

No.	DESCRIPTION
<b>A Sheets</b>	<b>Title Sheets</b>
A.1	Title Sheet
A.2	Location Map Sheet
A.3	Design Criteria
<b>B Sheets</b>	<b>Typical Cross Sections and Details</b>
B.1 - 4	Typical Cross Sections and Details
<b>C Sheets</b>	<b>Quantities and General Information</b>
C.1 - 2	Tabulations
<b>D Sheets</b>	<b>Mainline Plan and Profile Sheets</b>
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - 6	"Mainline Name"
<b>G Sheets</b>	<b>Survey Sheets</b>
G.1 - 4	Reference Ties and Bench Marks
G.5	Horizontal Control Tab. & Super for all Alignments
<b>J Sheets</b>	<b>Traffic Control and Staging Sheets</b>
* J.1	Traffic Control Plan
* J.2	Traffic Control & Staging Legend & Symbol Info. Sheet
* J.3 - 6	Staging and Traffic Control Sheets
<b>K Sheets</b>	<b>Interchange Sheets</b>
* K.1 - 2	Interchange Layout Sheets
* K.3 - 5	RAMP E Plan and Profile Sheets
* K.6 - 7	RAMP F Plan and Profile Sheets
* K.8 - 9	RAMP G Plan and Profile Sheets
* K.10 - 11	RAMP H Plan and Profile Sheets
<b>M Sheets</b>	<b>Storm Sewer Sheets</b>
M.1	Storm Sewer Tabulations
<b>V Sheets</b>	<b>Bridge and Culvert Situation Plans</b>
* V.1 - 14	Bridge and Culvert Situation Plans
<b>W Sheets</b>	<b>Mainline Cross Sections</b>
W.1	Cross Sections Legend & Symbol Information Sheet
W.2 - 31	Mainline Cross Sections
<b>Y Sheets</b>	<b>Ramp Cross Sections</b>
Y.1 - 14	Ramp E Cross Sections
Y.15 - 27	Ramp F Cross Sections
Y.28 - 38	Ramp G Cross Sections
Y.39 - 48	Ramp H Cross Sections
	* Color Plan Sheets



**Highway Division**

PLANS OF PROPOSED IMPROVEMENT ON THE

**INTERSTATE ROAD SYSTEM**

**IOWA COUNTY**

**PCC PAVEMENT - GRADE AND NEW**

**Rest Area near Victor (EB)**

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

131

PROJECT IDENTIFICATION NUMBER

19-48-080-010

PROJECT NUMBER

IMN-080-6(483)208--OE-48

R.O.W. PROJECT NUMBER

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Anticipated Project Development Schedule:

D0 Pre-Design Concept  
August 25, 2020

D2 Design Field Exam  
January 11, 2021

D3 Plans for Preliminary Bridge  
January 22, 2021

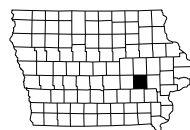
D5 Plans to Right of Way  
April 16, 2021

Preliminary Earthwork:

---,000 CY Cut (Total)  
---,000 CY Fill (Total)

MILEAGE SUMMARY			
			105-1
			09-27-94
Div.	Location	Lin. Ft.	Miles
1	I-80 East Bound		
	Sta. 167+11.42 to Sta. 173+09.85	598.43	0.11
	Sta. 178+07.63 to Sta. 184+51.07	643.44	0.12
	Sta. 200+30.00 to Sta. 224+57.68	2427.68	0.46
	Ramp E		
	Sta. 2173+11.59 to Sta. 2201+09.51	2797.92	0.53
	Ramp F		
	Sta. 4189+77.51 to Sta. 4212+27.76	2250.25	0.43
	Ramp G		
	Sta. 3176+46.70 to Sta. 3195+18.71	1872.01	0.35
Ramp H			
Sta. 3195+18.71 to Sta. 321145.35	1626.64	0.31	
	Total	12216.37	2.31

For Project Location Map refer to Sheet A.2



I-80 EB Rest Area DESIGN DATA RURAL			
2020 AADT	1,200	V.P.D.	
2040 AADT	1,400	V.P.D.	
20-- DHV	--	V.P.H.	
TRUCKS	--	%	
Total Design ESALs	--		

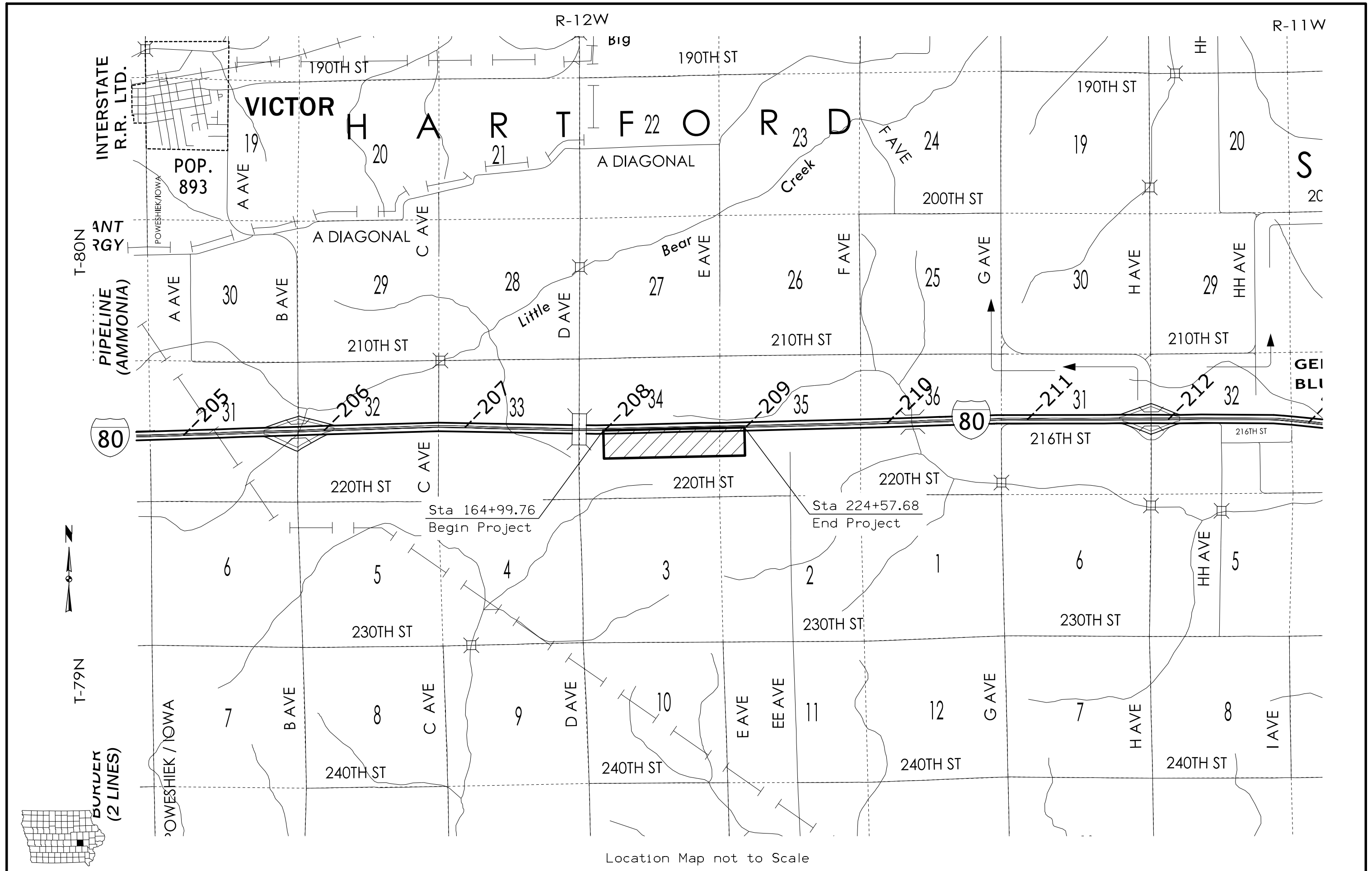
I-80 EB DESIGN DATA RURAL			
2020 AADT	29,600	V.P.D.	
2040 AADT	--	V.P.D.	
20-- DHV	--	V.P.H.	
TRUCKS	28	%	
Total Design ESALs	--		

INDEX OF SEALS		
SHEET NO.	NAME	TYPE
A.1	Cindy A. Spencer	Primary Signature Block

**PRELIMINARY PLANS**

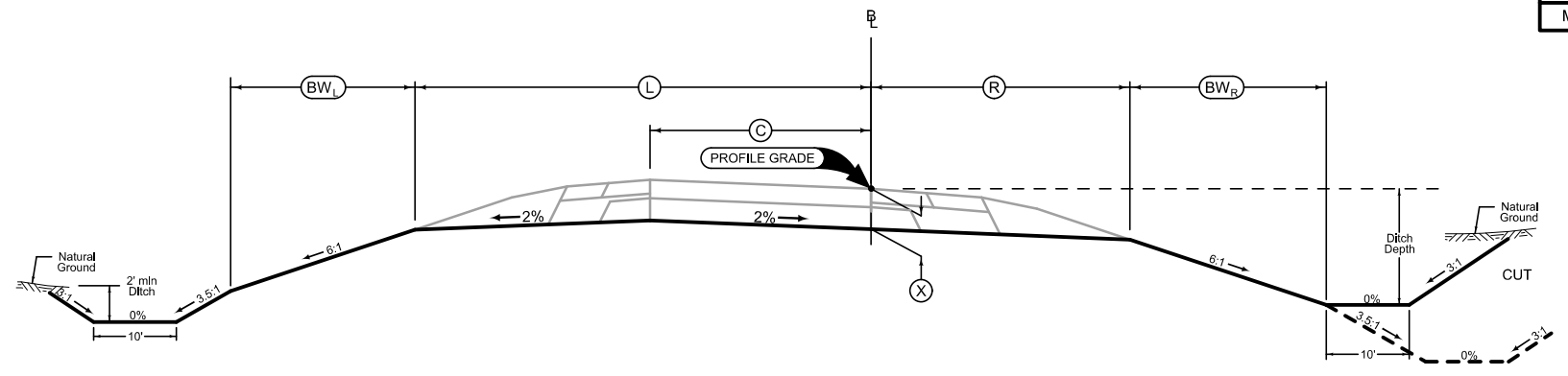
Subject to change by final design.

**D2 PLAN - Date: 01/11/2021**



LOCATION			DIMENSIONS					
INTERCHANGE	RAMP	STATION TO STATION	(L) Feet	(R) Feet	(C) Feet	(X) Inches	(BW <sub>L</sub> ) Feet	(BW <sub>R</sub> ) Feet
			33.77	19.5	16	22		
			33.77	19.5	16	22		
			33.77	19.5	16	22		
			33.77	19.5	16	22		

G\_1R\_Grade  
Modified



RAMP GRADING

**Paved Shoulder Alternates**

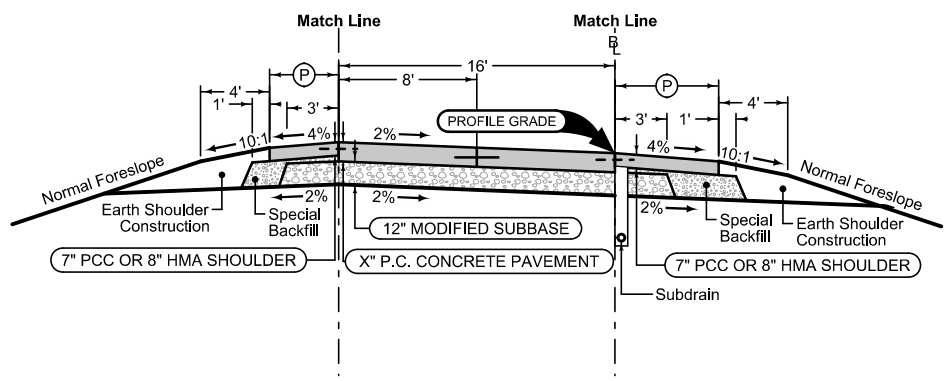
PCC Shoulder Jointing:  
Longitudinal joint: BT-1 or BT-5  
Transverse joints: C at 15' spacing  
HMA Shoulder Jointing:  
Longitudinal joint: B

1R_P_ALT_10-16-18		
BEGIN STATION	END STATION	(P) Feet
2173+11.59	2184+90.82	4
3178+86.70	3189+65.06	4
3195+05.44	3209+05.35	4
4206+48.47	4212+78.44	4

**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		
BEGIN STATION	END STATION	(P) Feet
2173+11.59	2184+90.82	6
3178+86.70	3189+65.06	6
3195+05.44	3209+05.35	6
4206+48.47	4212+78.44	6



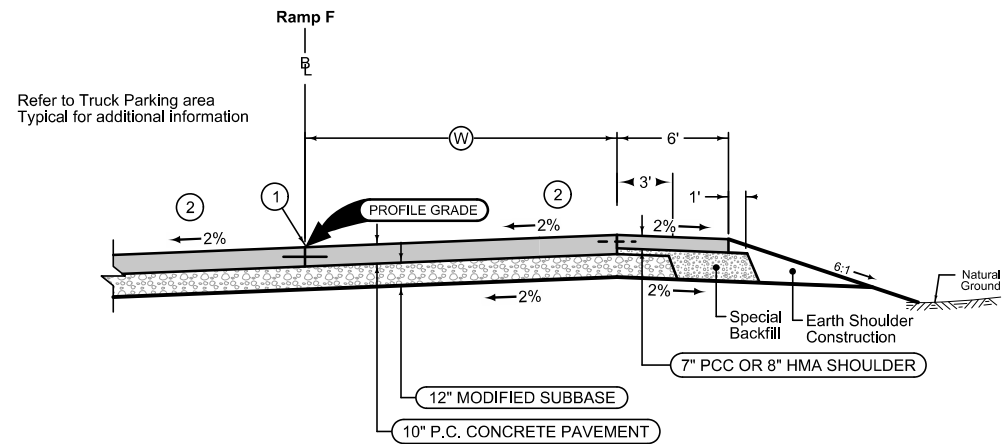
Section shown in the direction of traffic.

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

1RP_10-17-17		
BEGIN STATION	END STATION	(X) Inches
2173+11.59	2184+90.82	10
3178+86.70	3189+65.06	8.5
3195+05.44	3209+05.35	8.5
4206+48.47	4212+78.44	10

See Tab 100-24 or 100-25 for pavement quantities.  
See Tab 112-9 for shoulder quantities.

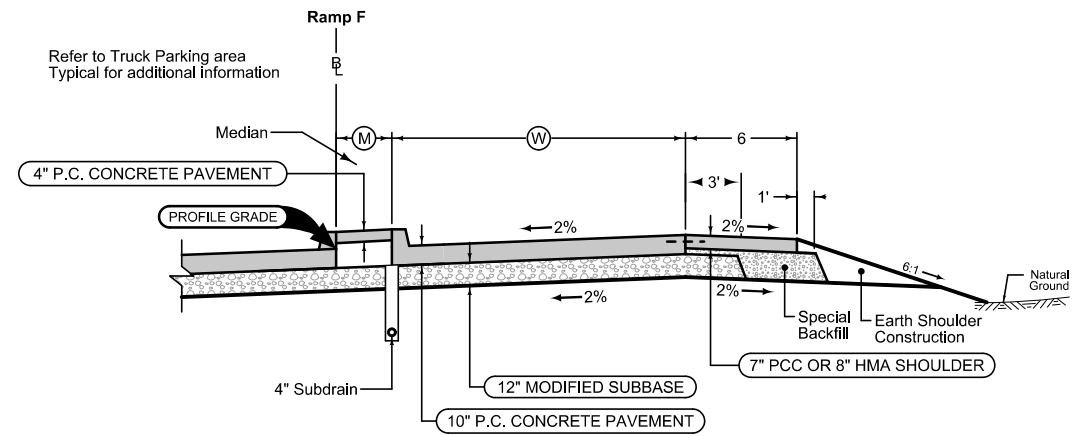
**INTERSTATE 80 IOWA COUNTY REST AREA  
EASTBOUND RAMPS**



BEGIN STATION	END STATION	(W) Feet
4195+72.54	4197+32.54	0-16.0
4202+16.37	4206+48.47	60.64-0

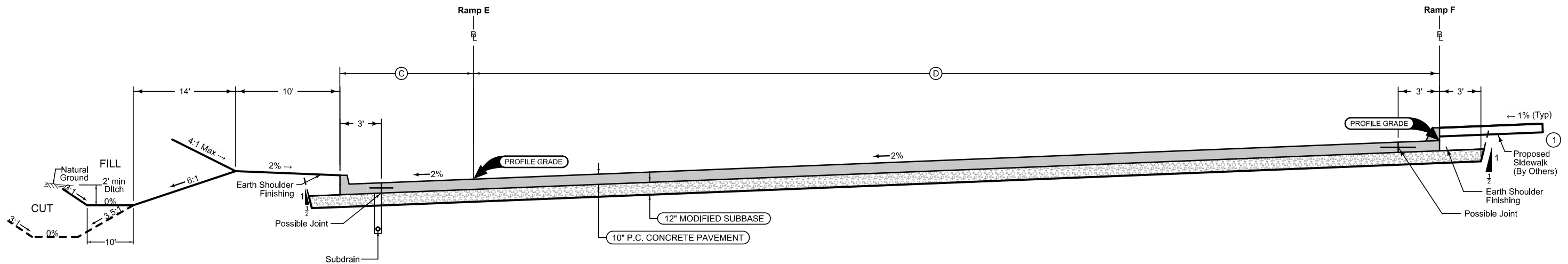
- ① Eliminate curb on right side of Truck Parking area thru Tapers.
- ② Cross slope may vary in areas of Super Elevation.

**INTERSTATE 80 IOWA COUNTY REST AREA  
TRUCK INSPECTION AREA - TAPERS**



BEGIN STATION	END STATION	(M) Feet	(W) Feet
4197+32.54	4197+79.28	0-4.67	16.0
4197+79.28	4198+32.54	4.67-10.0	16.0-22.86
4198+32.54	4200+47.28	10.0	22.86-72.0
4200+47.28	4201+27.28	10.0	72.0
4201+27.28	4202+16.37	10.0	72.0-50.64

**INTERSTATE 80 IOWA COUNTY REST AREA  
TRUCK INSPECTION AREA - PARKING**



**Integral Curb**

Shoulder jointing:  
Longitudinal joint not required when distance from back of curb to nearest joint is less than 16':

Transverse: CD at 17' spacing  
Single pour: L-2  
Staged: KT-2

BEGIN STATION	END STATION	(C) Feet	Curb Type See PV-102
2184+90.82	2186+45.82	16-31.5	
2186+45.82	2199+91.95	31.5	

PARK. LOT	BEGIN STATION	END STATION

Section view is in direction of traffic.  
Refer to Grading Typical above for dimensions and special notes.

**INTERSTATE 80 IOWA COUNTY REST AREA  
TRUCK PARKING LOTS**

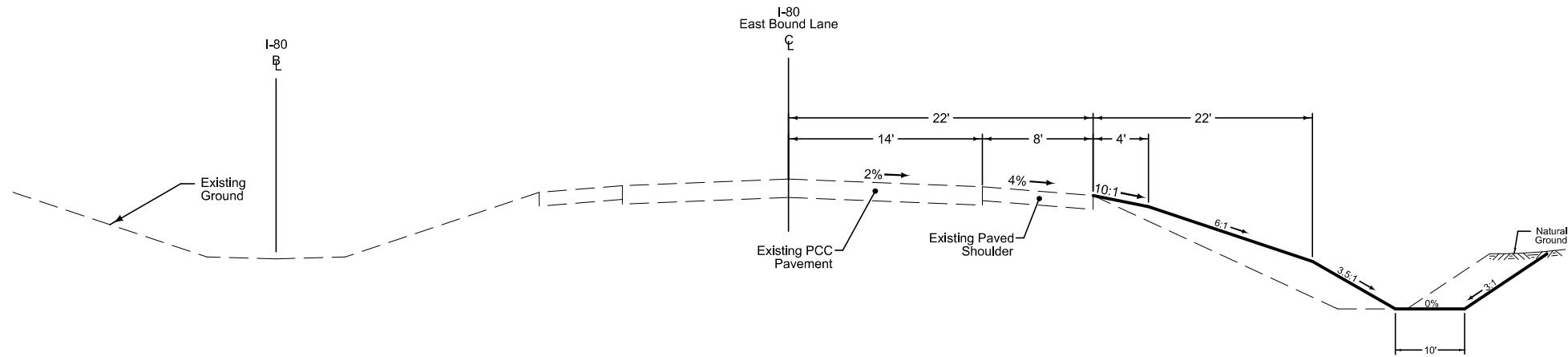
**Integral Curb**

Shoulder jointing:  
Longitudinal joint not required when distance from back of curb to nearest joint is less than 16':

Transverse: CD at 17' spacing  
Single pour: L-2  
Staged: KT-2

BEGIN STATION	END STATION	(D) Feet	Curb Type See PV-102
2184+91.80	2187+21.32	0-61.5	
2187+21.32	2195+99.50	61.5	

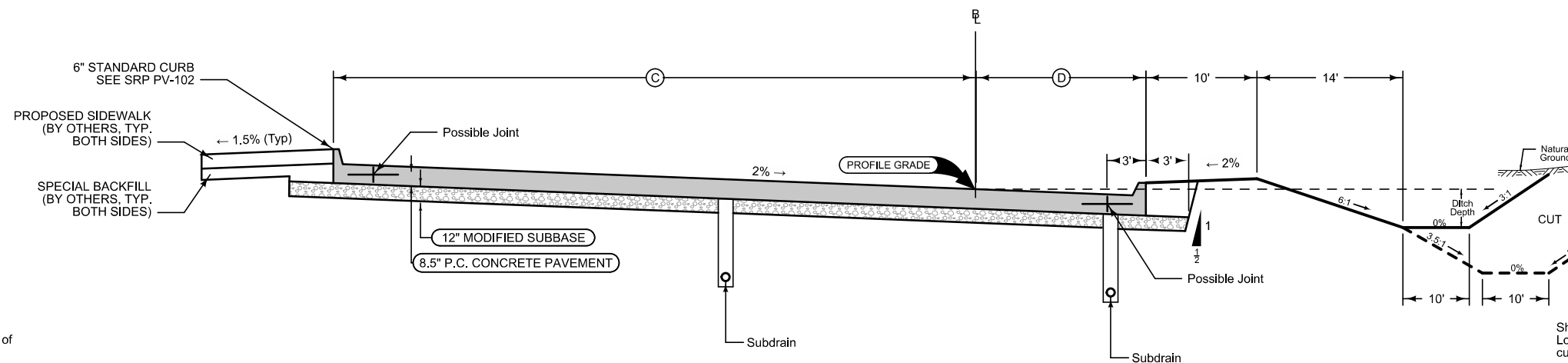
- ① Only install sidewalk adjacent to full-width pavement. Do not install in tapers.



Refer to Plan and Profile sheets for Ditch Grade elevations

BEGIN STATION	END STATION
165+00.00	175+17.00
178+75.00	209+88.00
210+11.00	225+58.00

### INTERSTATE 80 FORESLOPE IMPROVEMENTS



#### Integral Curb

Shoulder jointing:  
Longitudinal joint not required when distance from back of curb to nearest joint is less than 16'.

Transverse: C at 17' spacing  
Single pour: L-2  
Staged: KT-2

BEGIN STATION	END STATION	ⓐ Feet
3189+65.06	3189+78.34	16-39
3189+78.34	3195+05.44	39

PARK. LOT	BEGIN STATION	END STATION

Section view is in direction of traffic.

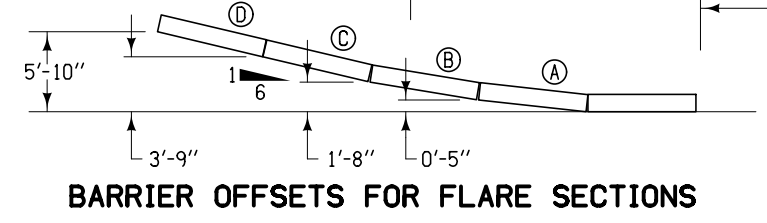
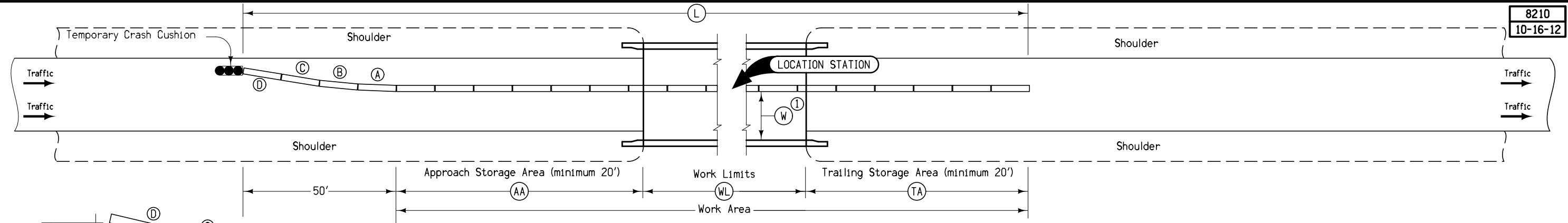
#### Integral Curb

Shoulder jointing:  
Longitudinal joint not required when distance from back of curb to nearest joint is less than 16'.

Transverse: C at 17' spacing  
Single pour: L-2  
Staged: KT-2

BEGIN STATION	END STATION	ⓐ Feet
3189+65.06	3189+73.24	0-10
3189+73.24	3195+05.44	10

### INTERSTATE 80 IOWA COUNTY REST AREA AUTO PARKING LOTS



Station	Side	AA	WL	TA	L	Anchored	W <sup>①</sup>	Remarks
		Feet	Feet	Feet	Feet	X	Ft-Inches	

① Where W is less than 14'-6", install restricted width signing as per Standard Road Plan TC-81.

**TEMPORARY CONCRETE BARRIER LAYOUT  
for One-Way Traffic**

<b>Roadway</b>	I-80 EB Rest Area - Victor			<b>Submittal Date</b>
<b>PIN Number</b>	19-48-080-010			
<b>Project Number</b>	IMN-080-6(483)208--0E-48			
<b>District</b>	District 6	<b>Assistant District Engineer</b>		
<b>County</b>	IOWA	or		
<b>Route</b>	I-80	<b>Office Director</b>		
<b>Location</b>	EB Rest Area near Victor			
<b>Work Type</b>	PCC Pavement - Grade and New			
<b>Segment Manager</b>	Cindy Spencer, Snyder & Associates, Inc.			
<b>Designer</b>	Cindy Spencer, Snyder & Associates, Inc.			
<b>Design Manual Section 1C-1</b>				
<b>Last Updated: 04-29-19</b>				
<b>Design Element</b>		<b>Preferred Values</b>	<b>Acceptable Values</b>	<b>Project Values</b>
Design speed (mph)		See Design Speed for Ramps Table Below	See Design Speed for Ramps Table Below	60 / 40
Design lane width (ft)		12	12	N/A
Turn-lane width (ft)		12	10	N/A
Pavement cross-slope (on tangent sections)		2%	1.5% minimum, 2% maximum	2%
Shoulder cross-slope (on tangent sections)		4	Shoulder cross-slope cannot be less than the adjacent lane, 6% max for paved or granular shoulders, 8% max for earth shoulders	4%
Foreslope		10:1 for 4' then 6:1	4:1 for interstates*, 3:1 for other roadways	10:1 / 6:1
(For fill areas greater than 40 ft, contact the Soils Design and design clear zone Section for assistance)		3.5:1	3:1	3.5:1
Bridge width—new**		2%	not steeper than 3:1	N/A
Bridge width—existing**		design lane widths + effective shoulder widths	design lane widths + effective shoulder widths	N/A
Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks)		16.5	16	N/A
Over primary over non-primary over railroad sign truss and pedestrian bridges		23.3	14	N/A
Structural Capacity		17.5	23.3	N/A
			17	N/A
		Contact Office of Bridges and Structures	Contact Office of Bridges and Structures	

\*Design Exception required for ramps on the Interstate system only

\*\*FHWA notification via email is required if acceptable criteria is not met on the Interstate or NHS systems (No formal design exception required)

**Effective Shoulder Width and Type for Ramps**

Design Element	Ramp Type										Project Values			
	Preferred			Acceptable				Project Values						
	Diagonal	Loop	Semi-Directional	Directional	Diagonal	Loop	Semi-Directional	Directional	Radius > 500 feet	Directional				
Full depth paved width (ft)	one lane	two lane	one lane	two lane	one lane	two lane	one lane	two lane	one lane	two lane	one lane	two lane		
Design lane width (ft)	16	24	16	24	16	24	16	24	14	22	14	22	14	16
Paved shoulder width (ft) (in the Left direction of travel)**	4	4	4	4	4	4	4	4	4	4	4	4	4	4
***Granular shoulder width (ft) (in the direction of travel)	4	-	-	-	-	-	-	-	4	-	-	-	-	N/A
Curb type	Interstate	Non-Interstate	4-inch sloped	4-inch sloped	4-inch sloped	4-inch sloped	4-inch sloped	4-inch sloped	6-inch sloped	6-inch sloped	6-inch sloped	6-inch sloped	6-inch sloped	N/A

\*For radii less than 500 feet, refer to design widths of pavement for turning roadways in A. Policy on Geometric Design of Highways and Streets

\*\*Left and right shoulders widths may be reversed if needed to provide additional sight distance

\*\*\*Non-Interstate interchanges only

**Notes:**

Curb in parking area will be 6" non-sloped. No curb expected in locations where design speed is over 40 mph.

**Ramp Design Speed (mph) = 60 / 40**

Design Element	Preferred Criteria										Acceptable Criteria										Project Values						
	Design Speed, mph					Design Speed, mph					Design Speed, mph					Design Speed, mph											
	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120		125	130	135	140	145	
Stopping sight distance (ft) (Refer to Section 6D-1)	155	200	250	305	360	425	495	570	650	730	810	895	985	1080	1180	1280	1385	1495	1610	1730	1850	2000	2150	2300	2450	570	570 / 305
Minimum horizontal curve radius (ft) and super-elevation side friction distribution rate (Refer to Sections 2A-2 and 2A-3)	144	231	340	485	643	833	1060	1330	1660	2050	2500	3000	3550	4150	4800	5500	6250	7100	8000	9000	10000	11000	12000	13000	14000	600	570
Minimum vertical curve length (ft) (Refer to Section 2B-1)	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300	315	330	345	360	375	390	405	420	435	450	570
Minimum Rate of Vertical Curvature (Refer to Section 2B-1)	26	37	49	64	79	96	115	136	160	185	215	250	290	335	385	440	495	555	620	690	765	845	930	1020	1115	1210	136
Minimum gradient (%) (Refer to Section 2B-1)	26	37	49	64	79	96	115	136	160	185	215	250	290	335	385	440	495	555	620	690	765	845	930	1020	1115	1210	136
Maximum gradient (%) on ramps	4																									0.5%	
Clear zone	See "Preferred Clear Zone" table in Section 9A-2																									See "Acceptable Clear Zone" table in Section 9A-2	

**Ramp Design Speed (mph) =**

Design Element	Preferred										Acceptable										Project Values						
	Design Speed (mph)					Design Speed (mph)					Design Speed (mph)					Design Speed (mph)											
	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155		160	165	170	175	180	60 / 40
All curves near free flow terminals	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	60 / 40	6%
Diagonal Curves near at-grade terminals	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	60 / 40	6%
Loop	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	60 / 40	6%
Directional	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60 / 40	6%
Semi-Directional	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	60 / 40	6%
All curves near free flow terminals	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	60 / 40	6%
Diagonal Curves near at-grade terminals	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	60 / 40	6%
Loop	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	60 / 40	6%
Directional	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	60 / 40	6%

**Ramp Design Criteria**

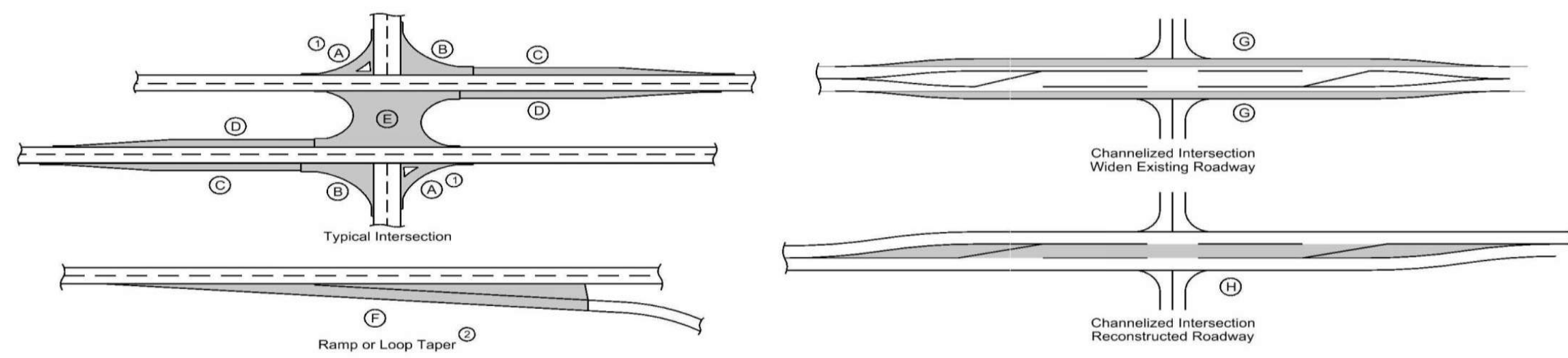
### DRAINAGE STRUCTURE BY ROAD CONTRACTOR

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	LT	RT							Type	No.			Lt.	Rt.	Other	Other	Total		Extensions		Lt.	Rt.	Lt.	Rt.	Rt.							Location Station	Top Elevation	Type
3.9	3182+70.00	DR-601	24	2000D	134	B	3.5	0.08	1	1	1										916.00	917.11			114.6	31.7																
22.6	3187+54.00	DR-601	36	2000D	70	B	5.1	0.17	1	1	1										915.52	916.42			55.1	30.9																
11.5	3201+68.00	DR-601	30	2000D	82	B	6.0	0.17	1	1	1										911.50	912.11			55.4	38.9																
2.0	4209+91.00	DR-601	24	2000D	62	B	2.9	0.08	1	1	1										901.50	899.76			44.3	30.0																
	164+99.76	DR-621	30	2000D	14	B																912.60	912.67			88.0	14.0															
	180+98.74	DR-621	24		-6																	921.50				88.4	-6.0															
	185+27.70	DR-621	42		-44																	913.91				107.3	-44.0		25													
	194+38.67	DR-621	24	2000D	14	B																914.35	914.25			88.1	14.0															
	199+92.10	DR-621	30		-44																	909.61				95.7	-44.0		10													
	206+70.37	DR-621	24	2000D	6	B																909.04	908.98			88.4	6.0															
	213+75.10	DR-621	30	2000D	32	B				1												892.38	891.58			167.2	32.0														36" per AB	
	219+44.37	DR-621	24	2000D	16	B																881.58	881.37			88.7	16.0															

### PCC 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 SY	Special Backfill TONS	Modified Subbase CY	Granular Subbase SY	Remarks	
			Width	Length	Area	A ①	B	C	D	E	F ②	G	H						
			FT	FT	SY	SY	SY	SY	SY	SY	SY	SY	SY						
Ramp E	EB	2173+11.59 2184+90.82 2184+91.80 2186+45.82	16.0 16-31.5 0-61.5 31.5	1179.2 155.0 229.5 1346.1	2096.4 409.0 784.2 4711.5								1332.0						
Ramp F	EB	4186+94.37 4195+72.54 4199+65.00 4202+58.95	61.5 Varies 93-16 16.0	1270.6 1075.9 294.0 968.8	8682.6 3714.2 1780.0 1722.3								1793.0						
Ramp G	EB	3178+86.70 3189+65.06 3189+78.34 3194+95.44	16.0 Varies 49.0 Varies	1078.4 13.3 517.1 23.3	1917.1 50.8 2815.3 89.5								213.3	2130.4	50.8	2815.3	89.5		
Ramp H	EB	3195+18.72 3209+05.35	16.0	1386.6	2465.1								213.3	2678.4	1200.9				



### SHOULDERS

- ① Lane(s) to which the shoulder is adjacent.
- ② See Typ. 7156, 7157, or 7158.
- ③ Bid Item.
- ④ Applies only for Paved Shoulders constructed on project with existing granular shoulders.
- ⑤ Bid Item. Typ. 7156, 7157, or 7158.
- ⑥ Does not include shrink.

Calculations assume a HMA unit weight (lbs/cf) of 150, a Special Backfill unit weight (lbs/cf) of 140, and a Granular Shoulder unit weight (lbs/cf) of 140.

Road Identification	Direction Of Traffic	Location						Quantities													Remarks						
		Station to Station		Side	P Width FT	P <sub>SG</sub> Width FT ②	G Width FT	L Length FT	Class 13 <sup>④</sup> Excavation CY ③	Hot Mix Asphalt		Binder TONS	Paved Shoulder SY ③	" Paved Shoulder at Guardrail SY ⑤	Reinforced Paved Shoulder SY ③	Special Backfill				Subbase CY ③		Granular Shoulder		Earth Shoulder Construction Alternates			
		Start	End							TON	TON/STA					HMA Alternate		PCC Alternate				TON	TON/STA	STA ③	HMA CY ⑥	PCC CY ⑥	
Ramp E	EB	2167+11.32	2167+79.62	R	10 to 6		68.3					60.7					39.443	57.750									0.7
		2167+79.62	2176+43.73	R	6.0		864.1		259.233	30.000	15.554	576.1					347.804	40.250									8.6
		2178+84.26	2179+99.56	R	0 to 6		115.3		17.295	15.000	1.038	38.4					23.204	20.125									1.2
		2179+99.56	2184+91.80	R	6.0		492.2		147.672	30.000	8.860	328.2					198.127	40.250									4.9
		2184+91.80	2185+14.19	R	6 to 0		22.4		3.359	15.000	0.202	7.5					4.506	20.125									0.2
		2173+11.59	2184+90.13	L	4.0		1178.5		236.003	20.025	14.160	523.8					268.118	22.750									11.8
		2184+90.13	2185+30.82	L	4 to 0		40.7		4.059	9.975	0.244	9.0			4.628	11.375										0.4	
Ramp F	EB	4195+71.95	4206+24.88	R	6.0		1075.1		322.530	30.000	19.352	716.7					216.364	20.125									10.8
		4206+24.88	4207+74.92	R	6 to 0		150.0		372.393	30.000	22.344	50.0					30.196	20.125								1.5	
		4210+15.46	4222+56.77	R	6.0		1241.3		29.947	15.000	1.797	827.5					499.627	40.250								12.4	
		4222+56.77	4224+56.42	R	6 to 10		199.6		2.146	9.975	0.129	4.8					2.447	11.375								0.2	
		4202+37.44	4202+58.95	L	0 to 4		21.5		194.004	20.025	11.640	430.6					220.404	22.750								9.7	
		4202+58.95	4212+27.76	L	4.0		968.8		0.230	9.975	0.014	0.5					0.212	9.191									0.0
Ramp G	EB	3176+46.70	3189+65.06	R	6.0		1318.4		395.508	30.000	23.730	878.9					449.890	34.125								13.2	
		3189+65.06	3189+69.97	R	6 to 0		4.9		0.736	15.000	0.044	1.6					0.838	17.066							0.0		
		3178+86.70	3180+00.57	L	0 to 4		113.9		11.359	9.975	0.682	25.3					10.466	9.191							1.1		
		3180+00.57	3189+65.06	L	4.0		964.5		193.139	20.025	11.588	428.7					177.225	18.375							9.6		
		3189+65.06	3189+67.37	L	4 to 0		2.3		0.230	9.975	0.014	0.5					0.212	9.191							0.0		
Ramp H	EB	3194+99.43	3195+05.43	R	0 to 6		6.0		0.900	15.000	0.054	2.0					1.024	17.066								0.1	
		3195+05.43	3211+45.35	R	6.0		1639.9		491.976	30.000	29.519	1093.3					559.623	34.125							16.4		
		3195+05.43	3195+07.74	L	0 to 4		2.3		0.230	9.975	0.014	0.5					0.212	9.191							0.0		
		3195+07.74	3207+57.40	L	4.0		1249.7		250.244	20.025	15.015	555.4					229.625	18.375							12.5		
		3207+57.40	3209+05.35	L	4 to 0		147.9		14.758	9.975	0.885	32.9					13.598	9.191							1.5		
I-80	EB	178+08.08	184+51.07	R	8.0		643.0		257.035	39.975	15.422	571.5														6.4	
		200+91.58	212+27.88	R	8.0		1136.3		454.236	39.975	27.254	1010.0														11.4	

108-33  
10-15-19

### TEMPORARY BARRIER RAIL

Possible Standard: BA-401 Possible Detail: 560-7

\* 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
				Concrete BA-401	Steel 560-7			
1	166+31.00	184+81.00	1850.0	X		Yes	No	Stage 2 construction
2	200+20.00	224+82.50	2462.5	X		Yes		Stage 2 construction

108-30  
04-16-13

### 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 Reductive	Temporary Severe Use	Permanent	Permanent Severe Use	V	W	X	Y	Z	Excavation Class 10	Embankment in Place	Permanent	Permanent Severe Use		
1	EB	166+31.00	RT	1.88	X															Temporary barrier rail
2	EB	200+20.00	RT	1.88	X															Temporary barrier rail

### SURVEY SYMBOLS

- ▲ ROW Right of Way Mark
- MM MM Mile Marker Post
- CP Control Point
- ▲ SCR Section Corner
- ⊕ REF Reference Tie Point
- WC Wild Card (Misc. Field Shot)
- ⊕ MH Utility Access (Manhole)
- UE Utility Elevation
- MIS Miscellaneous
- CON Concrete or A/C Slab
- IN Storm Sewer Intake
- PIP Pipe Culvert
- PRO Profile Shot
- PLG Location of General Photo
- LIN Miscellaneous Line
- BL Topo Breakline
- LUM Luminaire
- UV Underground Utility Vault
- SIGN SI Sign
- SIGN SL Speed Limit Sign
- EB EB Electrical Box
- ⊗ WEL Well
- FWD Wood Fence
- GL1D Gas Line Co. 1 - Quality D
- TP TPD Telephone Pedestal
- LP L.P. Tank
- OUT Tile Outlet
- SH Paved Shoulder
- CU Back of Curb
- GU Gutter In Front of Curb
- D Centerline Draw or Stream (Down)
- DU Centerline Draw or Stream (Up)
- GR Ground Shot
- FW Wire Fence
- FCL Chain Link and Security Fence
- EP Edge of Paved Roads (ML or SR)
- BLD Building or Foundation
- WV WV Water Valve
- SWK Sidewalk
- FLG FLG Flag Poles
- RIP Rip-Rap
- SOP Size of Pipe or Culvert
- HDG Hedge Row
- GP Guard Post (Less Than 4 Posts)
- Default\_Point Default Point Feature
- BM Bench Mark

### UTILITY LEGEND

- SAN.(C) --- SA1C Iowa DOT- Quality C  
Contact Name: \_\_\_\_\_  
Contact Phone: \_\_\_\_\_  
Contact Email: \_\_\_\_\_
- SAN. --- SA1D Iowa DOT- Quality D  
Contact Name: \_\_\_\_\_  
Contact Phone: \_\_\_\_\_  
Contact Email: \_\_\_\_\_
- ST S(C) --- ST1C Iowa DOT - Quality C  
Contact Name: \_\_\_\_\_  
Contact Phone: \_\_\_\_\_  
Contact Email: \_\_\_\_\_
- E1 --- EL1D TIP Rural Electric Cooperative - Quality D  
Contact Name: \_\_\_\_\_  
Contact Phone: \_\_\_\_\_  
Contact Email: \_\_\_\_\_
- E2 --- EL2D Iowa DOT - Quality D  
Contact Name: \_\_\_\_\_  
Contact Phone: \_\_\_\_\_  
Contact Email: \_\_\_\_\_
- T1 --- TL1D Cooperative Telephone Company - Quality D  
Contact Name: \_\_\_\_\_  
Contact Phone: \_\_\_\_\_  
Contact Email: \_\_\_\_\_
- G2 --- GL2D Iowa DOT - Quality D  
Contact Name: \_\_\_\_\_  
Contact Phone: \_\_\_\_\_  
Contact Email: \_\_\_\_\_
- F0 --- FO1D Iowa Communications Network - Quality D  
Contact Name: \_\_\_\_\_  
Contact Phone: \_\_\_\_\_  
Contact Email: \_\_\_\_\_
- F02 --- FO2D Cooperative Telephone Company - Quality D  
Contact Name: \_\_\_\_\_  
Contact Phone: \_\_\_\_\_  
Contact Email: \_\_\_\_\_
- F03 --- FO3D Iowa DOT - Quality D  
Contact Name: \_\_\_\_\_  
Contact Phone: \_\_\_\_\_  
Contact Email: \_\_\_\_\_
- W --- WL1D Poweshiek Water Association - Quality D  
Contact Name: \_\_\_\_\_  
Contact Phone: \_\_\_\_\_  
Contact Email: \_\_\_\_\_

### 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 "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.	
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
- ▲ 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
- C/A Access Control
- Property Line

## PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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

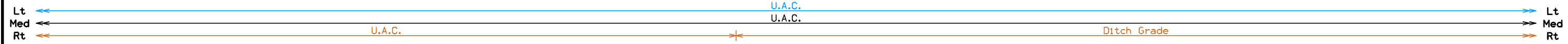
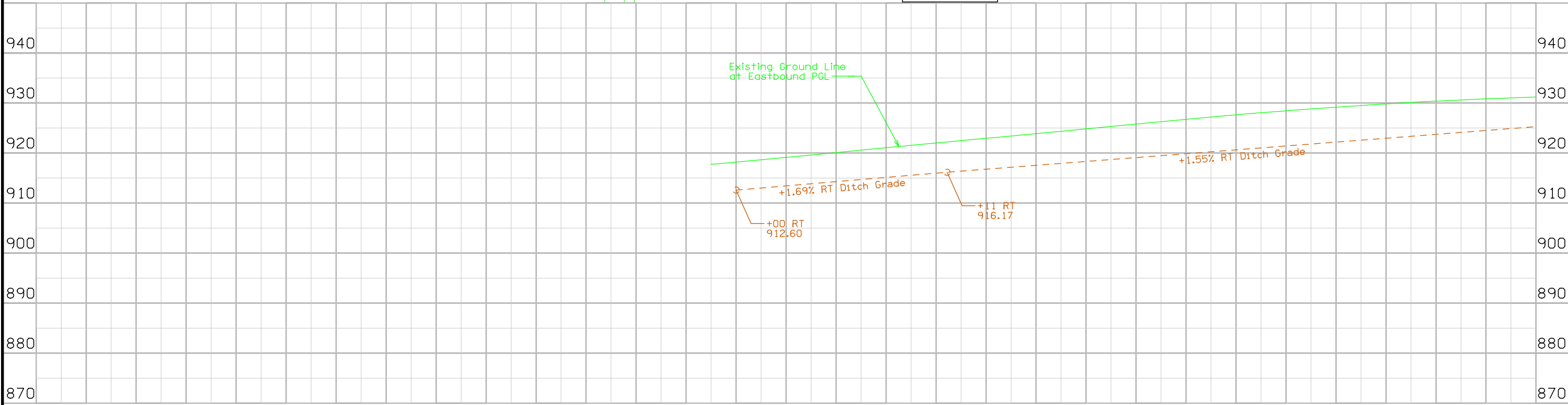
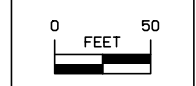
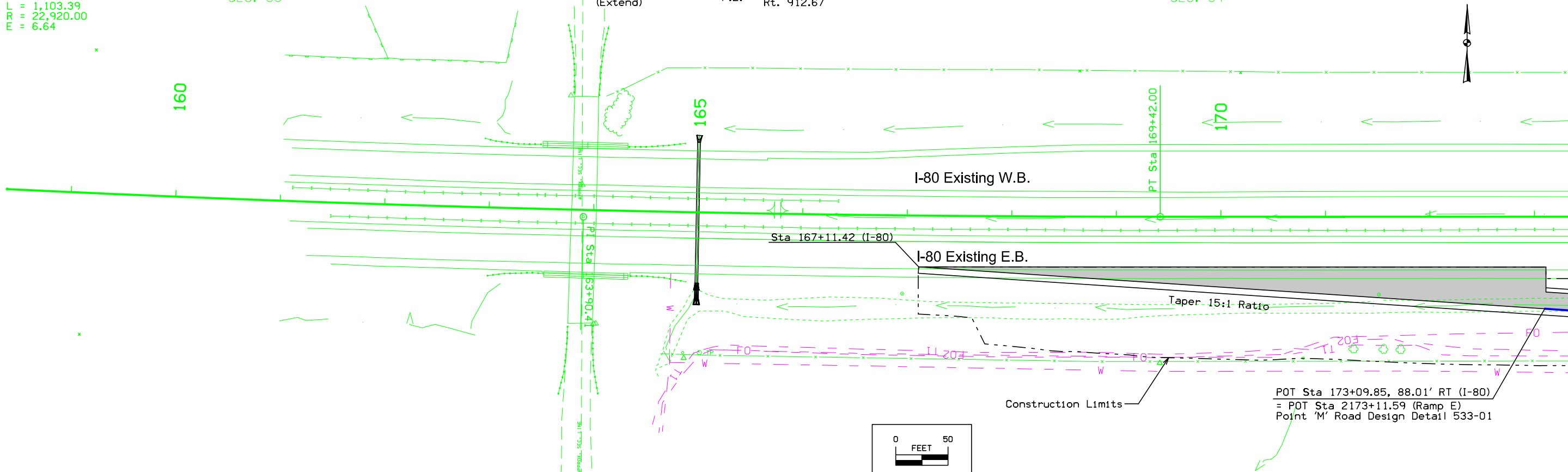
Curve Data  
 $\Delta = 2^\circ 45' 29.75''$  (LT)  
 T = 551.80  
 L = 1,103.39  
 R = 22,920.00  
 E = 6.64

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 SEC. 33

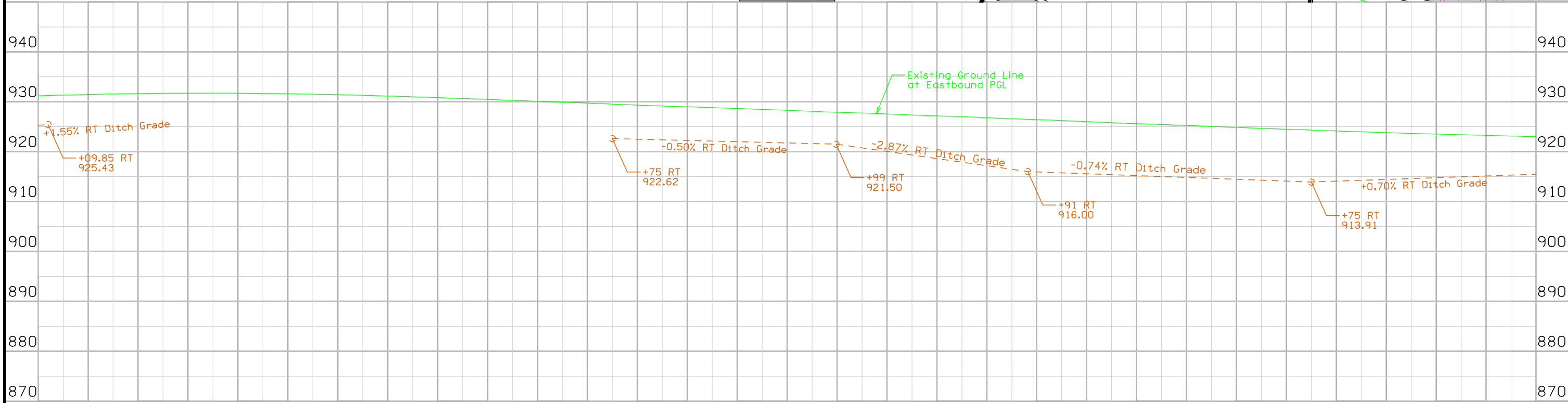
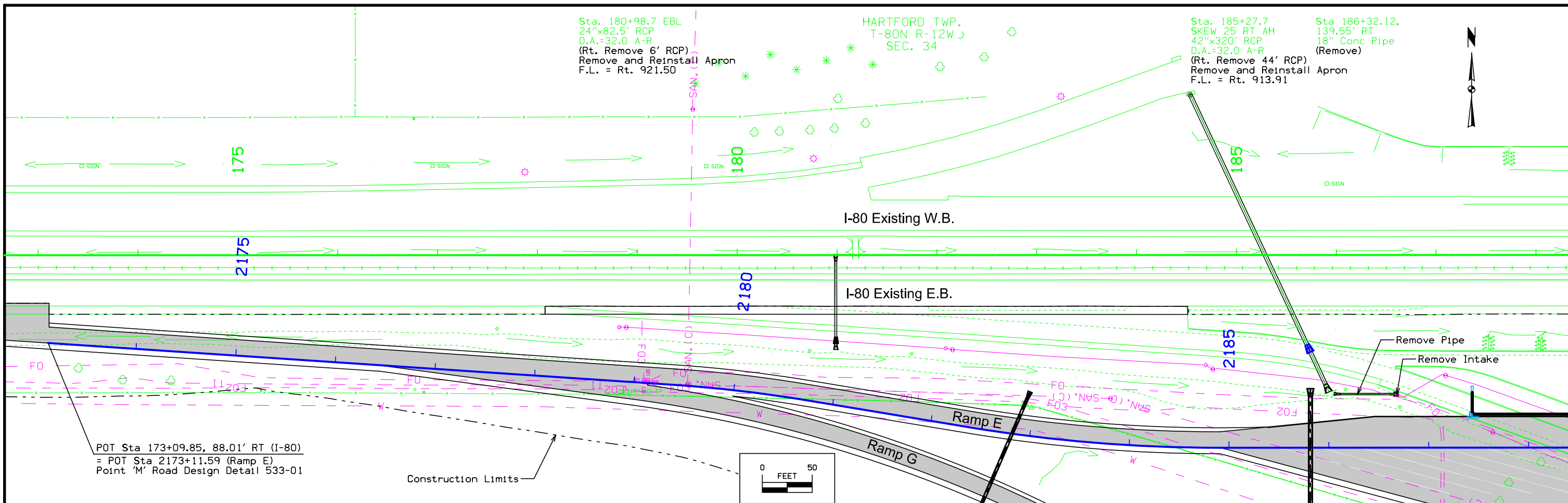
Sta. 164+99.7  
 30"x135' RCP  
 D.A.=5.0 A-R  
 (Extend)

Sta. 164+99.76 EBL  
 Install 30"x14' RCP Extension  
 Lt. U.A.C.  
 F.L. = Rt. 912.67

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 SEC. 34



917.77	918.20	918.65	919.13	919.61	920.09	920.58	921.07	921.55	922.02	922.48	922.94	923.41	923.88	924.35	924.84	925.33	925.80	926.27	926.74	927.19	927.65	928.06	928.45	928.83	929.17	929.51	929.81	930.11	930.38	930.62	930.85	931.02	931.20
																165	166	167	168	169	170	171	172	173									



Lt																	Lt																																												
Rt																	Rt																																												
Ditch Grade																	Ditch Grade																																												
V-Ditch																	Ditch Grade																																												
U.A.C.																	U.A.C.																																												
931.02	931.20	931.34	931.46	931.57	931.63	931.70	931.72	931.74	931.72	931.67	931.62	931.52	931.43	931.30	931.15	931.00	930.83	930.66	930.48	930.30	930.10	929.91	929.75	929.54	929.34	929.16	929.00	928.84	928.65	928.47	928.29	928.08	927.89	927.75	927.55	927.35	927.16	927.01	926.81	926.60	926.43	926.24	926.02	925.81	925.61	925.45	925.26	925.08	924.87	924.68	924.51	924.33	924.16	923.98	923.82	923.67	923.52	923.40	923.27	923.14	923.01
173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188																																														

Sta. 194+38.67  
 Install 24"x14' RCP Extension  
 Lt. U.A.C.  
 F.L. = Other 9124.26  
 Rt. 914.35

Sta. 194+38.7  
 24"x137' RCP  
 D.A.=4.0 A-R  
 (Extend)

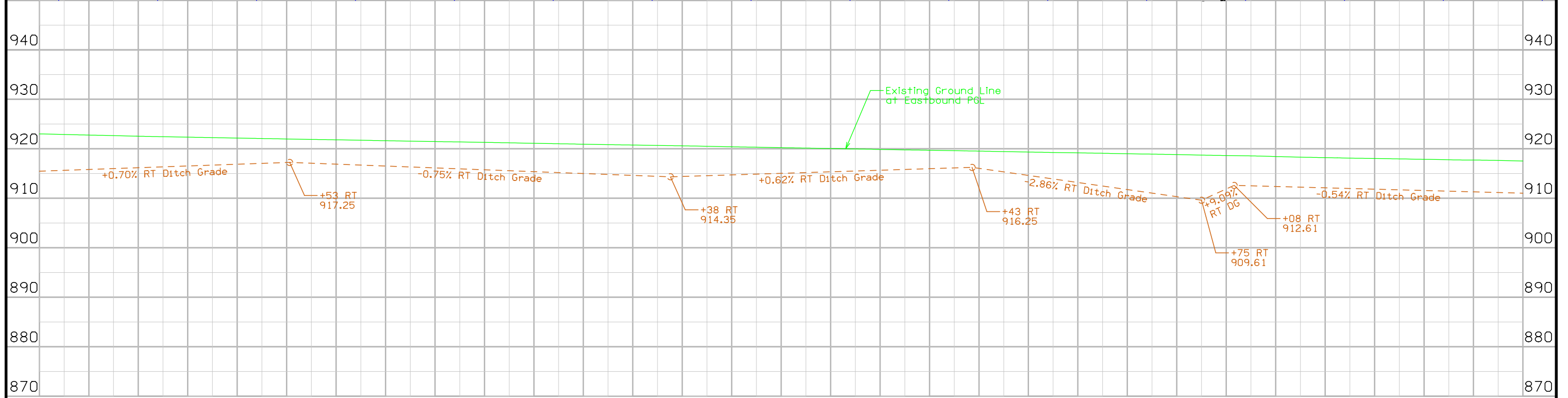
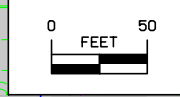
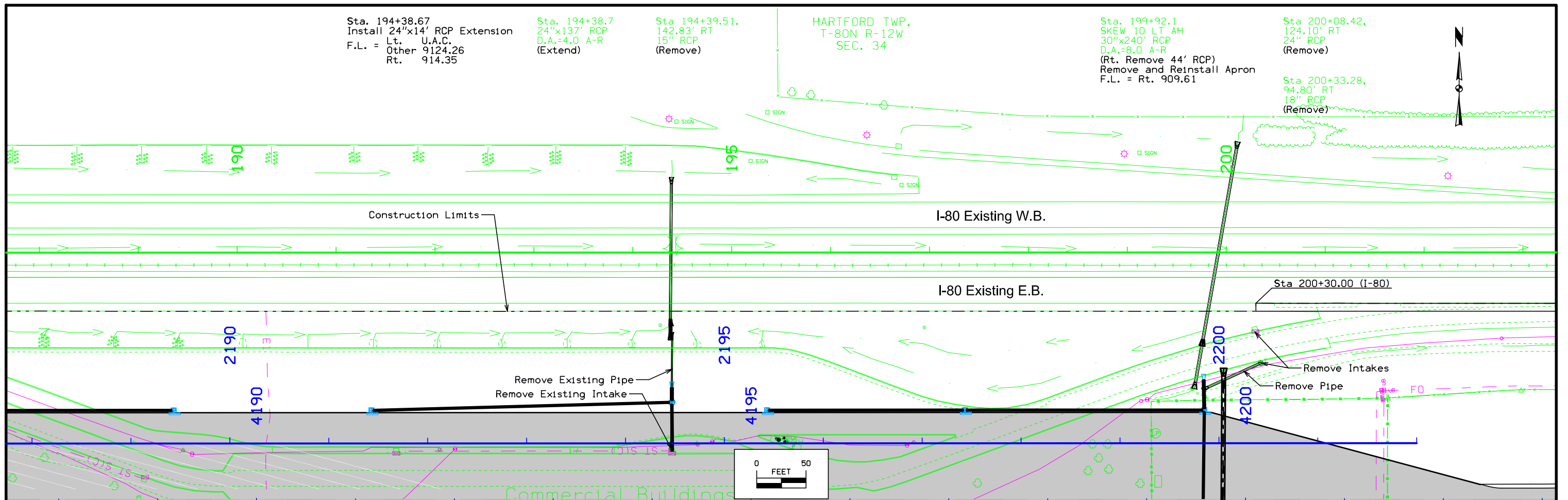
Sta 194+39.51,  
 142.83' RT  
 15" RCP  
 (Remove)

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Sta. 199+92.1  
 SKEW 10 LT AH  
 30"x240' RCP  
 D.A.=8.0 A-R  
 (Rt. Remove 44' RCP)  
 Remove and Reinstall Apron  
 F.L. = Rt. 909.61

Sta 200+08.42,  
 124.10' RT  
 24" RCP  
 (Remove)

Sta 200+33.28,  
 94.80' RT  
 18" RCP  
 (Remove)



Station	Station	Station	Station	Station	Station	Station	Station	Station	Station	Station	Station	Station	Station	Station	Station	Station	Station	Station	Station	Station																																									
923.14	923.01	922.90	922.78	922.67	922.55	922.45	922.36	922.27	922.18	922.08	922.00	921.91	921.82	921.73	921.64	921.56	921.47	921.38	921.30	921.21	921.12	921.03	920.94	920.85	920.76	920.68	920.61	920.51	920.41	920.32	920.24	920.15	920.06	919.98	919.89	919.80	919.71	919.63	919.54	919.45	919.35	919.26	919.19	919.11	919.02	918.93	918.83	918.73	918.65	918.58	918.44	918.32	918.22	918.12	918.05	917.96	917.88	917.79	917.73	917.64	917.53

Sta. 206+70.4  
24"x142" RCP  
D.A.=2.0 A-R  
(Extend)

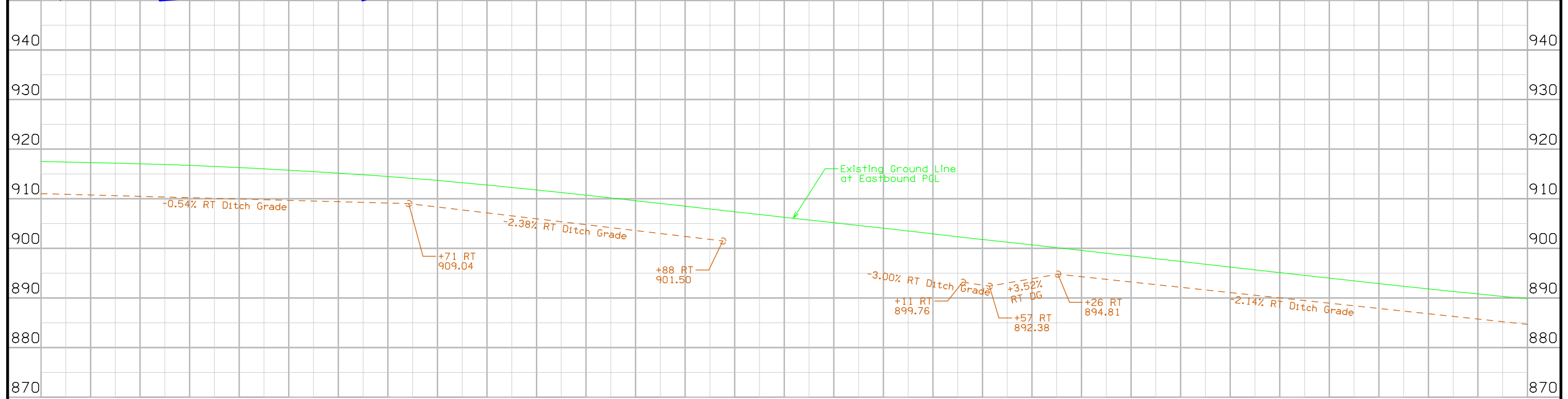
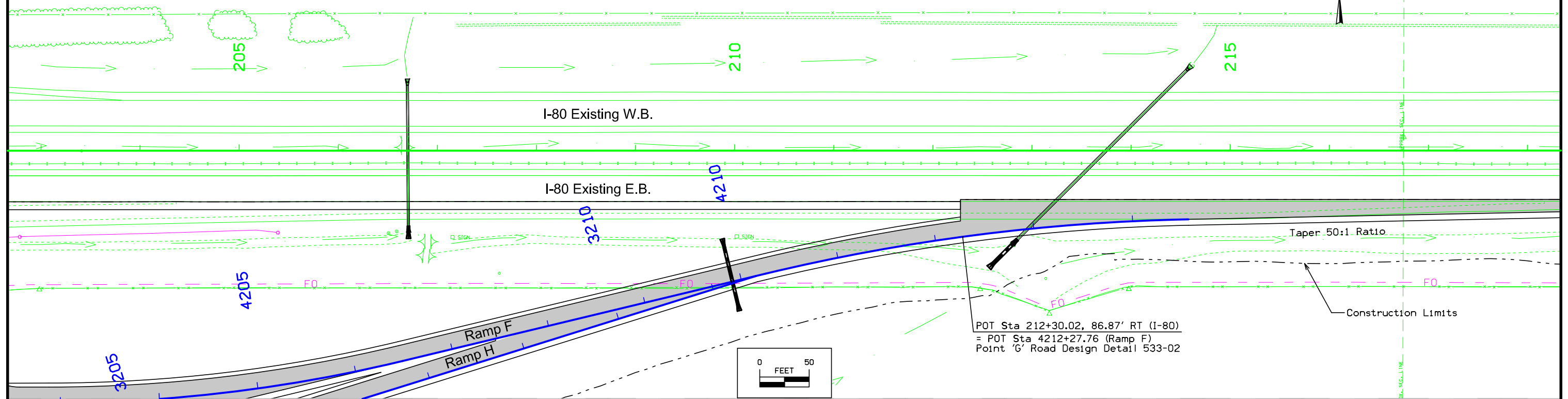
Sta. 206+70.37  
Install 24"x6' RCP Extension  
F.L. = Lt. U.A.C.  
Other 908.98  
Rt. 909.04

HARTFORD TWP.  
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SEC. 34

Sta. 213+75.1  
SKEW 45 LT AH  
30"x242" RCP  
D.A.=2.0 A-R  
(Extend)

Sta. 213+75.10  
Skew 40° Lt. Ahead  
Install 30"x32' RCP Extension  
F.L. = Lt. U.A.C.  
Other 991.18  
Rt. 892.38

HARTFORD TWP.  
T-80N R-12W  
SEC. 35

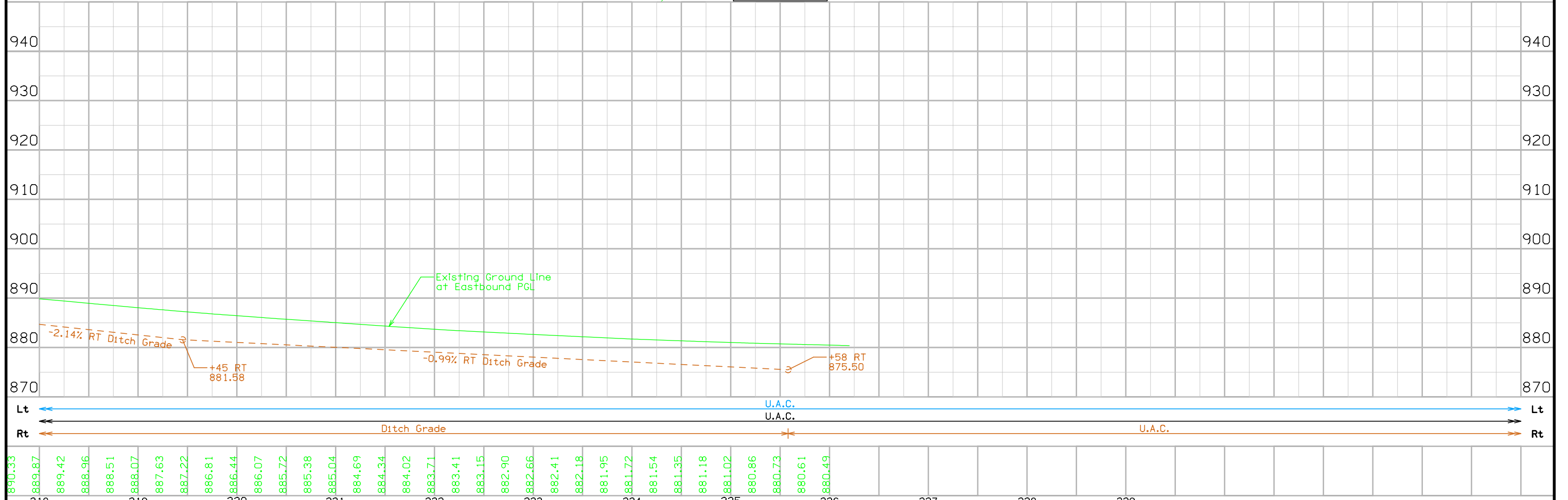
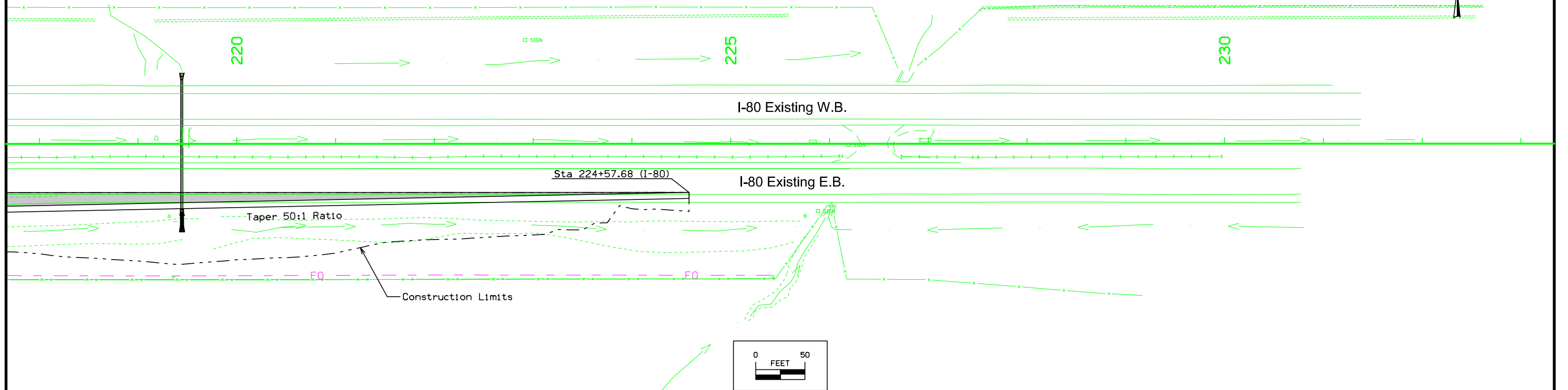


917.64	917.53	917.41	917.30	917.18	917.04	916.90	916.73	916.52	916.29	916.04	915.76	915.48	915.16	914.85	914.49	914.10	913.70	913.24	912.78	912.29	911.78	911.26	910.72	910.17	909.62	909.06	908.50	907.94	907.38	906.82	906.27	905.72	905.17	904.62	904.07	903.51	902.94	902.36	901.79	901.25	900.71	900.15	899.59	899.03	898.48	897.92	897.36	896.81	896.24	895.68	895.12	894.56	894.00	893.45	892.91	892.37	891.84	891.31	890.82	890.33	889.87
203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218																																														

Sta. 219+44.4  
24"x131" RCP  
D.A.=0.5 A-R  
(Extend)

Sta. 219+44.37  
Install 24"x16" RCP Extension  
F.L. = Lt. U.A.C.  
Other 881.37  
Rt. 881.58

HARTFORD TWP.  
T-80N R-12W  
SEC. 35



## Survey Information

Iowa County  
IMN-080-6(483)208--0E-48  
PIN 19-48-080-10  
I 80-Survey of Rest Stop near Victor (EB)  
Approx. 3.5 Miles Southeast of Victor  
SAP0843.1

### Party Personnel

Jeremy Leemon- Survey Project Manager  
Larry Boyer- Assistant Survey Project Manager  
Steve Lentz- Survey Party Chief  
Jacob Powers- Assistant Survey Party Chief  
John Kropp- Instrument

### Date(s) of Survey

Begin Date 04/2/2019  
End Date 08/14/2019

### General Information

Measurement units for this survey are US survey feet. Project datum and control was established using IARTN and USGS BM DWB. This is a partial DTM survey with photo control of the rest area on the eastbound lane of Interstate 80.

