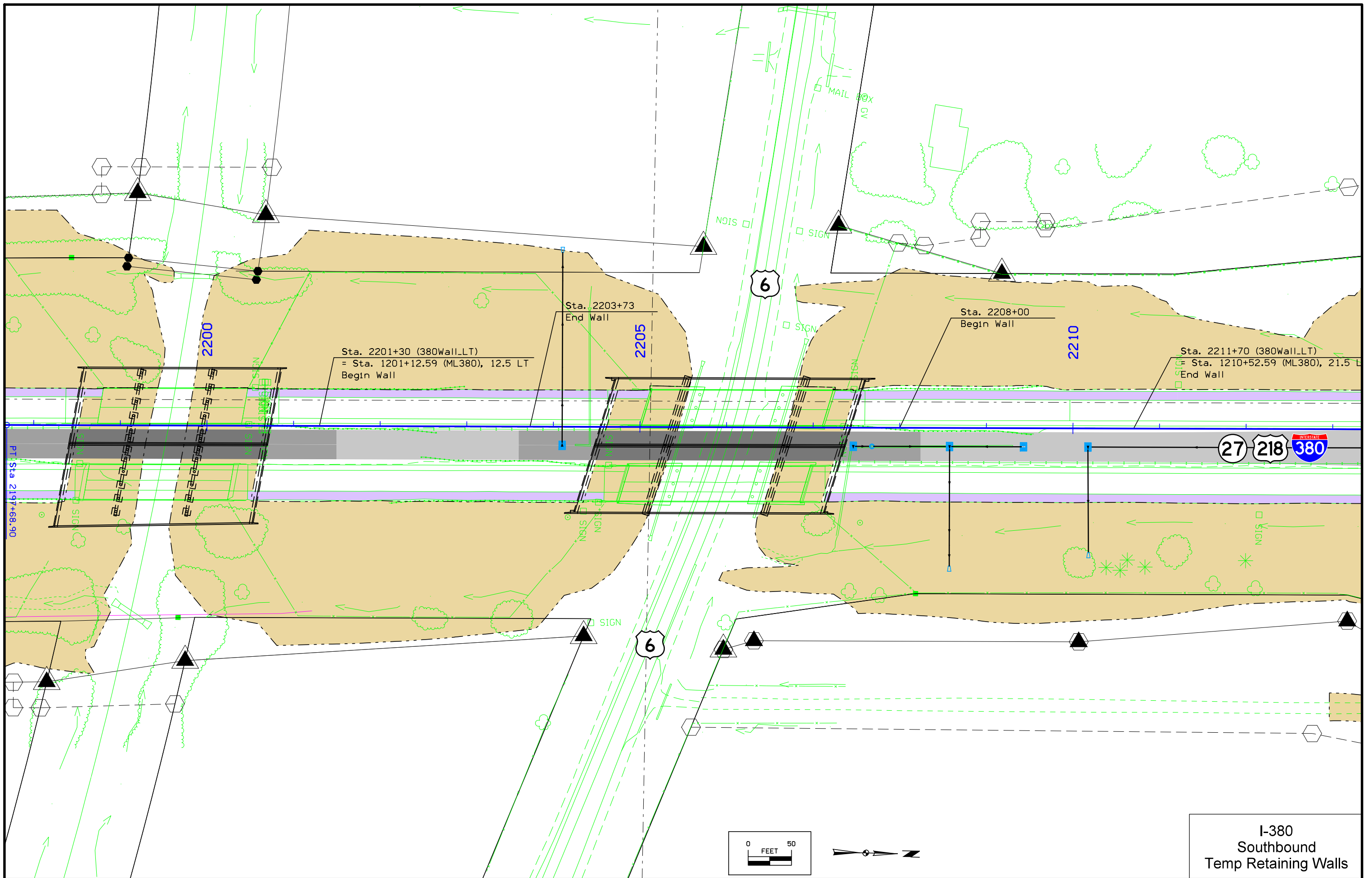
MODIFIED	REVISION	
	2	04-17-18
STANDARD ROAD PLAN	SW-538	
SHEET 5 of 5		

APPROVED BY DESIGN METHODS ENGINEER

**INTAKE FOR BRIDGE END DRAIN
(WITH LETDOWN)**



I-380
Northbound
Temp Retaining Walls



I-380
Southbound
Temp Retaining Walls

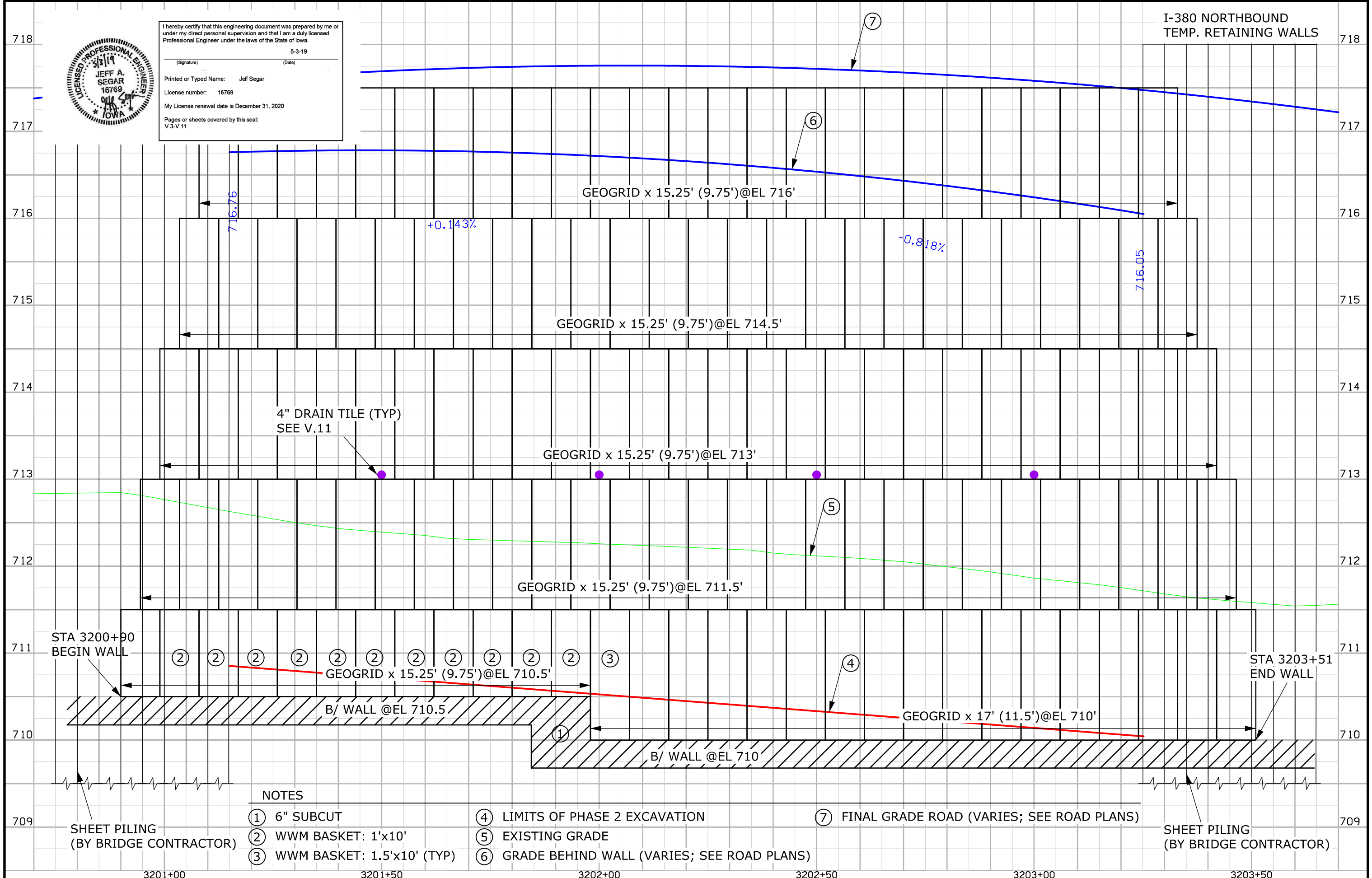
I-380 NORTHBOUND
TEMP. RETAINING WALLS



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

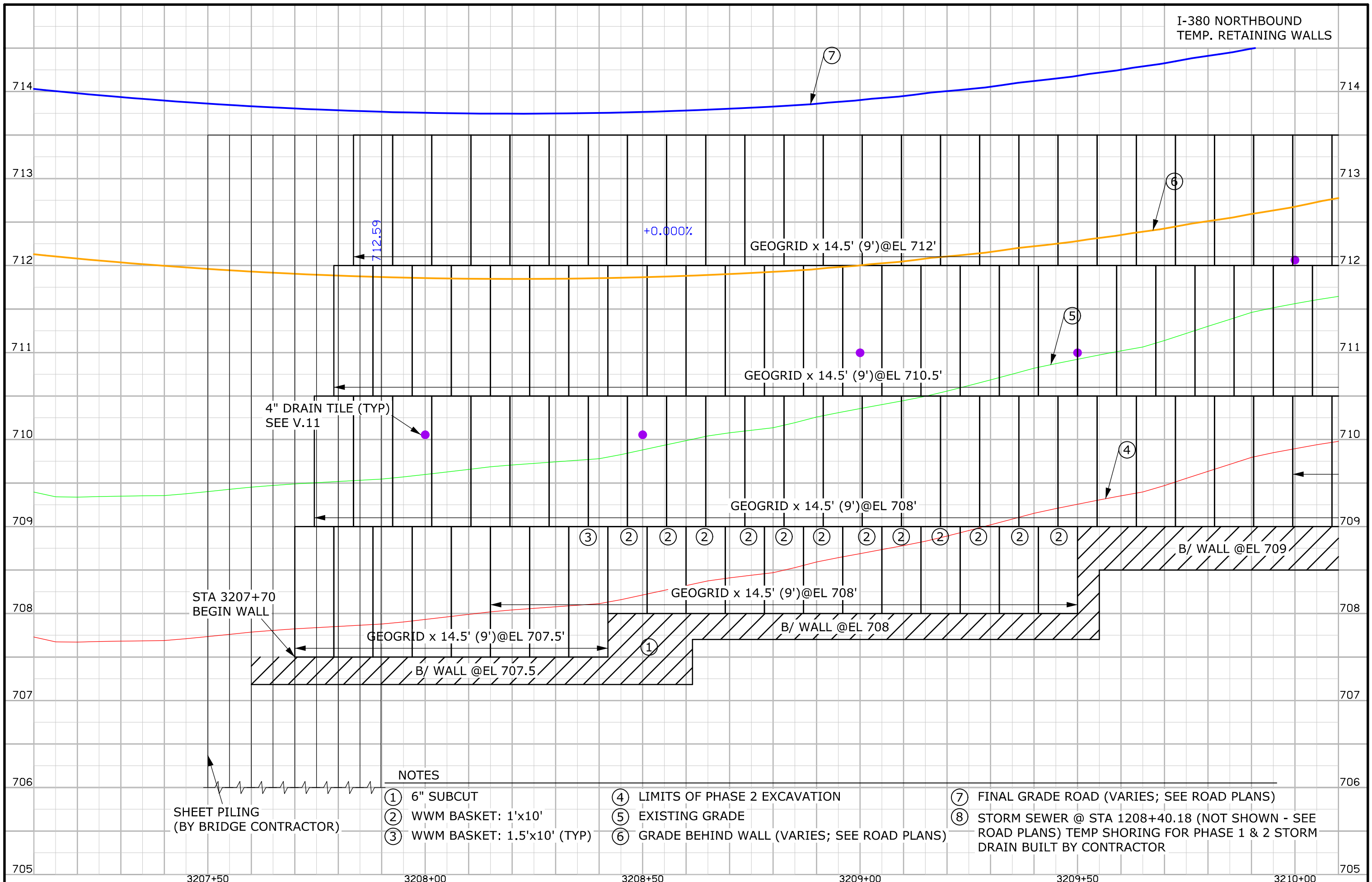
(Signature) _____ (Date) 5-3-19

Printed or Typed Name: Jeff Segar
License number: 16769
My License renewal date is December 31, 2020
Pages or sheets covered by this seal: V.3-V.11



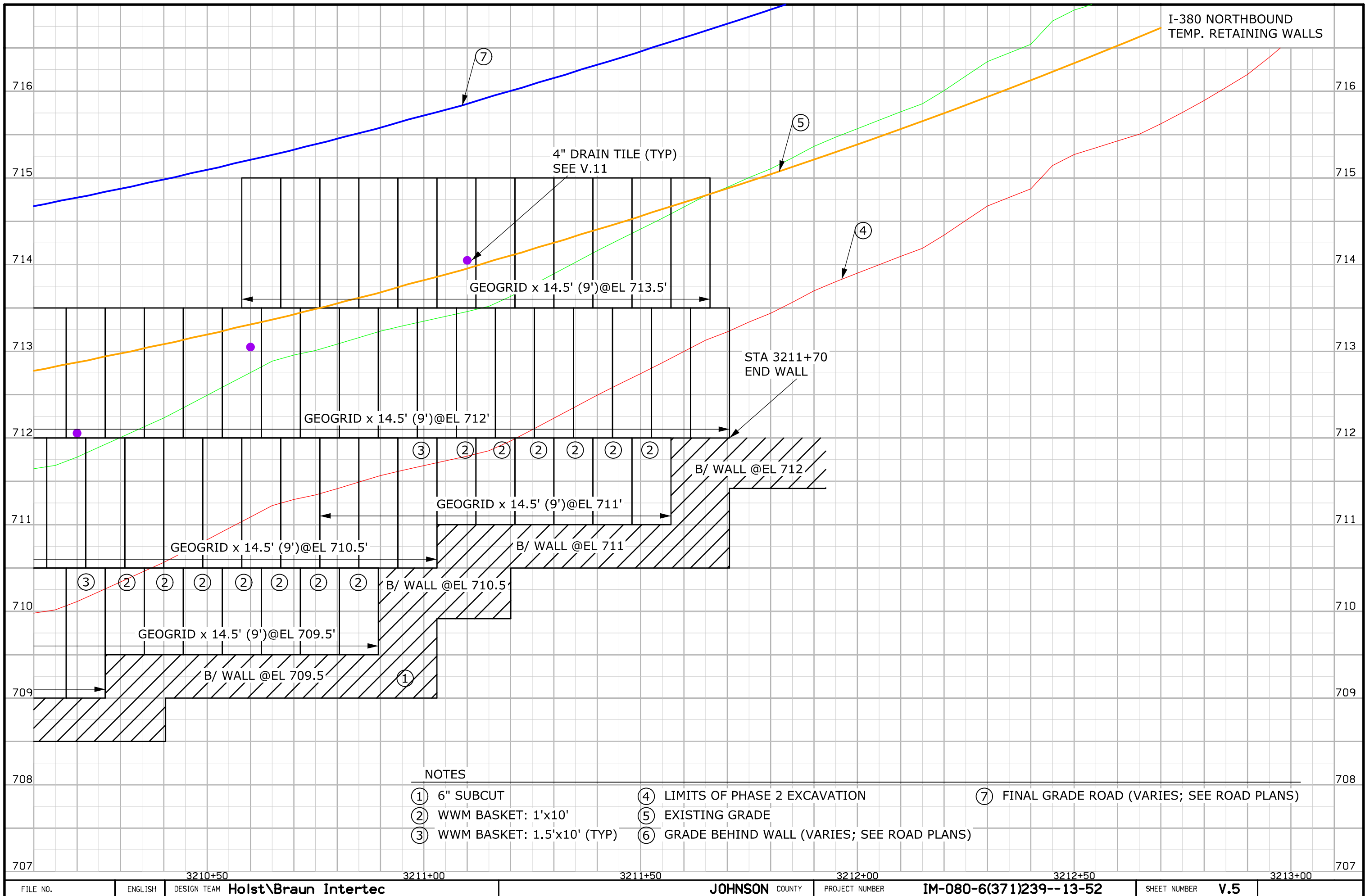
NOTES

- ① 6" SUBCUT
- ② WWM BASKET: 1'x10'
- ③ WWM BASKET: 1.5'x10' (TYP)
- ④ LIMITS OF PHASE 2 EXCAVATION
- ⑤ EXISTING GRADE
- ⑥ GRADE BEHIND WALL (VARIES; SEE ROAD PLANS)
- ⑦ FINAL GRADE ROAD (VARIES; SEE ROAD PLANS)



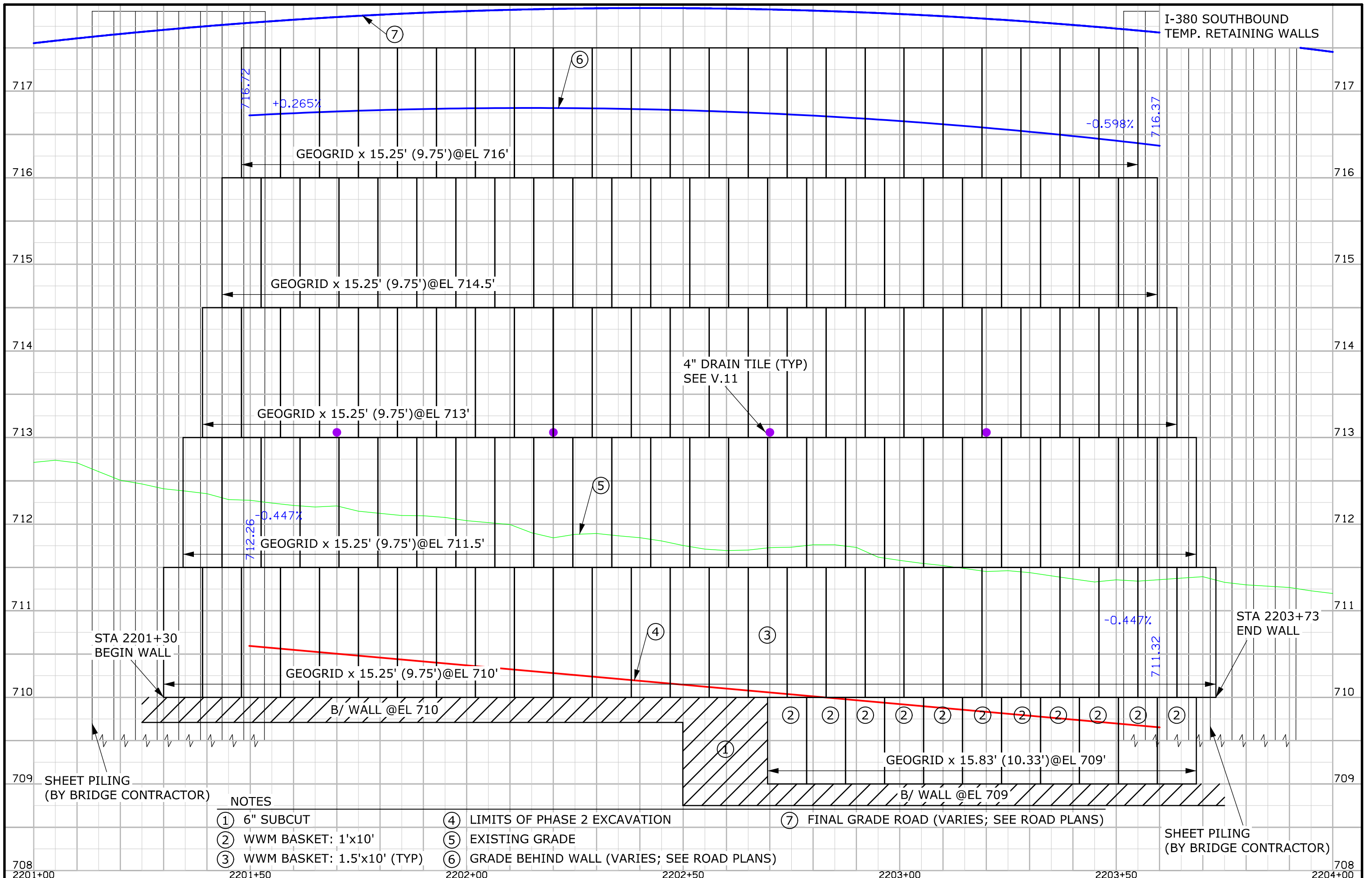
NOTES

- ① 6" SUBCUT
- ④ LIMITS OF PHASE 2 EXCAVATION
- ⑦ FINAL GRADE ROAD (VARIES; SEE ROAD PLANS)
- ② WWM BASKET: 1'x10'
- ⑤ EXISTING GRADE
- ⑧ STORM SEWER @ STA 1208+40.18 (NOT SHOWN - SEE ROAD PLANS) TEMP SHORING FOR PHASE 1 & 2 STORM DRAIN BUILT BY CONTRACTOR
- ③ WWM BASKET: 1.5'x10' (TYP)
- ⑥ GRADE BEHIND WALL (VARIES; SEE ROAD PLANS)



NOTES

- ① 6" SUBCUT
- ② WWM BASKET: 1'x10'
- ③ WWM BASKET: 1.5'x10' (TYP)
- ④ LIMITS OF PHASE 2 EXCAVATION
- ⑤ EXISTING GRADE
- ⑥ GRADE BEHIND WALL (VARIES; SEE ROAD PLANS)
- ⑦ FINAL GRADE ROAD (VARIES; SEE ROAD PLANS)



I-380 SOUTHBOUND
TEMP. RETAINING WALLS

+0.265%

-0.598%

GEOGRID x 15.25' (9.75')@EL 716'

GEOGRID x 15.25' (9.75')@EL 714.5'

GEOGRID x 15.25' (9.75')@EL 713'

4" DRAIN TILE (TYP)
SEE V.11

GEOGRID x 15.25' (9.75')@EL 711.5'

GEOGRID x 15.25' (9.75')@EL 710'

GEOGRID x 15.83' (10.33')@EL 709'

STA 2201+30
BEGIN WALL

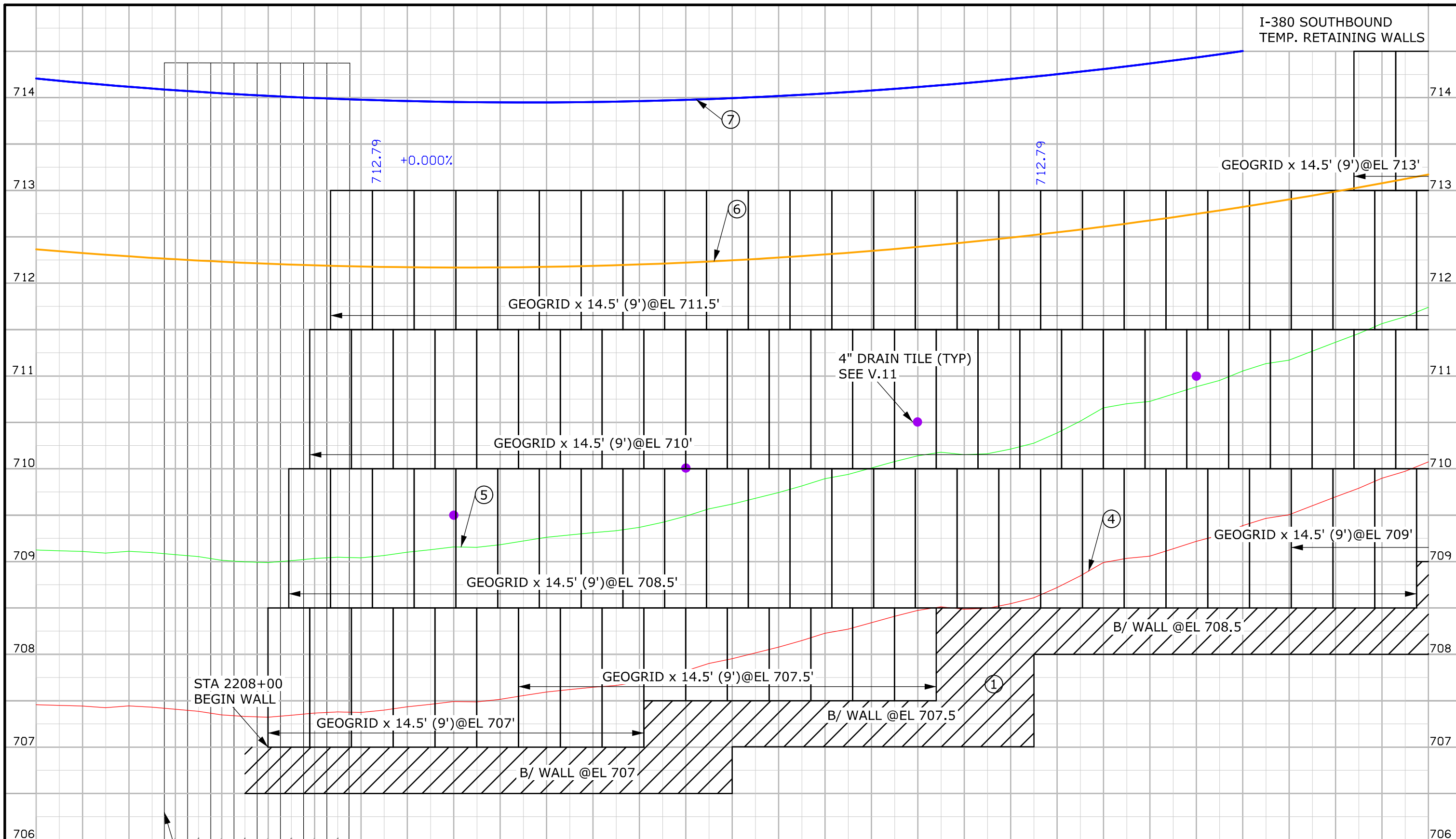
STA 2203+73
END WALL

SHEET PILING
(BY BRIDGE CONTRACTOR)

SHEET PILING
(BY BRIDGE CONTRACTOR)

NOTES

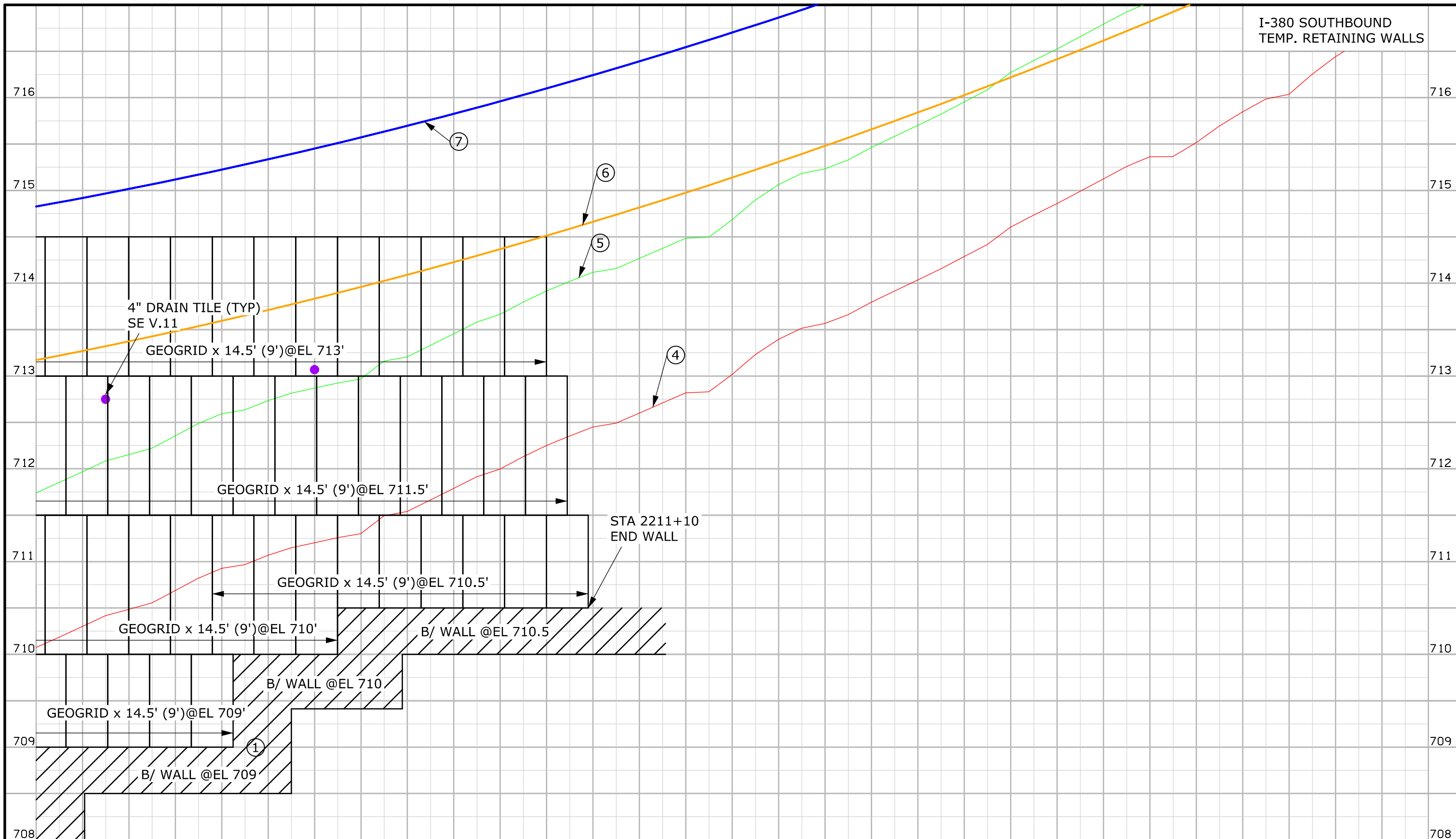
- ① 6" SUBCUT
- ② WWM BASKET: 1'x10'
- ③ WWM BASKET: 1.5'x10' (TYP)
- ④ LIMITS OF PHASE 2 EXCAVATION
- ⑤ EXISTING GRADE
- ⑥ GRADE BEHIND WALL (VARIES; SEE ROAD PLANS)
- ⑦ FINAL GRADE ROAD (VARIES; SEE ROAD PLANS)



NOTES

- ① 6" SUBCUT
- ② WWM BASKET: 1'x10'
- ③ WWM BASKET: 1.5'x10' (TYP)
- ④ LIMITS OF PHASE 2 EXCAVATION
- ⑤ EXISTING GRADE
- ⑥ GRADE BEHIND WALL (VARIES; SEE ROAD PLANS)
- ⑦ FINAL GRADE ROAD (VARIES; SEE ROAD PLANS)
- ⑧ STORM SEWER @ STA 1208+40.18 (NOT SHOWN - SEE ROAD PLANS) TEMP SHORING FOR PHASE 1 & 2 STORM DRAIN BUILT BY CONTRACTOR

SHEET PILING
(BY BRIDGE CONTRACTOR)



(CONTINUES - SEE SHEET V.7)

- NOTES
- ① 6" SUBCUT
 - ② WWM BASKET: 1'x10'
 - ③ WWM BASKET: 1.5'x10' (TYP)
 - ④ LIMITS OF PHASE 2 EXCAVATION
 - ⑤ EXISTING GRADE
 - ⑥ GRADE BEHIND WALL (VARIES; SEE ROAD PLANS)
 - ⑦ FINAL GRADE ROAD (VARIES; SEE ROAD PLANS)

1.0 Design

- A. Design of the temporary wall is based on AASHTO LRFD Bridge Design Specifications 2007.
- B. Soil loadings considered in this design and calculations are based on the following parameters:

	Unit Weight	Friction Angle	Cohesion
Reinforced Soil	125 pcf	28°	0 psf
Retained Soil	125 pcf	28°	0 psf
Foundation Soil	120 pcf	12°	600 psf

- C. A 6-inch subcut at the base of the wall shall be performed. The exposed material shall be compacted prior to placing reinforced soil.
- D. Actual soil parameters must meet or exceed these listed conditions to be used in wall construction.
- E. Hydrostatic loading is not considered in this analysis.
- F. Design Life = 3years
- G. Traffic Surcharge = 250 psf. Walls not designed for crane loading for bridge construction or concrete pump truck out rigger loads.
- H. The Capacity Demand Ratios, CDR, used for design of temporary wall are presented below
 - H.1 Internal Stability
 - Grid Pull Out Capacity CDR = 1
 - Sliding on geogrid CDR = 1
 - H.2 External Stability
 - Sliding at 6" subcut base CDR = 1
- J. Global Stability
 - J.1 Global Stability of the wall system was evaluated using a minimum Factor of Safety of 1.5 for design.

2.0 MATERIALS

2.1 Reinforced Soil

- B. Reinforced backfill shall be on-site or imported soils that meet the strength requirements presented in Section 1.0 Design, and the gradation limits listed below. Material shall be free of roots, sod, snow, frozen lumps, organic matter or other deleterious materials. All rock particles and hard earth clods shall be less than 3-inches in the longest dimension. Material which does not meet these criteria shall be considered unsuitable and shall be removed. The portion of the reinforced soil passing the No. 40 sieve shall have a Liquid Limit less than 30 and Plasticity Index less than 15.

U.S Standard Sieve No.	Percent Passing, Min	Percent Passing, Max
4	100	100
No. 40	0	90
No. 200	0	60

2.2 Retained Soil

- A. Retained Soil shall be similar to reinforced soil material listed in Section 2.1 above.

2.3 Foundation Soil

- A. Refer to Section 1 Design

2.4 Geogrid

- A. Geogrid Tensile Properties and Reduction Factors used for calculations are listed below. Reduction factors used for design are as follows: Creep 1.45, Installation Damage 1.05, and Durability 1.1

Ultimate Tensile Strength, Tult	Allowable Design Strength, Tall
3500 lb/ft	2090 lb/ft

2.5 Geotextile Fabric

- A. Geotextile shall meet the specification for AASHTO M288 Geotextile Class 2 Nonwoven US160NW or equiv.

2.5 Welded Wire Mesh Facing & Wire Struts

- A. Baskets: Galvanized 4x4-W4.0xW4.0
- B. Wire Struts: #4 Galvanized wire

3.0 WALL CONSTRUCTION

3.1 Excavation

- A. Contractor shall verify locations of existing structures and utilities prior to excavation.
- B. Contractor shall ensure all surrounding structures are protected from the effects of wall excavation.

3.2 Foundation Soil Preparation

- A. A 6-inch minimum subcut below bottom of wall grades shown in plans shall be performed.
- B. Exposed soils shall consist of foundation soils presented in Section 1. Any unsuitable soils shall be over-excavated.
- C. Foundation soils shall be proof roll inspected using a loaded truck with 18 kip axial loads or per project specifications.
- D. Foundation soil shall be examined by the Geotechnical Engineer to ensure that the actual foundation soil strength meets or exceeds assumed design strength in Section 1 Design. Soil not meeting the required strength shall be removed and replaced with acceptable material.
- E. Over-excavated areas shall be filled with compacted soil meeting reinforced soils listed in Section 2.

3.4 Wire Basket Installation

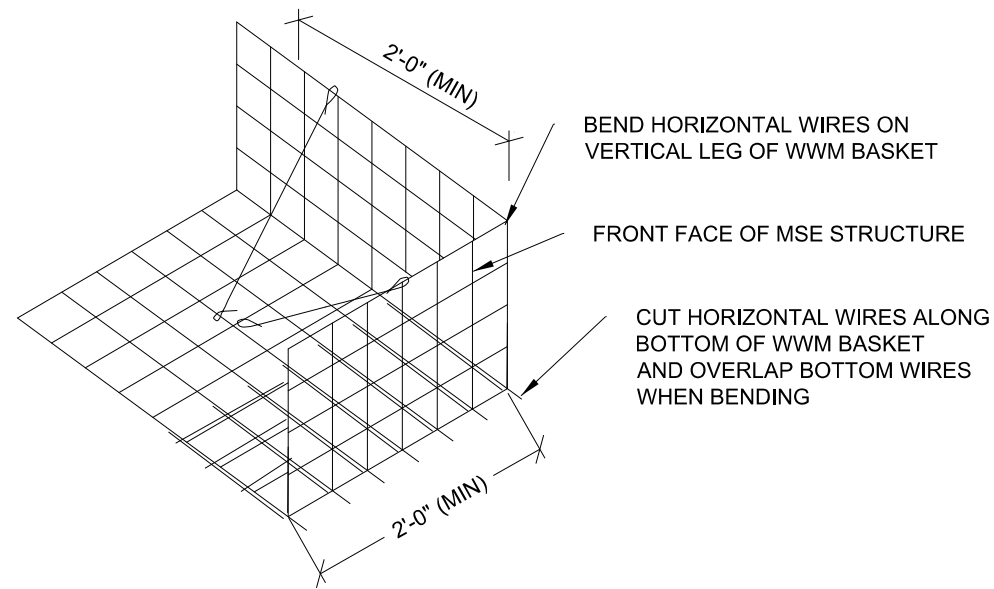
- A. Install wire basket on level grade. Ends of adjacent facing units shall be overlapped 4.0 inches. Attach the end vertical wire of adjacent facing units with 12.5 GA. hog rings to maintain alignment and contain fill. Struts shall be placed a minimum of 2-feet on-center along the basket. Additional struts may be used to stiffen facing units.

3.5 Geogrid Installation

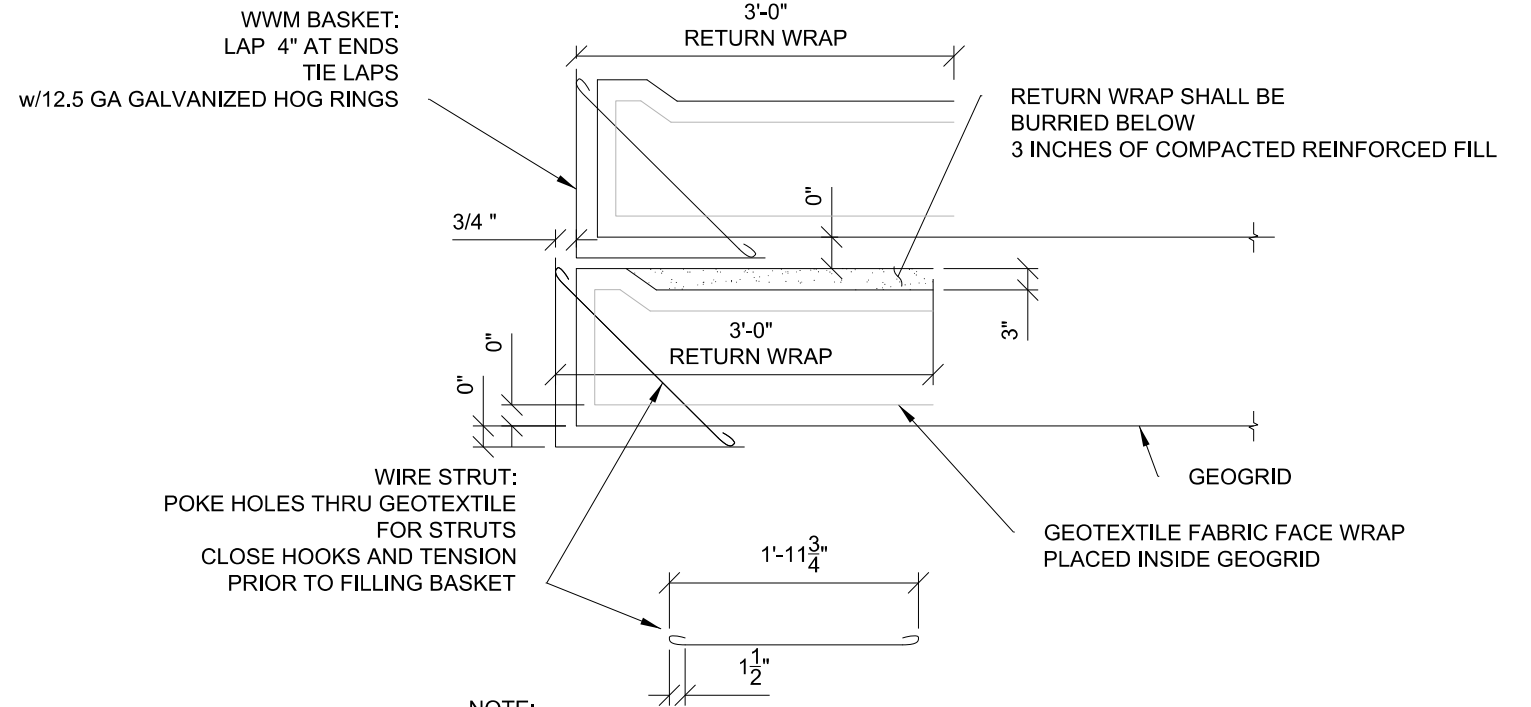
- A. Install wire baskets to designated elevation shown on plans.
- B. Lay geogrid at the proper elevation, orientations, and to lengths shown on plans.
- C. Geogrid shall be pulled tight and held tight, by suitable means, such as pins, prior to backfilling.
- D. Correct orientation of the geogrid shall be verified by the contractor and on-site soils engineer. Strength direction is perpendicular to wall face.
- E. Adjacent sheets of geogrid shall be butted against each other at the wall face to achieve 100 percent coverage. No overlap of grid permitted.
- F. A minimum of 3-inch of fill material shall be placed between layers of geogrid, unless otherwise noted.
- G. At basket facing, geotextile fabric shall be placed on geogrid and wrapped per project plans.
- H. Wrap geogrid per project plans.
- J. 6-inches of retained soil fill shall be placed above the geogrid before allowing a track type vehicle on the surface. Turning of the track vehicles shall be kept to a minimum.
- K. Rubber tire vehicles may pass over the geogrid reinforcement at slow speeds less than 10 mph during compaction. Sudden braking and sharp turning shall be avoided.

3.6 Backfill Placement

- A. Backfill shall be placed from the back of the wire basket facing towards the end of geogrid to promote proper tensioning of geogrid.
- B. Backfill shall be placed at a moisture content no greater than two percent of wet and no less than two percent dry of optimum and compacted to a minimum of 95% of maximum standard proctor dry density in accordance with AASHTO T-99.
- C. At the end of each work day, backfill surface shall be graded away from the wall face. A temporary soil berm shall be constructed near the crest of the wall constructed to prevent surface water runoff from overtopping the wall face.

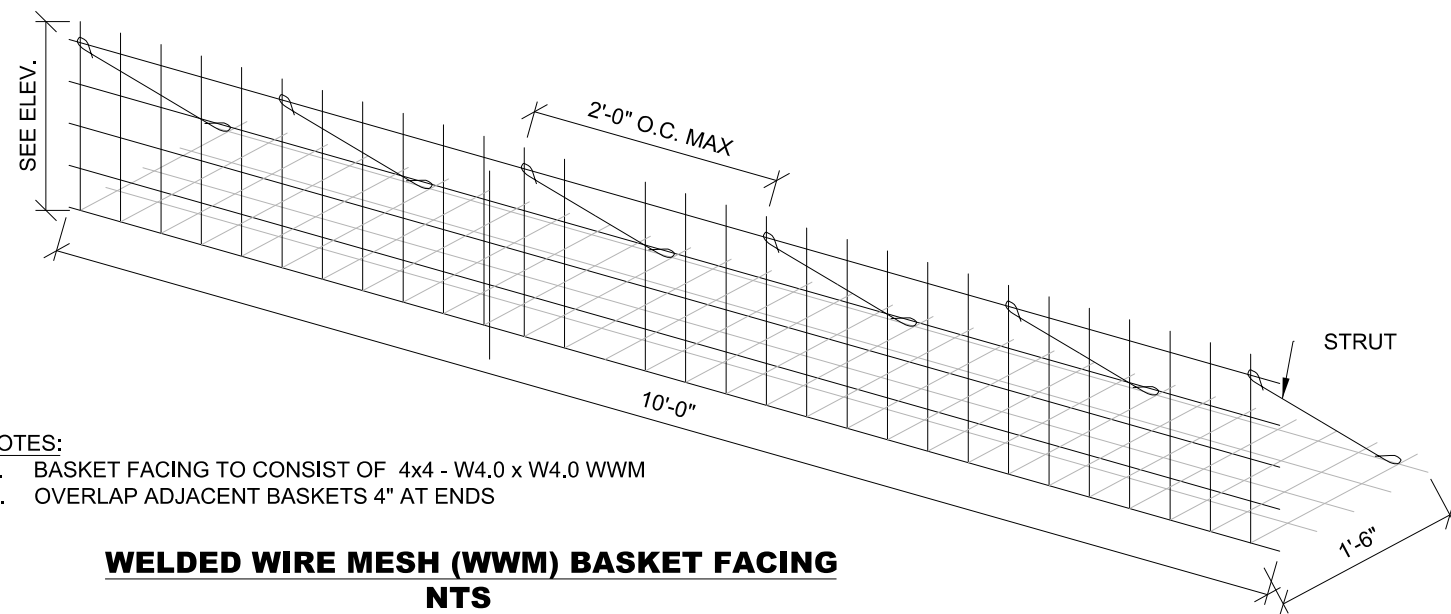


WELDED WIRE MESH FACING OUTSIDE CORNER UNIT
NTS



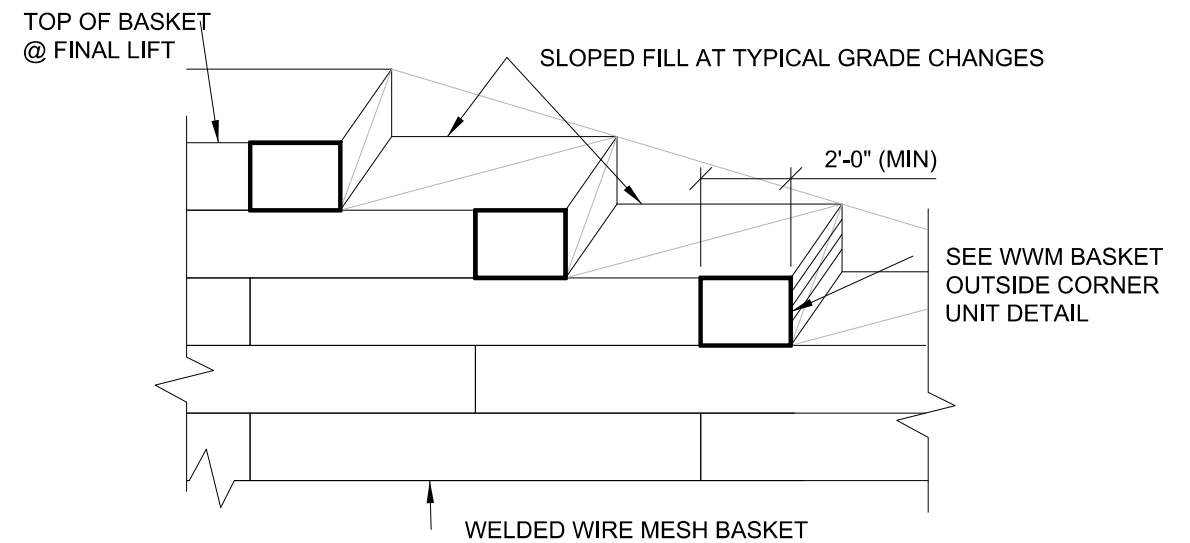
NOTE:
1. TOTAL GEOGRID LENGTH SHOWN ON THE ELEVATION VIEW INCLUDES LENGTH FOR BASKET HEIGHT & RETURN WRAP

TYPICAL GEOGRID SECTION
NTS

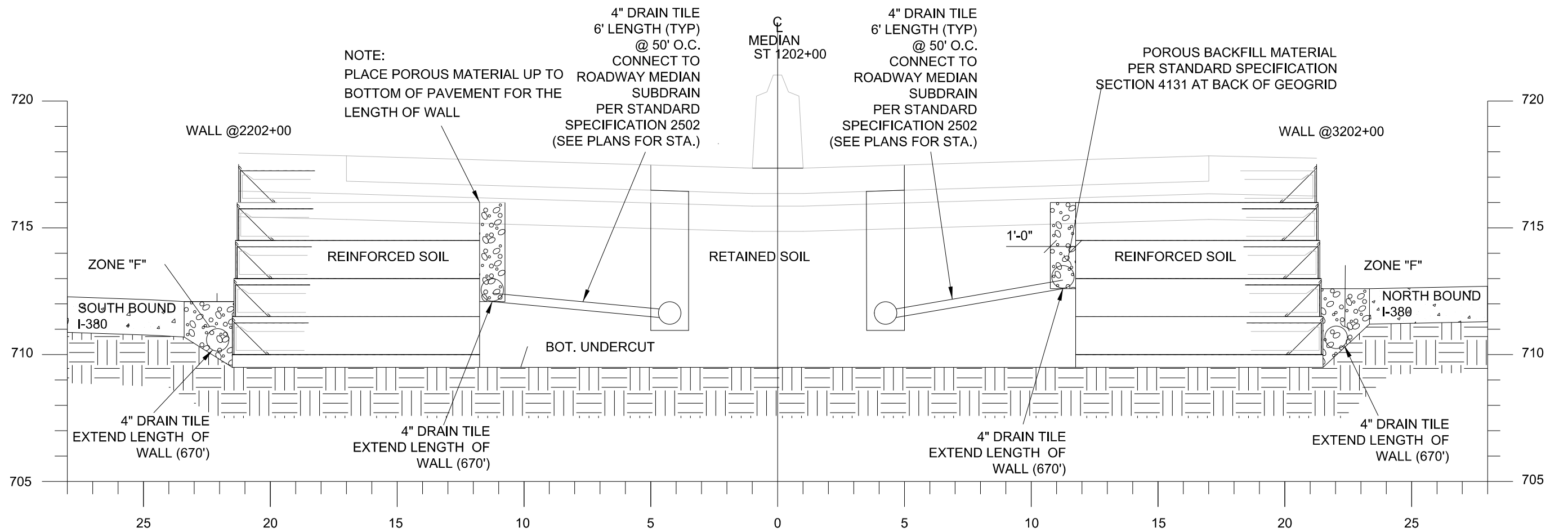


NOTES:
1. BASKET FACING TO CONSIST OF 4x4 - W4.0 x W4.0 WWM
2. OVERLAP ADJACENT BASKETS 4" AT ENDS

WELDED WIRE MESH (WWM) BASKET FACING
NTS

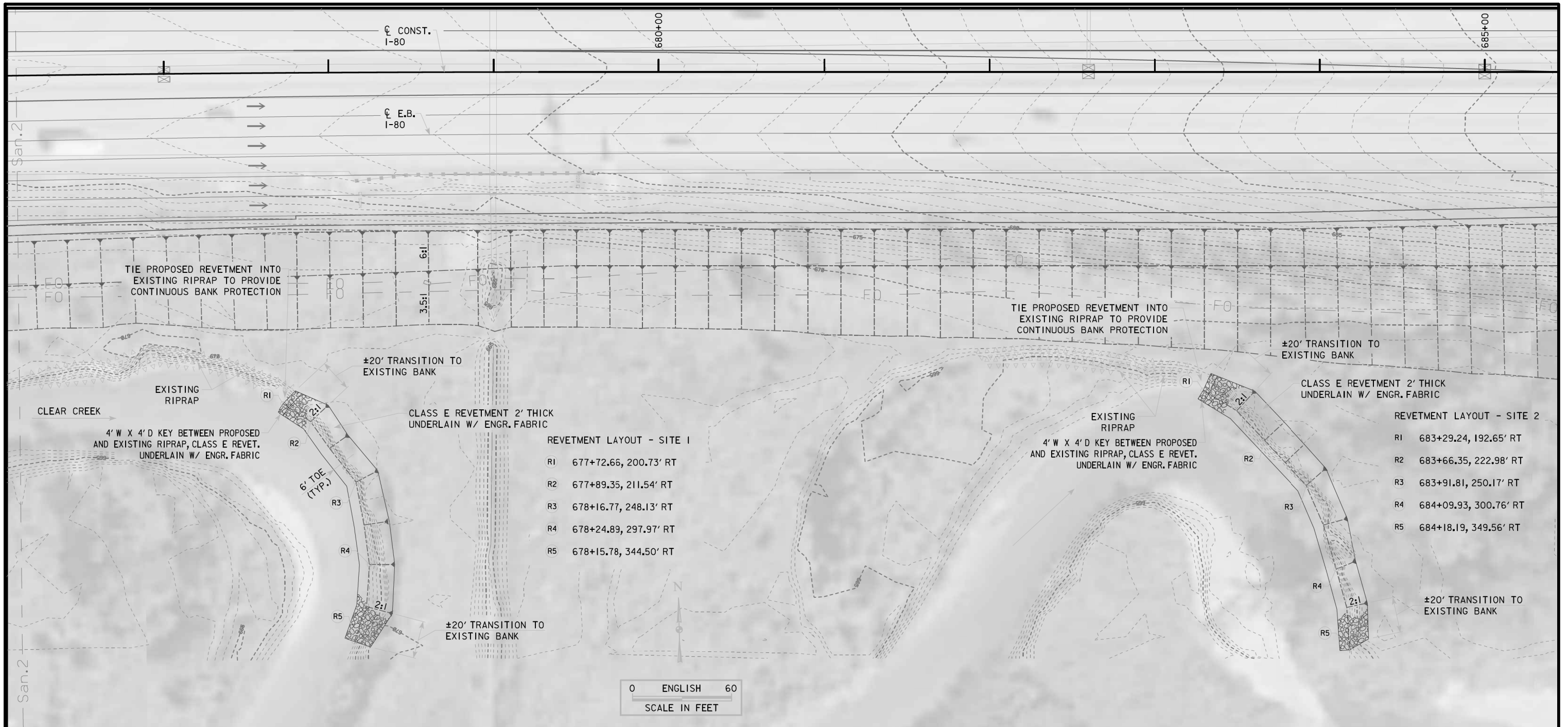


END WALL STEP DETAIL (TYP)
NTS



TYPICAL PHASE 1 SECTION (STATION 1202+00 SHOWN)
NTS

ZONE "F" : PLACE POROUS BACKFILL MATERIAL PER STANDARD SPECIFICATION 4131 AND 4" DRAIN TILE AT FACE OF WALL AFTER PLACEMENT OF SECOND WELDED WIRE FORM. SLOPE DRAIN TILE TO TEMPORARY INTAKES. REFER TO TYPICAL ROADWAY SECTIONS.



REVETMENT LAYOUT - SITE 1

R1	677+72.66, 200.73' RT
R2	677+89.35, 211.54' RT
R3	678+16.77, 248.13' RT
R4	678+24.89, 297.97' RT
R5	678+15.78, 344.50' RT

REVETMENT LAYOUT - SITE 2

R1	683+29.24, 192.65' RT
R2	683+66.35, 222.98' RT
R3	683+91.81, 250.17' RT
R4	684+09.93, 300.76' RT
R5	684+18.19, 349.56' RT

UTILITIES LEGEND:
 FO - FIBER OPTIC - STATE OF IOWA (ICN)
 SAN. - SANITARY SEWER

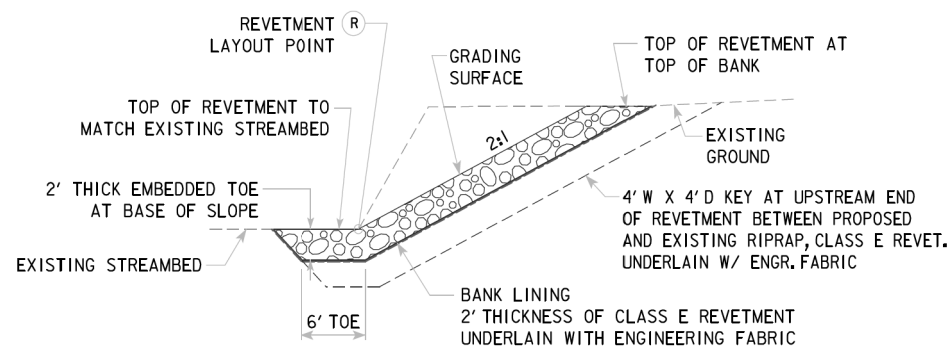
**SITE 1
SITUATION PLAN**

HYDRAULIC DATA
 DRAINAGE AREA = 81.0 ACRES
 Q₅₀ = 8,700 CFS
 HW ELEV. = 672.9
 STREAM SLOPE = 3.7 FT./MI.

ESTIMATED REVETMENT QUANTITIES

LOCATION	REVETMENT CL. E (TON)	ENGINEERING FABRIC (SY)	EXCAVATION (CY)
SITE 1	630.5	644.1	394.1
SITE 2	732.4	745.4	457.8
TOTALS	1,362.9	1,389.5	851.9

EXCAVATION QUANTITY CALCULATED FROM GRADING SURFACE. QUANTITIES FOR INFORMATION ONLY, SEE ROAD SHEETS.



TYPICAL BANK PROTECTION CROSS SECTION

**SITE 2
SITUATION PLAN**

LOCATION

I-80 / I-380 SYSTEMS INTERCHANGE
 T-80N R-7W
 SECTION 35
 CLEAR CREEK TOWNSHIP
 JOHNSON COUNTY

HYDRAULIC DESIGN

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Signature: *Steven L. Seivert* Date: 7/7/2015
 Printed or Typed Name: Steven L. Seivert
 My license renewal date is December 31, 2016

Pages or sheets covered by this seal: SHTS. 1 OF 1

DESIGN FOR
**STREAMBANK STABILIZATION
 BANK LINING
 SITUATION PLAN**

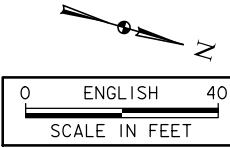
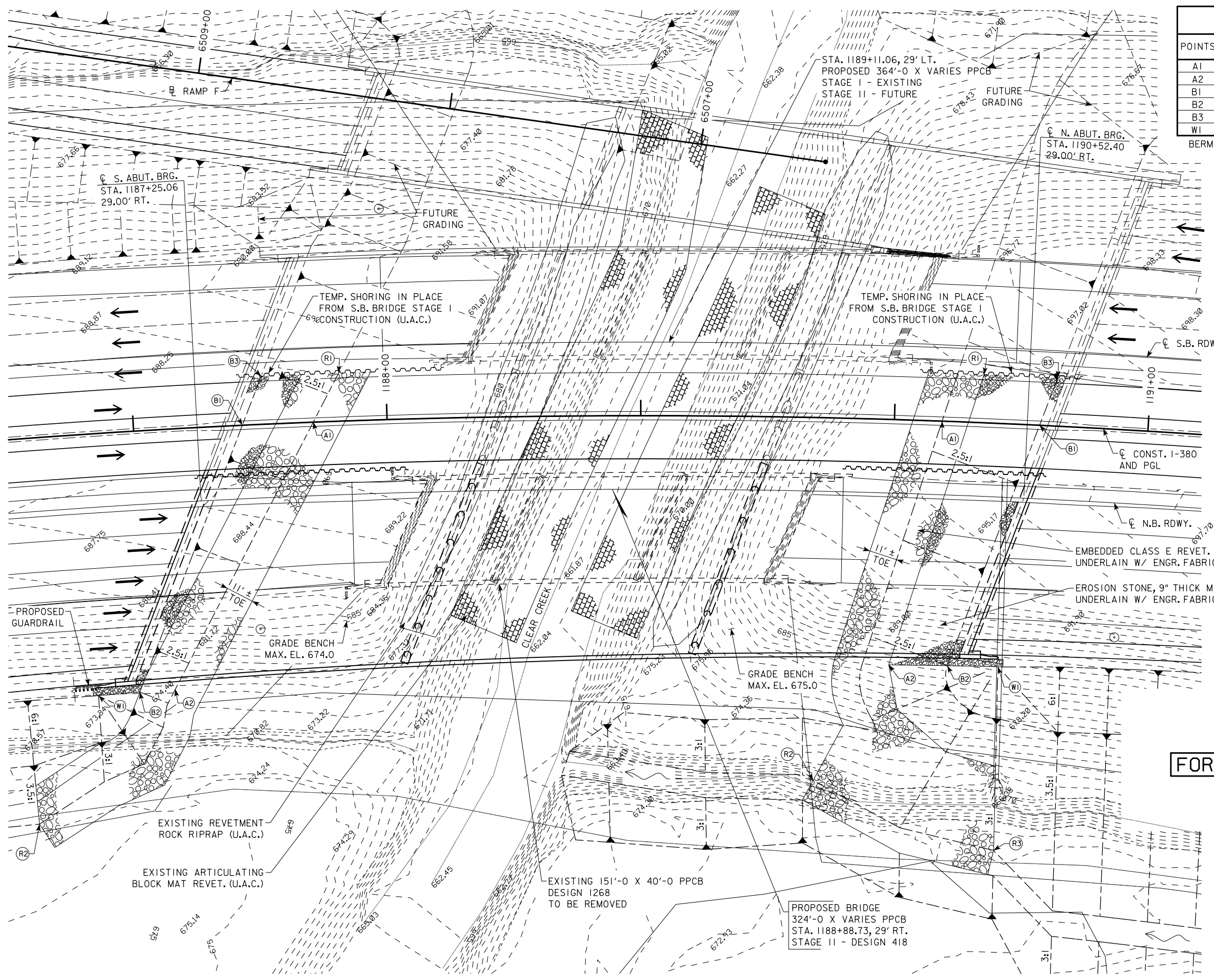
STATION 678+25, 270' RT (SITE 1)
 STATION 684+00, 250' RT (SITE 2)

JOHNSON COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 1 OF 1 FILE NO. 30864 DESIGN NO. 818

POINTS	SOUTH ABUTMENT			NORTH ABUTMENT		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
A1	1187+70.91	0.00'	674.00	1190+18.80	0.00'	675.00
A2	1187+10.54	102.53' RT	674.00	1190+00.72	96.72' RT	675.00
B1	1187+42.91	0.00'	683.20	1190+57.27	0.00'	689.80
B2	1186+96.06	102.81' RT	678.77	1190+24.52	96.25' RT	690.10
B3	1187+51.22	19.00' LT	684.19	1190+63.50	19.00' LT	685.26
W1	1186+79.20	103.15' RT	684.90	1190+45.05	95.84' RT	692.07

BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE



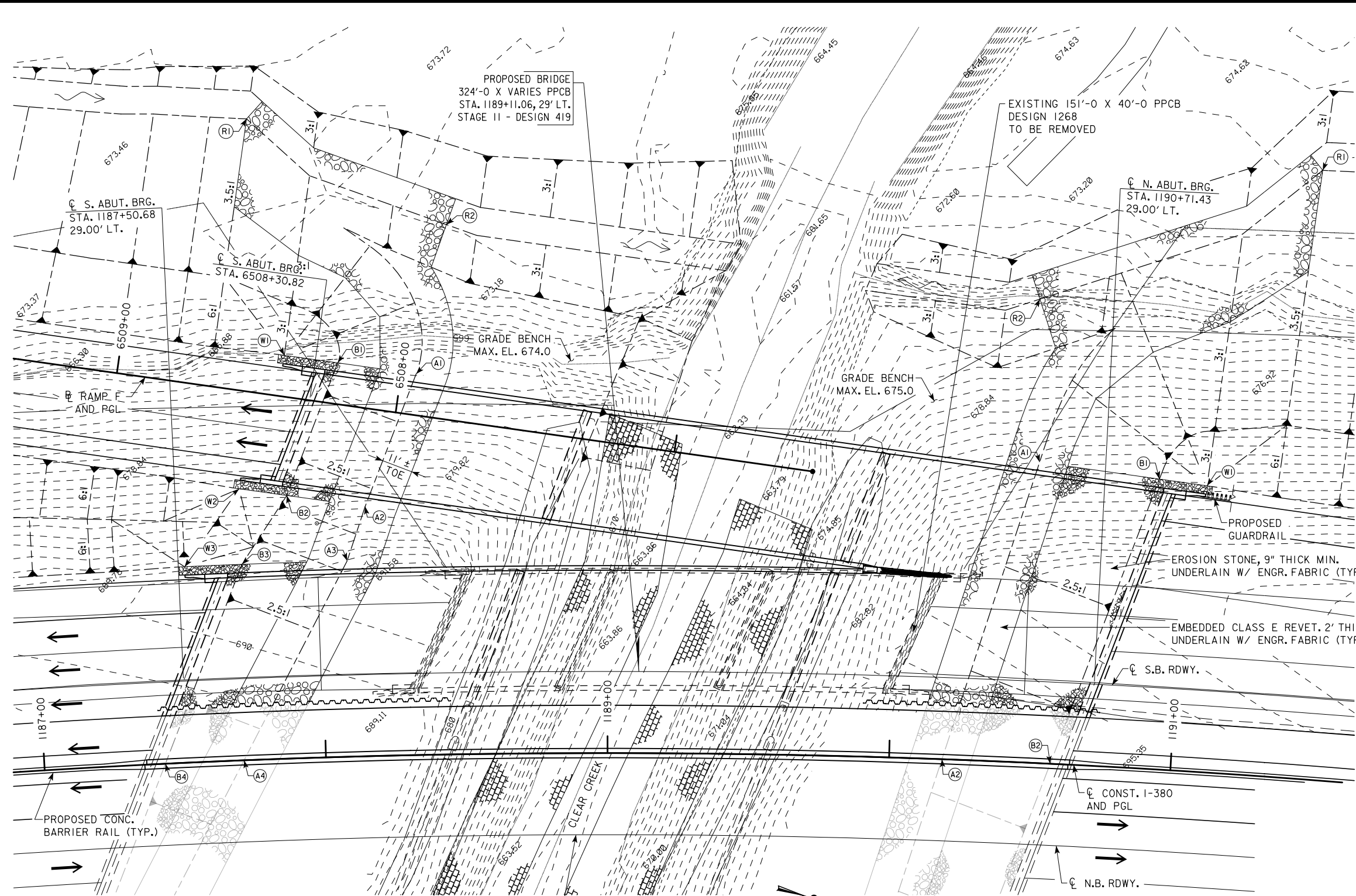
FOR GRADING INFORMATION ONLY

DESIGN FOR 21° SKEW (LA) ON A 3274.04' RADIUS CURVE
324'-0 X VARIES PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE - STAGE II
 106'-0 END SPANS (BTC BEAM) 112'-0 INTERIOR SPAN
SITUATION PLAN - SITE
 STATION 1188+88.73, 29' RIGHT \bar{C} CONST. I-380 JUNE 2014
JOHNSON COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 2 OF 2 FILE NO. 30864 DESIGN NO. 418

SITE PLAN

POINTS	SOUTH ABUTMENT			NORTH ABUTMENT		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
A1	1188+34.70	135.37' LT	674.00	1190+48.66	106.86' LT	675.00
A2	1188+16.19	88.70' LT	674.00	1190+18.80	0.00'	675.00
A3	1188+09.44	69.58' LT	674.00	--	--	--
A4	1187+70.91	0.00'	674.00	--	--	--
B1	1188+08.09	139.98' LT	684.96	1190+90.15	103.05' LT	691.94
B2	1187+89.23	93.46' LT	684.96	1190+57.27	0.00'	689.80
B3	1187+72.83	69.58' LT	687.11	--	--	--
B4	1187+42.91	0.00'	683.20	--	--	--
W1	1187+89.98	143.24' LT	690.96	1191+06.65	101.69' LT	698.60
W2	1187+72.91	96.46' LT	691.99	--	--	--
W3	1187+52.86	69.58' LT	692.74	--	--	--

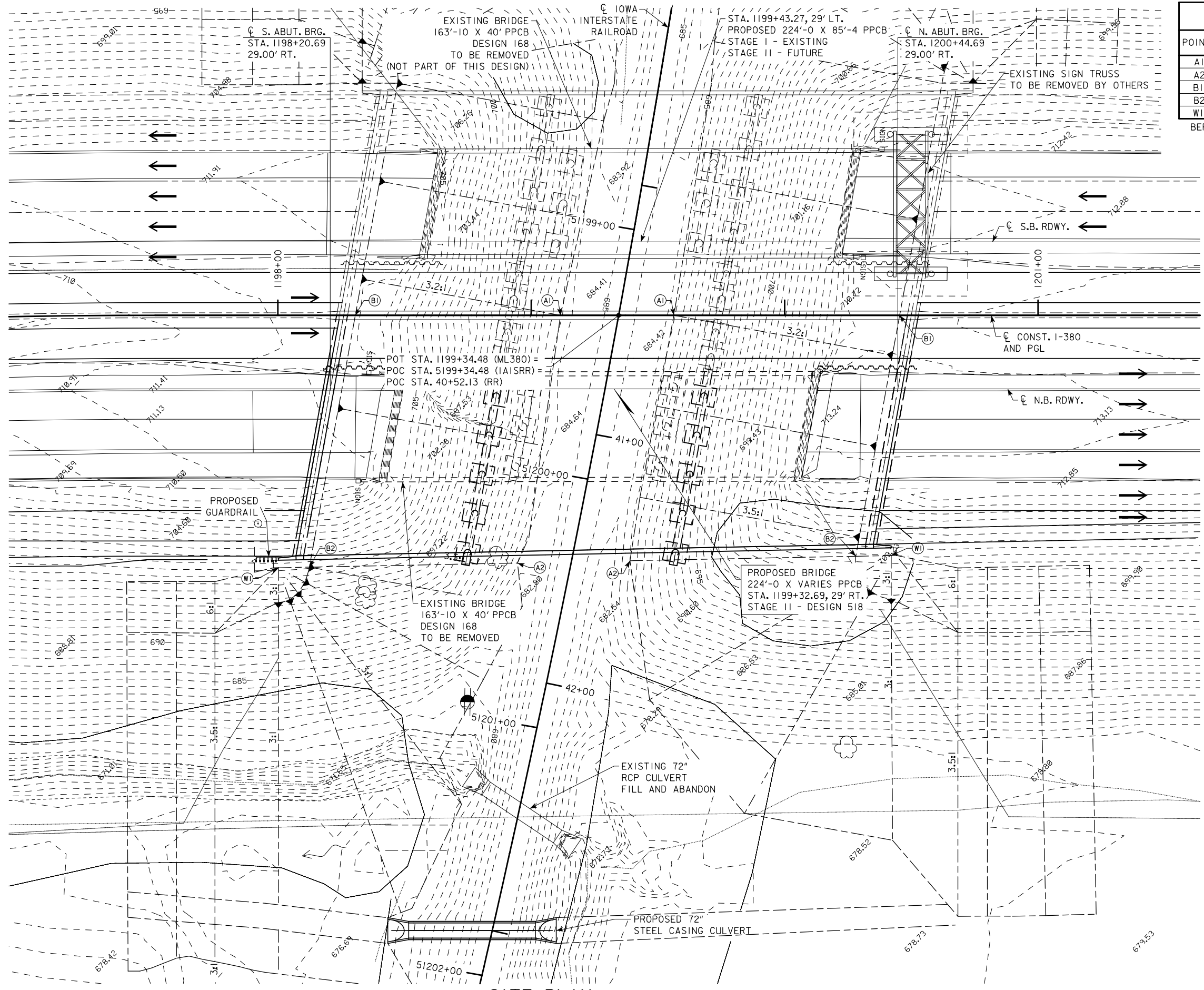
BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE



SITE PLAN

FOR GRADING INFORMATION ONLY

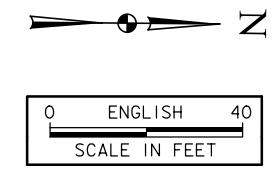
DESIGN FOR 21° SKEW (LA) ON A 3274.04' RADIUS CURVE
324'-0 X VARIES PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE - STAGE II
 106'-0 END SPANS (BTC BEAM) 112'-0 INTERIOR SPAN
SITUATION PLAN - SITE
 STATION 1189+11.06, 29' LEFT \bar{C} CONST. I-380 JUNE 2014
JOHNSON COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 2 OF 2 FILE NO. 30864 DESIGN NO. 419



POINTS	SOUTH ABUTMENT			NORTH ABUTMENT		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
A1	1199+11.55	0.00'	686.19	1199+56.30	0.00'	684.13
A2	1198+94.56	97.69' RT	684.0	1199+38.95	96.81' RT	686.0
B1	1198+30.55	0.00'	709.49	1200+45.40	0.00'	712.01
B2	1198+12.43	99.39' RT	706.49	1200+42.07	94.74' RT	709.54
W1	1198+00.20	99.55' RT	711.81	1200+42.04	94.74' RT	715.25

BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE

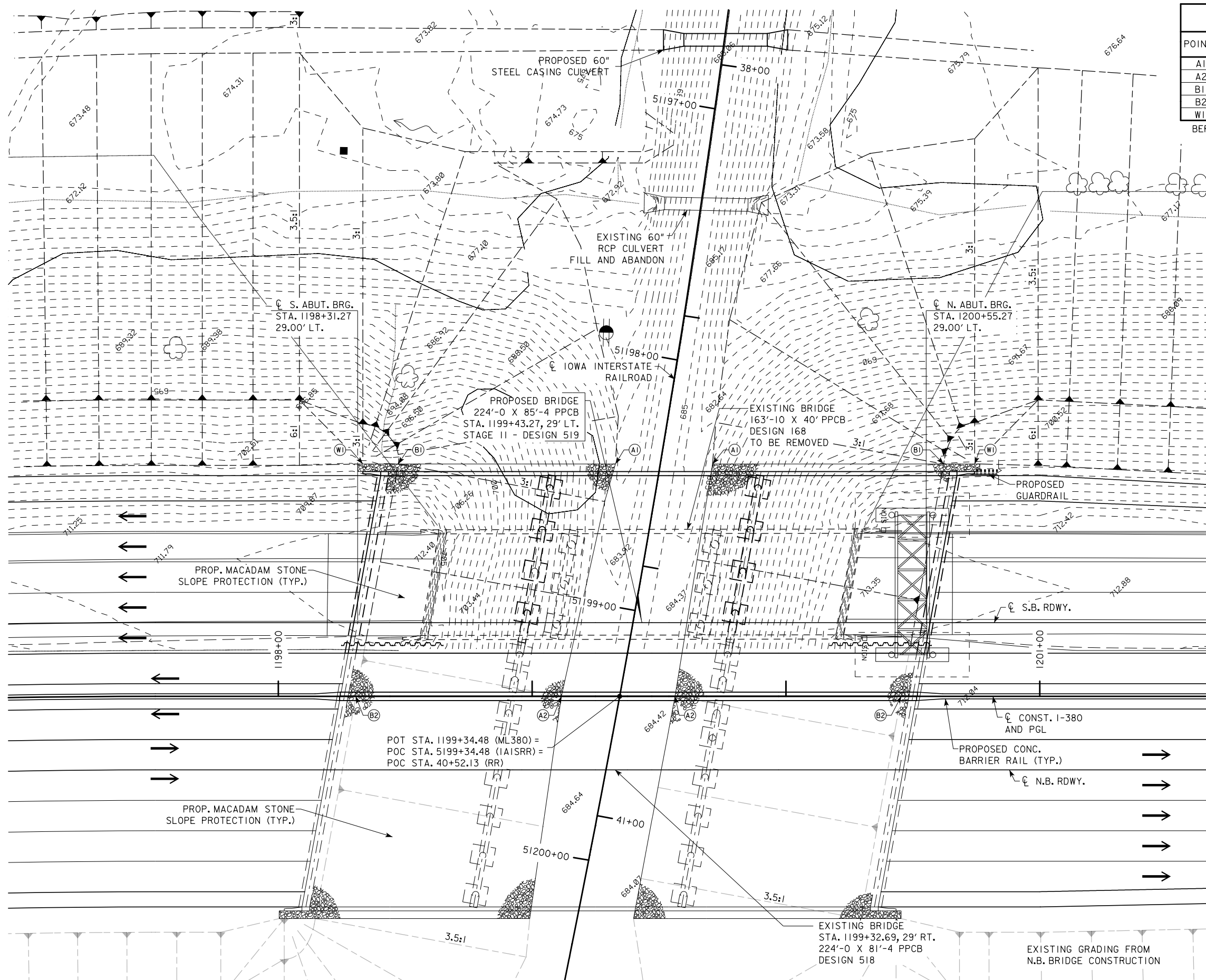
FOR GRADING INFORMATION ONLY



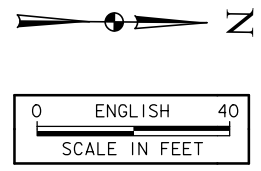
DESIGN FOR 10° 20' 00.00" SKEW (LA)
224'-0" X VARIES PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE - STAGE II
 66'-0", 76'-0" END SPANS (BTB BEAM) 82'-0" INTERIOR SPAN
SITUATION PLAN - SITE
 STATION 1199+32.69, 29' RIGHT $\bar{\epsilon}$ CONST. I-380 DEC 2016
JOHNSON COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 2 OF 2 FILE NO. 30864 DESIGN NO. 518

POINTS	SOUTH ABUTMENT			NORTH ABUTMENT		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
A1	1199+32.80	91.58' LT	682.83	1199+71.07	91.58' LT	683.56
A2	1199+11.55	0.00'	684.59	1199+56.30	0.00'	684.13
B1	1198+47.25	91.58' LT	710.88	1200+62.10	91.58' LT	713.19
B2	1198+30.55	0.00'	709.49	1200+45.40	0.00'	712.01
W1	1198+33.32	91.58' LT	716.20	1200+74.37	91.58' LT	718.64

BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE



FOR GRADING INFORMATION ONLY

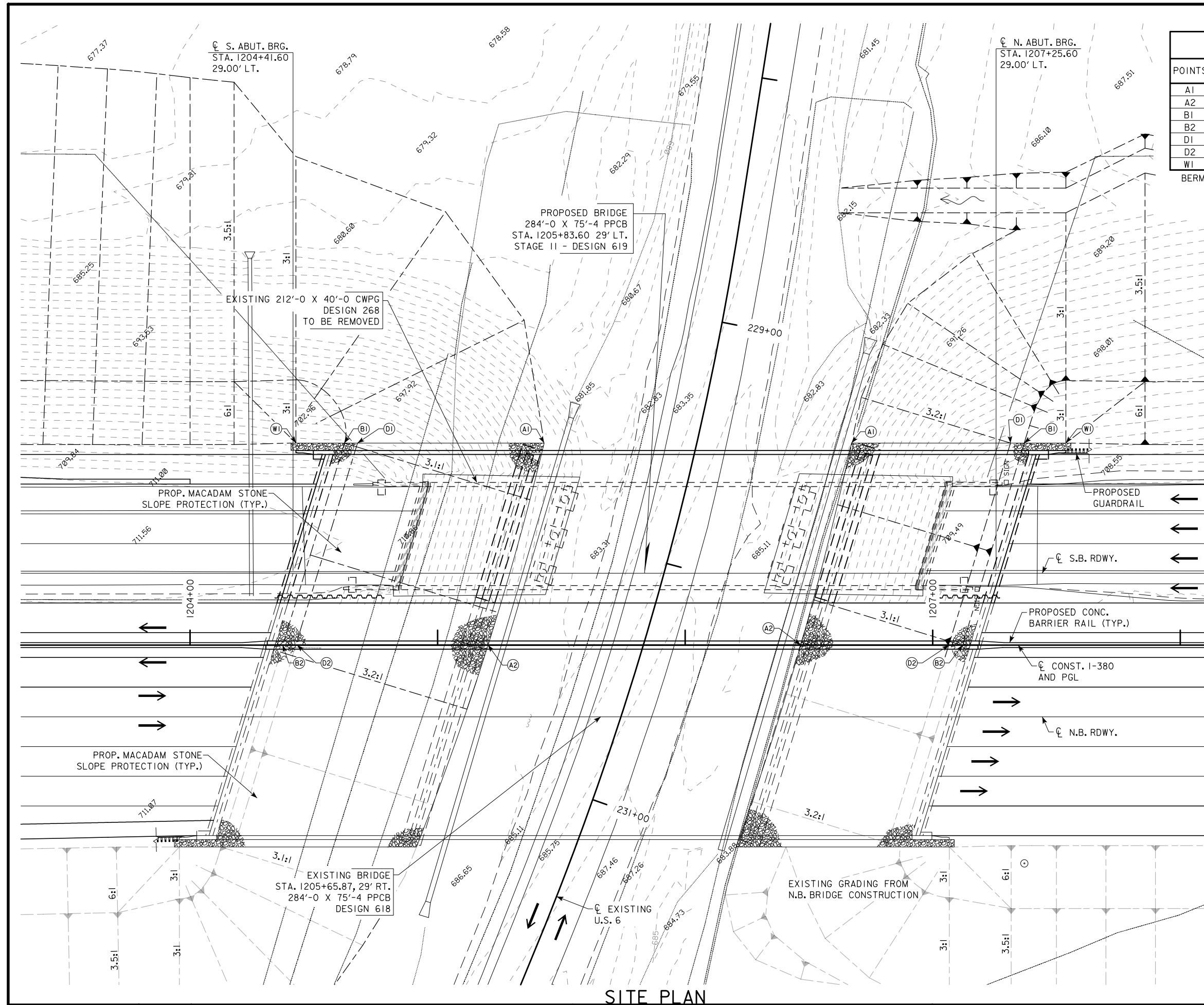


DESIGN FOR 10° 20' SKEW (LA)
224'-0" X 85'-4" PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE - STAGE II
 66'-0", 76'-0" END SPANS (BTB BEAM) 82'-0" INTERIOR SPAN
SITUATION PLAN - SITE
 STATION 1199+43.27, 29' LEFT ϕ CONST. I-380
 JOHNSON COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 2 OF 2 FILE NO. 30864 DESIGN NO. 519

SITE PLAN

POINTS	SOUTH ABUTMENT			NORTH ABUTMENT		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
A1	1205+43.05	81.58' LT	683.56	1206+67.21	81.58' LT	685.50
A2	1205+20.36	0.00'	684.49	1206+46.68	0.00'	686.27
B1	1204+62.38	81.58' LT	709.48	1207+36.97	81.58' LT	706.69
B2	1204+37.44	0.00'	709.48	1207+12.03	0.00'	706.69
D1	1204+67.65	81.58' LT	707.80	1207+31.42	81.58' LT	704.92
D2	1204+43.24	0.00'	707.80	1207+06.60	0.00'	704.92
W1	1204+42.77	81.58' LT	717.99	1207+53.77	81.58' LT	715.11

BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE



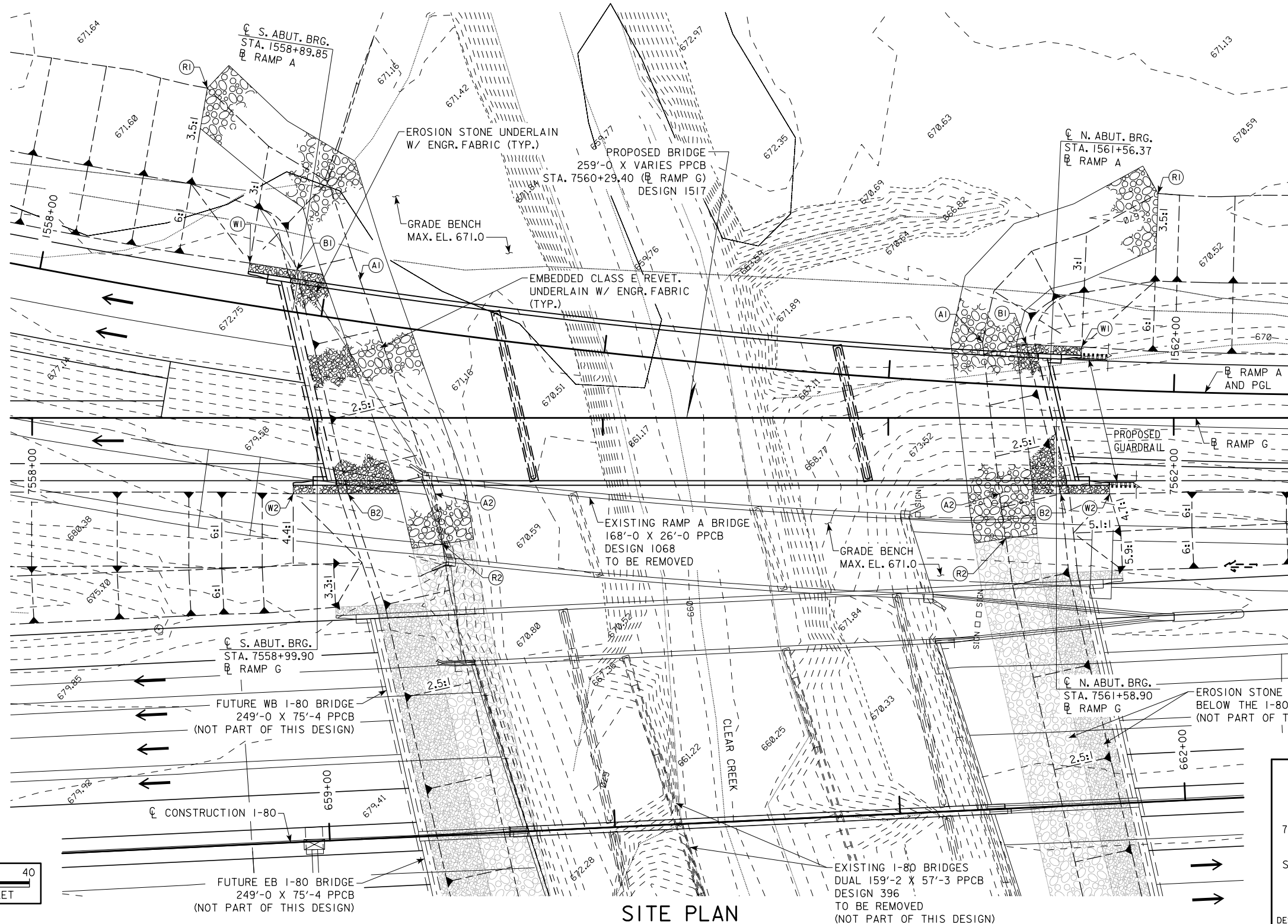
FOR GRADING INFORMATION ONLY

DESIGN FOR 17° SKEW L.A.
284'-0" x 75'-4" PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE - STAGE II
 81'-0", 66'-0" END SPANS (BTD BEAM TYPE) 137'-0" INTERIOR SPAN
SITUATION PLAN - SITE
 STATION 1205+83.60, 29' LEFT C. CONST. I-380
 JAN 2015
JOHNSON COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 2 OF 2 FILE NO. 30864 DESIGN NO. 619

BERM SLOPE LOCATION TABLE

POINTS	WEST ABUTMENT			EAST ABUTMENT		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
A1	7559+14.93	48.38' LT	671.00	7561+32.98	26.58' LT	671.00
A2	7559+41.20	26.58' RT	671.00	7561+38.97	26.58' RT	671.00
B1	7558+92.58	51.71' LT	679.05	7561+48.33	25.76' LT	677.08
B2	7559+10.66	26.58' RT	682.60	7561+60.42	26.58' RT	679.58
W1	7558+76.29	54.26' LT	685.47	7561+67.76	24.86' LT	683.46
W2	7558+91.48	26.58' RT	688.73	7561+77.48	26.58' RT	685.48

BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE
BERM SLOPE POINTS REFERENCED FROM RAMP G



FOR GRADING INFORMATION ONLY

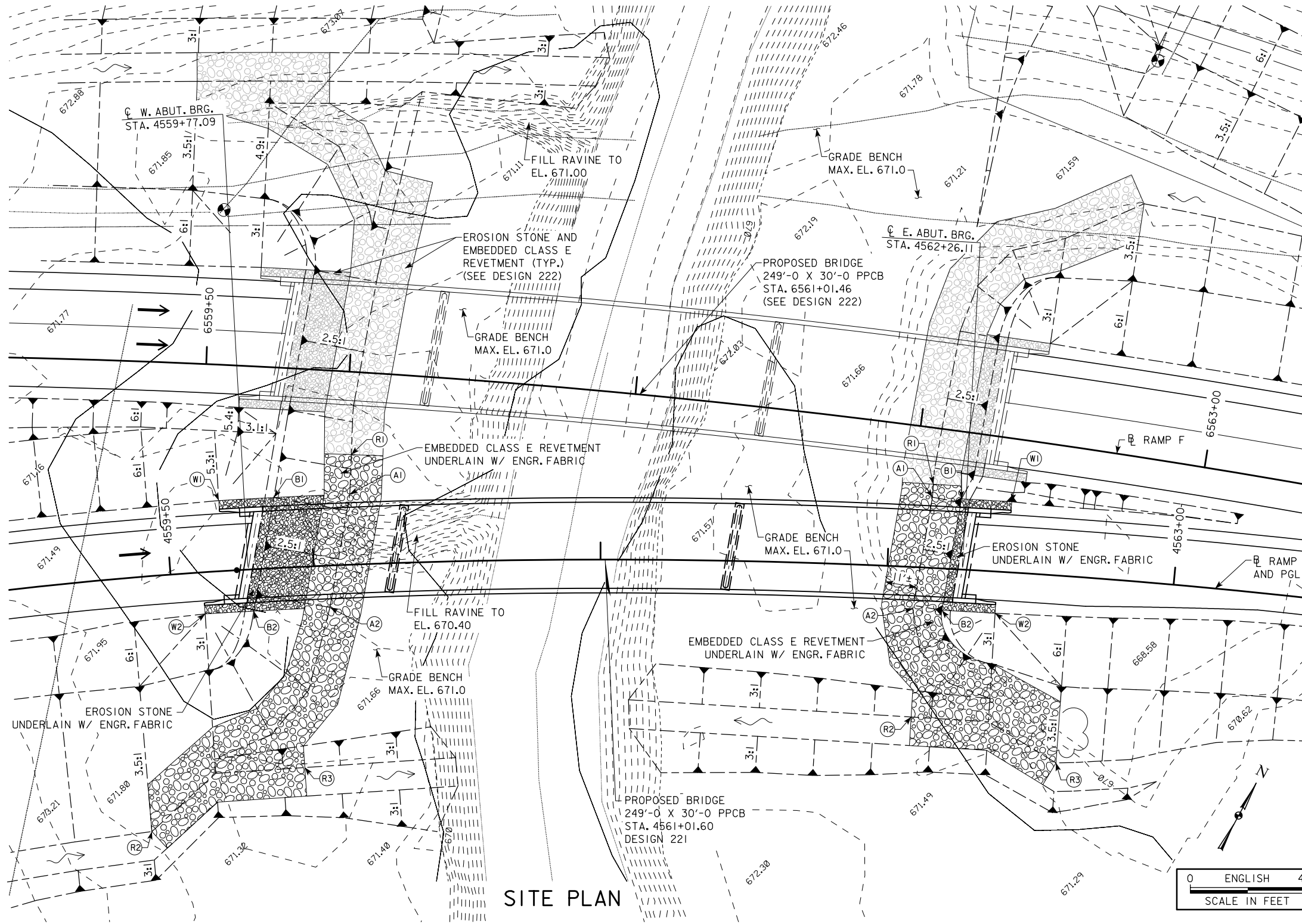
DESIGN FOR 13° SKEW (R.A.)
259'-0 X VAR. WIDTH PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE
 71'-0 END SPANS (BTC BEAM TYPE) 117'-0 INTERIOR SPAN
SITUATION PLAN - SITE
 STATION 7560+29.40 RAMP G OCT 2014
JOHNSON COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 2 OF 2 FILE NO. 30864 DESIGN NO. 1517

SITE PLAN

BERM SLOPE LOCATION TABLE

POINTS	WEST ABUTMENT			EAST ABUTMENT		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
A1	4560+13.57	24.58' LT	670.40	4562+14.47	24.58' LT	671.00
A2	4560+05.02	14.58' RT	671.00	4562+09.54	14.58' RT	671.00
B1	4559+87.34	24.58' LT	681.35	4562+24.54	24.58' LT	675.04
B2	4559+78.30	14.58' RT	681.35	4562+19.79	14.58' RT	675.04
W1	4559+68.37	24.58' LT	689.23	4562+41.86	24.58' LT	682.42
W2	4559+61.14	14.58' RT	687.89	4562+38.46	14.58' RT	680.91

BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE



FOR GRADING INFORMATION ONLY

DESIGN FOR 10° SKEW (LA) RADIUS = 2,250.00'
249'-0 X 30'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE
 51'-0, 81'-0 END SPANS (BTC BEAM TYPE) 117'-0 INTERIOR SPAN
SITUATION PLAN - SITE
 STATION 4561+01.60 AUG 2014
JOHNSON COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 1 OF 2 FILE NO. 30864 DESIGN NO. 221

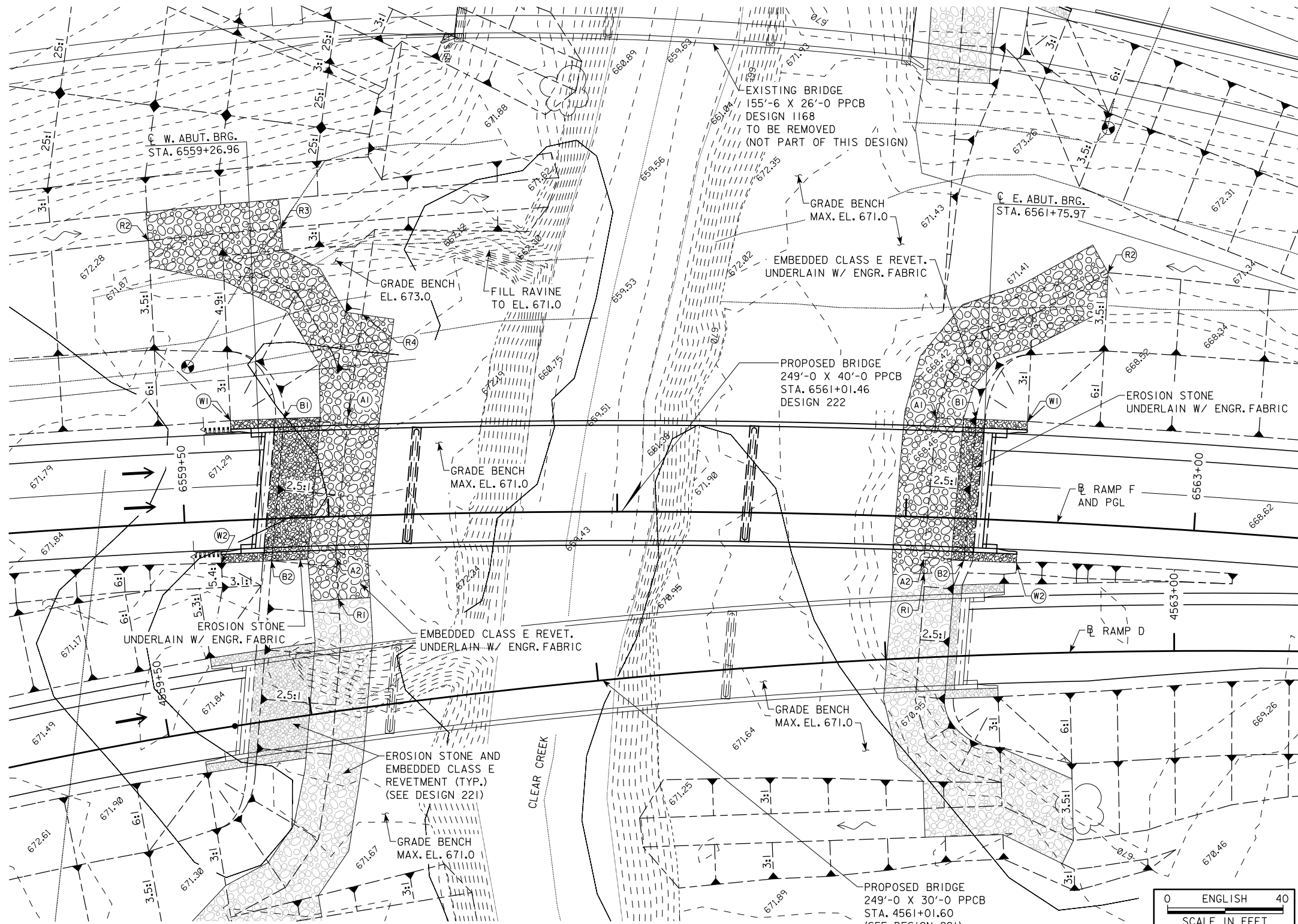


SITE PLAN

BERM SLOPE LOCATION TABLE

POINTS	WEST ABUTMENT			EAST ABUTMENT		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
A1	6560+07.72	34.58' LT	671.00	6562+09.29	34.58' LT	671.00
A2	6560+02.08	14.58' RT	670.90	6562+06.76	14.58' RT	671.00
B1	6559+85.87	34.58' LT	679.78	6562+23.08	34.58' LT	676.57
B2	6559+79.62	14.58' RT	679.78	6562+20.77	14.58' RT	676.57
W1	6559+67.43	34.58' LT	687.77	6562+40.69	34.58' LT	684.26
W2	6559+62.11	14.58' RT	686.09	6562+39.05	14.58' RT	682.52

BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE

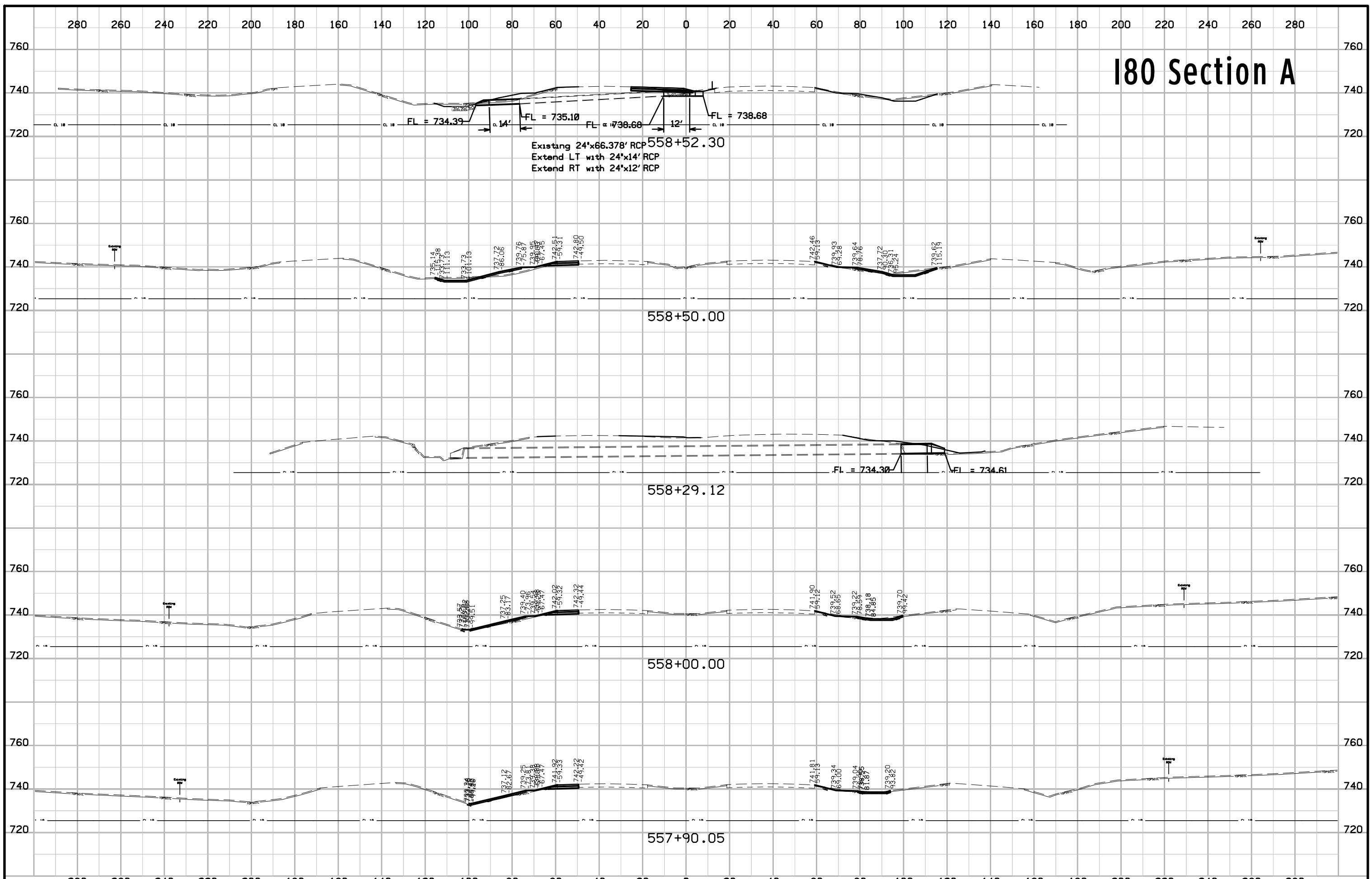


FOR GRADING INFORMATION ONLY

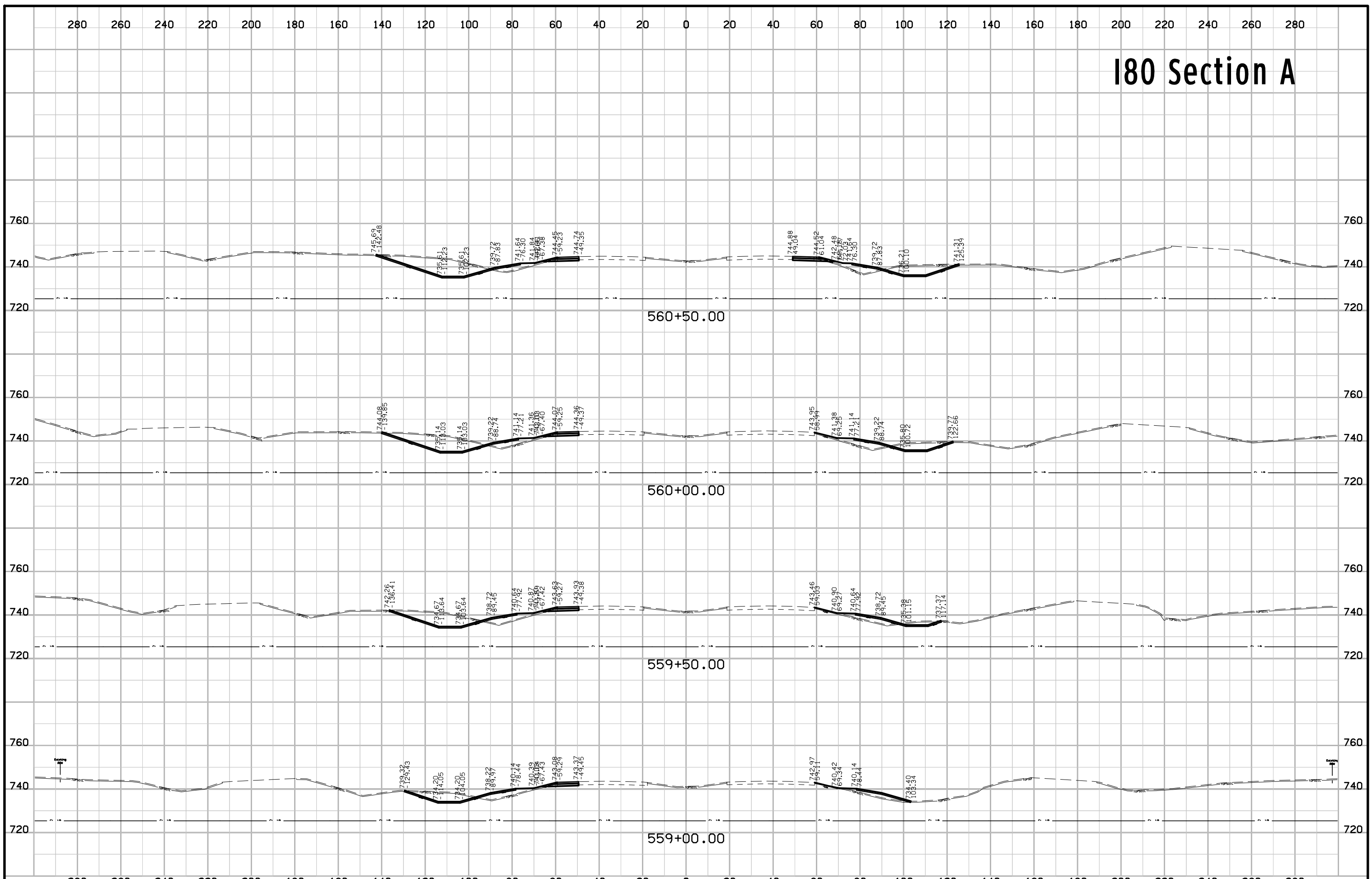
SITE PLAN

DESIGN FOR 5° SKEW (LA) RADIUS = 3,000.00'
249'-0 X 40'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE
 51'-0, 81'-0 END SPANS (BTC BEAM TYPE) 117'-0 INTERIOR SPAN
SITUATION PLAN - SITE
 STATION 6561+01.46 SEPT 2014
JOHNSON COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 1 OF 2 FILE NO. 30864 DESIGN NO. 222

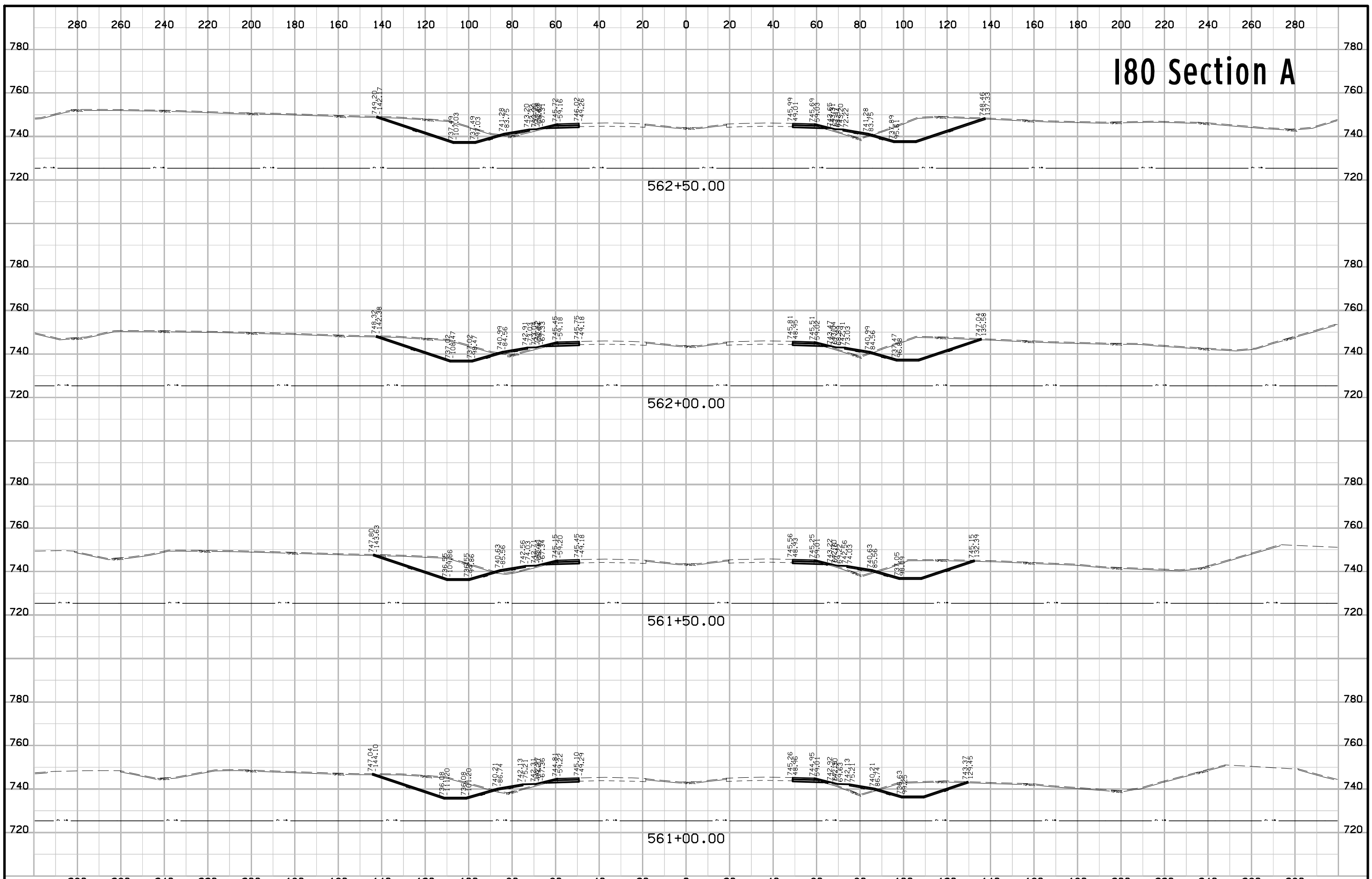
180 Section A



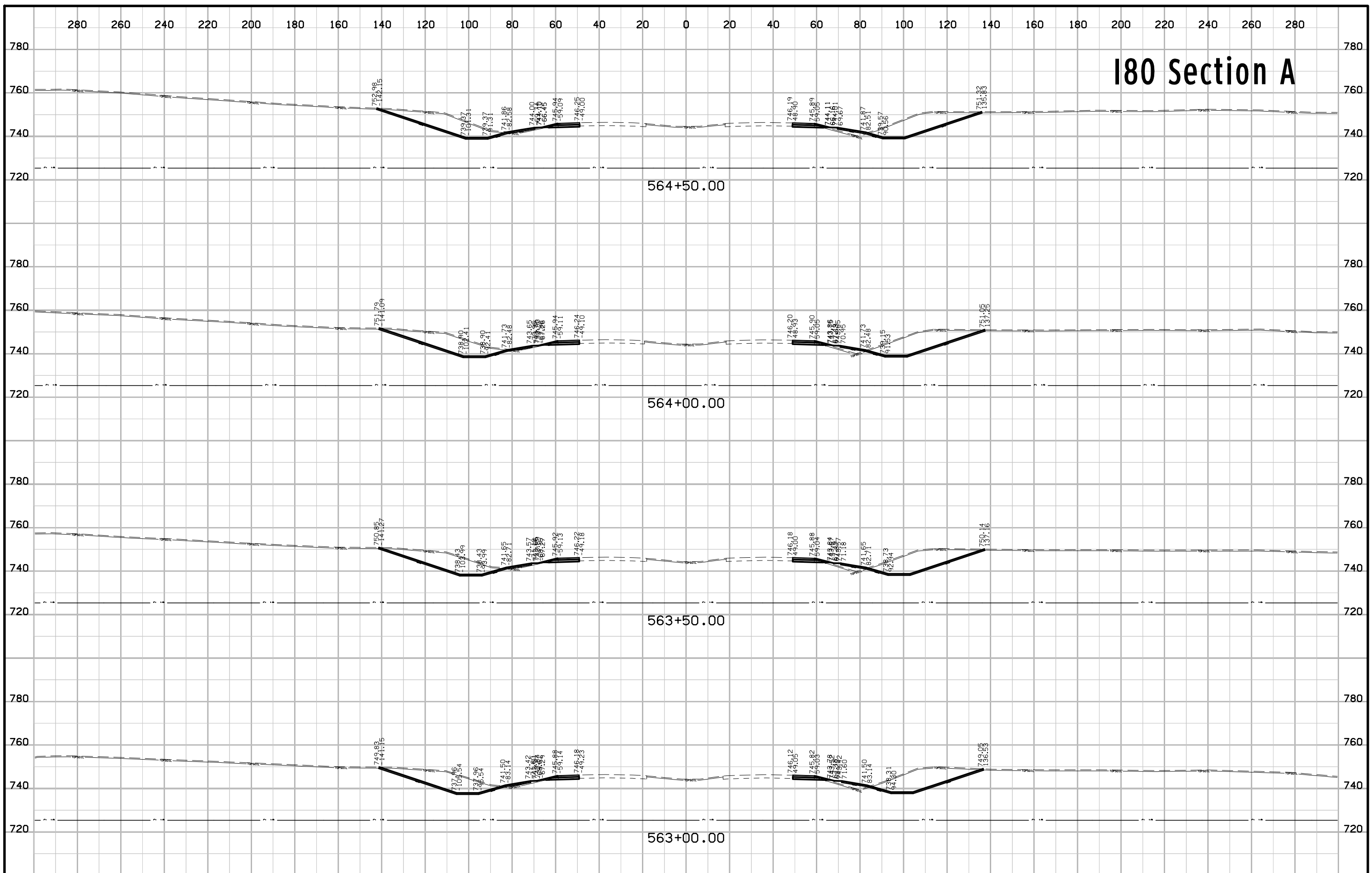
180 Section A



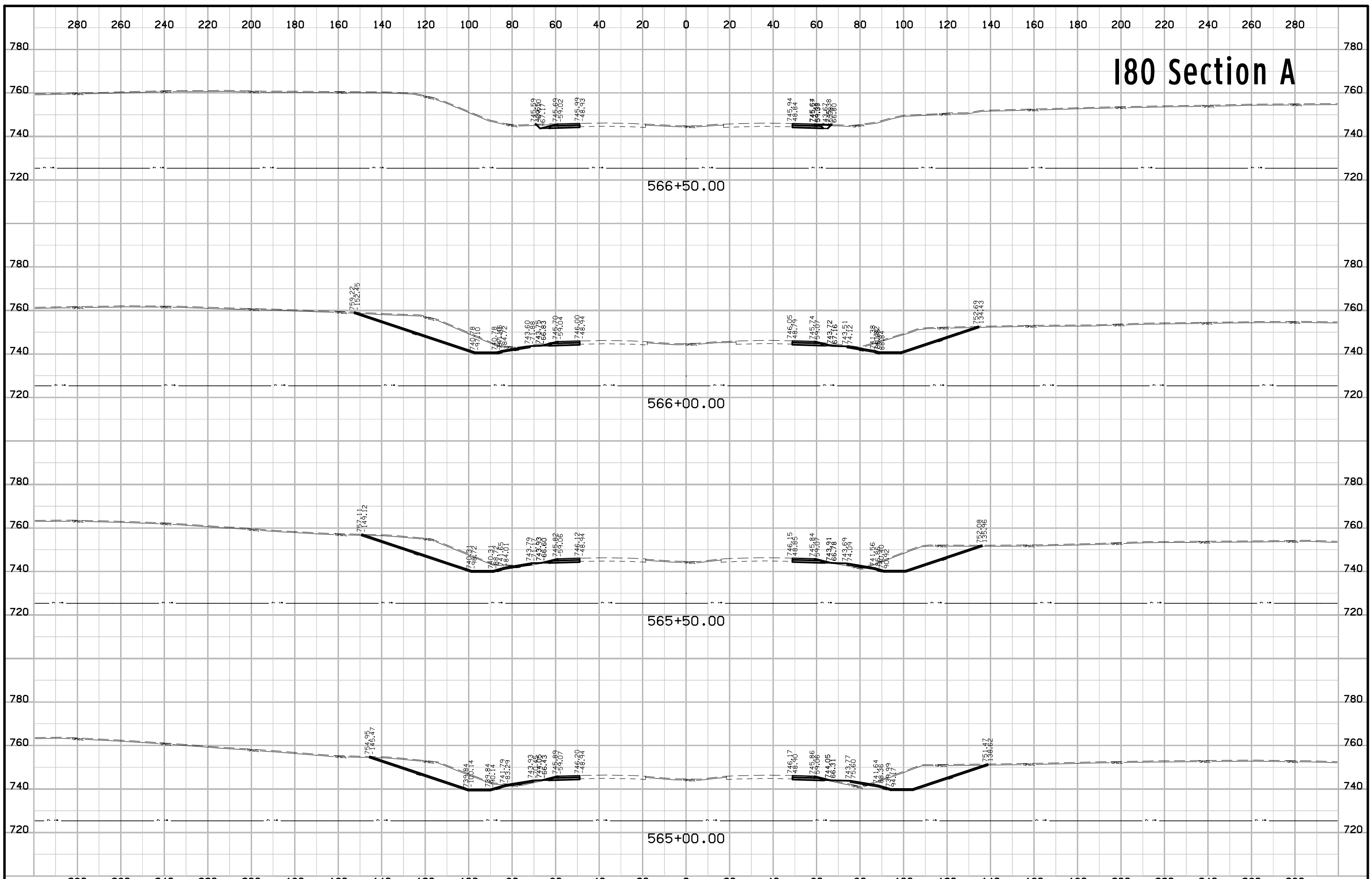
180 Section A



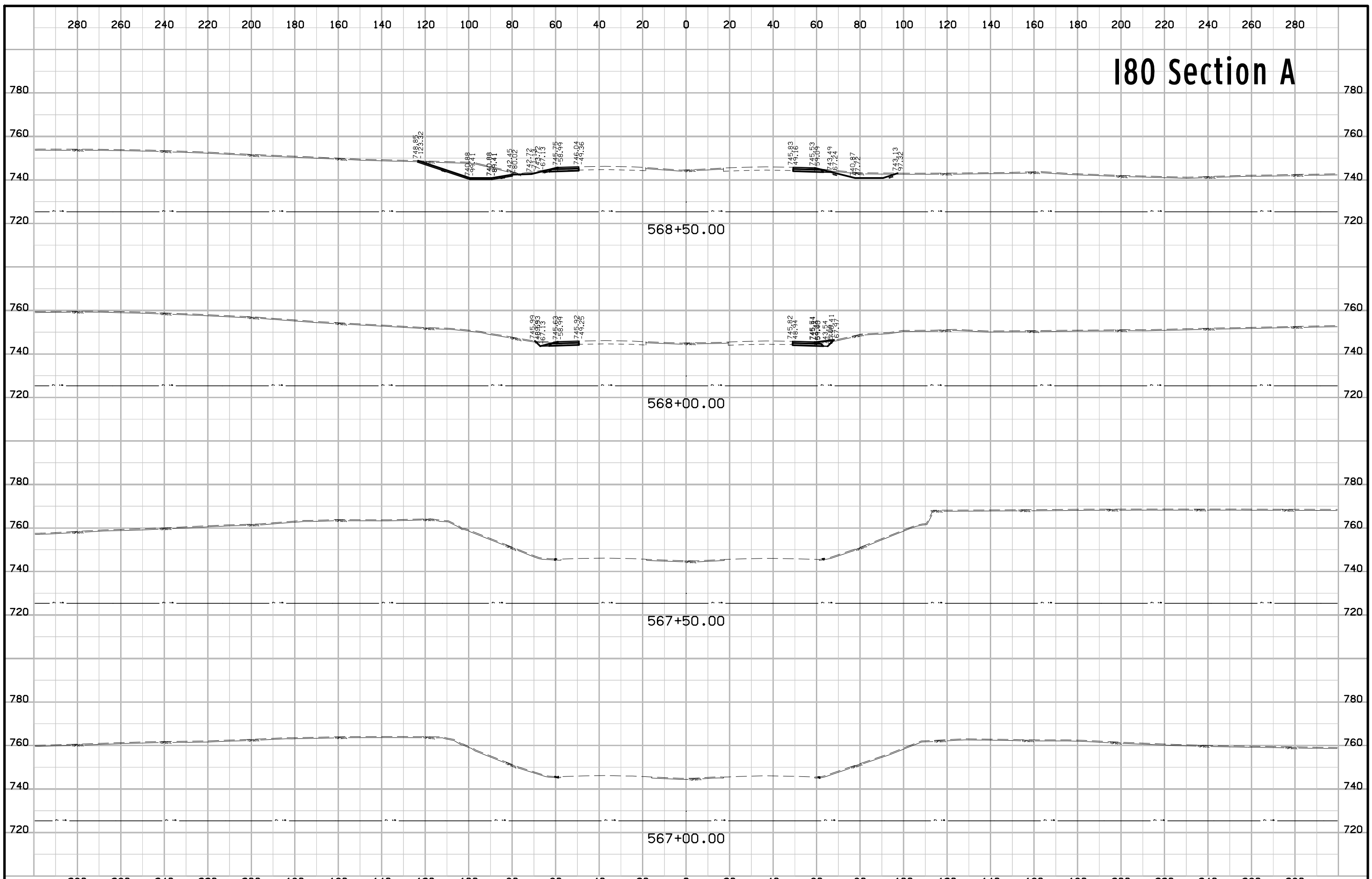
180 Section A



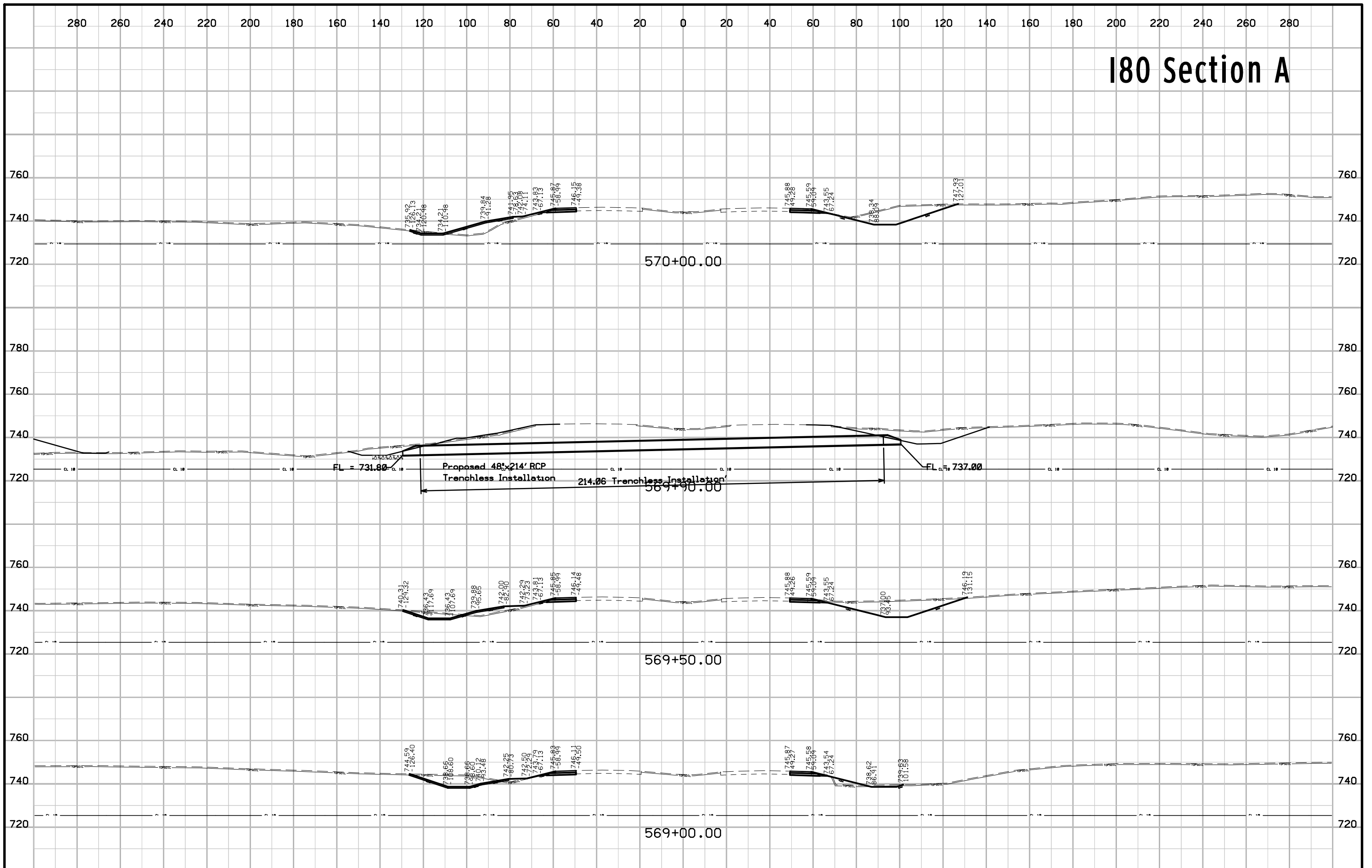
180 Section A



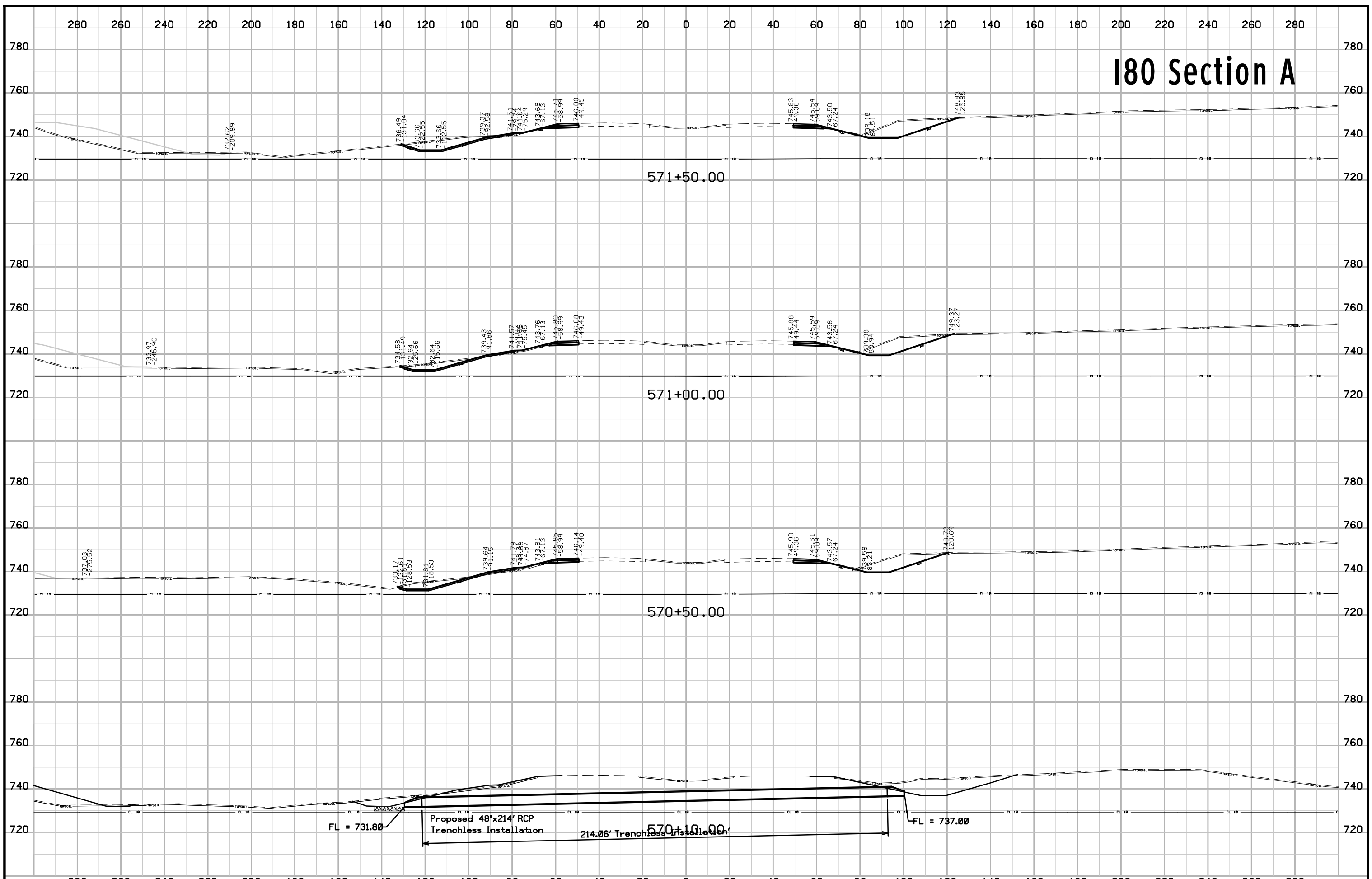
180 Section A

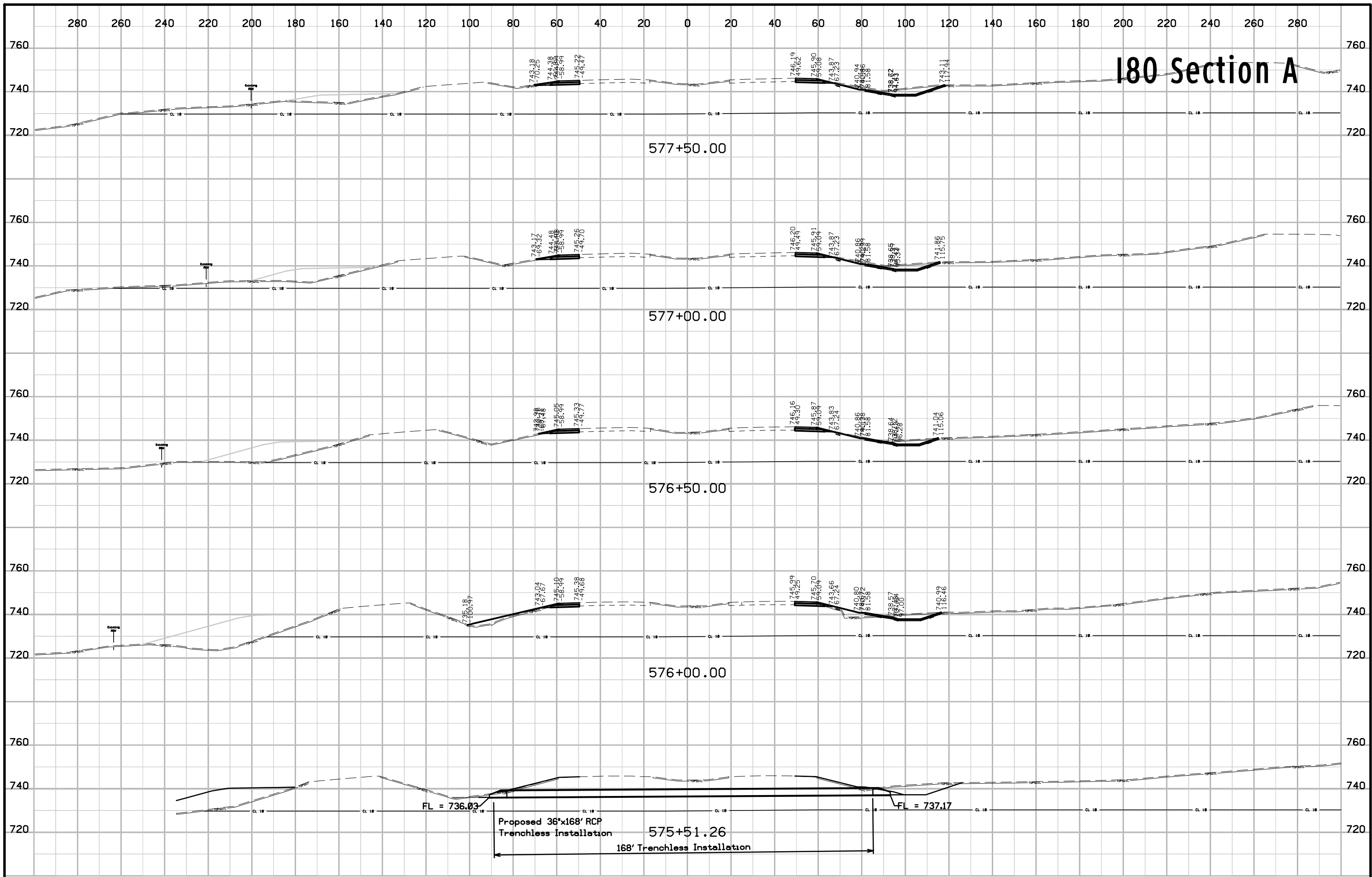


180 Section A



180 Section A





180 Section A

577+50.00

577+00.00

576+50.00

576+00.00

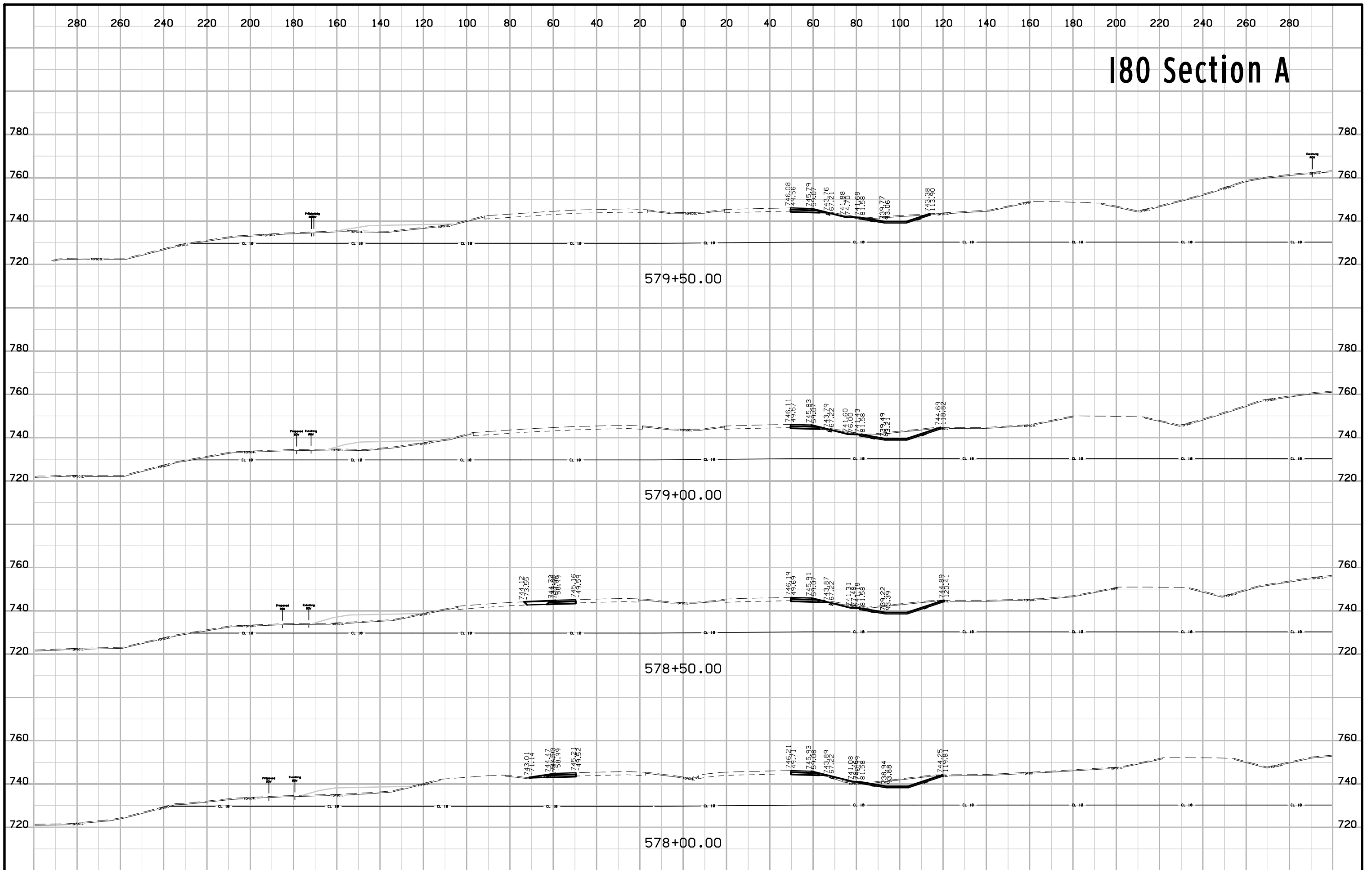
FL = 736.03

FL = 737.17

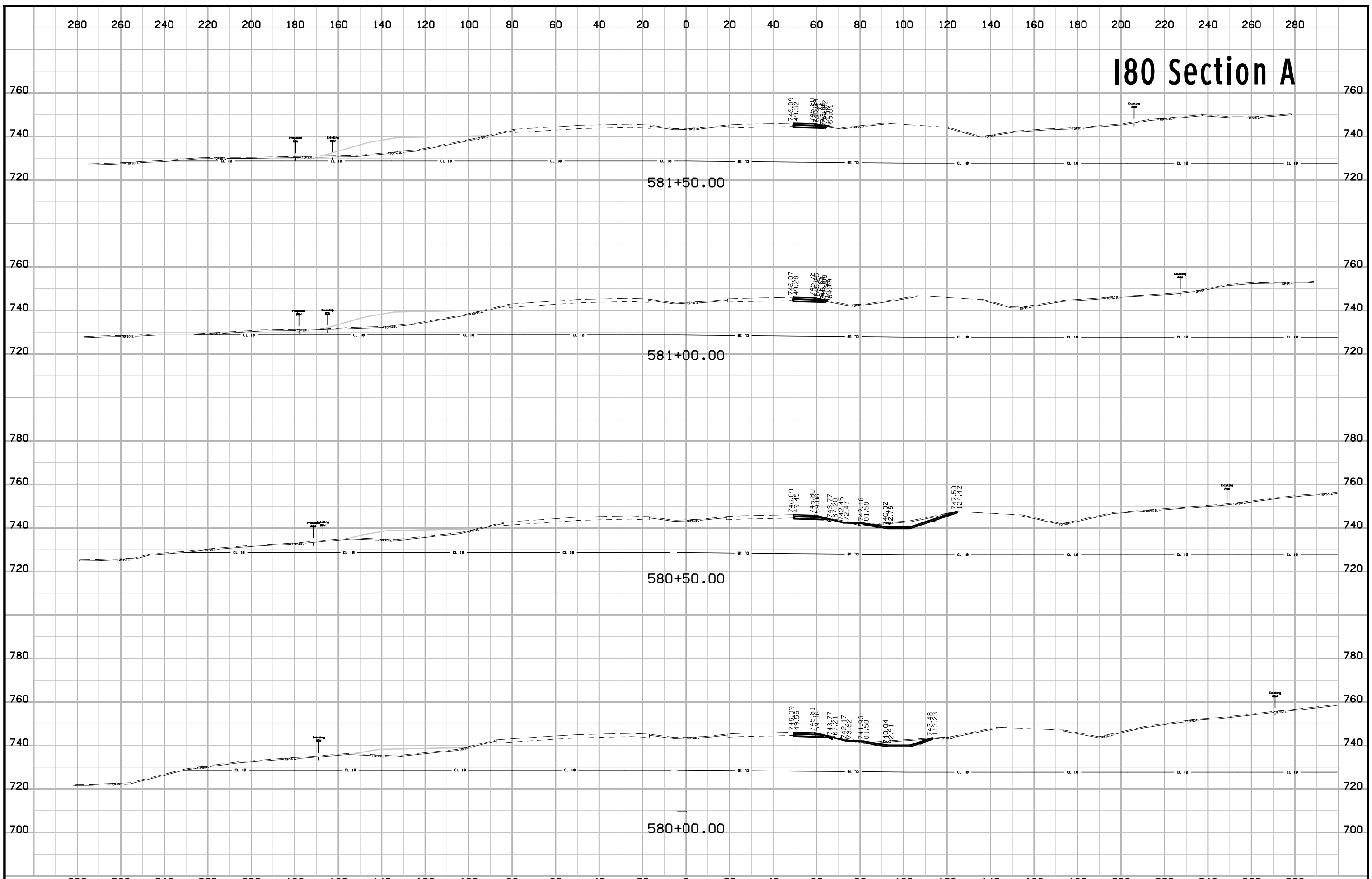
Proposed 36"x168" RCP
Trenchless Installation
168' Trenchless Installation

