

IOWA DEPARTMENT OF TRANSPORTATION

TO OFFICE:	District 1	DATE:	February 9, 2016
ATTENTION:	Scott Dockstader	REF. :	Polk County IM-080-3(178)127—13-77 PIN: 13-77-080-050
FROM:	Stan Stallsmith		
OFFICE:	HR Green, Inc.		
SUBJECT:	Field Exam Review (D-02)		

A field exam was held on Wednesday, January 20, 2016 to review the proposed plan for the widening of Interstate 80/35 from Douglas Avenue to E. of IA 141. This plan included new ramps at Meredith Avenue, a new flyover ramp for IA 141, and reconstruction of the existing ramps at the IA 141 interchange. The total length of interstate widening for this project is approximately 1.8 miles long. The total length of new ramps construction for this project is approximately 1.9 miles.

Those present for the field exam included the following: Joe Jurasic from Federal Highways - Iowa Division; Tony Gustafson, Jesse Tibodeau, Jim Scott, and Cy Quick from District 1; Kevin Patel from the Office of Design; John Clute from the Office of Bridges and Structures; DeeAnn Newell and Marc Solberg from the Office of Location and Environment; Jeff McCollough and Benjamin Huckler from the Office of Traffic and Safety; Jeff Larson from the Office of Right of Way; David McKay and John Larson from the City of Urbandale; Anna Smith and Gary Miller from Terracon and David Dougherty, Stan Stallsmith, Andy Swisher, Michael Lyons, Drew McGovern, Cory Shannon, and Blake Ahlers from HR Green.

I-80/35 is functionally classified as an “interstate” route. The 2012 estimated daily traffic is 98,500 vpd with 15 % truck traffic. The 2040 estimated daily traffic is 154,000 vpd with 17% truck traffic.

The proposed project involves widening the existing 6 lane interstate to an 8 lane interstate on the same alignment. The widening of both the NB/EB and WB/SB direction begins on the north side of the Douglas Avenue interchange and continues to just east of the IA 141 interchange. The typical section will widen between 12 ft. to 24 ft. depending on auxiliary lane locations, with 12 ft. full depth outside shoulders. The 12 ft. outside shoulders will allow for future widening of the interstate. The typical section of ramp A (SB exit) at Douglas Avenue widens the existing ramp to 24 ft. wide pavement with 6 ft. outside and 4’ inside partial depth shoulders. A short section of ramp D (NB entrance) at Douglas Avenue will be reconstructed to 16 ft. wide pavement with 6 ft. and 4 ft. shoulders. The new ramp C (SB entrance) at Meredith Drive will be a dual lane 24 ft. wide pavement section transitioning to a 16 ft. wide pavement section entering the interstate. The outside shoulder will vary from 6 ft. to 7 ft. depending on the MSE wall

location. The inside shoulder typical section is 4 ft. wide. The new ramp B (NB exit) at Meredith Drive typical section is 16 ft. widening to 36 ft. at the terminal. The outside shoulder widths vary from 6 ft. to 7 ft. to account for the MSE wall locations. The inside shoulder is 4 ft. wide. Ramps A (WB exit), C (SB entrance), and D (EB entrance) at IA 141 have typical sections of 16 ft. entering and exiting the interstate with 6 ft. outside and 4 ft. inside partial depth shoulders. The IA 141 ramp B (flyover) has a pavement width of 24 ft. with 8 ft. inside and 4 ft. outside shoulders. The shoulders widths are reversed from standard design practice to allow additional horizontal sight distance.

This 1.8 mile segment between the interchanges will be priority 1 access control with priority 3 on the primary highway. There are no existing entrances requiring relocation to ensure that access is maintained.

It was recommended by the Office of Bridges and Structures earlier during the Field Reconnaissance Exam meeting on October 13, 2015 to replace a minimum 2 to 3 sections of the existing roadway pipes requiring extension in order to tie those sections of pipe together. It was decided during the D2 Field Exam meeting to reduce that to just one (1) section of pipe inward from the existing aprons to minimize impacts to the existing shoulder and existing traffic. If during construction further sections of pipe inward along the pipe run are required then field adjustments can be made to replace those damaged sections.

The interstate has existing rumble strips along the shoulders. The median rumble strips will be temporarily removed or covered during the paving construction year to allow traffic to travel on the inside shoulder and decrease noise concerns.

There appears to be many utility impacts along the corridor. The most noticeable impacts are to a high pressure gas line and a transmission line that parallel IA 141 on the west side. The transmission line crosses over the interstate on the west side of the bridges crossing IA 141. The D2 plans will be provided to the utility owner of the transmission line and coordination will begin in February 2016. There are no current plans to realign 141 Ramp B (flyover) in the area of this transmission line.

IA 141 Ramp B bridge over I-80/35 will provide a vertical clearance of approximately 17.17 ft. Interchange bridges at Meredith Drive and 100th Street Interchange will maintain approximately 16.70 ft. of vertical clearance once the widening is completed. The bridges at the interchanges of Douglas Avenue and 86th Street are not affected by this project. The vertical clearance of the dual I-80/35 bridges at IA 141 exceeds the minimum 16.5' (approximately 23.0 ft.).

During construction I-80/35 traffic in both the NB and SB directions will be maintained at all time during daytime hours. Lane closures will be only allowed between the hour of midnight and 5:00 am. This project is intended to be a 2 year project with grading the first year (along with some minor paving sections), followed by grading and paving in the second year. The bridge pier construction will begin in the first year and continue through the winter months with completion of the entire bridge in the second year.

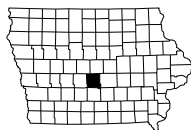
UNKNOWN PAVEMENT - GRADE AND NEW
IM-080-3(178)127--13-77

POLK CO.

LETTING DATE
 XX

INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	Title Sheets
A.1	Title Sheet
A.2	Location Map Sheet
B Sheets	Typical Cross Sections and Details
B.1 - 19	Typical Cross Sections and Details
D Sheets	Mainline Plan and Profile Sheets
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - 5	I-35/80
E Sheets	Side Road Plan and Profile Sheets
* E.1 - 4	IA 141
F Sheets	Detour or Temporary Pavement Sheets
* F.1 - 6	Detour Plan and Profile Sheets
G Sheets	Survey Sheets
G.1 - 2	Reference Ties and Bench Marks
G.3 - 6	Horizontal Control Tab. & Super for all Alignments
J Sheets	Traffic Control and Staging Sheets
* J.1	Traffic Control Plan
* J.1	Staging Notes Stage
* J.2	Traffic Control & Staging Legend & Symbol Info. Sheet
* J.3 - 5	Staging Typical Cross Sections and Details
* J.6 - 19	Staging and Traffic Control Sheets Stage 1
* J.20 - 33	Staging and Traffic Control Sheets Stage 2A
* J.34 - 47	Staging and Traffic Control Sheets Stage 2B
K Sheets	Interchange Sheets
* K.1 - 5	Interchange Layout Sheets
* K.6	Douglas RAMP A Plan and Profile Sheets
* K.7	Douglas RAMP D Plan and Profile Sheets
* K.8	Meredith RAMP B Plan and Profile Sheets
* K.9	Meredith RAMP C Plan and Profile Sheets
* K.10	IA 141 RAMP A Plan and Profile Sheets
* K.11 - 12	IA 141 RAMP B Plan and Profile Sheets
* K.13	IA 141 RAMP C Plan and Profile Sheets
* K.14	IA 141 RAMP D Plan and Profile Sheets
N Sheets	Traffic Signal and Signing Sheets
N.1	Traffic Signal Sheets "Mainline or Side Road Name"
V Sheets	Bridge and Culvert Situation Plans
V.1 - 7	Bridge and Culvert Situation Plans
V.8 - 14	MSE Wall Plan and Profile Sheets
W Sheets	Mainline Cross Sections
W.1	Cross Sections Legend & Symbol Information Sheet
W.2 - 73	Mainline Cross Sections
X Sheets	Side Road Cross Sections
X.1 - 5	IA 141_S Cross Sections
X.10 - 16	IA 141_N Cross Sections
Y Sheets	Ramp Cross Sections
Y.1 - 6	Douglas RAMP A Cross Sections
Y.10 - 11	Douglas RAMP D Cross Sections
Y.20 - 29	Meredith RAMP B Cross Sections
Y.30 - 38	Meredith RAMP C Cross Sections
Y.40 - 53	IA 141 RAMP A Cross Sections
Y.60 - 68	IA 141 RAMP B Cross Sections
Y.70 - 74	IA 141 RAMP C Cross Sections
Y.80 - 94	IA 141 RAMP D Cross Sections

* Color Plan Sheets



Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

POLK COUNTY

UNKNOWN PAVEMENT - GRADE AND NEW

Douglas Ave to E of 100th St,
includes the IA141 Interchange, in Urbandale

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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



NO MILEAGE SUMMARY

For Project Location Map
Refer to Sheet A.2

DESIGN DATA INTERSTATE			
2012	AADT	98,500	V.P.D.
2040	AADT	154,000	V.P.D.
2040	DHV	16,200	V.P.H.
	TRUCKS	17	%
	Total		
	Design ESALs	--	

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

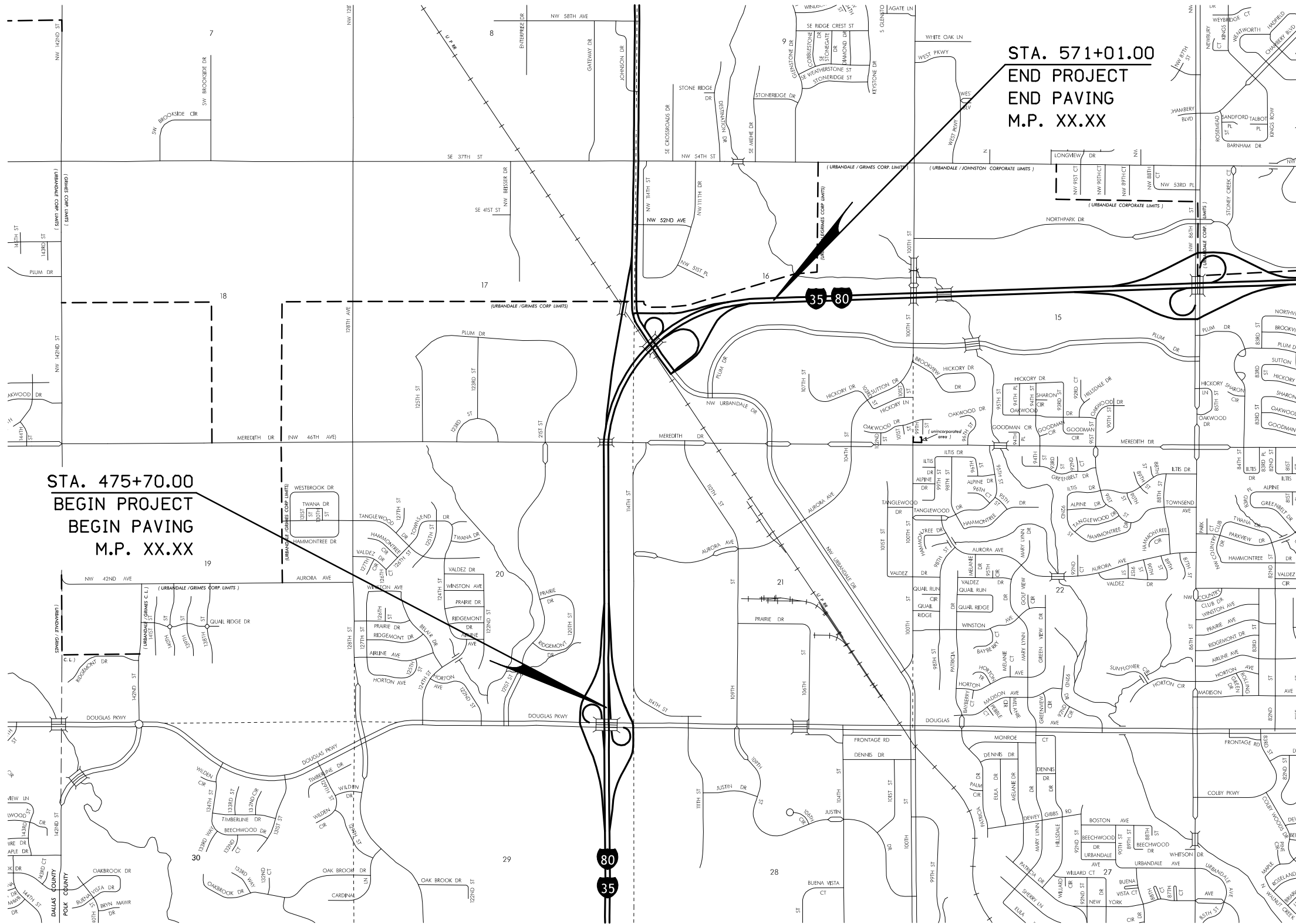
PRELIMINARY PLANS

Subject to change by final design.

D2 PLAN - January 11, 2016

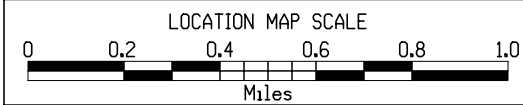
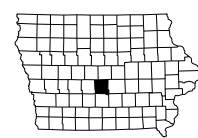
REVISIONS	TOTAL
	XX
PROJECT IDENTIFICATION NUMBER	
13-77-080-050	
PROJECT NUMBER	
IM-080-3(178)127--13-77	
R.O.W. PROJECT NUMBER	
IMN-080-3(188)127--0E-77	

R-26W R-25W



T-79N

T-79N



R-26W R-25W

- Any new items that should be included and/or any old items that should be removed since the preliminary data was obtained?

- Do profile grades and horizontal alignments fit terrain?

- Drainage:
Does the PGL provide adequate positive drainage?

Does drainage effect adjacent property?

Are the proposed drainage structures satisfactory/condition of the structures being extended?

Do drainage structures need provisions for the future lowering?

Are ditches satisfactory?

Do any areas appear to need intercepting ditches?

Are any "letdown" structures are needed?

Are channel changes warranted?

- Traffic control/staging concept:
Are any additional measures required to mitigate traffic congestion?

Is project constructible as staged? (Discuss the traffic control measures needed)

Review whether sideroads/ramps need to be kept open or if closures are necessary.

Discuss proposed detours.

Review winter carry over of traffic control in the construction zone.

Who will be responsible for maintaining the traffic control during this time period?

- Any areas that need special attention for soil stability?

- Are there any areas requiring special erosion control work during grading?

- Are there trees or similar sensitive areas which can be saved?

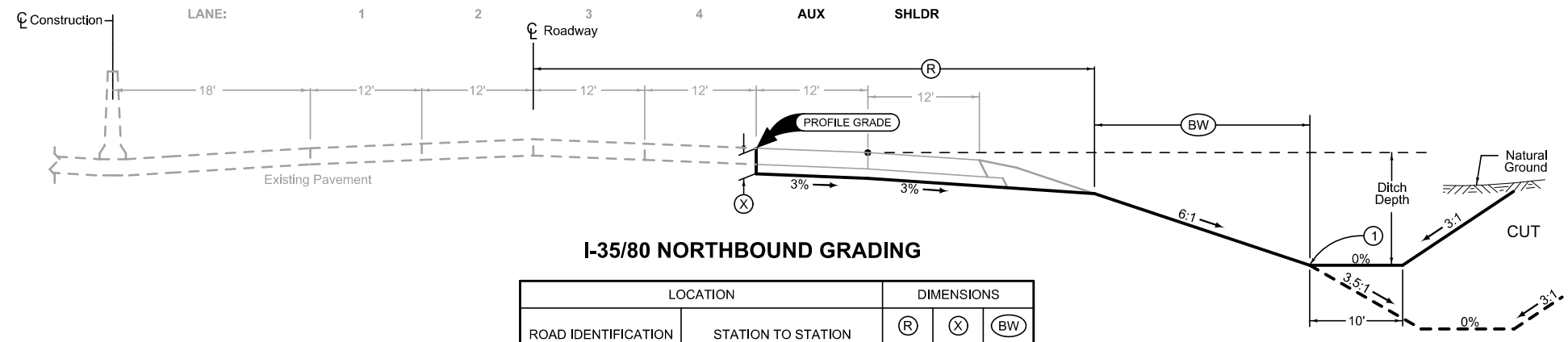
- Are there impacts to any ponds or drainage ditches that need to be considered?

- Review the need for shielding obstacles, steep embankments, or other areas of concern. Review flattening foreslopes and extending culverts to eliminate the use of guardrail.

- Review disposition of removal items such as pavement (will it be used as subbase?), bridges, culverts, guardrail, etc.

- Review the fencing requirements.

- Review existing lighting.



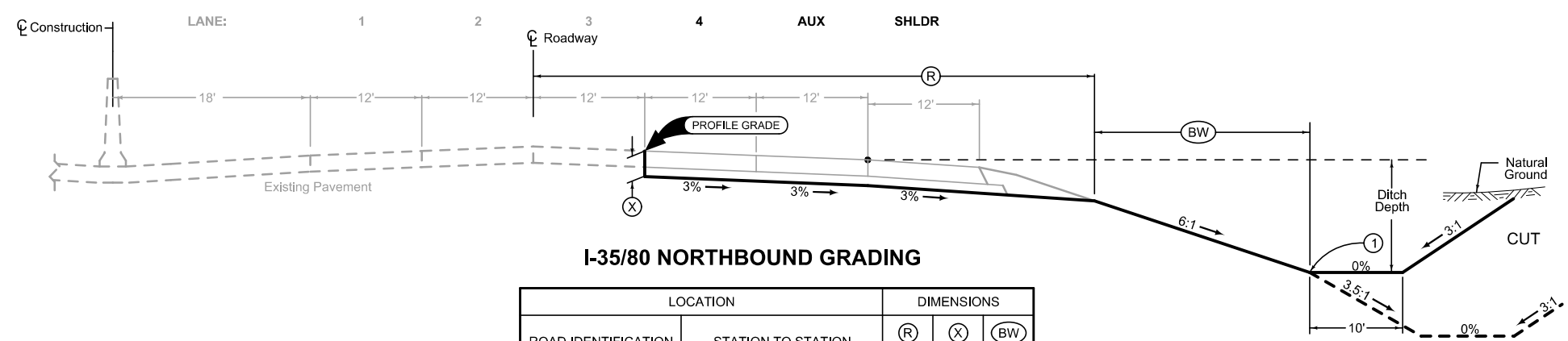
I-35/80 NORTHBOUND GRADING

ROAD IDENTIFICATION	LOCATION		DIMENSIONS		
	STATION TO STATION		(R) Feet	(X) Inches	(BW) Feet
I-35/80 NB	481+75.00	485+60.28	X	X	X
I-35/80 NB	531+38.41	544+45.88	X	X	X
I-35/80 NB	546+95.93	562+80.00	X	X	X

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

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

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



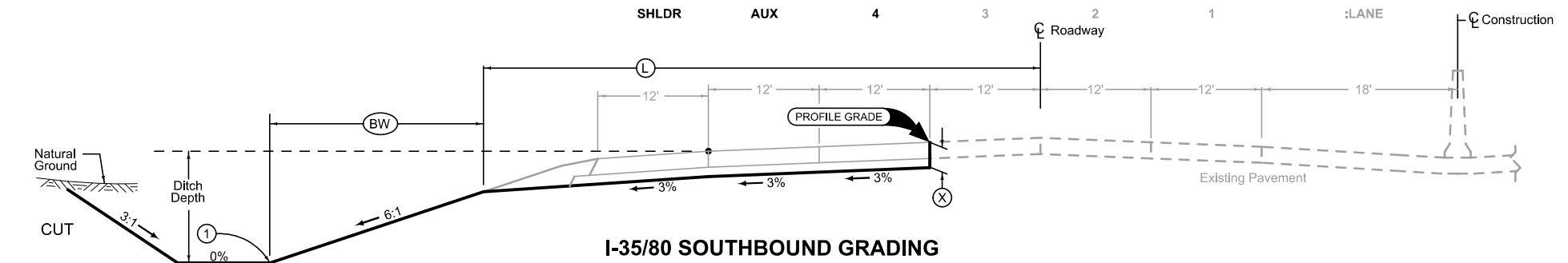
I-35/80 NORTHBOUND GRADING

ROAD IDENTIFICATION	LOCATION		DIMENSIONS		
	STATION TO STATION		(R) Feet	(X) Inches	(BW) Feet
I-35/80 NB	490+80.00	507+75.00	X	X	X
I-35/80 NB	513+75.00	523+75.00	X	X	X
I-35/80 NB	562+80.00	571+01.16	X	X	X

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

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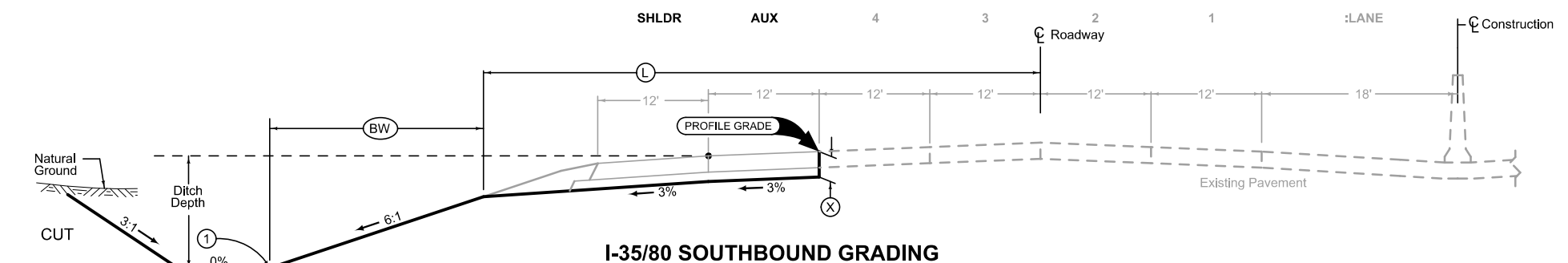
I-35/80 SOUTHBOUND GRADING

ROAD IDENTIFICATION	LOCATION		DIMENSIONS		
	STATION TO STATION		L Feet	X Inches	BW Feet
I-35/80 SB	497+75.00	503+50.00	X	X	X
I-35/80 SB	515+80.00	520+25.00	X	X	X

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

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



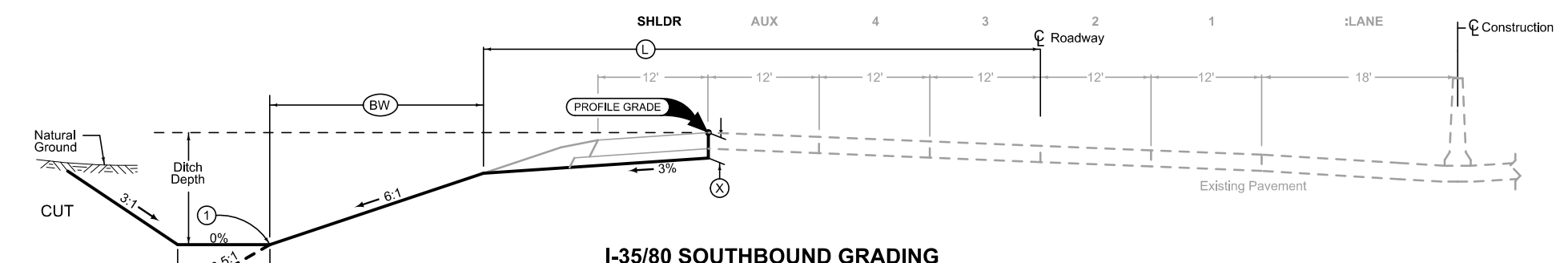
I-35/80 SOUTHBOUND GRADING

ROAD IDENTIFICATION	LOCATION		DIMENSIONS		
	STATION TO STATION		L Feet	X Inches	BW Feet
I-35/80 SB	520+25.00	526+82.71	X	X	X
I-35/80 SB	531+32.11	535+00.00	X	X	X
I-35/80 SB	547+18.99	558+27.12	X	X	X

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I-35/80 SOUTHBOUND GRADING

ROAD IDENTIFICATION	LOCATION		DIMENSIONS		
	STATION TO STATION		L Feet	X Inches	BW Feet
I-35/80 SB	535+00.00	544+76.07	X	X	X

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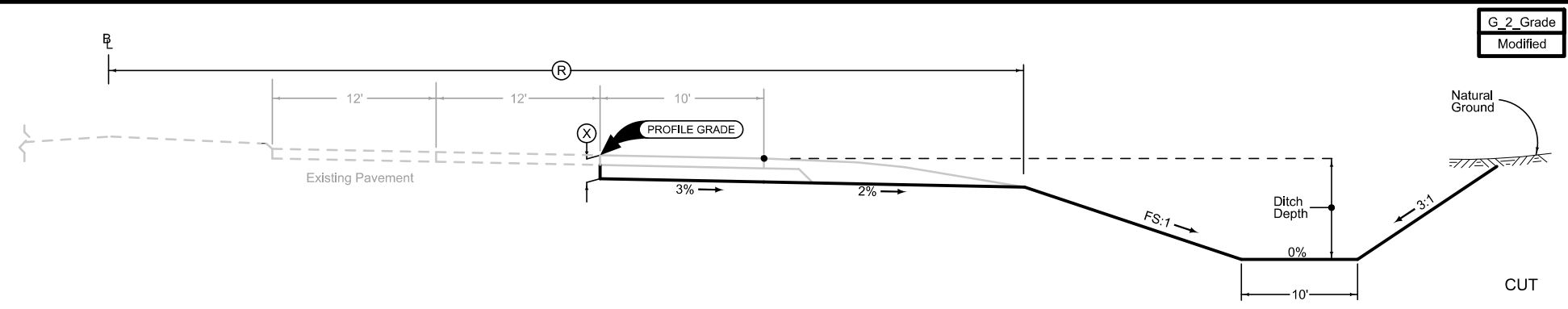
See Plan & Profile sheets and cross sections for additional details of ditches and backslopes.

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

LOCATION			DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION		(R)	(X)		FS
			Feet	Inches		
IA 141 NB	18+60.91	20+85.21	X	X	X	X

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

See plan & profile sheets and cross sections for additional details of ditches and backslopes.



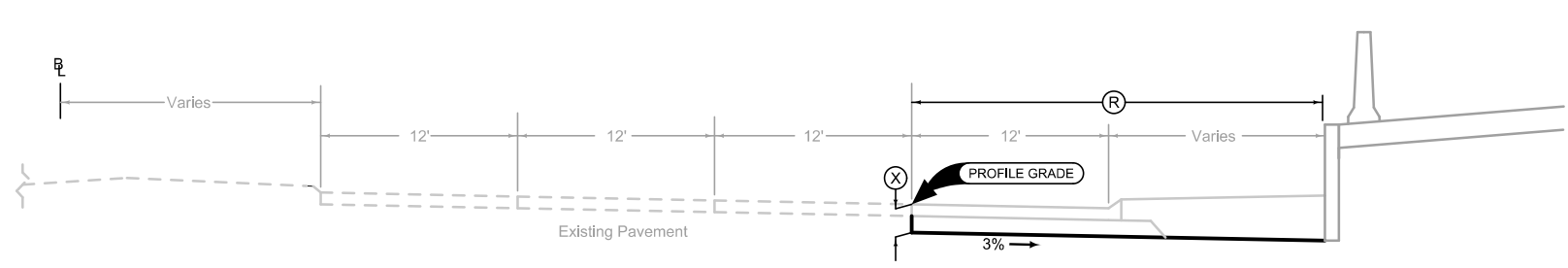
IA 141 NORTHBOUND GRADING

G_2_Grade
Modified

LOCATION			DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION		(R)	(X)		FS
			Feet	Inches		
IA 141 NB	34+50.00	36+10.00	X	X	X	X

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

See plan & profile sheets and cross sections for additional details of ditches and backslopes.



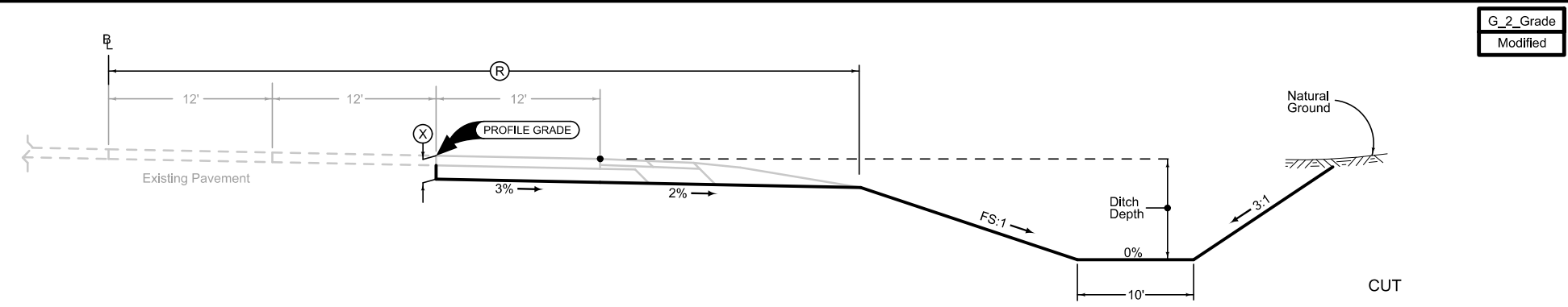
IA 141 NORTHBOUND GRADING

G_2_Grade
Modified

LOCATION			DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION		(R)	(X)		FS
			Feet	Inches		
IA 141 NB	41+32.40	45+29.07	X	X	X	X
IA 141 NB	53+72.07	57+74.07	X	X	X	X

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

See plan & profile sheets and cross sections for additional details of ditches and backslopes.



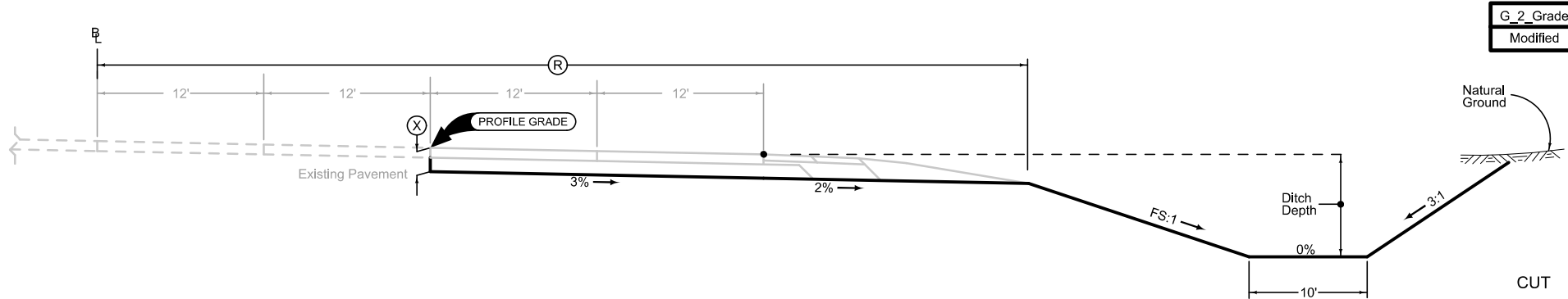
IA 141 NORTHBOUND GRADING

G_2_Grade
Modified

LOCATION			DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION		(R)	(X)	(X)	FS
			Feet	Inches		
IA 141 NB	47+09.07	51+82.44	X	X	X	X

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

See plan & profile sheets and cross sections for additional details of ditches and backslopes.



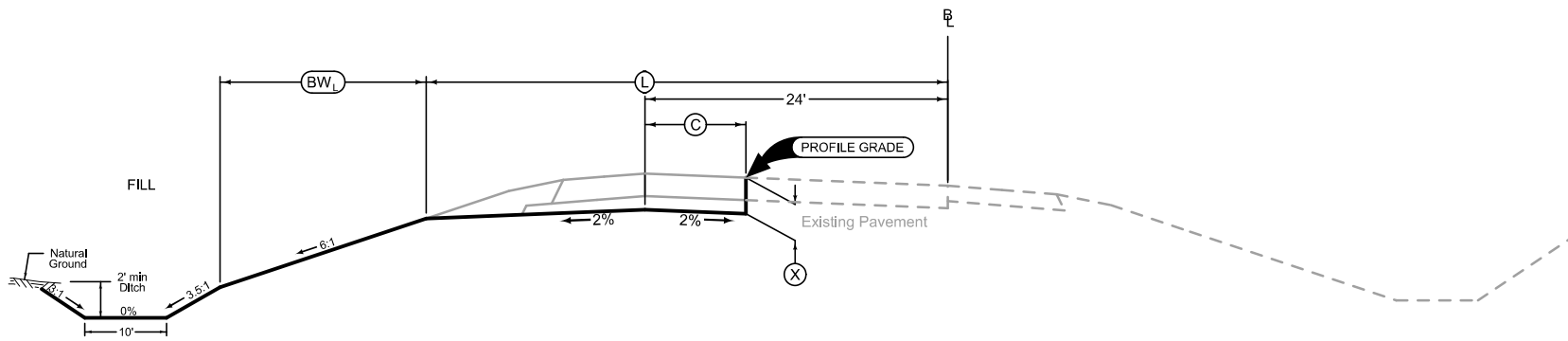
IA 141 NORTHBOUND GRADING

G_2_Grade
Modified

LOCATION				DIMENSIONS			
INTERCHANGE	RAMP	STATION TO STATION		(L)	(C)	(X)	(BW _L)
				Feet	Feet	Inches	Feet
Douglas	A	1574+95.28	1585+79.06	X	8	X	X

Section view is in direction of traffic.

Normal sections shown may be appropriately modified for areas specifically designated by the Engineer such as intersections or super-elevated curves.



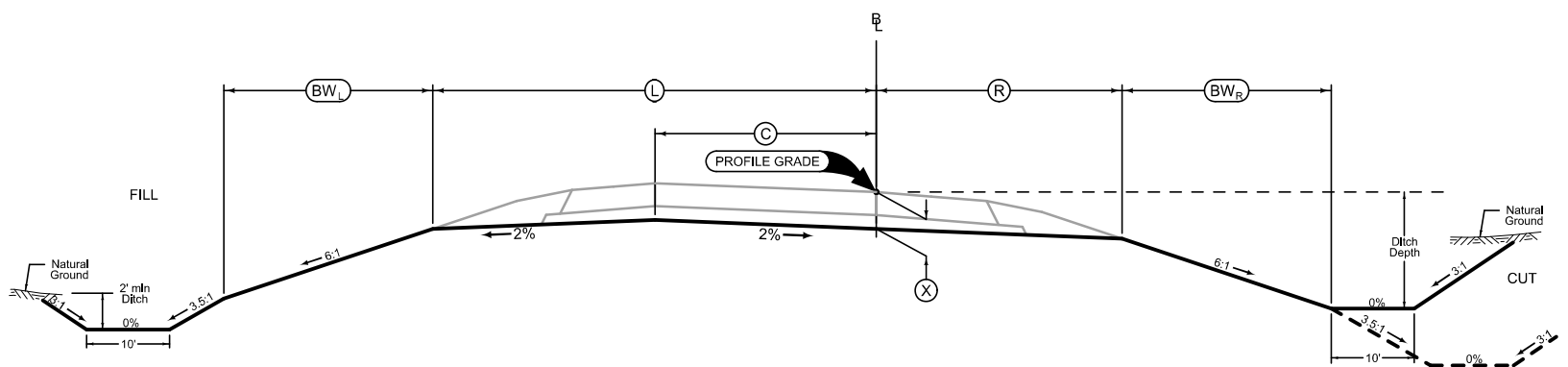
RAMP GRADING

G_1R_Grade
Modified

LOCATION				DIMENSIONS					
INTERCHANGE	RAMP	STATION TO STATION		(L)	(R)	(C)	(X)	(BW _L)	(BW _R)
				Feet	Feet	Feet	Inches	Feet	Feet
Douglas	D	4584+75.00	4585+61.02	X	X	16	X	X	X
Meredith	B	2513+75.00	2515+60.00	X	X	16	X	X	X
Meredith	C	3515+78.68	3517+00.00	X	X	16	X	X	X
IA 141	A	1545+97.92	1551+55.00	X	+12	24	X	X	X
IA 141	A	1553+35.00	1558+13.87	X	X	16	X	X	X
IA 141	B	2531+15.84	2536+98.75	X	X	24	X	X	X
IA 141	C	3531+44.27	3536+55.24	X	X	24	X	X	X
IA 141	D	4558+19.37	4562+89.38	X	X	16	X	X	X

Section view is in direction of traffic.

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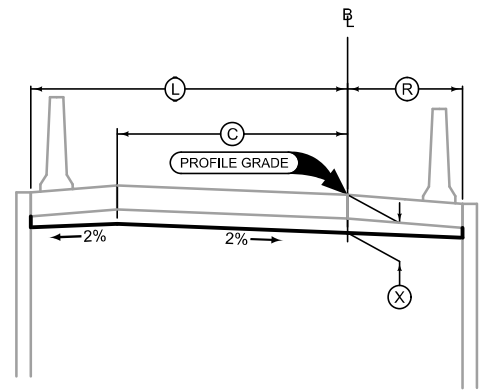


RAMP GRADING

G_1R_Grade
04-15-14

LOCATION				DIMENSIONS			
INTERCHANGE	RAMP	STATION TO STATION		(L) Feet	(R) Feet	(C) Feet	(X) Inches
Meredith	B	2518+71.00	2524+83.79	4	6	36	X
Meredith	C	3521+50.00	3524+44.39	4	6	16	X
IA 141	B	2562+27.68	2566+25.00	8	4	24	X

G_1R_Grade
Modified

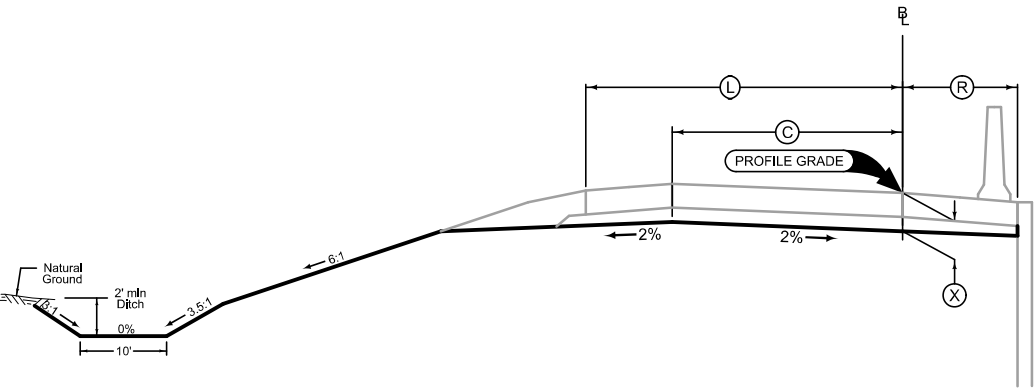


RAMP GRADING

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

LOCATION				DIMENSIONS			
INTERCHANGE	RAMP	STATION TO STATION		(L) Feet	(R) Feet	(C) Feet	(X) Inches
Meredith	B	2515+60.00	2517+51.00	4	6	16	X
Meredith	C	3517+00.00	3521+50.00	4	6	16	X

G_1R_Grade
Modified

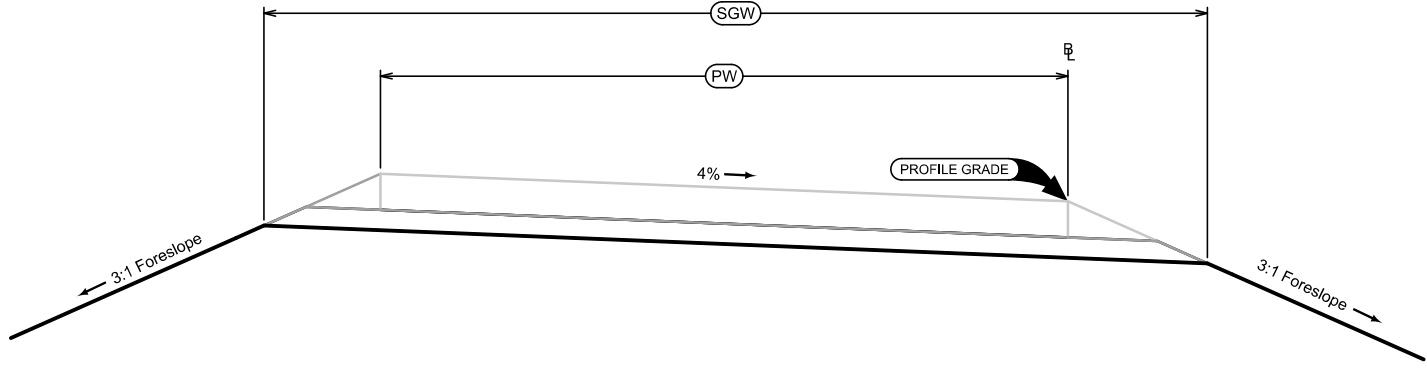


RAMP GRADING

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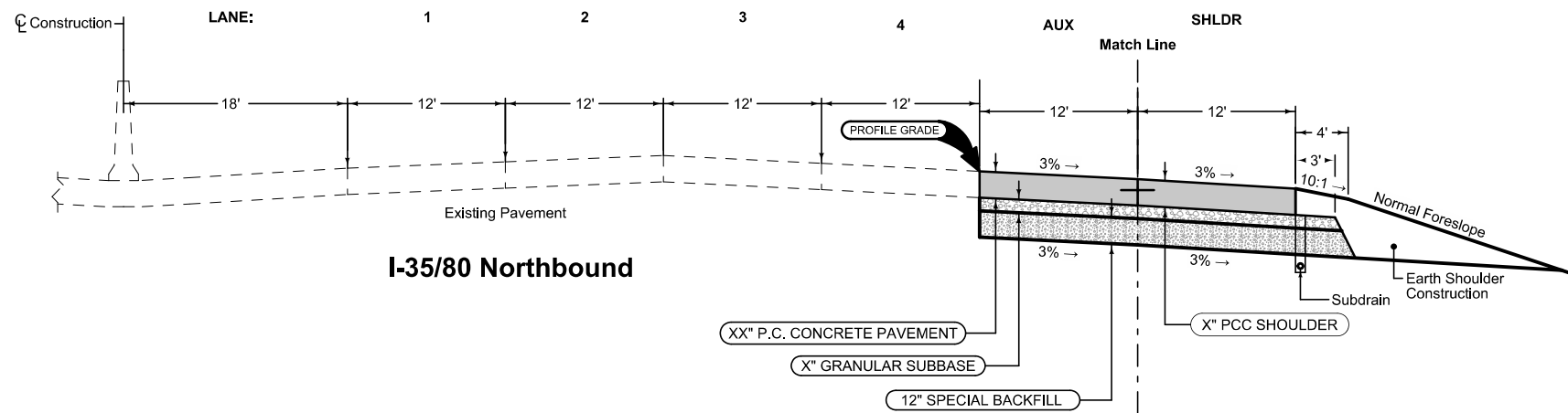
LOCATION			DIMENSIONS		6" Special Backfill Tons/Station	Earth Shoulder Construction Station
ROAD IDENTIFICATION	STATION TO STATION		(SGW) Feet	(PW) Feet		
Douglas Ramp A	13+47.07	15+97.83		16		
Douglas Ramp D	12+47.16	16+66.13		16		
IA 141 Ramp A	23+55.49	27+26.46		16		
IA 141 Ramp C	26+39.98	31+24.72		16		
IA 141 Ramp D	21+86.18	27+63.23		16		

D_Detour
Modified



DETOUR GRADING

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



I-35/80 Northbound

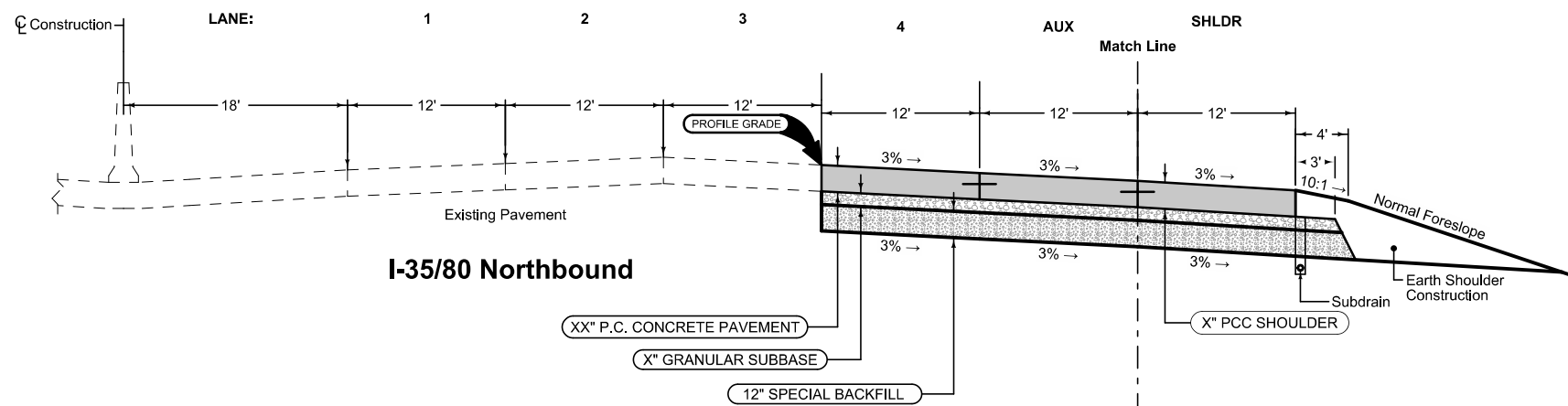
Mainline Jointing:
Transverse joints: CD at 20' spacing

Modified	
BEGIN STATION	END STATION
481+75.00	485+60.28
531+38.41	544+45.88
546+95.93	562+80.00

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 20' spacing

6D_Closed_P_FullPCC_04-19-11	
BEGIN STATION	END STATION
481+75.00	485+60.28
531+38.41	544+45.88
546+95.93	562+80.00



I-35/80 Northbound

Mainline Jointing:
Transverse joints: CD at 20' spacing

Modified	
BEGIN STATION	END STATION
490+80.00	507+75.00
513+75.00	523+75.00
562+80.00	571+01.16

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 20' spacing

6D_Closed_P_FullPCC_04-19-11	
BEGIN STATION	END STATION
490+80.00	507+75.00
513+75.00	523+75.00
562+80.00	571+01.16

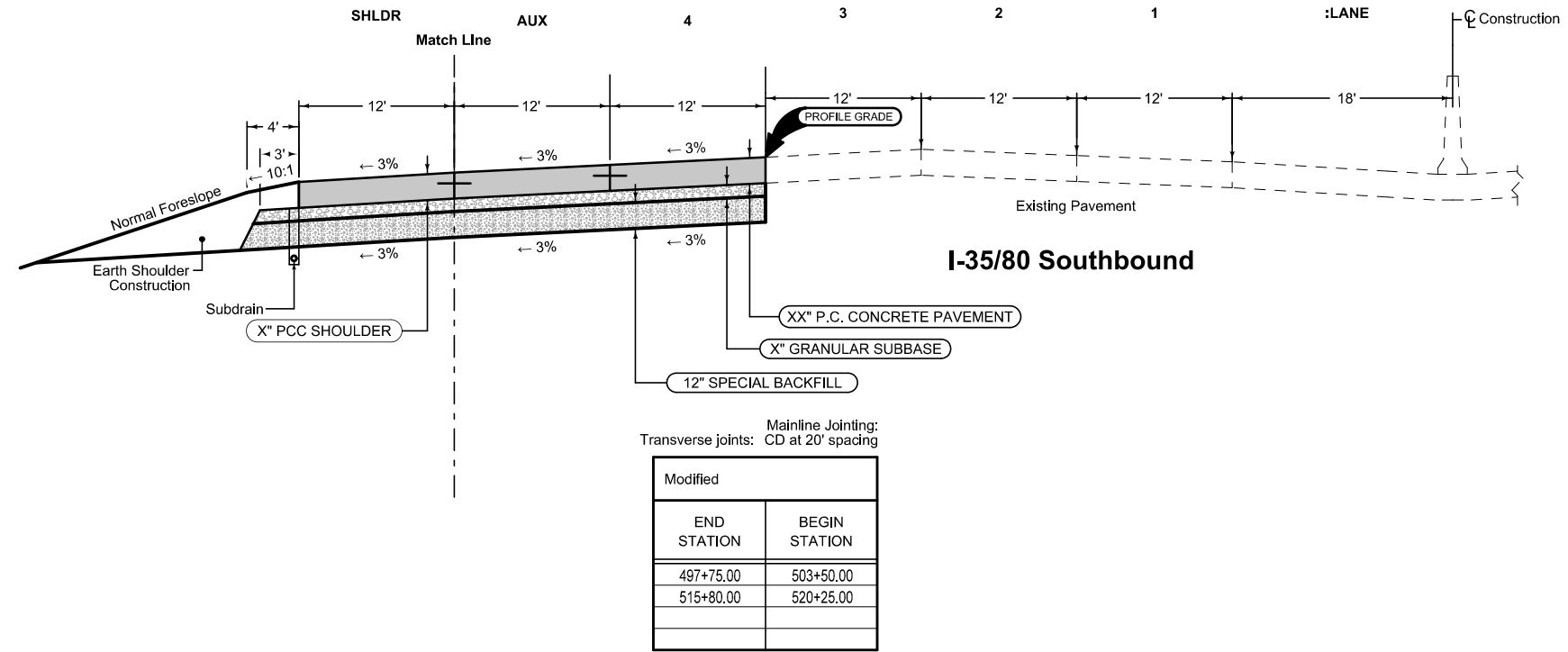
See Tab 100-24 or 100-25 for pavement quantities.
See Tab 112-9 for shoulder quantities.

I-35/80

Full Depth PCC Shoulder

Shoulder Jointing:
 Longitudinal joint: L-2 or KT-2
 Transverse joints: C at 20' spacing

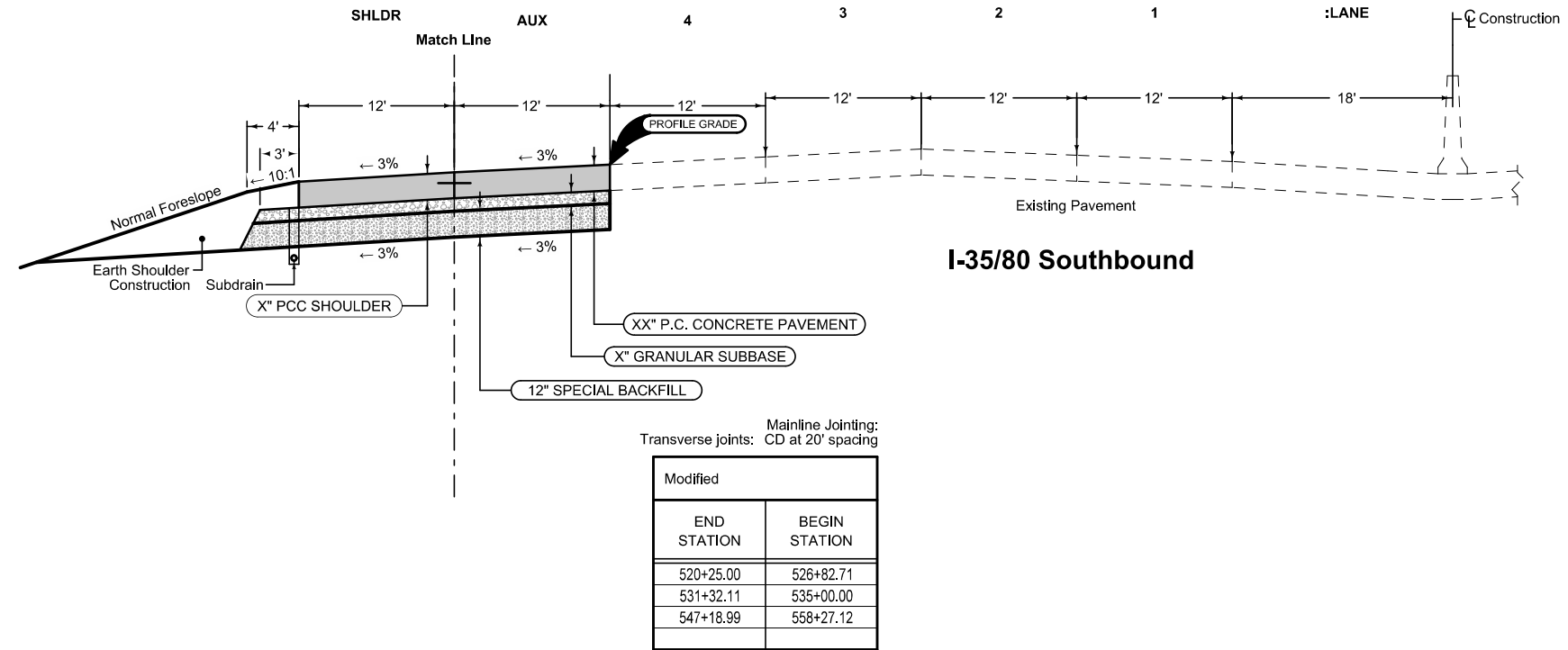
6D_Closed_P_FullPCC_04-19-11	
END STATION	BEGIN STATION
497+75.00	503+50.00
515+80.00	520+25.00



Full Depth PCC Shoulder

Shoulder Jointing:
 Longitudinal joint: L-2 or KT-2
 Transverse joints: C at 20' spacing

6D_Closed_P_FullPCC_04-19-11	
END STATION	BEGIN STATION
520+25.00	526+82.71
531+32.11	535+00.00
547+18.99	558+27.12



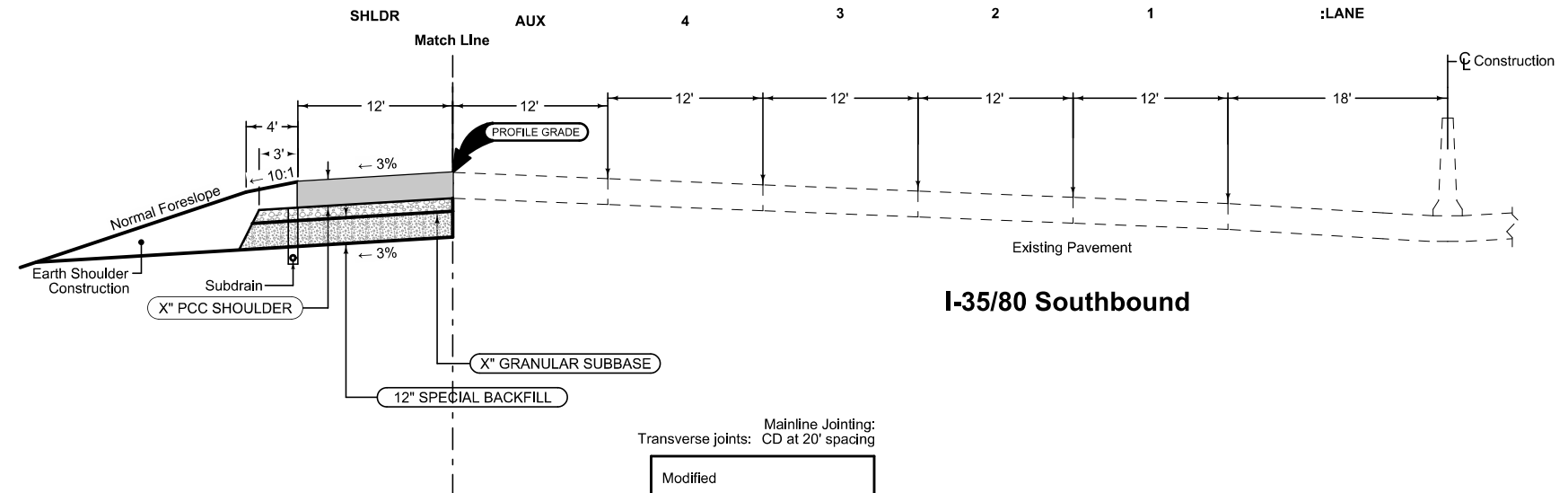
See Tab 100-24 or 100-25 for pavement quantities.
 See Tab 112-9 for shoulder quantities.

I-35/80

Full Depth PCC Shoulder

Shoulder Jointing:
 Longitudinal joint: L-2 or KT-2
 Transverse joints: C at 20' spacing

6D_Closed_P_FullPCC_04-19-11	
END STATION	BEGIN STATION
535+00.00	544+76.07



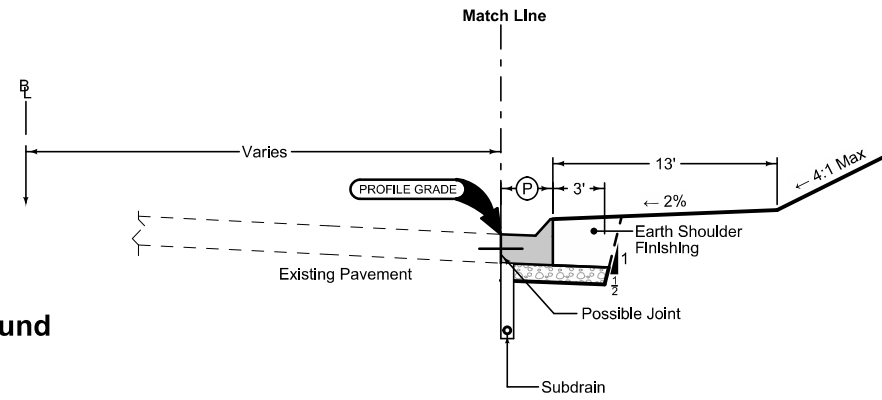
Mainline Jointing:
 Transverse joints: CD at 20' spacing

Modified	
END STATION	BEGIN STATION
535+00.00	544+76.07

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

I-35/80

IA 141 Northbound



Curbed Shoulder

Shoulder Jointing:
 Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

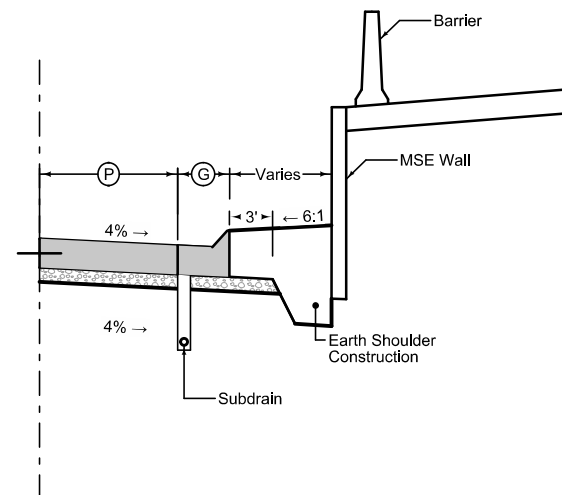
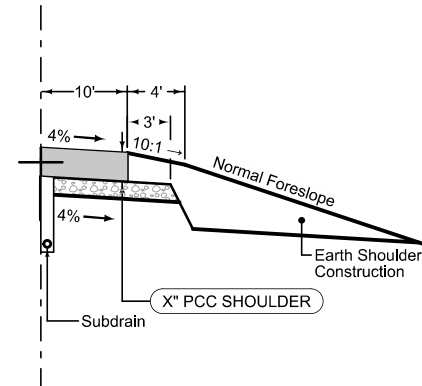
Single pour: L-2
 Staged: KT-2
 Transverse: C at 20' spacing

STATION TO STATION		(P) Feet	Curb Type See PV-102
11+35.10	12+58.00	2	
32+90.15	34+50.00	2	

Full Depth PCC Shoulder

Shoulder Jointing:
 Longitudinal joint: L-2 or KT-2
 Transverse joints: C at 20' spacing

END STATION	BEGIN STATION
18+60.91	20+85.21



Full Depth PCC Shoulder / Curbed Shoulder

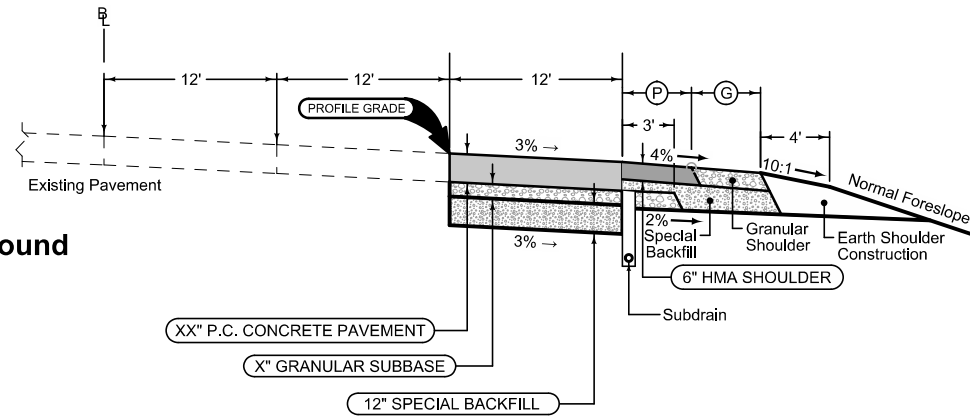
Shoulder Jointing:
 Longitudinal joint: B

STATION TO STATION		(P) Feet	(G) Feet
34+50.00	35+85.49	10.5	2

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

IA 141

IA 141 Northbound



Mainline Jointing:
Transverse joints: CD at 20' spacing

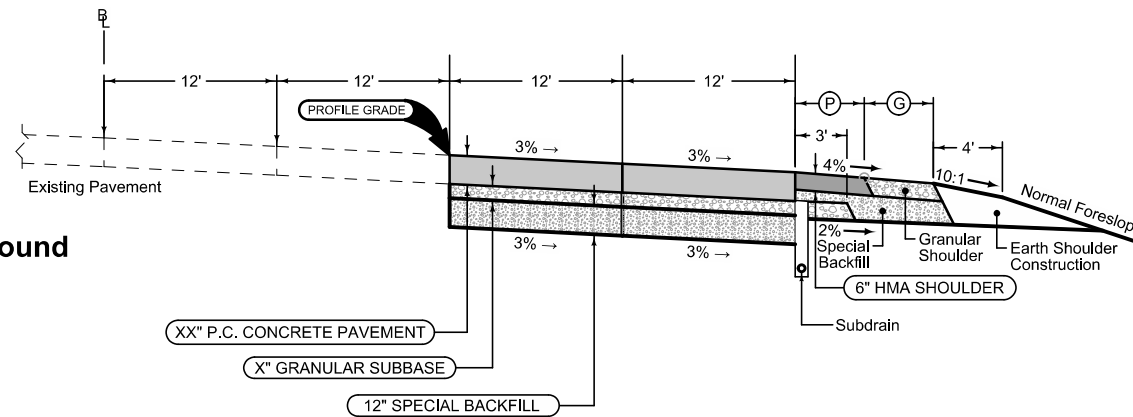
Modified	
BEGIN STATION	END STATION
41+32.40	45+29.07
53+72.07	61+74.18

Combination Shoulder

Shoulder Jointing:
Longitudinal joint: B

2_C_		
10-15-13		
STATION TO STATION	(P) Feet	(G) Feet
41+32.40	45+29.07	6
53+72.07	57+74.07	6

IA 141 Northbound



Mainline Jointing:
Transverse joints: CD at 20' spacing

Modified	
BEGIN STATION	END STATION
47+09.07	51+82.44

Combination Shoulder

Shoulder Jointing:
Longitudinal joint: B

2_C_		
10-15-13		
STATION TO STATION	(P) Feet	(G) Feet
47+09.07	51+82.44	6

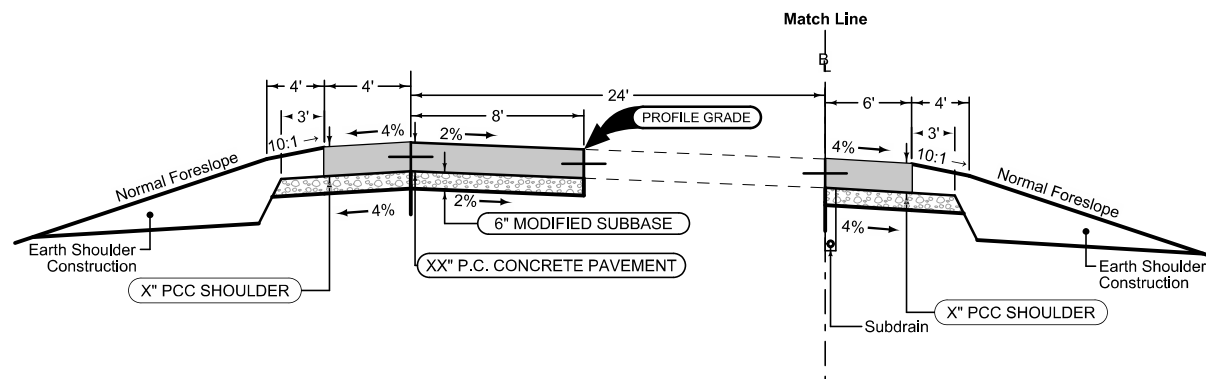
See Tab 100-24 or 100-25 for pavement quantities.
See Tab 112-9 for shoulder quantities.

IA 141

Full Depth PCC Shoulder

Shoulder Jointing:
 Longitudinal joint: L-2 or KT-2
 Transverse joints: C at 20' spacing

6D_Closed_P_FullPCC_04-19-11	
END STATION	BEGIN STATION
1585+79.06	1574+95.28



Section shown in the direction of traffic.

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

Modified	
END STATION	BEGIN STATION
1585+79.06	1574+95.28

Full Depth PCC Shoulder

Shoulder Jointing:
 Longitudinal joint: L-2 or KT-2
 Transverse joints: C at 20' spacing

6D_Closed_P_FullPCC_04-19-11	
END STATION	BEGIN STATION
1585+79.06	1580+43.00

Full Depth PCC Shoulder

Shoulder Jointing:
 Longitudinal joint: L-2 or KT-2
 Transverse joints: C at 20' spacing

6D_Closed_P_FullPCC_04-19-11	
END STATION	BEGIN STATION
1588+45.00	1586+18.30

Temporary shoulder strengthening for detour traffic. To be removed with future permanent construction.

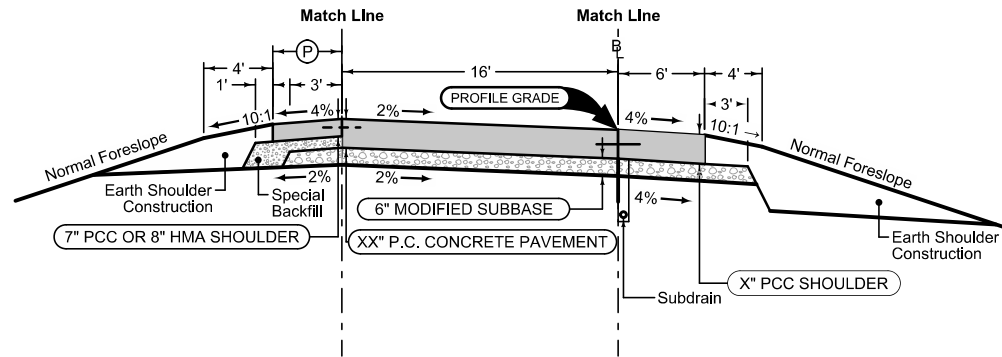
See Tab 100-24 or 100-25 for pavement quantities.
 See Tab 112-9 for shoulder quantities.

DOUGLAS RAMP A

Paved Shoulder Alternates

PCC Shoulder Jointing:
 Longitudinal joint: BT-1 or BT-5
 Transverse joints: C at 20' spacing
 HMA Shoulder Jointing:
 Longitudinal joint: B

1R_P_ALT_ 10-21-14		
BEGIN STATION	END STATION	(P) Feet
4584+75.00	4585+61.02	4



Section shown in the direction of traffic.

Ramp Jointing:
 Transverse joints: CD at 20' spacing.

1RP_ 10-19-10	
BEGIN STATION	END STATION
4584+75.00	4585+61.02

Full Depth PCC Shoulder

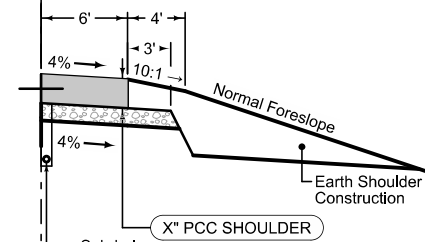
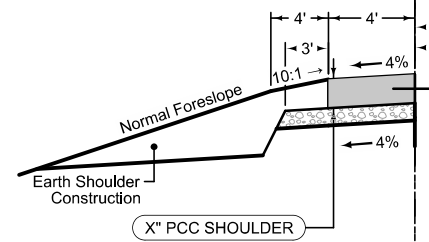
Shoulder Jointing:
 Longitudinal joint: L-2 or KT-2
 Transverse joints: C at 20' spacing

6D_Closed_P_FullPCC_ 04-19-11	
BEGIN STATION	END STATION
4583+30.00	4585+61.02

Full Depth PCC Shoulder

Shoulder Jointing:
 Longitudinal joint: L-2 or KT-2
 Transverse joints: C at 20' spacing

6D_Closed_P_FullPCC_ 04-19-11	
BEGIN STATION	END STATION
4575+80.00	4576+70.00



Full Depth PCC Shoulder

Shoulder Jointing:
 Longitudinal joint: L-2 or KT-2
 Transverse joints: C at 20' spacing

6D_Closed_P_FullPCC_ 04-19-11	
BEGIN STATION	END STATION
4585+61.02	4586+90.00

Temporary shoulder strengthening for detour traffic. To be removed with future permanent construction.

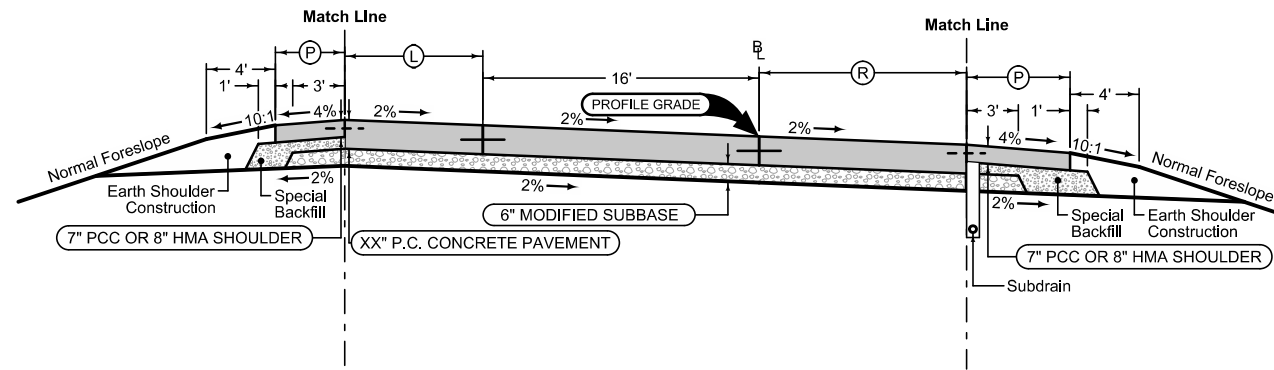
See Tab 100-24 or 100-25 for pavement quantities.
 See Tab 112-9 for shoulder quantities.

DOUGLAS RAMP D

Paved Shoulder Alternates

PCC Shoulder Jointing:
 Longitudinal joint: BT-1 or BT-5
 Transverse joints: C at 20' spacing
 HMA Shoulder Jointing:
 Longitudinal joint: B

1R_P_ALT_ 10-21-14		
BEGIN STATION	END STATION	(P) Feet
2513+75.00	2517+51.00	4



Paved Shoulder Alternates

PCC Shoulder Jointing:
 Longitudinal joint: BT-1 or BT-5
 Transverse joints: C at 20' spacing
 HMA Shoulder Jointing:
 Longitudinal joint: B

1R_P_ALT_ 10-21-14		
BEGIN STATION	END STATION	(P) Feet
2513+75.00	2515+60.00	6

Section shown in the direction of traffic.

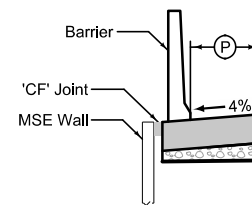
Ramp Jointing:
 Transverse joints: CD at 20' spacing.

1RP_ Modified			
BEGIN STATION	END STATION	(R)	(L)
2513+75.00	2517+51.00	0'	0'
2517+51.00	2518+71.00	0'-8"	0'-12"
2518+71.00	2524+83.79	8'	12'

Full Depth PCC Shoulder / Retaining Wall

Shoulder Jointing:
 Longitudinal joint: L-2 or KT-2
 Transverse joints: C at 20' spacing

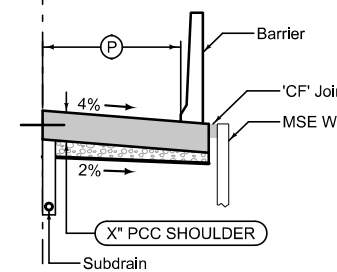
Modified		
STATION TO STATION	(P) Feet	
2517+51.00	2524+83.79	4



Full Depth PCC Shoulder / Retaining Wall

Shoulder Jointing:
 Longitudinal joint: L-2 or KT-2
 Transverse joints: C at 20' spacing

Modified		
STATION TO STATION	(P) Feet	
2515+60.00	2524+83.79	6



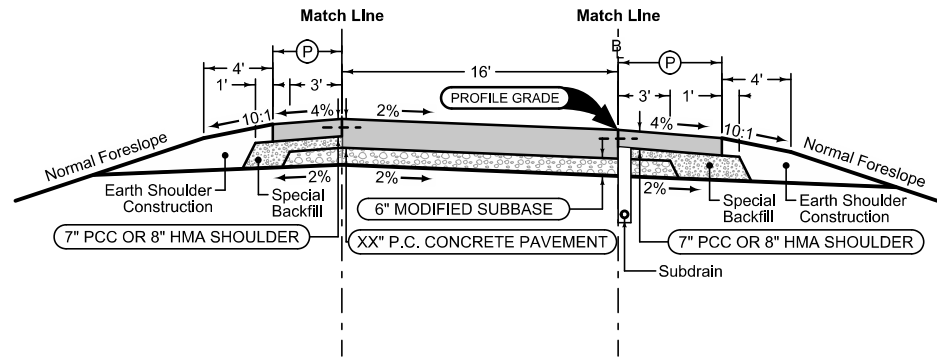
See Tab 100-24 or 100-25 for pavement quantities.
 See Tab 112-9 for shoulder quantities.

MEREDITH RAMP B

Paved Shoulder Alternates

PCC Shoulder Jointing:
 Longitudinal joint: BT-1 or BT-5
 Transverse joints: C at 20' spacing
 HMA Shoulder Jointing:
 Longitudinal joint: B

1R_P_ALT_ 10-21-14		
BEGIN STATION	END STATION	(P) Feet
3515+78.68	3521+50.00	4



Section shown in the direction of traffic.

Ramp Jointing:
 Transverse joints: CD at 20' spacing.

1RP_ 10-19-10	
BEGIN STATION	END STATION
3517+00.00	3521+50.00
3521+50.00	3524+44.39

Paved Shoulder Alternates

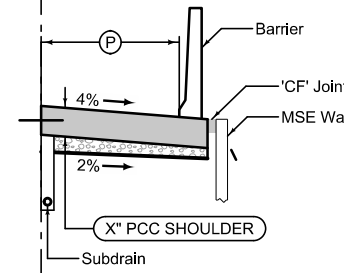
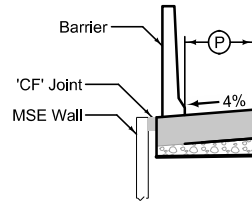
PCC Shoulder Jointing:
 Longitudinal joint: BT-1 or BT-5
 Transverse joints: C at 20' spacing
 HMA Shoulder Jointing:
 Longitudinal joint: B

1R_P_ALT_ 10-21-14		
BEGIN STATION	END STATION	(P) Feet
3515+78.68	3517+00.00	6

Full Depth PCC Shoulder / Retaining Wall

Shoulder Jointing:
 Longitudinal joint: L-2 or KT-2
 Transverse joints: C at 20' spacing

Modified		
STATION TO STATION	(P) Feet	
3521+50.00	3524+44.39	4



Full Depth PCC Shoulder / Retaining Wall

Shoulder Jointing:
 Longitudinal joint: L-2 or KT-2
 Transverse joints: C at 20' spacing

Modified		
STATION TO STATION	(P) Feet	
3517+00.00	3524+44.39	6

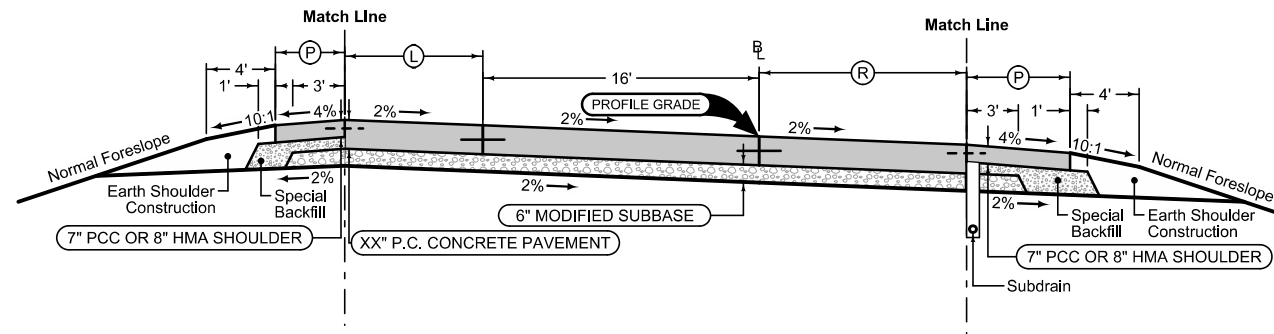
See Tab 100-24 or 100-25 for pavement quantities.
 See Tab 112-9 for shoulder quantities.

MEREDITH RAMP C

Paved Shoulder Alternates

PCC Shoulder Jointing:
 Longitudinal joint: BT-1 or BT-5
 Transverse joints: C at 20' spacing
 HMA Shoulder Jointing:
 Longitudinal joint: B

1R_P_ALT_ 10-21-14		
BEGIN STATION	END STATION	(P) Feet
1545+97.91	1558+13.87	4



Paved Shoulder Alternates

PCC Shoulder Jointing:
 Longitudinal joint: BT-1 or BT-5
 Transverse joints: C at 20' spacing
 HMA Shoulder Jointing:
 Longitudinal joint: B

1R_P_ALT_ 10-21-14		
BEGIN STATION	END STATION	(P) Feet
1545+88.34	1558+13.87	6

Section shown in the direction of traffic.

Ramp Jointing:
 Transverse joints: CD at 20' spacing.

1RP_ Modified			
BEGIN STATION	END STATION	(R)	(L)
1545+88.34	1551+55.00	12'	8'
1551+55.00	1553+35.00	12'-0"	8'-0"
1553+35.00	1558+13.87	0'	0'

See Tab 100-24 or 100-25 for pavement quantities.

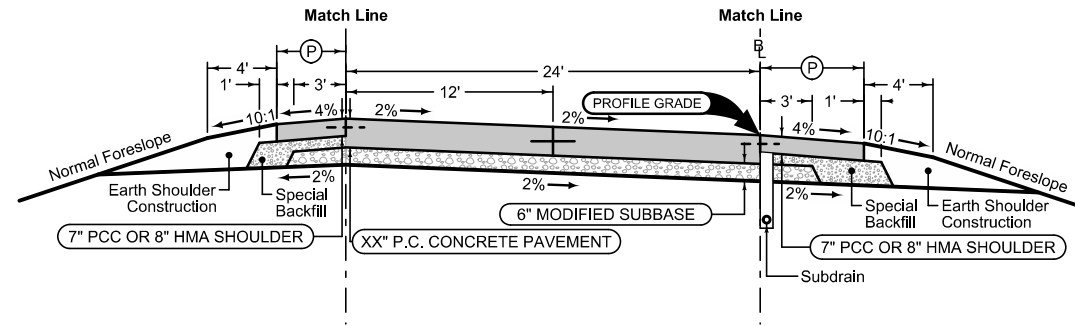
See Tab 112-9 for shoulder quantities.

141 RAMP A

Paved Shoulder Alternates

PCC Shoulder Jointing:
 Longitudinal joint: BT-1 or BT-5
 Transverse joints: C at 20' spacing
 HMA Shoulder Jointing:
 Longitudinal joint: B

1R_P_ALT_10-21-14		
BEGIN STATION	END STATION	(P) Feet
2531+15.84	2536+98.75	8



Section shown in the direction of traffic.

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

2RP_04-16-13	
BEGIN STATION	END STATION
2531+15.84	2536+98.75
2562+27.68	2566+18.78

Paved Shoulder Alternates

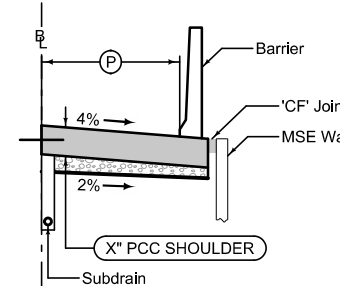
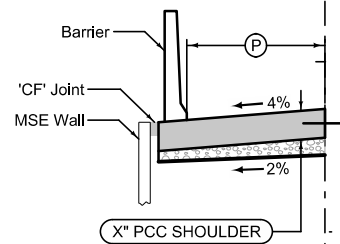
PCC Shoulder Jointing:
 Longitudinal joint: BT-1 or BT-5
 Transverse joints: C at 20' spacing
 HMA Shoulder Jointing:
 Longitudinal joint: B

1R_P_ALT_10-21-14		
BEGIN STATION	END STATION	(P) Feet
2531+15.84	2536+98.75	4

Full Depth PCC Shoulder / Retaining Wall

Shoulder Jointing:
 Longitudinal joint: L-2 or KT-2
 Transverse joints: C at 20' spacing

Modified		
STATION TO STATION	(P) Feet	
2562+27.68	2566+18.78	8



Full Depth PCC Shoulder / Retaining Wall

Shoulder Jointing:
 Longitudinal joint: L-2 or KT-2
 Transverse joints: C at 20' spacing

Modified		
STATION TO STATION	(P) Feet	
2562+27.68	2566+18.78	4

See Tab 100-24 or 100-25 for pavement quantities.

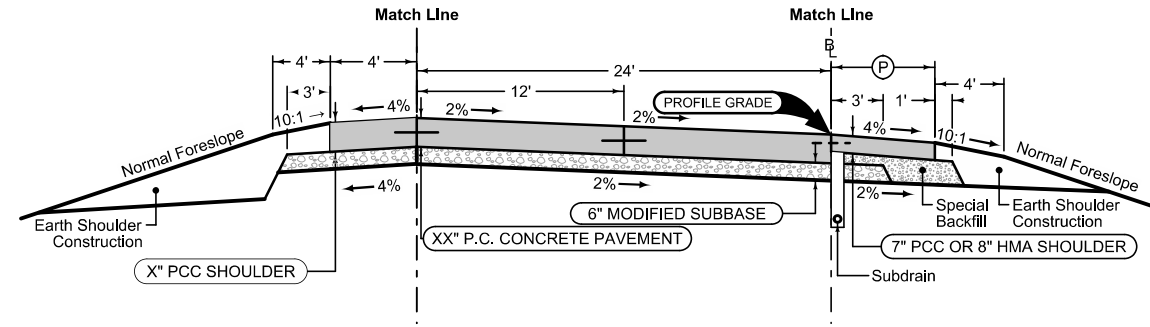
See Tab 112-9 for shoulder quantities.

141 RAMP B

Full Depth PCC Shoulder

Shoulder Jointing:
 Longitudinal joint: L-2 or KT-2
 Transverse joints: C at 20' spacing

6D_Closed_P_FullPCC_04-19-11	
BEGIN STATION	END STATION
3531+44.27	3539+80.00



Section shown in the direction of traffic.

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

2RP_04-16-13	
BEGIN STATION	END STATION
3531+44.27	3536+55.24

Paved Shoulder Alternates

PCC Shoulder Jointing:
 Longitudinal joint: BT-1 or BT-5
 Transverse joints: C at 20' spacing
 HMA Shoulder Jointing:
 Longitudinal joint: B

1R_P_ALT_10-21-14		
BEGIN STATION	END STATION	(P) Feet
3531+44.27	3536+55.24	6

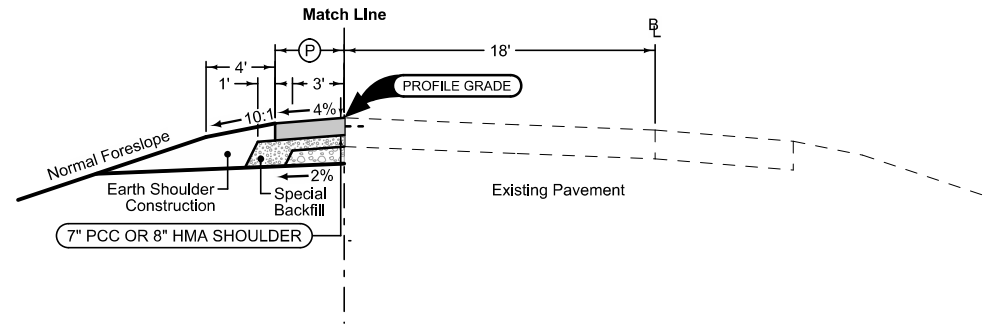
See Tab 100-24 or 100-25 for pavement quantities.
 See Tab 112-9 for shoulder quantities.

141 RAMP C

Paved Shoulder Alternates

PCC Shoulder Jointing:
 Longitudinal joint: BT-1 or BT-5
 Transverse joints: C at 20' spacing
 HMA Shoulder Jointing:
 Longitudinal joint: B

1R_P_ALT_ 10-21-14		
BEGIN STATION	END STATION	(P) Feet
4548+25.00	4552+13.00	4



Section shown in the direction of traffic.

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

Modified	
BEGIN STATION	END STATION
4548+25.00	4552+13.00

See Tab 100-24 or 100-25 for pavement quantities.

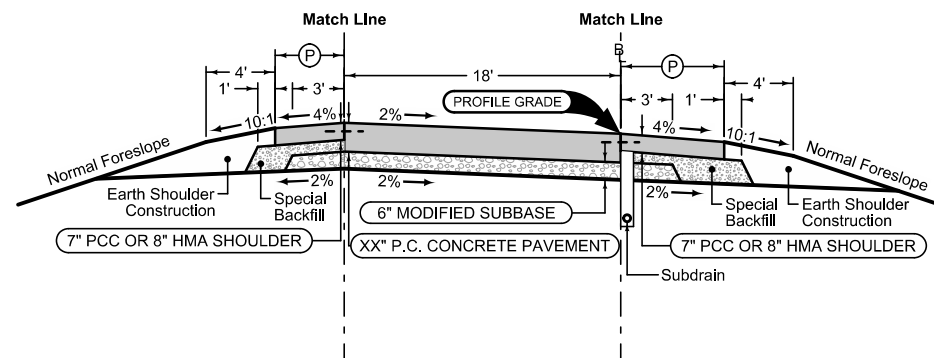
See Tab 112-9 for shoulder quantities.

141 RAMP D

Paved Shoulder Alternates

PCC Shoulder Jointing:
 Longitudinal joint: BT-1 or BT-5
 Transverse joints: C at 20' spacing
 HMA Shoulder Jointing:
 Longitudinal joint: B

1R_P_ALT_ 10-21-14		
BEGIN STATION	END STATION	(P) Feet
4558+19.37	4562+89.38	4



Section shown in the direction of traffic.

Ramp Jointing:
 Transverse joints: CD at 20' spacing.

1RP_ 10-19-10	
BEGIN STATION	END STATION
4558+19.37	4562+89.38

Paved Shoulder Alternates

PCC Shoulder Jointing:
 Longitudinal joint: BT-1 or BT-5
 Transverse joints: C at 20' spacing
 HMA Shoulder Jointing:
 Longitudinal joint: B

1R_P_ALT_ 10-21-14		
BEGIN STATION	END STATION	(P) Feet
4558+19.37	4562+89.38	6

See Tab 100-24 or 100-25 for pavement quantities.

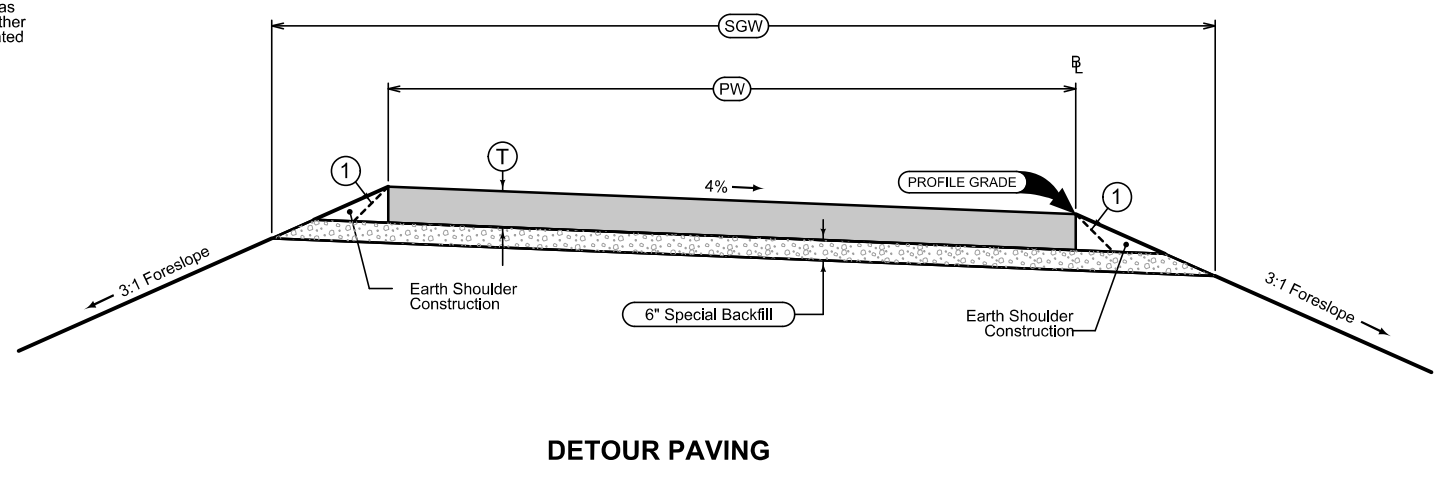
See Tab 112-9 for shoulder quantities.

141 RAMP D

LOCATION		DIMENSIONS						6" Special Backfill Tons/Station	Earth Shoulder Construction Station
ROAD IDENTIFICATION	STATION TO STATION	HMA			PCC				
		PW Feet	T Inches	SGW Feet	PW Feet	T Inches	SGW Feet		
Douglas Ramp A	13+47.07	15+97.83							
Douglas Ramp D	12+47.16	16+66.13							
IA 141 Ramp A	23+55.49	27+26.46							
IA 141 Ramp C	26+39.98	31+24.72							
IA 141 Ramp D	21+86.18	27+63.23							

Quantity calculations based on vertical pavement edges.
Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

① Possible HMA 1:1 slope



D_Detour
10-21-14

SURVEY SYMBOLS

UTILITY LEGEND

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

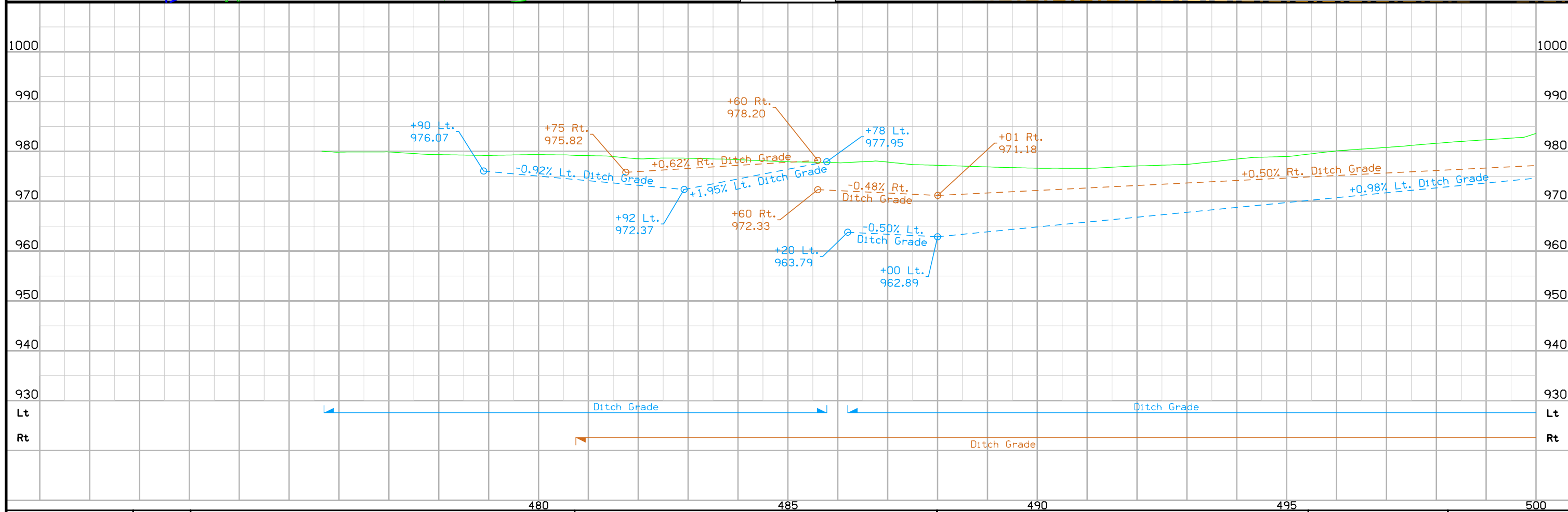
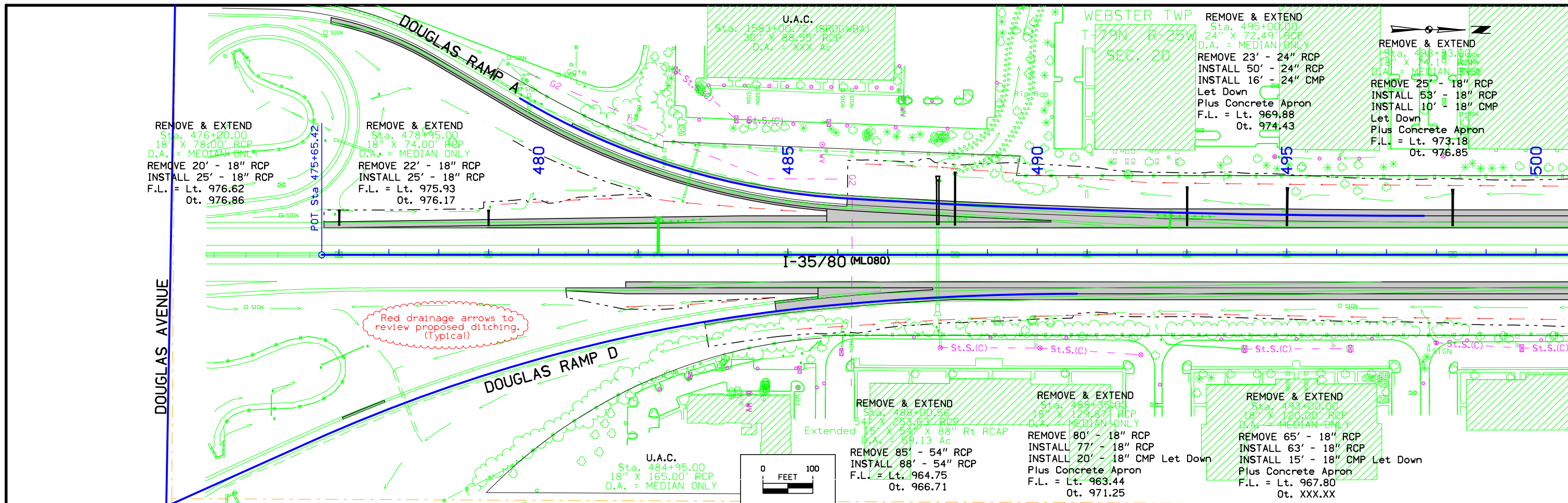
LINEWORK		Design Color No.	
Green	(2)		Existing Ground Line Profile
Blue	(1)		Proposed Profile and Annotation
Magenta	(5)		Existing Utilities
Blue, Light	(230)		Proposed Ditch Grades, Left
Black	(0)		Proposed Ditch Grades, Median
Rust	(14)		Proposed Ditch Grades, Right

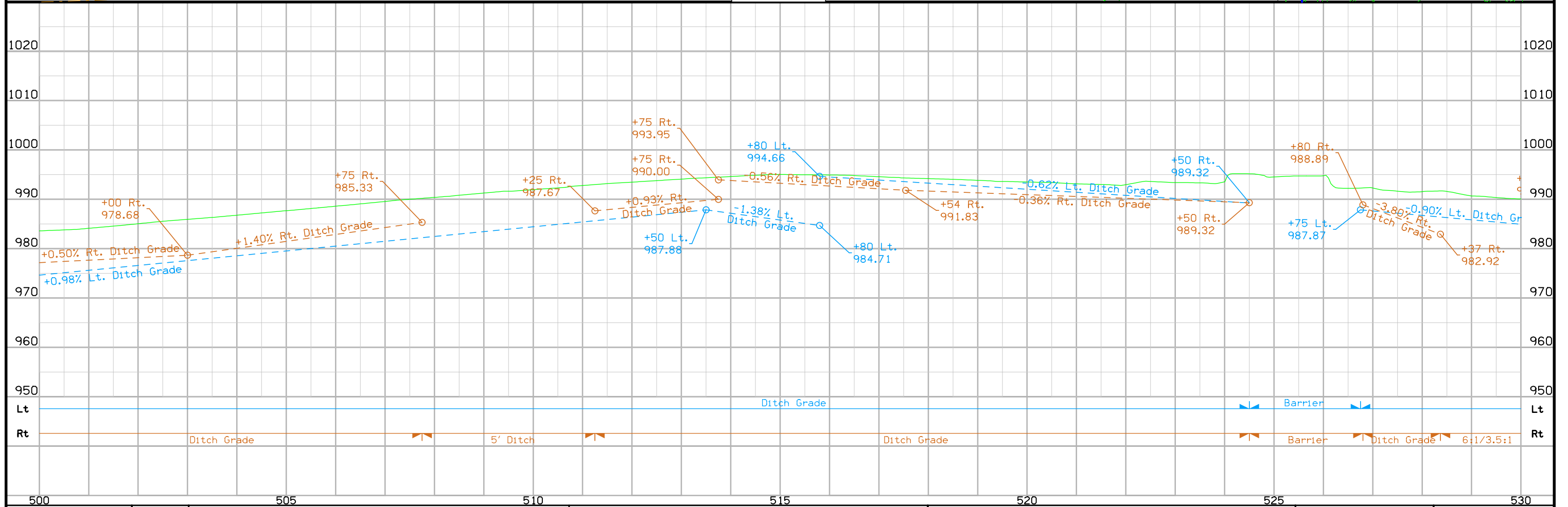
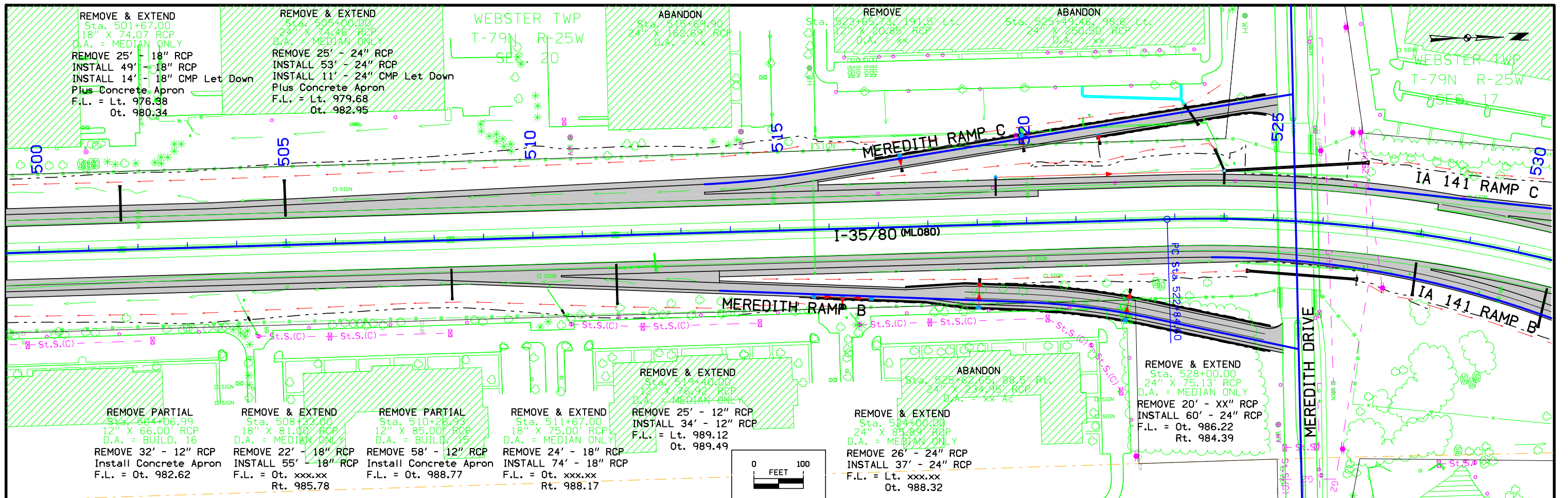
	Reference Point
	Station
	Survey Line
	Section Corner
	Ground Line Intercept
	Saw Cut
	Guardrail
	Trench Drain
	HighTension Cable Guardrail
	Sheet Pile
	Pavement Removal
	Clearing & Grubbing Area

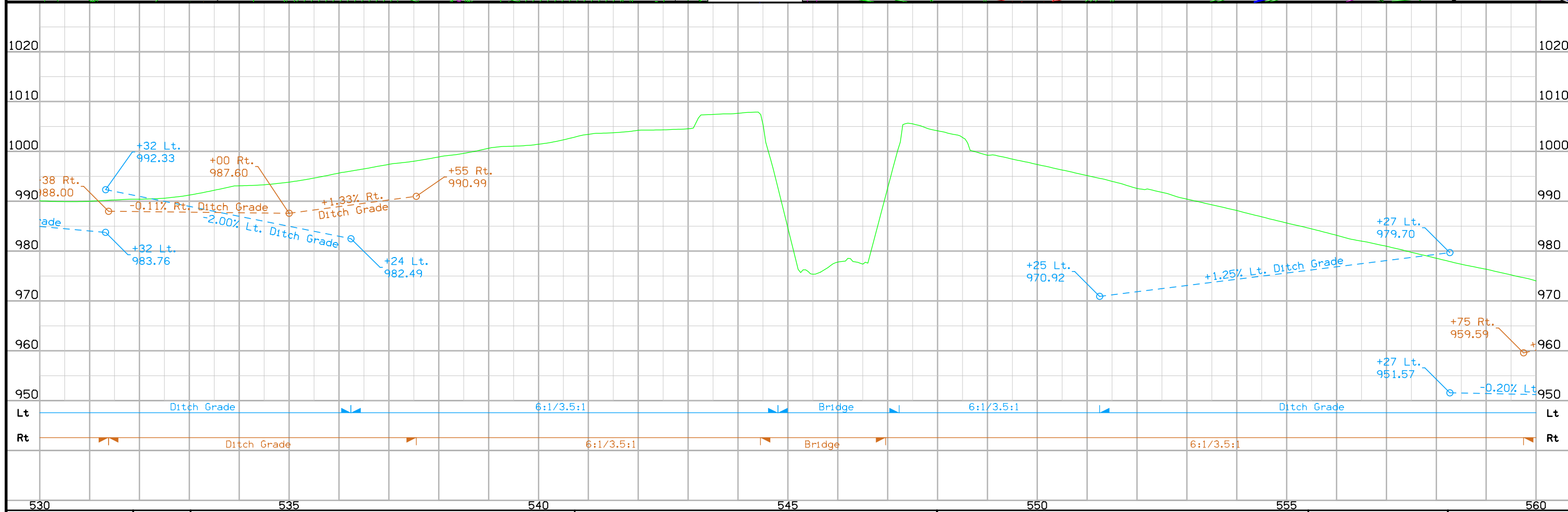
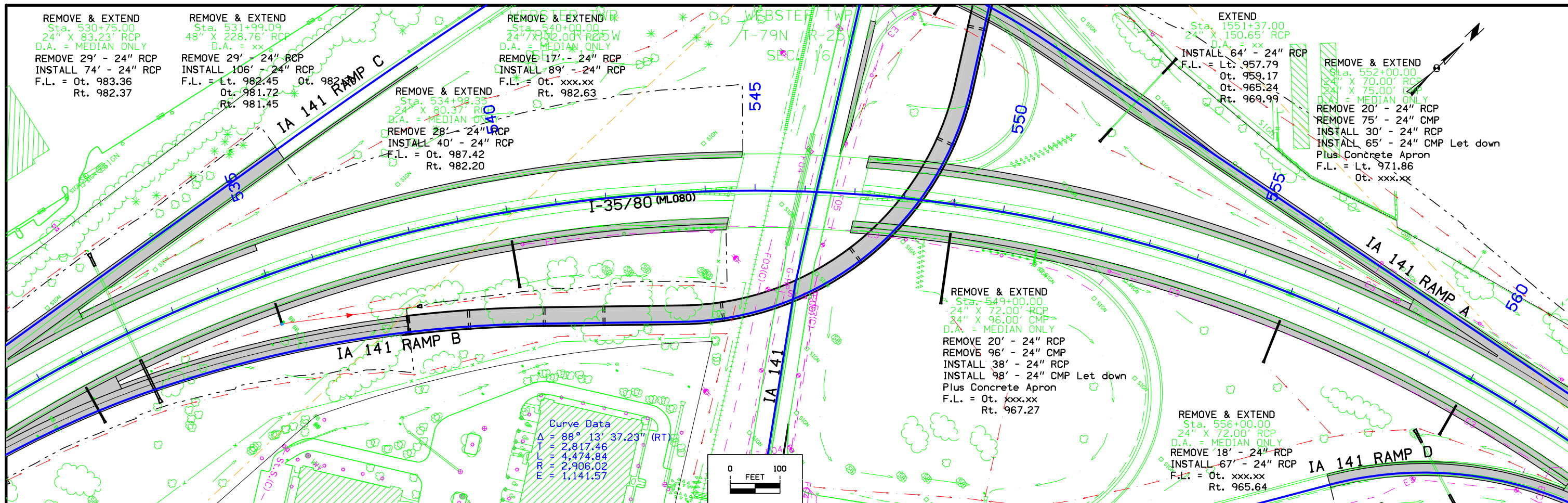
RIGHT-OF-WAY LEGEND	
	Proposed Right-of-Way
	Existing Right of Way
	Existing and Proposed Right-of-Way
	Easement and Existing Right-of-Way
	Easement (Temporary)
	Easement
	Access Control
	Property Line

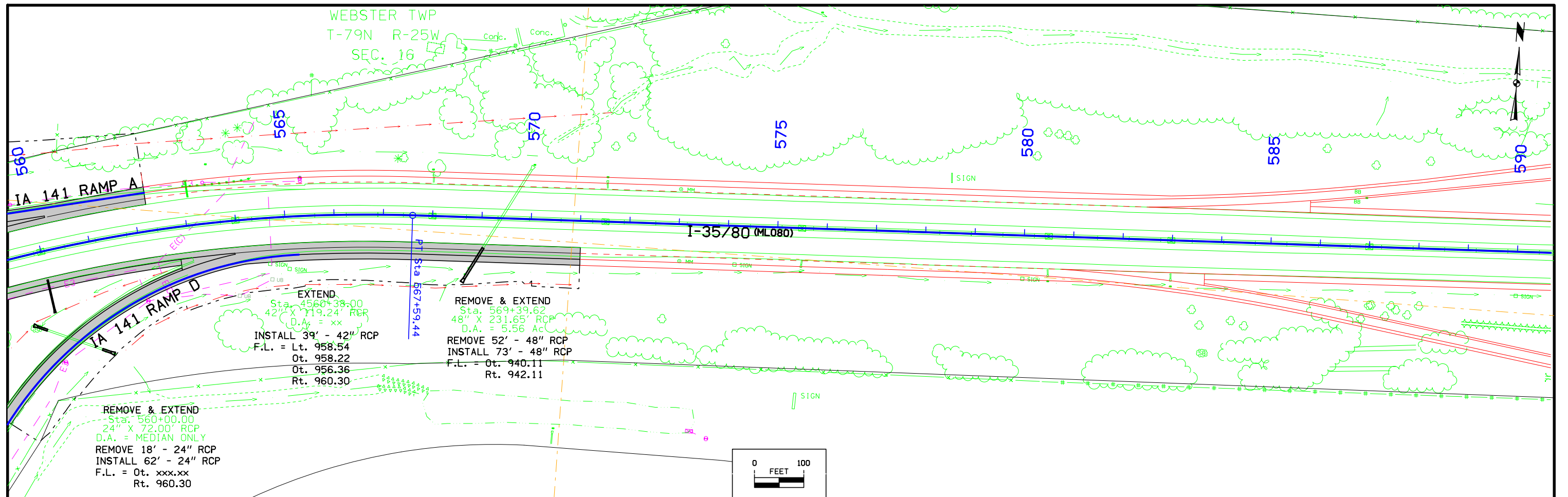
**PLAN AND PROFILE
LEGEND AND SYMBOL
INFORMATION SHEET**

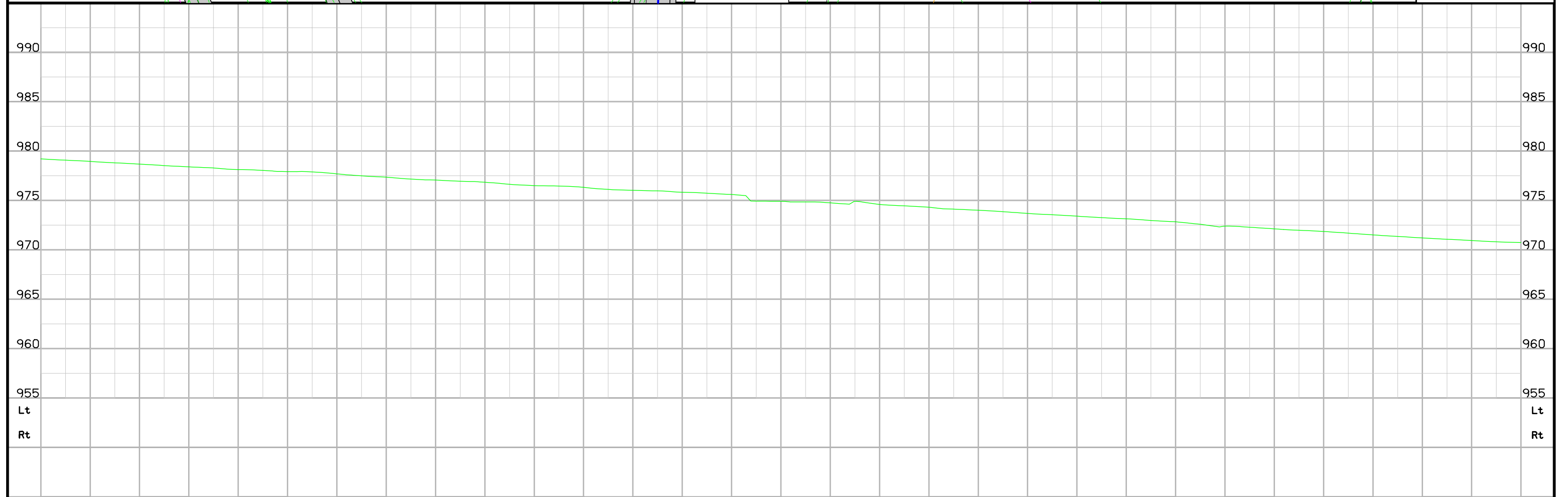
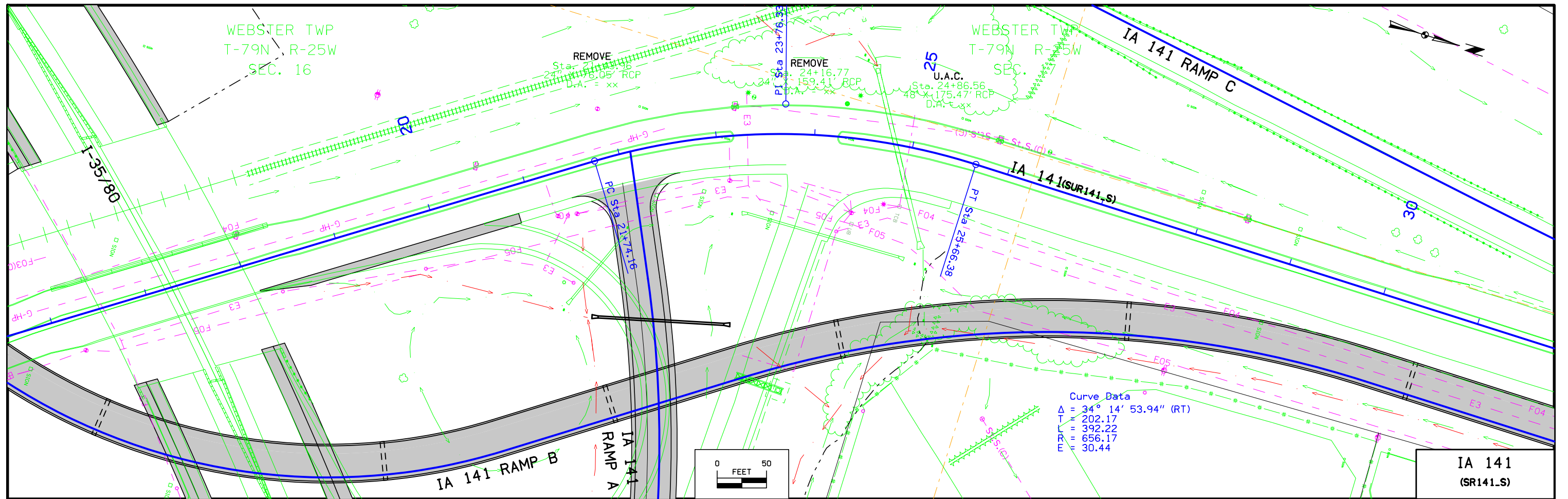
(COVERS SHEET SERIES D, E, F, & K)

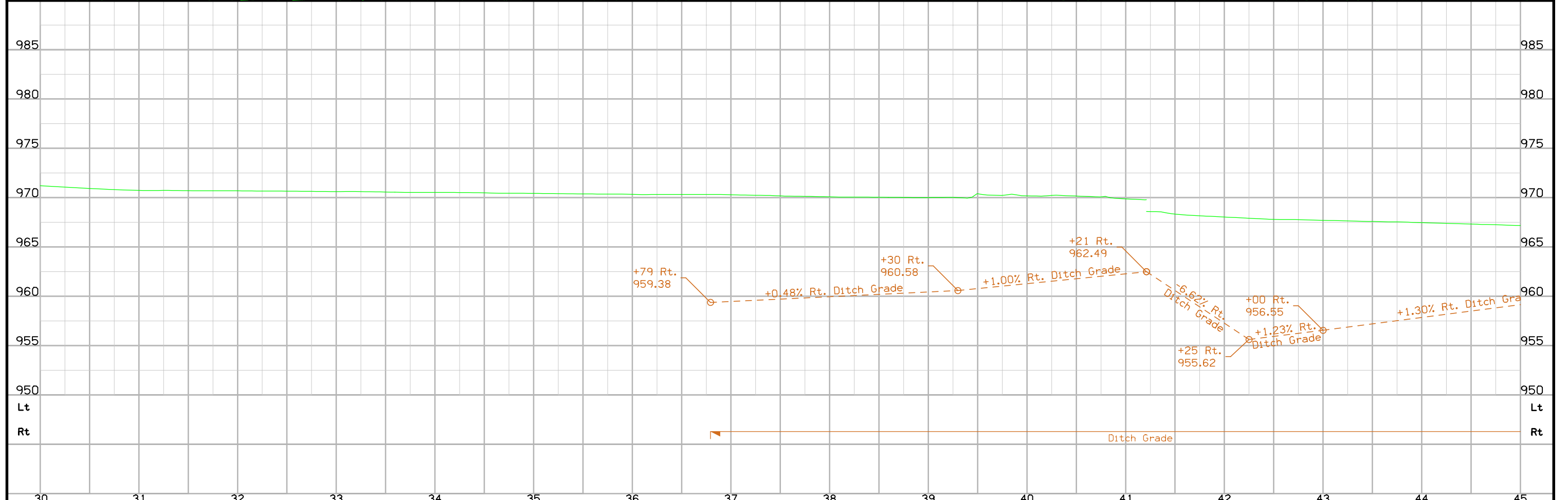
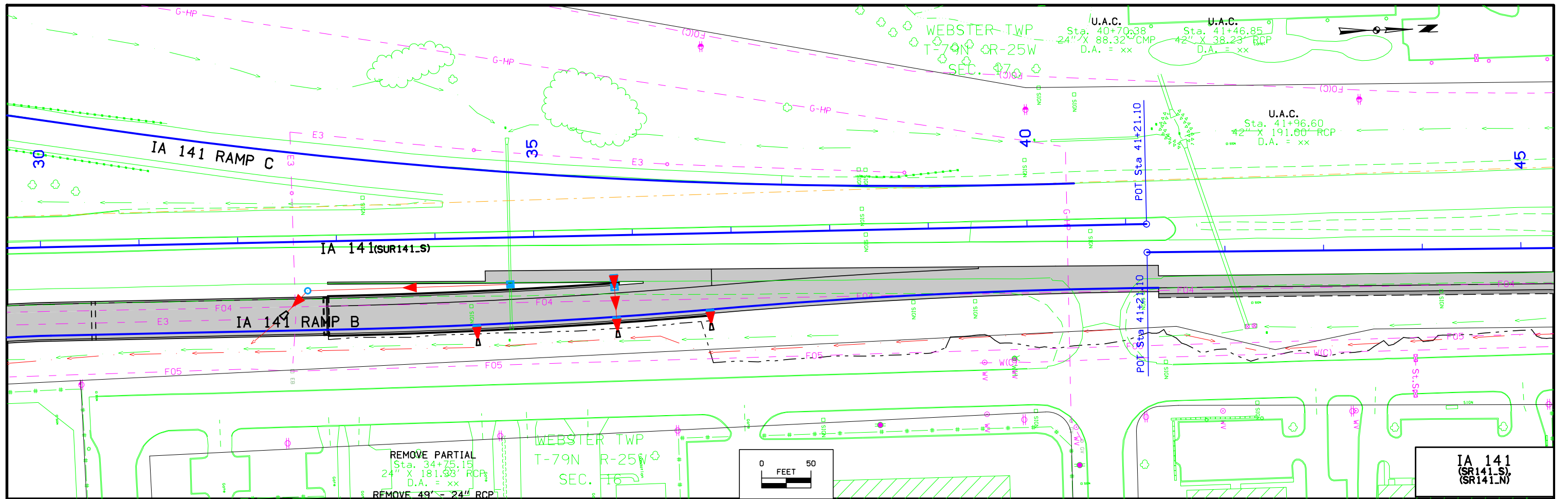


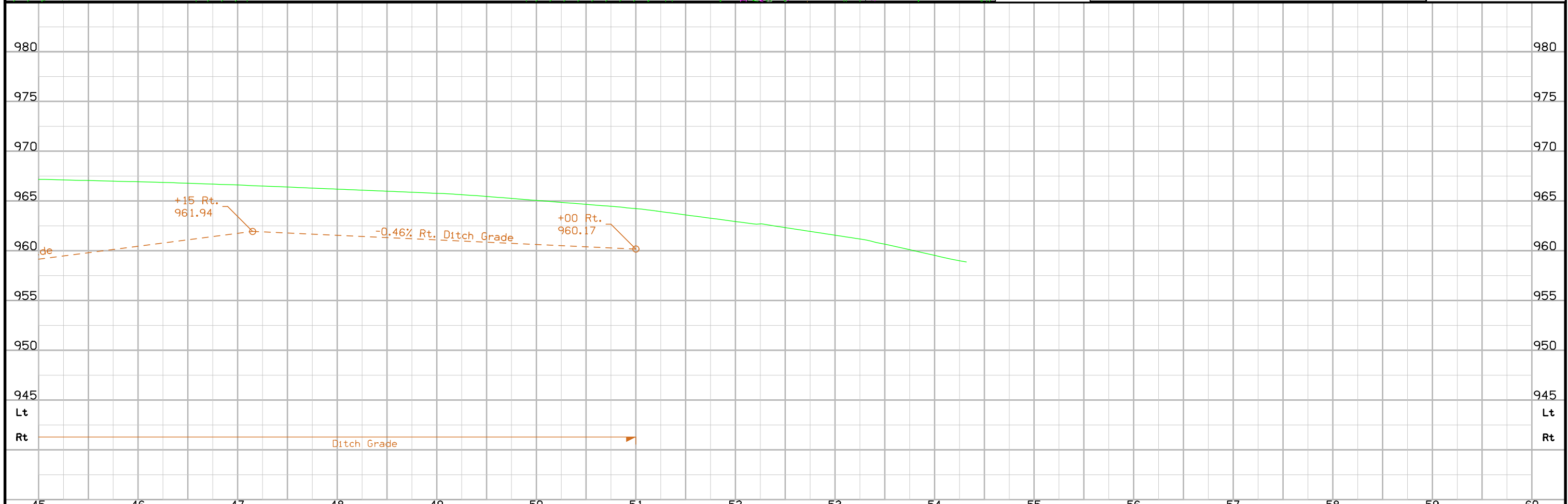
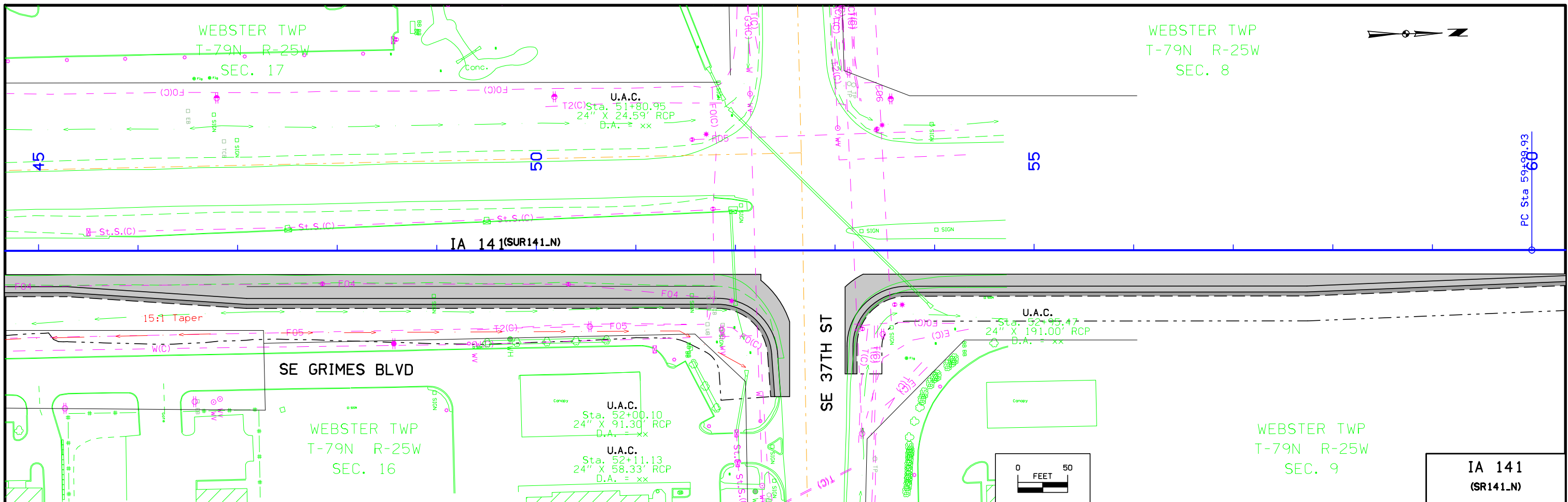






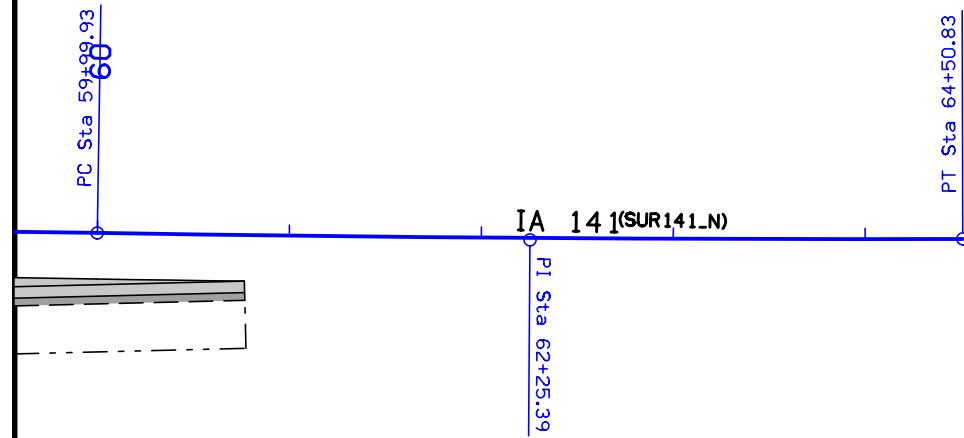




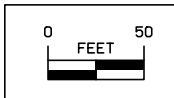


FILE NO.	ENGLISH	DESIGN TEAM	GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER	IM-080-3(178)127--13-77	SHEET NUMBER	E.3
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WEBSTER TWP
T-79N R-25W
SEC. 8

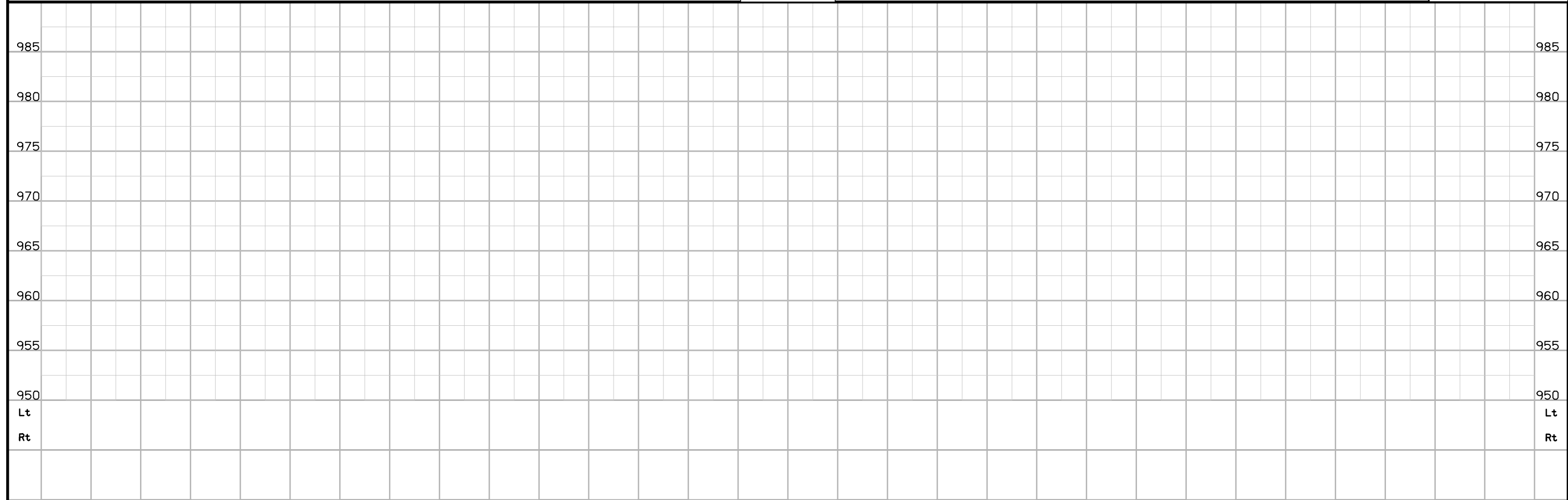


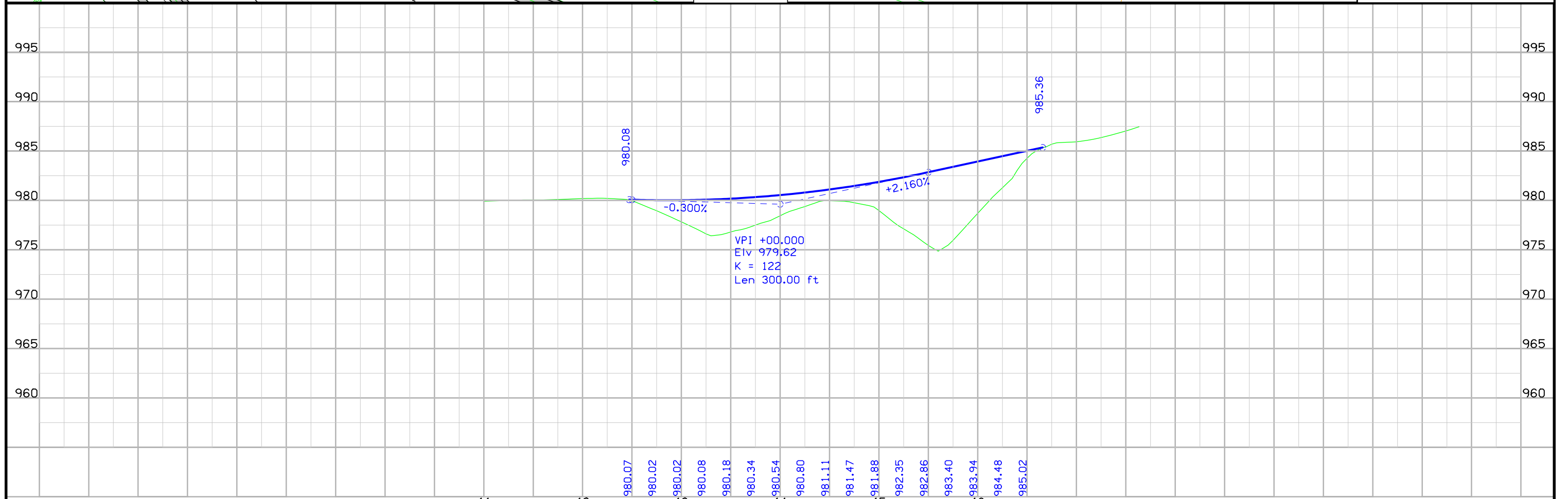
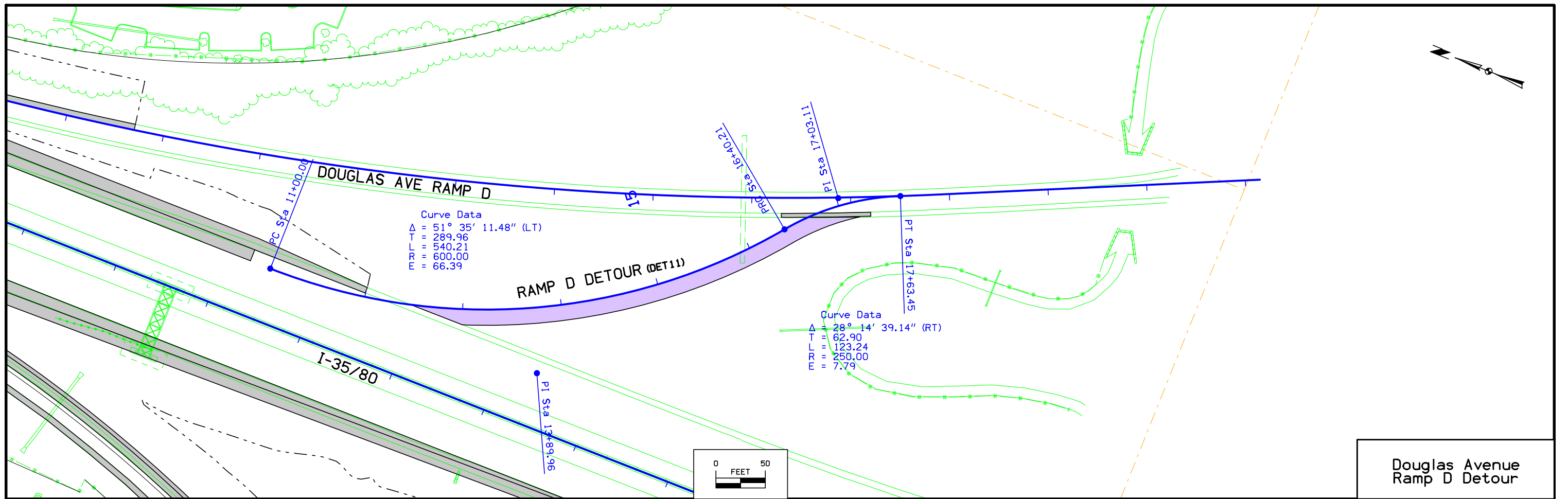
Curve Data
 $\Delta = 1^\circ 03' 32.21''$ (LT)
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 L = 450.91
 R = 24,396.96
 E = 1.04