### Vertical Control

Vertical datum for this survey is relative to NGVD29=NAVD88 at this location. Geoid12B was used in this survey. A Digital level loop was run from BM #511 (USGS BM DWB) through the project benchmarks and returned to BM # 511. The loop error met 3<sup>rd</sup> Order accuracy and the error was distributed proportionately among the project bench marks.

This survey observed 1 USGS Control Monument with published NGVD29=NAVD88 heights to compare to local ground control:

USGS mark designated DWB has a published Elev. Of 936.744  
Survey Elev. = 936.750

This survey observed 2 As-Built plan bench marks to compare to local ground control:

BM 520 Project IM-80-6(199)208—13-48 Elev. 936.74  
Survey Elev. = 936.750

BM 521 Project IM-80-6(199)208—13-48 Elev. 936.694  
Survey Elev. = 936.717

### Horizontal Control

The project coordinate system for this survey is IaRCS Zone 10(U.S. Survey Feet). This survey control is relative to IaRTN reference stations. IaRTN Reference Station coordinates are relative to the National Reference Station network datum: NAD83 (2011) for Epoch 2010.00. We established 6 control points surrounding the project limits, observing each for 180 epochs. Then a calibration was performed from BASE100. Additional points were placed throughout the project using GNSS Base-Rover setup relative to Pt.

The Combined Scale Factor may be used for total station stakeout and location to survey in the State Plane coordinate system.

### Alignment Information

The horizontal alignment for this survey is a retrace of As-built Plans No. I-80-6(24)208. Survey stationing was equated to the plan PC at STA 158+38.7 and run back and ahead without equation throughout the survey.

Survey stationing relates to as built plan stationing as follows:

PC Sta. 158+38.69 As-built Plans Project No. I-80-6(24)208  
Survey PC Sta. 158+38.7

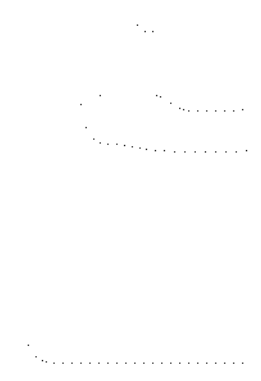
PI Sta 163+90.32 Project No. I-80-6(24)208  
Survey PI STA 163+90.5

PT STA 169+42.00 Project No. I-80-6(24)208  
Survey PT STA 169+42.0

POT STA 175+99.98 Project No. I-80-6(24)208  
Survey POT STA 176+00

POT STA 203+41.16 Project No. I-80-6(24)208  
Survey POT STA 203+42.7

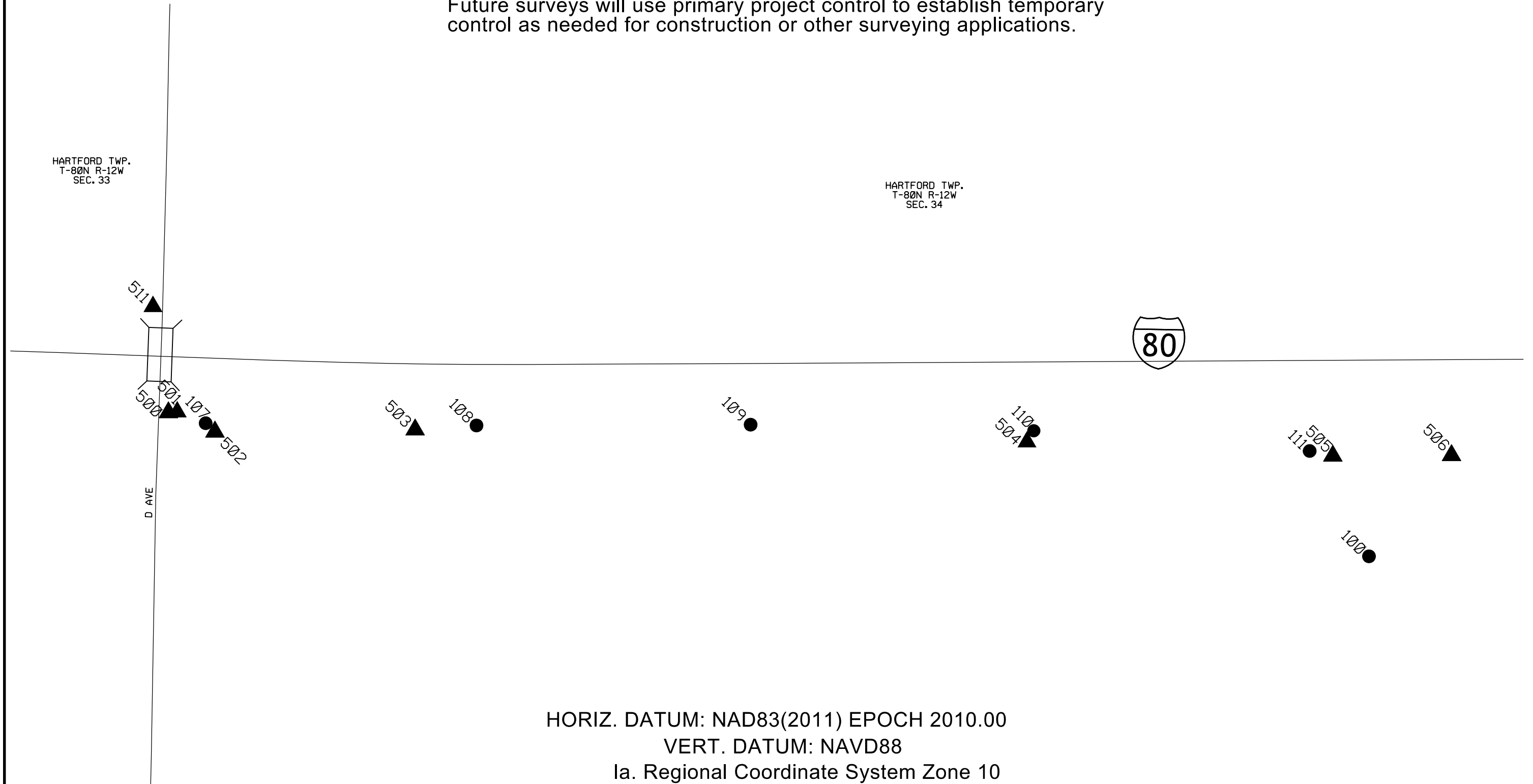
PC STA 253+26.72 Project No. I-80-6(24)208  
Survey PC STA 253+31.4





# CONTROL POINT VICINITY MAP

This map is a guide to the vicinity of the primary project control points  
Primary control is for use with RTK base stations and for RTN validation.  
Future surveys will use primary project control to establish temporary  
control as needed for construction or other surveying applications.



HORIZ. DATUM: NAD83(2011) EPOCH 2010.00

VERT. DATUM: NAVD88

Ia. Regional Coordinate System Zone 10

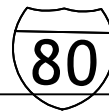
Coordinate listing from next sheet will be used with IaRTN for monument  
recovery. No other reference ties are given.

# CONTROL POINT VICINITY MAP

This map is a guide to the vicinity of the primary project control points  
Primary control is for use with RTK base stations and for RTN validation.  
Future surveys will use primary project control to establish temporary  
control as needed for construction or other surveying applications.

HARTFORD TWP.  
T-80N R-12W  
SEC. 34

HARTFORD TWP.  
T-80N R-12W  
SEC. 35



507 ▲ 112 ●

113 ●  
508 ▲

114 ●

115 ● 509 ▲

116 ●

510 ▲  
117 ●

HORIZ. DATUM: NAD83(2011) EPOCH 2010.00

VERT. DATUM: NAVD88

1a. Regional Coordinate System Zone 10

Coordinate listing from next sheet will be used with 1aRTN for monument  
recovery. No other reference ties are given.

# HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING

HORIZ. DATUM: NAD83(2011) EPOCH 2010.00

VERT. DATUM: NAVD88

Ia. Regional Coordinate System Zone 10

Point Name	Northing	Easting	Elevation	Feature	Description
100	7949968.31	20345761.88	926.00	CP	SET REBAR 6" DEEP
107	7950260.03	20343221.00	914.01	CP	SET REBAR 6" DEEP
108	7950254.63	20343814.83	927.39	CP	SET REBAR 6" DEEP
109	7950255.55	20344413.16	930.13	CP	SET REBAR 6" DEEP
110	7950243.09	20345022.56	921.90	CP	SET REBAR 6" DEEP
111	7950198.72	20345631.24	921.17	CP	SET REBAR 6" DEEP
112	7950186.16	20346265.49	920.04	CP	SET REBAR 6" DEEP
113	7950246.16	20346899.15	919.29	CP	SET REBAR 6" DEEP
114	7950266.97	20347498.27	914.40	CP	SET REBAR 6" DEEP
115	7950261.64	20348049.69	896.03	CP	SET REBAR 6" DEEP
116	7950255.92	20348671.57	888.64	CP	SET REBAR 6" DEEP
117	7950256.84	20349278.49	875.99	CP	SET REBAR 6" DEEP
500	7950287.50	20343136.05	939.18	BM	FD DOT BRASS BUTTON SE ABUT. HANDRAIL
501	7950287.77	20343137.89	936.72	BM	FD IHC BM ON SE ABUTMENT
502	7950254.70	20343221.96	915.17	BM	CUT X ON ROW RAIL
503	7950250.01	20343677.38	928.43	BM	CUT X ON ROW RAIL
505	7950189.86	20345681.01	923.10	BM	SET MAG NAIL SE SIDE LUM BASE
506	7950190.42	20345940.17	922.41	BM	SET MAG NAIL S SIDE LUM BASE
507	7950197.02	20346200.75	922.30	BM	SET CUT X SIDE LUM BASE
508	7950242.70	20346899.36	920.63	BM	CUT X ON ROW RAIL
509	7950250.87	20348133.47	895.99	BM	CUT X ON ROW RAIL
510	7950328.09	20349337.85	879.49	BM	FD IHC BM ON INLET HEADWALL
511	7950505.78	20343114.19	936.74	BM	FD USGS MONUMENT

**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														
Ramp E	RPE_3	1330	6.0	186	62	PV-303	2179+03.56		2179+40.76	2179+96.56						2179+34.56	2179+34.56		60 mph. A-A at 3% x-slope
				144	48				2181+71.24	2180+70.44	2180+27.24					2180+75.24	2180+75.24		40 mph
Ramp E	RPE_6	1530	4.0	96	48	PV-303	2185+38.13	2181+71.24	2182+38.44	2182+67.24						2182+67.24	2182+67.24		40 mph
									2184+90.13	2184+61.33						2184+61.33	2184+61.33		40 mph
Ramp G	RPG_3	1330	6.0	186	62	PV-303	3178+65.85		3179+03.05	3179+58.85						3178+96.85	3178+96.85		60 mph. A-A at 3% x-slope
				144	48				3184+10.98	3183+67.78						3184+15.78	3184+15.78		40 mph
Ramp G	RPG_6	485	6.0	144	48	PV-303	3190+11.21	3185+11.78	3186+12.57	3186+55.77						3186+07.77	3186+07.77		40 mph
								3189+63.21	3188+62.41	3188+19.21						3188+67.21	3188+67.21		40 mph
Ramp F	RPF_3	1530	4.0	96	48	PV-303	4202+69.21		4202+88.41	4203+17.21						4203+17.21	4203+17.21		40 mph
								4207+63.66	4207+15.66	4206+48.46	4206+19.66					4206+19.66	4206+19.66		40 mph
Ramp F	RPF_6	2000	5.4	168	62	PV-303	4209+69.81		4210+25.41	4210+75.81						4210+32.25	4210+32.25		60 mph
Ramp H	RPH_3	1000	5.0	120	48	PV-303	3197+16.15	3197+64.15	3198+48.15	3198+84.15						3198+60.15	3198+60.15		40 mph
								3202+82.37	3202+34.37	3201+50.37	3201+14.37					3201+38.37	3201+38.37		40 mph

**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)
Ramp E	Point RPE1	2166+00.00	7950349.464	20343335.57															
	Curve RPE_3						2179+40.76	7950260.144	20344673.34	2180+05.65	7950255.821	20344738.09	2180+70.44	7950245.216	20344802.11				
	Curve RPE_6						2182+38.44	7950217.758	20344967.85	2183+64.57	7950197.144	20345092.29	2184+90.13	7950197.186	20345218.42				
	Point RPE8	2203+21.42	7950197.799	20347049.71															
Ramp F	Point RPF1	4186+00.00	7950135.732	20345355.26															
	Curve RPF_3						4202+88.41	7950136.297	20347043.68	4204+69.28	7950136.358	20347224.54	4206+48.47	7950178.587	20347400.4				
	Curve RPF_6						4210+25.41	7950266.599	20347766.93	4212+41.76	7950317.113	20347977.29	4214+56.42	7950321.474	20348193.59				
	Point RPF8	4225+56.42	7950343.646	20349293.37															
Ramp G	Point RPG1	3176+00.00	7950286.136	20344330.69															
	Curve RPG_3						3179+03.05	7950245.877	20344631.06	3181+60.15	7950211.724	20344885.87	3184+10.98	7950085.065	20345109.6				
	Curve RPG_6						3186+12.57	7949985.748	20345285.04	3187+40.33	7949922.808	20345396.22	3188+62.41	7949922.808	20345523.98				
	Point RPG8	3195+68.72	7949922.807	20346230.28															
Ramp H	Point RPH1	3194+00.00	7949922.807	20346061.57															
	Curve RPH_3						3198+48.15	7949922.807	20346509.72	3200+00.42	7949922.807	20346661.99	3201+50.37	7949968.129	20346807.36				
	Point RPH5	3212+13.31	7950284.5	20347822.12															
ML I-80	SURML080																		
	Curve SURML080_1						158+38.61	7950416.392	20342574.74	163+90.41	7950389.925	20343125.9	169+42.00	7950390.013	20343677.7				
	Point SURML0803	253+26.72	7950391.343	20352062.42															

108-23A  
08-01-08

### TRAFFIC CONTROL PLAN

1. Two lanes of I-80 shall remain open to traffic at all time. Shoulder closures as necessary will be allowed. For construction in the shoulder area, shift traffic per details shown elsewhere in these plans.
2. Refer to staging plan for rest area closure information. The existing rest area is to remain open to traffic as much as possible. Notify DOT staff at least 2 weeks prior to expected closing date.

108-26A  
08-01-08










### STAGING NOTES

- Stage 1: Traffic utilizes existing I-80 and existing rest area ramps. Rest area remains open to traffic.
- Construct inside shoulder strengthening on I-80.
  - Construct car parking areas and ramps outside of proposed tapers and existing pavement. Estimated station ranges:
    - Ramp E: Sta. 2174+00 - Sta. 2185+00
    - Ramp F: Sta. 4202+50 - Sta. 4210+50
    - Ramps G / H: Sta. 3176+47 - Sta. 3211+45 (Entire lenth)
- Stage 2: Shift I-80 traffic to inside shoulder. Close rest area.
- Remove existing tapers, ramps, and parking area.
  - Construct new ramp tapers. Construct truck parking area and truck inspection area.

**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

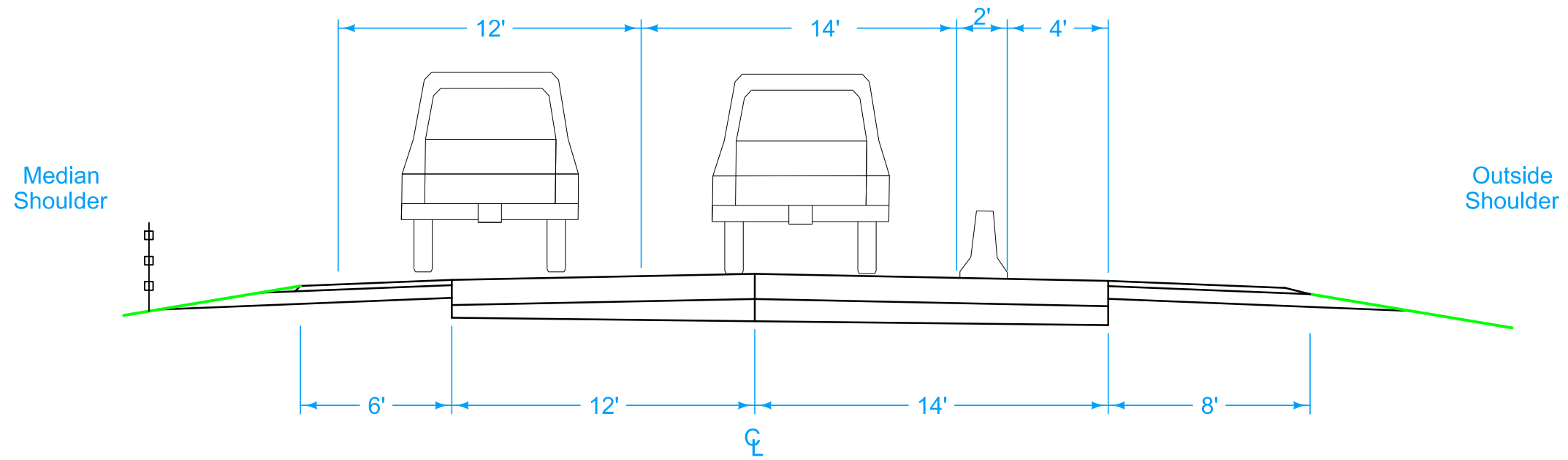
**PLAN VIEW PATTERN AND SYMBOL LEGEND  
OF TRAFFIC CONTROL AND STAGING SHEETS**

●	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

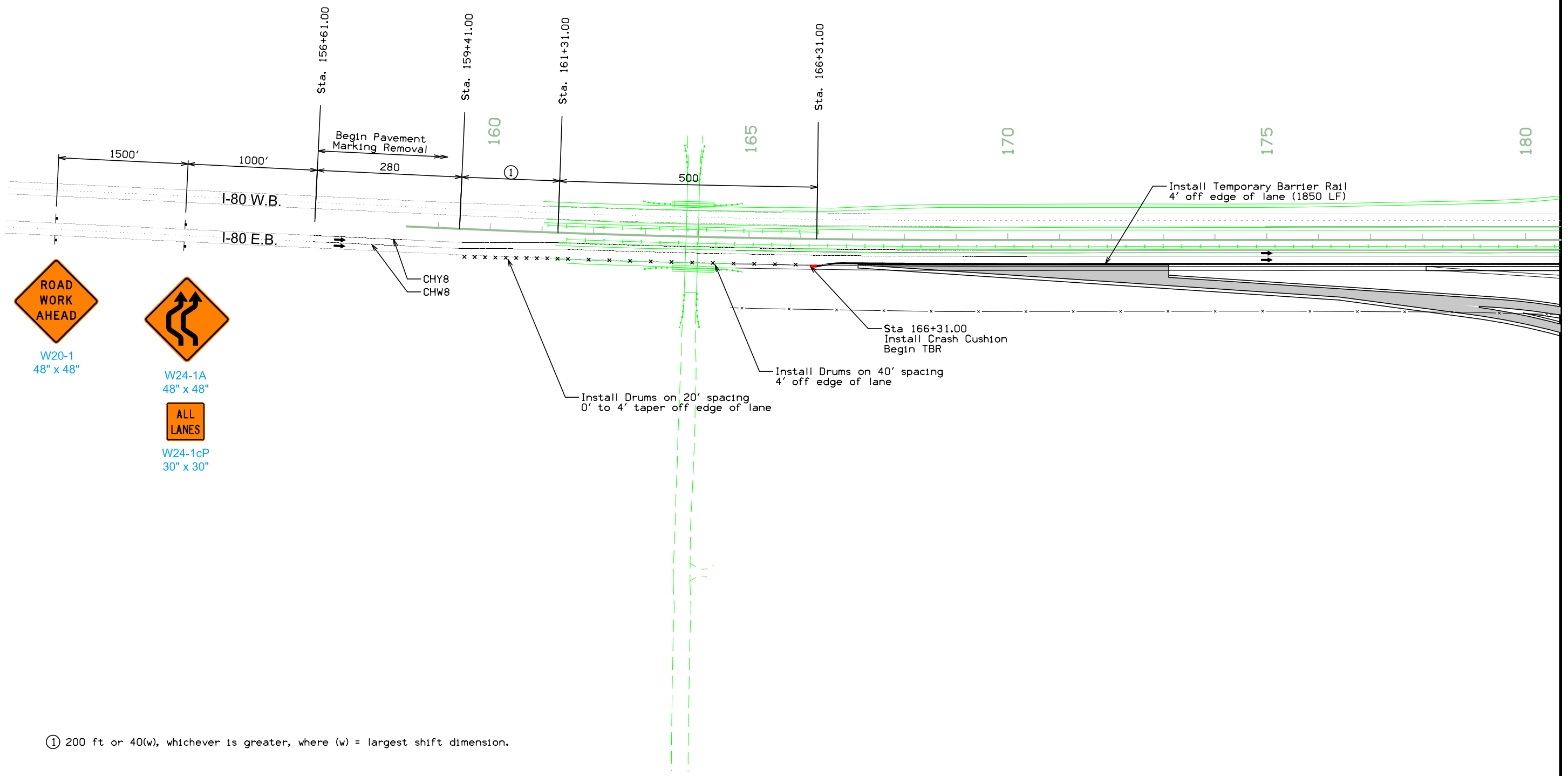
NOTE: Device spacing according to Standard Road Plans unless specifically dimensioned.

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

(COVERS SHEET SERIES J)

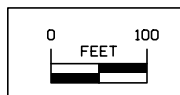


**INTERSTATE 80 E.B. IOWA COUNTY  
Traffic Control Lane Shift**



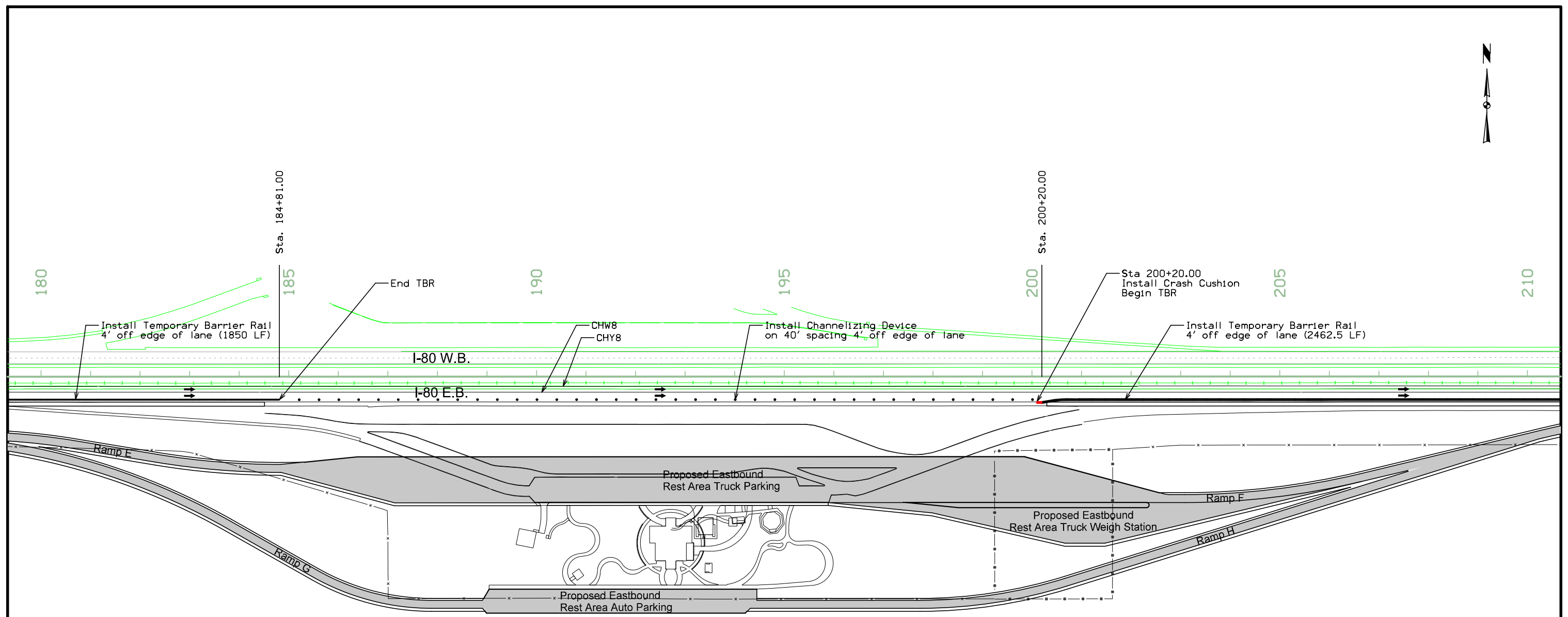
① 200 ft or 40(w), whichever is greater, where (w) = largest shift dimension.

- When a temporary lane shift is necessary:
1. Place solid white line (CHW8) between all lanes. Also place a yellow lane line (CHY8) on median side through this area.
  2. Install sign W24-1 1000 ft prior to shift on both shoulders.



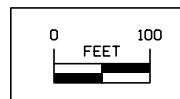
Traffic Control Layout  
I-80 Lane Shift



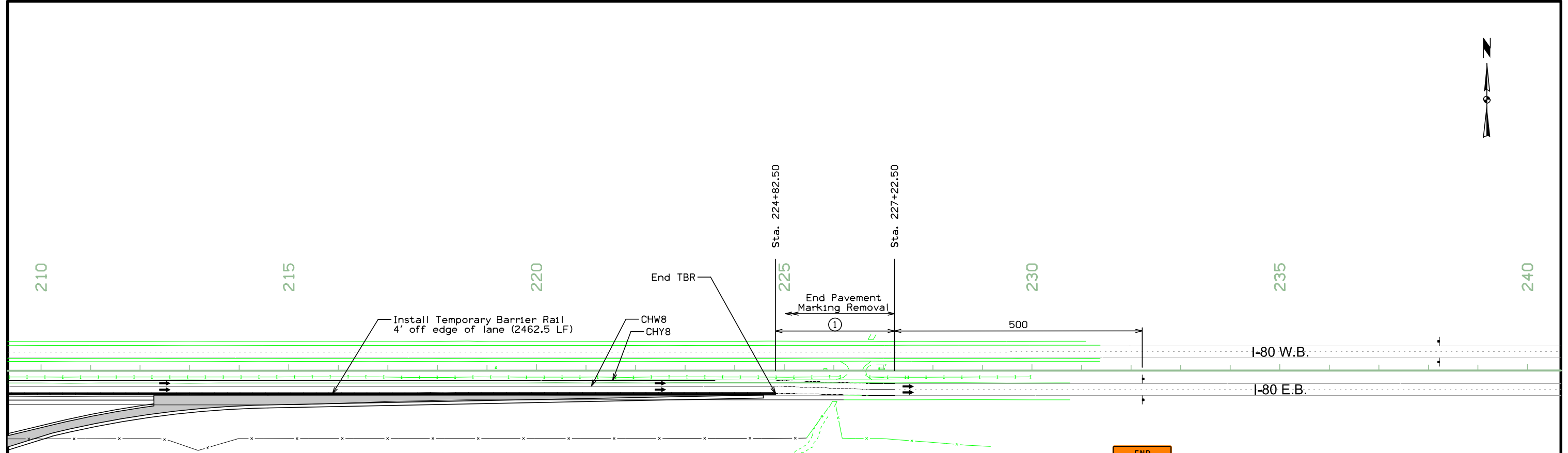


When a temporary lane shift is necessary:

1. Place solid white line (CHW8) between all lanes. Also place a yellow lane line (CHY8) on median side through this area.



Traffic Control Layout  
I-80 Lane Shift



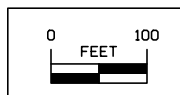
END ROAD WORK

G20-2A  
48" x 24"

① 200 ft or 40(w), whichever is greater, where (w) = largest shift dimension.

When a temporary lane shift is necessary:

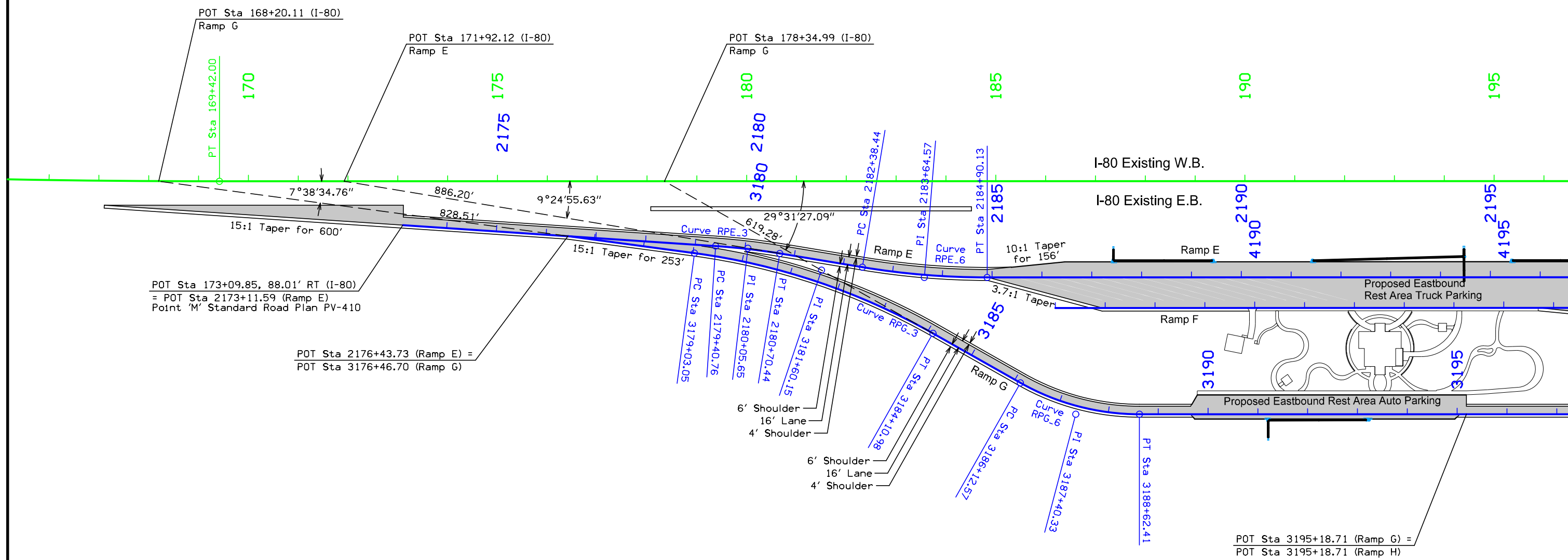
1. Place solid white line (CHW8) between all lanes. Also place a yellow lane line (CHY8) on median side through this area.



Traffic Control Layout  
I-80 Lane Shift

Curve Data  
 $\Delta = 2^\circ 45' 29.75''$  (LT)  
 T = 551.80  
 L = 1,103.39  
 R = 22,920.00  
 E = 6.64

HARTFORD TWP.  
 T-80N R-12W  
 SEC. 34



POT Sta 173+09.85, 88.01' RT (I-80)  
 = POT Sta 2173+11.59 (Ramp E)  
 Point 'M' Standard Road Plan PV-410

POT Sta 2176+43.73 (Ramp E) =  
 POT Sta 3176+46.70 (Ramp G)

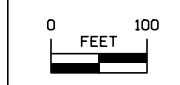
POT Sta 3195+18.71 (Ramp G) =  
 POT Sta 3195+18.71 (Ramp H)

Curve RPE\_3 Data  
 $\Delta = 5^\circ 35' 11.53''$  (RT)  
 T = 64.89  
 L = 129.68  
 R = 1,330.00  
 E = 1.58  
 e = 6.0%  
 I = 55.8'  
 x = 62'

Curve RPG\_3 Data  
 $\Delta = 21^\circ 52' 52.32''$  (RT)  
 T = 257.10  
 L = 507.93  
 R = 1,330.00  
 E = 24.62  
 e = 6.0%  
 I = 186'  
 x = 62'

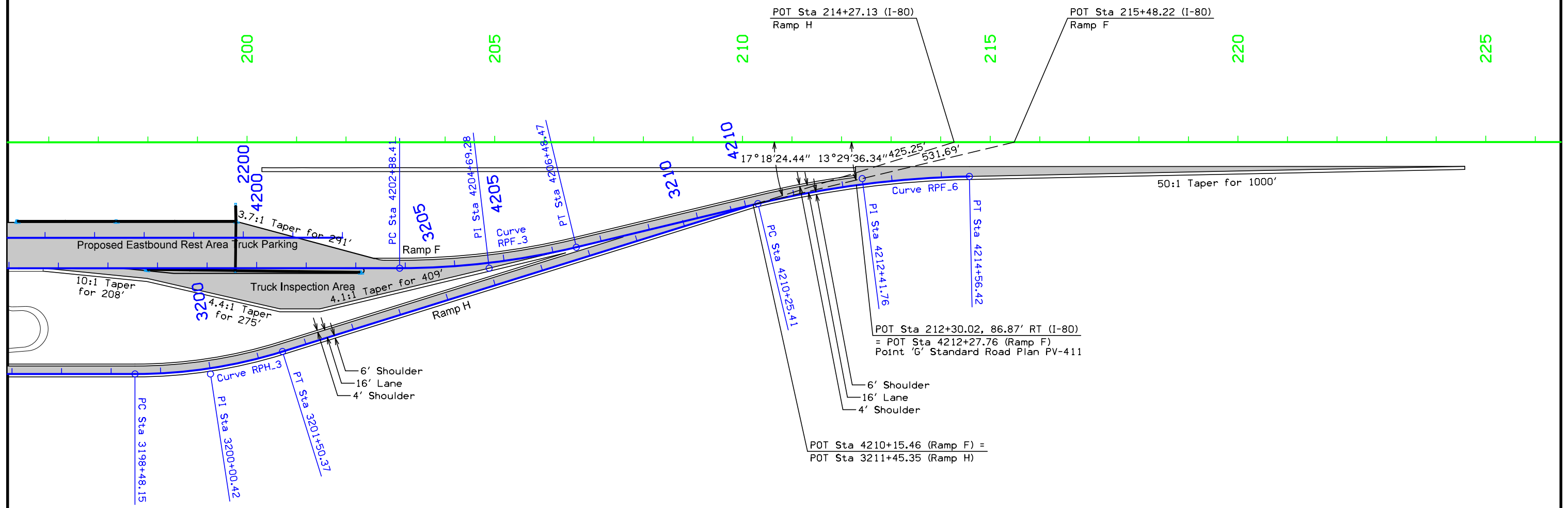
Curve RPE\_6 Data  
 $\Delta = 9^\circ 25' 31.96''$  (LT)  
 T = 126.13  
 L = 251.70  
 R = 1,530.00  
 E = 5.19  
 e = 4.0%  
 I = 28.8'  
 x = 48'

Curve RPG\_6 Data  
 $\Delta = 29^\circ 30' 54.30''$  (LT)  
 T = 127.76  
 L = 249.84  
 R = 485.00  
 E = 16.54  
 e = 6.0%  
 I = 43.2'  
 x = 48'



Geometric Plan  
 Proposed Interchange of  
 Interstate 80 with  
 Rest Area near Victor (EB)  
 Iowa County

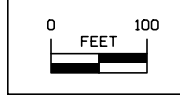
HARTFORD TWP.  
T-80N R-12W  
SEC. 34



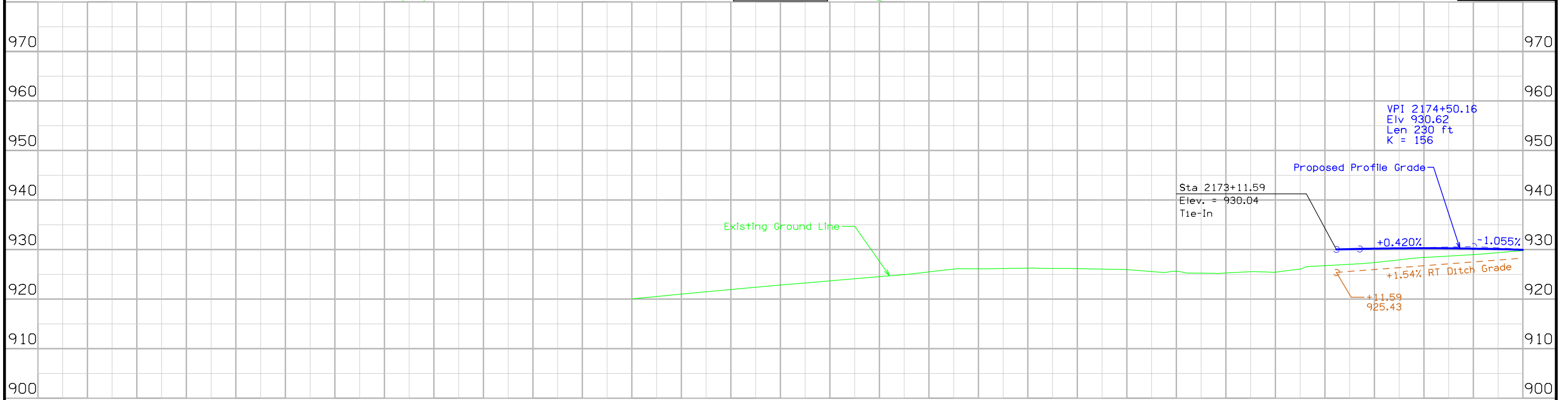
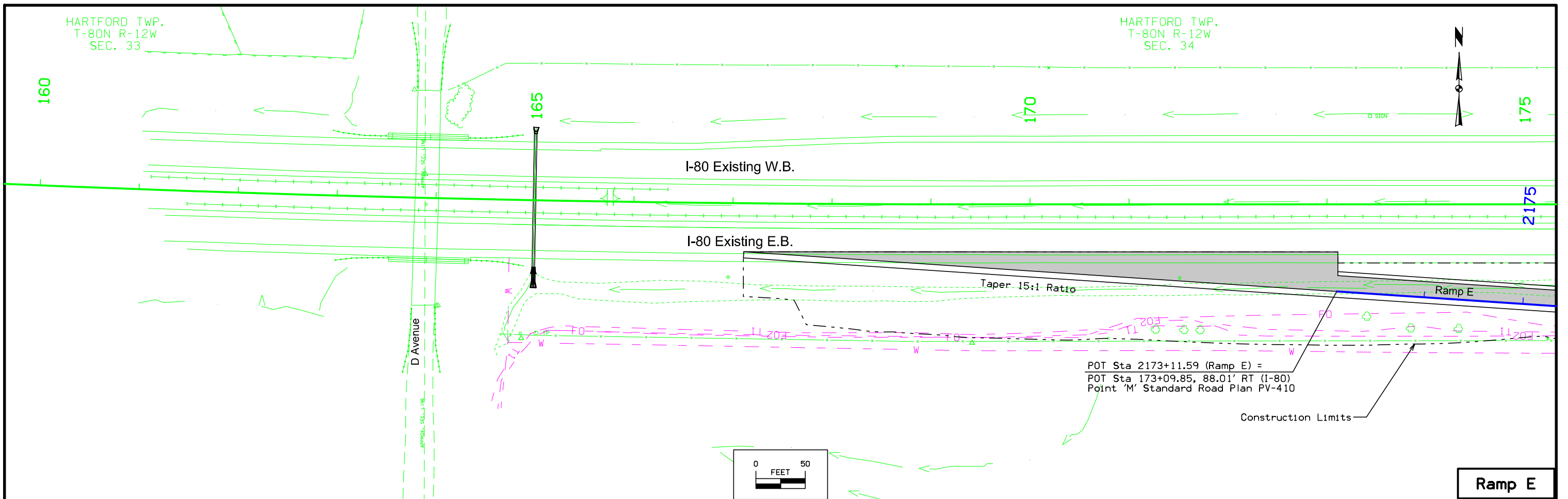
Curve RPH\_3 Data  
 $\Delta = 17^\circ 18' 57.16''$  (LT)  
 $T = 152.27$   
 $L = 302.22$   
 $R = 1,000.00$   
 $E = 11.53$   
 $e = 5.0\%$   
 $I = 120'$   
 $x = 48'$

Curve RPF\_3 Data  
 $\Delta = 13^\circ 29' 00.01''$  (LT)  
 $T = 180.86$   
 $L = 360.05$   
 $R = 1,530.00$   
 $E = 10.65$   
 $e = 4.0\%$   
 $I = 96'$   
 $x = 48'$

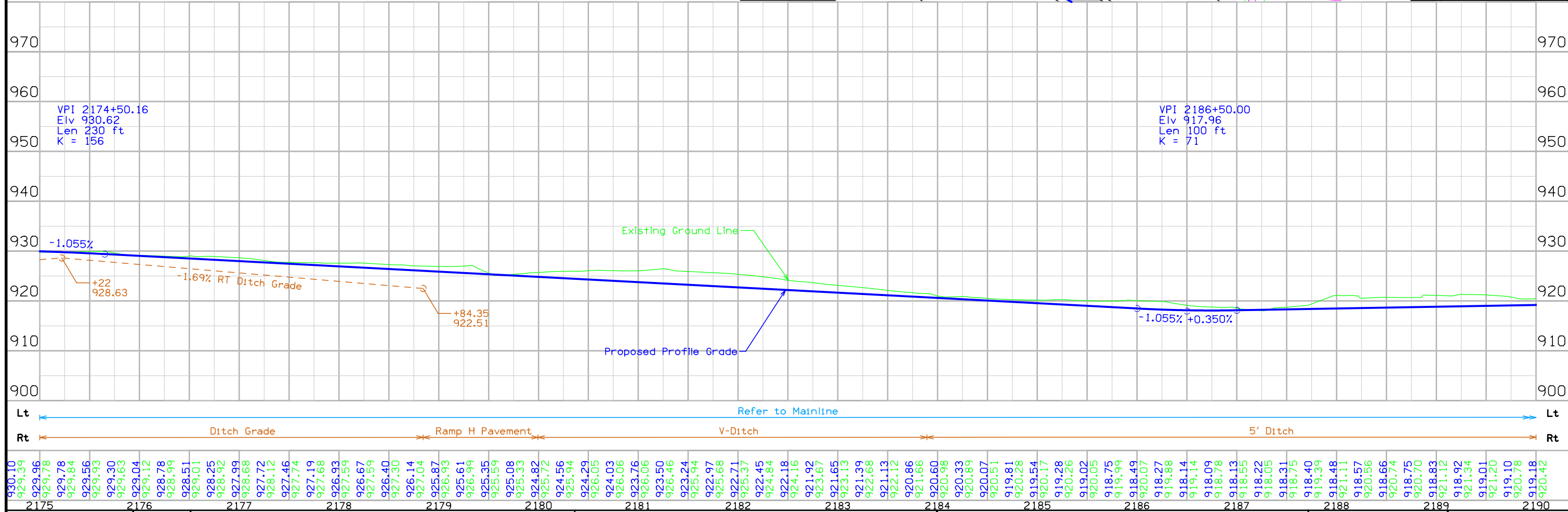
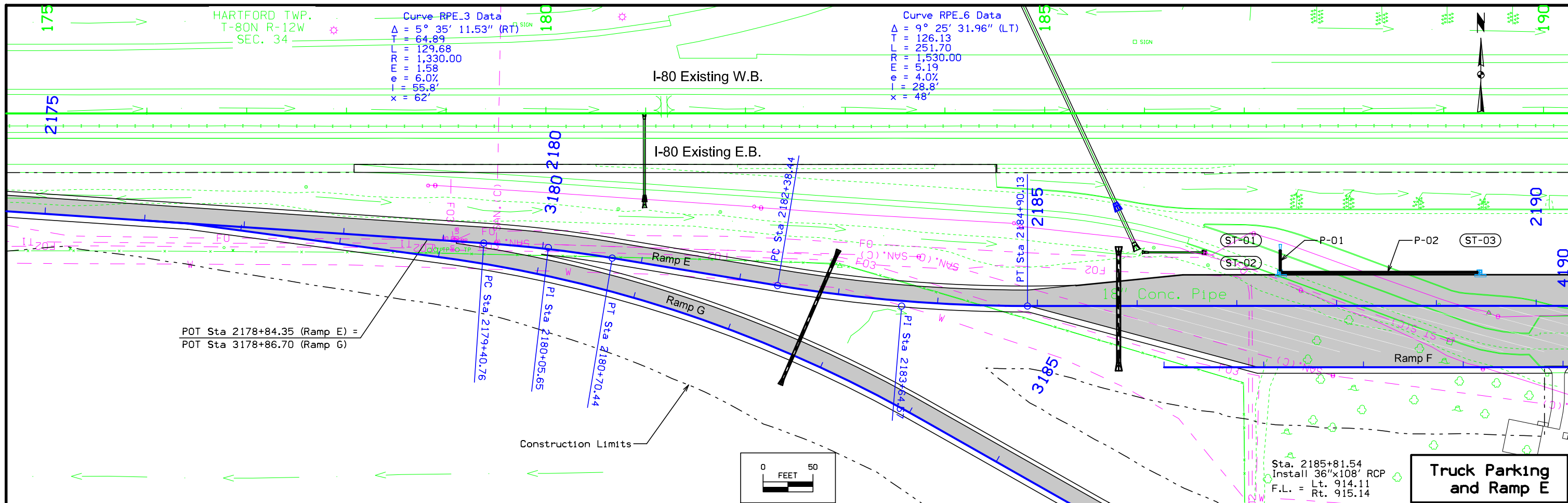
Curve RPF\_6 Data  
 $\Delta = 12^\circ 20' 51.23''$  (RT)  
 $T = 216.34$   
 $L = 431.01$   
 $R = 2,000.00$   
 $E = 11.67$   
 $e = 5.4\%$   
 $I = 168'$   
 $x = 62'$

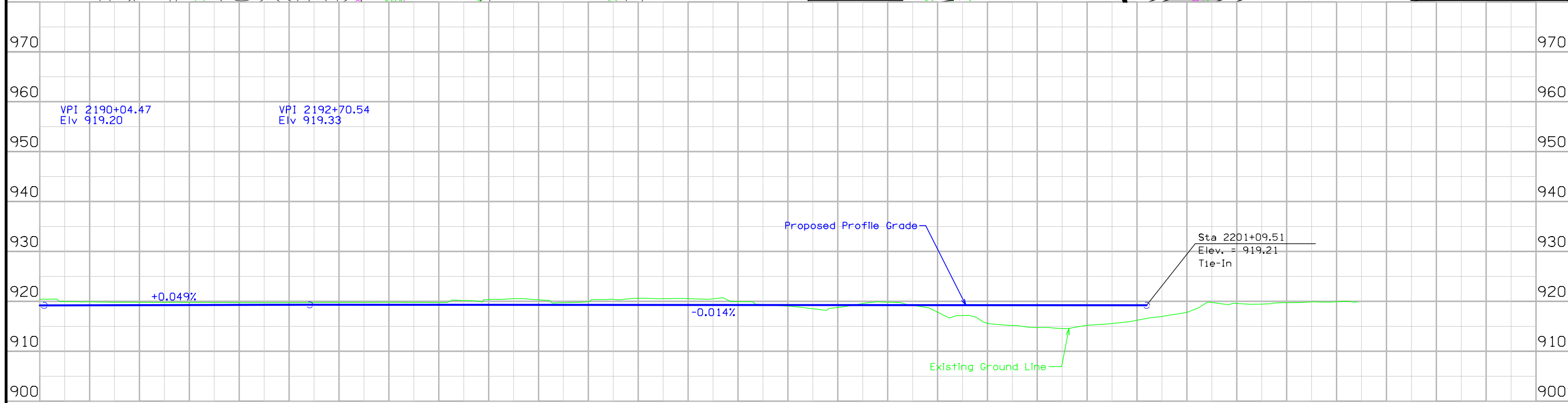
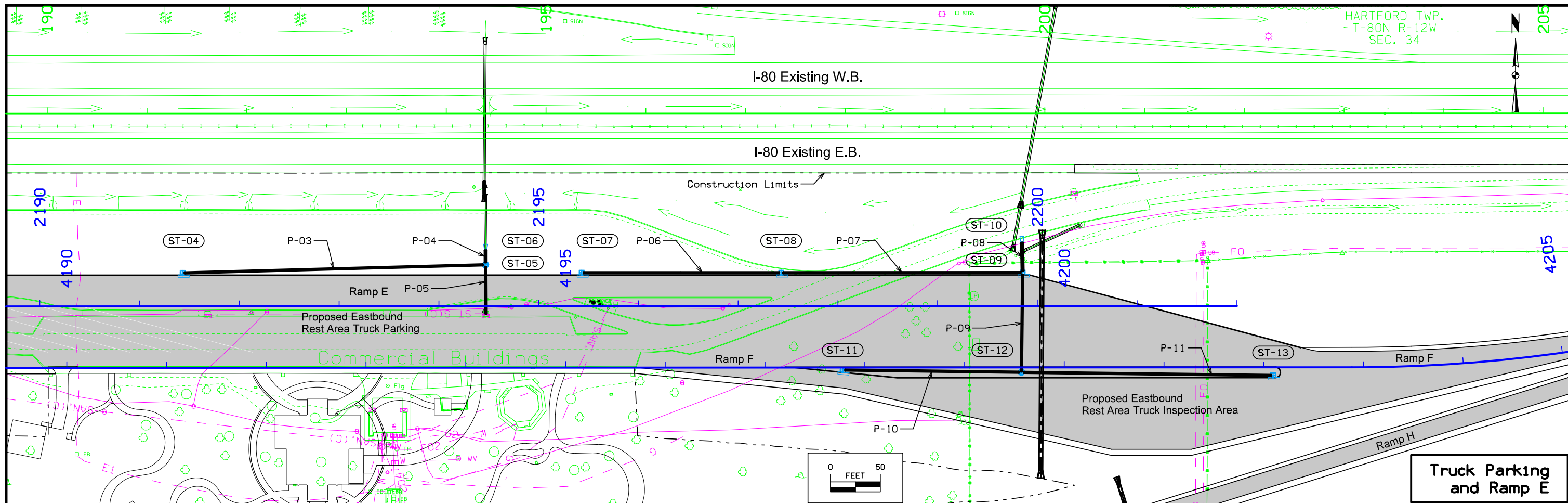


Geometric Plan  
 Proposed Interchange of  
 Interstate 80 with  
 Rest Area near Victor (EB)  
 Iowa County

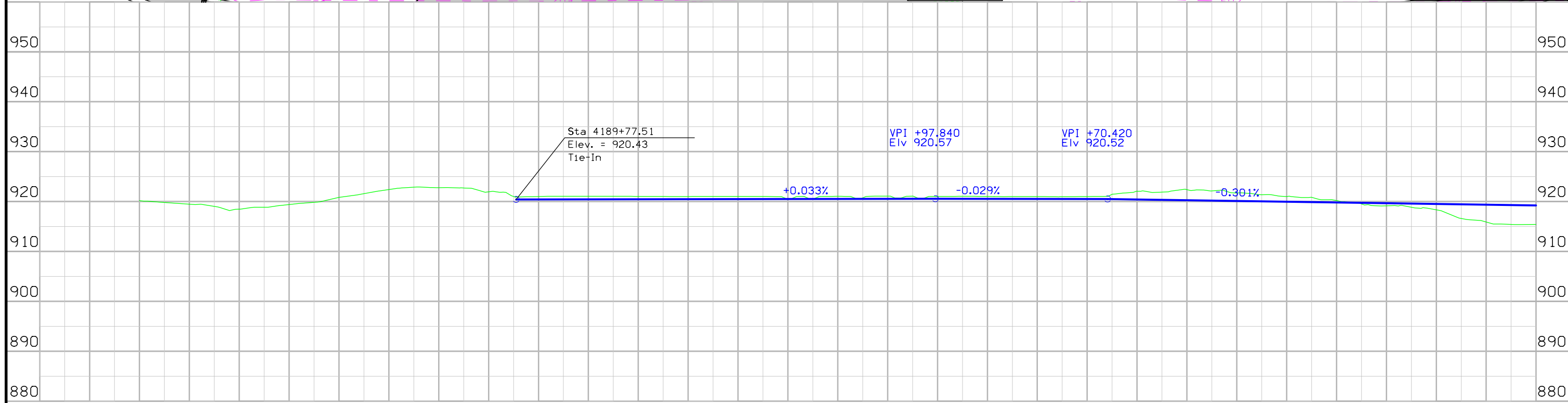
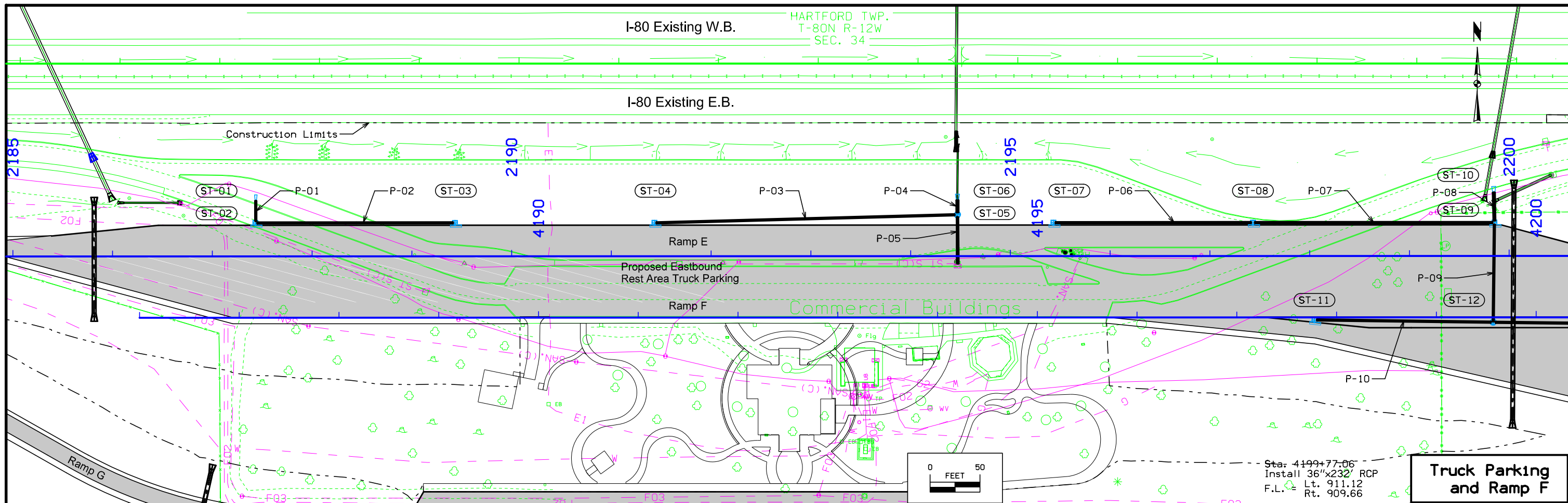


Station	Profile Data	
	Elevation (ft)	Description
2166.05	920.05	Existing Ground Line
2166.54	920.54	Existing Ground Line
2167.02	921.02	Existing Ground Line
2167.48	921.48	Existing Ground Line
2167.95	921.95	Existing Ground Line
2168.40	922.40	Existing Ground Line
2168.85	922.85	Existing Ground Line
2169.26	923.26	Existing Ground Line
2169.69	923.69	Existing Ground Line
2170.12	924.12	Existing Ground Line
2170.55	924.55	Existing Ground Line
2170.95	924.95	Existing Ground Line
2171.51	925.51	Existing Ground Line
2172.06	926.06	Existing Ground Line
2172.62	926.62	Existing Ground Line
2173.19	926.19	Existing Ground Line
2173.77	926.77	Existing Ground Line
2174.10	930.10	Proposed Profile Grade
2174.02	927.02	Proposed Profile Grade
2173.39	930.19	Proposed Profile Grade
2173.26	927.39	Proposed Profile Grade
2173.91	930.26	Proposed Profile Grade
2174.28	927.91	Proposed Profile Grade
2174.43	930.28	Proposed Profile Grade
2174.26	928.43	Proposed Profile Grade
2174.70	930.26	Proposed Profile Grade
2174.20	928.70	Proposed Profile Grade
2174.99	930.20	Proposed Profile Grade
2174.10	930.10	Proposed Profile Grade
2174.39	929.39	Proposed Profile Grade
2174.78	929.96	Proposed Profile Grade
2175.78	929.78	Proposed Profile Grade





919.10	920.78	919.18	920.42	919.21	919.98	919.22	919.91	919.23	919.83	919.25	919.82	919.26	919.81	919.27	919.81	919.28	919.79	919.30	919.77	919.31	919.74	919.32	919.77	919.33	919.79	919.33	919.81	919.32	919.82	919.32	919.81	919.31	919.78	919.31	920.19	919.30	920.37	919.30	920.55	919.29	920.32	919.29	919.75	919.29	919.90	919.29	920.42	919.28	920.62	919.28	920.55	919.28	920.55	919.27	920.50	919.27	919.96	919.26	919.36	919.26	919.05	919.26	918.52	919.25	918.78	919.25	919.58	919.25	919.86	919.24	919.21	919.24	917.86	919.24	917.18	919.23	915.63	919.23	915.18	919.23	914.76	919.22	914.55	919.22	915.19	919.21	915.57	919.21	916.22	916.98	917.84	919.78	919.59	919.44	919.74	919.89	919.92
--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------



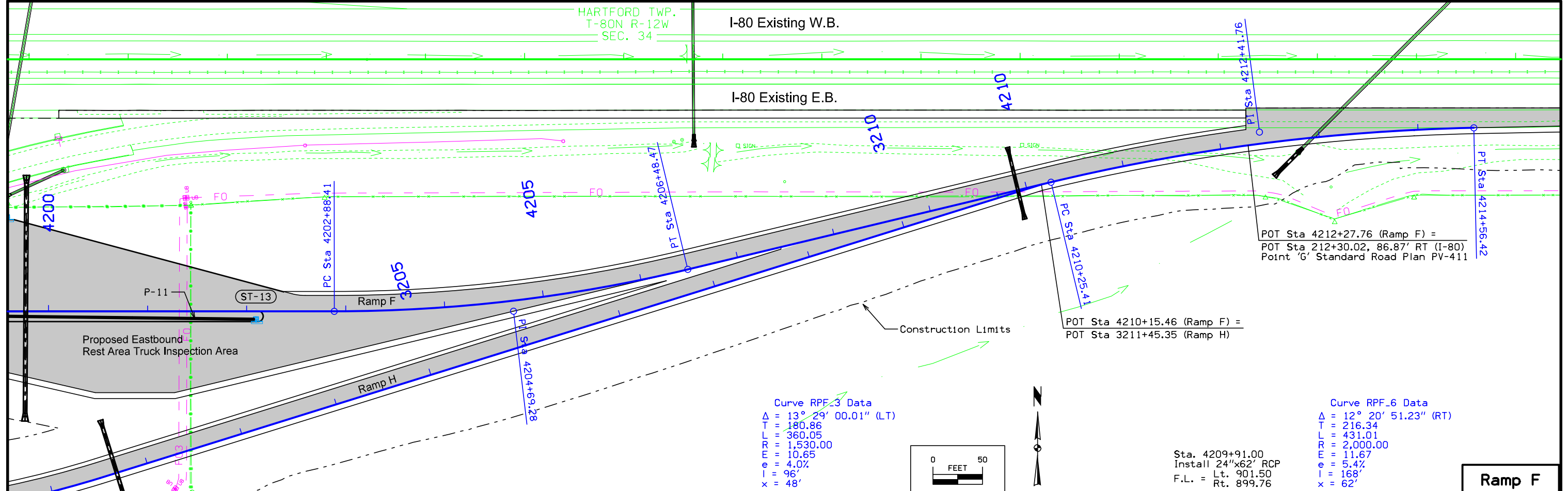
Lt	Refer to Mainline																		Lt																																																																			
Rt	Rest Area (By Others)												5' Ditch						Rt																																																																			
	920.18	919.82	919.49	919.03	918.48	918.86	919.41	919.84	920.85	921.57	922.41	922.89	922.78	922.72	921.95	921.01	920.44	921.01	920.45	921.05	920.45	921.06	920.46	921.07	920.47	921.04	920.48	921.02	920.49	921.02	920.50	921.03	920.50	921.04	920.51	921.04	920.52	921.06	920.53	921.06	920.55	921.03	920.55	921.03	920.54	921.00	920.53	920.97	920.53	921.01	920.51	921.45	920.43	922.07	920.36	921.90	920.28	922.40	920.21	922.12	920.13	921.75	920.06	921.38	919.98	921.02	919.90	920.84	919.83	920.21	919.75	919.52	919.68	919.15	919.60	918.85	919.53	918.35	919.45	916.61	919.38	915.90	919.30	915.42	919.23	915.41



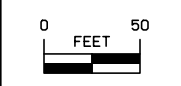
HARTFORD TWP.  
T-80N R-12W  
SEC. 34

I-80 Existing W.B.

I-80 Existing E.B.