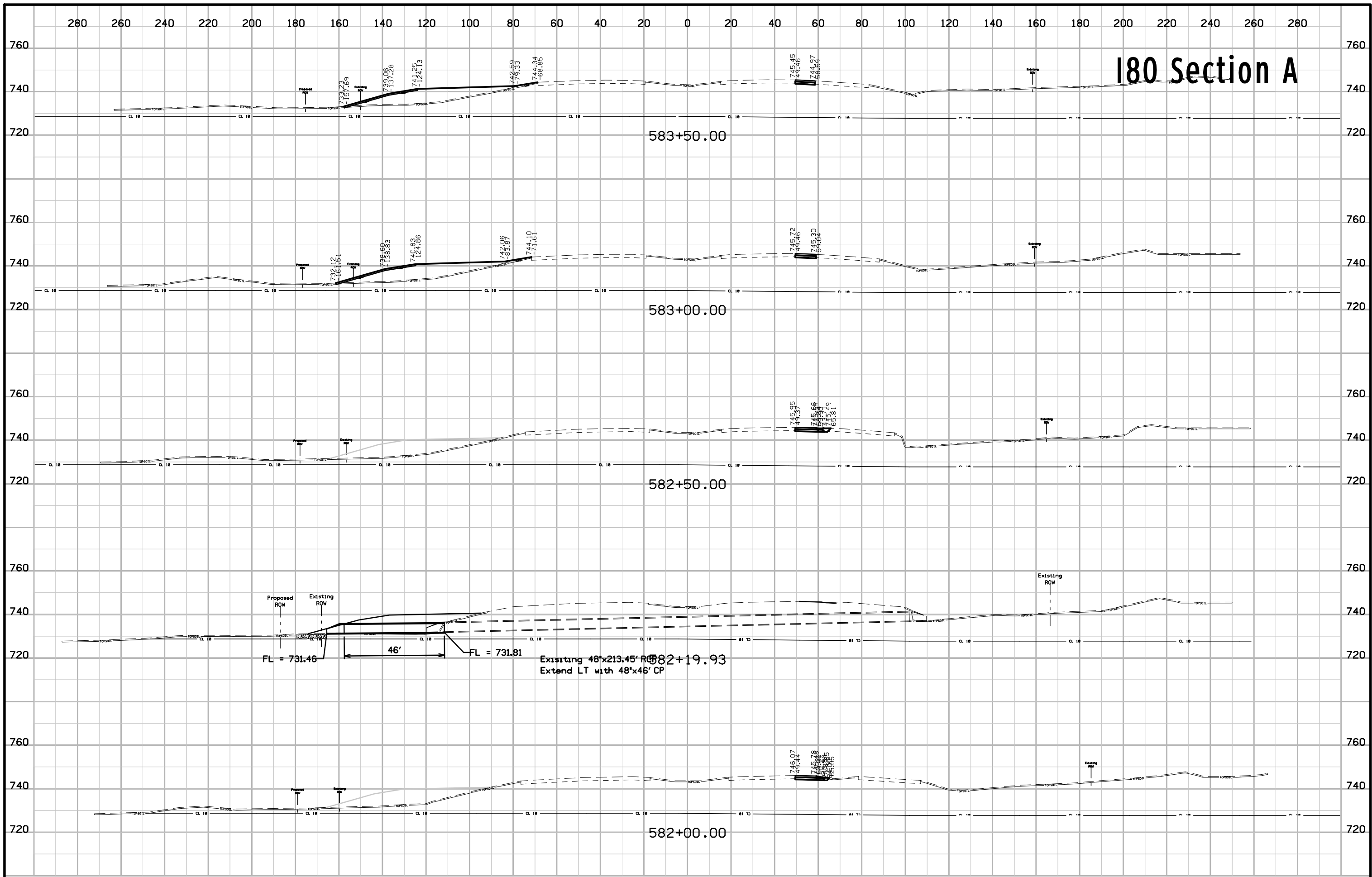
575+51.26

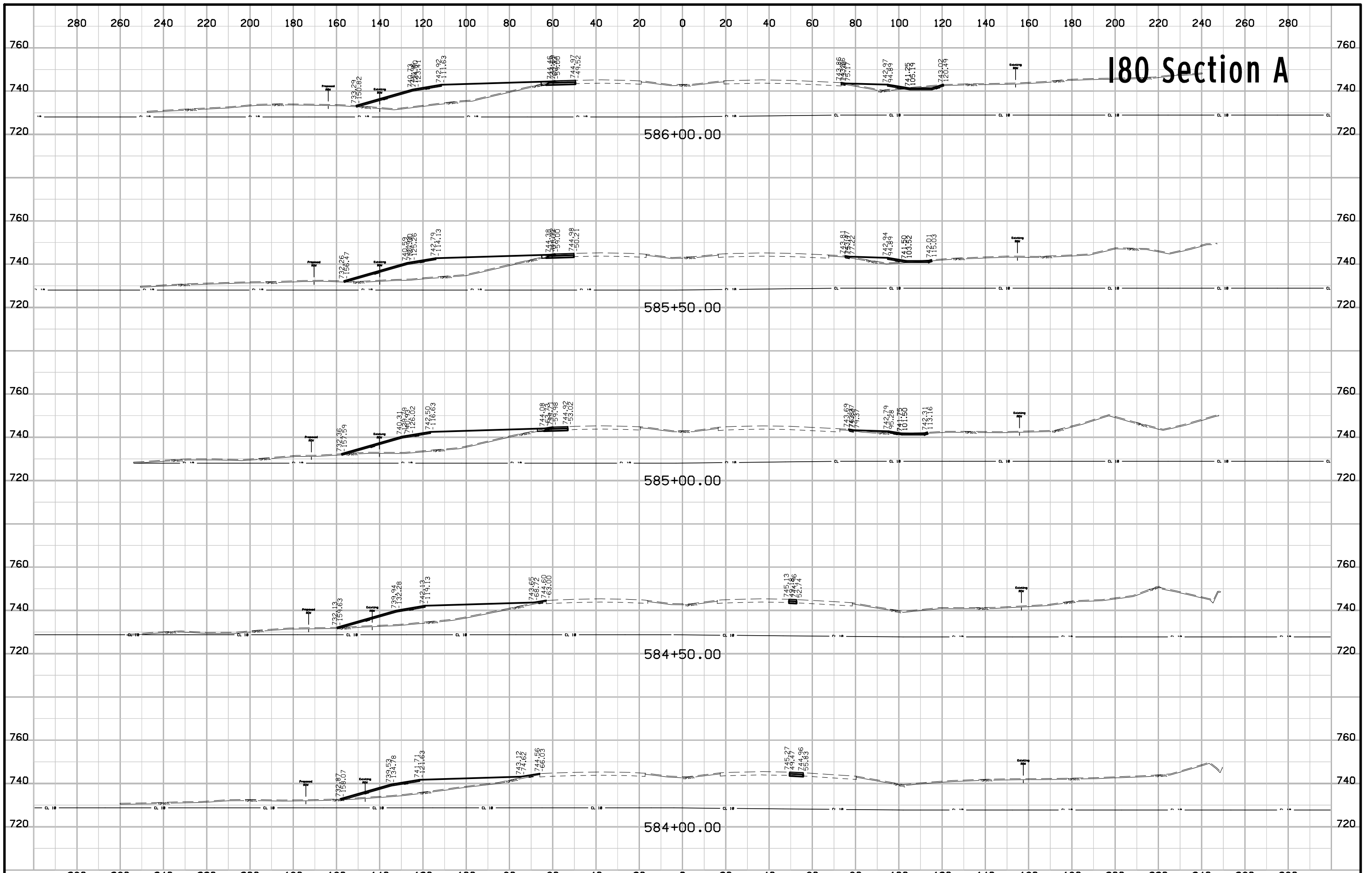
180 Section A

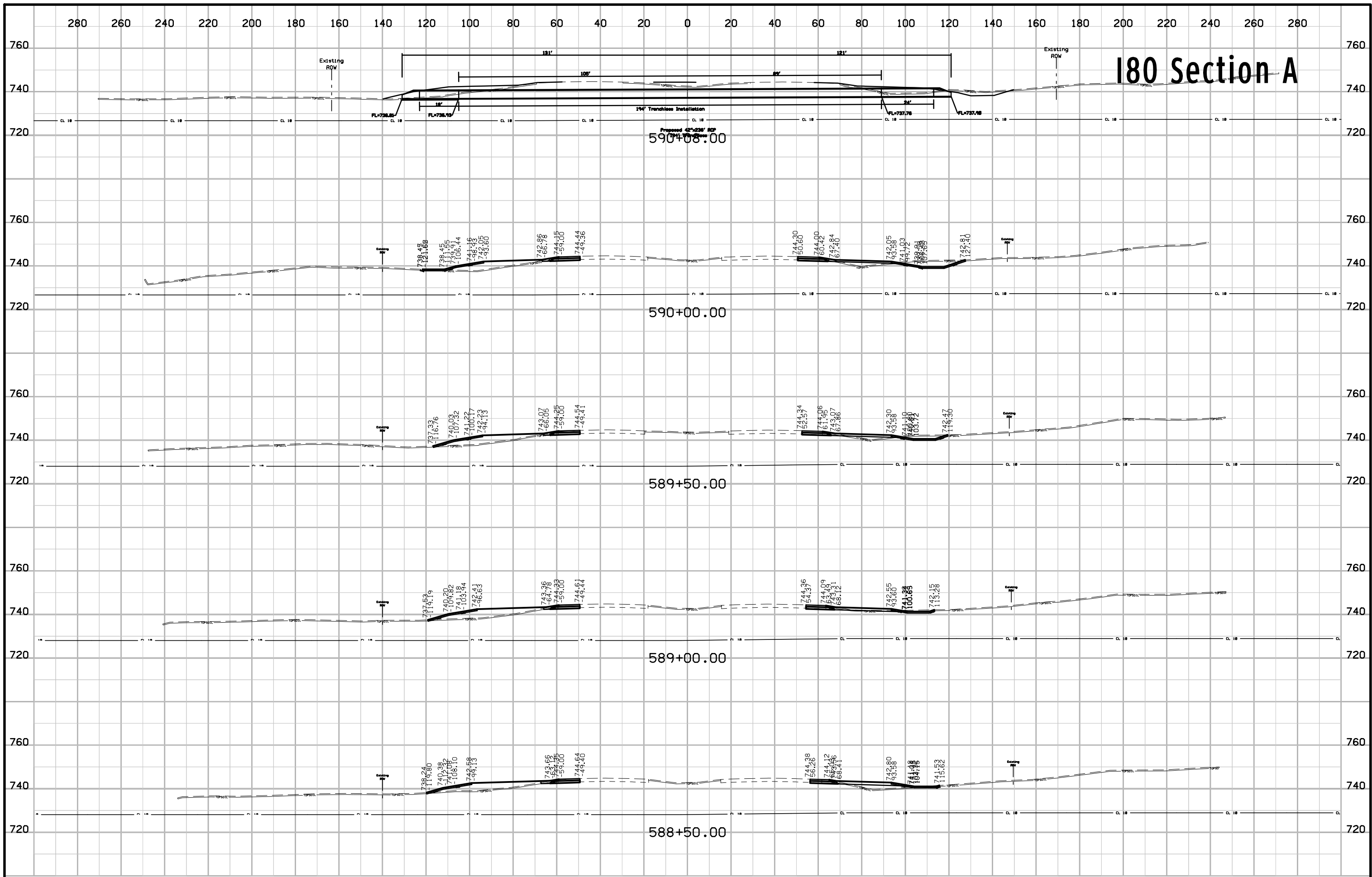


180 Section A

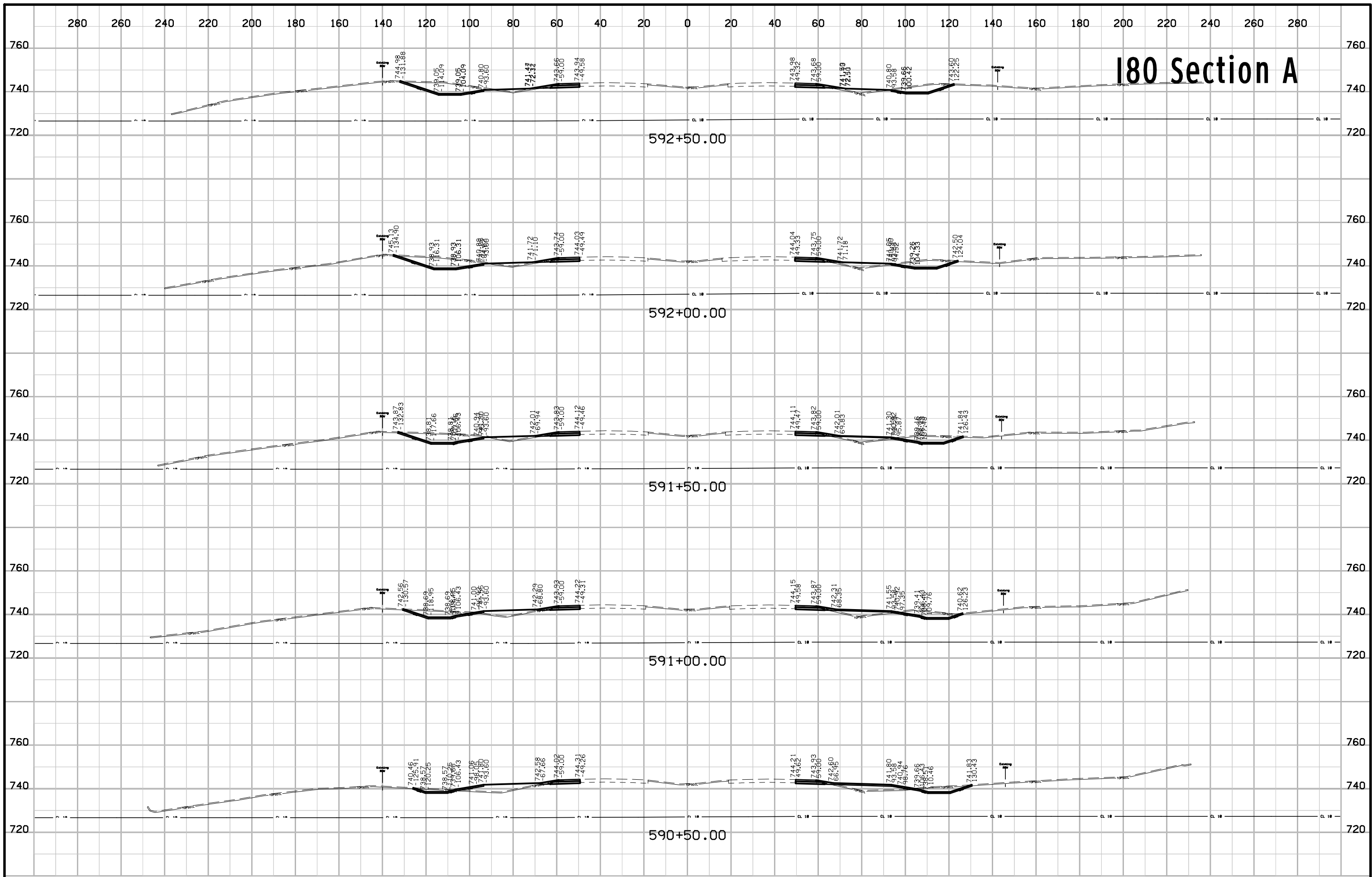






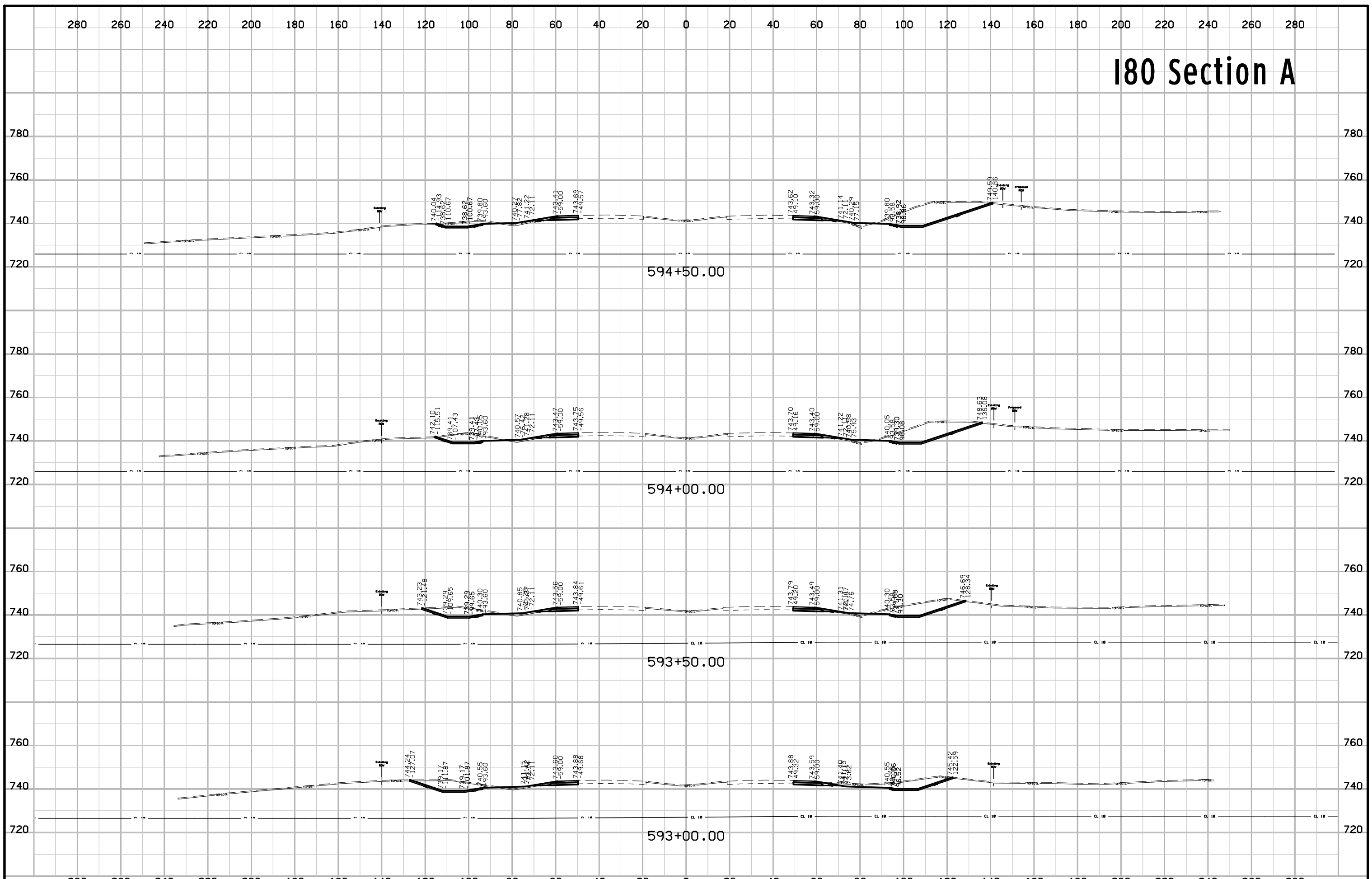


180 Section A

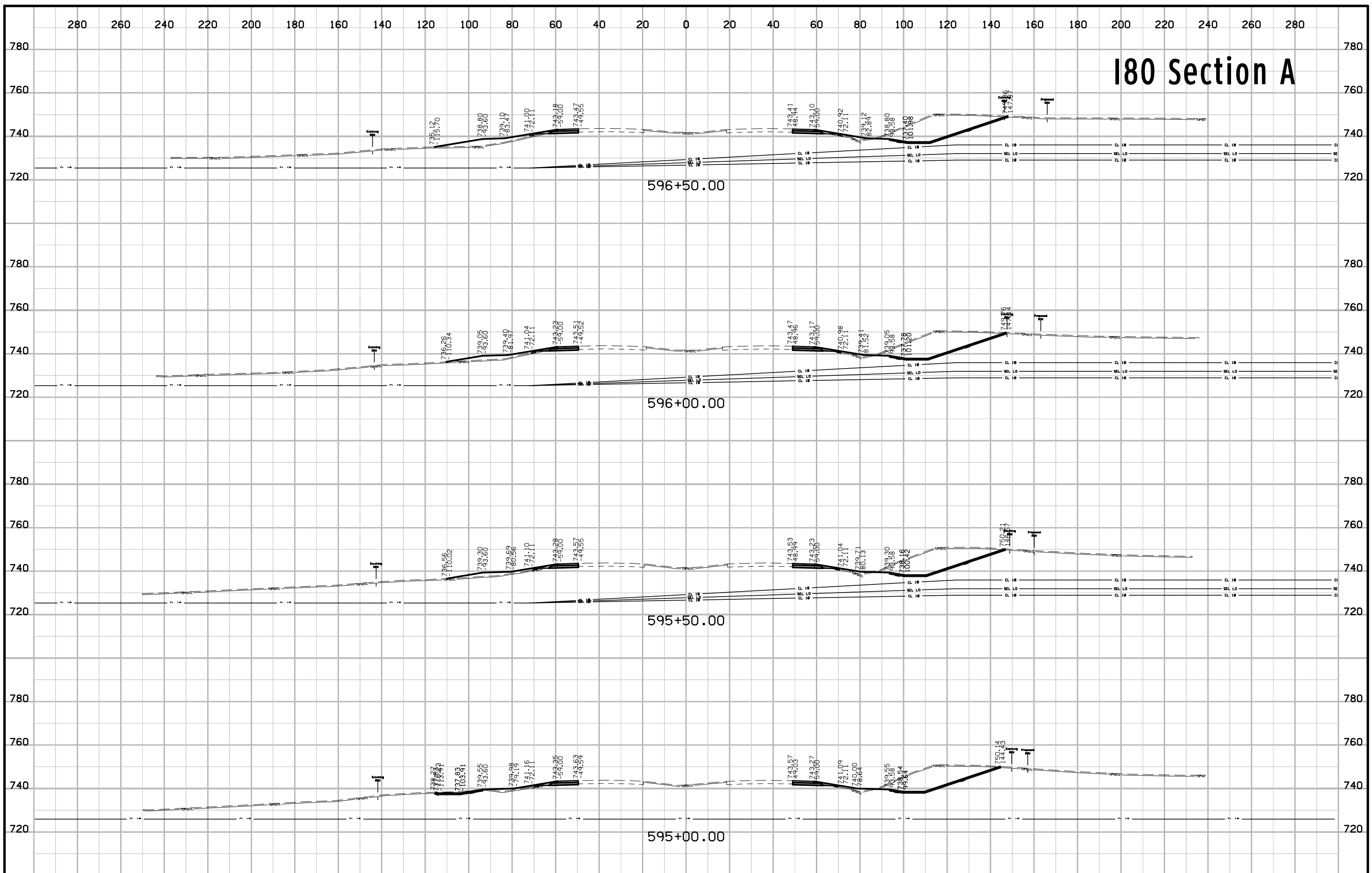


180 Section A

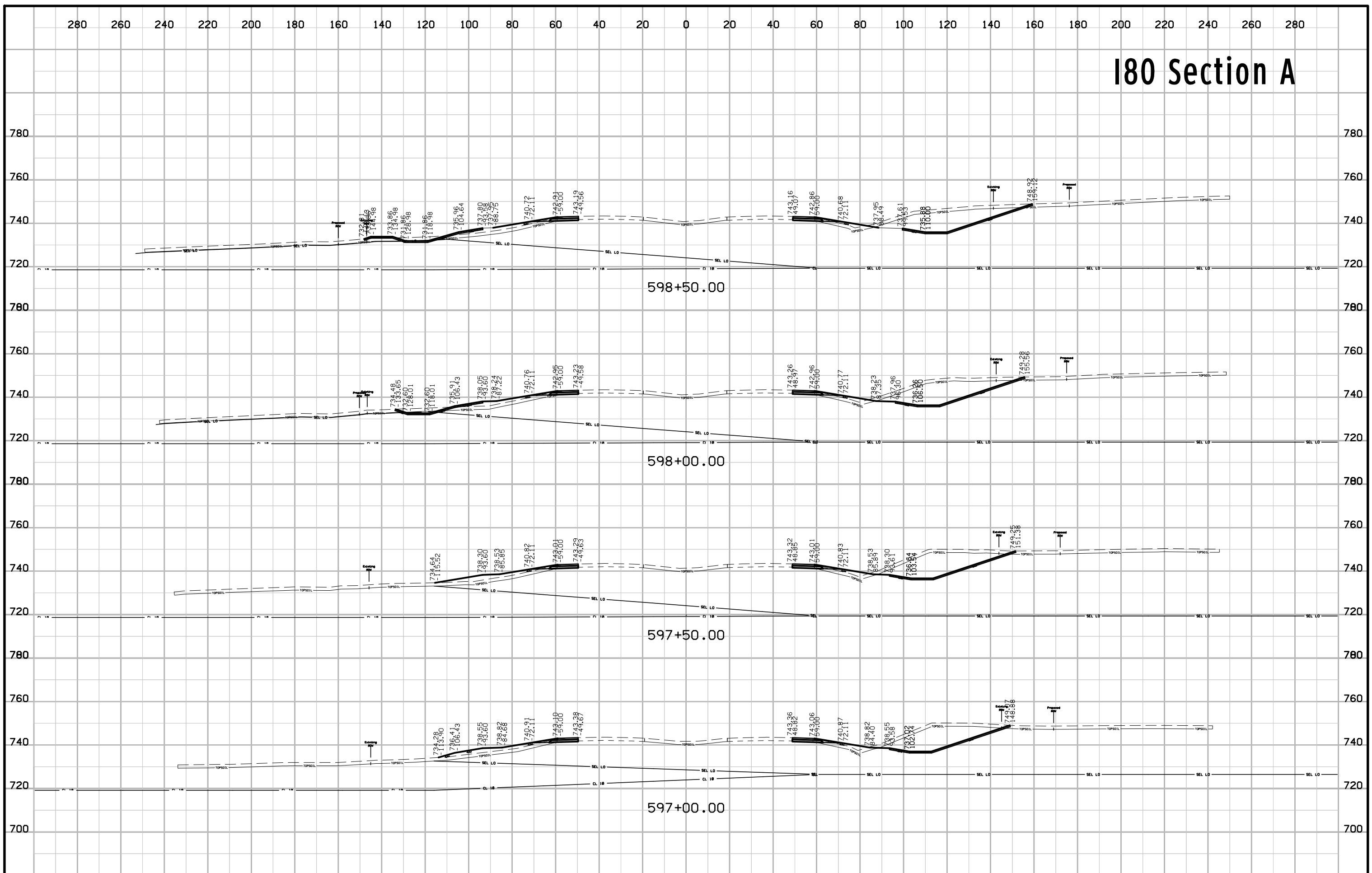
180 Section A

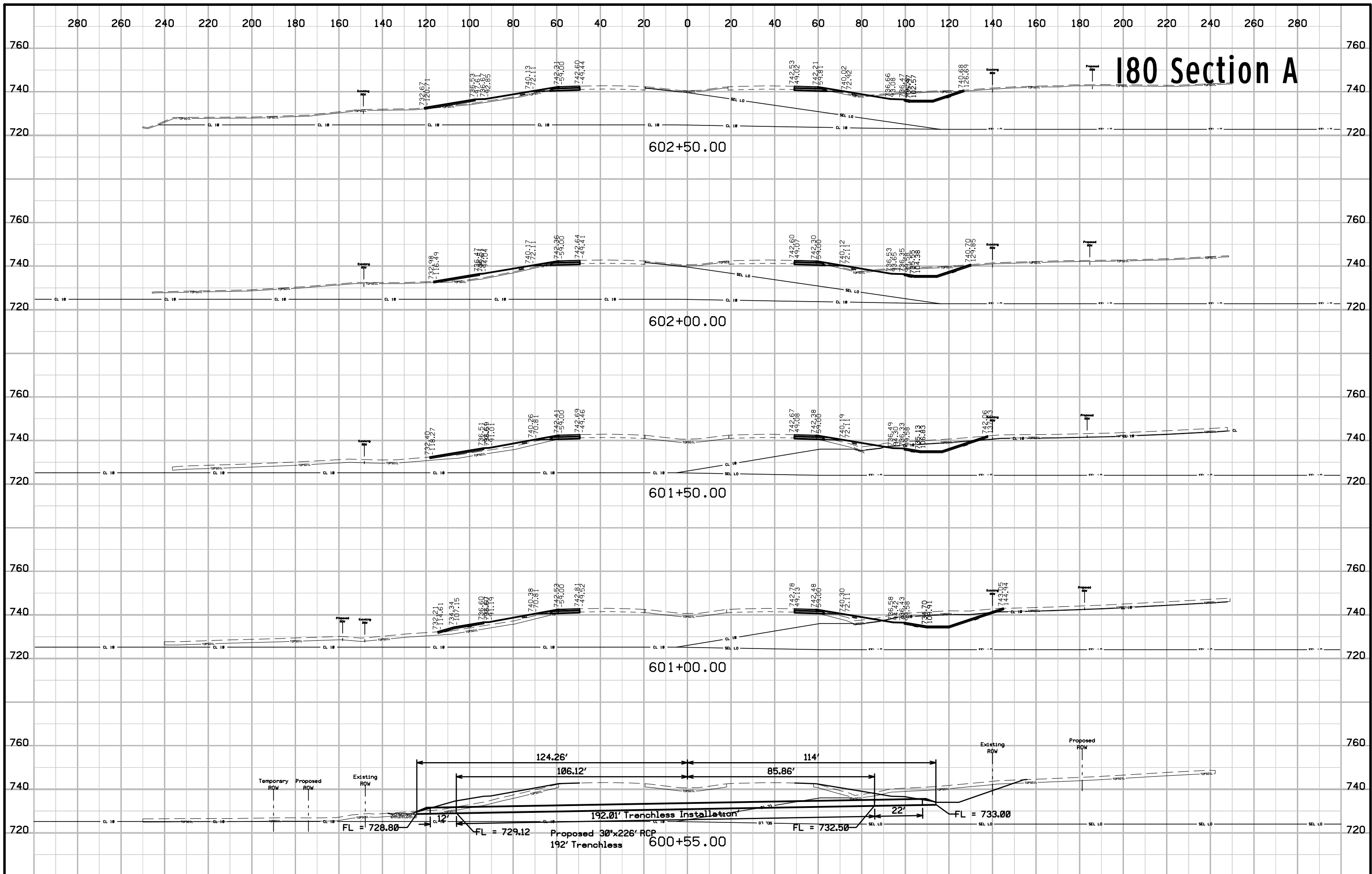


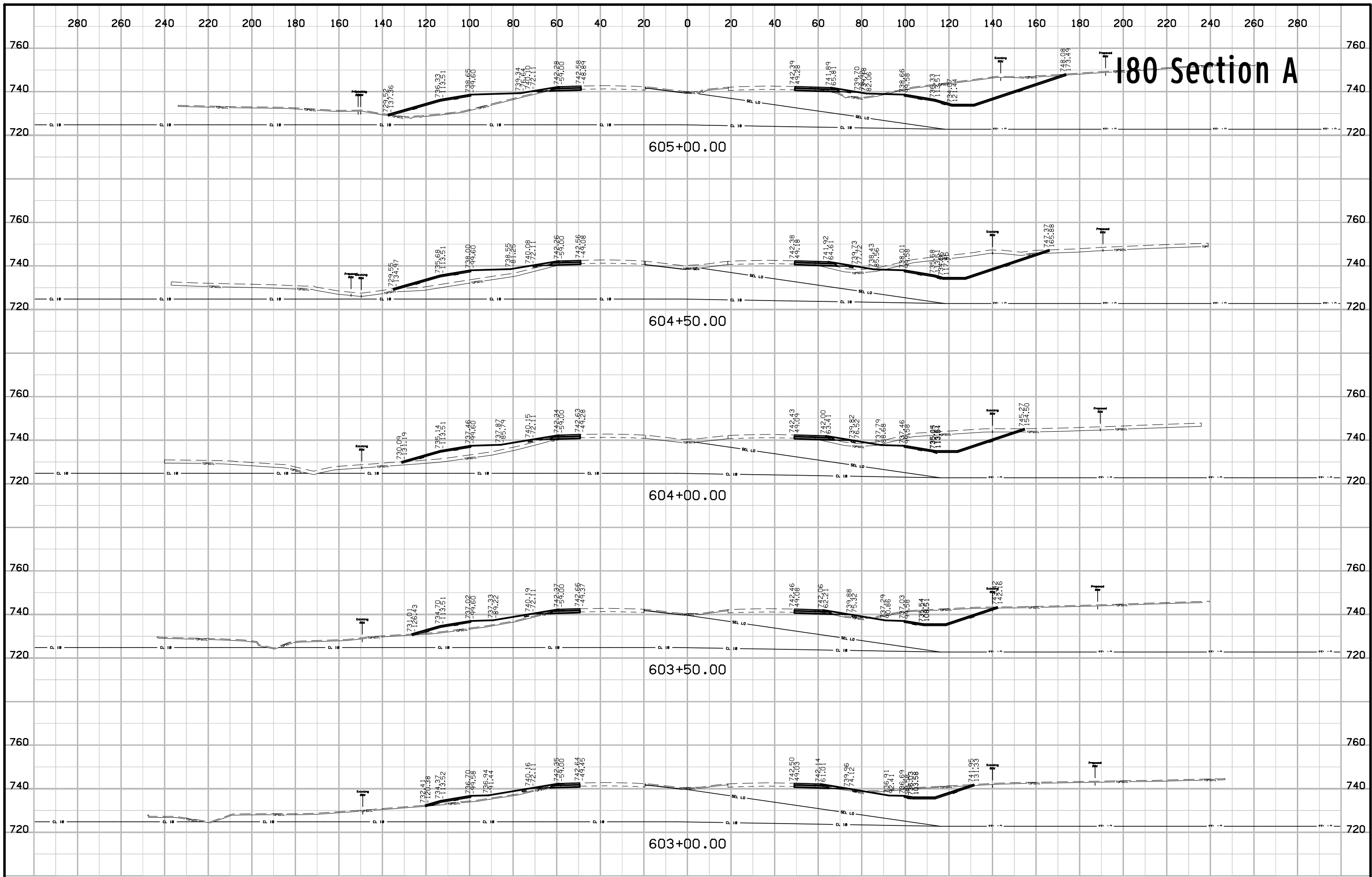
180 Section A



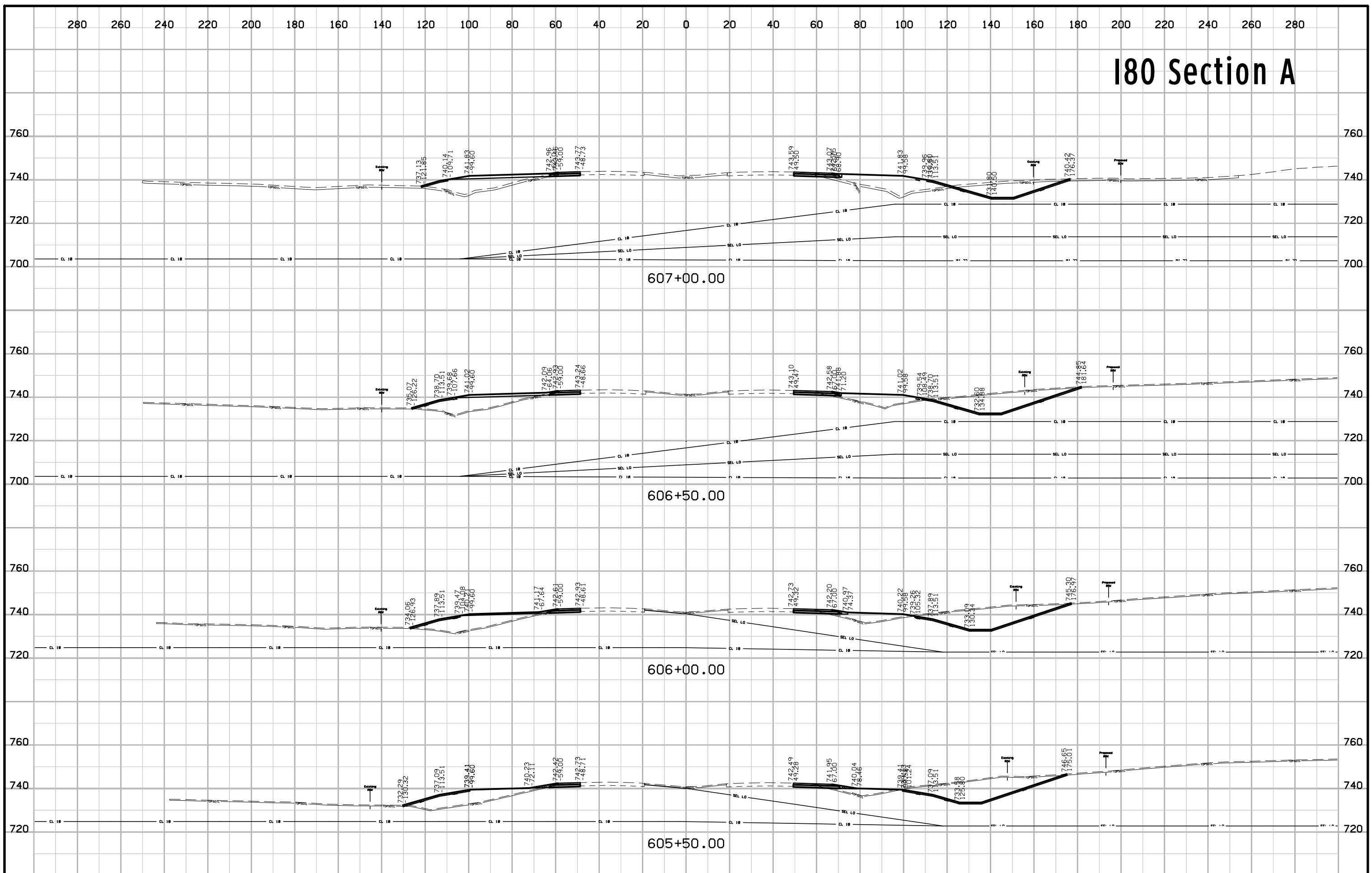
180 Section A



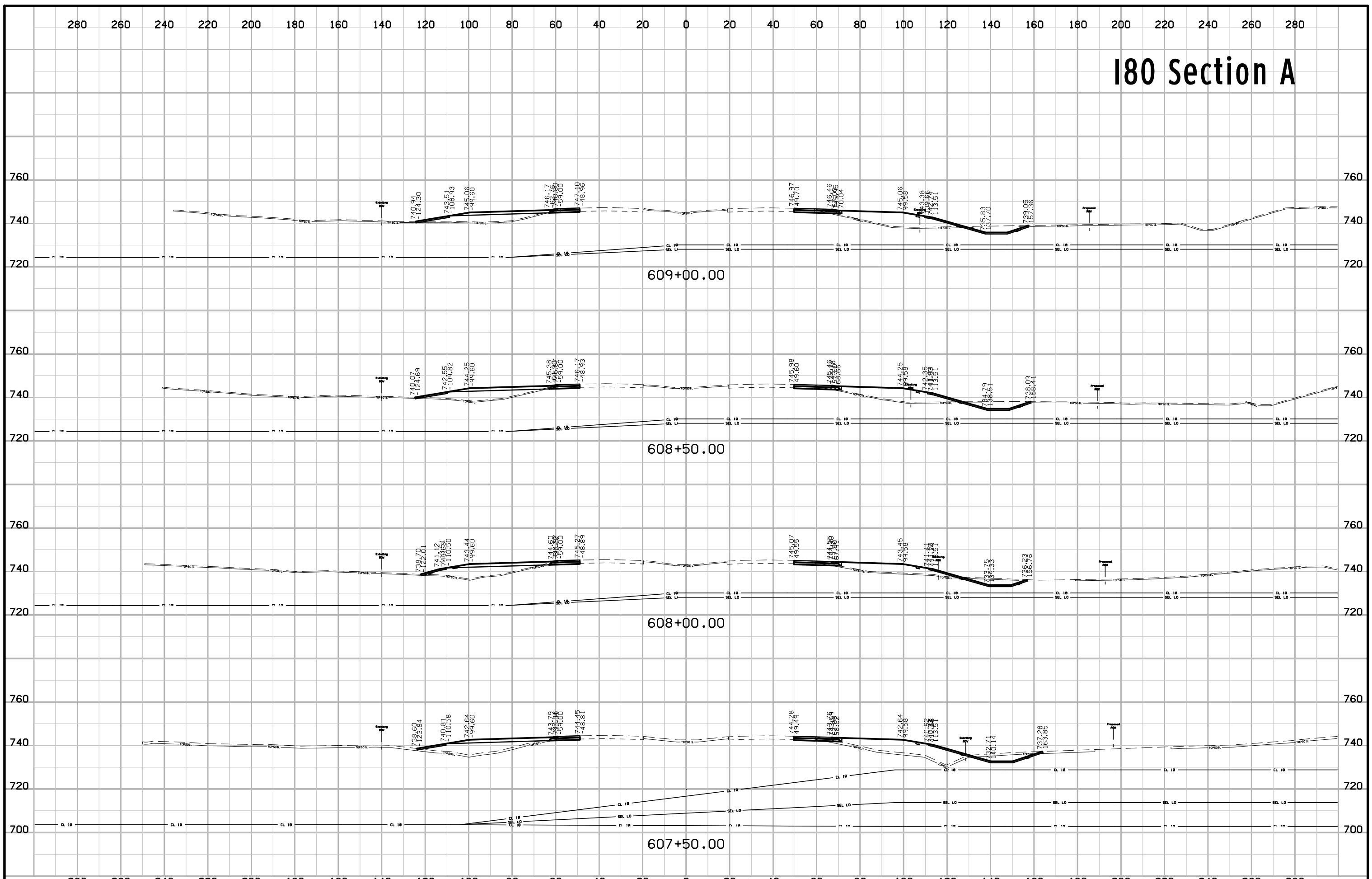




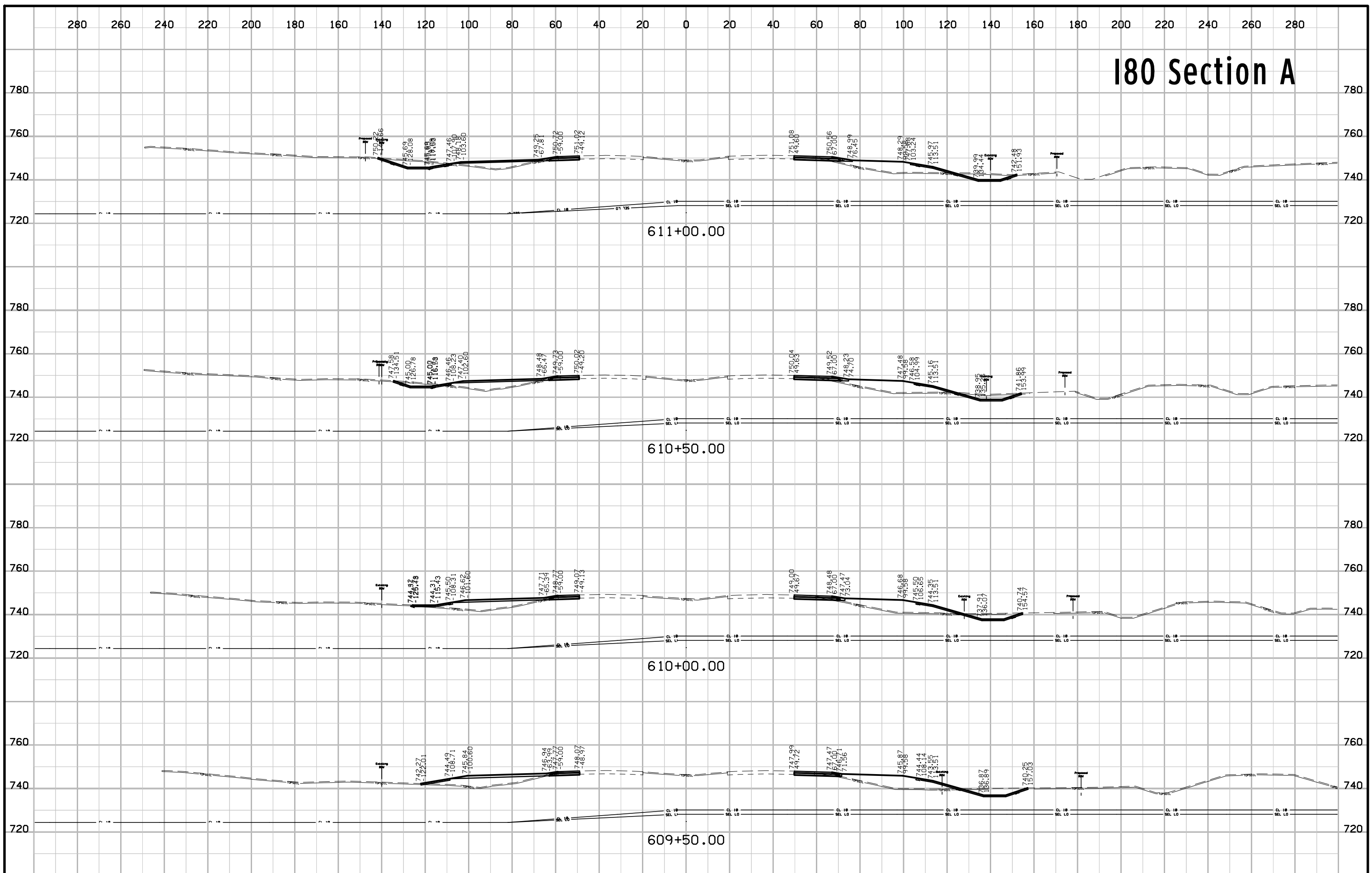
180 Section A



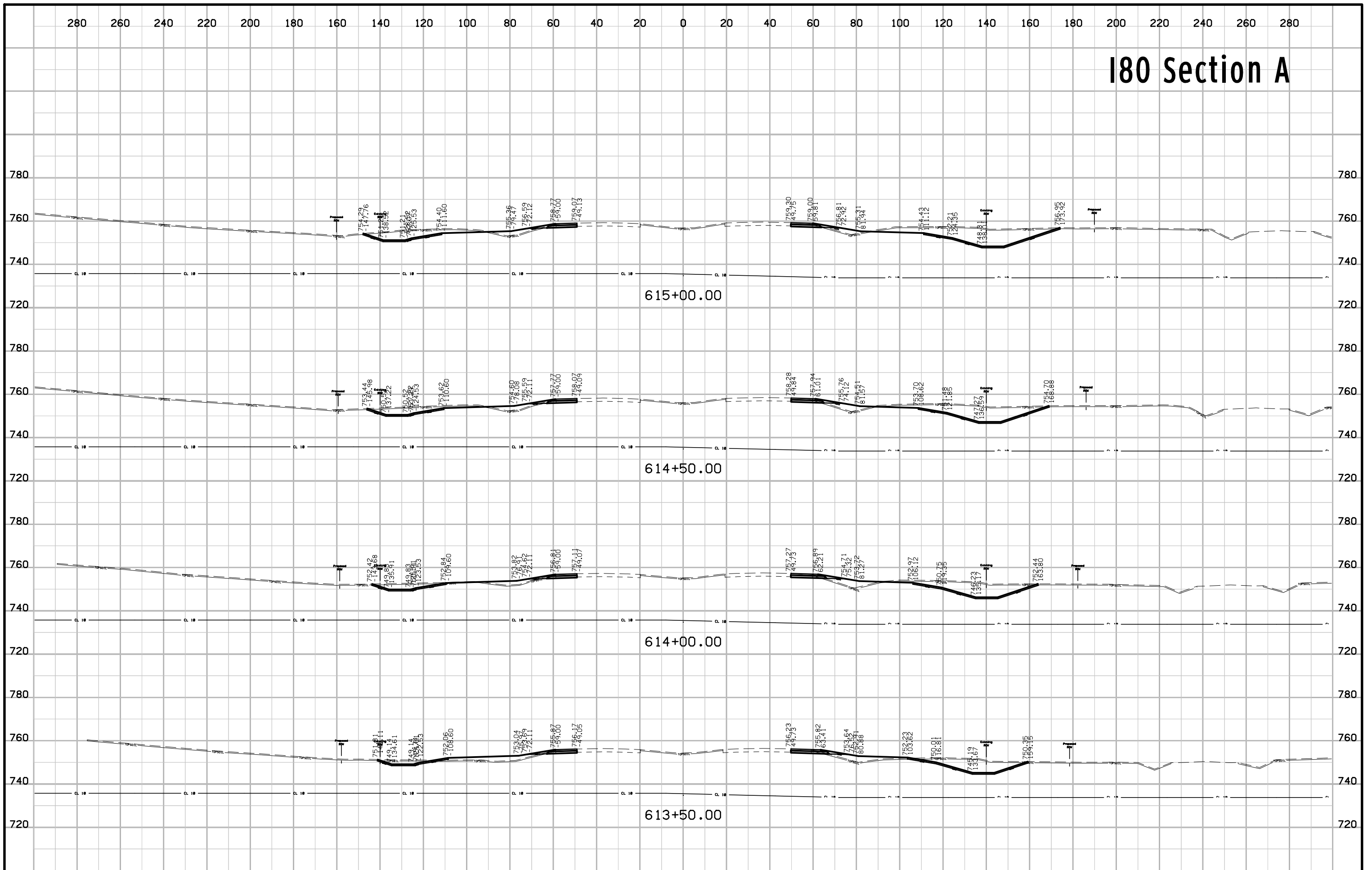
180 Section A



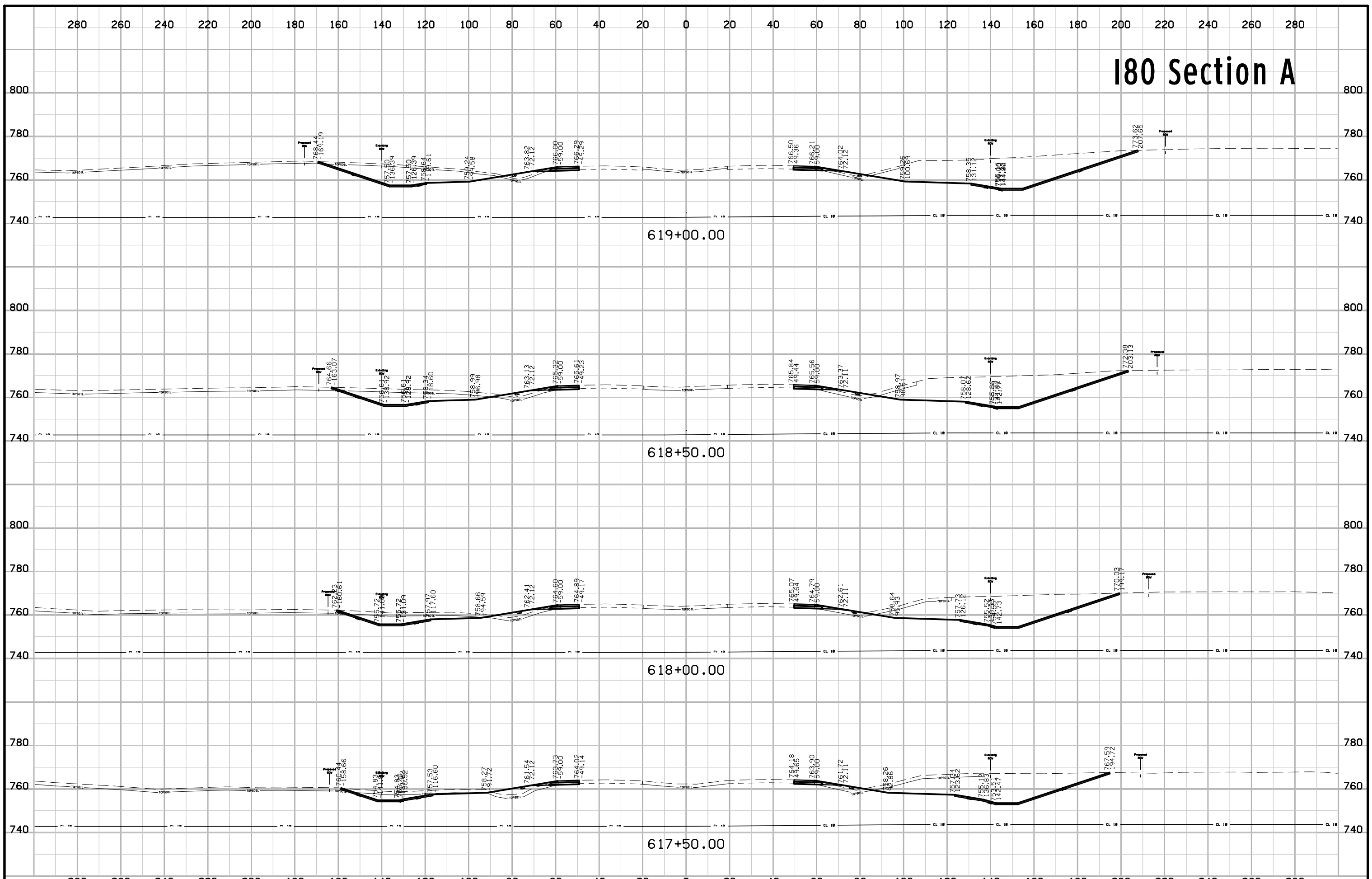
180 Section A



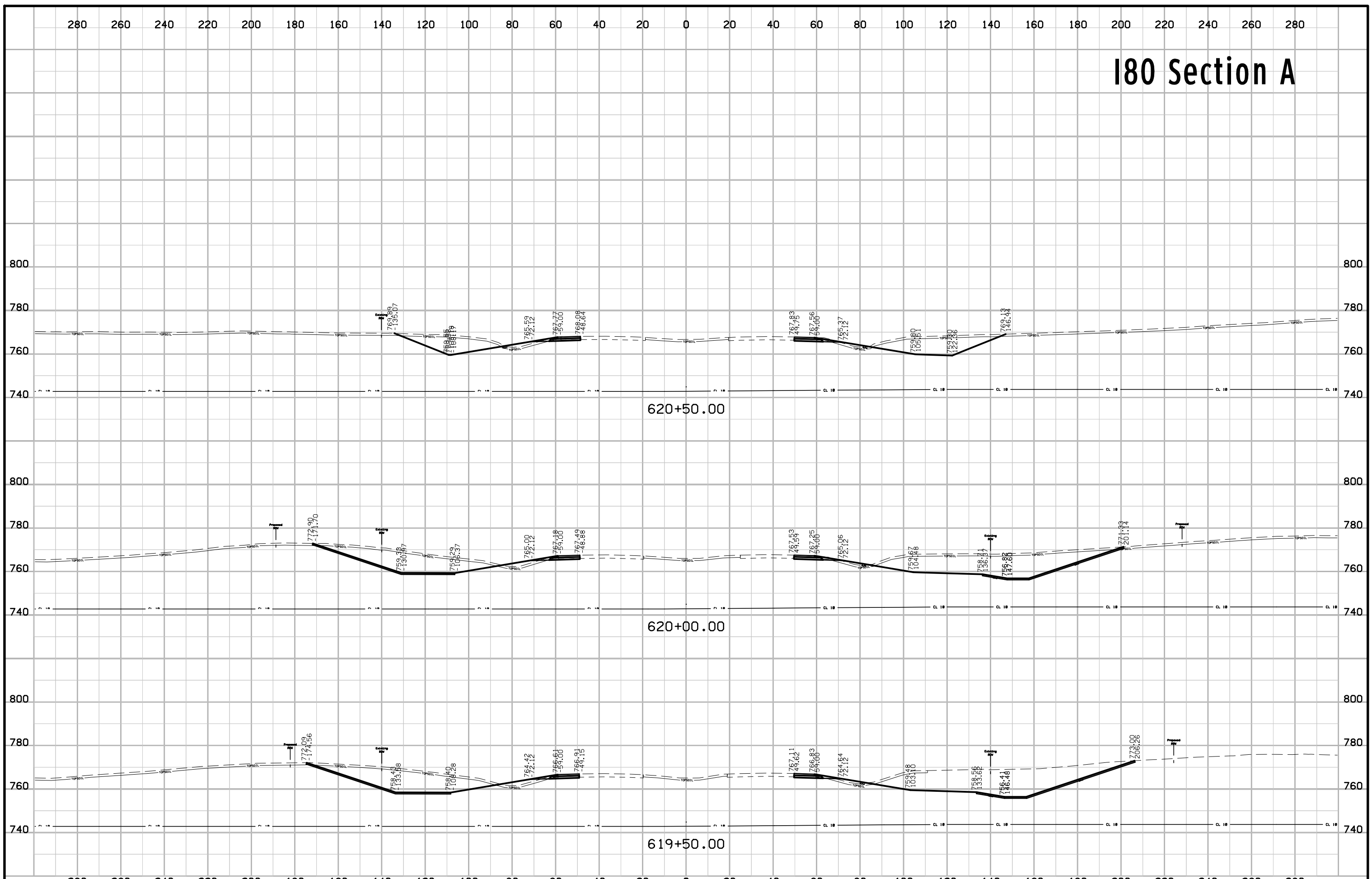
180 Section A



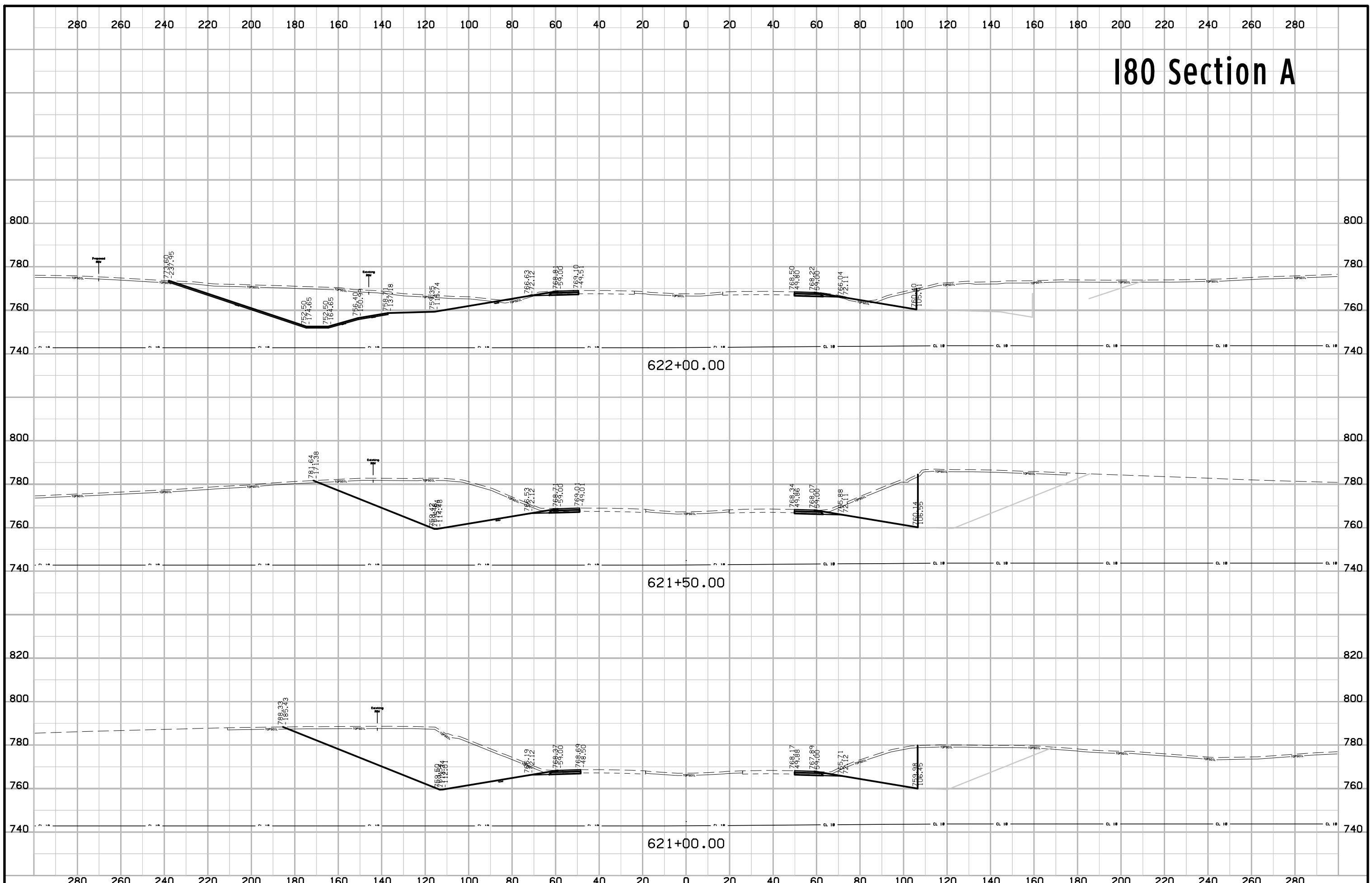
180 Section A



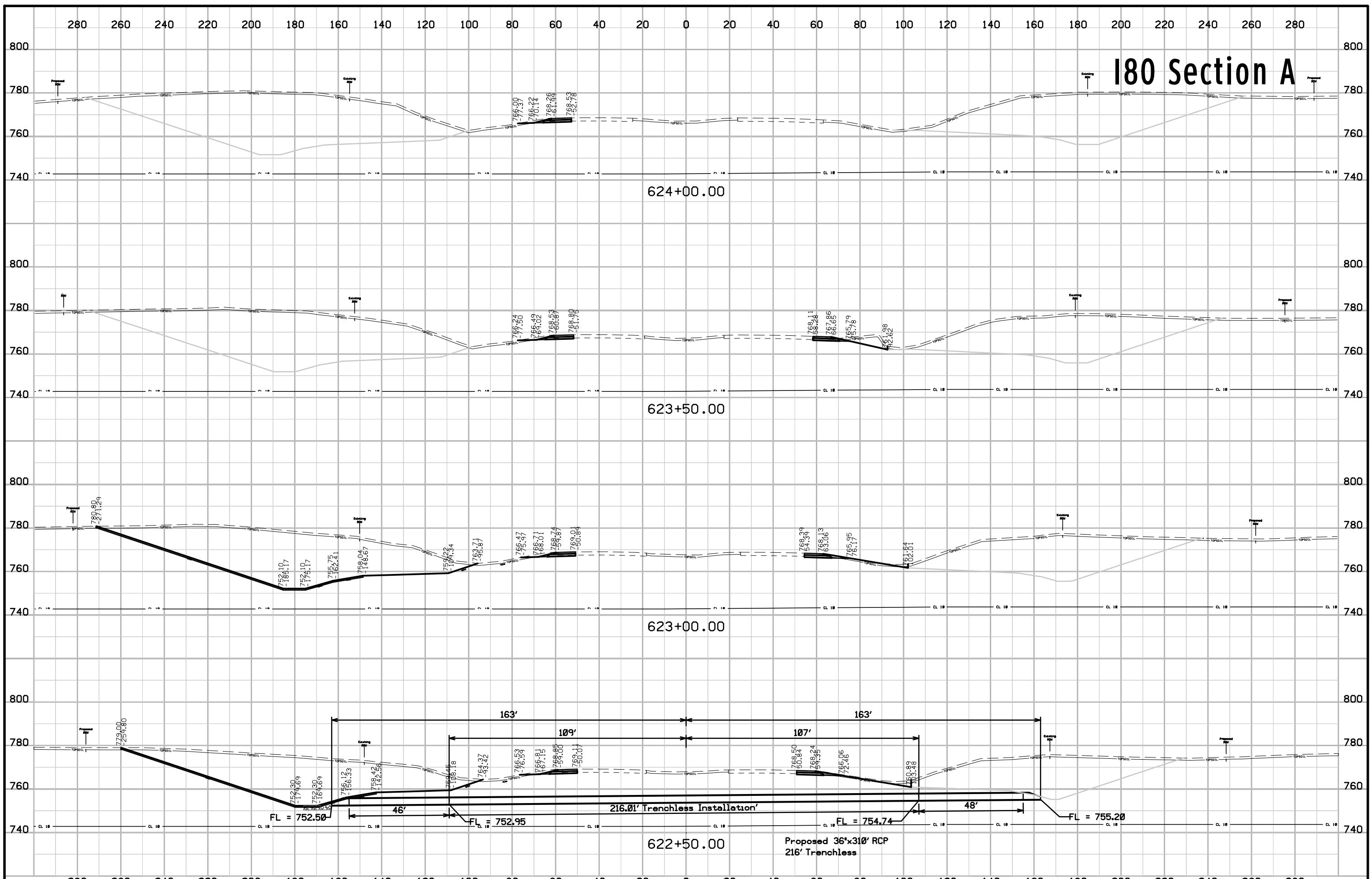
180 Section A



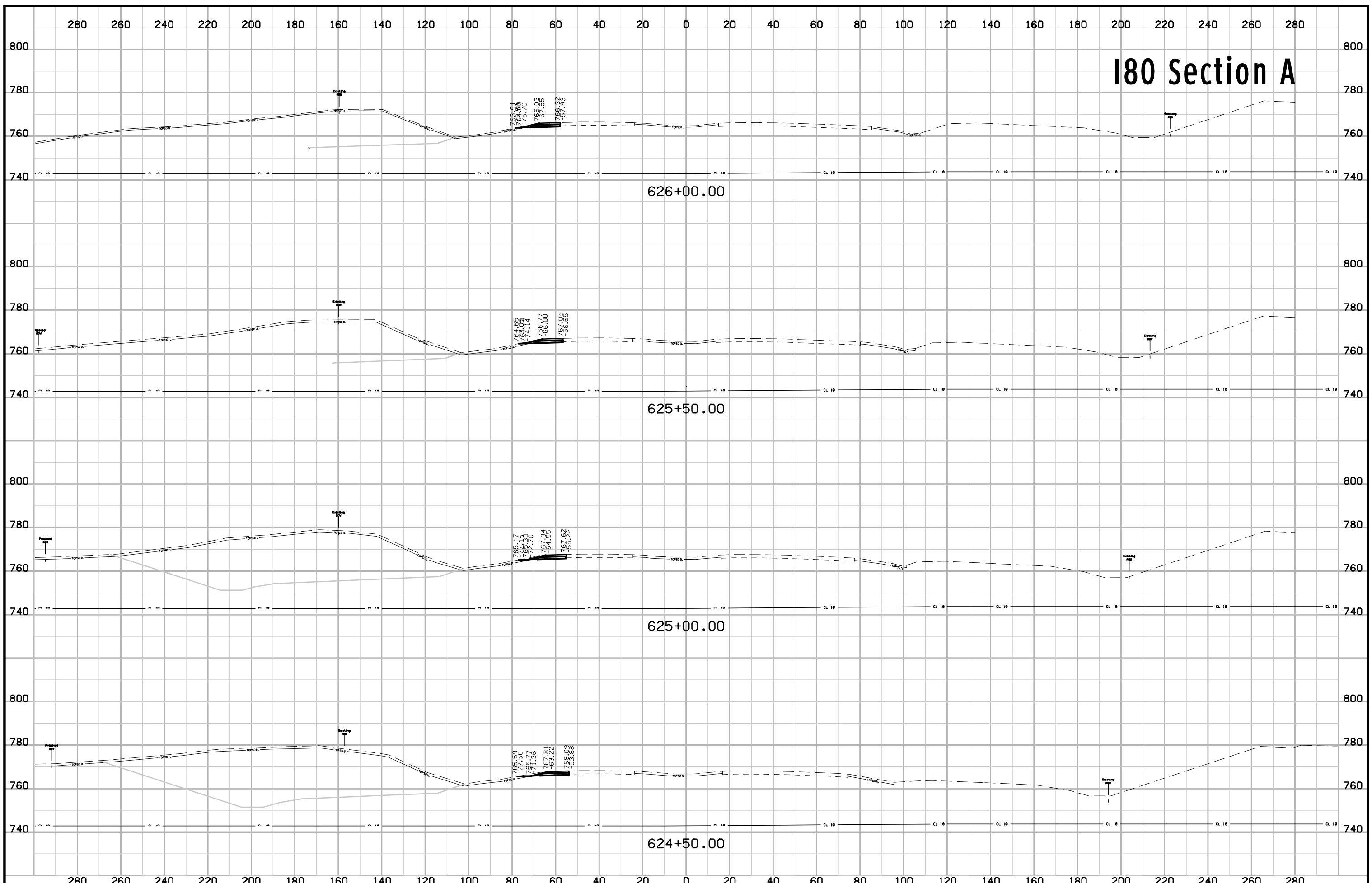
180 Section A



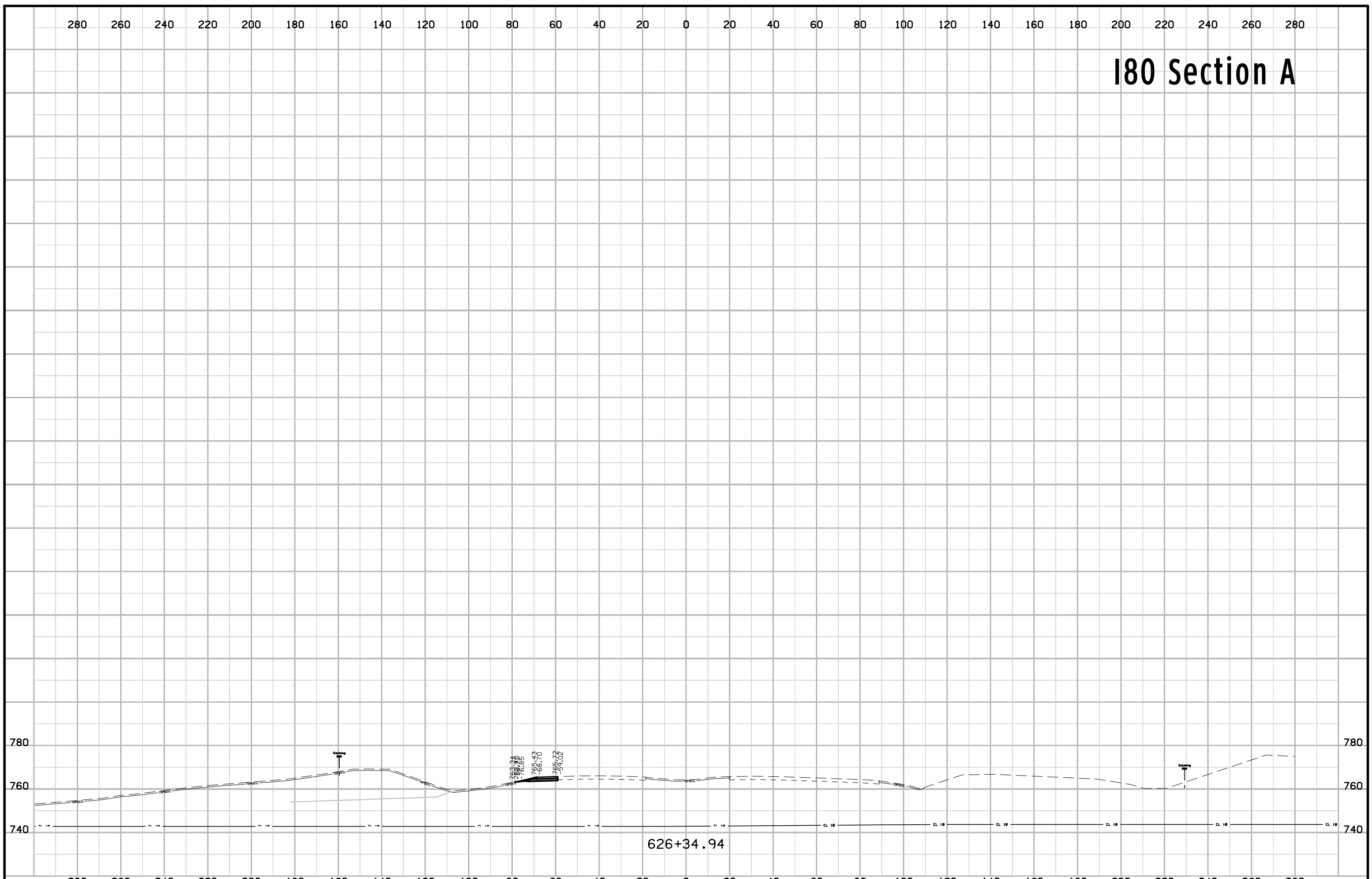
180 Section A



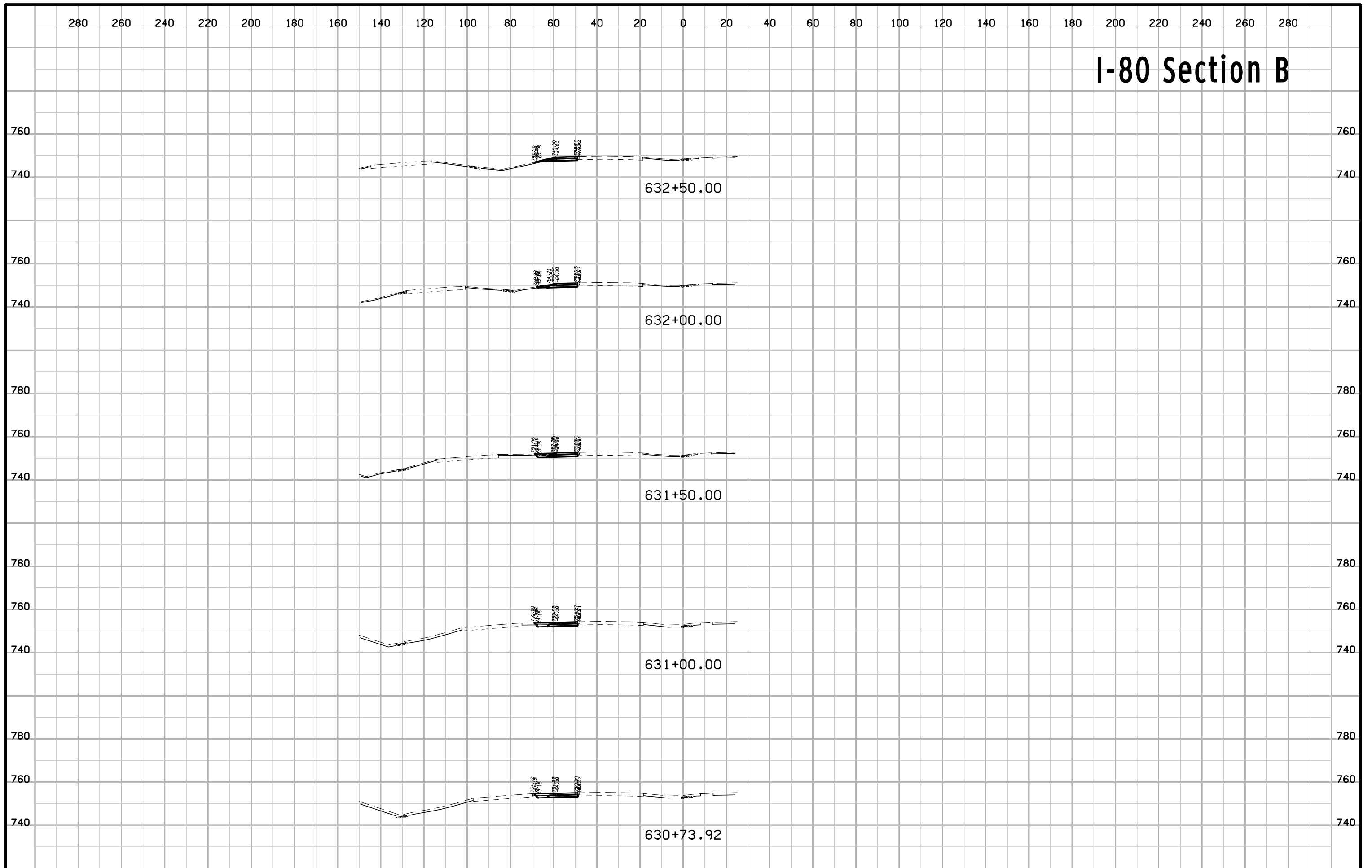
180 Section A



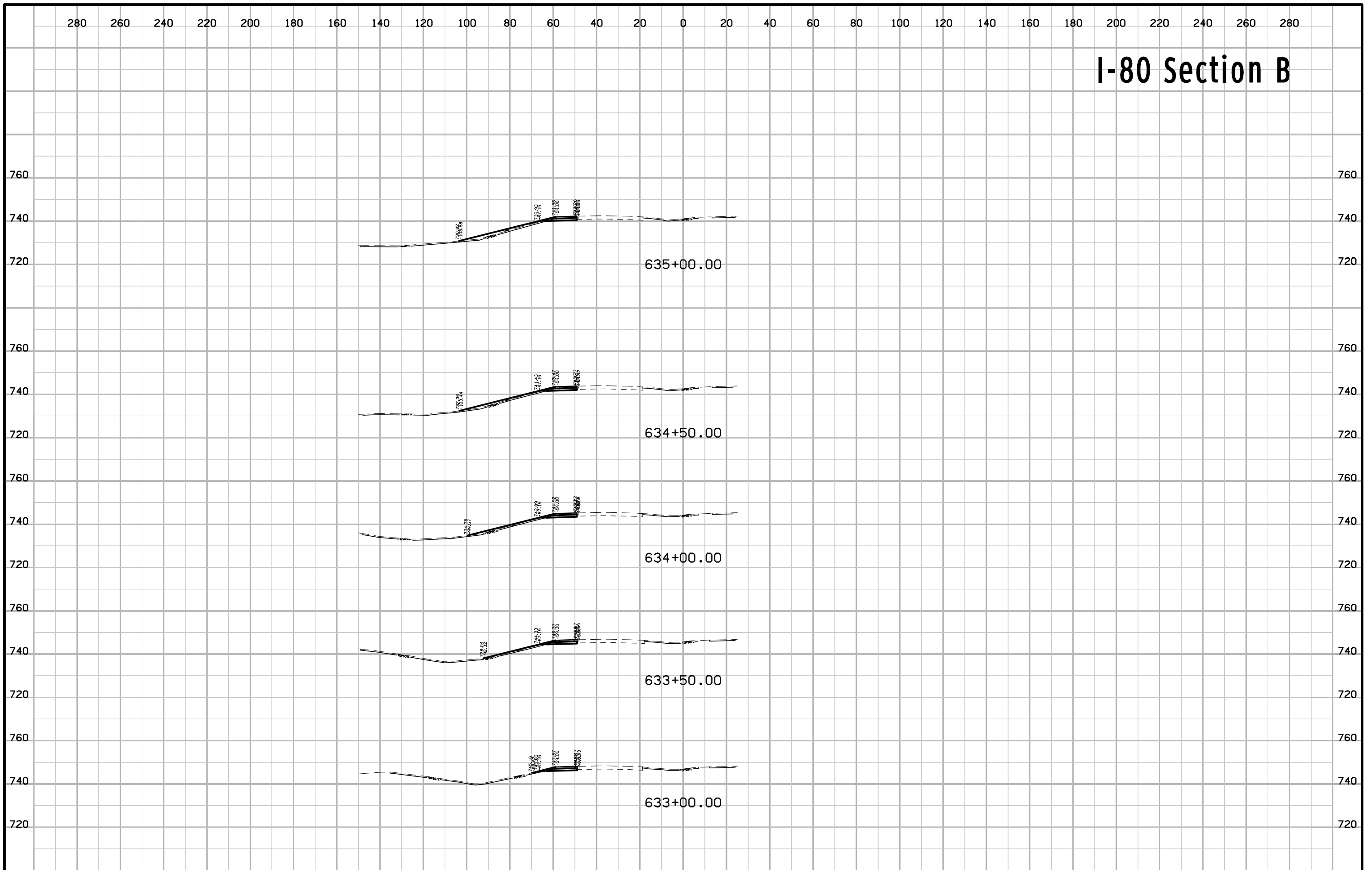
180 Section A



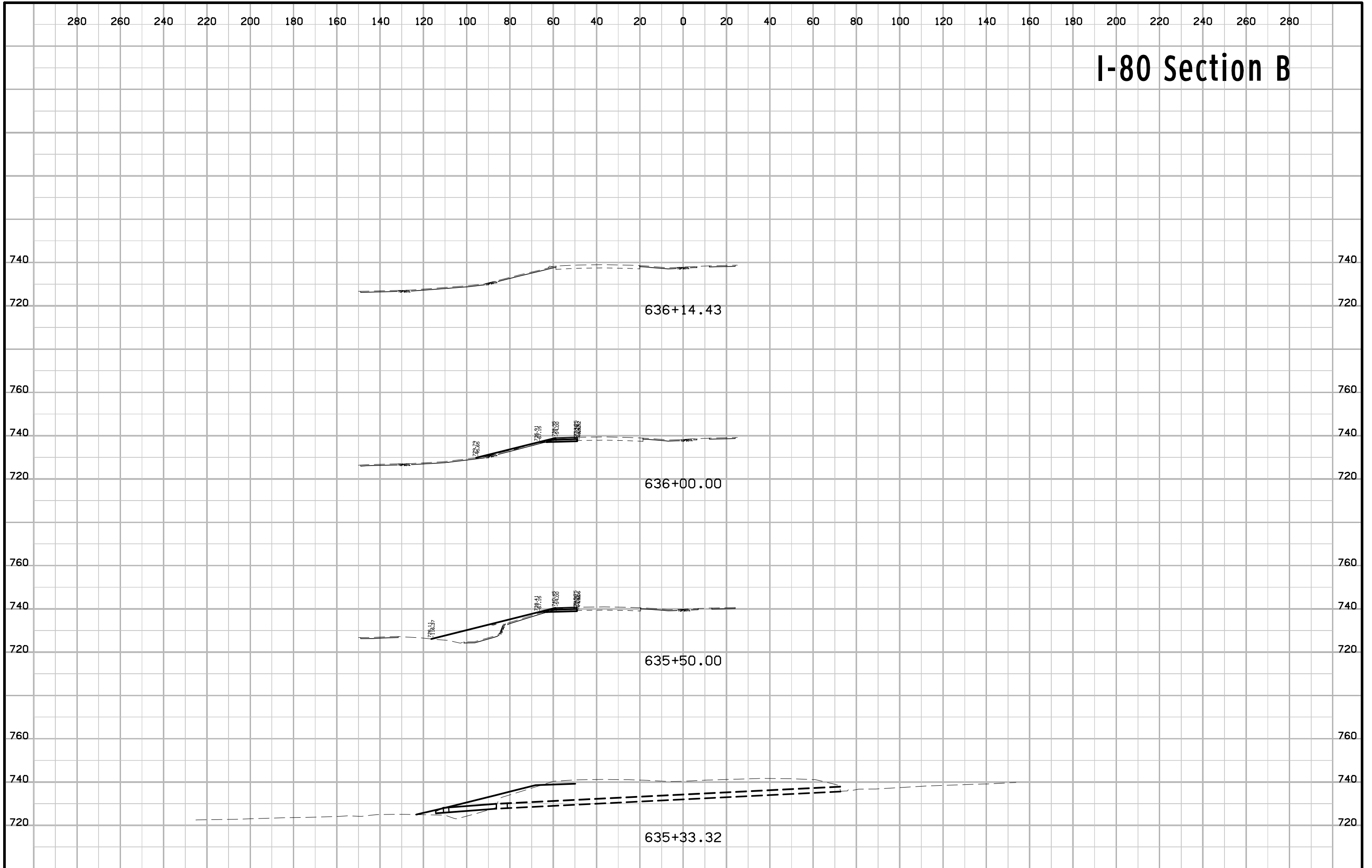
I-80 Section B



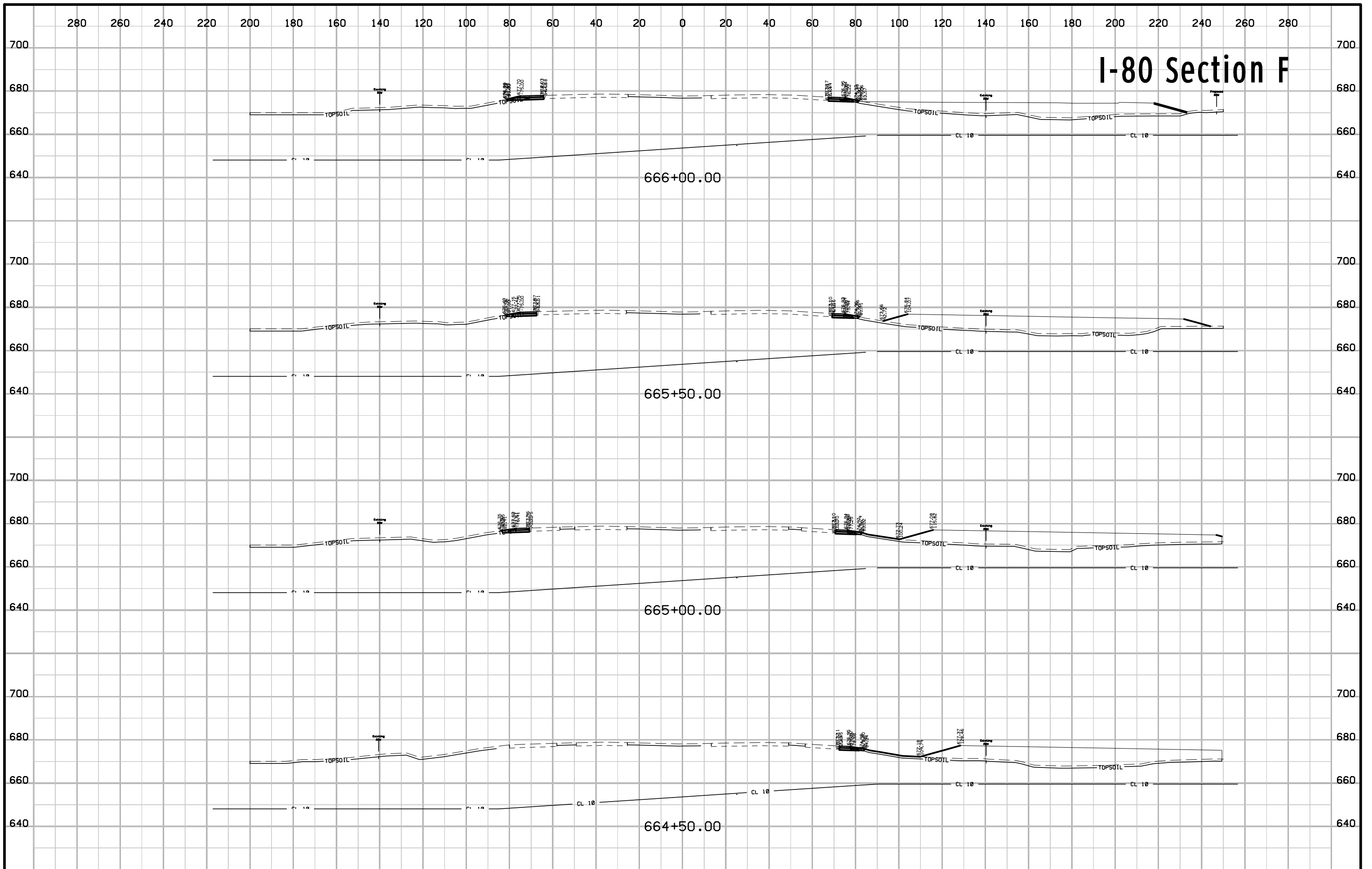
I-80 Section B



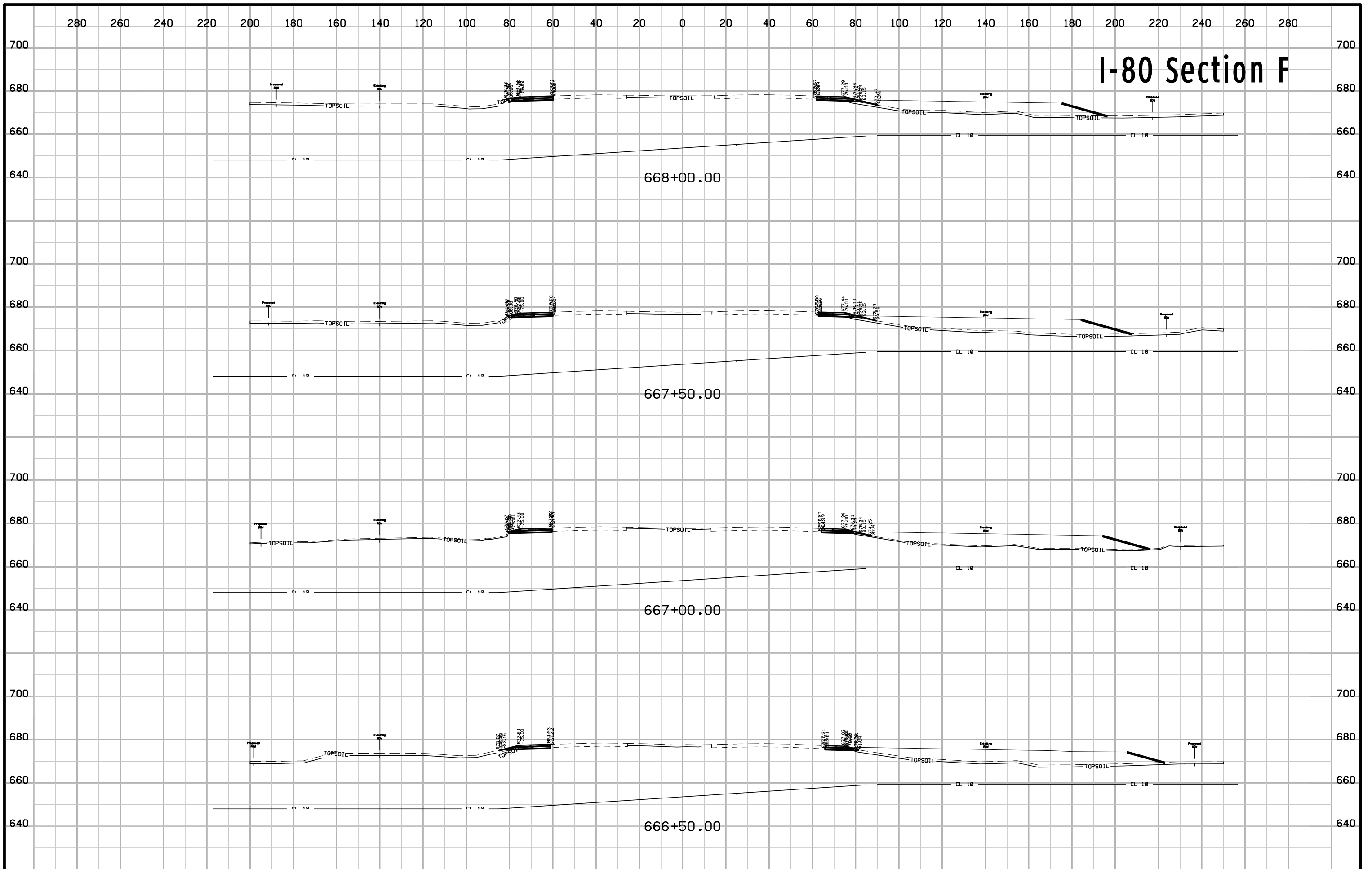
I-80 Section B



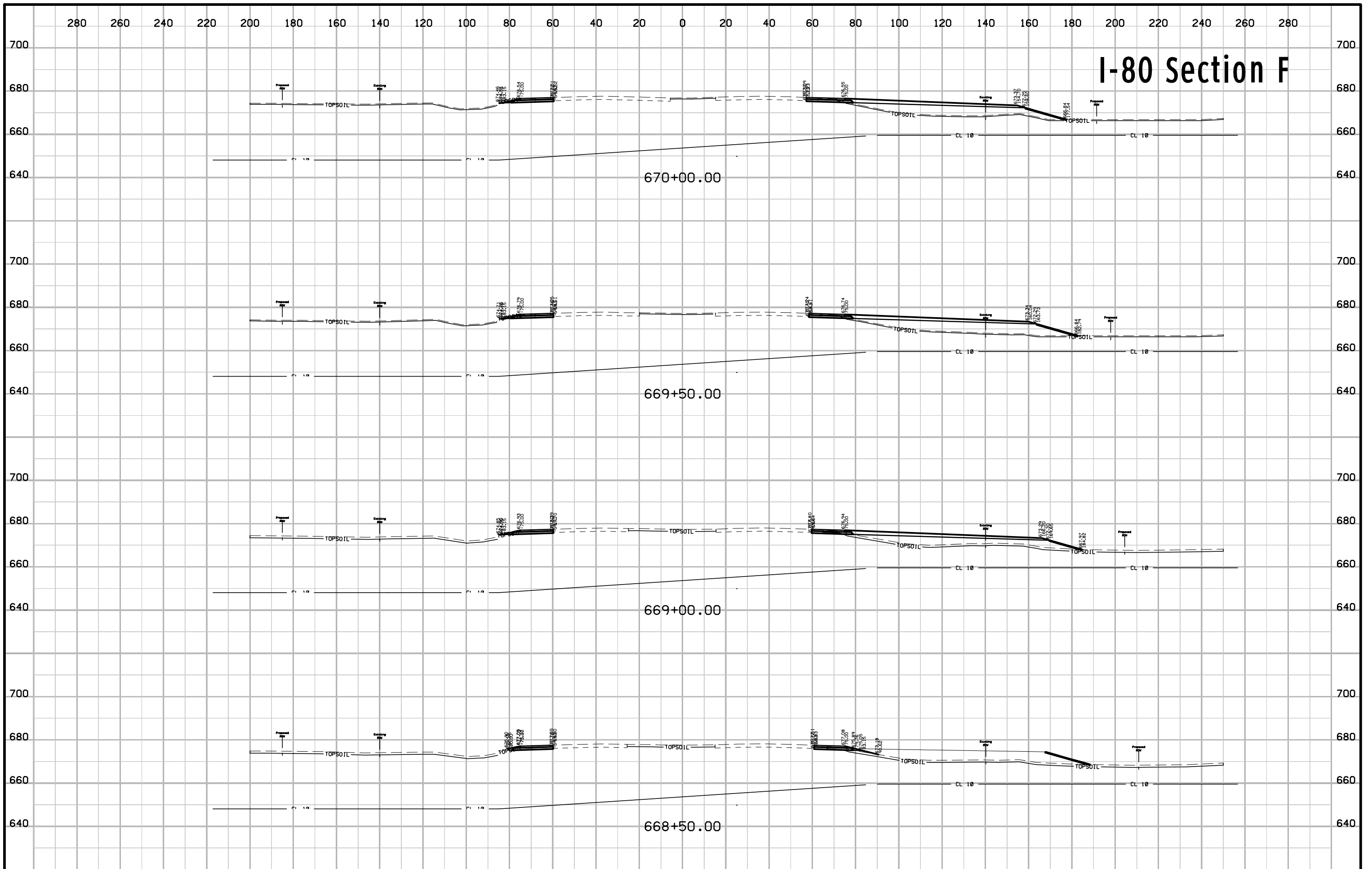
I-80 Section F



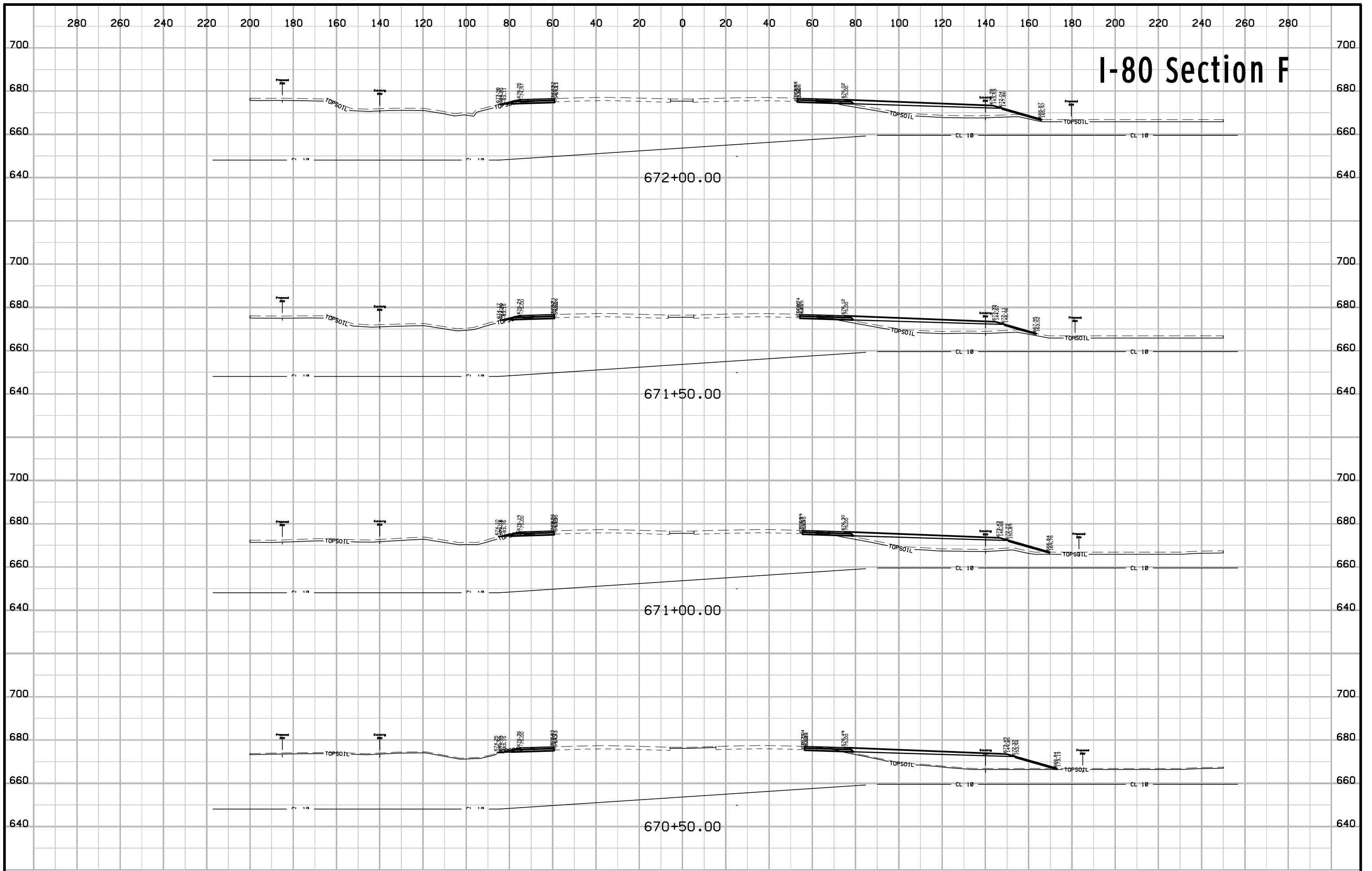
I-80 Section F



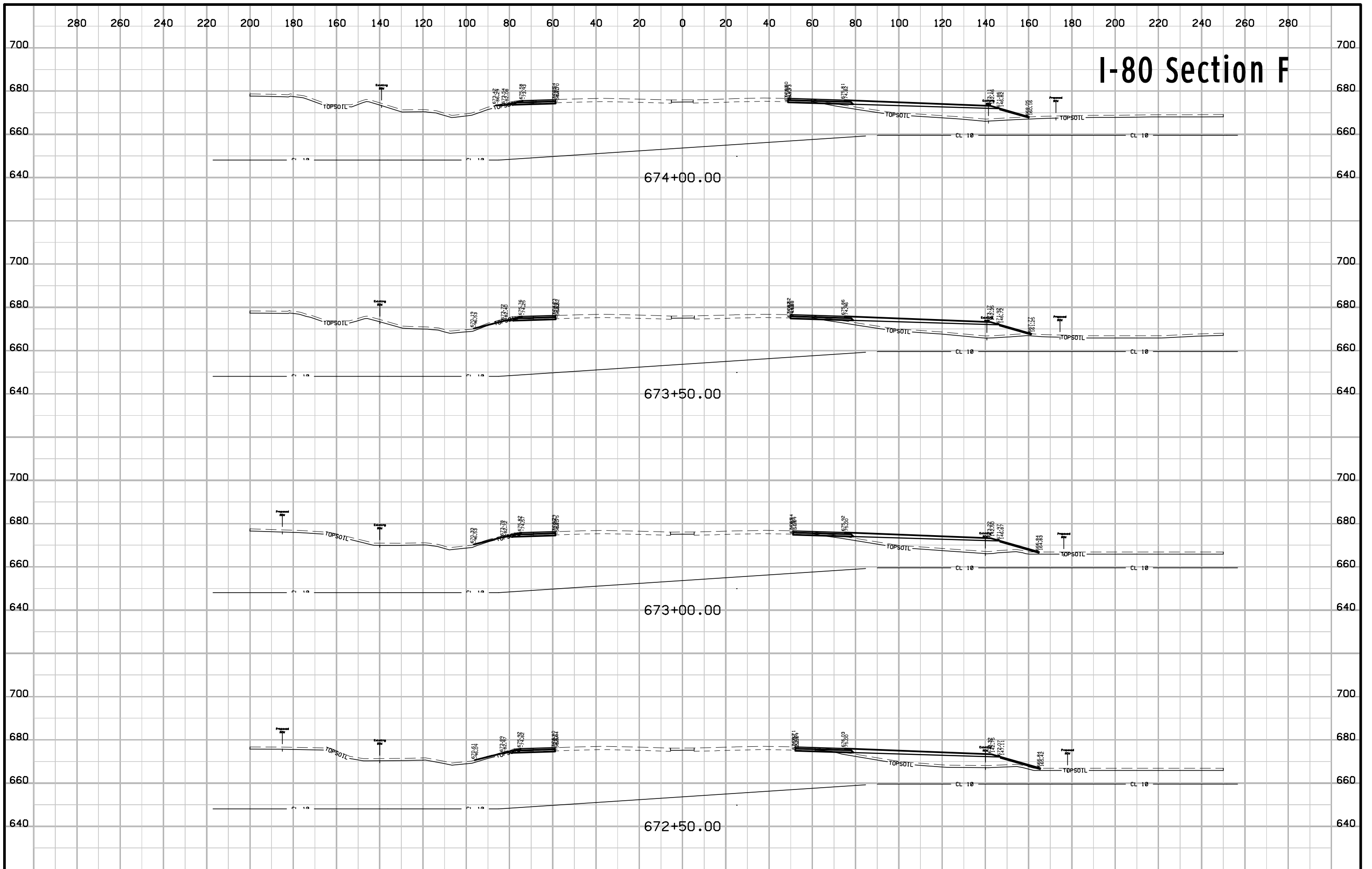
I-80 Section F



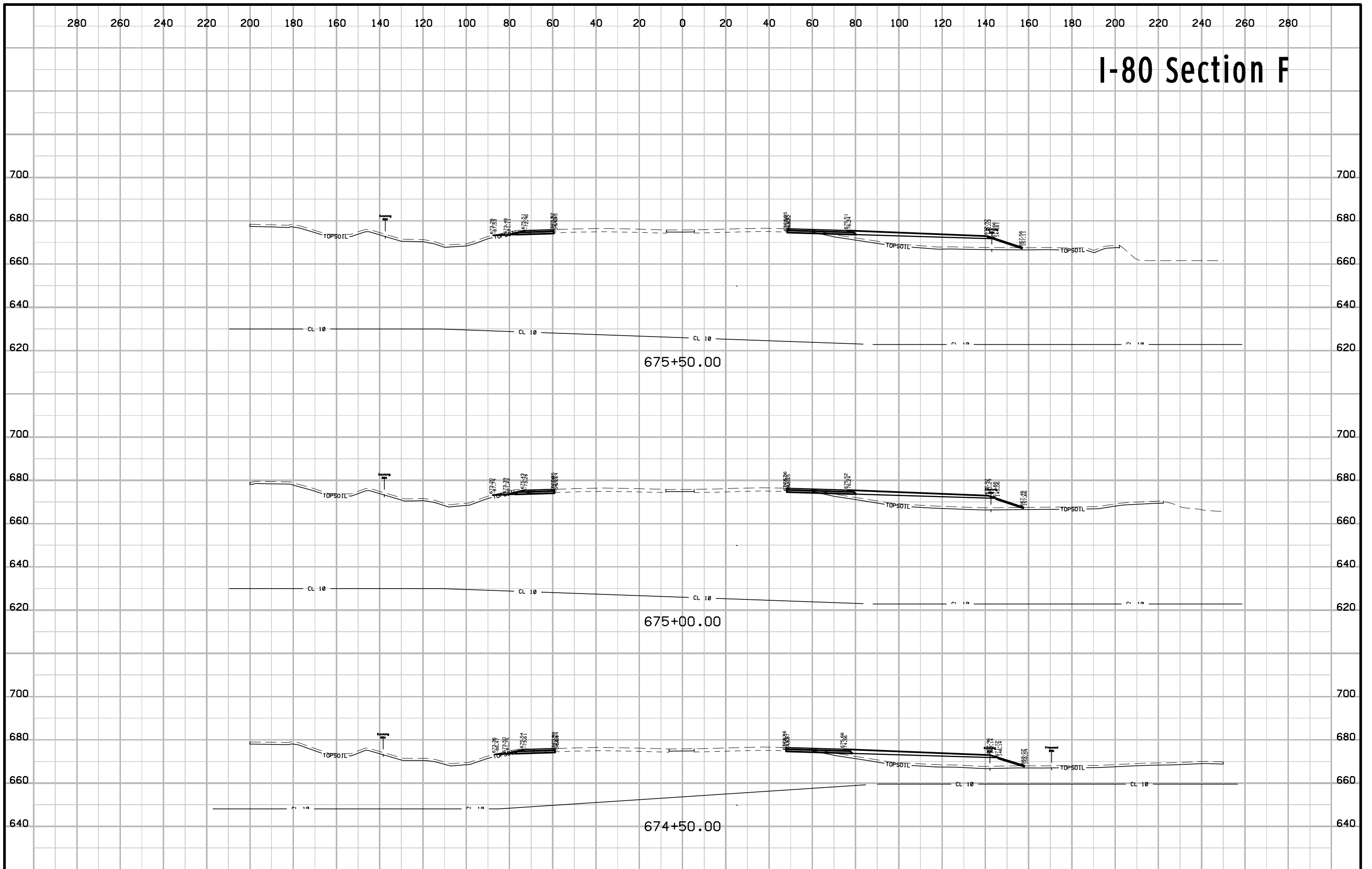
I-80 Section F



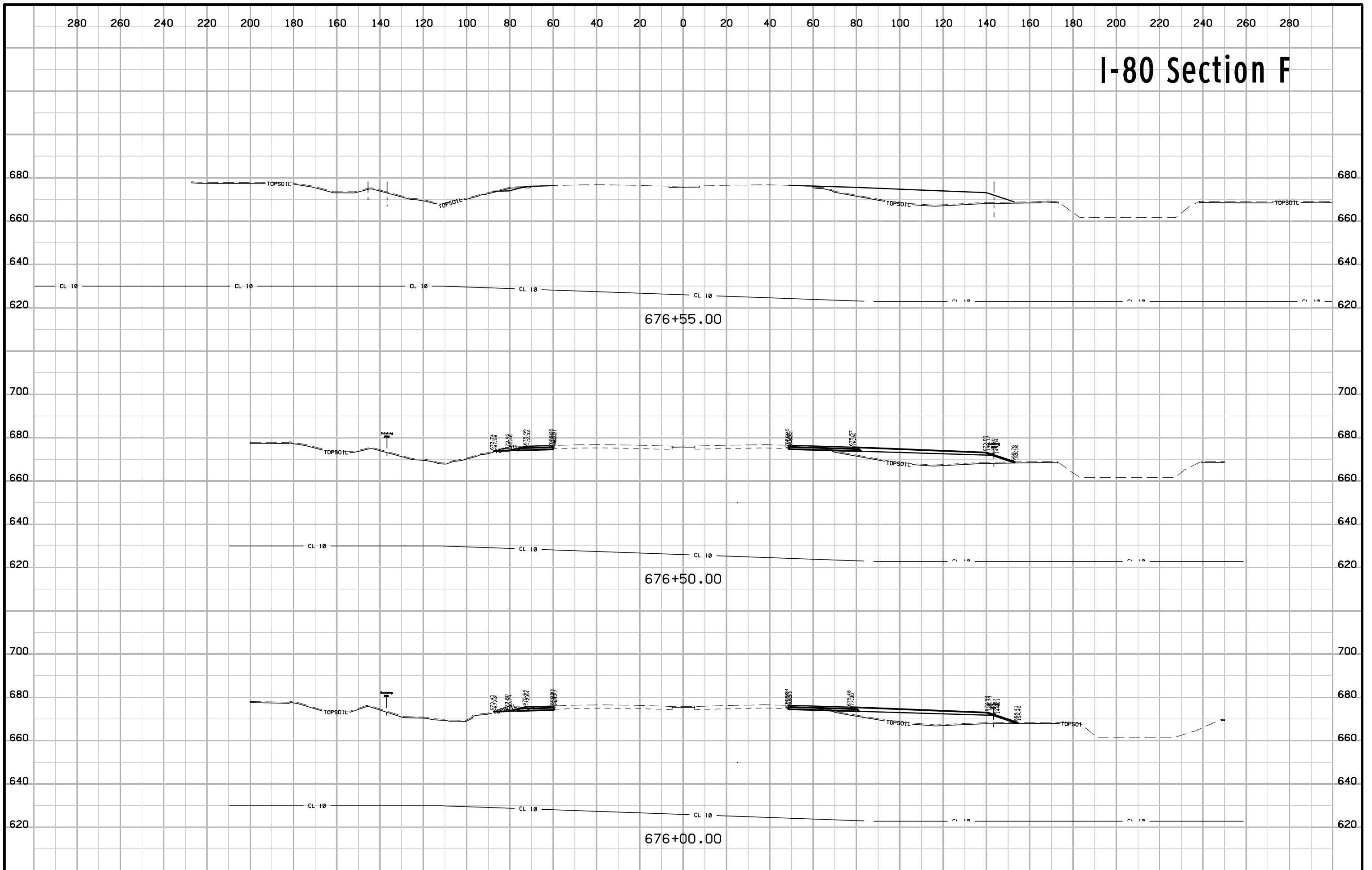
I-80 Section F



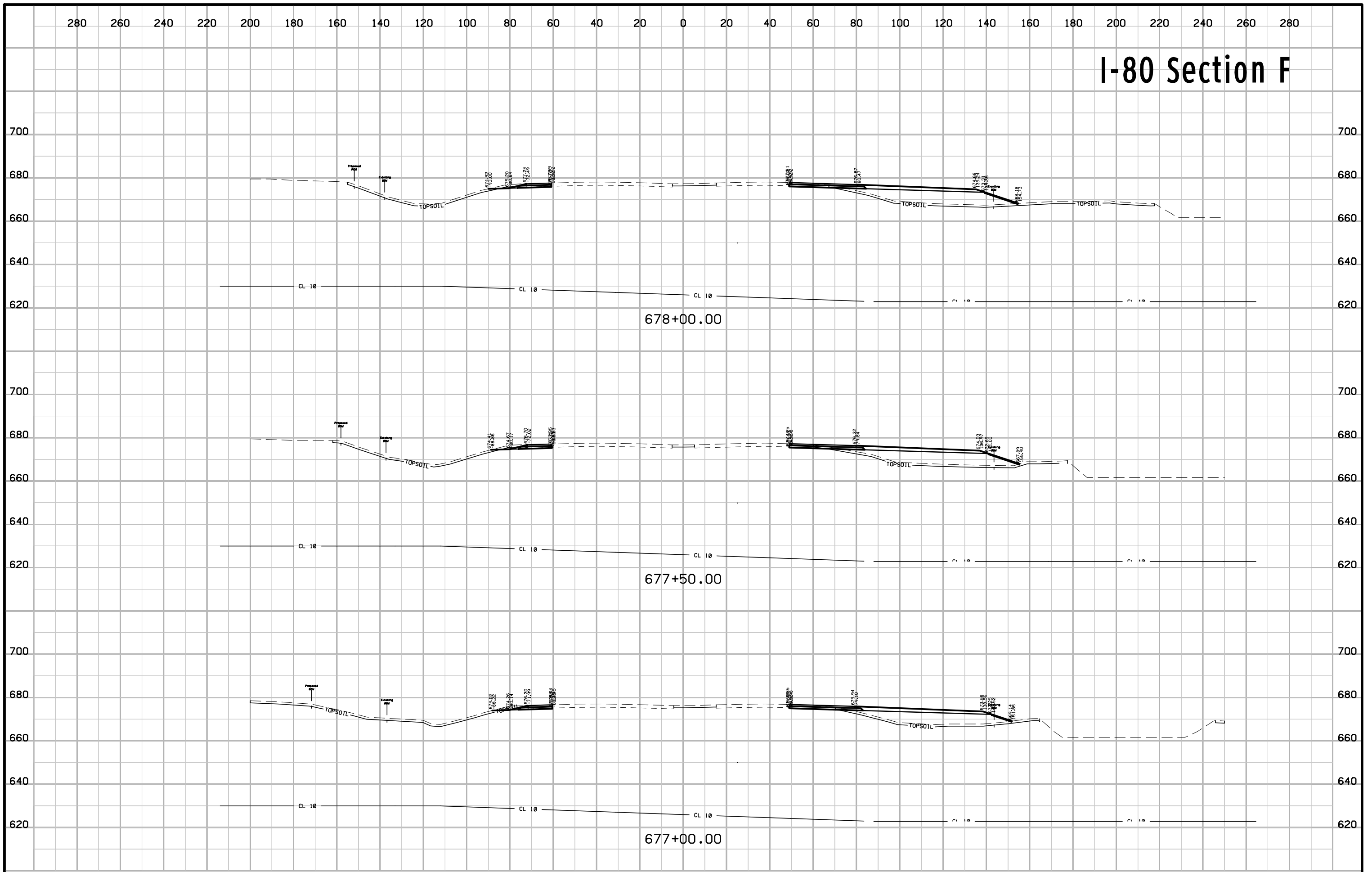
I-80 Section F



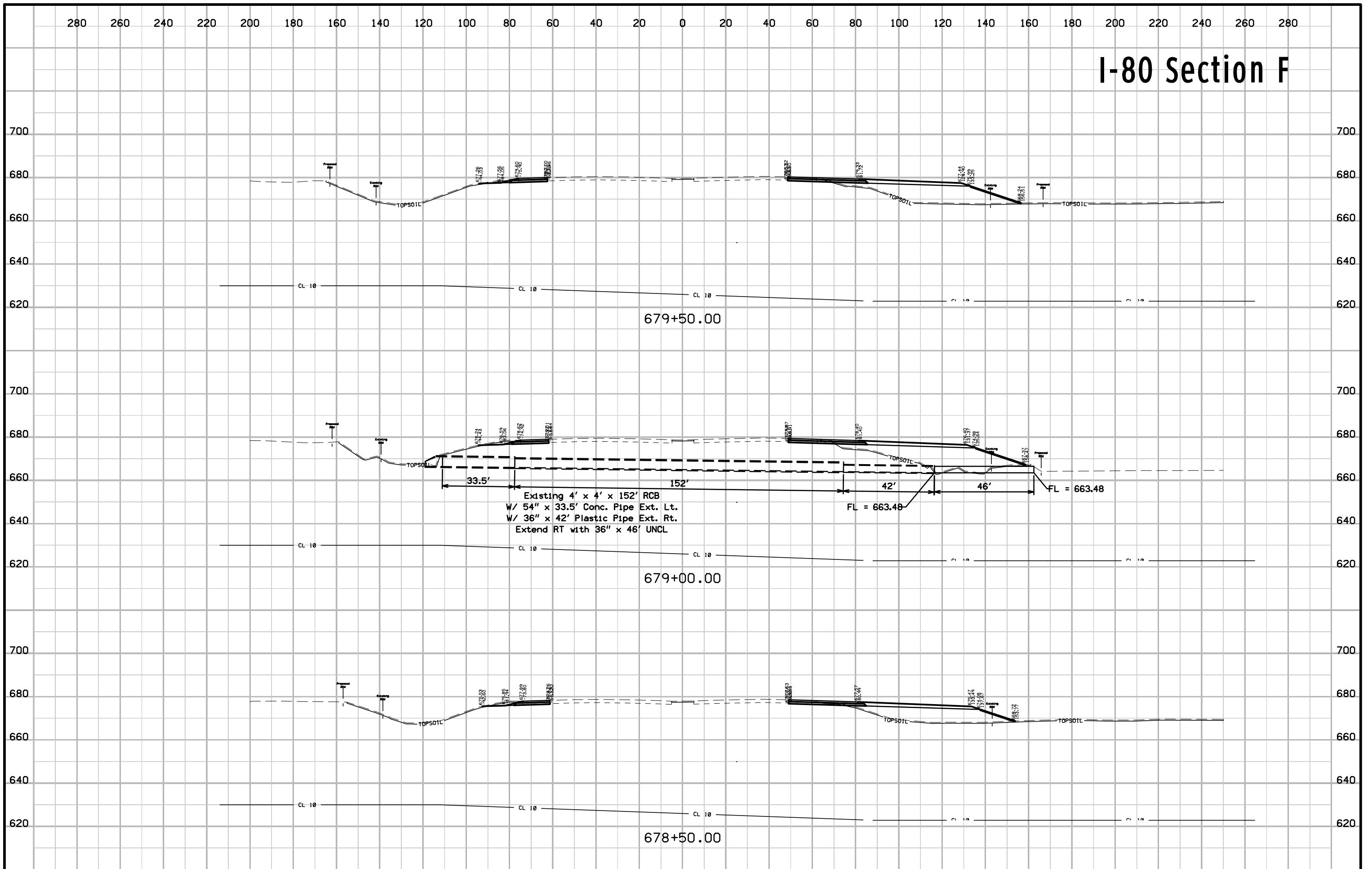
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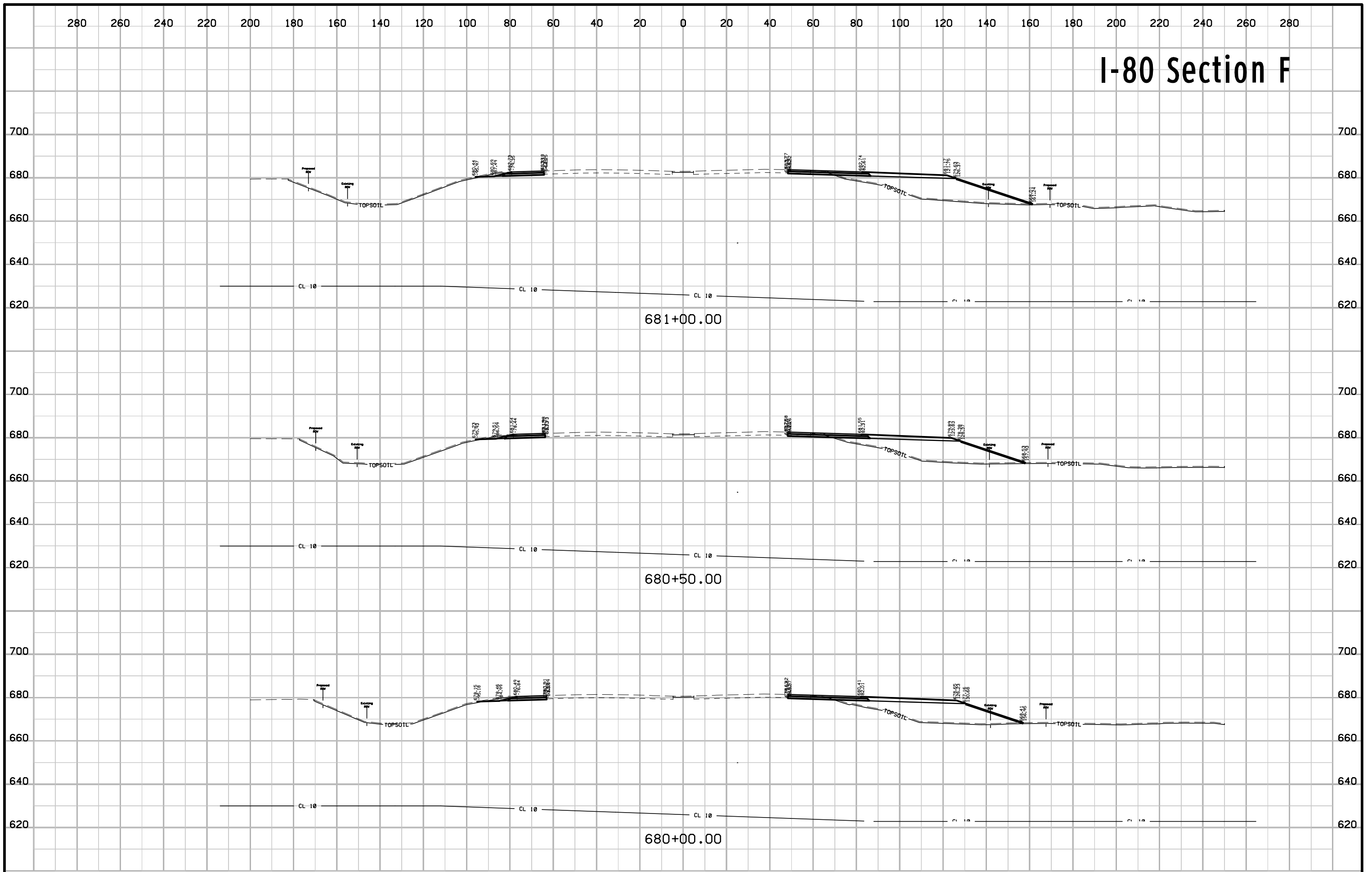
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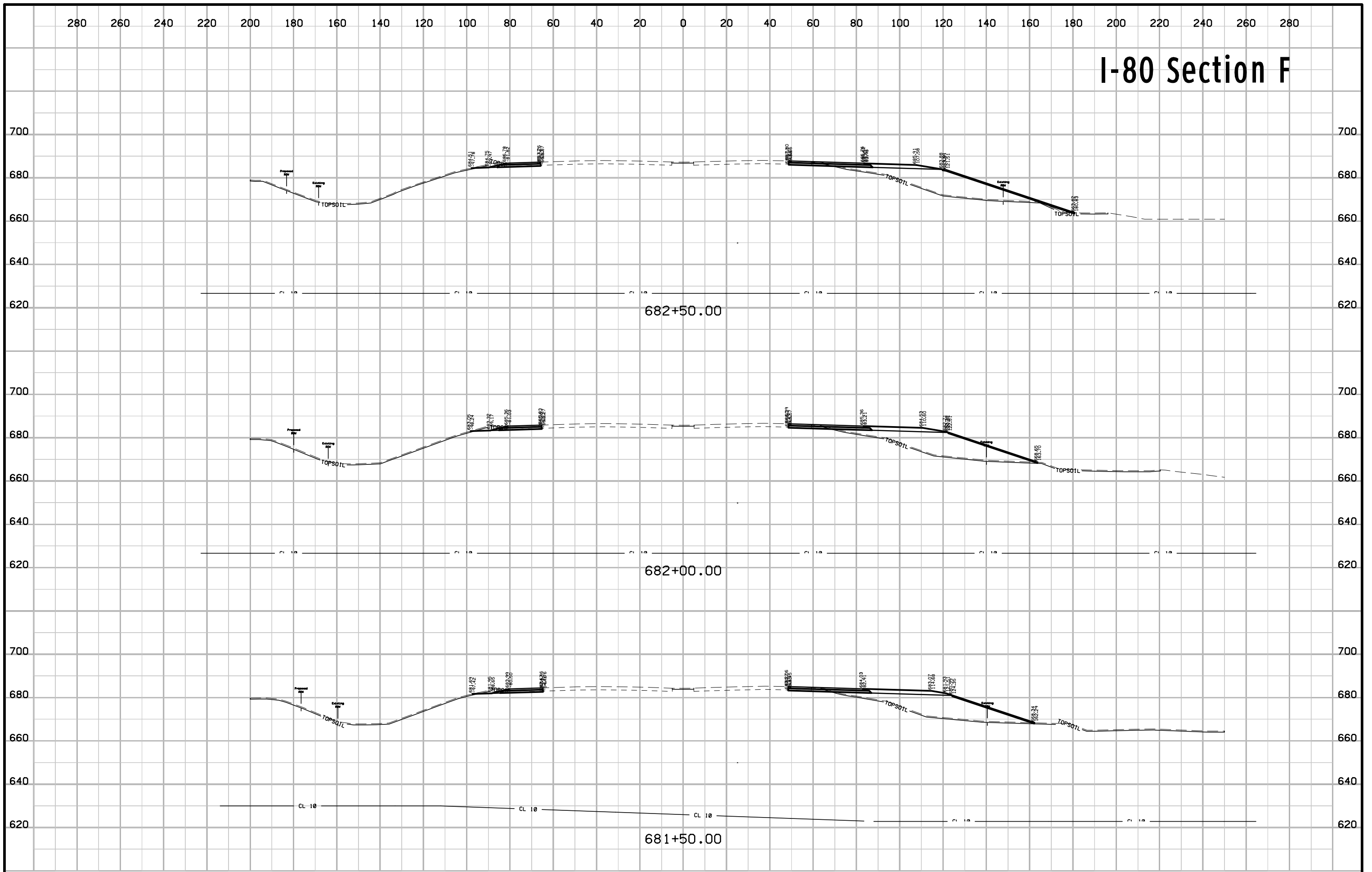
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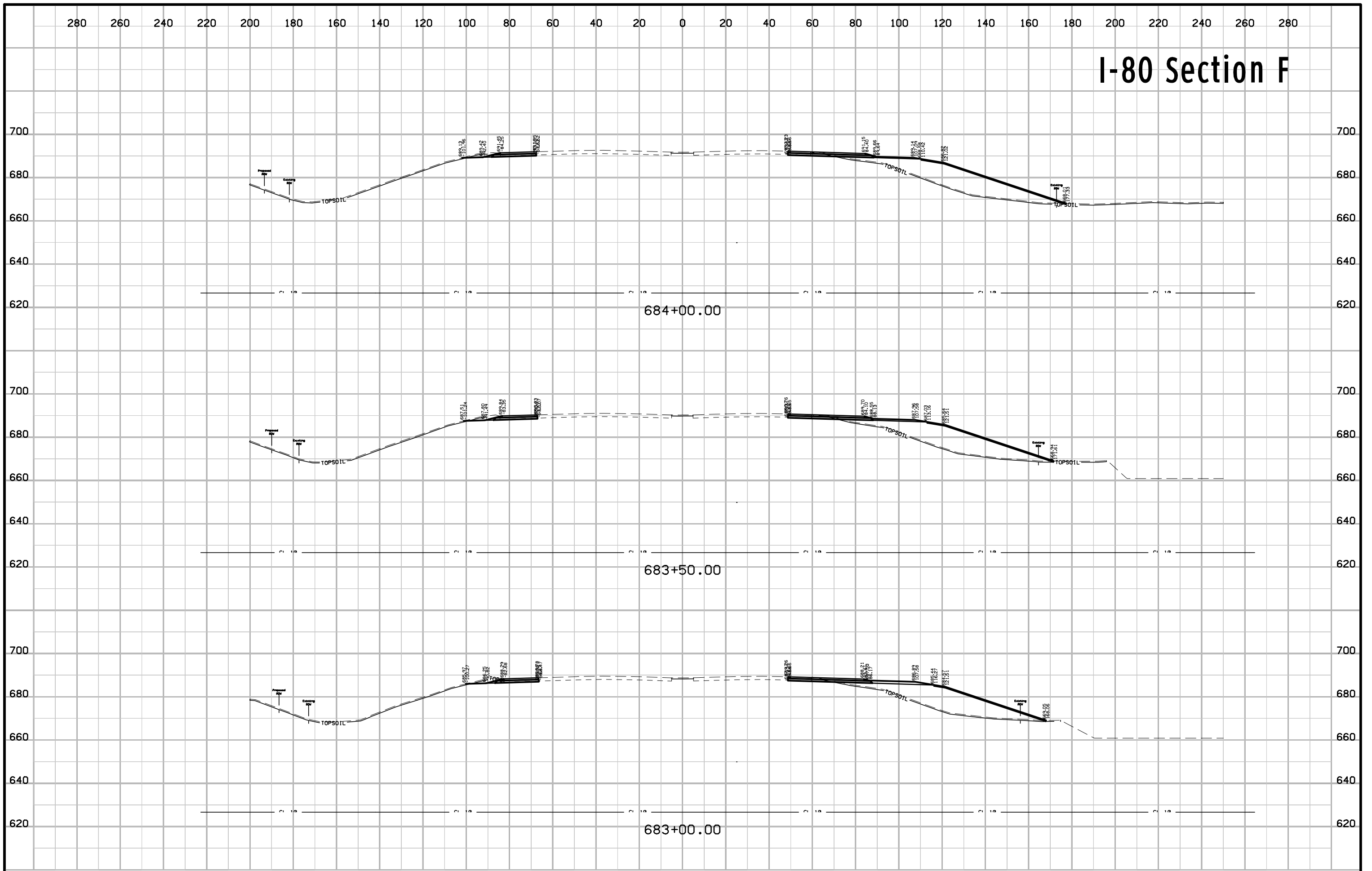
I-80 Section F



I-80 Section F

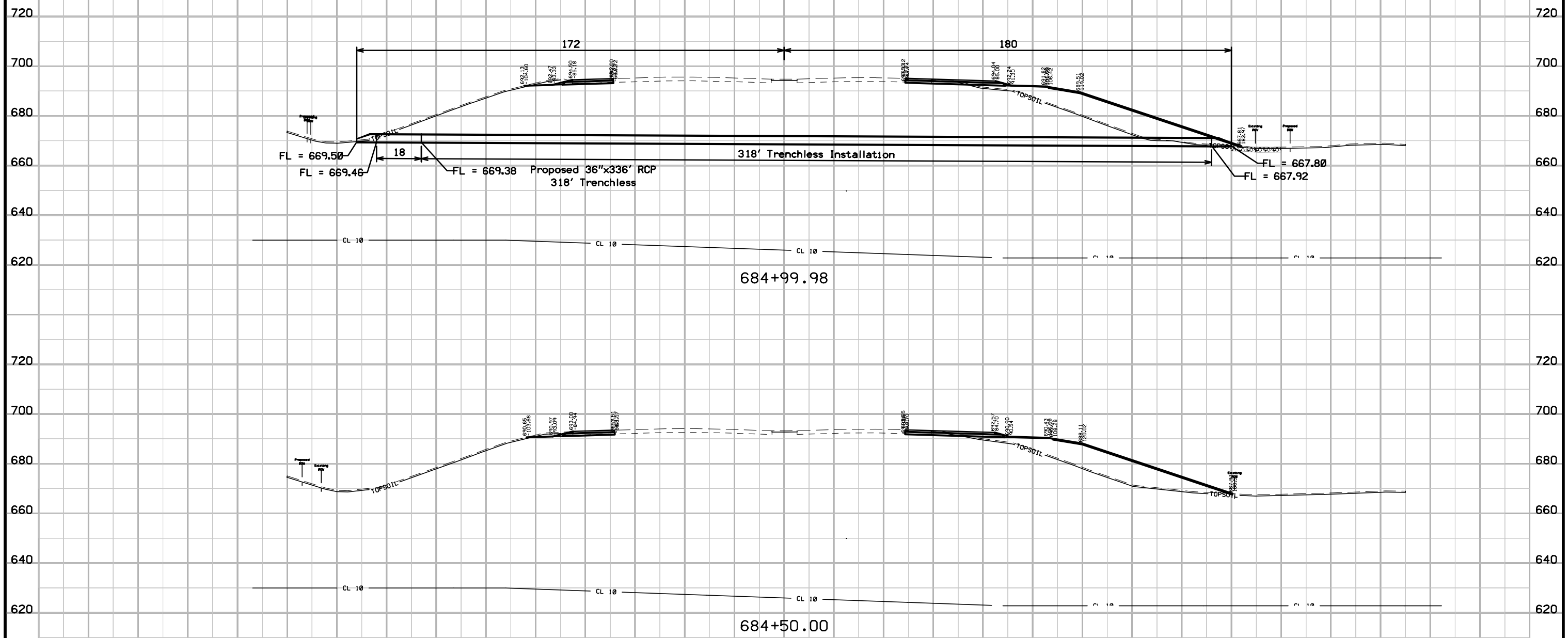


I-80 Section F



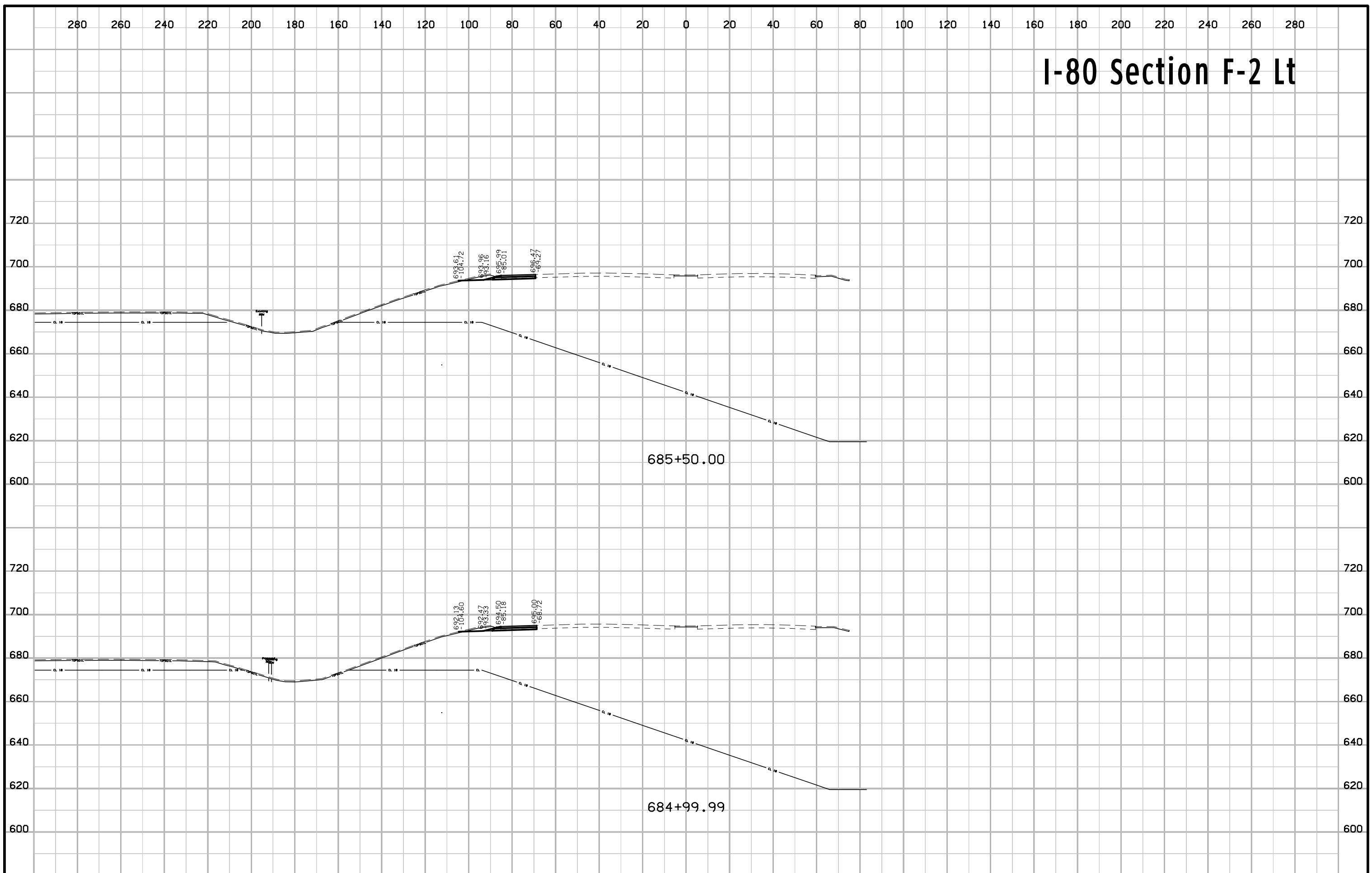
280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

I-80 Section F

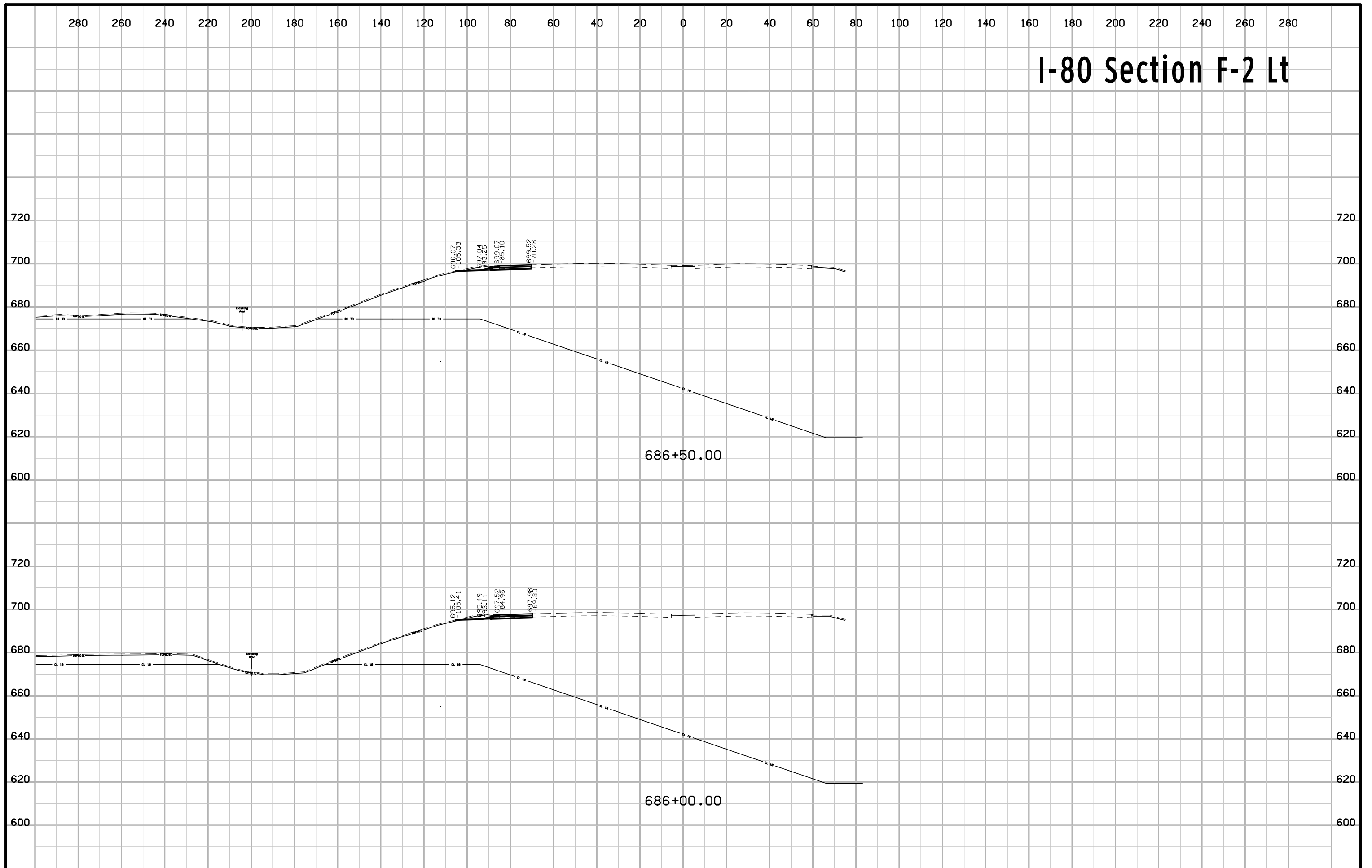


280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

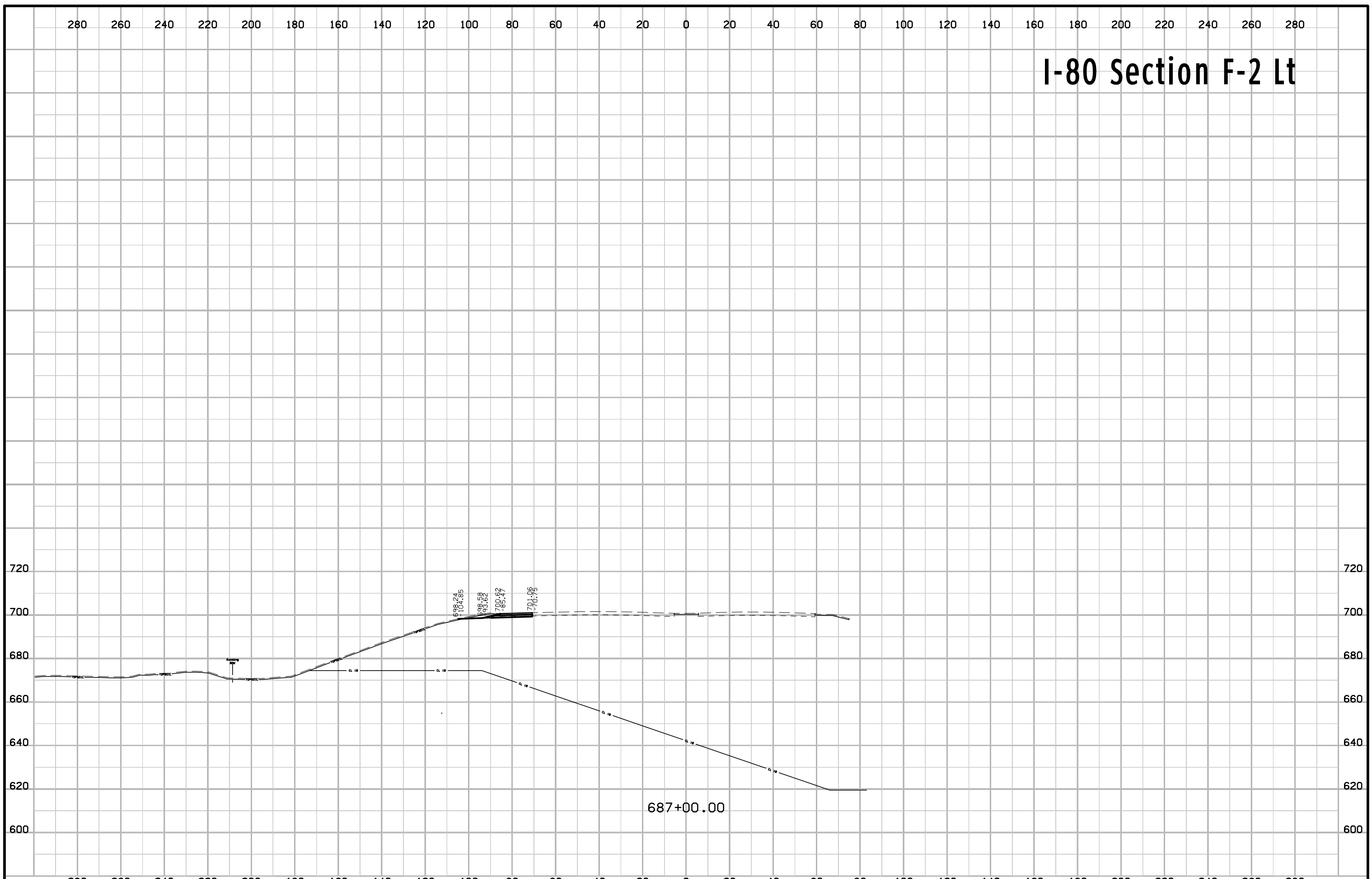
I-80 Section F-2 Lt



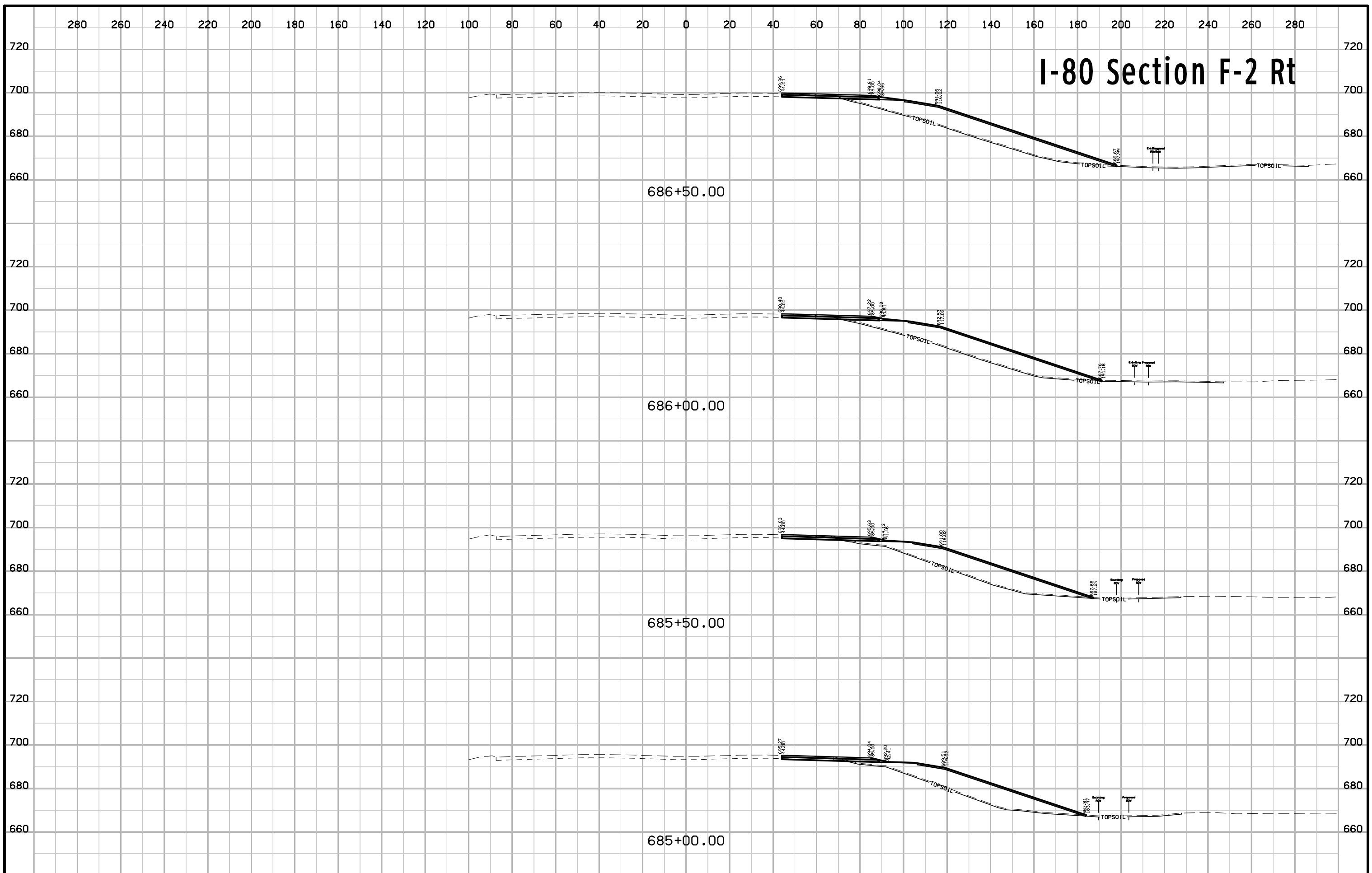
I-80 Section F-2 Lt



I-80 Section F-2 Lt

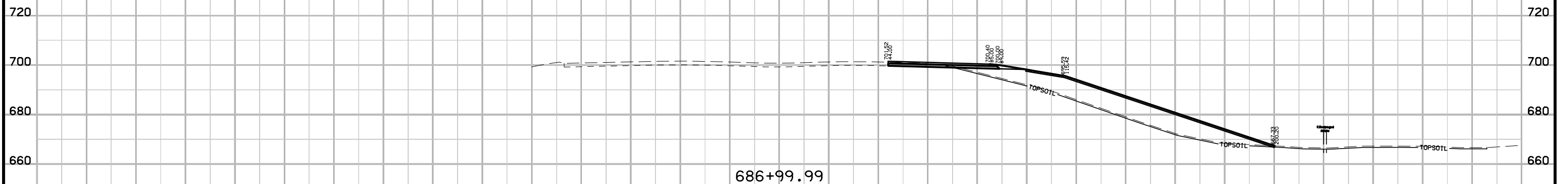


I-80 Section F-2 Rt



280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

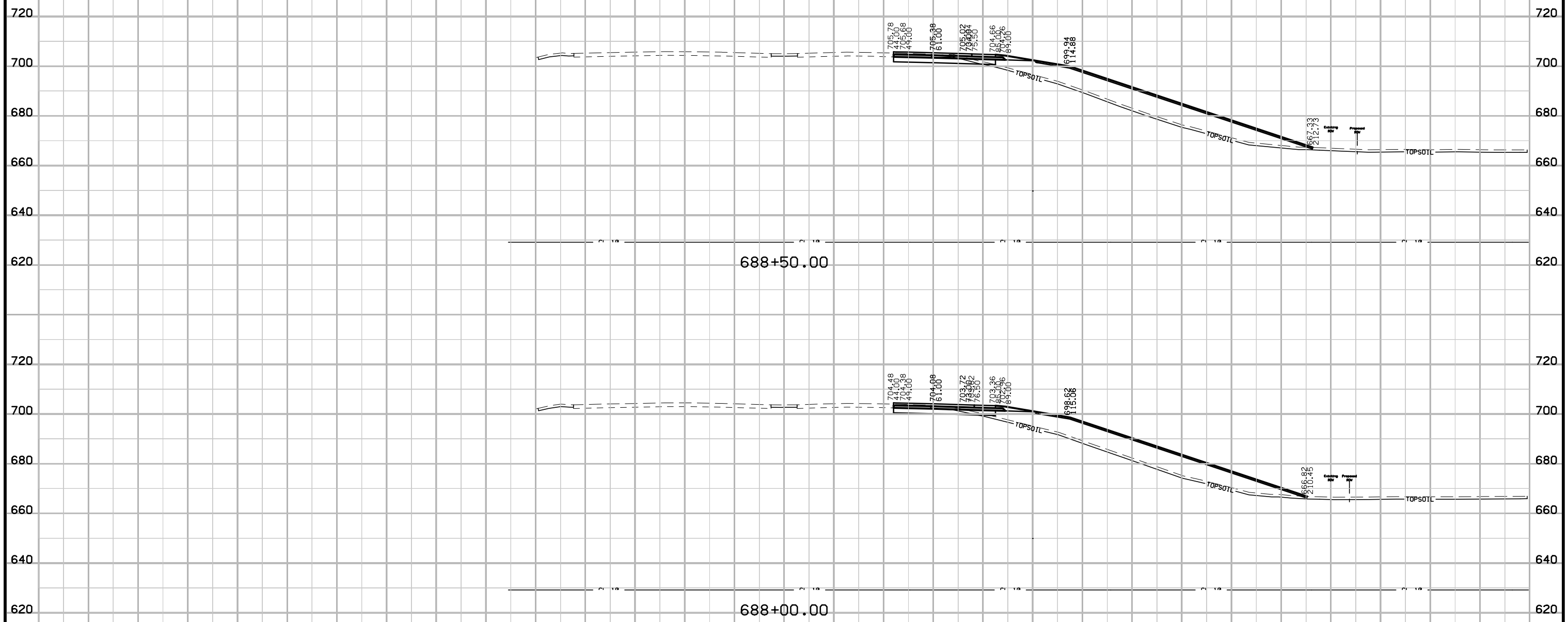
I-80 Section F-2 Rt



686+99.99

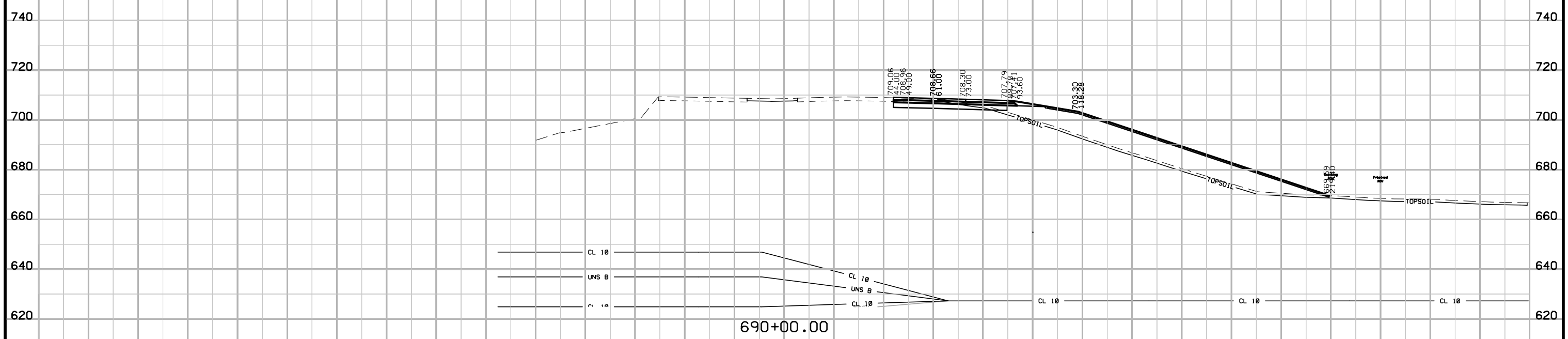
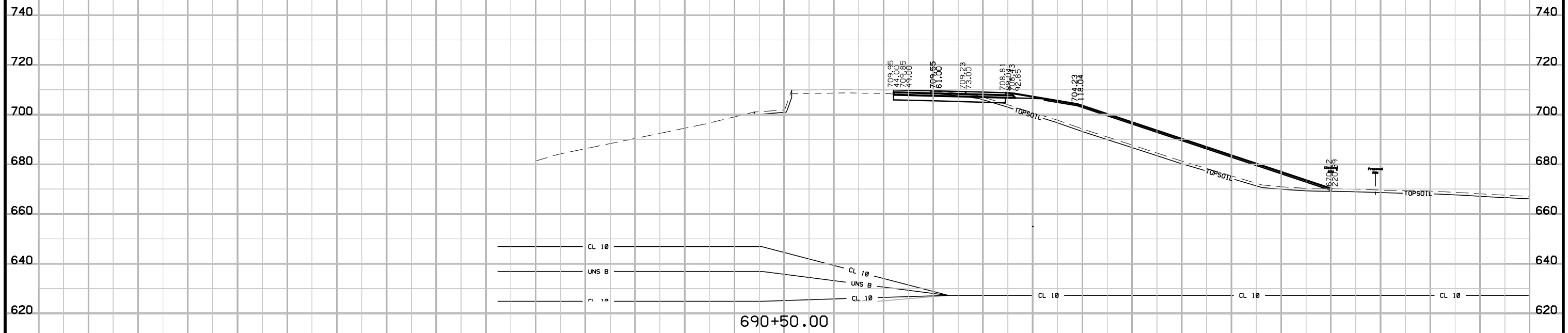
280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

I-80 Section G Lt Stage 1



280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

I-80 Section G Lt Stage 1

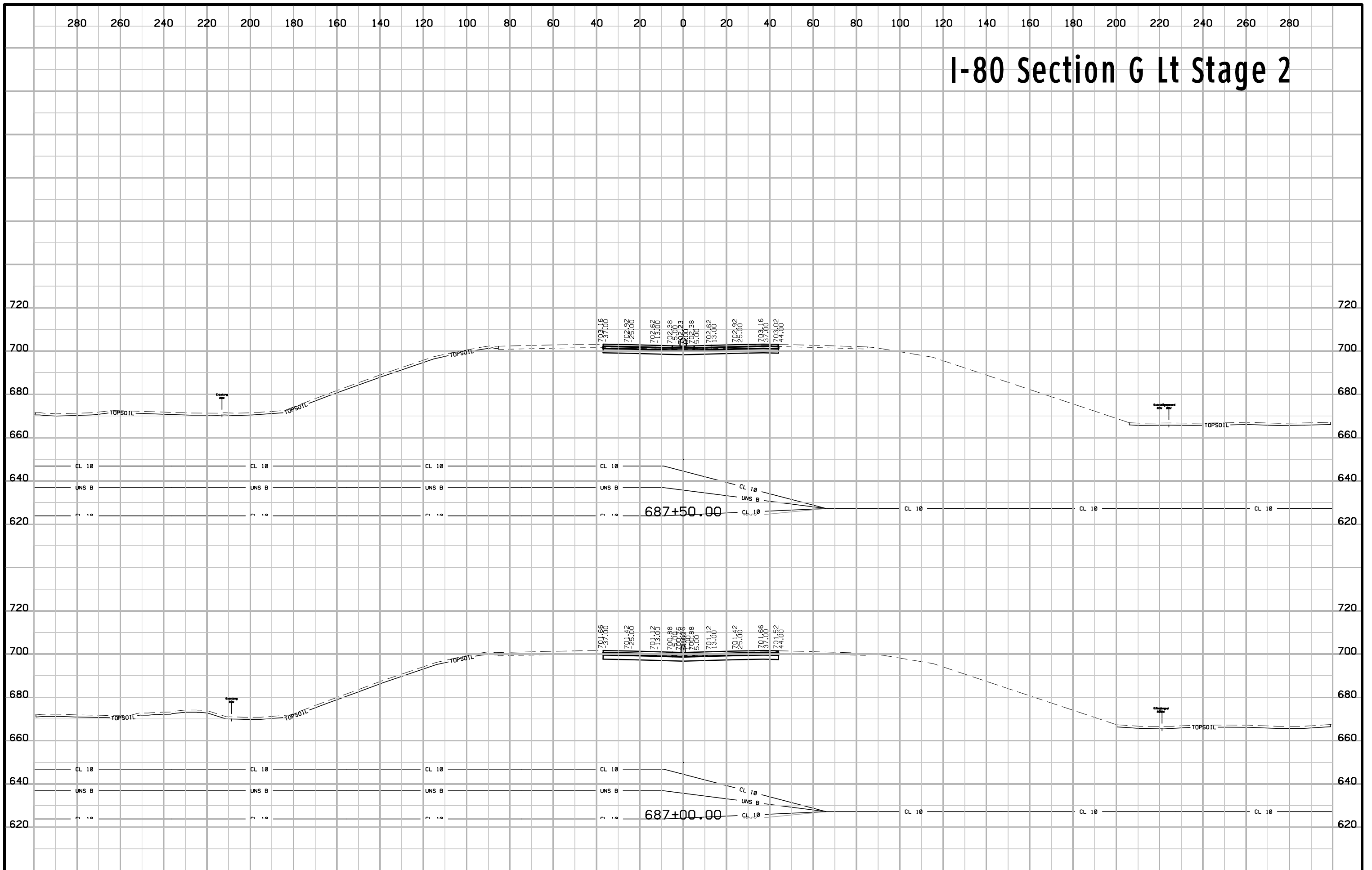


280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

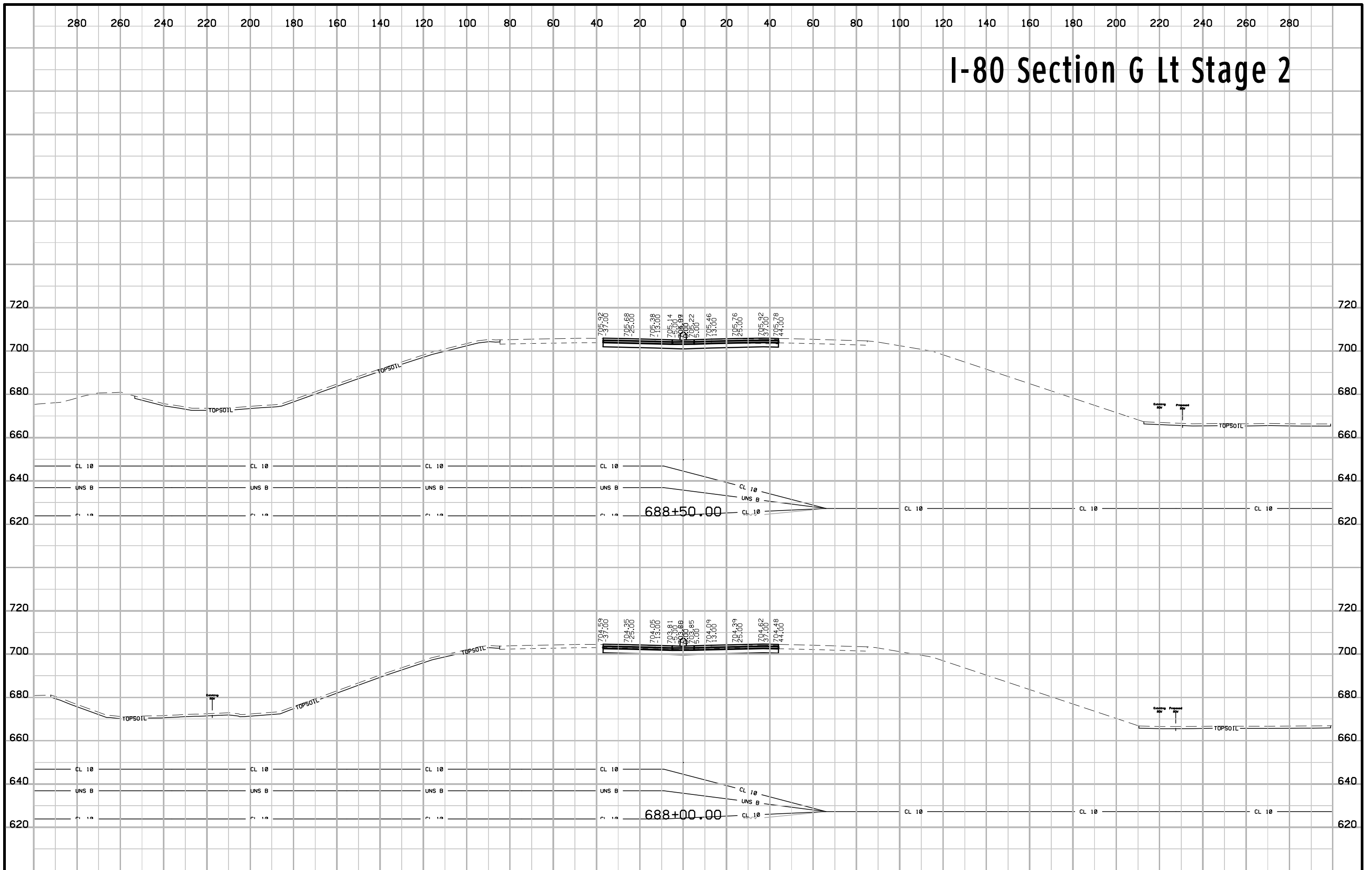
I-80 Section G Lt Stage 1



I-80 Section G Lt Stage 2



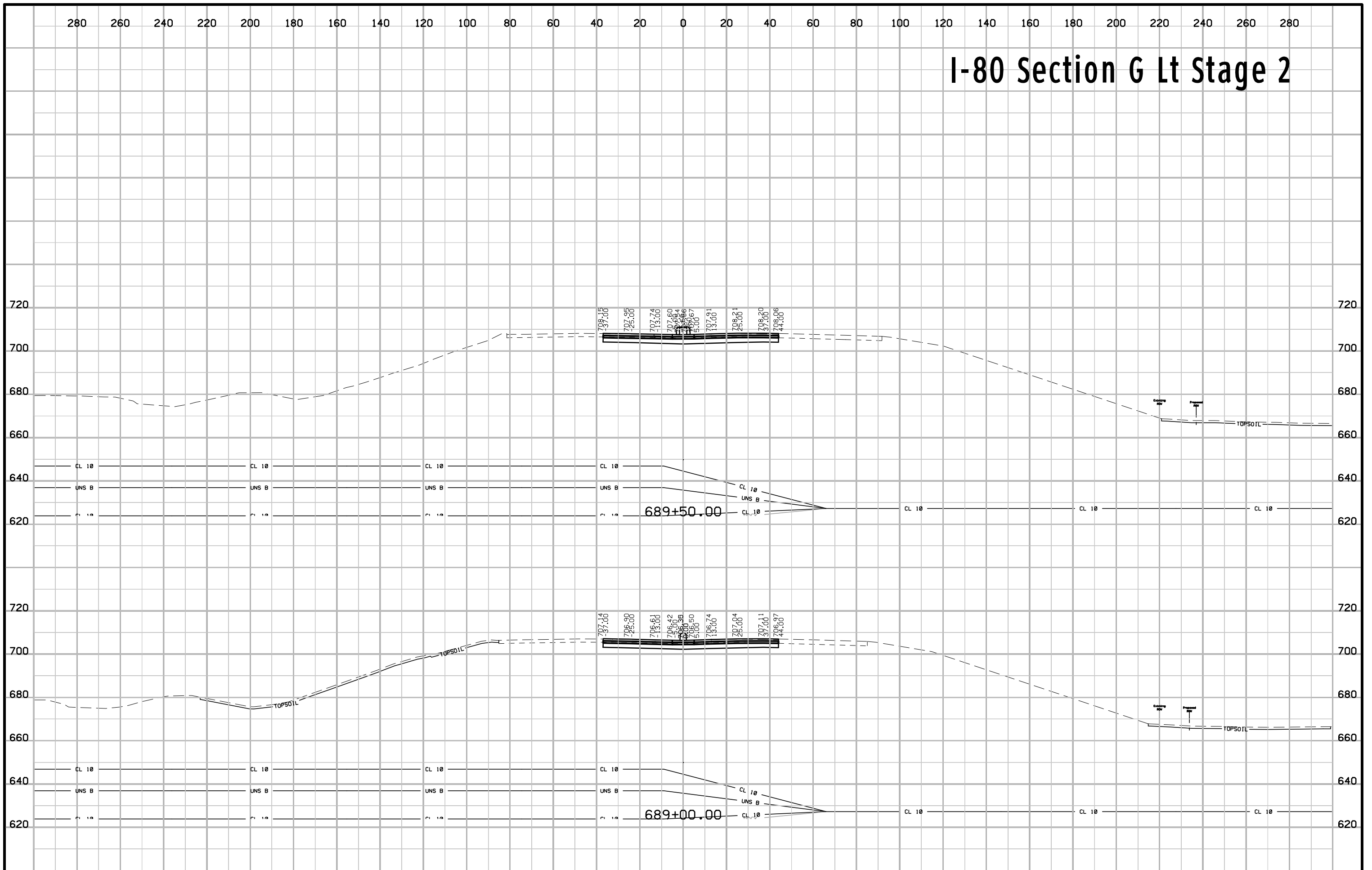
I-80 Section G Lt Stage 2



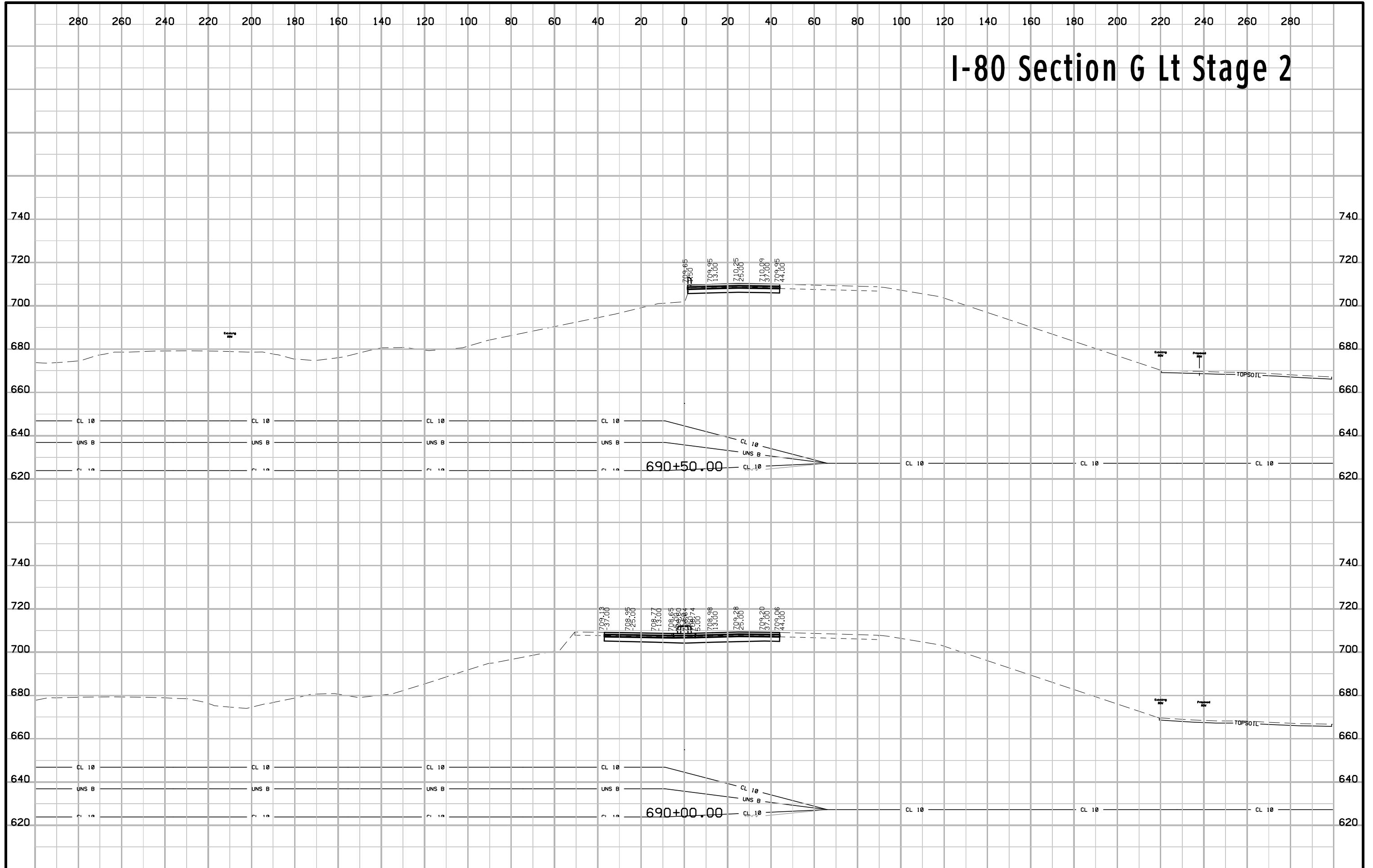
705.32
705.68
705.00
705.38
705.04
705.97
705.00
705.00
705.46
705.76
705.32
705.78