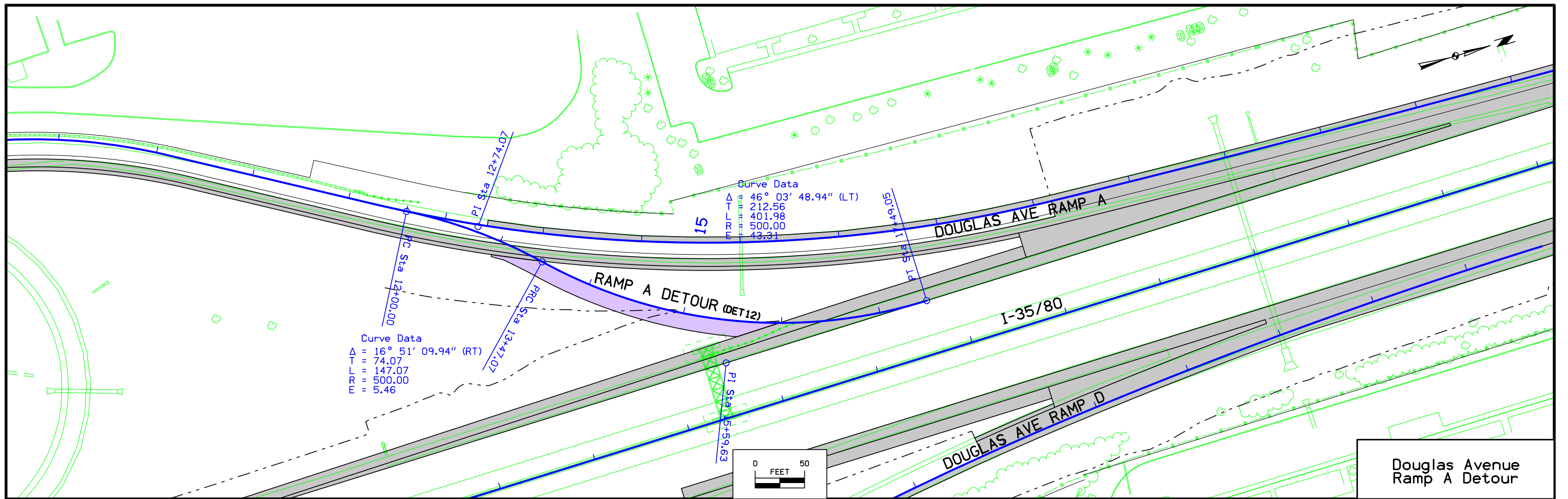


WEBSTER TWP
T-79N R-25W
SEC. 9

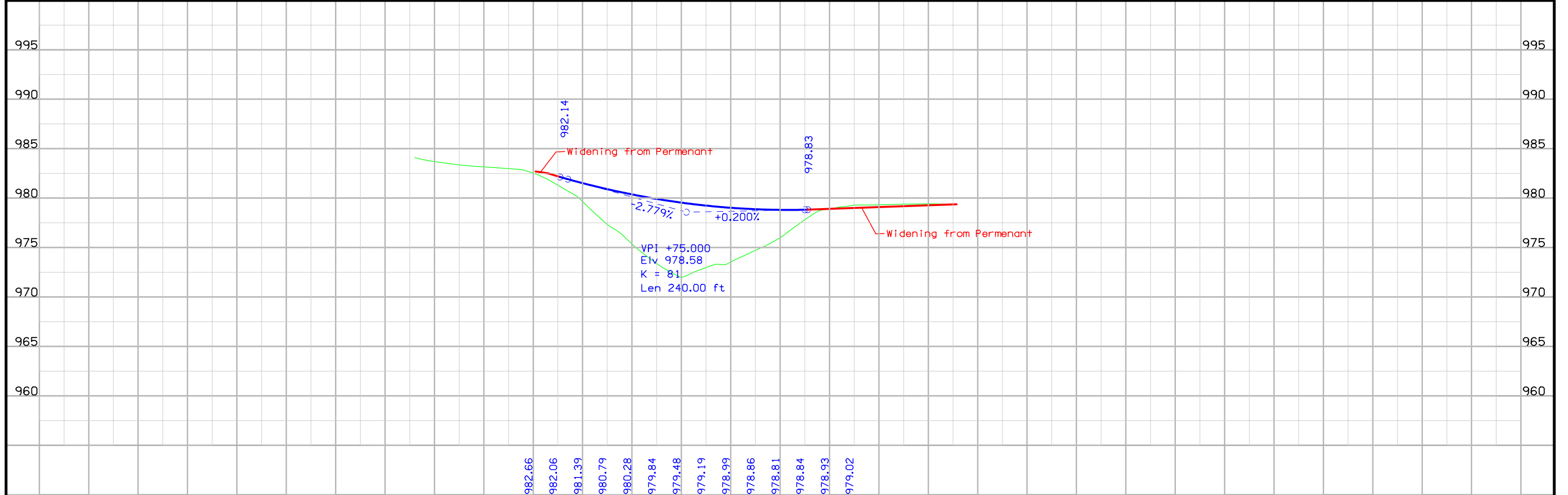
IA 141
(SR141.N)

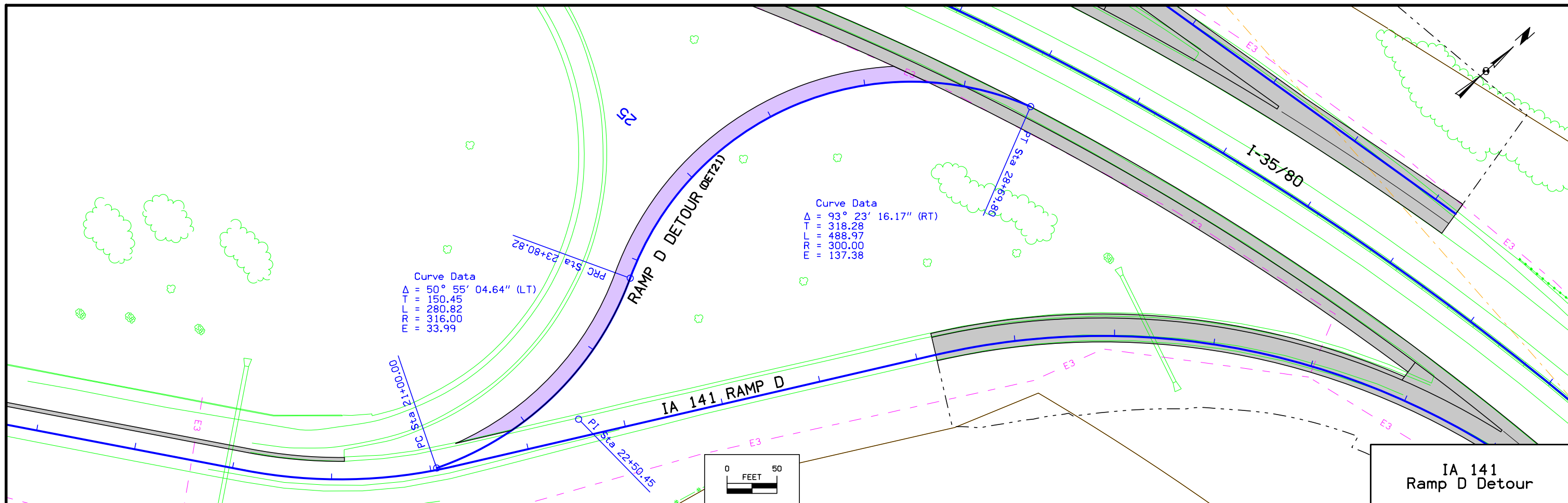




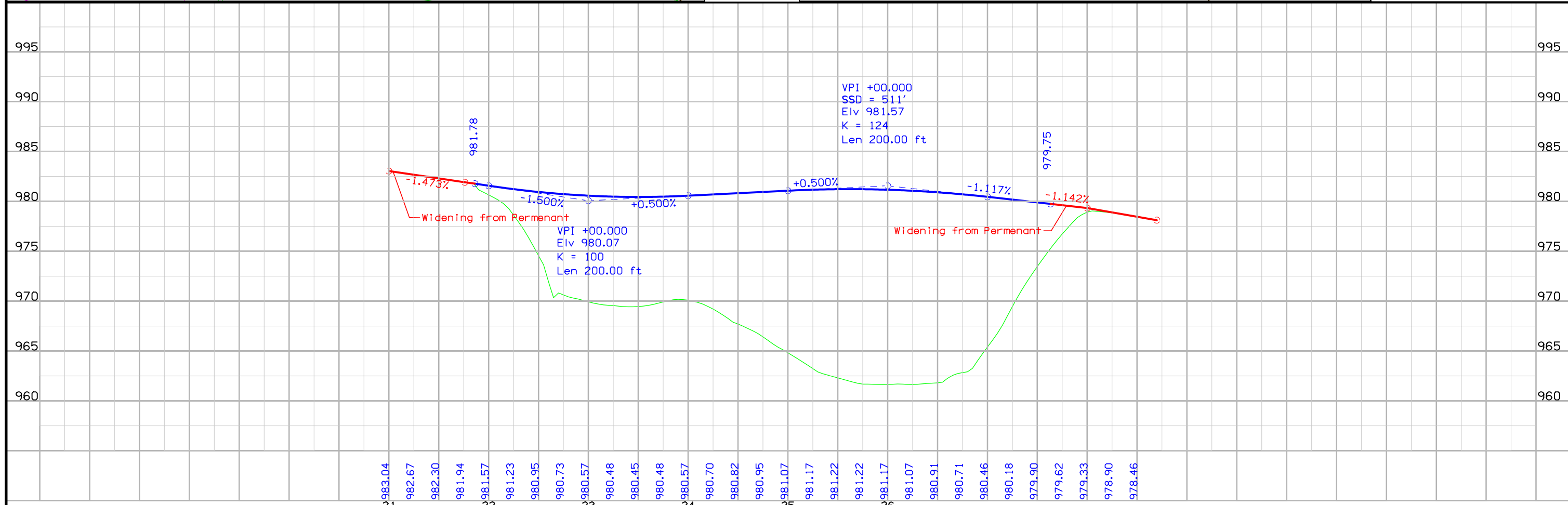


Douglas Avenue Ramp A Detour

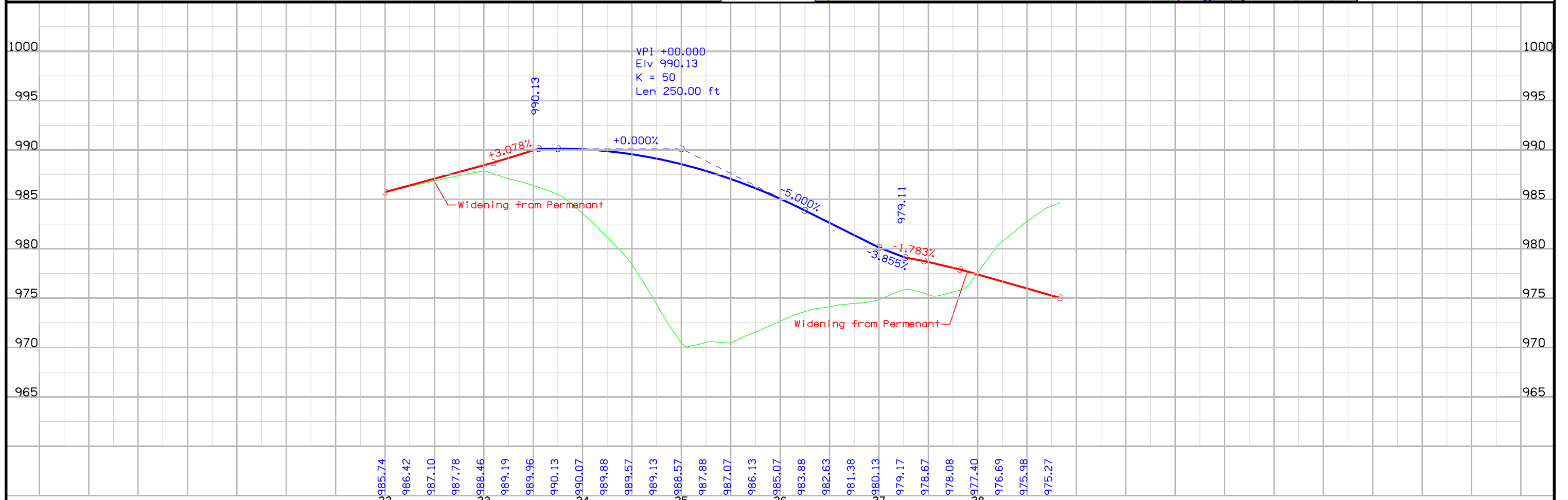
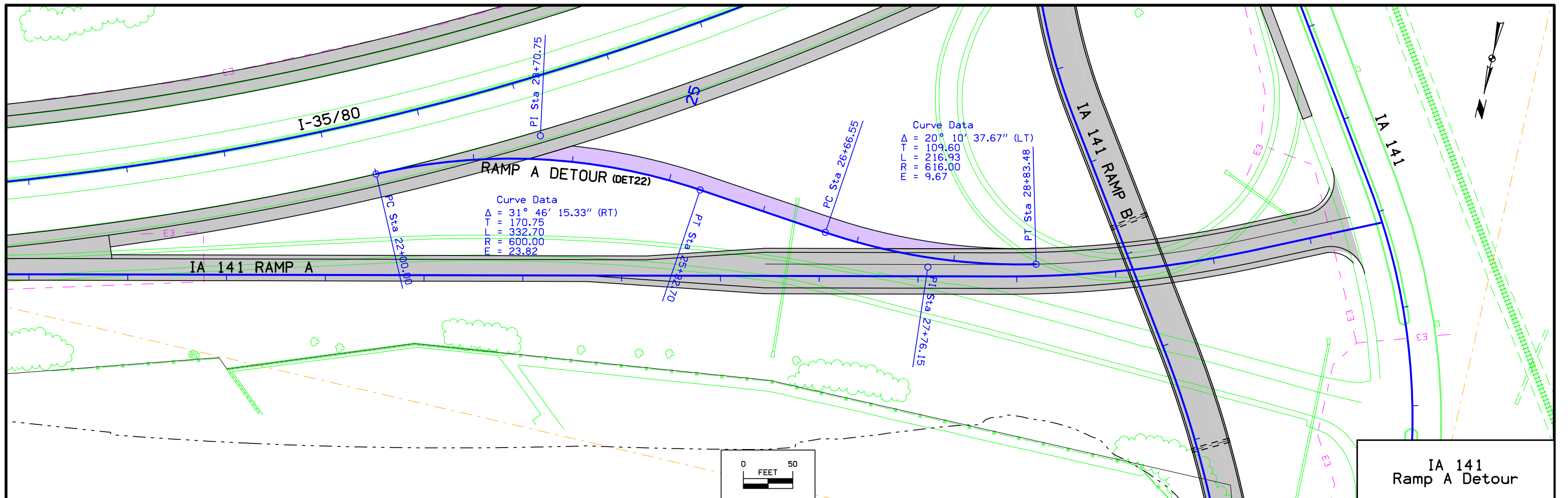


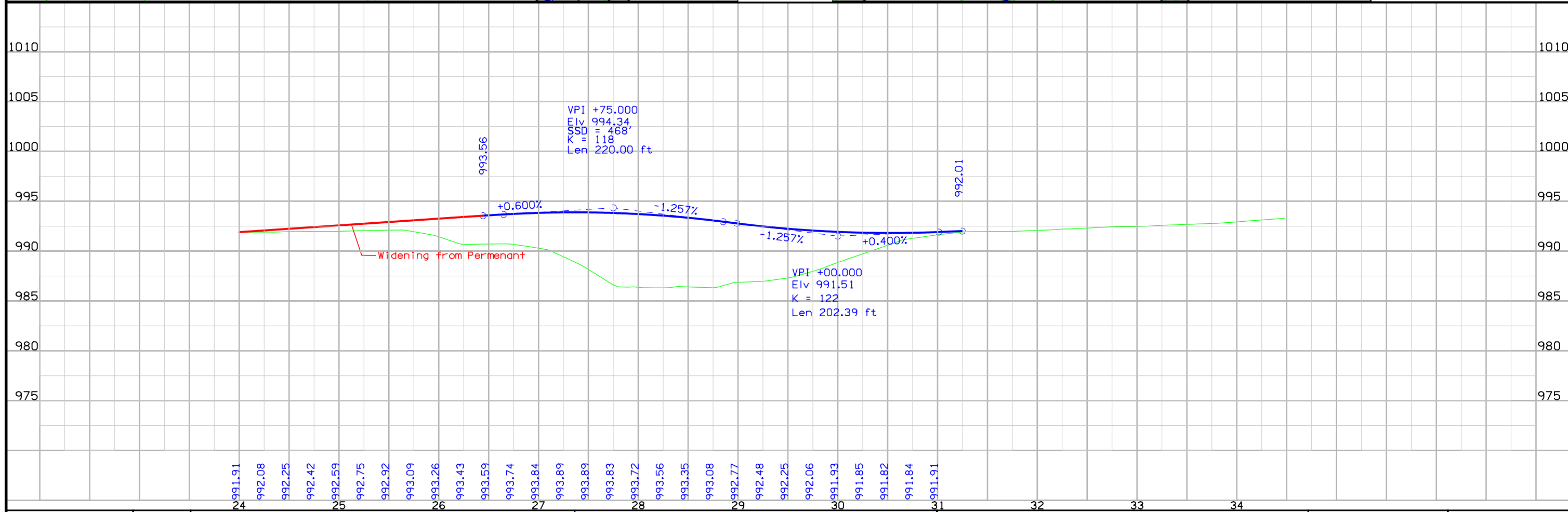
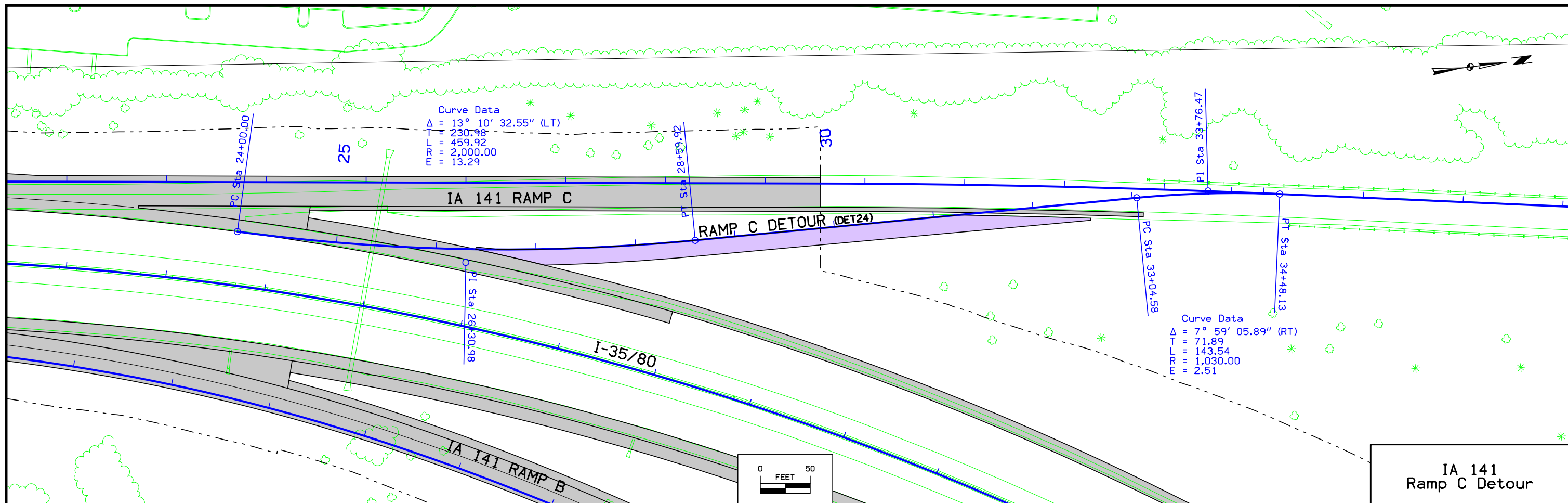


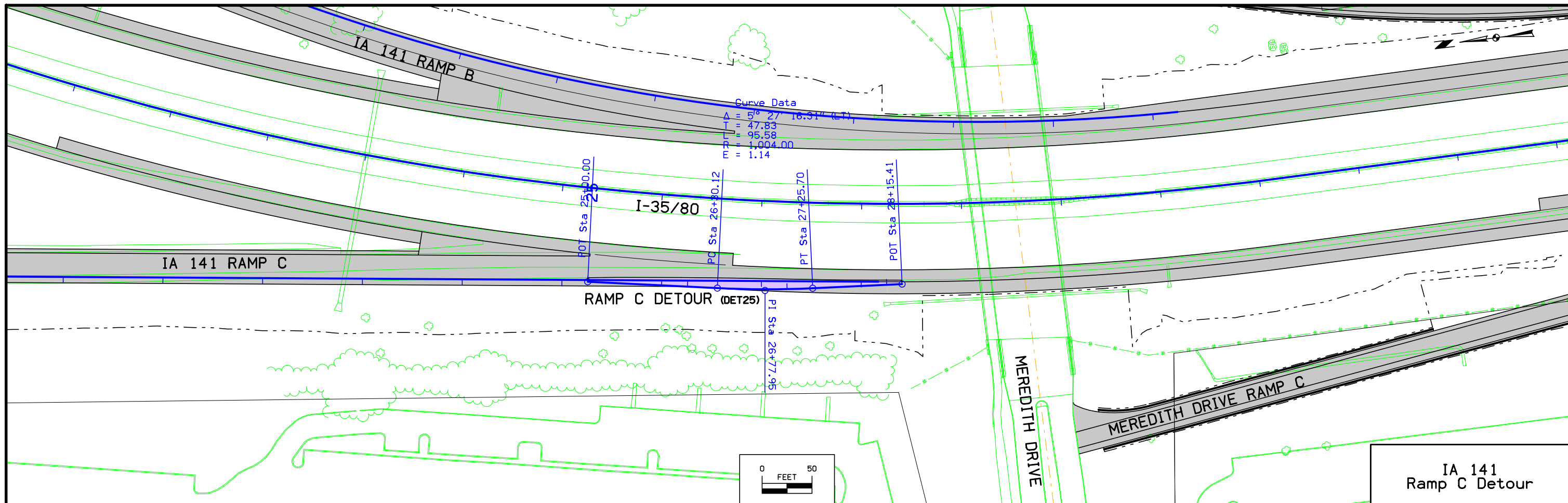
IA 141
Ramp D Detour



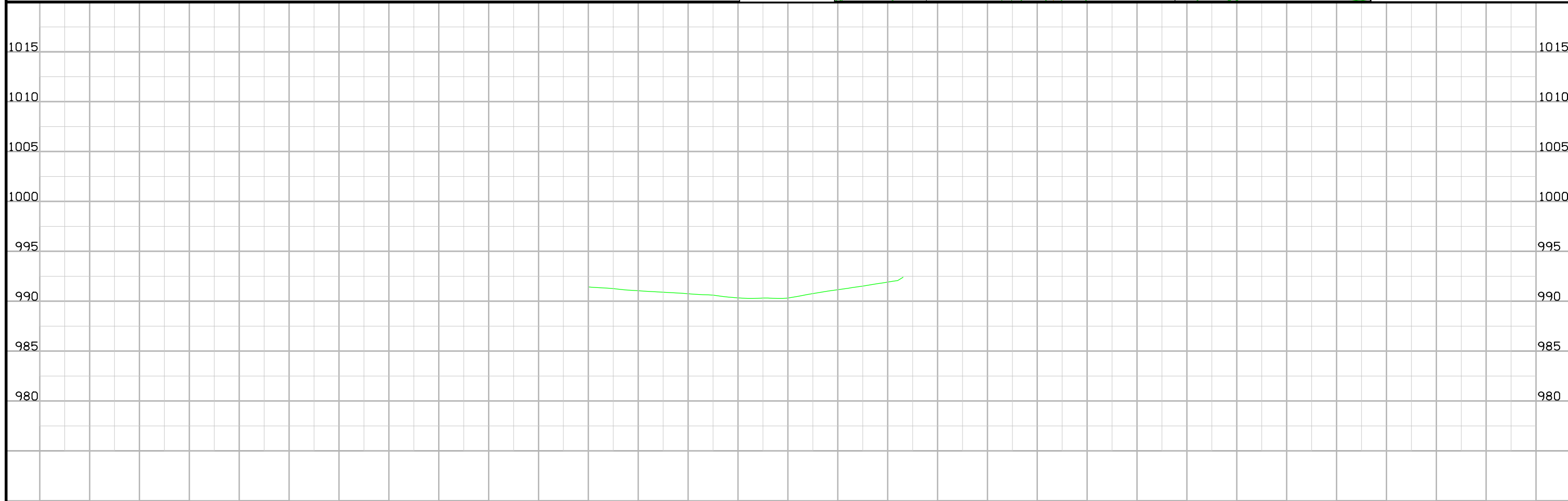
FILE NO.	ENGLISH	DESIGN TEAM	GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER	IM-080-3(178)127--13-77	SHEET NUMBER	F.3
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IA 141
Ramp C Detour



Survey Information

General Information

Measurement units for this survey are US survey feet. This survey is for proposed interchange improvements at Rider Corner and I-35/80 intersection. This project is a complete field survey for the digital terrain model.

Vertical Control

Vertical datum for this survey is relative to NAVD88.

A digital level loop was run from IDOT monument designated as IA, D.O.T. 77-141-1(NGS PID BBCZ46) through the project benchmarks and returned to IA, D.O.T. 77-141-1. The loop error was allowable and the error was distributed proportionately among the project marks.

This survey observed 5 As-Built plan bench marks to compare to local ground control:

BM 504 Project STP-U-7875(638)--70-77 Elev. 958.58 Survey Elev. = 958.63	BM 601 Project STP-U-7875(638)--70-77 Elev. 1007.11 Survey Elev. = 1007.16
BM 505 Project NHSN-141-7(24)—2R-77 Elev. 963.67 Survey Elev. = 963.96	BM 602 Project STP-U-7875(638)--70-77 Elev. 927.50 Survey Elev. = 927.59
BM 509 Project NHSN-141-7(24)—2R-77 Elev. 938.22 Survey Elev. = 938.36	BM 603 Project STP-U-7875(638)--70-77 Elev. 937.76 Survey Elev. = 937.97
BM 512 Project NHSN-141-7(24)—2R-77 Elev. 962.56 Survey Elev. = 962.83	

Horizontal Control

The project coordinate system is the Iowa Regional Coordinate System, Zone 8. Horizontal datum is NAD83 (2011) for Epoch 2010.00. The projection parameters for Zone 8 of the laRCS is defined below:

Transverse Mercator Projection

Origin Lat: 40°15'N
Origin Central Meridian: 093°43'W
Projection Axis Scale: 1.000 033
False Northing: 7,000,000
False Easting: 18,500,000

The laRTN base stations are the primary control for this project. The IDOT Survey Office provided secondary control for five FENO monuments in the project vicinity. The coordinates of the five FENO monuments were verified using the laRTN with three observations with appropriate time spans between. The averaged observations were within tolerance and the provided control was accepted. Additional control points were placed throughout the project using the laRTN with multiple observations. Observations were averaged to determine control coordinates. The horizontal standard deviation of these observations was less than 0.04 ft.

There has been design survey performed in the 100th Street area performed previously by Snyder & Associates, Inc. and Nilles Associates, Inc. The coordinate system used for these projects is a modified Iowa State Plane South Coordinate system scaled to ground. However, the scaling information is unreported and unknown. Four control points previously established for the 100" St. projects were observed and coordinates determined in Iowa RCS, Zone 8 coordinates. The results are shown below:

	Control Used for the Following Projects: STP-U-7875(638)--70-77 Urbandale 100th St Project (S&A 106.1015 & 112.0818) 100th St Interchange Project (Nilles)		RCS ZONE 8 AMES-DSM (This Survey)	
	CP1	602605.71	1575635.47	7511458.74
CP5	601914.71	1570335.87	7510754.77	18489133.66
CP9	601552.78	1565434.75	7510380.76	18484233.49
CP22	604456.85	1570496.25	7513297.28	18489287.79

Alignment Information

Interstate 80 Alignment Information

The horizontal alignment for this survey is a retrace of As-built Plans No. IR-35-2(204)73—12-77. Survey stationing was equated to the plan at PT at Sta. 567+59.44 (US ft.) and run back and ahead without equation throughout the survey.

Equations are as follows:

PT Sta. 475+65.42 This Survey
= PT Sta. 475+65.50 As-built Plans Project No. IR-35-2(204)73—12-77

PT Sta. 567+59.44 This Survey
= PT Sta. 567+59.44 As-built Plans Project No. IR-35-2(204)73—12-77

PI Sta. 597+32.96 This Survey
= PI Sta. 597+33.80 As-built Plans Project No. IM-35-3(70)77—13-77

PI Sta. 707+53.21 This Survey
= PI Sta. 707+53.50 As-built Plans Project No. IM-35-3(70)77—13-77

la 141 Alignment Information

This alignment retraces a 2000 Preliminary survey (SAP 322) alignment. The 2000 survey was related to a modified state plane coordinate system.

A 2013 survey (SAP 322.4) used SAP 322 alignment points. The 2013 alignment coordinates were scaled back to unmodified Iowa State Plane South and then transformed to laRCS zone 8.

To check the relationship of the 2000 survey to this survey the following comparison was made:

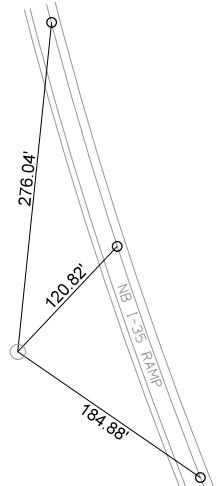
Inverse Pt. 13(2000) to Pt. 320(2000) N0°22'19" W Distance 4,240.18
Inverse Pt. RJM13(laRCS) to Pt. RJM320(laRCS) N0°31'04" W Distance 4,240.15

Two alignments were created in laRCS zone 8. SUR141A begins south of I 80/35 at Station 8+59.48 and continues north to a 28.62 ft lateral offset right at 90° to the back tangent at Station 41+21.10. This retraces the alignment from metric as built ramp reconstruction plan STP-141-7(18)--2C-77 however US ft. stationing was used in place of metric stationing. US ft. stationing relates to metric stationing at PI Station 23+76.33 (US Ft.) = PI Station 4003+96.899m. SUR141B begins at Station 41+21.10 at the lateral offset and continues to PT Station 64+50.83. This retraces the alignment and stationing from as built plan Fn-141-7(7)—21-77.

VERTICAL CONTROL

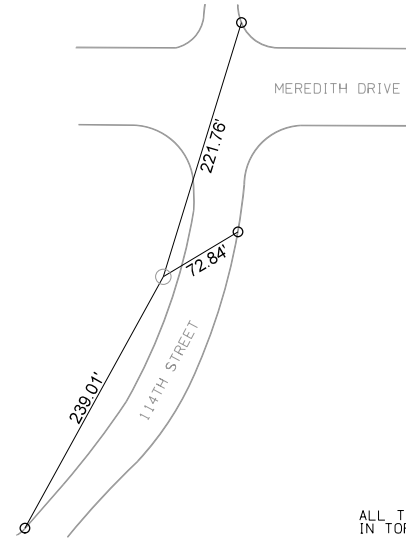
Point	North	East	Elevation	Station	Offset	Feature	Description
BM100	7510868.879	18491498.440	919.970	619+67.99	-90.831	BM	CUT TRIANGLE
BM101	7510790.388	18489824.680	903.200	602+92.46	-75.106	BM	CUT X
BM102	7510749.380	18488204.390	921.080	586+71.72	-94.214	BM	CUT TRIANGLE
BM103	7510729.339	18487383.120	929.970	578+50.27	-104.478	BM	CUT TRIANGLE
BM104	7510617.234	18485831.080	969.310	563+06.65	-85.938	BM	CUT TRIANGLE
BM105	7510664.882	18485566.550	961.260	560+71.53	-193.504	BM	ROW RAIL
BM106	7510975.912	18484163.470	961.600	551+31.34	-1078.828	BM	RR SPIKE
BM107	7510318.832	18486911.150	951.560	573+63.48	288.342	BM	GIN SPIKE
BM109	7510687.805	18491554.510	915.210	620+17.23	92.217	BM	W CORNER HEADWALL
BM110	7509532.000	18485052.000	980.210	550+33.57	613.516	BM	NW BOLT LP BASE
BM505	7512681.310	18484235.070	963.960	556+77.35	-2544.770	BM	CUT X NW COR SIGN BASE
BM509	7514208.935	18483980.970	938.360	558+33.82	-4057.446	BM	IHC HEADWALL OF RCB
BM512	7516715.972	18483979.160	962.830	561+04.68	-6449.039	BM	CUT X NW HEAD BOLT HYDRANT
BM515	7510640.576	18490003.990	902.220	604+66.03	81.319	BM	IHC HEADWALL OF RCB
BM602	7510807.616	18489283.100	927.590	597+51.91	-112.613	BM	IHCBM NE WINGWALL OF 100TH ST BRIDGE OVER INTERSTATE
BM603	7513146.583	18489305.720	937.970	598+62.14	-2449.091	BM	RR SPIKE IN PP SE QUAD 100TH ST & NW 54TH AVE

STA. 478+01.08, 158.91' Rt.
 CP No. 778001, FND FENO MONUMENT
 N=7503180.88 E=18483683.68



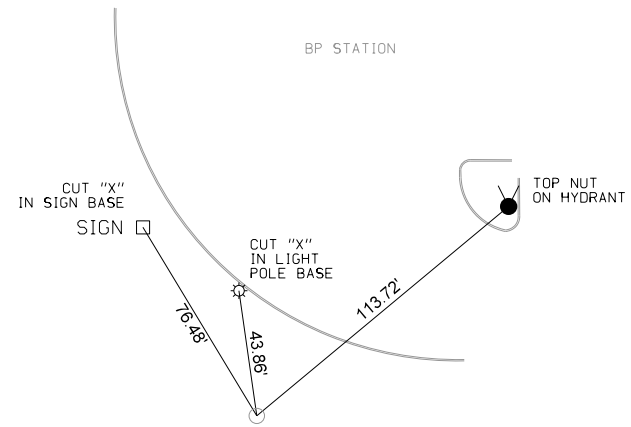
ALL TIES CUT "X"
 IN EDGE OF PAVEMENT

STA. 524+12.89, 717.13' Rt.
 CP No. 778002, FND FENO MONUMENT
 N=7507764.25 E=18484216.78



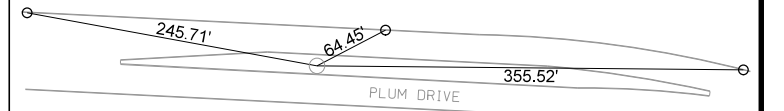
ALL TIES CUT "X"
 IN TOP OF CURB

STA. 557+95.30, 3115.84' Lt.
 CP No. 771411, FND FENO MONUMENT
 N=7513297.91 E=18484233.98

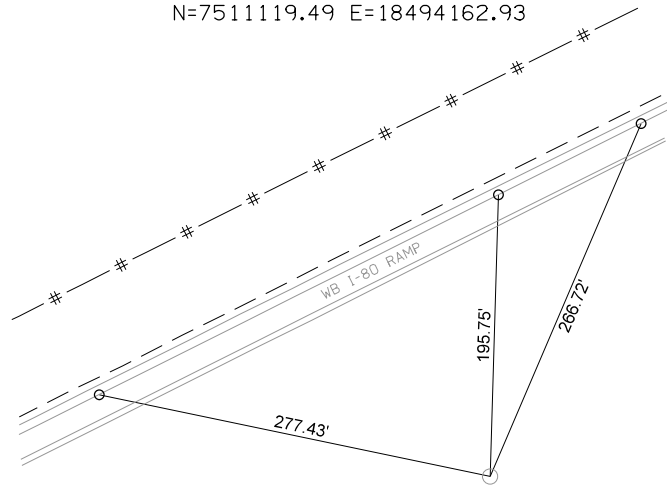


ALL TIES CUT "X"
 IN TOP OF CURB

STA. 585+38.66, 698.23' Rt.
 CP No. 778003, FND FENO MONUMENT
 N=7509952.56 E=18488100.65



STA. 646+39.99, 241.43' Lt.
 CP No. 778004, FND FENO MONUMENT
 N=7511119.49 E=18494162.93



ALL TIES CUT "X"
 IN EDGE OF PAVEMENT

ALIGNMENT COORDINATES

101-16
10-20-09

Name	Location	Point on Tangent		Begin Spiral		Begin Curve		Simple Curve PI or Master PI of SCS			End Curve		End Spiral			
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
I-35/80																
20000		475+65.42	7,502,944.28	18,483,526.17												
20005							522+84.60	7,507,663.37	18,483,498.10	551+02.06	7,510,480.78	18,483,481.35	567+59.44	7,510,584.70	18,486,296.89	
20010		567+59.44	7,510,584.70	18,486,296.89												
20020		597+32.96	7,510,694.37	18,489,268.39												
20030		707+53.21	7,511,107.27	18,500,280.90												
IA 141.S																
22014		8+59.48	7,509,067.50	18,484,894.59												
22012		15+40.31	7,509,607.51	18,484,479.96												
22005							21+74.16	7,510,135.19	18,484,128.78	23+76.33	7,510,303.50	18,484,016.77	25+66.38	7,510,505.65	18,484,018.91	
22020		41+21.10	7,512,060.28	18,484,035.30												
IA 141.N																
22100		41+21.10	7,512,059.98	18,484,063.92												
22105							59+99.93	7,513,938.39	18,484,103.49	62+25.39	7,514,163.80	18,484,108.25	64+50.83	7,514,389.26	18,484,108.85	
DOUGLAS RAMP A																
34010		1571+89.75	7,502,647.30	18,483,019.81												
34005							1574+09.75	7,502,867.29	18,483,022.37	1575+62.66	7,503,020.19	18,483,024.15	1577+08.76	7,503,152.34	18,483,101.08	
34015							1579+25.76	7,503,339.87	18,483,210.25	1582+78.63	7,503,644.83	18,483,387.78	1586+18.30	7,503,997.17	18,483,406.98	
34025							1586+18.30	7,503,997.17	18,483,406.98	1591+96.83	7,504,574.84	18,483,438.47	1597+75.00	7,505,153.35	18,483,435.03	
34030		1597+75.00	7,505,153.35	18,483,435.03												
DOUGLAS RAMP D																
37000		4571+85.24	7,502,635.53	18,484,031.81												
37005							4575+08.01	7,502,929.45	18,483,898.41	4580+34.56	7,503,408.92	18,483,680.78	4585+52.13	7,503,932.48	18,483,624.81	
37007							4585+52.13	7,503,932.48	18,483,624.81	4588+16.29	7,504,195.14	18,483,596.73	4590+80.00	7,504,459.29	18,483,595.16	
37010		4590+80.00	7,504,459.29	18,483,595.16												
MEREDITH RAMP B																
35040		2513+75.00	7,506,754.49	18,483,621.51												
35005							2519+88.00	7,507,366.37	18,483,658.65	2521+18.91	7,507,497.04	18,483,666.58	2522+49.19	7,507,624.46	18,483,696.60	
35000		2525+56.22	7,507,923.31	18,483,766.99												
MEREDITH RAMP C																
36040		3513+50.00	7,506,728.21	18,483,405.66												
36005							3513+50.00	7,506,728.21	18,483,405.66	3514+63.48	7,506,841.65	18,483,402.72	3515+76.72	7,506,954.04	18,483,386.96	
36010		3525+55.96	7,507,923.78	18,483,250.99												
IA 141 RAMP A																
34120		1545+25.13	7,510,166.86	18,484,108.98												
34105							1546+55.29	7,510,221.85	18,484,226.95	1547+84.99	7,510,276.64	18,484,344.51	1549+13.68	7,510,305.04	18,484,471.06	
34100		1562+25.00	7,510,592.23	18,485,750.54												
IA 141 RAMP B																
35110		2523+75.00	7,507,751.80	18,483,576.95												
35103							2523+75.00	7,507,751.80	18,483,576.95	2527+99.92	7,508,176.59	18,483,587.64	2532+12.38	7,508,560.33	18,483,770.11	
35105							2532+12.38	7,508,560.33	18,483,770.11	2535+86.51	7,508,898.21	18,483,930.77	2539+55.04	7,509,173.65	18,484,183.95	
35115							2542+48.04	7,509,389.37	18,484,382.23	2547+22.41	7,509,738.62	18,484,703.25	2550+50.84	7,510,131.55	18,484,437.49	
35125							2553+04.84	7,510,341.95	18,484,295.19	2556+35.77	7,510,616.07	18,484,109.78	2559+46.37	7,510,946.98	18,484,113.27	
35205							2562+27.68	7,511,228.28	18,484,116.24	2564+22.62	7,511,423.20	18,484,118.29	2566+17.41	7,511,617.84	18,484,107.69	
35207							2566+17.41	7,511,617.84	18,484,107.69	2568+43.94	7,511,844.04	18,484,095.37	2570+70.26	7,512,070.52	18,484,100.15	
IA 141 RAMP C																
36130		3526+82.71	7,508,070.59	18,483,445.64												
36115							3536+55.24	7,509,034.77	18,483,572.72	3538+85.64	7,509,263.21	18,483,602.83	3541+15.99	7,509,490.21	18,483,642.28	
36105							3556+63.47	7,511,014.84	18,483,907.22	3561+53.78	7,511,497.92	18,483,991.16	3566+41.71	7,511,988.23	18,483,991.82	
36110		3566+41.71	7,511,988.23	18,483,991.82												
IA 141 RAMP D																
37110		4546+48.96	7,509,232.14	18,484,768.17												
37105							4551+12.56	7,509,514.47	18,485,135.89	4552+19.57	7,509,579.64	18,485,220.76	4553+23.47	7,509,673.56	18,485,272.03	
37115							4558+19.37	7,510,108.83	18,485,509.63	4562+01.59	7,510,444.32	18,485,692.78	4565+25.00	7,510,489.15	18,486,072.36	
37130		4565+25.00	7,510,489.15	18,486,072.36												
MSE WALL 35500																
35500		300+00.00	7,506,938.64	18,483,641.08												
35502		302+30.58	7,507,168.80	18,483,655.05												
35504		303+10.98	7,507,248.17	18,483,667.88												
35500							304+28.74	7,507,365.72	18,483,675.02	305+58.71	7,507,495.45	18,483,682.92	306+88.04	7,507,621.93	18,483,712.82	
35507		309+37.60	7,507,864.84	18,483,770.04												

ALIGNMENT COORDINATES

101-16
10-20-09

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
MSE WALL 35600																			
35600		400+00.00	7,507,131.16	18,483,621.93															
35602		401+20.28	7,507,251.35	18,483,617.23															
35600								402+37.60	7,507,368.45	18,483,624.34	403+71.45	7,507,502.06	18,483,632.45	405+04.65	7,507,632.34	18,483,663.14			
35602								407+44.55	7,507,865.85	18,483,718.14	407+45.01	7,507,866.30	18,483,718.24	407+45.47	7,507,866.74	18,483,718.33			
MSE WALL 35700																			
35700								500+00.00	7,511,221.36	18,484,122.54	501+98.57	7,511,419.92	18,484,124.86	503+96.99	7,511,618.19	18,484,114.06			
35701								503+96.99	7,511,618.19	18,484,114.06	505+22.21	7,511,743.23	18,484,107.25	506+47.40	7,511,868.44	18,484,105.67			
MSE WALL 35710																			
35710								600+00.00	7,511,221.79	18,484,081.79	601+51.26	7,511,373.04	18,484,083.56	603+02.45	7,511,524.18	18,484,077.66			
MSE WALL 35720																			
35720		700+00.00	7,511,221.79	18,484,081.79															
35721		700+40.75	7,511,221.36	18,484,122.54															
MSE WALL 36500																			
36500		100+00.00	7,507,074.96	18,483,361.55															
36501		108+00.00	7,507,867.21	18,483,250.47															
MSE WALL 36600																			
36600		200+00.00	7,507,524.87	18,483,329.52															
36602								202+94.39	7,507,816.41	18,483,288.65	203+20.40	7,507,842.17	18,483,285.03	203+45.81	7,507,867.47	18,483,291.07			
								203+45.81	7,507,867.47	18,483,291.07	203+46.01	7,507,867.67	18,483,291.12	203+46.22	7,507,867.86	18,483,291.17			
DETOUR DET11																			
DET11-1								11+00.00	7,503,532.62	18,483,576.67	13+89.96	7,503,242.66	18,483,578.40	16+40.21	7,503,063.85	18,483,806.66			
DET11-2								16+40.21	7,503,063.85	18,483,806.66	17+03.11	7,503,025.06	18,483,856.18	17+63.45	7,502,967.46	18,483,881.44			
DETOUR DET12																			
DET12-1								12+00.00	7,503,369.57	18,483,227.08	12+74.07	7,503,434.44	18,483,262.84	13+47.07	7,503,486.15	18,483,315.87			
DET12-2								13+47.07	7,503,486.15	18,483,315.87	15+59.63	7,503,634.54	18,483,468.06	17+49.05	7,503,847.10	18,483,466.80			
DETOUR DET21																			
DET21-1								21+00.00	7,509,659.67	18,485,261.84	22+50.45	7,509,798.47	18,485,319.87	23+80.82	7,509,931.03	18,485,248.71			
DET21-2								23+80.82	7,509,931.03	18,485,248.71	26+99.11	7,510,211.45	18,485,098.17	28+69.80	7,510,345.16	18,485,387.01			
DETOUR DET22																			
DET22-1								22+00.00	7,510,344.37	18,485,113.19	23+70.75	7,510,269.90	18,484,959.54	25+32.70	7,510,287.50	18,484,789.70			
DET22-2								26+66.55	7,510,301.29	18,484,656.56	27+76.15	7,510,312.59	18,484,547.55	28+83.48	7,510,285.59	18,484,441.33			
DETOUR DET24																			
DET24-1								24+00.00	7,508,449.20	18,483,545.57	26+30.98	7,508,672.25	18,483,605.54	28+59.92	7,508,903.11	18,483,613.09			
DET24-2								33+04.58	7,509,347.53	18,483,627.62	33+76.47	7,509,419.38	18,483,629.97	34+48.13	7,509,490.21	18,483,642.28			
DETOUR DET25																			
12500		25+00.00	7,508,359.75	18,483,482.03															
DET25-1								26+30.12	7,508,231.59	18,483,459.48	26+77.95	7,508,184.49	18,483,451.19	27+25.70	7,508,136.81	18,483,447.42			
12501		28+15.41	7,508,047.38	18,483,440.34															
SUR141LA																			
54500		2011+13.35	7,509,268.86	18,484,739.98															
54510								2015+79.43	7,509,551.57	18,485,110.52	2070+42.16	7,512,865.12	18,489,453.54	2024+24.82	7,510,009.76	18,484,796.47			
SUR141LB																			
55000								3020+09.20	7,510,020.77	18,484,254.61	3022+30.97	7,509,828.05	18,484,364.34	3027+33.49	7,509,989.39	18,484,516.50			
SUR141RA																			
54000		1010+67.76	7,509,232.69	18,484,767.75															
54010								1015+33.84	7,509,515.40	18,485,138.30	1016+37.25	7,509,578.13	18,485,220.51	1017+37.69	7,509,668.64	18,485,270.53			
54020								1022+56.24	7,510,122.50	18,485,521.34	1025+05.95	7,510,339.10	18,485,645.57	1027+38.33	7,510,438.02	18,485,874.84			
SUR141RC																			
56000		4024+28.15	7,510,368.29	18,484,031.97															
56010								4028+73.06	7,510,350.39	18,484,476.52	4031+81.18	7,510,338.00	18,484,784.38	4034+84.33	7,510,420.27	18,485,081.31			
56003		4038+68.47	7,510,524.98	18,485,450.91															

SPIRAL OR CIRCULAR CURVE DATA

101-17
04-19-11

Name	Location	Δ _{scs}	Horizontal Alignment Data												Remarks				
			Spiral Data						Curve Data										
			θ _s	L _s	T _s	E _s	X _c	Y _c	L.T.	S.T.	Δ _c	T	L	R		E			
I-35/80 20005														88° 13' 37.23" RT	2,817.46'	4,474.84'	2,906.02'	1,141.57'	
IA 141_S 22005														34° 14' 53.94" RT	202.17'	392.22'	656.17'	30.44'	
IA 141_N 22105														1° 03' 32.21" LT	225.46'	450.91'	24,396.96'	1.04'	
DOUGLAS RAMP A 34005 34015 34025														29° 32' 18.87" RT 27° 05' 06.25" LT 3° 27' 38.79" LT	152.91' 352.87' 578.52'	299.02' 692.54' 1,156.70'	580.00' 1,465.00' 19,150.00'	19.82' 41.90' 8.74'	
DOUGLAS RAMP D 37005 37007														18° 18' 41.06" RT 5° 45' 39.31" RT	526.55' 264.16'	1,044.11' 527.87'	3,267.00' 5,250.00'	42.16' 6.64'	
MEREDITH RAMP B 35005														9° 46' 51.48" RT	130.91'	261.19'	1,530.00'	5.59'	
MEREDITH RAMP C 36005														6° 29' 42.69" LT	113.48'	226.72'	2,000.00'	3.22'	
IA 141 RAMP A 34105														12° 20' 14.51" RT	129.70'	258.39'	1,200.00'	6.99'	
IA 141 RAMP B 35103 35105 35115 35125 35205 35207														23° 59' 21.16" RT 17° 09' 27.98" RT 76° 39' 40.60" LT 34° 40' 36.39" RT 3° 43' 17.71" LT 4° 19' 27.77" RT	424.92' 374.13' 474.37' 330.93' 194.93' 226.53'	837.38' 742.66' 802.80' 641.54' 389.72' 452.85'	2,000.00' 2,480.00' 600.00' 1,060.00' 6,000.00' 6,000.00'	44.64' 28.06' 164.87' 50.46' 3.17' 4.27'	
IA 141 RAMP C 36115 36105														2° 20' 58.21" RT 9° 46' 54.34" LT	230.41' 490.32'	460.75' 978.25'	11,236.00' 5,730.00'	2.36' 20.94'	
IA 141 RAMP D 37105 37115														23° 51' 11.36" LT 54° 38' 04.46" RT	107.00' 382.23'	210.91' 705.63'	506.60' 740.00'	11.18' 92.88'	
MSE WALL 35500 35500														9° 48' 55.12" RT	129.97'	259.30'	1,513.62'	5.57'	
MSE WALL 35600 35600 35602														9° 46' 51.48" RT 1° 54' 02.52" LT	133.85' 0.46'	267.05' 0.92'	1,564.38' 27.62'	5.72' 0.00'	
MSE WALL 35700 35700 35701														3° 47' 13.00" LT 2° 23' 37.62" RT	198.57' 125.22'	396.99' 250.41'	6,006.38' 5,993.62'	3.28' 1.31'	
MSE WALL 35710 35710														2° 54' 17.49" LT	151.26'	302.45'	5,965.63'	1.92'	
MSE WALL 36600 36600 36602														21° 24' 25.13" RT 0° 10' 08.70" RT	26.01' 0.20'	51.42' 0.41'	137.63' 137.49'	2.44' 0.00'	
DETOUR DET11 DET11-1 DET11-2														51° 35' 11.48" LT 28° 14' 39.14" RT	289.96' 62.90'	540.21' 123.24'	600.00' 250.00'	66.39' 7.79'	
DETOUR DET12 DET12-1 DET12-2														16° 51' 09.94" RT 46° 03' 48.94" LT	74.07' 212.56'	147.07' 401.98'	500.00' 500.00'	5.46' 43.31'	
DETOUR DET21 DET21-1 DET21-2														50° 55' 04.64" LT 93° 23' 16.17" RT	150.45' 318.28'	280.82' 488.97'	316.00' 300.00'	33.99' 137.38'	

SPIRAL OR CIRCULAR CURVE DATA

101-17
04-19-11

Name	Location	Δ_{SCS}	Horizontal Alignment Data											Remarks		
			Spiral Data					Curve Data								
			θ_s	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	Δ_c	T	L	R	E	
DETOUR DET22 DET22-1 DET22-2																
											31° 46' 15.33" RT	170.75'	332.70'	600.00'	23.82'	
											20° 10' 37.67" LT	109.60'	216.93'	616.00'	9.67'	
DETOUR DET24 DET24-1 DET24-2																
											13° 10' 32.55" LT	230.98'	459.92'	2,000.00'	13.29'	
											7° 59' 05.89" RT	71.89'	143.54'	1,030.00'	2.51'	
DETOUR DET25 DET25-1																
											5° 27' 16.31" LT	47.83'	95.58'	1,004.00'	1.14'	
SUR141LA 54510																
											174° 10' 16.74" LT	5,462.73'	845.39'	278.10'	5,191.70'	
SUR141LB 55000																
											252° 58' 45.12" RT	221.77'	724.29'	164.04'	439.89'	
SUR141RA 54010 54020																
											23° 43' 32.61" LT	103.41'	203.85'	492.28'	10.74'	
											36° 49' 43.82" RT	249.70'	482.09'	750.00'	40.48'	
SUR141RC 56010																
											17° 47' 27.94" LT	308.11'	611.27'	1,968.58'	23.97'	

TRAFFIC CONTROL PLAN

Mainline I-35/80
Maintain three lanes of traffic, both northbound/eastbound and southbound/westbound, at all times during all stages of construction except as noted elsewhere in the traffic control plan. Shift existing three inside northbound/southbound lanes 12 feet inward toward existing mainline median barrier between Douglas Avenue and NW 100th Street interchanges for the duration of the project.

Douglas Avenue Interchange
Maintain traffic on northbound/eastbound entrance ramp and southbound/westbound exit ramp at all times during all stages of construction except as noted elsewhere in the traffic control plan. Construct proposed/temporary pavement and shift traffic as specified in the staging notes in a manner that maintains traffic flow.

Meredith Drive Interchange
Maintain two lanes of traffic, both eastbound and westbound, at all times during all stages of construction except as noted elsewhere in the traffic control plan. Construct proposed ramp pavement in a manner that maintains traffic flow.

Highway 141 Interchange
Maintain traffic on northbound/eastbound entrance ramp and southbound/westbound exit ramp at all times during all stages of construction except as noted elsewhere in the traffic control plan. Close and remove existing loop ramps as detailed in the staging notes. Construct proposed/temporary pavement and shift traffic as specified in the staging notes in a manner that maintains traffic flow.

NW 100th Street Interchange
Maintain traffic on northbound/eastbound off-ramp and southbound/westbound on-ramp at all times during all stages of construction except as noted elsewhere in the traffic control plan. Shift traffic as specified in the staging notes in a manner that maintains traffic flow.

Mainline Highway 141
Maintain two lanes of traffic, both northbound and southbound, at all times during all stages of construction except as noted elsewhere in the traffic control plan. Shift existing lanes to avoid areas of construction as detailed in staging notes.

Highway 141/SE 37th Street Intersection
Maintain traffic through intersection, both northbound/southbound and eastbound/westbound, at all times during all stages of construction except as noted elsewhere in the traffic control plan. Refer to staging notes for stages and locations where heavy truck turning movements will be restricted at the intersection and require alternative routing.

STAGING NOTES

Stage 1 (Refer to sheets J.6 to J.19)
Construction:
1) Grading for I-35/80 NB and SB lane widening; Douglas Avenue Ramps A and D; Meredith Drive Ramps B and C; Highway 141 Ramps A, B, C, and D; and Highway 141 widening that does not affect staged I-35/80 mainline or ramp traffic operations as detailed in J sheets.
2) Construct Highway 141 Ramp B fly-over ramp bridge piers.
3) Pave Highway 141 lane and shoulder (18 to 30 ft.) north of SE 41st Street through the SE 37th Street intersection to the north limits of the project.
4) Remove existing Highway 141 Ramp E loop entrance ramp.

Traffic:
1) NB and SB I-35/80 traffic will operate on existing mainline pavement and median shoulder. Existing three lanes in each direction will be shifted 12 toward median barrier and temporary barrier rail will be installed between traffic lanes and grading work as specified in J sheet typical sections and plan sheets.
2) Existing ramp and merge/diverge lanes for Douglas Avenue Ramps A and D; Highway 141 Ramps A, C, D, and H; and NW 100th Street Ramps B and C will be redirected as detailed on the applicable J sheets to shift ramp traffic away from proposed grading/construction. When traffic is to be redirected onto/across existing ramp/mainline shoulder, replace all partial depth shoulders with full depth shoulder pavement.
3) Highway 141 northbound, right-turn truck movements eastbound to SE 37th Street shall be routed via SE 41st Street. Provide right-turn deceleration lane as shown on applicable J sheets.

Stage 2A (Refer to sheets J.20 to J.33)
Construction:
1) Pave I-35/80 NB and SB outside lane and shoulder (24 ft.) as shown on applicable J sheets.
2) Pave Meredith Drive Ramps B and C.
3) Pave Highway 141 Ramp B, associated bridge deck, and Highway 141 lane and shoulder (18 ft.) as shown on applicable J sheets.
4) Pave portions of Douglas Avenue Ramps A and D and Highway 141 Ramp A as detailed on applicable J sheets.
5) Grade and pave all ramp detours as shown on applicable F and J sheets. When traffic is to be redirected onto/across existing ramp/mainline shoulder, replace all partial depth shoulders with full depth shoulder pavement.

Traffic:
1) NB and SB I-35/80 traffic will operate on existing mainline pavement and median shoulder.
2) Redirect Douglas Avenue Ramps A and D and Highway 141 Ramp C onto strengthened shoulder and/or detour pavement as detailed on the applicable F and J sheets to shift ramp traffic away from proposed grading/construction.










Stage 2B (Refer to sheets J.34 to J.47)
Construction:
1) Grade and pave remaining I-35/80 NB and SB outside lane and shoulder (24 ft.) as shown on applicable J sheets.
2) Pave remaining portions of Douglas Avenue Ramps A and D and Highway 141 Ramp A as detailed on applicable J sheets.
3) Pave Highway 141 Ramps C and D.
4) Remove existing Highway 141 Ramp H loop exit ramp.

Traffic:
1) NB and SB I-35/80 traffic will operate on existing mainline pavement and median shoulder.
2) Shift Douglas Avenue Ramp D traffic onto detour pavement. Adjust mainline interstate temporary barrier rail accordingly to provide acceleration lane as detailed on J sheets.
3) Shift Douglas Avenue Ramp A traffic onto detour pavement. Adjust mainline interstate temporary barrier rail accordingly to provide deceleration lane as detailed on J sheets.
4) Open Meredith Drive Ramps B and C and Highway 141 Ramp B to traffic. Direct merge/diverge lanes and adjust mainline interstate temporary barrier rail accordingly to provide accel./decel. lanes as detailed on the J sheets.
5) Shift Highway 141 Ramps A, C, and D traffic onto corresponding detour pavement. Direct merge/diverge lanes and adjust mainline interstate temporary barrier rail accordingly to provide accel./decel. lanes as detailed on the J sheets.

**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**

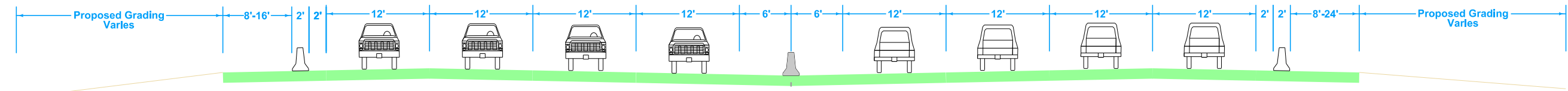
	Channelizing Device		Crash Cushion (Temp or Perm)
	Drum		Traffic Signal
	Temporary Lane Separator		Flagger
	Tubular Marker		Temporary Floodlighting
	Channelizer Marker		Traffic Sign
	Concrete Barrier Marker		Type III Barricade
	Delineator		Type A Warning Light
	Temporary Barrier Rail		Direction of Traffic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

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

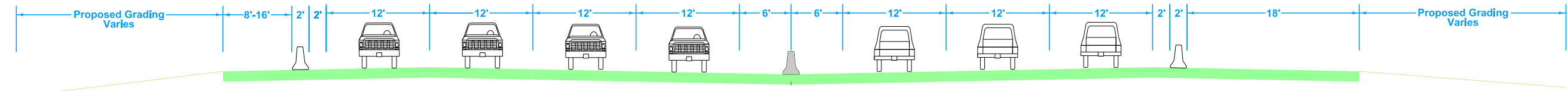
**TRAFFIC CONTROL
AND
STAGING
LEGEND AND SYMBOL
INFORMATION SHEET**

(COVERS SHEET SERIES J)

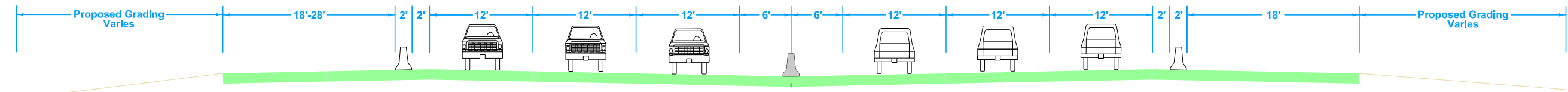
Stage 1



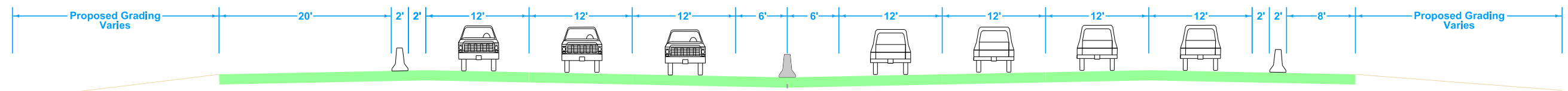
I-35/I-80 (Sta 495+00)



I-35/I-80 (Sta 500+00)

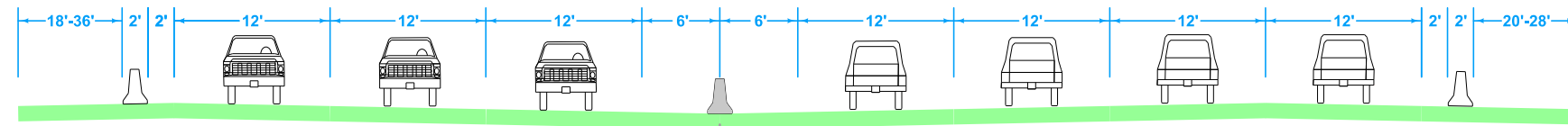


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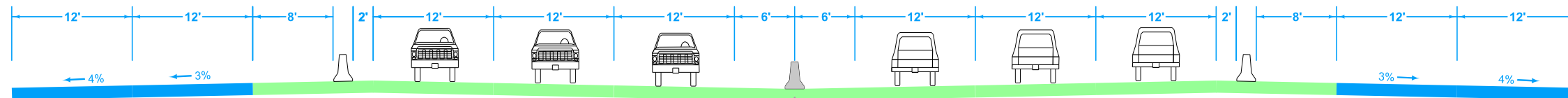


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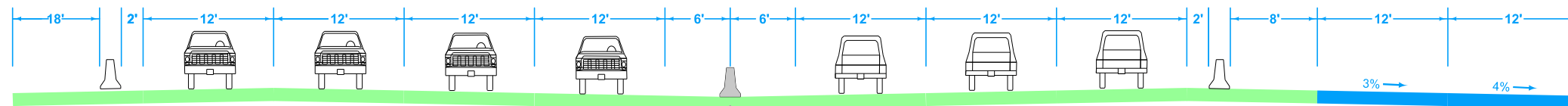
Stage 2A



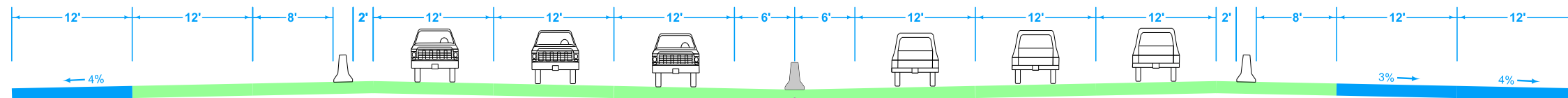
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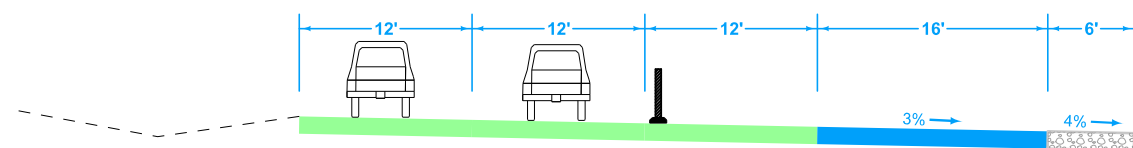
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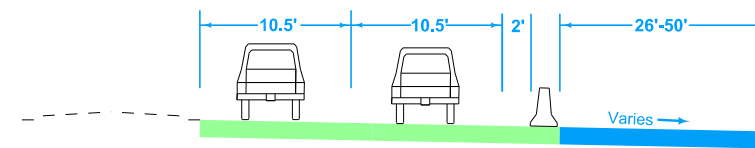
I-35/I-80 (520+00)



I-35/I-80 (535+00)

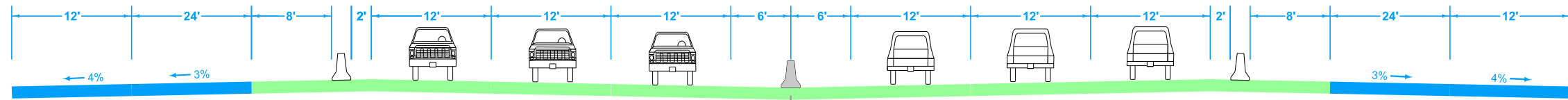


IA 141 NORTHBOUND (45+00)

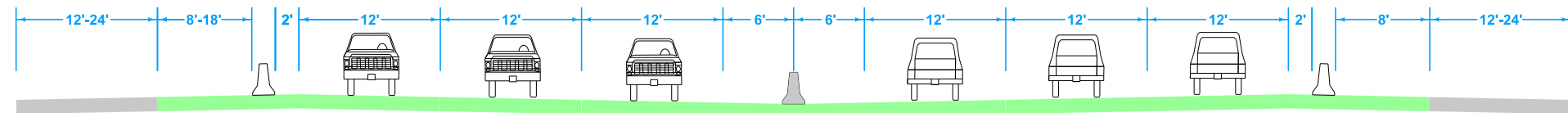


IA 141 NORTHBOUND (40+00)

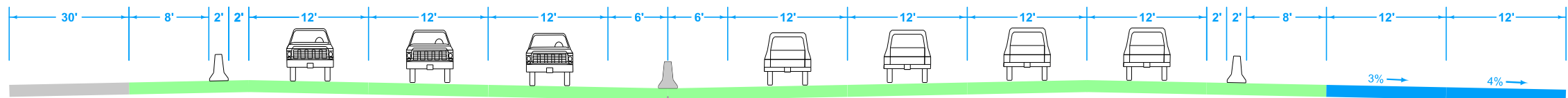
Stage 2B



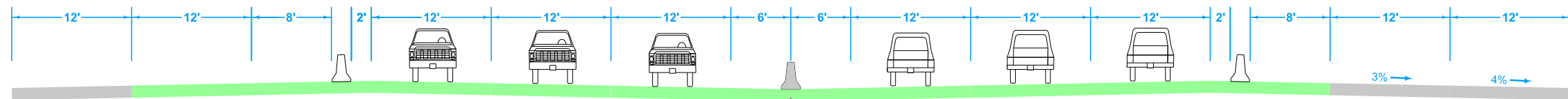
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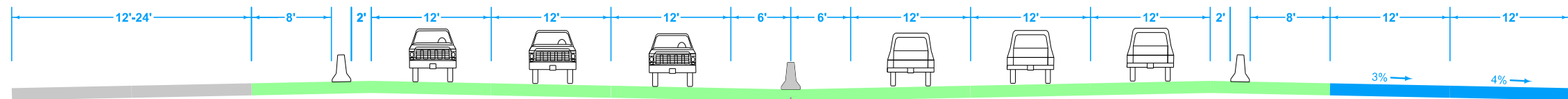
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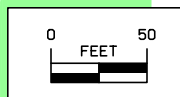
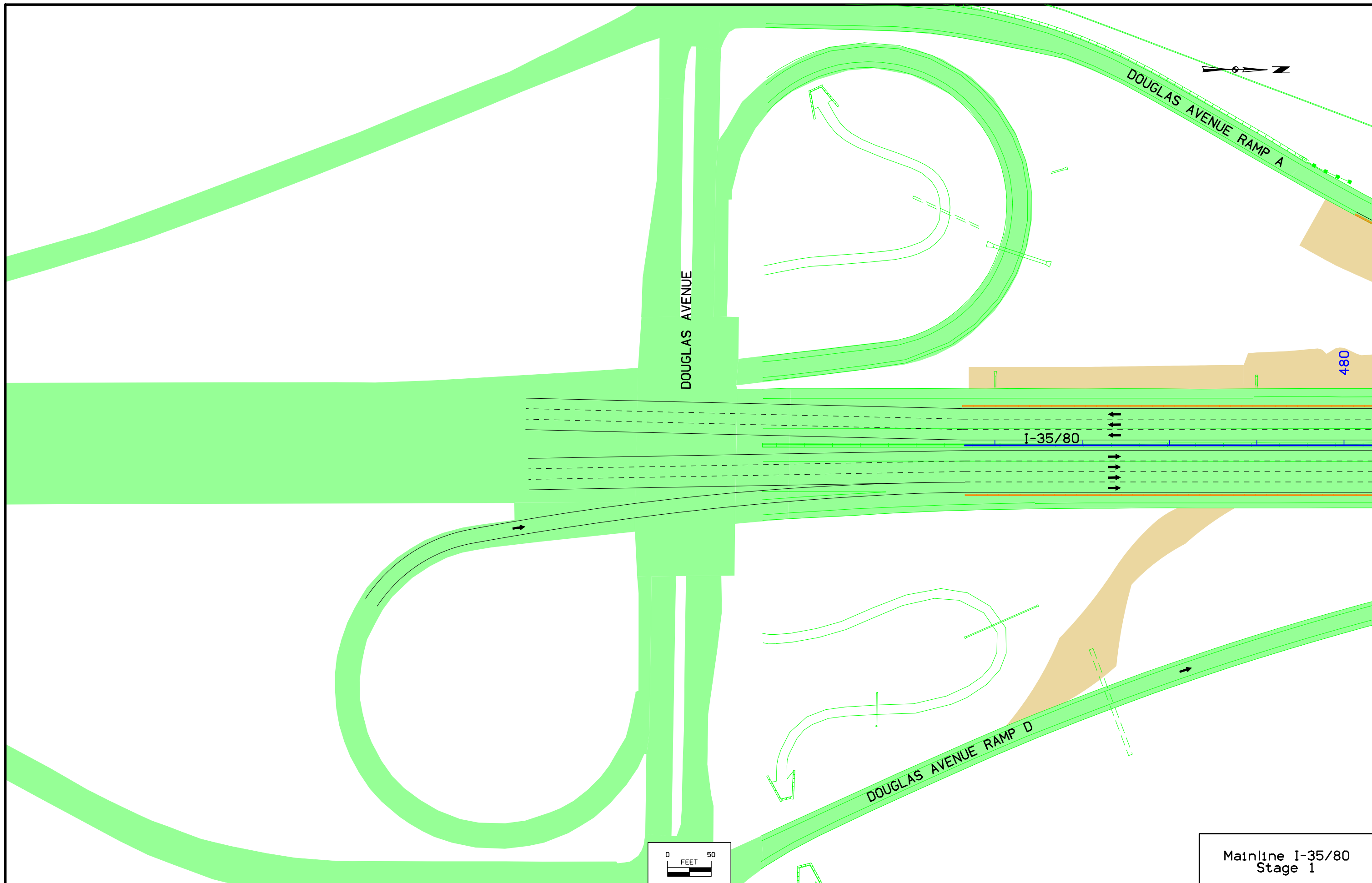
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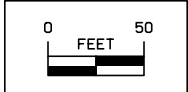
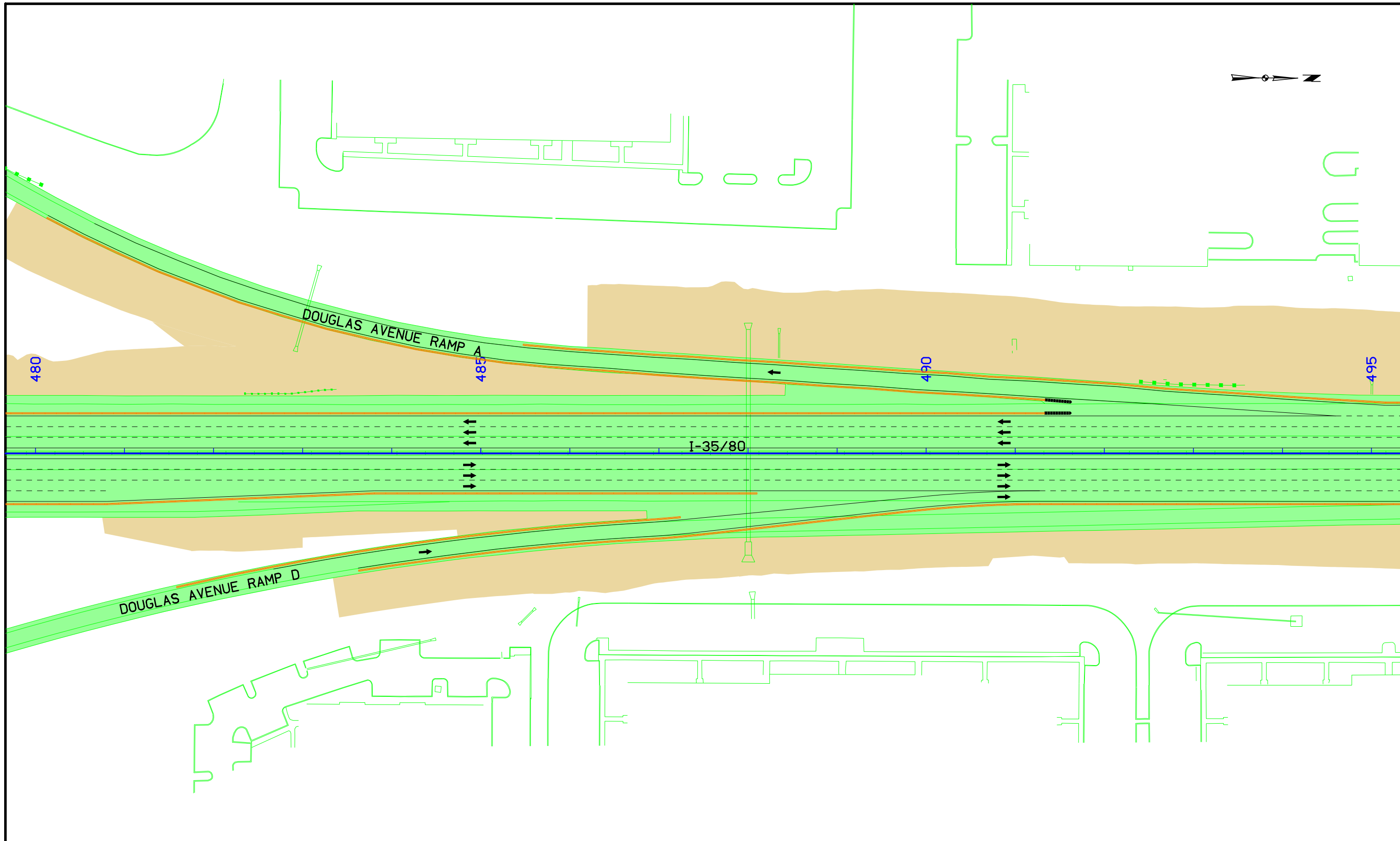


I-35/I-80 (565+00)

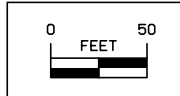
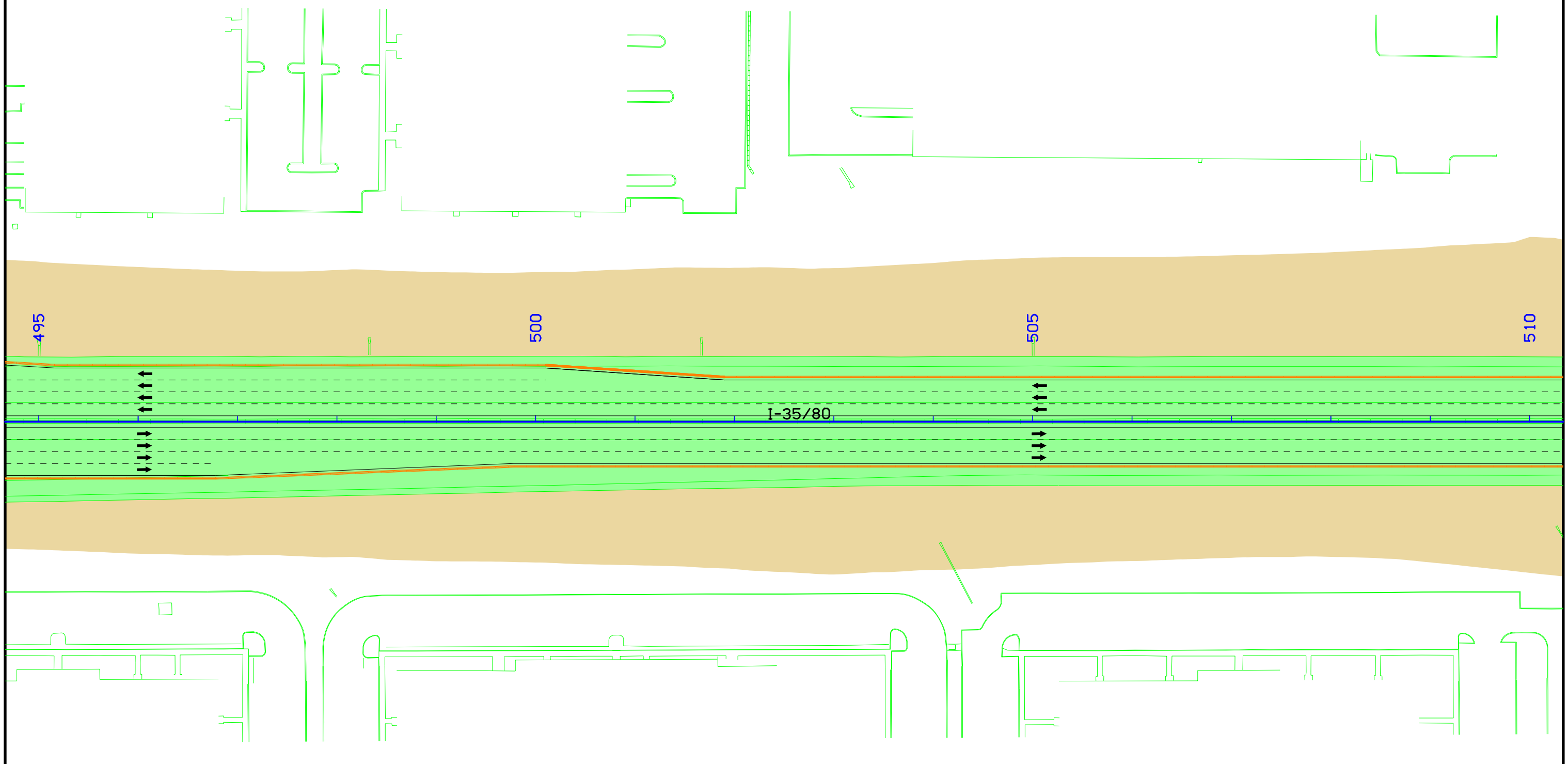


Mainline I-35/80
Stage 1

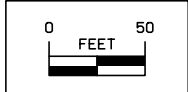
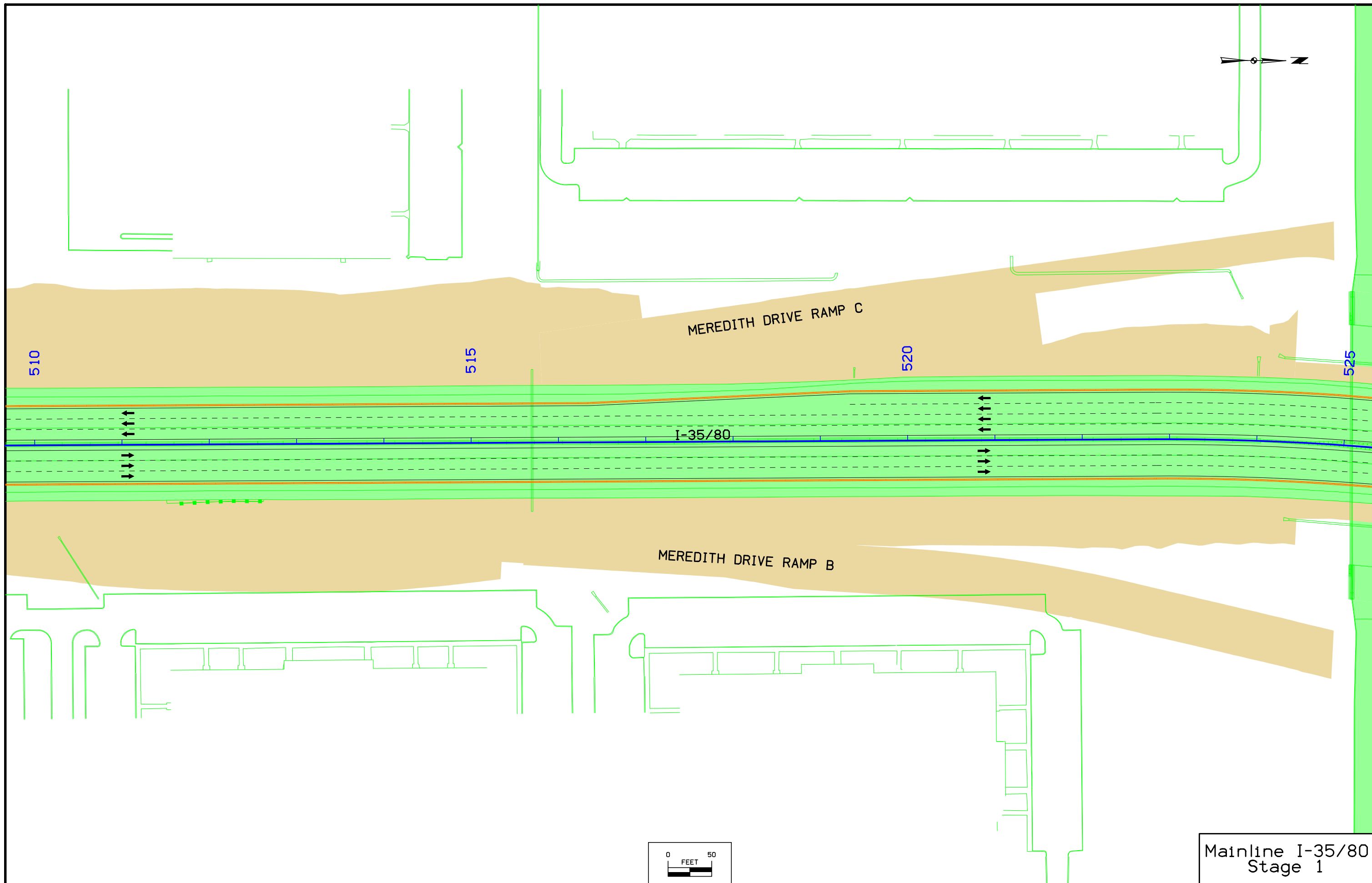
FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.6
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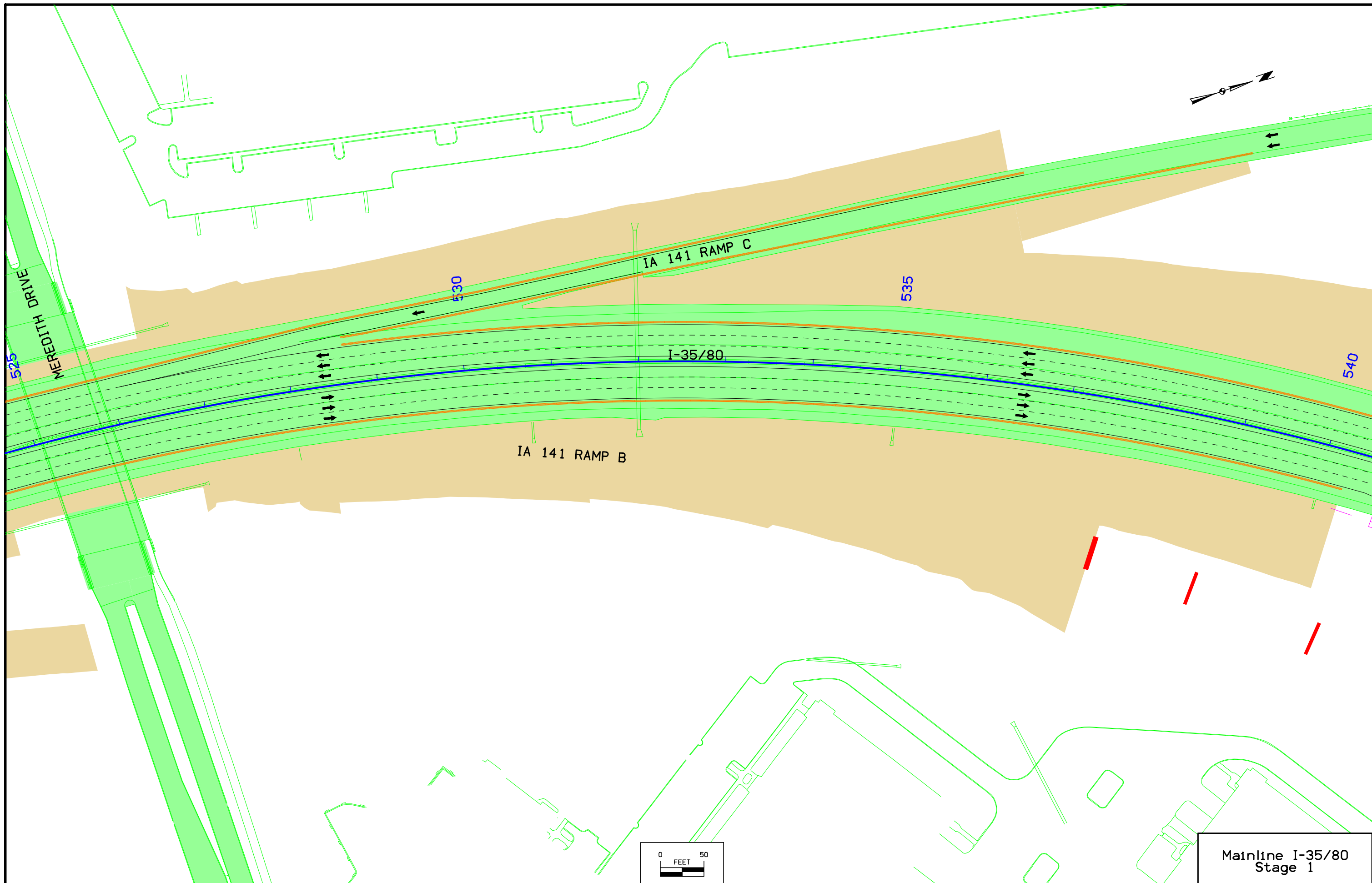
Mainline I-35/80
Stage 1



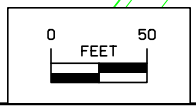
Mainline I-35/80
Stage 1

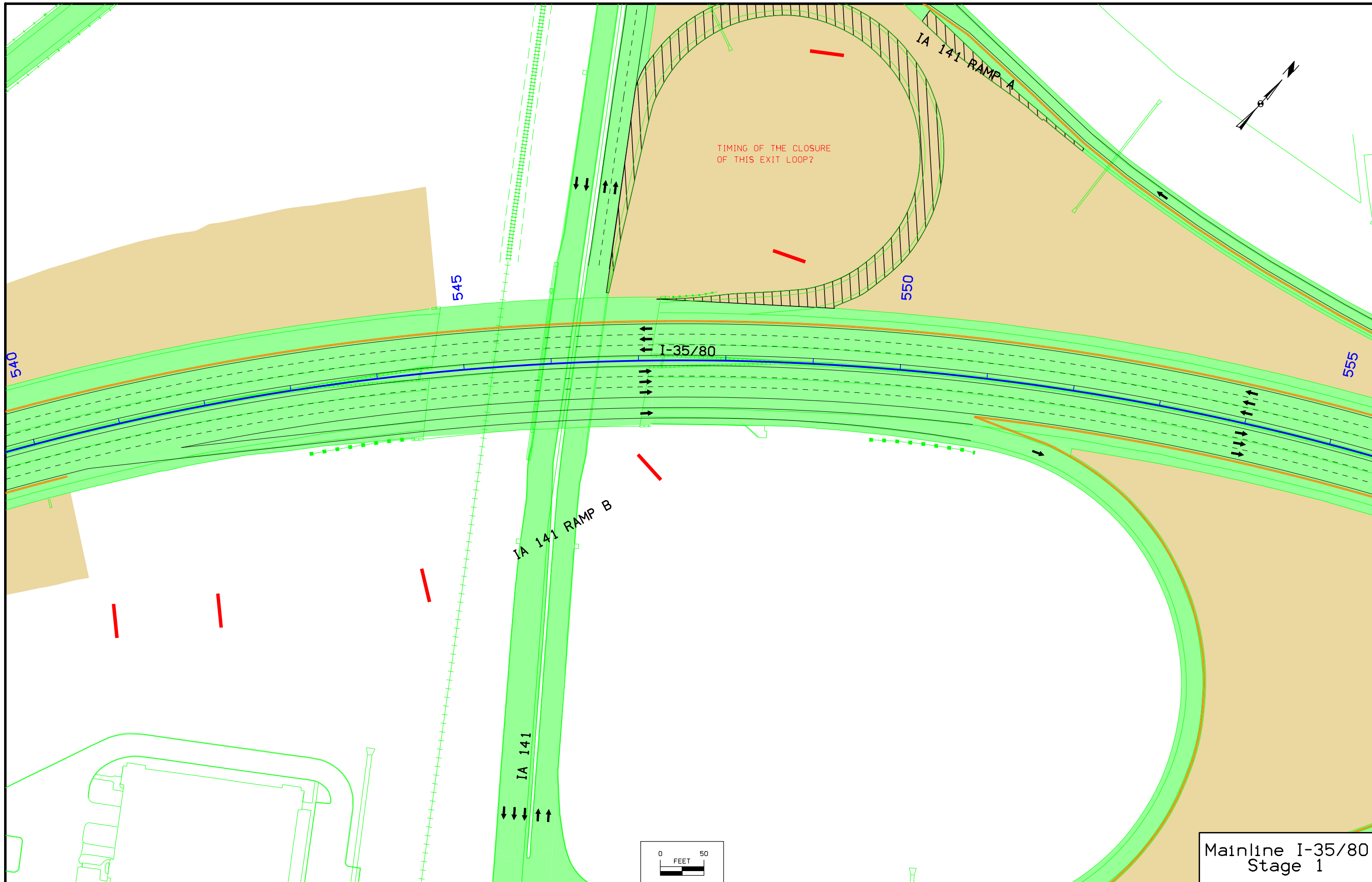


Mainline I-35/80
Stage 1

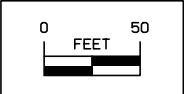
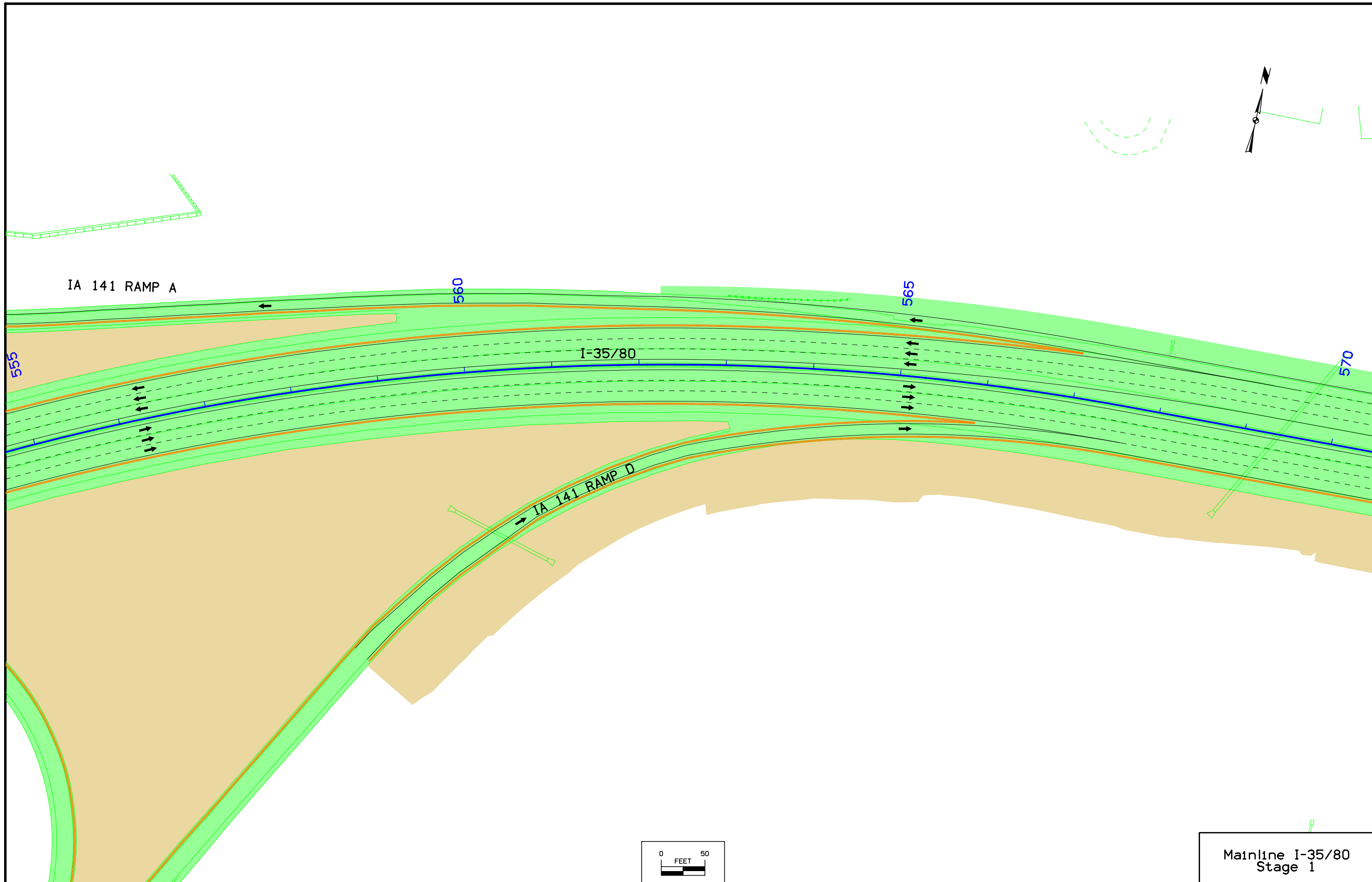


Mainline I-35/80
Stage 1

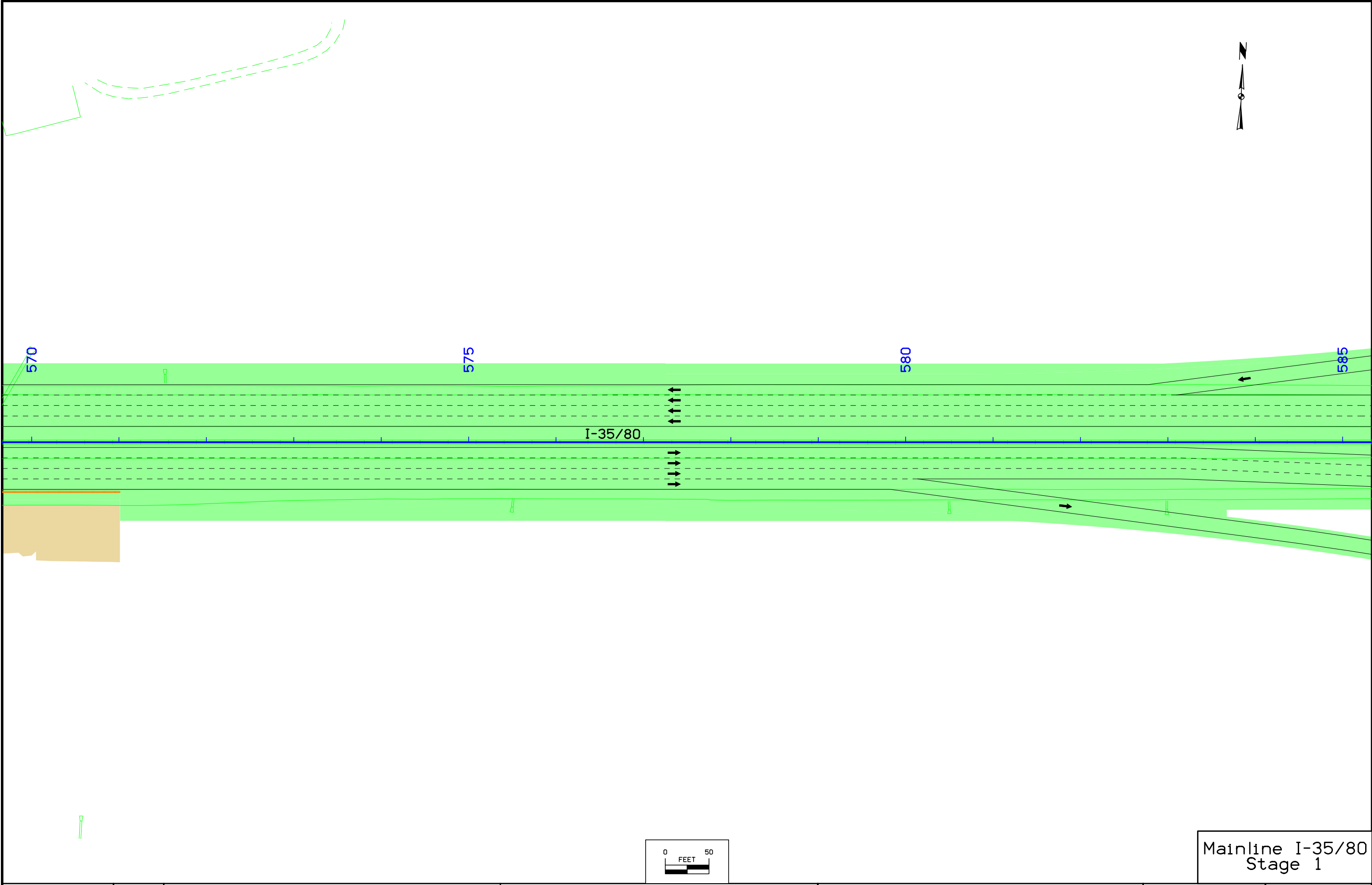




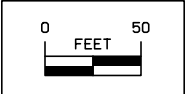
Mainline I-35/80
Stage 1

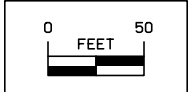
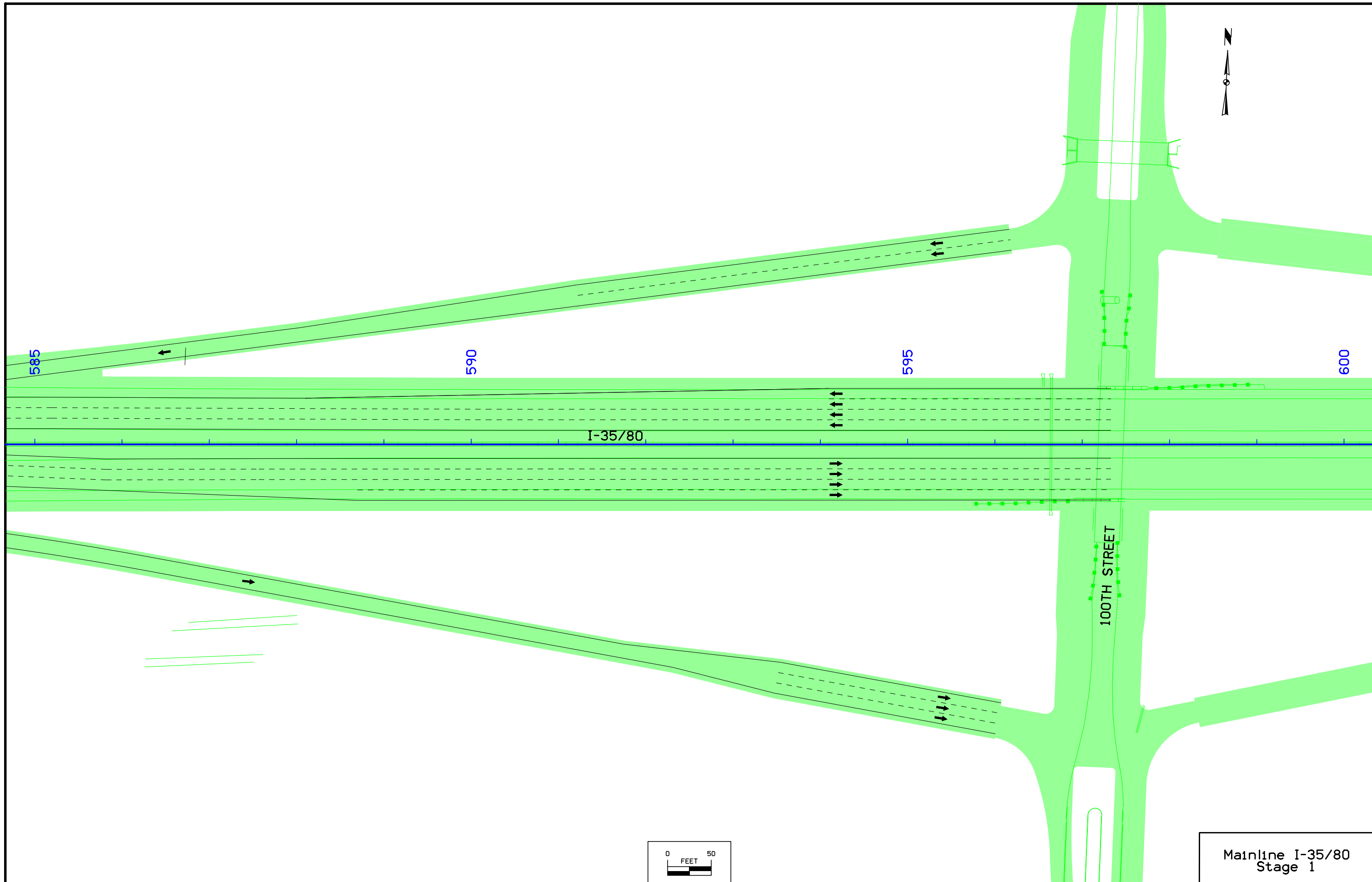


Mainline I-35/80
Stage 1



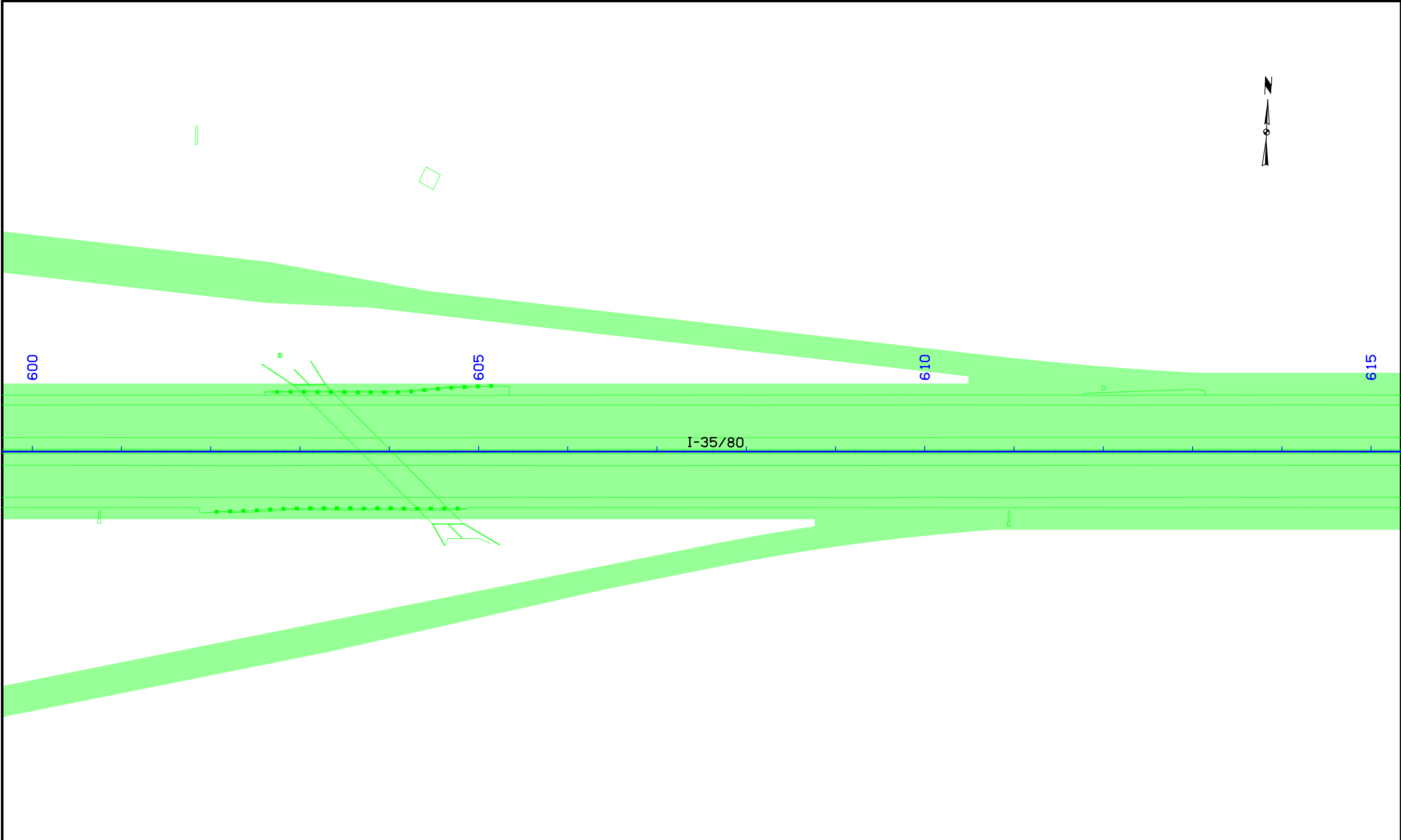
Mainline I-35/80
Stage 1





Mainline I-35/80
Stage 1

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.14
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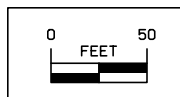
600

605

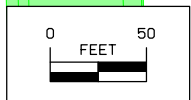
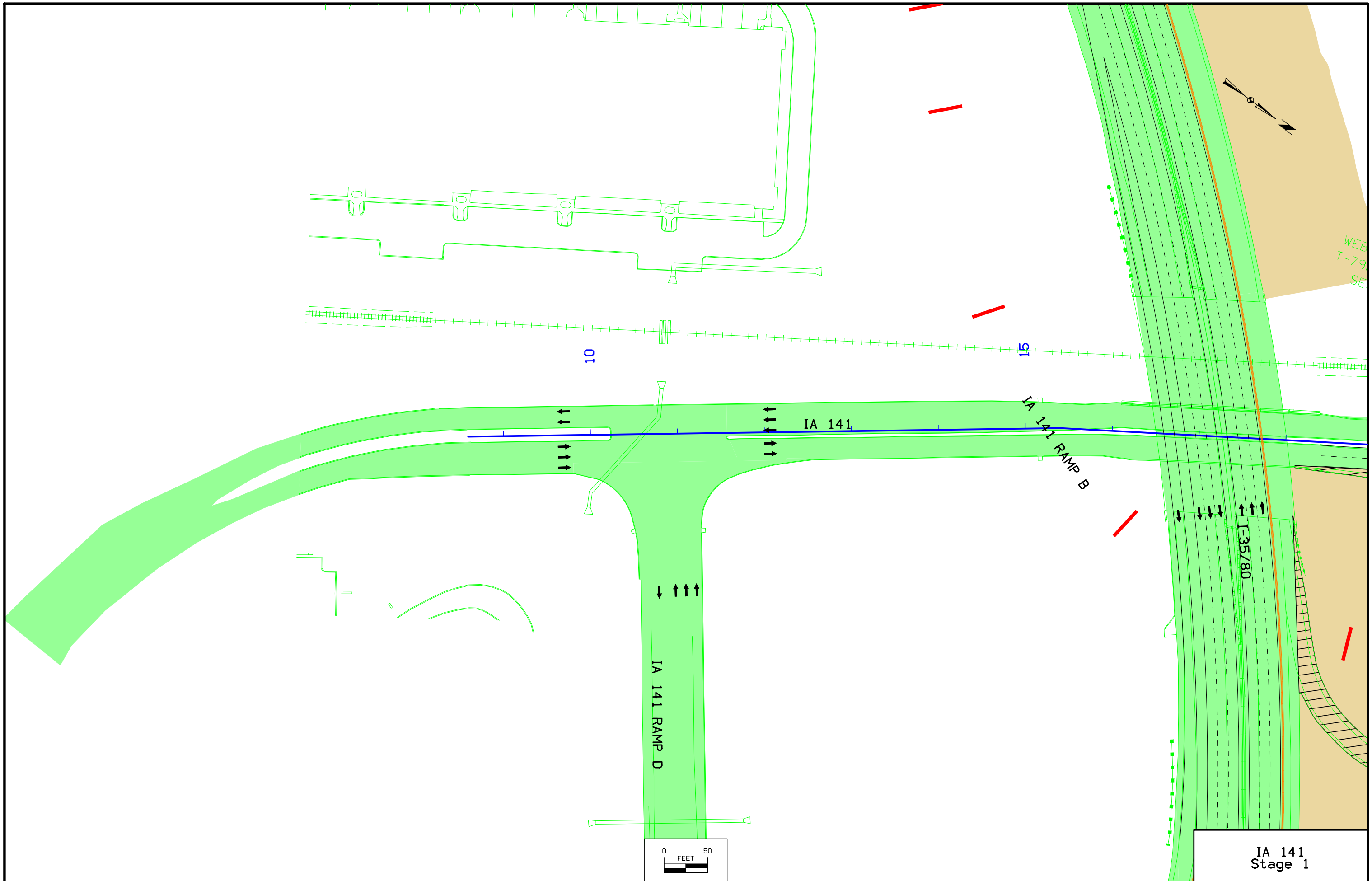
610

615

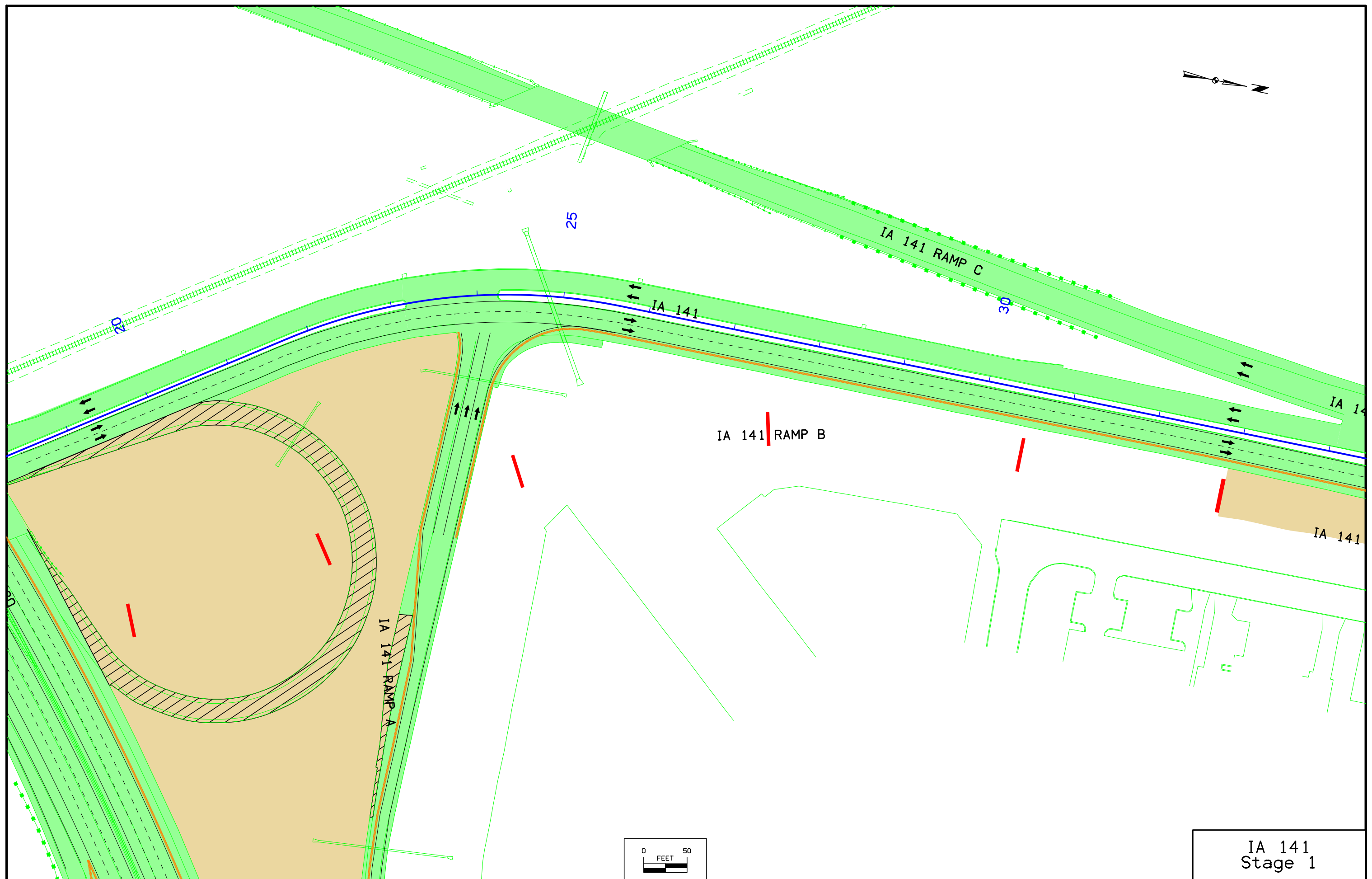
I-35/80



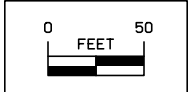
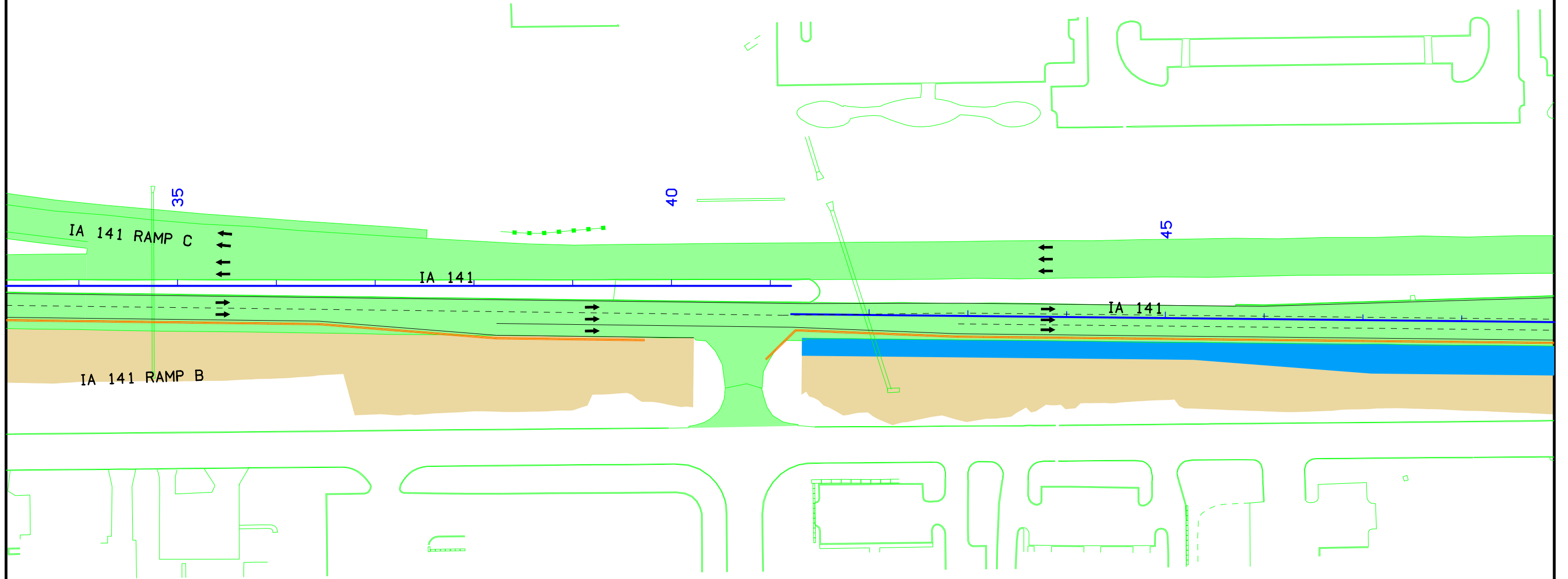
Mainline I-35/80
Stage 1



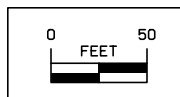
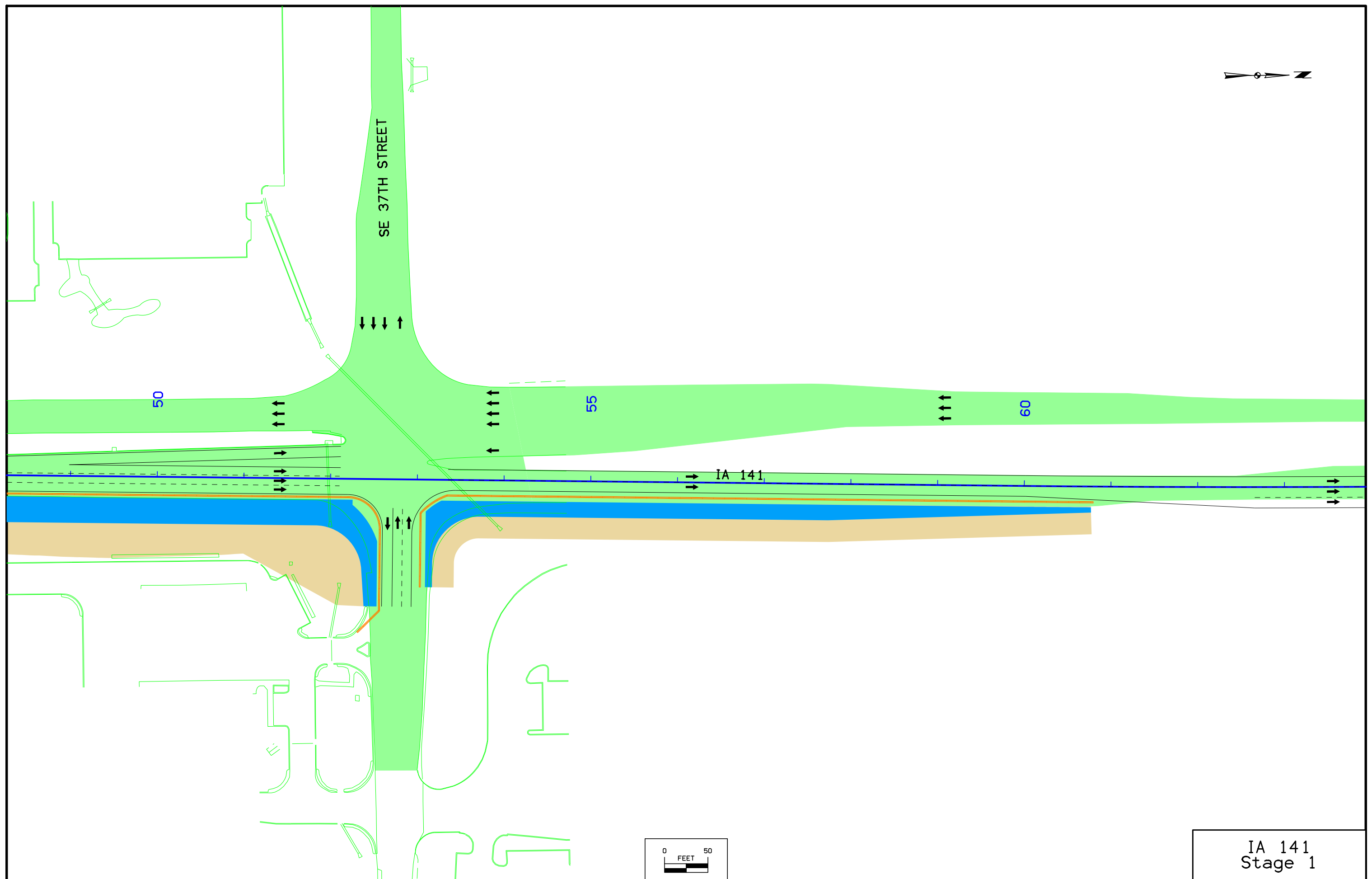
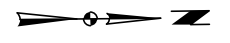
IA 141
Stage 1



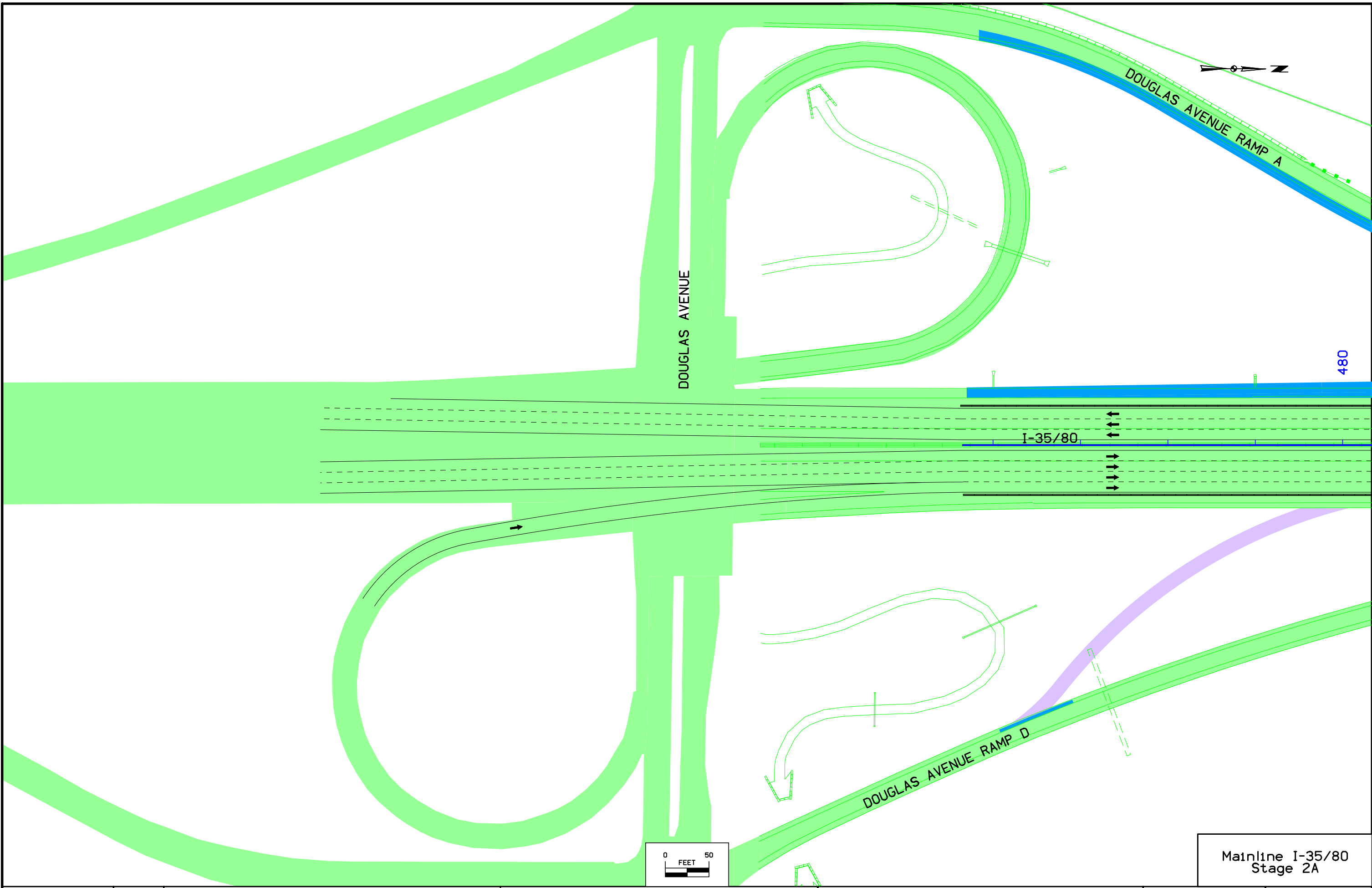
IA 141
Stage 1

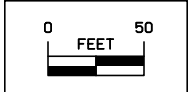
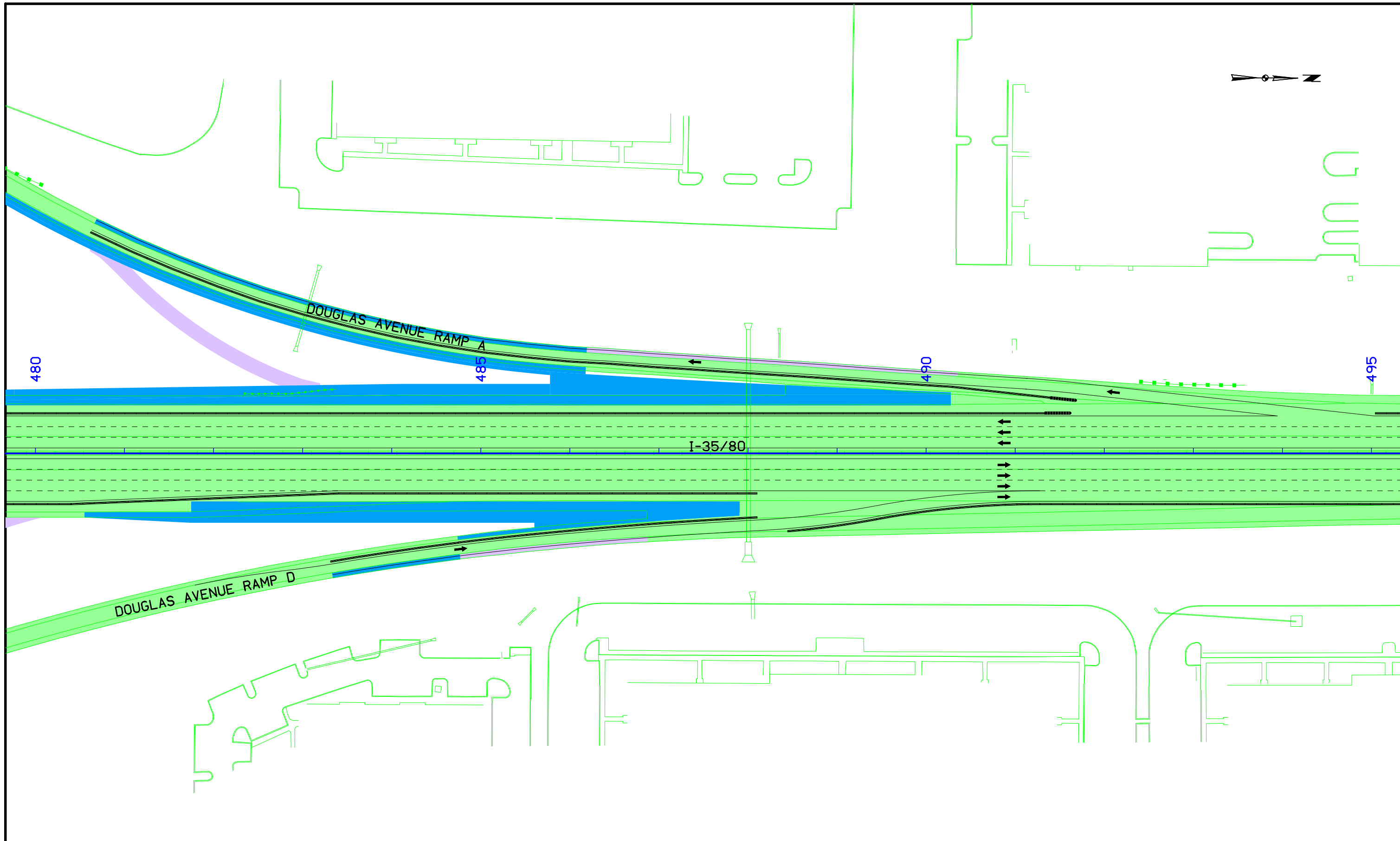


IA 141
Stage 1

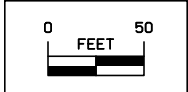
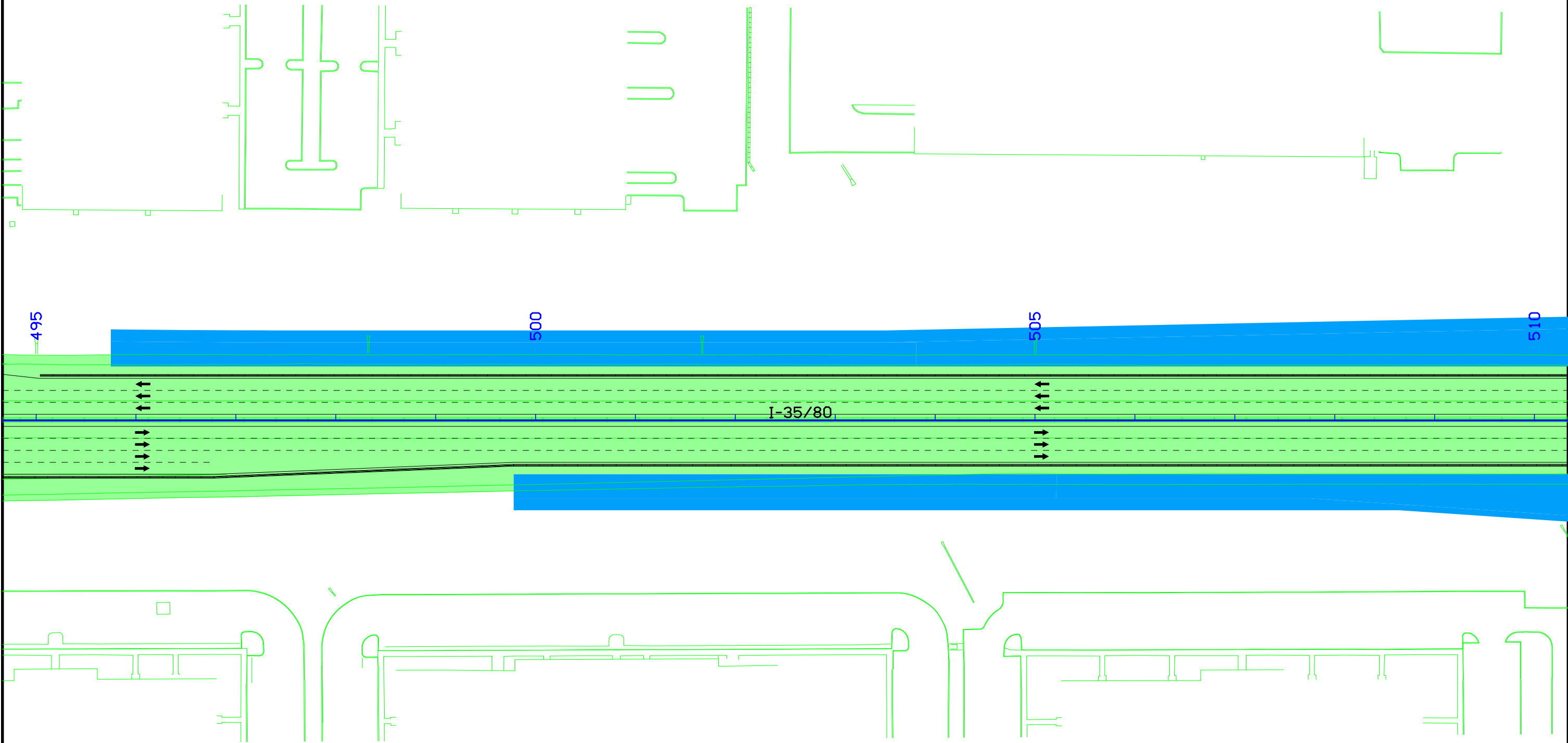


IA 141
Stage 1

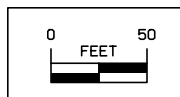
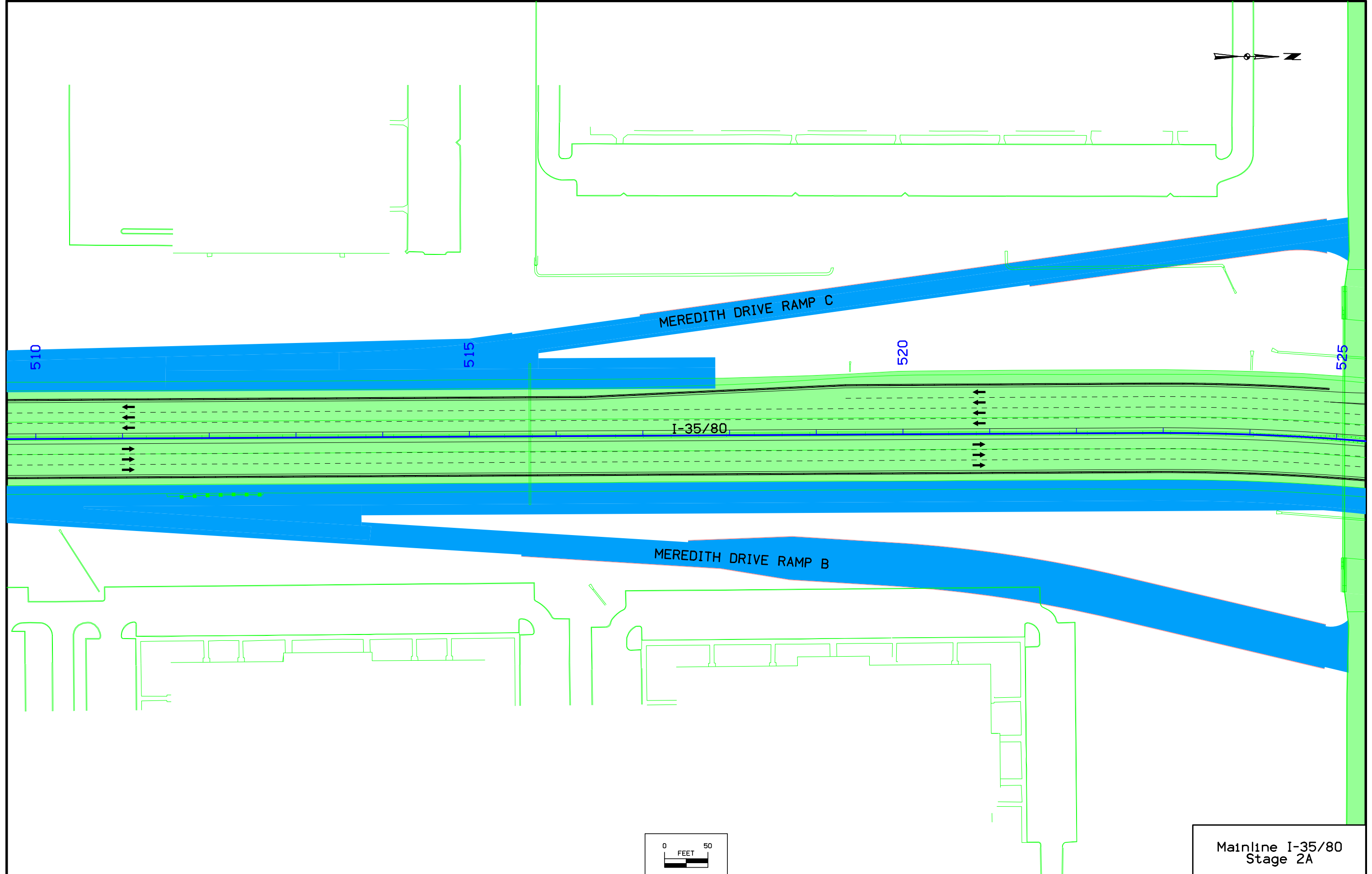




