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### Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

# PRIMARY ROAD SYSTEM WINNESHIEK COUNTY PCC PAVEMENT - GRADE AND REPLACE

INTERSECTION OF US HIGHWAY 52  
AND IOWA HIGHWAY 9

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.  
Value Engineering Saves. Refer to Article 1105.14 of the Specifications.



REVISIONS

TOTAL

68

PROJECT IDENTIFICATION NUMBER

15-96-052-010

PROJECT NUMBER

NHSN-052-5(042)--2R-96

R.O.W. PROJECT NUMBER

### MILEAGE SUMMARY

105-1

09-27-94

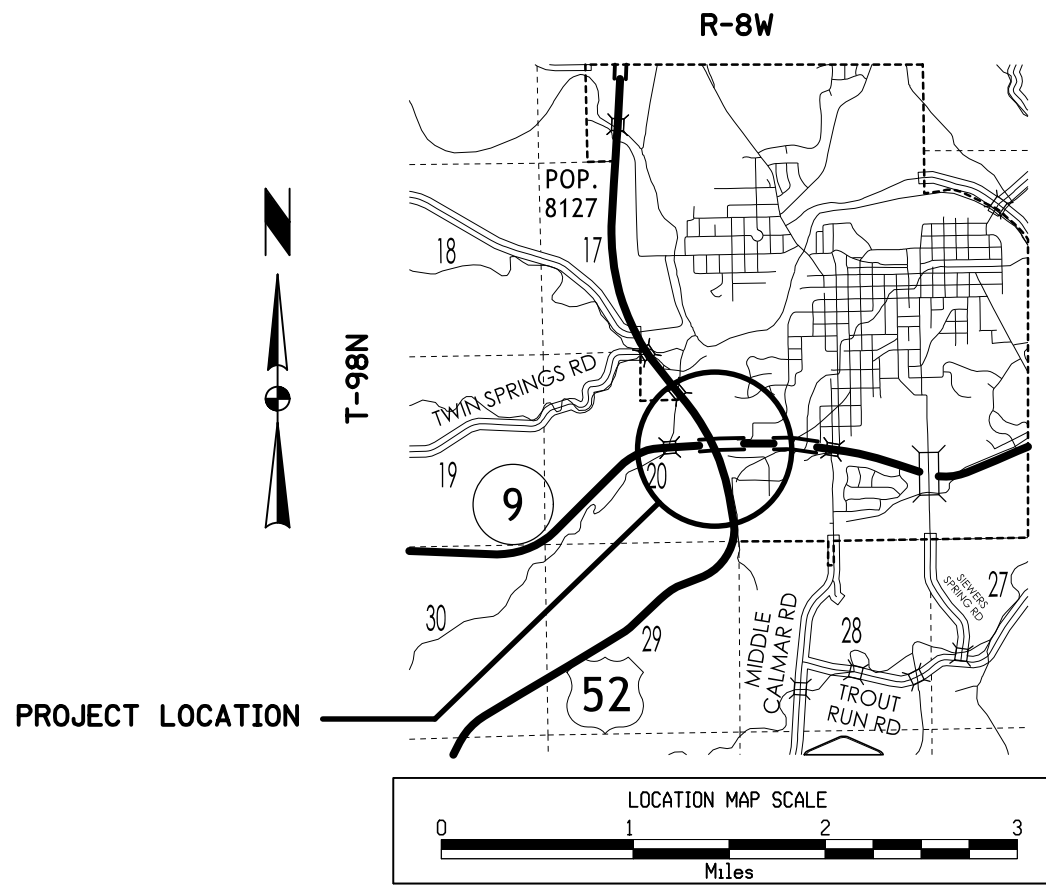
Div.	Location	Lin. Ft.	Miles
	US Highway 52 Sta. 1365+76.05 to Sta. 1381+49.44 Station Eq. 1381+49.44=114+11.00	1573.39	.298
	Sta. 114+11.00 to Sta. 117+08.11	297.11	.056
	Iowa Highway 9 Sta. 887+29.83 to Sta. 901+47.34	1417.51	0.268
		3288.01	0.622

US HIGHWAY 52 DESIGN DATA RURAL			IOWA HIGHWAY 9 DESIGN DATA RURAL		
20 15 AADT	5179	V.P.D.	20 15 AADT	10288	V.P.D.
20 35 AADT	6375	V.P.D.	20 35 AADT	12595	V.P.D.
20 DHV		V.P.H.	20 DHV		V.P.H.
TRUCKS	9 %		TRUCKS	12 %	
Total Design ESALs			Total Design ESALs		

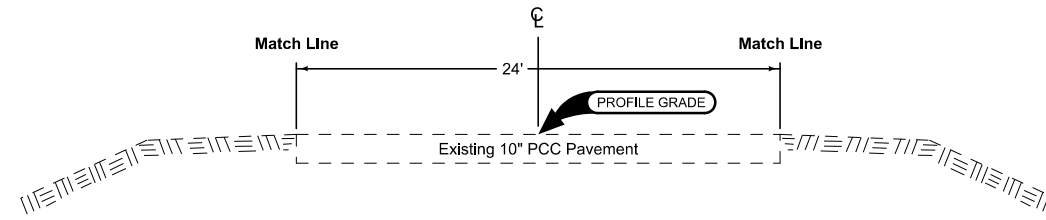
## PRELIMINARY PLANS

Subject to change by final design.

D5 PLAN - Date: 06-10-2016



Existing Typical

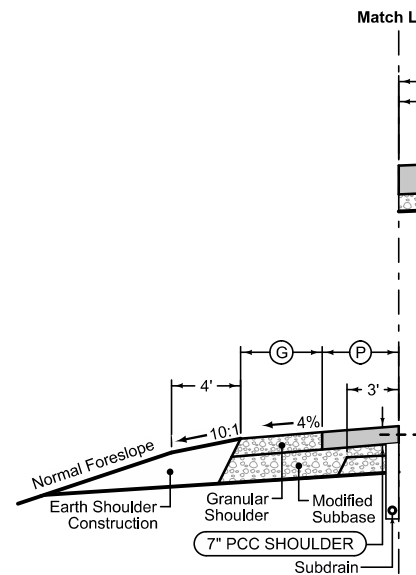


STATION TO STATION	
1365+76	1381+49
114+11	117+08

Combination Shoulder

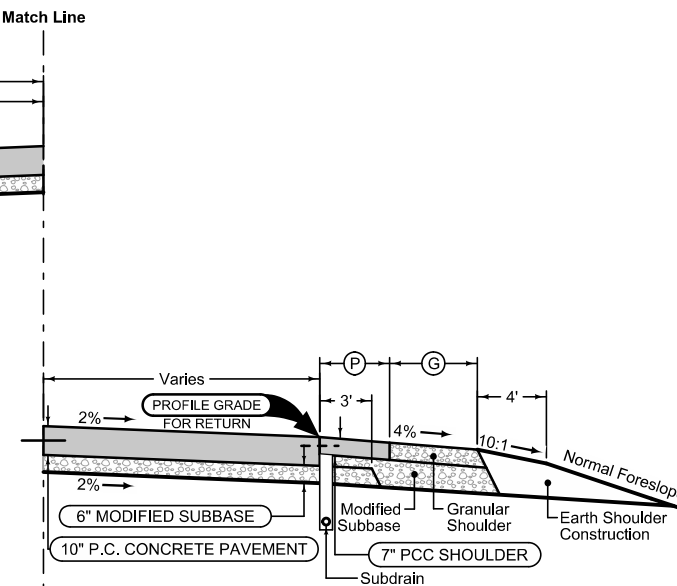
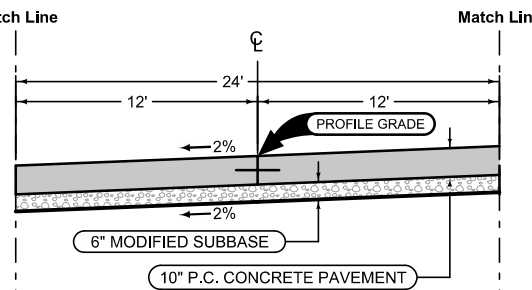
Shoulder Jointing:  
Longitudinal joint: B

STATION TO STATION		(P) Feet	(G) Feet
1365+76	1366+27	4	6



Mainline Jointing:  
Transverse joints: CD at 20' spacing  
Longitudinal joint: L-2

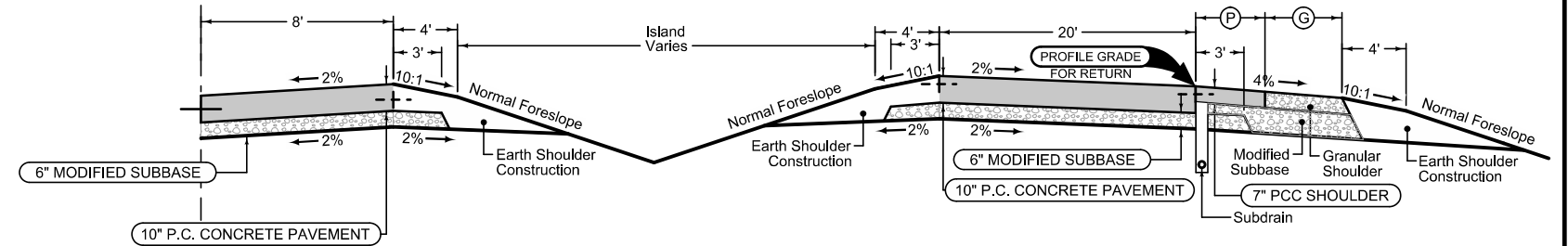
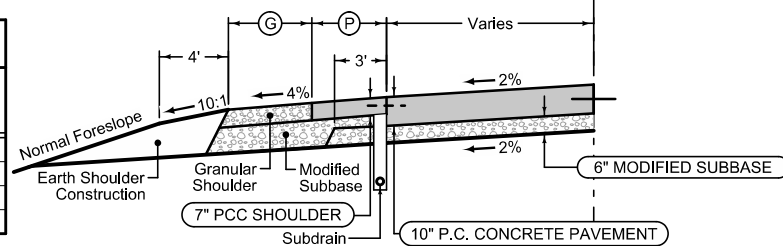
STATION TO STATION	
1365+76	1381+49
114+11	117+08



Combination Shoulder

Shoulder Jointing:  
Longitudinal joint: B

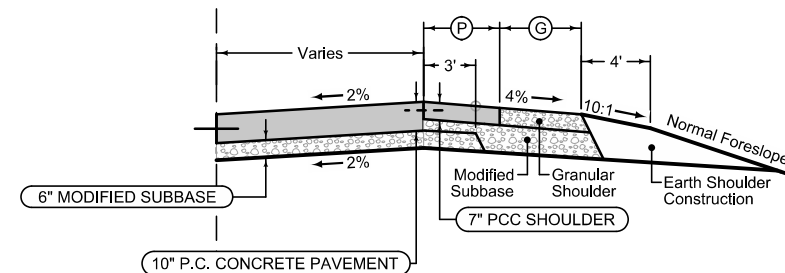
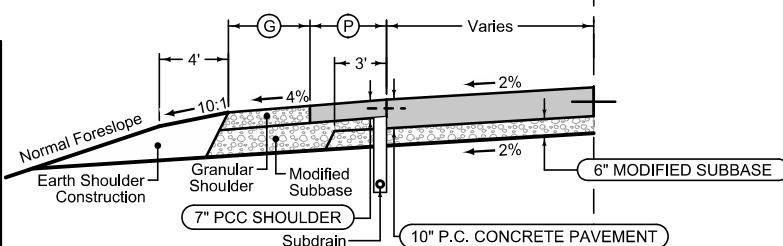
STATION TO STATION		(P) Feet	(G) Feet
1366+27	1367+75	4	6



Combination Shoulder

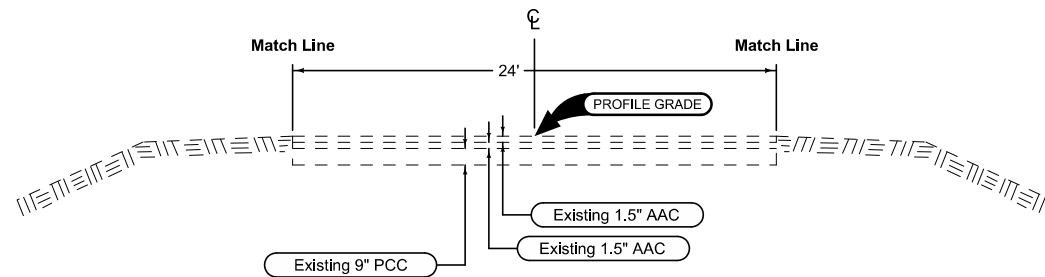
Shoulder Jointing:  
Longitudinal joint: B

STATION TO STATION		(P) Feet	(G) Feet
1369+59	1381+49	4	6
114+11	115+10	4	6

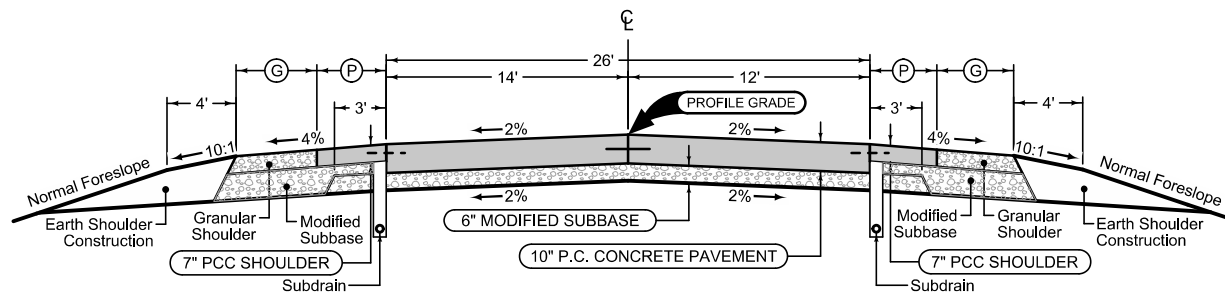


US 52  
Typical Section

**Existing Typical**



STATION TO STATION	
887+29	897+59

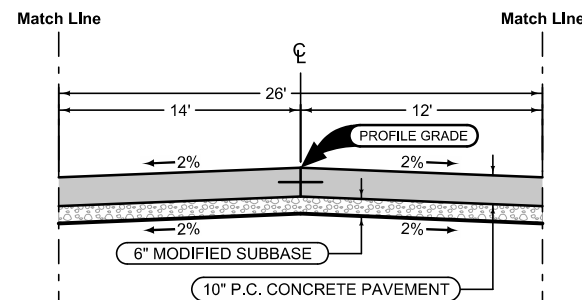


Mainline Jointing:  
 Transverse joints: CD at 20' spacing  
 Longitudinal joint: L-2

STATION TO STATION	
887+29	889+63

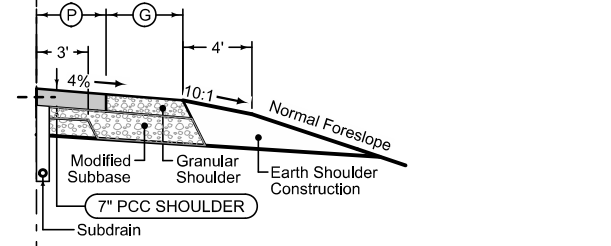
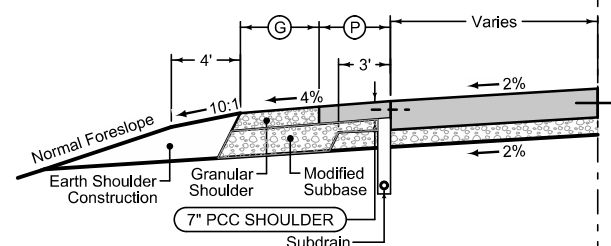
Shoulder Jointing:  
 Longitudinal joint: B

STATION TO STATION		(P) Feet	(G) Feet
887+29	889+63	4	6



Mainline Jointing:  
 Transverse joints: CD at 20' spacing  
 Longitudinal joint: L-2

STATION TO STATION	
889+63	897+59



**Combination Shoulder**

Shoulder Jointing:  
 Longitudinal joint: B

STATION TO STATION		(P) Feet	(G) Feet
889+63	892+63	4	6

**Combination Shoulder**

Shoulder Jointing:  
 Longitudinal joint: B

STATION TO STATION		(P) Feet	(G) Feet
892+63	895+63	4	6

**Combination Shoulder**

Shoulder Jointing:  
 Longitudinal joint: B

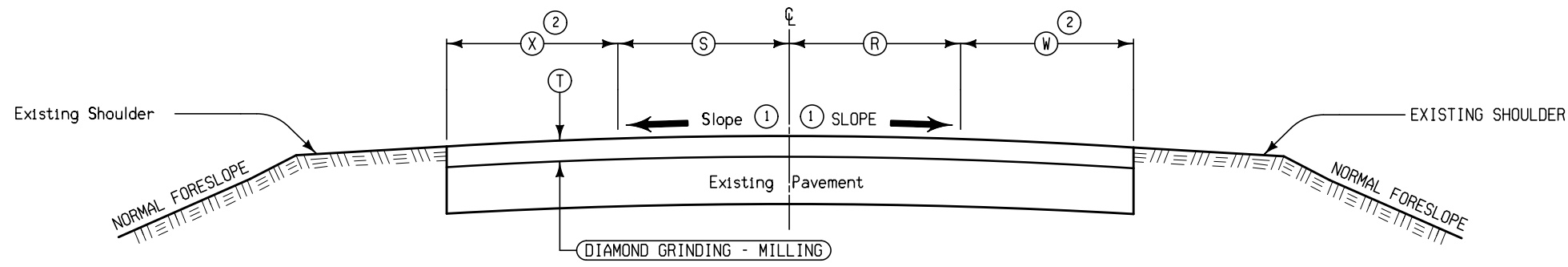
STATION TO STATION		(P) Feet	(G) Feet
895+63	897+59	4	6

**IA 9 (West of 52)  
 Typical Section**

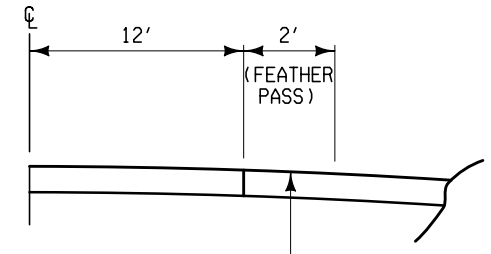








- Notes:
- ① Match finished slope to existing pavement, except that the maximum allowable slope is 3.0 %, minimum allowable slope is 2.0 %. Section may be modified as directed by the Engineer through areas of special shaping. Refer to tabulation listing of superelevated curves and Standard Road Plans for additional requirements through superelevated curves.
  - ② POSSIBLE CLIMBING LANES



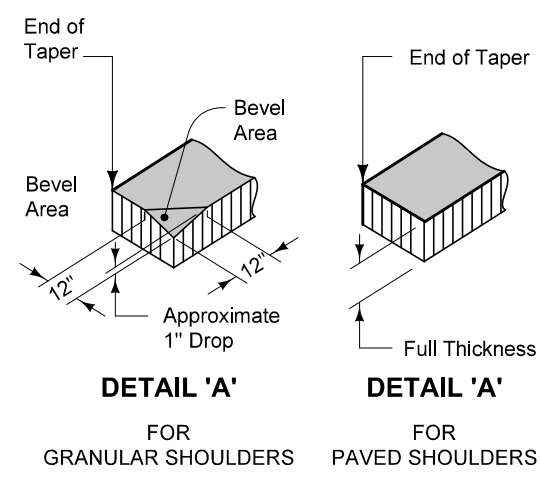
LOCATION		(X)	(S)	(R)	(W)	LENGTH	AREA	REMARKS
ROAD IDENTIFICATION	STATION TO STATION	Feet	Feet	Feet	Feet	Feet	Square Yards	
US 52	1370+17.40	1381+49.43*	-	12	-	1132.03	1509.37	
US 52	114+11.00*	117+08.11	-	12	-	297.11	396.15	
US 52	1370+17.40	1381+49.43*	-	-	12	1132.03	1509.37	
US 52	114+11.00*	117+08.11	-	-	12	297.11	396.15	
						<b>TOTAL:</b>	<b>3811.04</b>	

\* US 52 Station Equation: 1381+49.43 (AH) = 114+11.00 (BK)

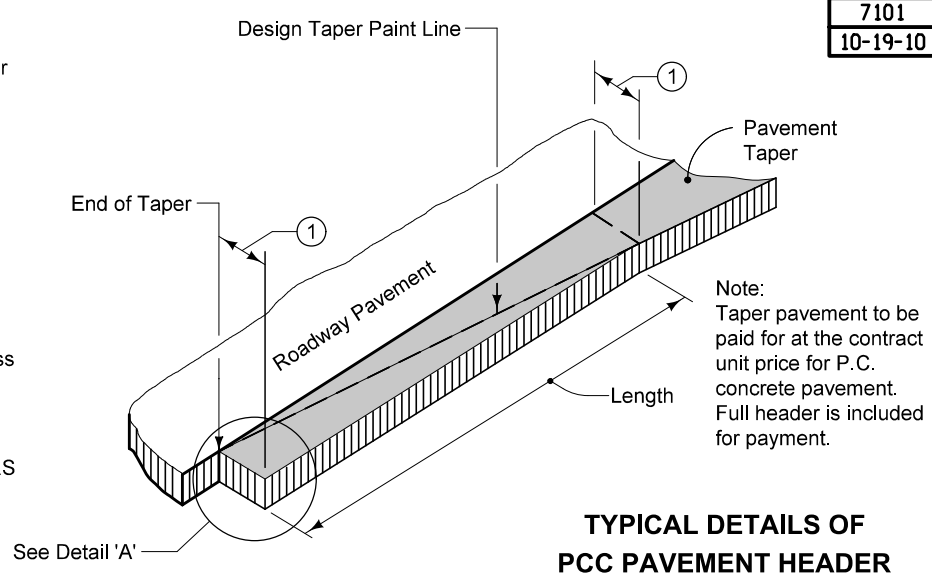
GRINDING PASS AT PAVED SHOULDERS, SIDE ROADS, AND TURN LANES

**TYPICAL CROSS SECTION DIAMOND GRINDING**

7101  
10-19-10

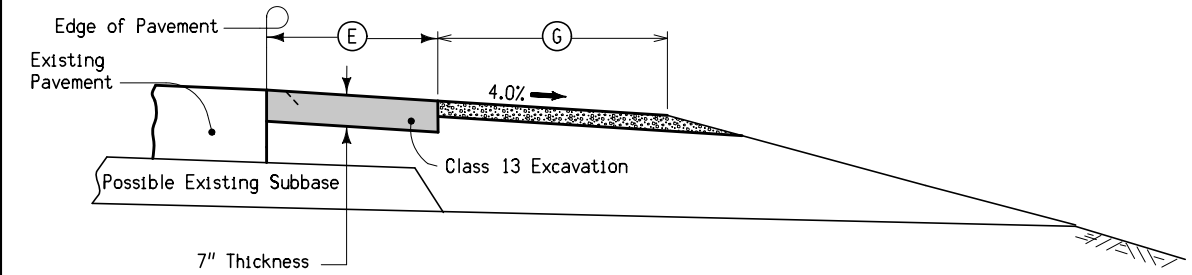


① Normal width is 2'-0". Construct 4'-0" width when butting into 4' wide HMA shoulders (See Typical 7154A).



**TYPICAL DETAILS OF PCC PAVEMENT HEADER**

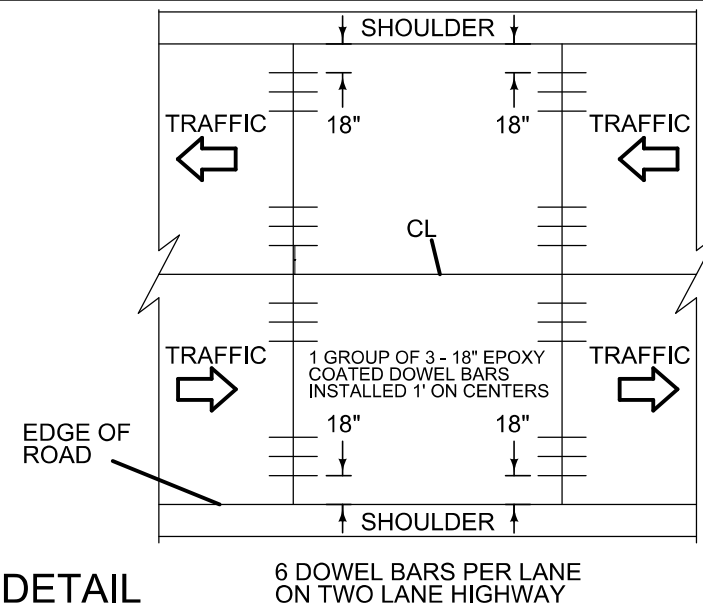
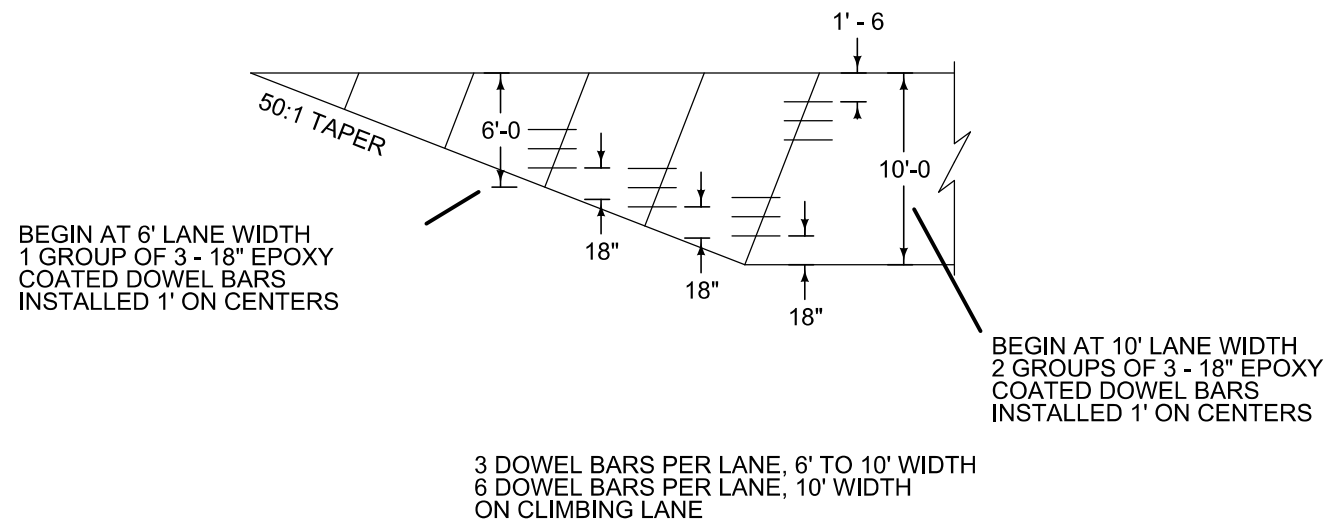
7152  
MODIFIED



**TYPICAL SECTION RETROFIT HOT MIX ASPHALT PAVED SHOULDER**

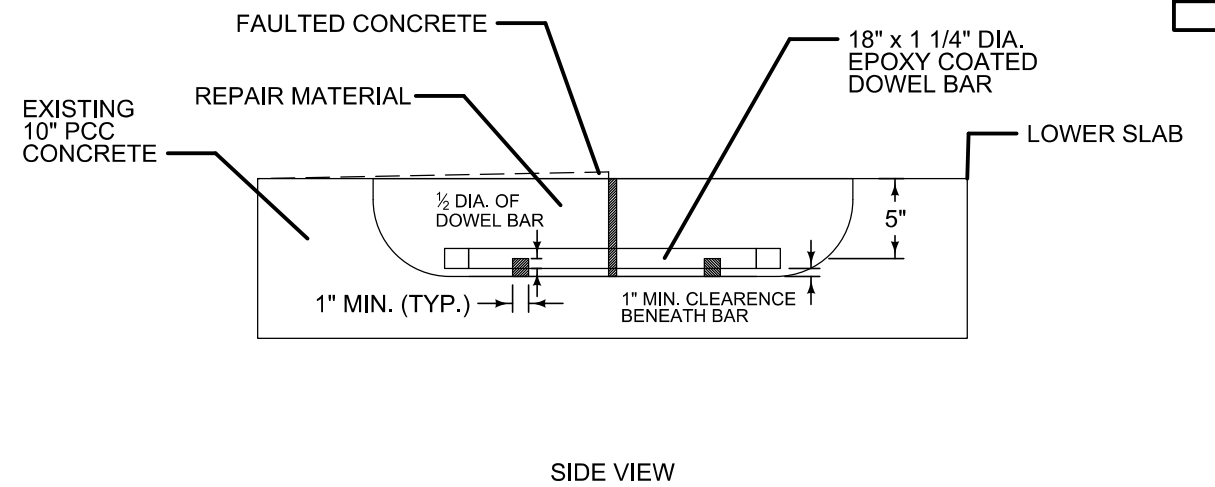
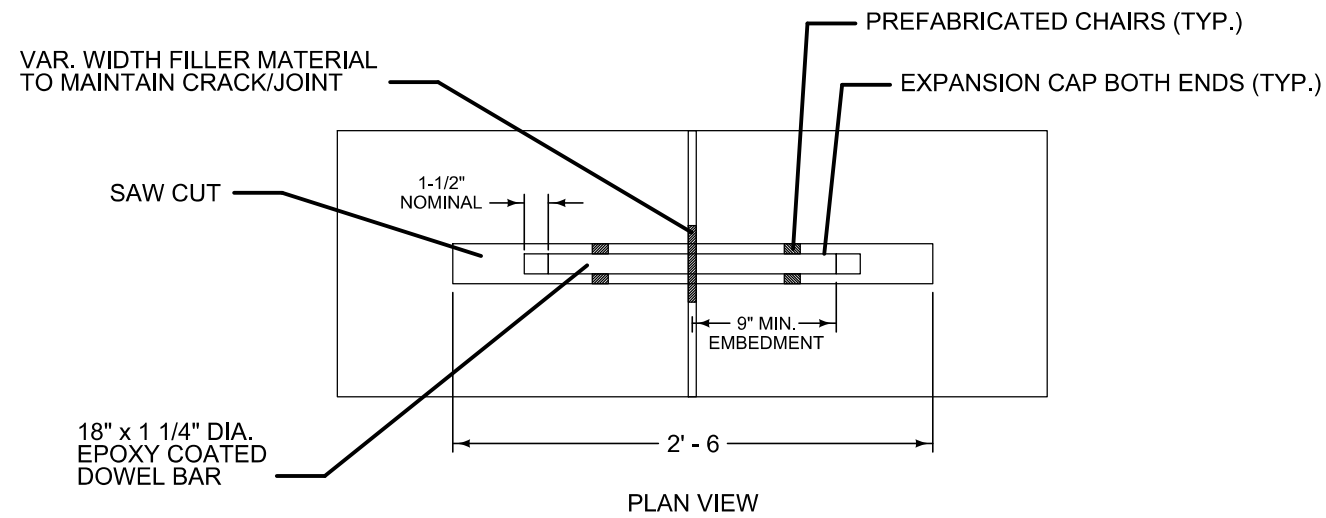
Location			(E)	(G)	
Road Identification	Station to Station	Side	Feet	Feet	
US 52	1370+17.40	1381+49.43*	Lt.	4	6
US 52	114+11.00*	115+09.80	Lt.	4	6
US 52	1370+17.40	1381+49.43*	Rt.	4	6
US 52	114+11.00*	115+09.80	Rt.	4	6
IA 9	888+22.46	889+19.68	Lt.	4	6
IA 9	888+22.46	889+19.68	Rt.	4	6

\* US 52 Station Equation: 1381+49.43 (AH) = 114+11.00 (BK)



WHKS-3

TYPICAL DOWEL BAR INSTALLATION DETAIL



WHKS-4

TYPICAL DOWEL BAR INSTALLATION DETAIL

### 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			Pipe Culvert ③			Aprons			Driveway Surface Area		Driveway Surfacing Material	Remarks			
Station	Side	A, B, C, Safety Ramp, or Predetermined*	Case	1½" Dropped Curb	3" Dropped Curb	W	PR ① ②	SR ②	H	Size	Pipe Length	Lt.	Rt.	No.		HMA	PCC	TON
			1 or 2	LF	LF	FT	FT	FT	FT	IN	LF	LF	LF	SY		SY	TON	
888+72.00	Lt.	C				32.0		15.0										33.200
889+09.00	Rt.	C				20.0		15.0									32.100	
889+75.00	Lt.	C				20.0		15.0									17.700	
890+63.00	Lt.	C				20.0		15.0									19.150	
893+04.00	Lt.	B				24.0		35.0									47.960	
893+04.00	Rt.	B				24.0	55.0 40.0	25.0	0.8	18.0	71.0	38.0	33.0	2		279.7	23.000	PR = West side PR = East side

# SURVEY SYMBOLS

- PIP Pipe Culvert
- CUL Culvert
- ☒ IN Storm Sewer Intake
- FCL Chain Link and Security Fence
- GDL Guard Rail Steel
- ROC Rock Outcropping
- TLNL Tree Line Left
- MM Mile Marker Post
- TLNR Tree Line Right
- ✱ TEV Evergreen Tree
- LUM Luminaire
- TP TPD Telephone Pedestal
- EB Electrical Box
- PR Electric Riser Pole
- BLD Building or Foundation
- TA Tower Anchor
- SIGN SI Sign
- FHD Fire Hydrants
- RET Retaining Walls
- TDC Tree Deciduous
- HDG Hedge Row
- GP GP Guard Post (Less Than 4 Posts)
- FWD Wood Fence
- SHR Shrub
- LIN Miscellaneous Line
- BB BB Billboard
- X LC Lot Corner
- SIGN SL Speed Limit Sign
- x FW Wire Fence
- PPA Alliant Energy
- WH WHD Water Hydrant
- ⊕ MH Utility Access (Manhole)
- FLG FLG Flag Poles
- MIS Miscellaneous
- SF Silt Fence (Wetlands)
- OUT Tile Outlet
- TVP TV Pedestal
- UV Underground Utility Vault
- BRG Bridge
- T1le TIL Tile Line
- GV Gas Valve
- WV Water Valve
- ⊕ WEL Well
- LP L.P. Tank
- CU Back of Curb
- GU Gutter In Front of Curb
- CON Concrete or A/C Slab
- D Centerline Draw or Stream (Down)
- BNK Stream Bank
- RIP Rip-Rap
- EP Edge of Paved Roads (ML or SR)
- SNP Unpaved Shoulder
- EG Edge of Gravel Road
- DU Centerline Draw or Stream (Up)
- ENU Edge Unpaved Entrance & Parking
- DIK Centerline of Dike or Dam
- ENT Centerline BL of Entrance
- SH Paved Shoulder
- ENP Edge Paved Entrance & Park Lot
- SWK Sidewalk
- SNK Sink Hole
- E2 ELB Hawkeye REC
- St.S. STA City of Decorah
- San. SAA City of Decorah
- WC Wild Card (Misc. Field Shot)
- CP Control Point
- BM Bench Mark
- PPB Hawkeye REC

# FIELD LOCATED UTILITIES

- PPA Alliant Energy
- E2 ELB Hawkeye REC
- St.S. STA City of Decorah
- San. SAA City of Decorah
- TV PPB Hawkeye REC
- TV TVA Mediacom
- F02 FOB (ICN) Iowa Communications Network
- E1 ELA Alliant Energy
- E3 ELC Iowa Department of Energy
- W WLA Decorah Water Department
- F03 FOC Mabel Cooperative Telephone Co.
- G GLA Black Hills Energy
- F04 FOD Alpine Communications
- T1 TLA Century Link Local Network
- E4 ELD Luther College
- E5 ELE Private Buried Line
- F0 FOA Century Link Local Network

# PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.	
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.		
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
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.	
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

Pavement Grinding

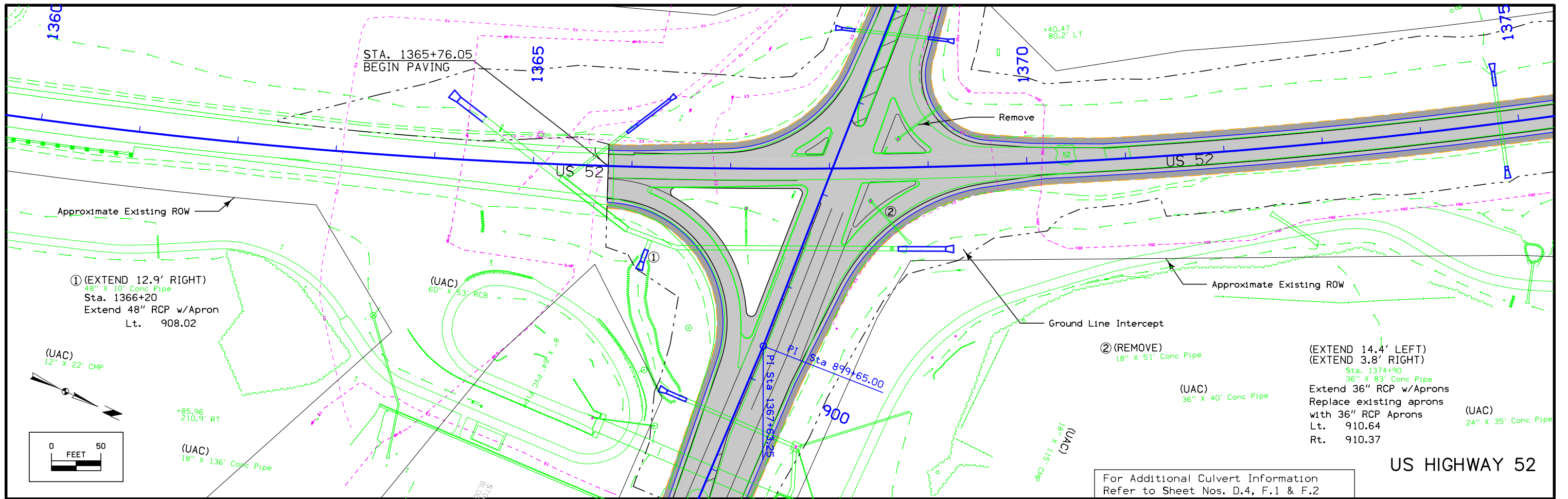
Clearing & Grubbing Area

### RIGHT-OF-WAY LEGEND

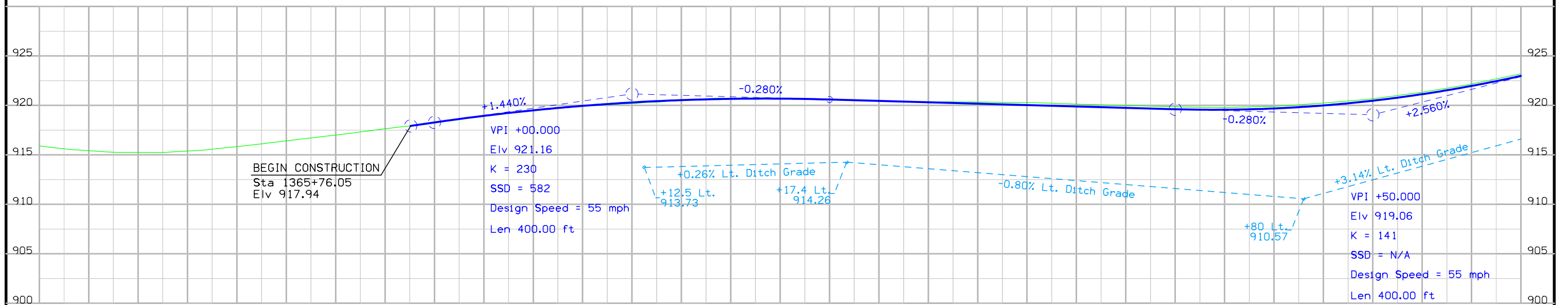
- ▲ Proposed Right-of-Way
- △ Existing Right of Way
- ▲ Existing and Proposed Right-of-Way
- ▲ Easement and Existing Right-of-Way
- Easement (Temporary)
- Easement
- C/A Access Control
- Property Line

# PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

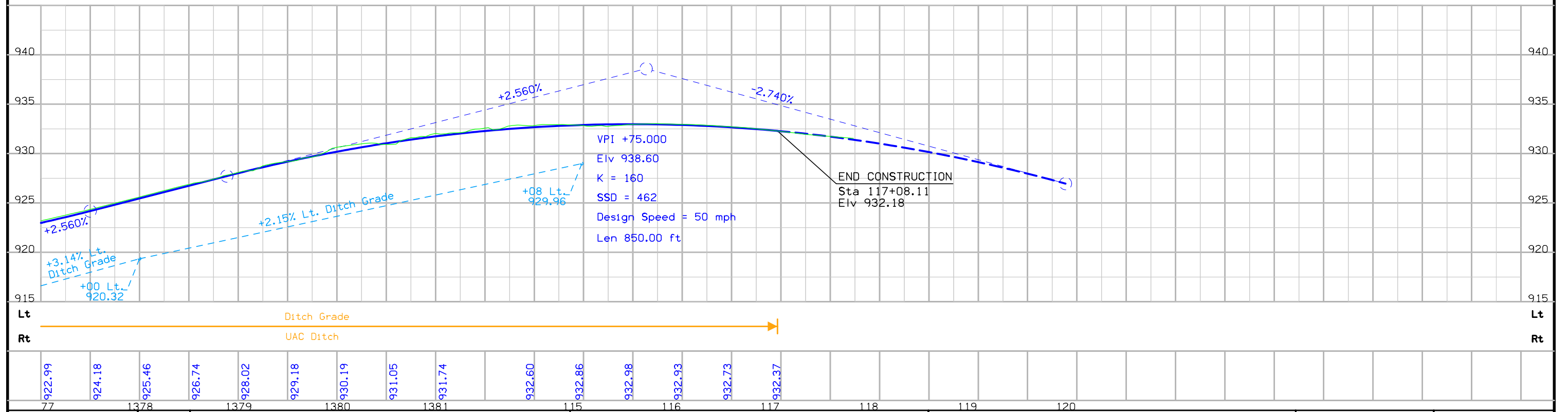
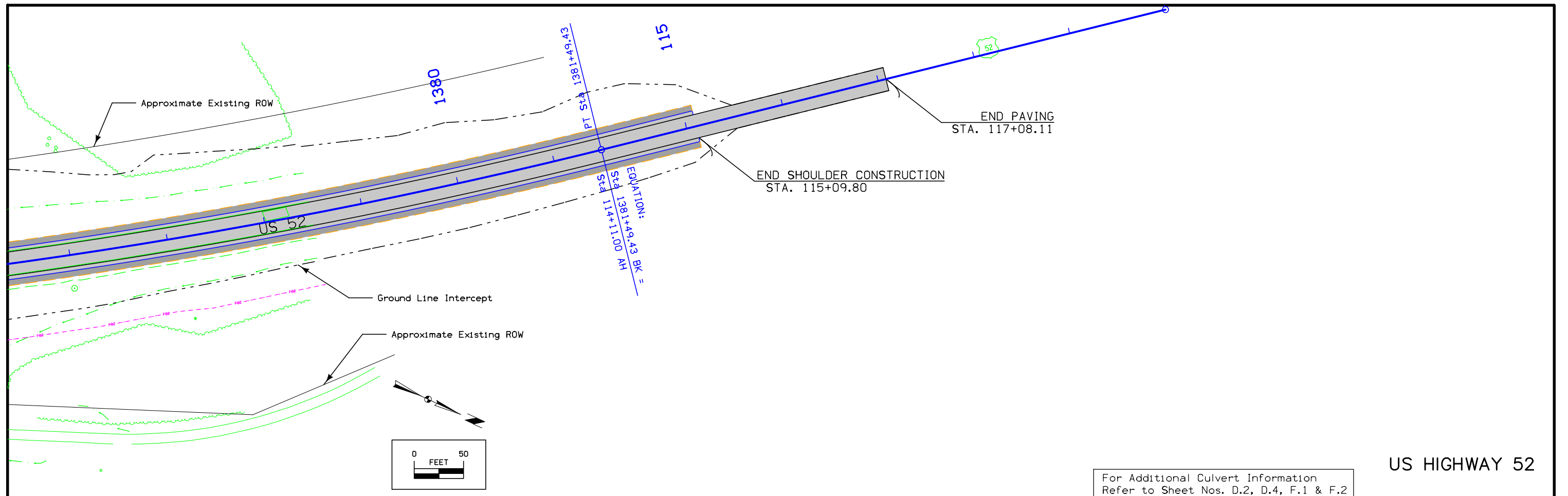
(COVERS SHEET SERIES D, E, F, & K)



Fill+30% = 2380 CY  
 Waste = 1903 CY  
 4283 CY  
 Cut = 4283 CY

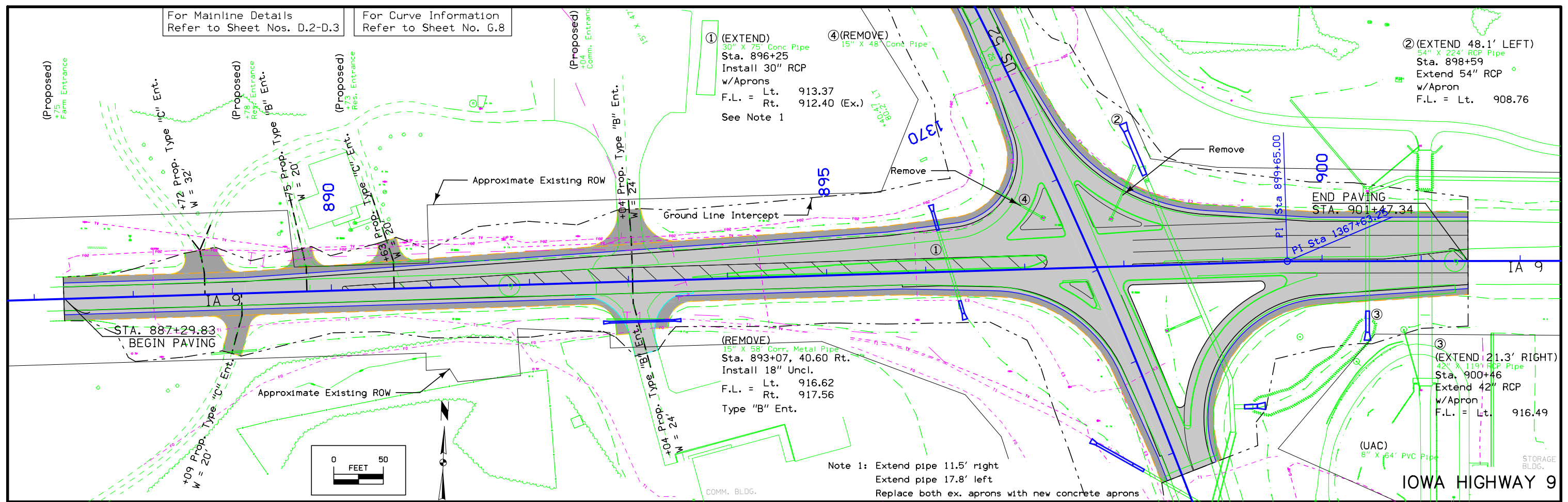


918.28	918.95	919.50	919.96	920.30	920.54	920.66	920.69	920.60	920.46	920.32	920.18	920.04	919.90	919.76	919.62	919.57	919.69	920.00	920.48	921.14	921.97	922.99	
1362	1363	1364	1365	1366	1367	1368	1369	1370	1371	1372	1373	1374	1375	1376	1377								

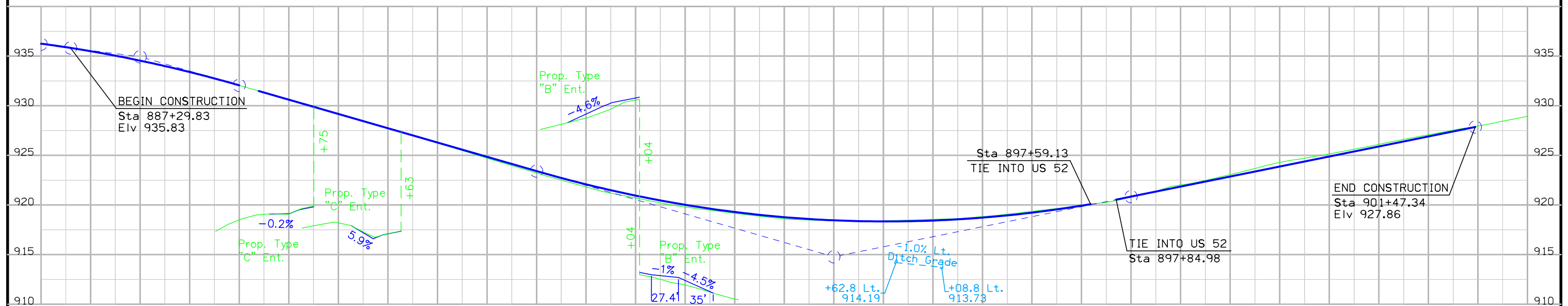




For Mainline Details Refer to Sheet Nos. D.2-D.3  
 For Curve Information Refer to Sheet No. G.8



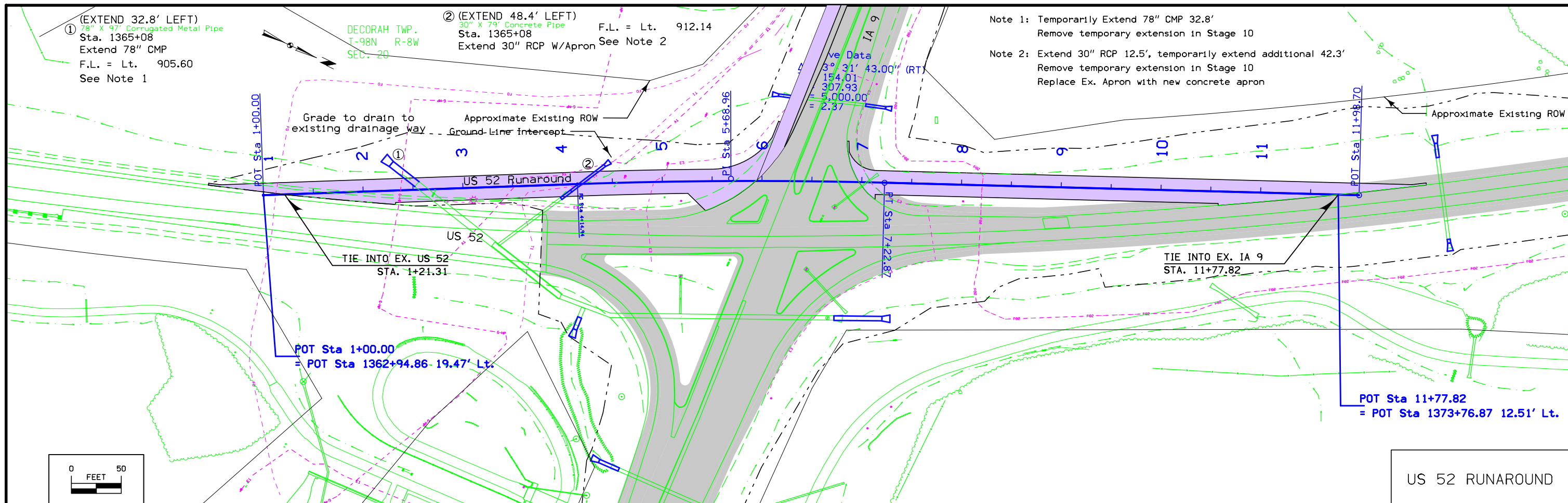
Fill+30% = 1438 CY  
 Waste = 3896 CY  
 5334 CY  
 Cut = 5334 CY



Lt																					Rt									
Rt																					Rt									
	<div style="display: flex; justify-content: space-between;"> <span>UAC Ditch</span> <span>UAC Ditch</span> <span>2' Ditch</span> <span>3' Ditch</span> <span>UAC Ditch</span> <span>Ditch Grade</span> <span>3' Ditch</span> <span>US 52</span> <span>US 52</span> <span>Island</span> <span>UAC Ditch</span> </div>																													
	936.26	935.50	934.55	933.40	932.06	930.62	929.18	927.74	926.30	924.86	923.42	922.08	920.95	920.02	919.29	918.77	918.46	918.34	918.43	918.73	919.23	919.93	920.84	921.85	922.86	923.87	924.88	925.89	926.90	
	888			889		890			891		892		893		894		895		896		897		898		899		900		901	902



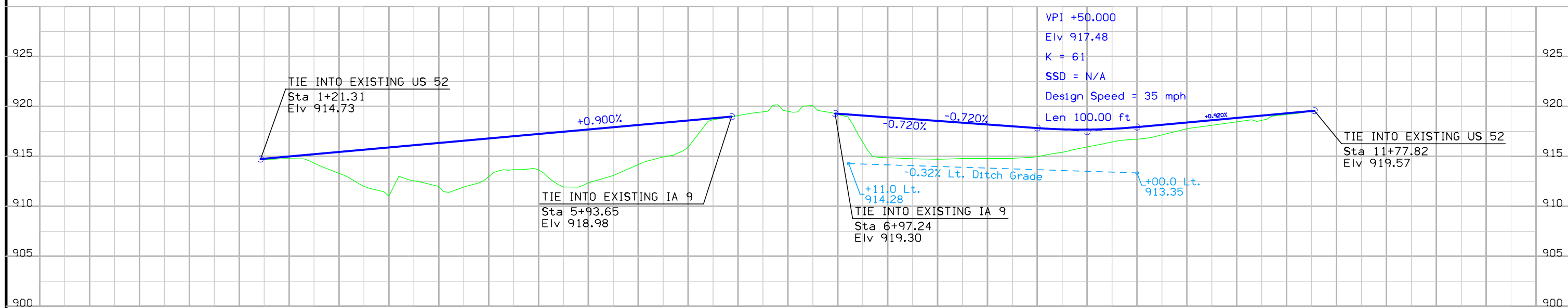




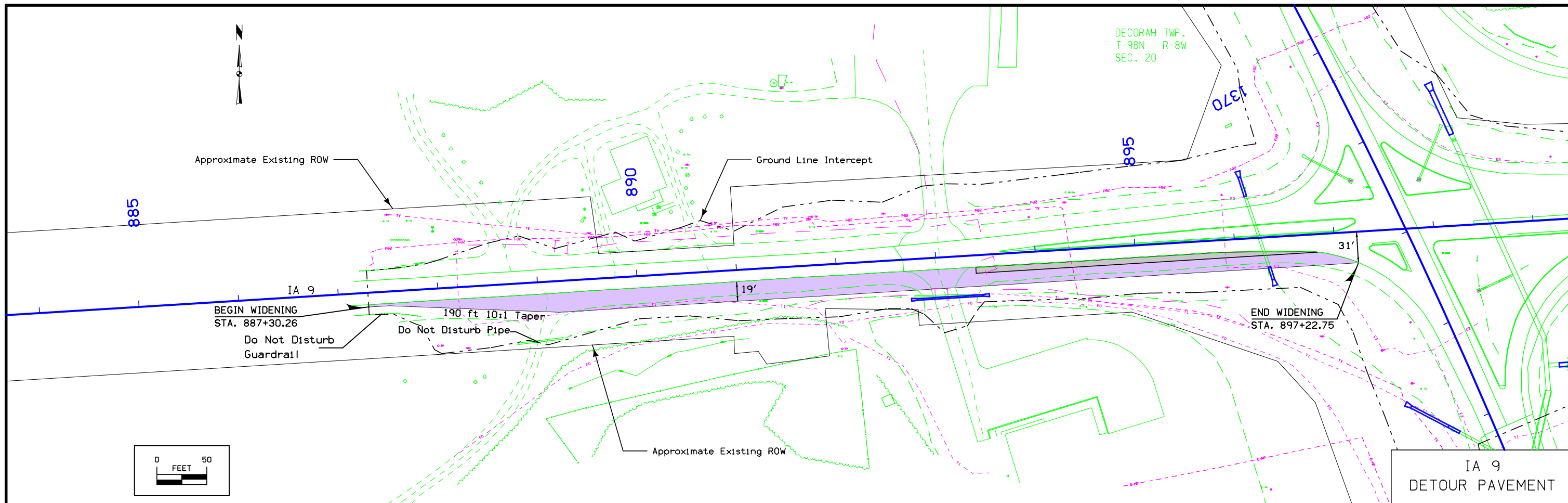
Fill+30% = 3239 CY

Cut = 481 CY  
 Need = 2758 CY  
 3239 CY

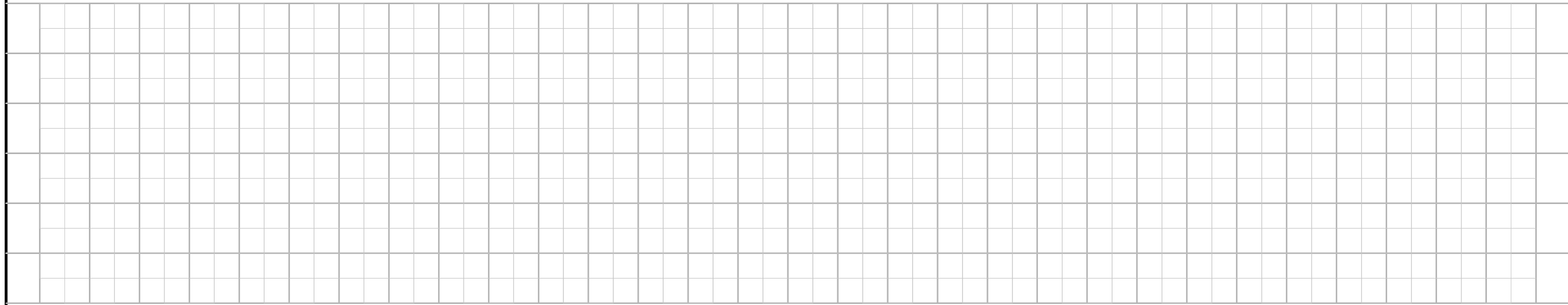
Contractor must supply embankment for this Temporary Pavement due to staging order



914.77	914.99	915.22	915.44	915.67	915.89	916.12	916.34	916.57	916.79	917.02	917.24	917.47	917.69	917.92	918.14	918.37	918.59	918.82	919.00	919.08	919.16	919.23	919.28	919.10	918.92	918.74	918.56	918.38	918.20	918.02	917.84	917.71	917.68	917.76	917.94	918.17	918.40	918.63	918.86	919.09	919.32	919.55
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Fill+30% = 138 CY      Cut = 571 CY  
 Waste = 433 CY  
                                  571 CY



886	887	888	889	890	891	892	893	894	895	896	897	898	899
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# Survey Information

Winneshiek County  
SAP 0753  
NHSN-52-5(31)- -2R-96  
IA 9/US52 - Intersection Survey & Various locations North along US 52

### General Information

This survey is in English Units.

Control Information – RTN observations and Winneshiek County monuments were utilized as a basis for project control.

### Vertical Datum

This survey is relative to NAVD 88 vertical datum. The published elevations on BM 500 & BM 537 were held fixed in a digital level run. The main level run originated on BM 500 (Decorah) then proceeded south to Ia 9, West to US 52 then North to BM 537 (S-42). The total length of the run was 9.1 miles with a missed closure of 0.0113 feet. The least squared adjustment values of the marks along the level run were held fixed on this survey. The adjusted values of control along this run were held fixed in the three supplemental bench loops.

A level loop West to BM 508 & 509 along Ia 9 originated and terminated on BM 507, the adjusted value of 923.358 was held fixed on 507. A level loop West to County CP 603 along Madison Rd originated and terminated on CP18, the adjusted value of 929.184 was held fixed on CP18. A level loop West to County CP 601 along Pole Line Rd originated and terminated on BM 521, the adjusted value of 878.658 was held fixed on BM521.

NGS datasheets show a vertical difference of 0.065' to 0.116' in the area (29 higher than 88) between NAVD88 to NGVD29.

### Equations:

BM # 500 this survey =Decorah =Decorah	Elev. =897.354 = Datum BM Elev. =897.354 (NAVD 88 NGS 2nd Order BM) (PID #ON0466) Elev. =897.47 (NGVD 29)
BM # 537 this survey =S 42 =S 42	Elev. =1180.765 = Datum BM Elev. =1180.765(NAVD 88 NGS 2nd Order BM) (PID #ON0470) Elev. =1180.83 (NGVD 29)
BM # 504 this survey =BM504	Elev. =935.804 Elev. =285.191 (M) 935.664 (F) 1998 AB Plan STP-9-8(23)--2C-96
BM # 505 this survey =BM504	Elev. =901.656 Elev. =274.781 (M) 901.511 (F) 1998 AB Plan STP-9-8(23)--2C-96
BM # 508 this survey =BM66B	Elev. =941.663 Elev. =942.12 1975 AB PLAN, FN-9-8(8)--21-96
BM # 509 this survey =BM501	Elev. =941.651 Elev. =286.973 (M) 941.511 (F) 1998 AB Plan STP-9-8(23)--2C-96
CP#601 this survey =County Monument 601	Elev. =875.413 Elev. =875.51 2003 ASI GPS Control
CP#603 this survey =County Monument 603	Elev. =910.865 Elev. =911.01 2003 ASI GPS Control
BM # 511 this survey =BM2A	Elev. =933.783 Elev. =933.55 1965 AB PLAN F-1112 (2), Sheet 5A
BM # 517 this survey =BM7A	Elev. =962.129 Elev. =962.05 1965 AB PLAN F-1112 (2), Sheet 7A
BM # 519 this survey =Unnumbered BM	Elev. =992.749 Elev. =992.62 1965 AB PLAN F-1112 (2), Sheet 7A
BM # 521 this survey =BM10A	Elev. =878.658 Elev. =878.58 1965 AB PLAN F-1112 (2), Sheet 8A
BM # 526 this survey =BM10A	Elev. =1077.905 Elev. =1077.70 1965 AB PLAN F-1112 (2), Sheet 9A
BM # 531 this survey =BM10A	Elev. =1141.460 Elev. =1141.16 AB PLAN F-1112 (2), Sheet 11A

### Horizontal Datum

### Project Coordinate Transformation

Iowa State Plane North Zone coordinates in US feet were transformed to project ground coordinates using a 1/combined scale factor broadcast about a held point. The held State Plane coordinate and project coordinate at control point 100 are N= 3938227.012 E=5372567.242

1 / GRID = 1.00003524

VERTICAL DATUM = NAVD 88 <> HORIZONTAL DATUM = NAD 83 (1996)

### Local Project Plane Coordinate Conversion Equation:

- Local Project Coord y = [(State Plane y - hold point y) 1/grid factor] + hold point y
- Local Project Coord x = [(State Plane x - hold point x) 1/grid factor] + hold point x

### ALL COORDINATES CONVERTED TO ENGLISH UNITS

POINT	STATE PLANE COORD(Y)	STATE PLANE COORD(X)	POINT SCALE FACTOR	LOCAL PROJECT PLANE COORD(Y)	LOCAL PROJECT PLANE COORD(X)	ORTHOMETRIC HEIGHT
135	3956477.547	5362502.522	0.99997584	3956478.190	5362502.167	910.762 (published)
136	3958043.940	5380069.610	0.99996284	3958044.638	5380069.874	1196.980 (published)
137	3957135.647	5396614.373	0.99996330	3957136.313	5396615.220	1172.901 (published)
142	3938068.144	5362230.261	0.99995706	3938068.138	5362229.897	1094.539 (published)
143	3939554.559	5378379.060	0.99996476	3939554.606	5378379.265	946.04 (published)
144	3939632.631	5394099.289	0.99996464	3939632.681	5394100.048	946.14 (published)
150	3924867.247	5362523.065	0.99995063	3924866.776	5362522.711	1088.893 (published)
151	3923970.413	5378902.185	0.99994784	3923969.911	5378902.408	1134.703 (published)
152	3925554.822	5394443.127	0.99994672	3925554.375	5394443.898	1171.32 (published)
153	3925580.643	5412909.980	0.99995258	3925580.197	5412911.402	1045.34 (published)
100	3938227.012	5372567.242		3938227.012	5372567.242	921.059 (Leveled)
13	3938920.486	5372141.318		3938920.576	5372141.288	919.602 (Leveled)
41	3958326.849	5371828.739		3958327.557	5371828.713	1132.582 (Leveled)
42	3959071.862	5371973.776		3959072.597	5371973.755	1140.617 (Leveled)
43	3938179.407	5371430.548		3938179.405	5371430.508	935.027 (Leveled)
44	3938273.284	5371979.151		3938273.286	5371979.130	919.577 (Leveled)

### Alignment

The two mainline alignments are both retraces of alignments found on the 4/7/1965 Winneshiek Co. F 1112 (2) AB plans. Station equations found on the as-built plans were duplicated on this survey.

### Mainline Equations

- PT Sta 1381+49.437 Back This Survey (South alignment)
- =PT Sta 1381+49.4 F 1112 (2) AB plans Sheet 4 of 55
- =POT Sta 114+11.00 Ahead This Survey (North Alignment)
- =POT Sta 114+11.0 F 1112 (2) AB plans Sheet 4 of 55
- =POC Sta 1368+03.153 US 52 This Survey
- =POC Sta 1368+03.07 US 52 NHSX-052-5(36)--3h-96 Sheet 21
- =POT Sta 897+72.059 This survey (Ia 9)
- =POT Sta 897+72.16 FN 98 AB Plan (Ia 9)
- =POT Sta 934+53.3 FN-9-8(11)--21-96 Plan-1976 ab plan
- PI Sta 1367+63.250 This Survey US 52 Alignment
- = PI Sta 1367+63.25 US 52 F 1112 (2) AB plans Sheet 4
- = PI Sta 899+65.0 This Survey Ia 9 Alignment
- PI Sta 148+94.280 This Survey (found rebar)
- = PI Sta 148+96.19 F 1112 (2) AB plans Sheet 6A
- PI Sta 288+39.181 This Survey
- = PI Sta 288+34.0 F 1112 (2) AB plans Sheet 10
- PI Sta 311+97.512 This Survey (found rebar)
- = PI Sta 311+88.42 F 1112 (2) AB plans Sheet 11A

## Survey Information

### la 9 Equations

The side road alignment is a retrace of the alignment found on the F 98 (8) 1963 AB plans

- = PI Sta 899+65.0 This Survey ("x" in Slab) la 9 Alignment
- = PI Sta 899+65.0 F 98 (8) 1963 AB plans Sheet 22
- = PI Sta 99+65.5 la 9 F 1112 (2) AB plans Sheet 4
- = PI Sta 30+37.417 (M) 1998 AB Plan STP-9-8(23)--2C-96

- = POST 1987.438 Back of PI Sta 899+65.0 This Survey Found Rebar la 9 Survey
- = POST 1987.438 Back of PI same PI point in 1998 AB Plan STP-9-8(23)--2C-96 Survey

- = PI Sta 906+99.787 This Survey (Fd Hinge Nail) la 9 Alignment
- = PI Sta 32+61.382 (M) 1998 AB Plan STP-9-8(23)--2C-96

- = PI Sta 918+28.806 This Survey (Fd Nail) la 9 Alignment
- = PI Sta 36+05.456 (M) 1998 AB Plan STP-9-8(23)--2C-96

### BENCHMARKS along US 52 South Alignment

### ELEVATION

No. 503 Sta.	1365+58.363	3973.665 Rt.	Y:3939594.892 X:5376231.708	Set MAG nail in NW Corner of intake NW Corner of Sanford St & Mechanic St.-----	886.708
No. 501 Sta.	1371+82.187	5601.551 Rt.	Y:3941336.441 X:5377190.739	Cut "X" SW Bolt F Hyd NW Quad Winnebago St. & Vernon St.-----	874.928
No. 502 Sta.	1374+25.573	4691.678 Rt.	Y:3941275.726 X:5376172.241	Set MAG nail on inlet HDWL of Culvert	
No. 510 Sta.	1374+81.859	47.785 Rt.	Y:3938893.452 X:5372185.221	Set MAG nail on inlet apron of 36" RCP west of "T" intersection Mechanic St and Vernon St.-----	913.567
No. 500 Sta.	1377+76.089	6011.827 Rt.	Y:3942567.003 X:5376902.606	Fd NGS 2nd order Monu in W corner of an old WWII Gun Conc base. Note: A Replica of statue of liberty has replaced gun base Monu is still the same NAVD88 EI=897.354 NGVD29 EL=897.47-----	897.354

### BENCHMARKS along la 9 Alignment

### ELEVATION

No. 508 Sta.	884+66.054	22.741 Rt.	Y:3938170.050 X:5371168.644	Fd IHC BM SW Wing of Brg =AB BM #66B EL=942.12 1975 AB PLAN FN-9-8(8)--21-96---	941.663
No. 509 Sta.	884+68.215	23.548 Lt.	Y:3938216.384 X:5371167.949	Fd chisled square on NW Barrier Rail of Bridge =1998 AB Plan STP-9-8(23)--2C-96 BM #501 EL=941.511-----	941.651
No. 507 Sta.	900+42.367	74.501 Lt.	Y:3938362.052 X:5372738.278	Set MAG nail NW Corner of intake	923.358
No. 506 Sta.	901+26.368	5.162 Lt.	Y:3938295.443 X:5372824.460	Fd MAG nail W/Washer in conc median =New Pedestrian Brg Construction BM painted w/EL=928.17-----	928.126
No. 504 Sta.	911+07.933	38.536 Rt.	Y:3938271.919 X:5373806.080	Fd RR SPK in Rock Bluff right below Cliff House Parking Lot =1998 AB Plan STP-9-8(23)--2C-96 BM #504 EL=935.664-----	935.804
No. 505 Sta.	918+17.066	80.207 Rt.	Y:3938225.205 X:5374509.963	Fd RR Spk S Side PP SW quad of Intersection in Pizza Hut Parking Lot =1998 AB Plan STP-9-8(23)--2C-96 BM #505 EL 901.51-----	901.656

### BENCHMARKS along US 52 North Alignment

### ELEVATION

No. 511 Sta.	117+69.659	17.987 Lt.	Y:3939679.721 X:5371518.908	Fd IHC SW Wing of Br =BM2A EL=933.55 1965 AB PLAN F-1112(2) Sheet 5A-----	933.783
No. 512 Sta.	129+95.776	19.06 Lt.	Y:3940640.327 X:5370755.510	Fd IHC BM on SW WHL GD of Bridge just behind conc barrier rail-----	904.331
No. 513 Sta.	133+73.444	18.616 Rt.	Y:3940974.826 X:5370576.287	Set PK nail in NE Wingwall of Brg-----	909.271
No. 514 Sta.	143+07.198	73.031 Lt.	Y:3941765.499 X:5370064.986	Set PK nail in Rock Shelf on Top of Rock Outcropping-----	965.578
No. 515 Sta.	156+35.449	46.511 Rt.	Y:3943075.044 X:5369812.604	Set RR Spike in Rock Outcropping-----	1020.263
No. 516 Sta.	170+99.279	54.498 Lt.	Y:3944529.693 X:5369656.232	Set RR Spike in Rock Outcropping-----	1008.469
No. 517 Sta.	178+39.034	30.037 Lt.	Y:3945266.889 X:5369722.397	Fd IHC BM on InHdwl Hdwl 2 x 3 RCB =BM7A EL=962.05 1965 AB PLAN F-1112(2) Sheet 7A-----	962.129
No. 518 Sta.	186+33.647	43.734 Lt.	Y:3946061.009 X:5369753.560	Set MAG Nail on Inlet End of 36" CMP-----	922.322
No. 519 Sta.	194+40.763	15.376 Lt.	Y:3946865.239 X:5369827.417	Fd IHC SW Wing of Brg =Unnumbered IHC BM EL=892.62 1965 AB PLAN F-1112(2) Sheet 7A-----	892.749