704.59
704.35
704.05
703.81
703.66
703.85
704.09
704.39
704.62
704.48

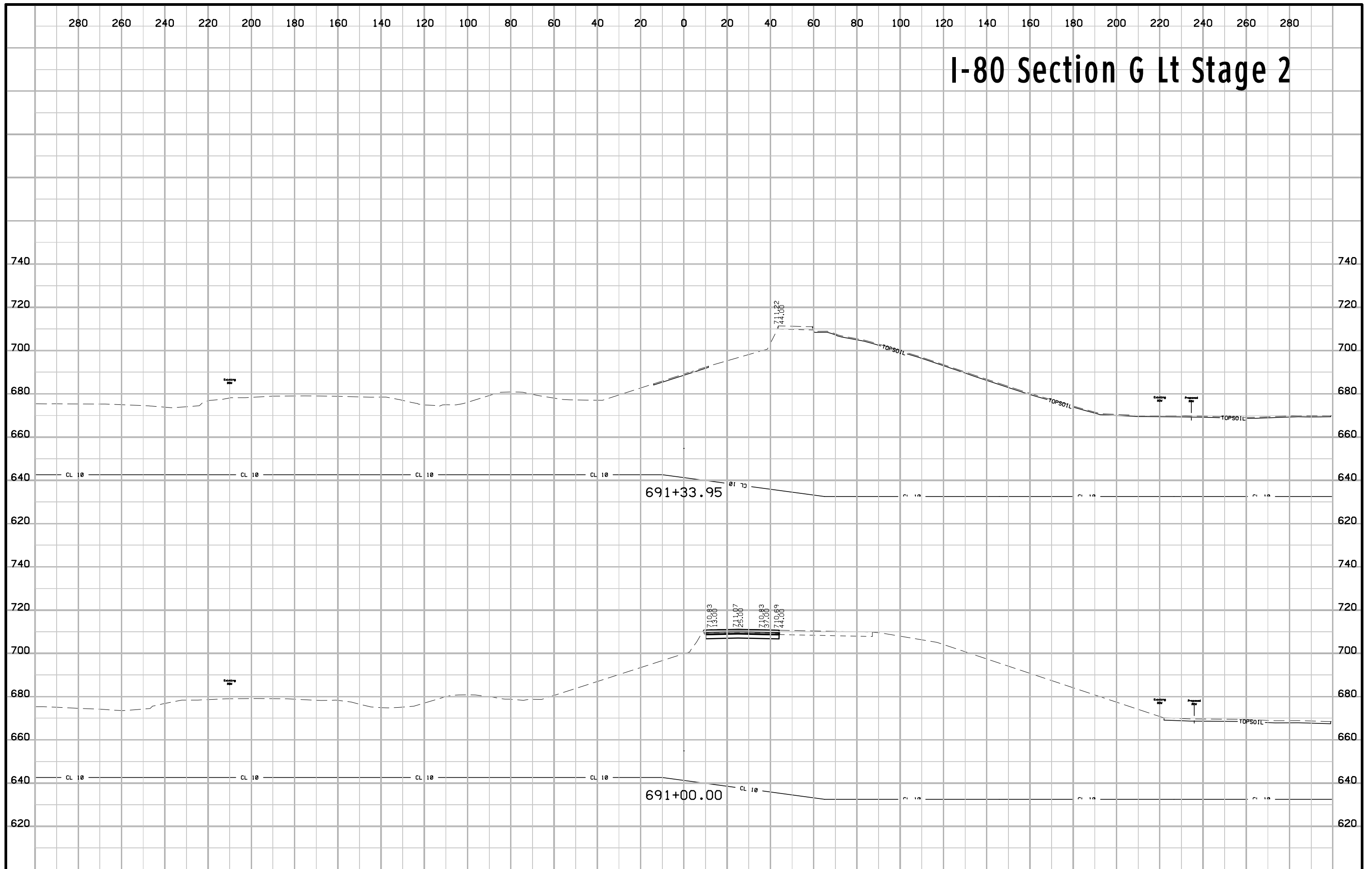
I-80 Section G Lt Stage 2



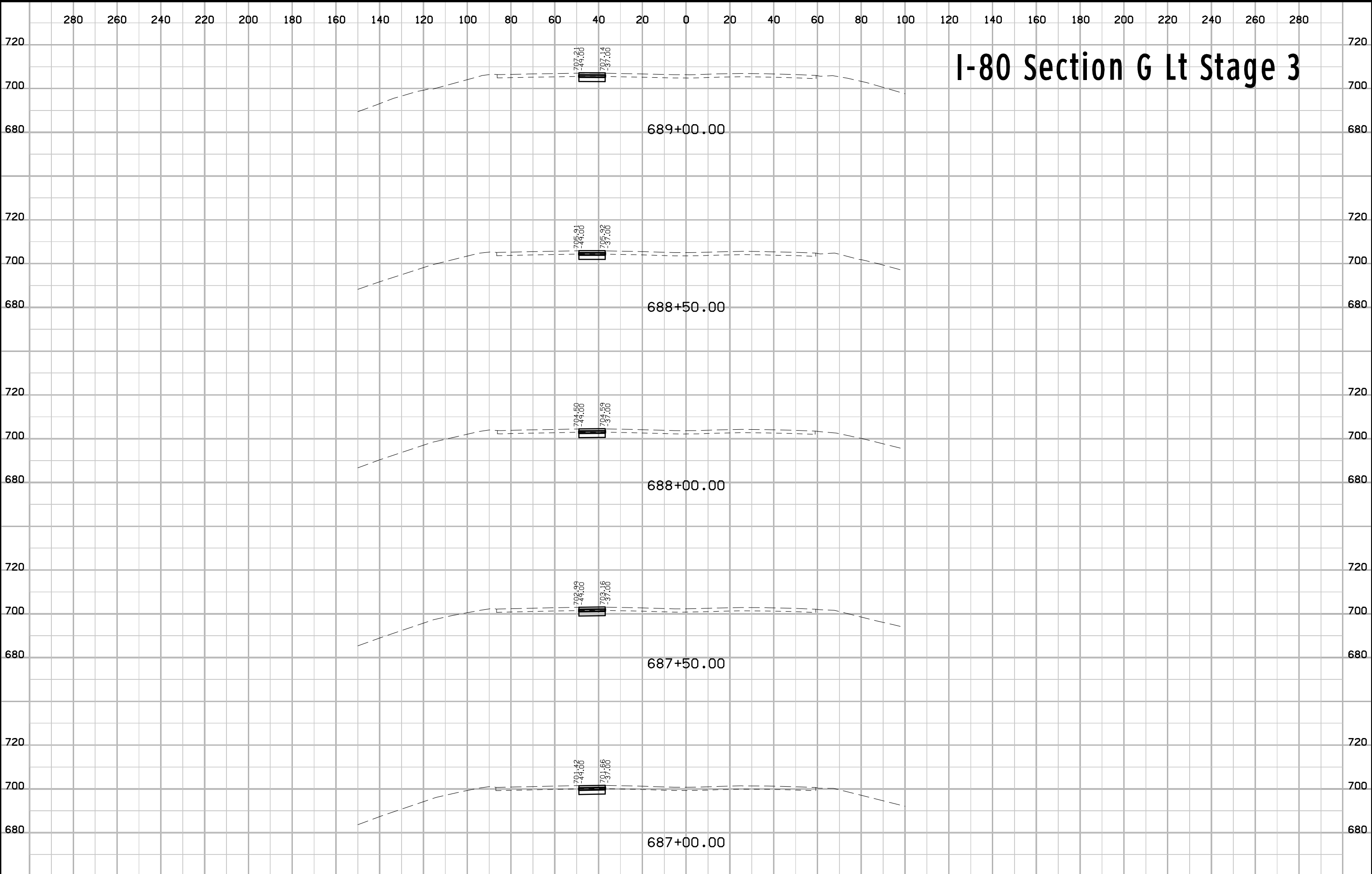
I-80 Section G Lt Stage 2



I-80 Section G Lt Stage 2

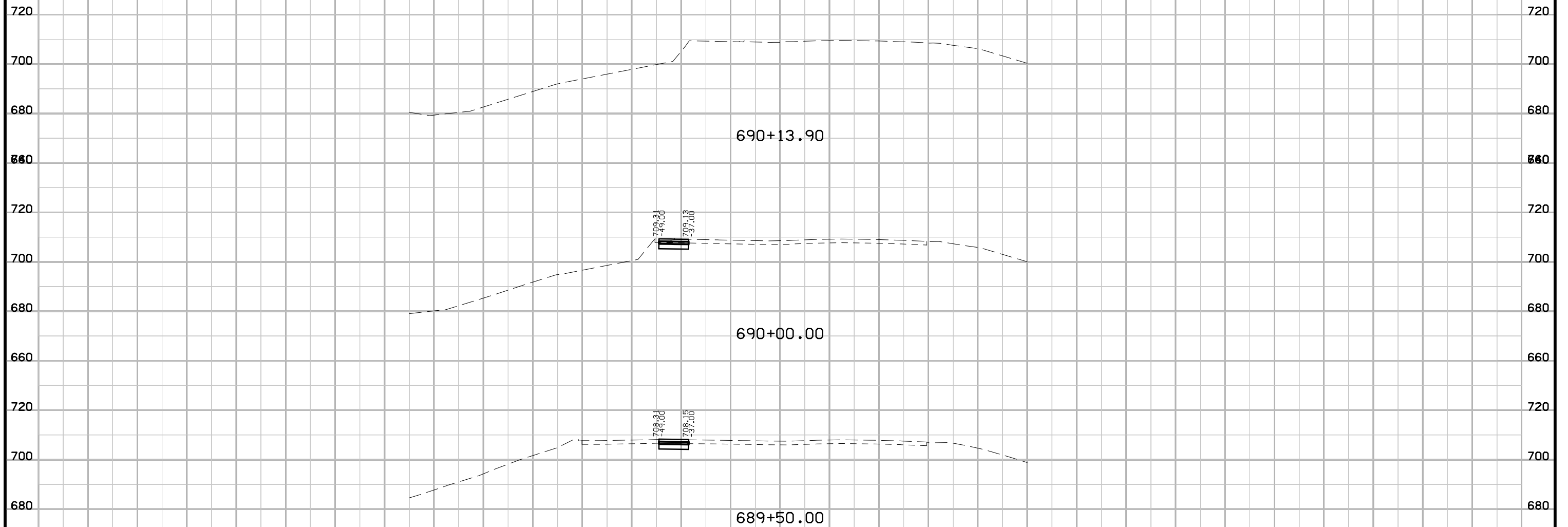


I-80 Section G Lt Stage 3

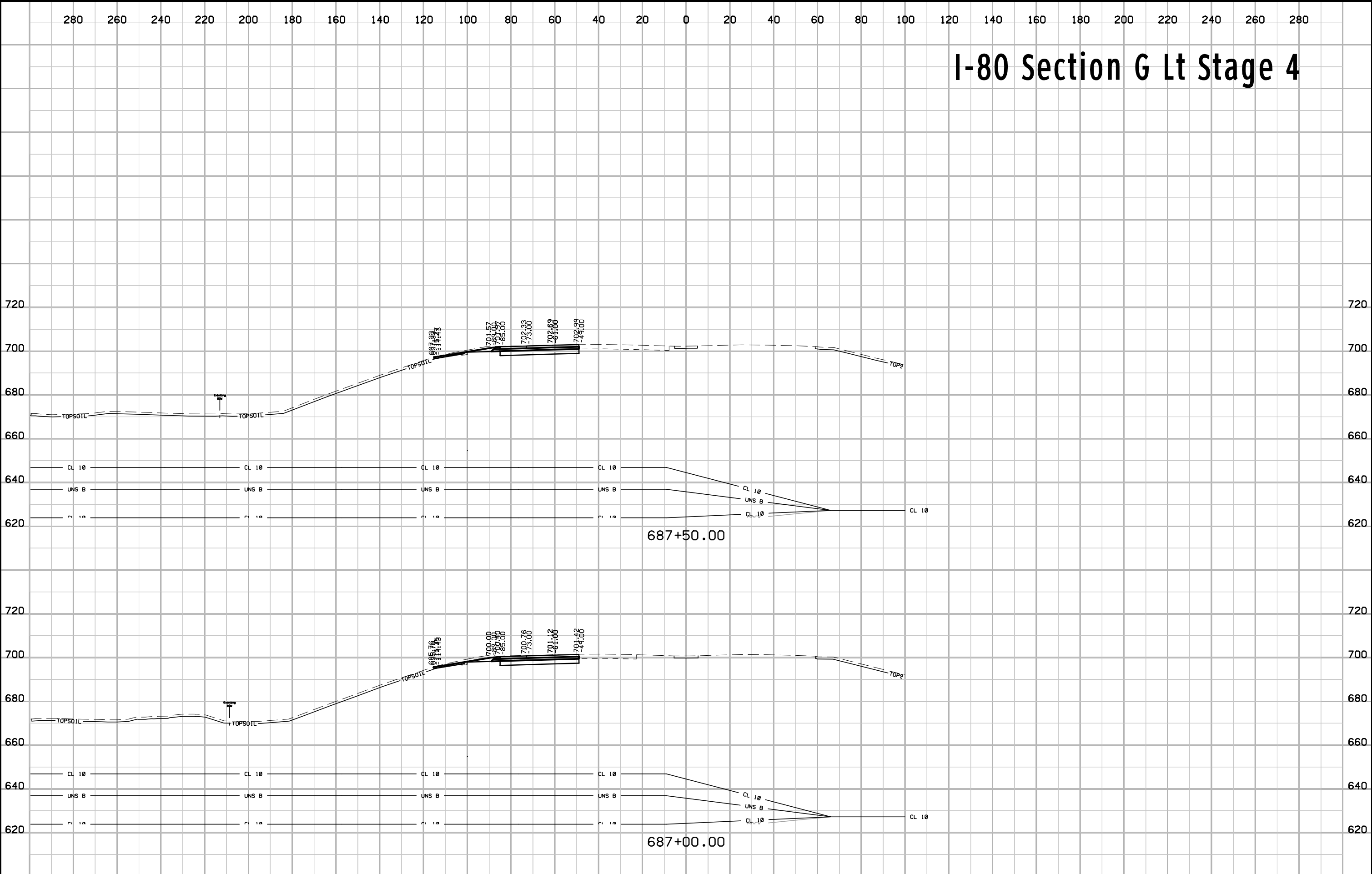


280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

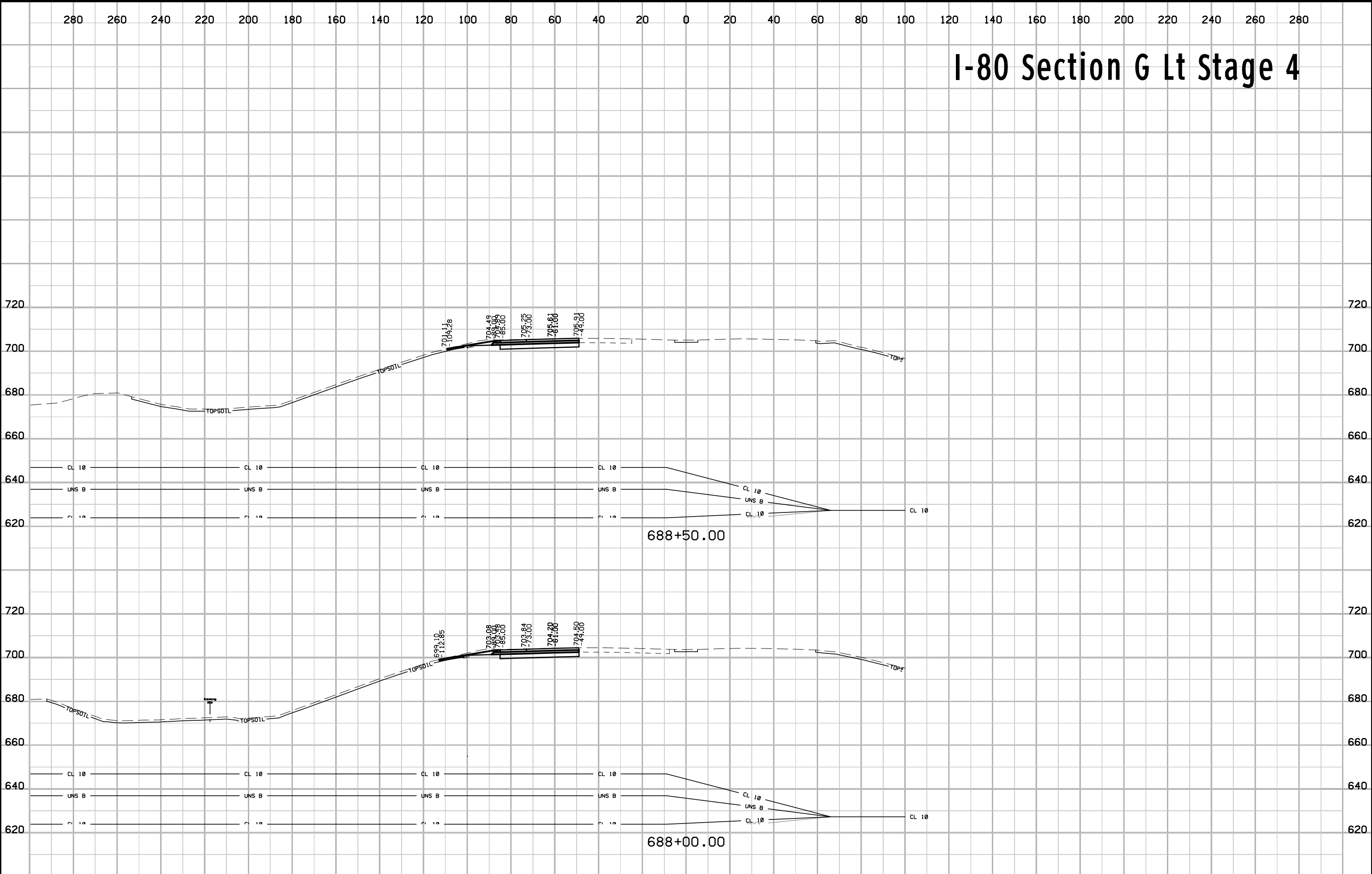
I-80 Section G Lt Stage 3



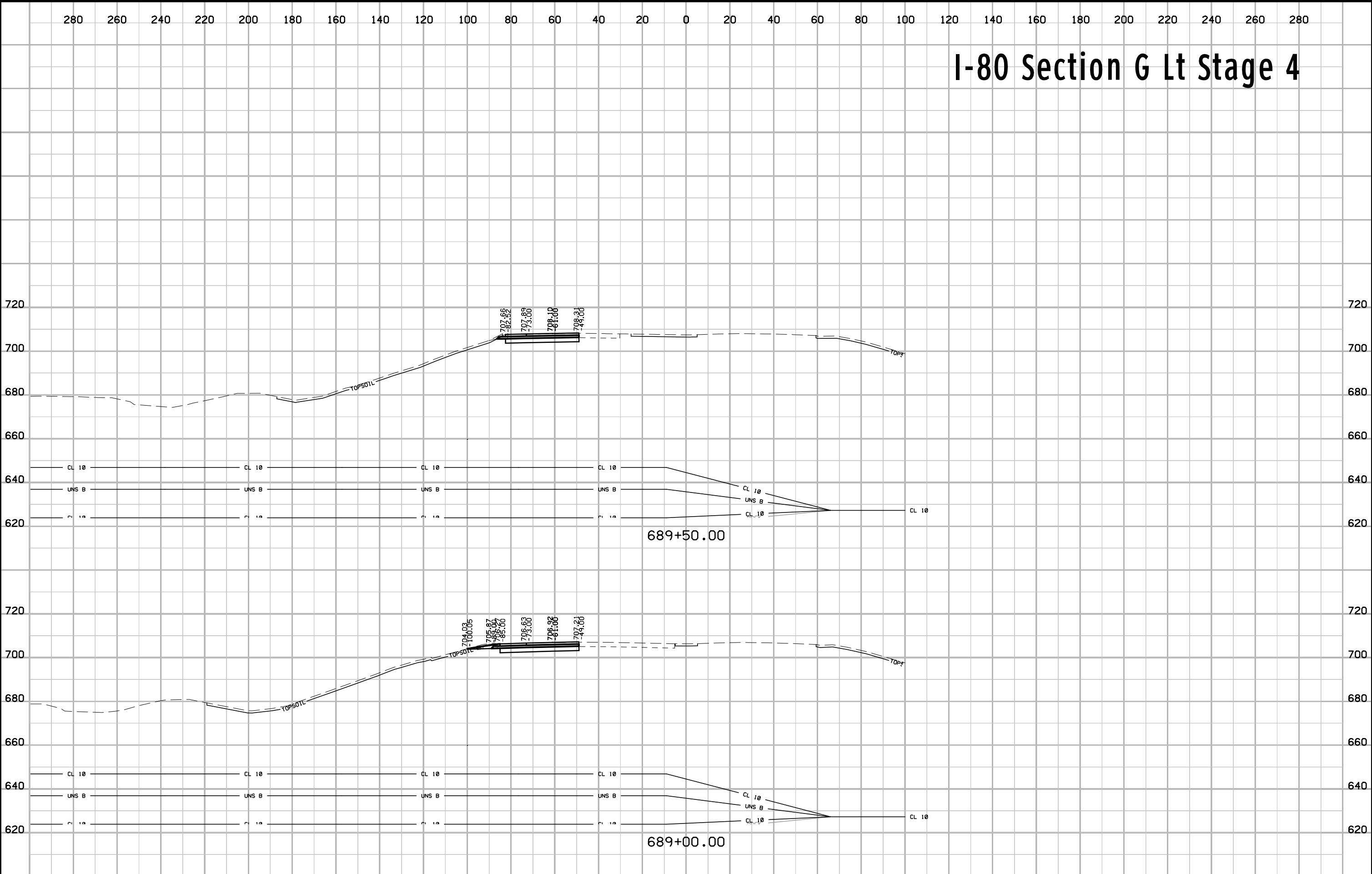
I-80 Section G Lt Stage 4



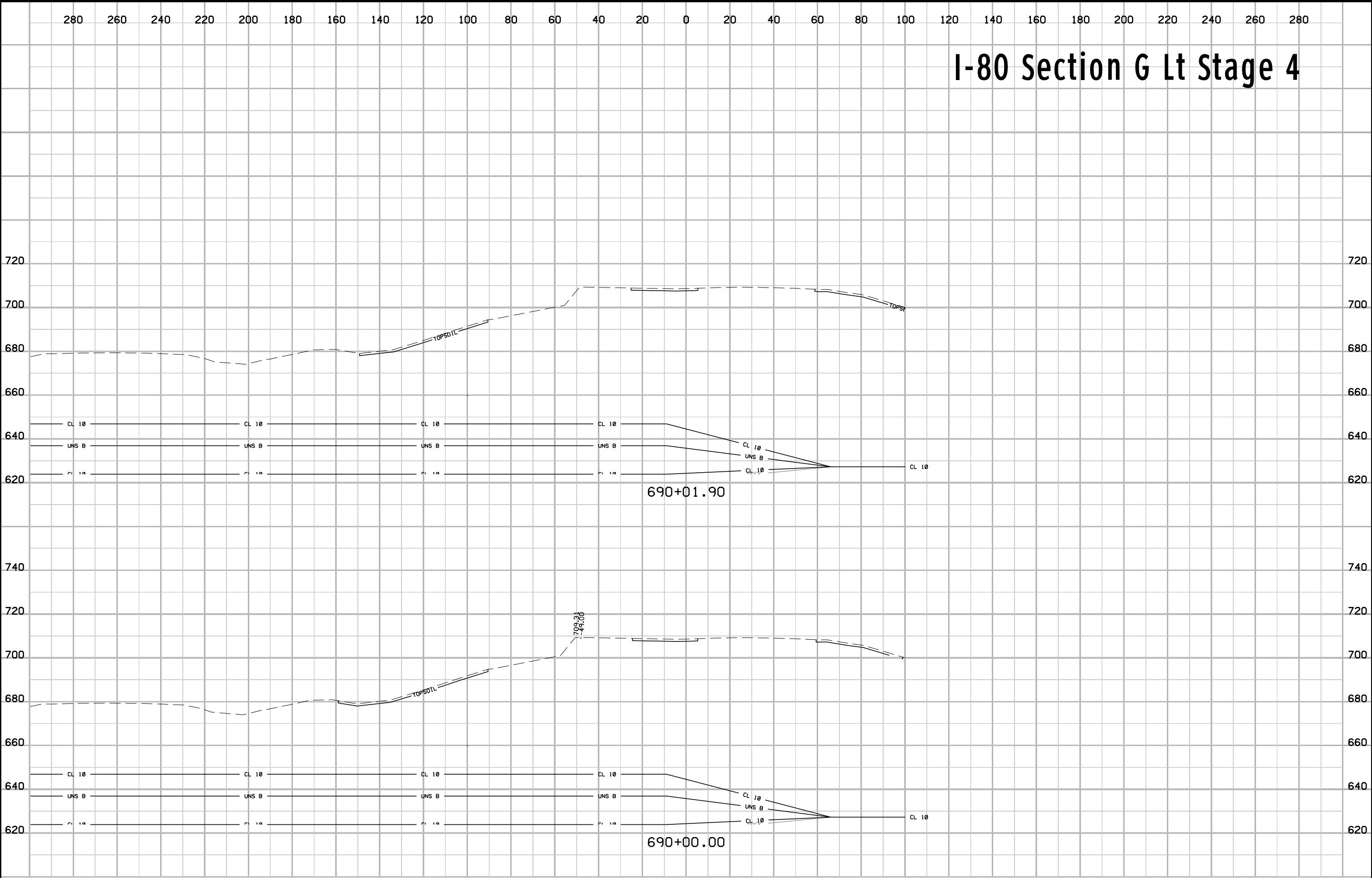
I-80 Section G Lt Stage 4



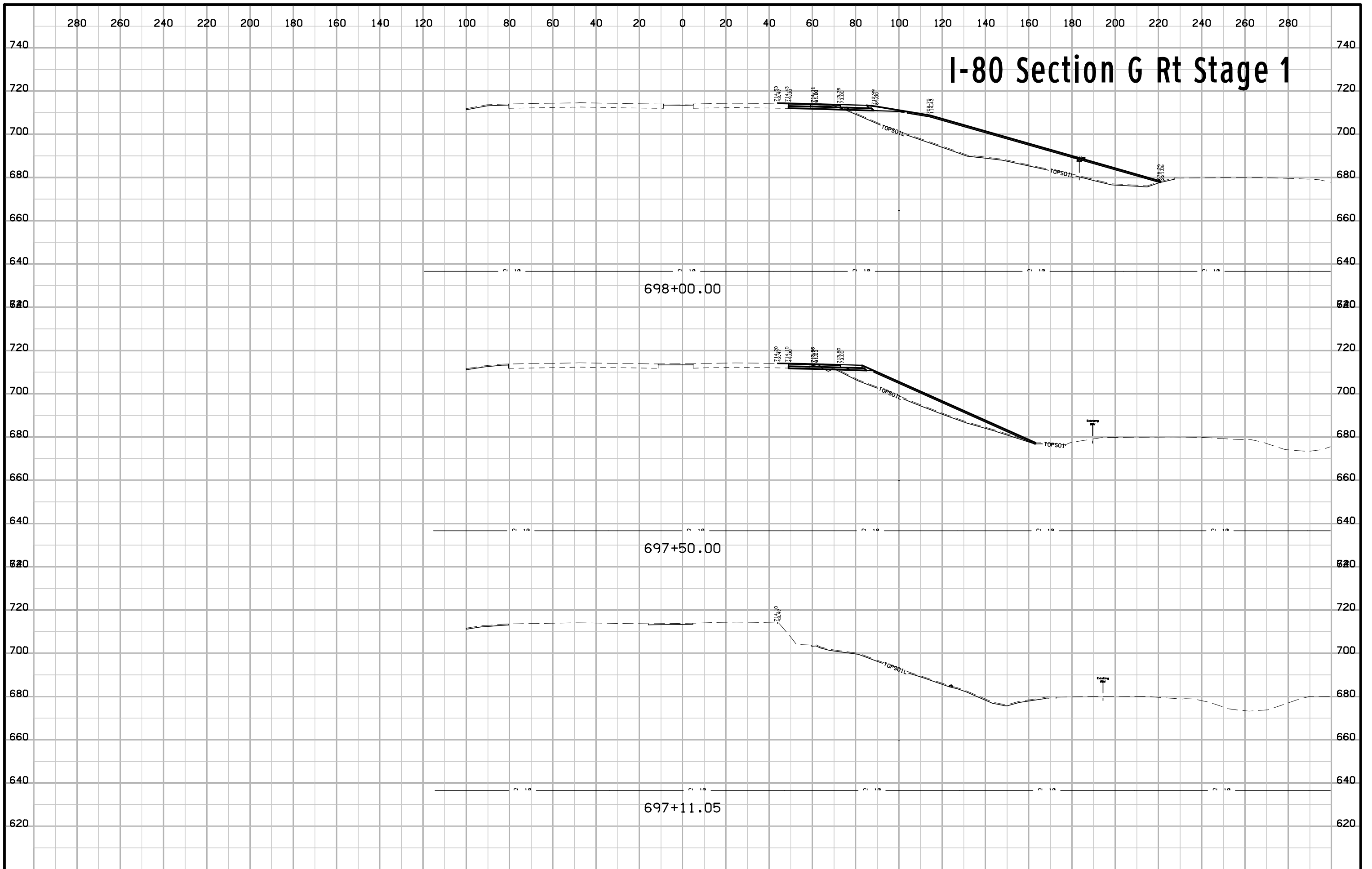
I-80 Section G Lt Stage 4



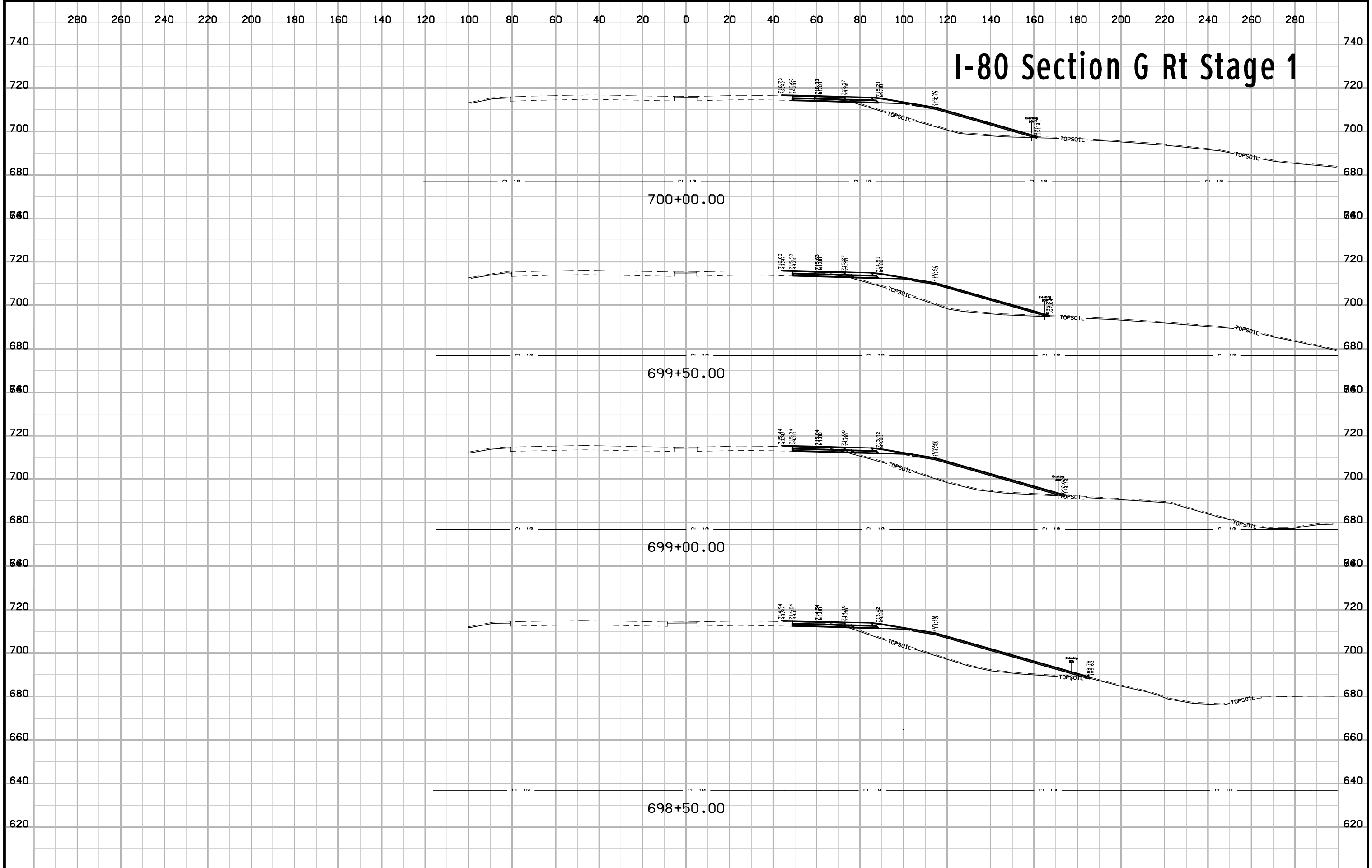
I-80 Section G Lt Stage 4



I-80 Section G Rt Stage 1

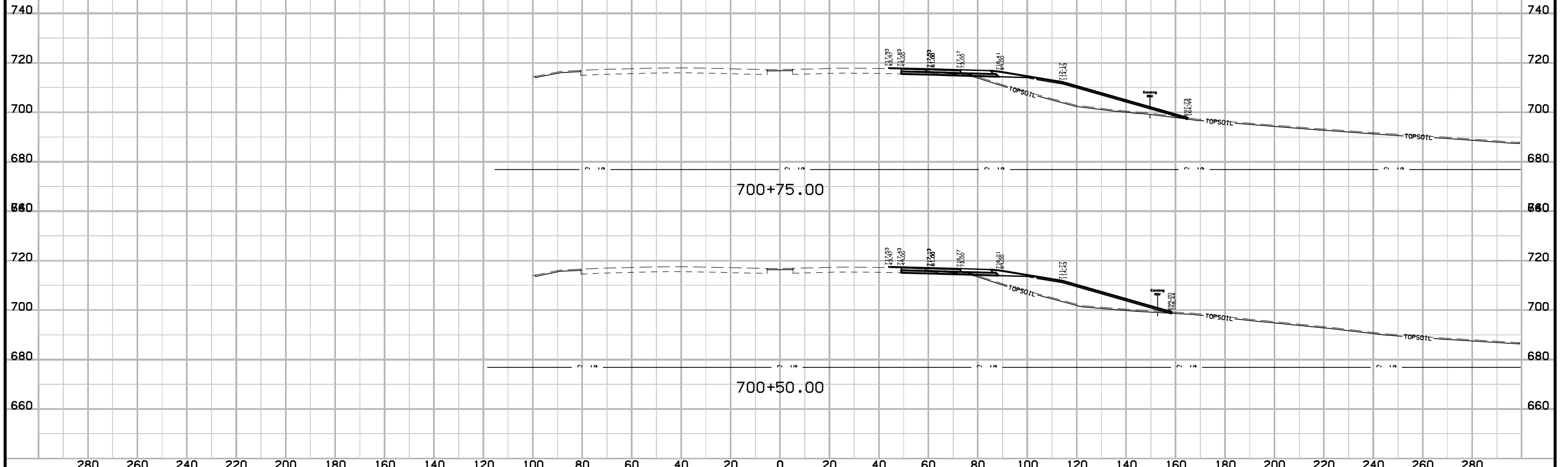


I-80 Section G Rt Stage 1

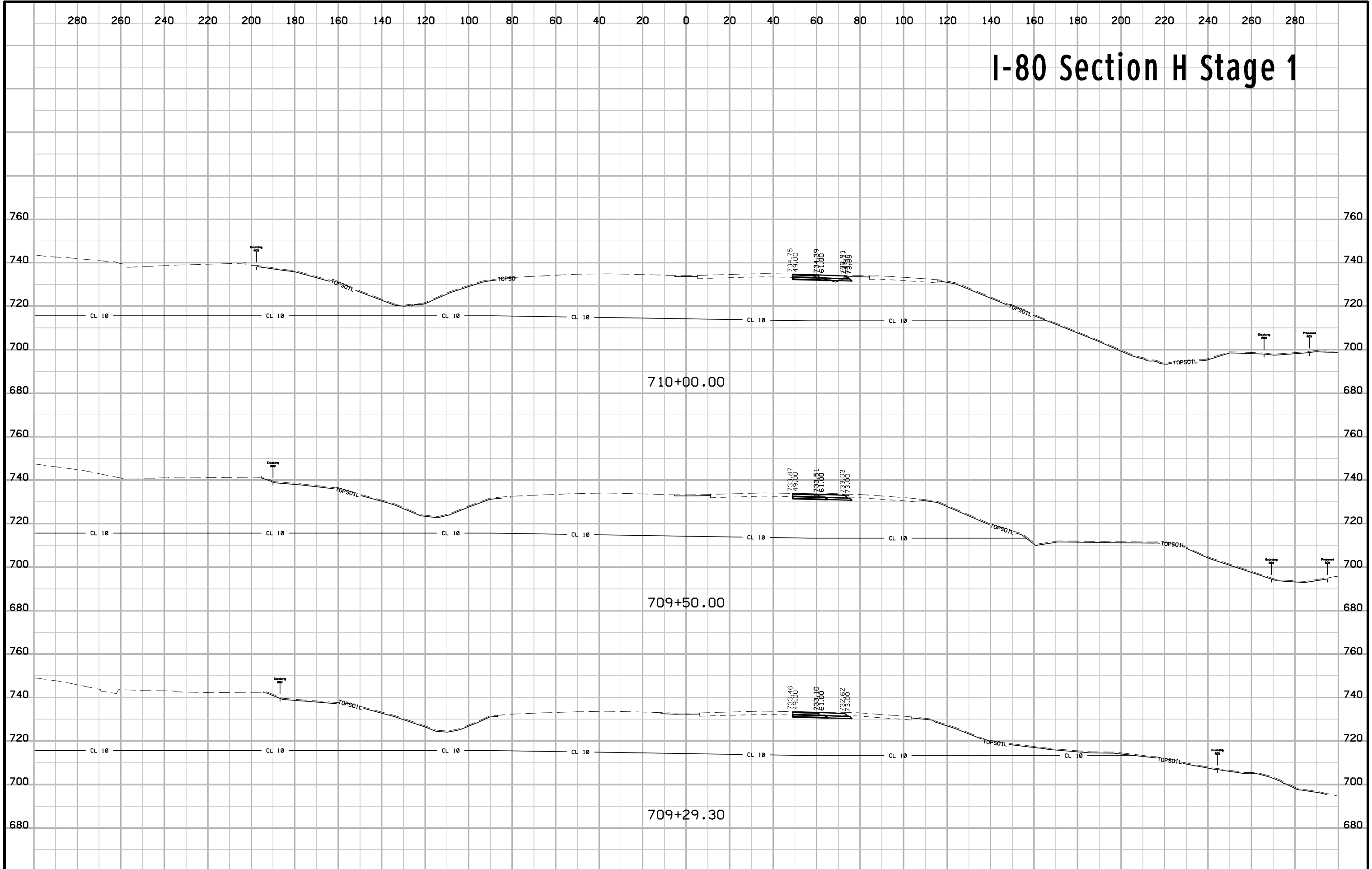


280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

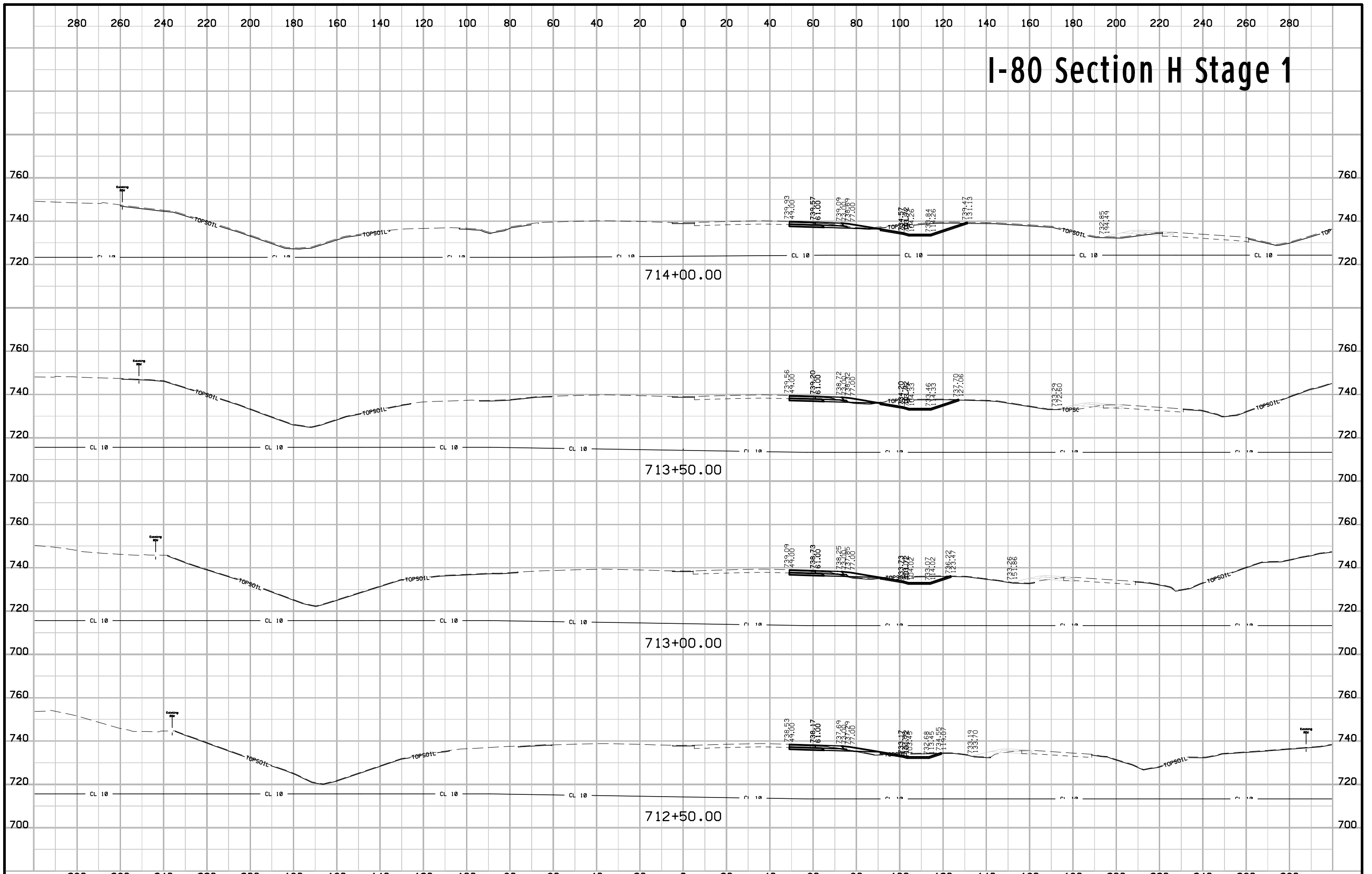
I-80 Section G Rt Stage 1



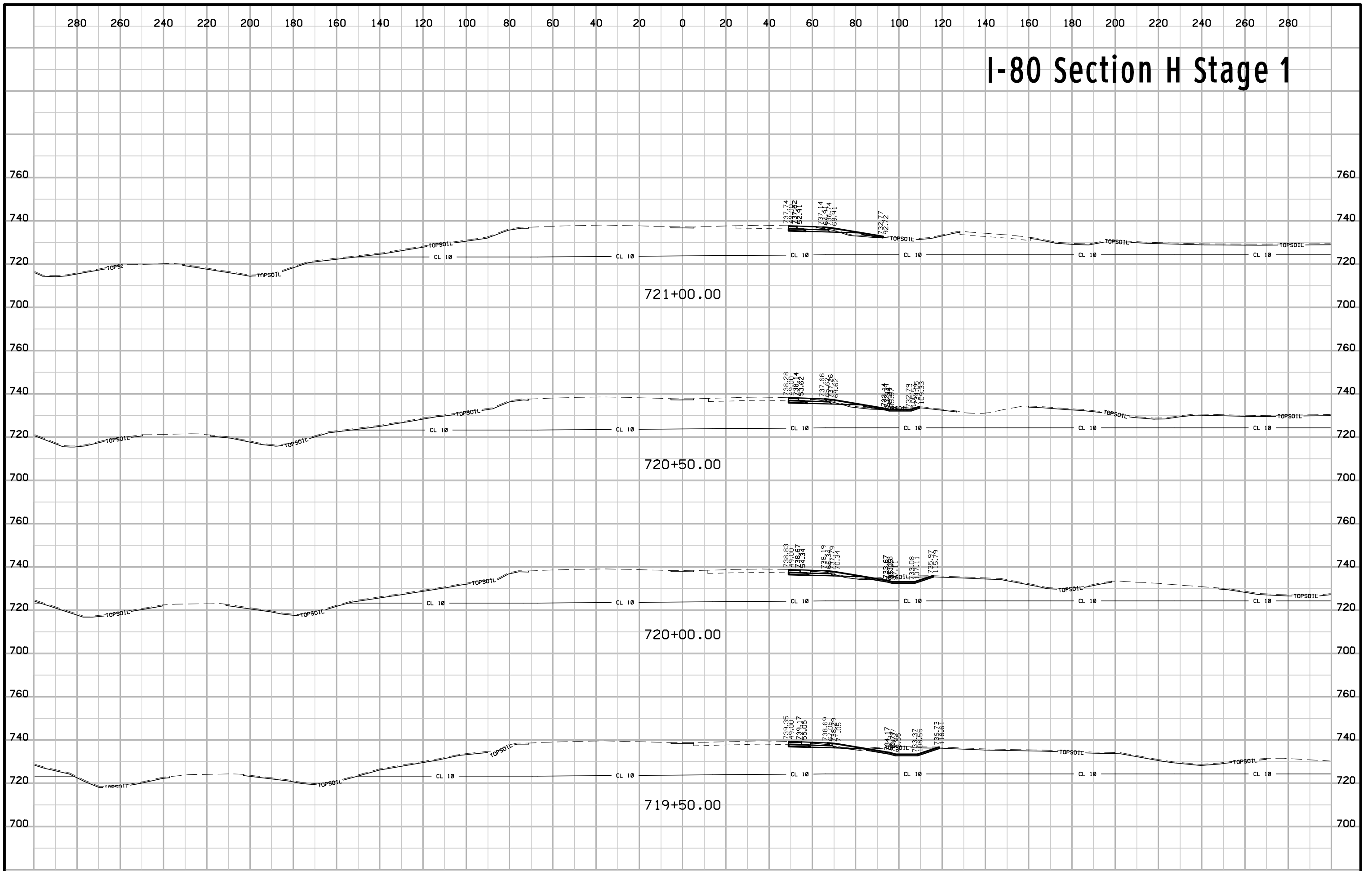
I-80 Section H Stage 1



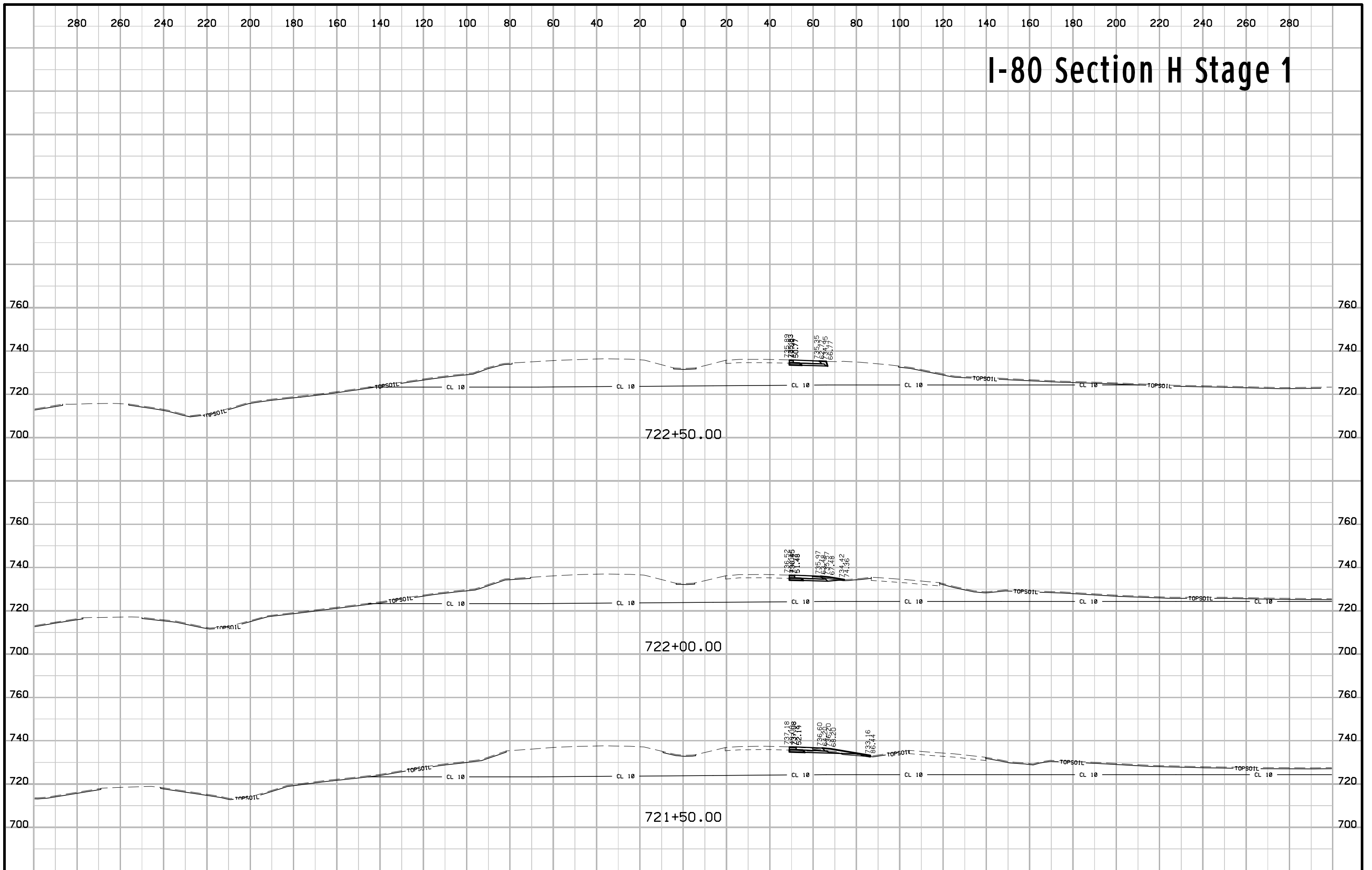
I-80 Section H Stage 1



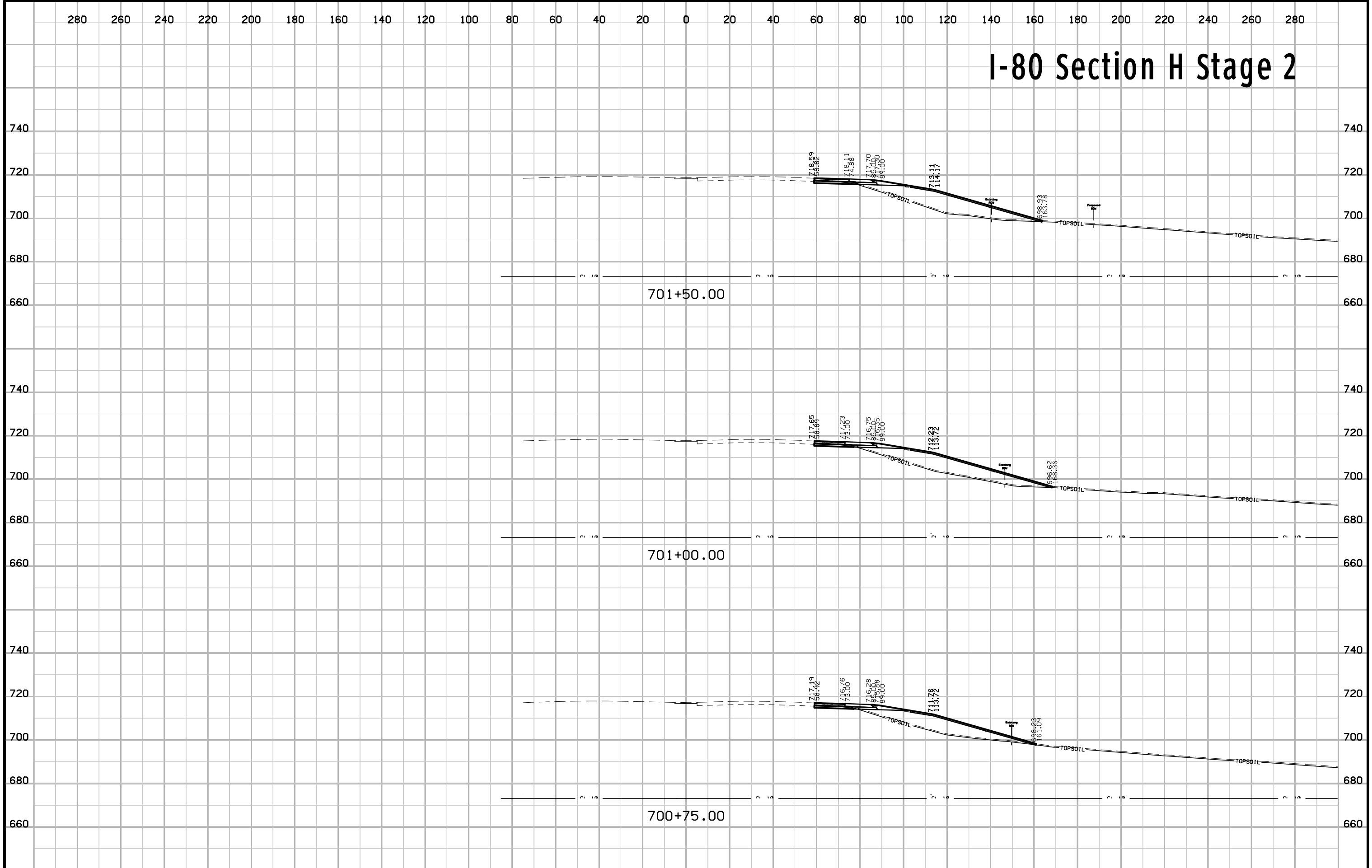
I-80 Section H Stage 1



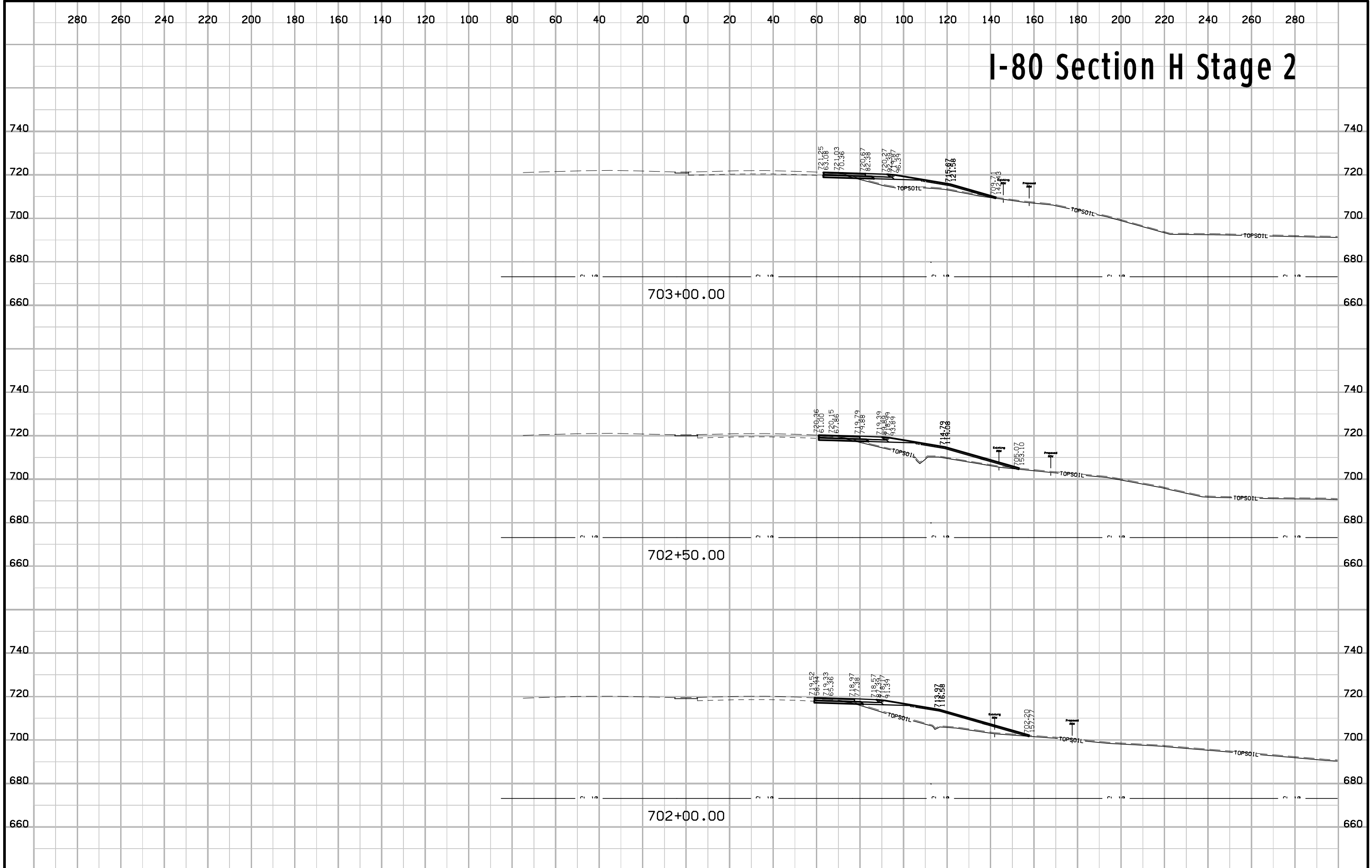
I-80 Section H Stage 1



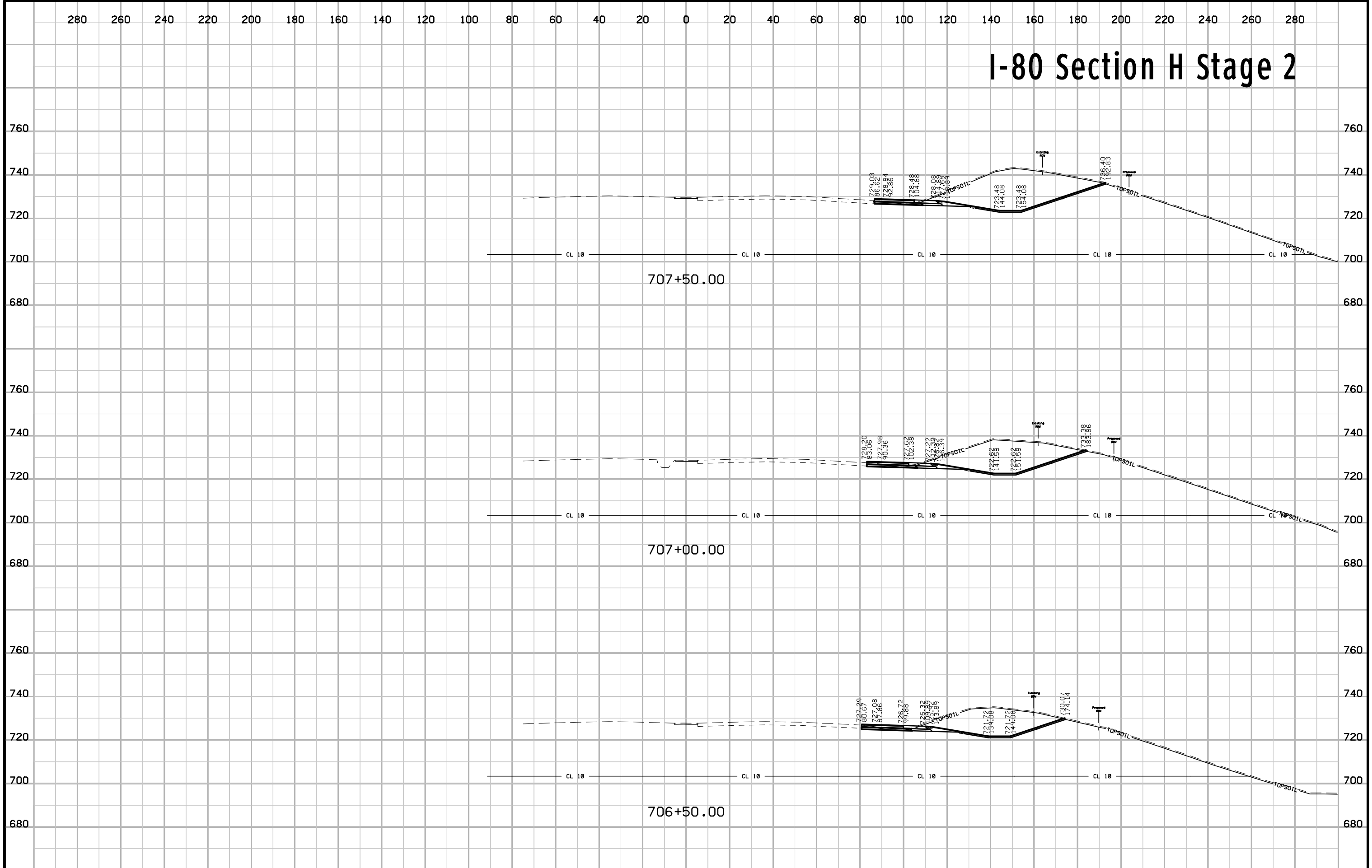
I-80 Section H Stage 2



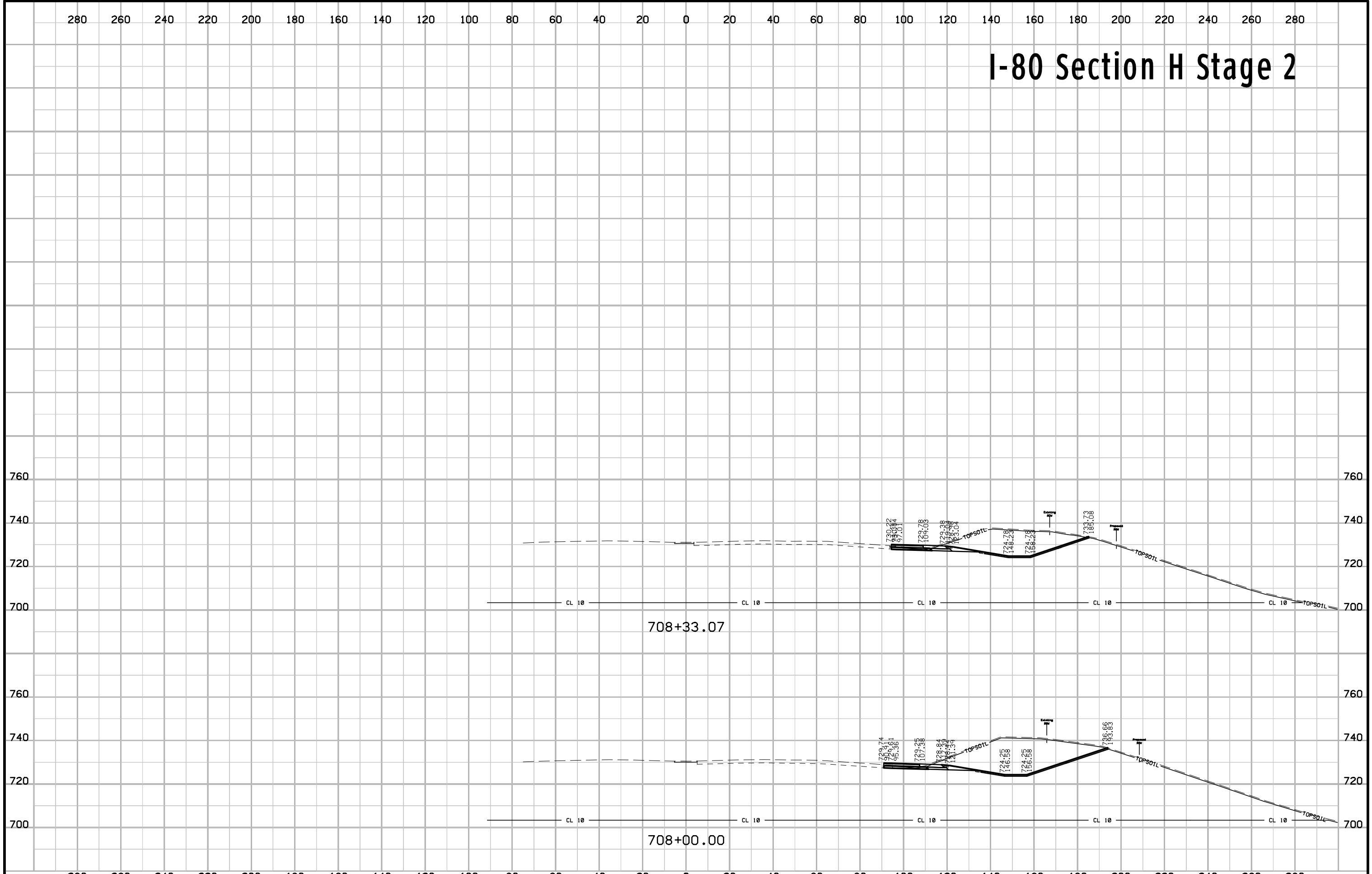
I-80 Section H Stage 2



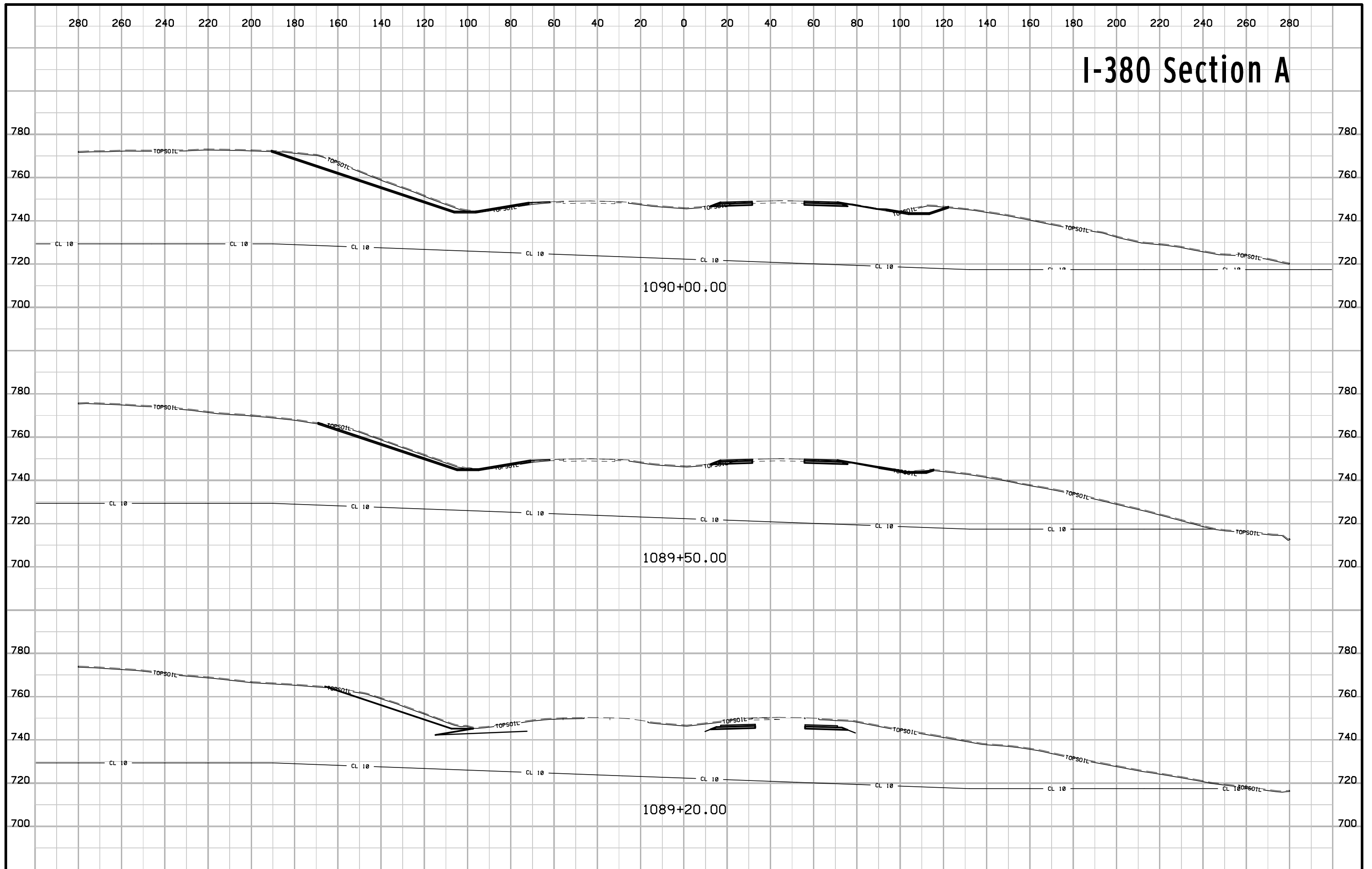
I-80 Section H Stage 2



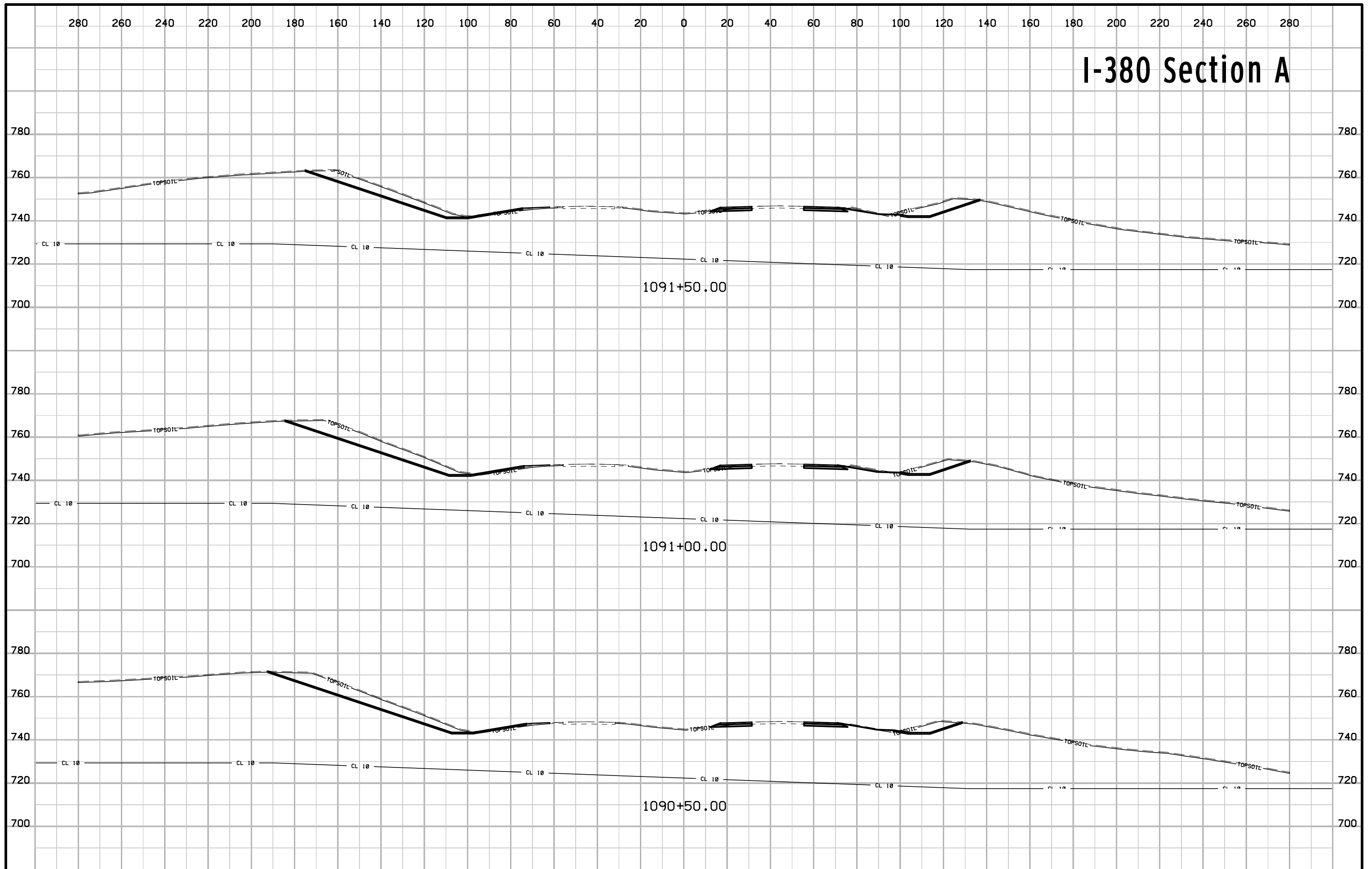
I-80 Section H Stage 2

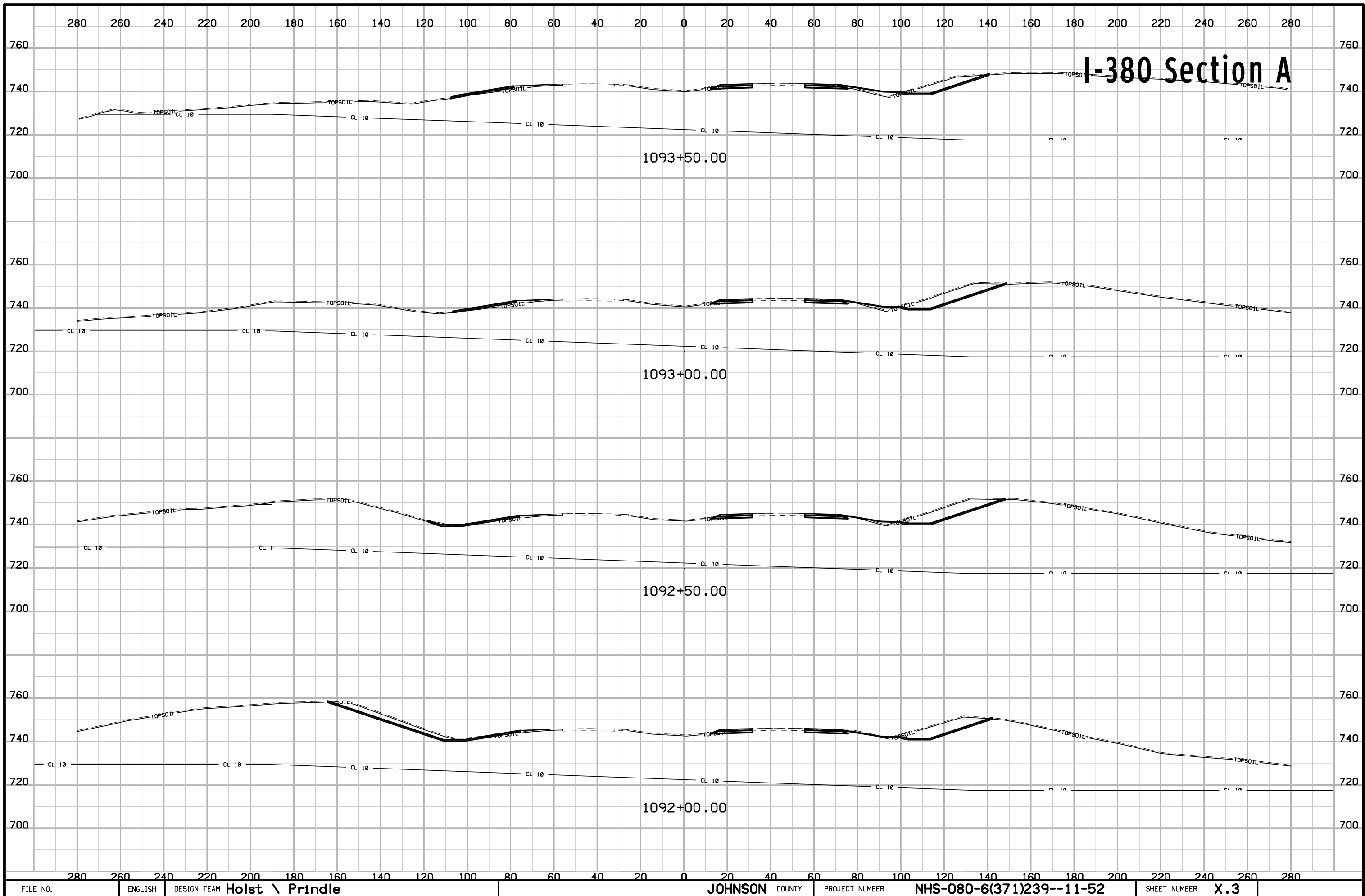


I-380 Section A

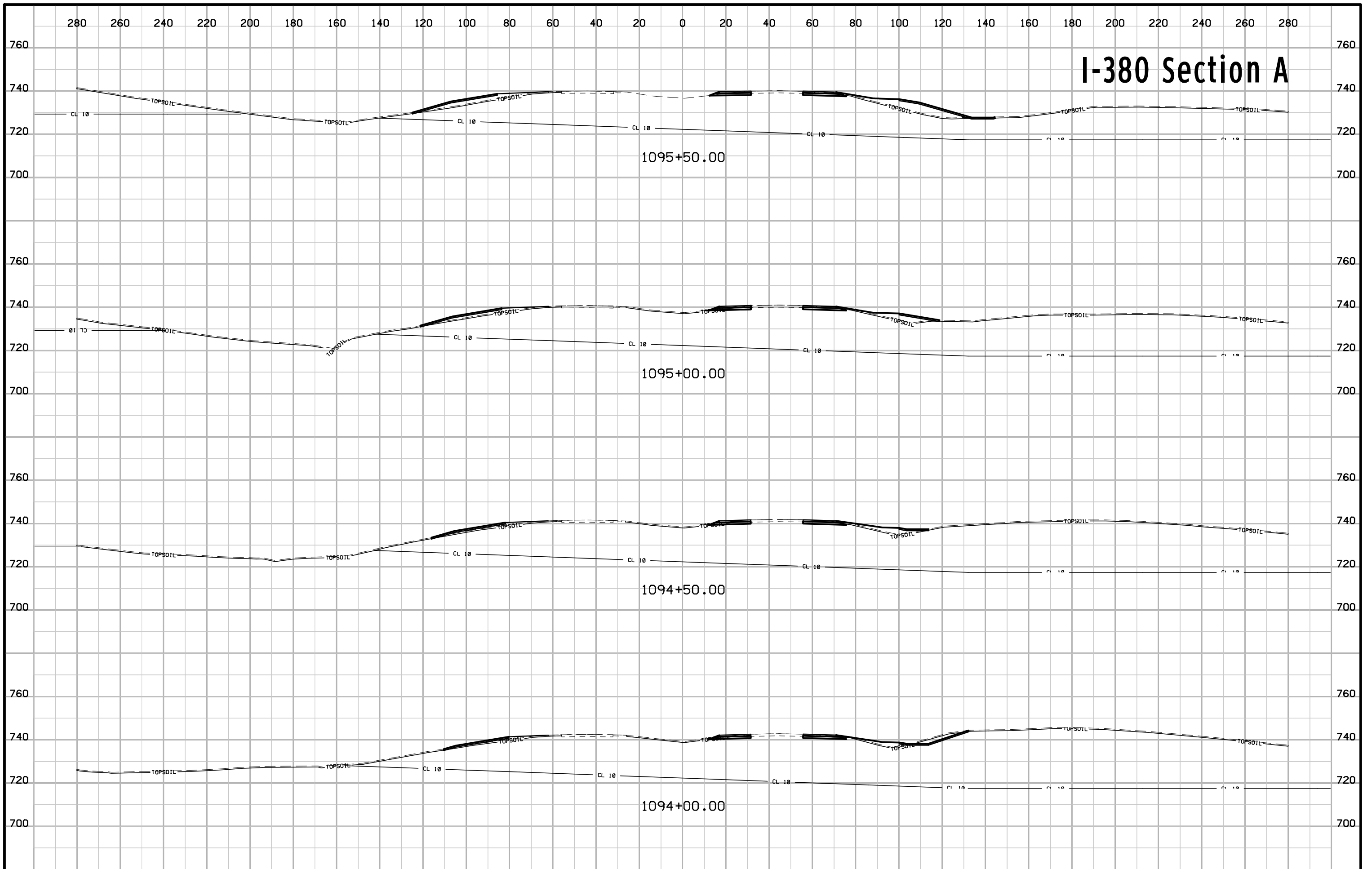


I-380 Section A

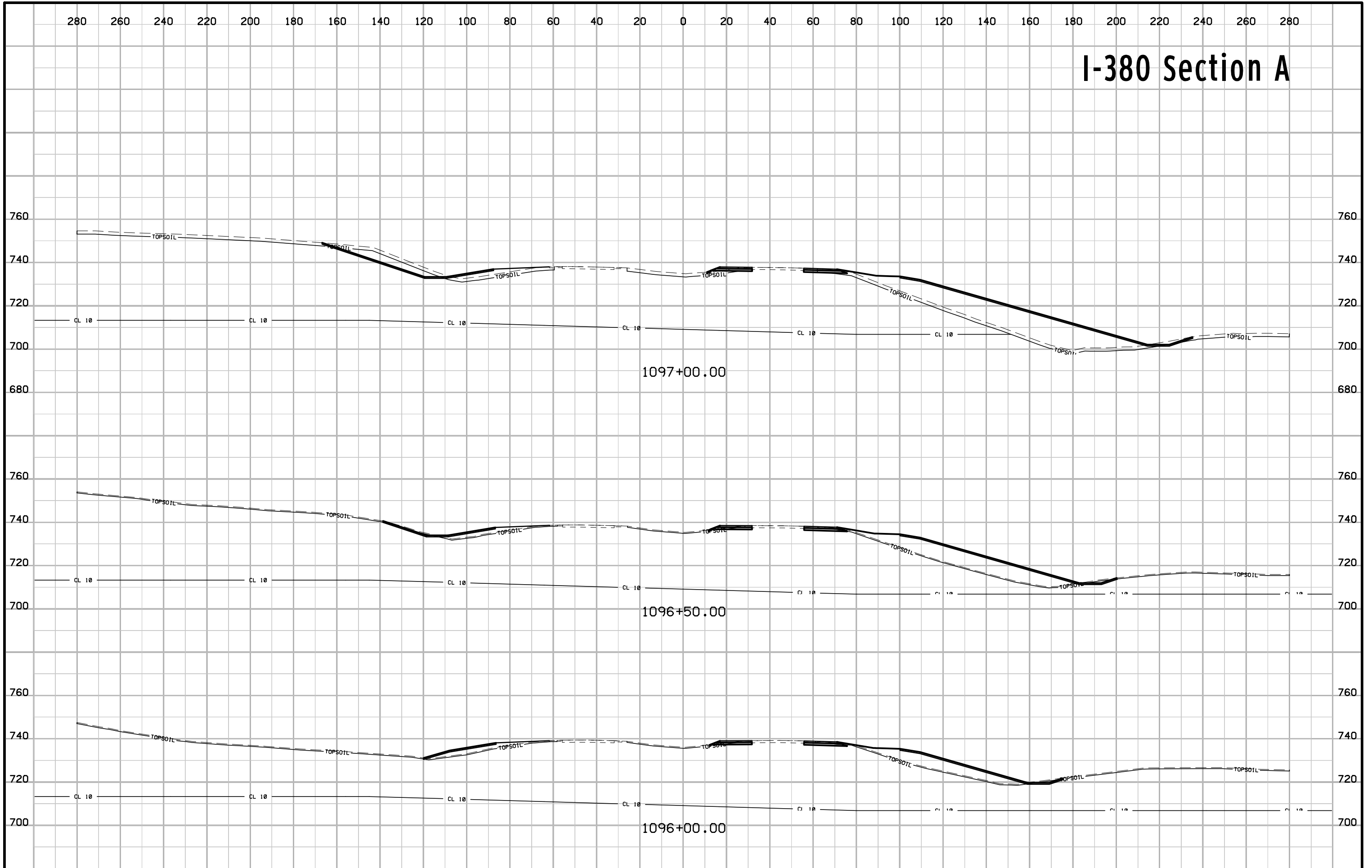




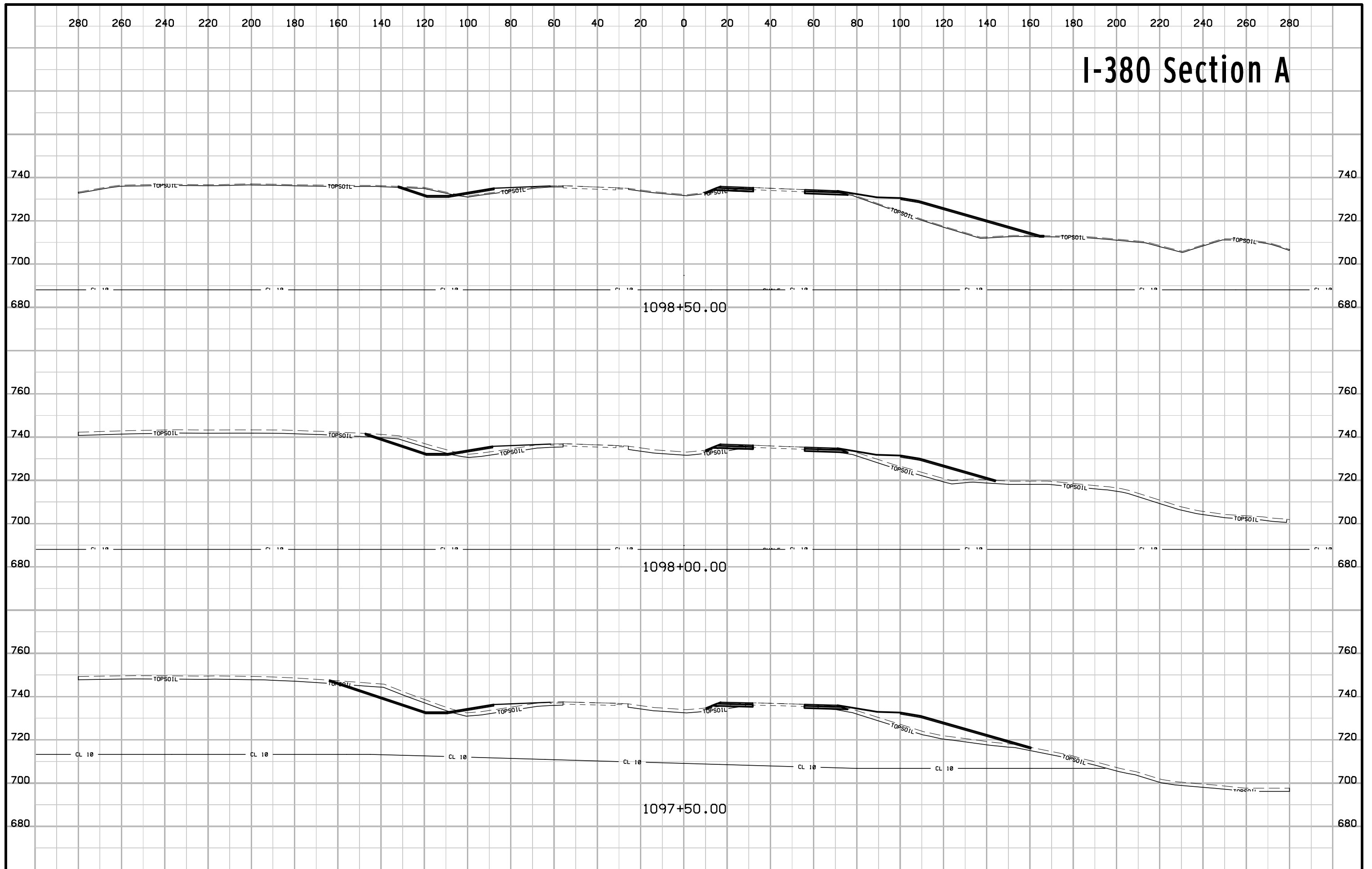
I-380 Section A



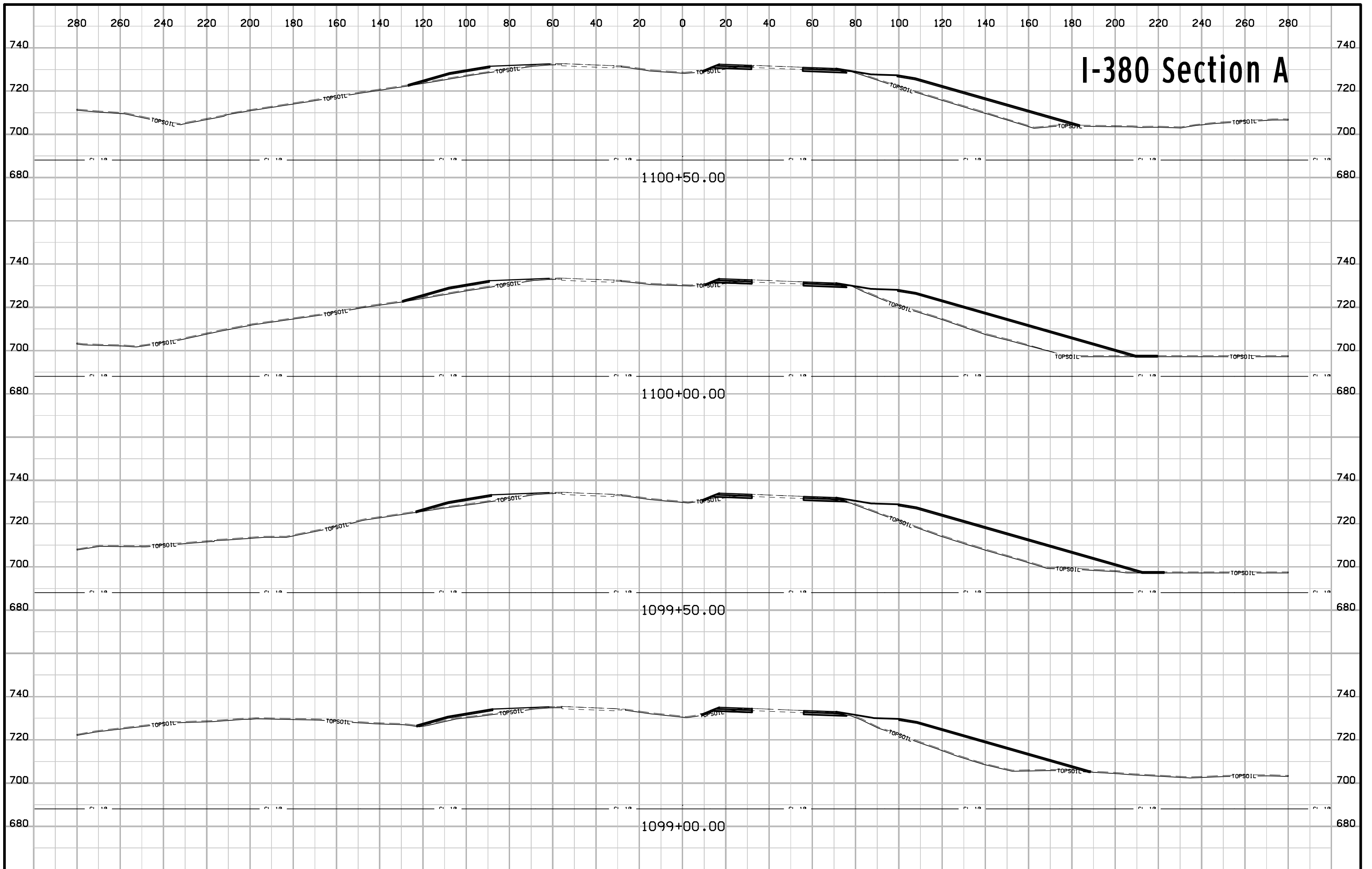
I-380 Section A

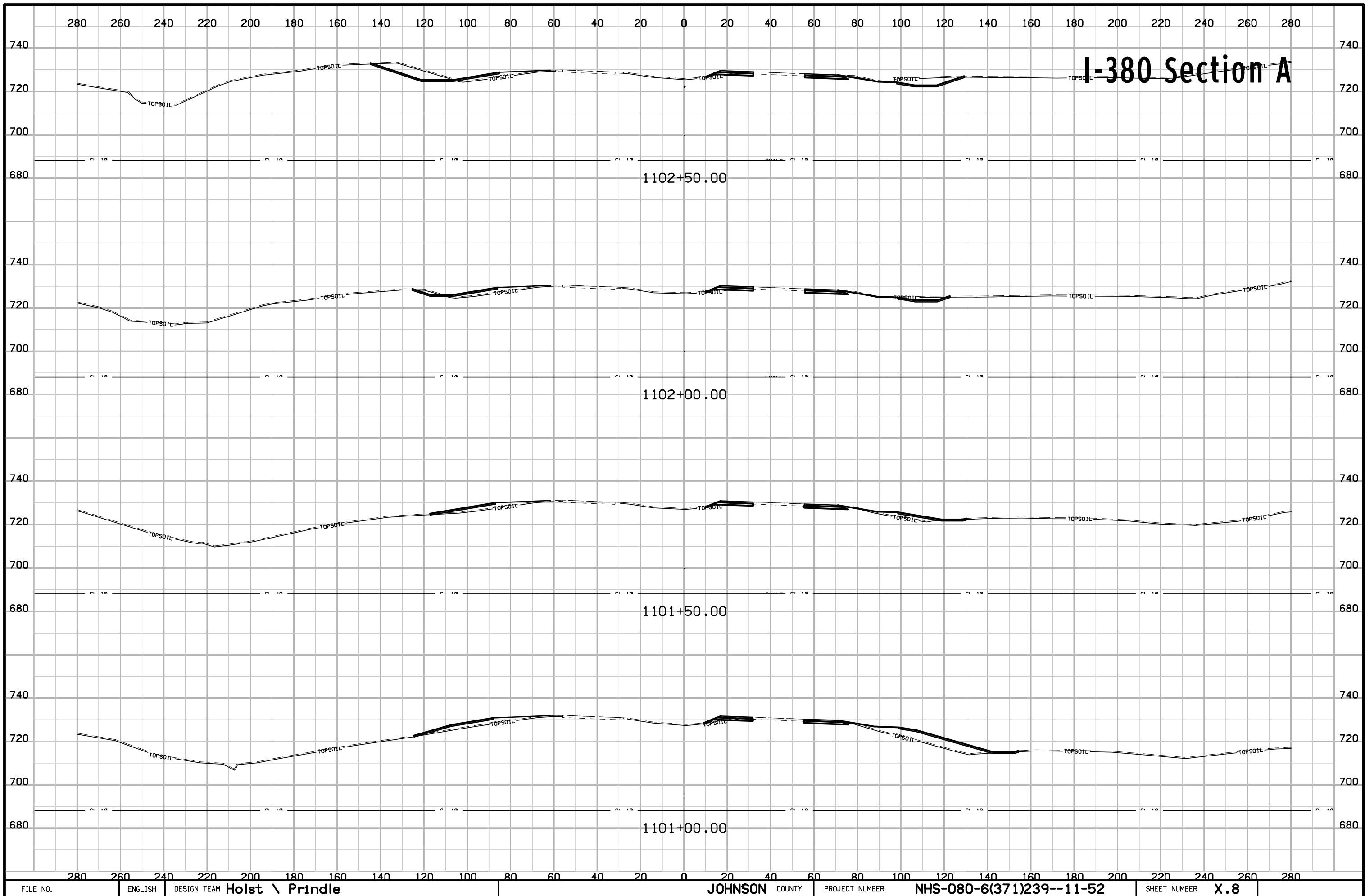


I-380 Section A

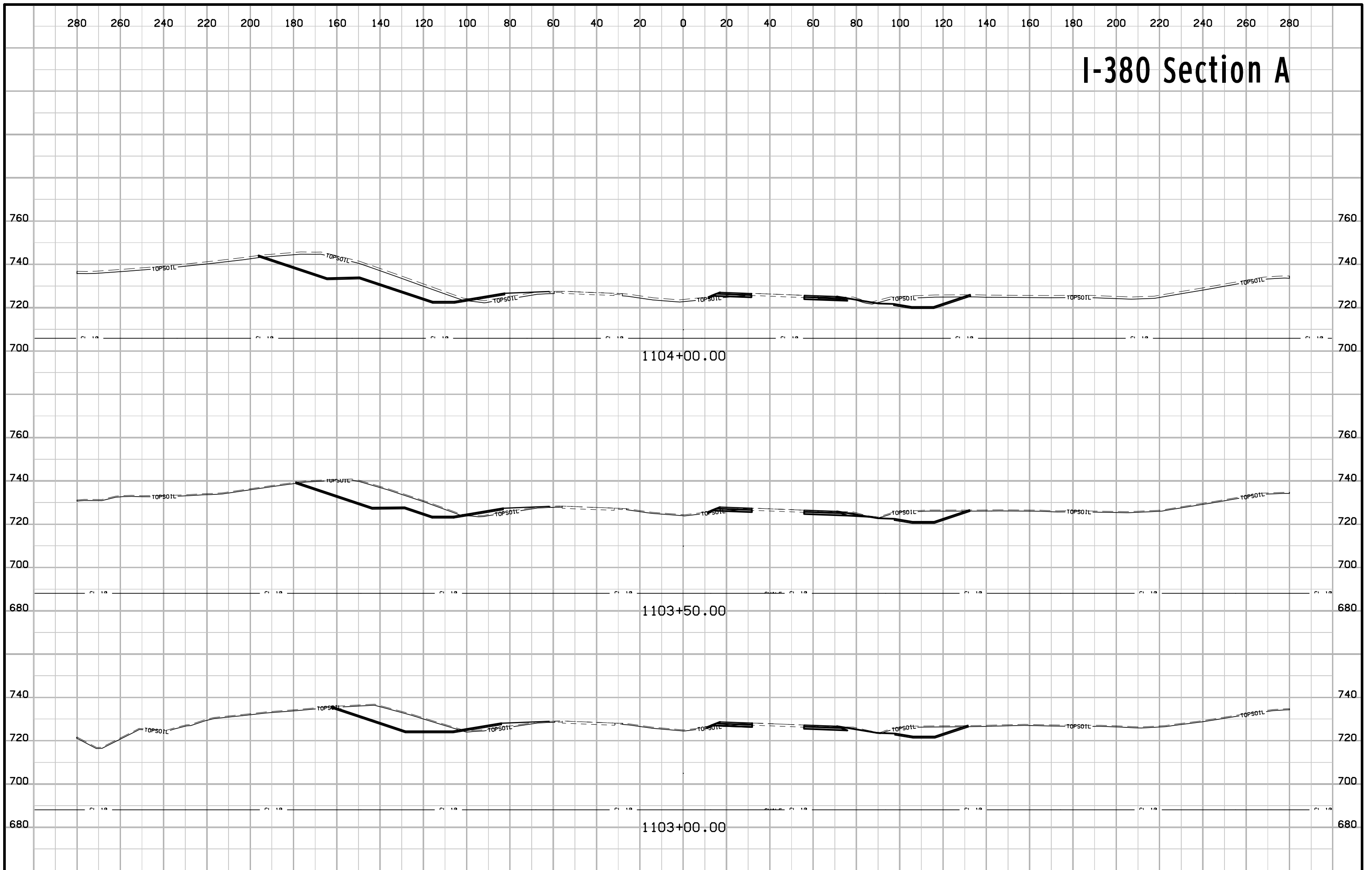


I-380 Section A

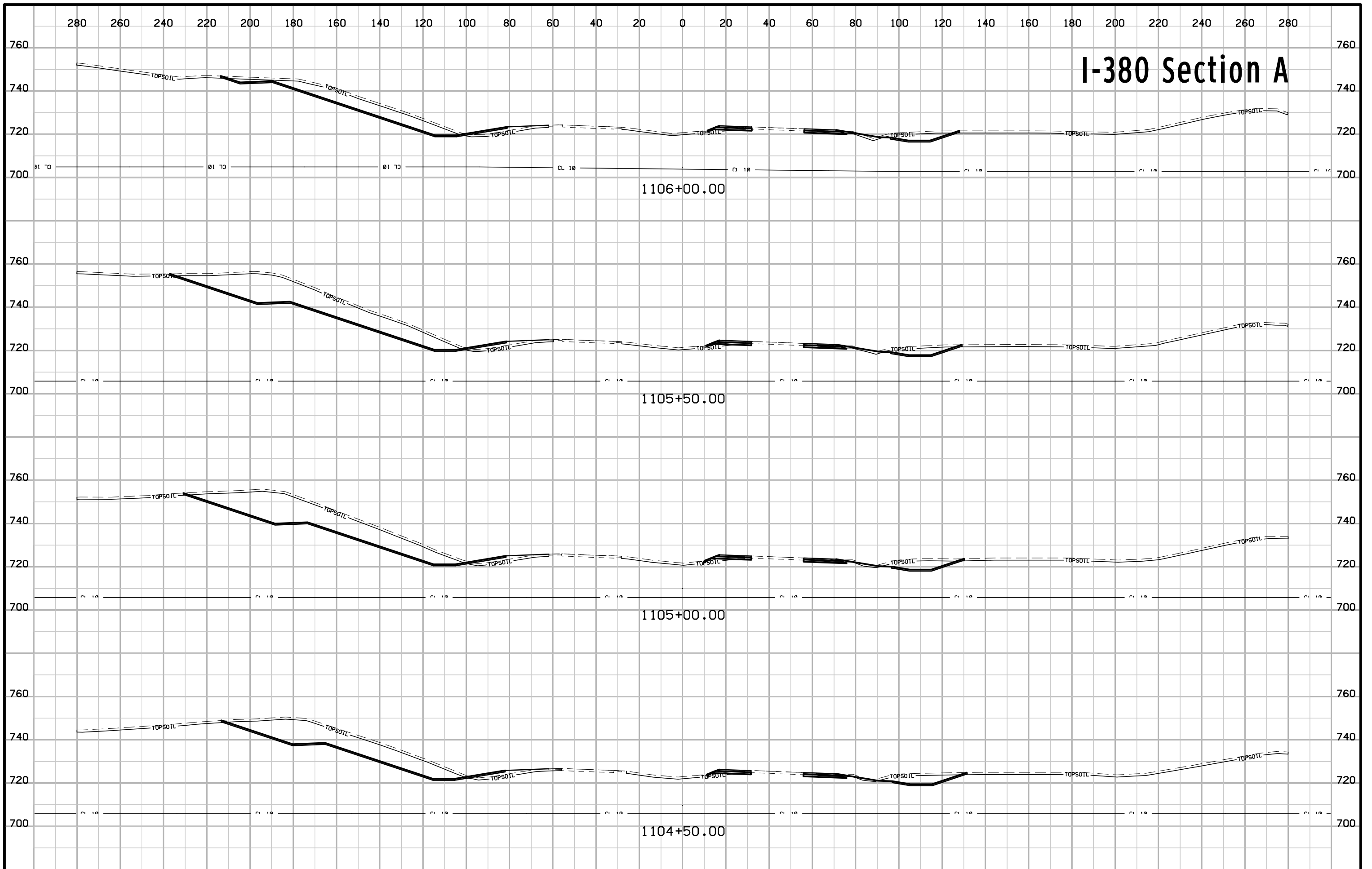




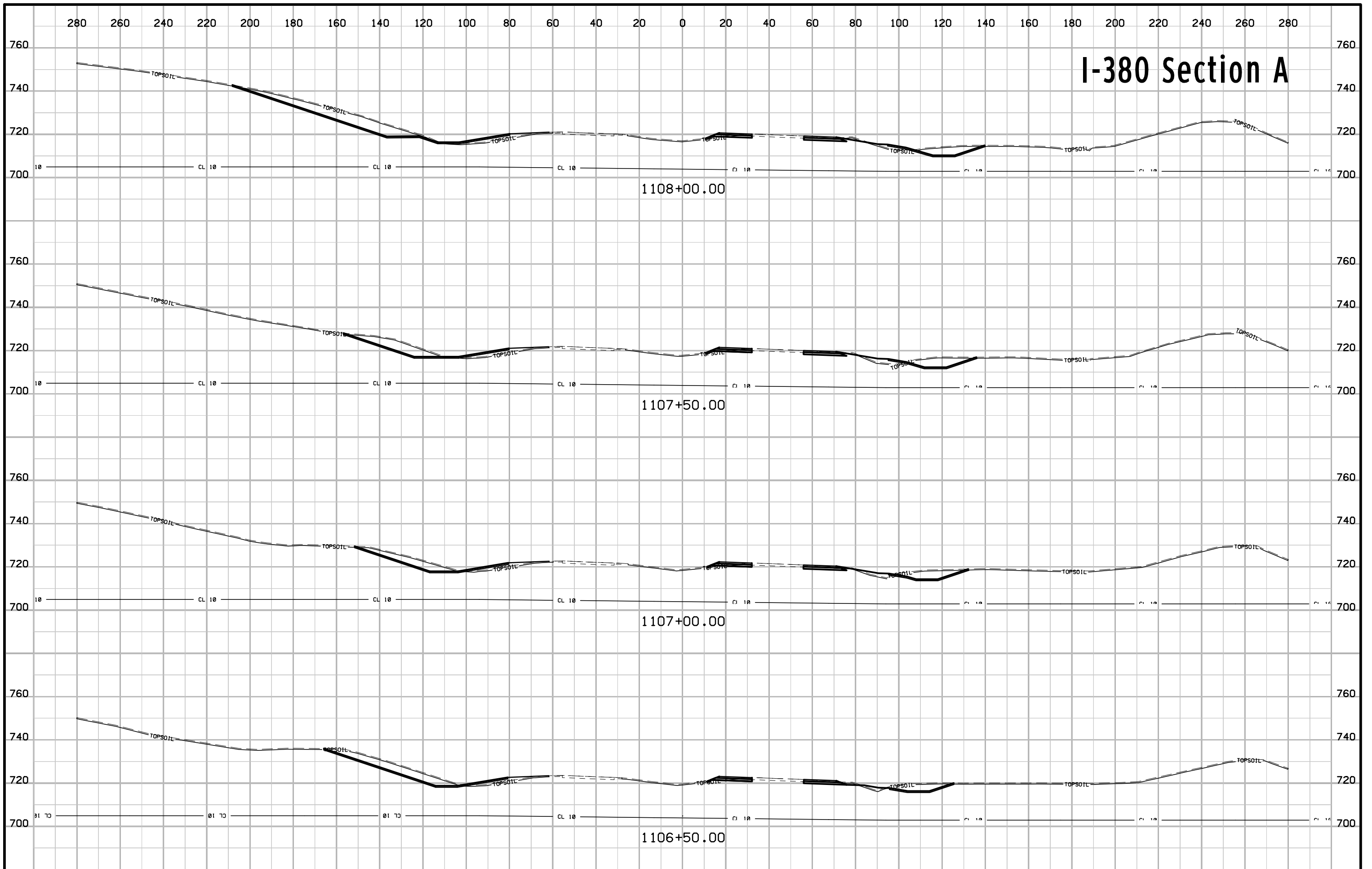
I-380 Section A



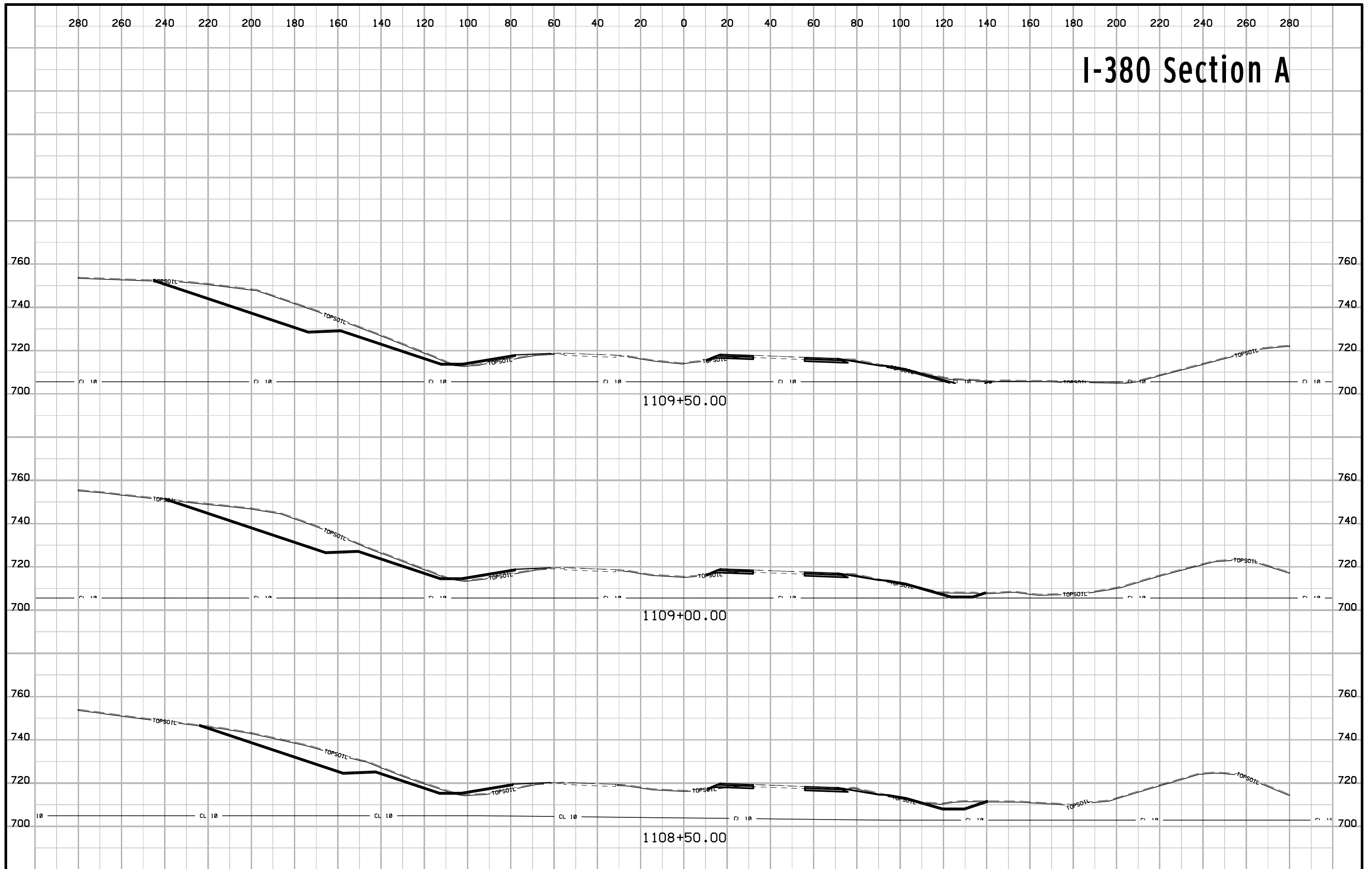
I-380 Section A



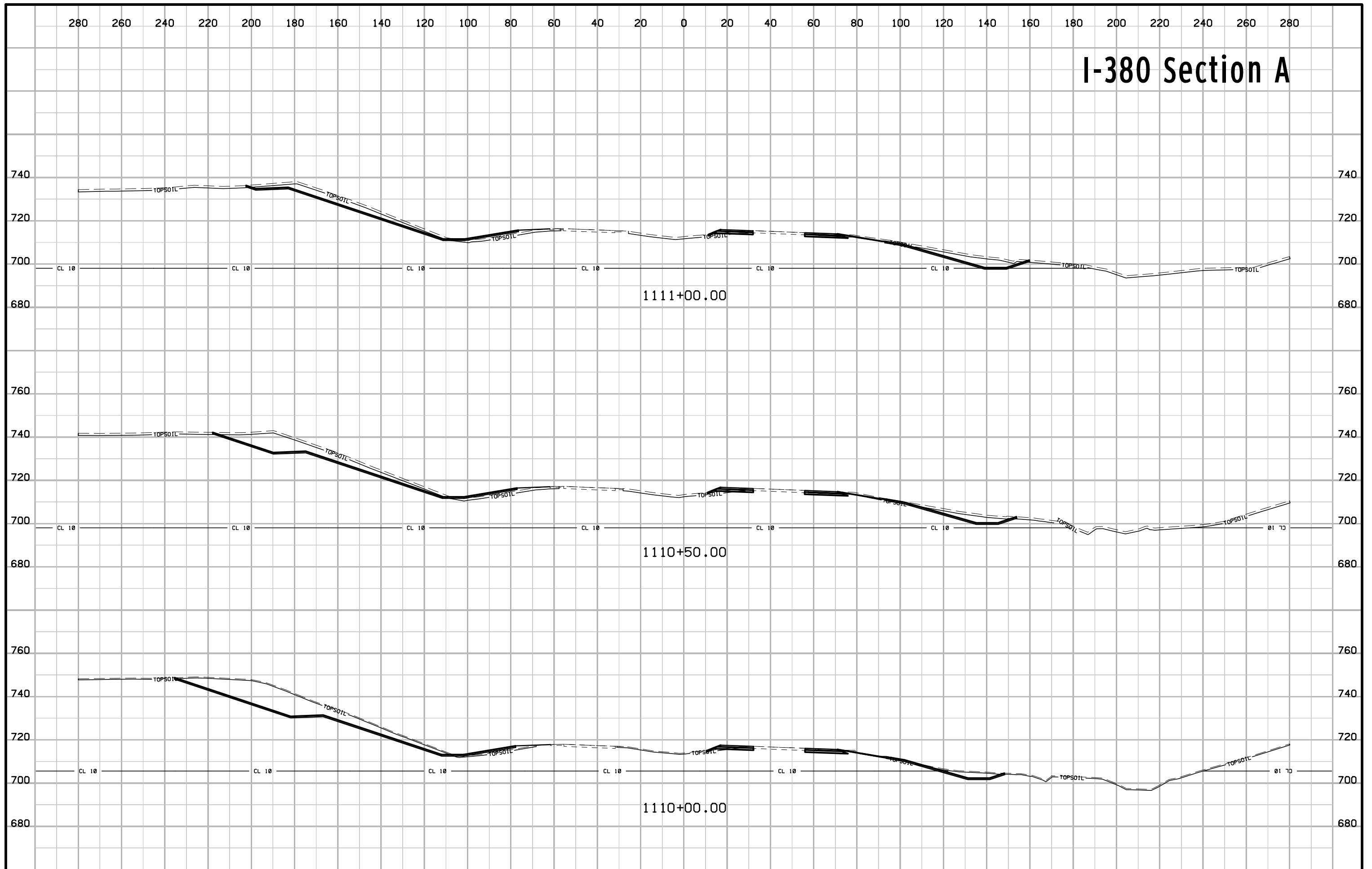
I-380 Section A



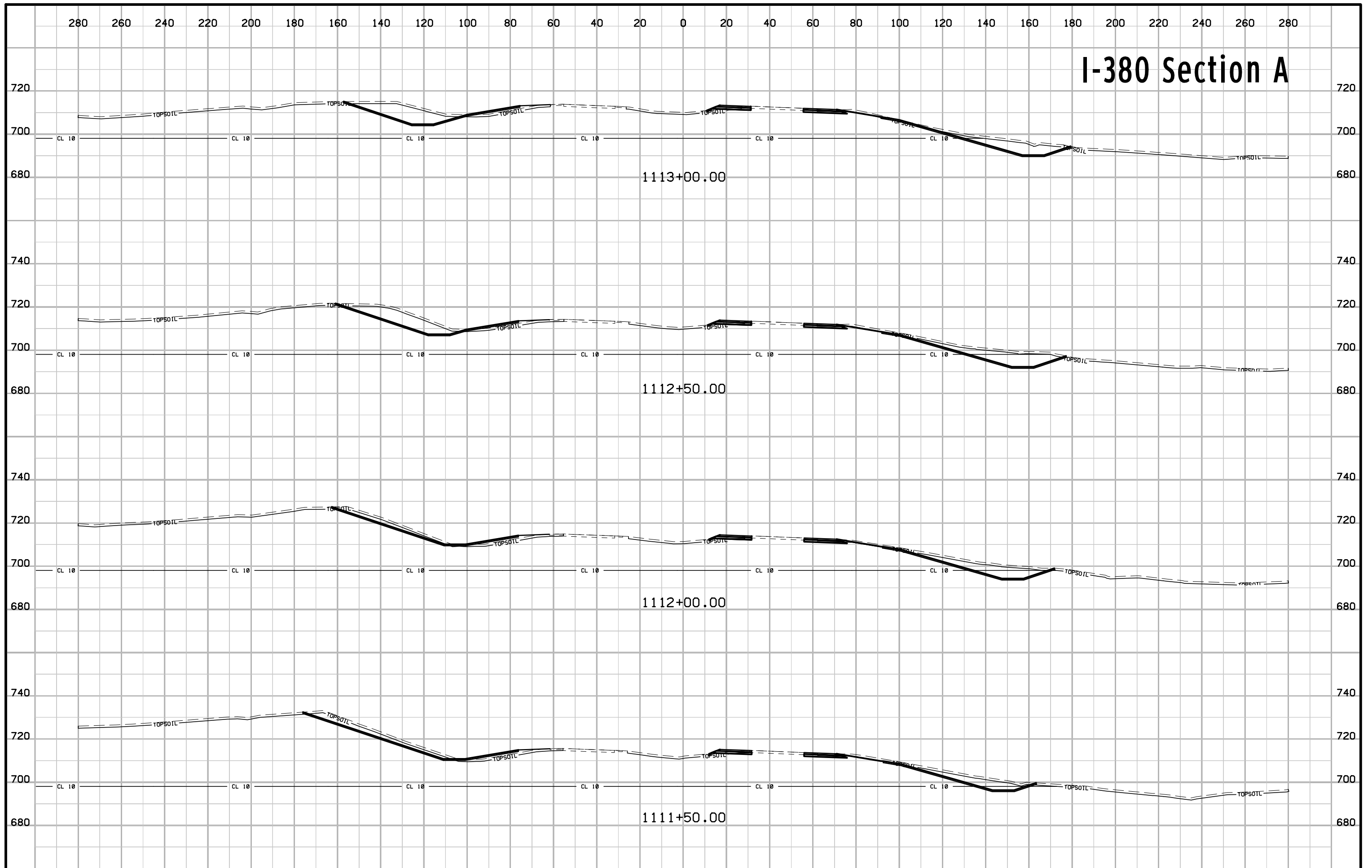
I-380 Section A

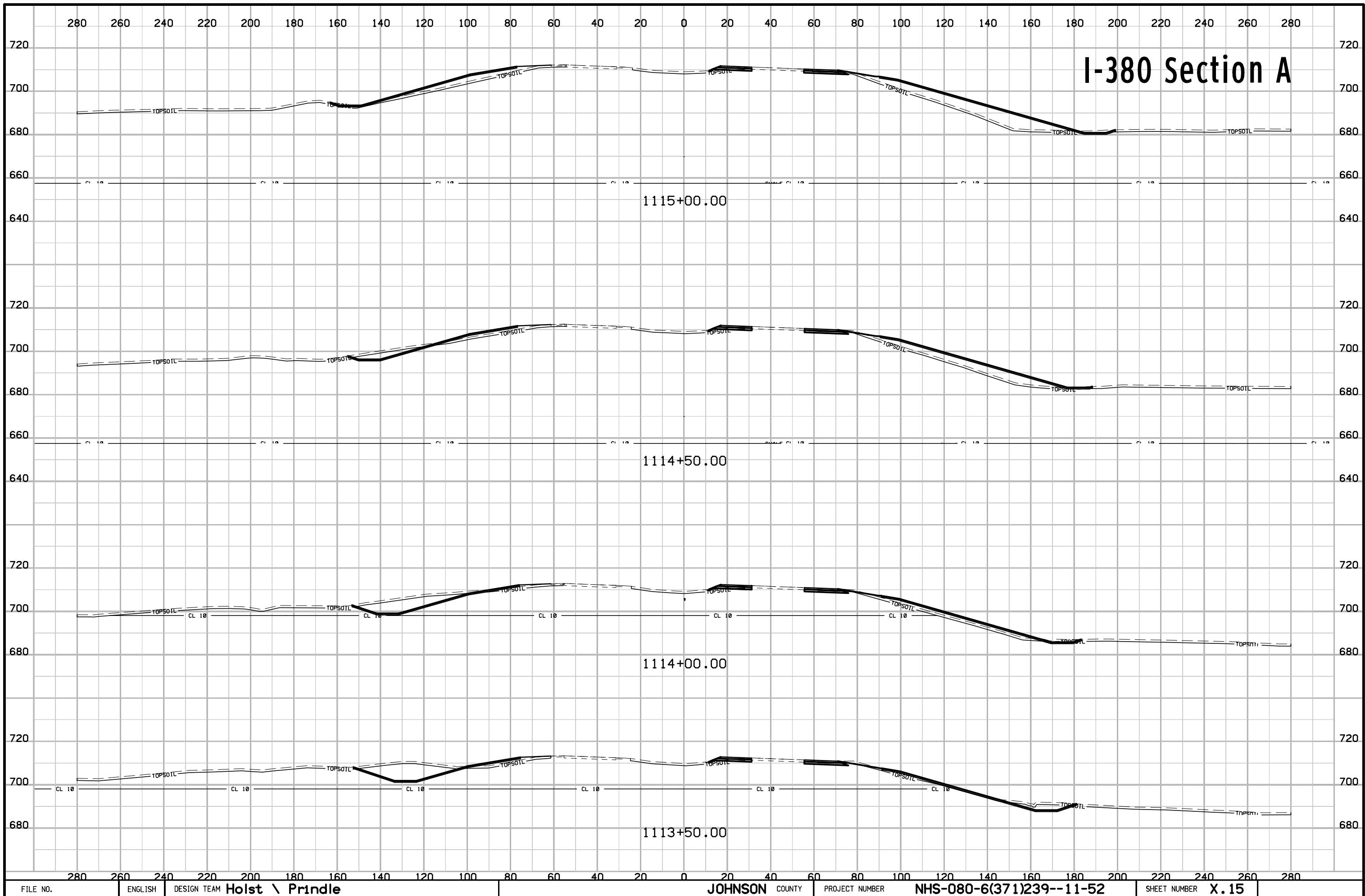


I-380 Section A

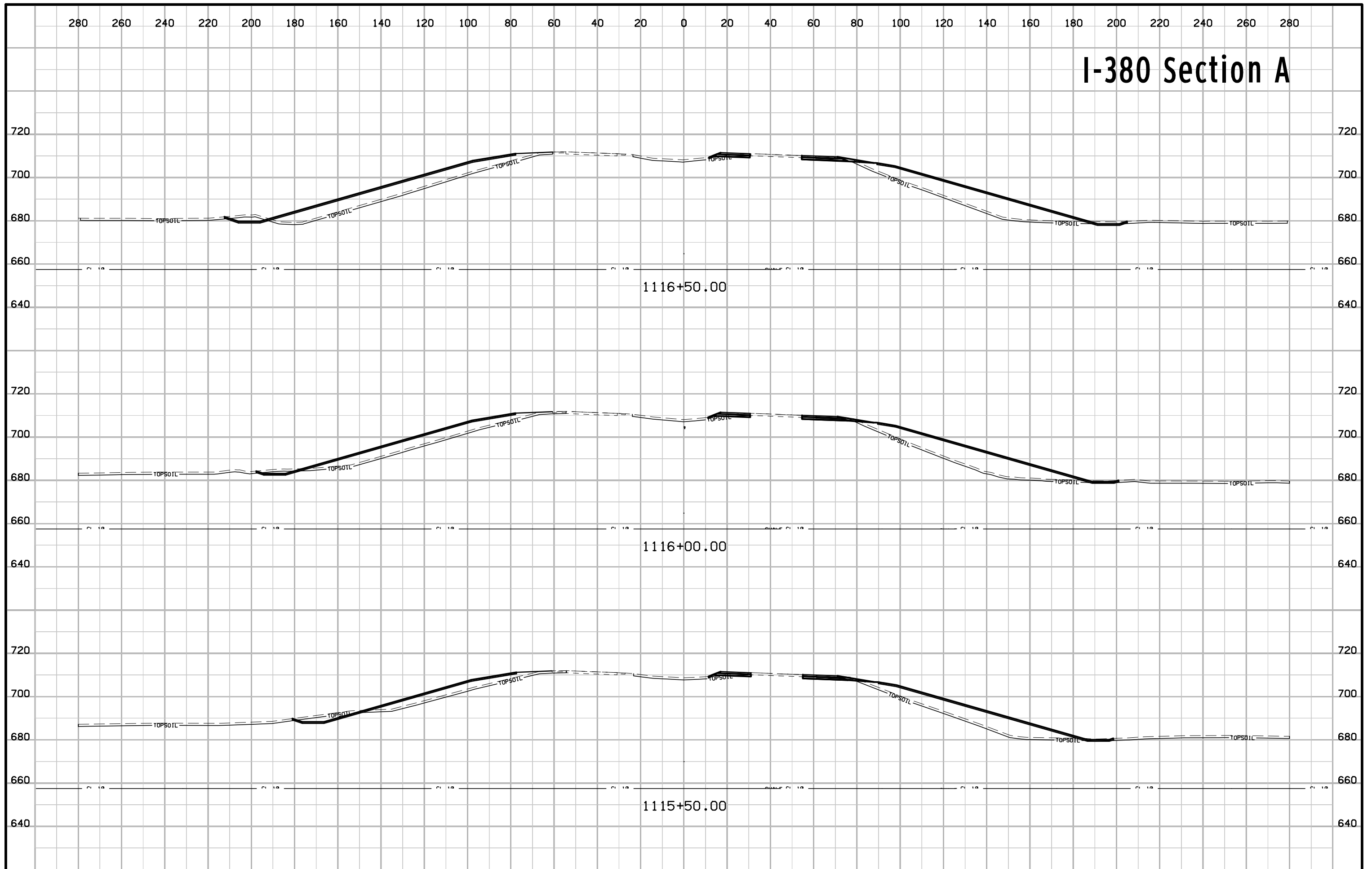


I-380 Section A

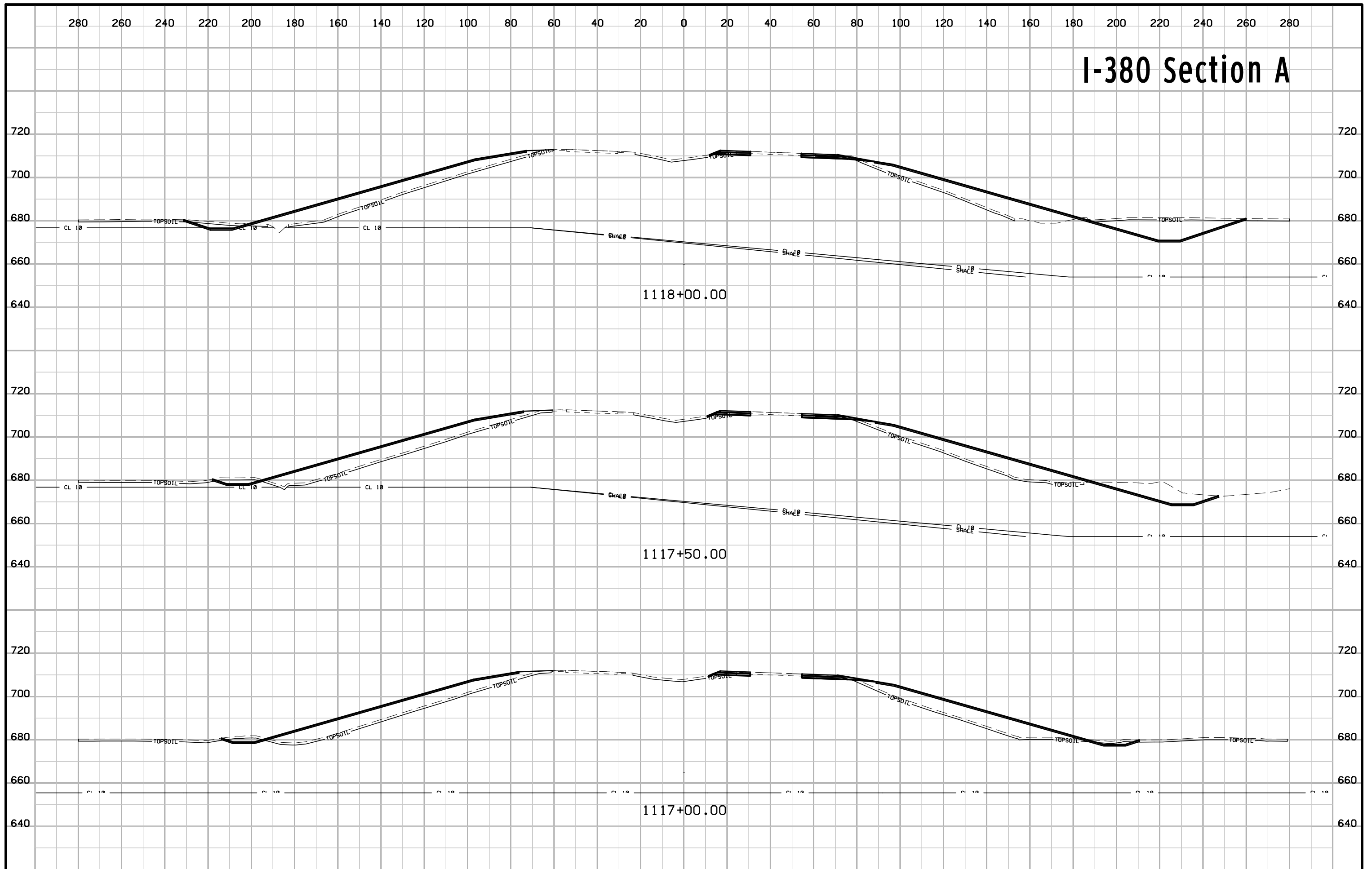




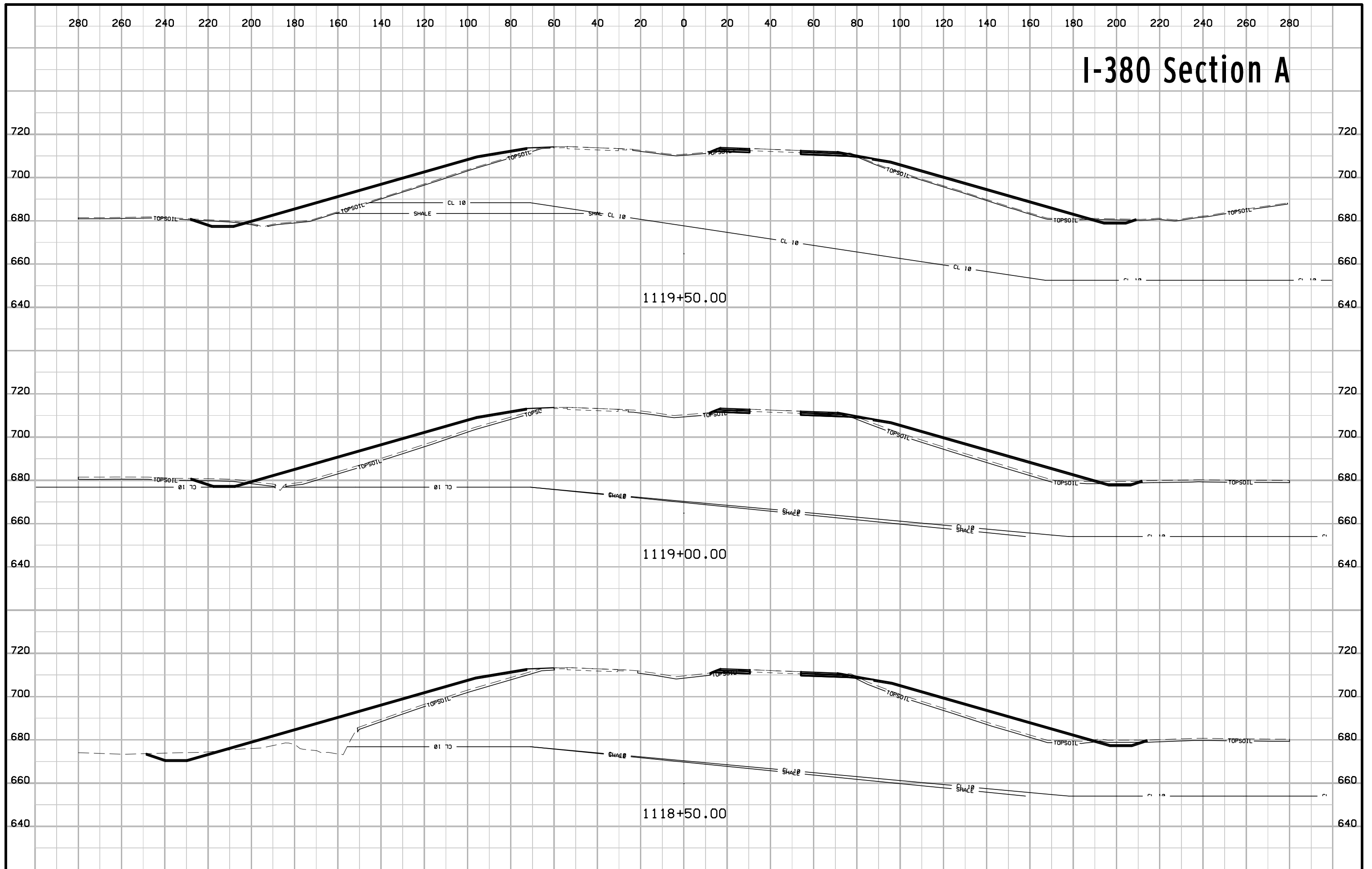
I-380 Section A



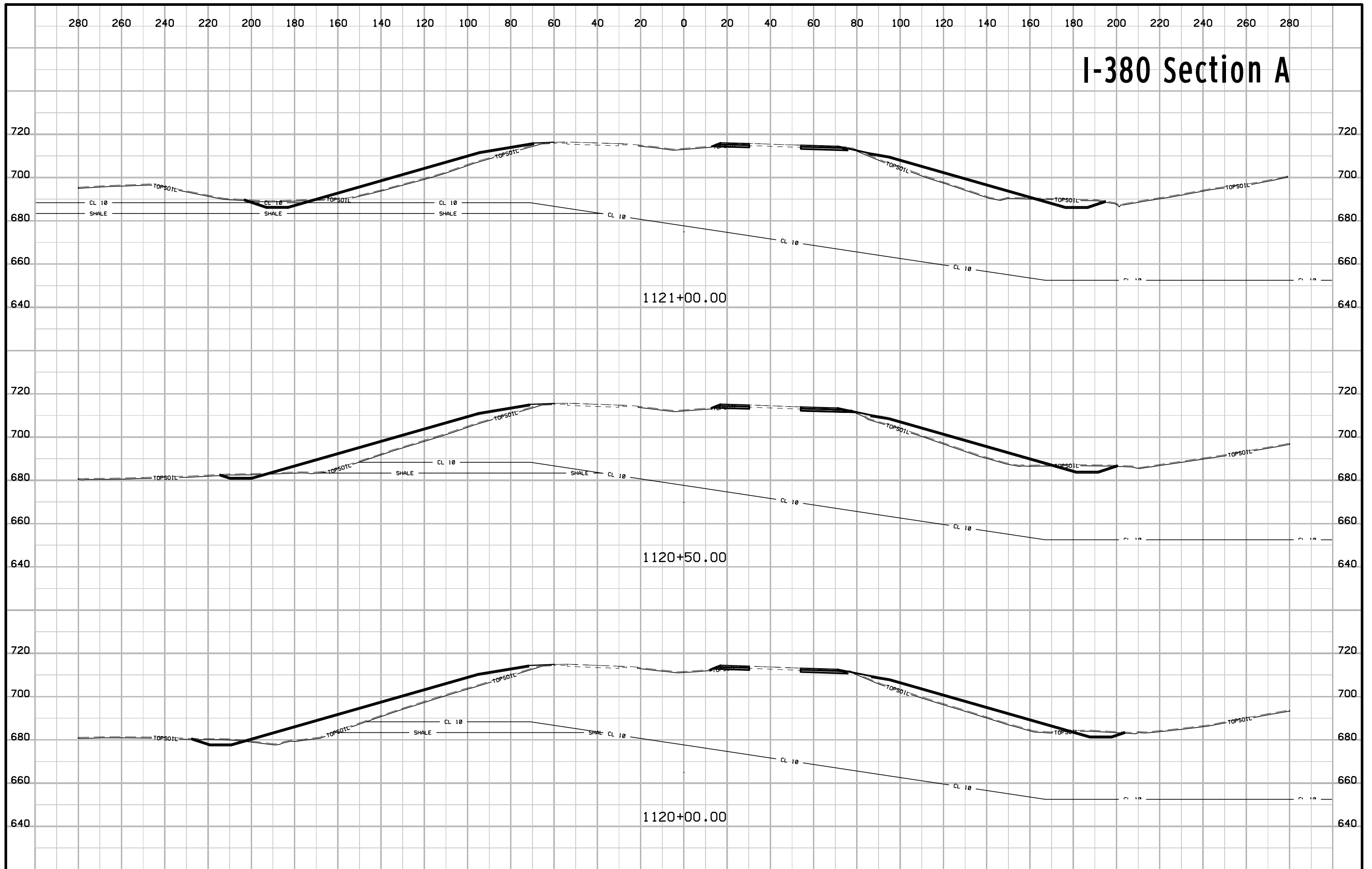
I-380 Section A



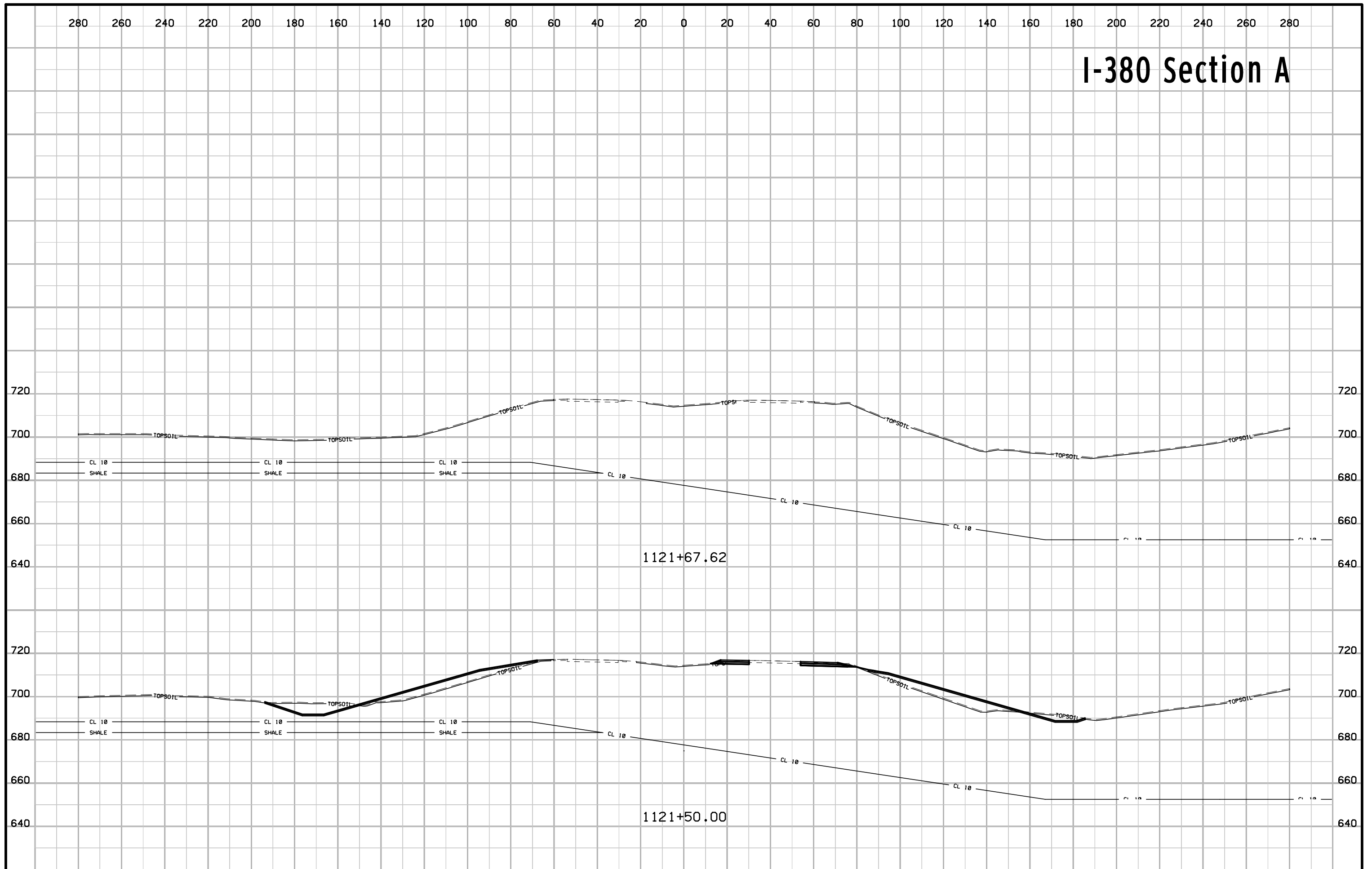
I-380 Section A



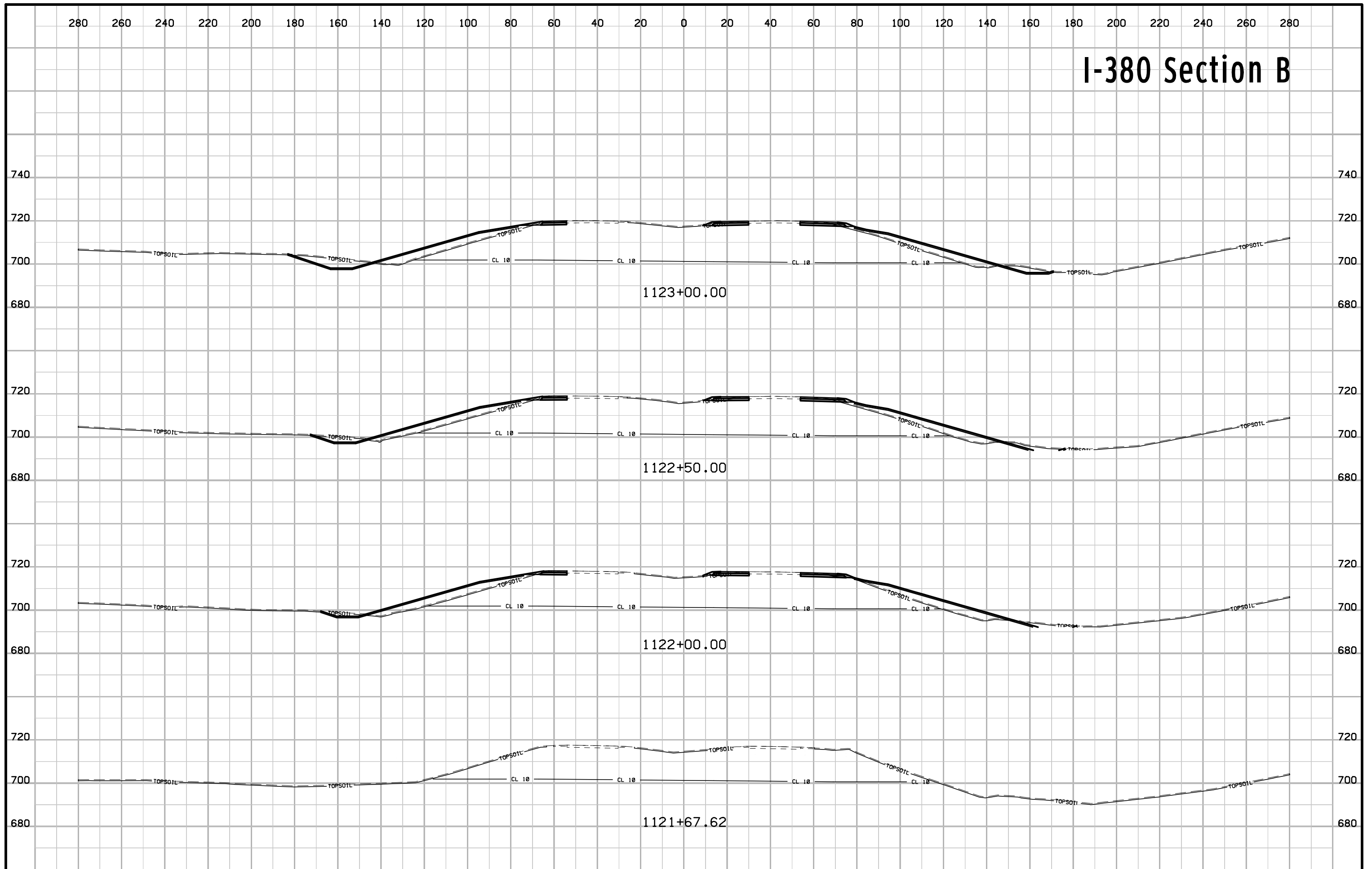
I-380 Section A



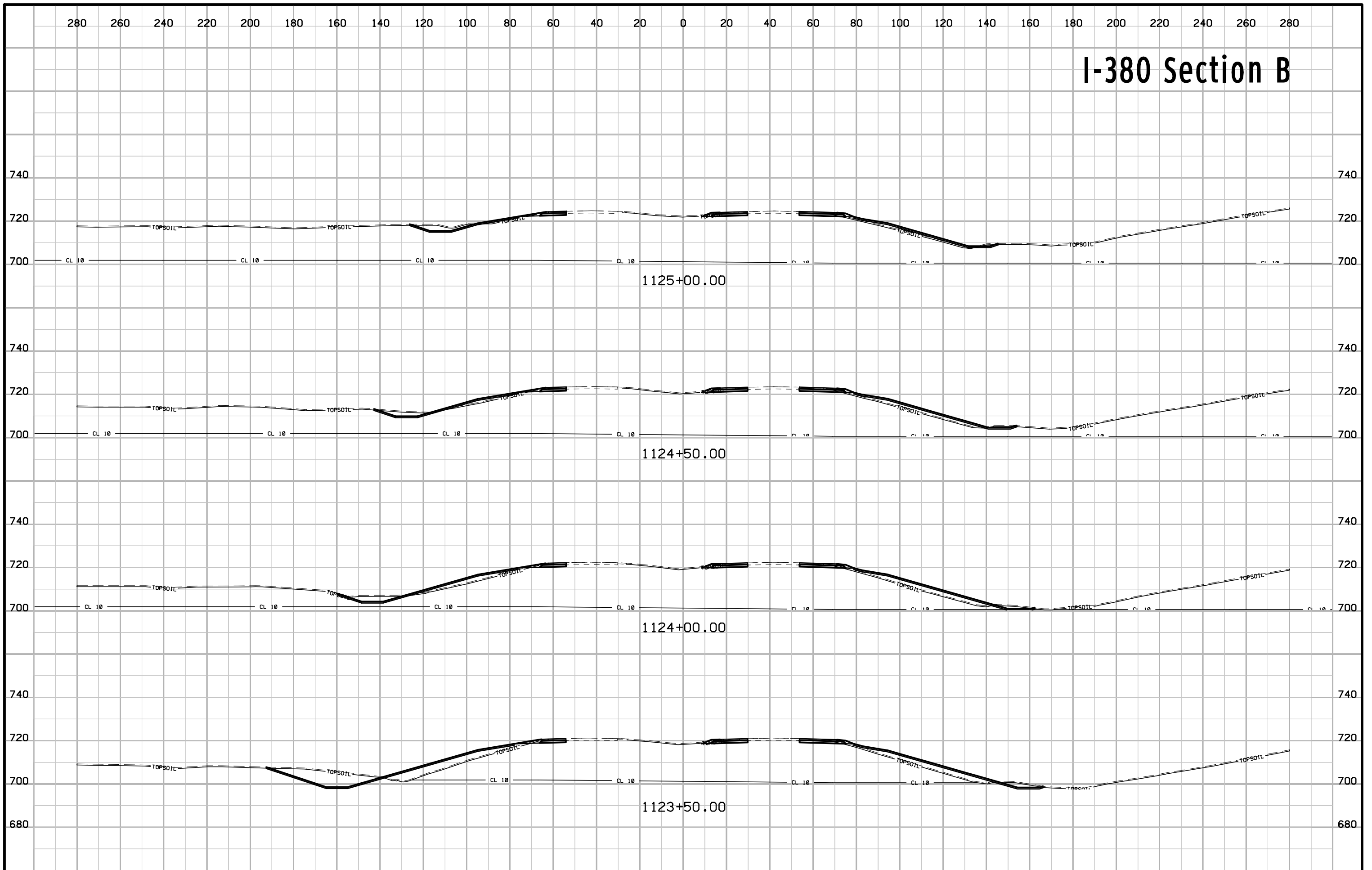
I-380 Section A



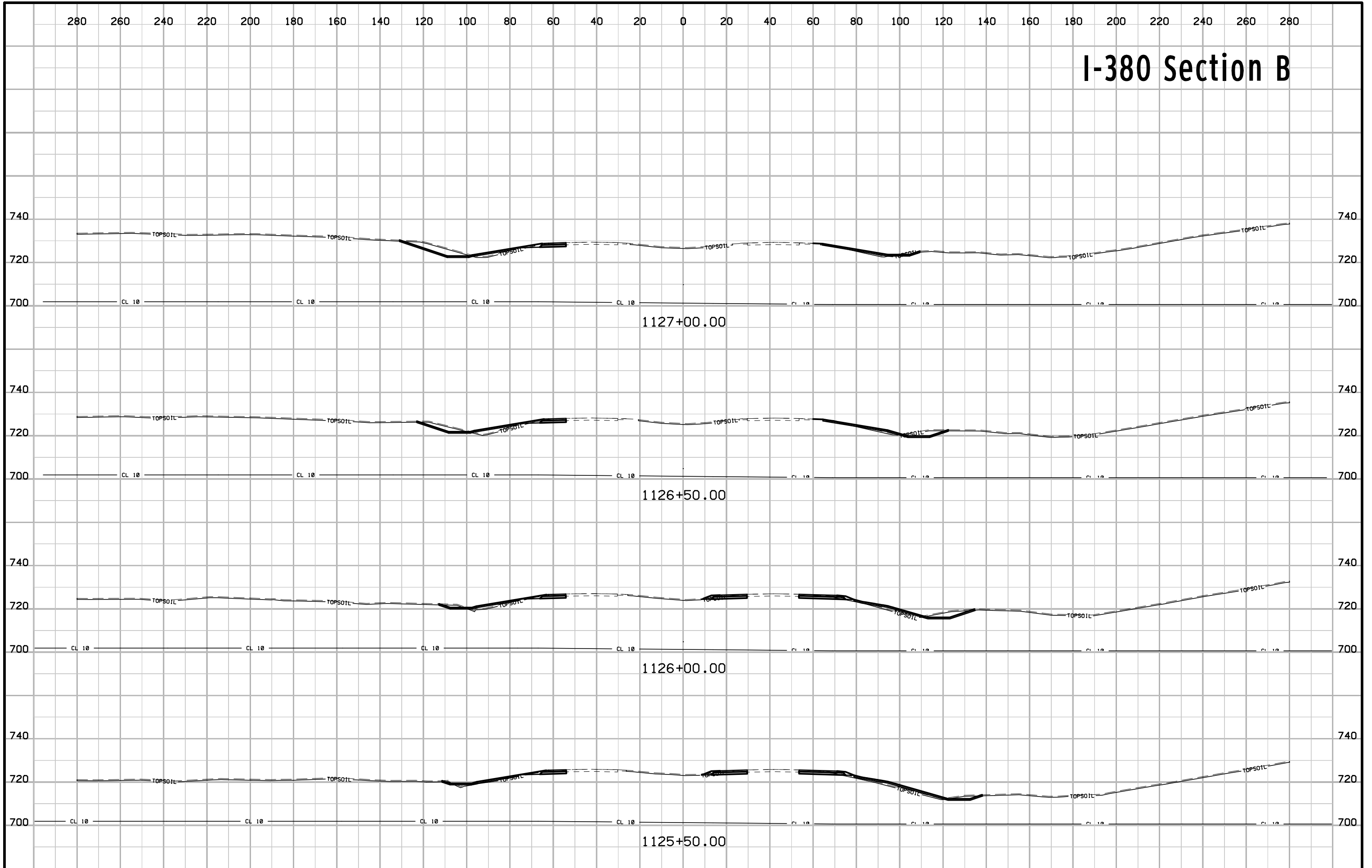
I-380 Section B



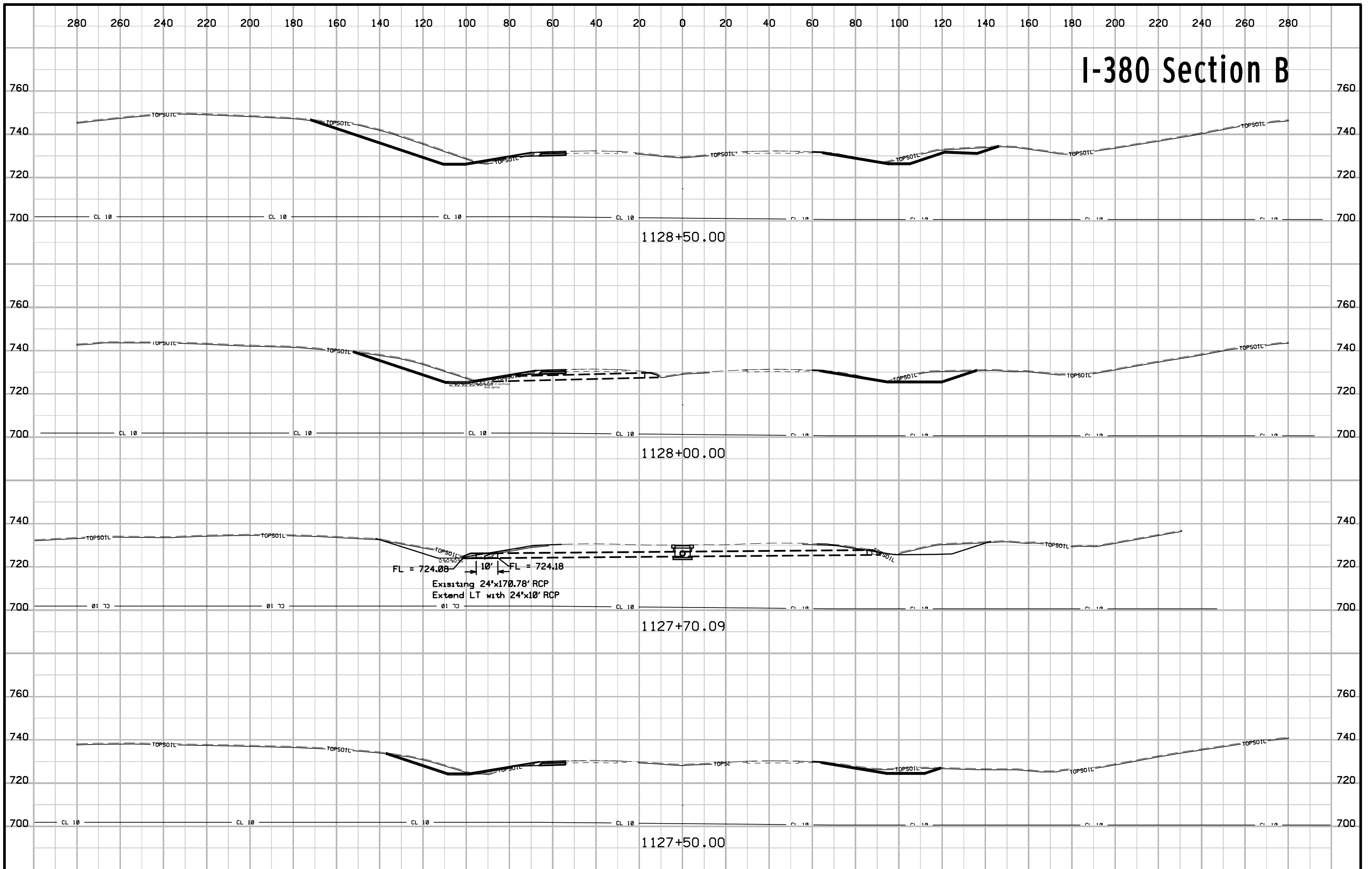
I-380 Section B



I-380 Section B

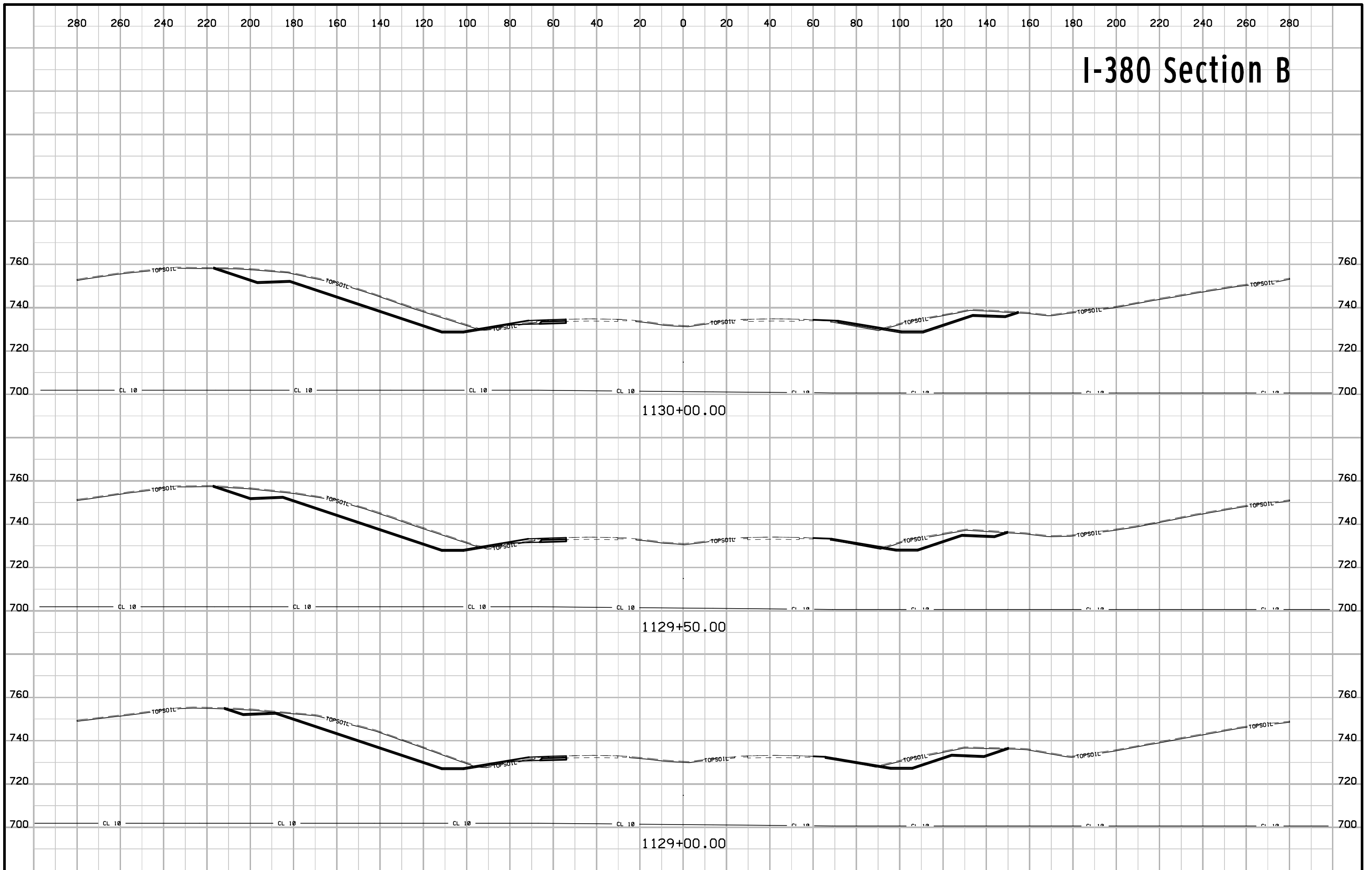


I-380 Section B

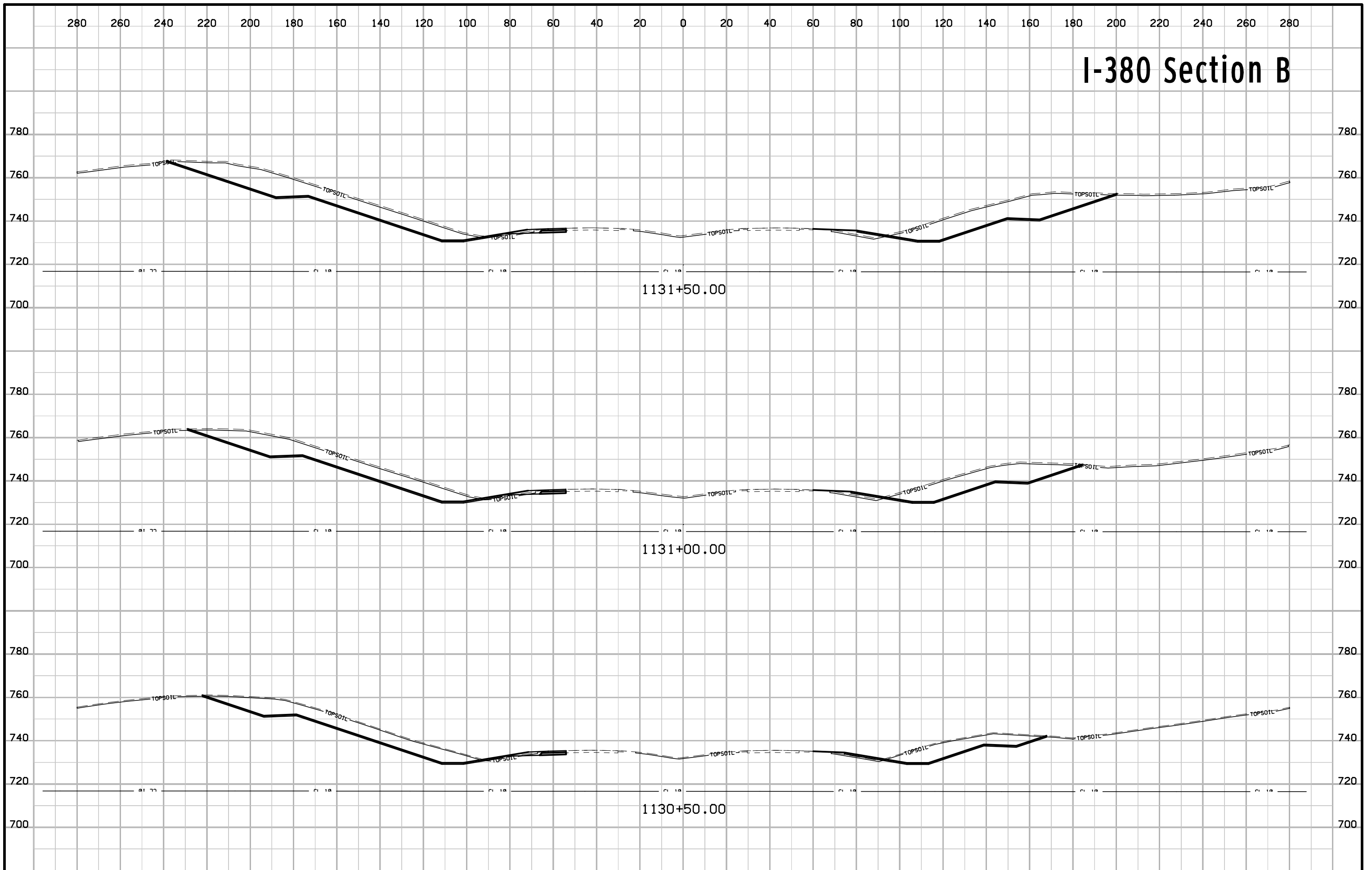


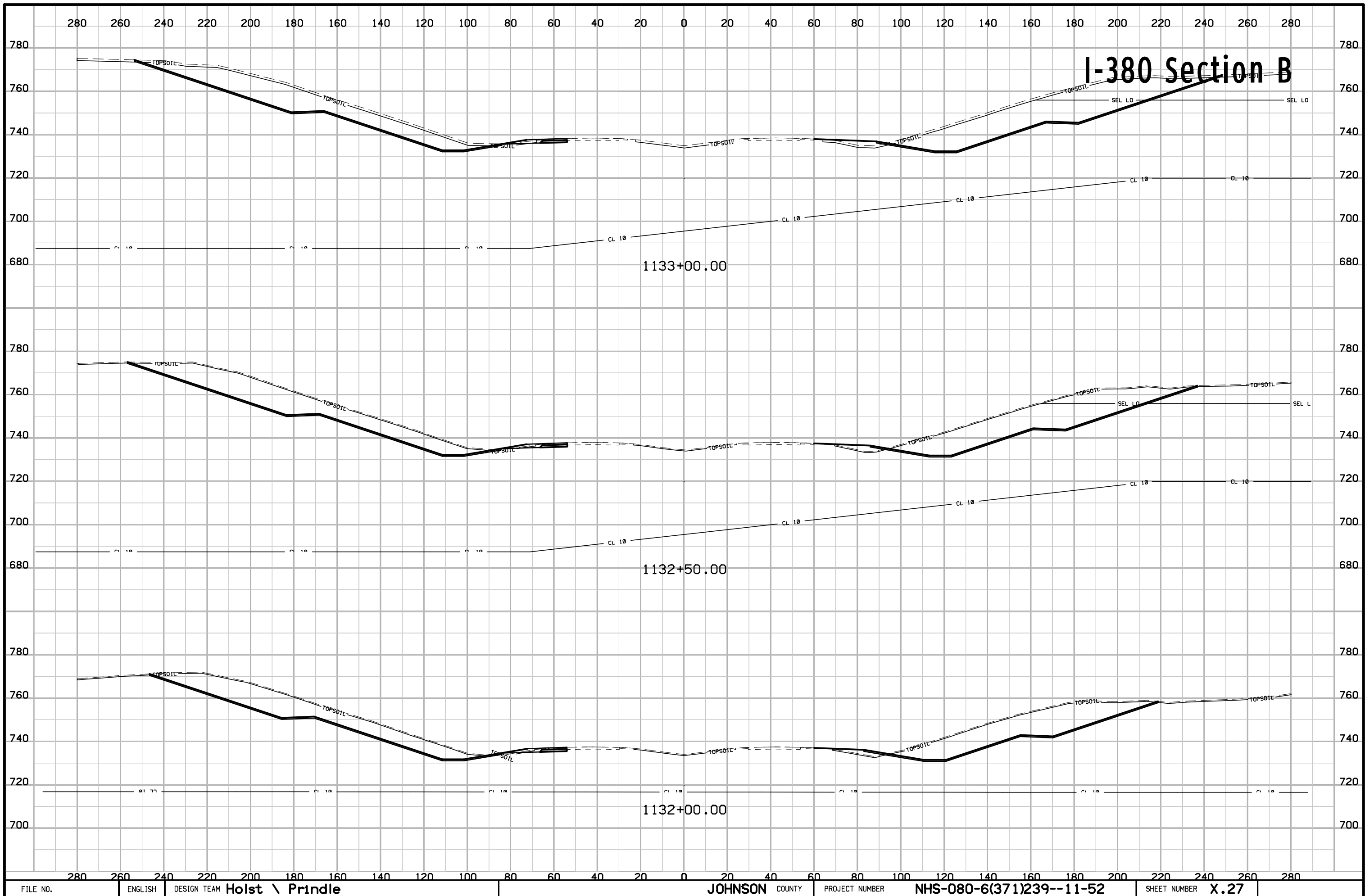
FL = 724.08
 10'
 FL = 724.18
 Existing 24"x170.78' RCP
 Extend LT with 24"x10' RCP

I-380 Section B



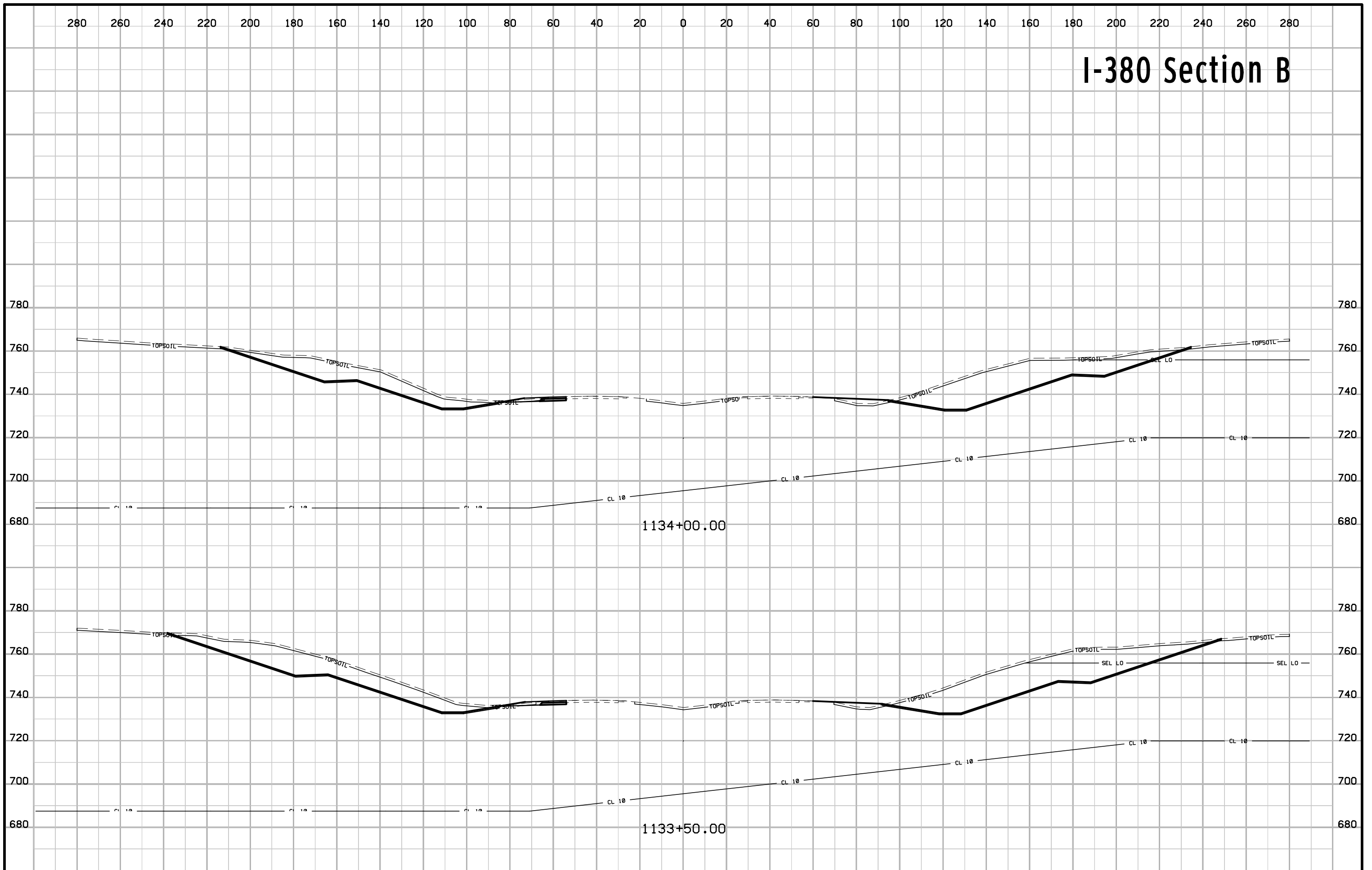
I-380 Section B



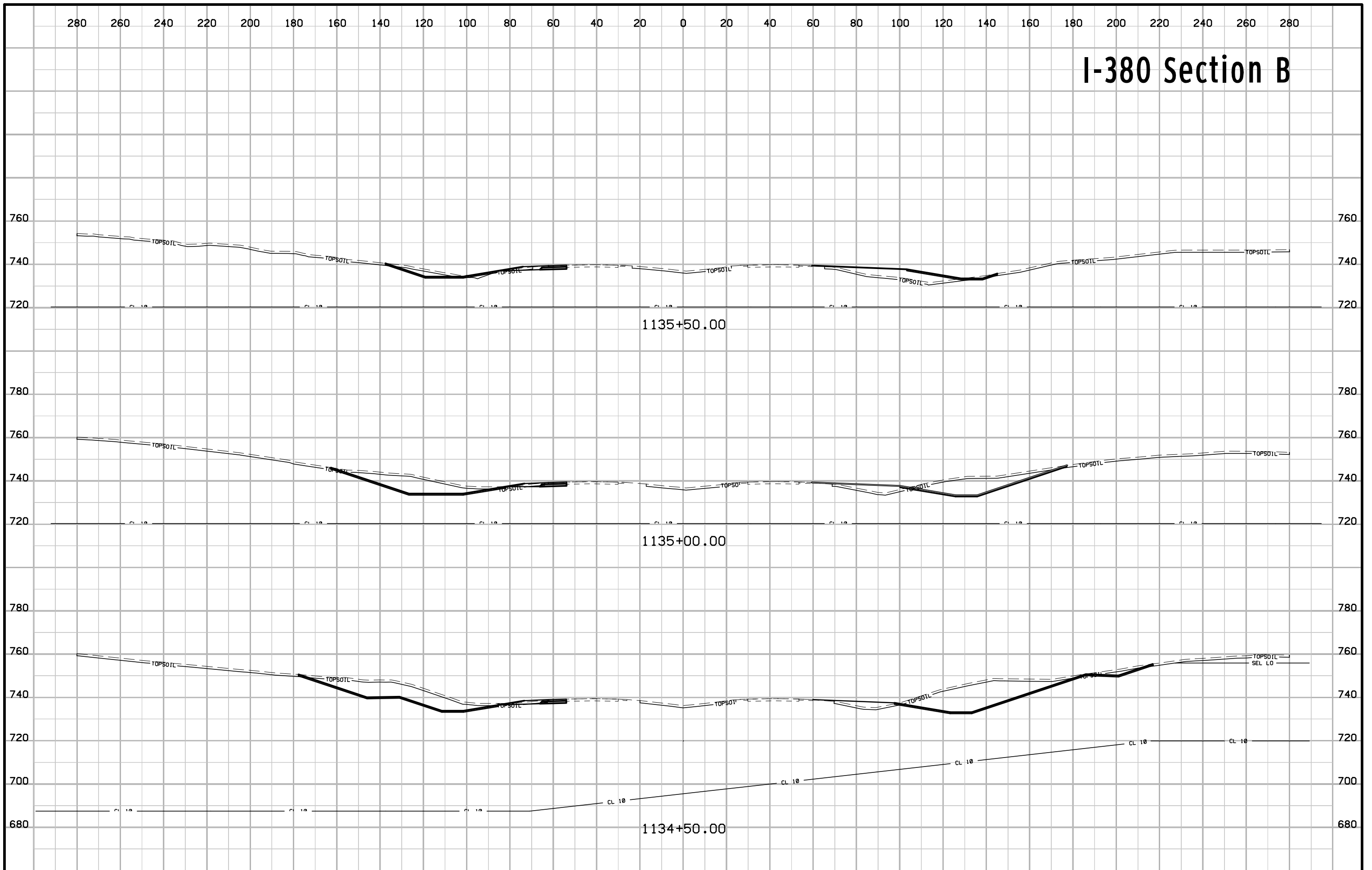


I-380 Section B

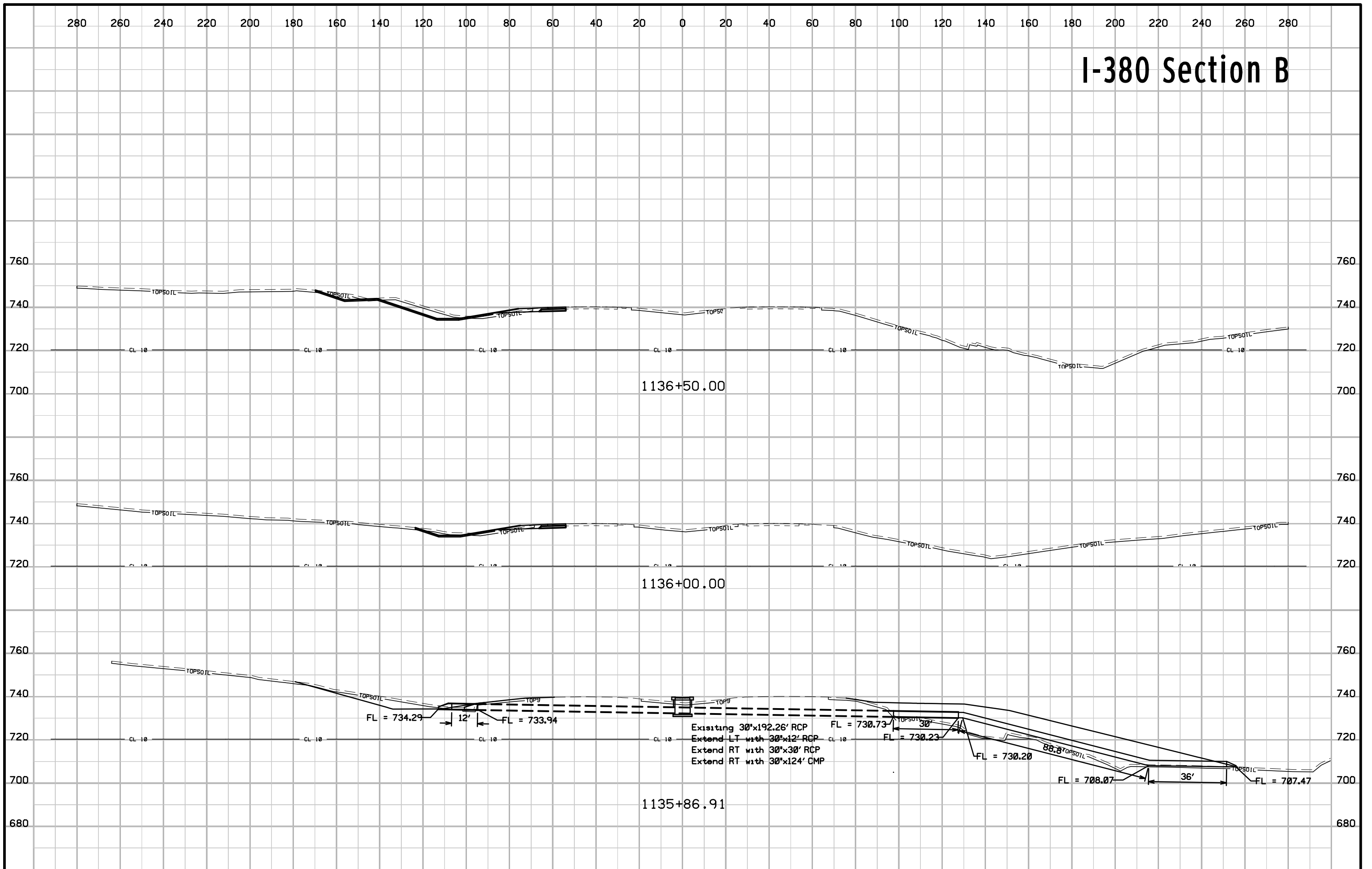
I-380 Section B



I-380 Section B



I-380 Section B



1136+50.00

1136+00.00

1135+86.91

Existing 30"x192.26' RCP
 Extend LT with 30"x12' RCP
 Extend RT with 30"x30' RCP
 Extend RT with 30"x124' CMP

FL = 734.29 12' FL = 733.94

FL = 730.73

FL = 730.23

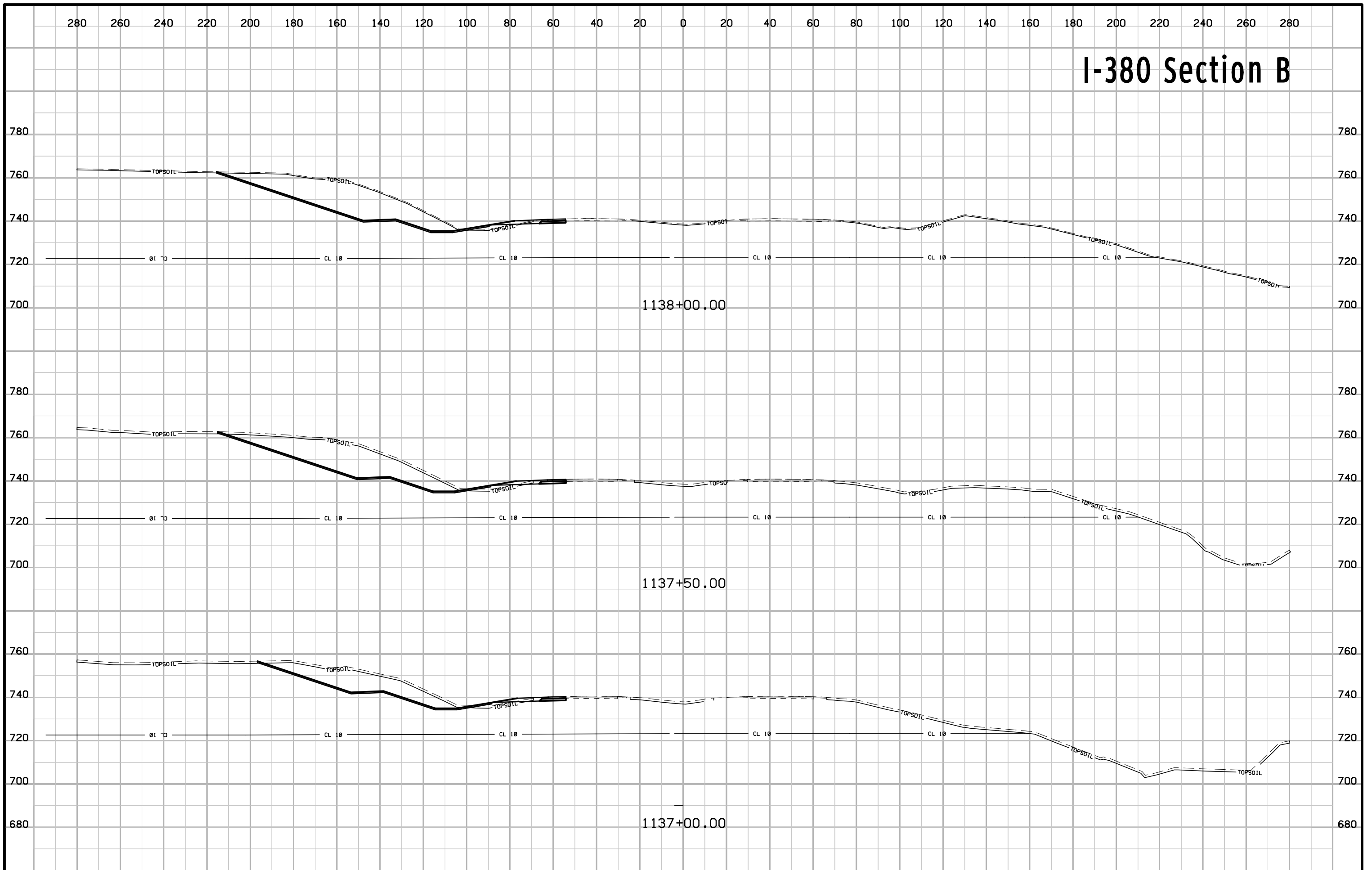
FL = 730.20

FL = 708.07

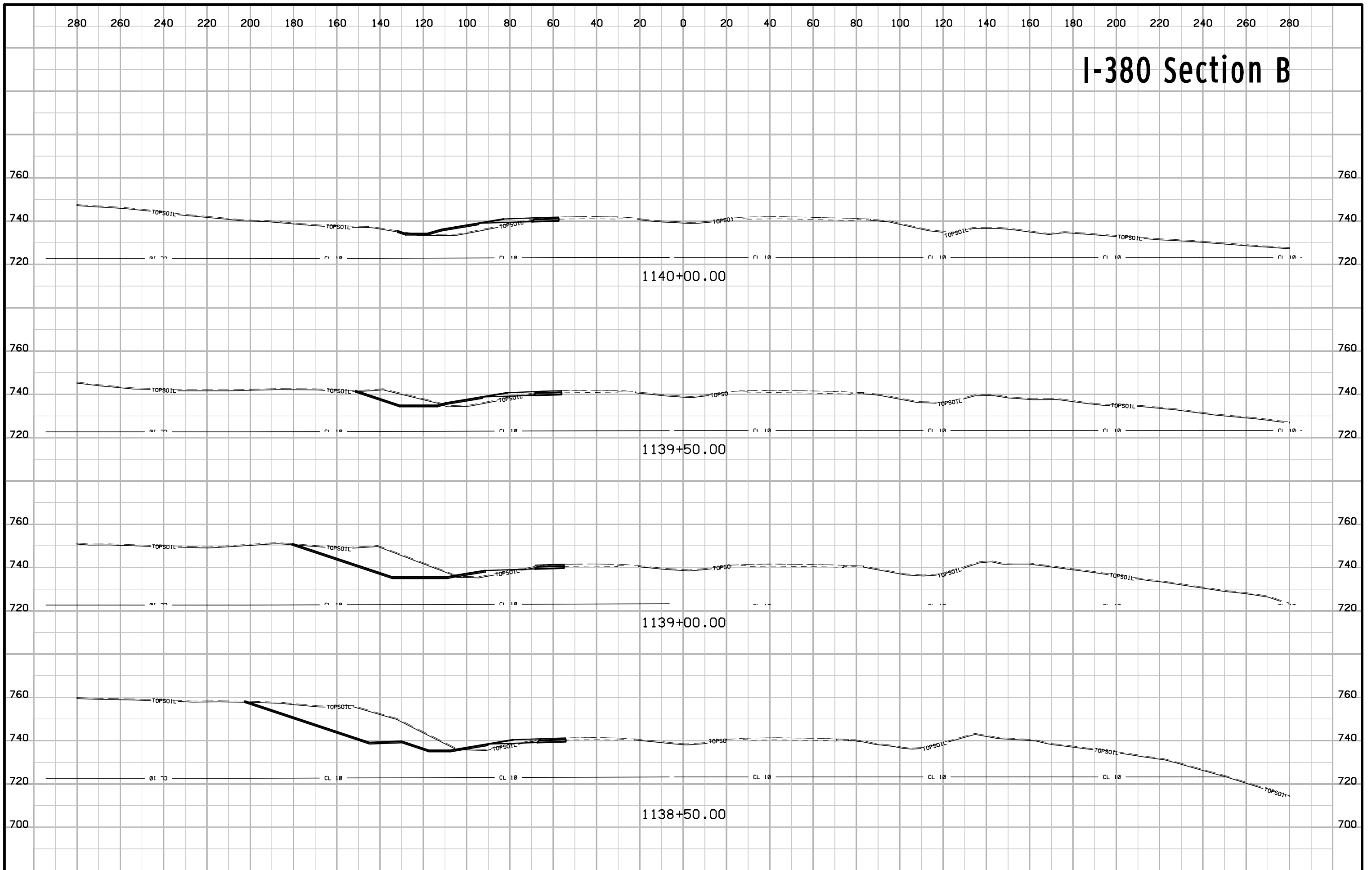
36'

FL = 707.47

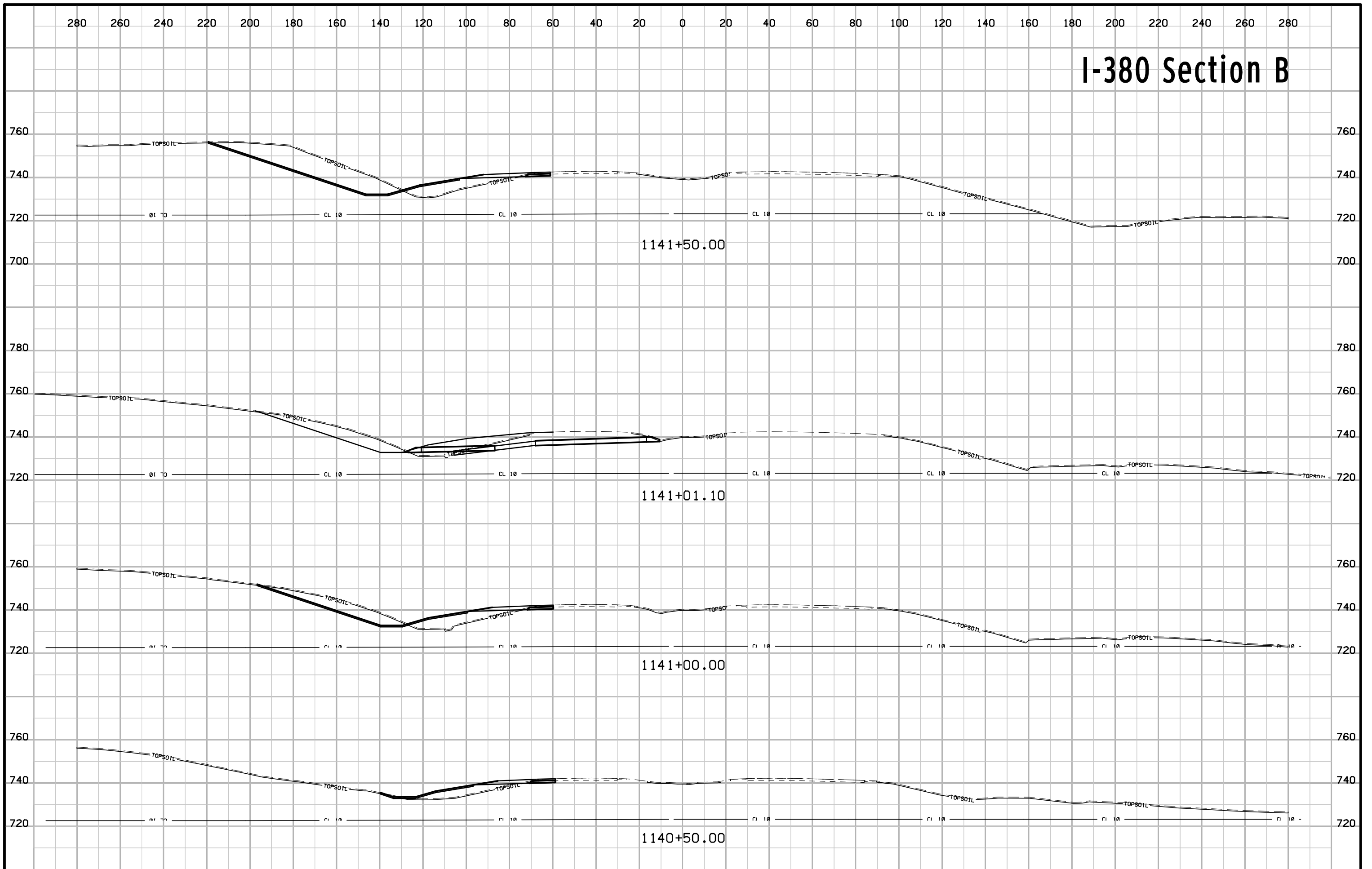
I-380 Section B



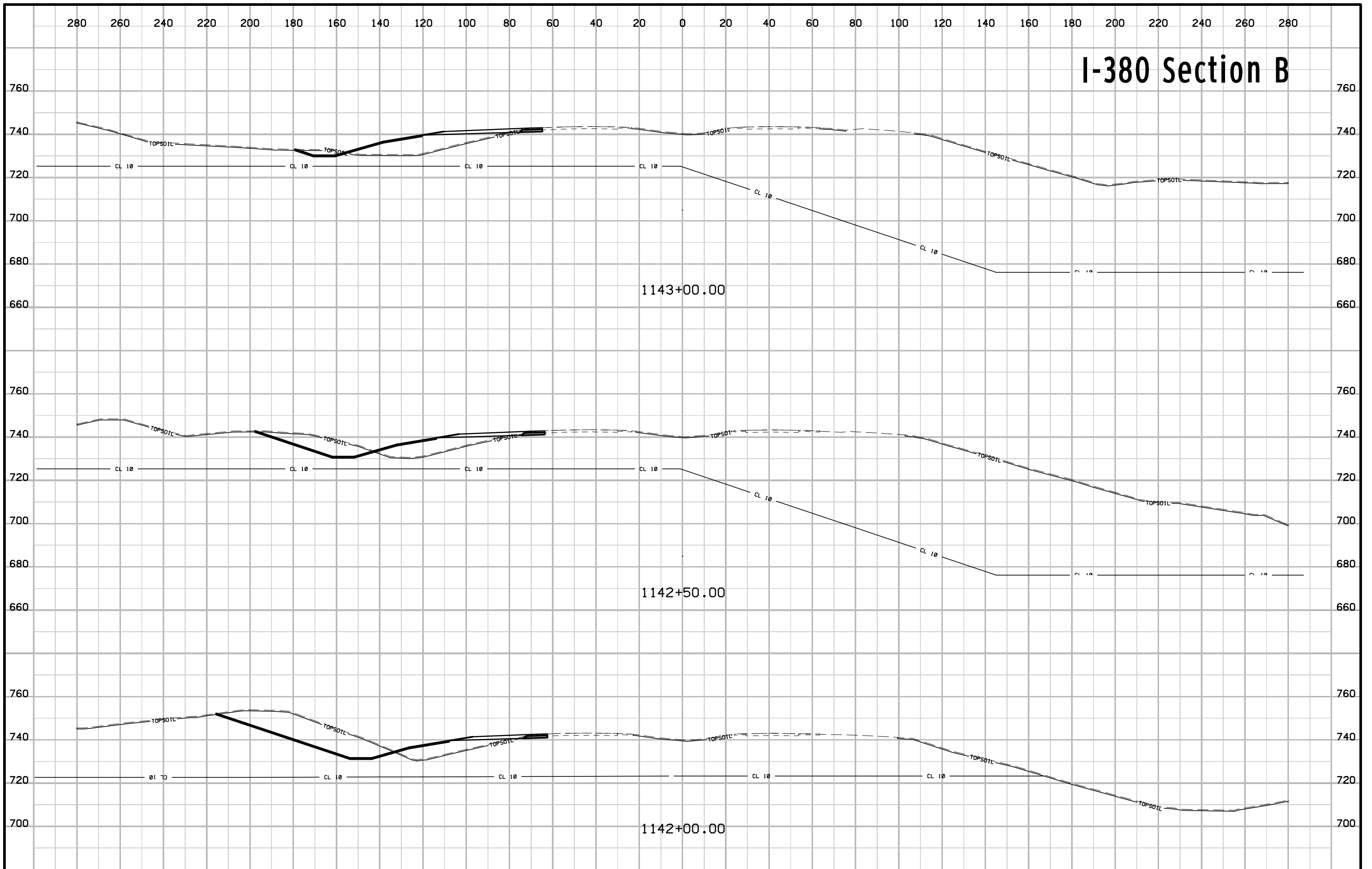
I-380 Section B



I-380 Section B



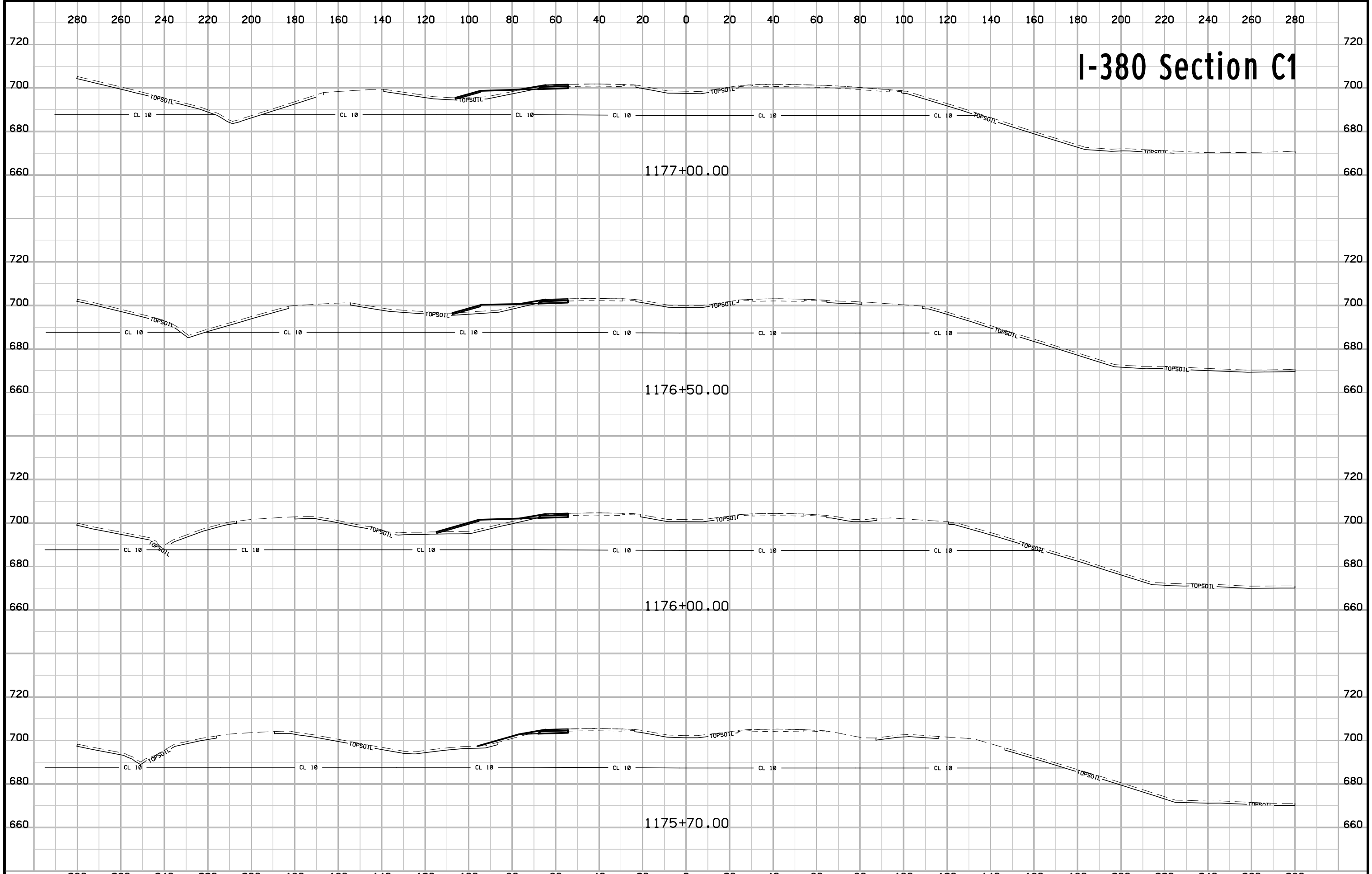
I-380 Section B



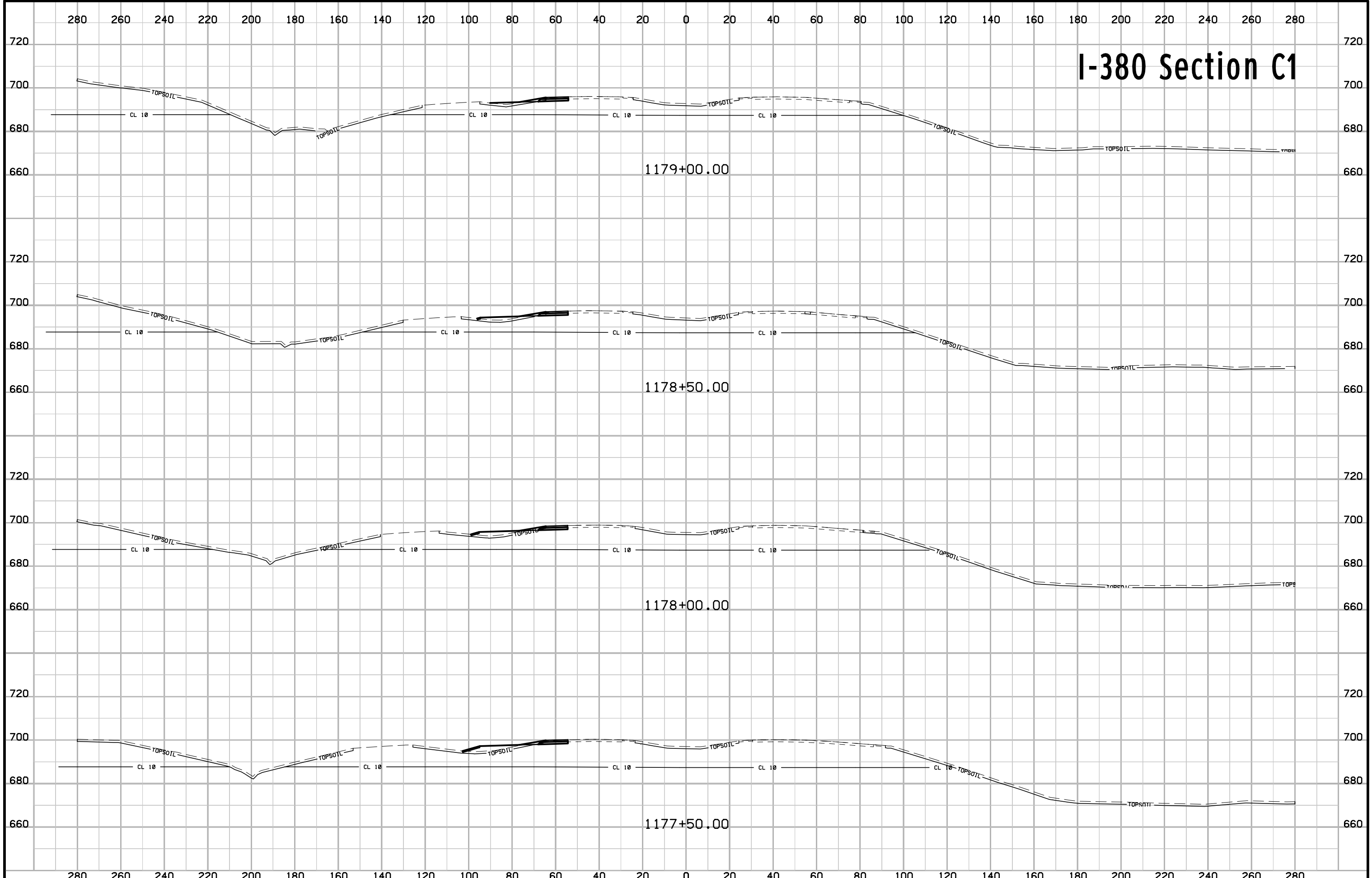
I-380 Section B



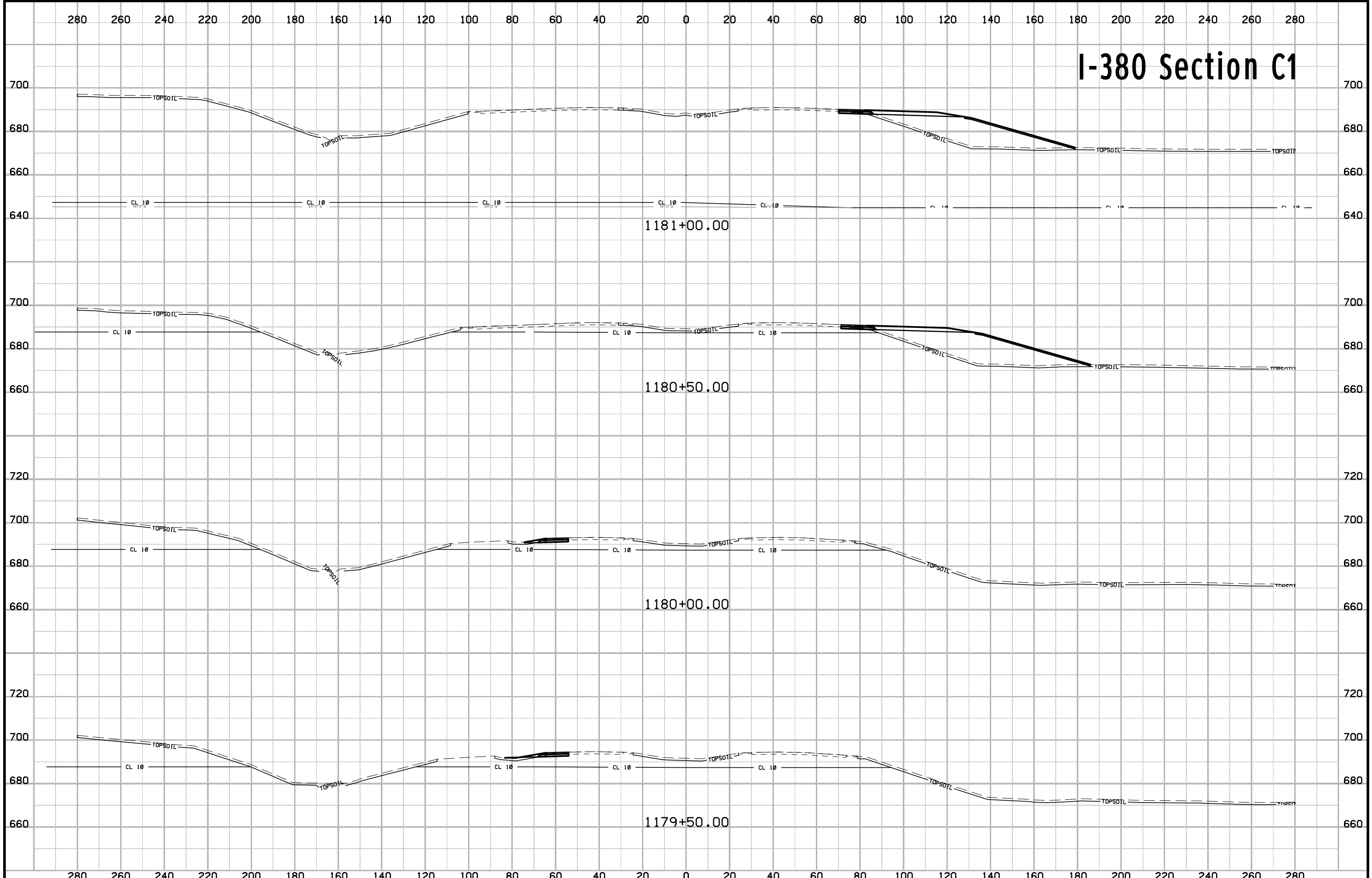
I-380 Section C1



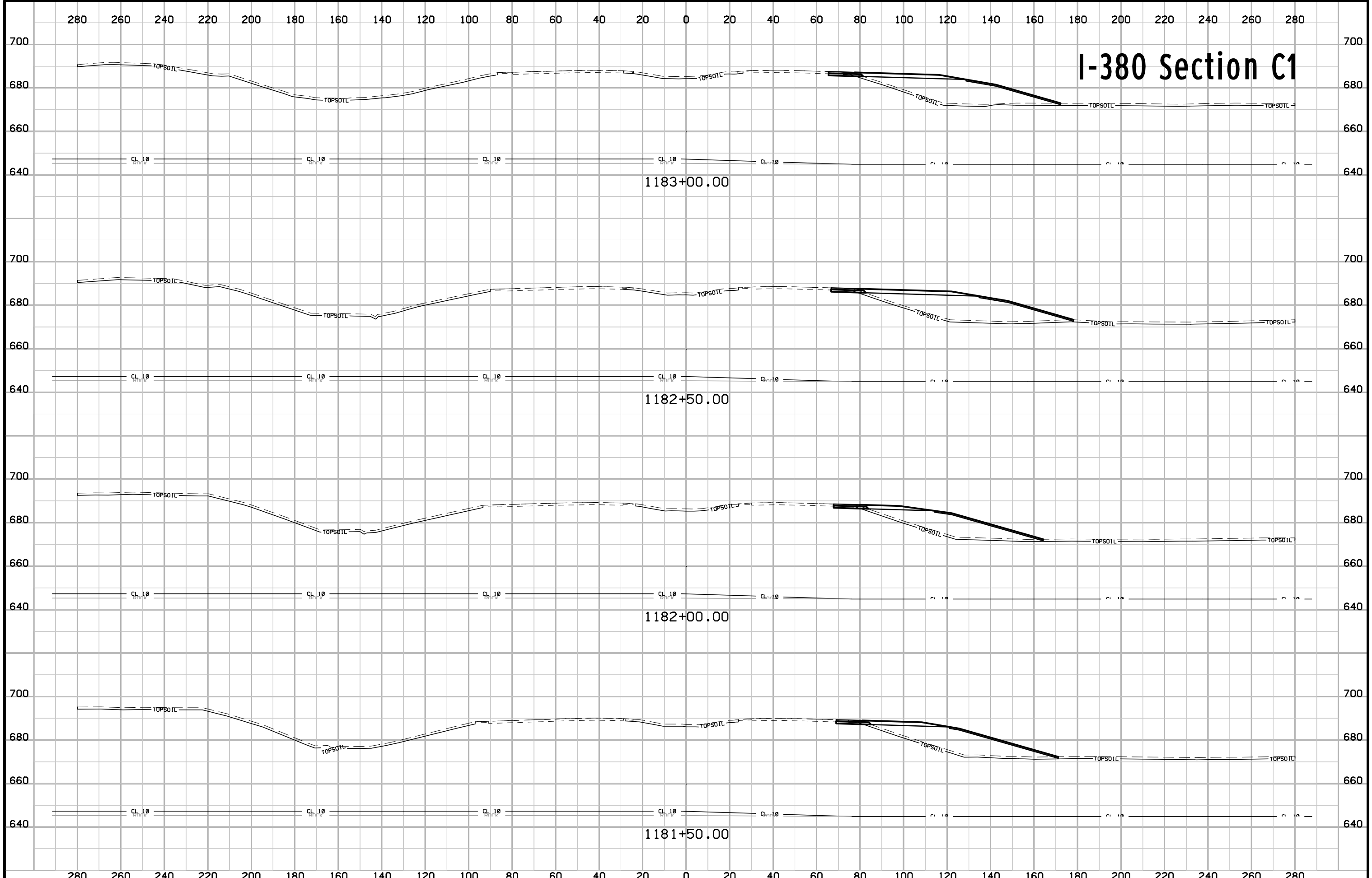
I-380 Section C1



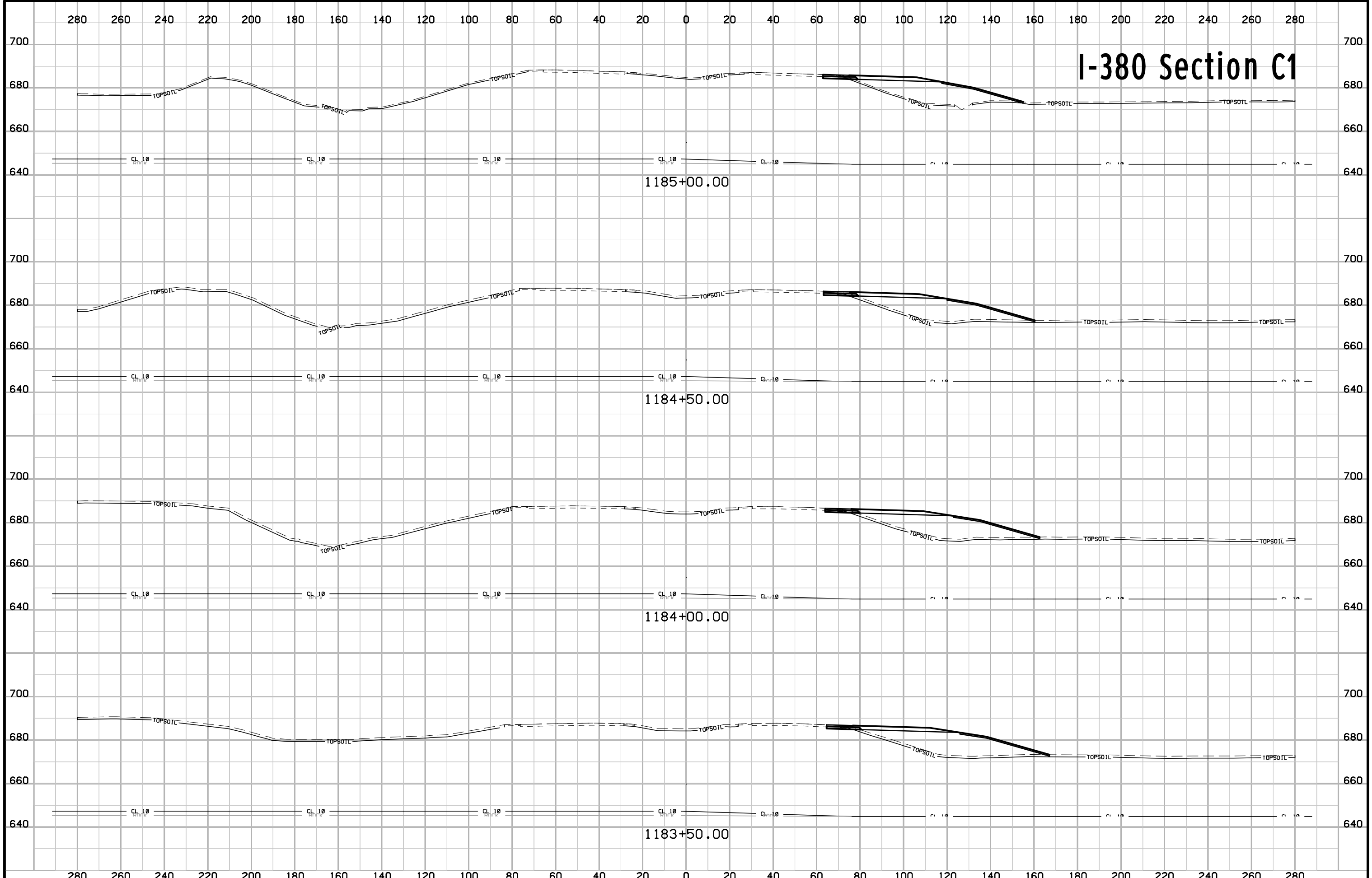
I-380 Section C1



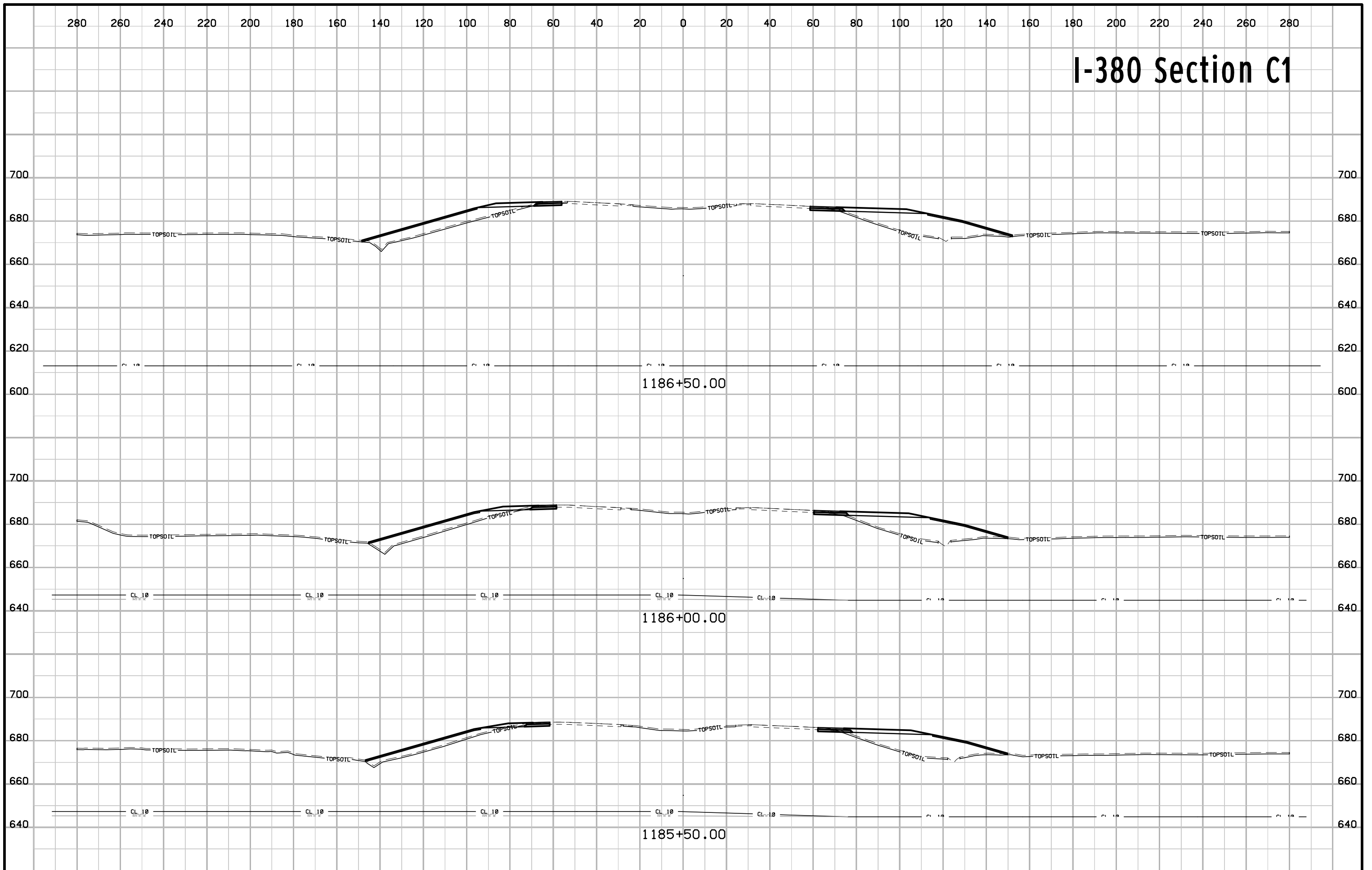
I-380 Section C1



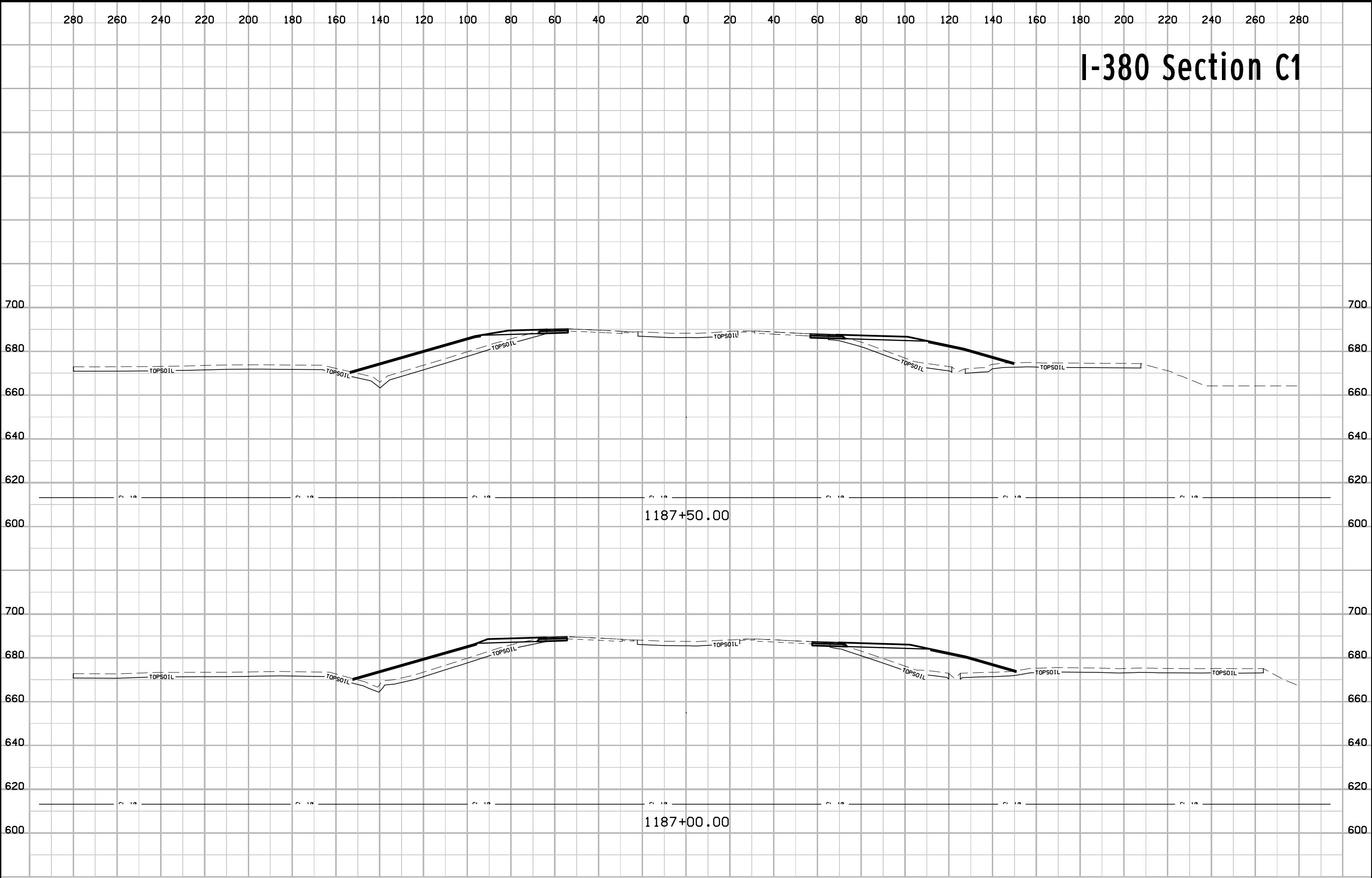
I-380 Section C1



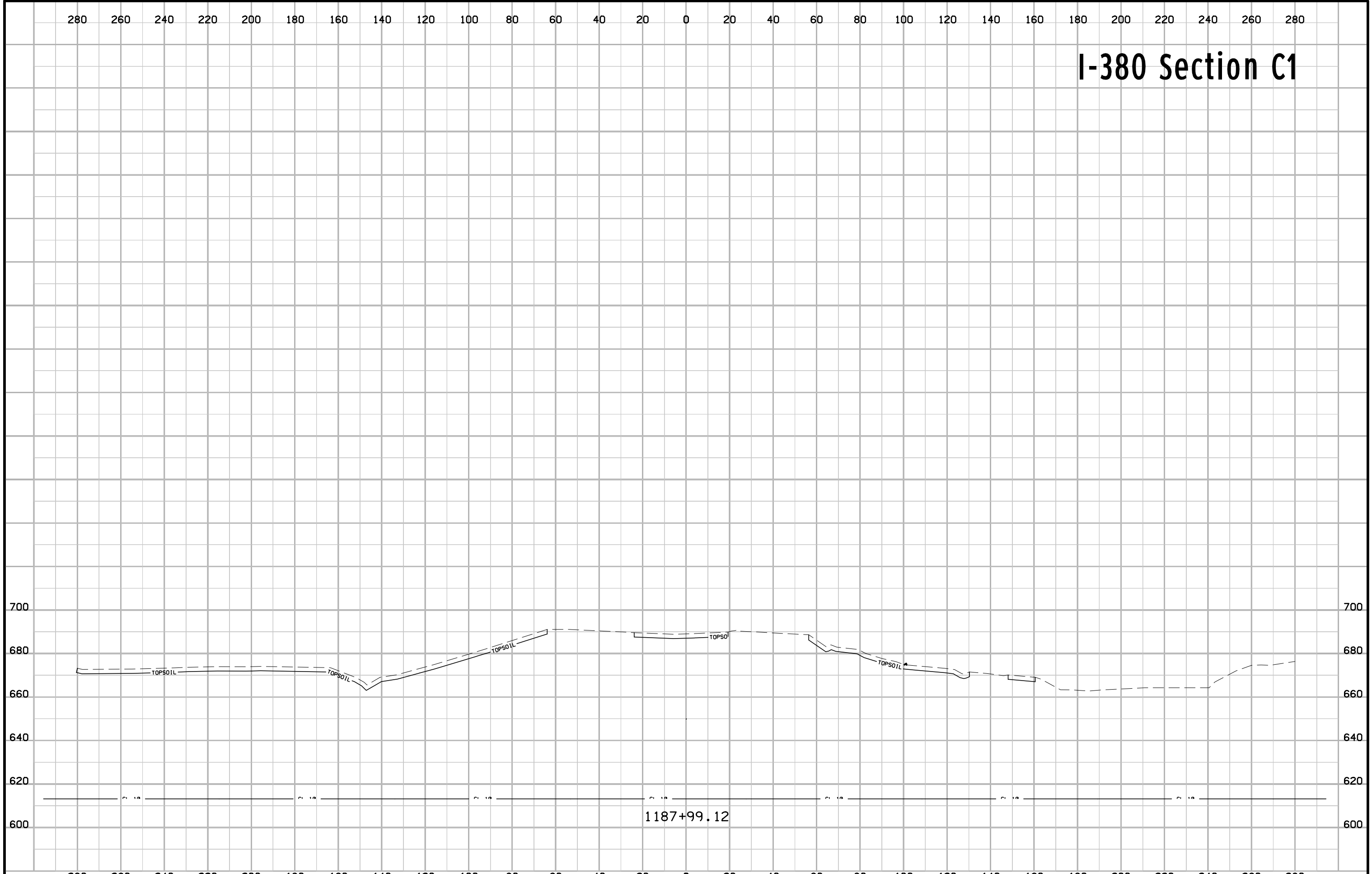
I-380 Section C1



I-380 Section C1

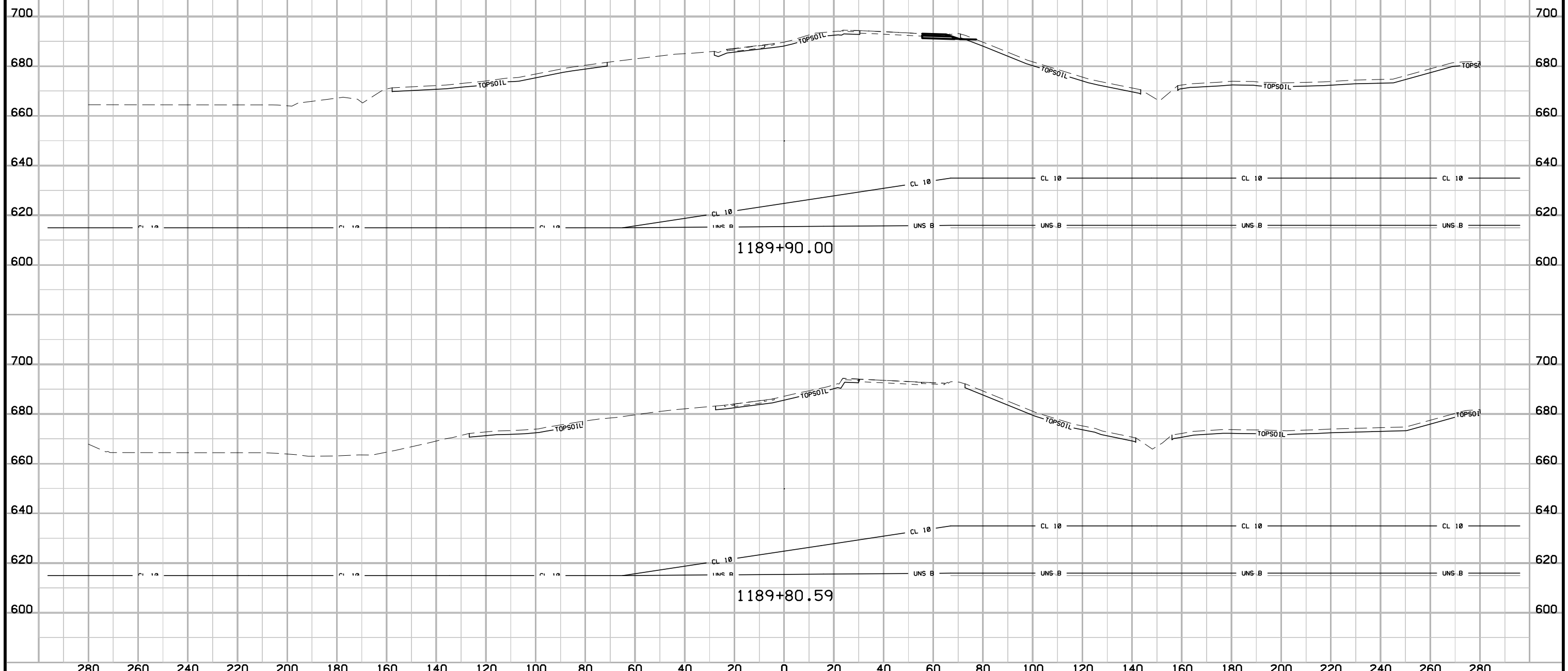


I-380 Section C1



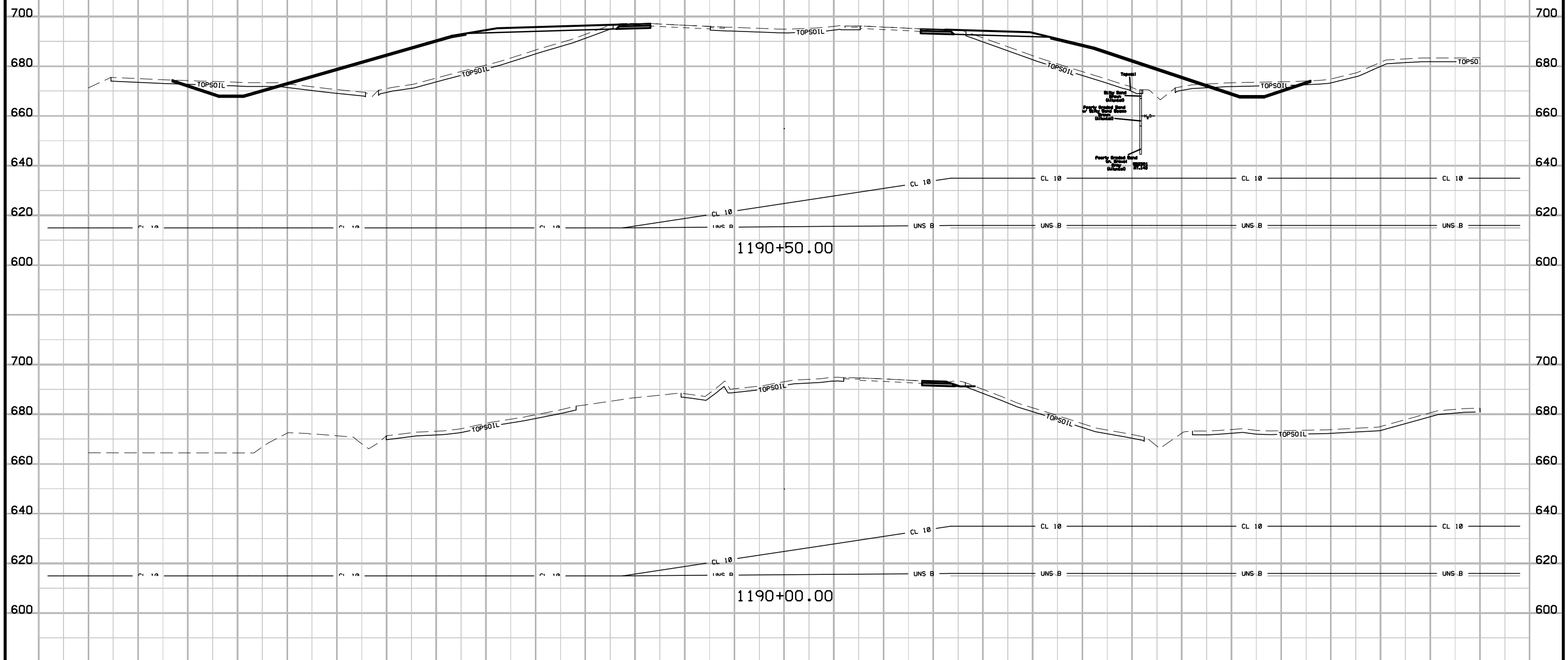
280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

I-380 Section C2



280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

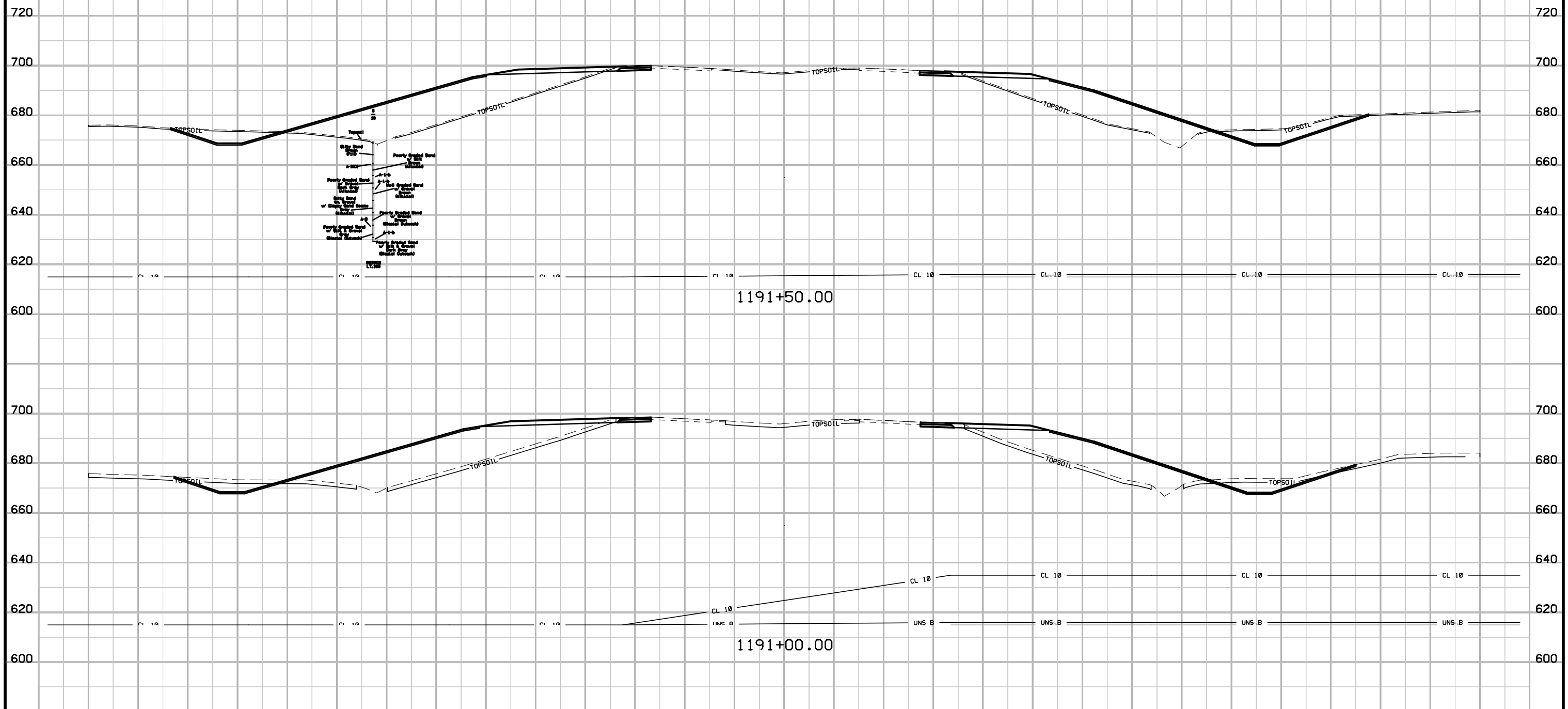
I-380 Section C2



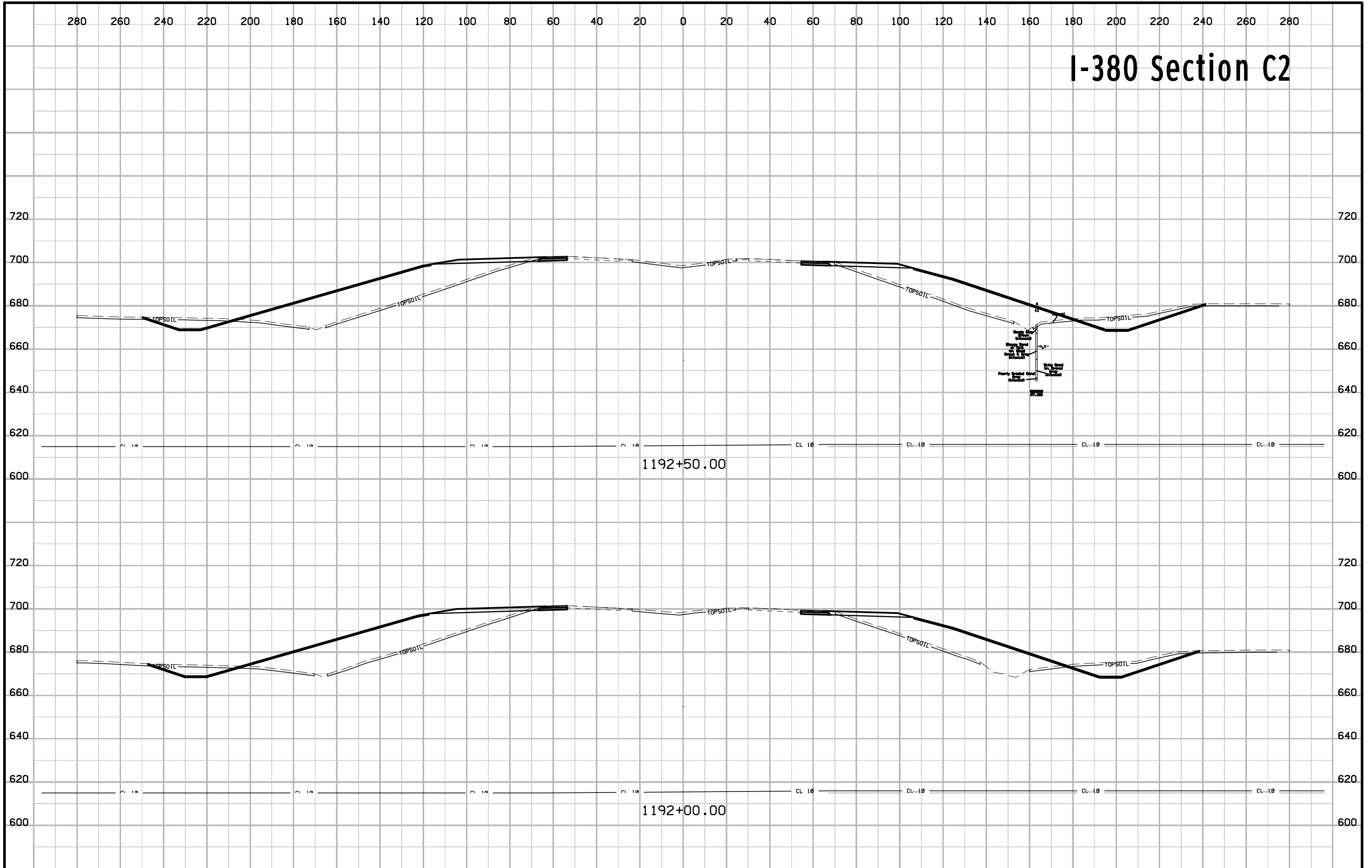
280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