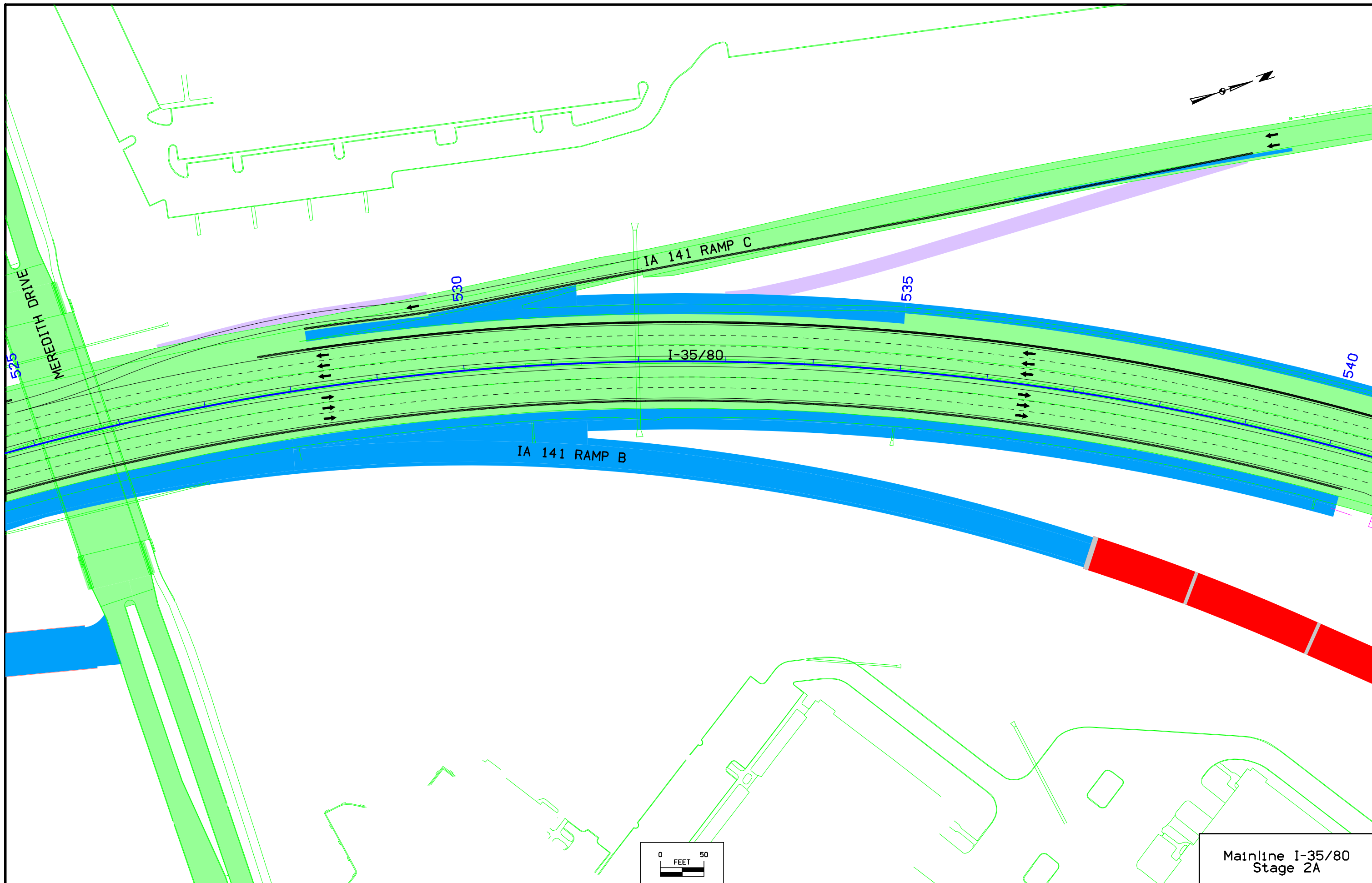
Mainline I-35/80
Stage 2A



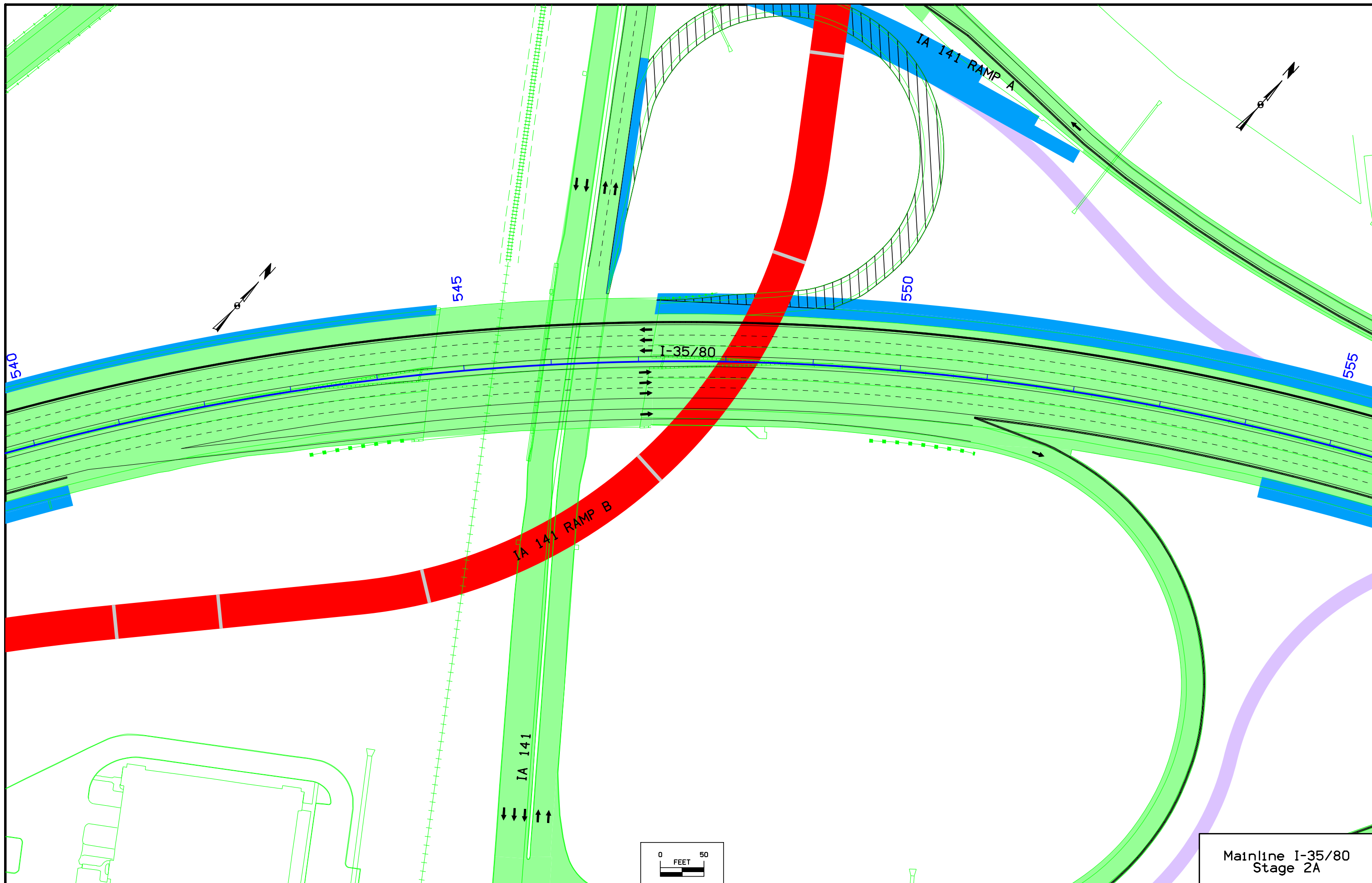
Mainline I-35/80
Stage 2A



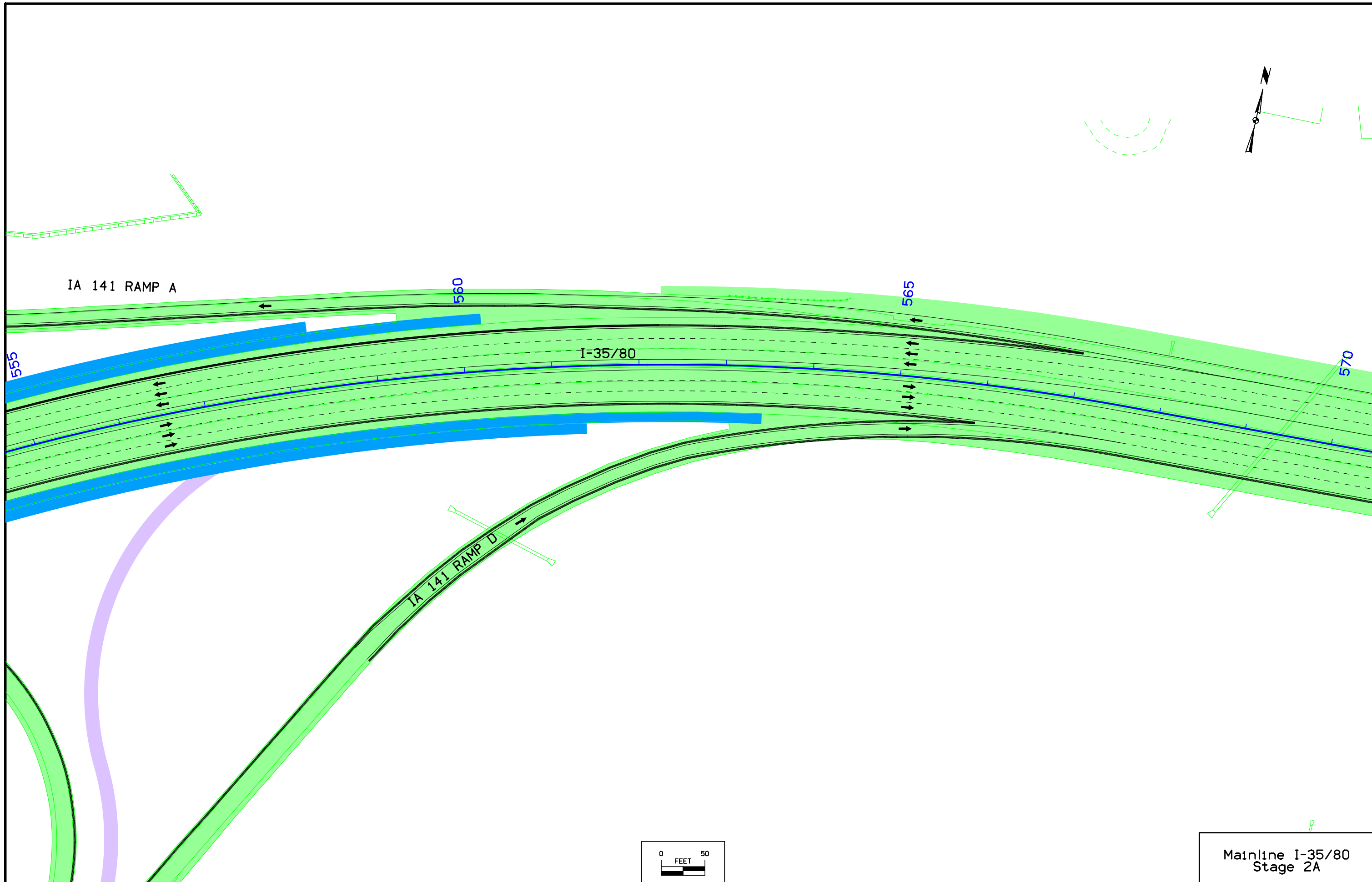
Mainline I-35/80
Stage 2A



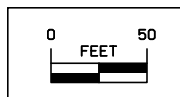
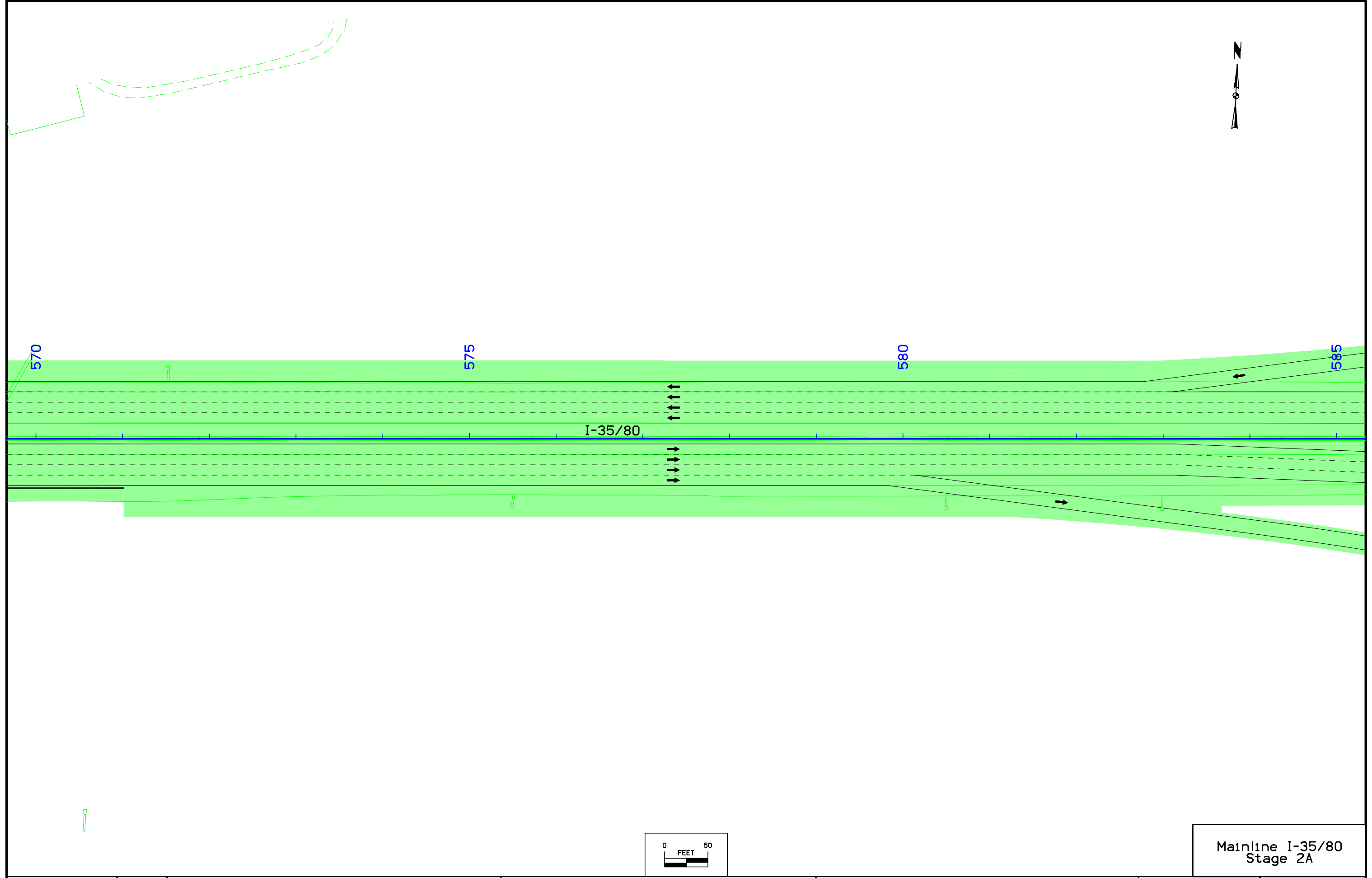
Mainline I-35/80
Stage 2A



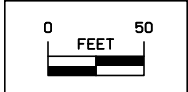
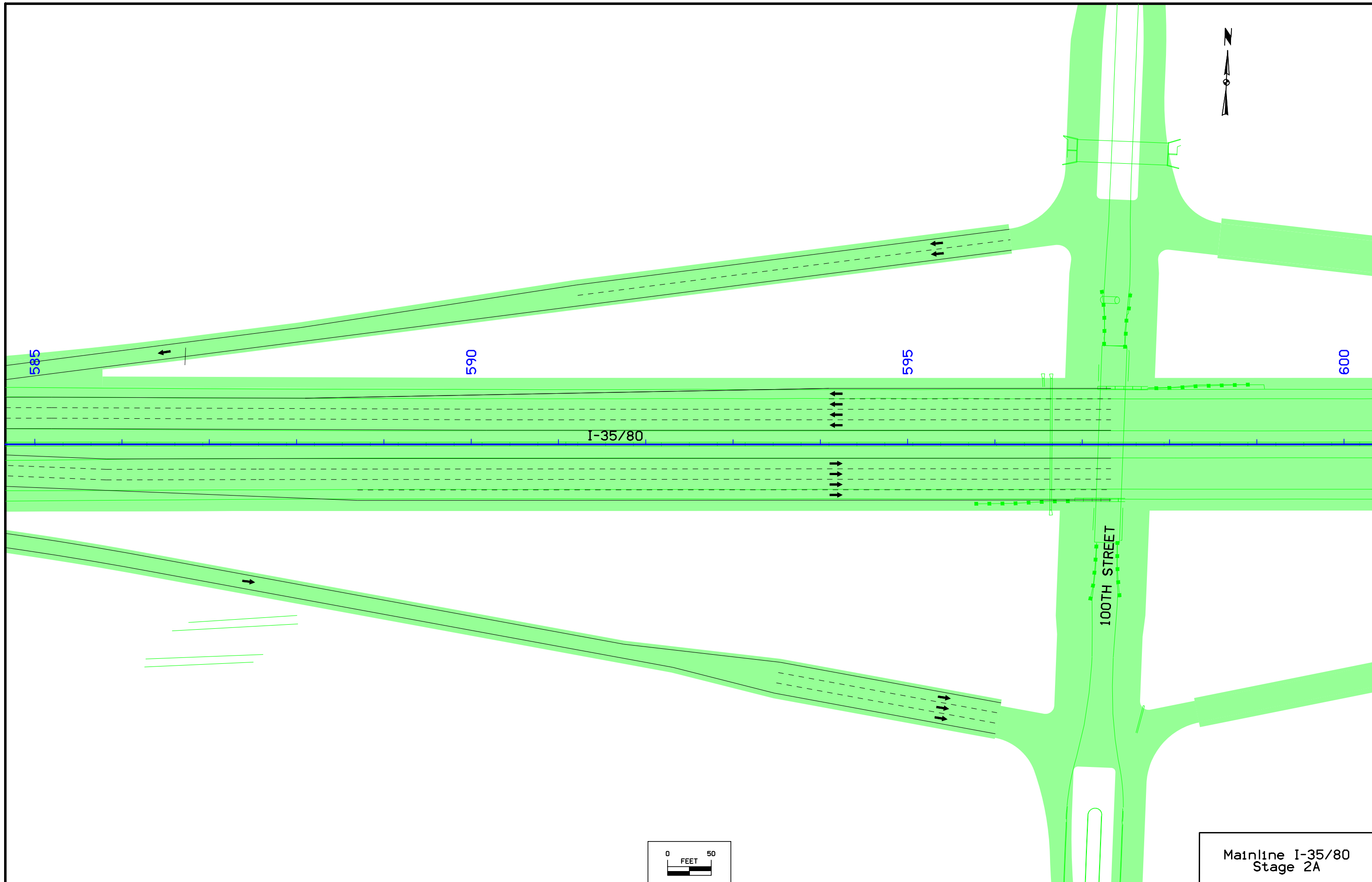
Mainline I-35/80
Stage 2A



Mainline I-35/80
Stage 2A

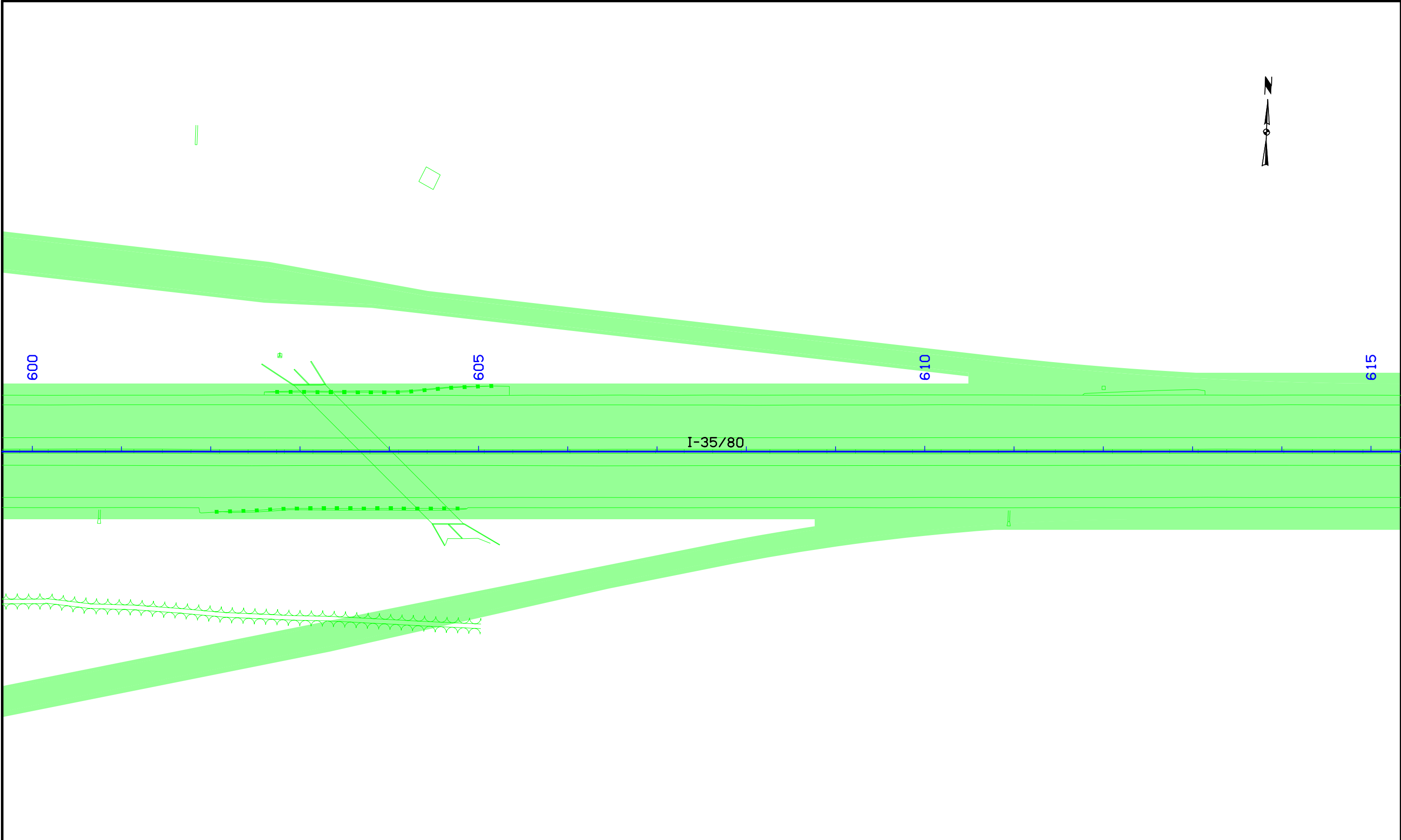


Mainline I-35/80
Stage 2A



Mainline I-35/80
Stage 2A

FILE NO.	ENGLISH	DESIGN TEAM GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER IM-080-3(178)127--13-77	SHEET NUMBER J.28
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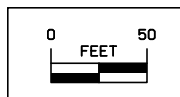
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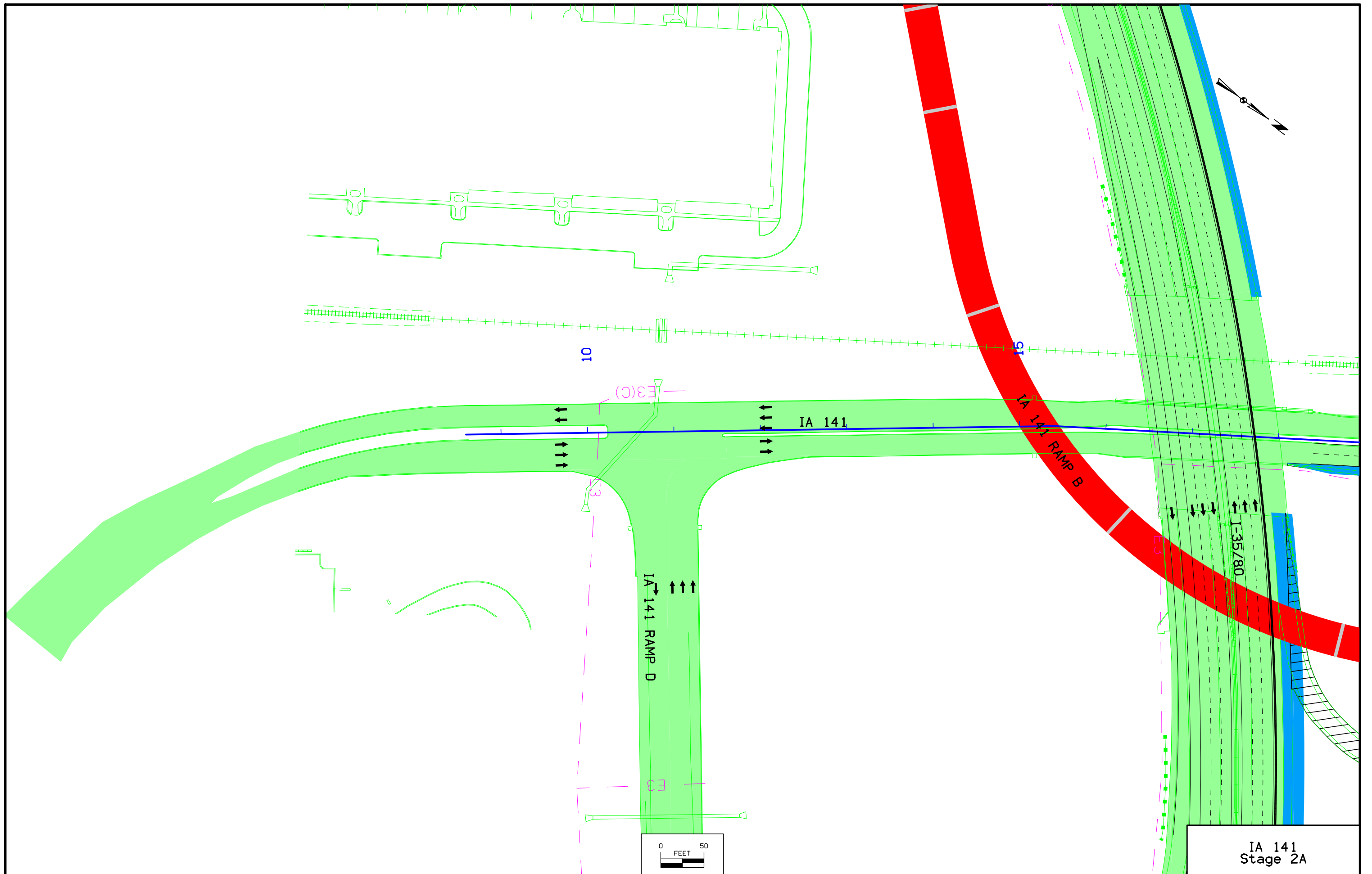
610

615

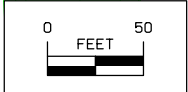
I-35/80

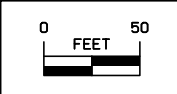
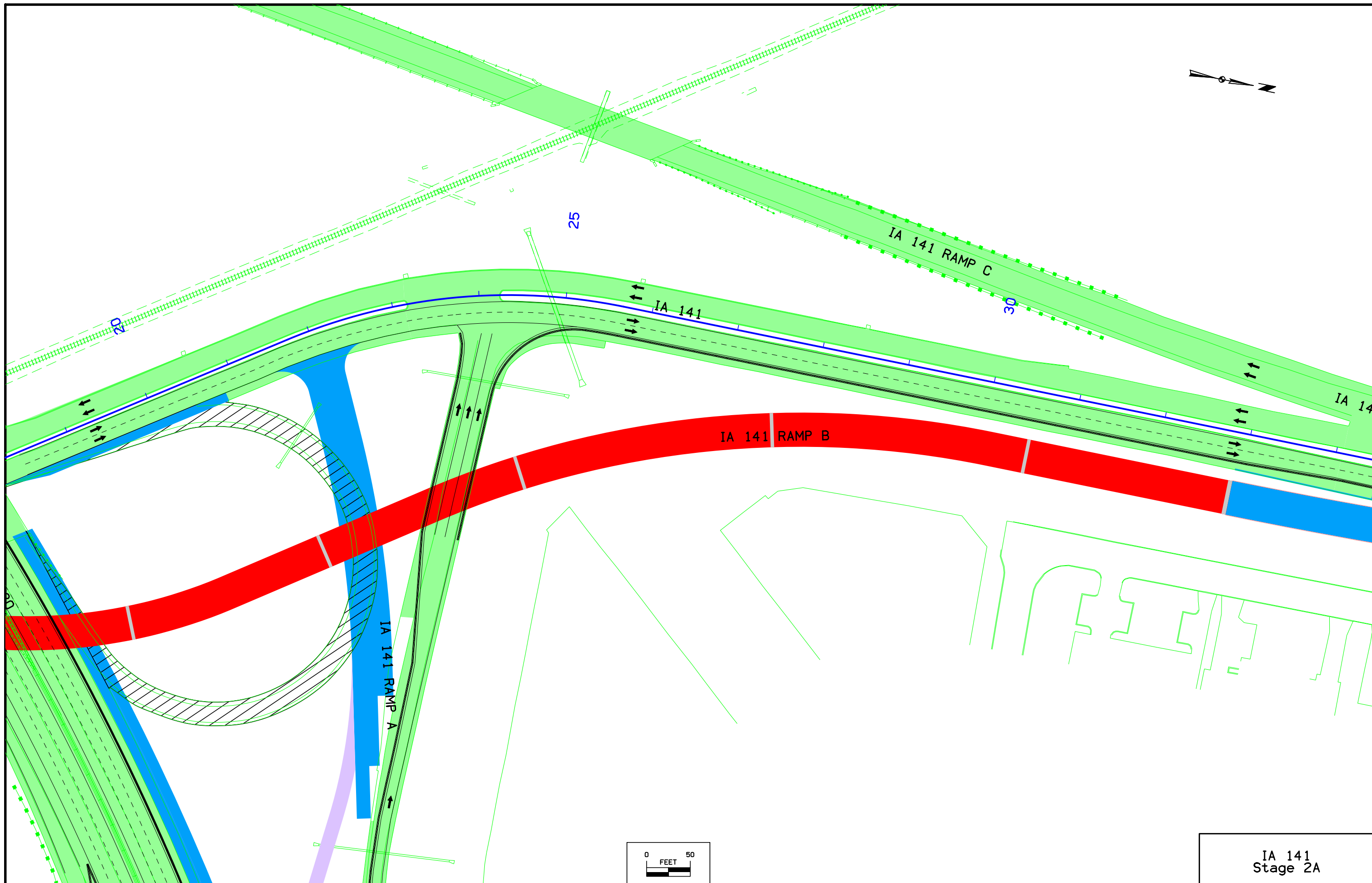


Mainline I-35/80
Stage 2A

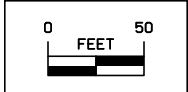
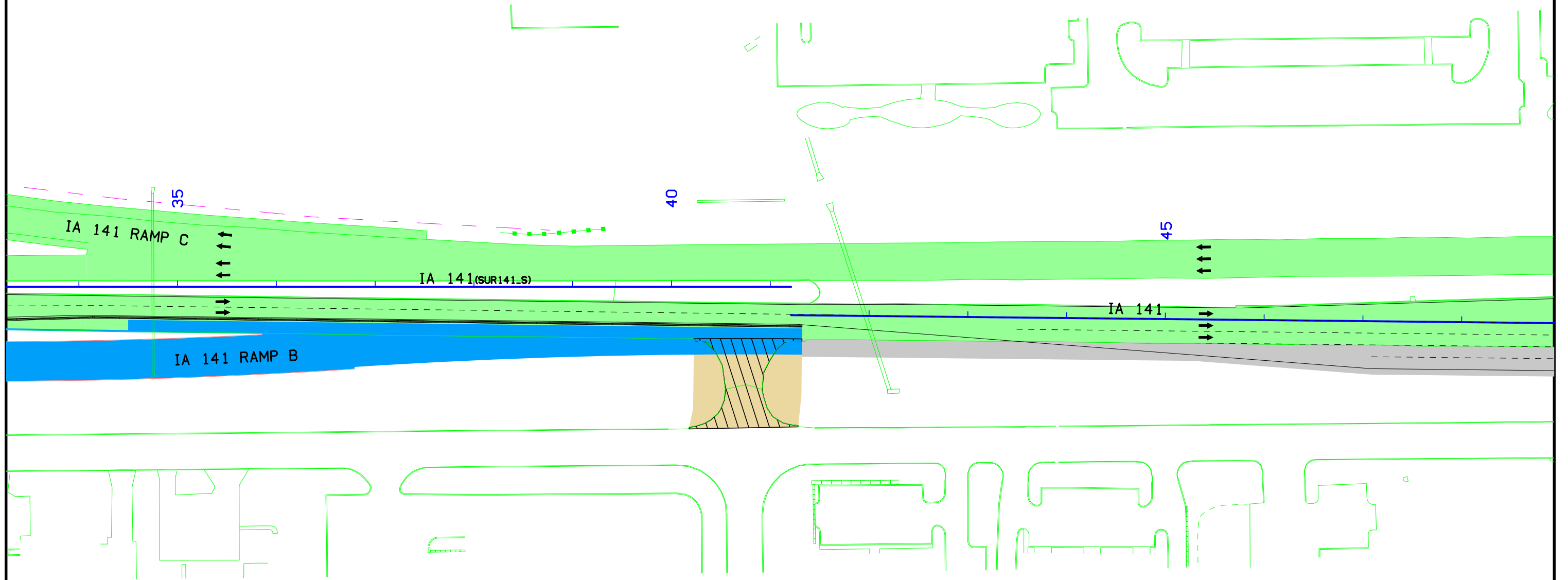


IA 141
Stage 2A

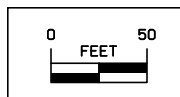
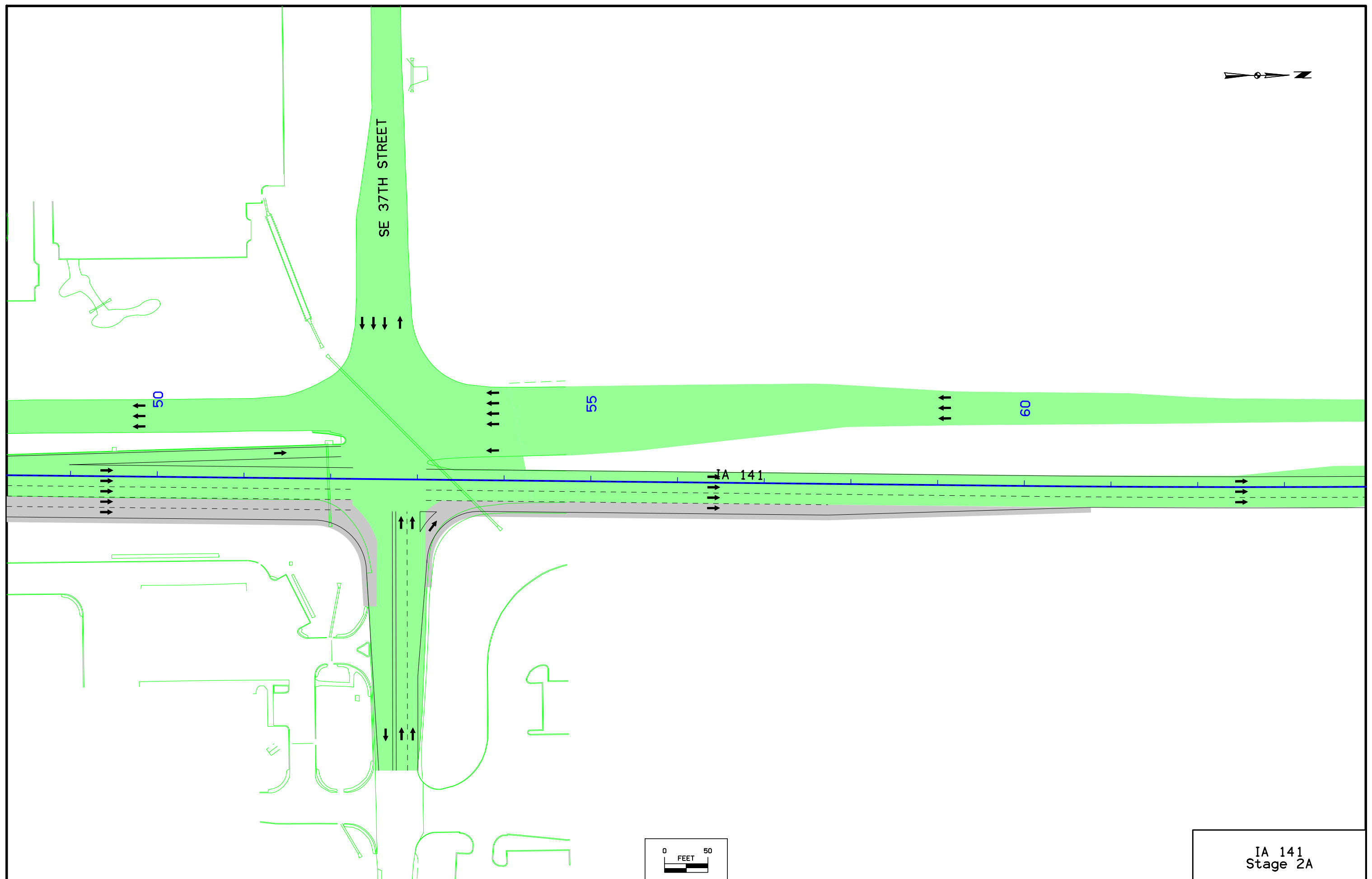
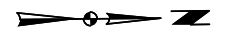




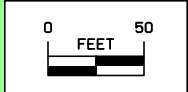
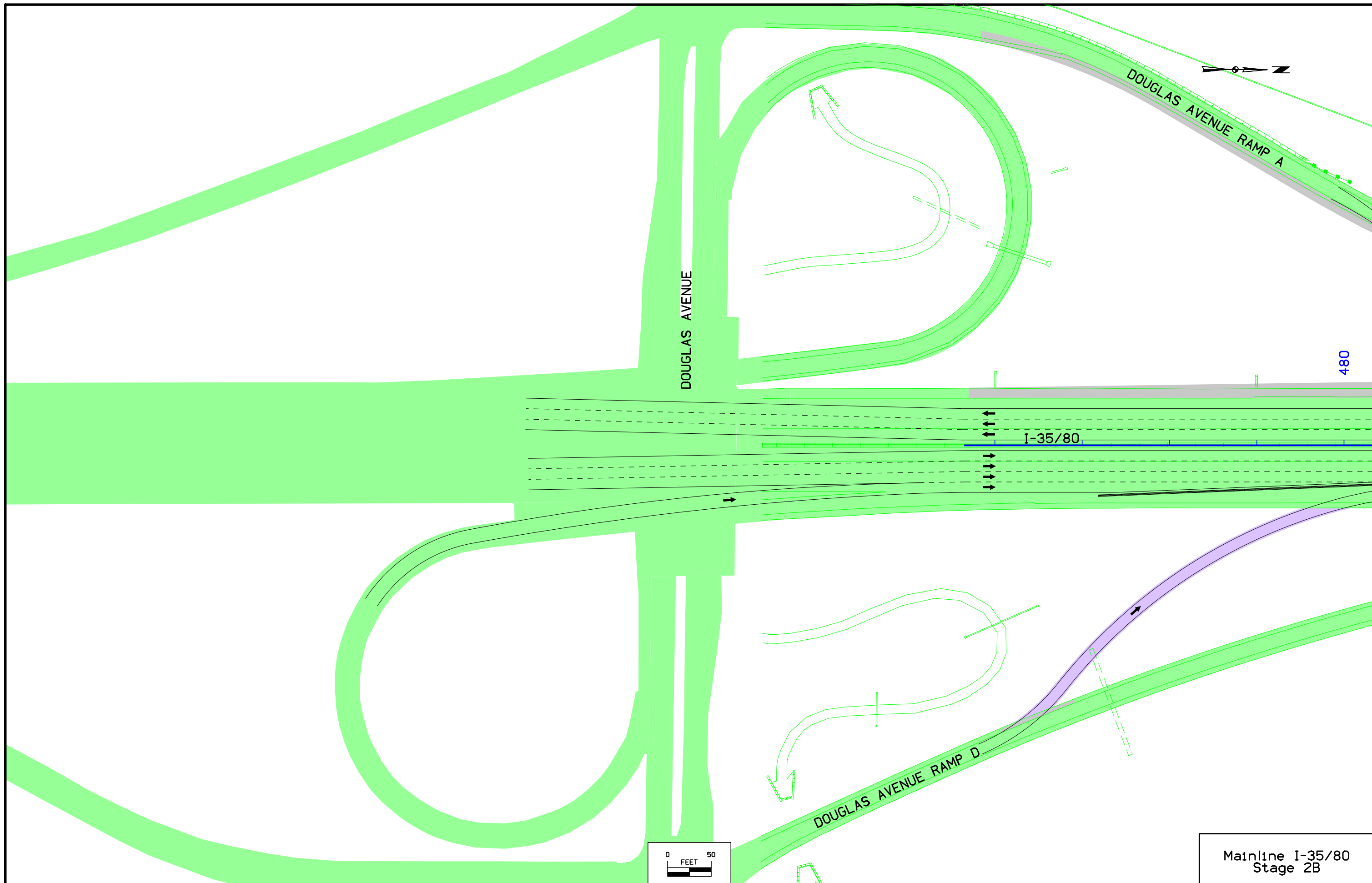
IA 141
Stage 2A



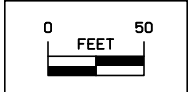
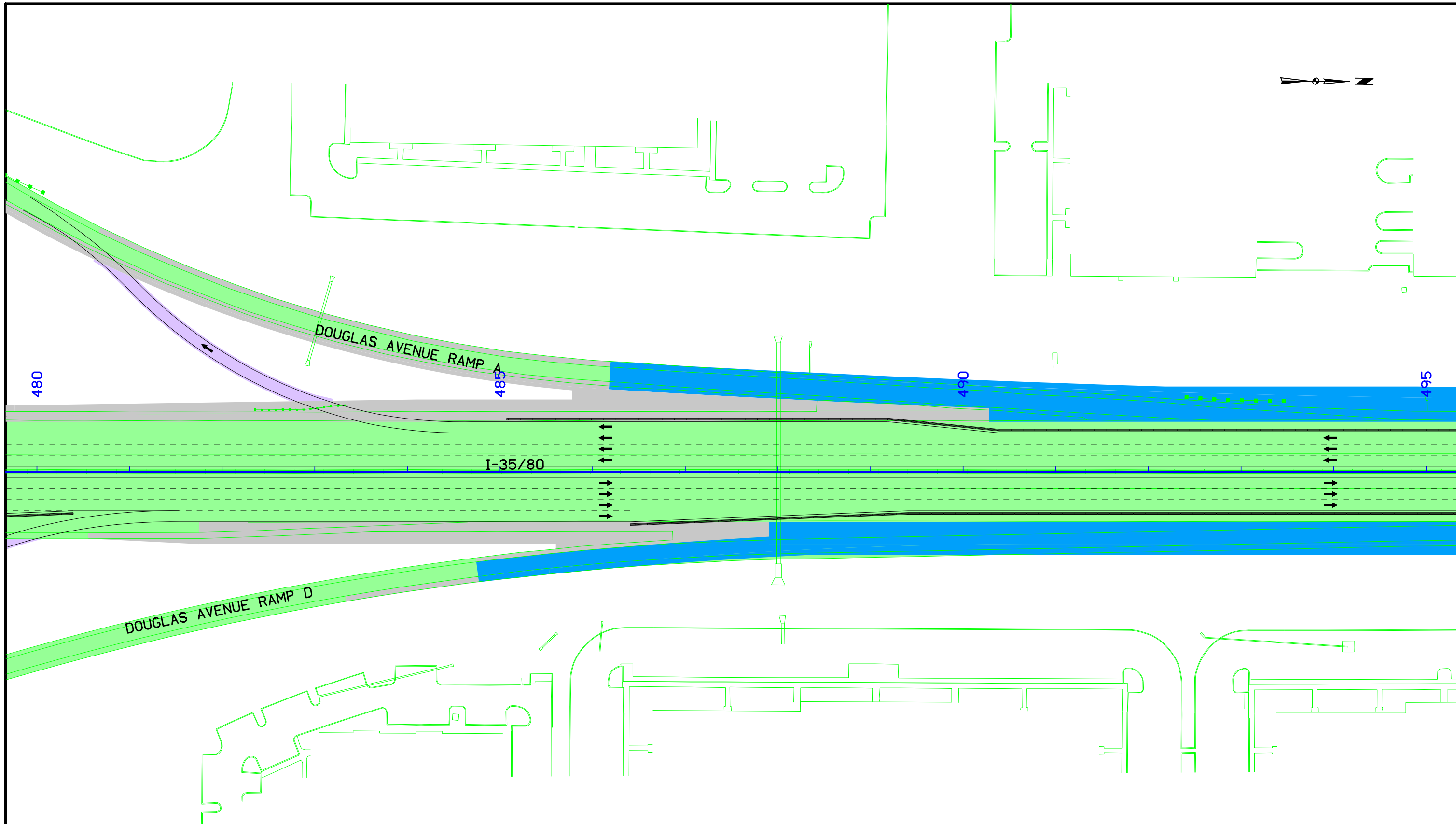
IA 141
Stage 2A



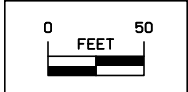
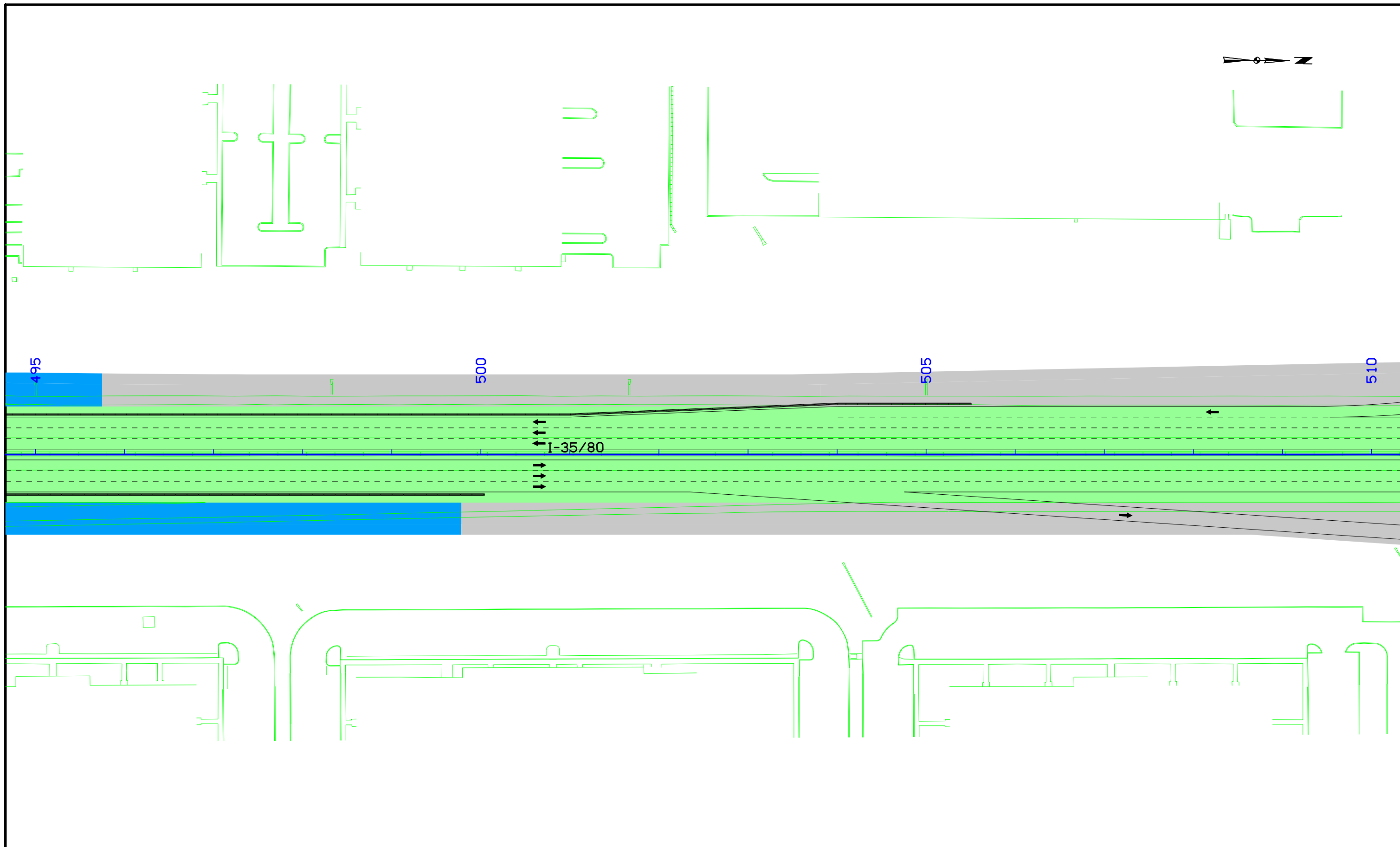
IA 141
Stage 2A



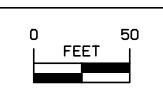
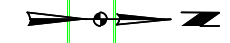
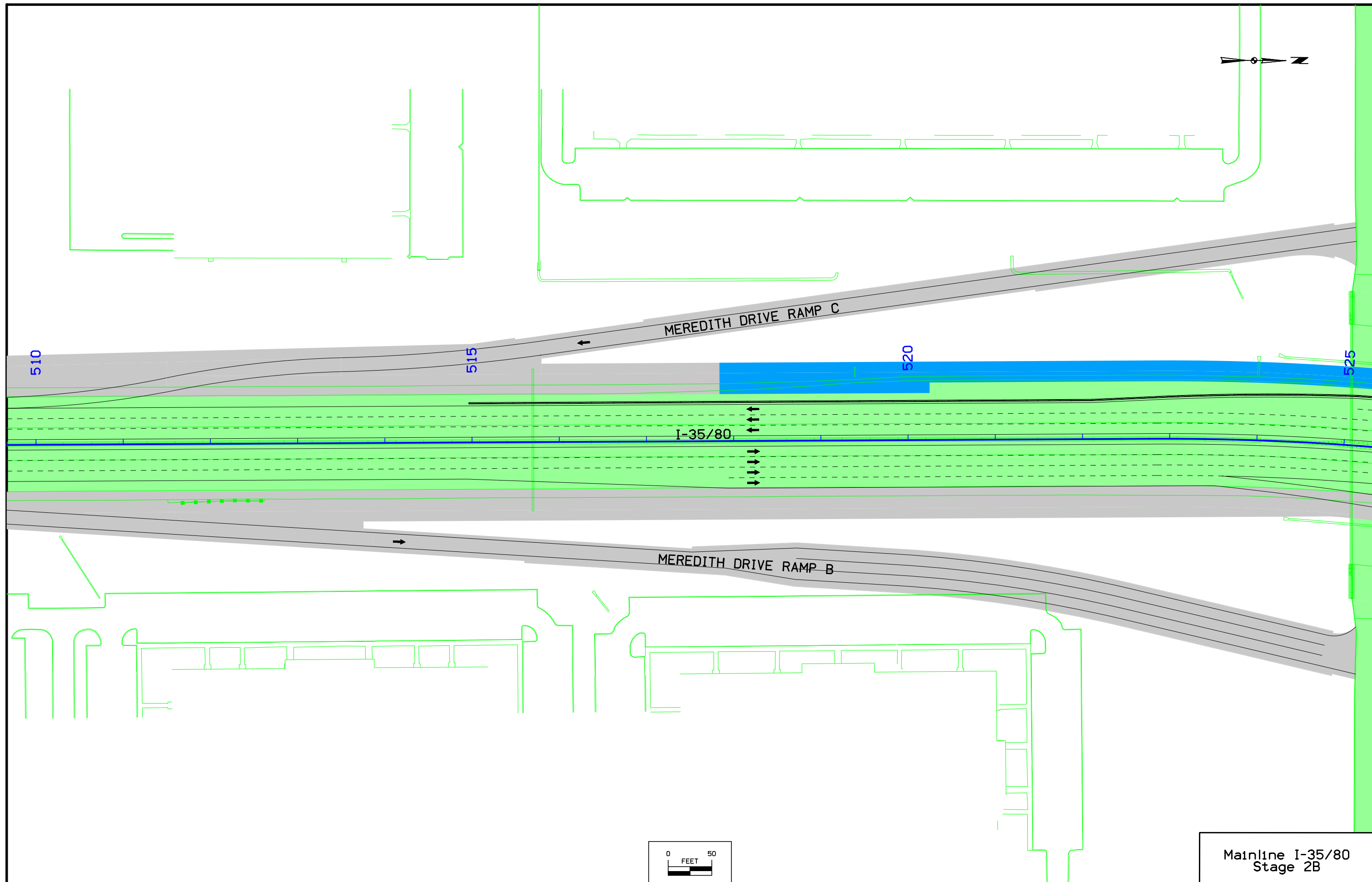
Mainline I-35/80
Stage 2B



Mainline I-35/80
Stage 2B

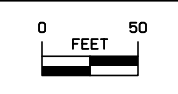
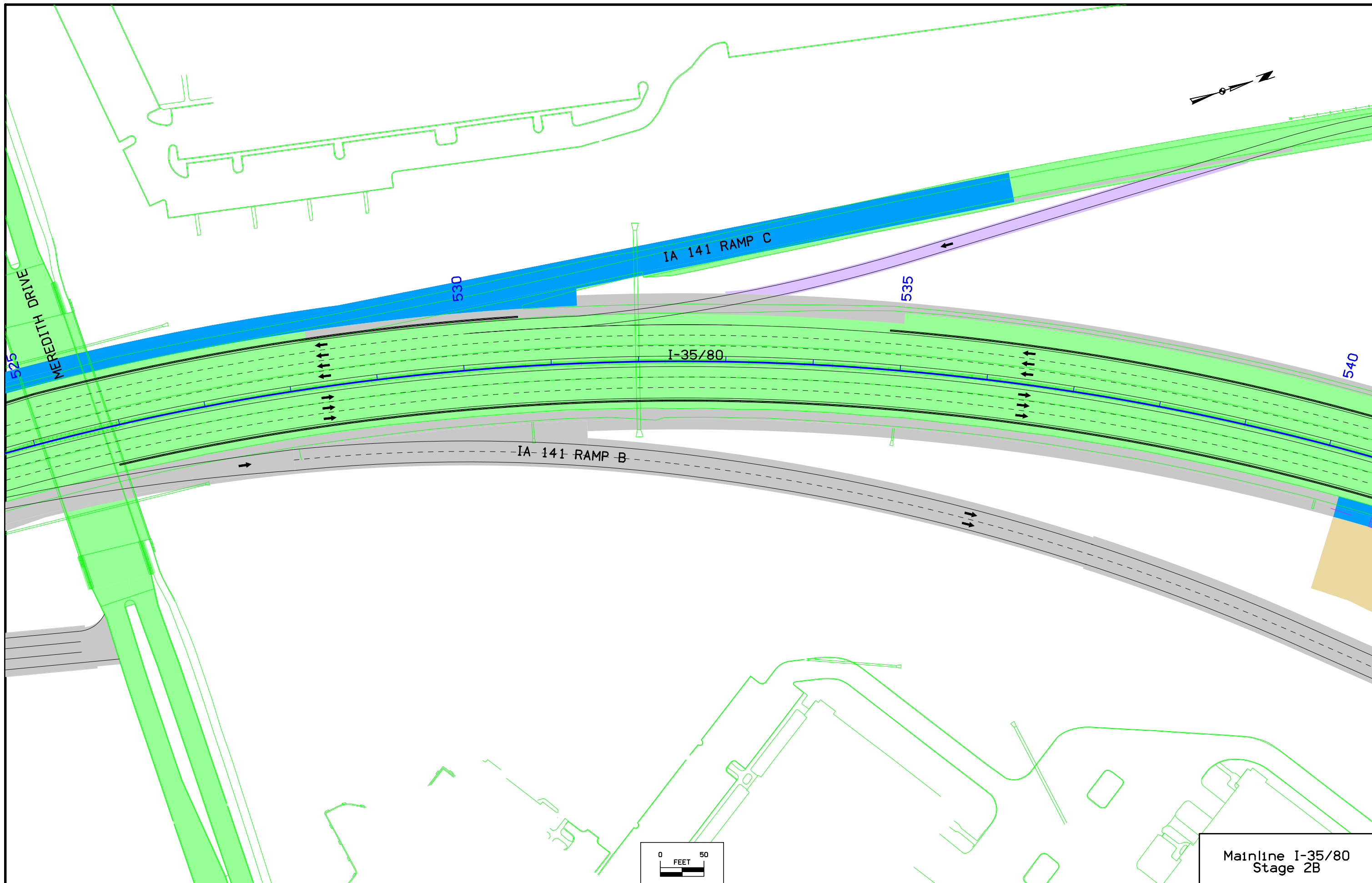


Mainline I-35/80
Stage 2B

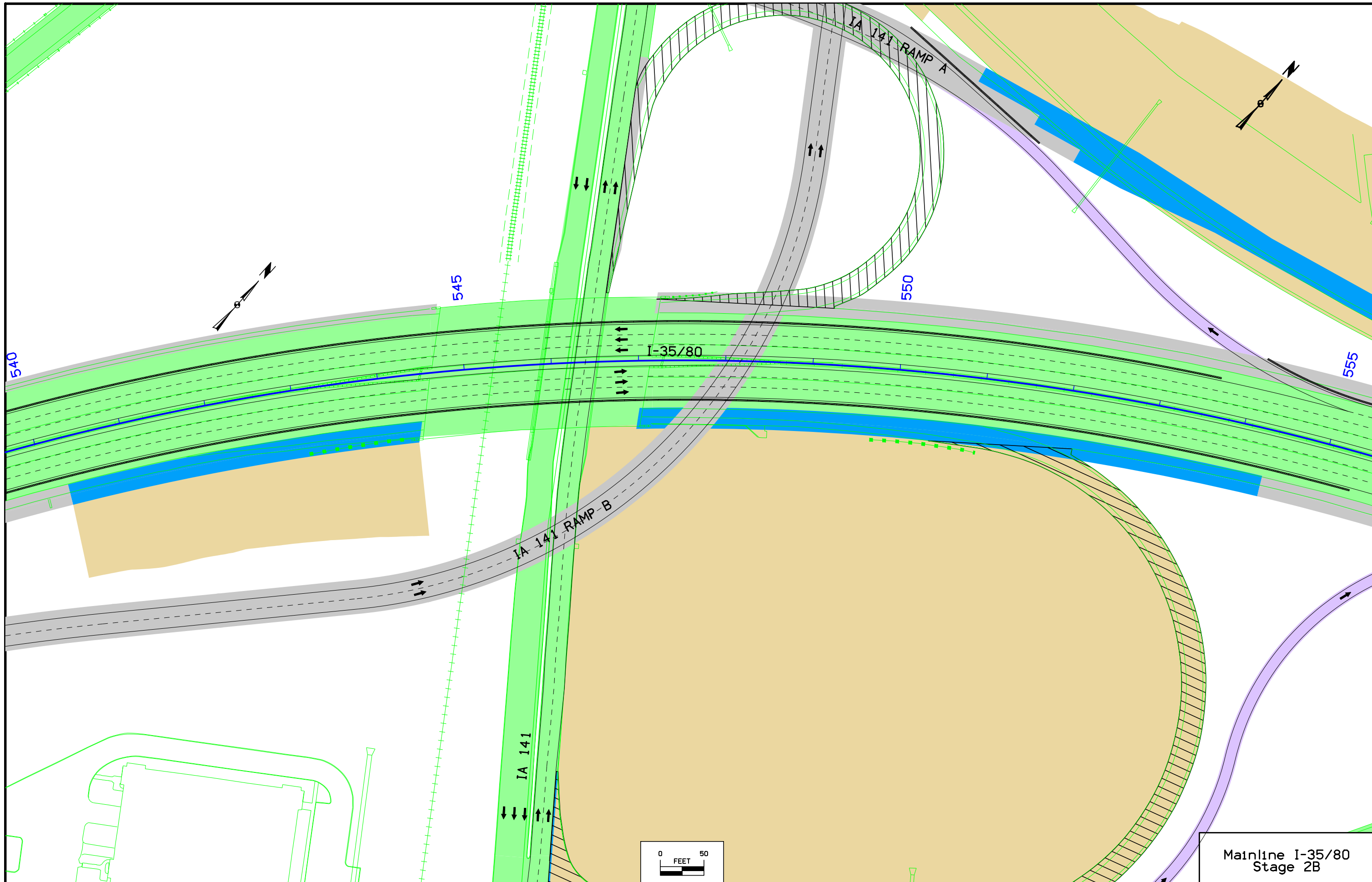


Mainline I-35/80
Stage 2B

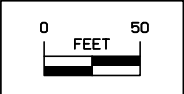
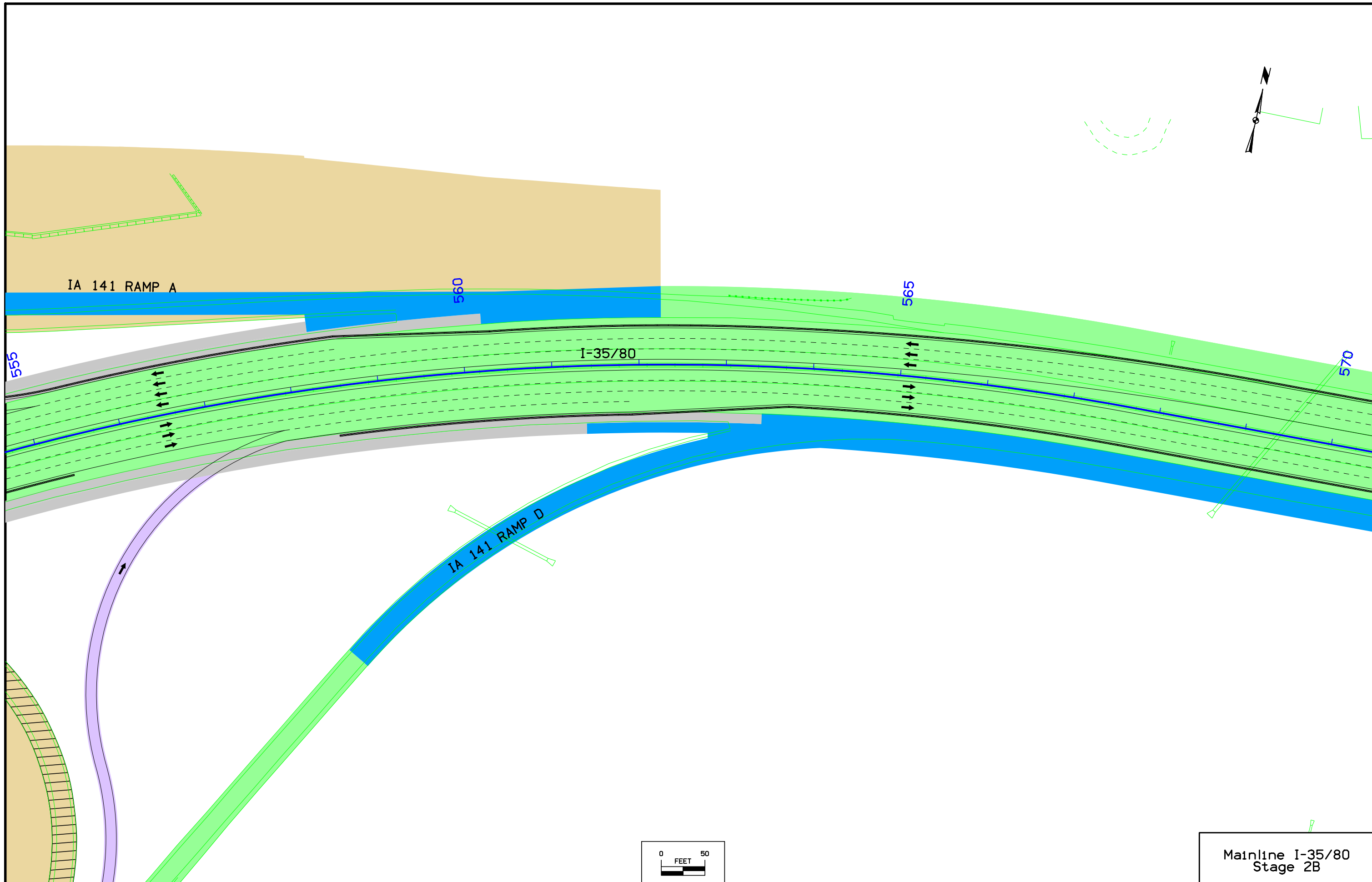
FILE NO.	ENGLISH	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER	J.37
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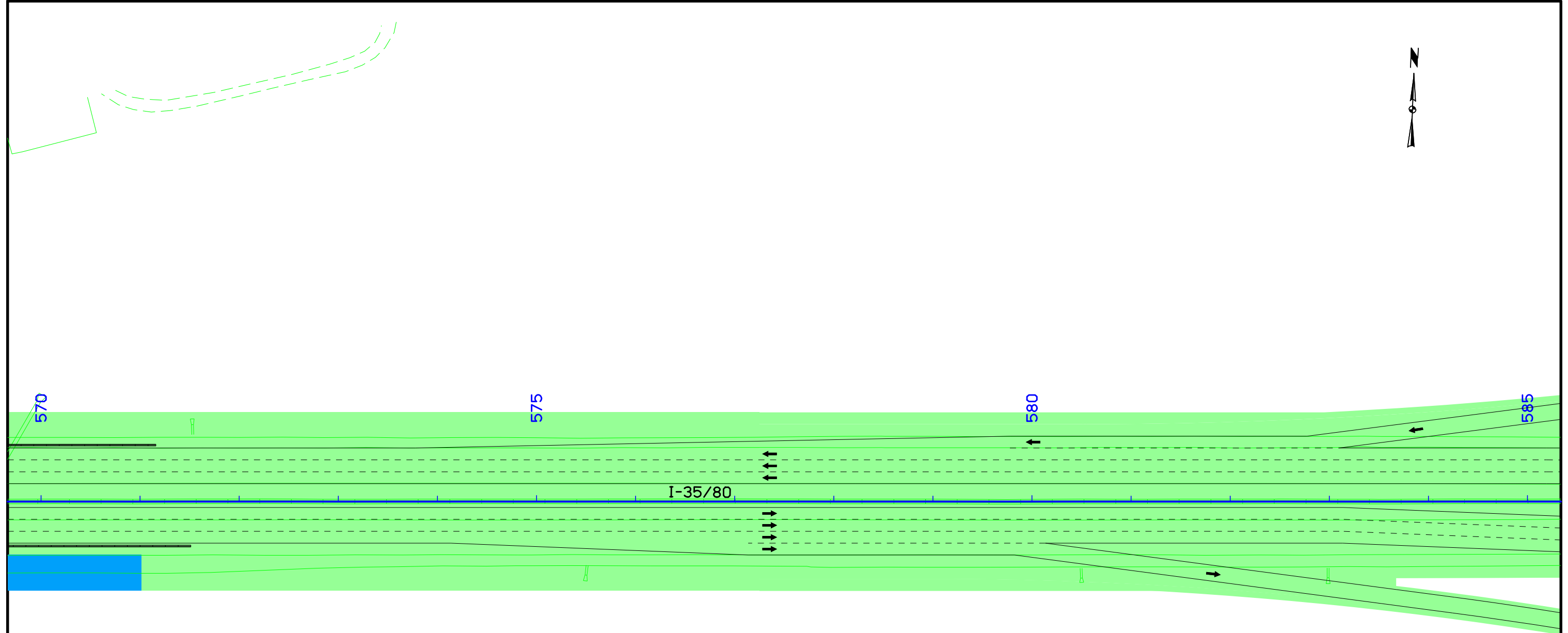
Mainline I-35/80
Stage 2B



Mainline I-35/80
Stage 2B



Mainline I-35/80
Stage 2B



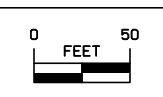
I-35/80

570

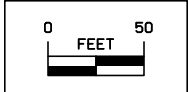
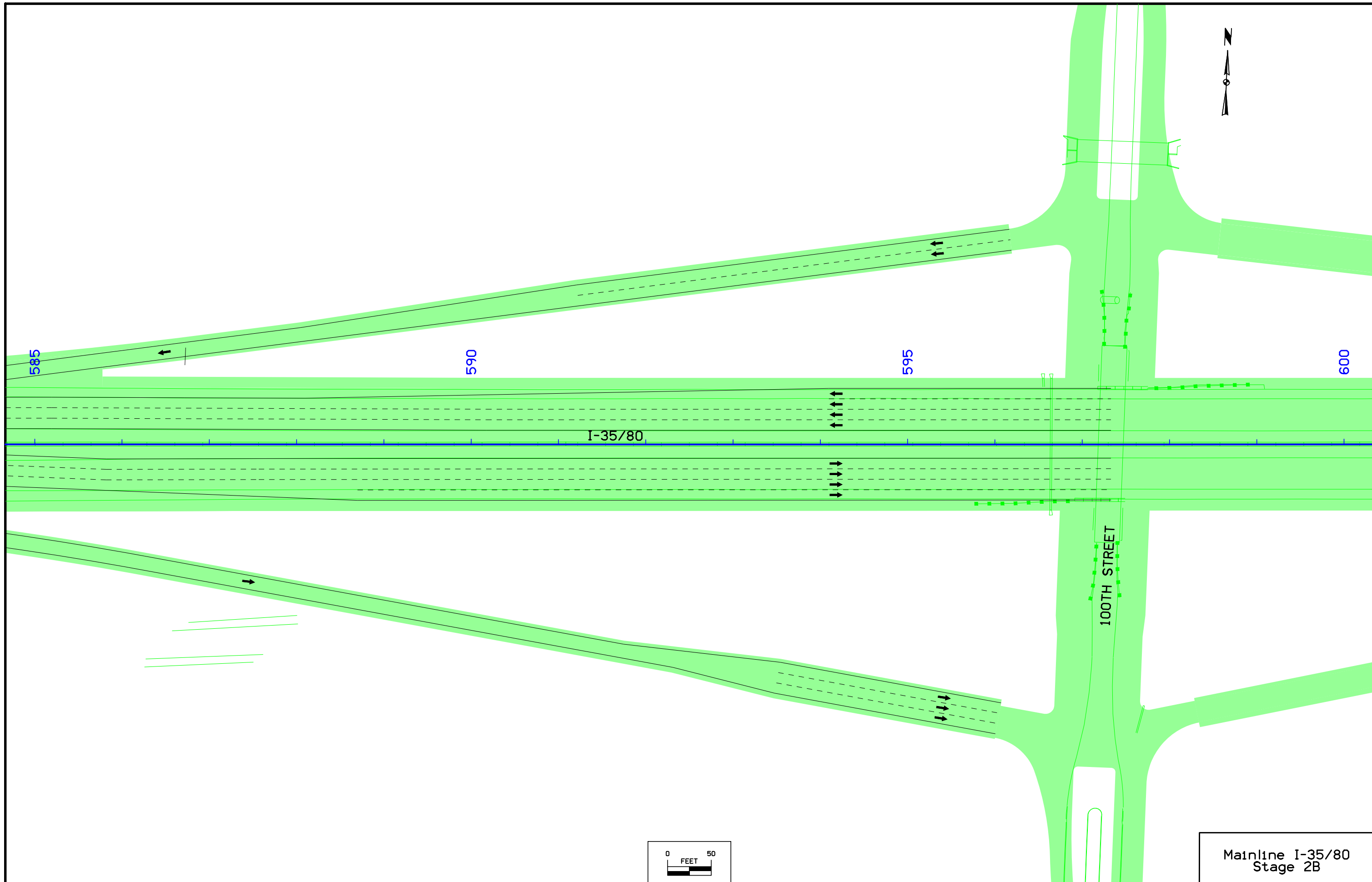
575

580

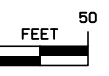
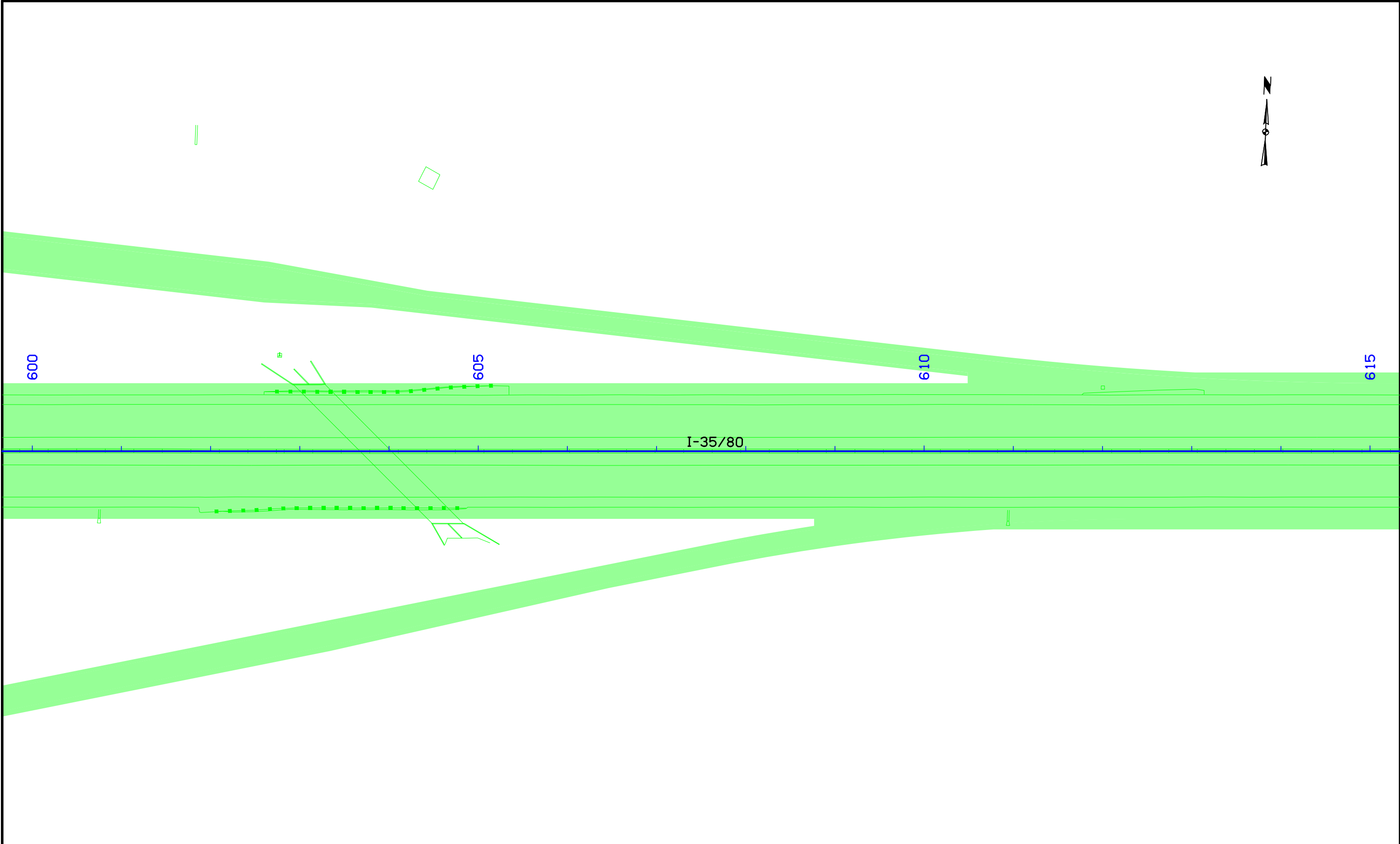
585



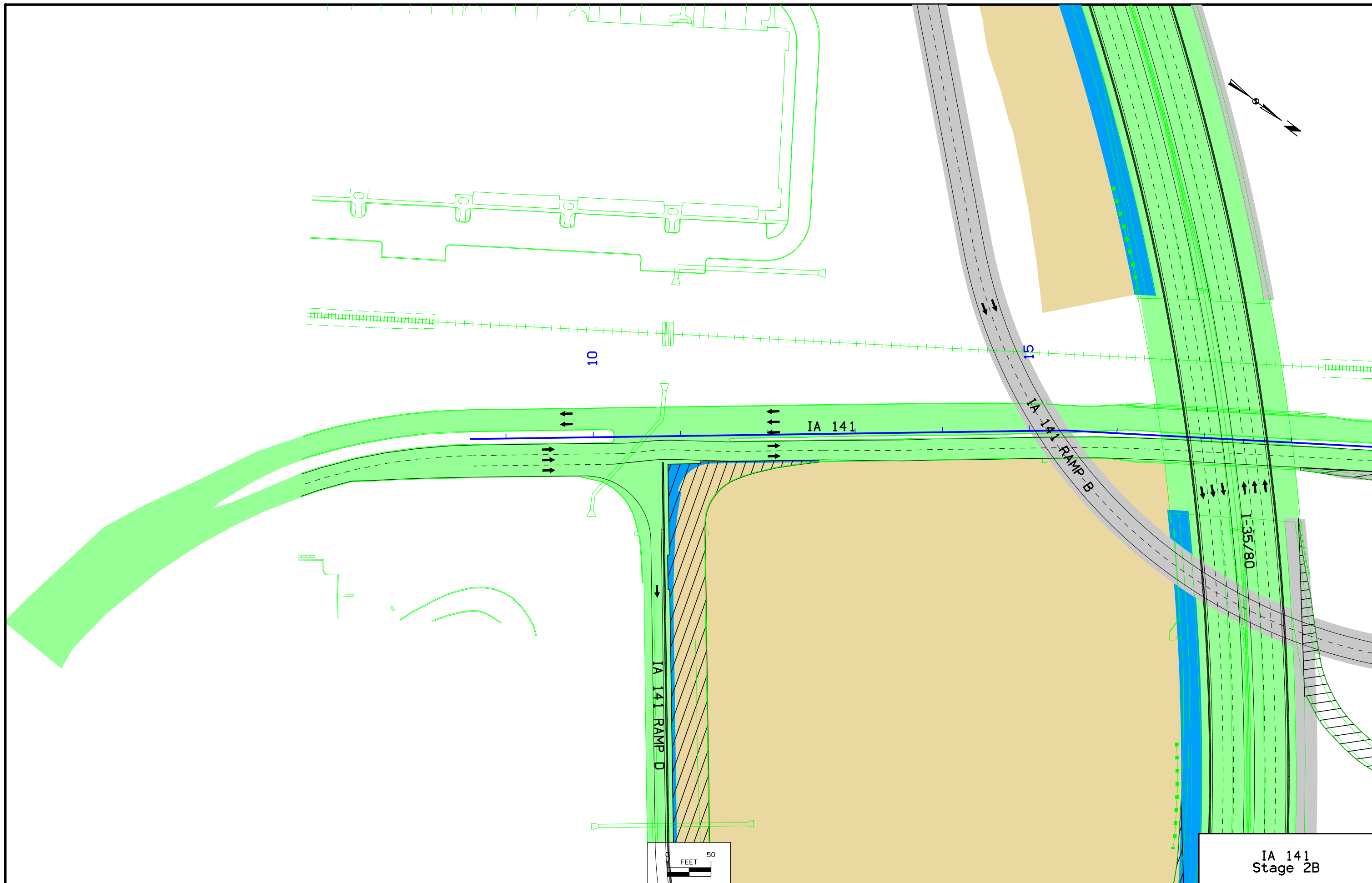
Mainline I-35/80
Stage 2B



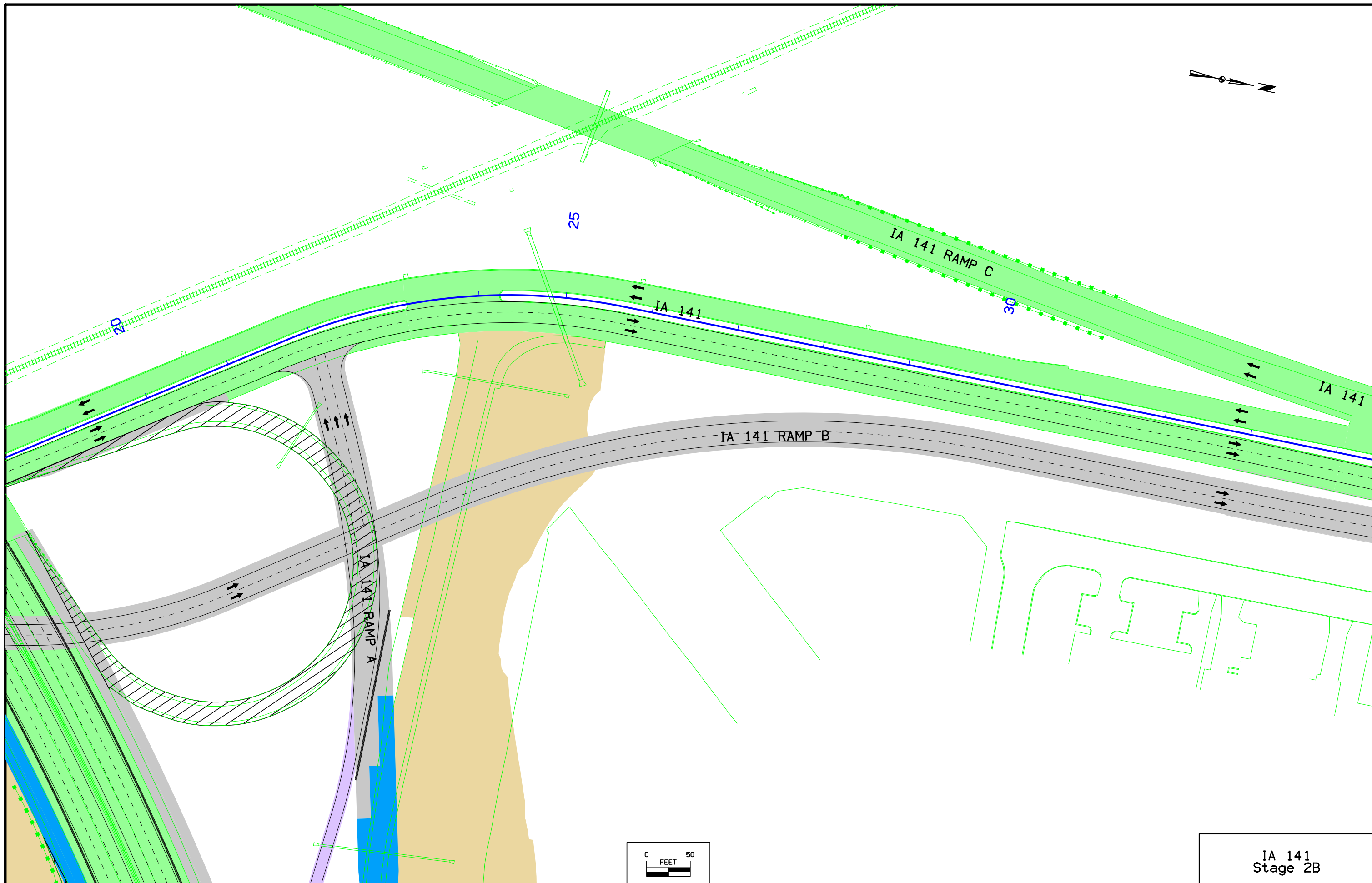
Mainline I-35/80
Stage 2B

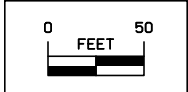
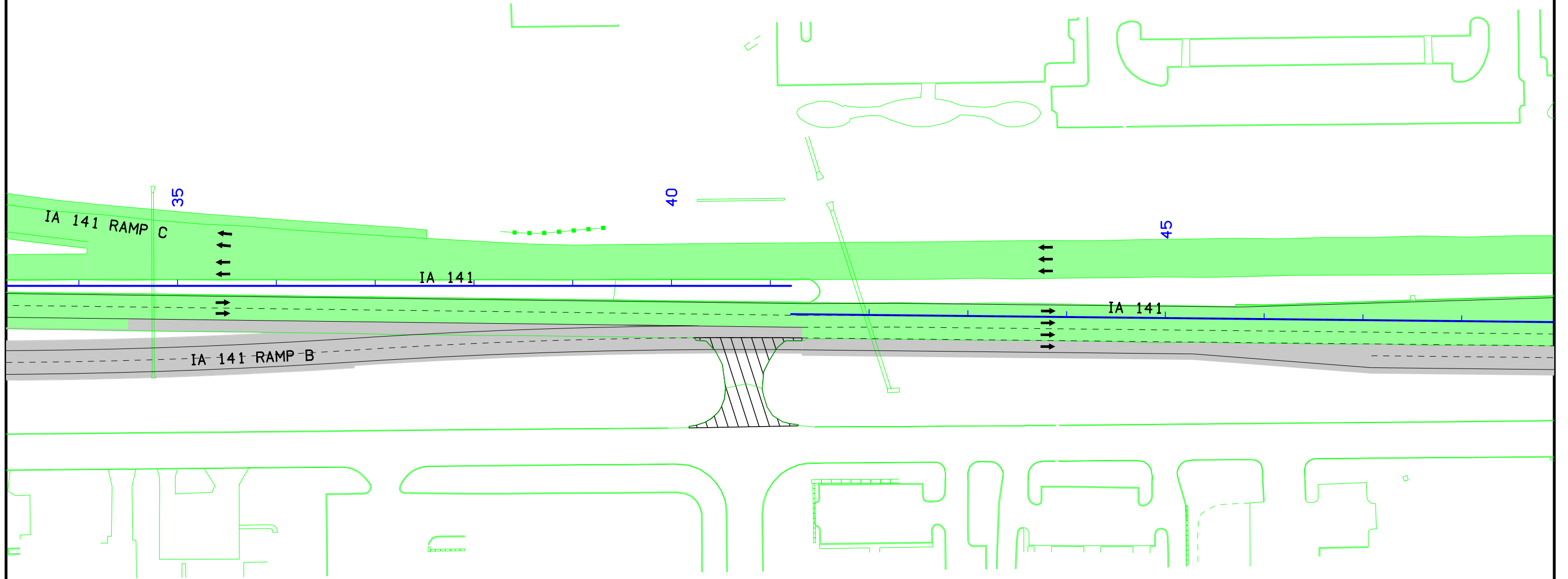


Mainline I-35/80
Stage 2B

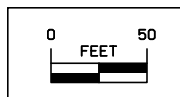
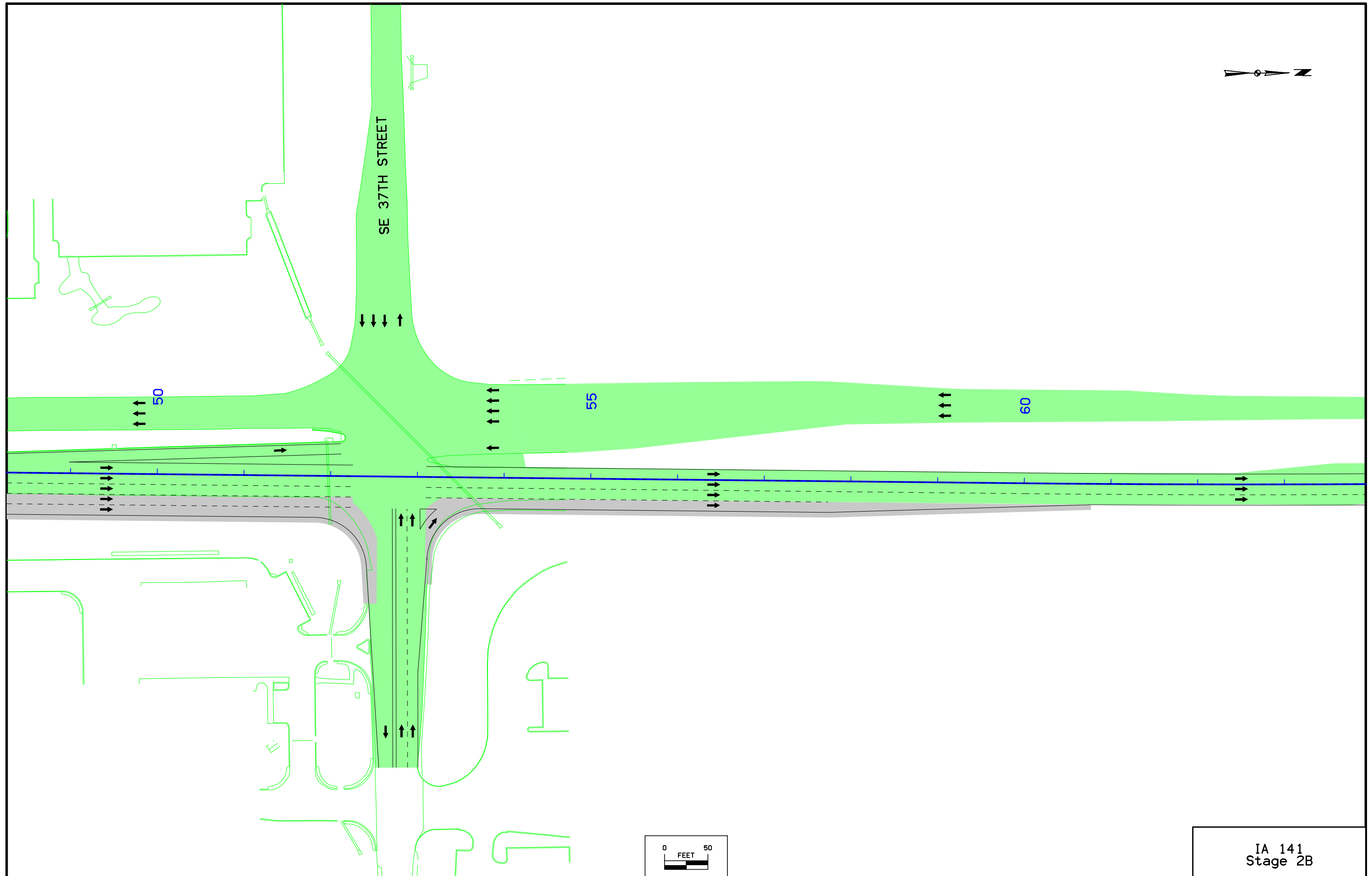
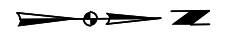


IA 141
Stage 2B





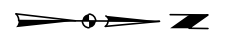
IA 141
Stage 2B



IA 141
Stage 2B

WEBSTER TWP
T-79N R-25W
SEC. 29

WEBSTER TWP
T-79N R-25W
SEC. 20



Curve Data
 $\Delta = 2^\circ 55' 54.96''$ (LT)
 $T = 209.90$
 $L = 419.72$
 $R = 8,202.08$
 $E = 2.69$

Curve Data
 $\Delta = 29^\circ 32' 18.87''$ (RT)
 $T = 152.91$
 $L = 299.02$
 $R = 580.00$
 $E = 19.82$

Curve Data
 $\Delta = 27^\circ 05' 06.25''$ (LT)
 $T = 352.87$
 $L = 692.54$
 $R = 1,465.00$
 $E = 41.90$

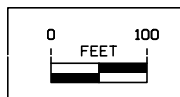
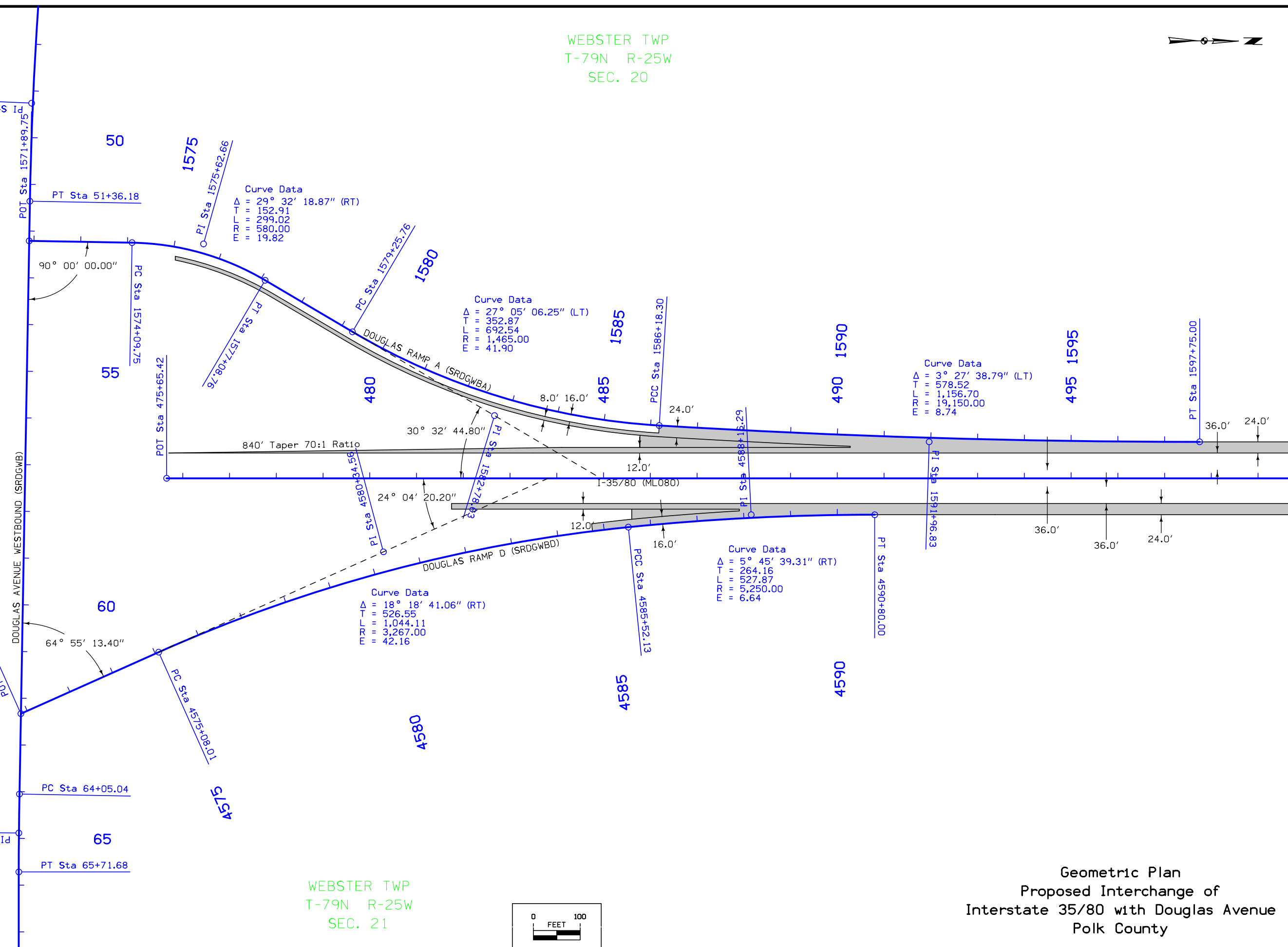
Curve Data
 $\Delta = 3^\circ 27' 38.79''$ (LT)
 $T = 578.52$
 $L = 1,156.70$
 $R = 19,150.00$
 $E = 8.74$

Curve Data
 $\Delta = 5^\circ 45' 39.31''$ (RT)
 $T = 264.16$
 $L = 527.87$
 $R = 5,250.00$
 $E = 6.64$

Curve Data
 $\Delta = 18^\circ 18' 41.06''$ (RT)
 $T = 526.55$
 $L = 1,044.11$
 $R = 3,267.00$
 $E = 42.16$

Curve Data
 $\Delta = 1^\circ 00' 43.95''$ (LT)
 $T = 83.32$
 $L = 166.64$
 $R = 9,432.40$
 $E = 0.37$

WEBSTER TWP
T-79N R-25W
SEC. 21



Geometric Plan
 Proposed Interchange of
 Interstate 35/80 with Douglas Avenue
 Polk County

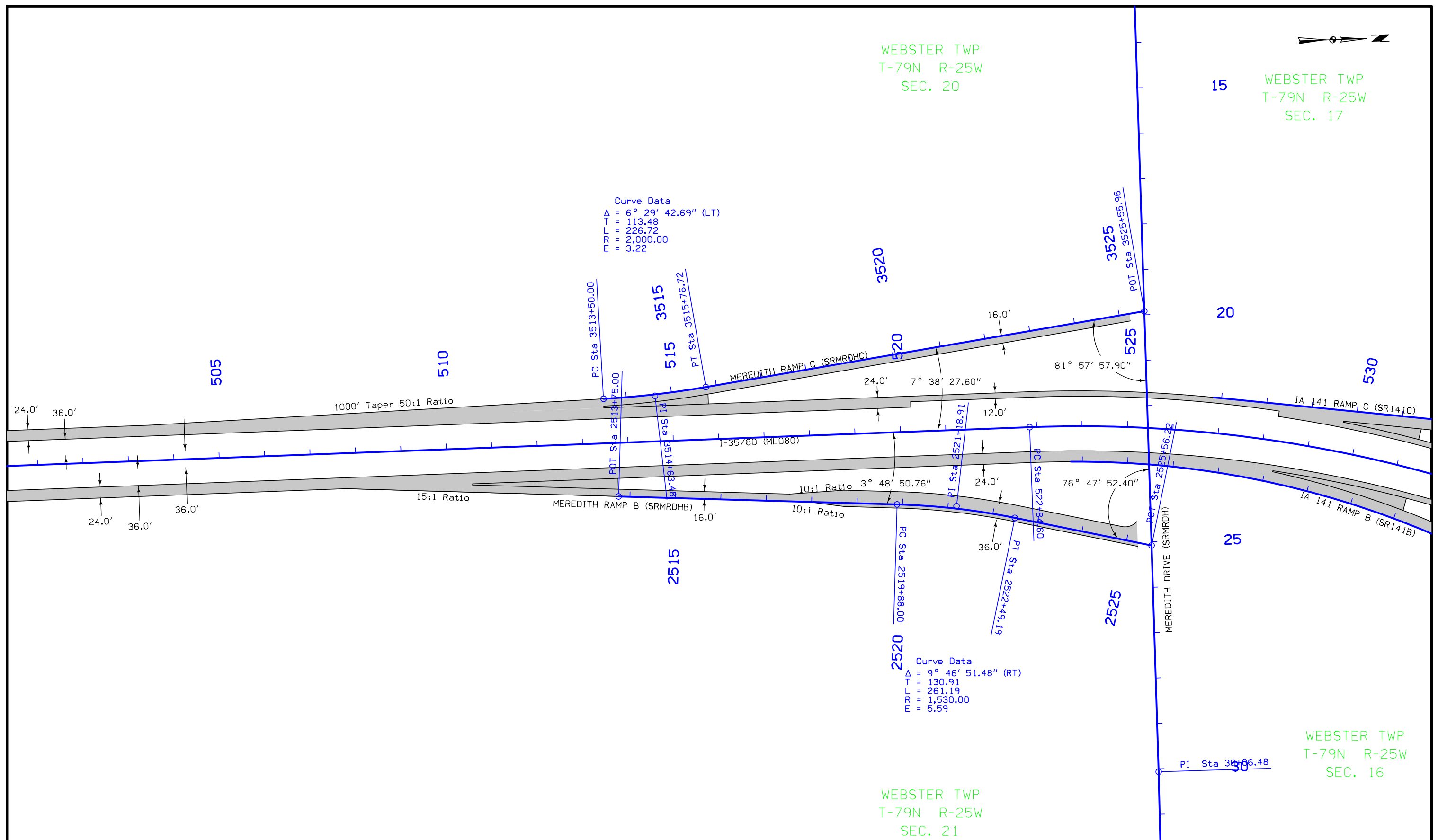


WEBSTER TWP
T-79N R-25W
SEC. 20

15 WEBSTER TWP
T-79N R-25W
SEC. 17

Curve Data
Δ = 6° 29' 42.69" (LT)
T = 113.48
R = 226.72
PI = 2,000.00
E = 3.22

Curve Data
Δ = 9° 46' 51.48" (RT)
T = 130.91
R = 261.19
PI = 1,530.00
E = 5.59



Geometric Plan
Proposed Interchange of
Interstate 35/80 with Meredith Drive
Polk County

WEBSTER TWP
T-79N R-25W
SEC. 17

WEBSTER TWP
T-79N R-25W
SEC. 20

WEBSTER TWP
T-79N R-25W
SEC. 21

WEBSTER TWP
T-79N R-25W
SEC. 16

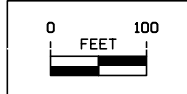
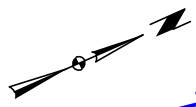
Curve Data
 $\Delta = 2^\circ 20' 58.21''$ (RT)
 $T = 230.41$
 $L = 460.75$
 $PR = 11,236.00$
 $E = 2.36$

Curve Data
 $\Delta = 88^\circ 13' 37.23''$ (RT)
 $T = 2,817.46$
 $L = 4,474.84$
 $PR = 2,906.02$
 $E = 1,141.57$

Curve Data
 $\Delta = 23^\circ 59' 21.16''$ (RT)
 $T = 424.92$
 $L = 837.38$
 $PR = 2,000.00$
 $E = 44.64$

Curve Data
 $\Delta = 17^\circ 09' 27.98''$ (RT)
 $T = 374.13$
 $L = 742.66$
 $PR = 2,480.00$
 $E = 28.06$

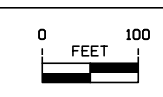
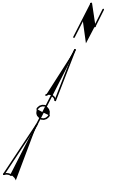
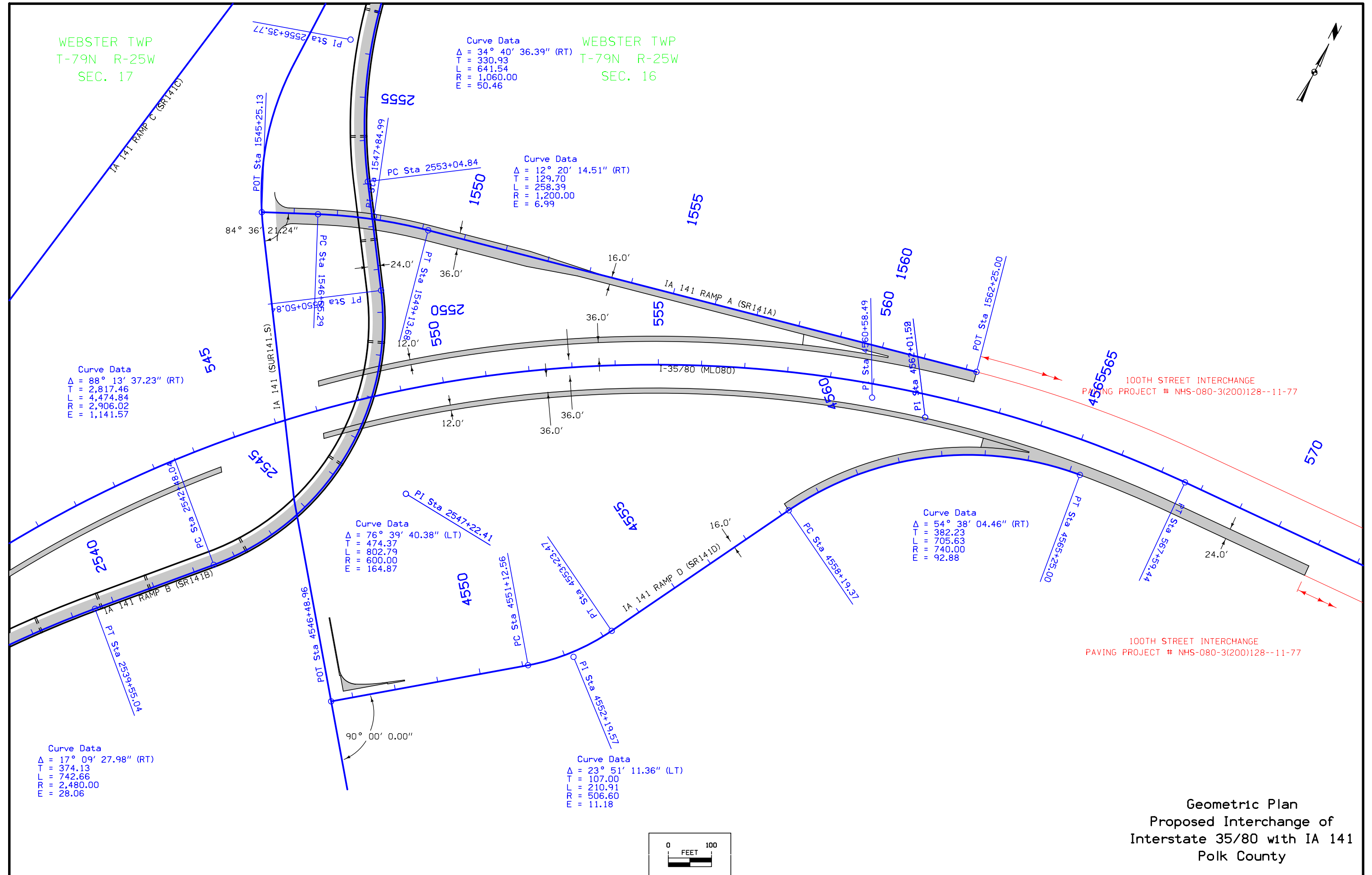
Curve Data
 $\Delta = 76^\circ 39' 40.38''$ (LT)
 $T = 474.37$
 $L = 802.79$
 $PR = 600.00$
 $E = 164.87$



Geometric Plan
Proposed Interchange of
Interstate 35/80 with IA 141
Polk County

WEBSTER TWP
T-79N R-25W
SEC. 17

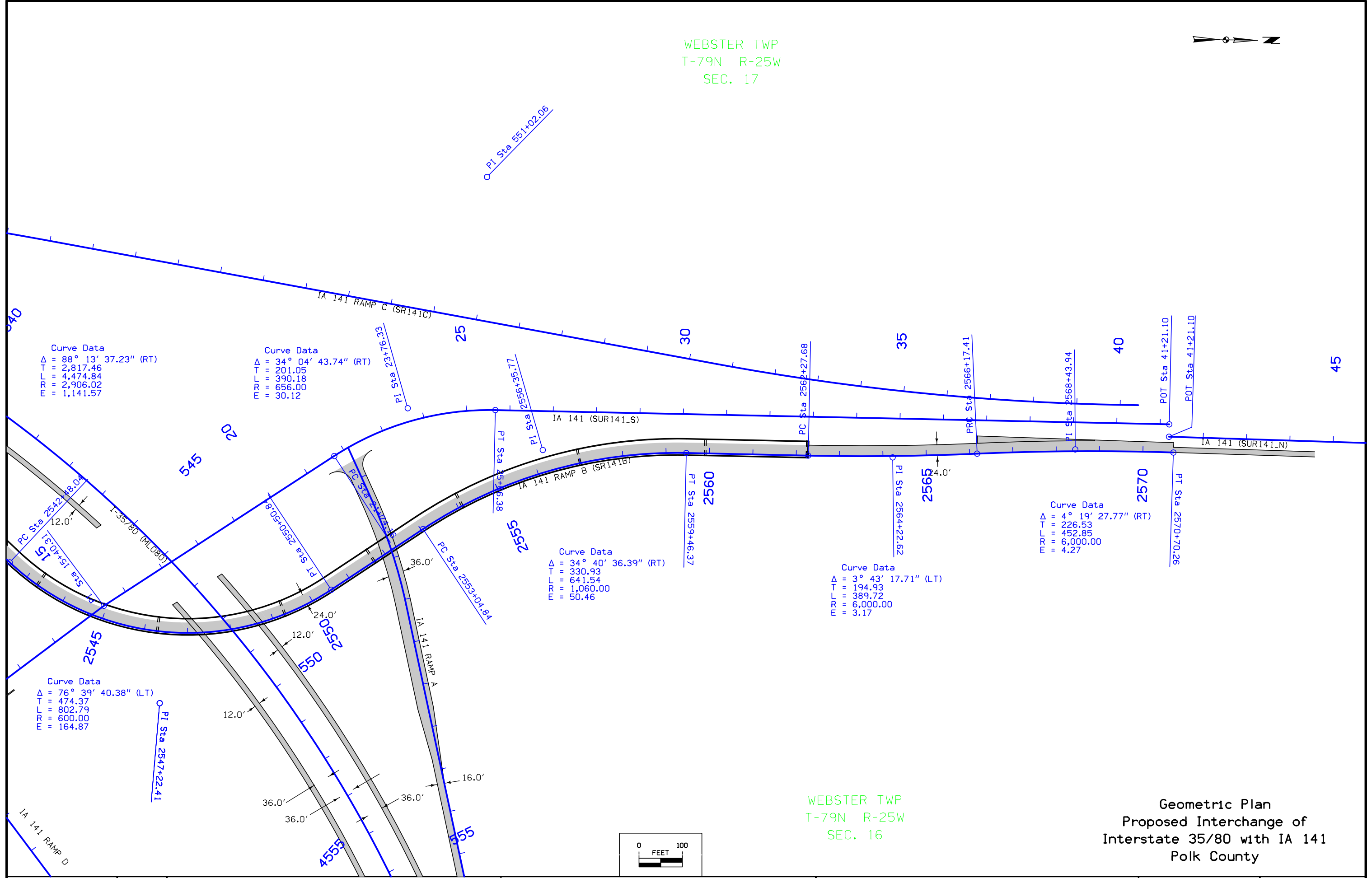
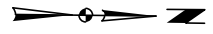
WEBSTER TWP
T-79N R-25W
SEC. 16



Geometric Plan
Proposed Interchange of
Interstate 35/80 with IA 141
Polk County

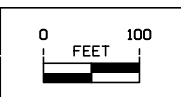
FILE NO.	ENGLISH	DESIGN TEAM	GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER	IM-080-3(178)127--13-77	SHEET NUMBER	K.4
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WEBSTER TWP
T-79N R-25W
SEC. 17



WEBSTER TWP
T-79N R-25W
SEC. 16

Geometric Plan
Proposed Interchange of
Interstate 35/80 with IA 141
Polk County

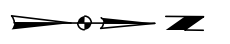


FILE NO.	ENGLISH	DESIGN TEAM	GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER	IM-080-3(178)127--13-77	SHEET NUMBER	K.5
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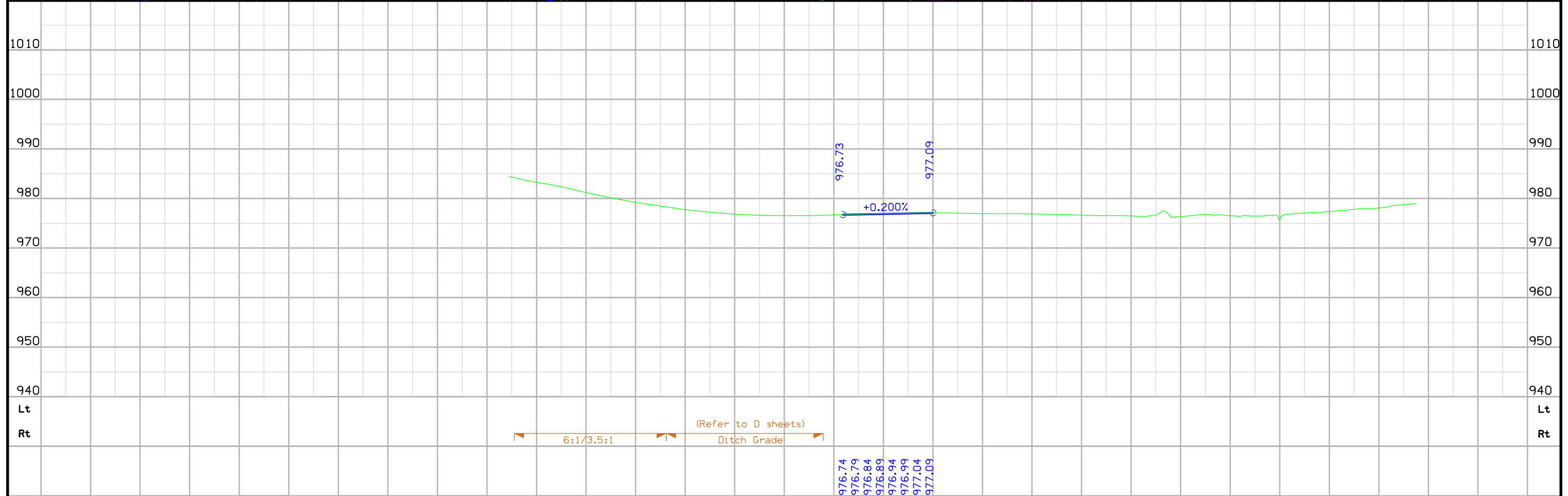
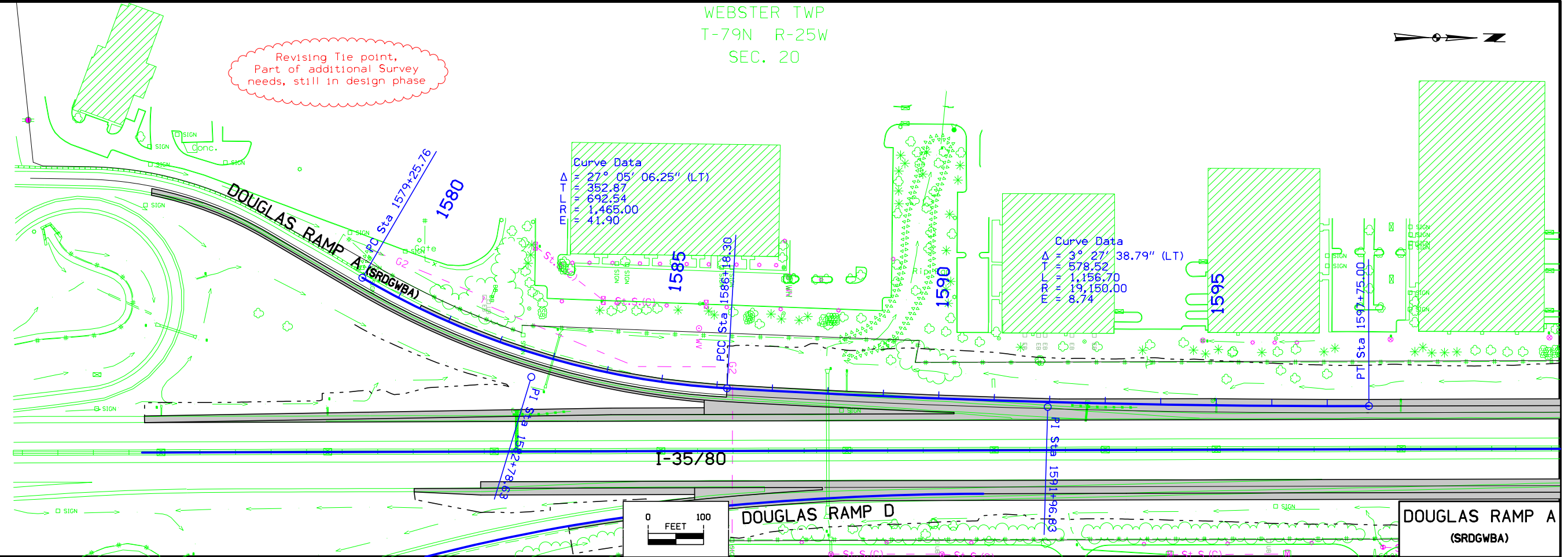
10:18:26 AM 1/13/2016 bahlers pw:\projectwise.dot.int.lan:PWMain\Documents\Projects\7708005013\Design\77080178K1.sh

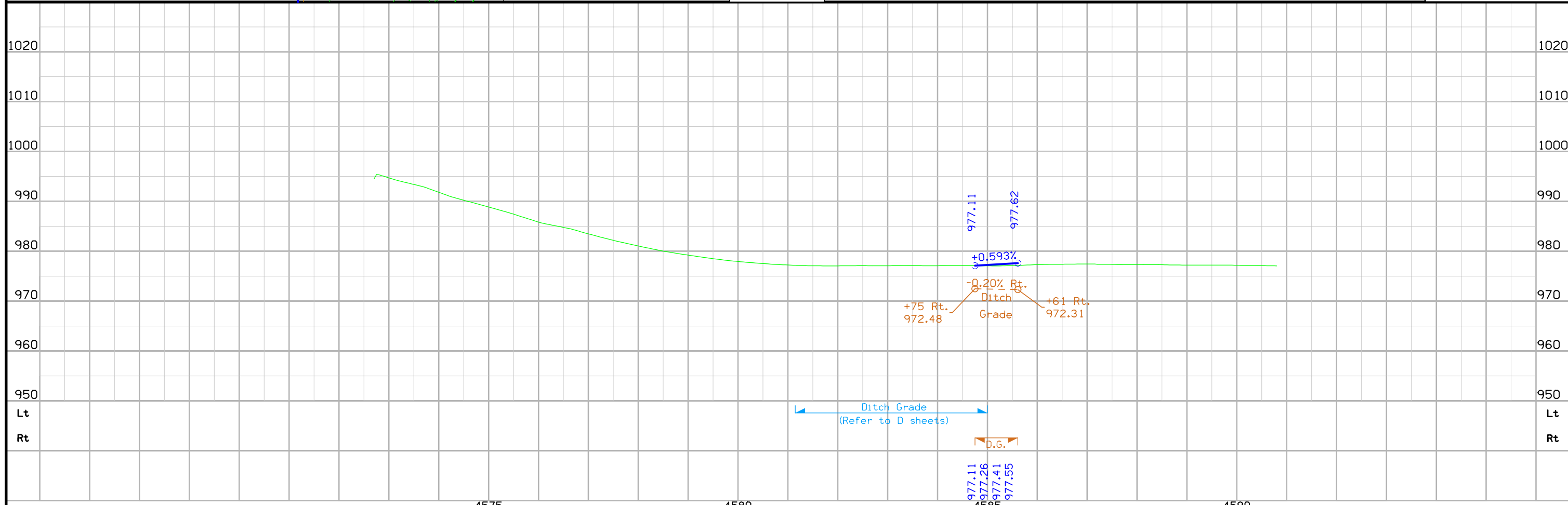
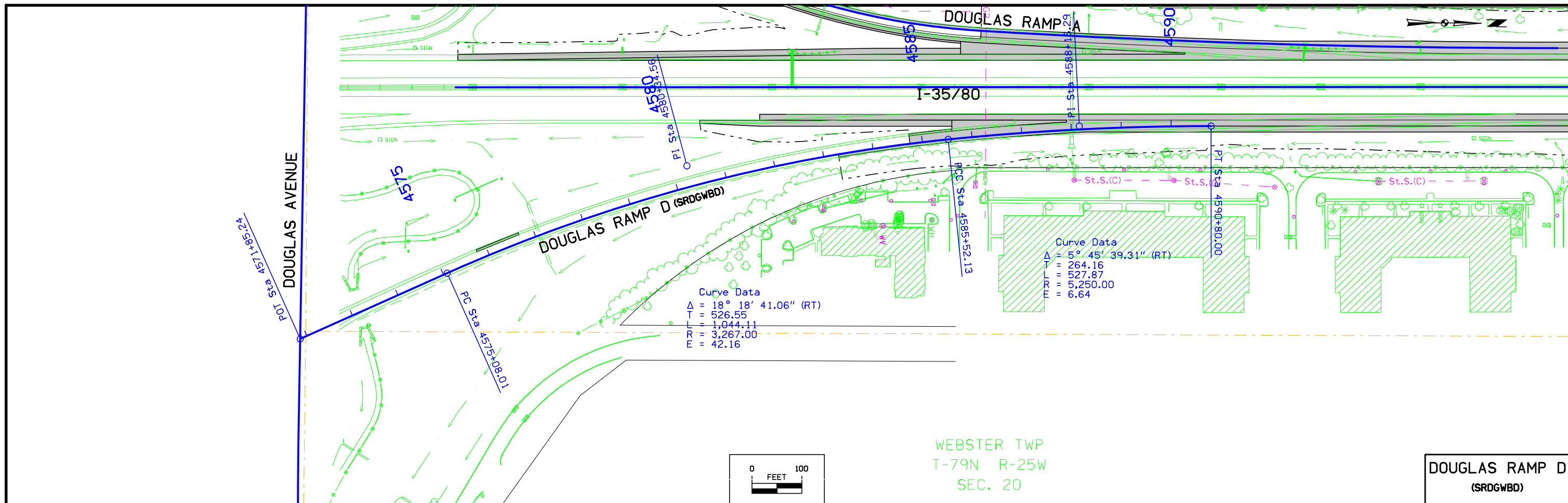
WEBSTER TWP
T-79N R-25W
SEC. 20

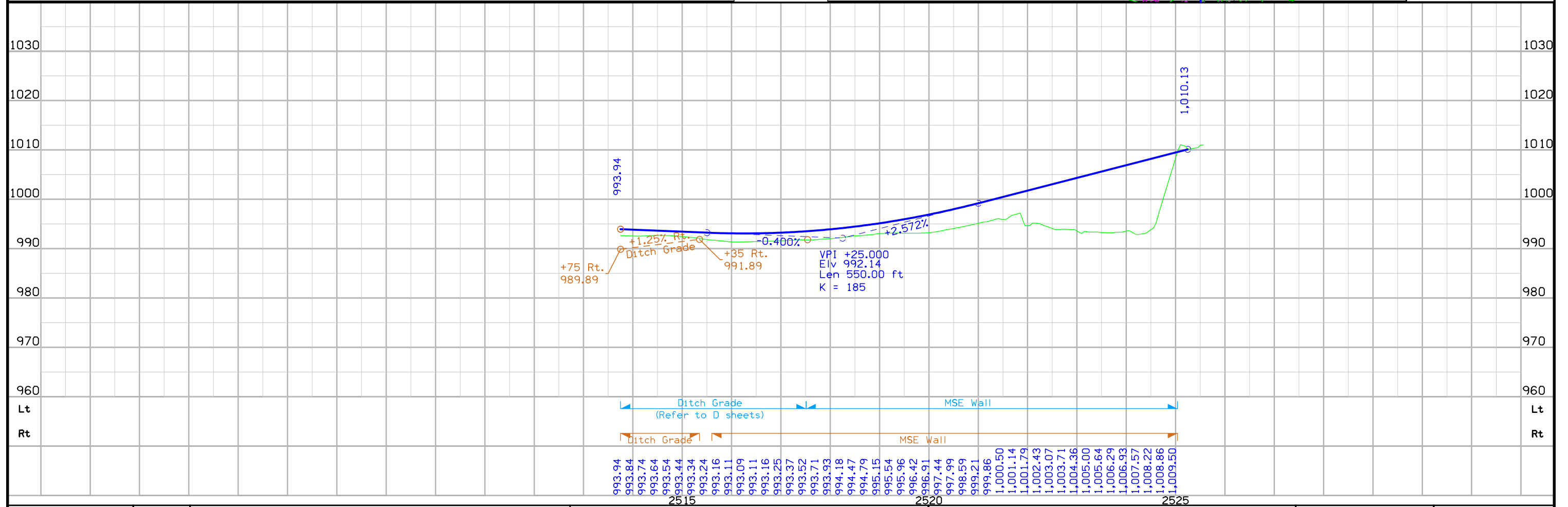
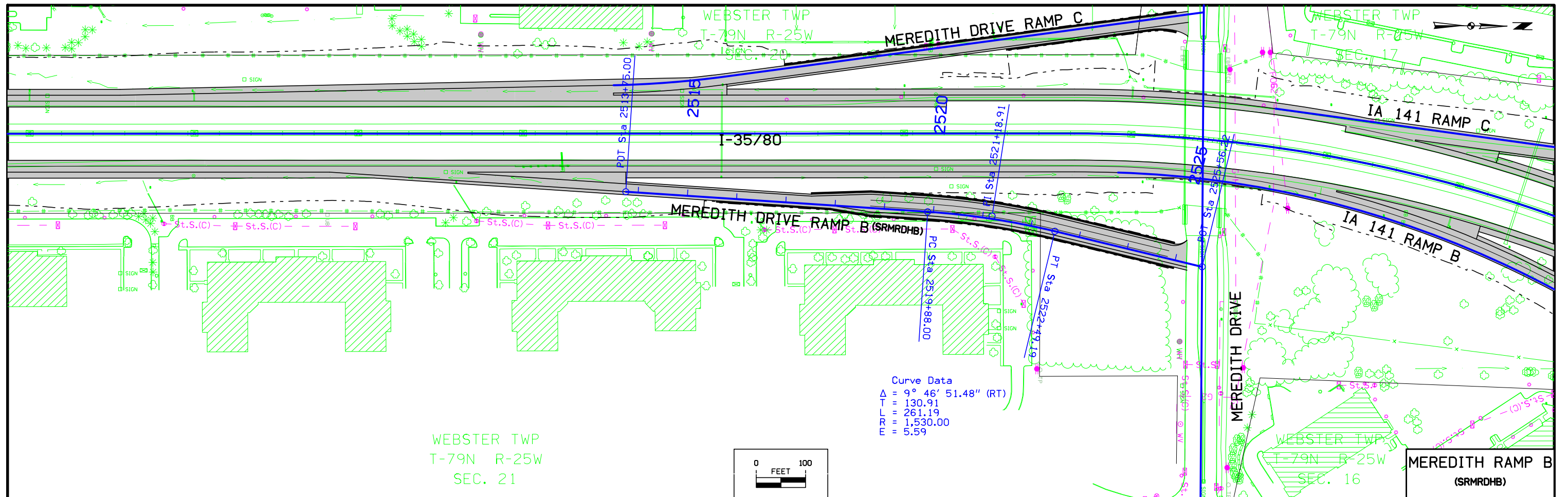
Revising Tie point,
Part of additional Survey
needs, still in design phase

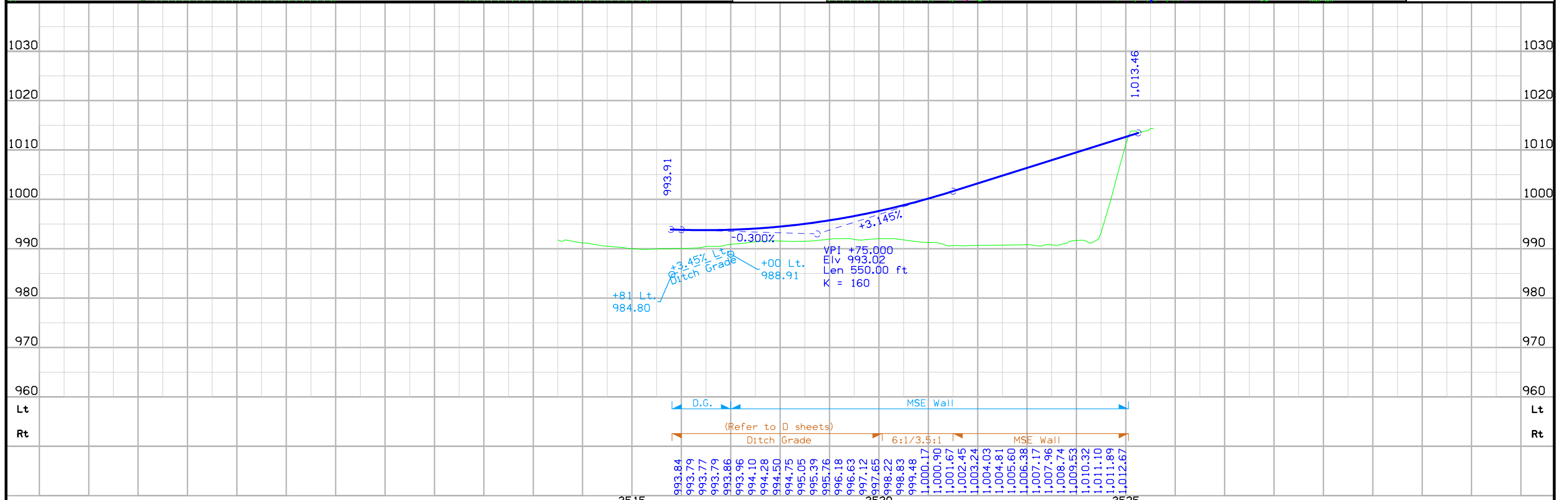
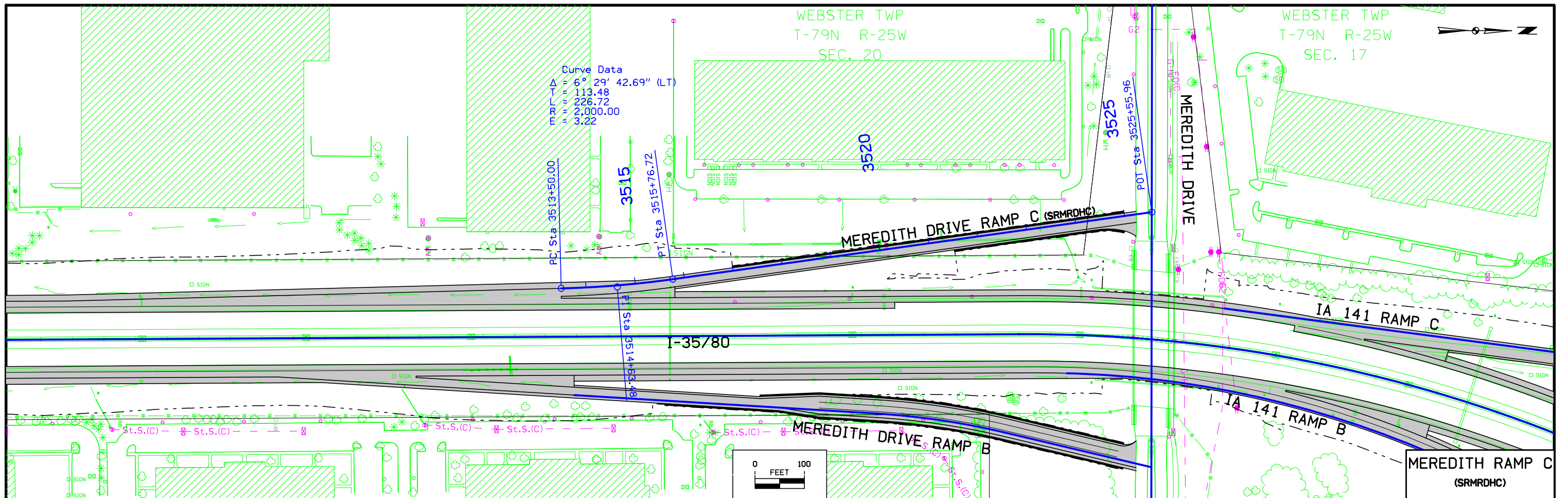


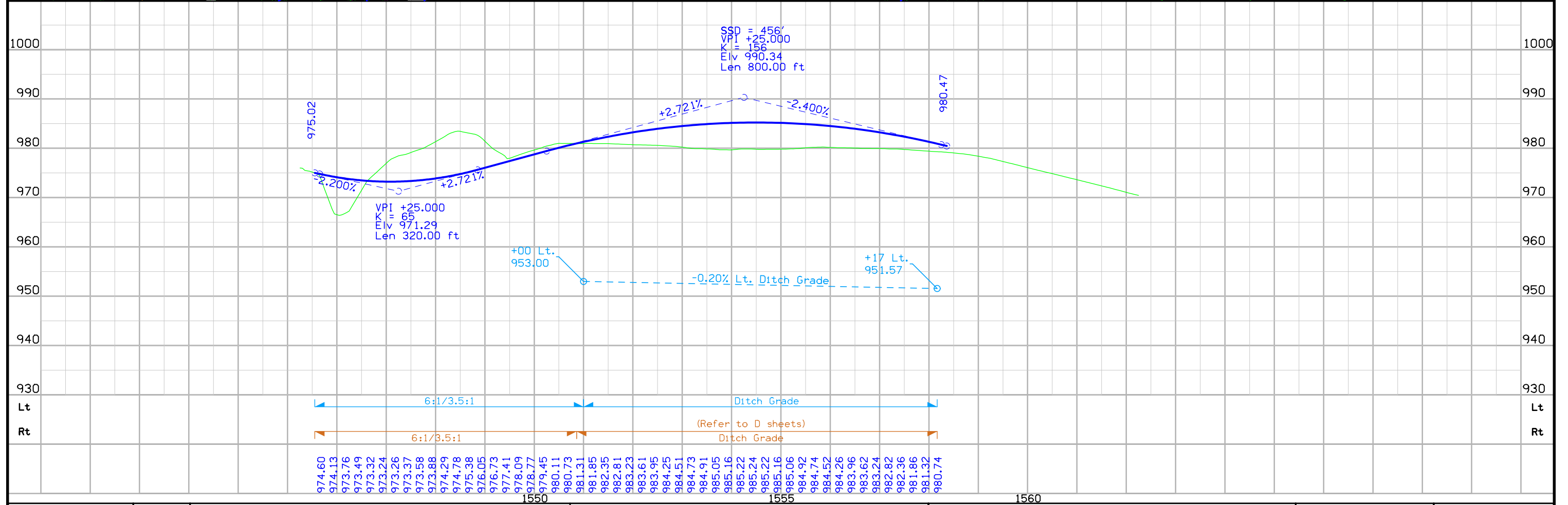
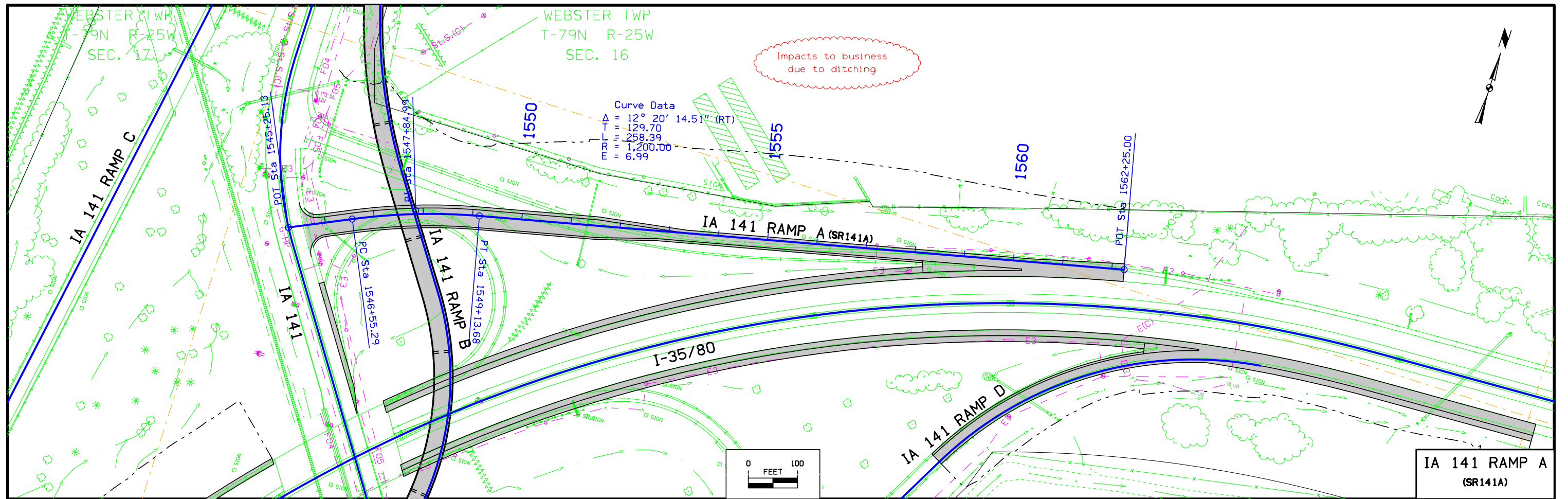
DOUGLAS AVENUE