### BENCHMARKS along US 52 South Alignment

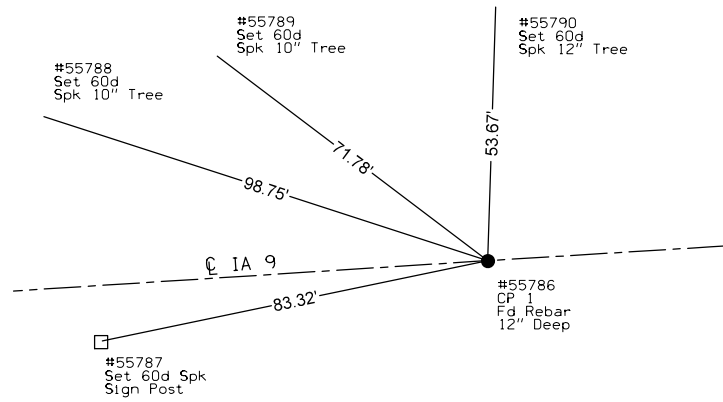
### ELEVATION

No. 520 Sta.	198+44.966	18.608 Rt.	Y:3947266.880 X:5369884.155	Set PK nail in NE Wingwall of Brg-----	
No. 521 Sta.	213+21.375	86.798 Lt.	Y:3948746.884 X:5369862.228	Fd IHC BM on InHdwl 5 x 5 RCB =BM10A EL=878.58 1965 AB PLAN F-1112(2) Sheet 8A-----	878.58
No. 522 Sta.	231+89.323	41.555 Lt.	Y:3950609.303 X:5370012.803	BM Set RR Spike in-----	
No. 523 Sta.	236+65.617	35.549 Rt.	Y:3951080.488 X:5370116.661	Set MAG nail Inlet end 30" RCP-----	
No. 524 Sta.	240+81.160	45.464 Rt.	Y:3951494.809 X:5370150.008	Set MAG nail Inlet end 42" RCP-----	
No. 525 Sta.	244+89.487	139.425 Rt.	Y:3951897.183 X:5370266.861	Set two 60D SPKs in Fence Post-----	
No. 526 Sta.	253+61.388	30.045 Rt.	Y:3952773.867 X:5370206.854	Fd IHC BM on InHdwl Stock Pass 1965 AB PLAN F-1112(2) Sheet 9A-----	965.854
No. 527 Sta.	266+15.200	72.675 Rt.	Y:3954023.276 X:5370320.167	Set RR Spk SW Side PP-----	
No. 528 Sta.	276+39.985	72.811 Rt.	Y:3955046.377 X:5370378.127	Set RR Spk S Side PP-----	
No. 529 Sta.	290+07.705	48.642 Lt.	Y:3956392.833 X:5370579.134	Set RR SPK S SIDE 12" OAK TREE-----	
No. 530 Sta.	305+04.260	71.097 Lt.	Y:3957659.496 X:5371385.790	Fd IHC BM on InHdwl 3'X3' RCB-----	
No. 531 Sta.	318+96.257	24.131 Rt.	Y:3958903.692 X:5371959.666	Fd IHC BM on InHdwl 4 X 5.5 RCB =BM18A EL=1141.16 1965 AB PLAN F-1112(2) Sheet 11A-----	1141.16
No. 532 Sta.	326+00.173	71.288 Rt.	Y:3959602.069 X:5372066.904	Fd IHC BM on InHdwl 4 X 5 RCB-----	
No. 533 Sta.	337+13.675	114.516 Lt.	Y:3960727.087 X:5371973.388	Set two 60D SPKS in Brace Post-----	

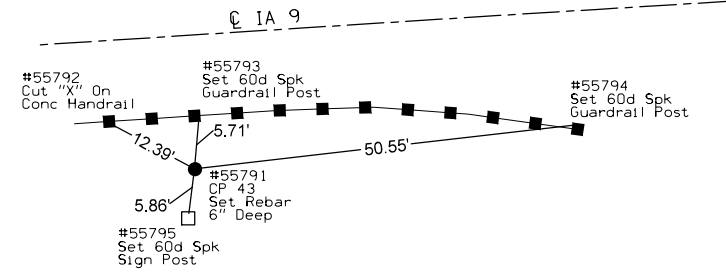
### MISCELLANEOUS LOCATIONS North and Outside Project limits

No. 534	-----	Y:3962123.635 X:5372256.595	Cut "X" on ROW Rail-----	
No. 535	-----	Y:3963307.153 X:5372261.988	Set MAG nail on inlet apron of 42" RCP-----	
No. 536	-----	Y:3964638.501 X:5372310.756	Cut "X" on ROW Rail-----	
No. 537	-----	Y:3965607.399 X:5371661.847	Fd NGS 2nd order Monu in corn field stamped S 42 NAVD88 EI=1180.765 NGVD EI=1180.83-----	1180.83

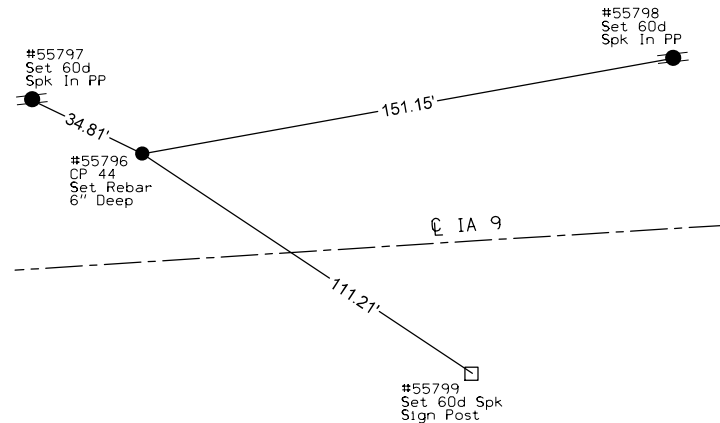
C.P. STA 879+77.56 RIGHT 0.00  
 C.P. 1, Fd 5/8" Rebar 12" Deep  
 N=3938162.649 E=5370679.679



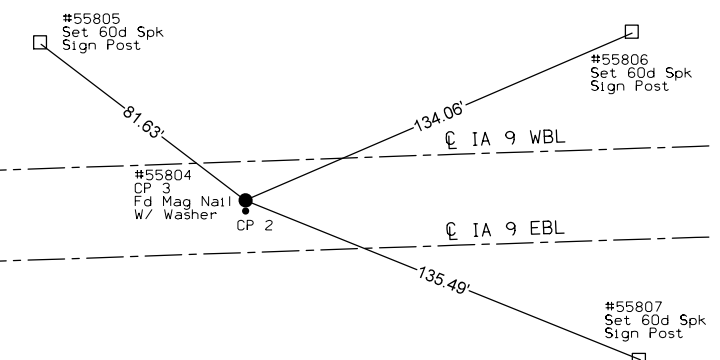
C.P. STA 887+28.00 RIGHT 29.54  
 C.P. 43, Set 5/8" Rebar 6" Deep  
 N=3938179.405 E=5371430.508



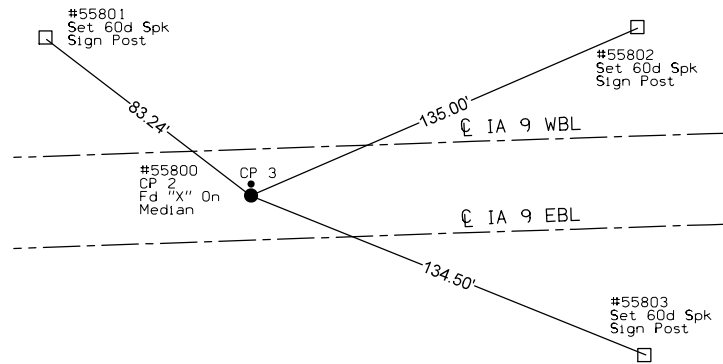
C.P. STA 892+81.36 LEFT 30.36  
 C.P. 44, Set 5/8" Rebar 6" Deep  
 N=3938273.286 E=5371979.130



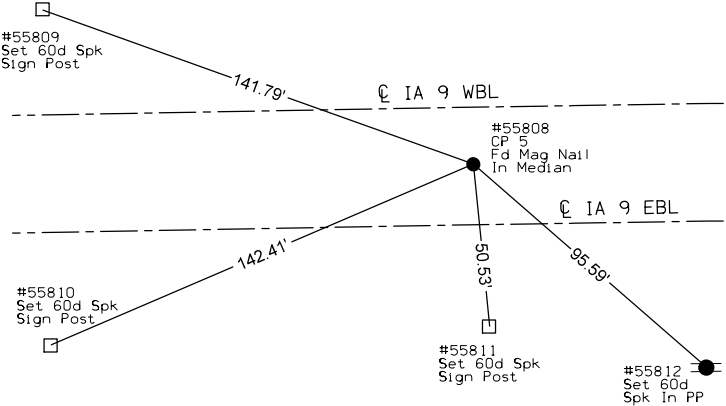
C.P. STA 901+04.19 LEFT 7.80  
 C.P. 3, Fd Mag Nail W/ Washer  
 N=3938297.367 E=5372802.208



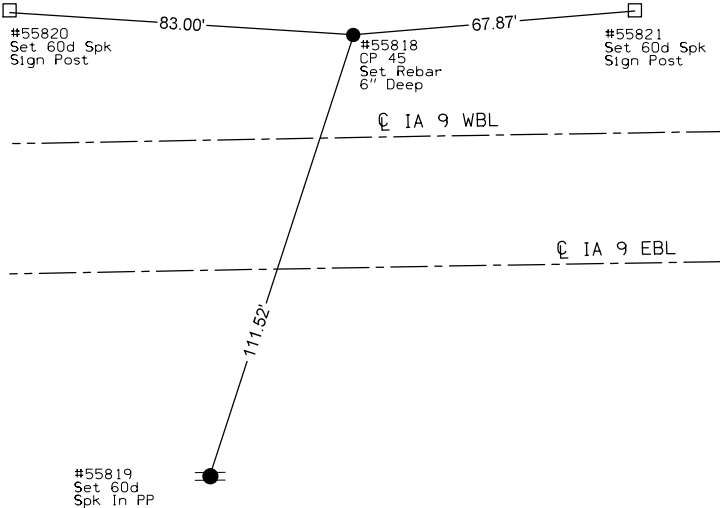
C.P. STA 901+04.19 LEFT 5.30  
 C.P. 2, Fd "X" On Median  
 N=3938294.870 E=5372802.285



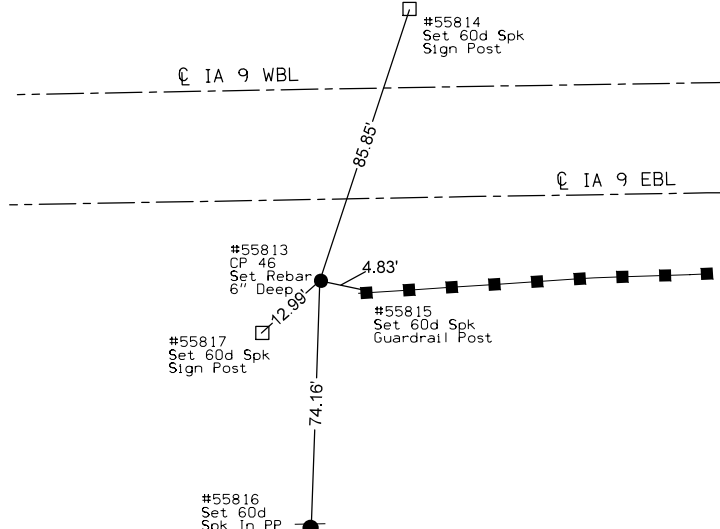
C.P. STA 903+61.97 LEFT 4.98  
 C.P. 5, Fd Mag Nail In Median  
 N=3938302.821 E=5373059.946



C.P. STA 904+69.98 LEFT 44.73  
 C.P. 45, Set 5/8" Rebar 6" Deep  
 N=3938346.012 E=5373166.622



C.P. STA 909+14.03 RIGHT 39.95  
 C.P. 46, Set 5/8" Rebar 6" Deep  
 N=3938269.658 E=5373612.184



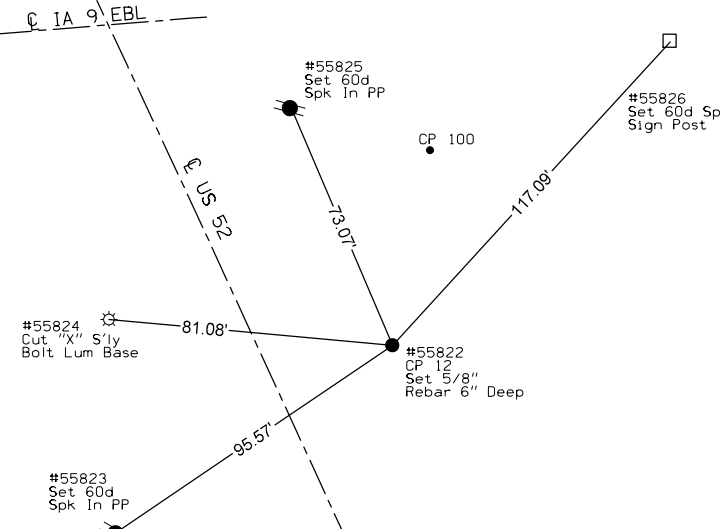
C.P. STA 1352+28.24 RIGHT 26.11  
 C.P. 10, Set 5/8" Rebar 6" Deep  
 N=3936780.405 E=5372967.983

NOT REFERENCED

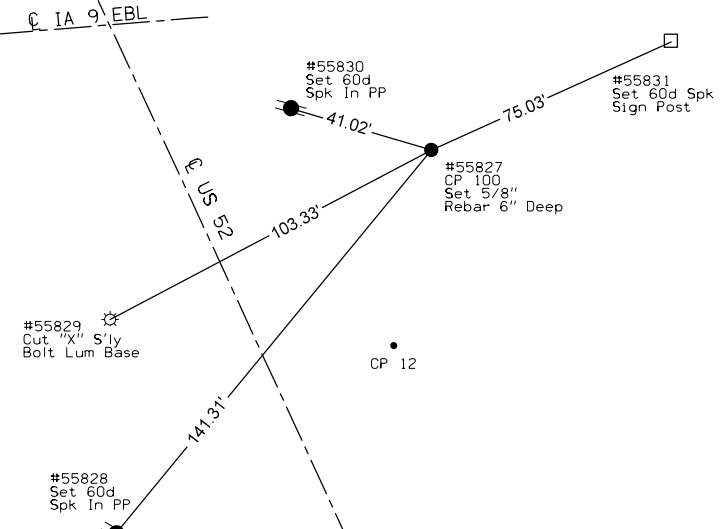
C.P. STA 1361+13.03 RIGHT 28.27  
 C.P. 11, Fd Iron Pin 6" Deep  
 N=3937642.122 E=5372754.604

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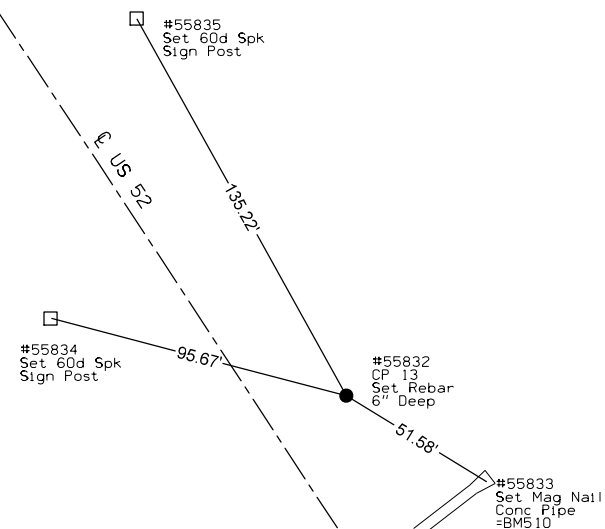
C.P. STA 1366+75.25 RIGHT 35.47  
 C.P. 12, Set 5/8" Rebar 6" Deep  
 N=3938171.471 E=5372556.588



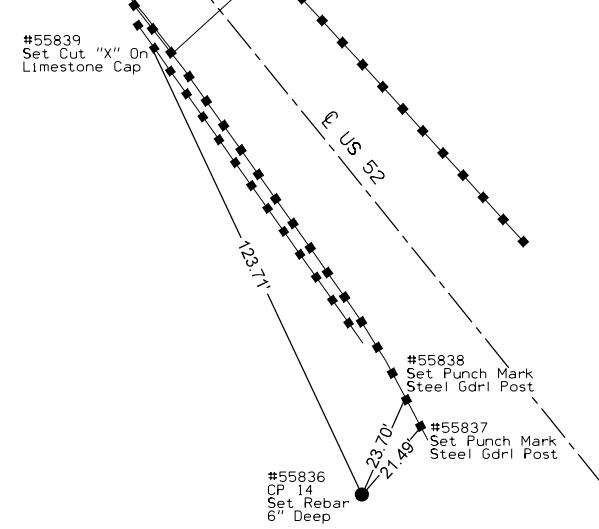
C.P. STA 1367+21.09 RIGHT 68.01  
 C.P. 100, Set 5/8" Rebar 6" Deep  
 N=3938227.006 E=5372567.227



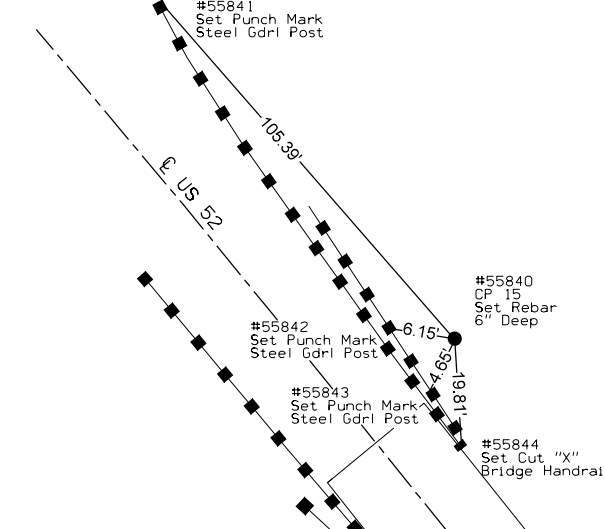
C.P. STA 1375+27.91 RIGHT 25.13  
 C.P. 13, Set 5/8" Rebar 6" Deep  
 N=3938920.476 E=5372141.288



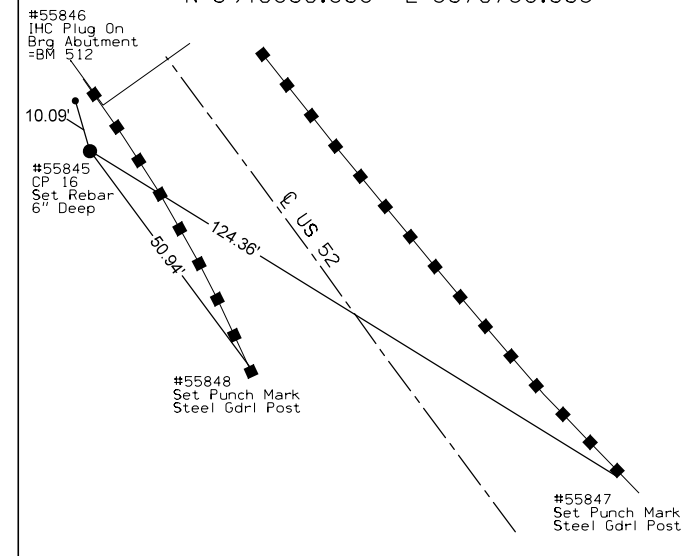
C.P. STA 116+42.33 LEFT 46.89  
 C.P. 14, Set 5/8" Rebar 6" Deep  
 N=3939562.375 E=5371576.169



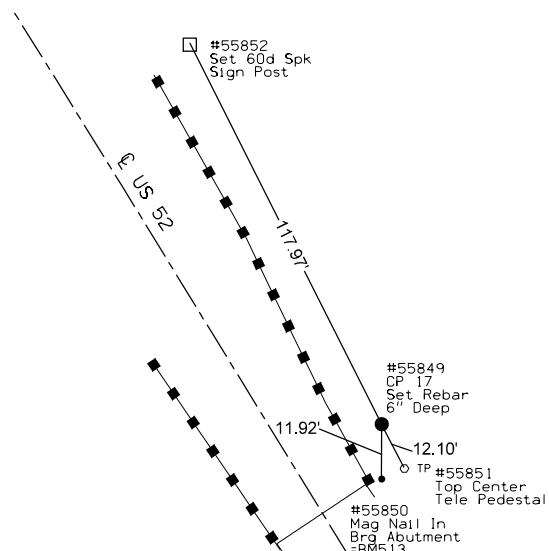
C.P. STA 119+24.10 RIGHT 20.90  
 C.P. 15, Set 5/8" Rebar 6" Deep  
 N=3939824.443 E=5371452.437



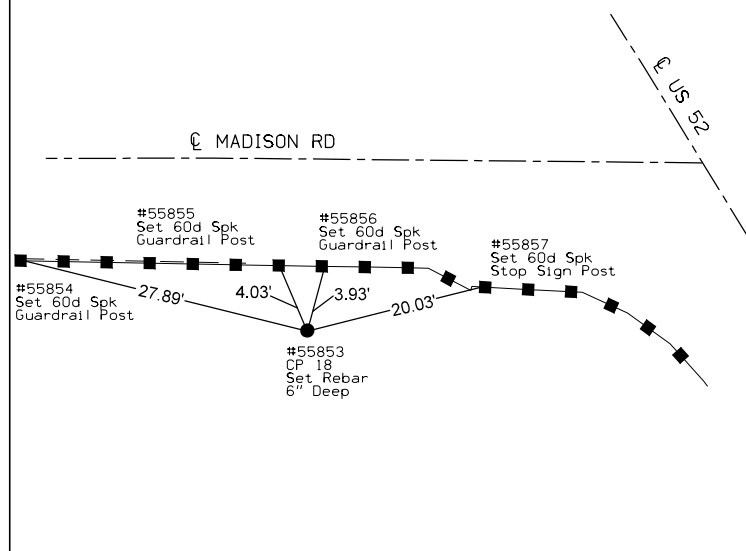
C.P. STA 129+86.30 LEFT 22.44  
 C.P. 16, Set 5/8" Rebar 6" Deep  
 N=3940630.636 E=5370758.335



C.P. STA 133+85.19 RIGHT 20.86  
 C.P. 17, Set 5/8" Rebar 6" Deep  
 N=3940985.947 E=5370572.001



C.P. STA 138+39.04 LEFT 63.90  
 C.P. 18, Set 5/8" Rebar 6" Deep  
 N=3941340.097 E=5370273.384



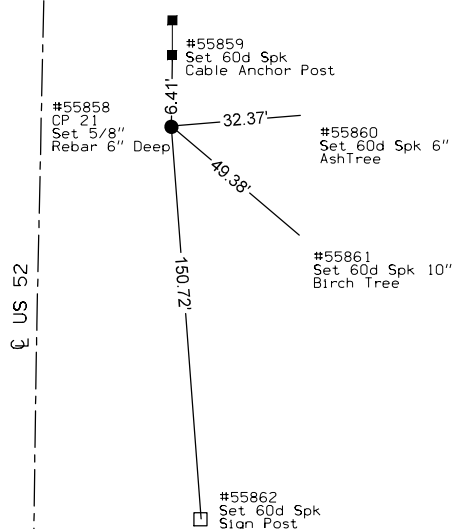
C.P. STA 149+92.39 LEFT 24.20  
 C.P. 19, Set 5/8" Rebar 6" Deep  
 N=3942433.609 E=5369883.547

NOT REFERENCABLE

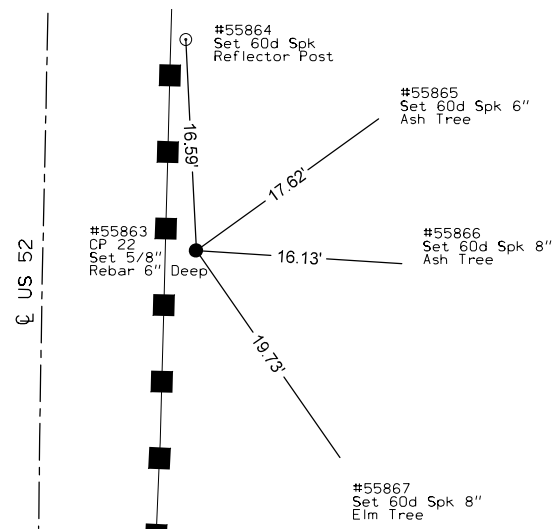
C.P. STA 158+94.46 LEFT 85.74  
 C.P. 20, Set 5/8" Rebar 6" Deep  
 N=3943313.747 E=5369645.162

NOT REFERENCABLE

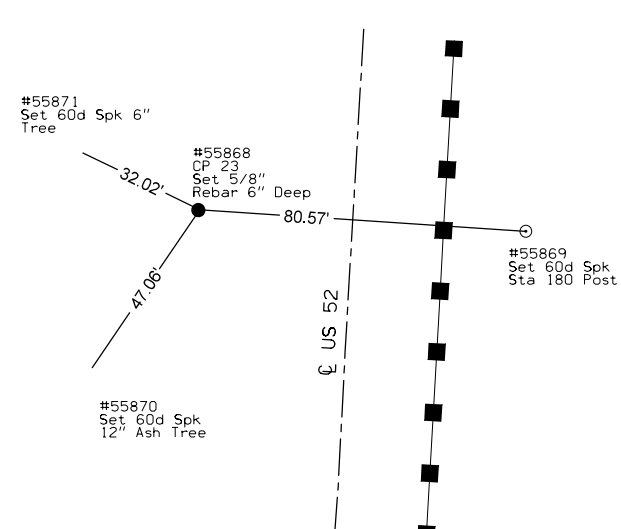
C.P. STA 167+29.34 RIGHT 32.18  
 C.P. 21, Set 5/8" Rebar 6" Deep  
 N=3944156.280 E=5369724.389



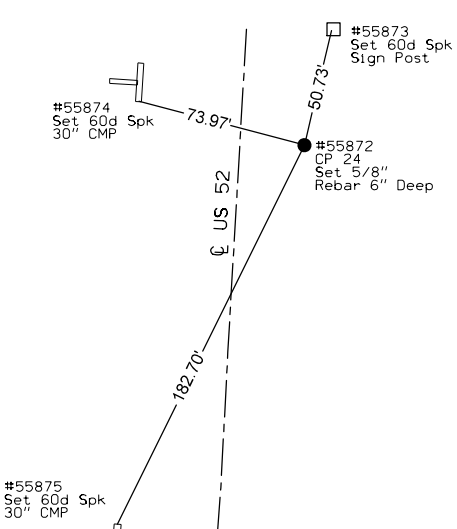
C.P. STA 172+20.01 RIGHT 32.97  
 C.P. 22, Set 5/8" Rebar 6" Deep  
 N=3944645.294 E=5369750.371



C.P. STA 180+09.87 LEFT 37.70  
 C.P. 23, Set 5/8" Rebar 6" Deep  
 N=3945437.885 E=5369724.390

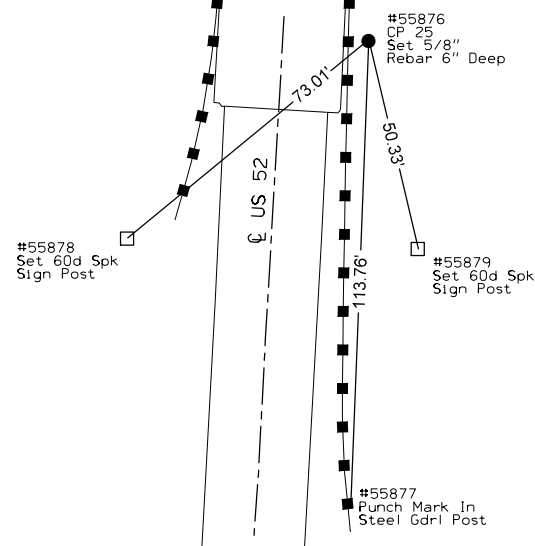


C.P. STA 188+14.85 RIGHT 27.87  
 C.P. 24, Set 5/8" Rebar 6" Deep  
 N=3946237.883 E=5369835.270

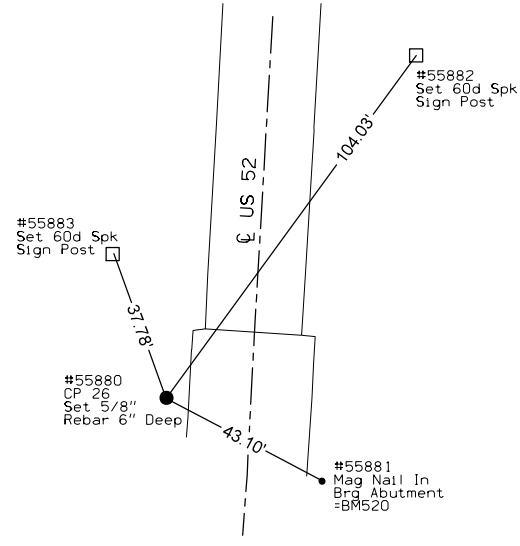




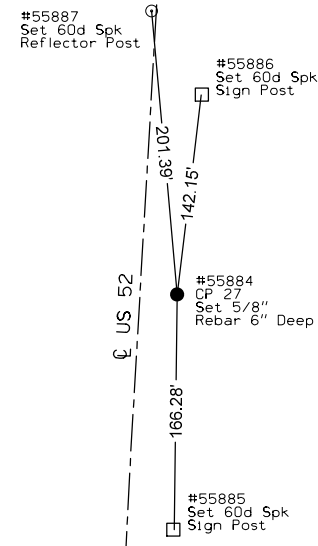
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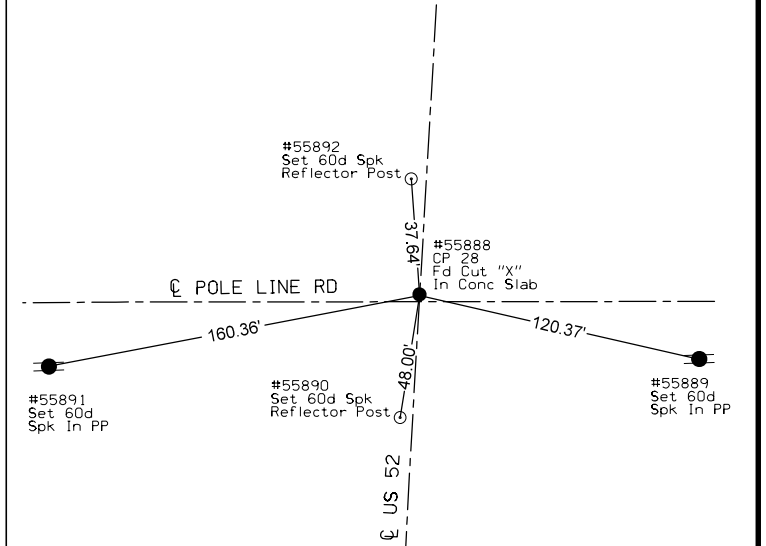
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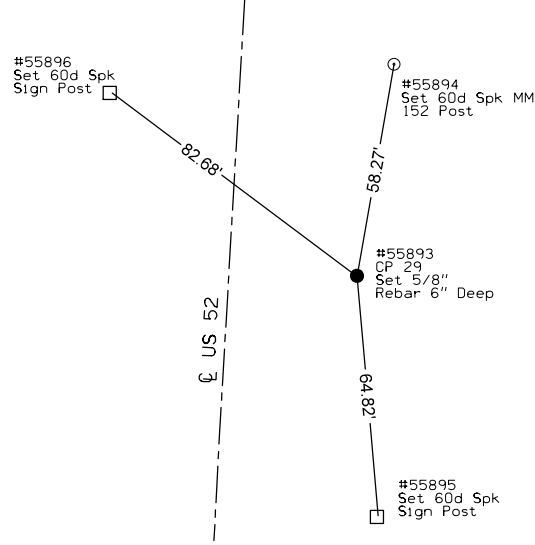
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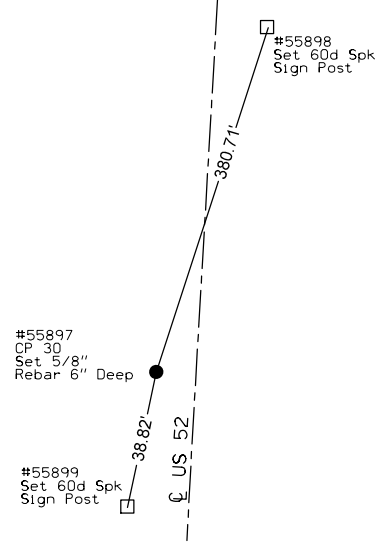
C.P. STA 213+06.12 RIGHT 0.30  
 C.P. 28, Fd Alignment POT  
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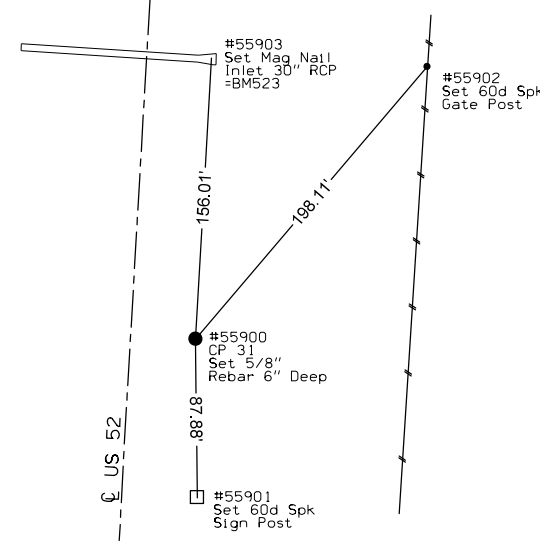
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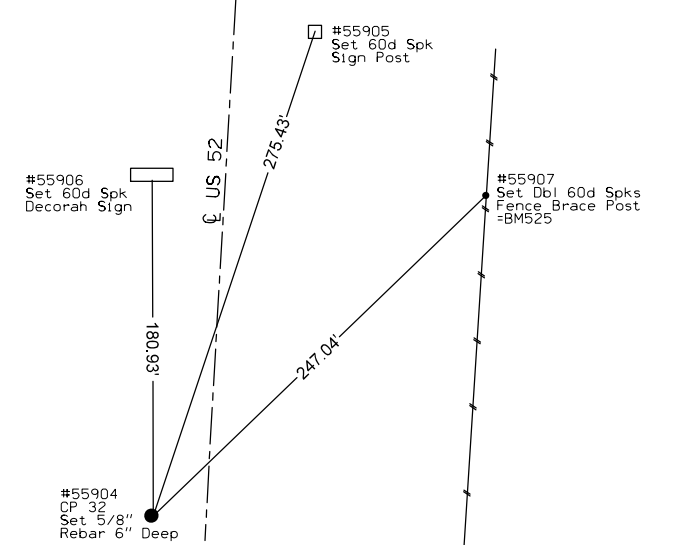
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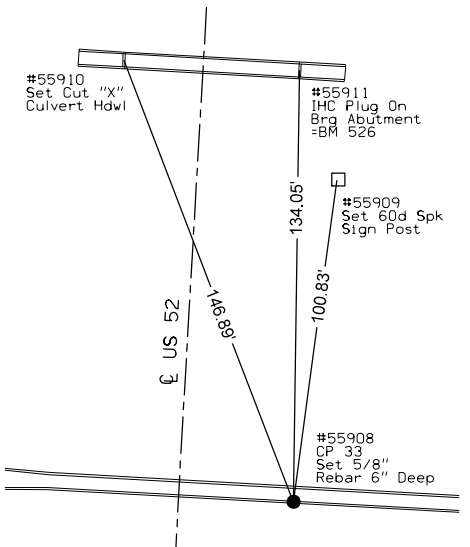
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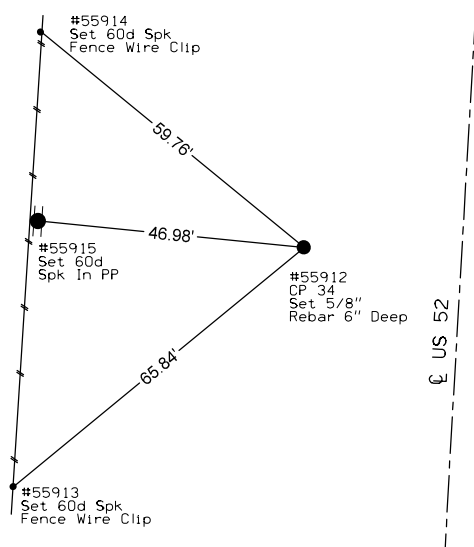
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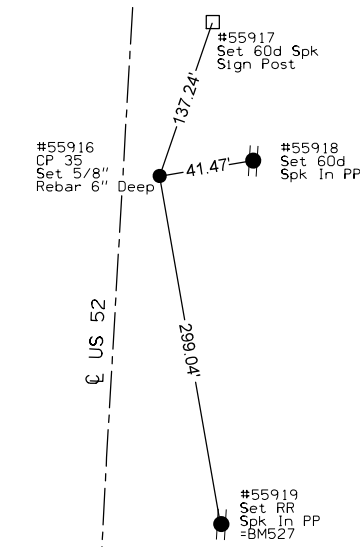
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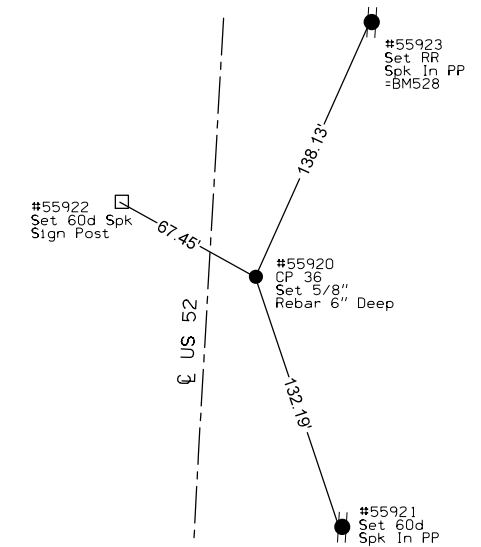
C.P. STA 260+11.06 LEFT 27.59  
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 N=3953425.757 E=5370185.971