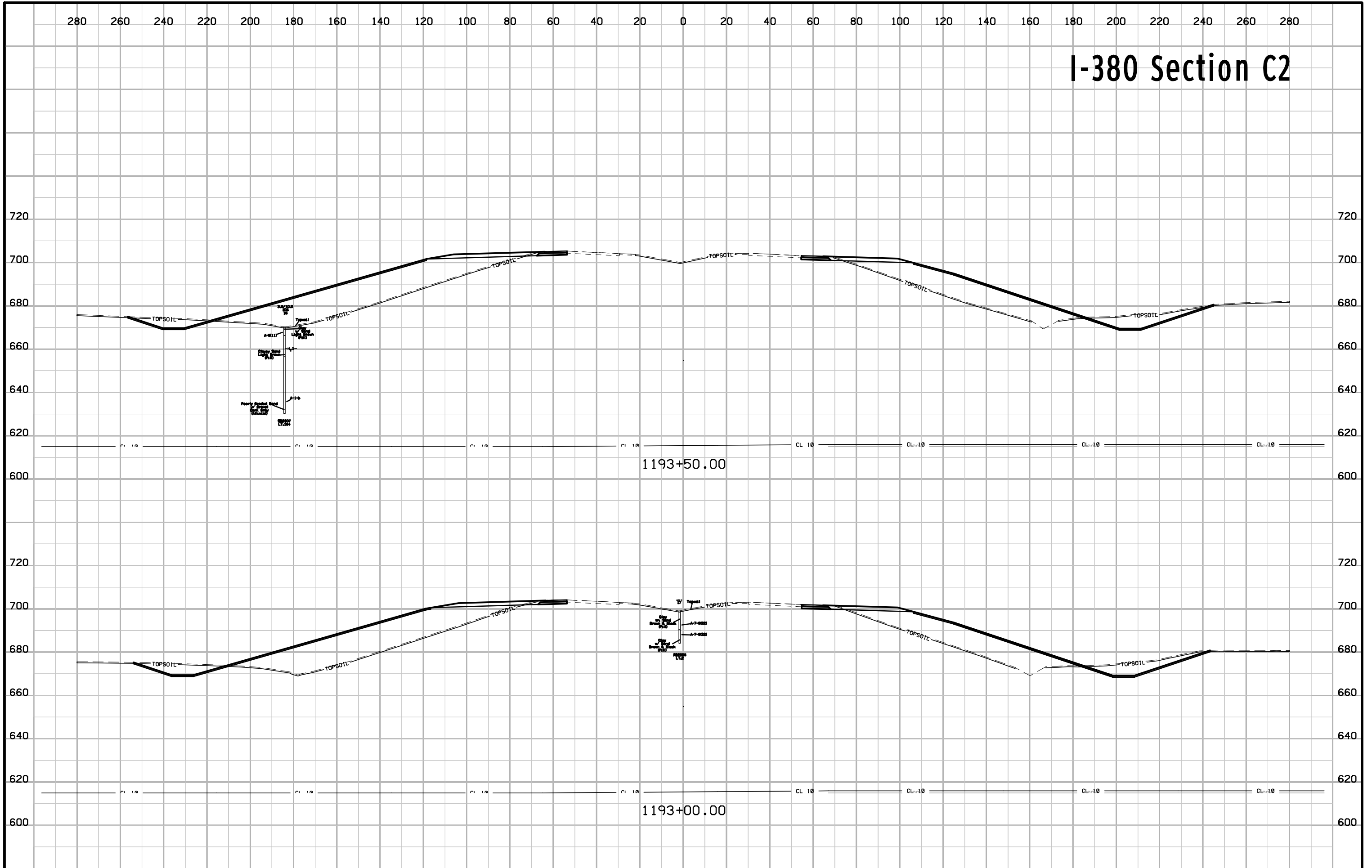
I-380 Section C2



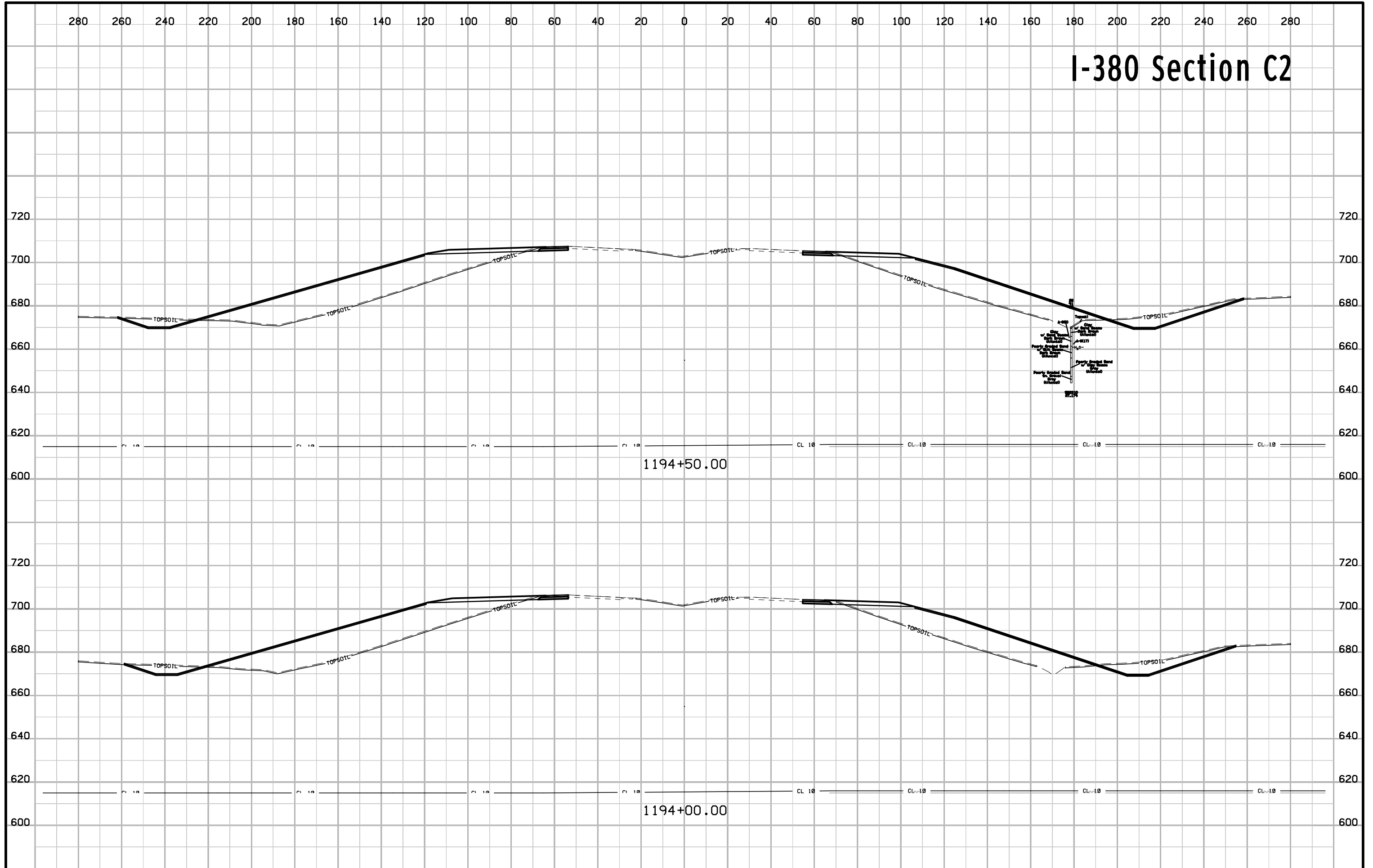
I-380 Section C2



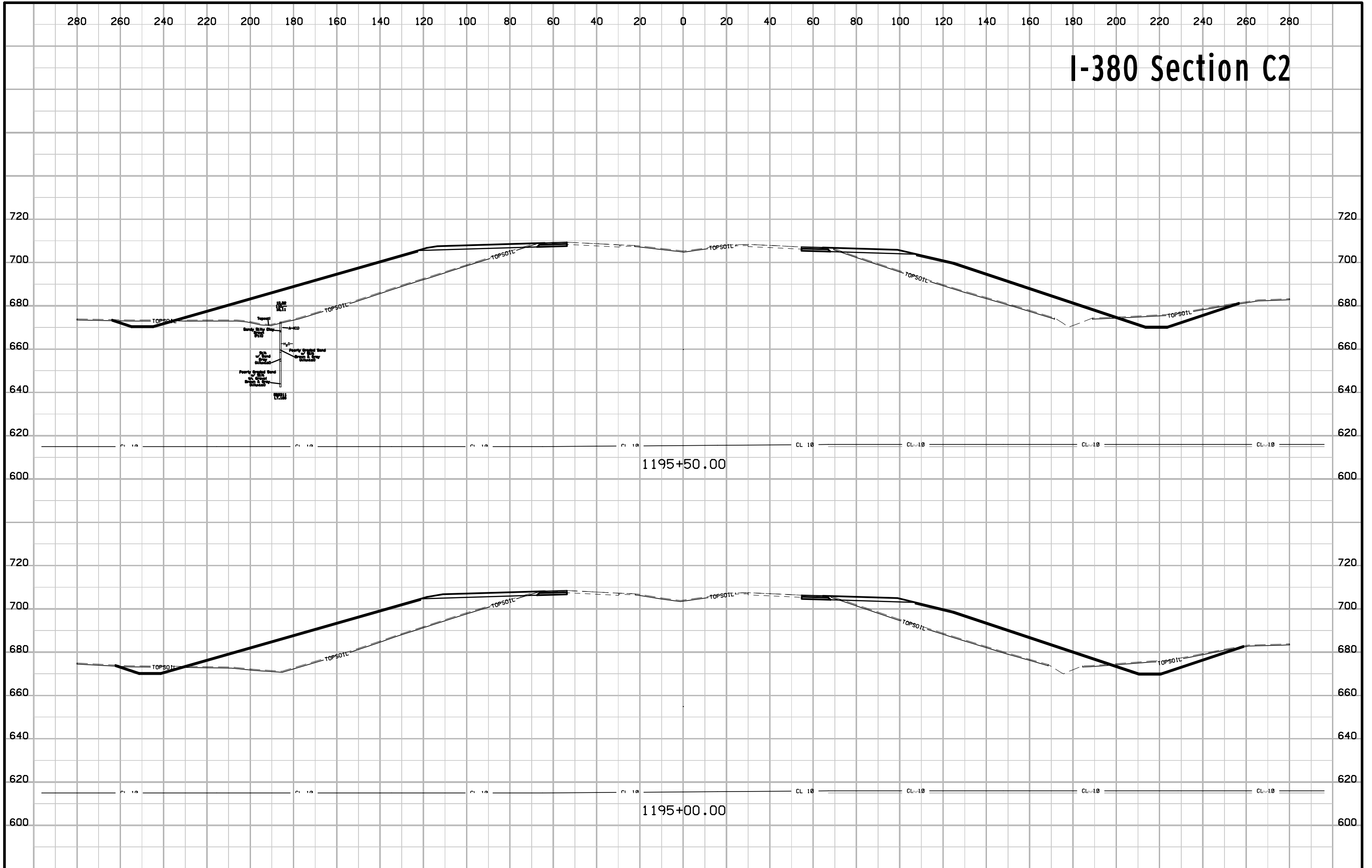
I-380 Section C2



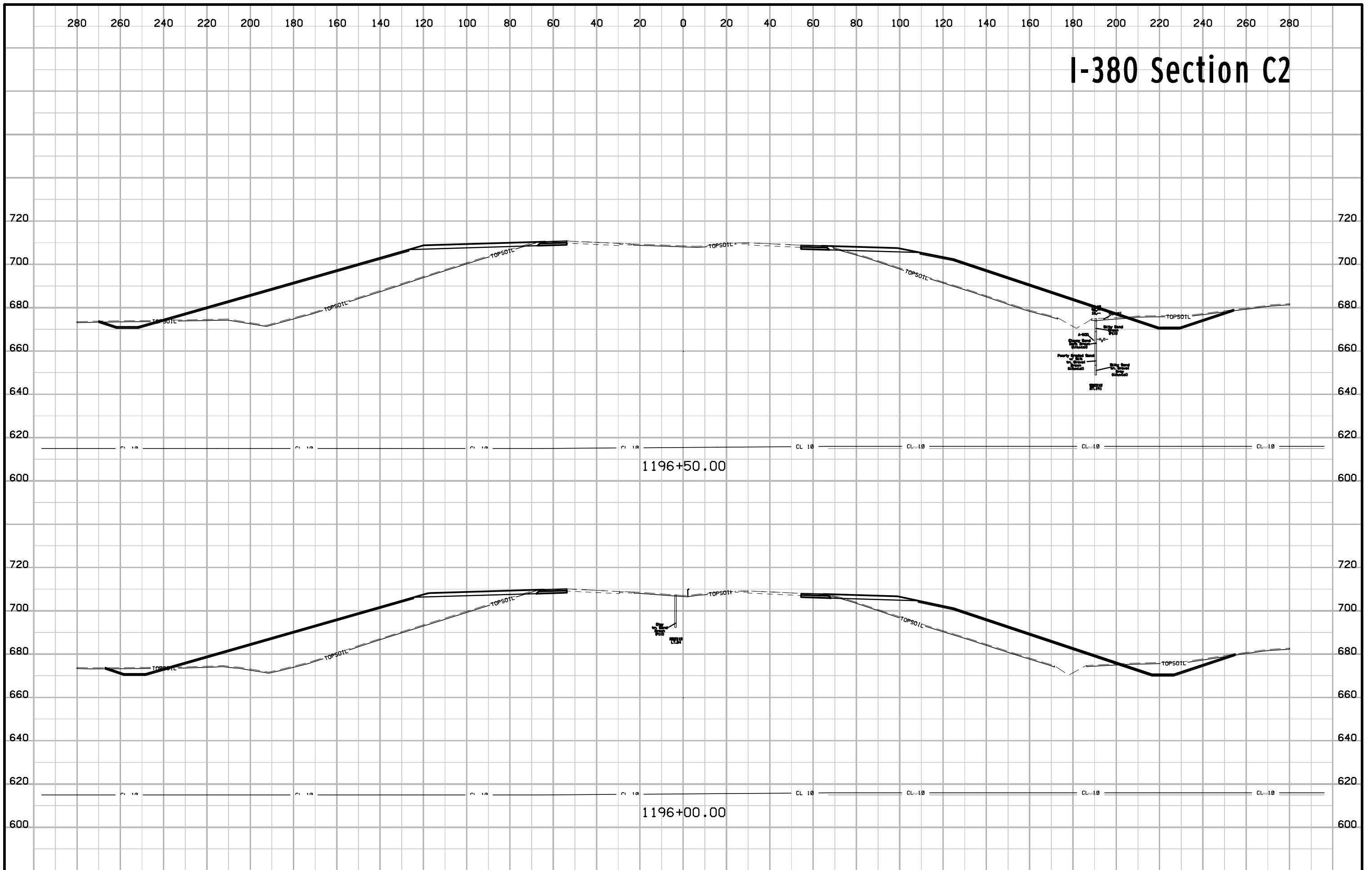
I-380 Section C2



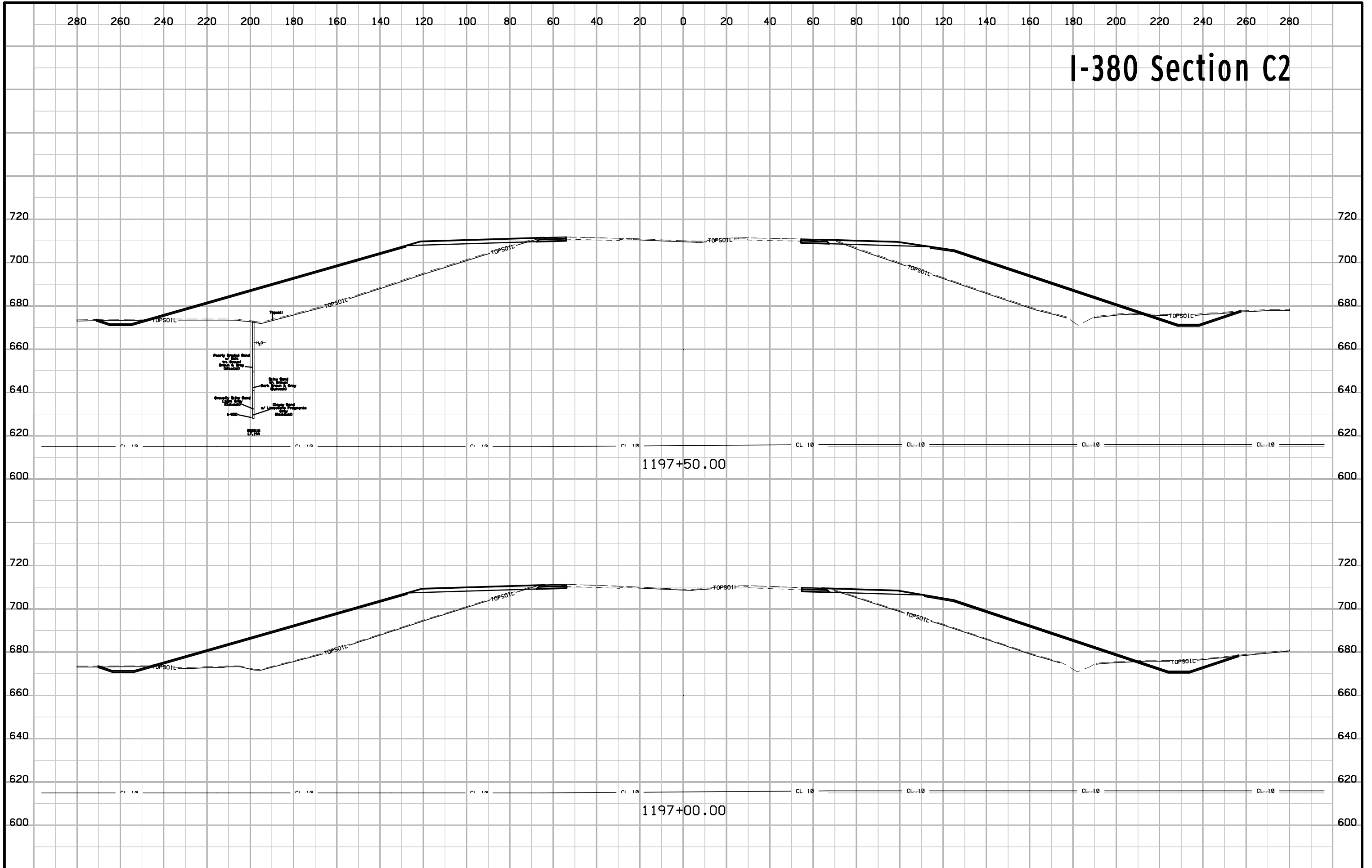
I-380 Section C2



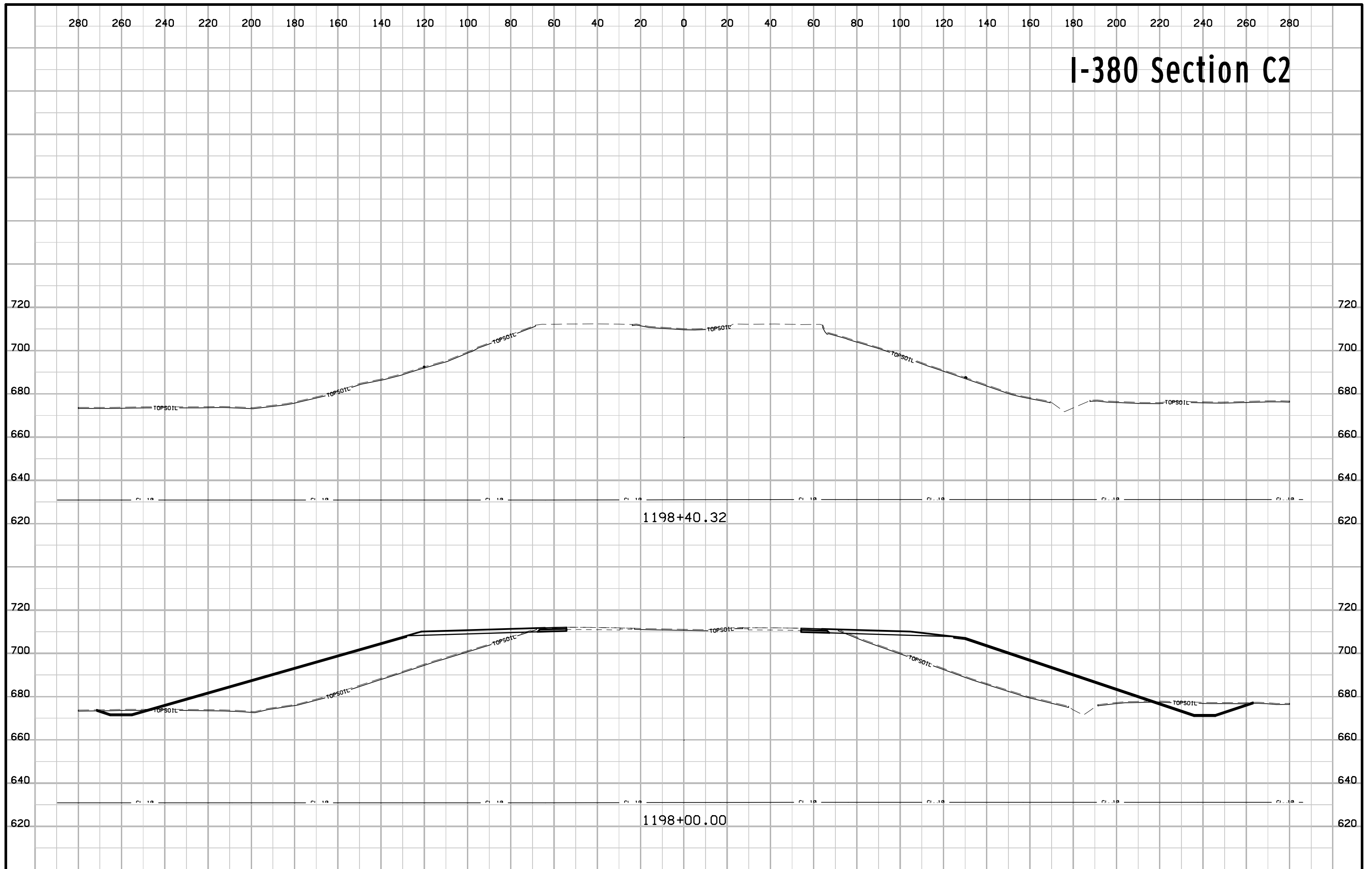
I-380 Section C2



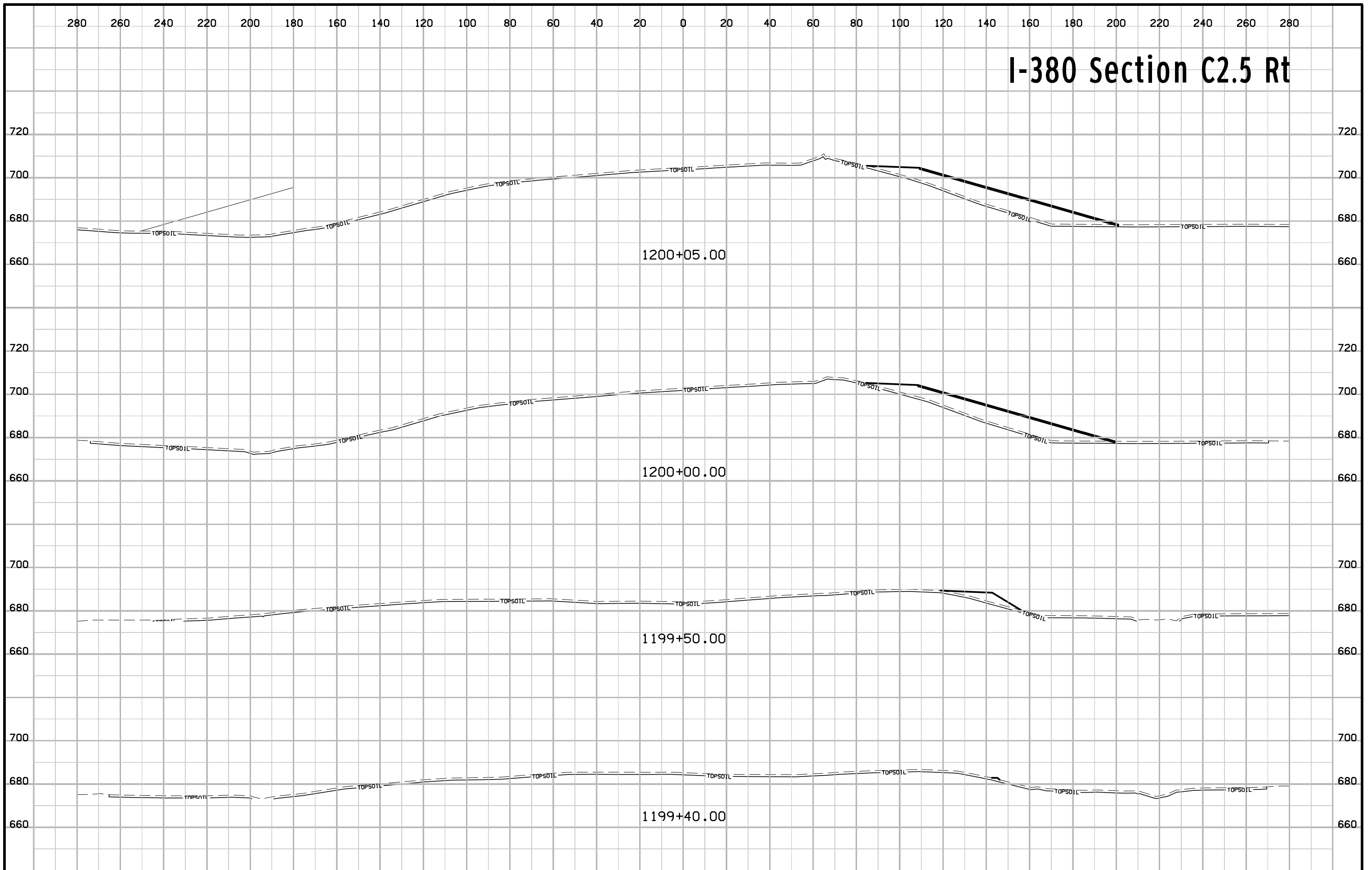
I-380 Section C2

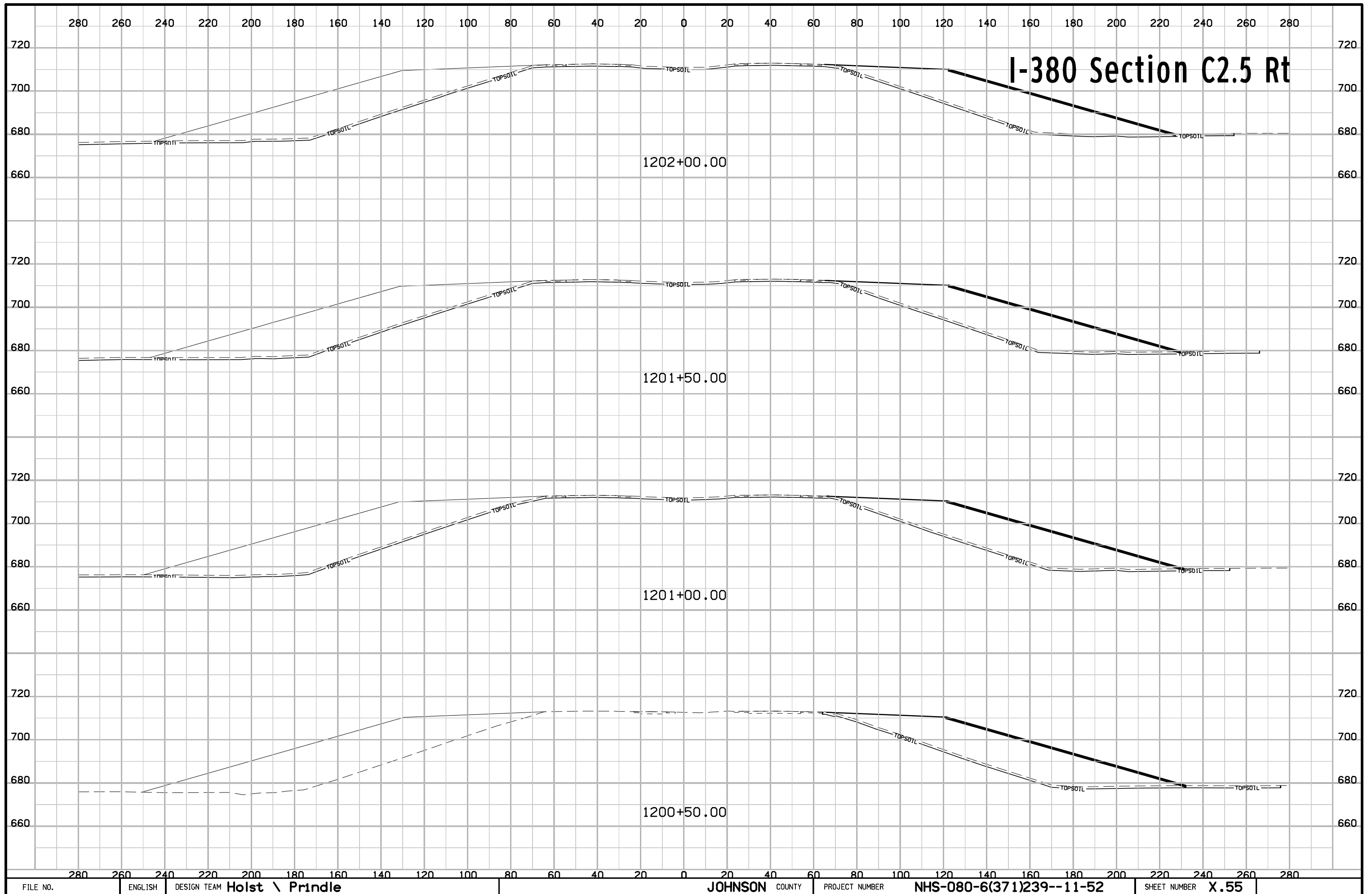


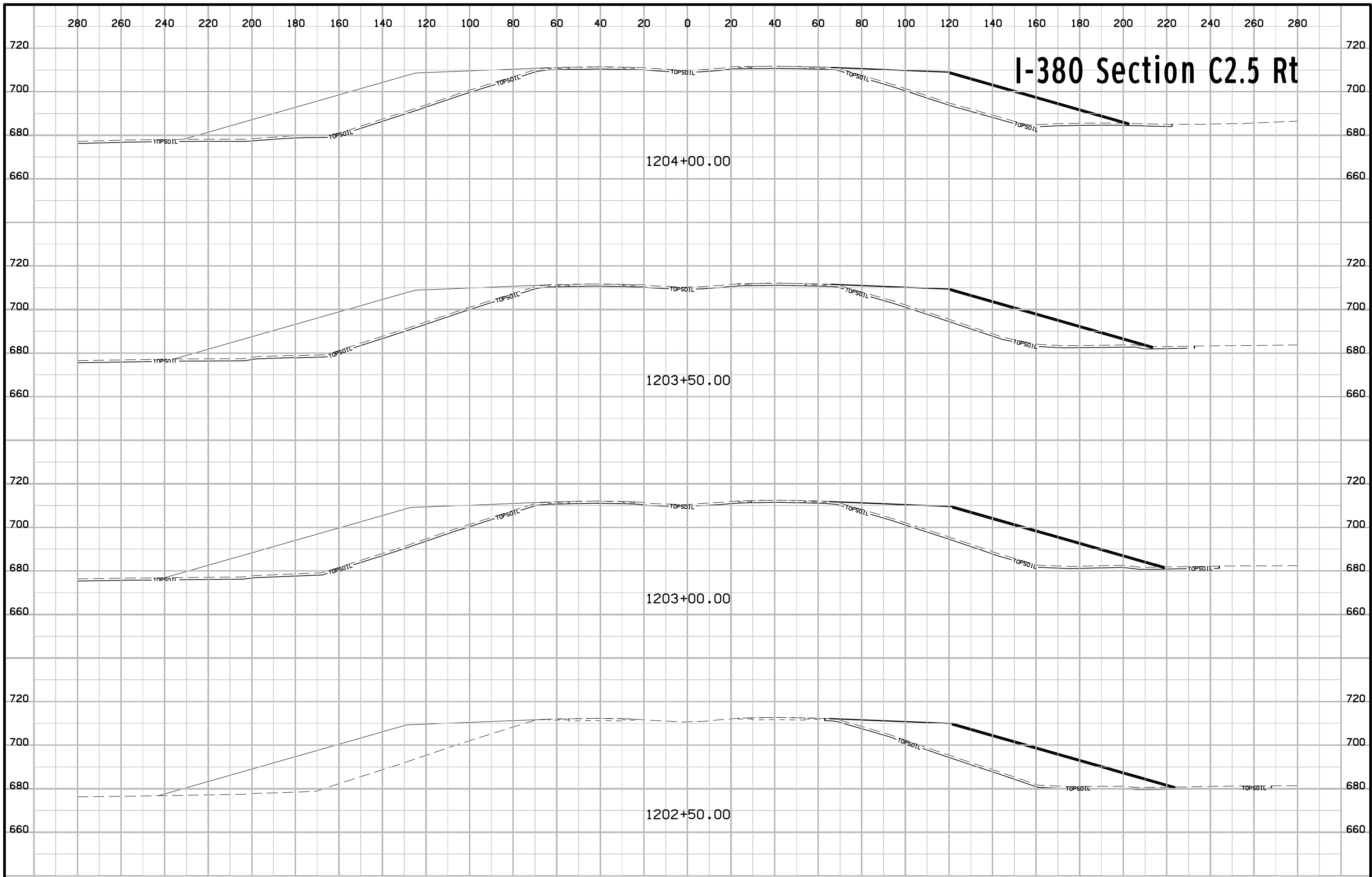
I-380 Section C2



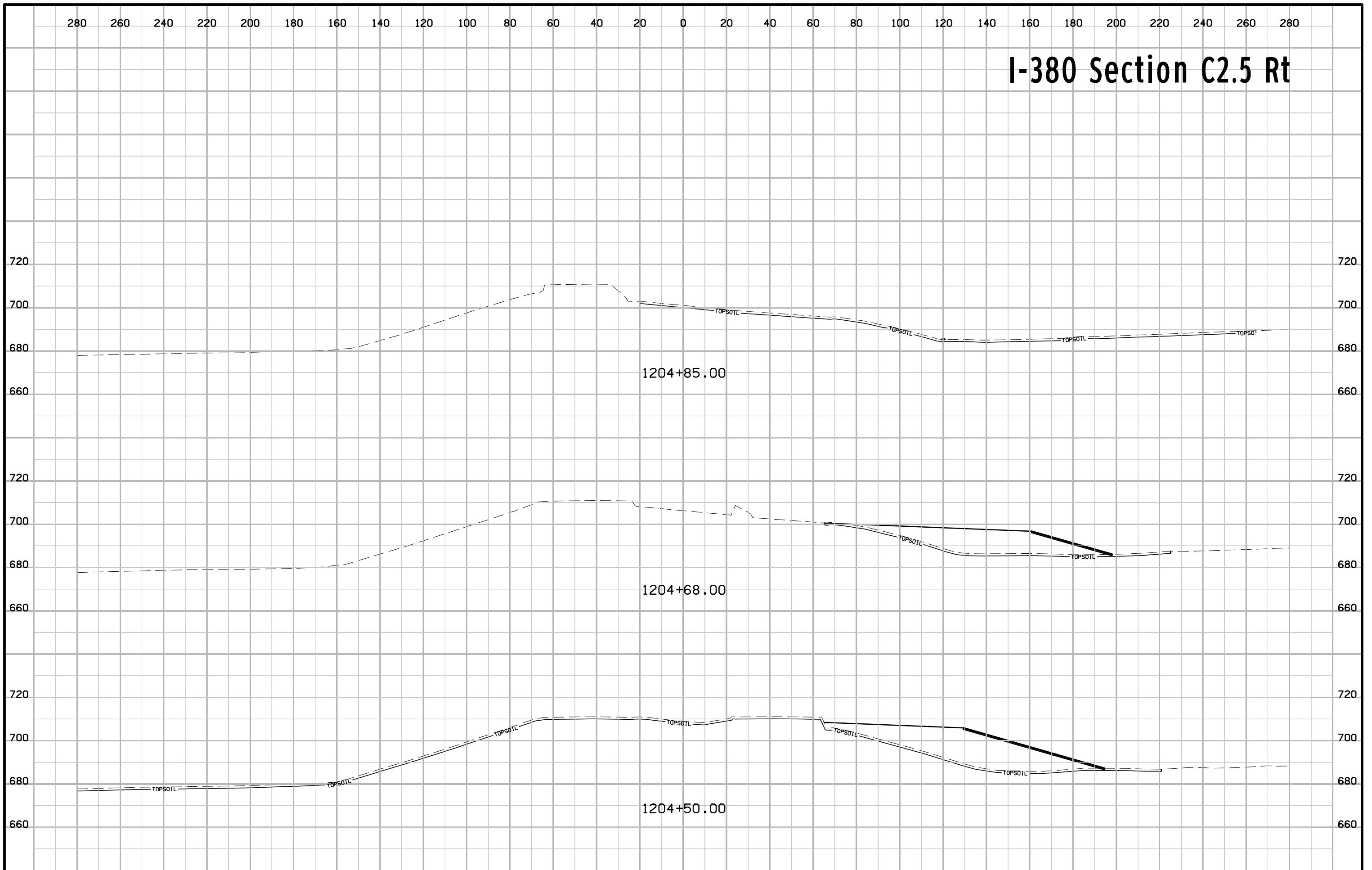
I-380 Section C2.5 Rt



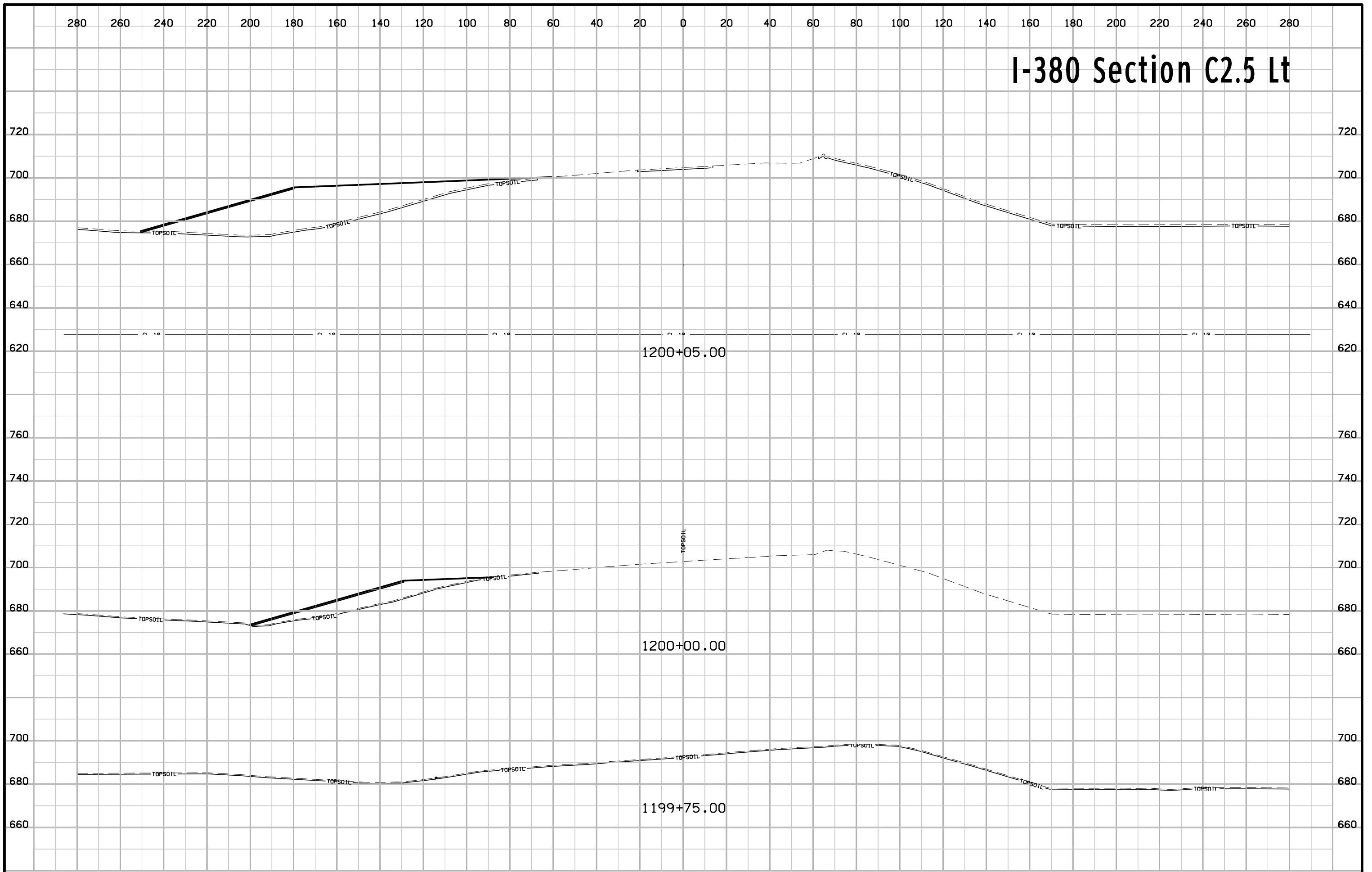




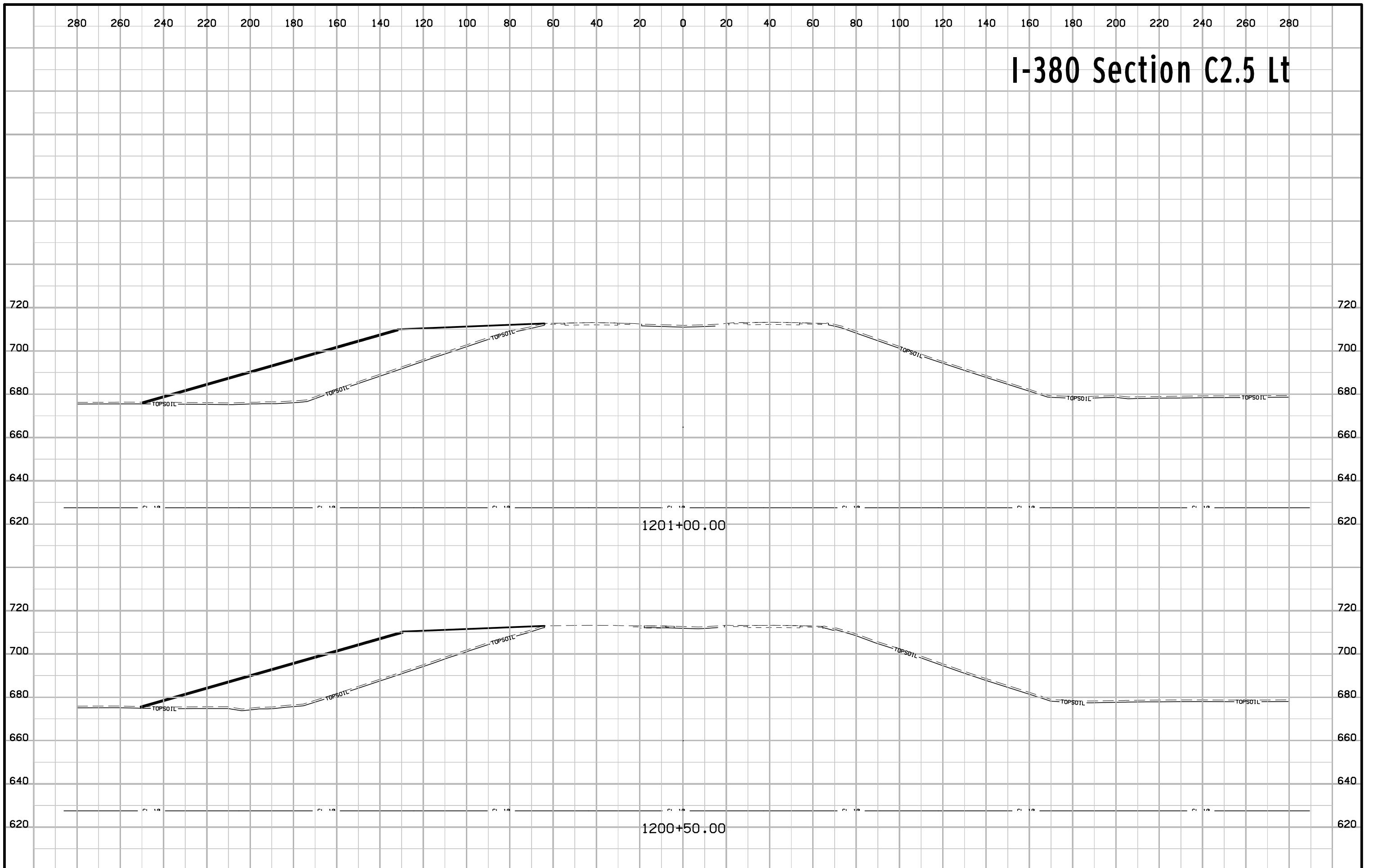
I-380 Section C2.5 Rt



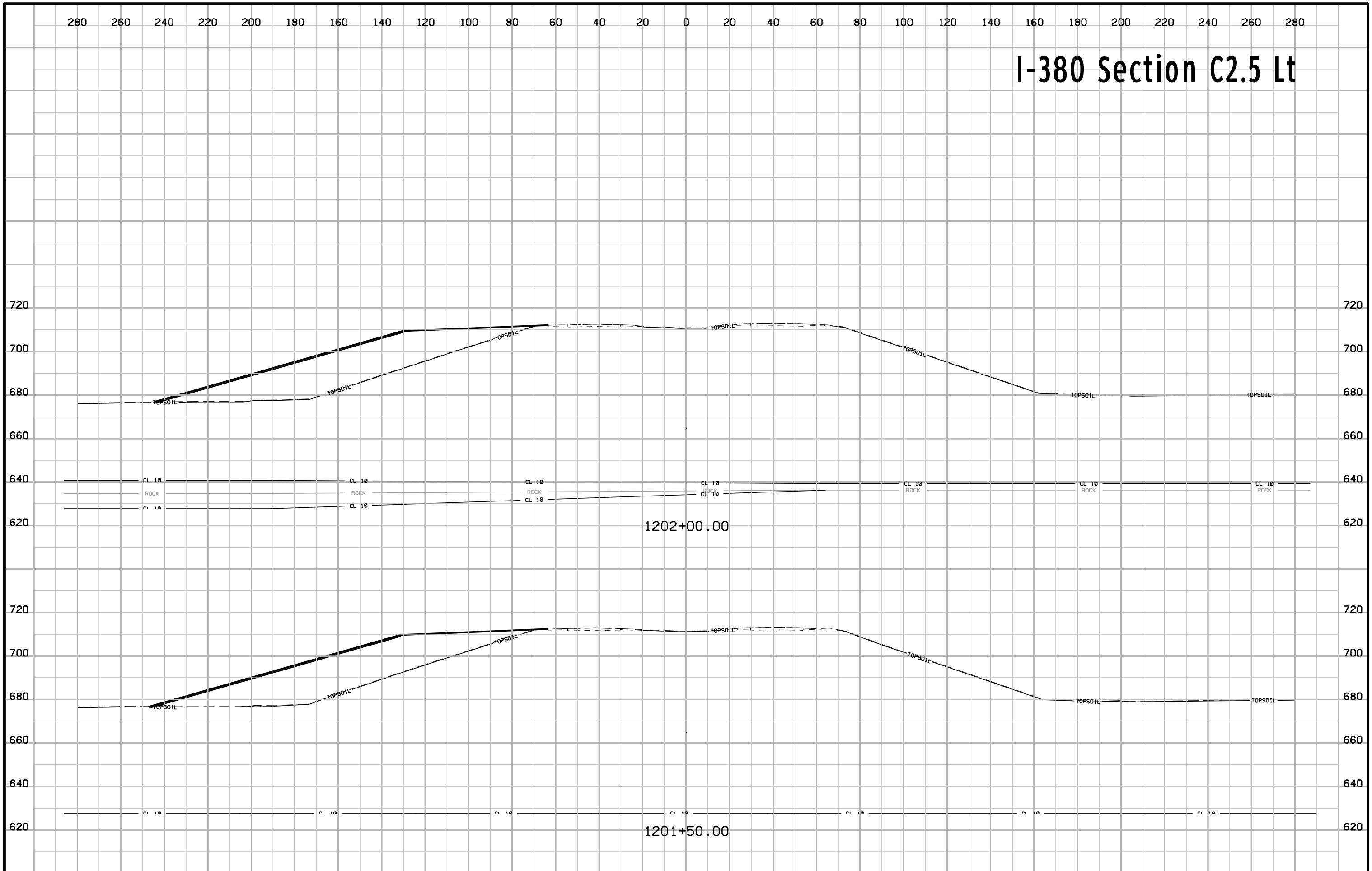
I-380 Section C2.5 Lt



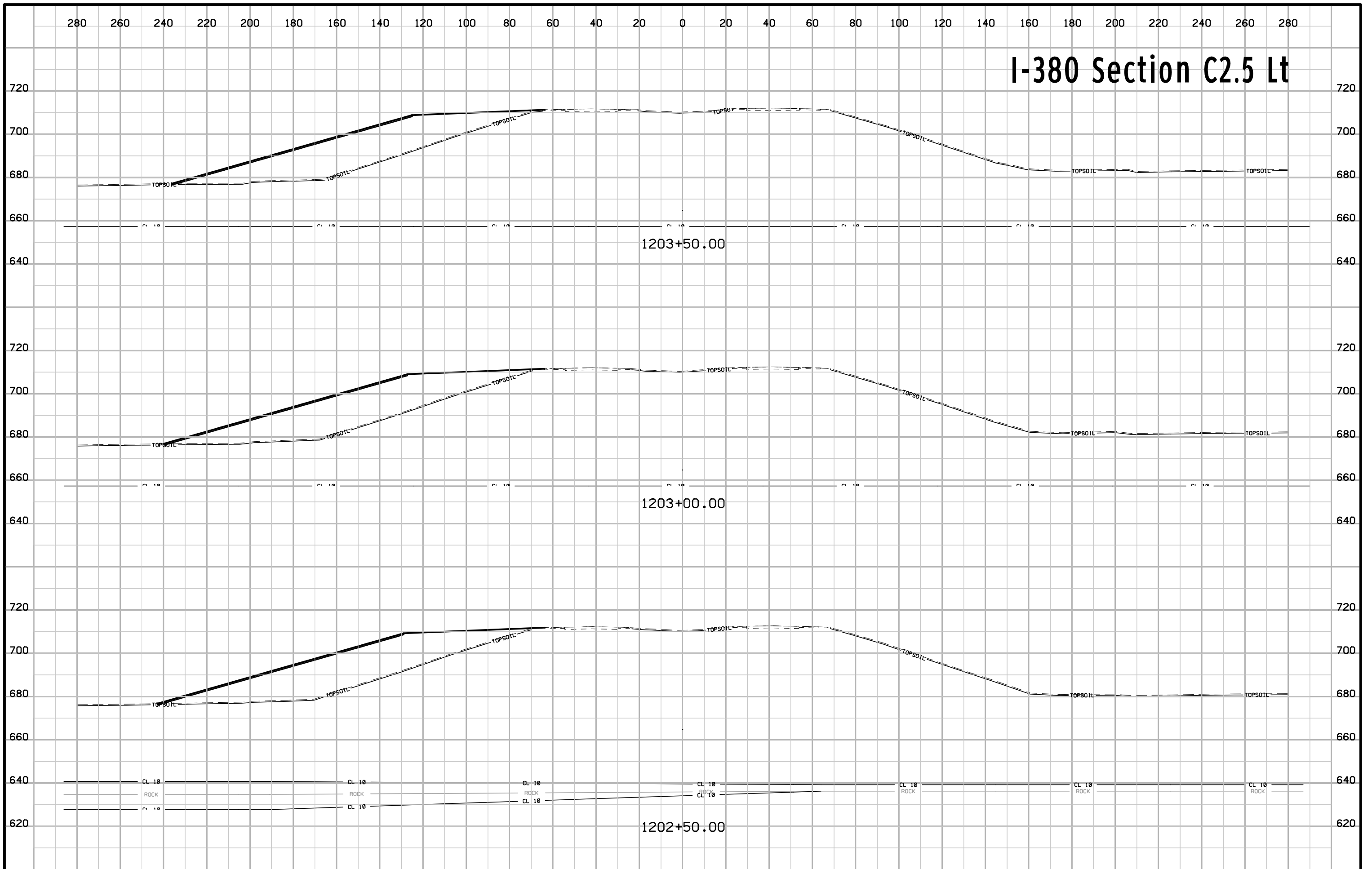
I-380 Section C2.5 Lt



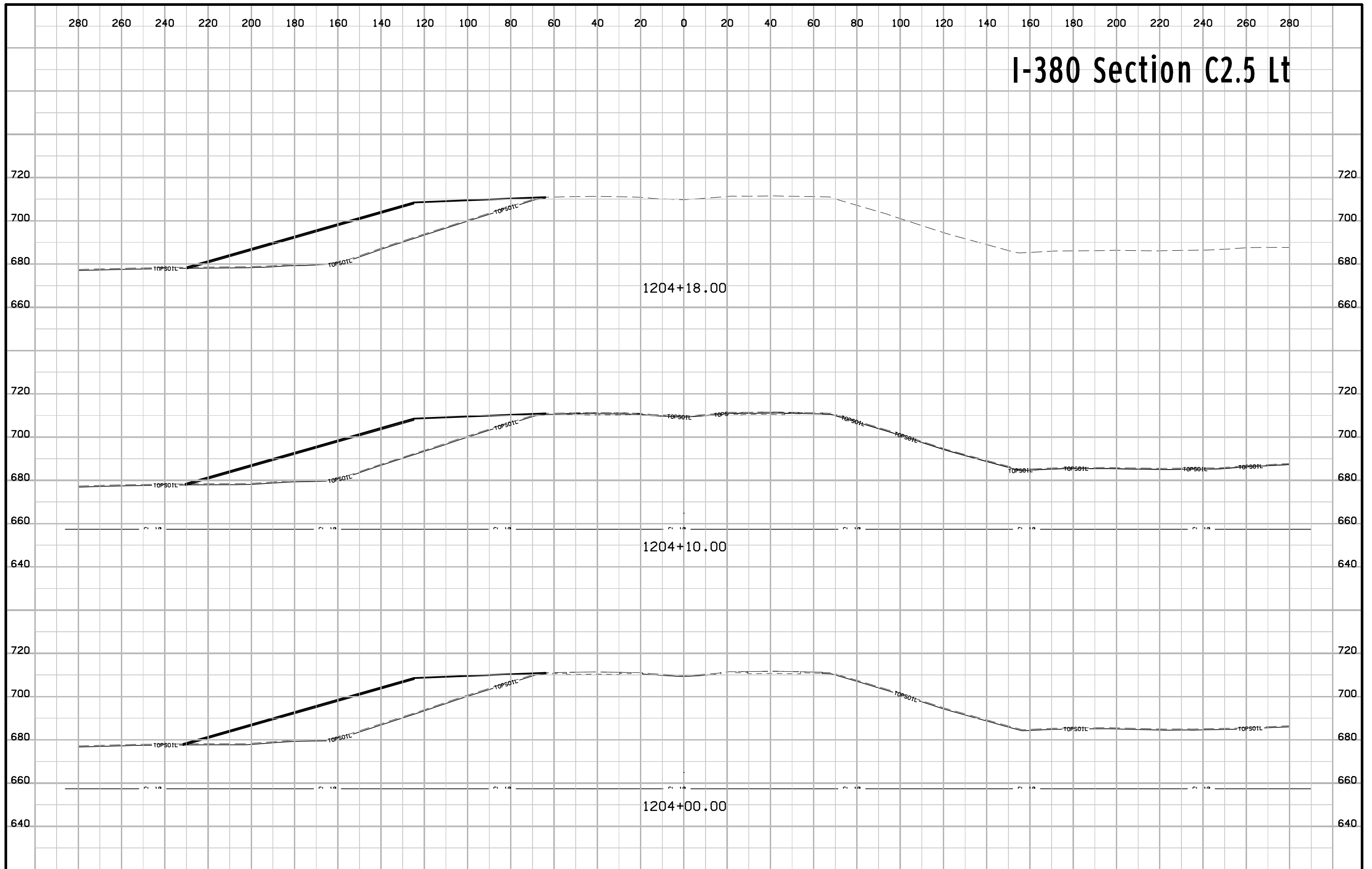
I-380 Section C2.5 Lt



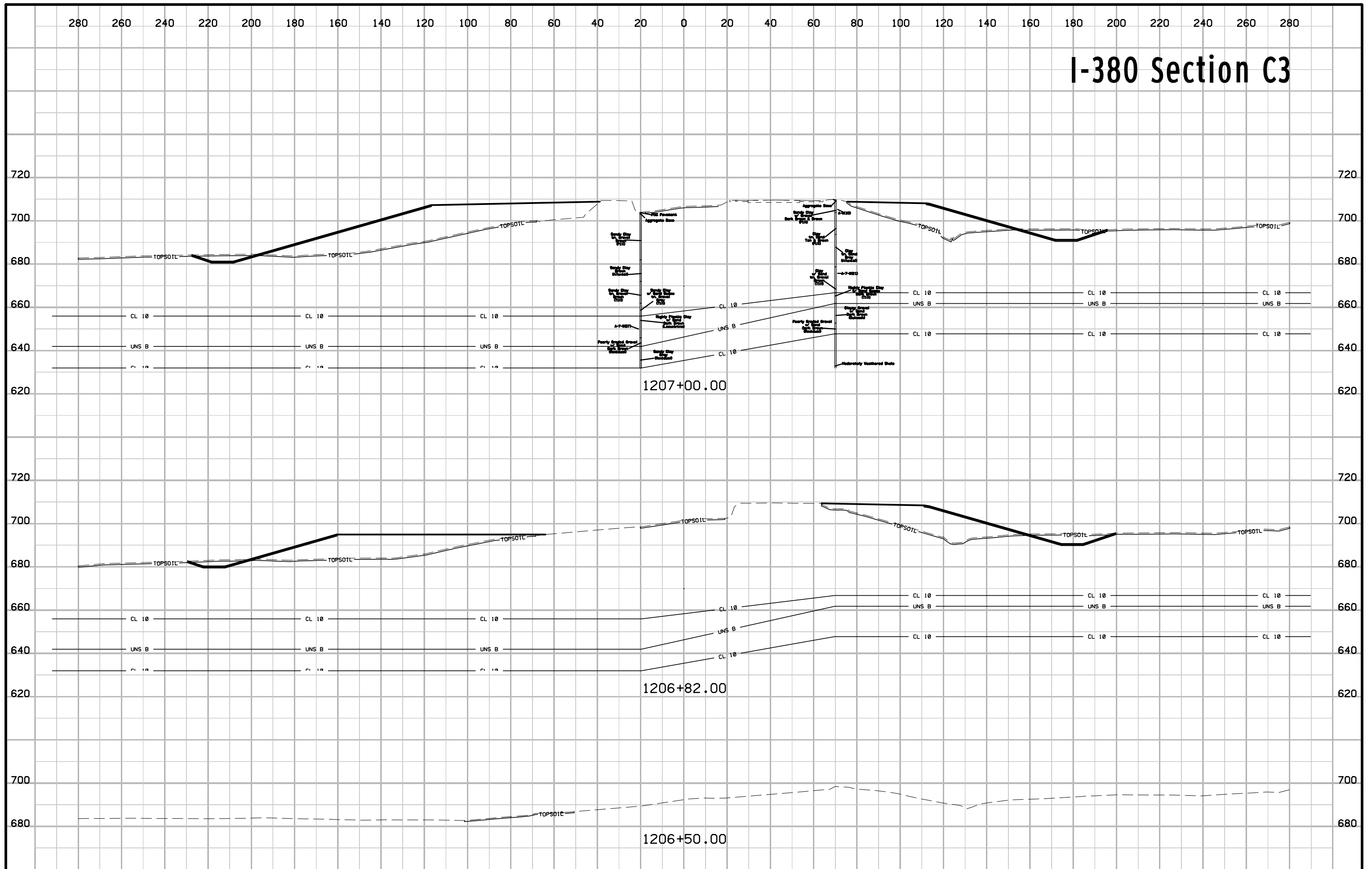
I-380 Section C2.5 Lt

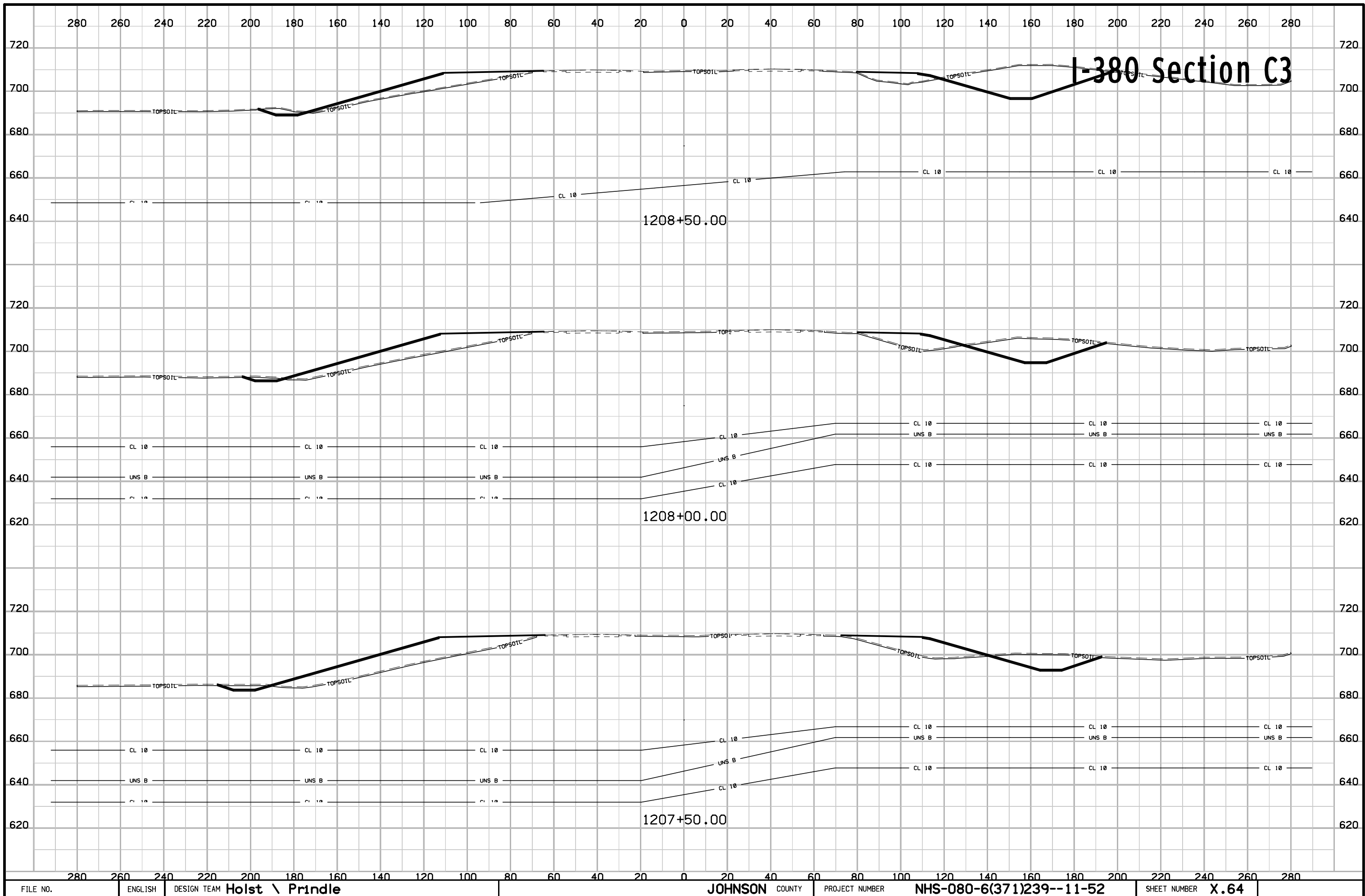


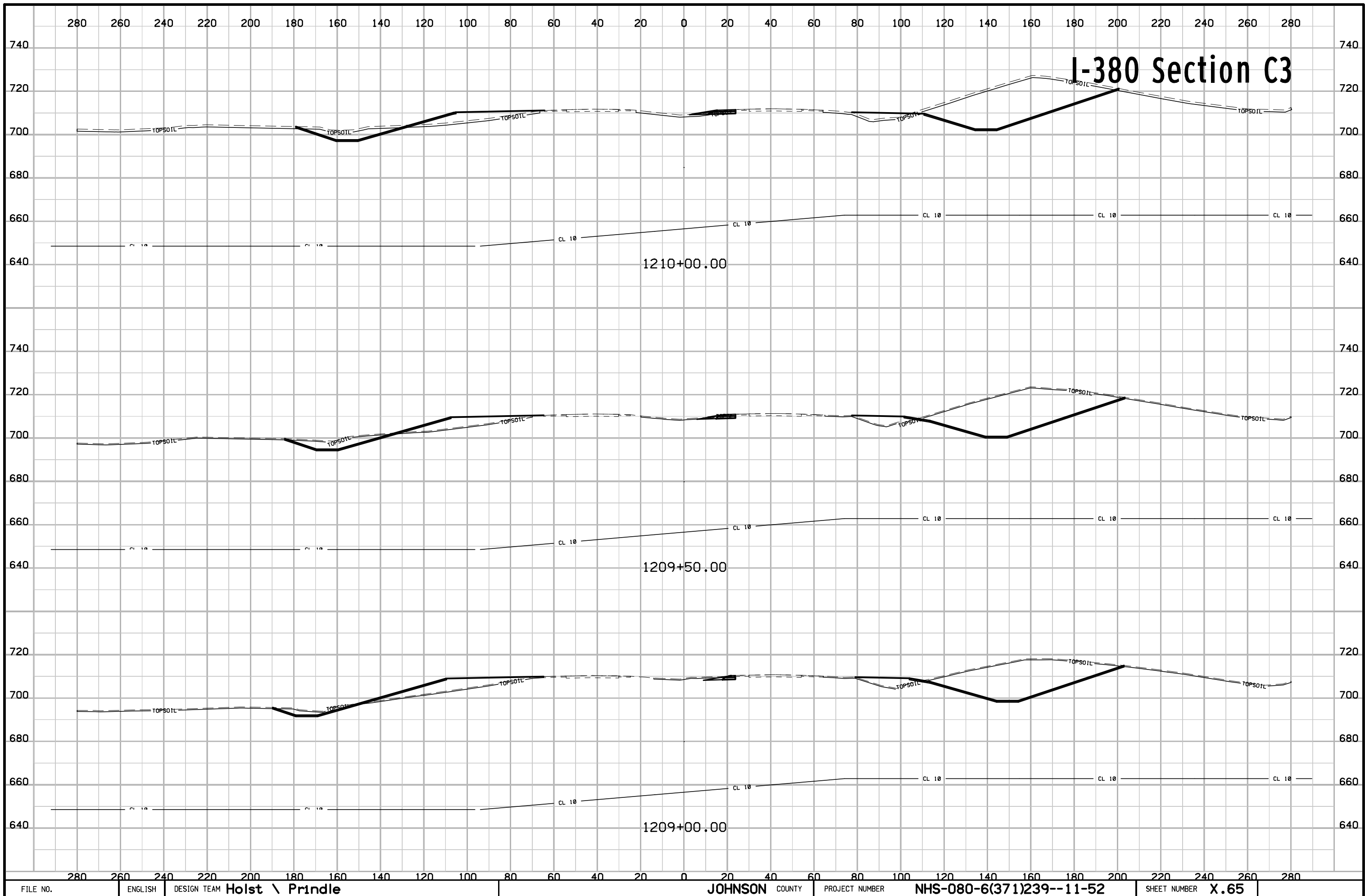
I-380 Section C2.5 Lt



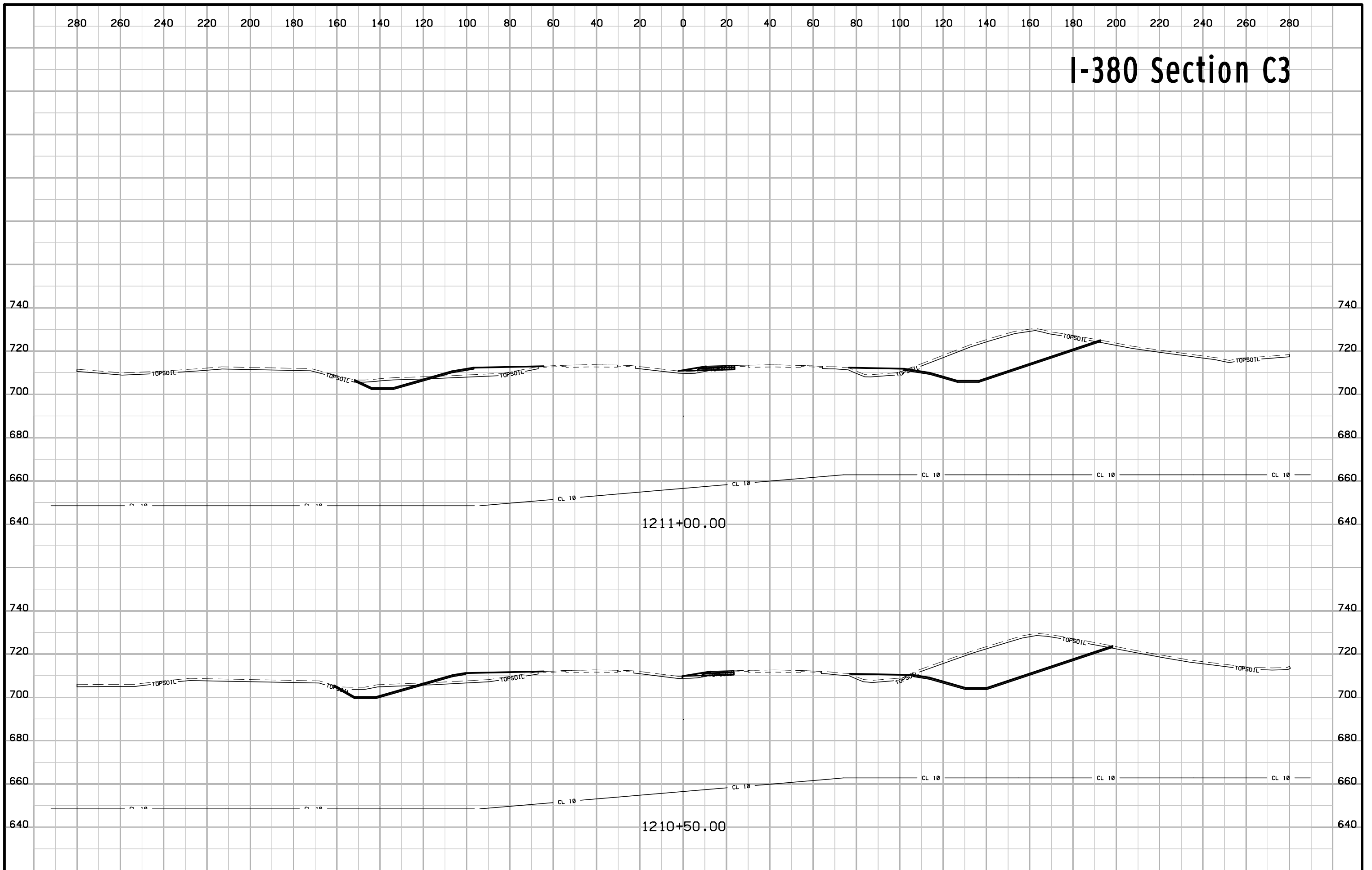
I-380 Section C3



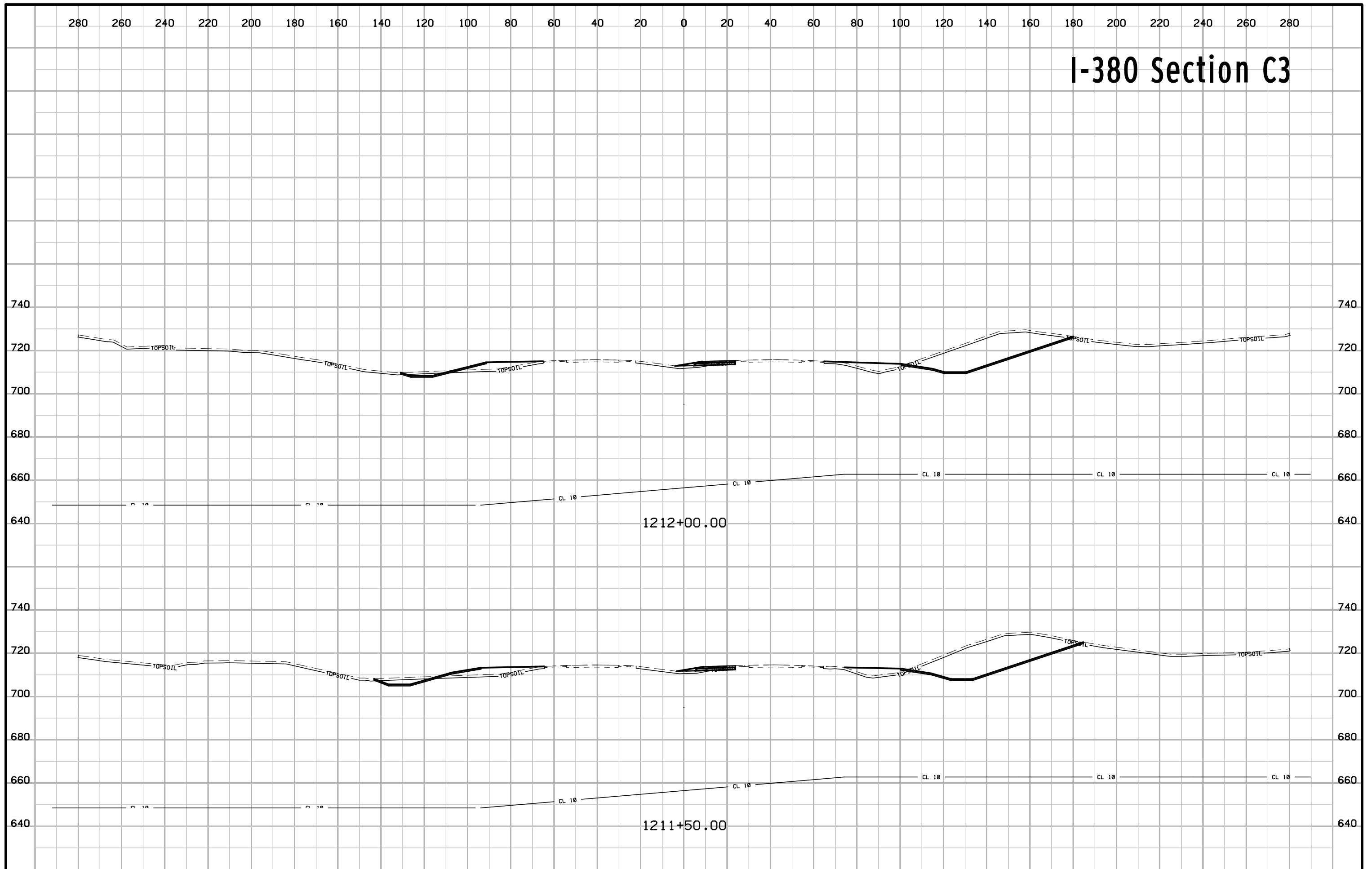




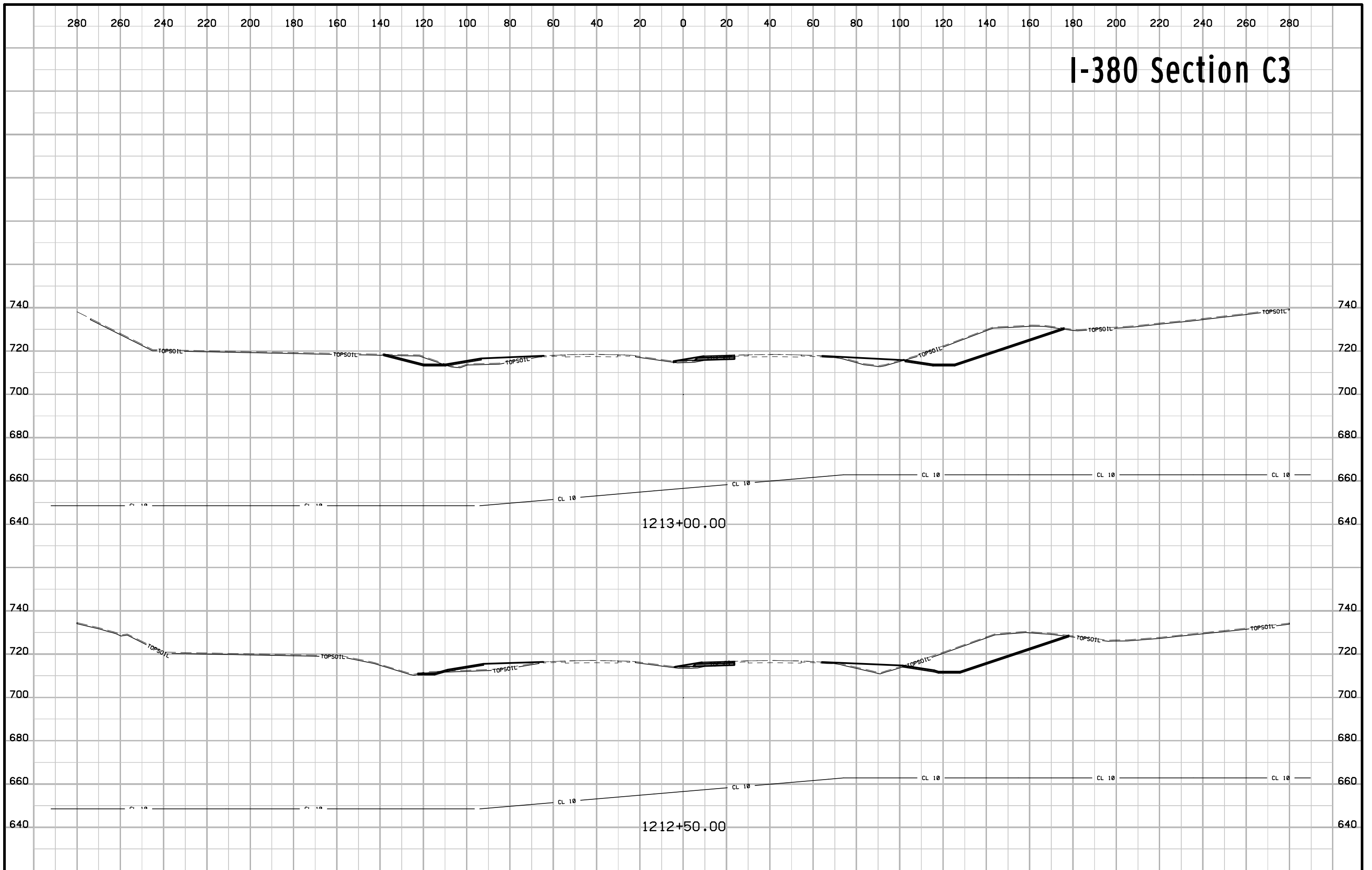
I-380 Section C3



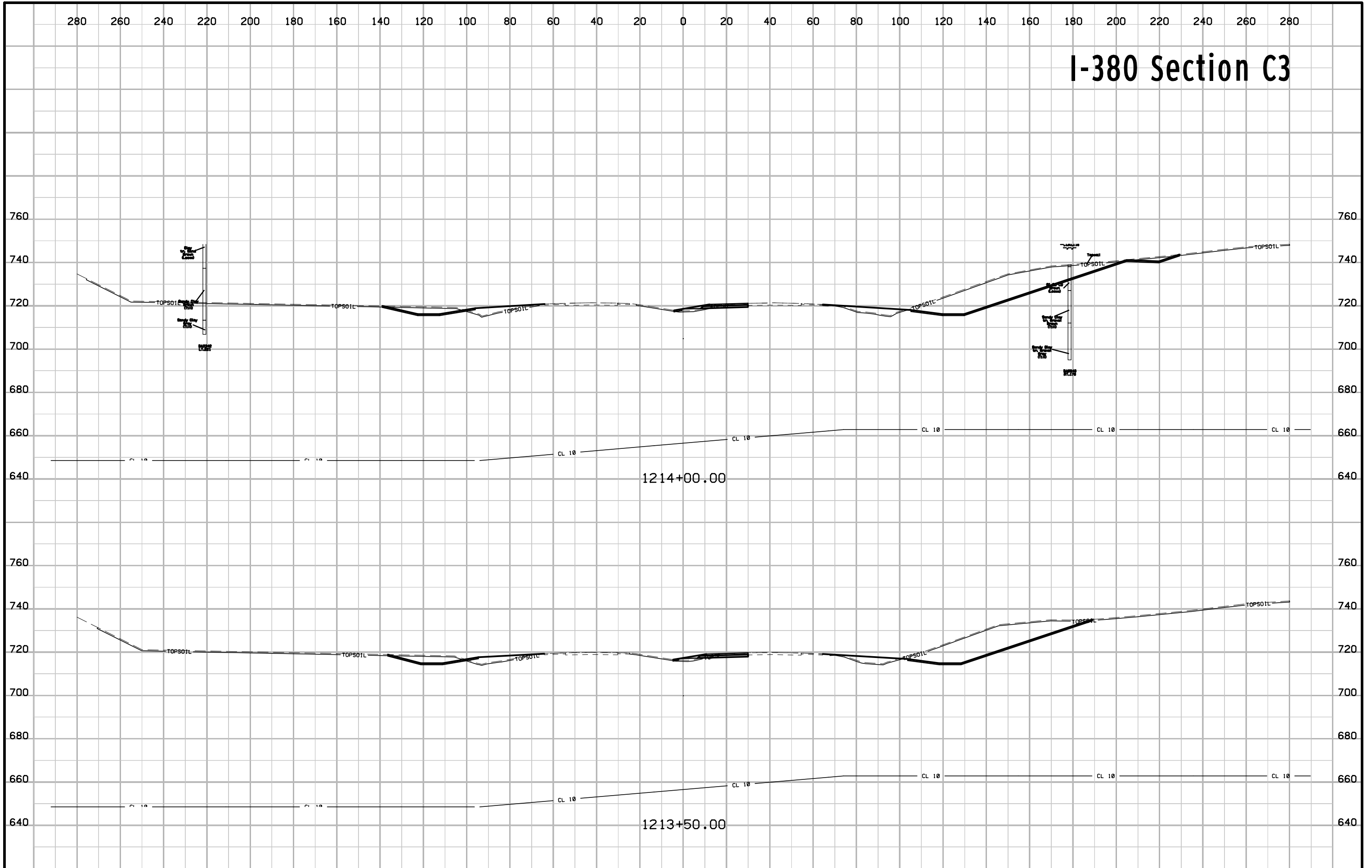
I-380 Section C3



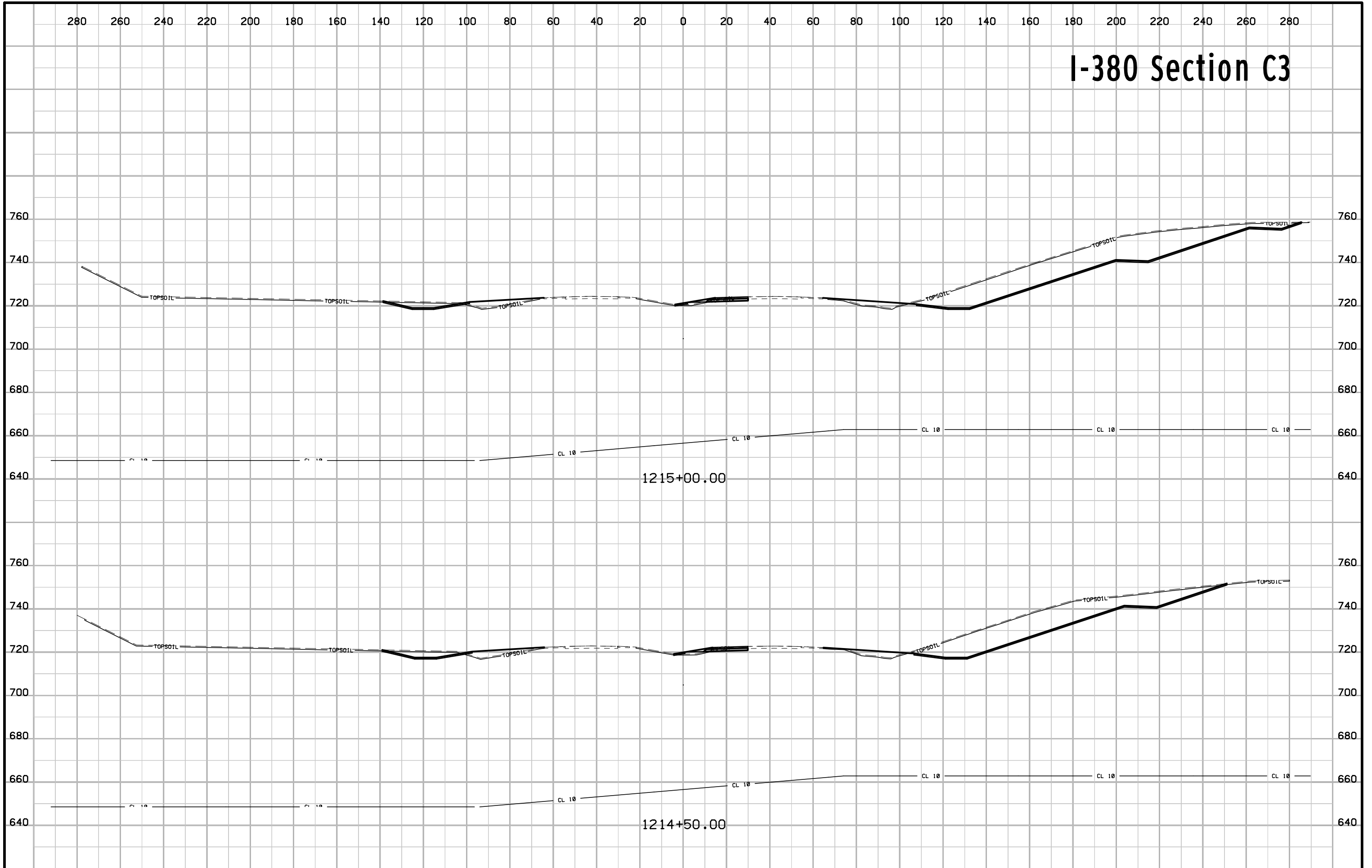
I-380 Section C3



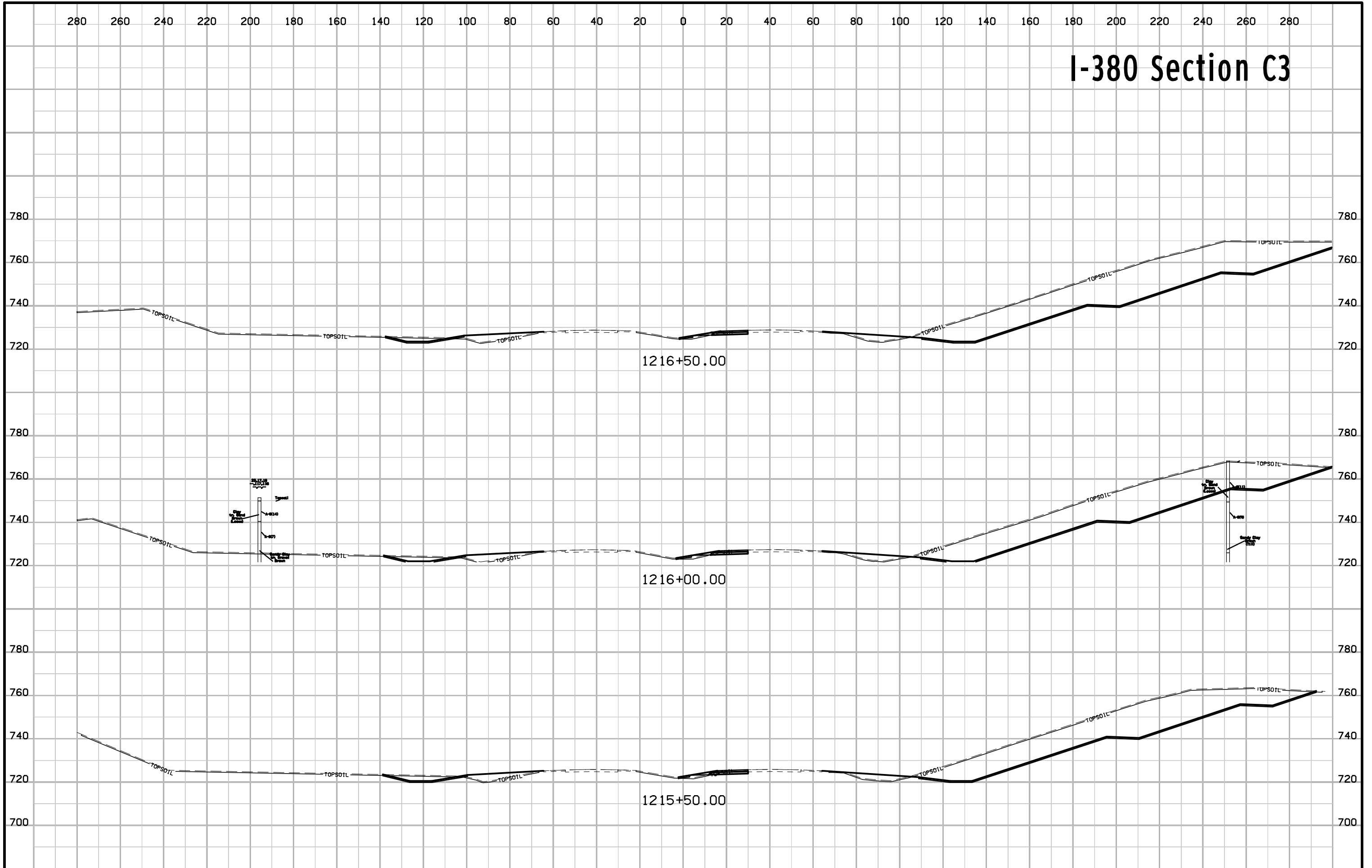
I-380 Section C3



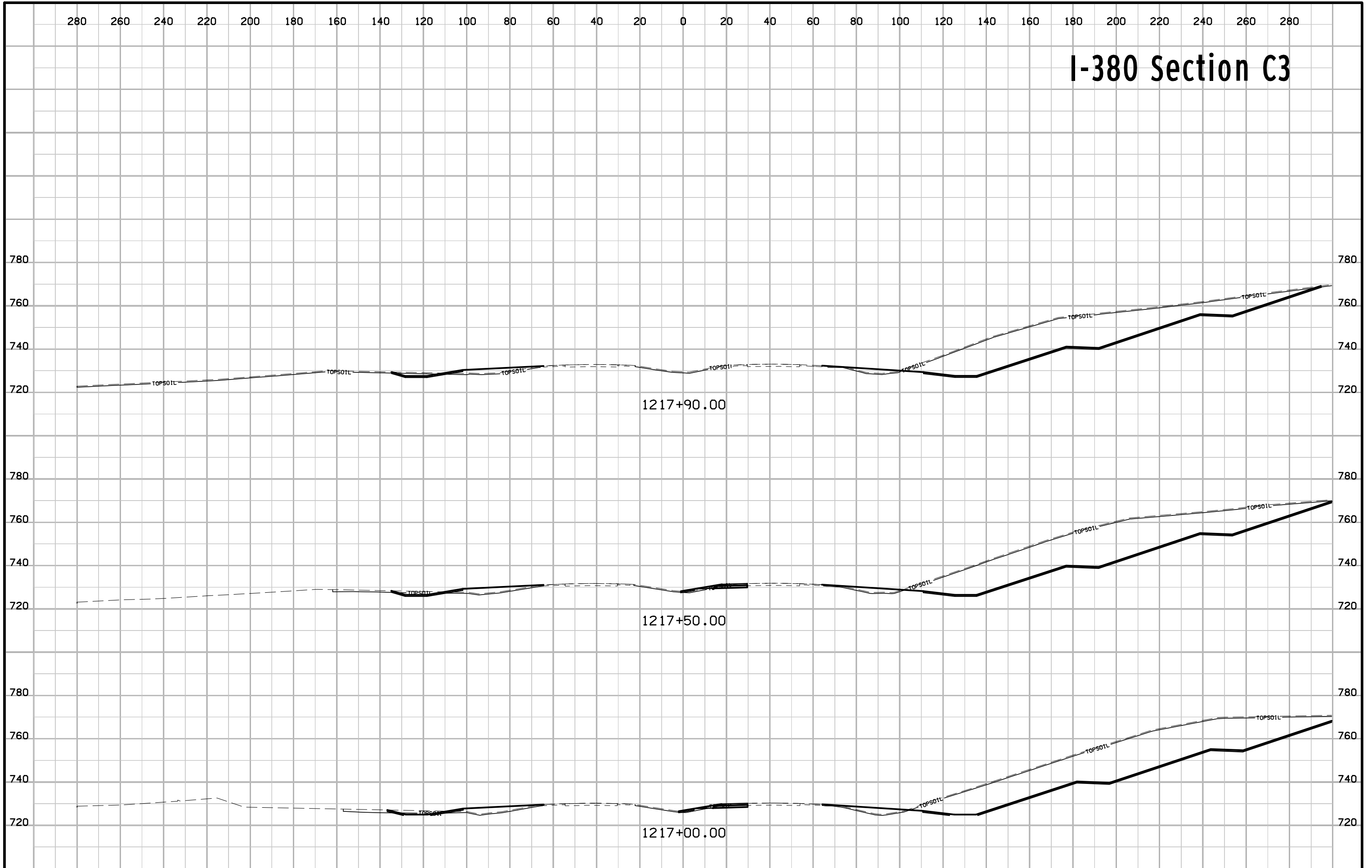
I-380 Section C3



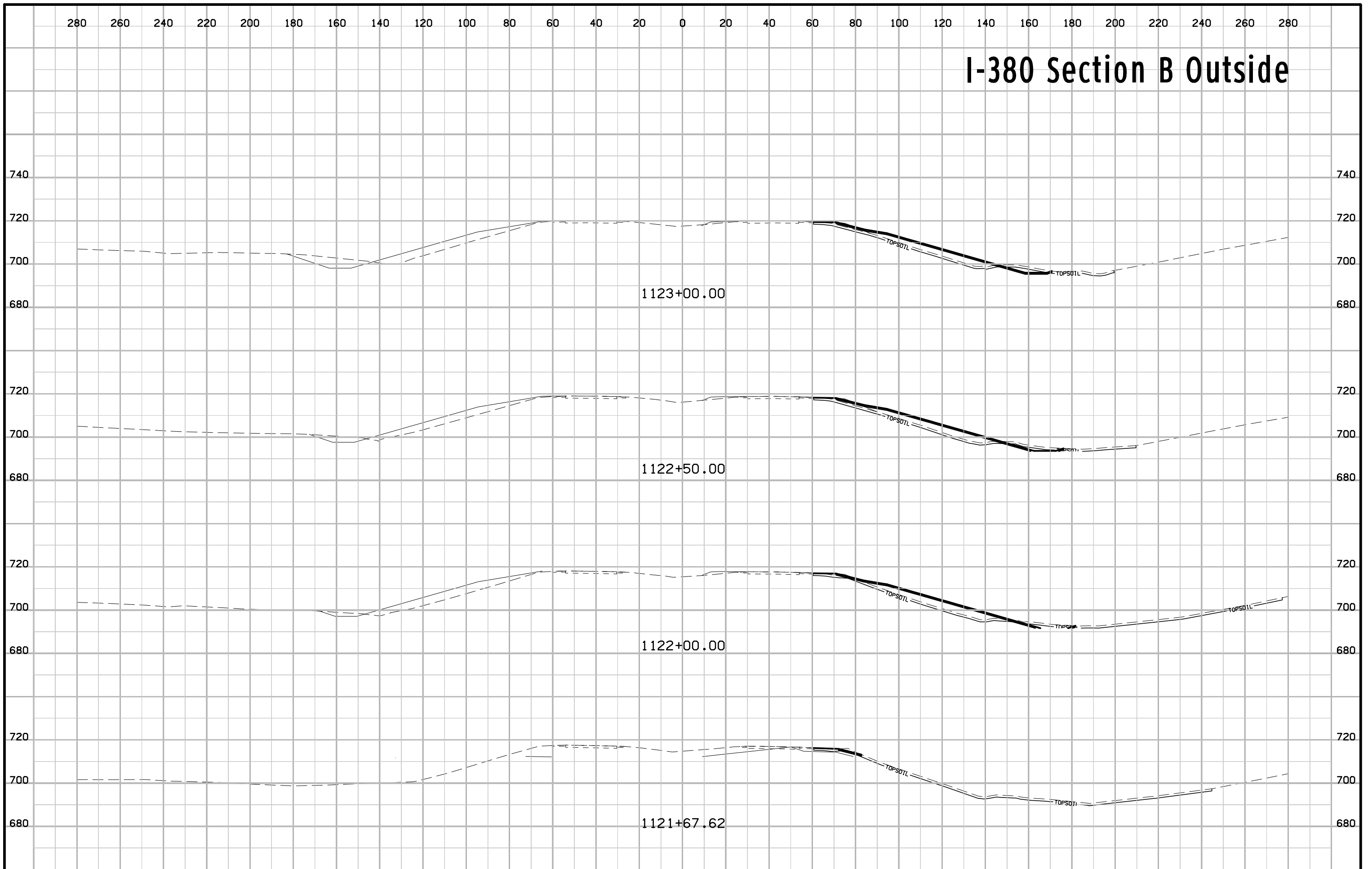
I-380 Section C3



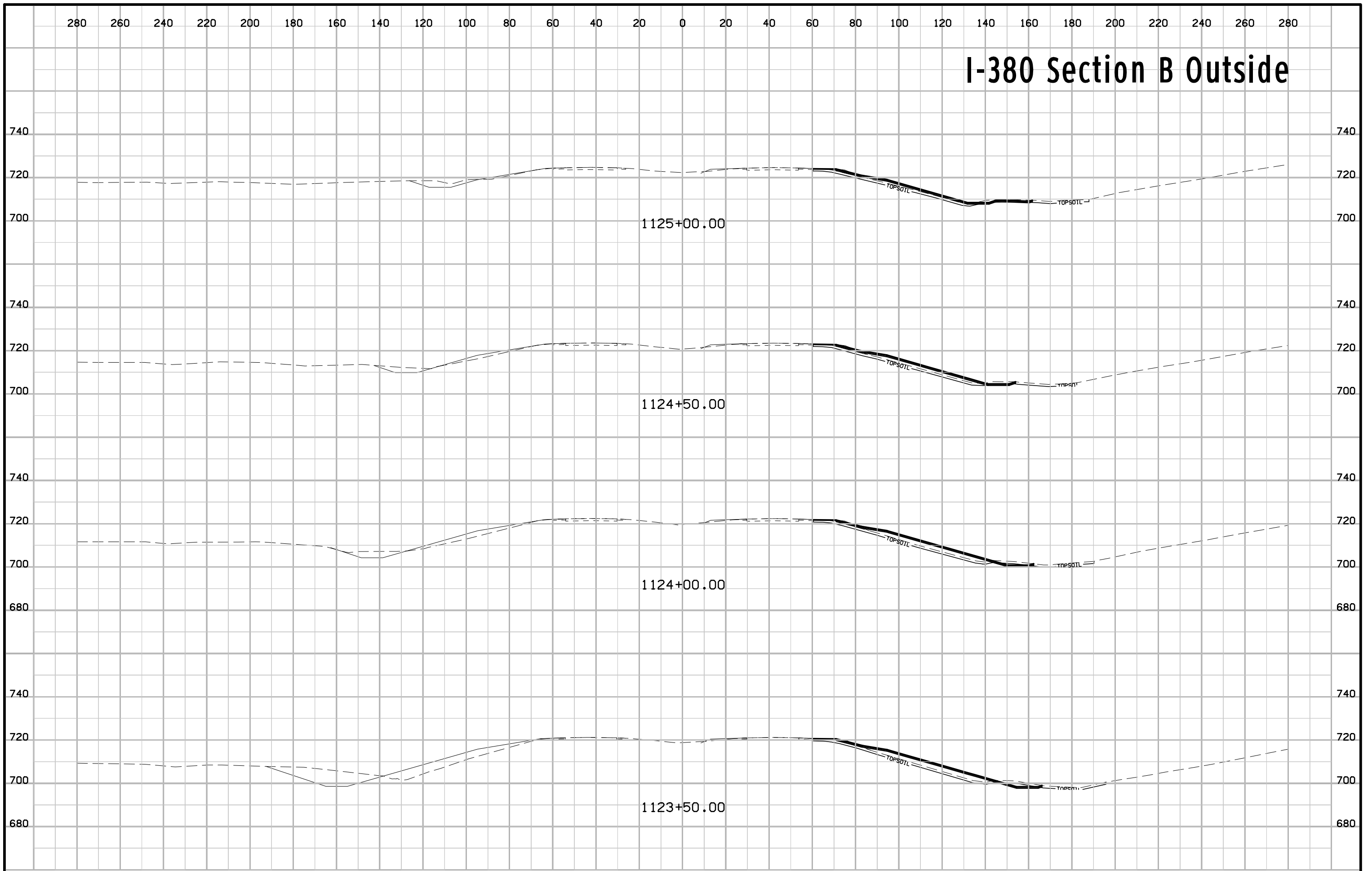
I-380 Section C3



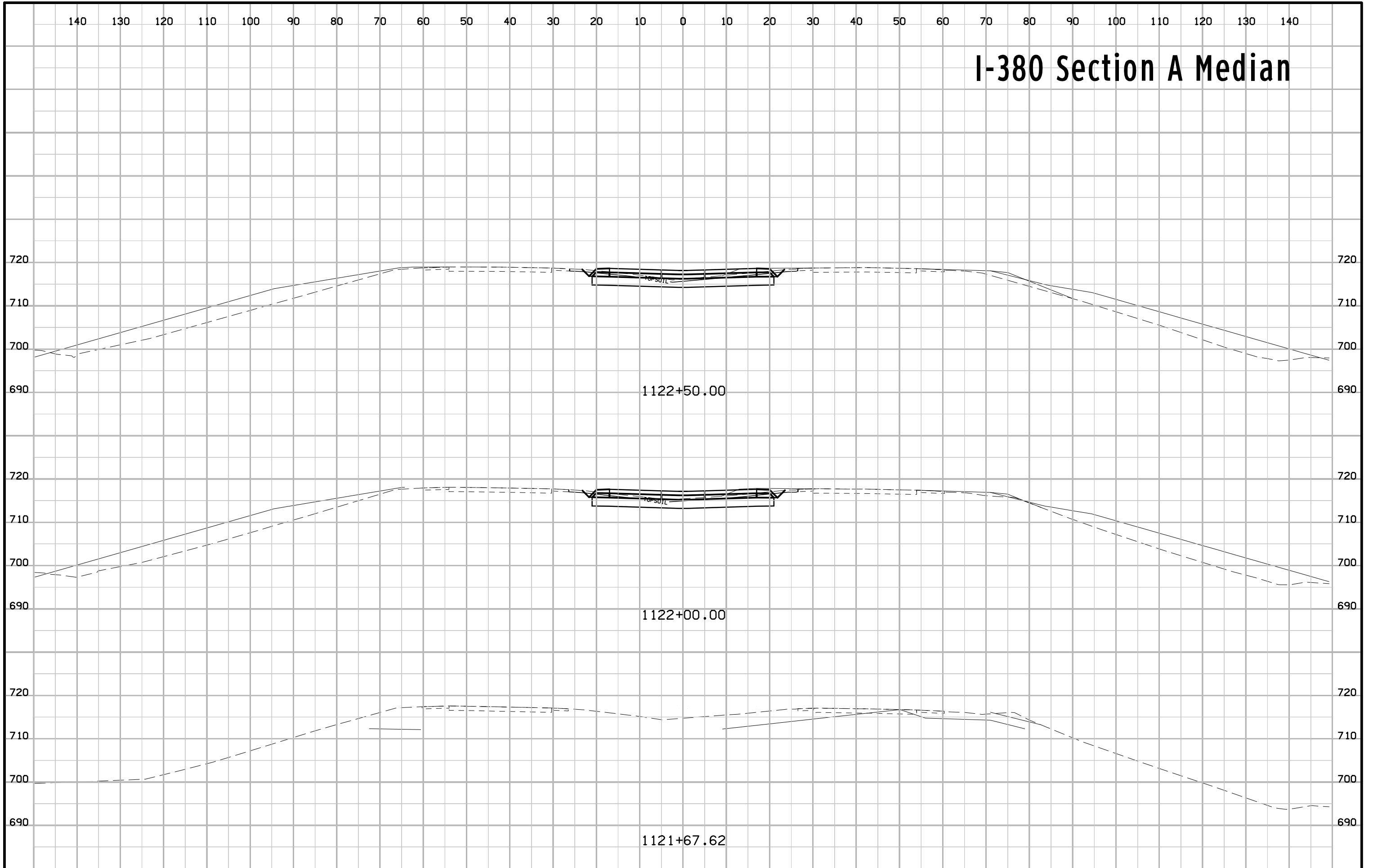
I-380 Section B Outside



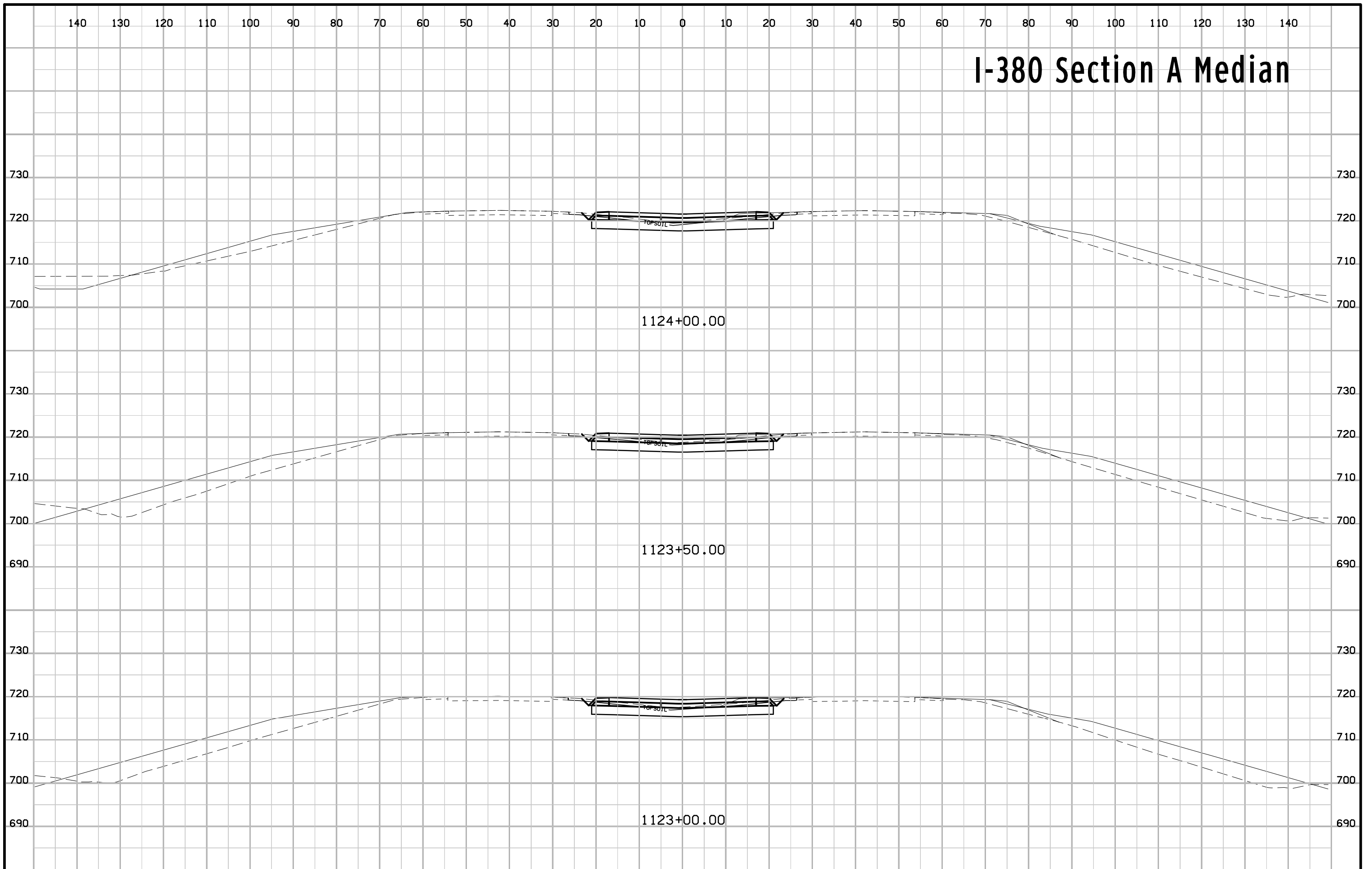
I-380 Section B Outside



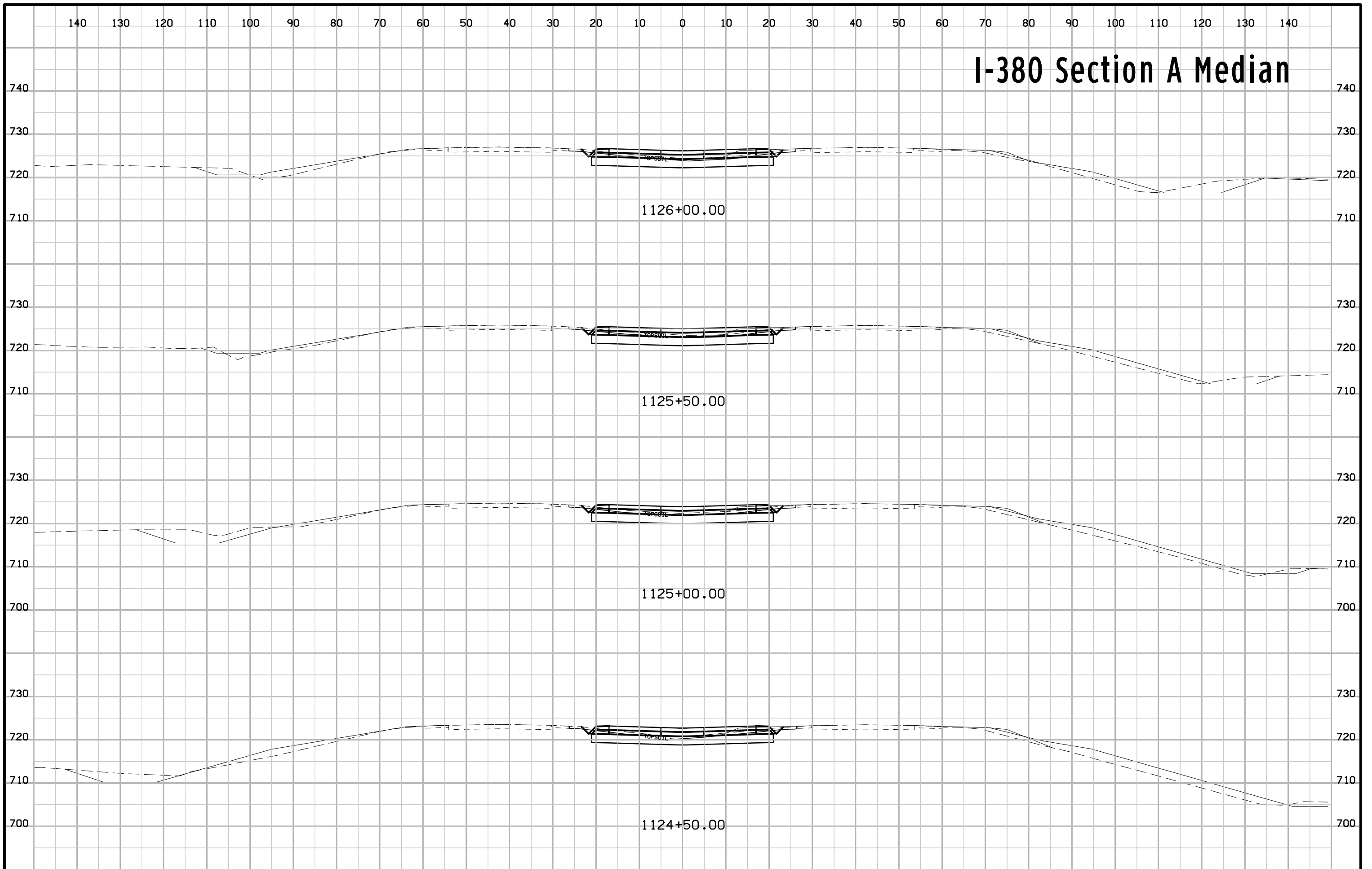
I-380 Section A Median



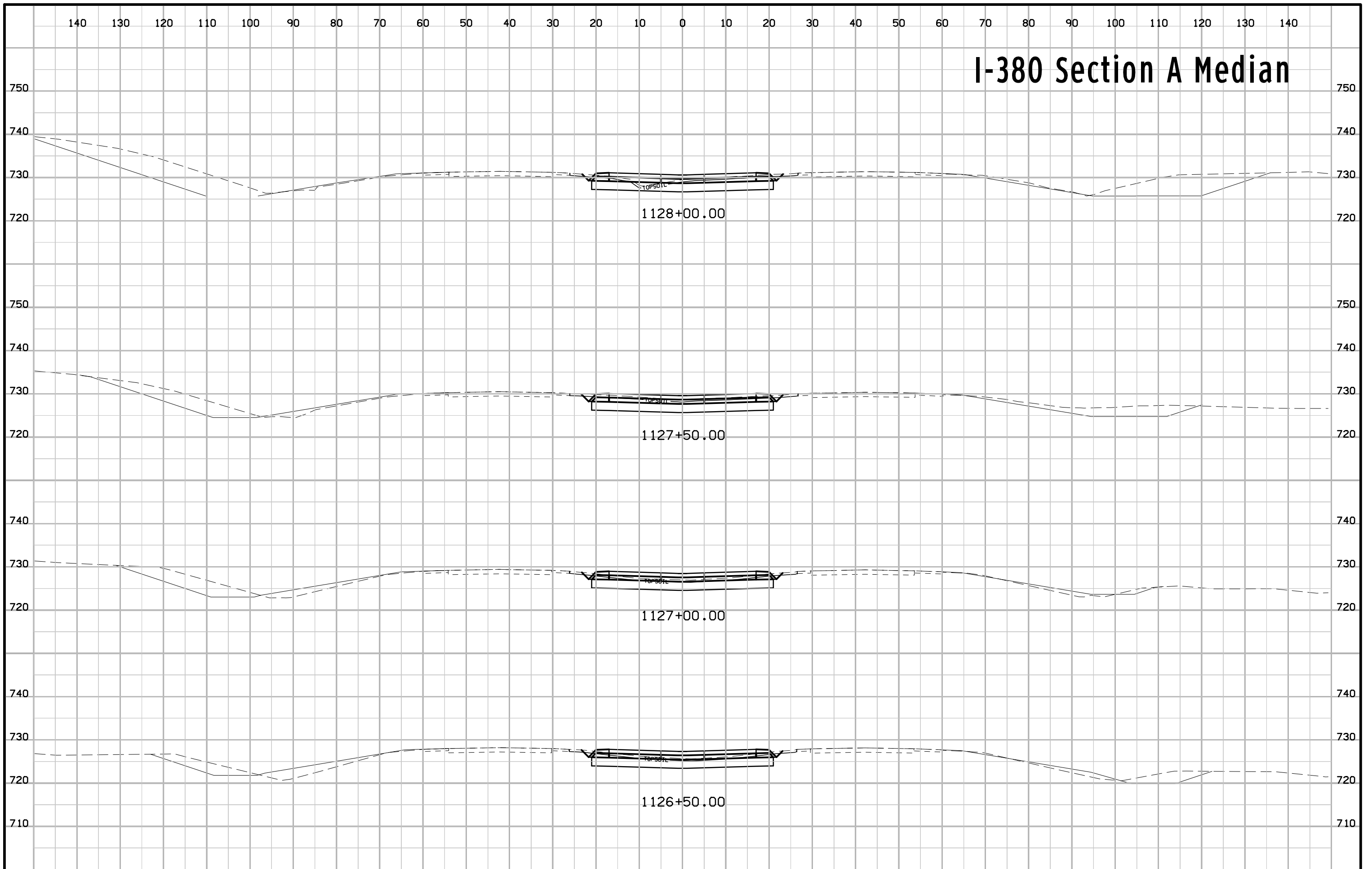
I-380 Section A Median



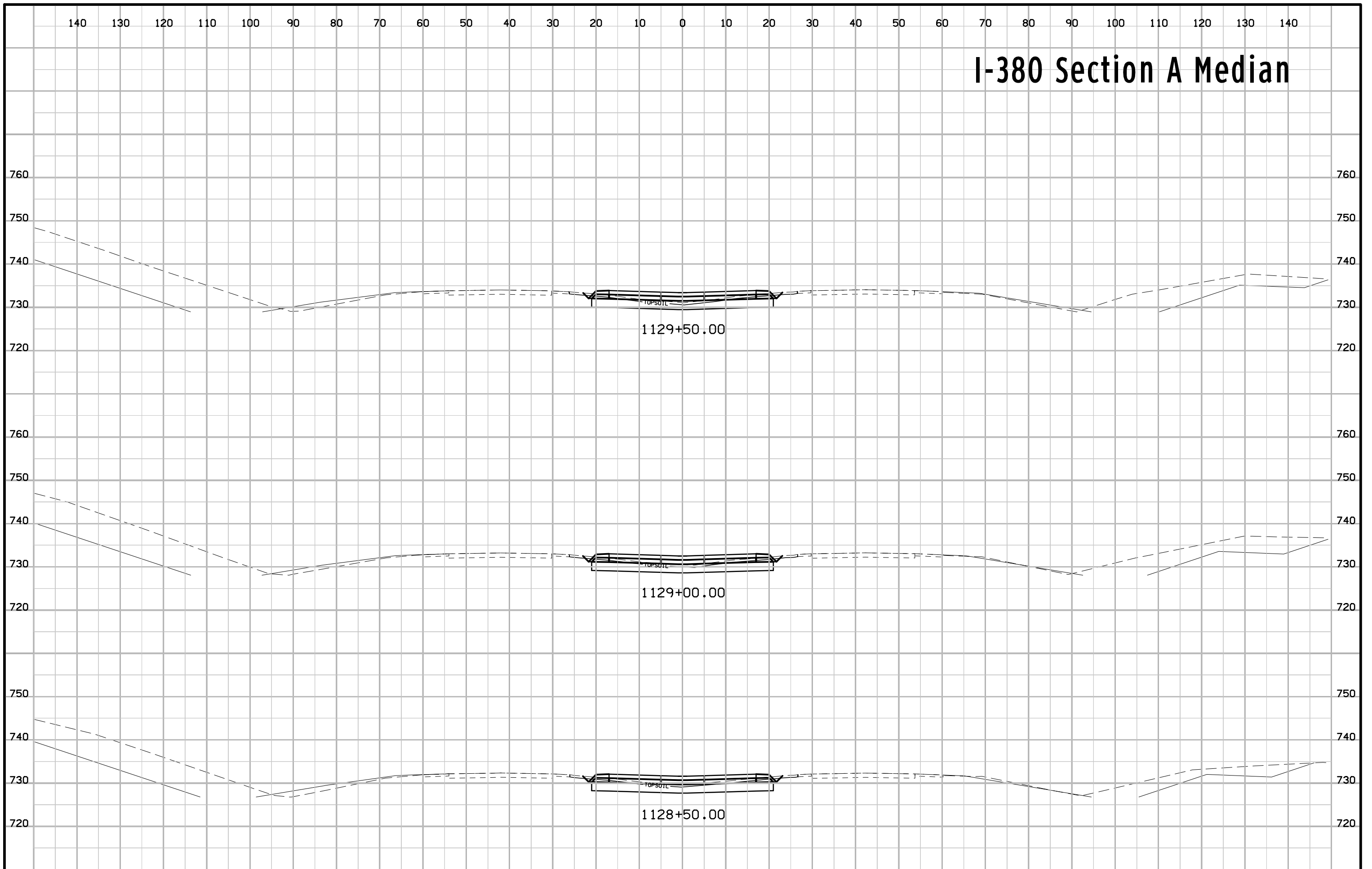
I-380 Section A Median



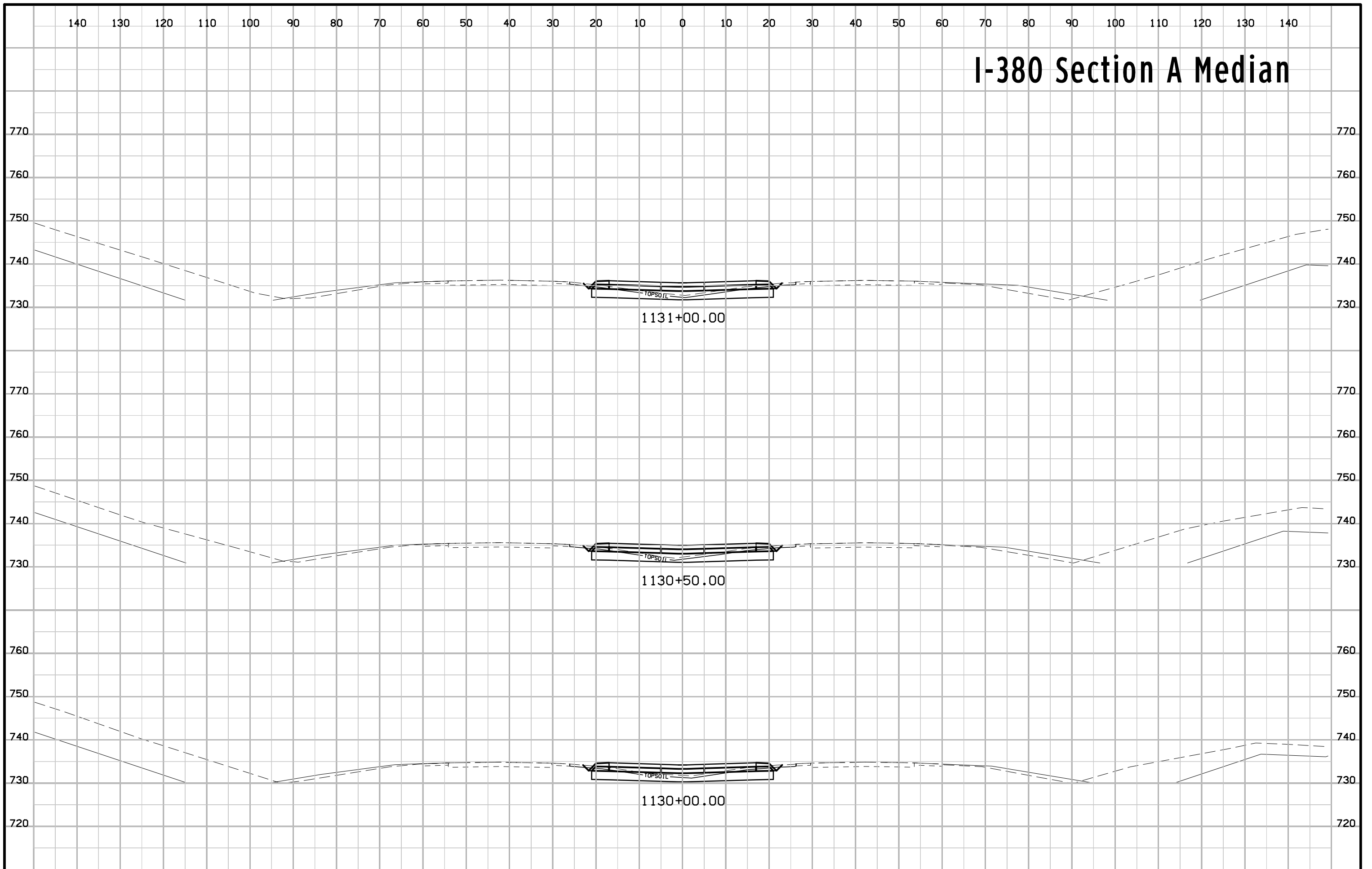
I-380 Section A Median



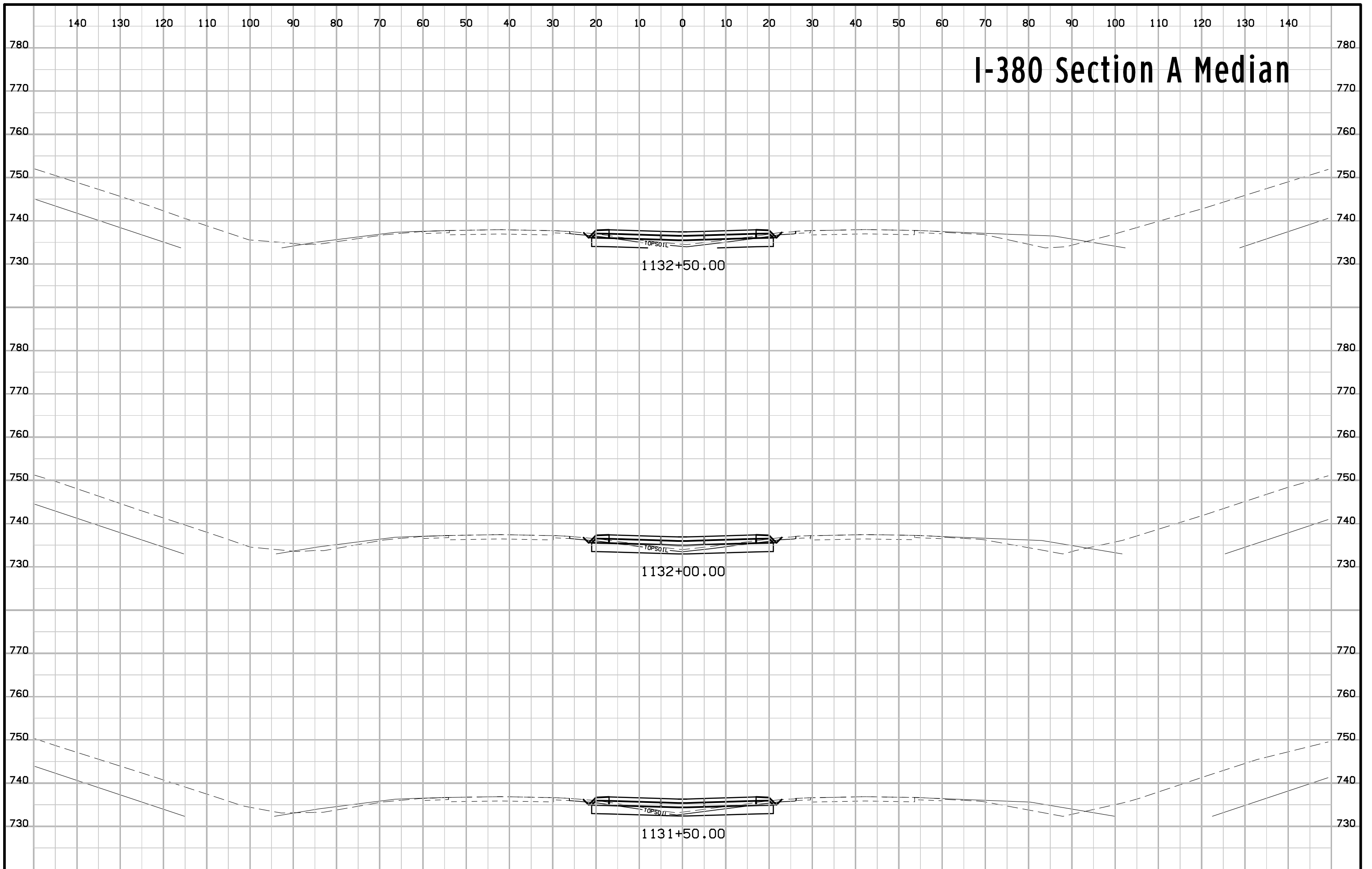
I-380 Section A Median



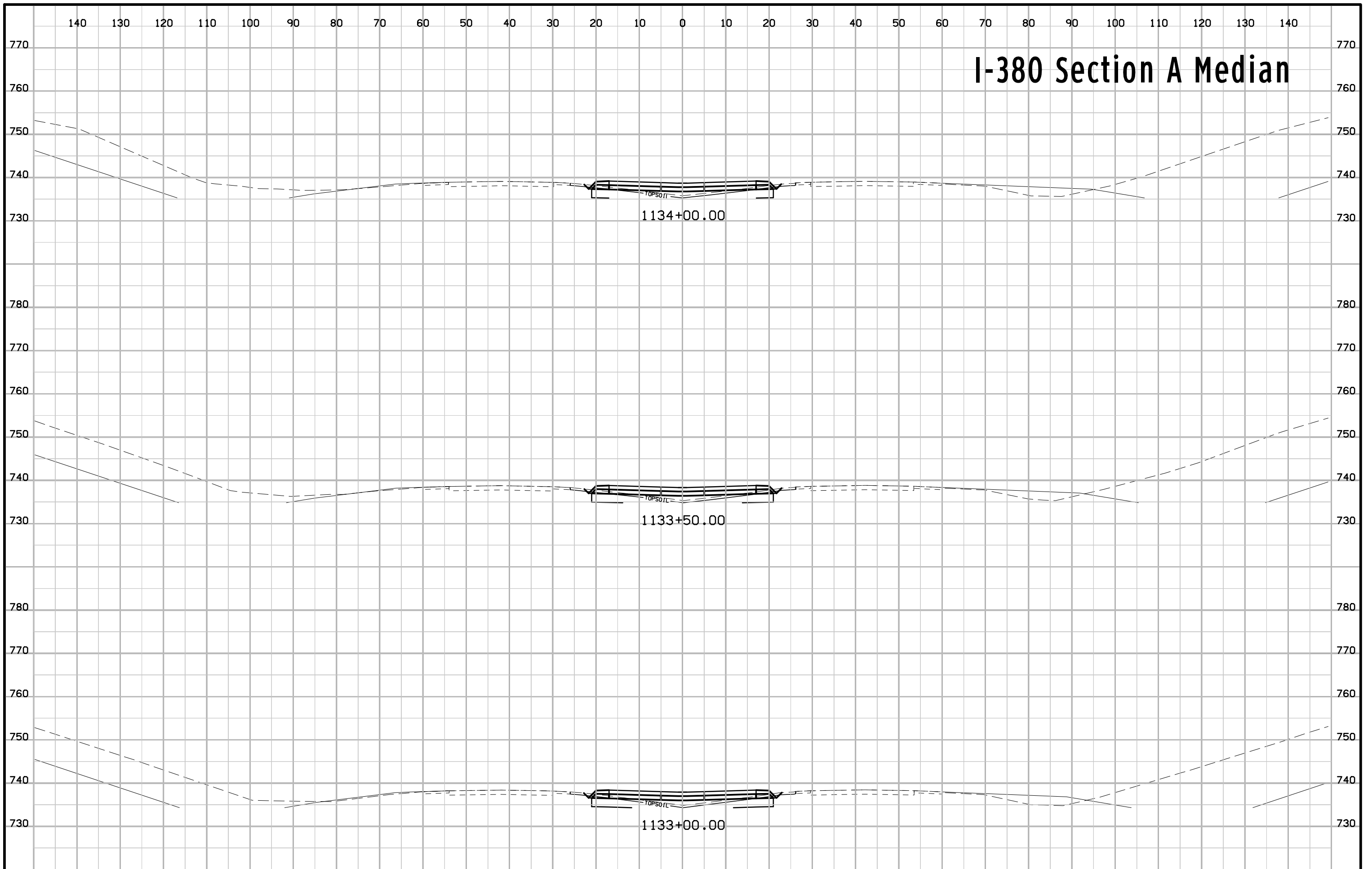
I-380 Section A Median



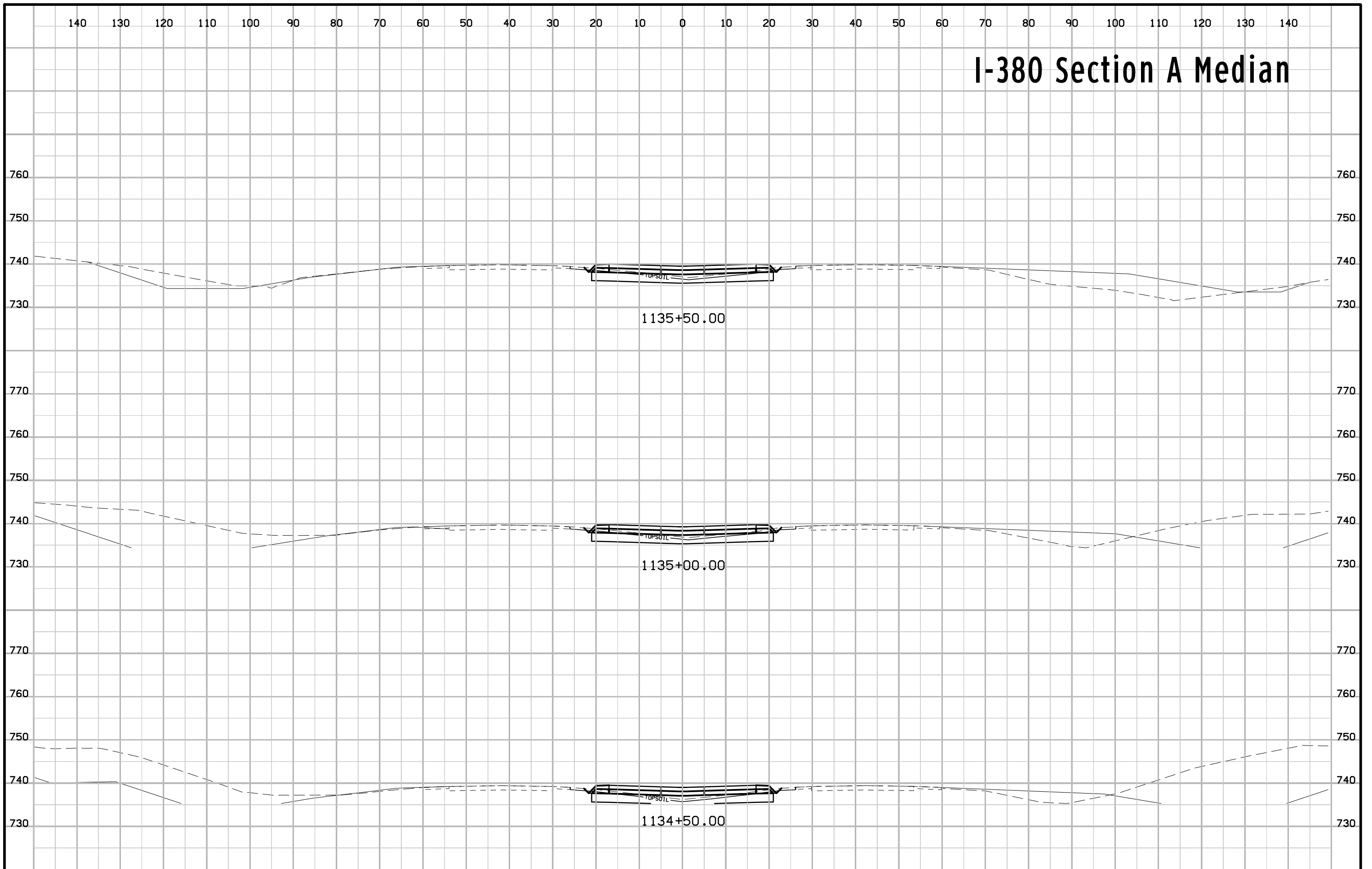
I-380 Section A Median



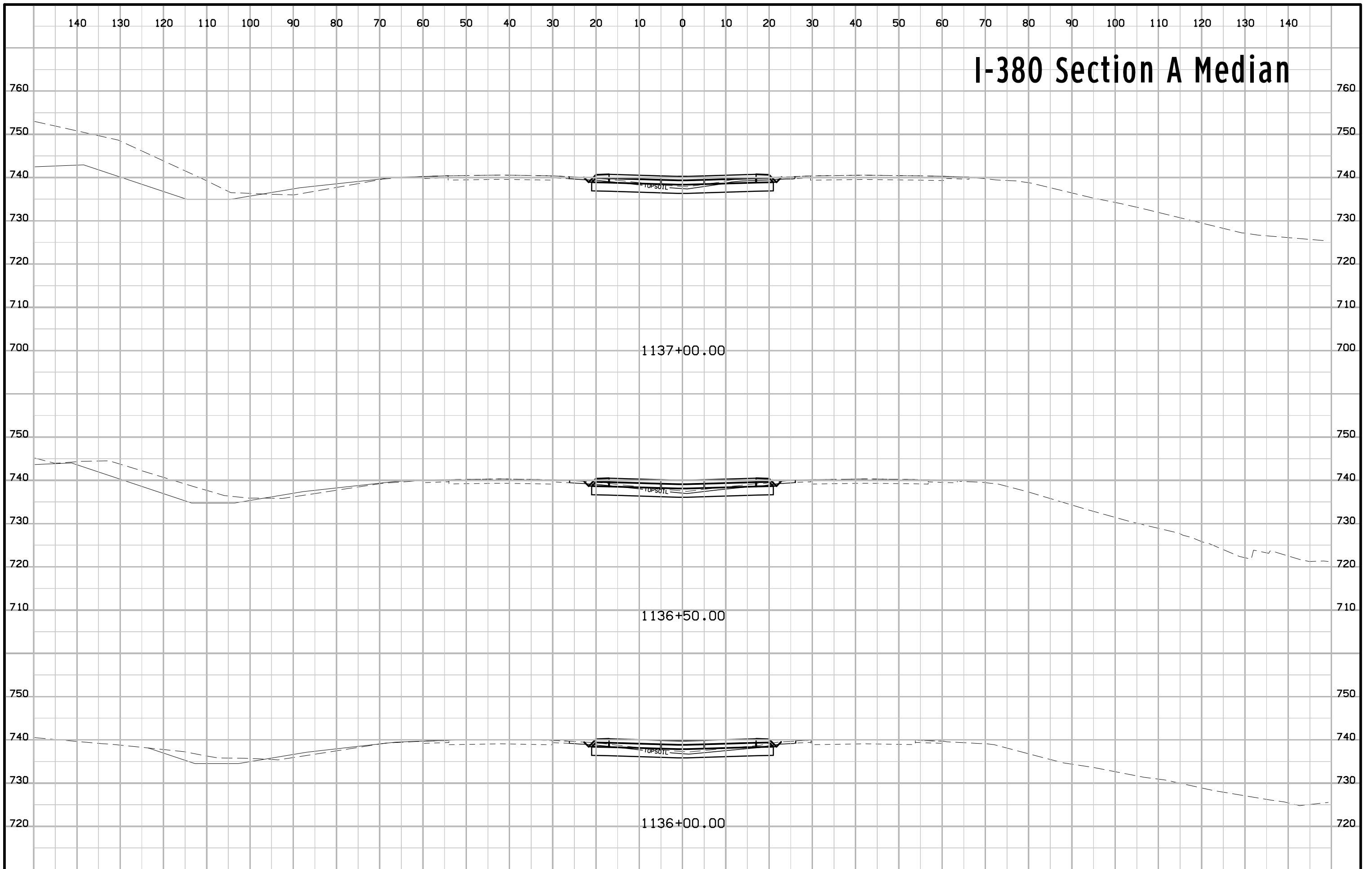
I-380 Section A Median



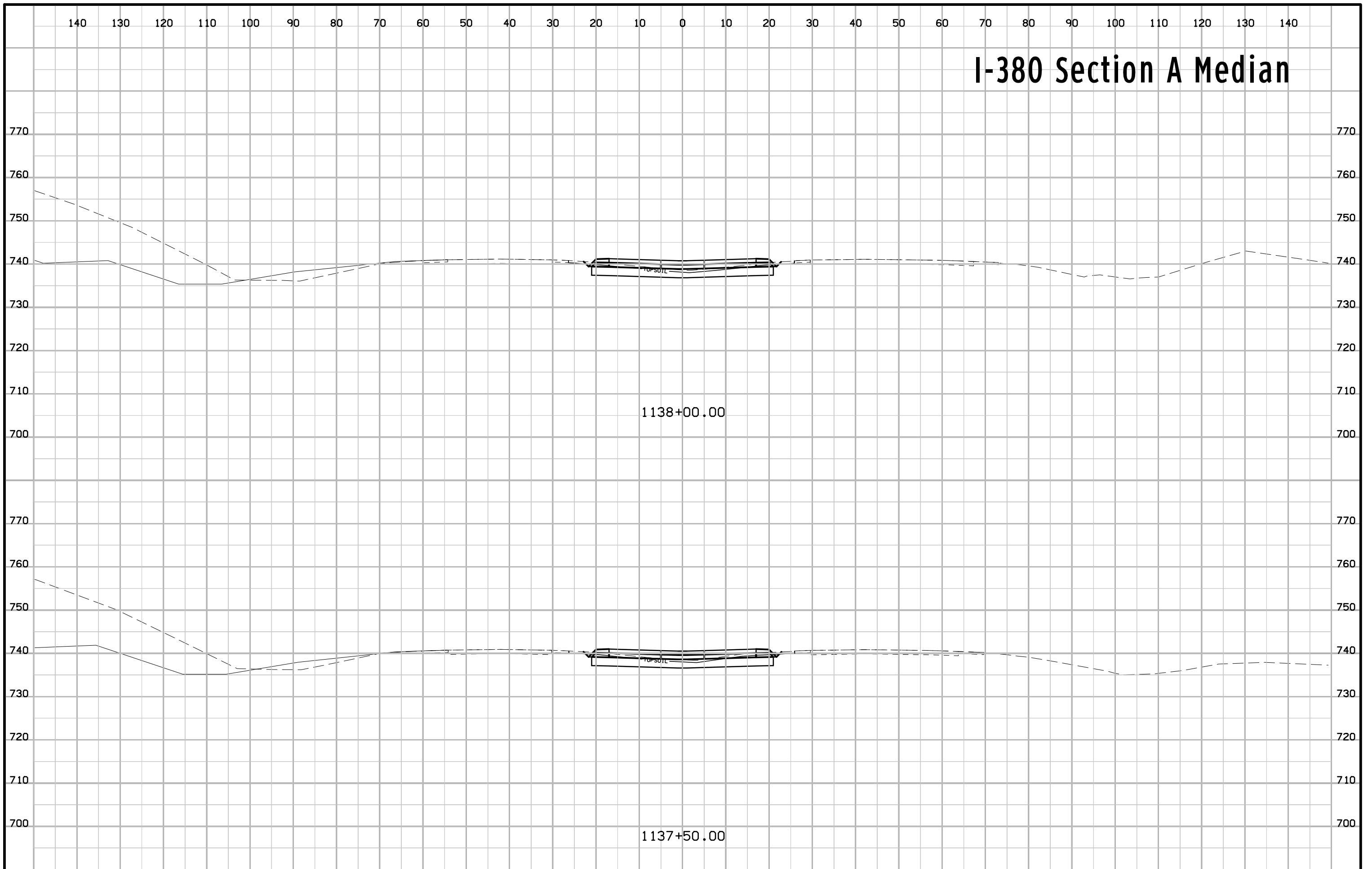
I-380 Section A Median



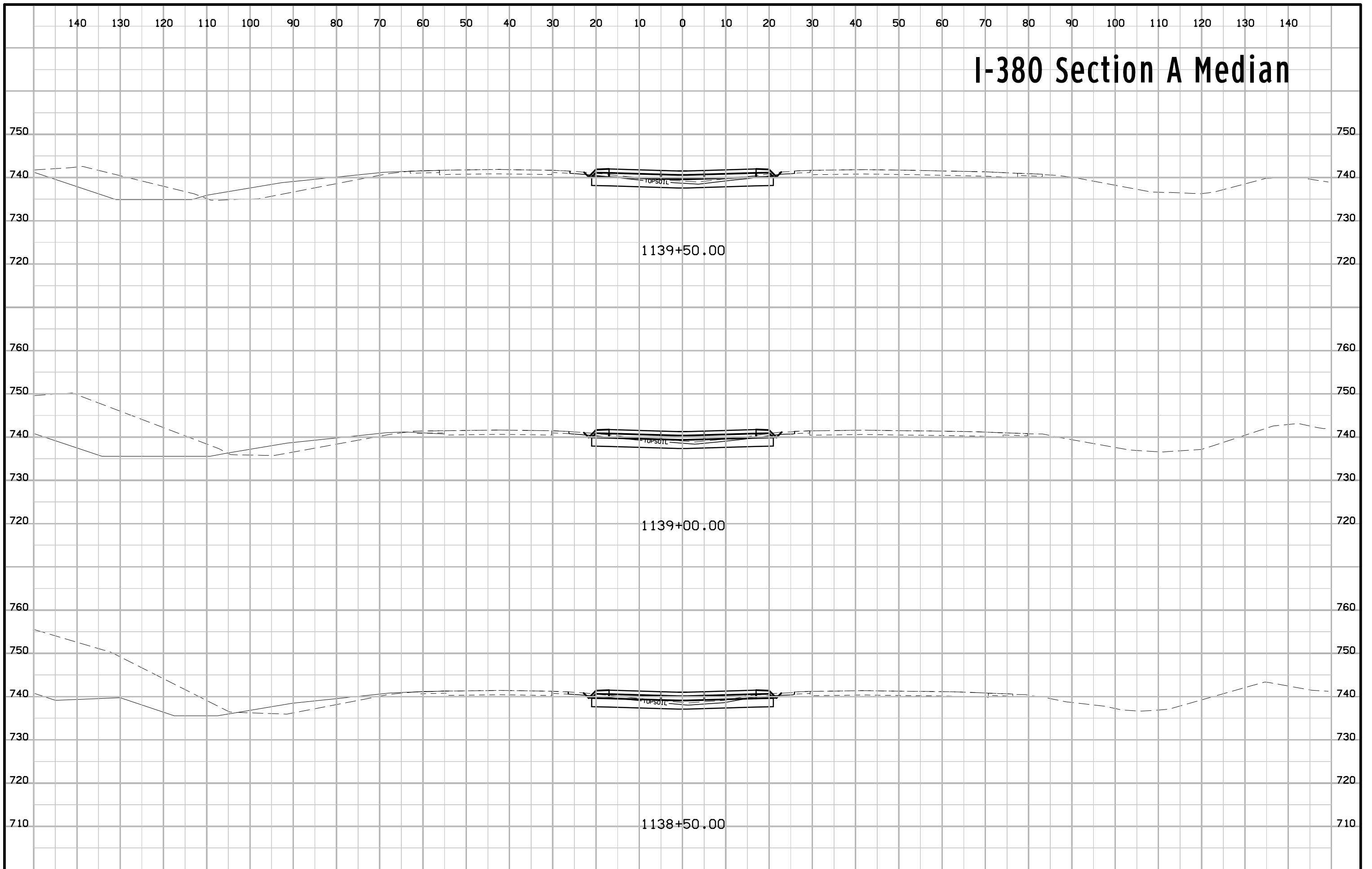
I-380 Section A Median



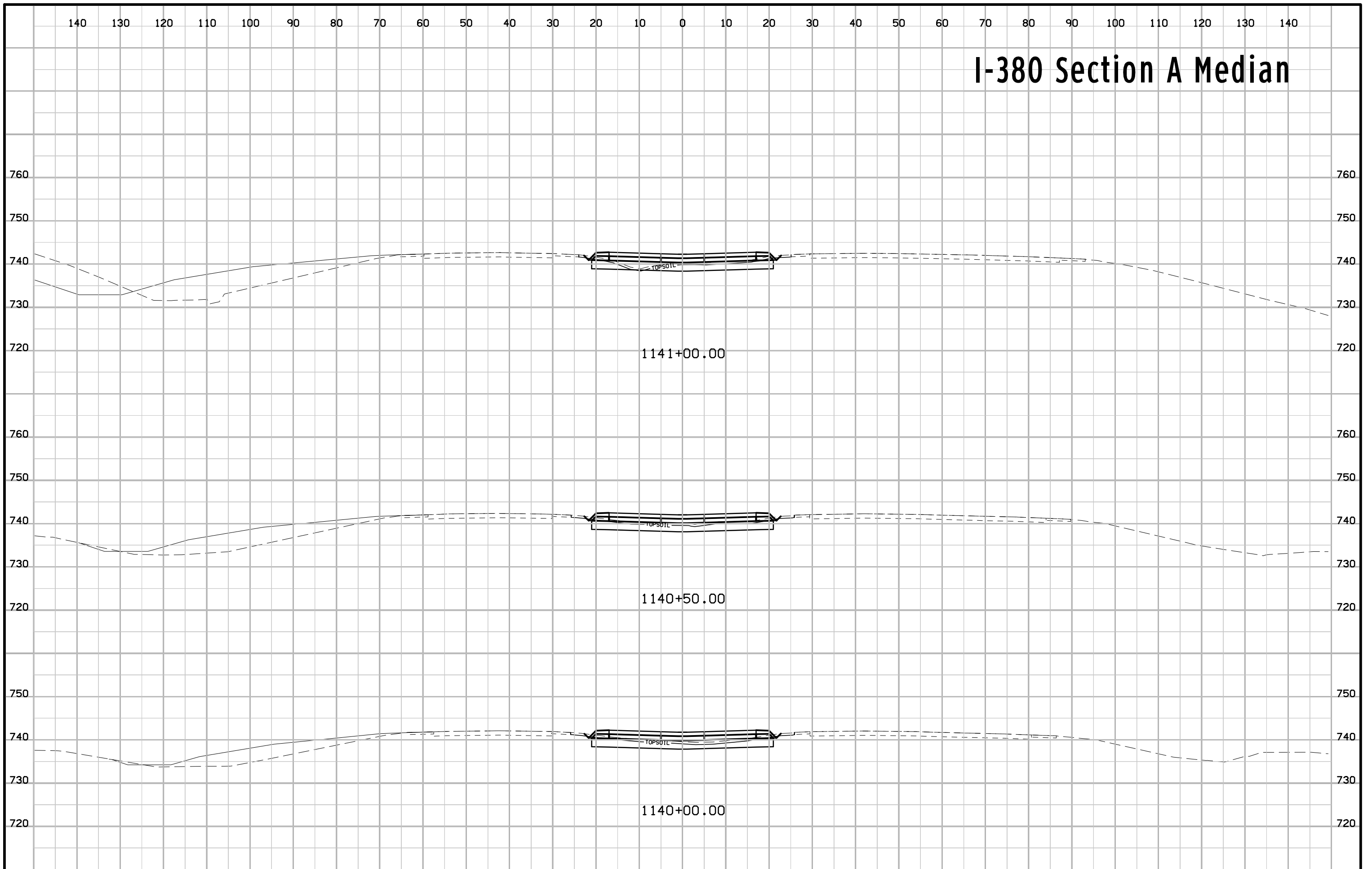
I-380 Section A Median



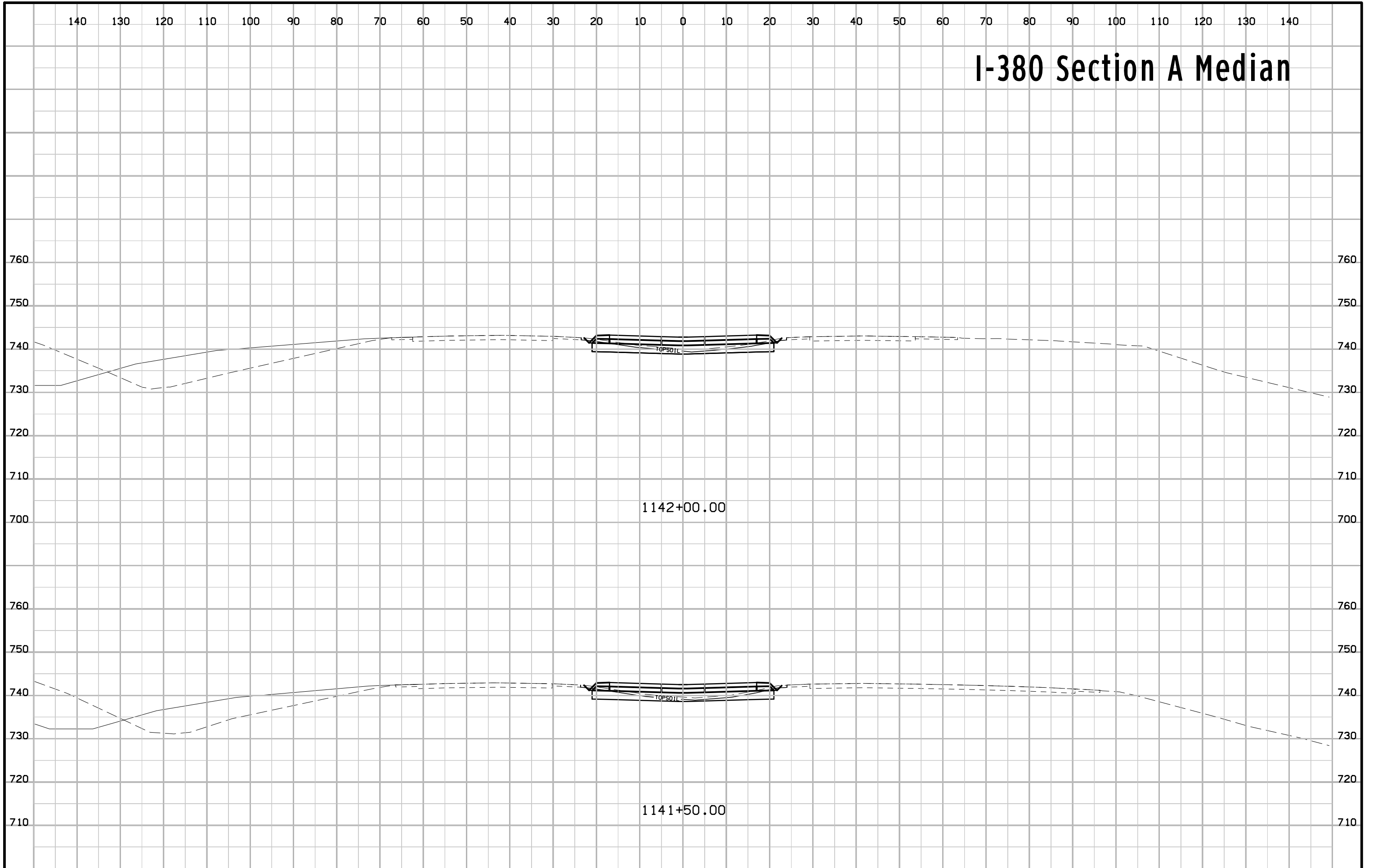
I-380 Section A Median



I-380 Section A Median

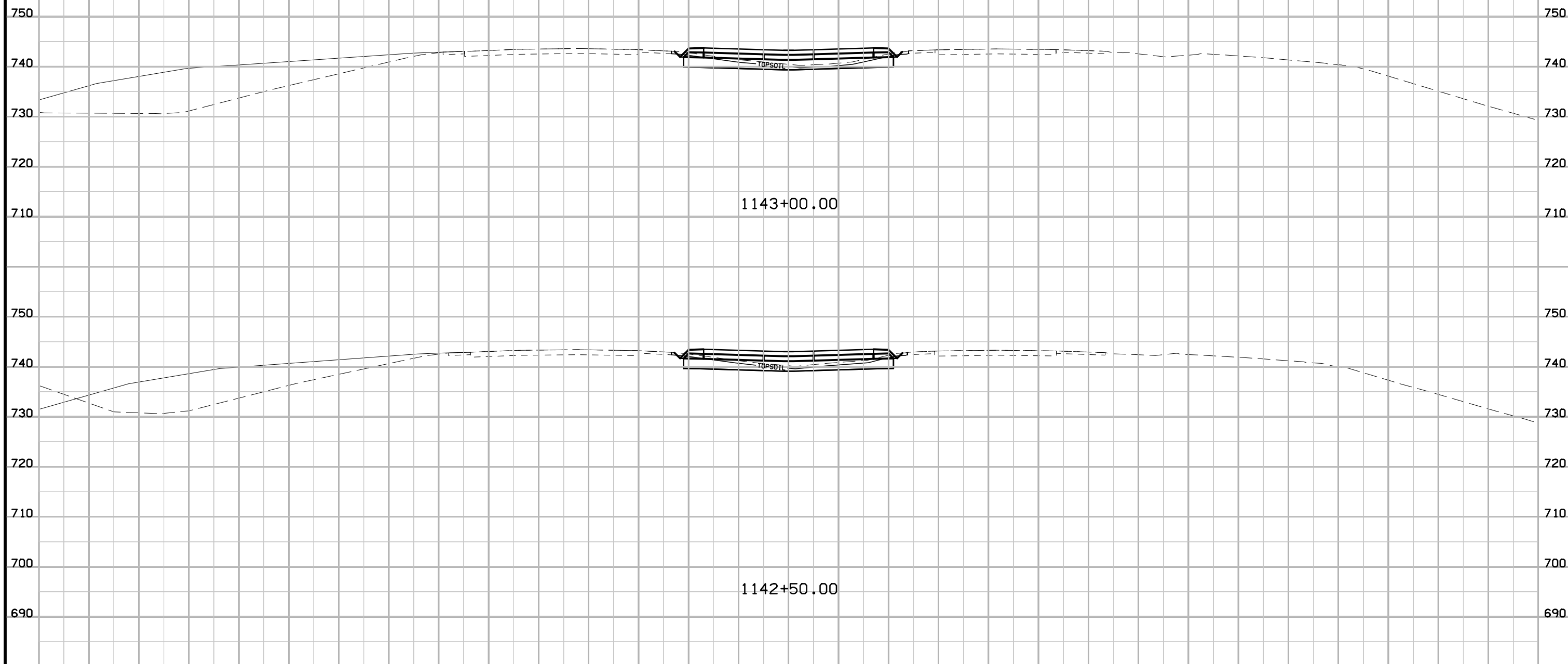


I-380 Section A Median



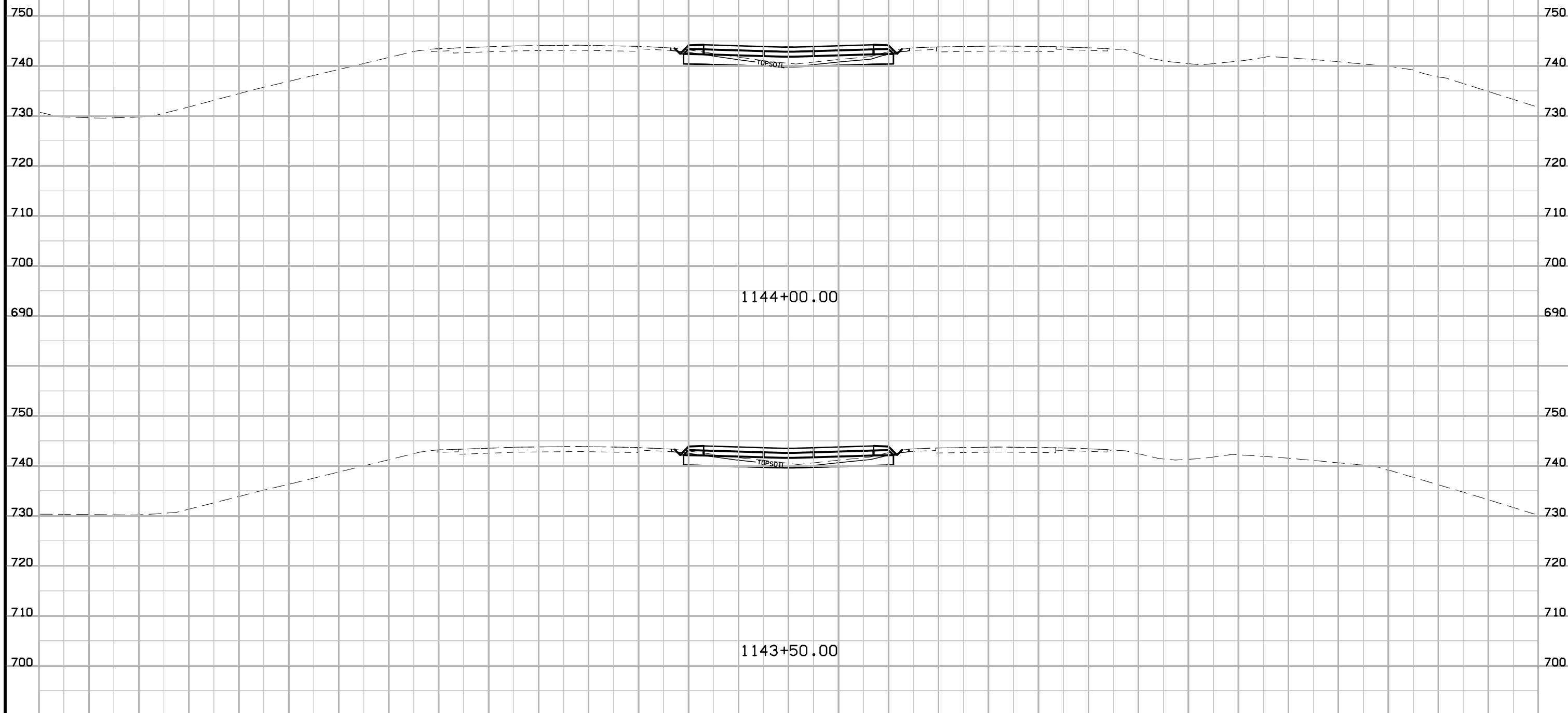
140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

I-380 Section A Median



140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

I-380 Section A Median

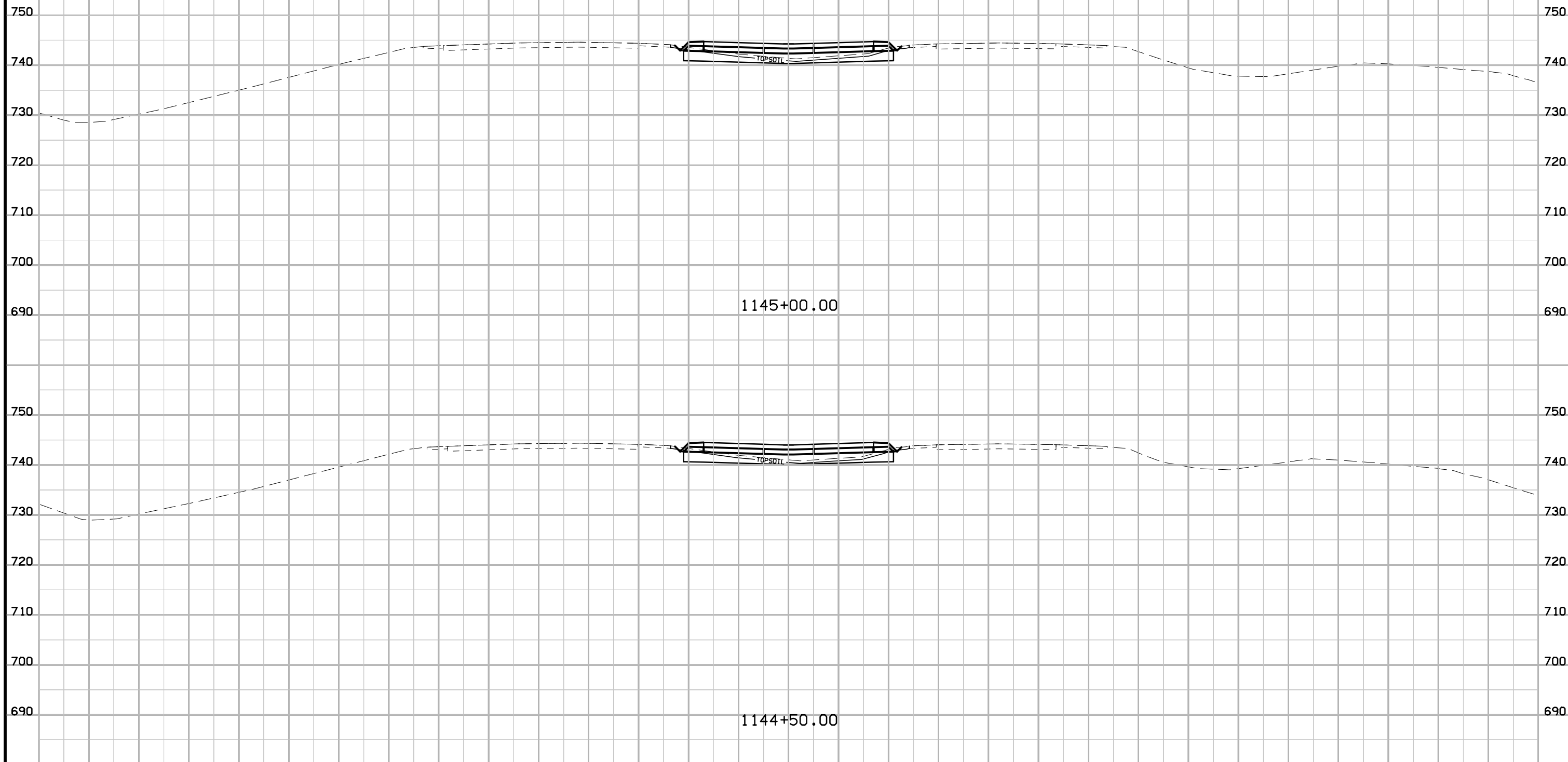


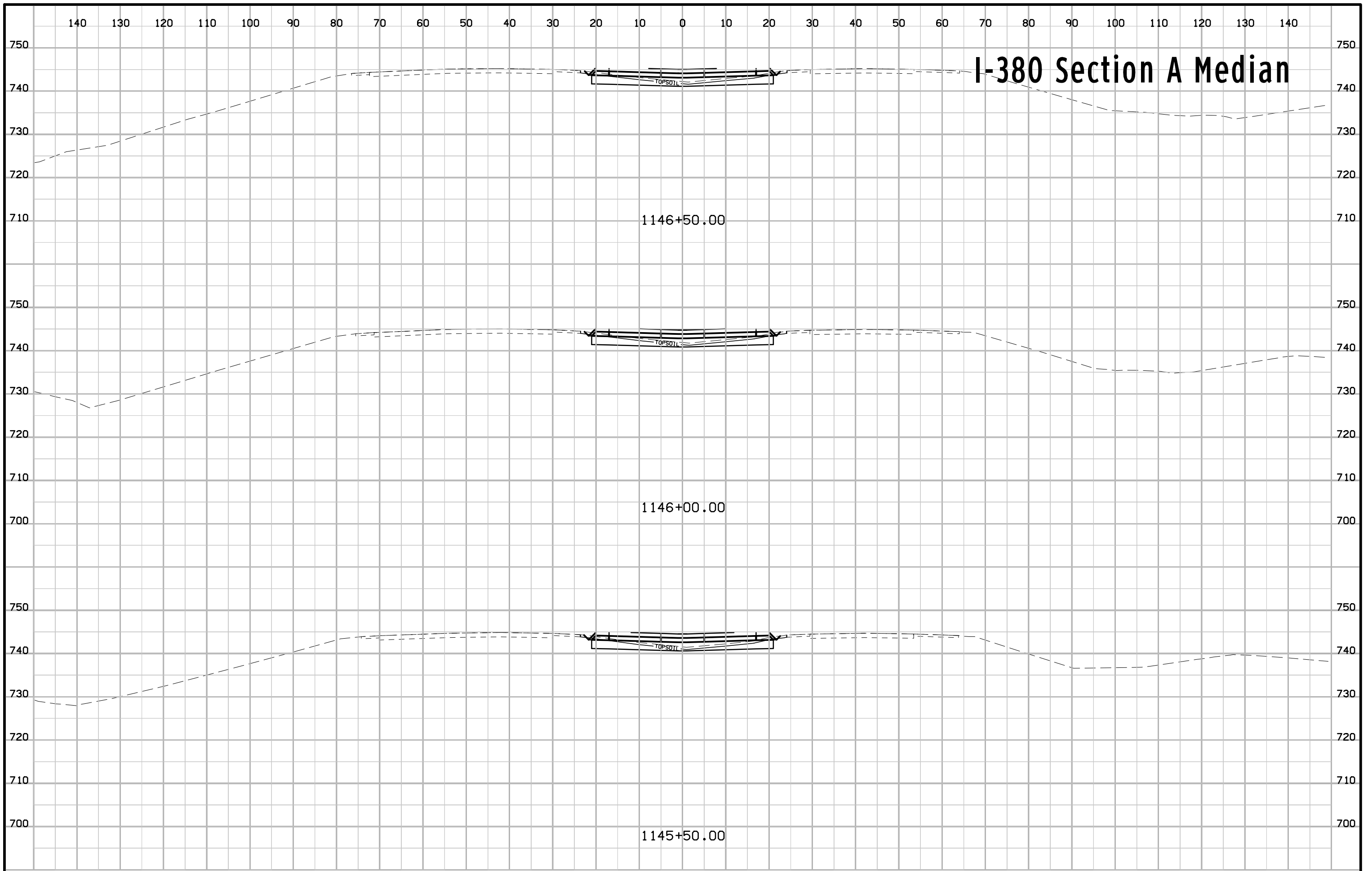
1144+00.00

1143+50.00

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

I-380 Section A Median

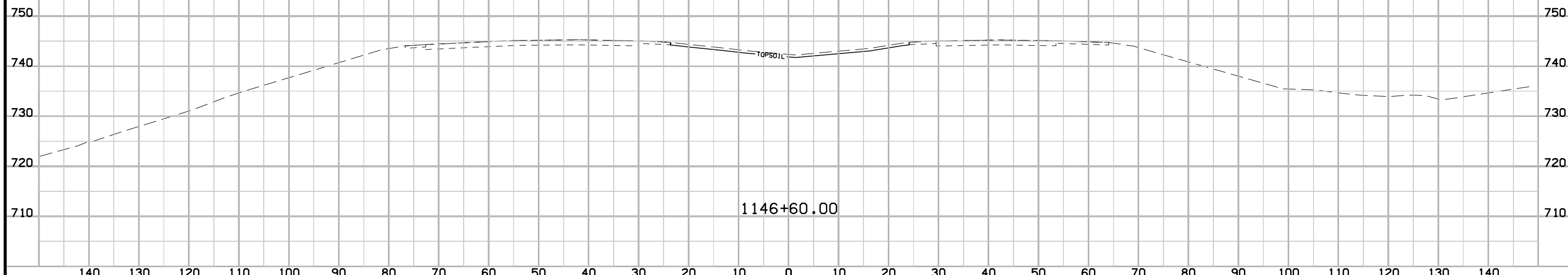




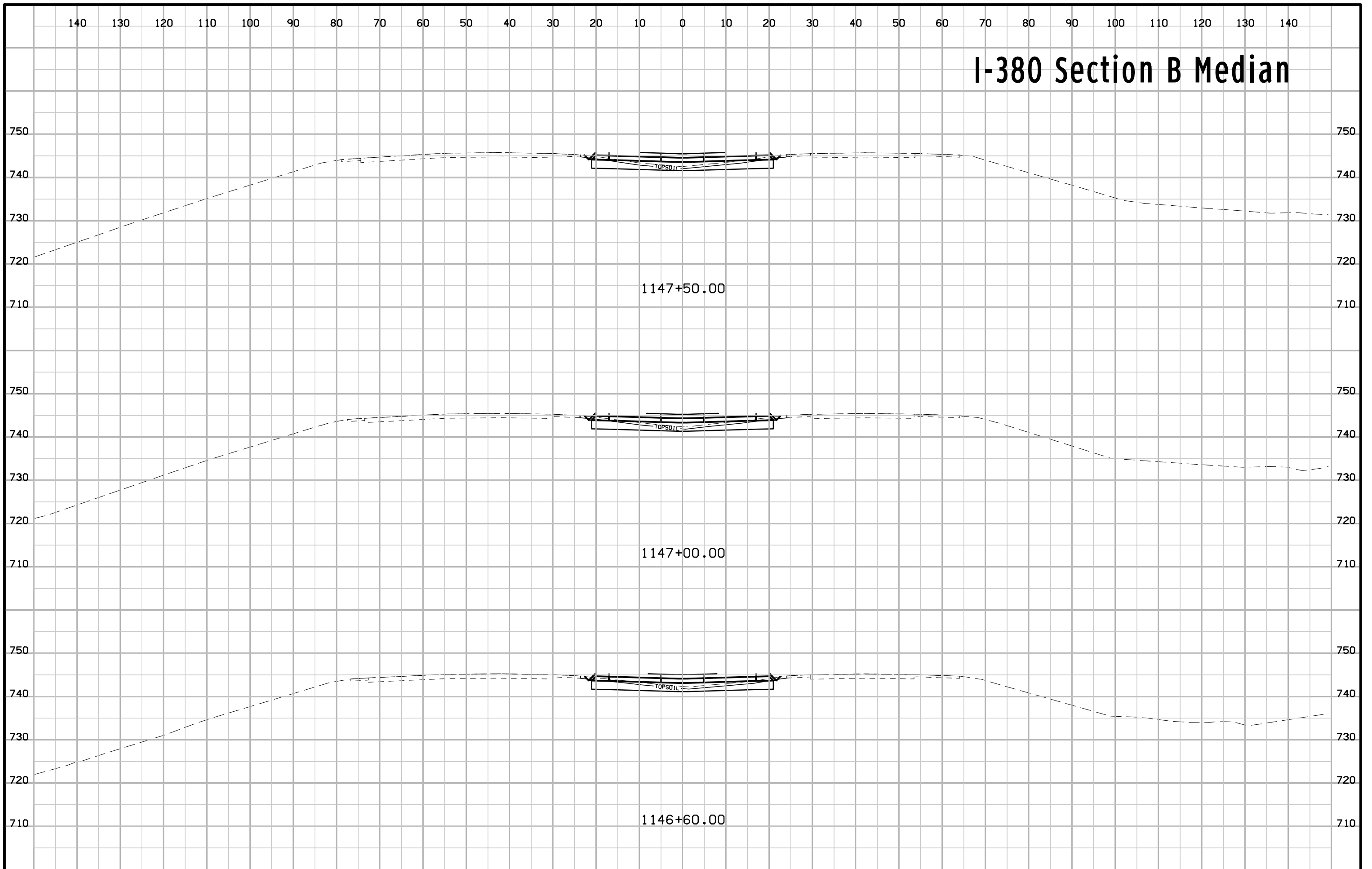
I-380 Section A Median

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

I-380 Section A Median

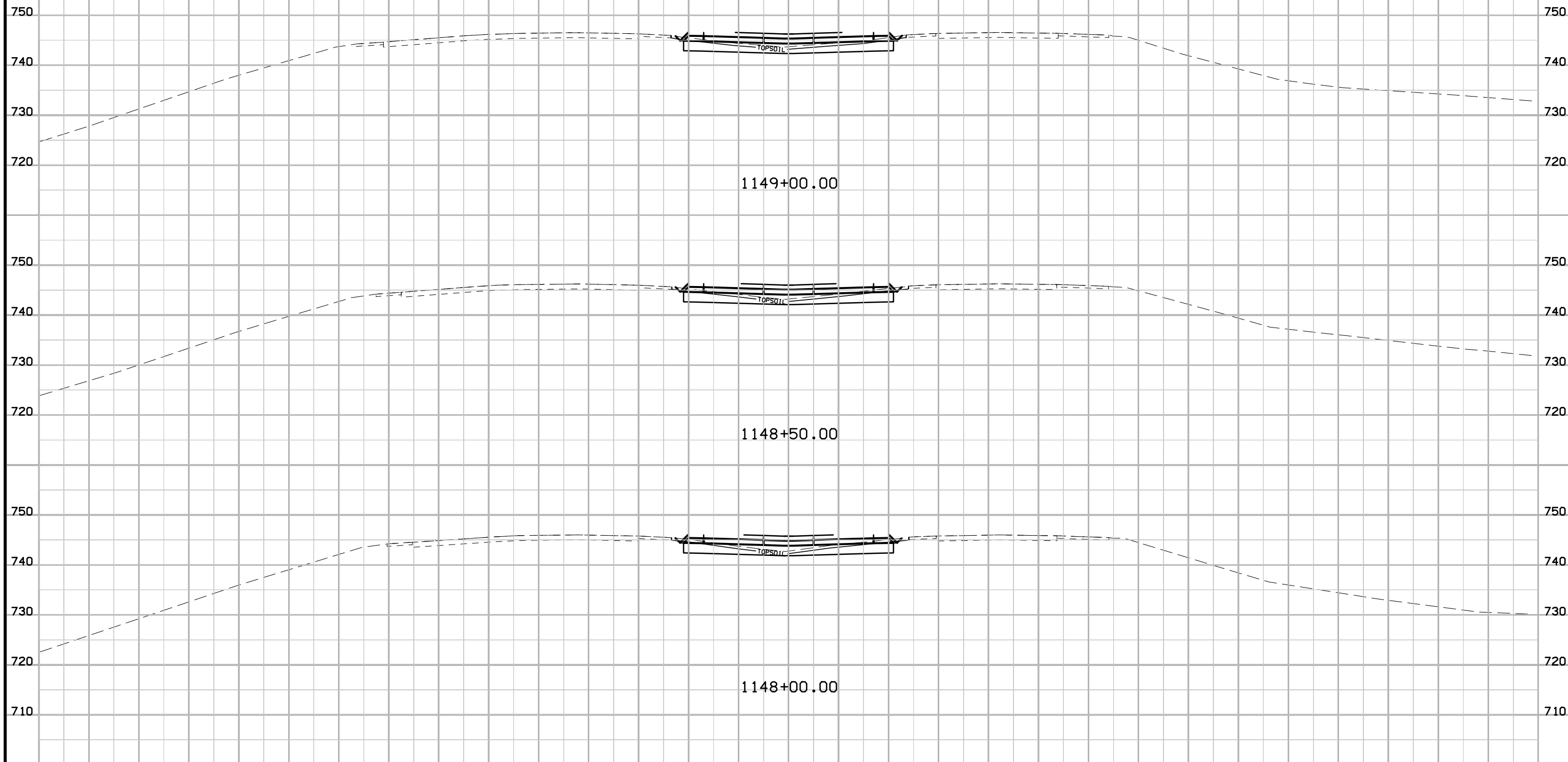


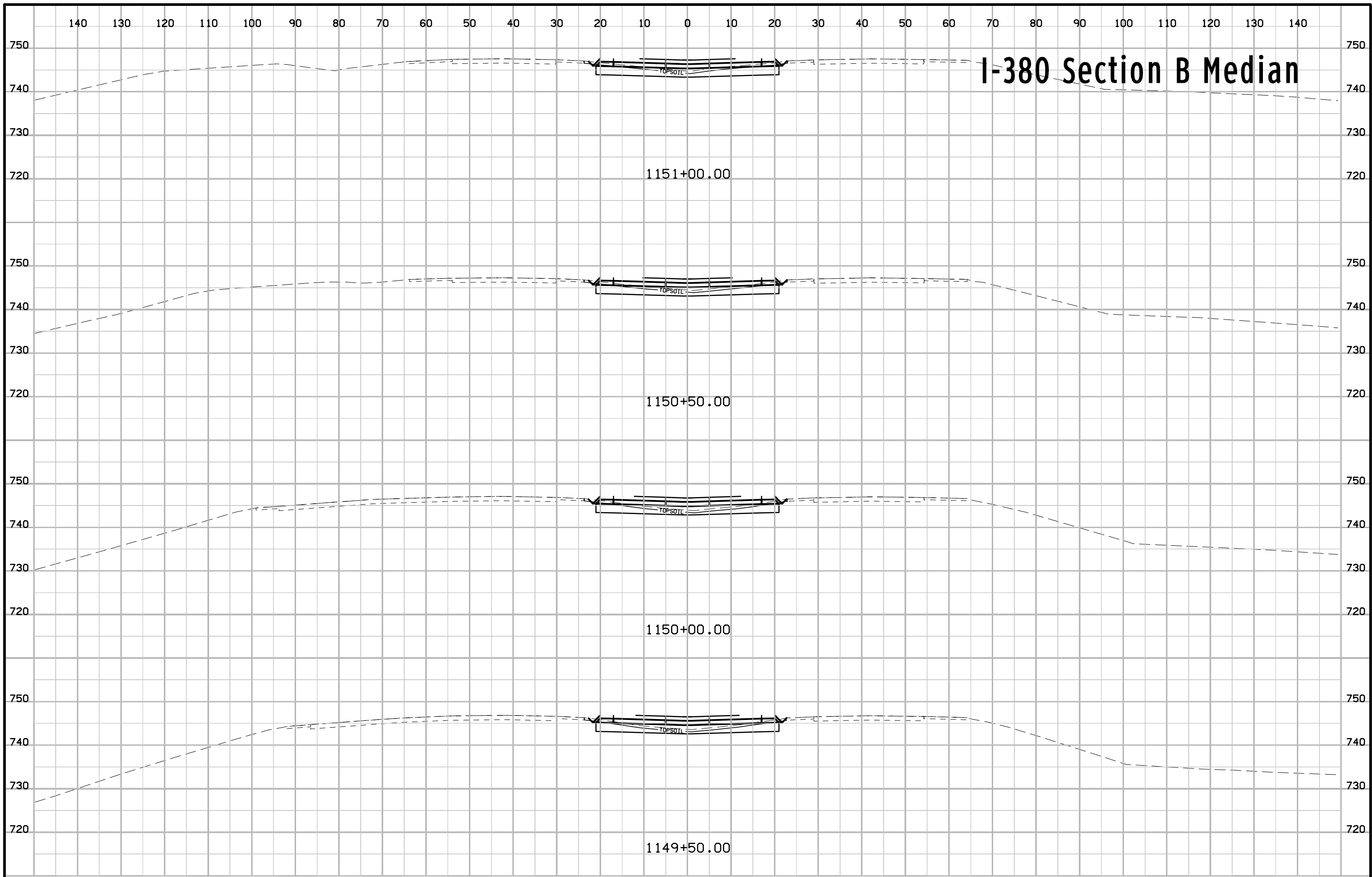
I-380 Section B Median



140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

I-380 Section B Median

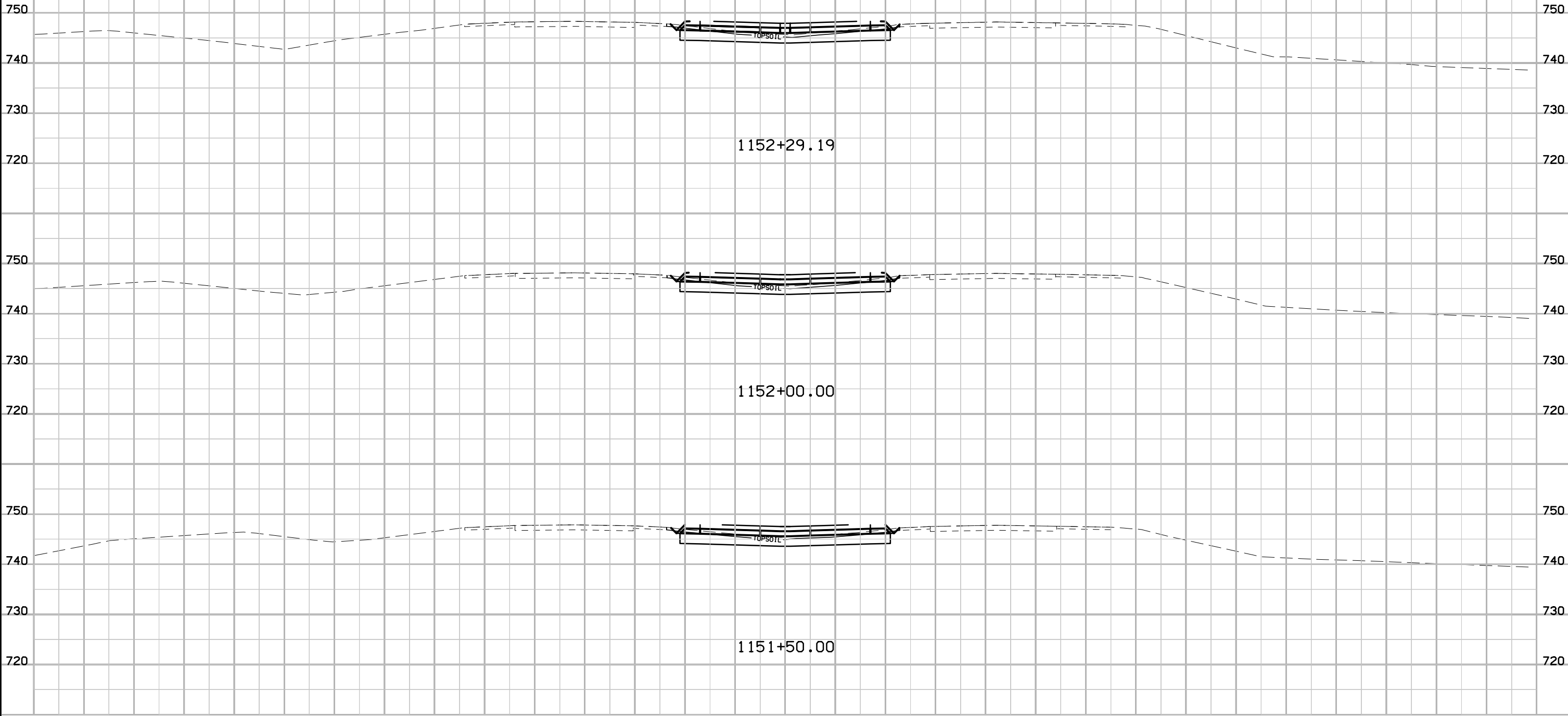


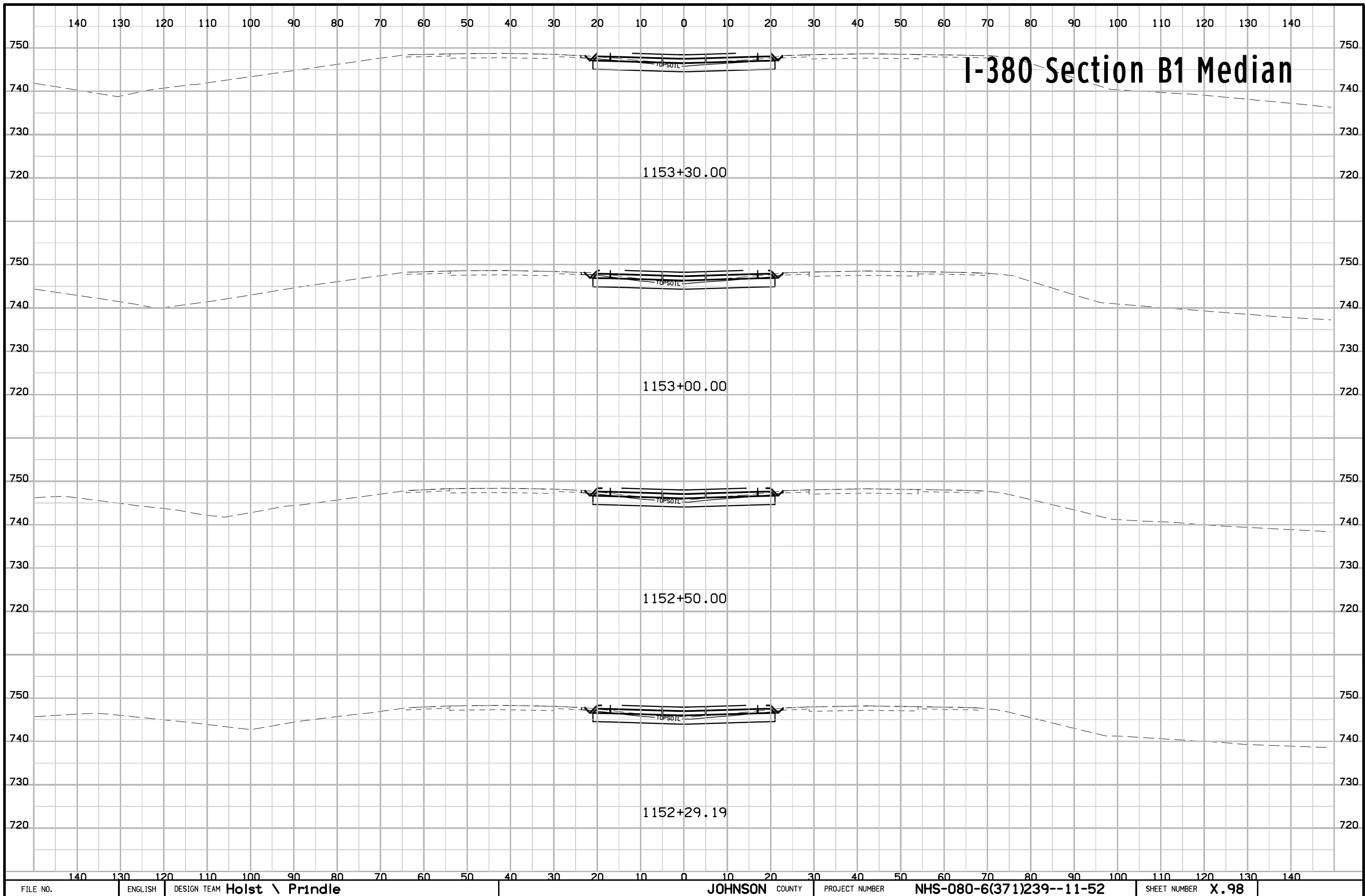


I-380 Section B Median

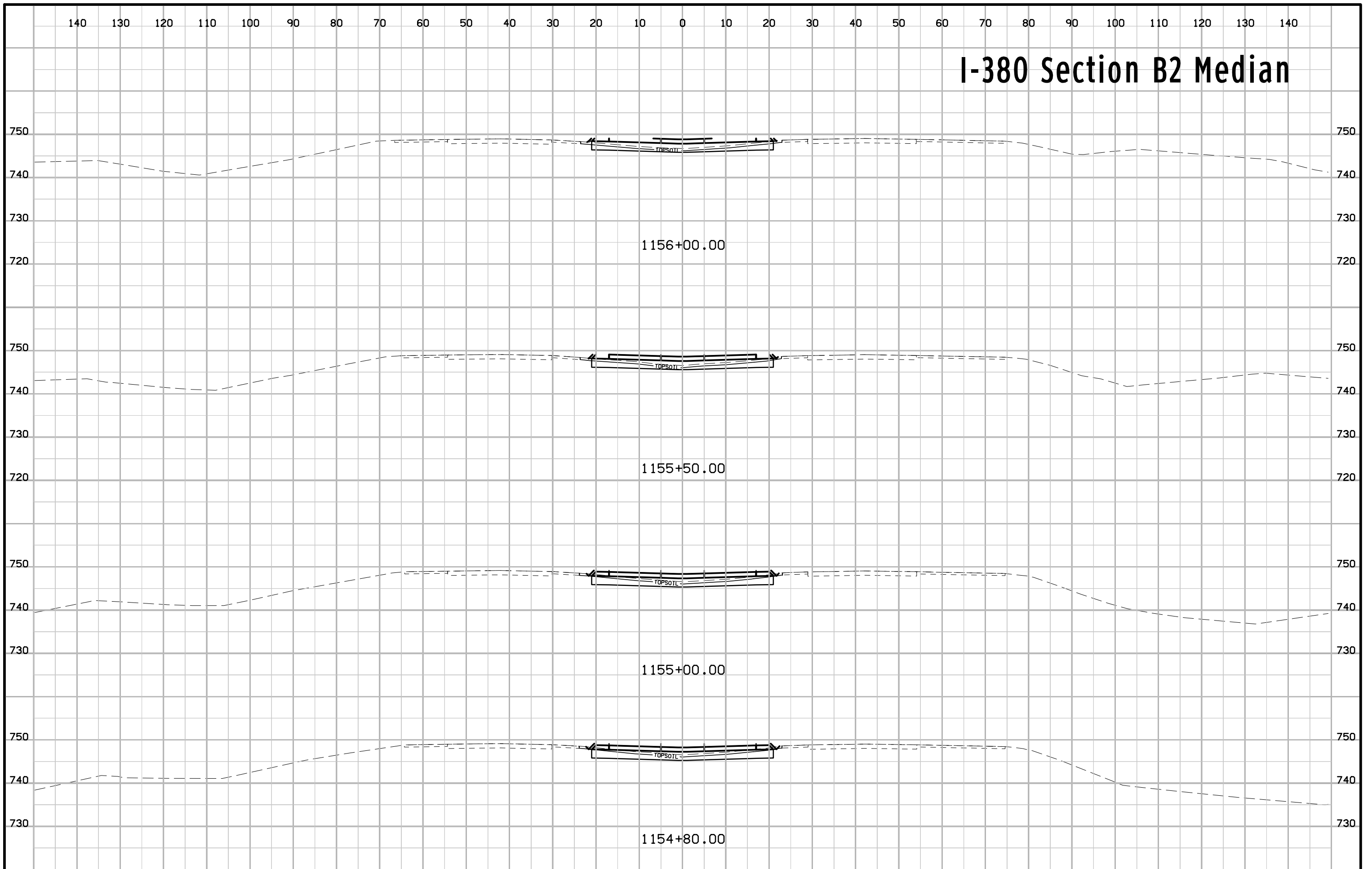
140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