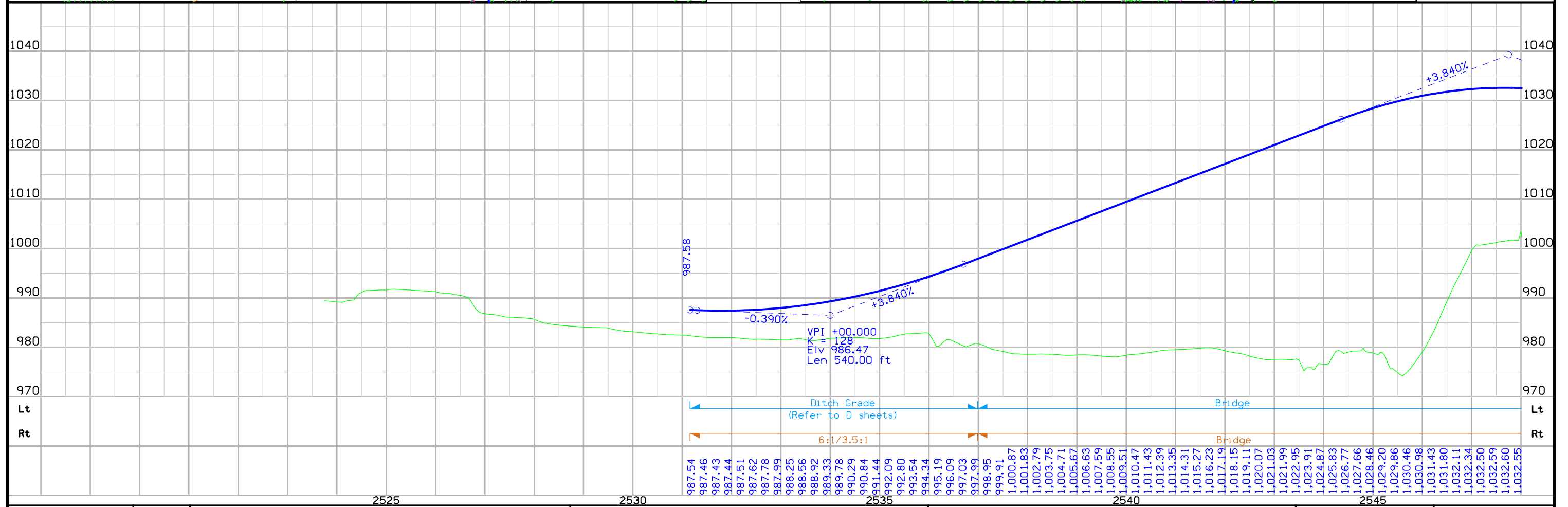
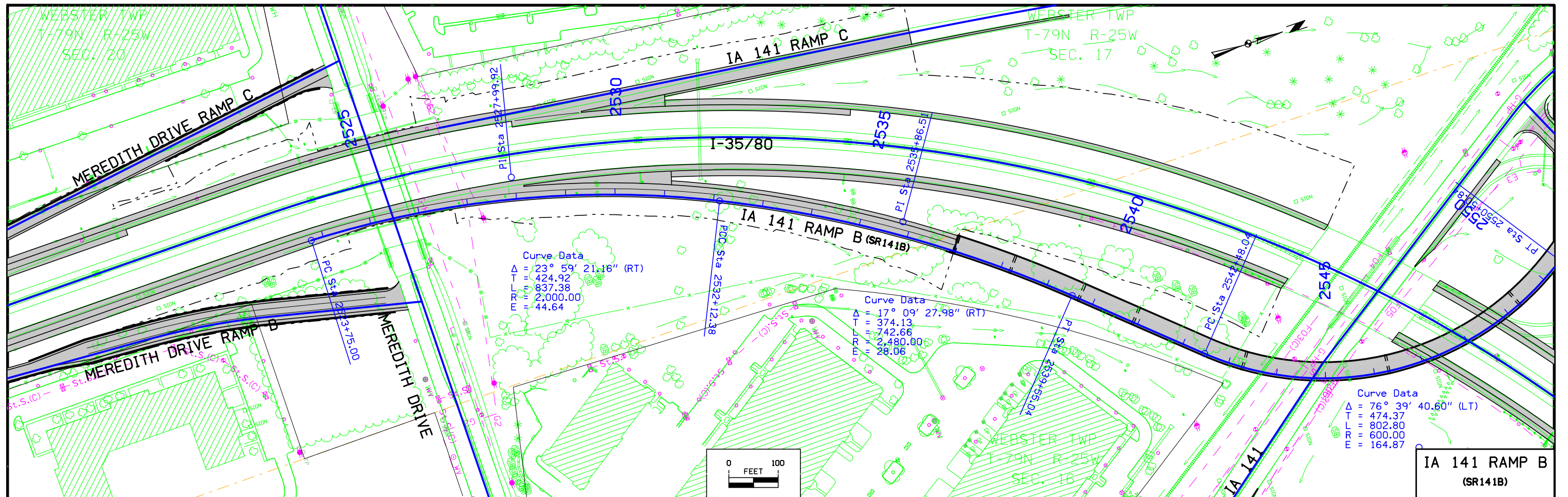


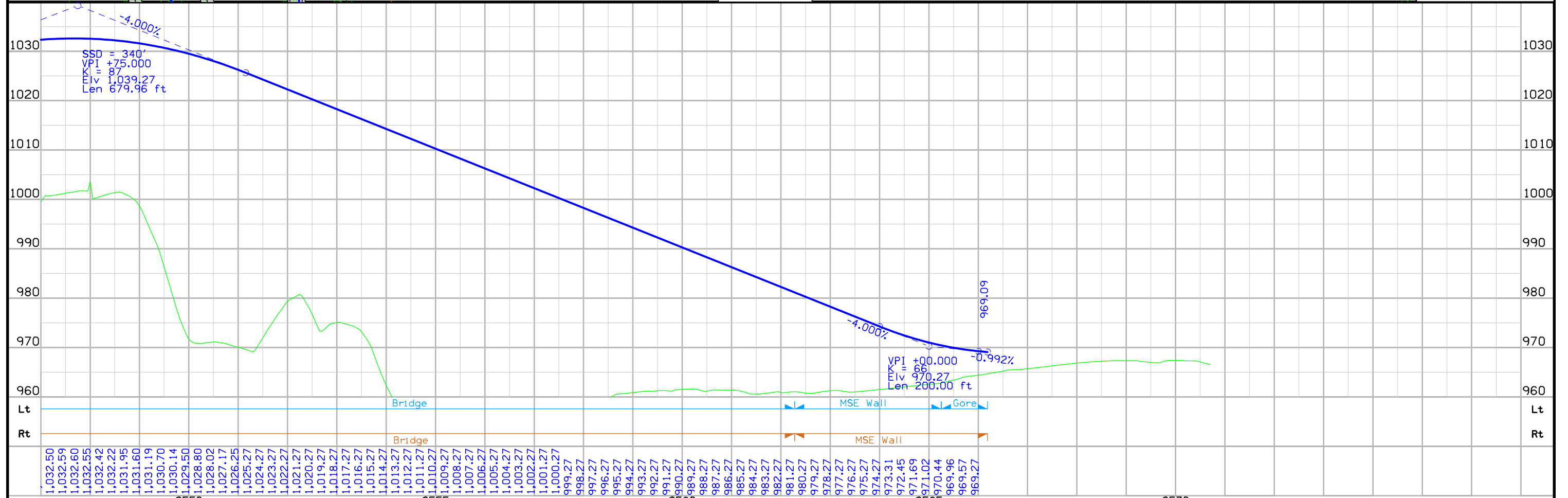
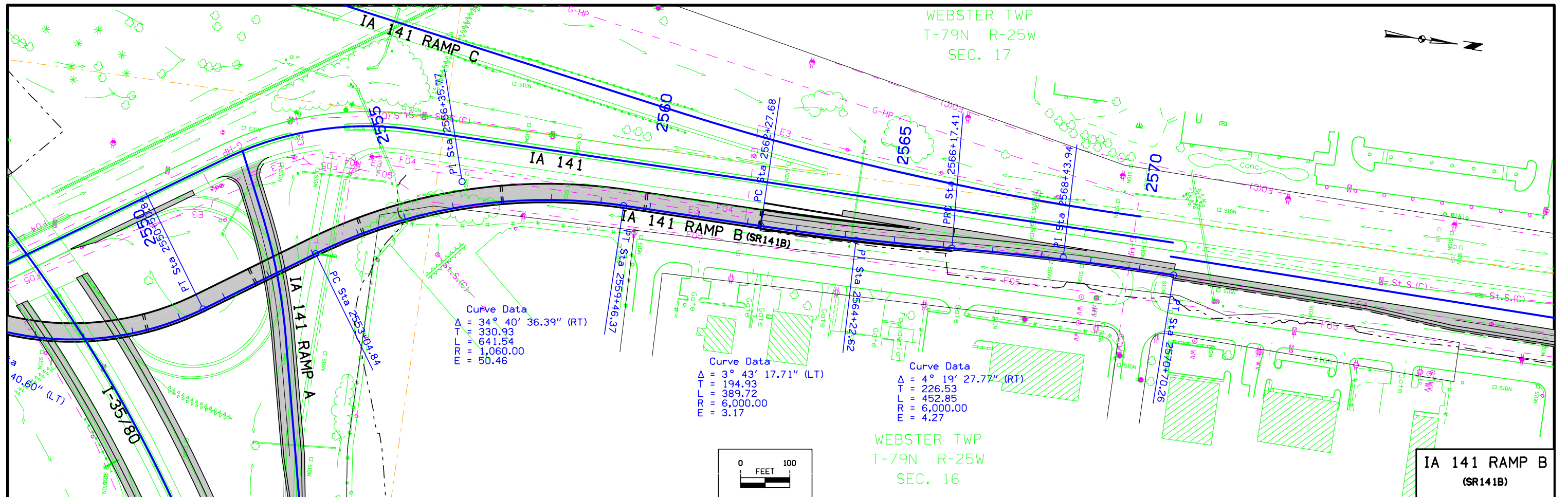




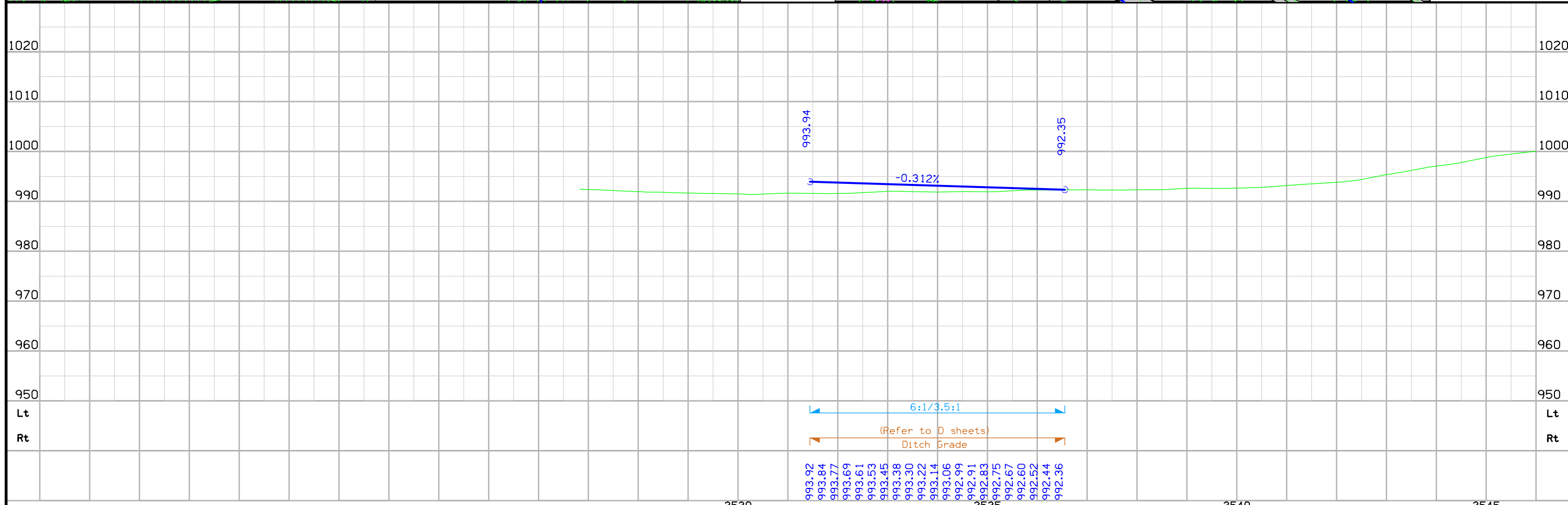
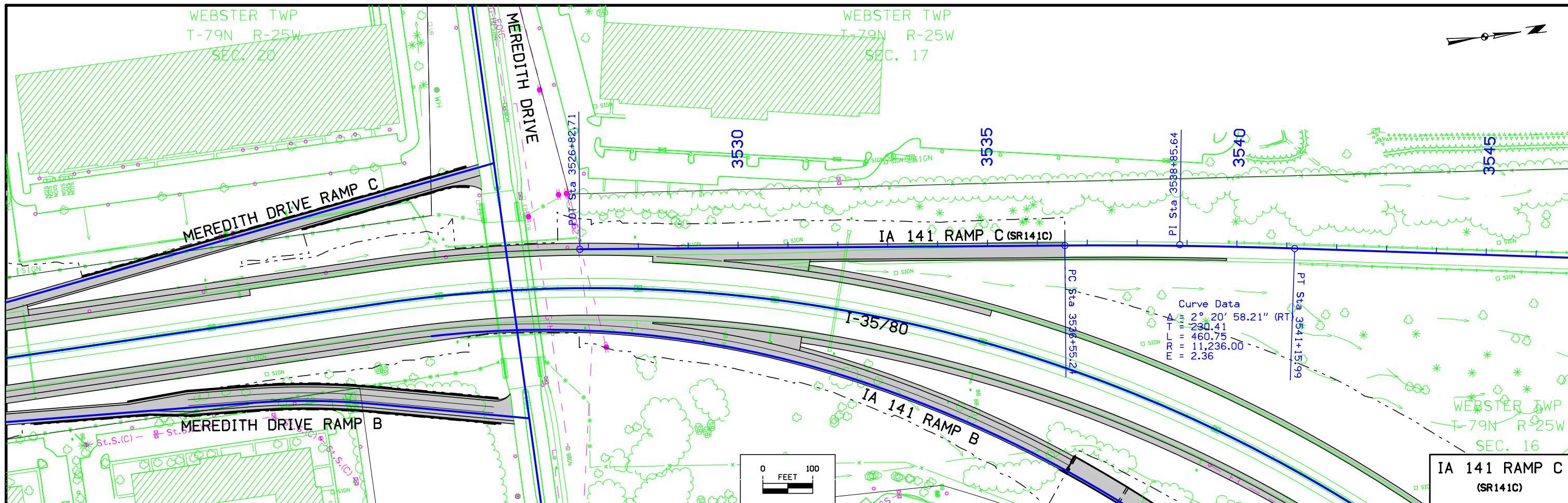


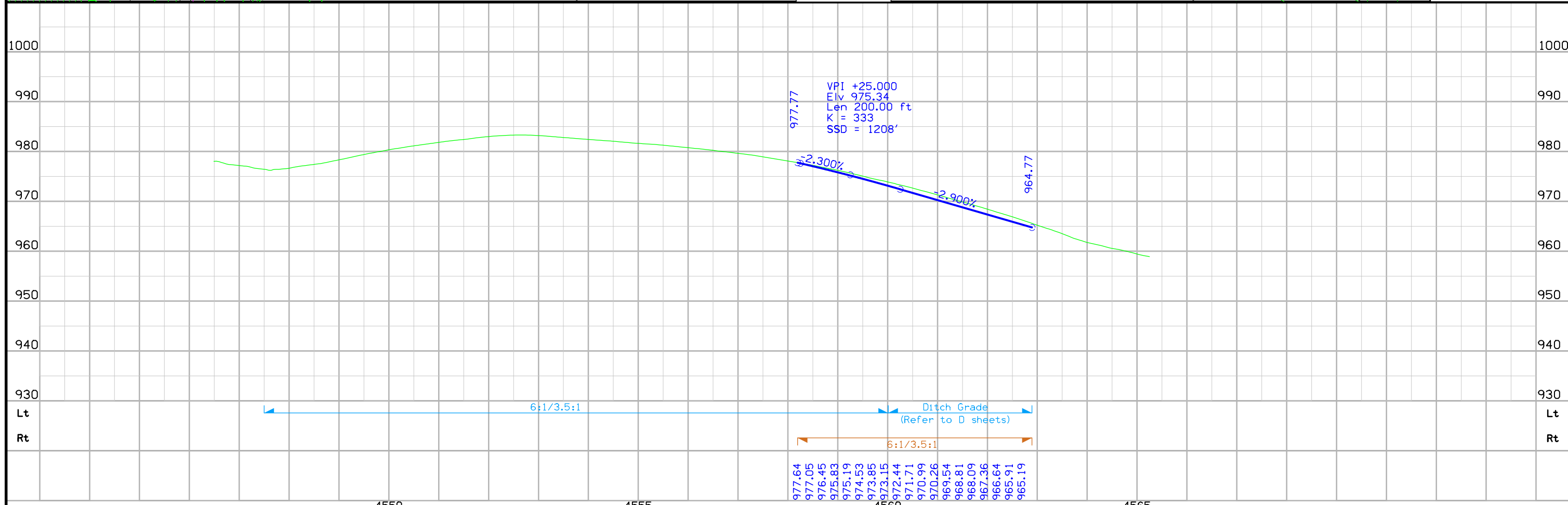
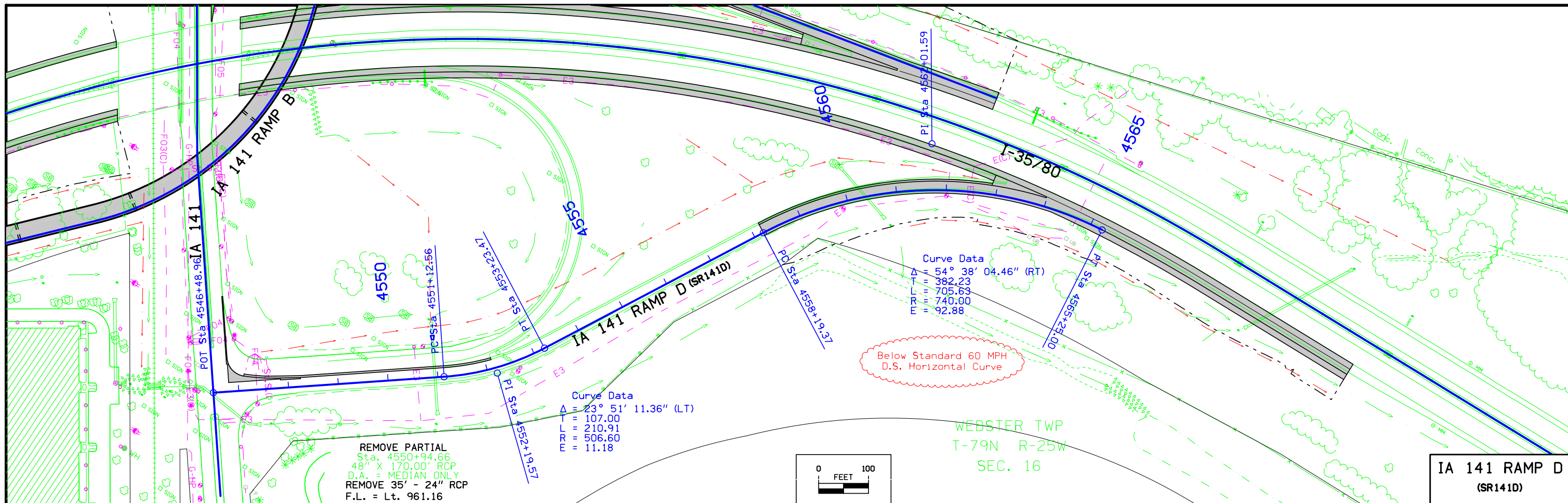




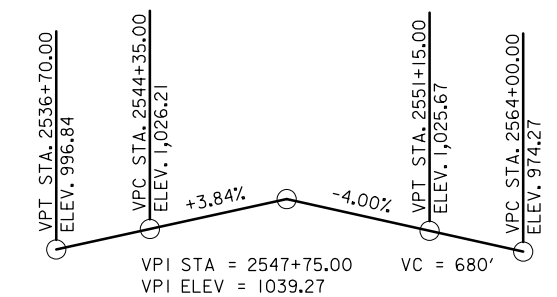
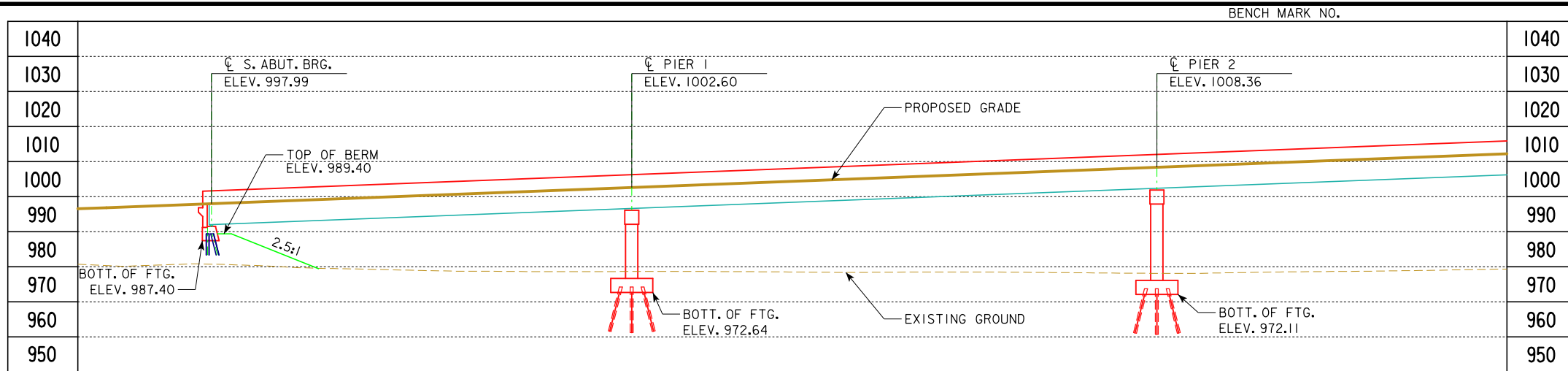


FILE NO.	ENGLISH	DESIGN TEAM	GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER	IM-080-3(178)127--13-77	SHEET NUMBER	K.12
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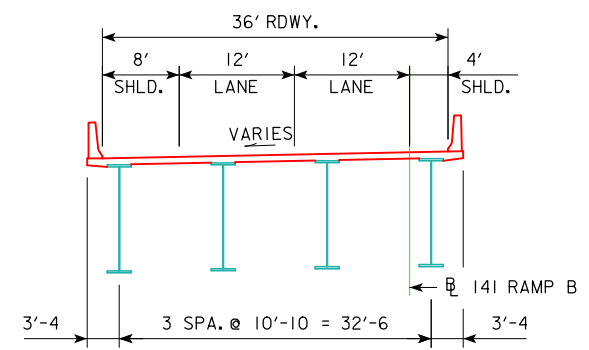


FILE NO.	ENGLISH	DESIGN TEAM	GUSTAFSON \ HR GREEN	POLK COUNTY	PROJECT NUMBER	IM-080-3(178)127--13-77	SHEET NUMBER	K.14
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LONGITUDINAL SECTION ALONG \square APPROACH ROADWAY

PROPOSED PROFILE GRADE 141 RAMP B



TYPICAL BRIDGE SECTION

CURVE 1 DATA

PI STA. 2535+86.51
 $\Delta = 17^{\circ}09'27.98''$ (RT)
 $D = 2^{\circ}18'37.13''$
 $T = 374.13'$
 $L = 742.66'$
 $E = 28.06'$
 $R = 2,480.00'$
 $e = 3.00\%$
 PC STA. 2532+12.38
 PT STA. 2539+55.04

UTILITIES LEGEND:

E = ELECTRIC
 FO = FIBER OPTIC
 G-HP = GAS
 St. S. = STORM SEWER

LOCATION

141 RAMP B OVER I-35/I-80
 T-79N R-25W
 SECTION 16
 WEBSTER TOWNSHIP
 POLK COUNTY
 FHWA NO. ?
 FRA NO. ?
 BRIDGE MAINT. NO. ?
 LATITUDE 41.649809°
 LONGITUDE 93.773399°

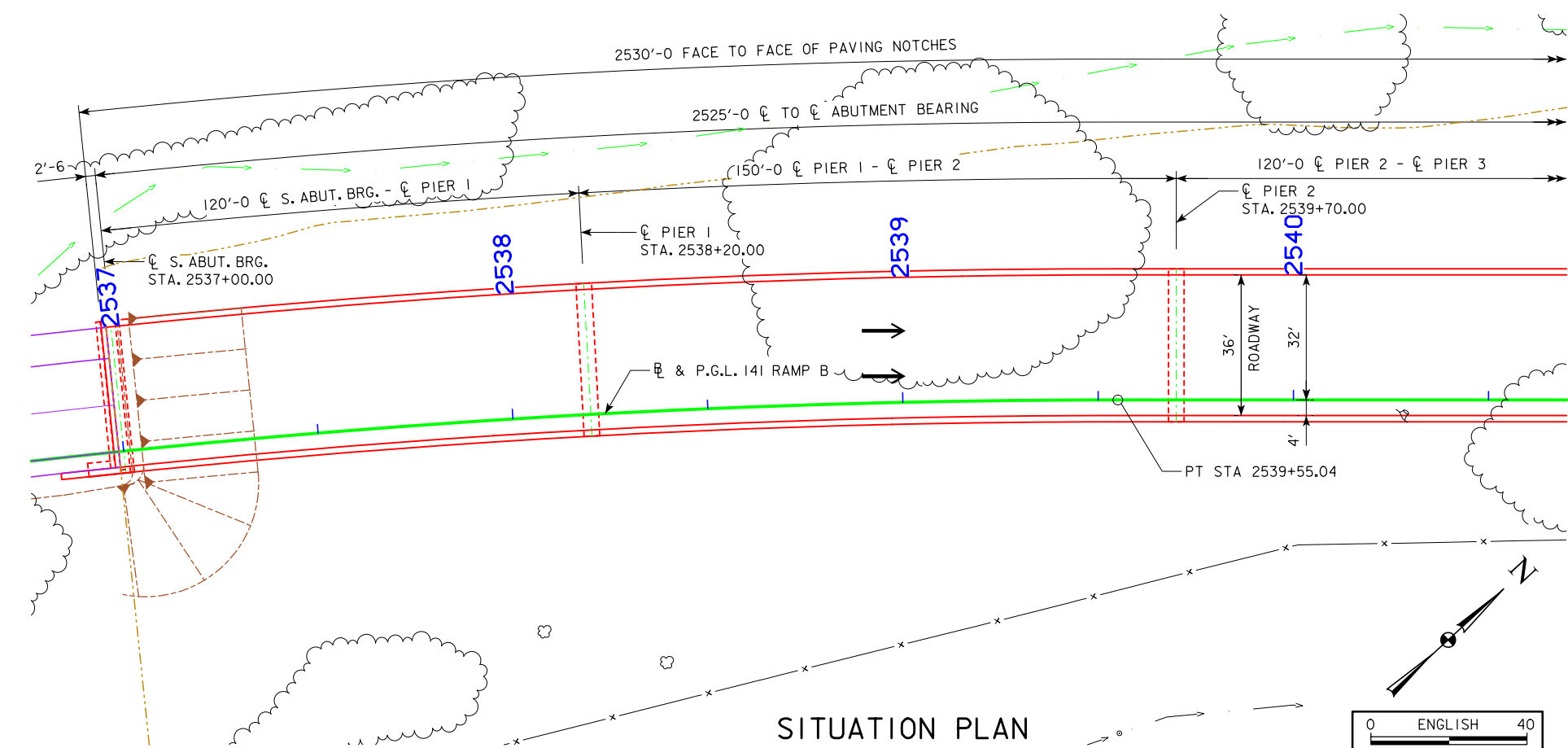
TRAFFIC ESTIMATE

2014 AADT	11,500	V.P.D.
2040 AADT	16,900	V.P.D.
2040 DHV	2,490	V.P.H.
TRUCKS	7	%

NOTES:

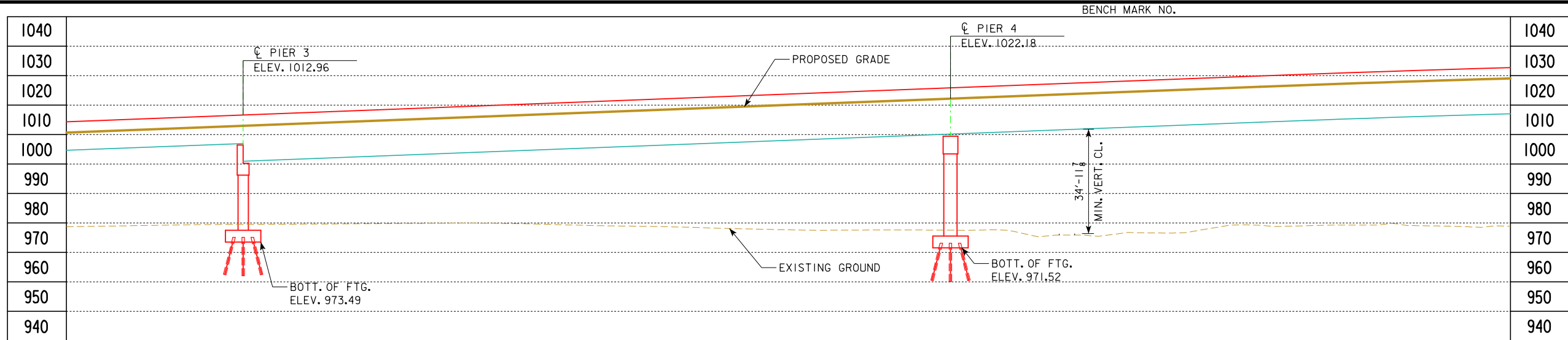
- NON-STANDARD ABUTMENT WING WALL
 - TL-5 BRIDGE RAILING PROPOSED
 - PIER TYPE - T
 - PIERS 5, 6, 7, AND 10 ARE DESIGNED FOR VEHICULAR COLLISION FORCE.
 - PIERS 1, 2, 3, 4, 8, AND 9 ARE EXEMPT FROM VEHICULAR COLLISION FORCE DESIGN.
 - BEAM TYPE - WPG - DEPTH = 5'-2" FOR SPANS 1, 2, & 3. DEPTH = 11'-2" FOR SPANS 4-11.
- PRELIMINARY

TYPICAL APPROACH SECTION



SITUATION PLAN

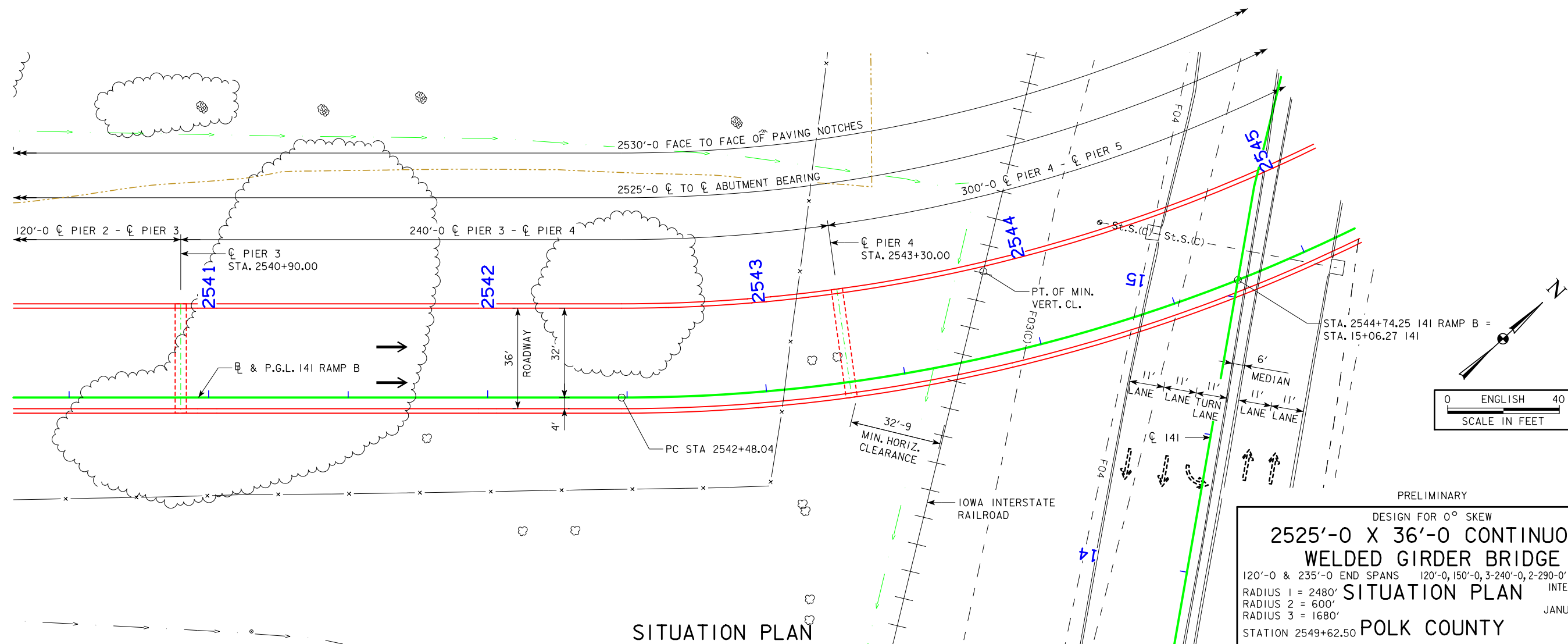
DESIGN FOR 0° SKEW
2525'-0" X 36'-0" CONTINUOUS WELDED GIRDER BRIDGE
 120'-0" & 235'-0" END SPANS 120'-0", 150'-0", 3-240'-0", 2-290'-0" & 2-300'-0" INTERIOR SPANS
 RADIUS 1 = 2480'
 RADIUS 2 = 600'
 RADIUS 3 = 1680'
SITUATION PLAN
 POLK COUNTY
 STATION 2549+62.50
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 1 OF 7 FILE NO. 31309 DESIGN NO. _____



LONGITUDINAL SECTION ALONG **B** APPROACH ROADWAY

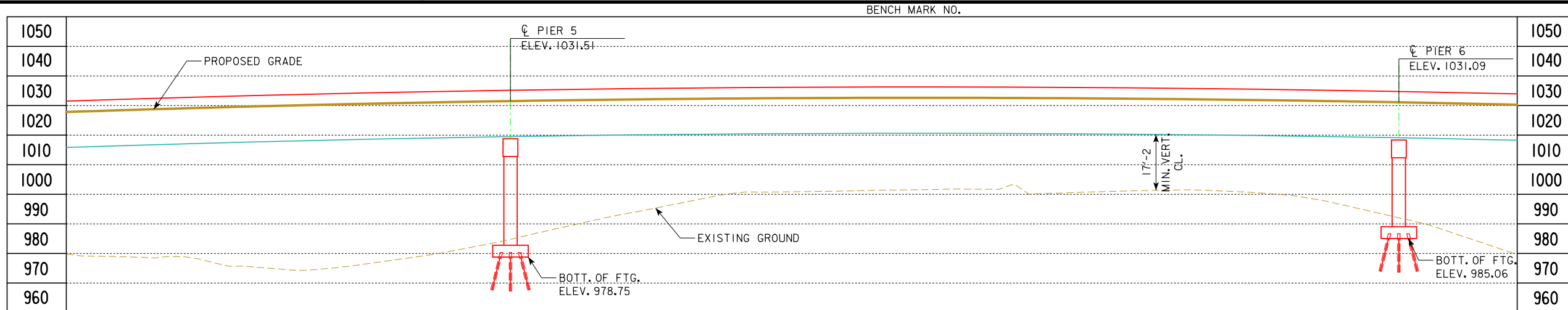
MINIMUM VERTICAL CLEARANCE (RR)

OVERHEAD STATION = 2543+85.76, OFFSET 30.25' LT.
 OVERHEAD ELEVATION = 1023.41
 DEPTH OF SUPERSTRUCTURE = 12.00'
 UNDERPASS ELEVATION = 976.42
 MINIMUM VERTICAL CLEARANCE = 34.99'



SITUATION PLAN

PRELIMINARY
 DESIGN FOR 0° SKEW
2525'-0 X 36'-0 CONTINUOUS WELDED GIRDER BRIDGE
 120'-0 & 235'-0 END SPANS 120'-0, 150'-0, 3-240'-0, 2-290'-0' & 2-300'-0 INTERIOR SPANS
 RADIUS 1 = 2480' RADIUS 2 = 600' RADIUS 3 = 1680'
SITUATION PLAN
 JANUARY, 2016
 STATION 2549+62.50 **POLK COUNTY**
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 2 OF 7 FILE NO. 31309 DESIGN NO.



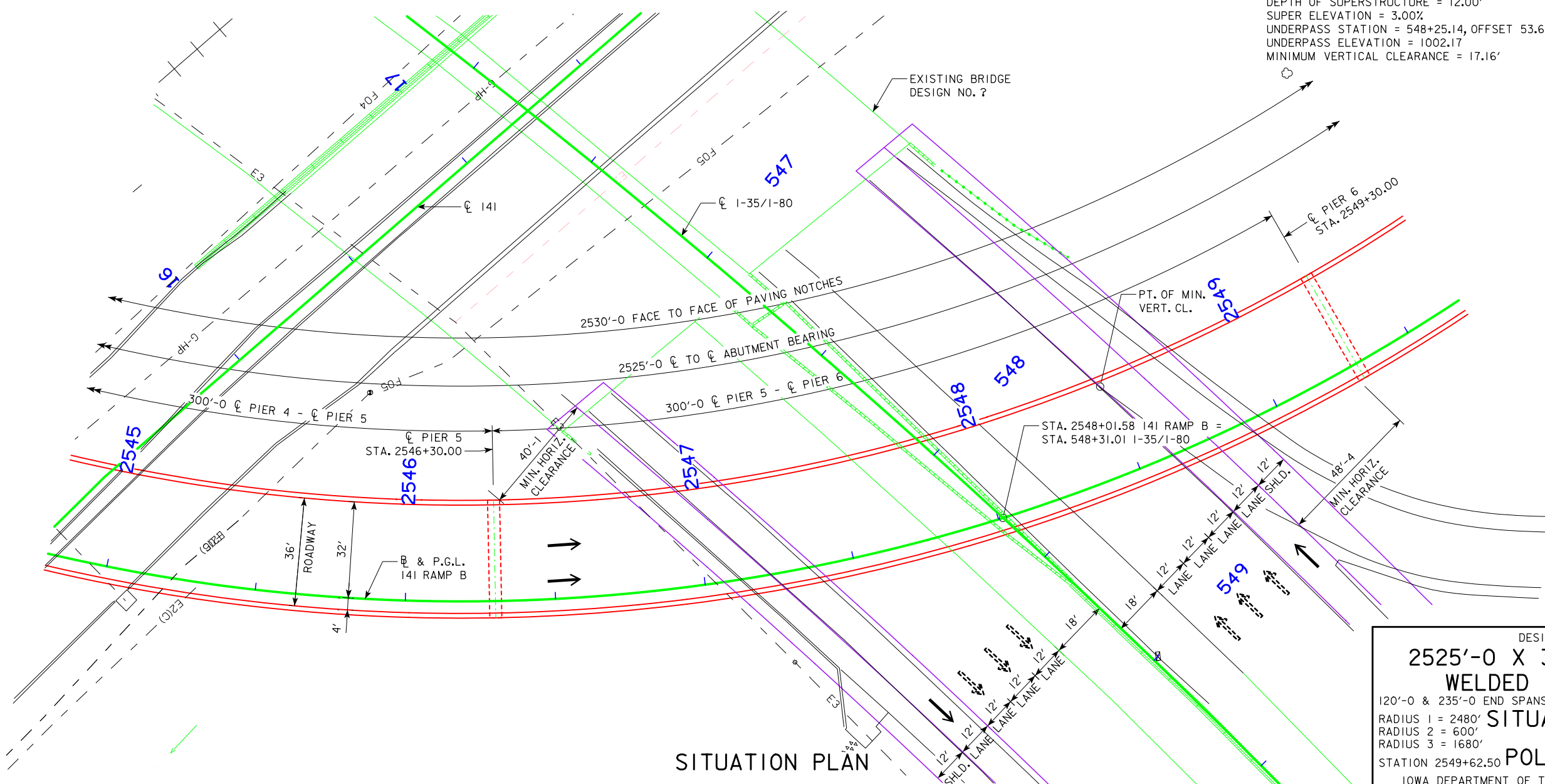
LONGITUDINAL SECTION ALONG \perp APPROACH ROADWAY

MINIMUM VERTICAL CLEARANCE (I-35/I-80)

OVERHEAD STATION = 2548+47.51, OFFSET 30.25' LT.
 OVERHEAD ELEVATION = 1031.33
 DEPTH OF SUPERSTRUCTURE = 12.00'
 SUPER ELEVATION = 3.00%
 UNDERPASS STATION = 548+25.14, OFFSET 53.69' RT.
 UNDERPASS ELEVATION = 1002.17
 MINIMUM VERTICAL CLEARANCE = 17.16'

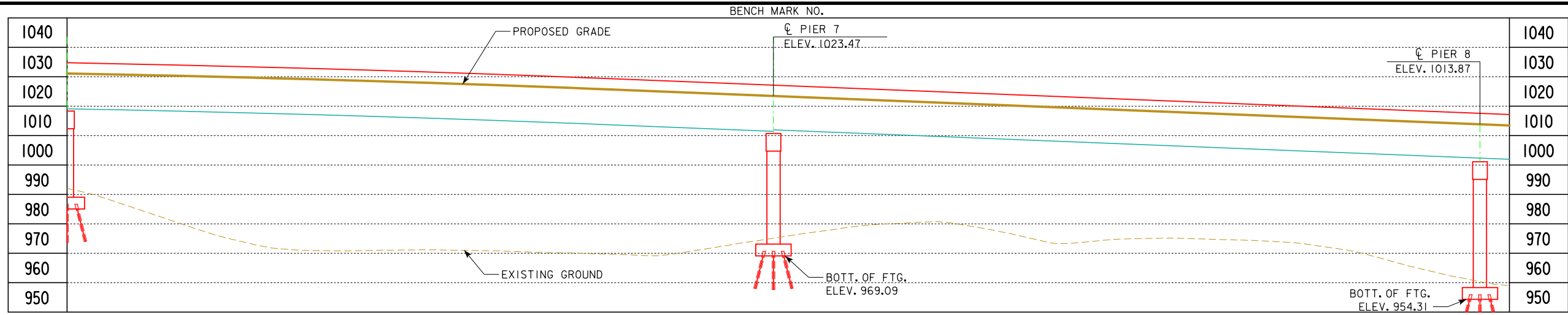
CURVE 2 DATA

PI STA. 2547+22.41
 $\Delta = 76^{\circ}39'40.60''$ (LT)
 $D = 9^{\circ}32'57.47''$
 $T = 474.37'$
 $L = 802.80'$
 $E = 164.87'$
 $R = 600.00'$
 $e = 3.00\%$
 PC STA. 2542+48.04
 PT STA. 2550+50.84

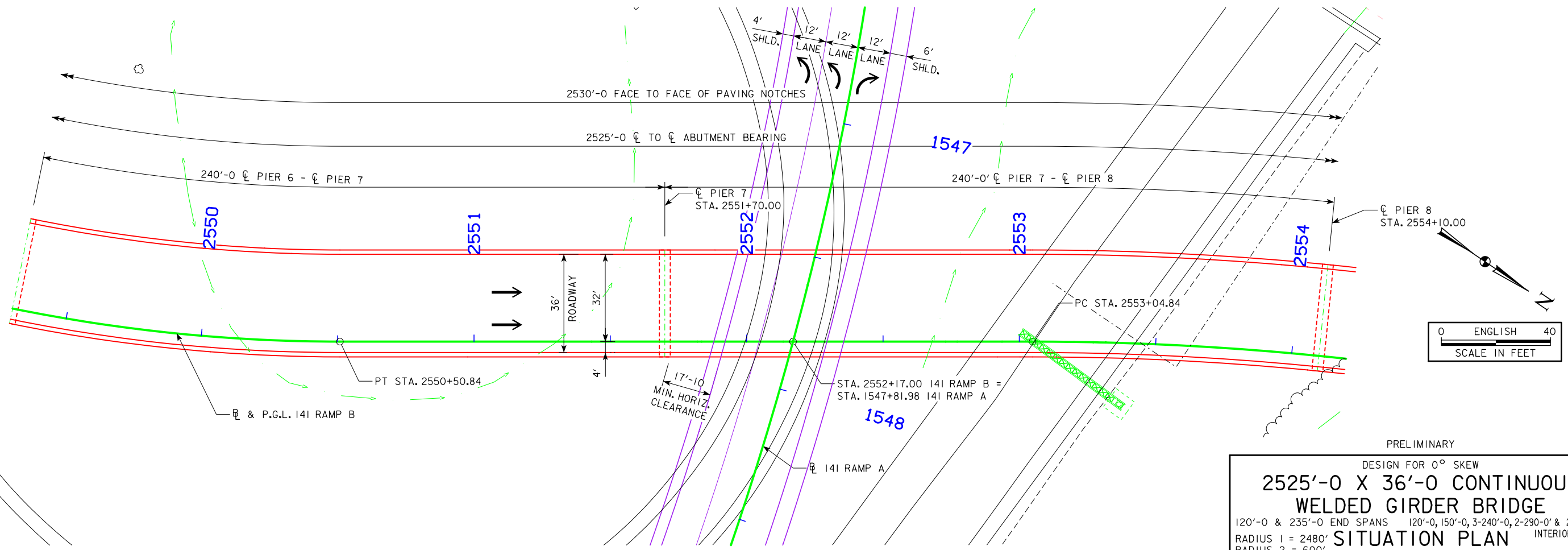


SITUATION PLAN

PRELIMINARY
 DESIGN FOR 0° SKEW
2525'-0 X 36'-0 CONTINUOUS WELDED GIRDER BRIDGE
 120'-0 & 235'-0 END SPANS 120'-0, 150'-0, 3-240'-0, 2-290'-0' & 2-300'-0 INTERIOR SPANS
 RADIUS 1 = 2480' RADIUS 2 = 600' RADIUS 3 = 1680'
SITUATION PLAN
 JANUARY, 2016
 STATION 2549+62.50 **POLK COUNTY**
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 3 OF 7 FILE NO. 31309 DESIGN NO.

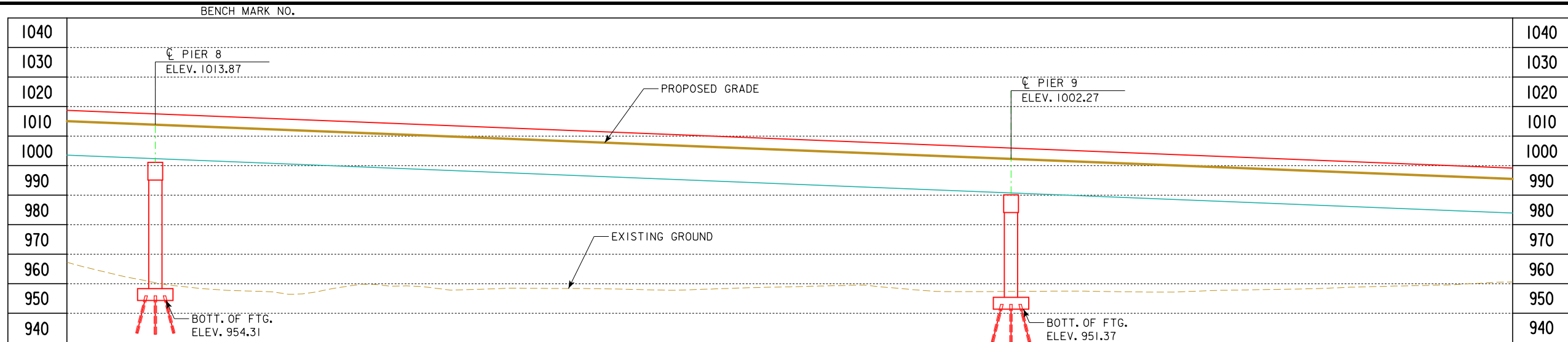


LONGITUDINAL SECTION ALONG \perp APPROACH ROADWAY

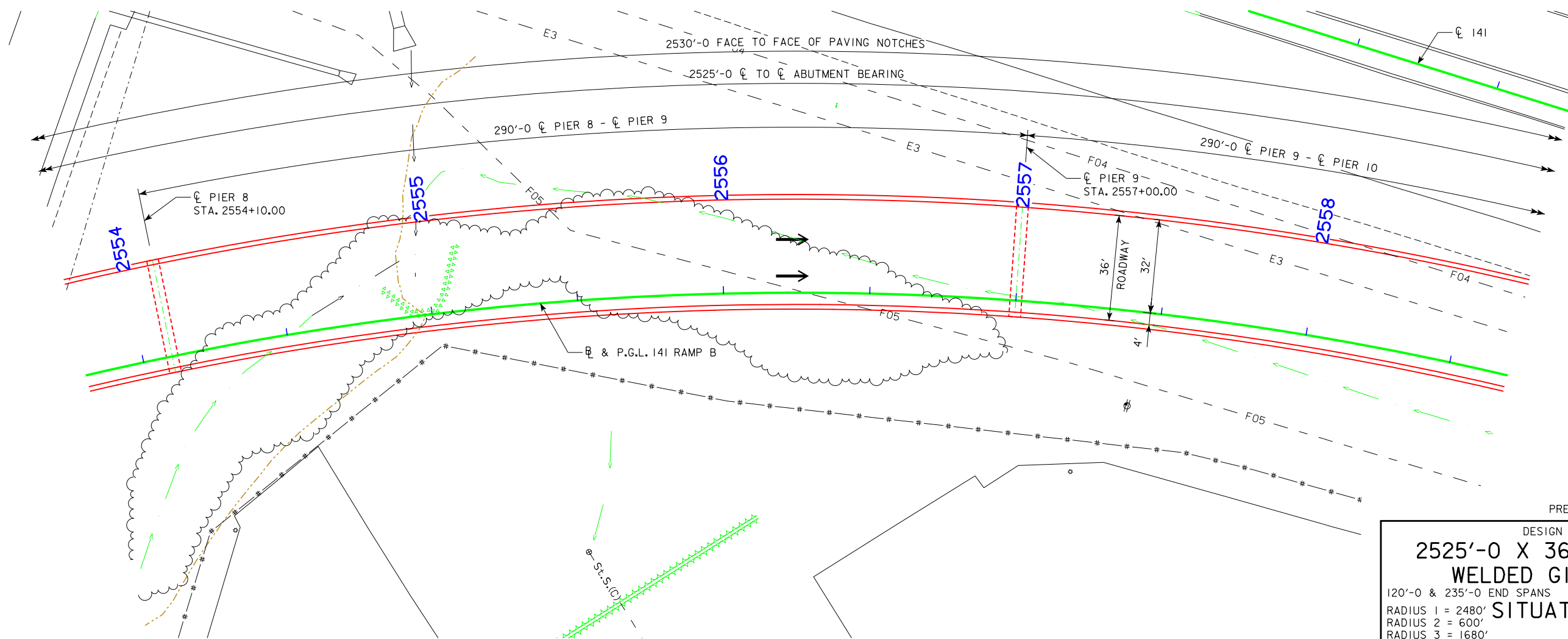


SITUATION PLAN

PRELIMINARY
 DESIGN FOR 0° SKEW
2525'-0 X 36'-0 CONTINUOUS WELDED GIRDER BRIDGE
 120'-0 & 235'-0 END SPANS 120'-0, 150'-0, 3-240'-0, 2-290'-0' & 2-300'-0 INTERIOR SPANS
 RADIUS 1 = 2480' RADIUS 2 = 600' RADIUS 3 = 1680'
SITUATION PLAN
 JANUARY, 2016
 STATION 2549+62.50 **POLK COUNTY**
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 4 OF 7 FILE NO. 31309 DESIGN NO.



LONGITUDINAL SECTION ALONG \perp APPROACH ROADWAY



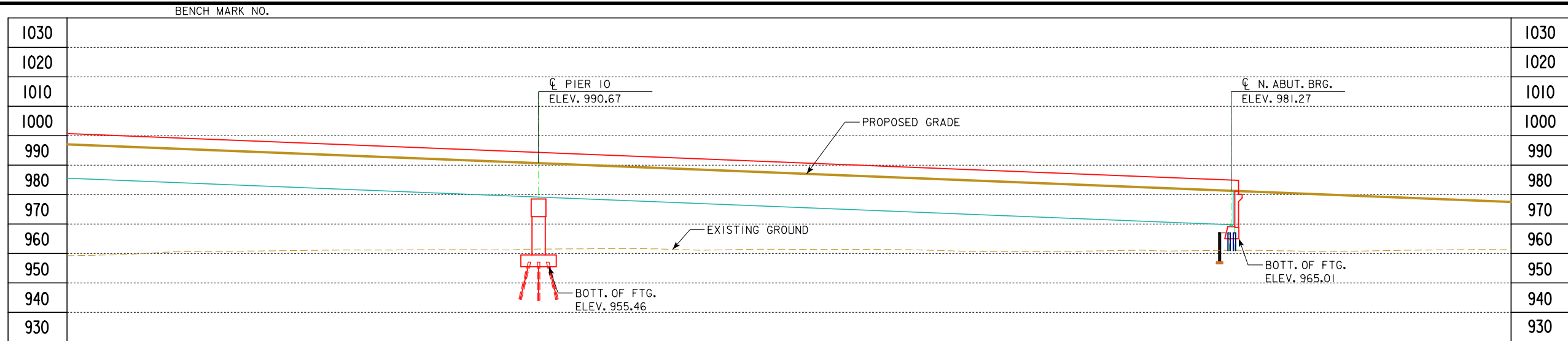
CURVE 3 DATA

PI STA. 2556+35.77
 $\Delta = 34^\circ 40' 36.39''$ (RT)
 $D = 5^\circ 24' 18.94''$
 $T = 330.93'$
 $L = 641.54'$
 $E = 50.46'$
 $R = 1,060.00'$
 $e = 3.00\%$
 PC STA. 2553+04.84
 PT STA. 2559+46.37

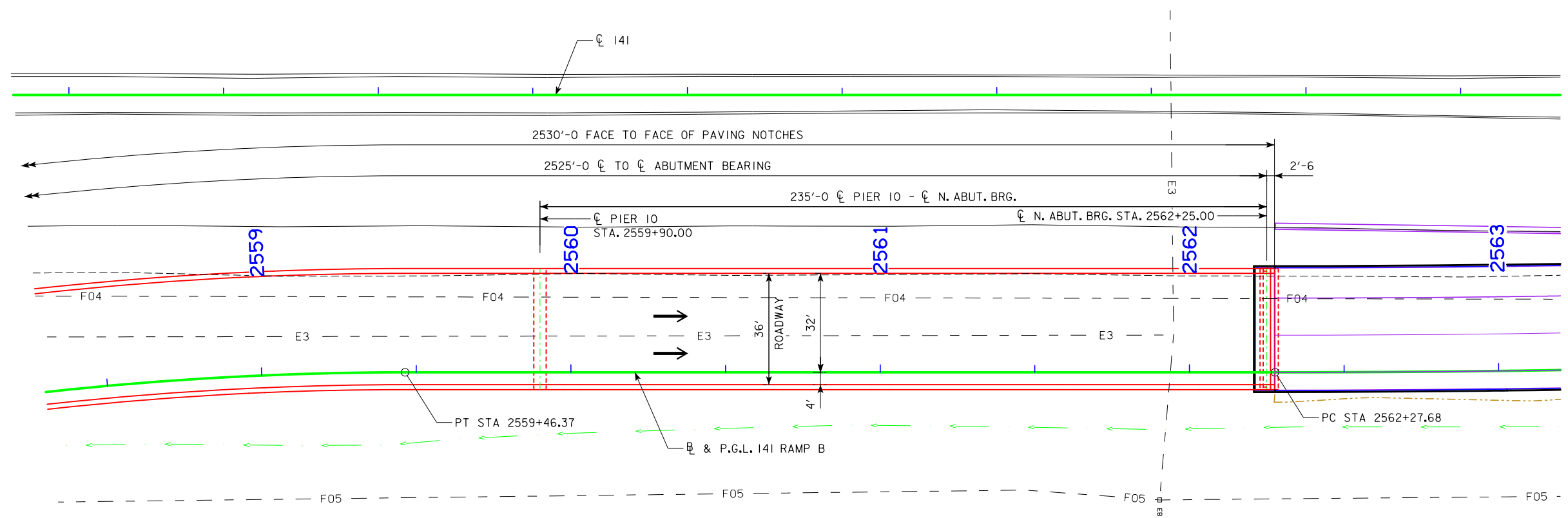


SITUATION PLAN

PRELIMINARY
 DESIGN FOR 0° SKEW
2525'-0 X 36'-0 CONTINUOUS WELDED GIRDER BRIDGE
 120'-0 & 235'-0 END SPANS 120'-0, 150'-0, 3-240'-0, 2-290'-0' & 2-300'-0' INTERIOR SPANS
 RADIUS 1 = 2480'
 RADIUS 2 = 600'
 RADIUS 3 = 1680'
SITUATION PLAN
 JANUARY, 2016
POLK COUNTY
 STATION 2549+62.50
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 5 OF 7 FILE NO. 31309 DESIGN NO.



LONGITUDINAL SECTION ALONG CL APPROACH ROADWAY



SITUATION PLAN

PRELIMINARY

DESIGN FOR 0° SKEW

2525'-0 X 36'-0 CONTINUOUS WELDED GIRDER BRIDGE

120'-0 & 235'-0 END SPANS 120'-0, 150'-0, 3-240'-0, 2-290'-0' & 2-300'-0' INTERIOR SPANS

RADIUS 1 = 2480'

RADIUS 2 = 600'

RADIUS 3 = 1680'

SITUATION PLAN

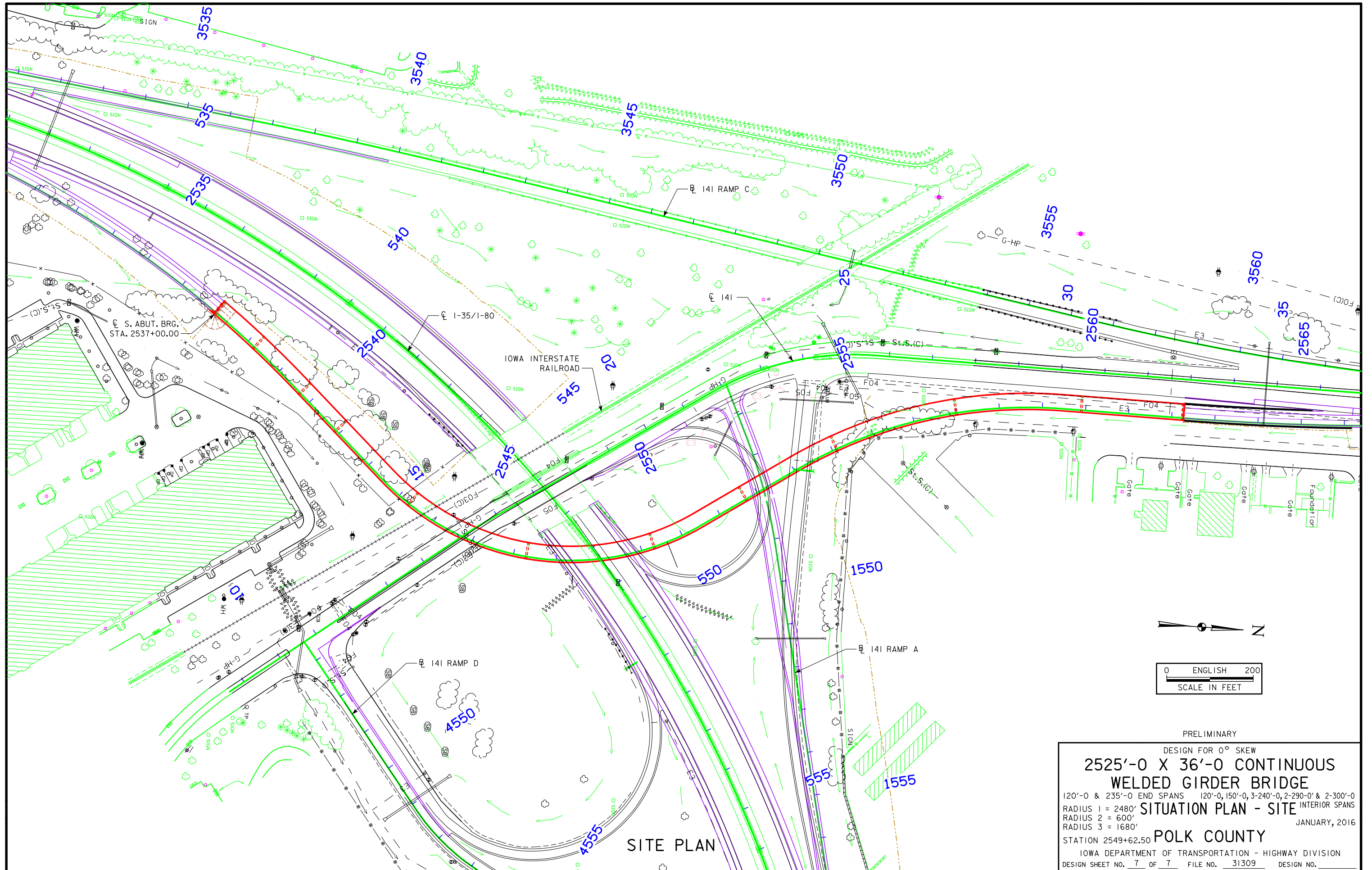
JANUARY, 2016

POLK COUNTY

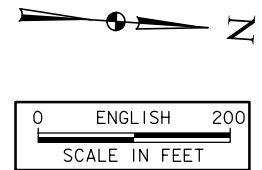
STATION 2549+62.50

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

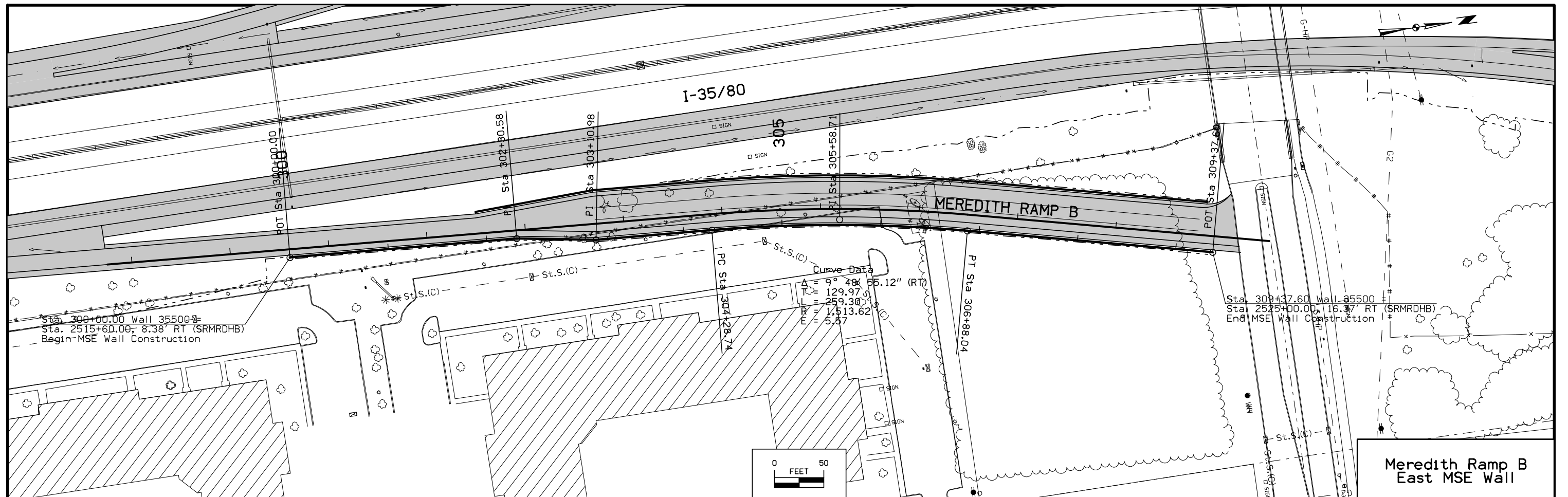
DESIGN SHEET NO. 6 OF 7 FILE NO. 31309 DESIGN NO.



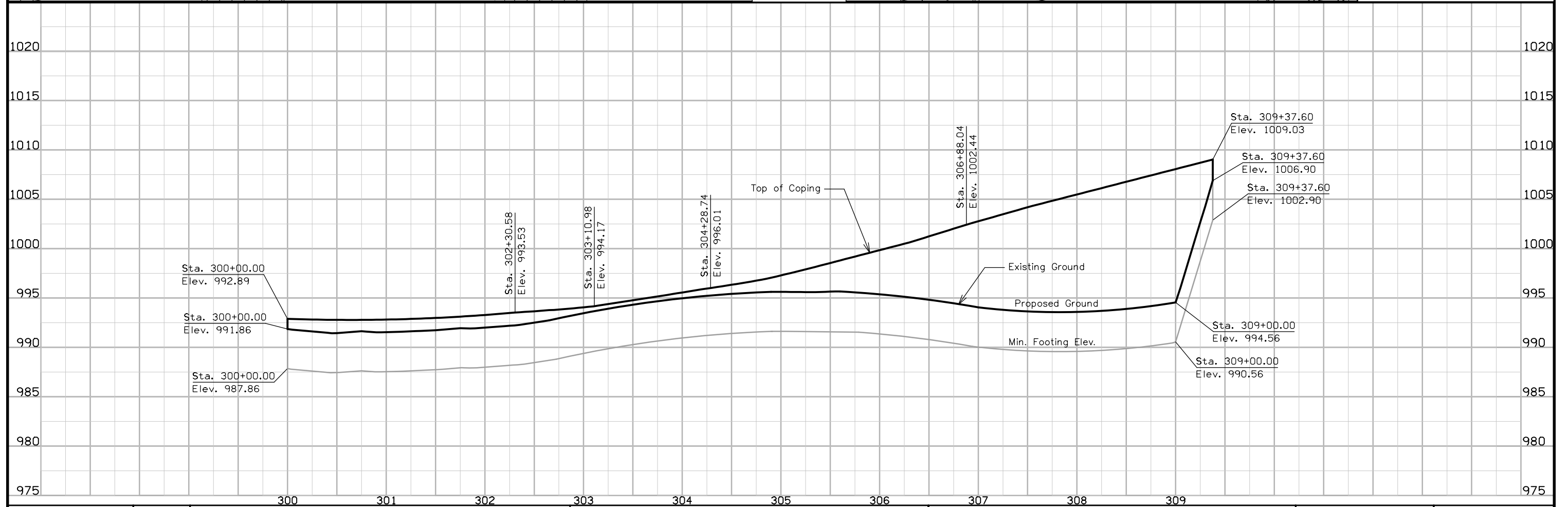
SITE PLAN

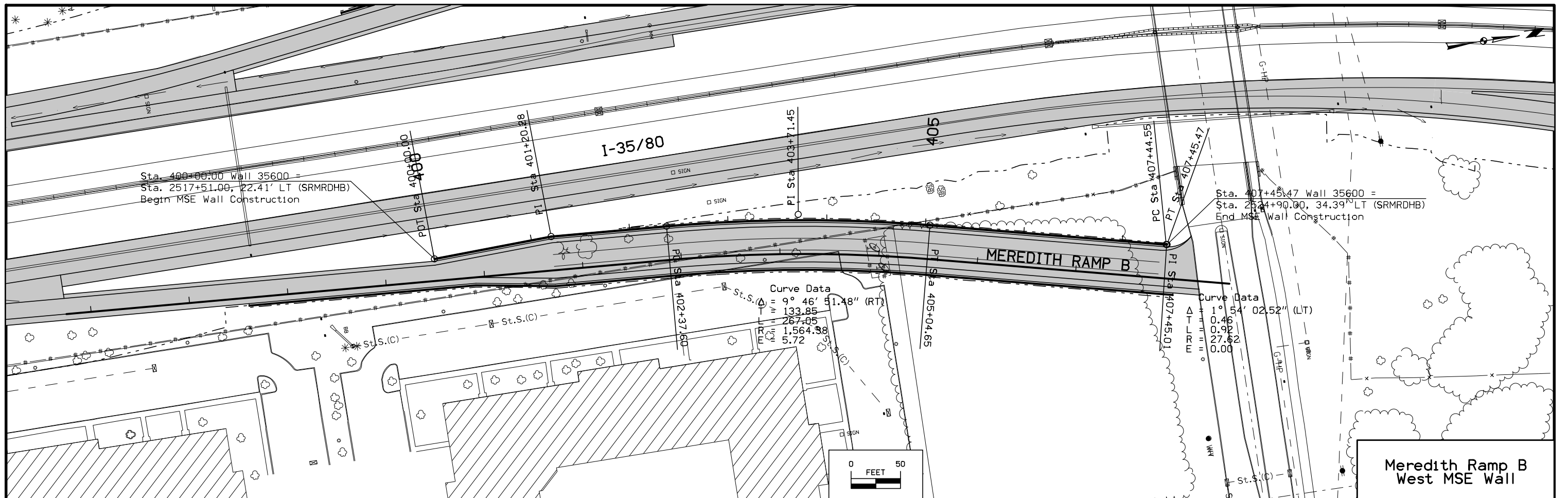


PRELIMINARY
 DESIGN FOR 0° SKEW
2525'-0 X 36'-0 CONTINUOUS WELDED GIRDER BRIDGE
 120'-0 & 235'-0 END SPANS 120'-0, 150'-0, 3-240'-0, 2-290'-0' & 2-300'-0 INTERIOR SPANS
 RADIUS 1 = 2480' RADIUS 2 = 600' RADIUS 3 = 1680'
SITUATION PLAN - SITE
 JANUARY, 2016
POLK COUNTY
 STATION 2549+62.50
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 7 OF 7 FILE NO. 31309 DESIGN NO.

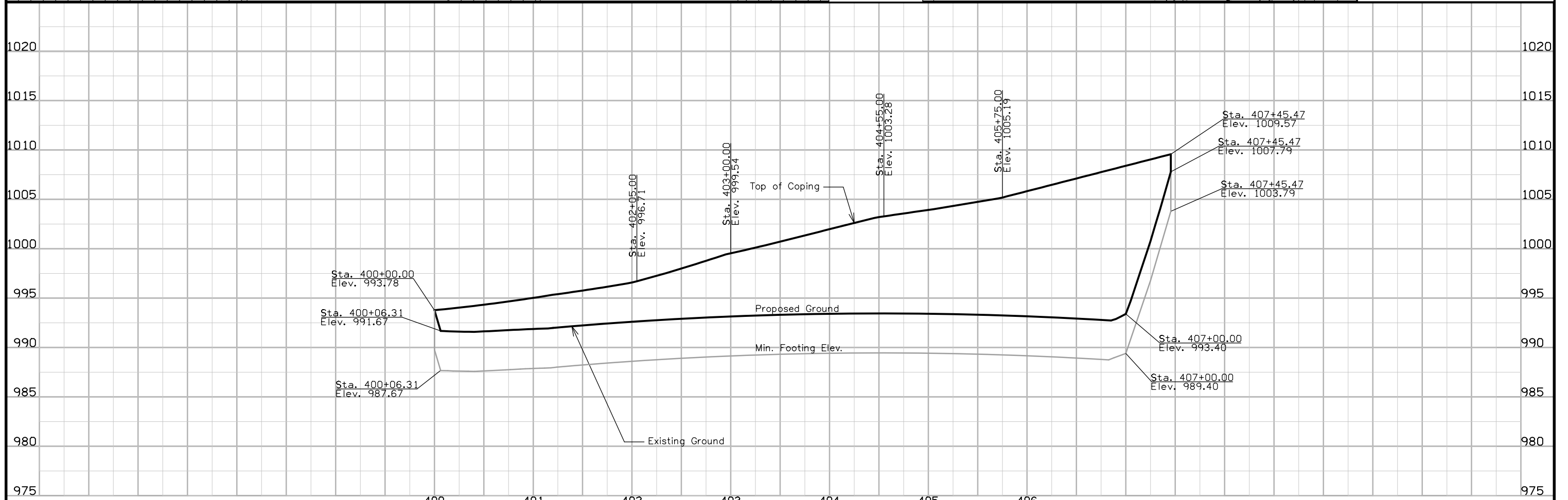


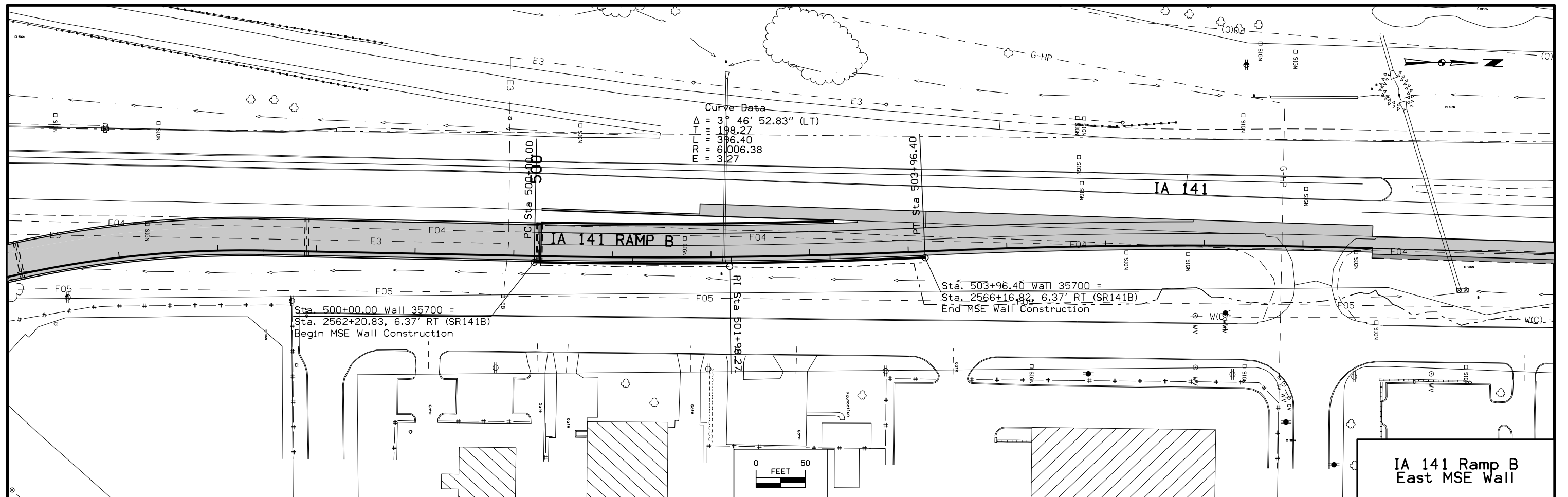
**Meredith Ramp B
East MSE Wall**



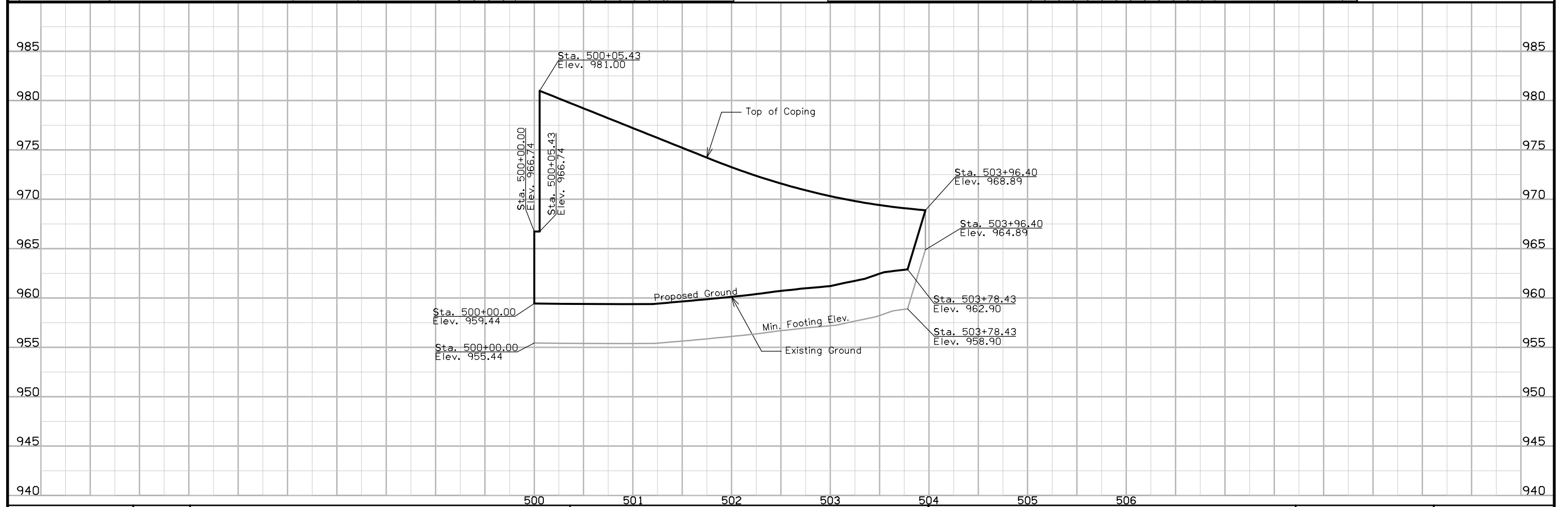


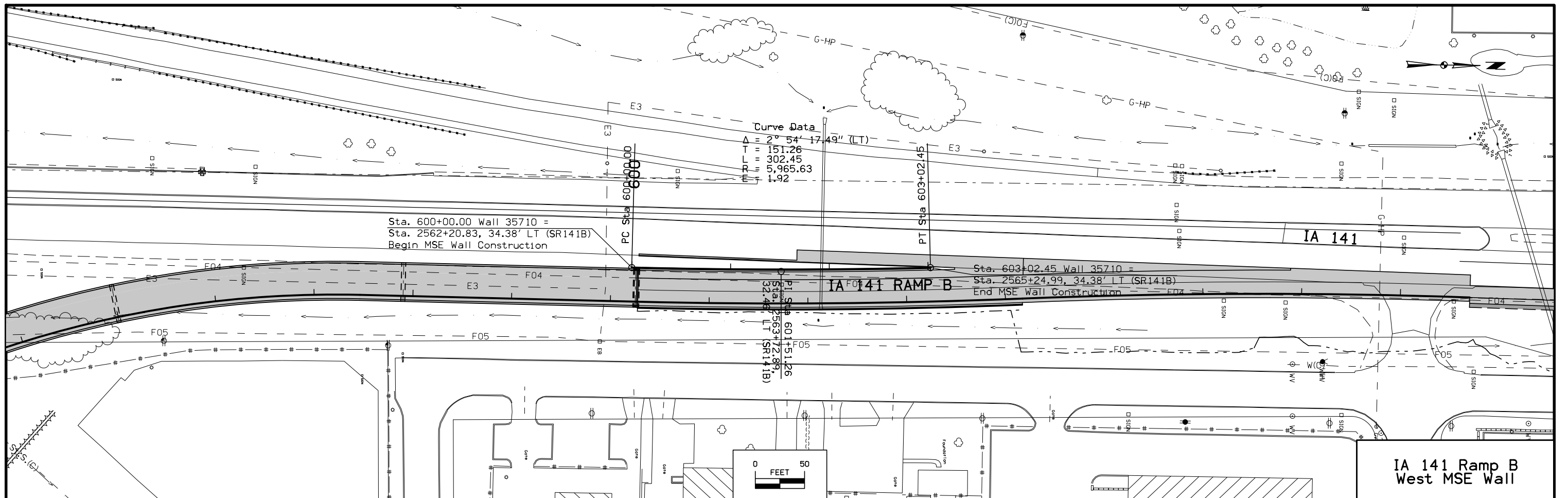
**Meredith Ramp B
West MSE Wall**





**IA 141 Ramp B
East MSE Wall**





Curve Data

Δ	= 2° 54' 17.49" (LT)
T	= 151.26
L	= 302.45
P	= 5,965.63
E	= 1.92

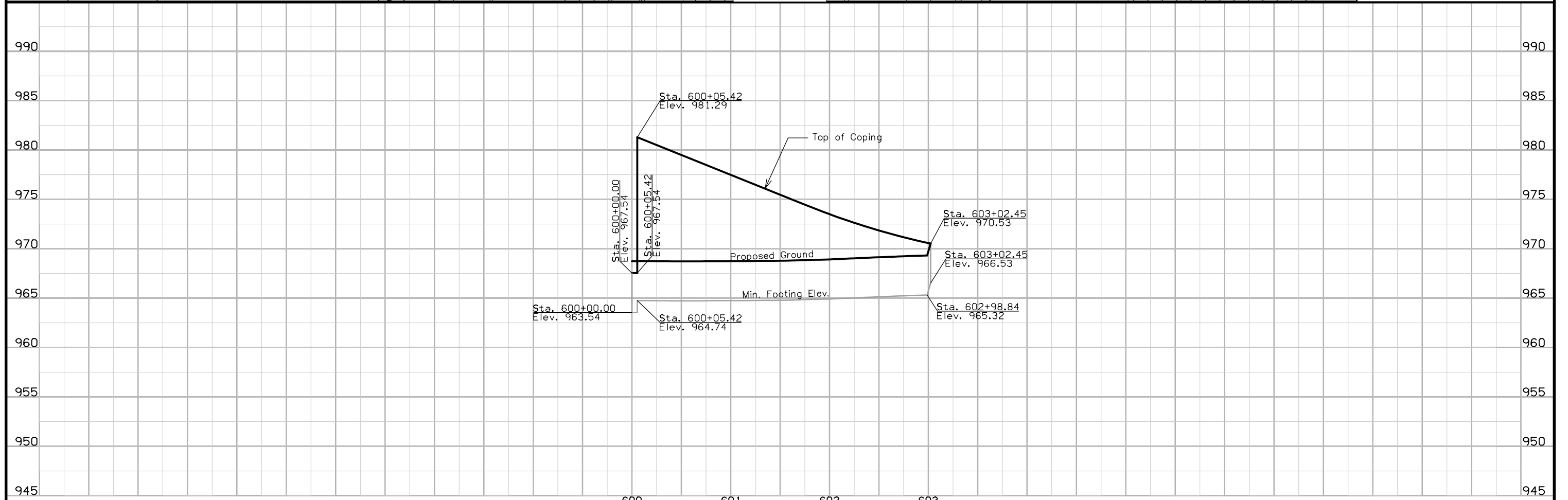
Sta. 600+00.00 Wall 35710 =
Sta. 2562+20.83, 34.38' LT (SR141B)
Begin MSE Wall Construction

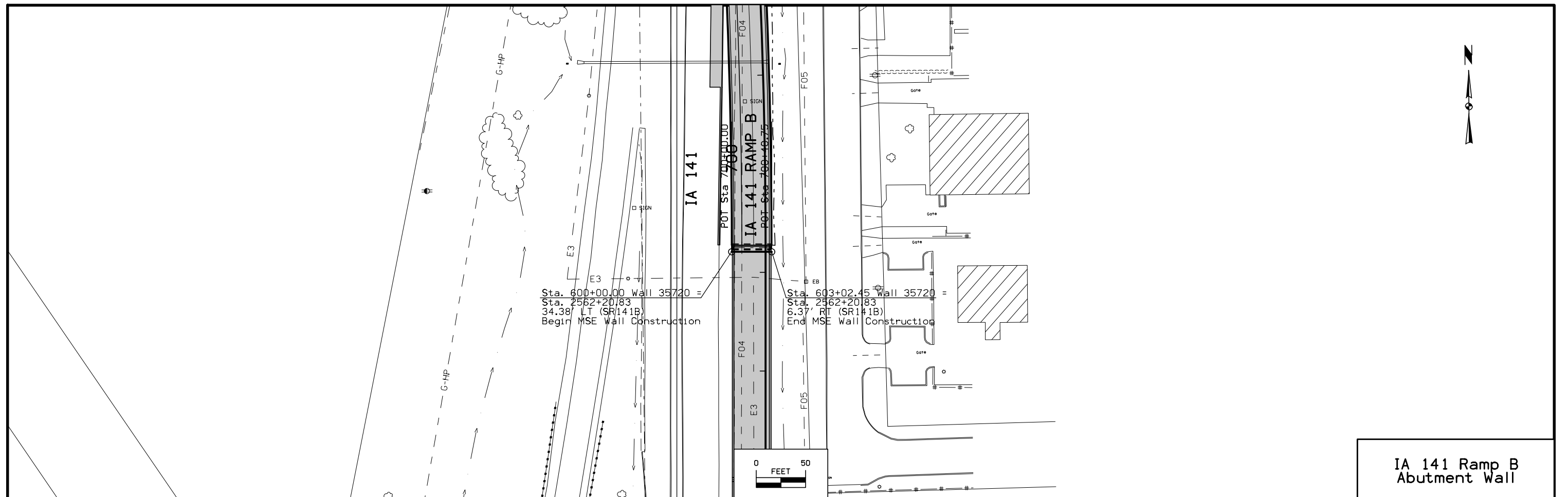
Sta. 603+02.45 Wall 35710 =
Sta. 2565+24.99, 34.38' LT (SR141B)
End MSE Wall Construction

PI Sta 601+51.26
Sta. 2563+72.89
LT (SR141B)

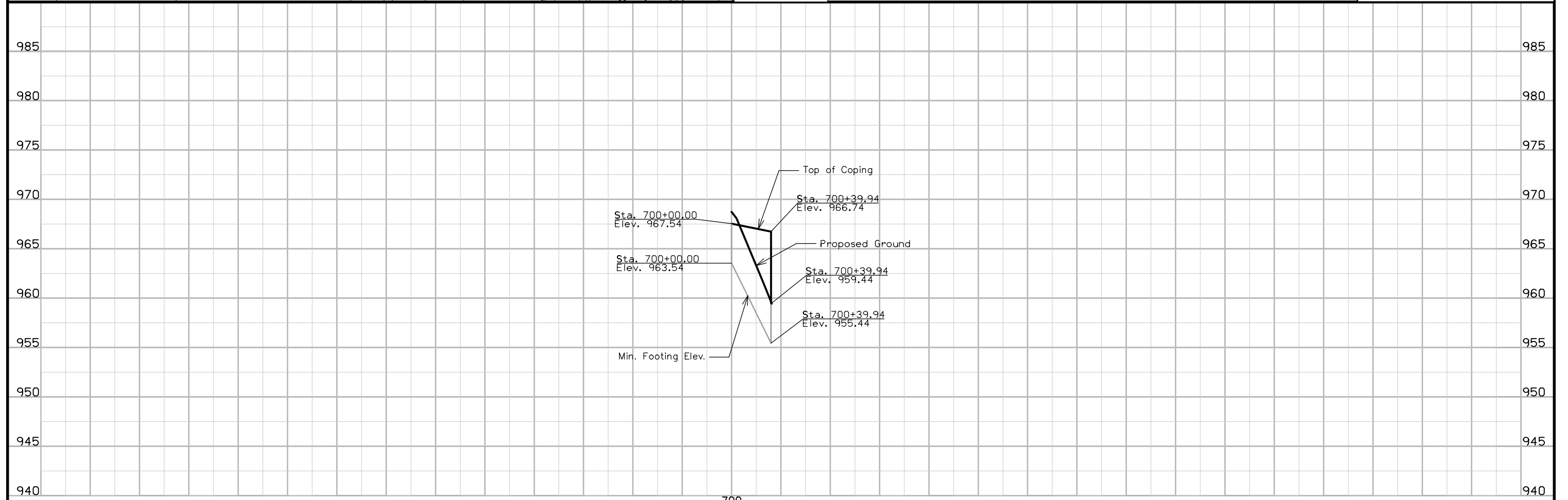


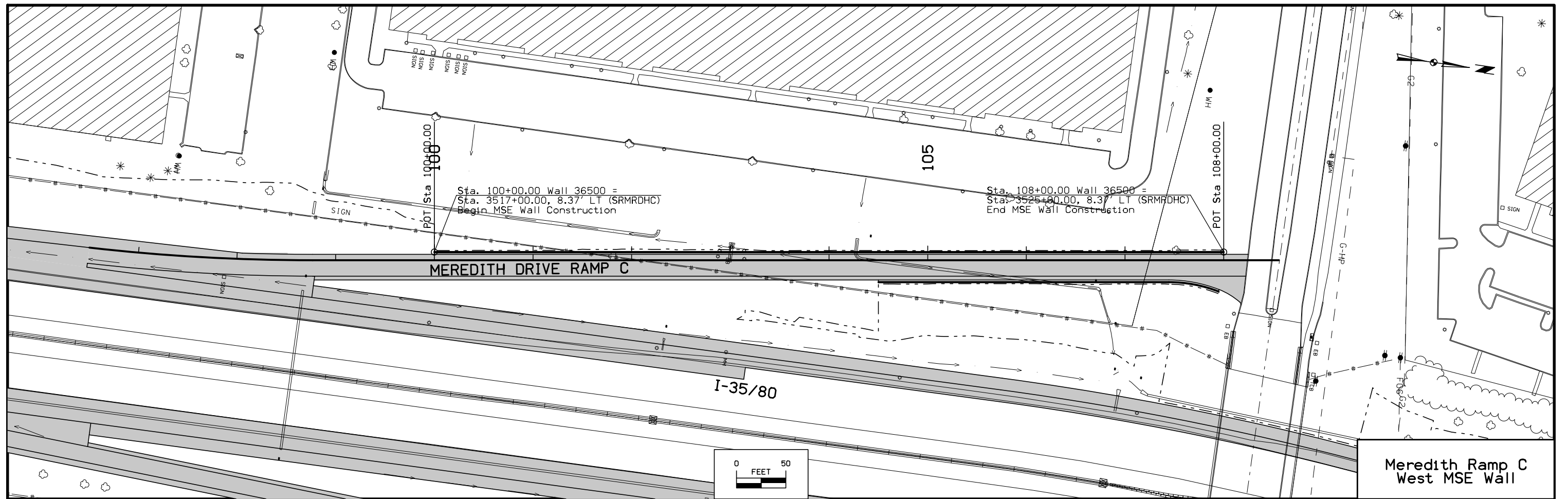
IA 141 Ramp B
West MSE Wall



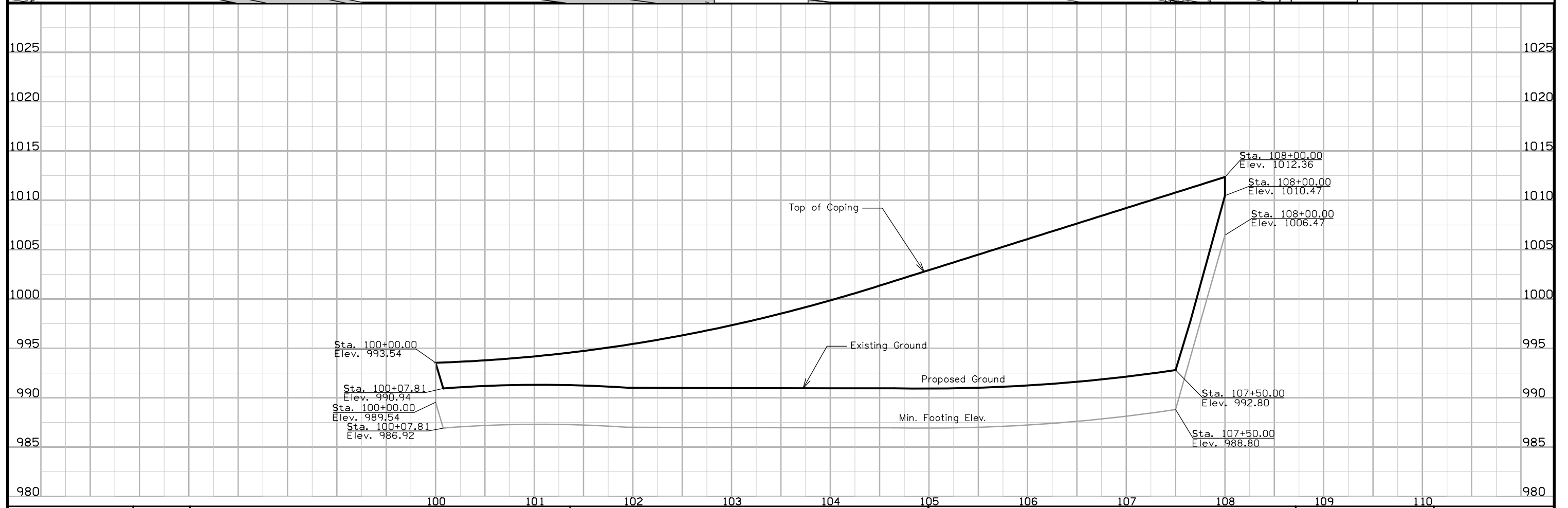


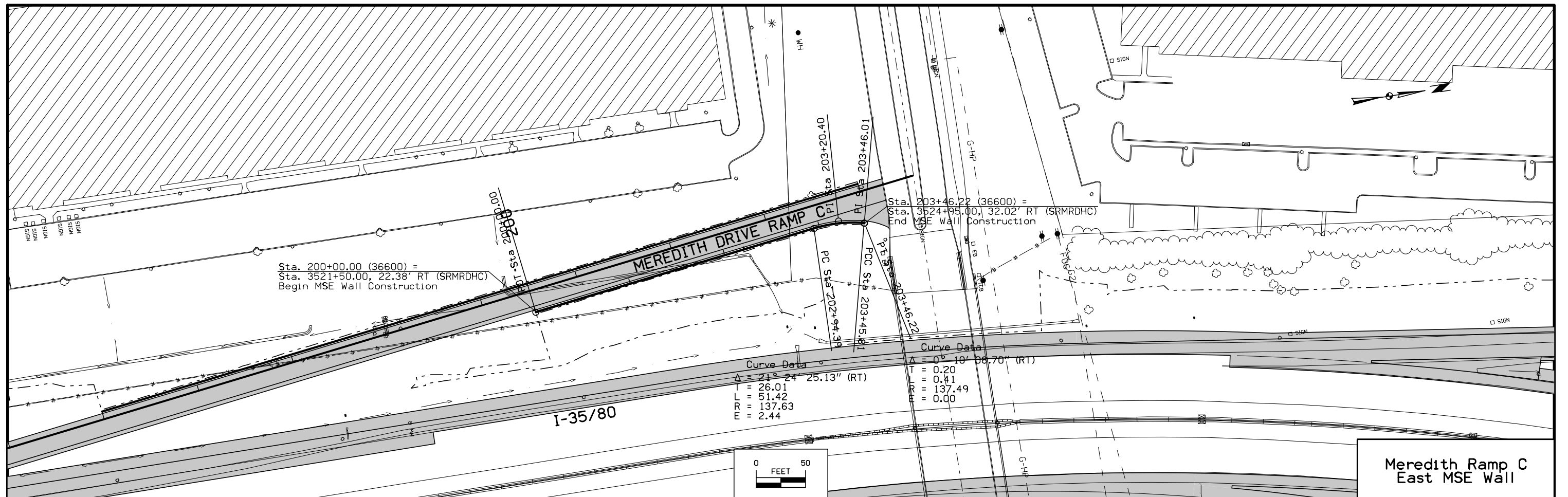
IA 141 Ramp B
Abutment Wall



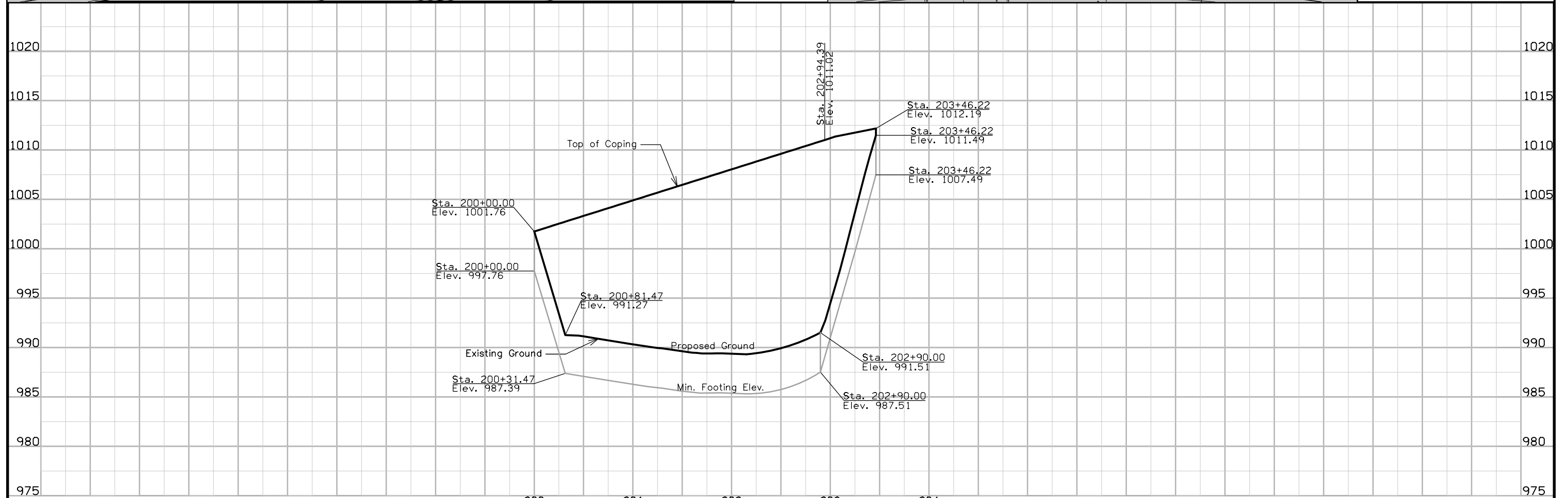


Meredith Ramp C
West MSE Wall





Meredith Ramp C
East MSE Wall



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)

- TS ----- Topsoil (Class 10)
- SLOPE DRESSING ----- 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
- B&W LS ----- Broken and Weathered Rock
- ROCK ----- Solid Rock
- BLDRS ----- Boulders

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

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

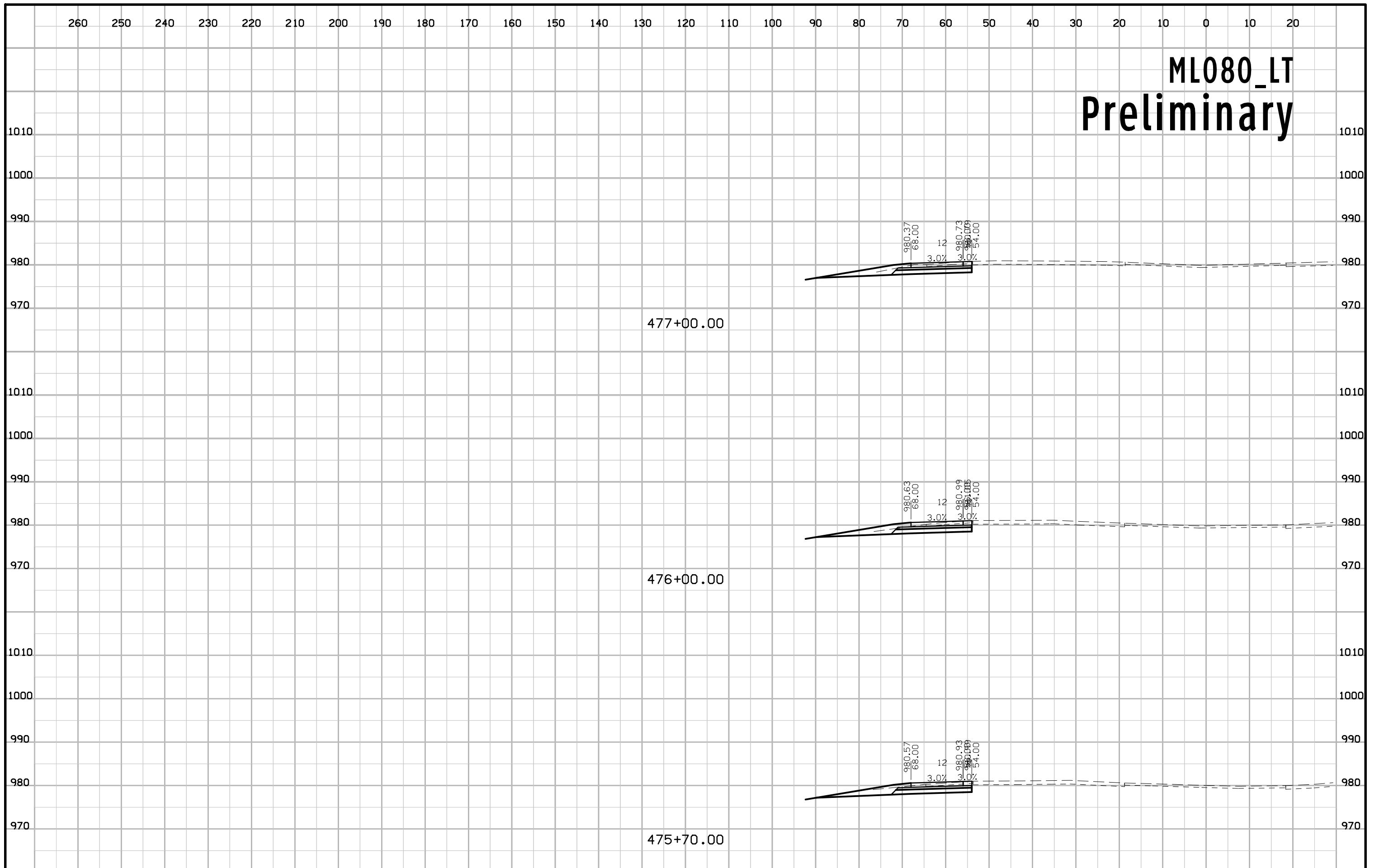
SYMBOL LEGEND OF CROSS SECTION SHEETS

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

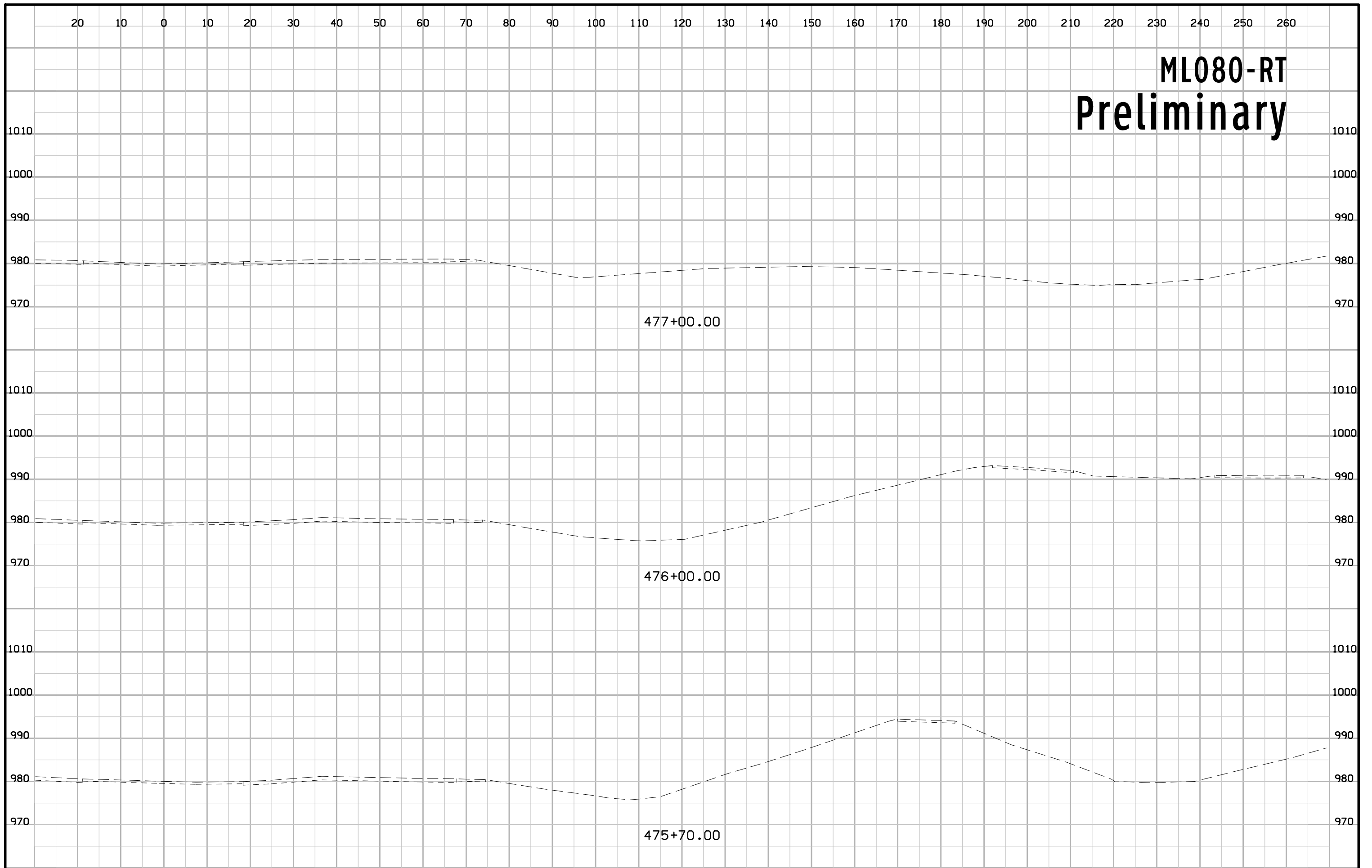
**CROSS SECTION
LEGEND AND SYMBOL
INFORMATION SHEET**

