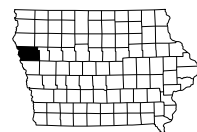


WOODBURY CO. PCC PAVEMENT - GRADE AND NEW
 LETTING DATE 11-01-2022
 IMX-029-6(294)127--02-97



INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	Title Sheets
* A.1	Title Sheet
B Sheets	Typical Cross Sections and Details
B.1 - 7	Typical Cross Sections and Details
D Sheets	I-29 Plan and Profile Sheets
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - 3	I-29 Plan and Profile Sheets
E Sheets	IA 141 Plan and Profile Sheets
* E.1 - 2	IA 141 Plan and Profile Sheets
F Sheets	Detour Pavement Sheets
* F.1 - 2	Detour Plan and Profile Sheets
G Sheets	Survey Sheets
G.1 - 3	Reference Ties and Bench Marks
G.4 - 5	Horizontal Control Tab. & Super for all Alignments
J Sheets	Traffic Control and Staging Sheets
J.1	Traffic Control Plan & Staging Notes
* J.2	Traffic Control & Staging Legend & Symbol Info. Sheet
* J.3 - 11	Staging and Traffic Control Sheets
K Sheets	Interchange Sheets
* K.1 - 2	Interchange Layout Sheets
* K.3	IA 141 Ramp A Plan and Profile Sheet
* K.4	IA 141 Ramp B Plan and Profile Sheet
* K.5	IA 141 Ramp C Plan and Profile Sheet
* K.6	IA 141 Ramp D Plan and Profile Sheet
W Sheets	Mainline Cross Sections
W.1	Cross Sections Legend & Symbol Information Sheet
W.2 - 43	I-29 Cross Sections
X Sheets	Side Road Cross Sections
X.1 - 31	IA 141 Cross Sections
X.32 - 50	IA 141 Detour Cross Sections
Y Sheets	Ramp Cross Sections
Y.1 - 10	Ramp A Cross Sections
Y.11 - 21	Ramp B Cross Sections
Y.22 - 31	Ramp C Cross Sections
Y.32 - 41	Ramp D Cross Sections
	* Color Plan Sheets



Highway Division

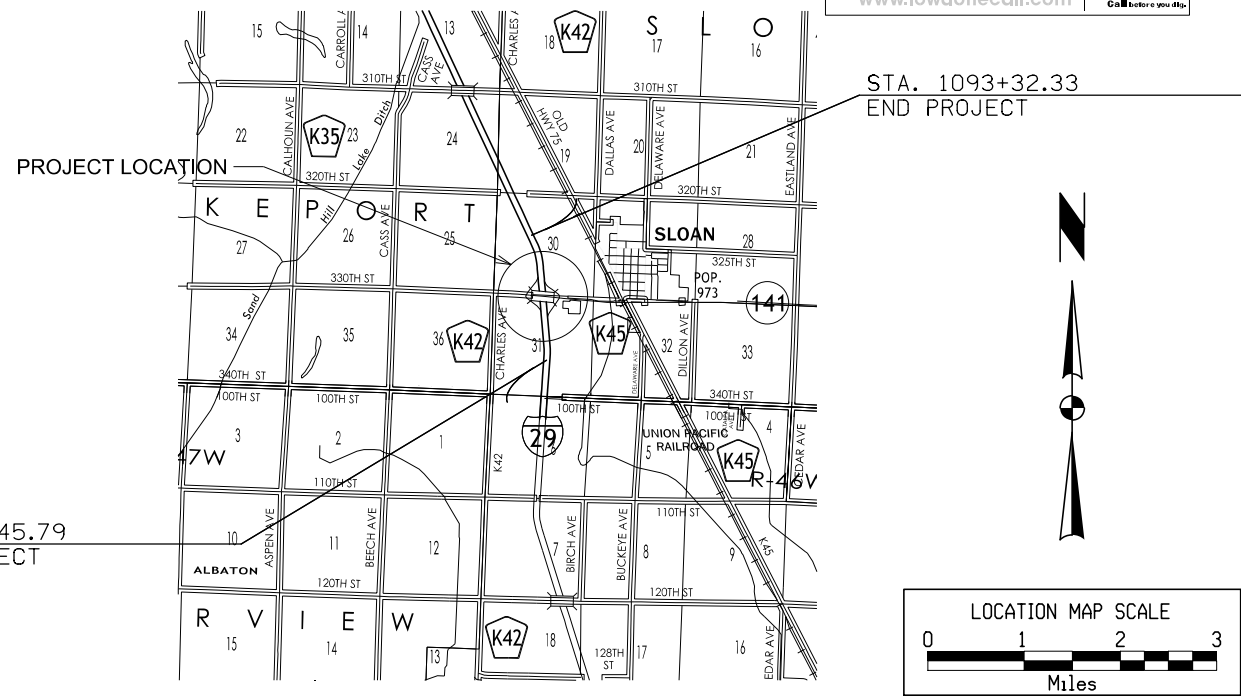
PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM WOODBURY COUNTY PCC PAVEMENT - GRADE AND NEW

IA 141 over I-29 (Sloan Interchange)

SCALES: As Noted

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



IA 141			
DESIGN DATA RURAL			
2023	AADT	4,100	V.P.D.
2043	AADT	4,300	V.P.D.
20--	DHV	--	V.P.H.
	TRUCKS	13	%
	Total		
	Design ESALs	--	

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

REVISIONS	TOTAL
	--
PROJECT IDENTIFICATION NUMBER	
18-97-029-010	
PROJECT NUMBER	
IMX-029-6(294)127--02-97	
R.O.W. PROJECT NUMBER	
IMN-029-6(299)127--0E-97	

PRELIMINARY PLANS

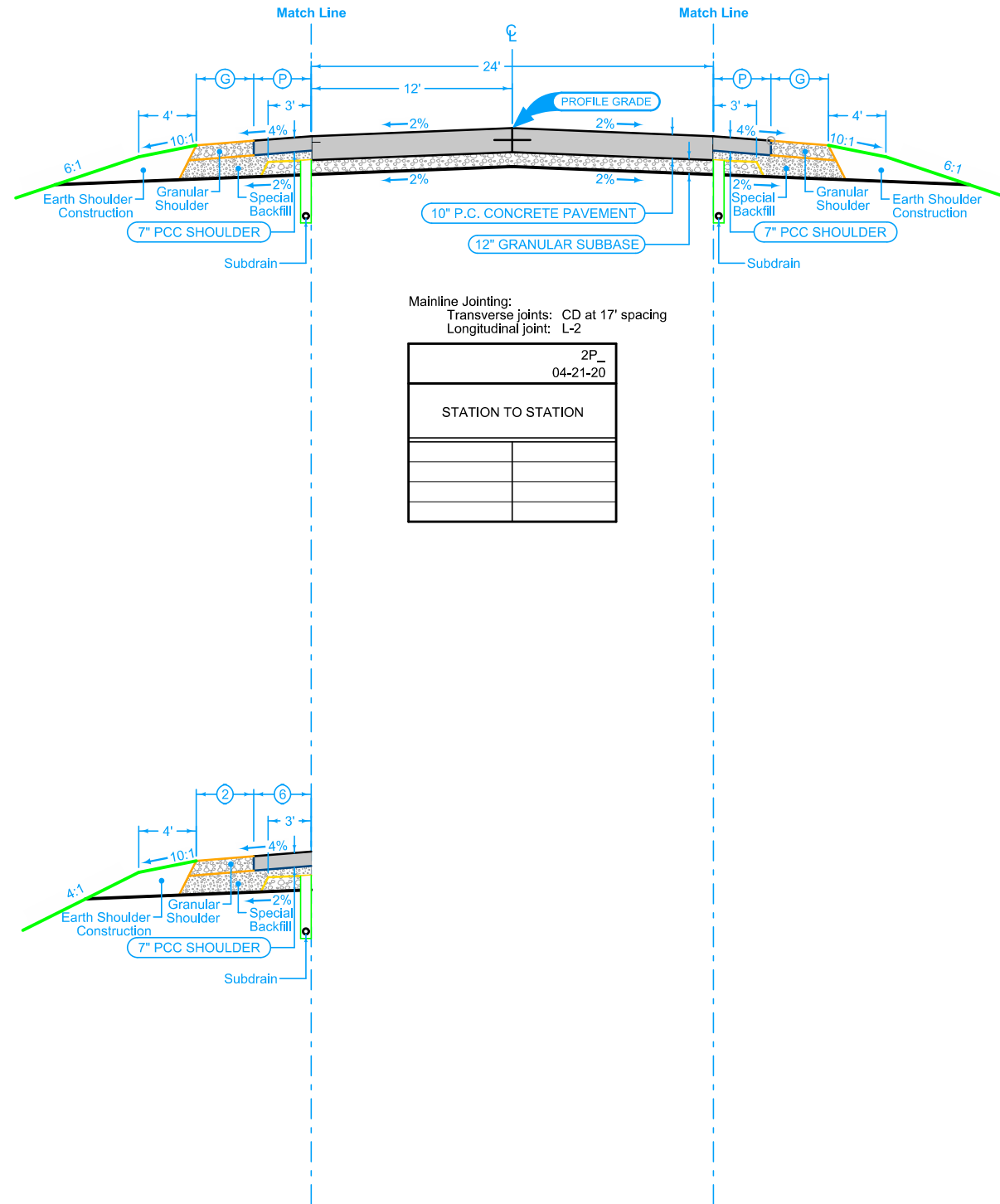
Subject to change by final design.

D5 PLAN - Date: 11/6/2020

Combination Shoulder

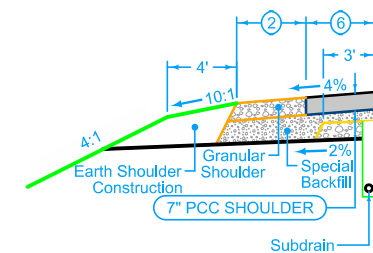
Shoulder Jointing:
Longitudinal joint: B

		2_C_10-15-13	
STATION TO STATION	(P) Feet	(G) Feet	
	6	2	



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

		2P_04-21-20	
STATION TO STATION	(P) Feet	(G) Feet	



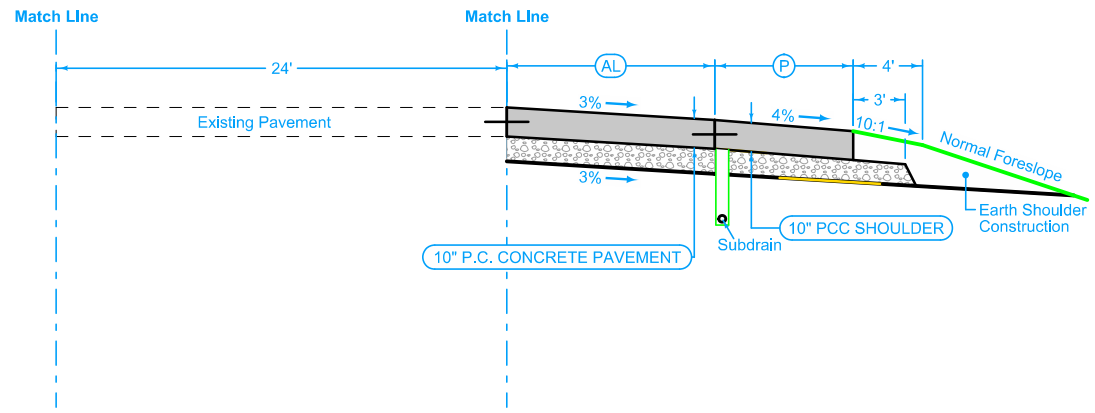
Combination Shoulder

Shoulder Jointing:
Longitudinal joint: B

		2_C_10-15-13	
STATION TO STATION	(P) Feet	(G) Feet	
	6	2	

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

4E_10-19-10



Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

Auxiliary Lane Full Depth Shoulder

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

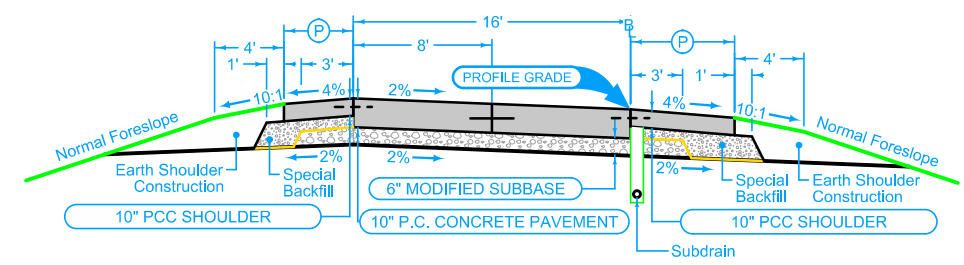
		4_AuxLane_PCC_10-18-16		4_AL_Shldr_FullPCC_MODIFIED	
Direction Travel	BEGIN STATION	END STATION	AL Feet	P Feet	
SB	1094+52.96	1090+82.33	0-12	6-10	
SB	1091+52.63	1081+33.08	12	6	
SB	1081+33.08	1077+14.04	12-16	6	

I 29 SB EXIT DECELERATION LANE

Paved Shoulder

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

1R_P_ALT_10-16-18		
BEGIN STATION	END STATION	P Feet
111+44.77	100+94.00	4
100+94.00	100+12.42	4



Paved Shoulder

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

1R_P_ALT_10-16-18		
BEGIN STATION	END STATION	P Feet
111+44.77	100+94.00	6
100+94.00	100+12.42	6

Section shown in the direction of traffic.

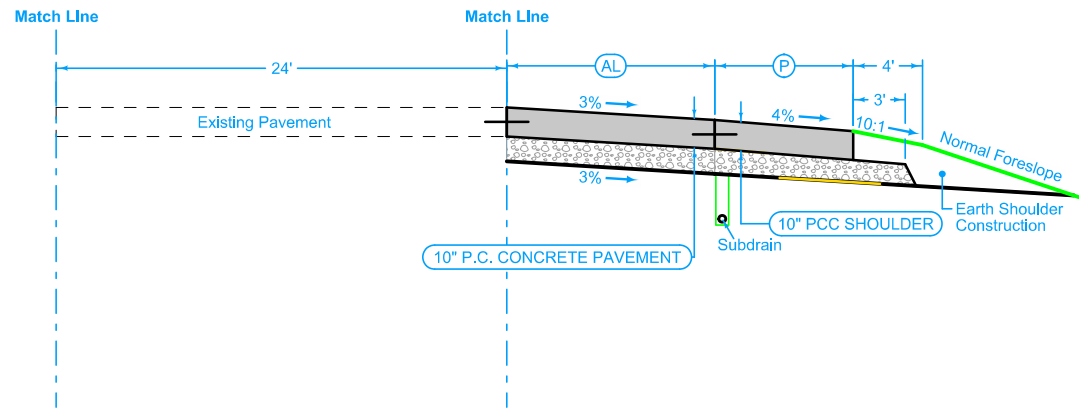
Ramp Jointing:
Transverse joints: CD at 15' spacing.
Longitudinal joints: L-2

1RP_10-17-17	
BEGIN STATION	END STATION

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

I 29 RAMP A

4E_10-19-10



Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

Auxiliary Lane Full Depth Shoulder

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

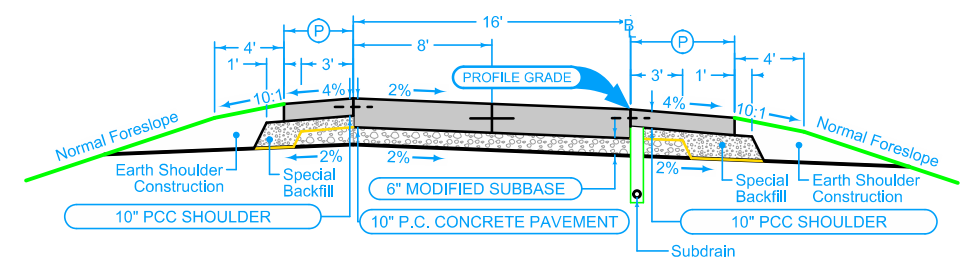
		4_AuxLane_PCC_10-18-16		4_AL_Shldr_FullPCC_MODIFIED	
Direction Travel	BEGIN STATION	END STATION	AL Feet	P Feet	
SB	1055+04.51	1051+96.83	12-16	6	
SB	1051+96.83	1041+96.83	12	6	
SB	1041+96.83	1035+92.10	0-12	10	

I 29 SB ENTRANCE ACCELERATION LANE

Paved Shoulder

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

1R_P_ALT_10-16-18		
BEGIN STATION	END STATION	P Feet
214+91.73	212+59.95	4
212+61.25	203+08.92	4



Paved Shoulder

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

1R_P_ALT_10-16-18		
BEGIN STATION	END STATION	P Feet
214+91.73	212+61.25	6
212+61.25	203+08.92	6

Section shown in the direction of traffic.