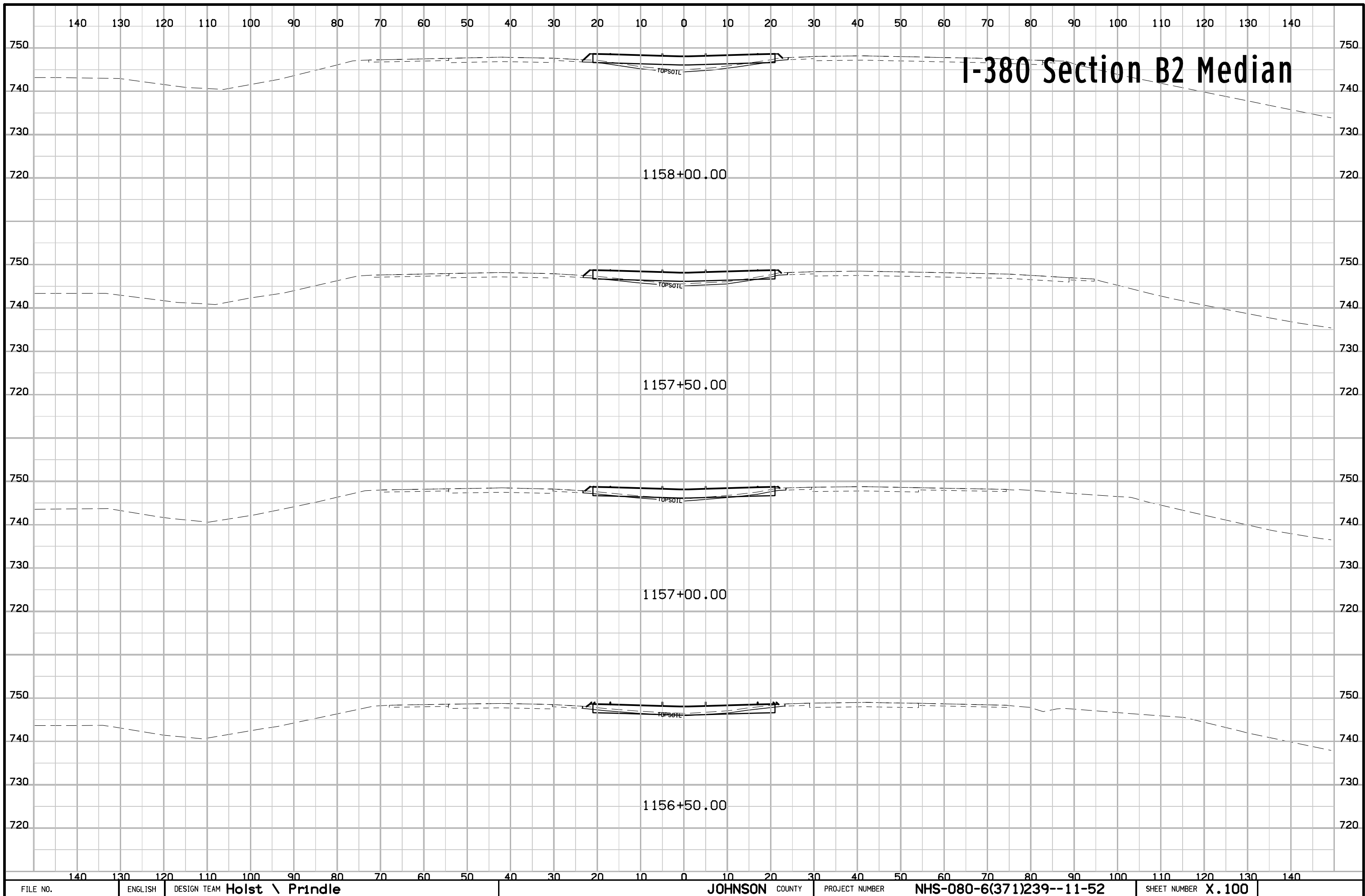
I-380 Section B Median





I-380 Section B2 Median





I-380 Section B2 Median

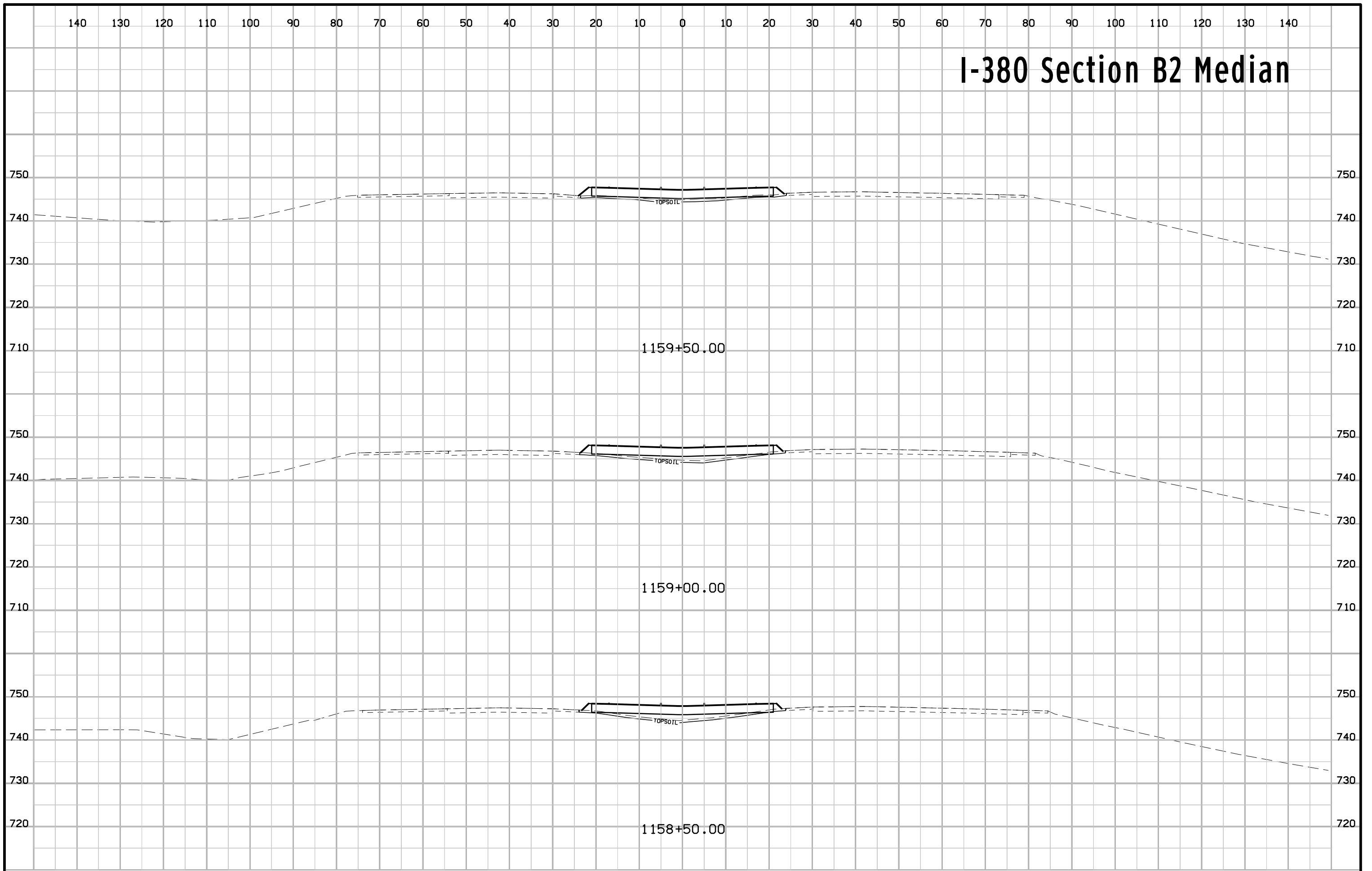
1158+00.00

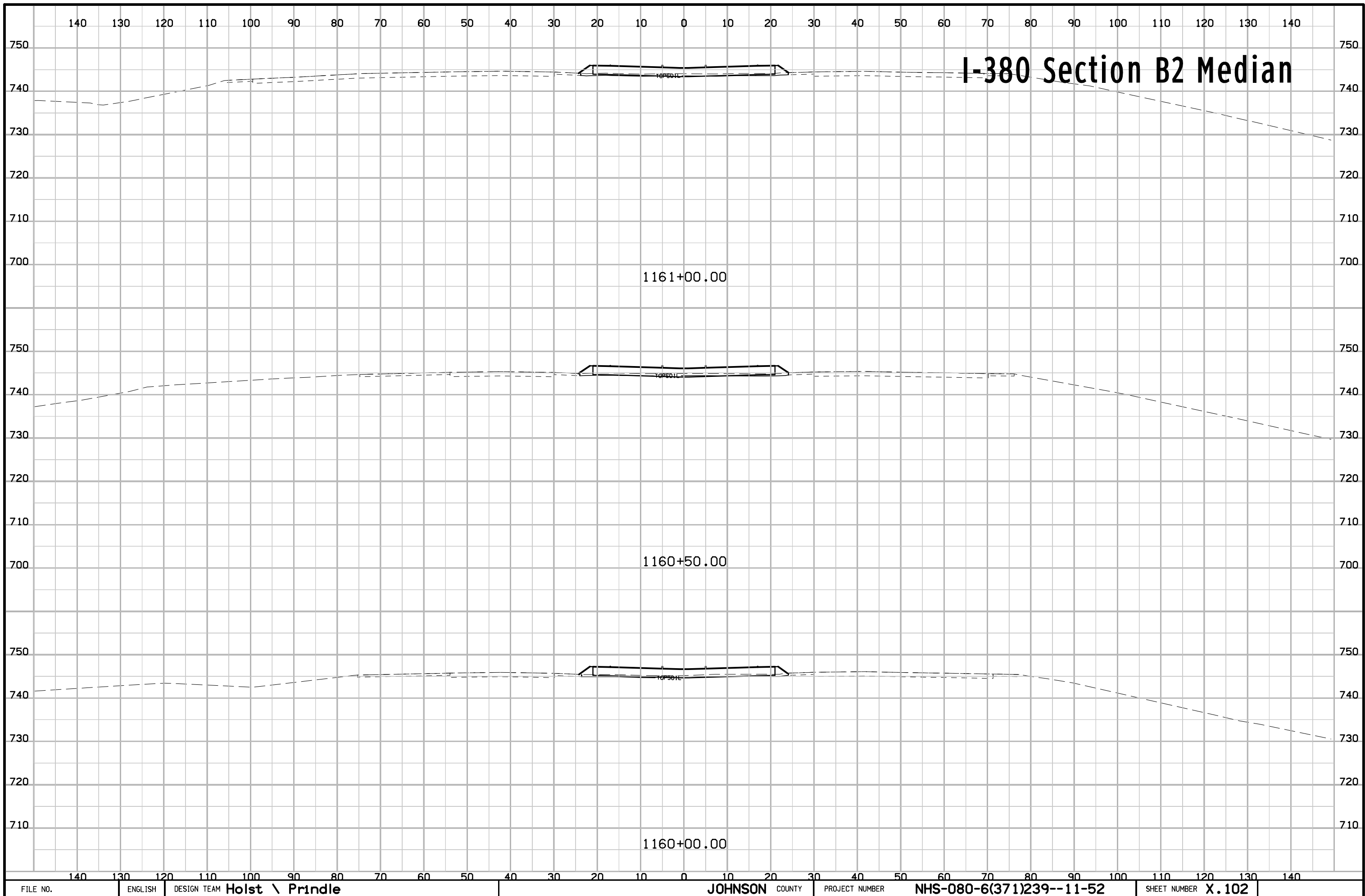
1157+50.00

1157+00.00

1156+50.00

I-380 Section B2 Median





I-380 Section B2 Median

1161+00.00

1160+50.00

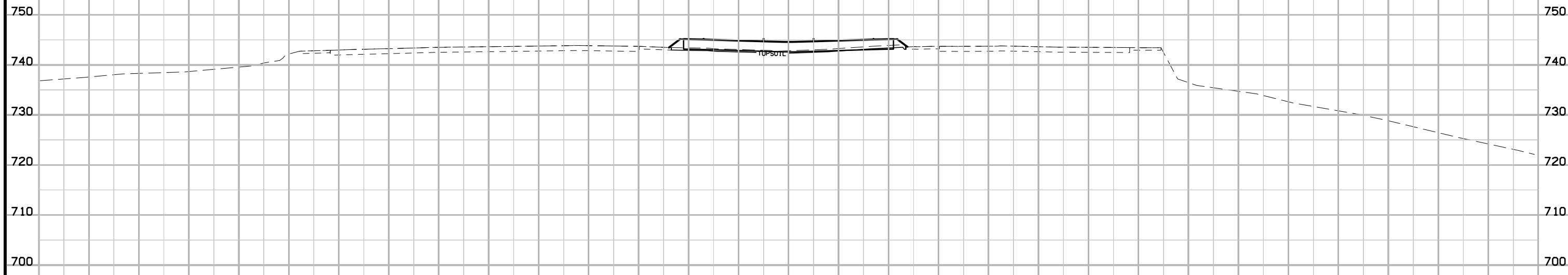
1160+00.00

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

I-380 Section B2 Median

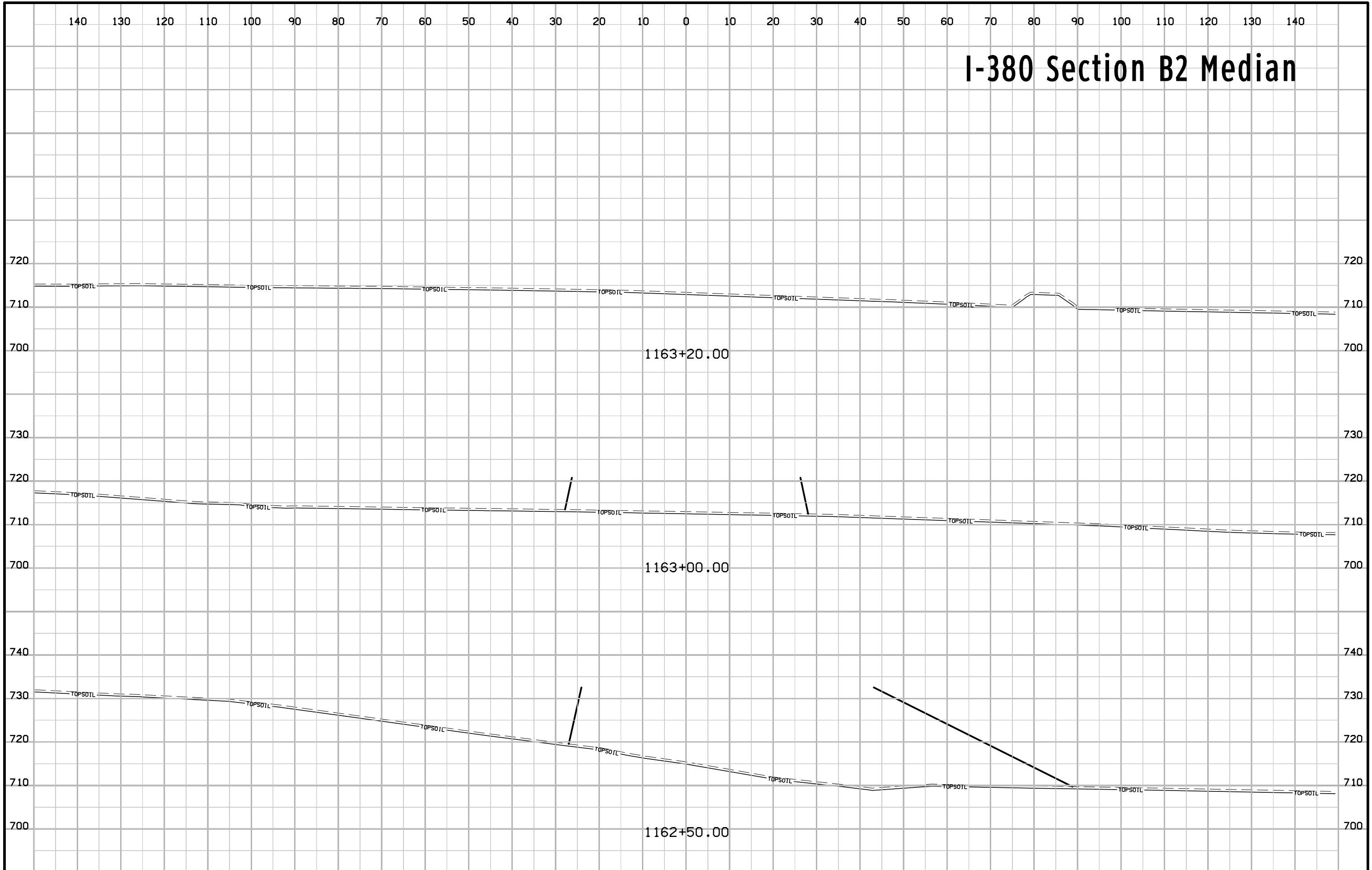


1162+00.00

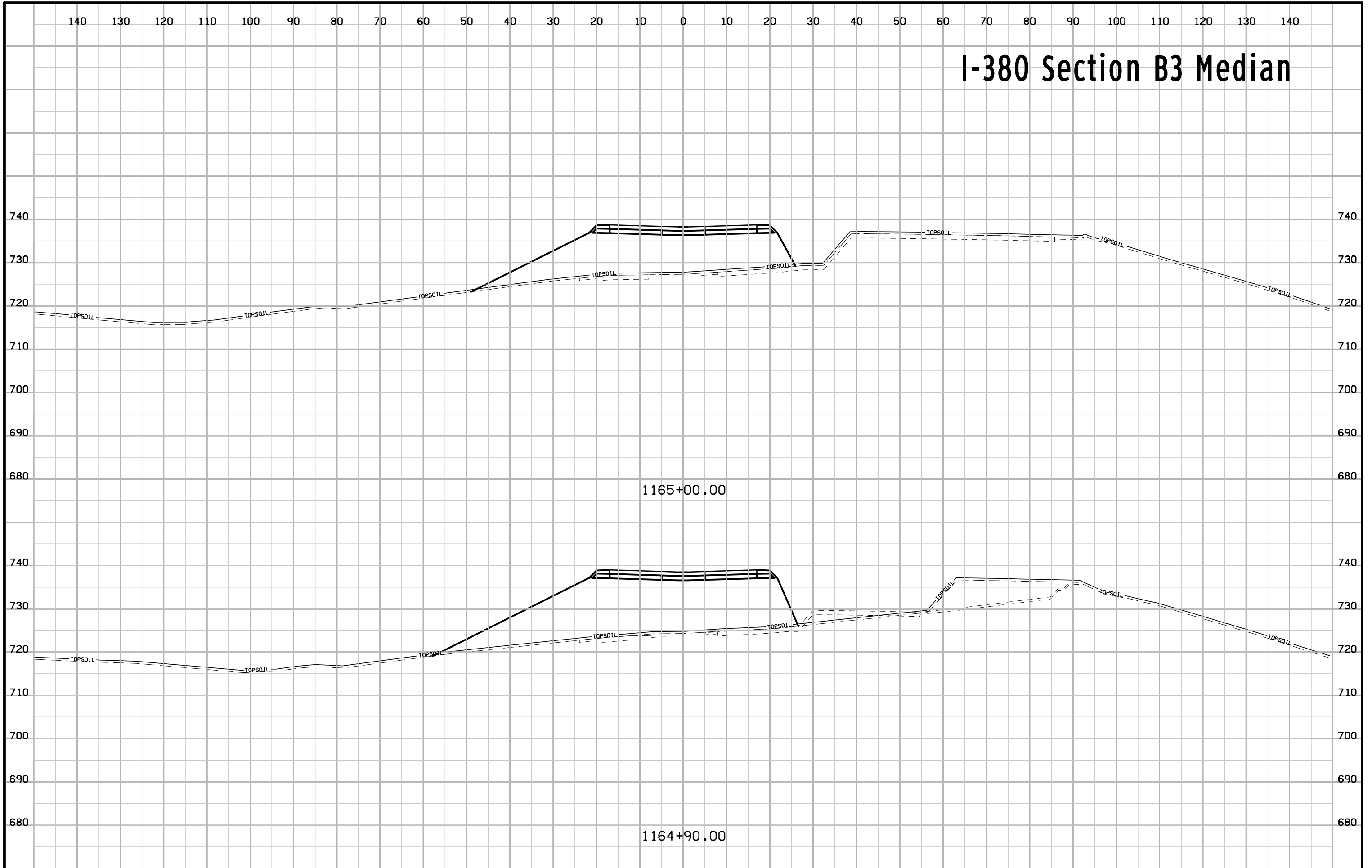


1161+50.00

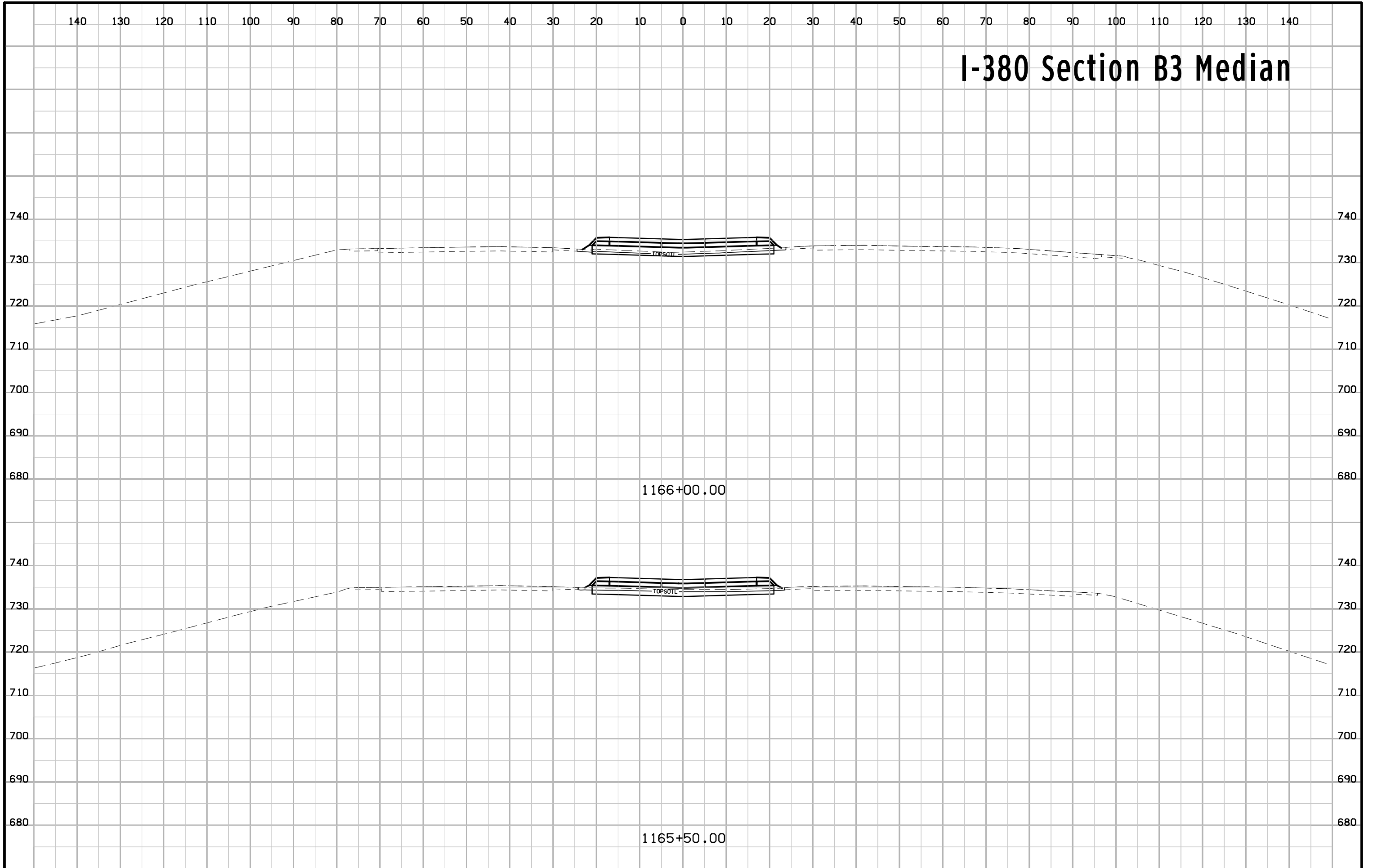
I-380 Section B2 Median



I-380 Section B3 Median

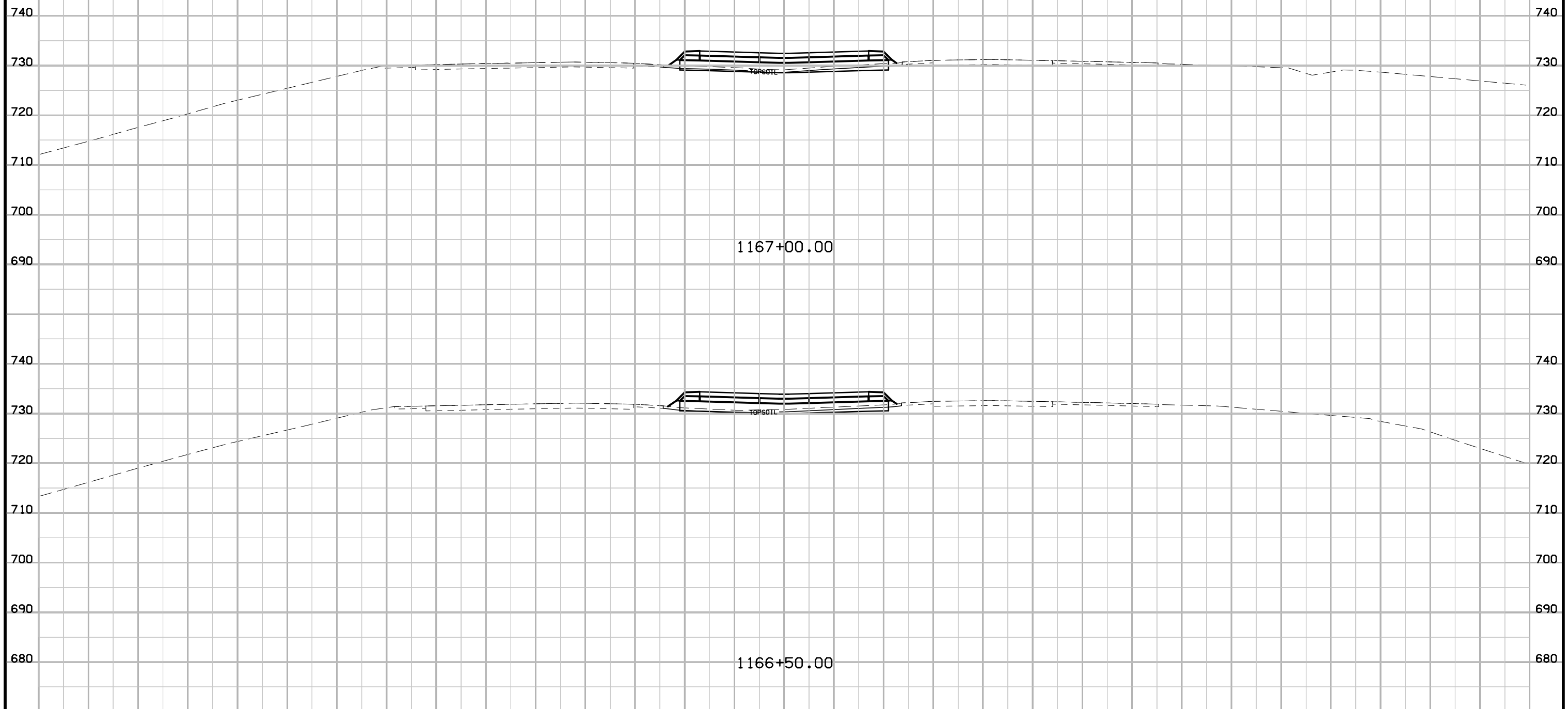


I-380 Section B3 Median

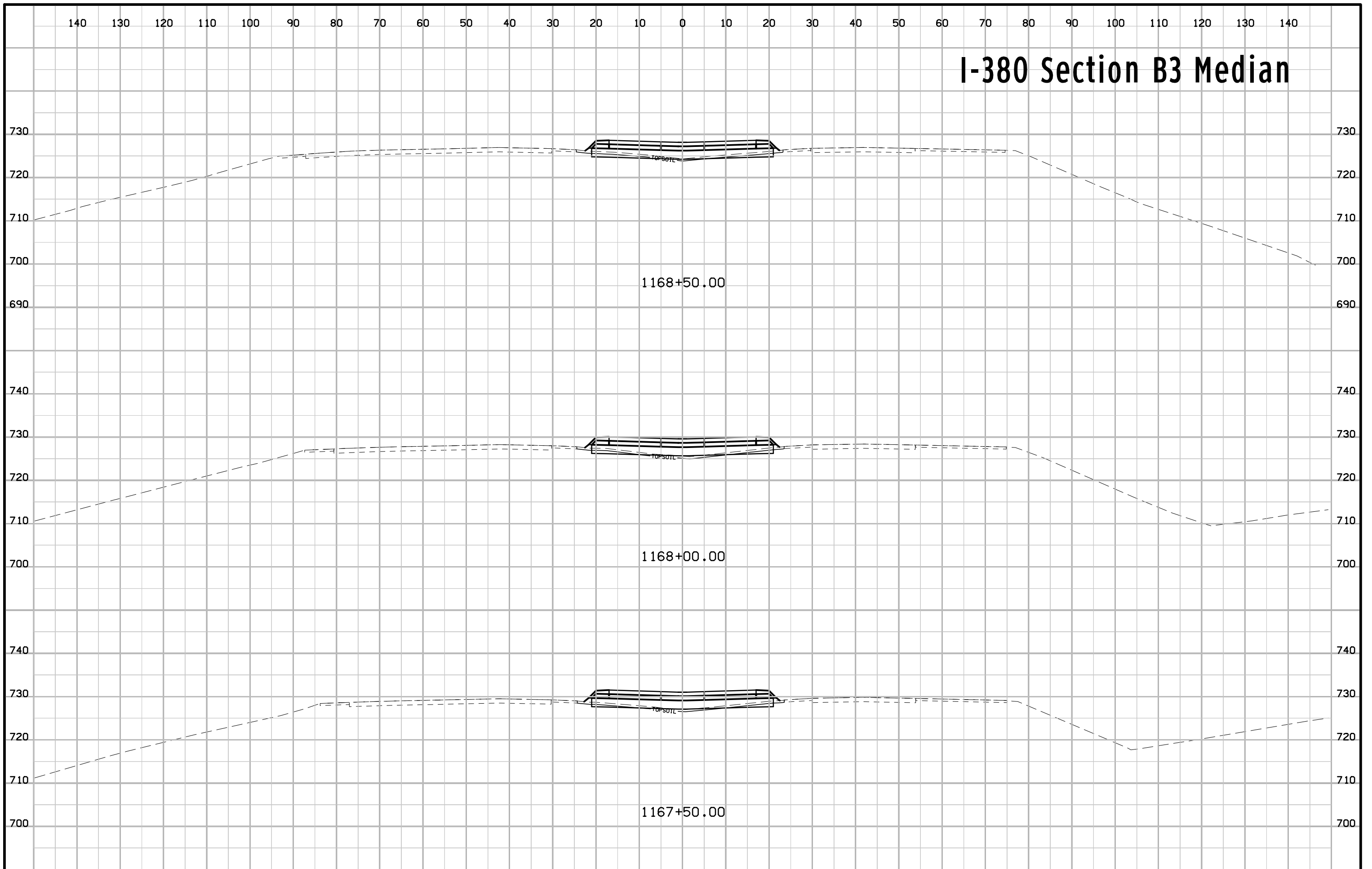


140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

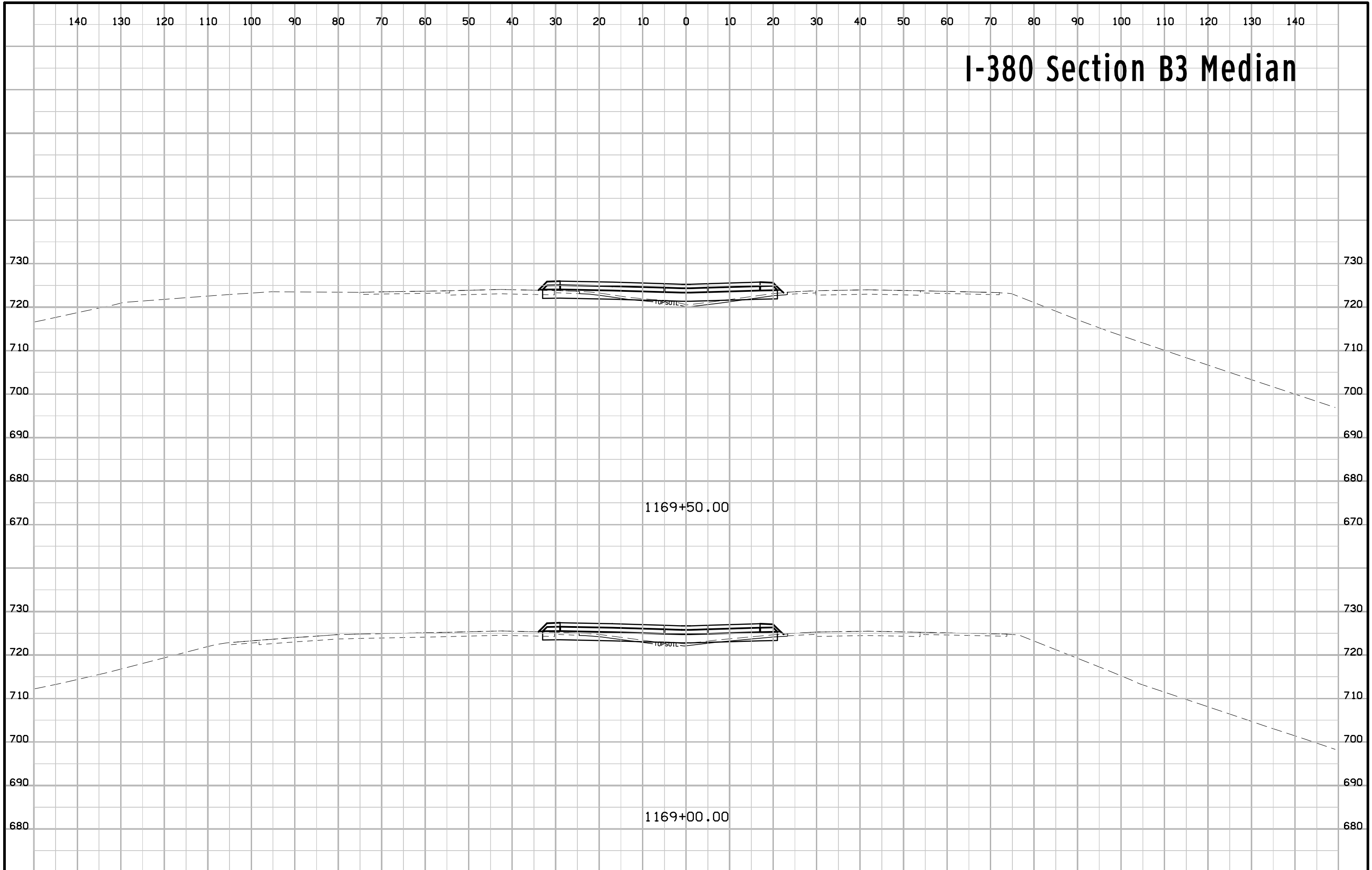
I-380 Section B3 Median



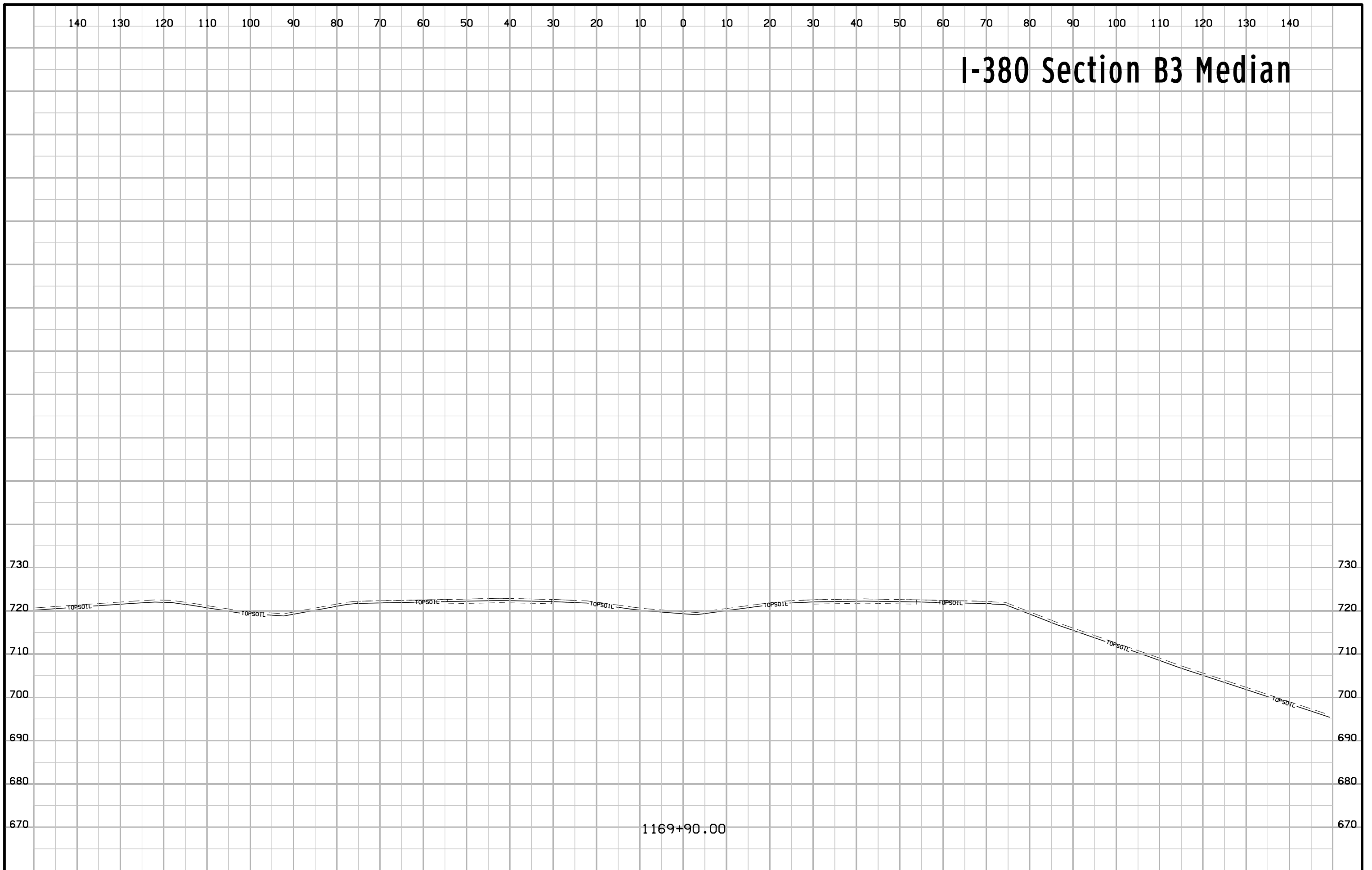
I-380 Section B3 Median



I-380 Section B3 Median

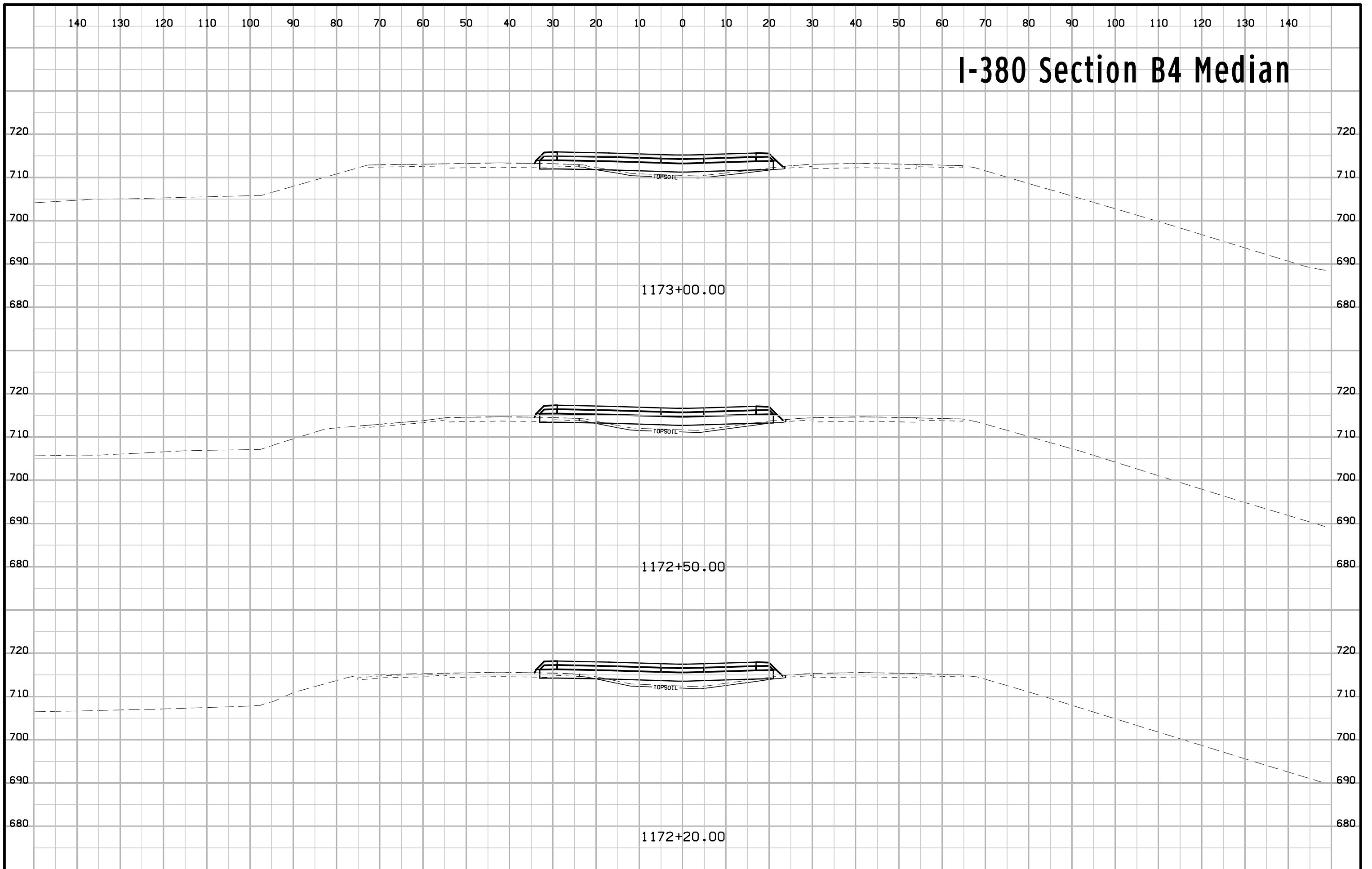


I-380 Section B3 Median

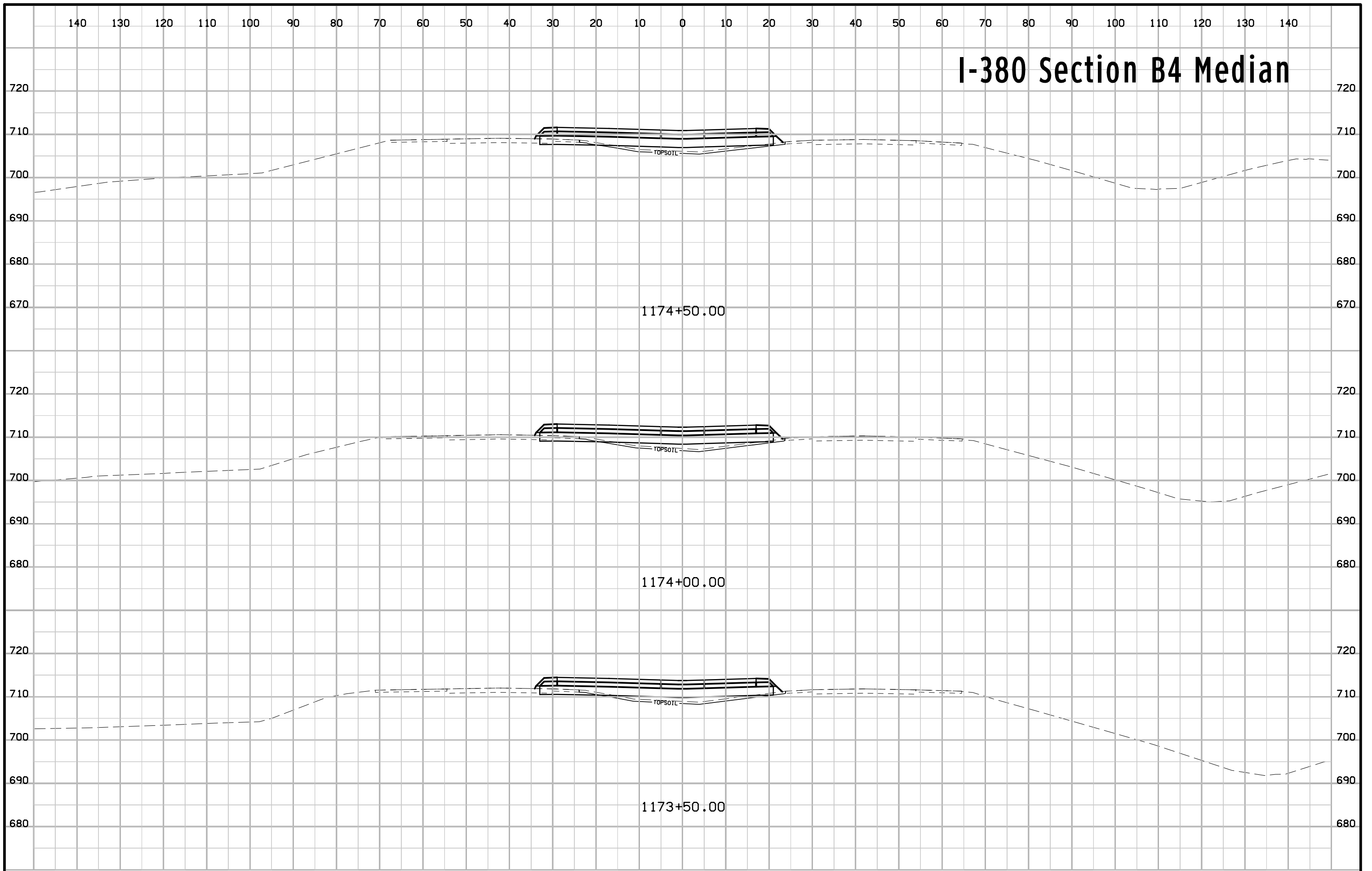


1169+90.00

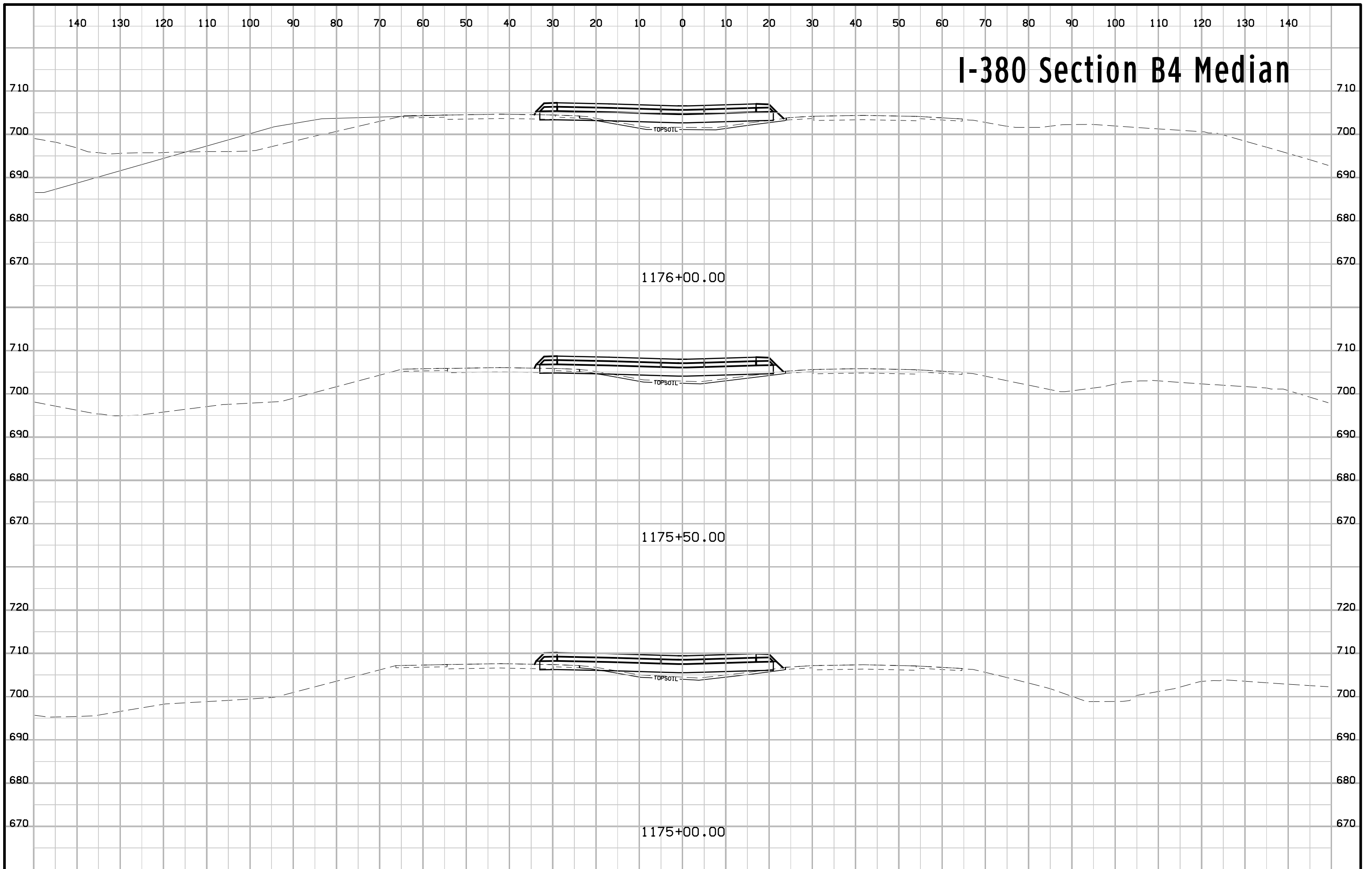
I-380 Section B4 Median



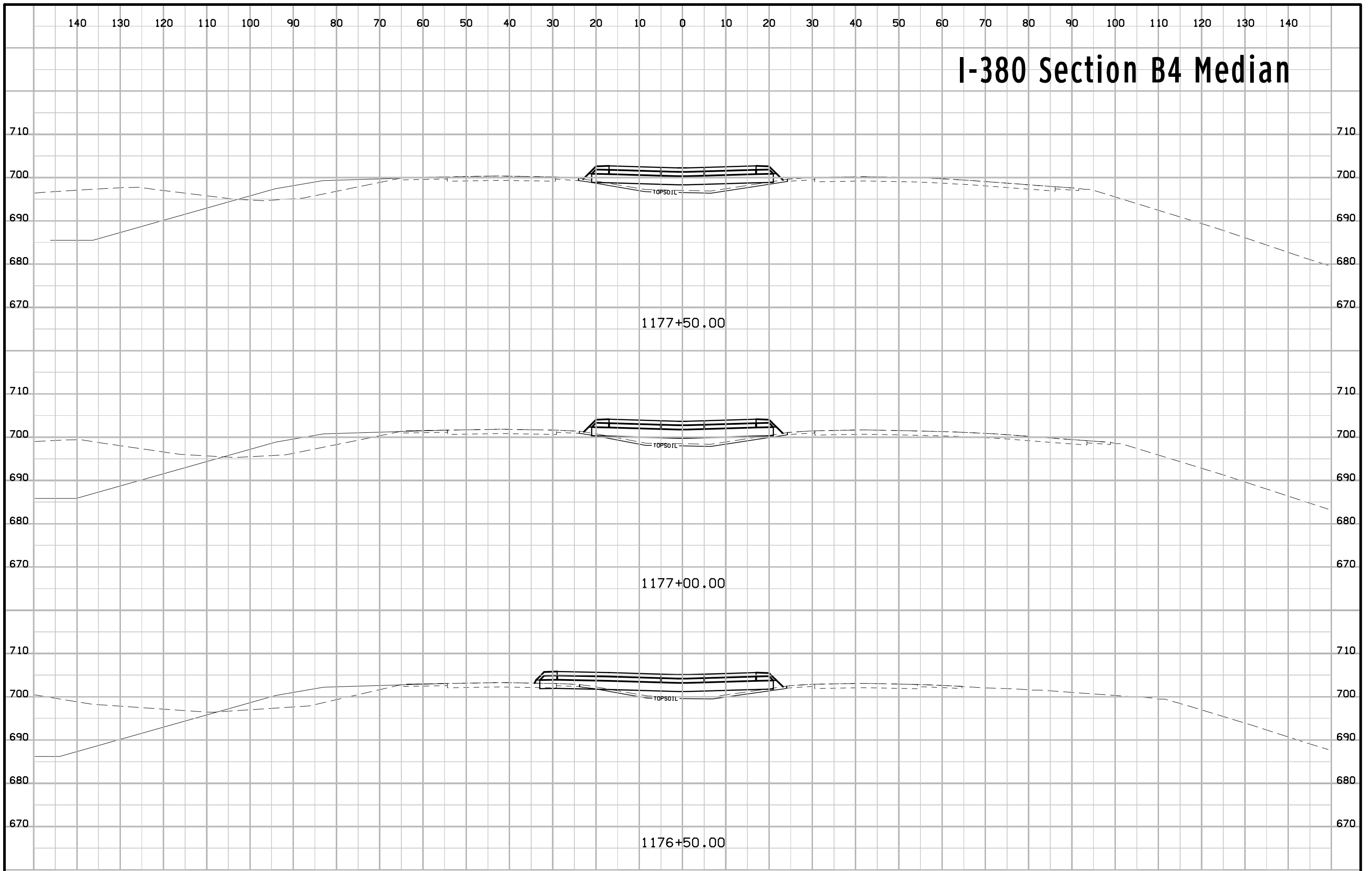
I-380 Section B4 Median



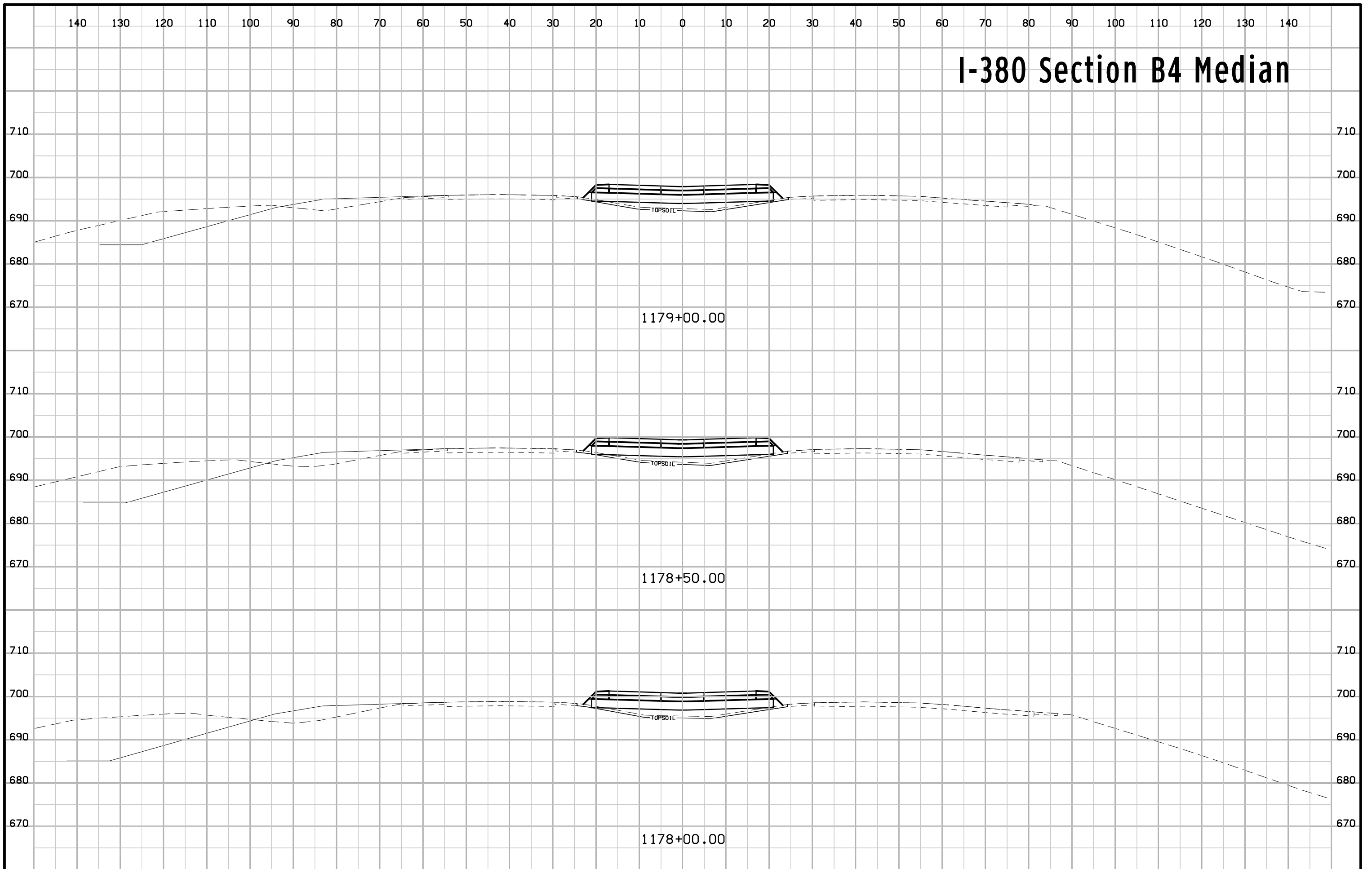
I-380 Section B4 Median



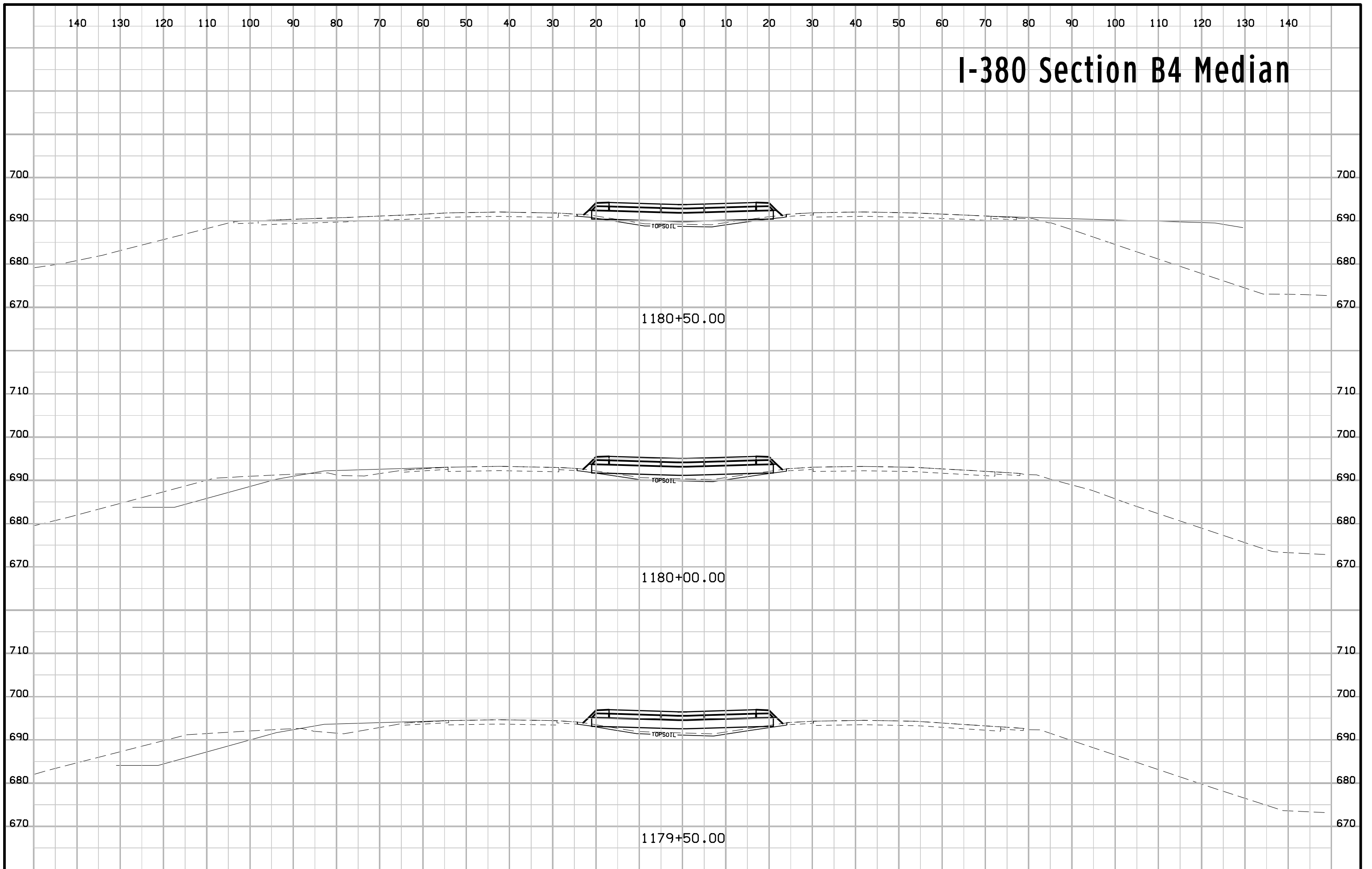
I-380 Section B4 Median



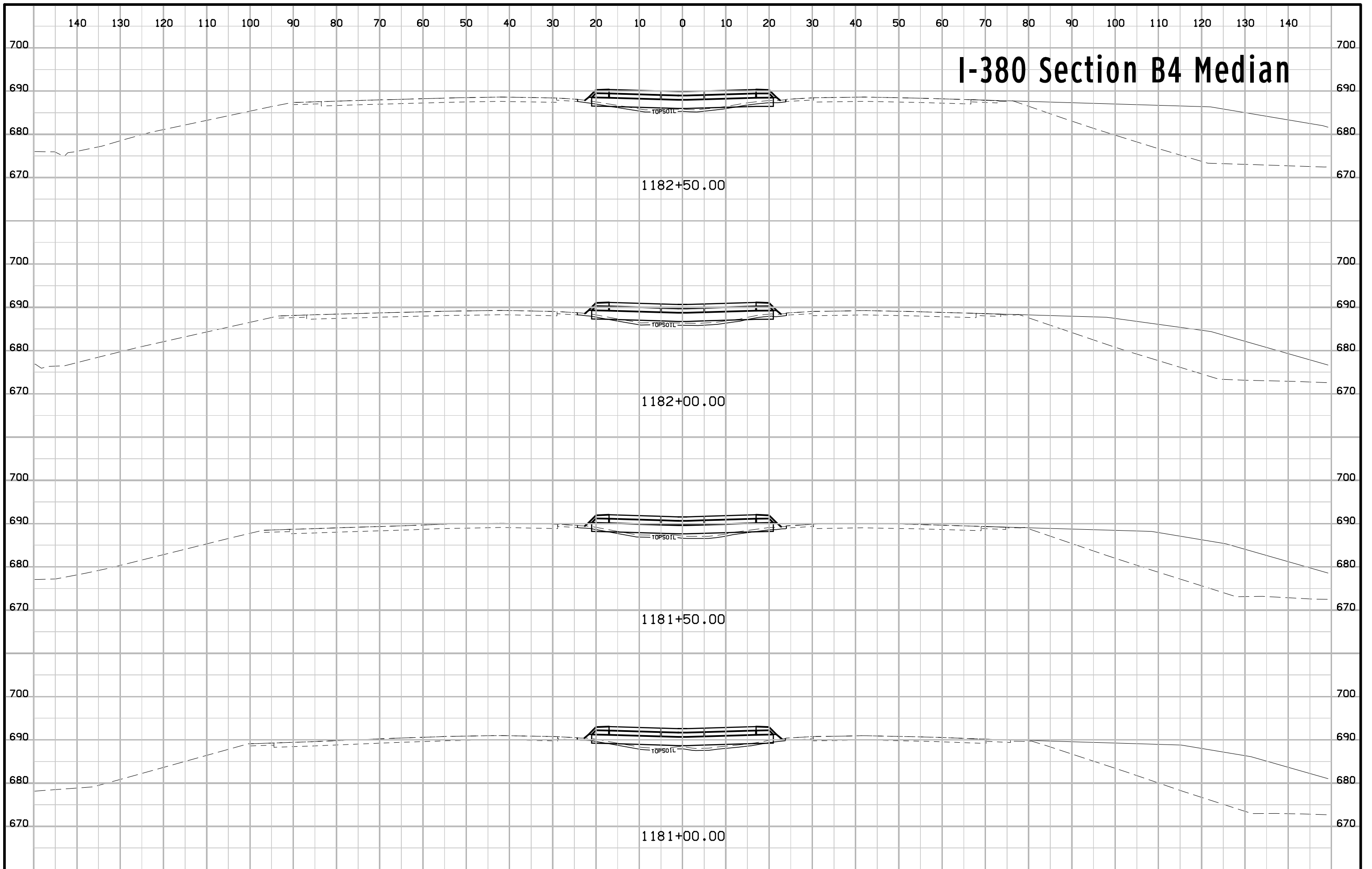
I-380 Section B4 Median



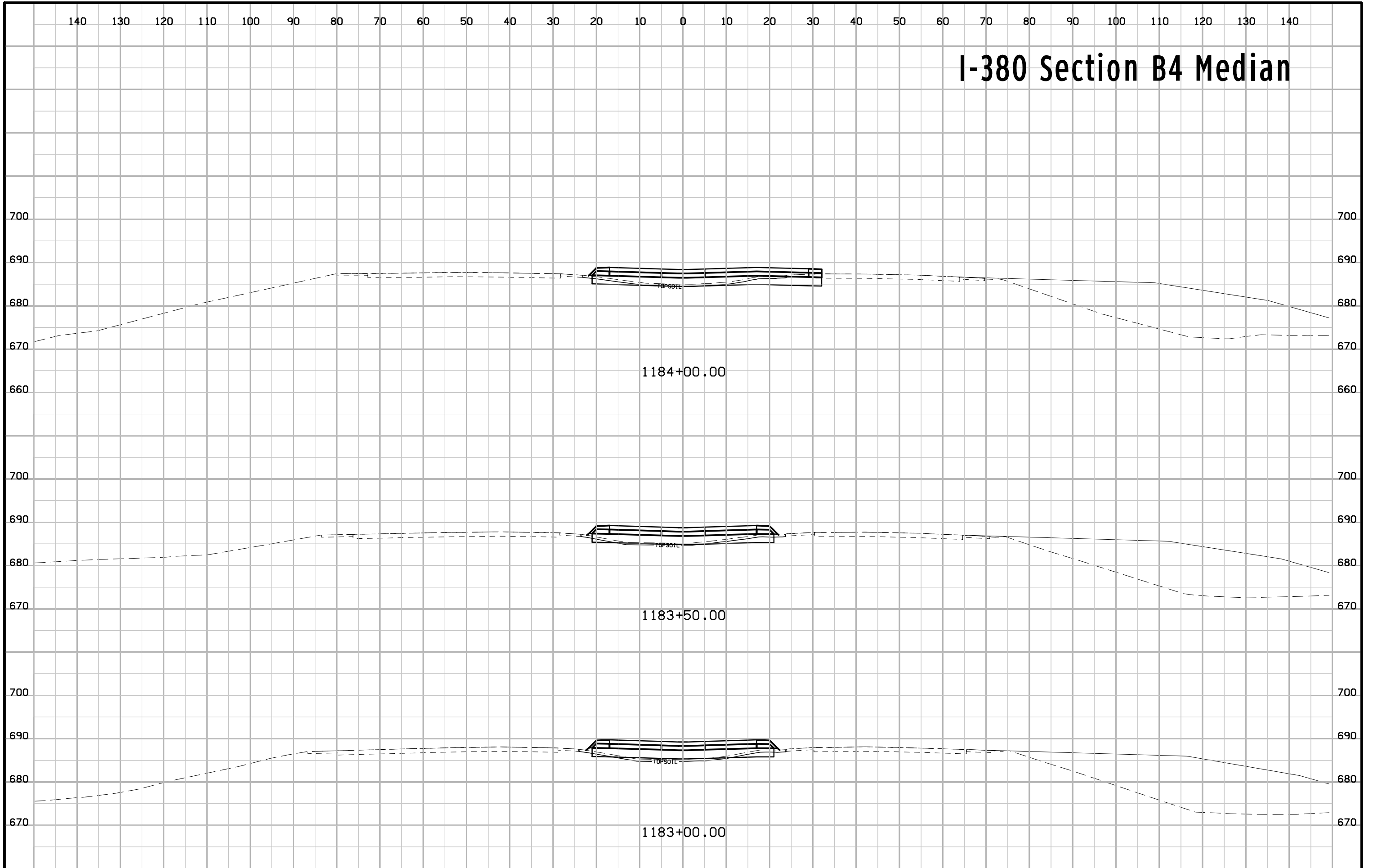
I-380 Section B4 Median

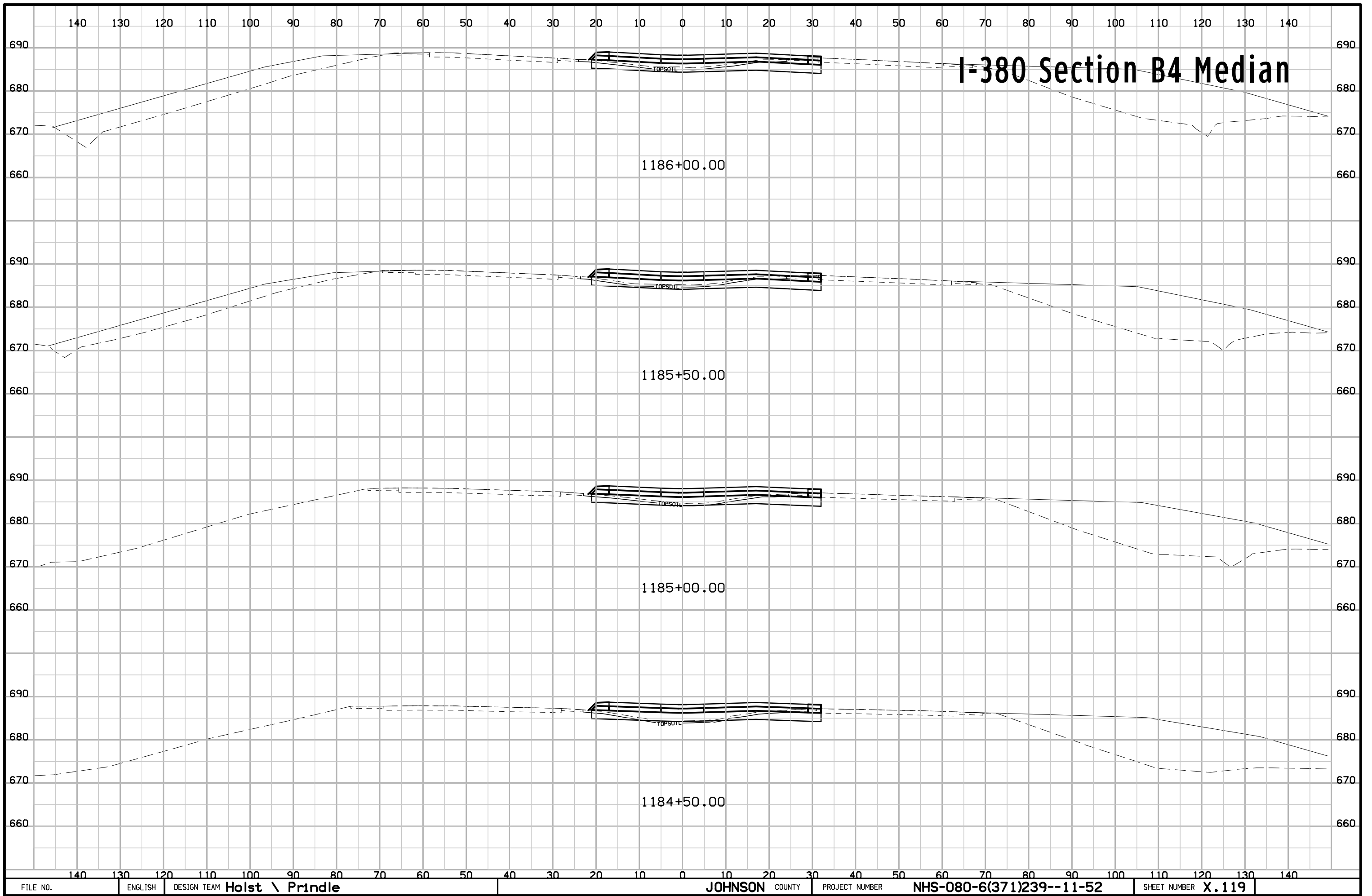


I-380 Section B4 Median

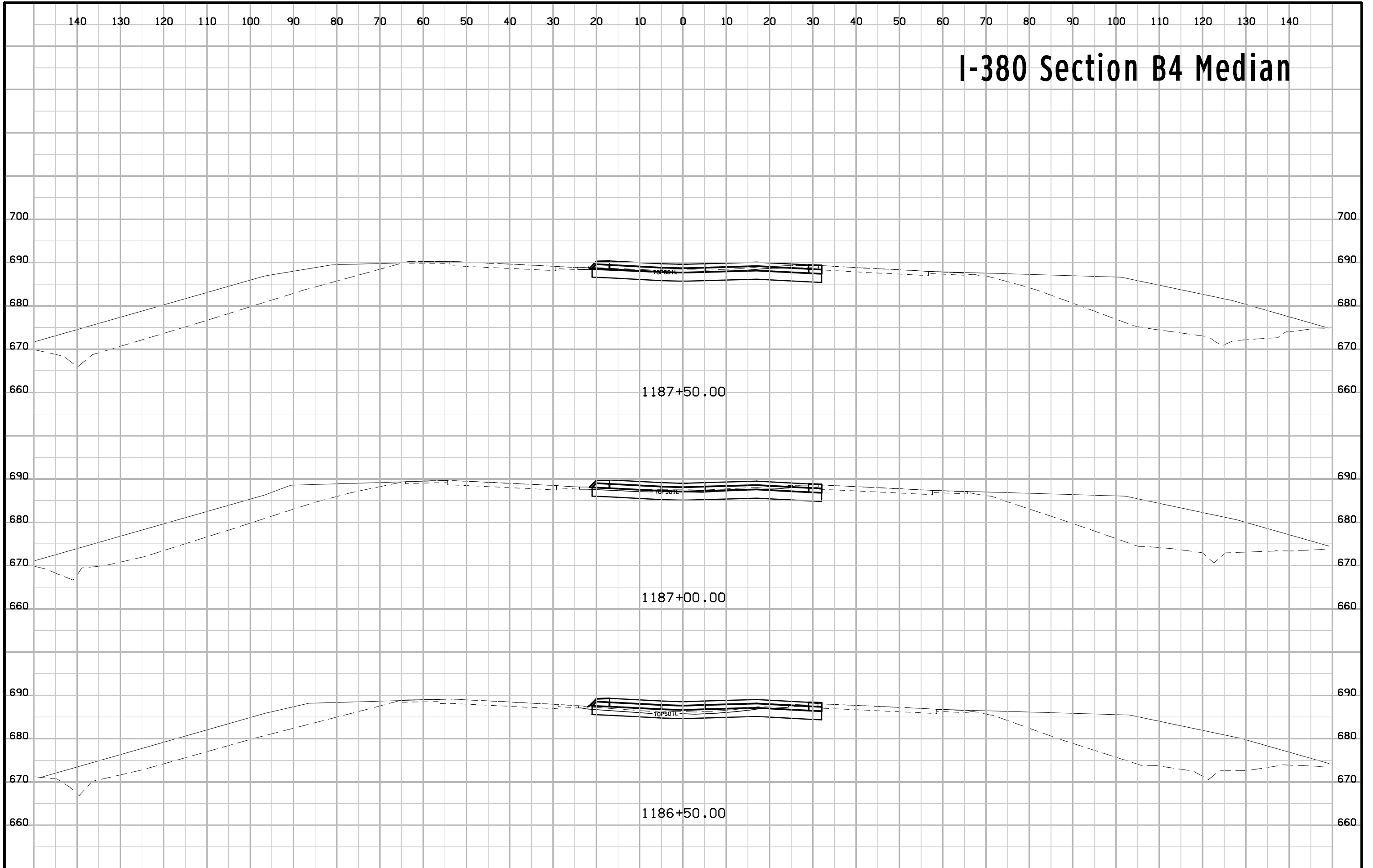


I-380 Section B4 Median

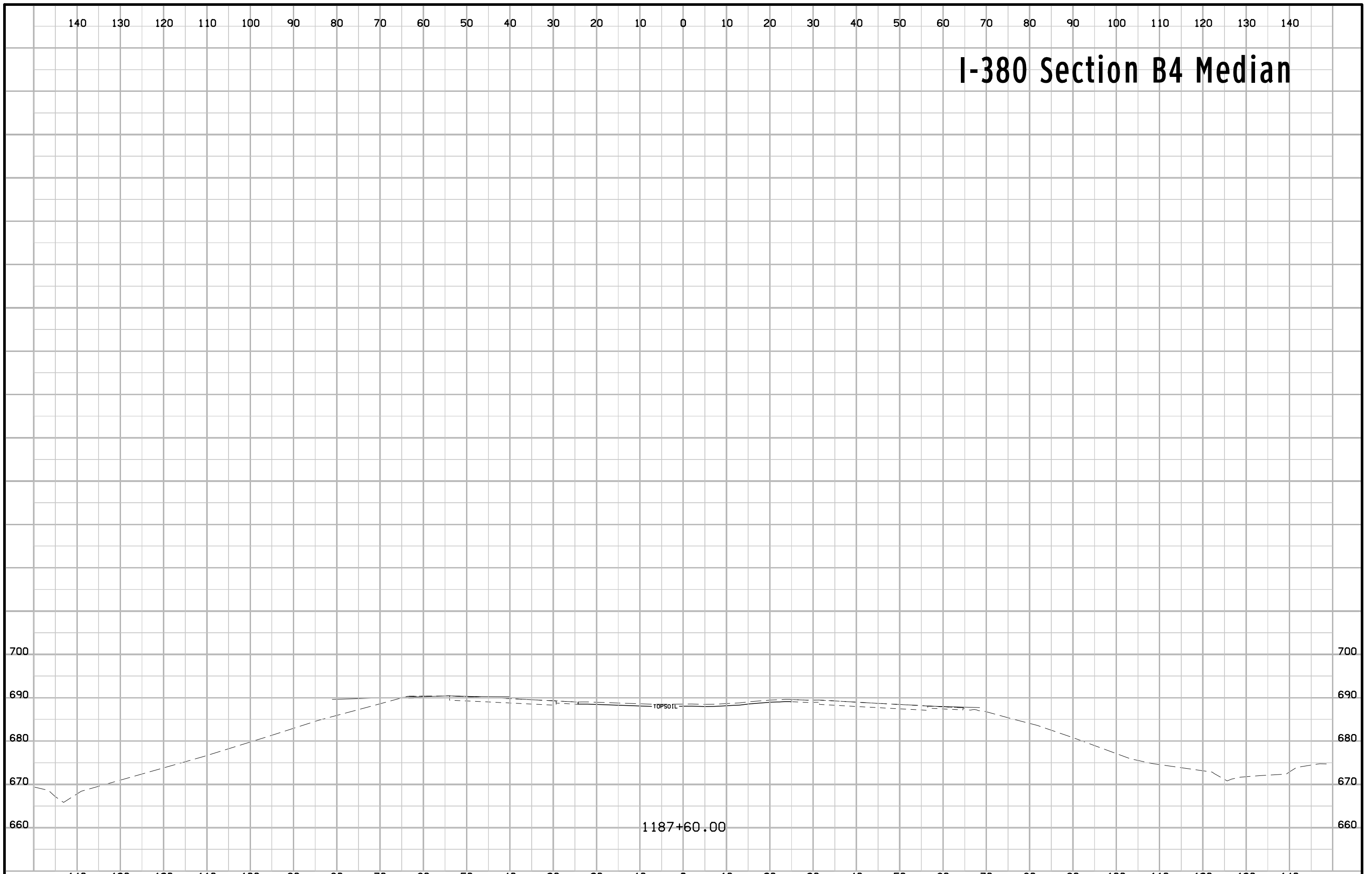




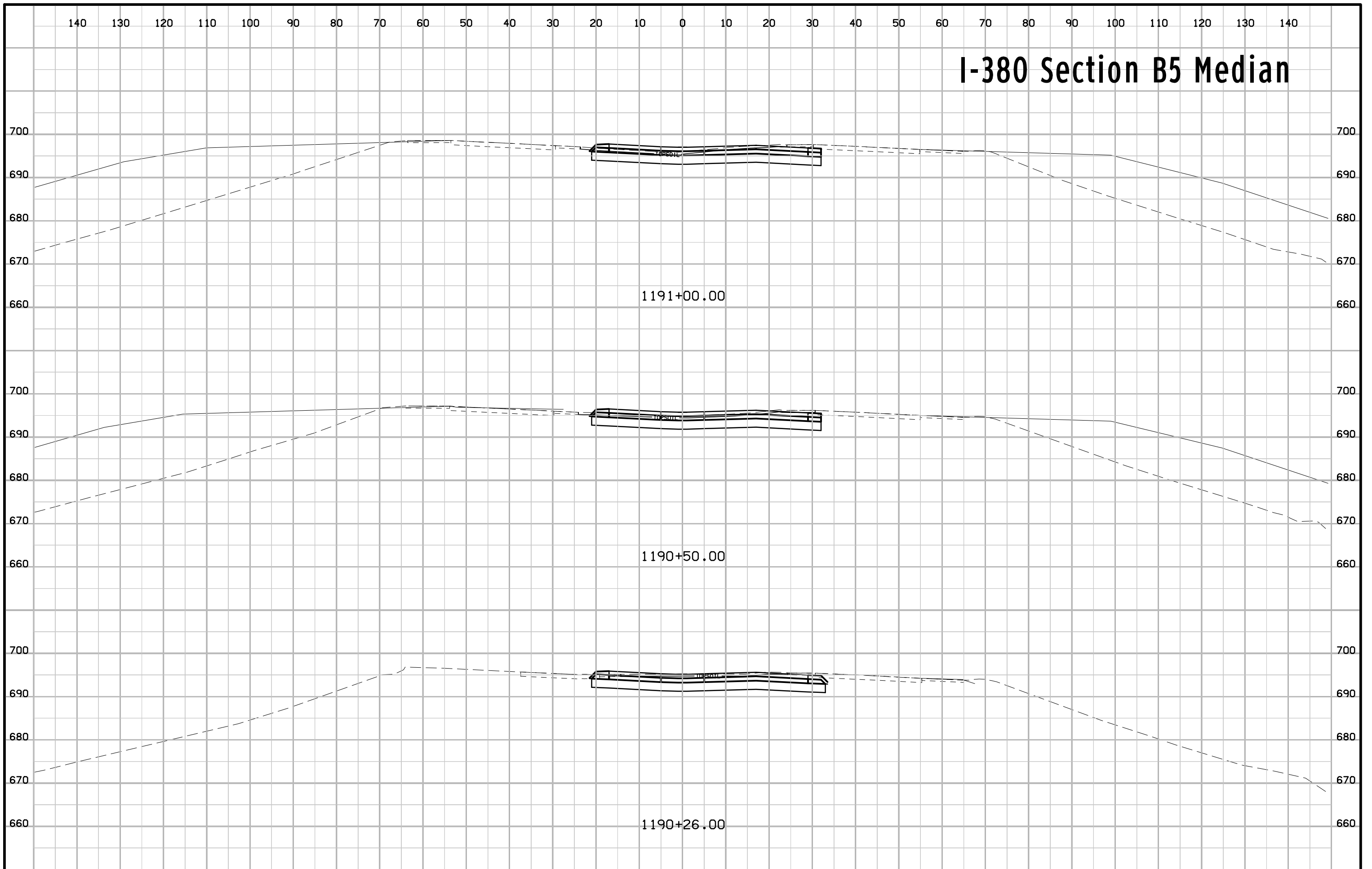
I-380 Section B4 Median



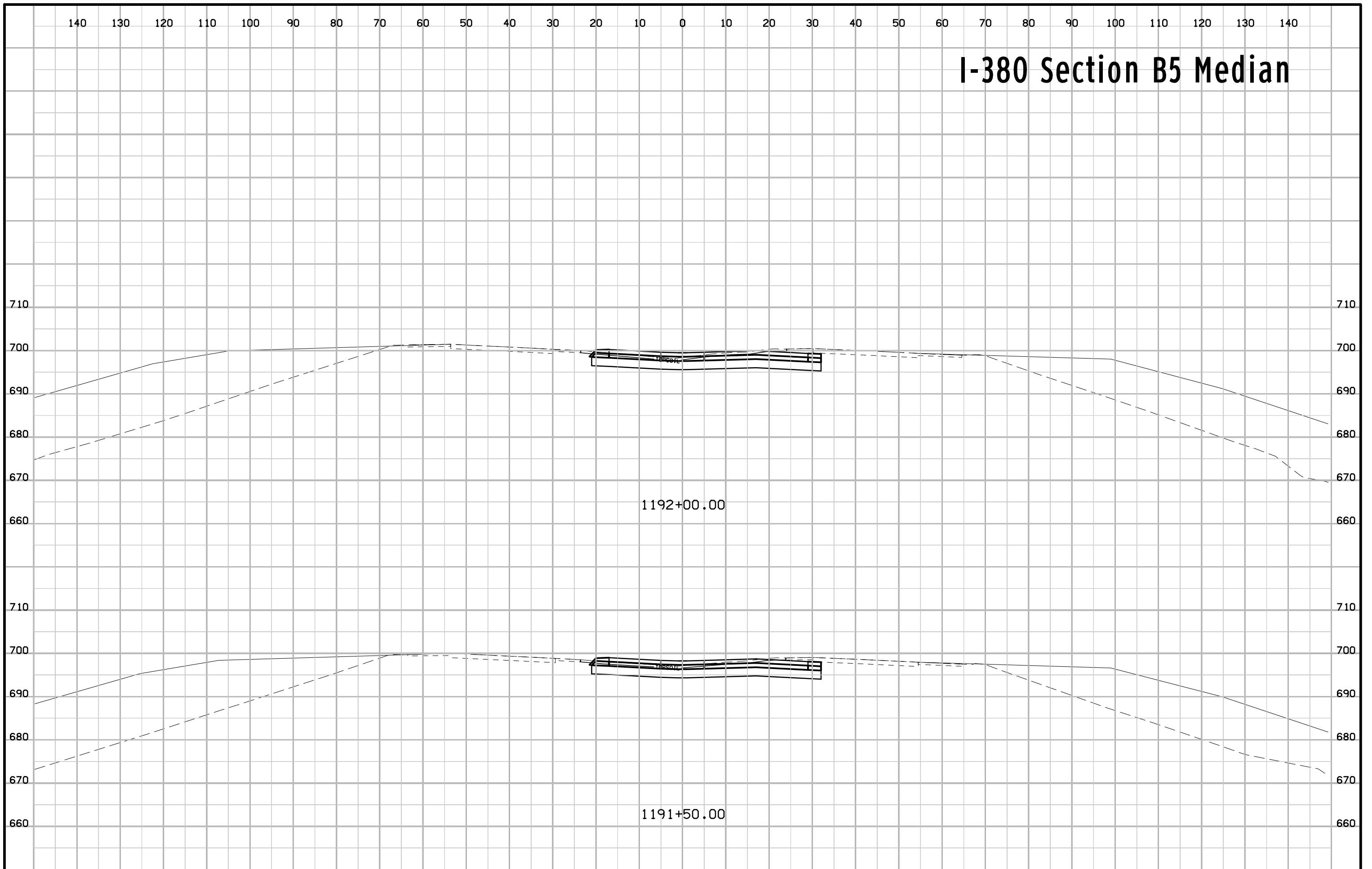
I-380 Section B4 Median



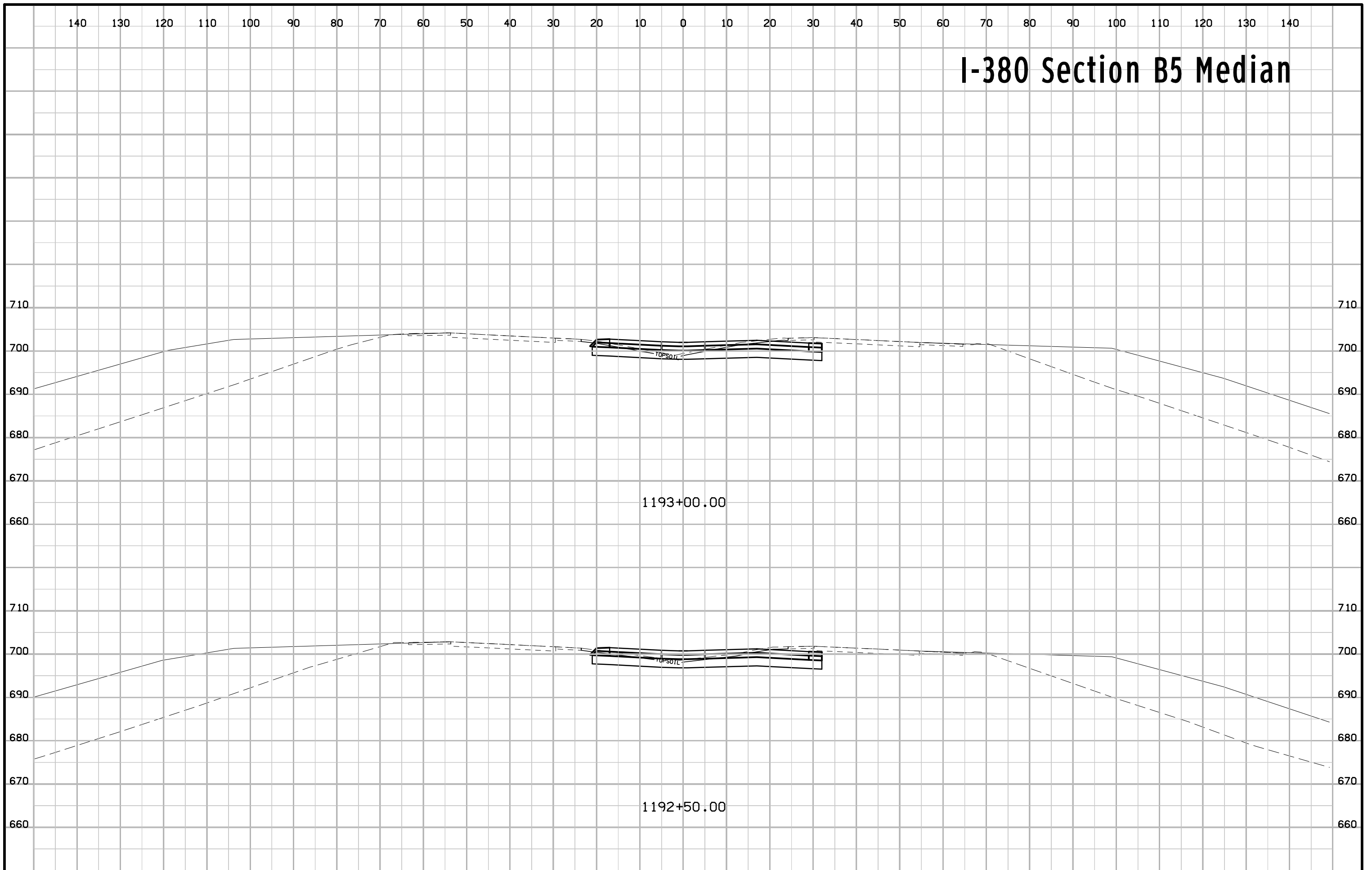
I-380 Section B5 Median



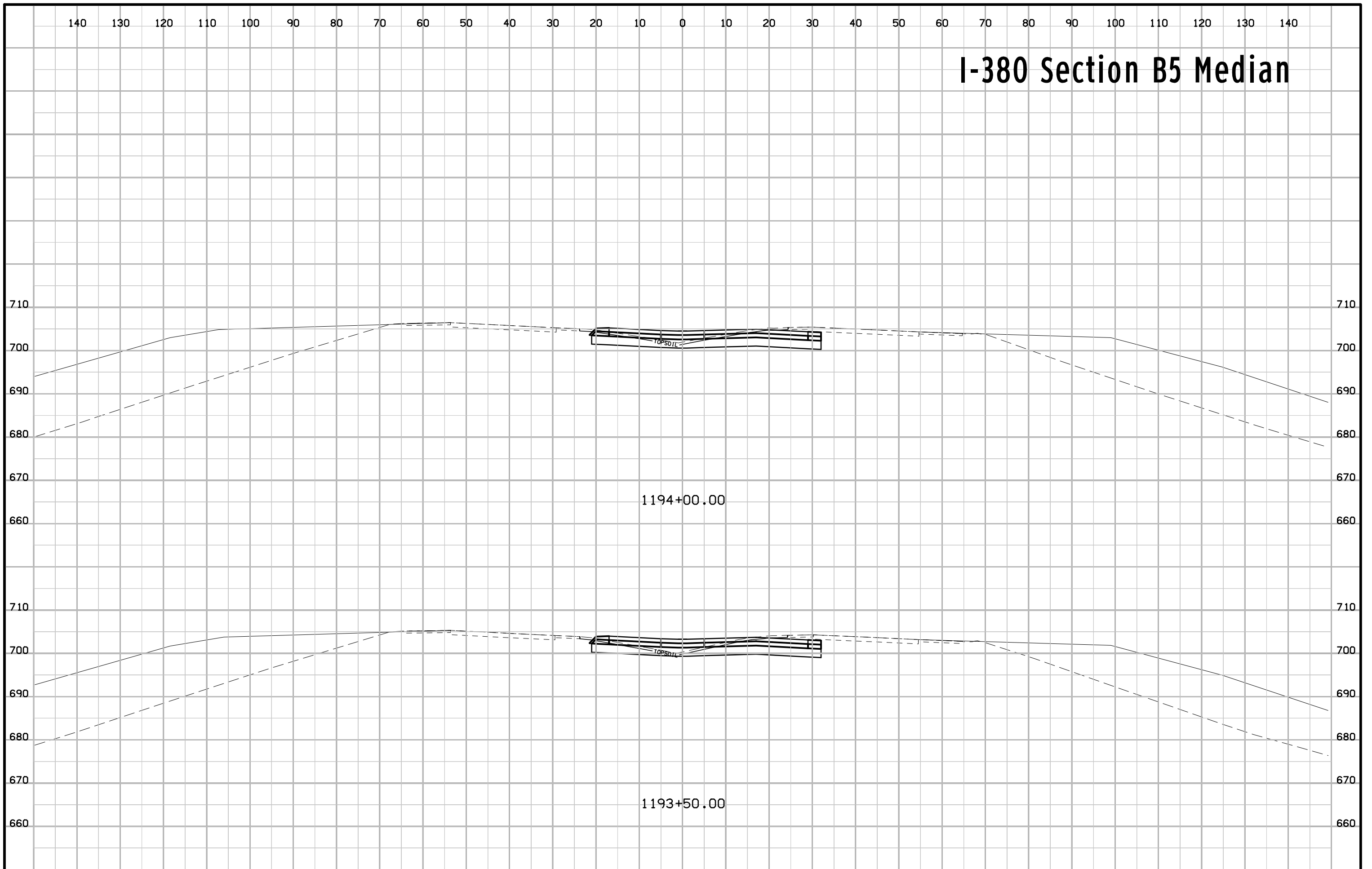
I-380 Section B5 Median

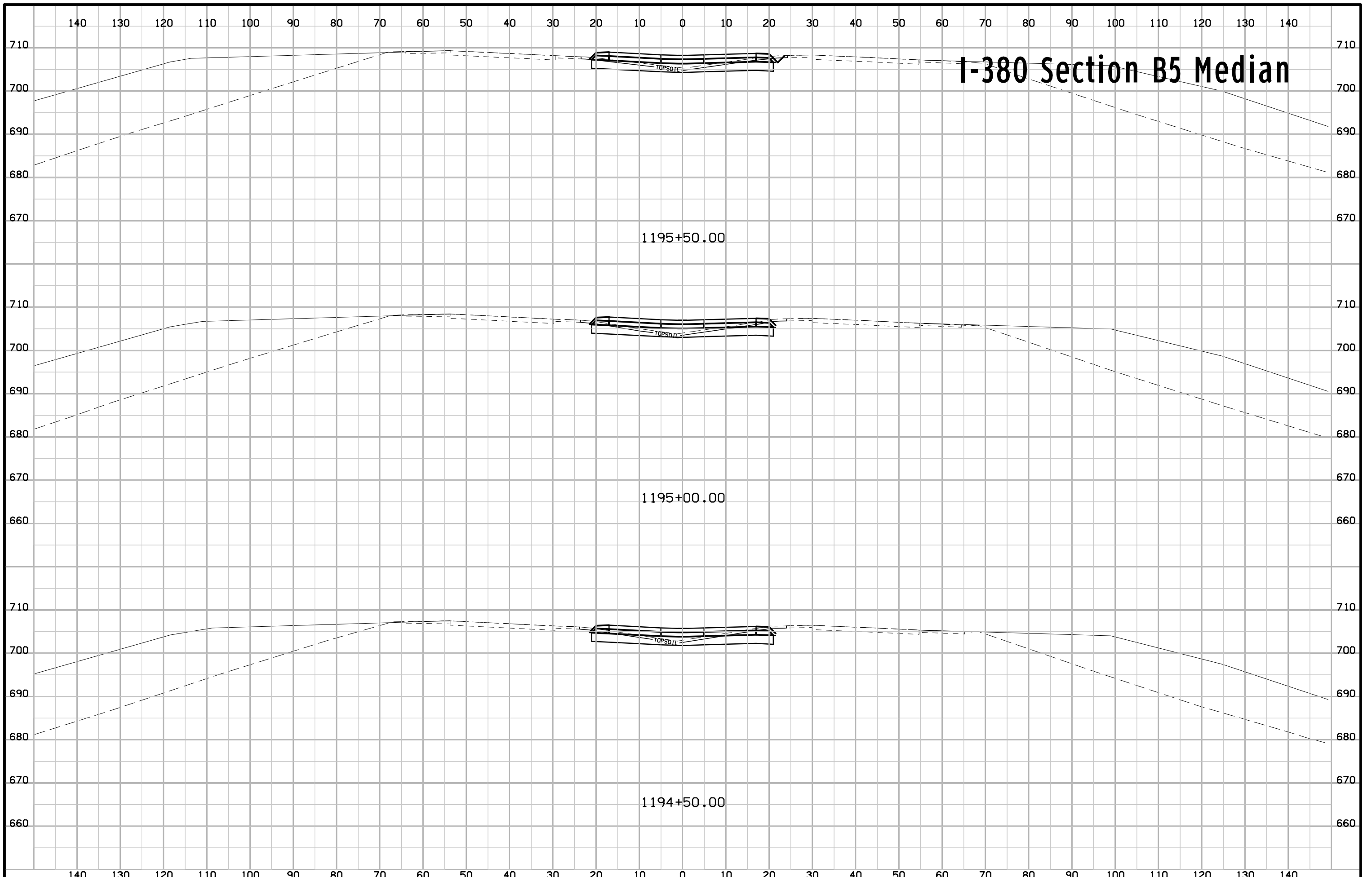


I-380 Section B5 Median



I-380 Section B5 Median





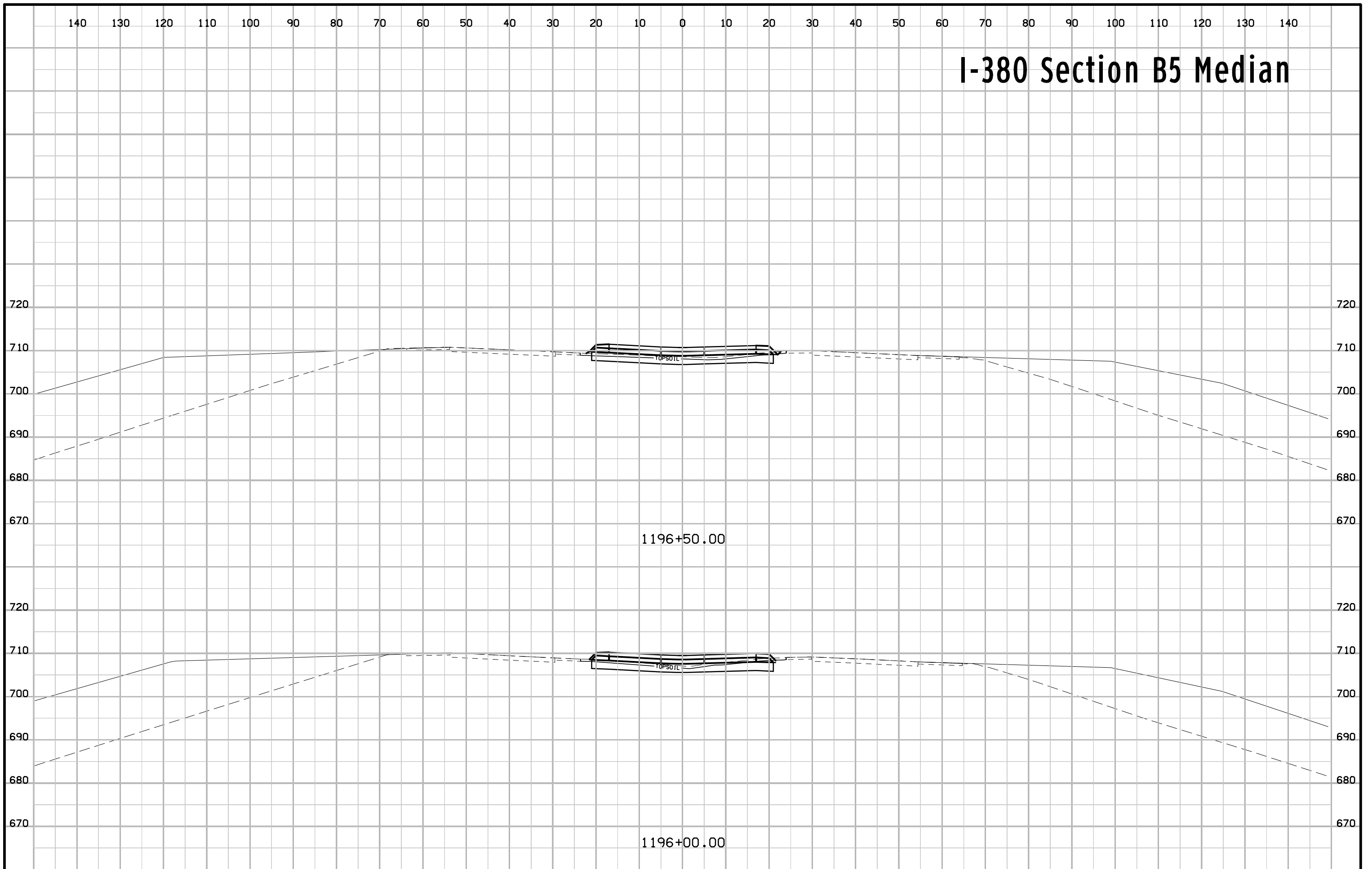
I-380 Section B5 Median

1195+50.00

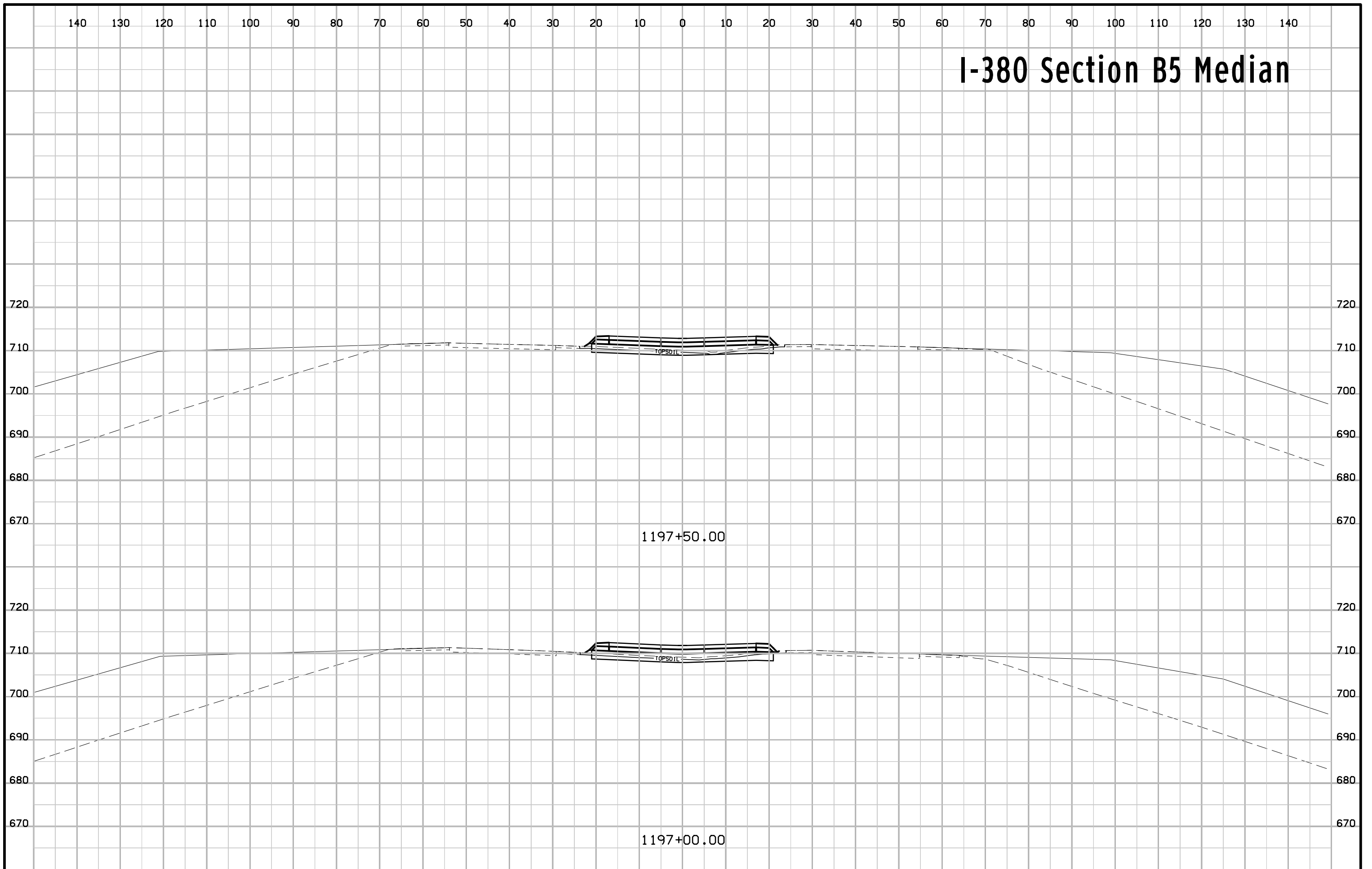
1195+00.00

1194+50.00

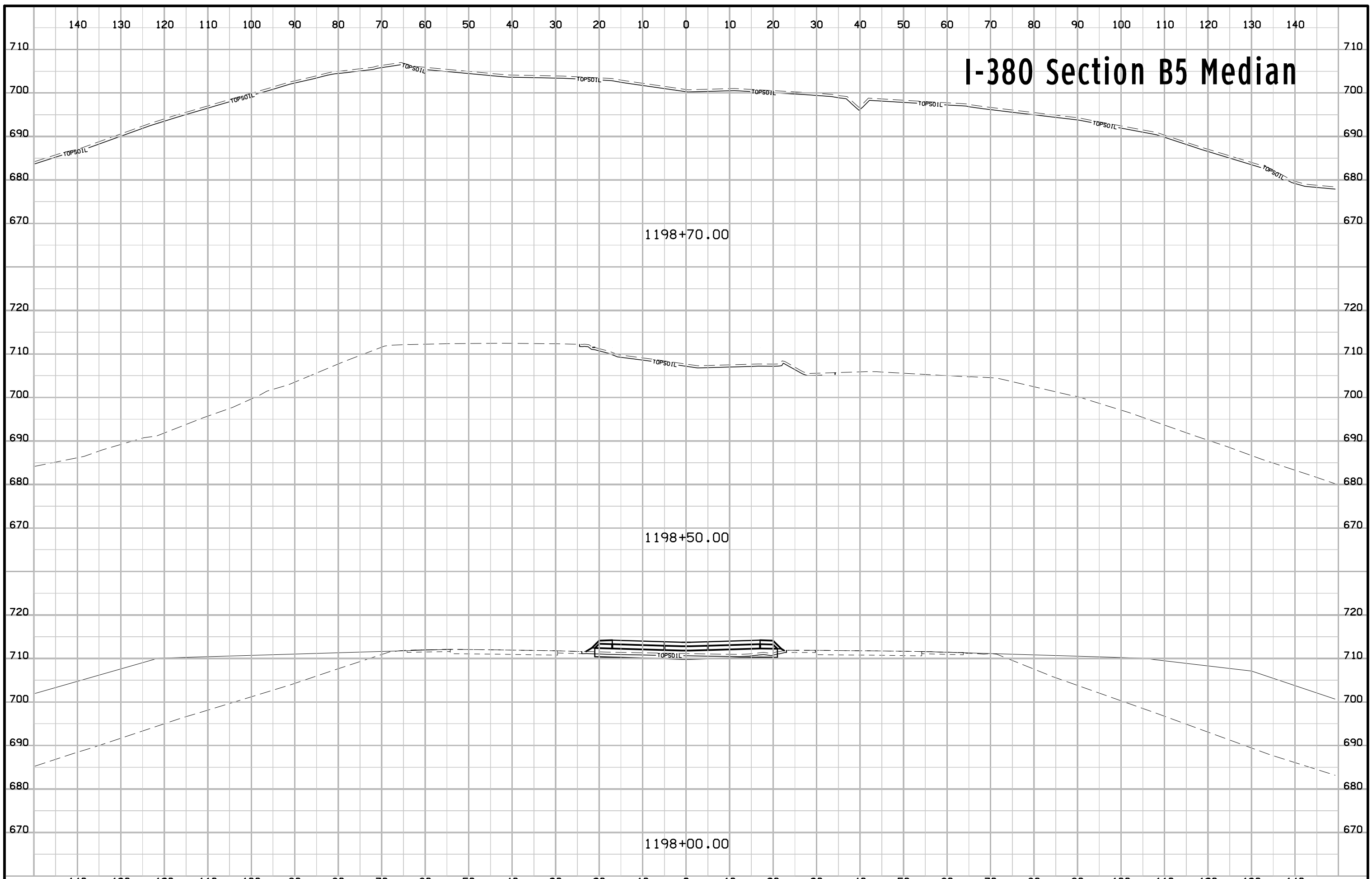
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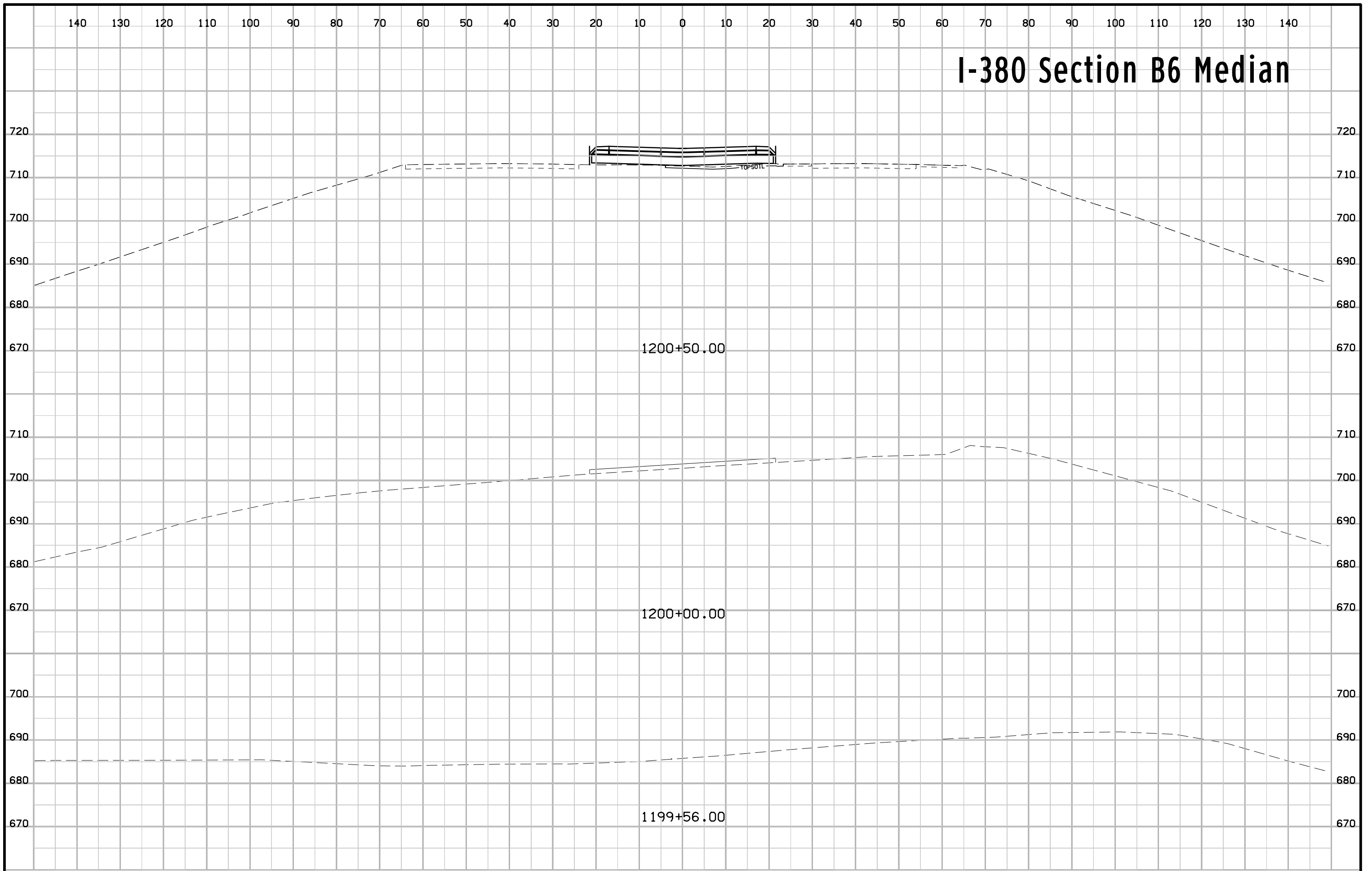
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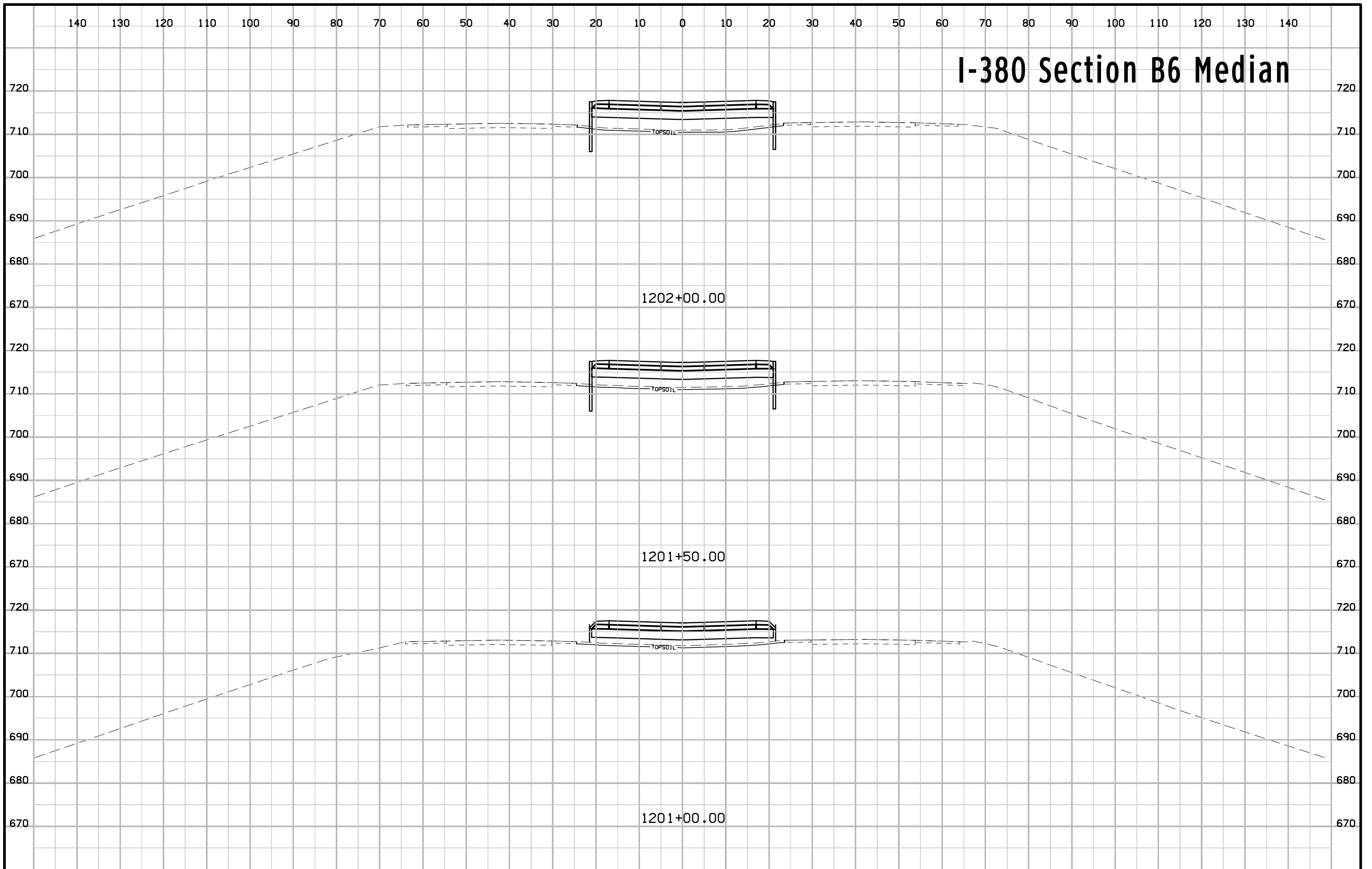
I-380 Section B5 Median



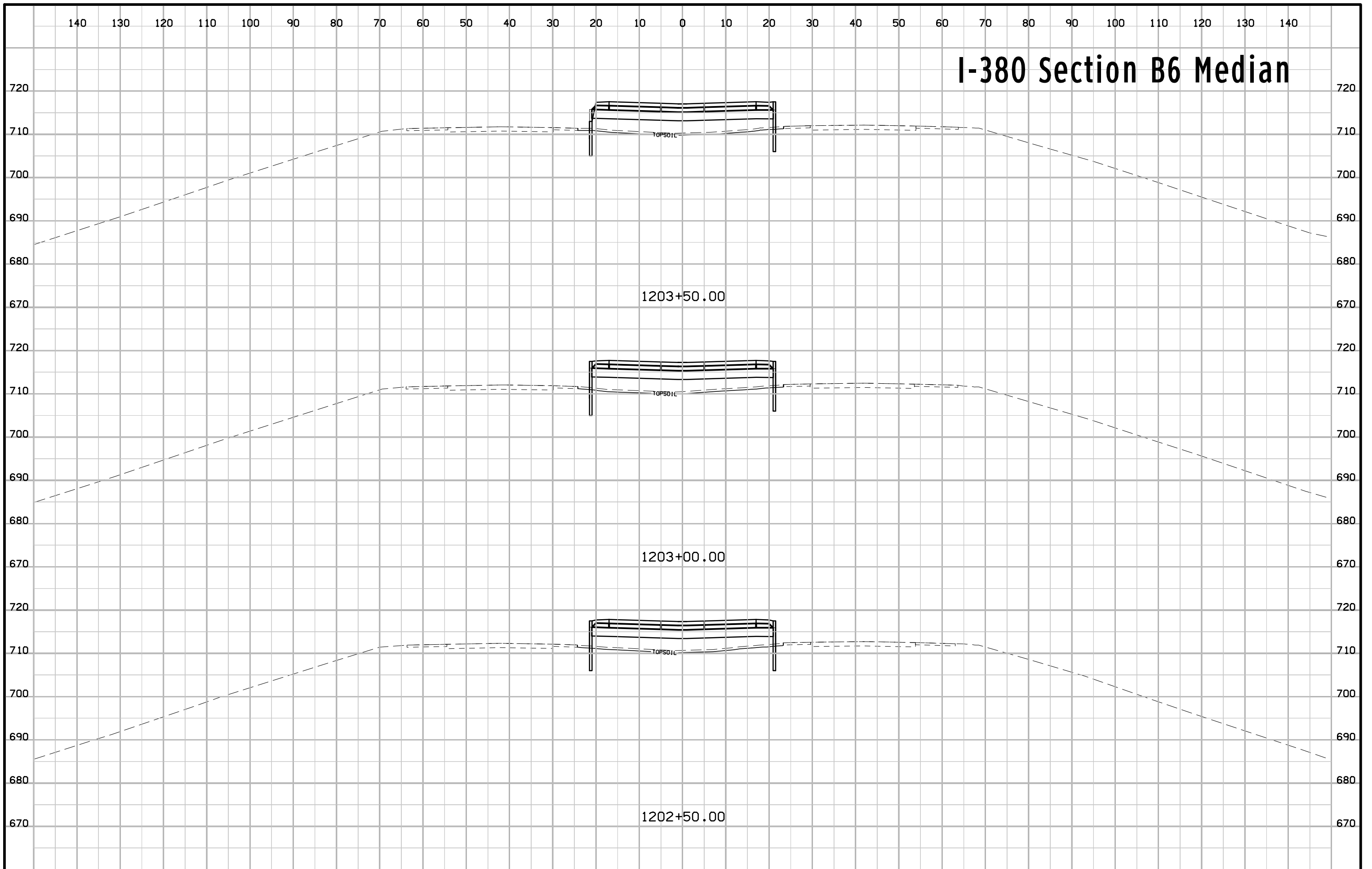
I-380 Section B6 Median



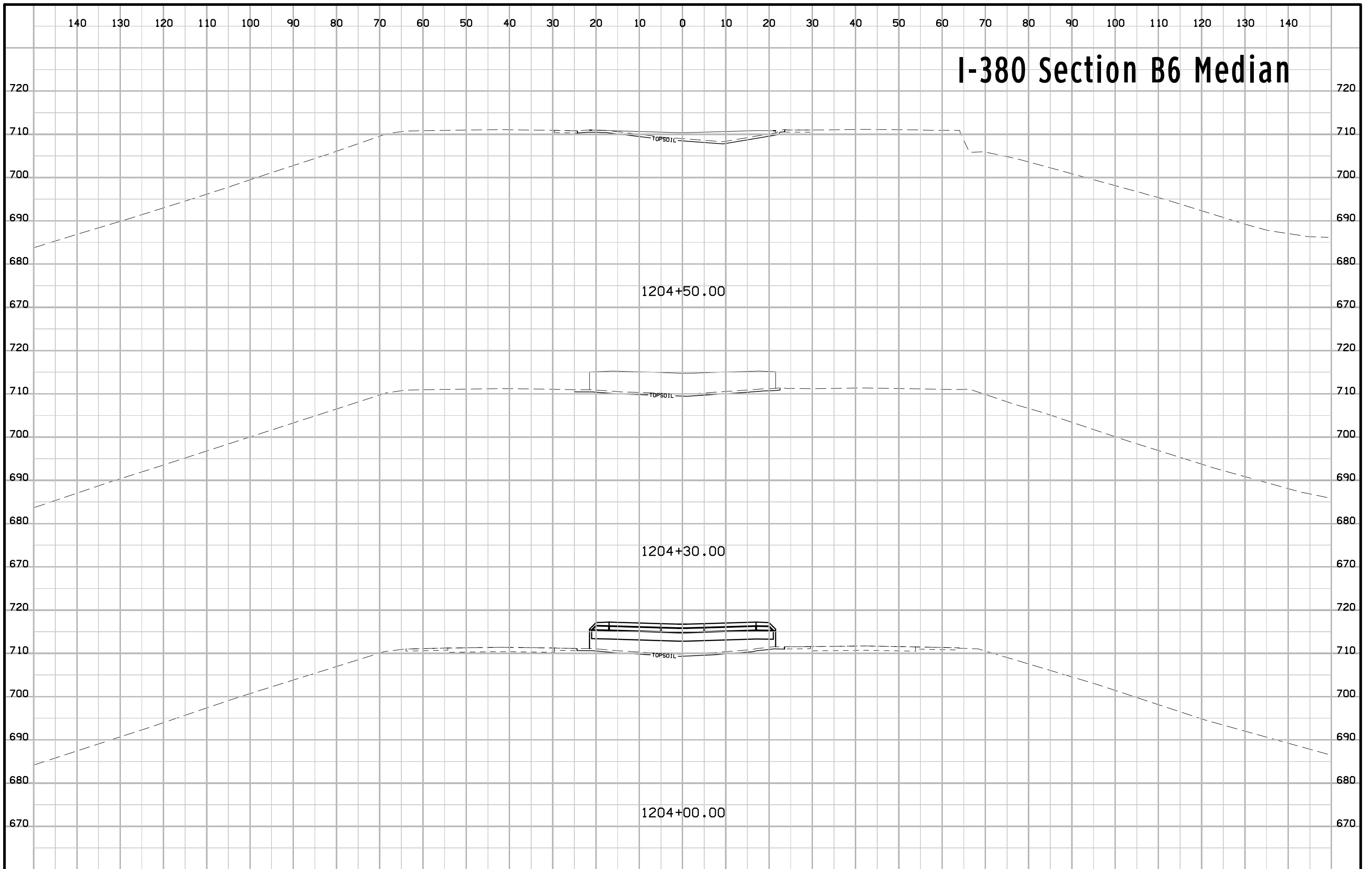
I-380 Section B6 Median



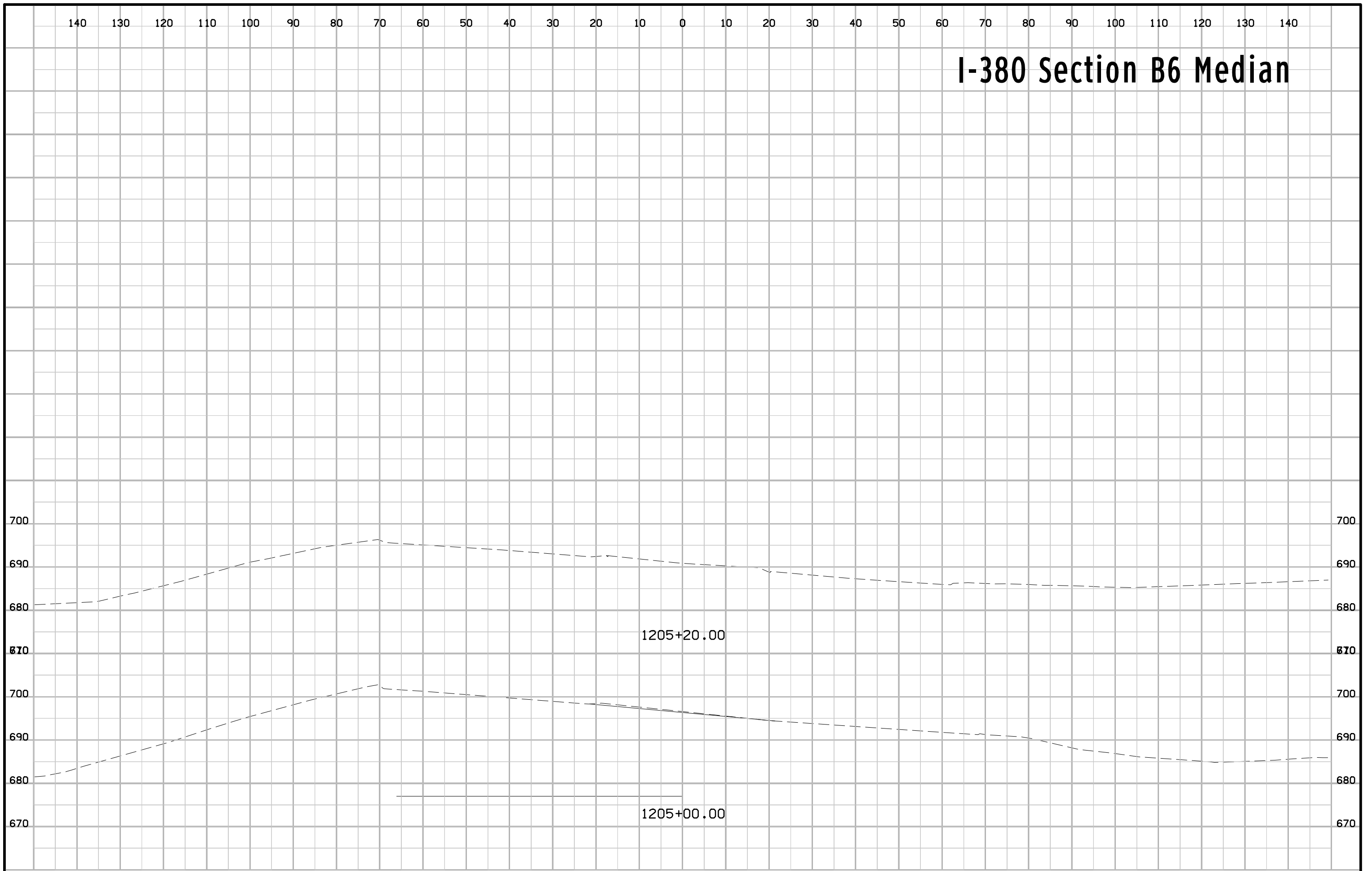
I-380 Section B6 Median



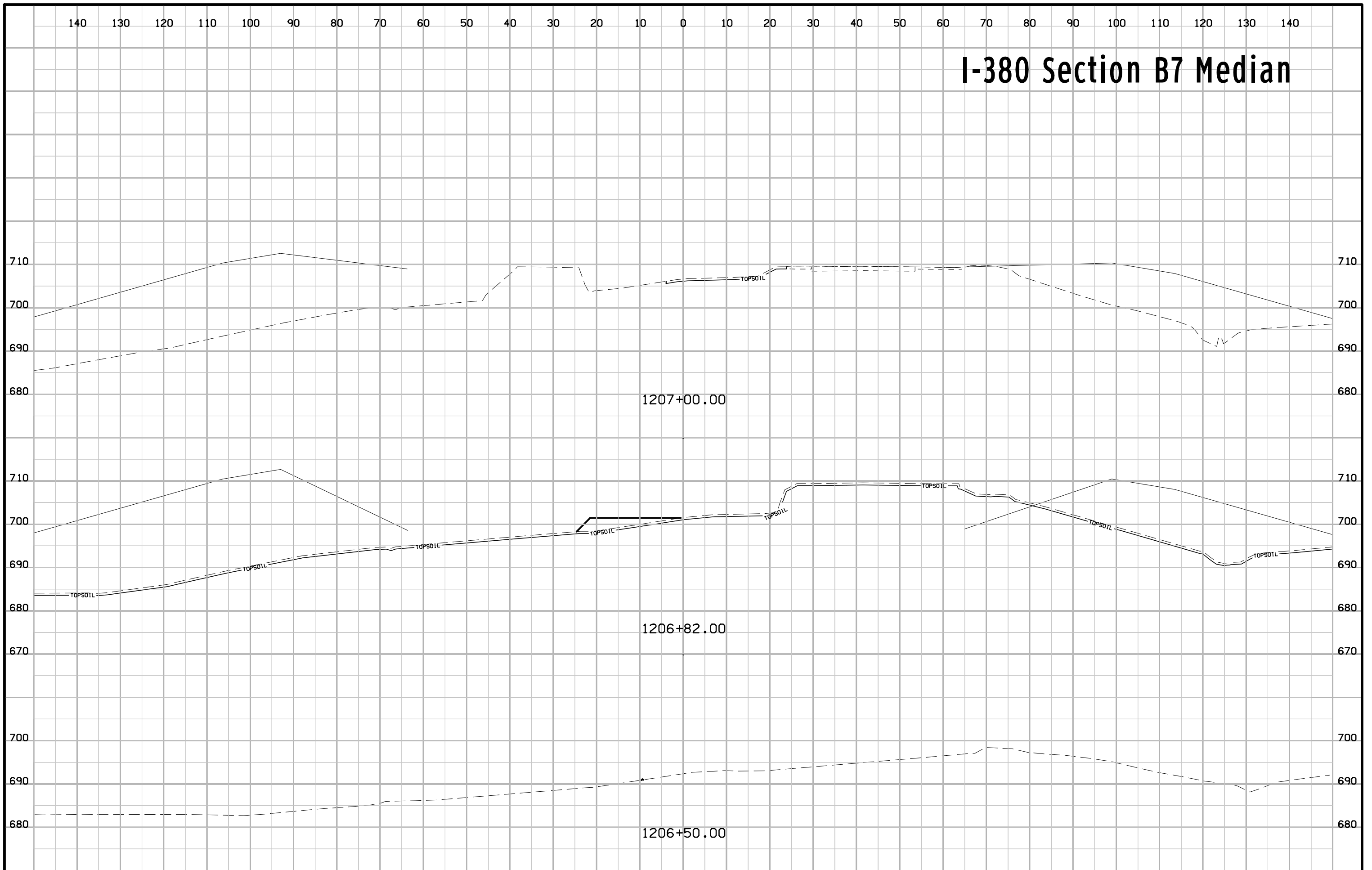
I-380 Section B6 Median



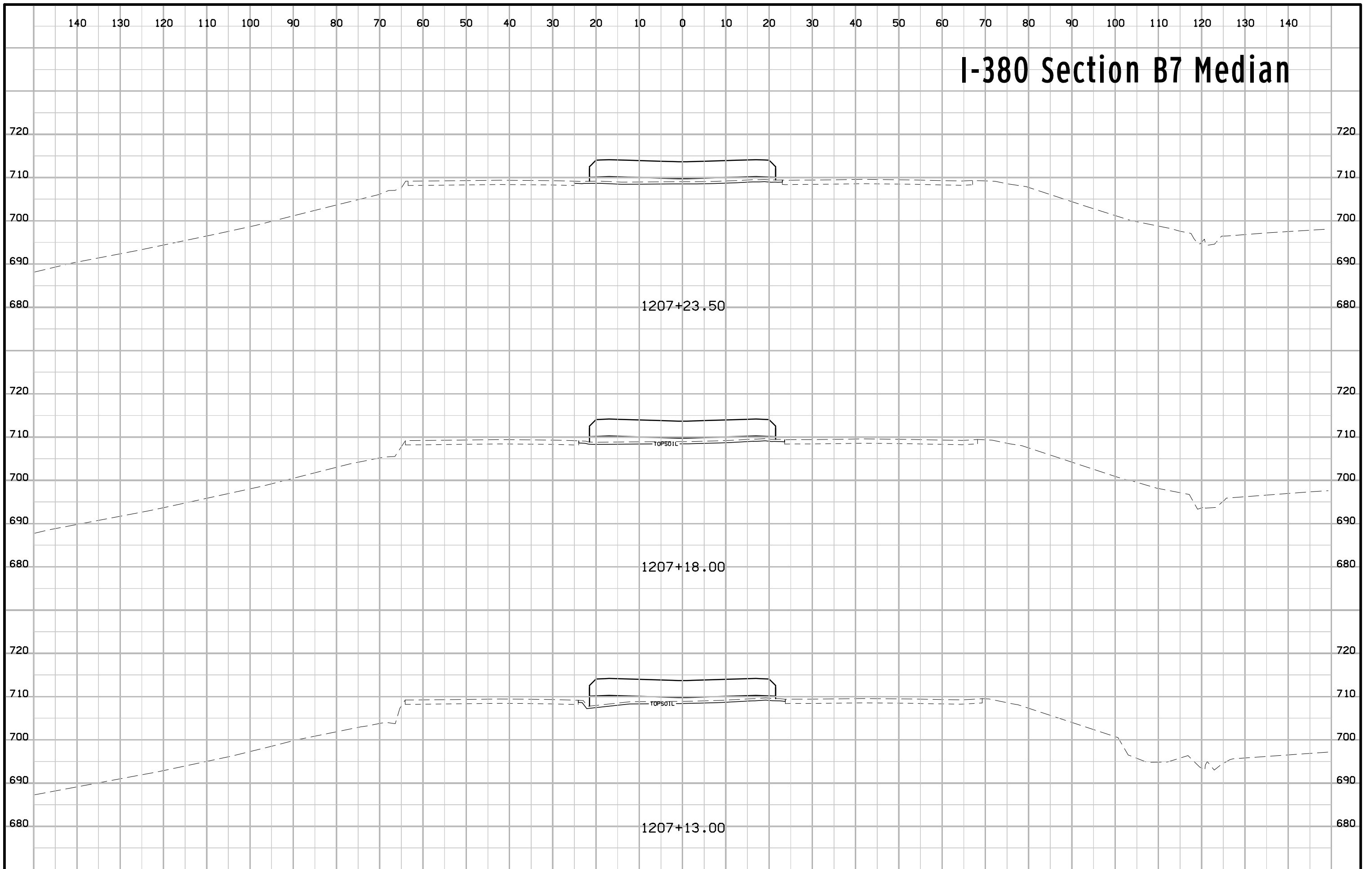
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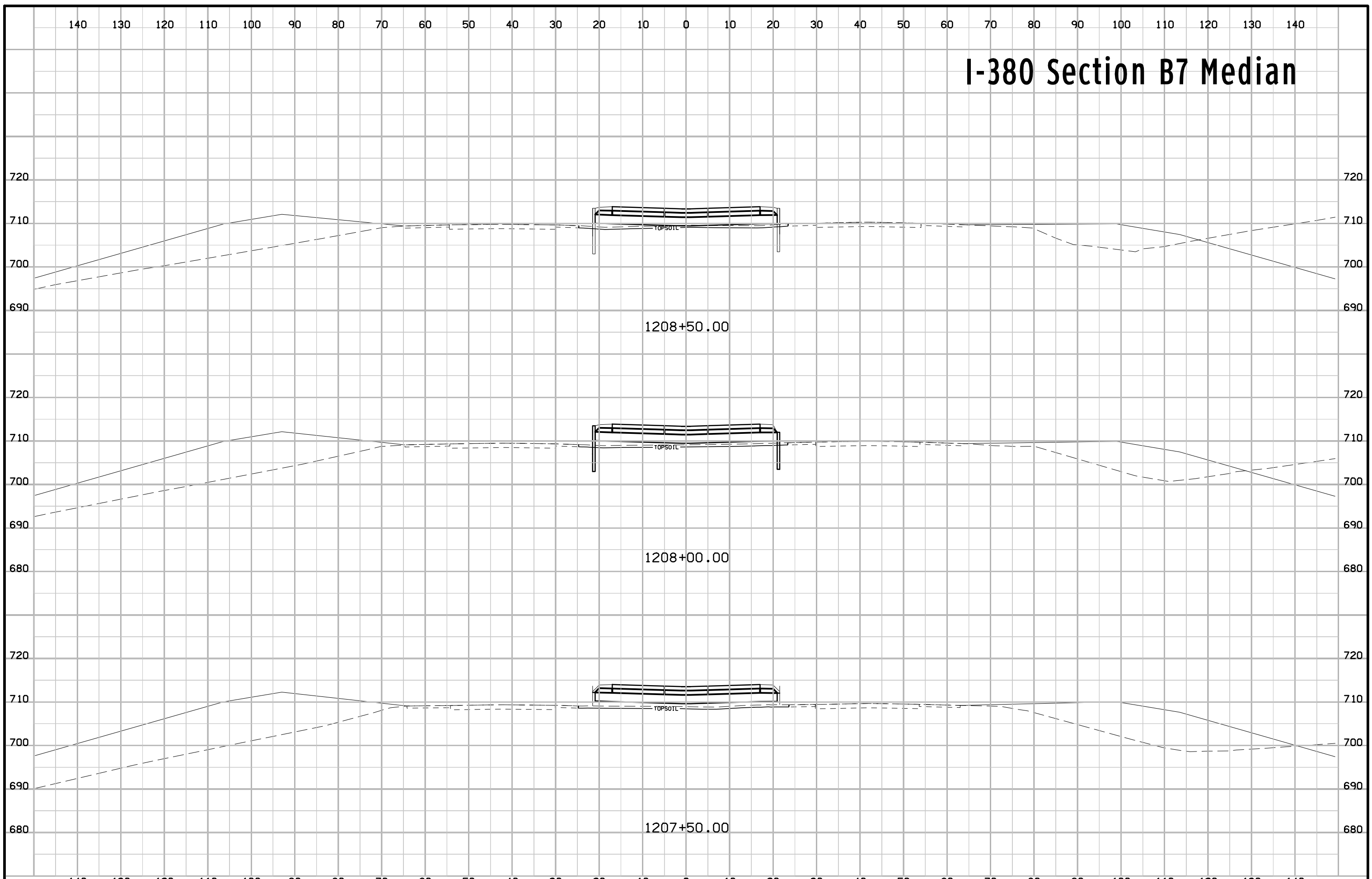
I-380 Section B7 Median



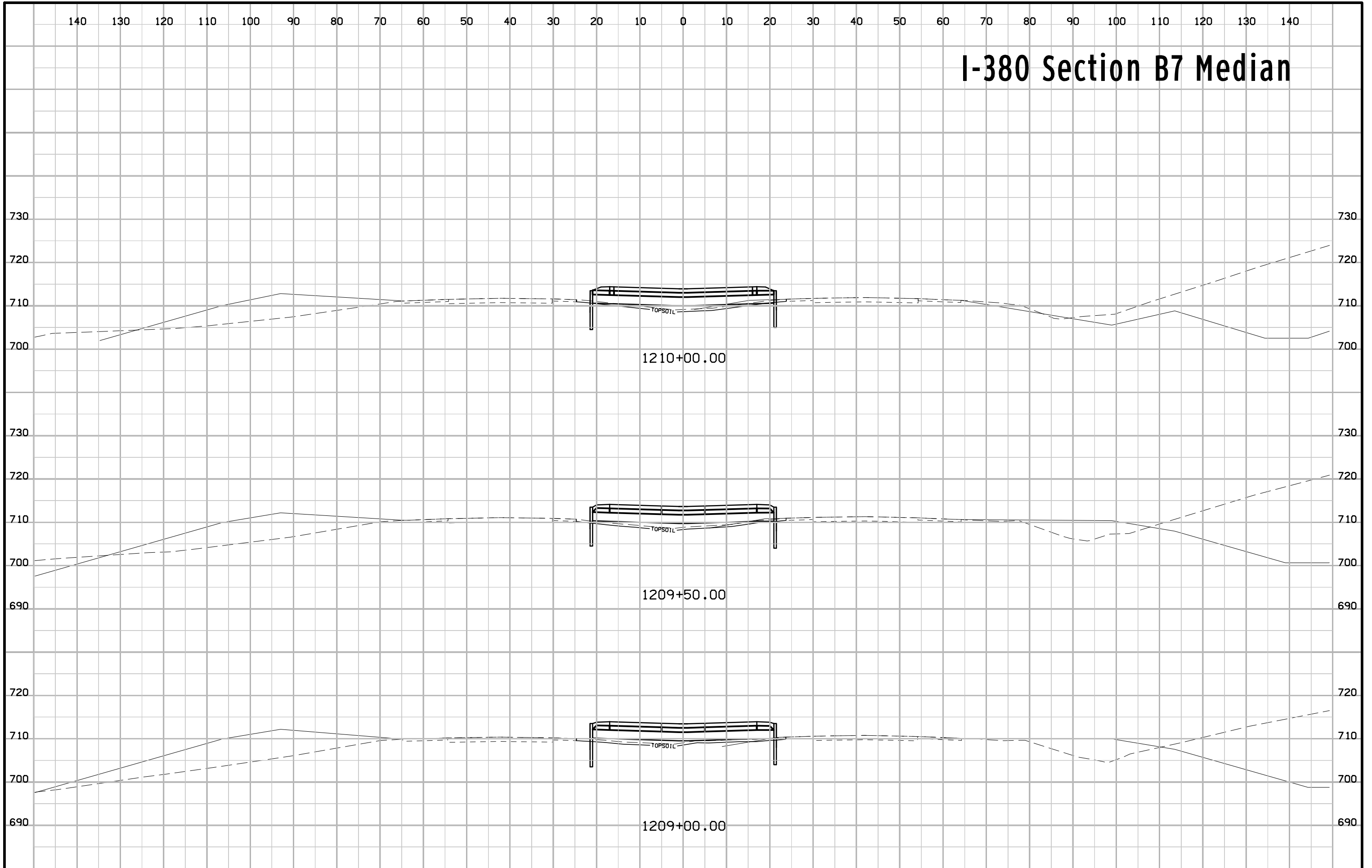
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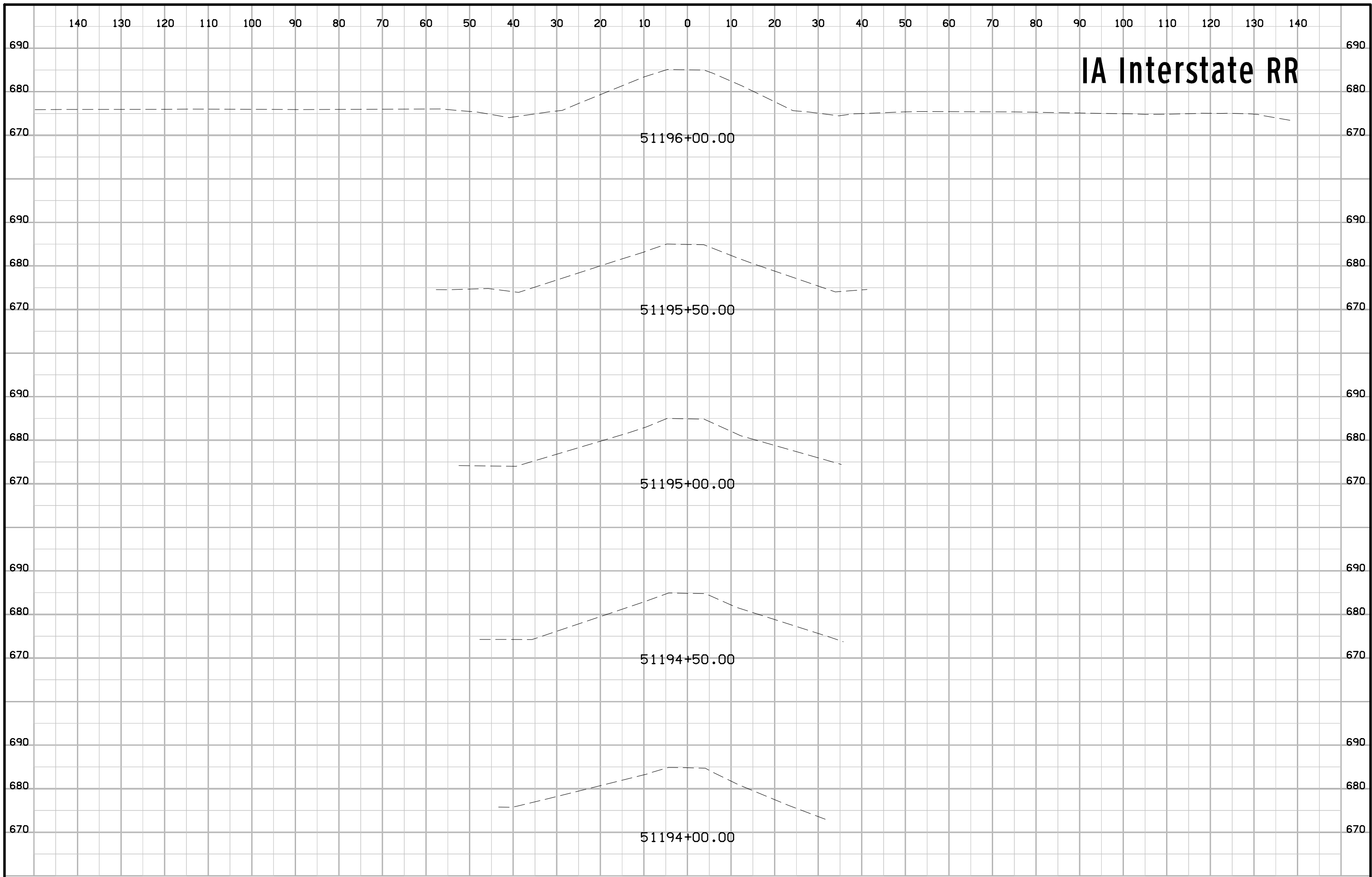


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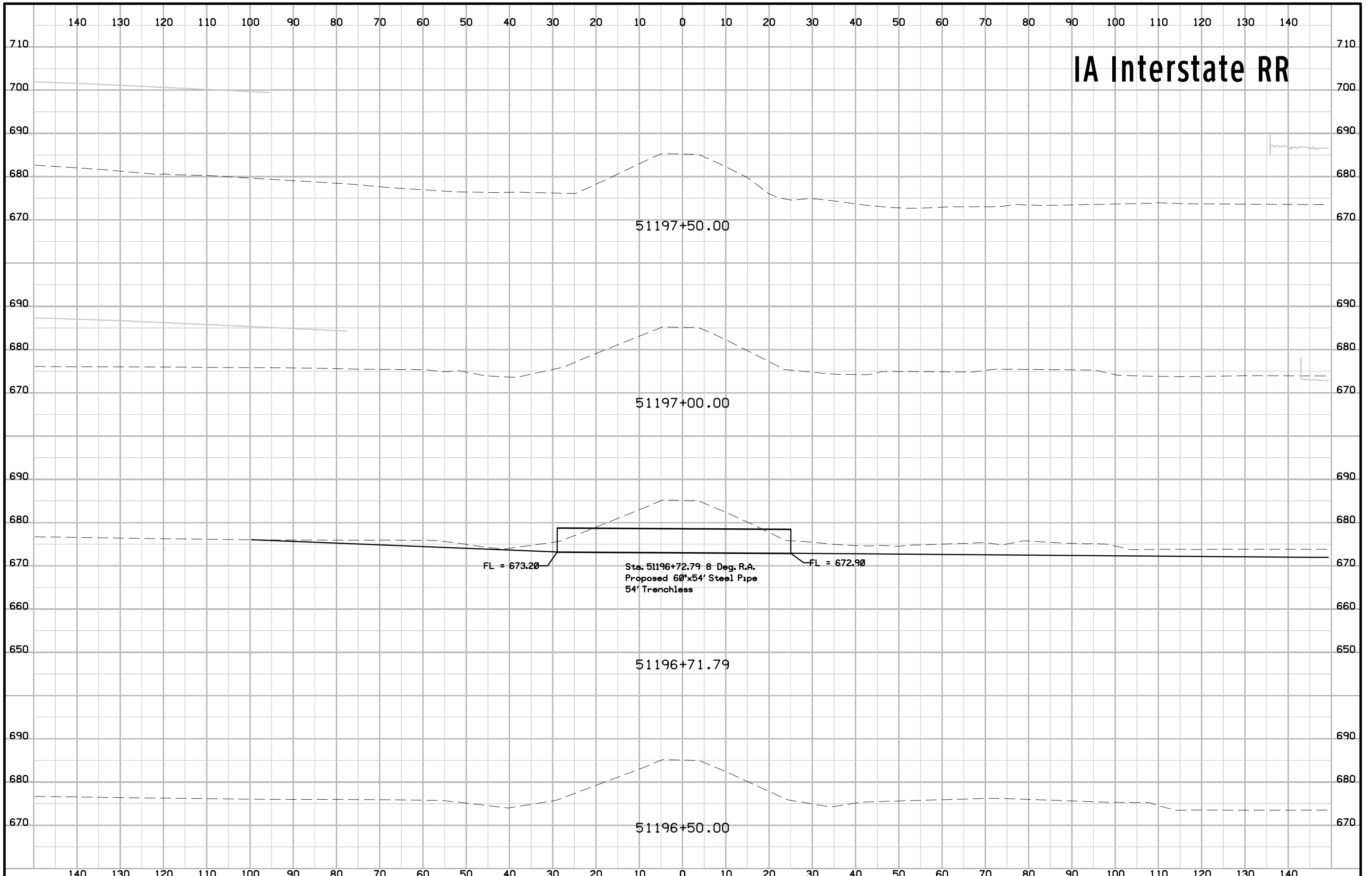
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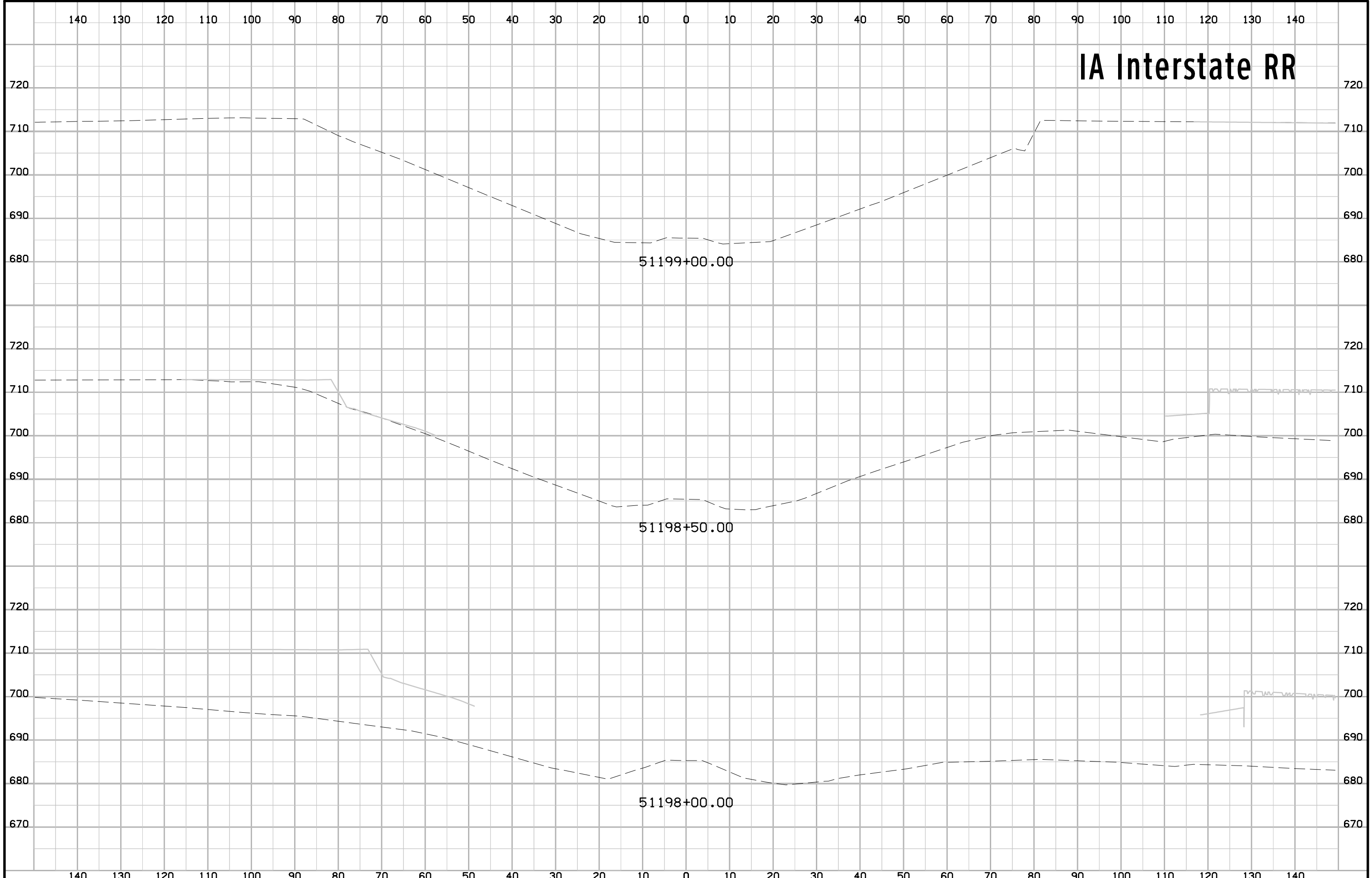