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

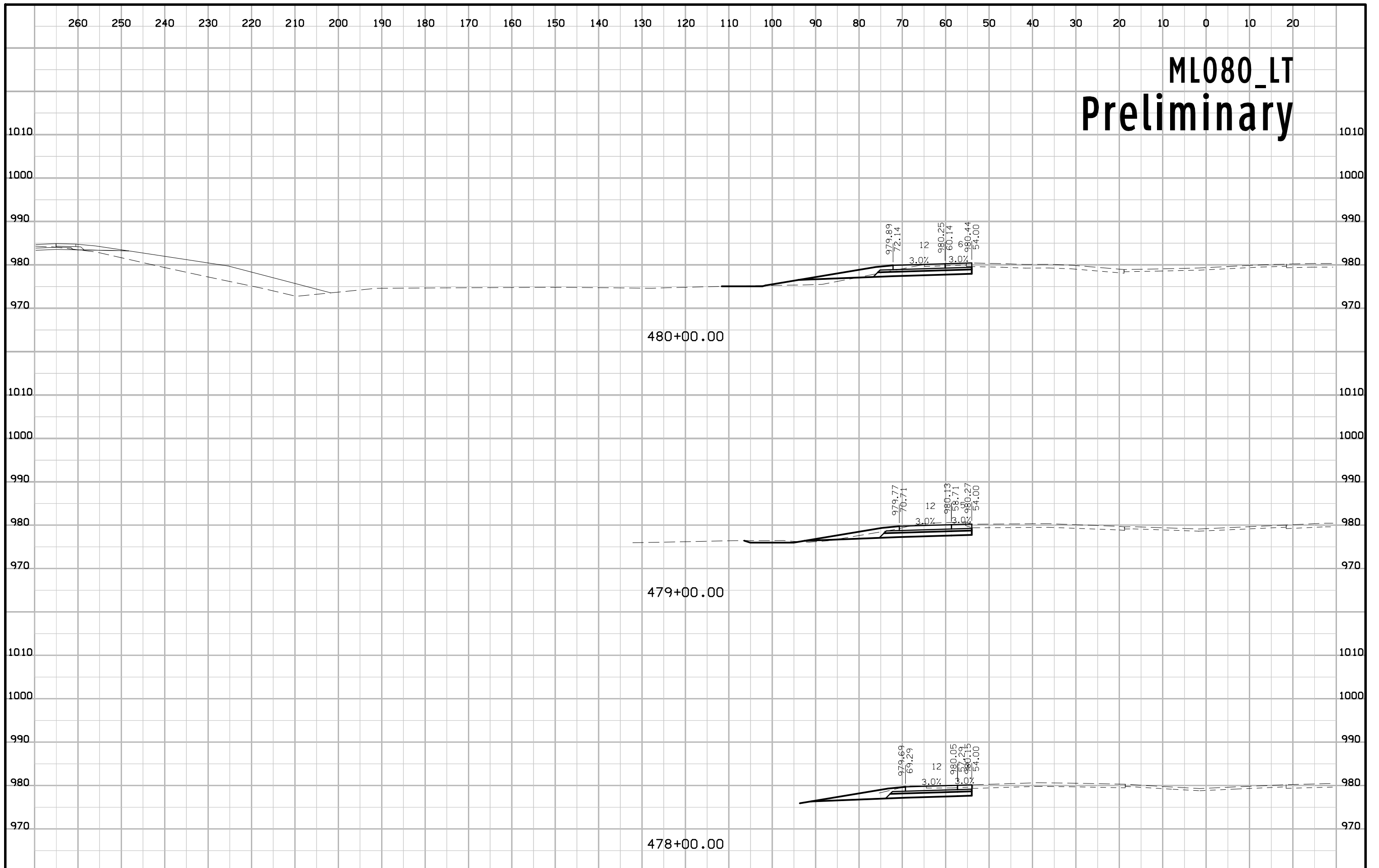
ML080_LT Preliminary



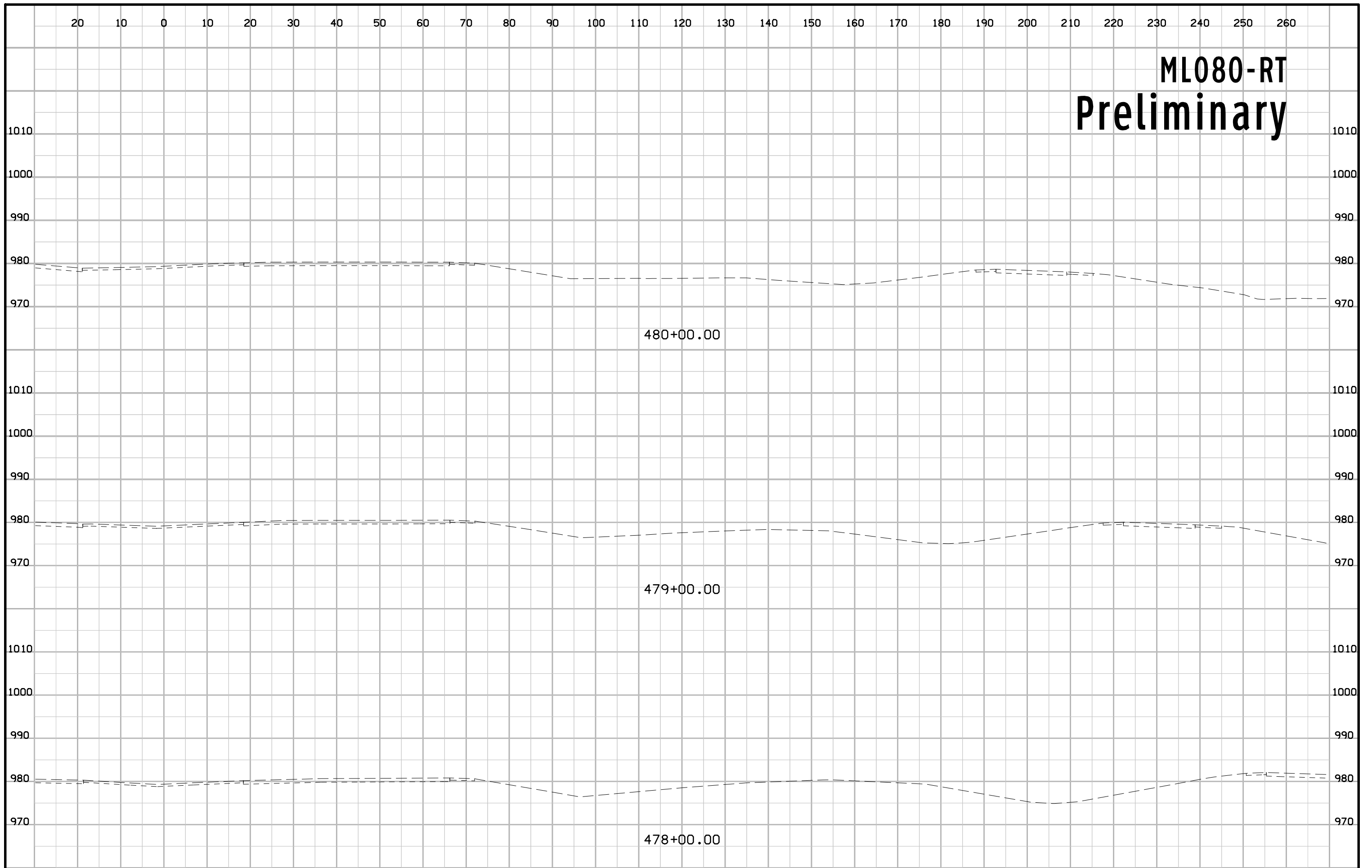
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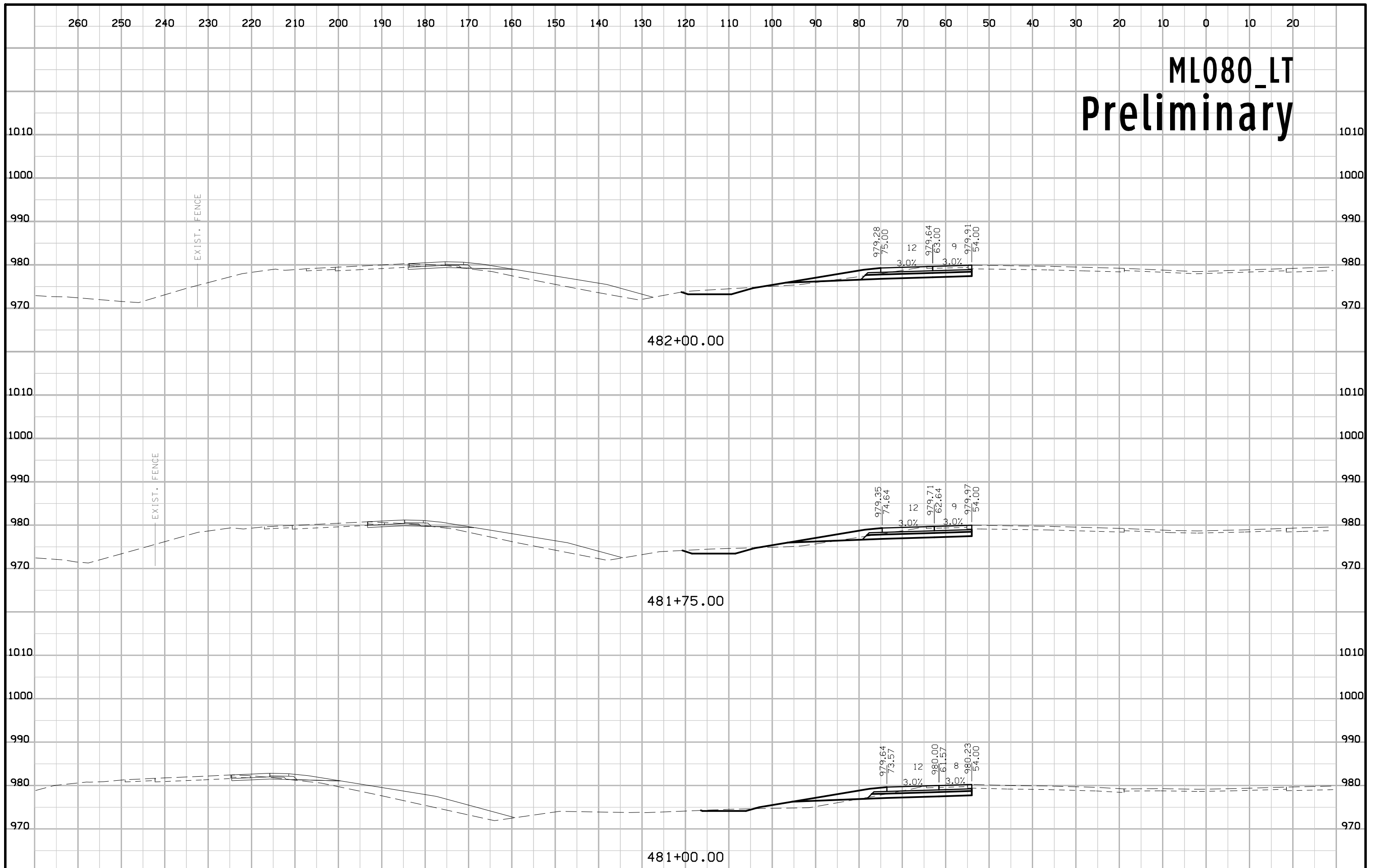
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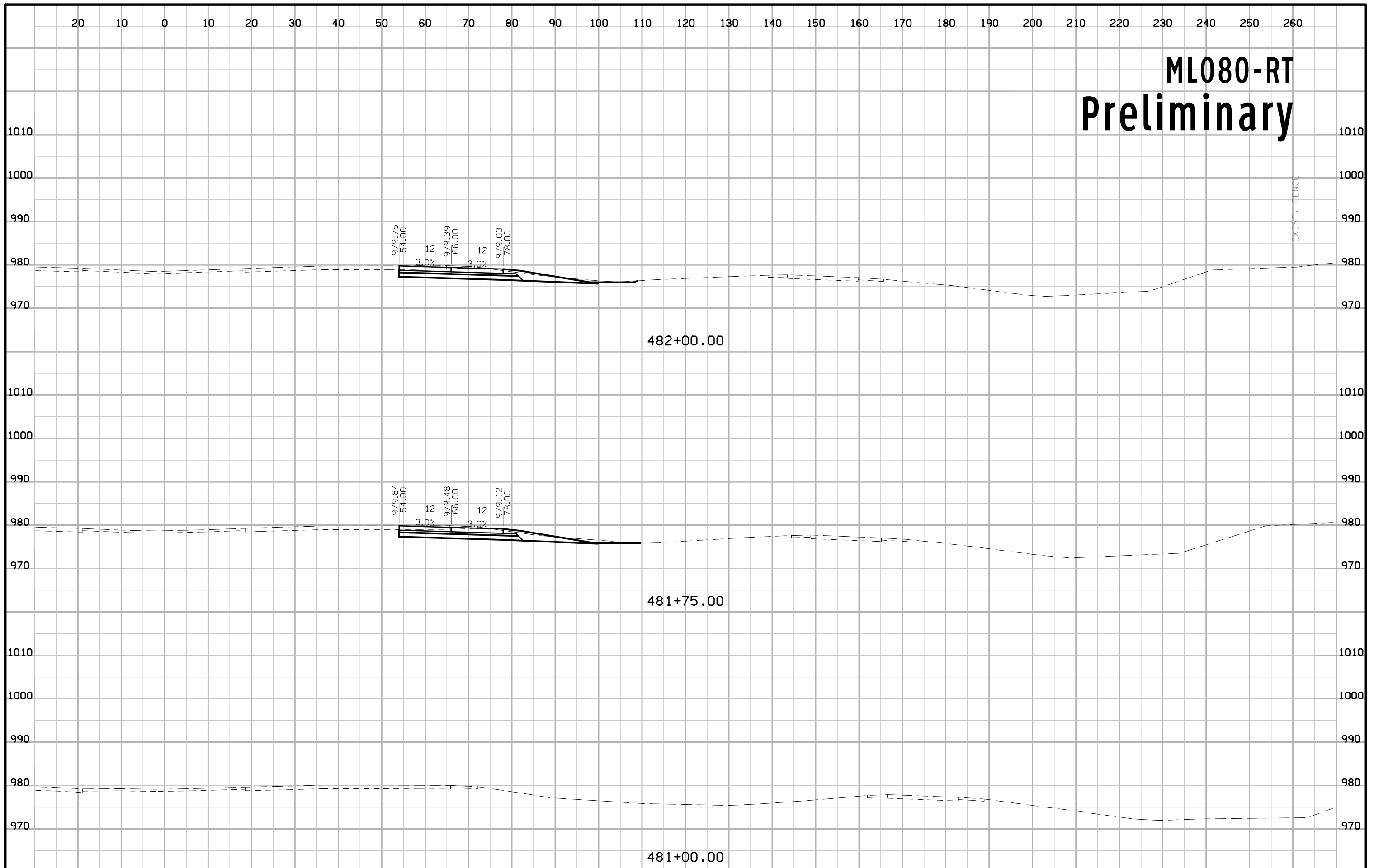
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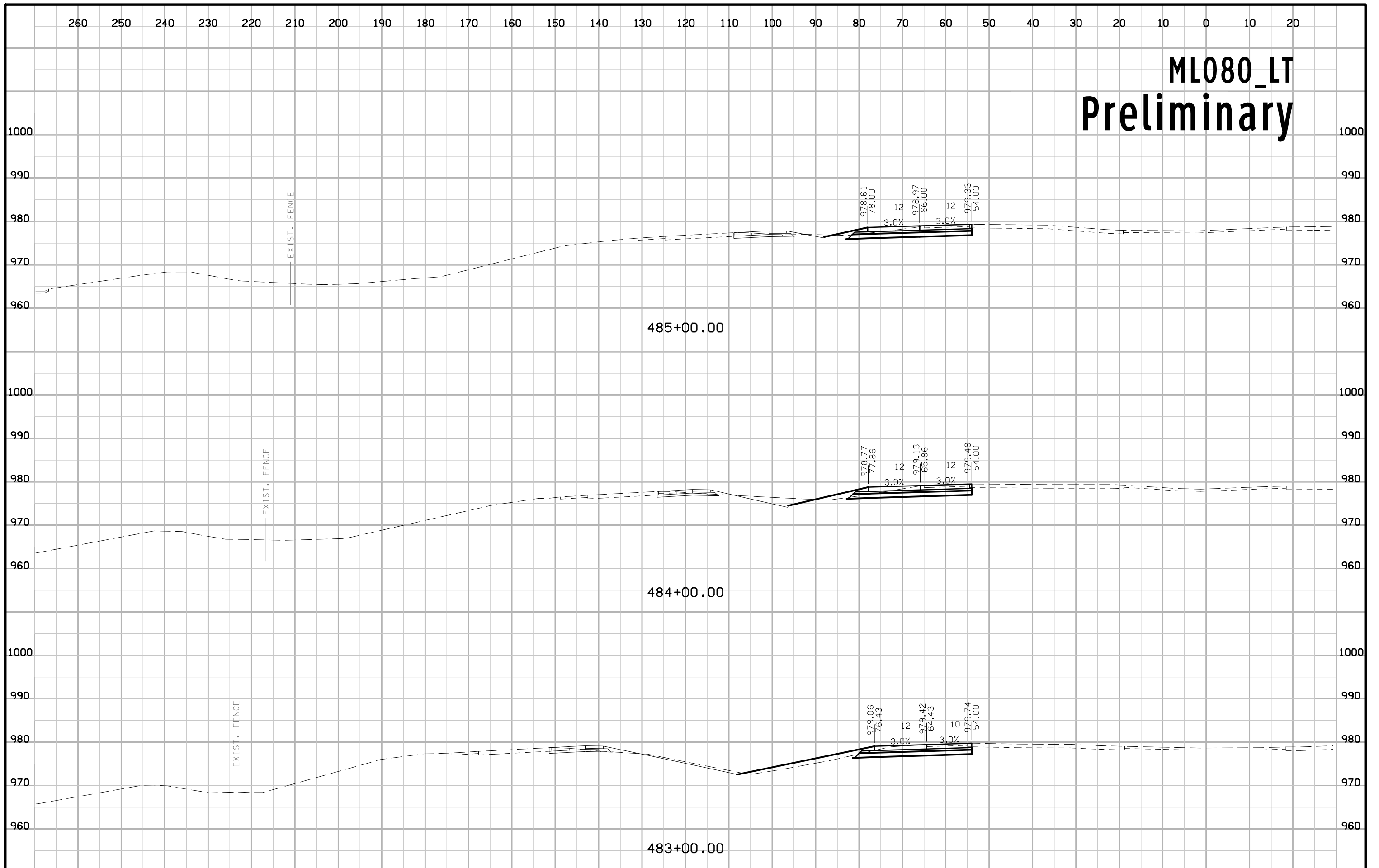
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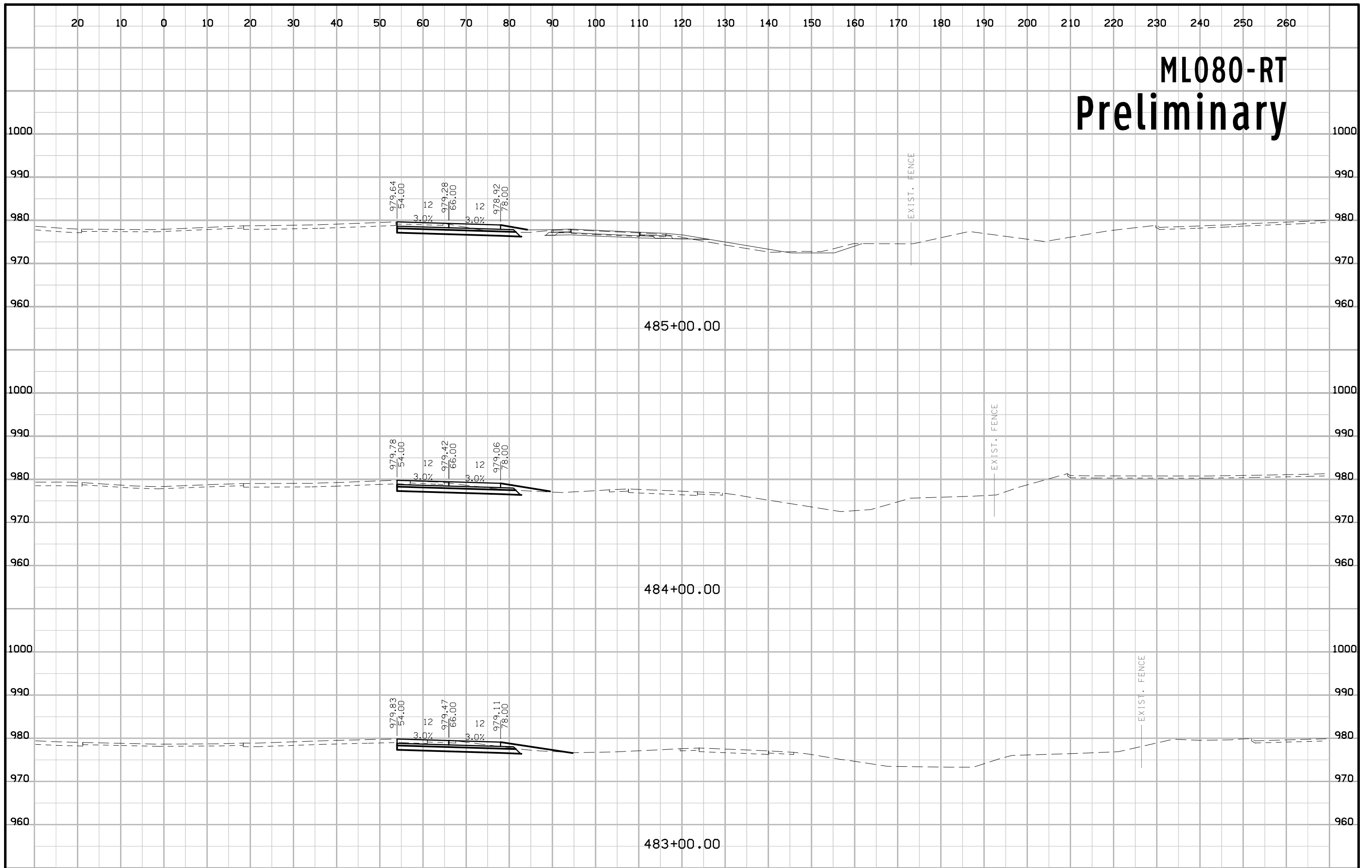
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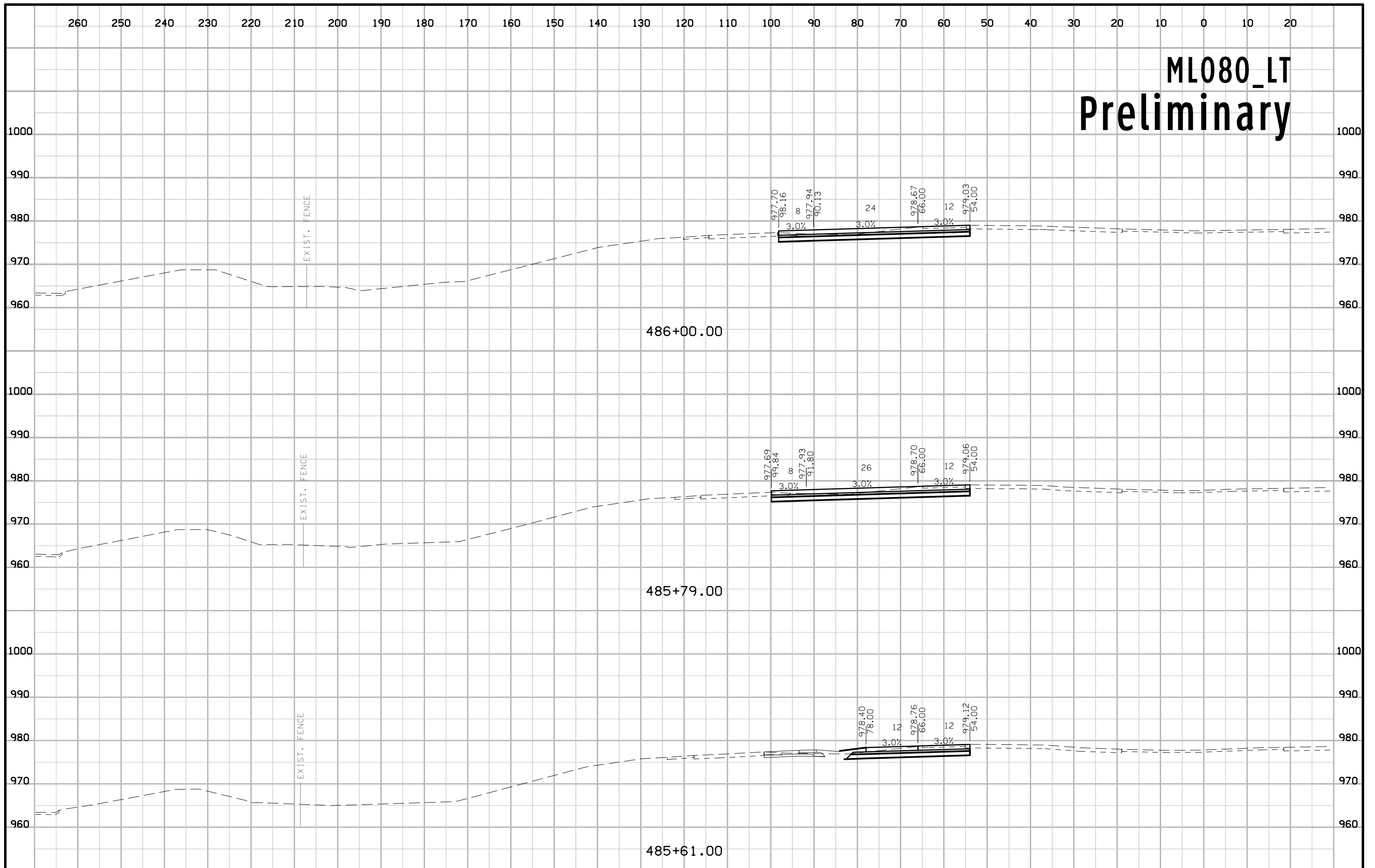
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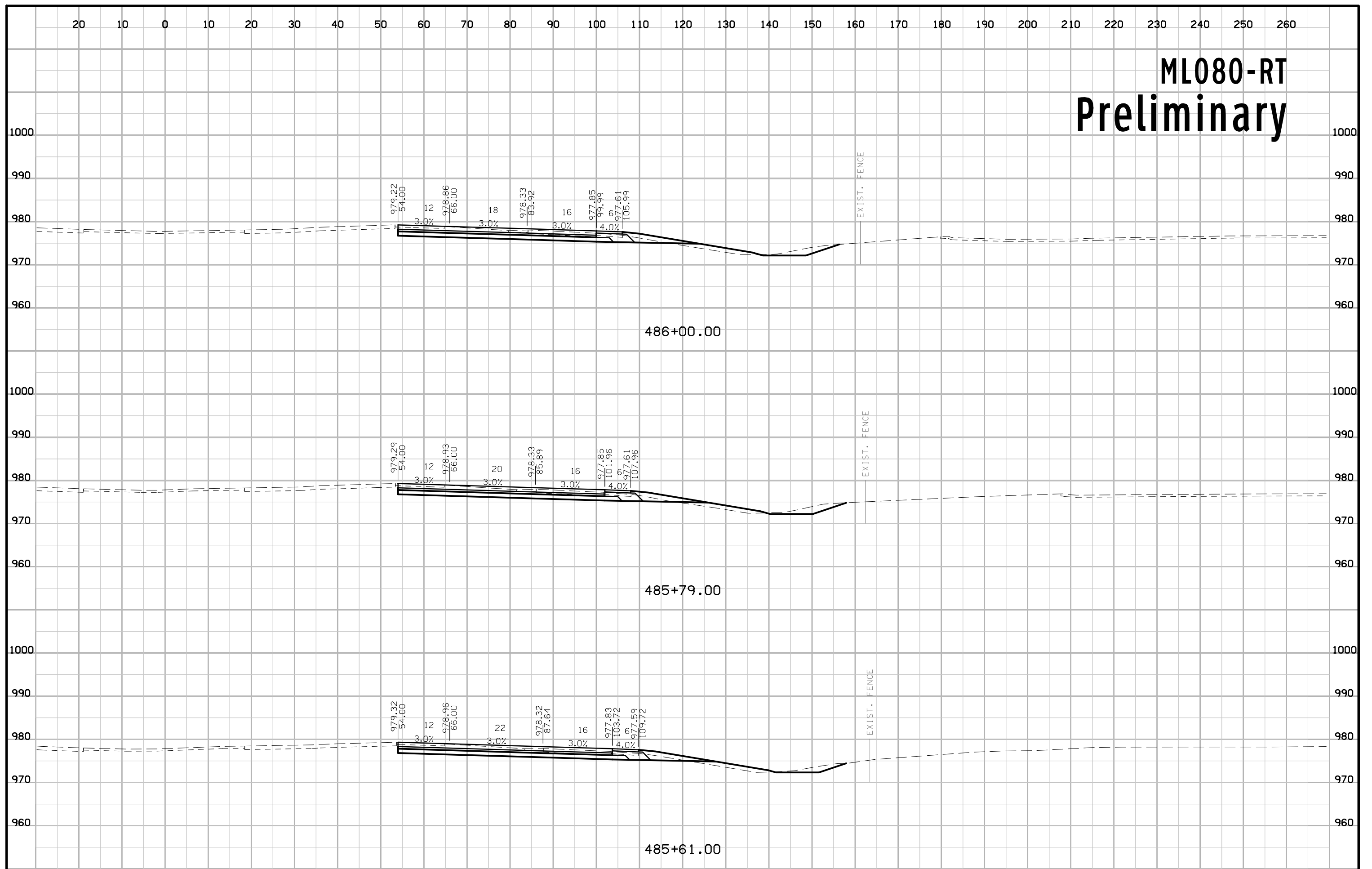
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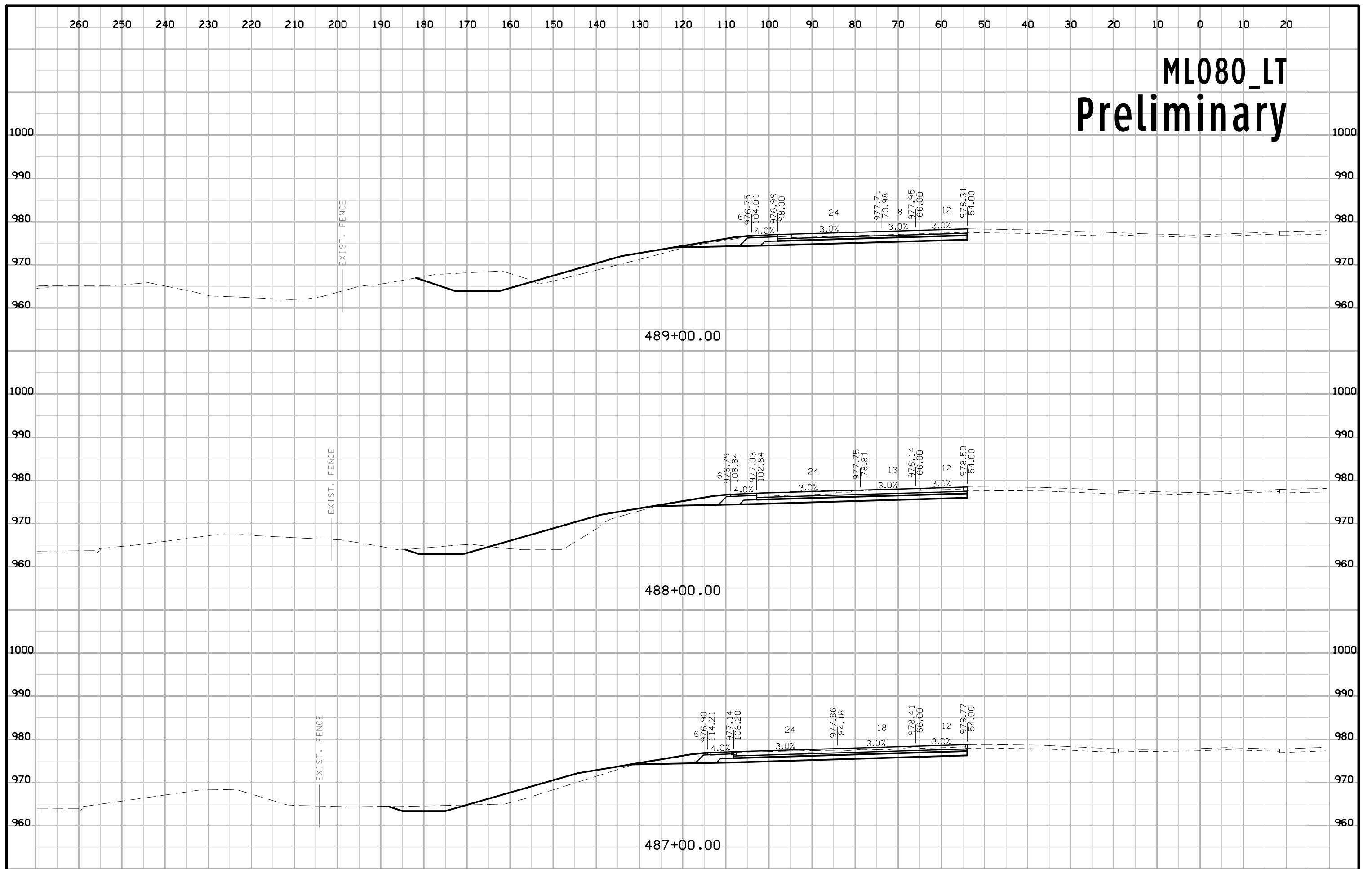
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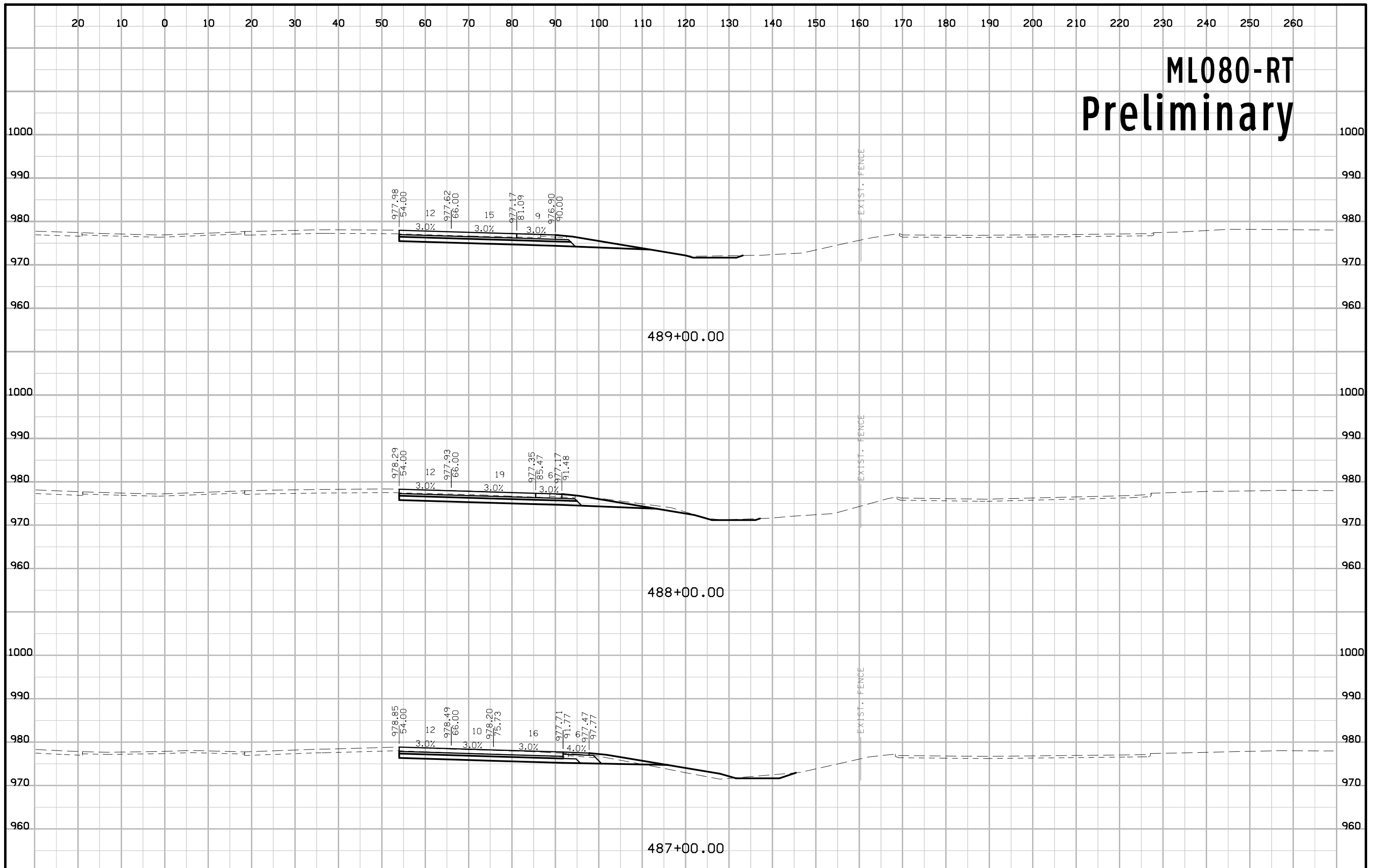
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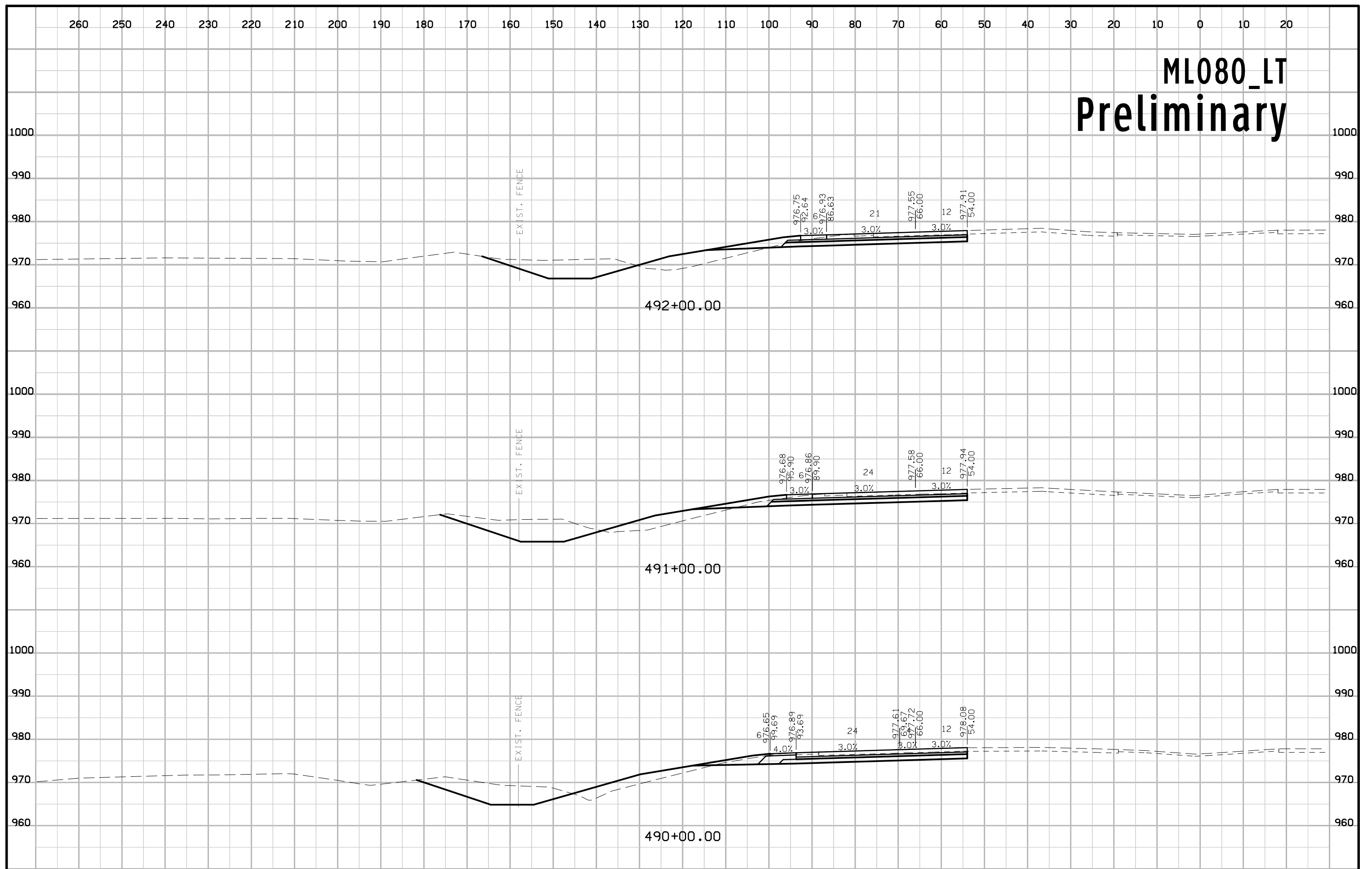
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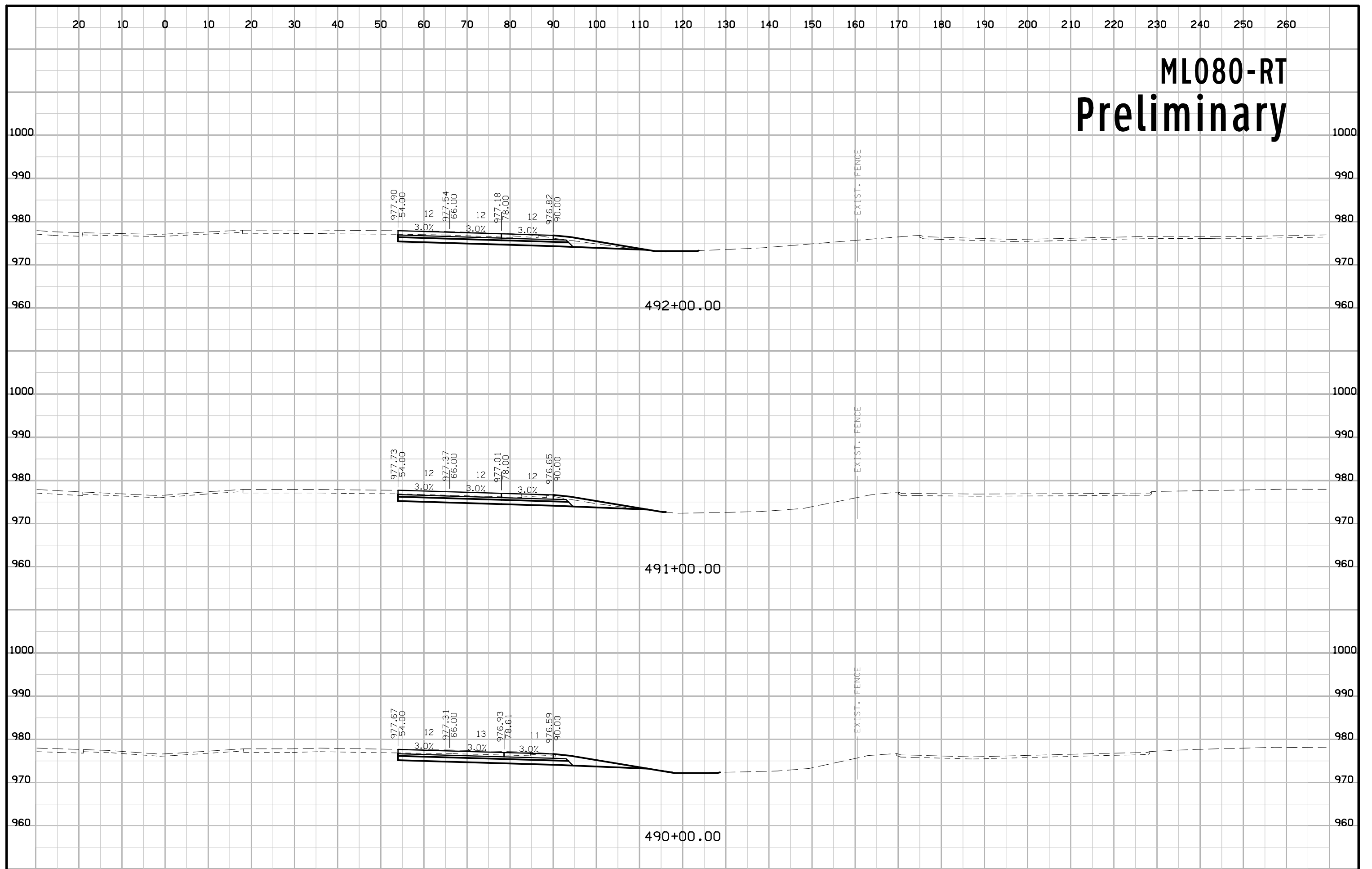
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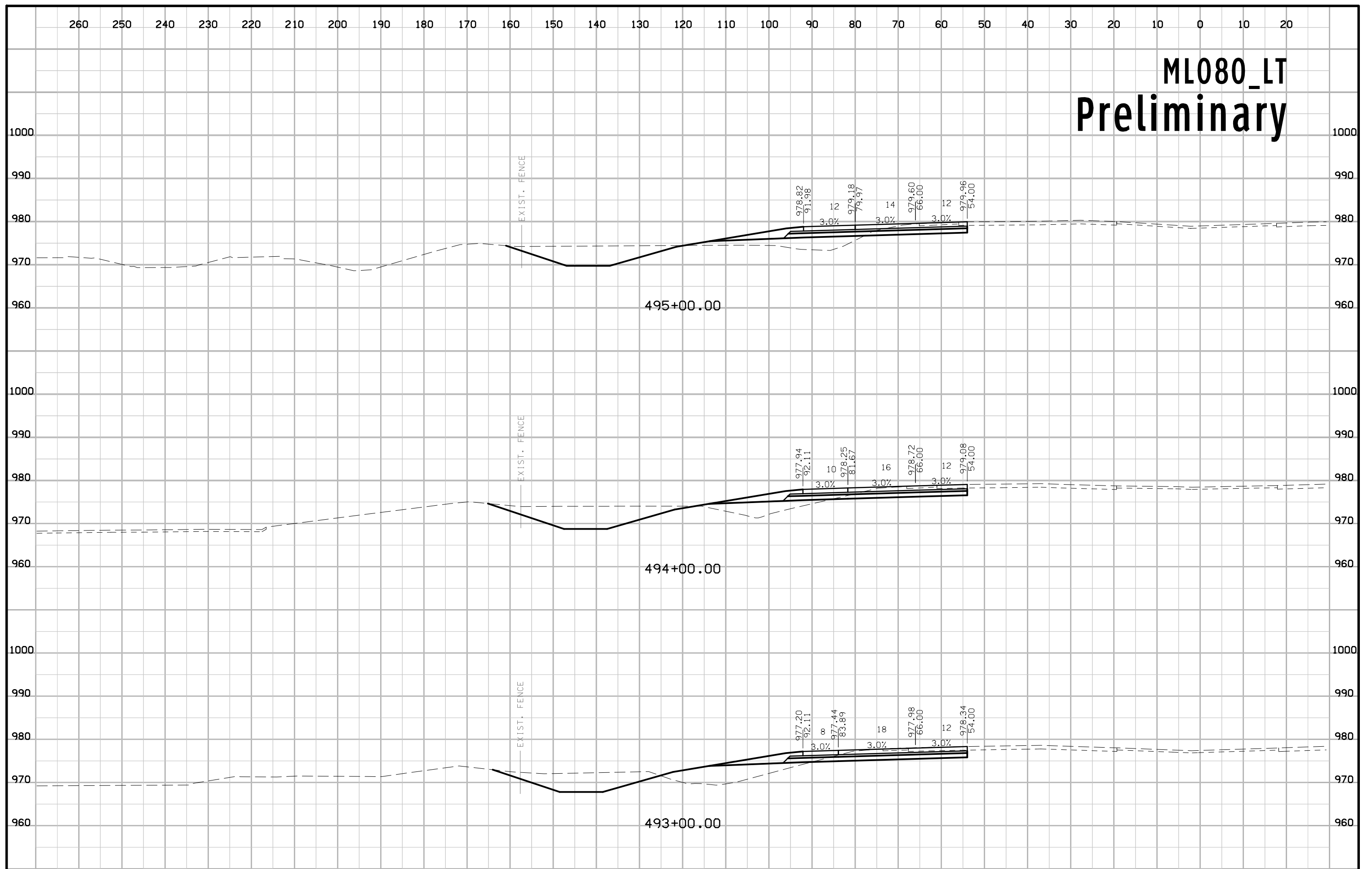
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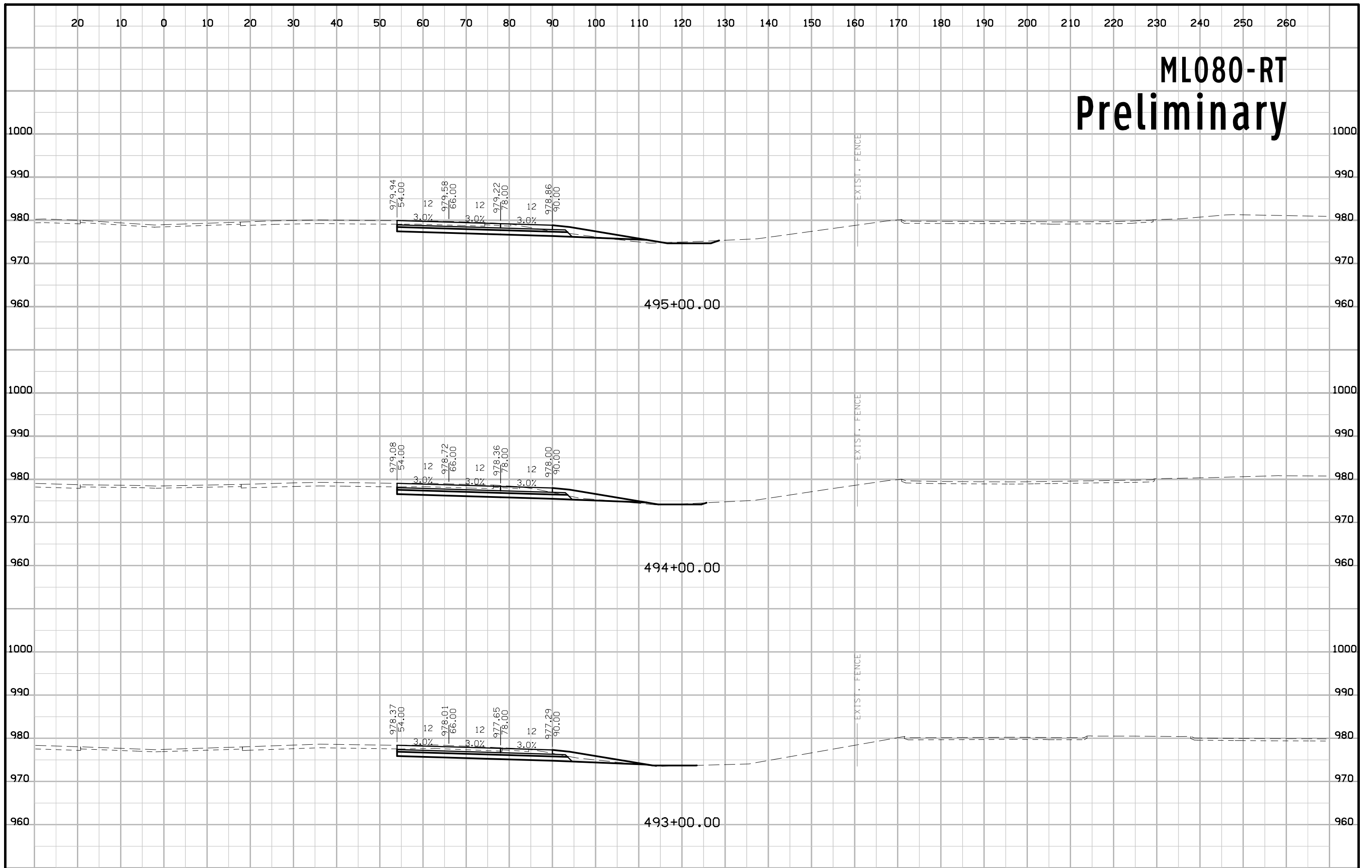
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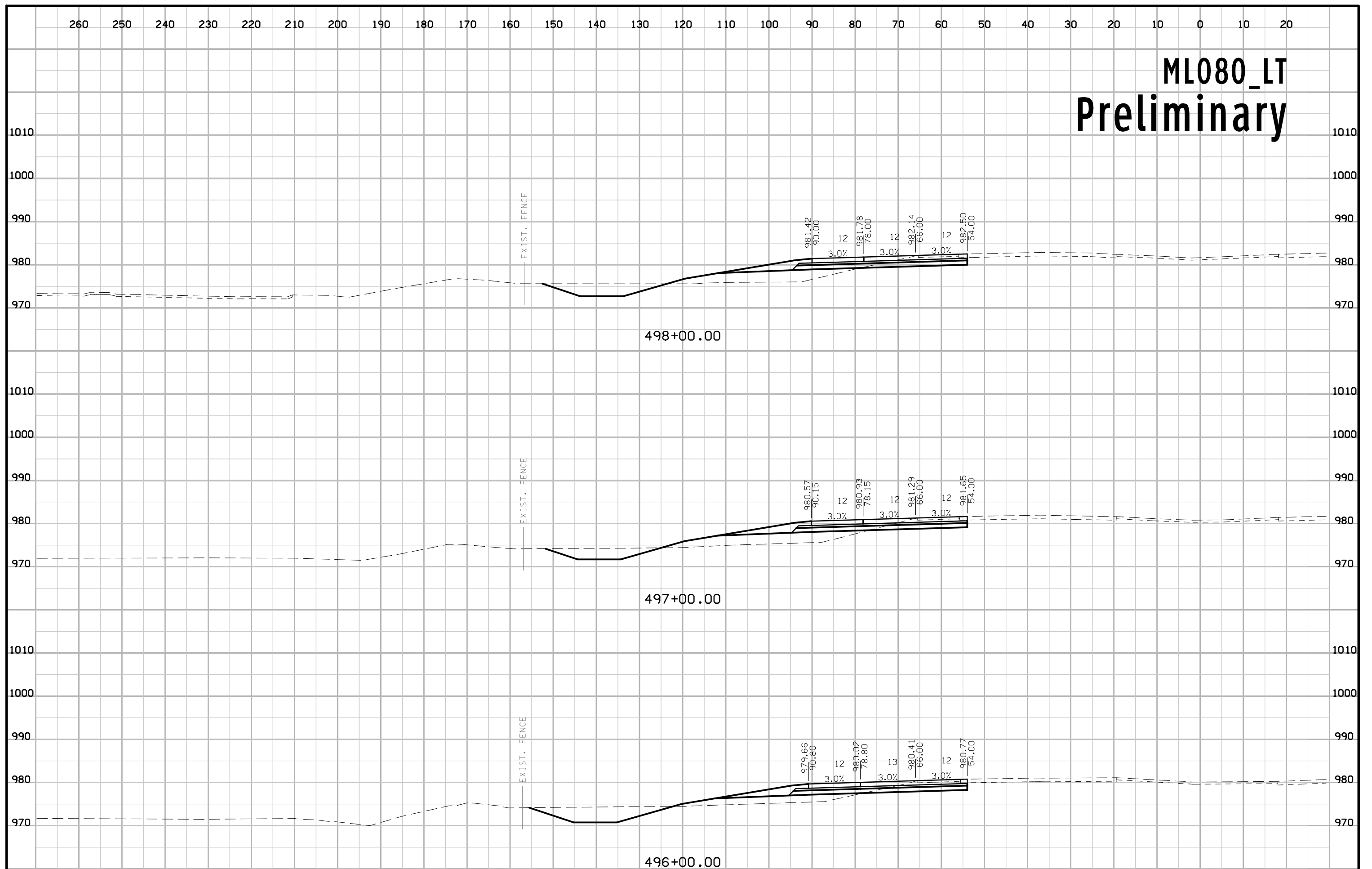
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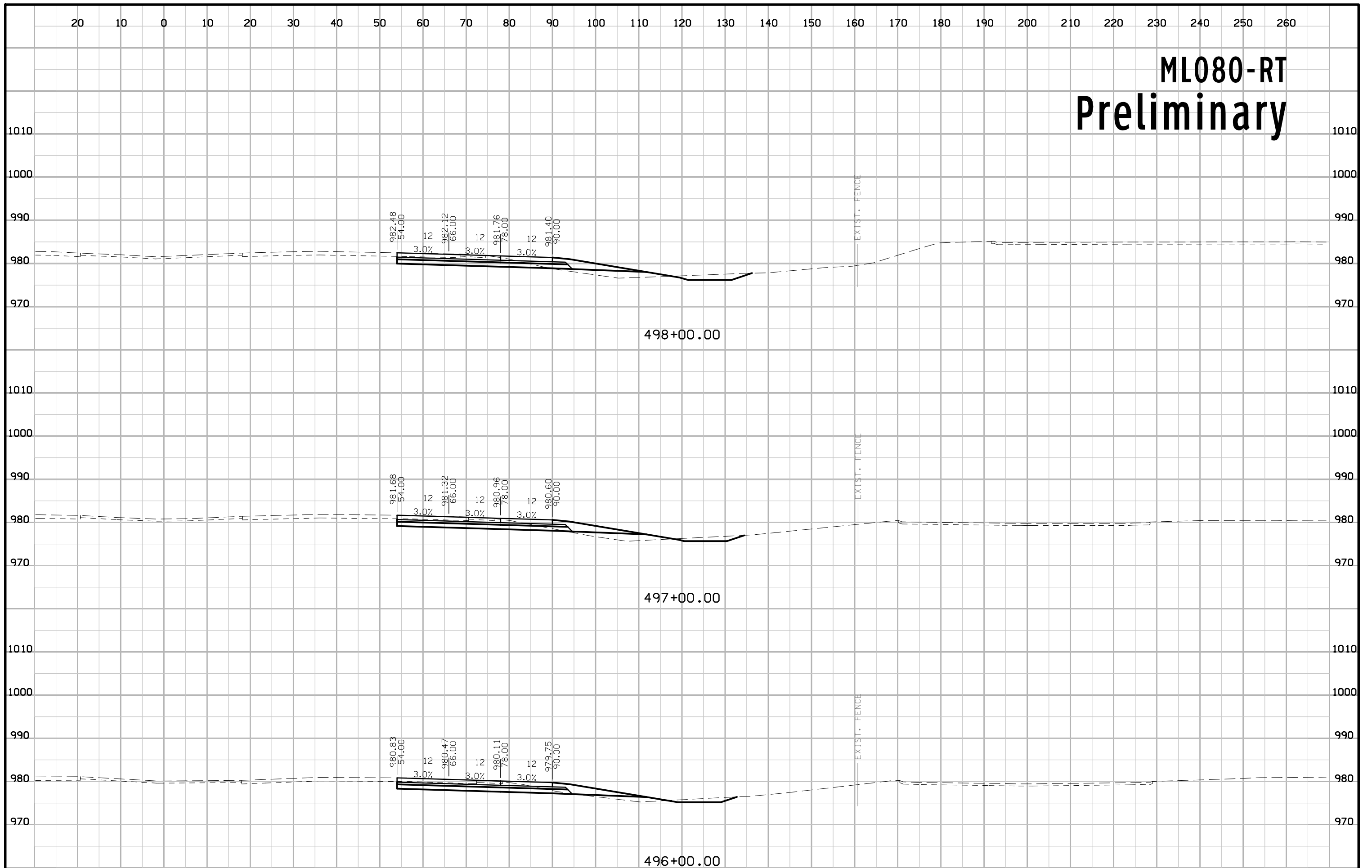
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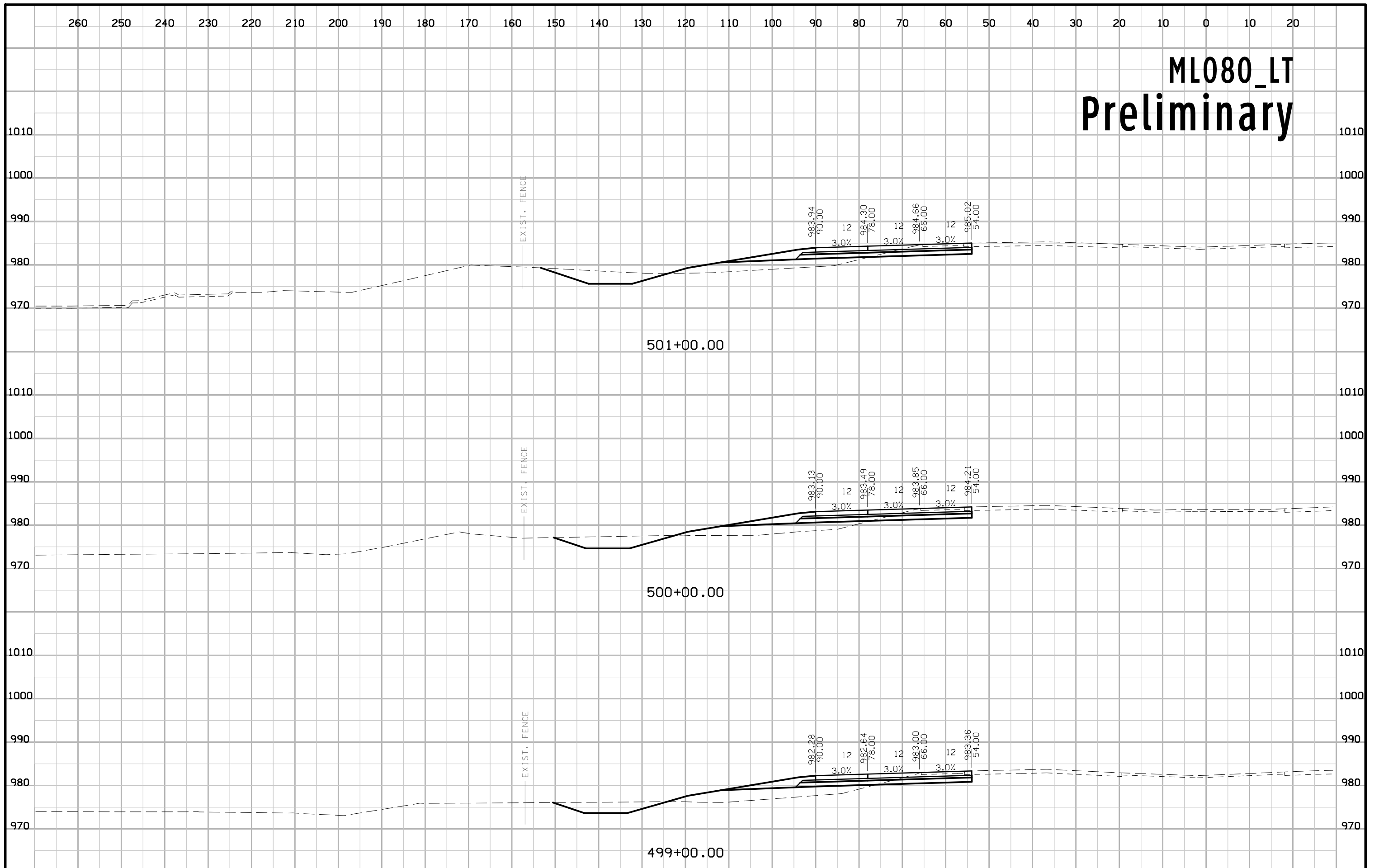
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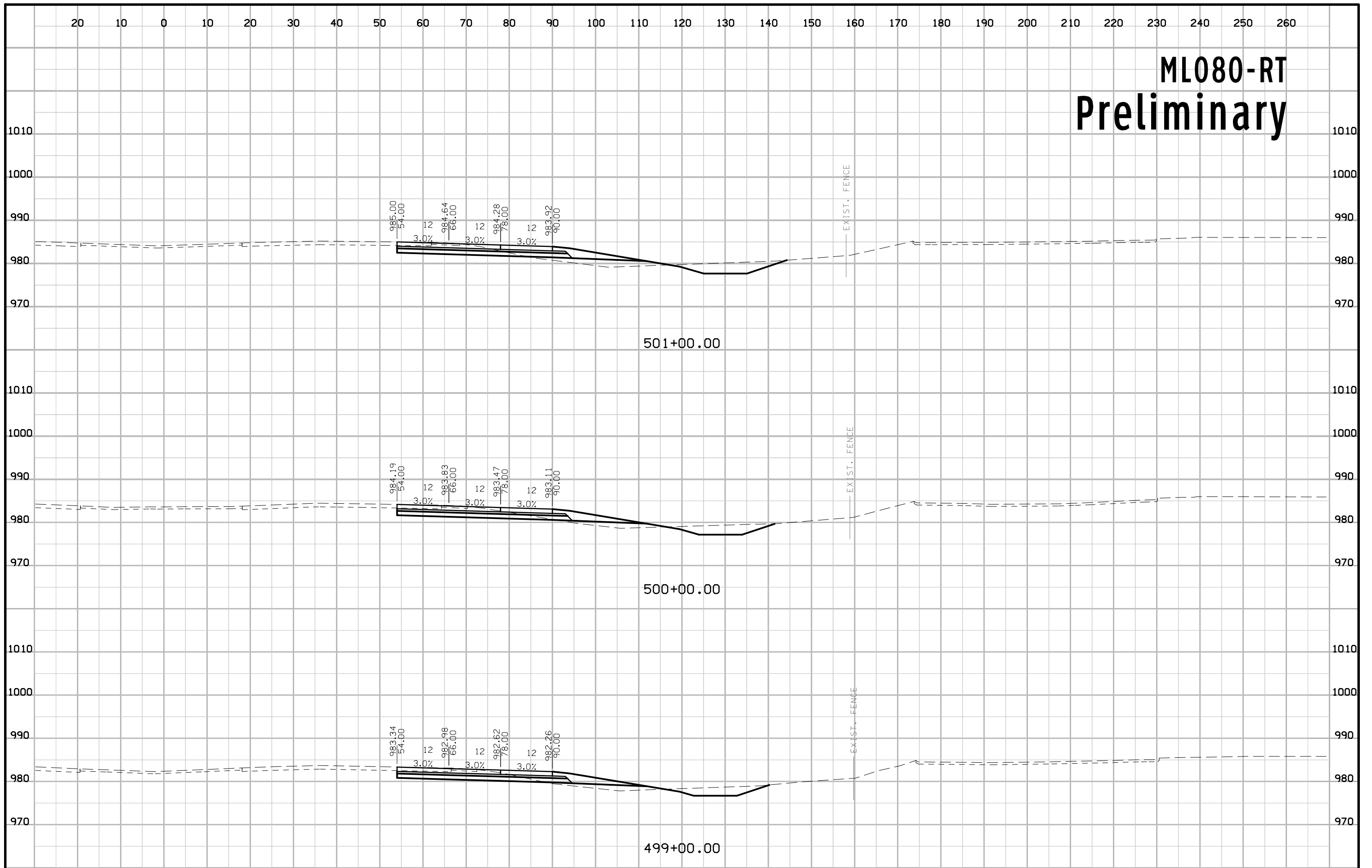
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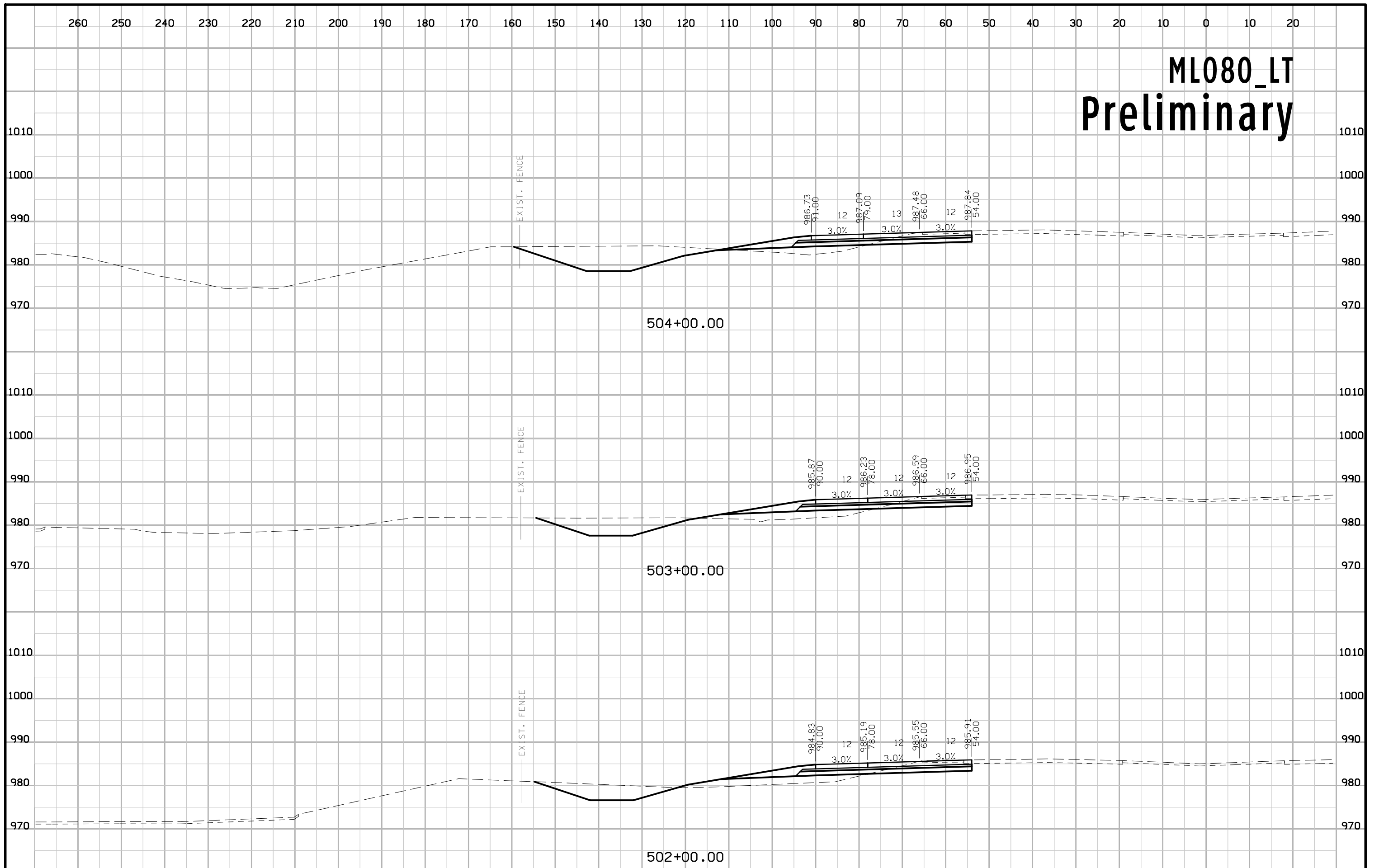
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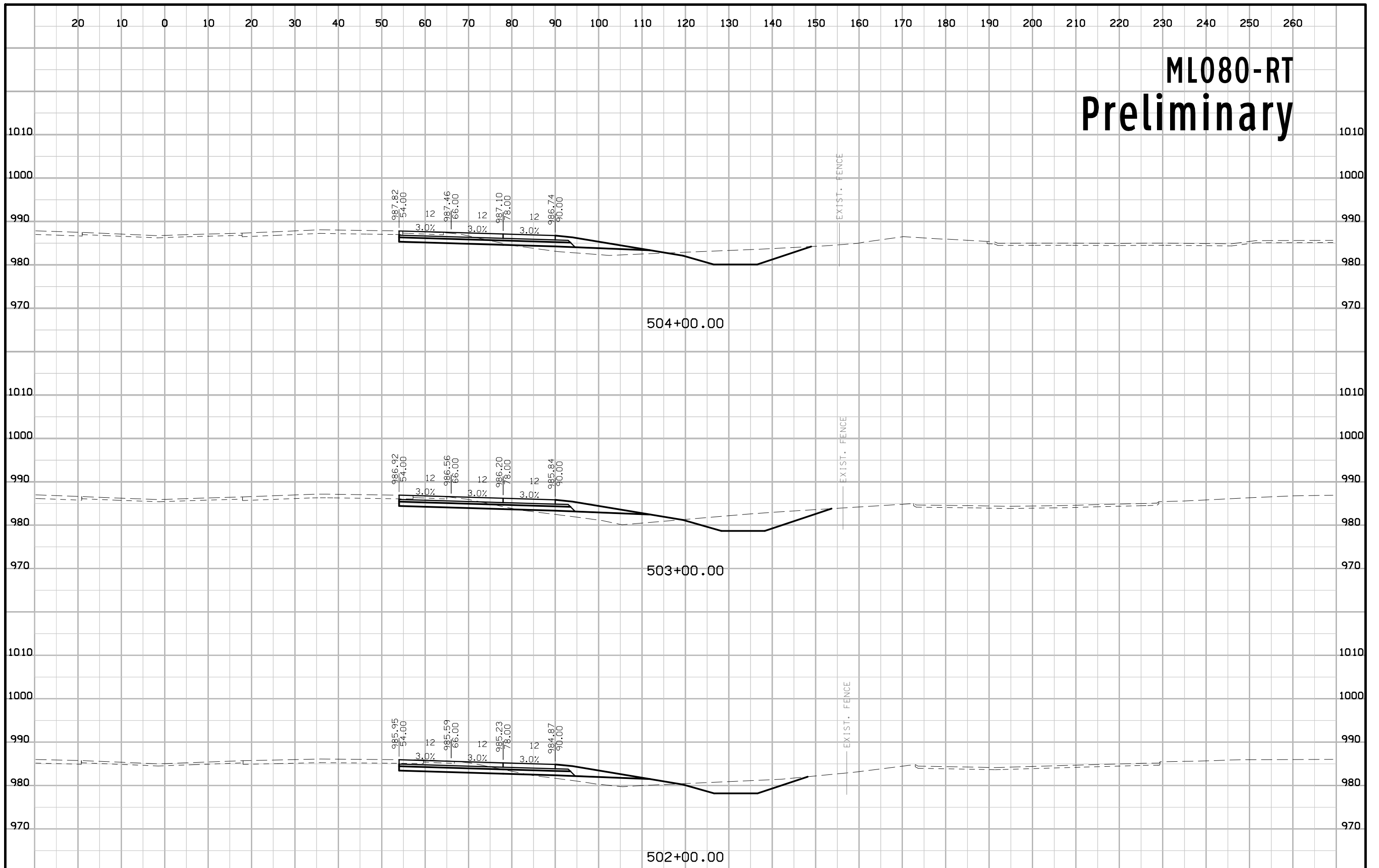
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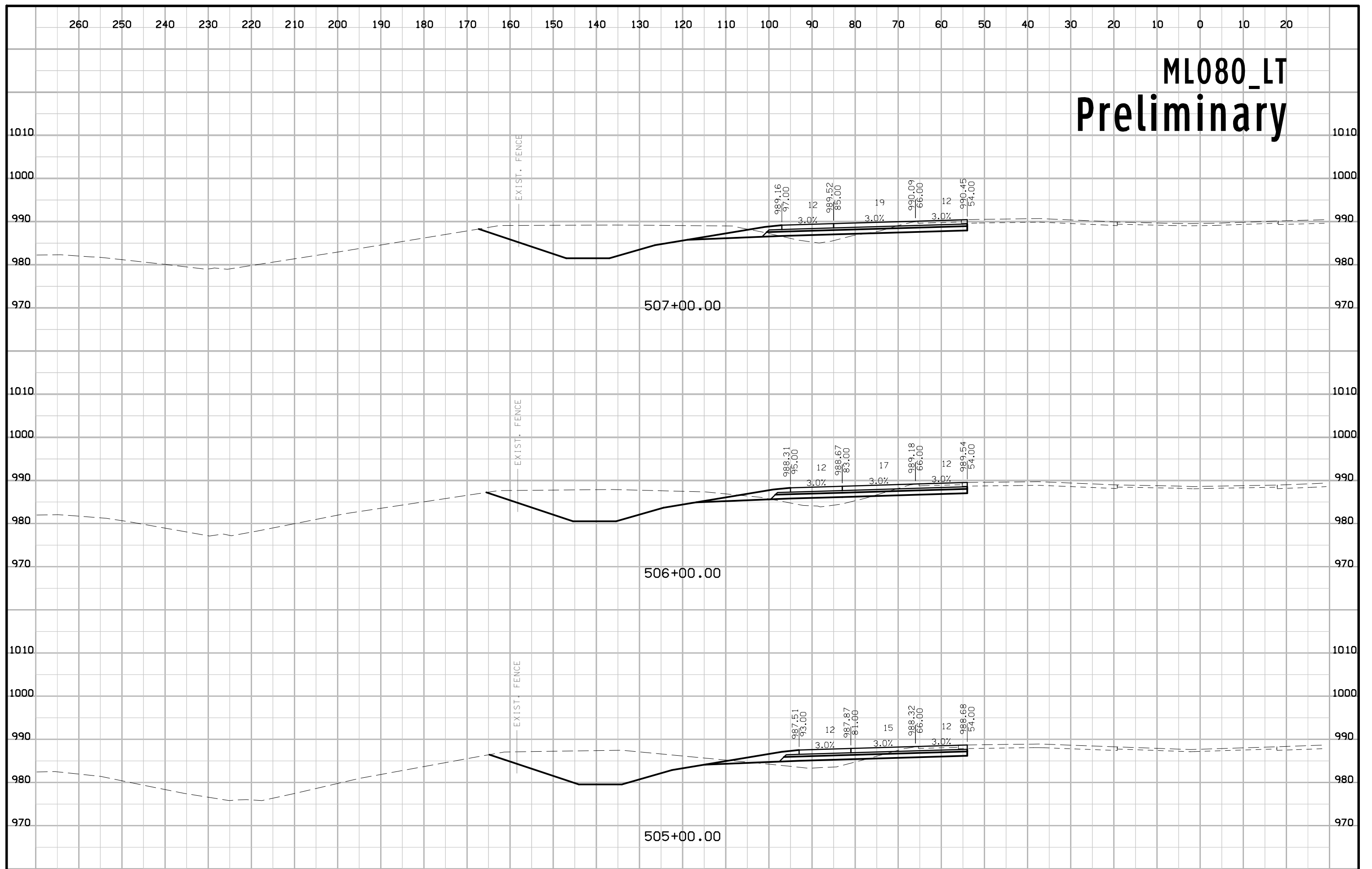
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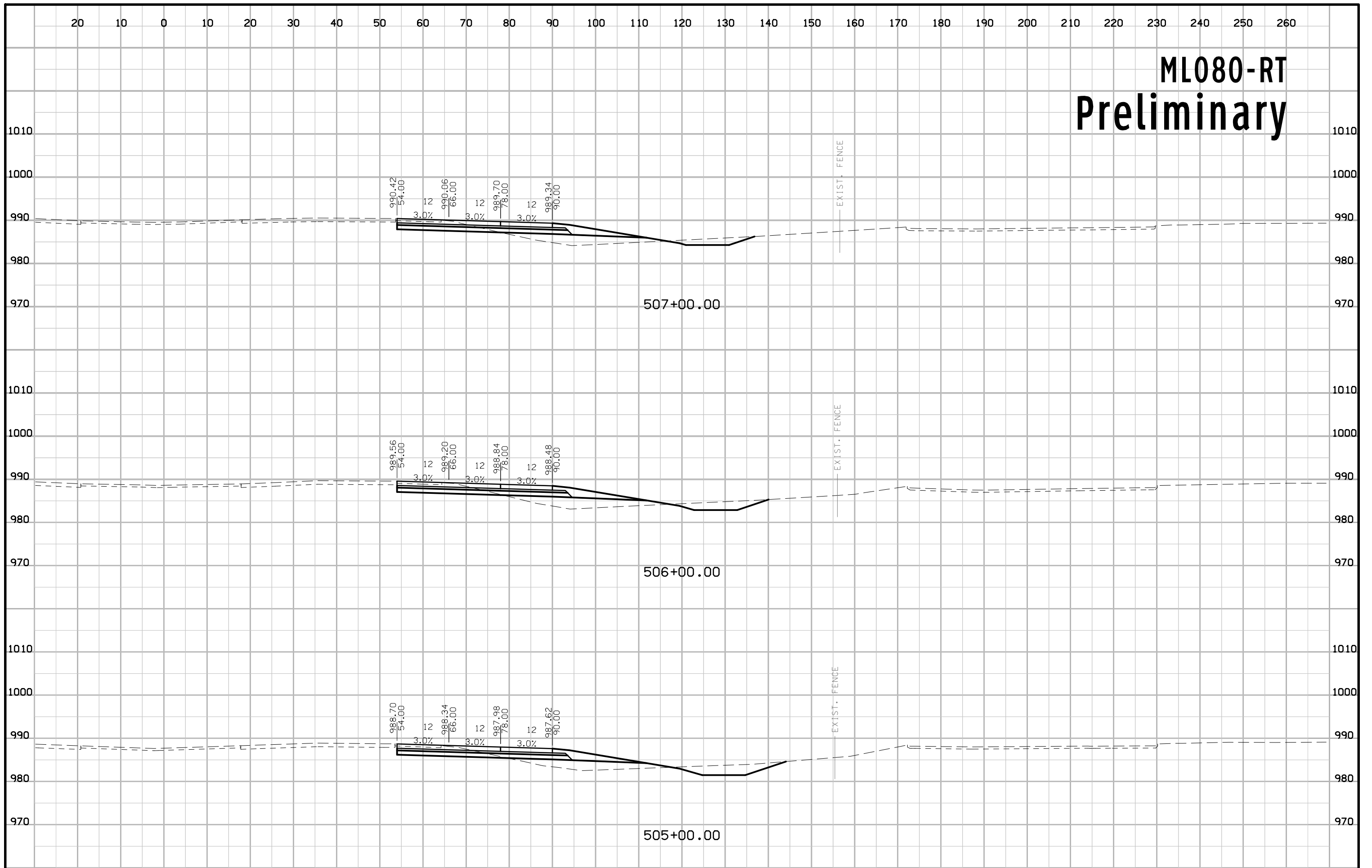
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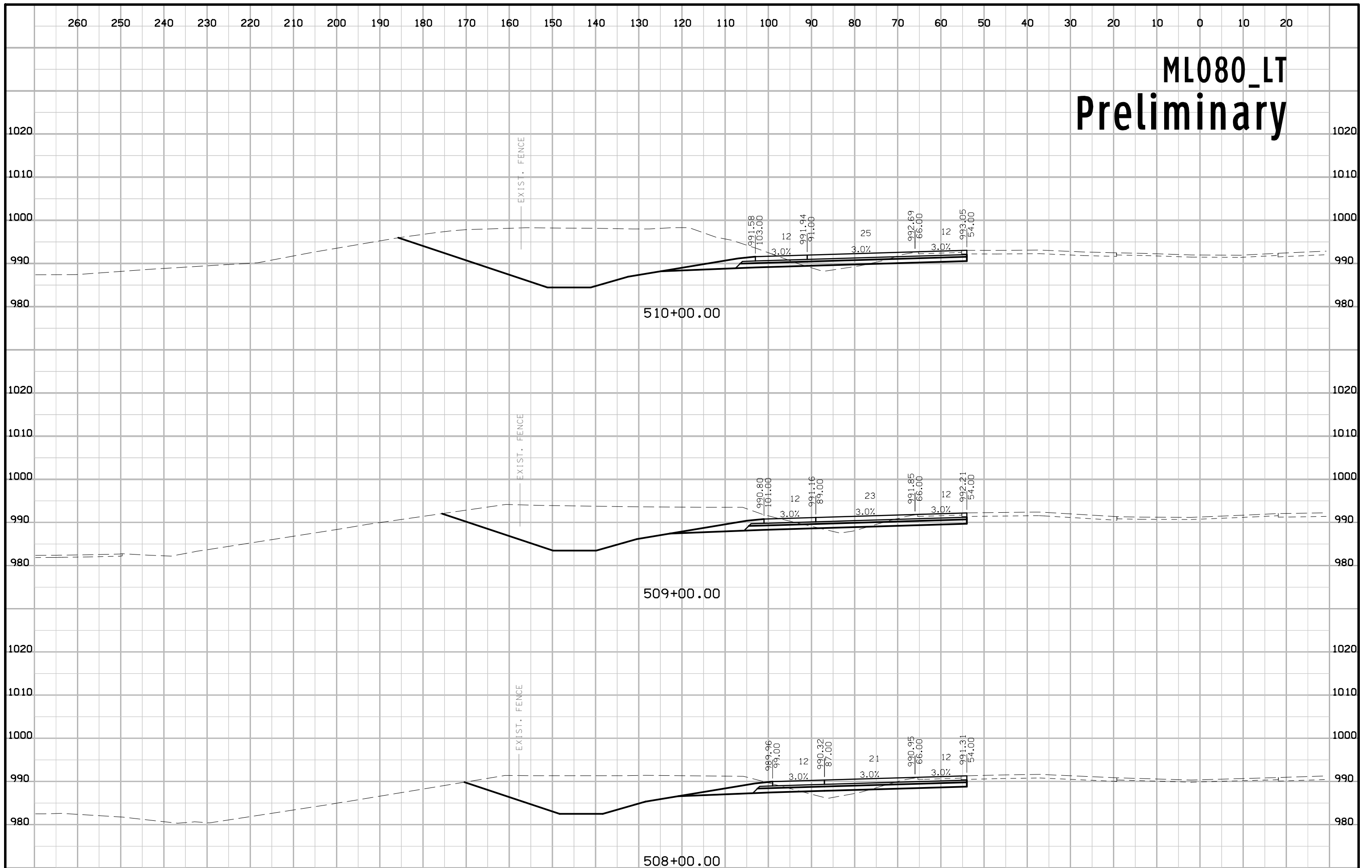
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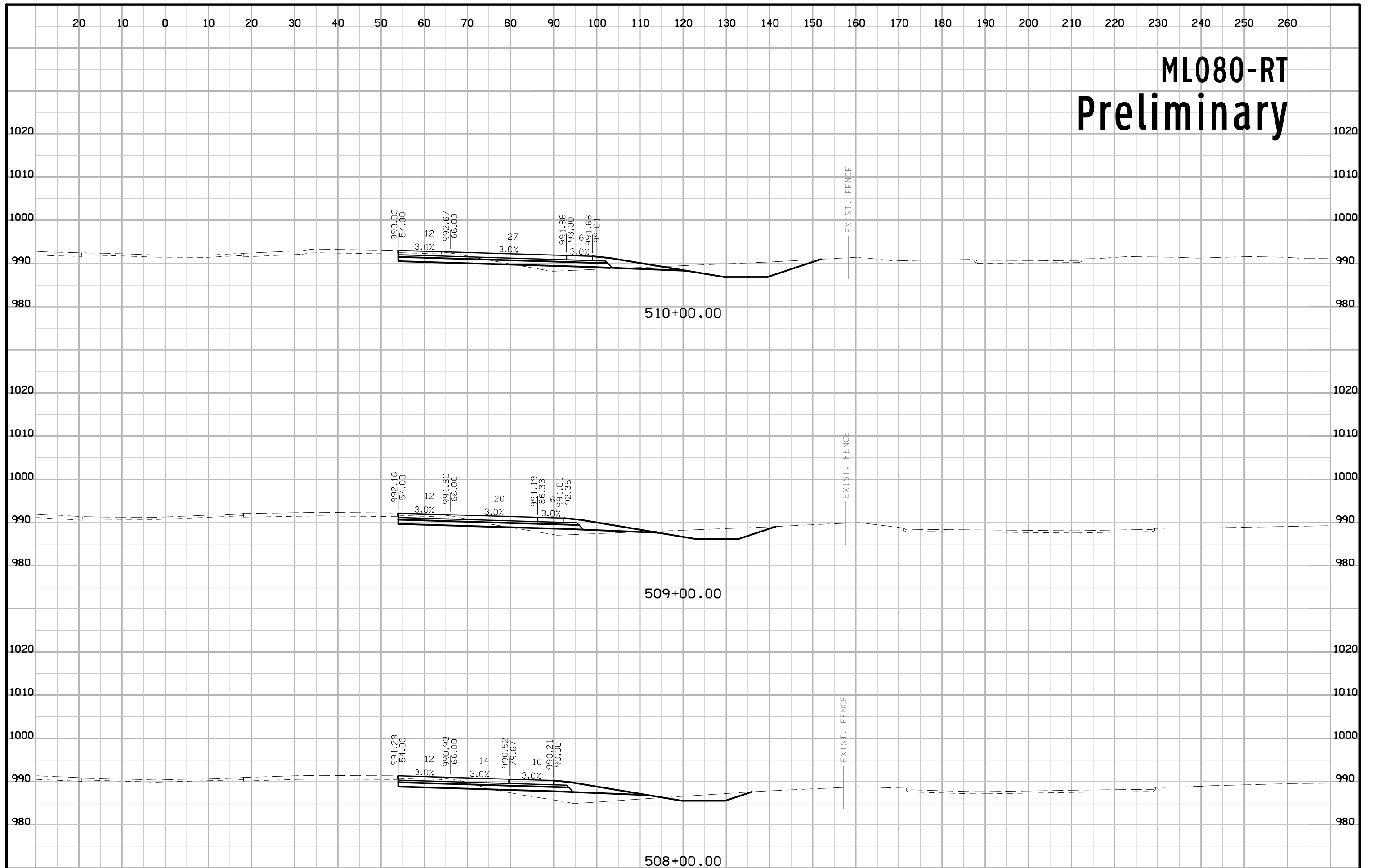
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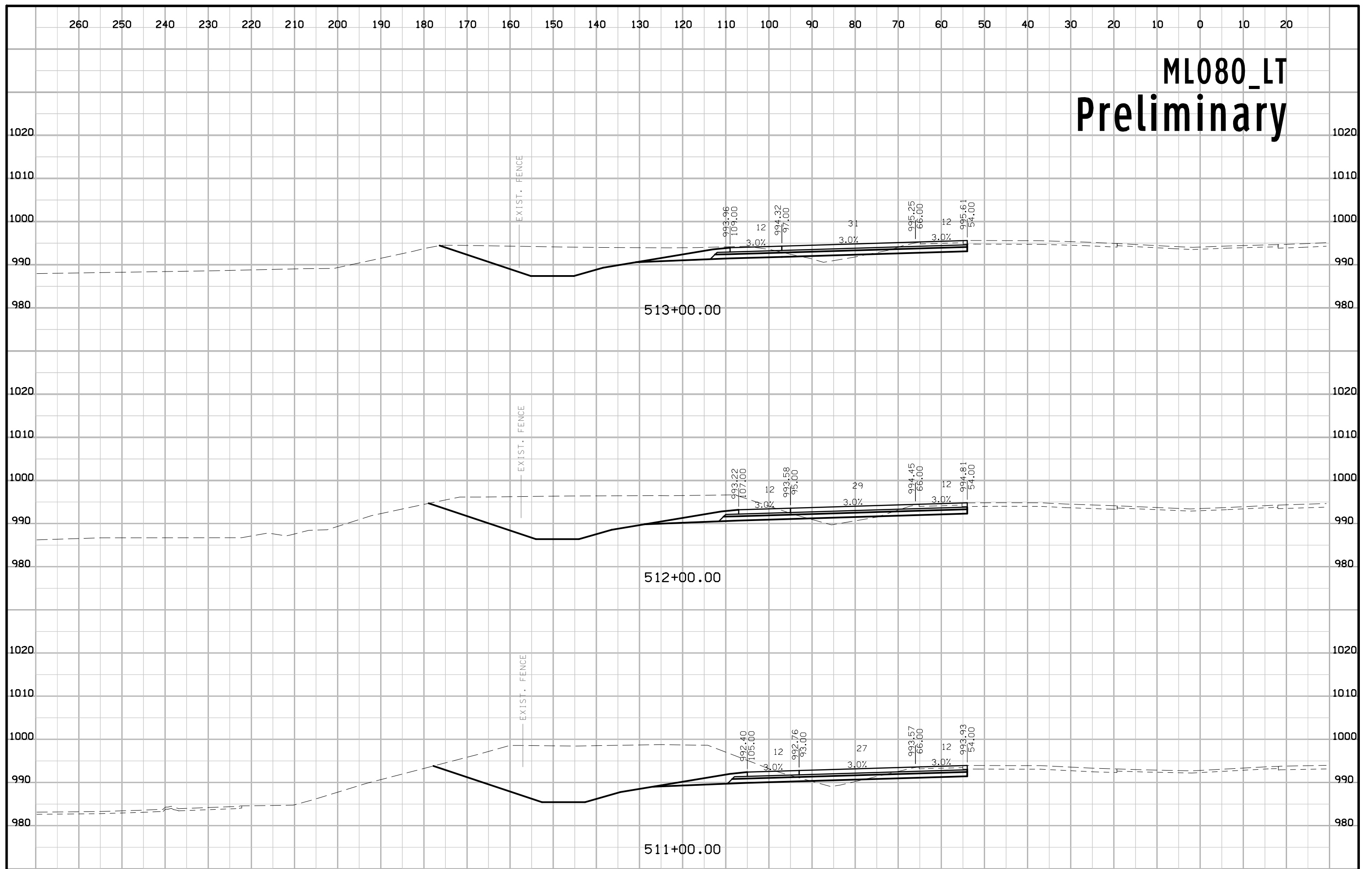
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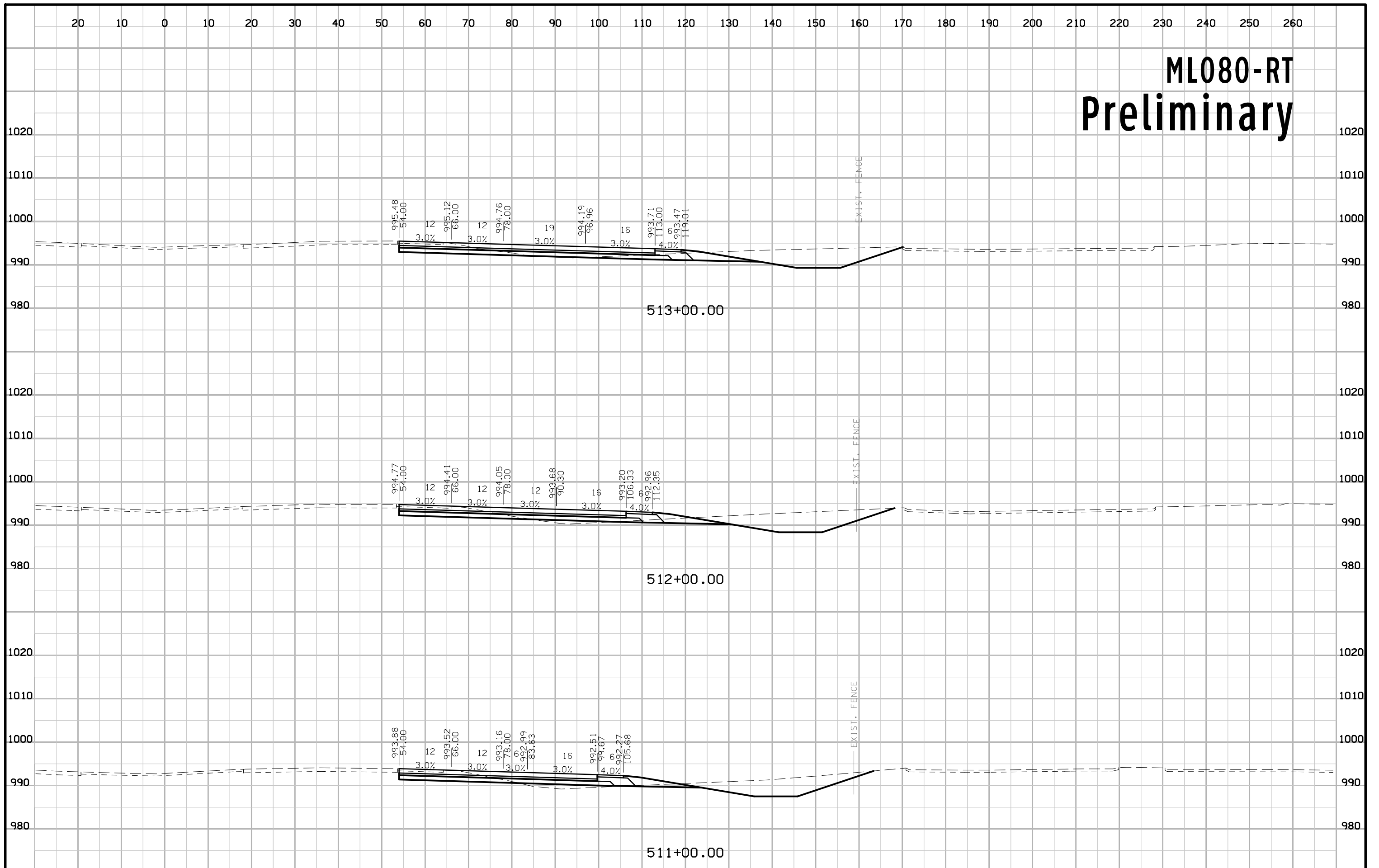
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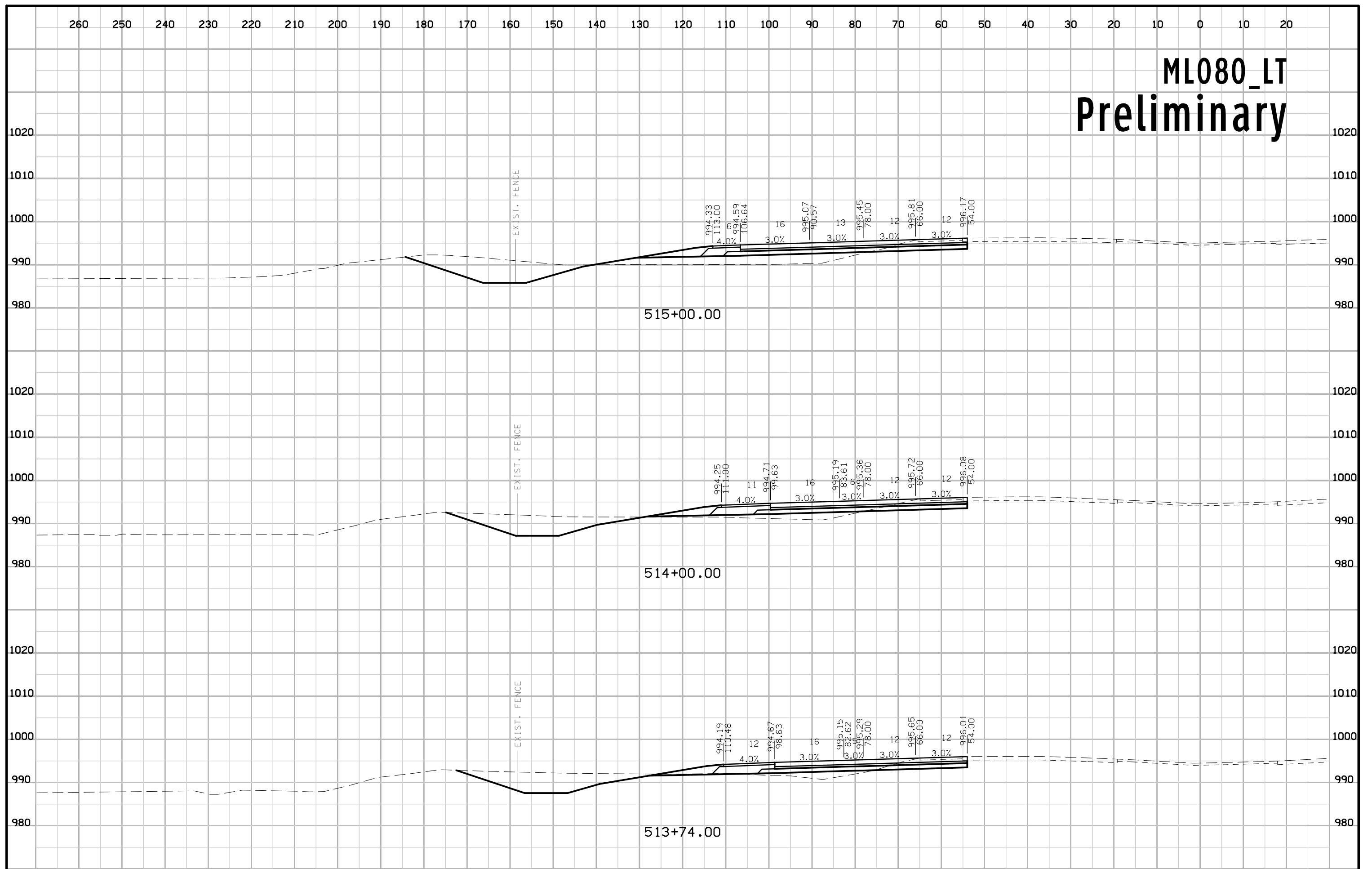
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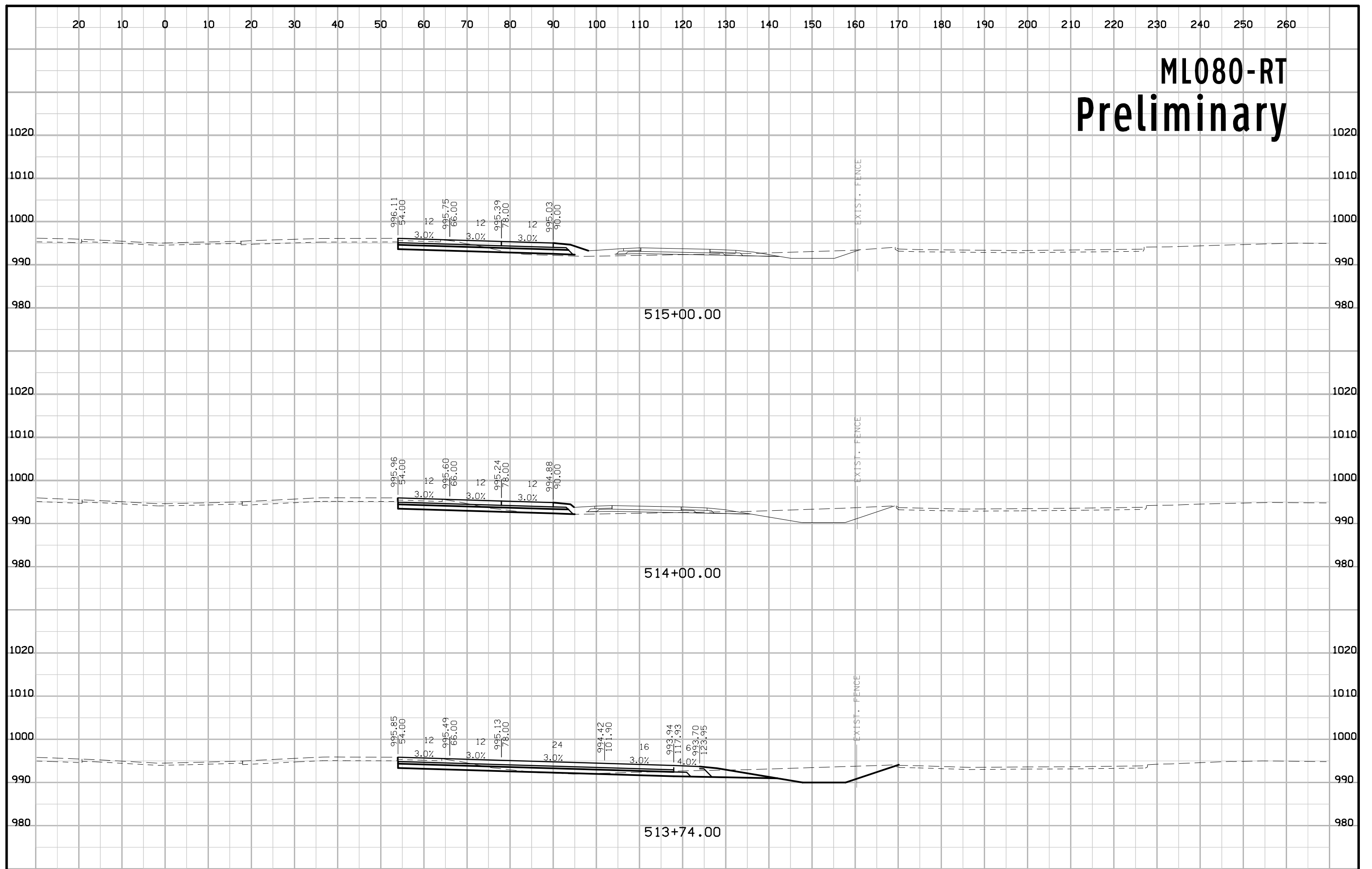
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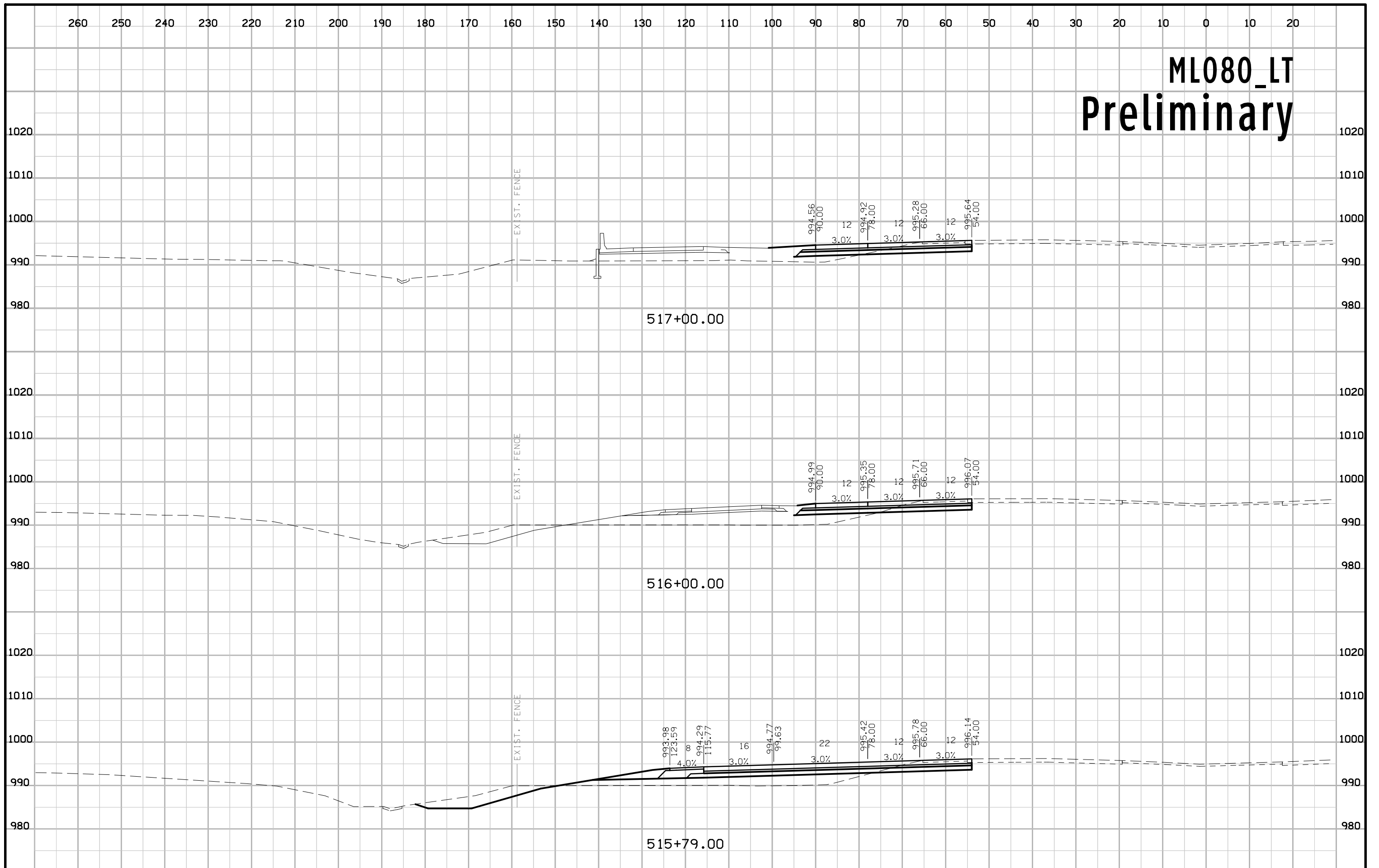
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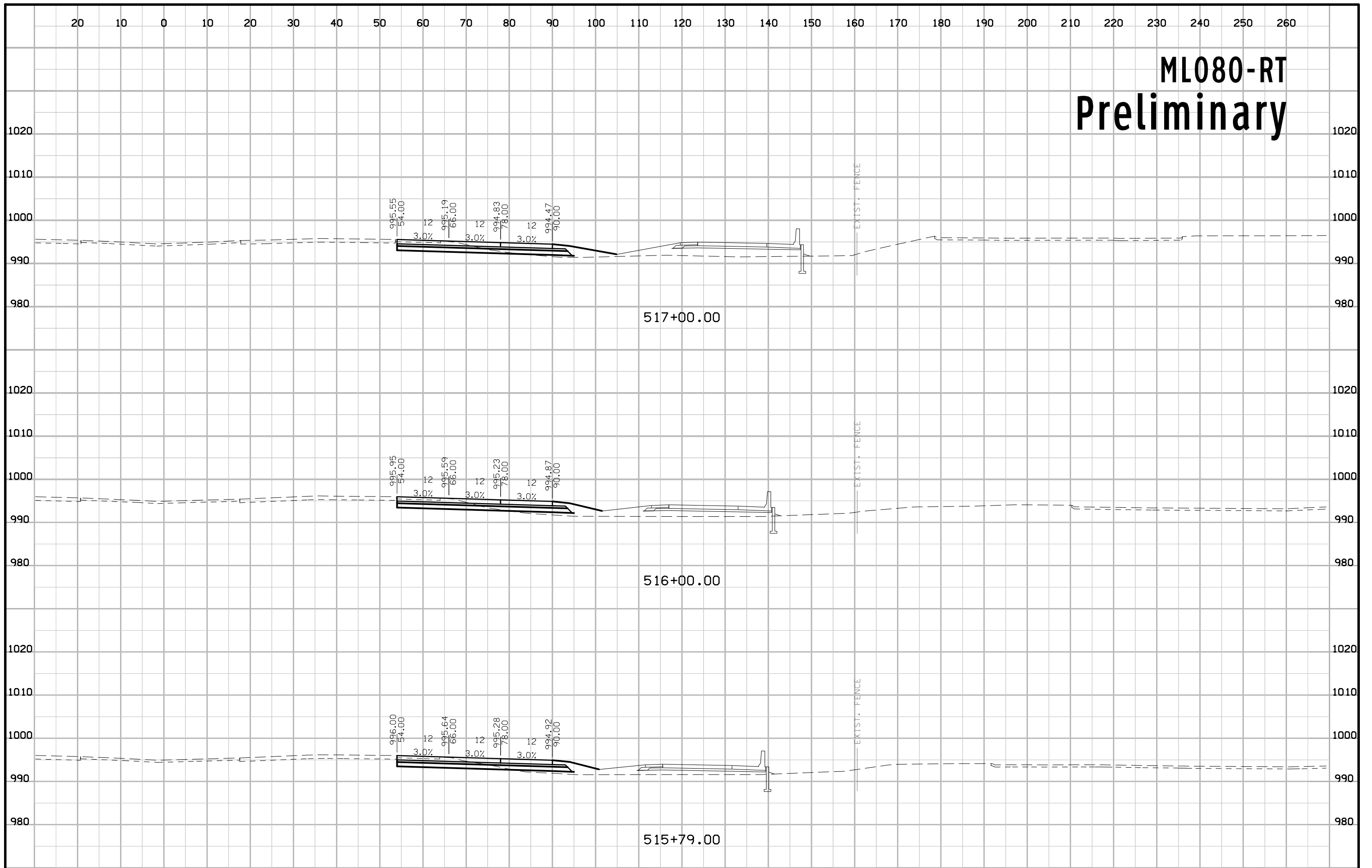
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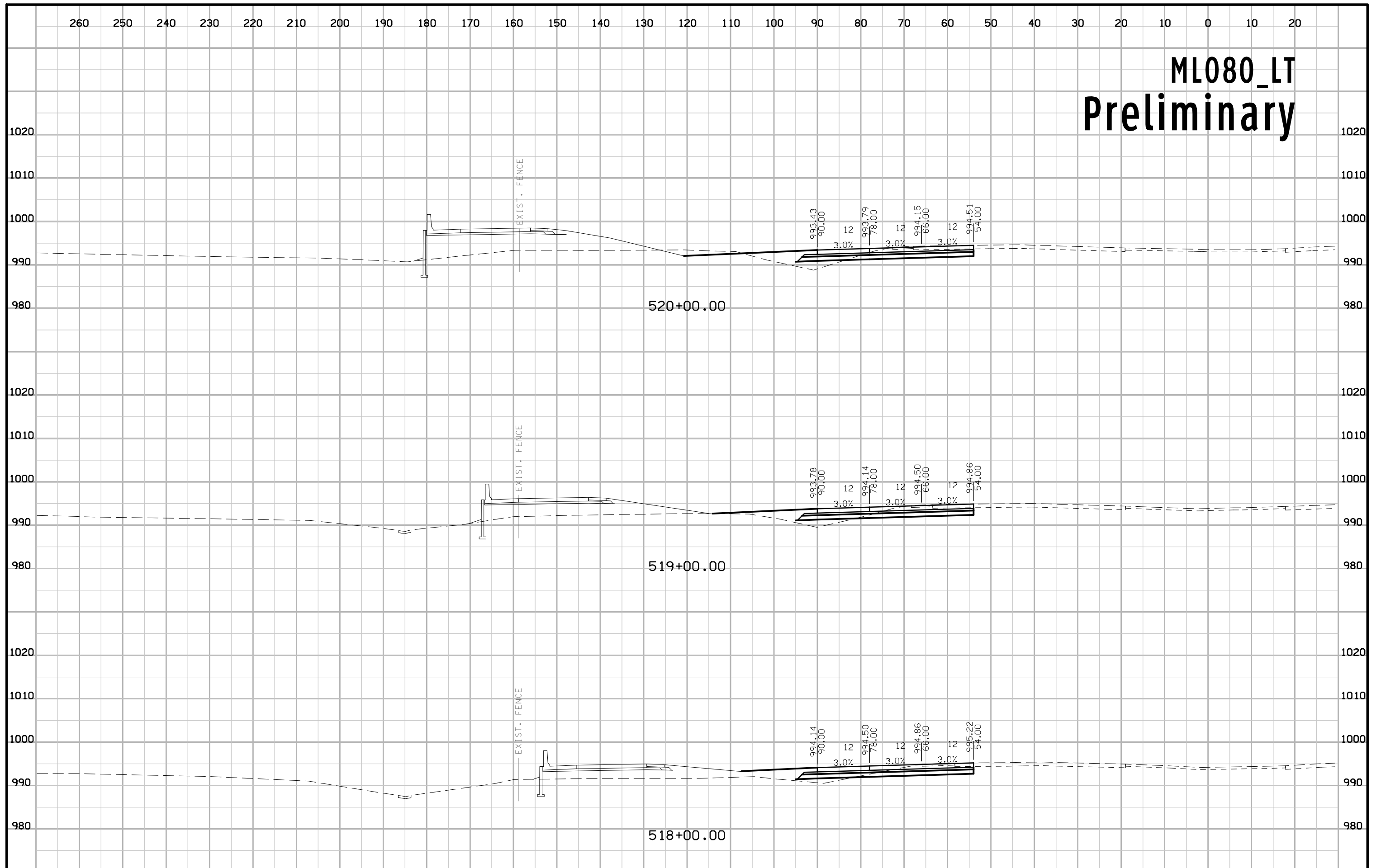
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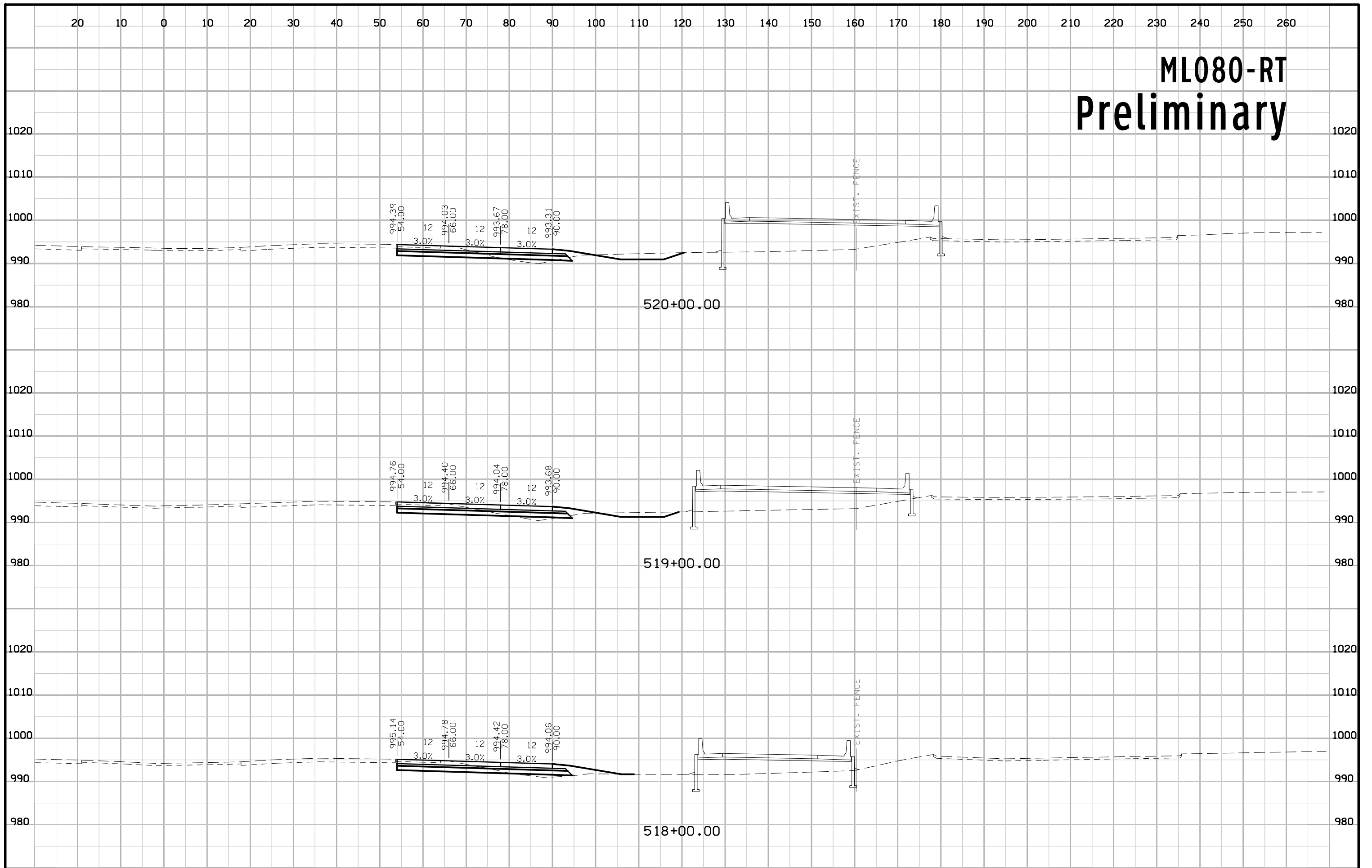
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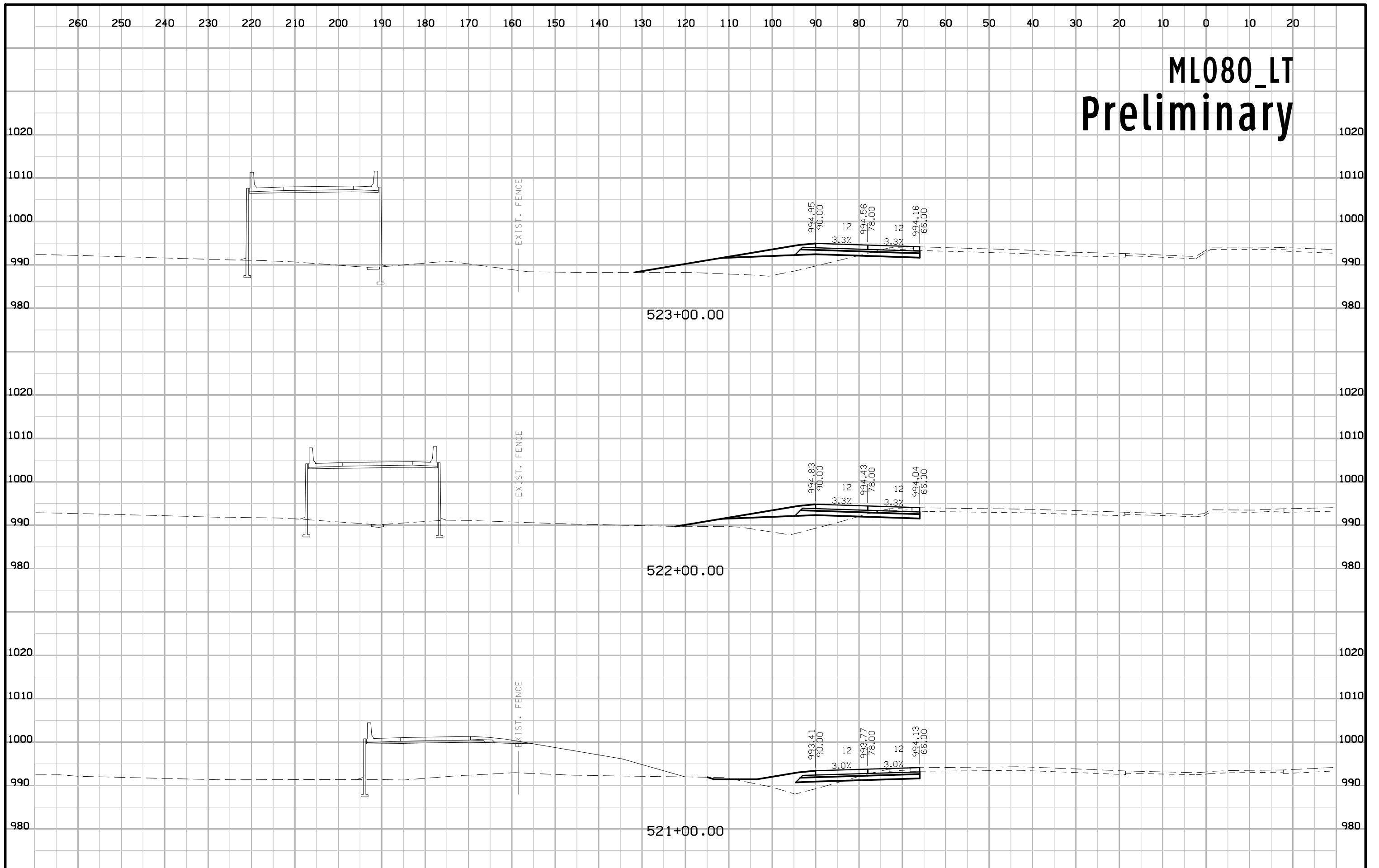
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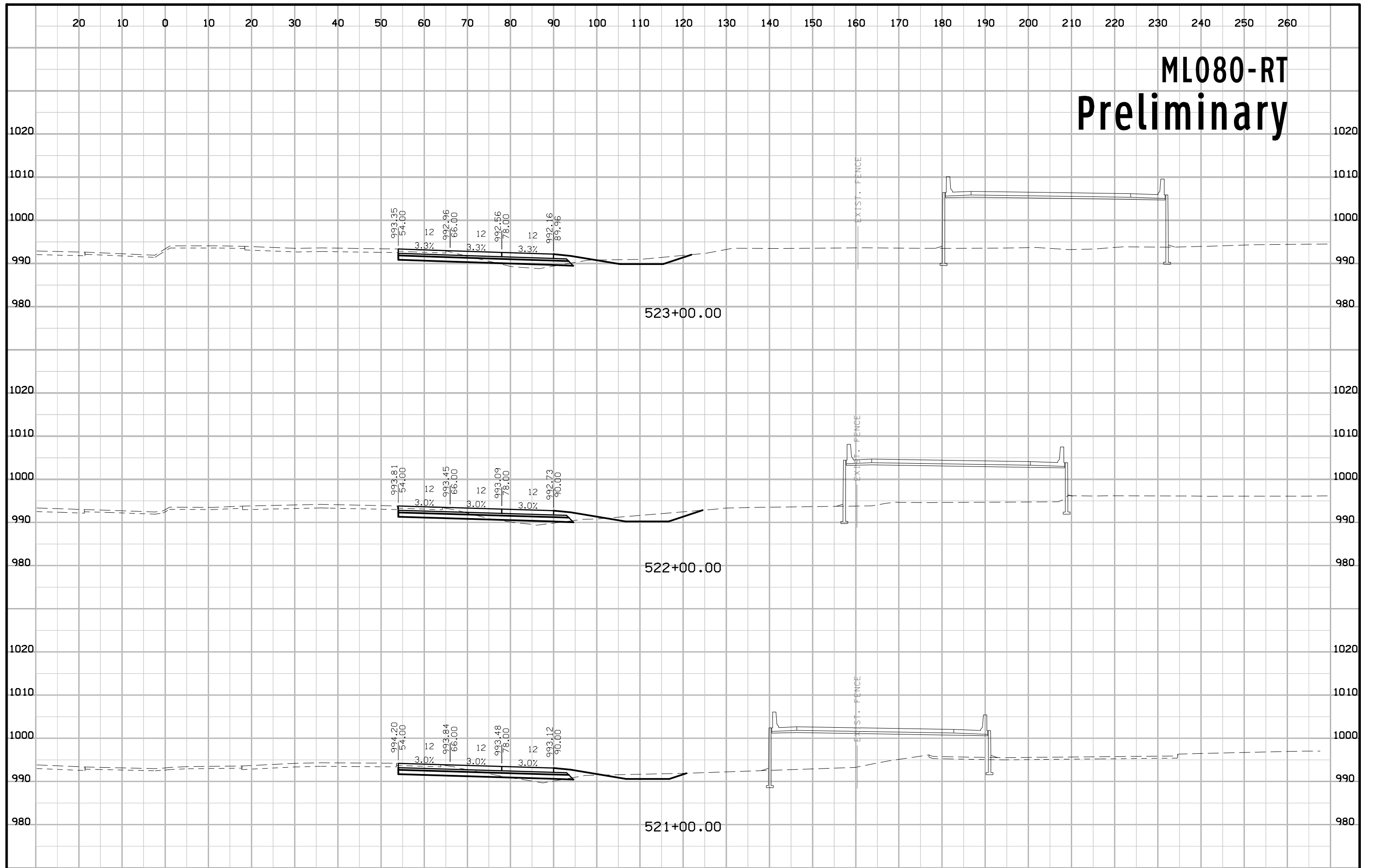
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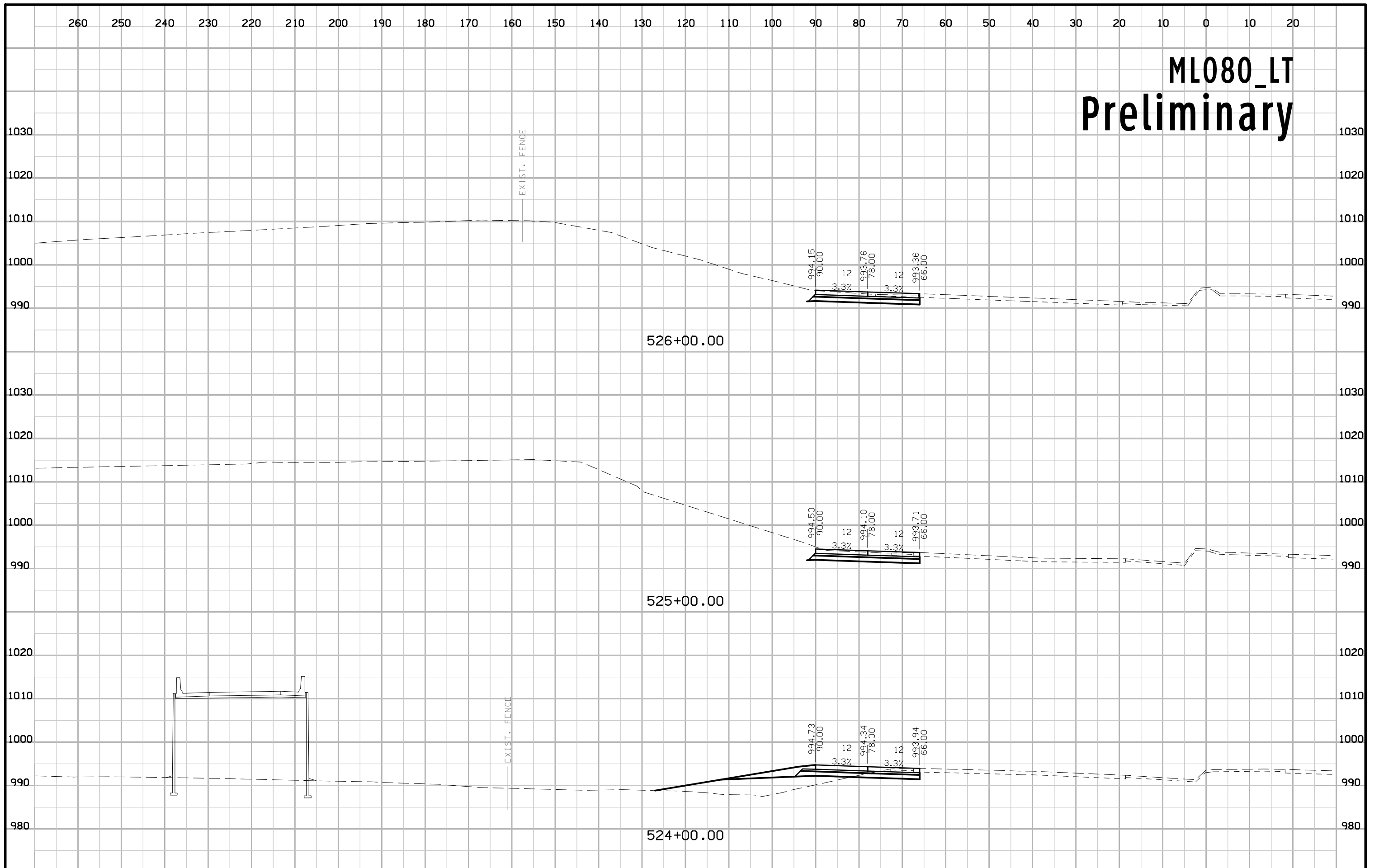
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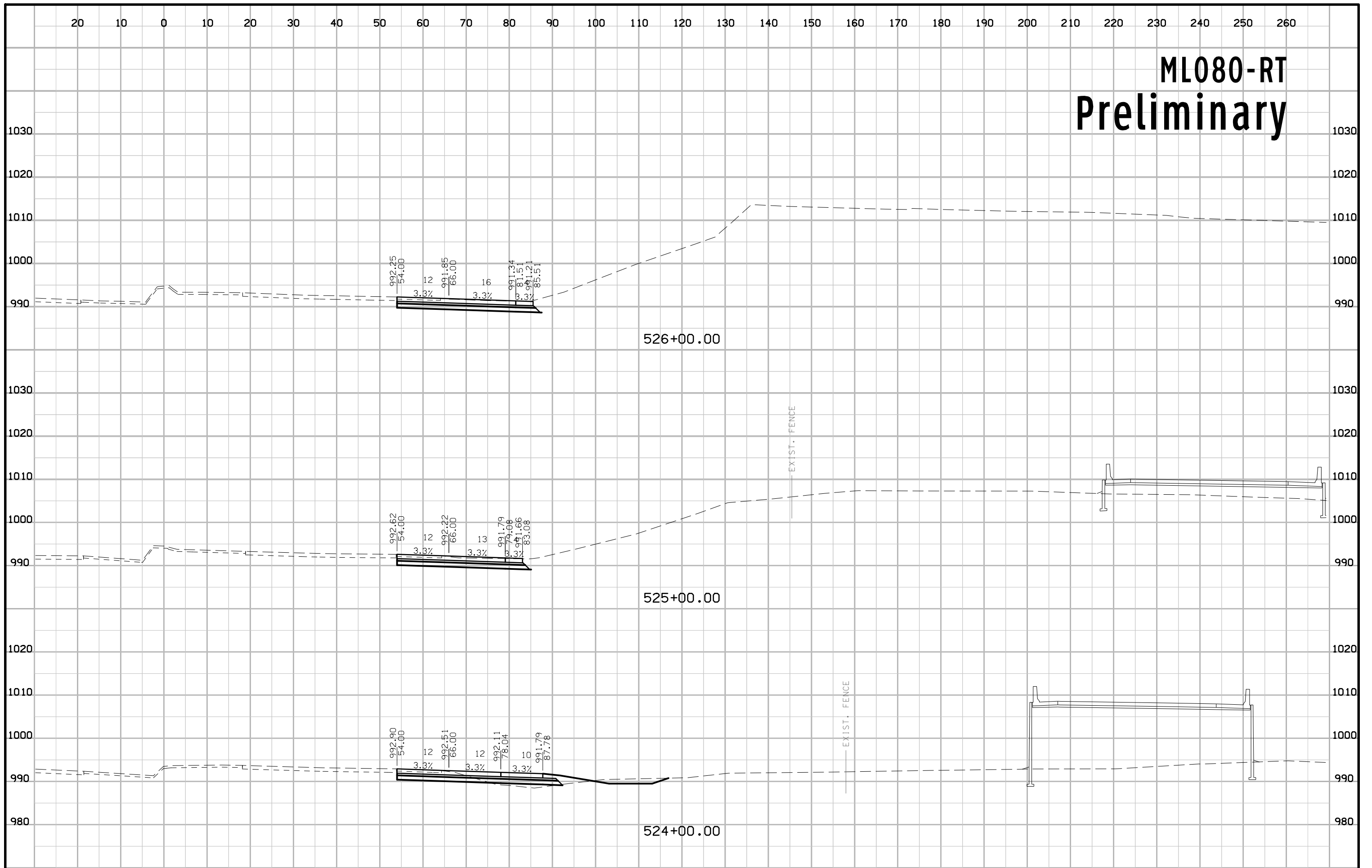
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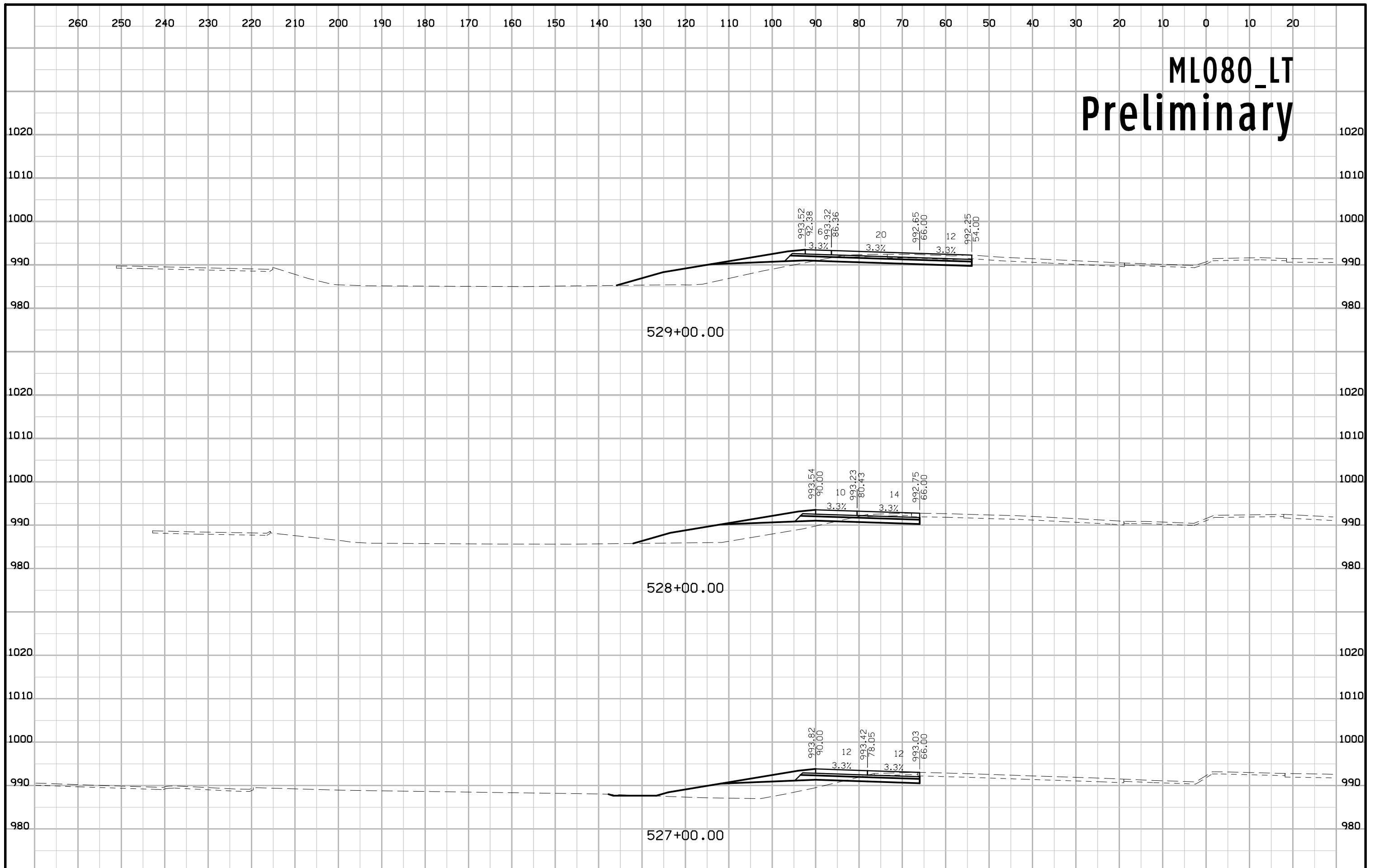
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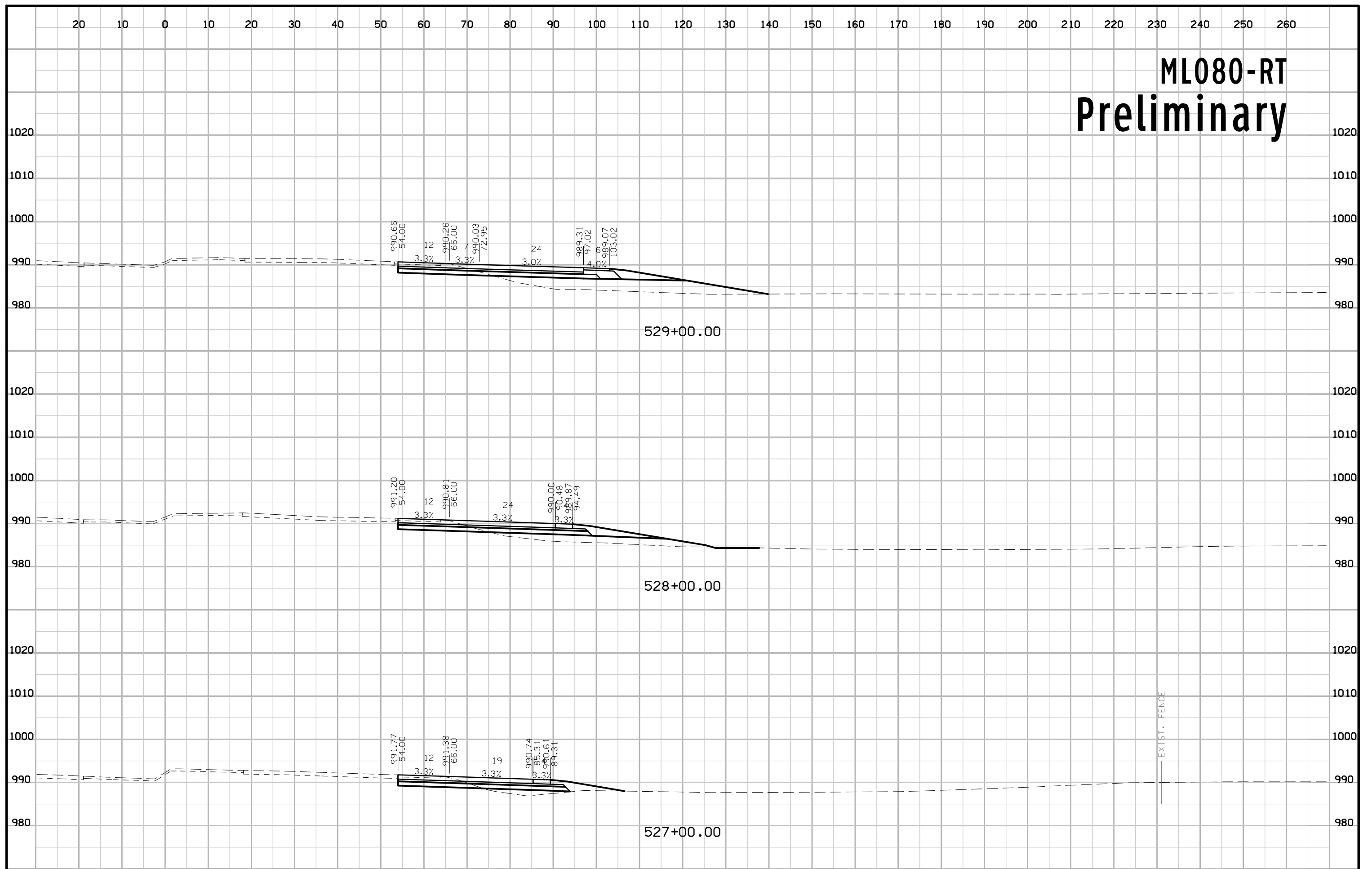
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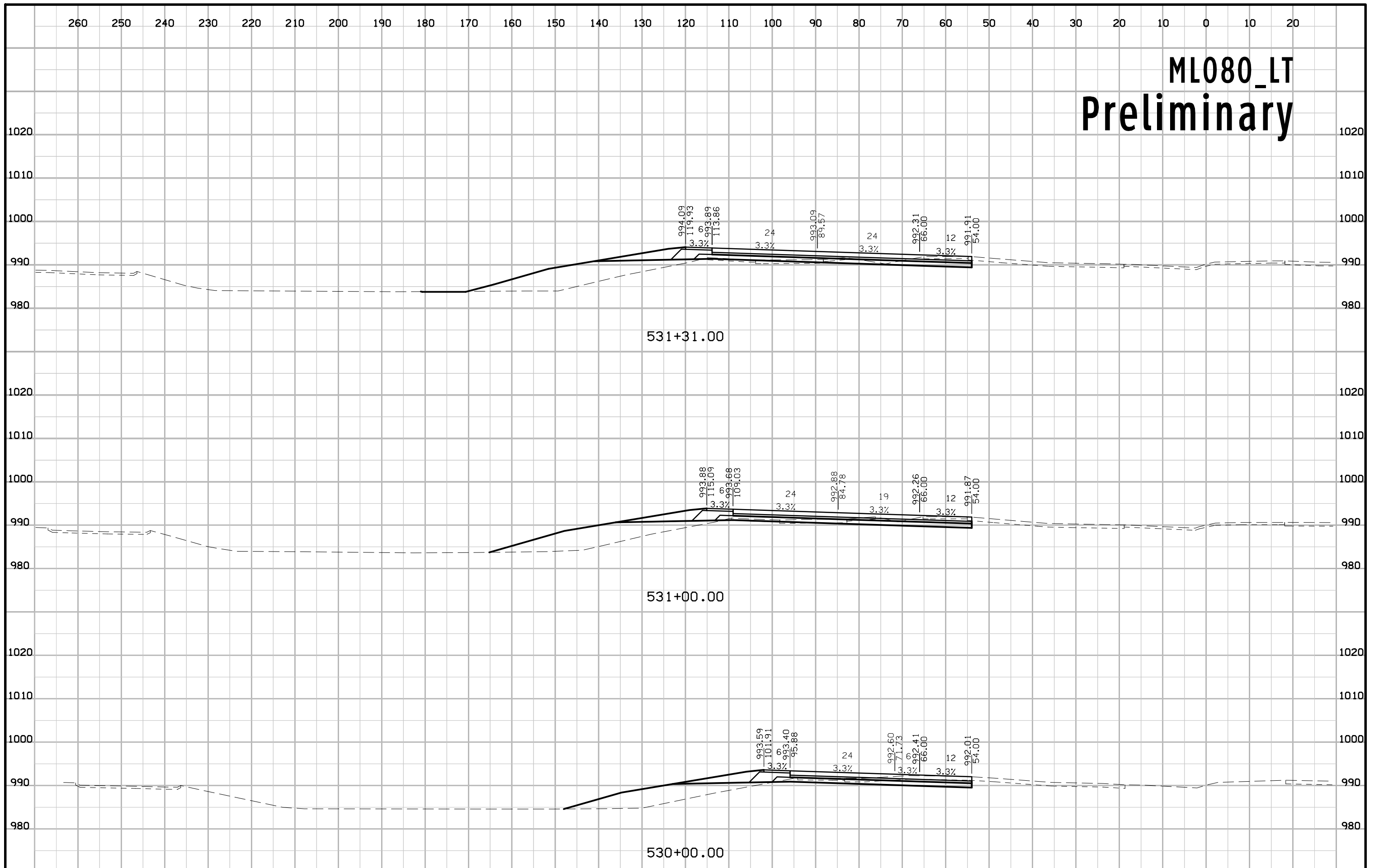
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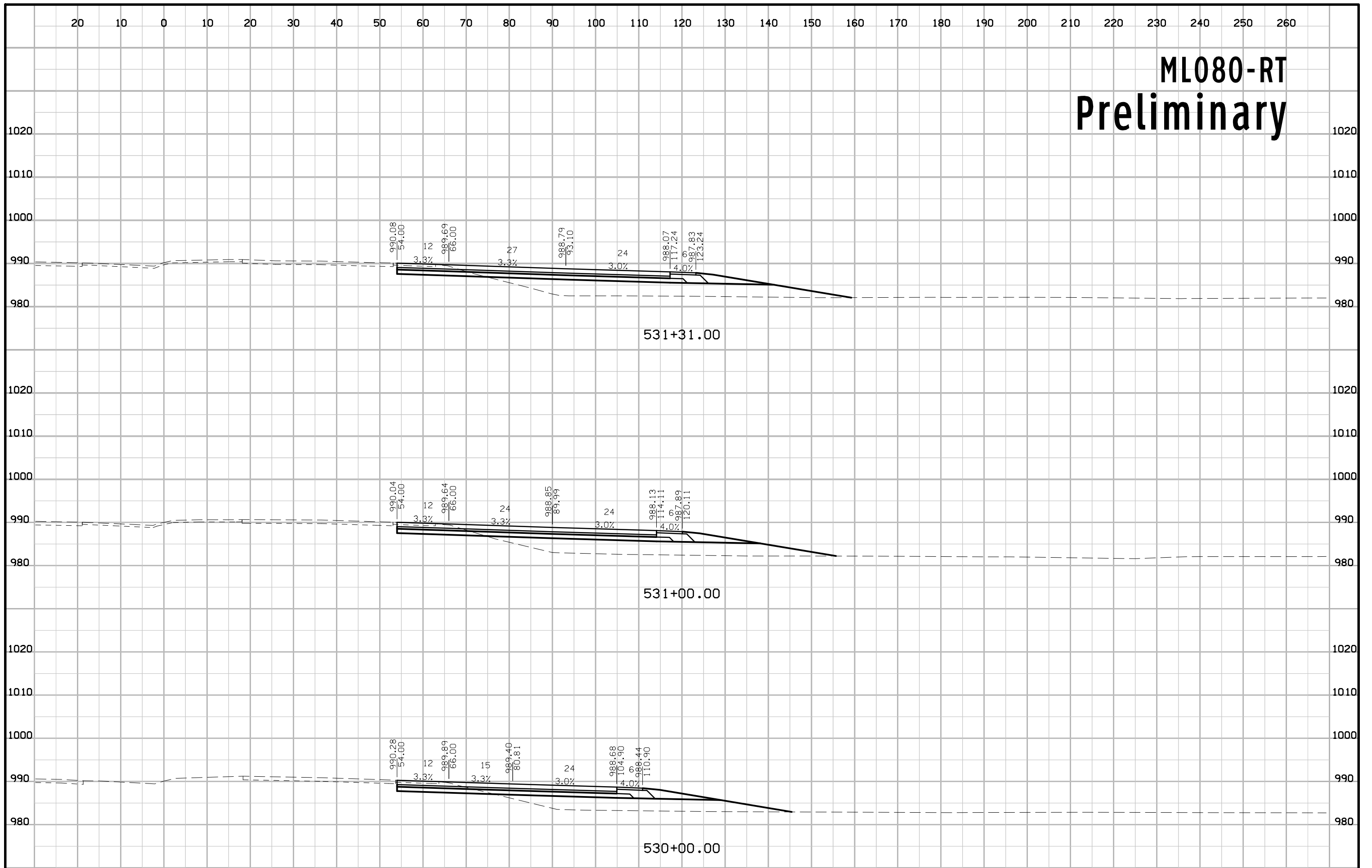
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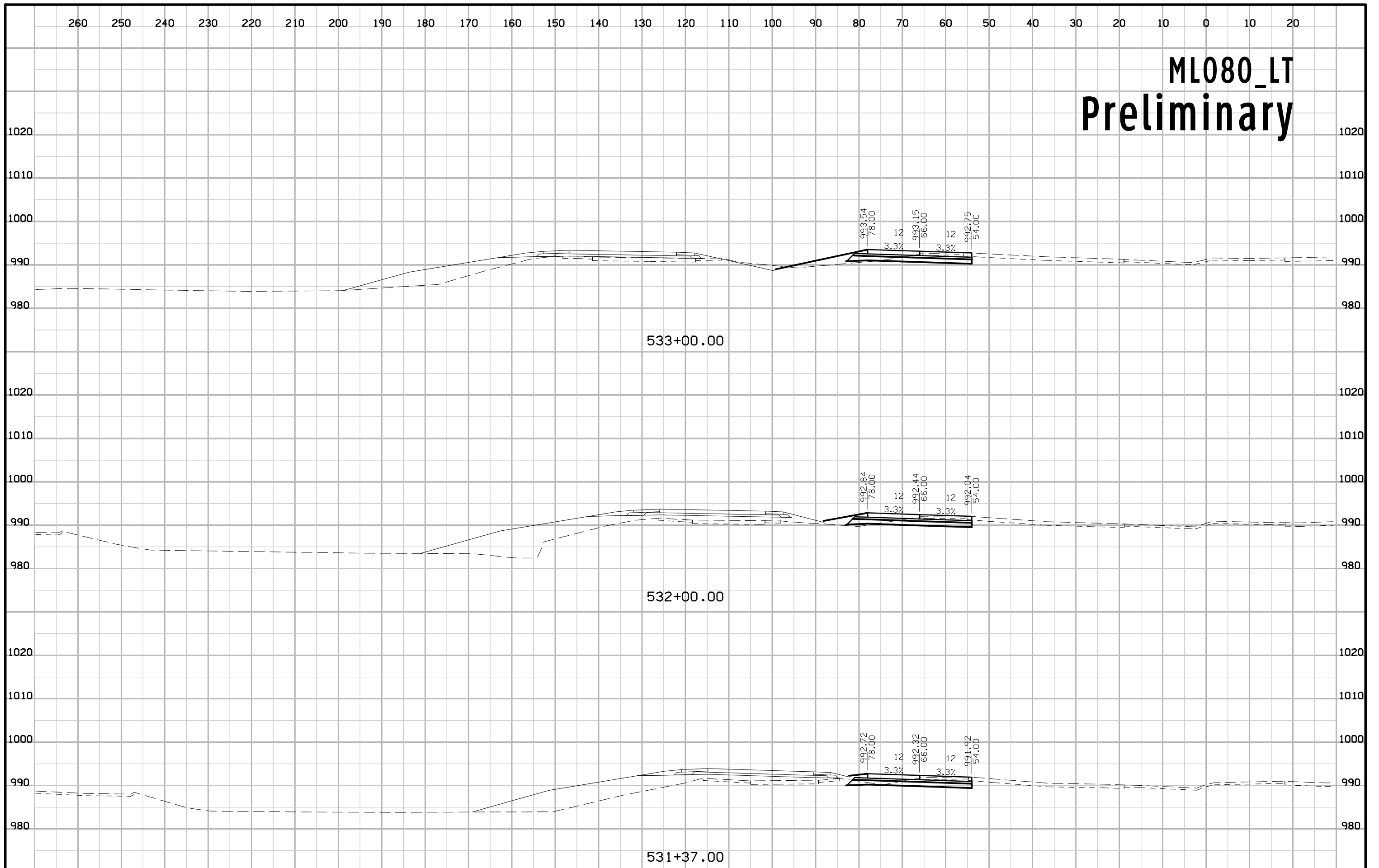
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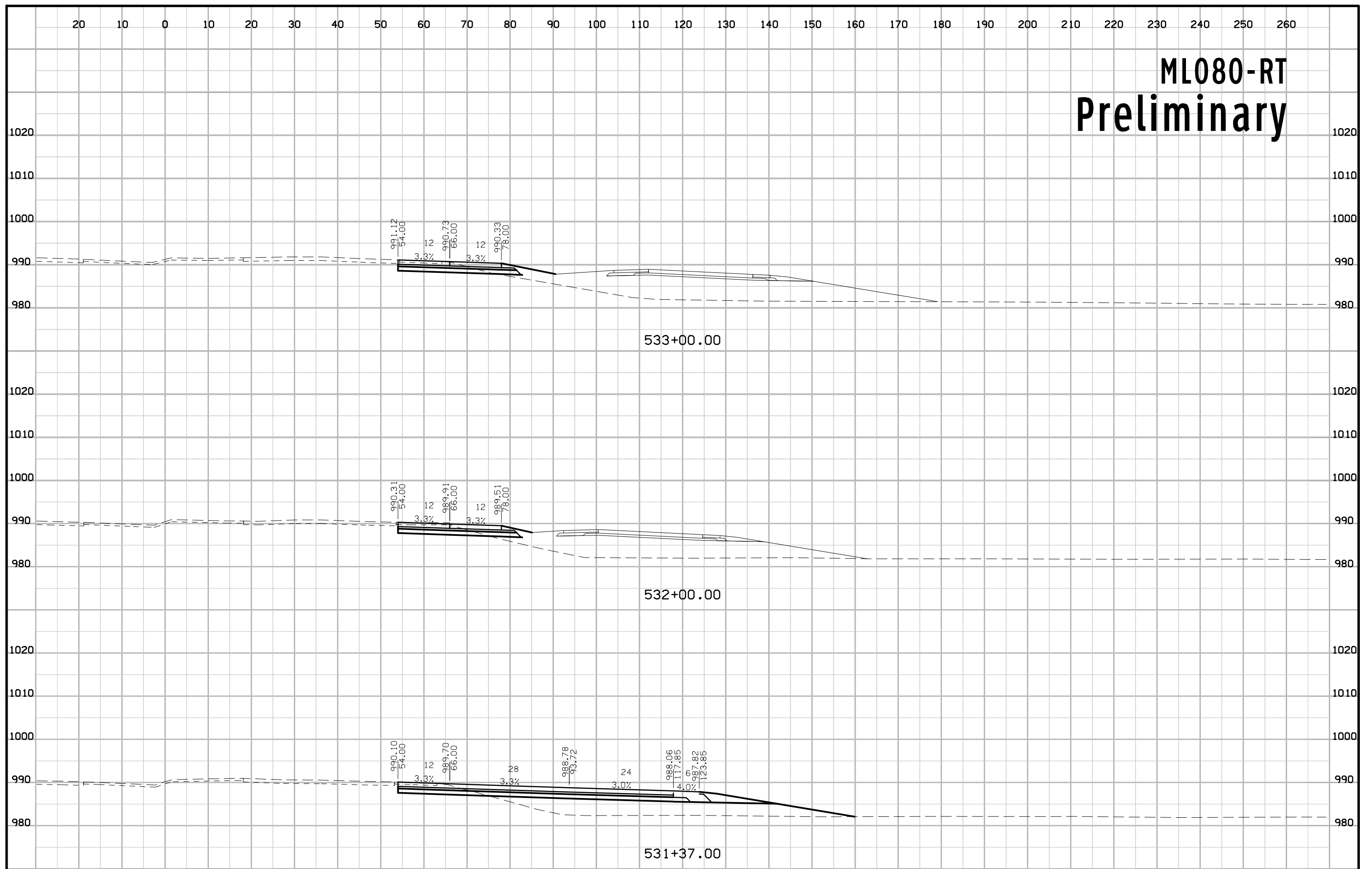
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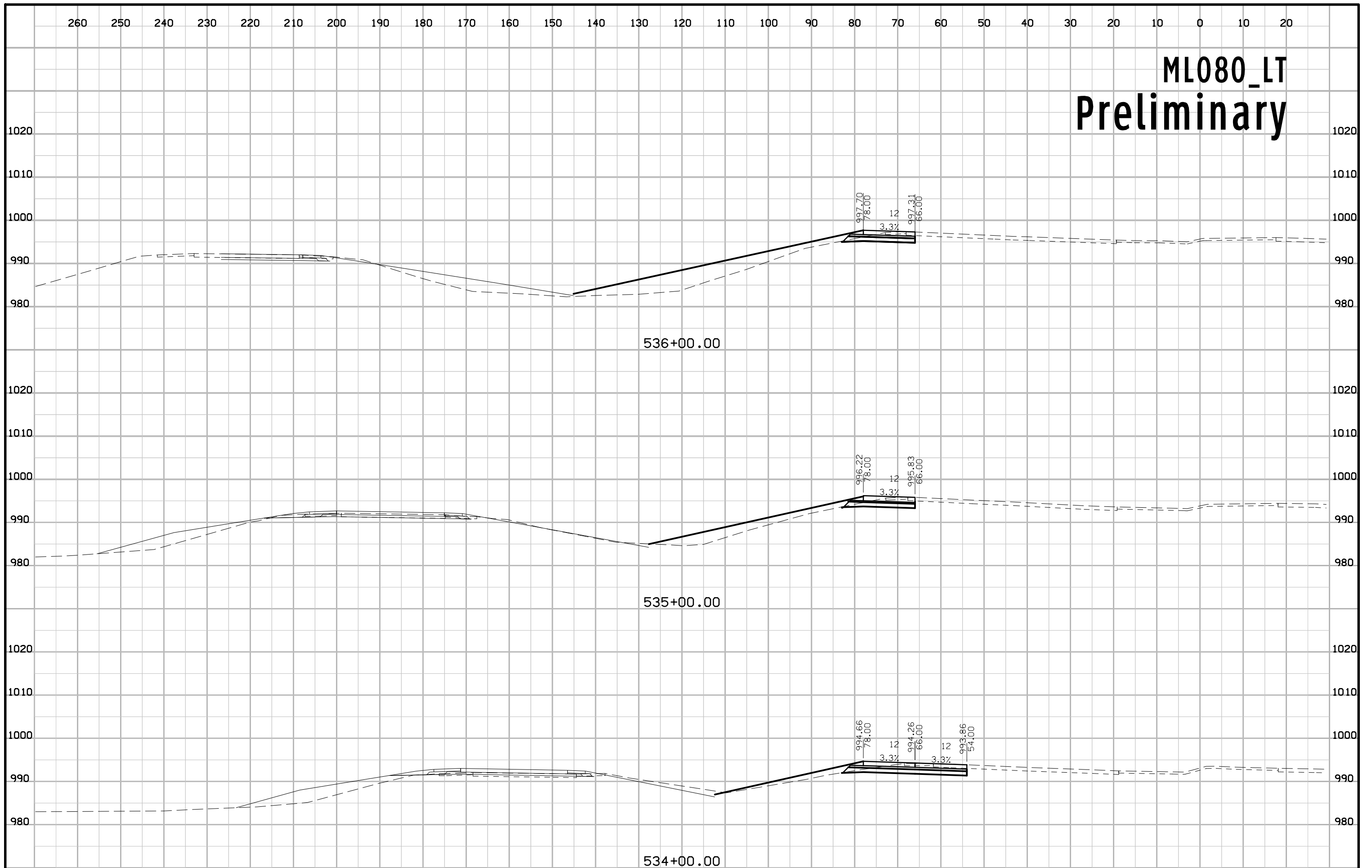
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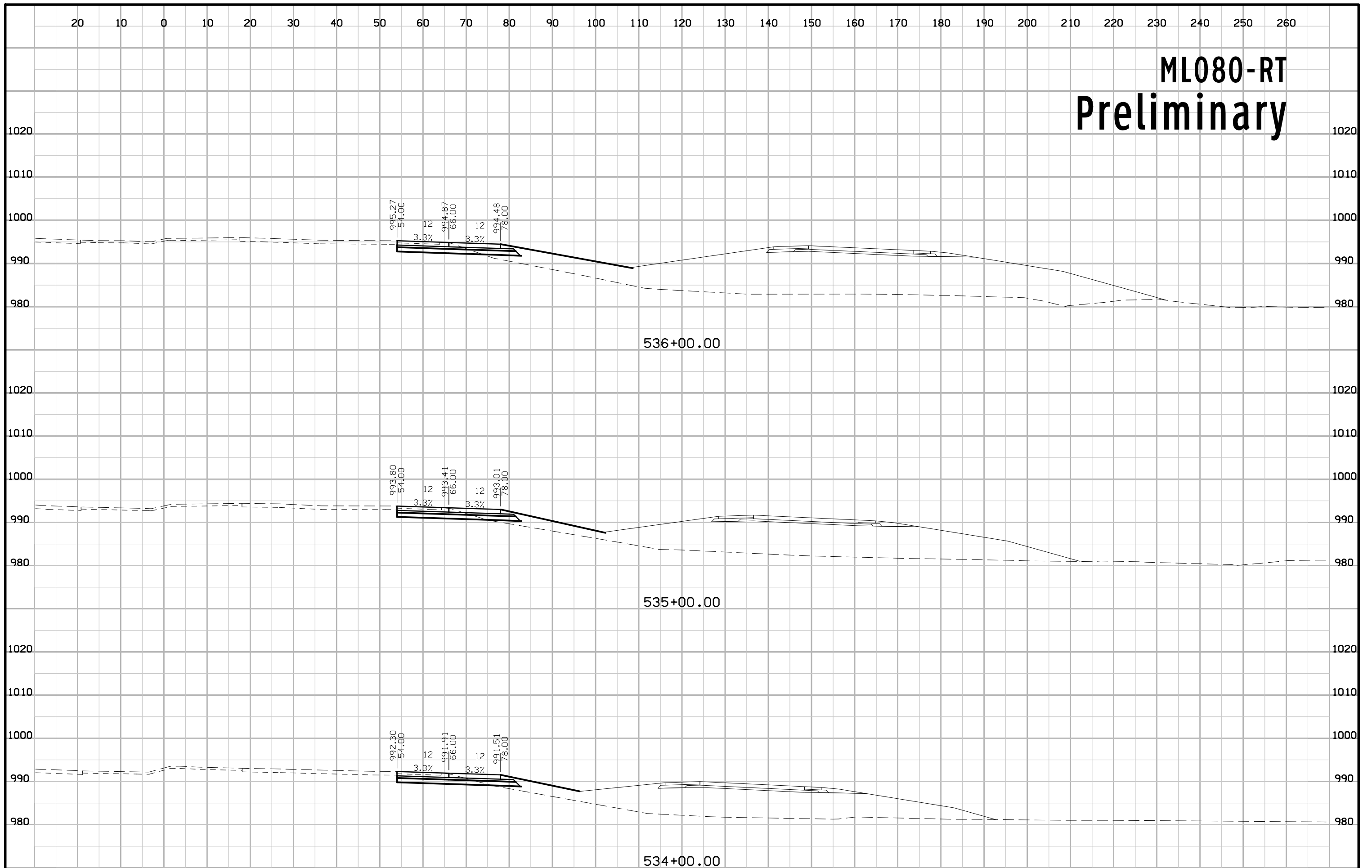
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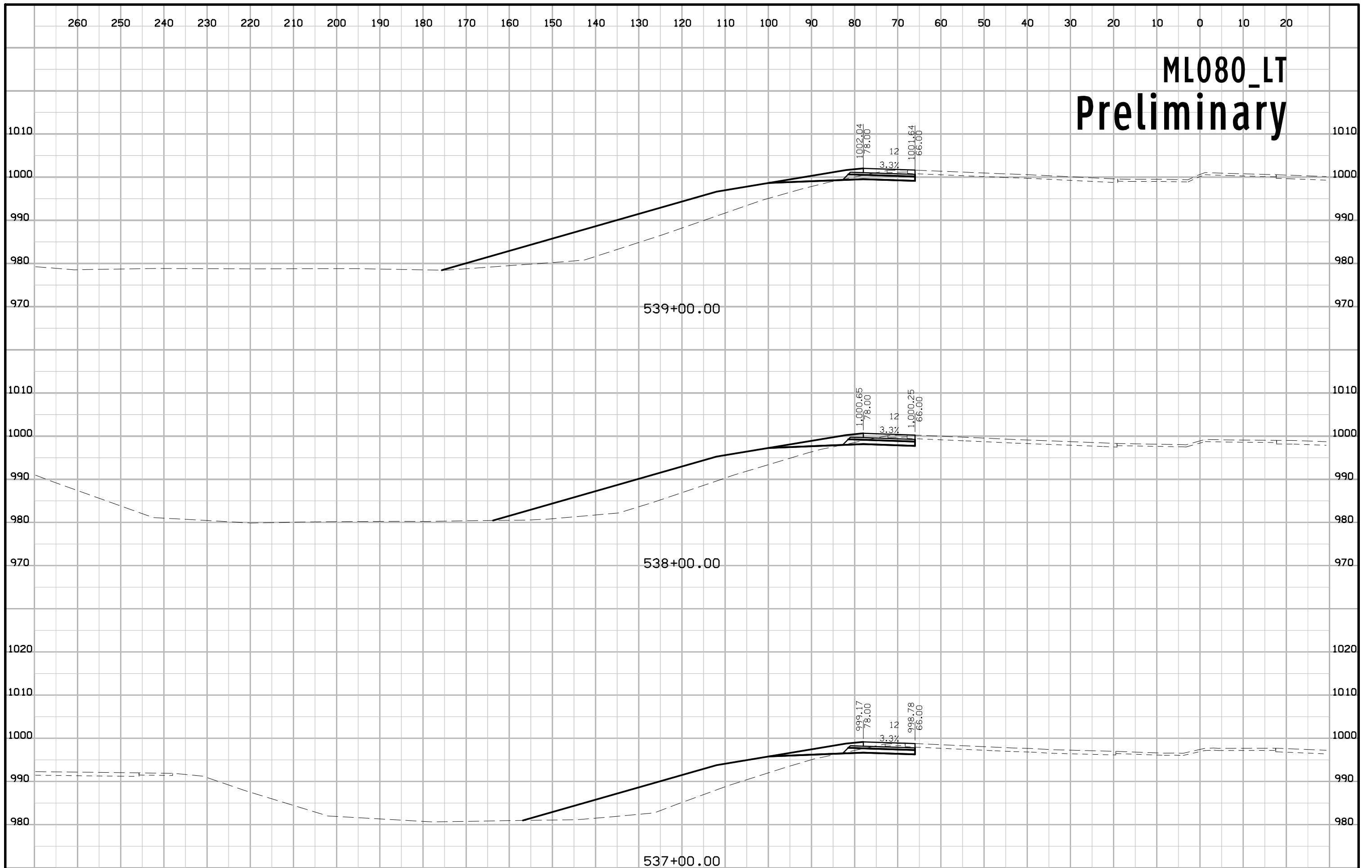
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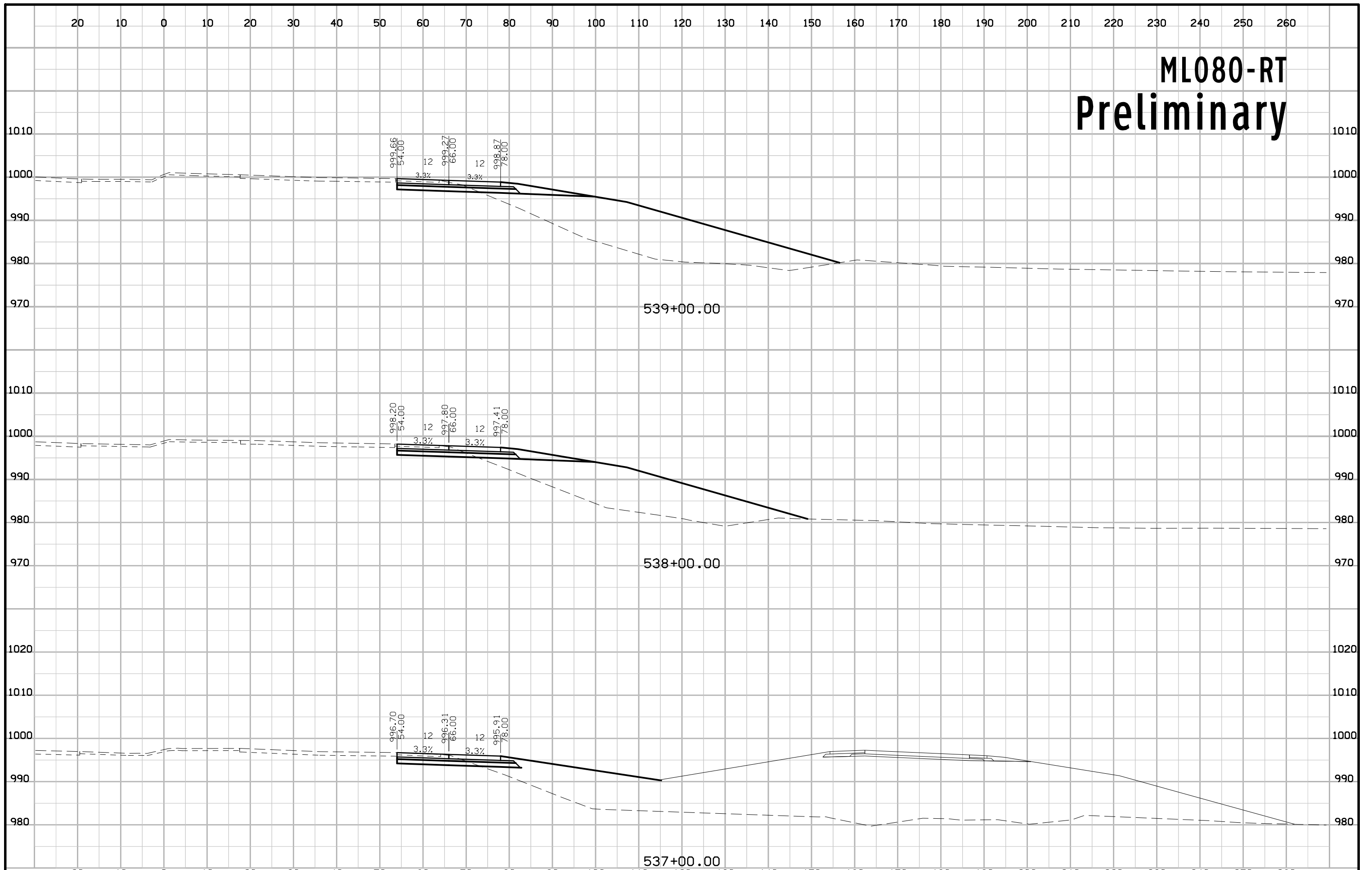
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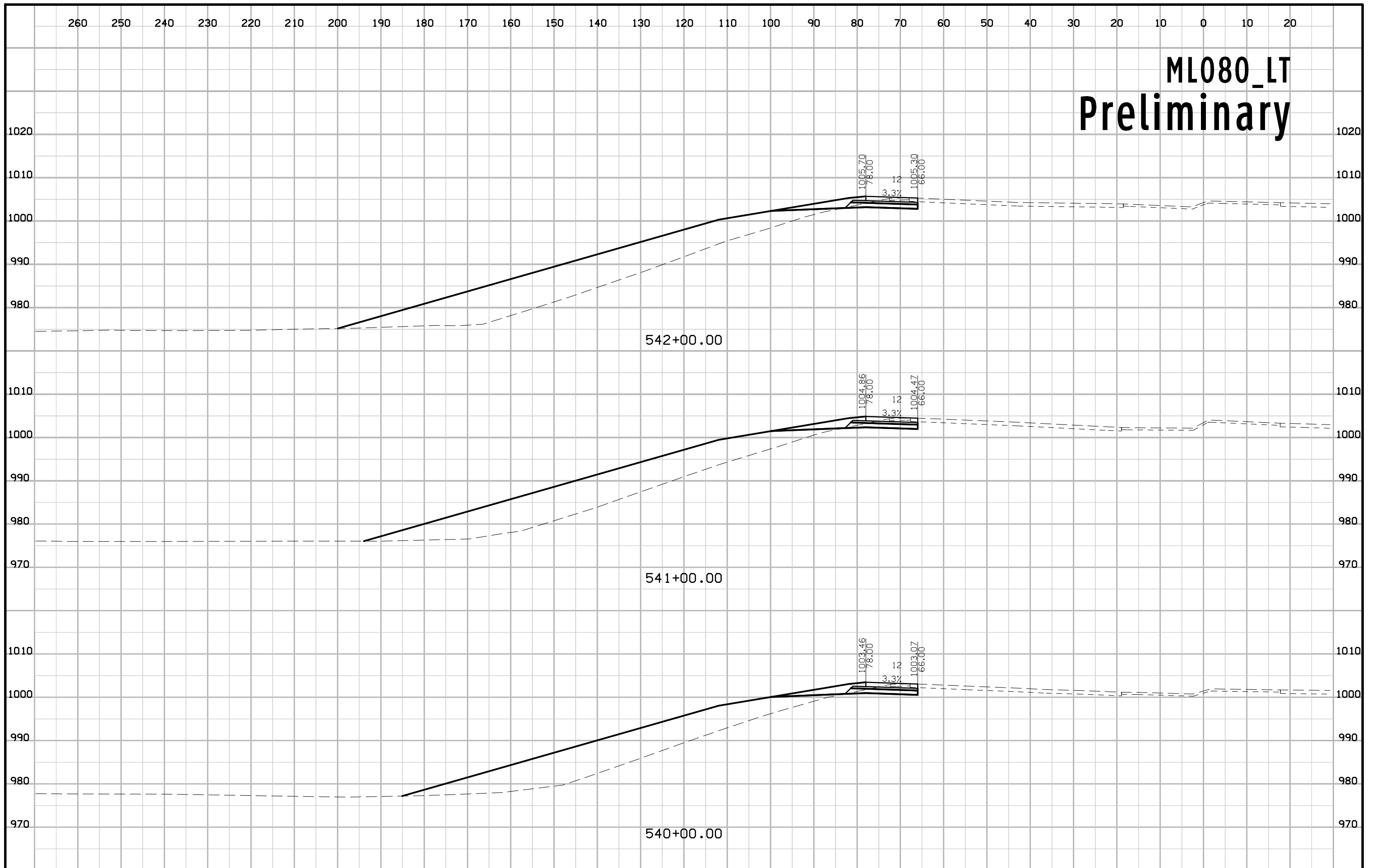
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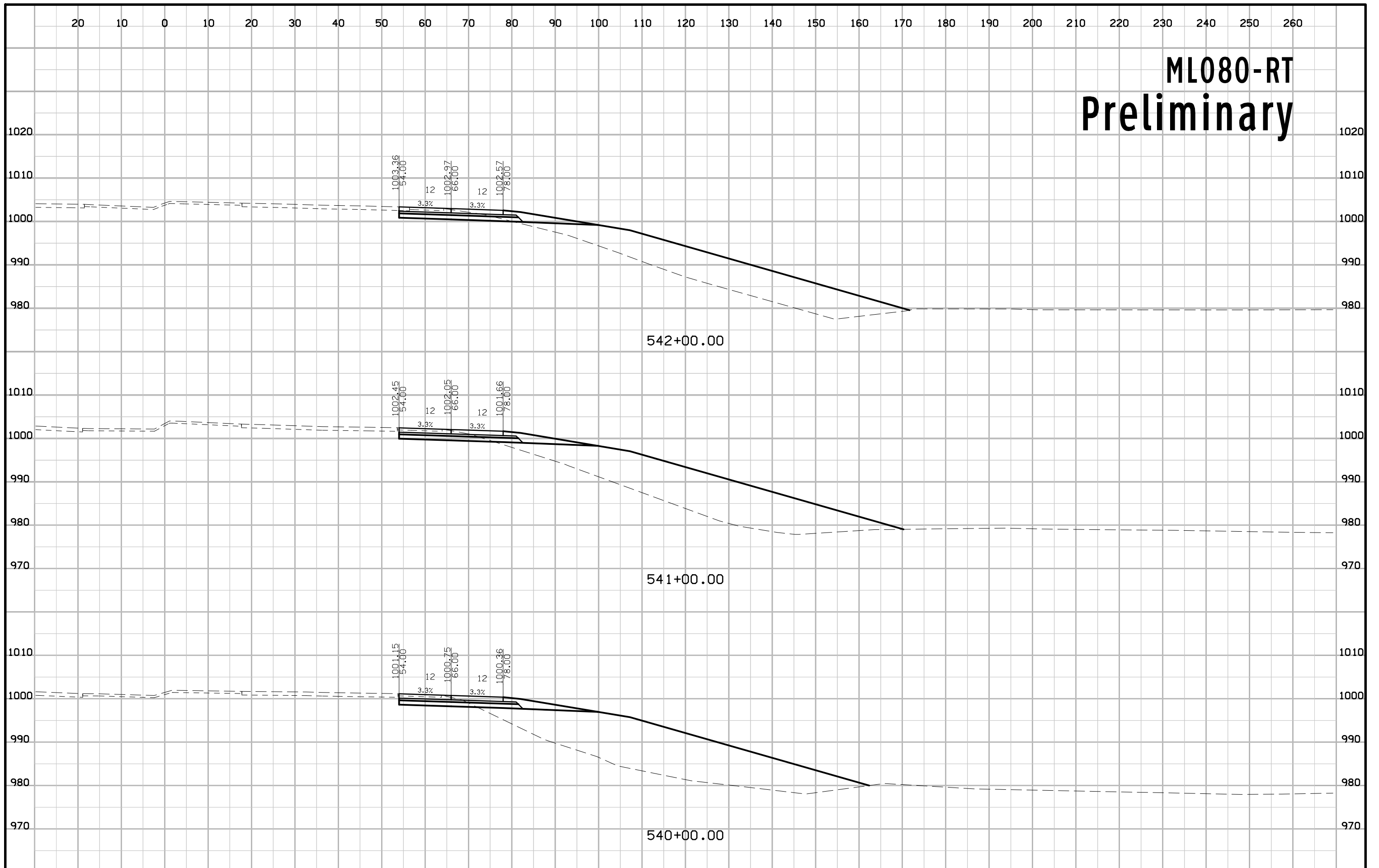
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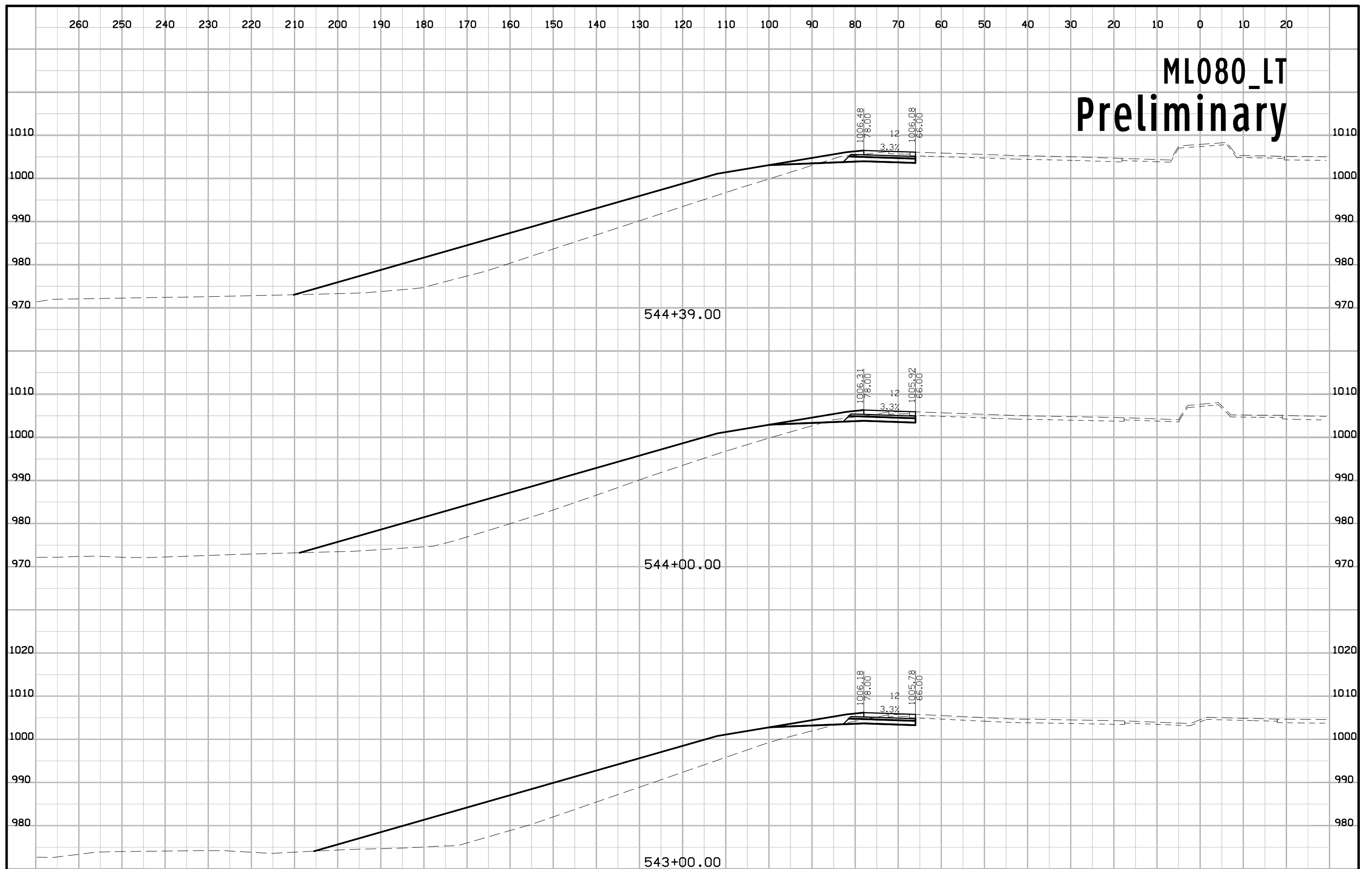
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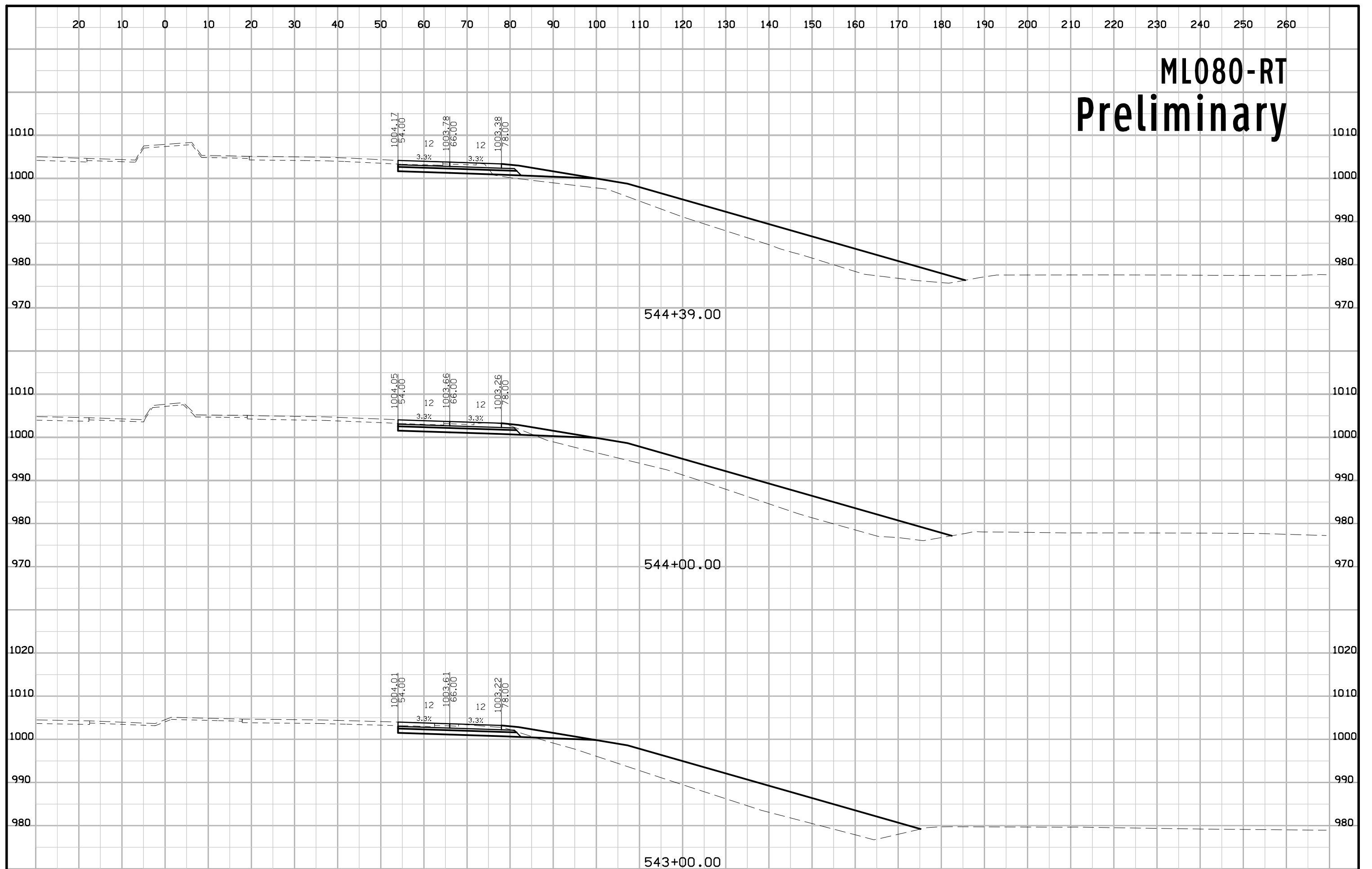
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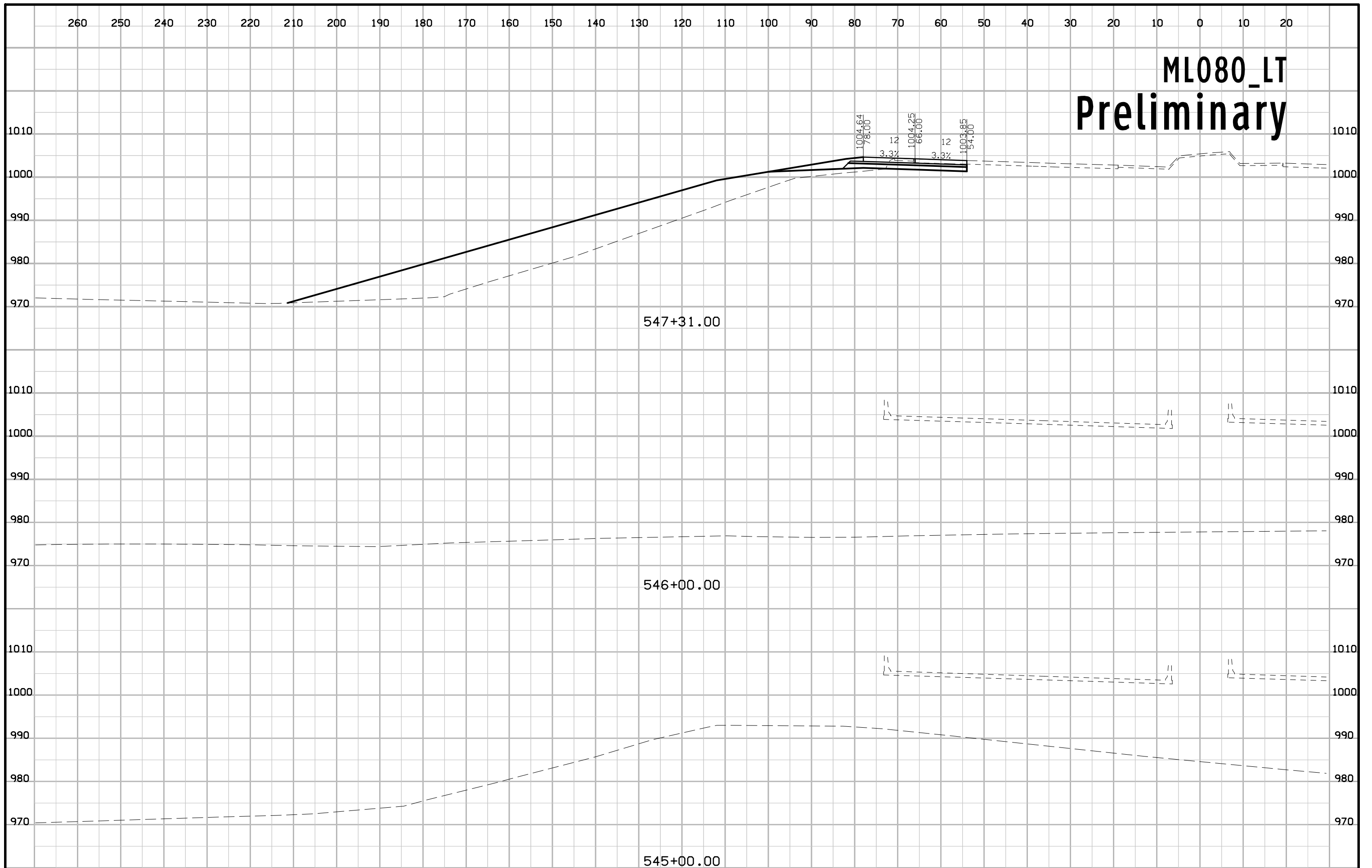
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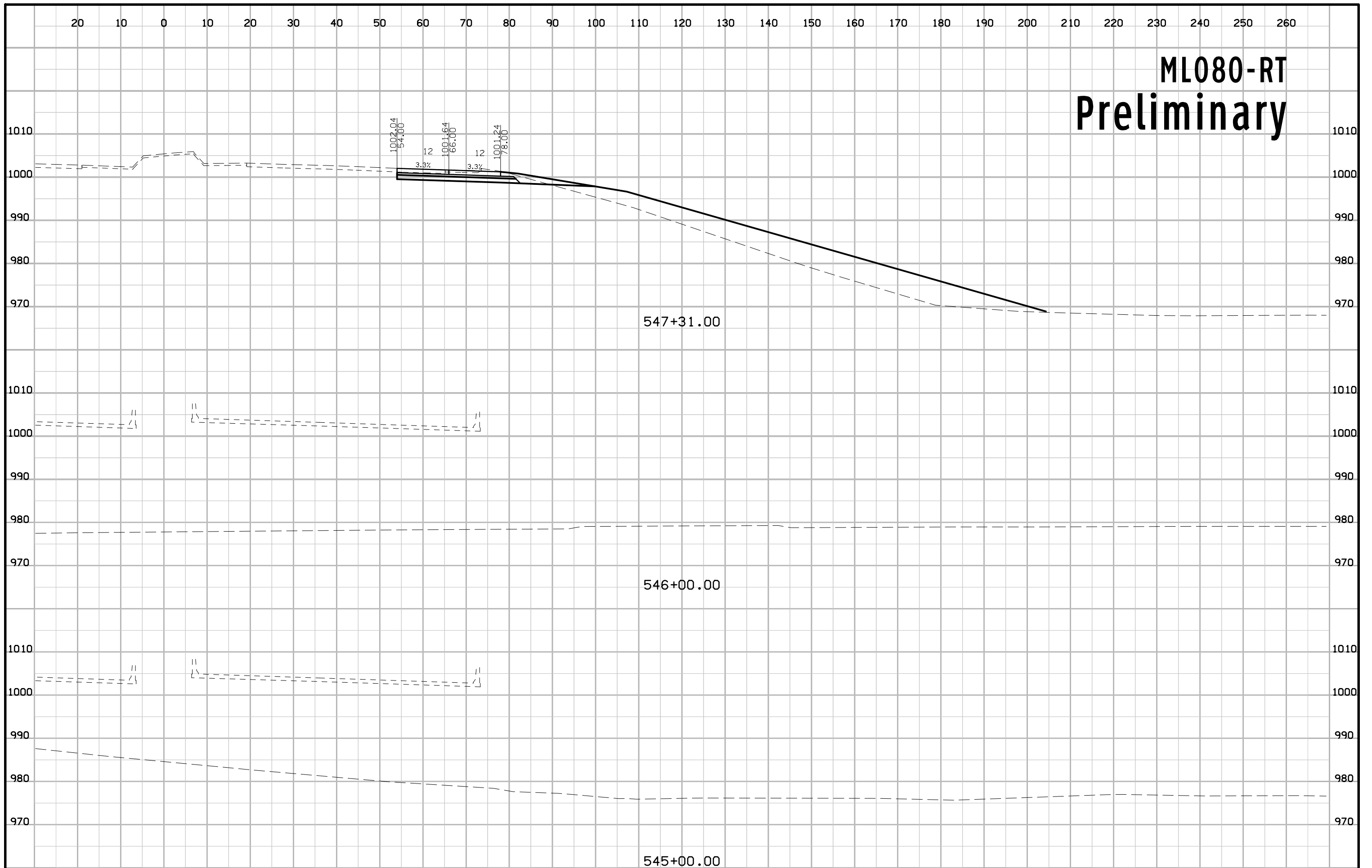
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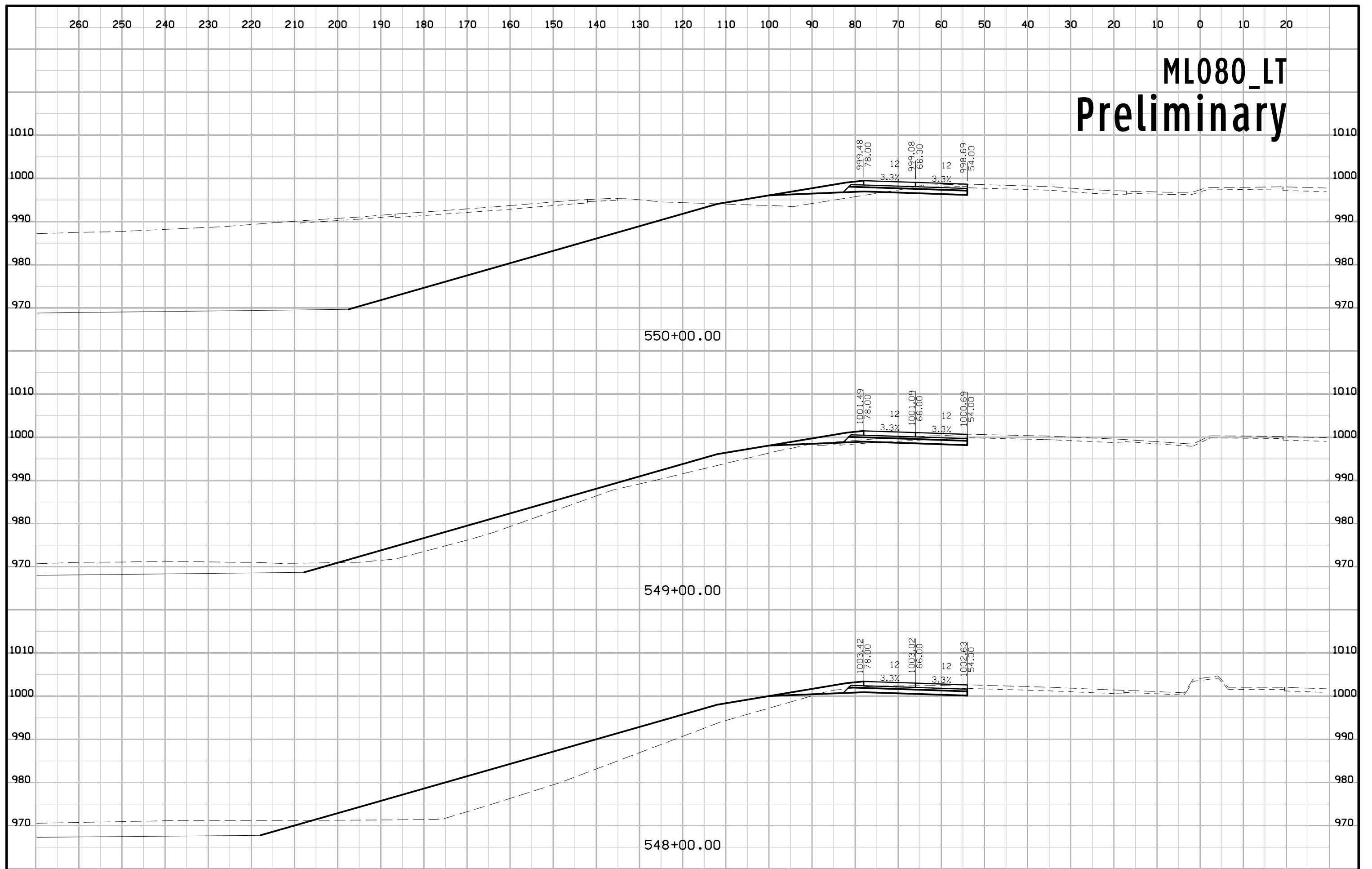
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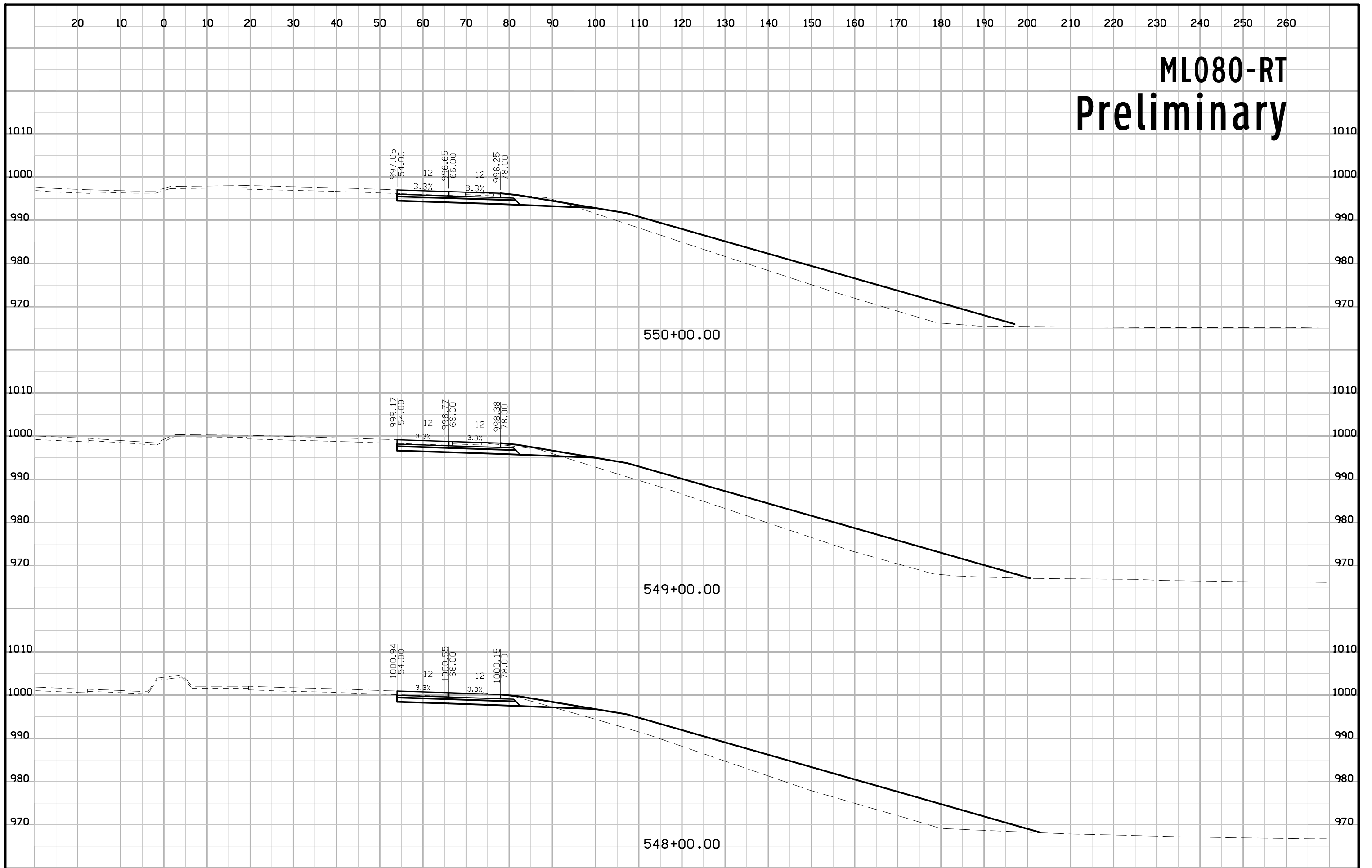
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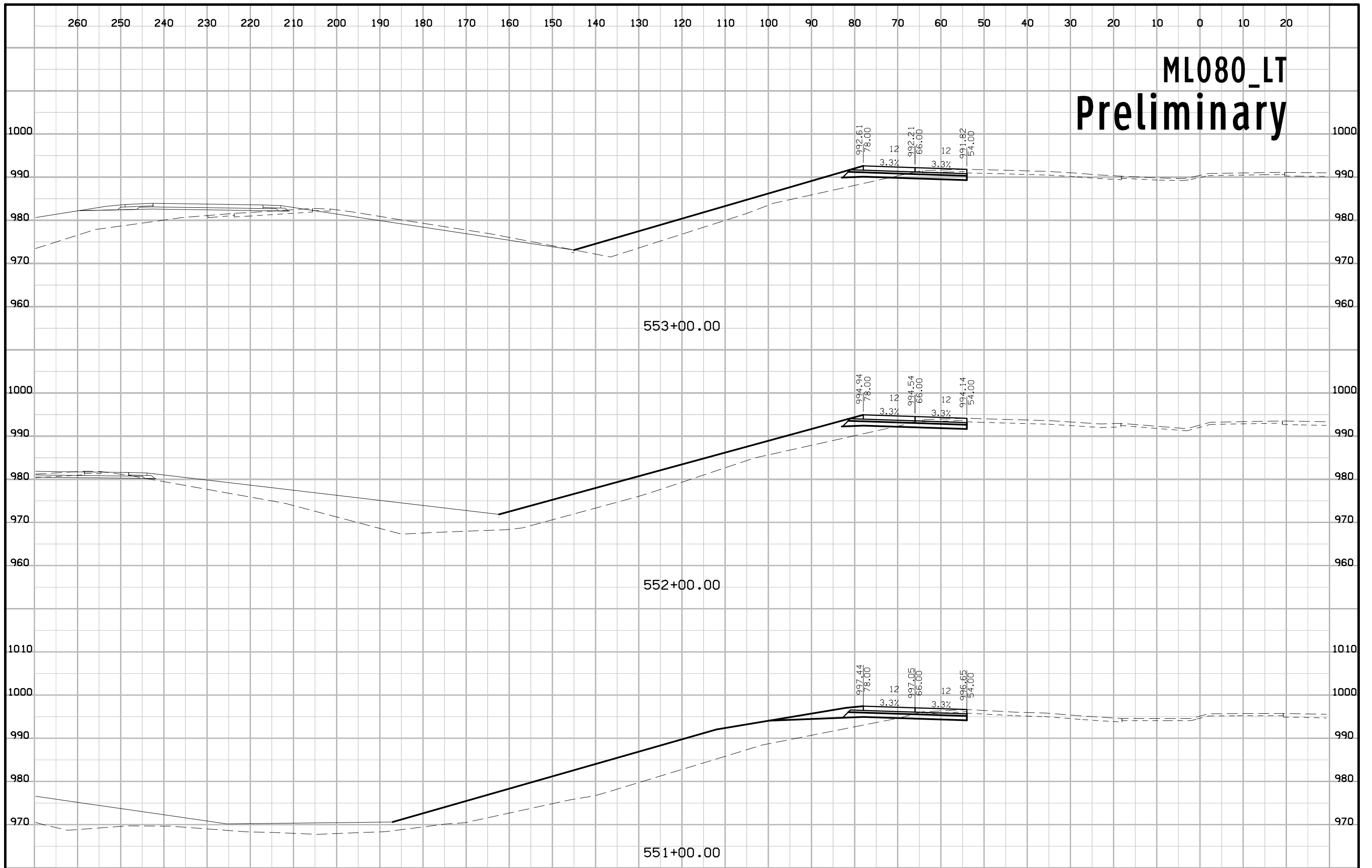
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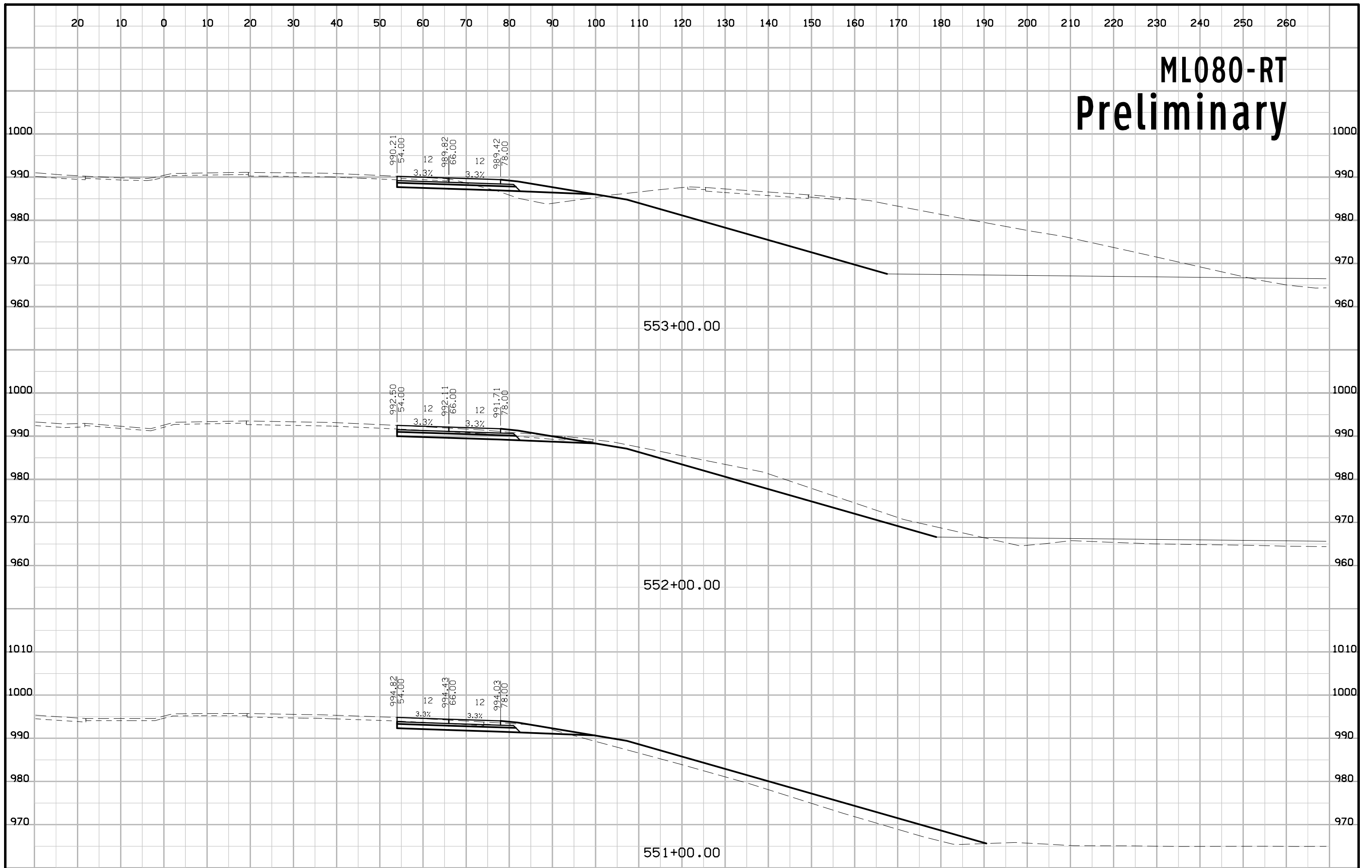
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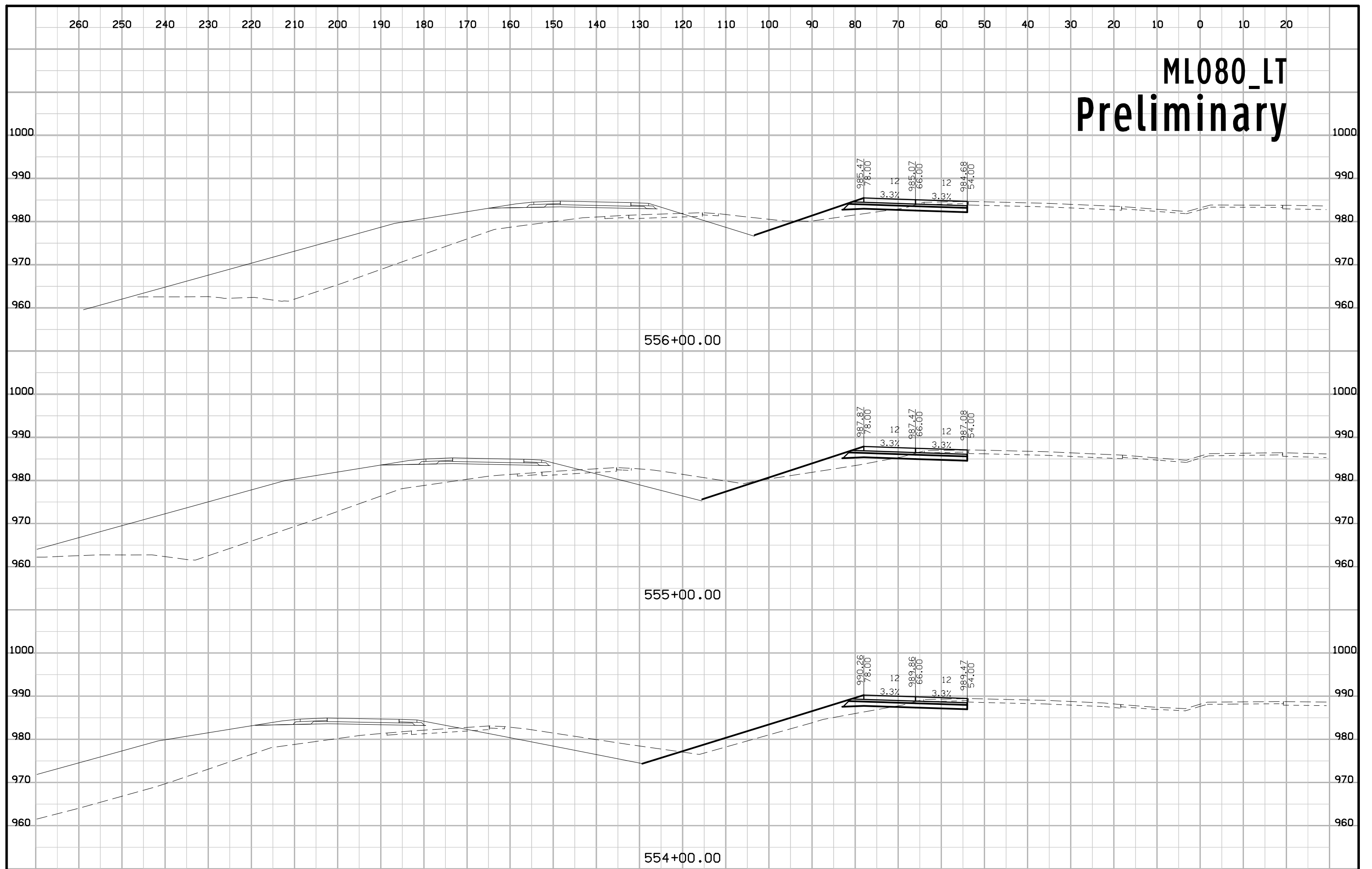
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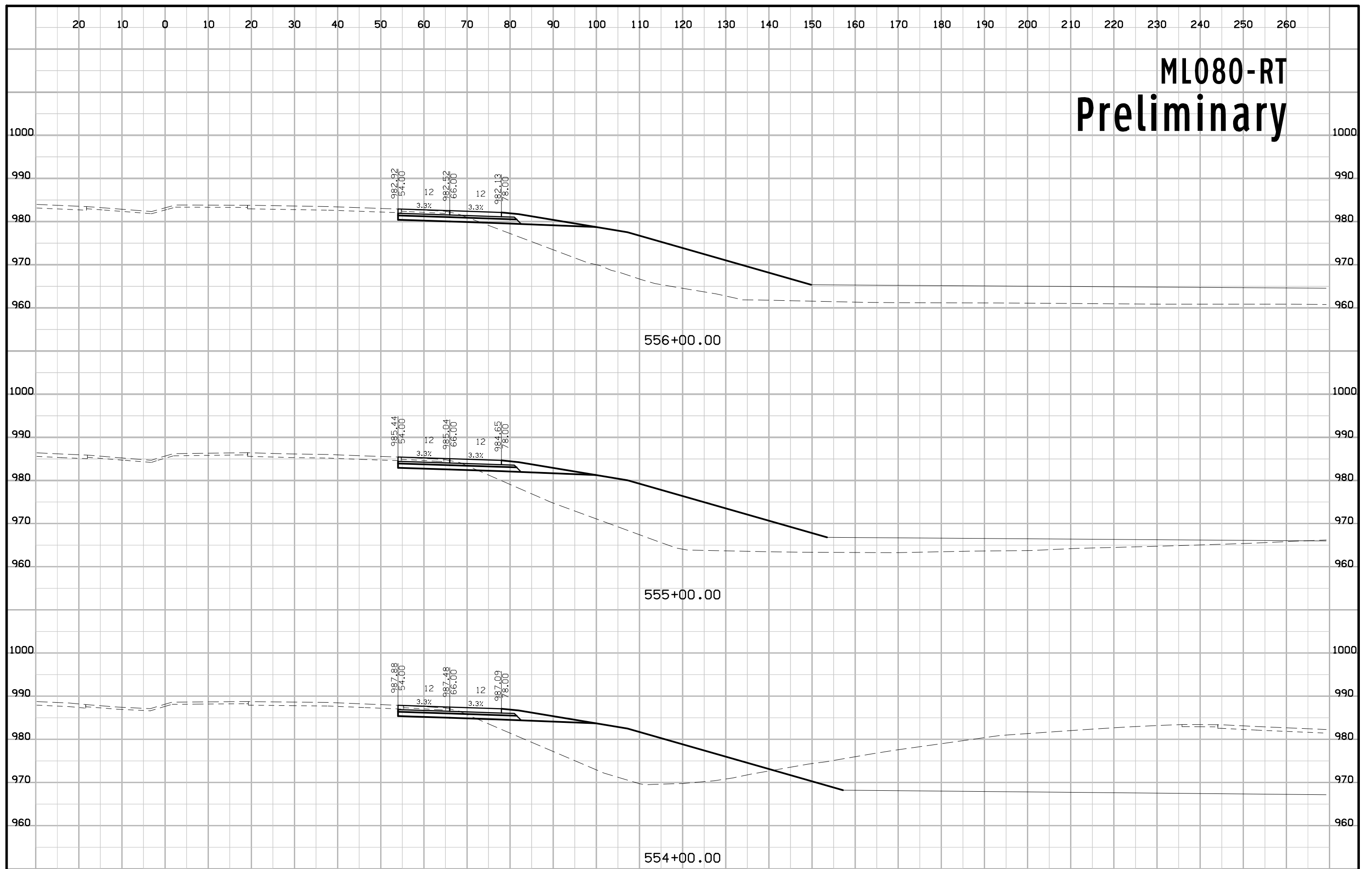
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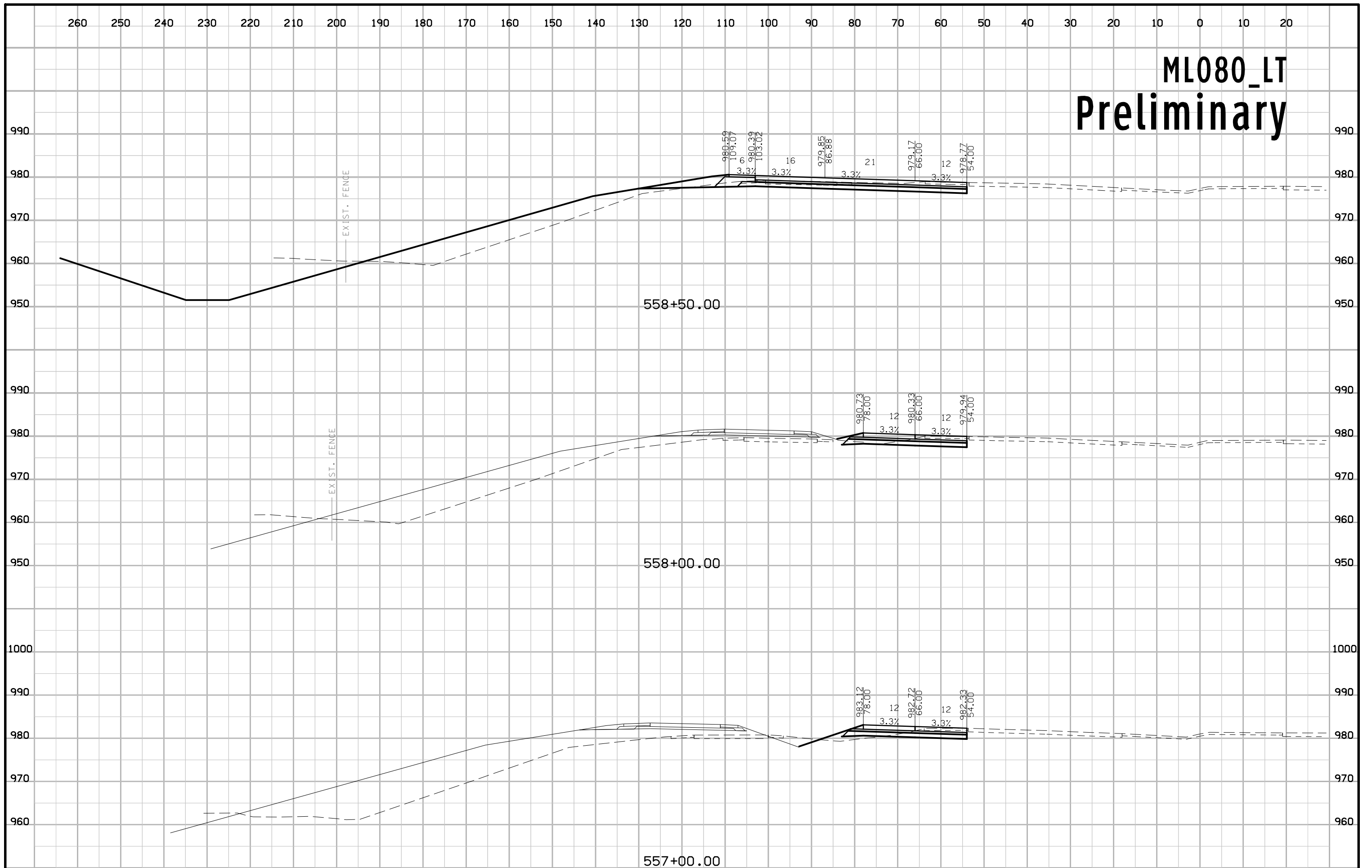
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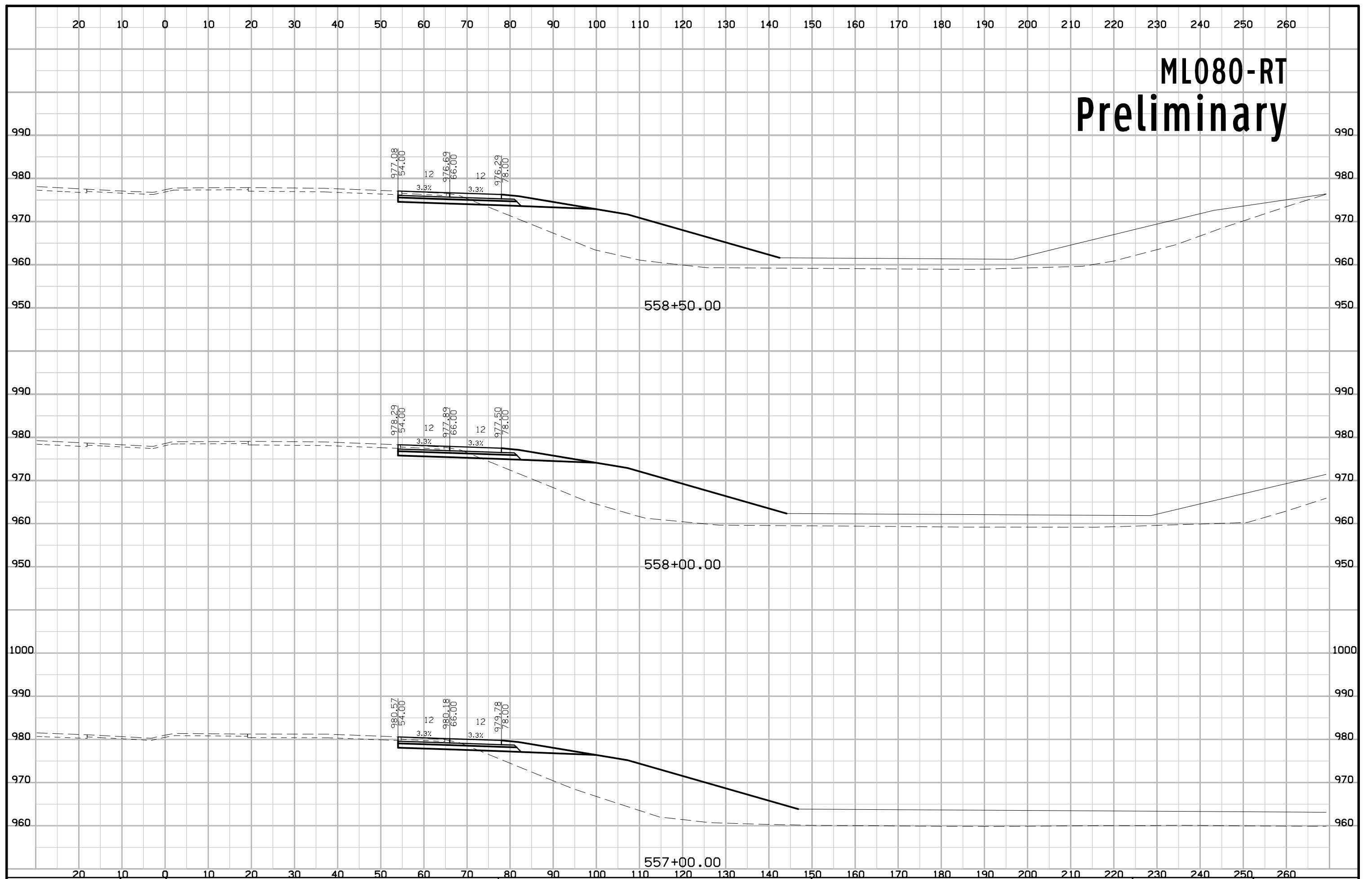
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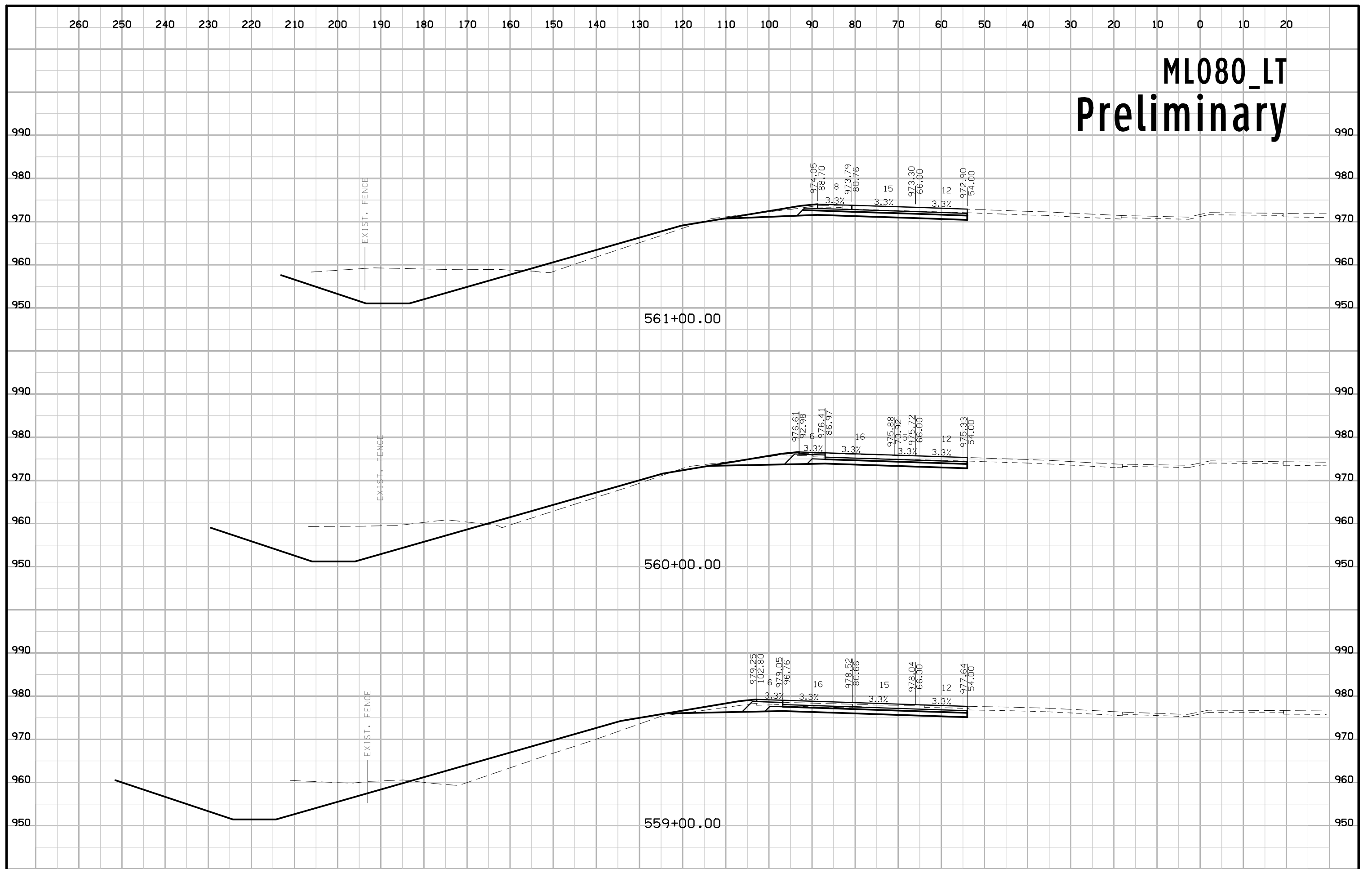
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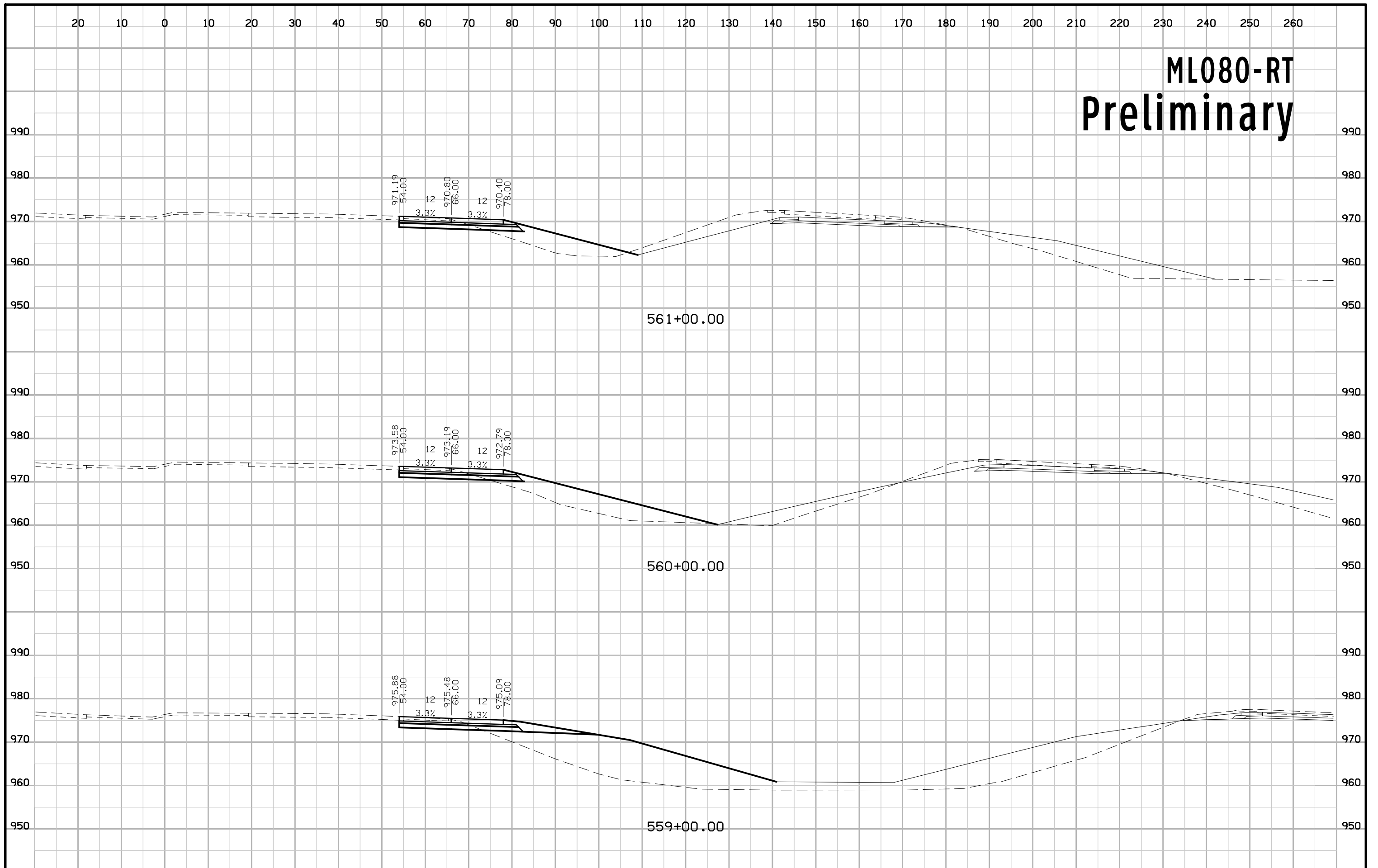
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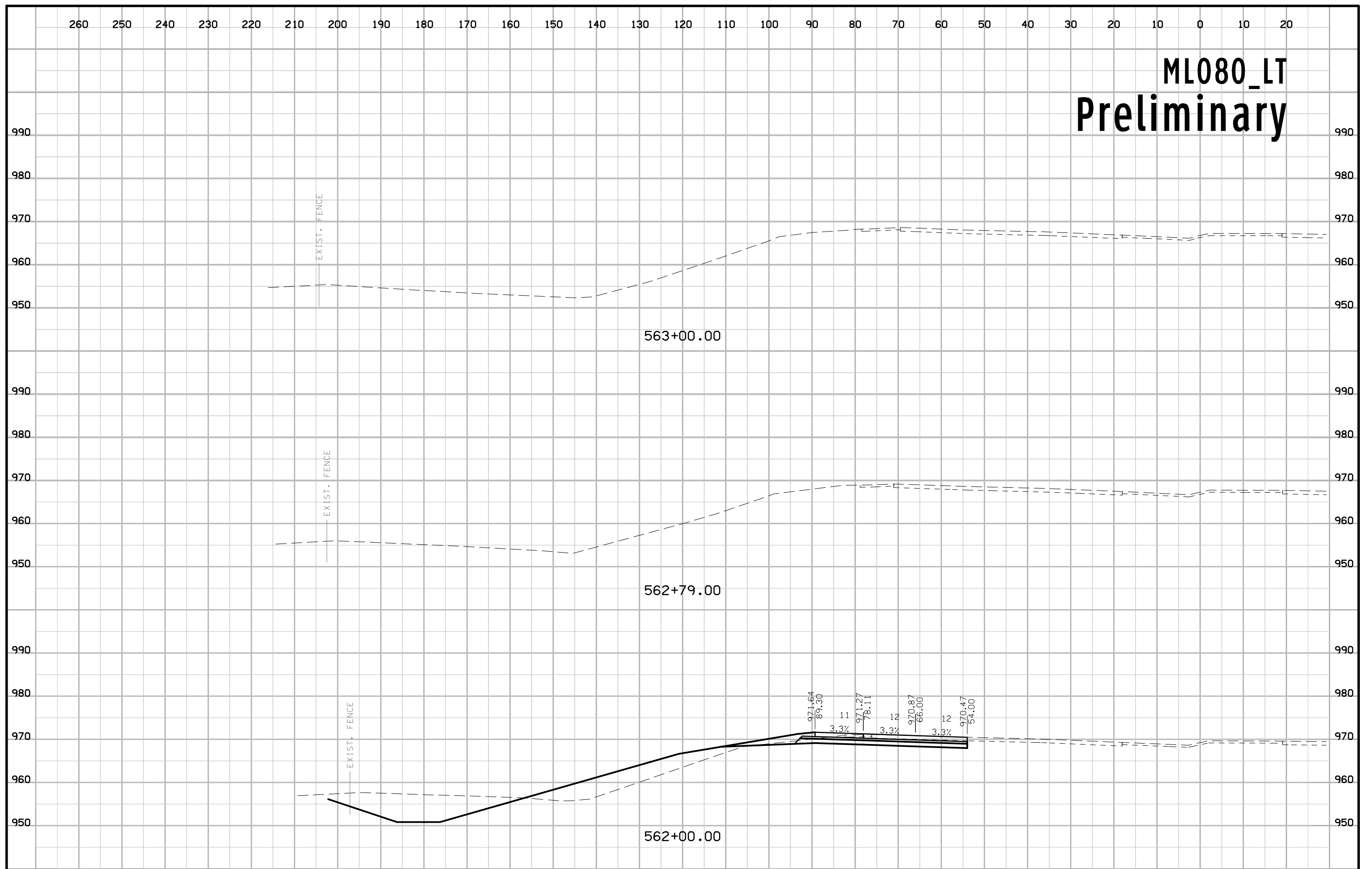
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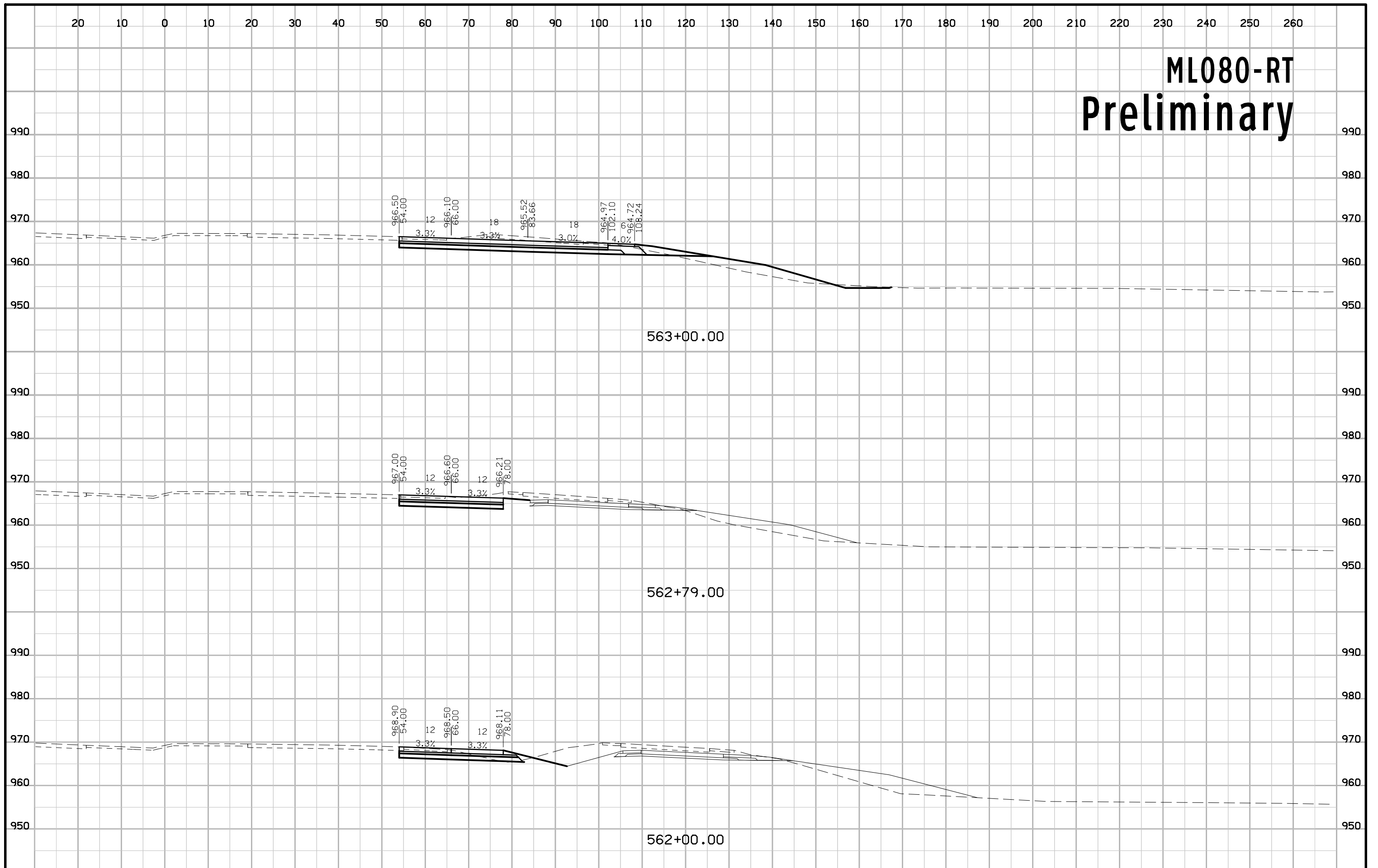
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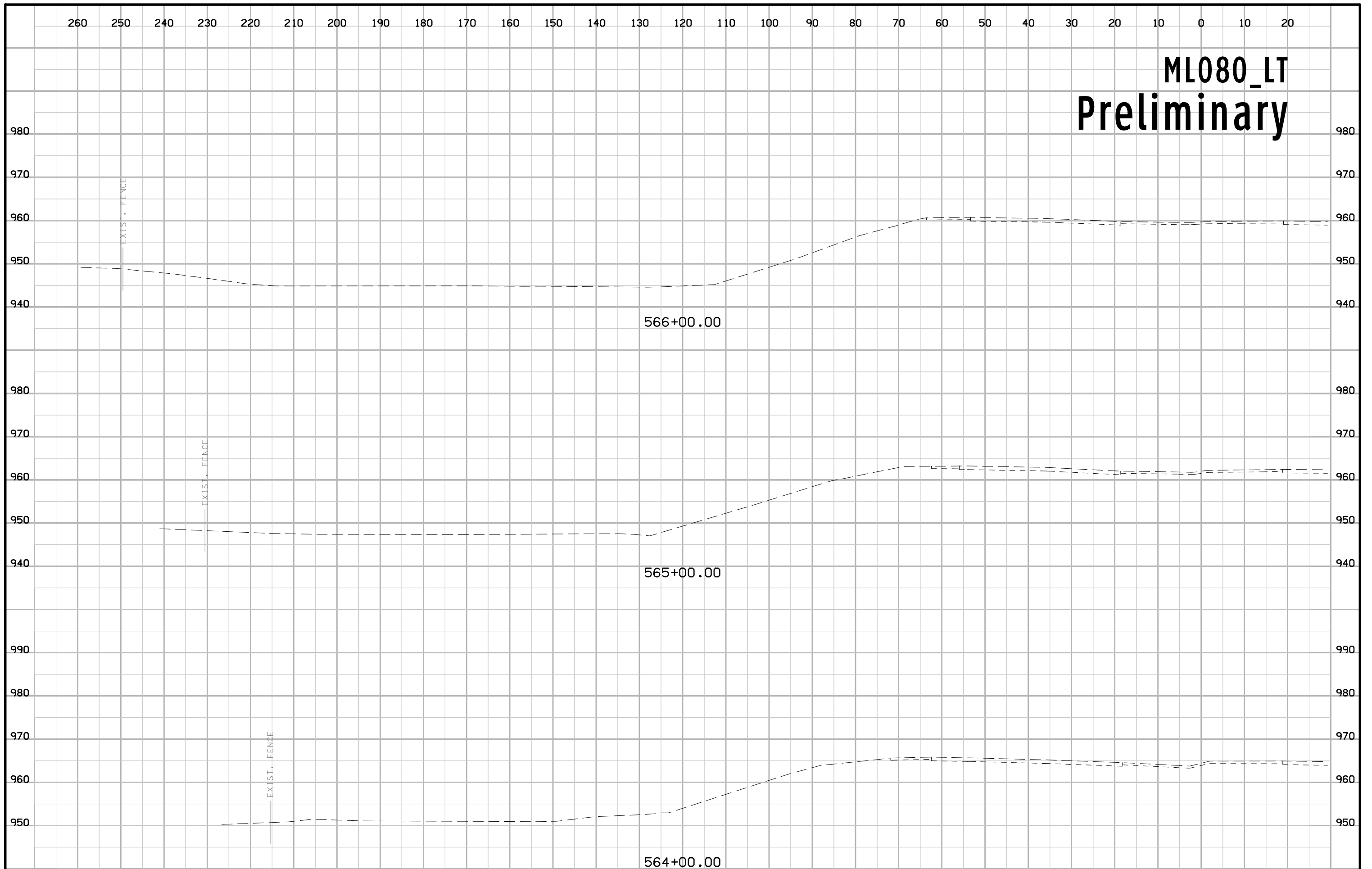
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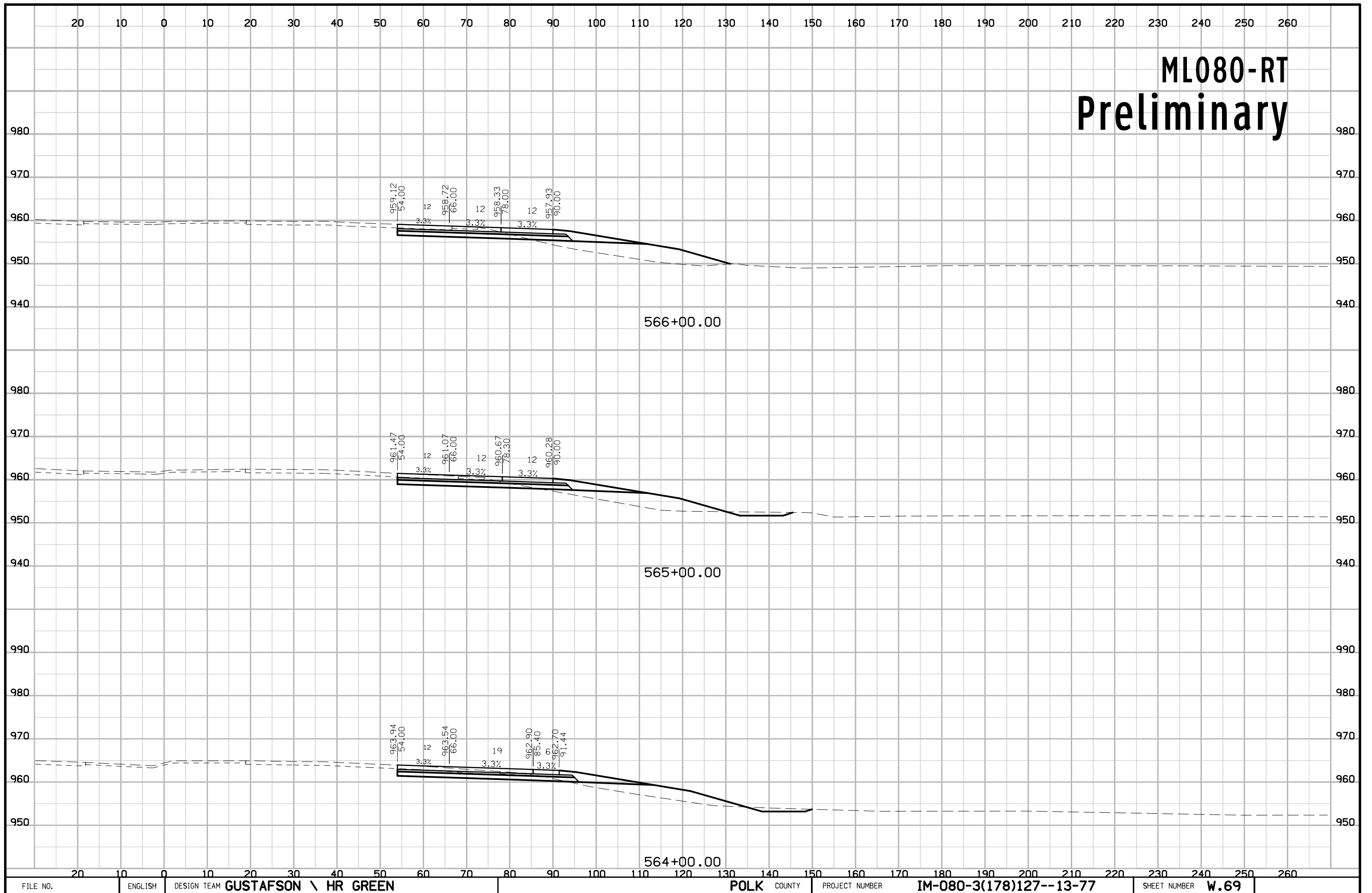
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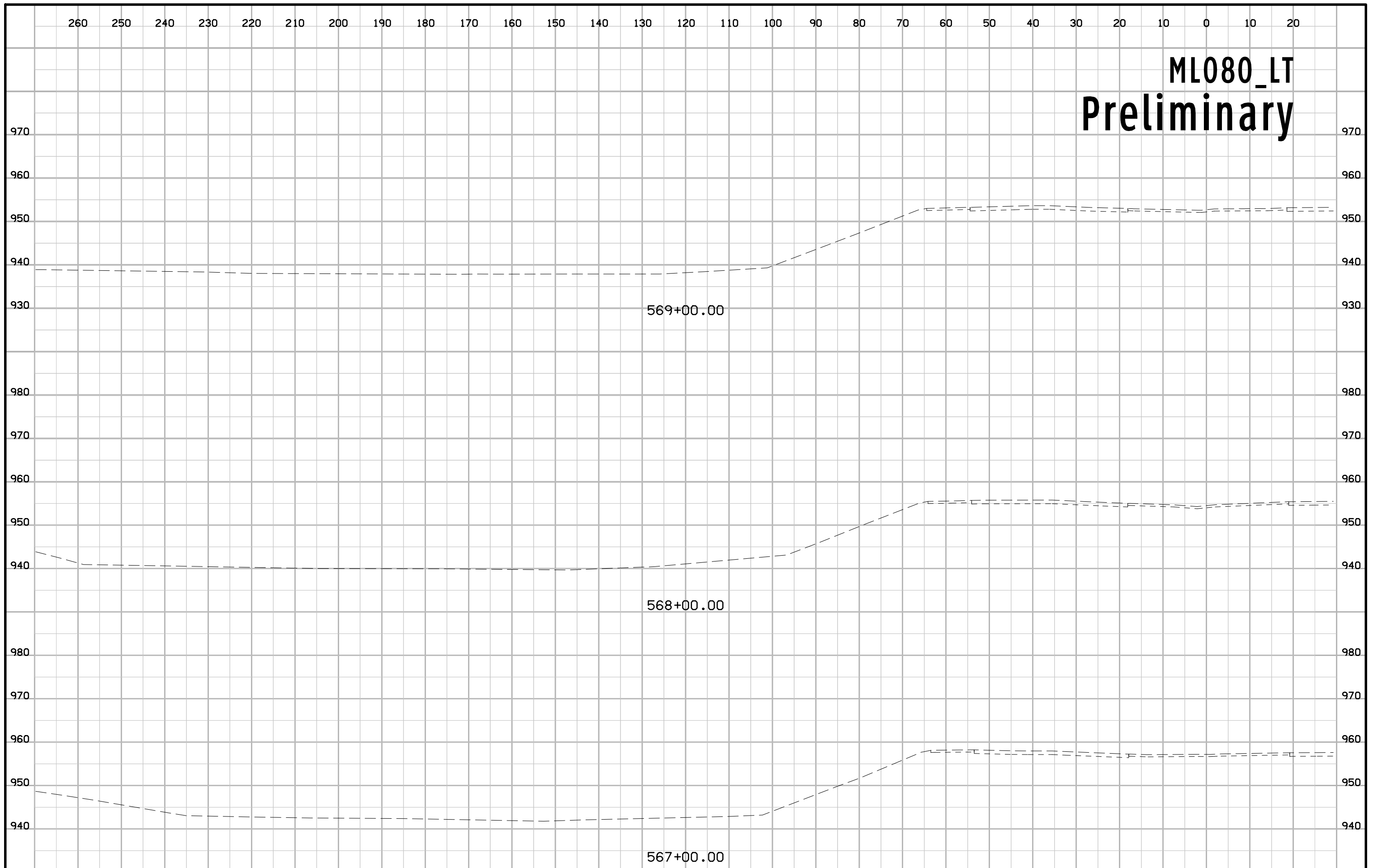
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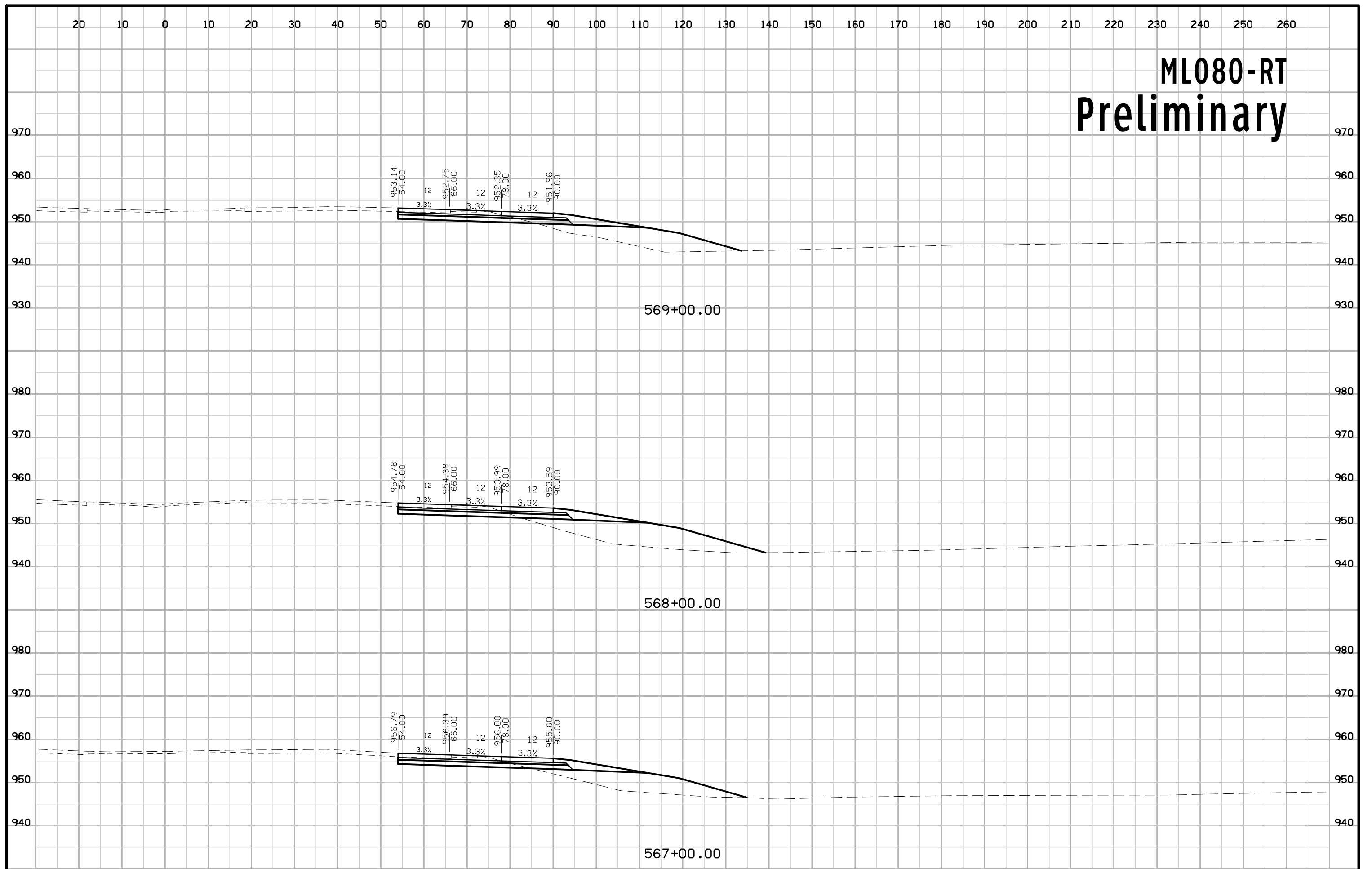
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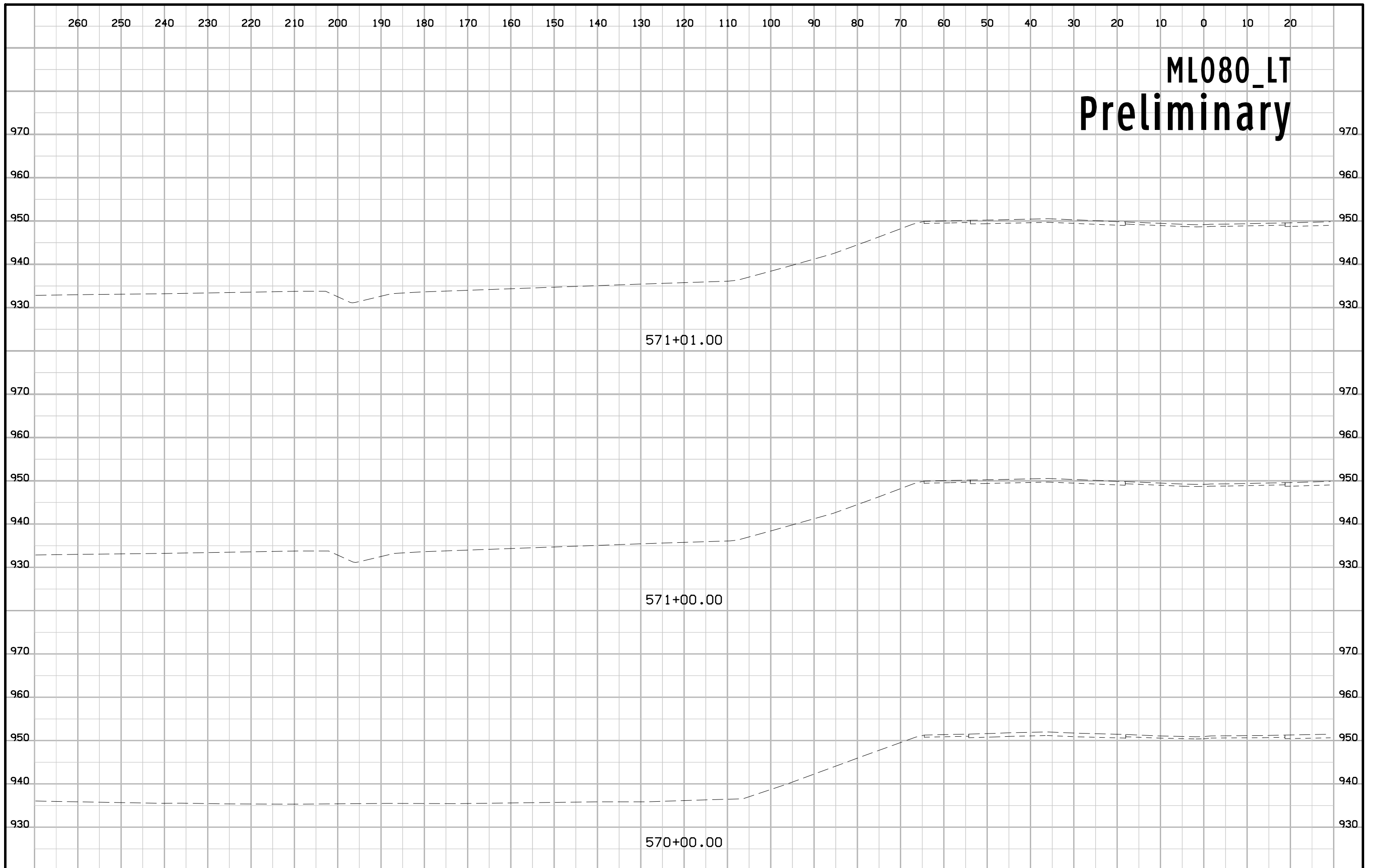
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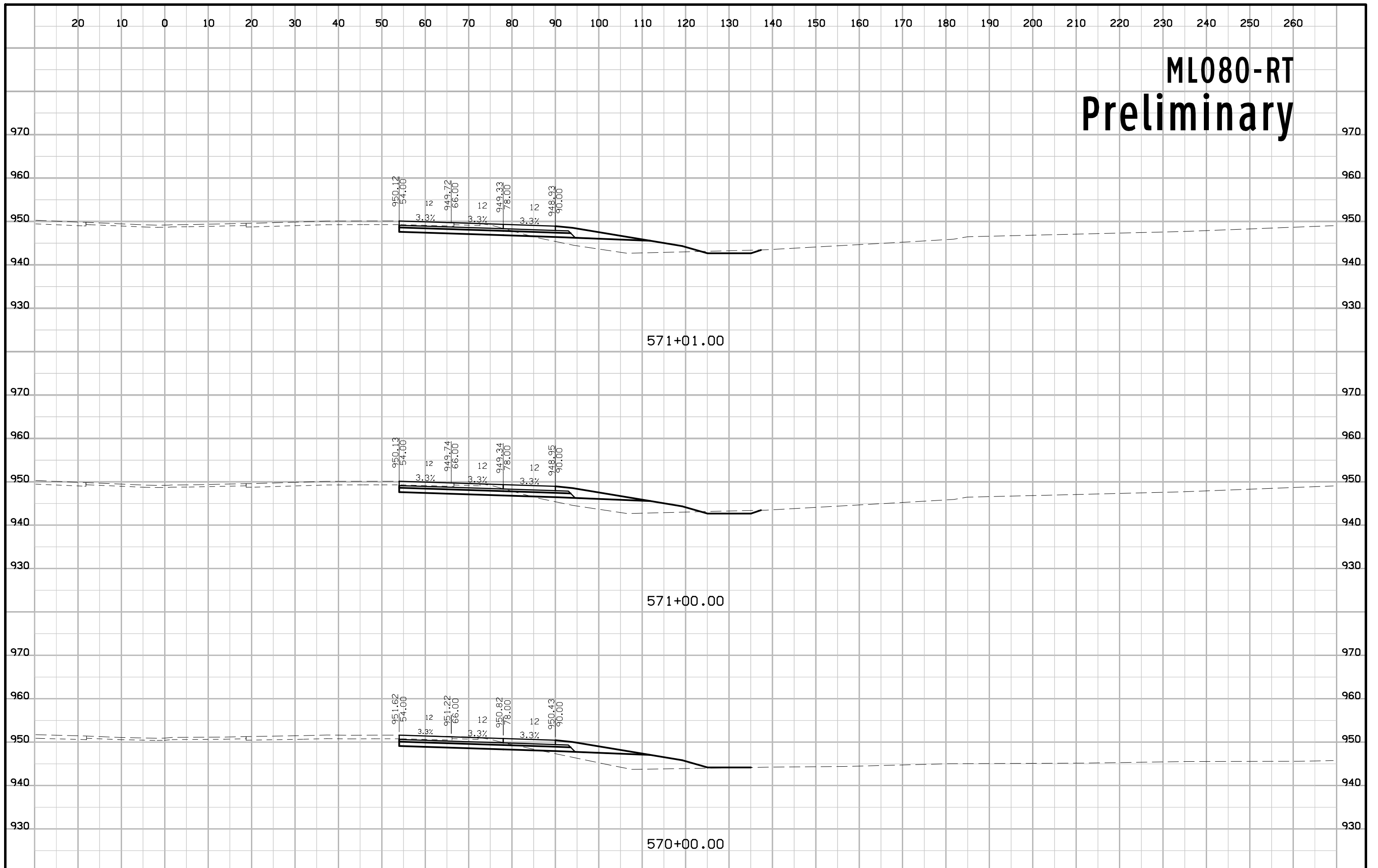
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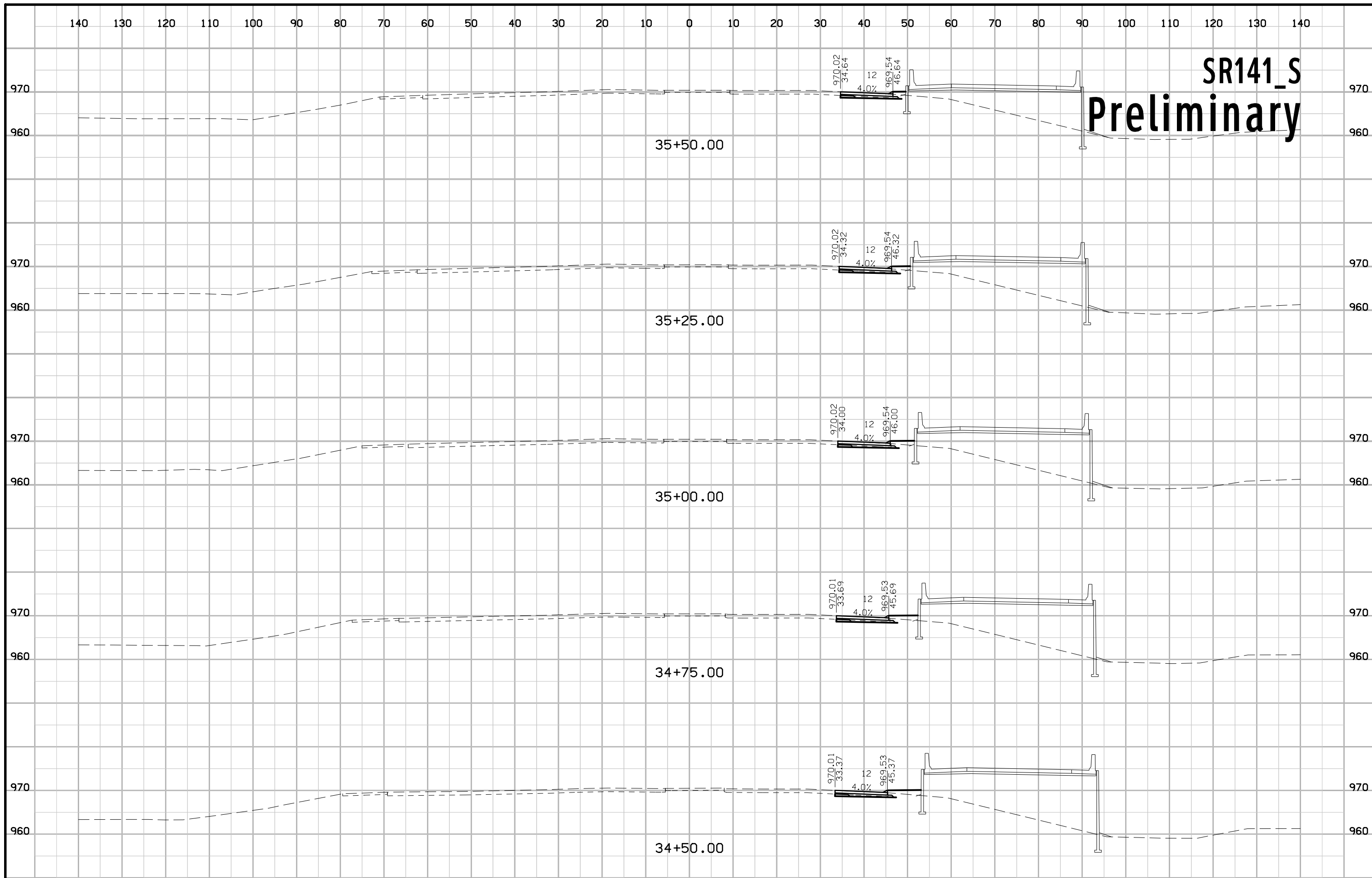