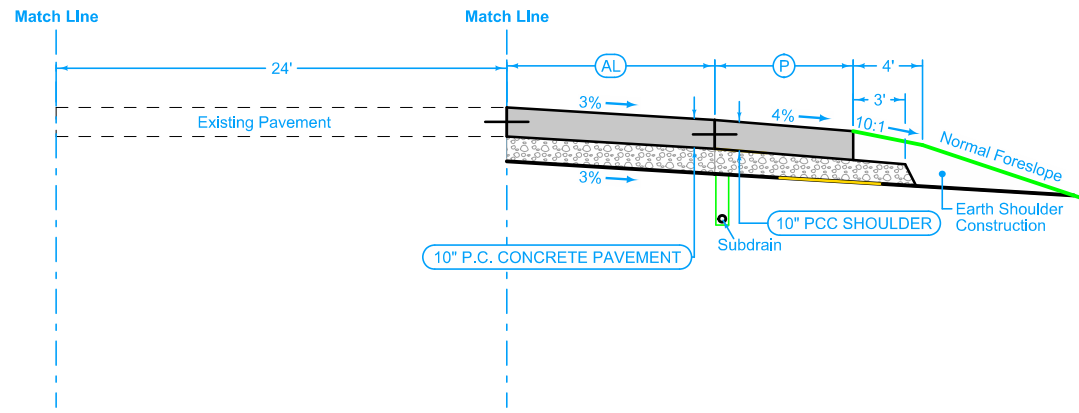
Ramp Jointing:
Transverse joints: CD at 15' spacing.
Longitudinal joints: L-2

1RP_10-17-17	
BEGIN STATION	END STATION

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

I 29 RAMP B

4E_10-19-10



Auxiliary Lane Full Depth Shoulder

Longitudinal joint: L or KT
Transverse joint: Match Mainline

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

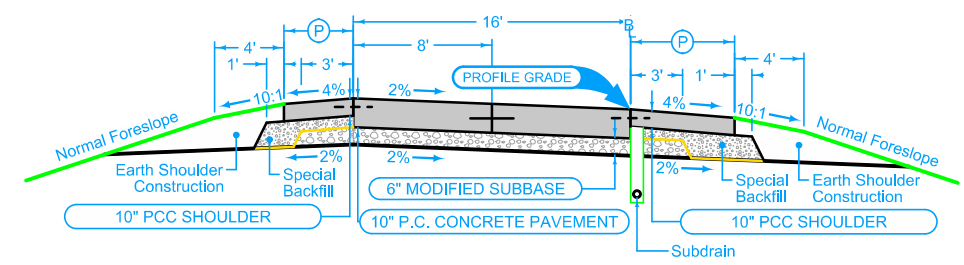
		4_AuxLane_PCC_10-18-16		4_AL_Shldr_FullPCC_MODIFIED	
Direction Travel	BEGIN STATION	END STATION	(AL) Feet	(P) Feet	
NB	1037+37.33	1040+37.33	0-12	6-10	
NB	1040+37.33	1050+36.21	12	6	
NB	1050+36.21	1054+56.21	16	6	

I 29 NB EXIT DECELERATION LANE

Paved Shoulder

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

		1R_P_ALT_10-16-18	
BEGIN STATION	END STATION	(P) Feet	
300+00.00	309+98.81	4	
309+98.81	310+79.85	4	



Paved Shoulder

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

		1R_P_ALT_10-16-18	
BEGIN STATION	END STATION	(P) Feet	
300+00.00	309+98.81	6	
309+98.81	310+79.85	6	

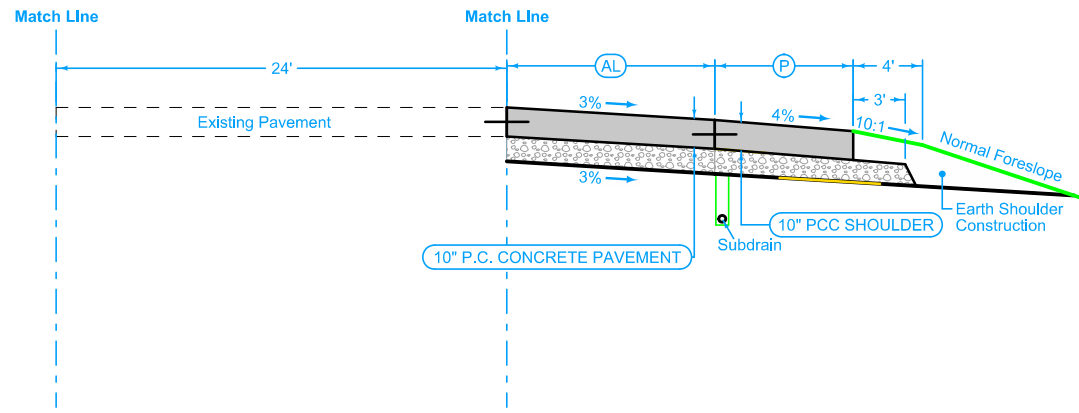
Section shown in the direction of traffic.
Ramp Jointing:
Transverse joints: CD at 15' spacing.
Longitudinal joints: L-2

		1RP_10-17-17	
BEGIN STATION	END STATION		

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

I 29 RAMP C

4E_10-19-10



Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

Auxiliary Lane Full Depth Shoulder

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

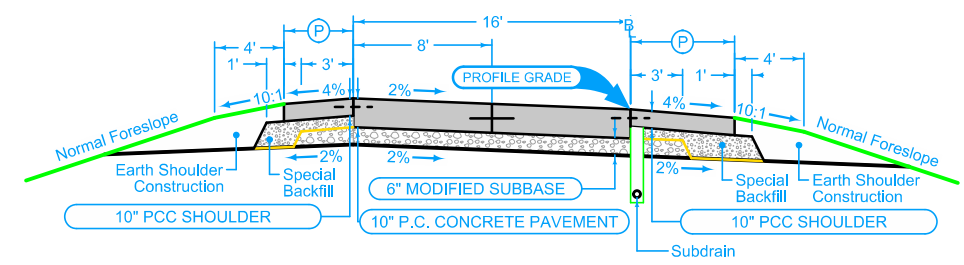
		4_AuxLane_PCC_10-18-16		4_AL_Shldr_FullPCC_MODIFIED	
Direction Travel	BEGIN STATION	END STATION	AL Feet	P Feet	
NB	1075+52.10	1078+59.81	12-16	6	
NB	1078+59.81	1088+46.13	12	6	
NB	1088+46.13	1094+46.13	0-12	6-10	

I 29 NB ENTRANCE ACCELERATION LANE

Paved Shoulder

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

1R_P_ALT_10-16-18		
BEGIN STATION	END STATION	P Feet
400+13.86	401+29.30	4
402+46.30	411+27.27	4



Paved Shoulder

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

1R_P_ALT_10-16-18		
BEGIN STATION	END STATION	P Feet
400+13.86	401+29.30	6
401+29.30	411+27.27	6

Section shown in the direction of traffic.

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

1RP_10-17-17	
BEGIN STATION	END STATION

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

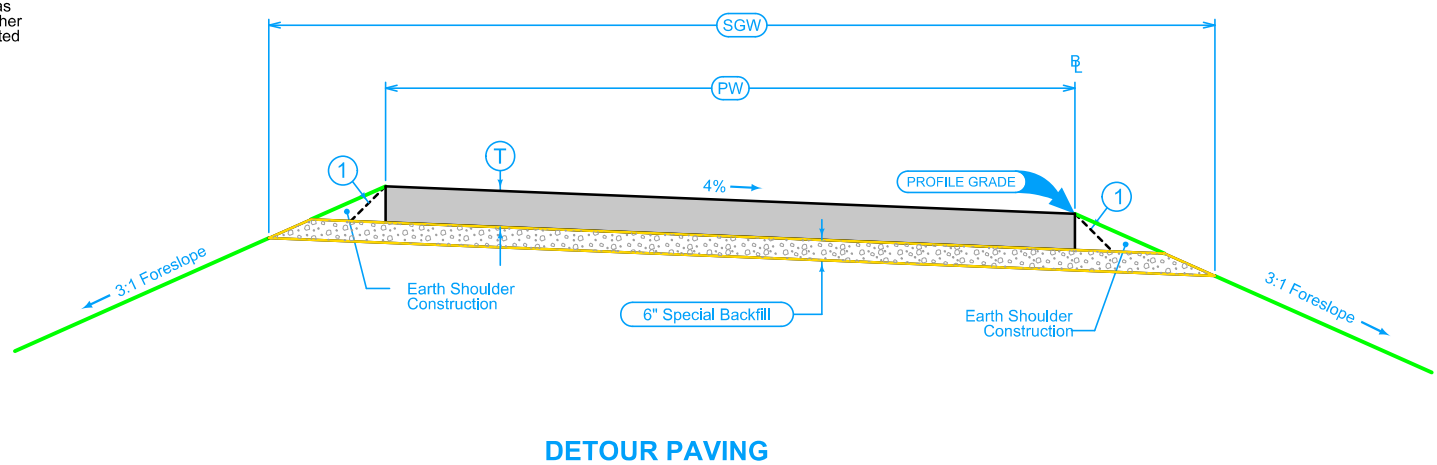
I 29 RAMP D

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		

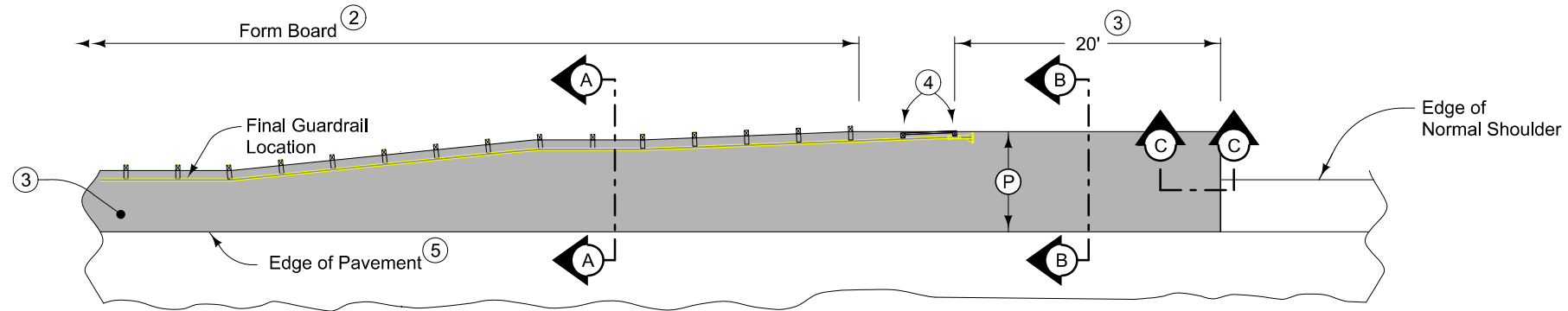
Quantity calculations based on vertical pavement edges.

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

① Possible HMA 1:1 slope



DESIGNER
INFO



PLAN VIEW

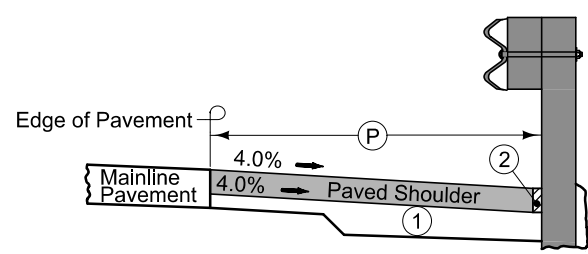
9" HMA Paved Shoulder at guardrail. 8" PCC may be substituted with the following jointing layout:

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

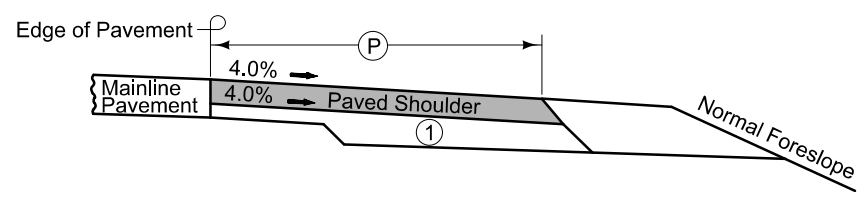
Compaction of HMA is required to face of guardrail post. Hand compaction will be allowed under guardrail. Removal and reinstallation of guardrail will be allowed with no additional payment.

Refer to Tabulation 112-9 for shoulder quantities.

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

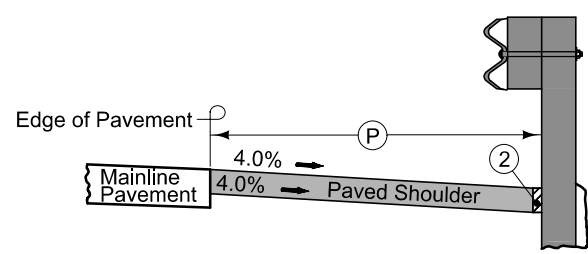


Section A-A

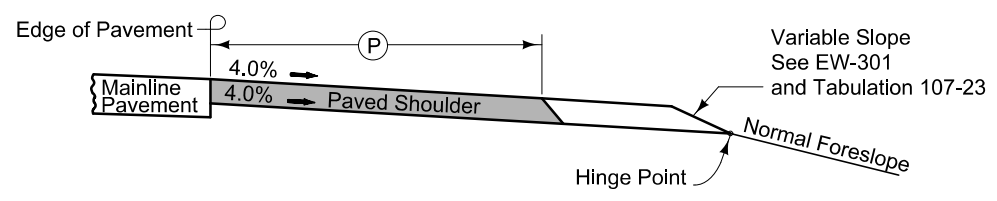


Section B-B

NEW CONSTRUCTION

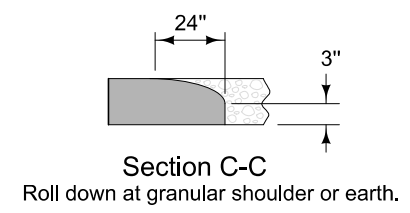


Section A-A



Section B-B

EXISTING SHOULDER



Section C-C

Roll down at granular shoulder or earth.