IA Interstate RR

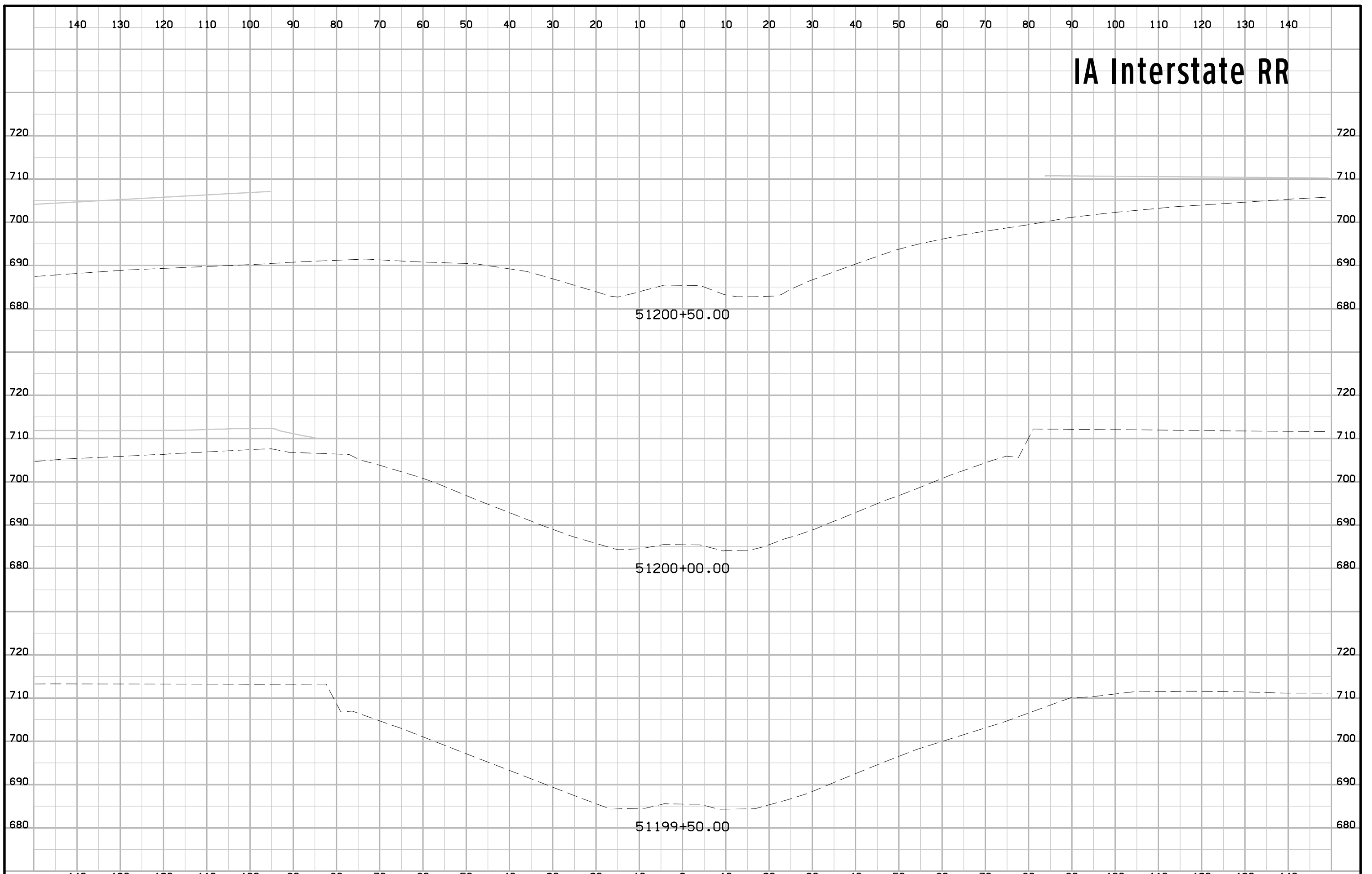
IA Interstate RR



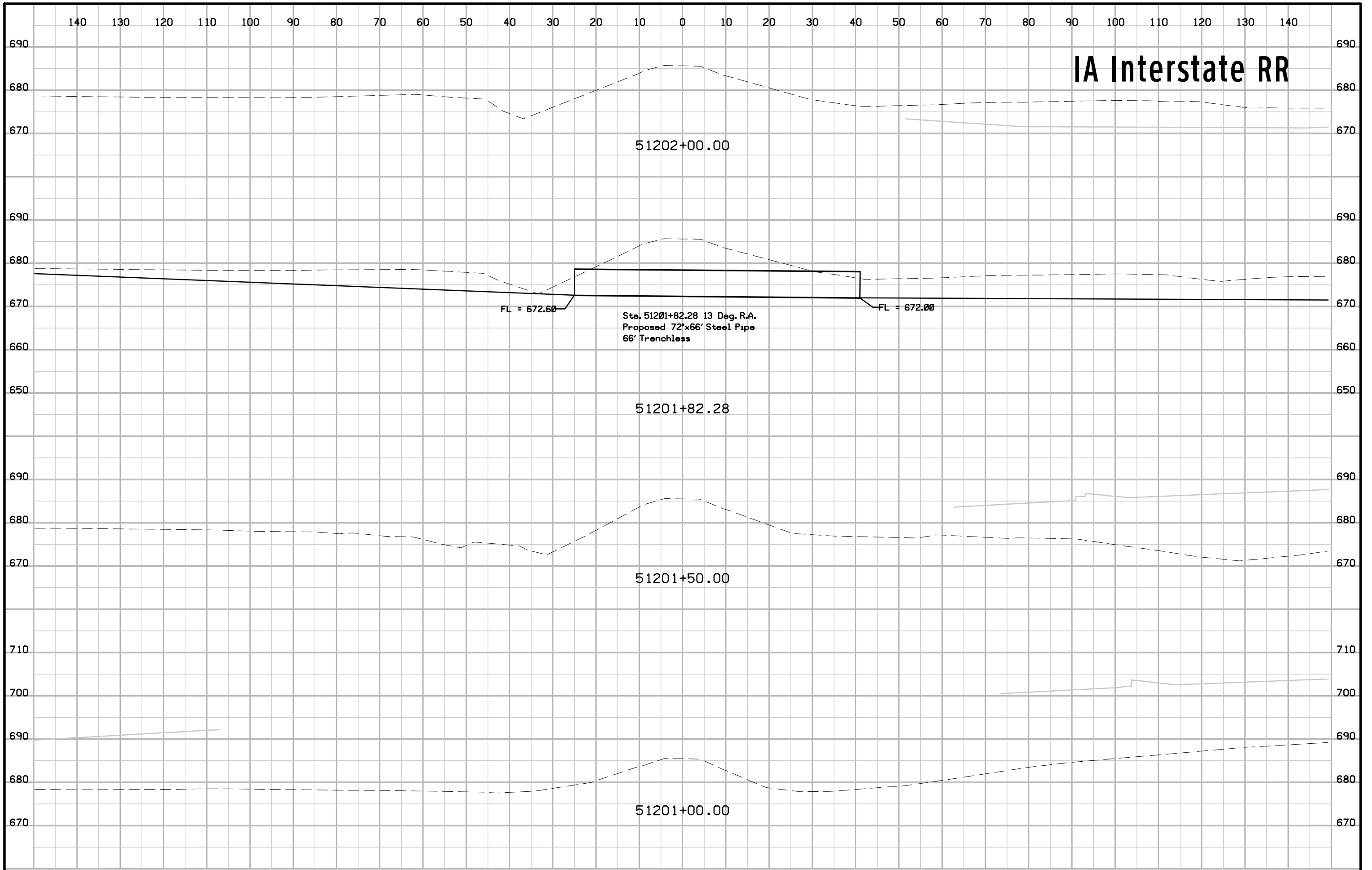
IA Interstate RR



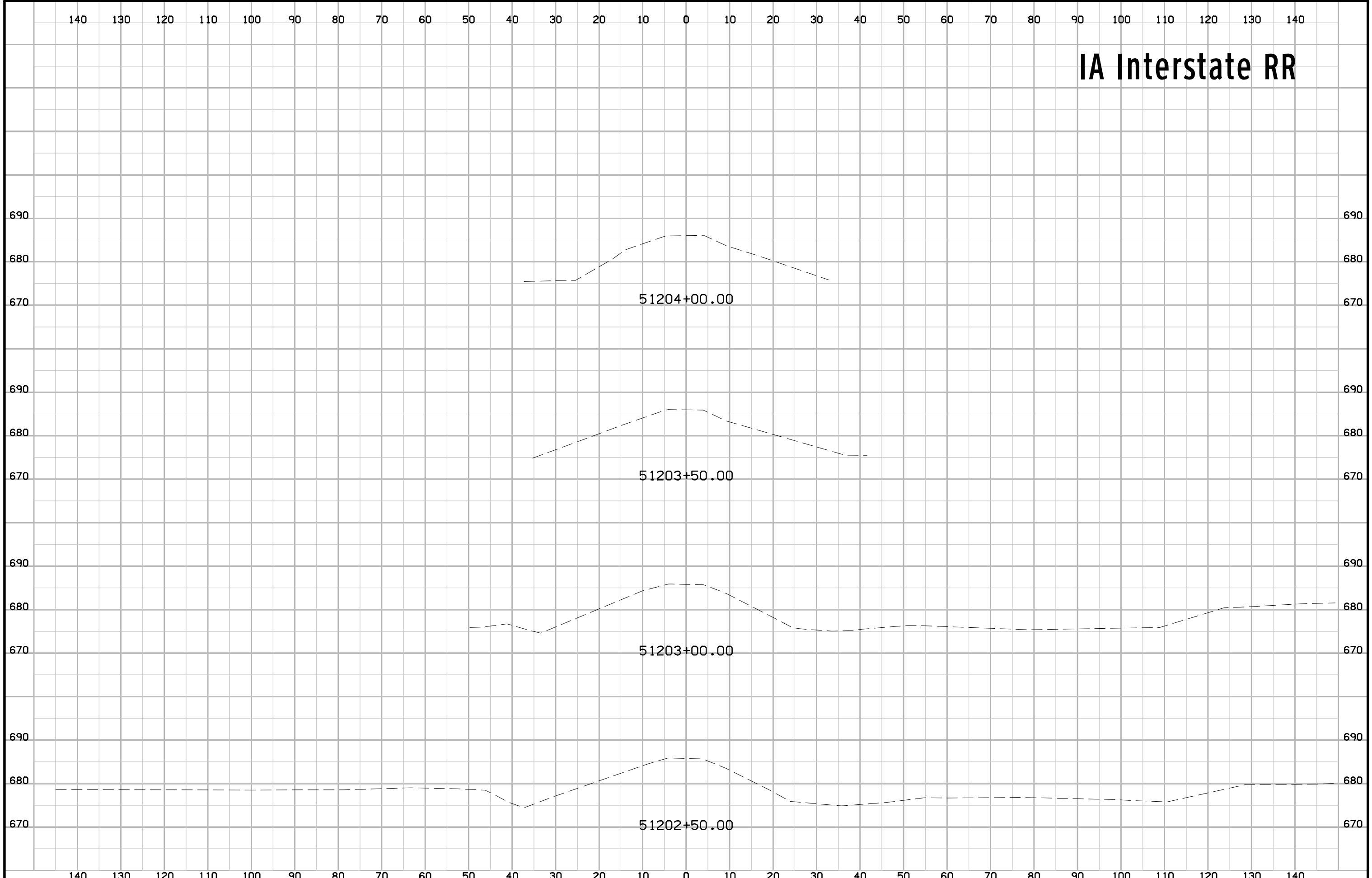
IA Interstate RR



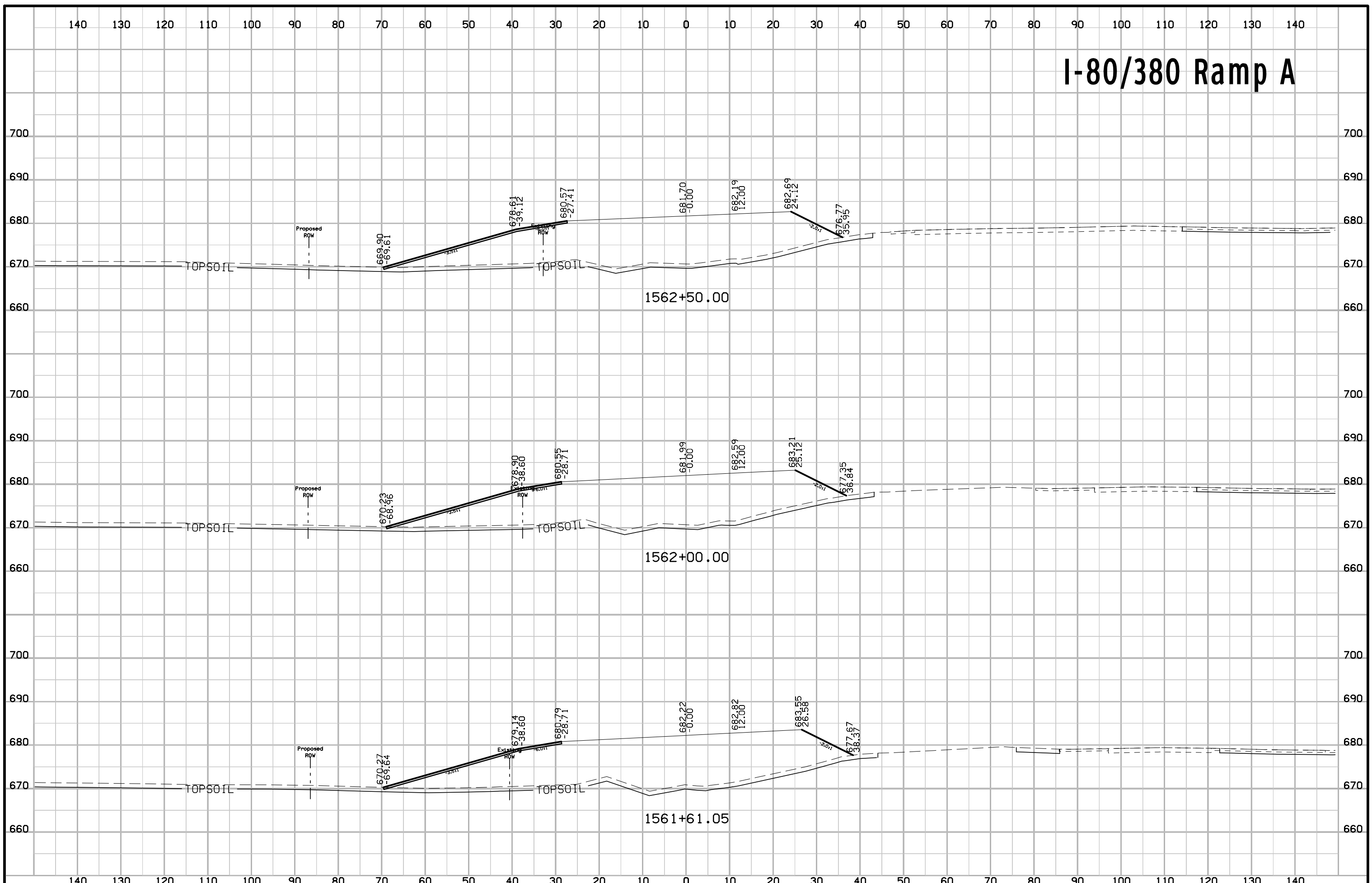
IA Interstate RR



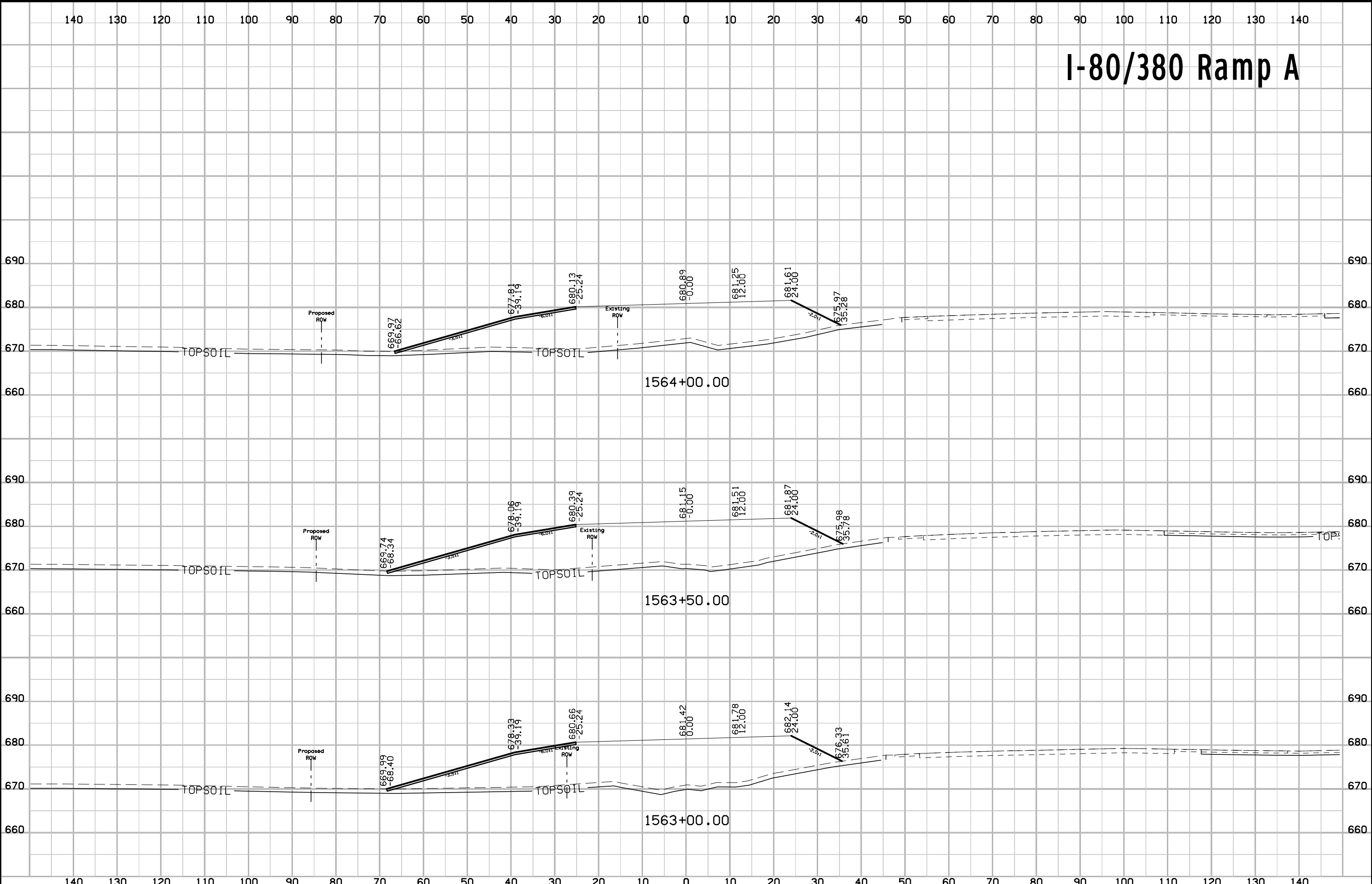
IA Interstate RR



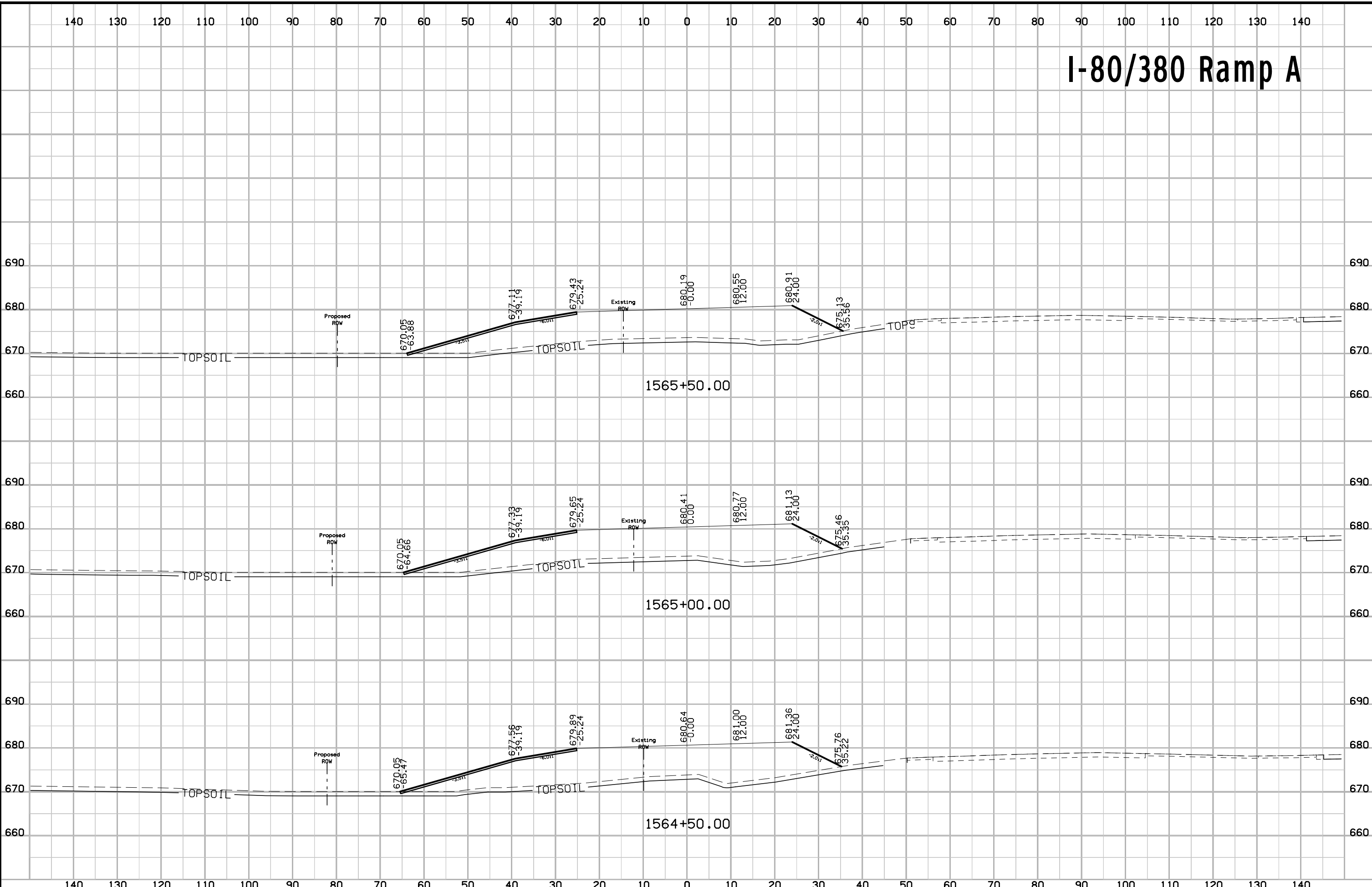
I-80/380 Ramp A



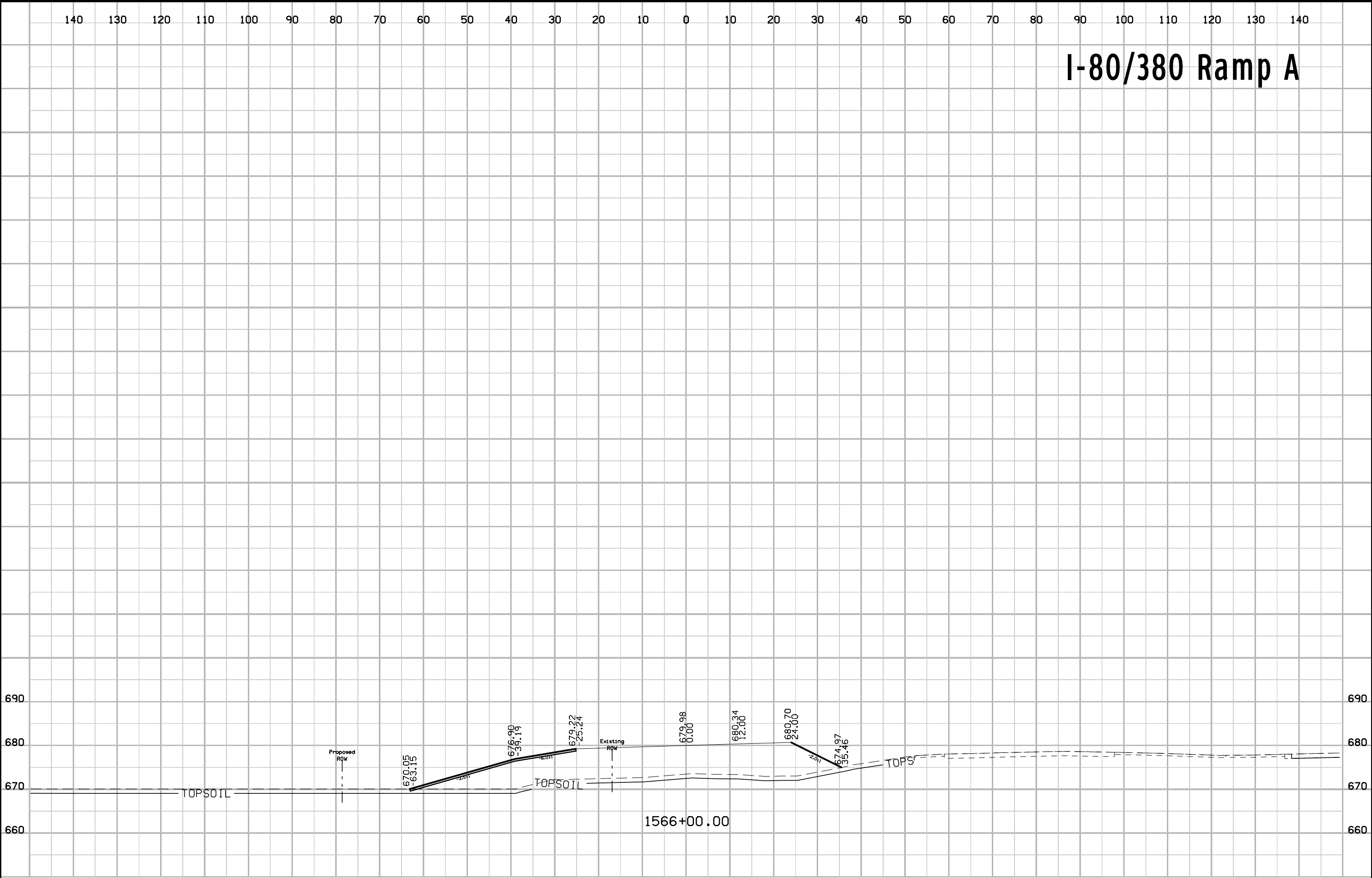
I-80/380 Ramp A



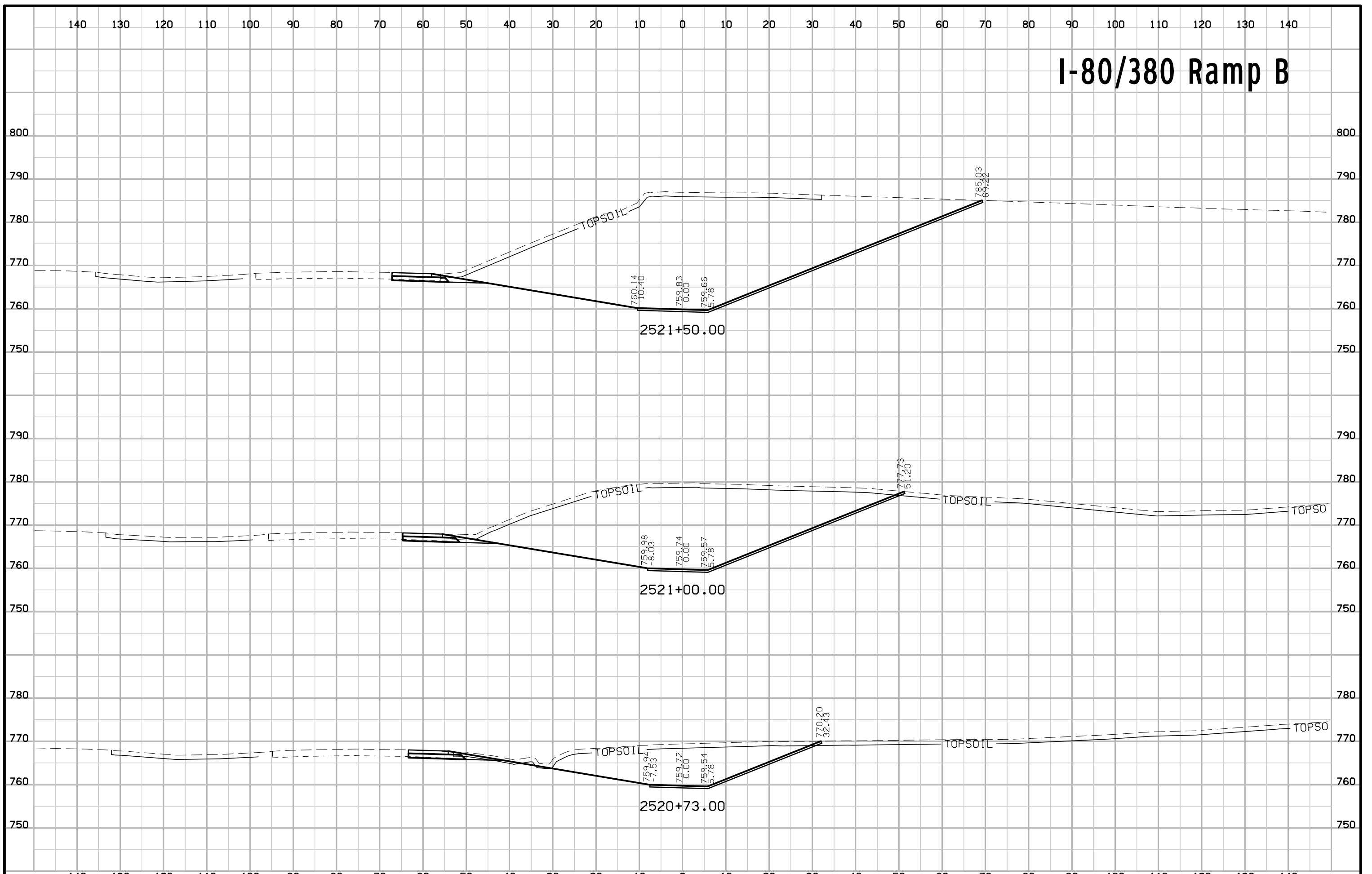
I-80/380 Ramp A



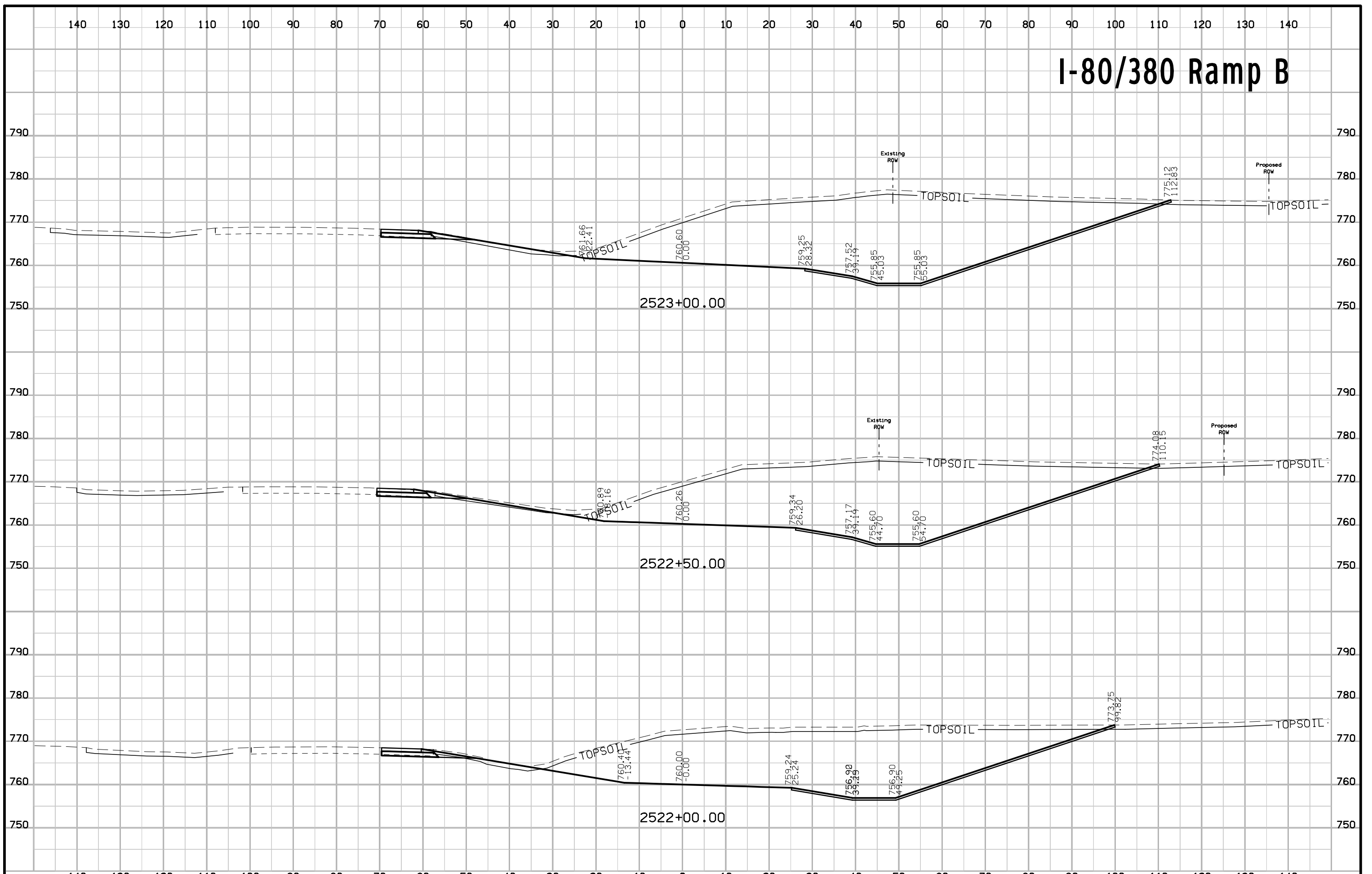
I-80/380 Ramp A



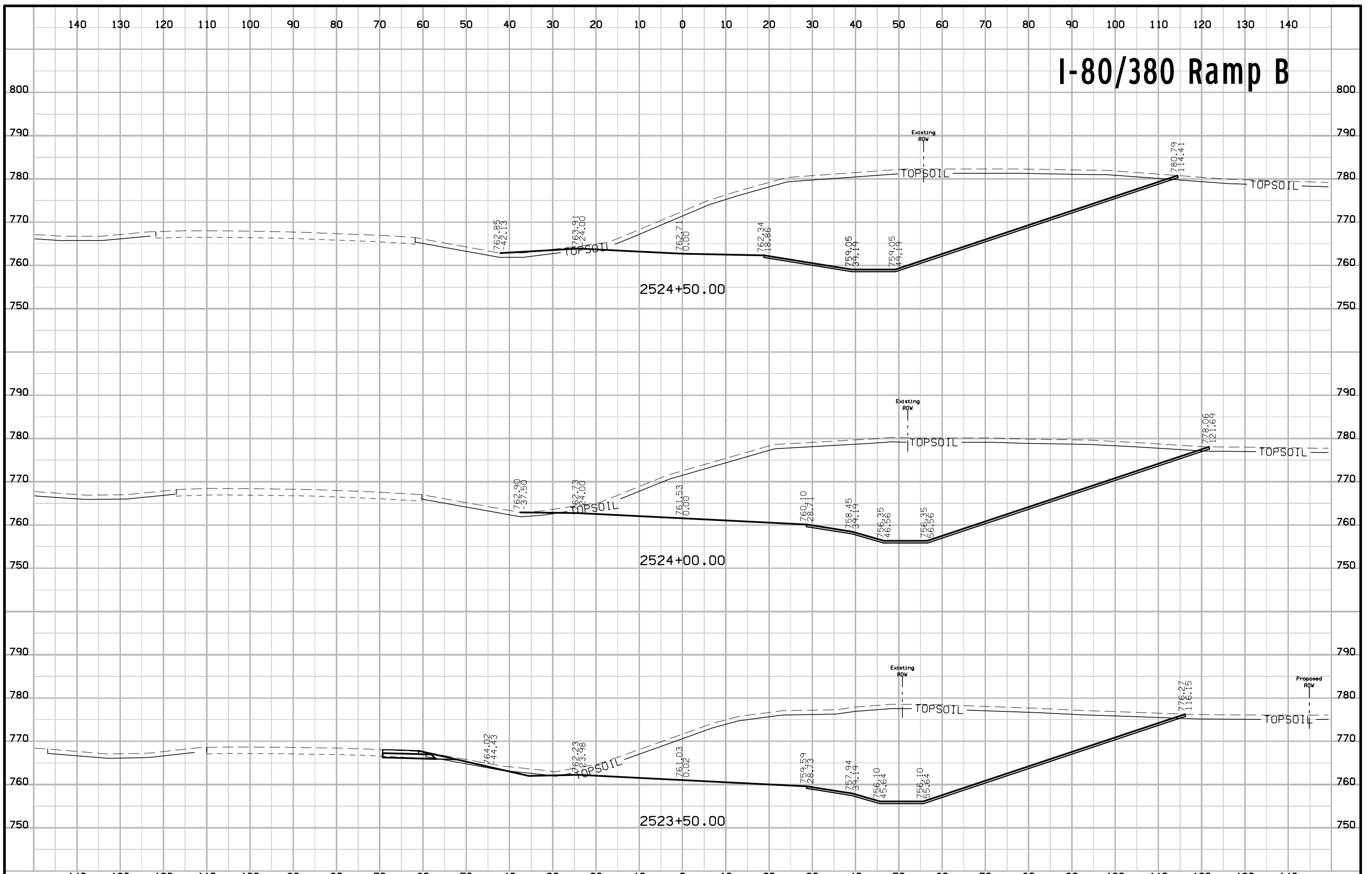
I-80/380 Ramp B



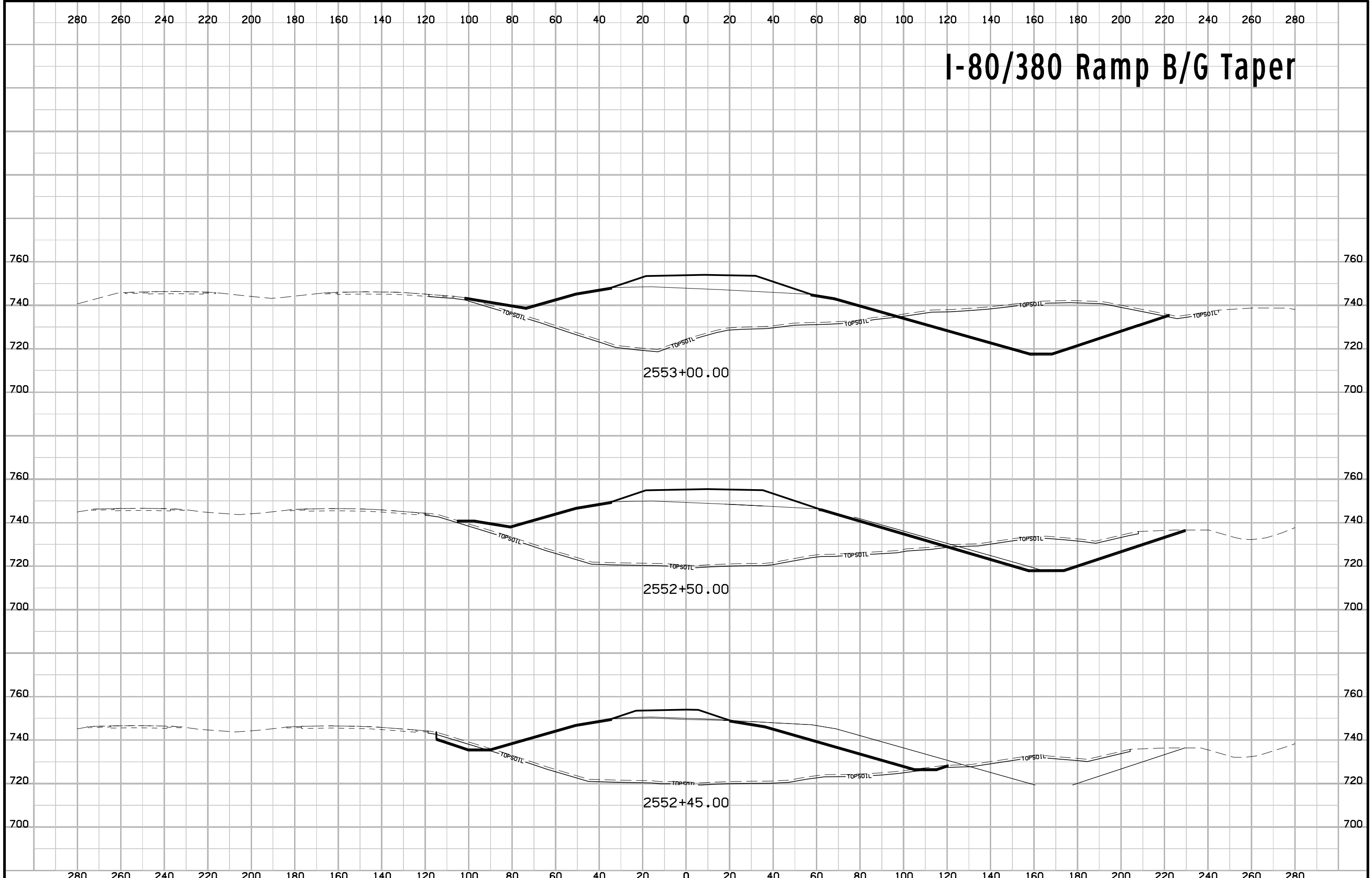
I-80/380 Ramp B



I-80/380 Ramp B



I-80/380 Ramp B/G Taper

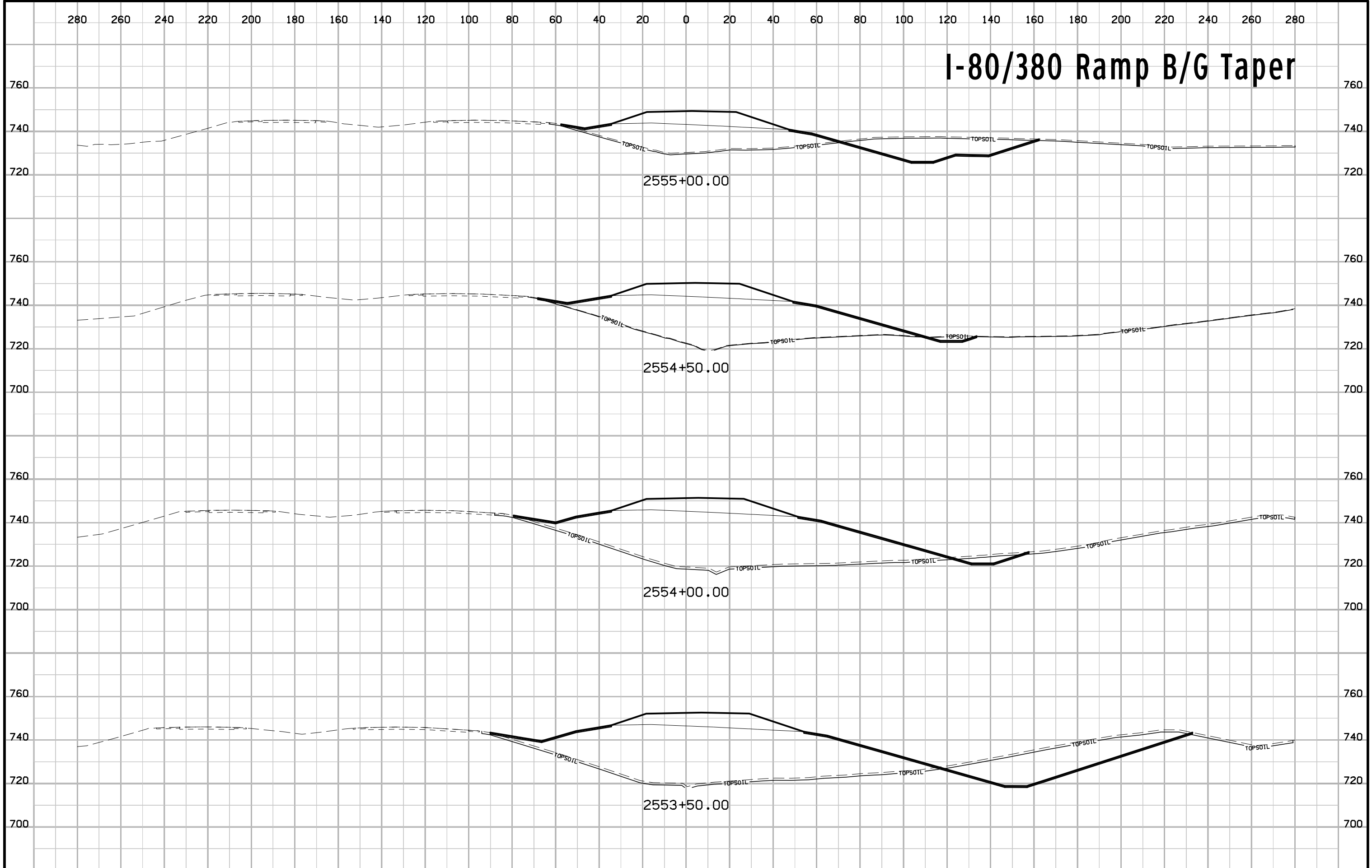


2553+00.00

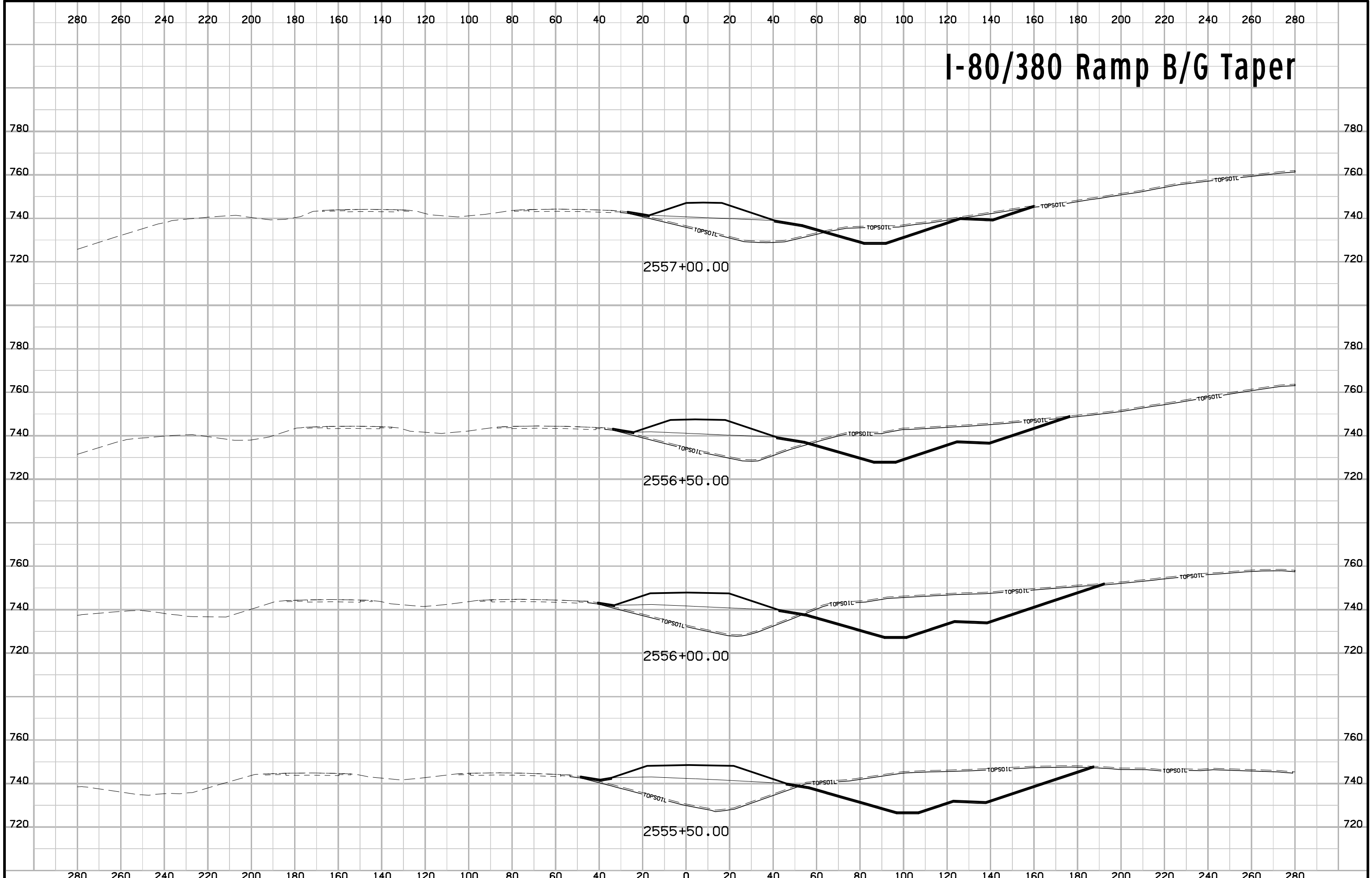
2552+50.00

2552+45.00

I-80/380 Ramp B/G Taper

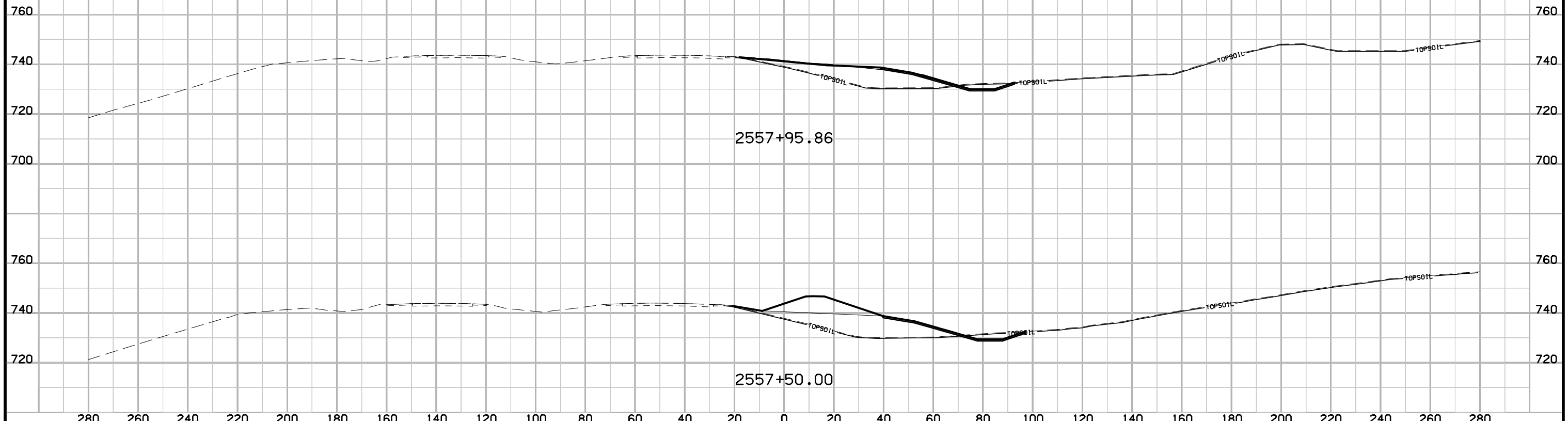


I-80/380 Ramp B/G Taper

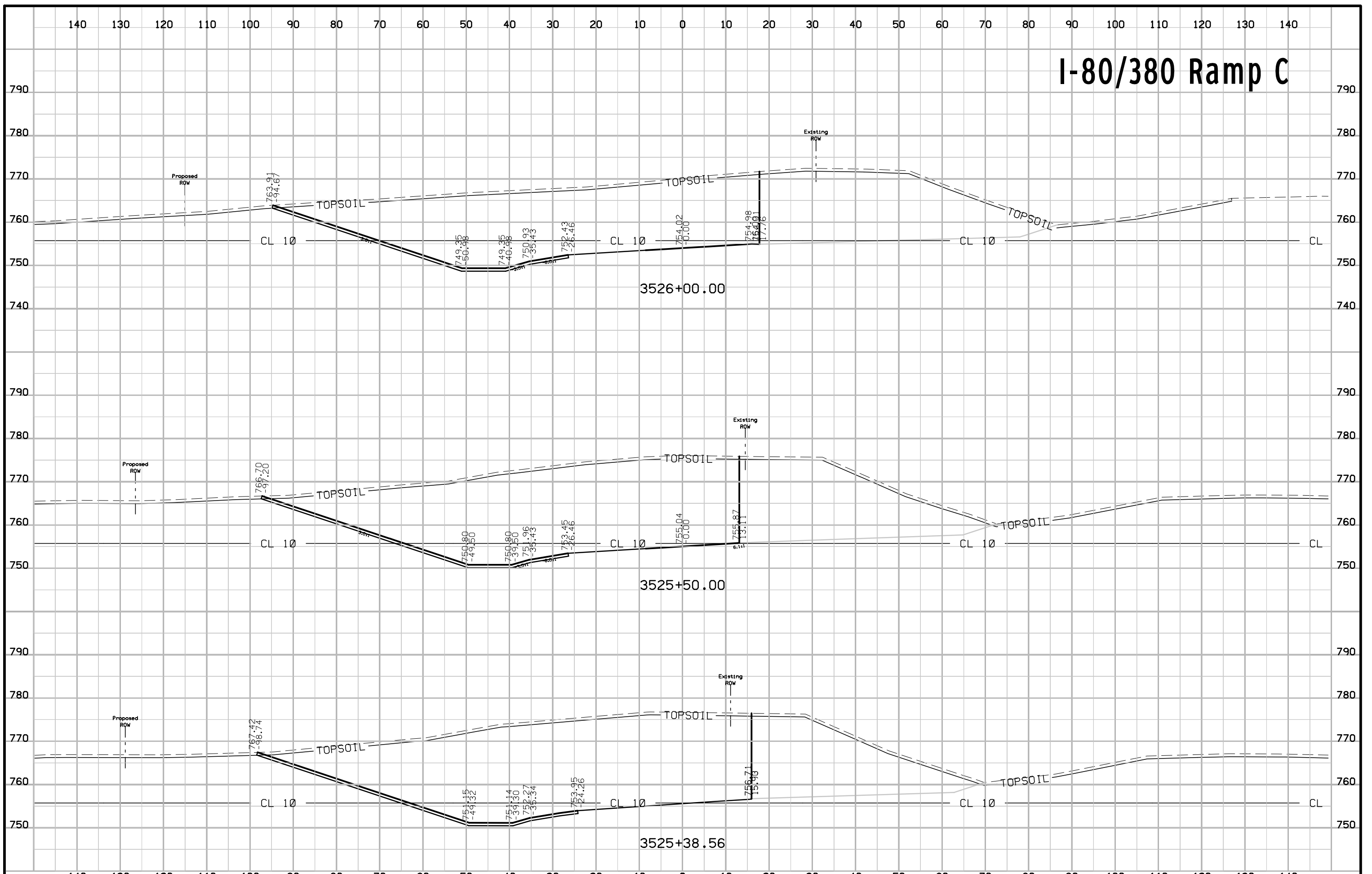


280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

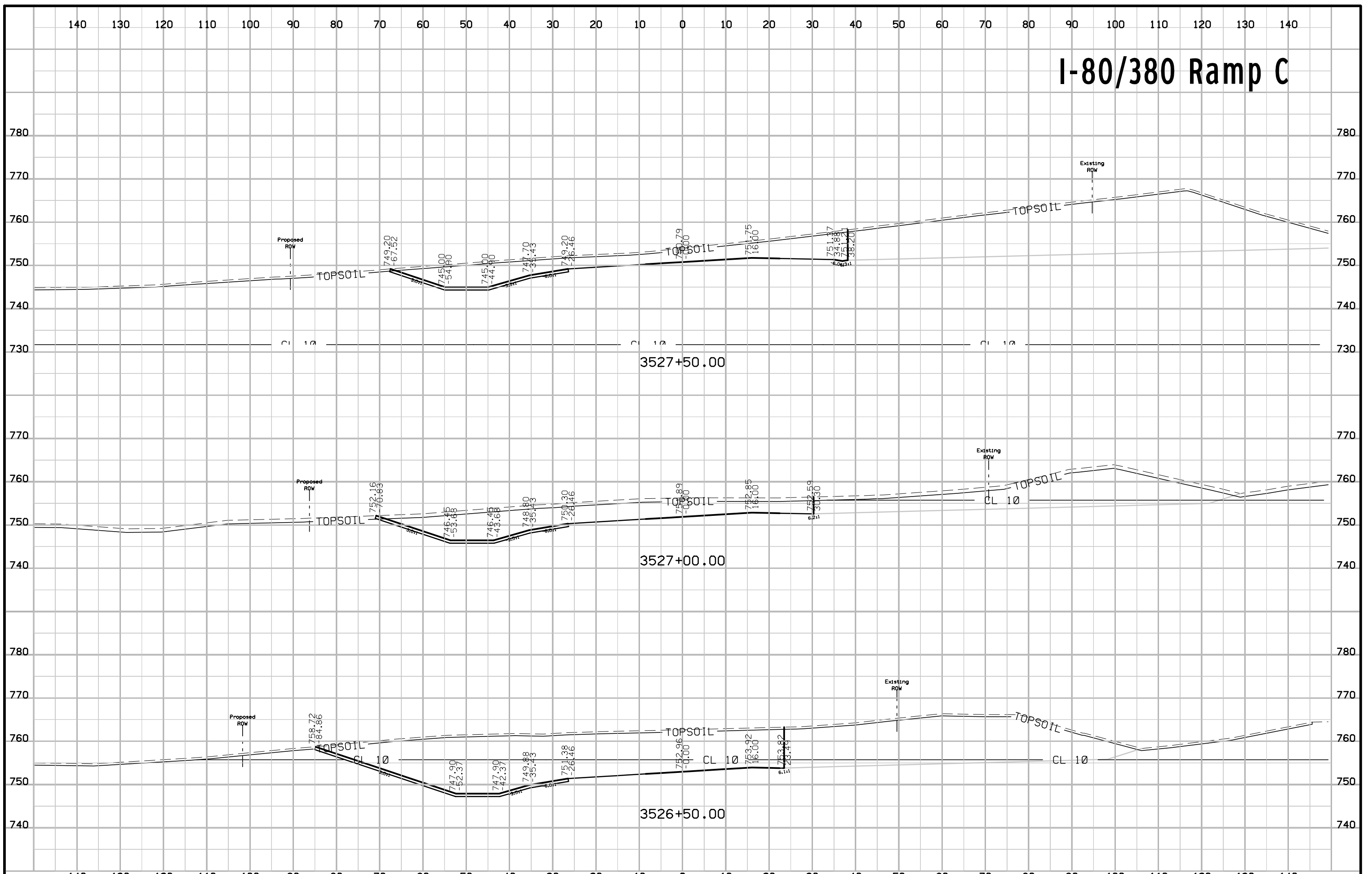
I-80/380 Ramp B/G Taper



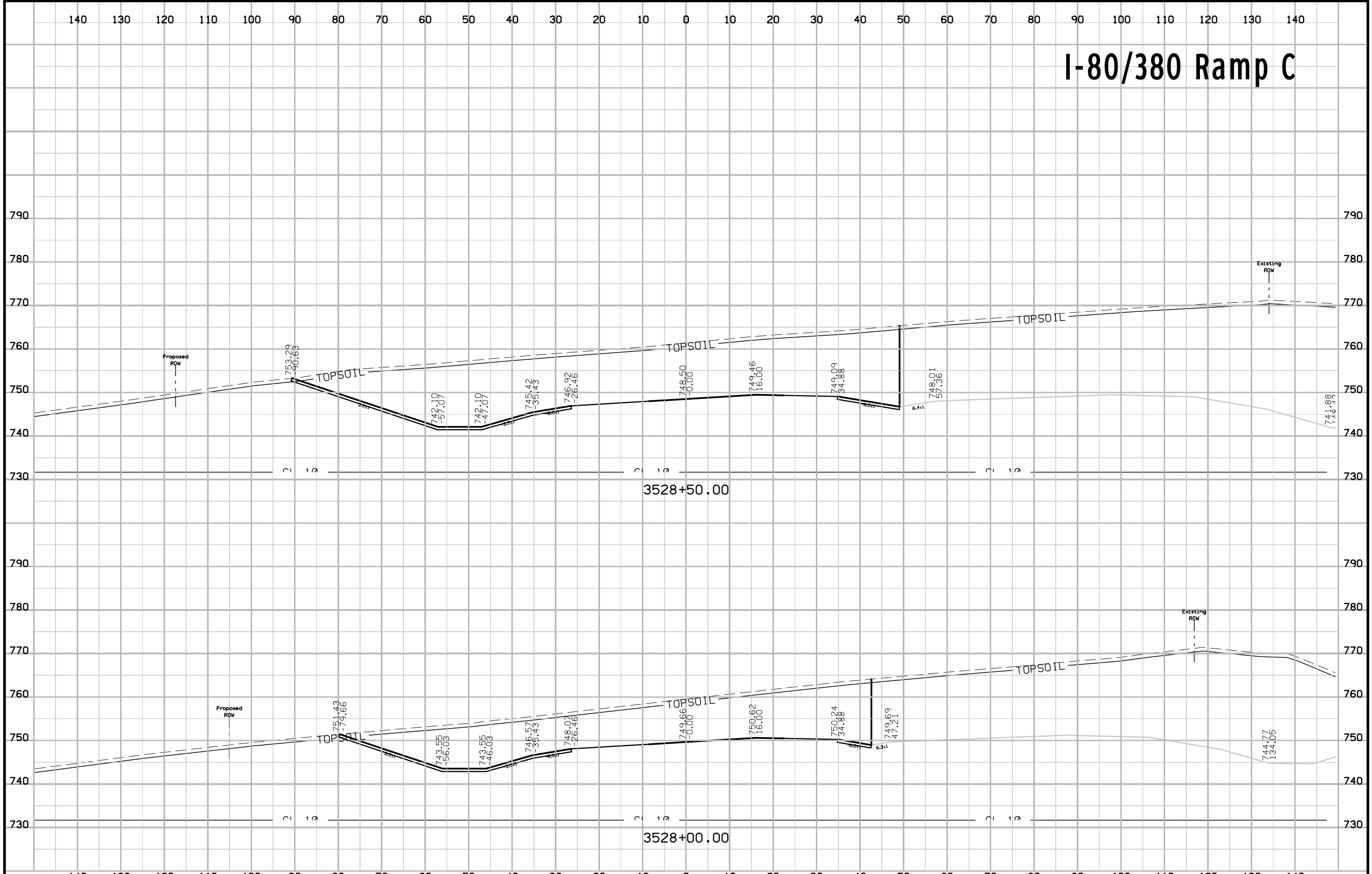
I-80/380 Ramp C



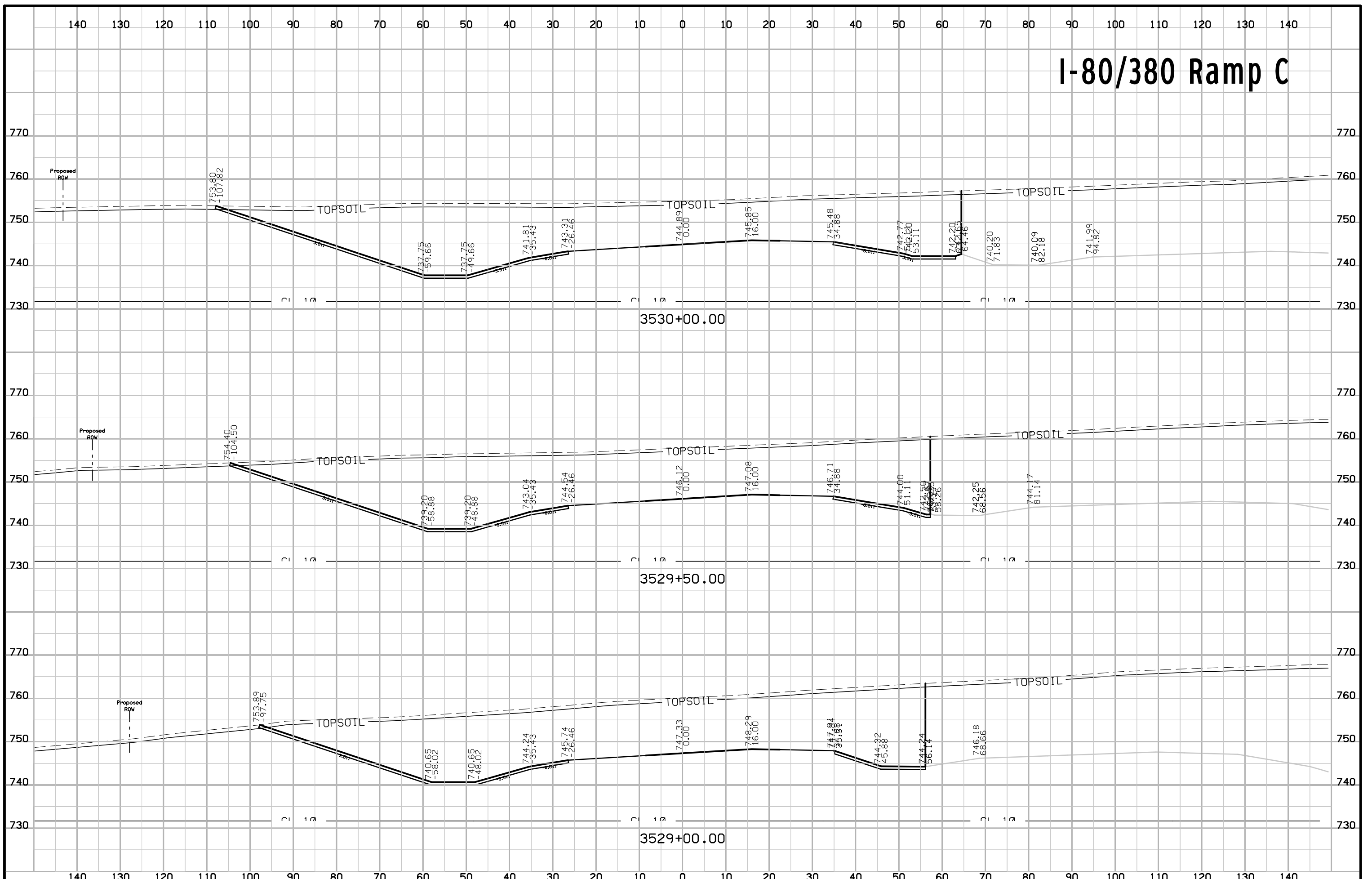
I-80/380 Ramp C



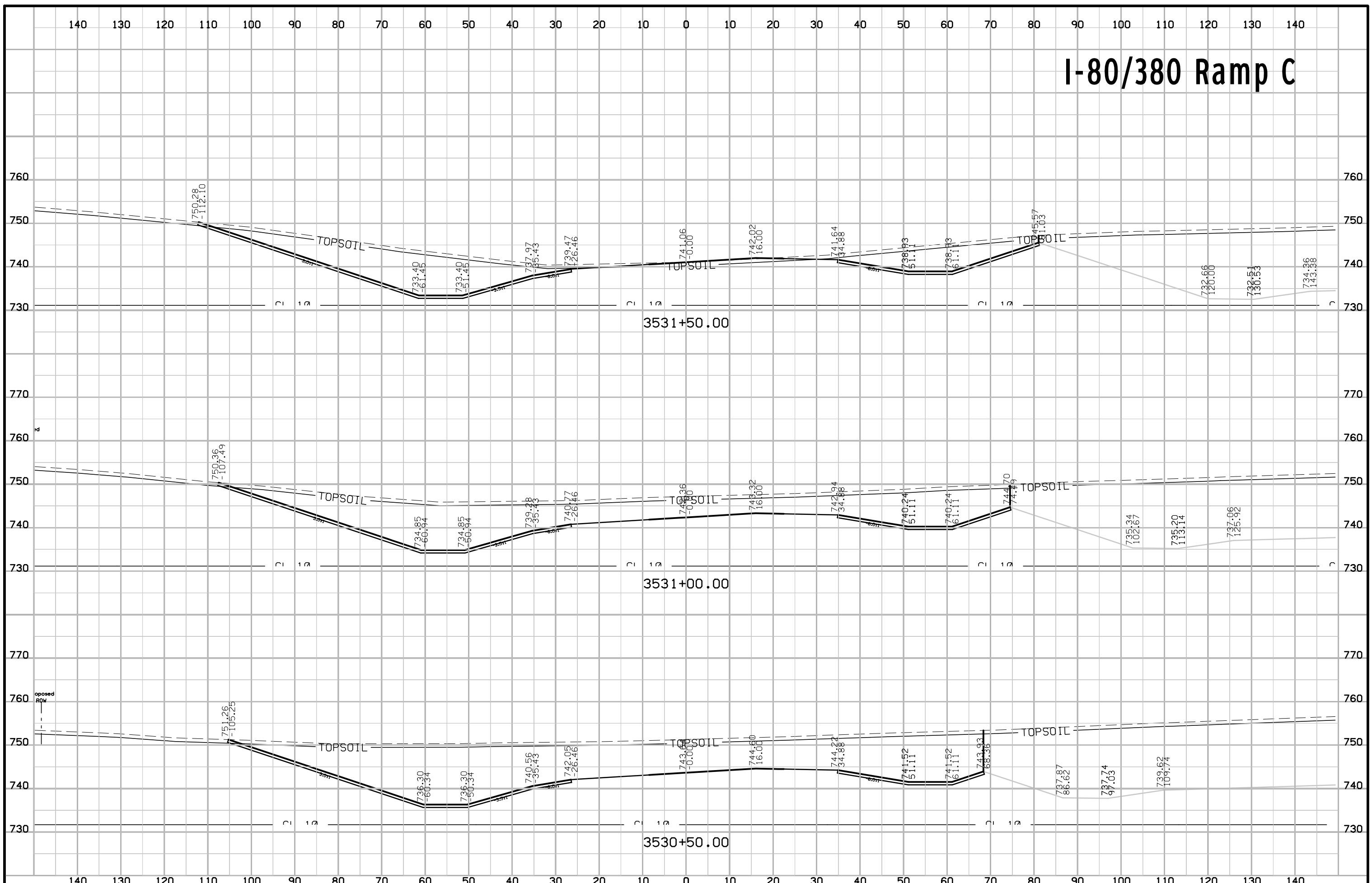
I-80/380 Ramp C



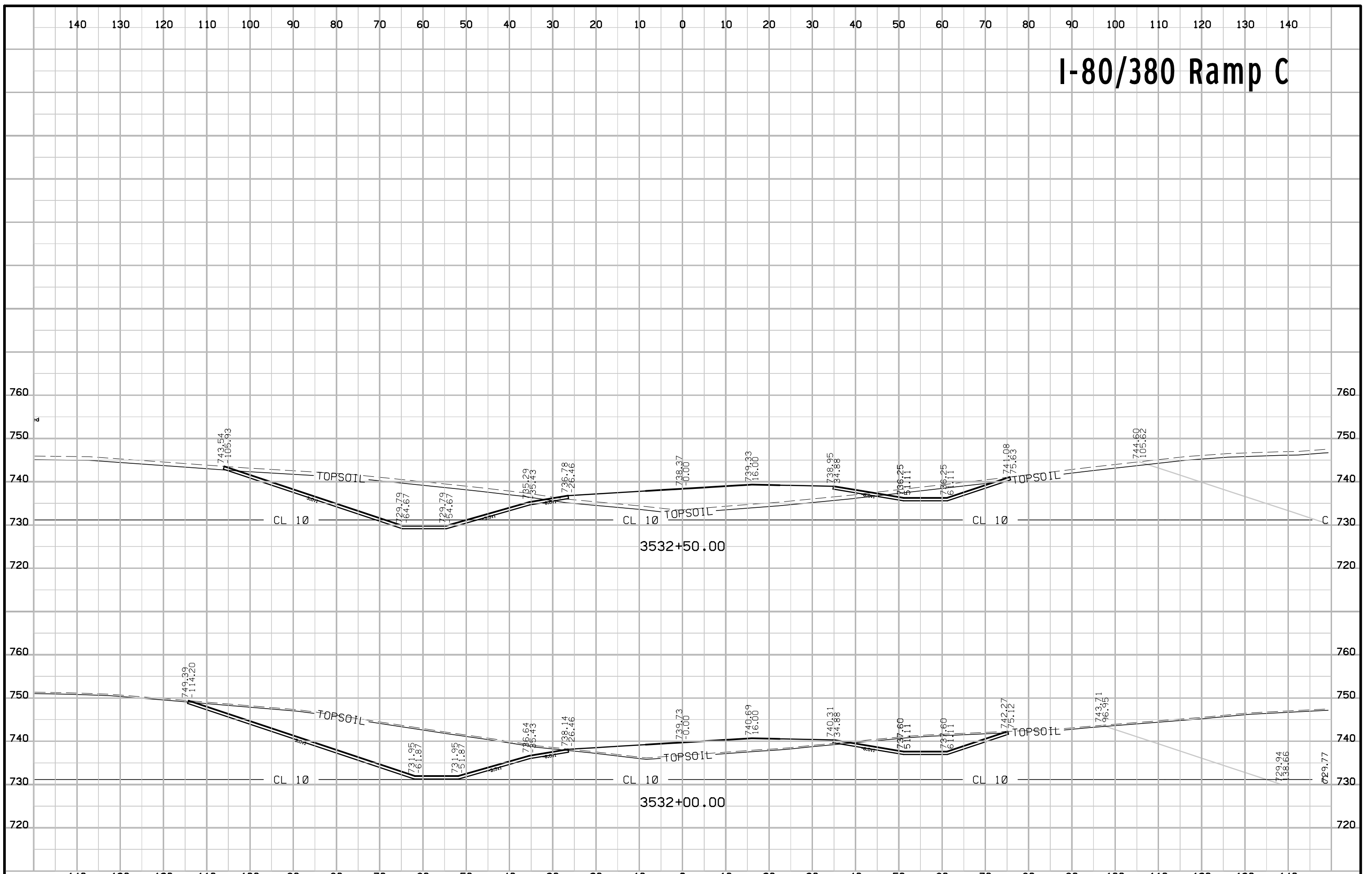
I-80/380 Ramp C



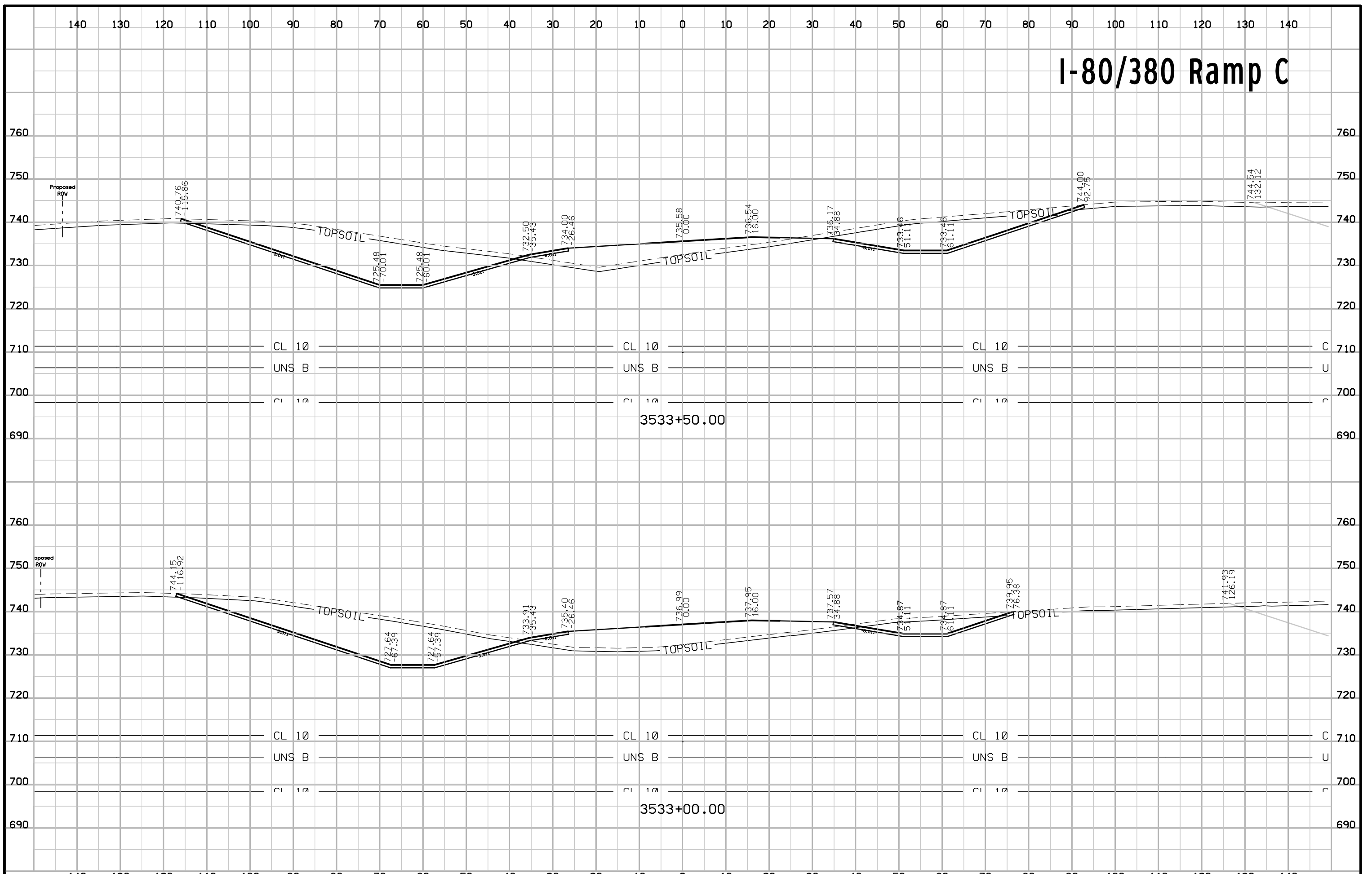
I-80/380 Ramp C



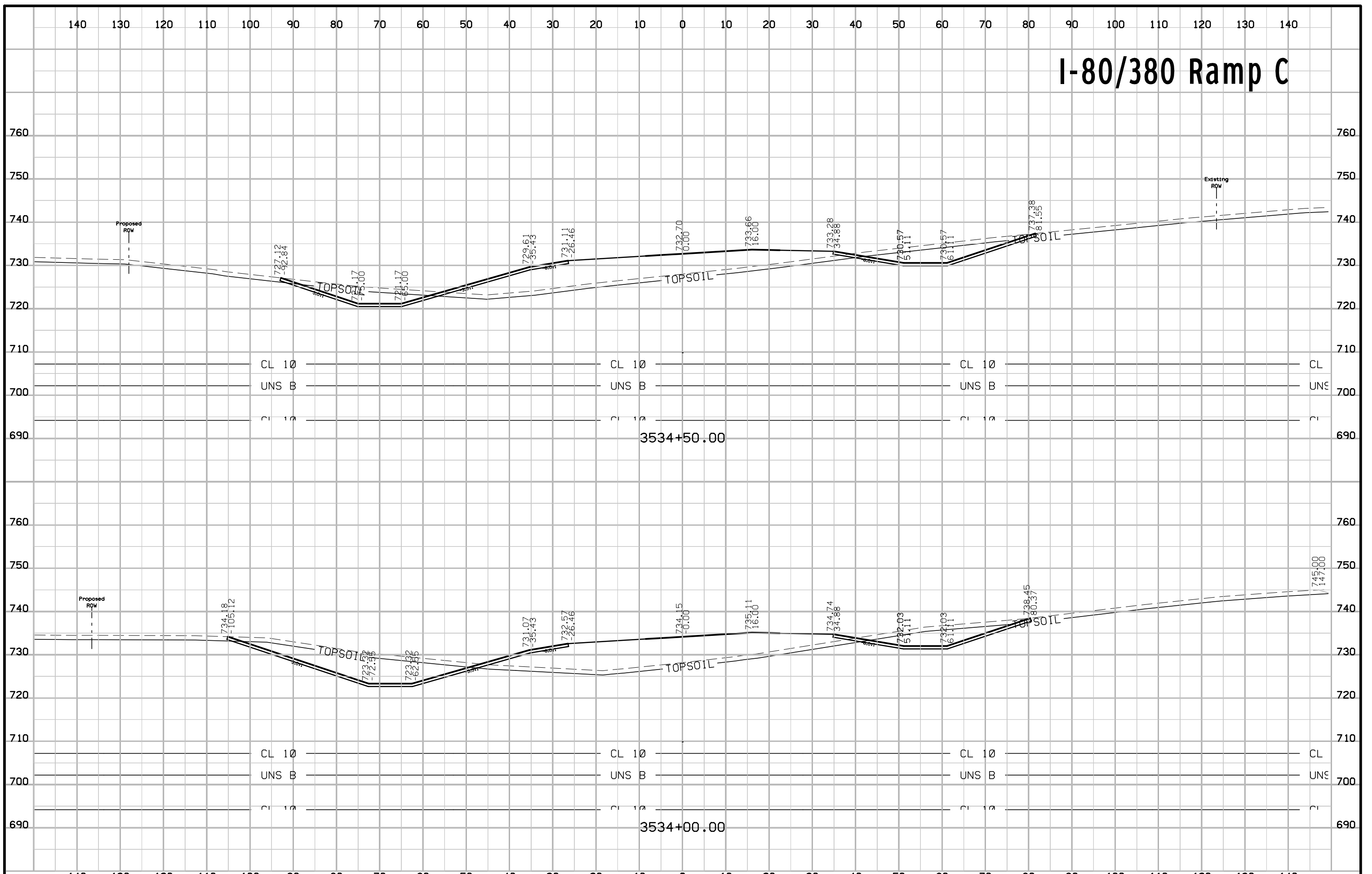
I-80/380 Ramp C



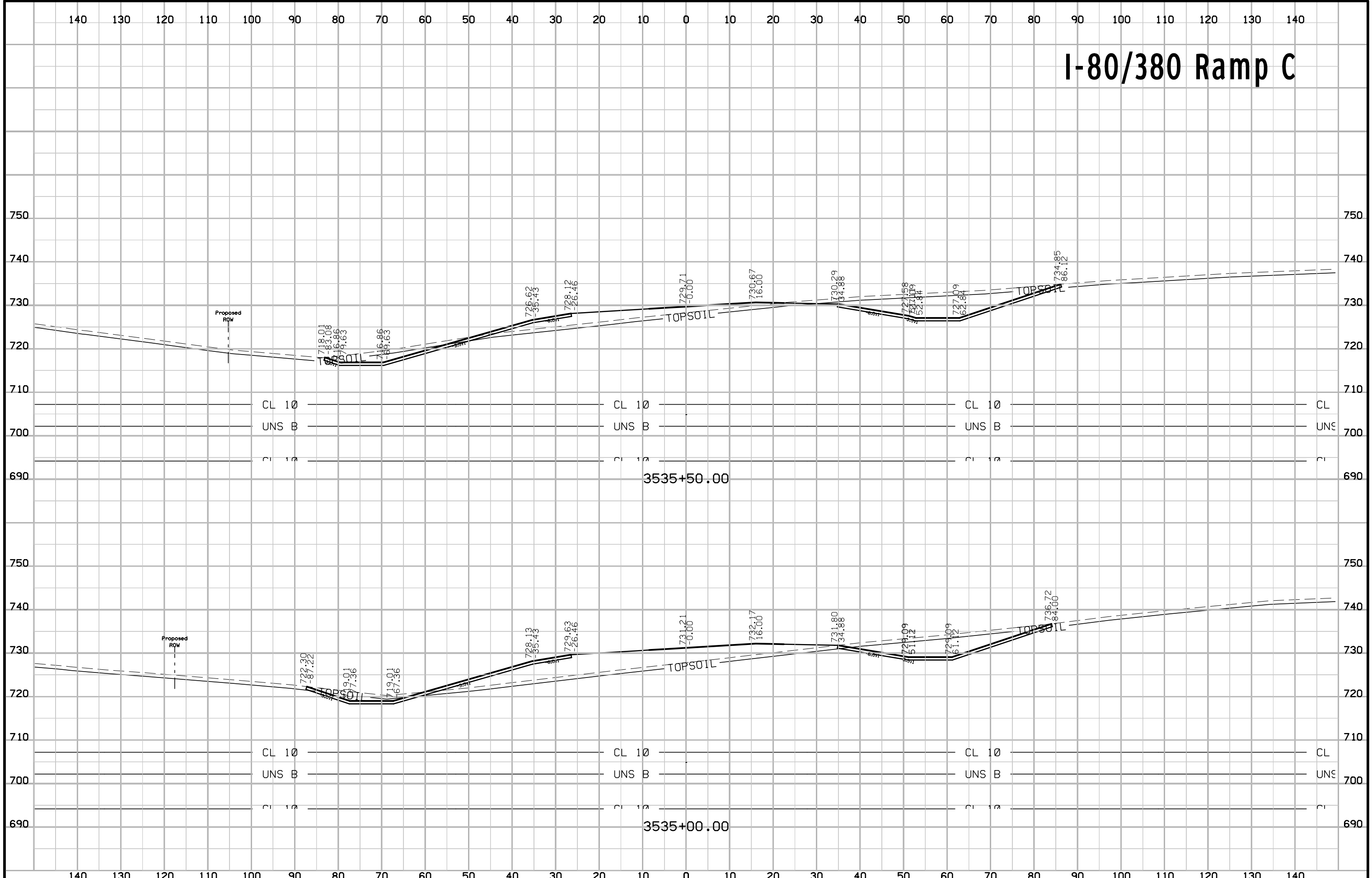
I-80/380 Ramp C



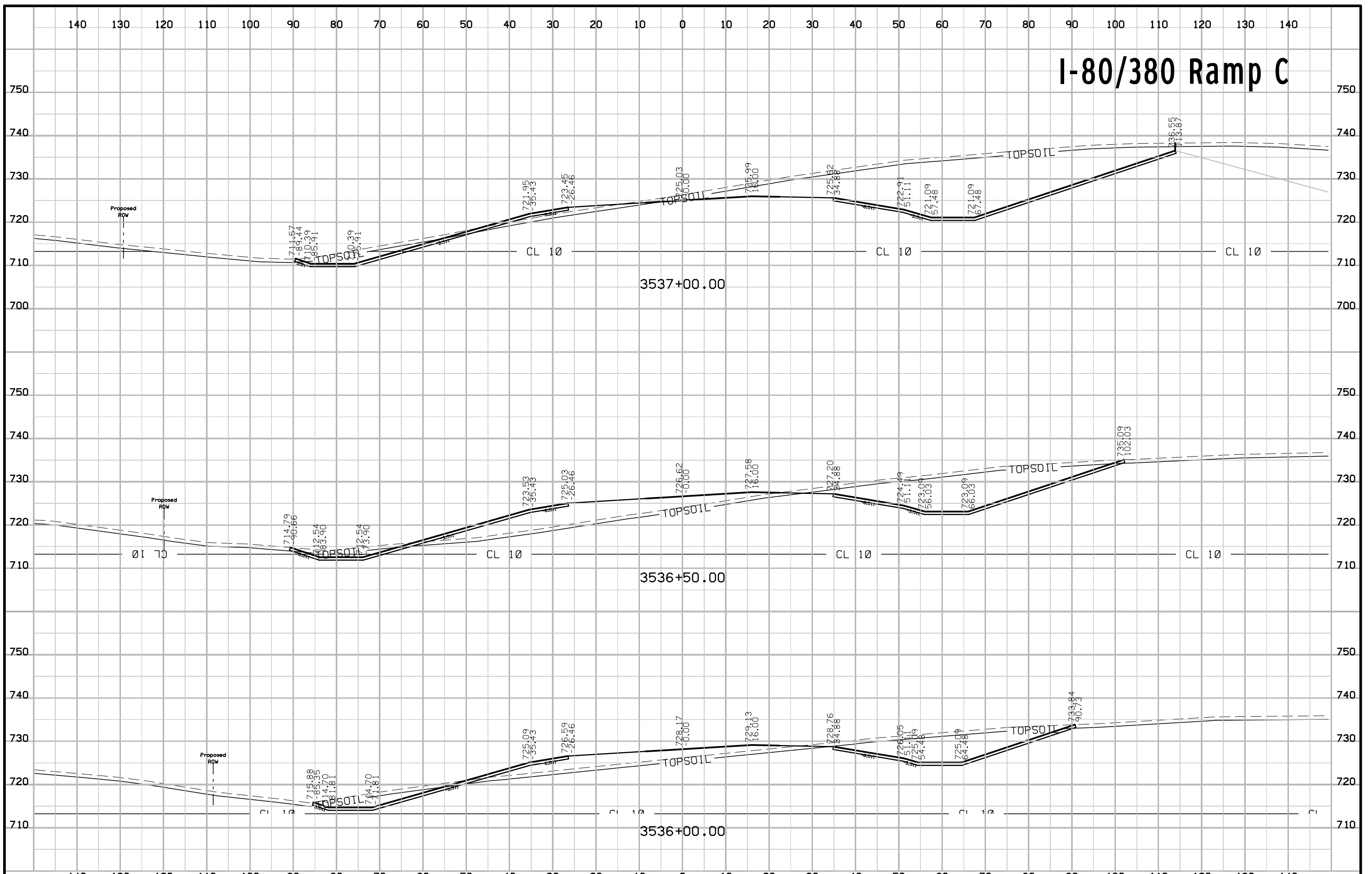
I-80/380 Ramp C



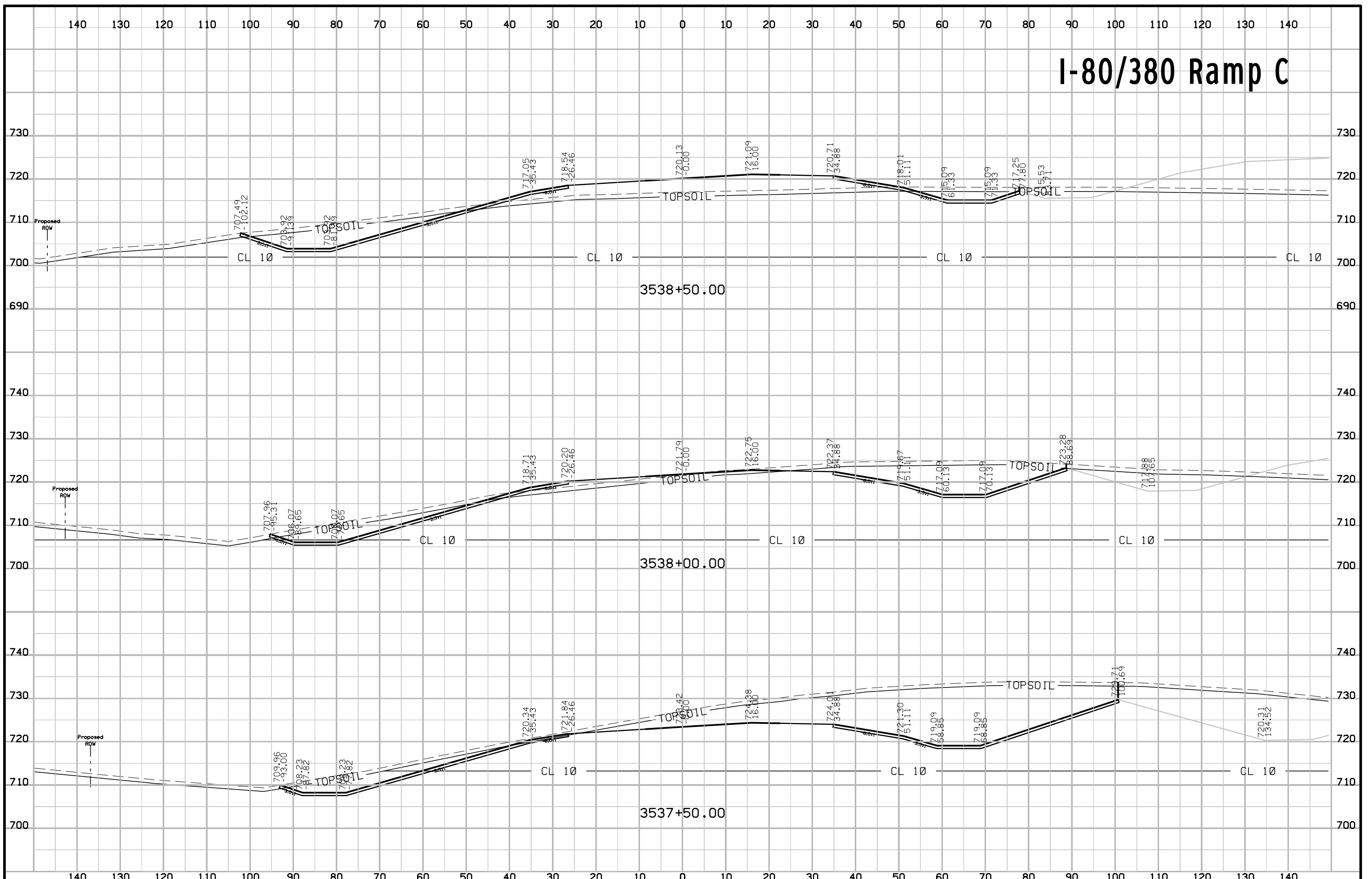
I-80/380 Ramp C



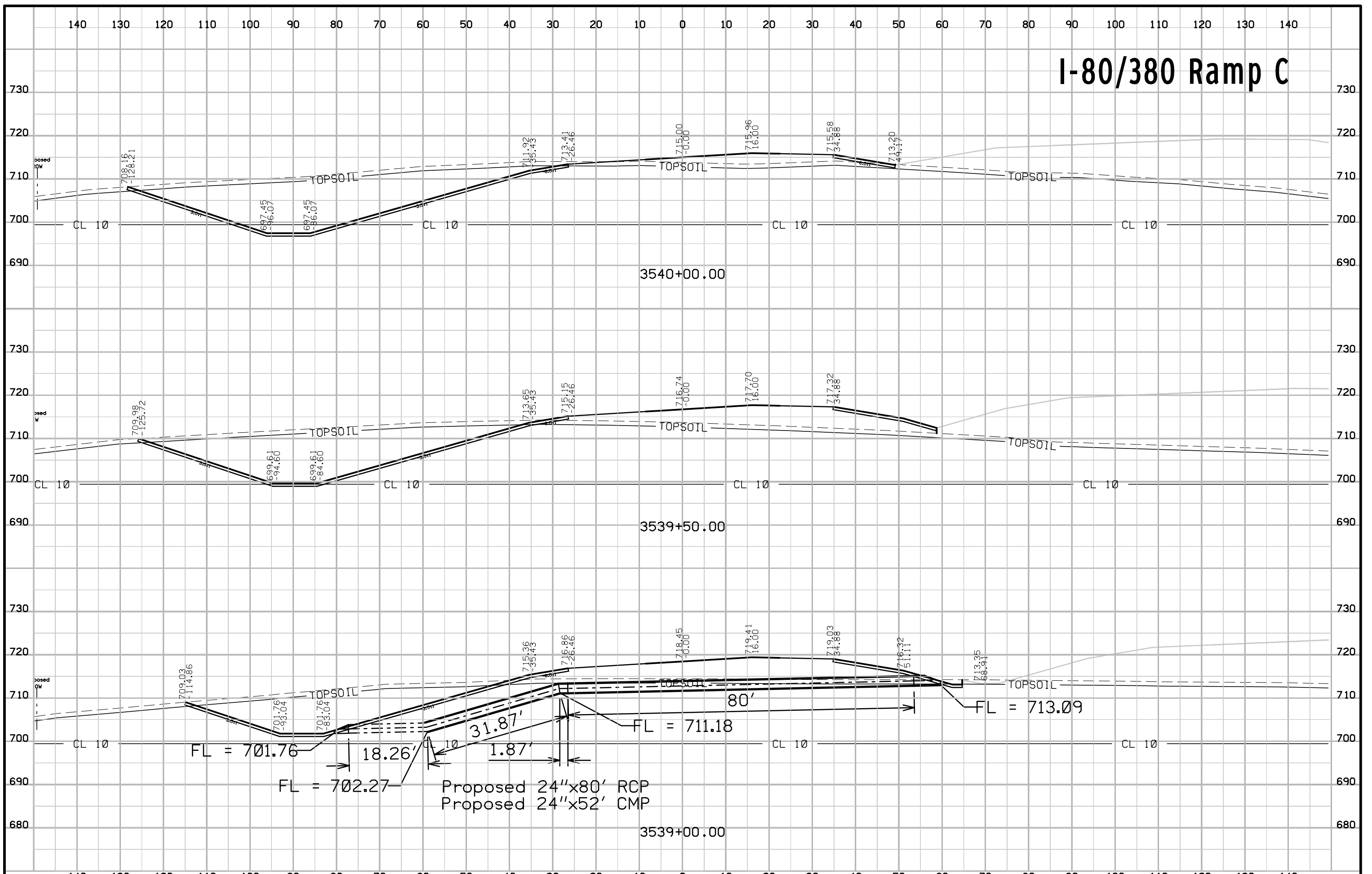
I-80/380 Ramp C



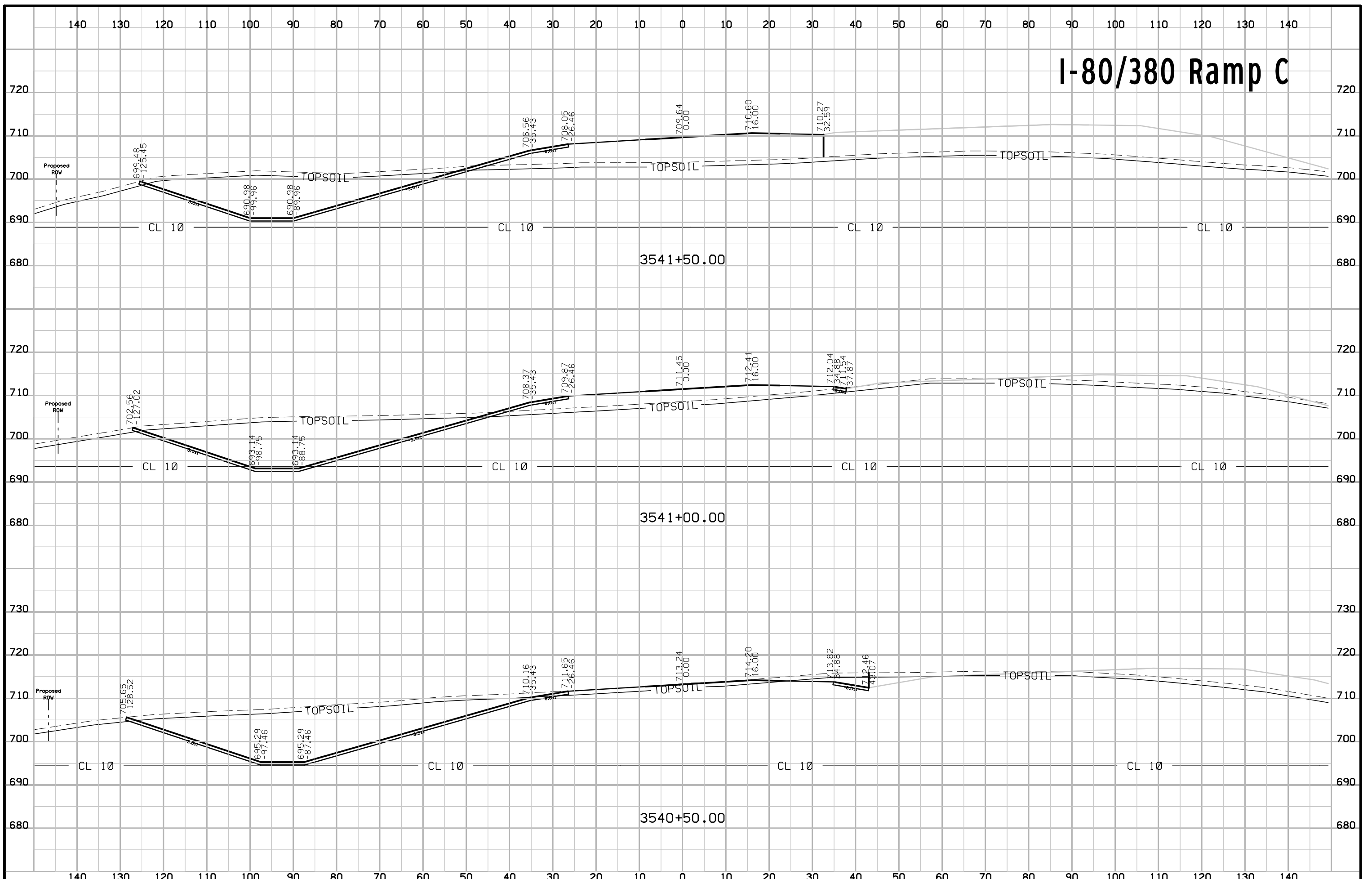
I-80/380 Ramp C



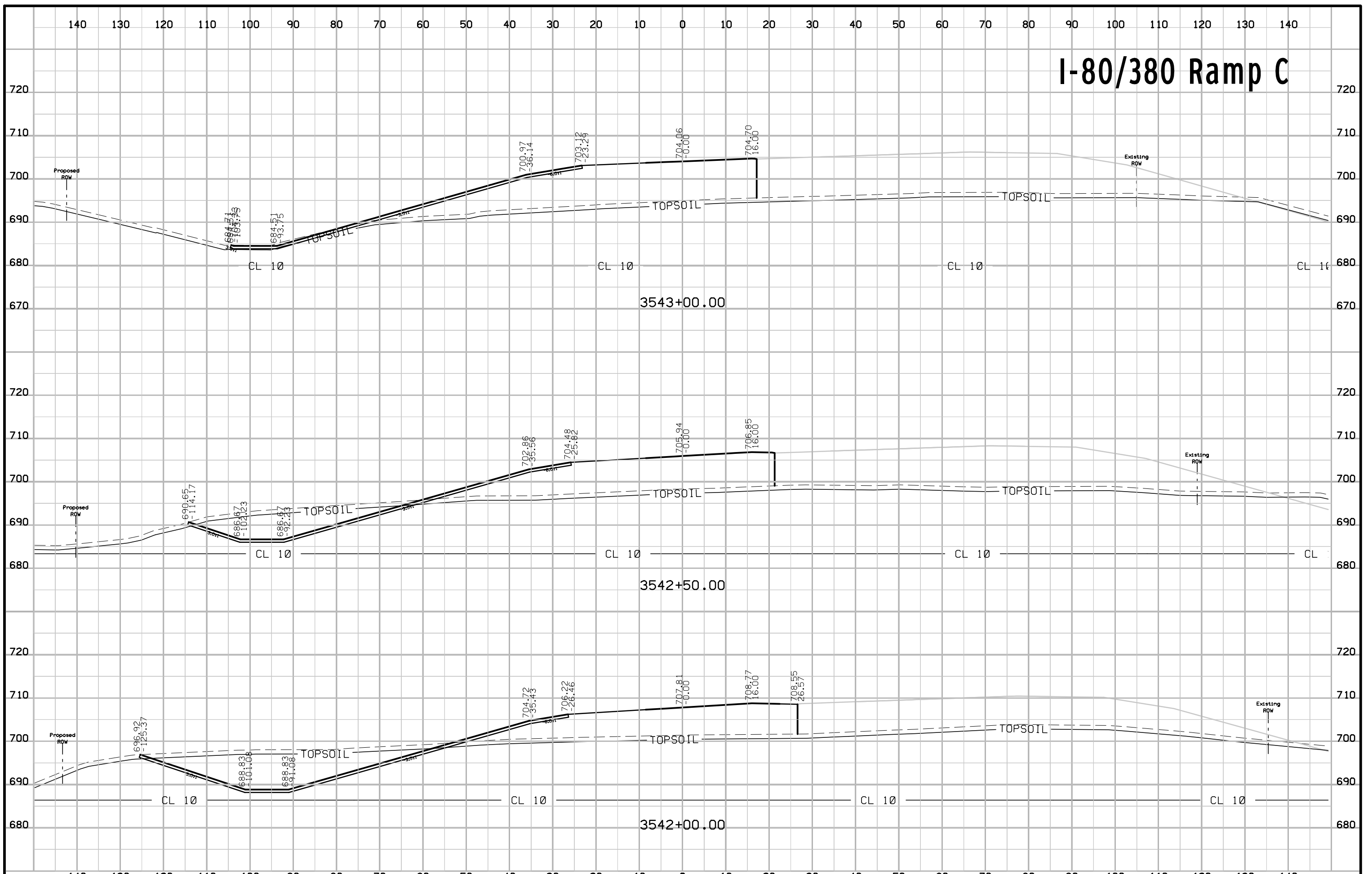
I-80/380 Ramp C



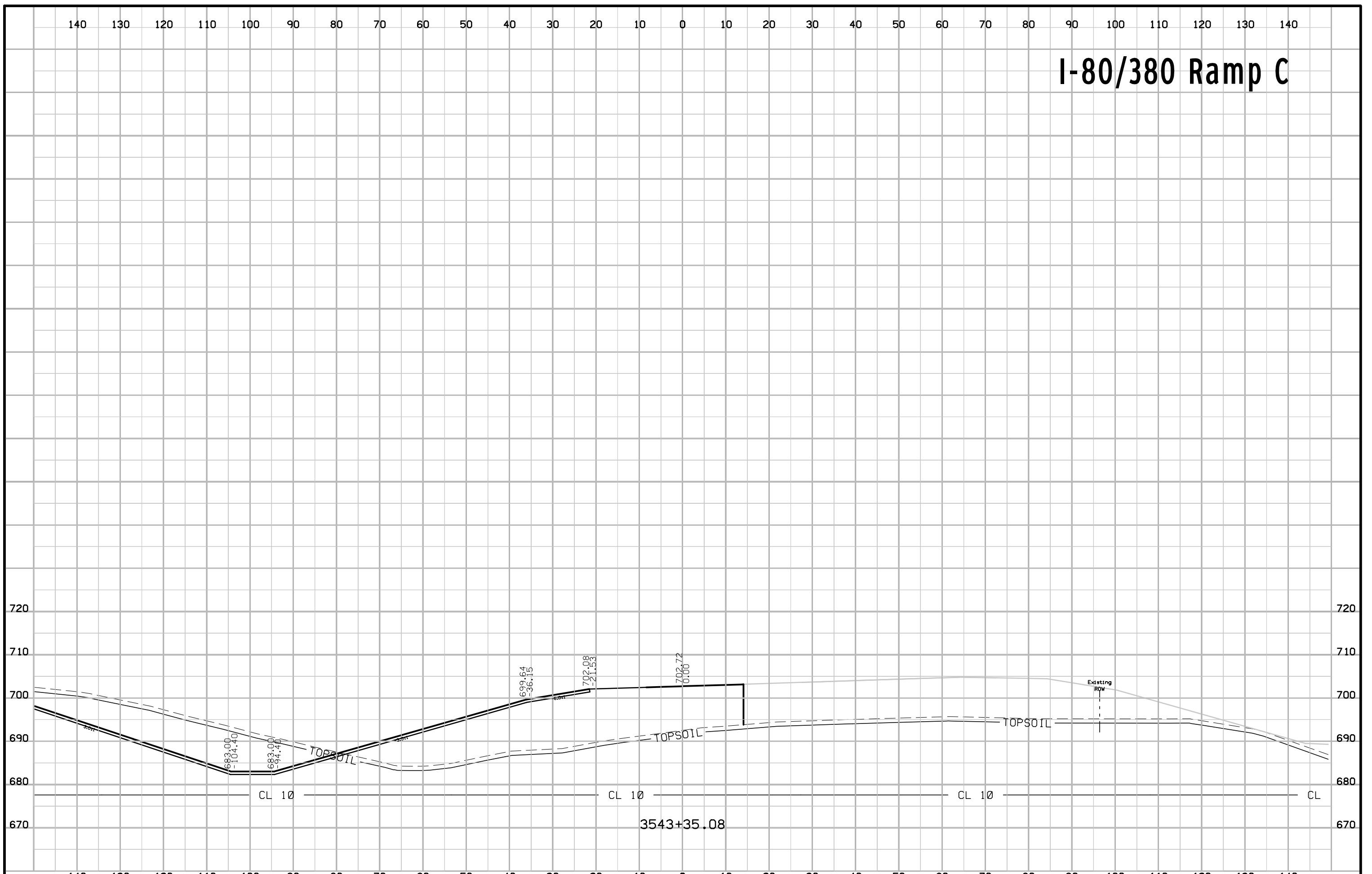
I-80/380 Ramp C



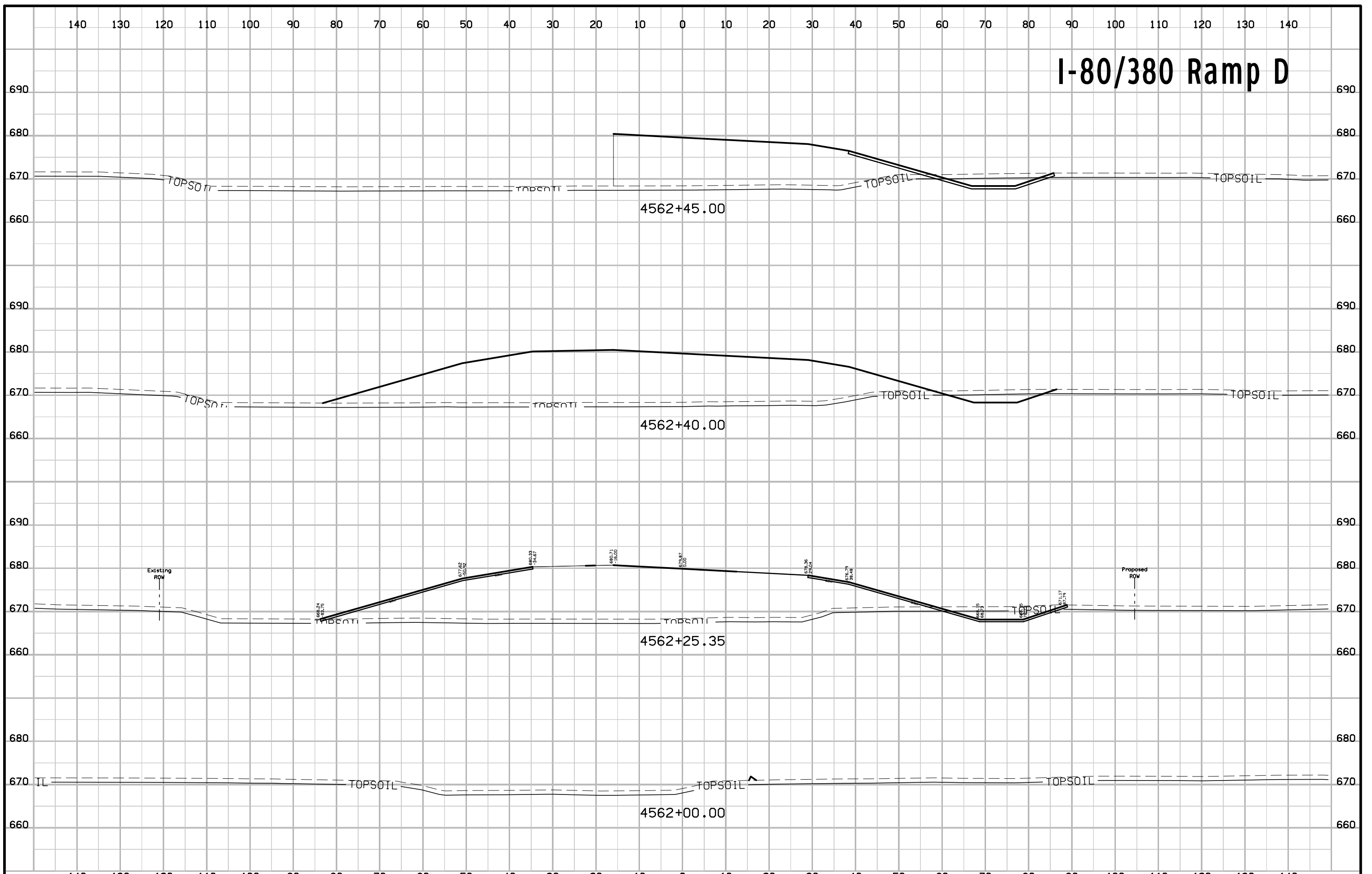
I-80/380 Ramp C



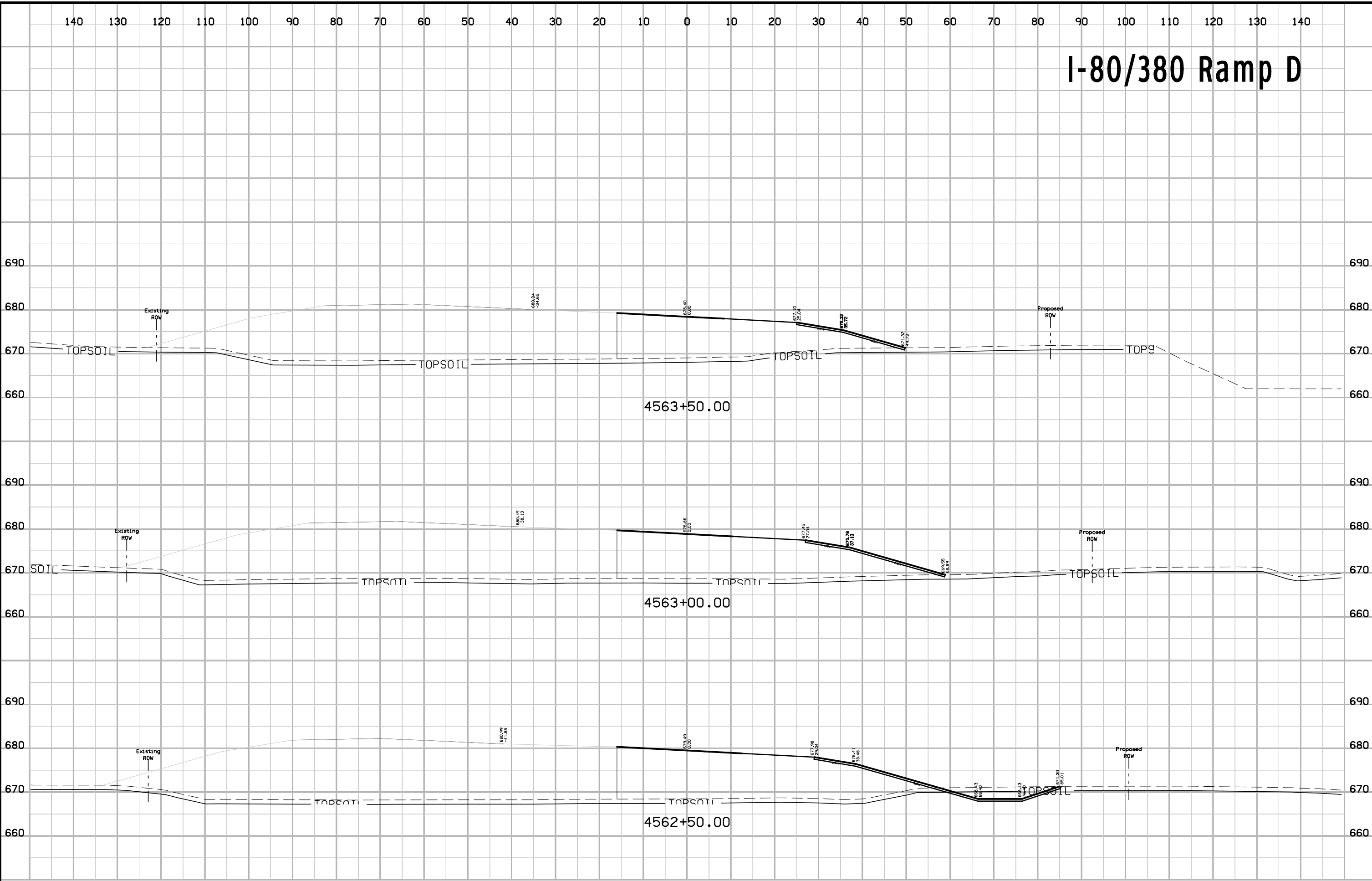
I-80/380 Ramp C



I-80/380 Ramp D



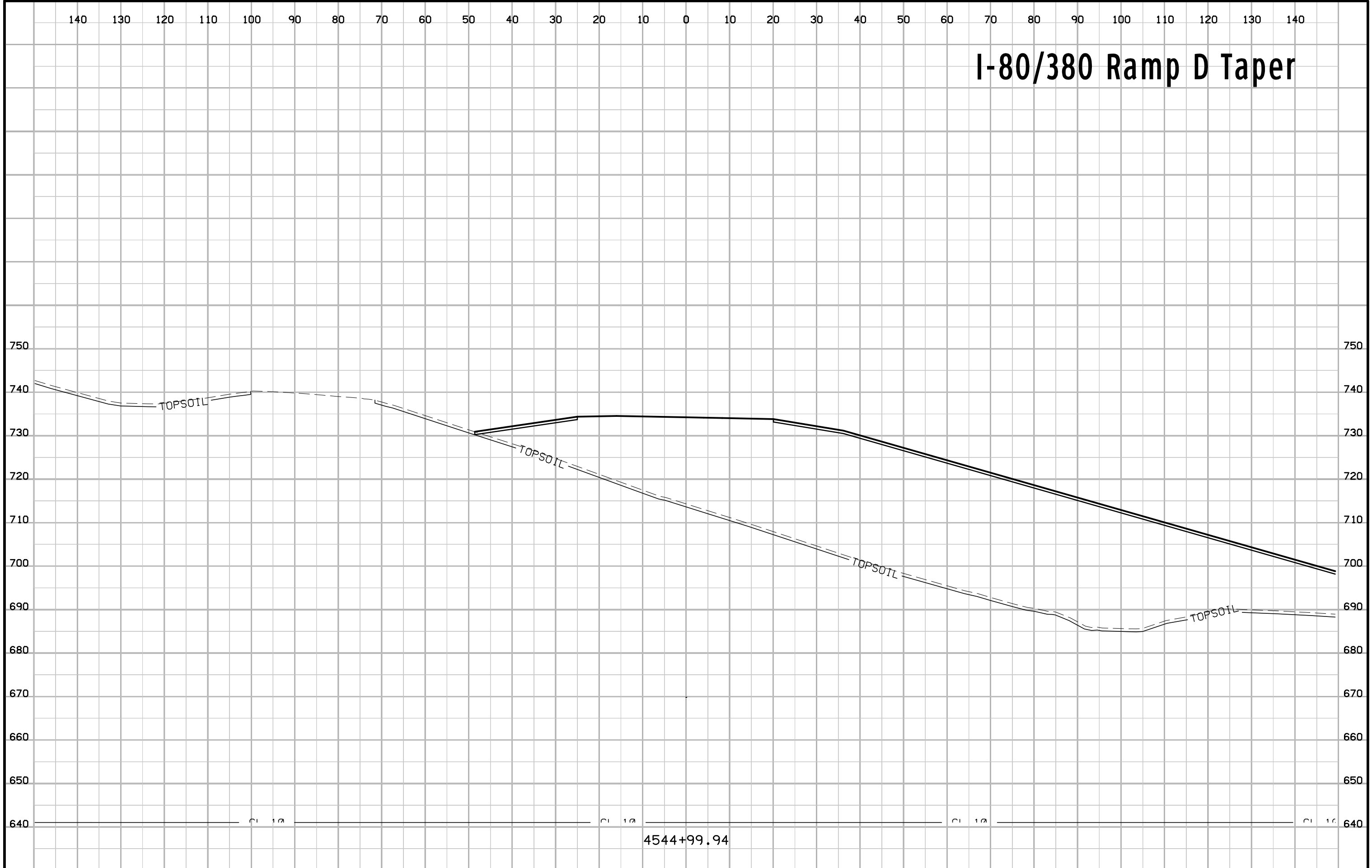
I-80/380 Ramp D



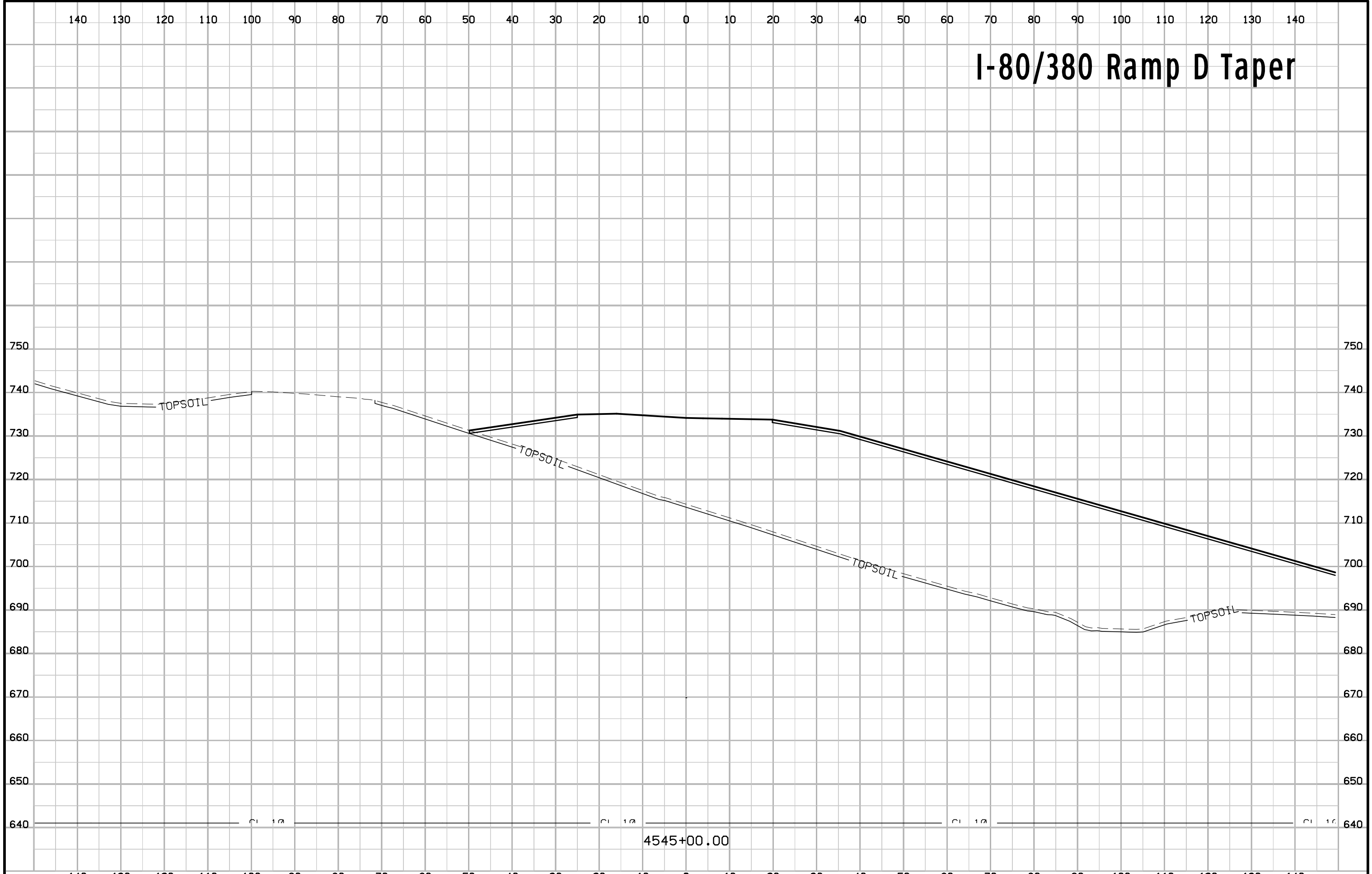
I-80/380 Ramp D



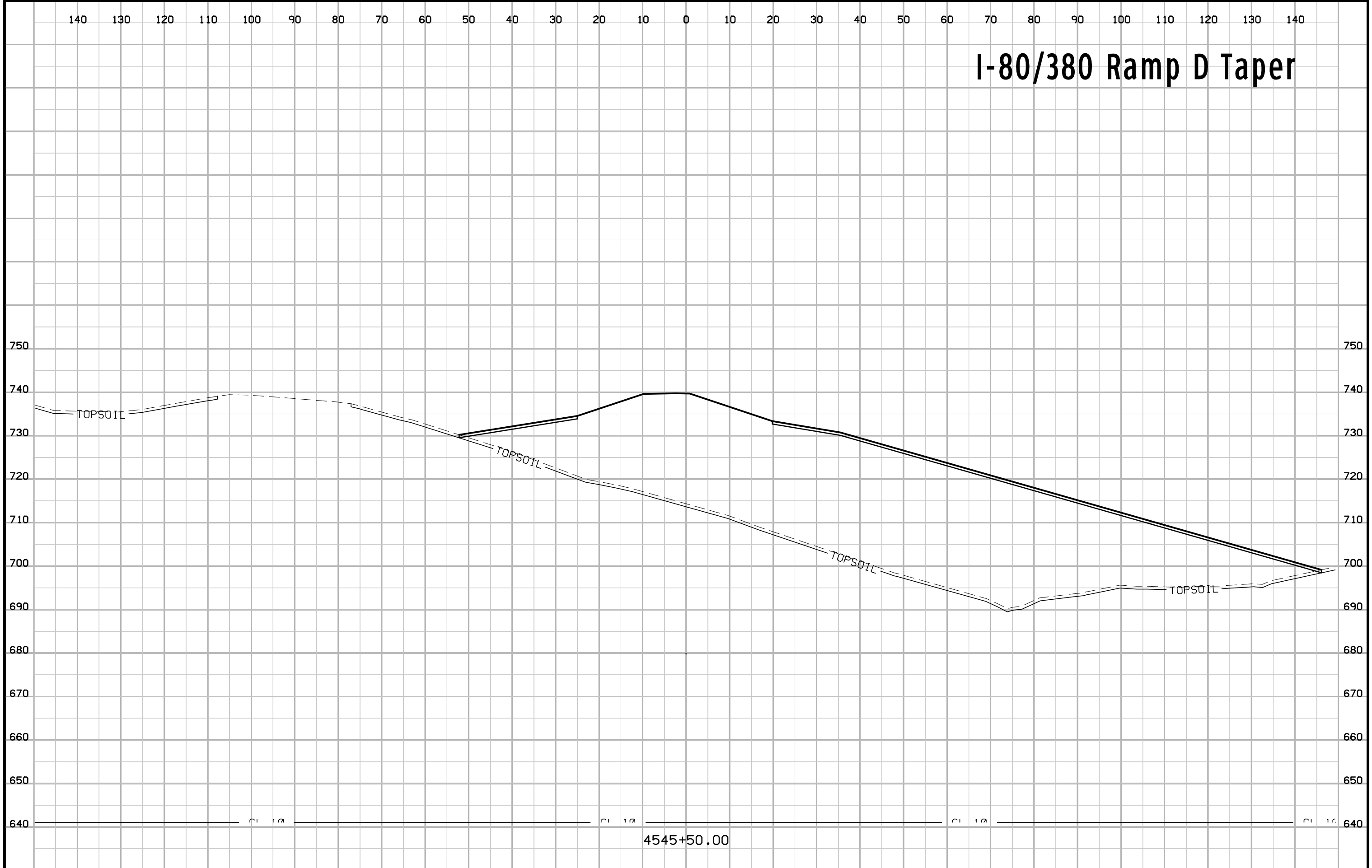
I-80/380 Ramp D Taper



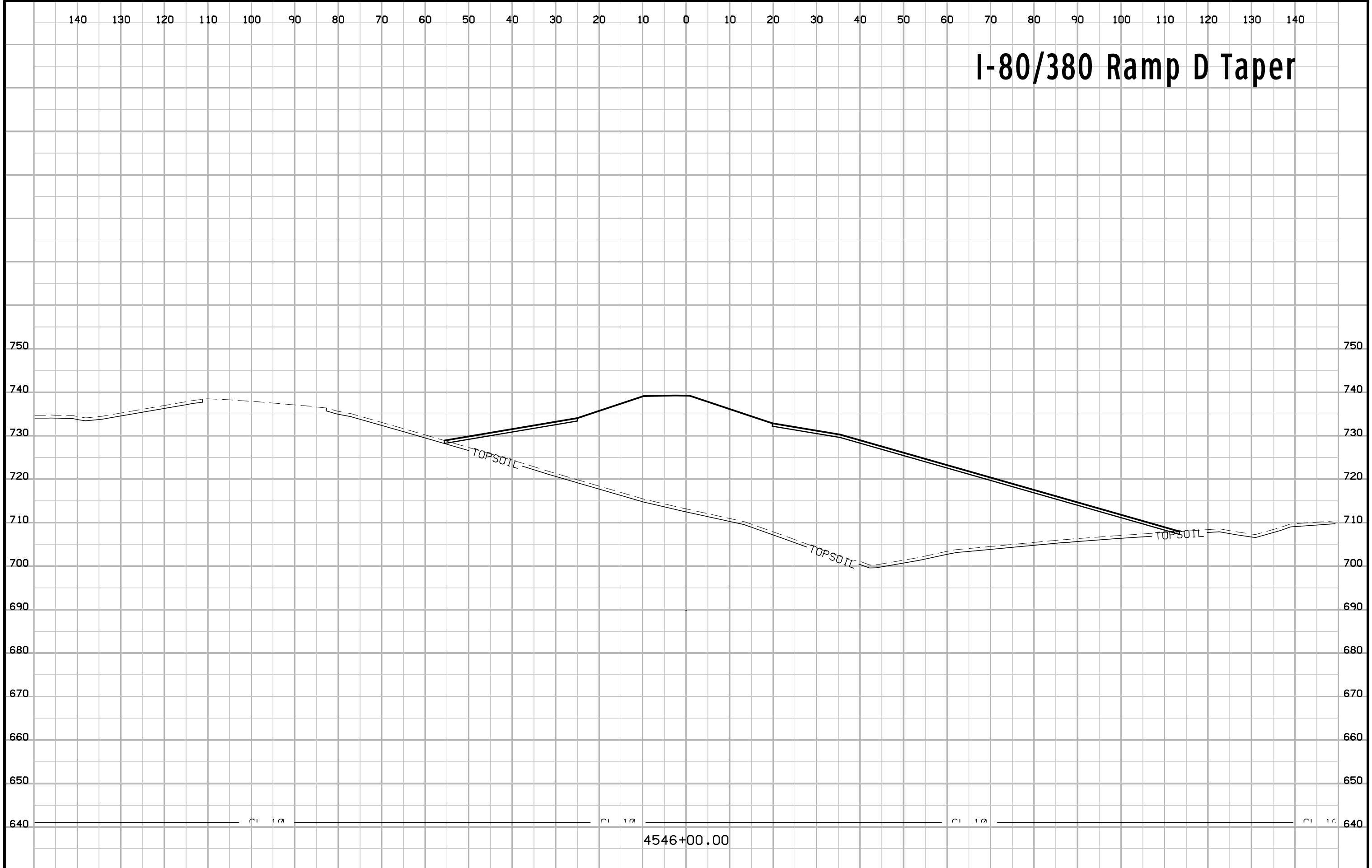
I-80/380 Ramp D Taper



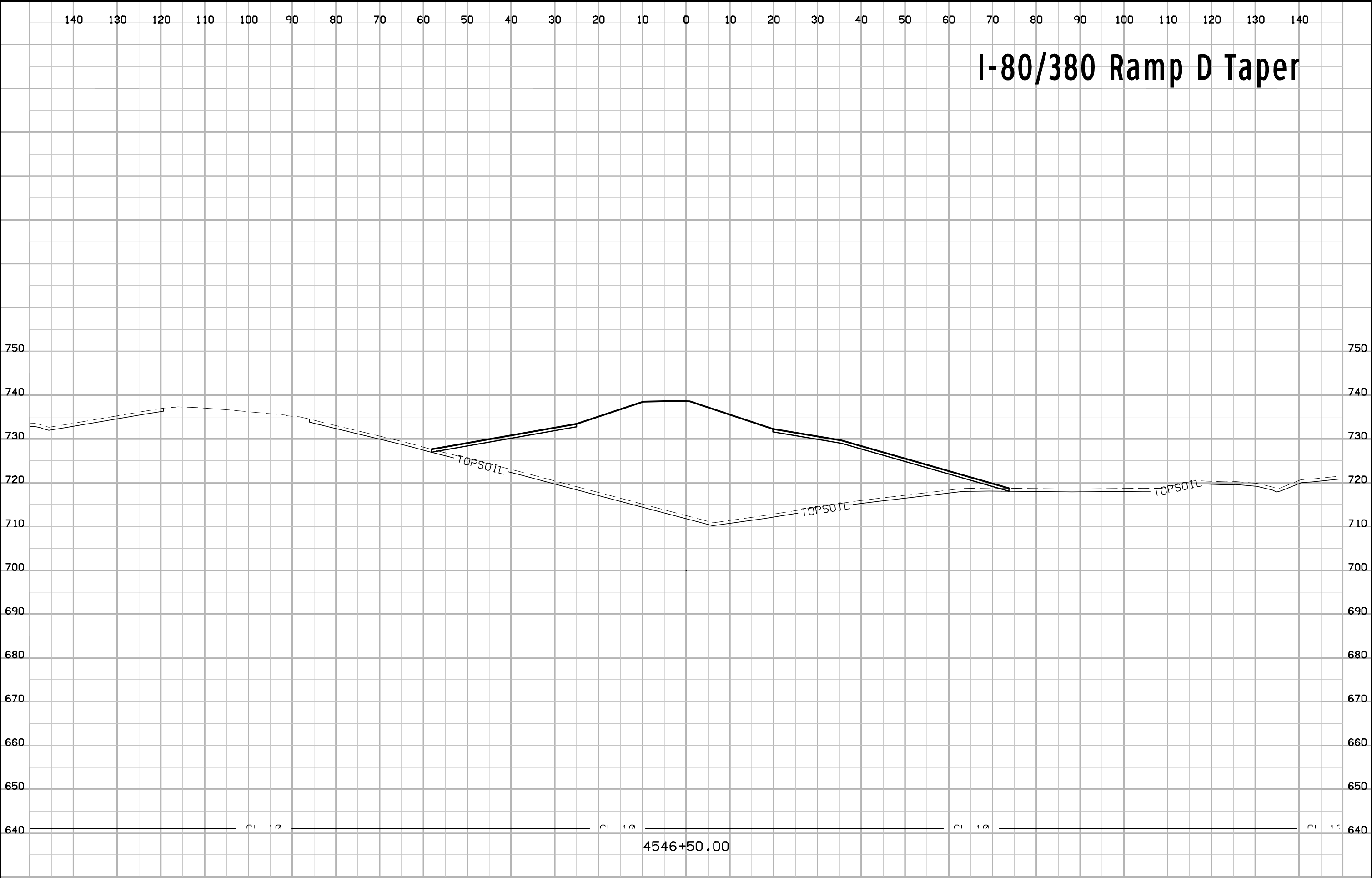
I-80/380 Ramp D Taper



I-80/380 Ramp D Taper

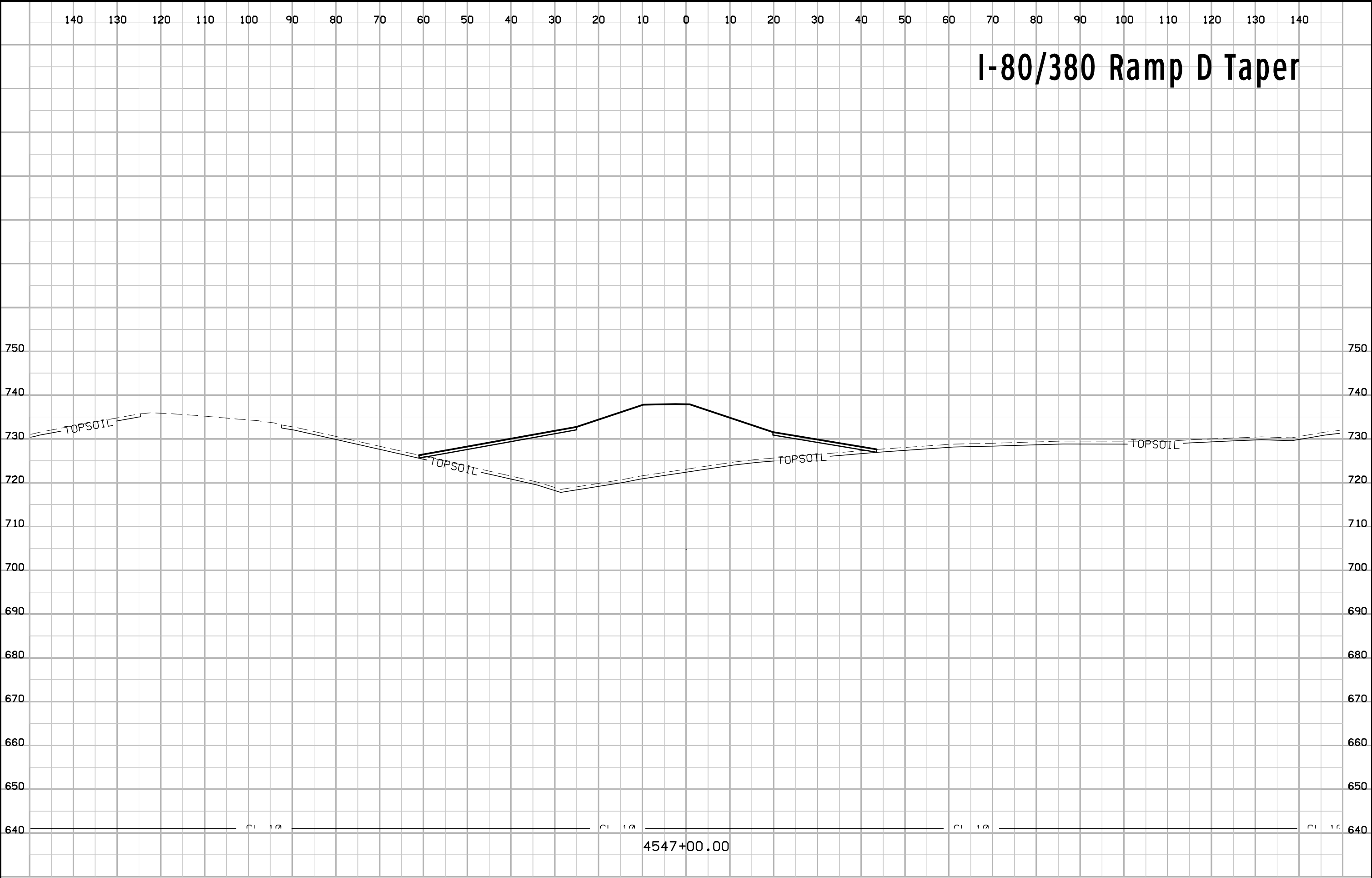


I-80/380 Ramp D Taper

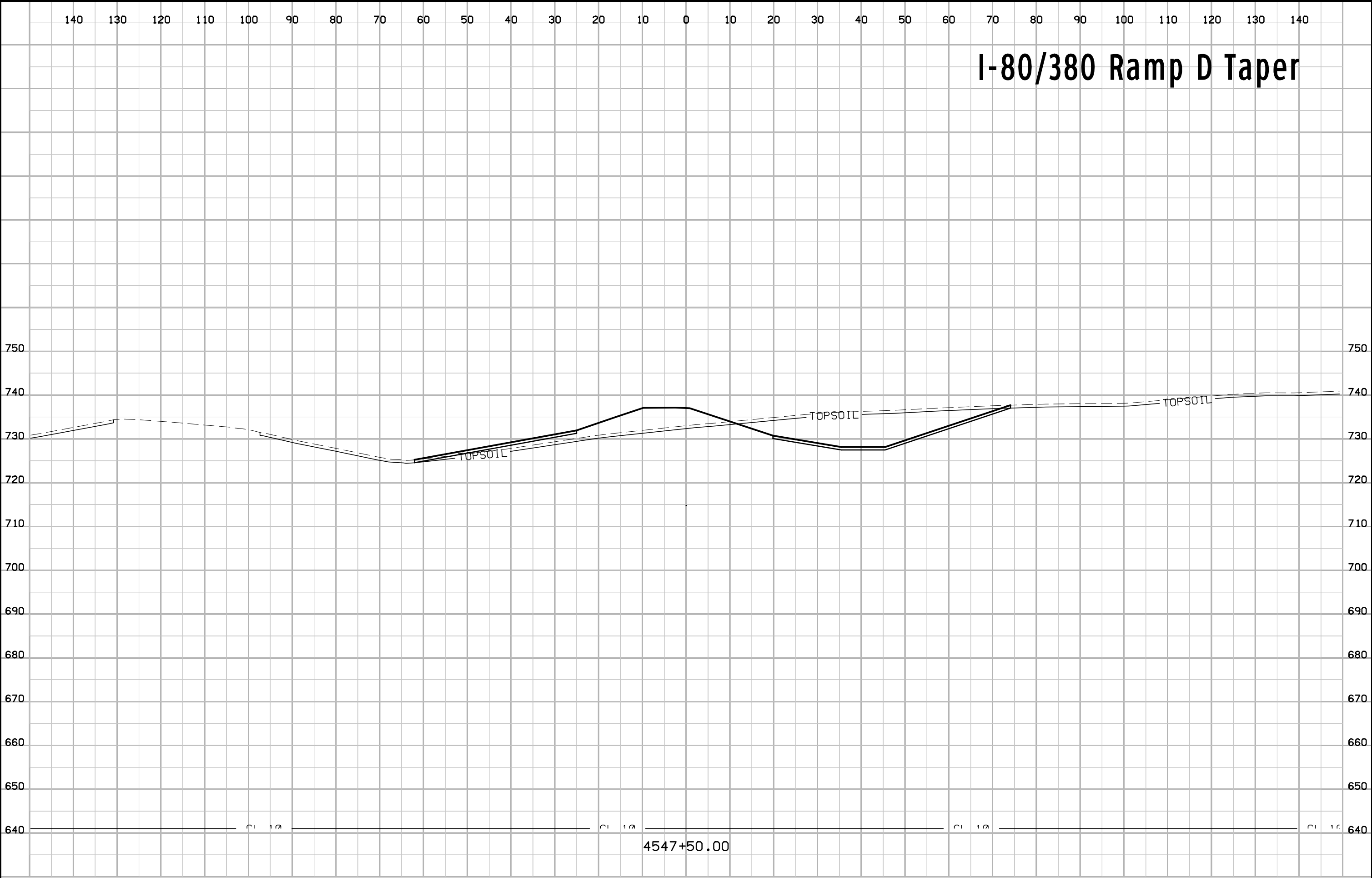


4546+50.00

I-80/380 Ramp D Taper

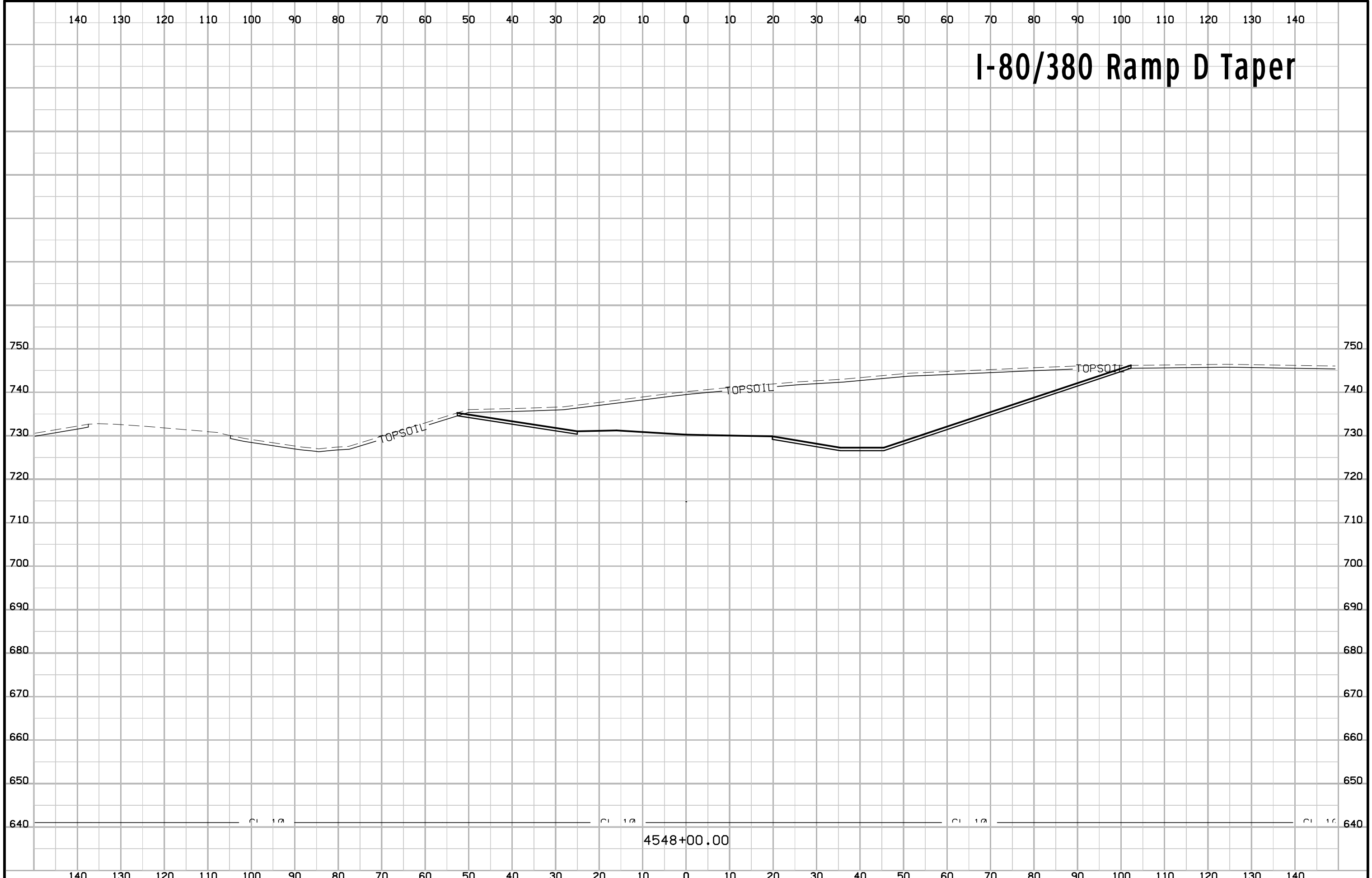


I-80/380 Ramp D Taper

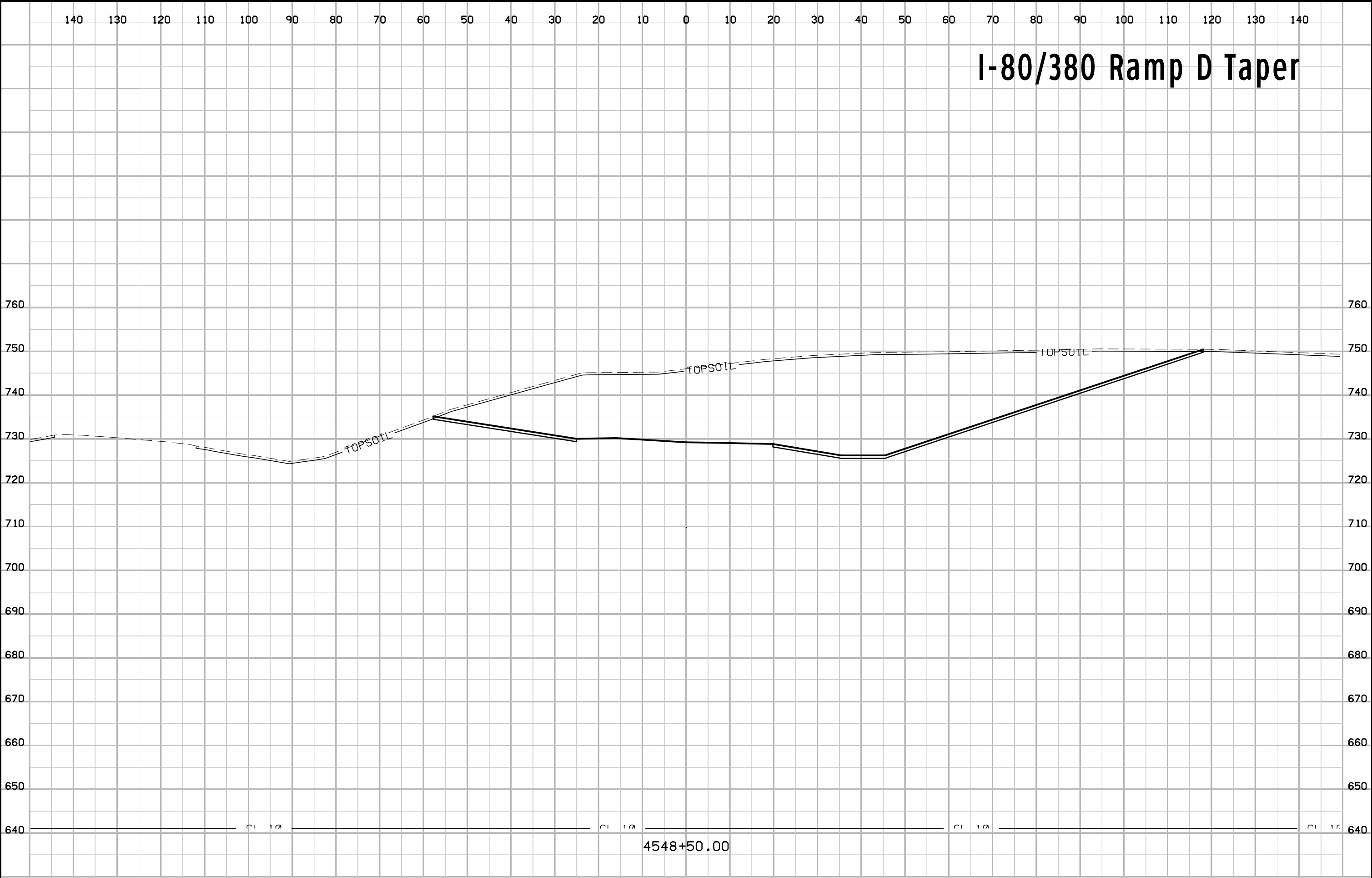


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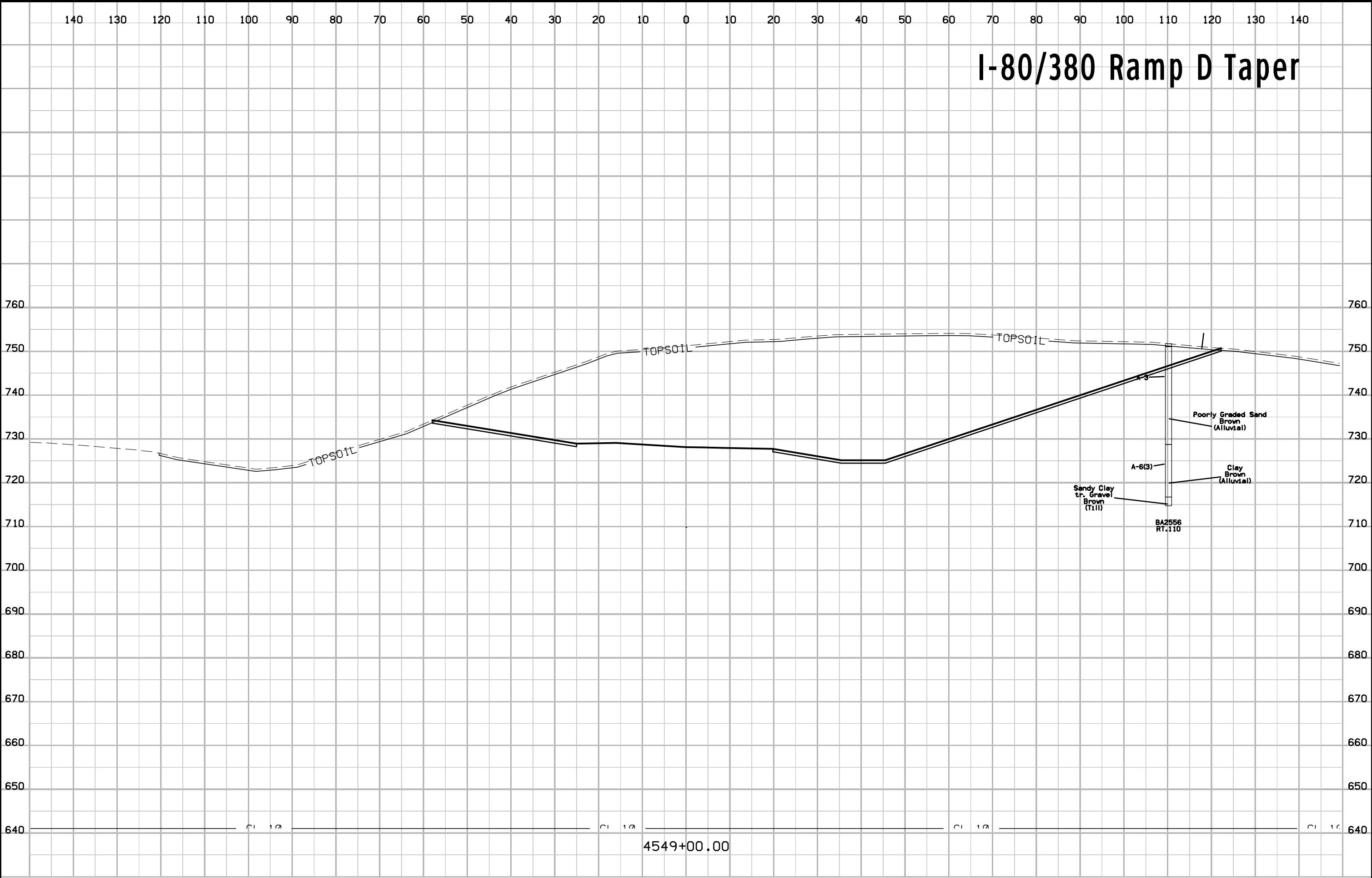
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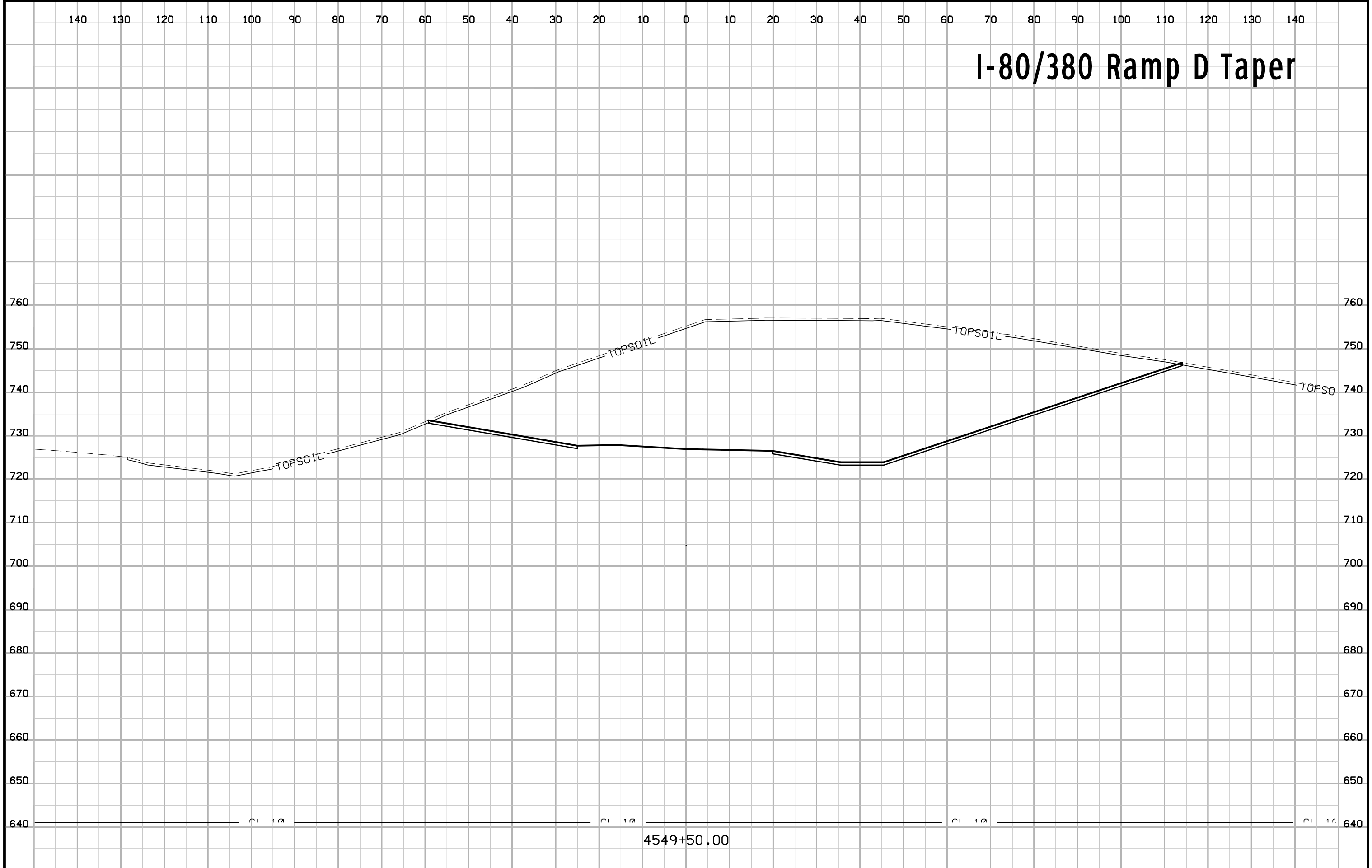
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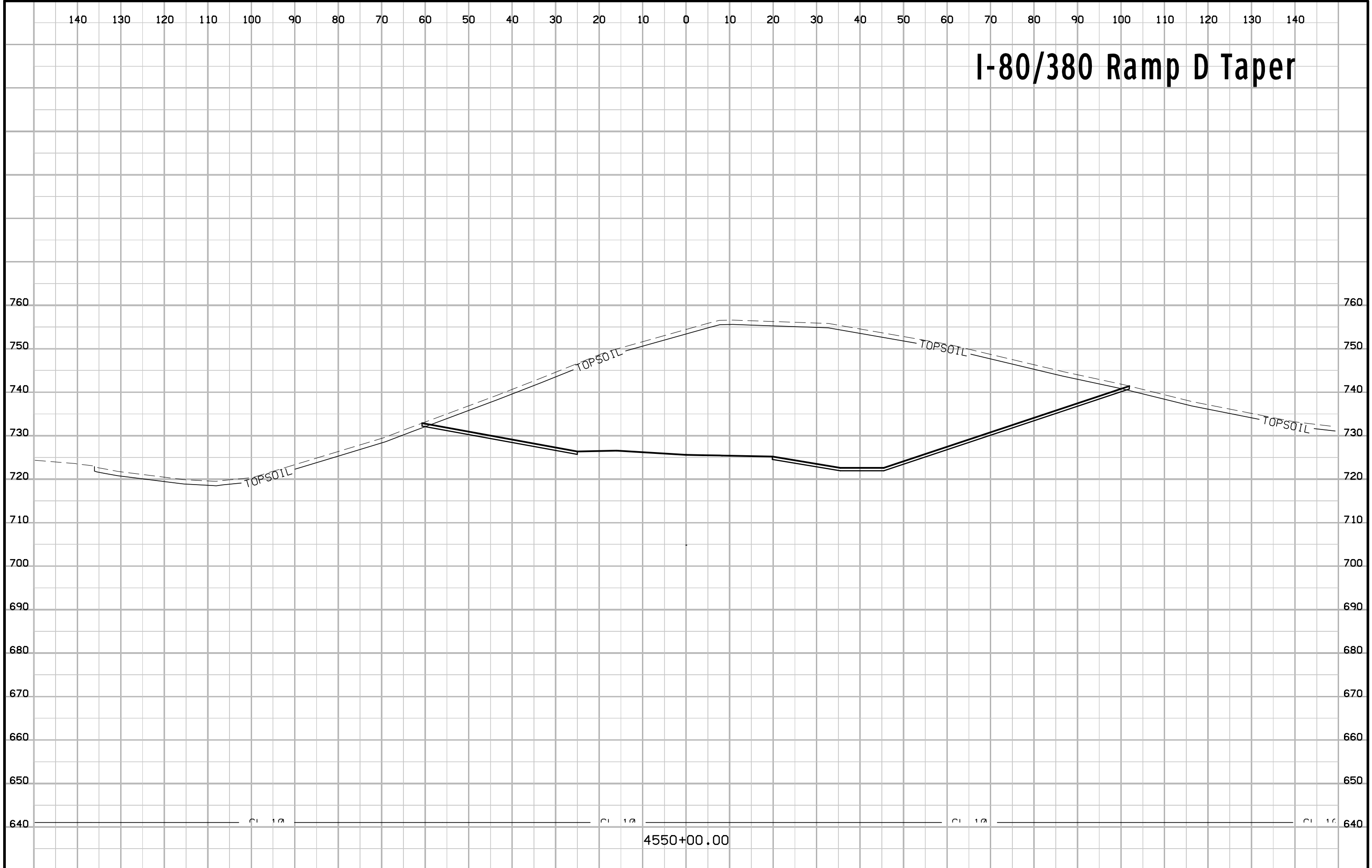
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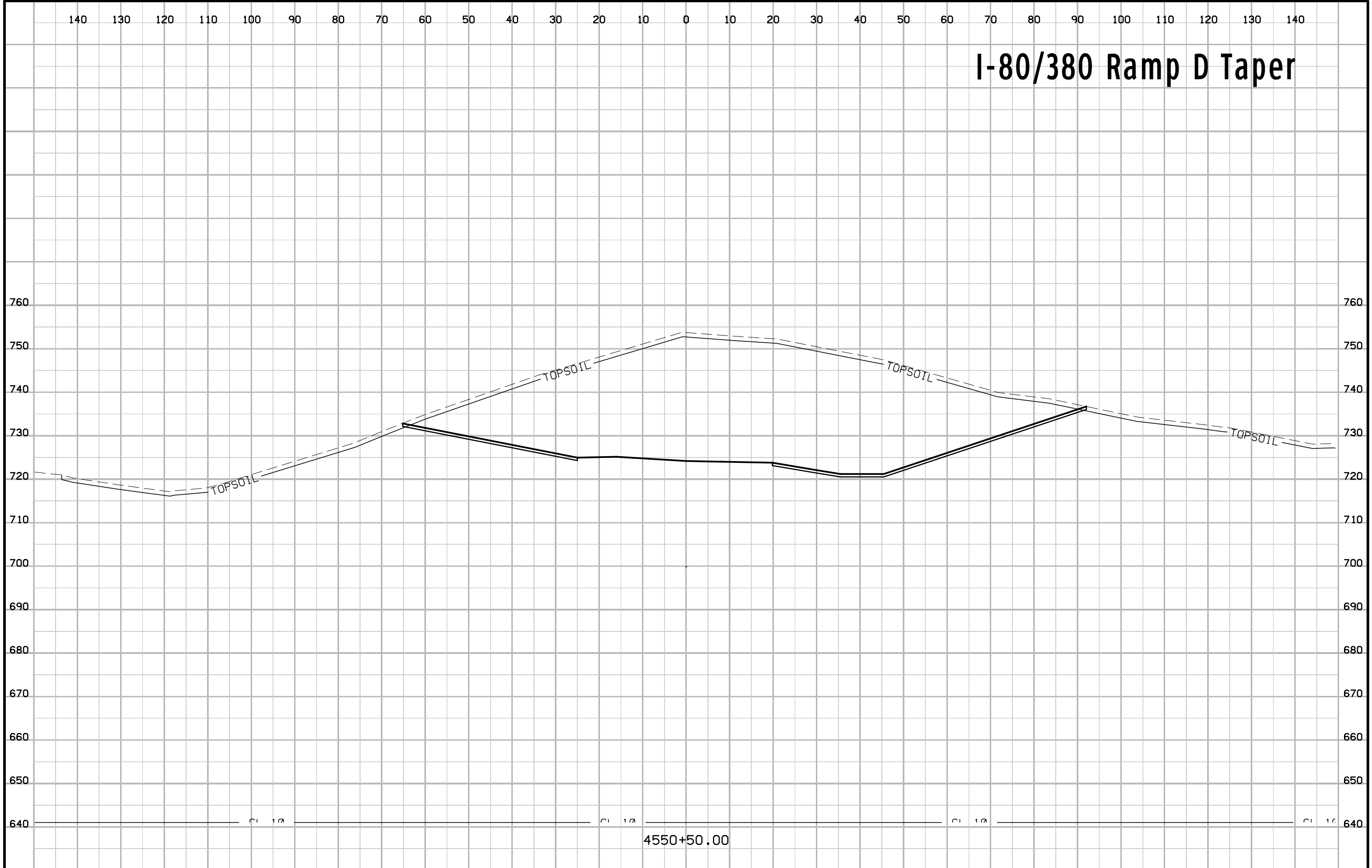
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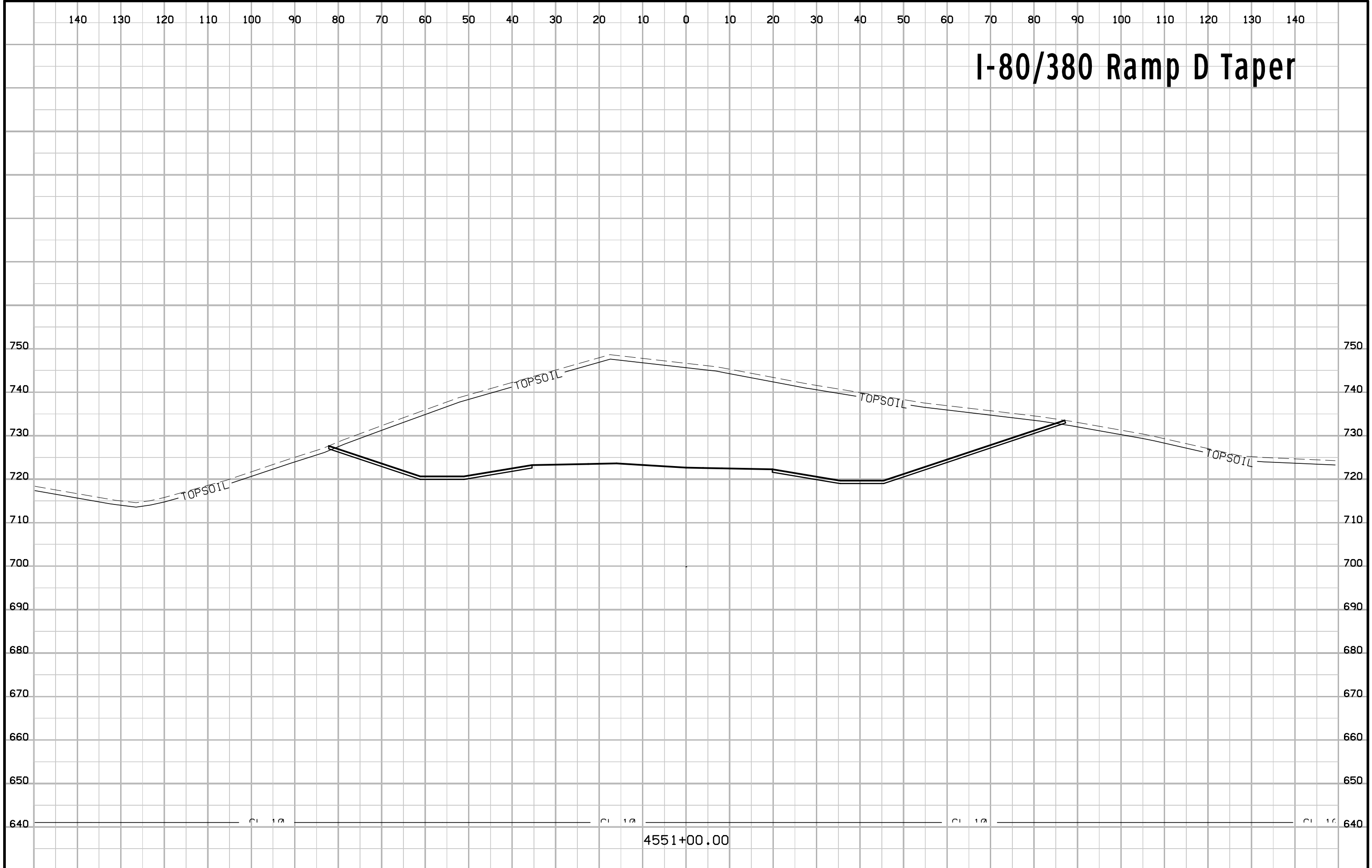
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I-80/380 Ramp D Taper

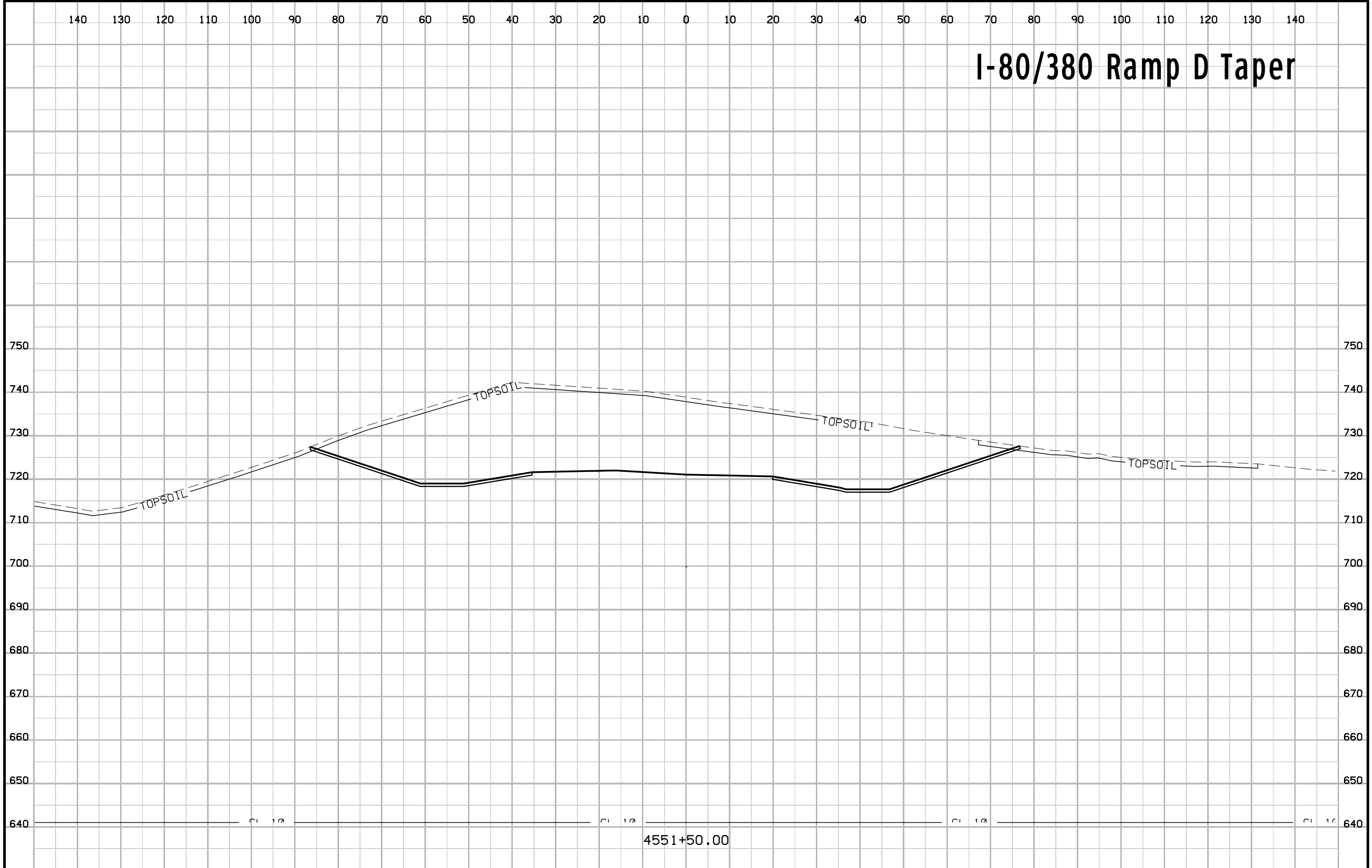


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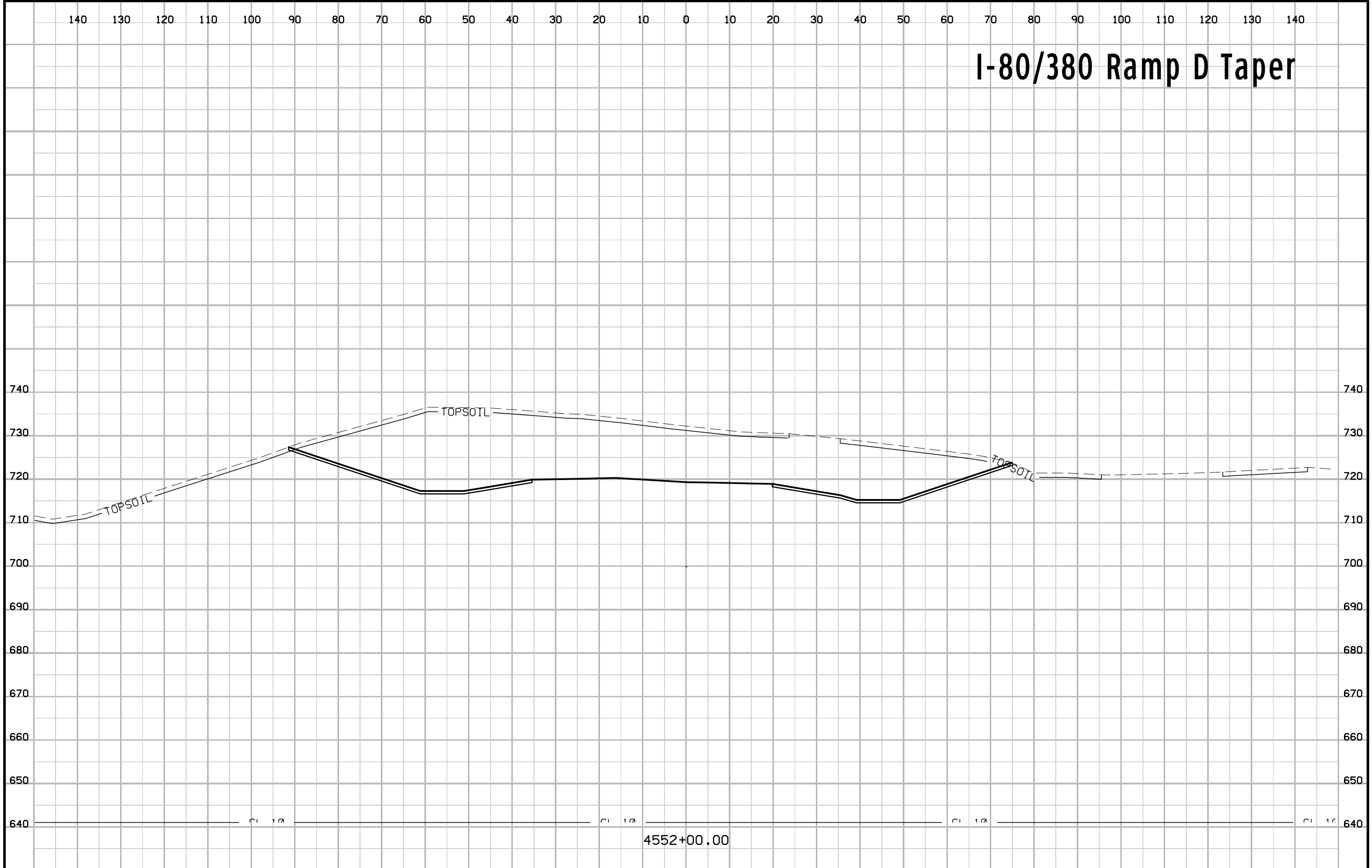


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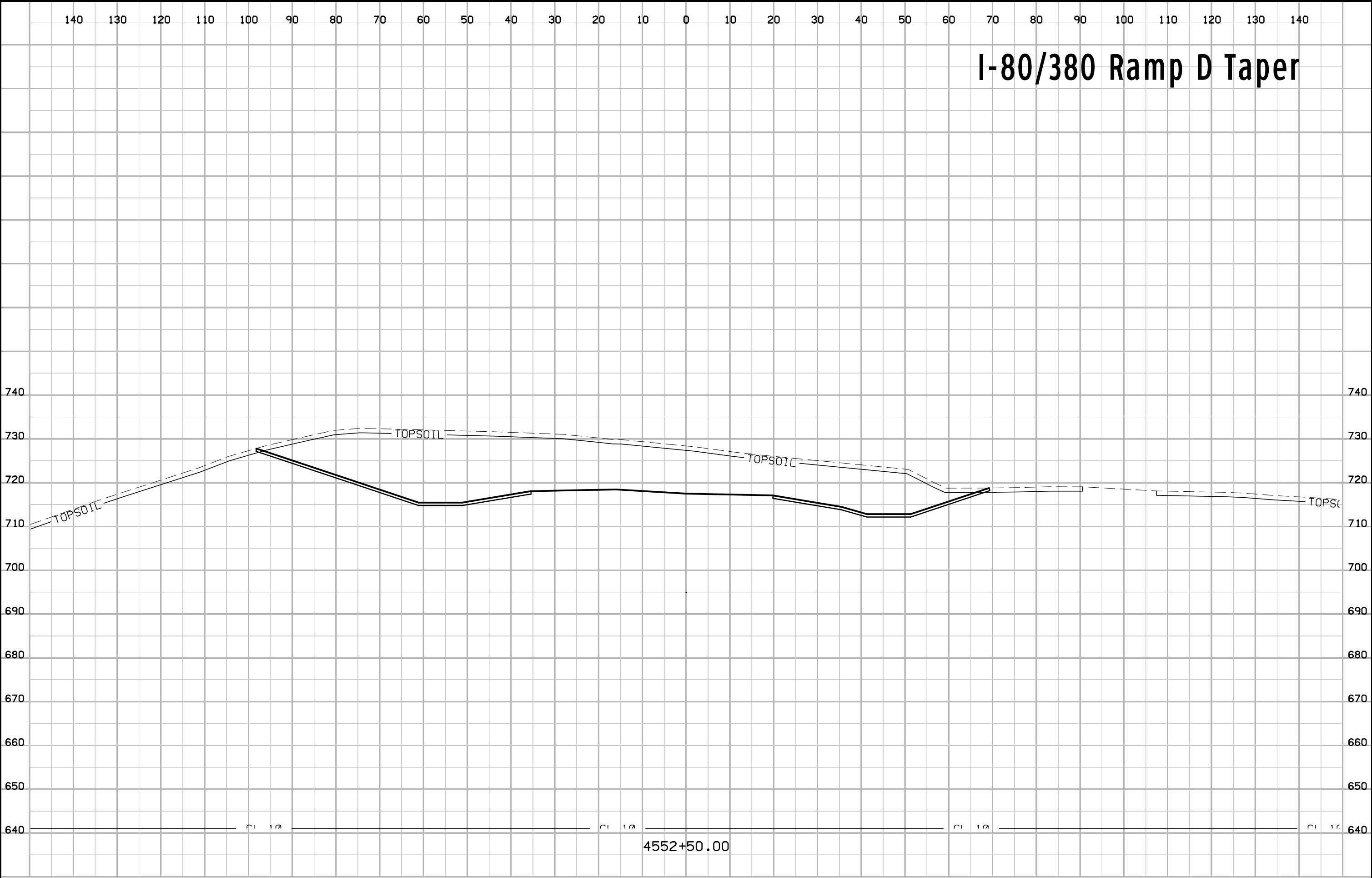
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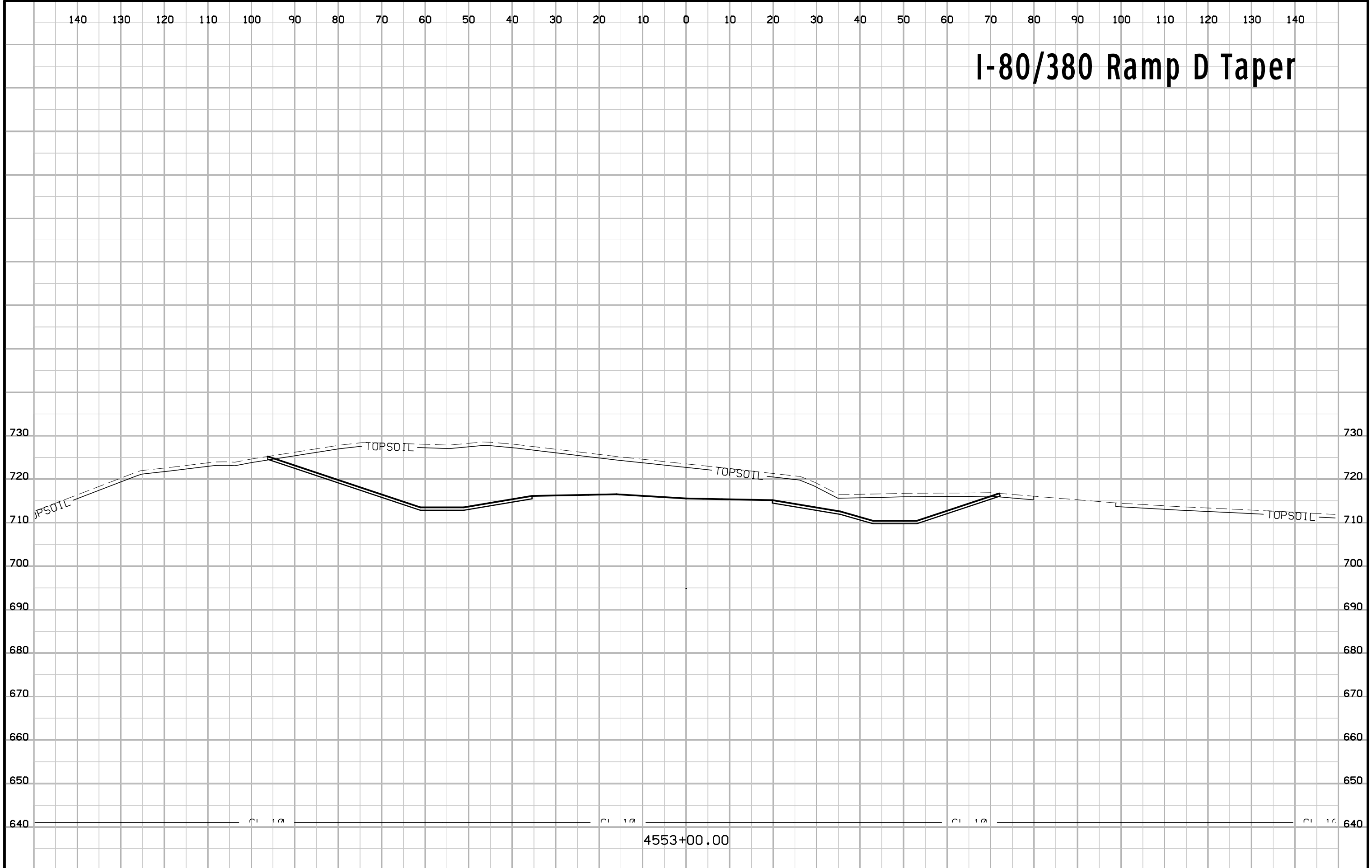
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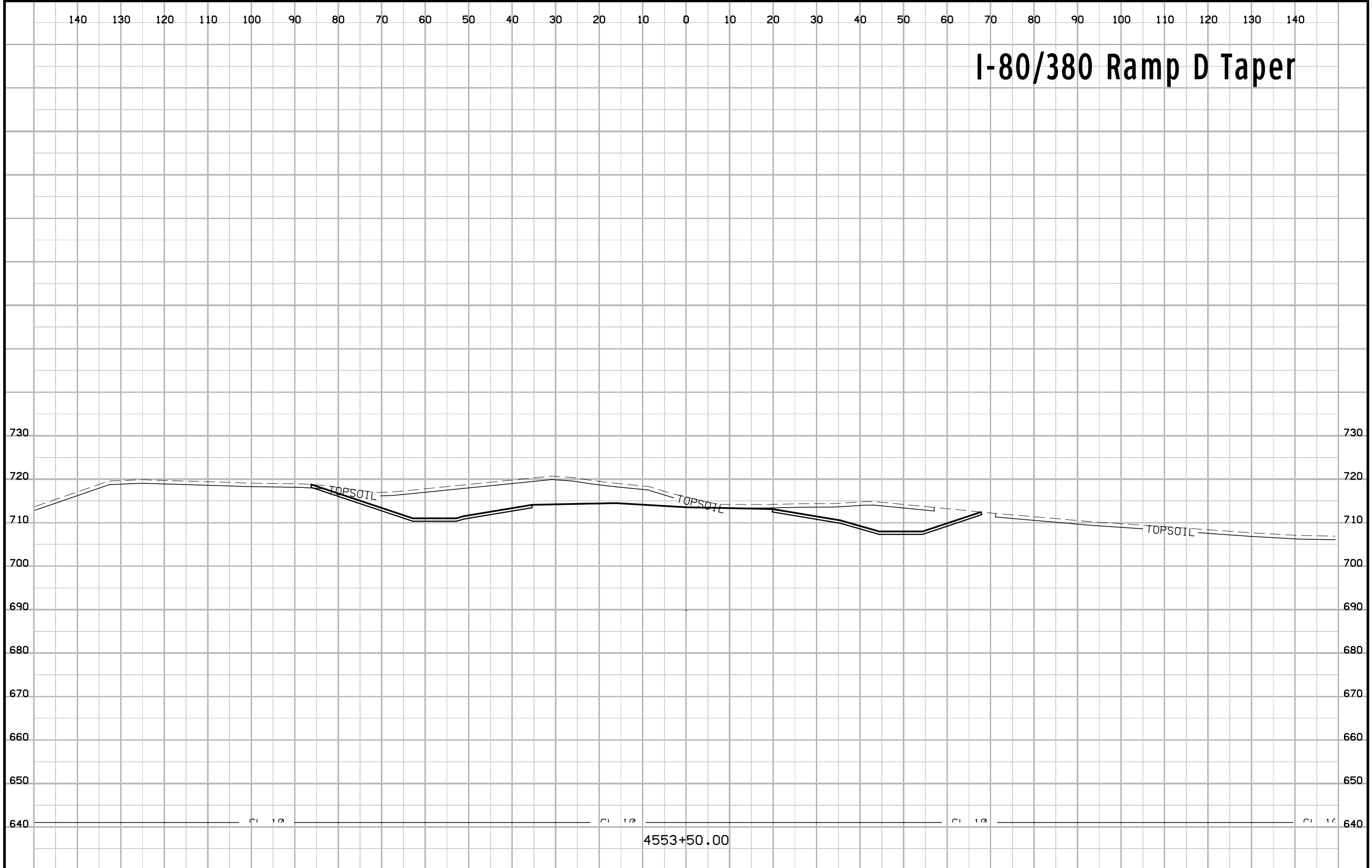


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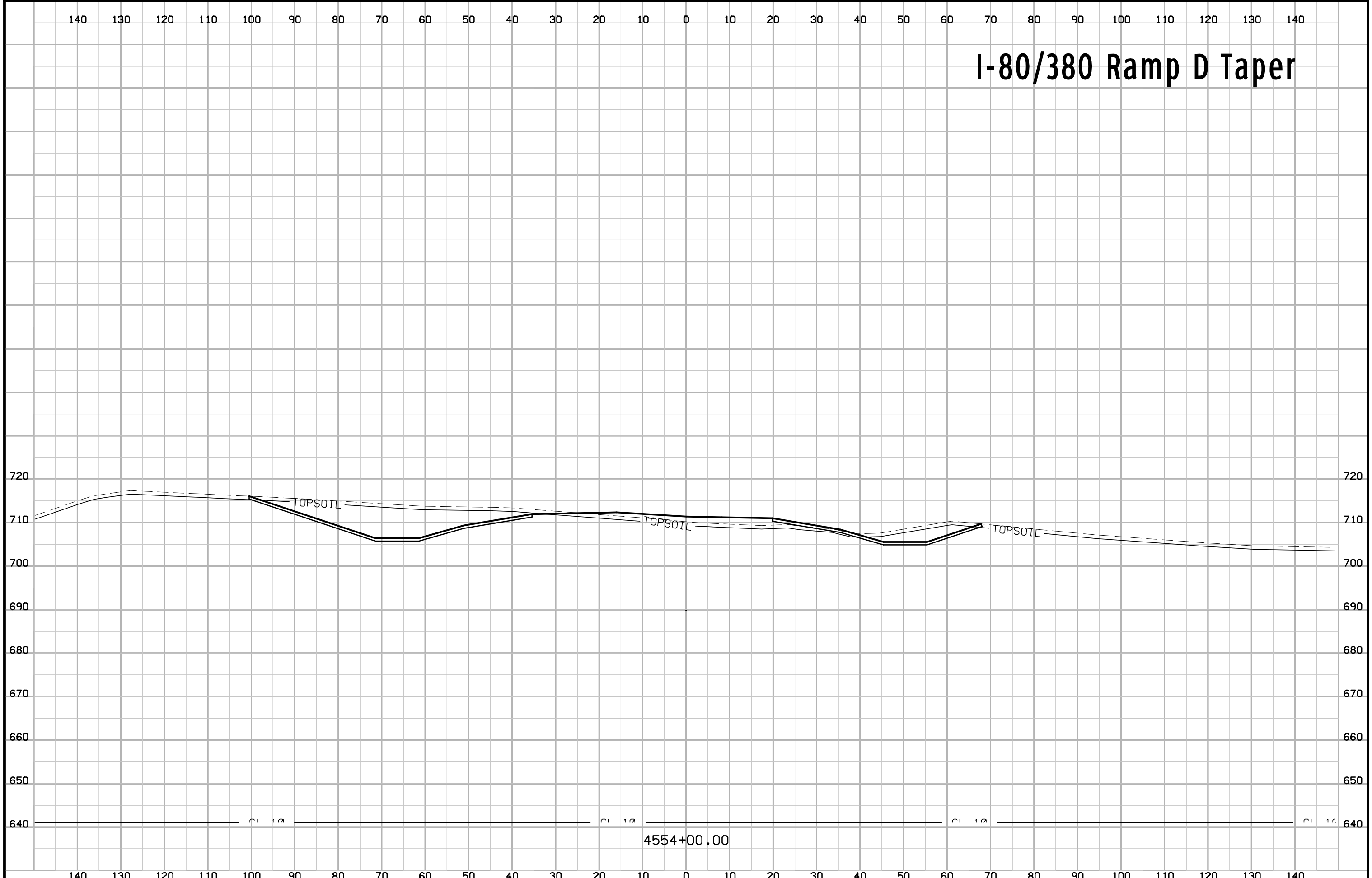
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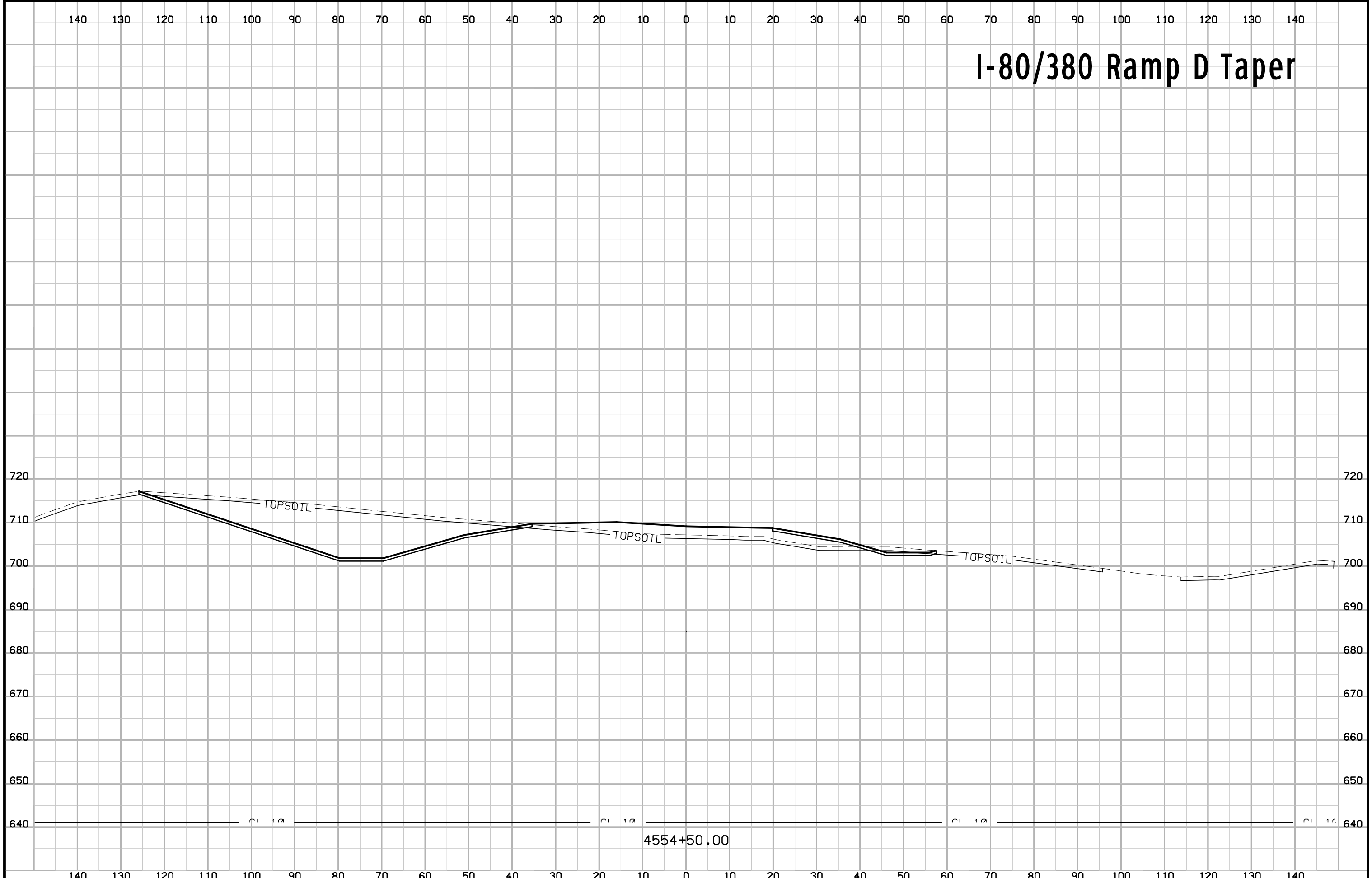


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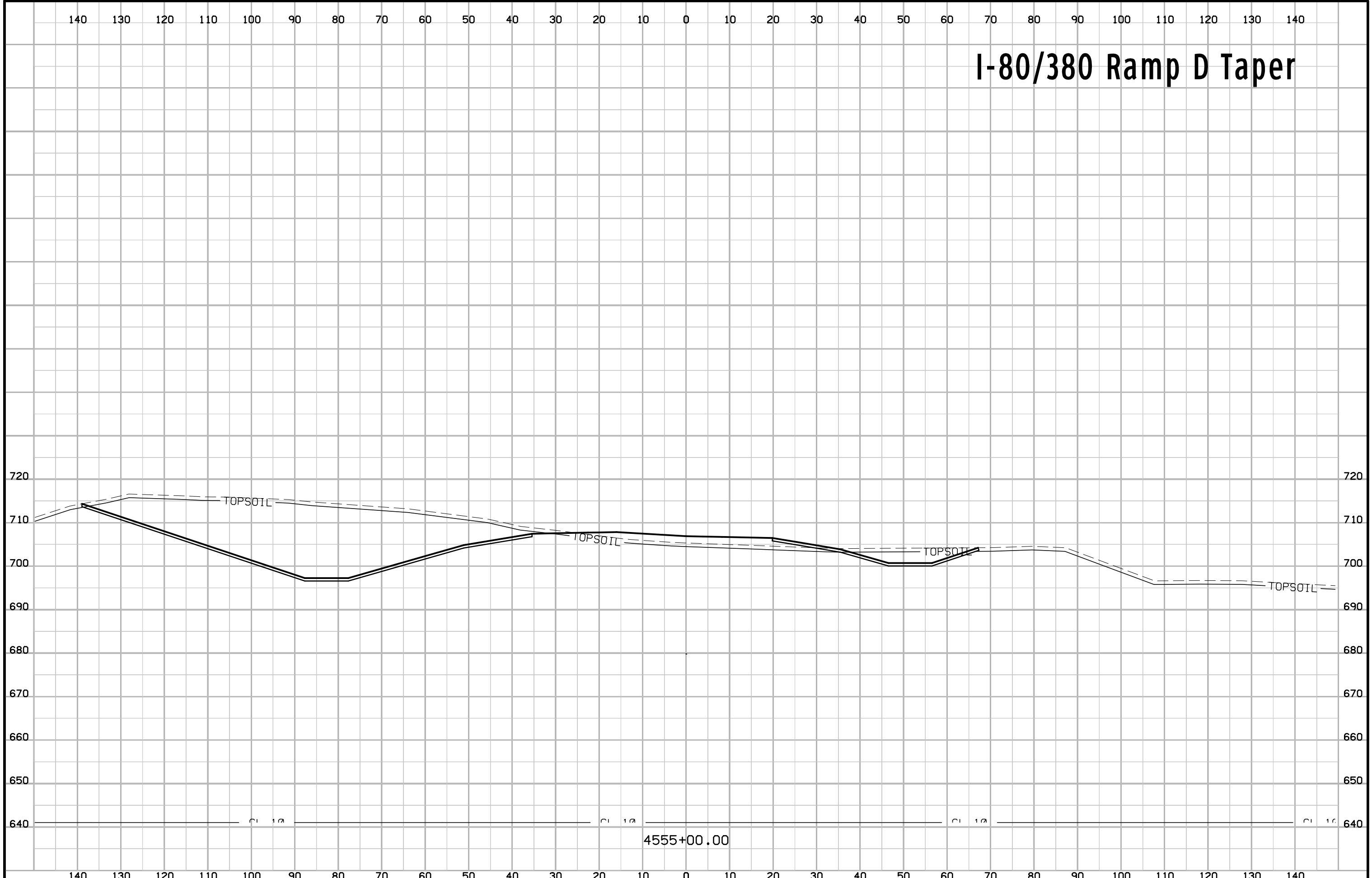
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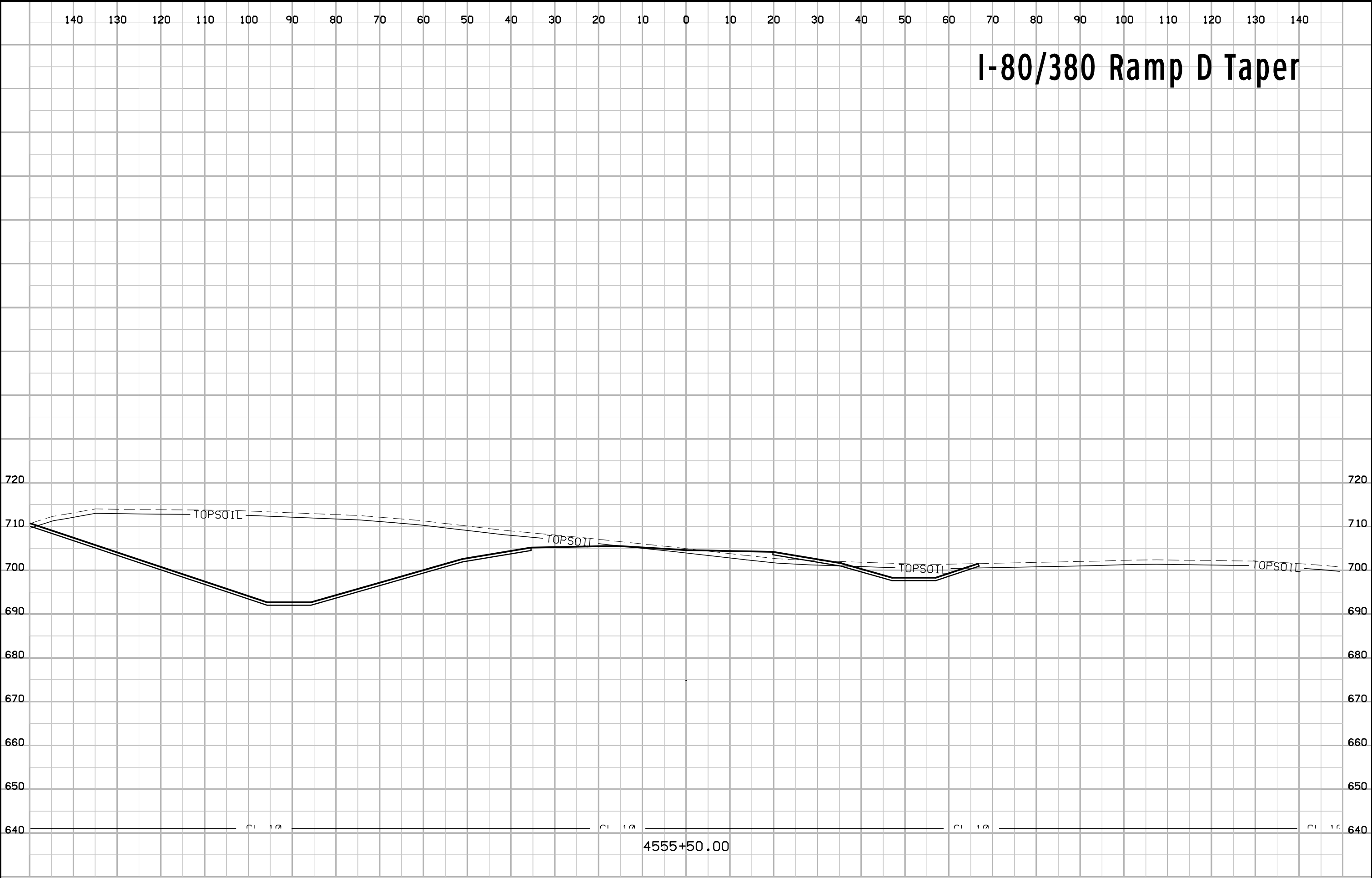
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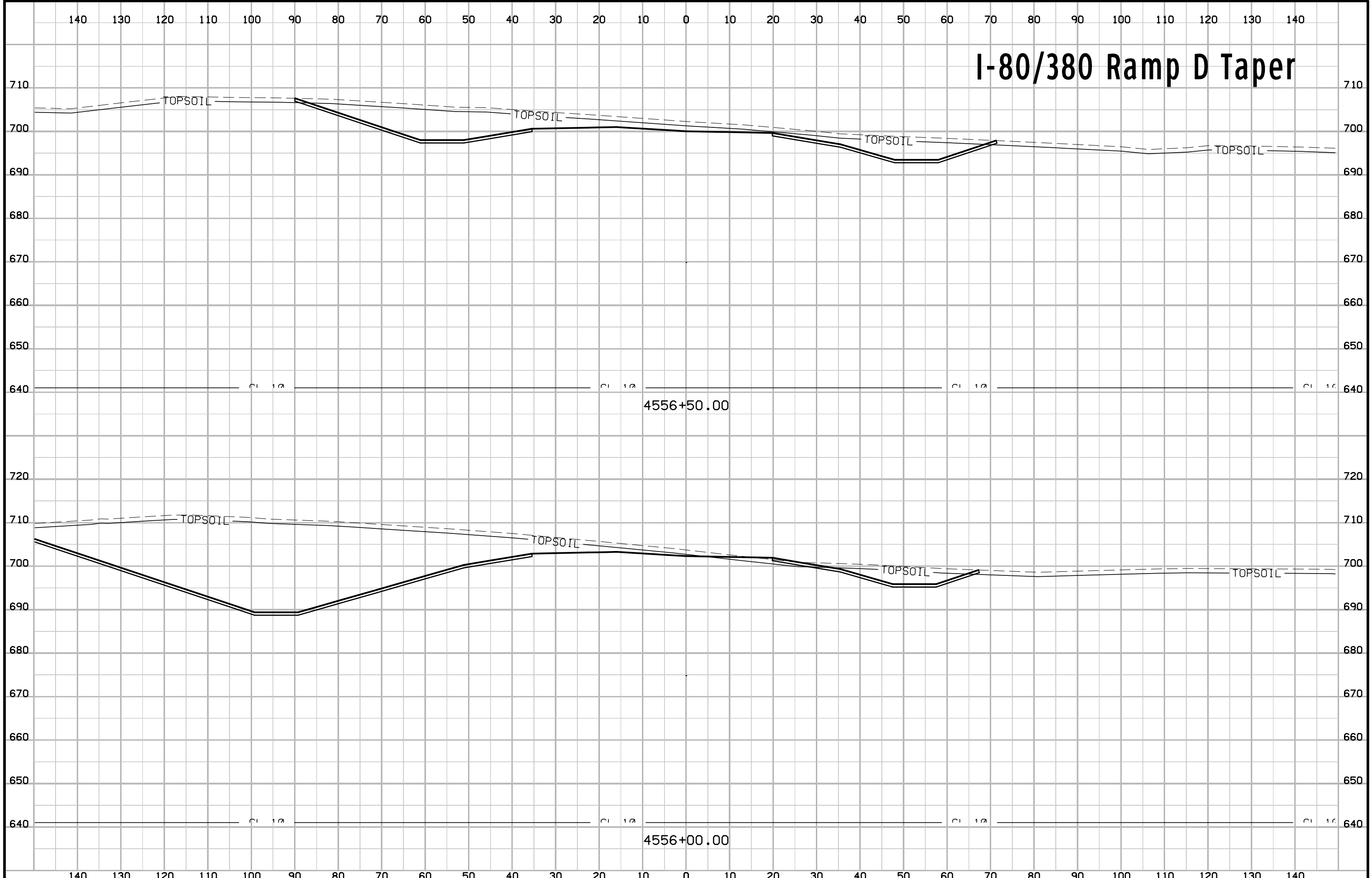
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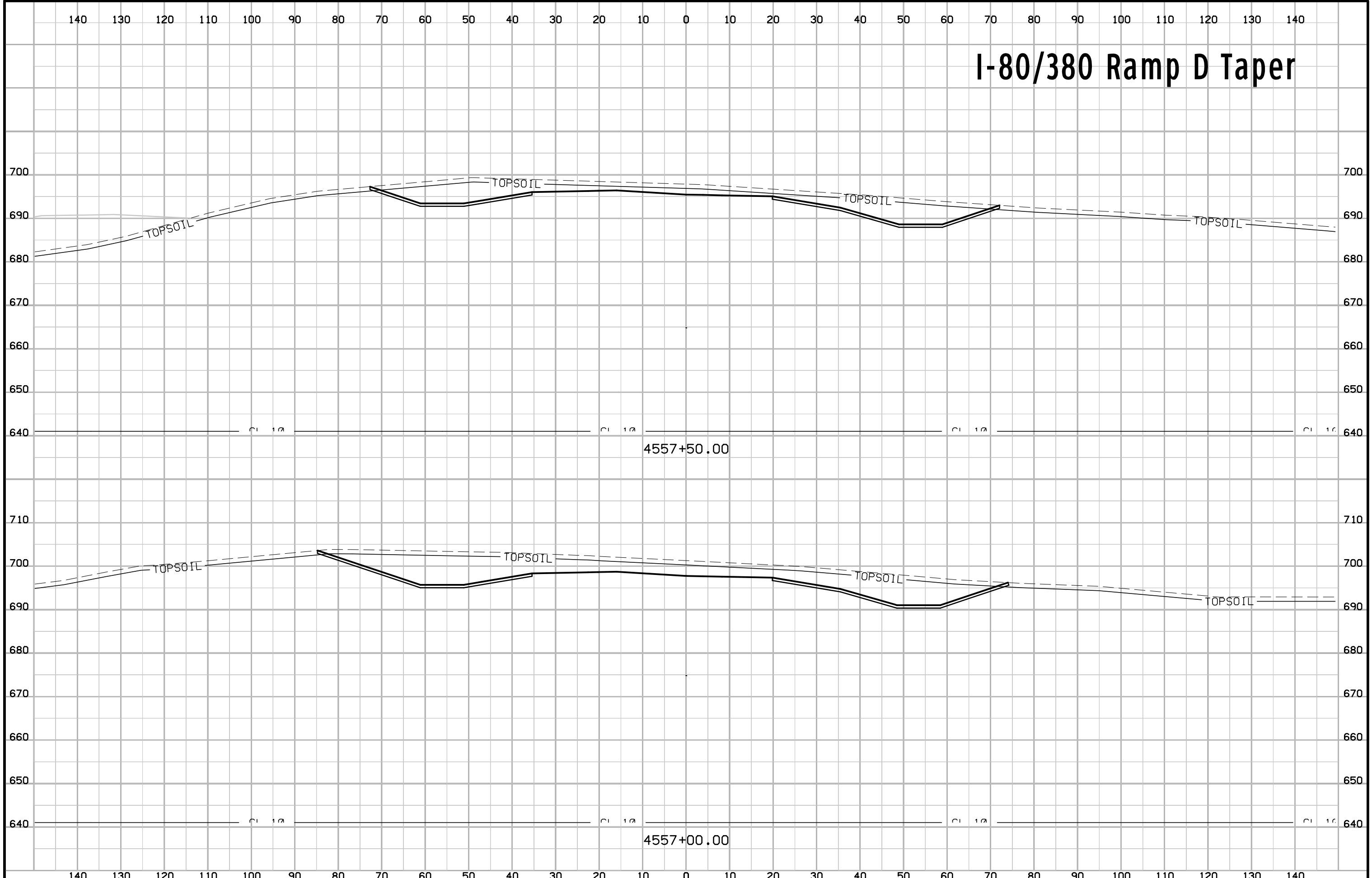
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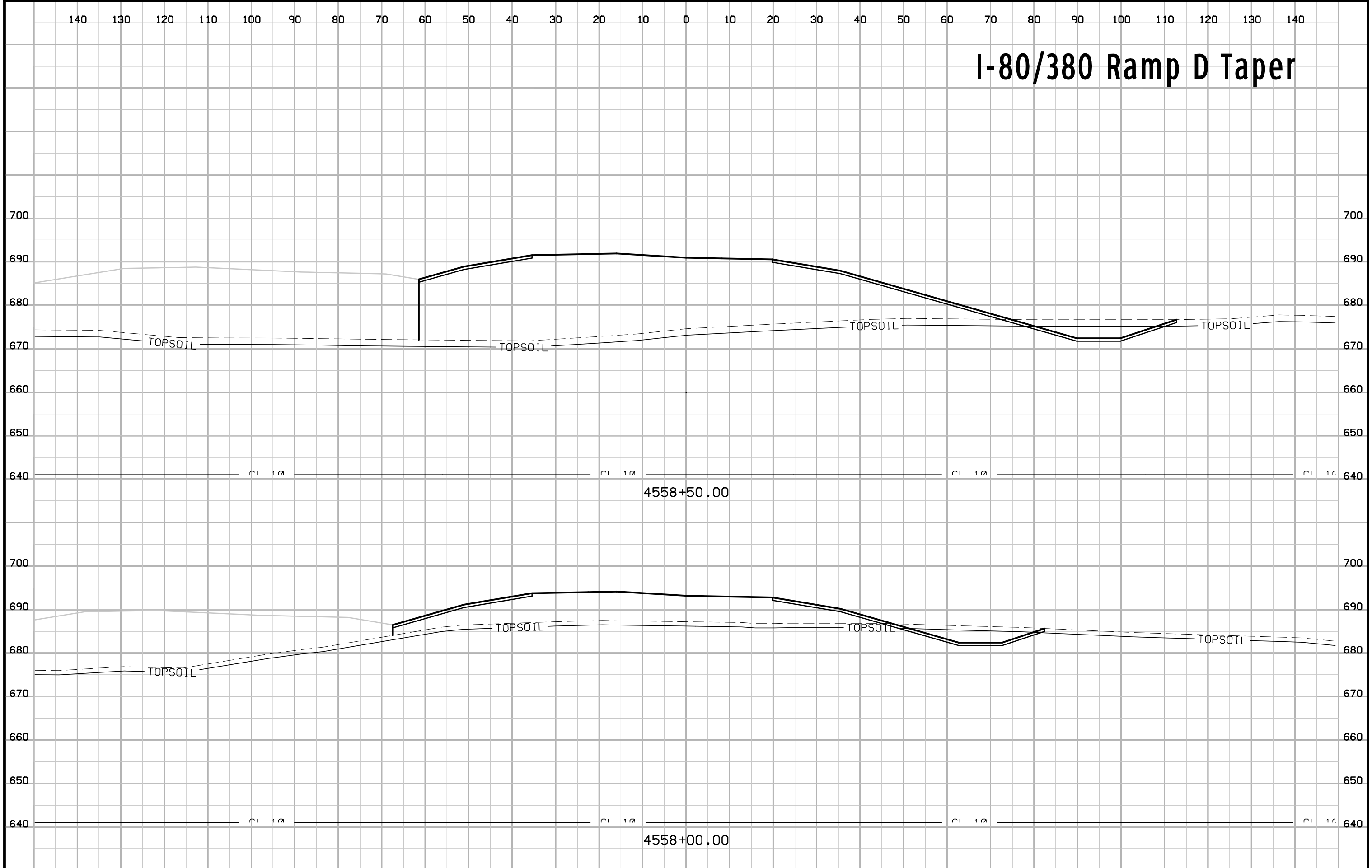
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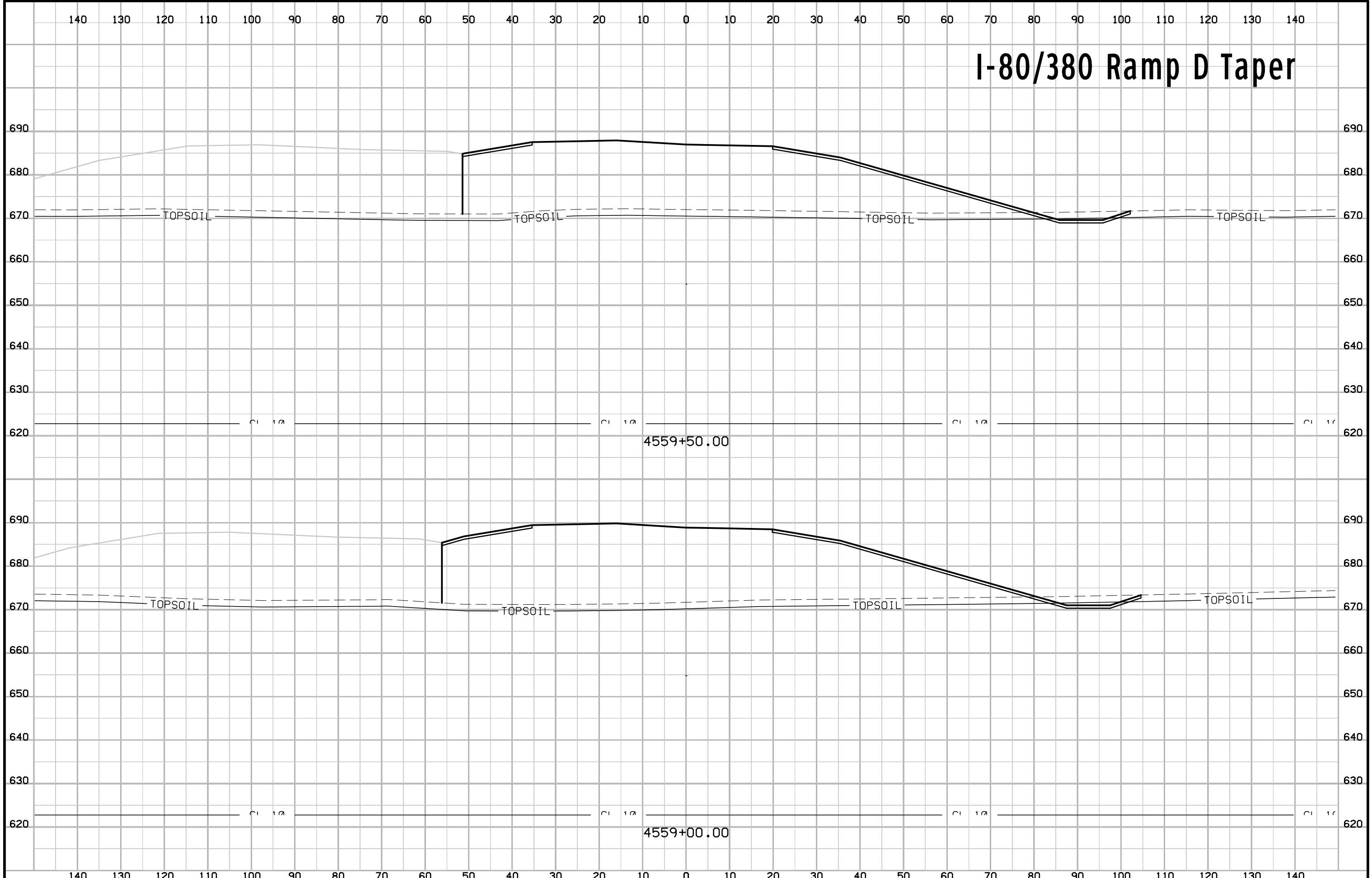
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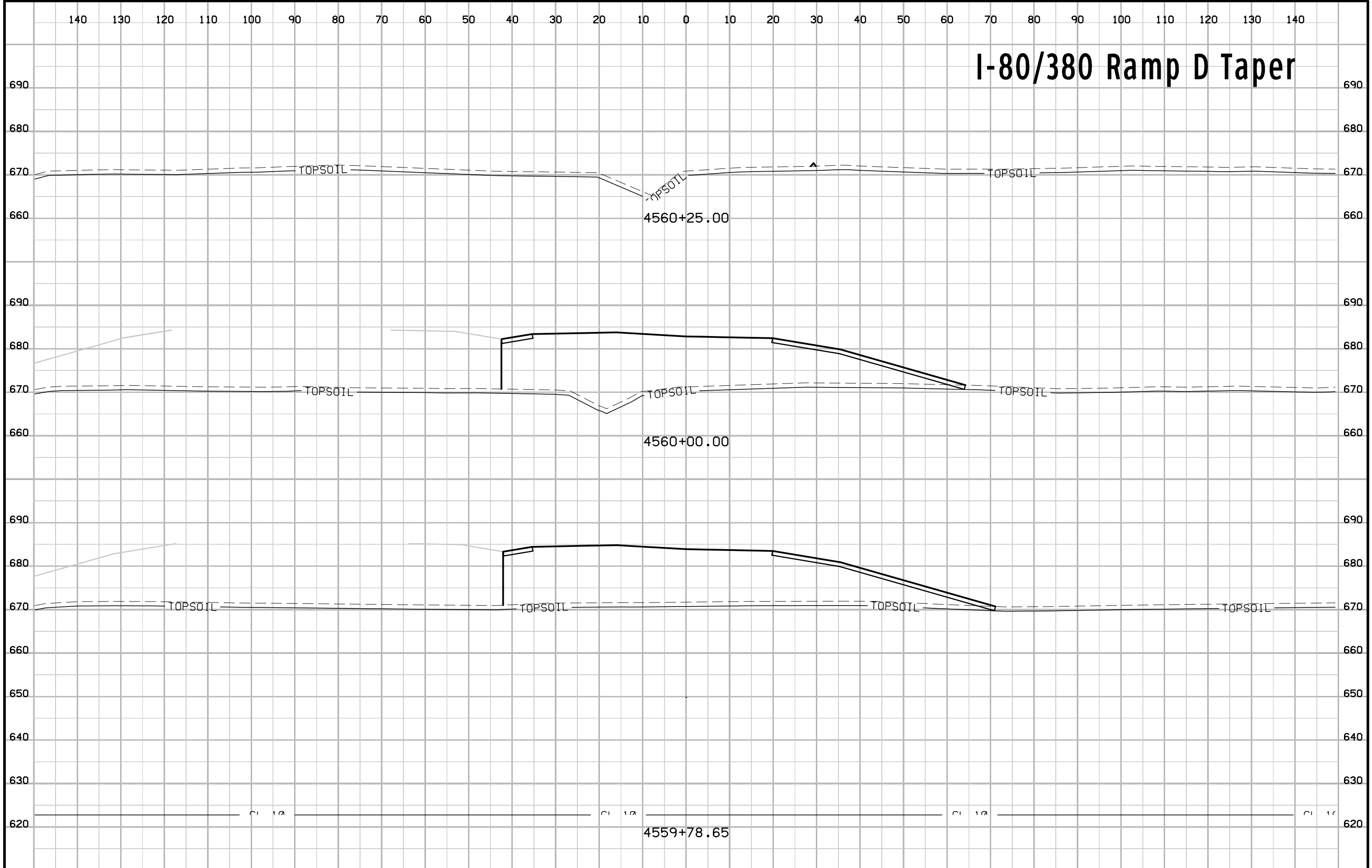
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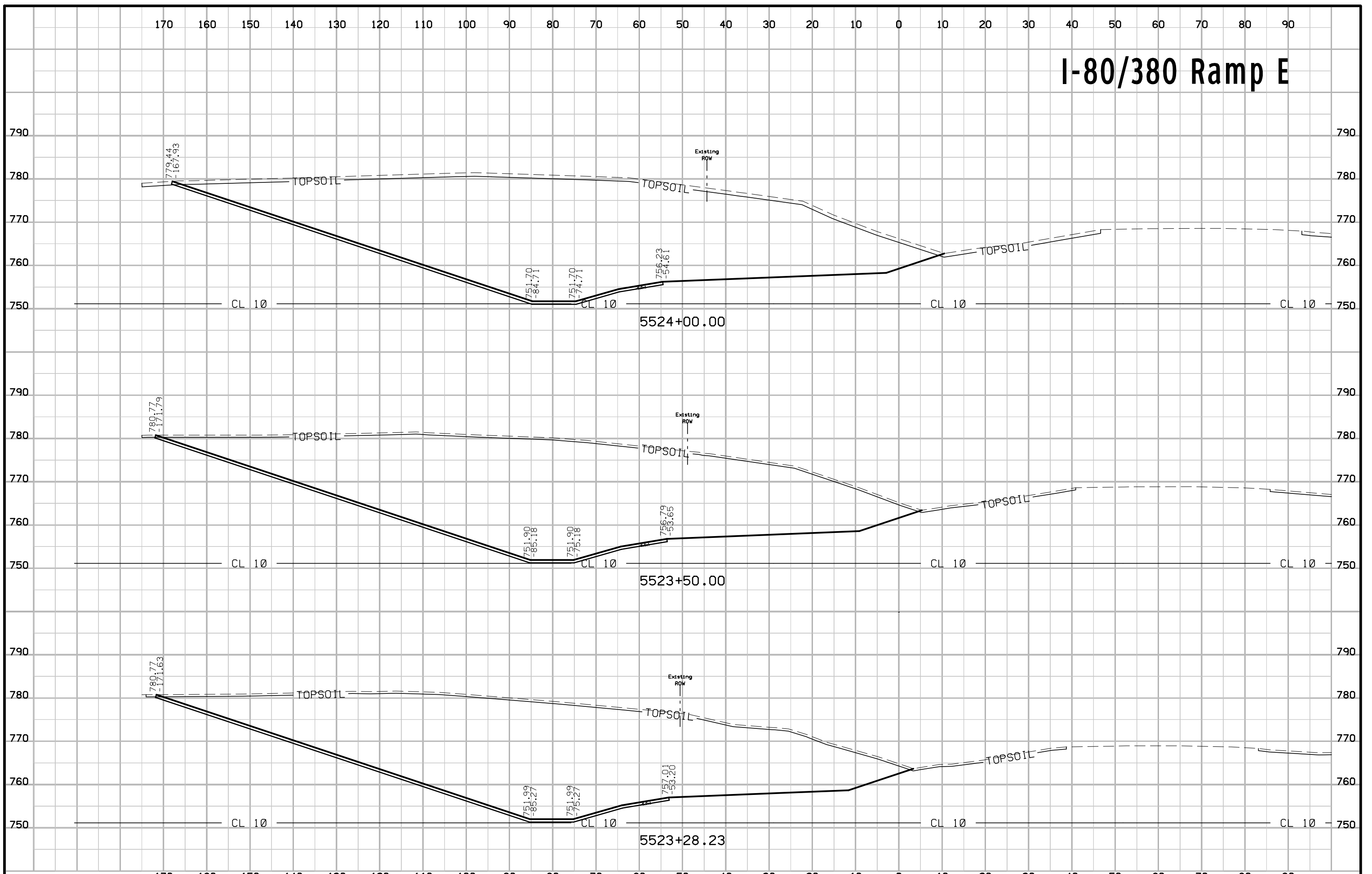
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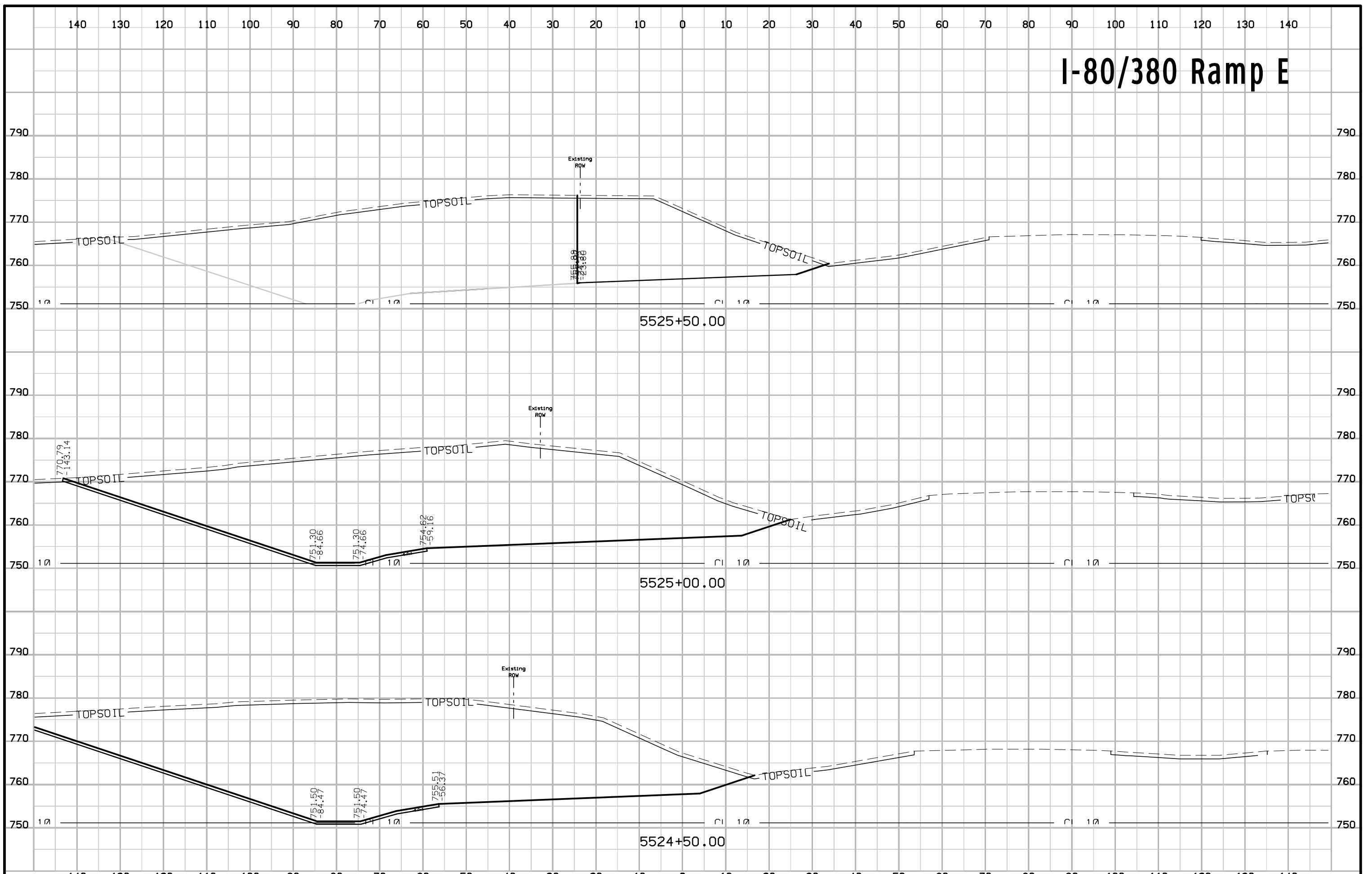
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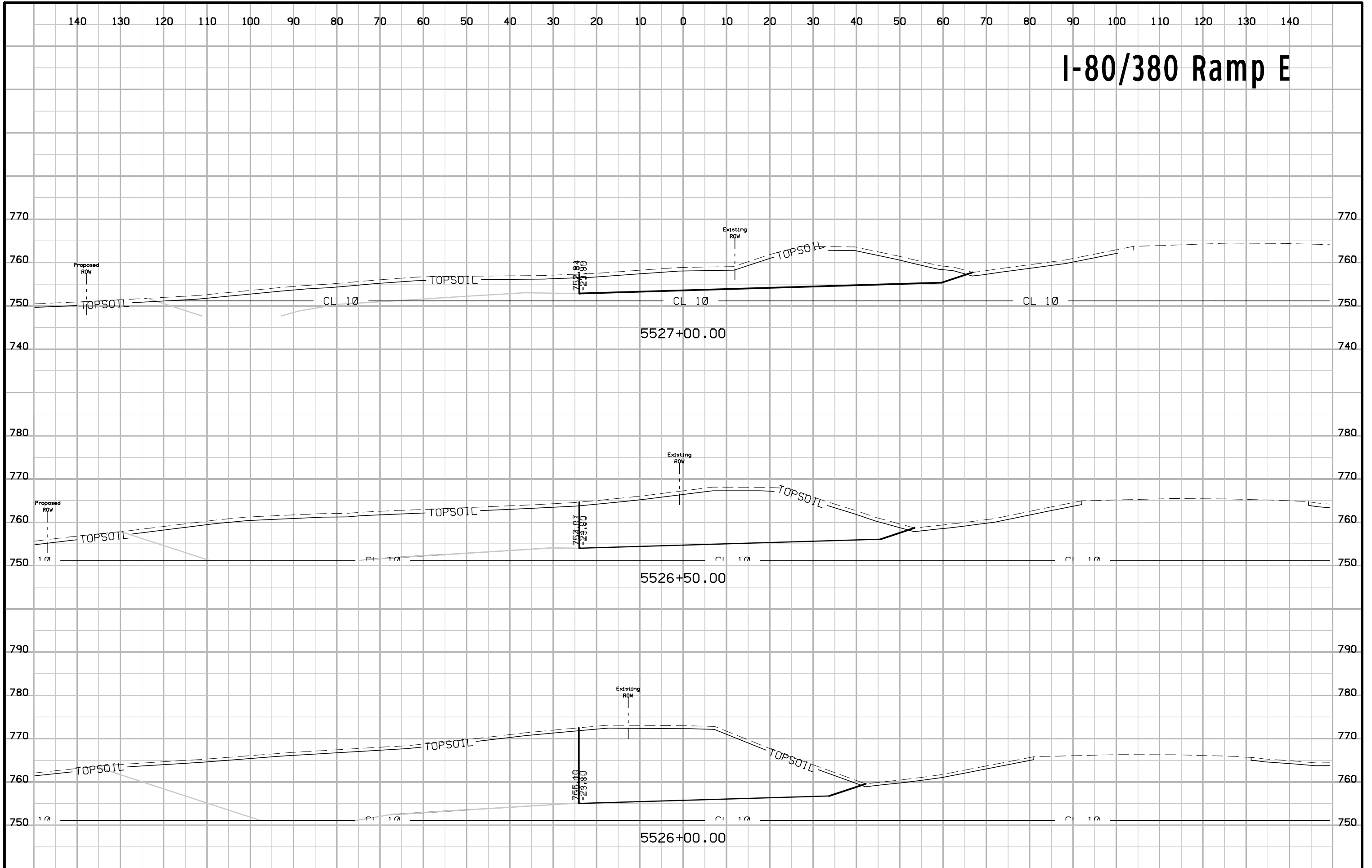
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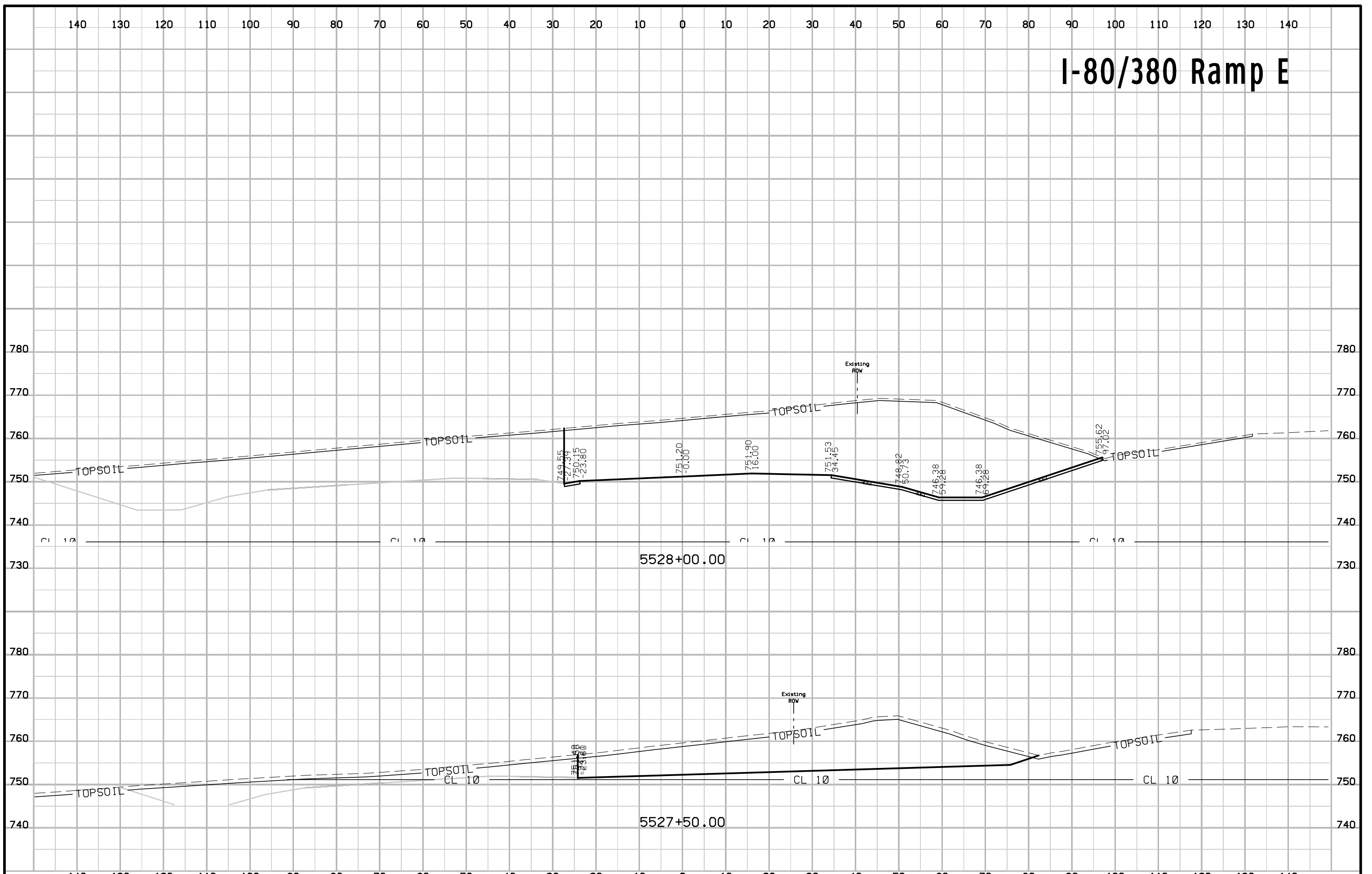
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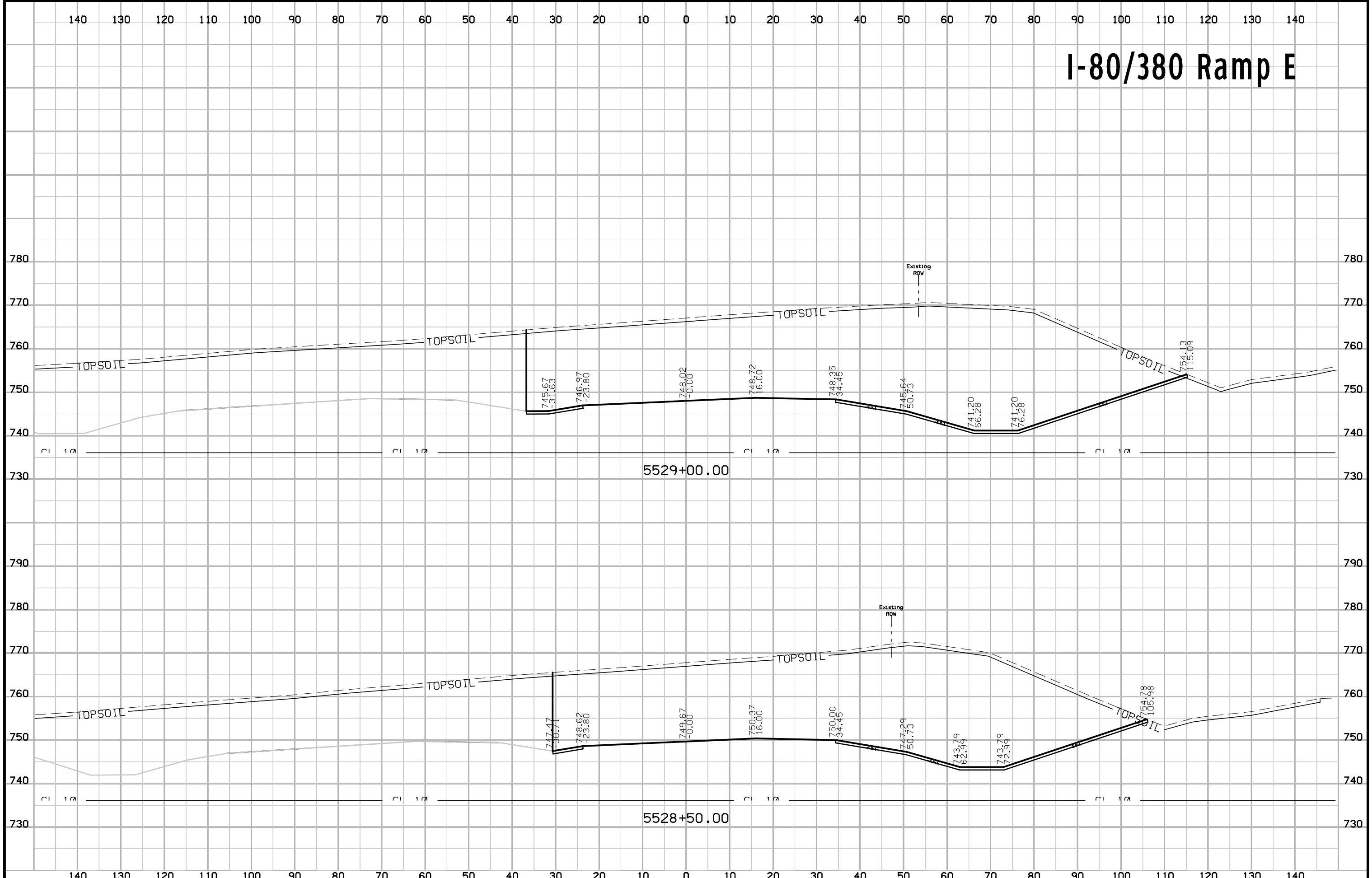
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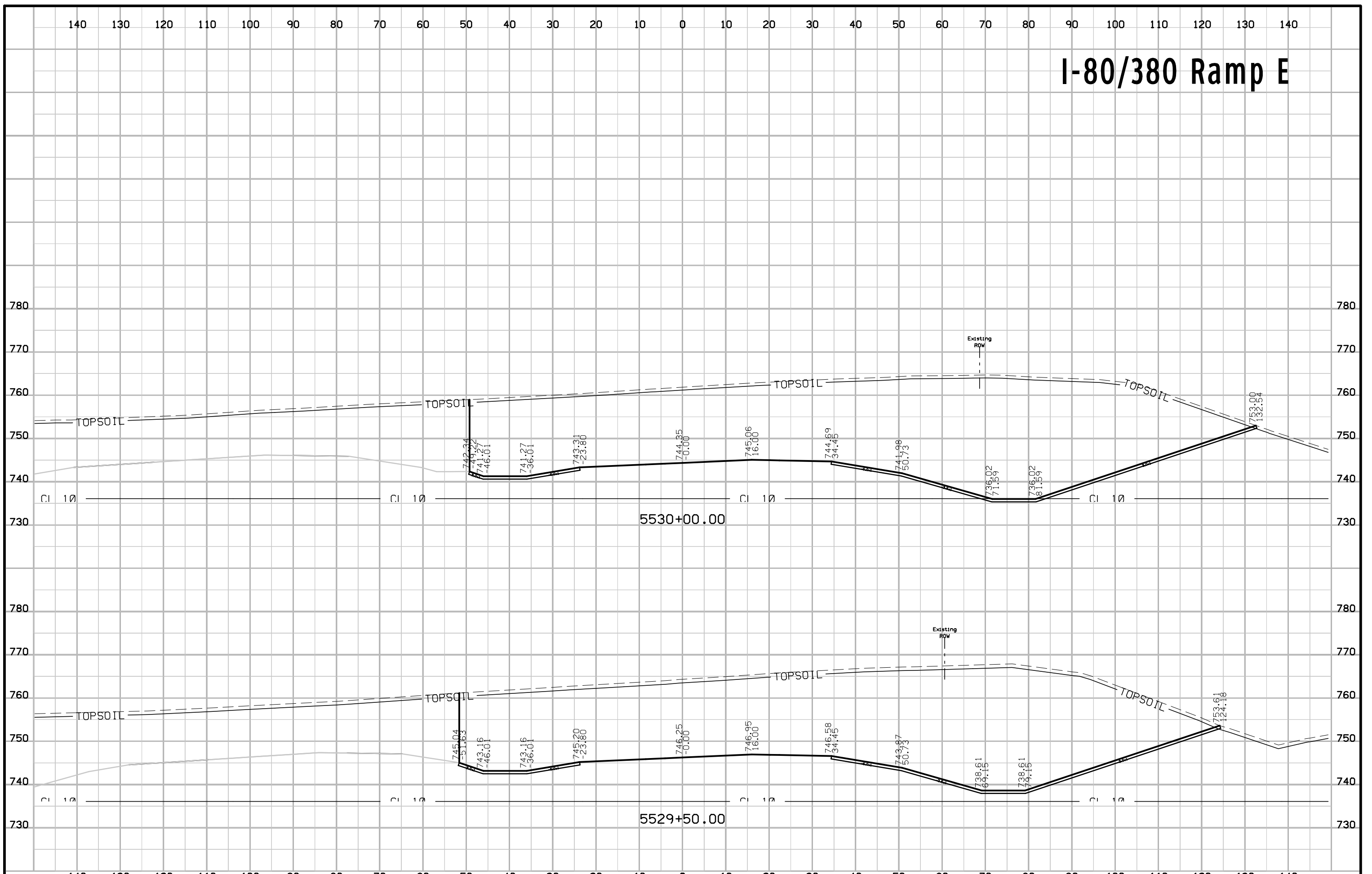
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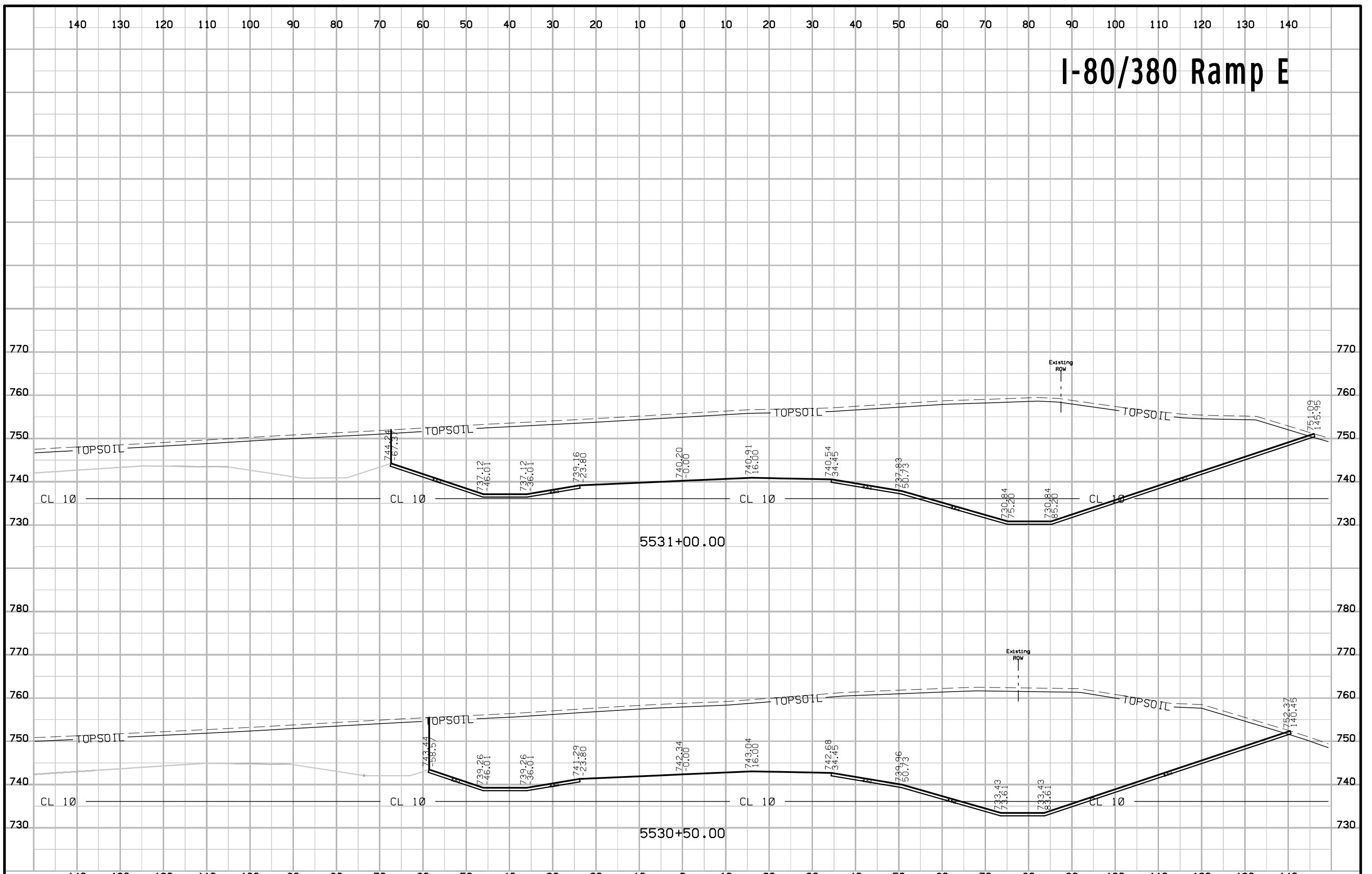
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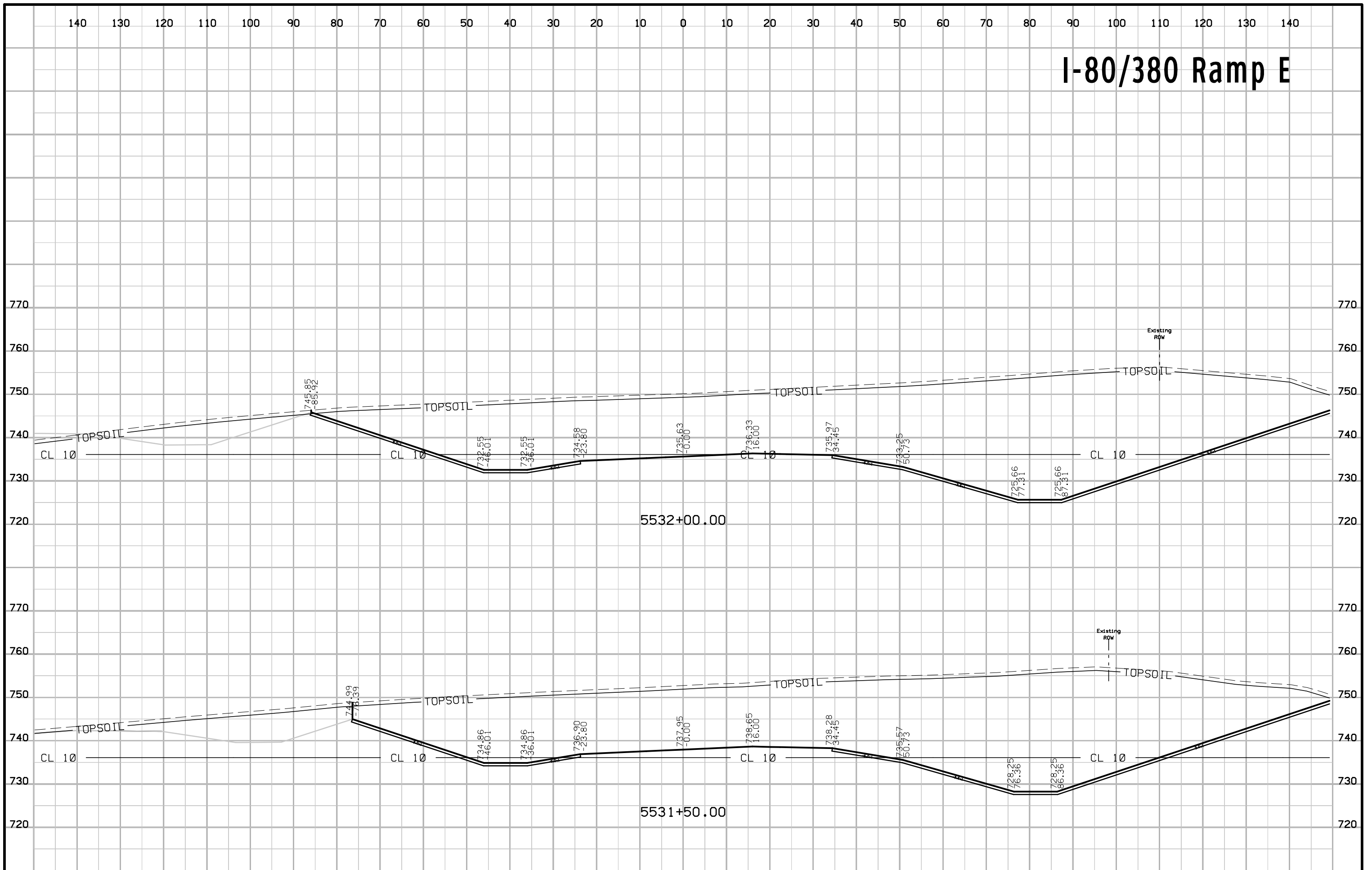
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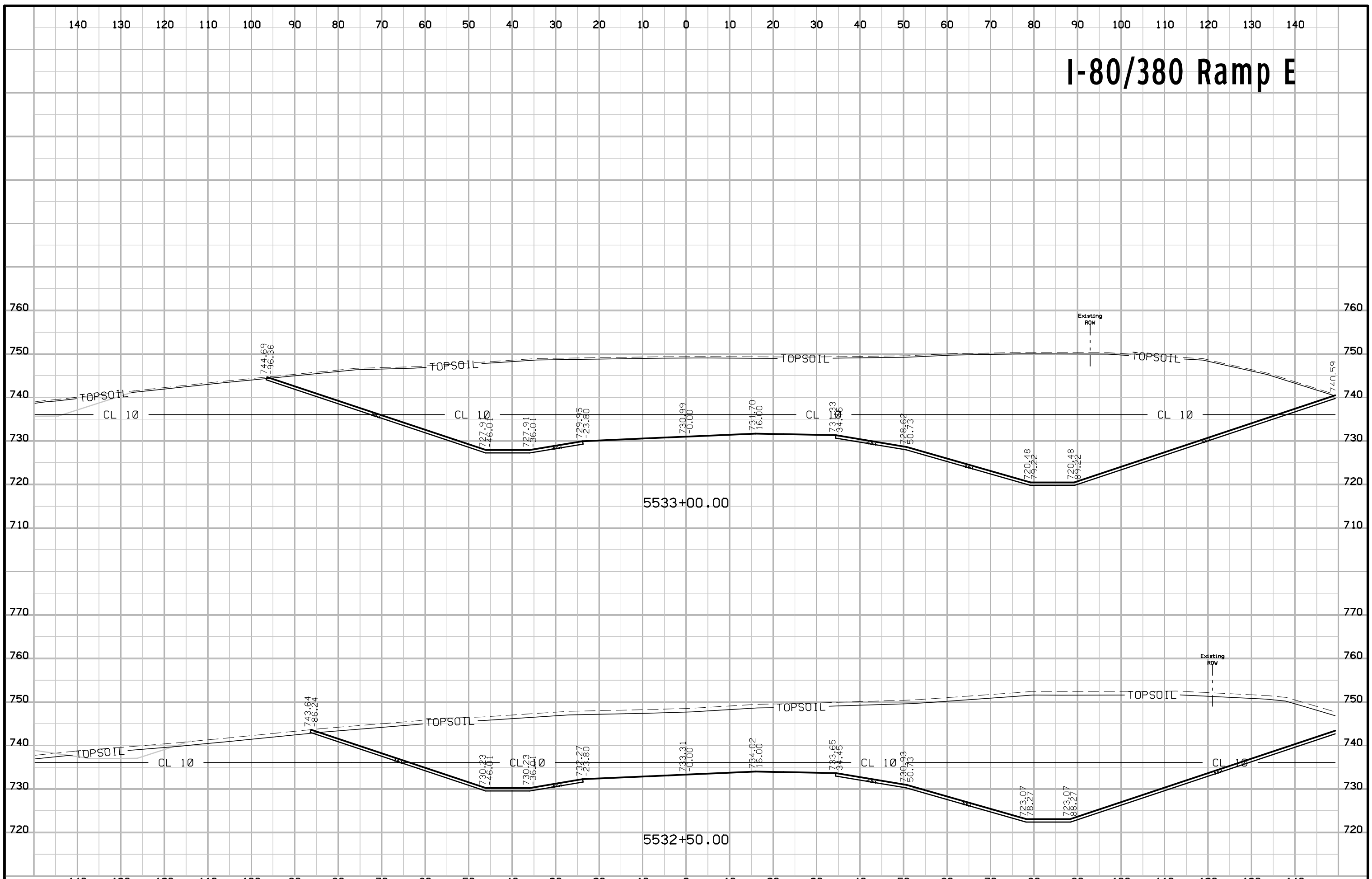
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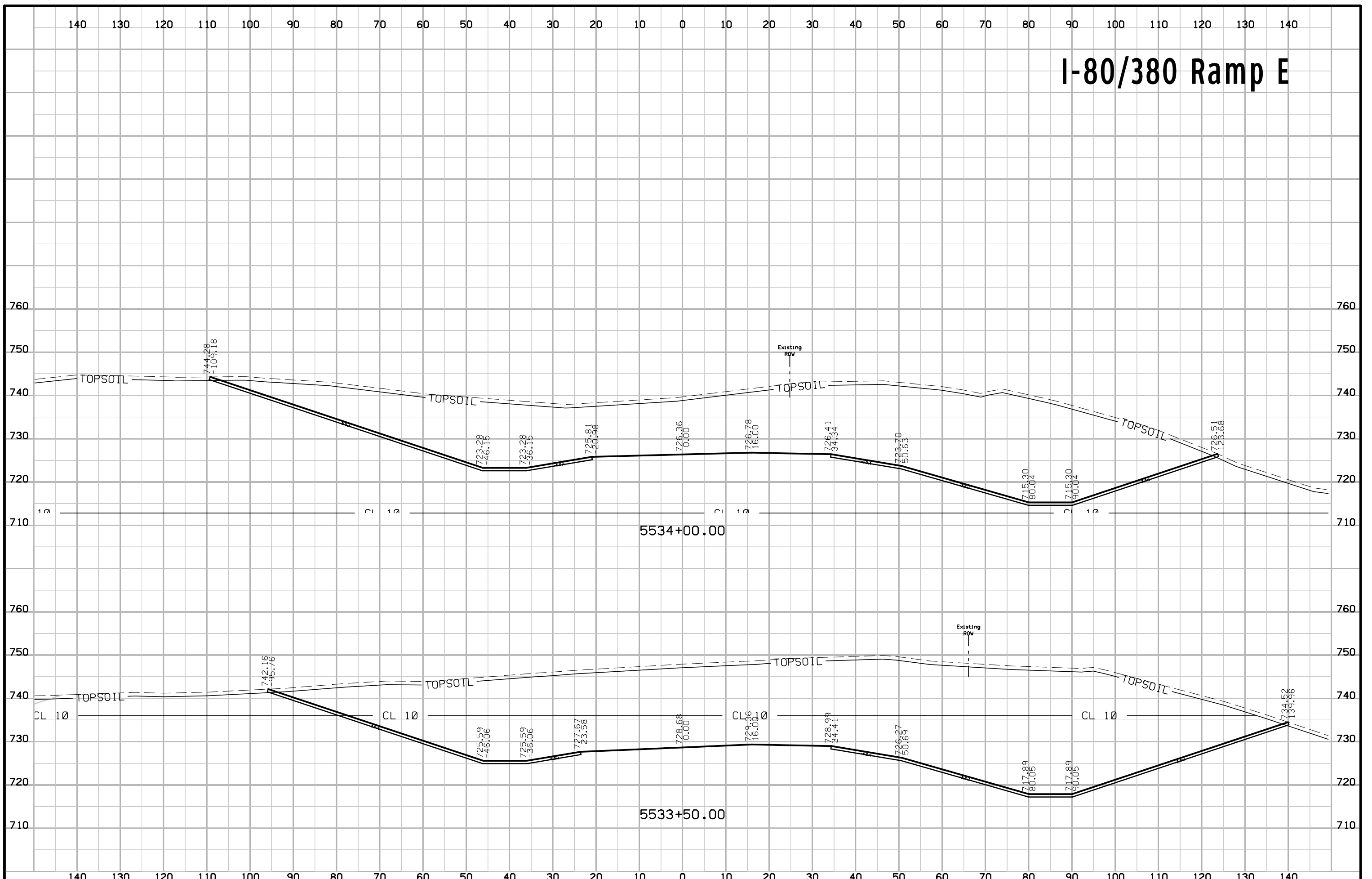
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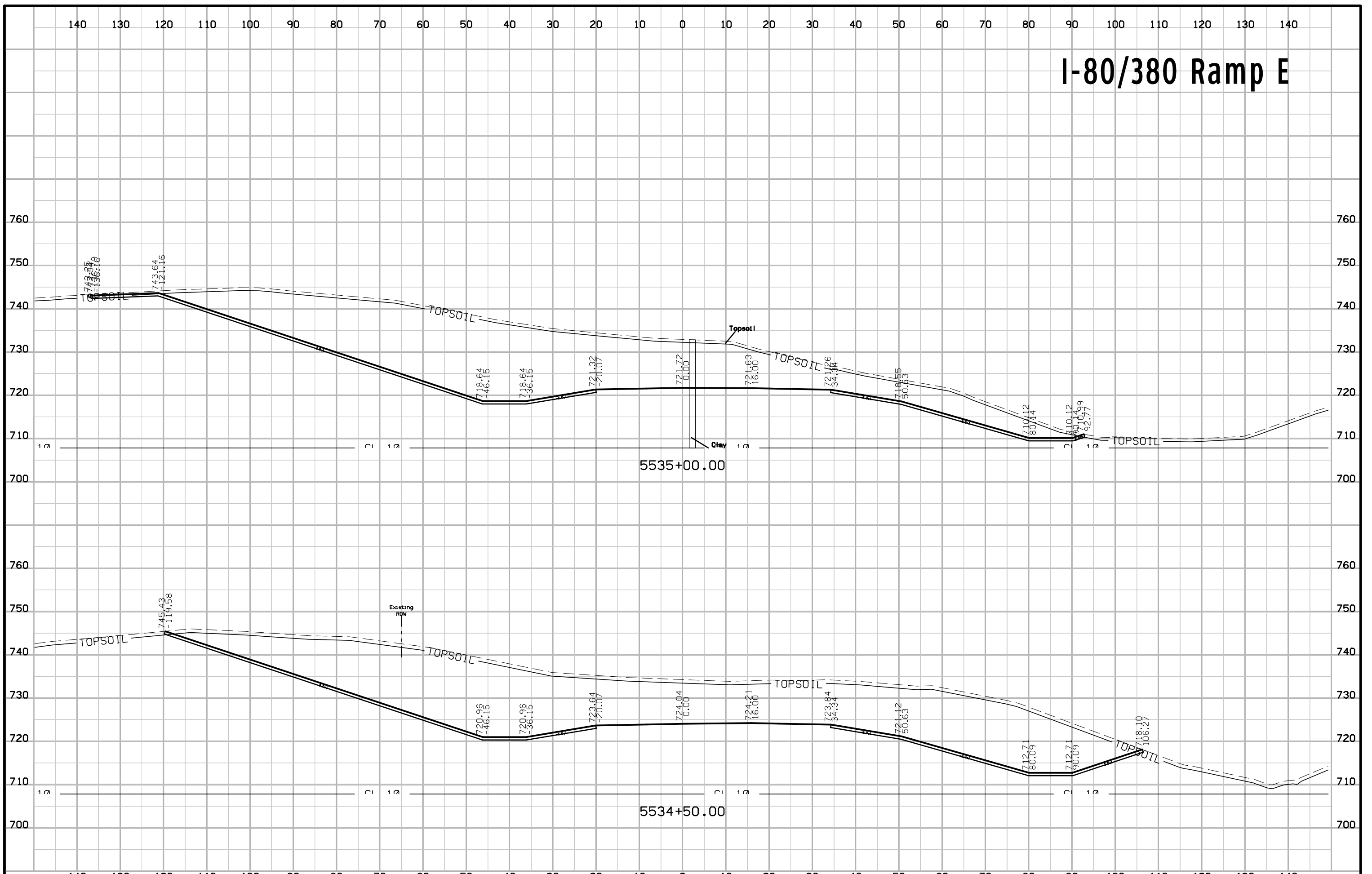
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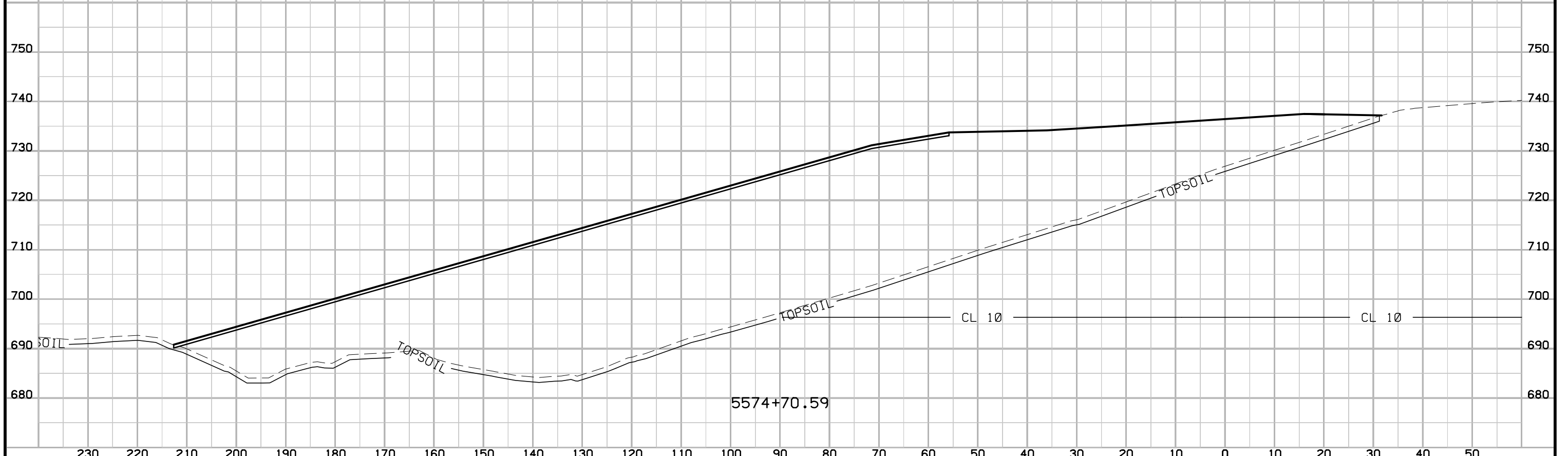
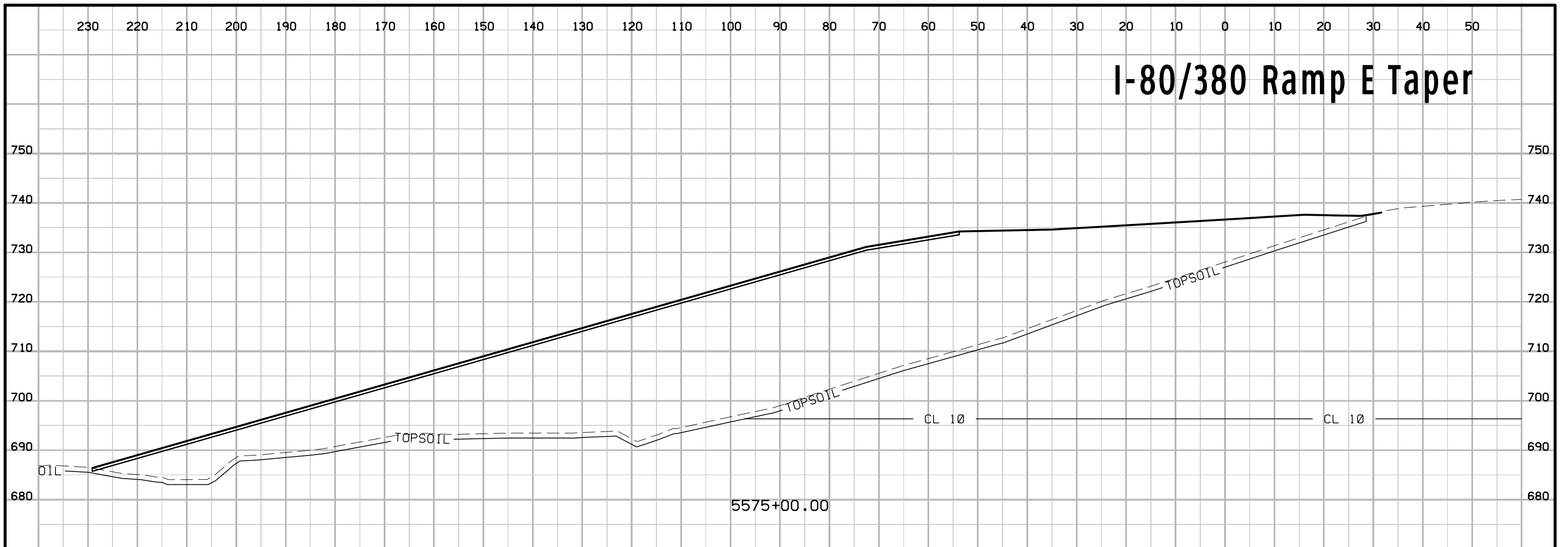
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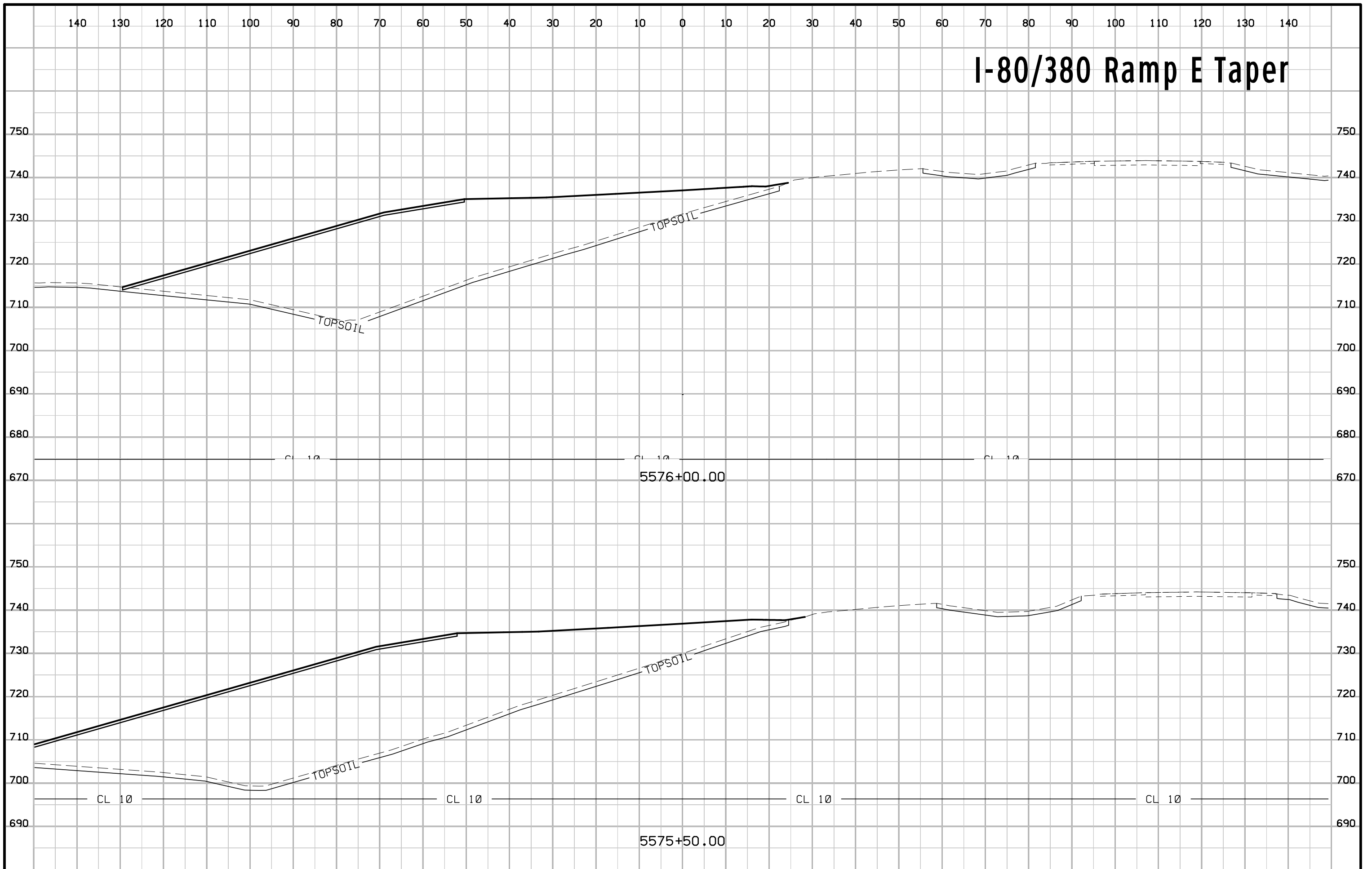
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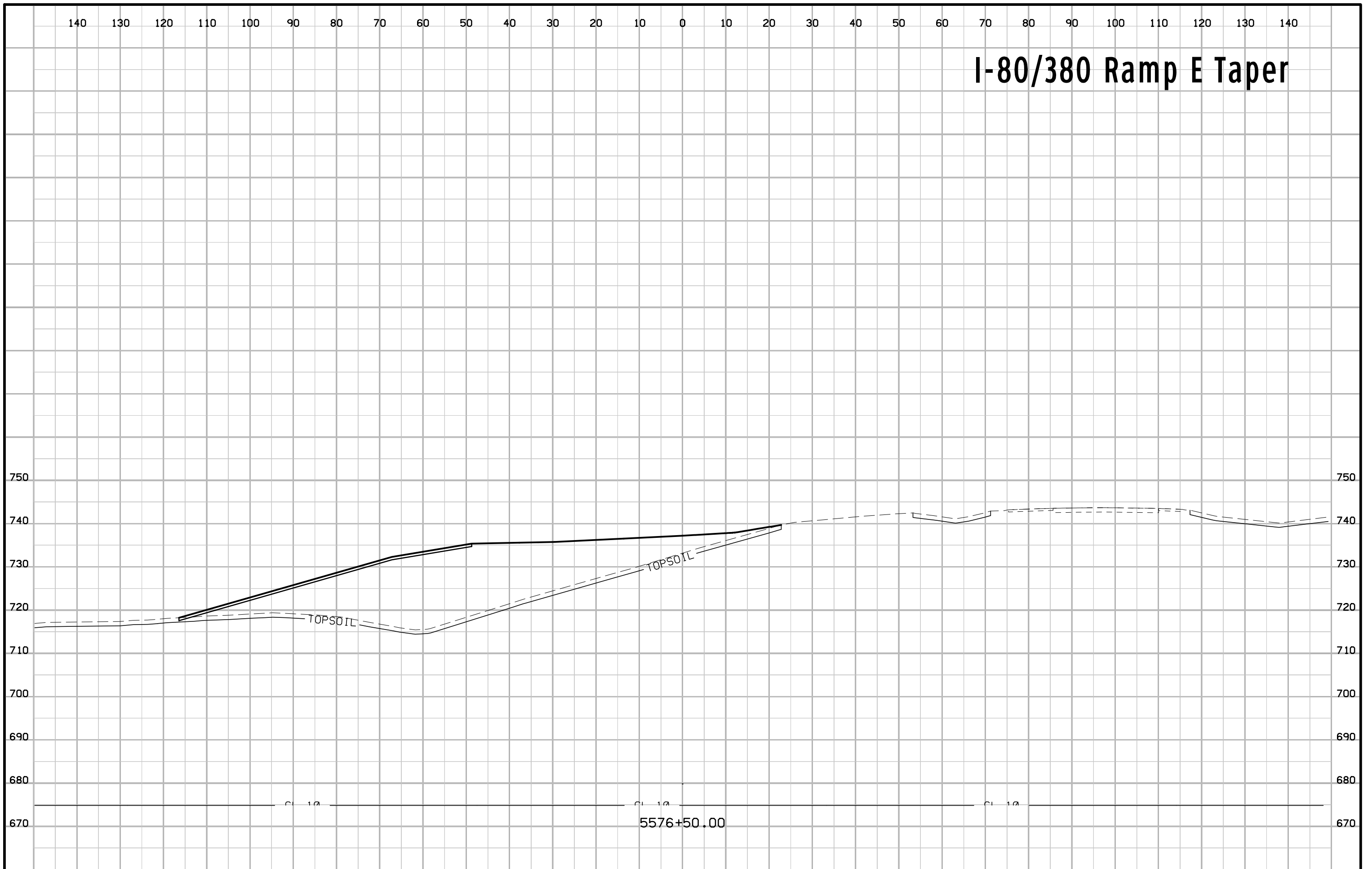
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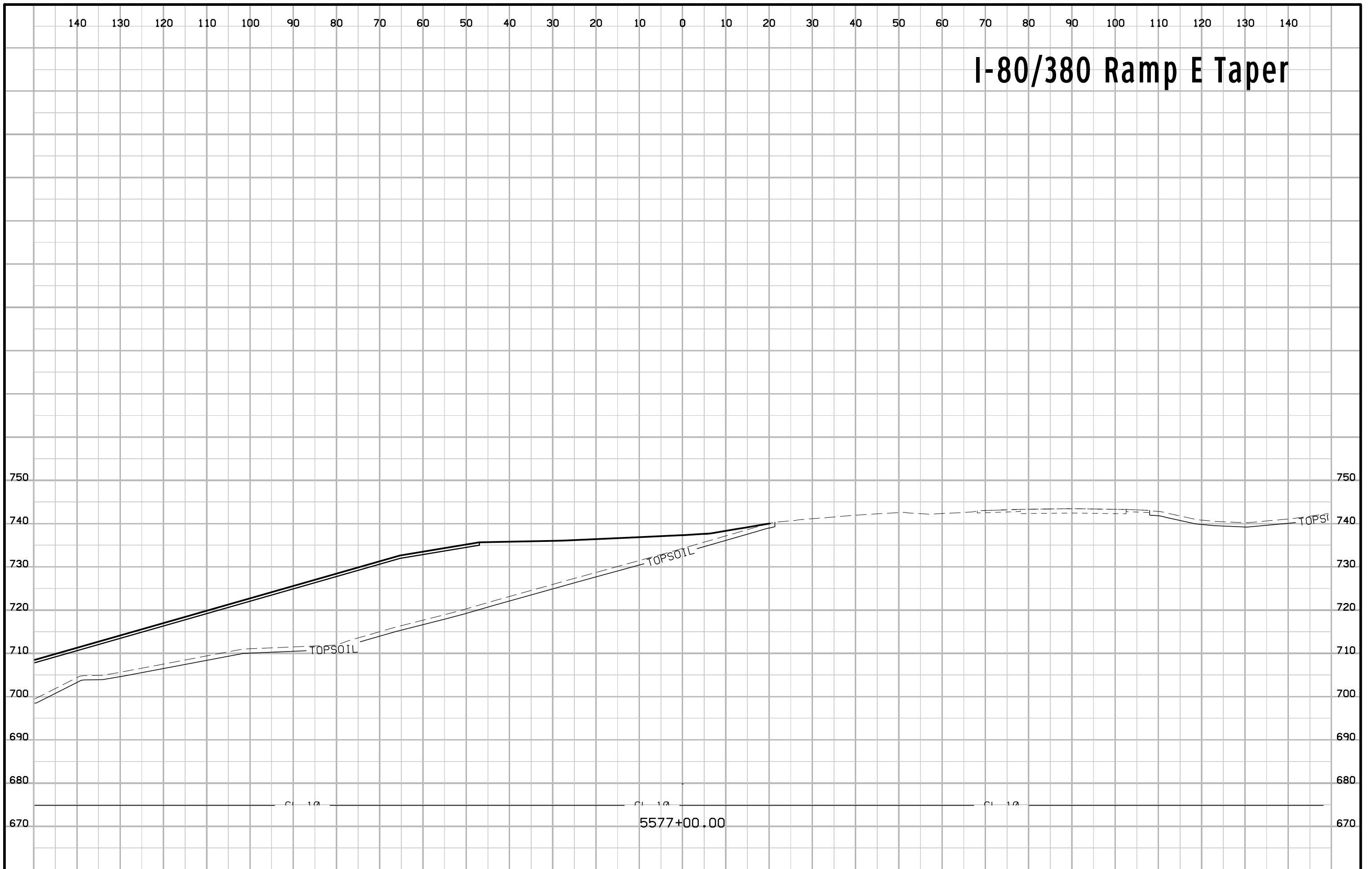
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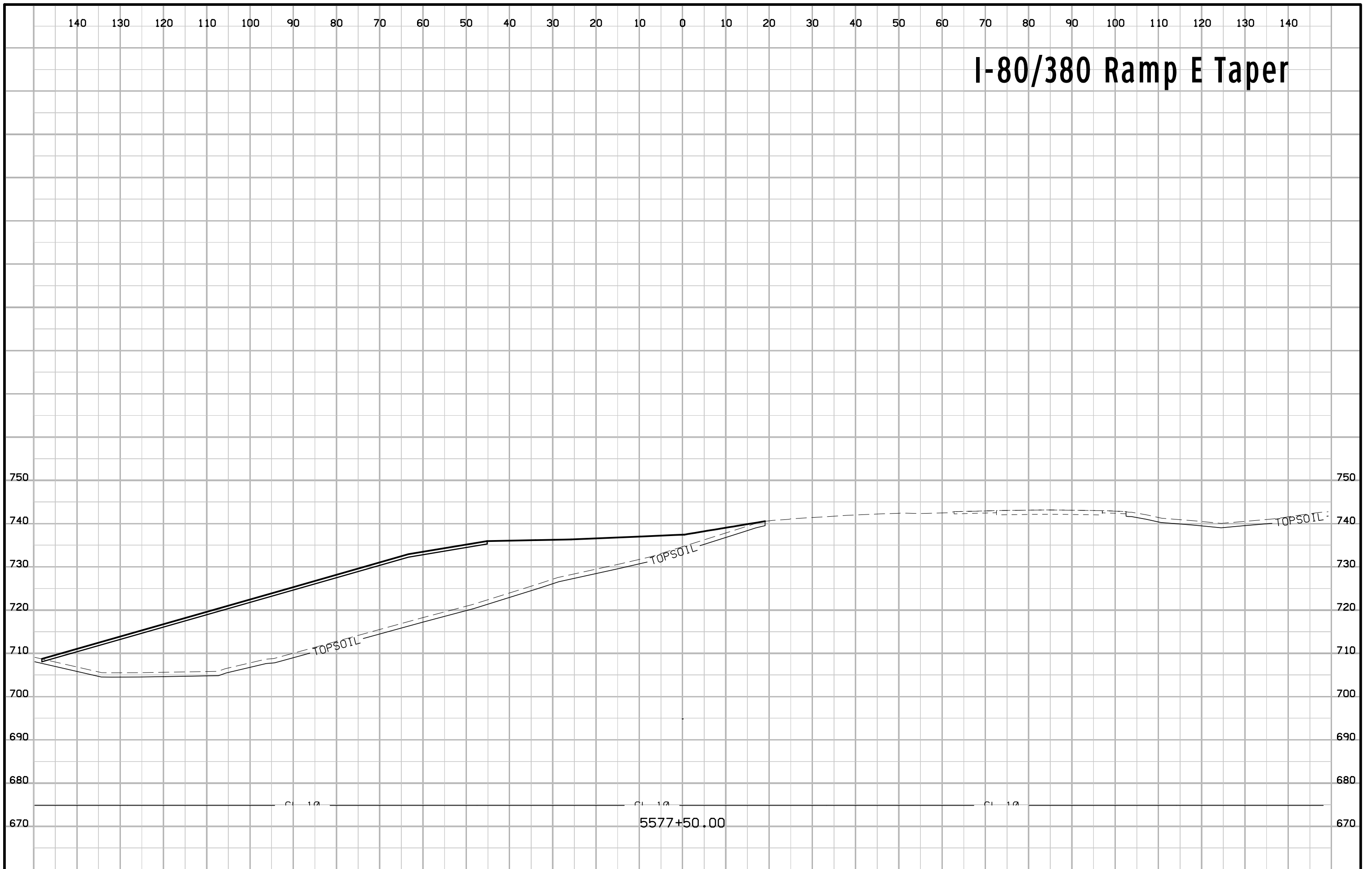
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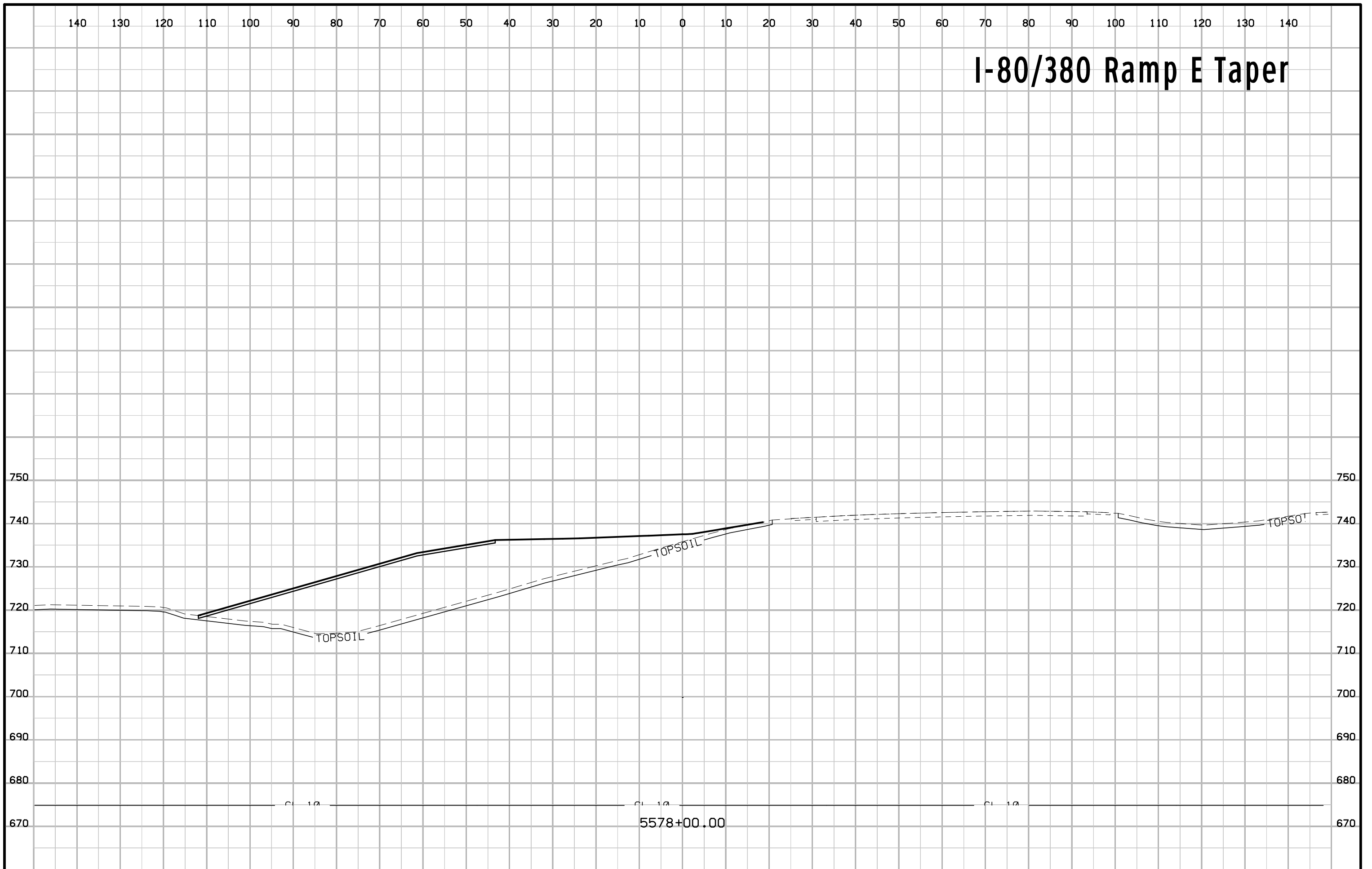
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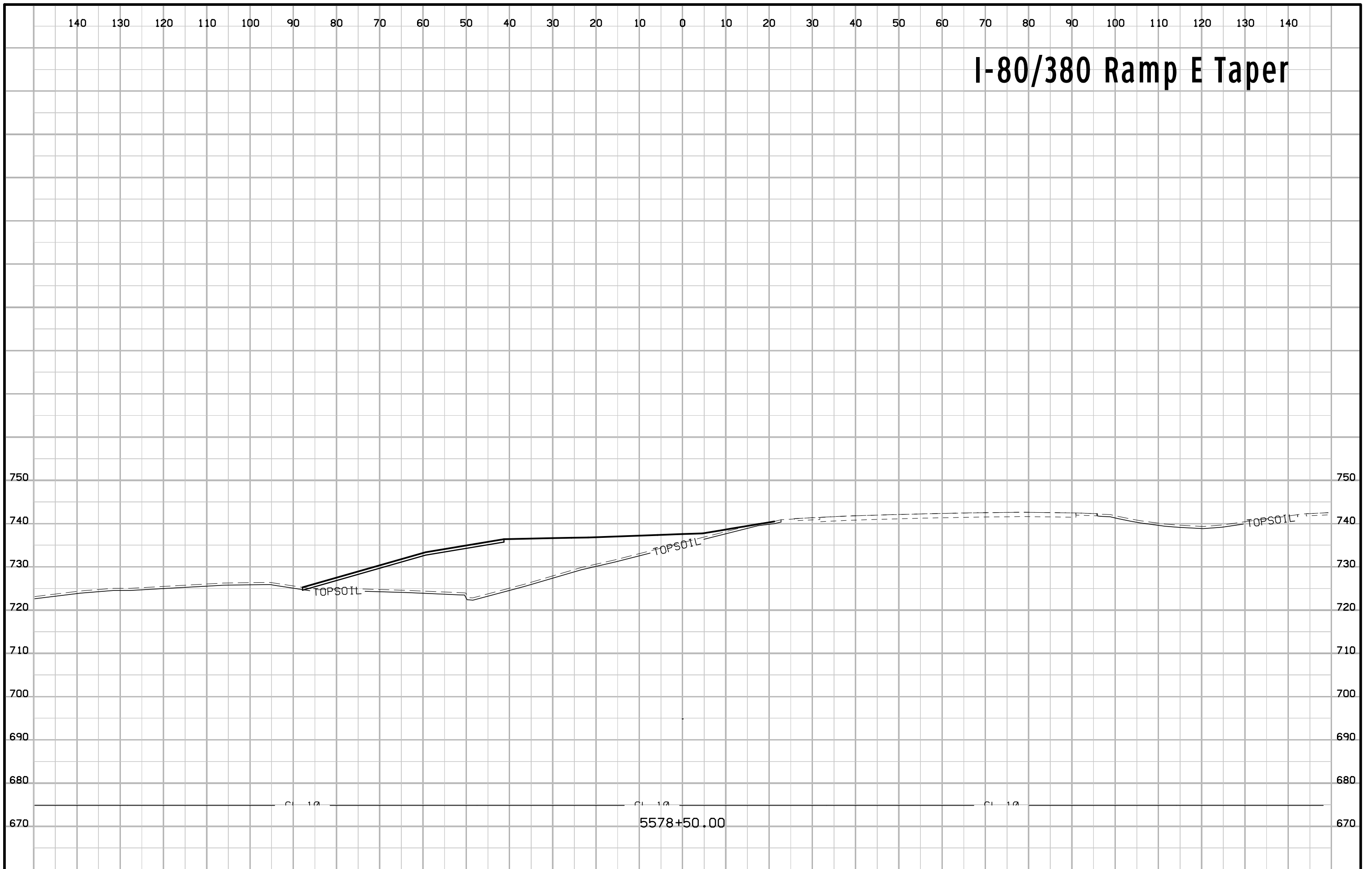
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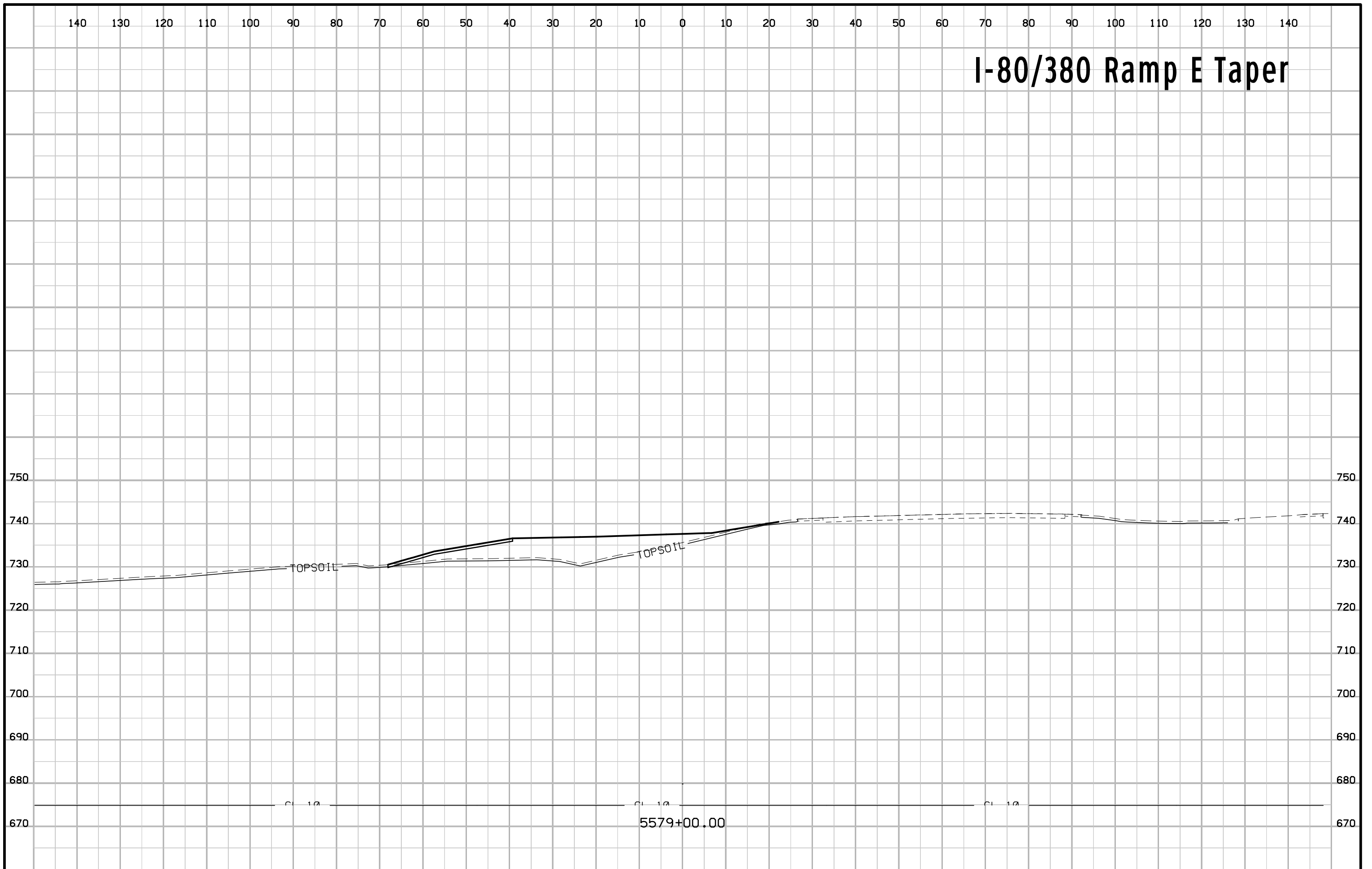
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I-80/380 Ramp E Taper