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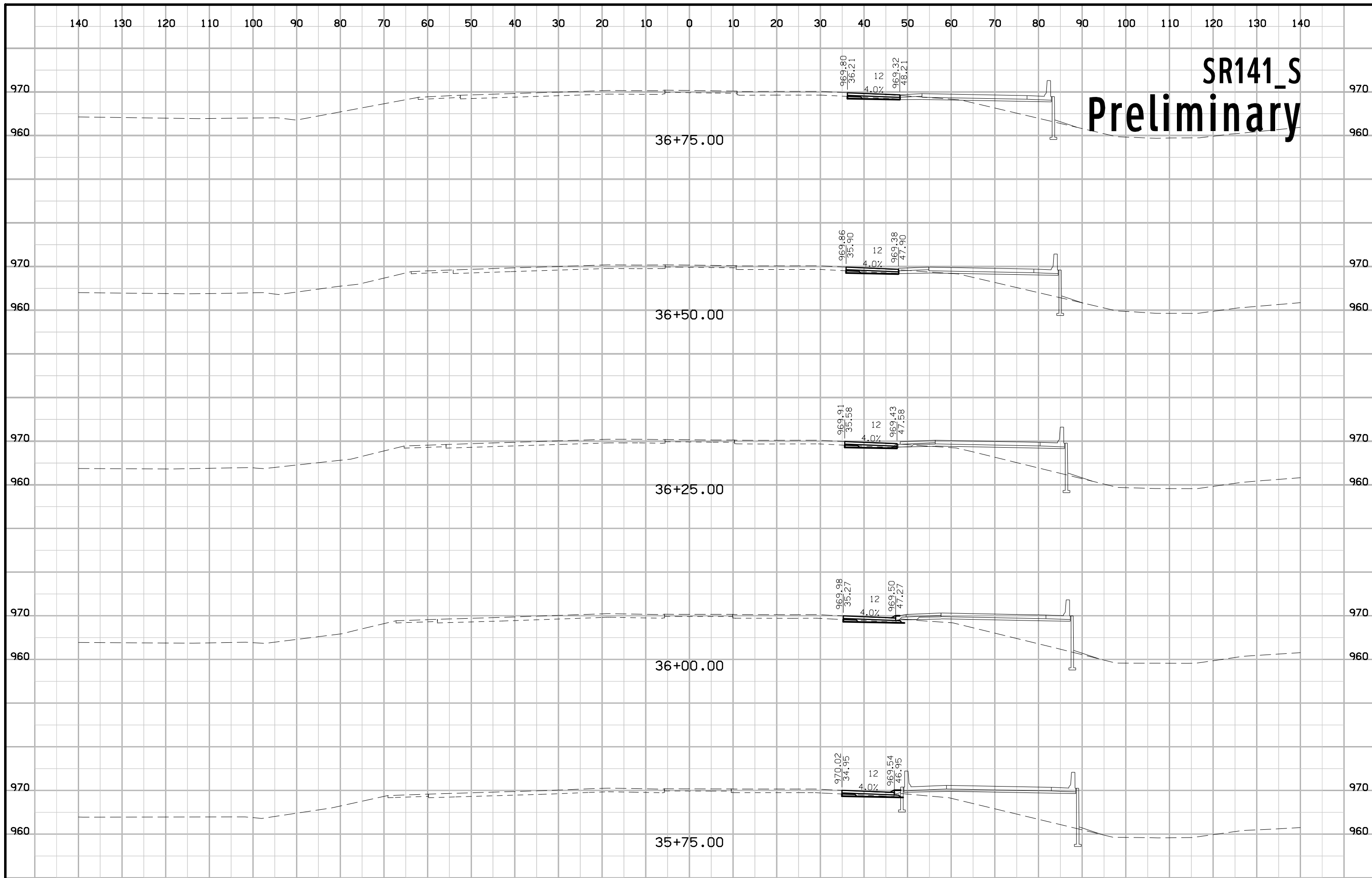


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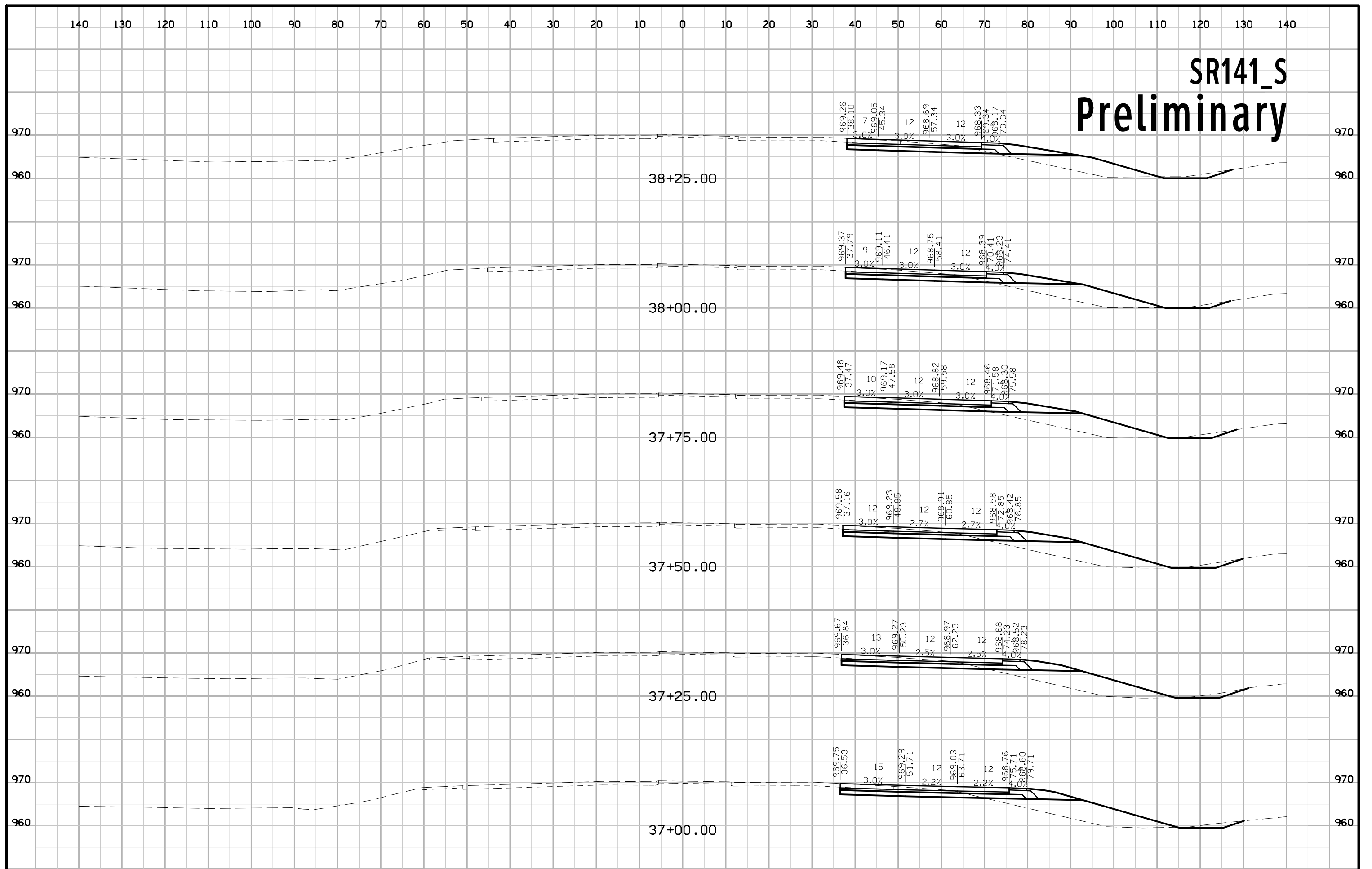


SR141_S
Preliminary

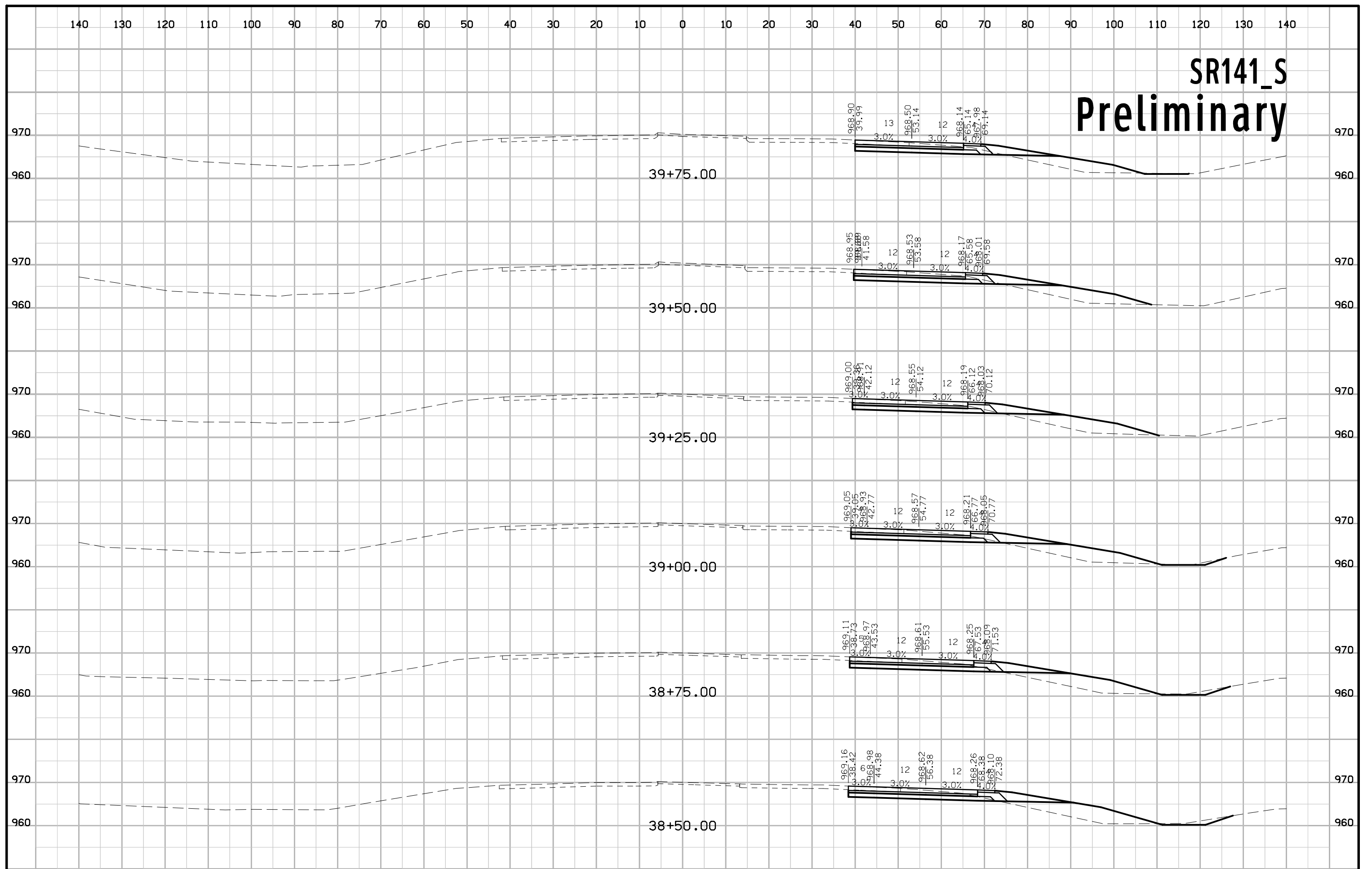


SR141_S
Preliminary

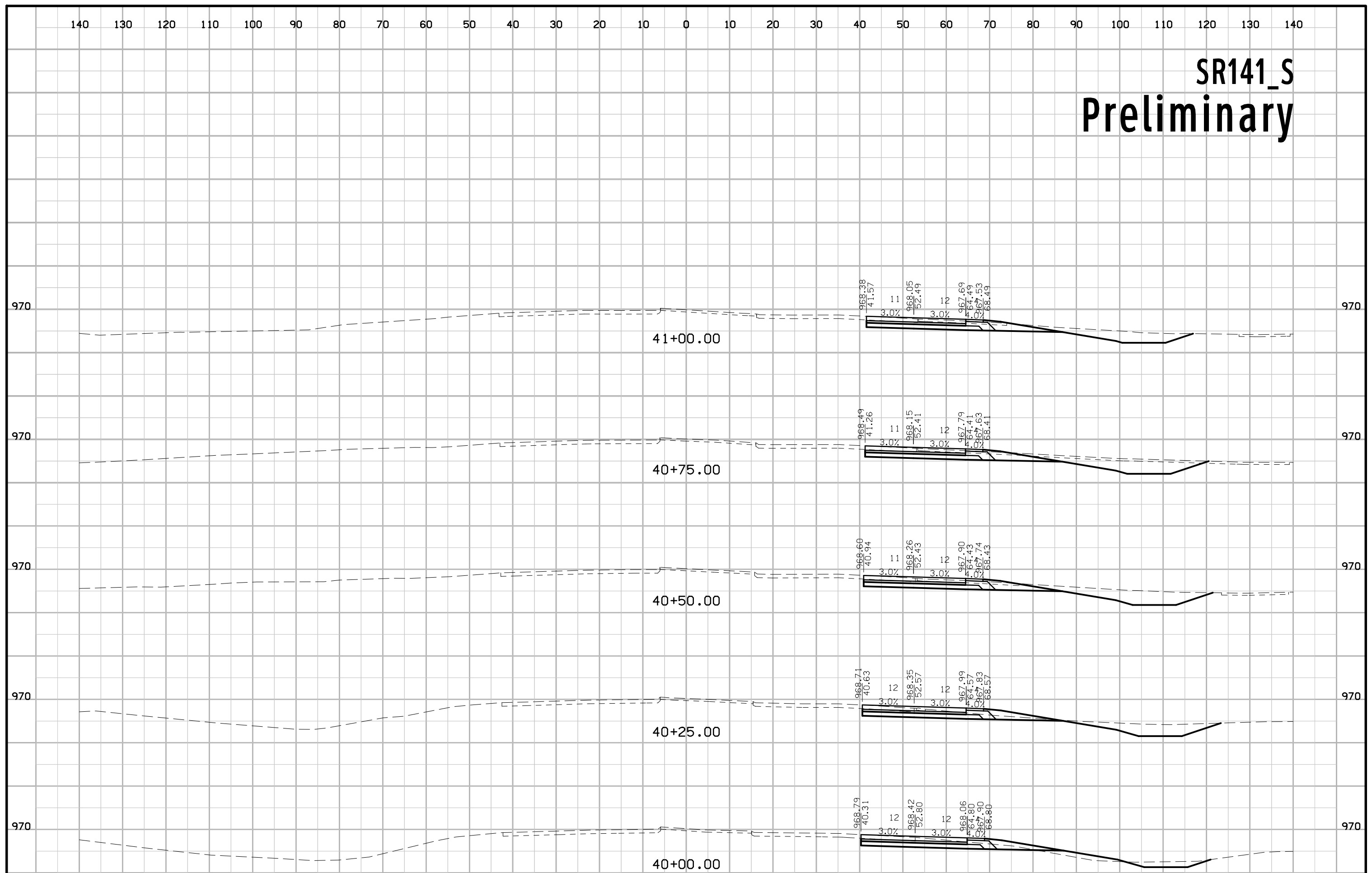
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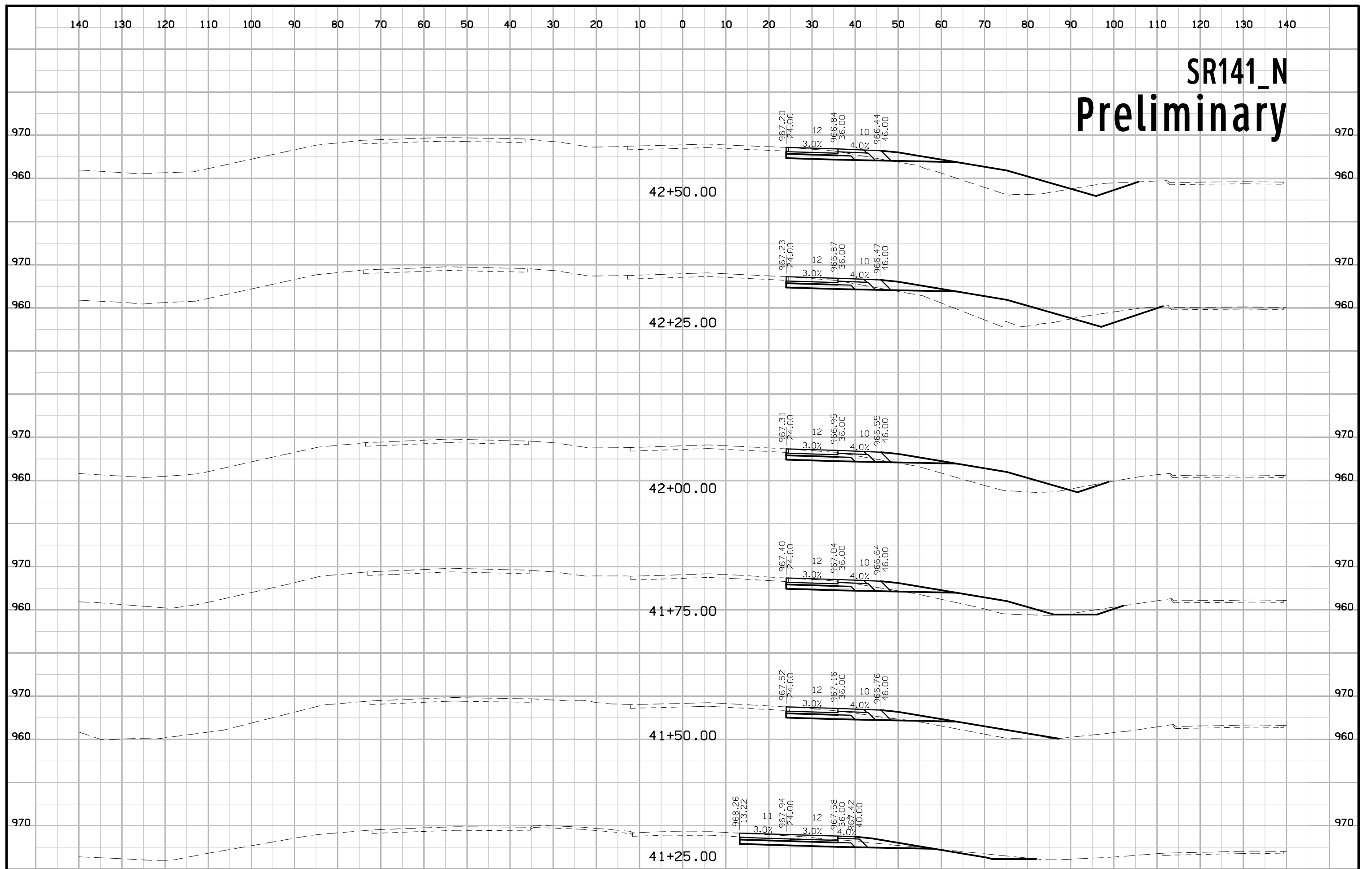
SR141_S Preliminary



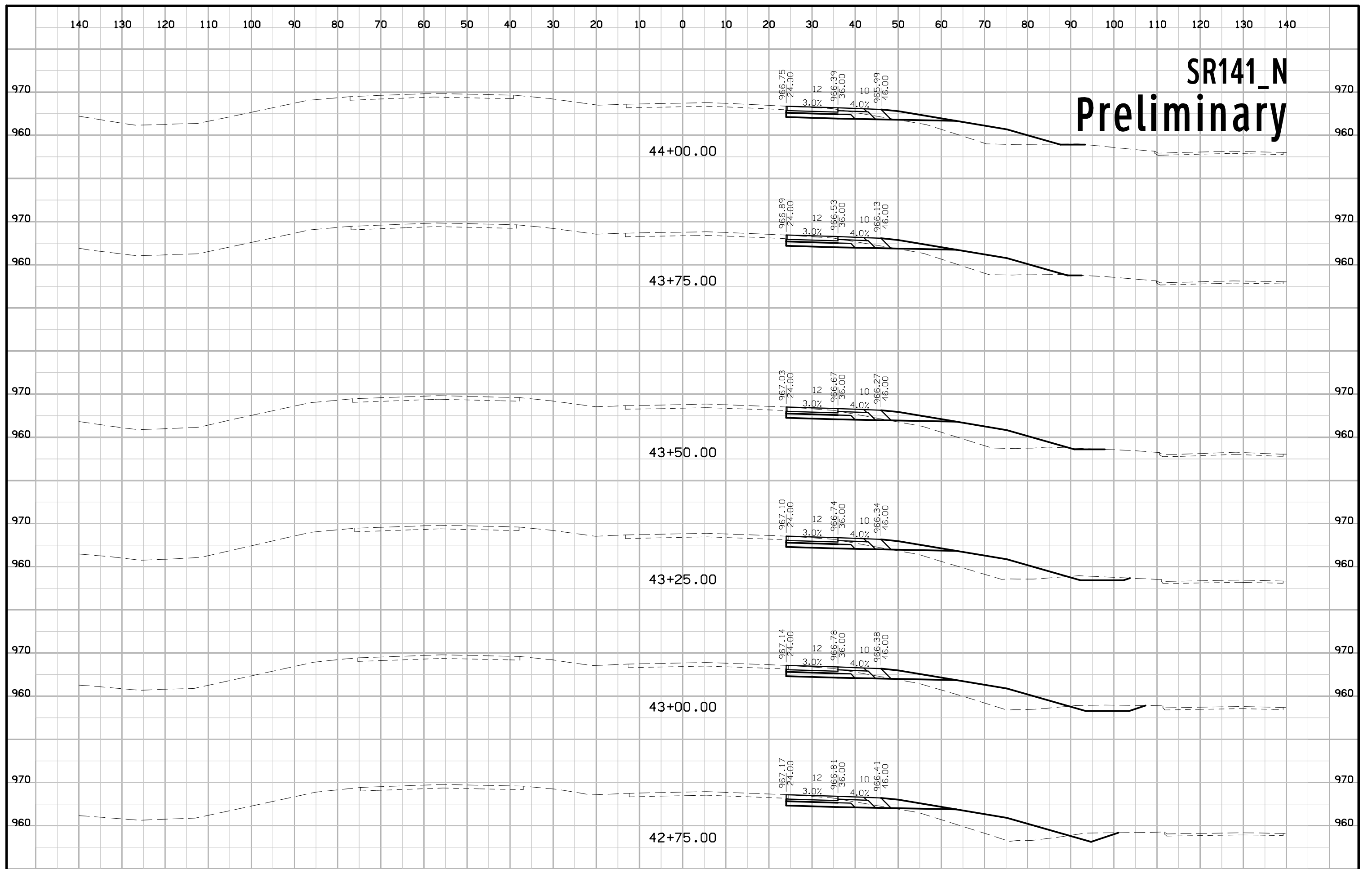
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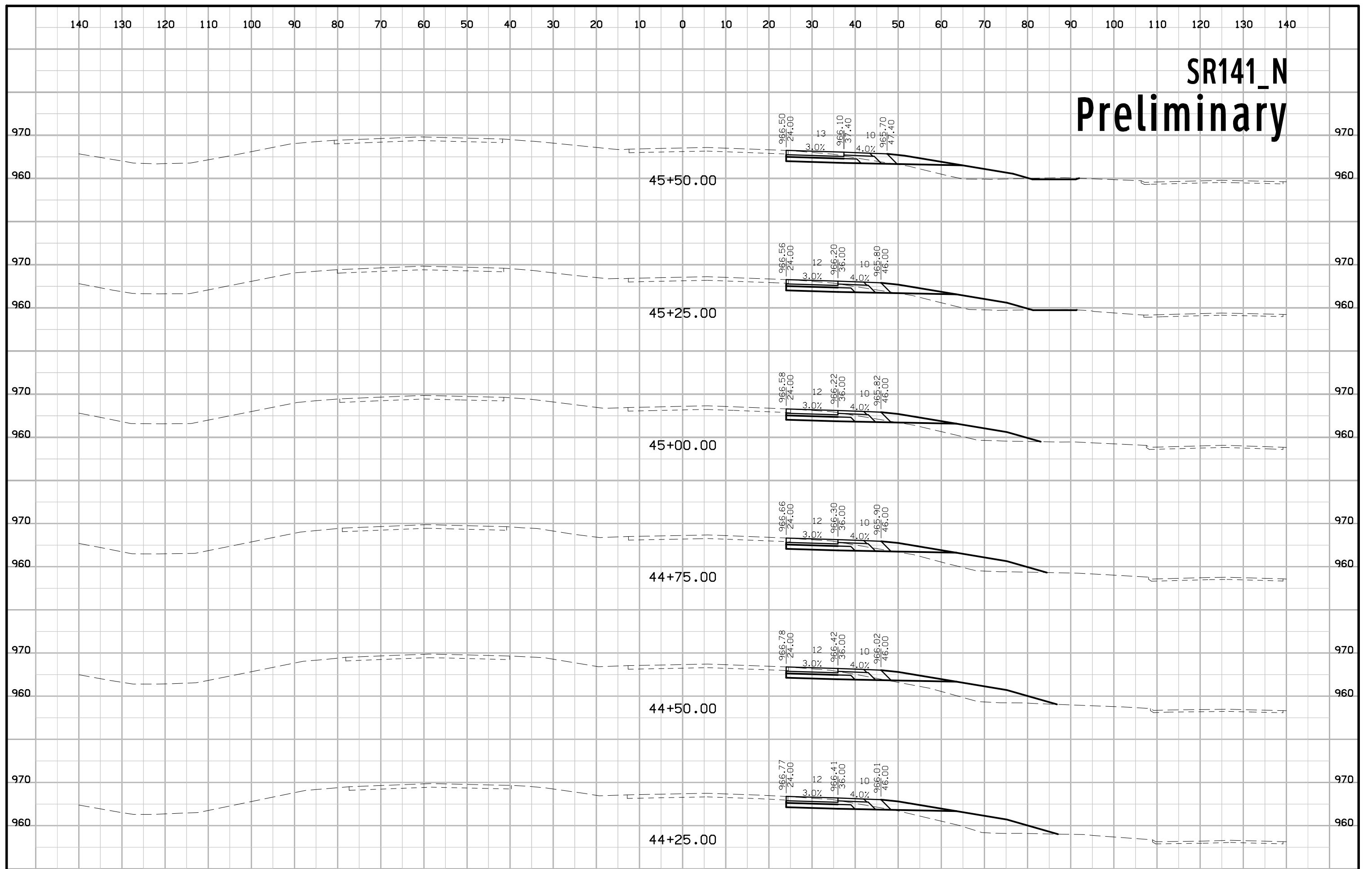
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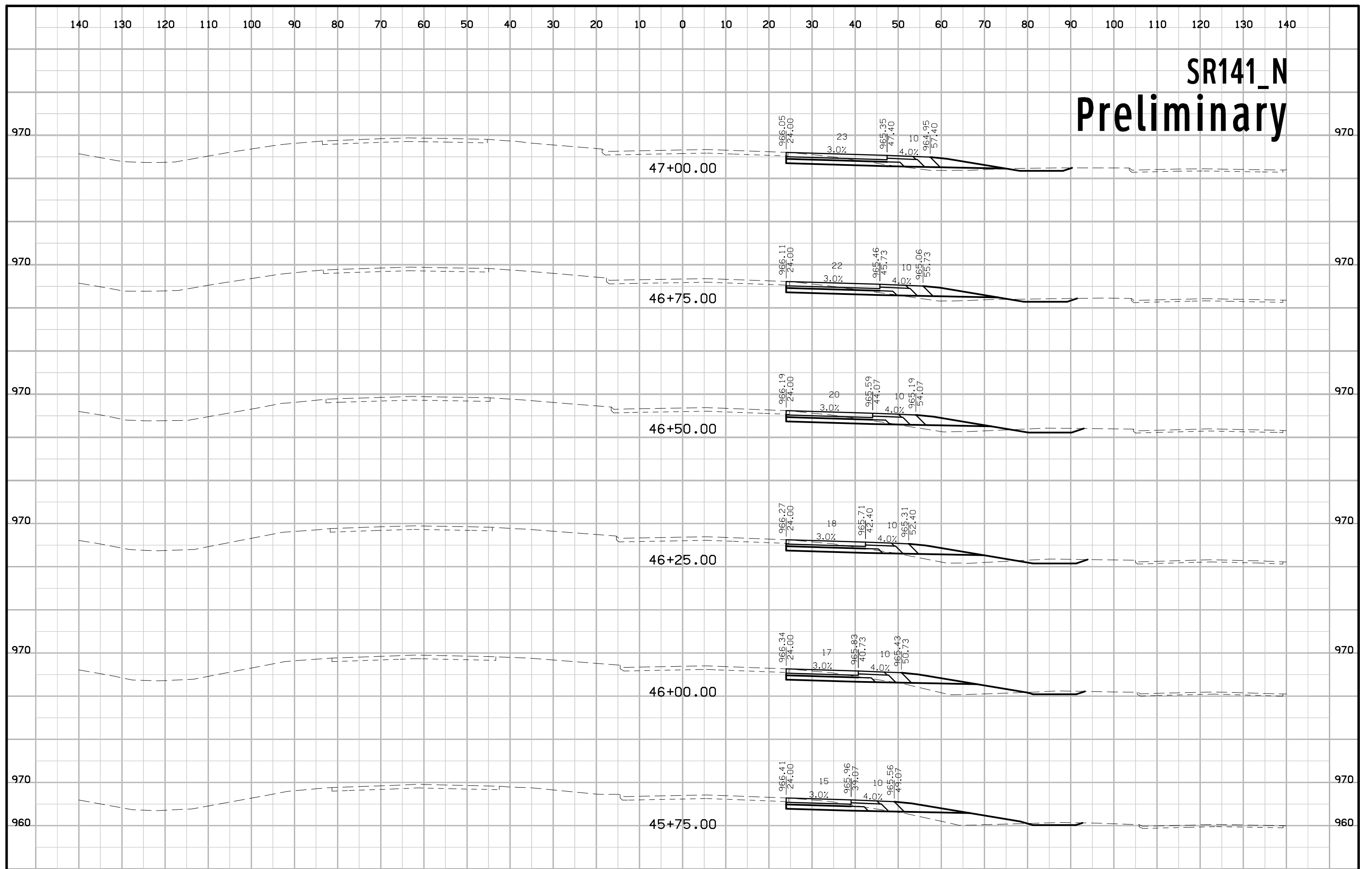
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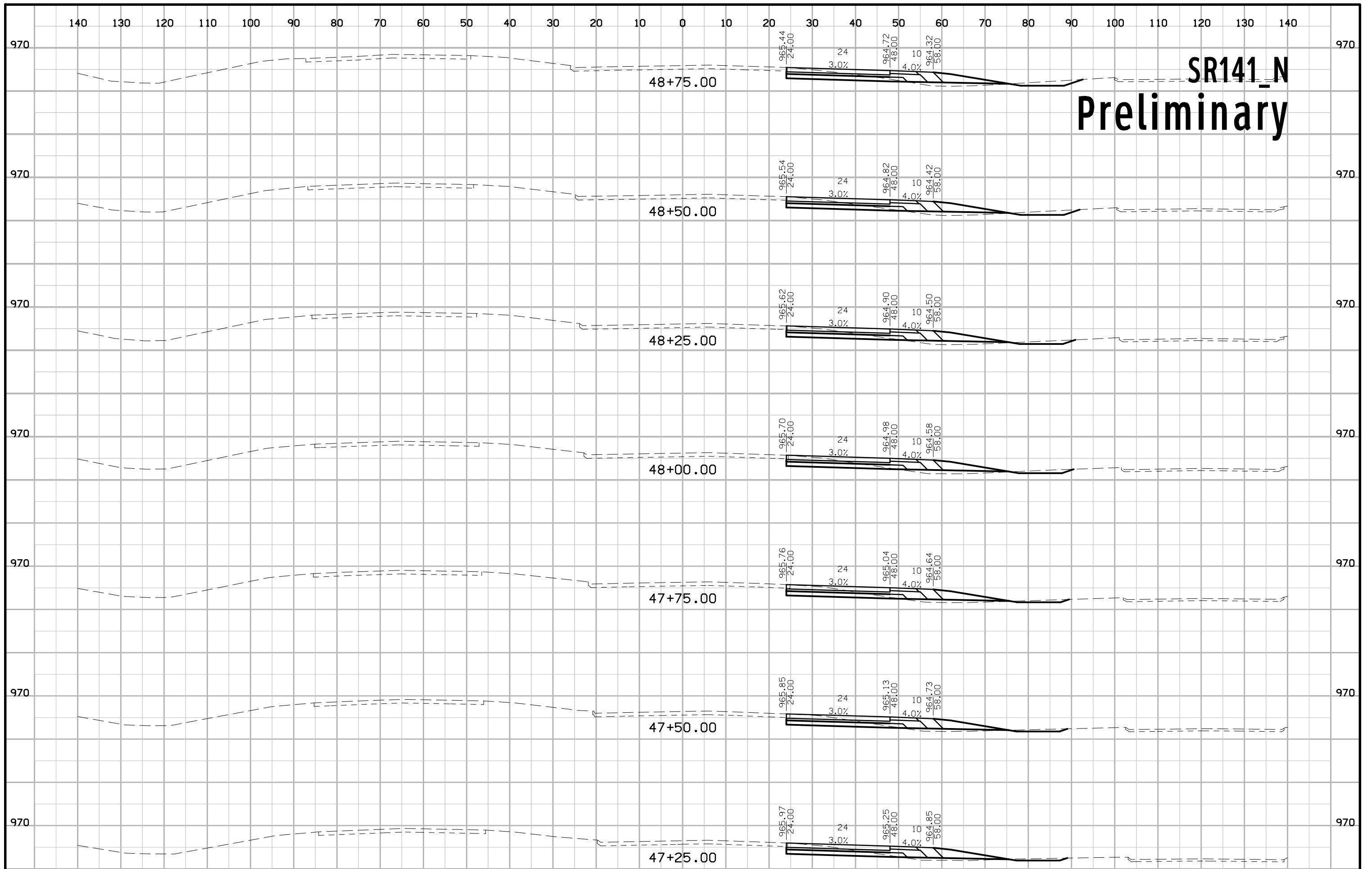