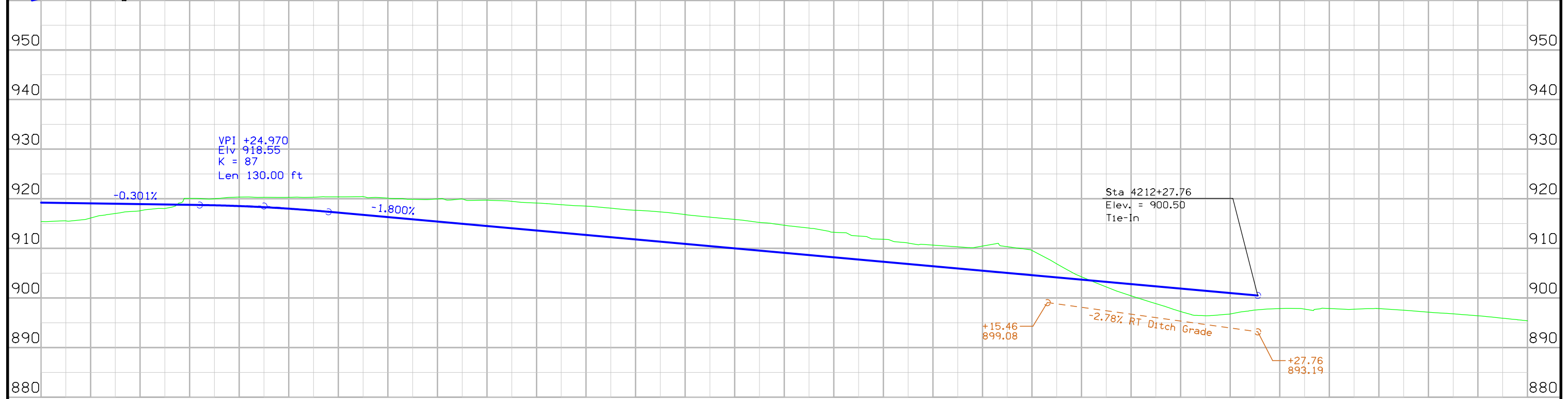
Curve RPF\_3 Data  
 $\Delta = 13^\circ 29' 00.01''$  (LT)  
 T = 180.86  
 L = 360.05  
 R = 1,530.00  
 E = 10.65  
 e = 4.0%  
 I = 96'  
 x = 48'



Curve RPF\_6 Data  
 $\Delta = 12^\circ 20' 51.23''$  (RT)  
 T = 216.34  
 L = 431.01  
 R = 2,000.00  
 E = 11.67  
 e = 5.4%  
 I = 168'  
 x = 62'

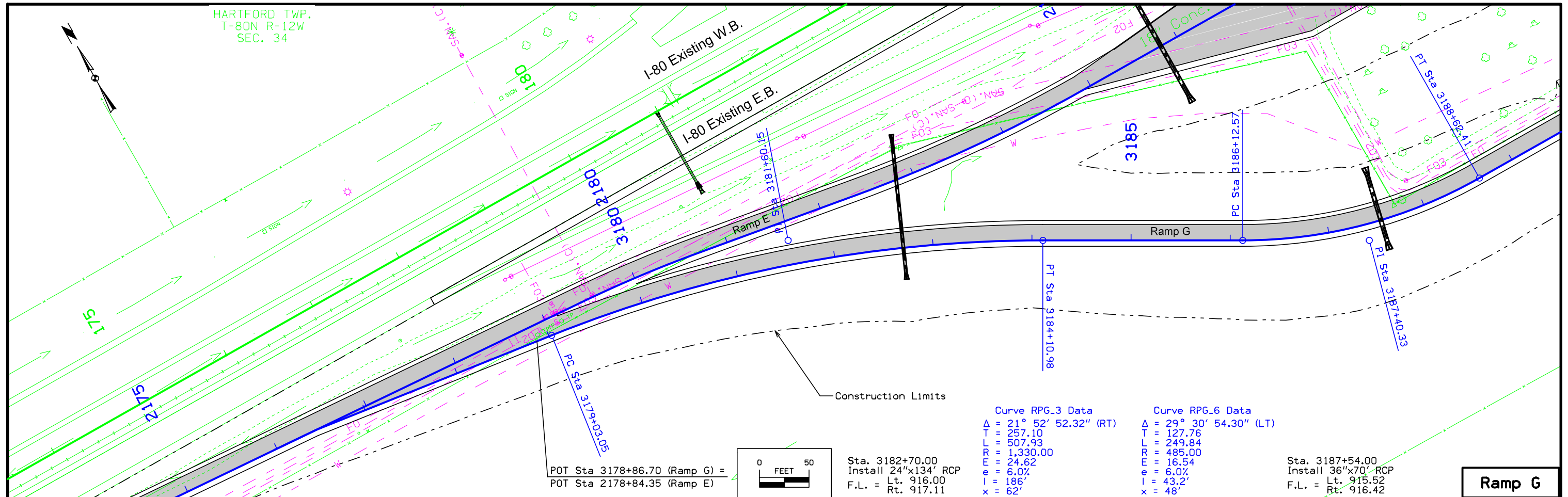
Sta. 4209+91.00  
 Install 24"x62' RCP  
 Lt. 901.50  
 F.L. = Rt. 899.76

**Ramp F**

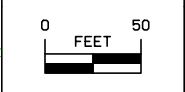


Lt															Rt																																																																																															
V-Ditch															Ramp H Pavement															Ditch Grade																																																																																
Refer to Mainline																																																																																																														
919.30	915.42	919.23	915.41	919.15	915.56	919.08	916.13	919.00	917.04	917.59	918.85	918.04	918.78	920.09	918.69	920.01	918.54	920.34	918.31	920.32	918.01	920.29	917.64	920.32	917.20	920.40	916.75	920.44	916.30	920.12	915.85	919.89	915.40	919.96	914.95	919.98	914.50	919.73	914.05	919.48	913.60	919.16	913.15	918.82	912.70	918.53	918.13	911.80	917.68	911.35	917.35	910.90	916.82	910.45	916.31	910.00	915.84	909.55	915.24	909.10	914.66	908.65	914.10	908.20	913.25	907.75	912.49	907.30	911.83	906.85	911.09	906.40	910.66	905.95	910.32	905.50	910.48	905.05	910.35	904.60	909.58	904.15	906.90	903.70	904.27	903.25	902.23	902.80	900.45	902.35	898.85	901.90	897.28	901.45	896.41	901.00	896.78	900.55	897.57	897.87	897.77	897.89	897.74	897.87	897.55	897.15	896.81	896.42	895.92	895.41

HARTFORD TWP.  
T-80N R-12W  
SEC. 34



POT Sta 3178+86.70 (Ramp G) =  
POT Sta 2178+84.35 (Ramp E)



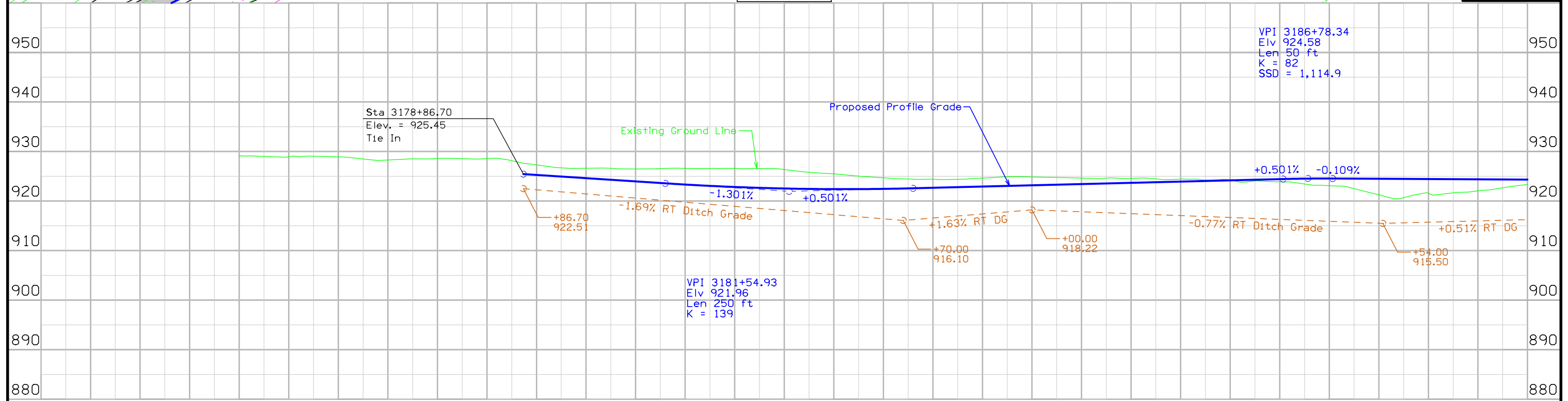
Sta. 3182+70.00  
Install 24"x134' RCP  
F.L. = Lt. 916.00  
Rt. 917.11

Curve RPG\_3 Data  
Δ = 21° 52' 52.32" (RT)  
T = 257.10  
L = 507.93  
RR = 1,330.00  
E = 24.62  
e = 6.0%  
l = 186'  
x = 62'

Curve RPG\_6 Data  
Δ = 29° 30' 54.30" (LT)  
T = 127.76  
L = 249.84  
RR = 485.00  
E = 16.54  
e = 6.0%  
l = 43.2'  
x = 48'

Sta. 3187+54.00  
Install 36"x70' RCP  
F.L. = Lt. 915.52  
Rt. 916.42

**Ramp G**



Sta 3178+86.70  
Elev. = 925.45  
Tie In

Existing Ground Line

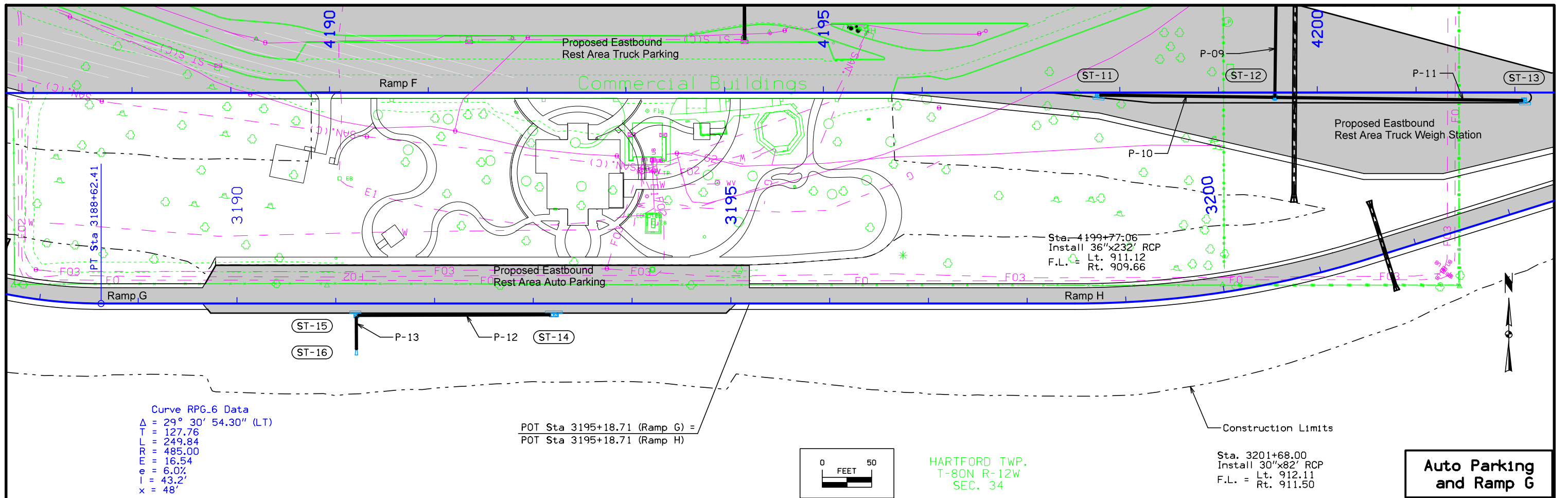
Proposed Profile Grade

VPI 3186+78.34  
Eiv 924.58  
Len 50 ft  
K = 82  
SSD = 1,114.9

VPI 3181+54.93  
Eiv 921.96  
Len 250 ft  
K = 139

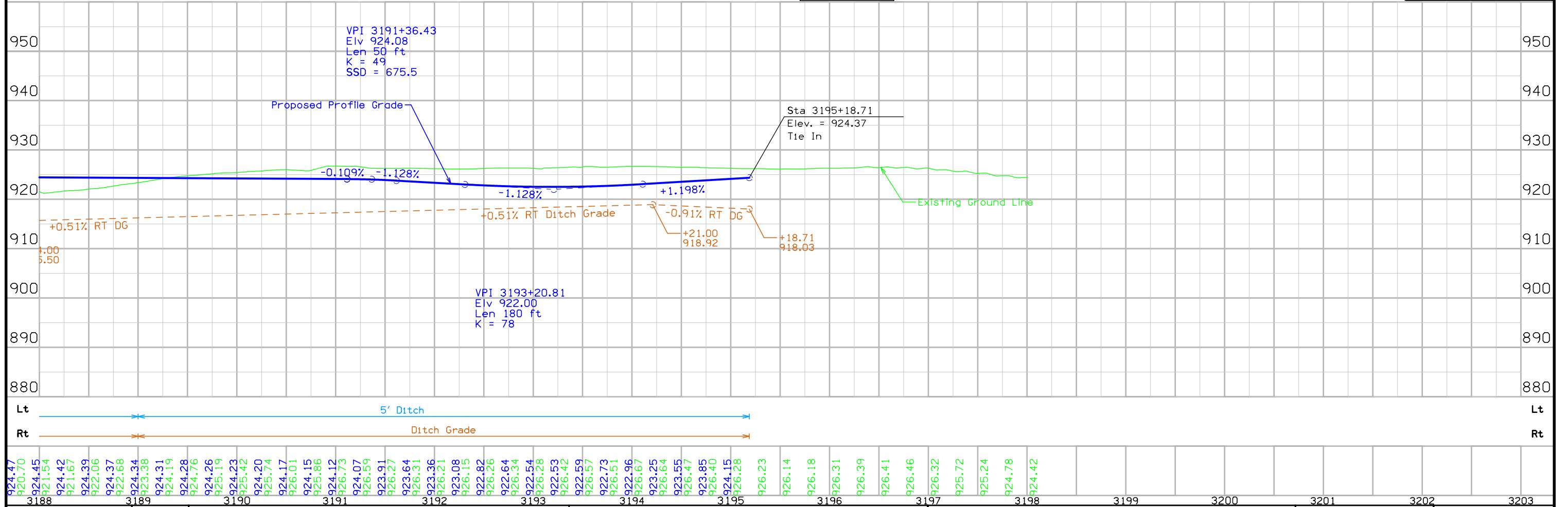
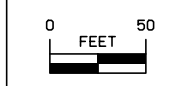
Lt Ramp E Pavement V-Ditch Refer to Ramp E Transition to 5' Ditch 5' Ditch Rt  
Rt Ditch Grade

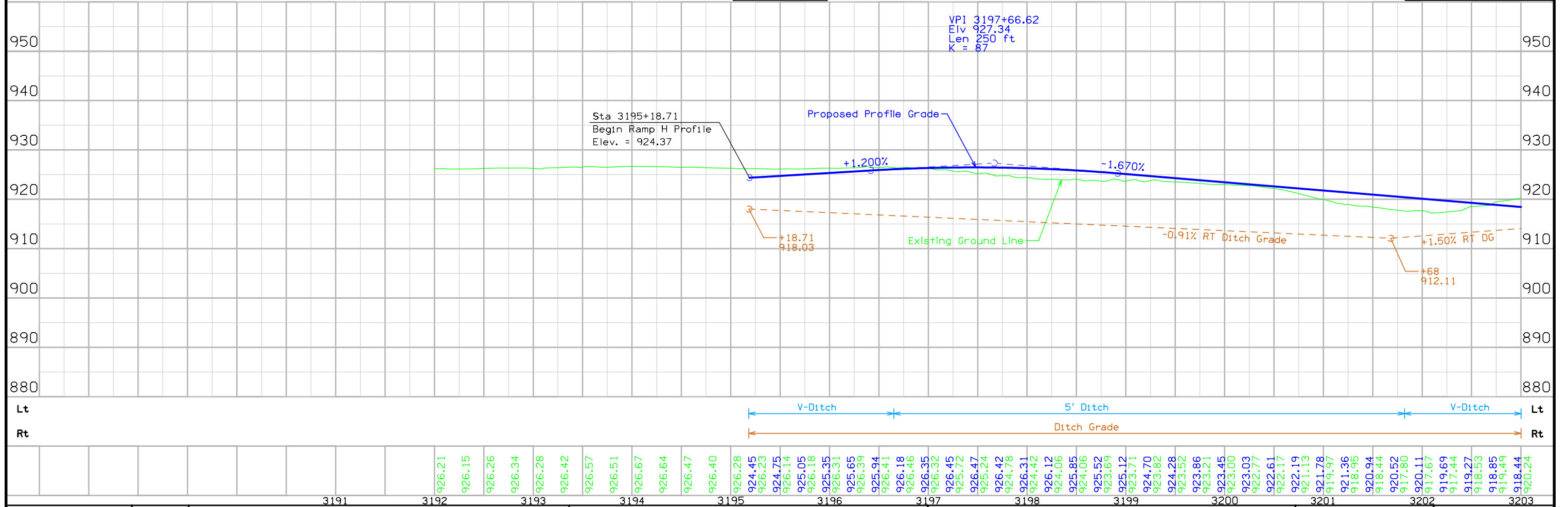
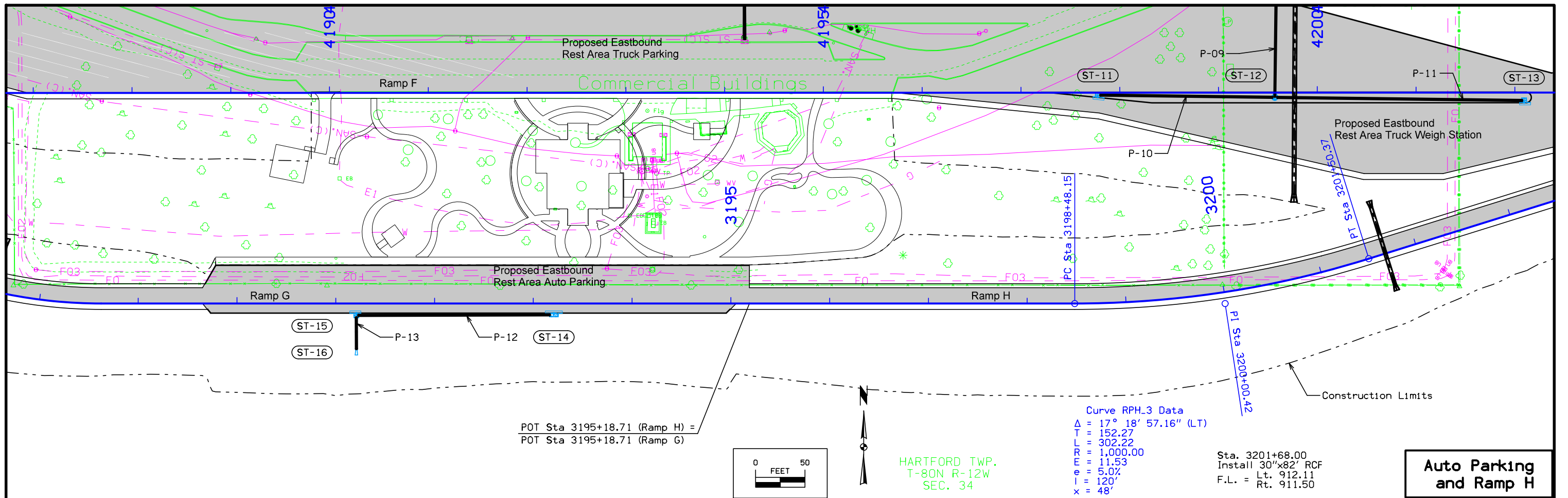
3174	3175	3176	3177	3178	3179	3180	3181	3182	3183	3184	3185	3186	3187	3188	3189																																																																														
		929.12	929.01	928.94	929.06	928.92	928.50	928.31	928.55	928.59	928.57	928.58	928.16	925.28	927.30	924.95	926.72	924.63	926.62	924.30	926.62	923.98	926.49	923.65	926.57	923.34	926.59	923.07	926.58	922.85	926.59	922.68	926.58	922.54	922.46	925.83	922.42	922.42	925.04	922.47	924.70	922.56	924.46	922.69	924.40	922.81	924.41	922.94	924.63	923.06	924.90	923.19	924.88	923.31	924.77	923.44	924.64	923.56	924.64	923.69	924.59	923.81	924.49	923.94	924.43	924.06	924.26	924.19	924.25	924.31	924.06	924.44	923.91	924.53	923.46	923.10	924.56	924.53	922.51	924.50	921.29	924.47	920.70	924.45	921.54	924.42	921.67	924.39	922.06	924.37	922.68	924.34	923.38

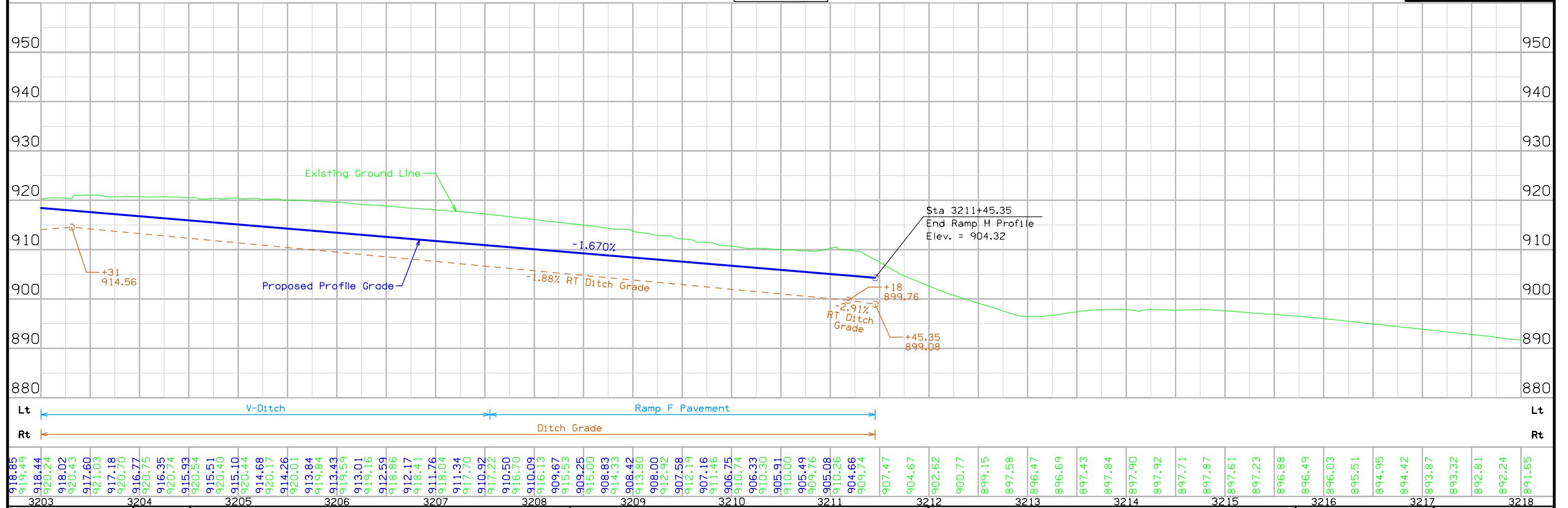
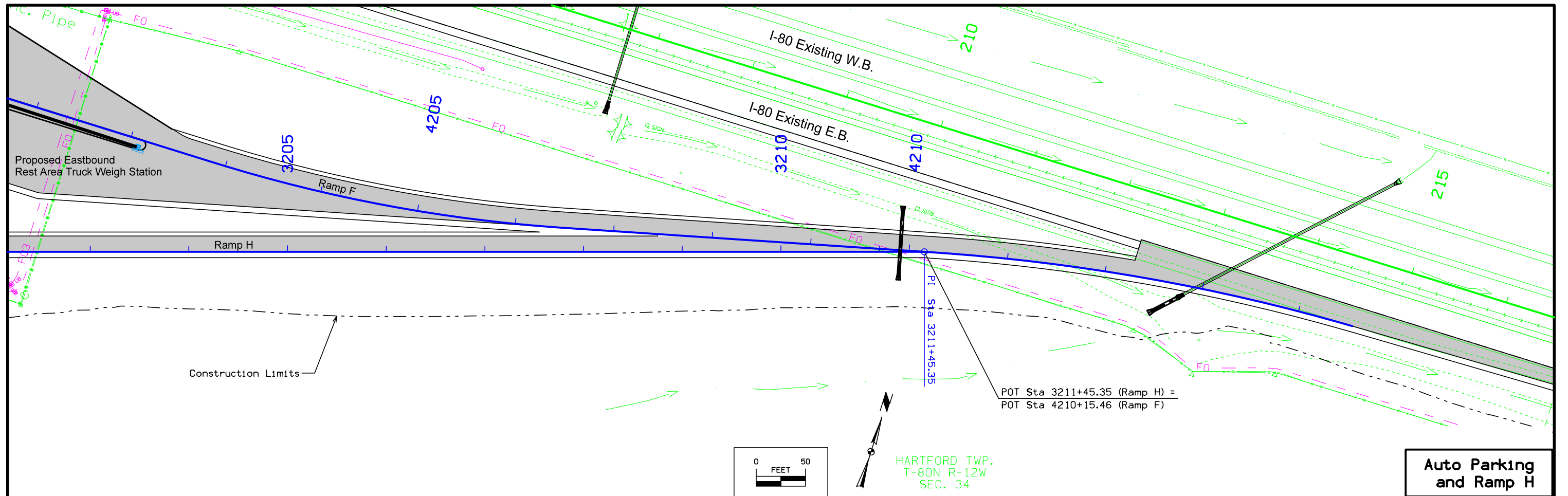


Curve RPG.6 Data  
 $\Delta = 29^\circ 30' 54.30''$  (LT)  
 T = 127.76  
 L = 249.84  
 R = 485.00  
 E = 16.54  
 e = 6.0%  
 I = 43.2'  
 x = 48'

POT Sta 3195+18.71 (Ramp G) =  
 POT Sta 3195+18.71 (Ramp H)







### STORM SEWER

① Diameter or equivalent diameter

\* Bid Item

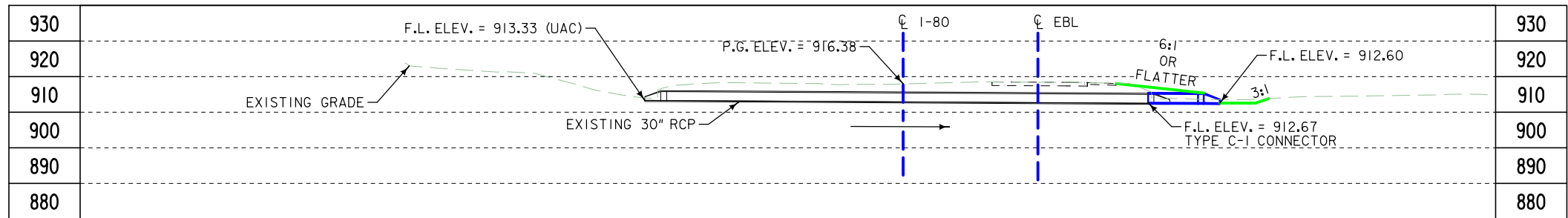
\*\* For SW-545

#### INTAKES AND UTILITY ACCESSES

#### PIPES

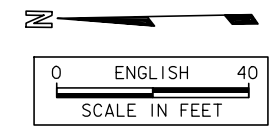
Design Length, Slope, and Flowlines are calculated from inside wall to inside wall along CL of pipe. An additional 2 ft length is added to each side of the Design Length to account for estimated length to center of structures.

No.	Location Station and Offset	*Type or Standard Road Plan	Form Grade	Bottom Well	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							Inlet Elevation	Outlet Elevation	Other Elevation		
			IN	FT	FT															
ST-01	2187+43.55, -61.580	DR-201 (15")	914.43			Loc sta=end pipe	1	ST-01	ST-02	RCP	15	28	26.0	0.5		914.56	914.43			
ST-02	2187+43.19, -31.50	SW-508	917	914.06			2	ST-03	ST-03	RCP	15	200	196.0	0.45		915.56	914.66			
ST-03	2189+43.19, -31.50	SW-508	918	915.06			3	ST-04	ST-05	RCP	15	200	196.0	0.5		915.56	914.58			
ST-04	2191+43.19, -31.50	SW-508	918	915.06			4	ST-05	ST-06	RCP	24	20	18.0	0.5		914.38	914.53			
ST-05	2194+46.92, -41.50	SW-401 (60")	919.19	914.12		FG = Rim	5	EX	ST-05	RCP	18	47	46.4	0.4		914.9	914.72			Field Verify EX
ST-06	2194+46.93, -62.130	DR-201 (24")	914.53			Loc sta=end pipe	6	ST-07	ST-08	RCP	15	200	196.0	0.5		915.56	914.58			
ST-07	2195+43.19, -31.50	SW-508	918	915.06			7	ST-08	ST-09	RCP	15	242	238.0	1		914.38	912			
ST-08	2197+43.17, -31.50	SW-508	918	914.08			8	ST-09	ST-10	RCP	24	38	34.0	0.5		911.9	911.73			
ST-09	2199+89.20, -31.50	SW-508	917.8	911.3			9	ST-12	ST-09	RCP	15	101	97.0	1		912.97	912			
ST-10	2199+84.54, -69.627	DR-201(24")	911.62			Loc sta=end pipe	10	ST-11	ST-12	RCP	15	178	174.0	1		917.78	916.04			
ST-11	2198+04.61, 66.011	SW-508	920.57	917.78			11	ST-13	ST-12	RCP	15	252	248.0	1.2		916.25	913.17			
ST-12	2199+83.98, 66.238	SW-401 (60")	921.05	912.47		FG = Rim	12	ST-14	ST-15	RCP	15	198	194.0	1		919.98	918.04			
ST-13	2202+36.32, 71.50	SW-508	920.64	916.15			13	ST-15	ST-16	RCP	15	40	38.0	1		917.84	917.46			
ST-14	3193+20.79, 10	SW-510	922.42	919.48																
ST-15	3191+20.81, 10	SW-508	923.89	917.34																
ST-16	3191+20.90, 52.084	DR-201 (15")	917.46			Loc sta=end pipe														



LONGITUDINAL SECTION ALONG  $\phi$  CULVERT

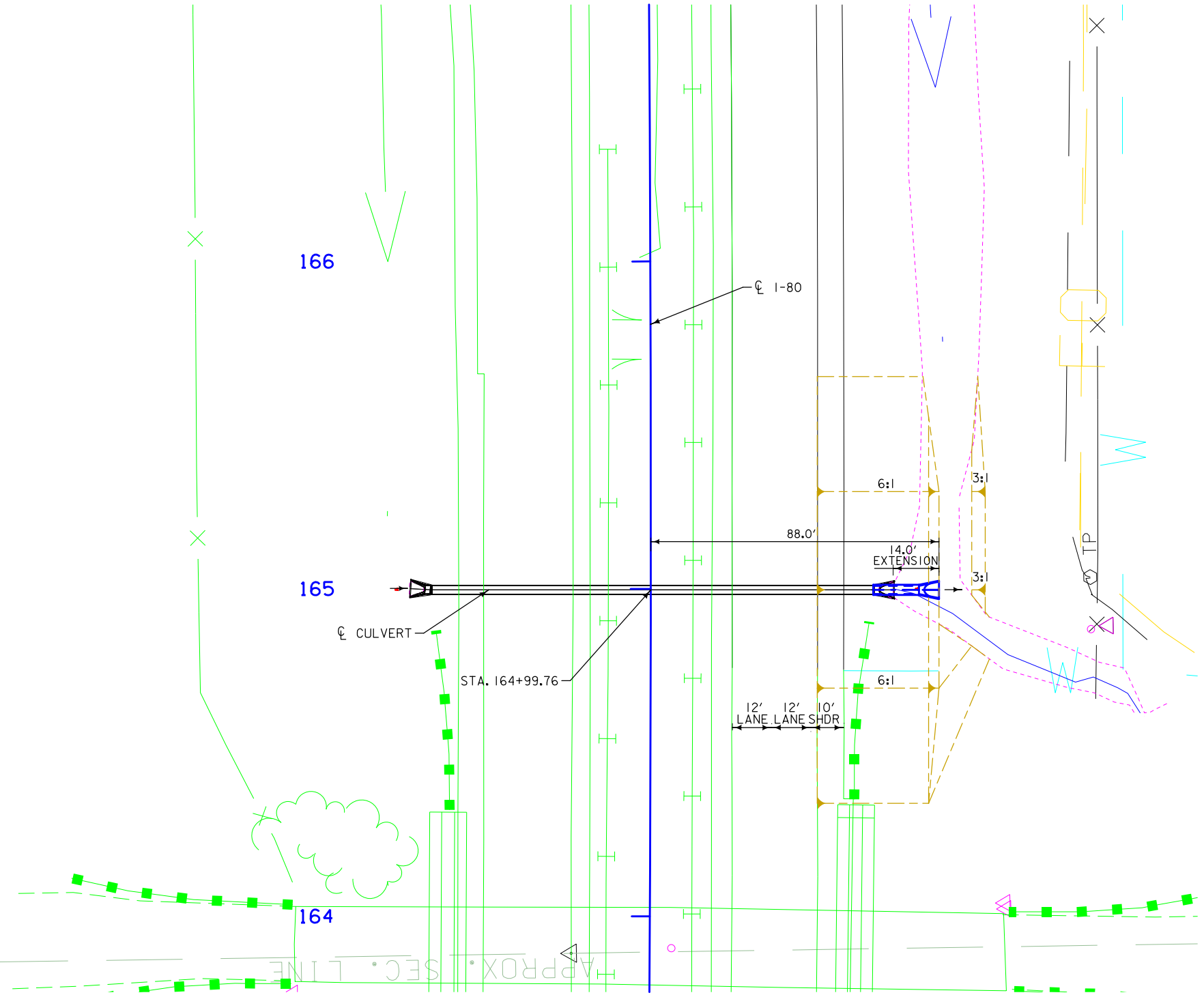
BM506  
 Sta 192+04.43 out 199.95 Rt  
 YC7950190.423 XC20345940.165  
 Elev= 922.406  
 Description: SET MAG NAIL S SIDE LU



UTILITIES LEGEND:  
 REFER TO D.I

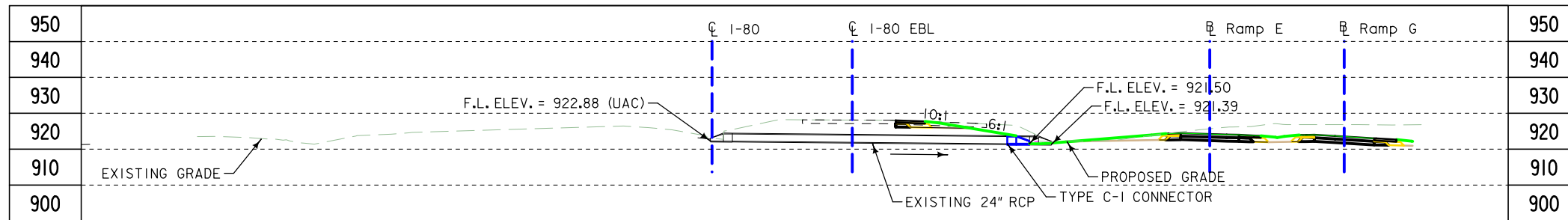
HYDRAULIC DATA  
 DRAINAGE AREA = 5.0 ACRES ROLLING

LOCATION  
 T-80N R-12W  
 SECTION 34  
 HARTFORD TOWNSHIP  
 IOWA COUNTY



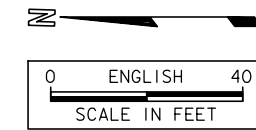
PLAT PLAN

DESIGN FOR 0° SKEW  
**30" X 14'**  
**REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
 STATION 164+99.76 01/11/21  
**IOWA COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION  
 DESIGN SHEET NO. OF FILE NO. DESIGN NO.



LONGITUDINAL SECTION ALONG  $\varnothing$  CULVERT

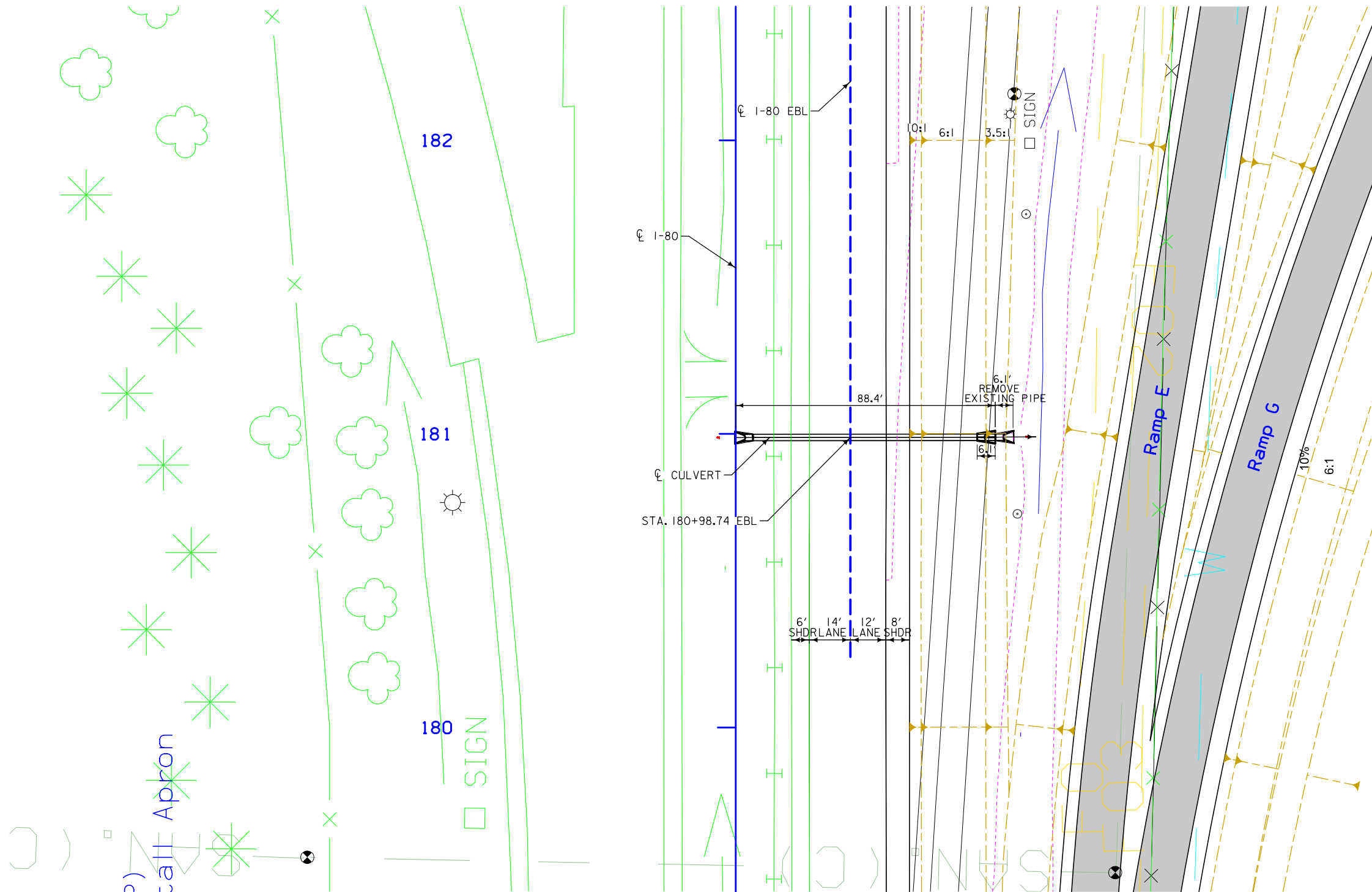
BM502  
Sta. 164+88.96 out 139.74 Rt  
Elev = 928.432



UTILITIES LEGEND:  
REFER TO D.1

LOCATION

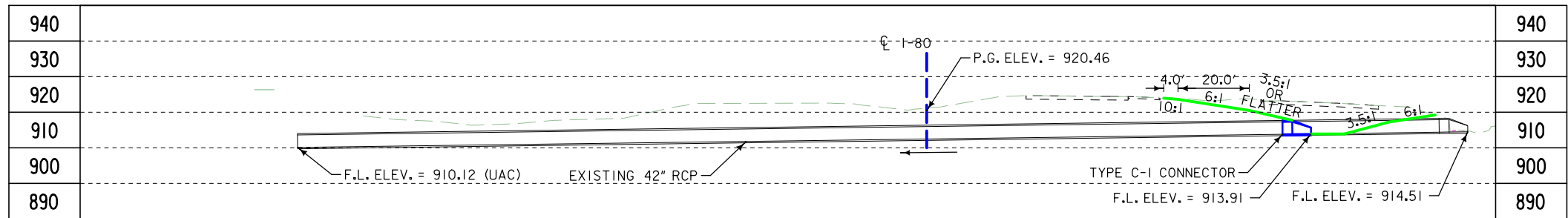
T-80N R-12W  
SECTION 34  
HARTFORD TOWNSHIP  
IOWA COUNTY



PLAT PLAN

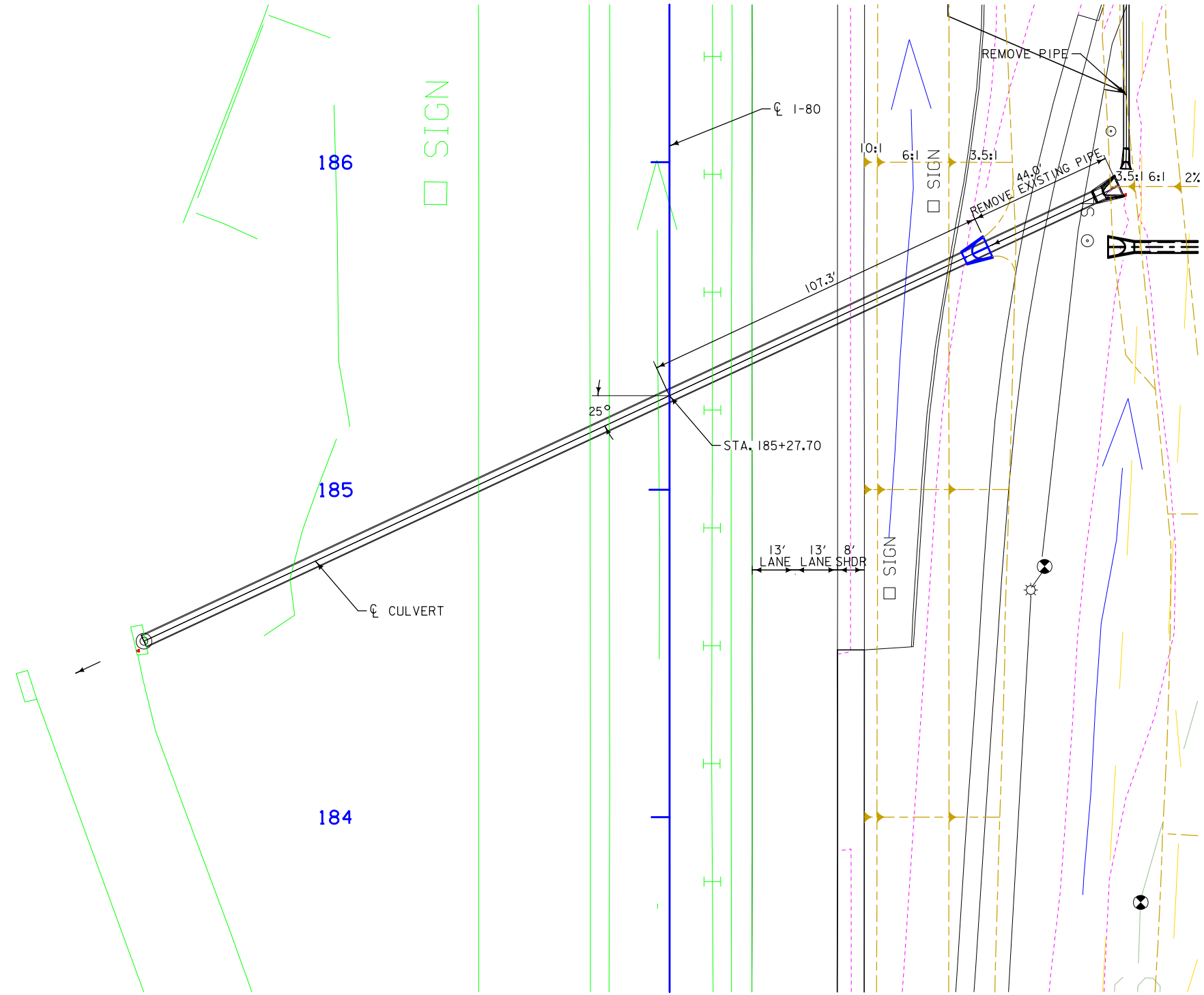
DESIGN FOR 0° SKEW  
24" X -6'  
REINFORCED CONCRETE  
PIPE EXTENSION  
PLAT PLAN  
STATION 180+98.74 EBL 01/11/21  
IOWA COUNTY  
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION  
DESIGN SHEET NO. OF FILE NO. DESIGN NO.



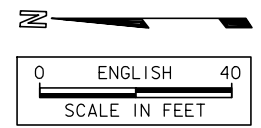


LONGITUDINAL SECTION ALONG  $\phi$  CULVERT

BM506  
 Sta 192+04.43 out 199.95 Rt  
 YC7950190.423 XC20345940.165  
 Elev= 922.406  
 Description: SET MAG NAIL S SIDE LU



PLAT PLAN

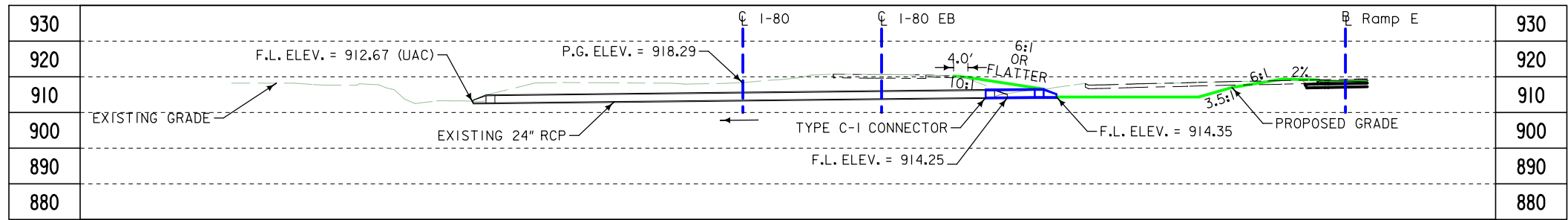


UTILITIES LEGEND:  
 REFER TO D.1

HYDRAULIC DATA  
 DRAINAGE AREA = 32.0 ACRES ROLLING

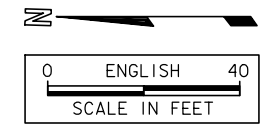
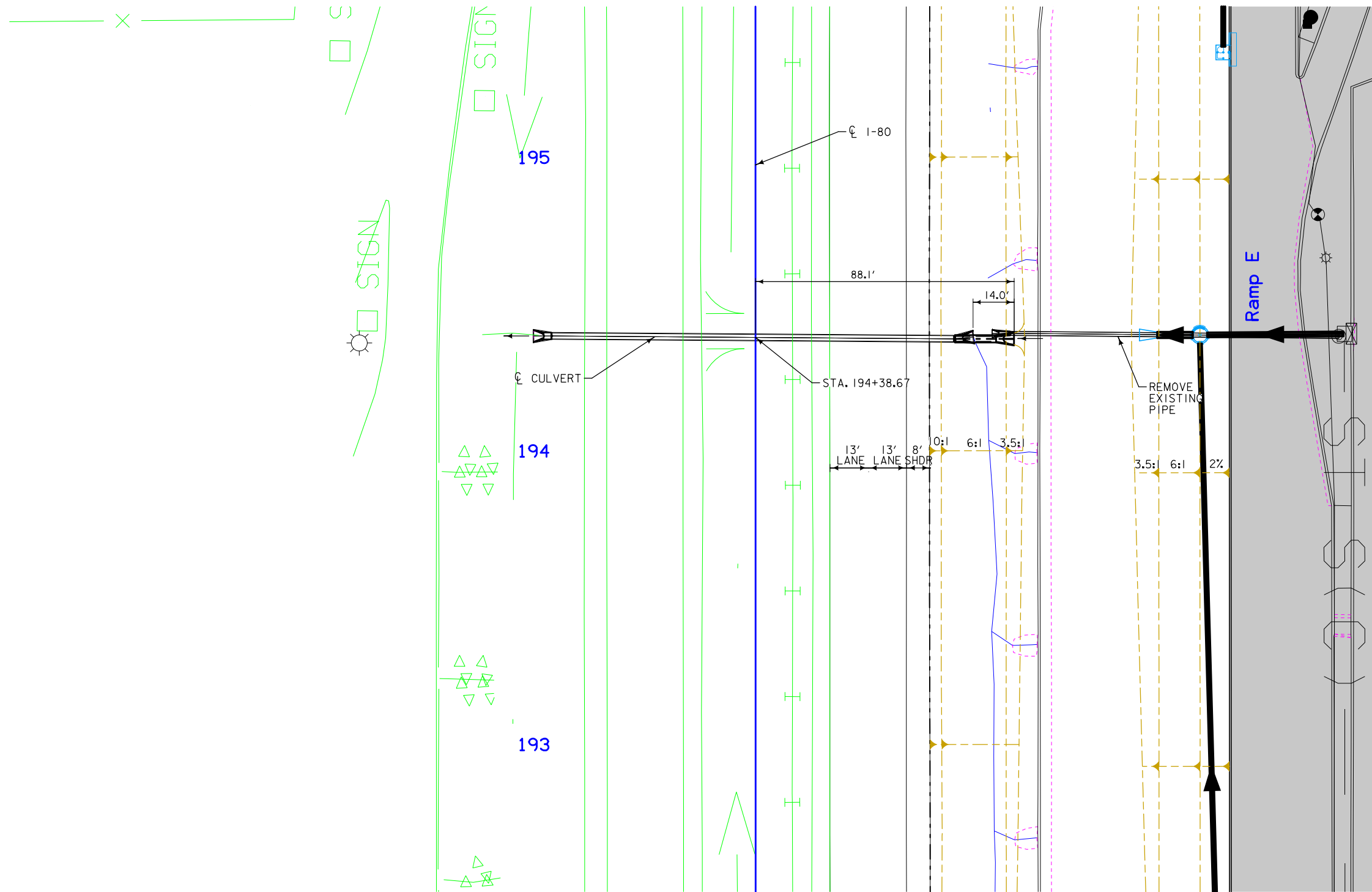
LOCATION  
 T-80N R-12W  
 SECTION 34  
 HARTFORD TOWNSHIP  
 IOWA COUNTY

DESIGN FOR 25° SKEW RT HEAD  
**42" X -44'**  
**REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
 STATION 185+27.70 01/11/21  
**IOWA COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION  
 DESIGN SHEET NO. OF FILE NO. DESIGN NO.



BM502  
 Sta 164+88.96 out 139.74 Rt  
 YC7950250.007 XC20343677.380  
 Elev= 928.432  
 Description: CUT X ON ROW RAIL

LONGITUDINAL SECTION ALONG CULVERT

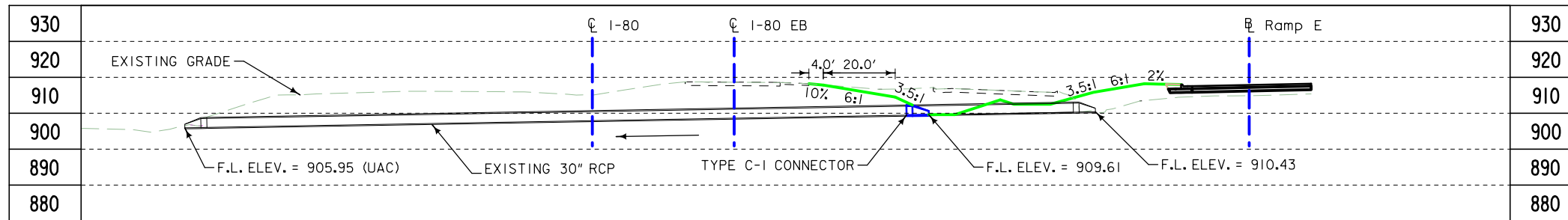


UTILITIES LEGEND:  
 REFER TO D.1

HYDRAULIC DATA  
 DRAINAGE AREA = 4.0 ACRES ROLLING

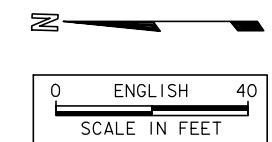
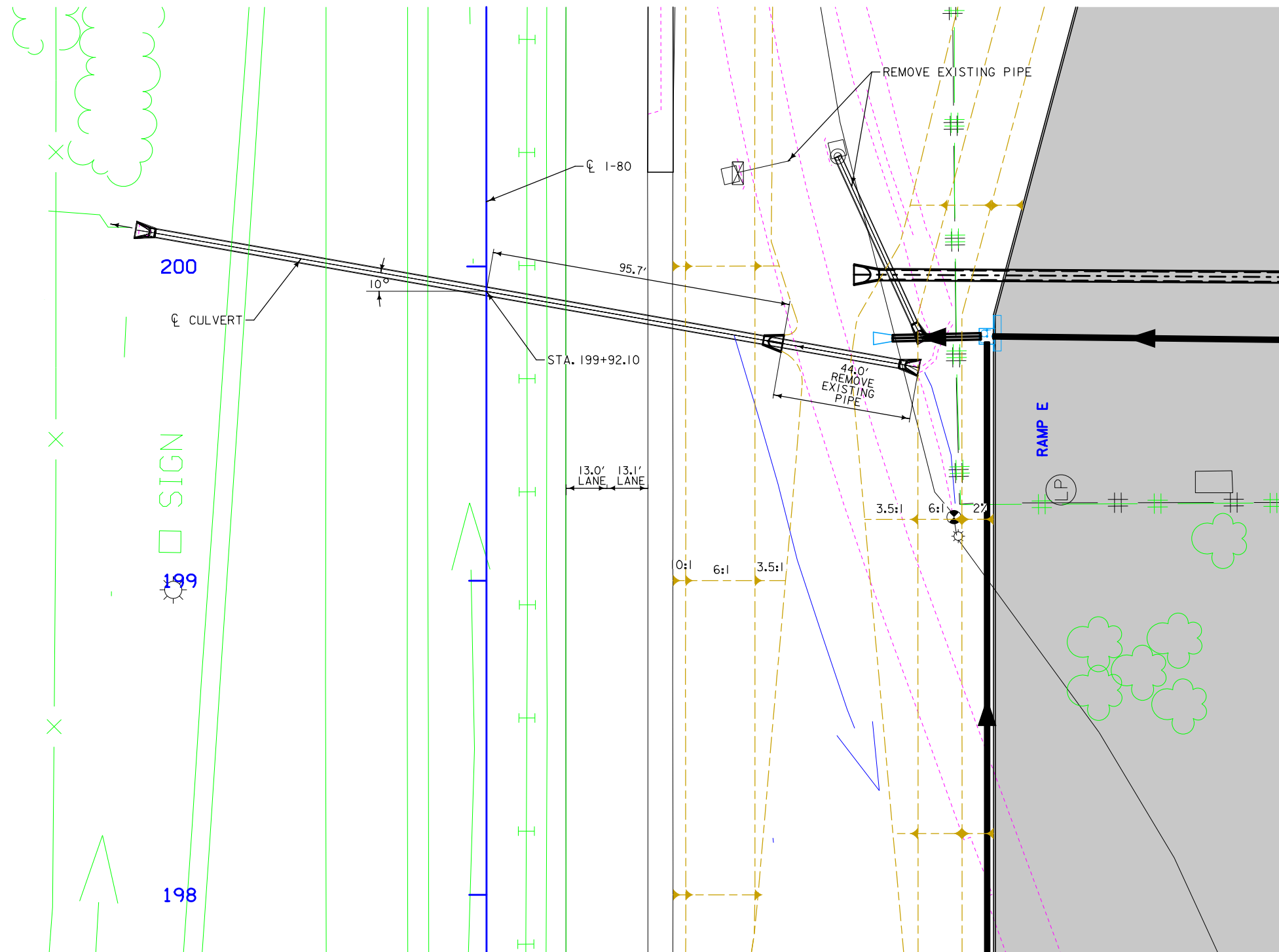
LOCATION  
 T-80N R-12W  
 SECTION 34  
 HARTFORD TOWNSHIP  
 IOWA COUNTY

DESIGN FOR 0° SKEW  
**24" X 14'**  
**REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
 STATION 194+38.67 01/11/21  
**IOWA COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION  
 DESIGN SHEET NO. OF FILE NO. DESIGN NO.



BM508  
 Sta 201+63.63 out 147.82 Rt  
 YC7950242.703 XC20346899.362  
 Elev= 920.634  
 Description: CUT X ON ROW RAIL

LONGITUDINAL SECTION ALONG CL CULVERT



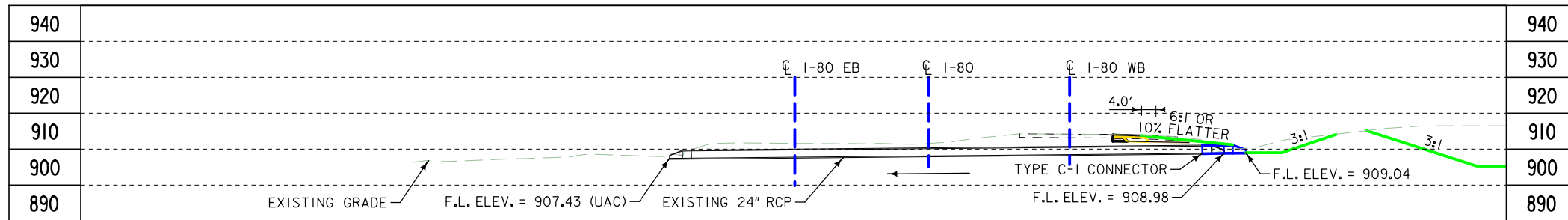
UTILITIES LEGEND:  
 REFER TO D.1

HYDRAULIC DATA  
 DRAINAGE AREA = 8.0 ACRES ROLLING

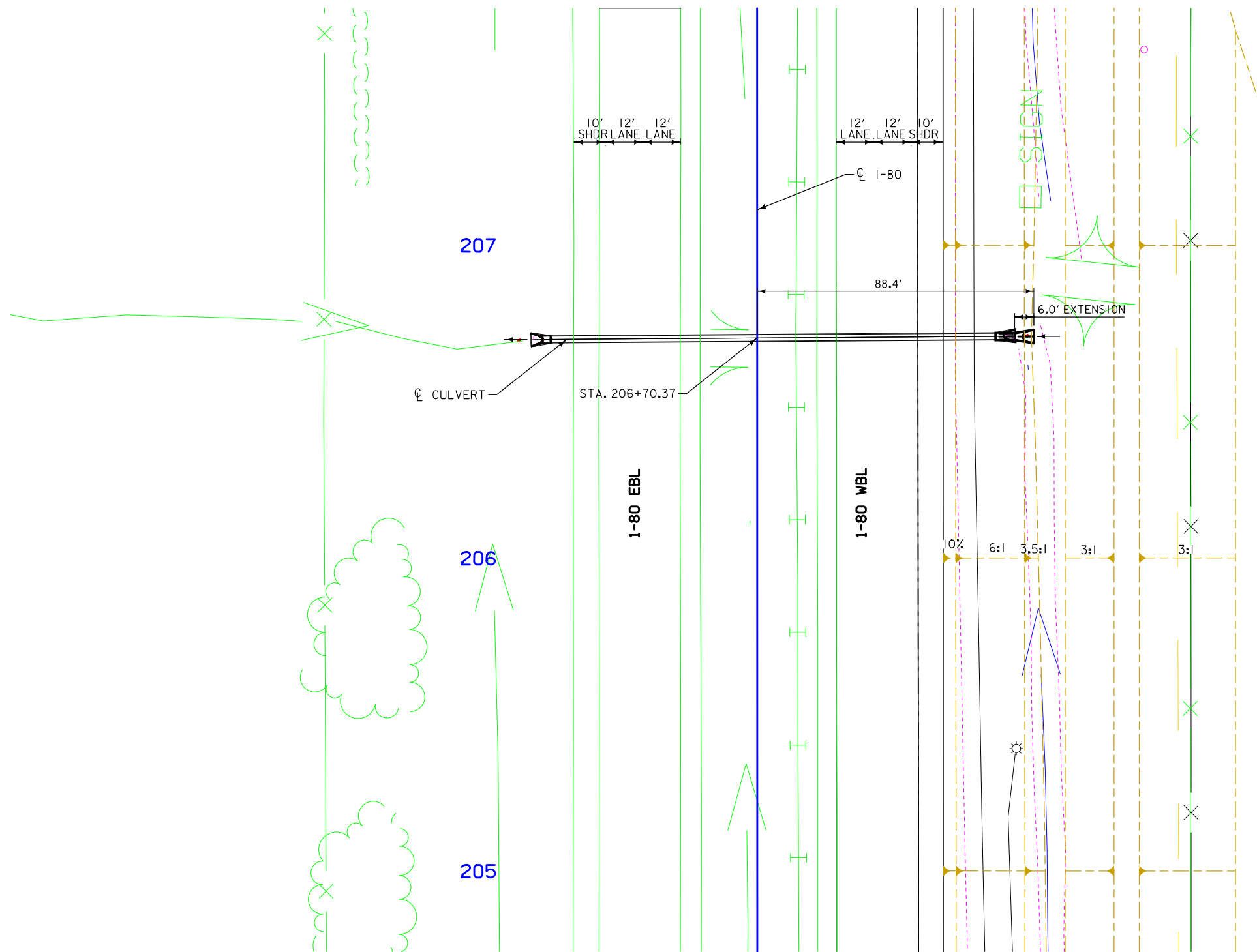
LOCATION  
 T-80N R-12W  
 SECTION 34  
 HARTFORD TOWNSHIP  
 IOWA COUNTY

PLAT PLAN

DESIGN FOR 10° SKEW LT AHEAD  
**30" X 44'**  
**REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
 STATION 199+92.10 1/11/21  
**IOWA COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION  
 DESIGN SHEET NO. OF FILE NO. DESIGN NO.

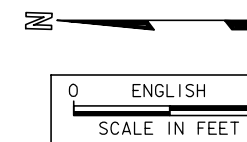


LONGITUDINAL SECTION ALONG  $\phi$  CULVERT



PLAT PLAN

BM508  
Sta 201+63.63 out 147.82  
R+ YC7950242.703 XC20346899.362  
Elev= 920.634  
Description: CUT X ON ROW RAIL

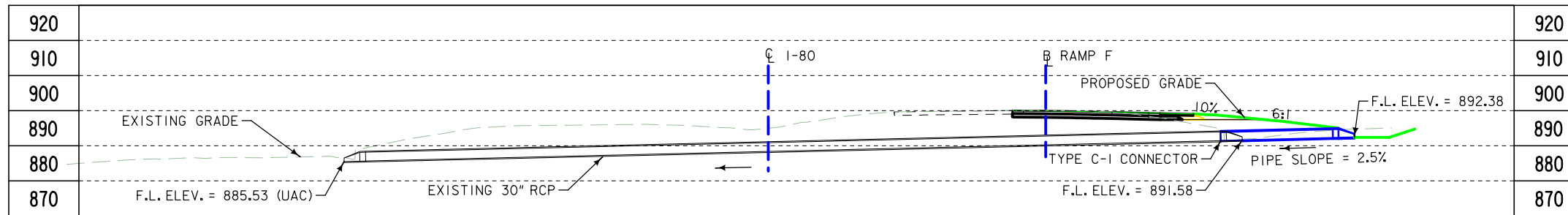


UTILITIES LEGEND:  
REFER TO D.1

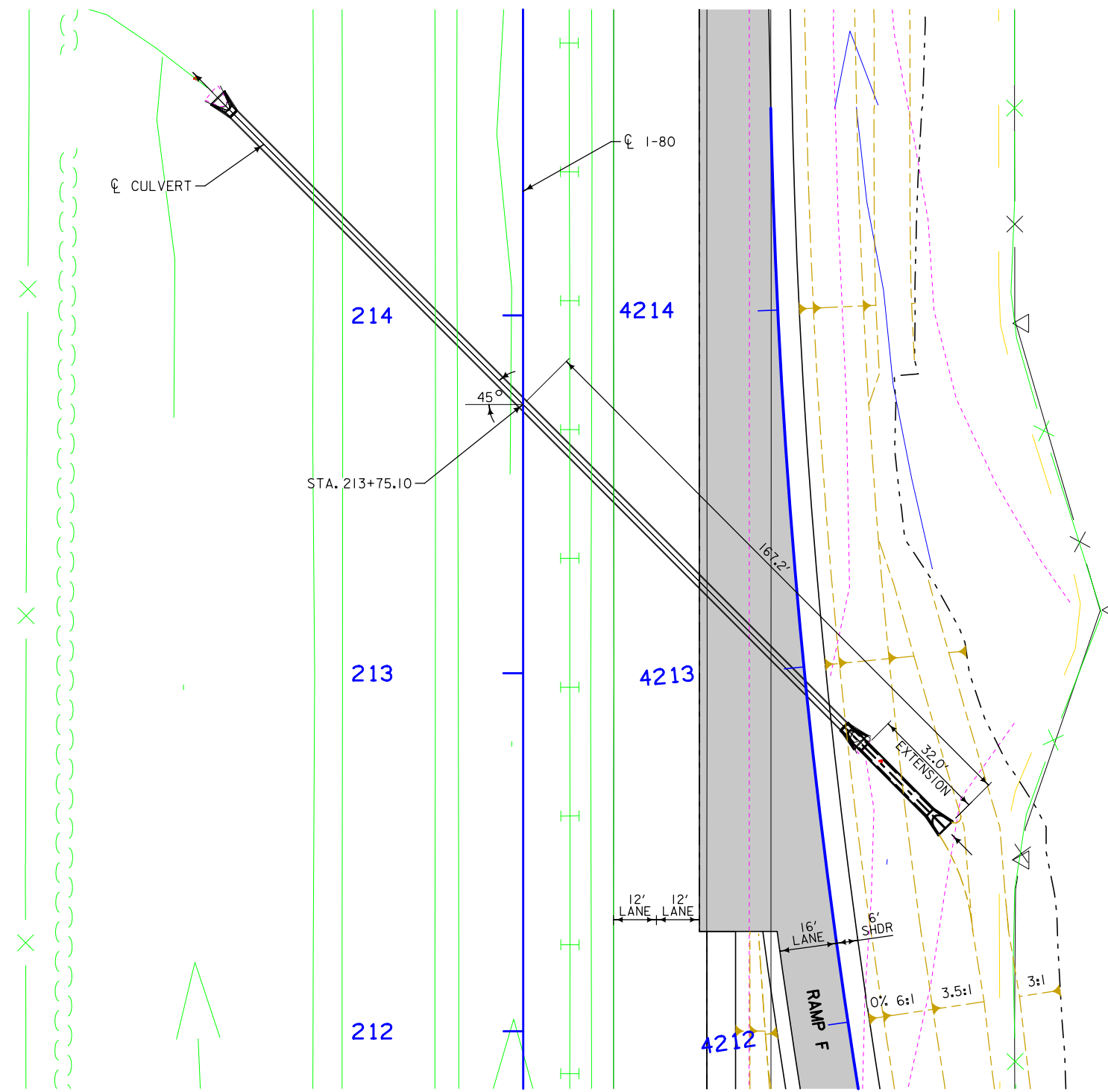
HYDRAULIC DATA  
DRAINAGE AREA = 2.0 ACRES ROLLING

LOCATION  
T-80N R-12W  
SECTION 34  
HARTFORD TOWNSHIP  
IOWA COUNTY

DESIGN FOR 0° SKEW  
**24" X 6'**  
**REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
STATION 206+70.37 01/11/21  
**IOWA COUNTY**  
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION  
DESIGN SHEET NO. OF FILE NO. DESIGN NO.