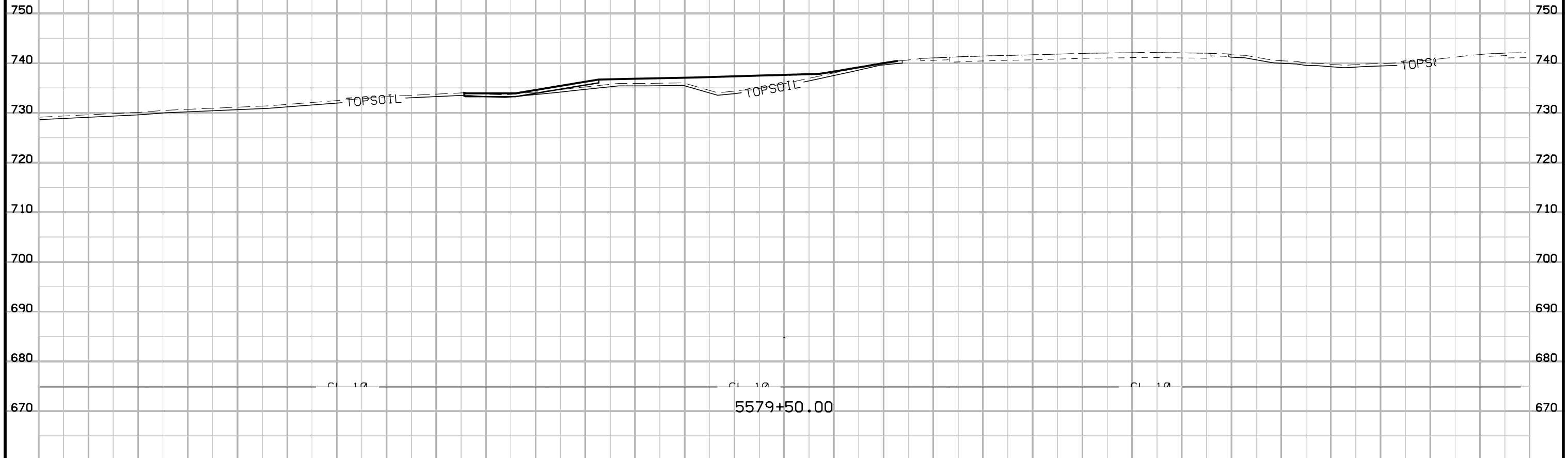


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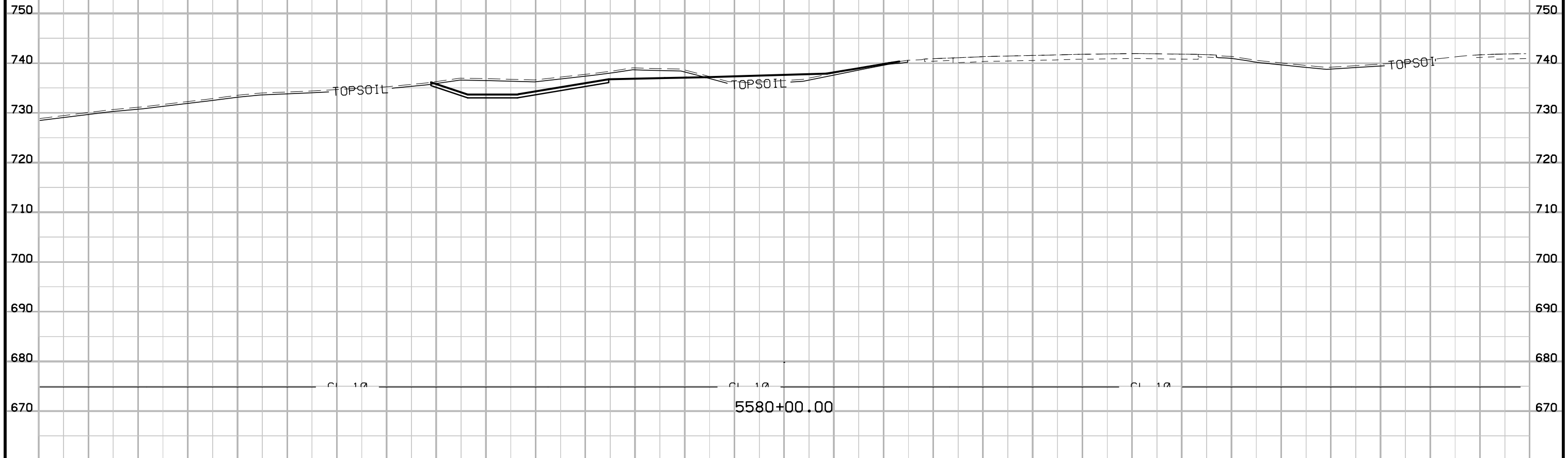
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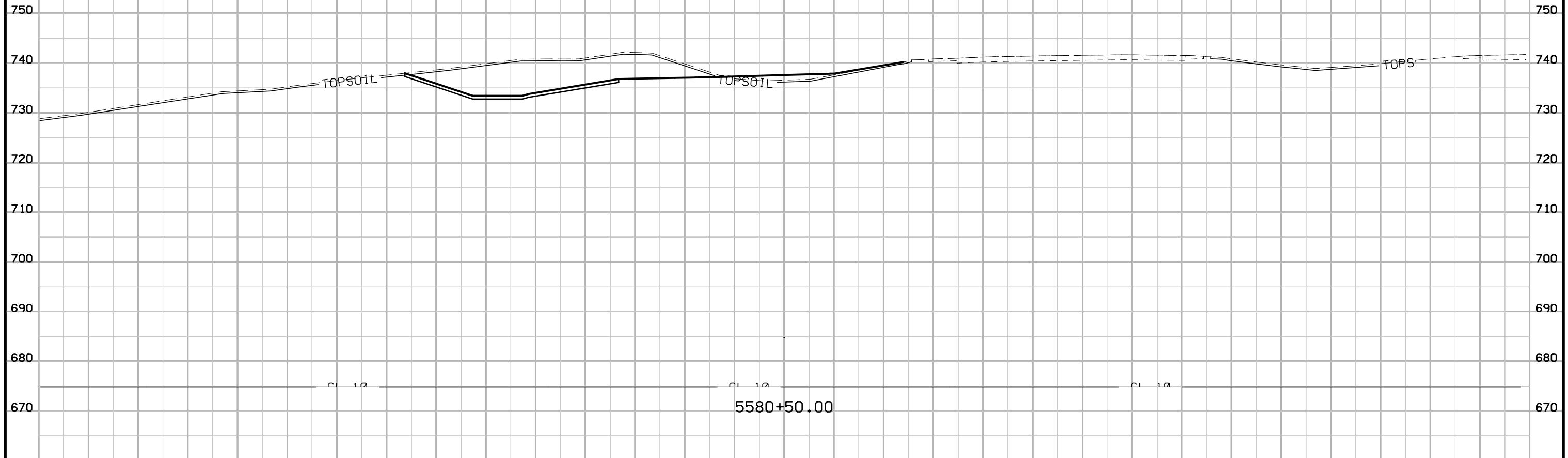
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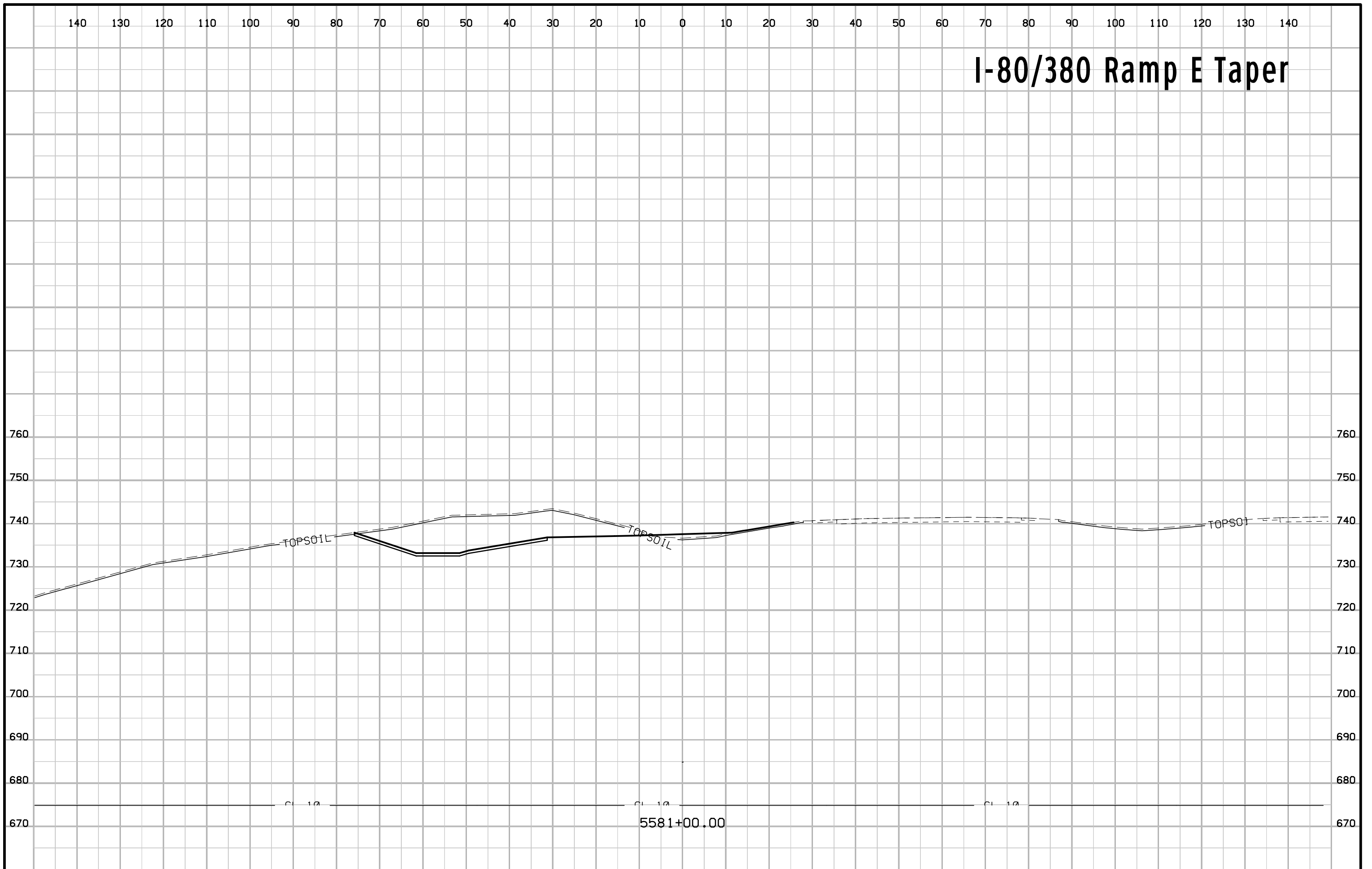


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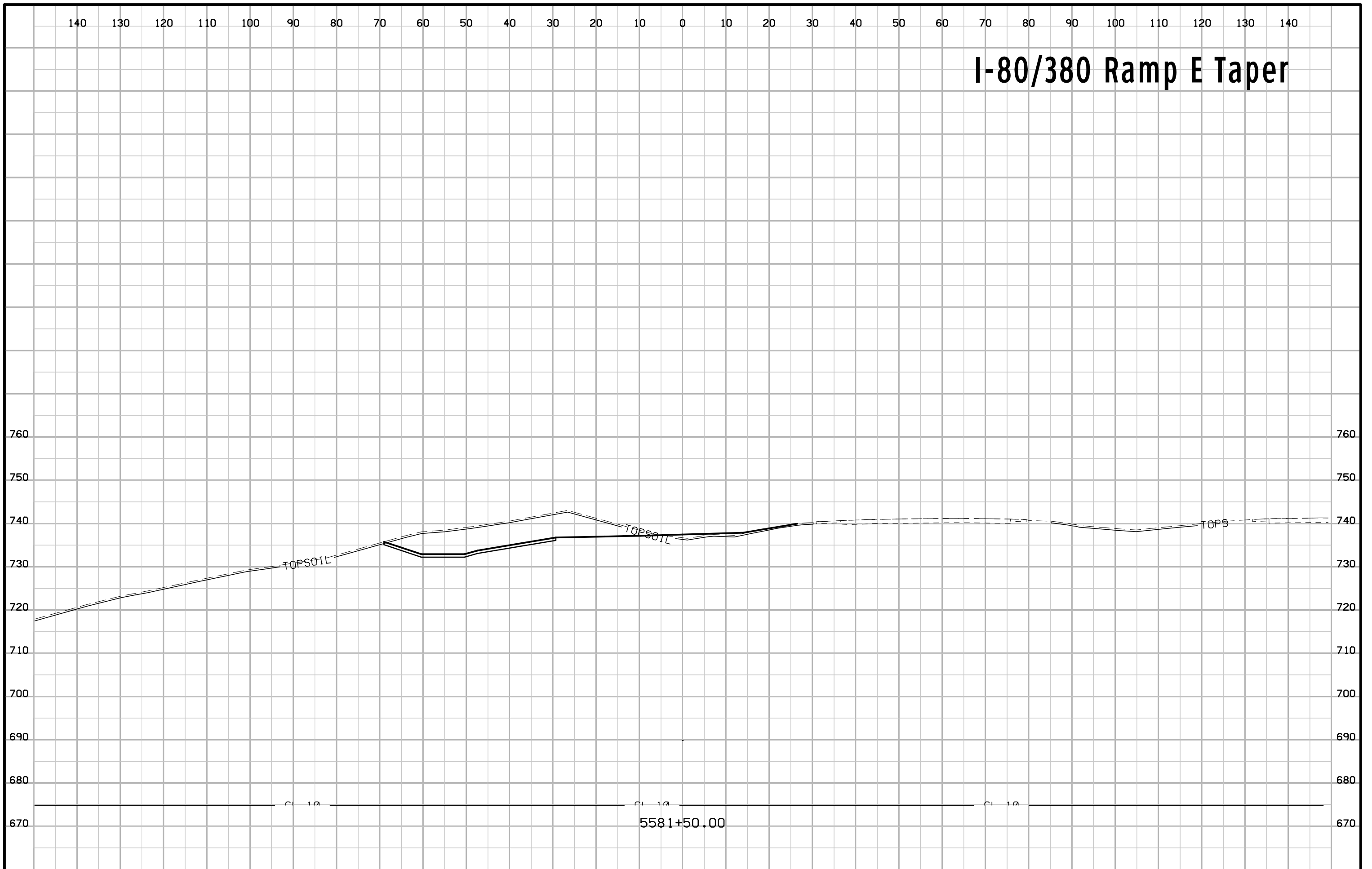
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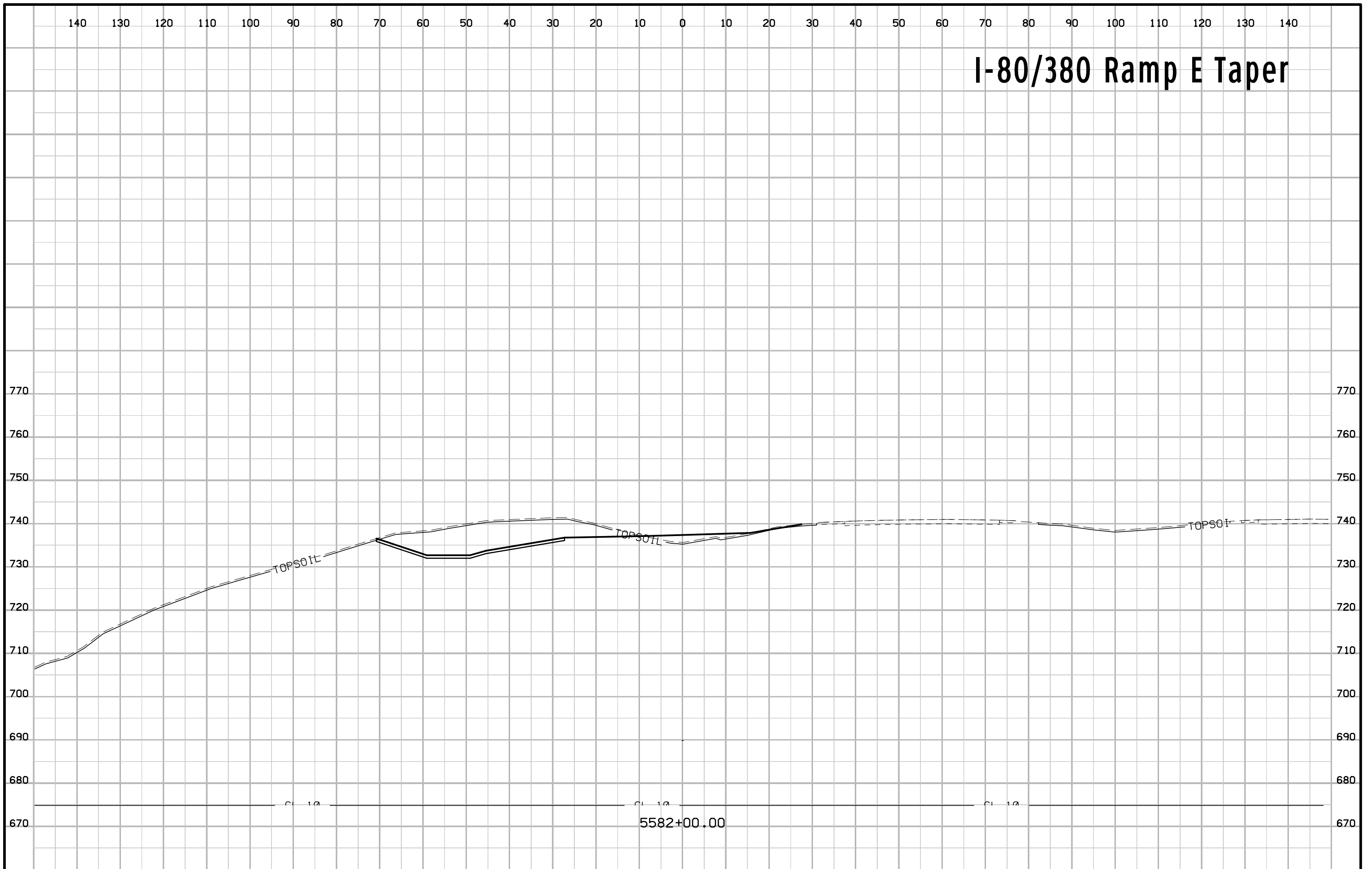
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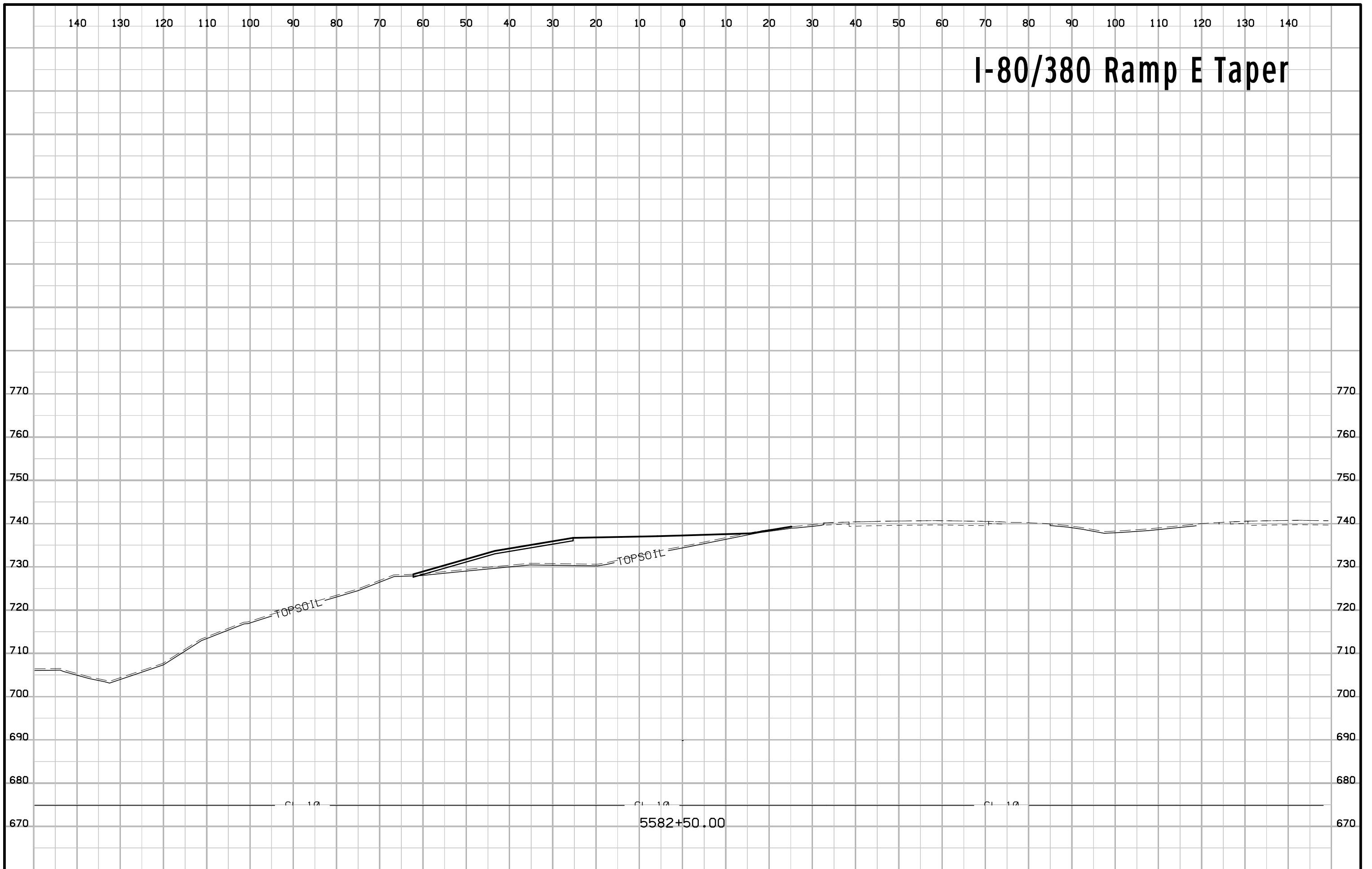
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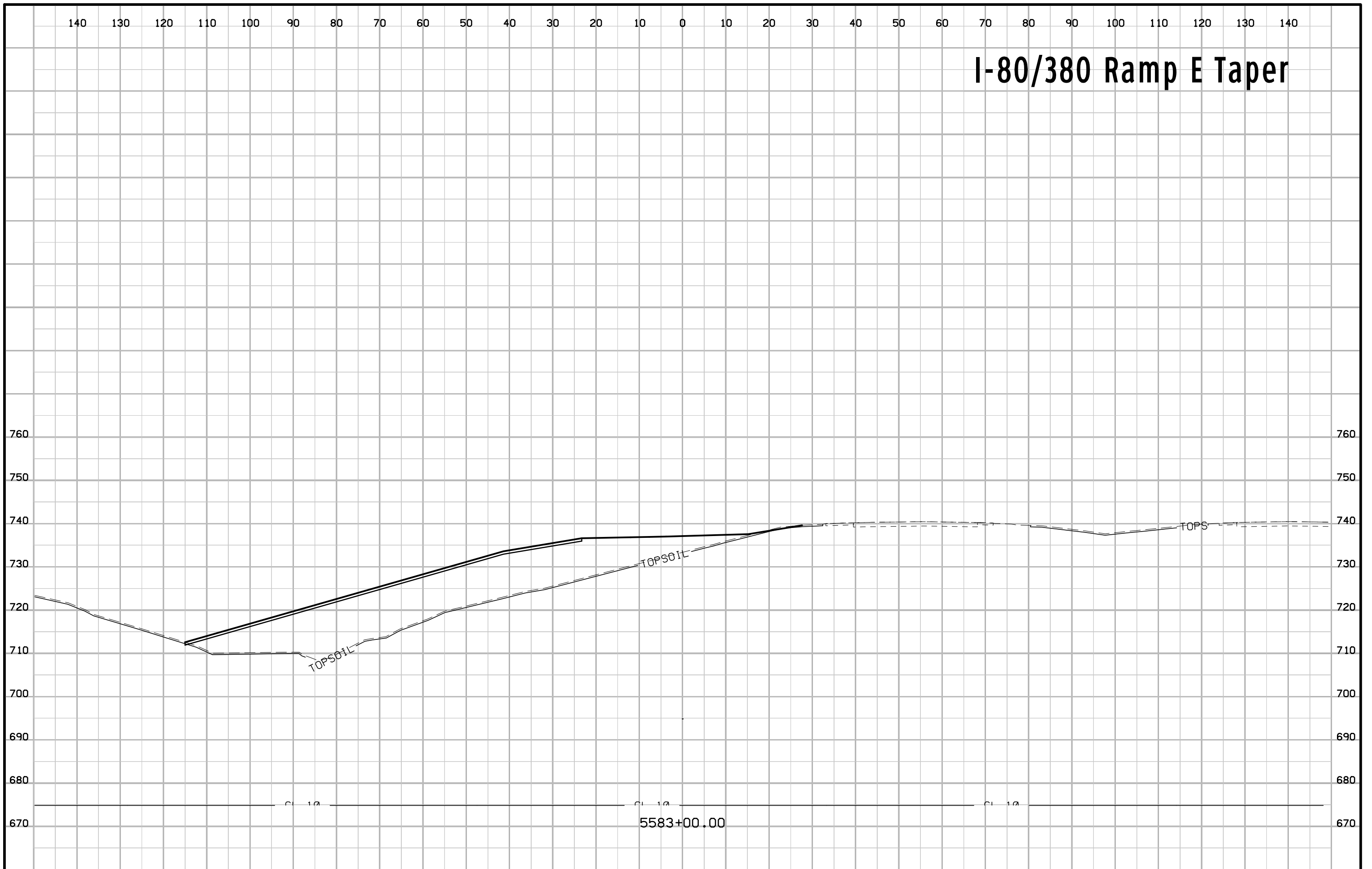
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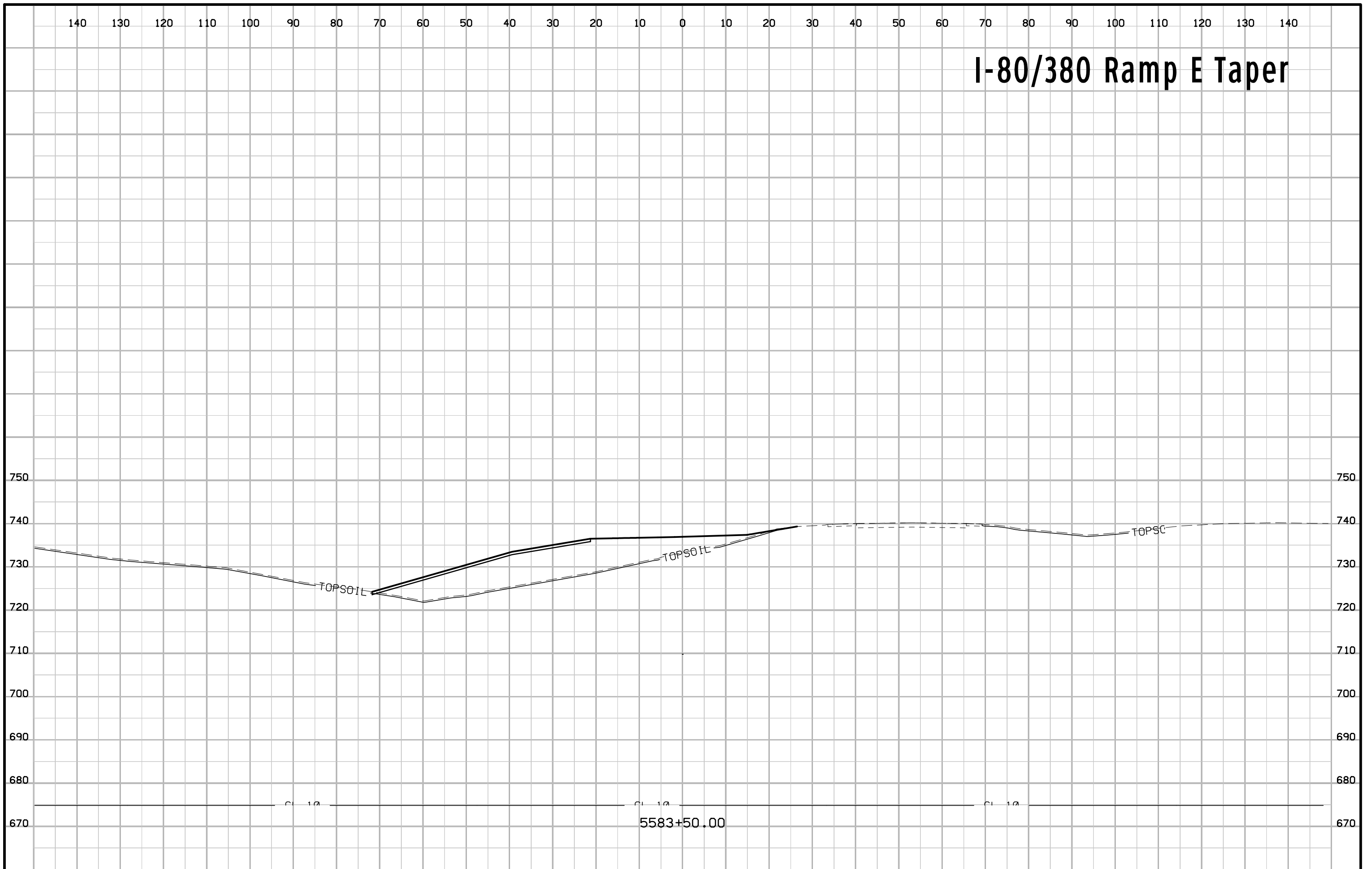
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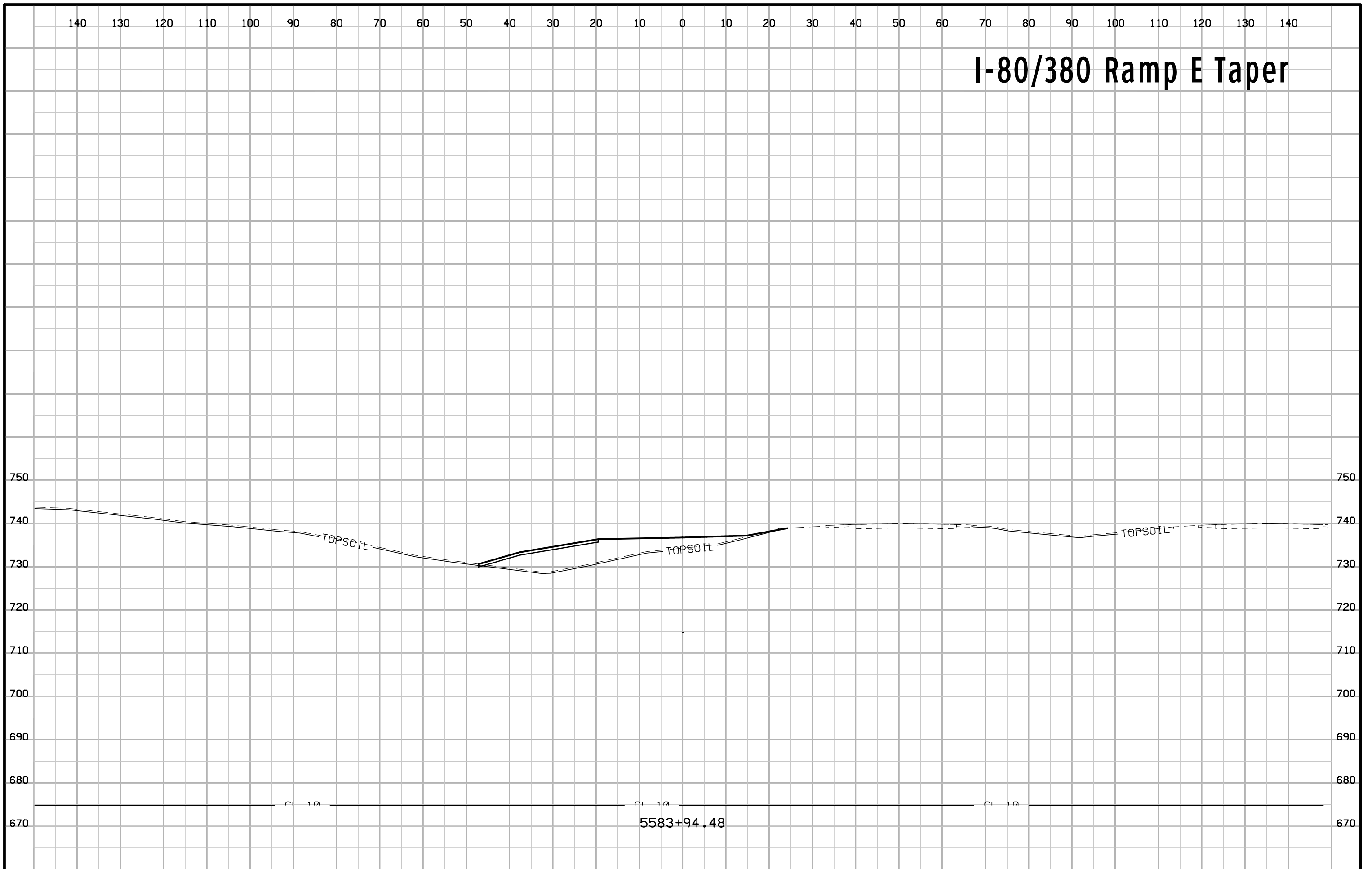
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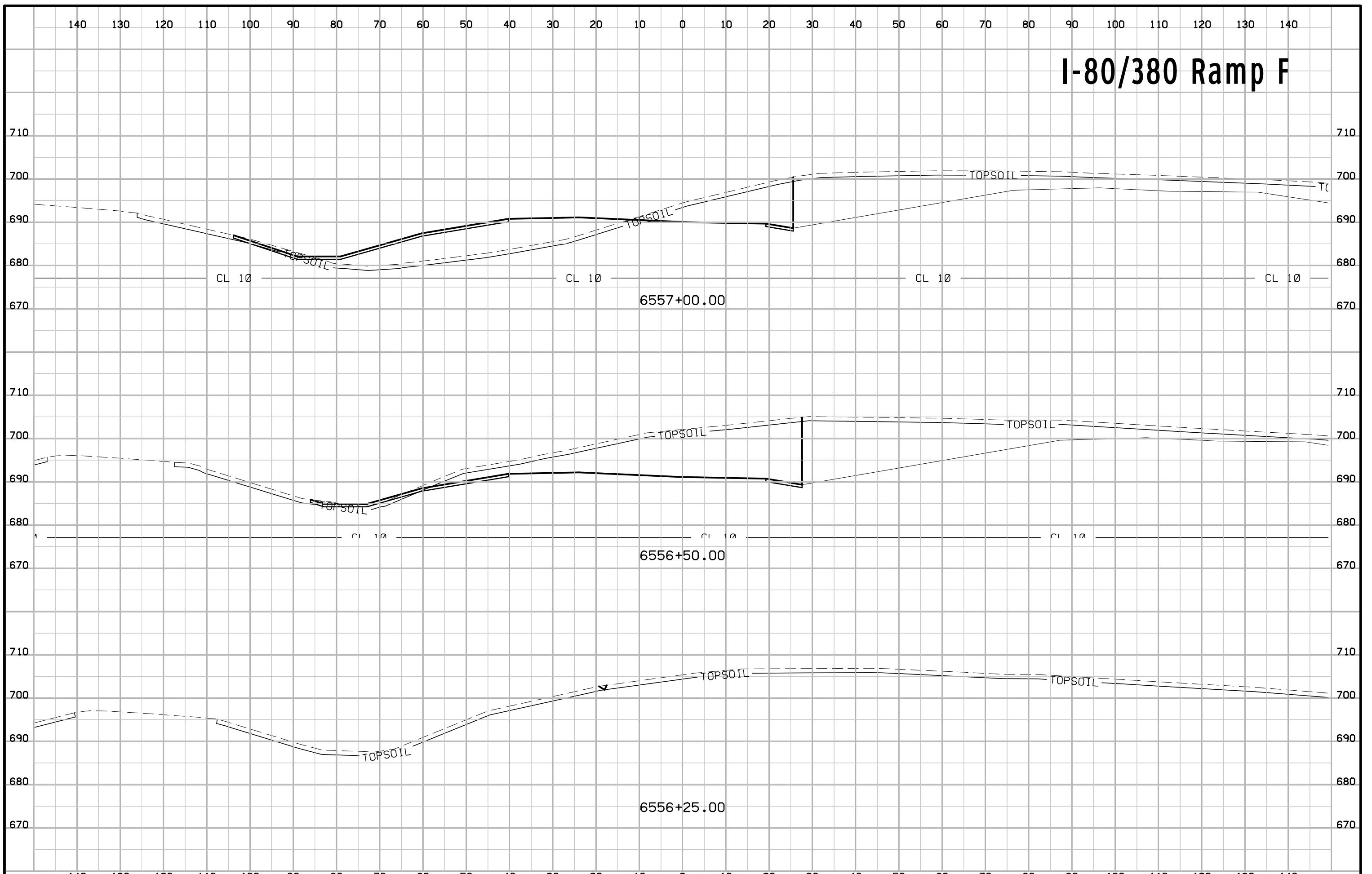
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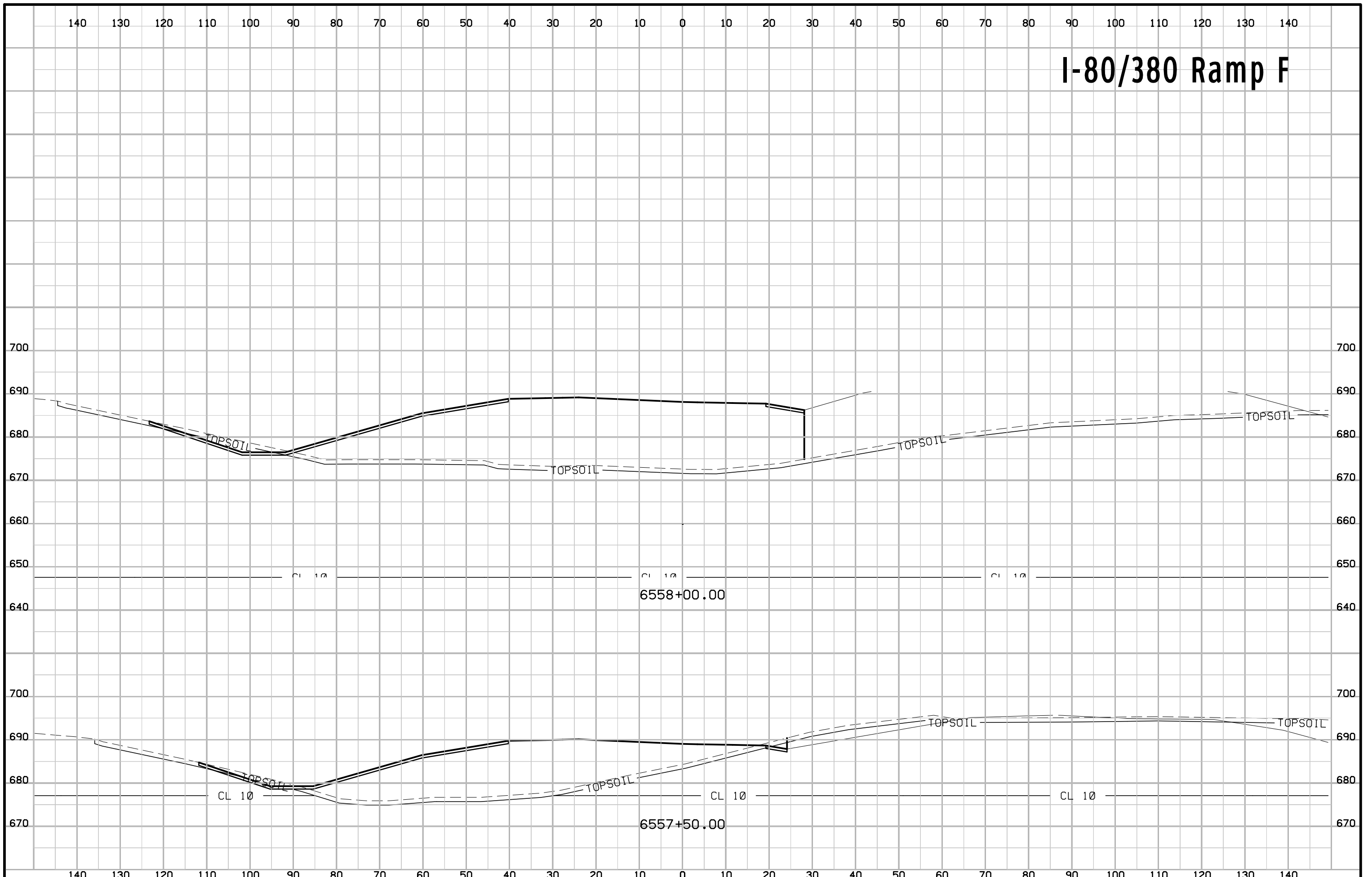
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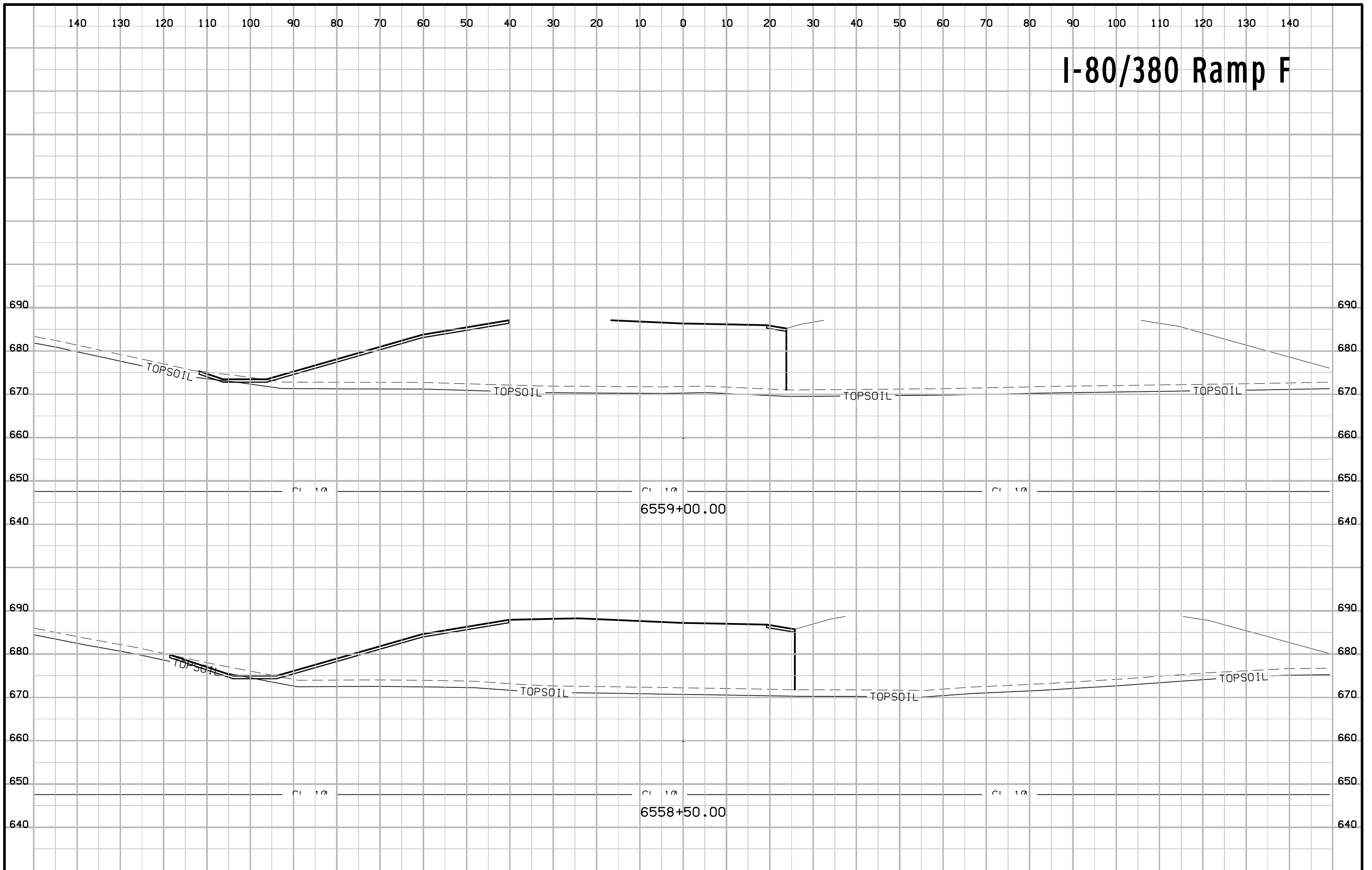
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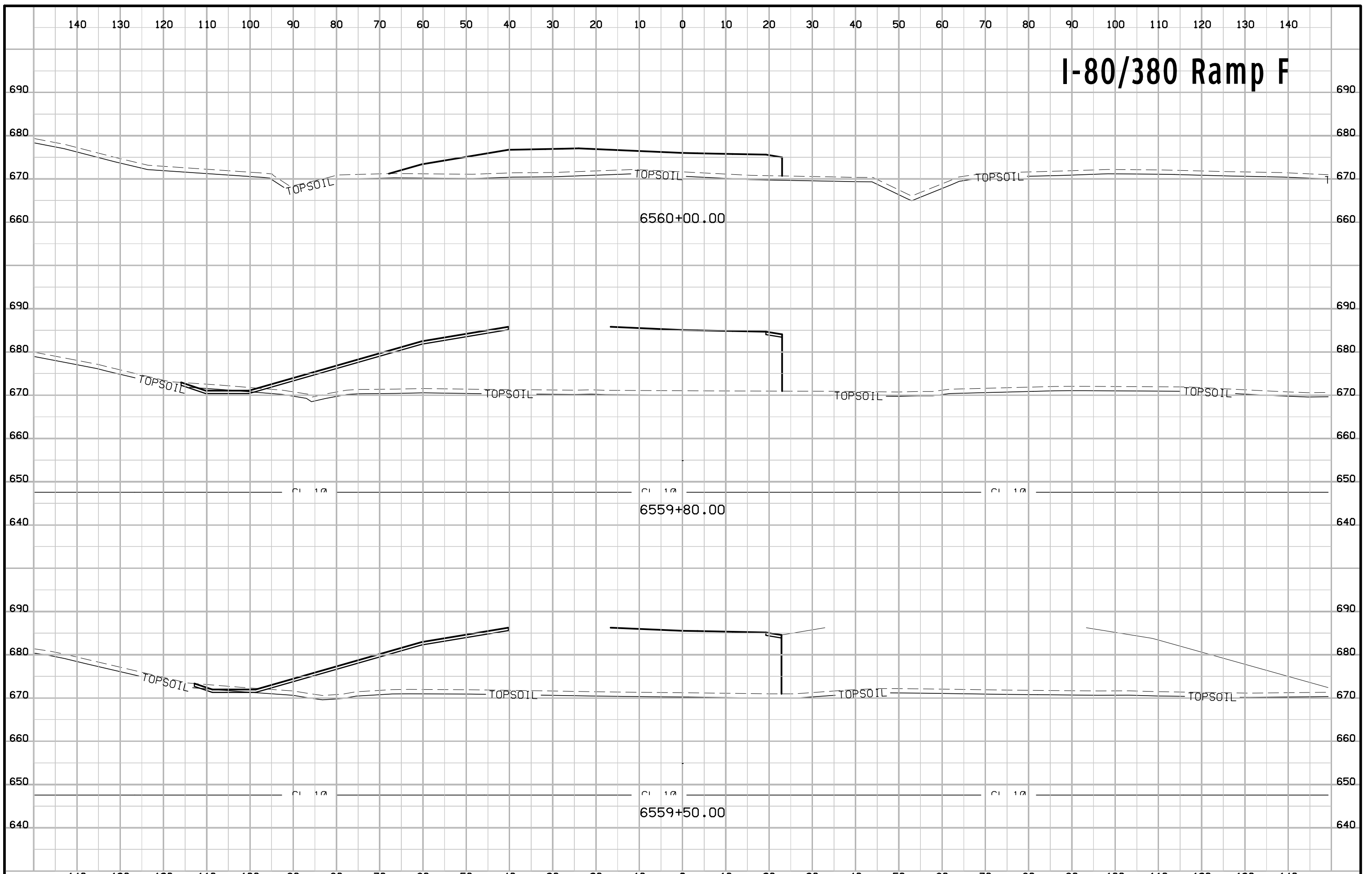
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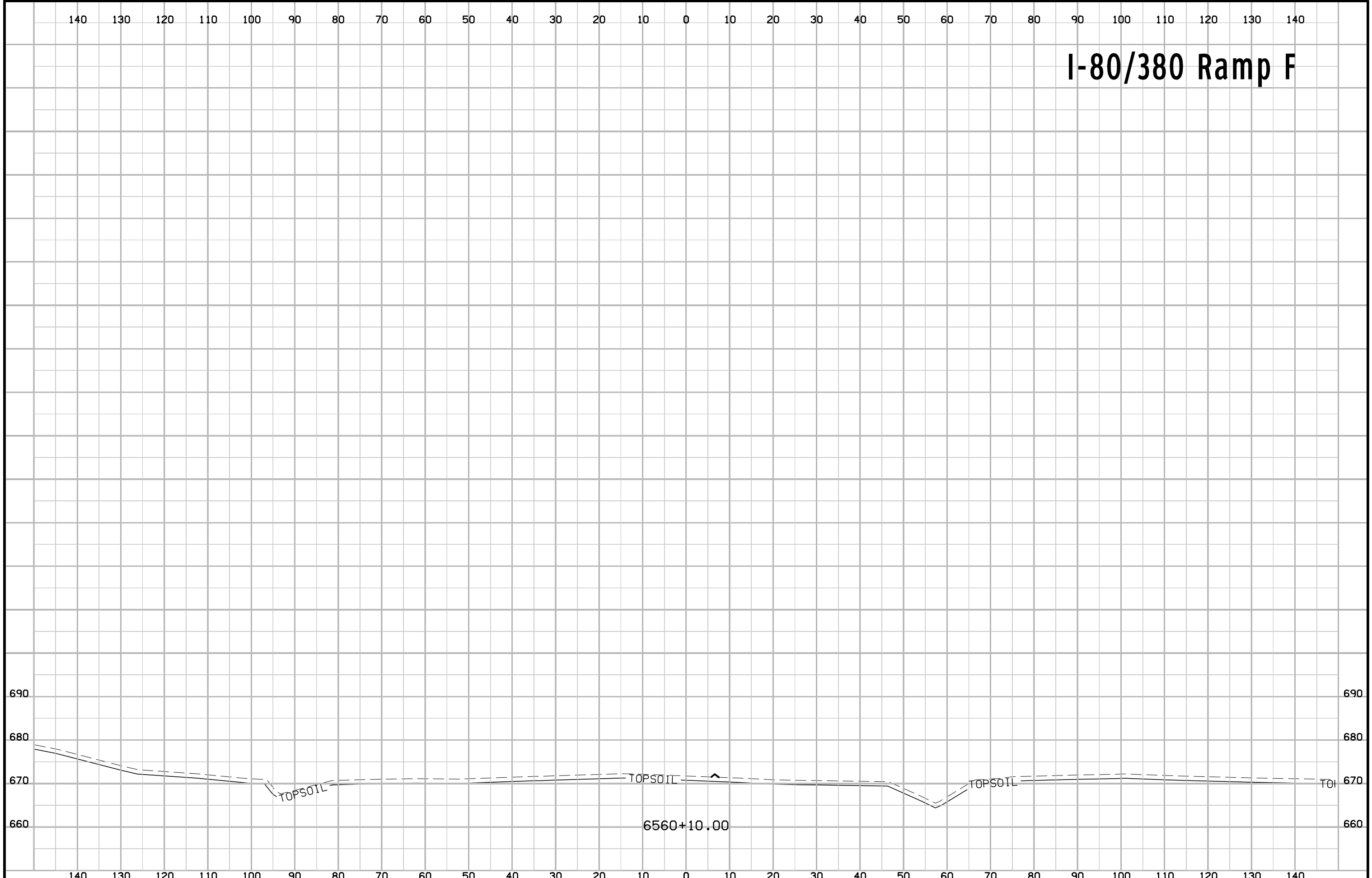
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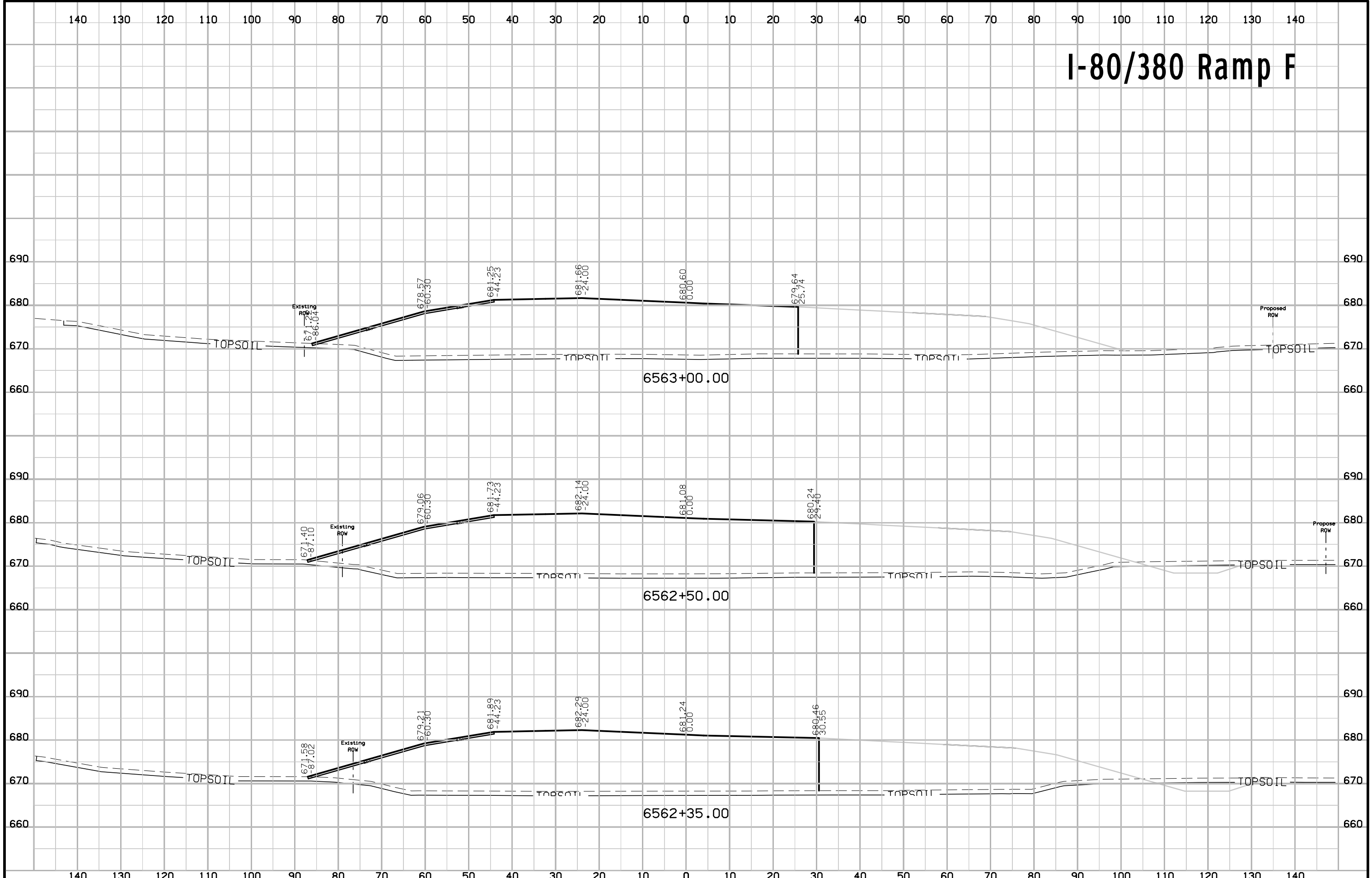
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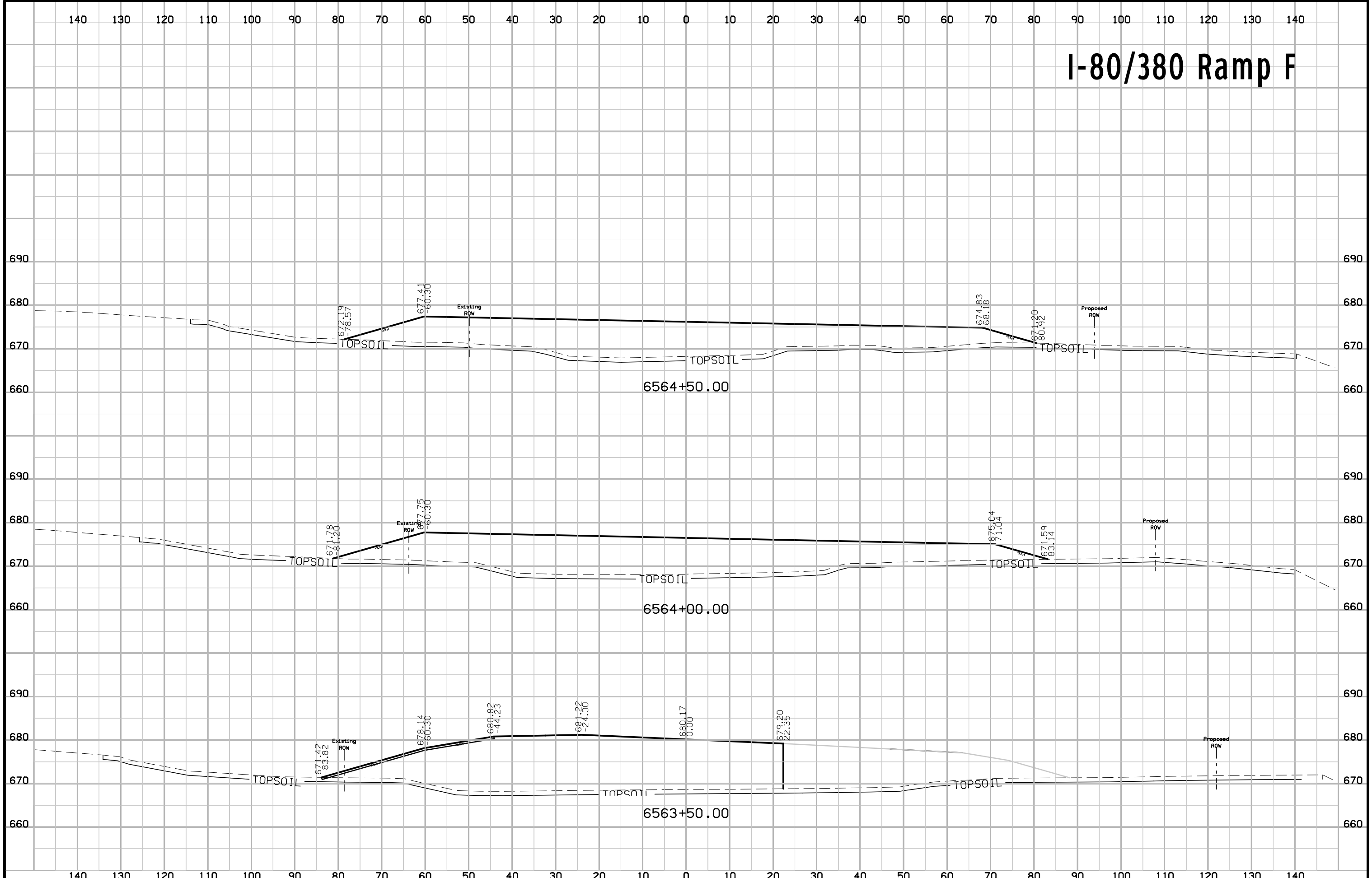
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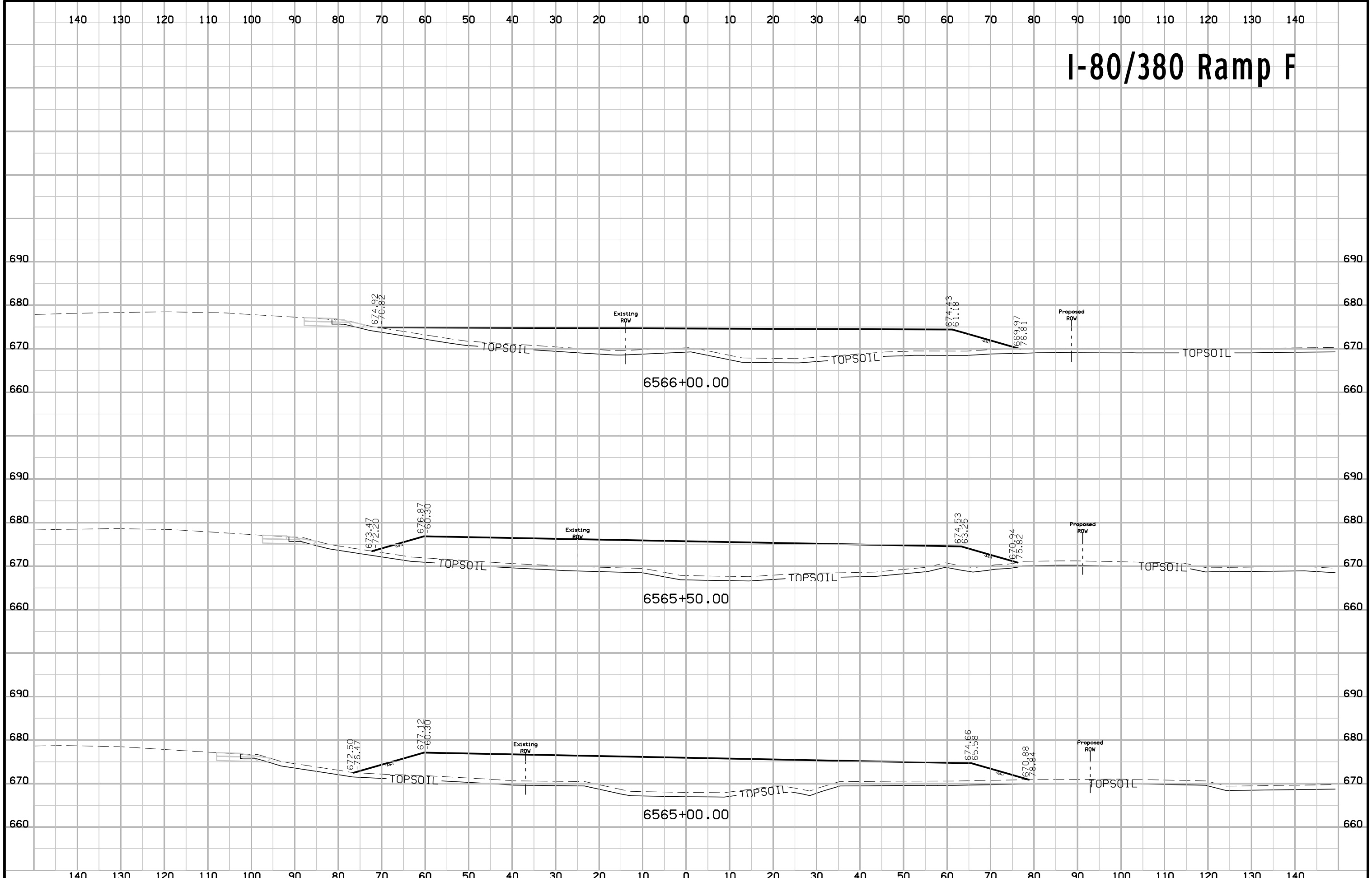
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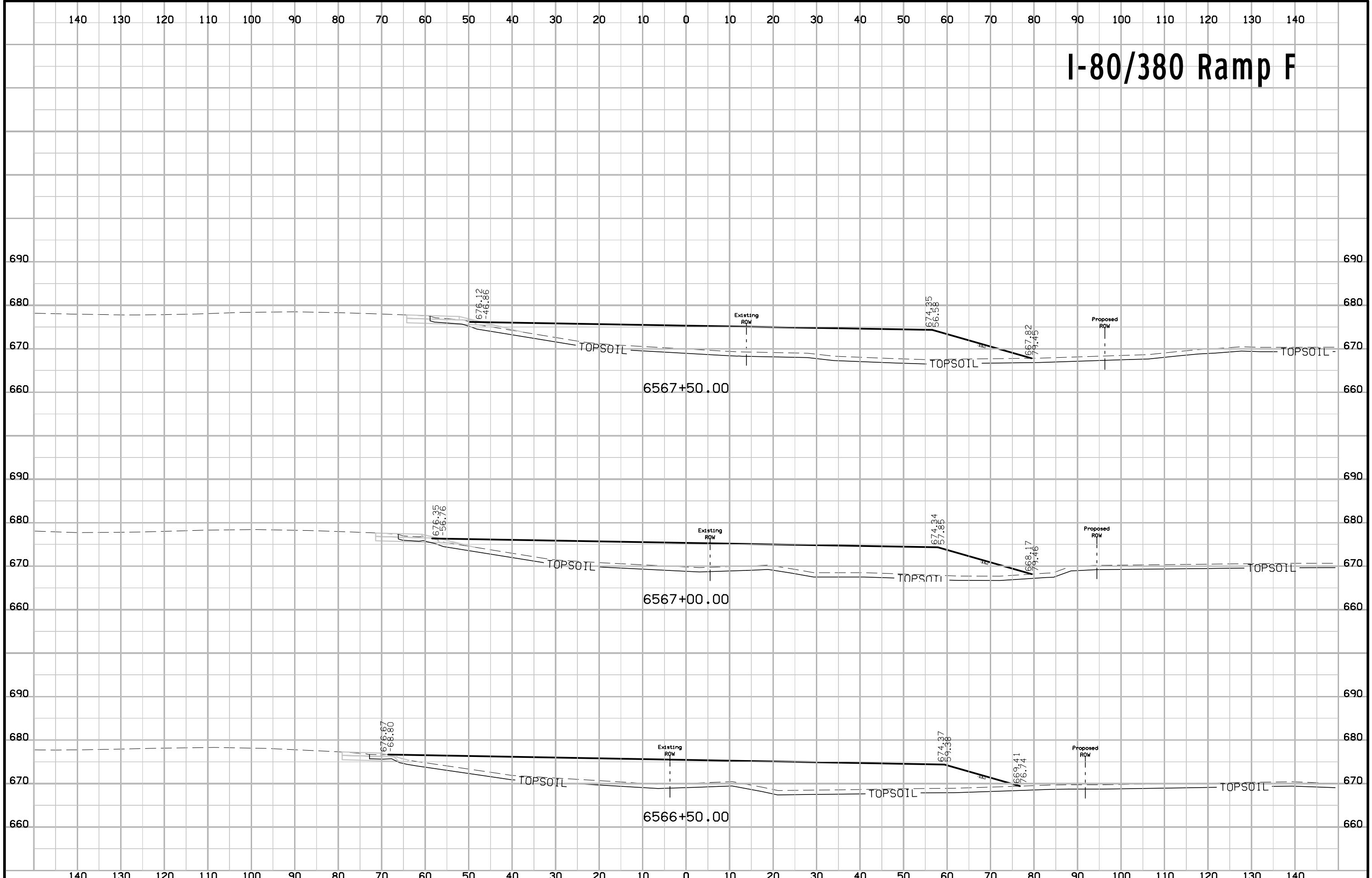
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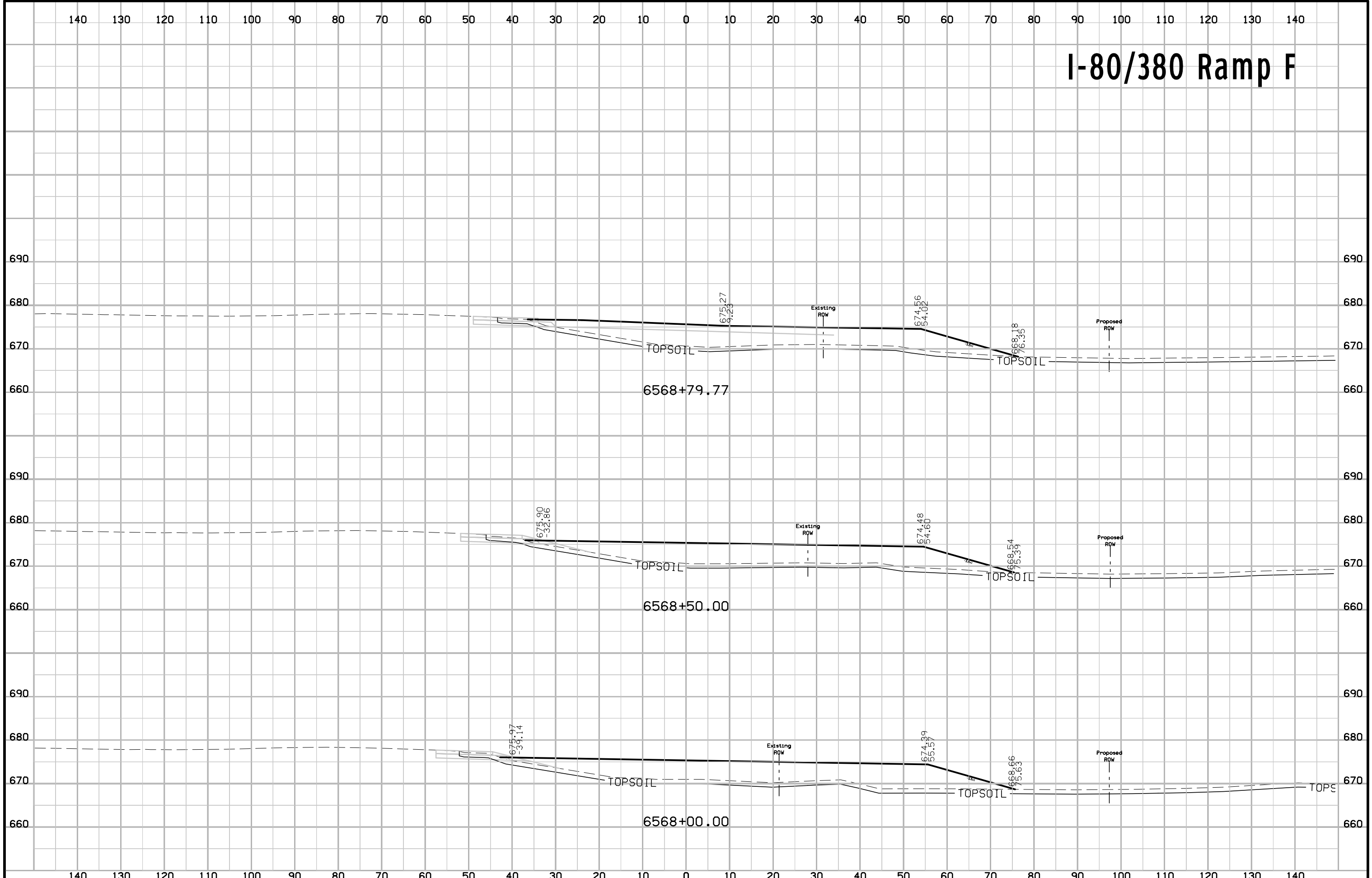
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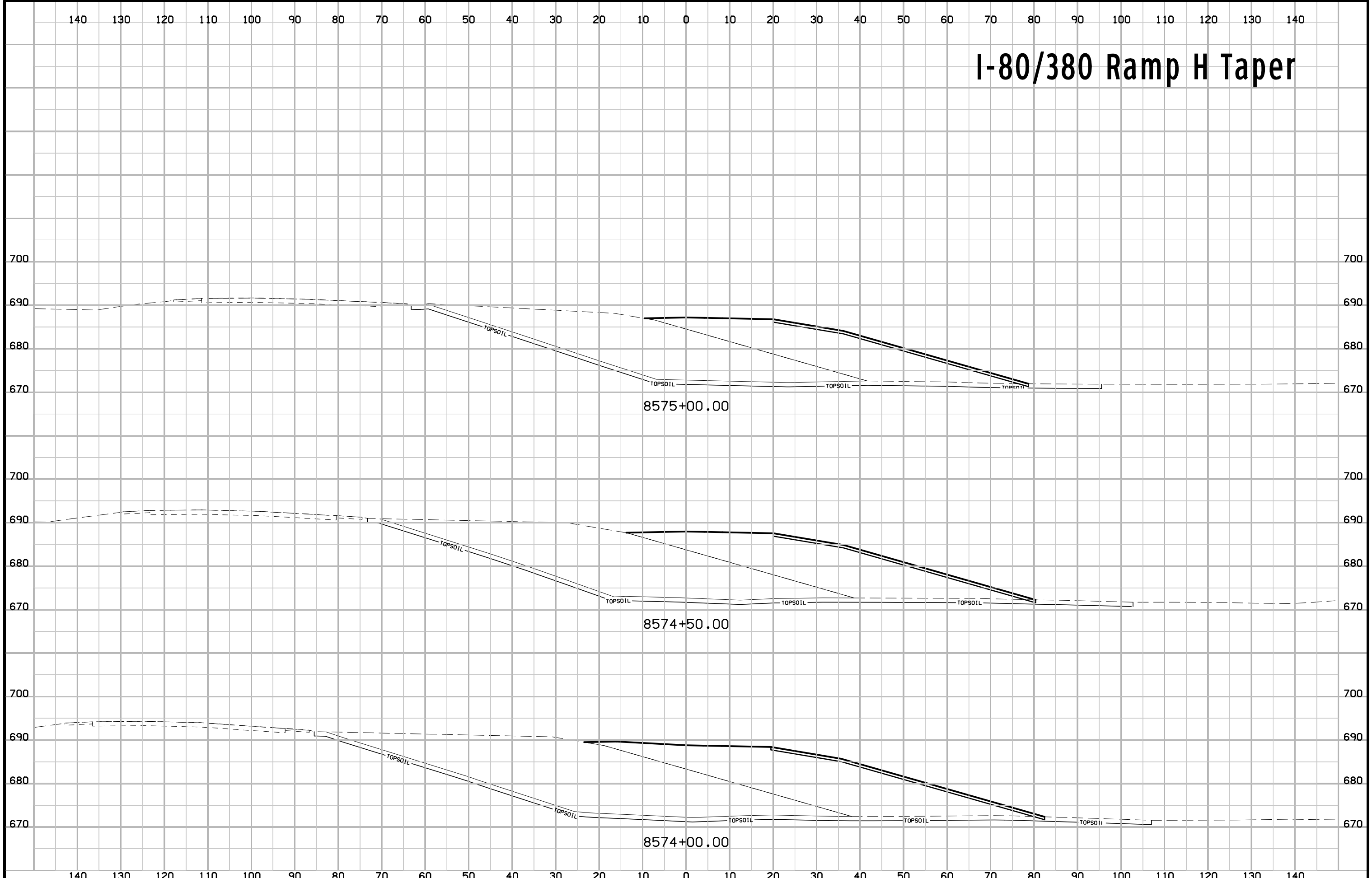
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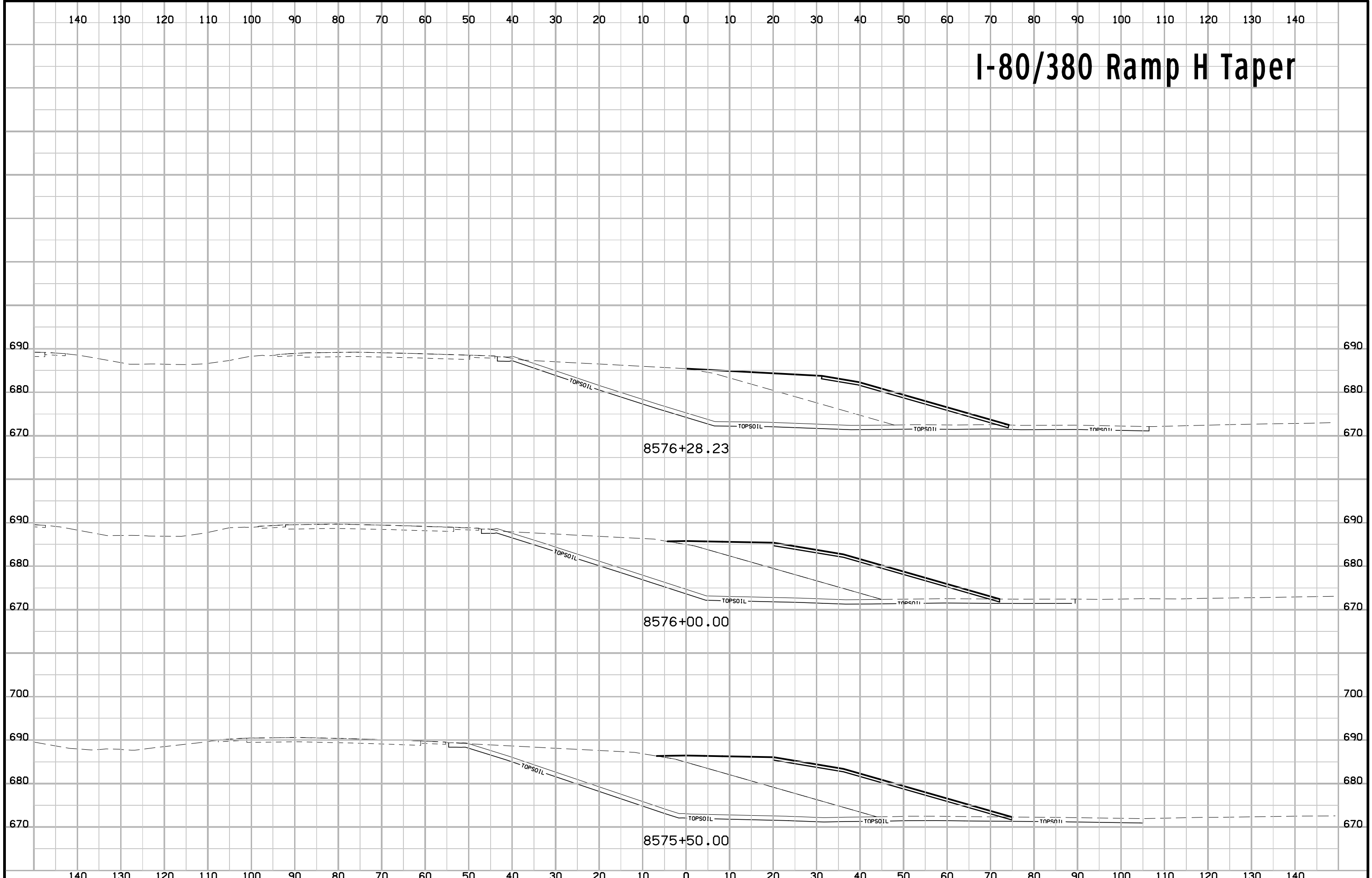
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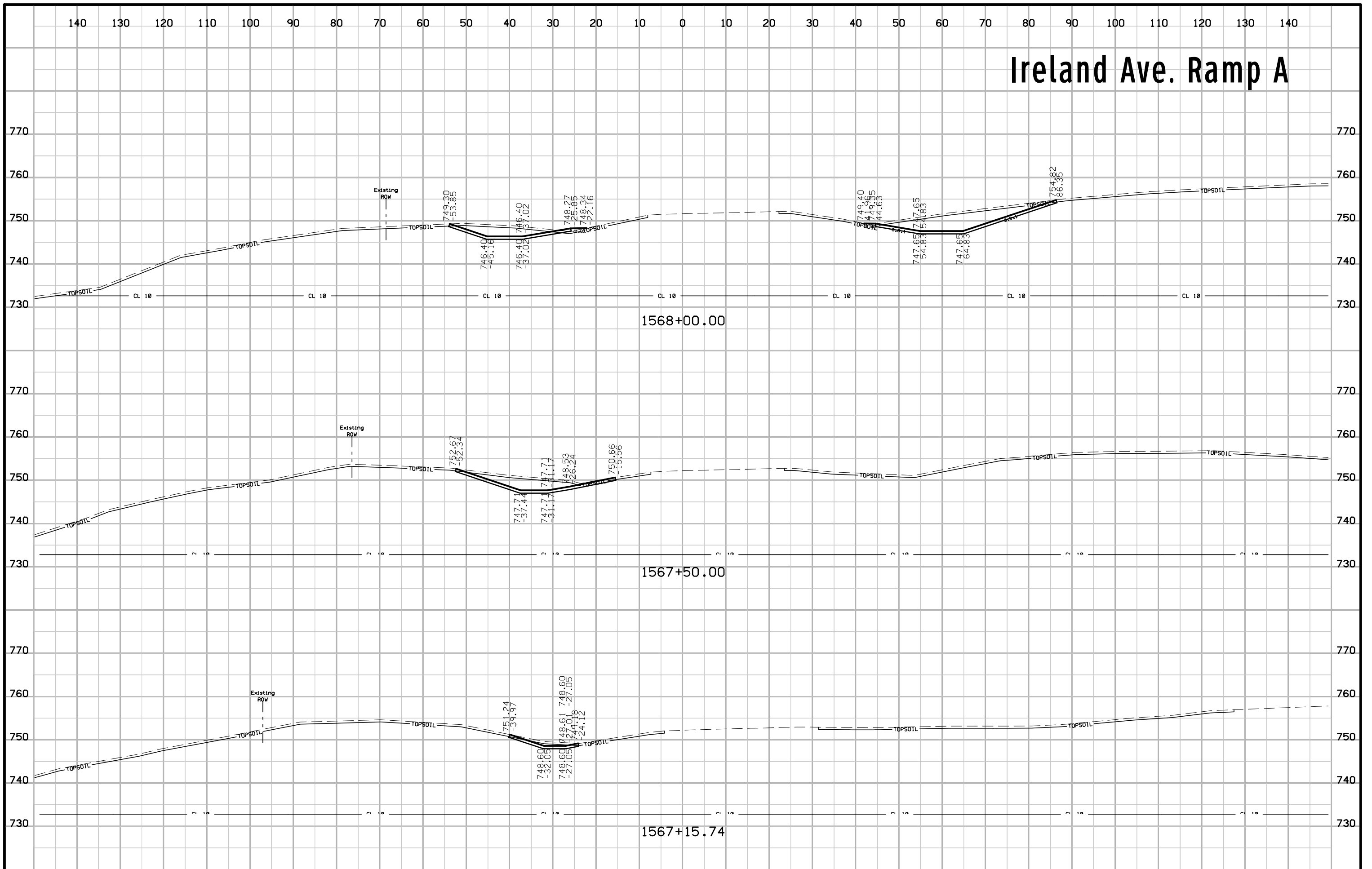
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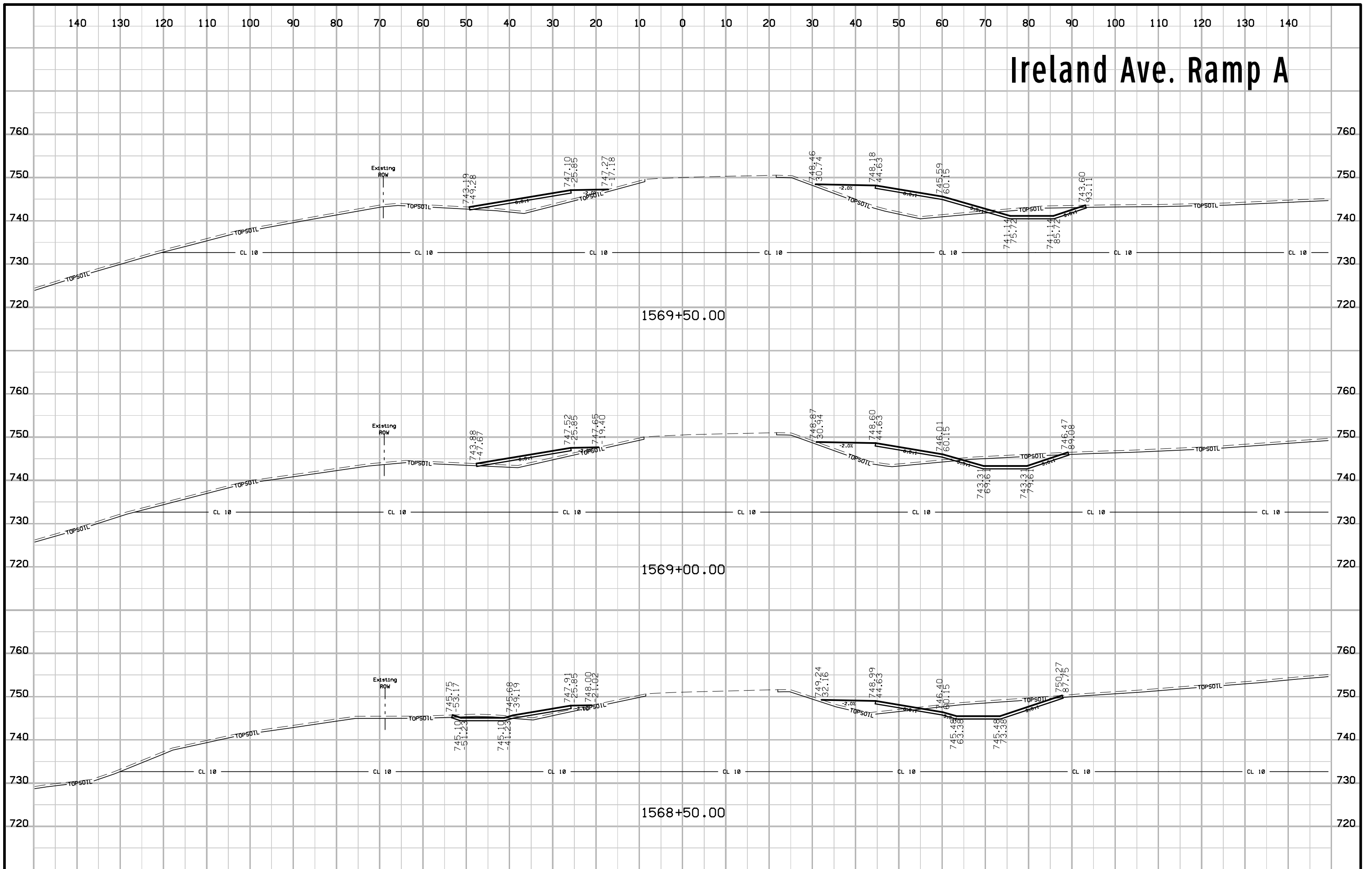
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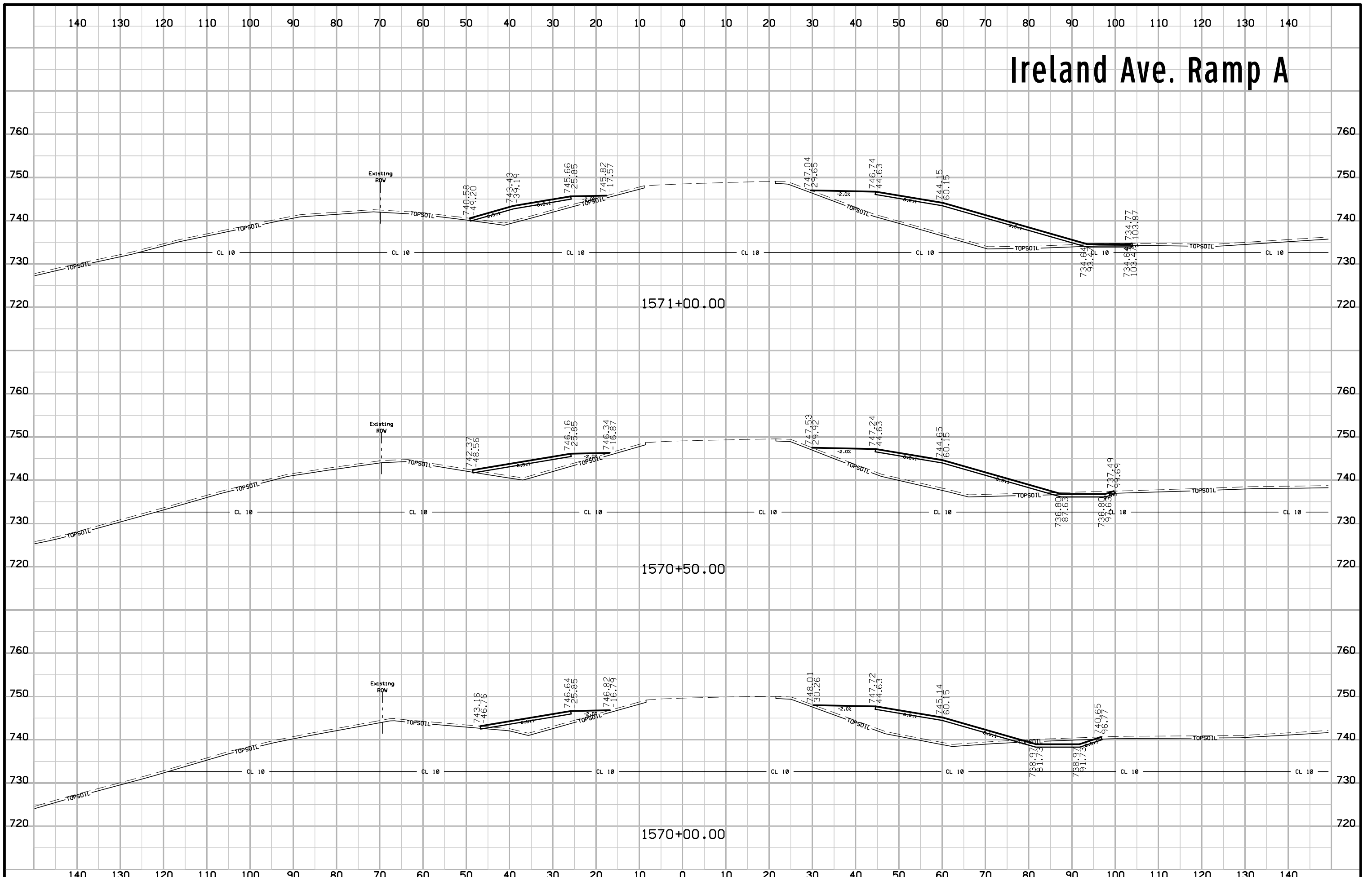
Ireland Ave. Ramp A



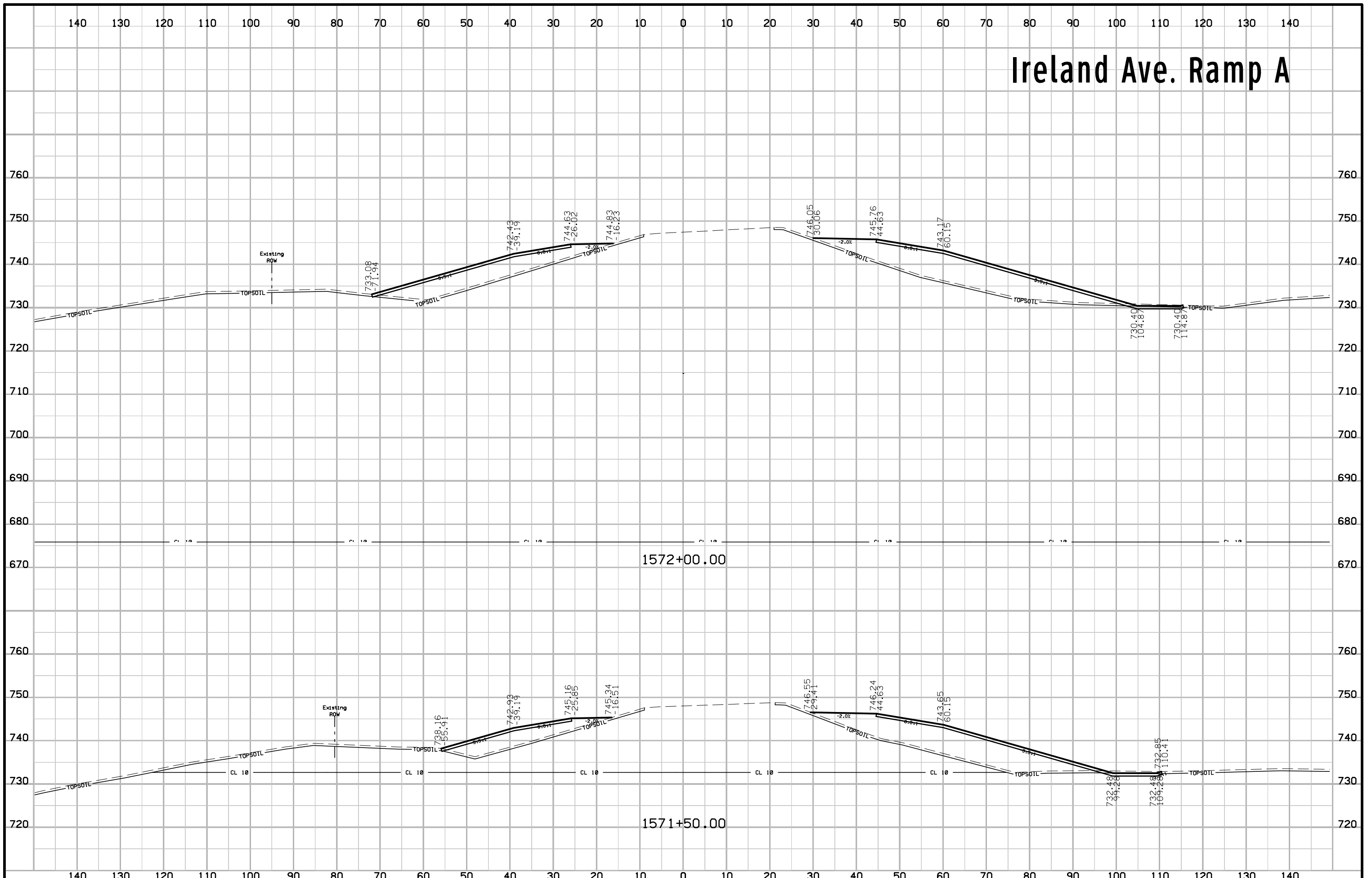
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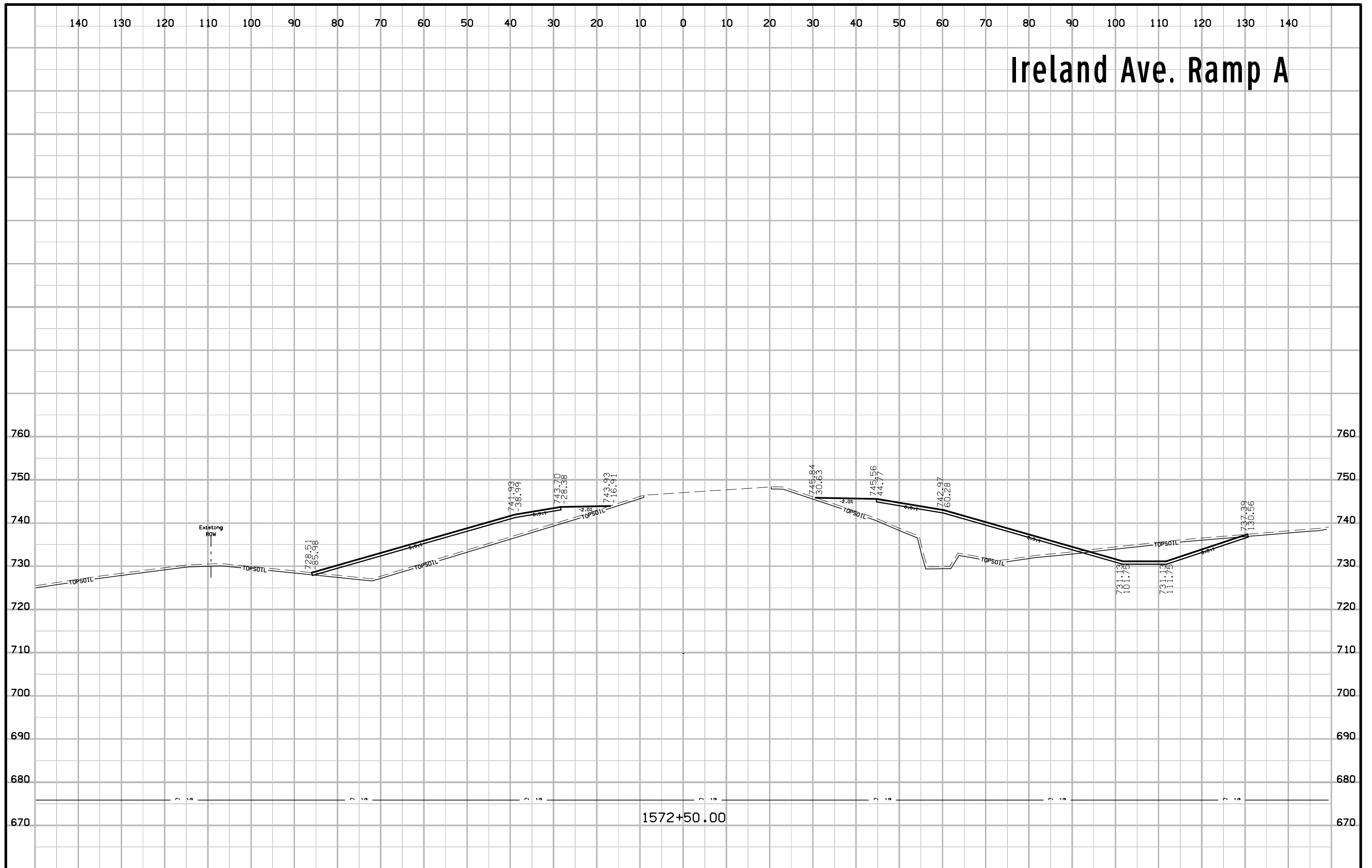
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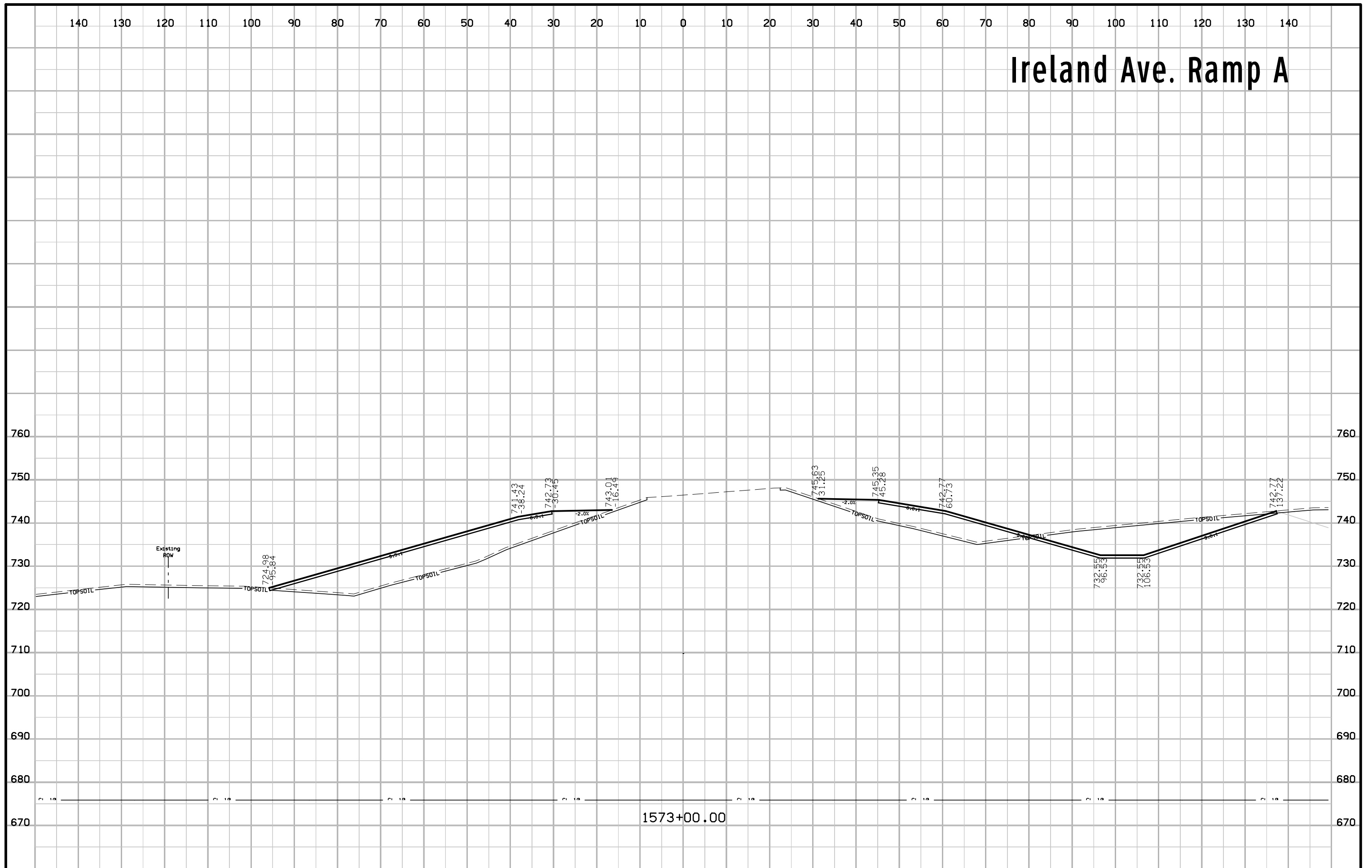
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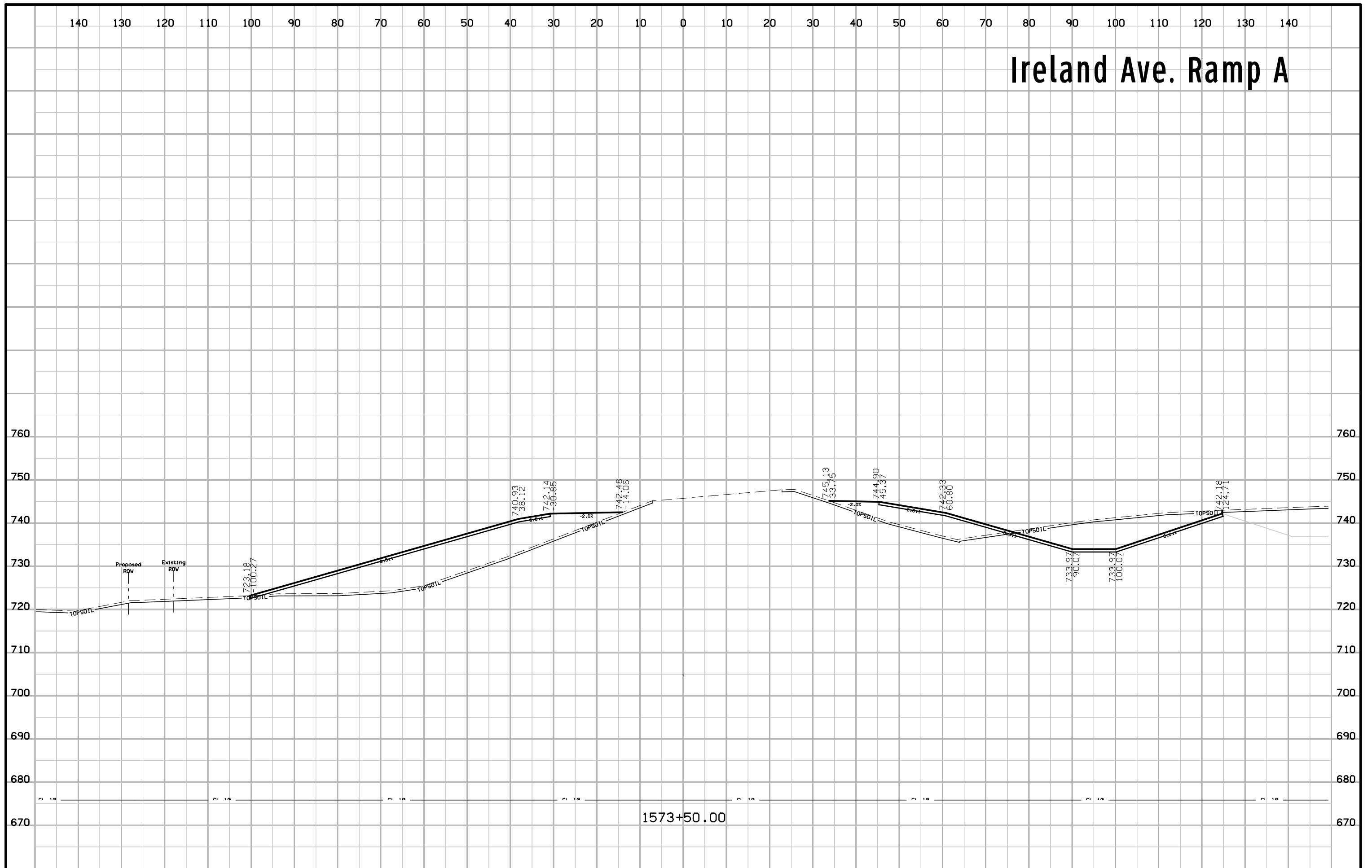
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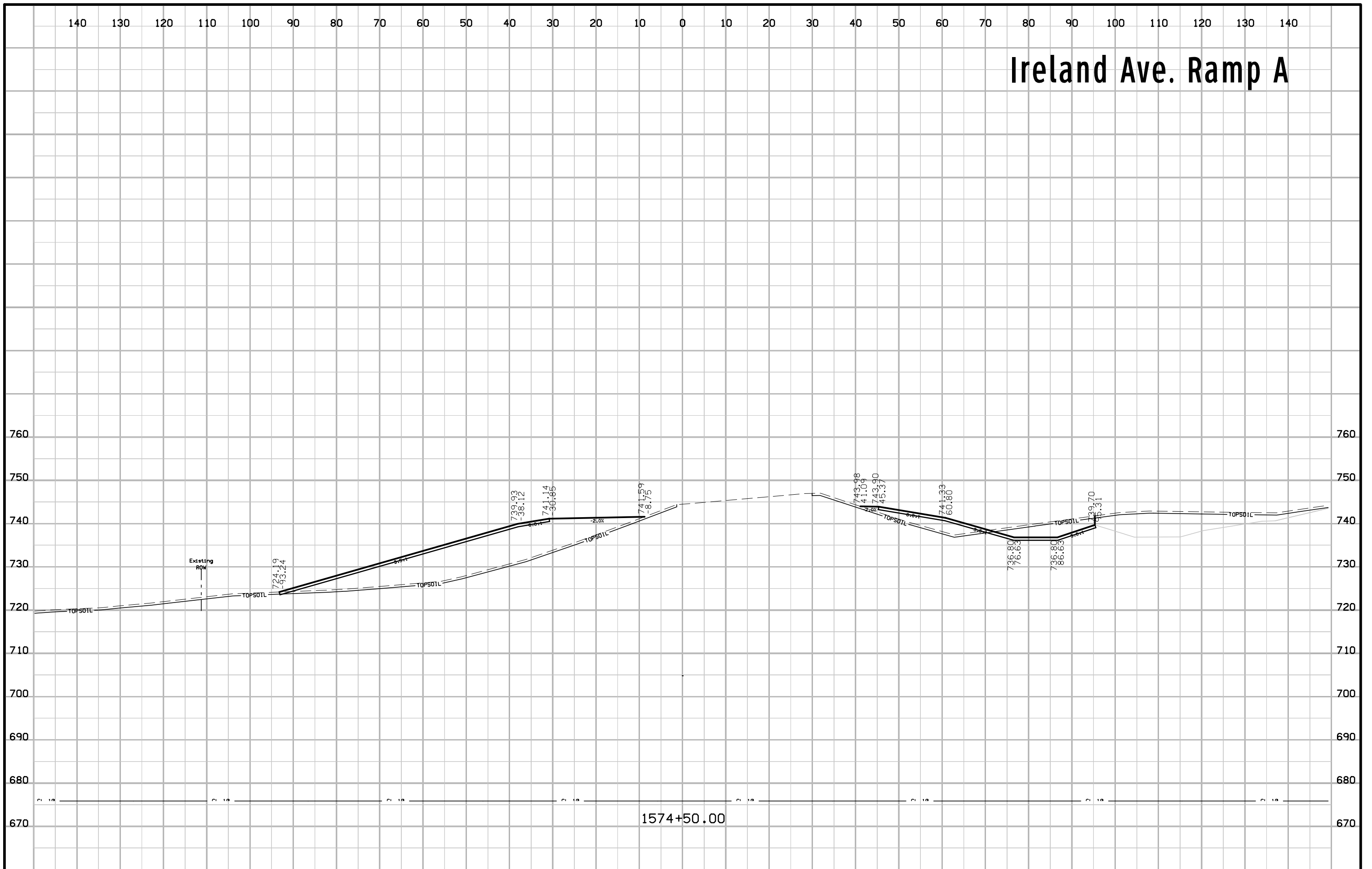


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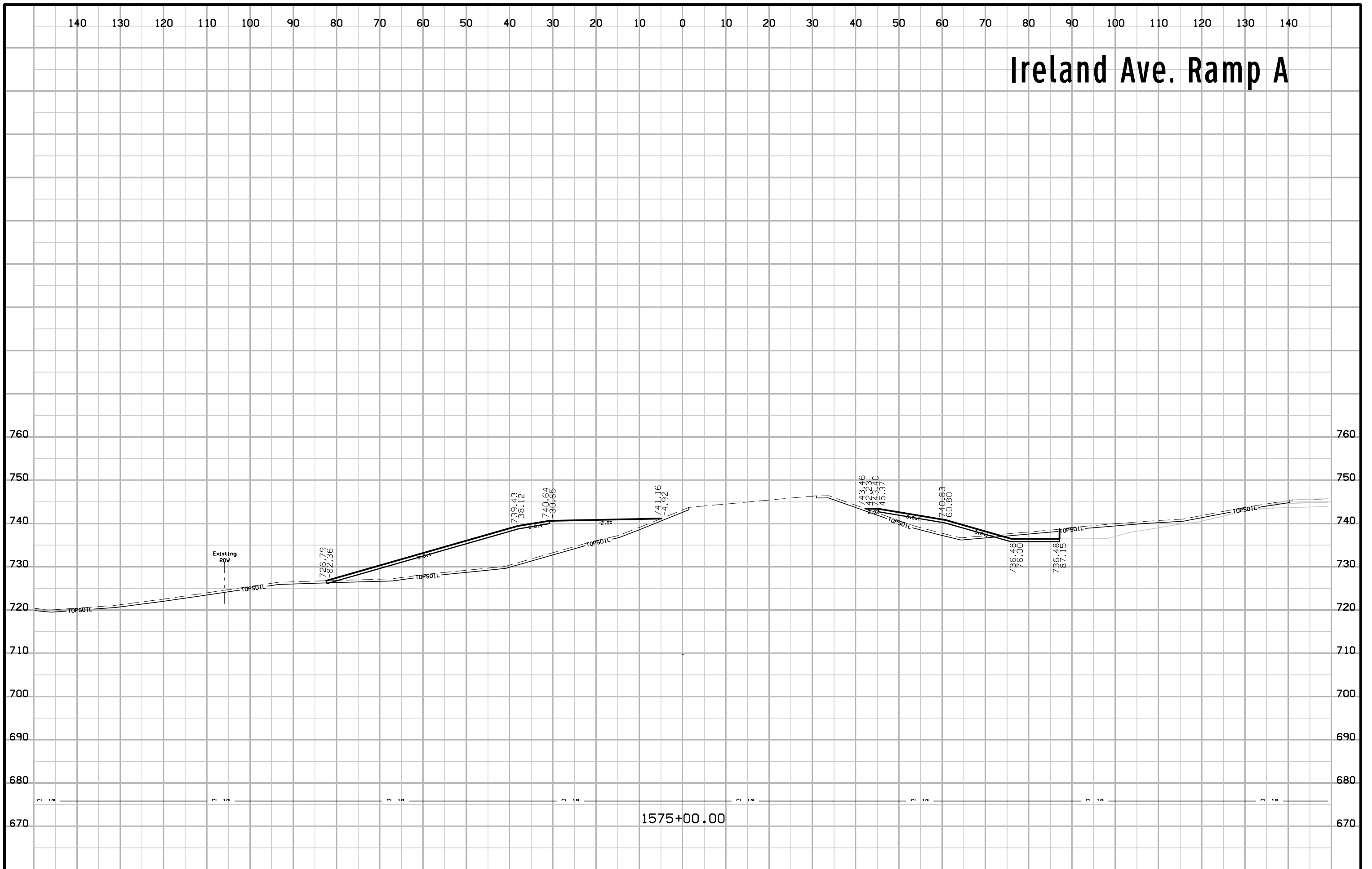


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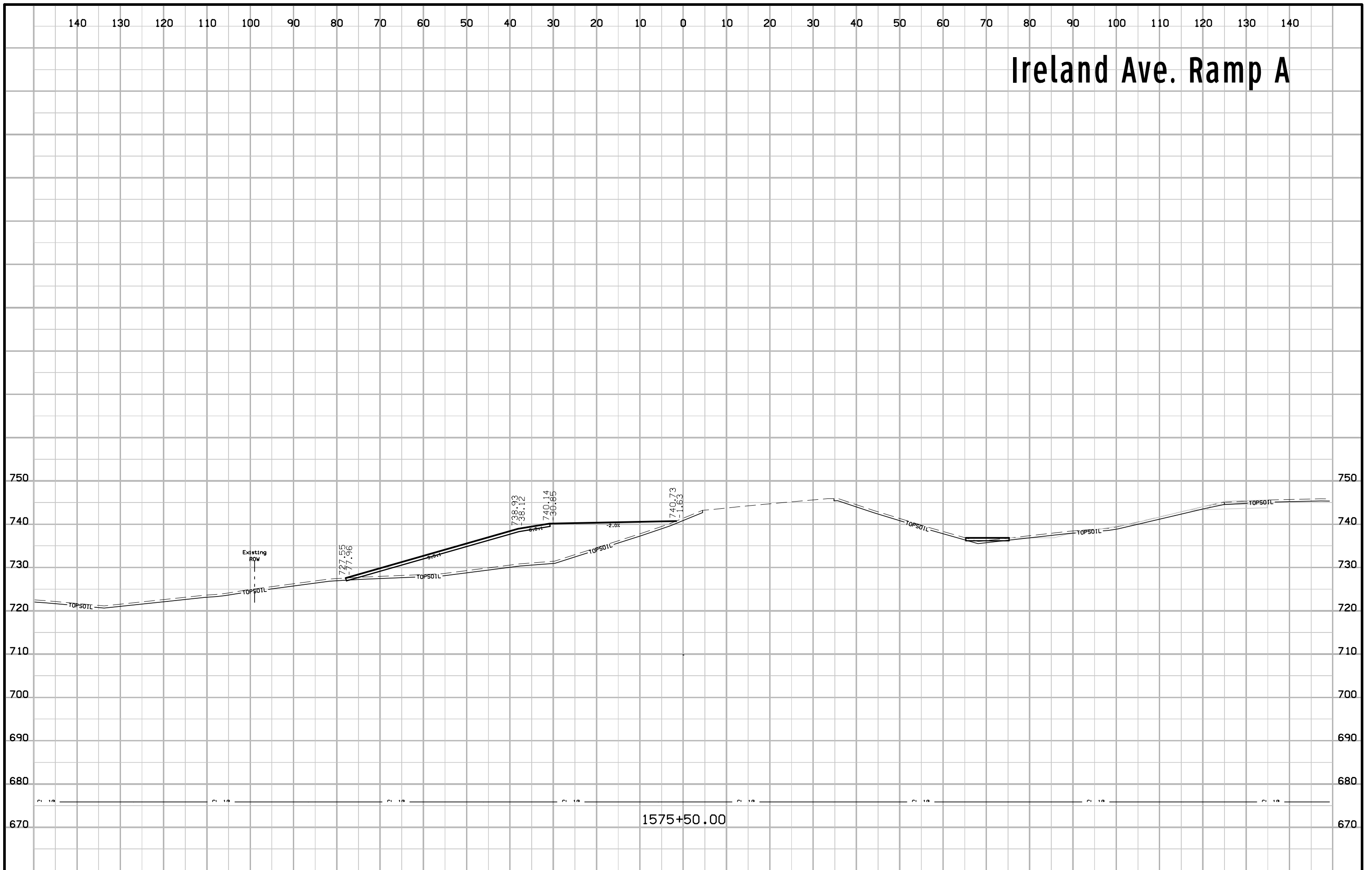
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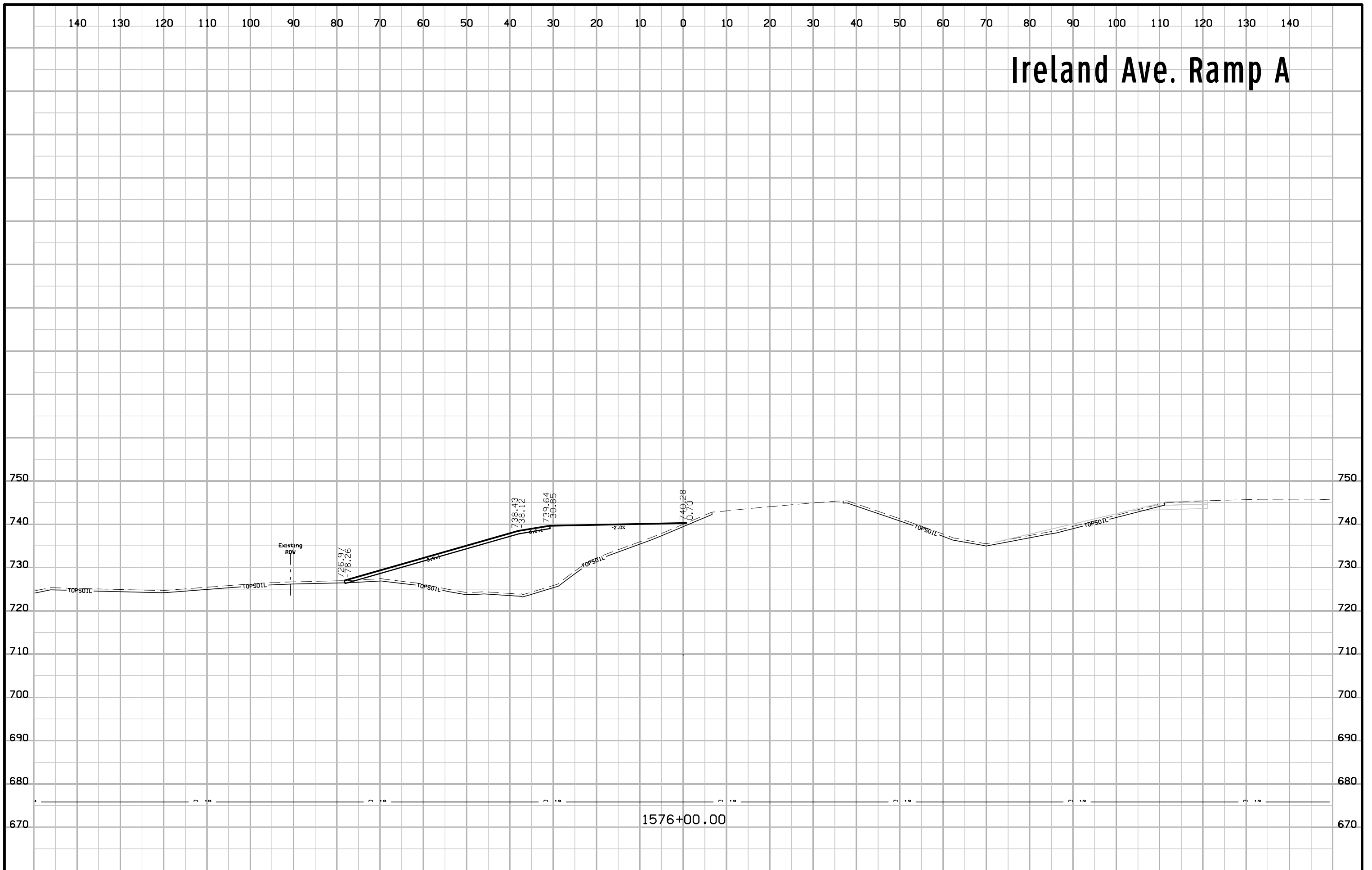
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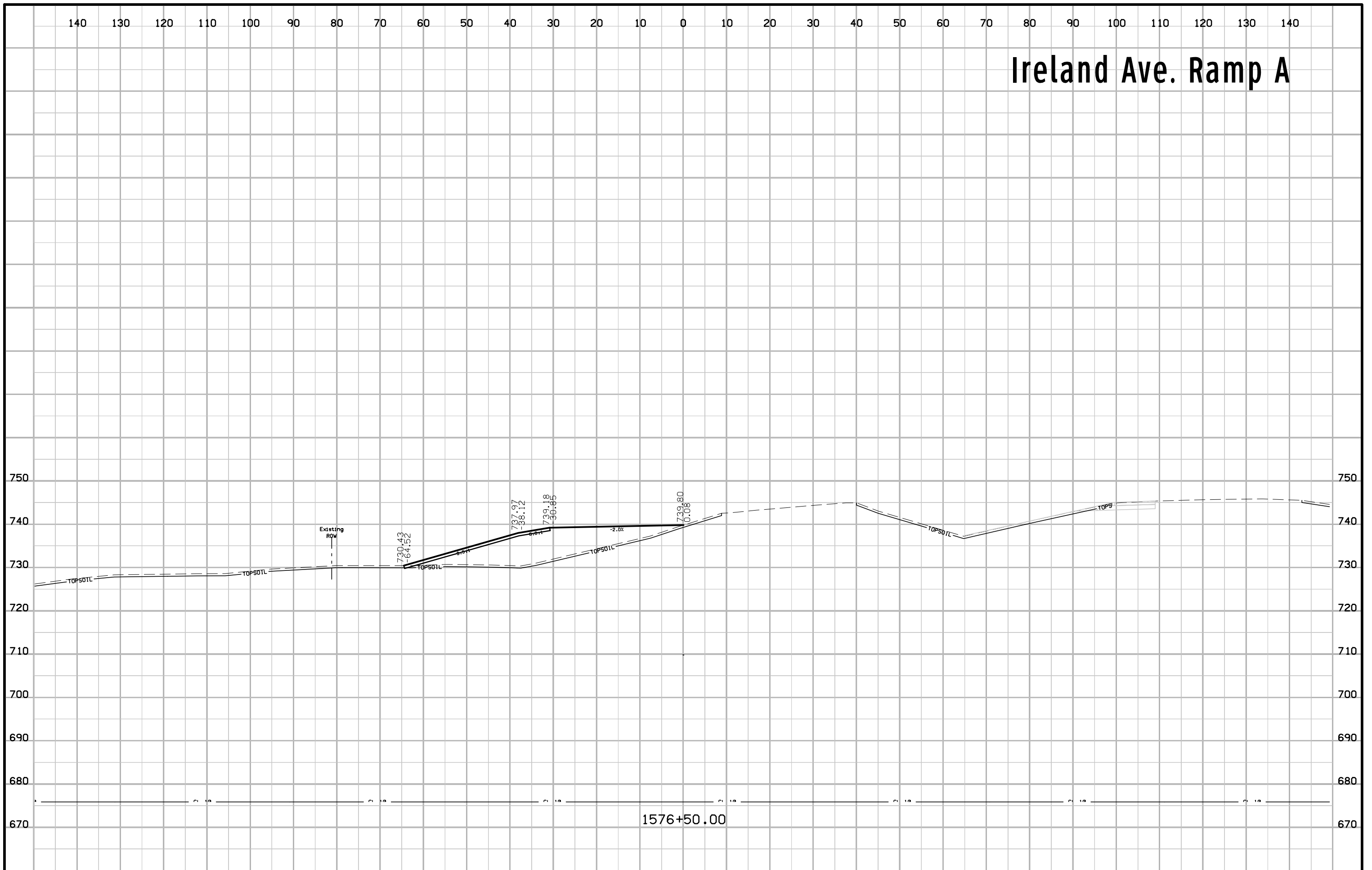
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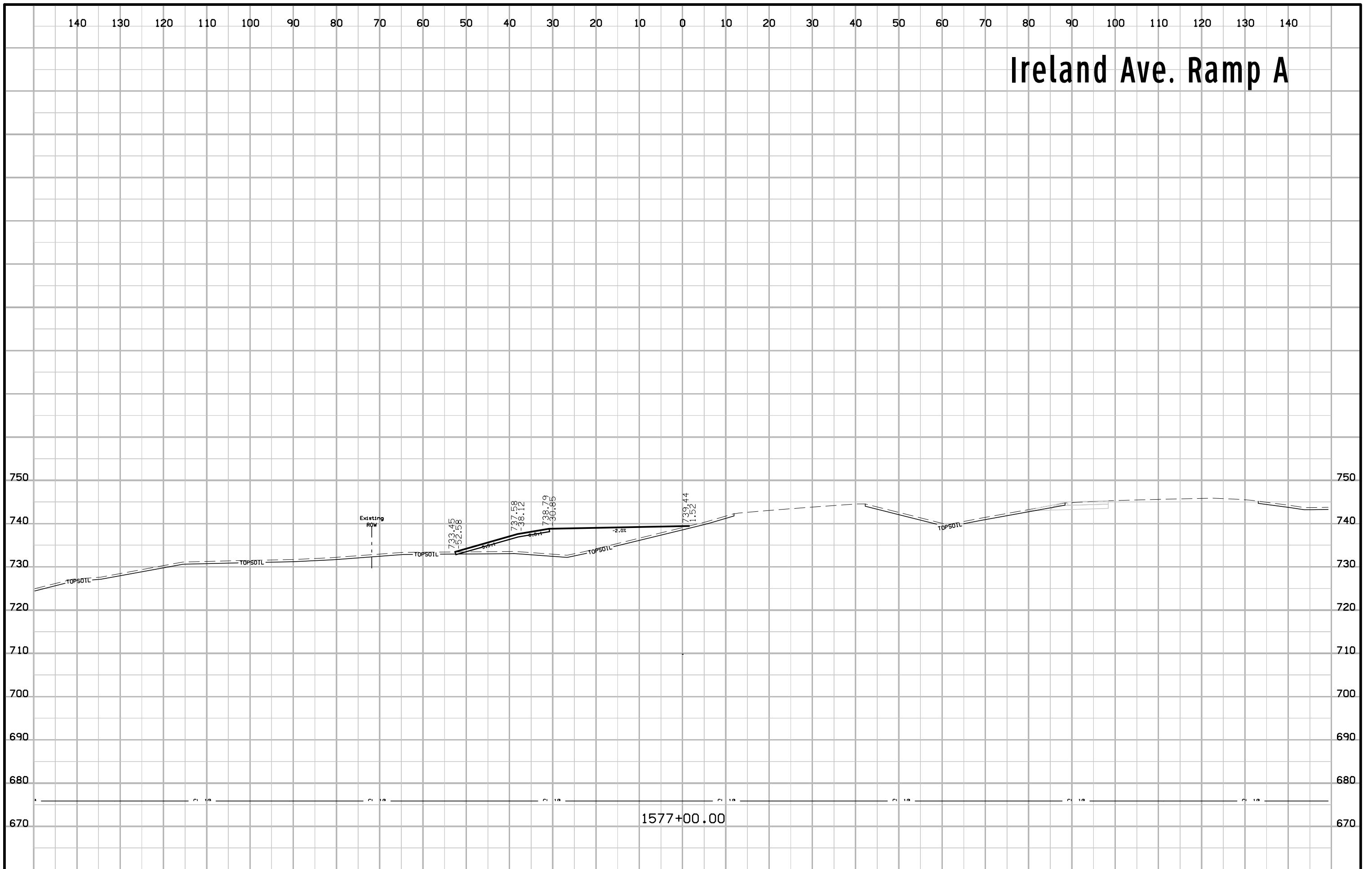
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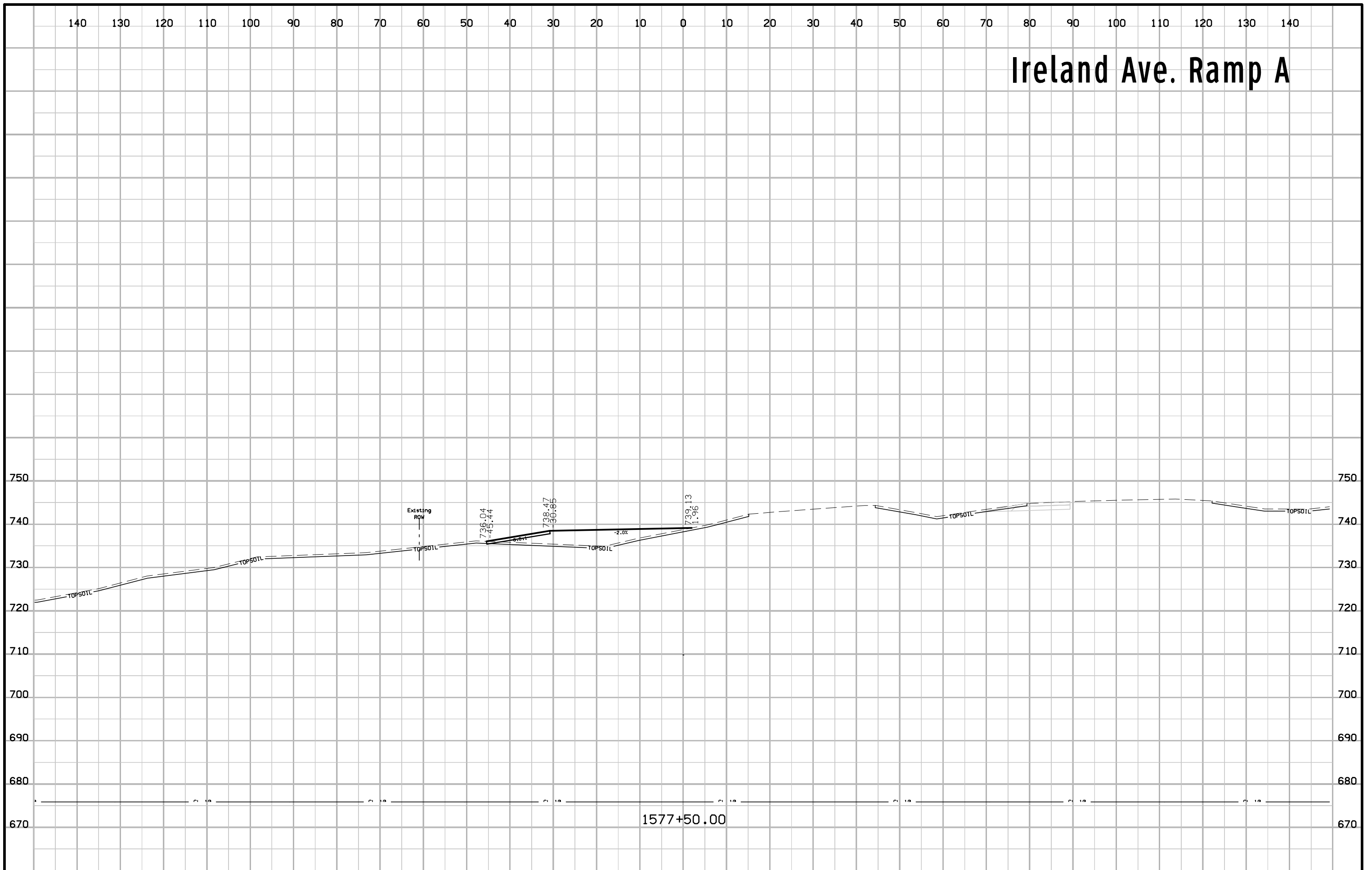
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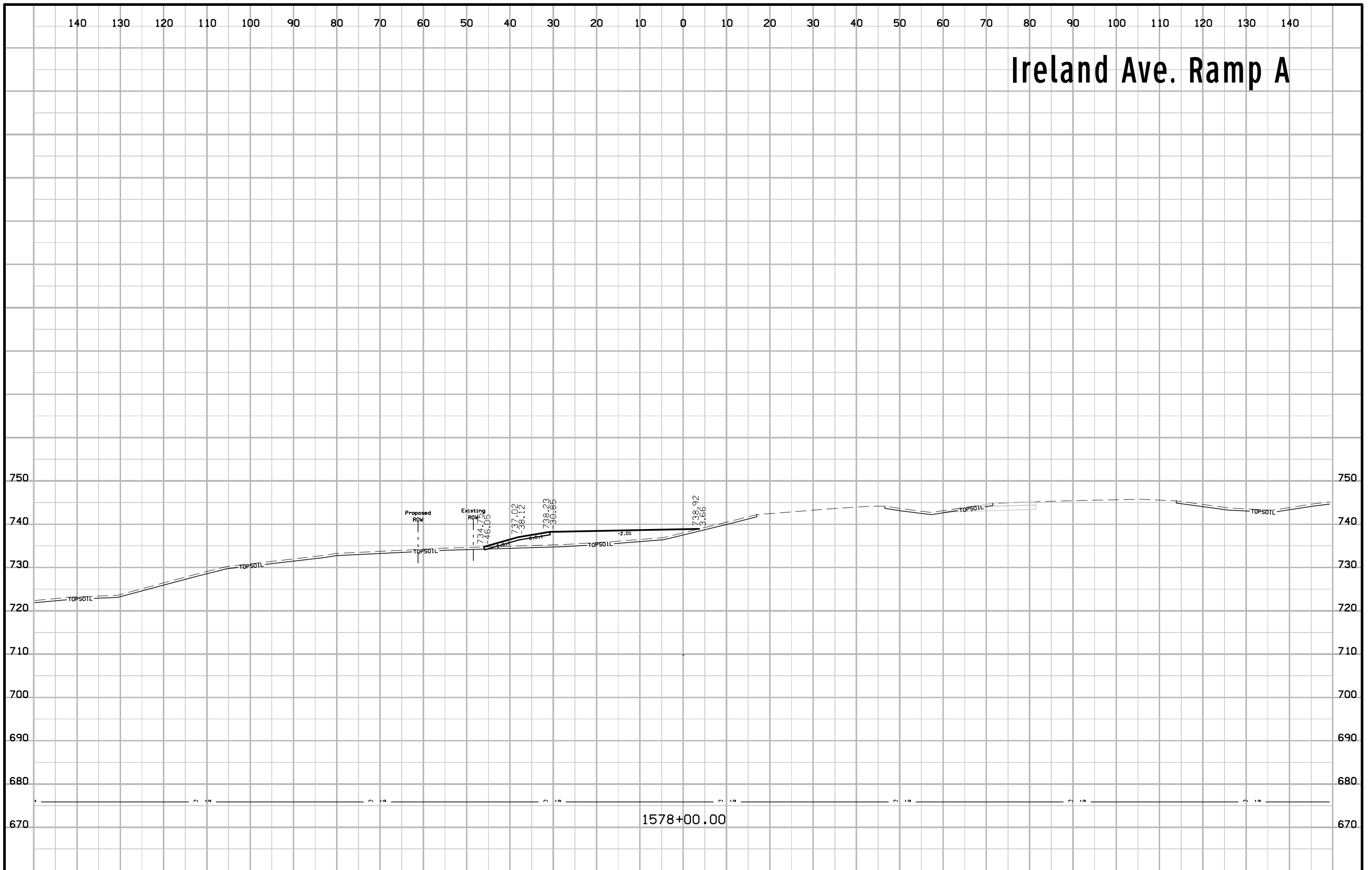
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Ireland Ave. Ramp A

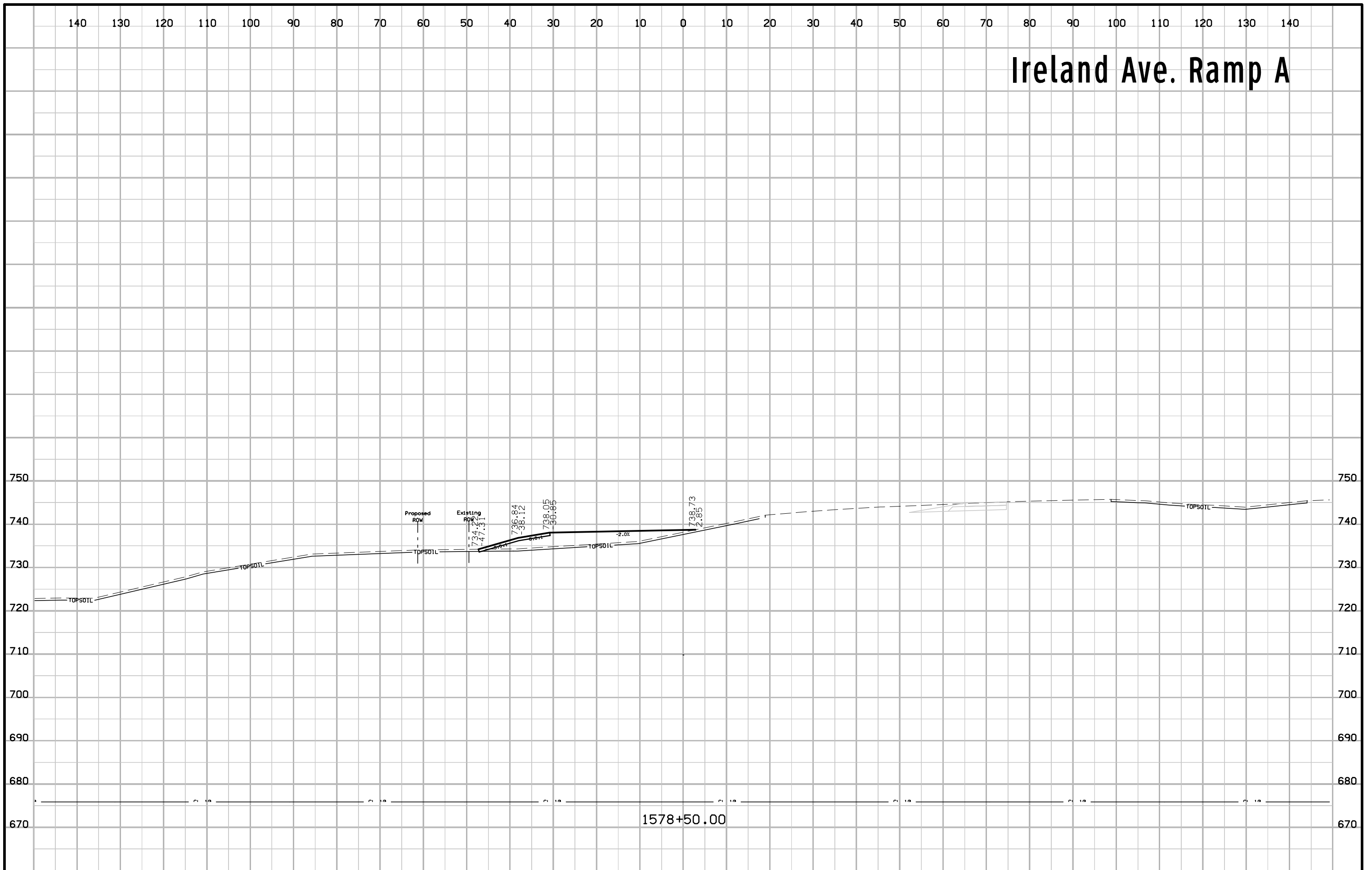


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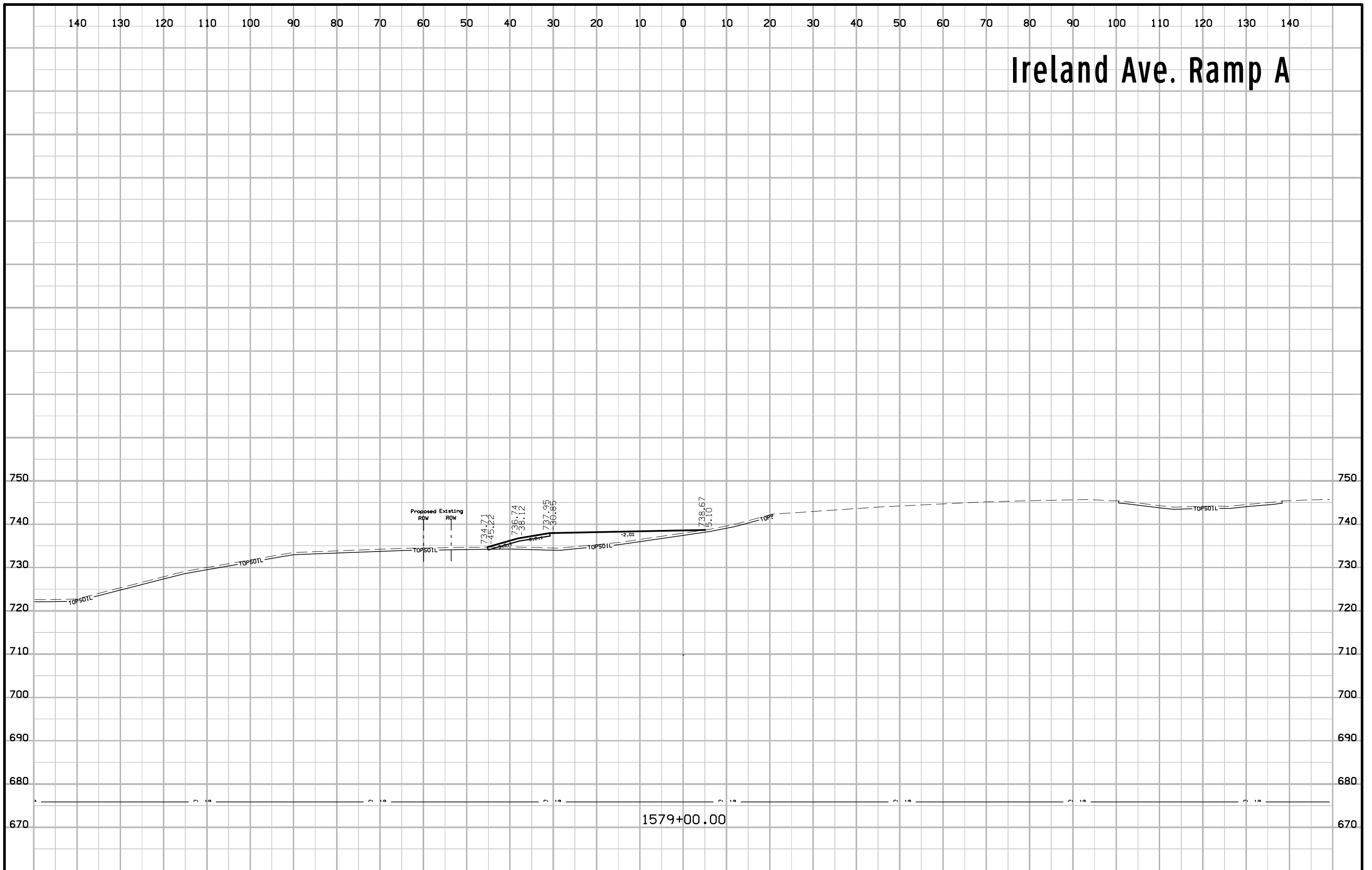


1578+00.00

Ireland Ave. Ramp A

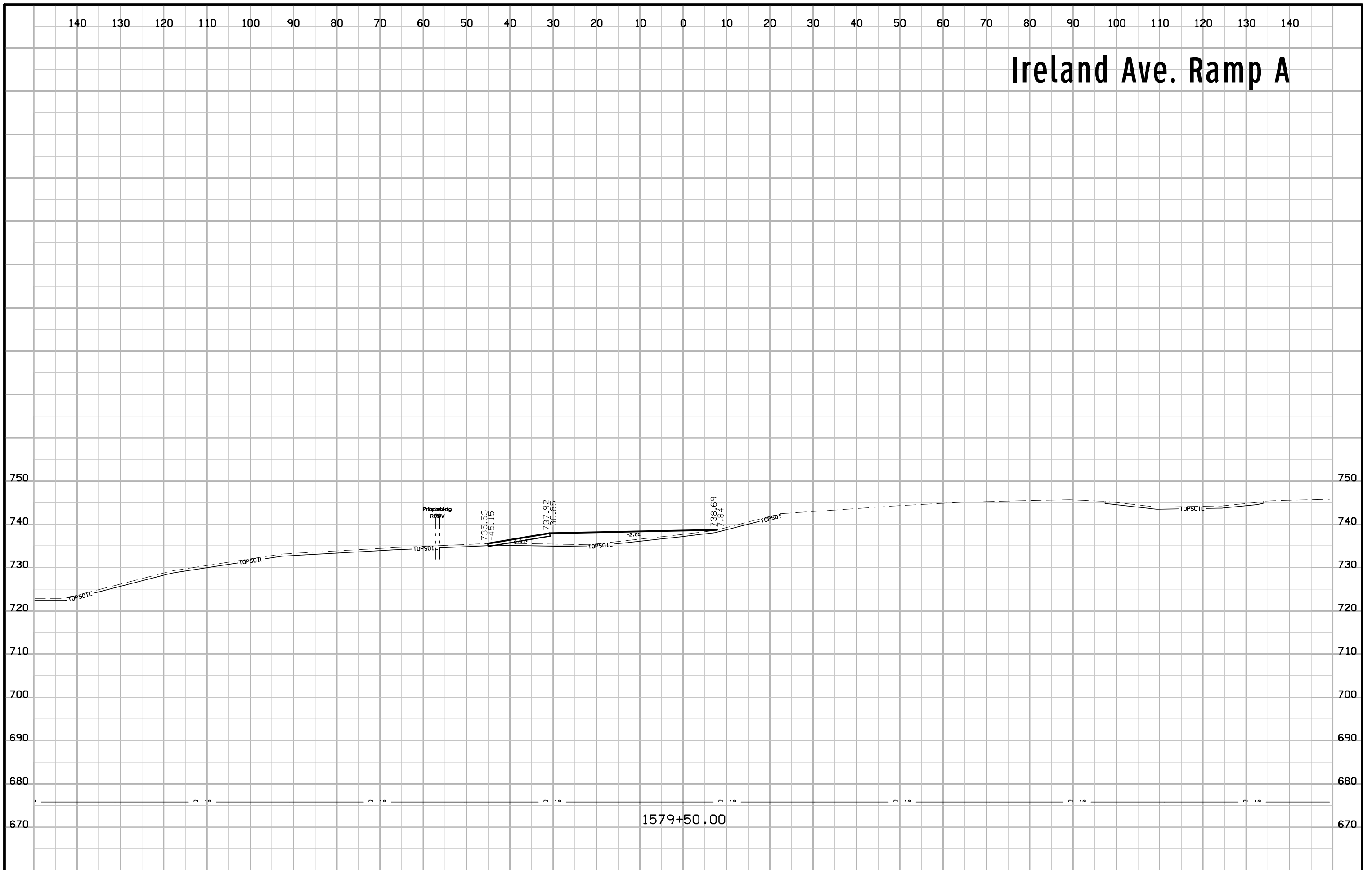


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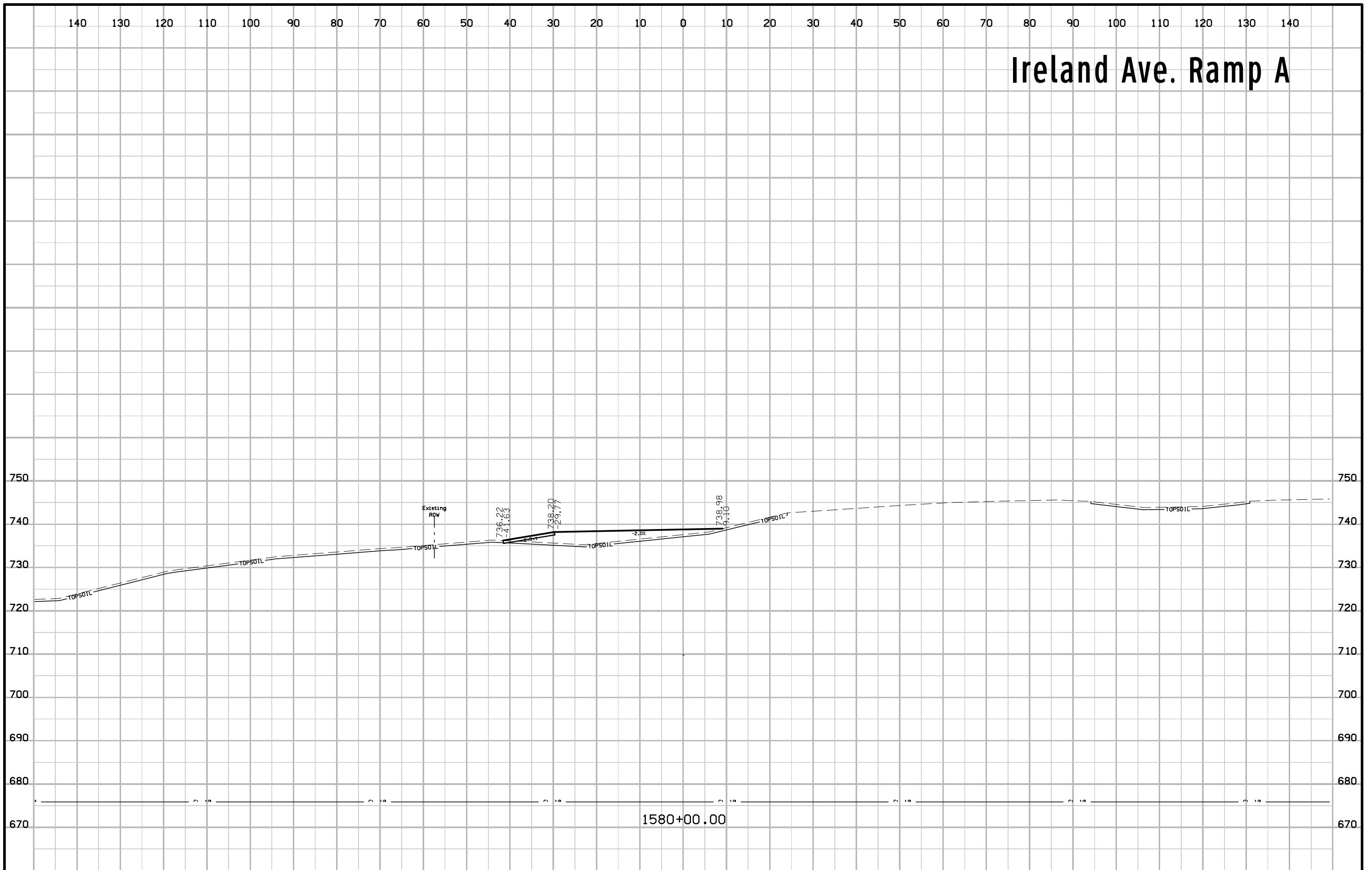


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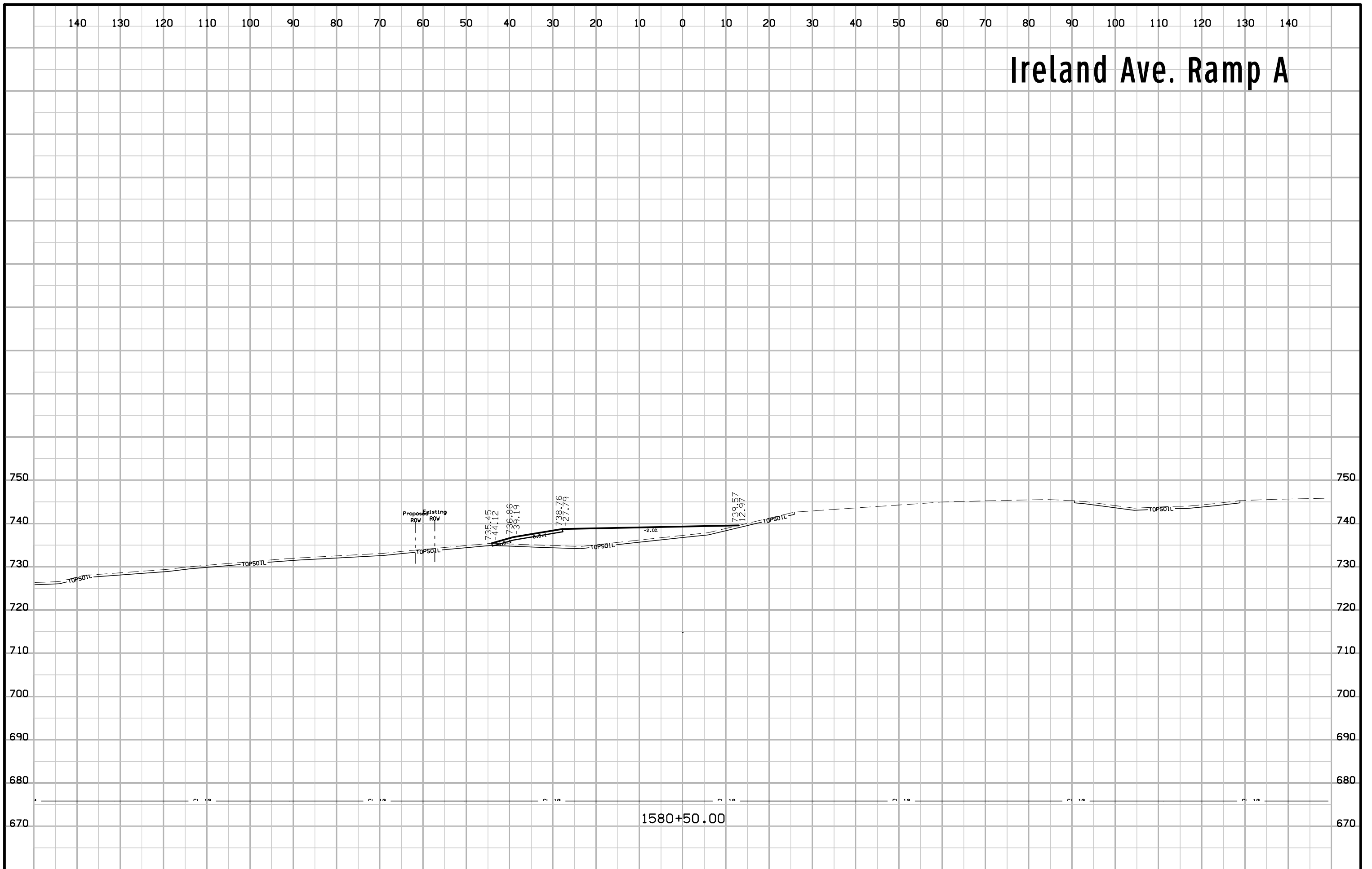
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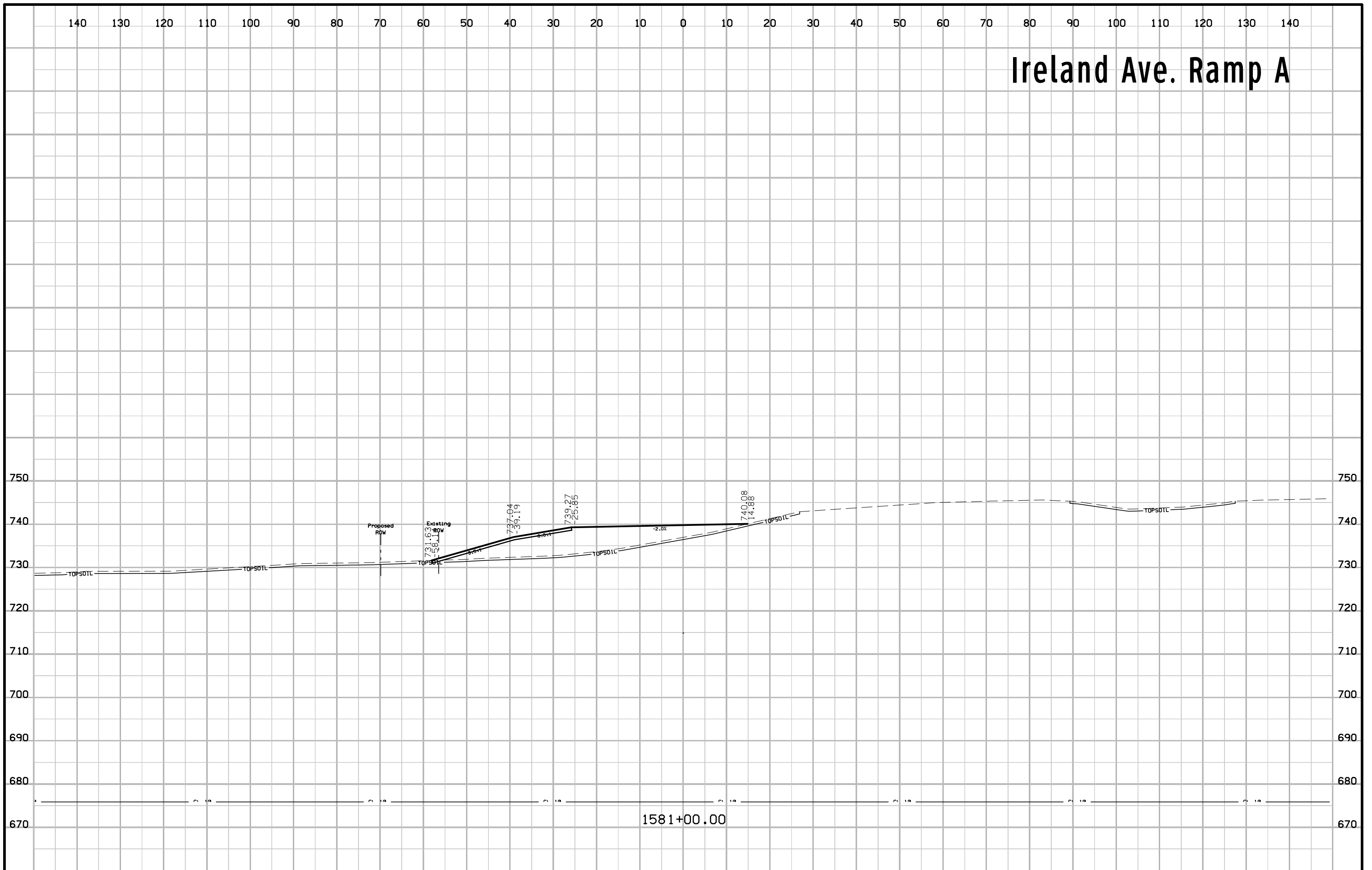
Ireland Ave. Ramp A



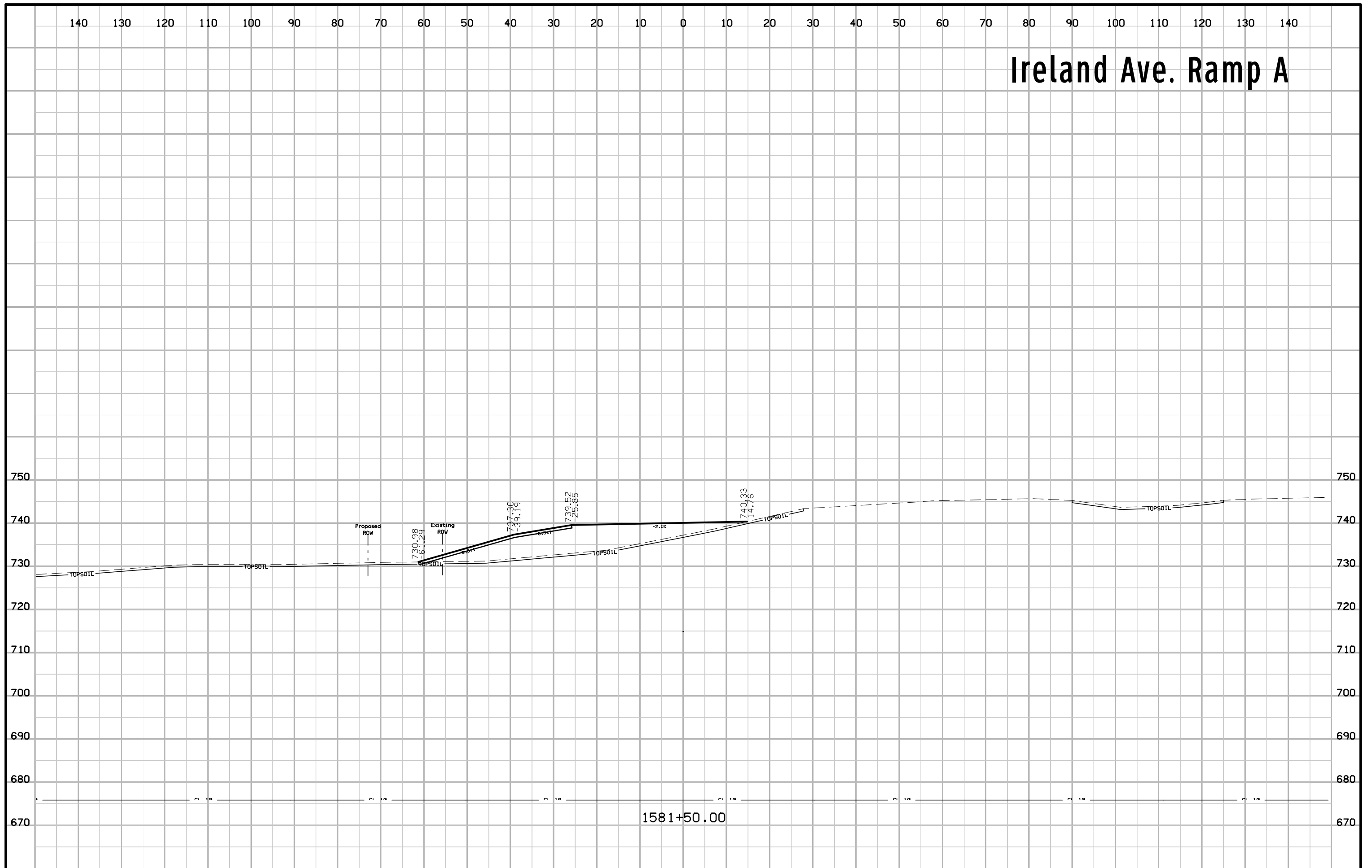
Ireland Ave. Ramp A



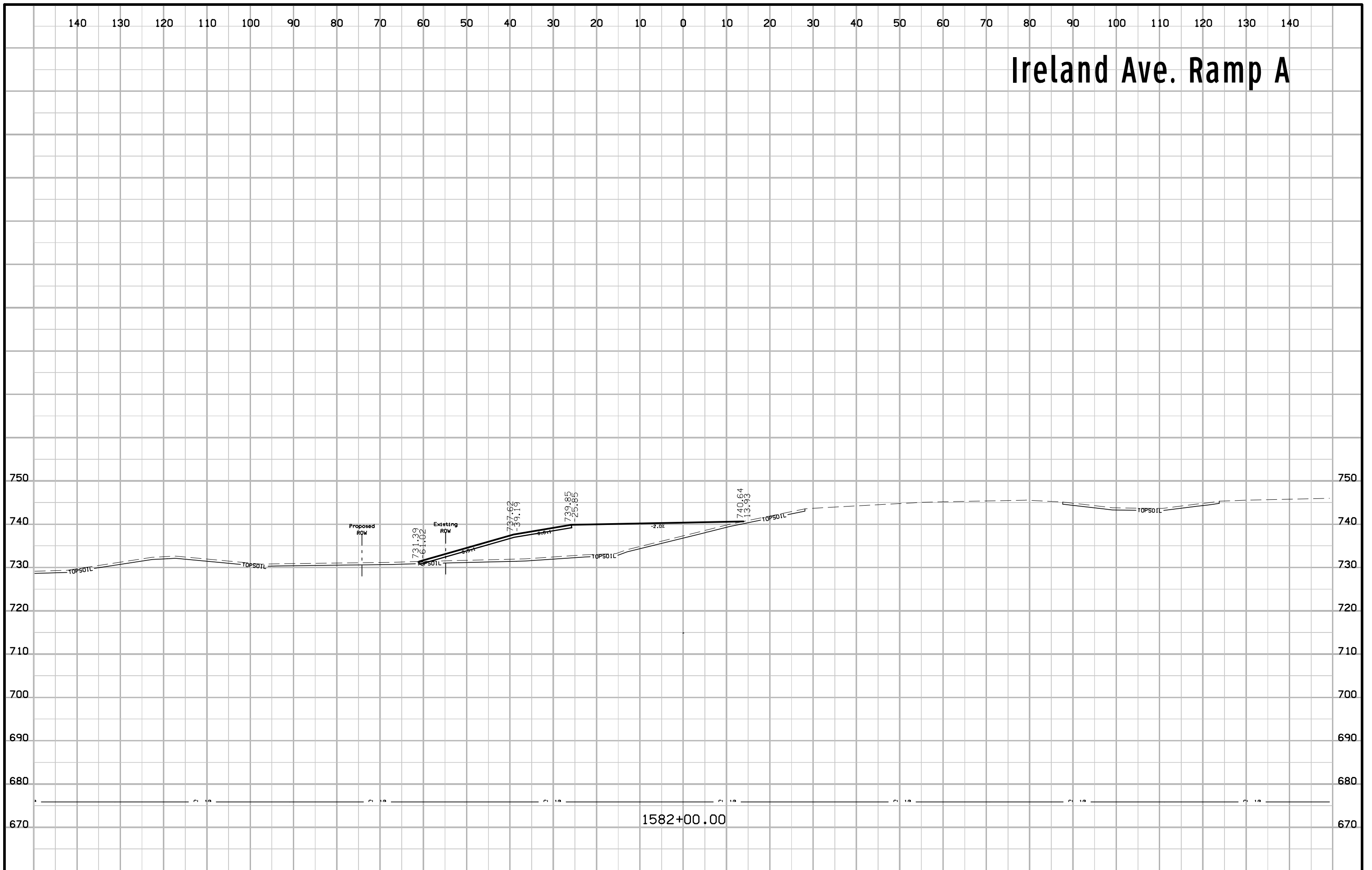
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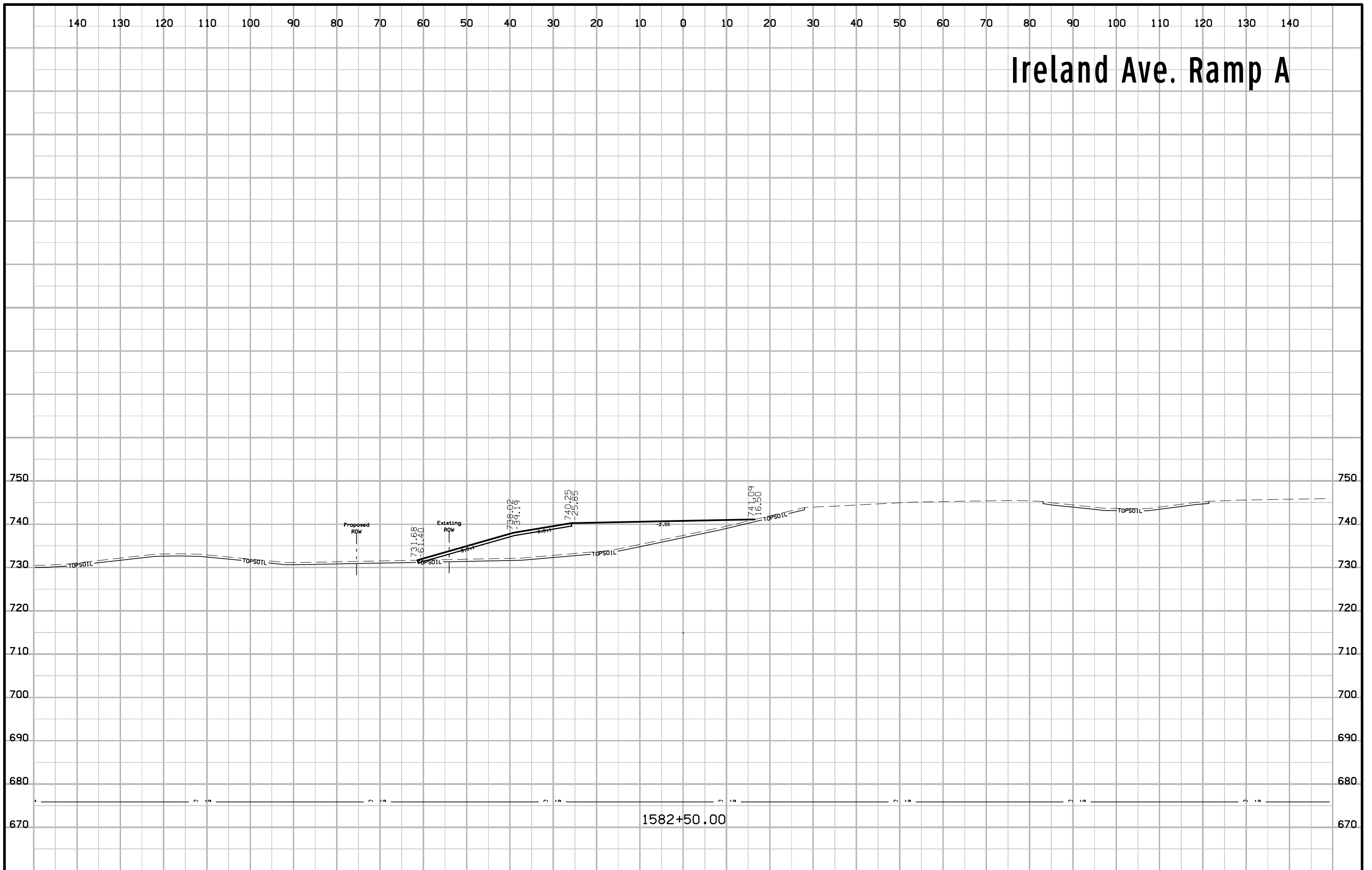
Ireland Ave. Ramp A



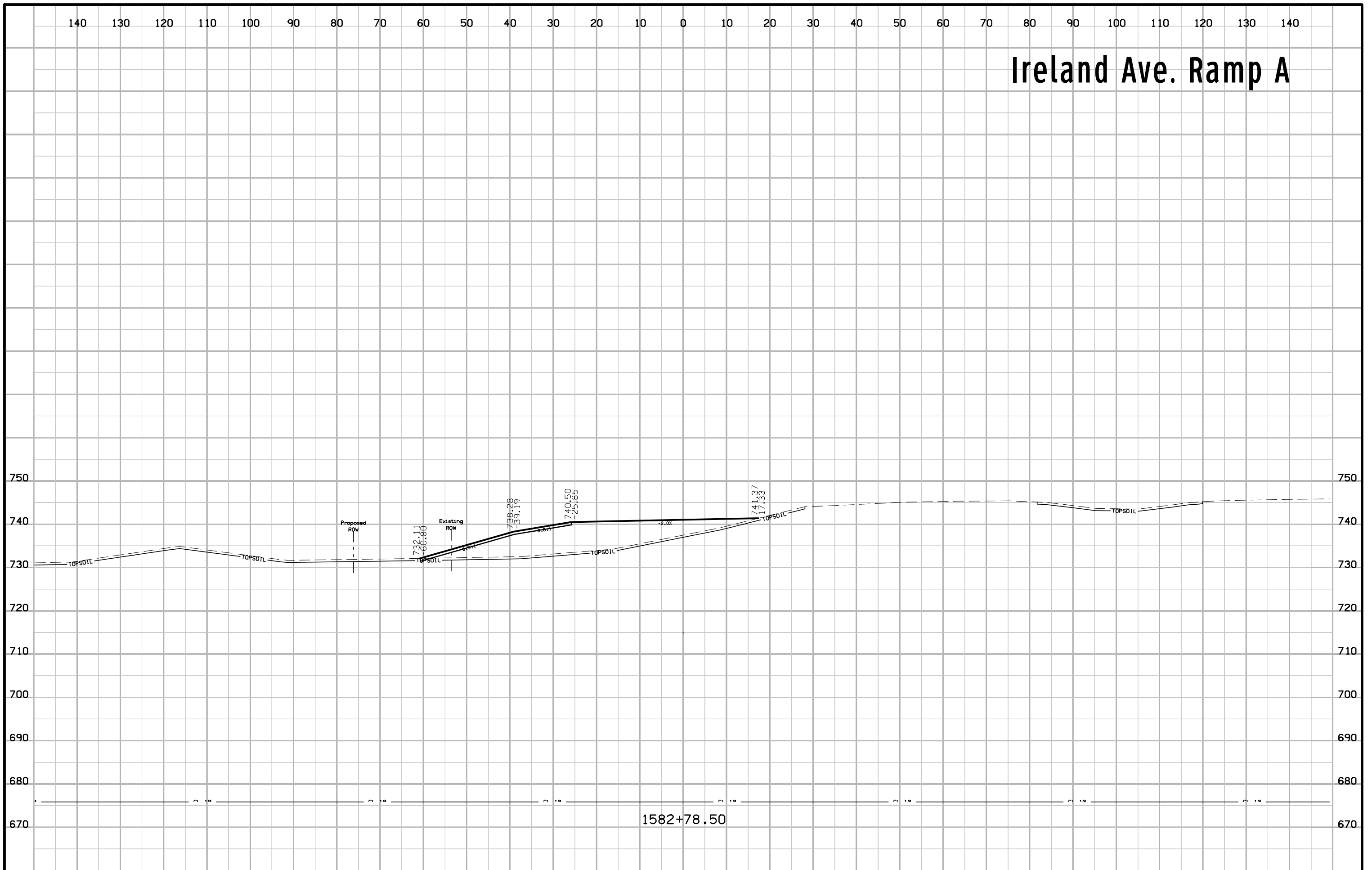
Ireland Ave. Ramp A



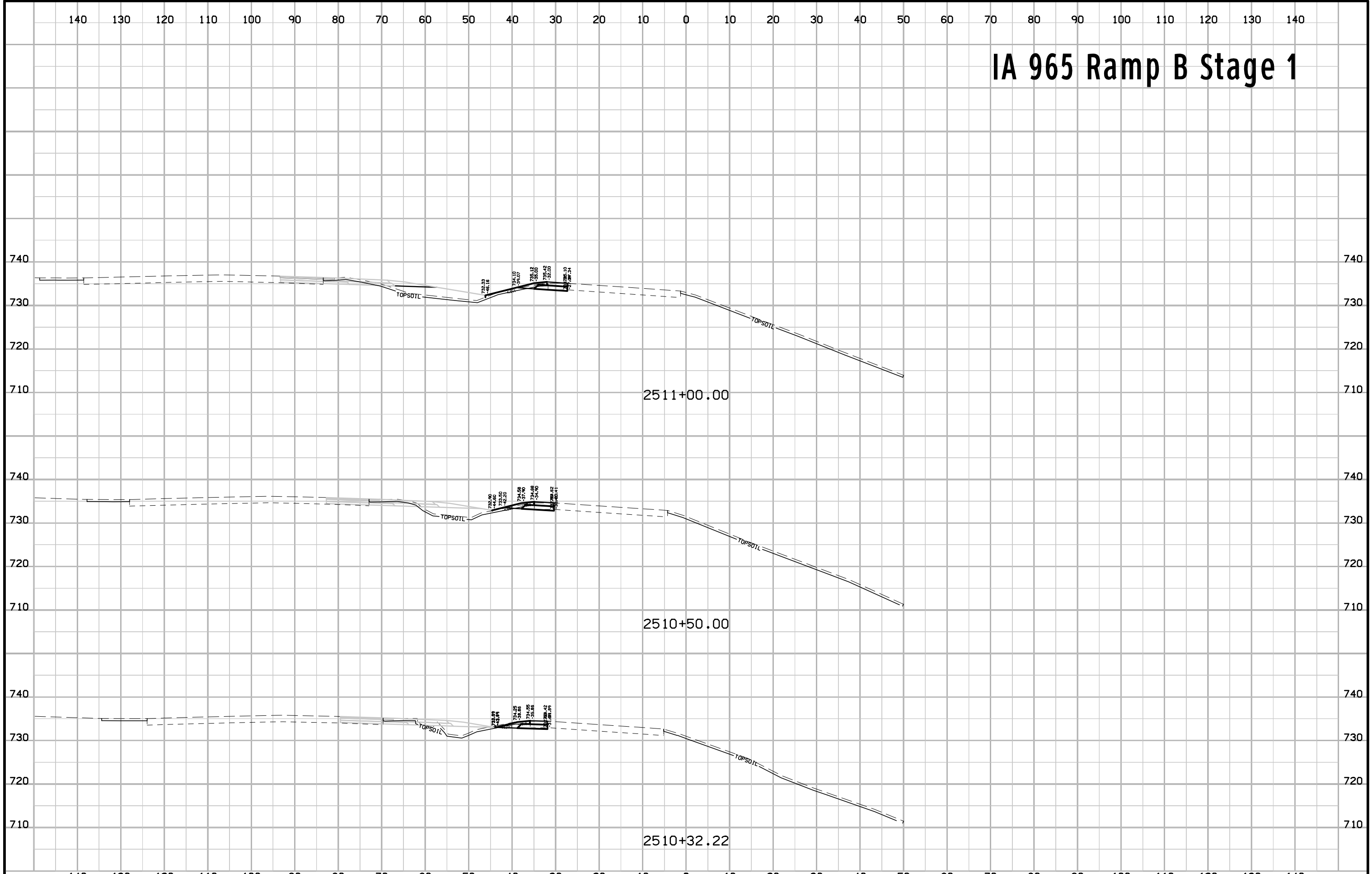
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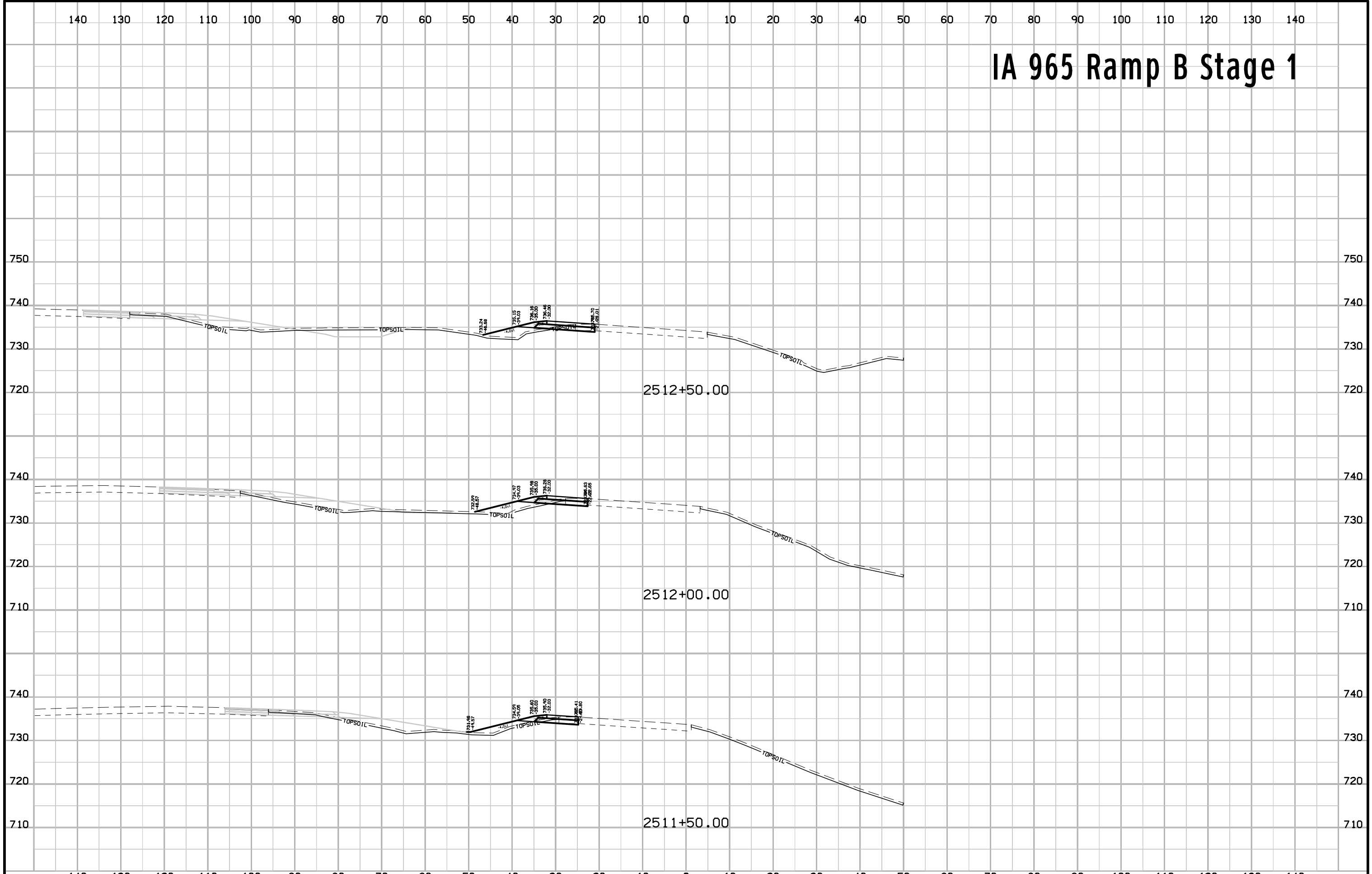
Ireland Ave. Ramp A



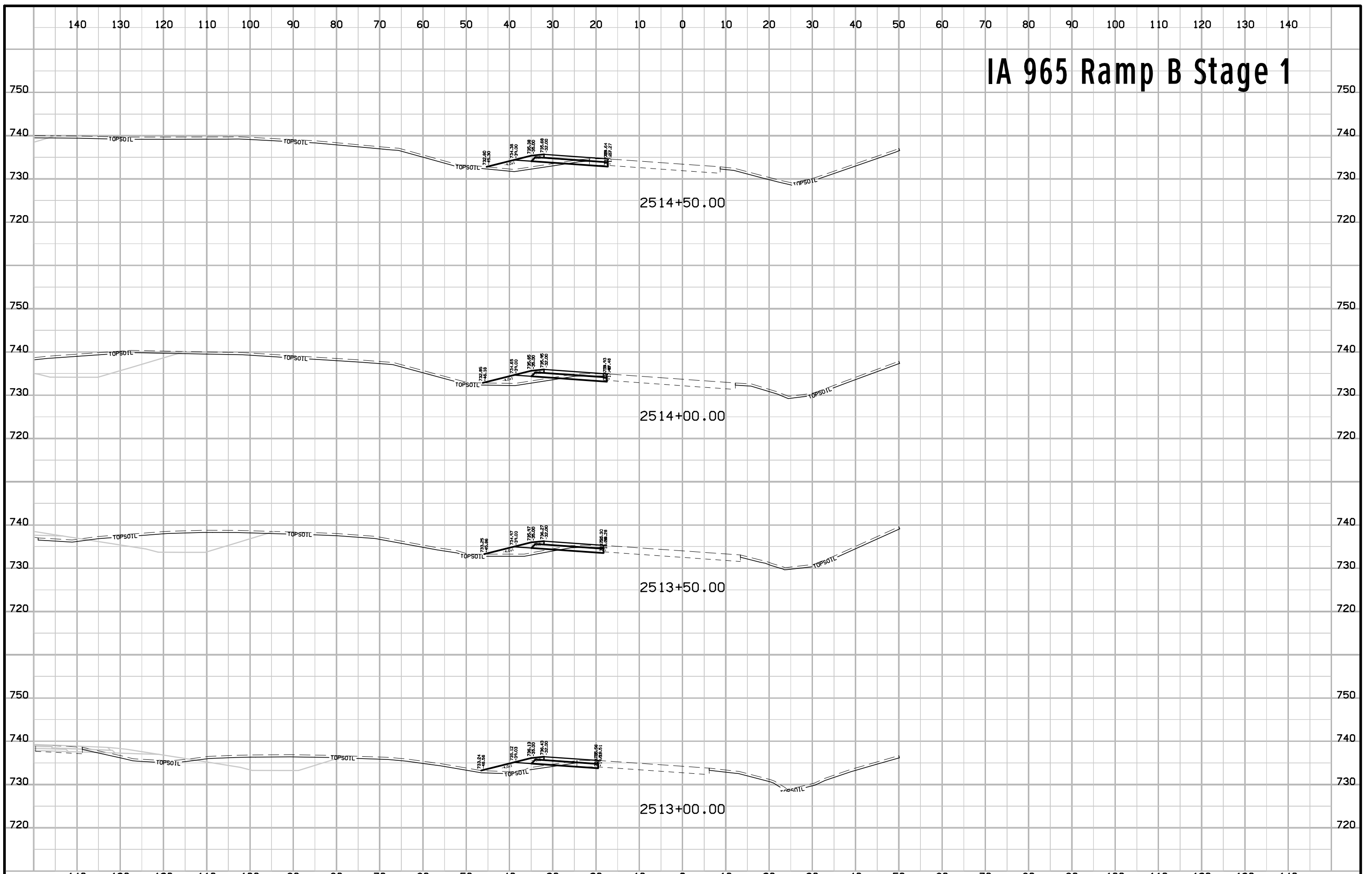
IA 965 Ramp B Stage 1



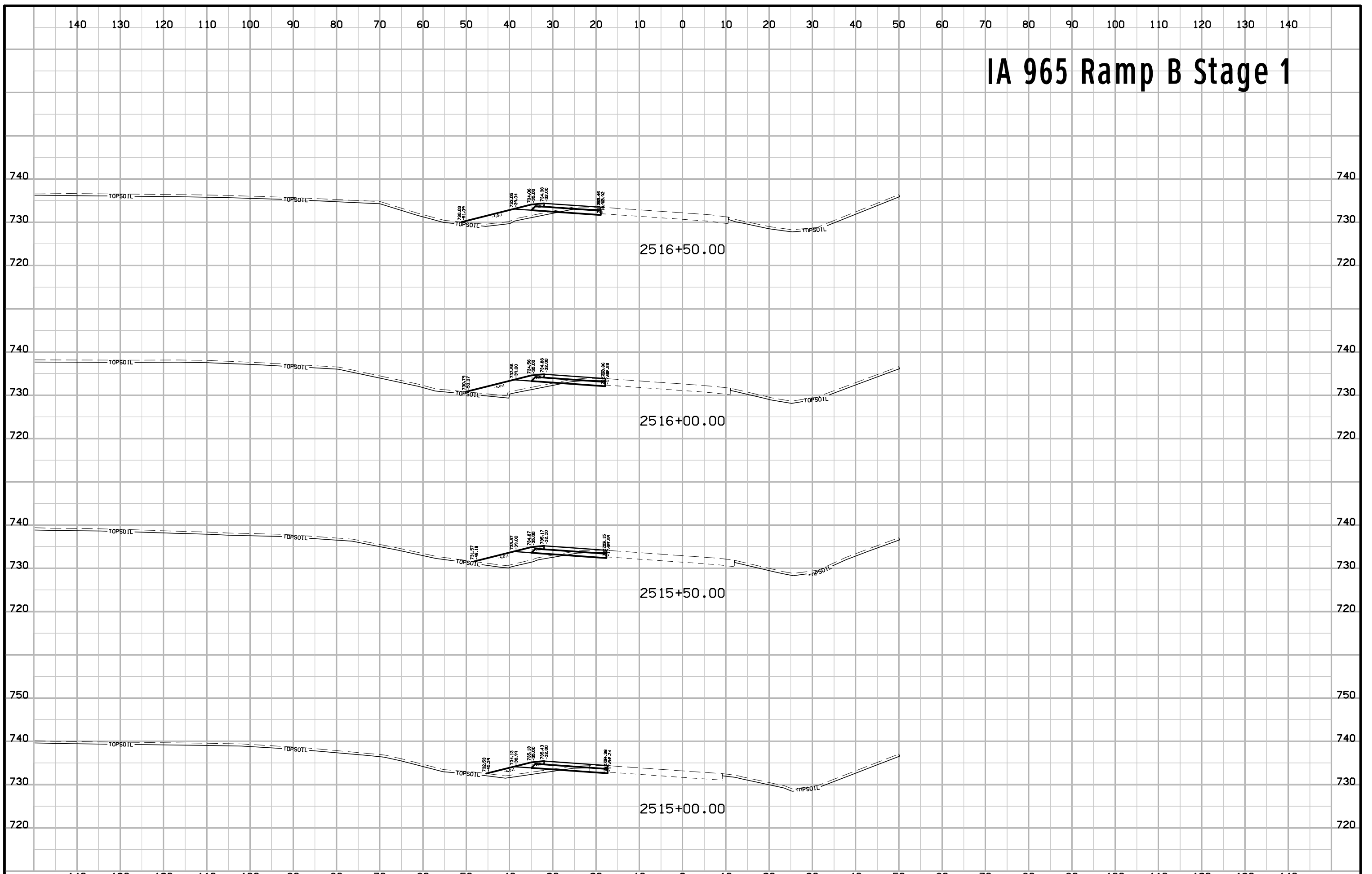
IA 965 Ramp B Stage 1



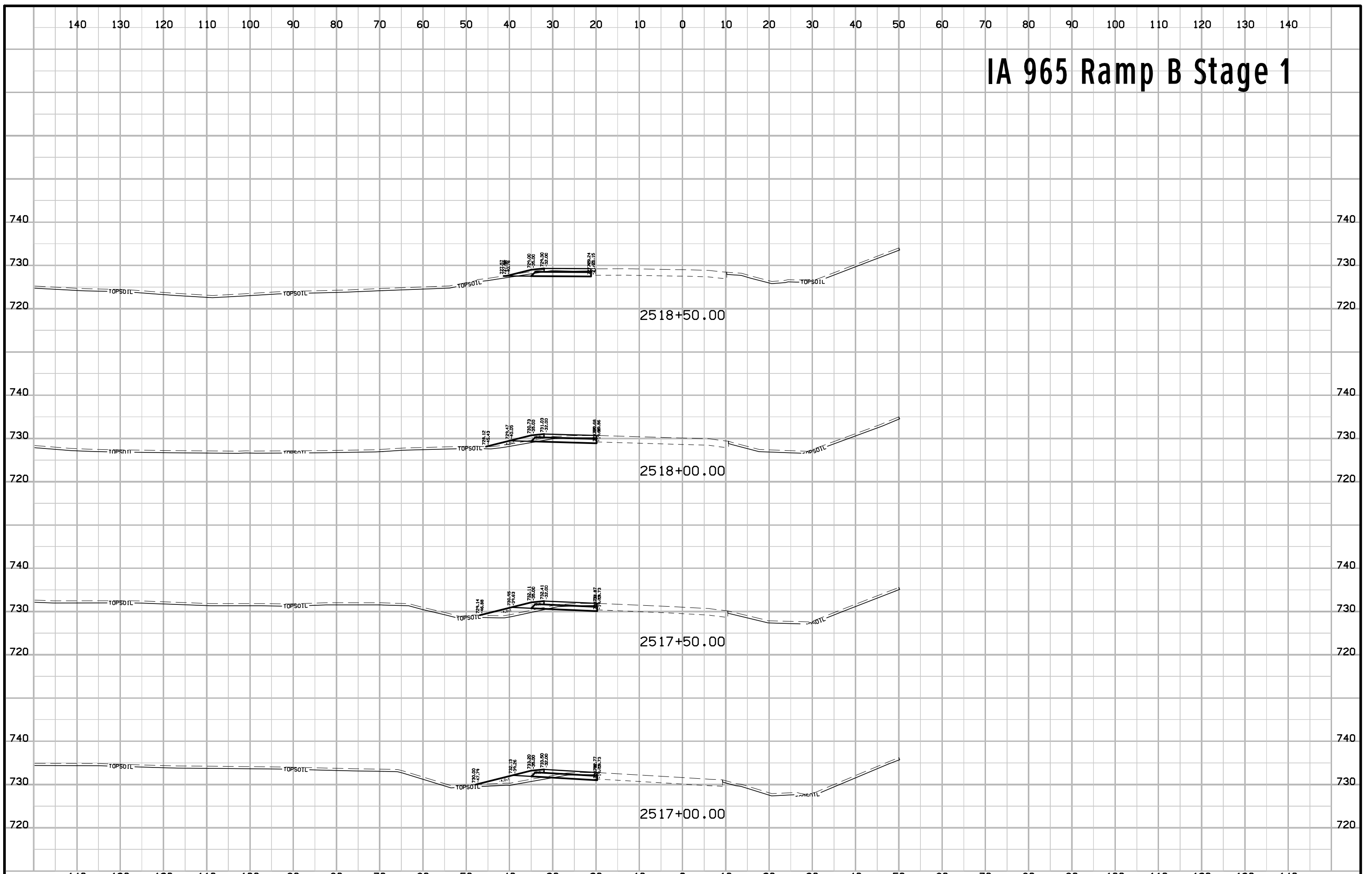
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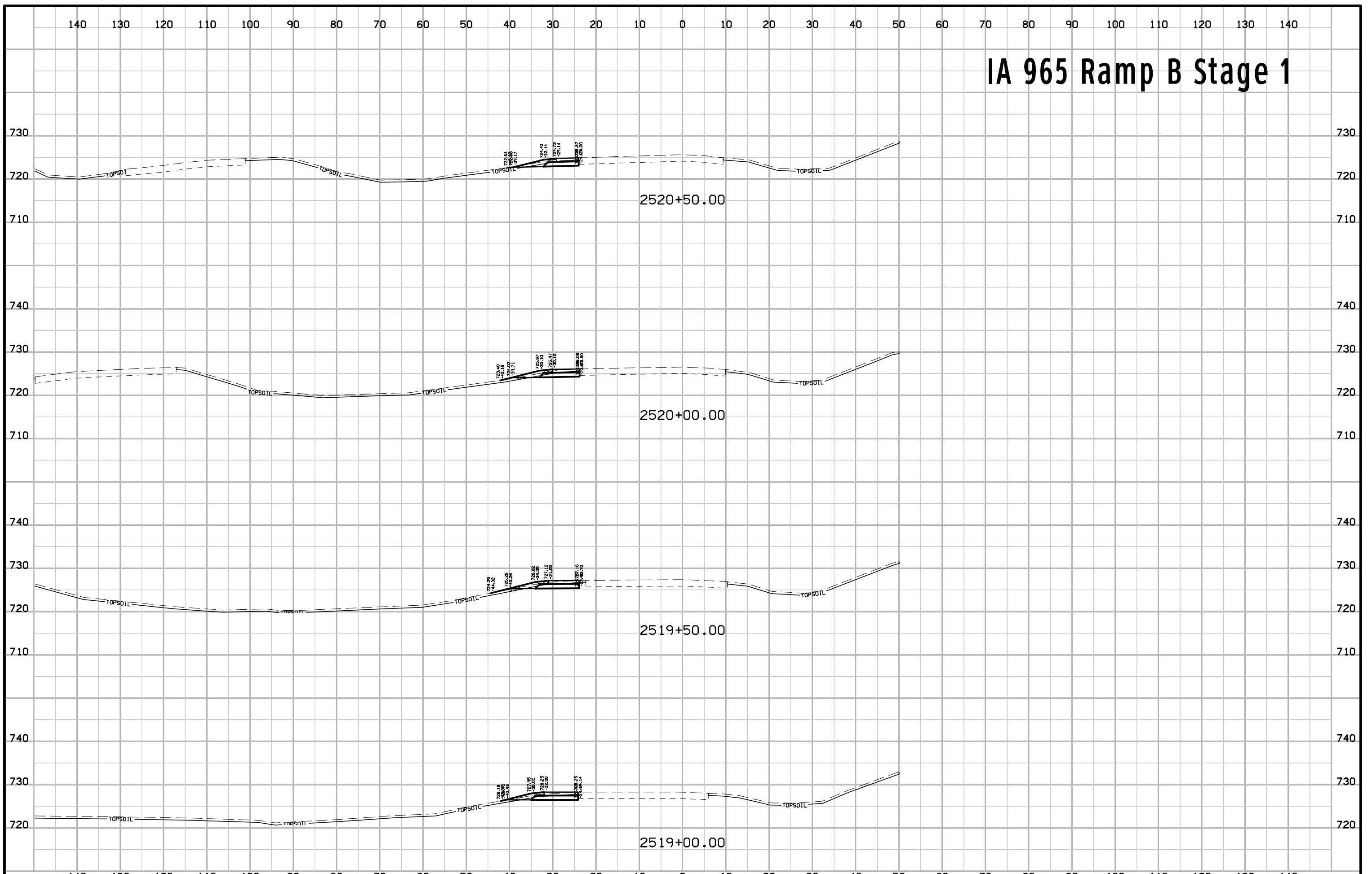
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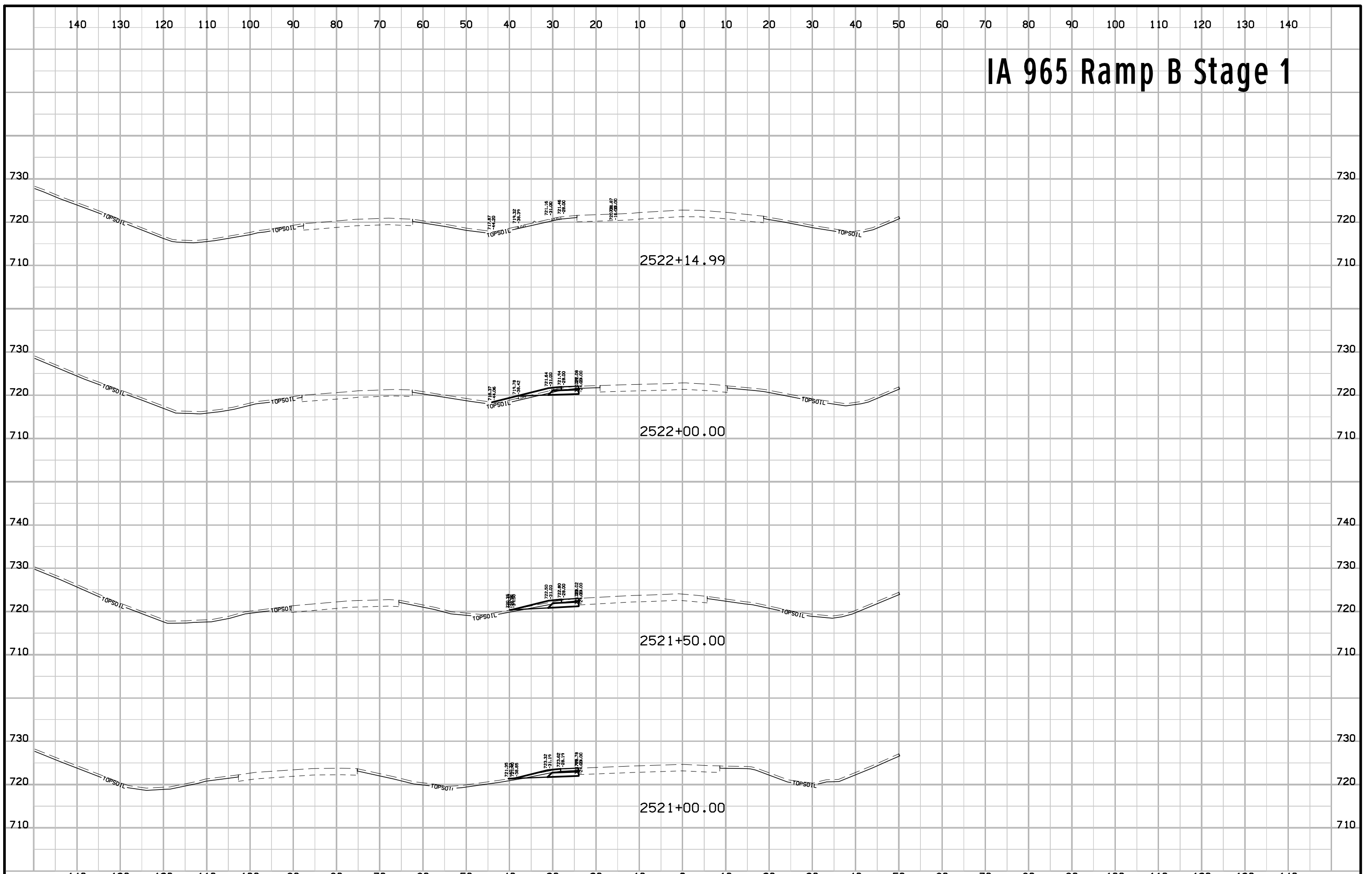
IA 965 Ramp B Stage 1