C.P. STA 269+11.38 RIGHT 31.37  
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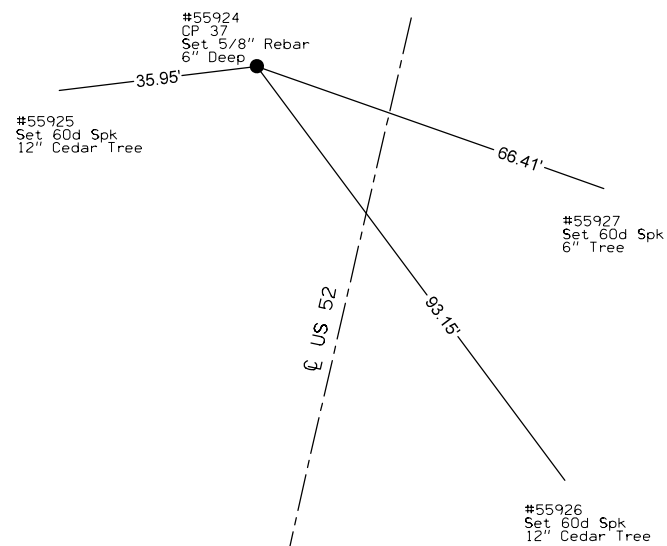


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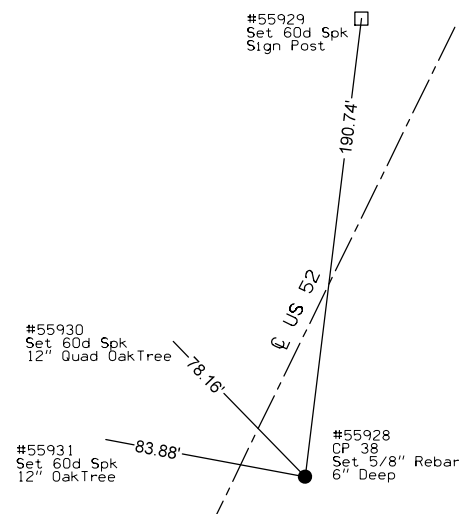




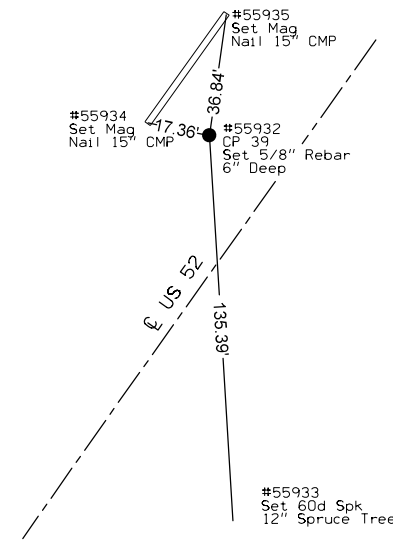
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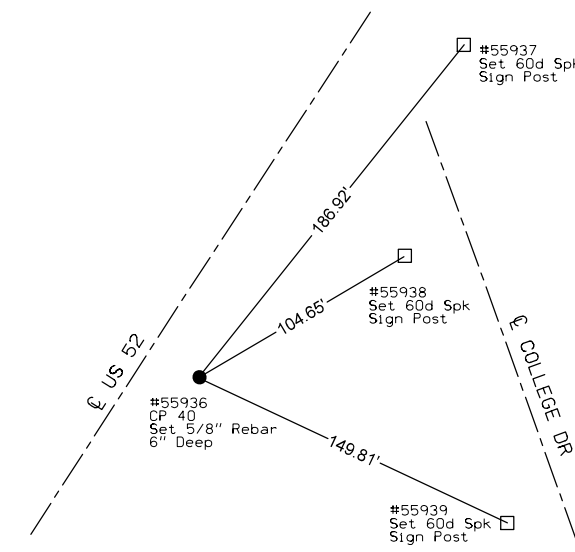
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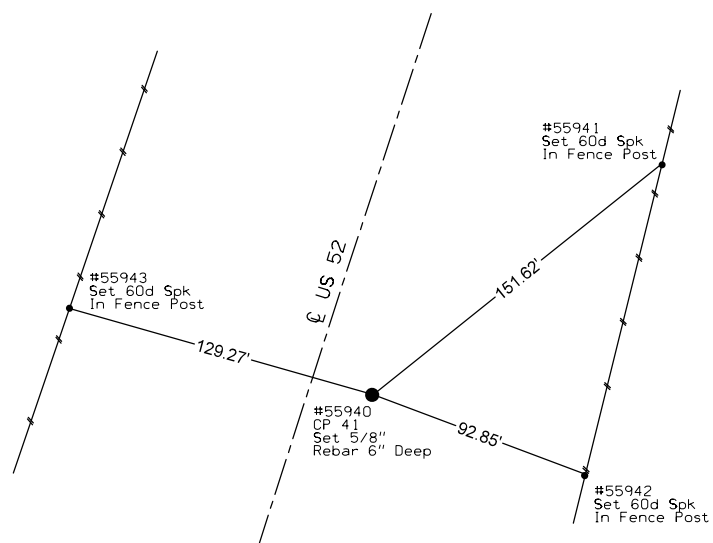
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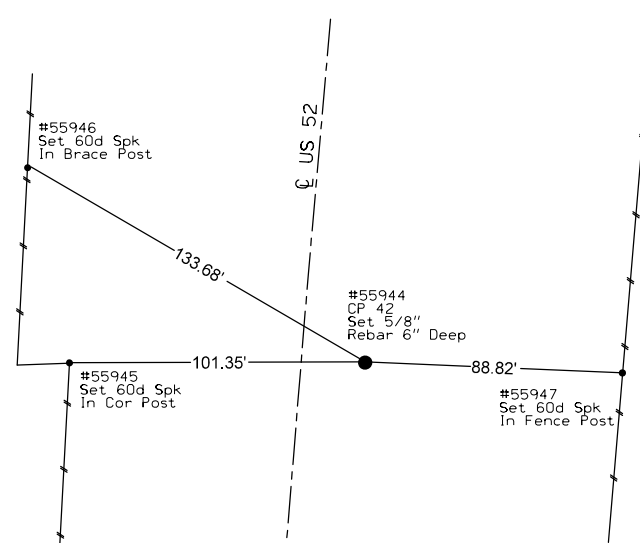
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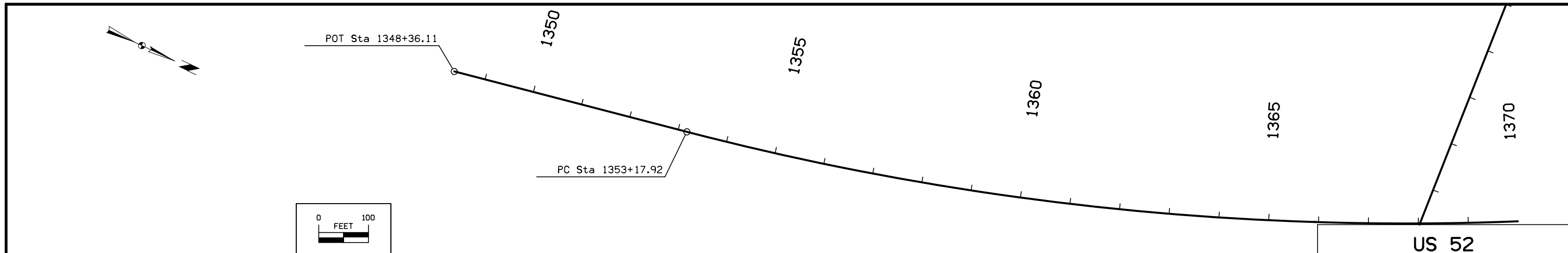


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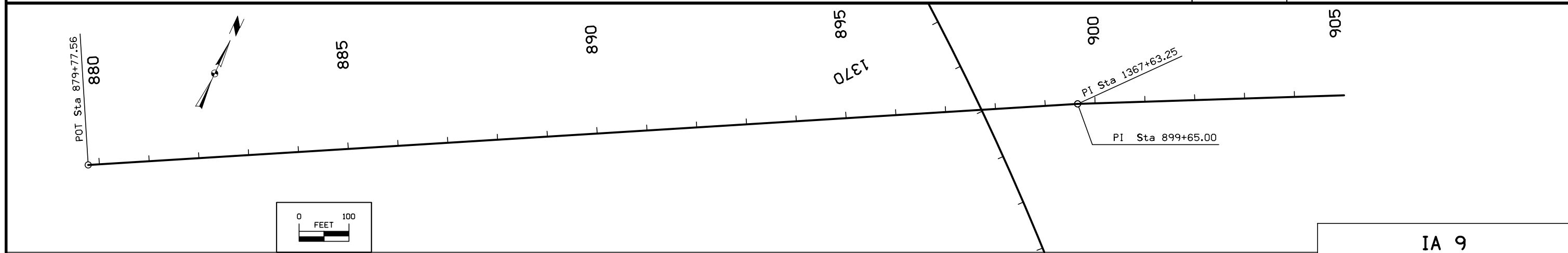
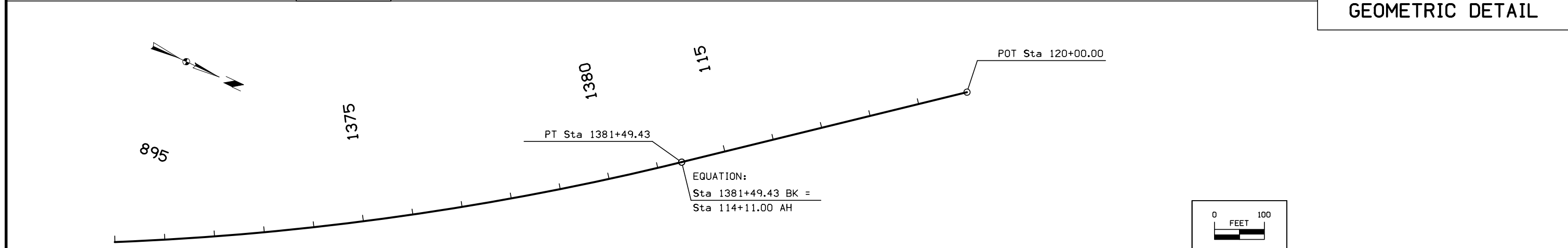


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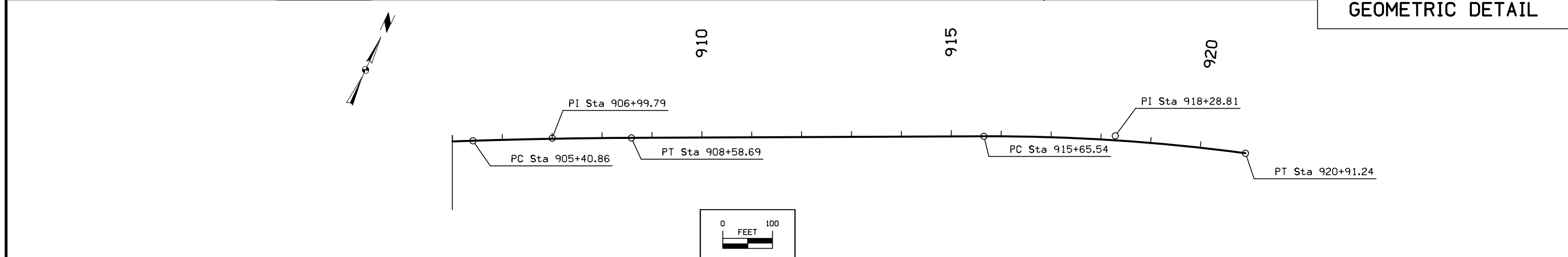




US 52  
GEOMETRIC DETAIL



IA 9  
GEOMETRIC DETAIL



**SPIRAL OR CIRCULAR CURVE DATA**

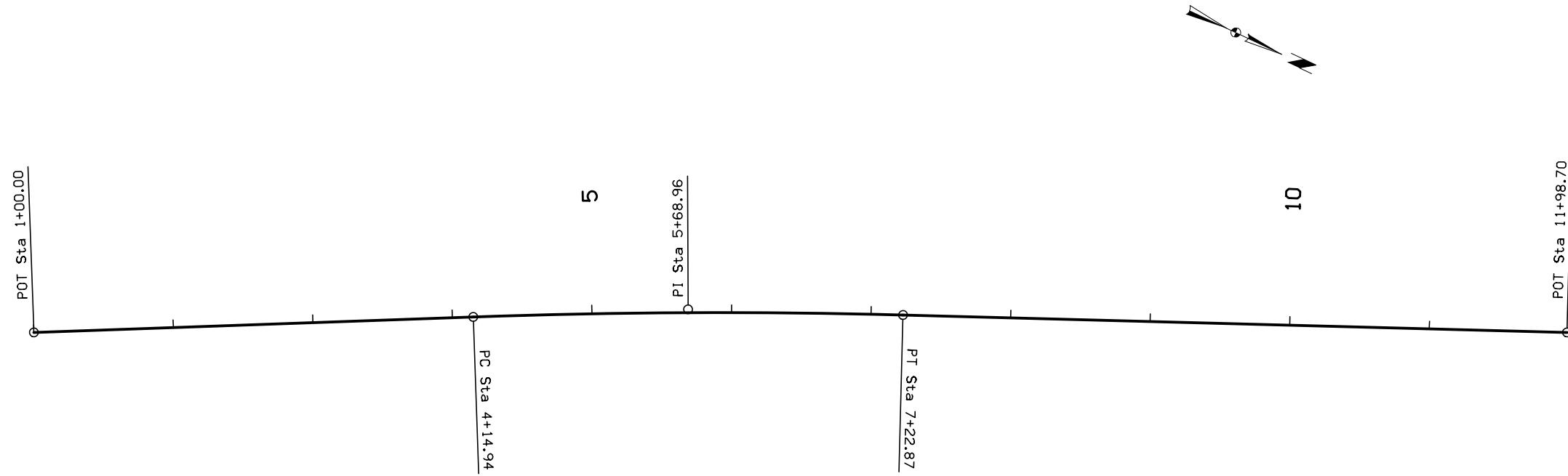
101-17  
04-19-11

Name	Location	$\Delta_{scs}$	Horizontal Alignment Data												Remarks			
			Spiral Data						Curve Data									
			$\theta_s$	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	$\Delta_c$	T	L	R		E		
ML_052-1	US Highway 52												28° 19' 49.6" LT	1,445.32	2,831.51	5,726.47	179.58	
SR_009-1 SR_009-2	Iowa Highway 9												01° 35' 20.9" RT	158.93	317.83	11,459.16	1.10	
20040	US 52 Fly-Through												07° 53' 07.5" RT	263.26	525.69	3,819.72	9.06	
													107°27' 51.0" RT	170.37	234.45	125.00	86.31	

**ALIGNMENT COORDINATES**

101-16  
10-20-09

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)
57	US Highway 52	1348+36.11	3,936,390.06	5,373,013.57															
ML_052-1			Equation: Sta	1381+49.43 (BK)	=	114+11.00 (AH)		1353+17.92	3,936,863.85	5,372,926.01	1367+63.25	3,938,285.11	5,372,663.34	1381+49.43	3,939,411.48	5,371,757.67			
43		114+11.00	3,939,411.48	5,371,757.67															
58		120+00.00	3,939,870.50	5,371,388.59															
6	Iowa Highway 9	879+77.56	3,938,162.65	5,370,679.68															
7		899+65.00	3,938,285.11	5,372,663.34															
SR_009-1								905+40.86	3,938,303.58	5,373,238.91	906+99.79	3,938,308.68	5,373,397.75	908+58.69	3,938,309.37	5,373,556.67			
SR_009-2								915+65.54	3,938,312.45	5,374,263.52	918+28.81	3,938,313.59	5,374,526.78	920+91.24	3,938,278.61	5,374,787.71			
10		920+91.24	3,938,278.61	5,374,787.71															



**US 52 DETOUR  
GEOMETRIC DETAIL**

**SPIRAL OR CIRCULAR CURVE DATA**

101-17  
04-19-11

Name	Location	$\Delta_{scs}$	Horizontal Alignment Data								Remarks				
			Spiral Data				Curve Data								
			$\theta_s$	$L_s$	$T_s$	$E_s$	$X_c$	$Y_c$	L.T.	S.T.	$\Delta_c$	T	L	R	E
DET1-1	US Highway 52 Detour										03° 31' 43.0" RT	154.01	307.93	5,000.00	2.37

**ALIGNMENT COORDINATES**

101-16  
10-20-09

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	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
10000	US Highway 52 Detour	1+00.00	3,937,798.02	5,372,649.31									
DET1-1													
10001		11+98.70	3,938,791.28	5,372,180.63	4+14.94	3,938,077.92	5,372,504.94	5+68.96	3,938,214.80	5,372,434.34	7+22.87	3,938,355.77	5,372,372.30

Winneshiek	ROW: NHSN-052-5(43)--2R-96			PIN	15-96-052-010														
	IA 9 Intersection in Decorah																		
		STATE		COUNTY		CITY		BORROW											
PARCEL NO	OWNER NAME	FEE	EASE	FEE	EASE	FEE	EASE	EXCESS	FEE	T.E.	MITIGATION	OTHER	HOUSE	BUILDING(S)	A/C ONLY	TOTAL ACQ.			
1	John Beard - Fee																		
2	952 Plaza, LLC - Fee		0.22 AC																
3	Nordschow Family Associates, LP - Fee		0.09 AC																
4	City of Decorah - Fee		0.07 AC																
6	Daniel Beard - Fee Kevin Kraus - Fee		0.05 AC																
5 Parcels	"TOTALS	0 AC	0.43 AC	0 AC	0 AC	0 AC	0 AC	0 AC	0 AC	0 AC	0 AC	0 AC							
		0 SF		0 SF	0 SF	0 SF	0 SF	0 SF	0 SF	0 SF	0 SF	0 SF							



DECORAH TWP.  
T-98N R-8W  
SEC. 20

③  
NORDSCHOW FAMILY  
ASSOCIATES, LP

②  
952 PLAZA, LLC

④  
CITY OF  
DECORAH

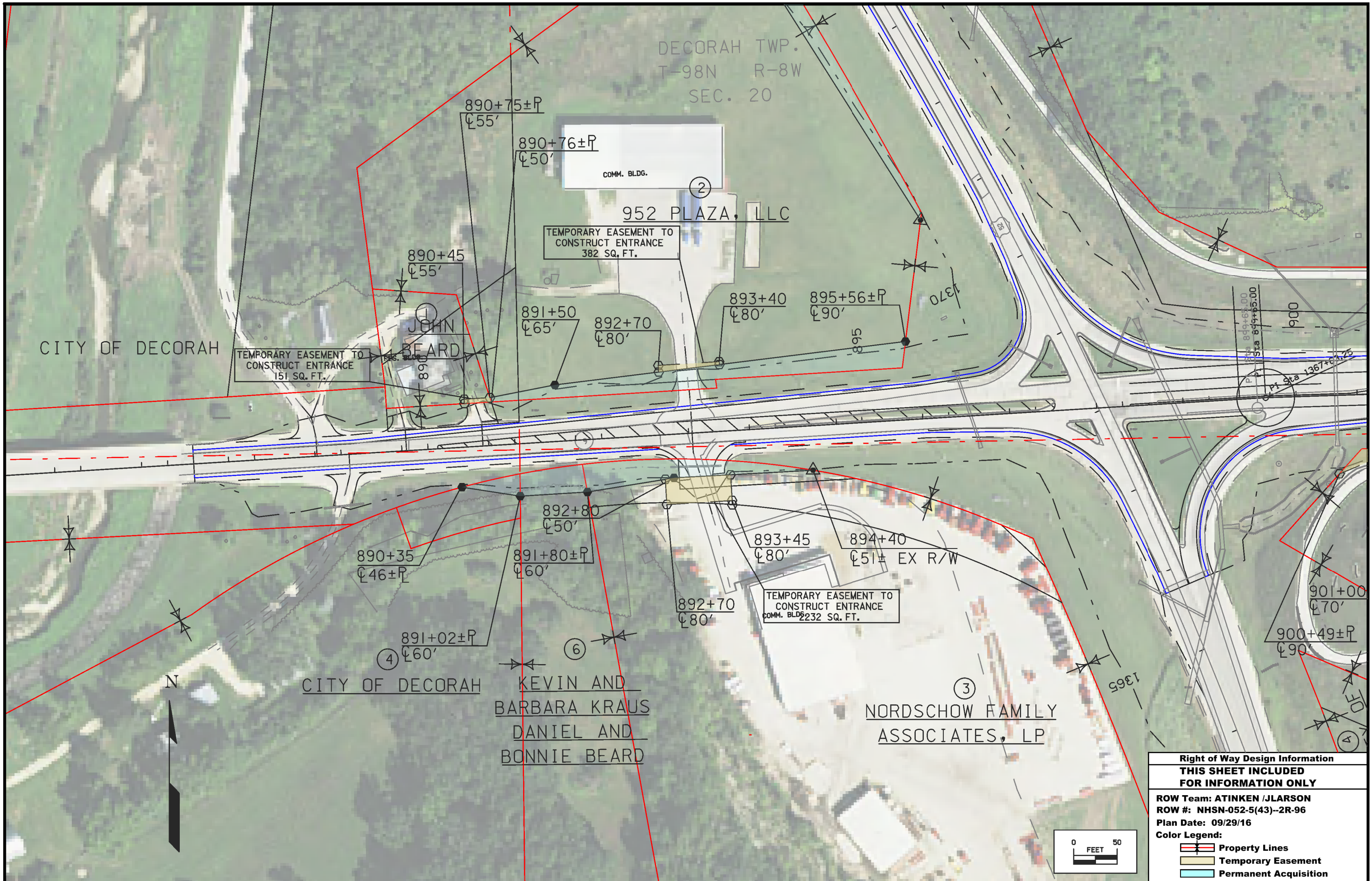
G & K  
DEVELOPMENT

BRAD J. SPITZACK



<b>Right of Way Design Information</b>	
<b>THIS SHEET INCLUDED FOR INFORMATION ONLY</b>	
ROW Team: ATINKEN /JLARSON	
ROW #: NHSN-052-5(43)--2R-96	
Plan Date: 09/29/16	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition





DECORAH TWP.  
T-98N R-8W  
SEC. 20

952 PLAZA, LLC

JOHN BEARD

KEVIN AND  
BARBARA KRAUS  
DANIEL AND  
BONNIE BEARD

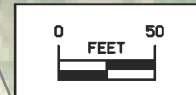
NORDSCHOW FAMILY  
ASSOCIATES, LP

TEMPORARY EASEMENT TO  
CONSTRUCT ENTRANCE  
151 SQ. FT.

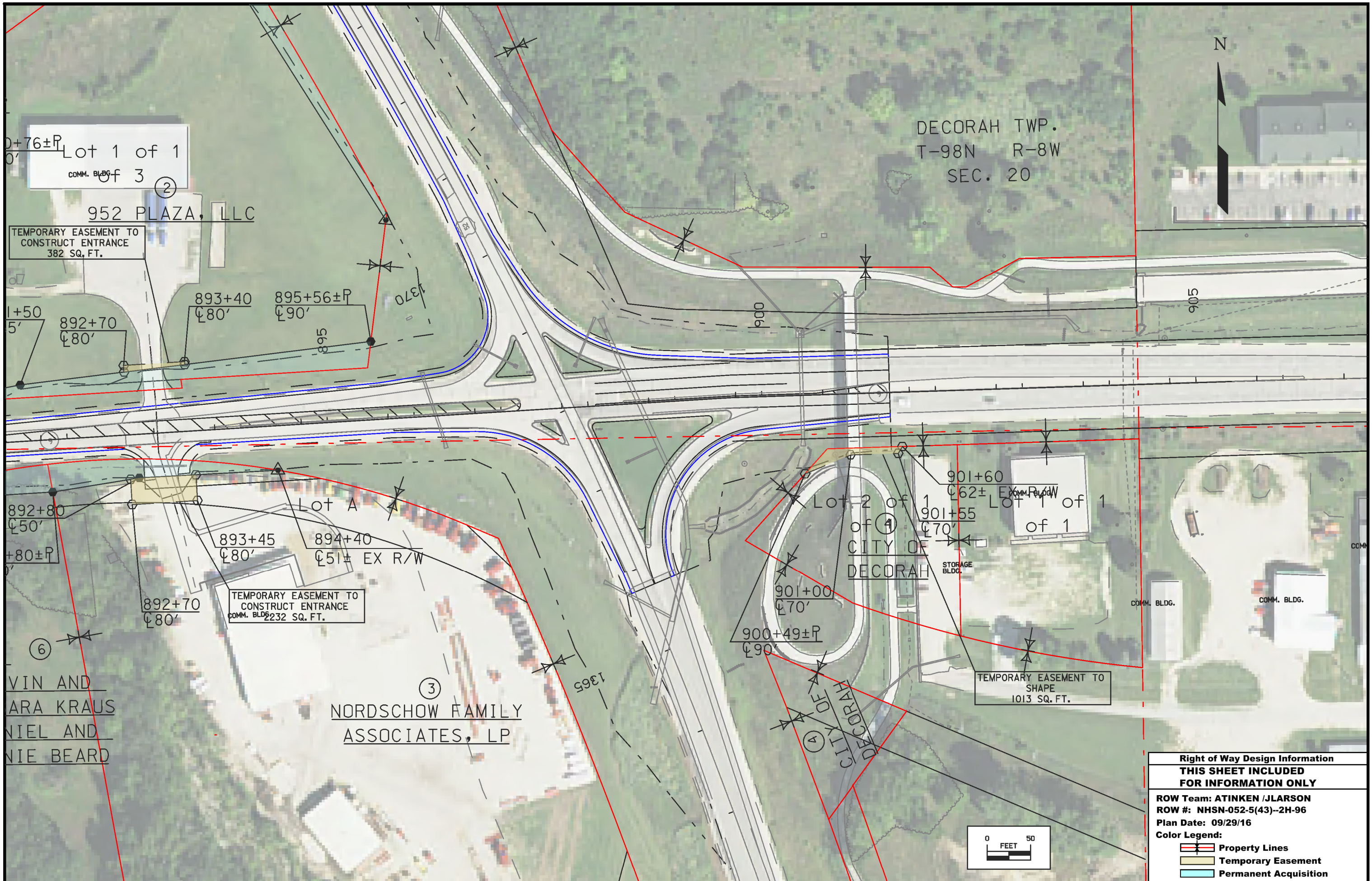
TEMPORARY EASEMENT TO  
CONSTRUCT ENTRANCE  
382 SQ. FT.

TEMPORARY EASEMENT TO  
CONSTRUCT ENTRANCE  
COMM. BLDG. 232 SQ. FT.

<b>Right of Way Design Information</b>	
<b>THIS SHEET INCLUDED FOR INFORMATION ONLY</b>	
ROW Team: ATINKEN /JLARSON	
ROW #: NHSN-052-5(43)--2R-96	
Plan Date: 09/29/16	
<b>Color Legend:</b>	
	Property Lines
	Temporary Easement
	Permanent Acquisition







N



DECORAH TWP.  
T-98N R-8W  
SEC. 20

0+76±P  
Lot 1 of 1  
COMM. BLDG. of 3

952 PLAZA, LLC

TEMPORARY EASEMENT TO  
CONSTRUCT ENTRANCE  
382 SQ. FT.

893+40  
895+56±P  
892+70  
891+50

892+80  
893+45  
894+40  
892+70

TEMPORARY EASEMENT TO  
CONSTRUCT ENTRANCE  
COMM. BLDG. 232 SQ. FT.

NORDSCHOW FAMILY  
ASSOCIATES, LP

VIN AND  
ARA KRAUS  
NIEL AND  
NIE BEARD

Lot 2 of 1  
of 1  
CITY OF  
DECORAH

901+00  
900+49±P

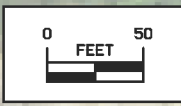
901+60  
901+55  
LOT 1 of 1  
of 1

TEMPORARY EASEMENT TO  
SHAPE  
1013 SQ. FT.

COMM. BLDG.

COMM. BLDG.

<b>Right of Way Design Information</b>	
<b>THIS SHEET INCLUDED FOR INFORMATION ONLY</b>	
ROW Team: ATINKEN /JLARSON	
ROW #: NHSN-052-5(43)--2H-96	
Plan Date: 09/29/16	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition





**STAGING NOTES**

**Stage 1 Traffic**  
- Close inside lanes of IA 9, provide minimum 6' of work area

**Stage 1 Construction**  
- Remove dowelled on median on east leg of intersection  
- Fill removed area with temporary pavement and permanent pavement. Refer to Sheet No. J.3 for limits of paving.

**Stage 2 Traffic**  
- Move IA 9 EB traffic to IA 9 WB lane, provide minimum 6' work area and minimum 11' traffic lanes

**Stage 2 Construction**  
- Remove islands on south side of IA 9. Build temporary pavement

**Stage 3 Traffic**  
- Stage 3A: Use flaggers to build shoulder strengthening on north side of IA 9. Provide minimum 11' westbound lane along median.  
- Stage 3B: Build shoulder strengthening on south side of IA 9, at night.  
- Stage 3C: Put traffic on shoulder strengthening built in Stages 3A and 3B.

**Stage 3 Construction**  
- Stage 3A: Build shoulder strengthening on north side of IA 9. Build shoulder strengthening in southeast quadrant.  
- Stage 3B: Build shoulder strengthening on south side of IA 9  
- Stage 3C: Grind median curb and build temporary pavement.

**Stage 4 Traffic**  
- Shift traffic to shoulder strengthening built in Stage 3. Use TBR to provide 12' traffic lanes and 6' work area.

**Stage 4 Construction**  
- Build temporary pavement on south side of IA 9

**Stage 5 Traffic**  
- Shift WB IA 9 traffic south to provide 6' of work area.  
- Use TC-216 to build US 52 one side at a time. Multiple Traffic Signal set-ups are required to maintain the maximum work area length.

**Stage 5 Construction**  
- Grind NW island curb and build temporary pavement.  
- Construct US 52 from Sta 1370+17 to the end of the project.

**Stage 6 Traffic**  
- Use temporary traffic signals to tie temporary pavement to US 52 on north end. Use paved shoulder on south end for work area.  
- Provide 6' of work area around west returns.

**Stage 6 Construction**  
- Construct US 52 runaround

**Stage 7 Traffic**  
- IA 9 : Use temporary traffic signals to build west 200'. Then switch traffic to EB lane and temporary pavement, using TBR  
- US 52 : Use runaround

**Stage 7 Construction**  
- Construct NE quadrant of intersection, north side of west leg of IA 9 and south portion of US 52

**Stage 8 Traffic**  
- IA 9 : Switch traffic to WB lanes and temporary pavement with Temporary Barrier Rail  
- US 52 : Use runaround  
- Flaggers shall be used to close the eastbound lane to allow truck access to the work area. See note on Sheet No. J.10 for additional information.

**Stage 8 Construction**  
- Construct south side of west leg of IA 9

**Stage 9 Traffic**  
- IA 9 : Switch traffic to WB lanes  
- US 52 : Use runaround

**Stage 9 Construction**  
- Construct NB to EB Fly-through

**Stage 10 Traffic**  
- IA 9 : Switch traffic to WB lanes  
- US 52 : Use runaround

**Stage 10 Construction**  
- Construct SE quadrant of intersection

**Stage 11 Traffic**  
- IA 9 : Switch traffic to EB lanes and temporary pavement  
- US 52 : Shift traffic 6' east to provide room for construction

**Stage 11 Construction**  
- Construct portion of NW quadrant of intersection, remove US 52 runaround

**Stage 12 Traffic**  
- IA 9 : Keep traffic on EB lanes  
- US 52 : Keep traffic 4' east to provide work area and minimum 11' lanes

**STAGING NOTES**

**Stage 12 Construction**  
- Construct portion of NW quadrant of intersection

**Stage 13 Traffic**  
- IA 9 : Switch traffic to WB lanes, Provide flaggers to completed paved shoulder work  
- US 52 : Shift traffic 4' east to provide work area and minimum 11' lanes

**Stage 13 Construction**  
- Remove IA 9 widening temporary pavement and build paved shoulders on west end of project  
- Construct SW quadrant of intersection

**TRAFFIC CONTROL PLAN**

Refer to Tab. 108-26A and Sheet Nos. J.3 to J.15 for traffic control details.

Stop signs for all stages shall be portable.