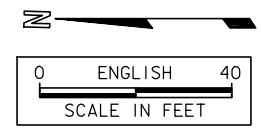


LONGITUDINAL SECTION ALONG  $\phi$  CULVERT



PLAT PLAN

BM509  
 Sta 213+97.74 out 139.85 Rt  
 YC7950250.874 XC20348133.467  
 Elev= 895.992  
 Description: CUT X ON ROW RAIL

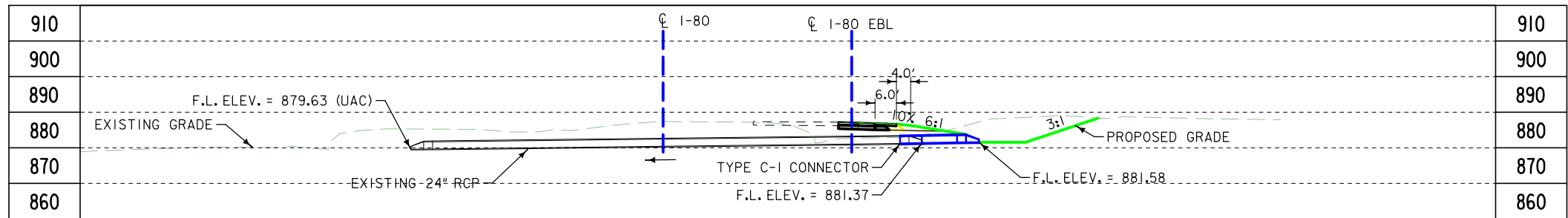


UTILITIES LEGEND:  
 REFER TO D.1

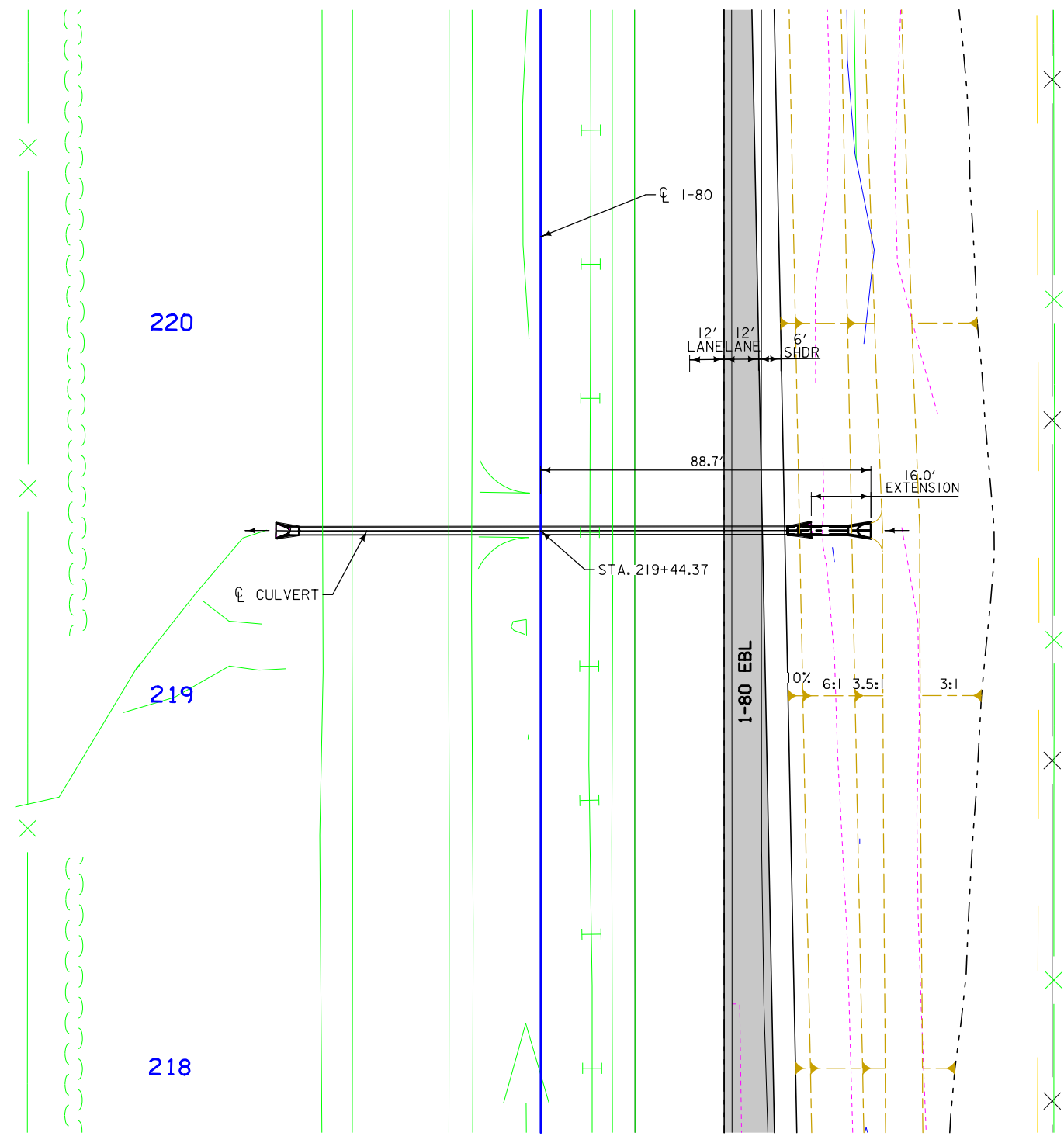
HYDRAULIC DATA  
 DRAINAGE AREA = 18.0 ACRES ROLLING

LOCATION  
 T-80N R-12W  
 SECTION 34  
 HARTFORD TOWNSHIP  
 IOWA COUNTY

DESIGN FOR 40° SKEW LT AHEAD  
**30" X 32'**  
**REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
 STATION 213+75.10 01/11/21  
 IOWA COUNTY  
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION  
 DESIGN SHEET NO. OF FILE NO. DESIGN NO.

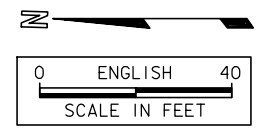


LONGITUDINAL SECTION ALONG  $\phi$  CULVERT



PLAT PLAN

BM509  
Sta 213+97.74 out 139.85 R+  
YC7950250.874 XC20348133.467  
Elev= 895.992  
Description: CUT X ON ROW RAIL

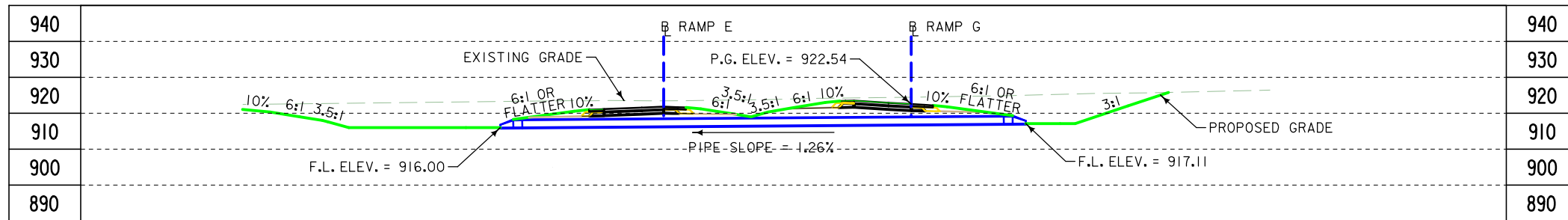


UTILITIES LEGEND:  
REFER TO D.1

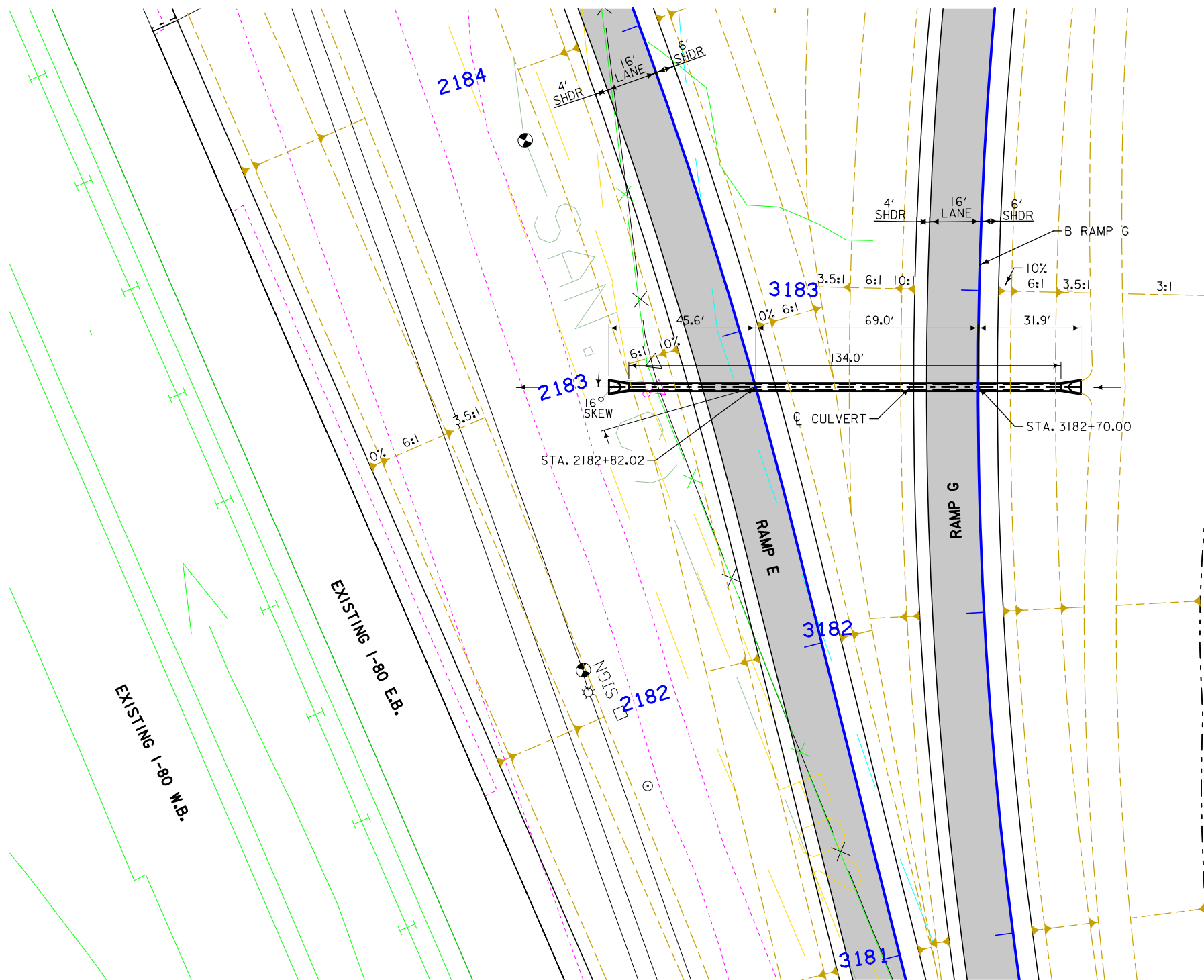
HYDRAULIC DATA  
DRAINAGE AREA = 0.5 ACRES ROLLING

LOCATION  
T-80N R-12W  
SECTION 34  
HARTFORD TOWNSHIP  
IOWA COUNTY

DESIGN FOR 0° SKEW  
**24" X 16'**  
**REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
STATION 219+44.37 OF FILE NO. 01/11/21  
**IOWA COUNTY**  
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION  
DESIGN SHEET NO. OF FILE NO. DESIGN NO.

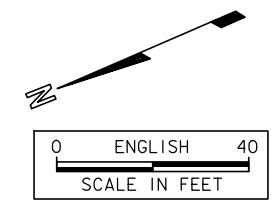


LONGITUDINAL SECTION ALONG  $\phi$  CULVERT



PLAT PLAN

BM509  
 Sta 213+97.74 out 139.85 Rt  
 YC7950250.874 XC20348133.467  
 Elev= 895.992  
 Description: CUT X ON ROW RAIL

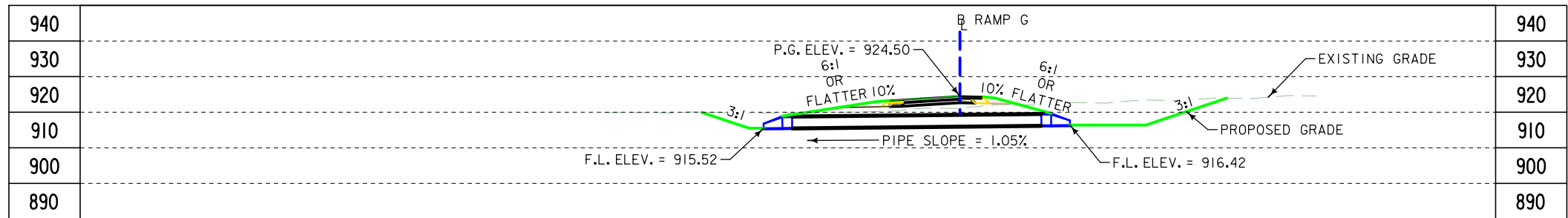


UTILITIES LEGEND:  
 REFER TO D.1

HYDRAULIC DATA  
 DRAINAGE AREA = 3.88 ACRES FLAT  
 DESIGN DISCHARGE,  $Q_{50}$  = 8.16 CFS

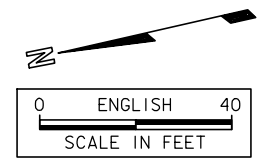
LOCATION  
 T-80N R-12W  
 SECTION 34  
 HARTFORD TOWNSHIP  
 IOWA COUNTY

DESIGN FOR 0° SKEW  
**24" X 134'**  
**REINFORCED CONCRETE**  
**PIPE**  
**PLAT PLAN**  
 STATION 3182+70.00 RAMP G 01/11/21  
**IOWA COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION  
 DESIGN SHEET NO. OF FILE NO. DESIGN NO.



LONGITUDINAL SECTION ALONG  $\phi$  CULVERT

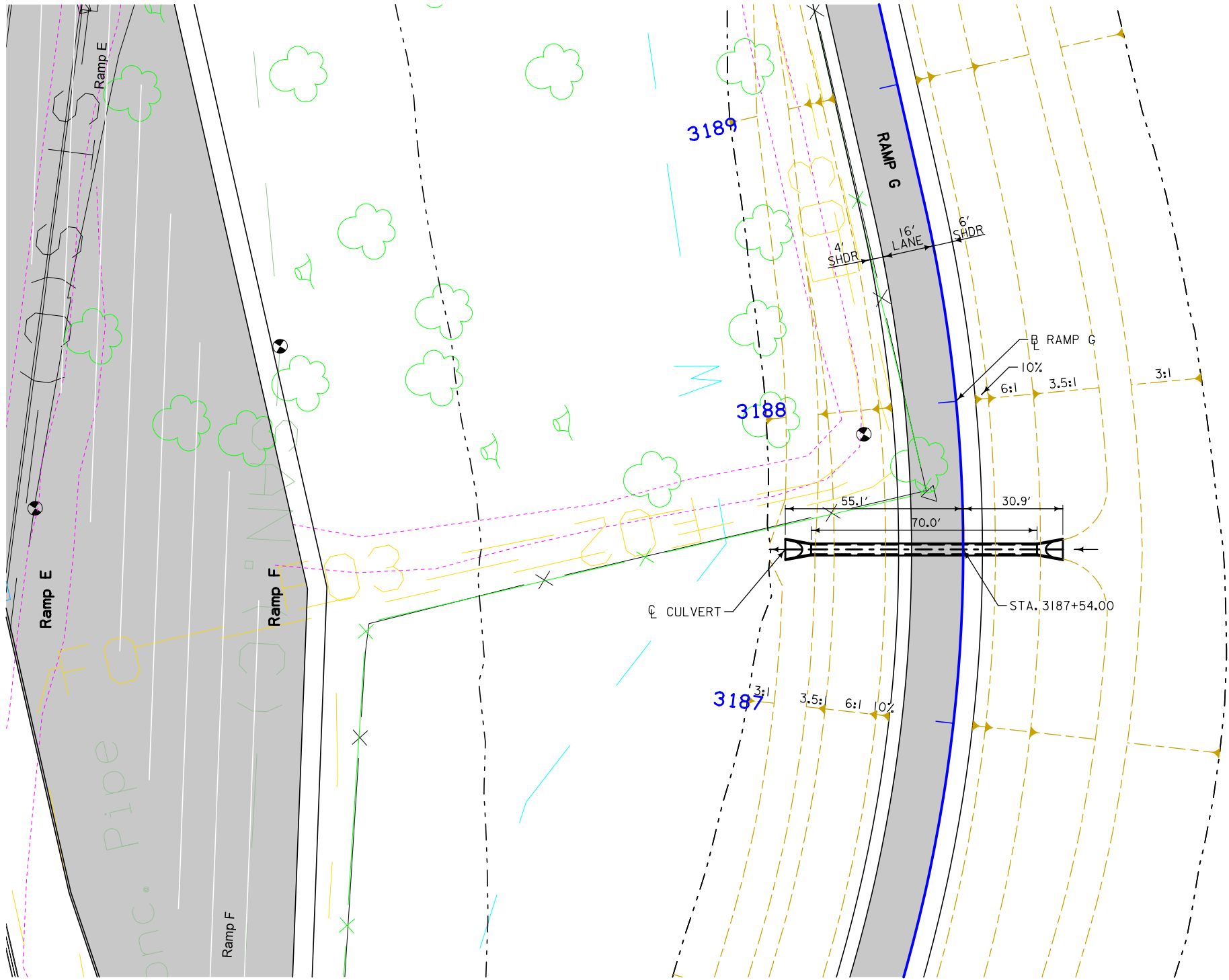
BM509  
 Sta 213+97.74 out 139.85 Rt  
 YC7950250.874 XC20348133.467  
 Elev= 895.992  
 Description: CUT X ON ROW RAIL



UTILITIES LEGEND:  
 REFER TO D.1

HYDRAULIC DATA  
 DRAINAGE AREA = 22.6 ACRES FLAT  
 DESIGN DISCHARGE,  $Q_{50} = 31.2$  CFS

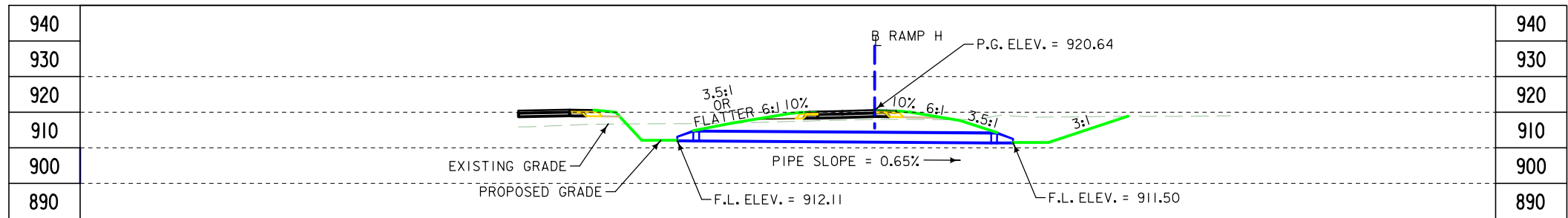
LOCATION  
 T-80N R-12W  
 SECTION 34  
 HARTFORD TOWNSHIP  
 IOWA COUNTY



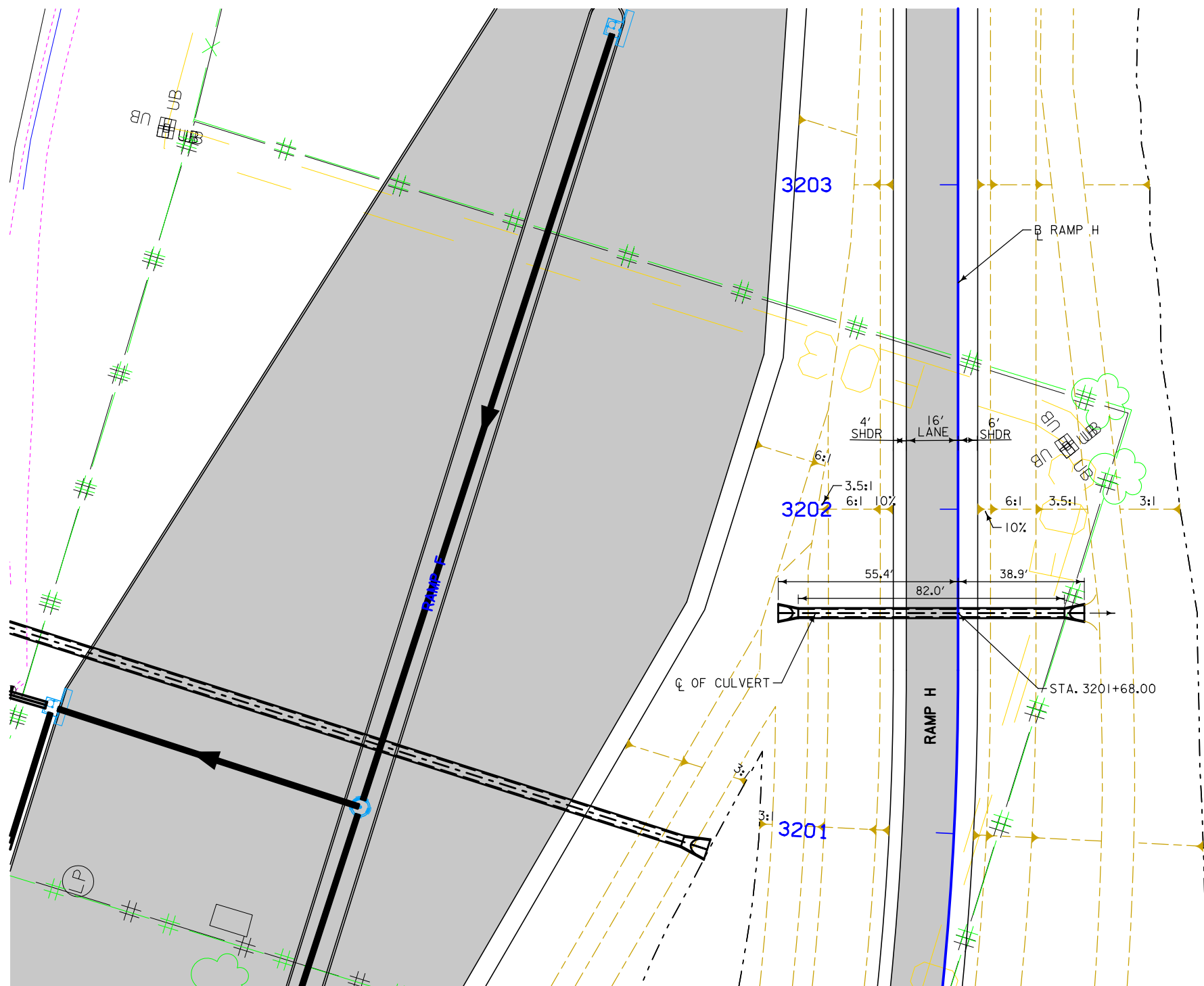
PLAT PLAN

DESIGN FOR 0° SKEW  
**36" X 70'**  
**REINFORCED CONCRETE**  
**PIPE**  
**PLAT PLAN**  
 STATION 3187+54.00 RAMP G 01/11/21  
**IOWA COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION  
 DESIGN SHEET NO. OF FILE NO. DESIGN NO.



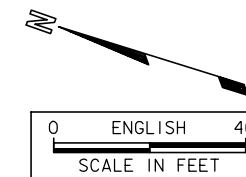


LONGITUDINAL SECTION ALONG  $\phi$  CULVERT



PLAT PLAN

BM509  
Sta 213+97.74 out 139.85 Rt  
YC7950250.874 XC20348133.467  
Elev= 895.992  
Description: CUT X ON ROW RAIL

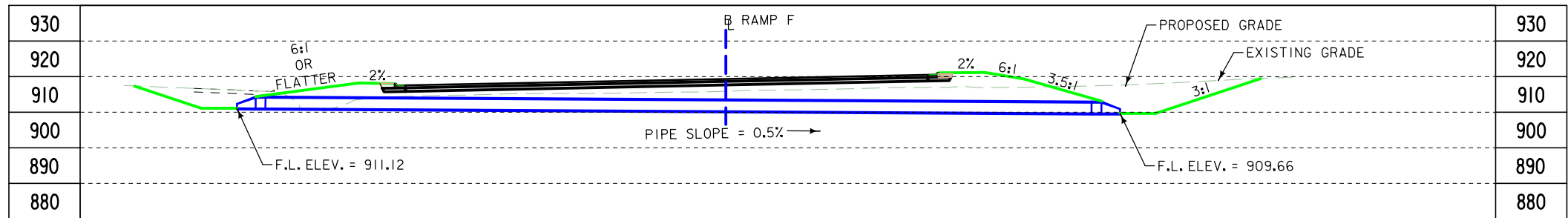


UTILITIES LEGEND:  
REFER TO D.1

HYDRAULIC DATA  
DRAINAGE AREA = 11.45 ACRES FLAT  
DESIGN DISCHARGE,  $Q_{50}$  = 18.6 CFS

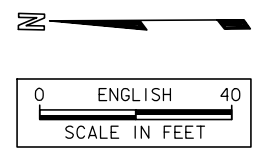
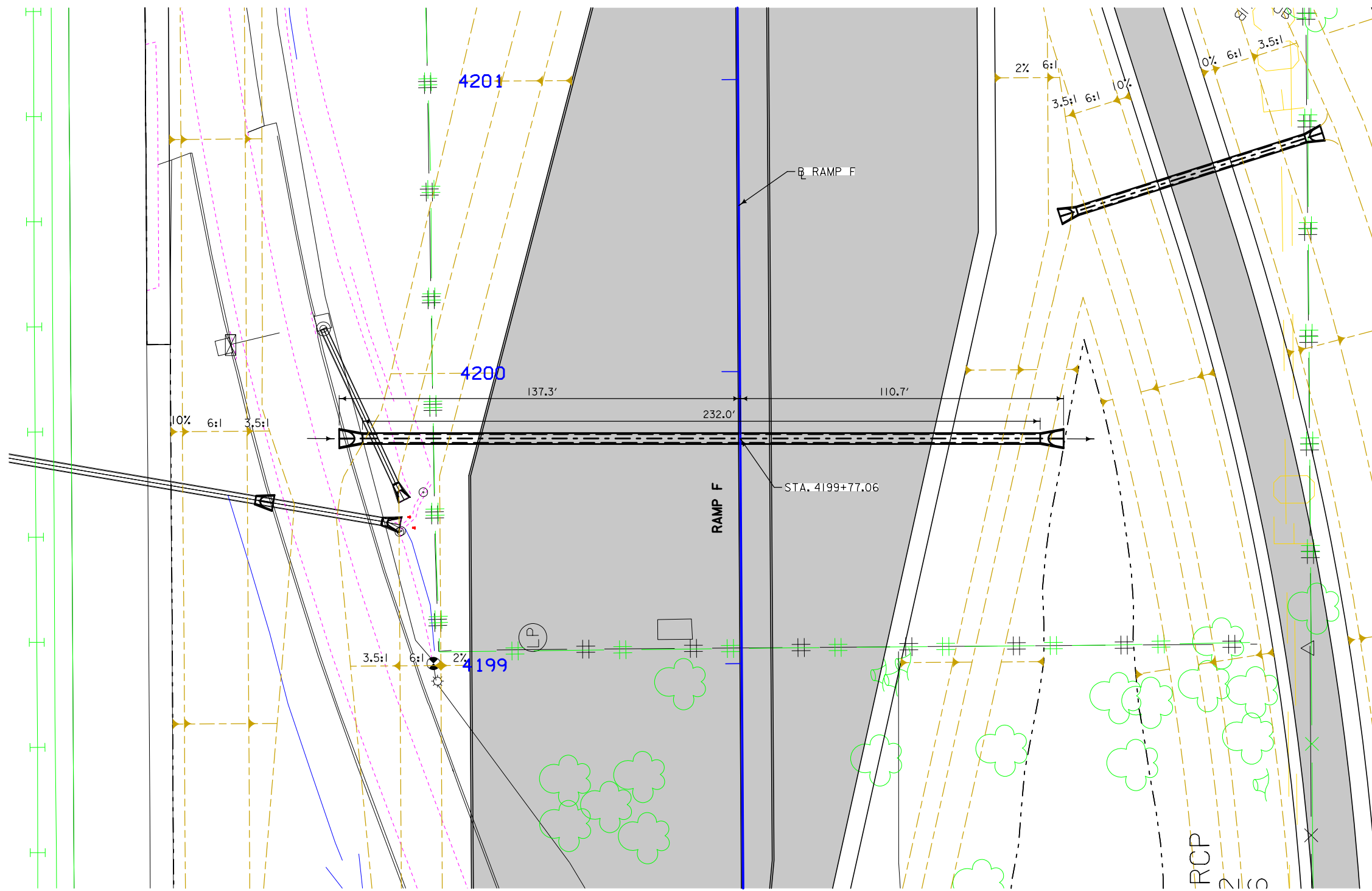
LOCATION  
T-80N R-12W  
SECTION 34  
HARTFORD TOWNSHIP  
IOWA COUNTY

DESIGN FOR 0° SKEW  
**30" X 82'**  
**REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
STATION 3201+68.00 RAMP H  
**IOWA COUNTY**  
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION  
DESIGN SHEET NO. OF FILE NO. DESIGN NO.



BM509  
 Sta 213+97.74 out 139.85 Rt  
 YC7950250.874 XC20348133.467  
 Elev= 895.992  
 Description: CUT X ON ROW RAIL

LONGITUDINAL SECTION ALONG  $\phi$  CULVERT

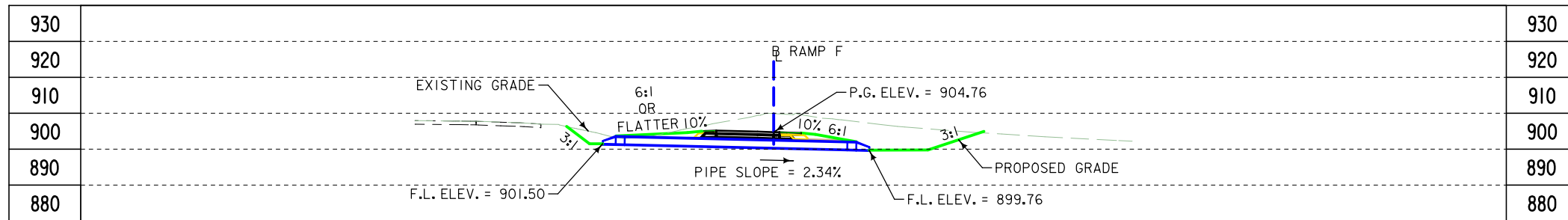


UTILITIES LEGEND:  
 REFER TO D.1

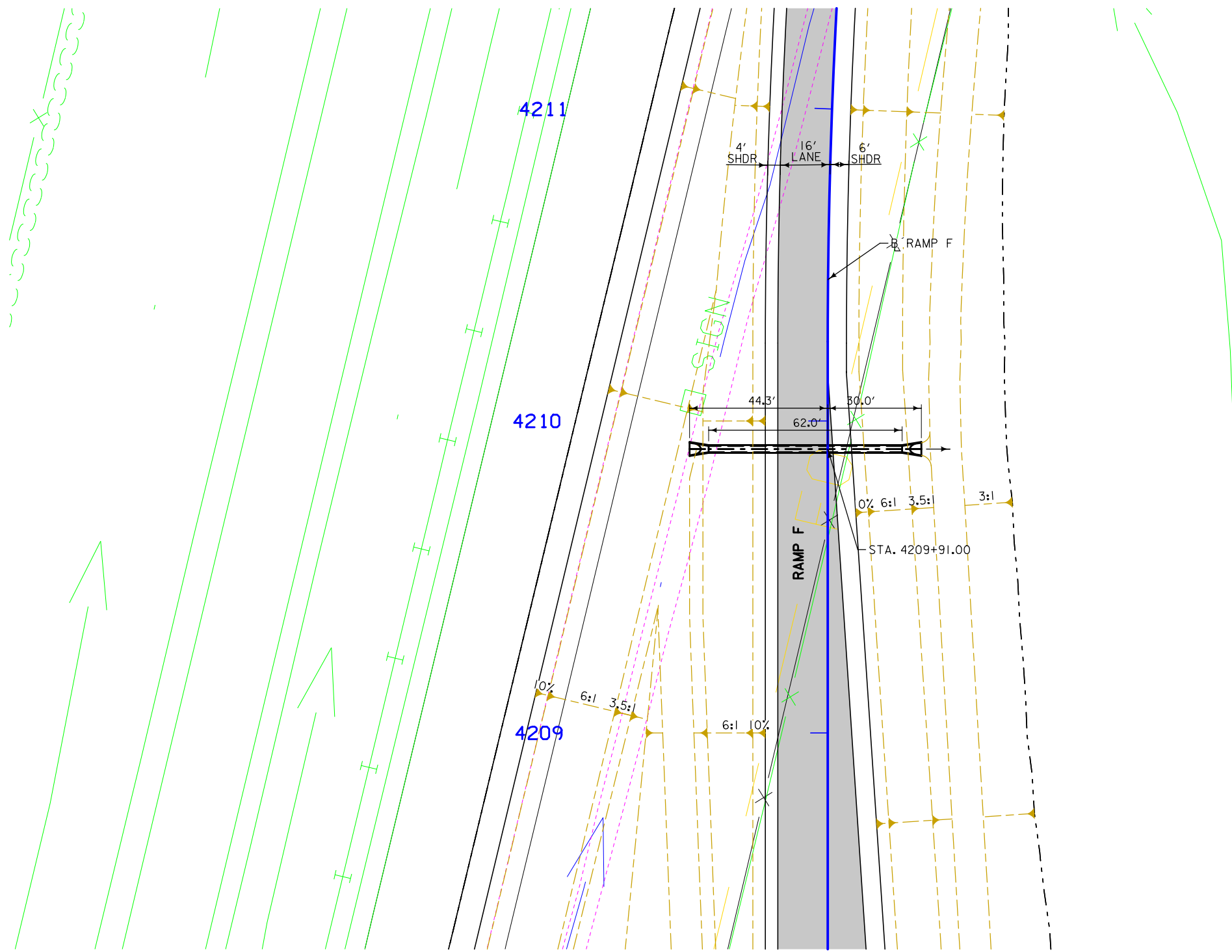
HYDRAULIC DATA  
 DRAINAGE AREA = X.X ACRES FLAT OR ROLLING??  
 DESIGN DISCHARGE,  $Q_{50}$  = X.XX CFS

LOCATION  
 T-80N R-12W  
 SECTION 34  
 HARTFORD TOWNSHIP  
 IOWA COUNTY

DESIGN FOR 0° SKEW  
**36" X 232'**  
**REINFORCED CONCRETE**  
**PIPE**  
**PLAT PLAN**  
 STATION 4199+77.06 RAMP F  
**IOWA COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION  
 DESIGN SHEET NO. OF FILE NO. DESIGN NO.

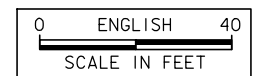


LONGITUDINAL SECTION ALONG  $\phi$  CULVERT



PLAT PLAN

BM509  
 Sta 213+97.74 out 139.85 Rt  
 YC7950250.874 XC20348133.467  
 Elev= 895.992  
 Description: CUT X ON ROW RAIL

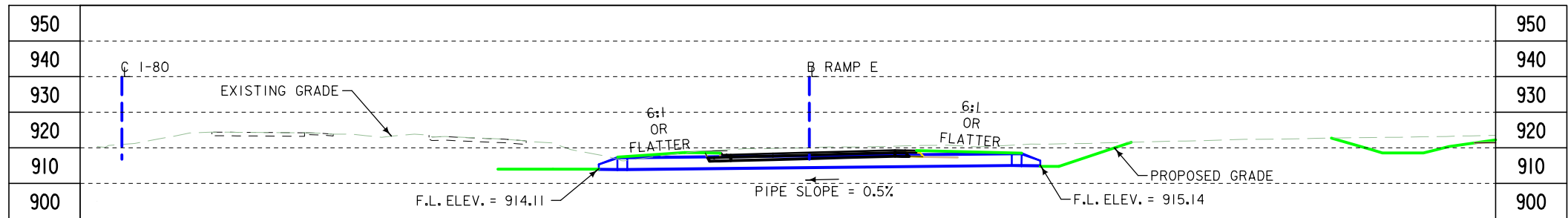


UTILITIES LEGEND:  
 REFER TO D.I

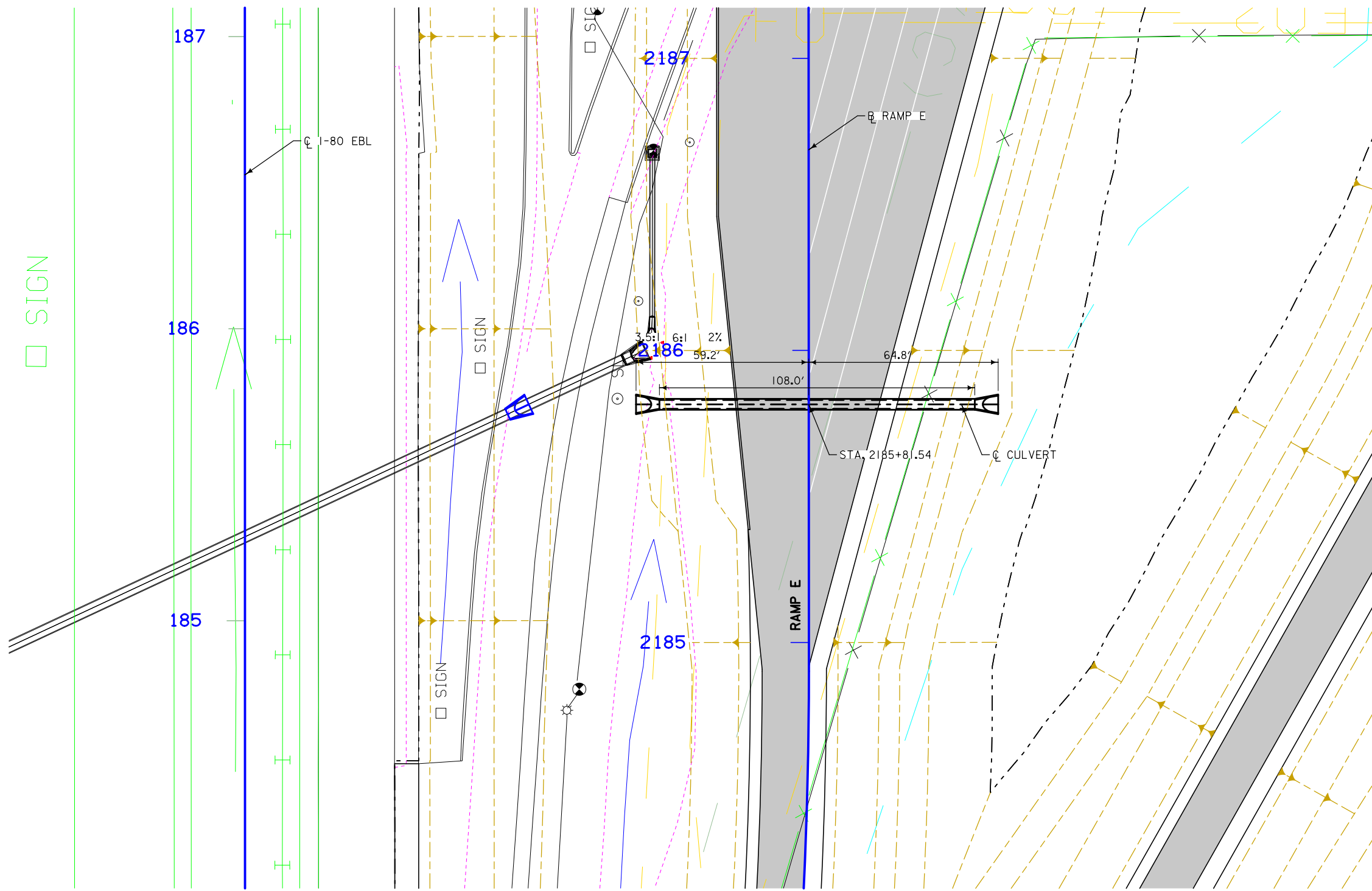
HYDRAULIC DATA  
 DRAINAGE AREA = 2.0 ACRES FLAT  
 DESIGN DISCHARGE,  $Q_{50}$  = 6.14 CFS

LOCATION  
 T-80N R-12W  
 SECTION 34  
 HARTFORD TOWNSHIP  
 IOWA COUNTY

DESIGN FOR 0° SKEW  
**24" X 62'**  
**REINFORCED CONCRETE**  
**PIPE**  
**PLAT PLAN**  
 STATION 4209+91.00 RAMP F 01/11/21  
**IOWA COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION  
 DESIGN SHEET NO. OF FILE NO. DESIGN NO.

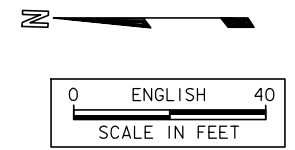


LONGITUDINAL SECTION ALONG CULVERT



PLAT PLAN

BM509  
 Sta 213+97.74 out 139.85 Rt  
 YC7950250.874 XC20348133.467  
 Elev= 895.992  
 Description: CUT X ON ROW RAIL



**UTILITIES LEGEND:**  
 REFER TO D.1

**HYDRAULIC DATA**  
 DRAINAGE AREA = 2.0 ACRES FLAT  
 DESIGN DISCHARGE,  $Q_{50} = 6.14$  CFS

**LOCATION**  
 T-80N R-12W  
 SECTION 34  
 HARTFORD TOWNSHIP  
 IOWA COUNTY

DESIGN FOR 0° SKEW  
**36" X 108'**  
**REINFORCED CONCRETE**  
**PIPE**  
**PLAT PLAN**  
 STATION 2185+81.54 RAMP E      01/11/21  
**IOWA COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION  
 DESIGN SHEET NO. OF FILE NO. DESIGN NO.

**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\R/CB
- ===== Proposed Pipe\R/CB
- ===== Proposed Dike
- ===== All Elements Associated with Proposed Entrances

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

- TOPSOIL ----- Topsoil (Class 10)
- Slope Dressing Only
- CL 10 ----- Class 10 Materials
- SEL LO ----- 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
- BRN LS ----- Broken and Weathered Rock
- ROCK ----- Solid Rock
- BLDGS ----- 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.

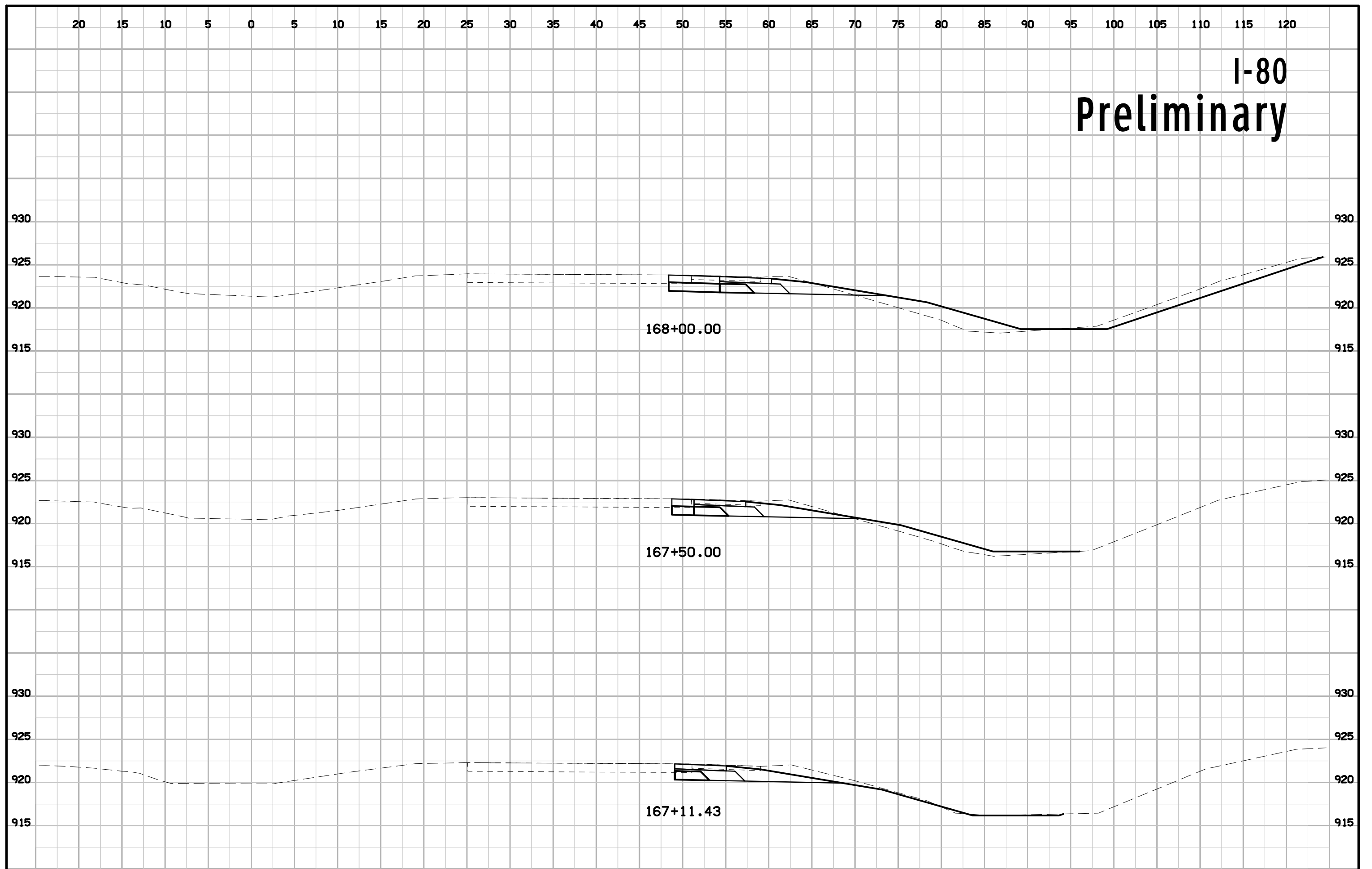
**SYMBOL LEGEND OF CROSS SECTION SHEETS**

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

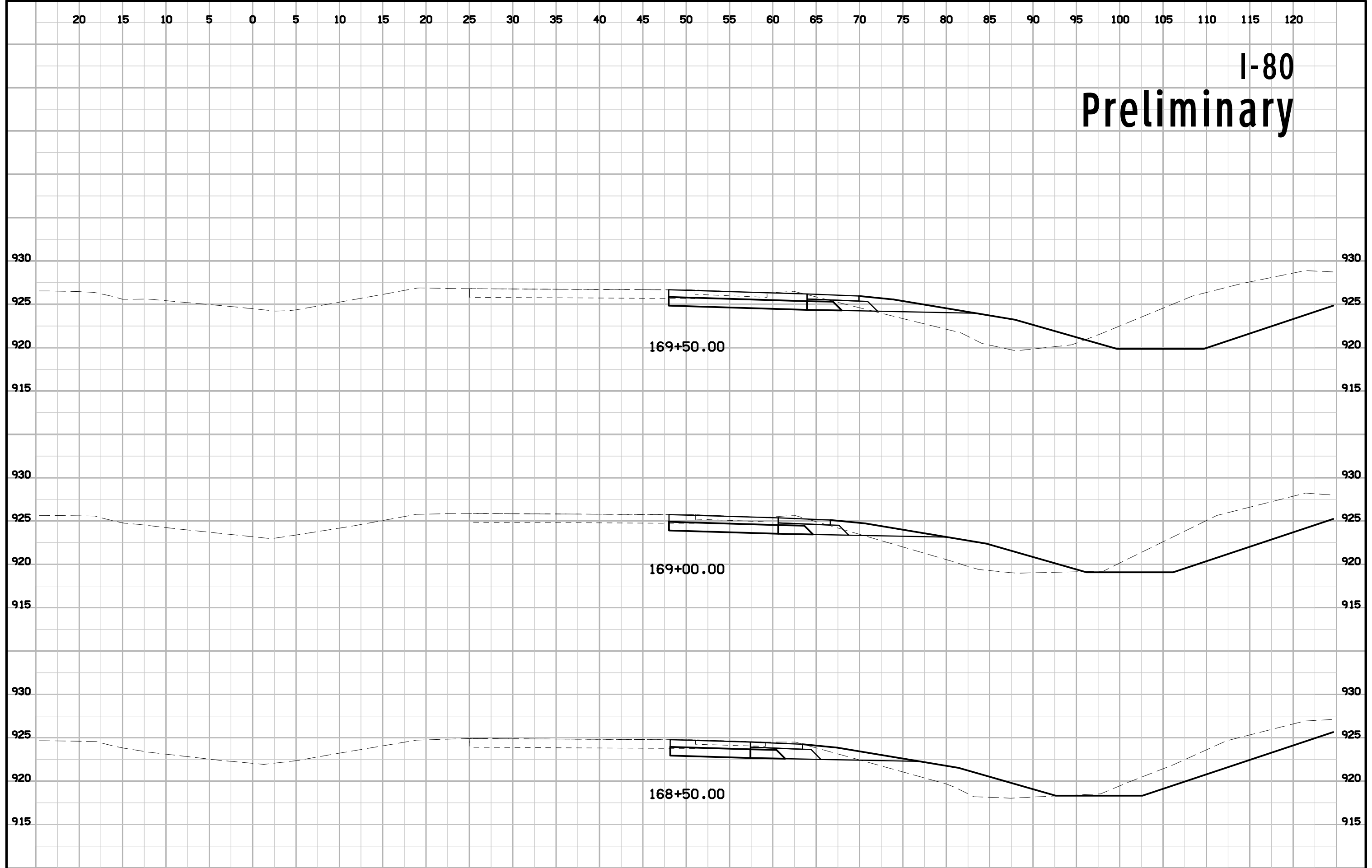
**CROSS SECTION  
LEGEND AND SYMBOL  
INFORMATION SHEET**

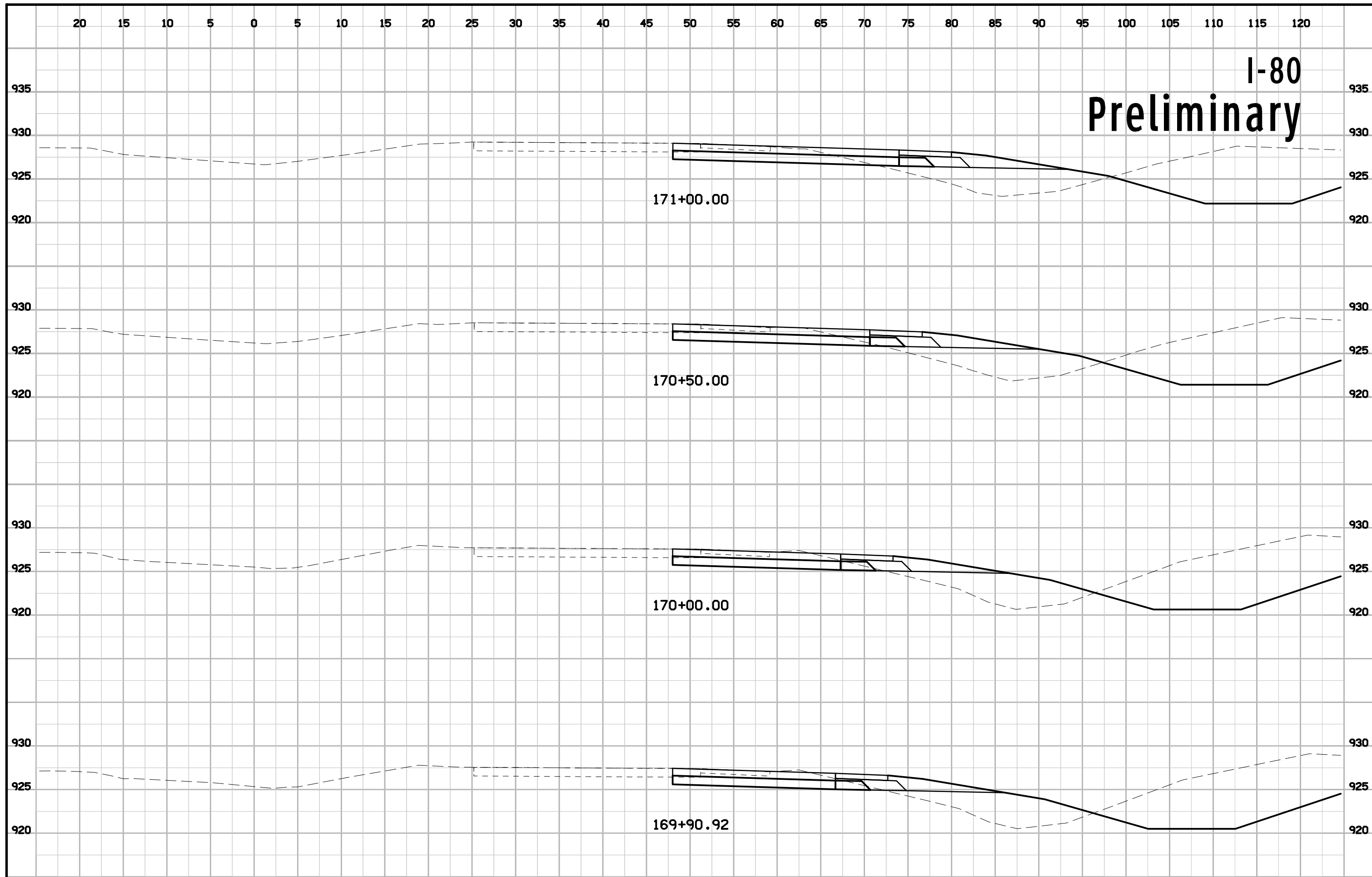
(COVERS SHEET SERIES W, X, Y, & Z)