PAVED SHOULDER AT GUARDRAIL

SURVEY SYMBOLS

- D Centerline Draw or Stream (Down)
- LUM Luminaire
- RIP Rip-Rap
- OUT Tile Outlet
- GDL Guard Rail Steel
- SIGN SL Speed Limit Sign
- MH Utility Access (Manhole)
- IN Storm Sewer Intake
- TDC Tree Deciduous
- TEV Evergreen Tree
- FCL Chain Link and Security Fence
- CEL Cell Phone Tower
- UB Utility Box
- TPD Telephone Pedestal
- PR Electric Riser Pole
- HDG Hedge Row
- TFR Tree Fruit
- TLNL Tree Line Left
- TLNR Tree Line Right
- SIGN SI Sign
- FW Wire Fence
- MM Mile Marker Post
- WHD Water Hydrant
- EB Electrical Box
- BB Billboard
- FHD Fire Hydrants
- MIS Miscellaneous
- SEP Septic Tank
- GPR Guard Post (4 or More Posts)
- GV Gas Valve

UTILITY LEGEND

- MIDAMERICAN ENERGY ELECTRIC
Contact Name: Gerald Messersmith
Contact Phone: (712)233-4833
Contact Email: gsmessersmith@midamerican.com
- E1 — MIDAMERICAN ENERGY ELECTRIC
Contact Name: Gerald Messersmith
Contact Phone: (712)233-4833
Contact Email: gsmessersmith@midamerican.com
- G — MIDAMERICAN ENERGY GAS
Contact Name: Jan Countryman
Contact Phone: (712)454-4524
Contact Email: JSCountryman@midamerican.com
- G2 — MEGELLAN PIPELINE
Contact Name: Dyan Gillean
Contact Phone: (918)574-7098
Contact Email: wilcall2@magellanlp.com
- E2 — IOWA DOT
Contact Name: Ron Gliser
Contact Phone: (712)4283300
Contact Email: ron.gliser@dot.iowa.gov
- F0 — LONG LINES
Contact Name: Miles Patton
Contact Phone: (712)271-5550
Contact Email: mpatton@longlines.biz
- W — CITY OF SLOAN WATER
Contact Name: Anthony Bride
Contact Phone: (712)4283754
Contact Email: jonescityofsloan@longlines.com
- SAN. — CITY OF SLOAN SEWER
Contact Name: Anthony Bride
Contact Phone: (712)4283754
Contact Email: jonescityofsloan@longlines.com
- F02 — SOUTH DAKOTA NETWORK LLC
Contact Name: Nicholas Rasmussen
Contact Phone: (605)9781077
Contact Email: nicholas.rasmussen@sdncommunications.com

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

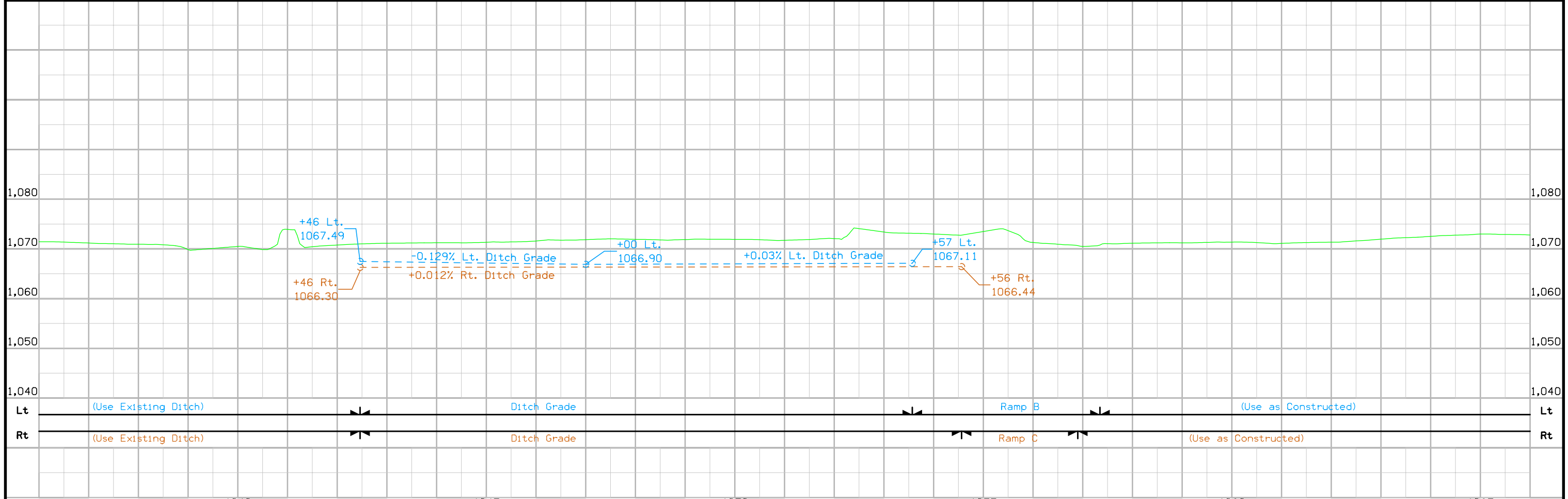
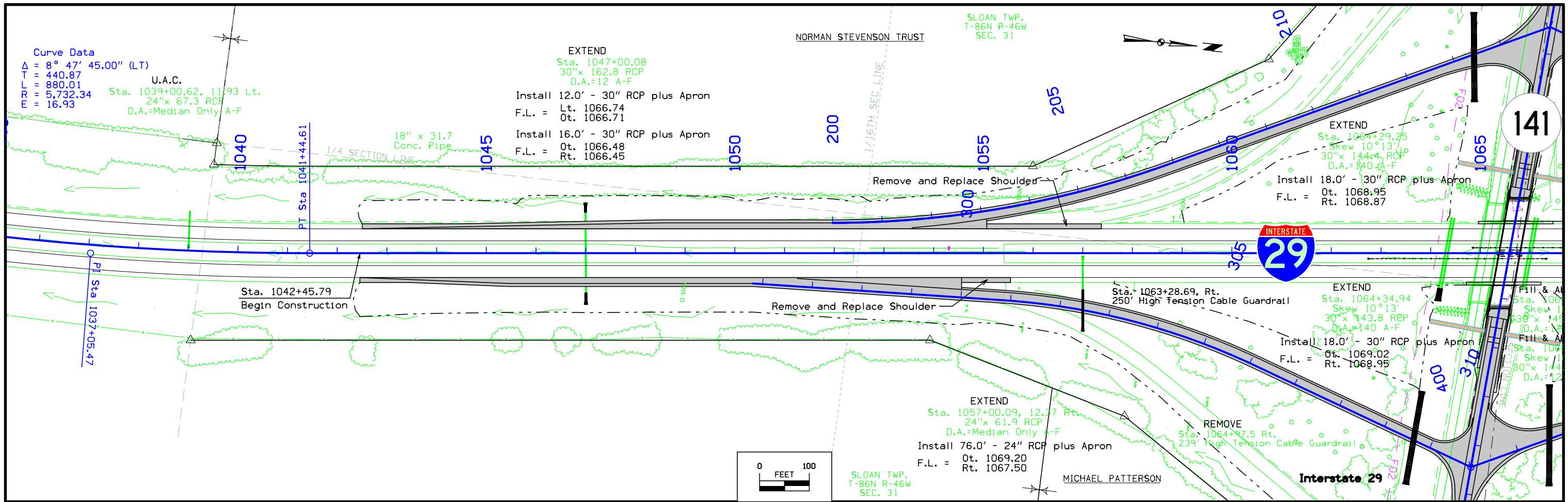
- Reference Point
- Station
- Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Trench Drain
- HighTension Cable Guardrail
- Sheet Pile
- Pavement Removal
- Clearing & Grubbing Area

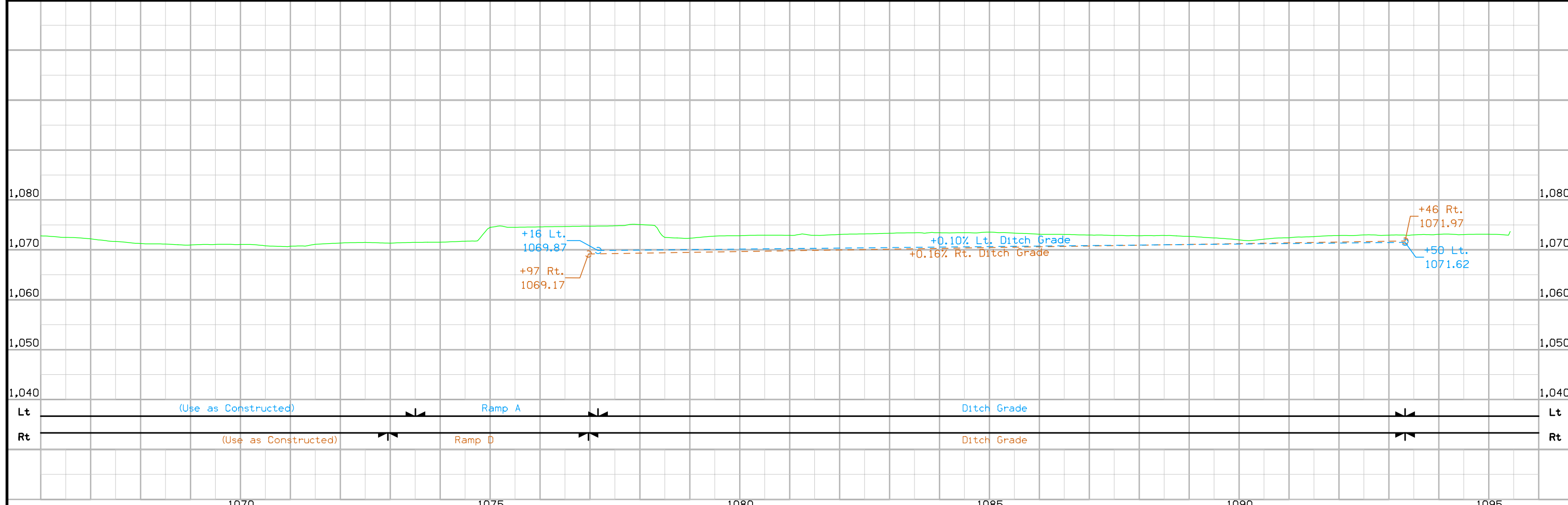
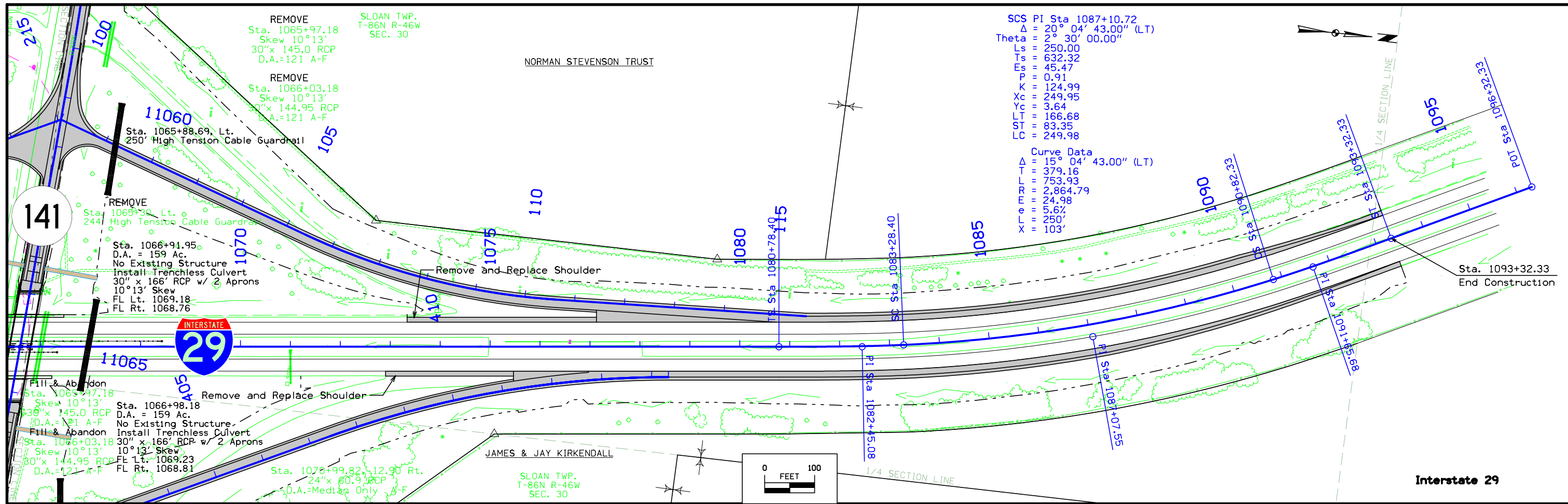
RIGHT-OF-WAY LEGEND

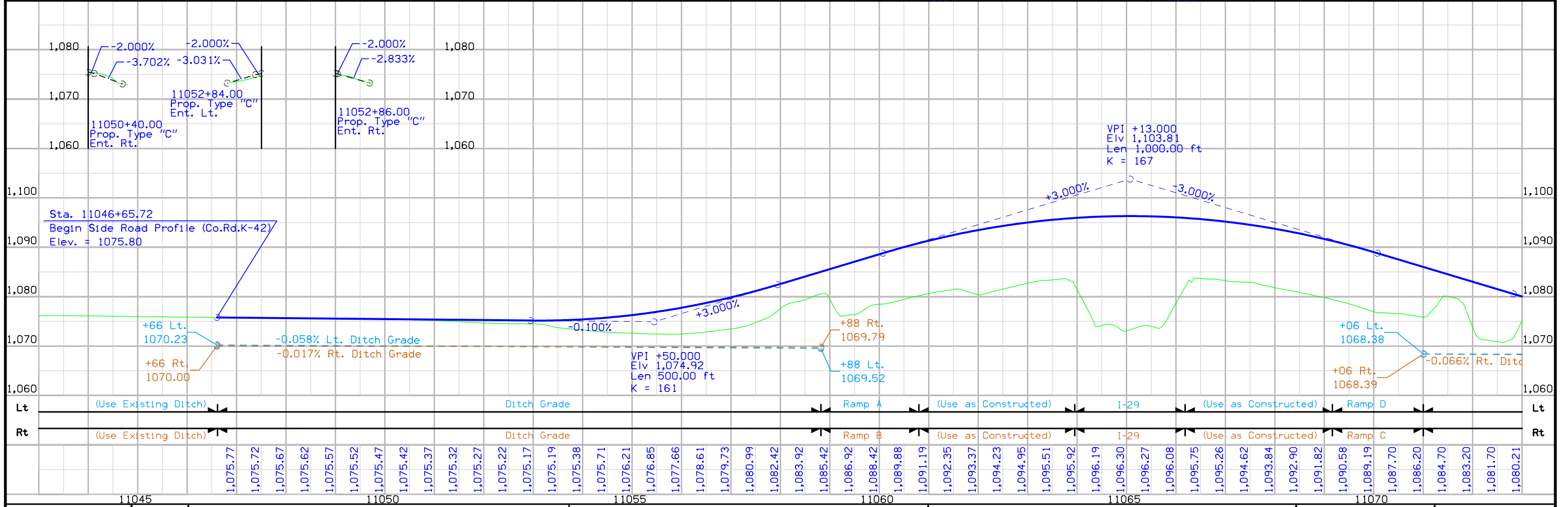
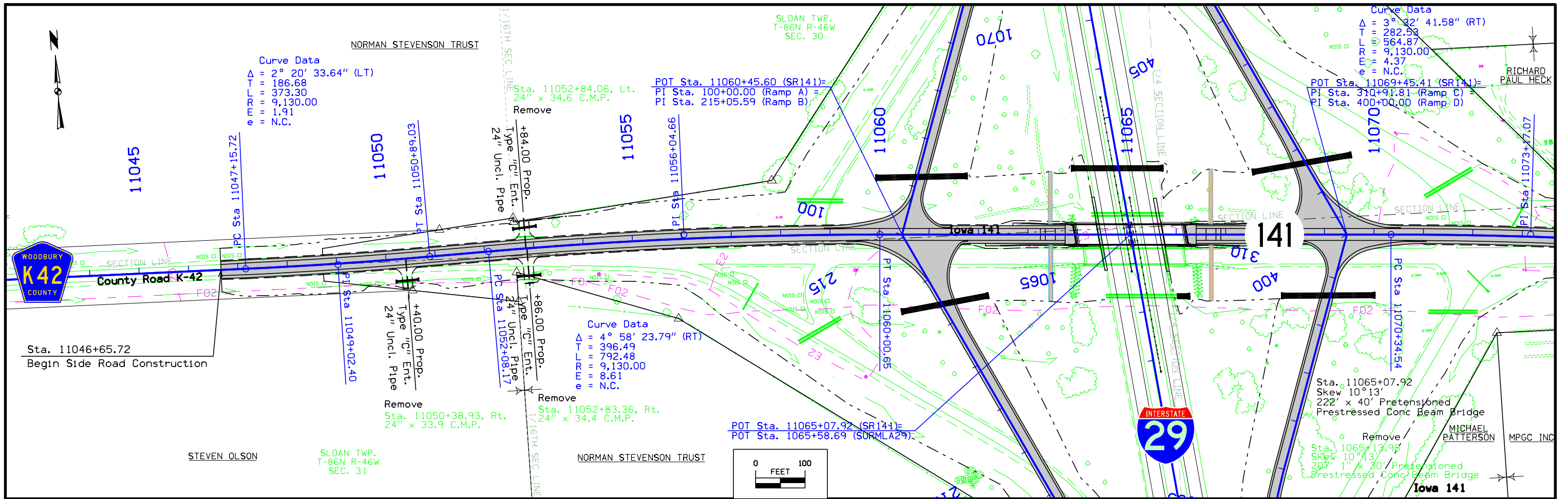
- Proposed Right-of-Way
- Existing Right of Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Easement (Temporary)
- Easement
- Access Control
- Property Line