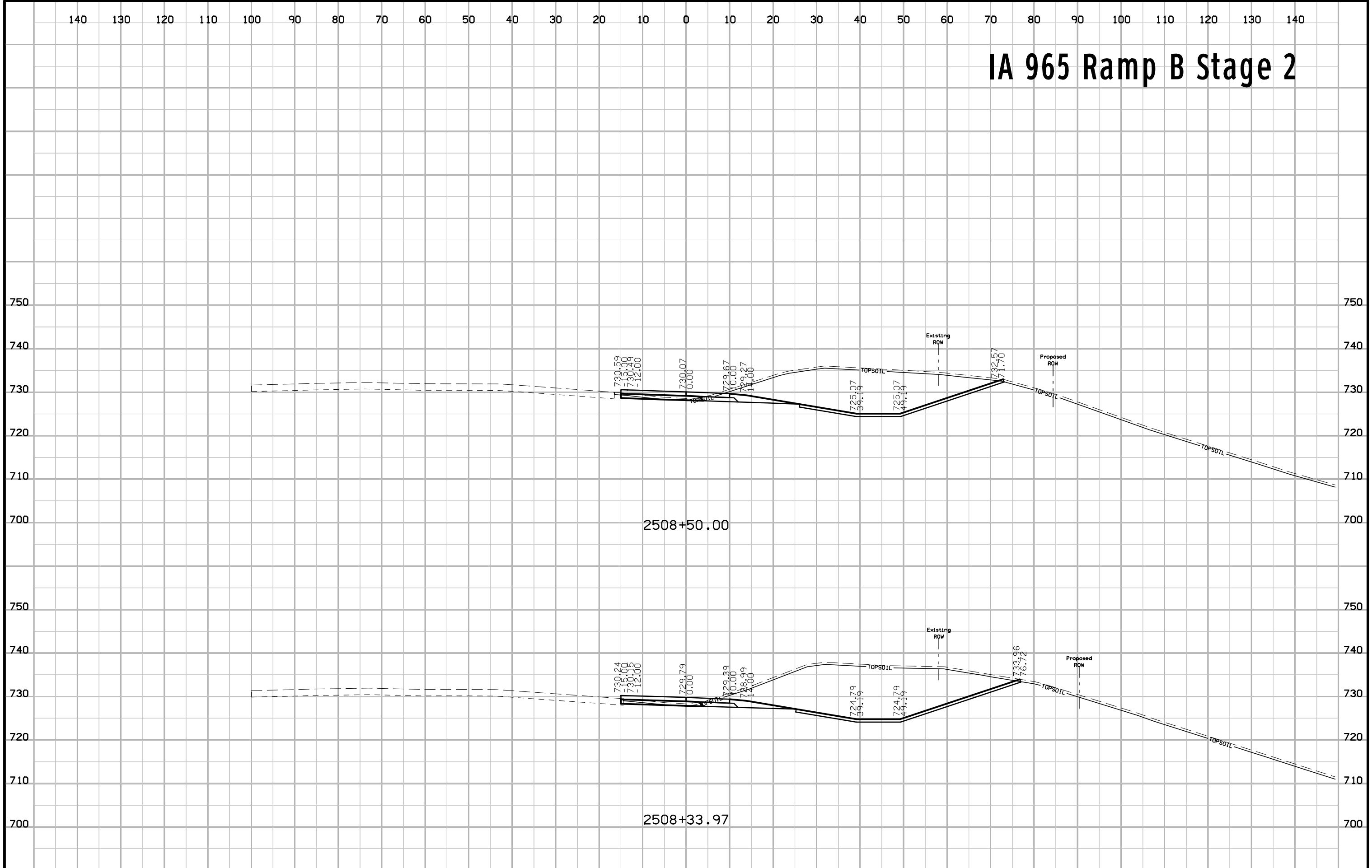
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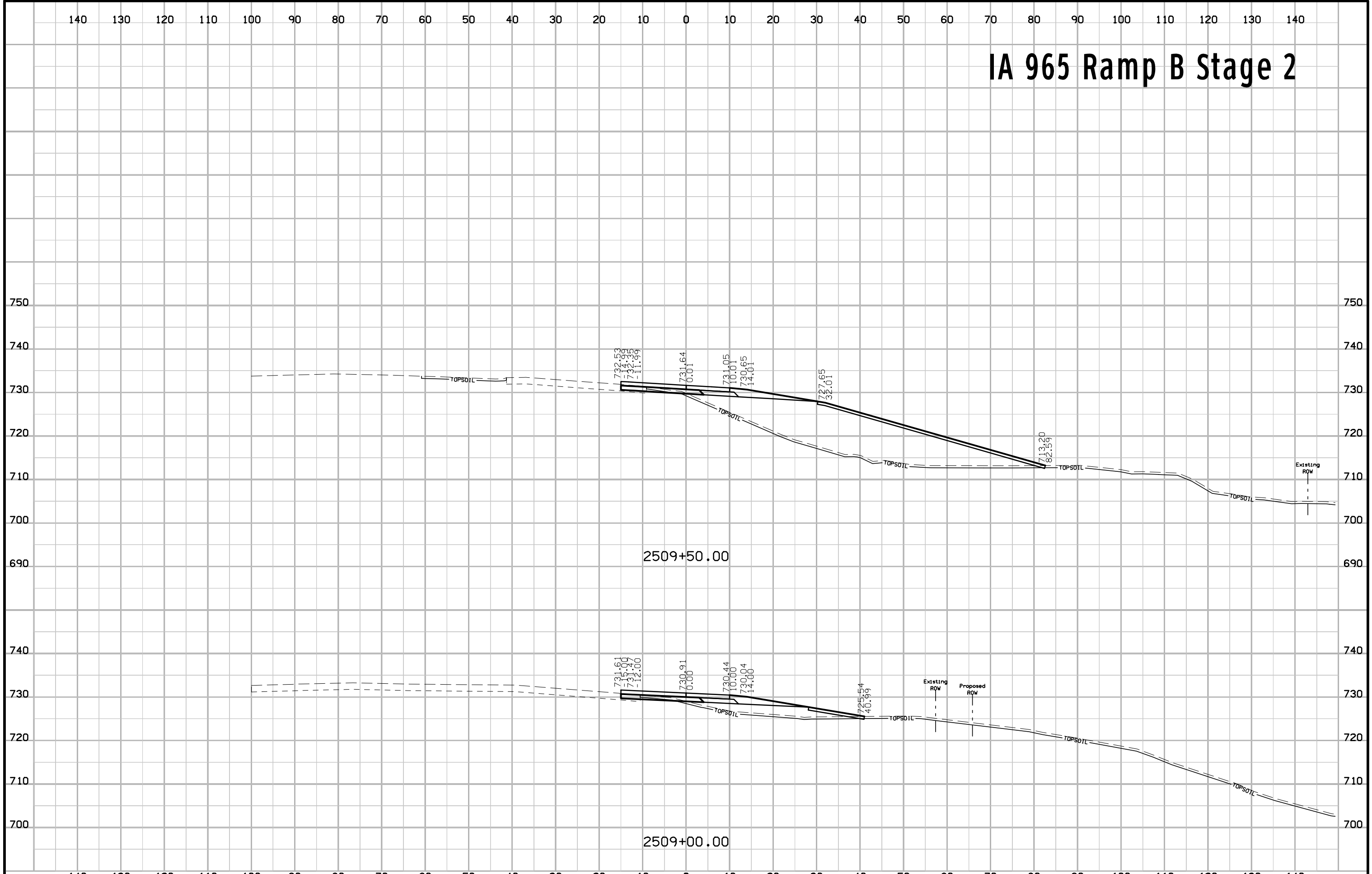
IA 965 Ramp B Stage 1



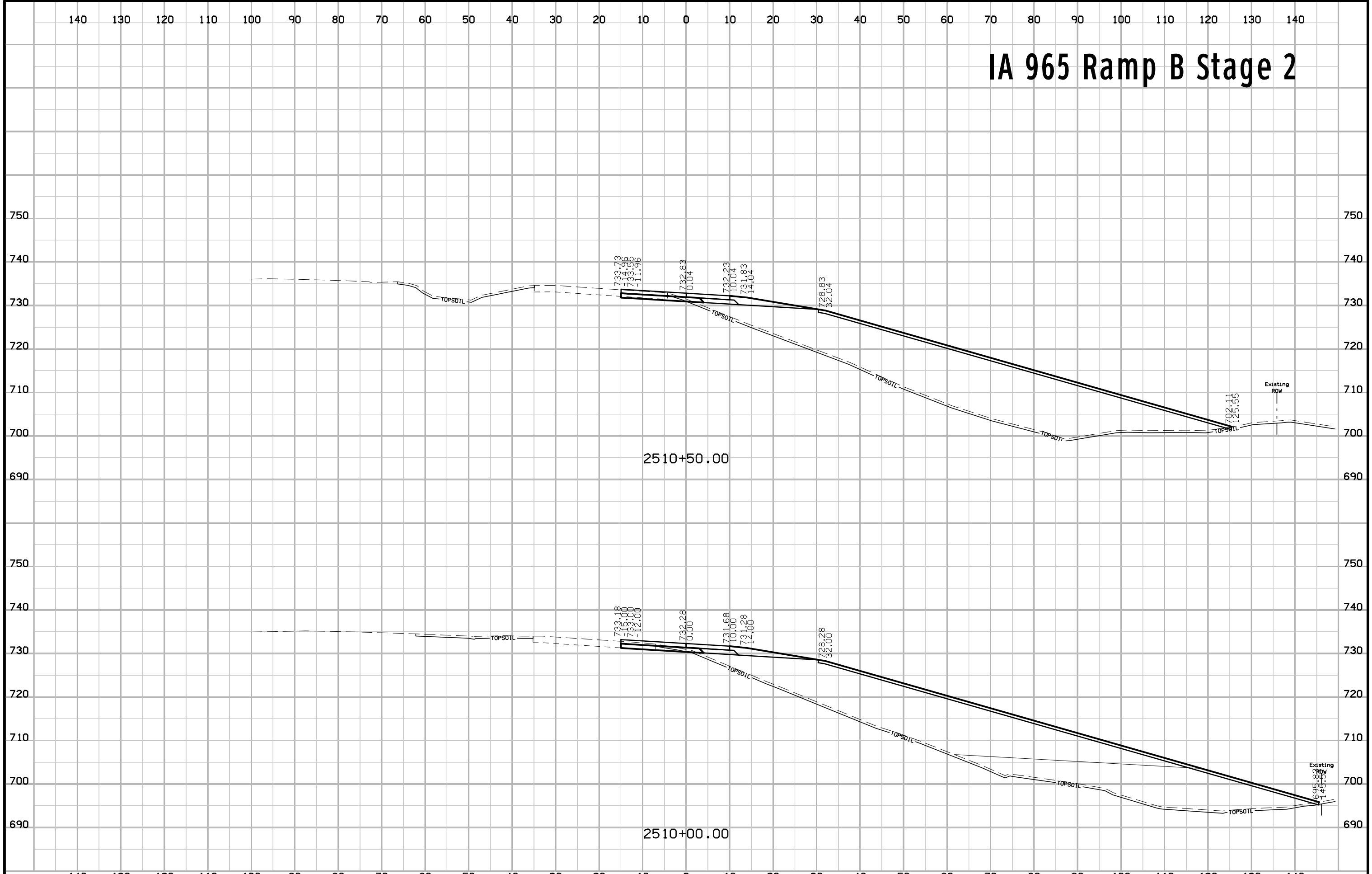
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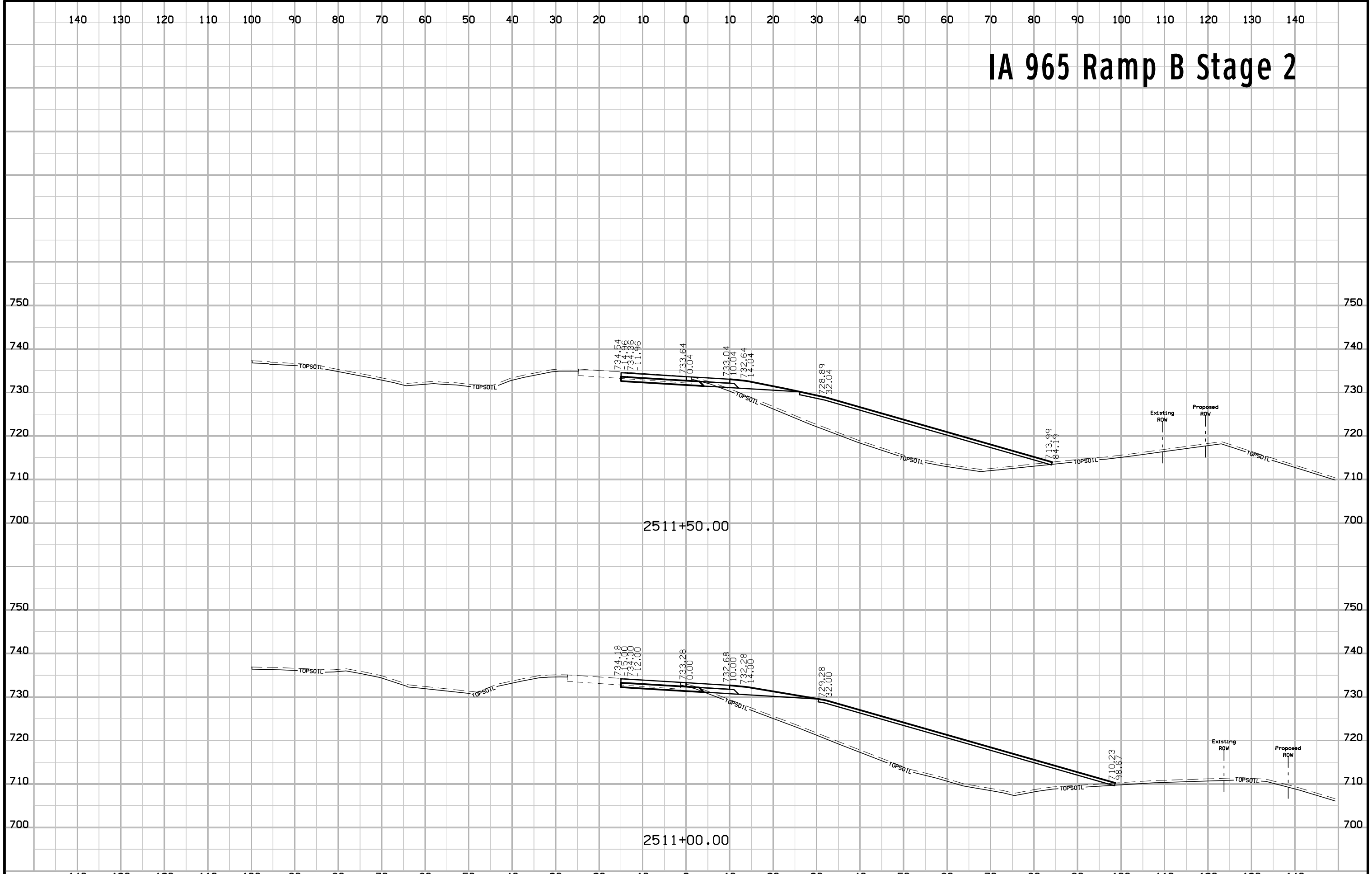
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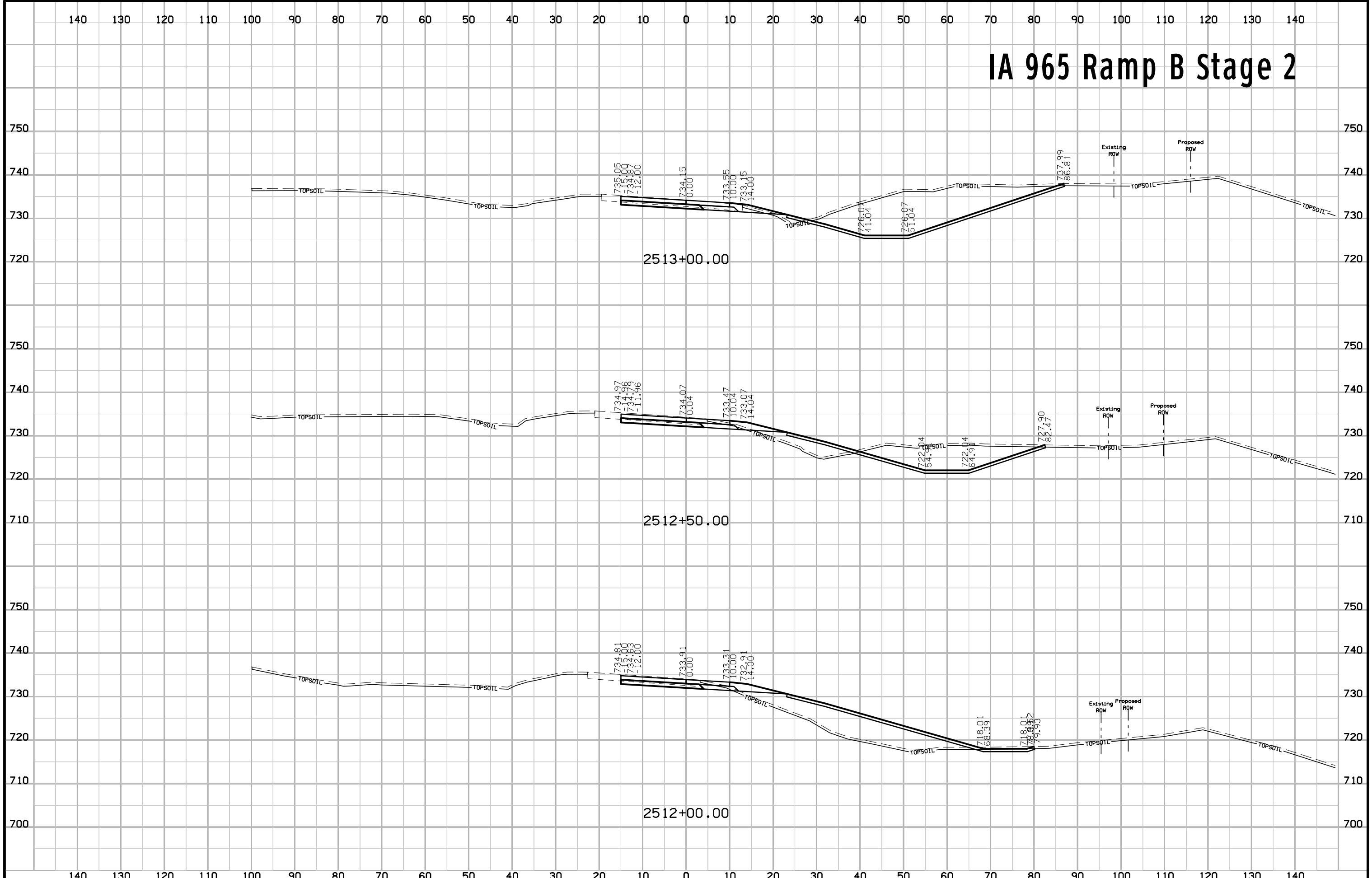
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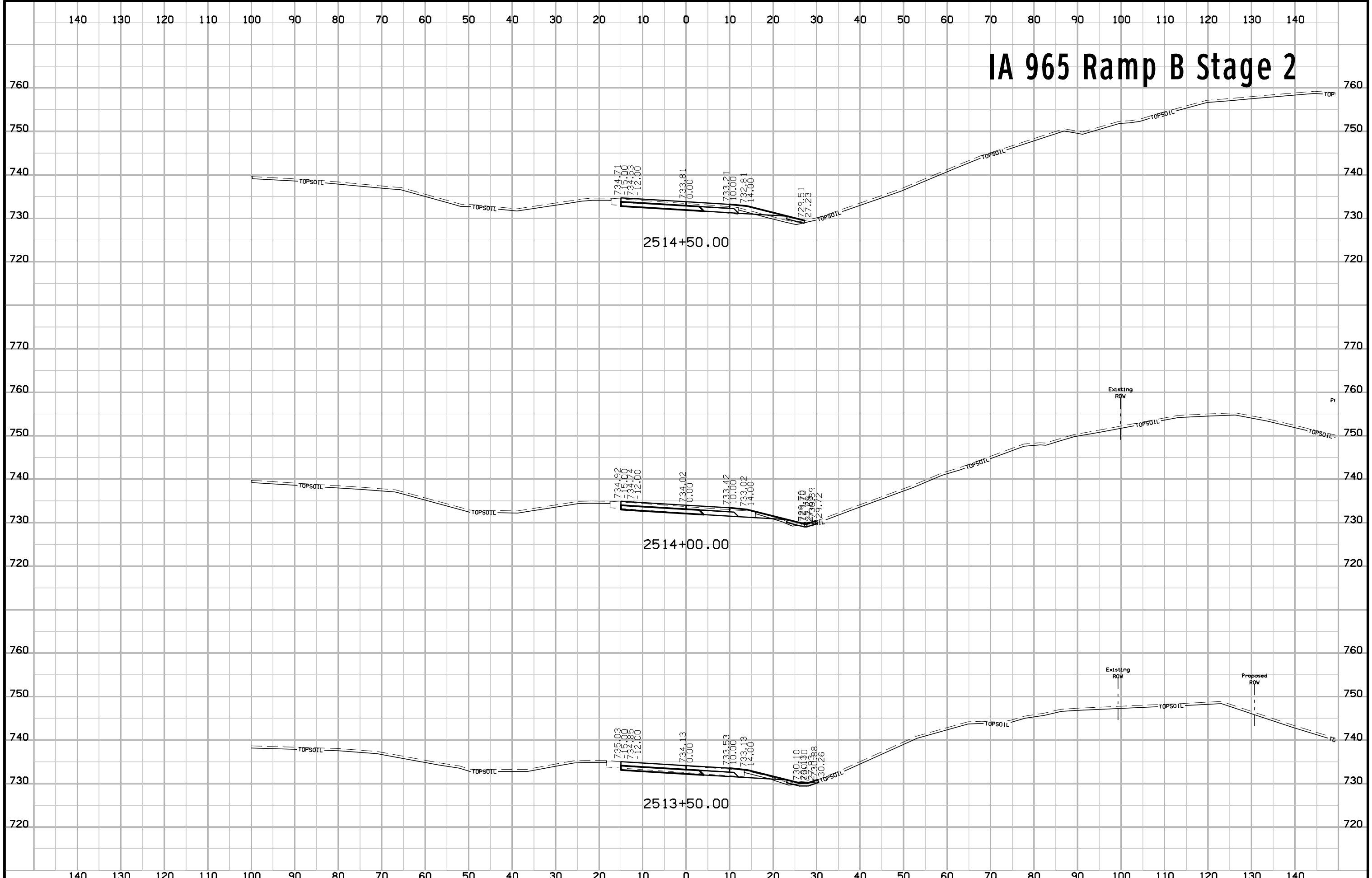
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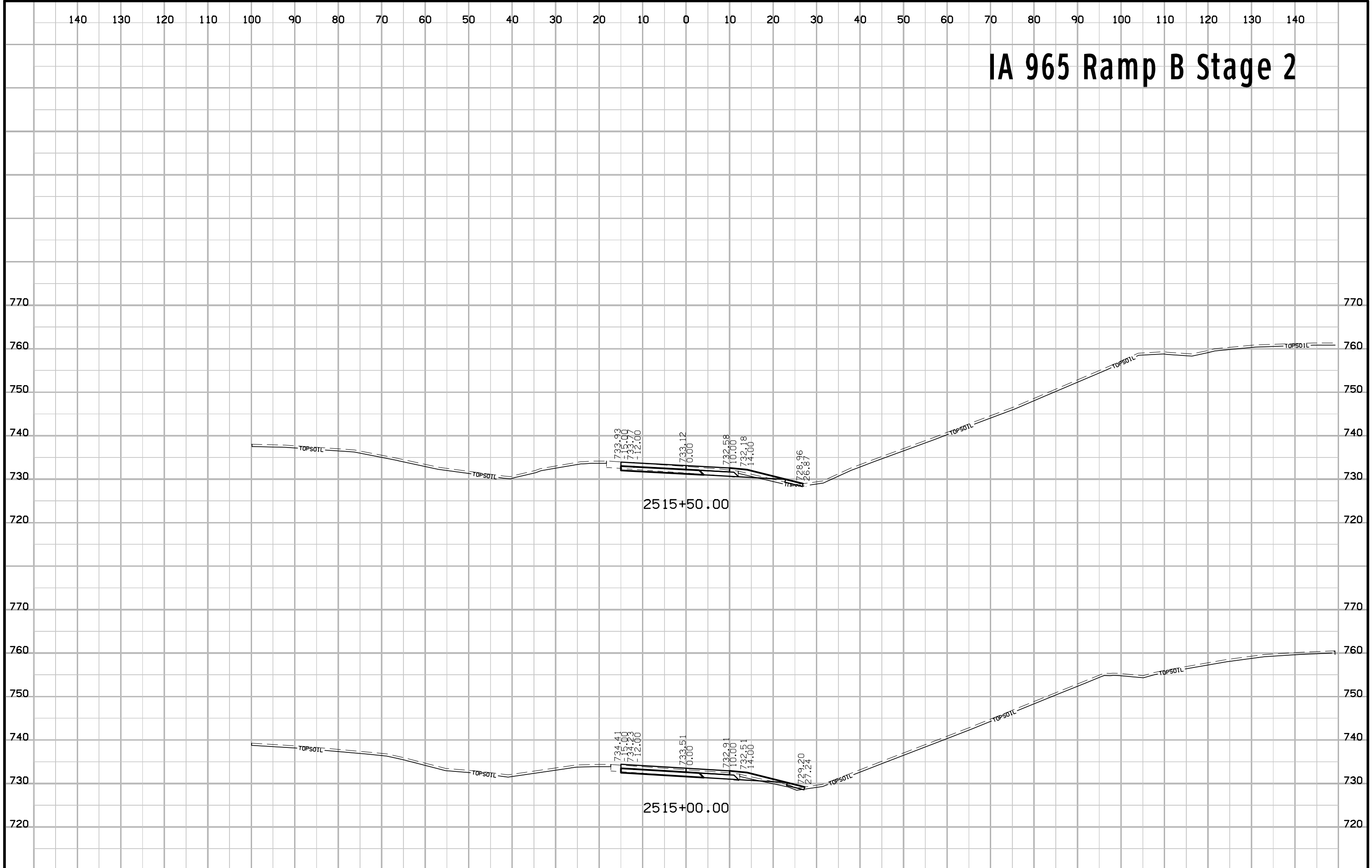
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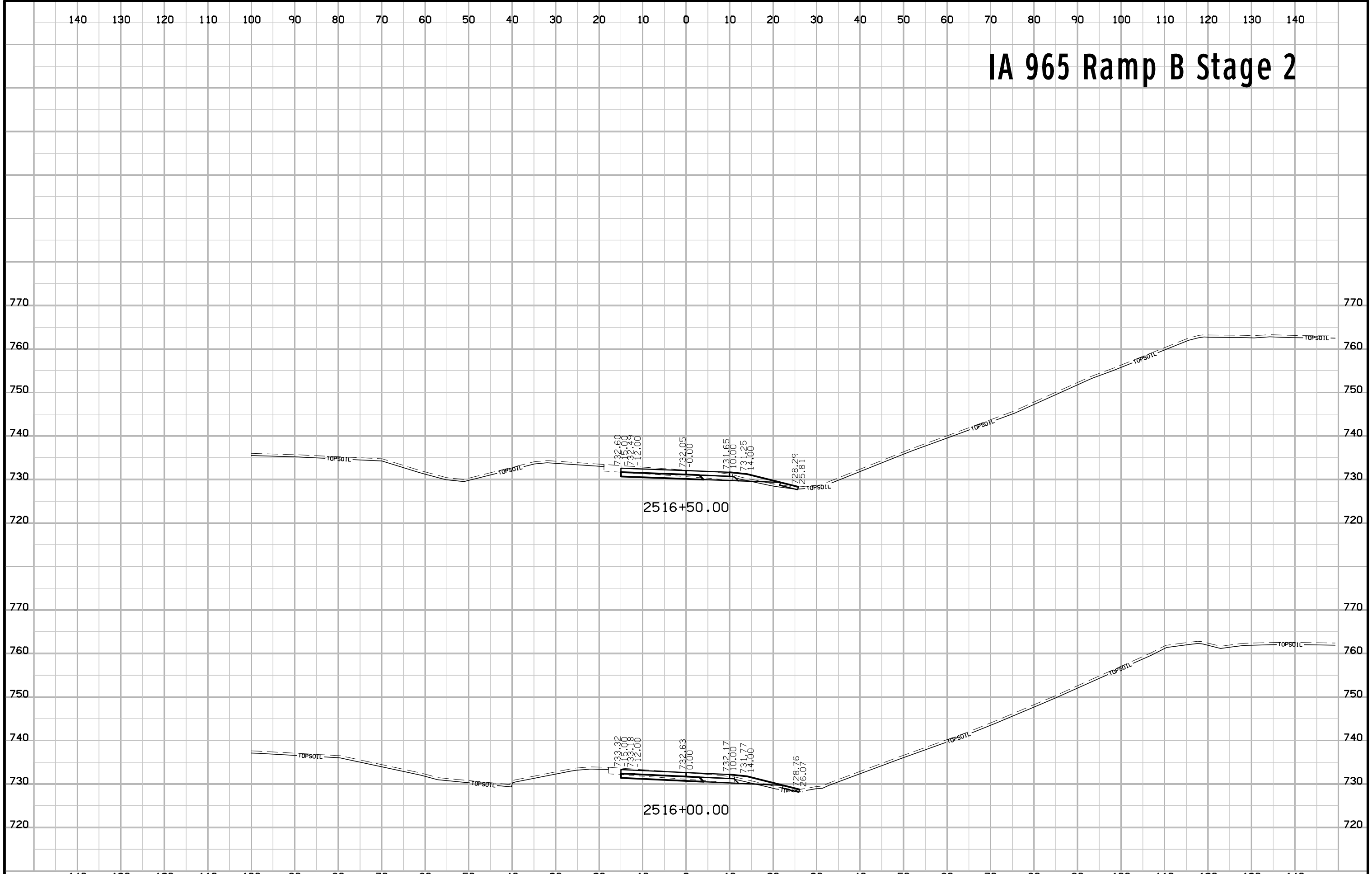
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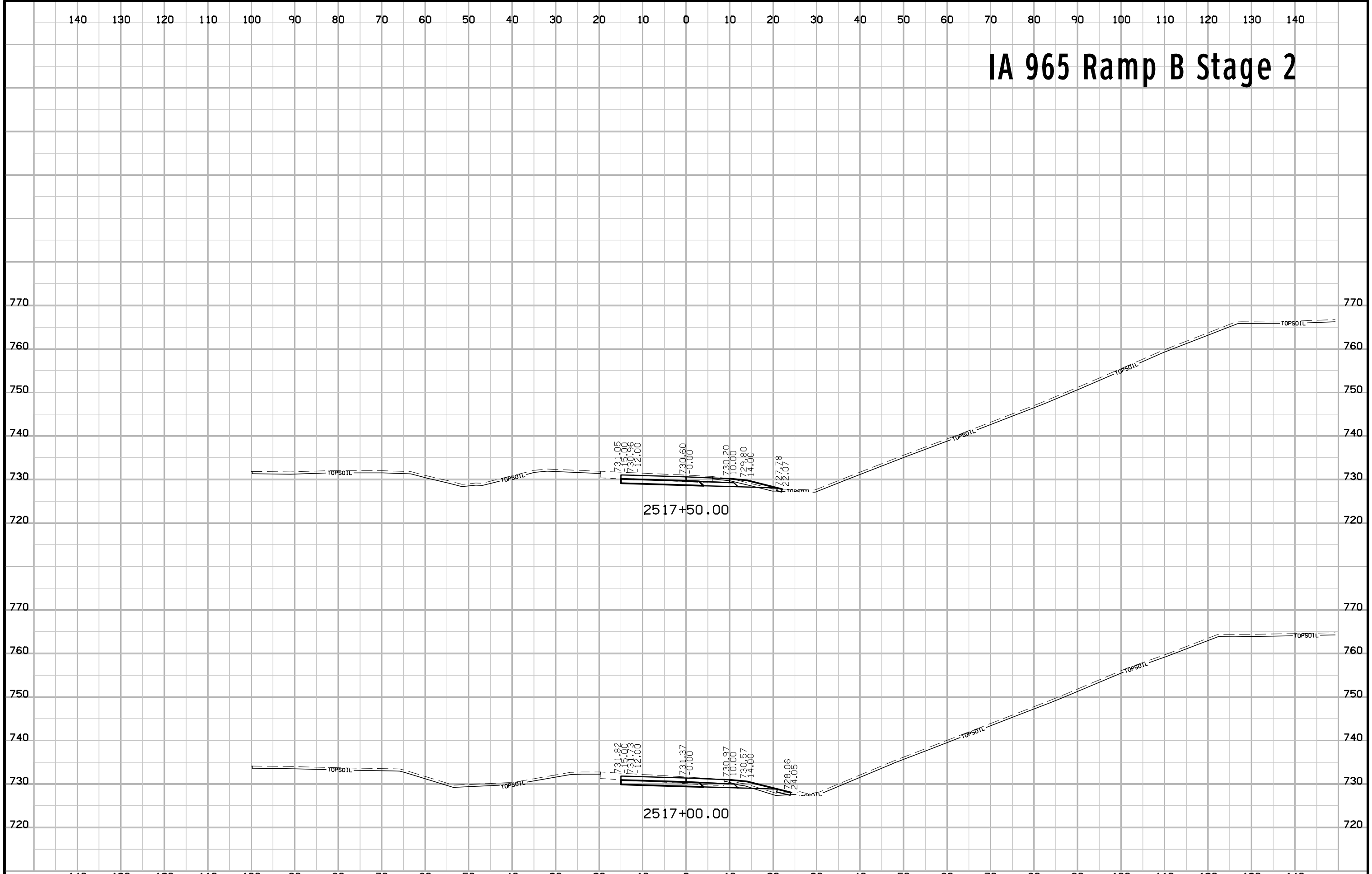
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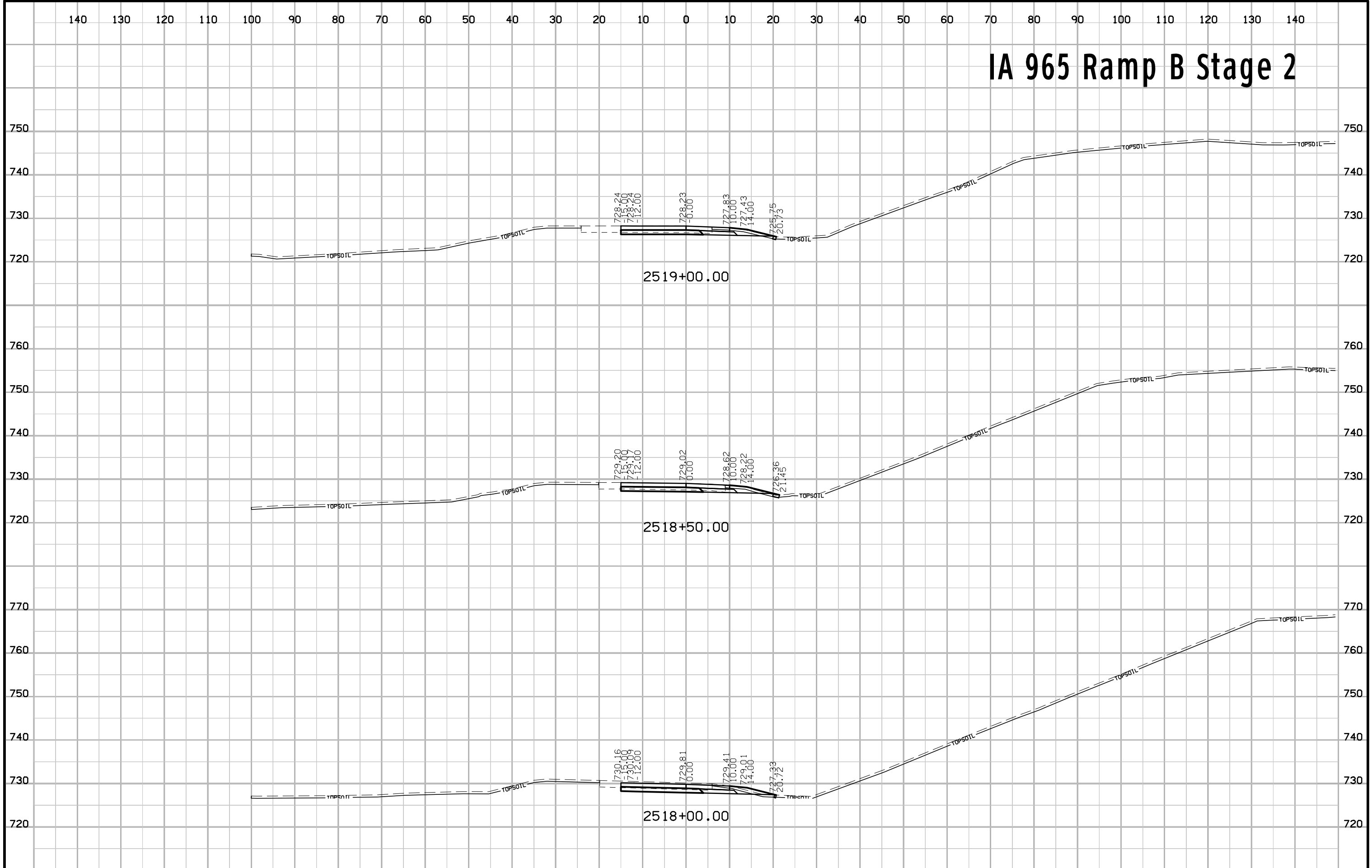
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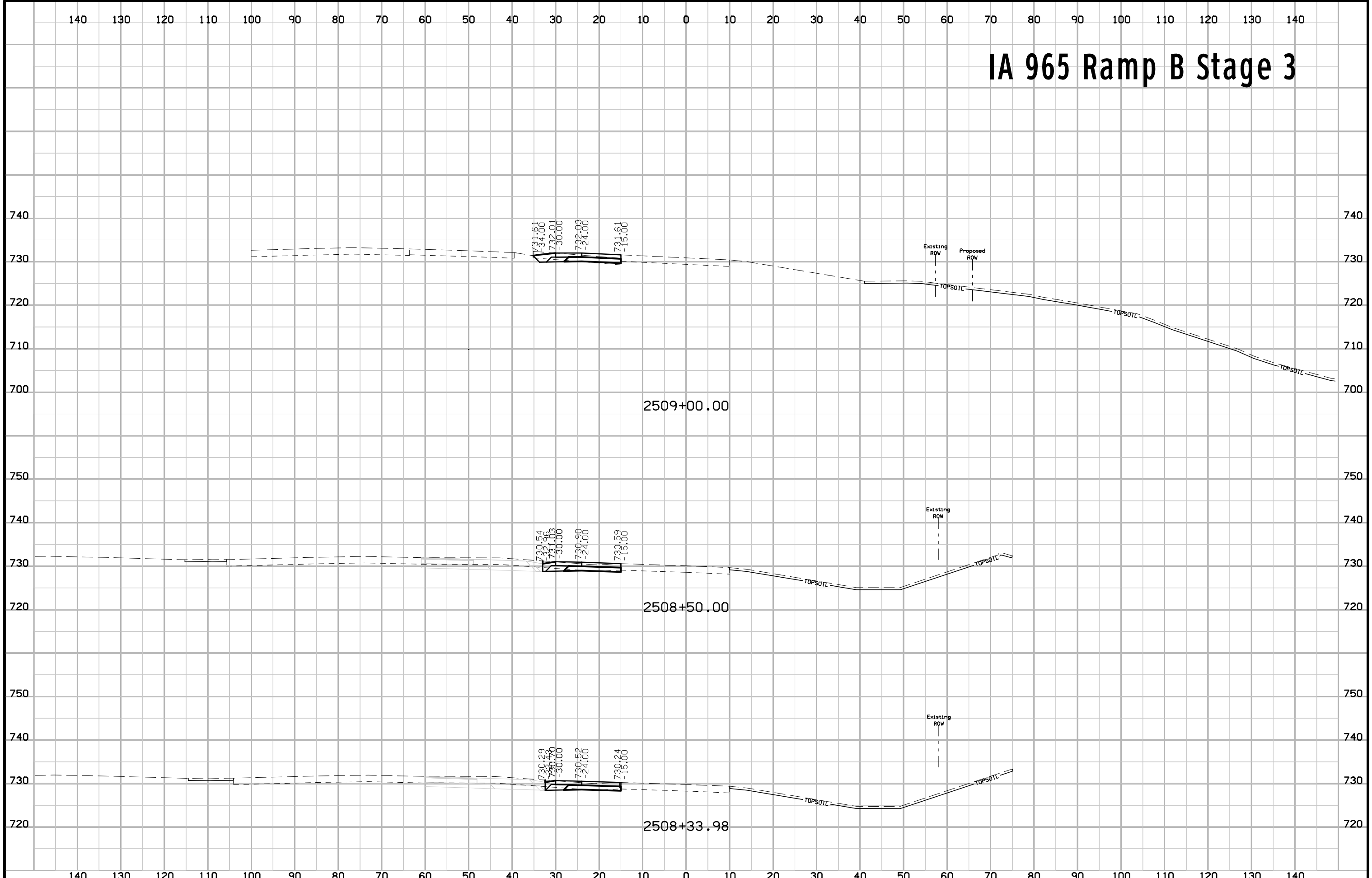
IA 965 Ramp B Stage 2



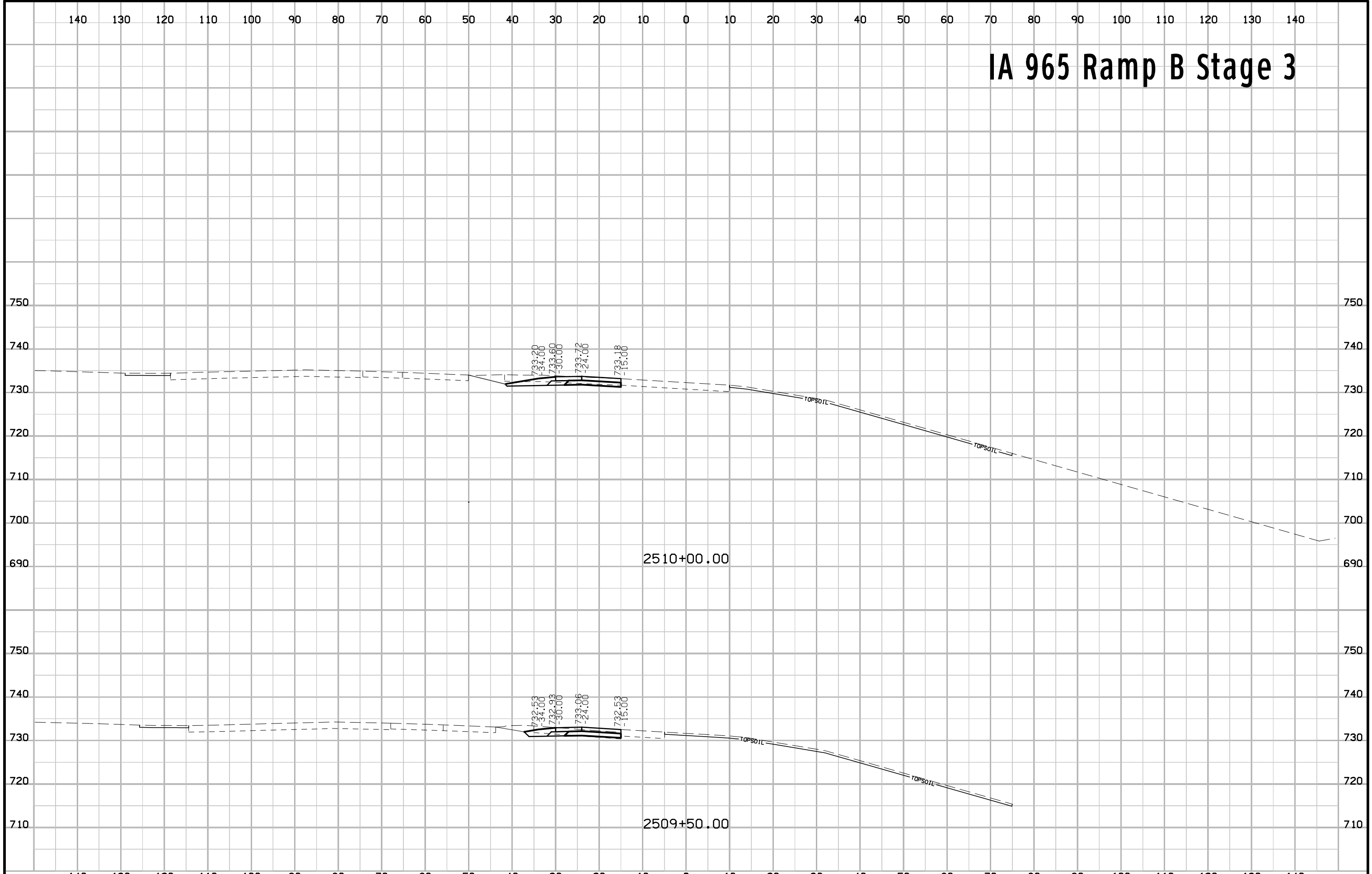
IA 965 Ramp B Stage 2



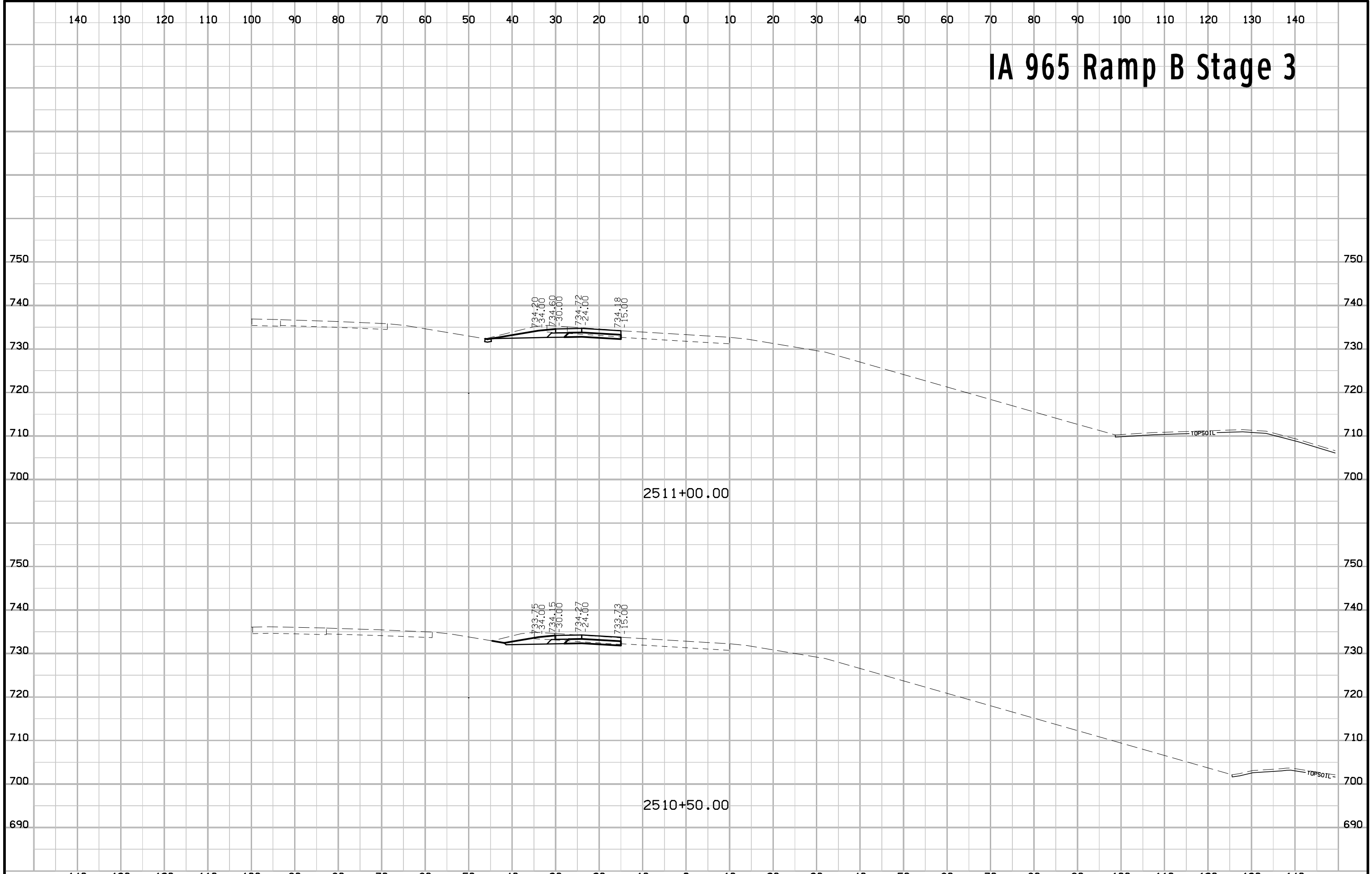
IA 965 Ramp B Stage 3



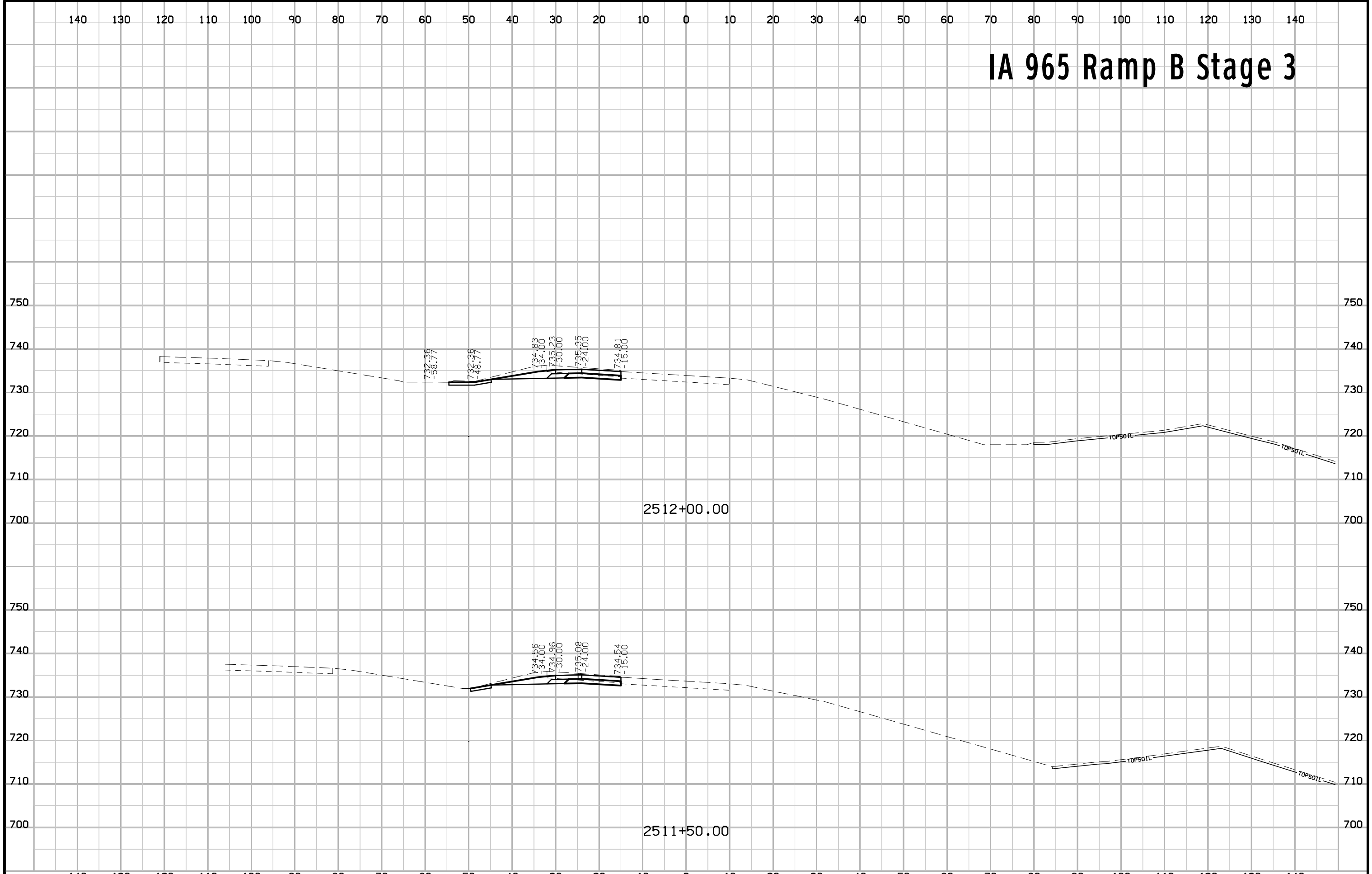
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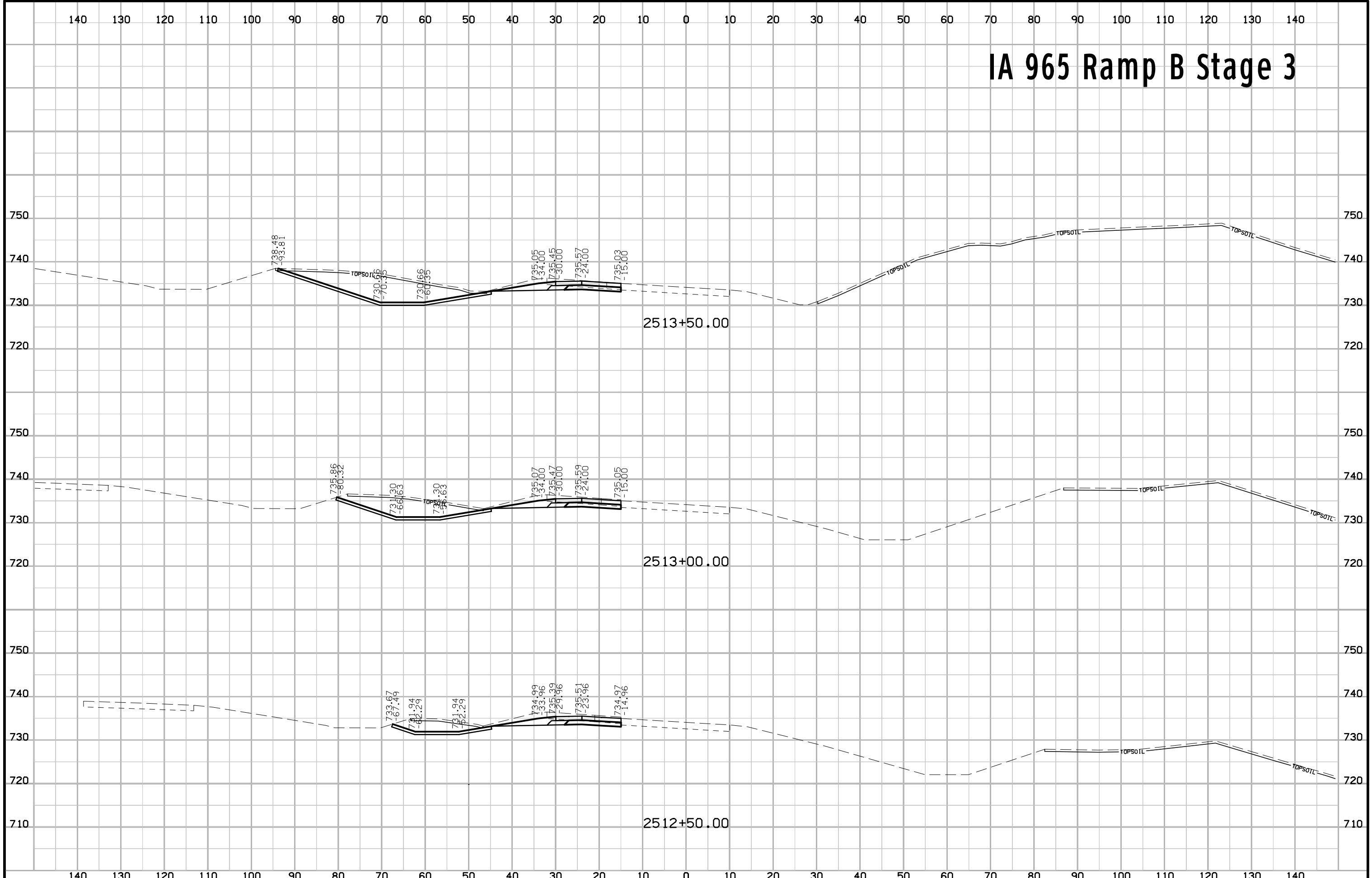
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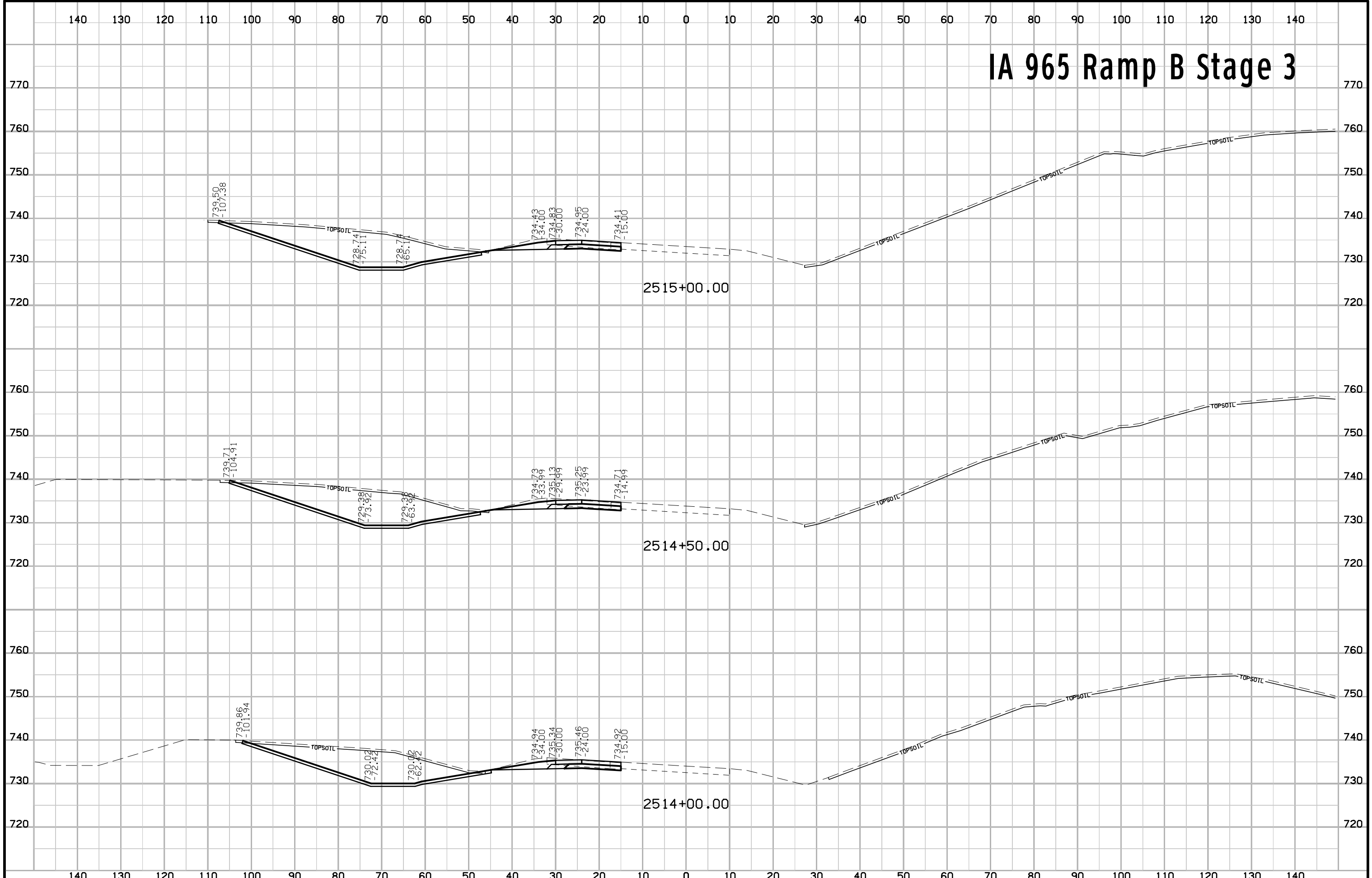
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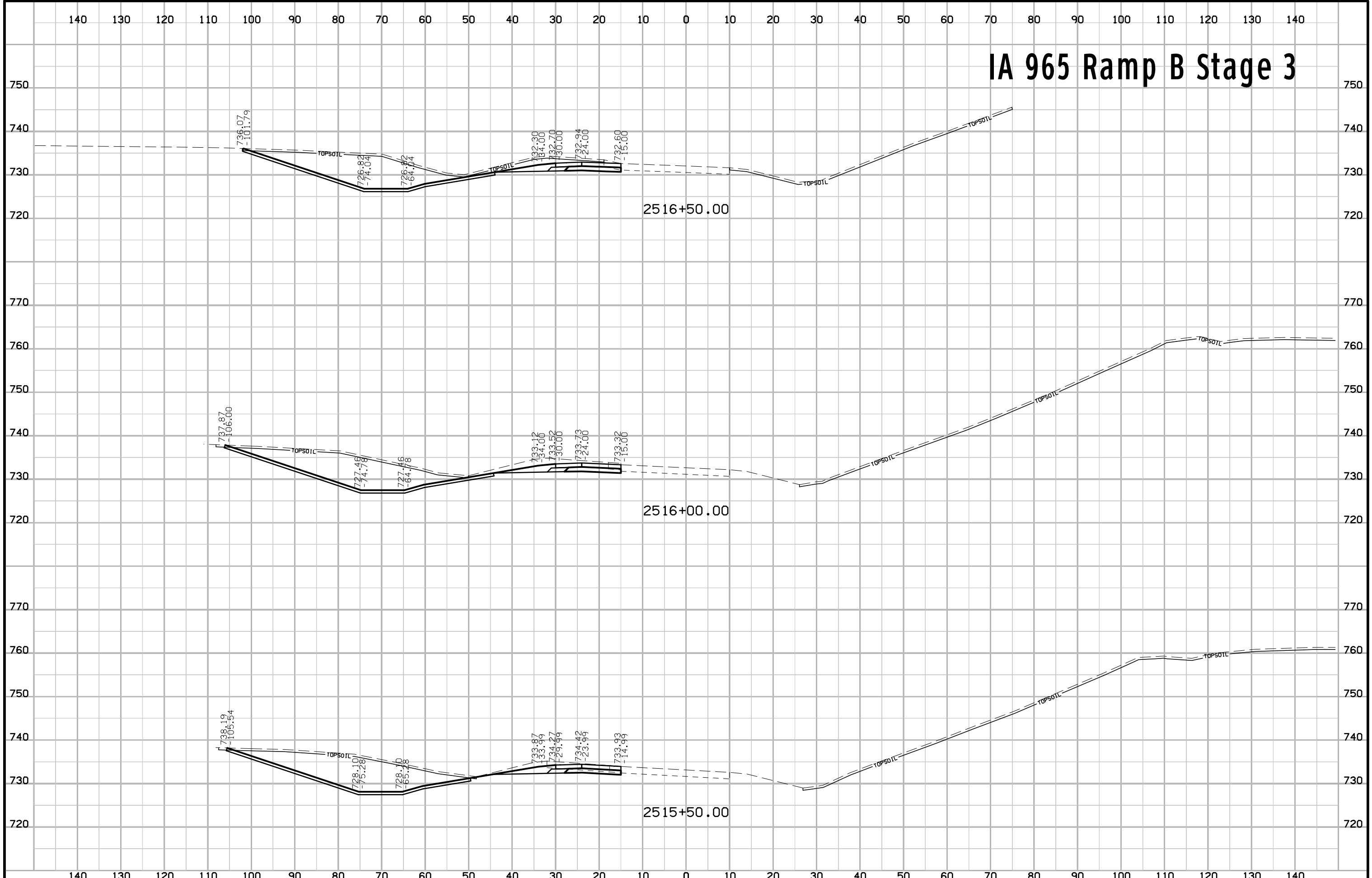
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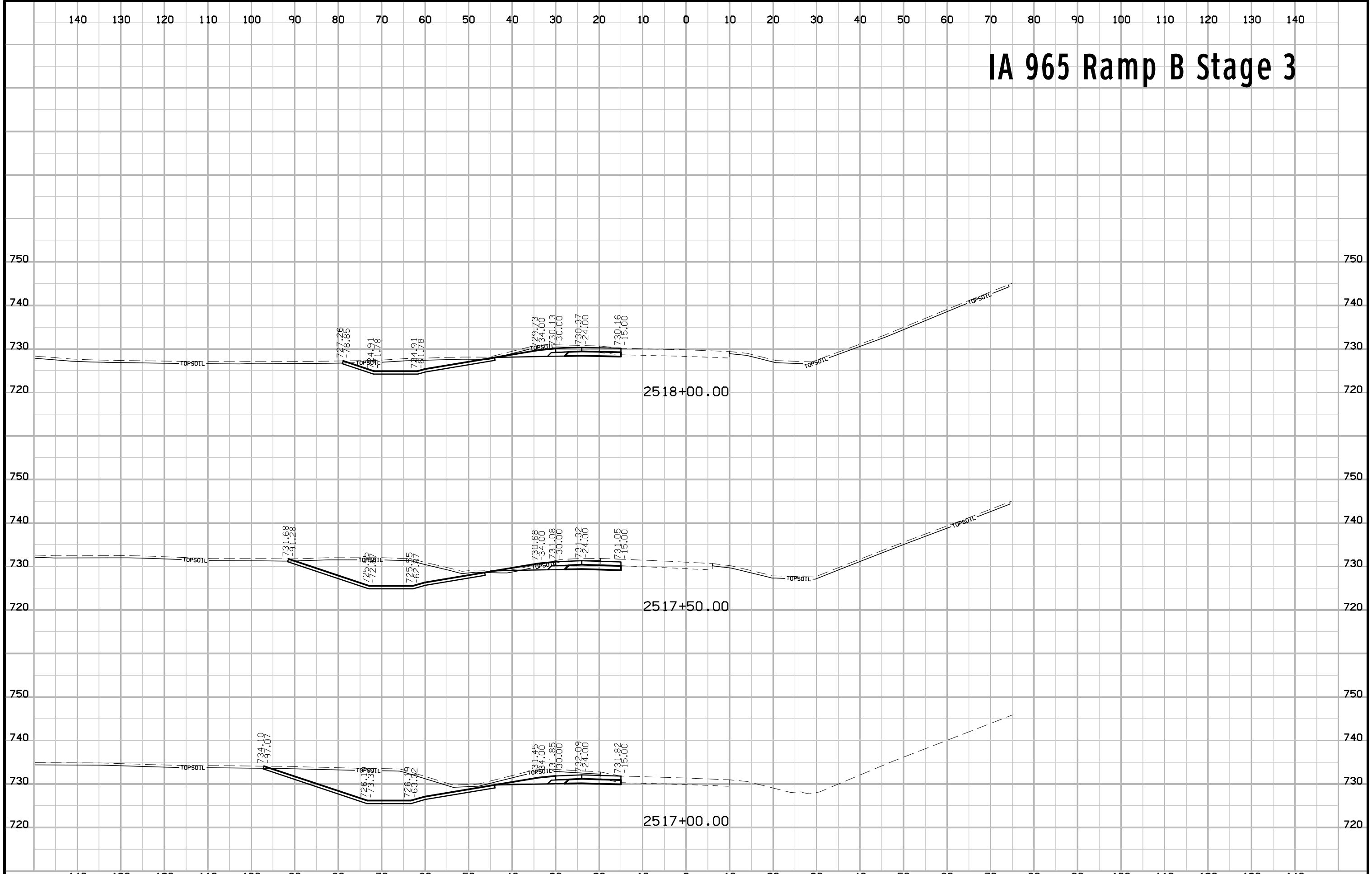
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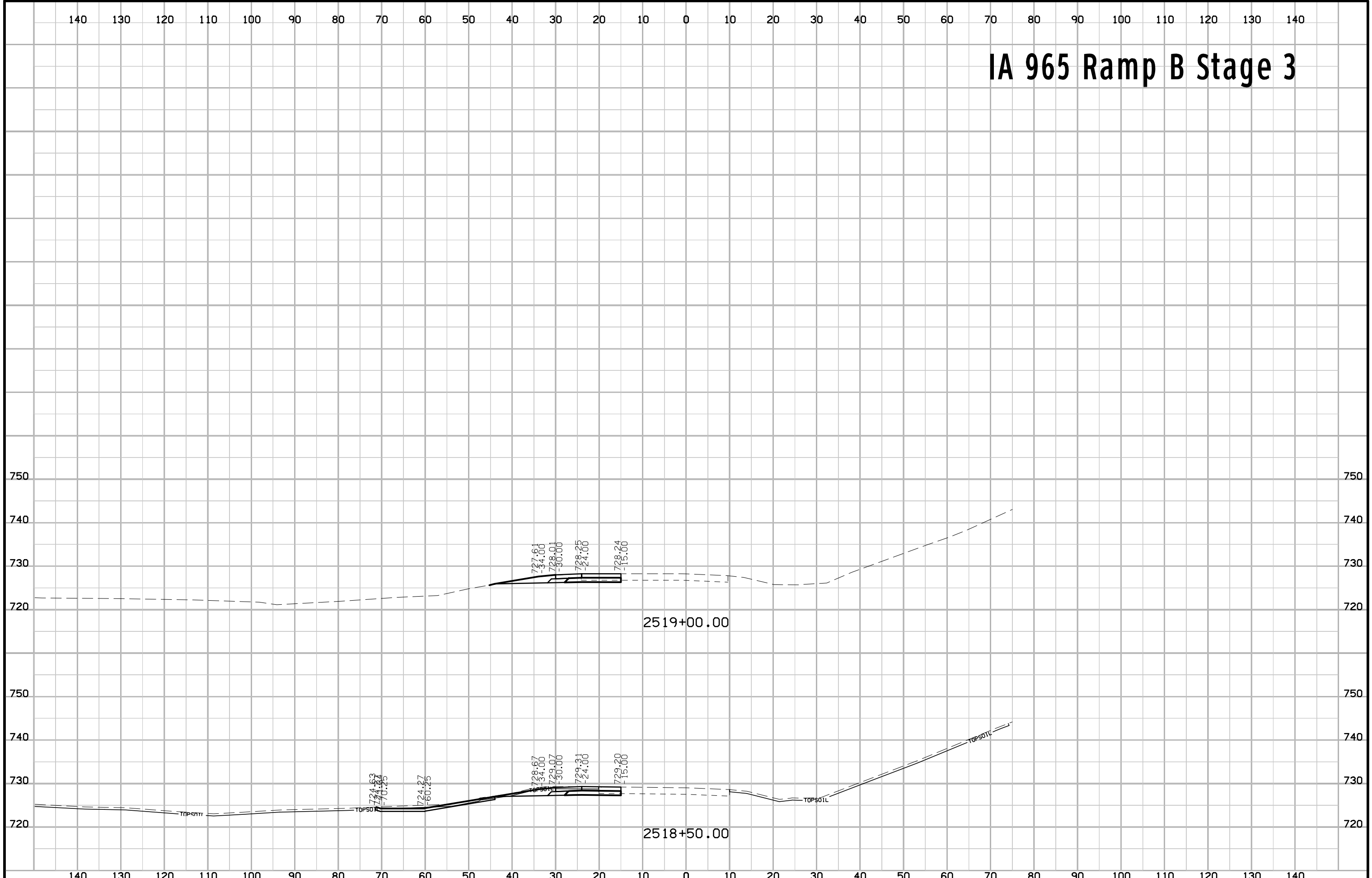
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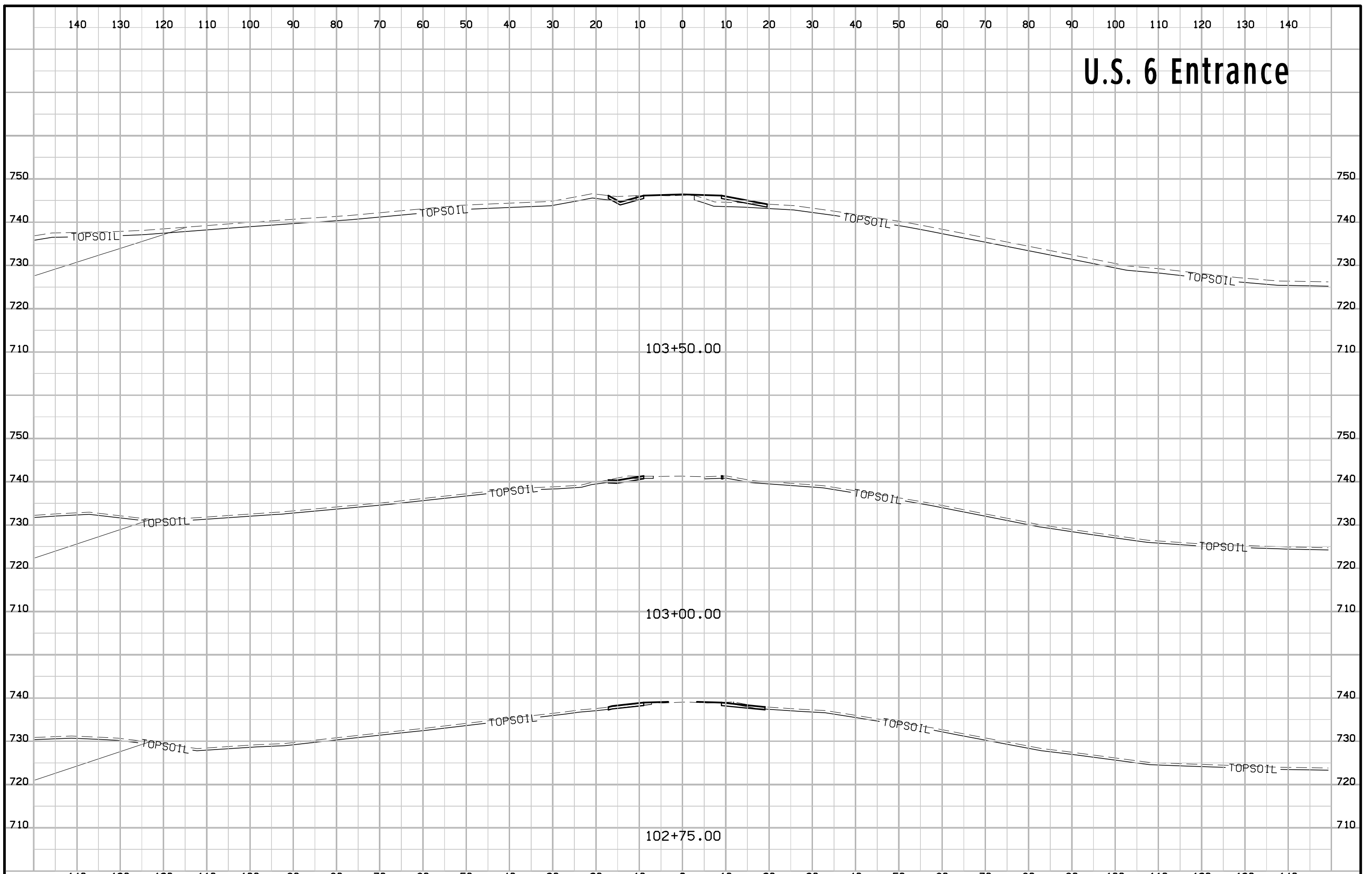
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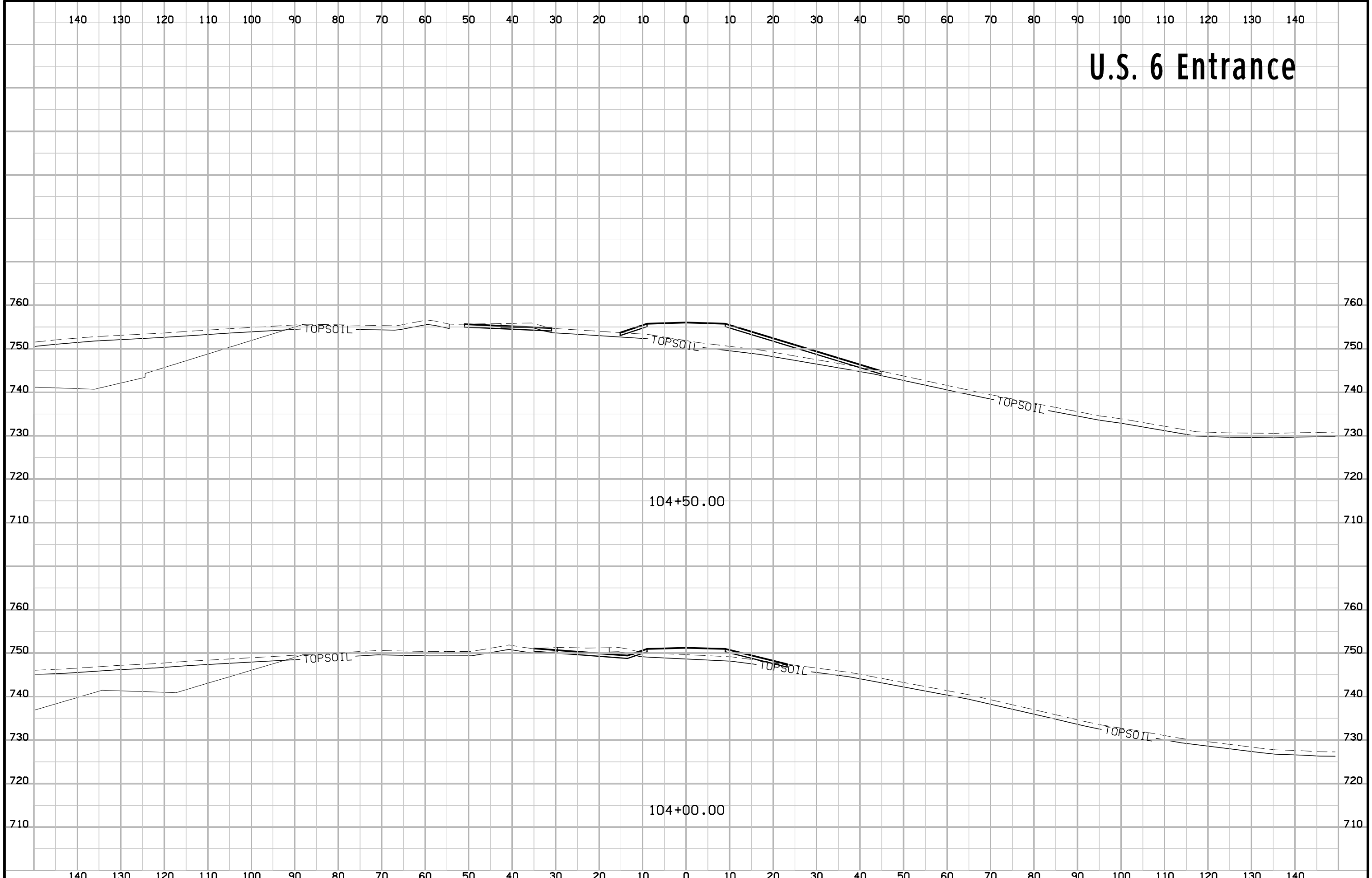
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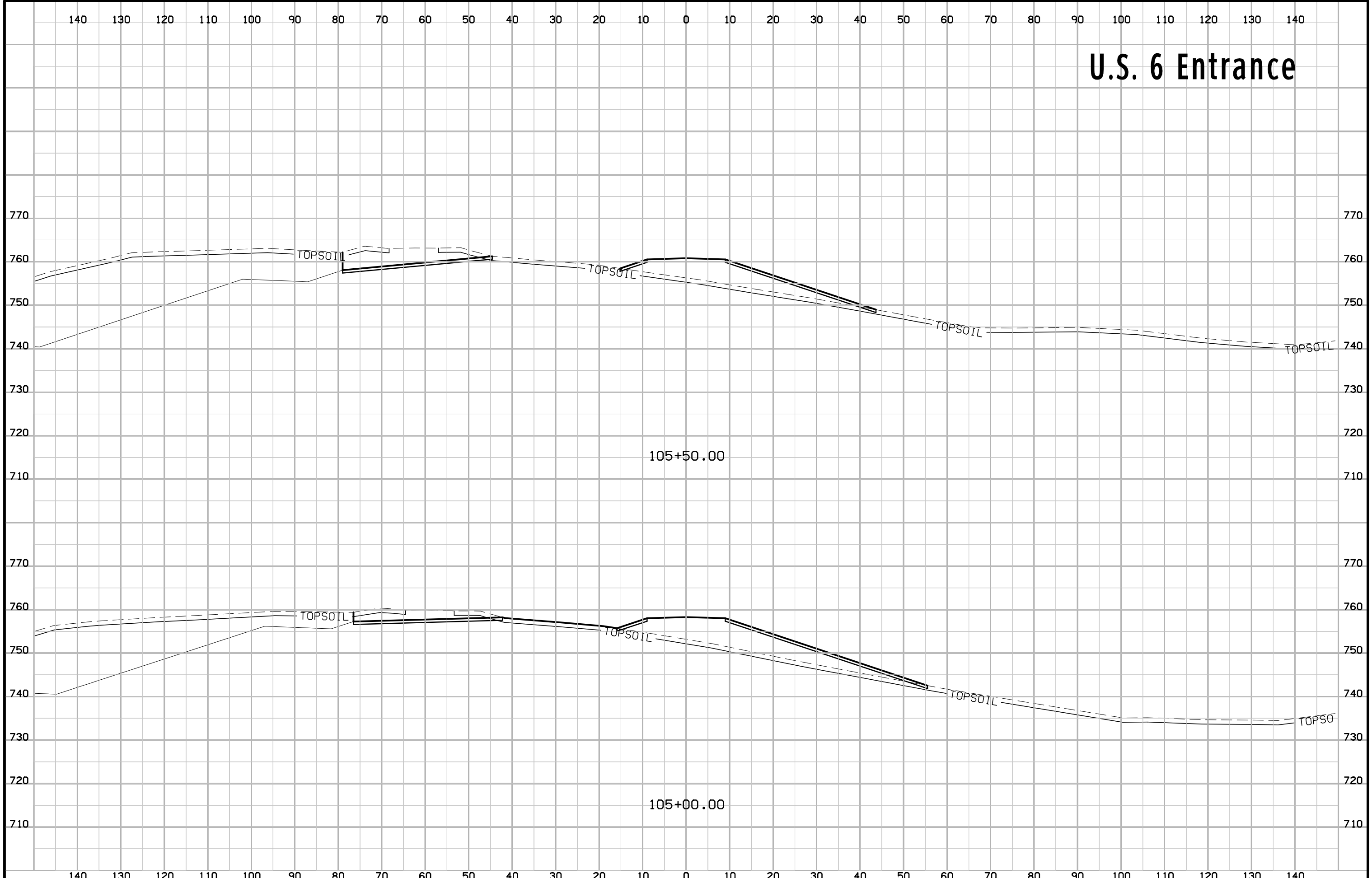
U.S. 6 Entrance



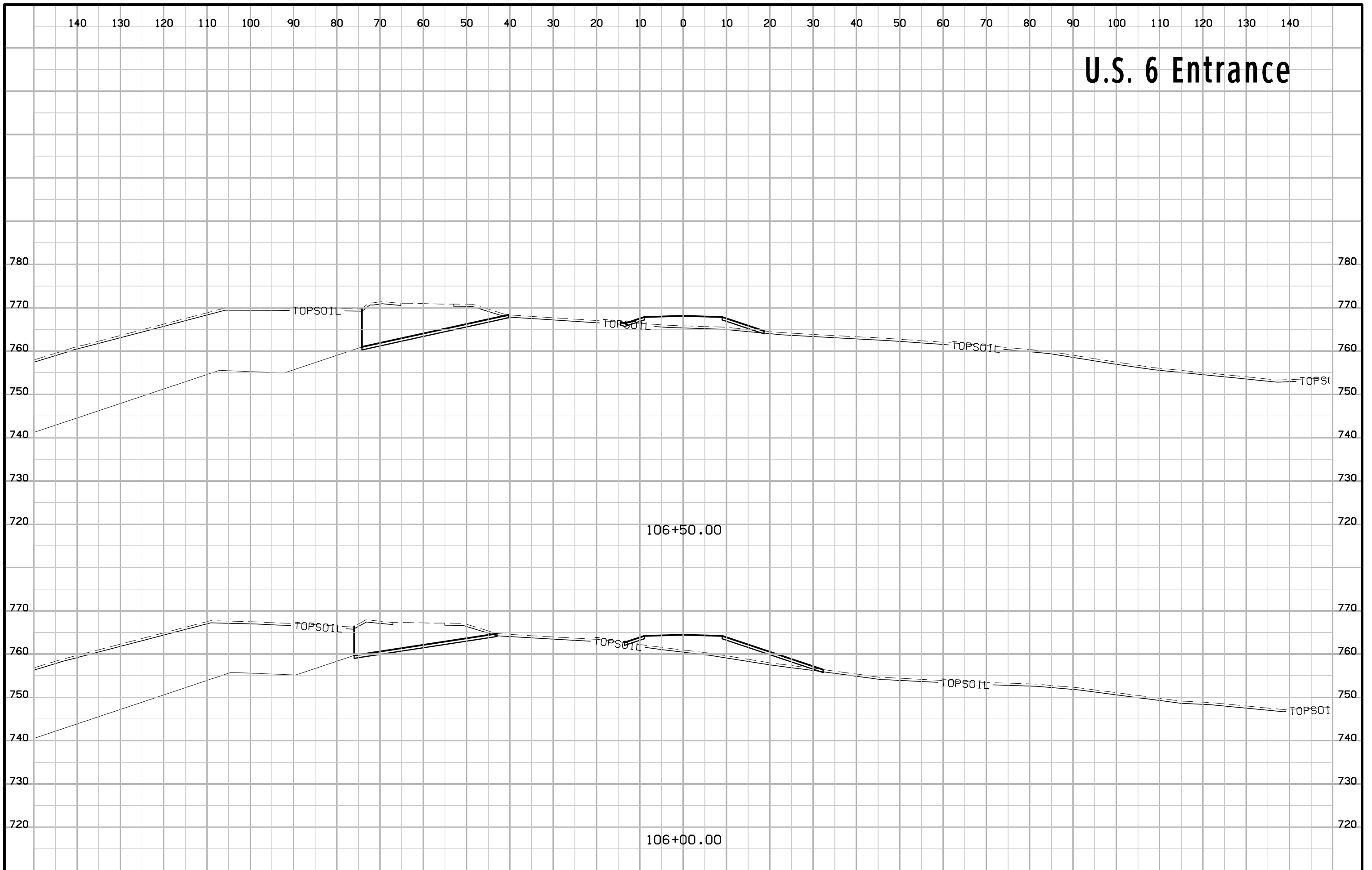
U.S. 6 Entrance



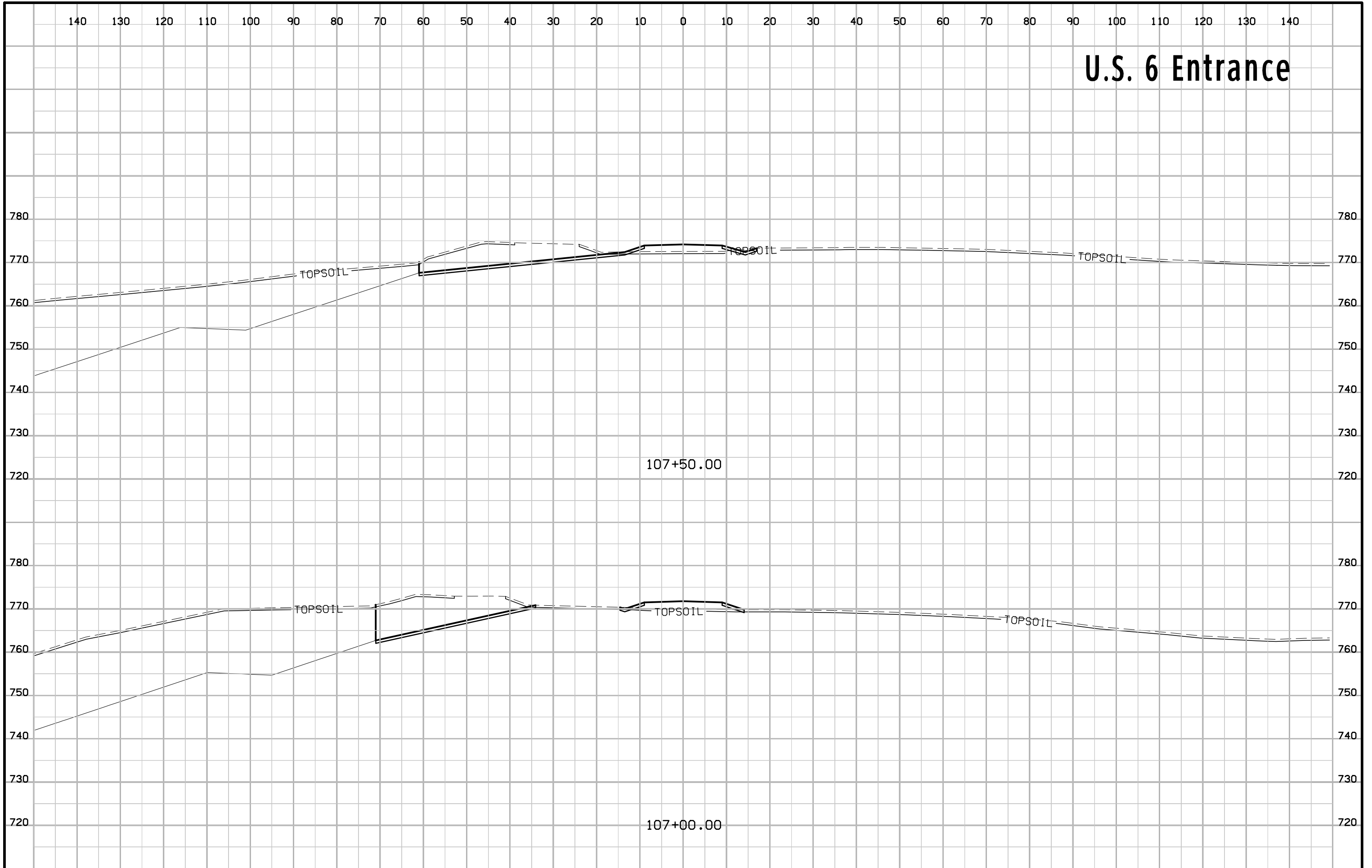
U.S. 6 Entrance



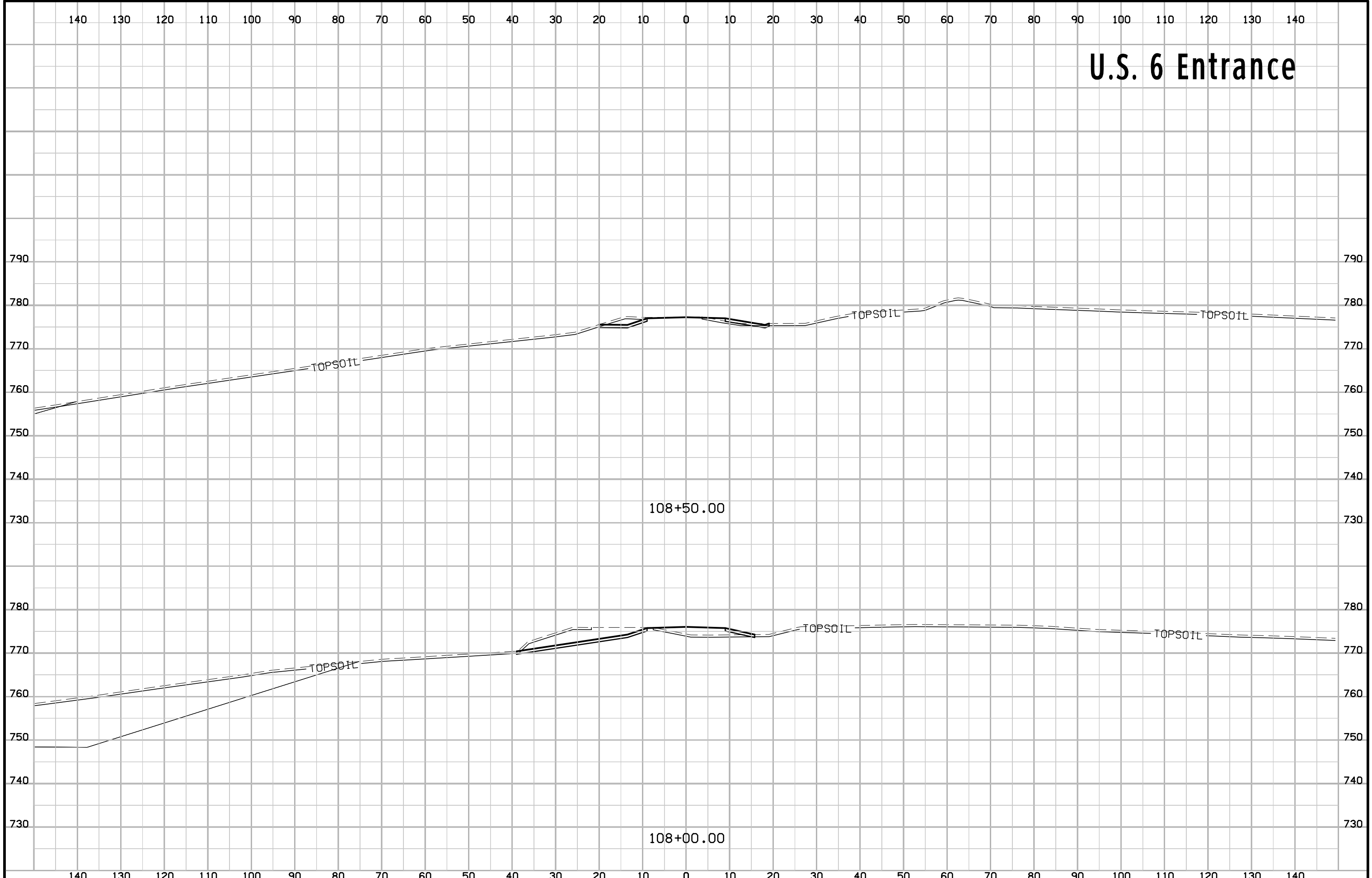
U.S. 6 Entrance



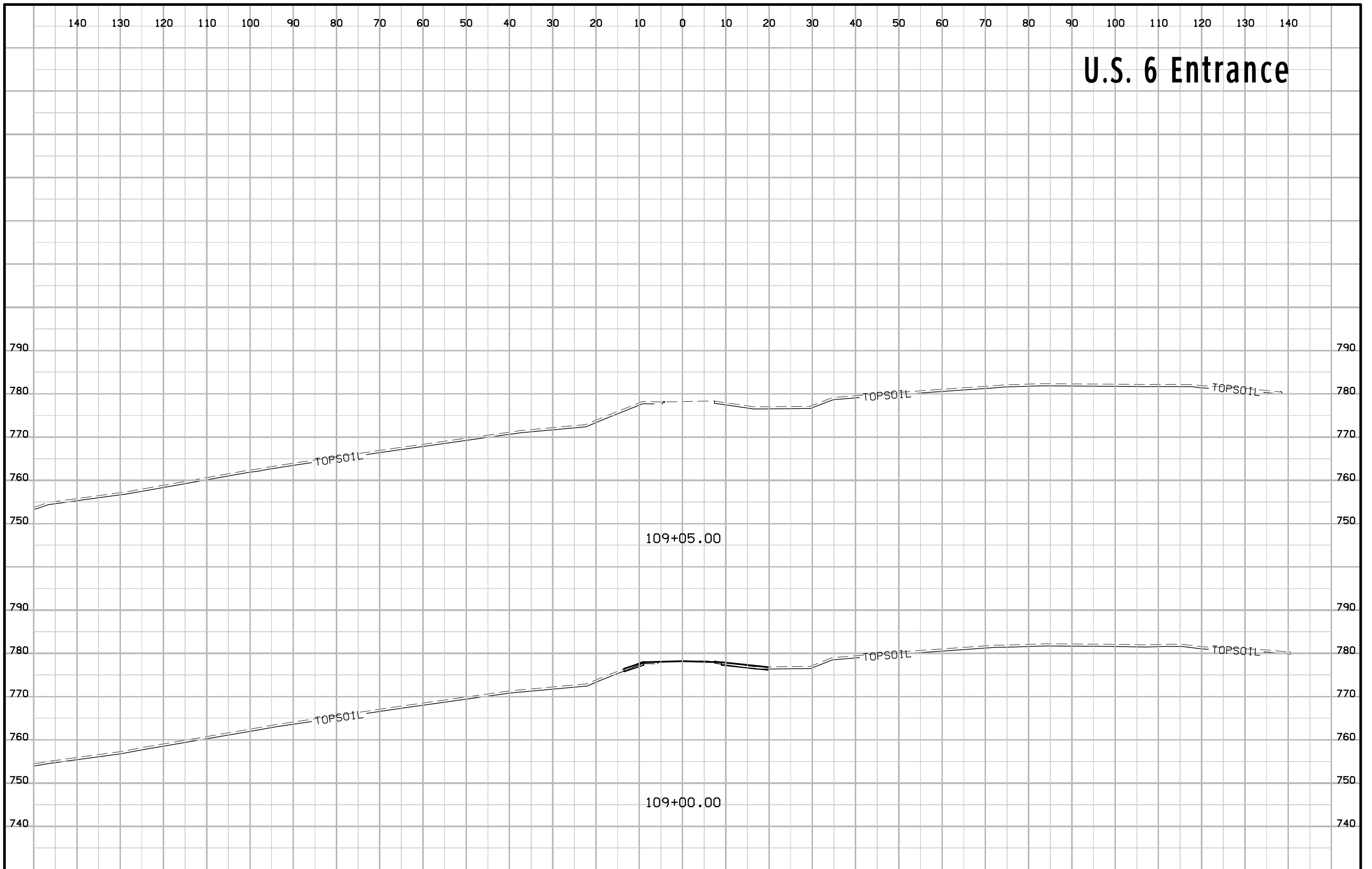
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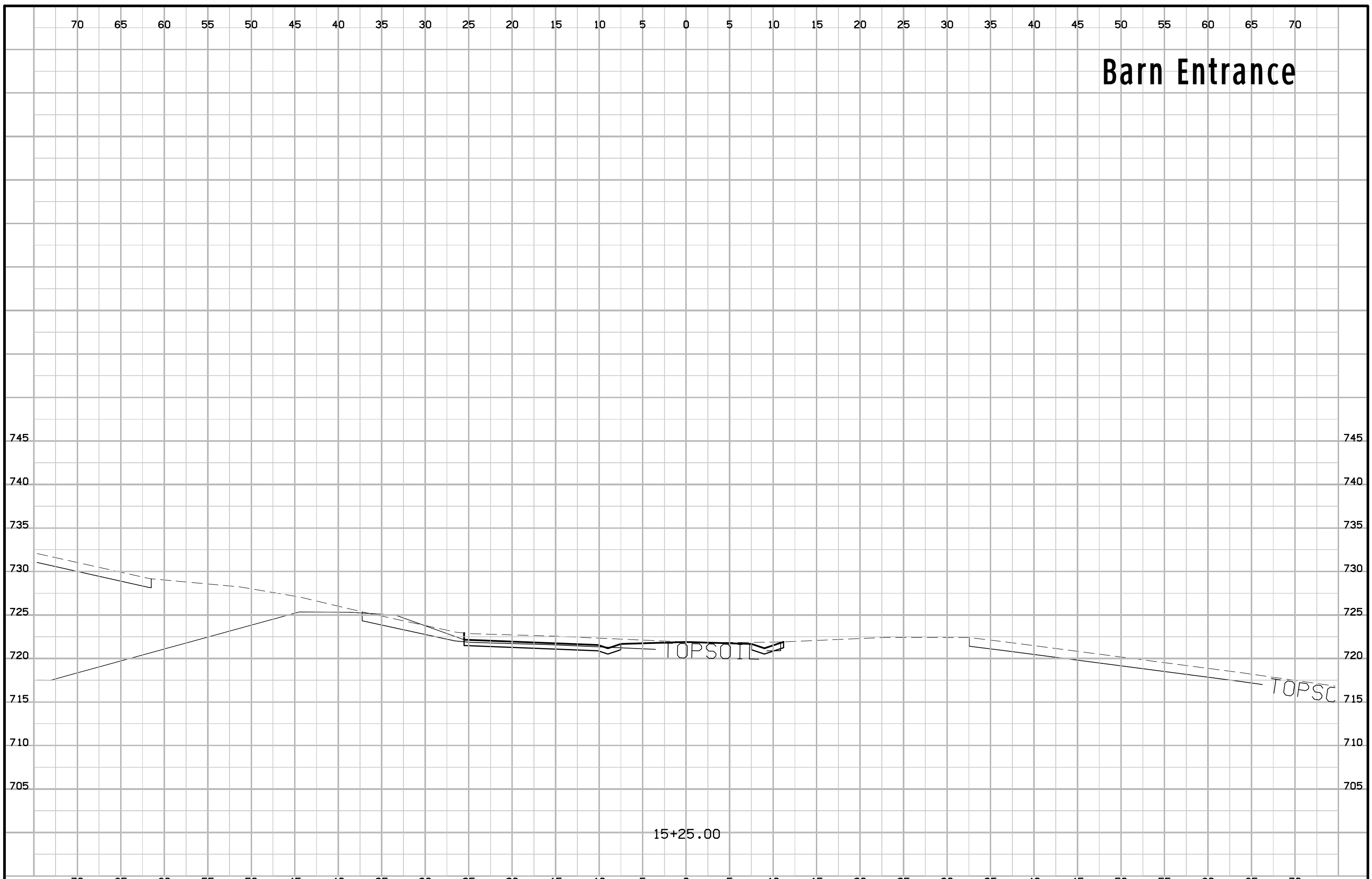
U.S. 6 Entrance



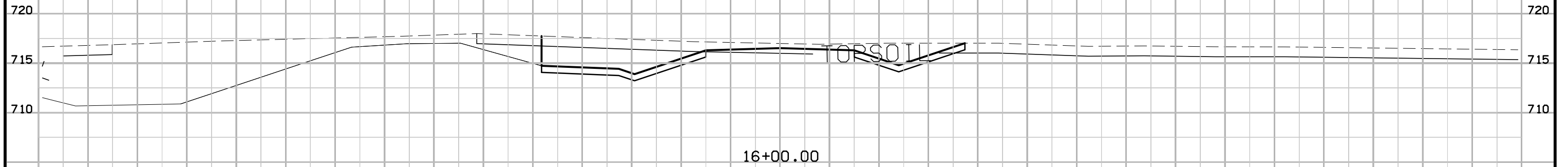
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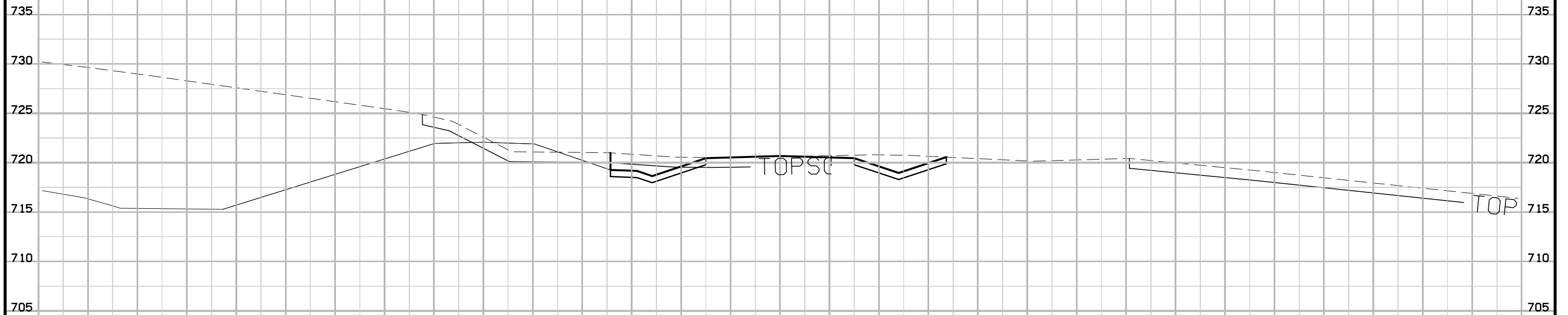
Barn Entrance



Barn Entrance

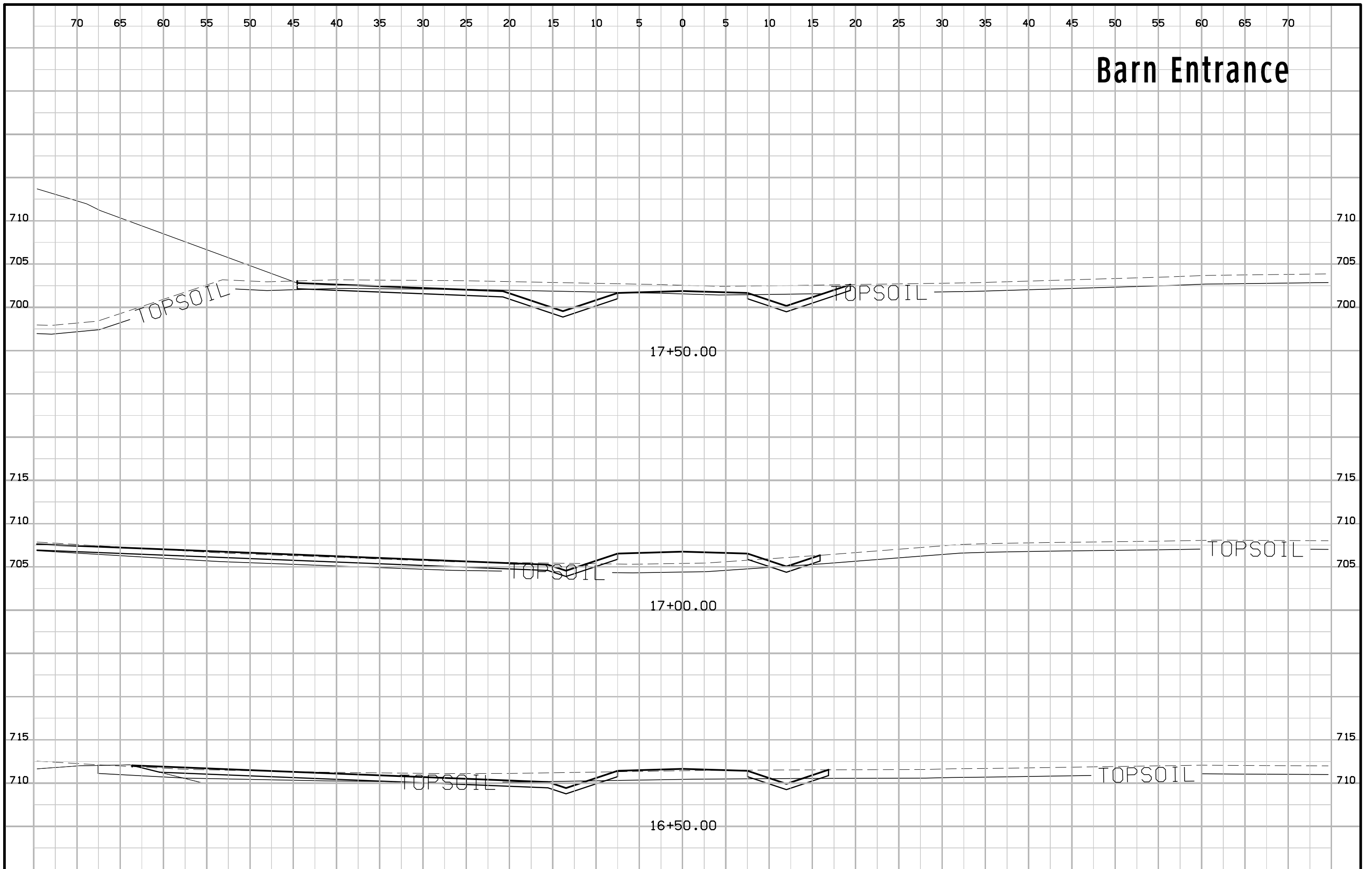


16+00.00

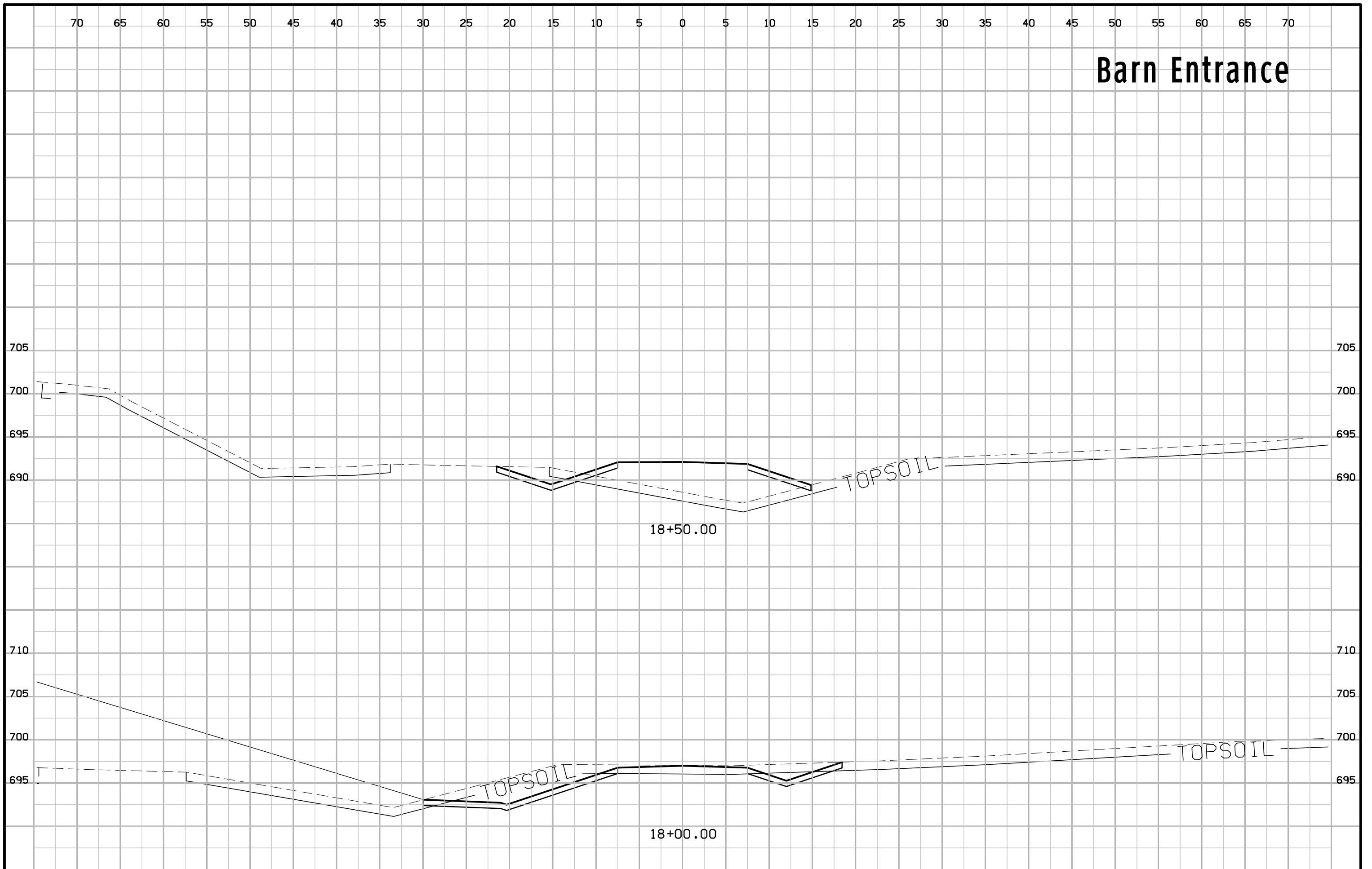


15+50.00

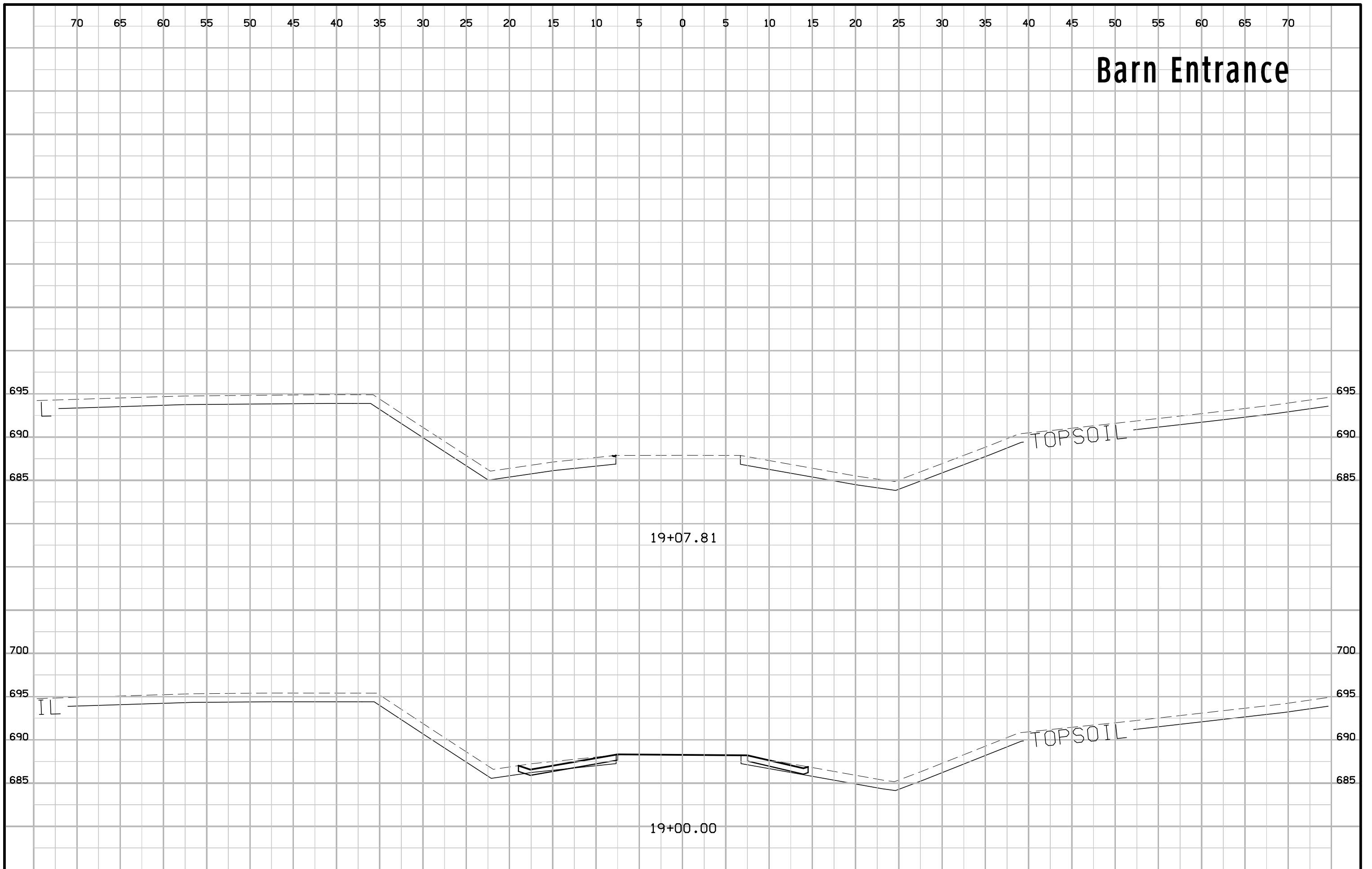
Barn Entrance



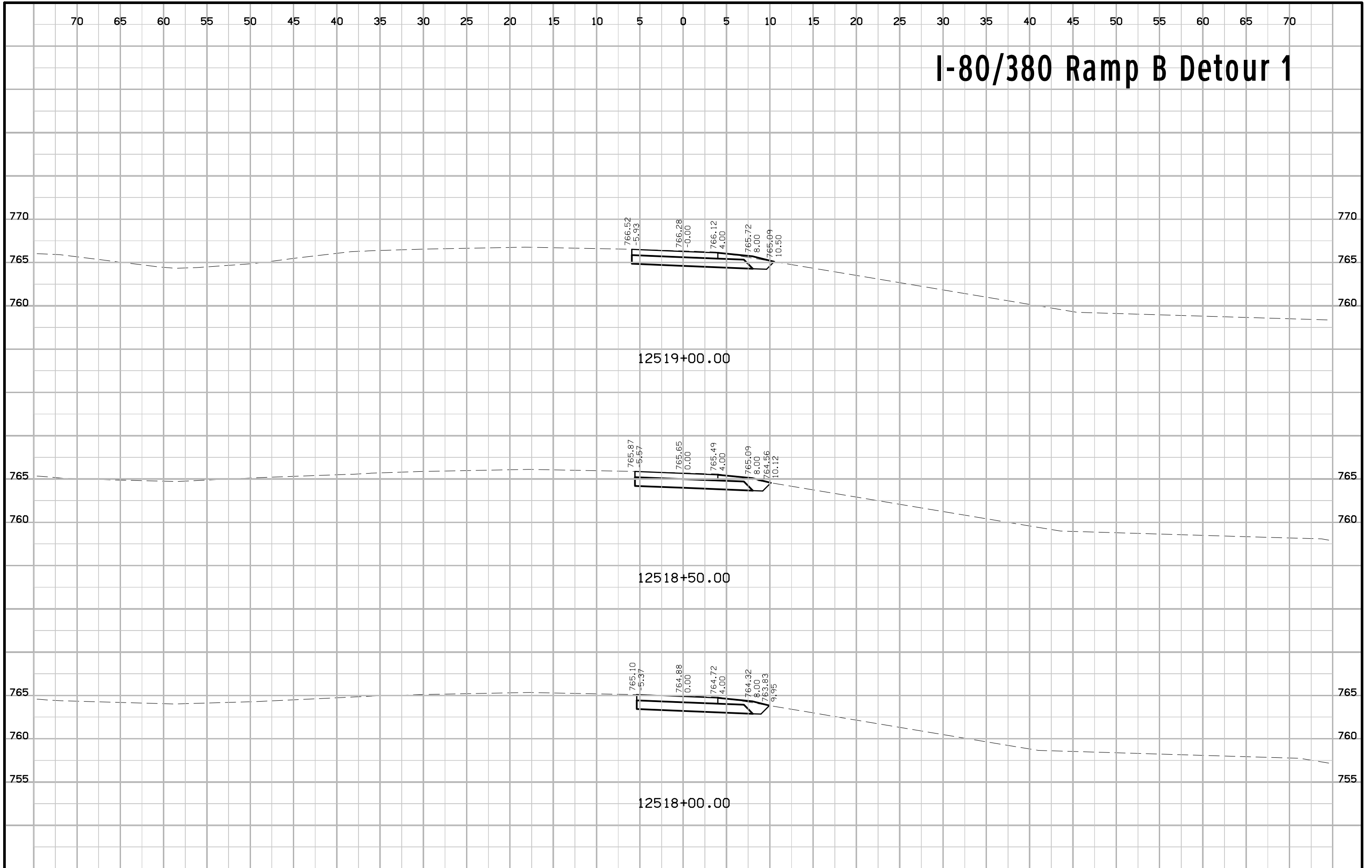
Barn Entrance



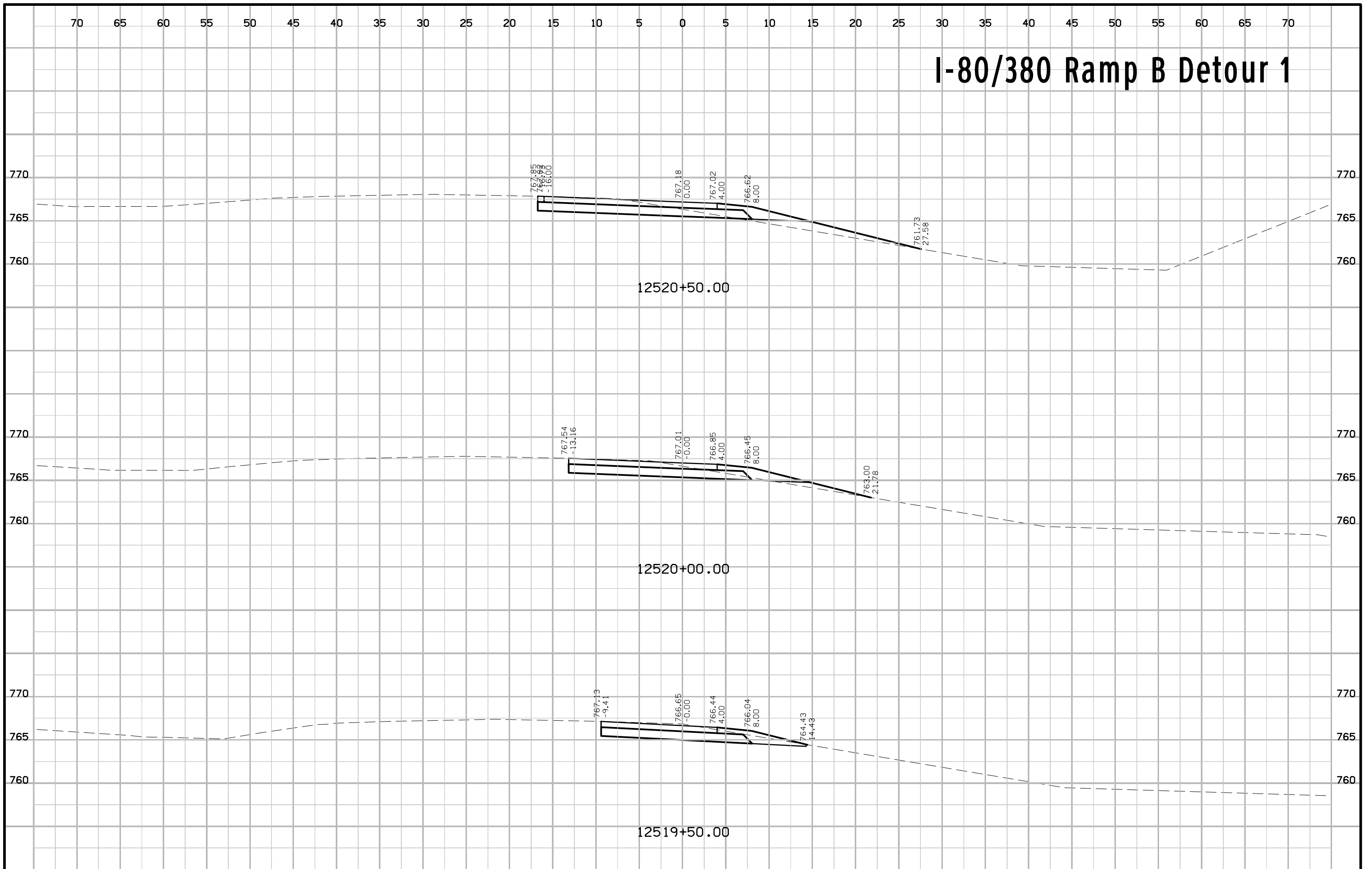
Barn Entrance



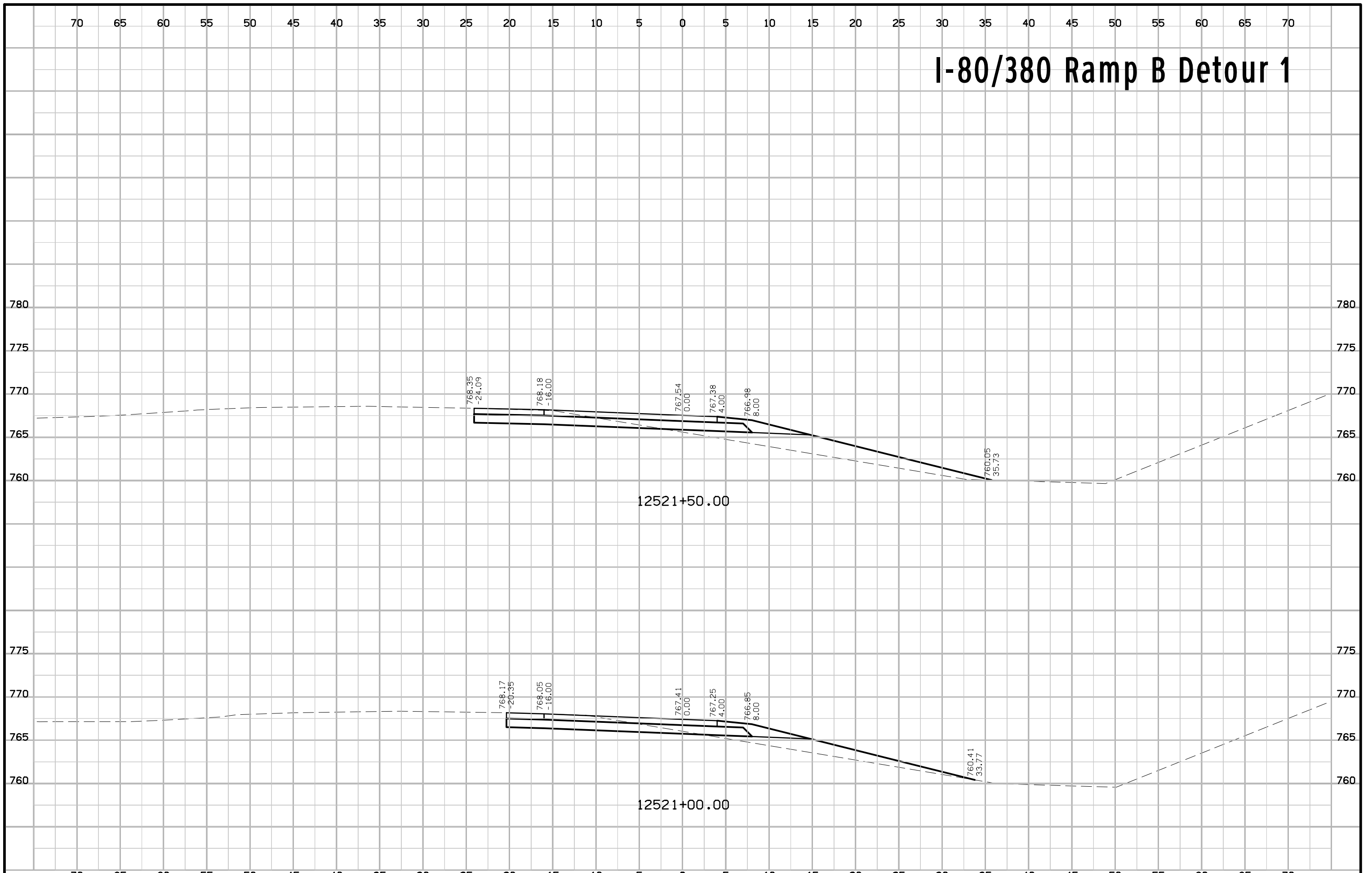
I-80/380 Ramp B Detour 1



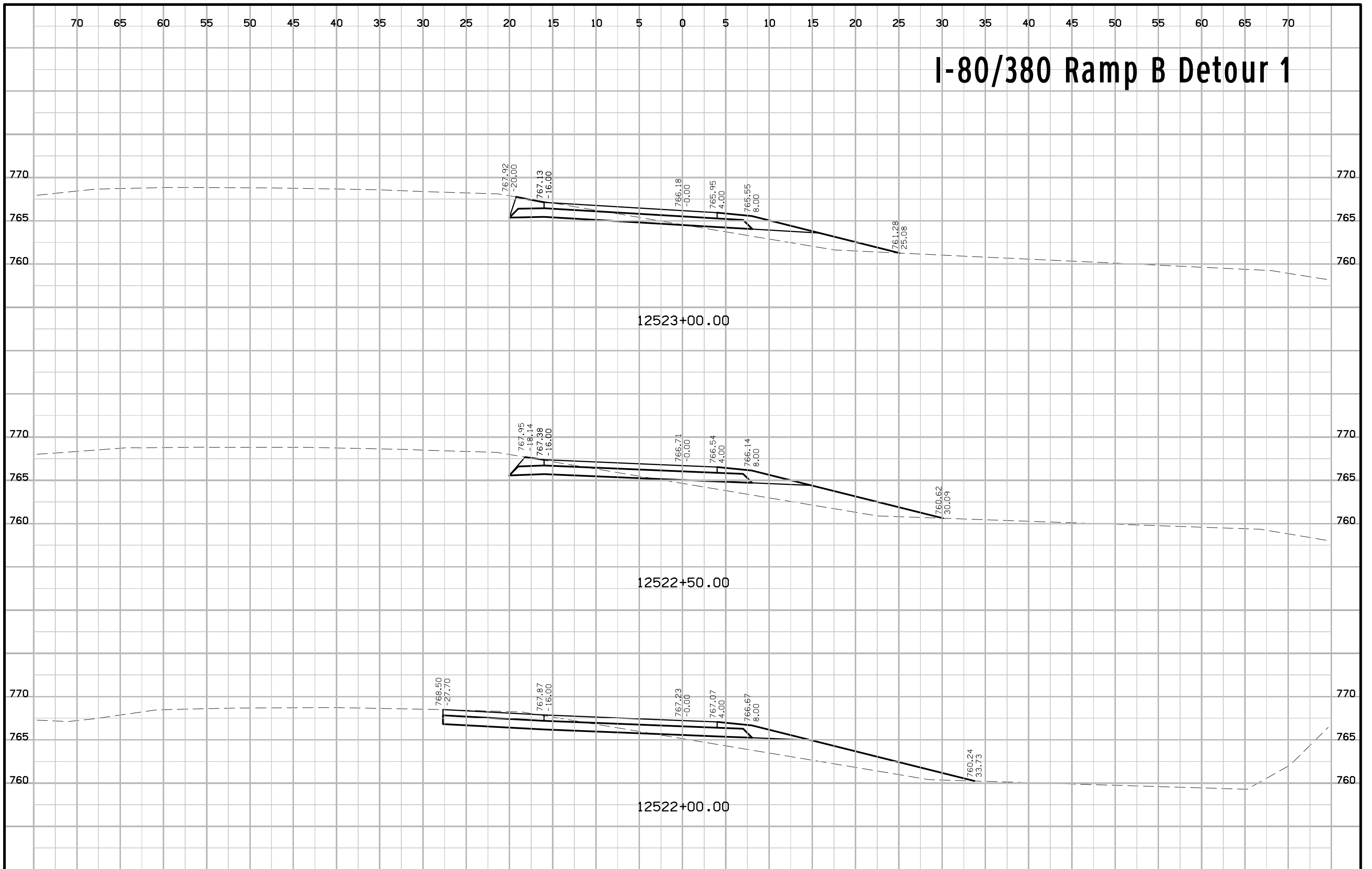
I-80/380 Ramp B Detour 1



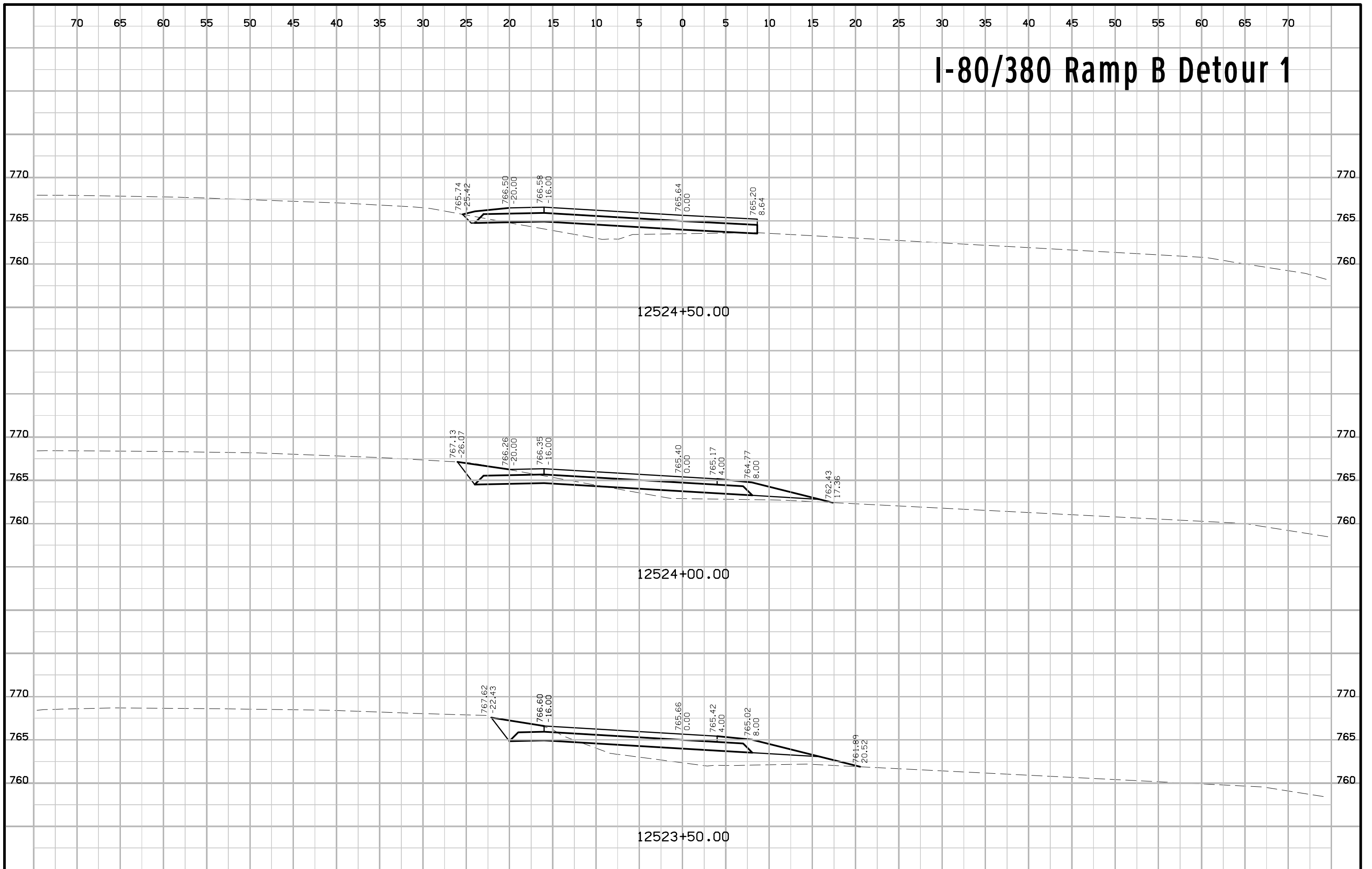
I-80/380 Ramp B Detour 1



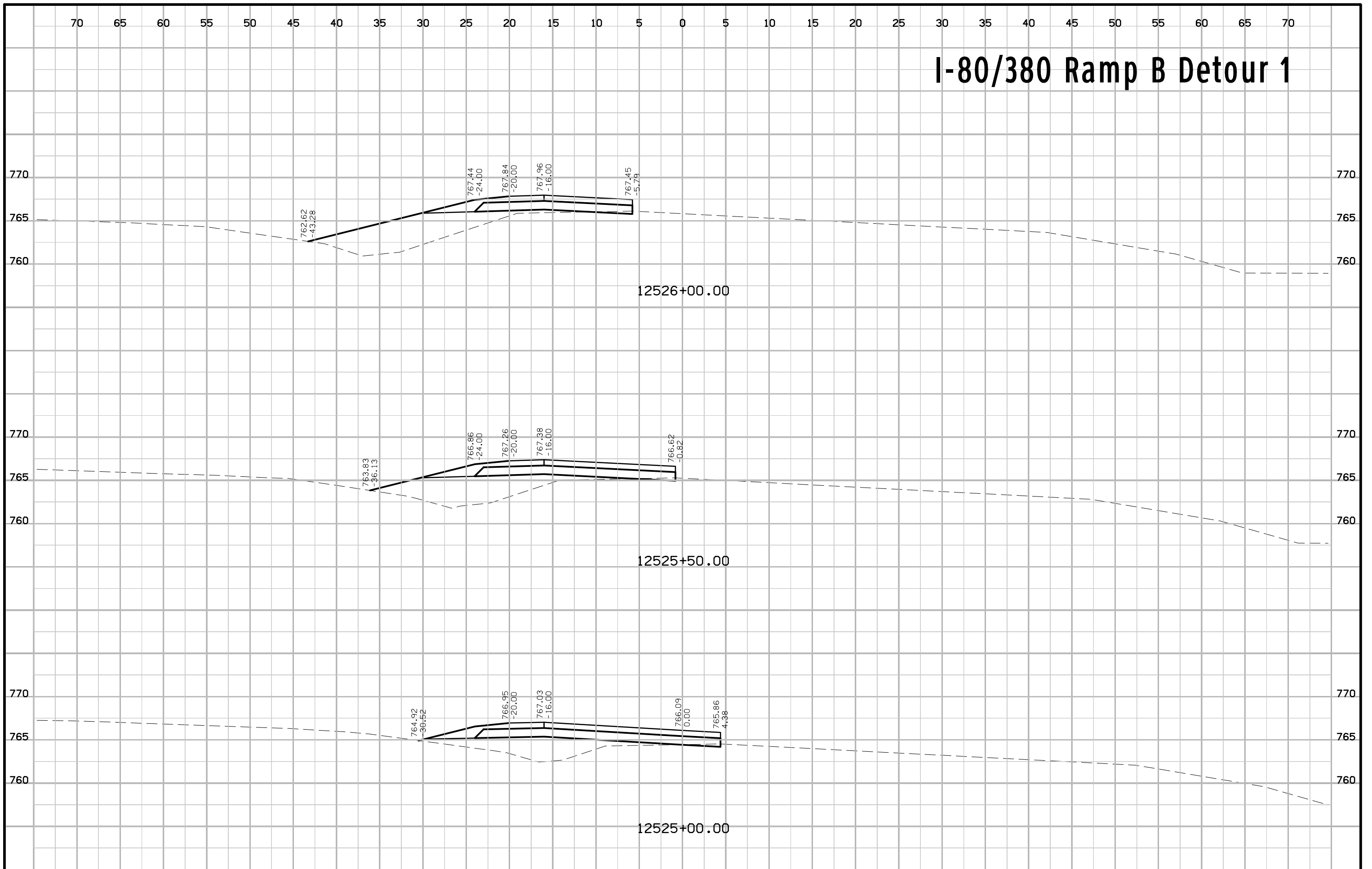
I-80/380 Ramp B Detour 1



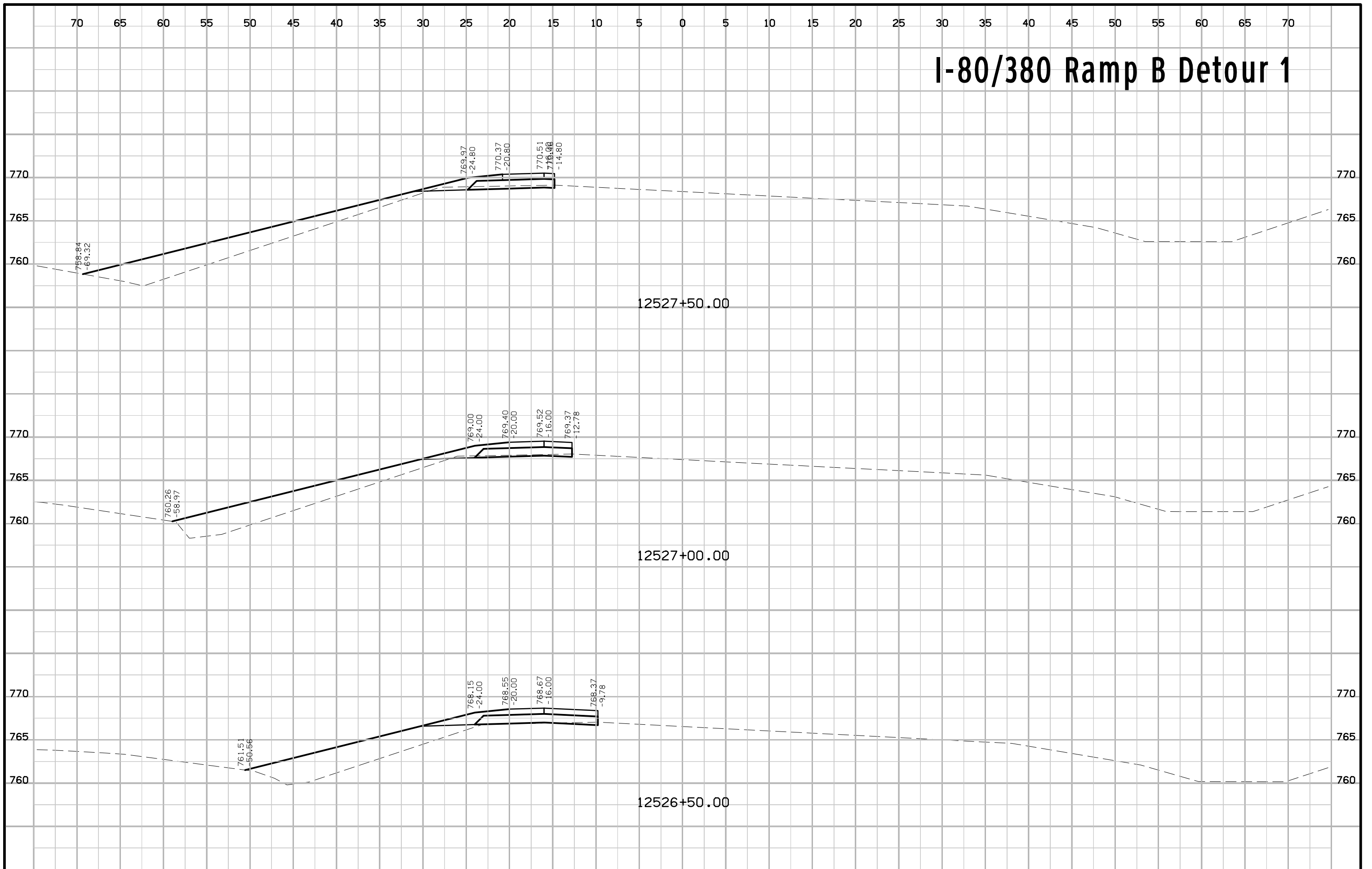
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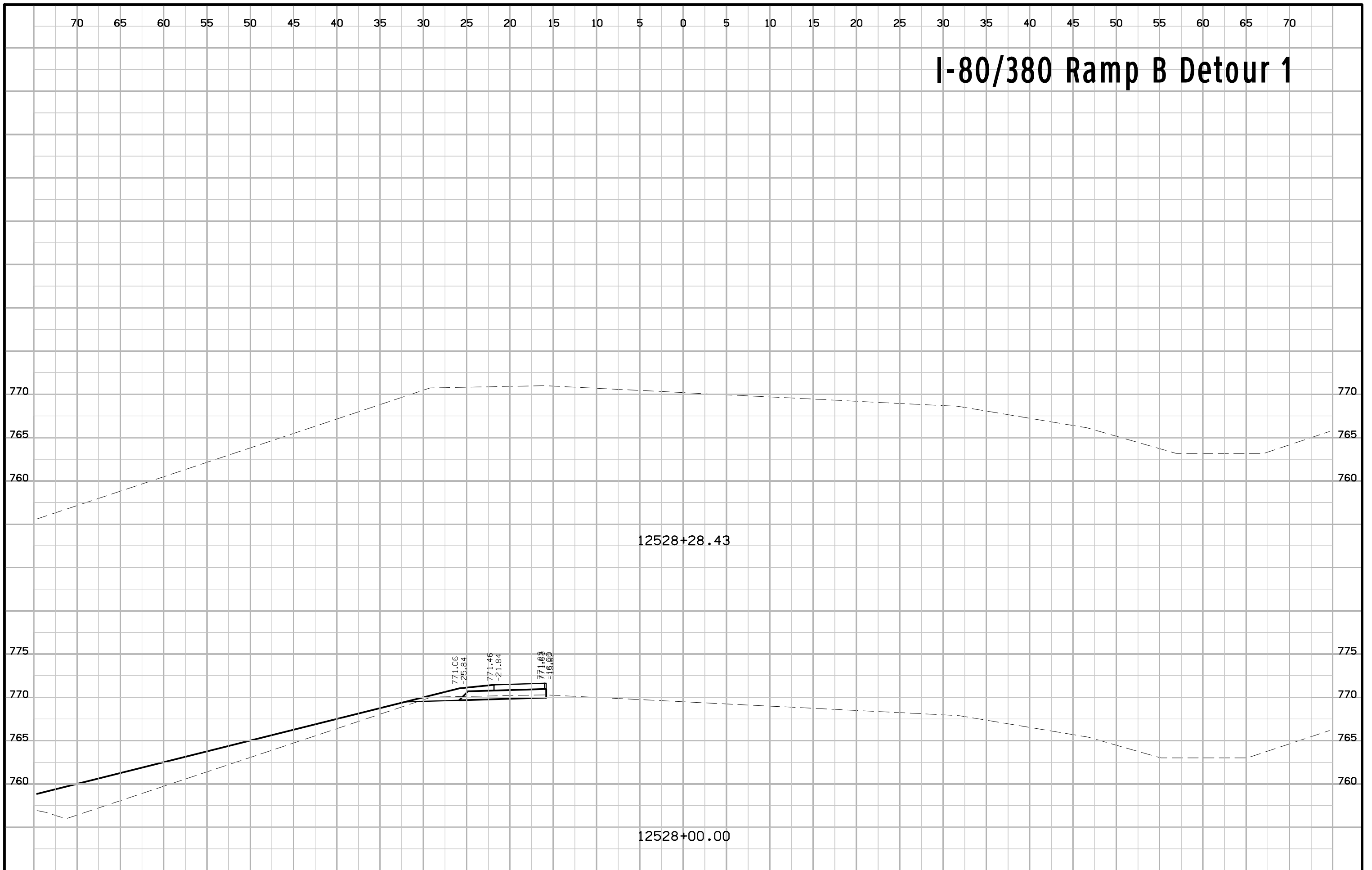
I-80/380 Ramp B Detour 1



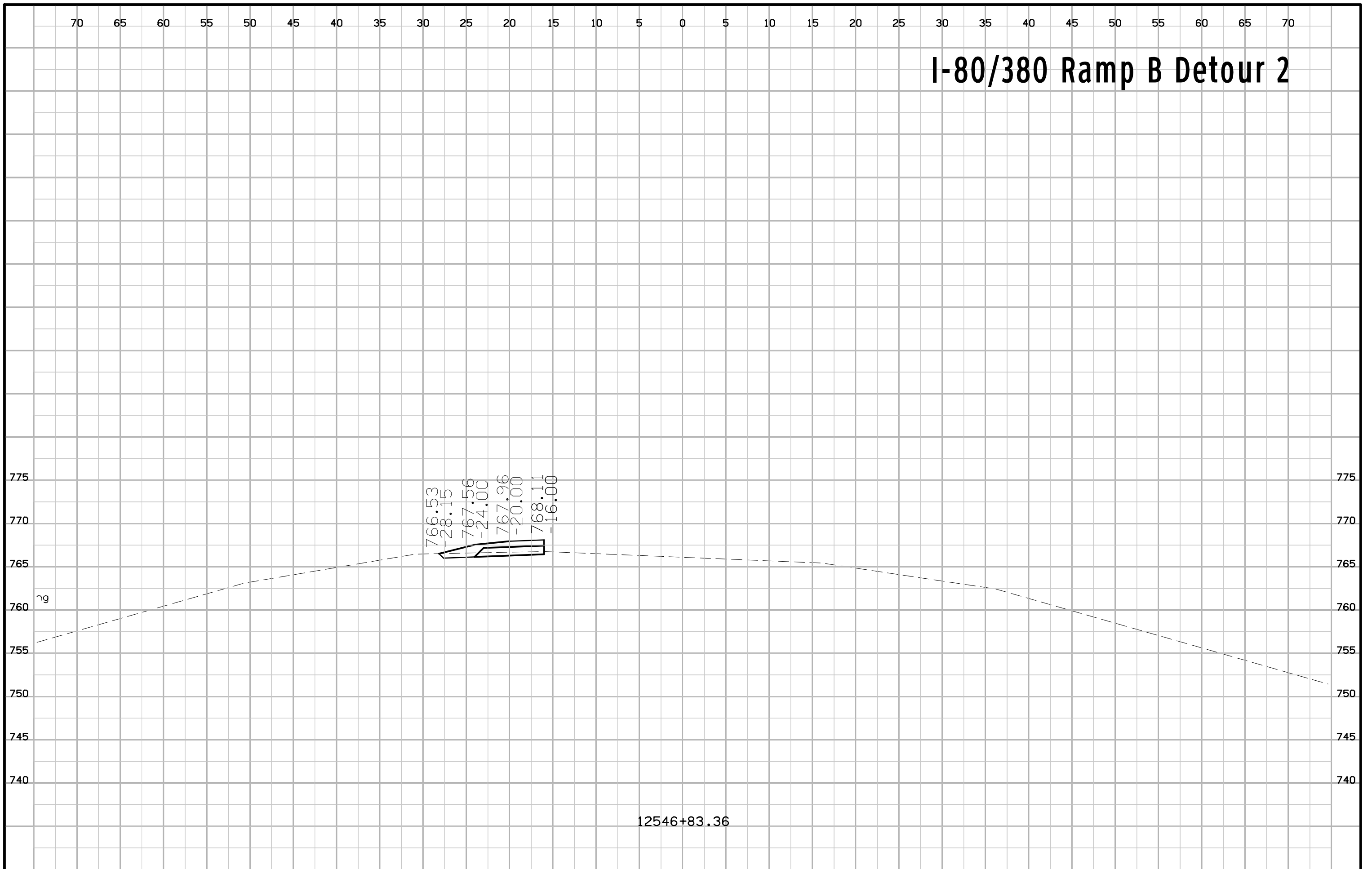
I-80/380 Ramp B Detour 1



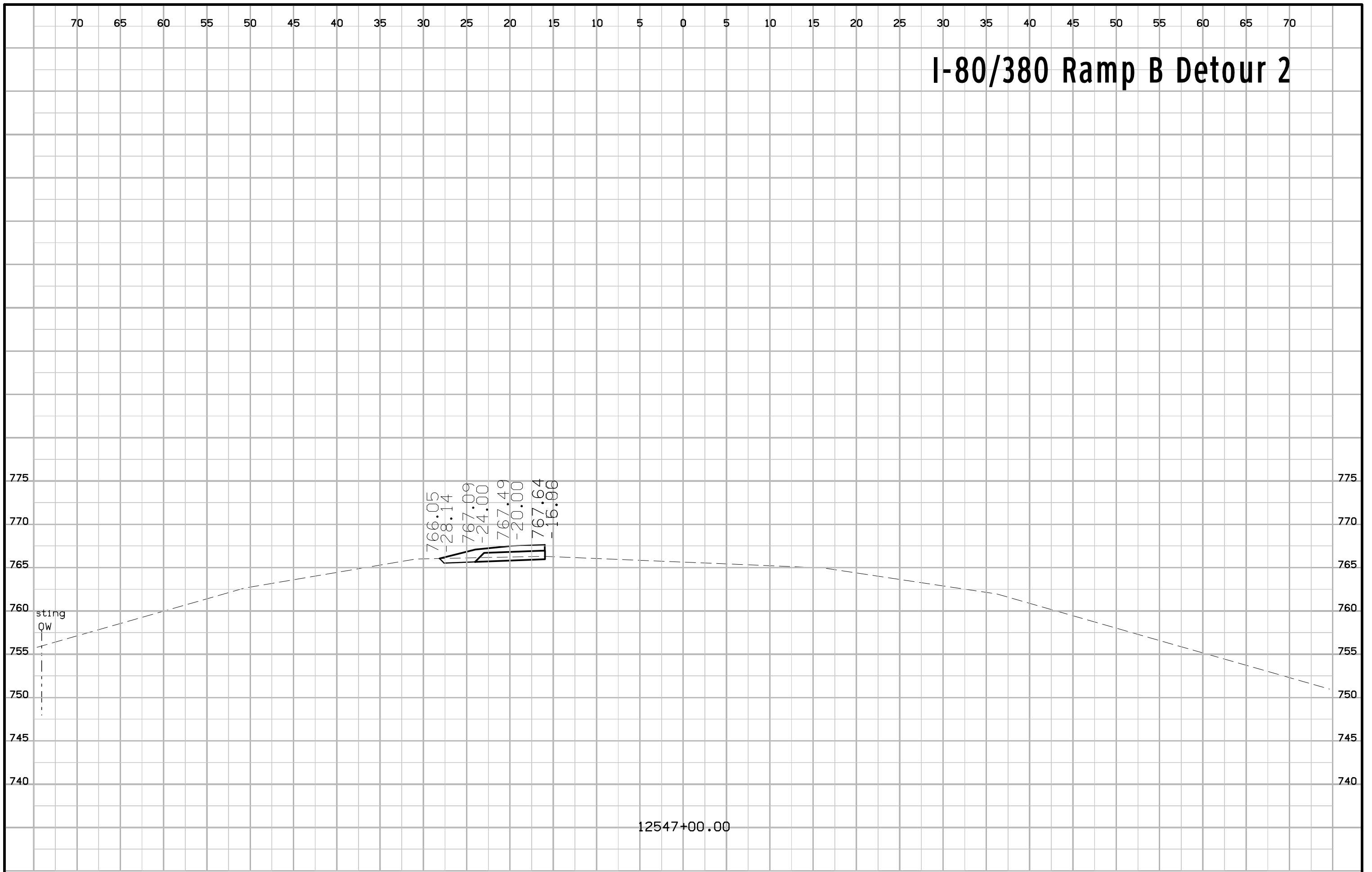
I-80/380 Ramp B Detour 1



I-80/380 Ramp B Detour 2

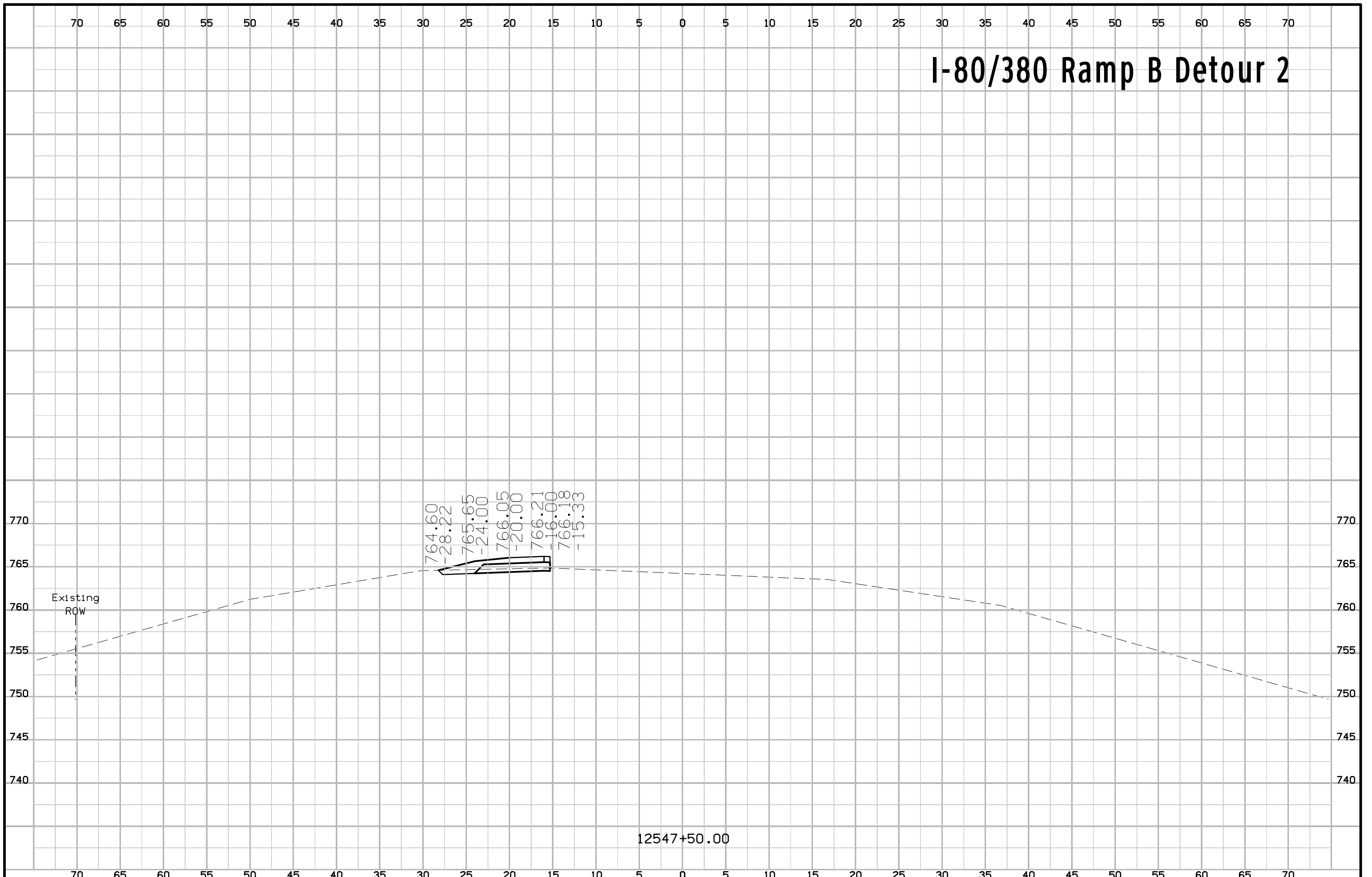


I-80/380 Ramp B Detour 2

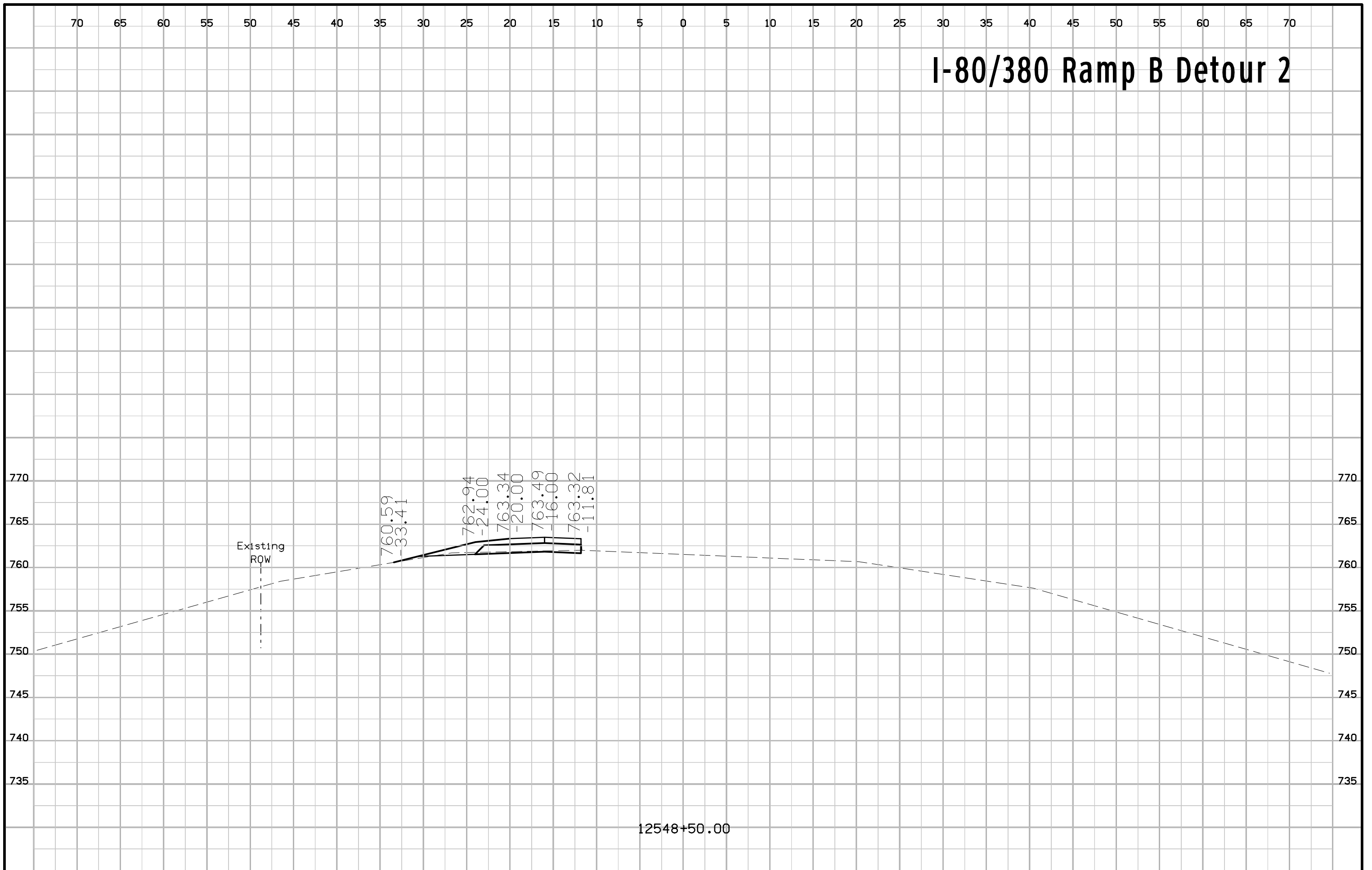


12547+00.00

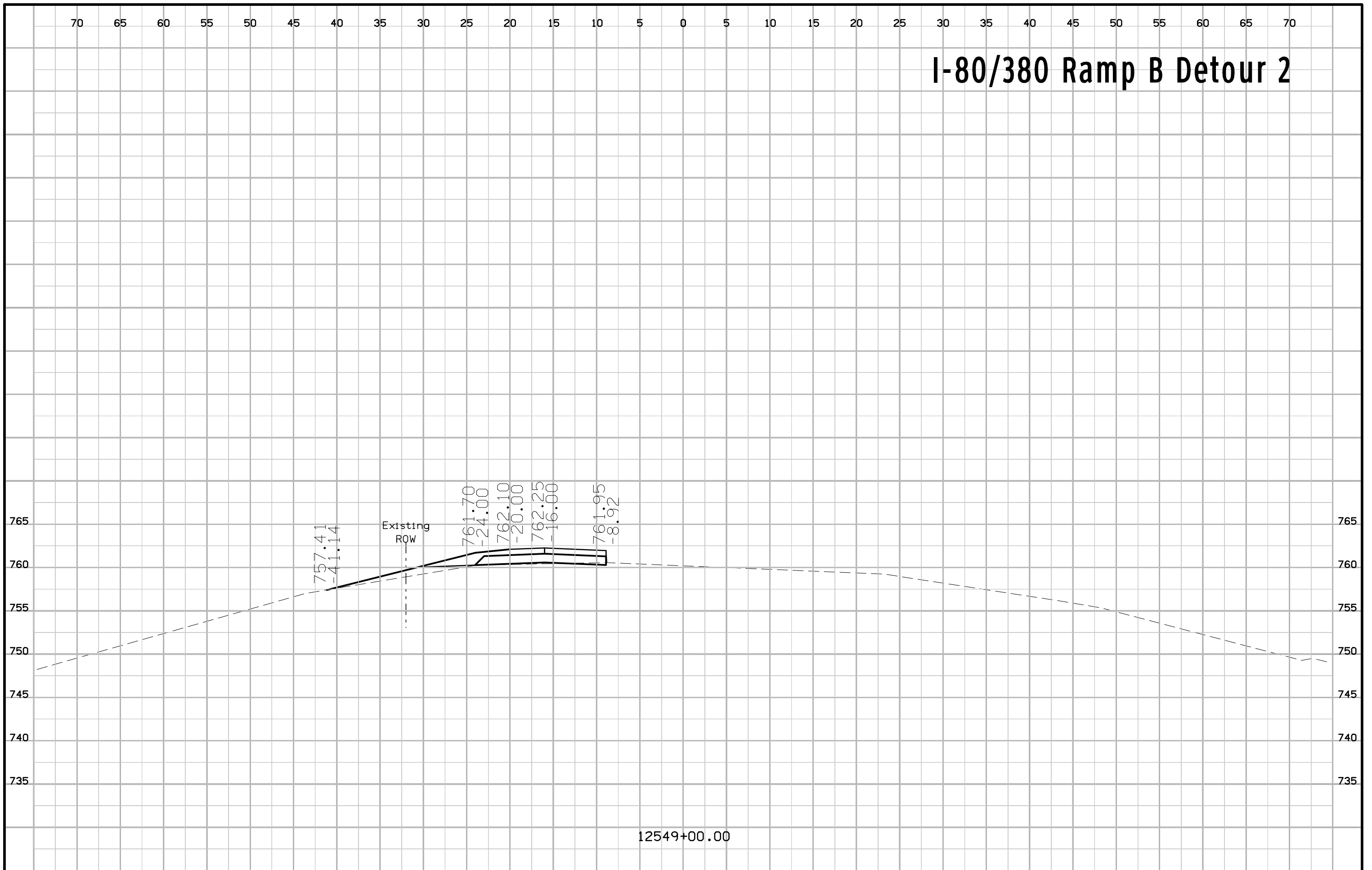
I-80/380 Ramp B Detour 2



I-80/380 Ramp B Detour 2

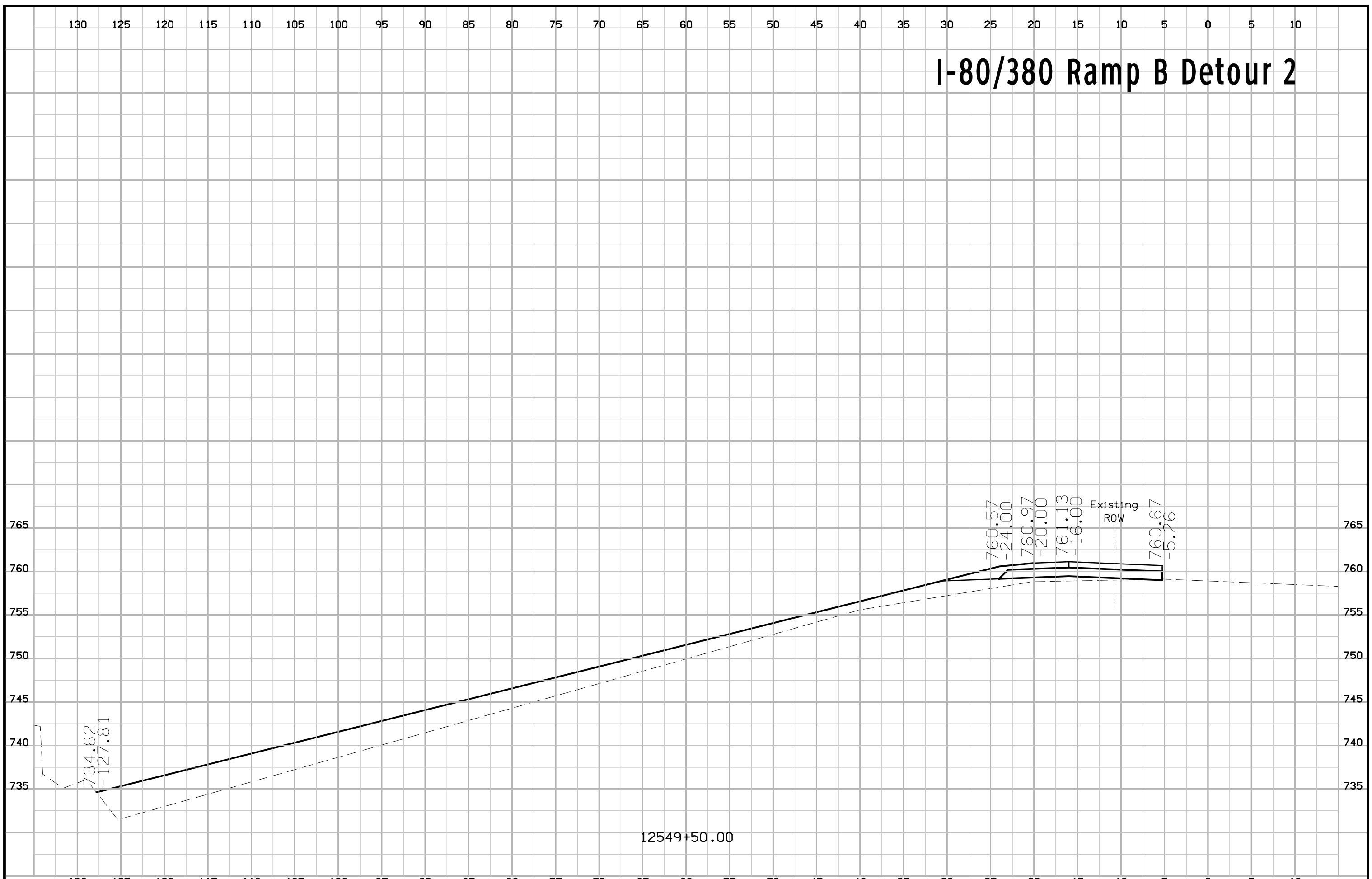


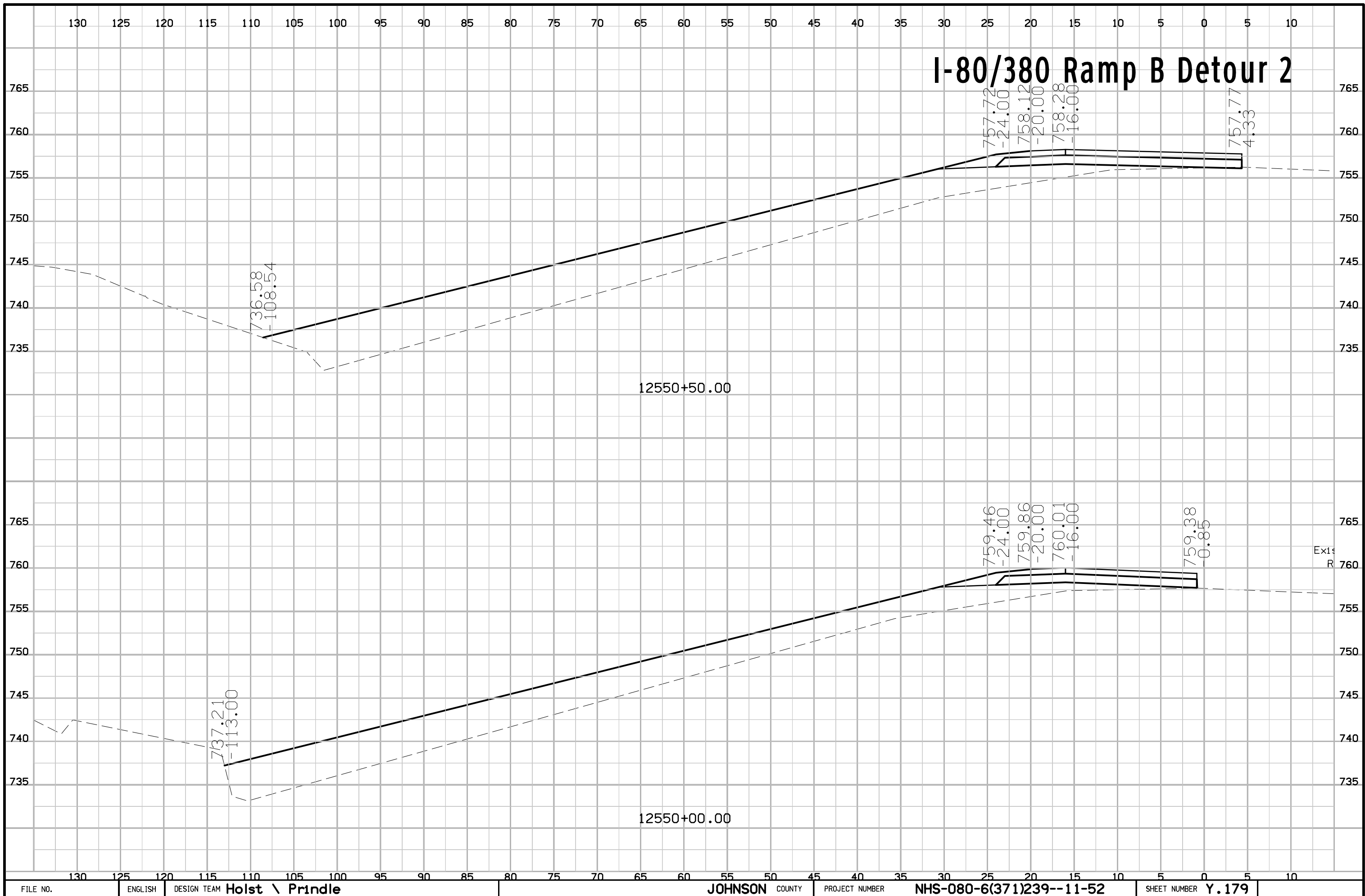
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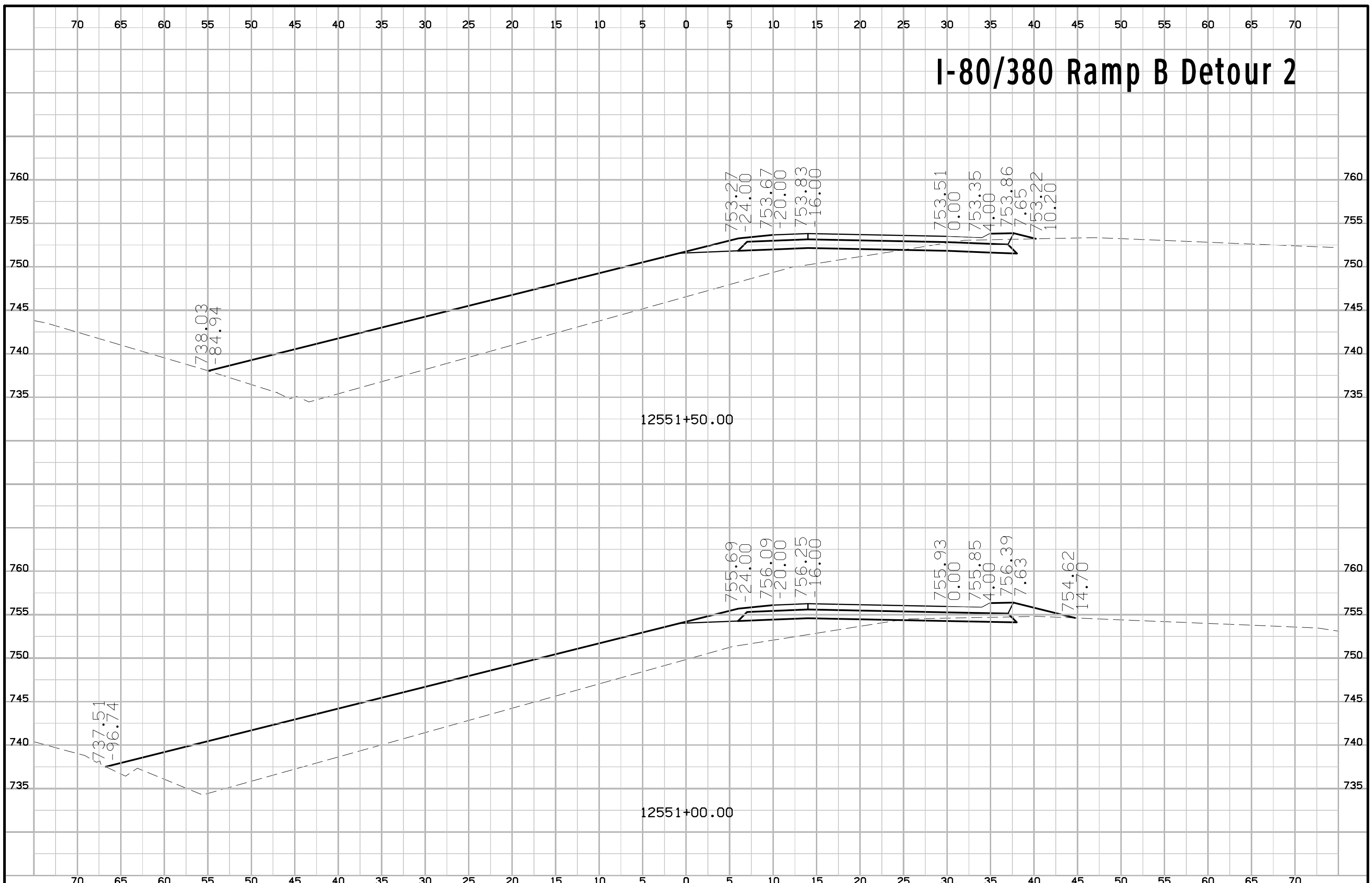
12549+00.00

I-80/380 Ramp B Detour 2

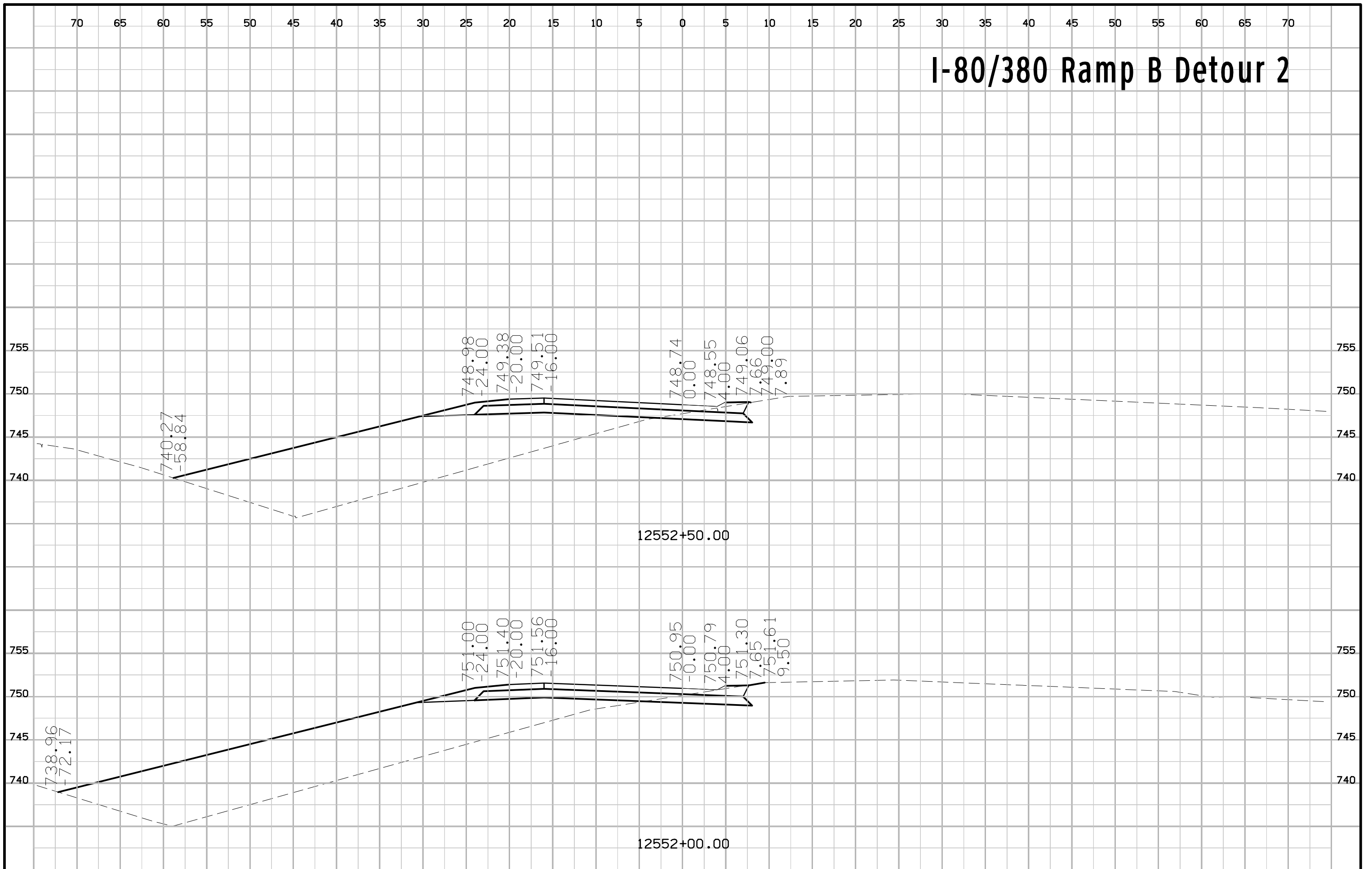




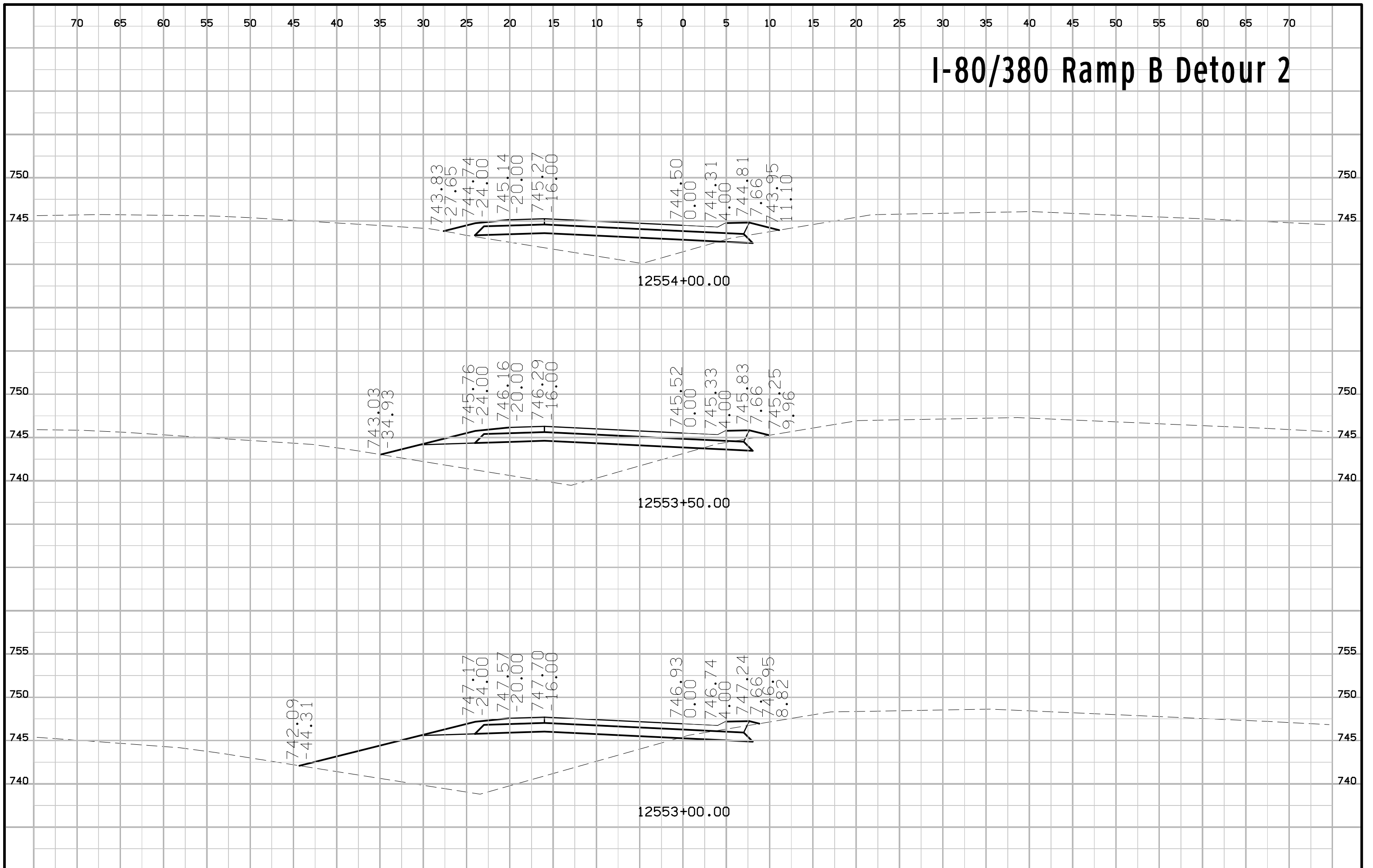
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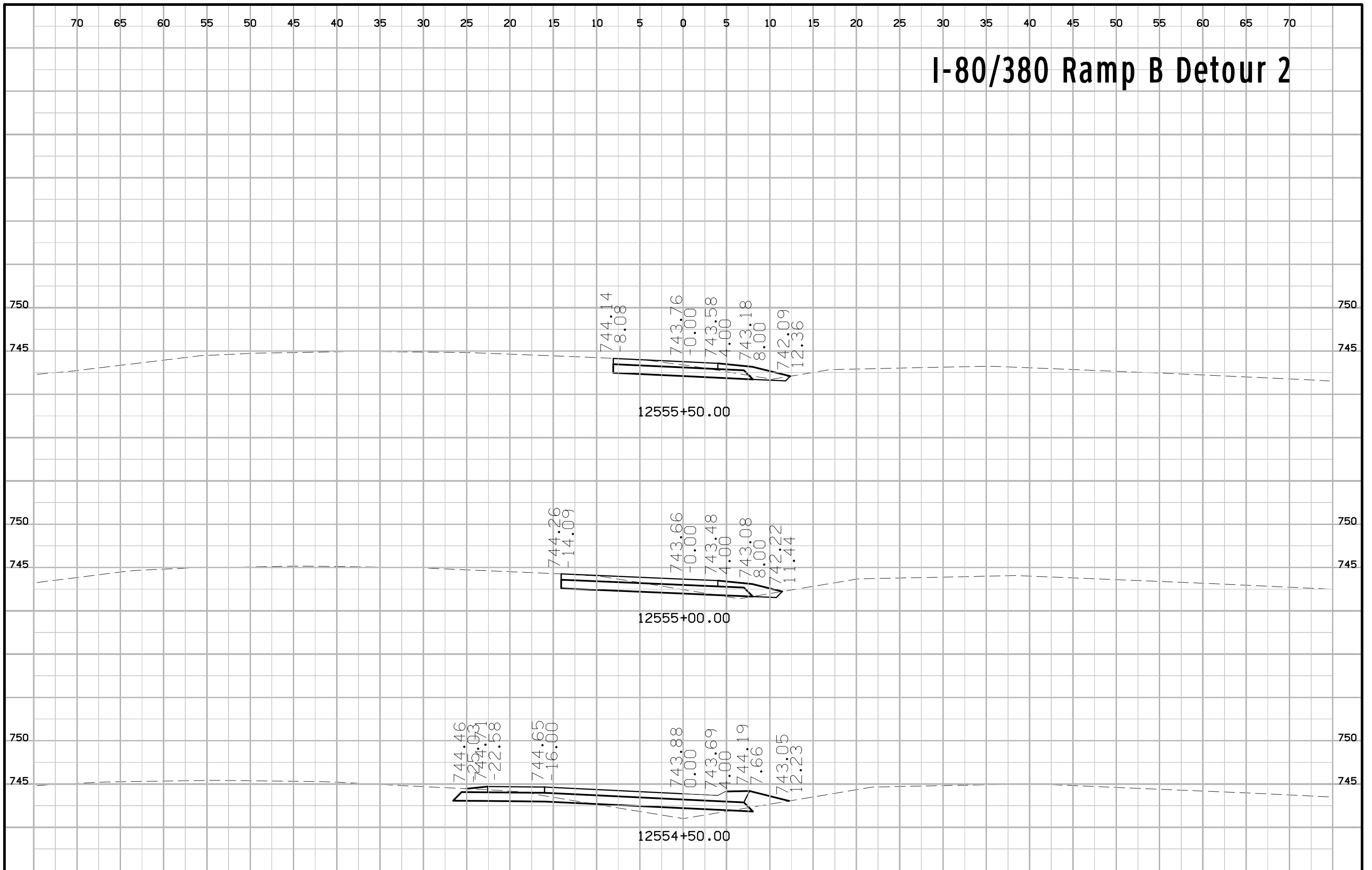
I-80/380 Ramp B Detour 2



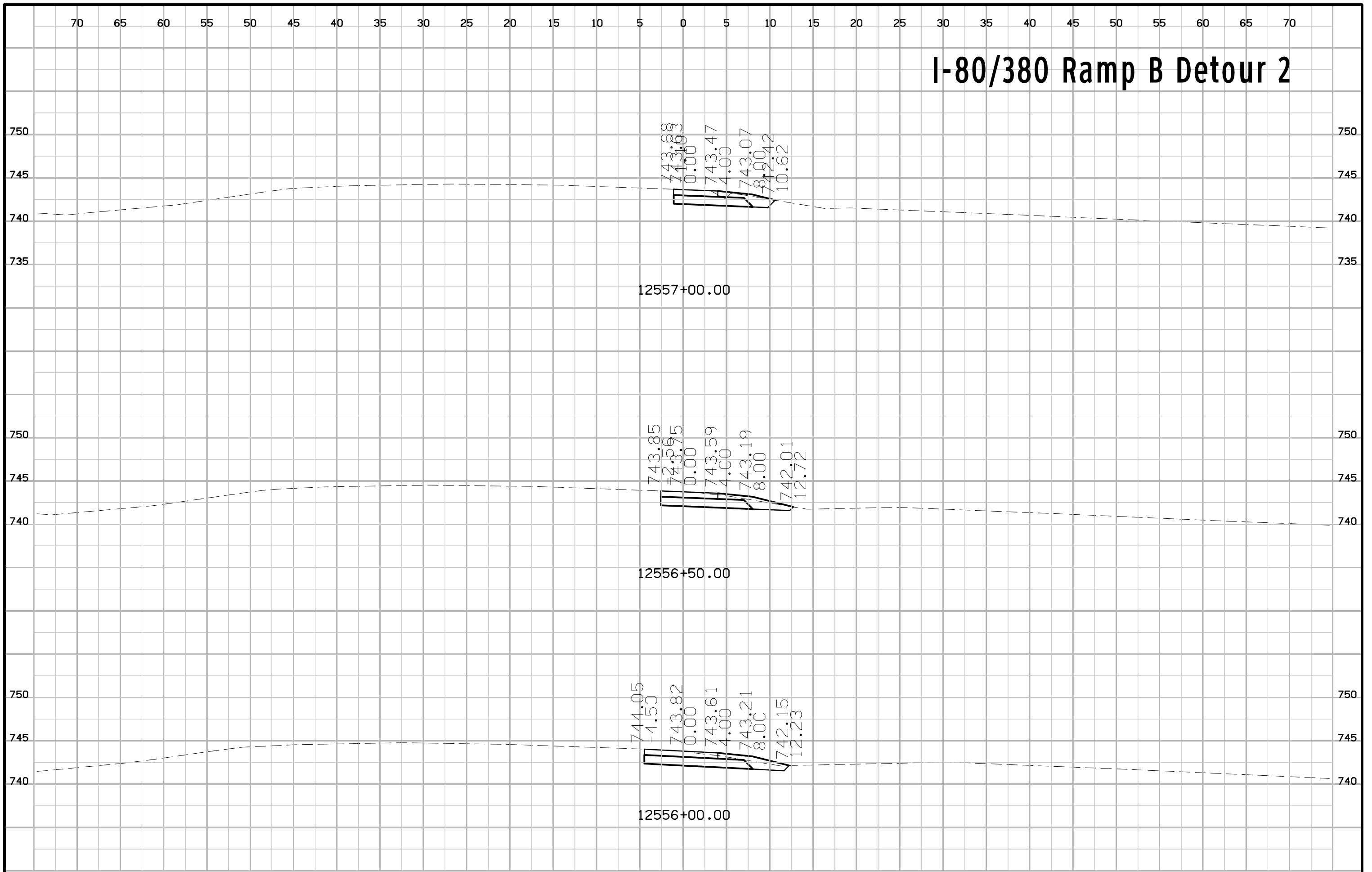
I-80/380 Ramp B Detour 2



I-80/380 Ramp B Detour 2



I-80/380 Ramp B Detour 2



I-80/380 Ramp B Detour 2