# I-80 Preliminary



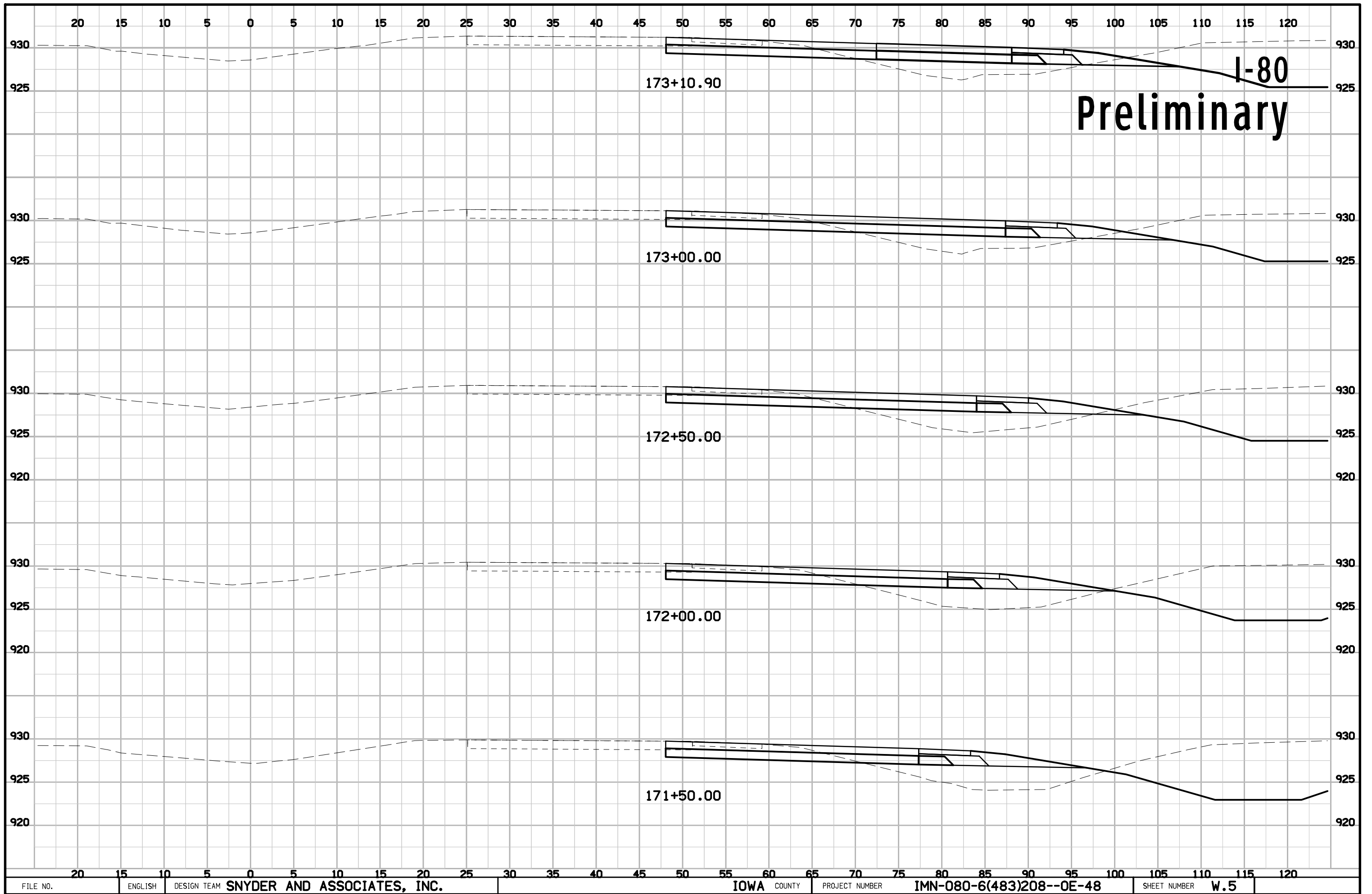
# I-80 Preliminary

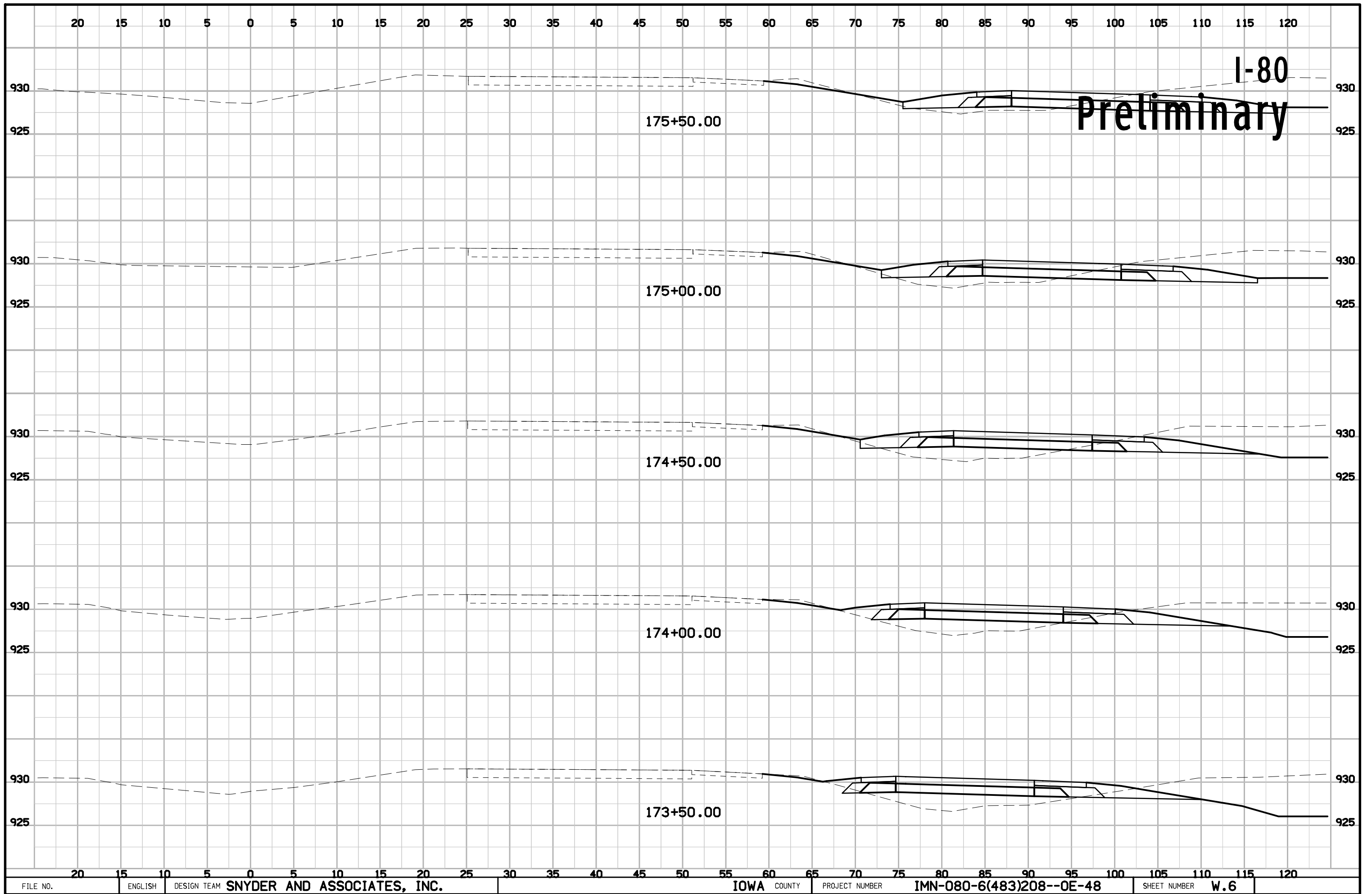




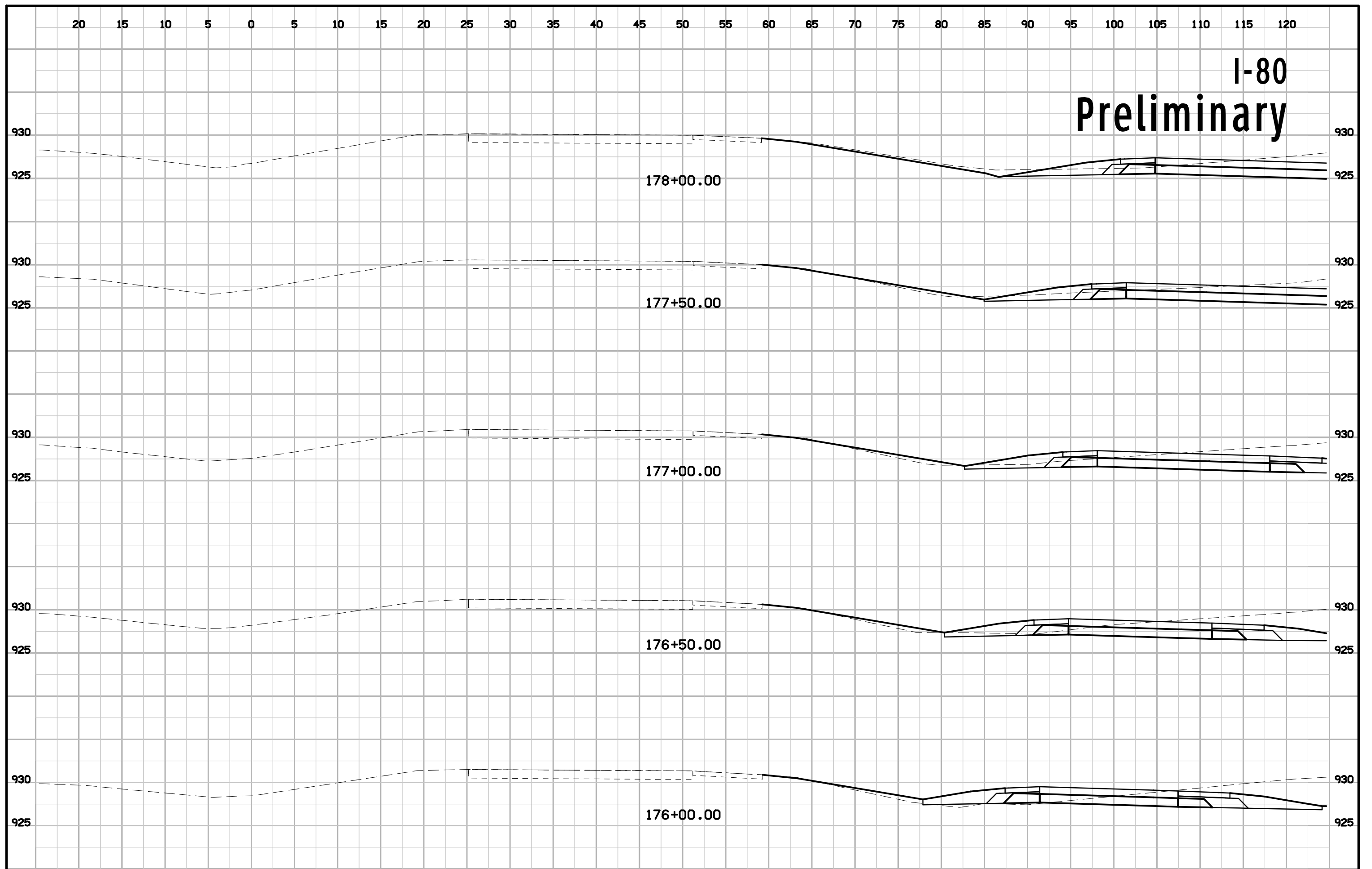
# I-80 Preliminary



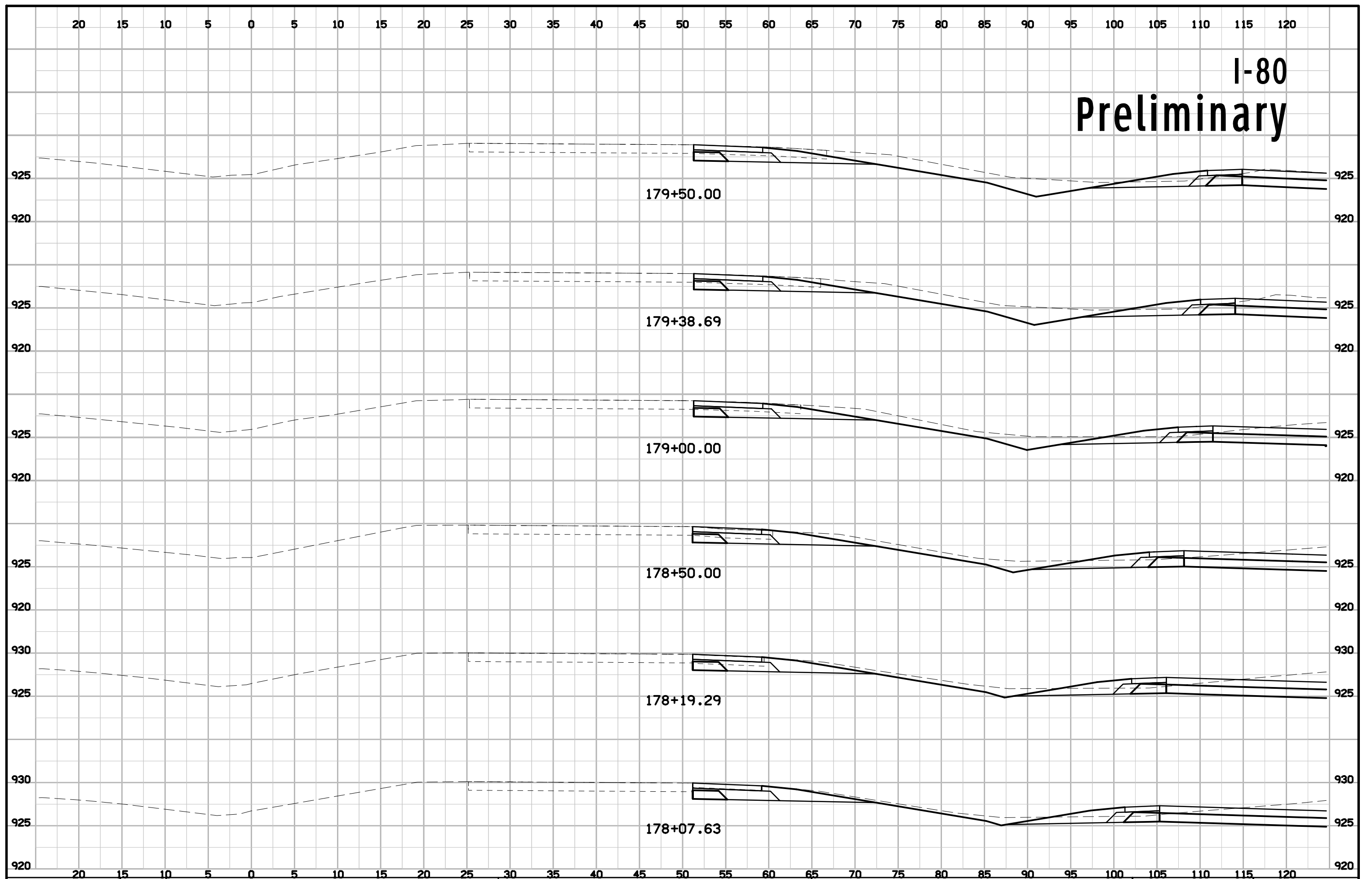


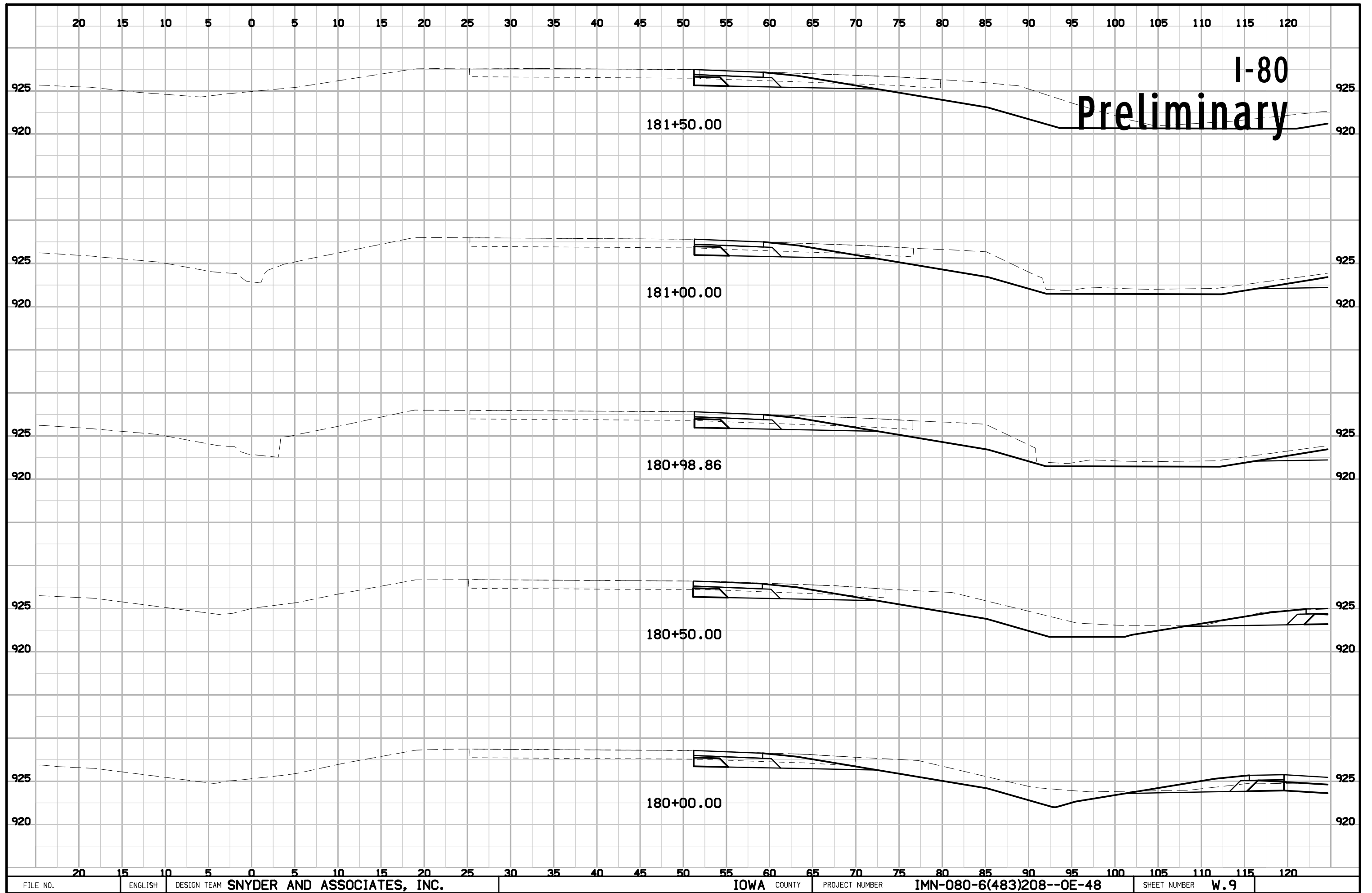


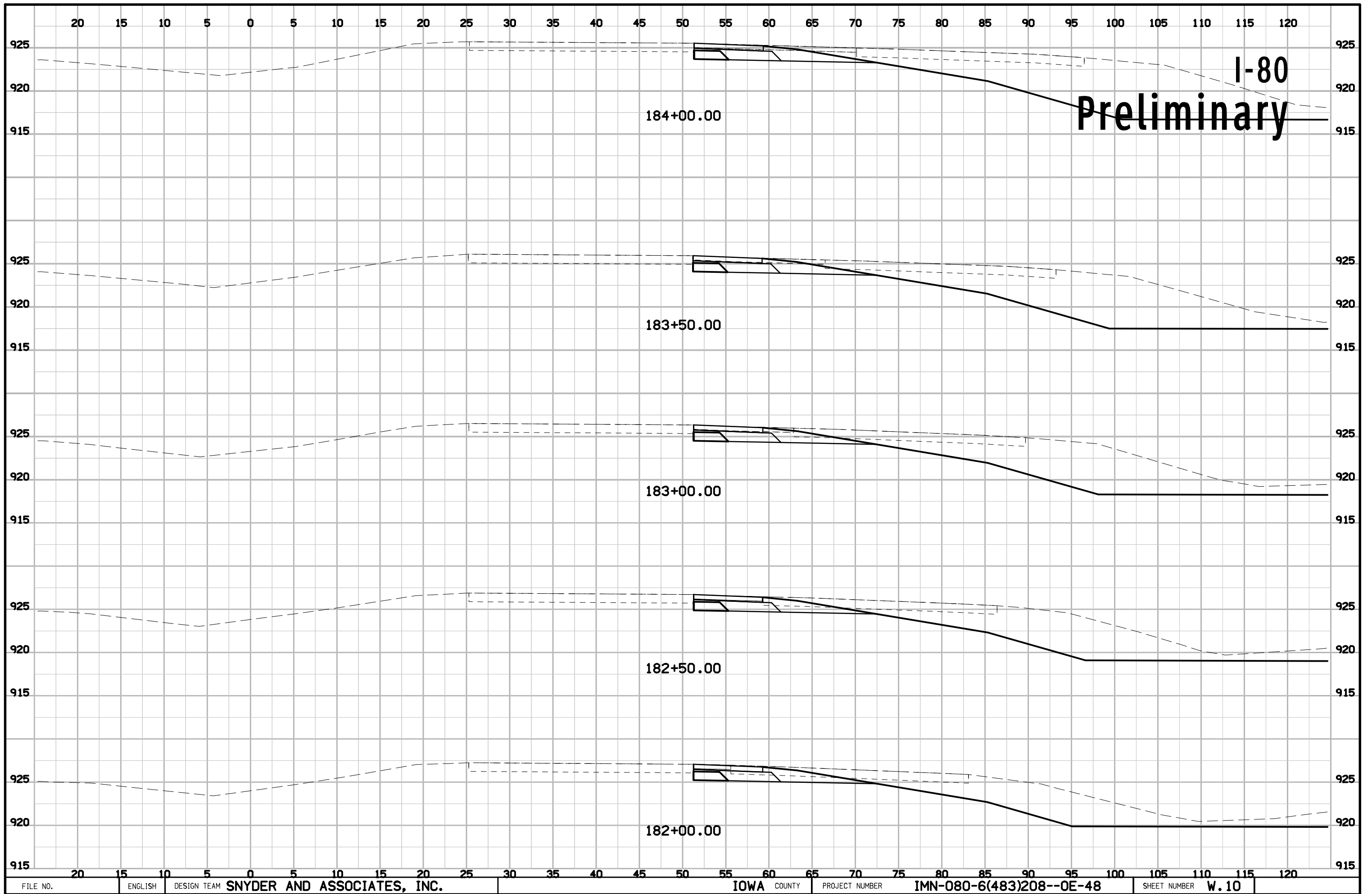
# I-80 Preliminary



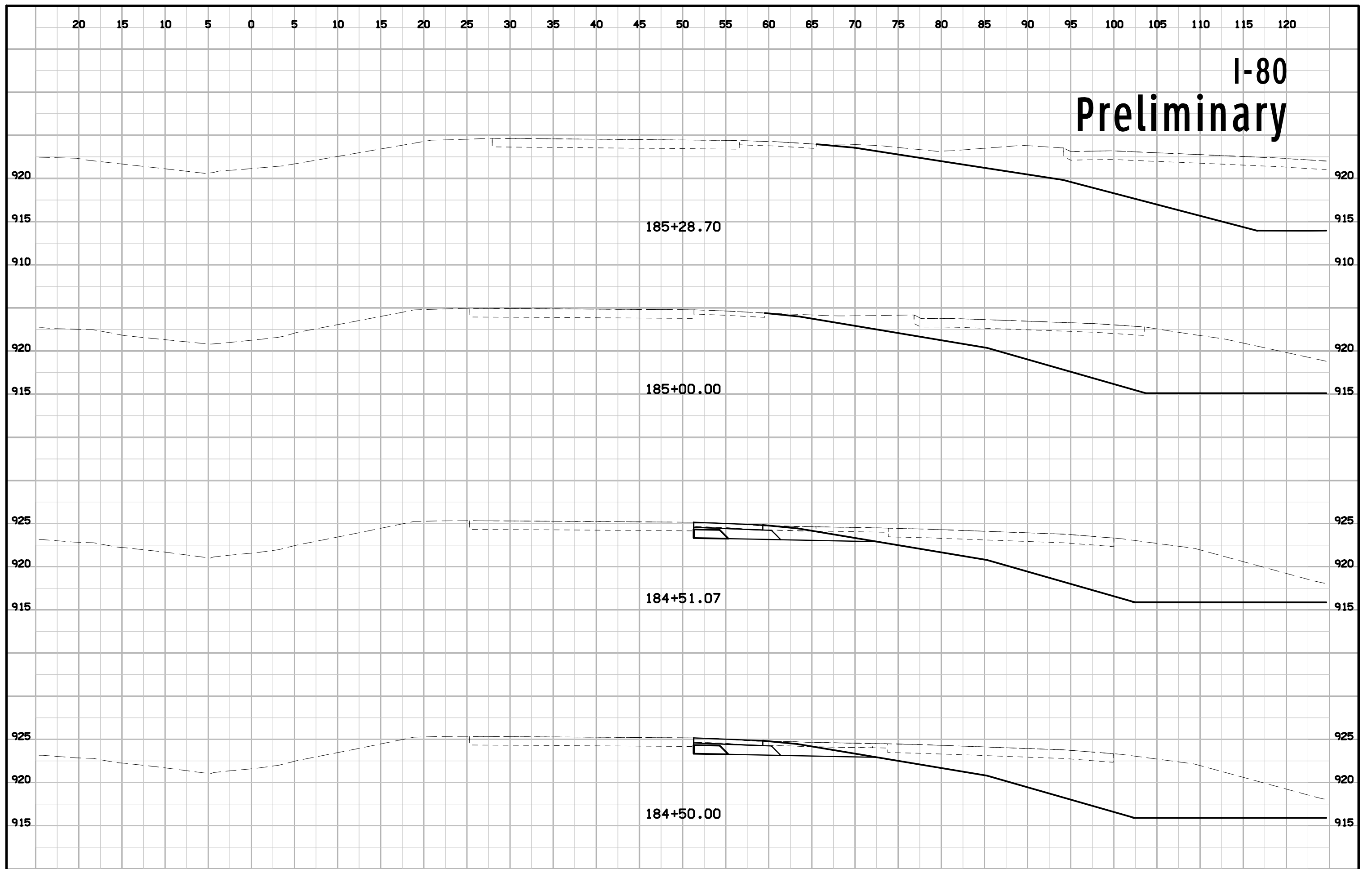
# I-80 Preliminary

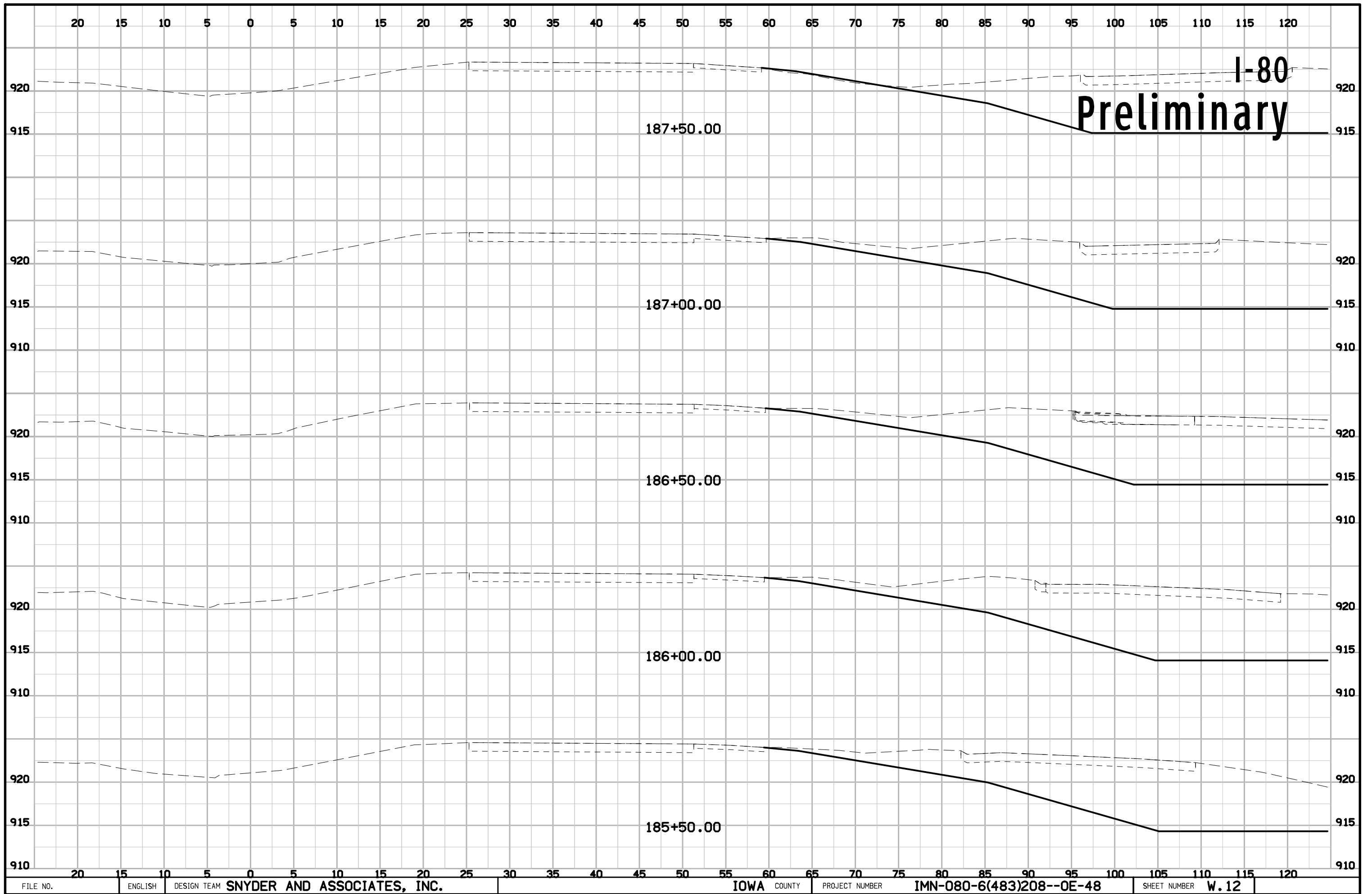




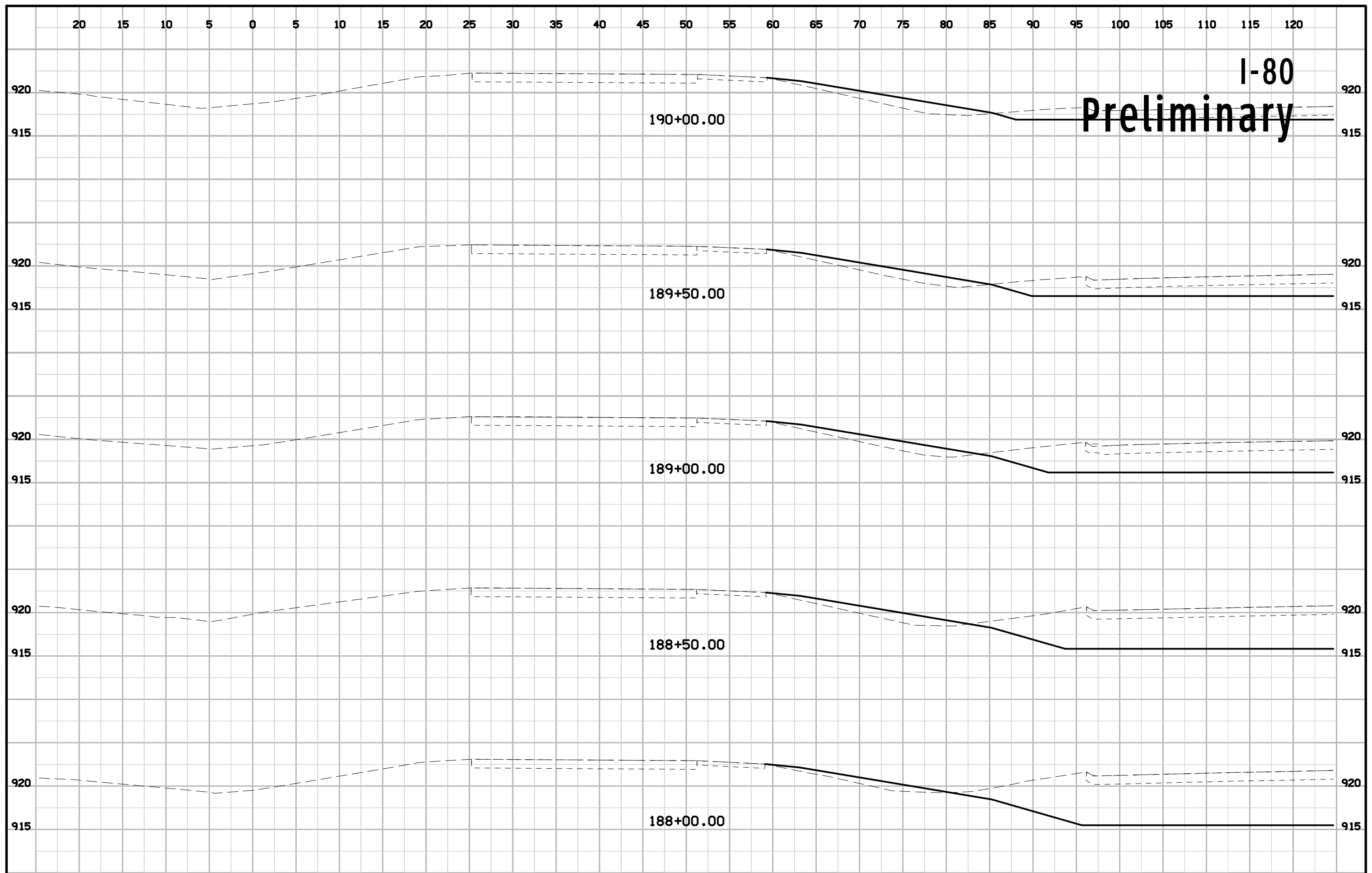


# I-80 Preliminary

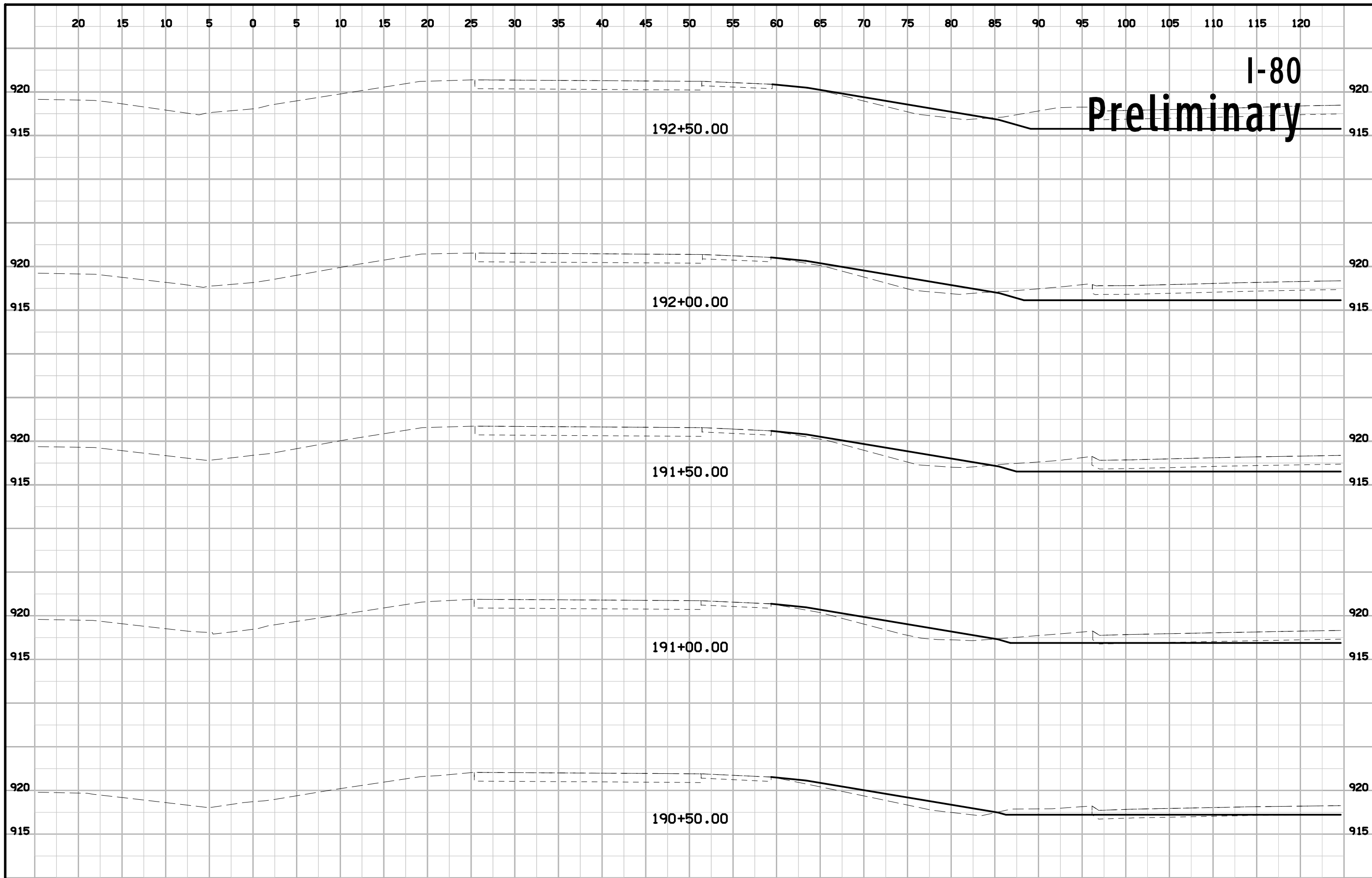








**I-80**  
**Preliminary**



I-80

Preliminary

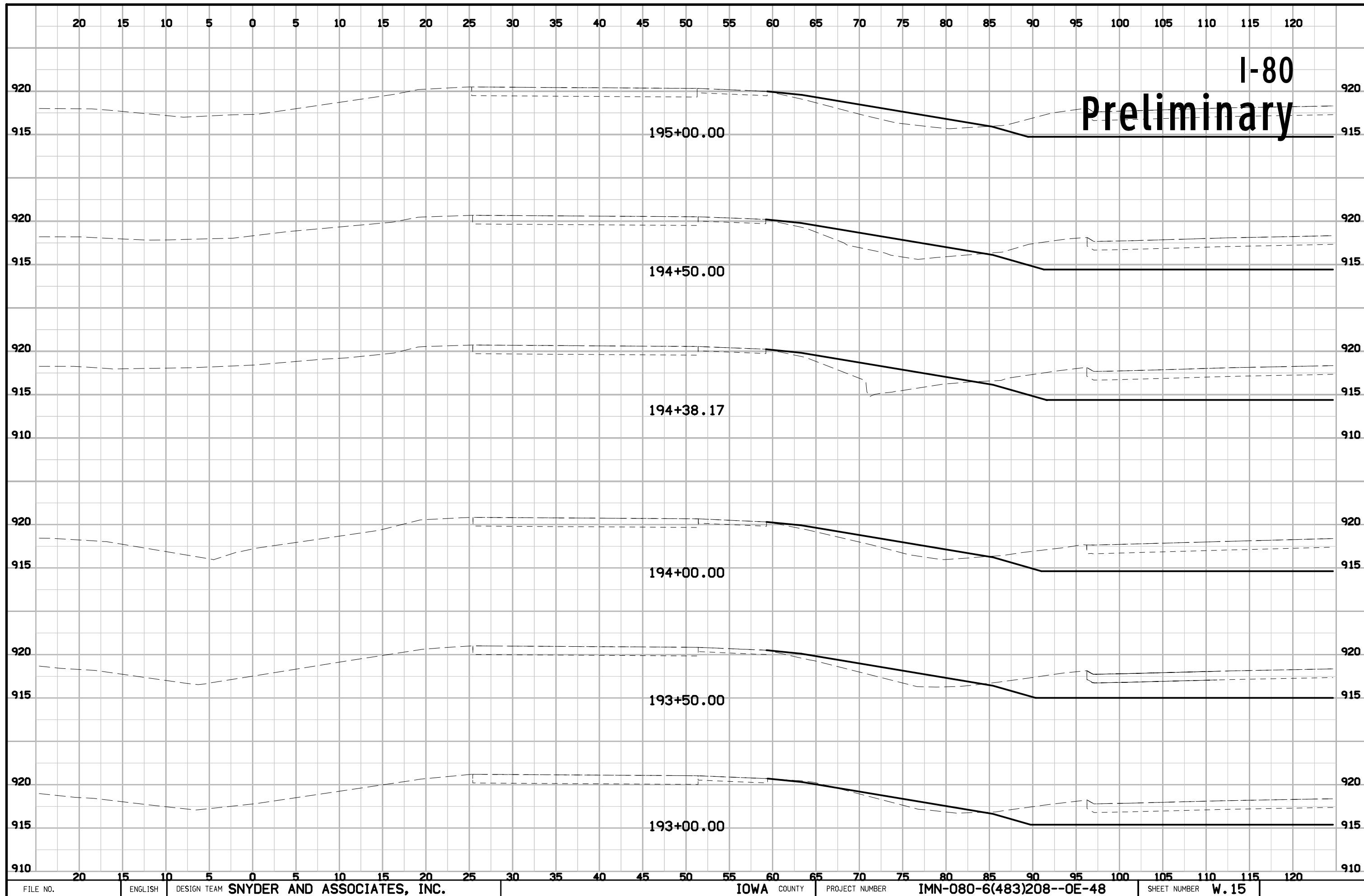
192+50.00

192+00.00

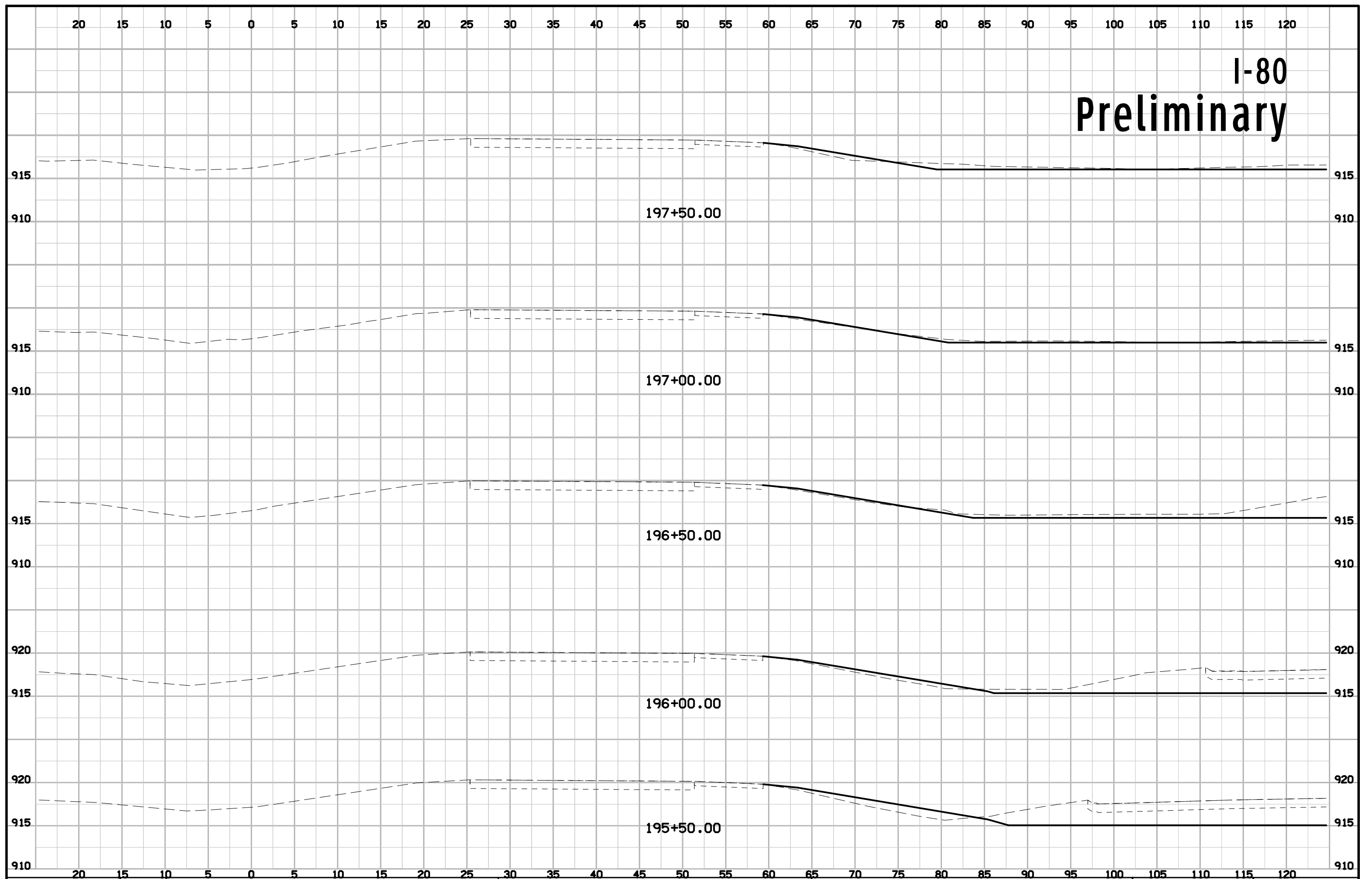
191+50.00

191+00.00

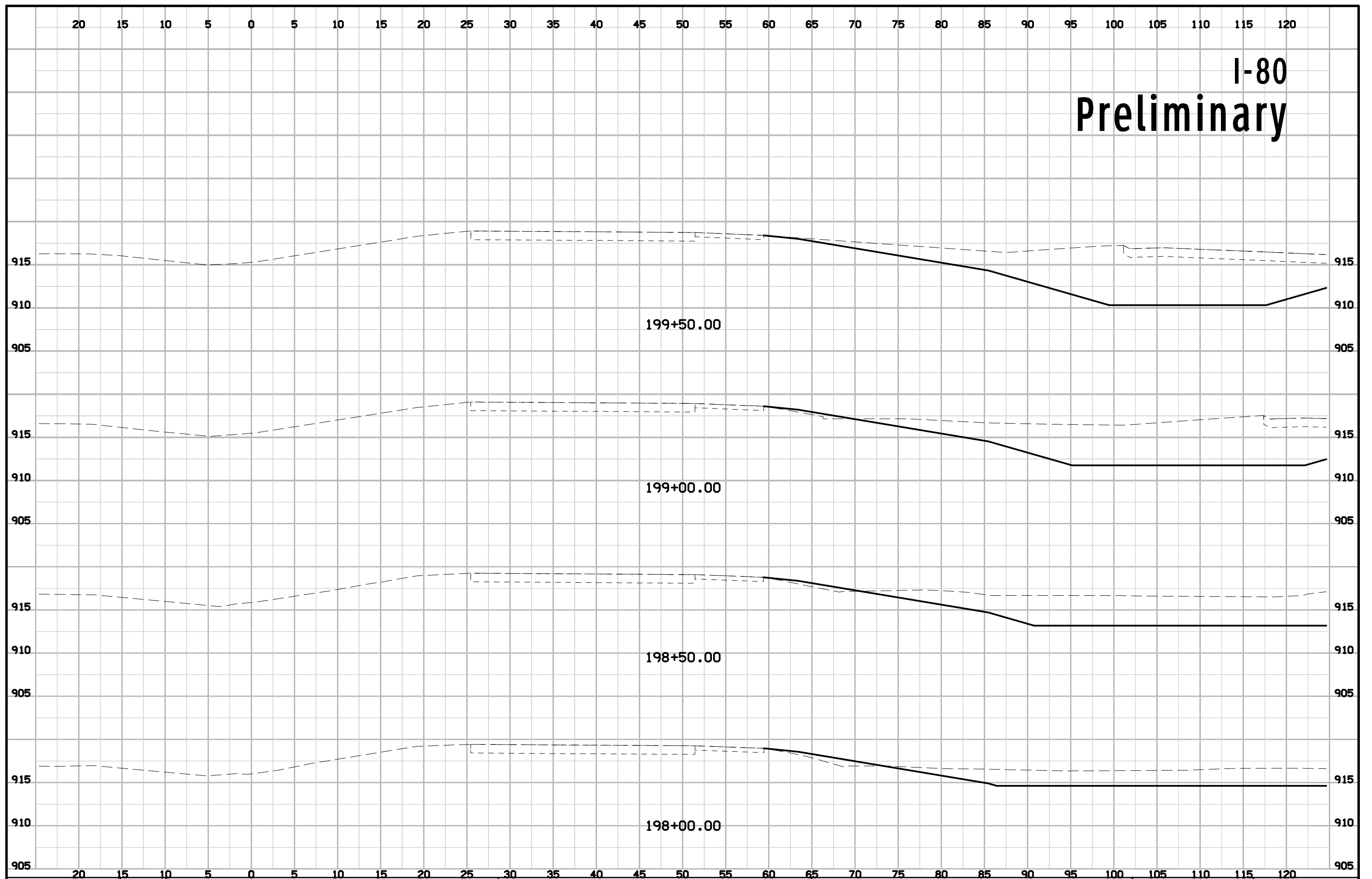
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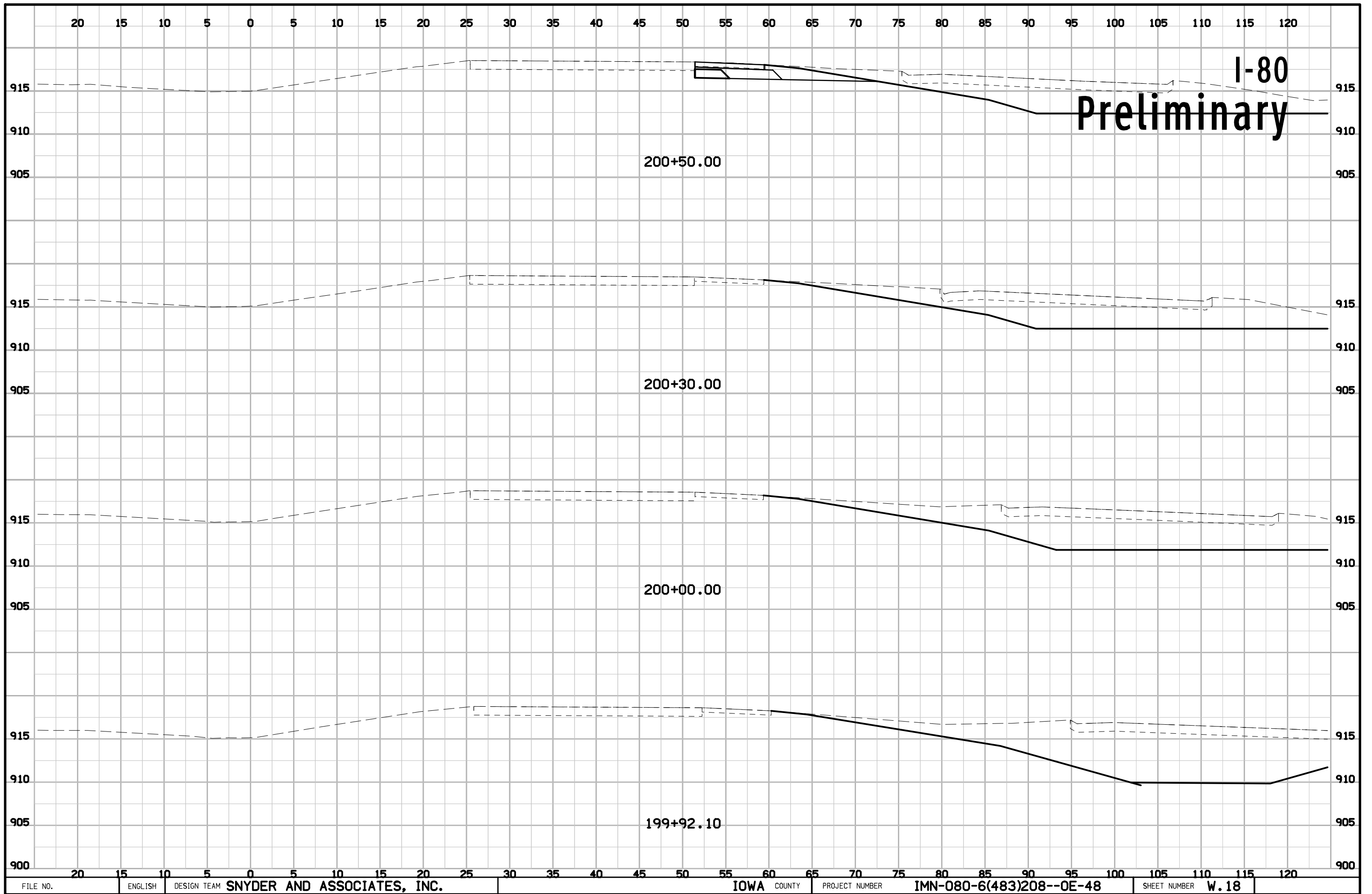