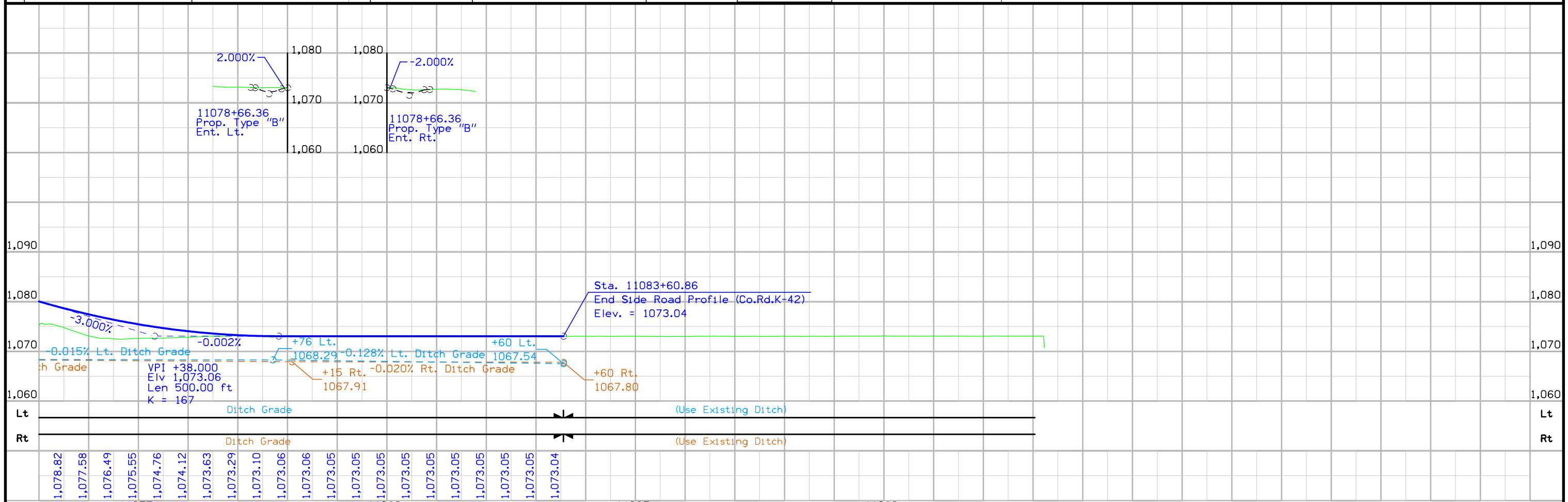
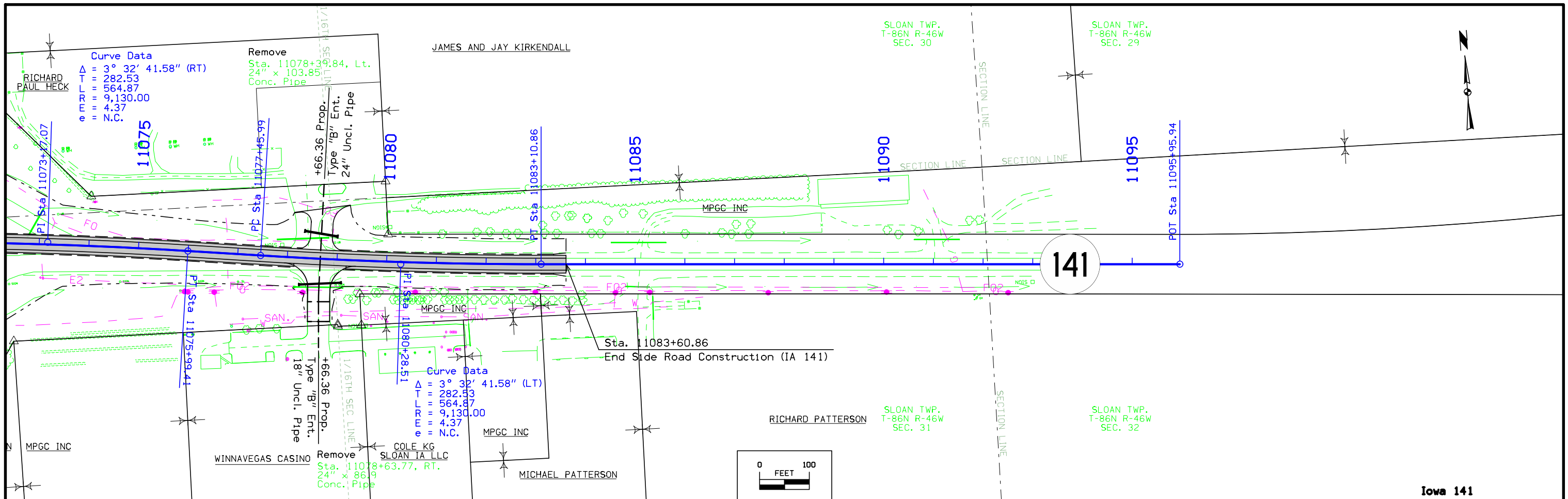
PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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

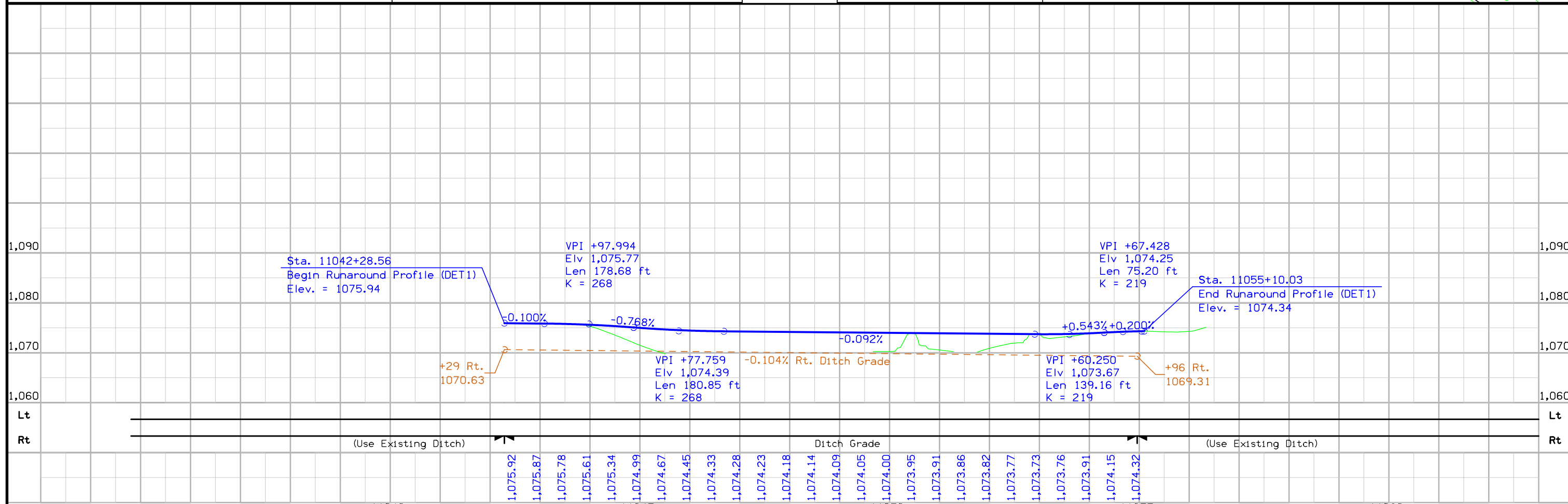
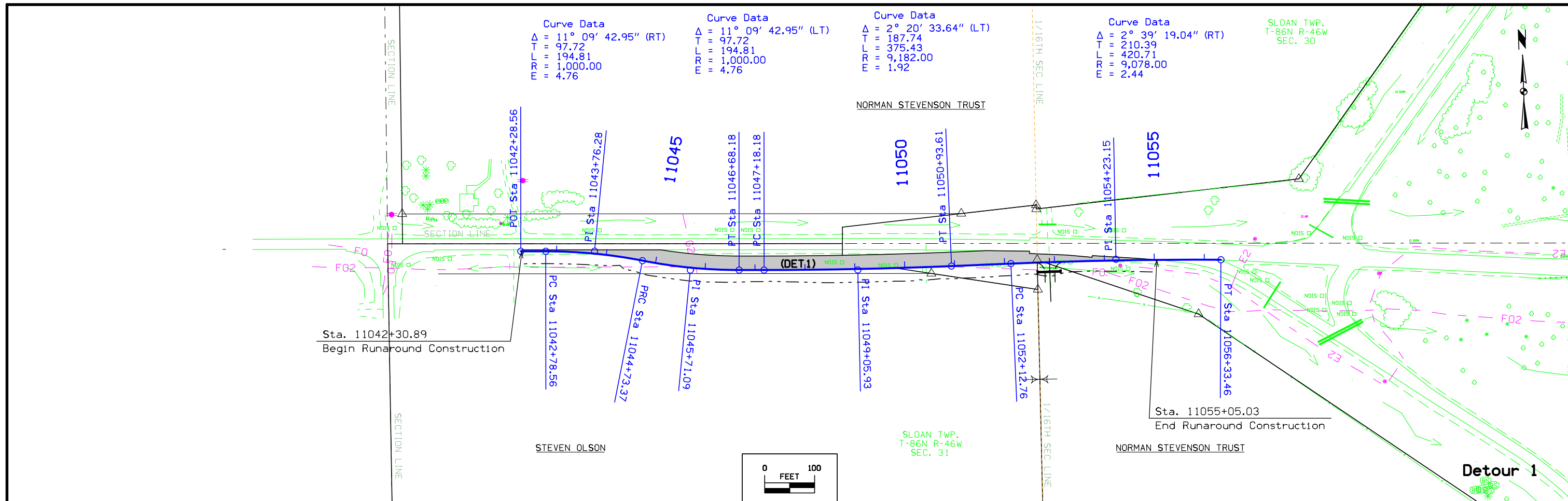


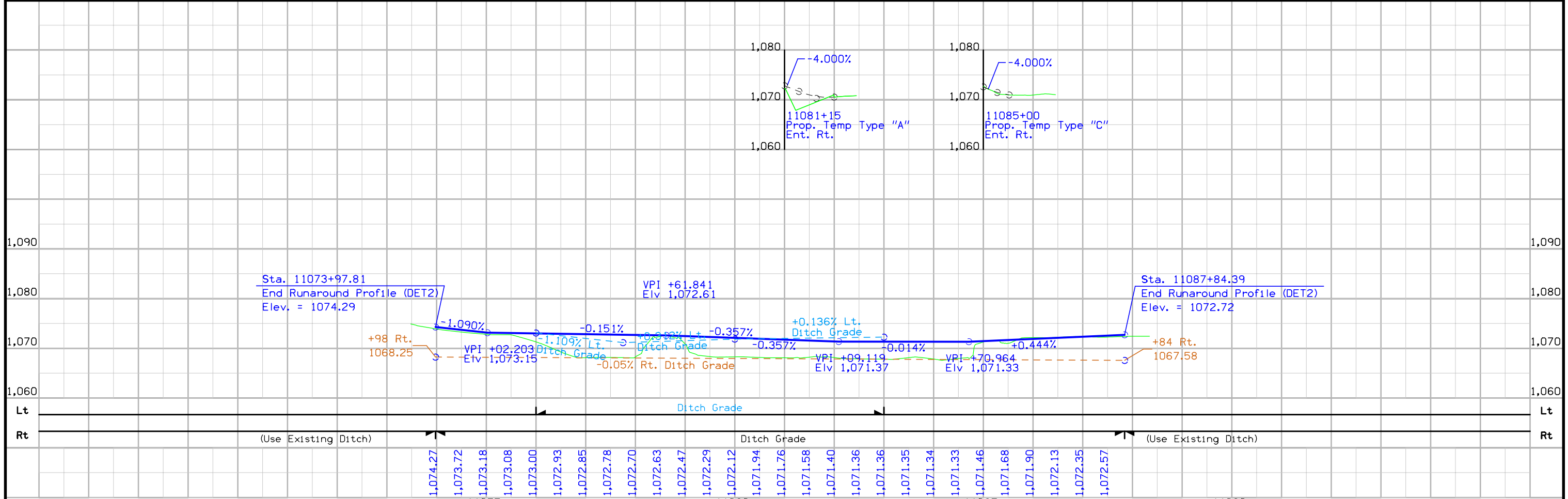
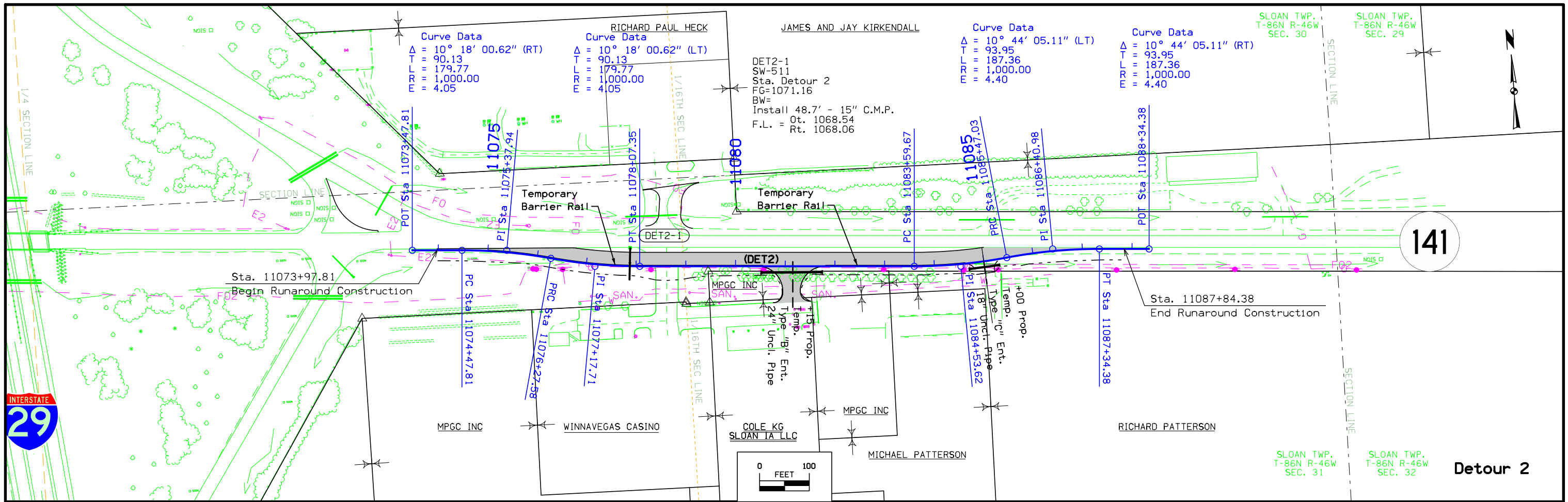






11:21:25 AM 11/4/2020 AAMEYER pw:\projectwise.dot.int.lan:PWMain\Documents\Projects\9702901018\Design\CADD_Files\Sheet_Files\97029294.E02.dgn





Survey Information

Woodbury County
IMX-029-6(294)- -2R-97
Location: IA 141 Interchange
Type of Work: PCC Pavement - Grade and Replace
Project Directory: 9702901011
PIN 18-97-029-010
Sap-0755.1

Party Personnel

Clayton Henningsen- Survey Party Chief
Jason Arn- Survey Party Chief
Paul Harry- Asst. Party Chief

Date(s) of Survey

Begin Date 7/30/2019
End Date 9/16/2019

General Information

Measurement units for this survey are US survey feet. This survey is for proposed removal and reconstruction of IA 141 interchange. This is a partial terrain and underground structure field survey with aerial image and lidar acquired terrain added in the Photogrammetry section of the Design Office.