**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

**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

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

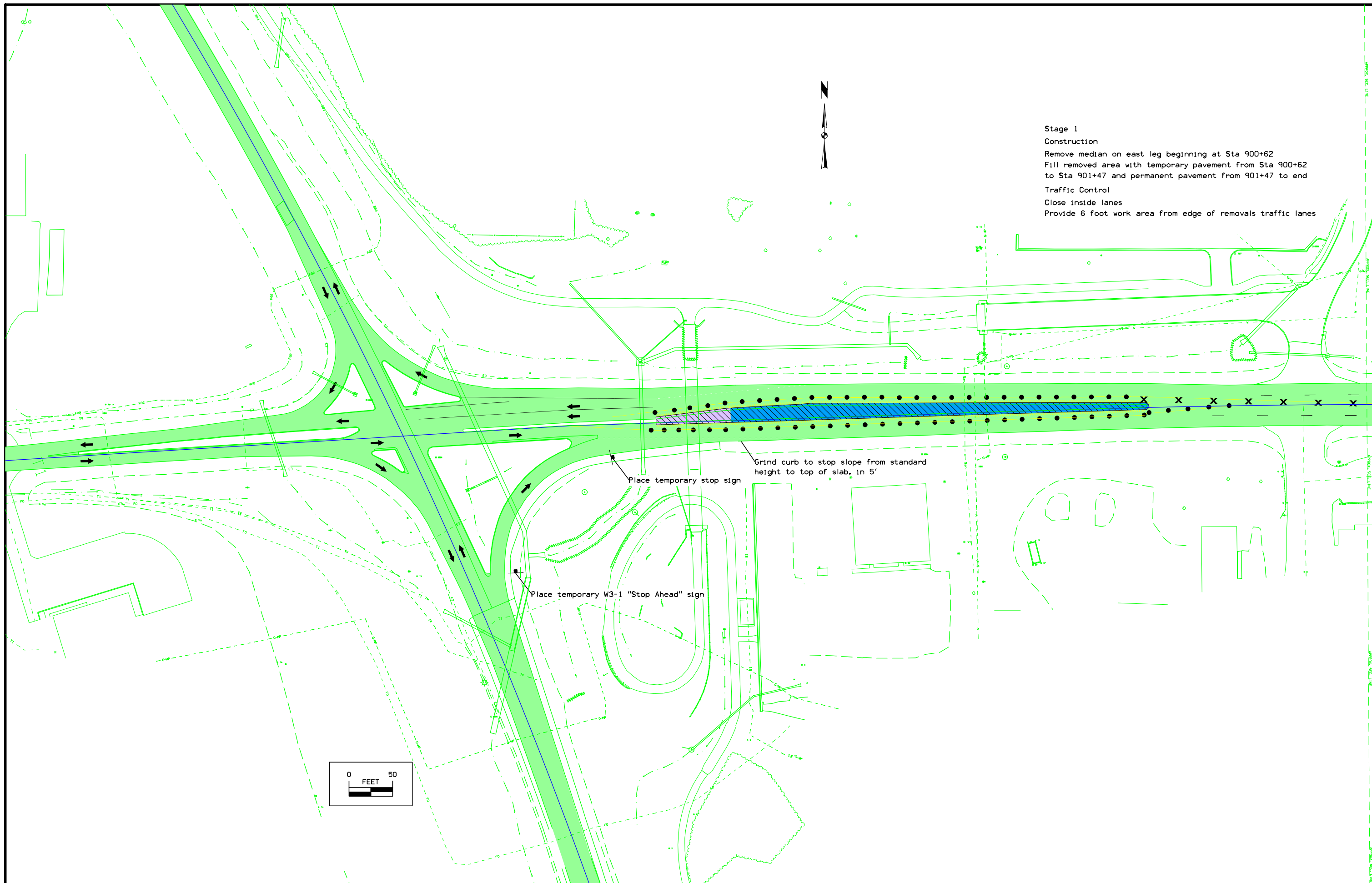
**PLAN VIEW PATTERN AND SYMBOL LEGEND  
OF TRAFFIC CONTROL AND STAGING SHEETS**

●	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		

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

**TRAFFIC CONTROL  
AND  
STAGING**

(COVERS SHEET SERIES J)

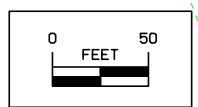


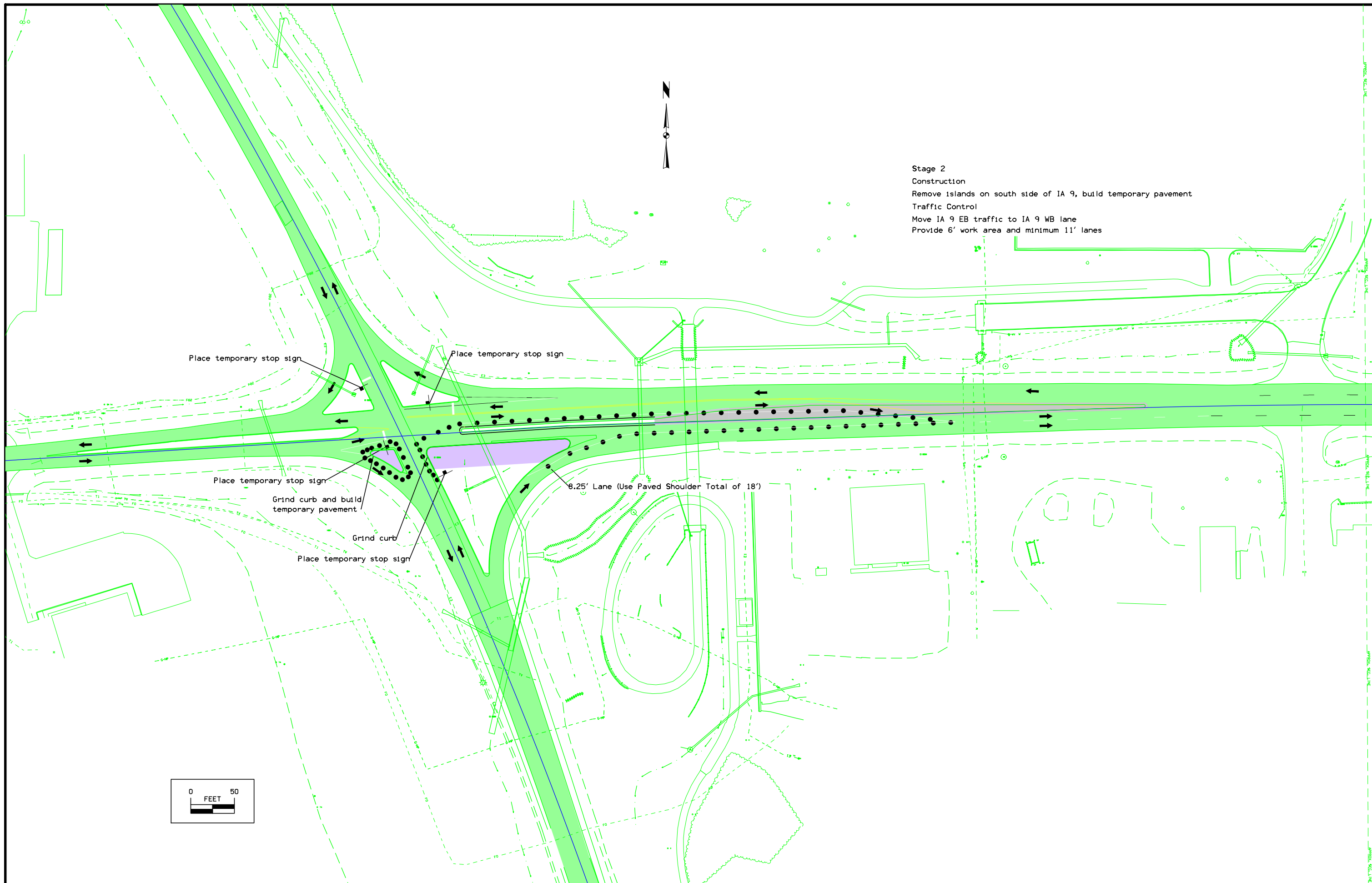
Stage 1  
 Construction  
 Remove median on east leg beginning at Sta 900+62  
 Fill removed area with temporary pavement from Sta 900+62  
 to Sta 901+47 and permanent pavement from 901+47 to end  
 Traffic Control  
 Close inside lanes  
 Provide 6 foot work area from edge of removals traffic lanes

Grind curb to stop slope from standard height to top of slab, in 5'

Place temporary stop sign

Place temporary W3-1 "Stop Ahead" sign





Stage 2  
 Construction  
 Remove islands on south side of IA 9, build temporary pavement  
 Traffic Control  
 Move IA 9 EB traffic to IA 9 WB lane  
 Provide 6' work area and minimum 11' lanes

Place temporary stop sign

Place temporary stop sign

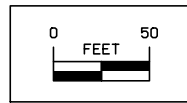
Place temporary stop sign

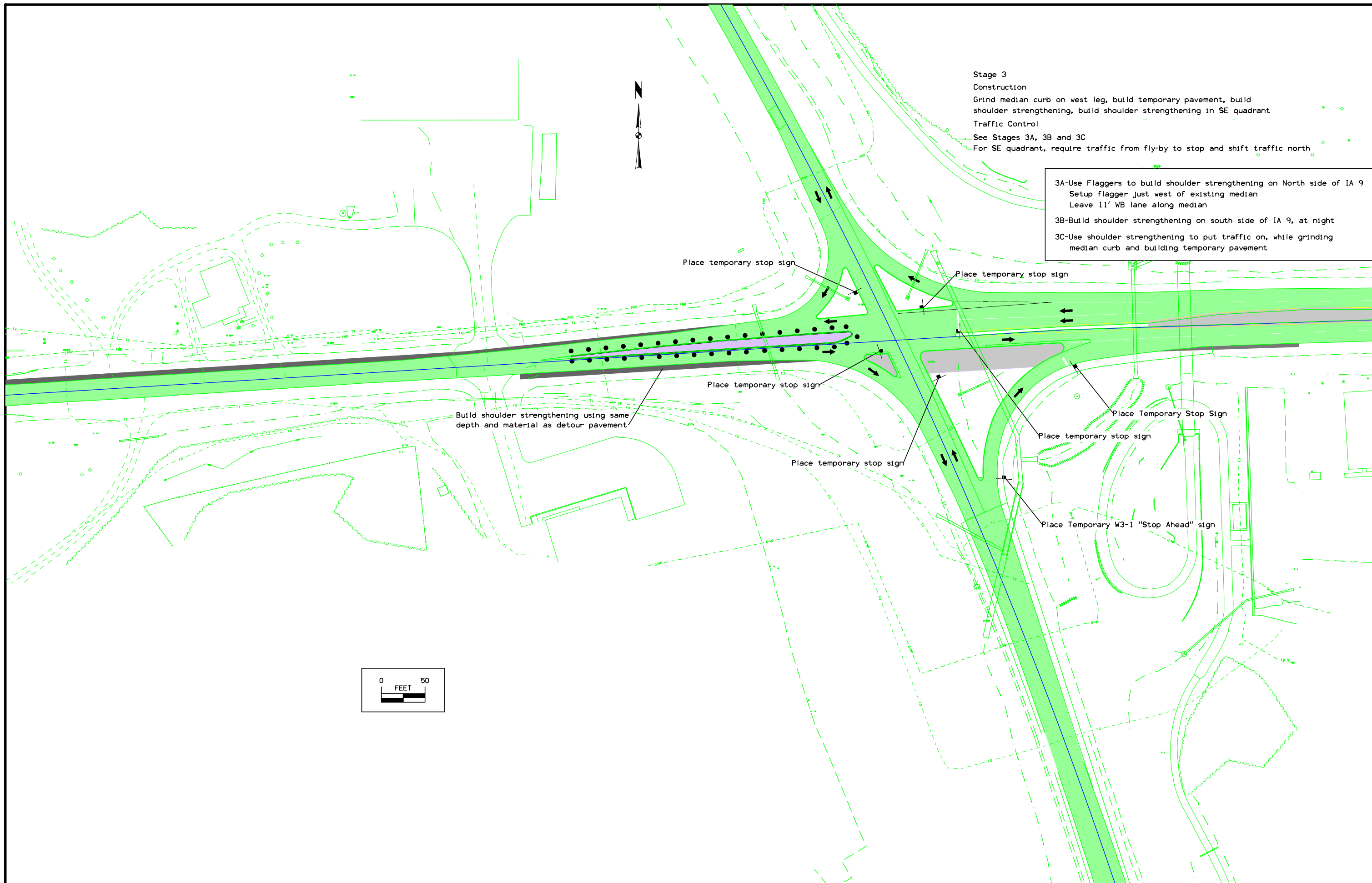
Grind curb and build temporary pavement

Grind curb

Place temporary stop sign

8.25' Lane (Use Paved Shoulder Total of 18')





Stage 3  
 Construction  
 Grind median curb on west leg, build temporary pavement, build shoulder strengthening, build shoulder strengthening in SE quadrant  
 Traffic Control  
 See Stages 3A, 3B and 3C  
 For SE quadrant, require traffic from fly-by to stop and shift traffic north

3A-Use Flaggers to build shoulder strengthening on North side of IA 9  
 Setup flagger just west of existing median  
 Leave 11' WB lane along median  
 3B-Build shoulder strengthening on south side of IA 9, at night  
 3C-Use shoulder strengthening to put traffic on, while grinding median curb and building temporary pavement

Place temporary stop sign

Place temporary stop sign

Place temporary stop sign

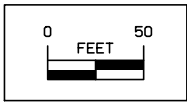
Build shoulder strengthening using same depth and material as detour pavement

Place temporary stop sign

Place Temporary Stop Sign

Place temporary stop sign

Place Temporary W3-1 "Stop Ahead" sign





Stage 4  
 Construction  
 Build temporary pavement on south side of IA 9  
 Traffic Control  
 Use shoulder strengthening built in Stage 3 for traffic  
 Provide 12' lanes, 6' work area and TBR

Place temporary stop sign

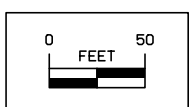
Place temporary stop sign

Place temporary stop sign

UAC shoulder strengthening  
 built in Stage 3  
 Build detour pavement around  
 existing shoulder strengthening

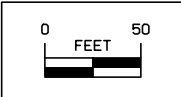
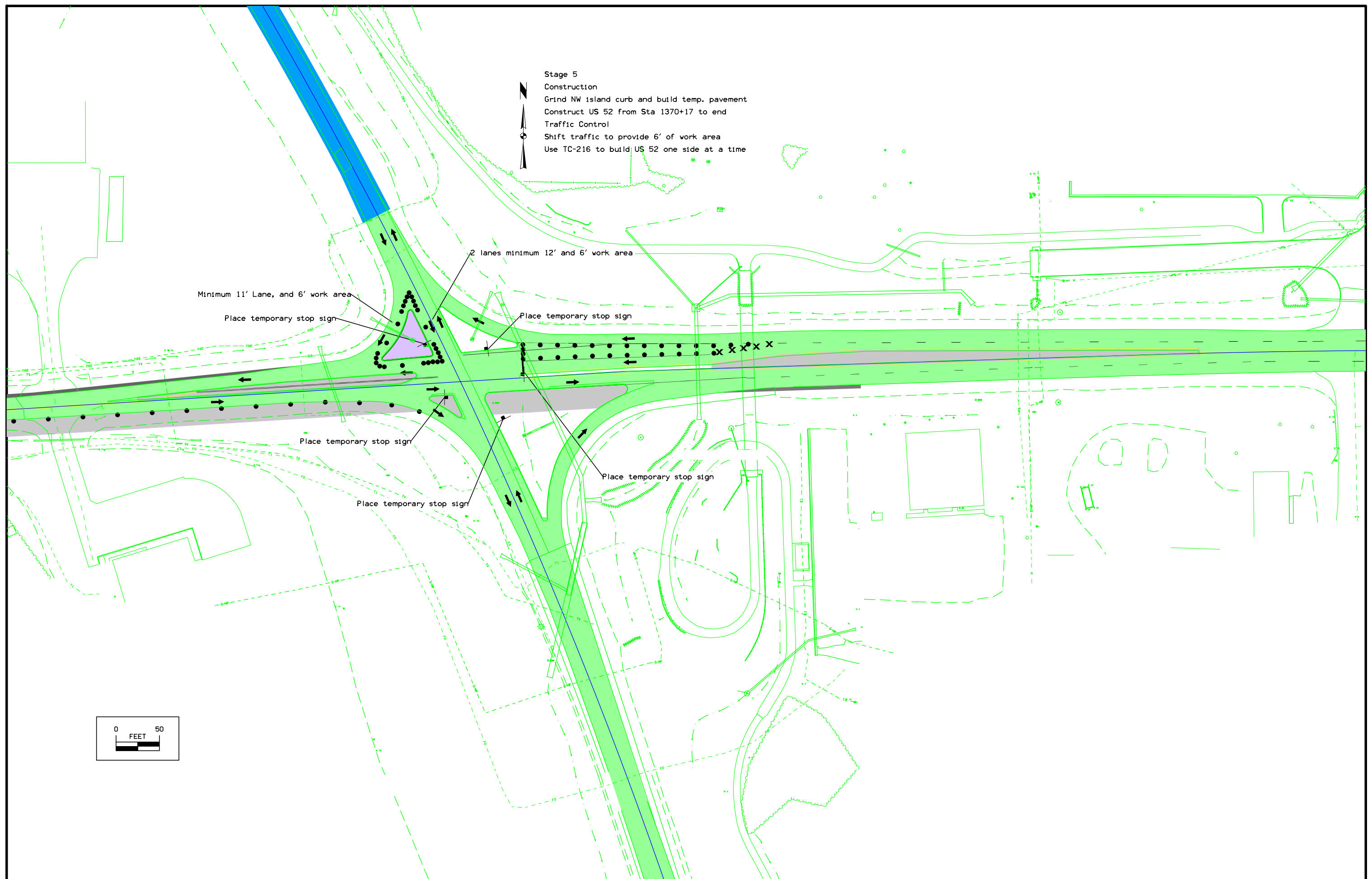
Place temporary stop sign

Place temporary stop sign



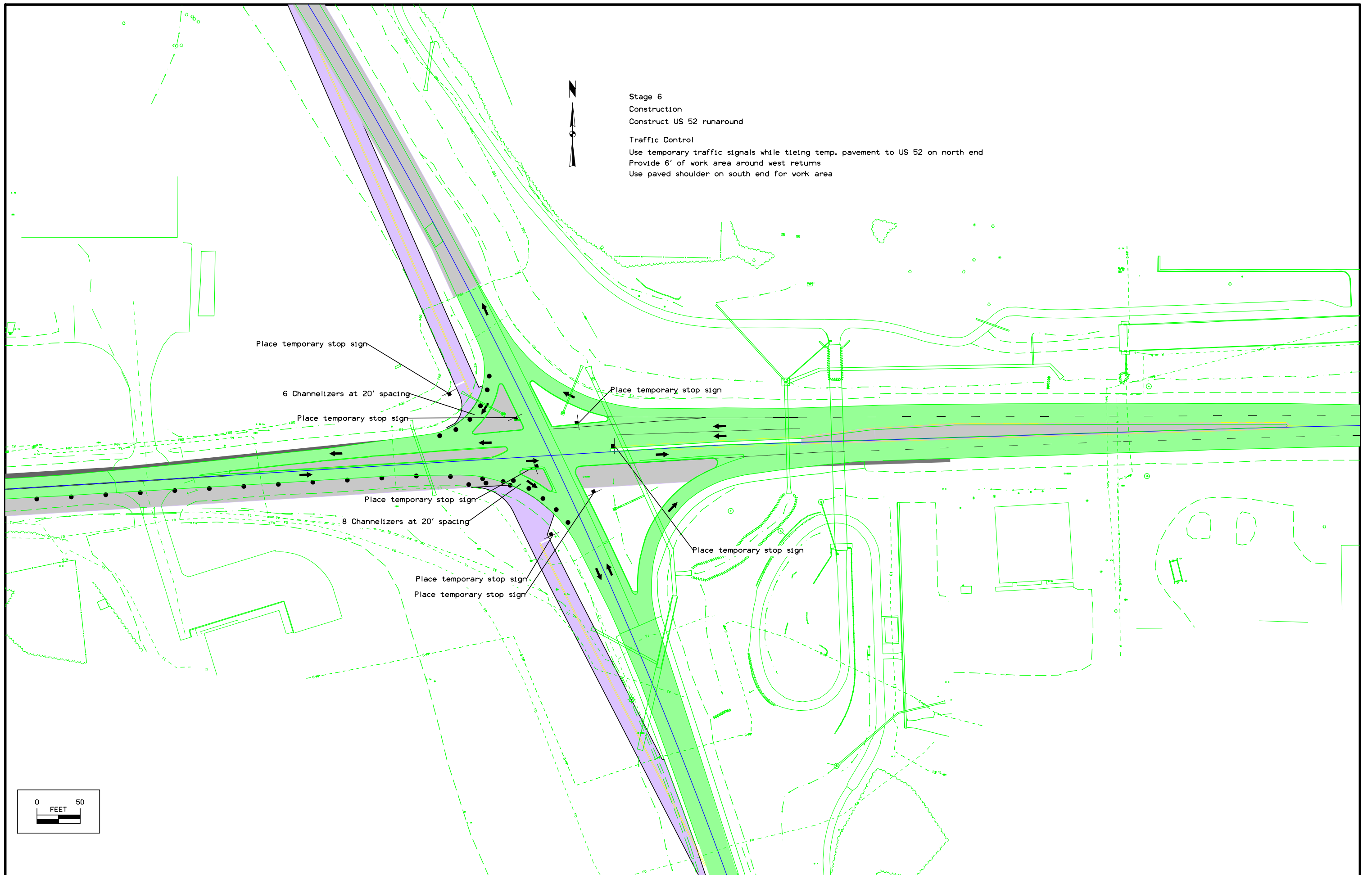


Stage 5  
 Construction  
 Grind NW island curb and build temp. pavement  
 Construct US 52 from Sta 1370+17 to end  
 Traffic Control  
 Shift traffic to provide 6' of work area  
 Use TC-216 to build US 52 one side at a time





Stage 6  
Construction  
Construct US 52 runaround  
  
Traffic Control  
Use temporary traffic signals while tying temp. pavement to US 52 on north end  
Provide 6' of work area around west returns  
Use paved shoulder on south end for work area



Place temporary stop sign

6 Channelizers at 20' spacing

Place temporary stop sign

Place temporary stop sign

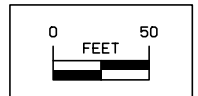
Place temporary stop sign

8 Channelizers at 20' spacing

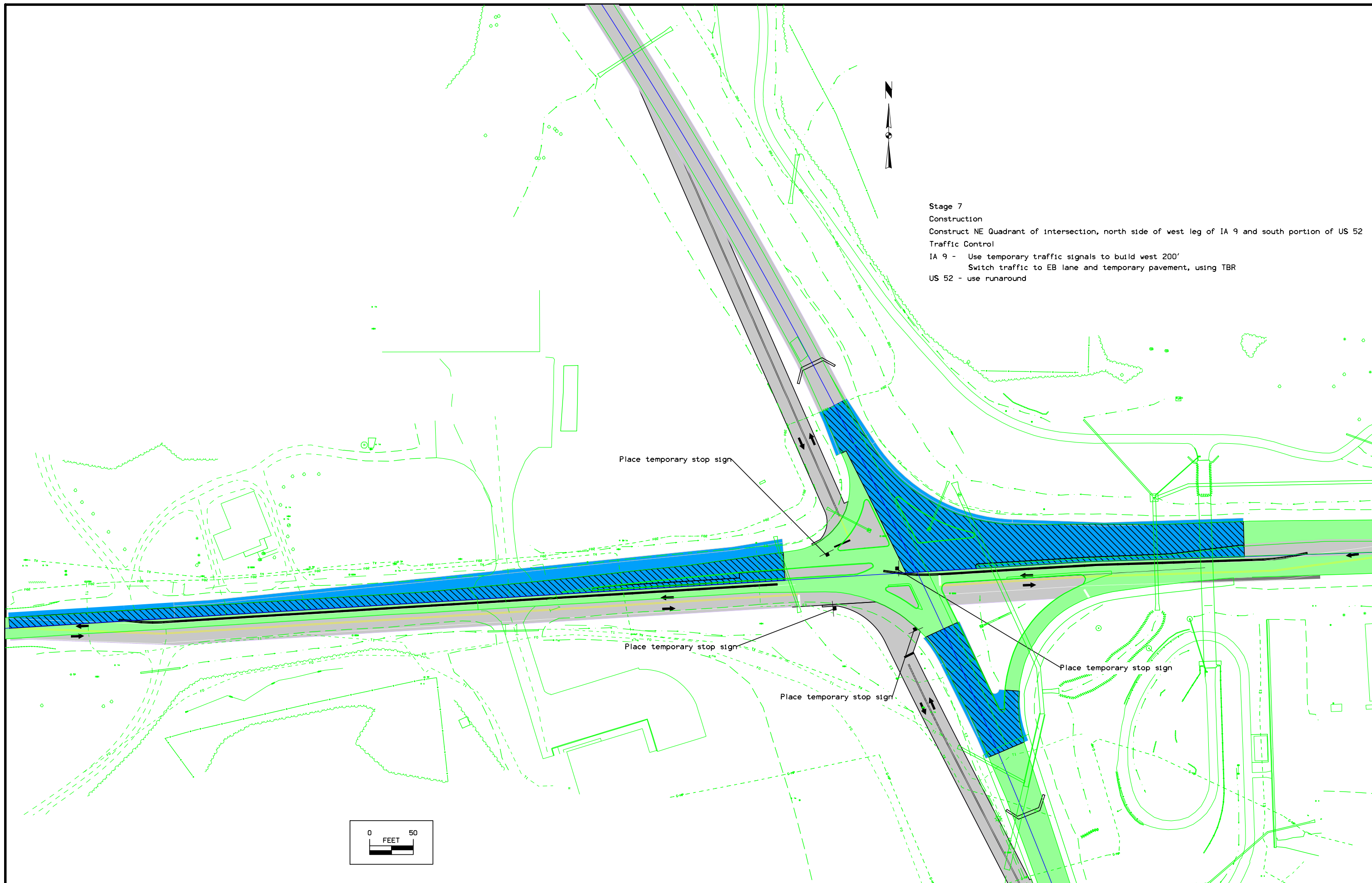
Place temporary stop sign

Place temporary stop sign

Place temporary stop sign







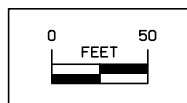
Stage 7  
 Construction  
 Construct NE Quadrant of intersection, north side of west leg of IA 9 and south portion of US 52  
 Traffic Control  
 IA 9 - Use temporary traffic signals to build west 200'  
           Switch traffic to EB lane and temporary pavement, using TBR  
 US 52 - use runaround

Place temporary stop sign

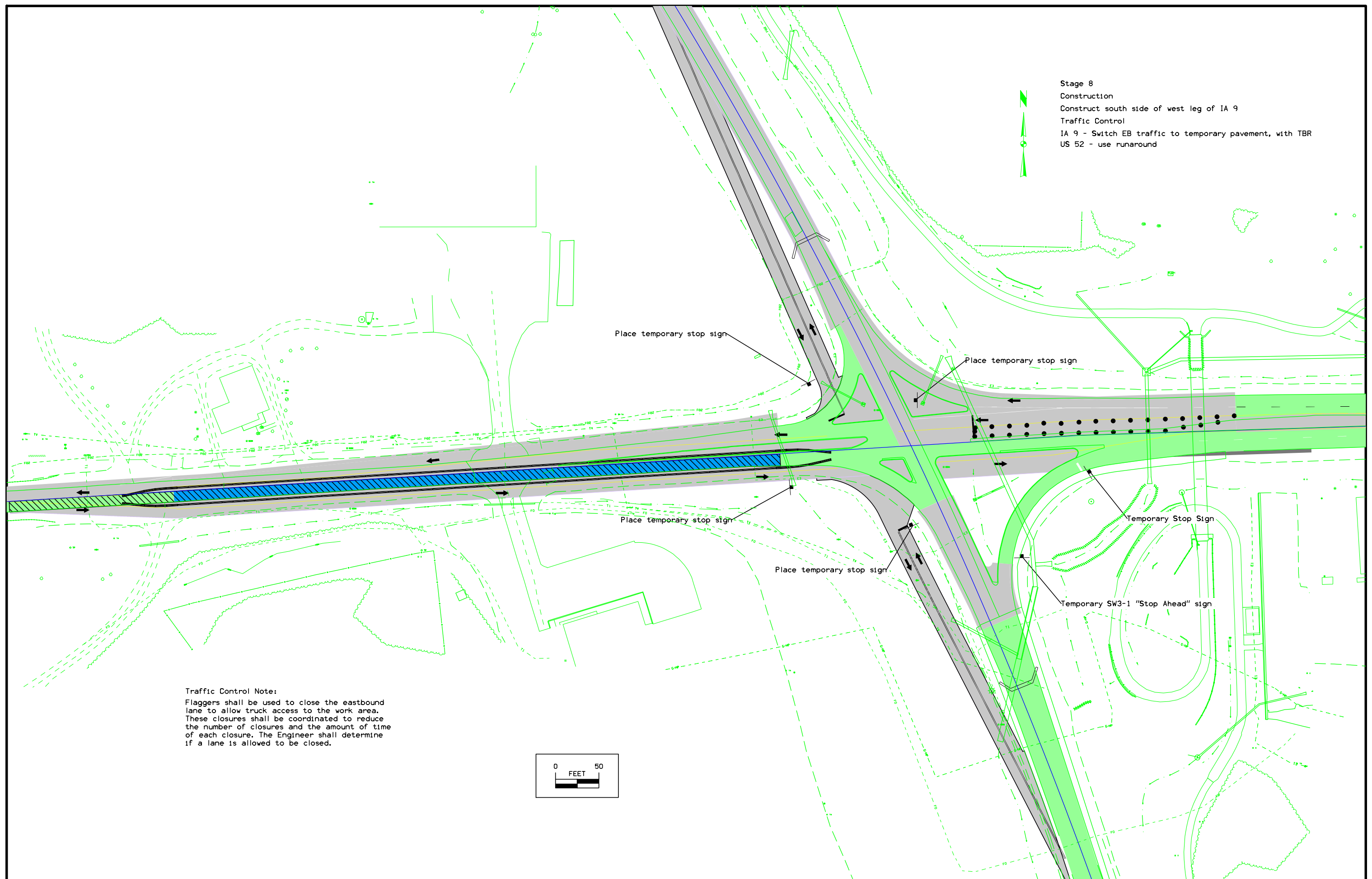
Place temporary stop sign

Place temporary stop sign

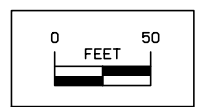
Place temporary stop sign



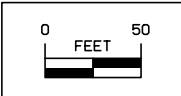
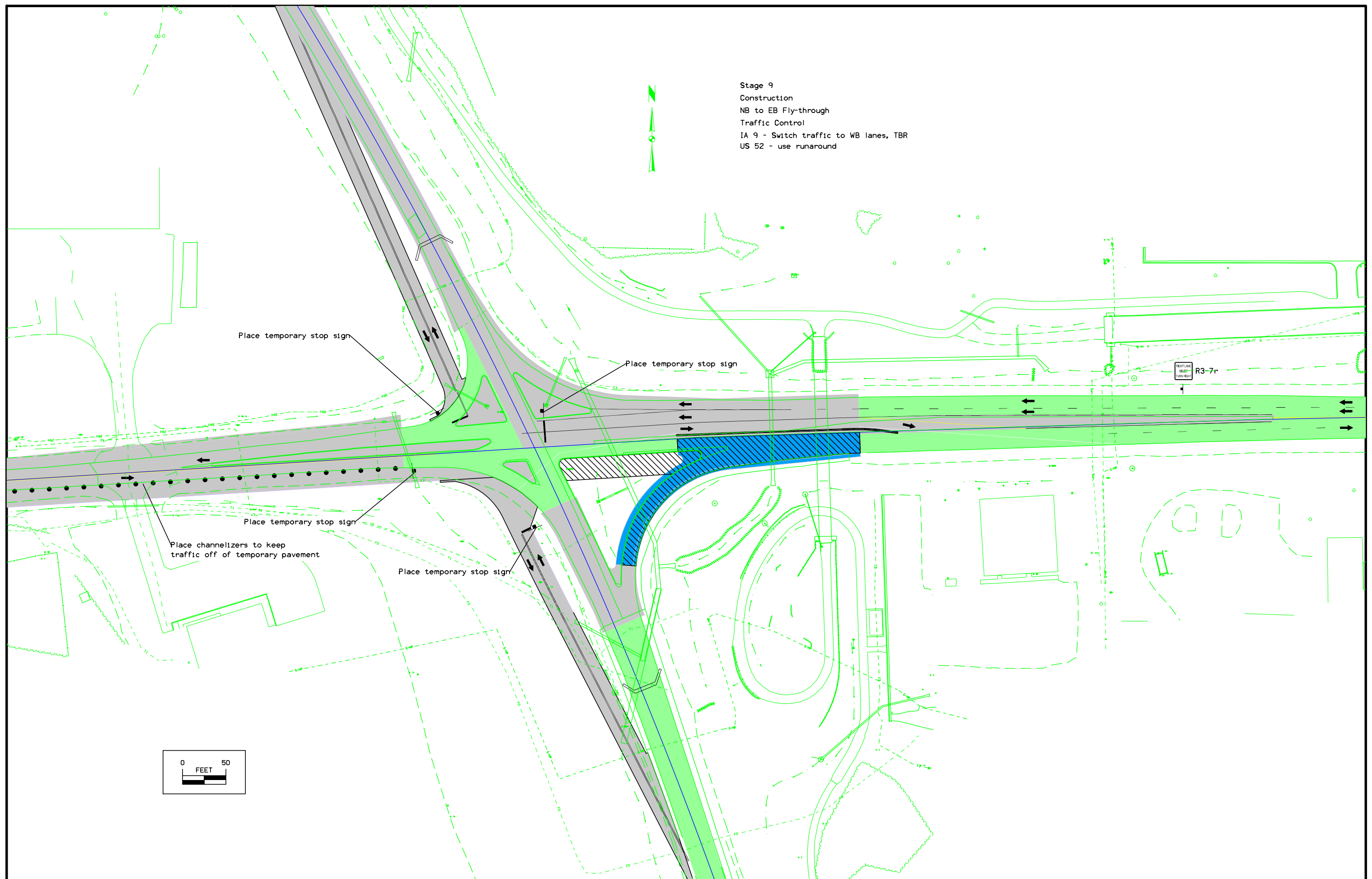
Stage 8  
 Construction  
 Construct south side of west leg of IA 9  
 Traffic Control  
 IA 9 - Switch EB traffic to temporary pavement, with TBR  
 US 52 - use runaround



**Traffic Control Note:**  
 Flaggers shall be used to close the eastbound lane to allow truck access to the work area. These closures shall be coordinated to reduce the number of closures and the amount of time of each closure. The Engineer shall determine if a lane is allowed to be closed.