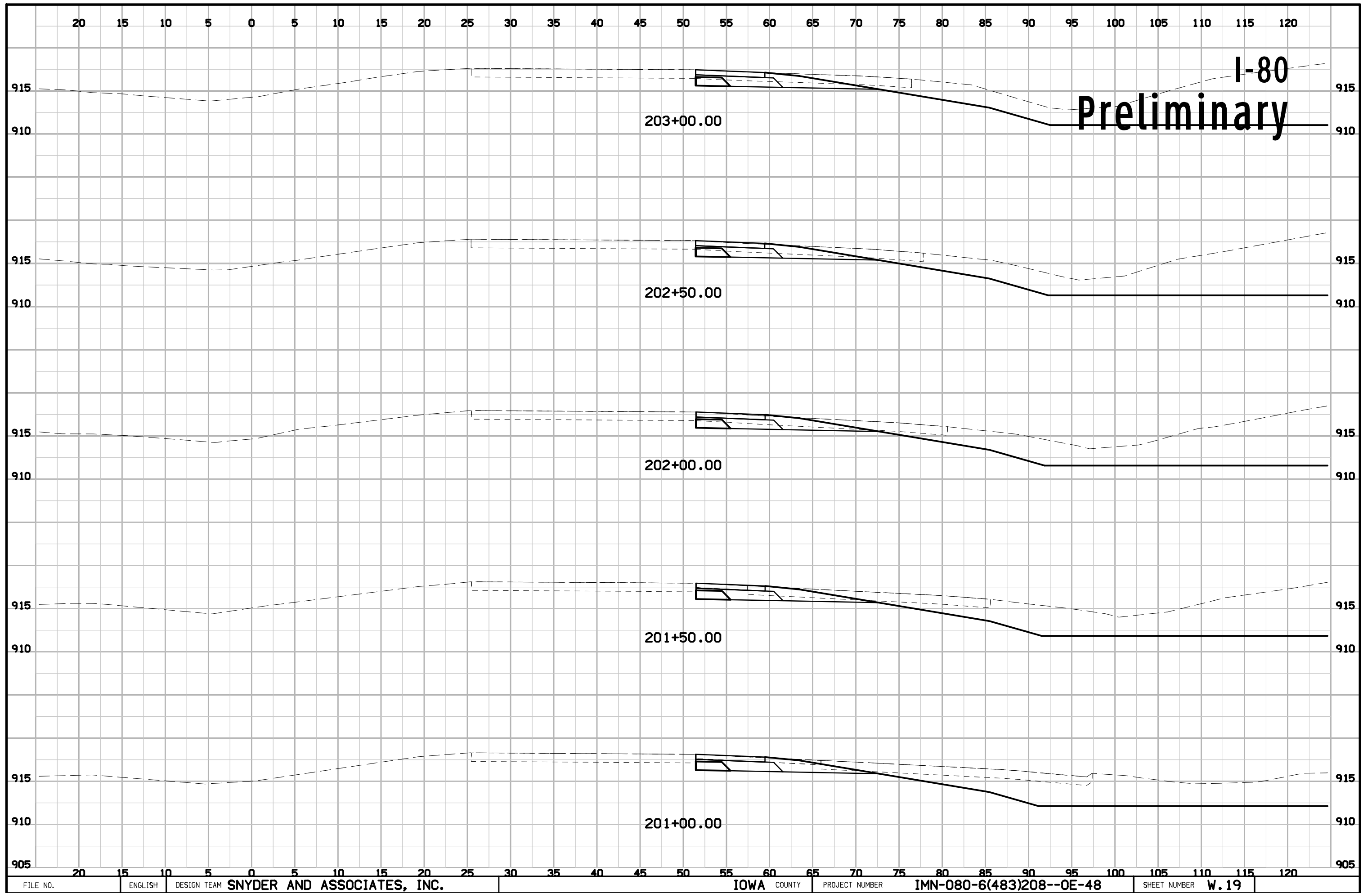
# I-80 Preliminary

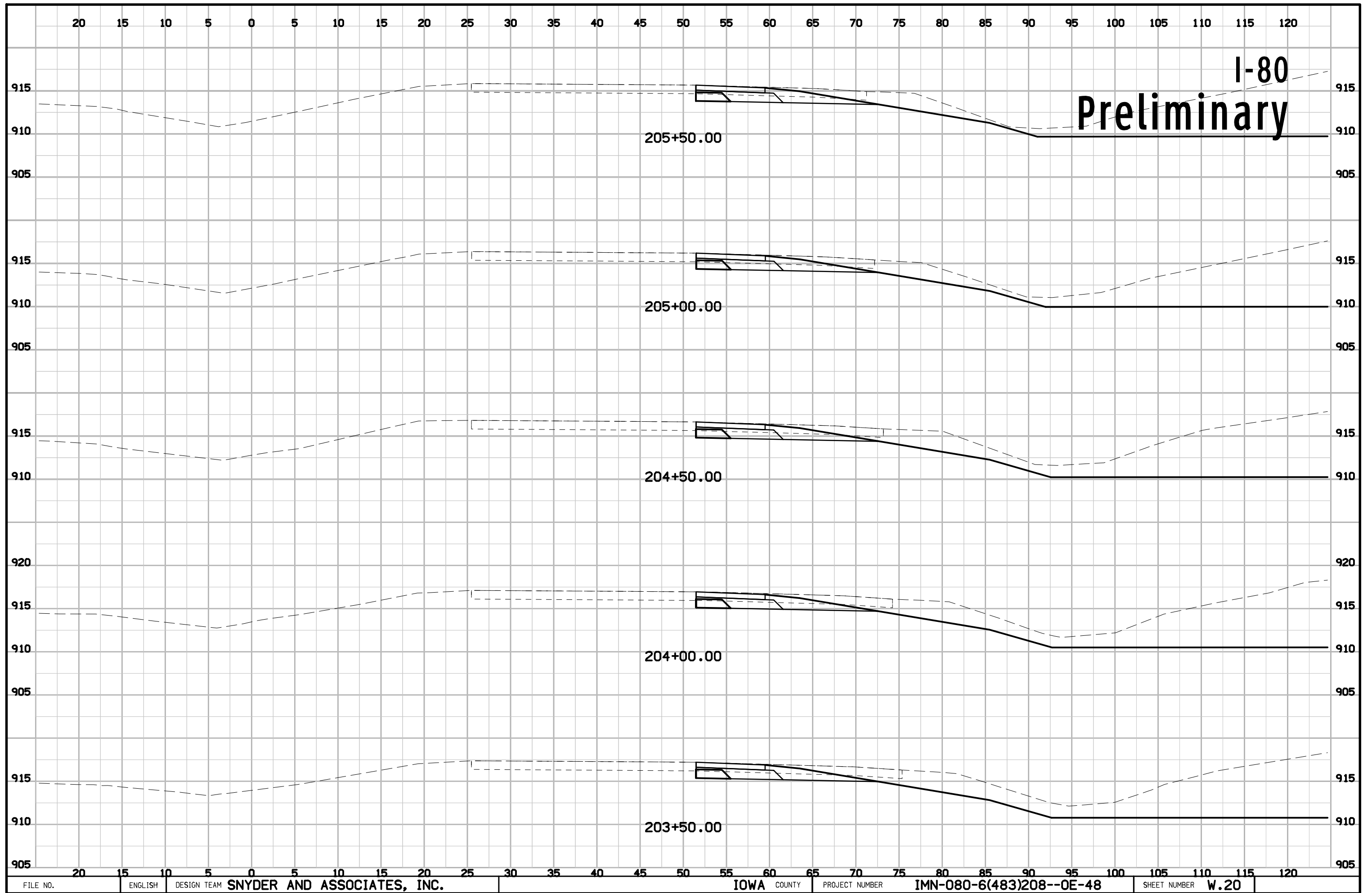


# I-80 Preliminary



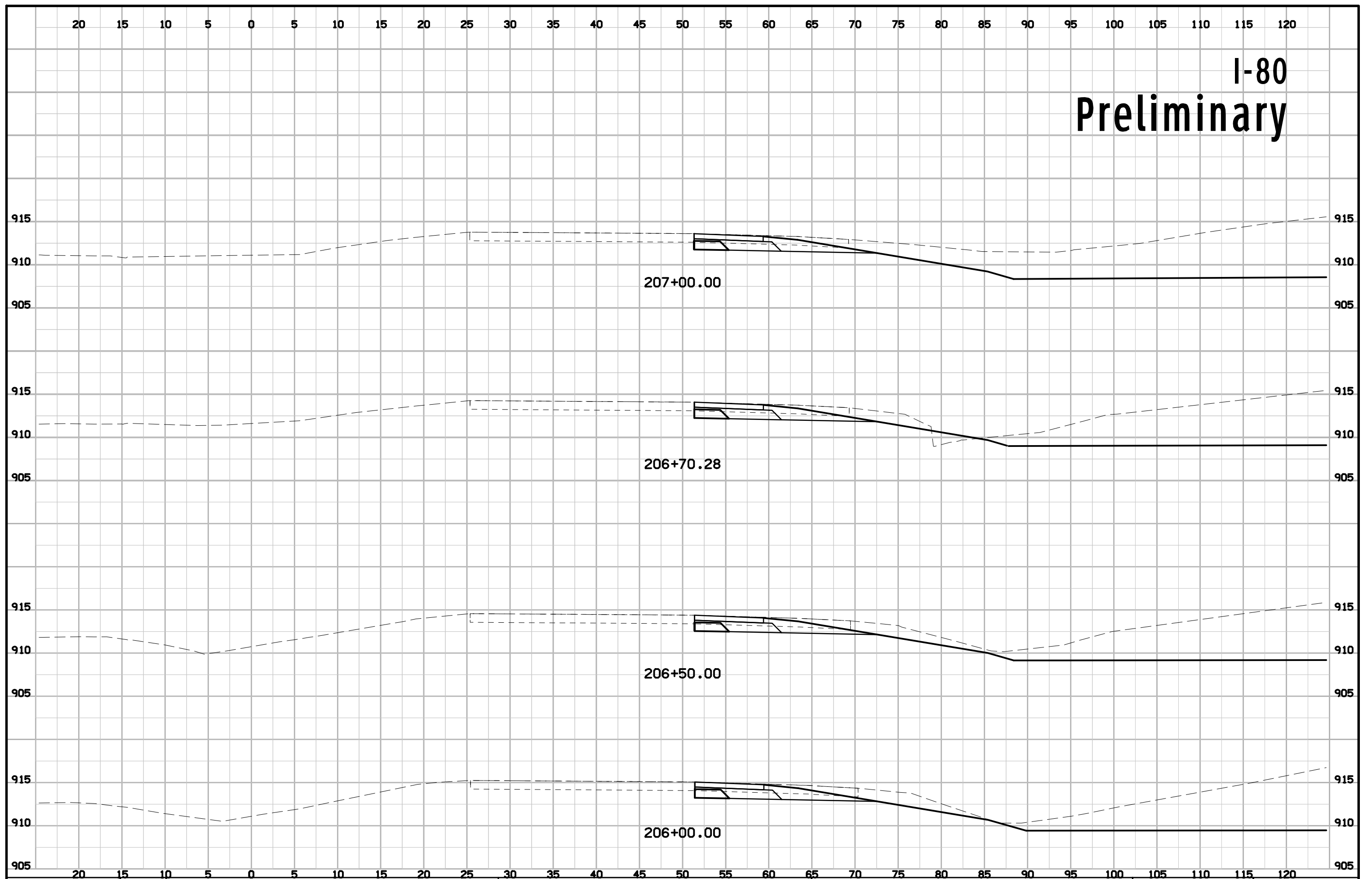




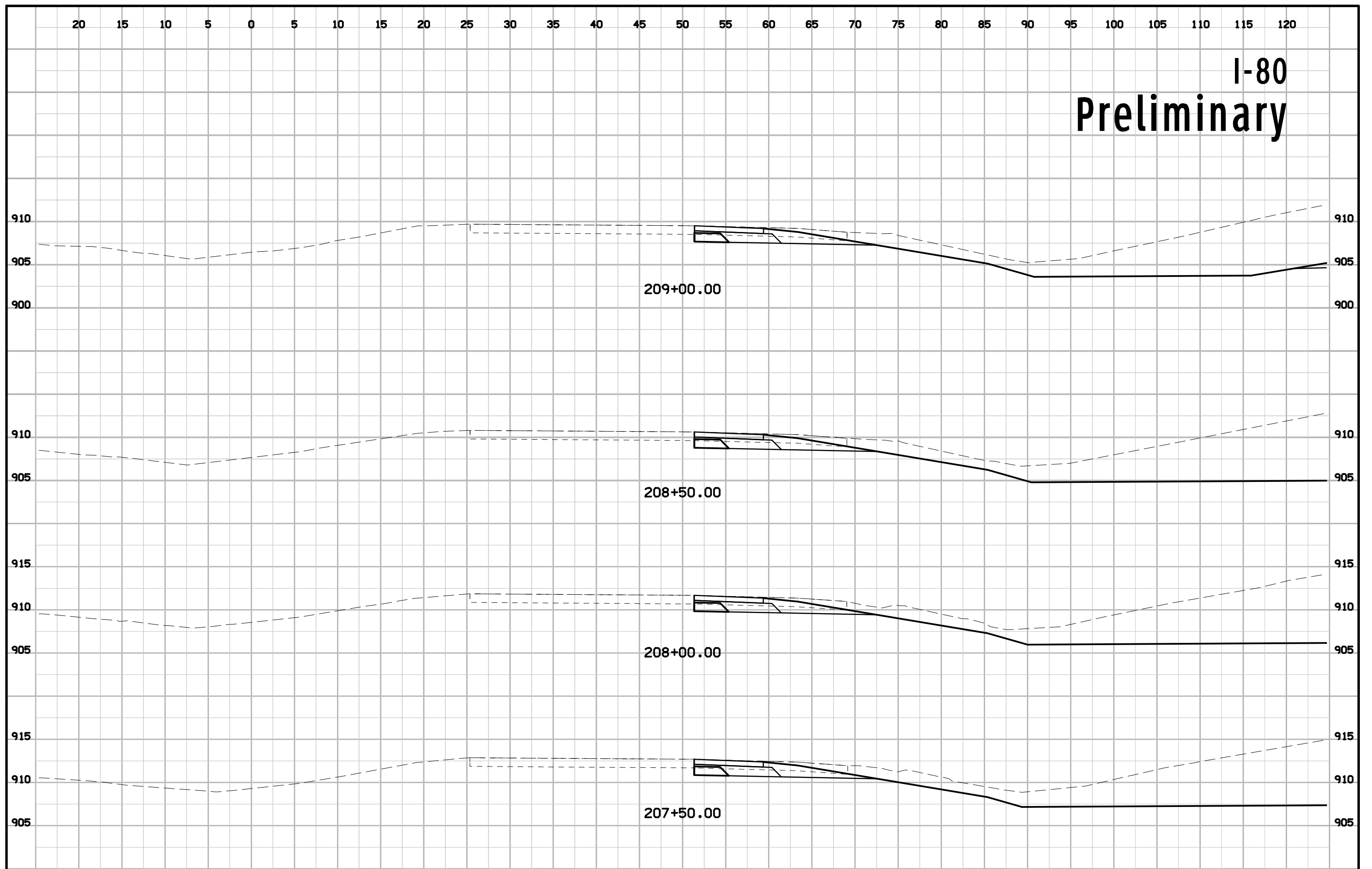




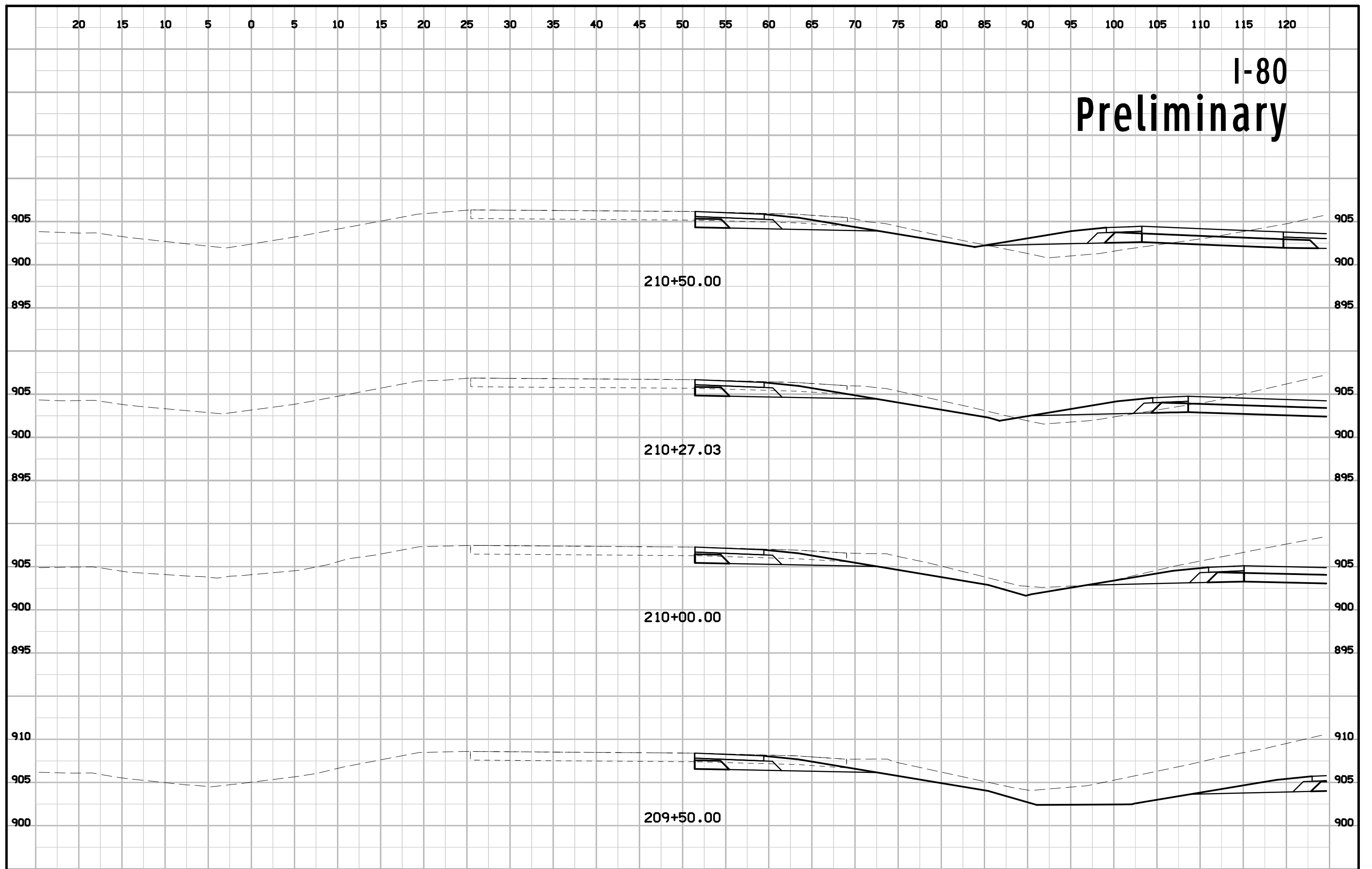
# I-80 Preliminary

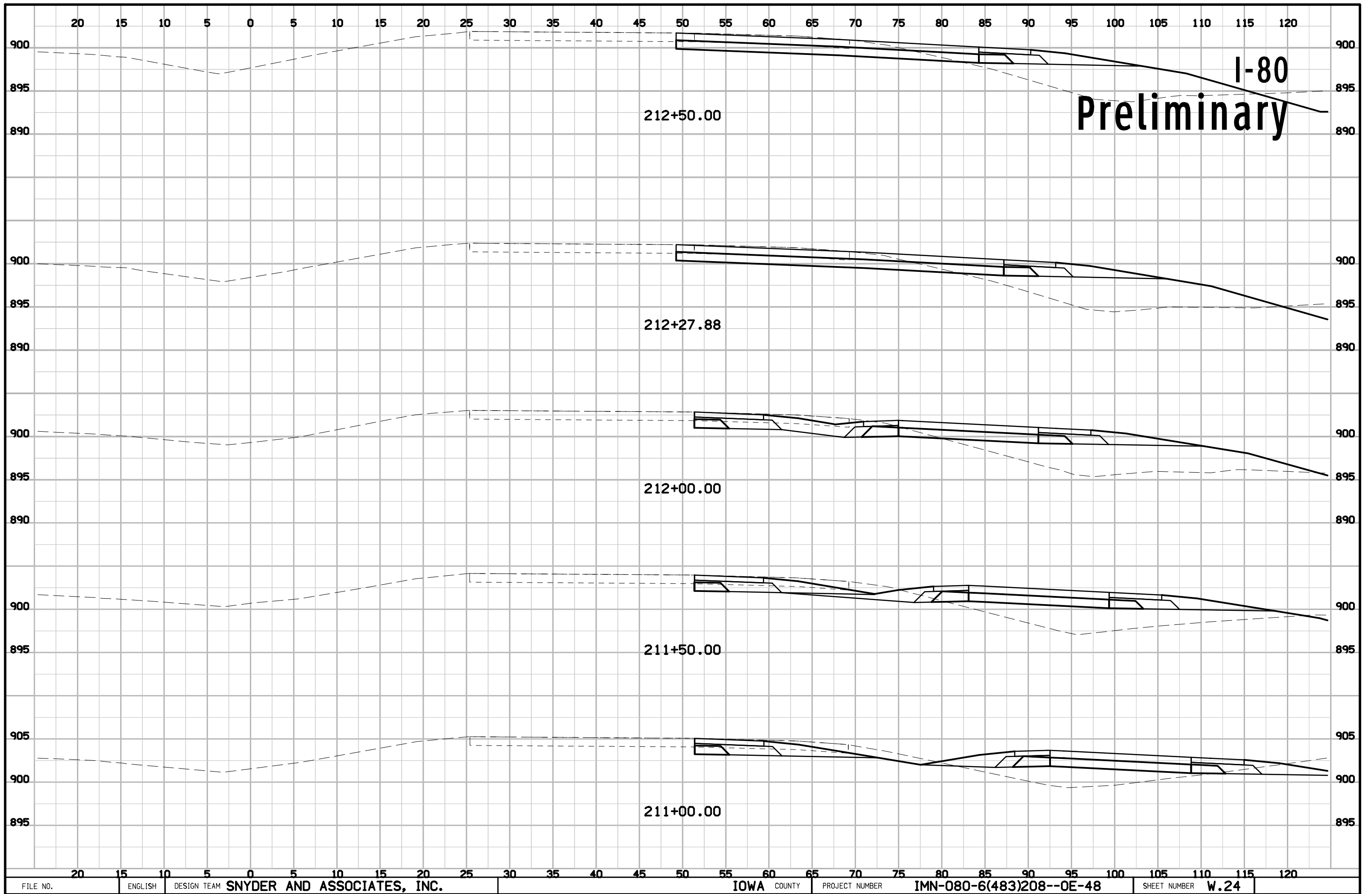


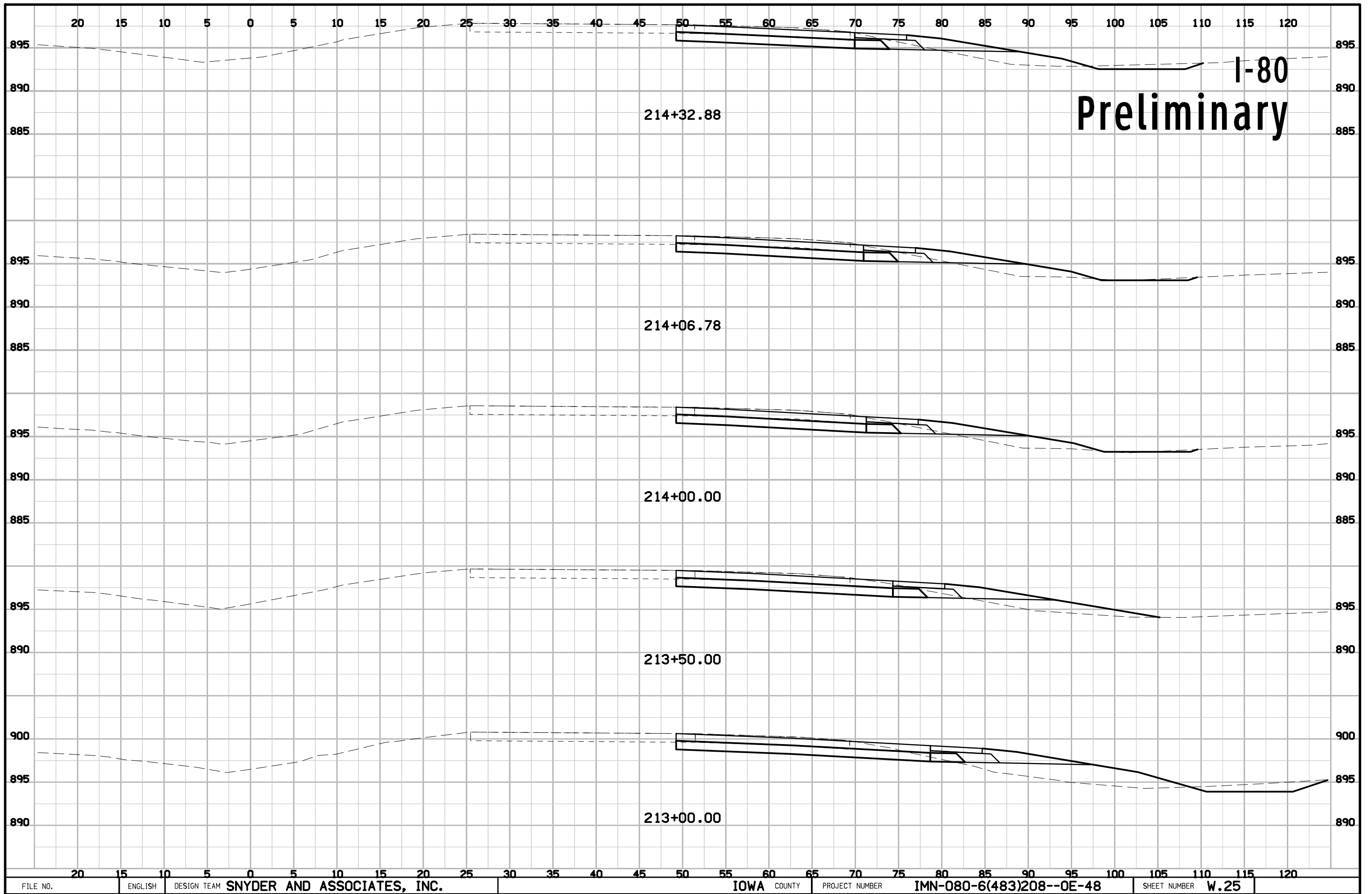
# I-80 Preliminary



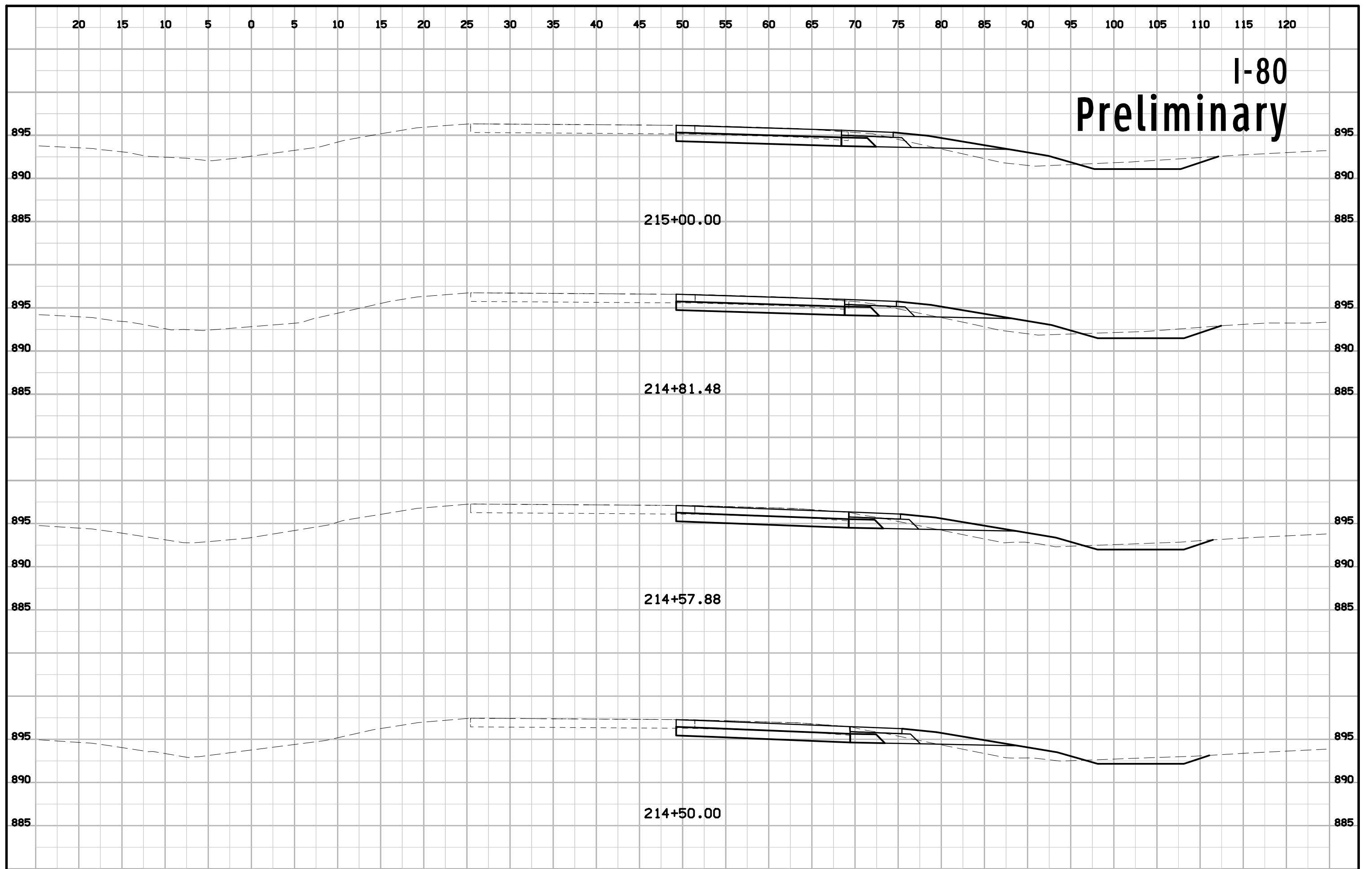
# I-80 Preliminary



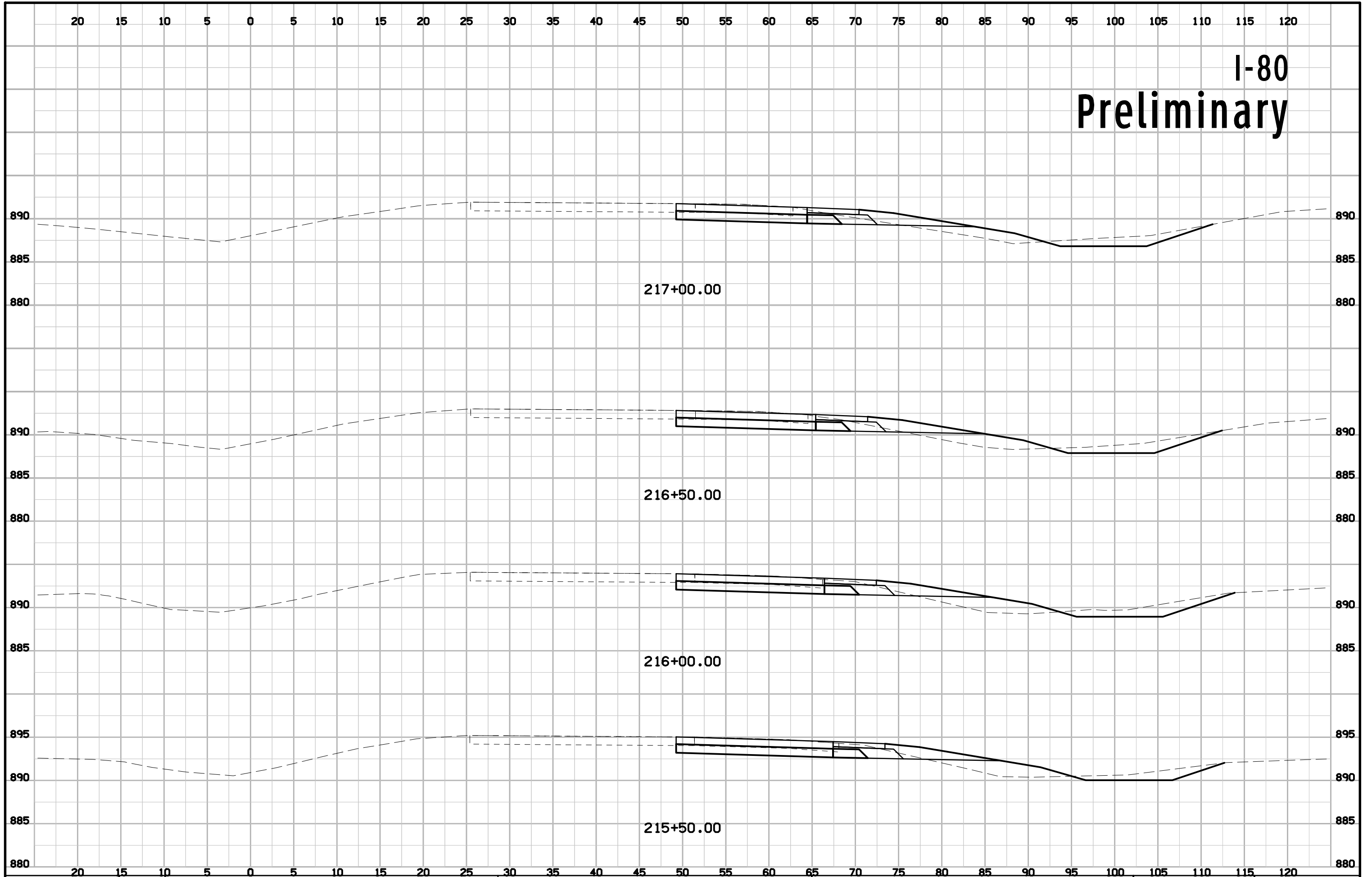




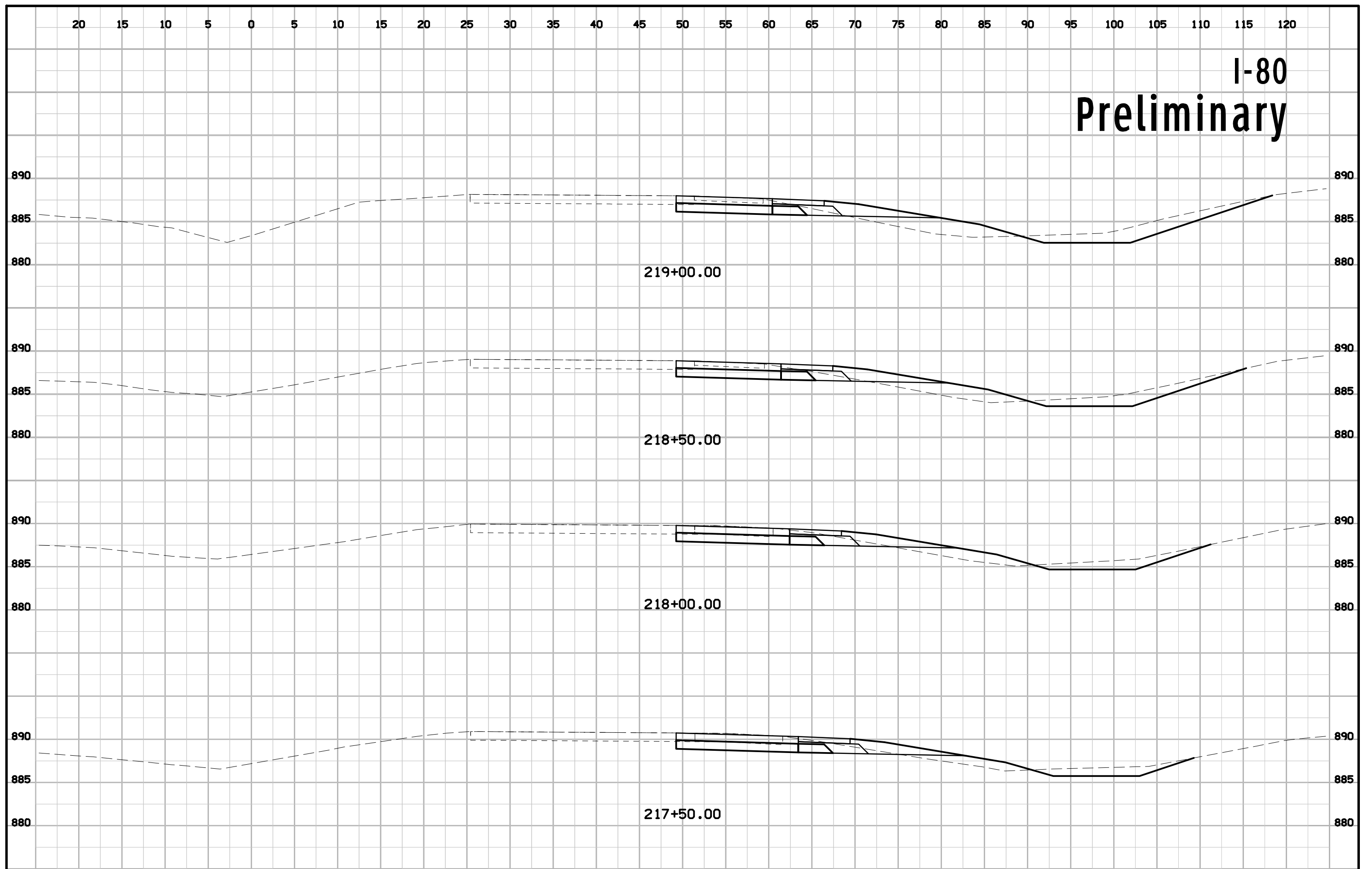
# I-80 Preliminary



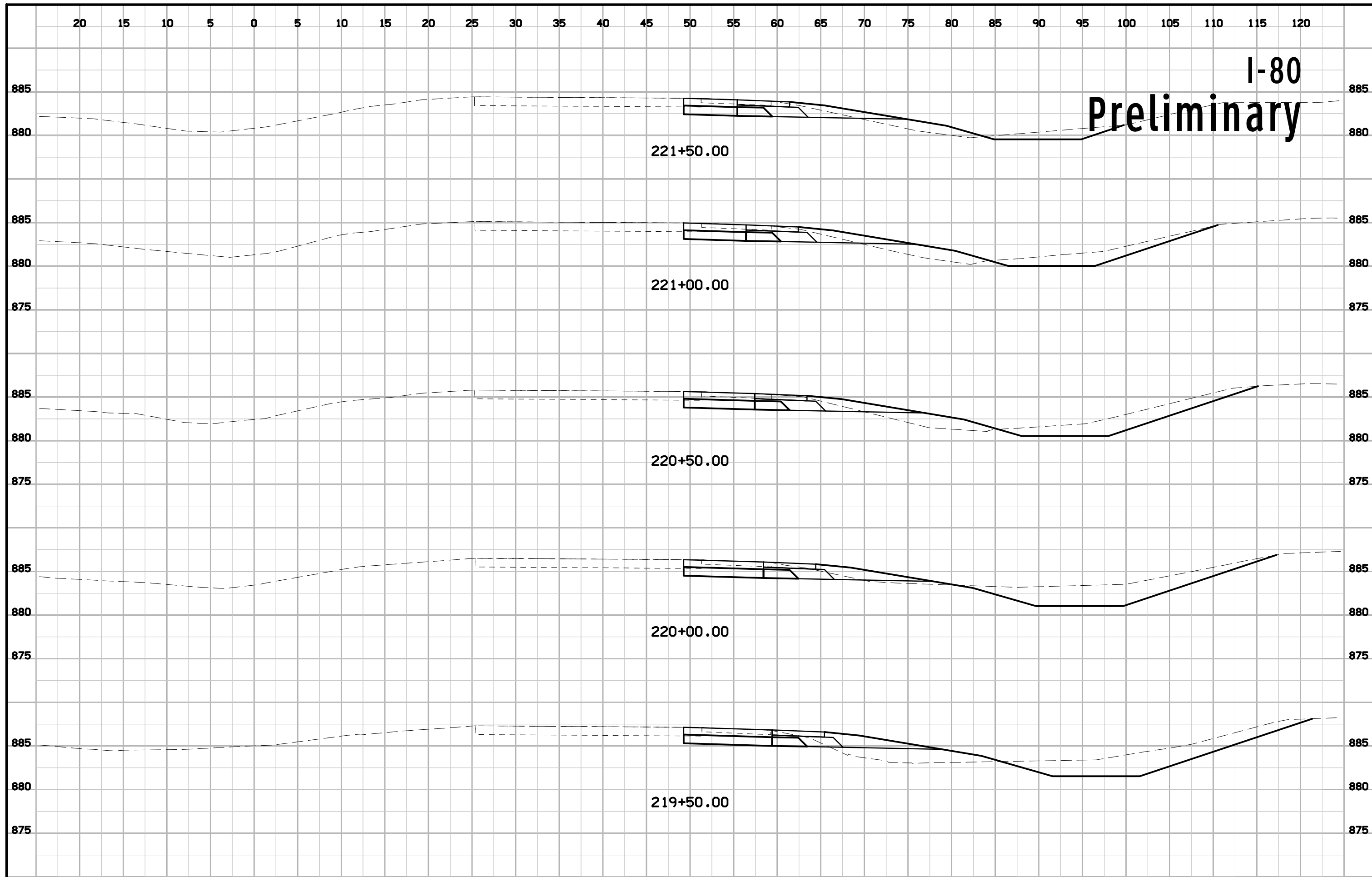
# I-80 Preliminary



# I-80 Preliminary







I-80  
Preliminary

221+50.00

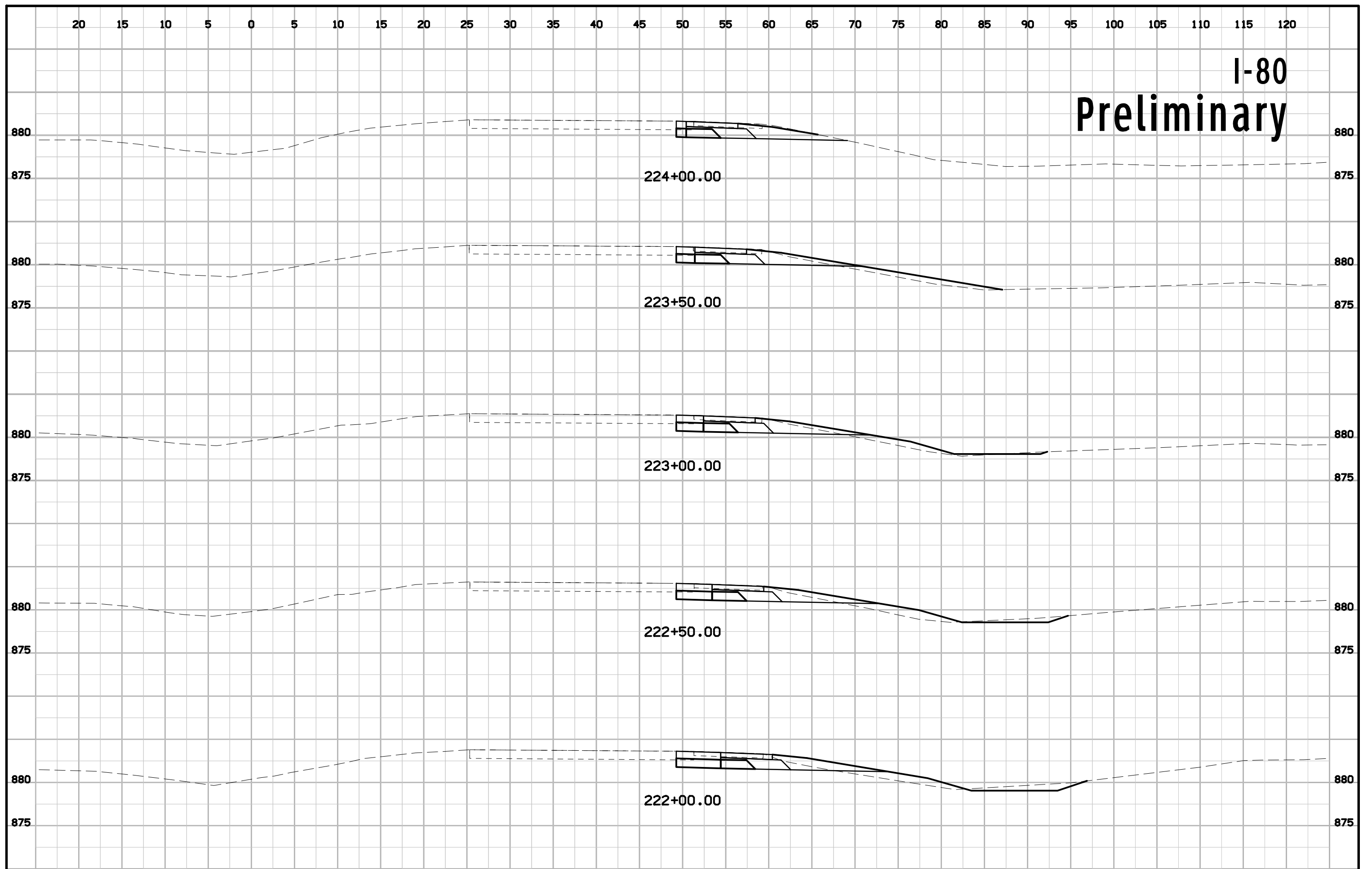
221+00.00

220+50.00

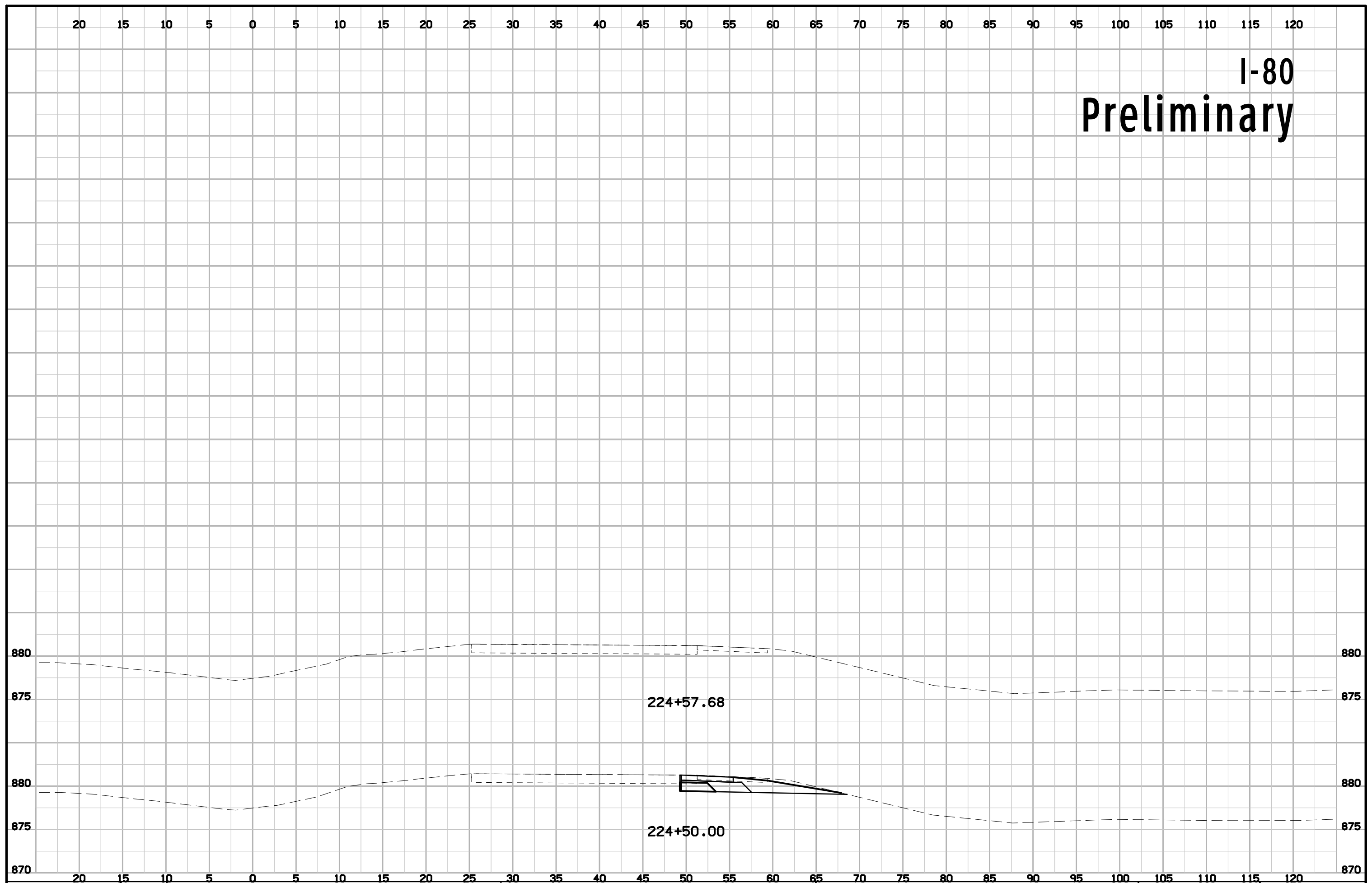
220+00.00

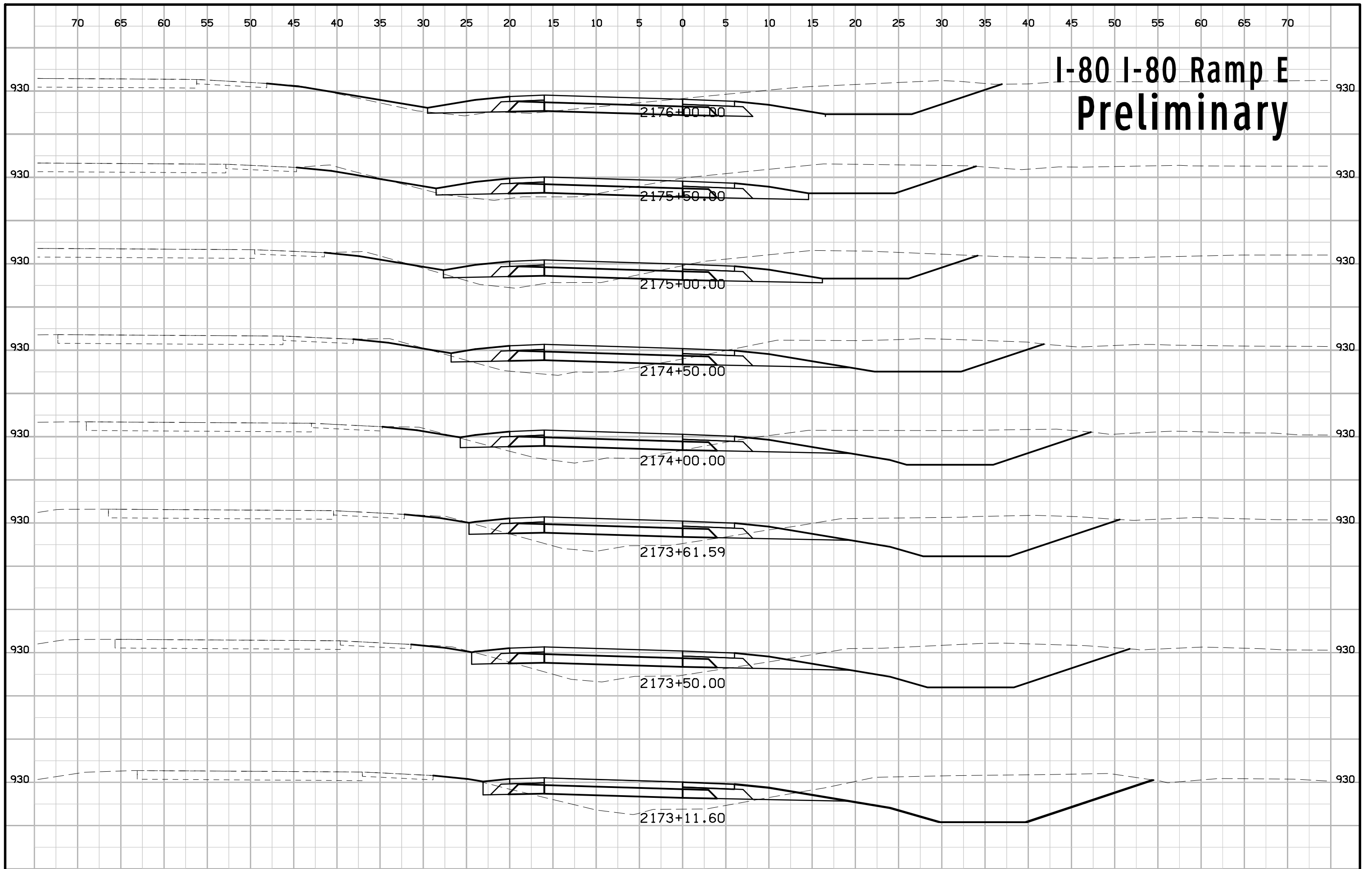
219+50.00

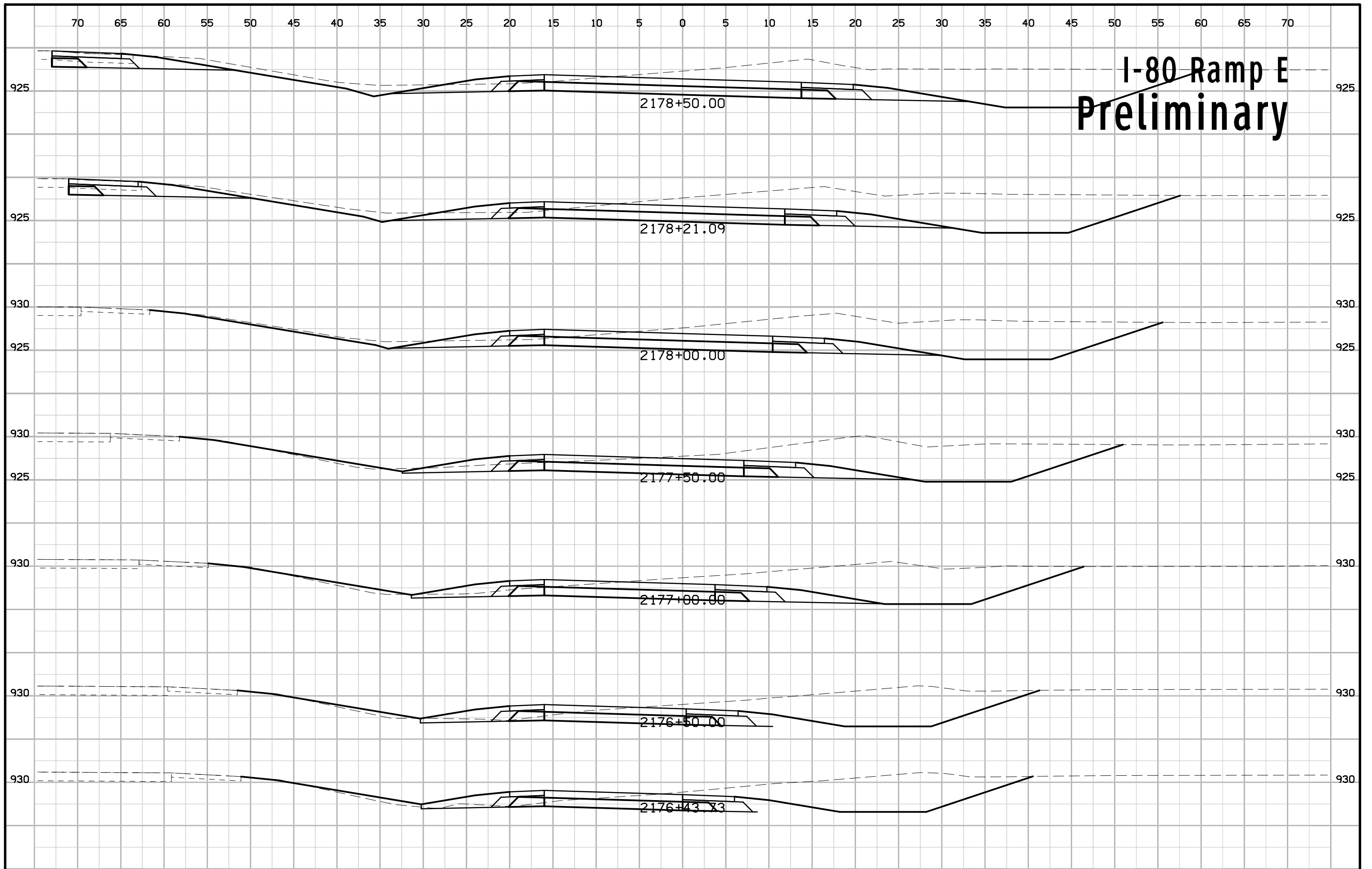
# I-80 Preliminary



# I-80 Preliminary







**I-80 Ramp E  
Preliminary**

2178+50.00

2178+21.09

2178+00.00

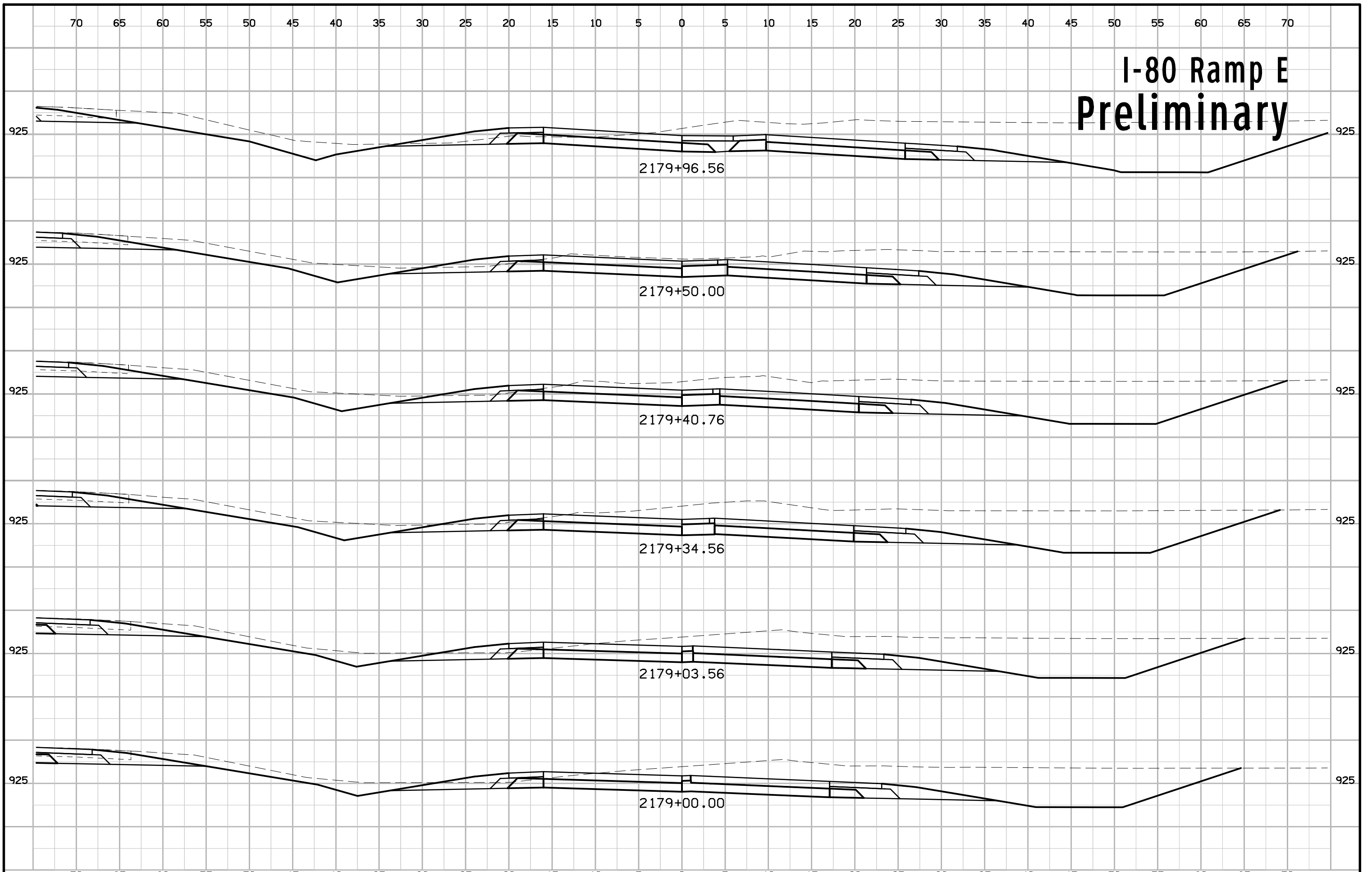
2177+50.00

2177+00.00

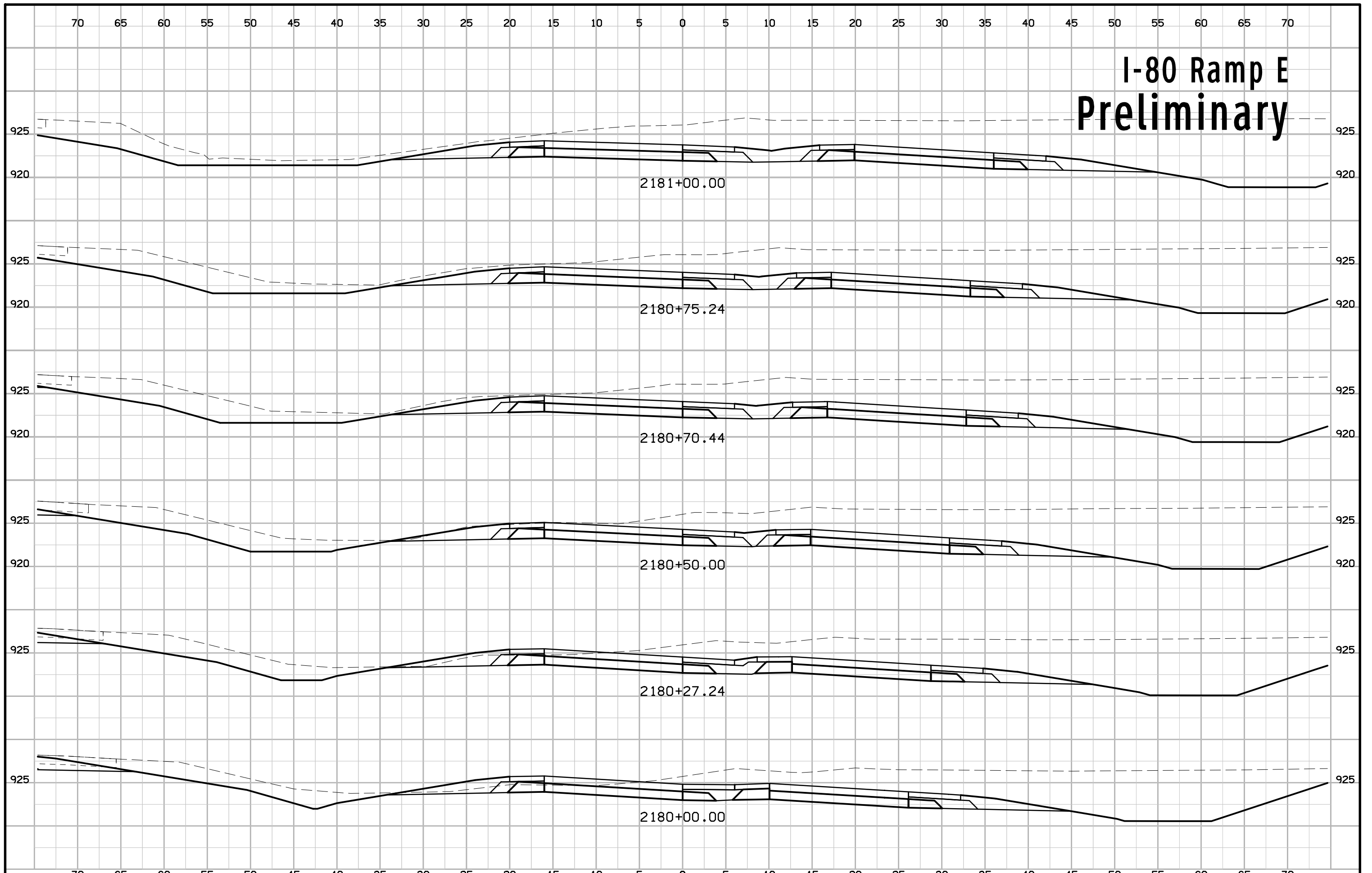
2176+50.00

2176+43.33

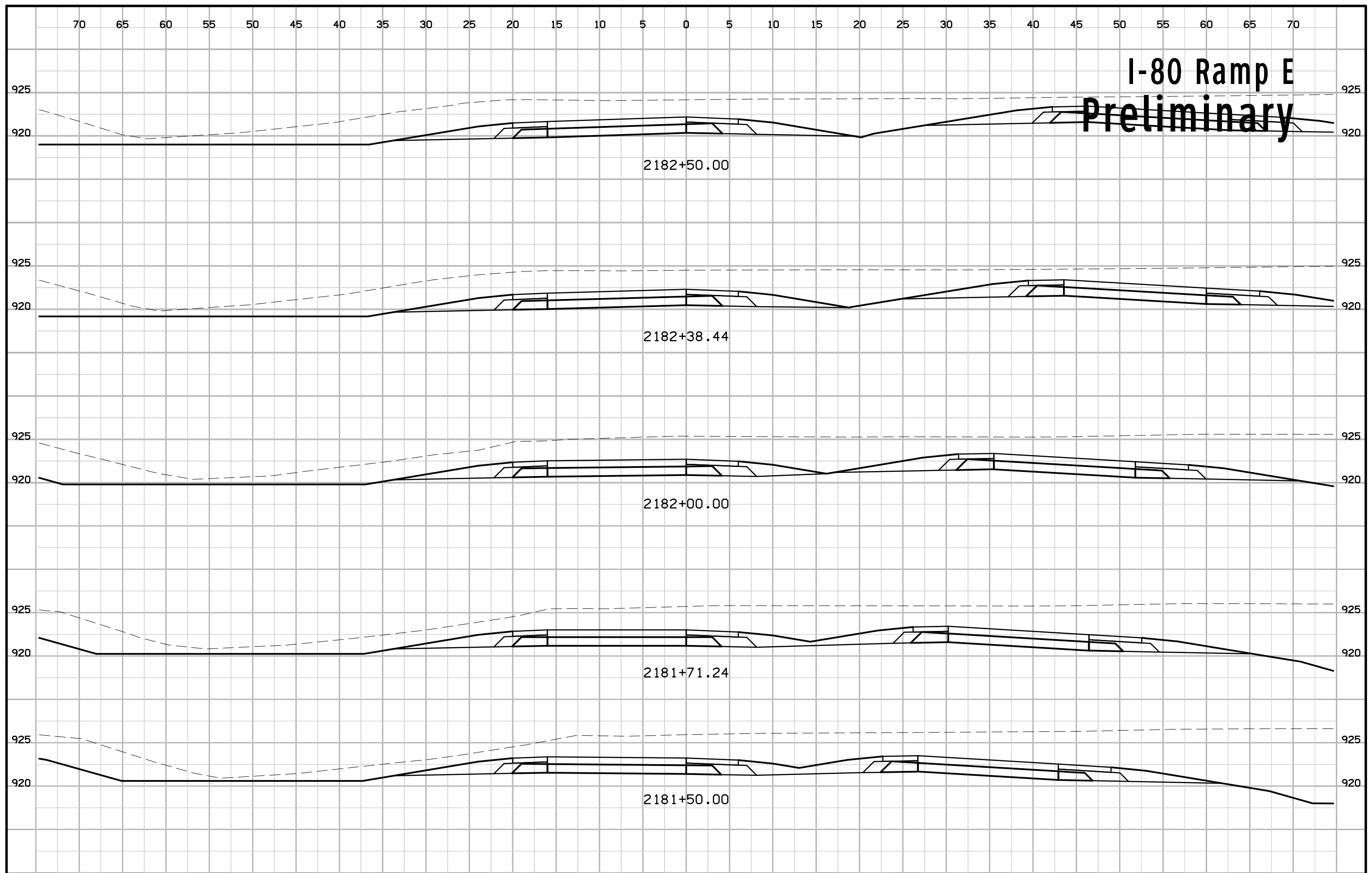
# I-80 Ramp E Preliminary



# I-80 Ramp E Preliminary

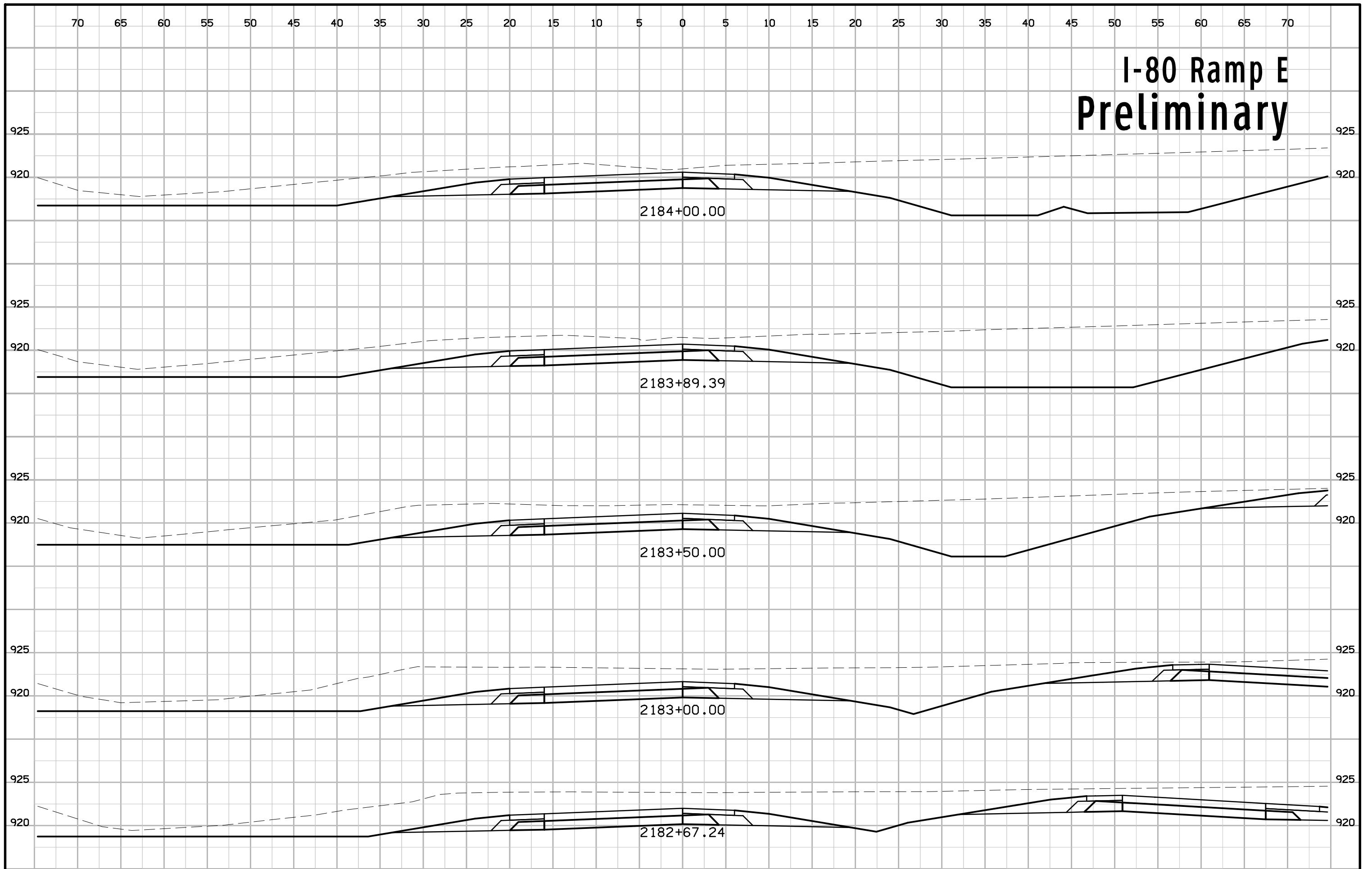


# I-80 Ramp E Preliminary

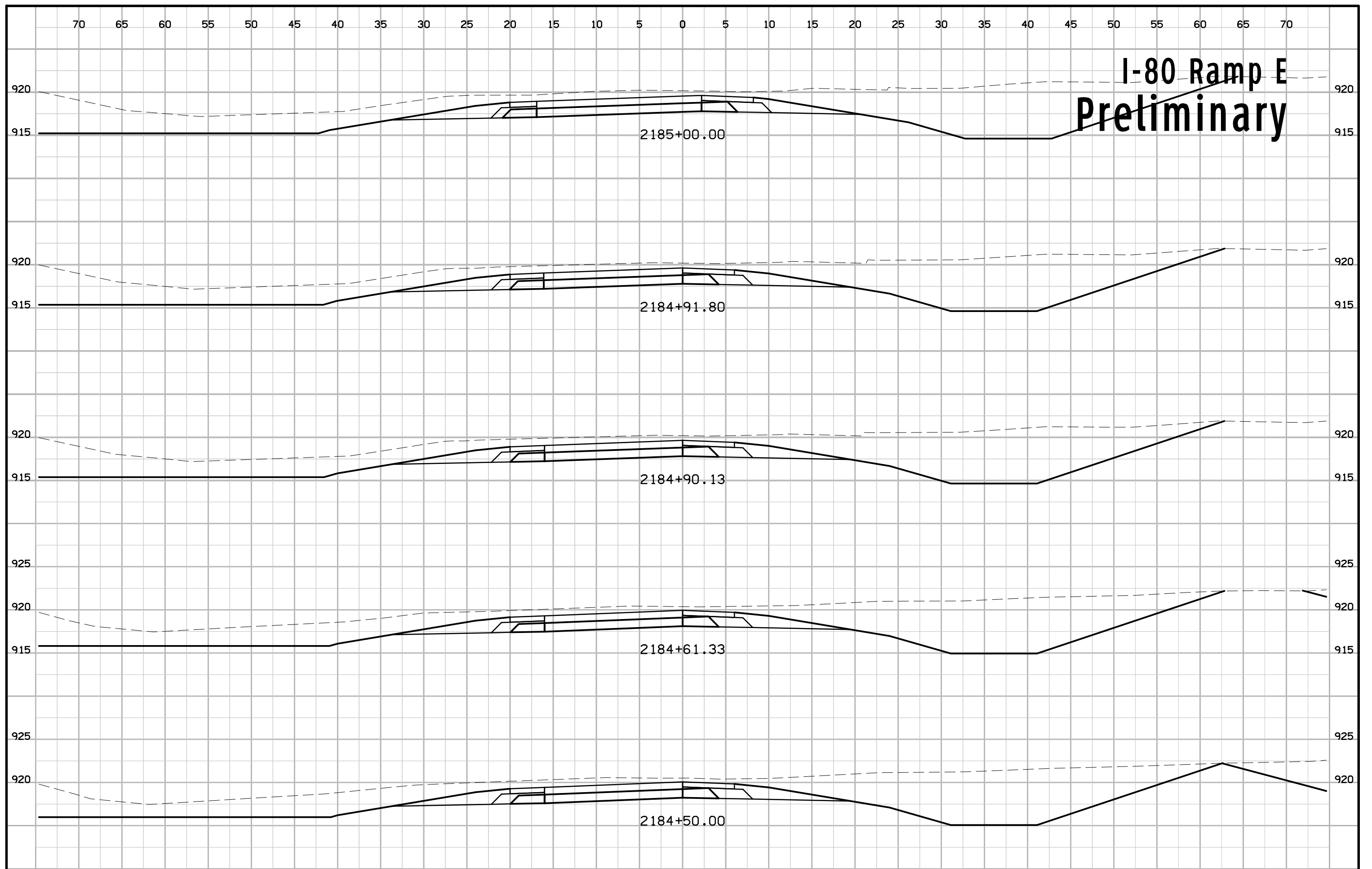


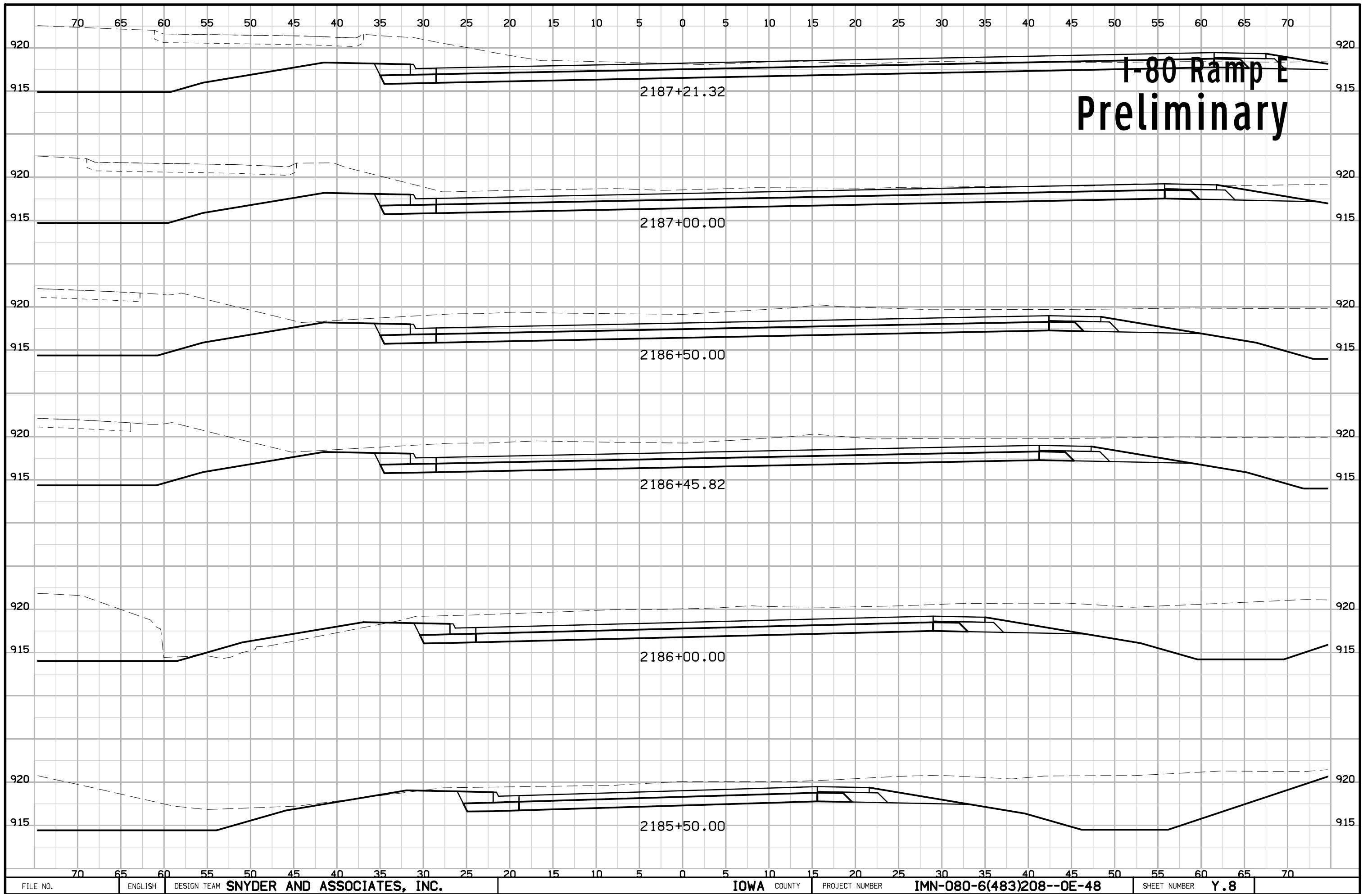


# I-80 Ramp E Preliminary

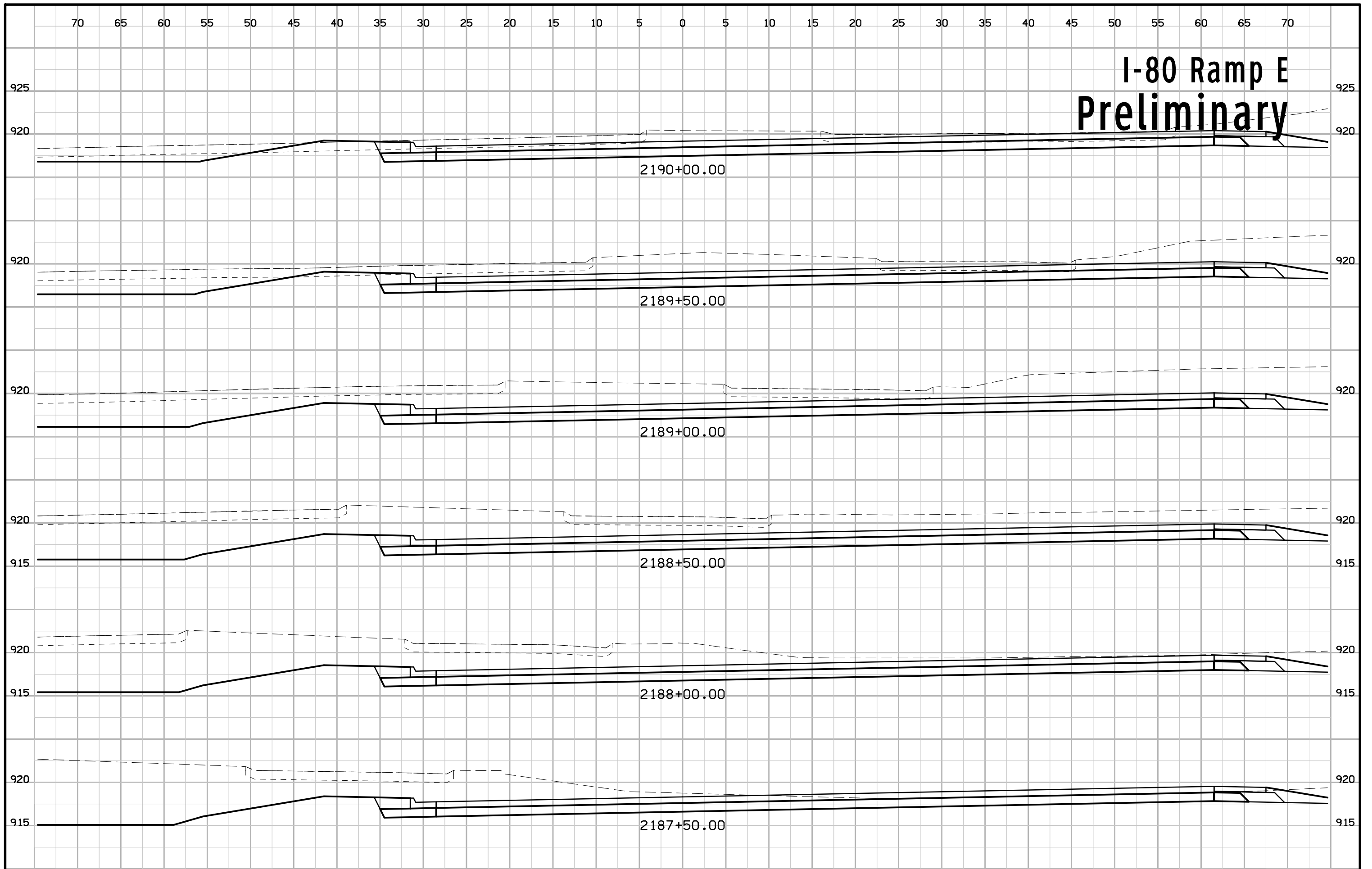


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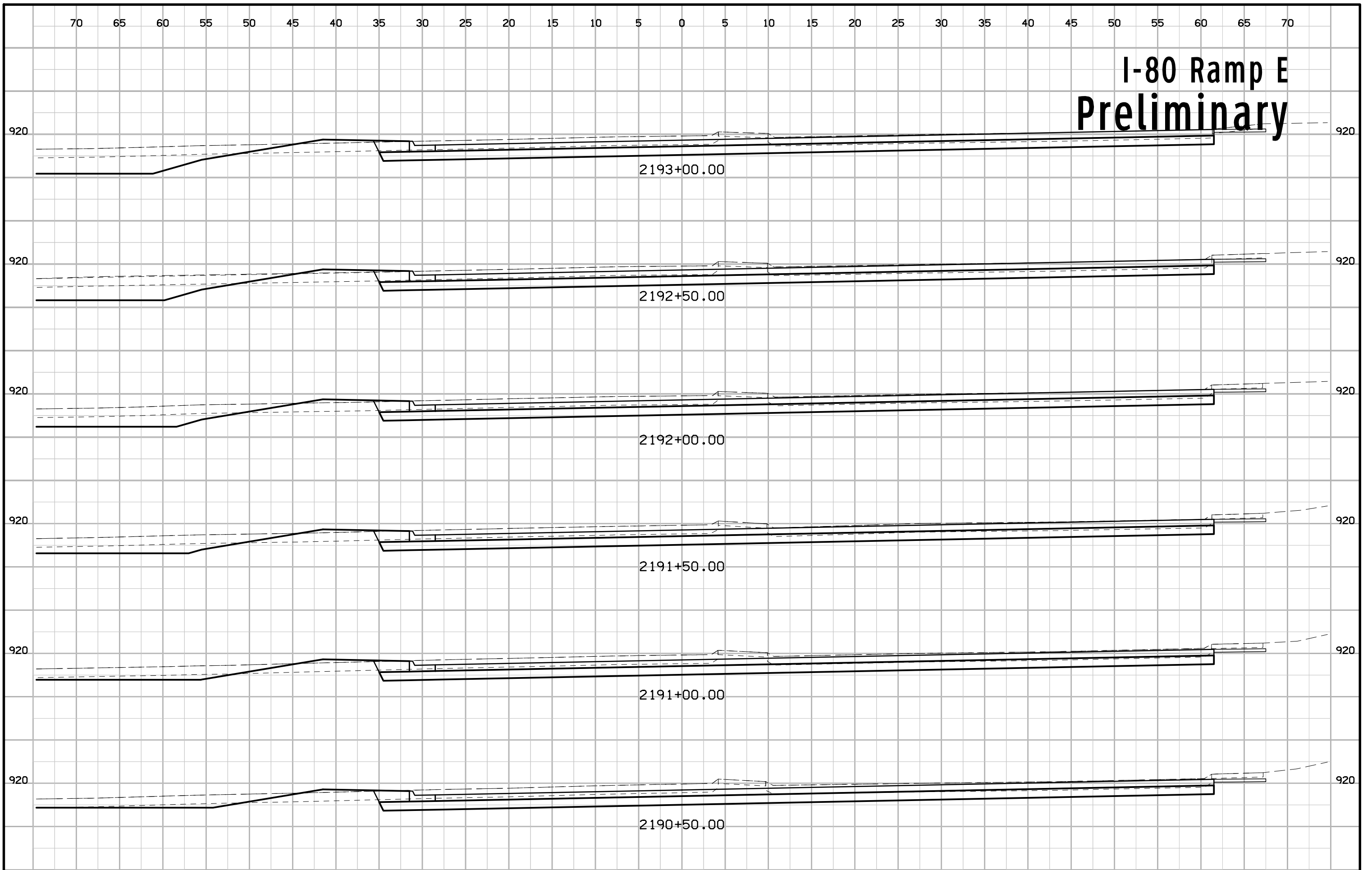