Vertical Control

Vertical datum for this survey is NAVD88 (Computed using Geoid12b). GRS80 Ellipsoidal Height was computed at project Pts. 97K42001, 97141002, 97029003, R 181, J 129, SLOAN, and 8097 by doing concurrent 6 hour static observations. The project control is relative to nearby Iowa RTN Base Stations.

This survey observed 1 County GPS control with published NAVD88 heights to compare to local ground control:

Woodbury County GPS Network mark designated 8097 has a published Elev. of 1071.19
Survey Elev. = 1071.115

This survey observed 3 NGS GPS control with published NAVD88 heights to compare to local ground control:

NGS mark designated R 181 (PID NM1908) has a published Elev. of 1074.17

Horizontal Control

The project coordinate system for this survey is Iowa RCS Zone 4 (U.S. Survey Feet). This survey control is relative to IaRTN reference stations. IaRTN Reference Station coordinates are relative to the National Reference Station network datum: NAD83 (2011) for Epoch 2010.00. Coordinates were determined by conducting concurrent 6 hour static observations on Project Pts. 97K42001, 97141002, 97029003, R 181, J 129, SLOAN, and 8097.

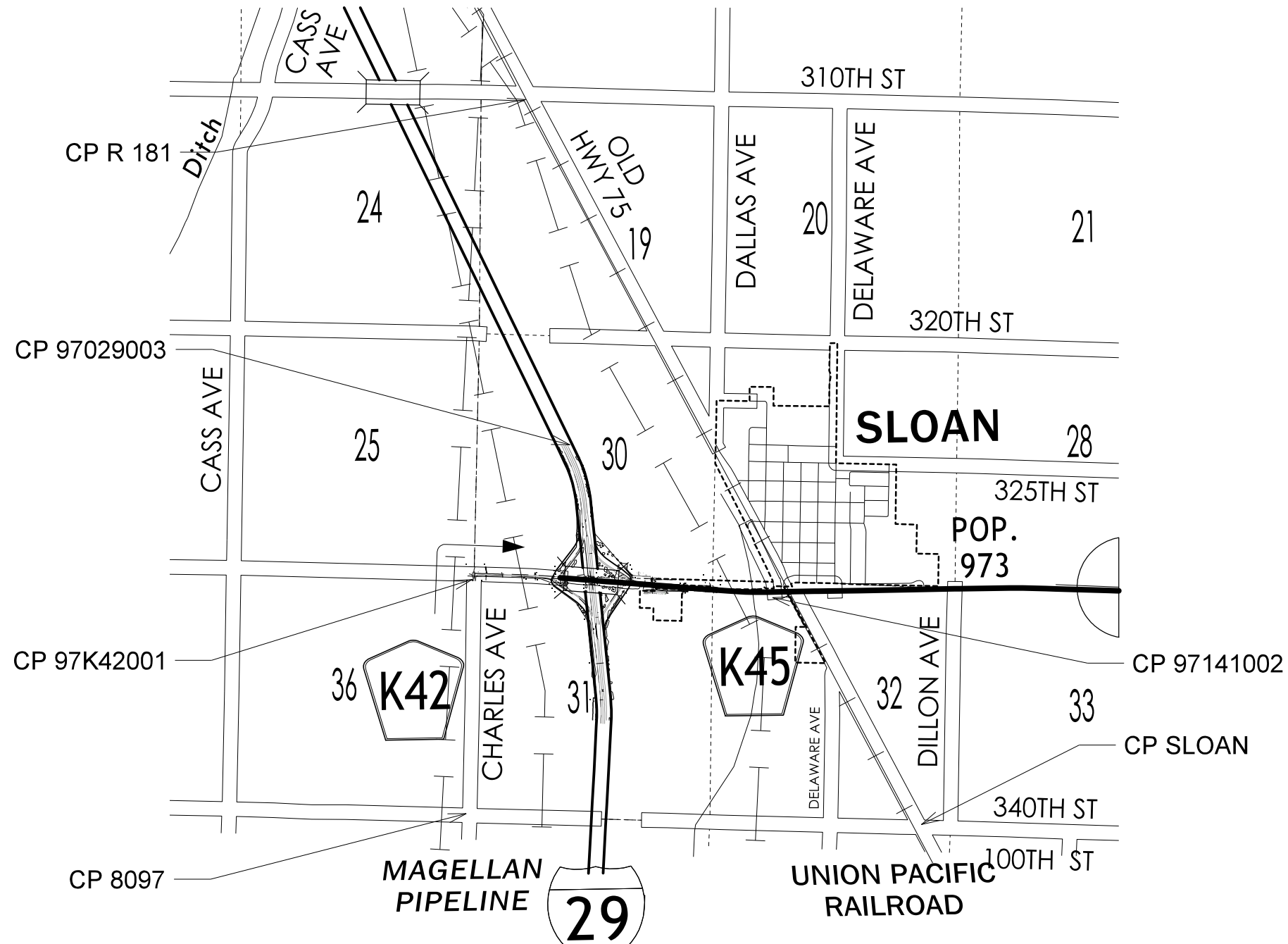
Alignment Information

Horizontal alignment was provided by District 3.

CP J 129

CONTROL POINT VICINITY MAP

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



HORIZ. DATUM: NAD83(2011) EPOCH 2010.00

VERT. DATUM: NAVD88

1a. Regional Coordinate System Zone 4

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

HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING

HORIZ. DATUM: NAD83(2011) EPOCH 2010.00

VERT. DATUM: NAVD88

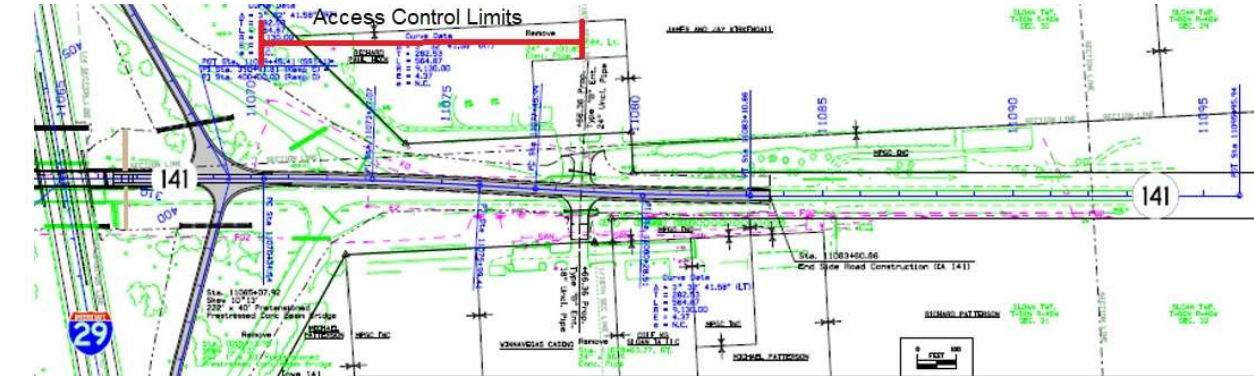
1a. Regional Coordinate System Zone 4

Point Name	North Coordinate	East Coordinate	Elevation	Feature Code- Monument Description
97K42001	8492205.092	14115877.022	1073.360	CP SET FENO MONUMENT
97029003	8495138.154	14118004.006	1071.640	CP SET FENO MONUMENT
8097	8487110.070	14115748.567	1071.120	CP WOODBURY COUNTY GPS
SLOAN	8486874.050	14125663.566	1068.810	CP NGS DISK PID NM0113
R 181	8497489.513	14119794.189	1074.030	CP NGS DISK PID NM1908
J 129	8502653.223	14117039.413	1074.290	CP NGS DISK PID NM0125
97141002	8491813.134	14122417.643	1071.310	CP SET FENO MONUMENT

Woodbury	ROW: IMN-029-6(299)127--0E-97			PIN	18-97-029-010														
	IA 141 Interchange																		
		STATE		COUNTY		CITY			TEMP EASE	BORROW									
PARCEL NO	OWNER NAME	FEE	EASE	FEE	EASE	FEE	EASE	EXCESS			FEE	T.E.	MITIGATION	OTHER	HOUSE	BUILDING(S)	A/C ONLY	TOTAL ACQ.	
1	James M Olson - Fee	.06 AC			0.06 AC														
2	Steve L Olson - Fee									15334 SF									
3	Valorie K Miller - Fee									2278 SF									
4	MPGC INC - Fee									16178 SF									
5	Richard J Patterson - Fee									4305 SF									
6	Cole KG Sloan IA LLC - Fee									1761 SF									
6 Parcels	"TOTALS	0.06 AC	0 AC	0 AC	0.06 AC	0 AC	0 AC	0 AC	0 AC	0 AC	0 AC	0 AC	0 AC	0 AC					
		0 SF	0 SF	0 SF	0 SF	0 SF	0 SF	0 SF	0 SF	0 SF	39856 SF								



11078+66 RT	Type C Entrance	Proposed
11078+66 LT	Type C Entrance	Proposed
11083+60	SR IA 141	End Project



To: Nikki Cuva/Jeff Larson
Office of Right of Way Design

Final Draft: February 25th, 2021

District 3: Tony Lazarowicz

Project Details:
PIN: 18-97-029-010
Project #: IMX-029-6(294)127—02-97
ROW #: IMN-029-6(299)127—0E-97

TAS: Jan Laaser-Webb
Office of Traffic & Safety

From: Leilah Armstrong
Office of Traffic & Safety

WOODBURY COUNTY
IA 141 over I-29 Sloan Interchange

SUBJECT: Access Review

PROJECT LOCATION AND DESCRIPTION:

This project is the proposed reconstruction of the IA 141 interchange over I-29 west of the town of Sloan.

ACCESS PRIORITY CLASSIFICATION:

Access locations are based off Priority 4A with a minimum spacing requirement of 600 feet along IA 141. I-29 is Priority 1 and a fully controlled access facility.

ACCESS CONTROL LIMITS:

No access will be allowed on IA 141/K42 from approximately Sta. 11052+86 to Sta. 11059+00 and Sta. 11070+35 to Sta. 11078+66.

ACCESS LOCATION DETAILS:

Location	Access	Comments
11046+65	SR IA 141	Begin Project
11050+40 RT	Type C Entrance	Proposed
11052+84 LT	Type C Entrance	Proposed
11052+86 RT	Type C Entrance	Proposed



SLOAN TWP
SEC 30-86-46

①
JAMES M AND
KRISTIN L OLSON

11045

11050

11055

SW1/4 SW1/4

SE1/4 SW1/4

11048+85
±64'
11048+74
±60'±EX R/W

11052+63.09
±63'±EX R/W

11056+00
±96'
11056+16
±90'±EX R/W

Remove

+84.00 Prop.
Type "C" Ent.
24" Uncl. Pipe

County Road K-42

TEMPORARY DETOUR

11042+28.57
In Side Road Construction
11043+91
±59±EX R/W

11046+00
±89'

TEMPORARY EASEMENT
TO CONSTRUCT RUNAROUND
AND CONSTRUCT ENTRANCE

+40.00 Prop.
Type "C" Ent.
24" Uncl. Pipe

11051+59
±87'±EX R/W

+86.00 Prop.
Type "C" Ent.
24" Uncl. Pipe

11052+61±R
±94'

11053+58
±82±EX R/W

TEMPORARY EASEMENT
TO CONSTRUCT ENTRANCE

②
STEVE L OLSON

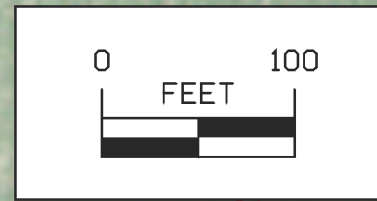
③
VALORIE K MILLER

Remove

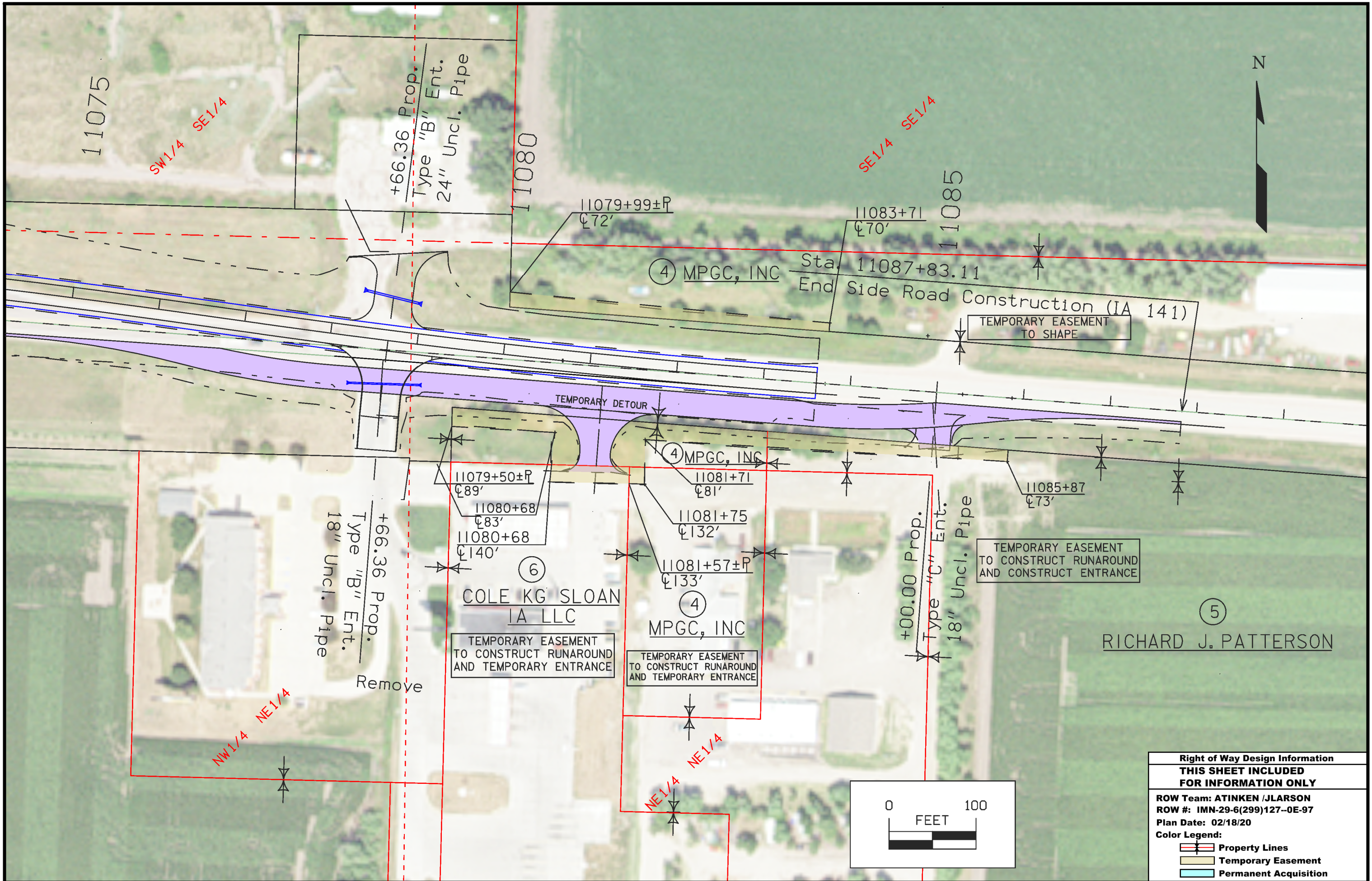
Remove

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SEC 31-86-46

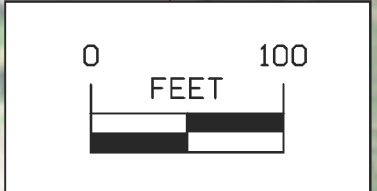
NW1/4 NW1/4



Right of Way Design Information	
THIS SHEET INCLUDED FOR INFORMATION ONLY	
ROW Team: ATINKEN /JLARSON	
ROW #: IMN-029-6(299)127--0E-97	
Plan Date: 02/18/20	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition