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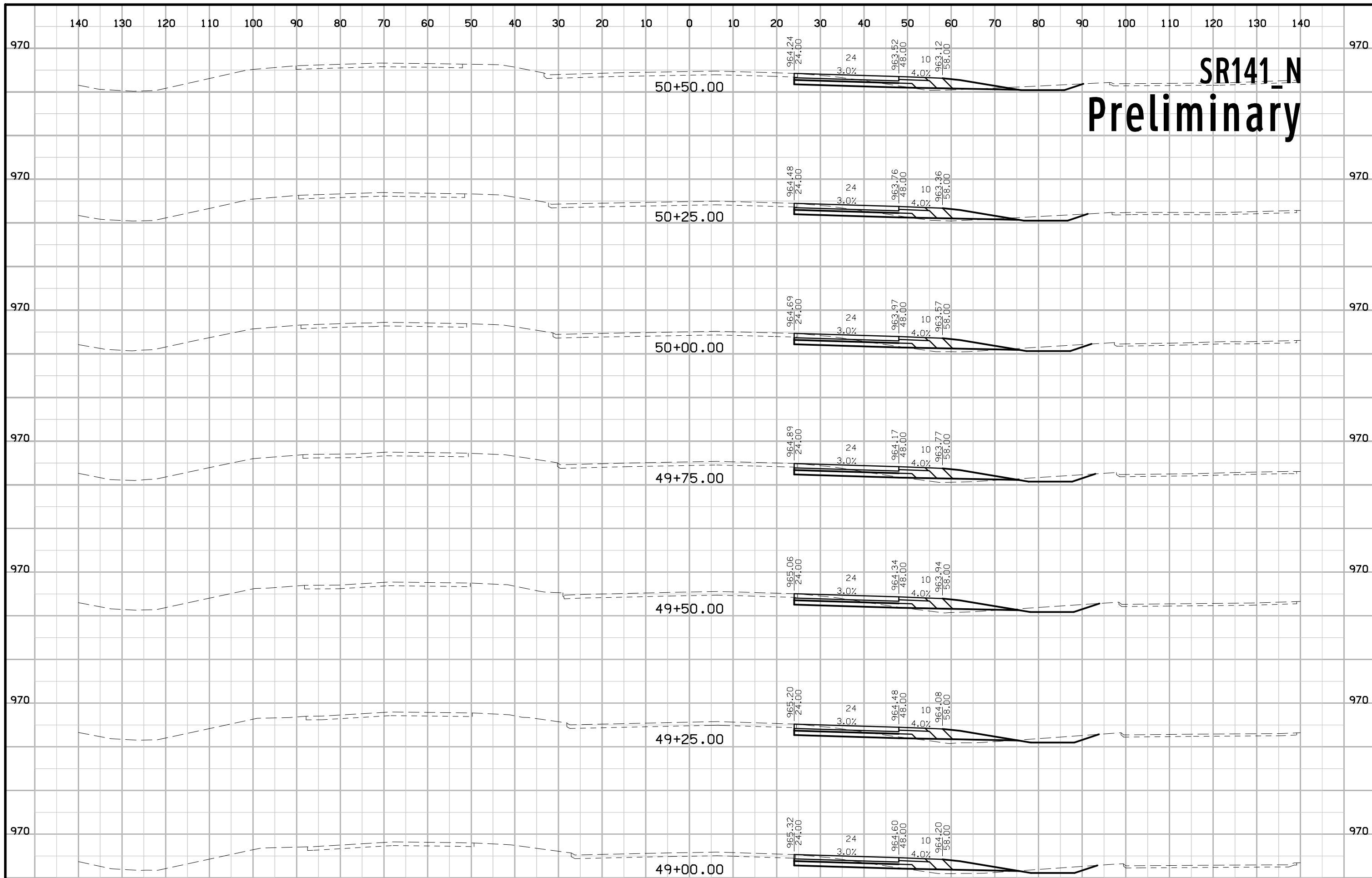


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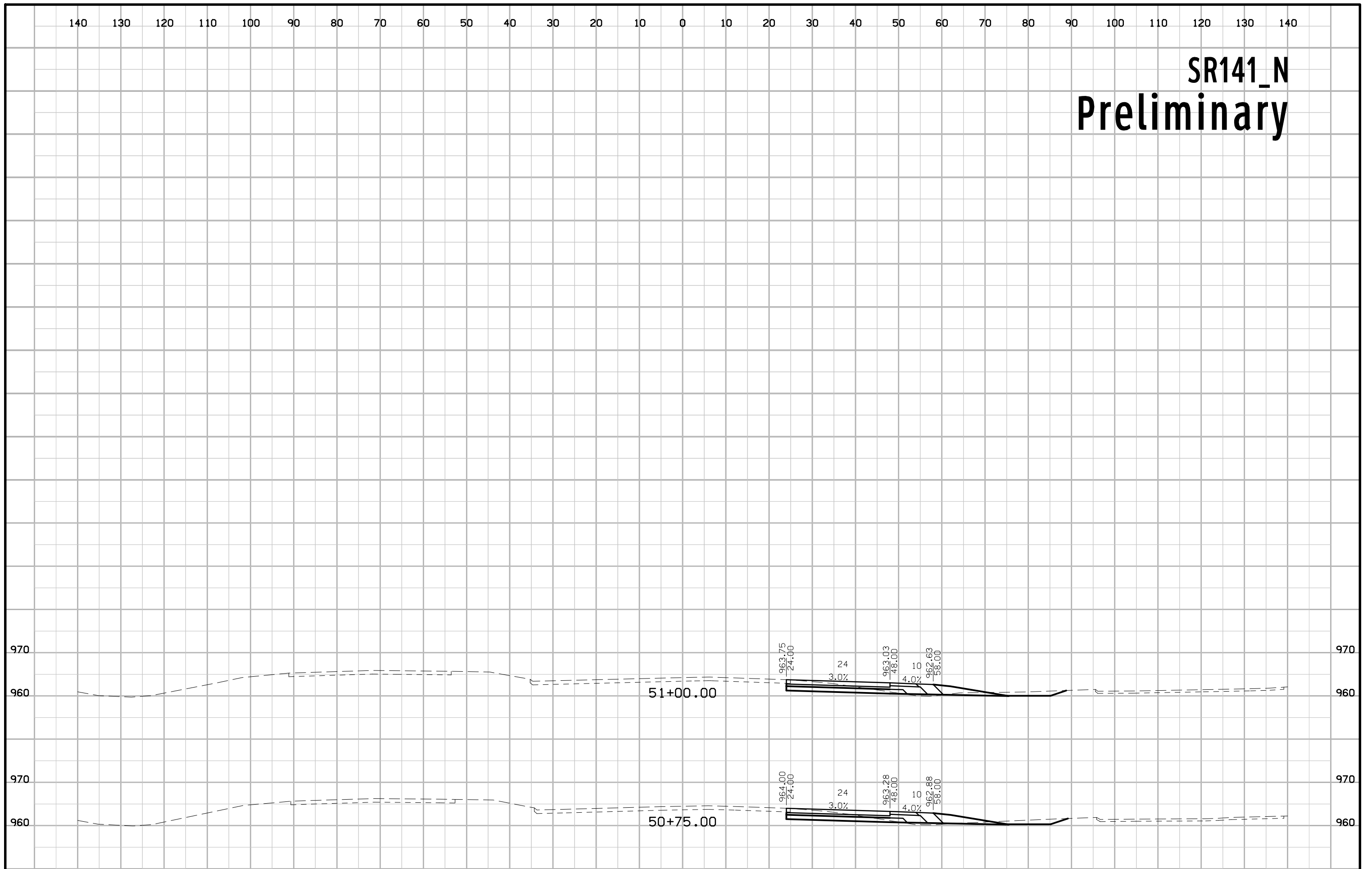


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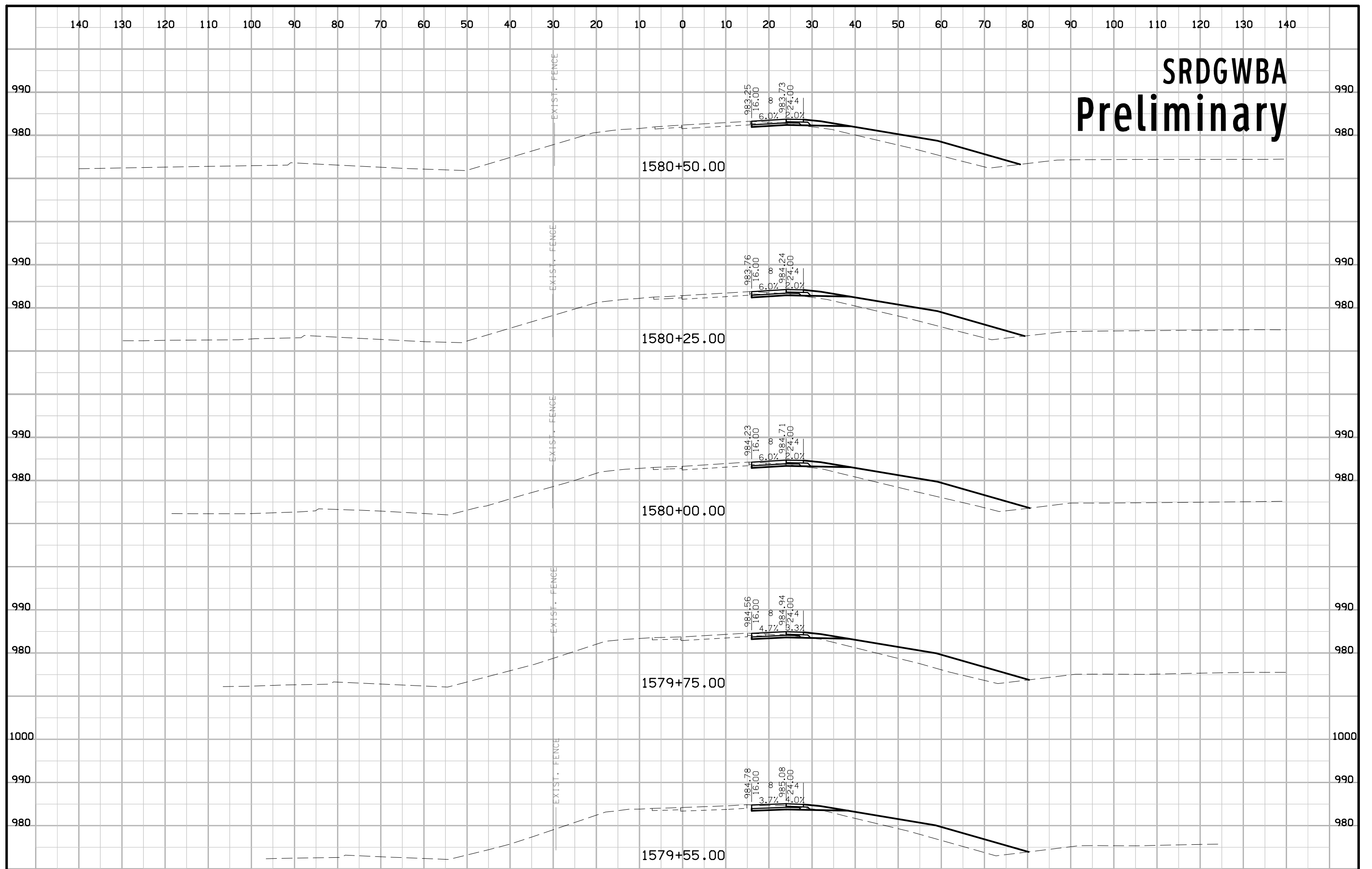


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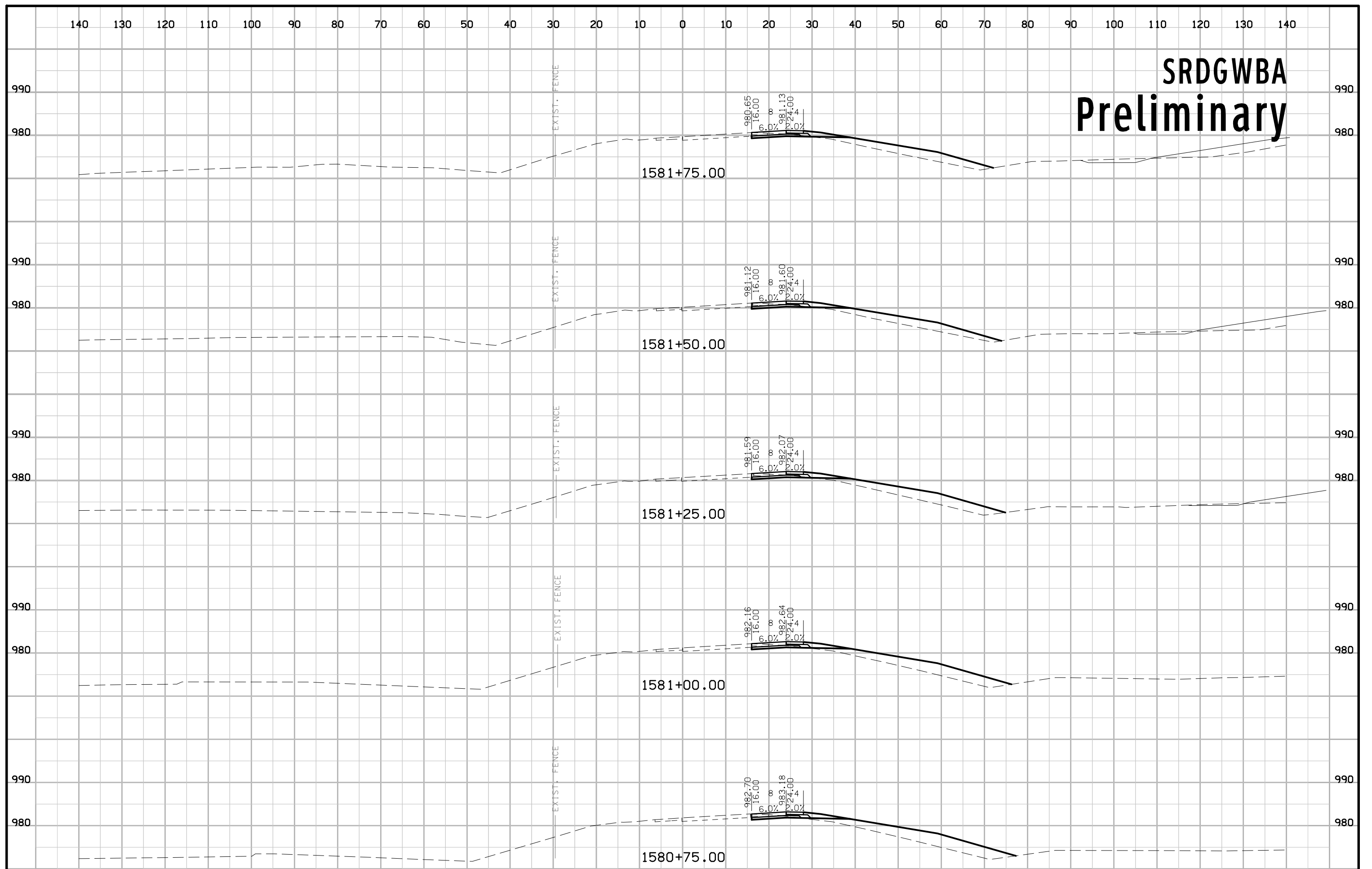
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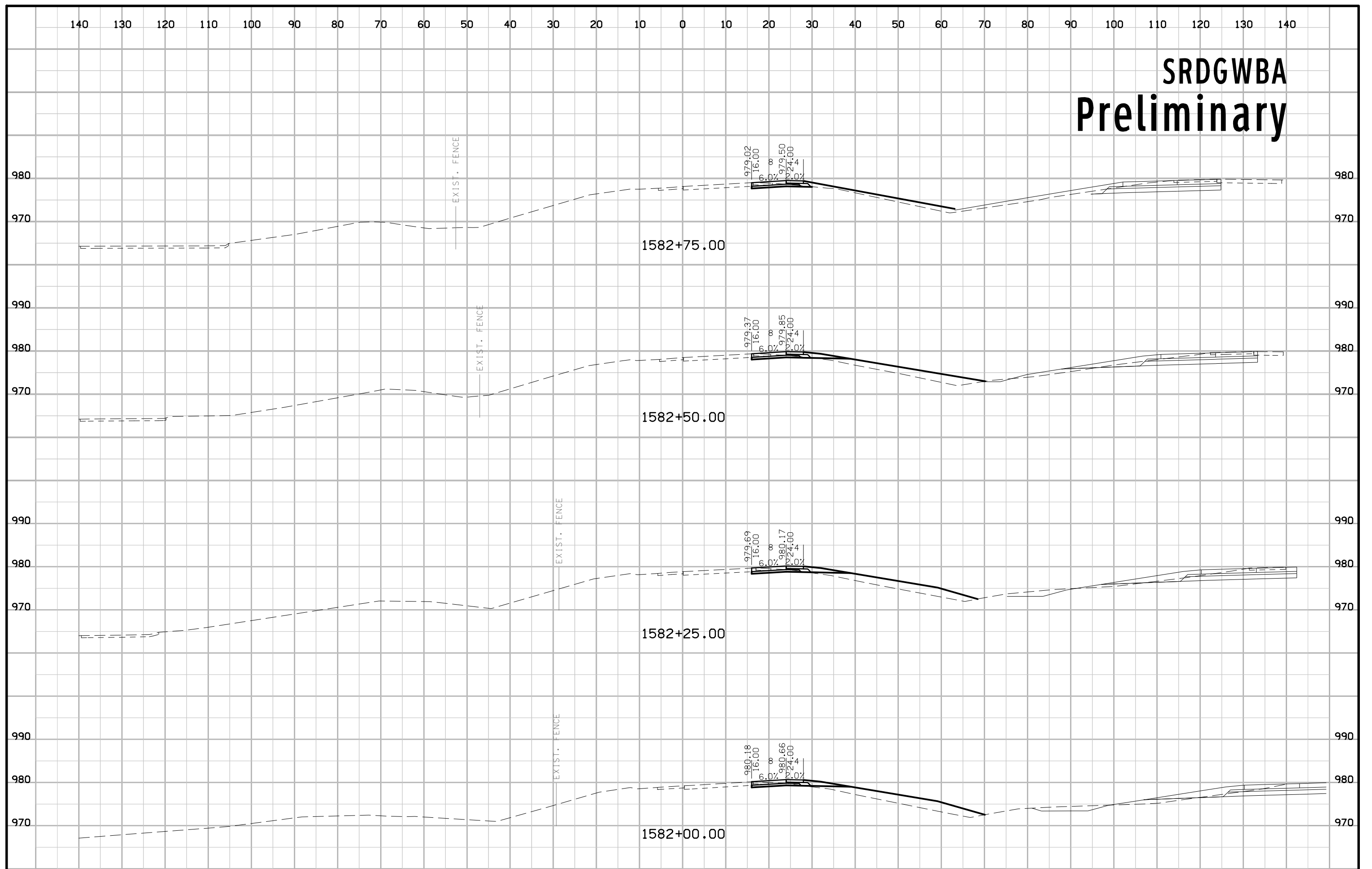
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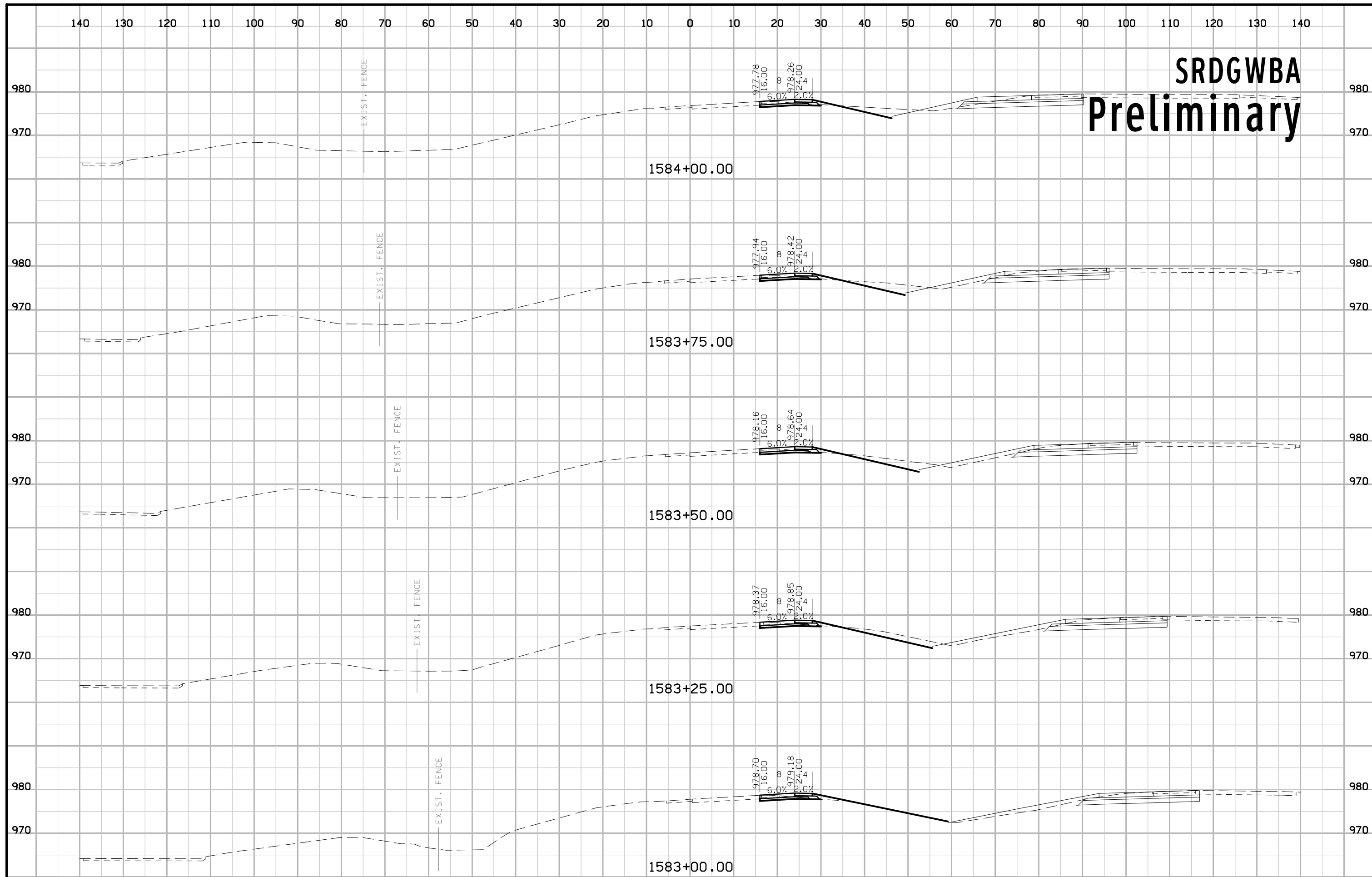


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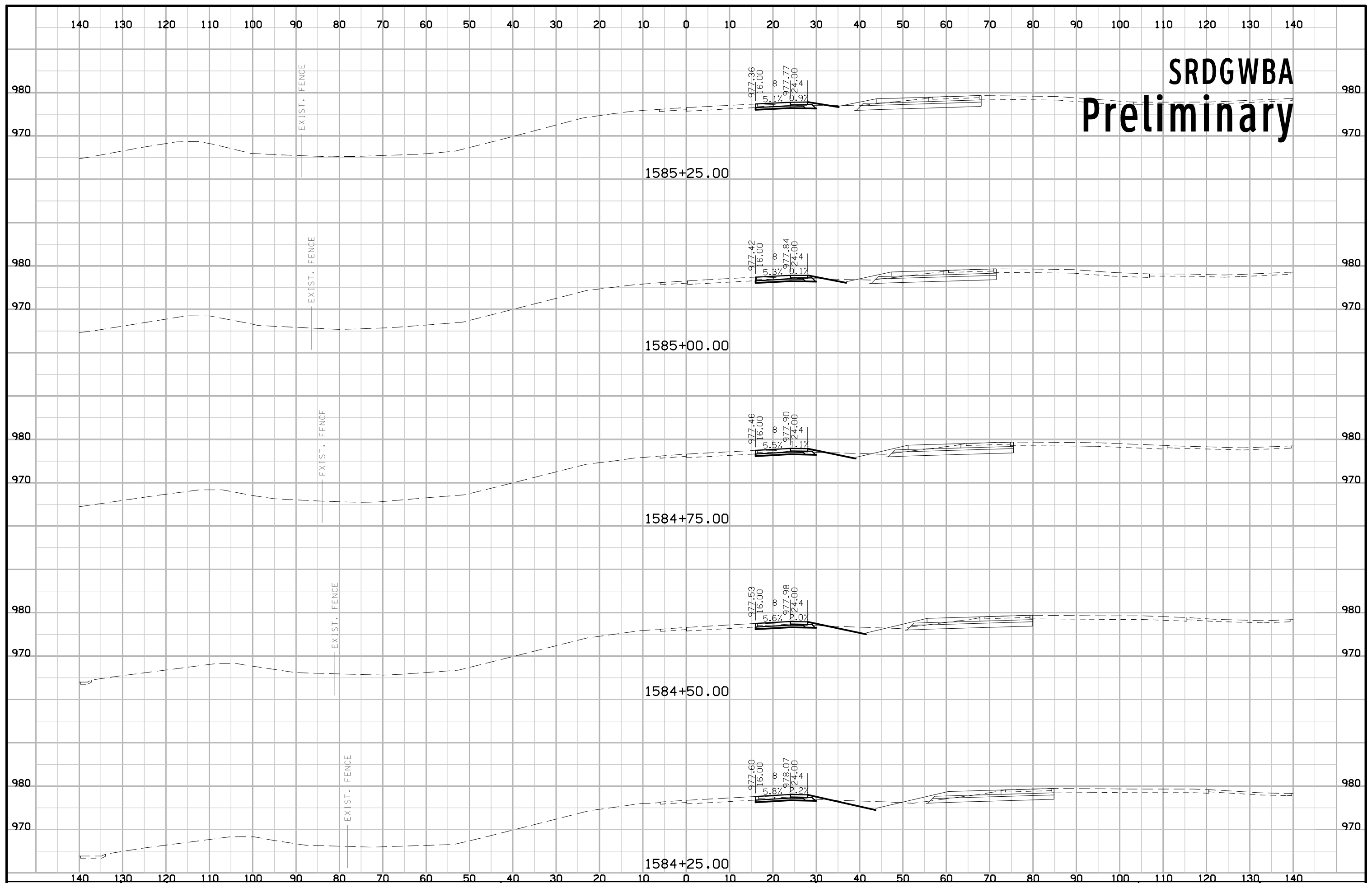
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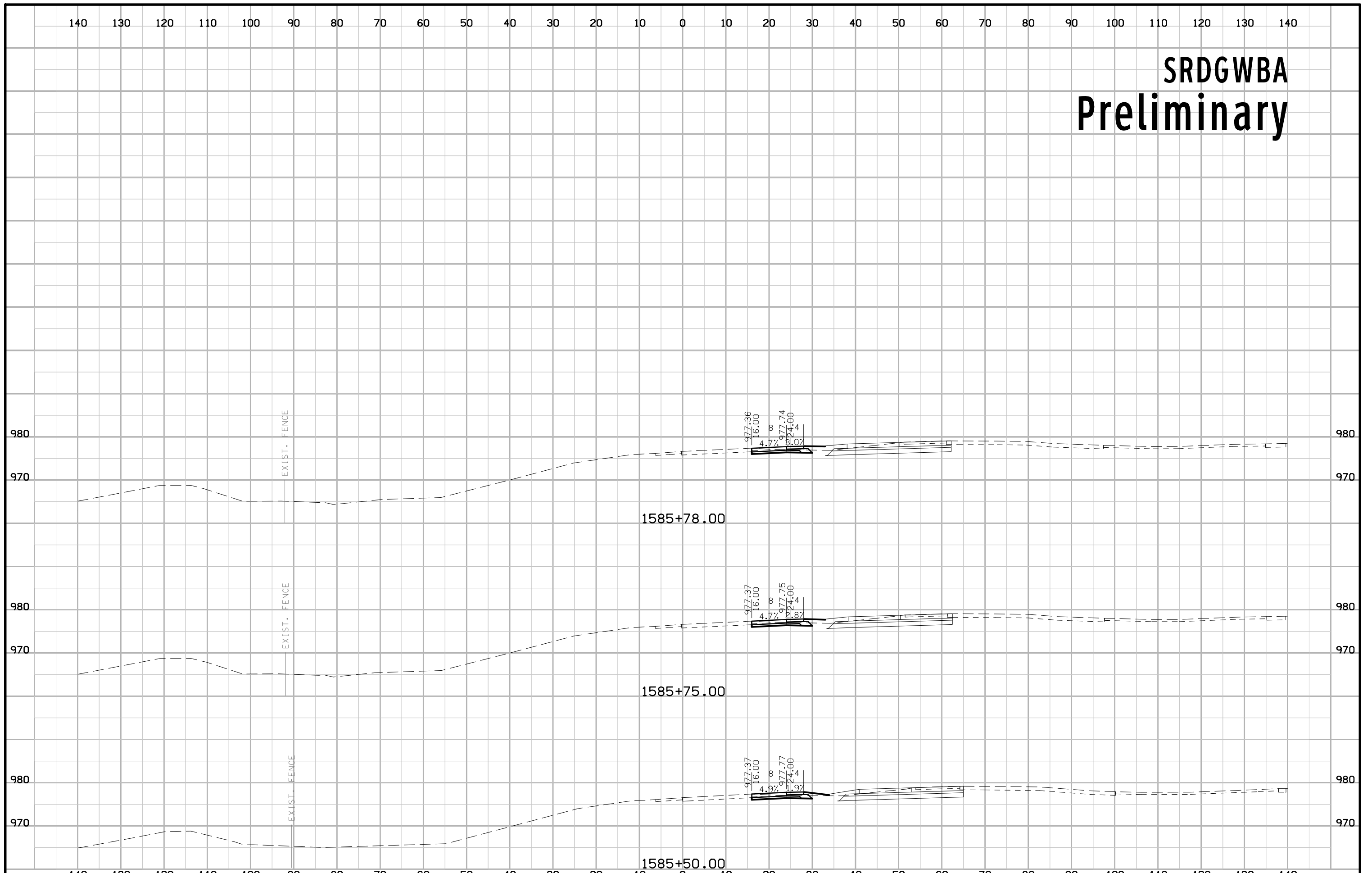


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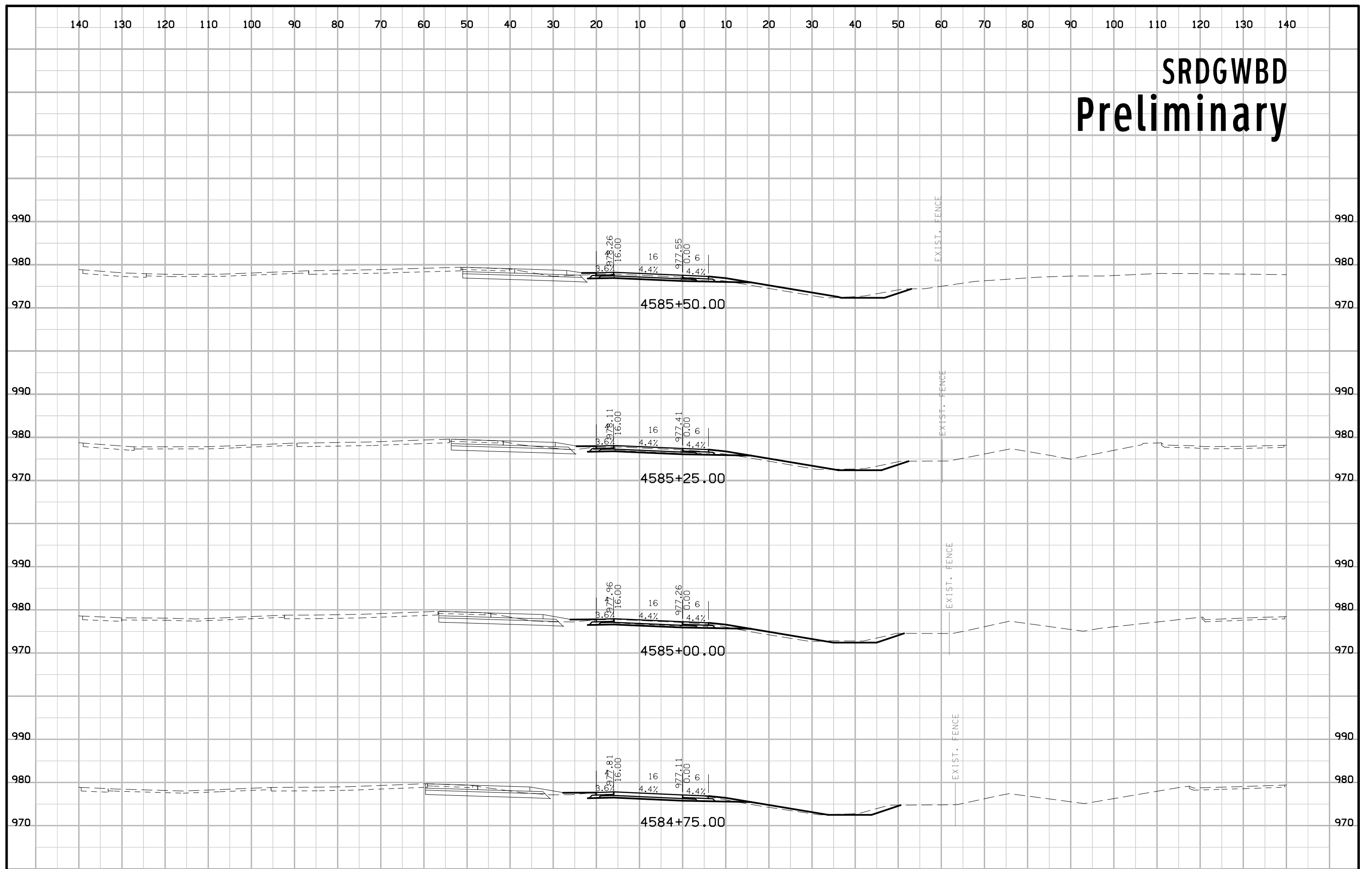
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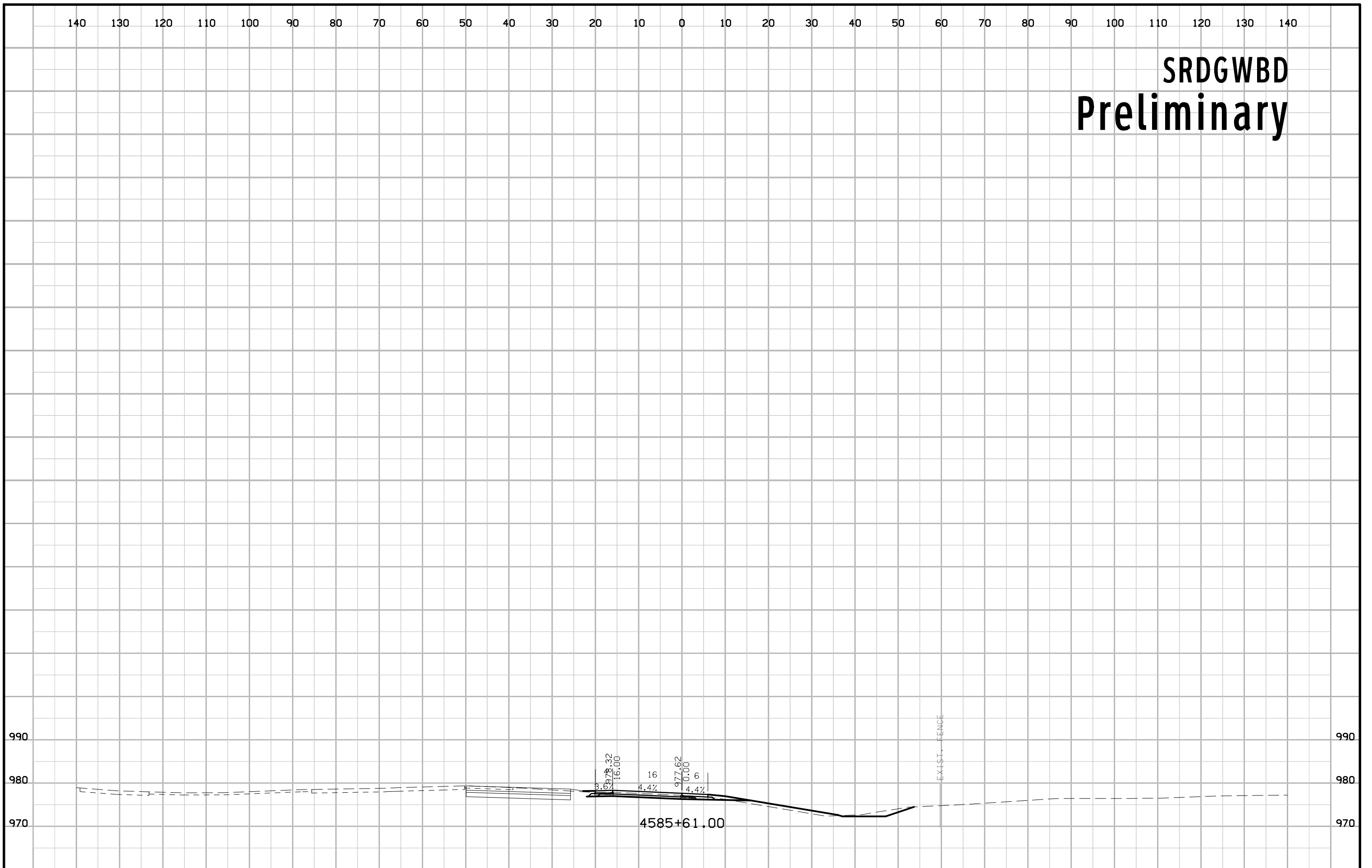
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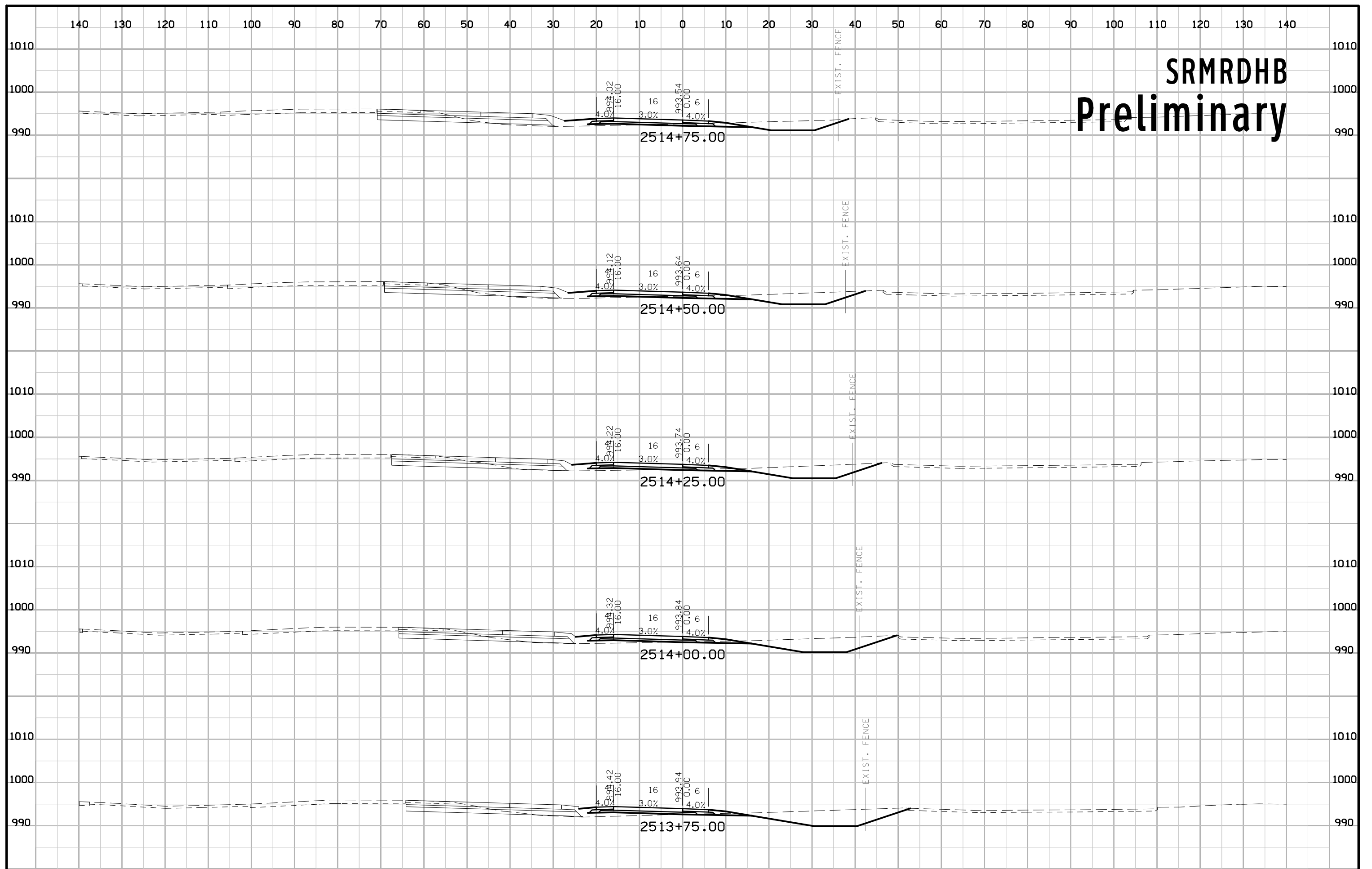
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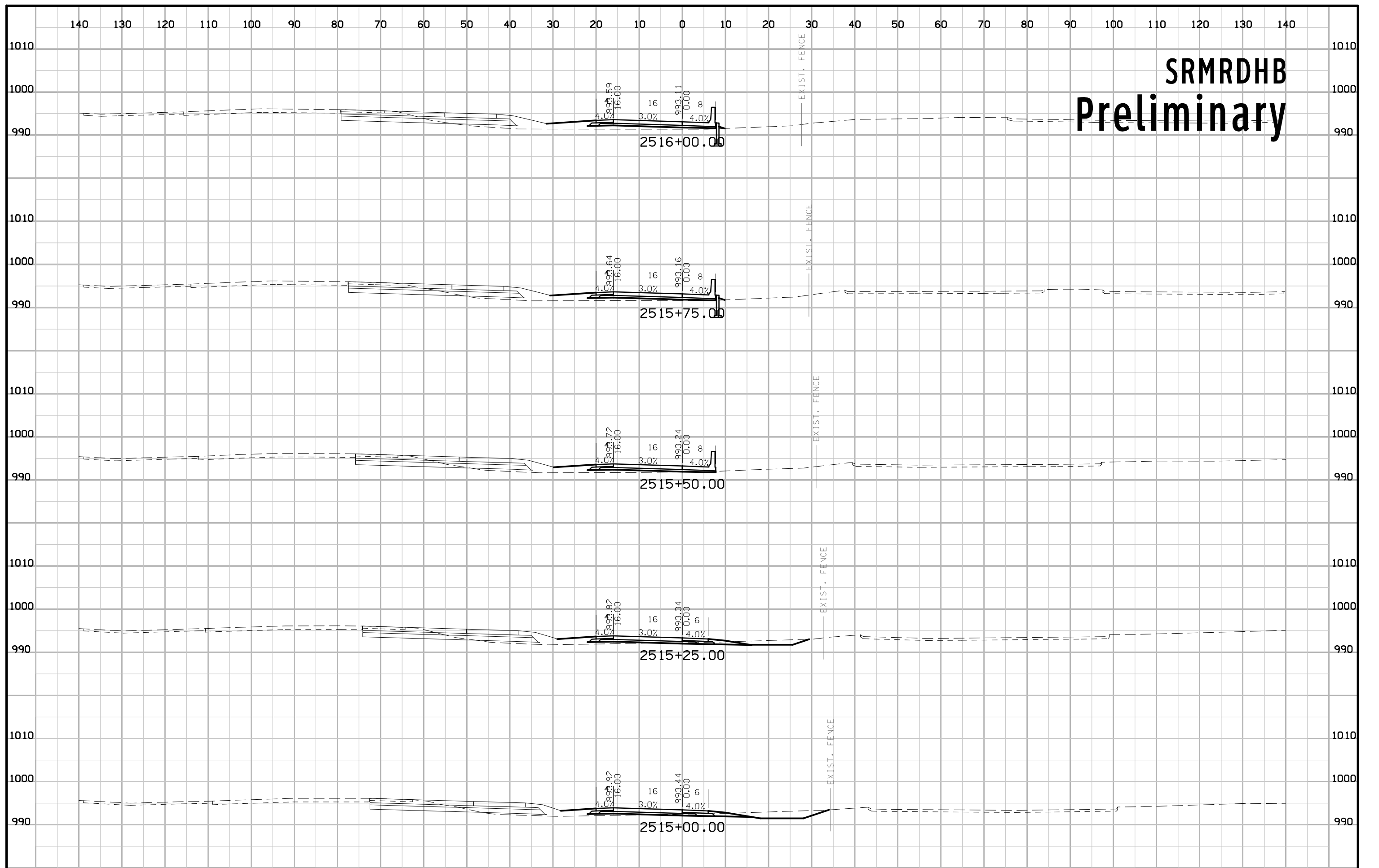
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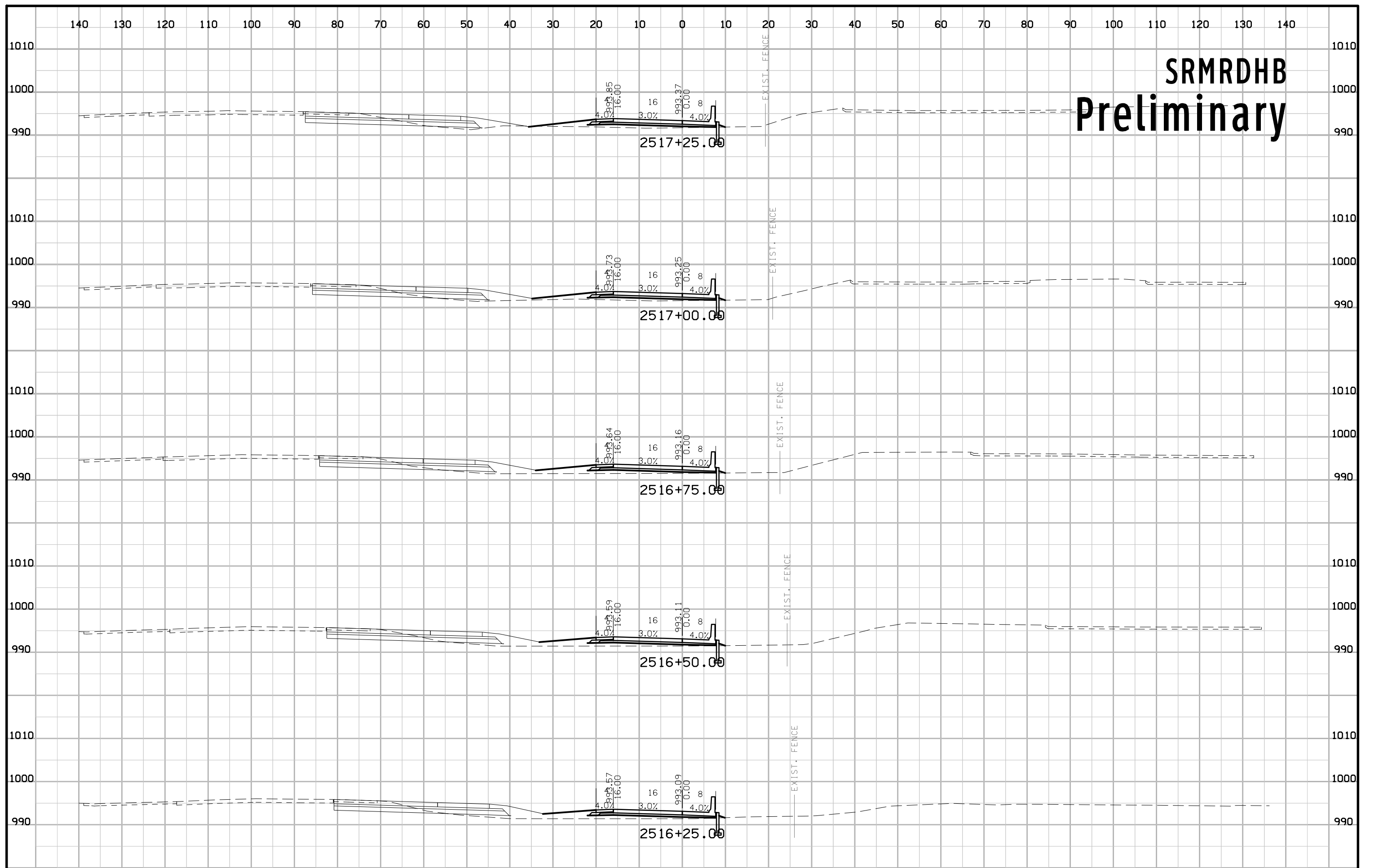
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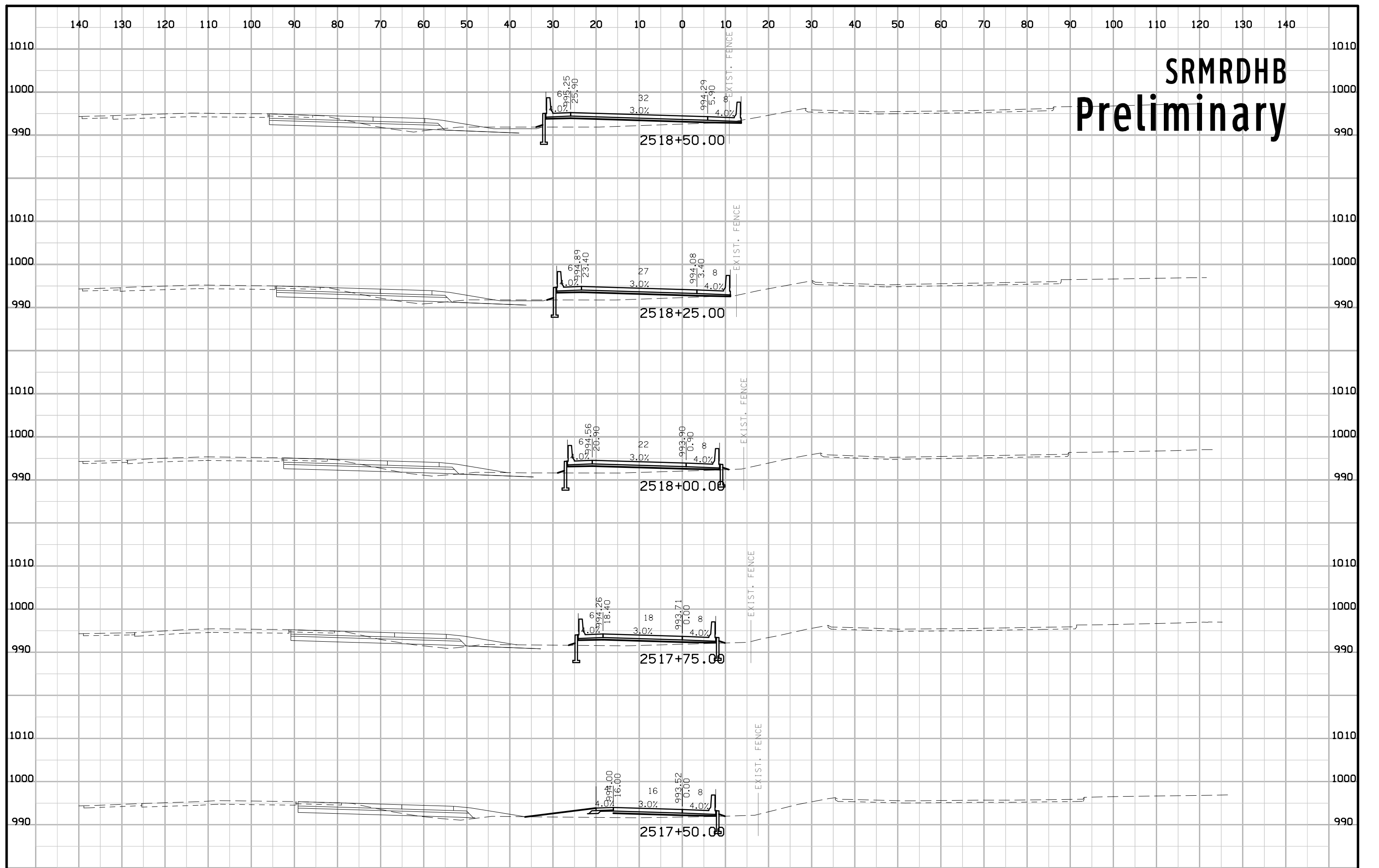
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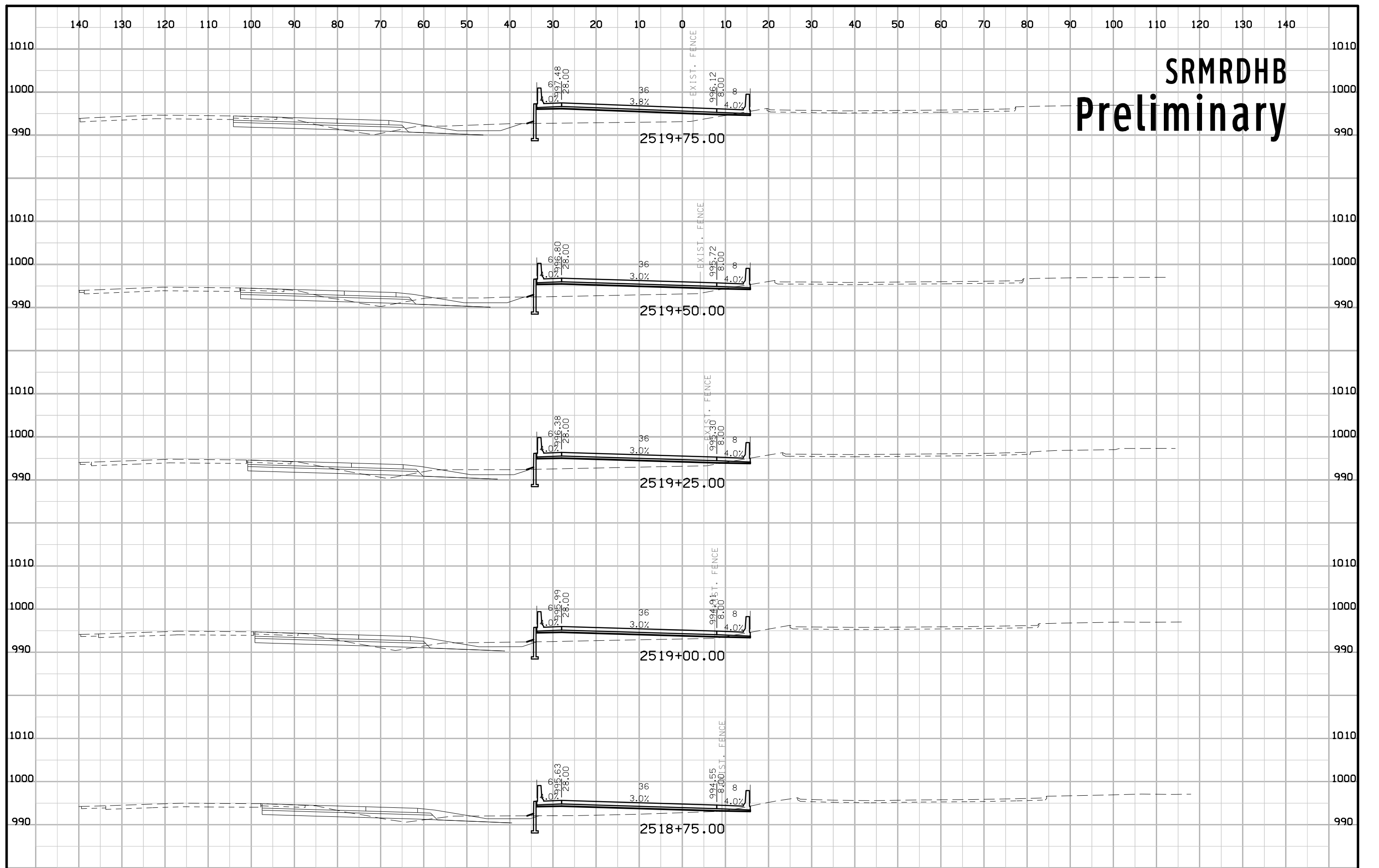
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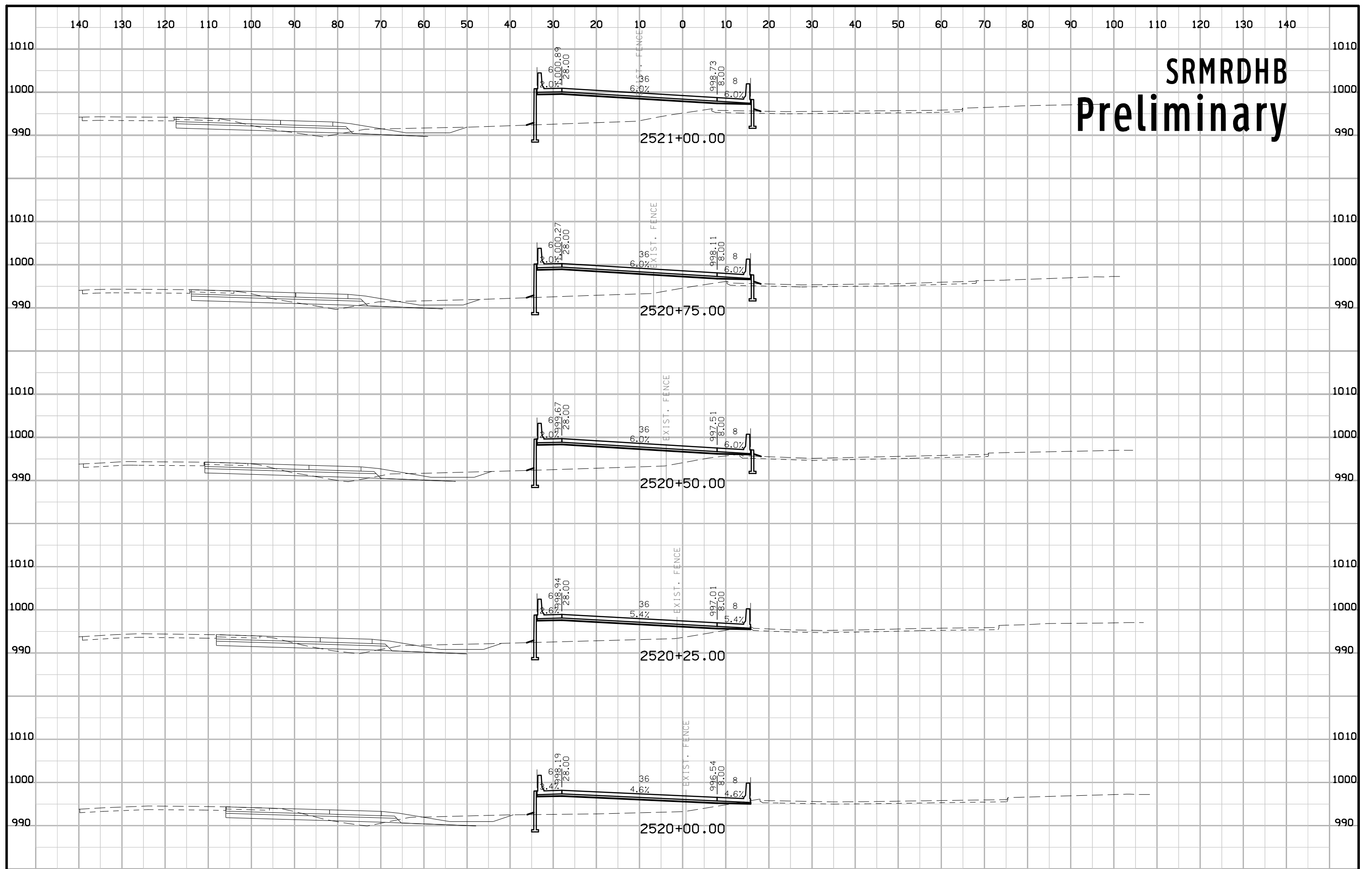
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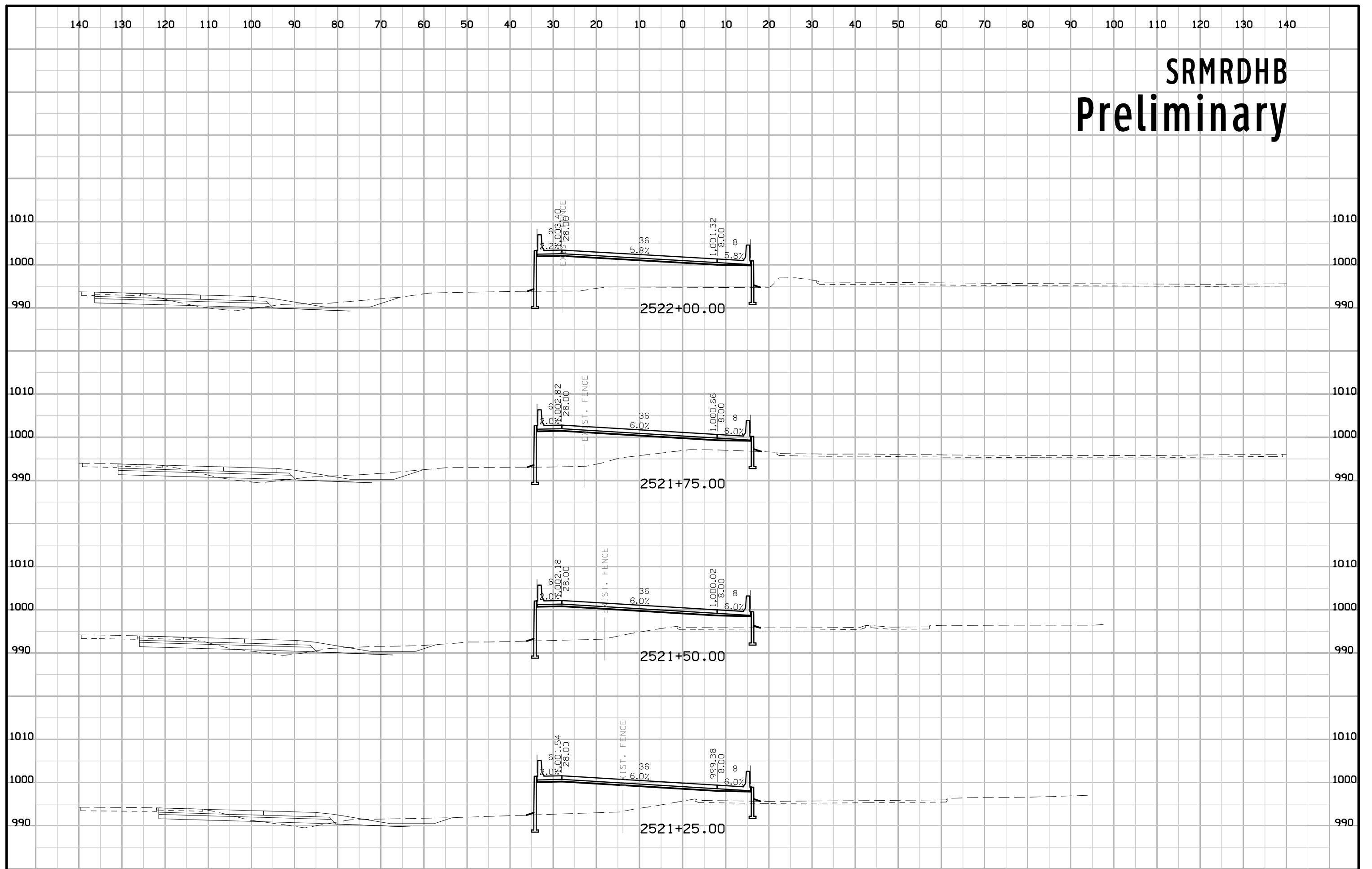
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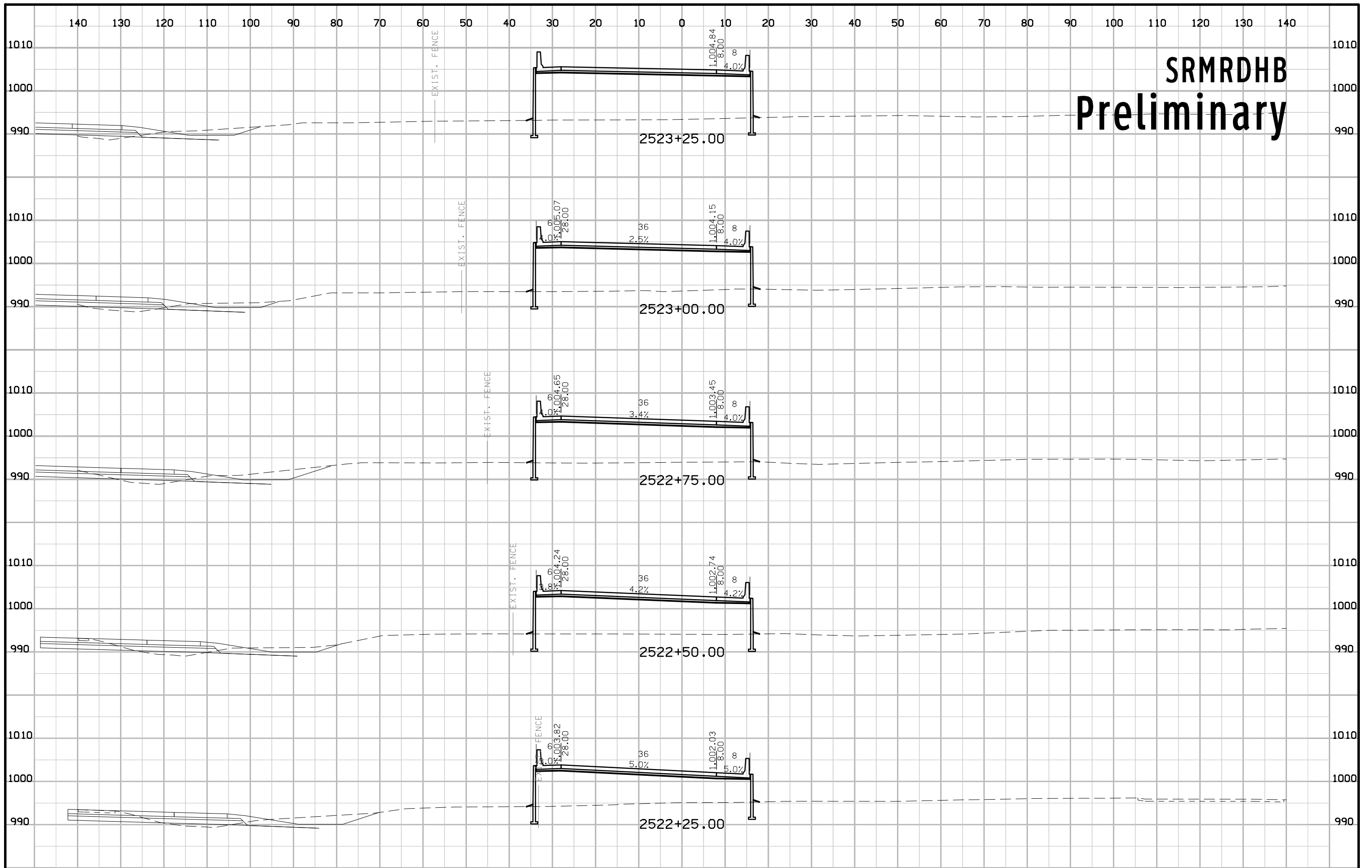
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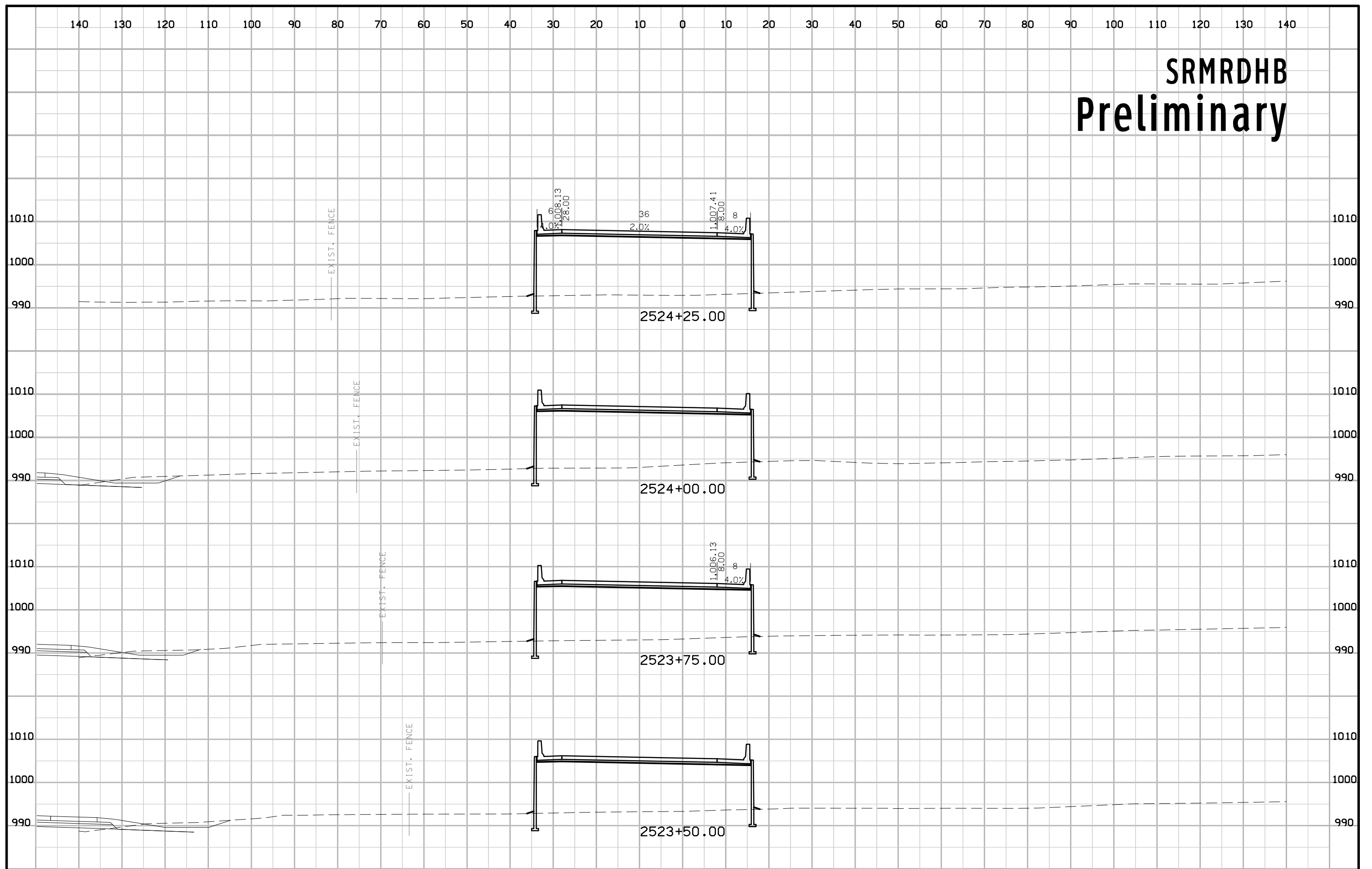
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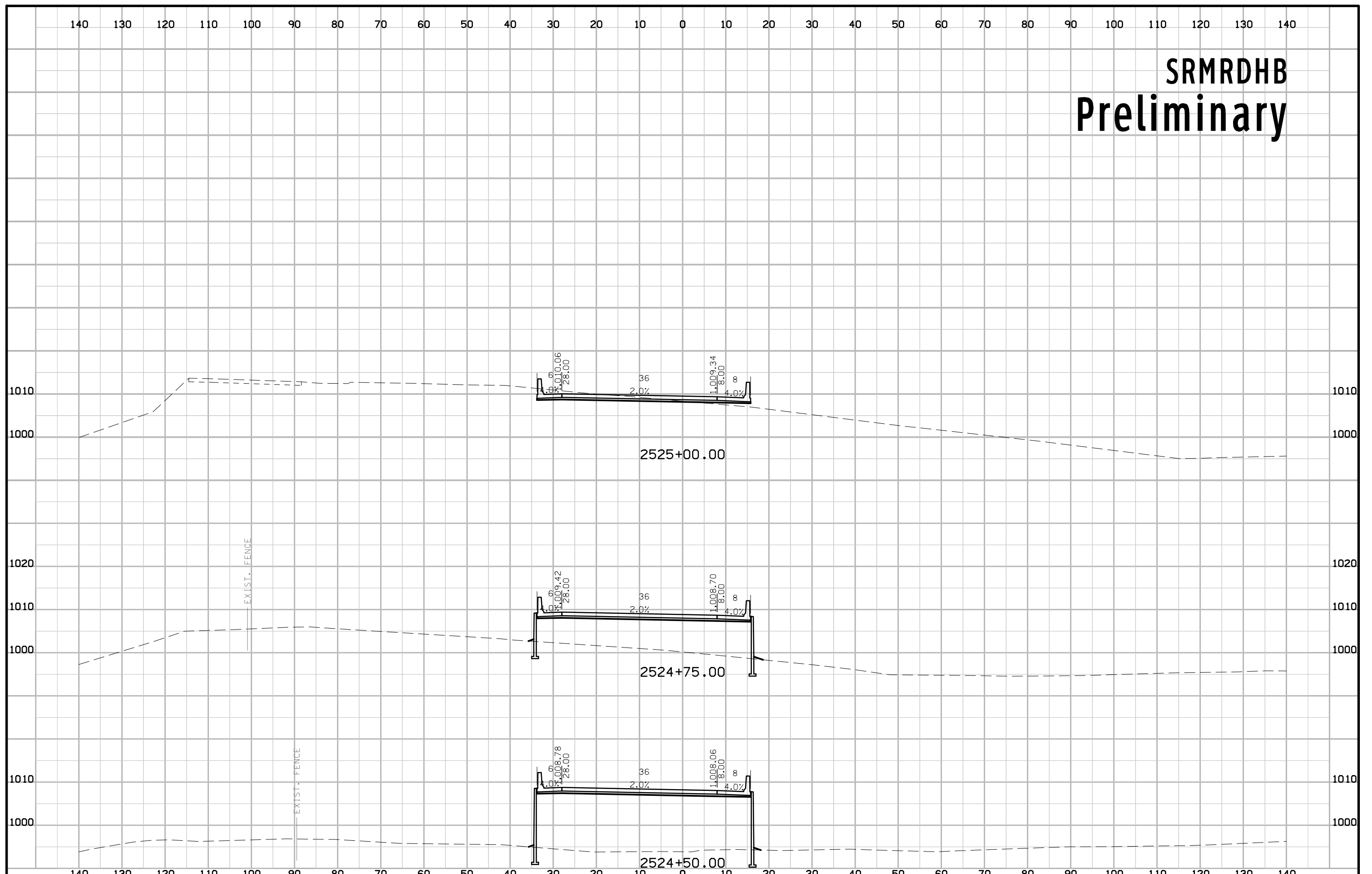
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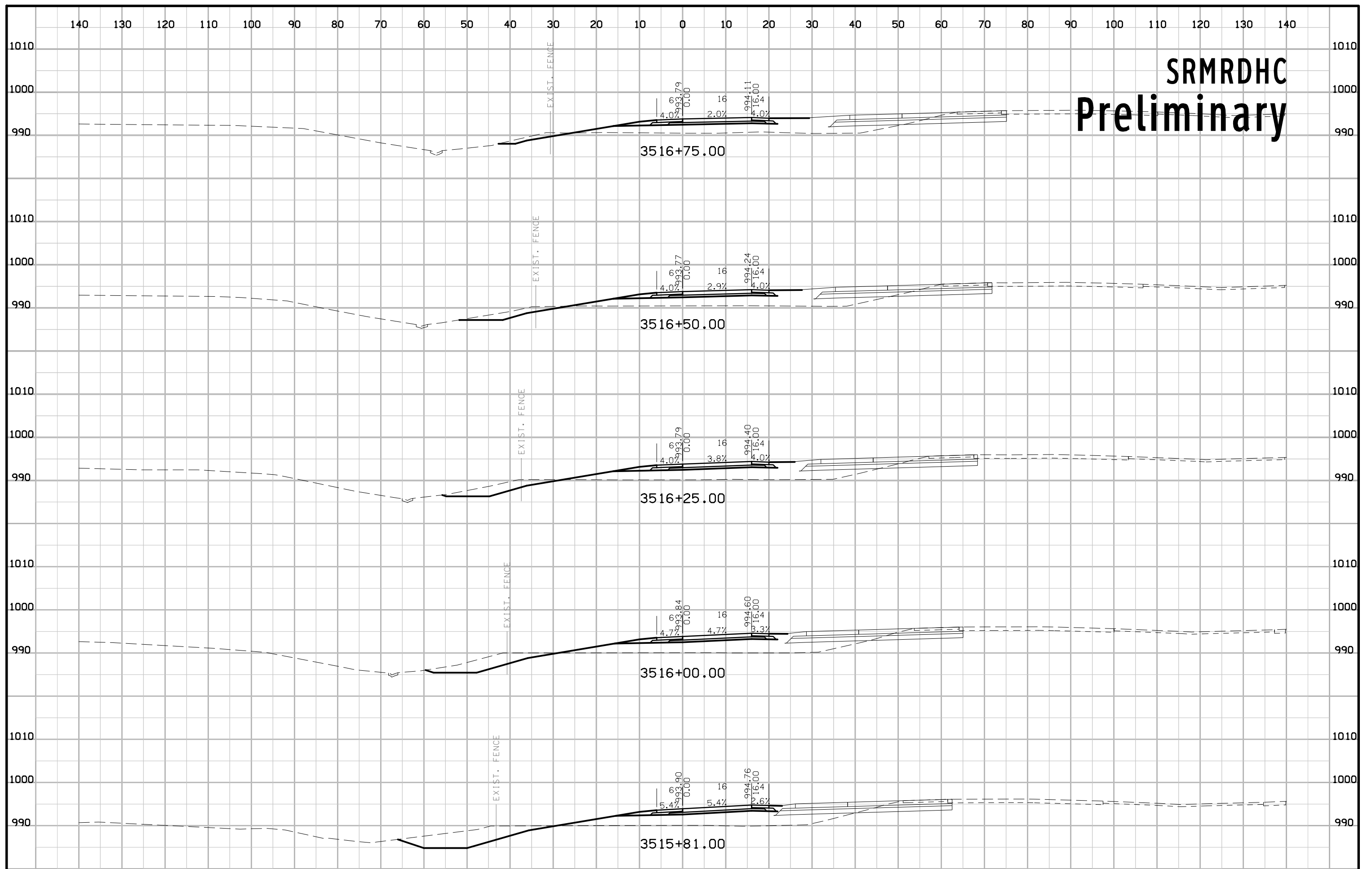
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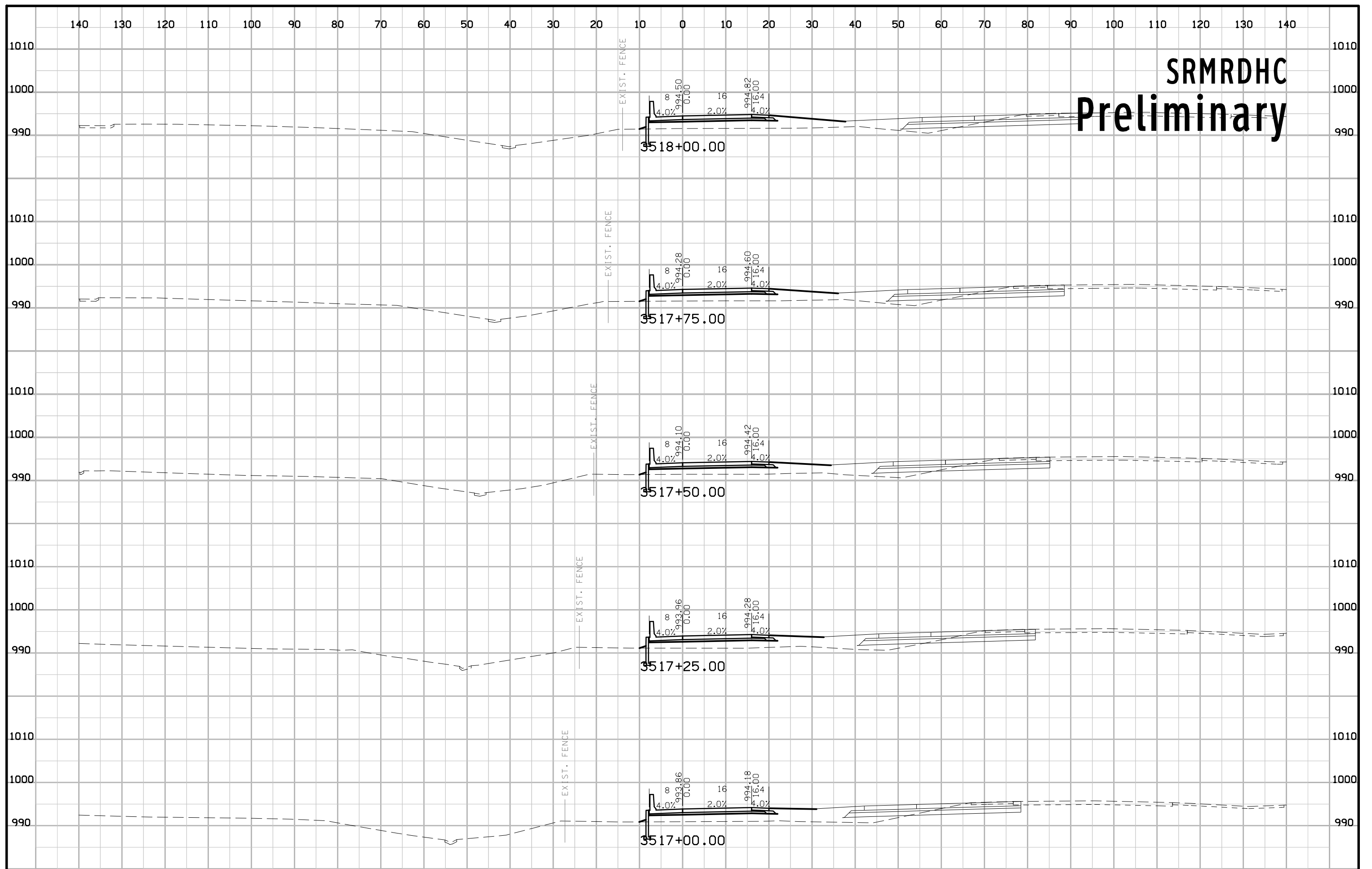
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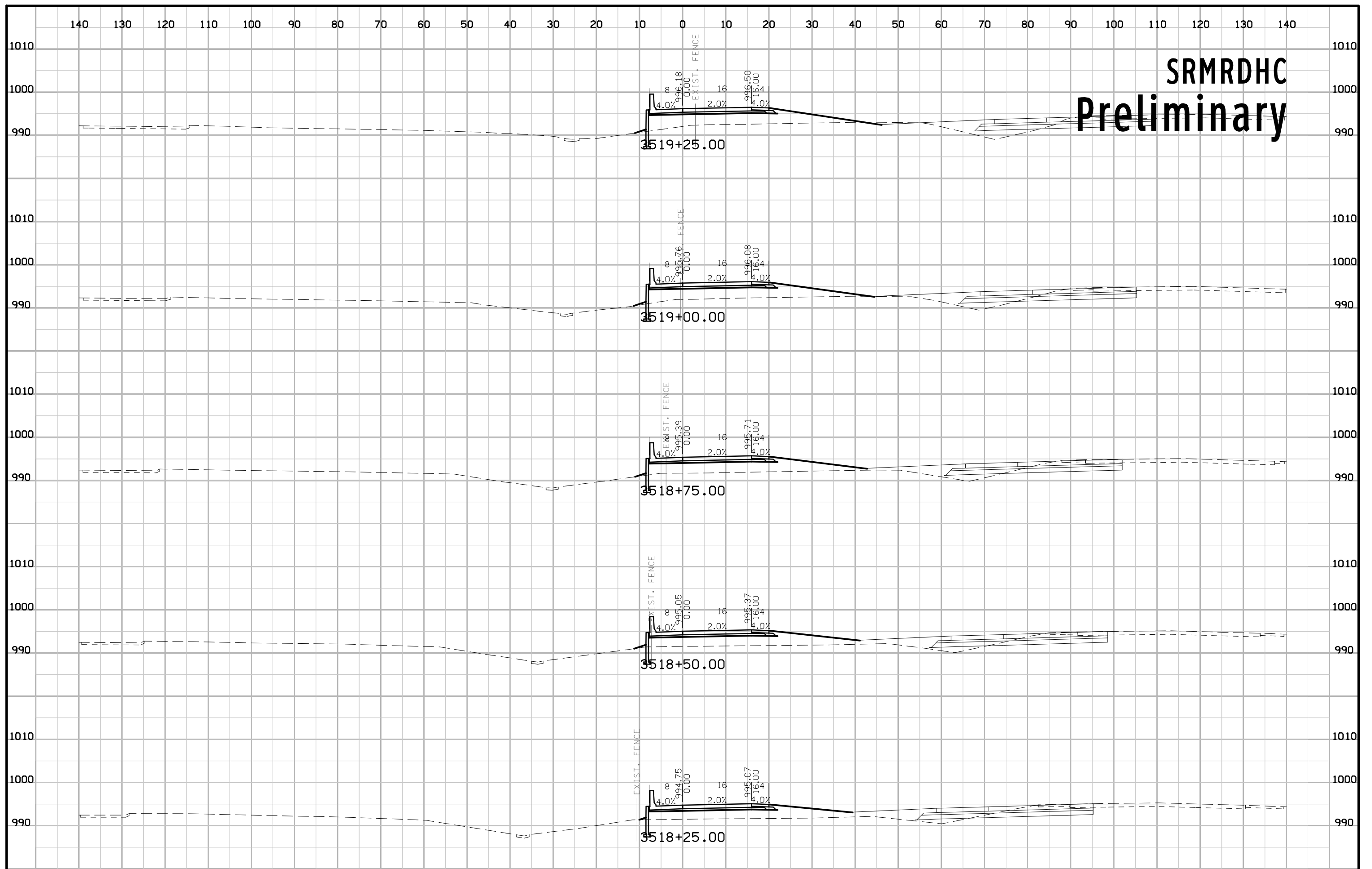
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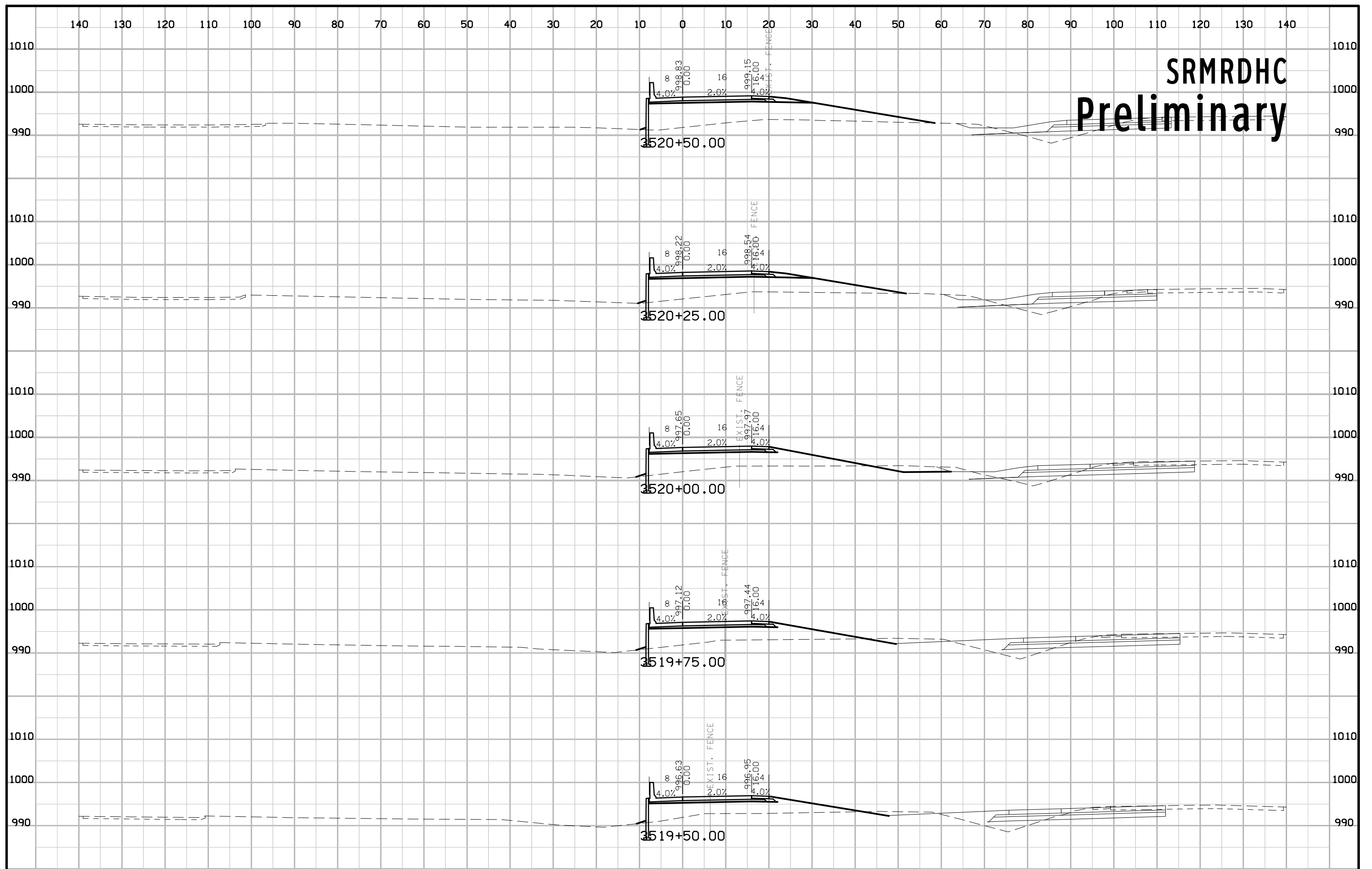
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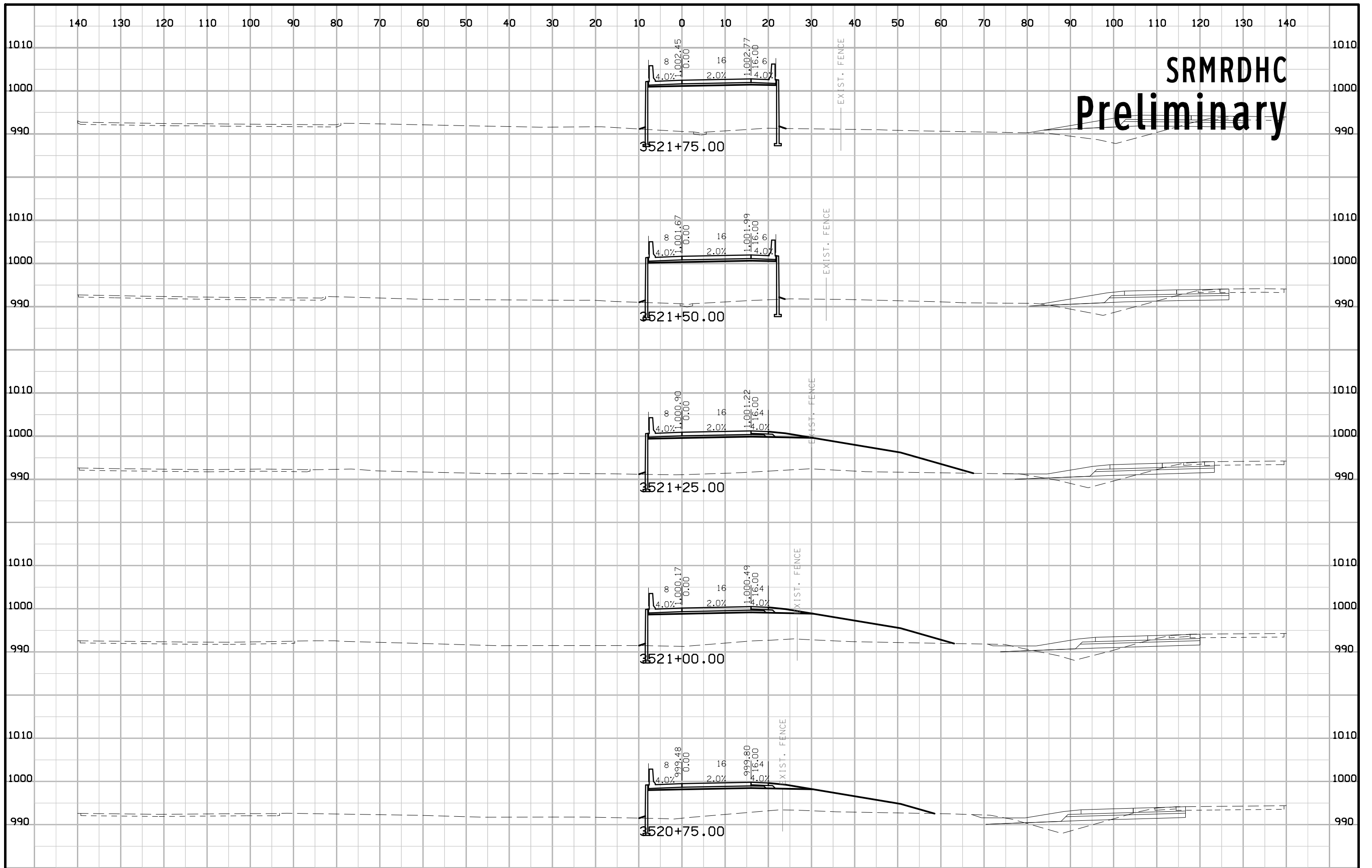
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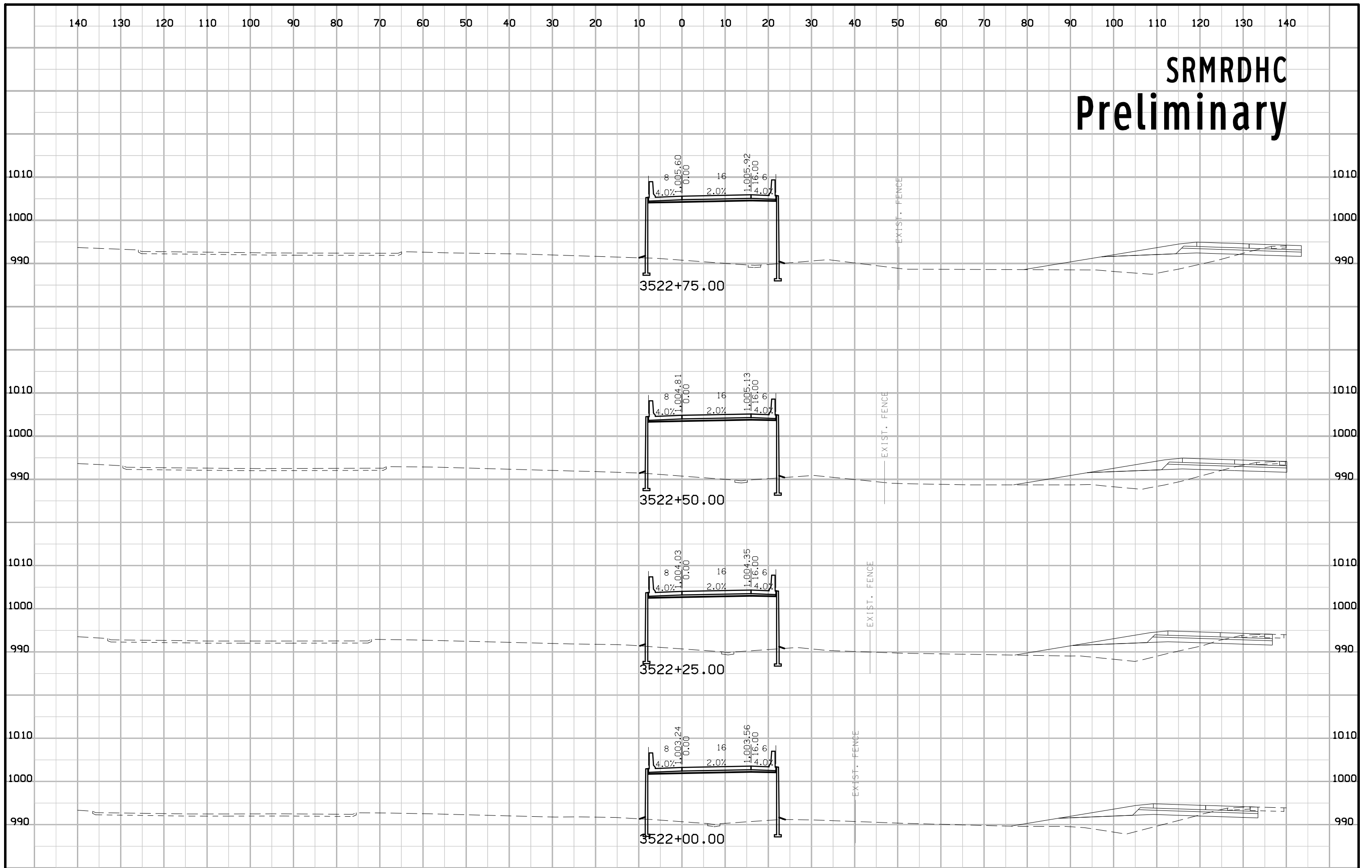
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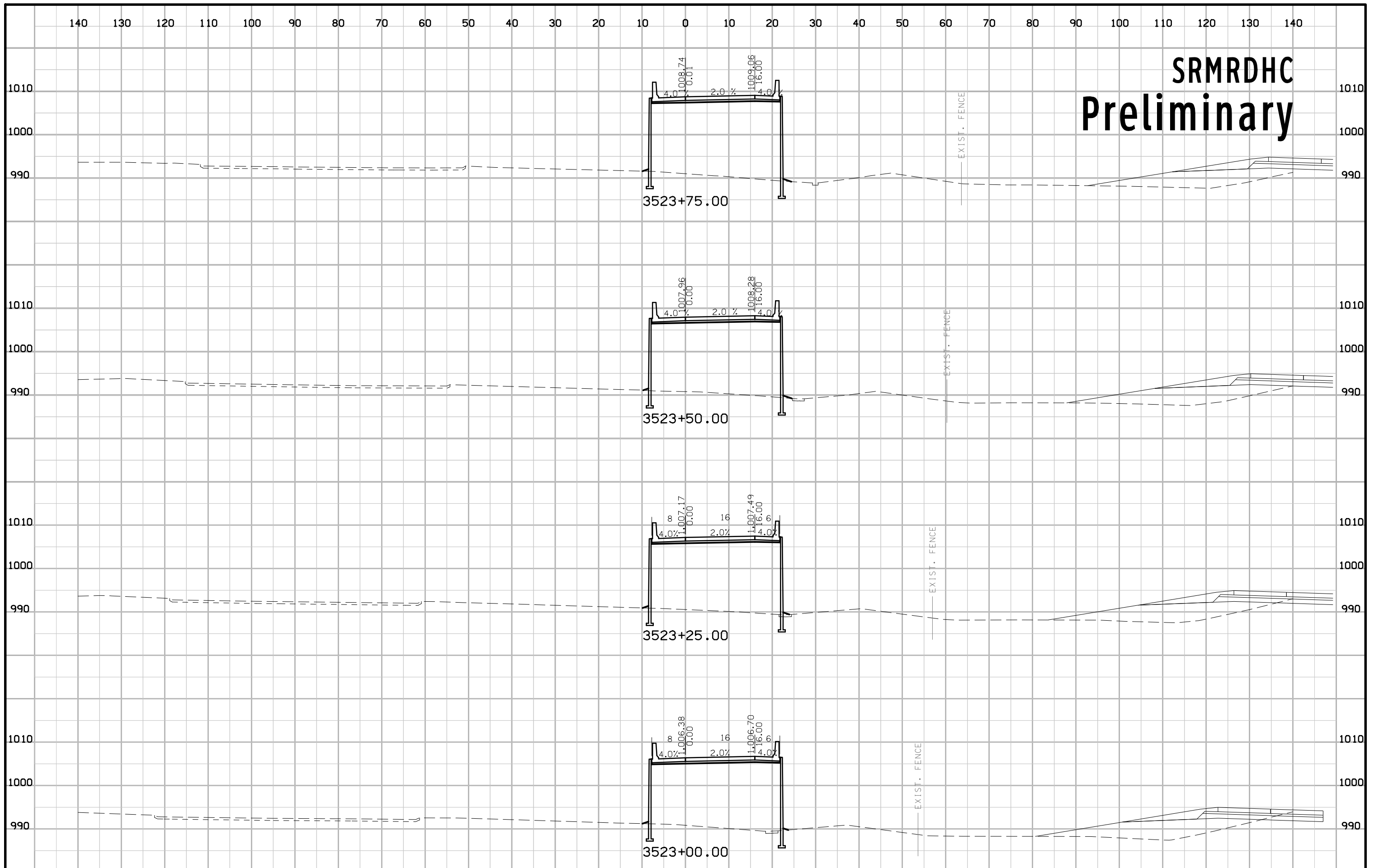
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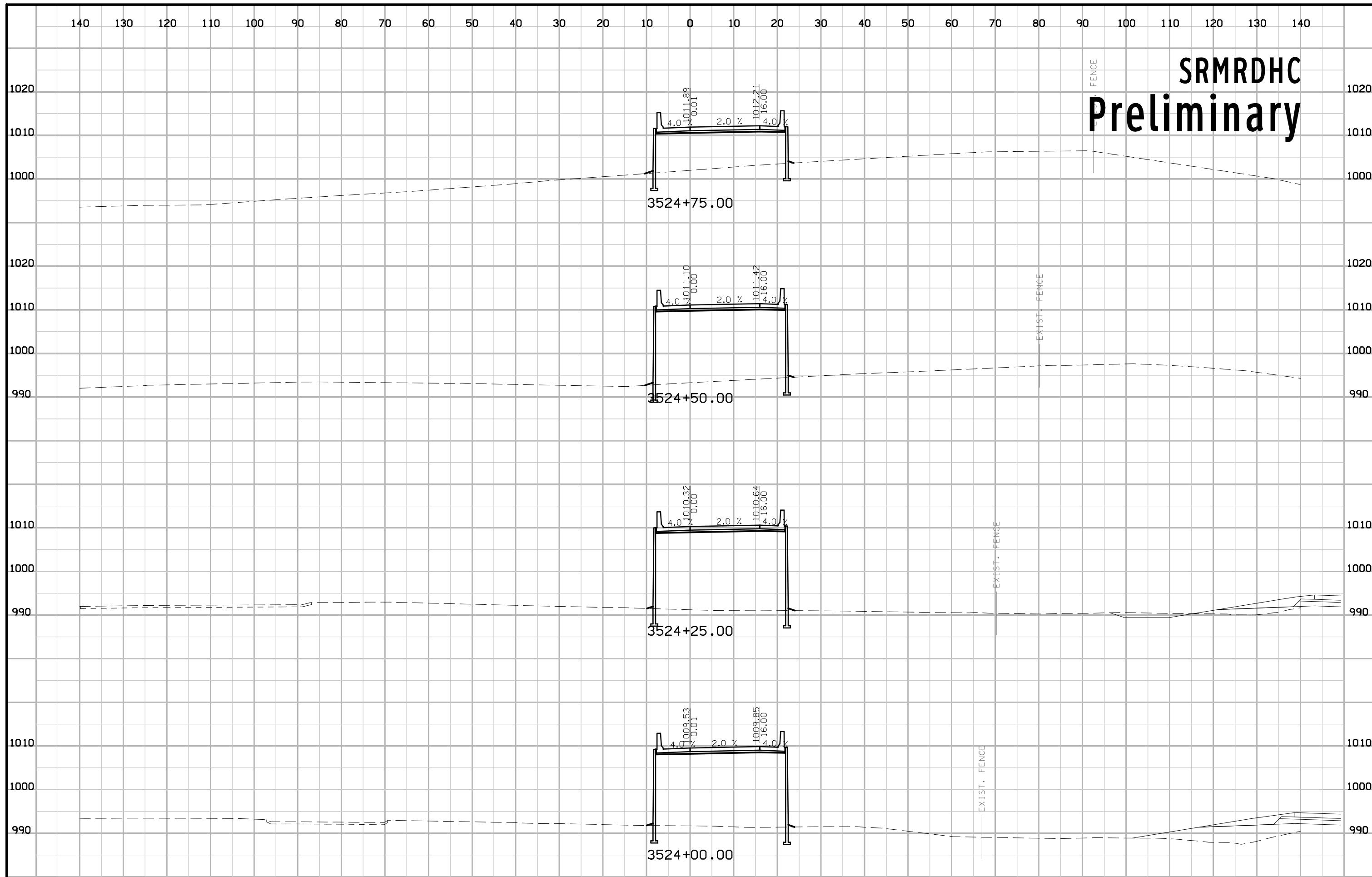


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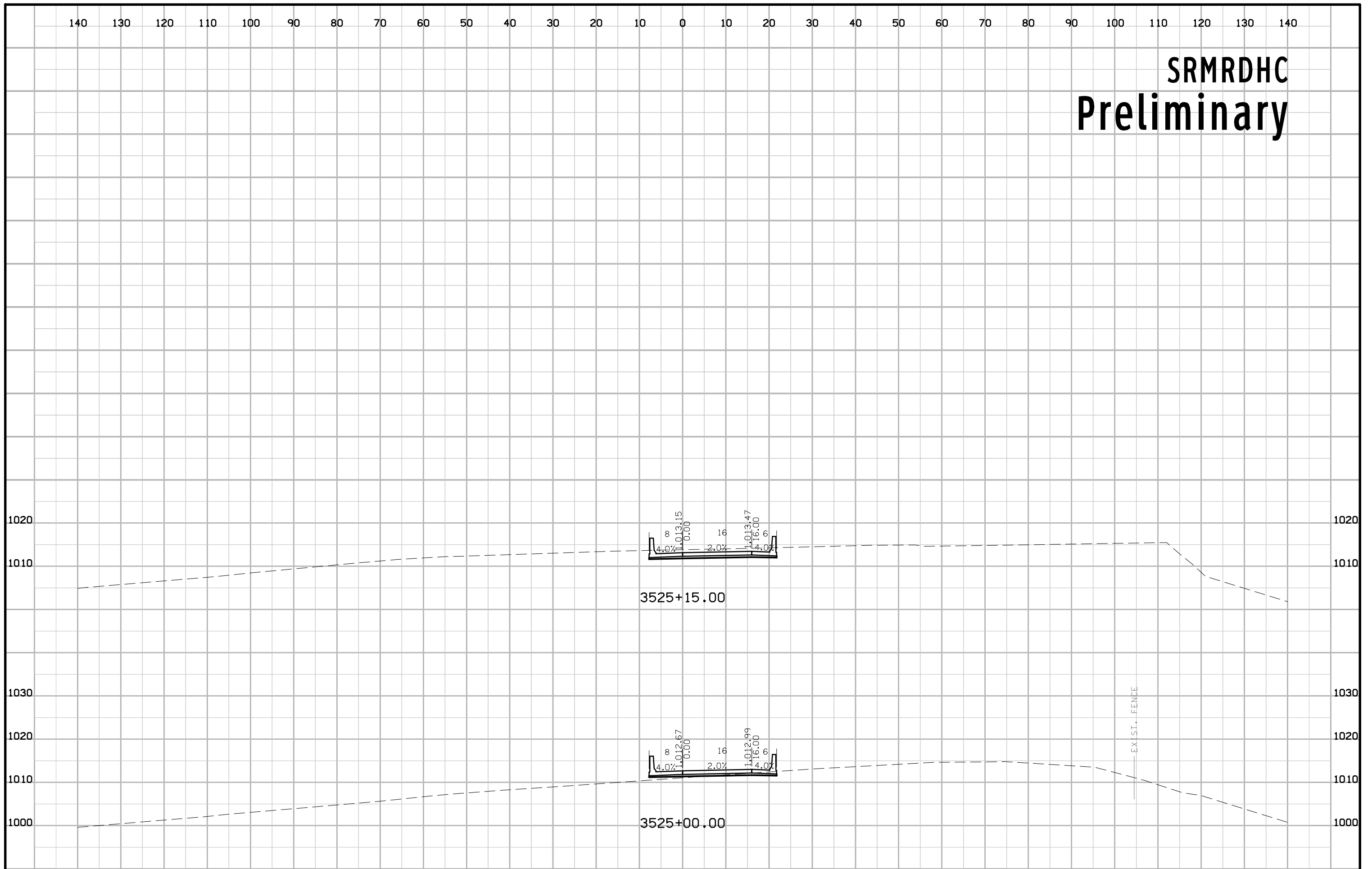
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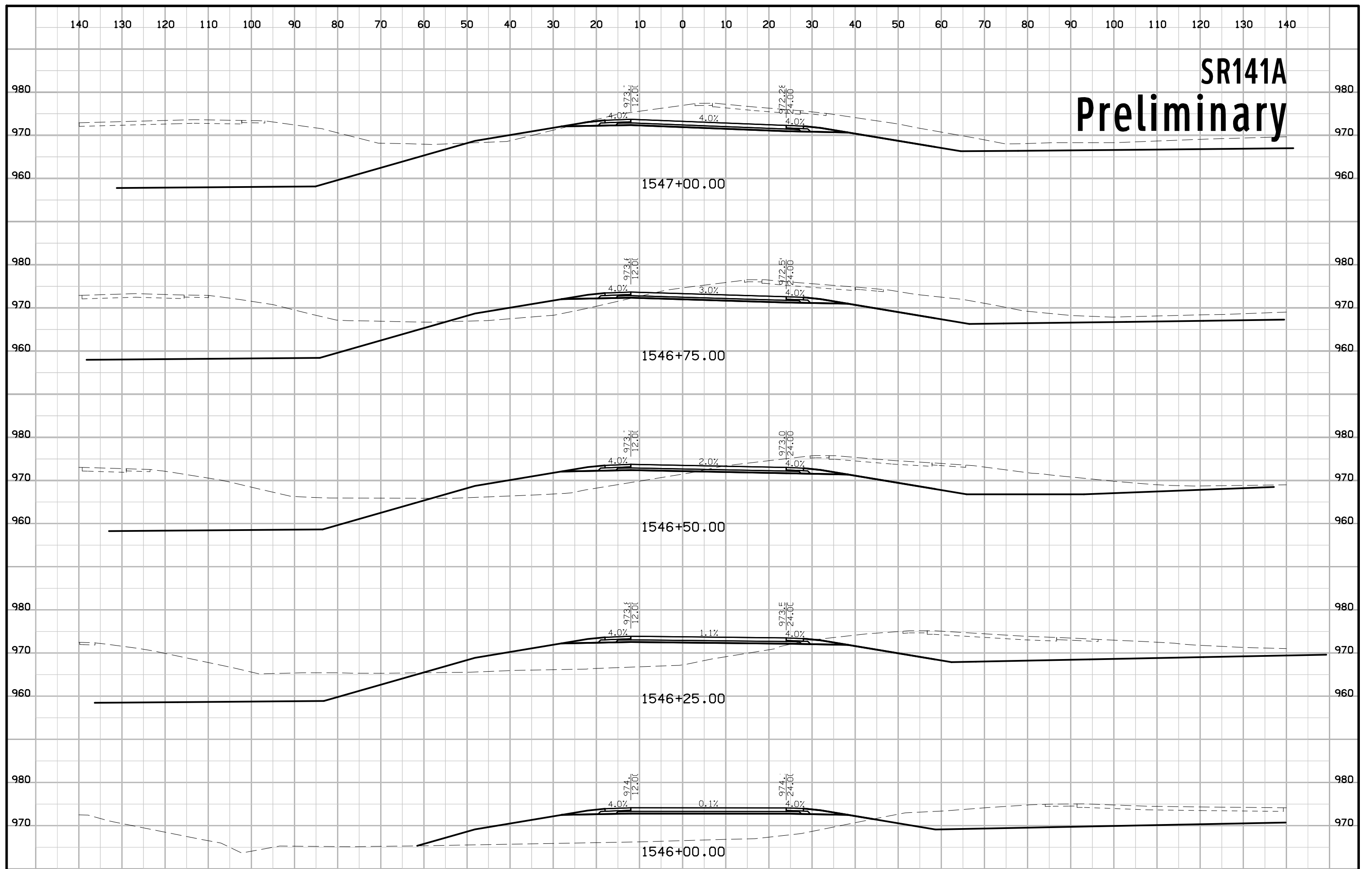


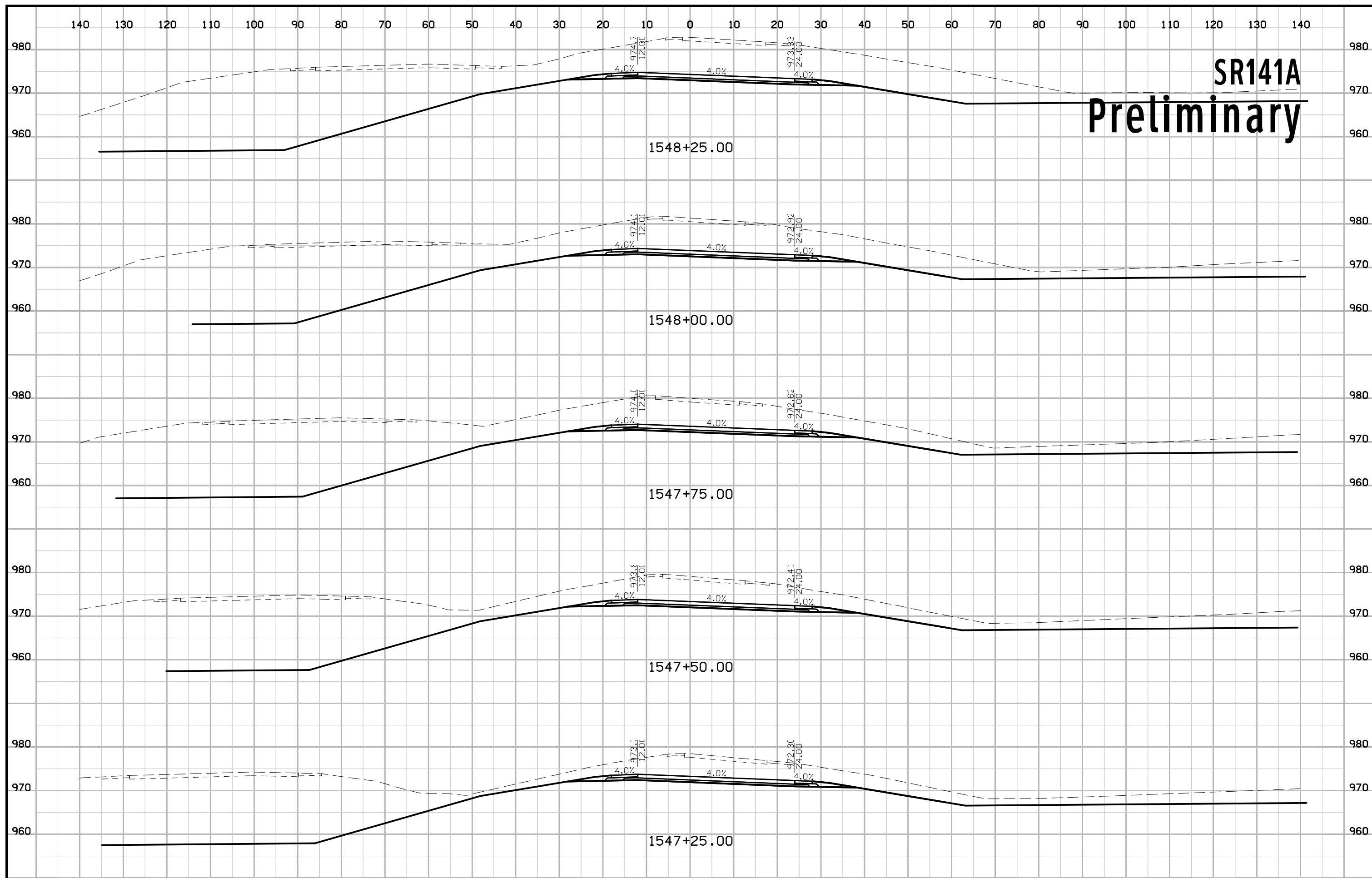
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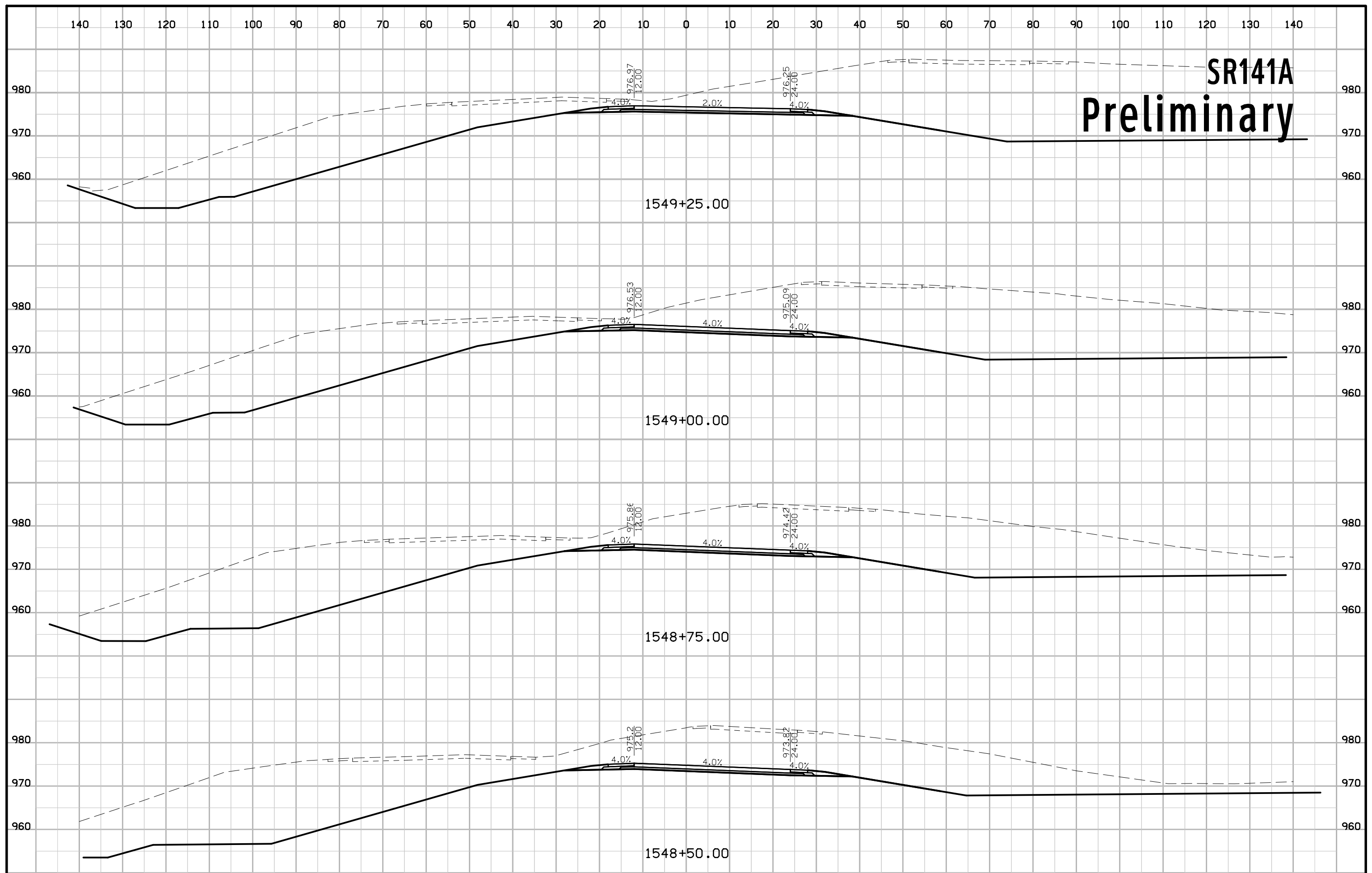


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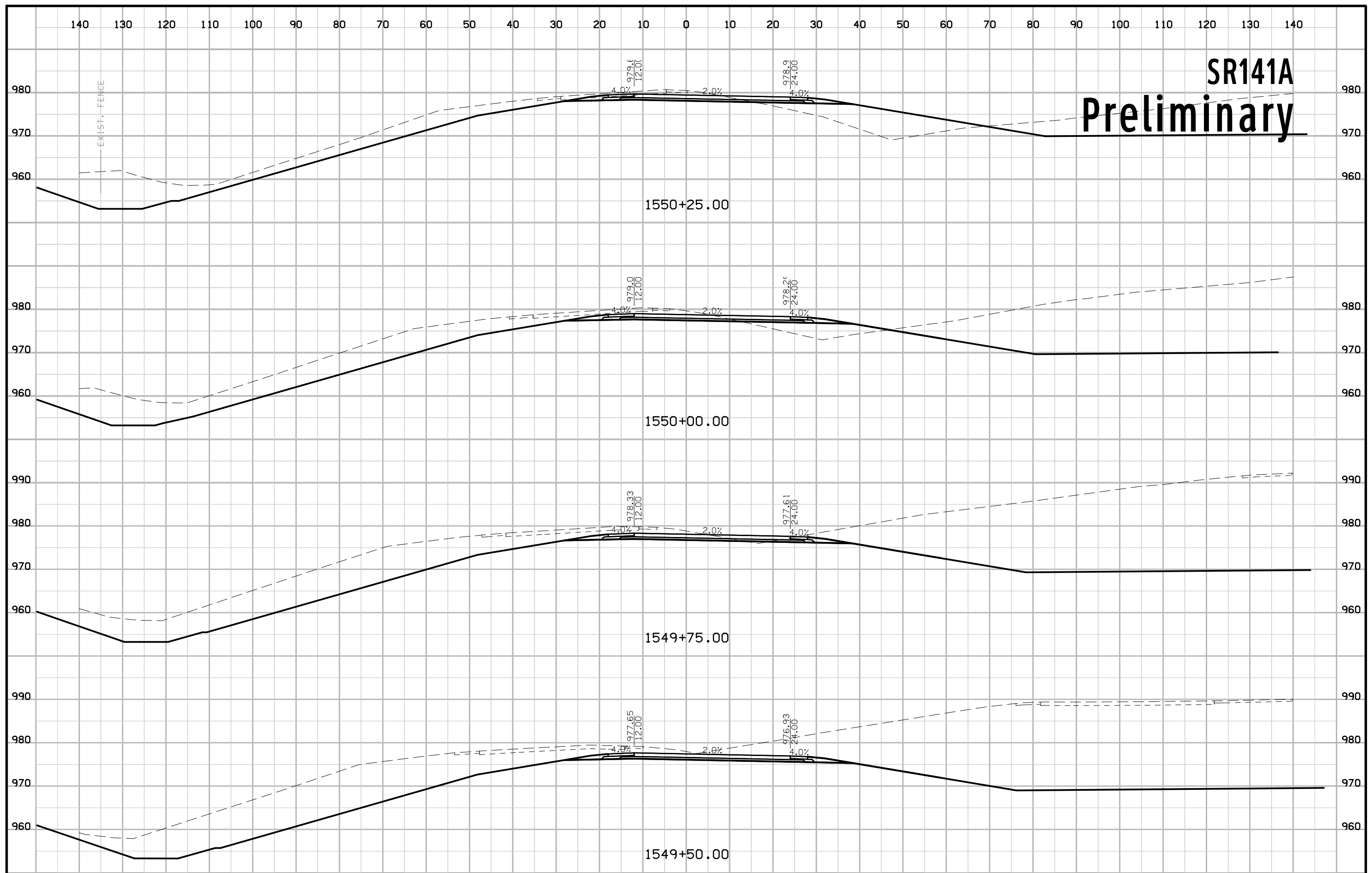




SR141A
Preliminary

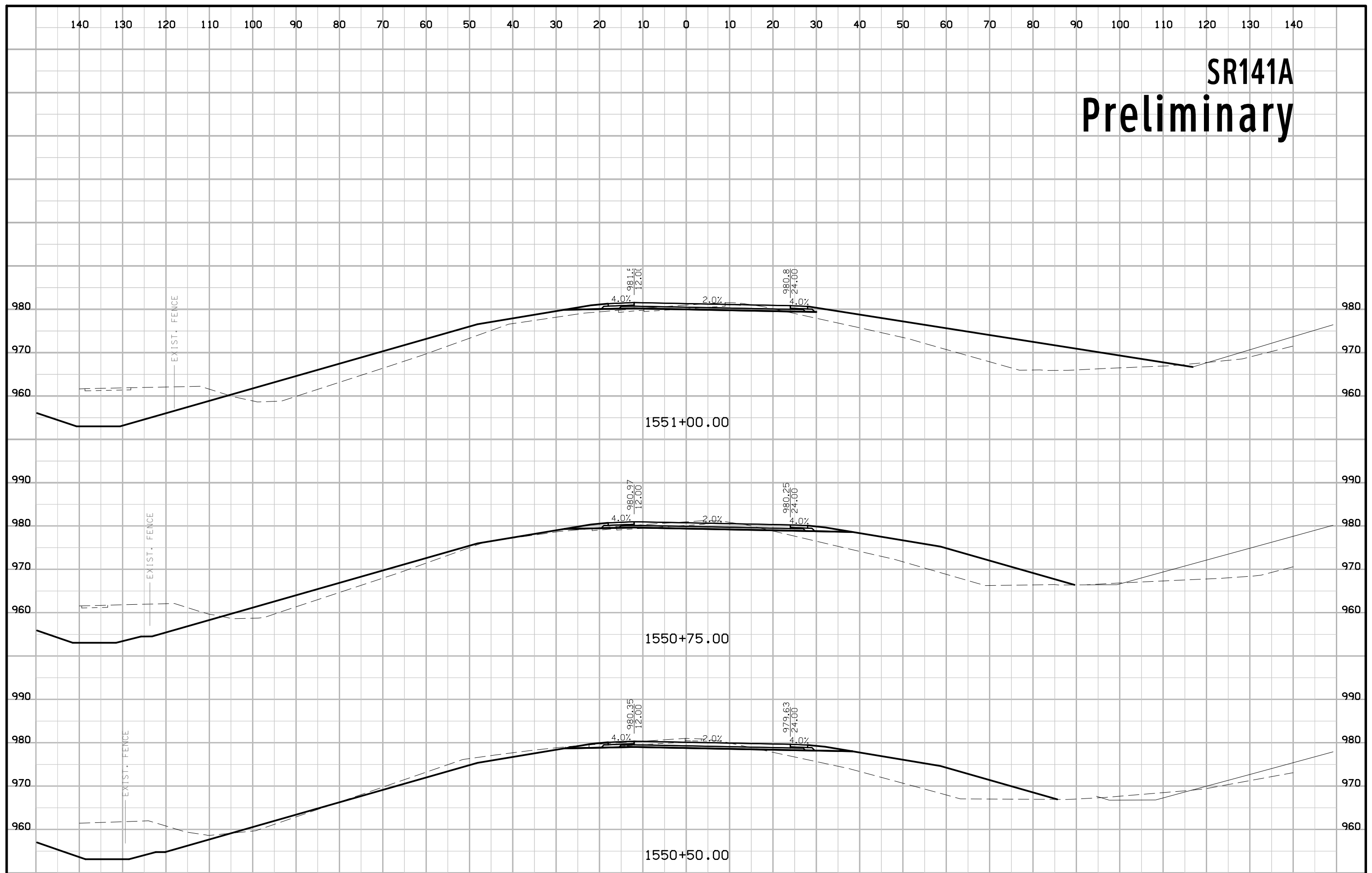


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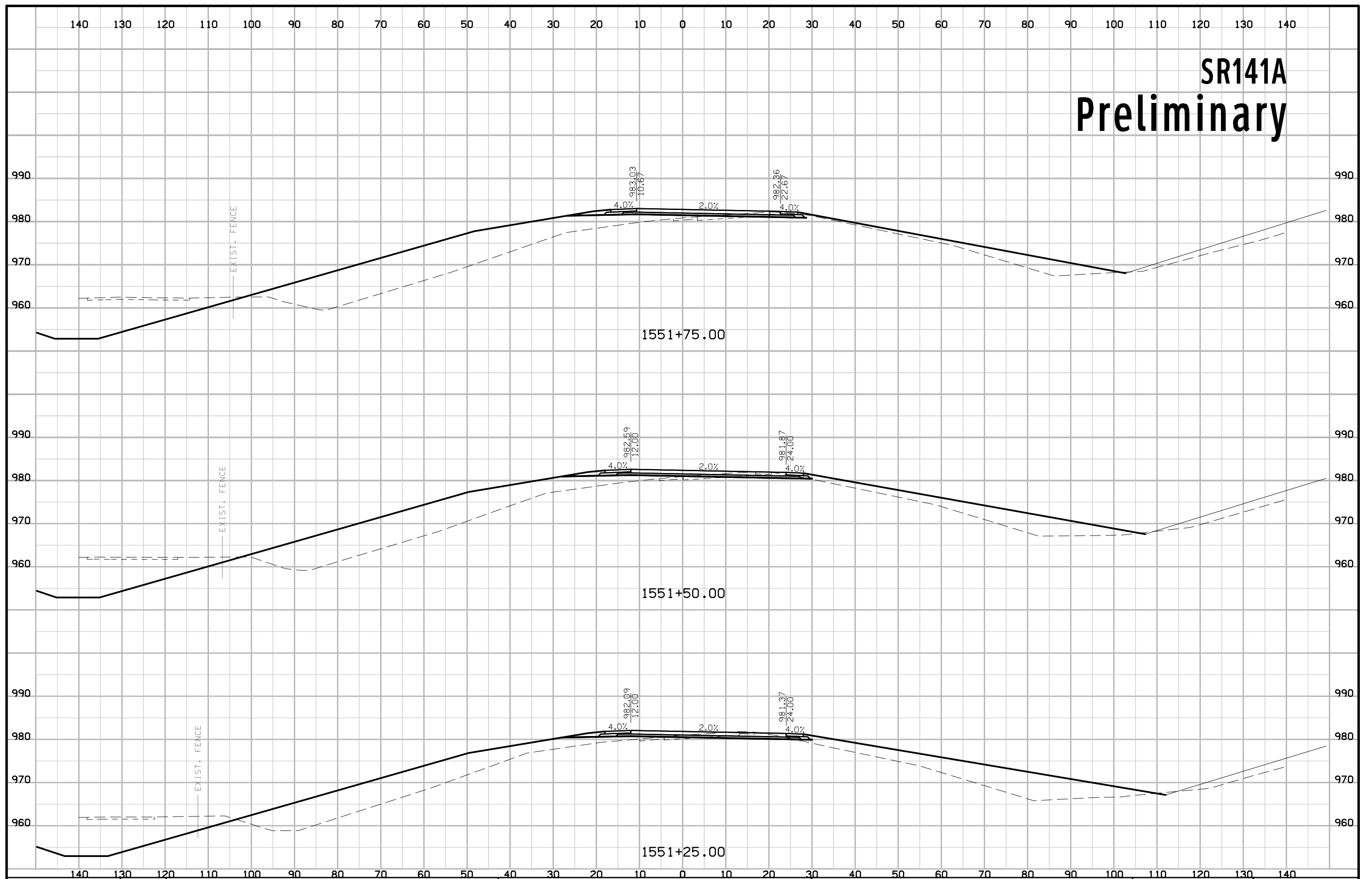