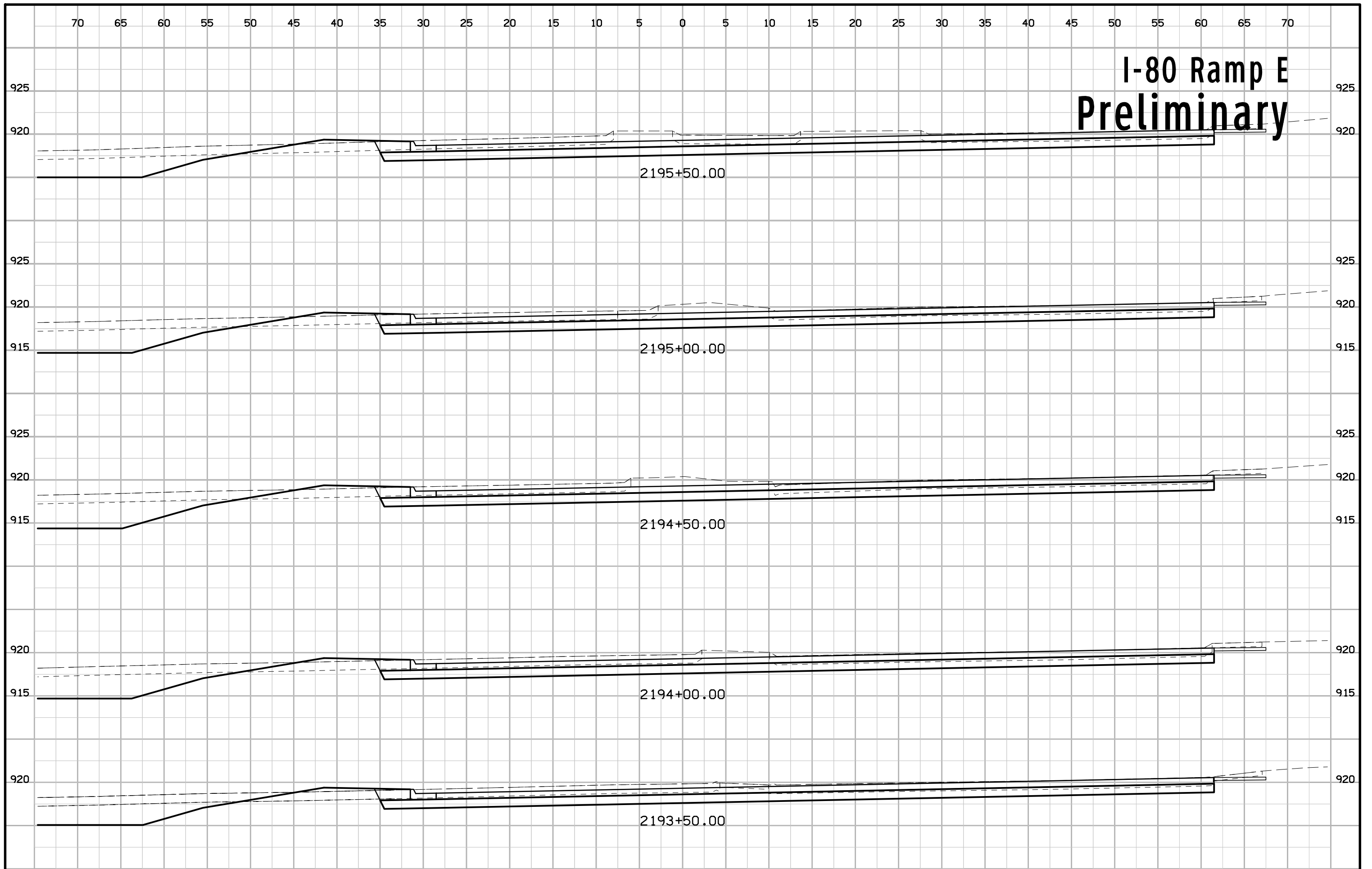
# I-80 Ramp E Preliminary



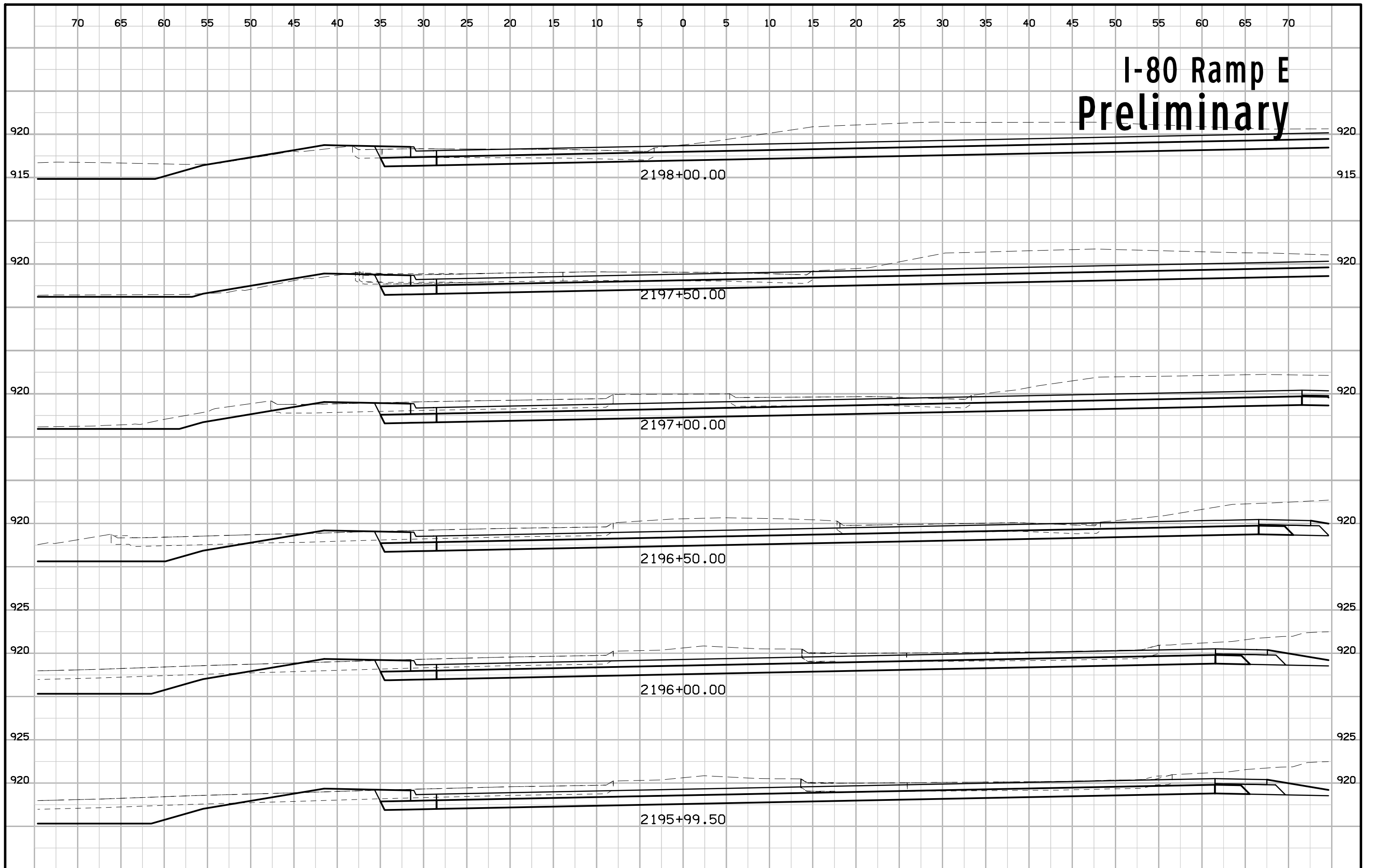
# I-80 Ramp E Preliminary



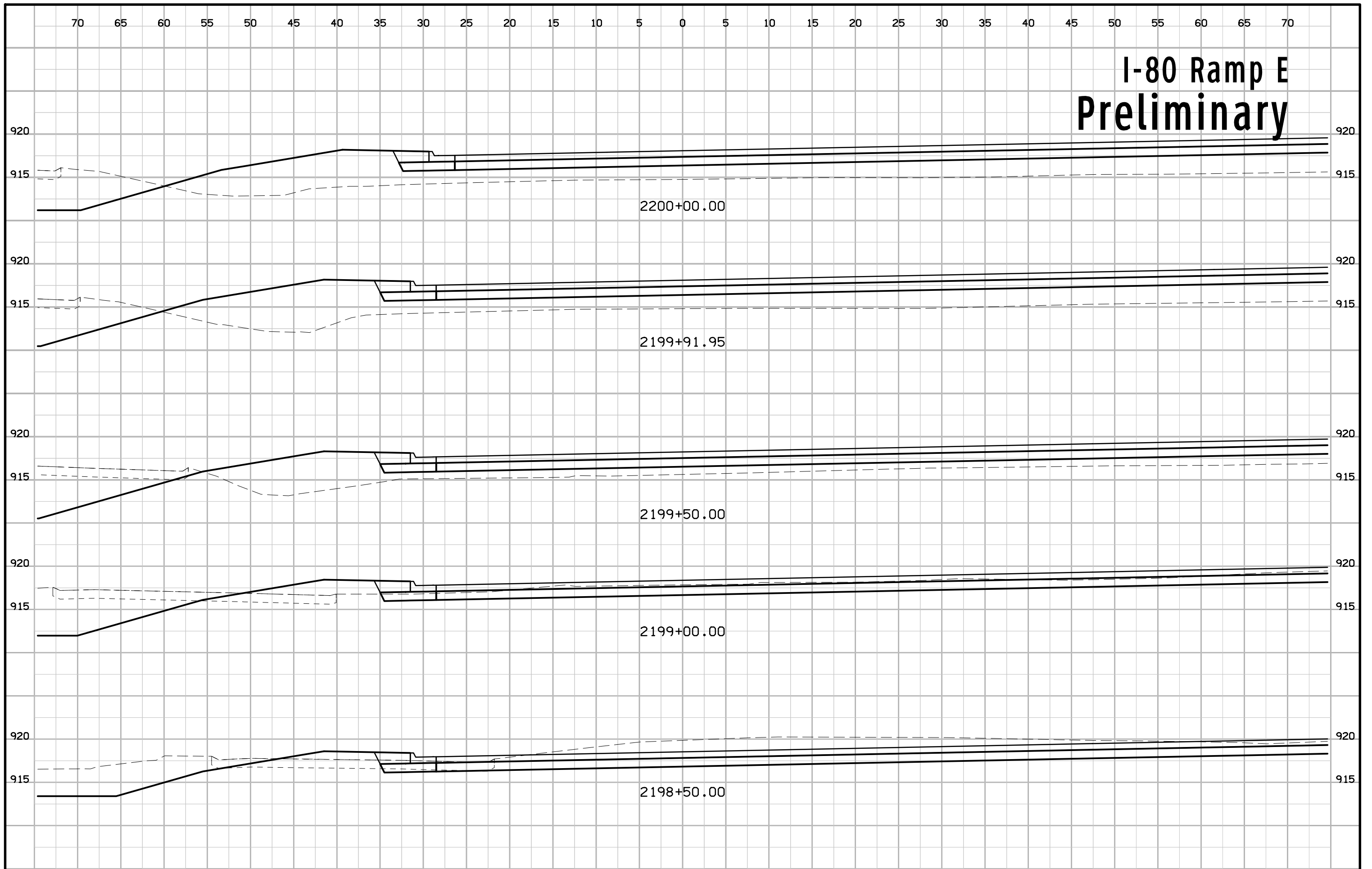
# I-80 Ramp E Preliminary



# I-80 Ramp E Preliminary

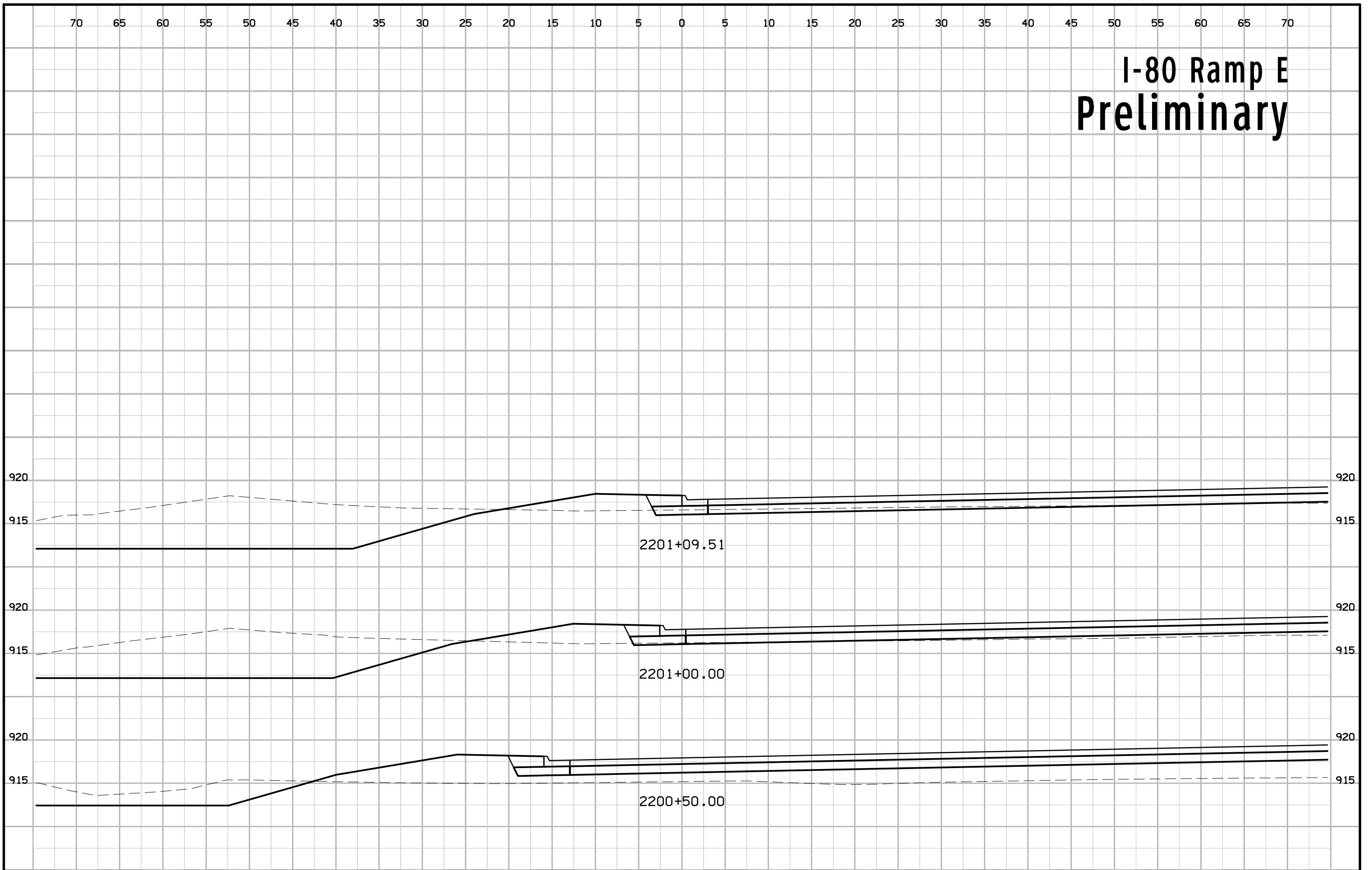


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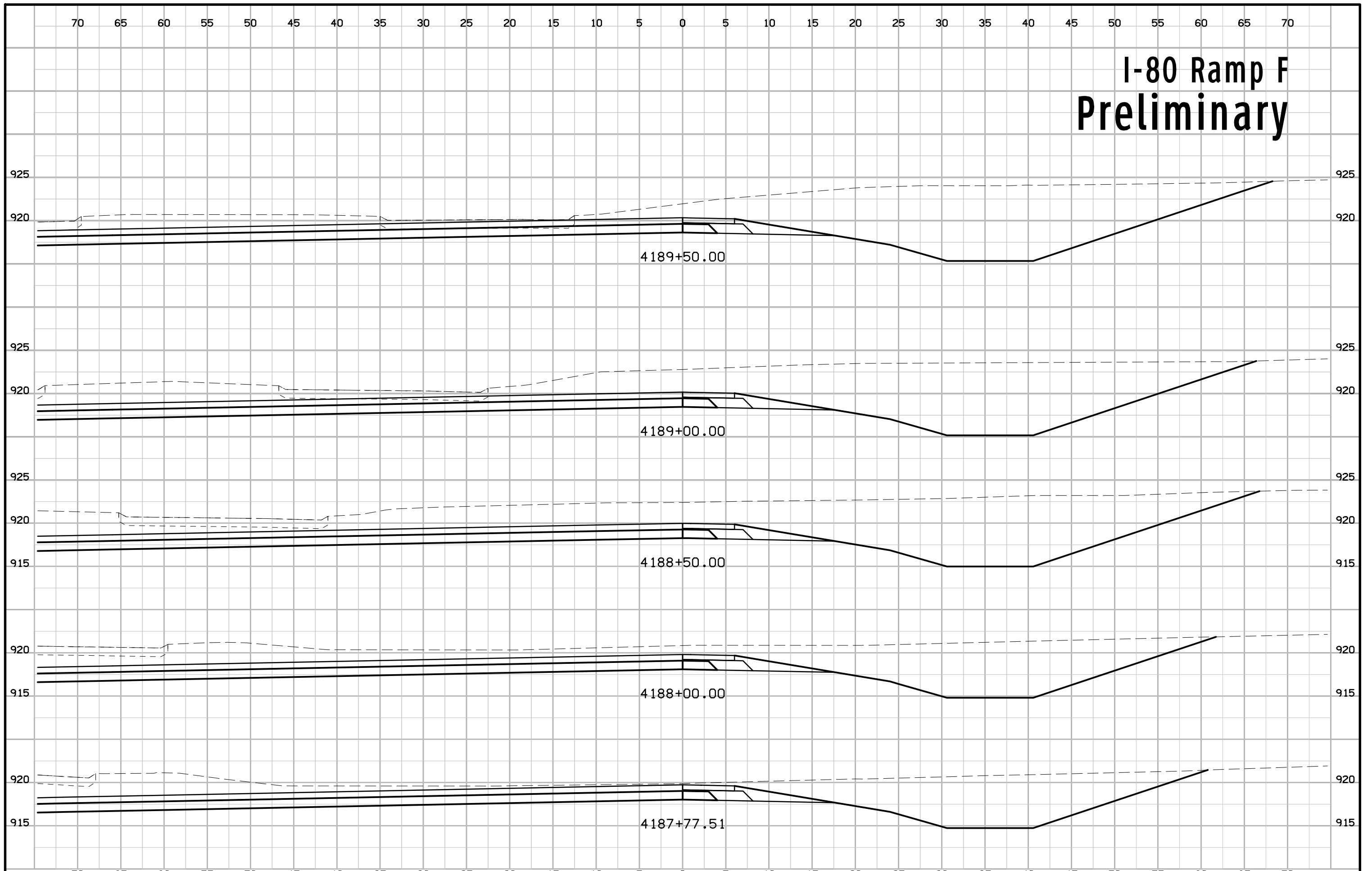




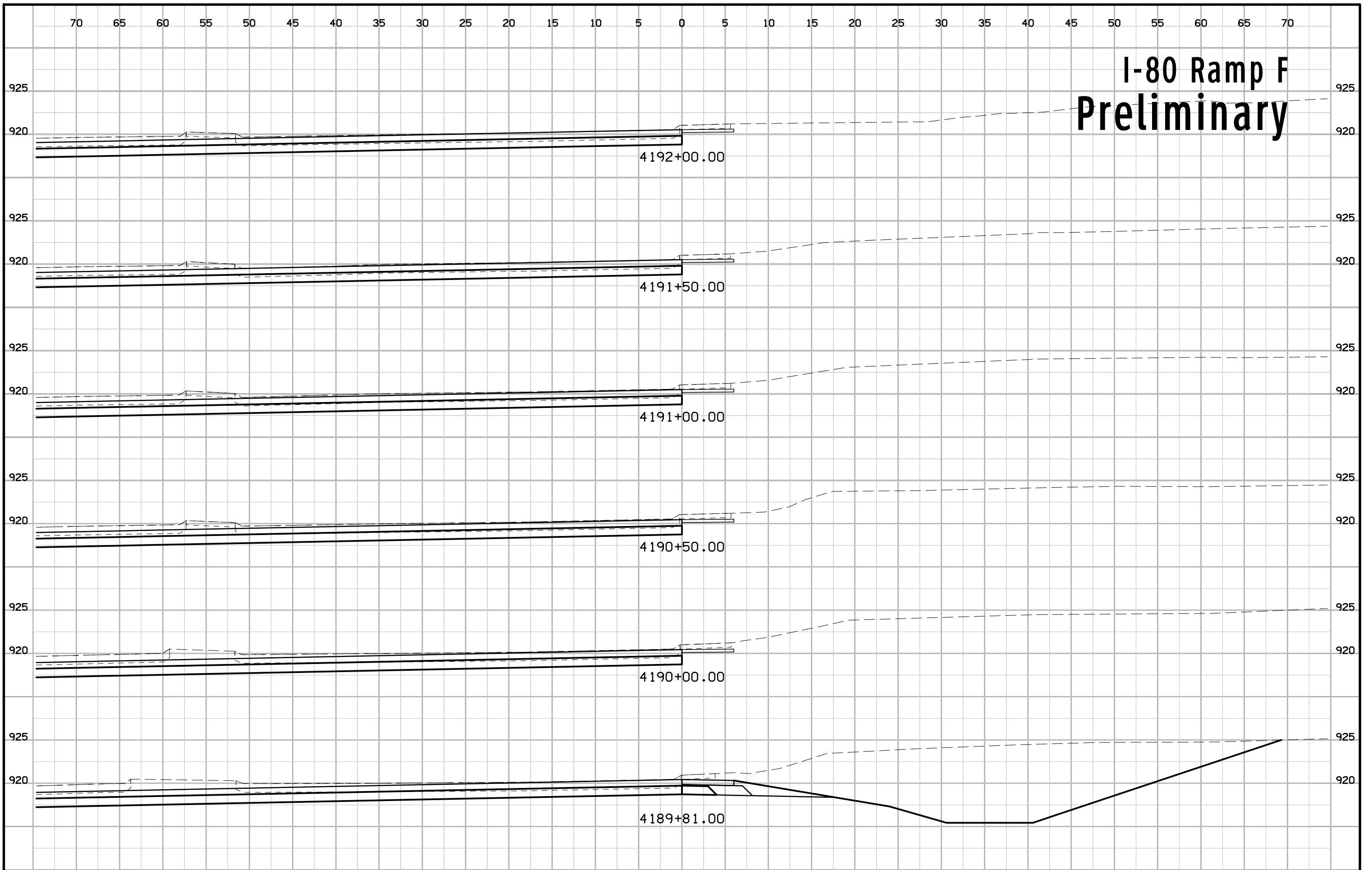
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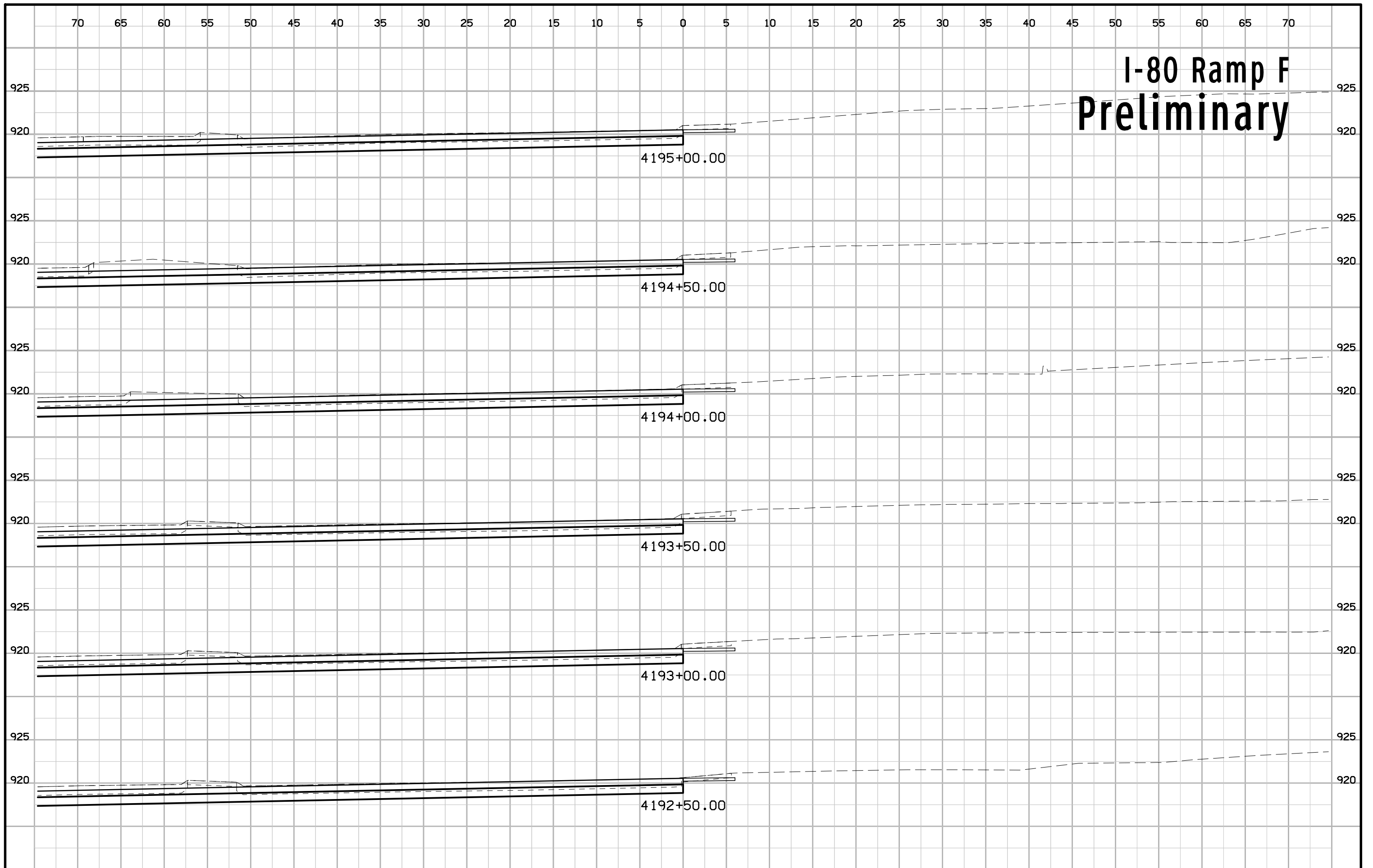
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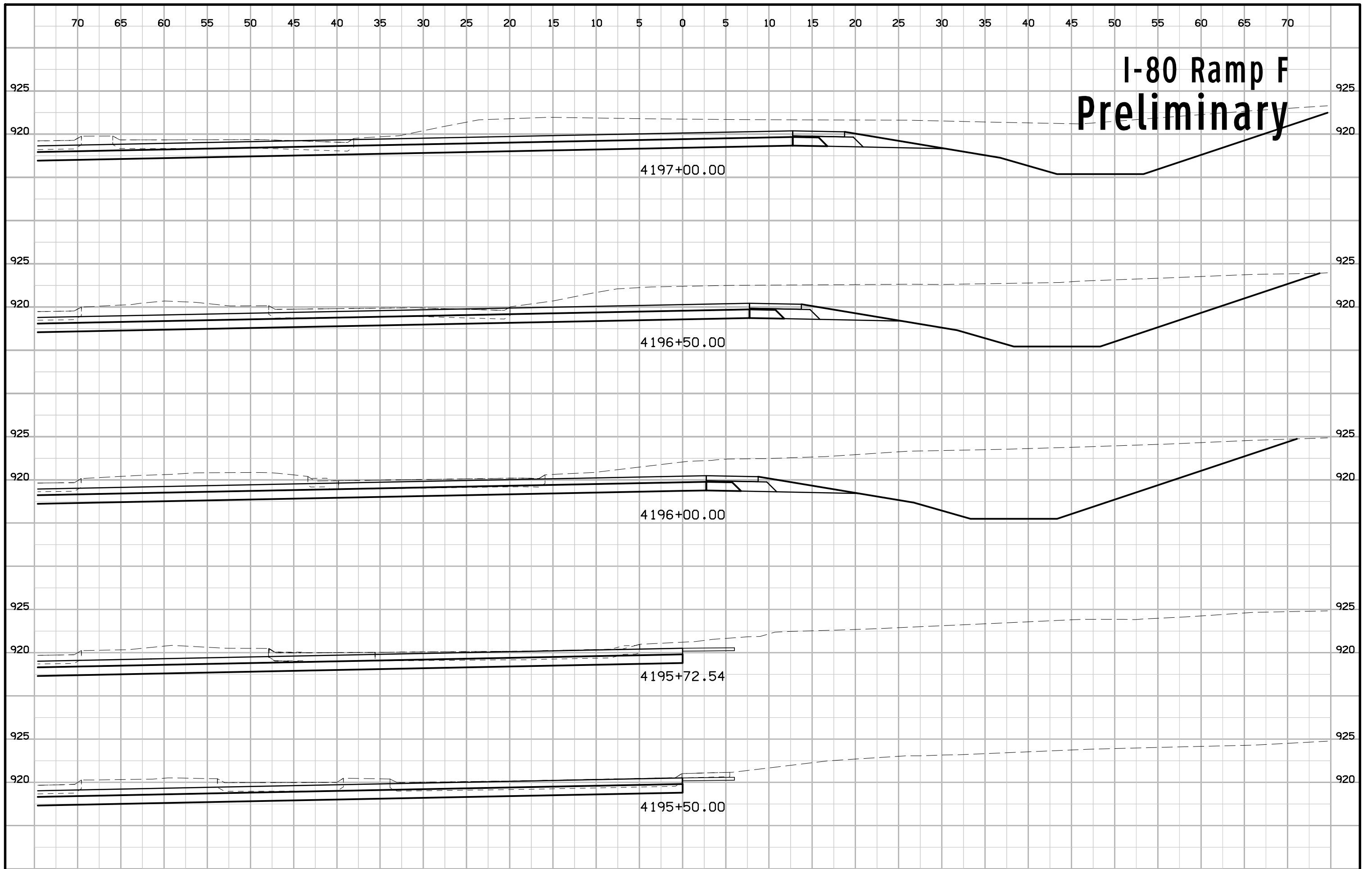
# I-80 Ramp F Preliminary



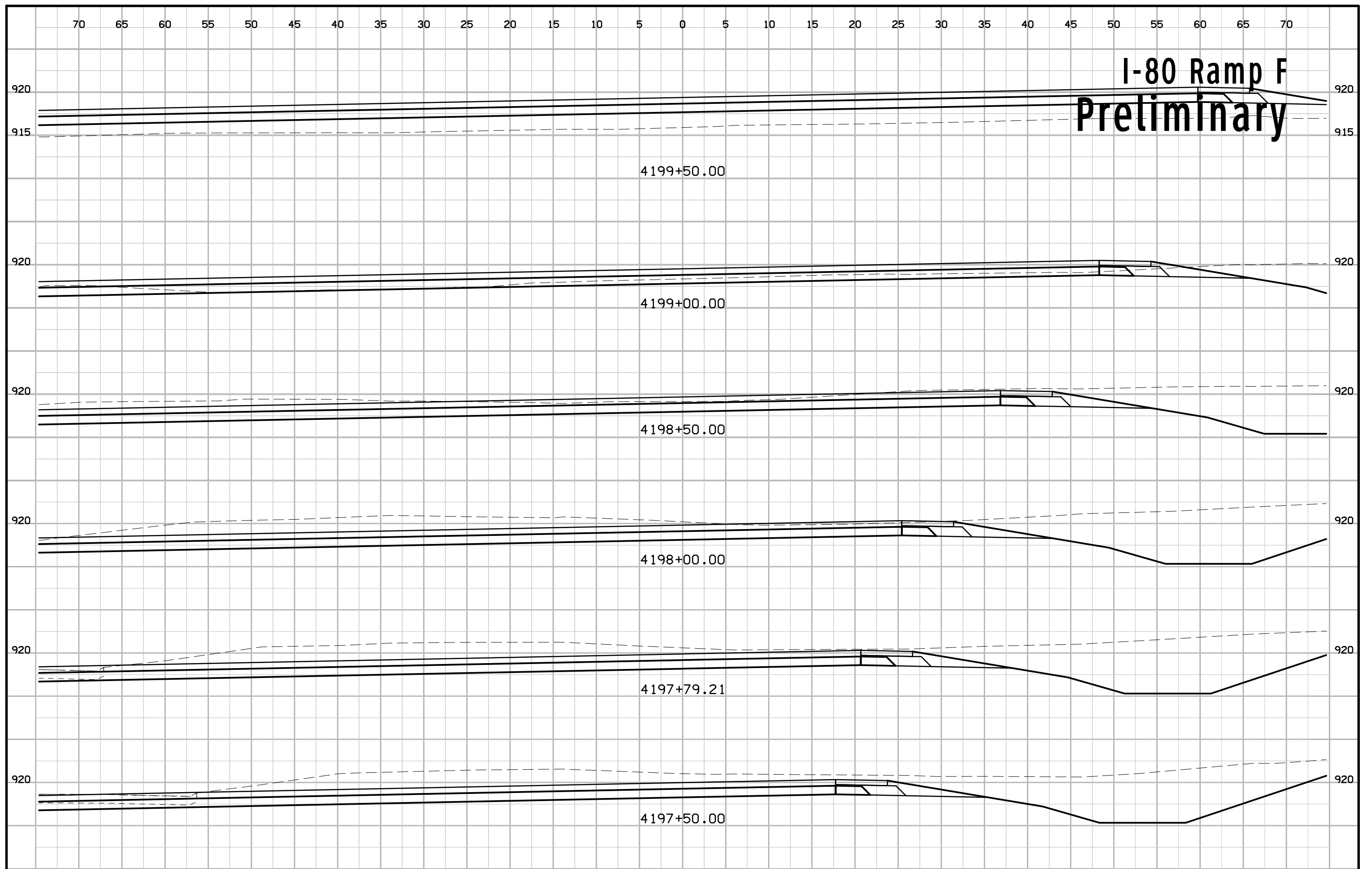
# I-80 Ramp F Preliminary



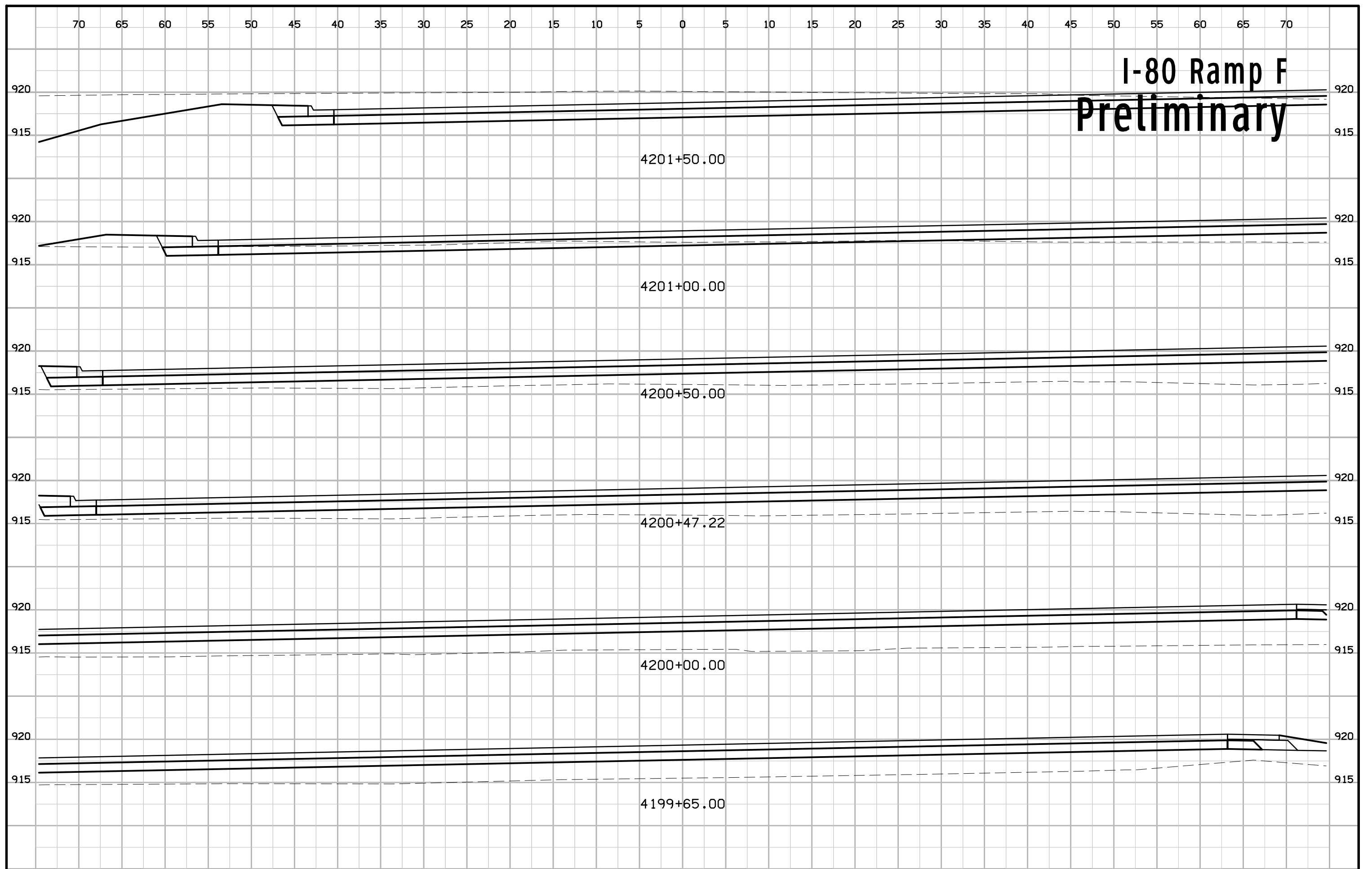
# I-80 Ramp F Preliminary



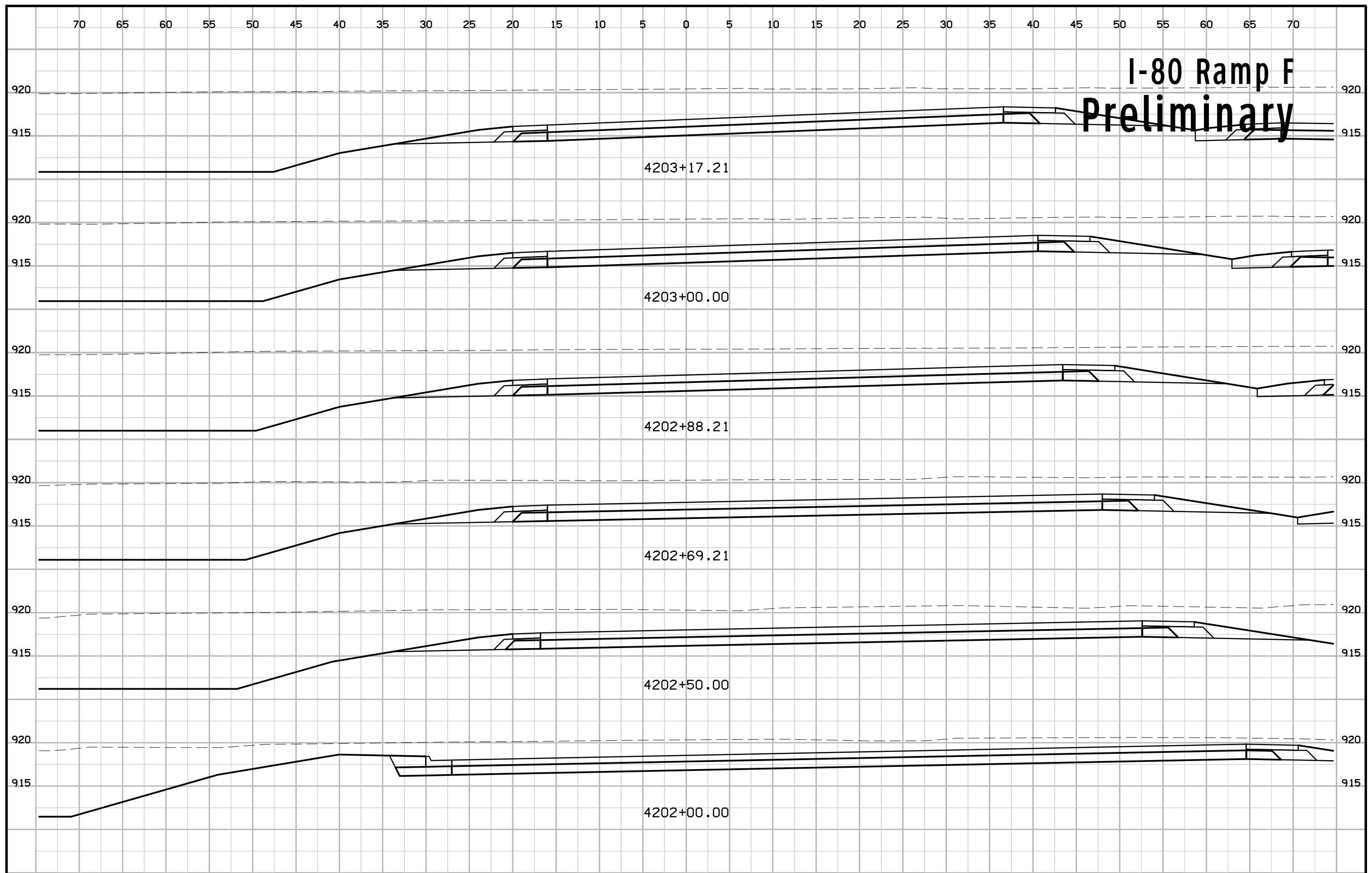
# I-80 Ramp F Preliminary



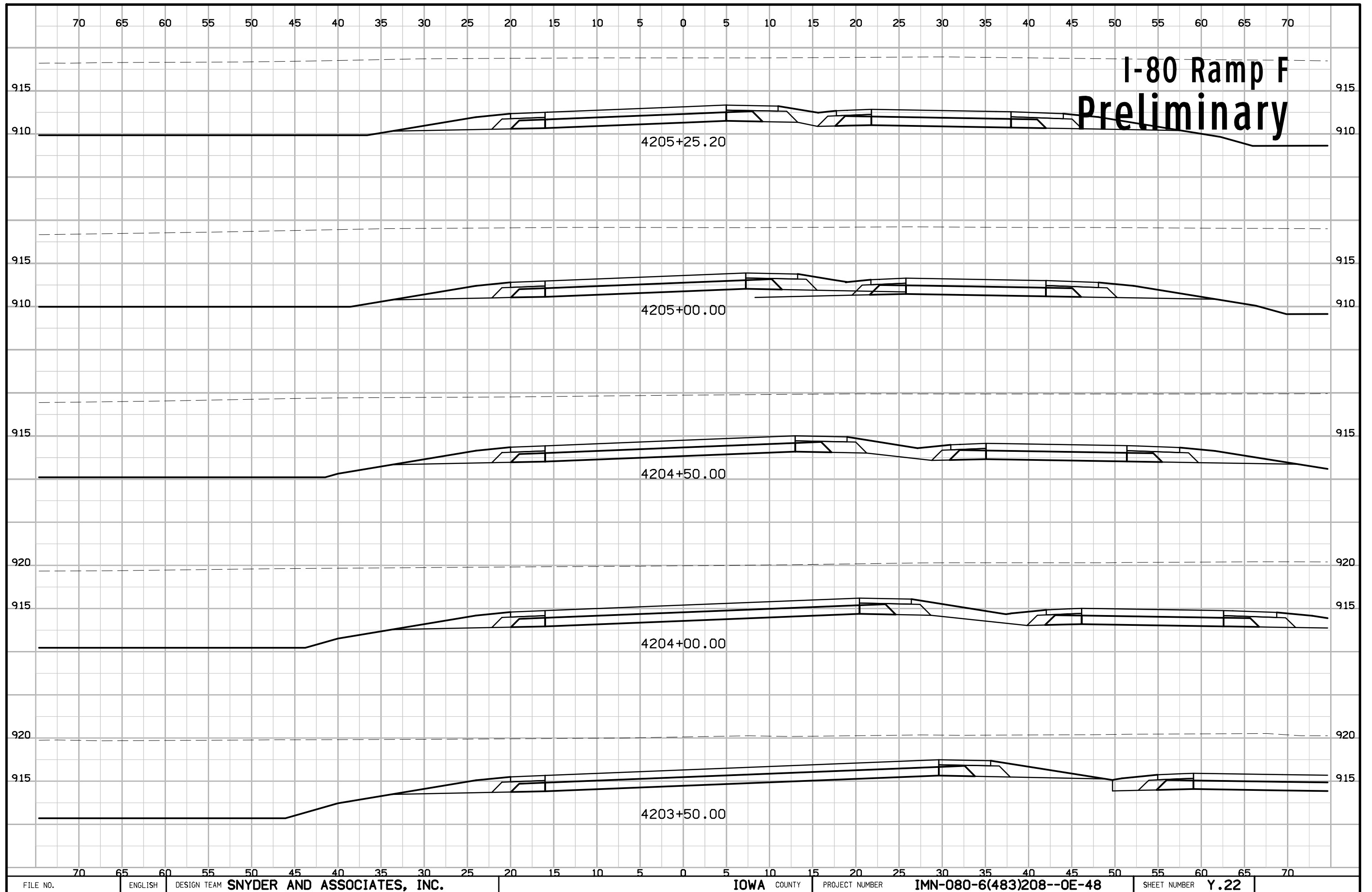
# I-80 Ramp F Preliminary

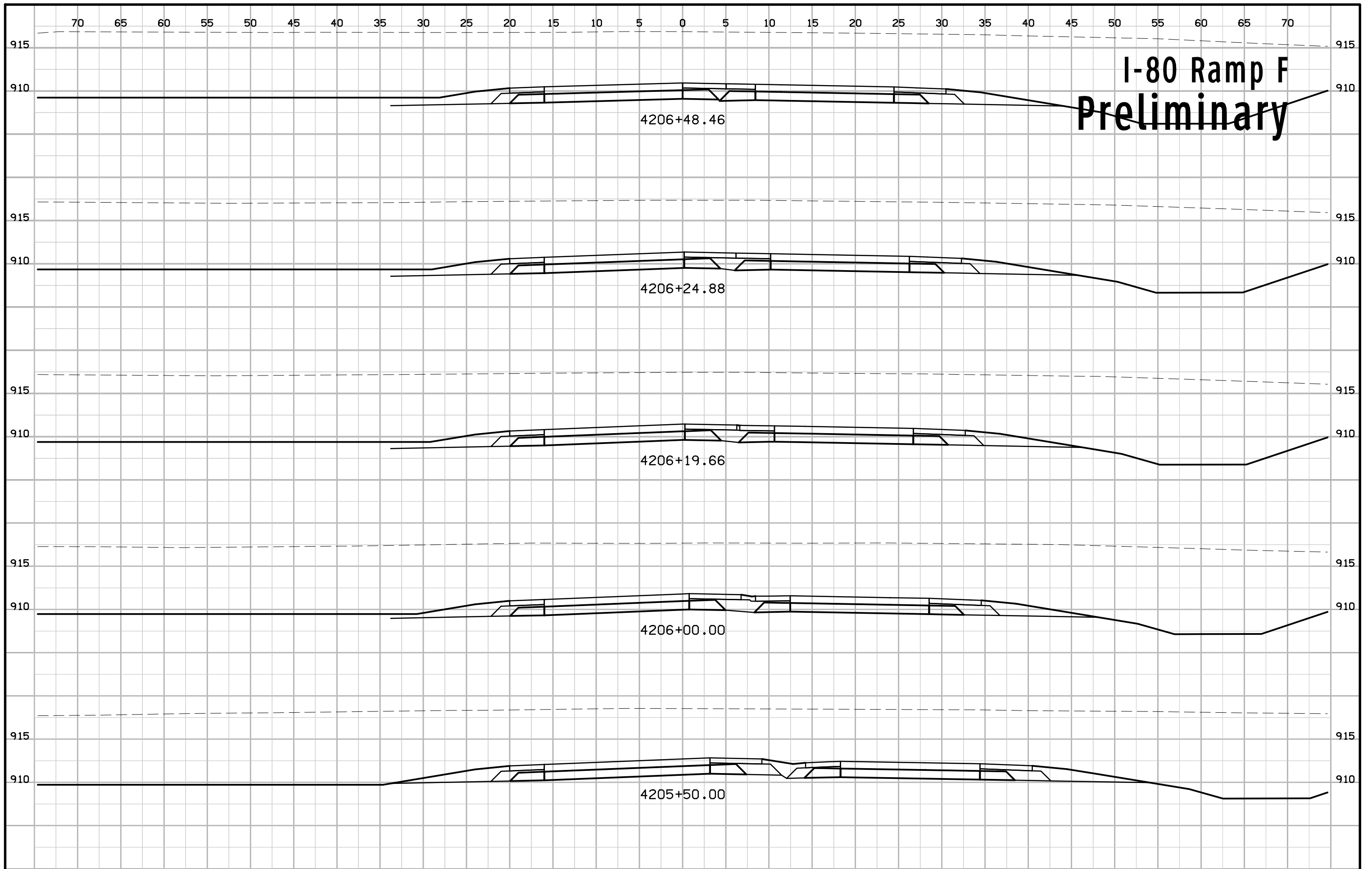


# I-80 Ramp F Preliminary









**I-80 Ramp F**  
**Preliminary**

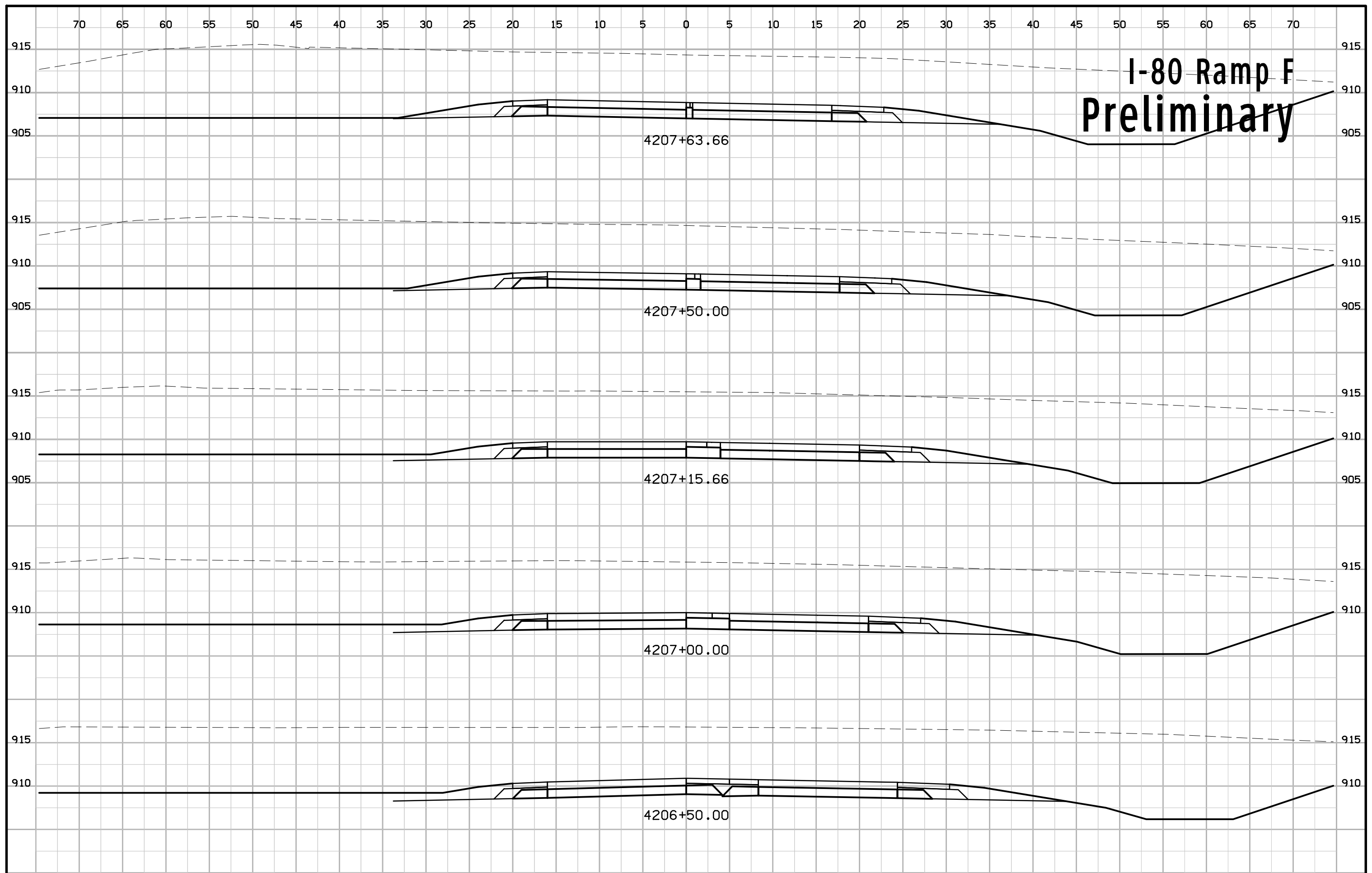
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4206+24.88