Right of Way Design Information	
THIS SHEET INCLUDED FOR INFORMATION ONLY	
ROW Team: ATINKEN /JLARSON	
ROW #: IMN-29-6(299)127--0E-97	
Plan Date: 02/18/20	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition



TRAFFIC CONTROL PLAN

1. All Traffic Control items shall be installed prior to contractor starting roadway work operations. Staging Traffic Control items shall be installed prior to beginning each stage's work. Items to be installed per the roadway plans, Standard Road Plan sheets, or as directed by the field engineer. Additional items may be necessary to accommodate field conditions. Contractor is responsible for field locate of utilities prior to installing TC items.
2. Lane Closure System, LCS, notifications shall be submitted and approved prior to related roadway work operations. "
3. Traffic Control shall be in accordance with Standard Road Plans. For additional information, refer to Part 6 of the Manual on the Uniform Traffic Control Devices and the current Standard and Supplemental Specifications.
4. Use Portable Dynamic Message Signs (PDMS) in conjunction with traffic control and detour signage per Standard Road Plan sheets; contractor shall provide PDMSs.
5. Traffic will be maintained on I-29 and IA 141 at all times.
6. Shoulder and/or lane closures (per Standard Road Plan TC-402, TC-418, and TC-420) will be necessary for all Stages of construction.
7. Ramps shall remain open and maintained except for short duration closures during Stages 3 and 4 (per Standard Road Plan TC-417) to complete ramp construction.
8. During ramp closures, I-29 traffic shall be detoured for duration of stages(see Sheets J.9 and J.10).
9. Demolition of existing structure and setting girders for new structure may require closure of I-29 for a short duration utilizing entrance/exit ramps. Install Traffic Control items per Standard Road Plan TC-454, using PDMSs to notify use of ramps, and the use of other items as directed by the field engineer to direct traffic accordingly.

COORDINATED OPERATIONS

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

Project	Type of Work

STAGING NOTES

Stage 1

Traffic:

- Maintain northbound/southbound traffic in existing lanes of I-29.
- Maintain eastbound/westbound traffic in existing lanes of IA 141.
- Refer to IowaDOT standard sheets TC-1 and TC-402 to install lane temporary pavement

Construction:

- Construct temporary pavement at ramp gores and Ramp D and IA 141 interchange terminal.
- Install drainage culvert(s) under runaround limits and at Ramp C temporary pavement section.
- Construct temporary pavement runarounds along IA 141 at either end of the project limits.
- Maintain access at hotel/truck stop parking lot driveway by constructing temporary pavement in halves/temporary alternate driveway.
- Install temporary barrier rail along I-29 median shoulders to protect work zone for substructure construction.

Stage 2

Traffic:

- Maintain I-29 ramp traffic utilizing temporary ramp gores and existing ramp pavement.
- Maintain eastbound/westbound IA 141 traffic along existing pavement and temporary runarounds.
- Coordinate I-29 northbound/southbound overnight shutdown for girder setting operations(use ramps to maintain traffic per Standard Roadway Plan TC-454).

Construction:

- Construct new alignment sections of Ramps A, B, C, and D that do not interfere with traffic along I-29 and IA 141.
- Construct IA 141 substructure and superstructure; set girders during allowed timeframe.
- Construction IA 141 from project limits except in areas of existing ramp terminals; do not impede traffic entering and exiting I-29.
- Install proposed culverts as necessary for drainage under proposed ramp sections; maintain drainage throughout stage.

Stage 3

Traffic:

- Maintain northbound/southbound traffic in existing lanes of I-29.
- Detour northbound I-29 entrance ramp(Ramp D) traffic and southbound I-29 exit ramp(Ramp A) traffic via the Salix and K-45 interchange(see 'Detour Plan' on Sheet J.9).
- Maintain northbound I-29 exit ramp(Ramp C) traffic and southbound I-29 entrance ramp(Ramp B) traffic utilizing temporary gore ramp and existing ramp pavement.
- Maintain eastbound/westbound IA 141 traffic along existing pavement and temporary runarounds.

Construction:

- Construct remaining sections of Ramp A and D during ramp closures; complete ramp/I-29 shoulder construction at gores.
- Construct remaining ramp terminal sections along IA 141.

Stage 4

Traffic:

- Maintain northbound/southbound traffic in existing lanes of I-29.
- Detour northbound I-29 exit ramp(Ramp C) traffic and southbound I-29 entrance ramp(Ramp B) traffic via the Whiting and K-42 interchange(see 'Detour Plan' on Sheet J.10).
- Maintain northbound I-29 entrance ramp(Ramp D) traffic and southbound I-29 exit ramp(Ramp A) traffic utilizing newly constructed pavement from Stage 2 and 3.
- Maintain eastbound/westbound IA 141 traffic along new pavement completed in Stages 2 and 3.

Construction:

- Construct remaining sections of Ramp B and C during ramp closures; complete ramp/I-29 shoulder construction at gores.
- Construct remaining ramp terminal sections along IA 141.
- Remove remaining portions of IA 141 and Ramps A, B, C, and D.
- Remove runarounds at IA 141 project limits and reconstruct driveways, ditches, etc.

Other Staging Considerations

Traffic/Construction:

- Contractor will need to drop the existing structure at some point during construction operations(maybe during Stage 3 and Stage 4 dropping the structure in halves when off ramps are closed and portion of traffic is detour anyways?).

511 TRAVEL RESTRICTIONS

Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No., Structure ID, or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks

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

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

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

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

PLAN VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

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

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

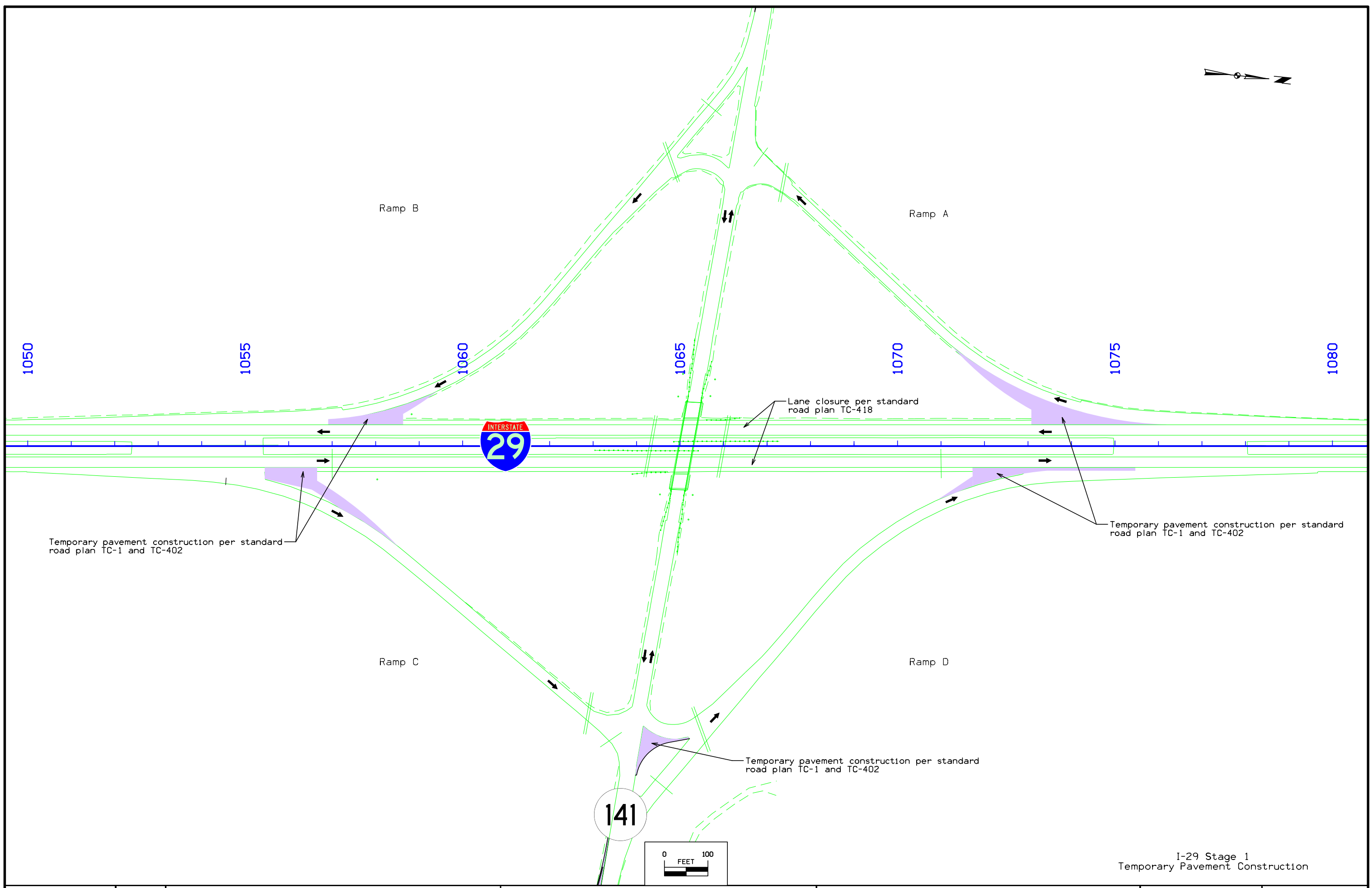
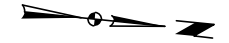
**PLAN VIEW PATTERN AND SYMBOL LEGEND
OF TRAFFIC CONTROL AND STAGING SHEETS**

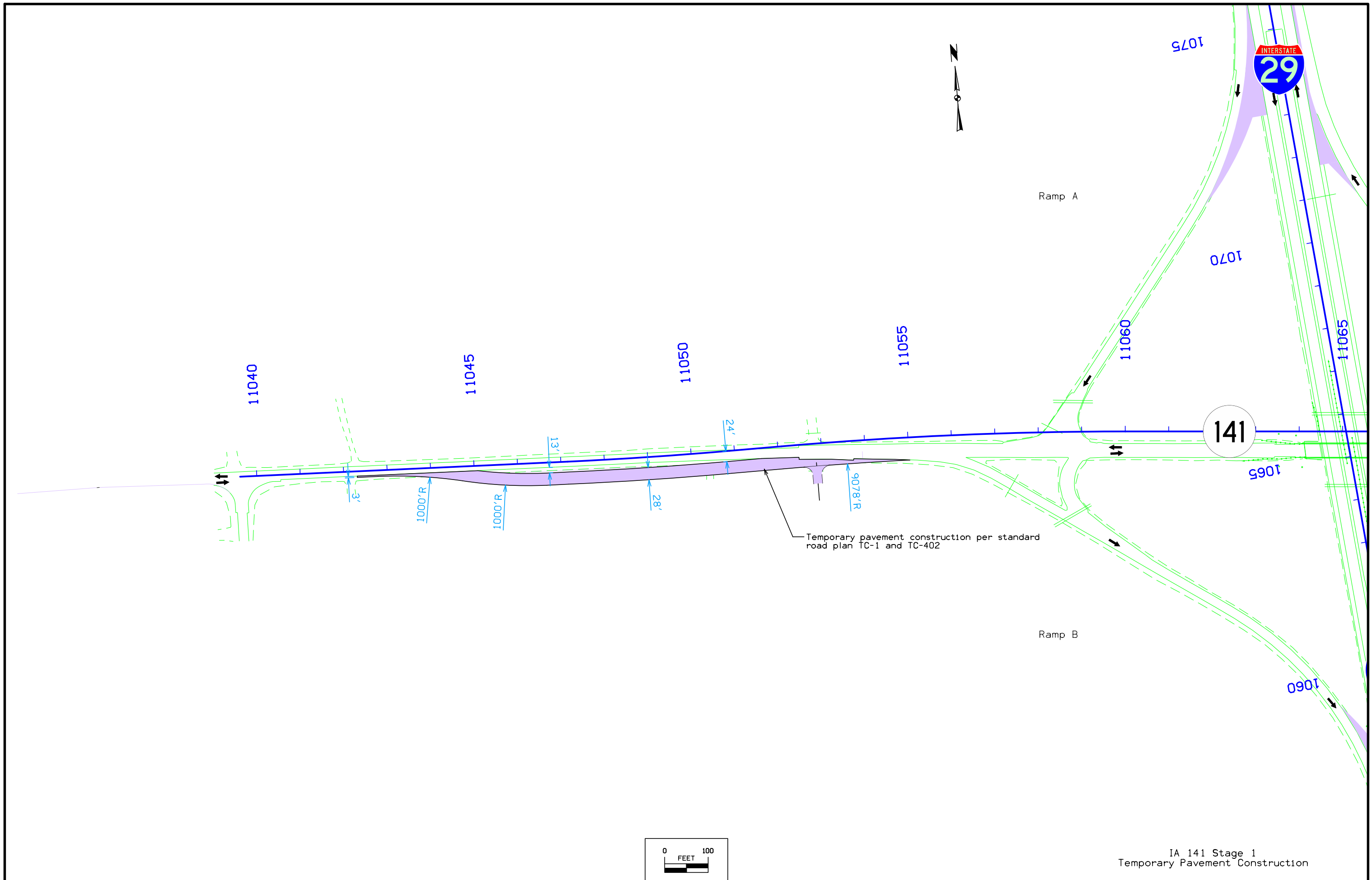
	Channelizing Device		Crash Cushion (Temp or Perm)
	Drum		Traffic Signal
	Temporary Lane Separator		Flagger
	Tubular Marker		Temporary Floodlighting
	Channelizer Marker		Traffic Sign
	Concrete Barrier Marker		Type III Barricade
	Delineator		Type A Warning Light
	Temporary Barrier Rail		Direction of Traffic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