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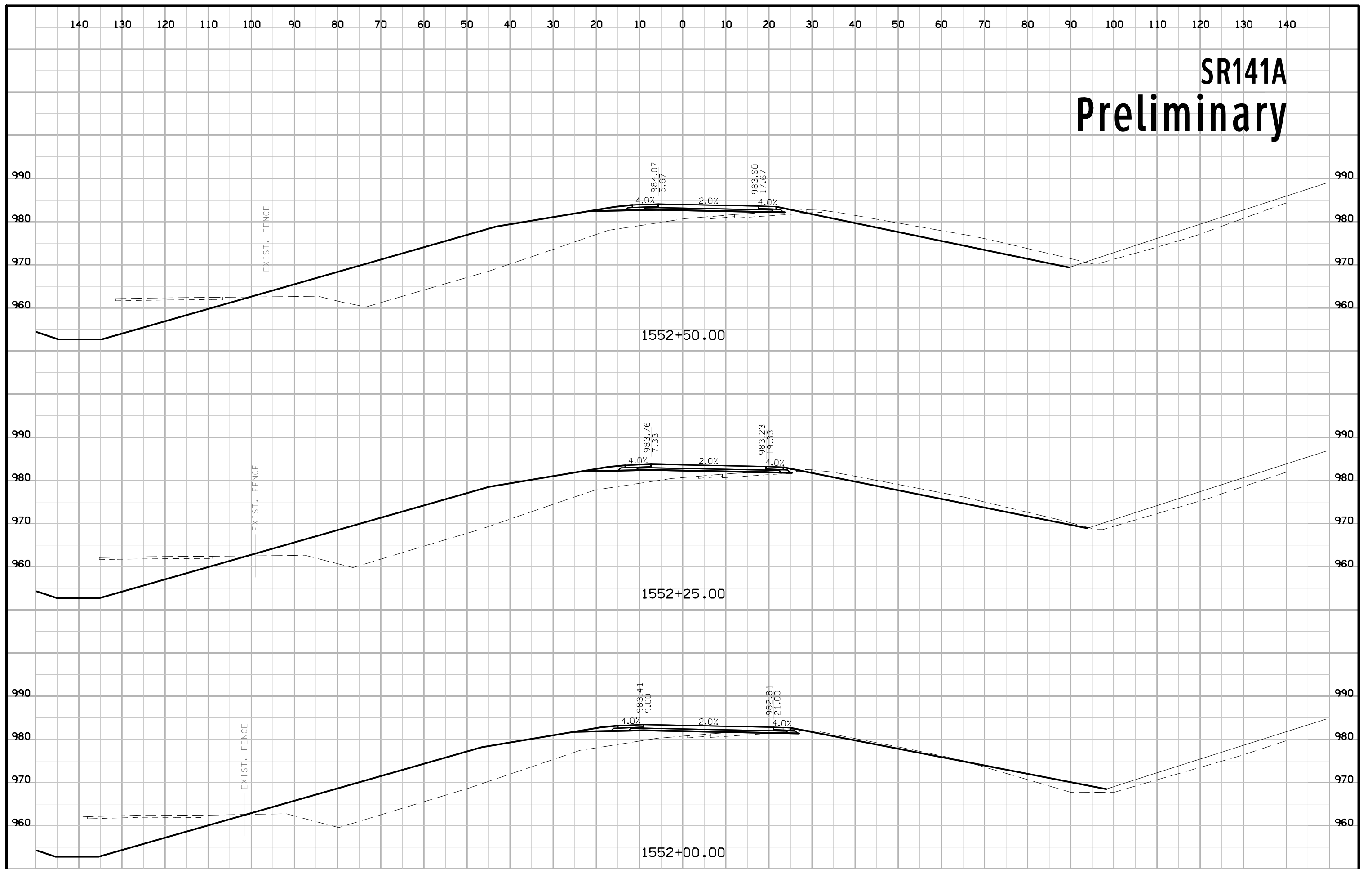
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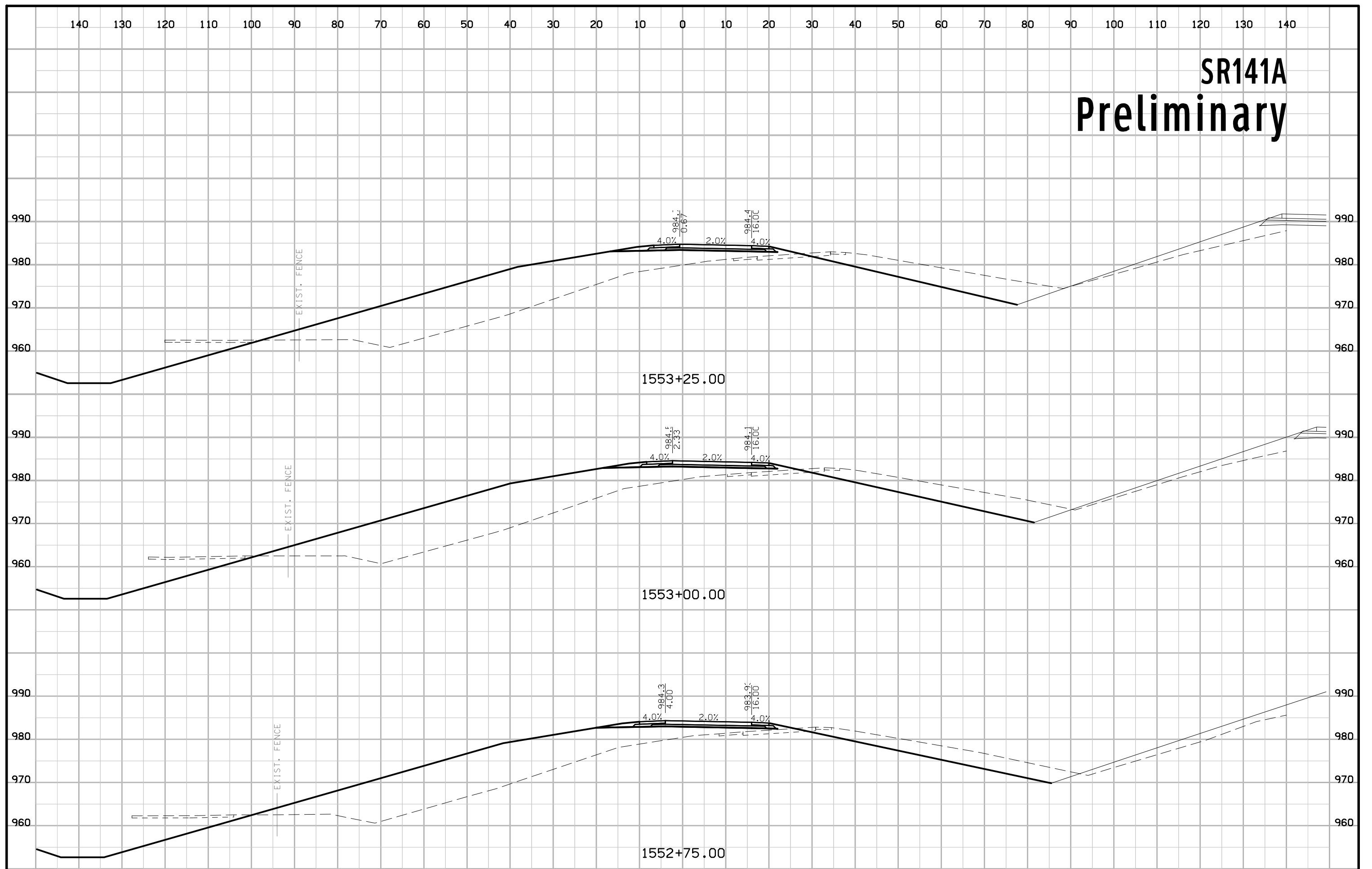
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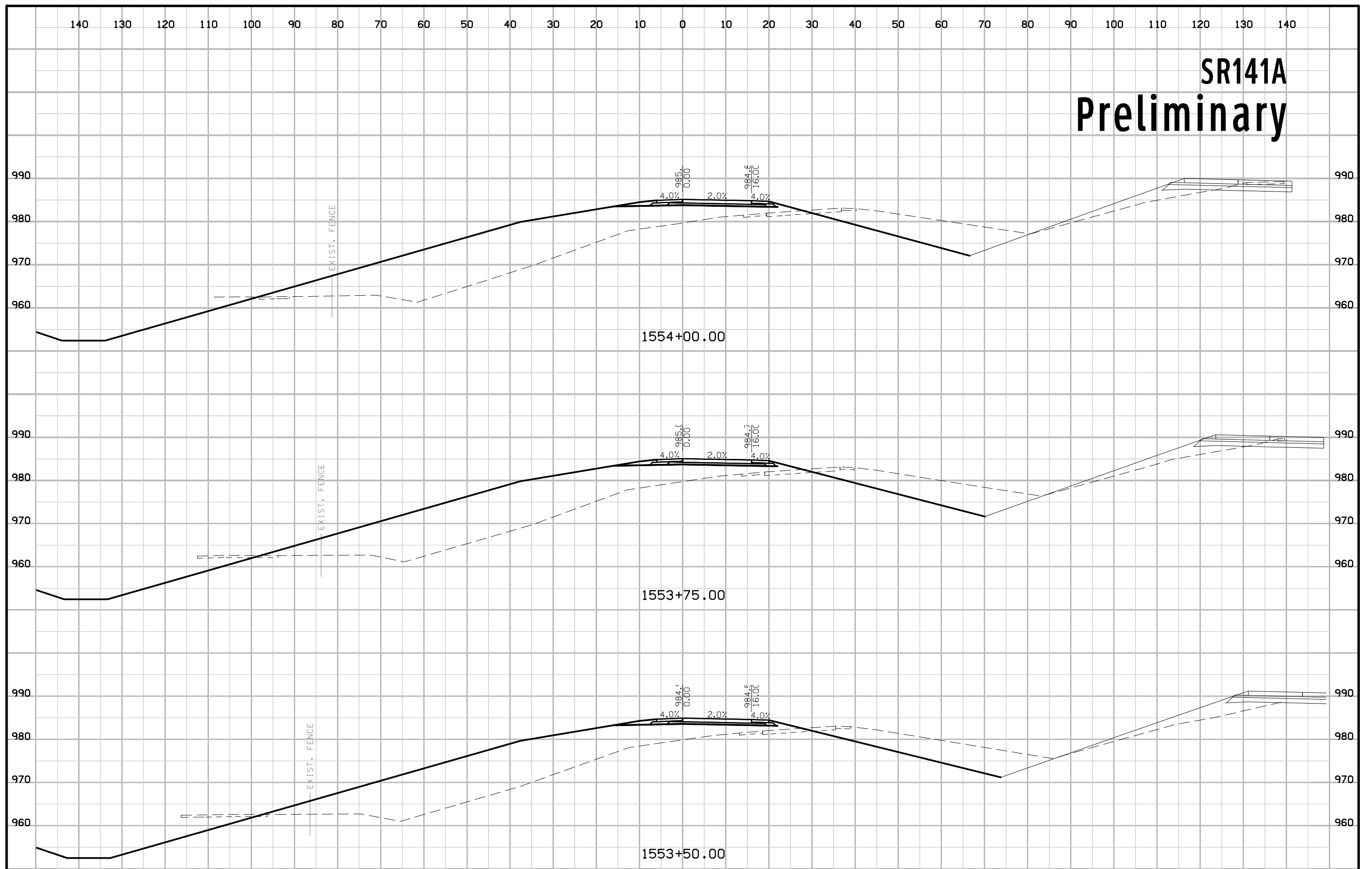
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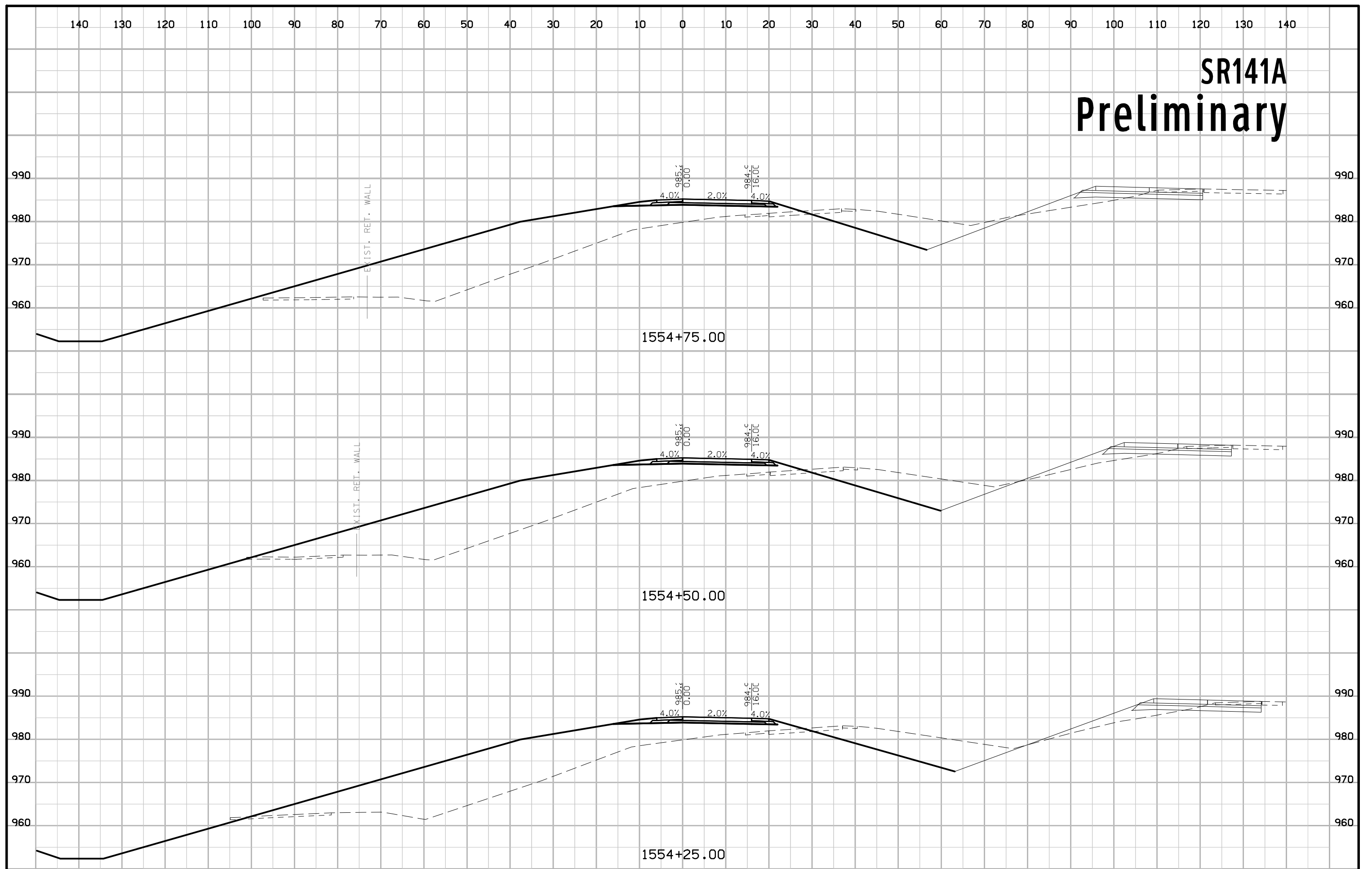
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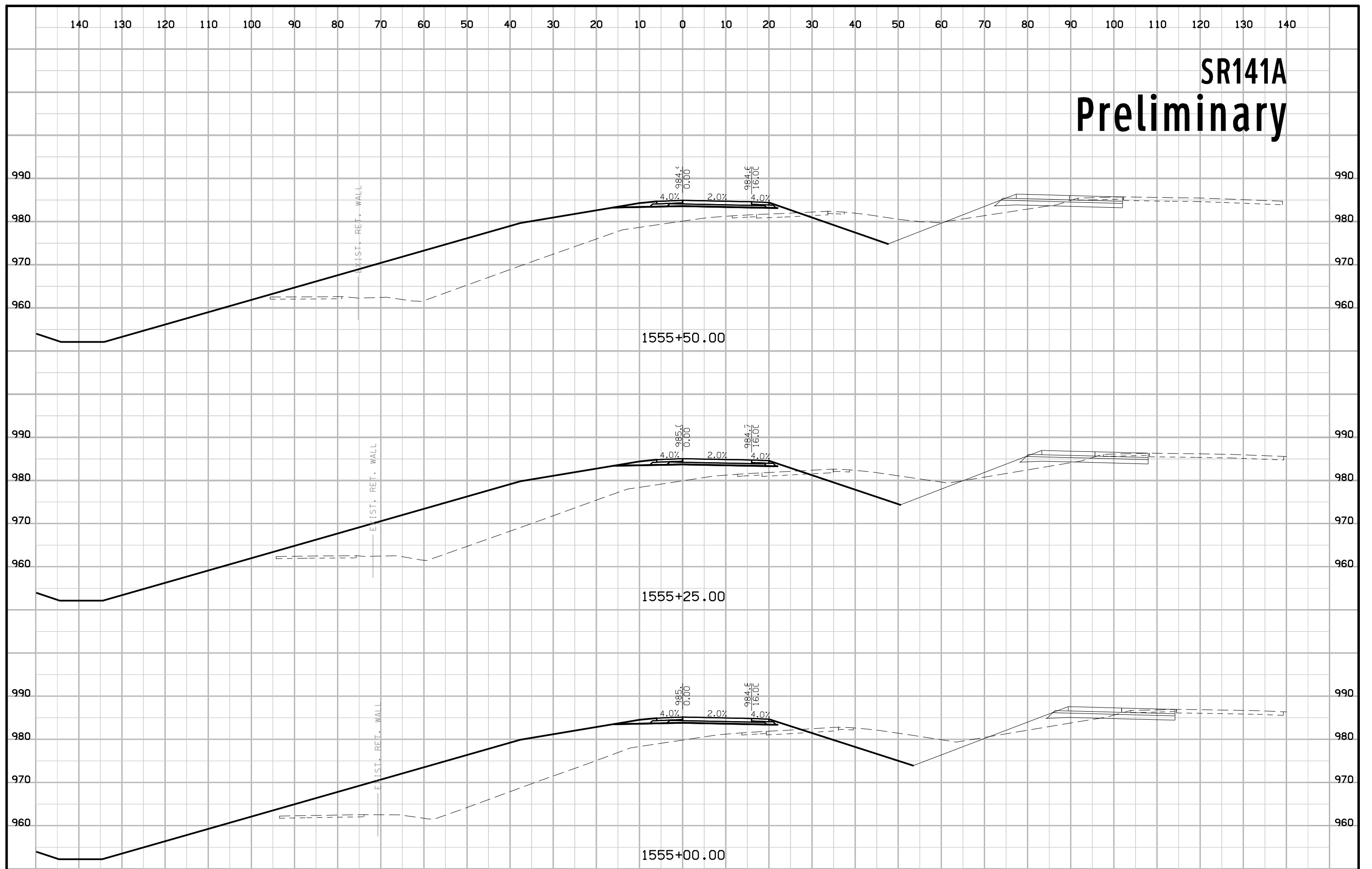
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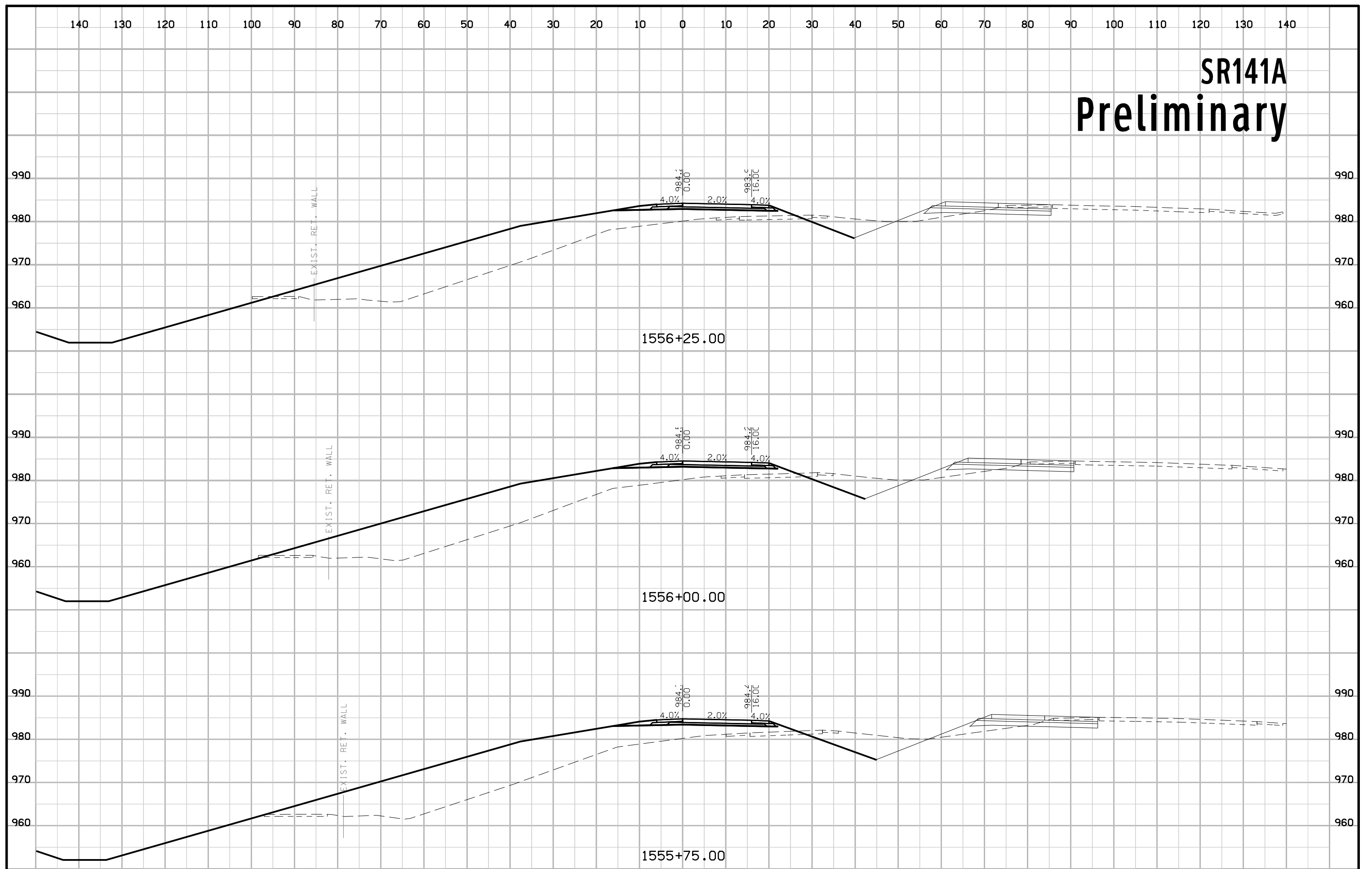
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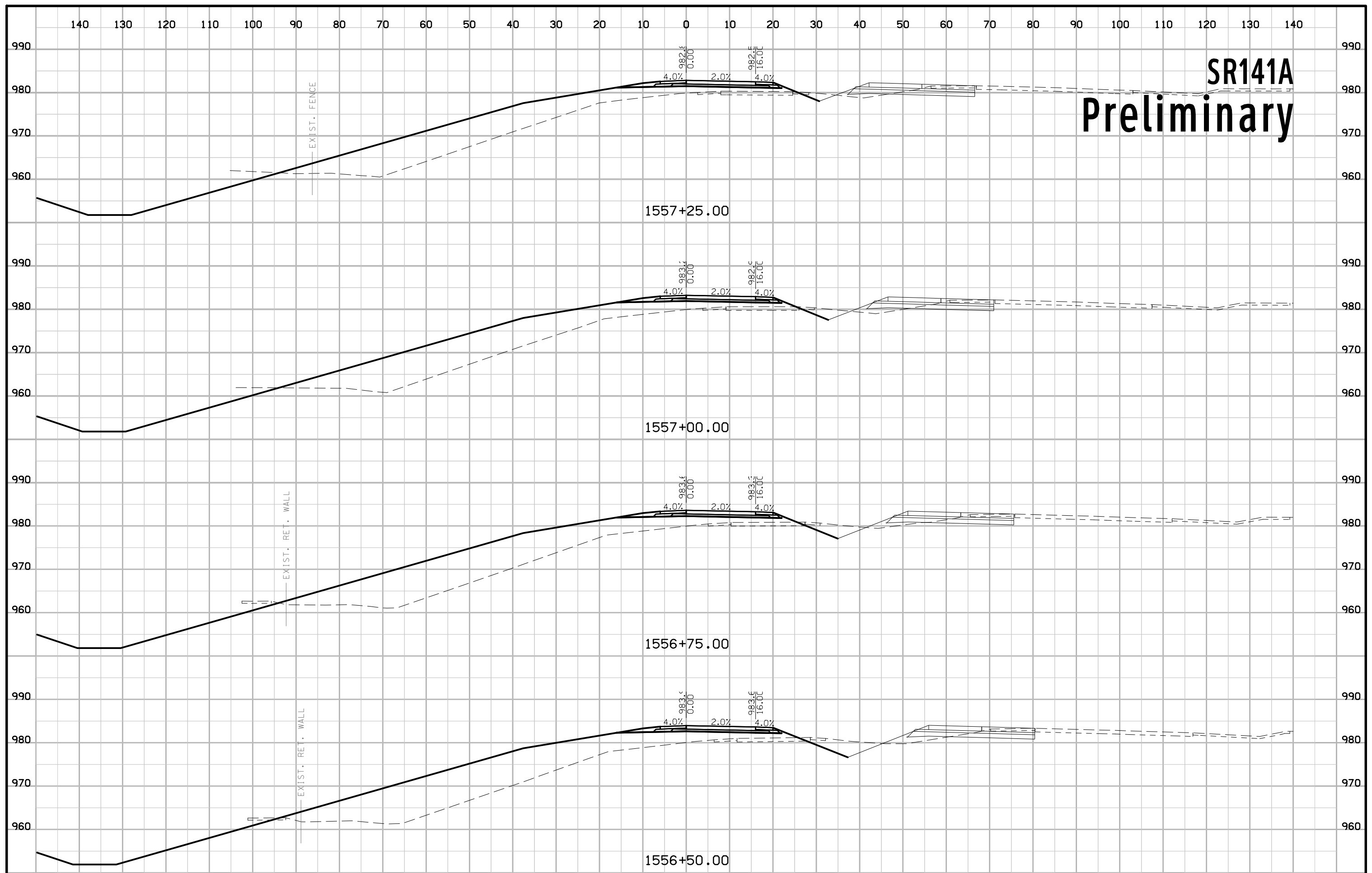


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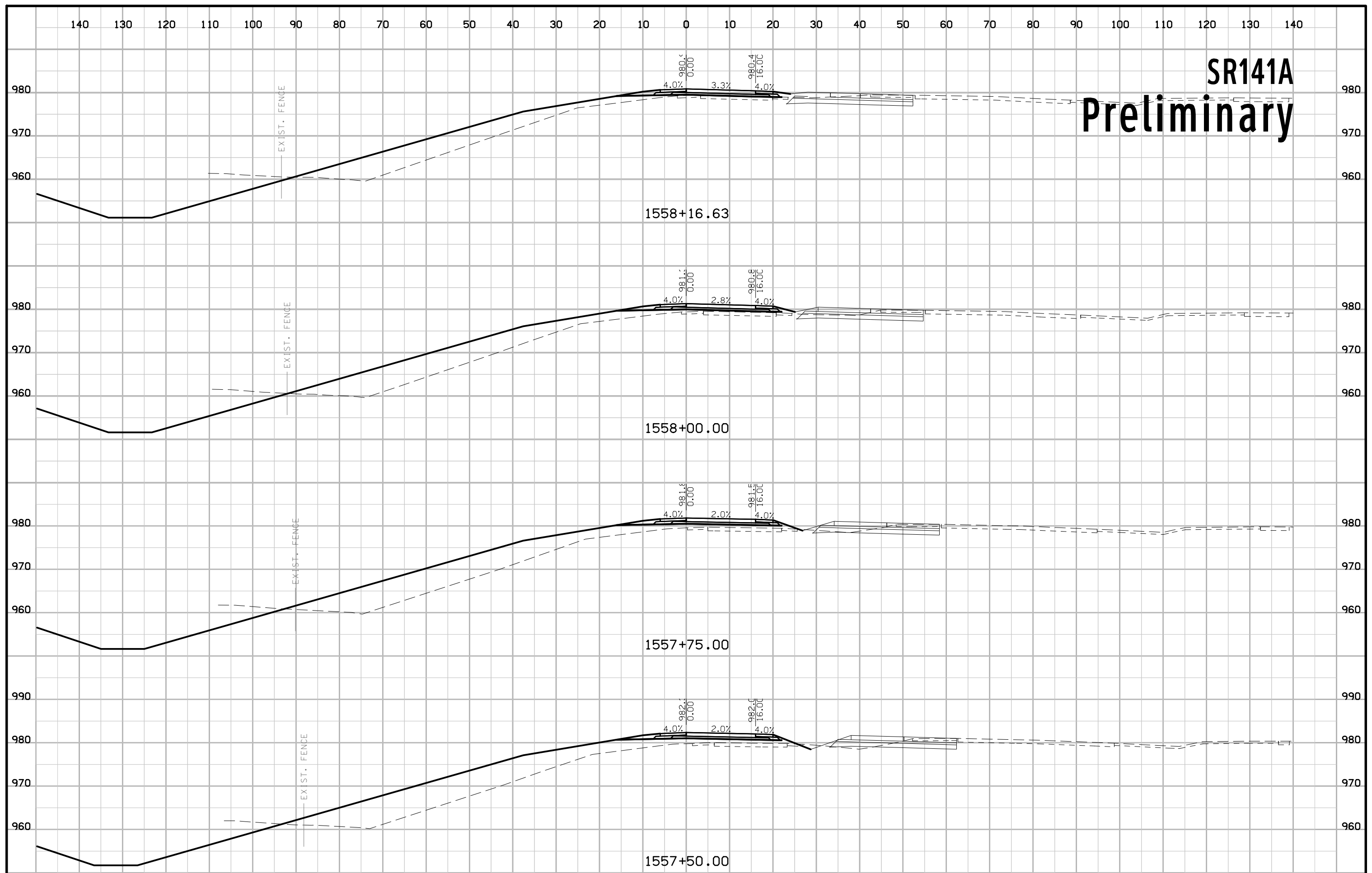


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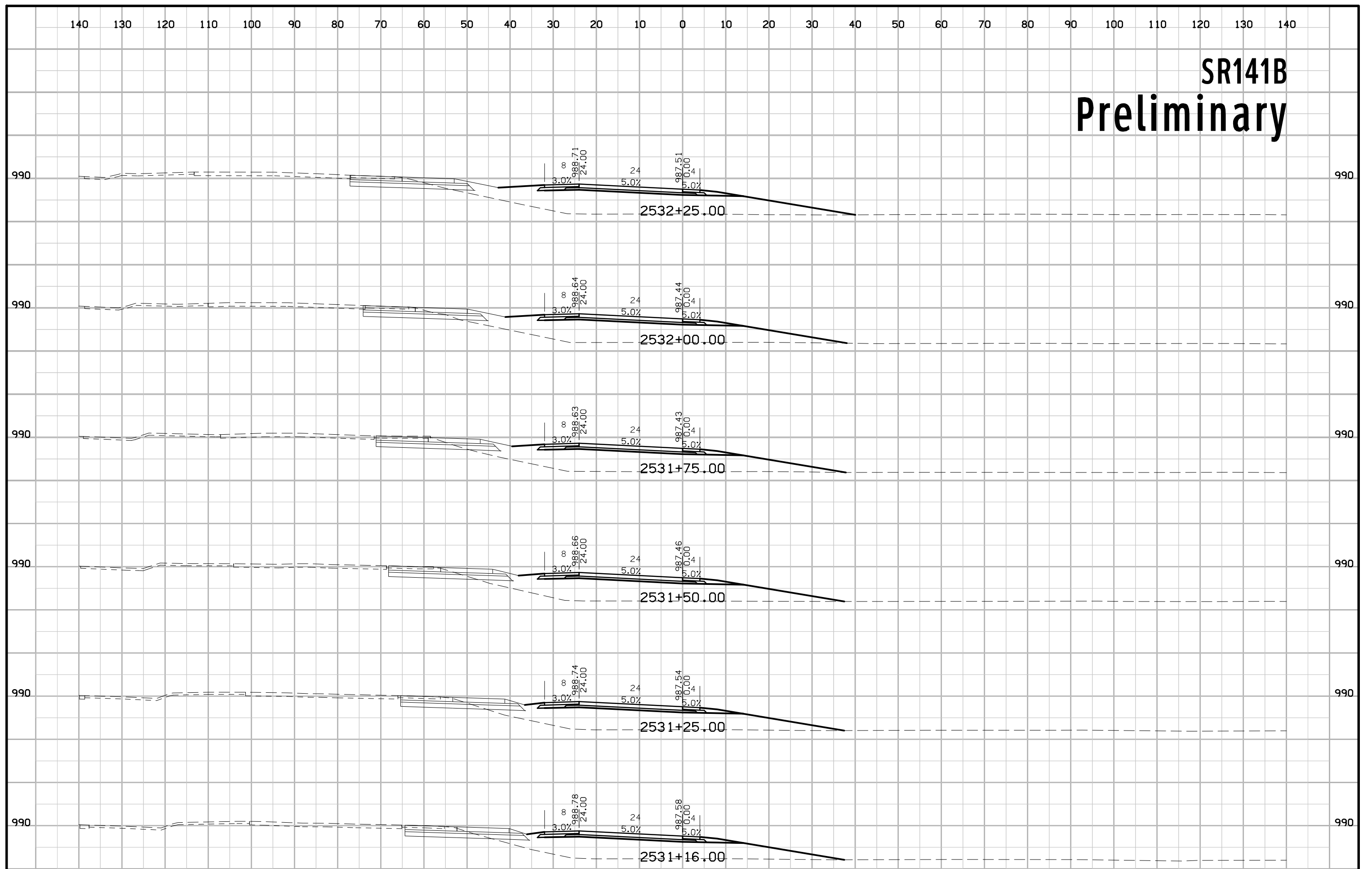


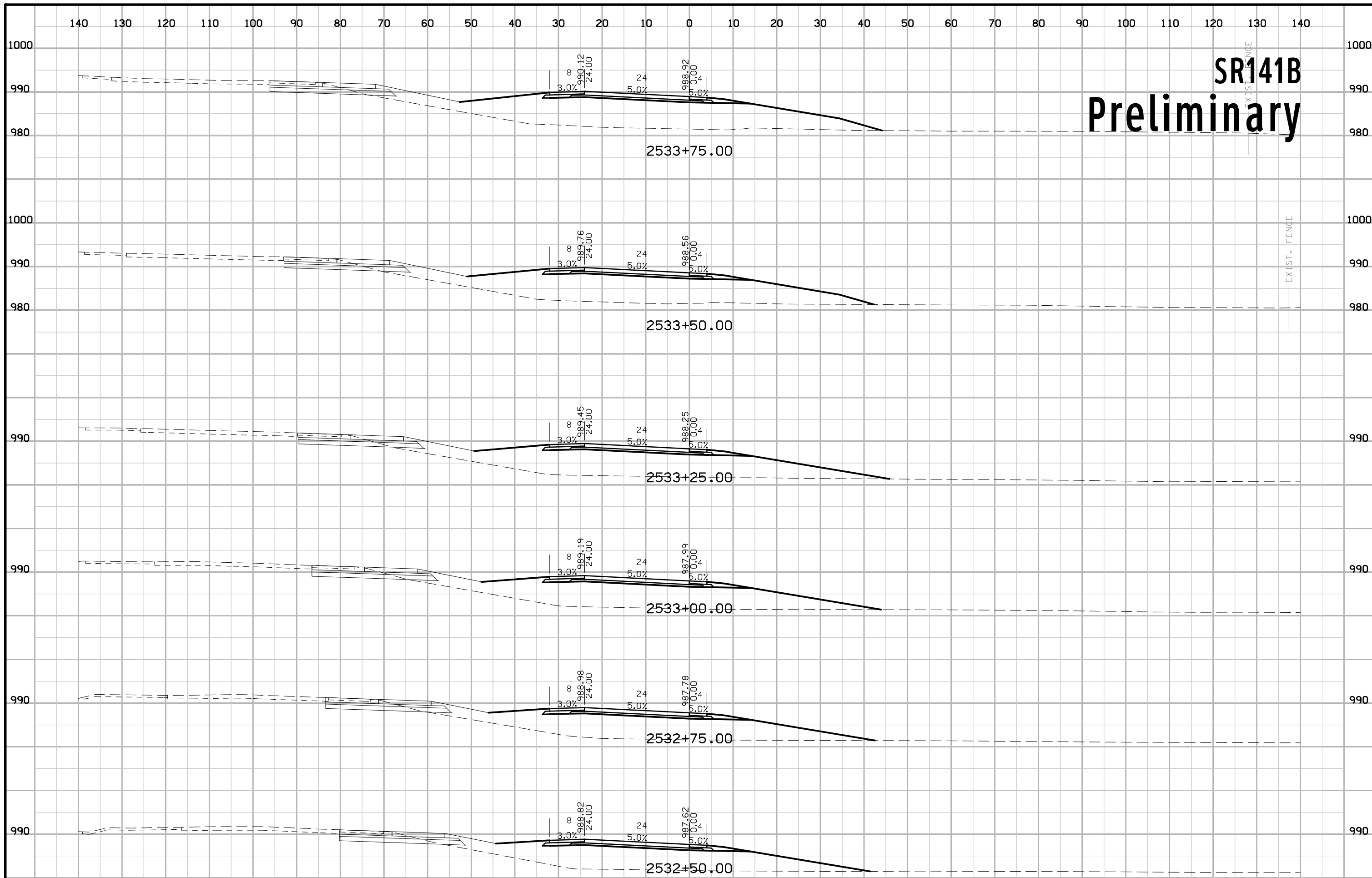
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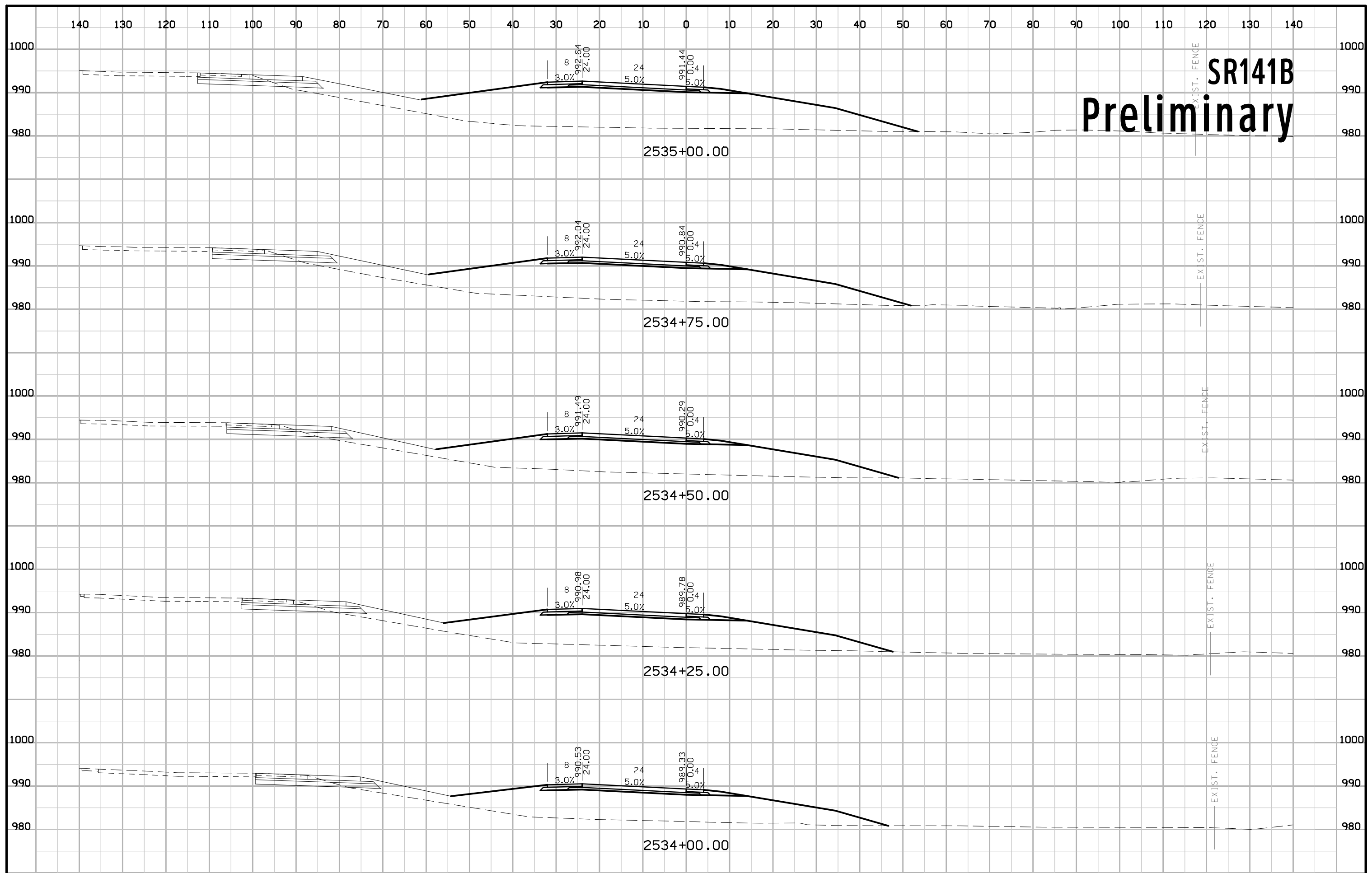


SR141A Preliminary

SR141B Preliminary







SR141B
Preliminary

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2534+75.00

2534+50.00

2534+25.00

2534+00.00

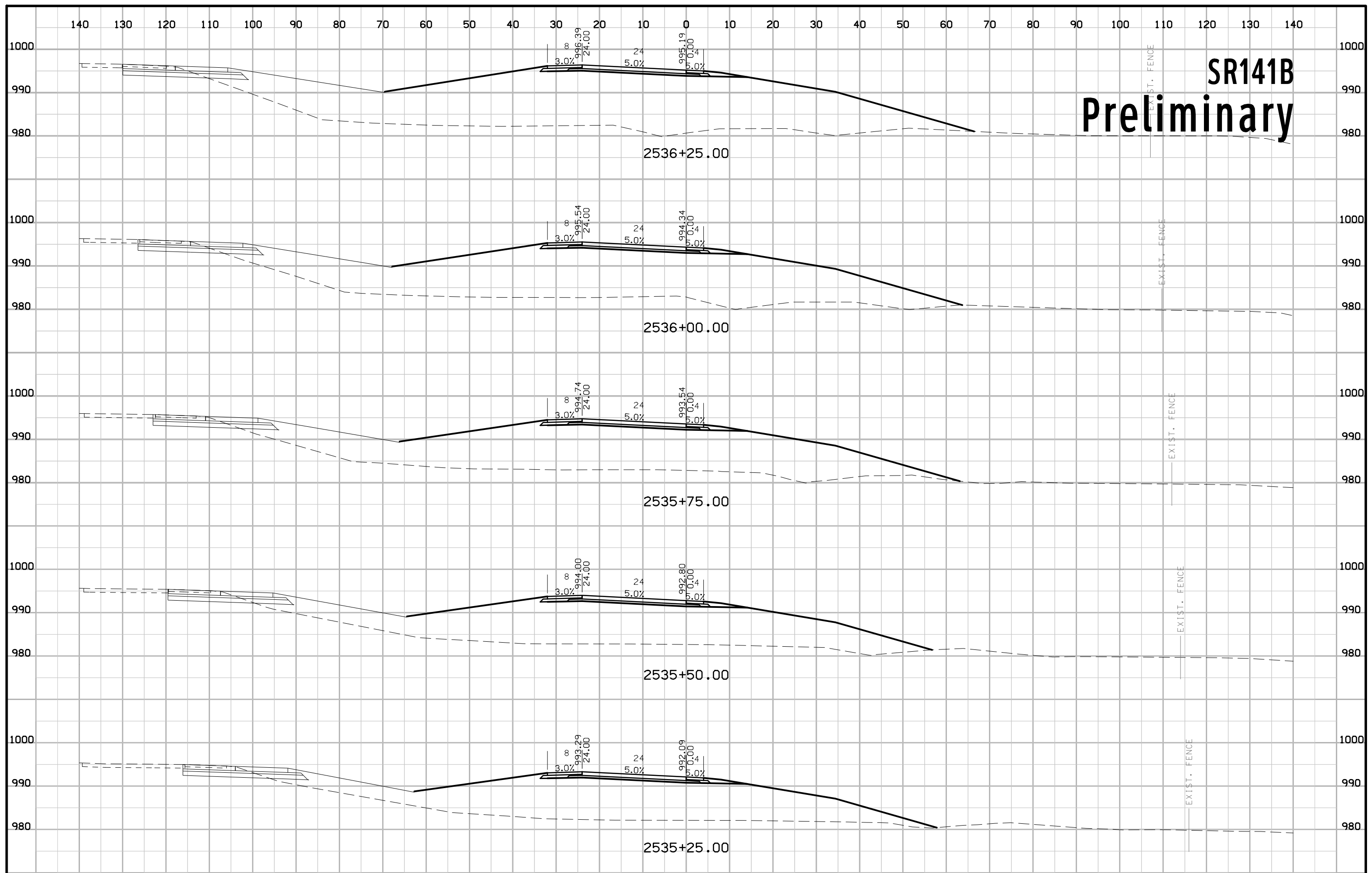
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EXIST. FENCE

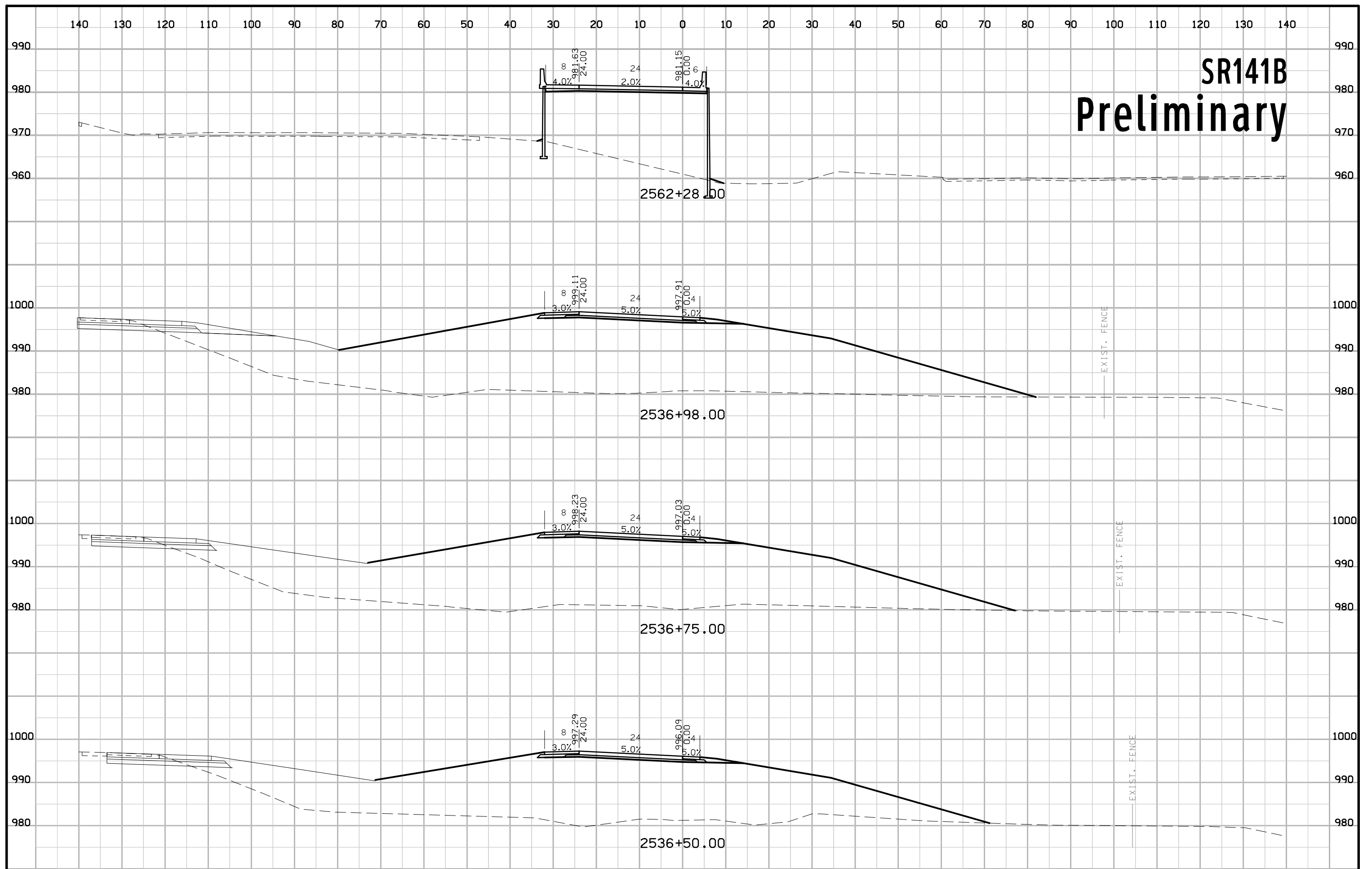
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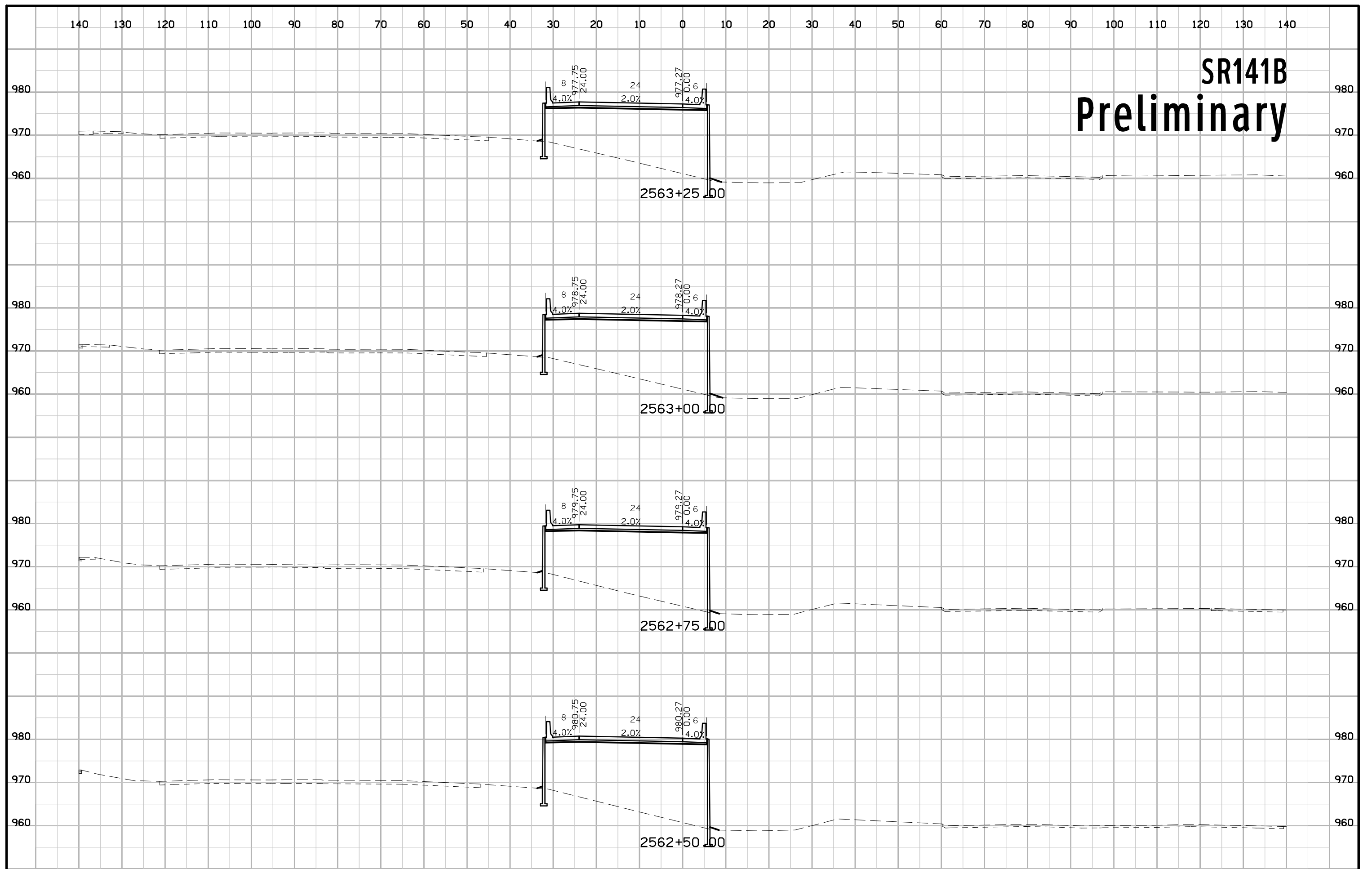
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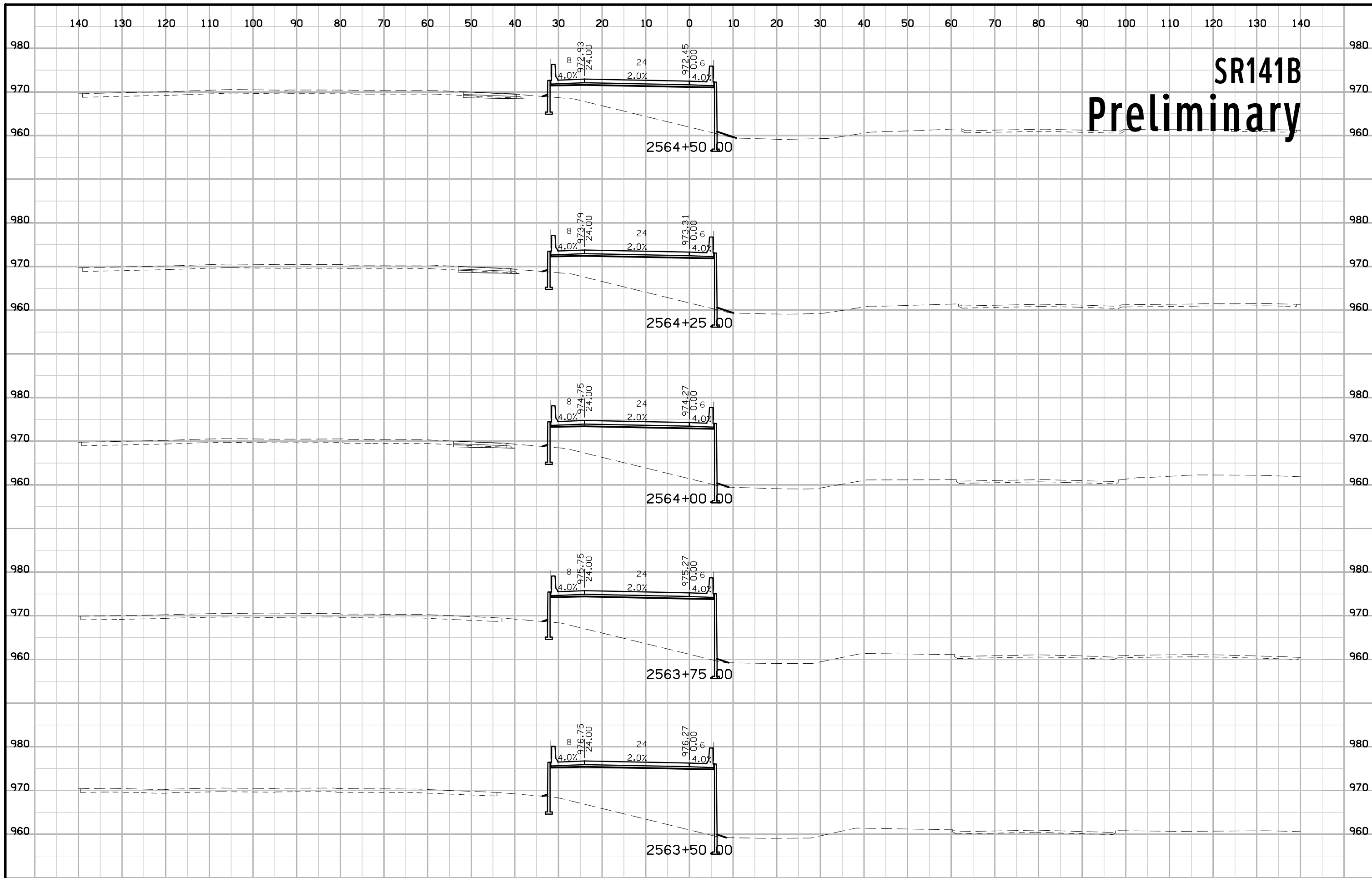


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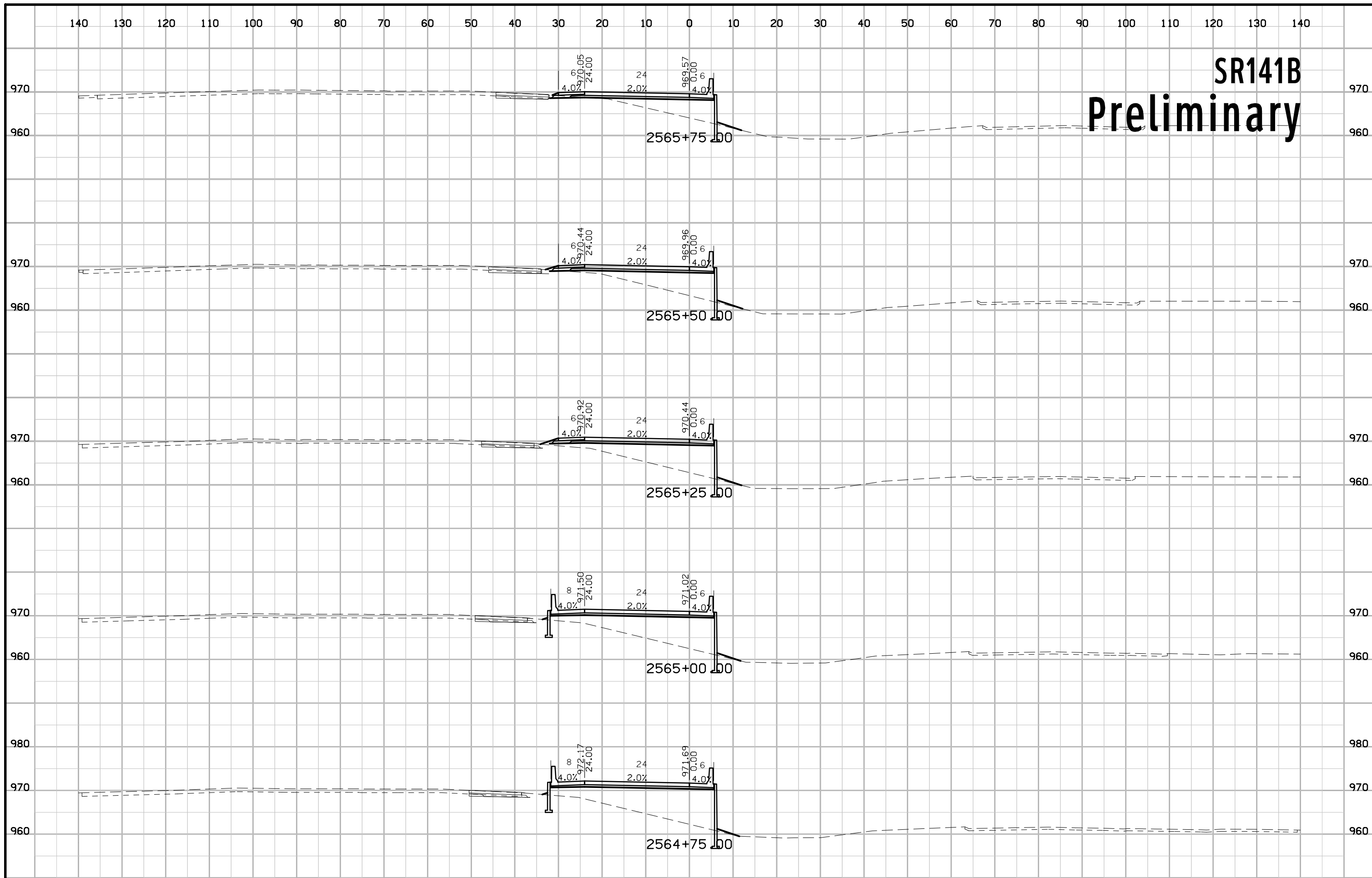


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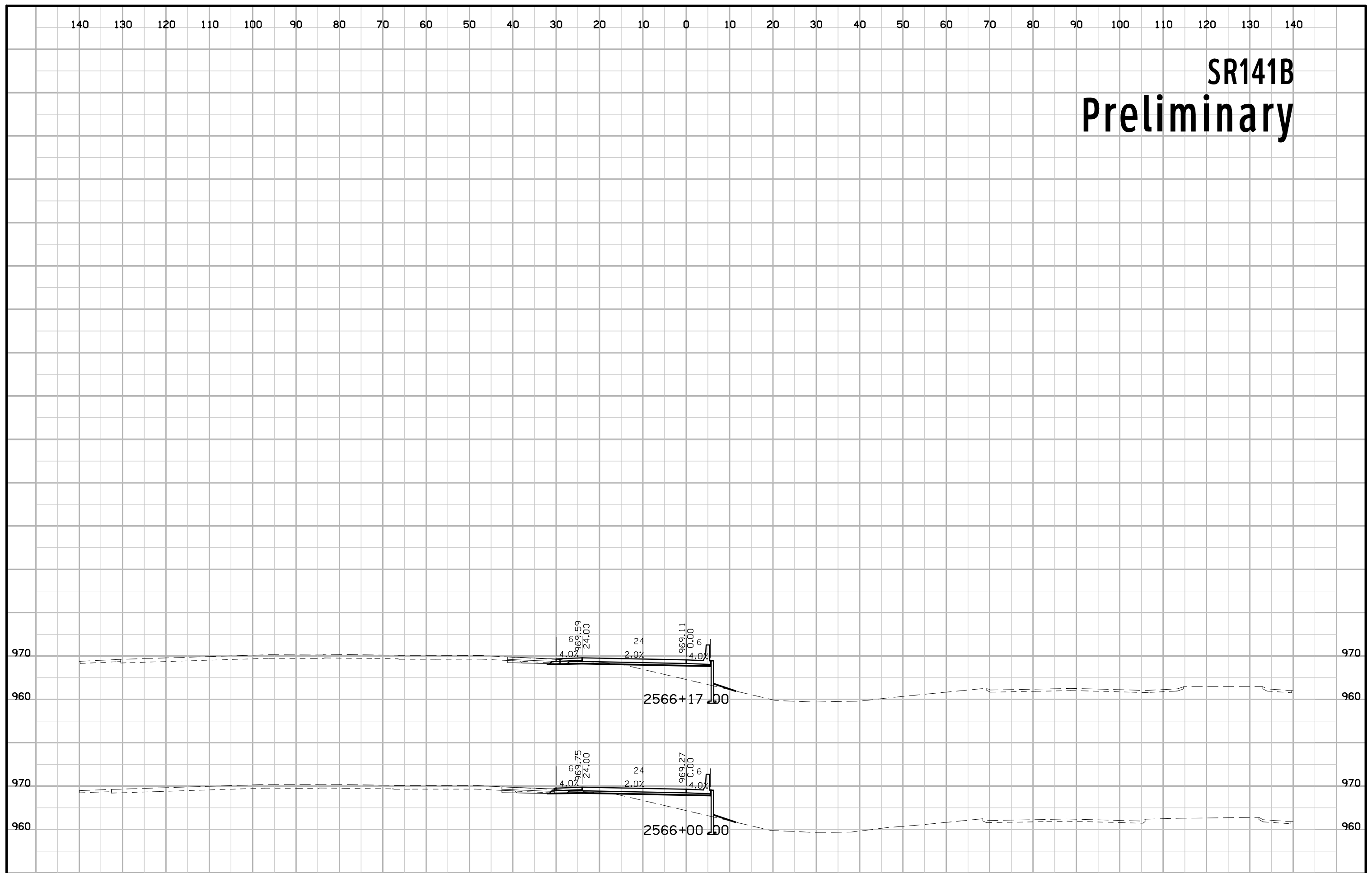


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Preliminary

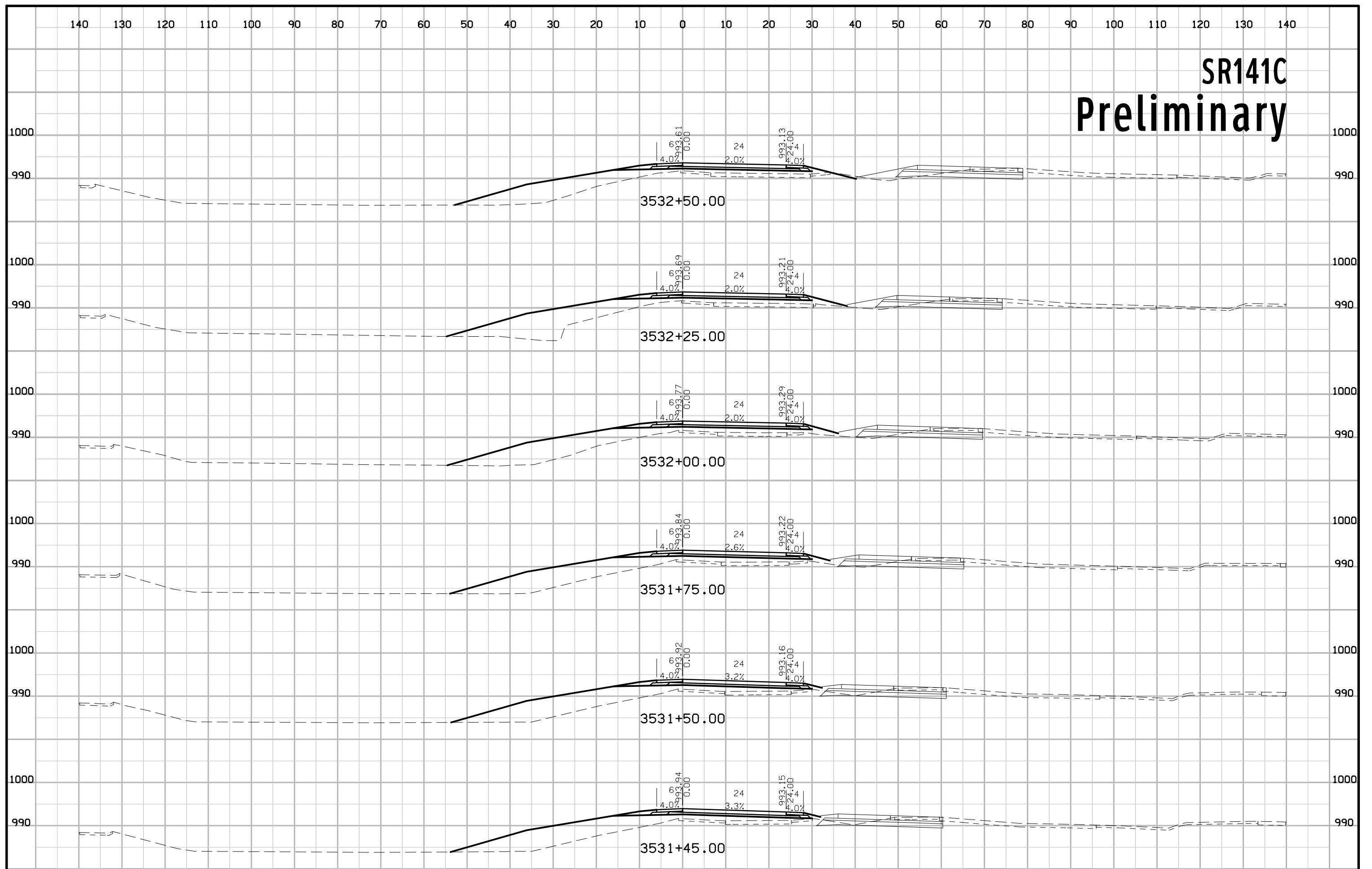


SR141B
Preliminary

SR141B Preliminary

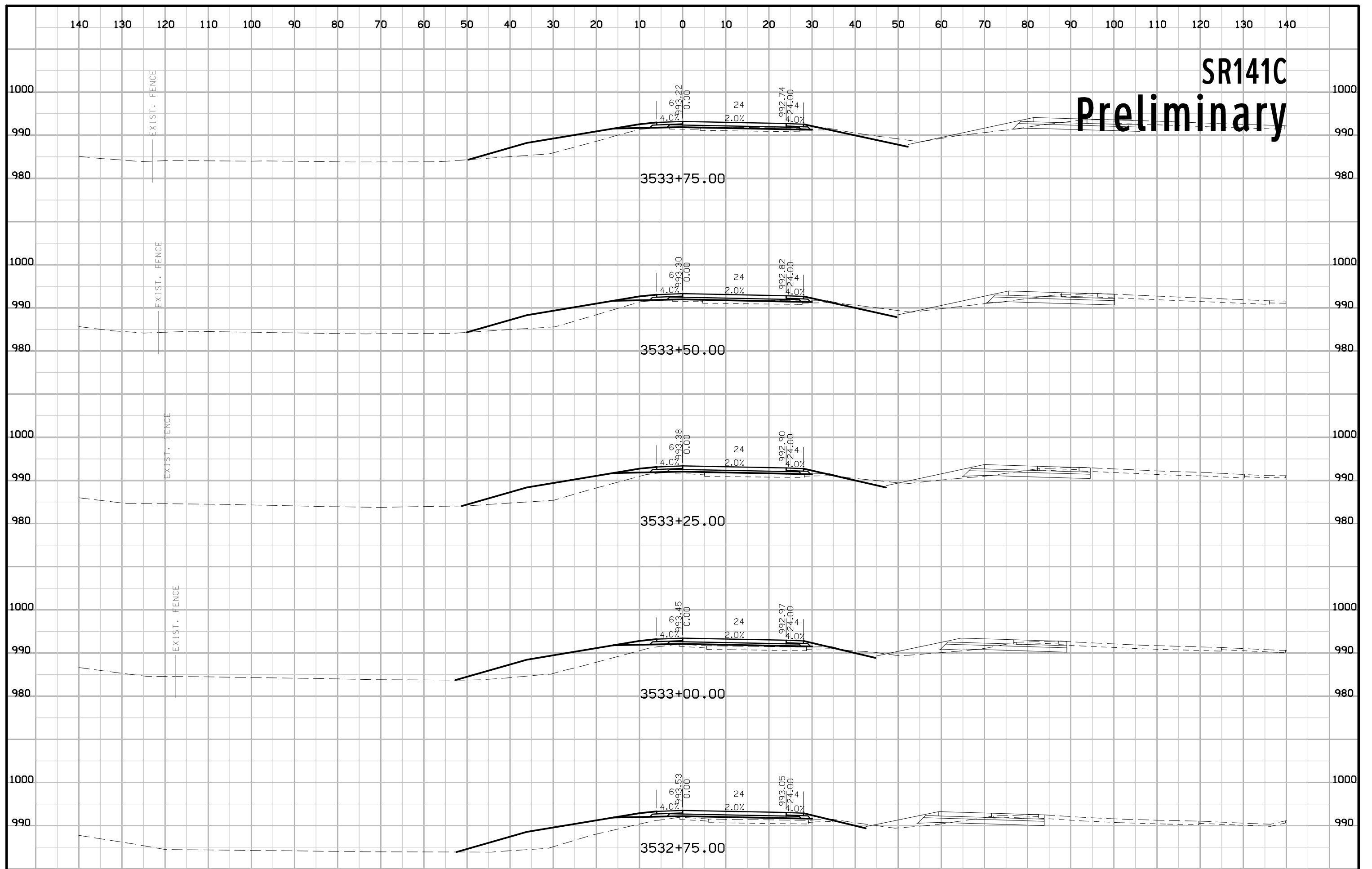


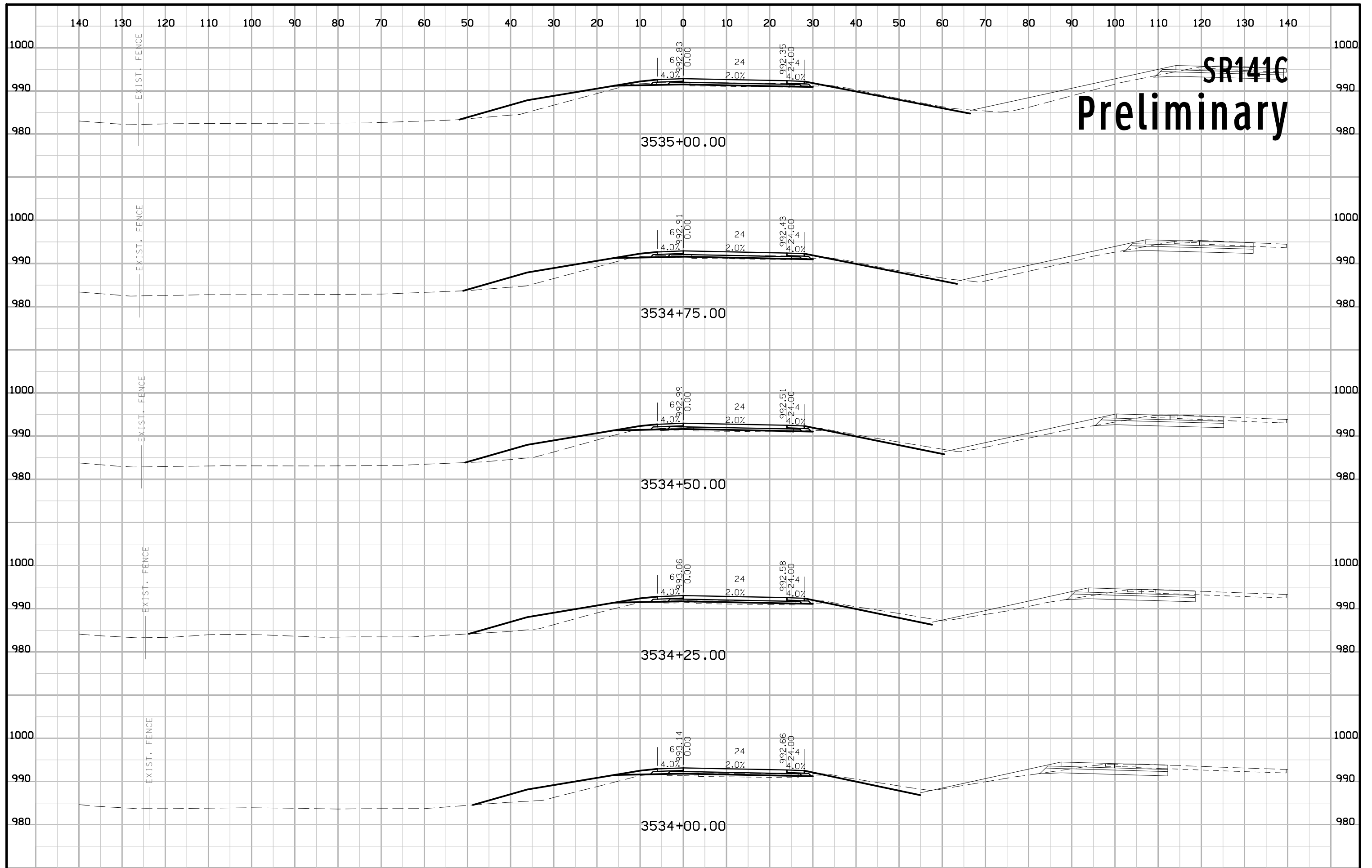
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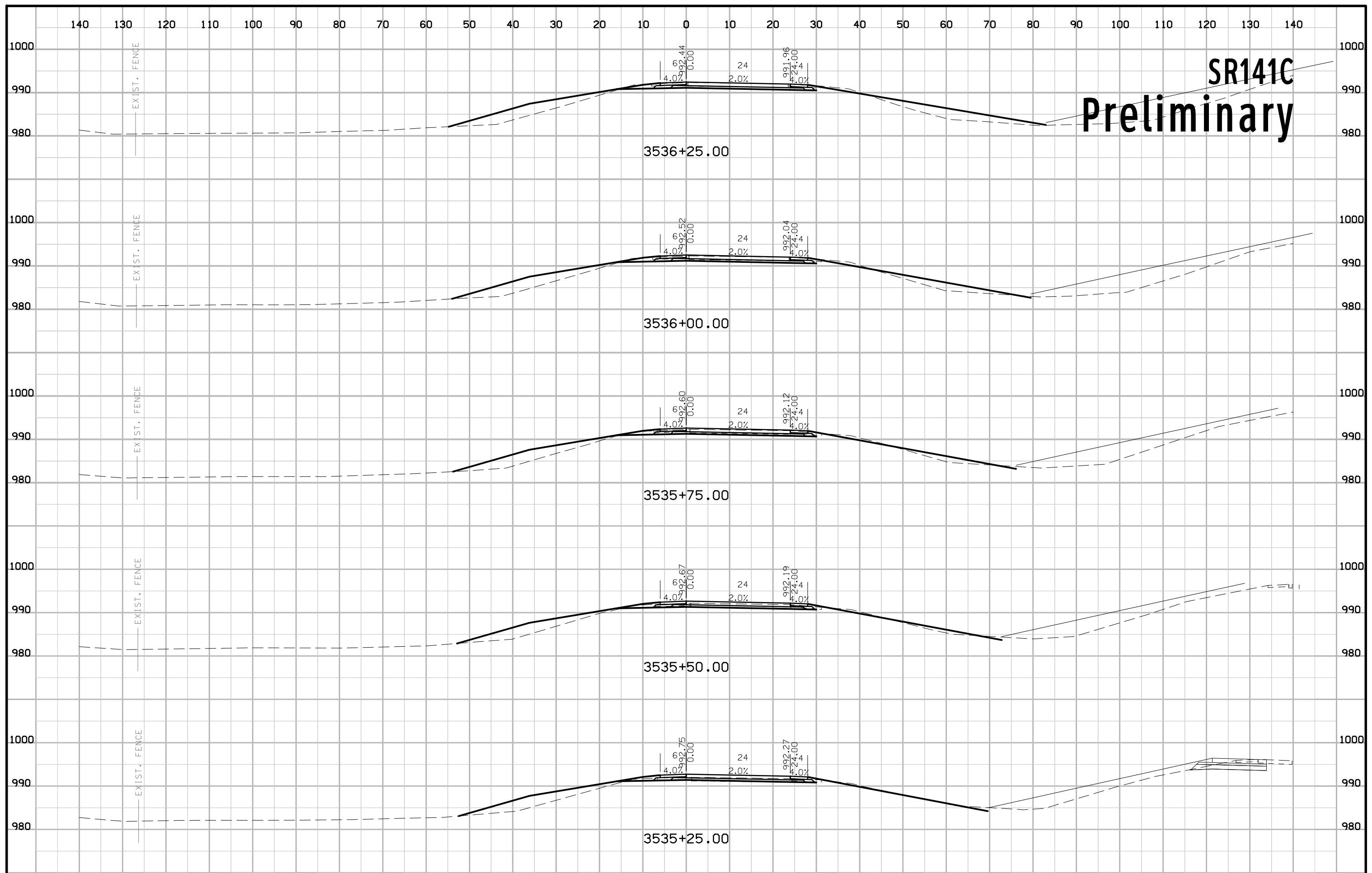
SR141C

Preliminary





SR141C
Preliminary



SR141C
Preliminary

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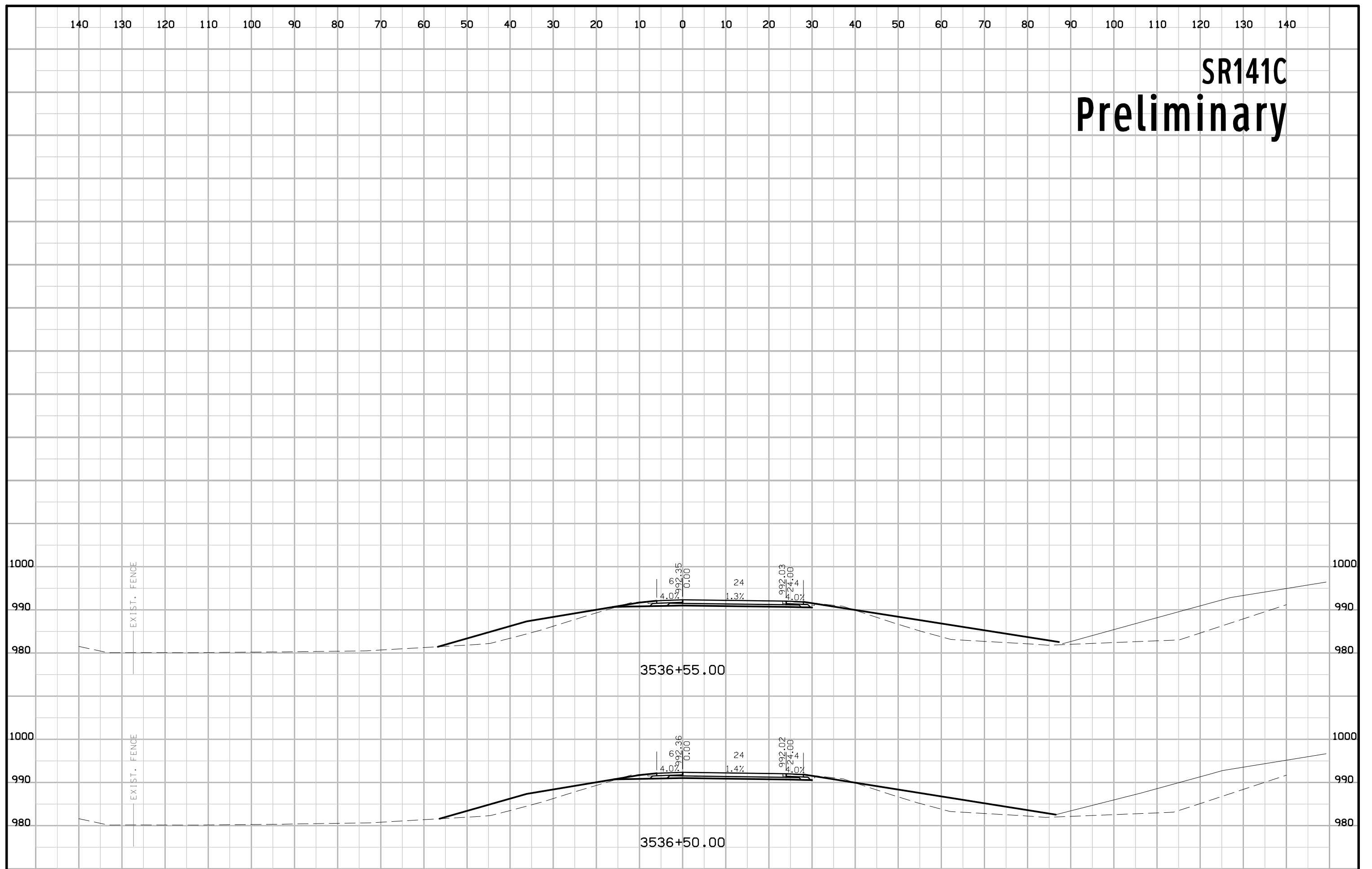
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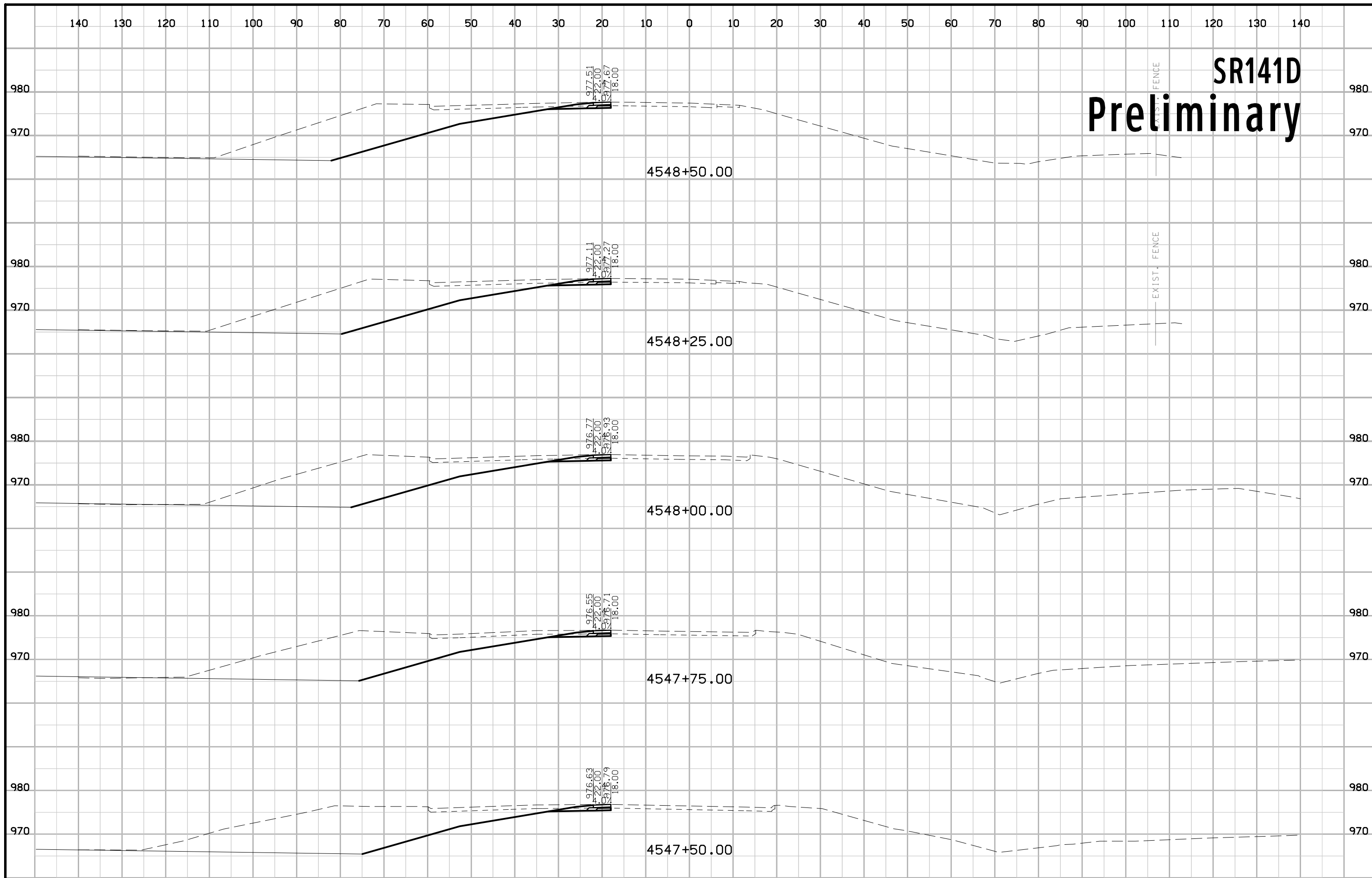
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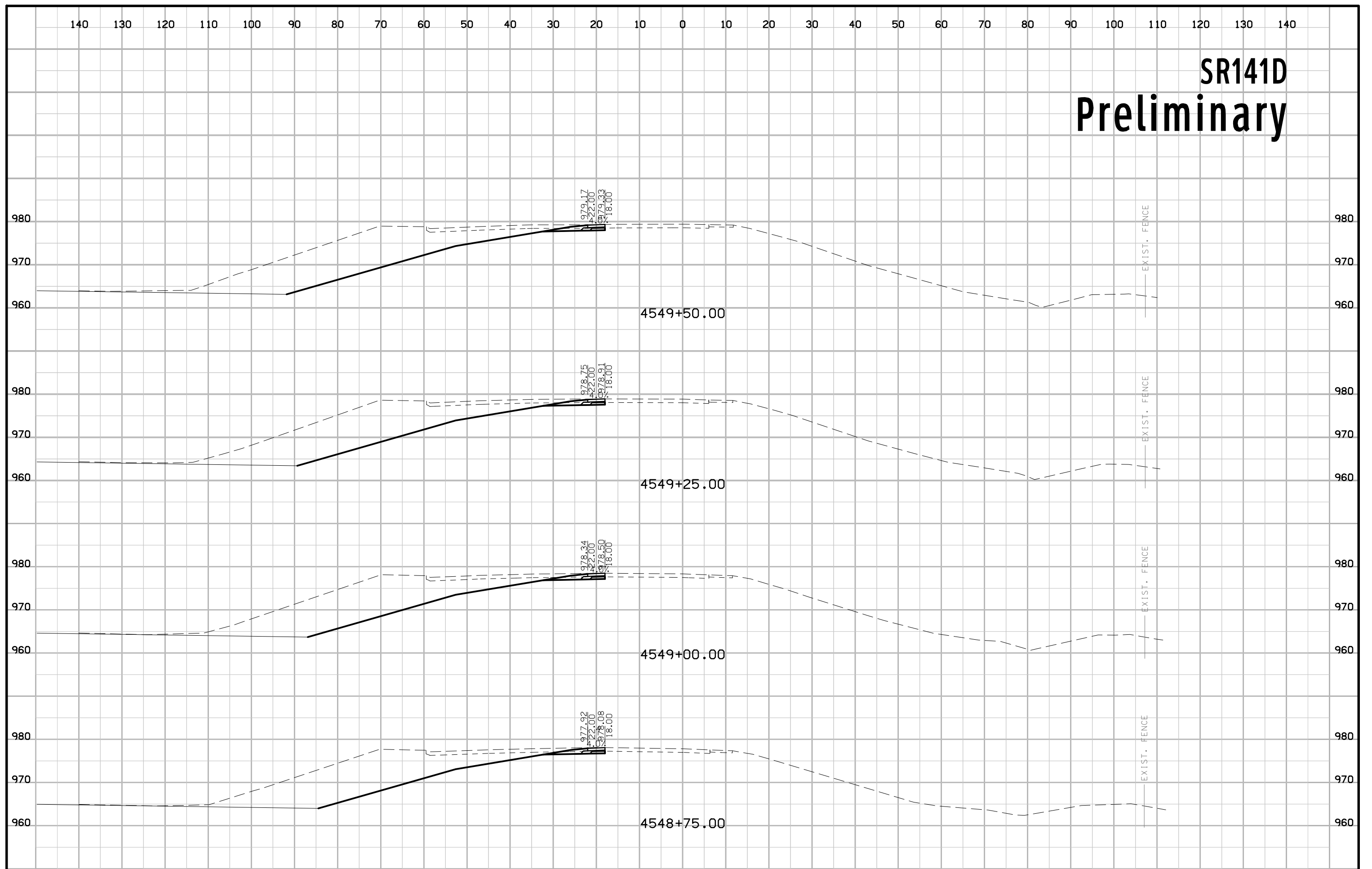
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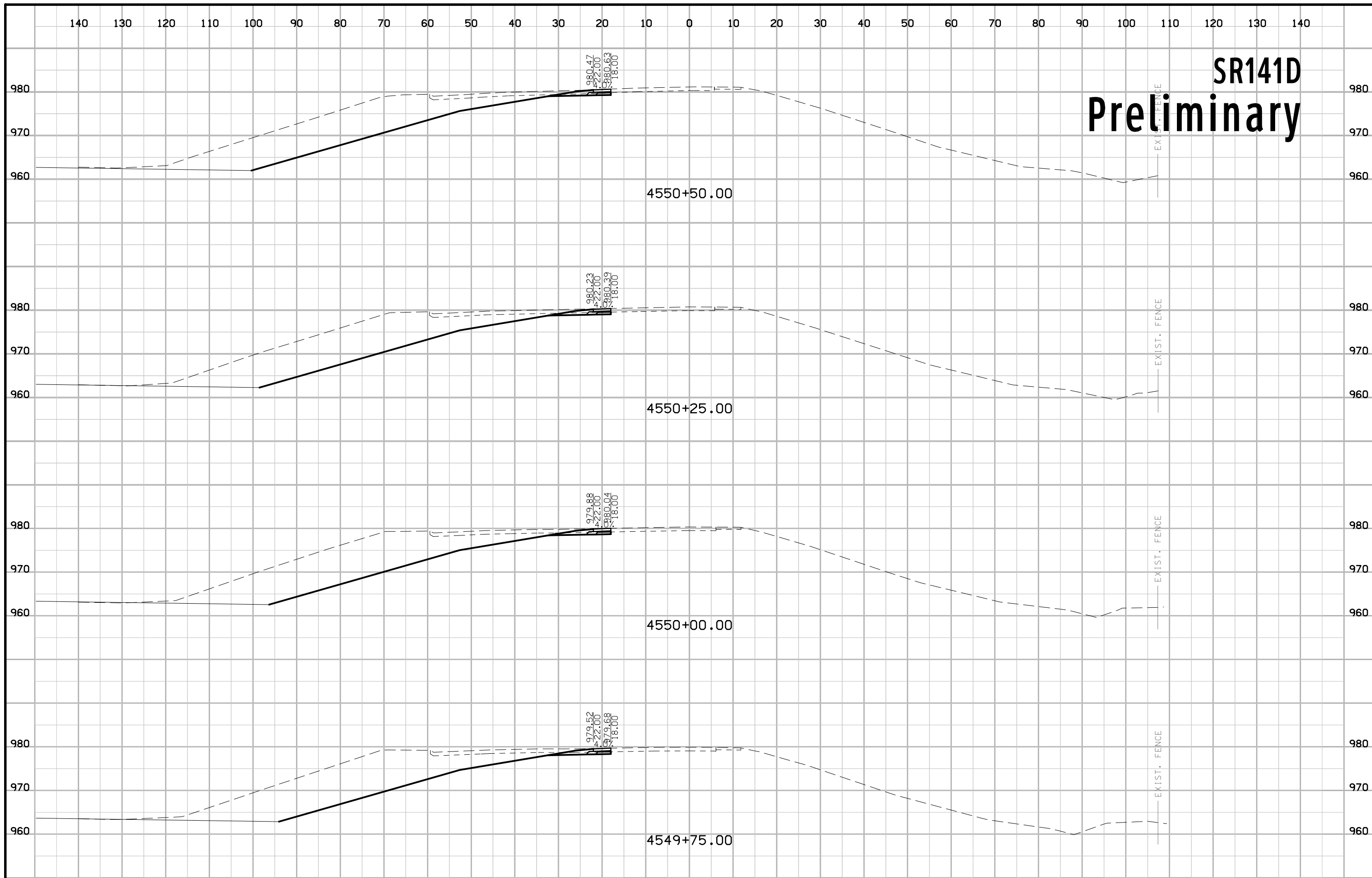
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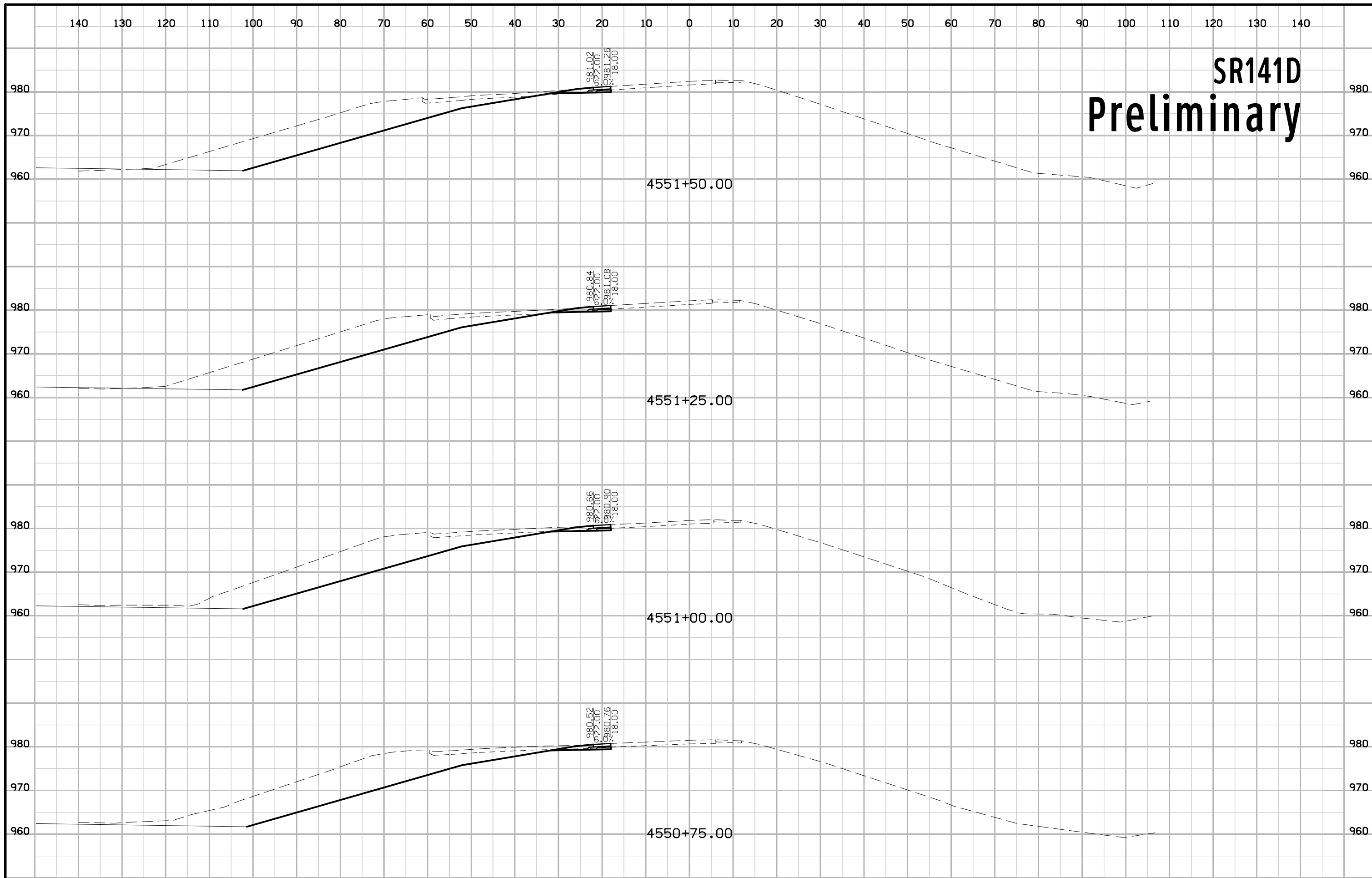


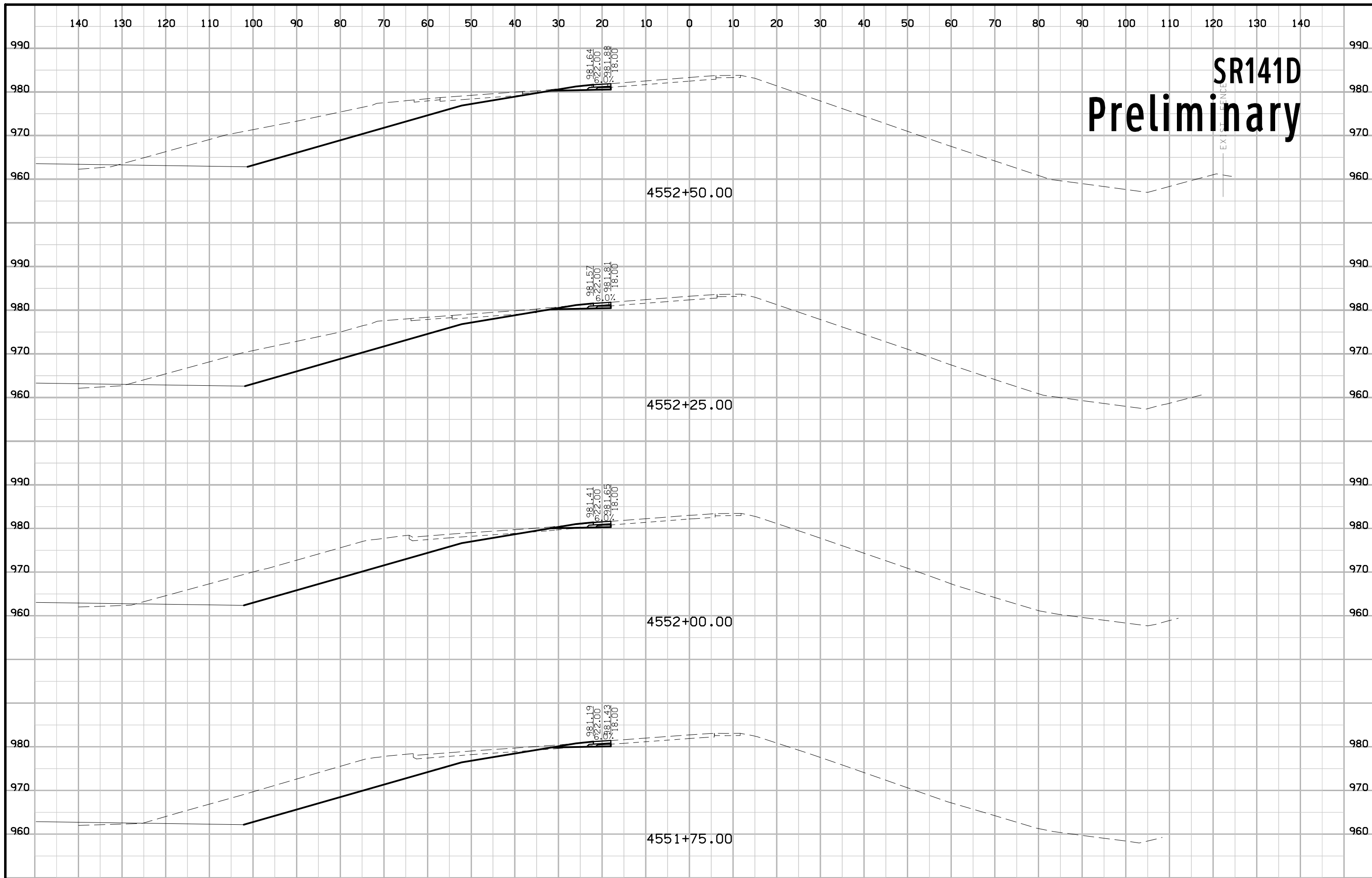


SR141D Preliminary

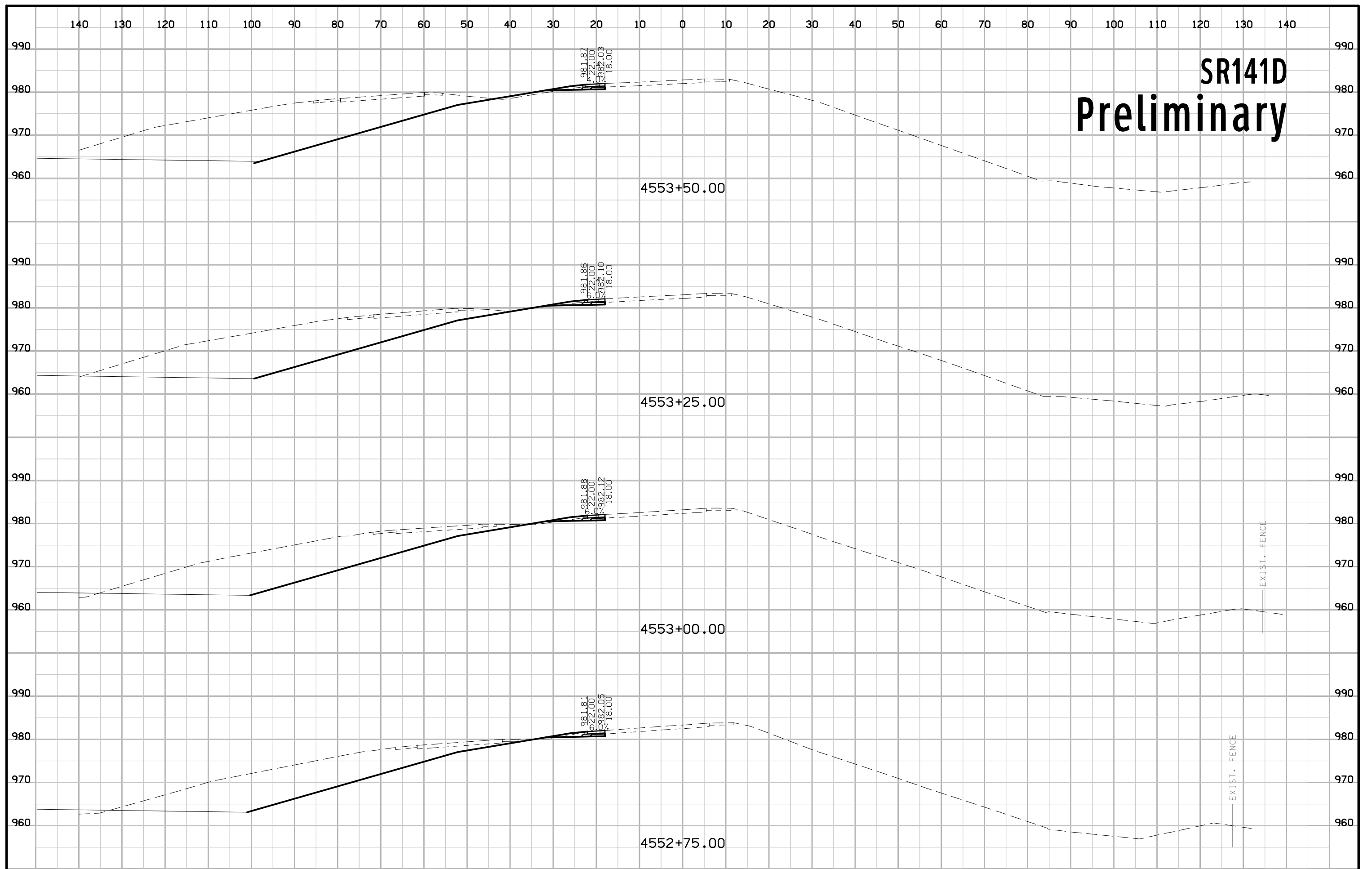








SR141D Preliminary



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+22.00
982.03
-18.00

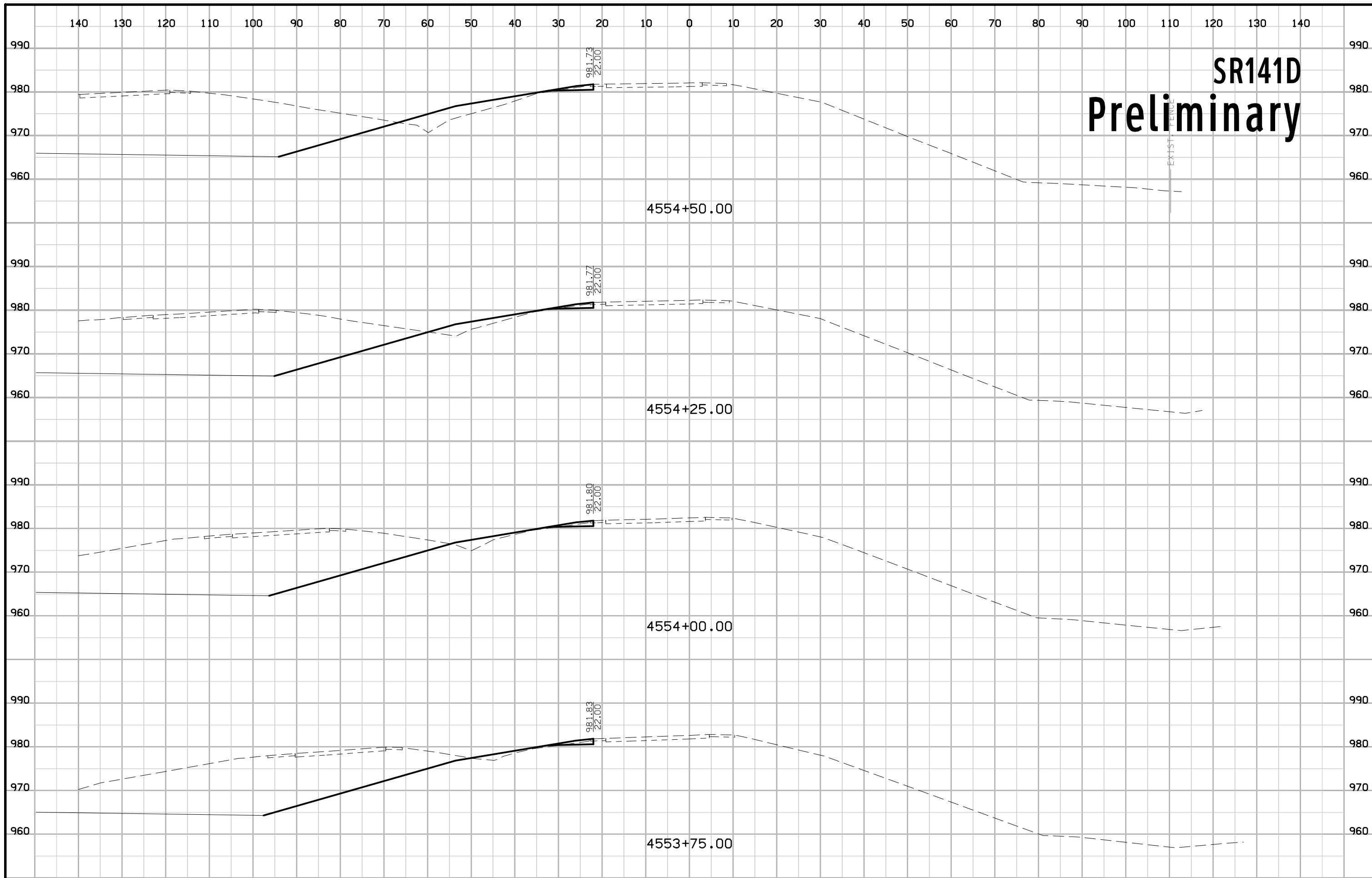
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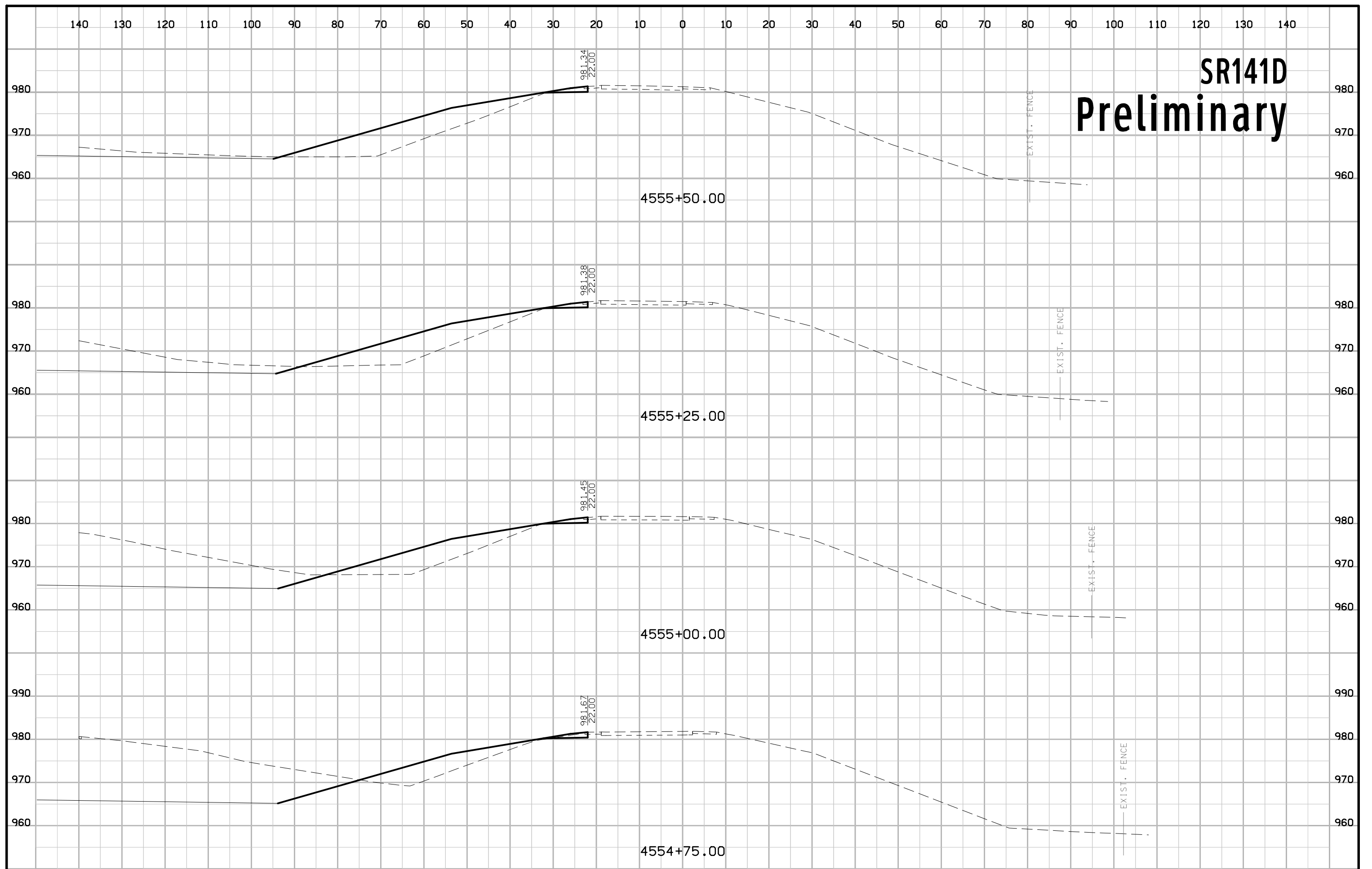
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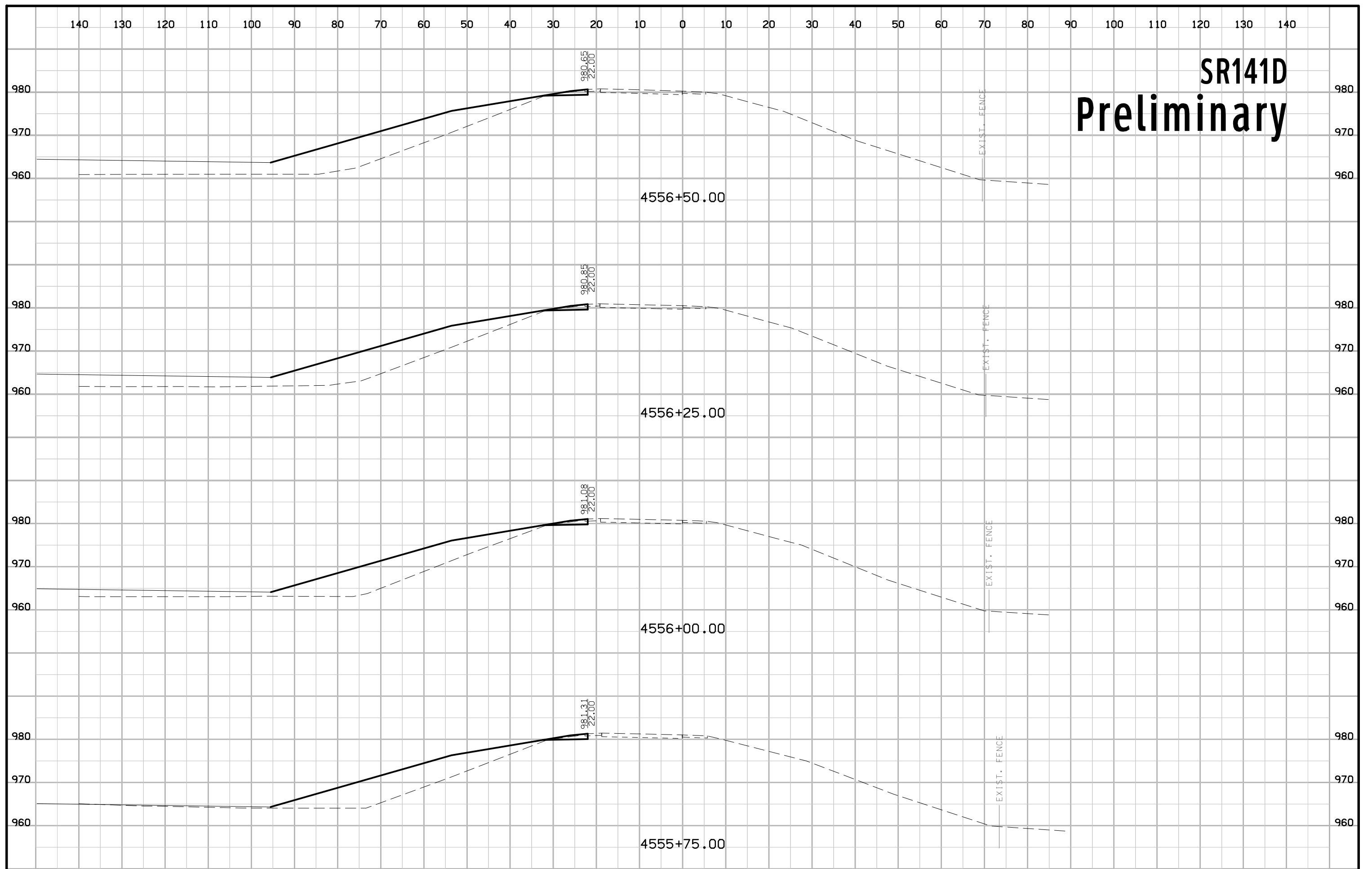
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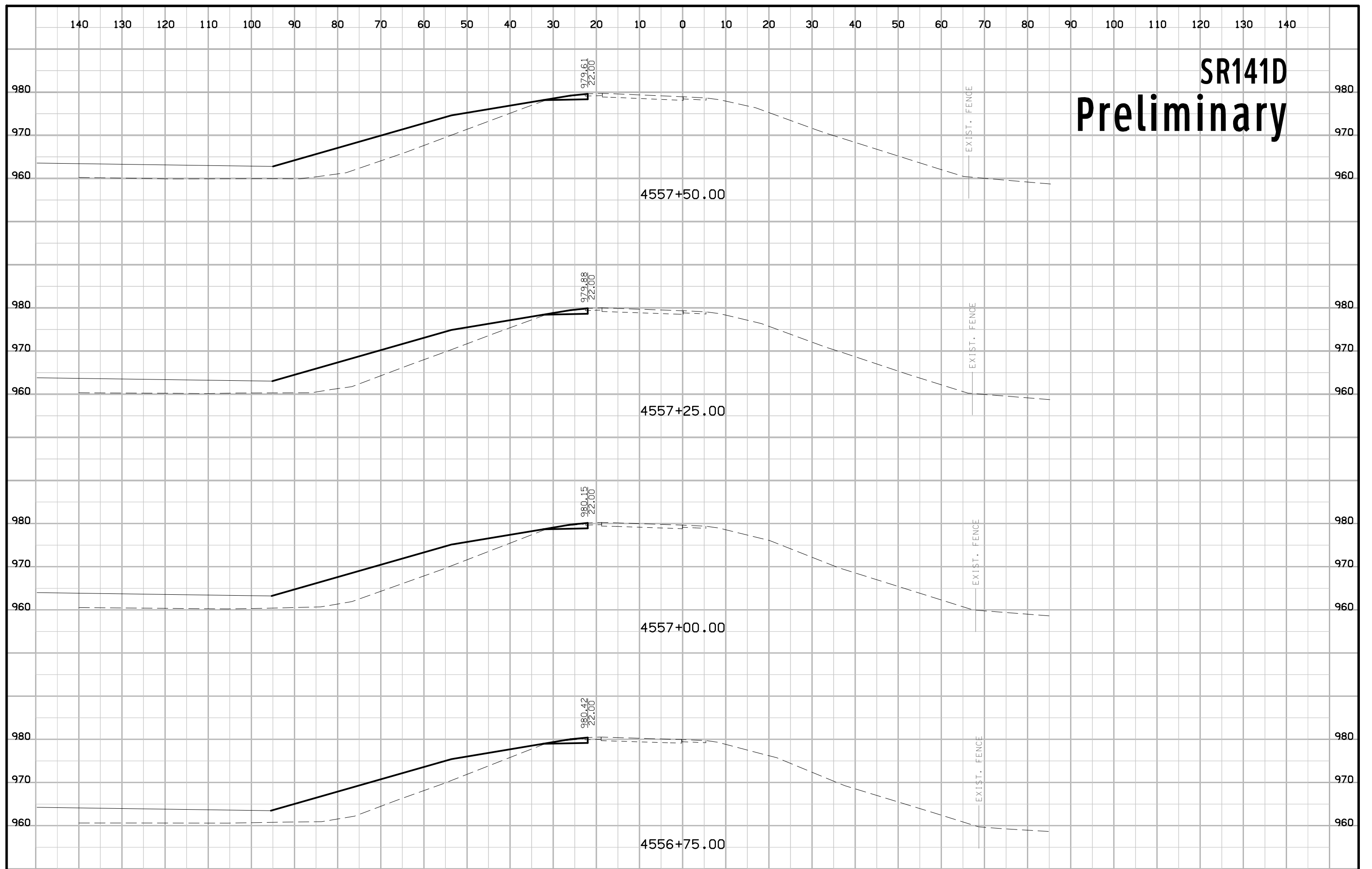
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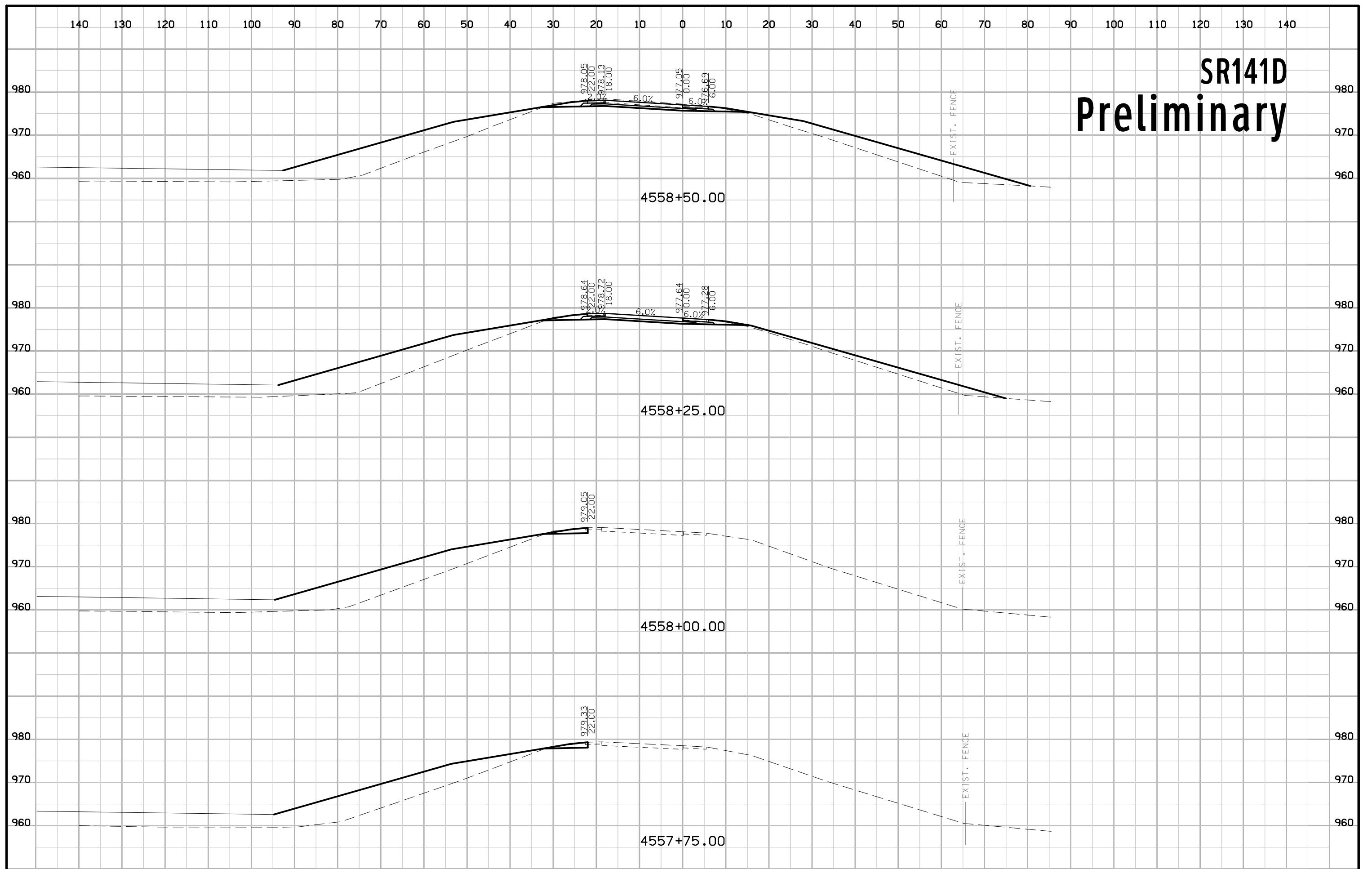
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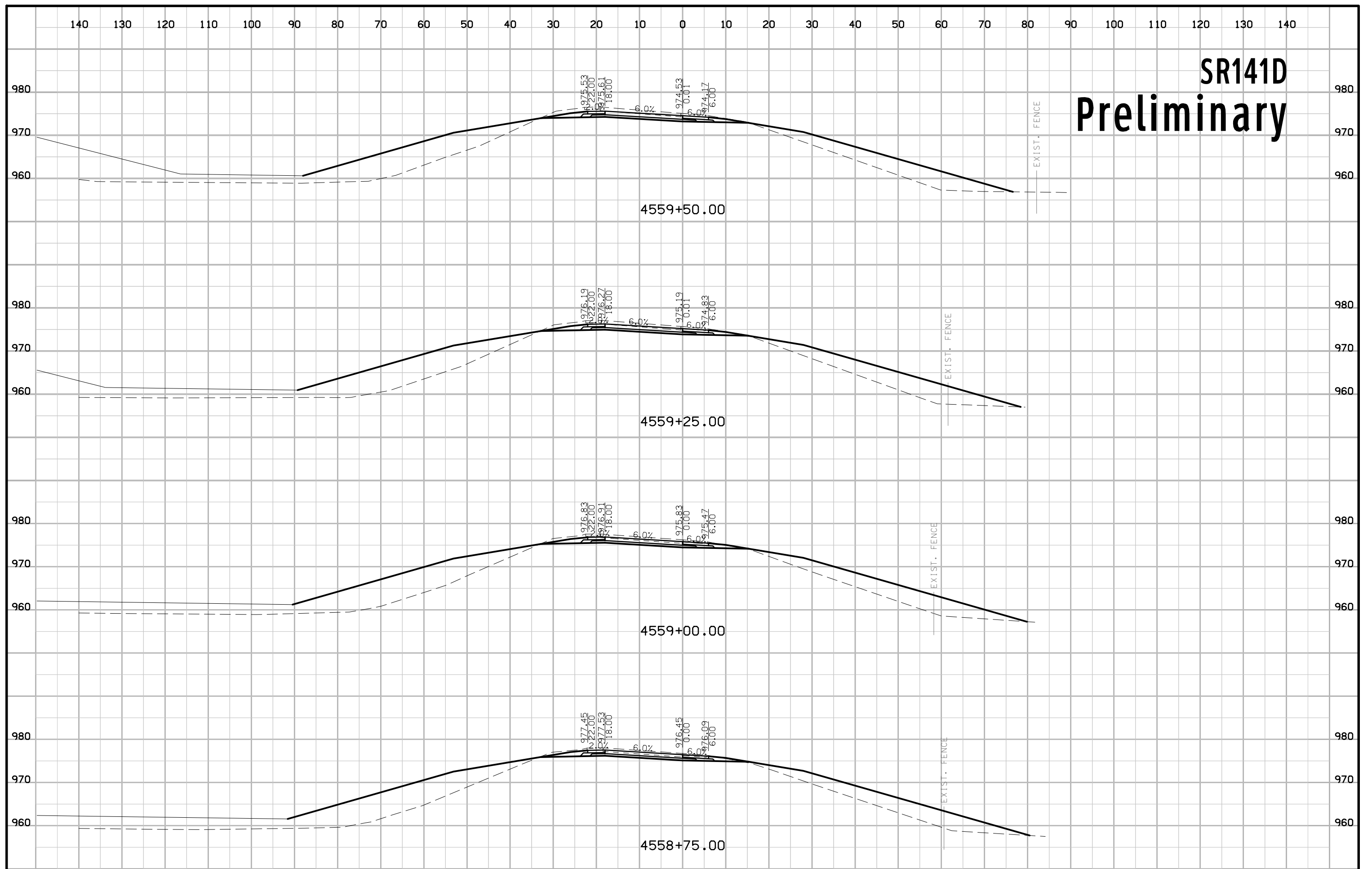
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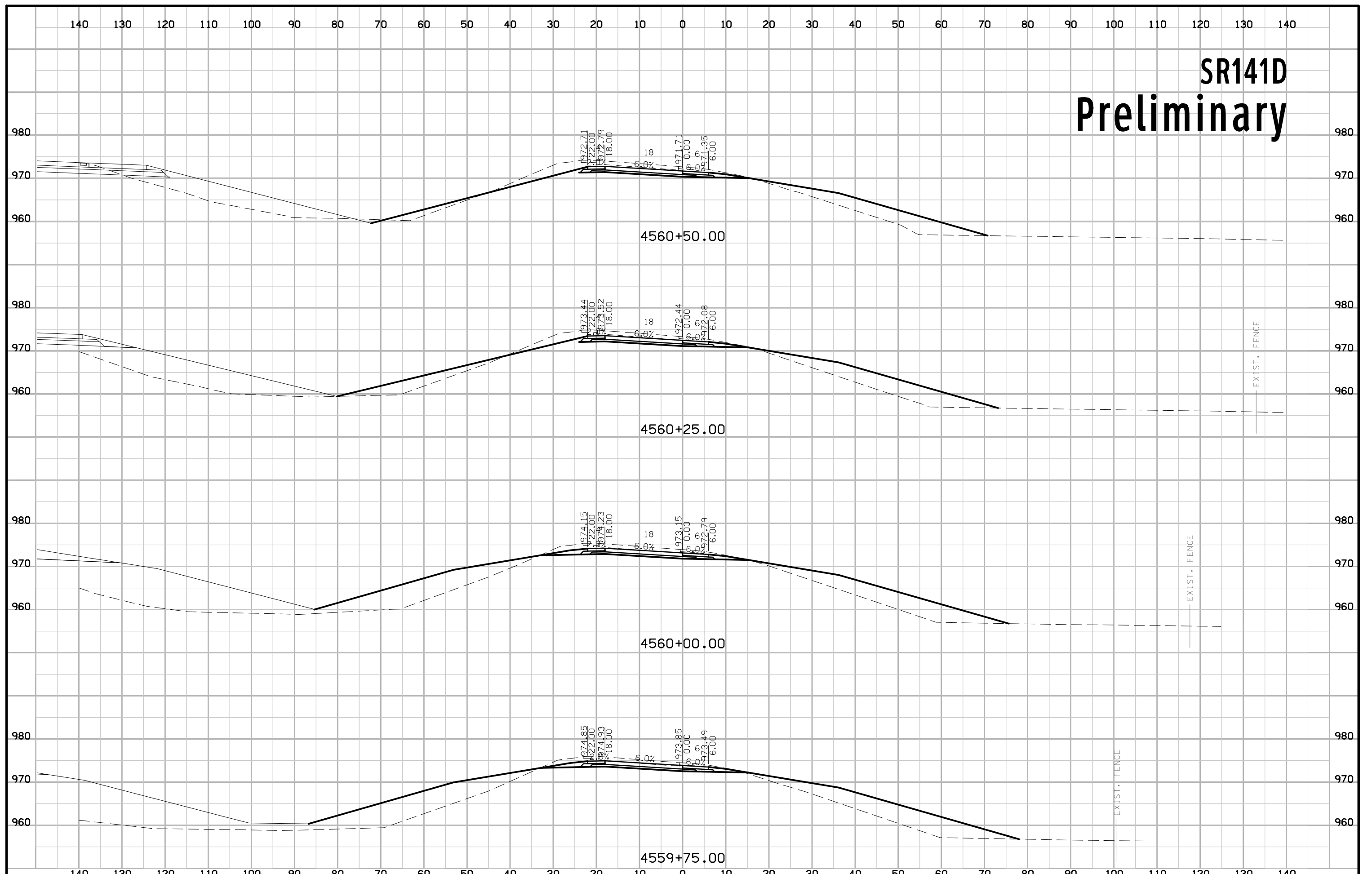
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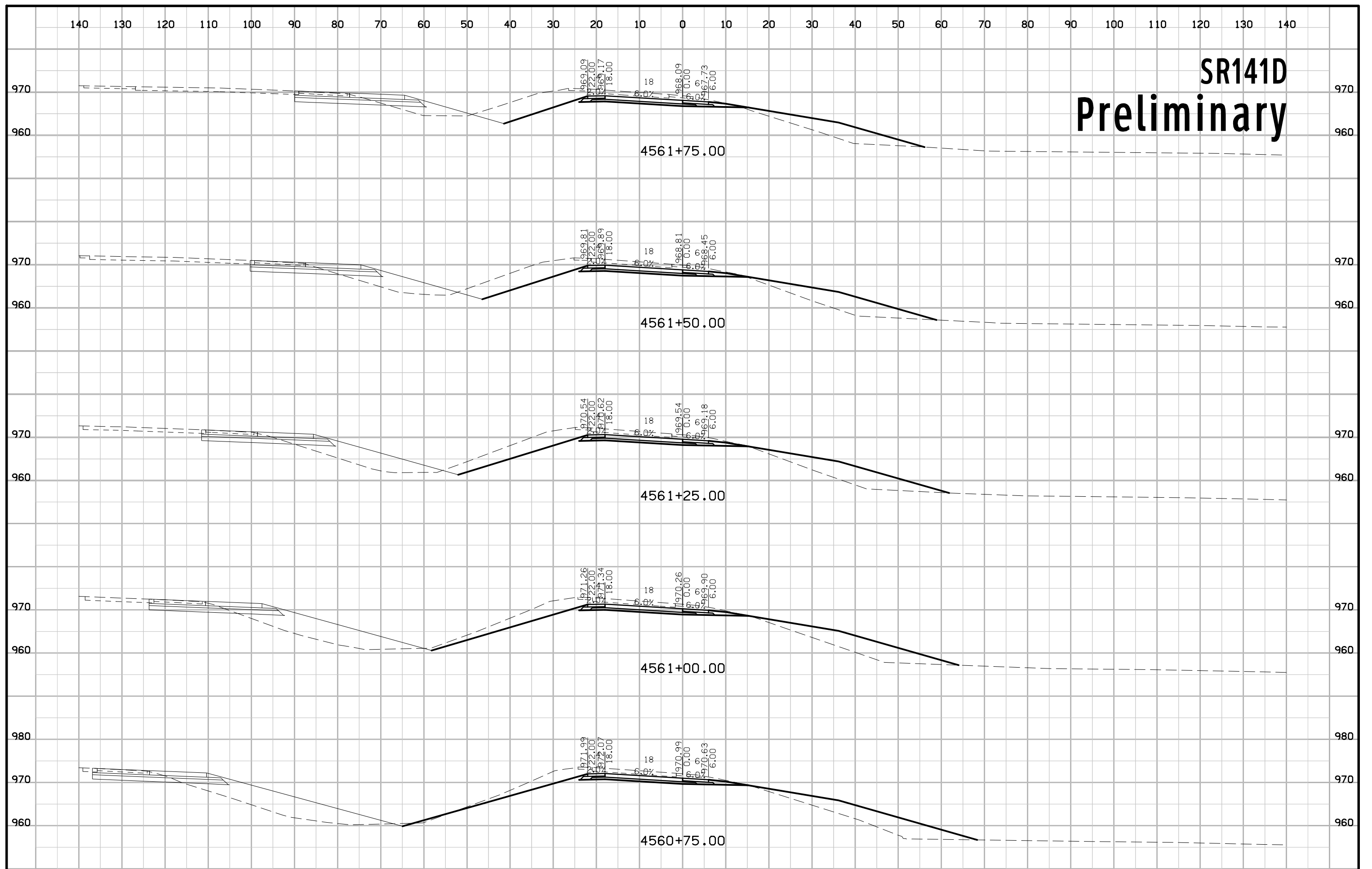
SR141D Preliminary



SR141D Preliminary



SR141D Preliminary



SR141D Preliminary