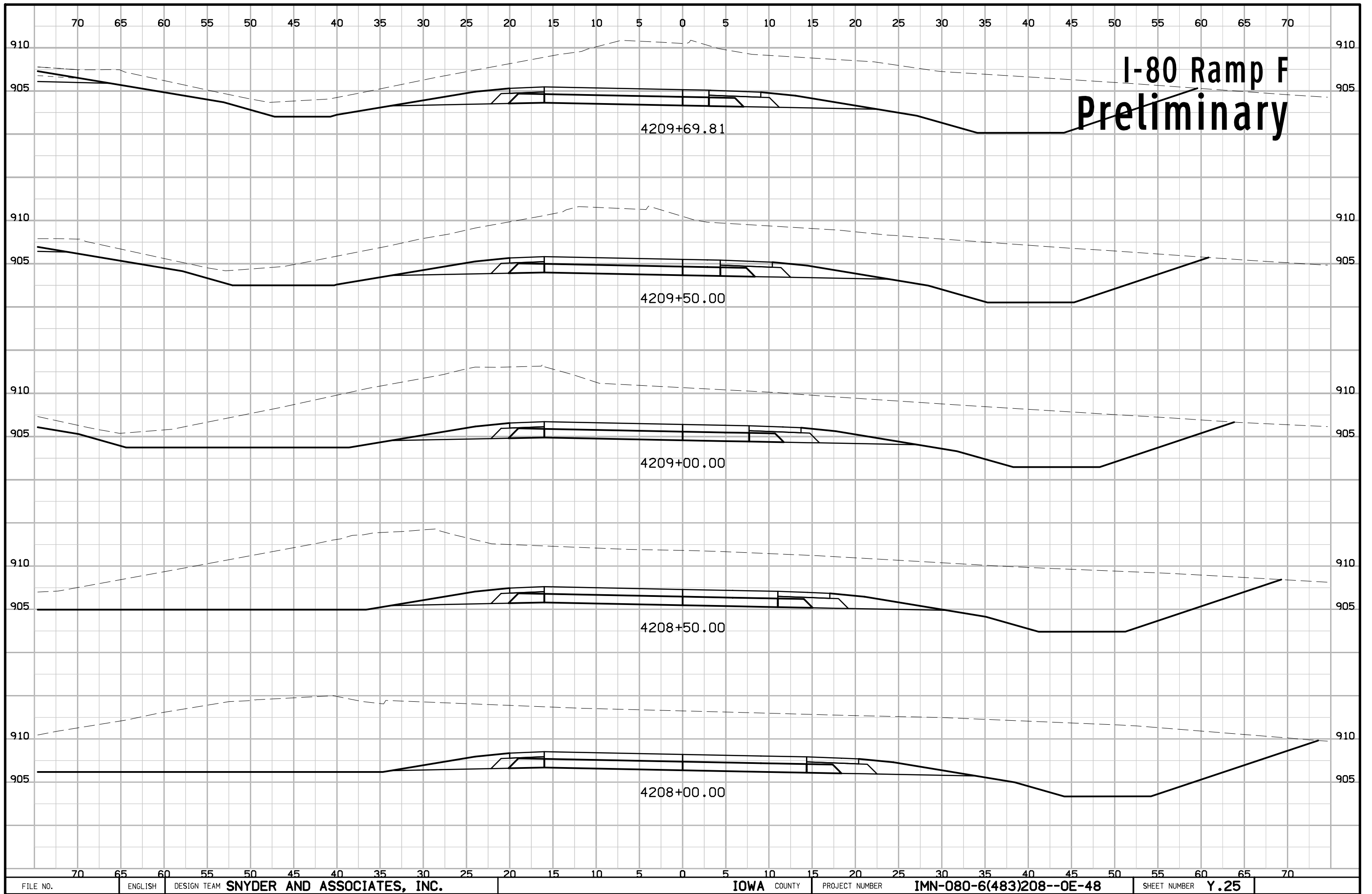
4206+19.66

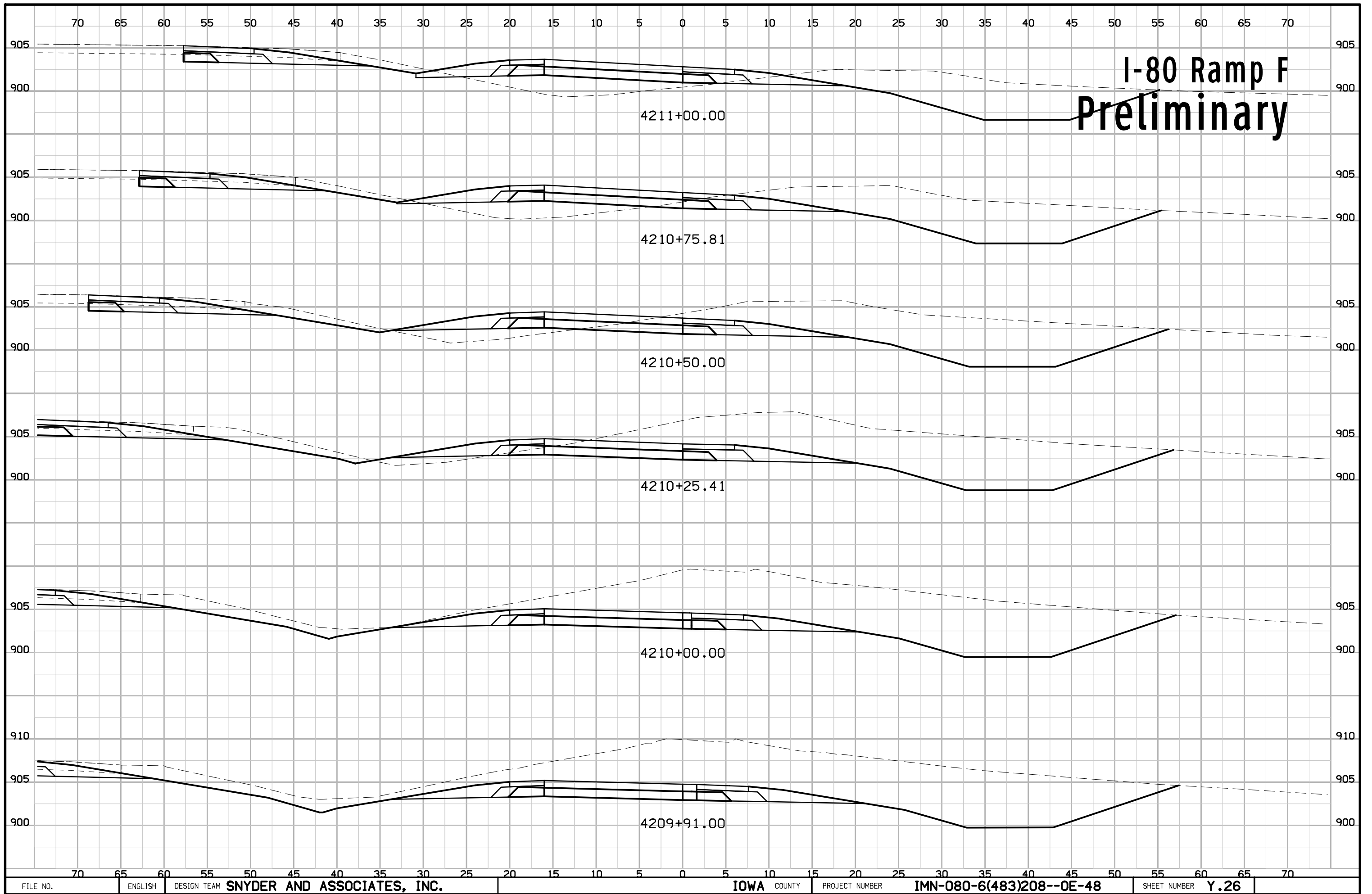
4206+00.00

4205+50.00



# I-80 Ramp F Preliminary





**I-80 Ramp F  
Preliminary**

4211+00.00

4210+75.81

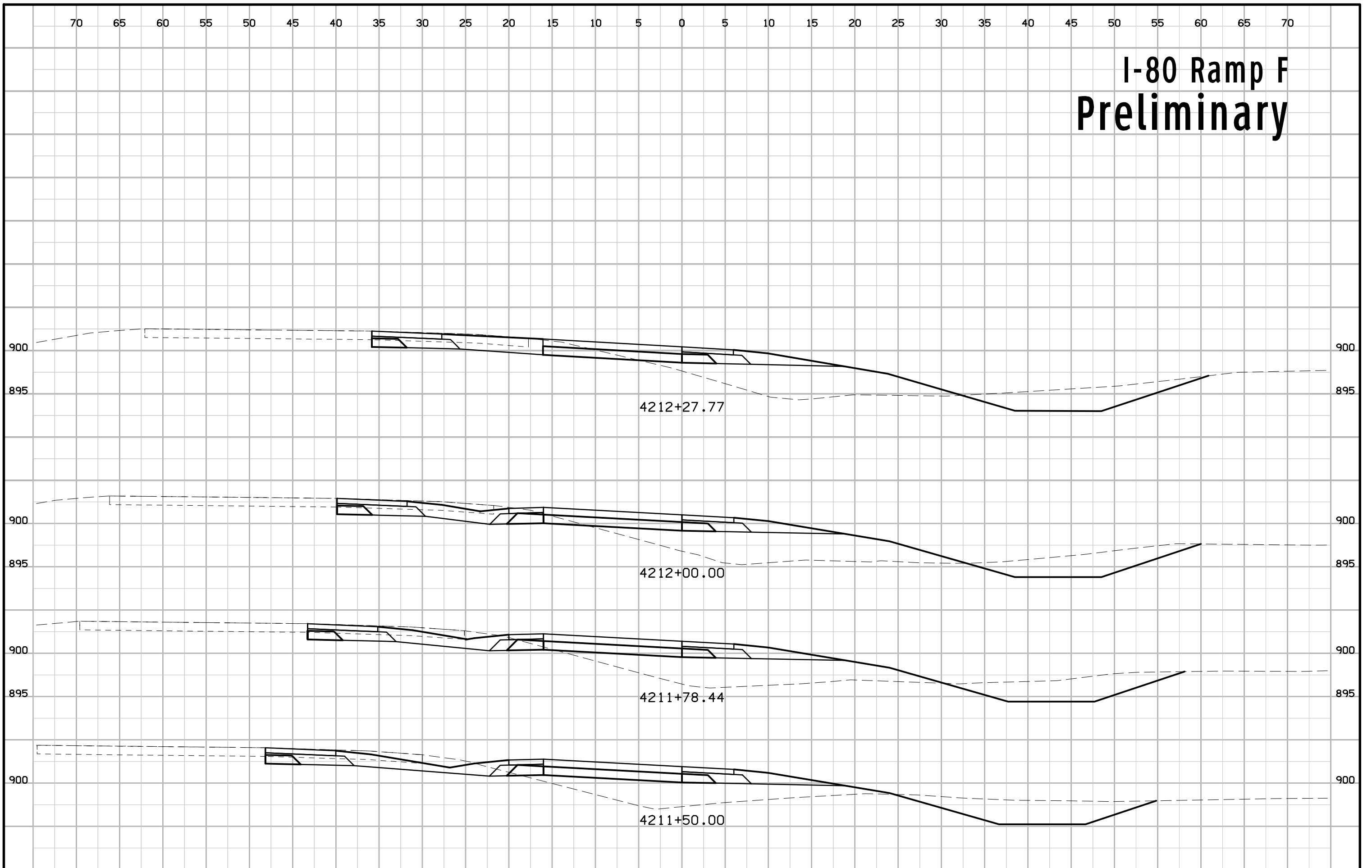
4210+50.00

4210+25.41

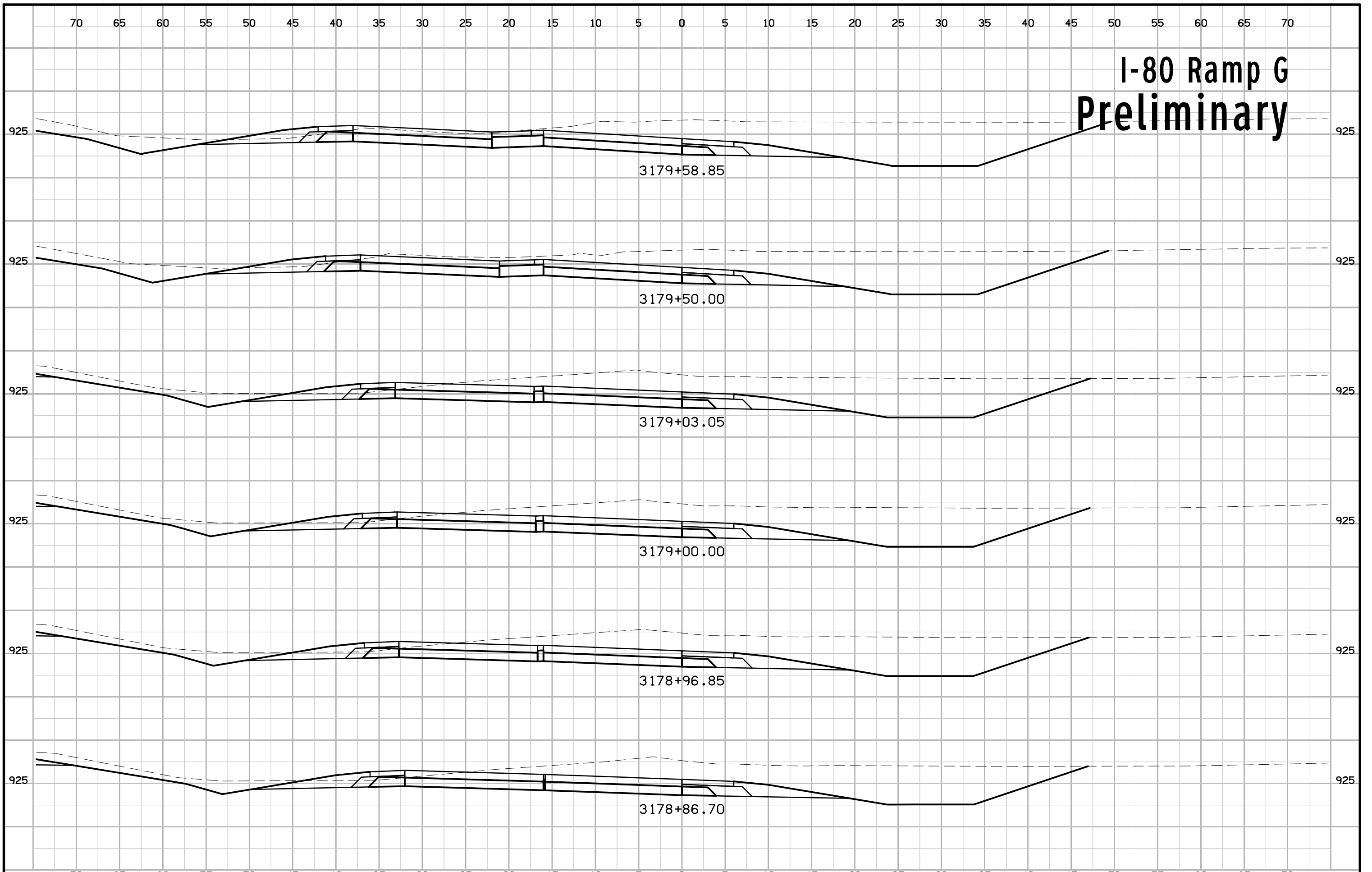
4210+00.00

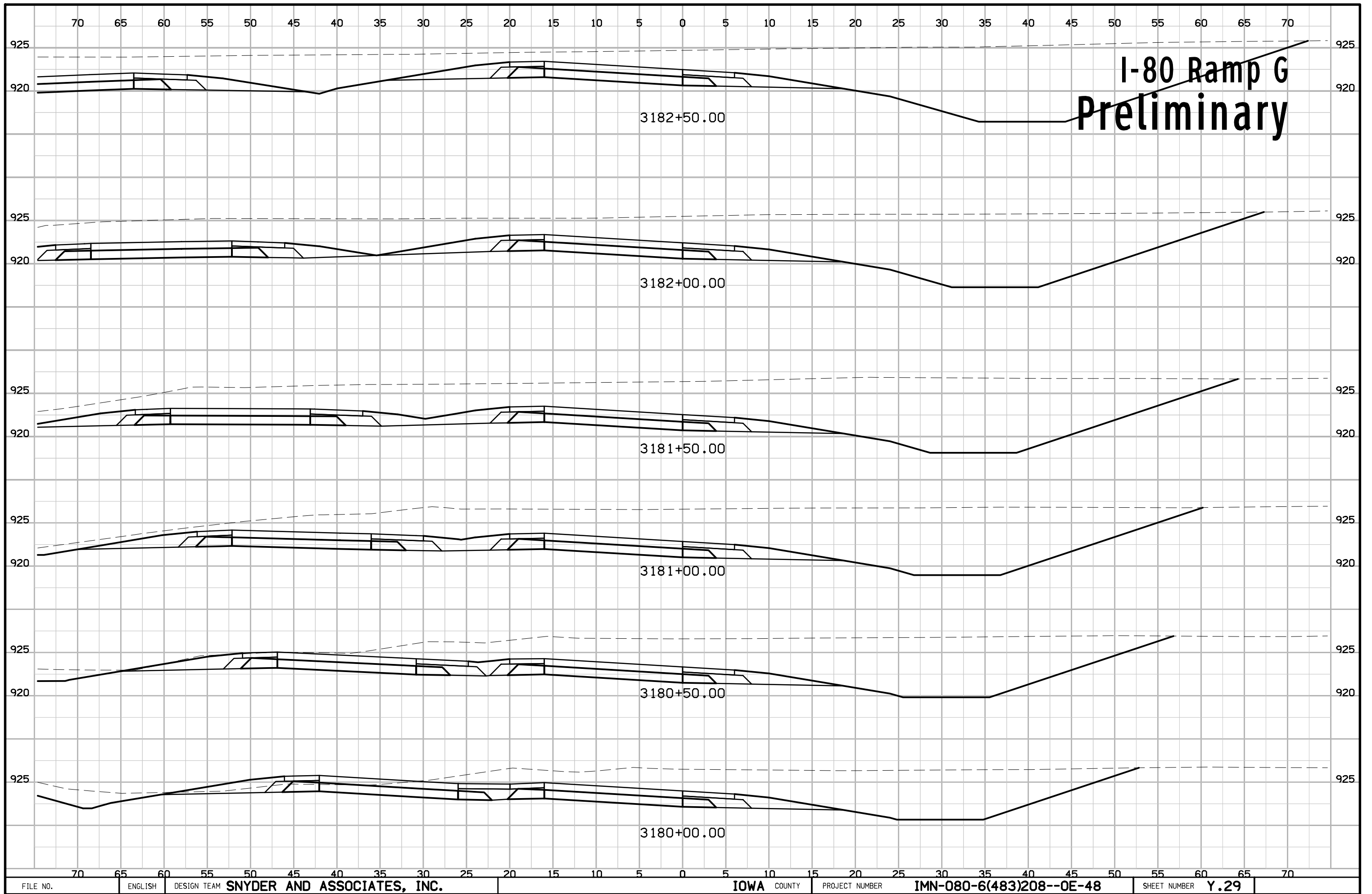
4209+91.00

# I-80 Ramp F Preliminary



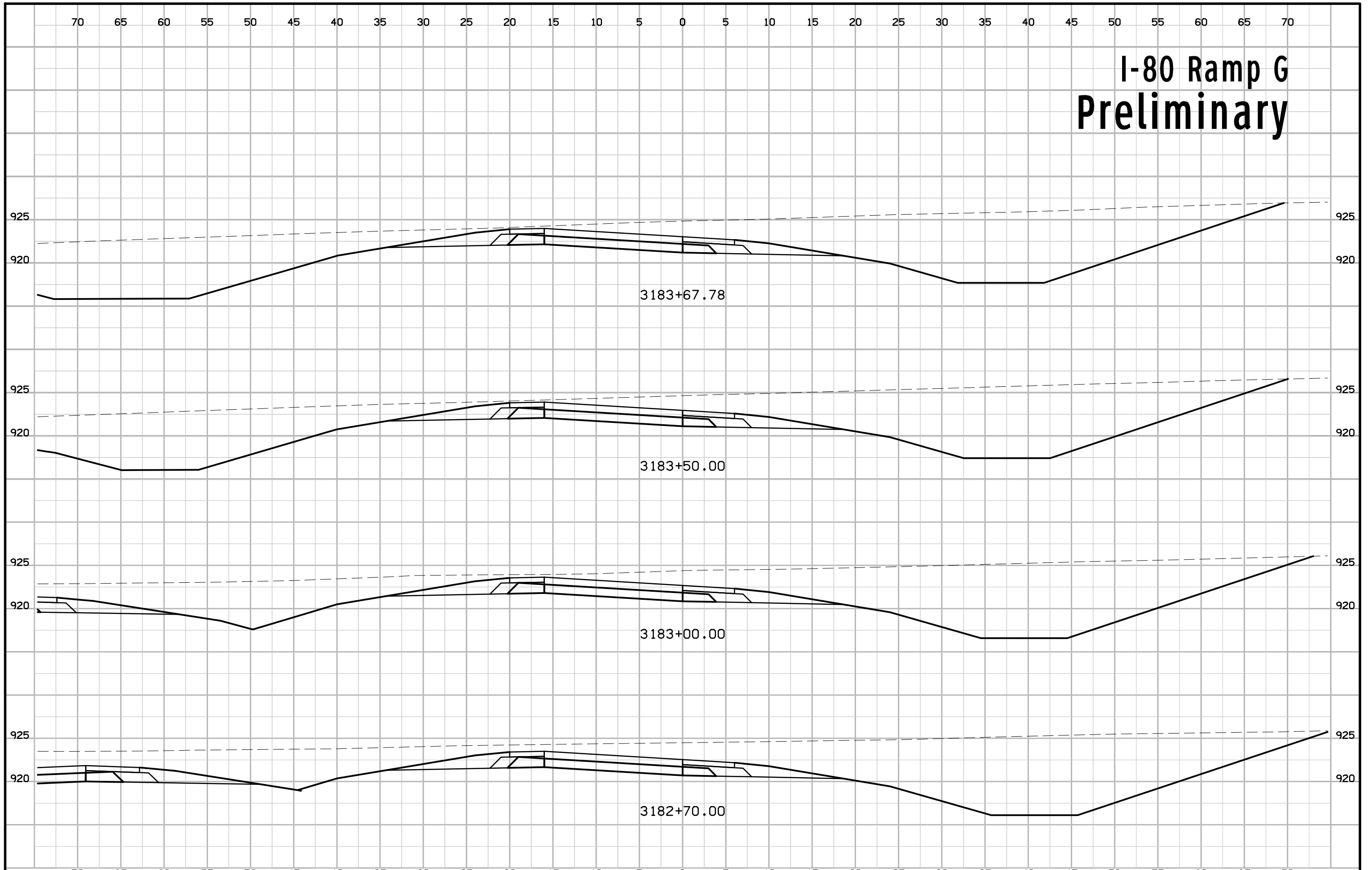
# I-80 Ramp G Preliminary



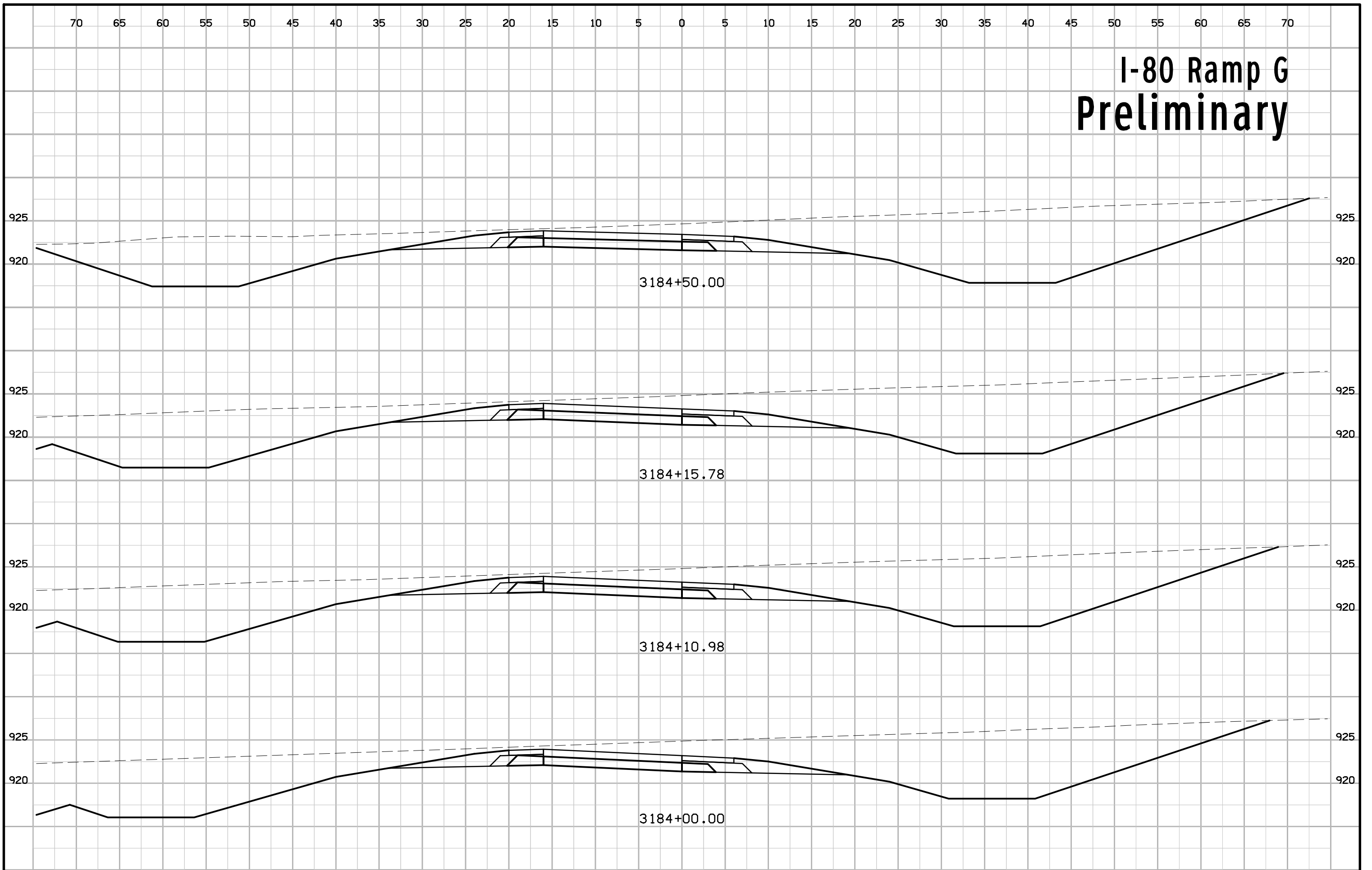


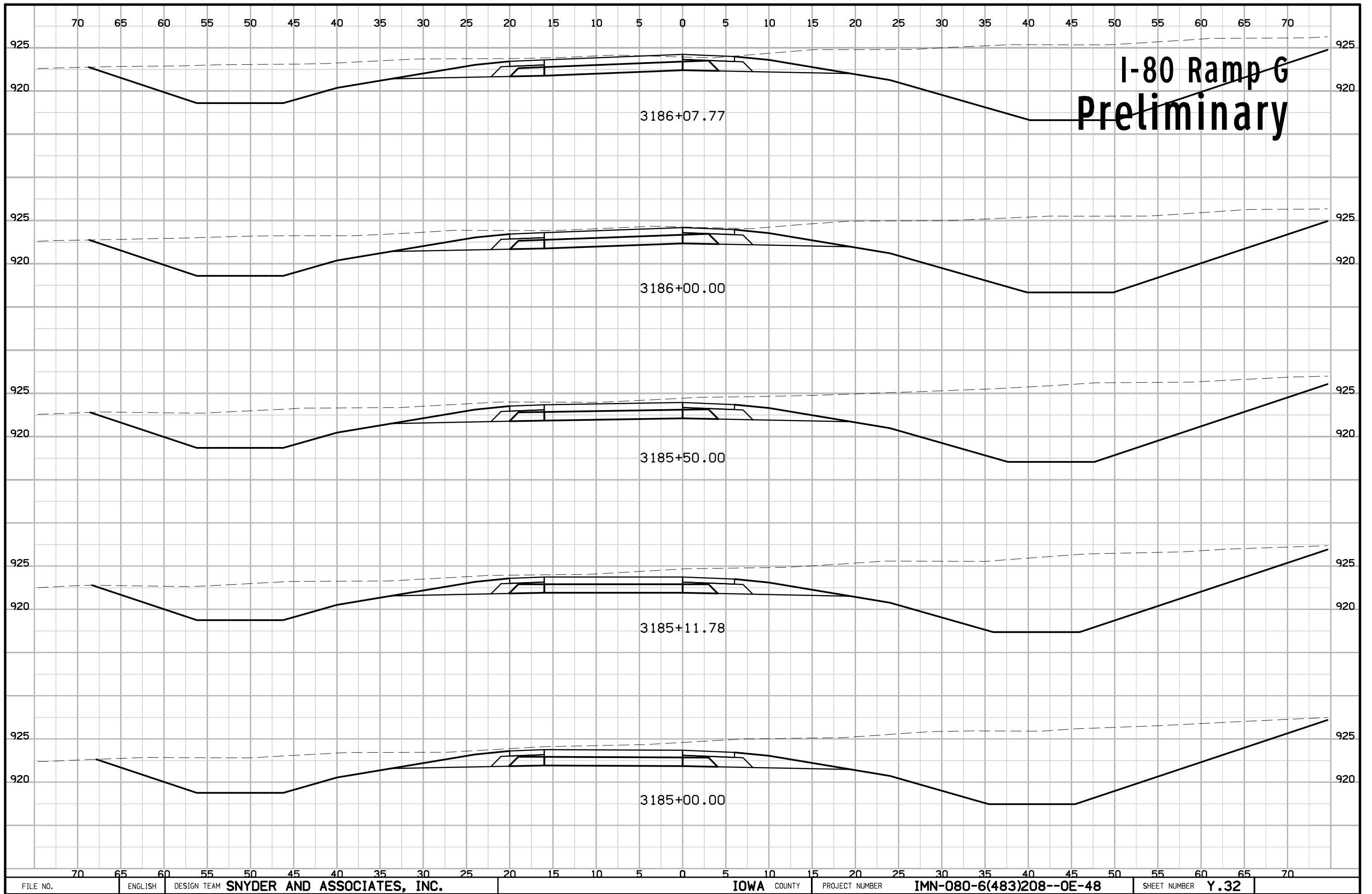


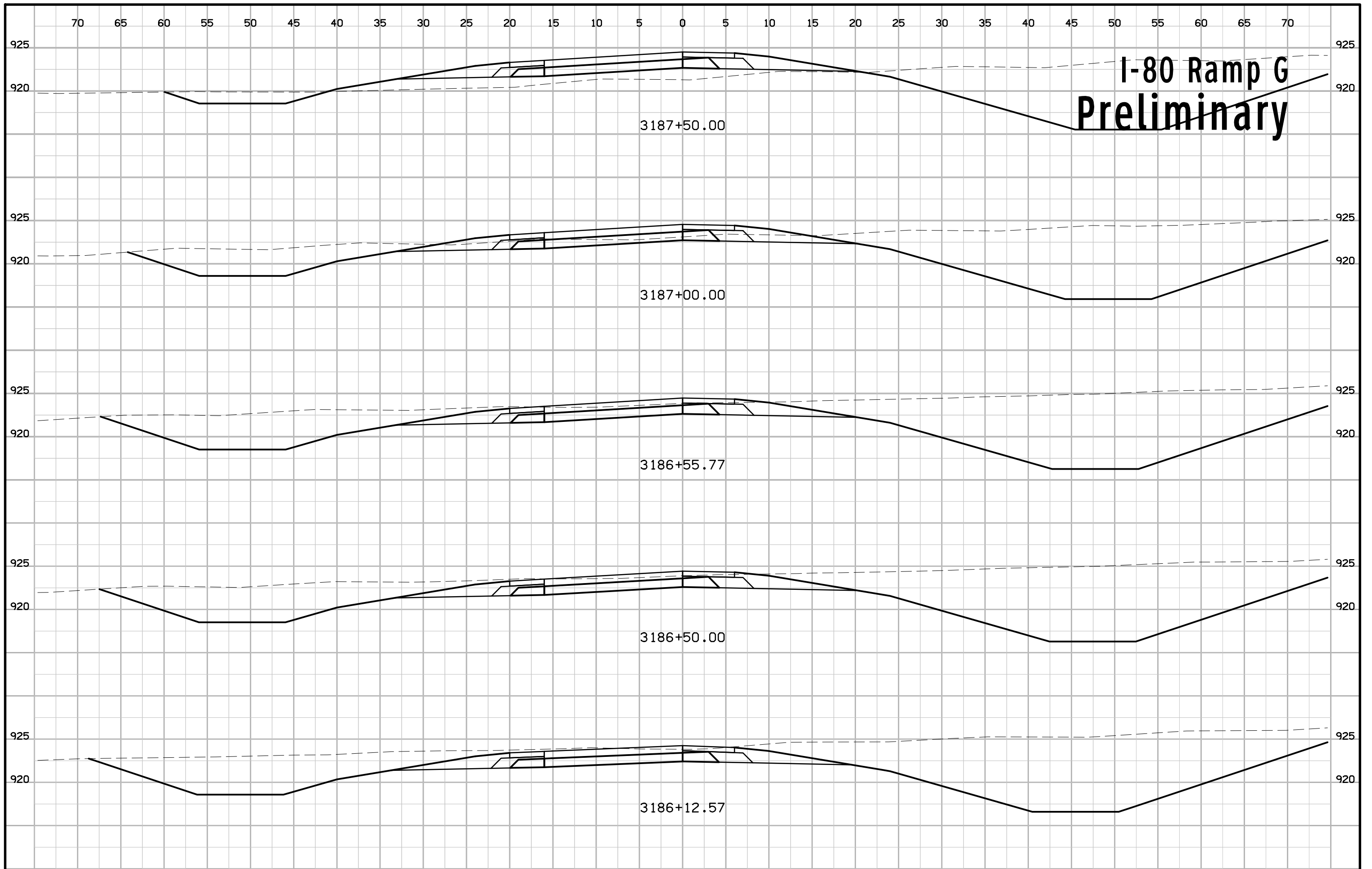
# I-80 Ramp G Preliminary



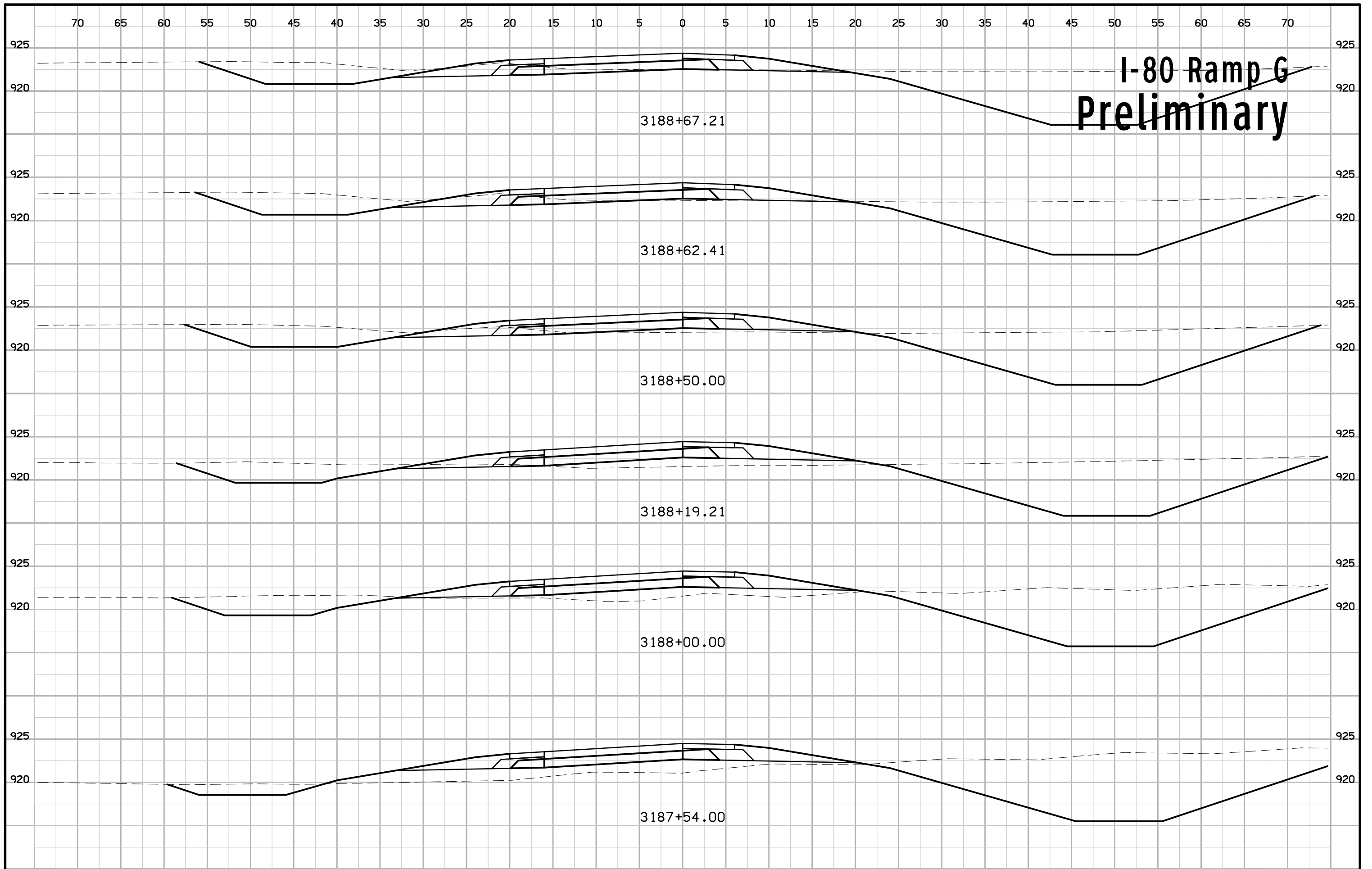
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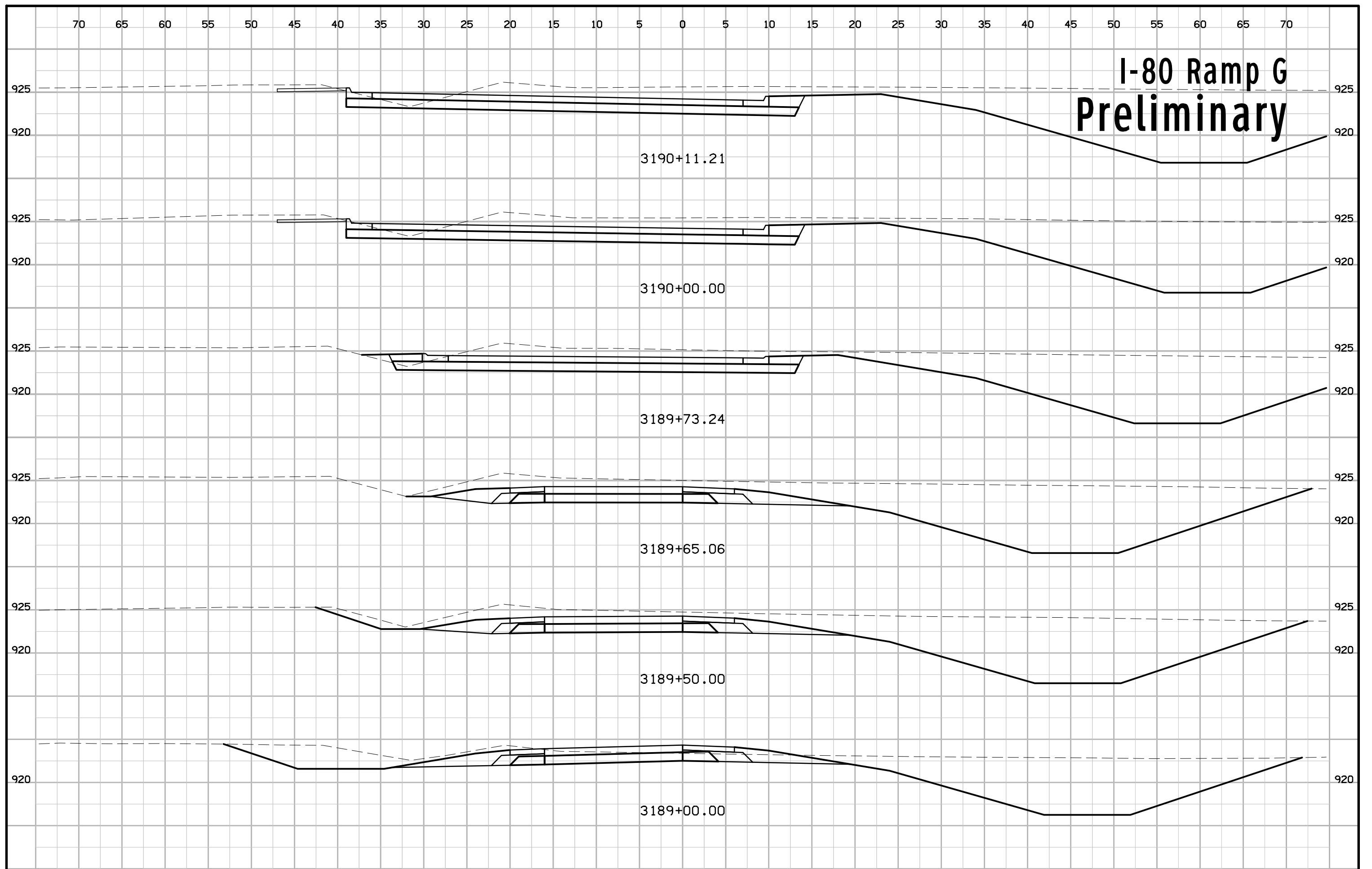


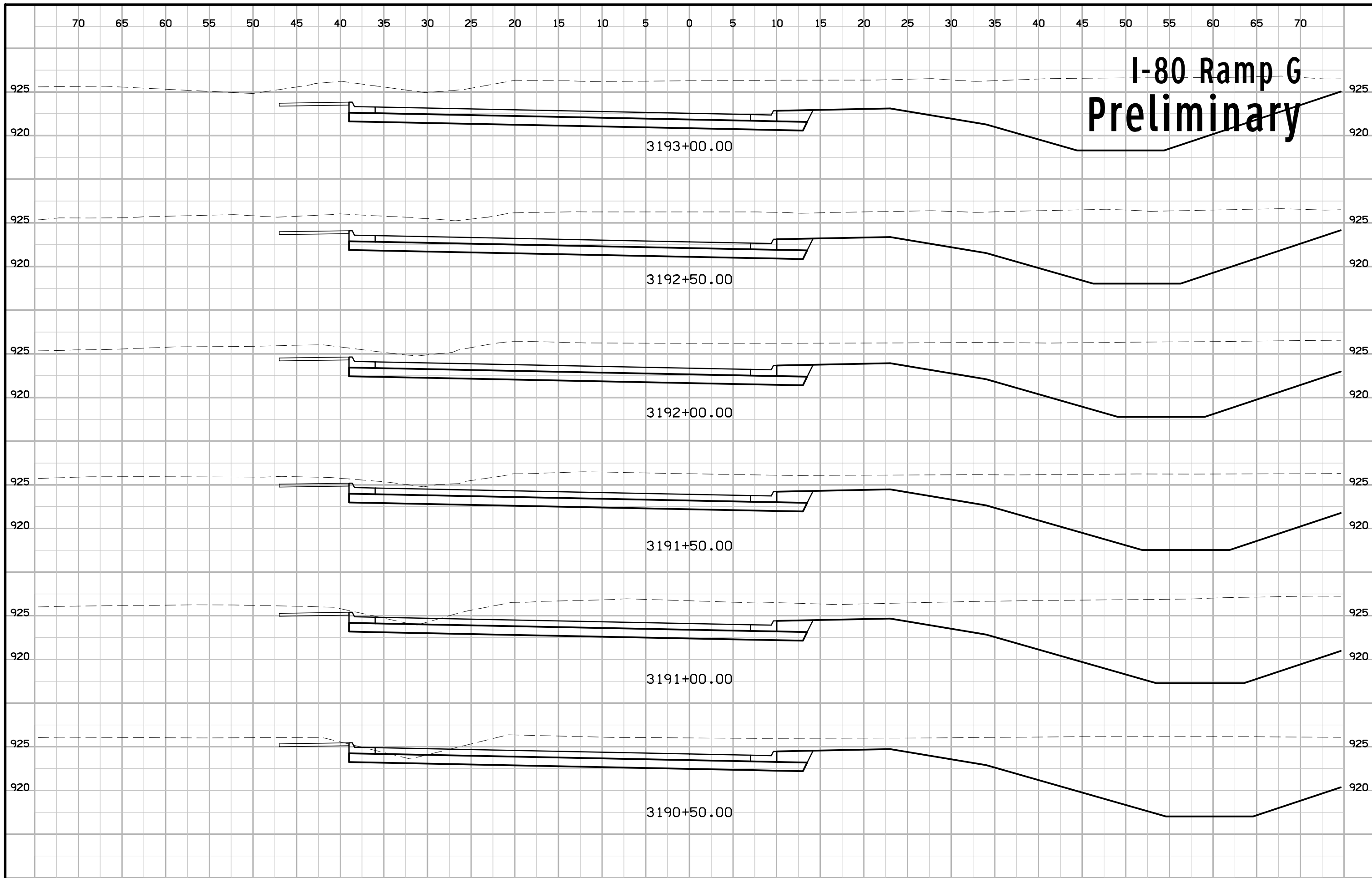


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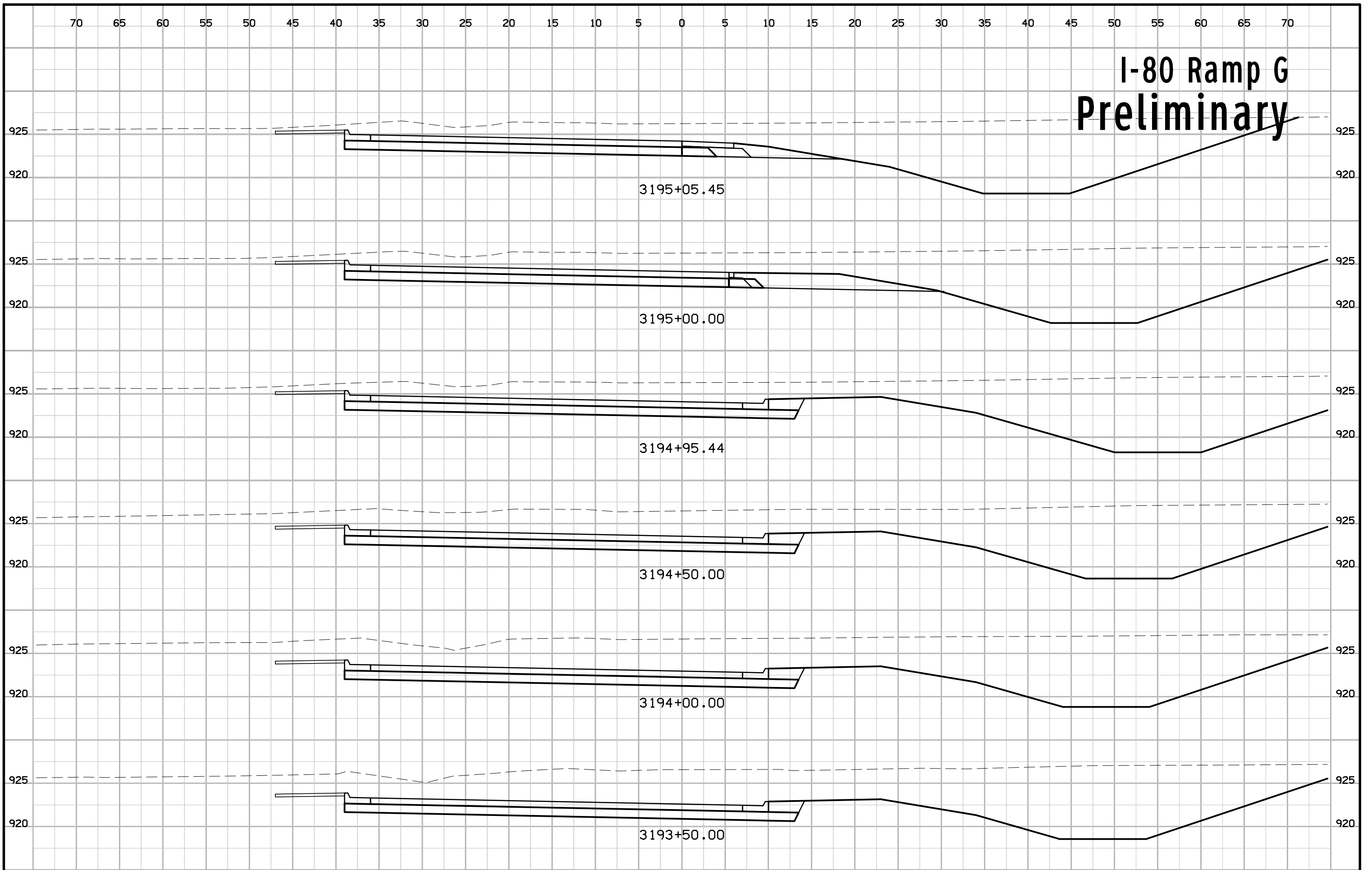
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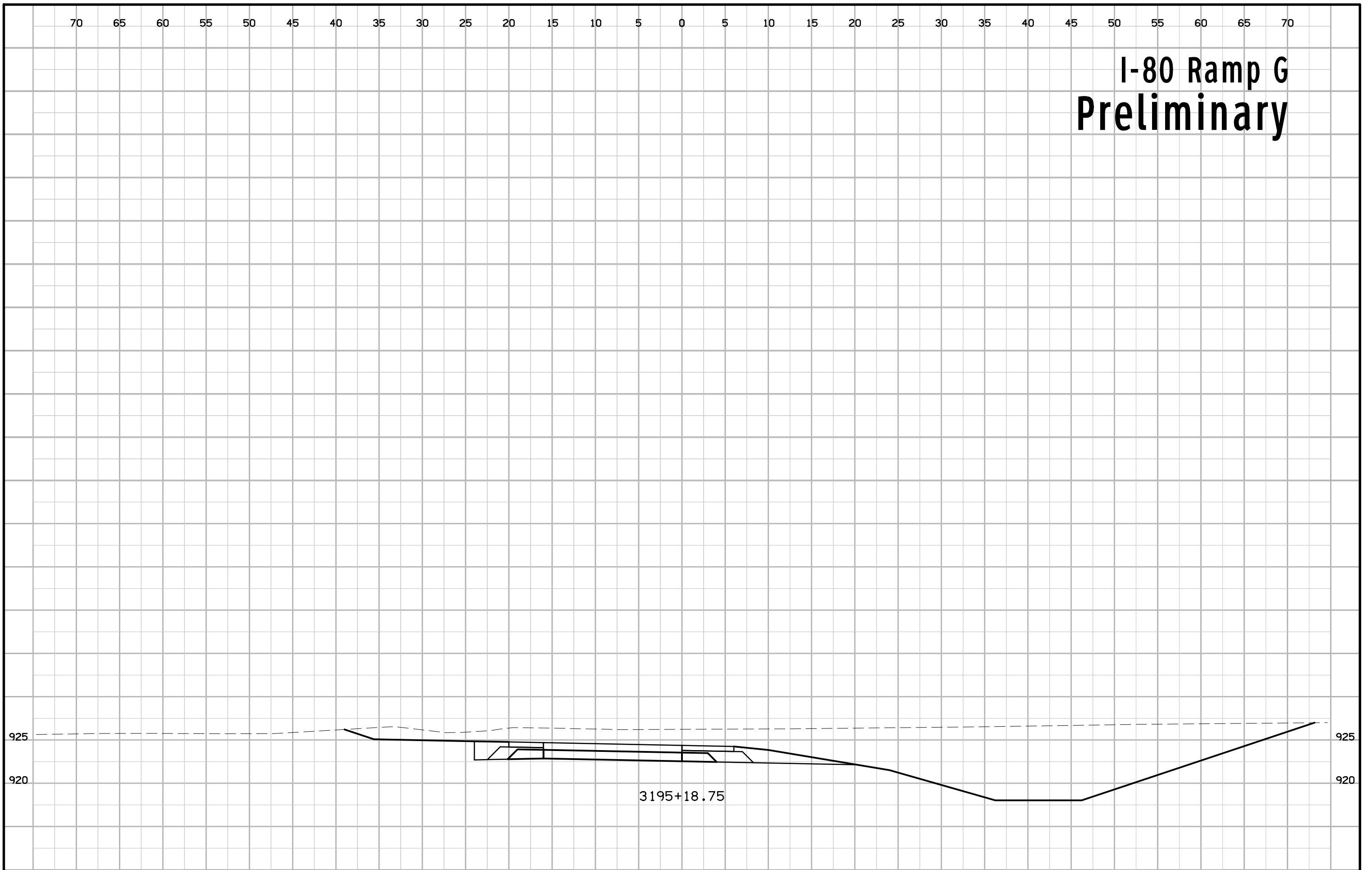
# I-80 Ramp G Preliminary

# I-80 Ramp G Preliminary

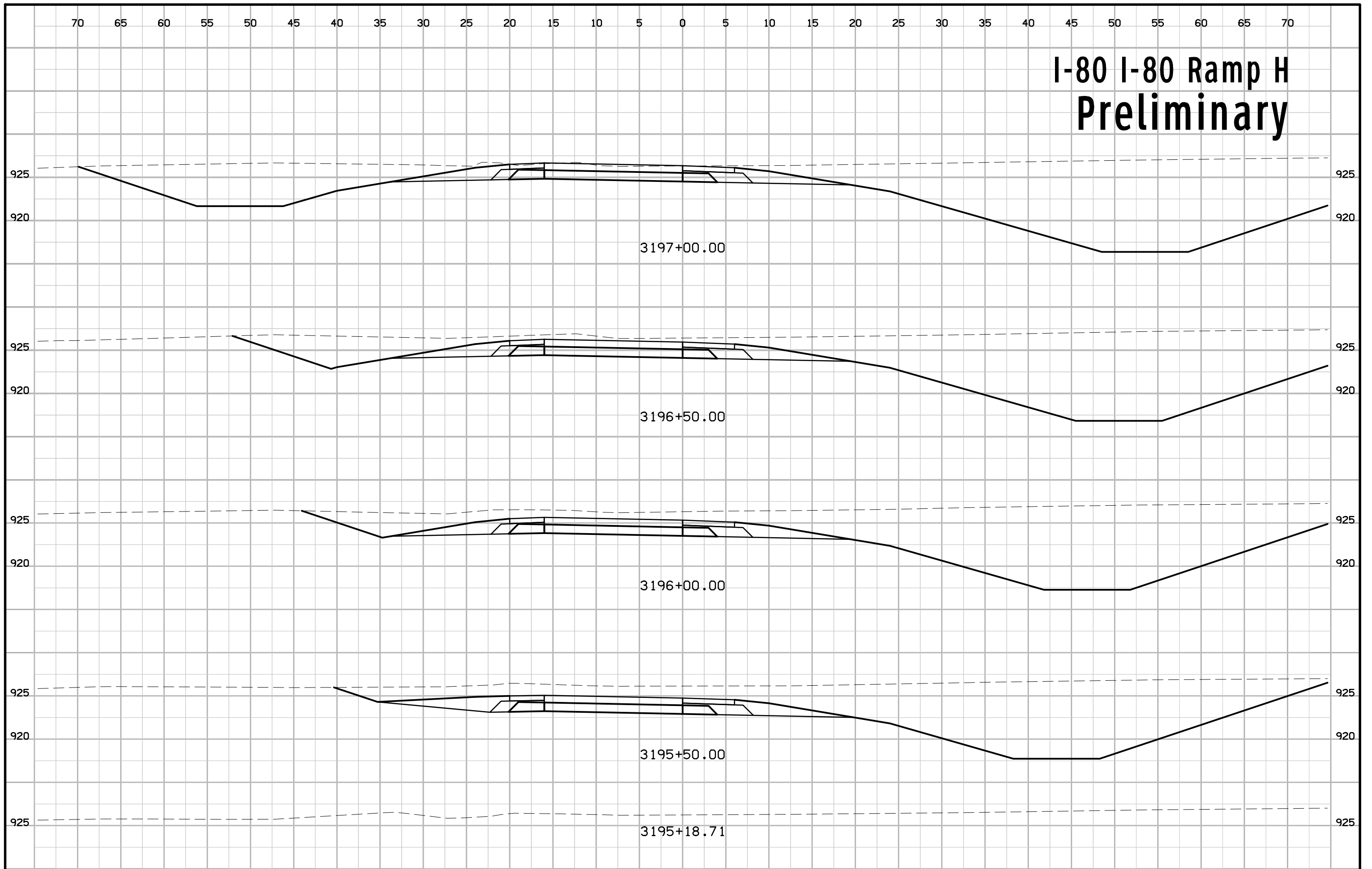


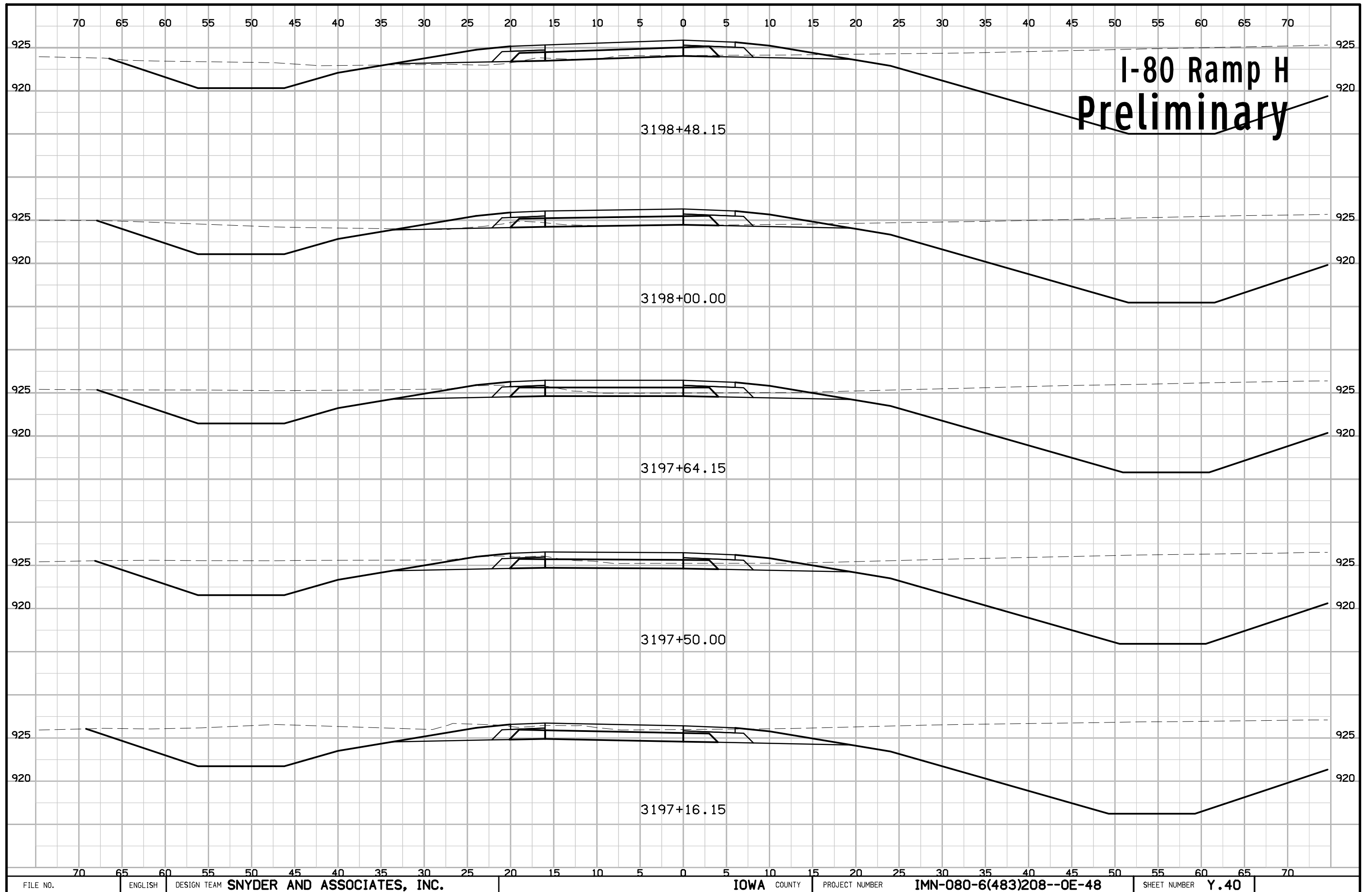


# I-80 Ramp G Preliminary



# I-80 I-80 Ramp H Preliminary





# I-80 Ramp H Preliminary

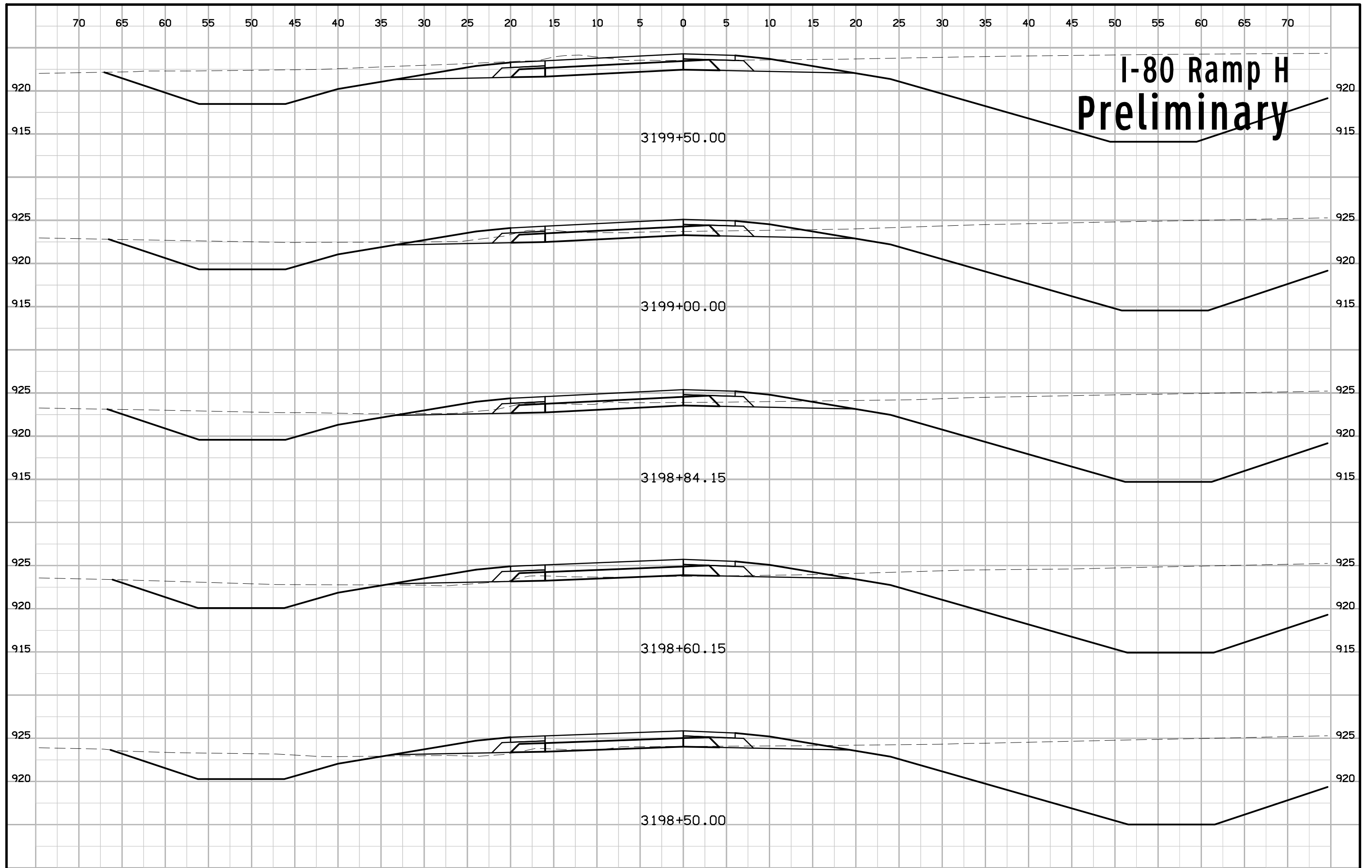
3198+48.15

3198+00.00

3197+64.15

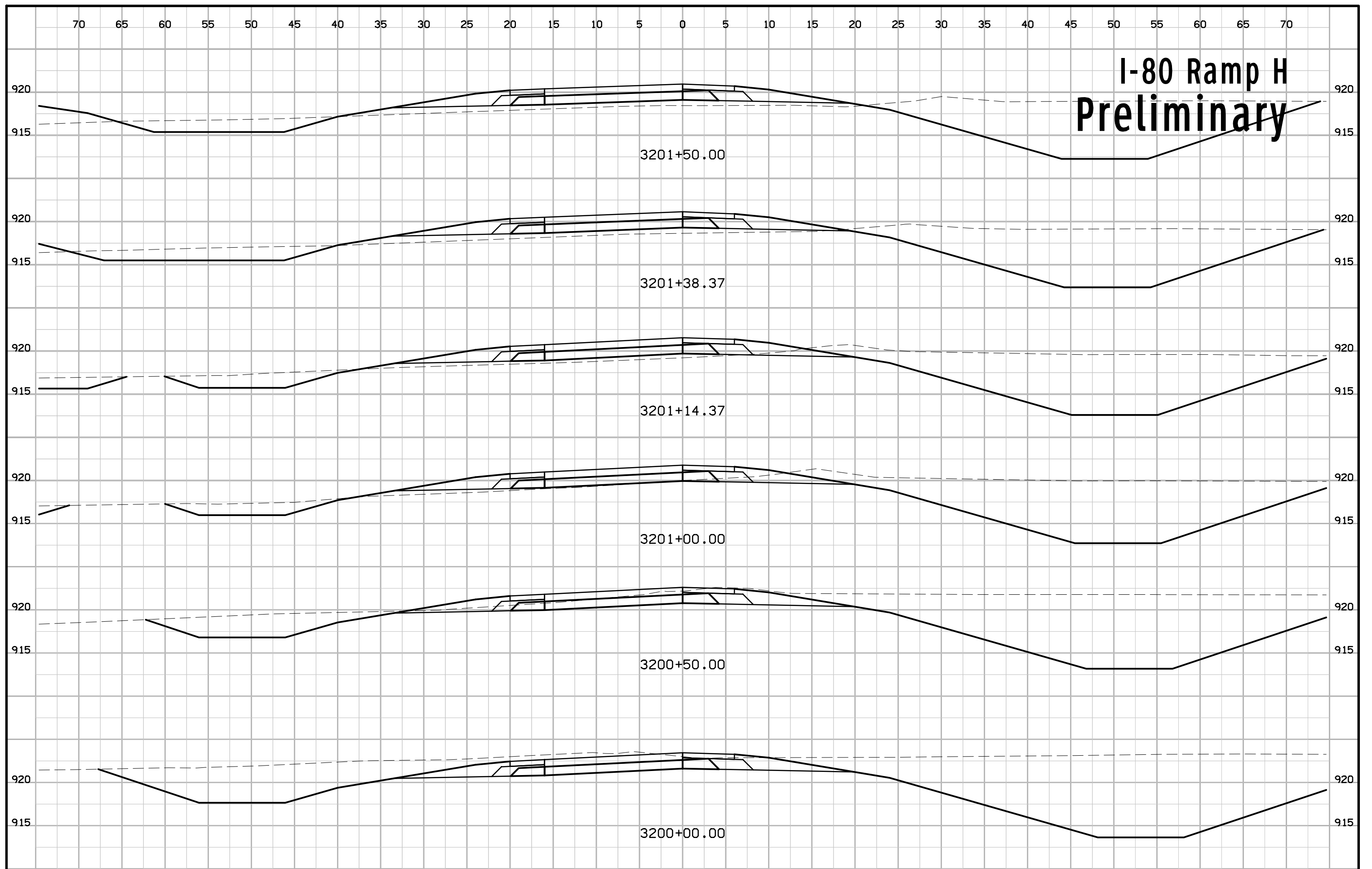
3197+50.00

3197+16.15

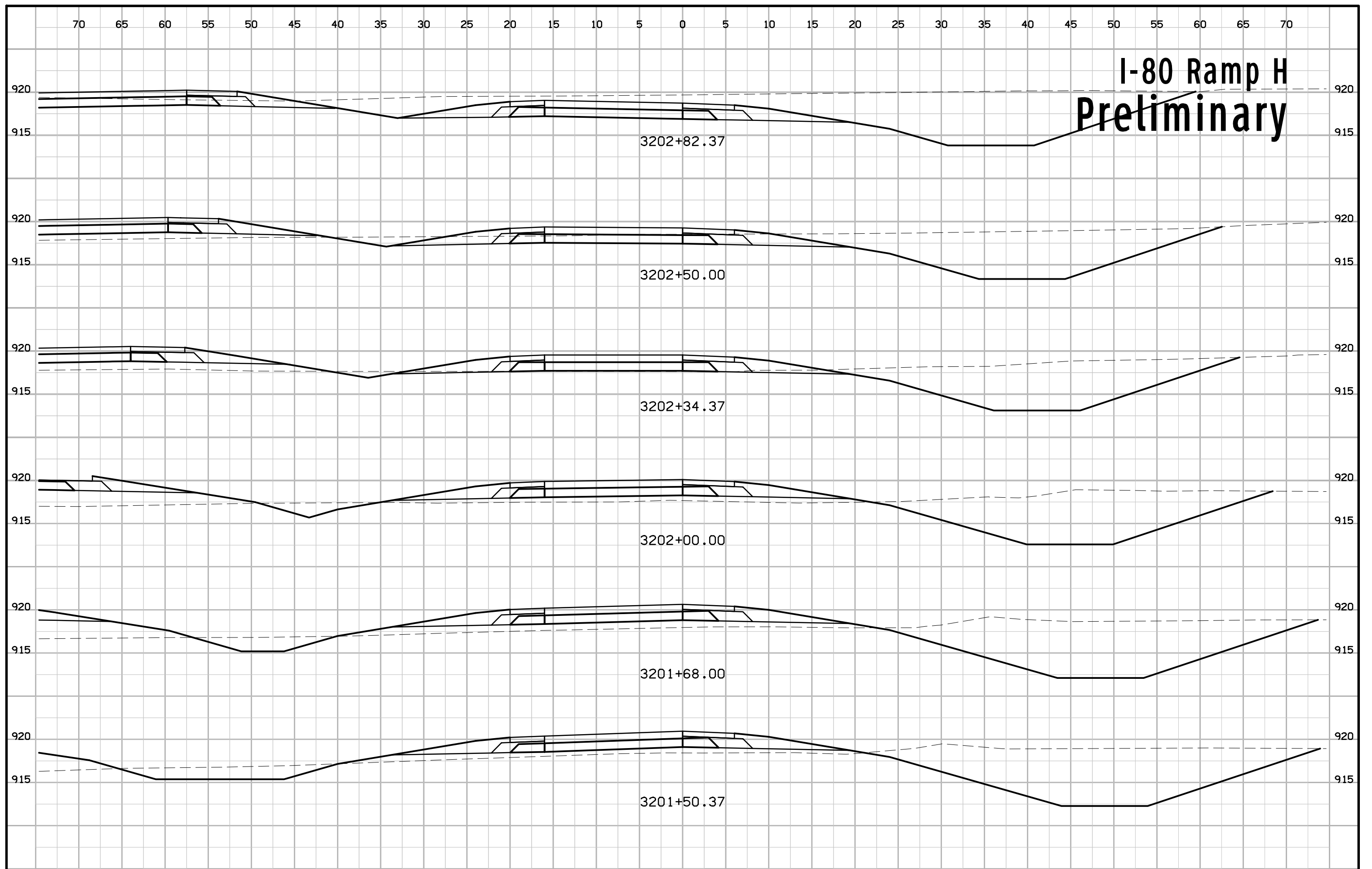


# I-80 Ramp H Preliminary

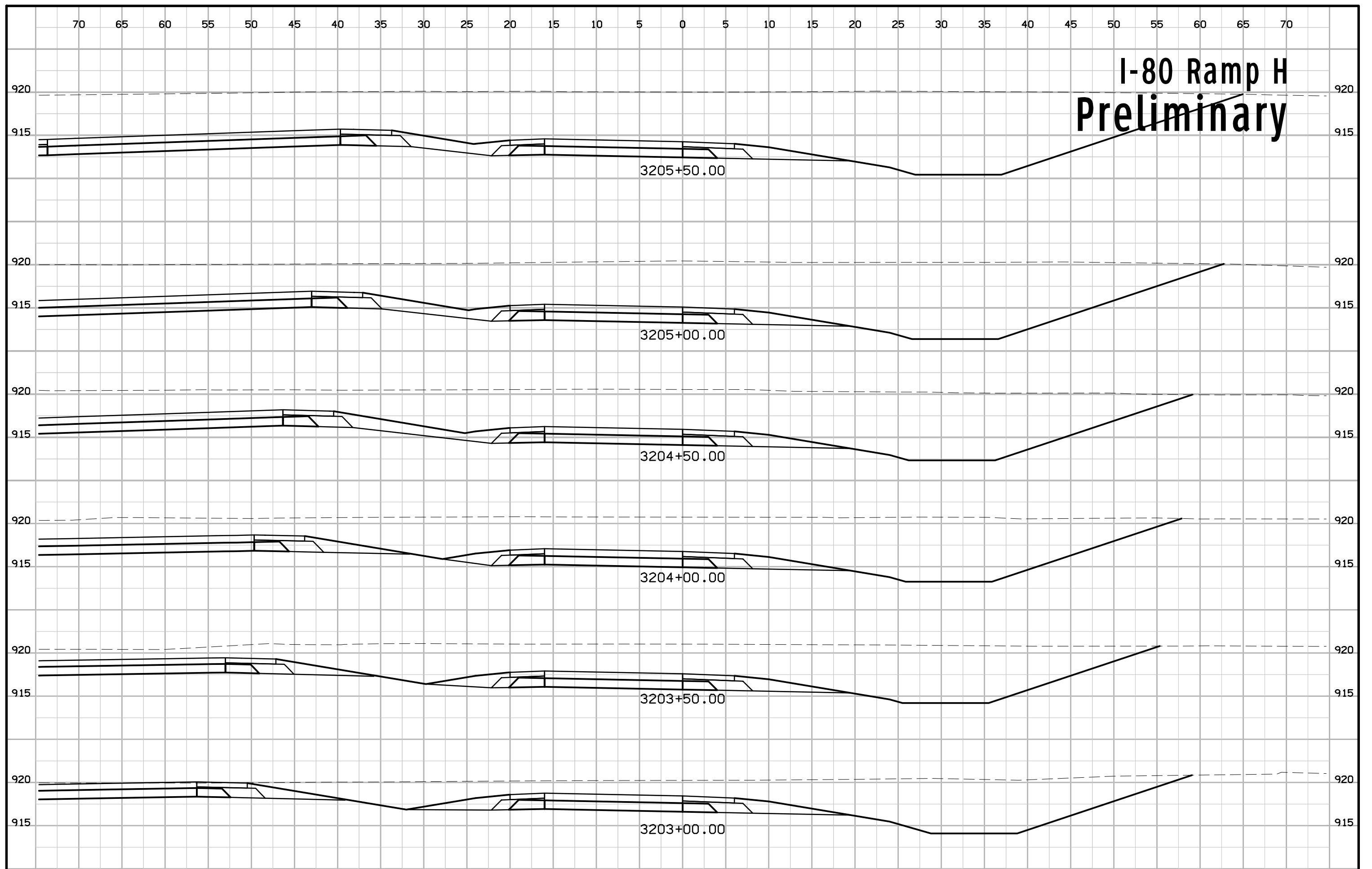
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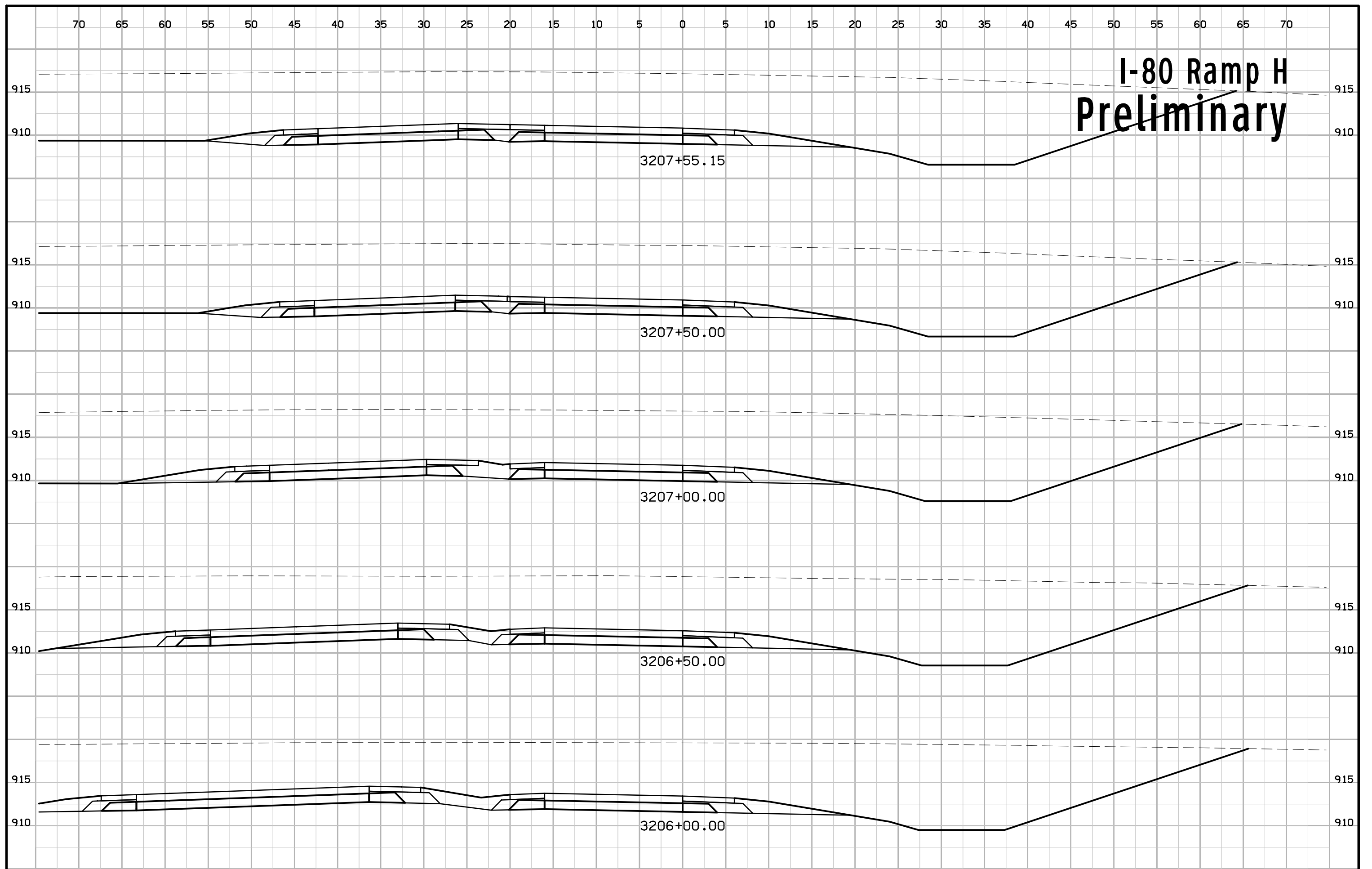
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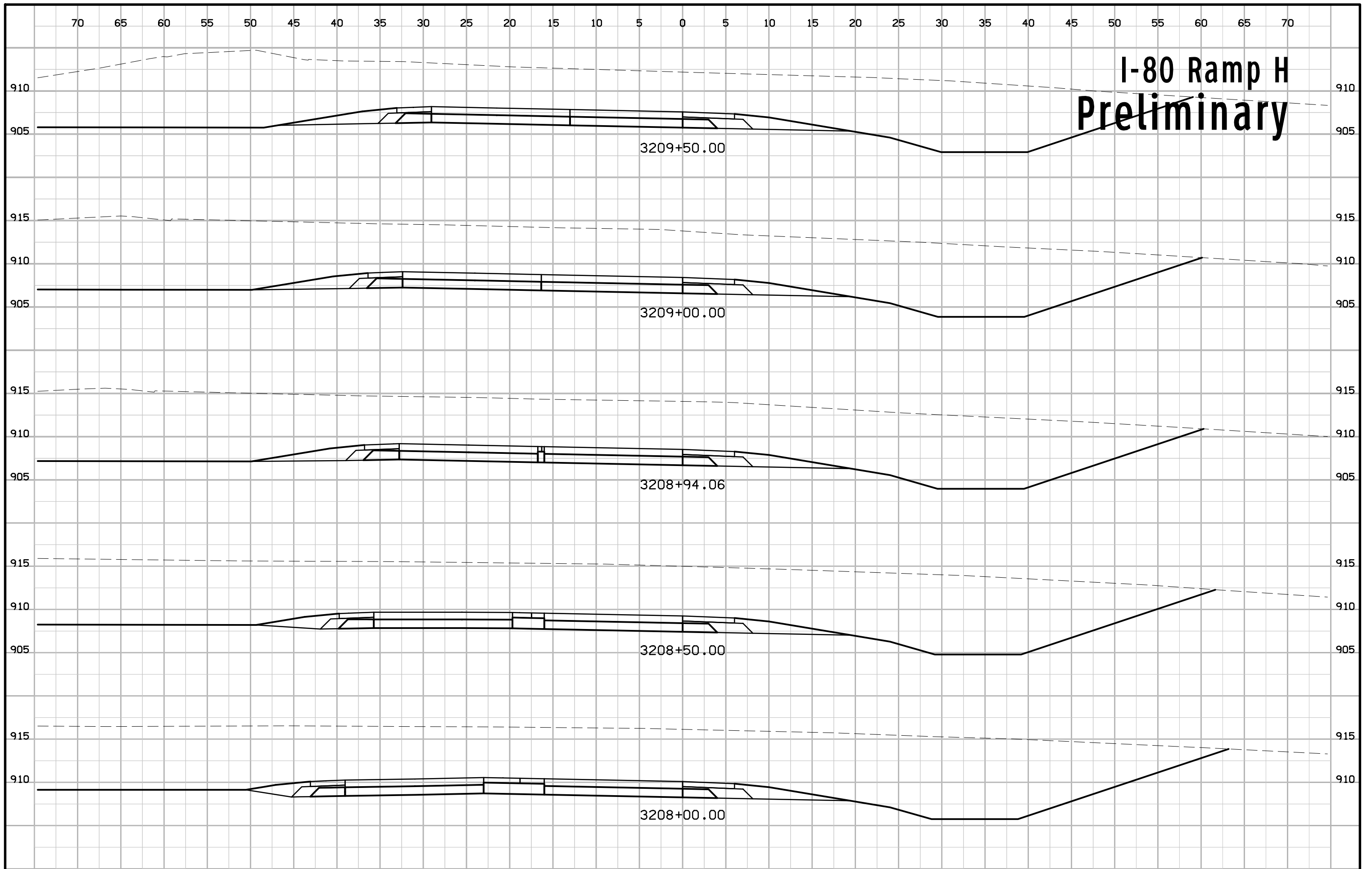
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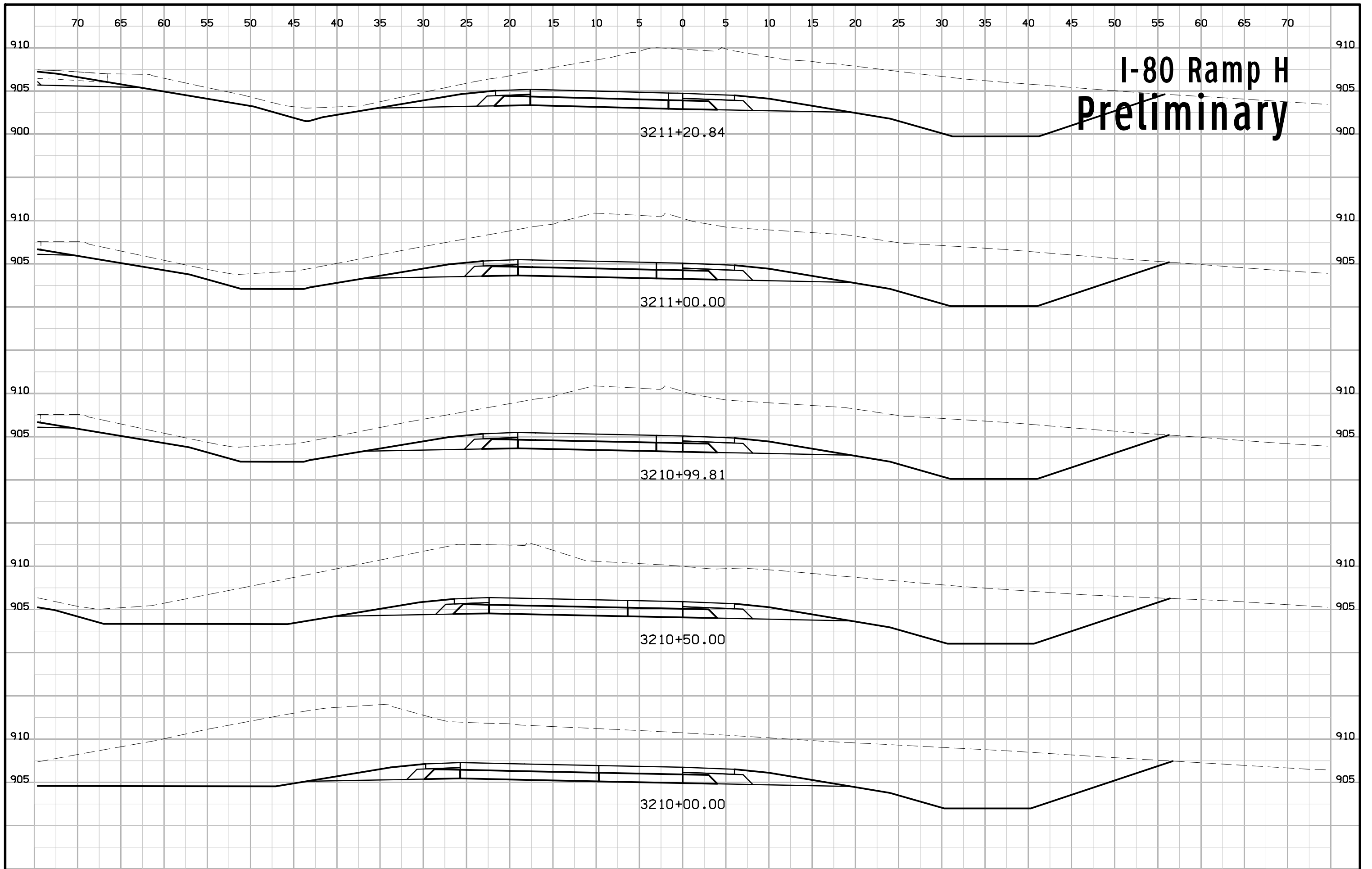
# I-80 Ramp H Preliminary







# I-80 Ramp H Preliminary



# I-80 Ramp H Preliminary

# I-80 Ramp H Preliminary