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

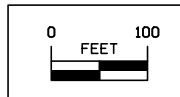
**TRAFFIC CONTROL
AND
STAGING
LEGEND AND SYMBOL
INFORMATION SHEET**

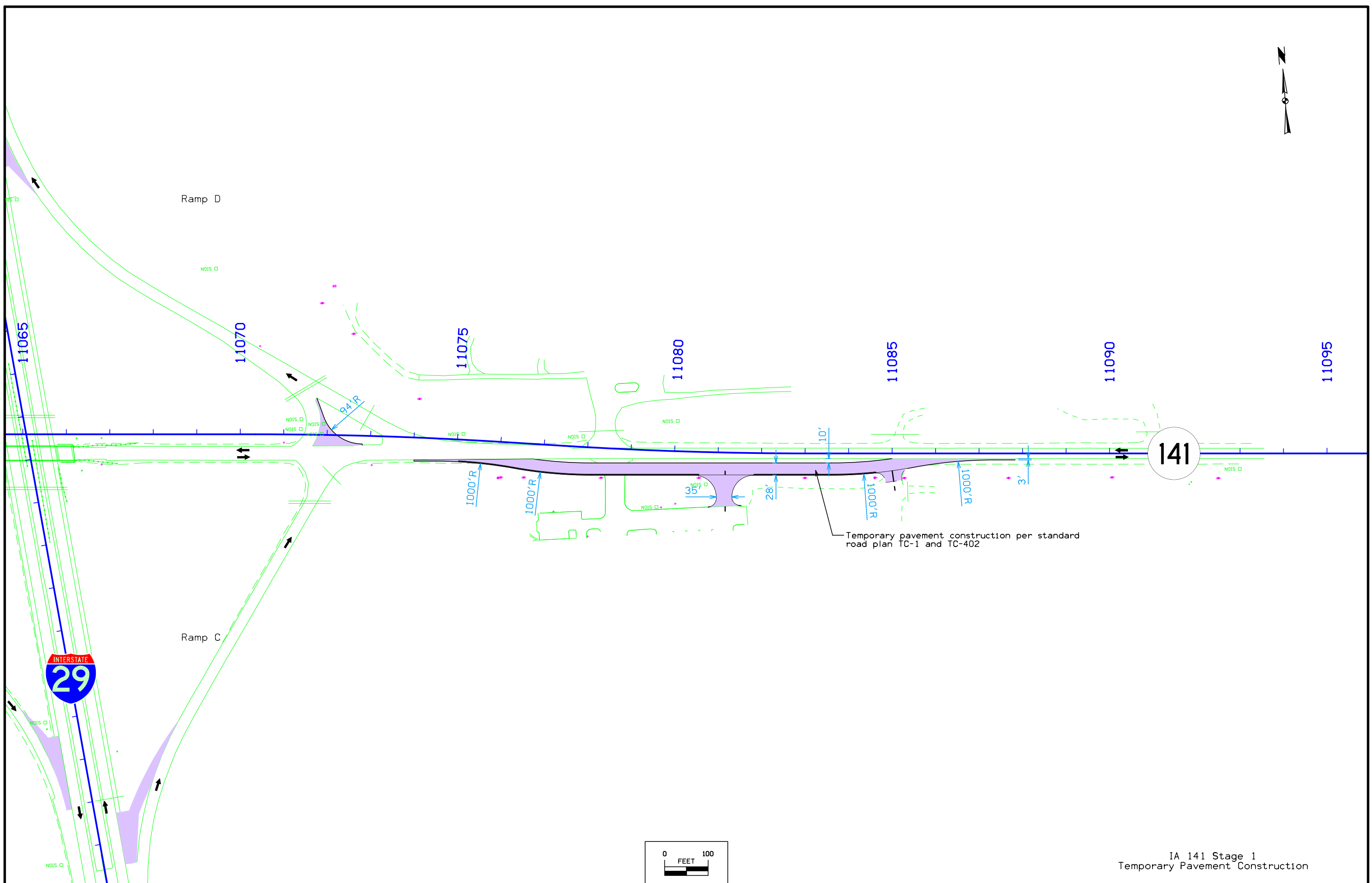
(COVERS SHEET SERIES J)



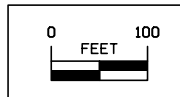


IA 141 Stage 1
Temporary Pavement Construction

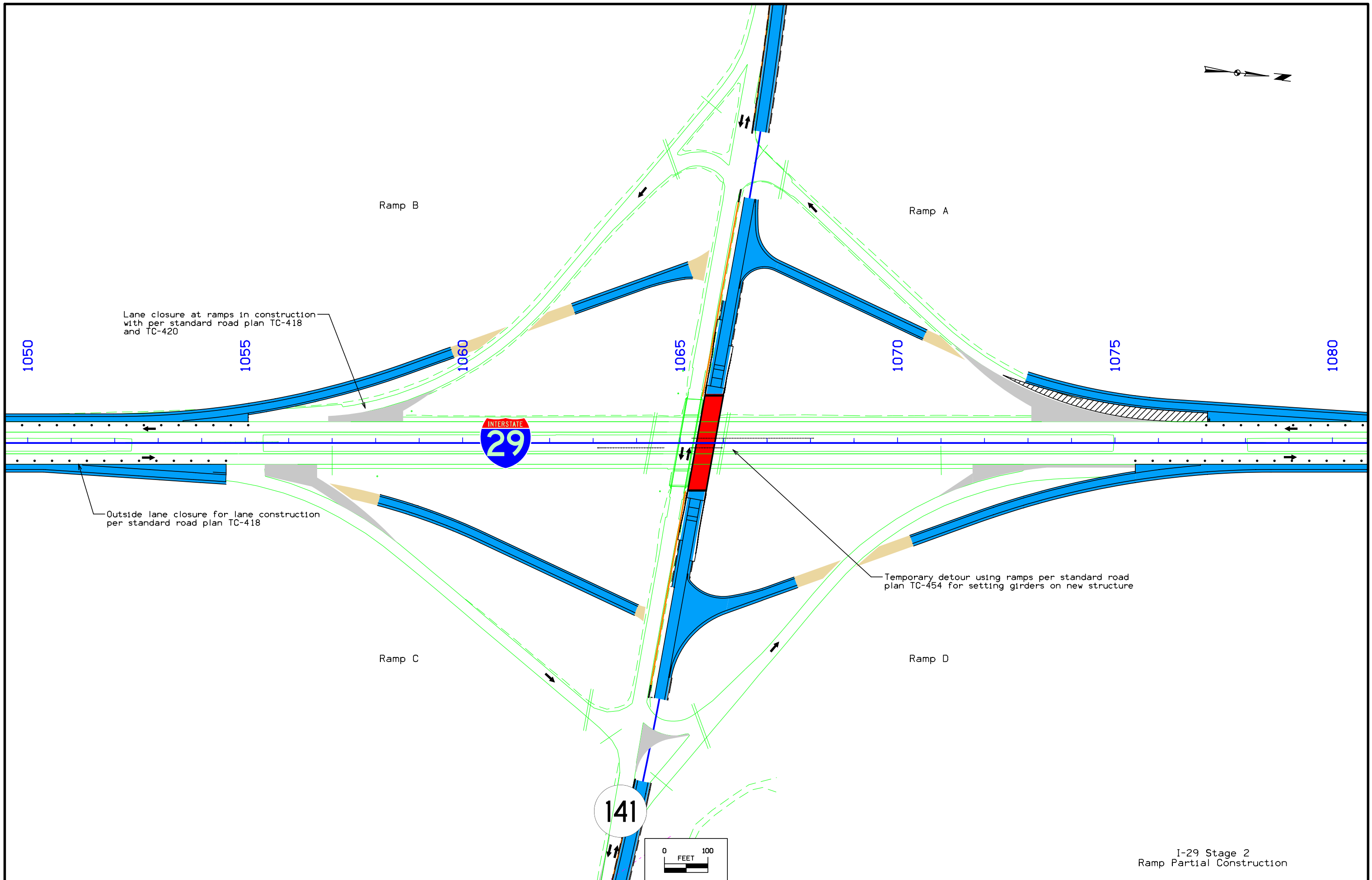
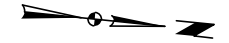




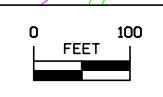
Temporary pavement construction per standard road plan TC-1 and TC-402



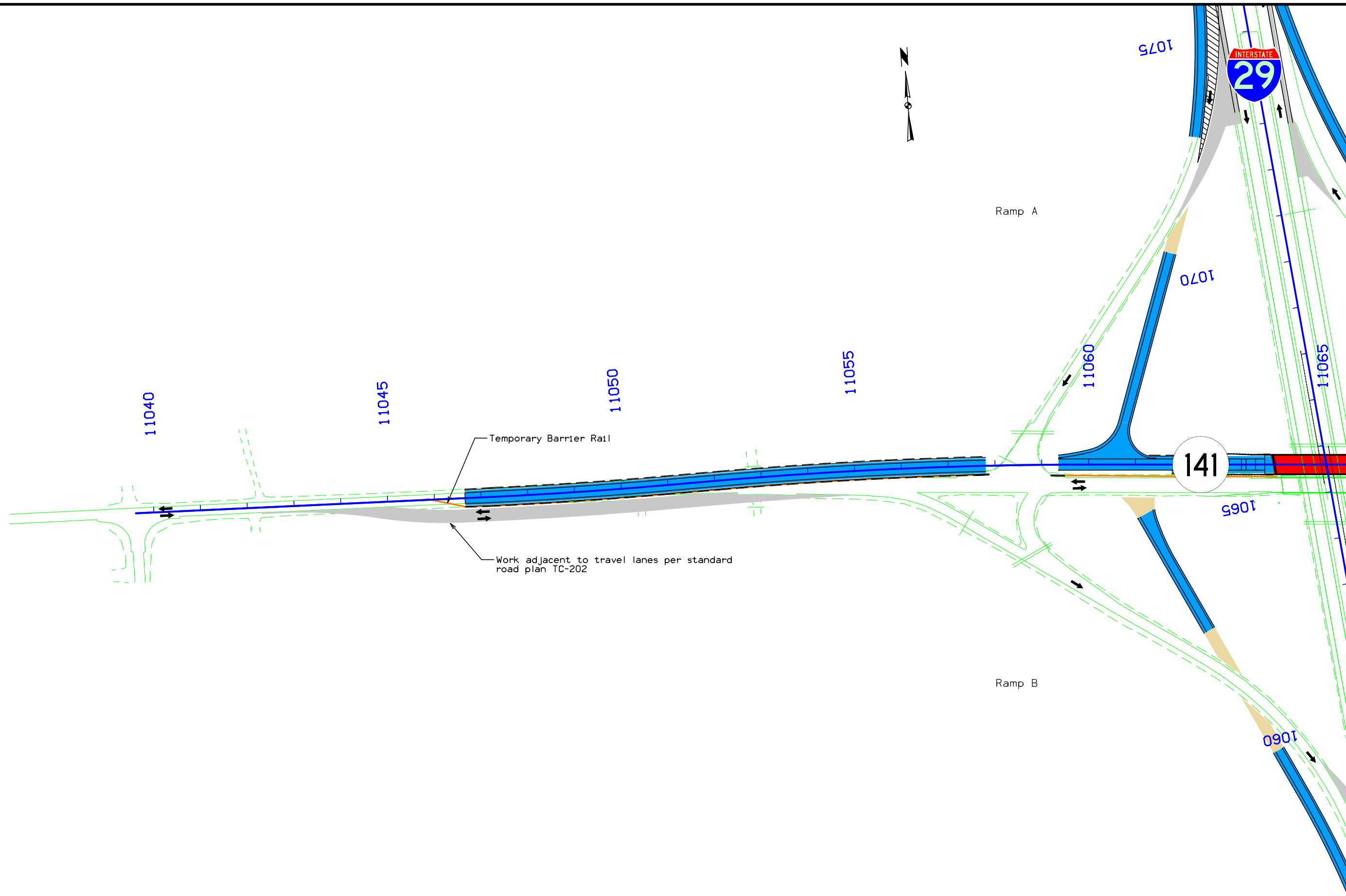
IA 141 Stage 1
Temporary Pavement Construction