Stage 9  
 Construction  
 NB to EB Fly-through  
 Traffic Control  
 IA 9 - Switch traffic to WB lanes, TBR  
 US 52 - use runaround



Stage 10  
 Construction  
 SE quadrant of intersection  
 Traffic Control  
 IA 9 - Switch traffic to WB lanes, TBR  
 US 52 - use runaround

Signage according to TC-419  
 Speed Limit = 40 mph

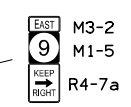
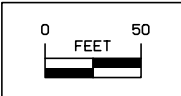
Temporary stop sign

Place temporary stop sign

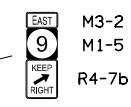
Temporary stop sign

Temporary stop sign

Move Safety Closure



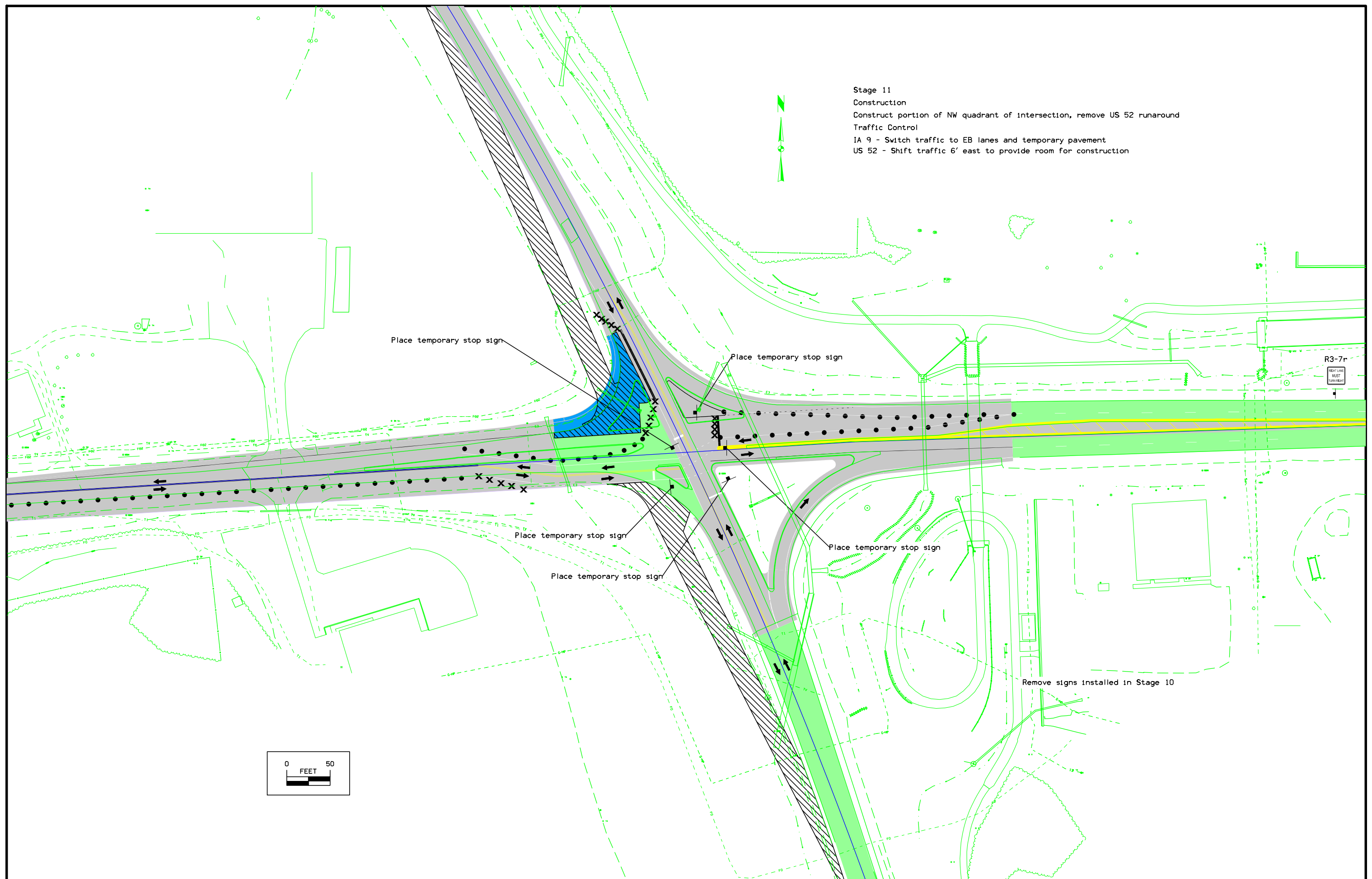
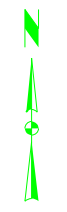
Place sign 500' south of closure



Place sign 750' south of closure



Stage 11  
 Construction  
 Construct portion of NW quadrant of intersection, remove US 52 runaround  
 Traffic Control  
 IA 9 - Switch traffic to EB lanes and temporary pavement  
 US 52 - Shift traffic 6' east to provide room for construction



Place temporary stop sign

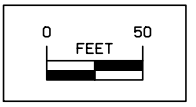
Place temporary stop sign

Place temporary stop sign

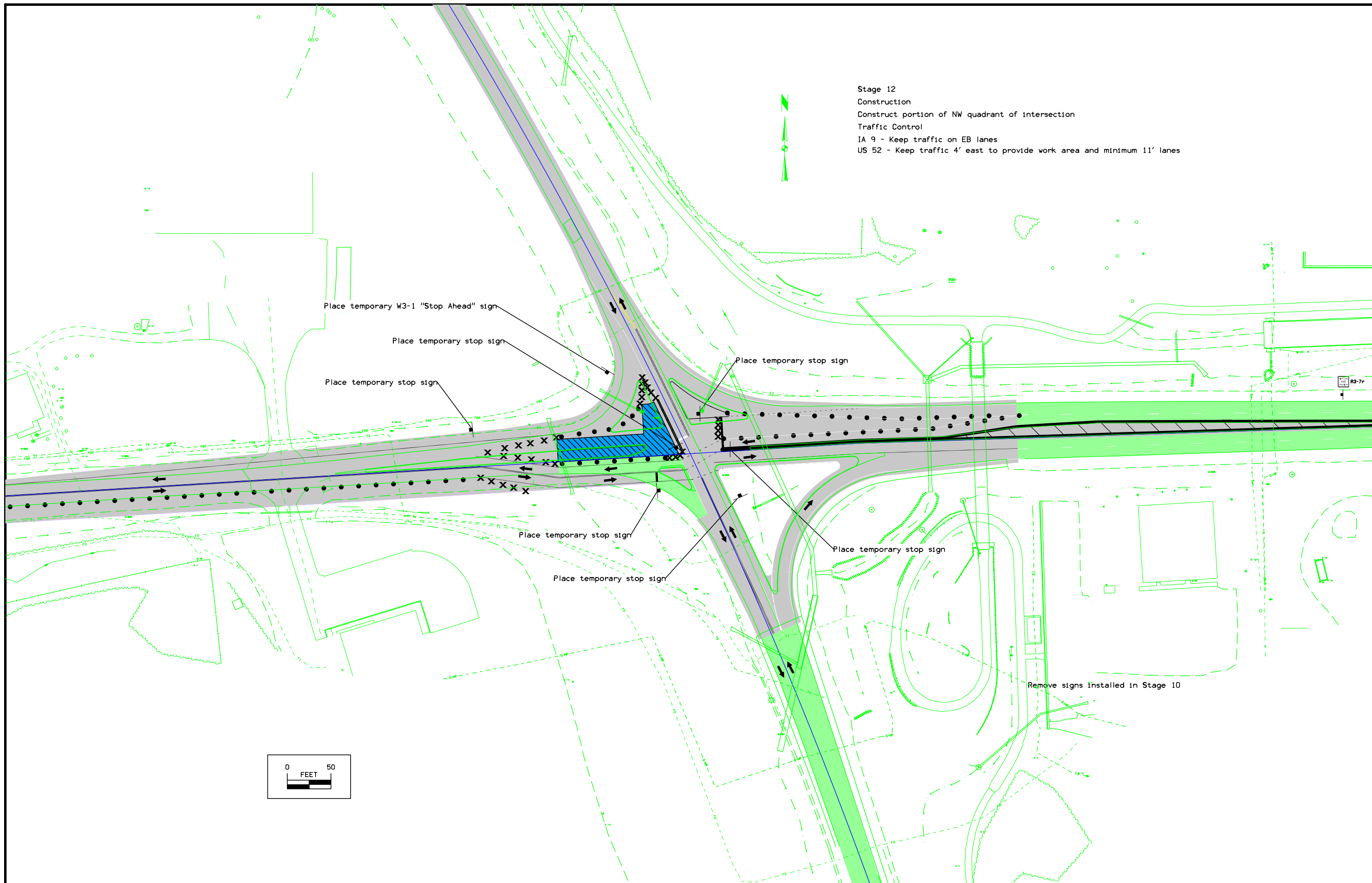
Place temporary stop sign

Place temporary stop sign

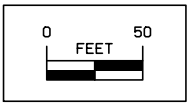
Remove signs installed in Stage 10



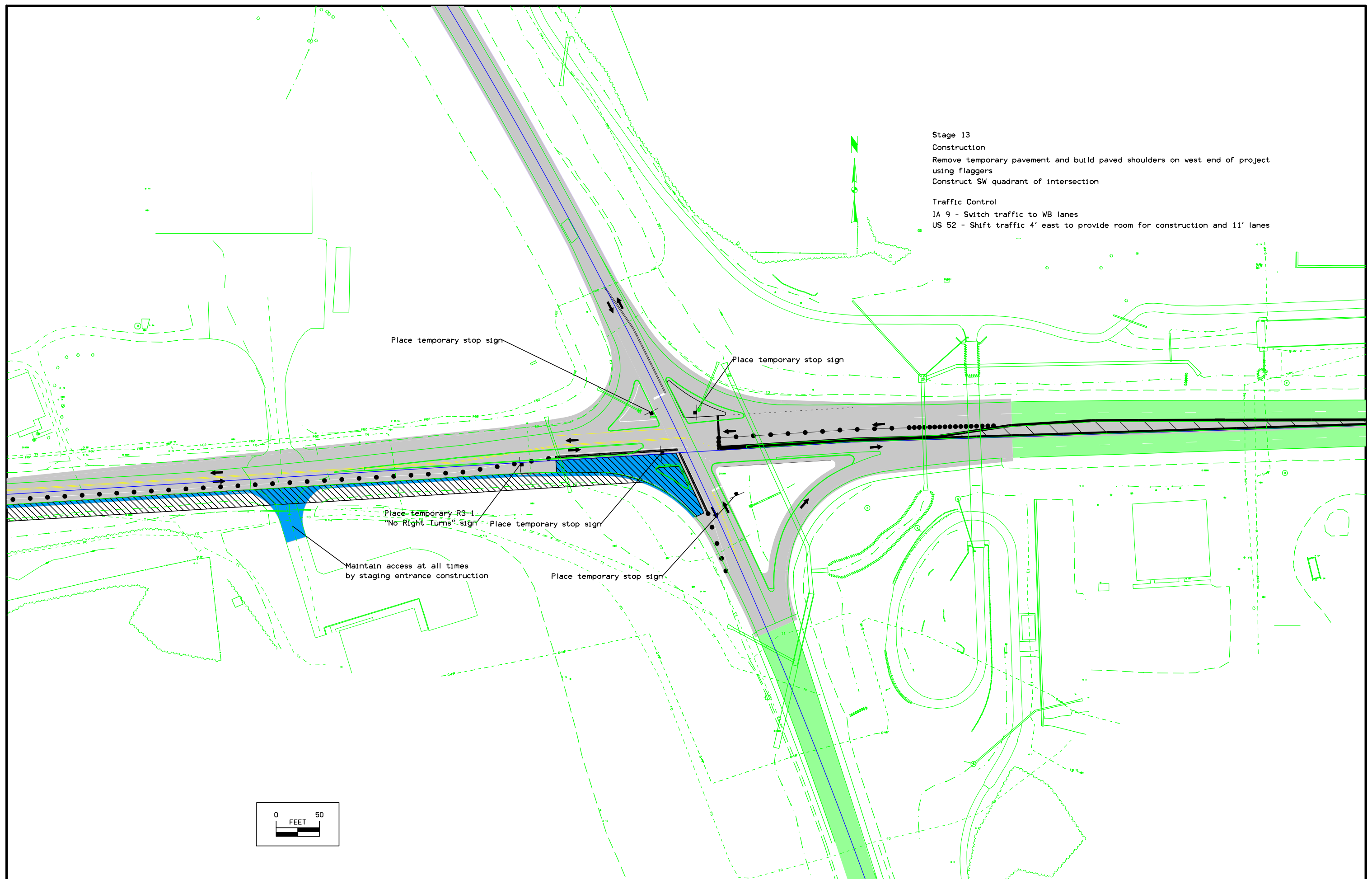




Stage 12  
 Construction  
 Construct portion of NW quadrant of intersection  
 Traffic Control  
 IA 9 - Keep traffic on EB lanes  
 US 52 - Keep traffic 4' east to provide work area and minimum 11' lanes



Stage 13  
 Construction  
 Remove temporary pavement and build paved shoulders on west end of project using flaggers  
 Construct SW quadrant of intersection  
  
 Traffic Control  
 IA 9 - Switch traffic to WB lanes  
 US 52 - Shift traffic 4' east to provide room for construction and 11' lanes





890

891

892

893

894

895

Begin Taper  
889+19.68 12.27 Lt.  
See Detail 7101 on Sheet No. B.5

643 ft 25:1 Taper

14.00'

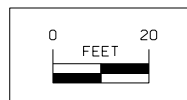
12.00'

IA 9

Profile Grade Location

NOTES:

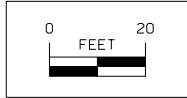
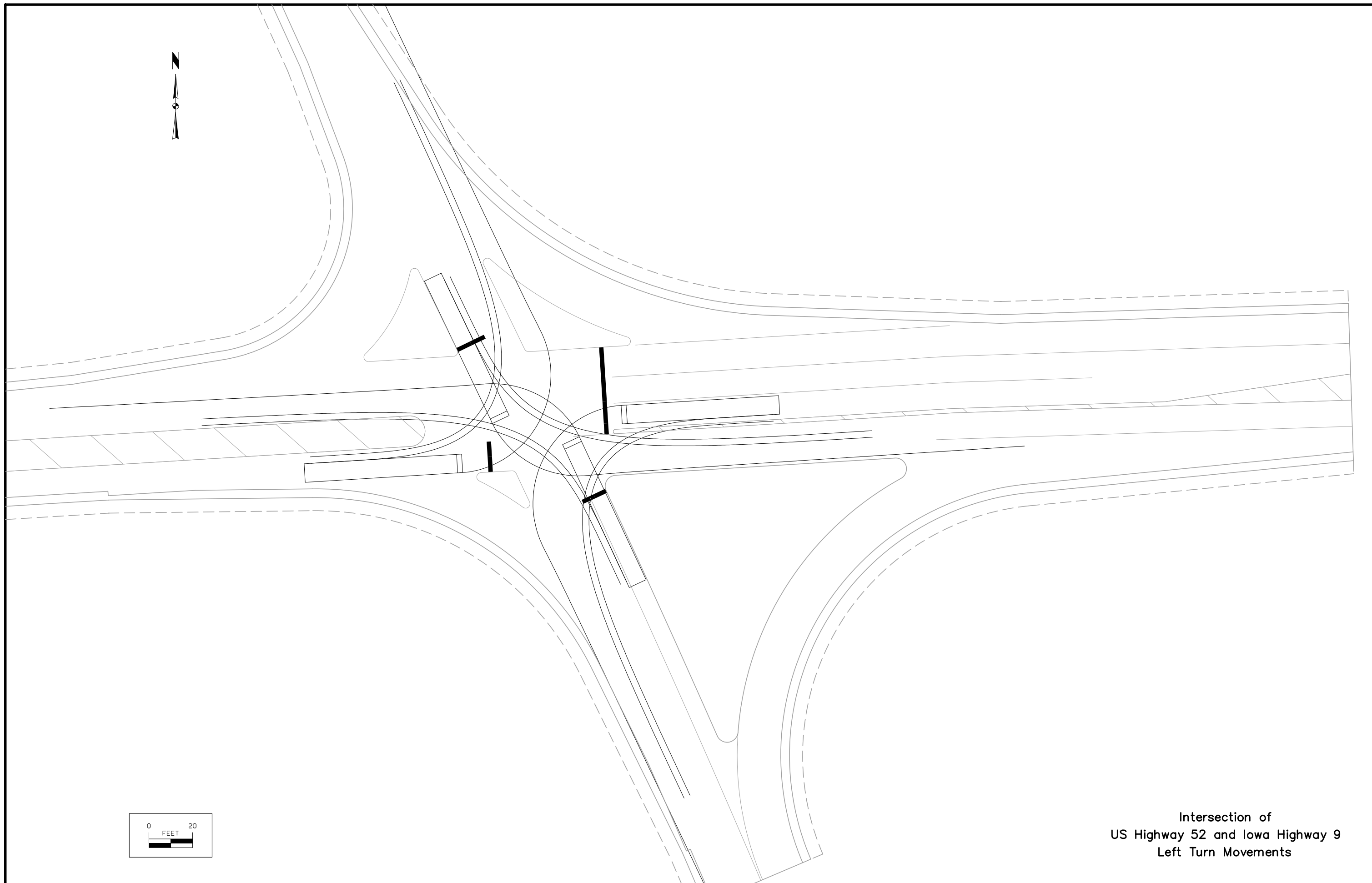
Refer to G sheets for horizontal alignment information.  
Refer to appropriate Standard Road Plans for additional information.



Iowa Highway 9  
Geometric Details

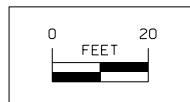
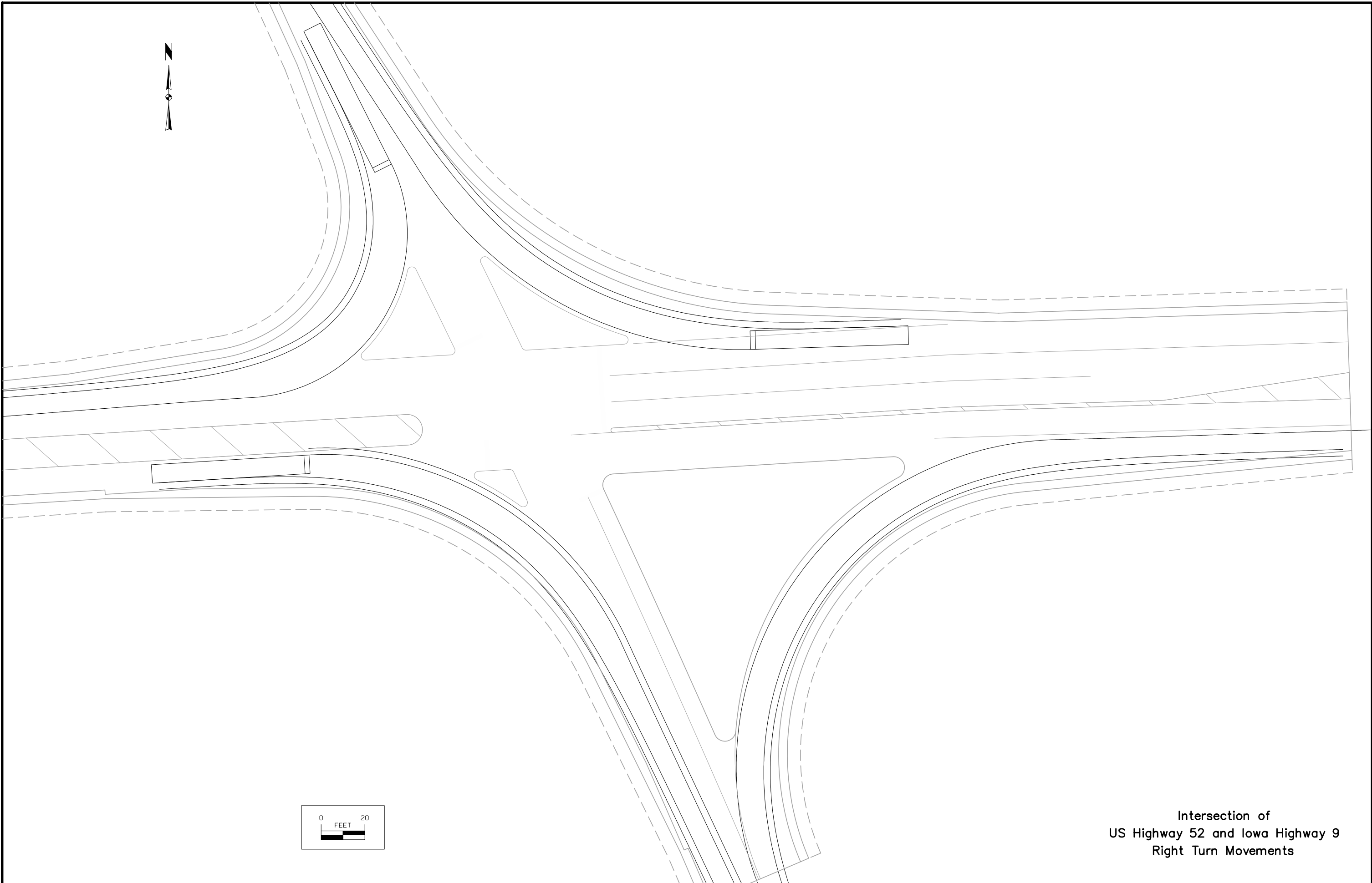
FILE NO.	ENGLISH	DESIGN TEAM	<b>WHKS &amp; CO.</b>	<b>WINNESHIEK</b>	COUNTY	PROJECT NUMBER	<b>NHSN-052-5(042)--2R-96</b>	SHEET NUMBER	<b>L.1</b>
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Intersection of  
US Highway 52 and Iowa Highway 9  
Left Turn Movements





Intersection of  
US Highway 52 and Iowa Highway 9  
Right Turn Movements

**LINE STYLE LEGEND OF CROSS SECTION SHEETS (ROAD)**

- Existing Ground Line
- ===== Proposed Template
- ===== Proposed Topsoil Placement
- Additional Topsoil Removal
- ===== Subgrade Treatment
- Granular Shoulder
- ===== Pavement
- Existing Pipe\RCB
- ===== Proposed Pipe\RCB
- ===== Proposed Dike
- ===== All Elements Associated with Proposed Entrances

**LINE STYLE LEGEND OF CROSS SECTION SHEETS (SOILS)**

- TS----- Topsoil (Class 10)
- SLOPE DRESSING --- Slope Dressing Only
- CL 10----- Class 10 Materials
- SEL L0----- Select Loams And Clay-Loams
- SEL SA----- Select Sand
- UNS A----- Unsuitable Type A Disposal
- UNS B----- Unsuitable Type B Disposal
- UNS C----- Unsuitable Type C Disposal
- SHALE----- Shale
- WASTE----- Waste
- B&W LS----- Broken and Weathered Rock
- ROCK----- Solid Rock
- BLDRS----- Boulders

Note: All layer lines and descriptions identify layers above the line.

Note: Vertical or near vertical lines connecting soil layers at edges of cross sections are only for the purpose of calculating template quantities and do not depict soil stratification.

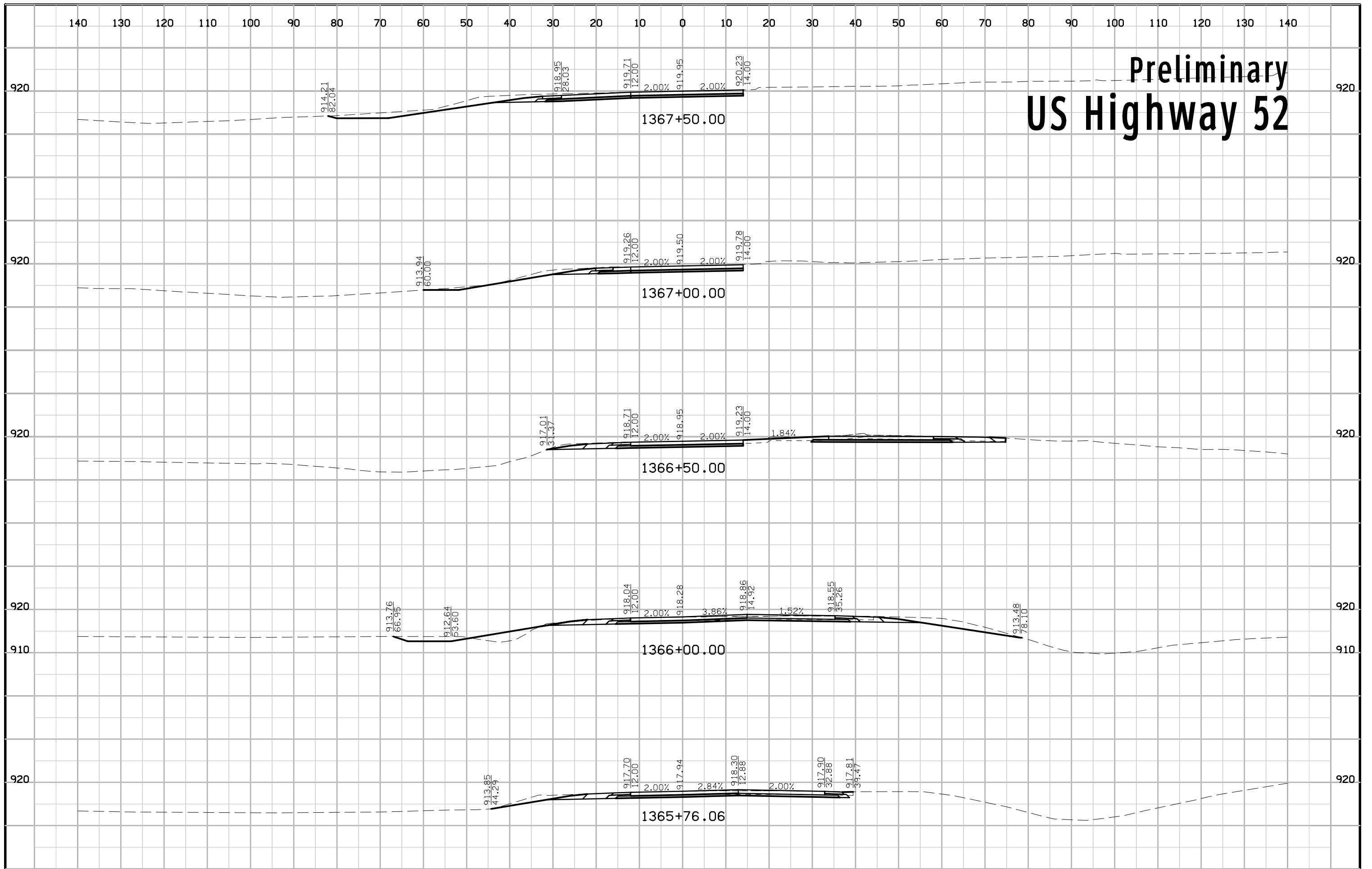
**SYMBOL LEGEND OF CROSS SECTION SHEETS**

- Existing ROW  
-----  
Existing Right-of-Way Limit
- Proposed ROW  
-----  
Proposed Right-of-Way Limit
- Temporary ROW  
-----  
Temporary Right-of-Way Limit

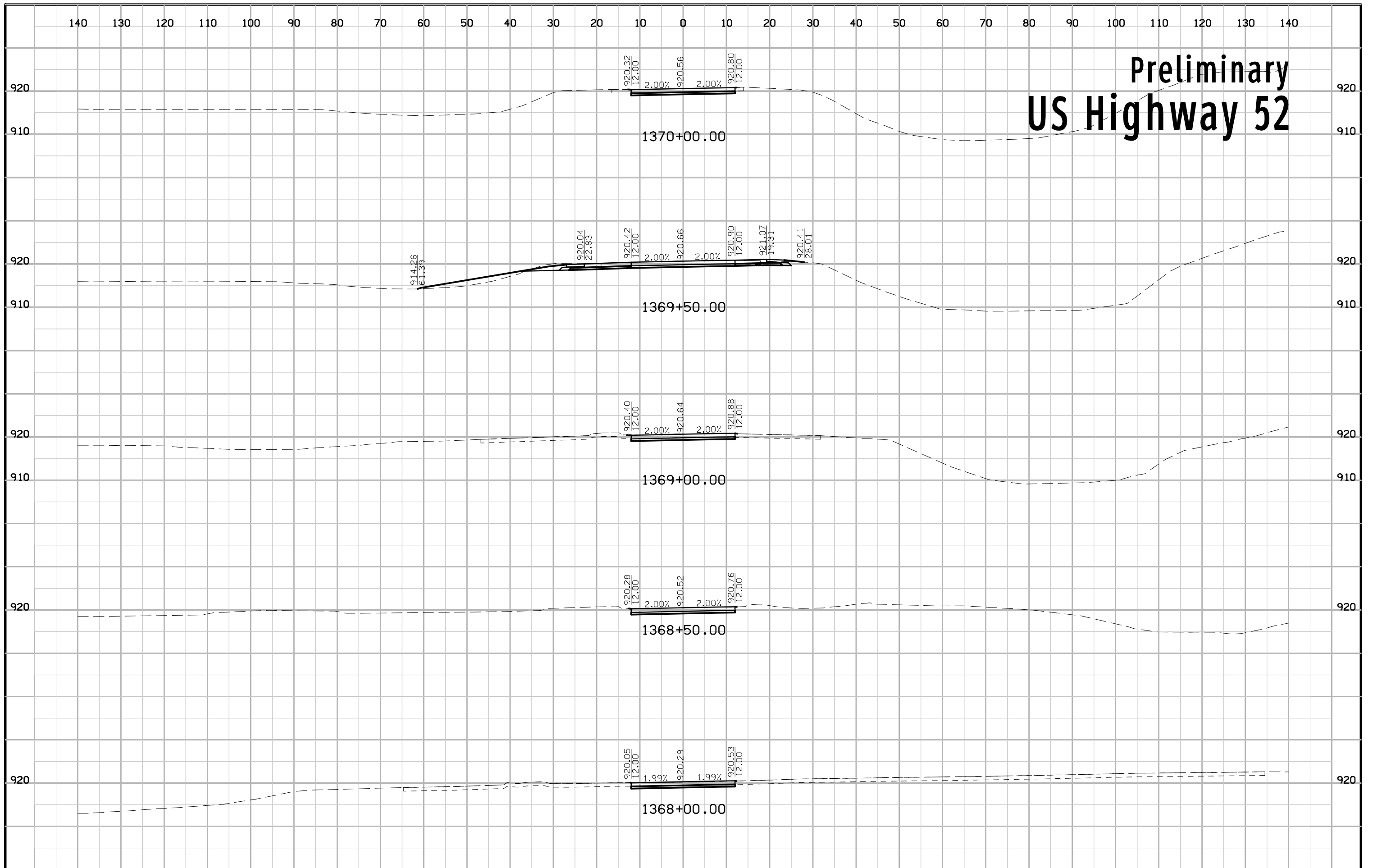
**CROSS SECTION  
LEGEND AN SYMBOL  
INFORMATION SHEET**

(COVERS SHEET SERIES W, X, Y, & Z)

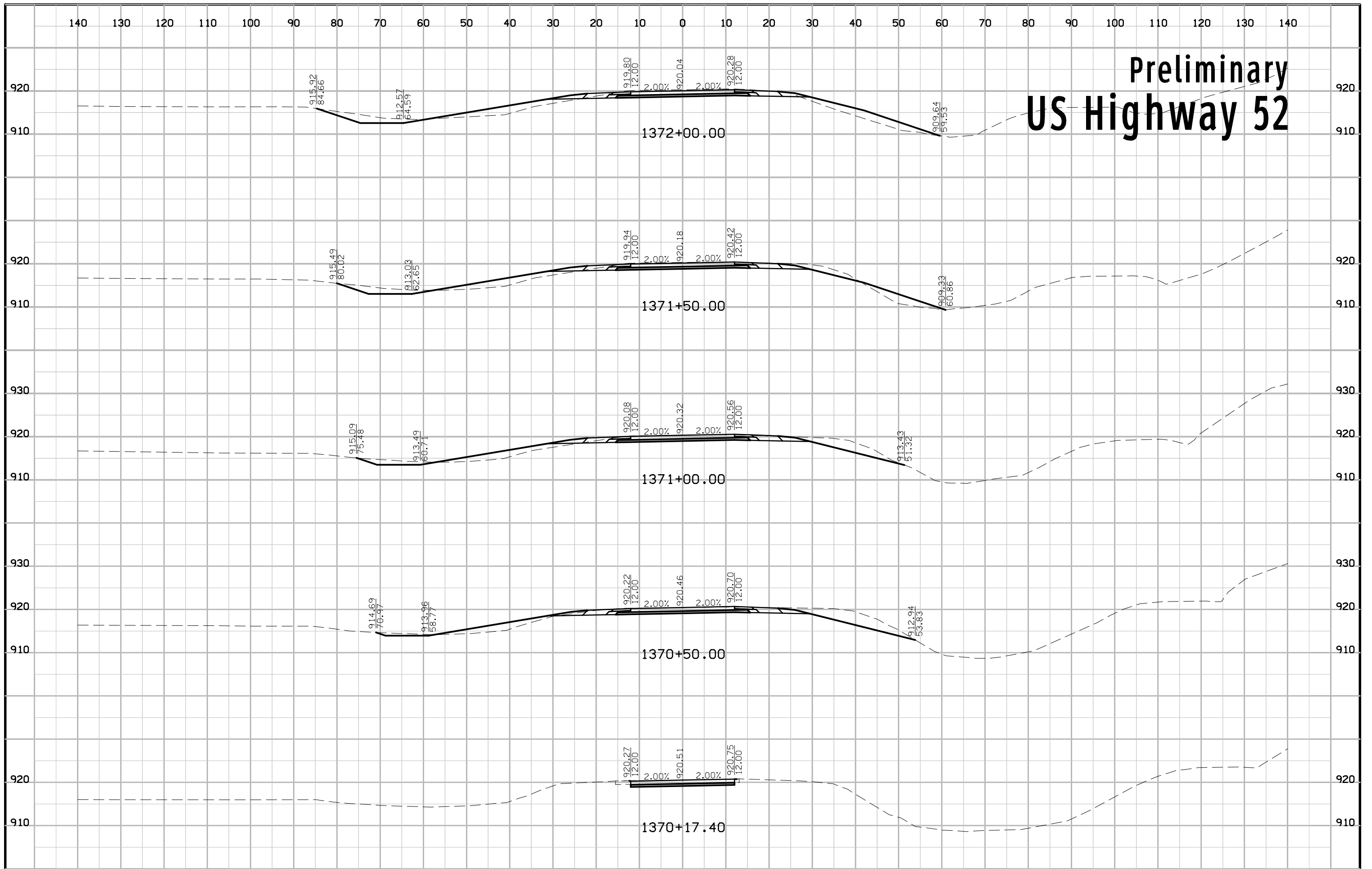
# Preliminary US Highway 52



# Preliminary US Highway 52

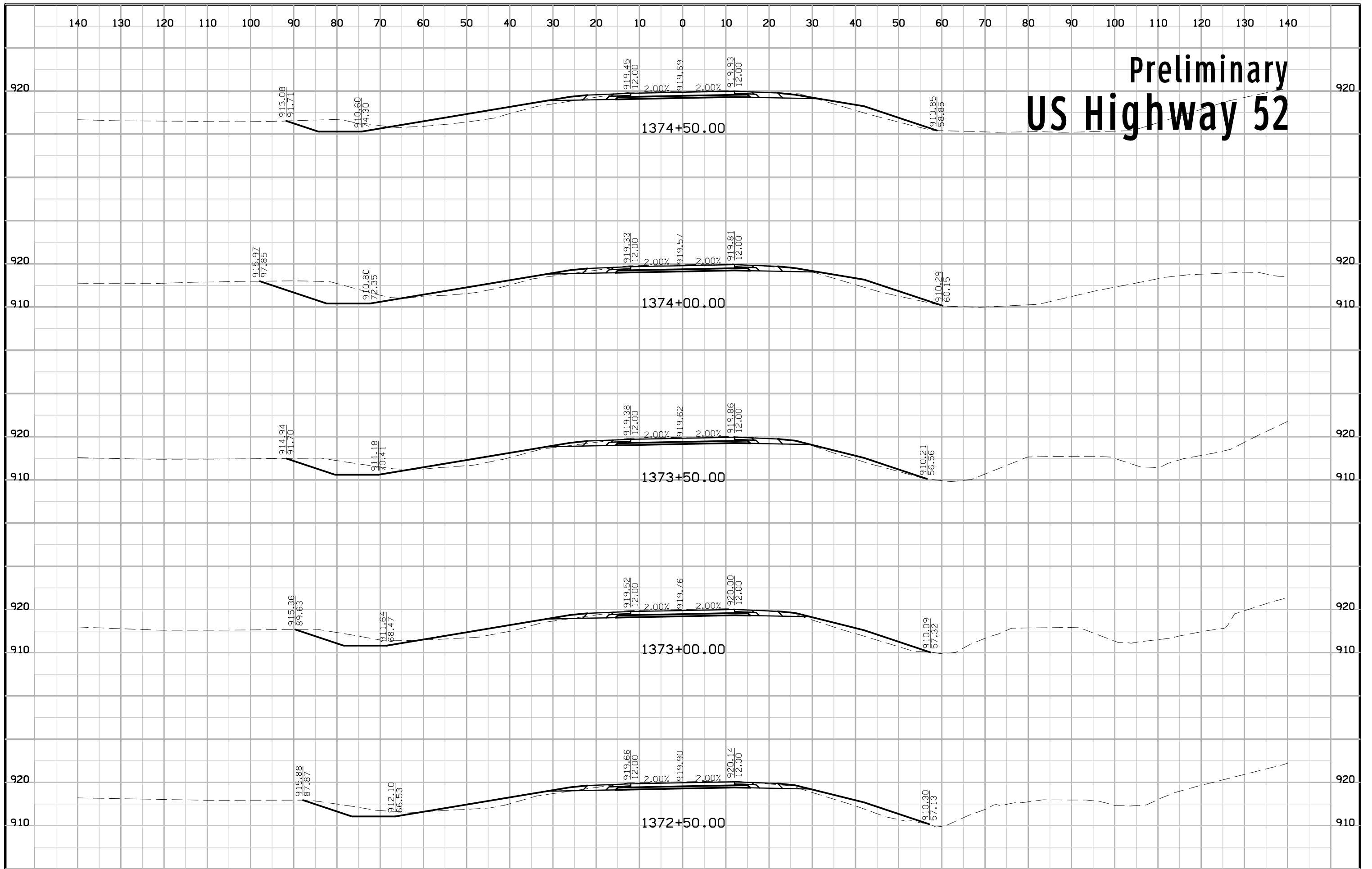


# Preliminary US Highway 52

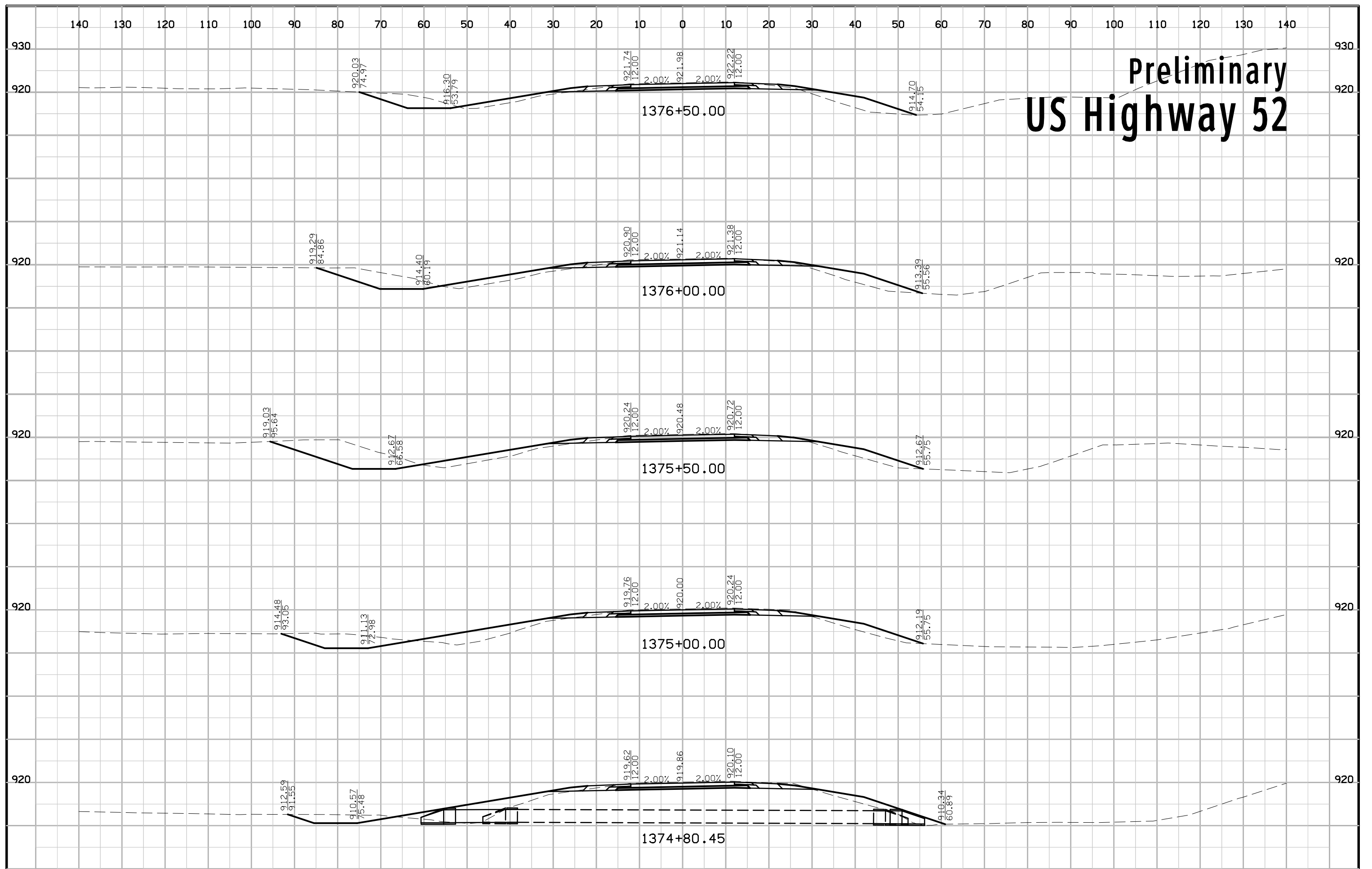




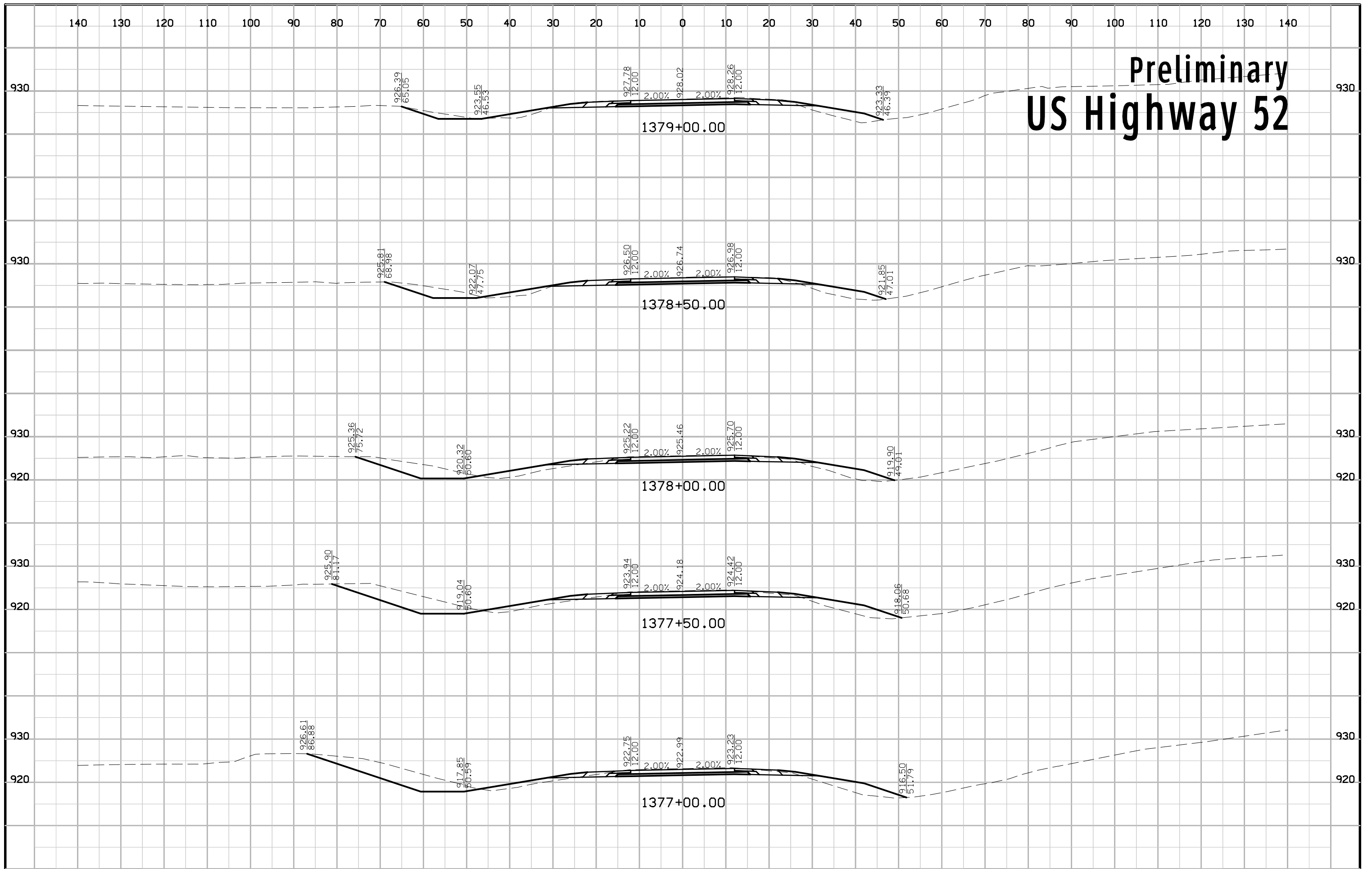
# Preliminary US Highway 52



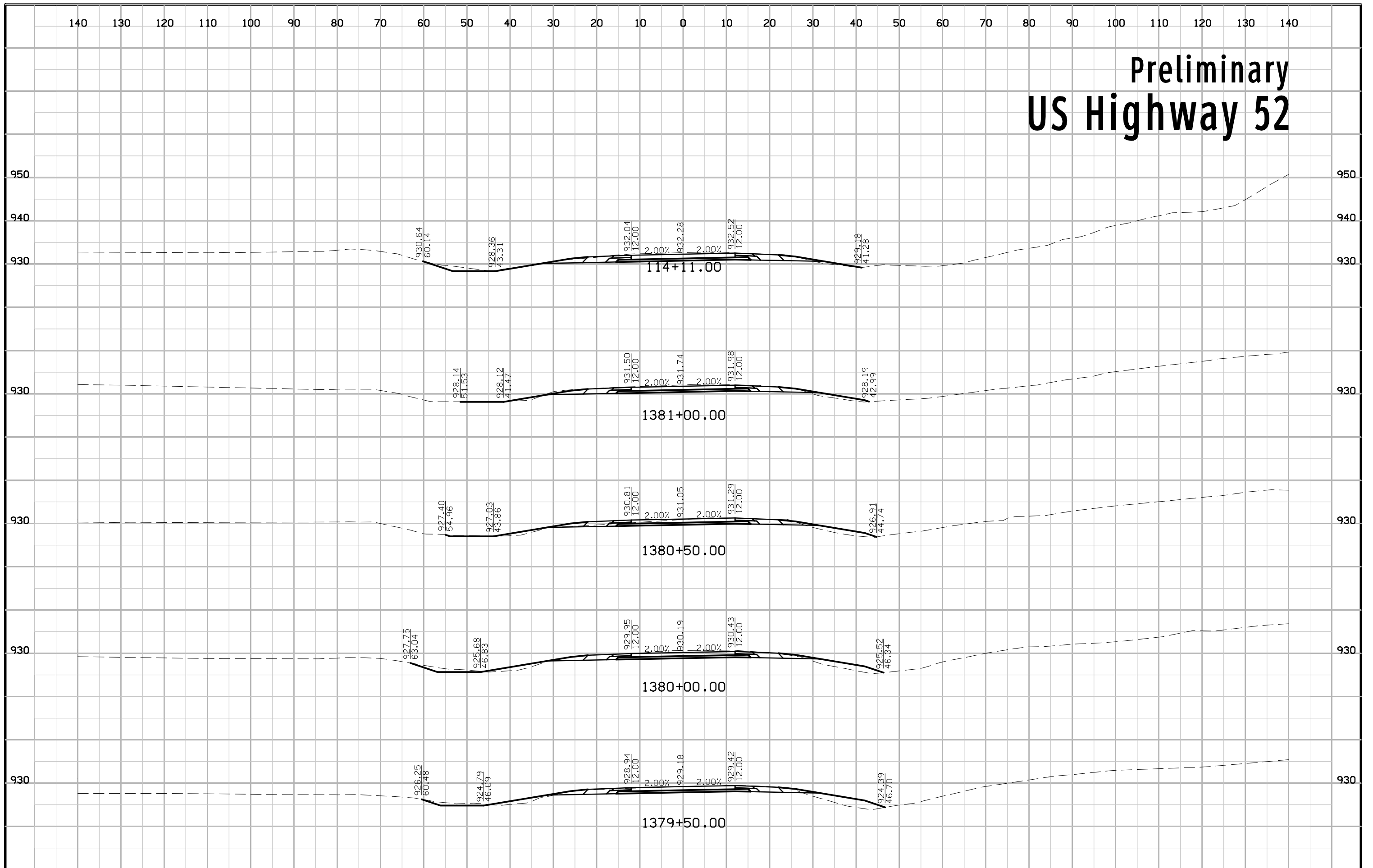
# Preliminary US Highway 52



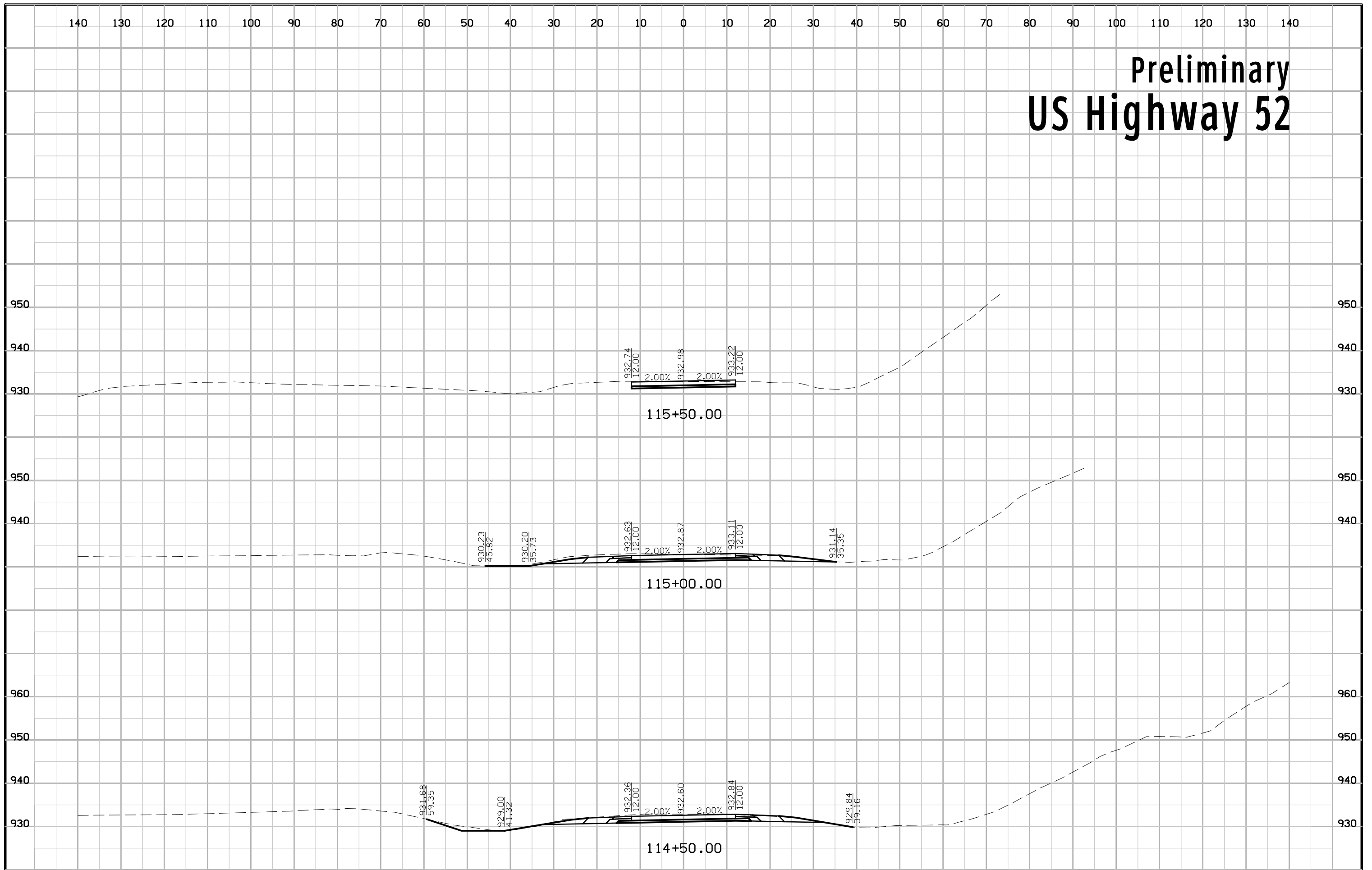
# Preliminary US Highway 52



# Preliminary US Highway 52

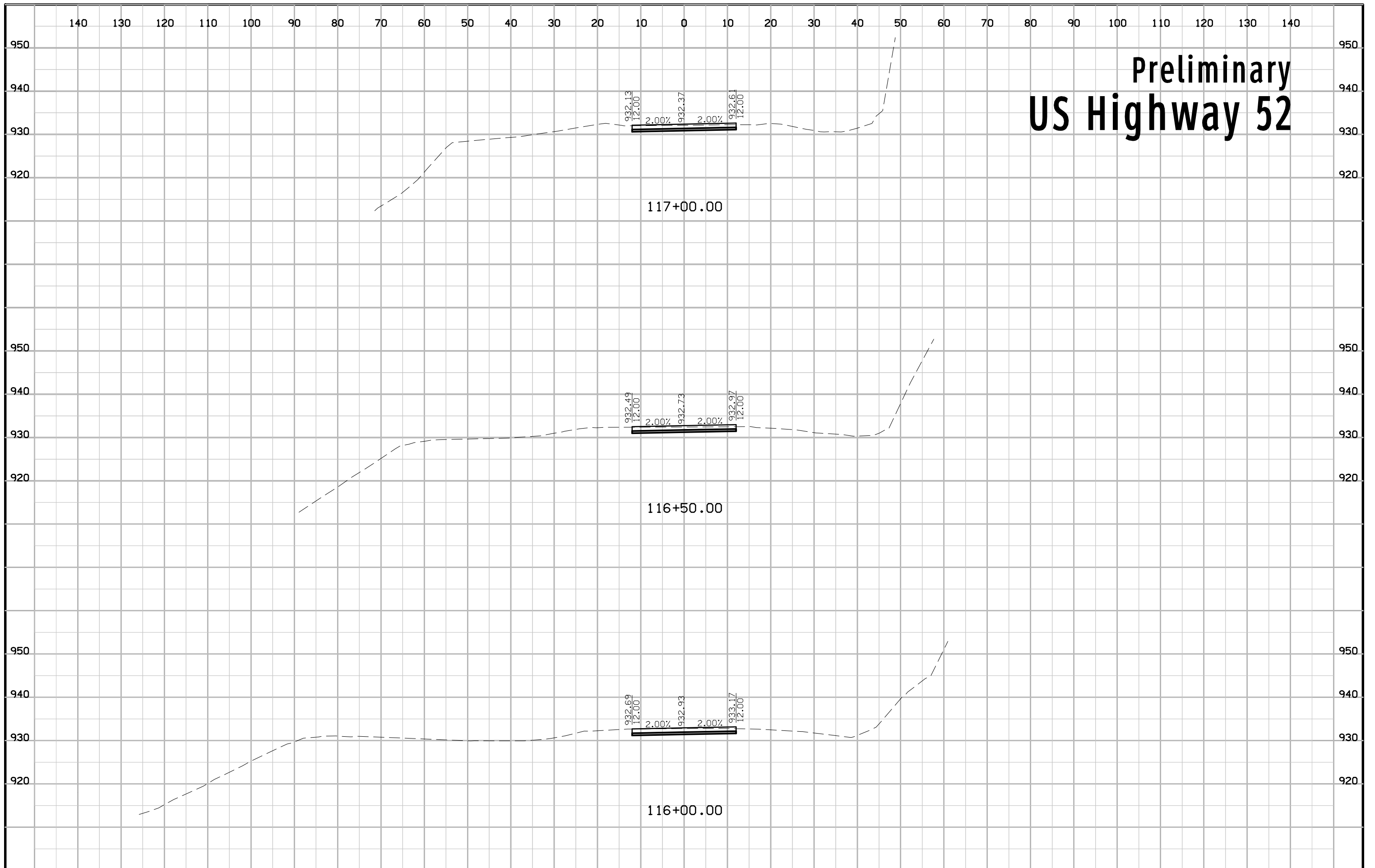


# Preliminary US Highway 52

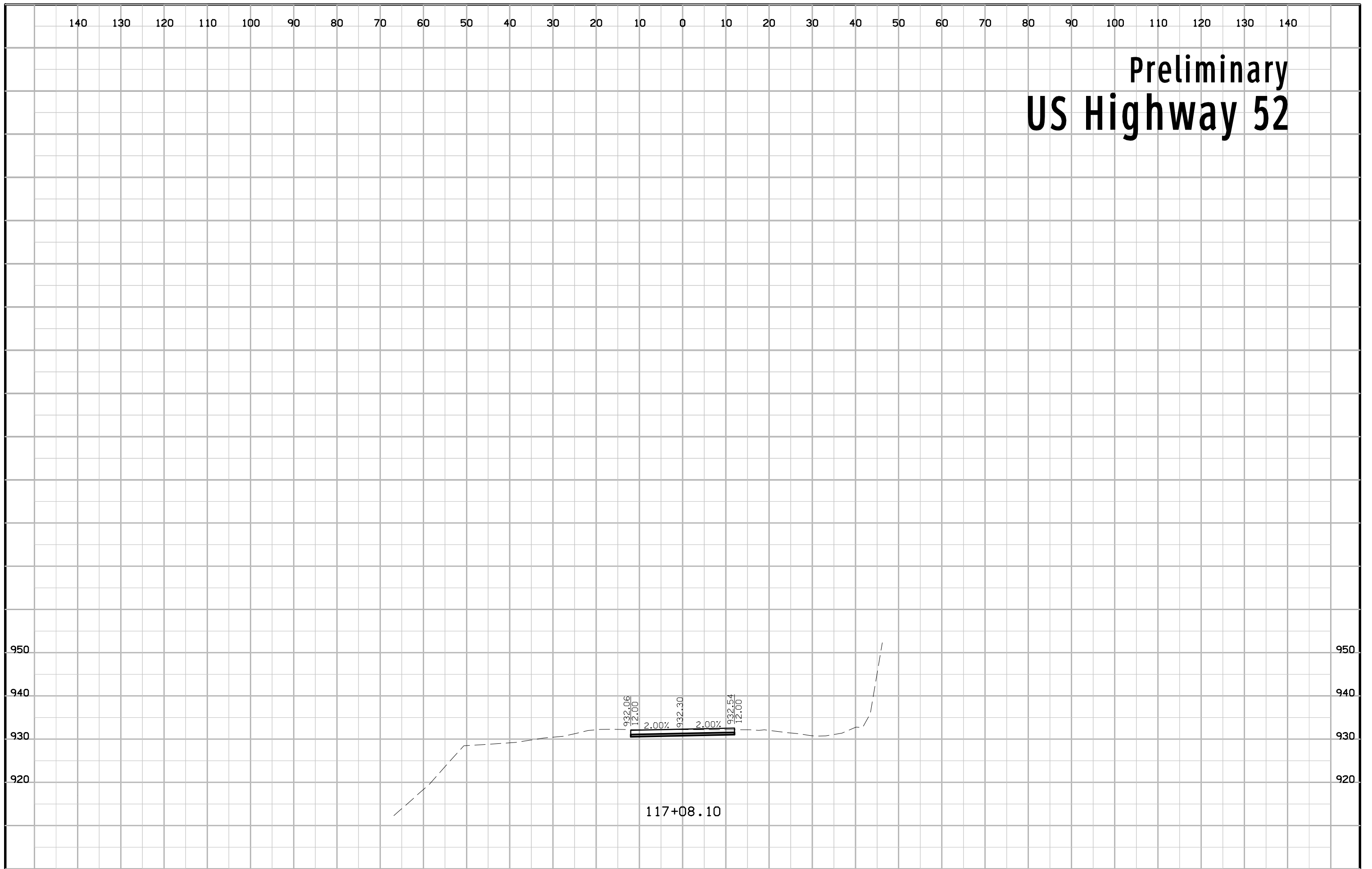




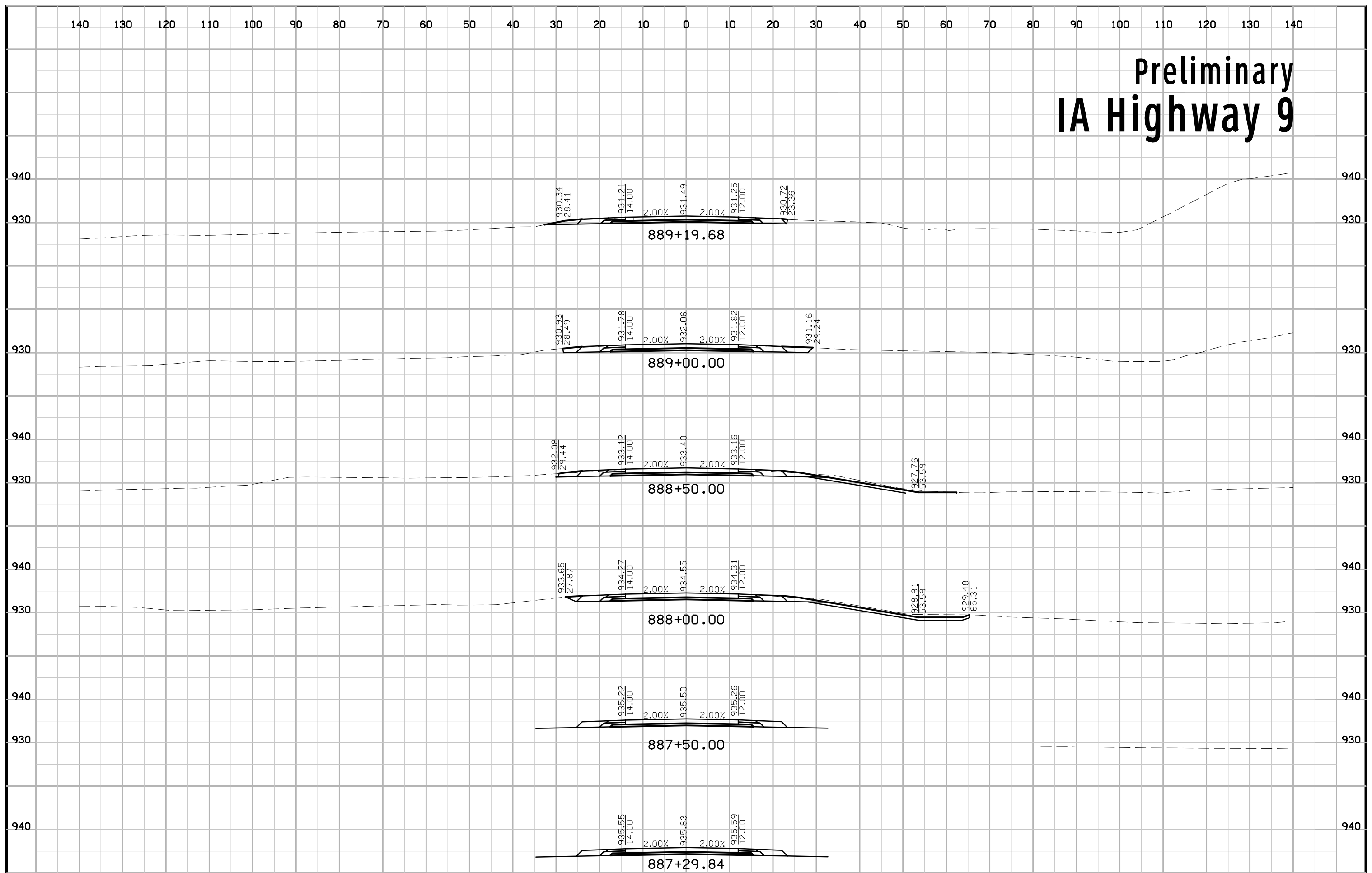
# Preliminary US Highway 52



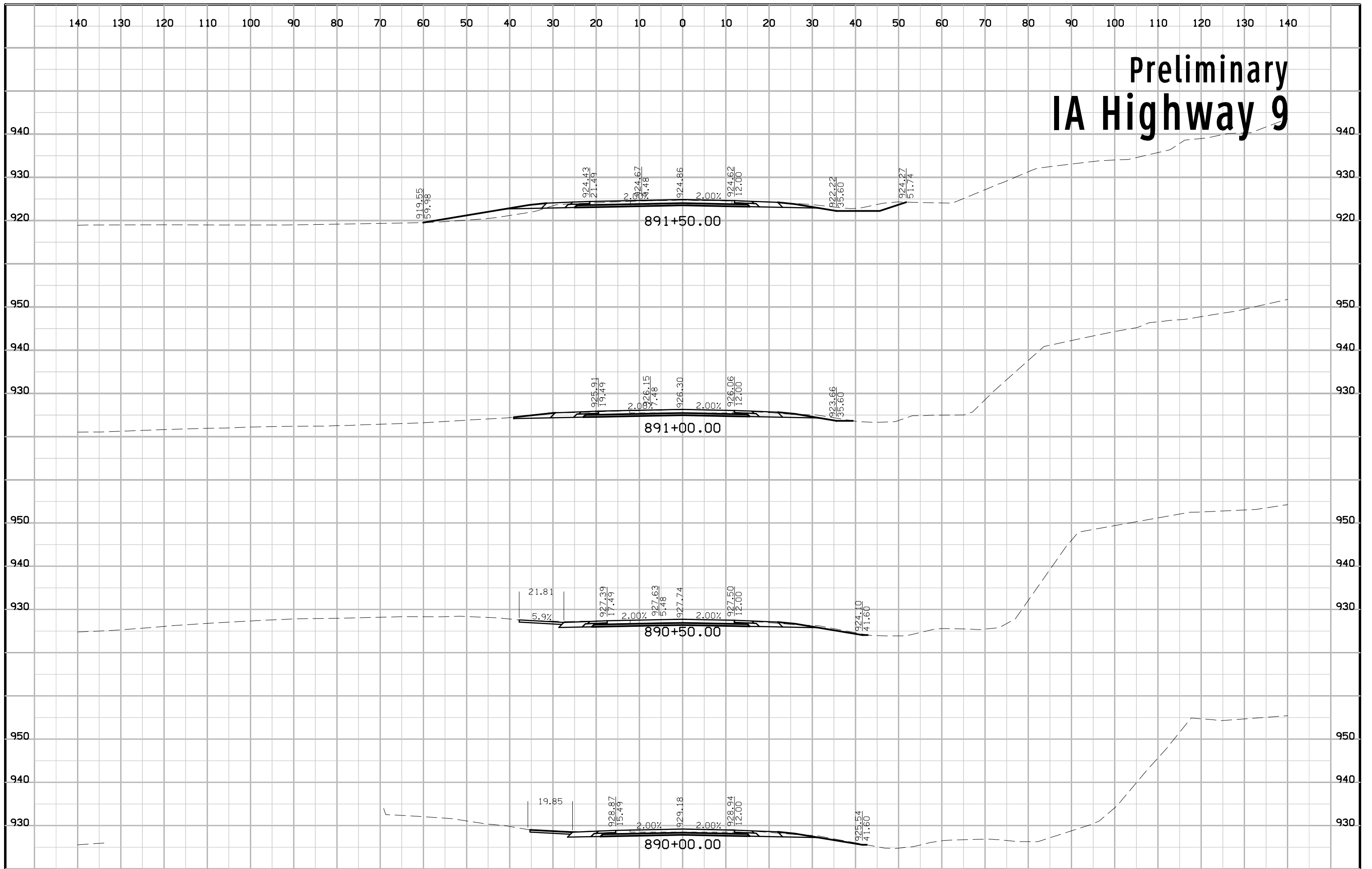
# Preliminary US Highway 52



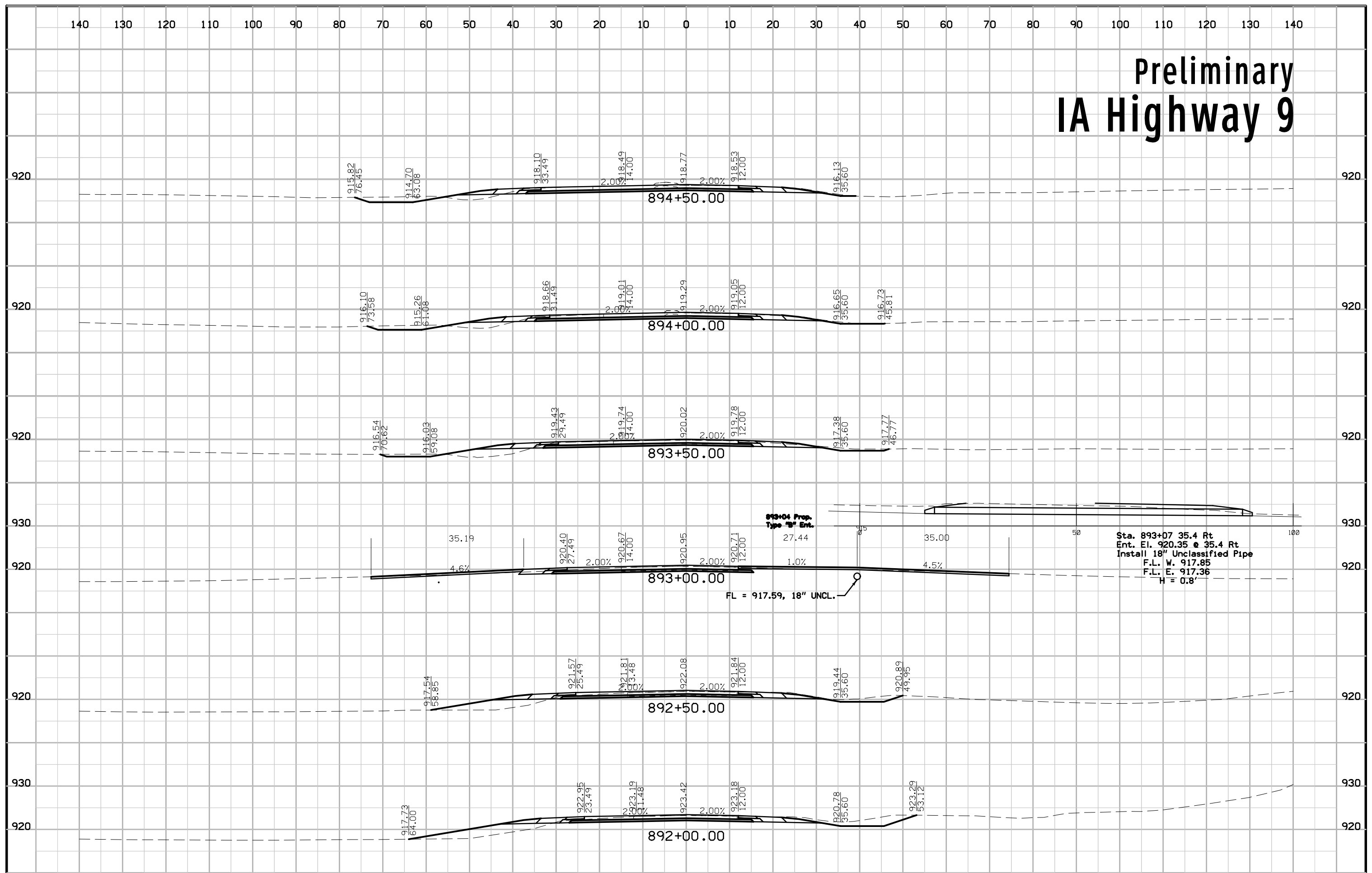
# Preliminary IA Highway 9



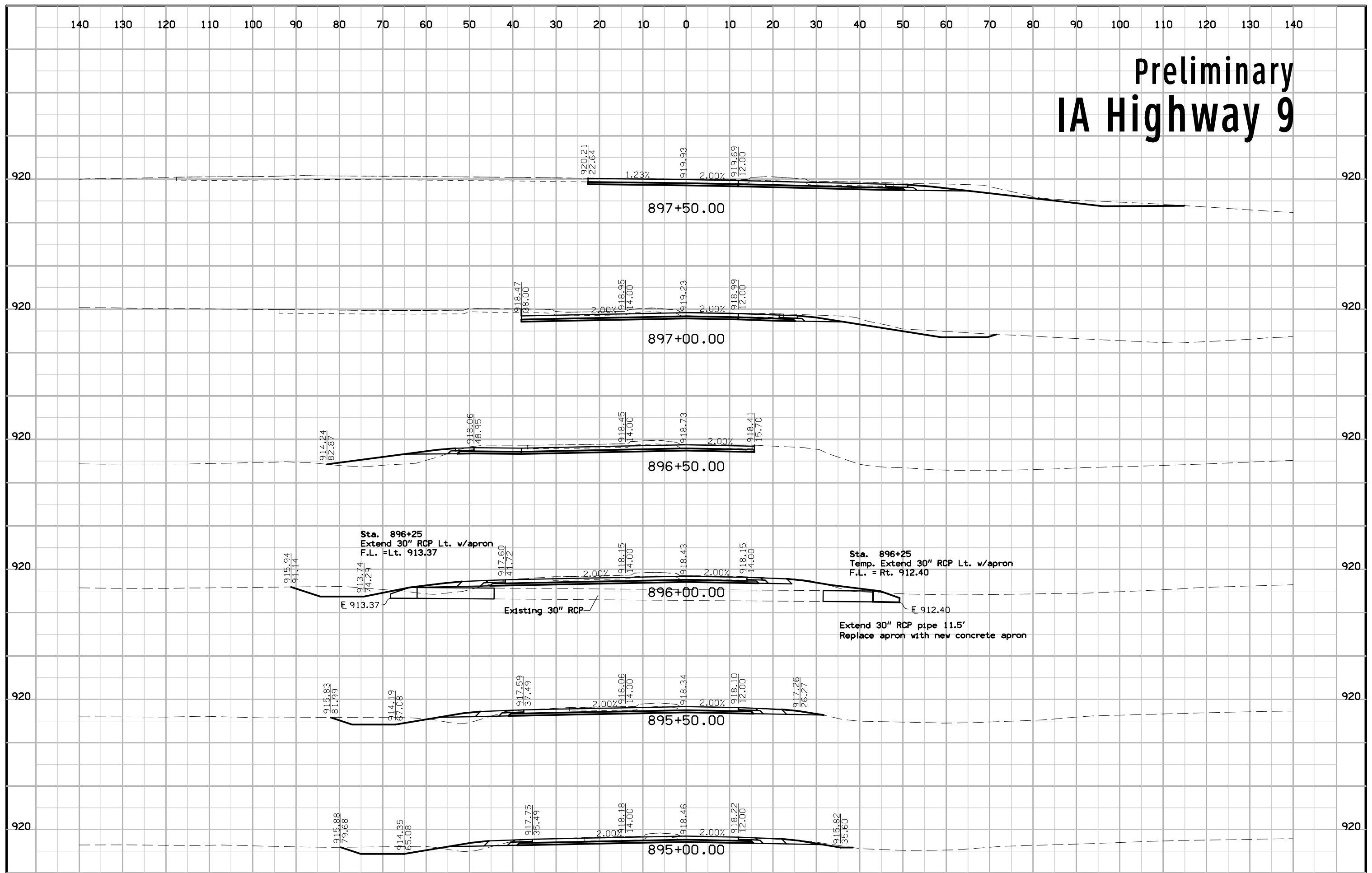
# Preliminary IA Highway 9



# Preliminary IA Highway 9

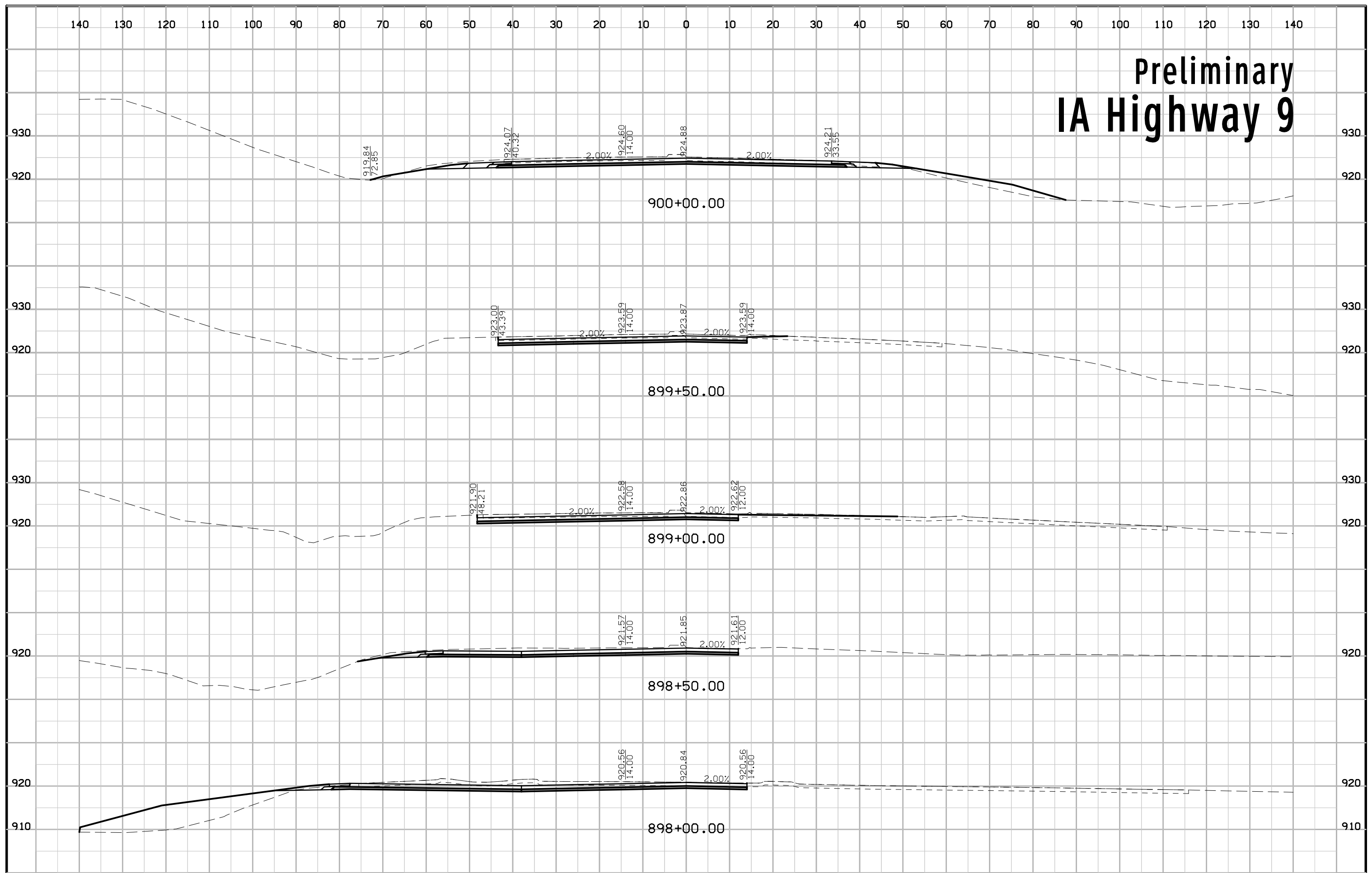


# Preliminary IA Highway 9



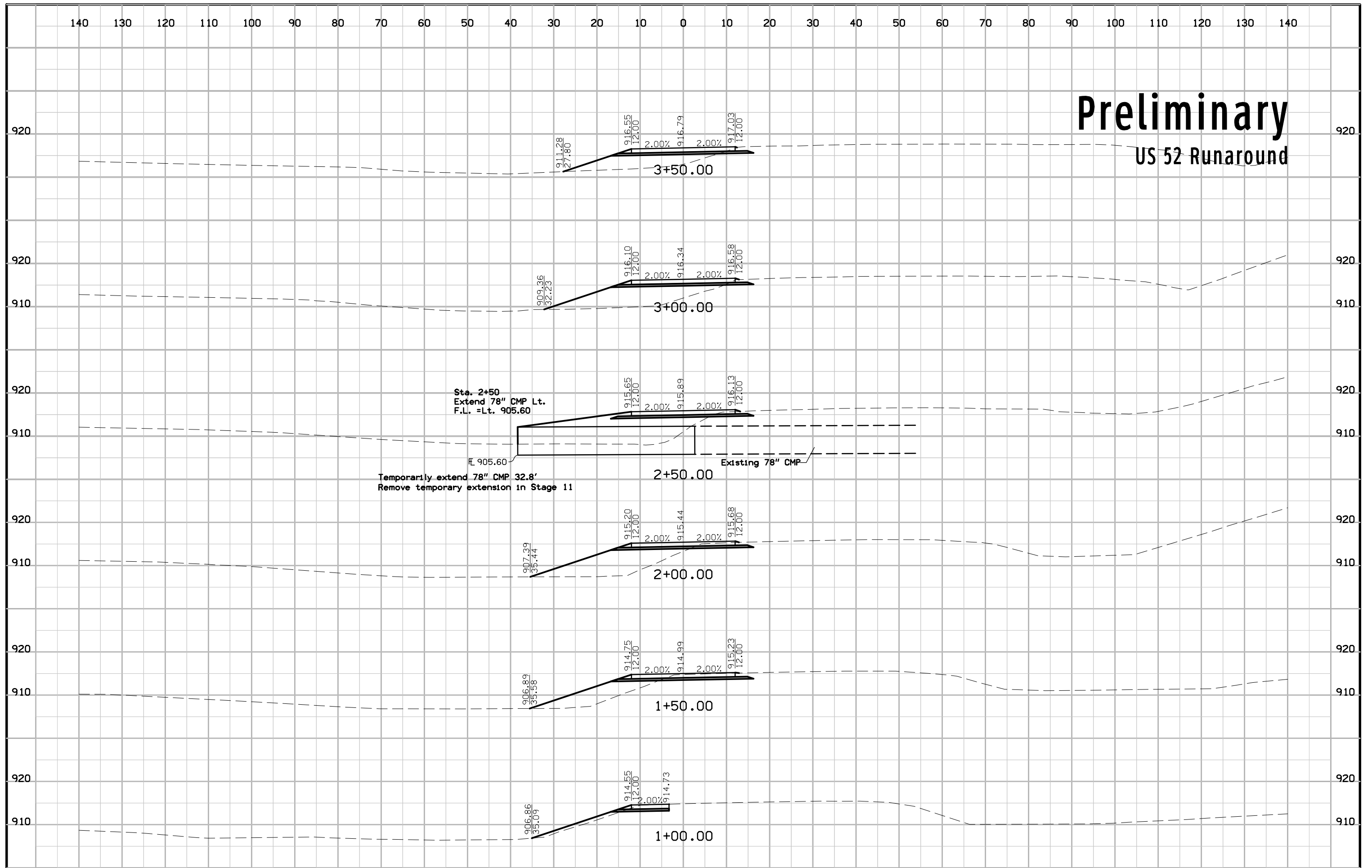


# Preliminary IA Highway 9



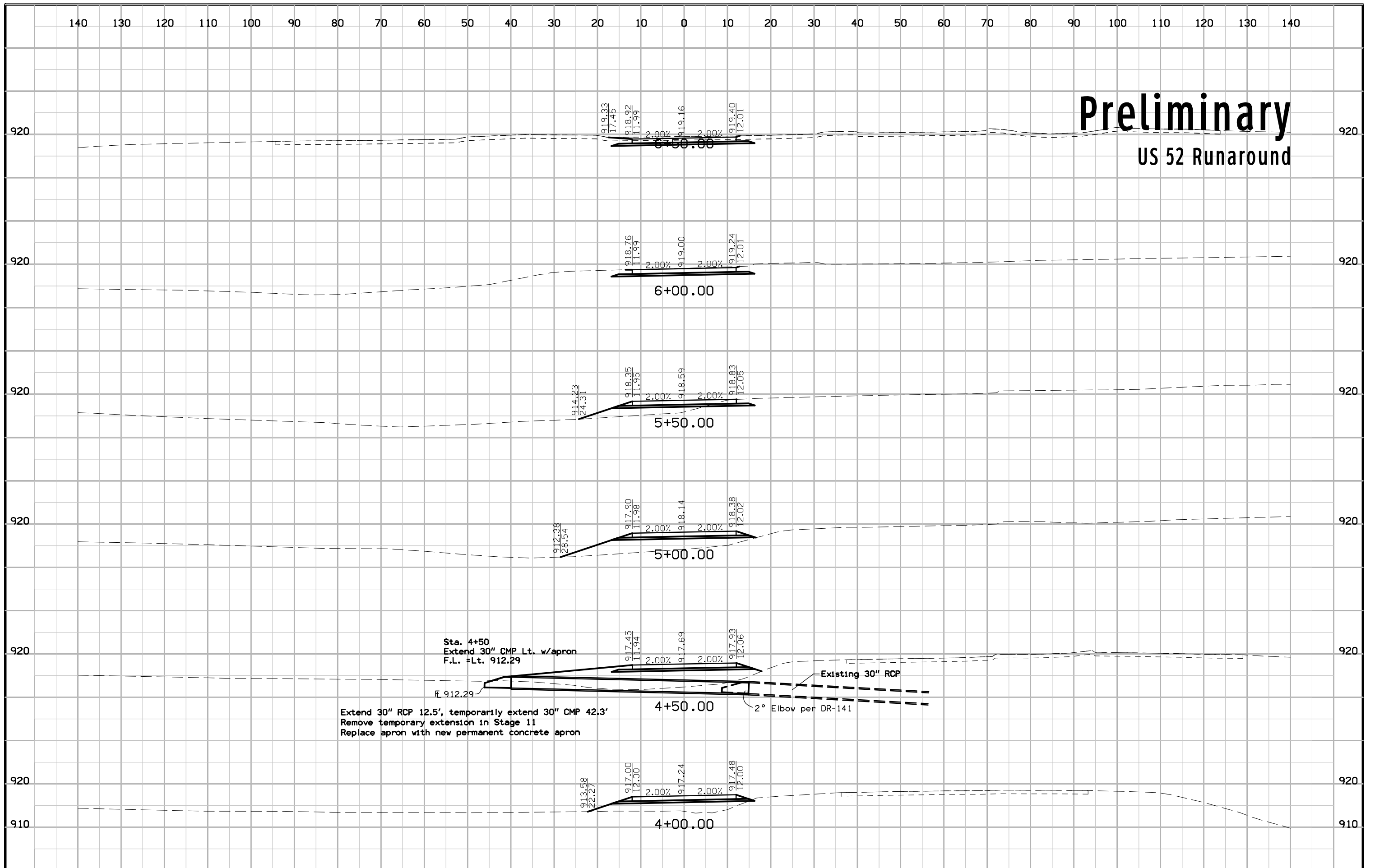
# Preliminary

## US 52 Runaround



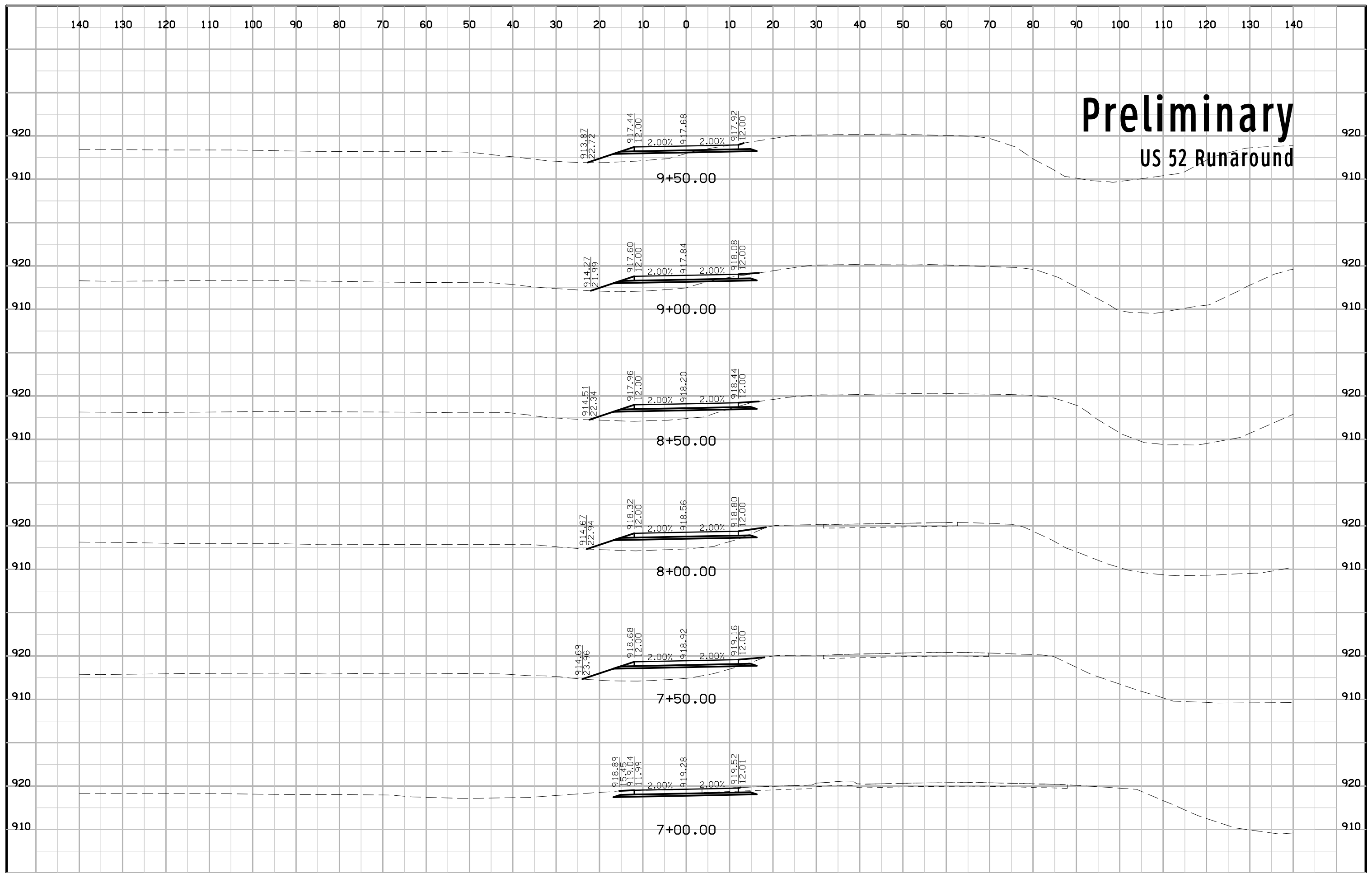
# Preliminary

## US 52 Runaround



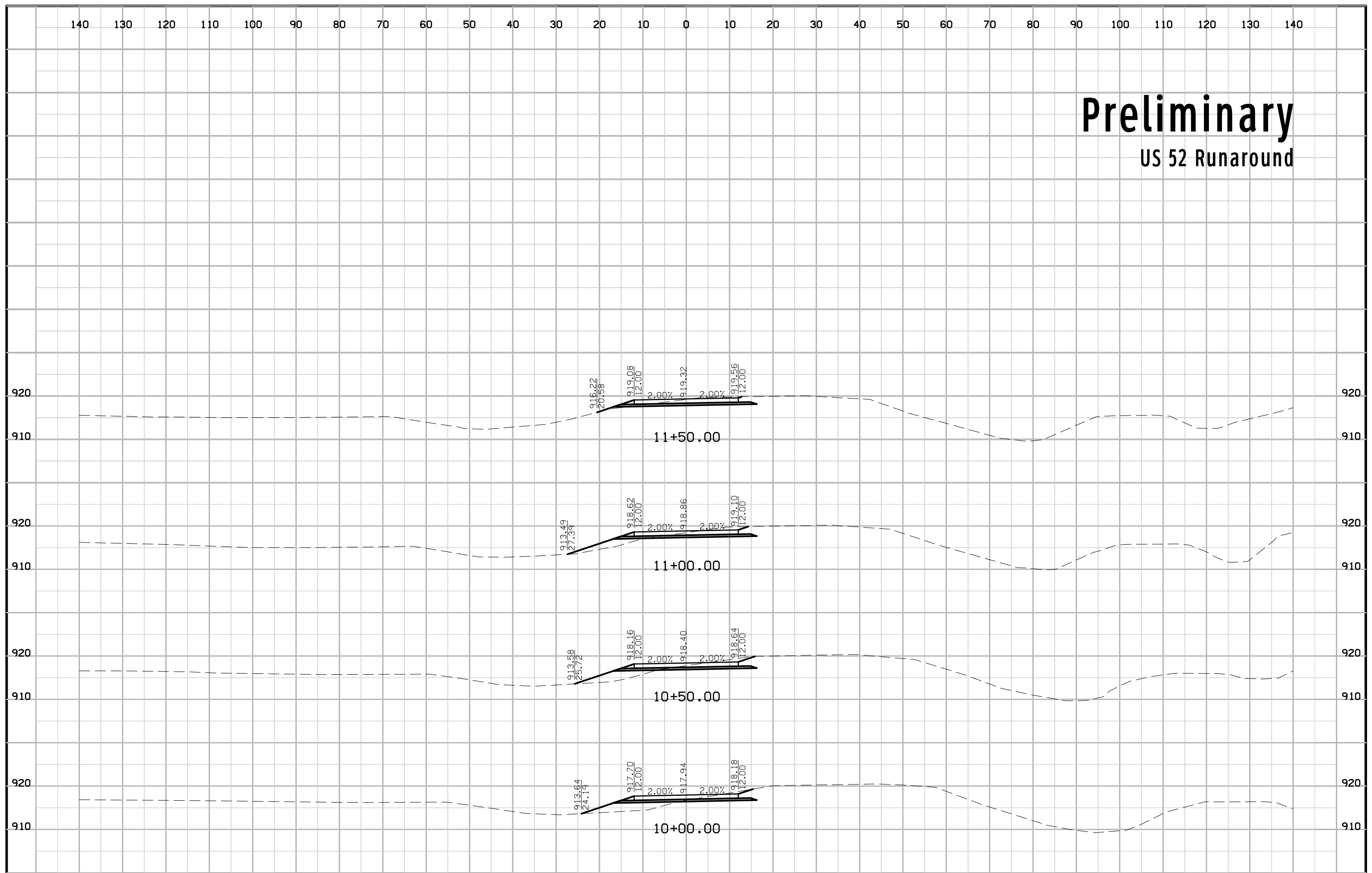
# Preliminary

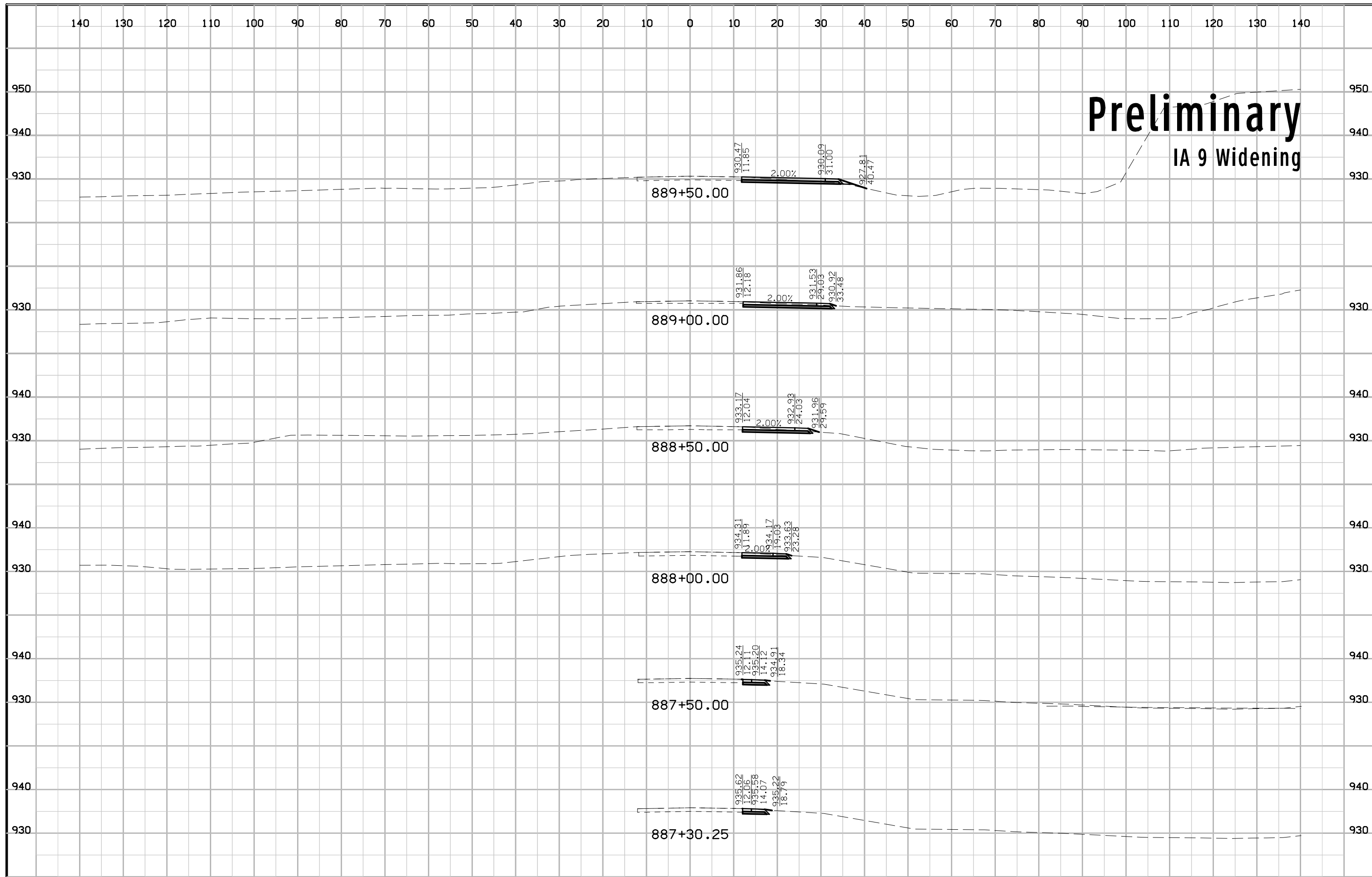
## US 52 Runaround



# Preliminary

## US 52 Runaround



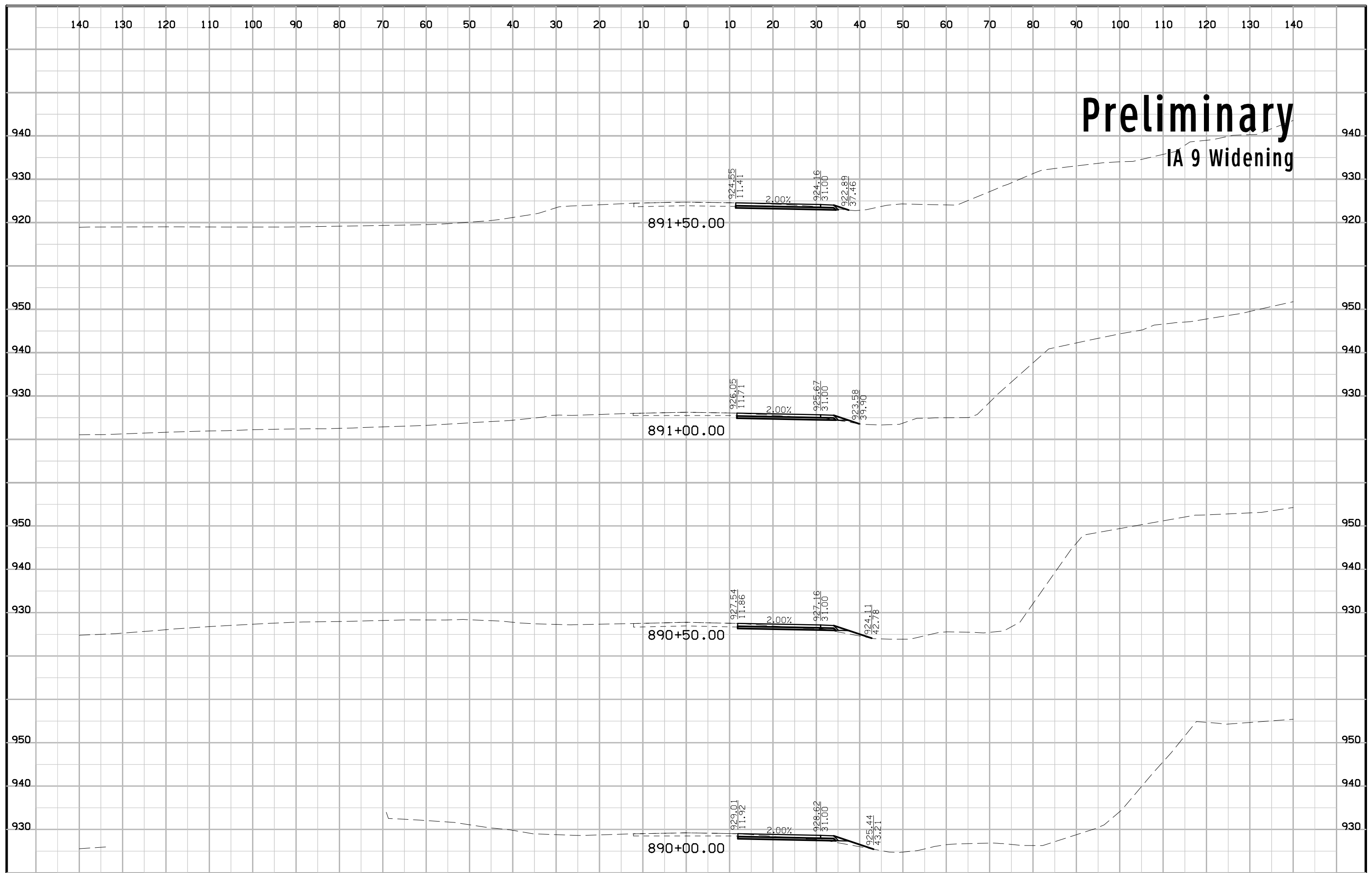


**Preliminary**  
IA 9 Widening



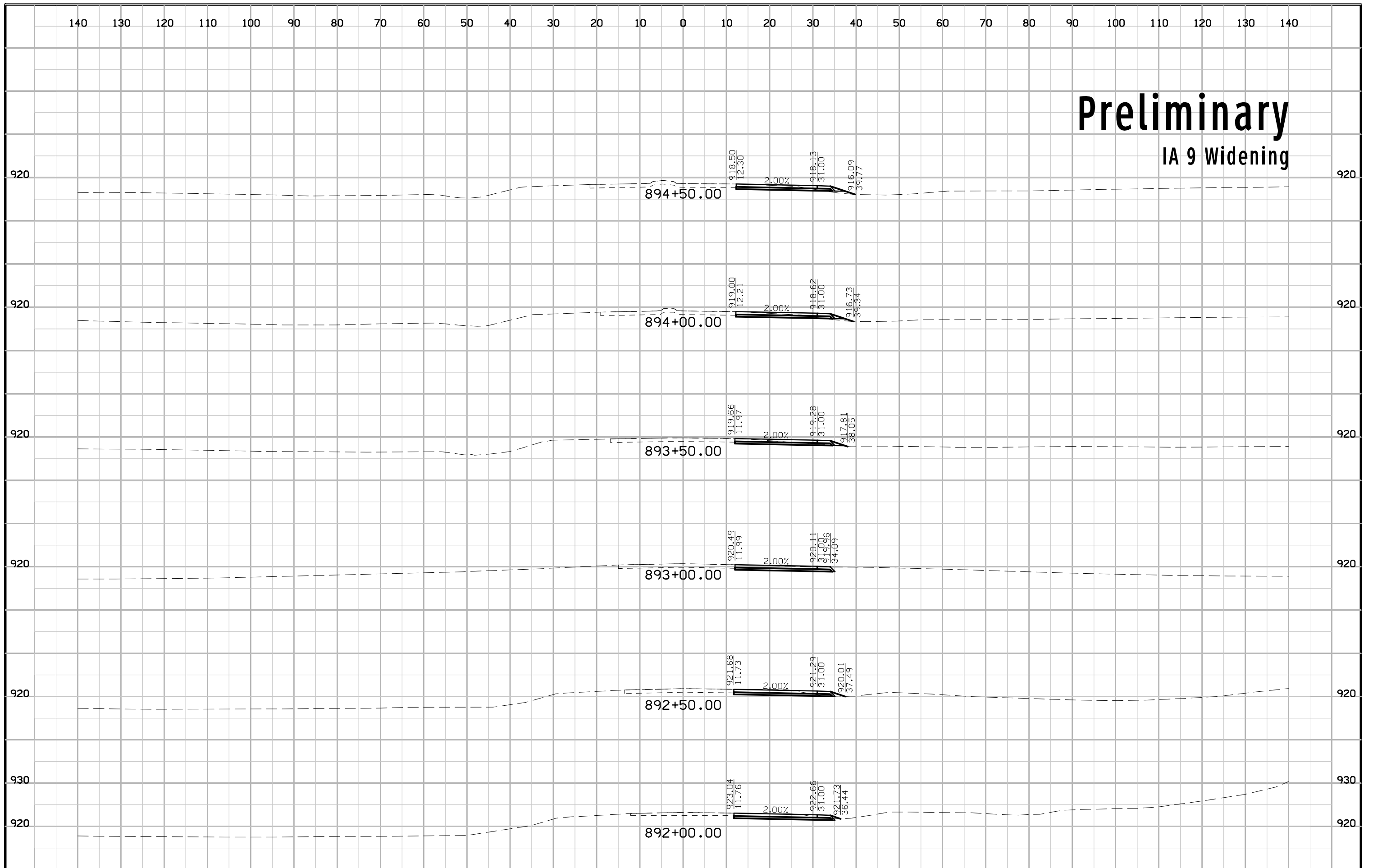
# Preliminary

## IA 9 Widening



# Preliminary

## IA 9 Widening



# Preliminary

## IA 9 Widening