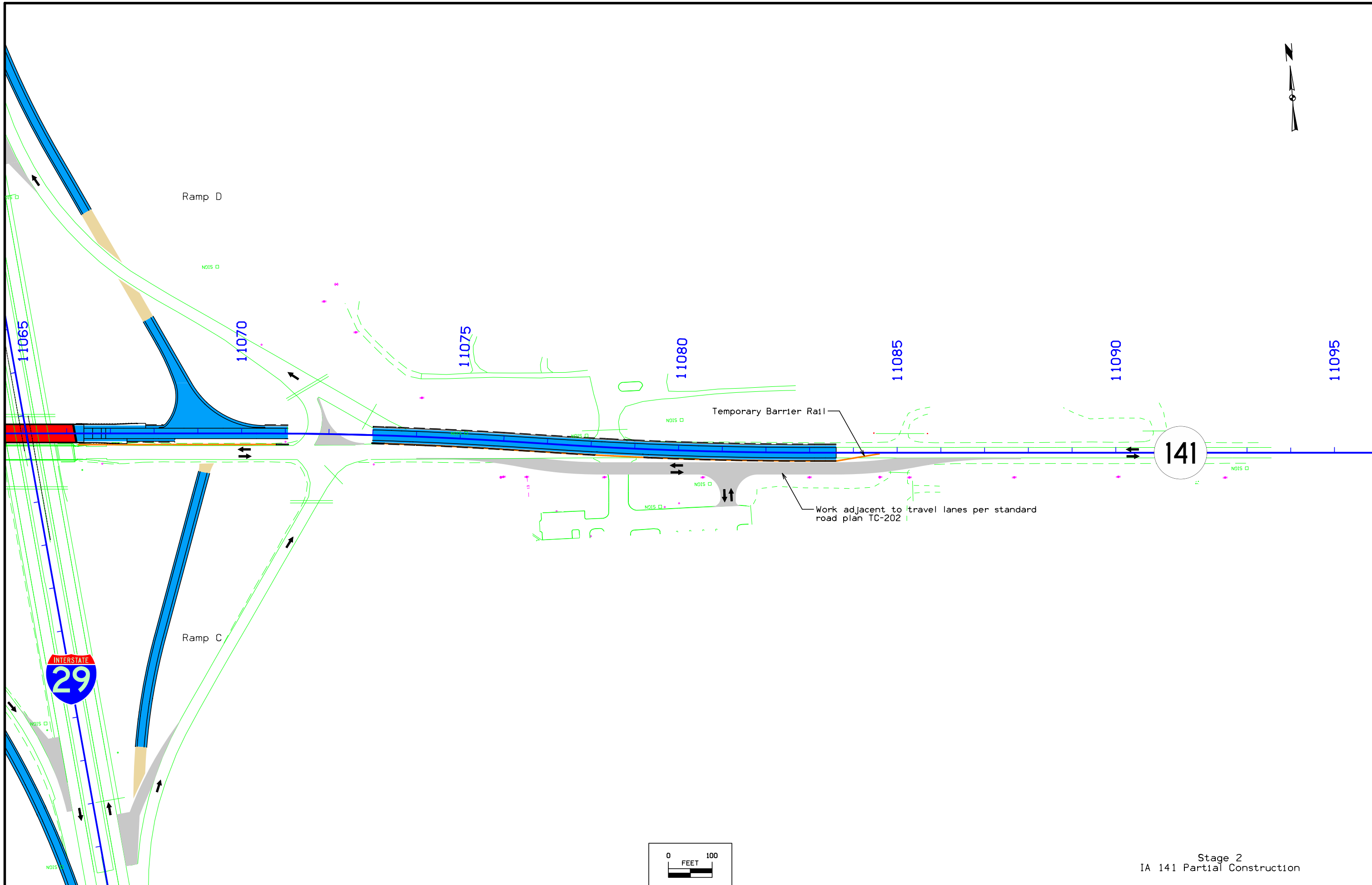
141

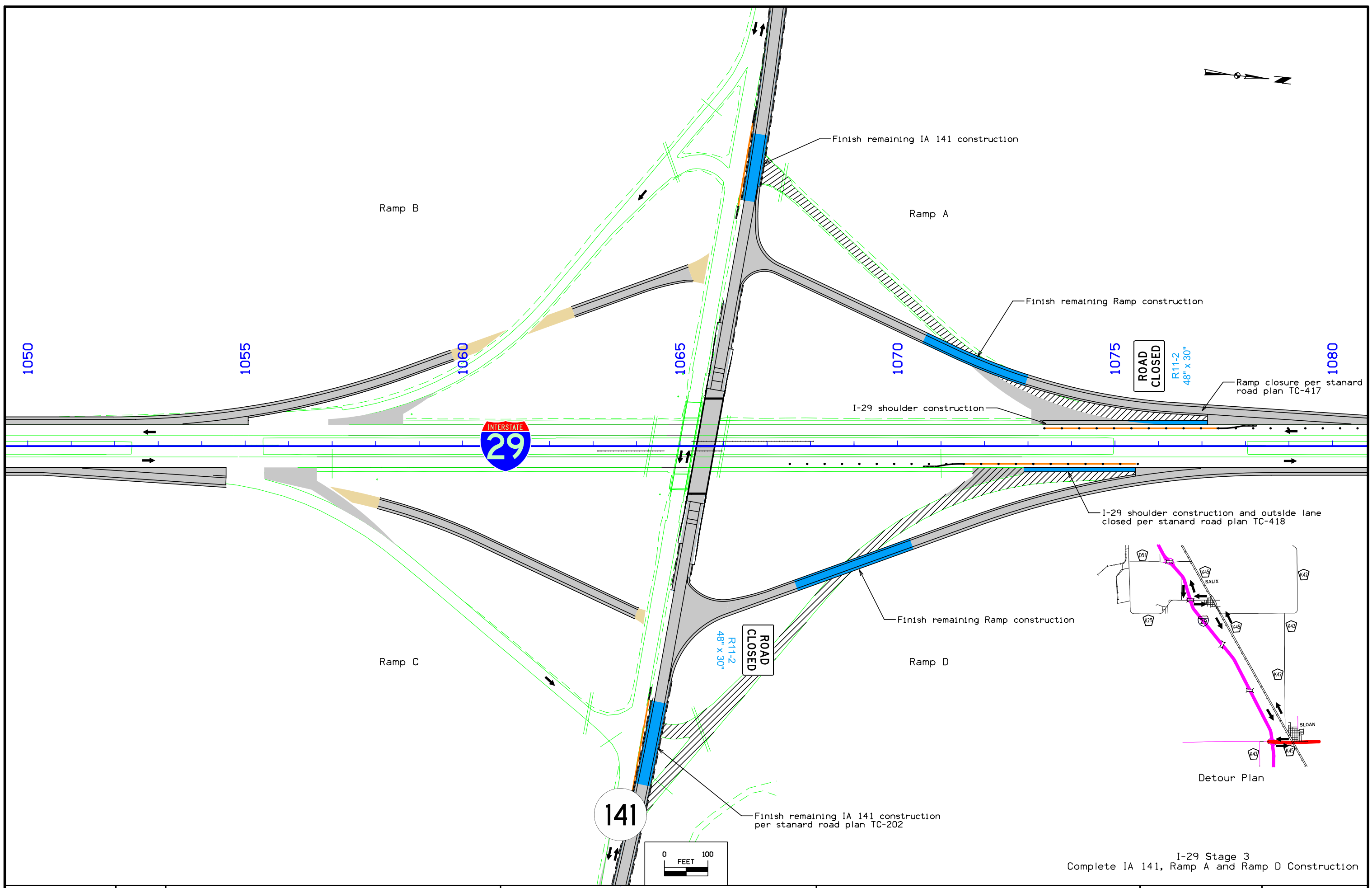
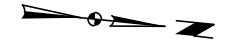


I-29 Stage 2
Ramp Partial Construction

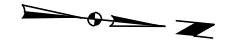


Stage 2
IA 141 Partial Construction





I-29 Stage 3
 Complete IA 141, Ramp A and Ramp D Construction



Finish remaining IA 141 construction per standard road plan TC-202

Ramp B

Ramp A

Finish remaining Ramp construction

I-29 shoulder construction and outside lane closure per standard road plan TC-418

1050

1055

1060

1065

1070

1075

1080

141



Ramp closure per standard road plan TC-417

R11-2
48" x 30"

ROAD
CLOSED

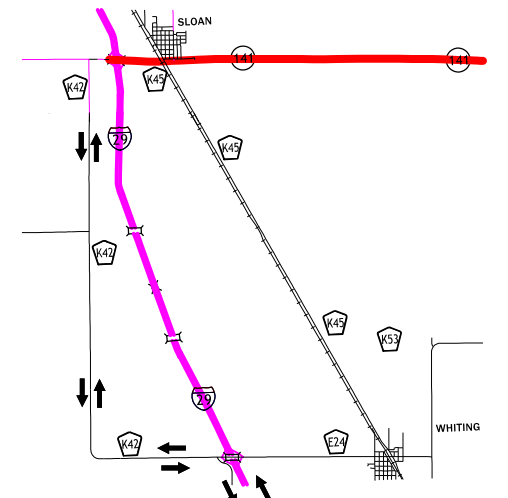
I-29 shoulder construction

Finish remaining Ramp construction

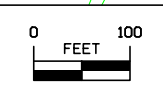
Ramp C

Ramp D

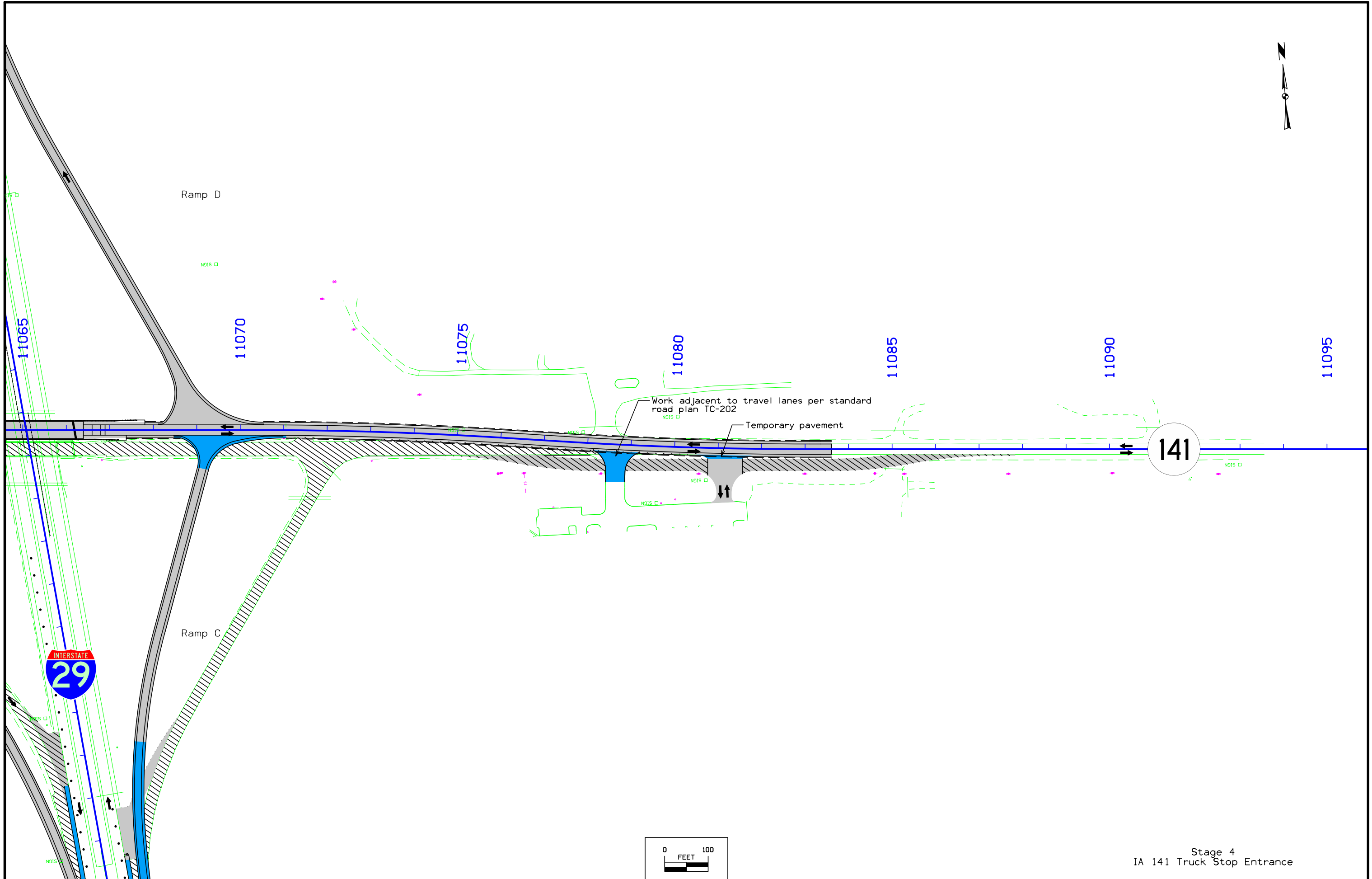
Finish remaining IA 141 construction



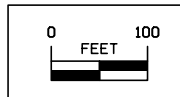
Detour Plan

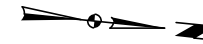


I-29 Stage 4
Ramp B and Ramp C Terminal Construction



Stage 4
IA 141 Truck Stop Entrance





Ramp B

PI Sta. 100+00.00 (Ramp A) =
PI Sta. 215+05.59 (Ramp B) =
POT Sta. 11060+45.60 (SR141)

Curve Data
 $\Delta = 19^\circ 47' 29.30''$ (LT)
T = 348.90
L = 690.85
RR = 2,000.00
E = 30.21
e = 5.4%
L = 168'
X = 62'

POT Sta. 1054+56.20, 89.00' RT =
POT Sta. 300+01.07
Point 'M' Road Design Detail 533-01

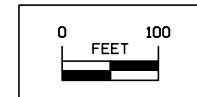
Curve Data
 $\Delta = 21^\circ 23' 40.08''$ (RT)
T = 264.46
L = 522.77
RR = 1,400.00
E = 24.76
e = 6.0'
L = 186'
X = 62'

Curve Data
 $\Delta = 8^\circ 47' 45.00''$ (LT)
T = 440.87
L = 880.01
RR = 5,732.34
E = 16.93

POT Sta. 1051+96.83, 61.00' LT =
POT Sta. 200+00.00
Point 'G' Road Design Detail 533-02

PI Sta. 310+91.81 (Ramp C) =
PI Sta. 400+00.00 (Ramp D) =
POT Sta. 11069+45.41 (SR141)

Ramp C



Geometric Plan
Proposed Interchange of
Interstate 29 with IA 141
Woodbury County



Ramp A

PI Sta. 100+00.00 (Ramp A) =
PI Sta. 215+05.59 (Ramp B) =
POT Sta. 11060+45.60 (SR141)

Curve Data
 $\Delta = 21^\circ 23' 48.00''$ (LT)
T = 264.49
L = 522.82
R = 1,400.00
E = 24.76
e = 6.0'
Lr = 186'
X = 62'

POT Sta. 1077+12.97, 89.00' LT =
POT Sta. 111+43.66
Point 'M' Road Design Detail 533-01

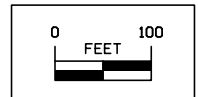
POT Sta. 1078+57.03, 61.00' RT =
POT Sta. 414+33.40
Point 'G' Road Design Detail 533-02

Curve Data
 $\Delta = 19^\circ 47' 29.30''$ (RT)
T = 348.90
L = 690.85
R = 2,000.00
E = 30.21
e = 5.4'
Lr = 168'
X = 62'

Curve Data
 $\Delta = 15^\circ 04' 43.00''$ (LT)
T = 379.16
L = 753.93
R = 2,864.79
E = 24.98
e = 5.6'
Lr = 250'
X = 103'
SCS PI Sta 1087+10.72
 $\Delta = 20^\circ 04' 43.00''$ (LT)
Theta = $2^\circ 30' 00.00''$
Ls = 250.00
Ts = 632.32
Es = 45.47
P = 0.91
K = 124.99
Xc = 249.95
Yc = 3.64
LT = 166.68
ST = 83.35
LC = 249.98

Ramp D

PI Sta. 310+91.81 (Ramp C) =
PI Sta. 400+00.00 (Ramp D) =
POT Sta. 11069+45.41 (SR141)



Geometric Plan
Proposed Interchange of
Interstate 29 with IA 141
Woodbury County

NORMAN STEVENSON TRUST

PI Sta. 215+05.59 (Ramp B)=
POT Sta. 11060+45.60 (IA 141)

Sta. 213+39.64
D.A. = 104 Ac.
No Existing Structure
Install Culvert
30" x 166' RCP w/ 2 Aprons
19°22'29" Skew
FL 1069.50 Lt.
FL 1069.47 Rt.

PI Sta. 100+00.00 (Ramp A)=

POT Sta. 11060+45.60 (IA 141)

Sta. 101+17.44
D.A. = 154 Ac.
No Existing Structure
Install Culvert
30" x 172' RCP w/ 2 Aprons
16°11'52" Skew
FL 1069.50 Lt.
FL 1068.94 Rt.

Curve Data
Δ = 21° 23' 48.00" (LT)
T = 264.49
L = 522.82
R = 1,400.00
E = 24.76
P = 6.0'
L = 186'
X = 62'

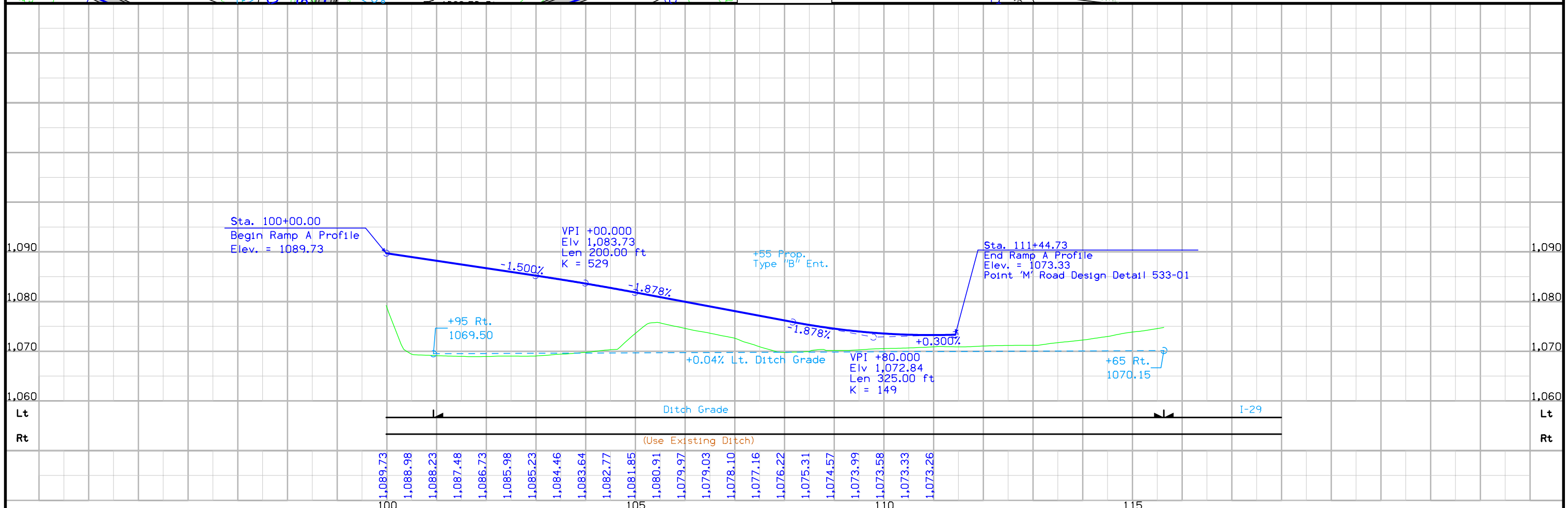
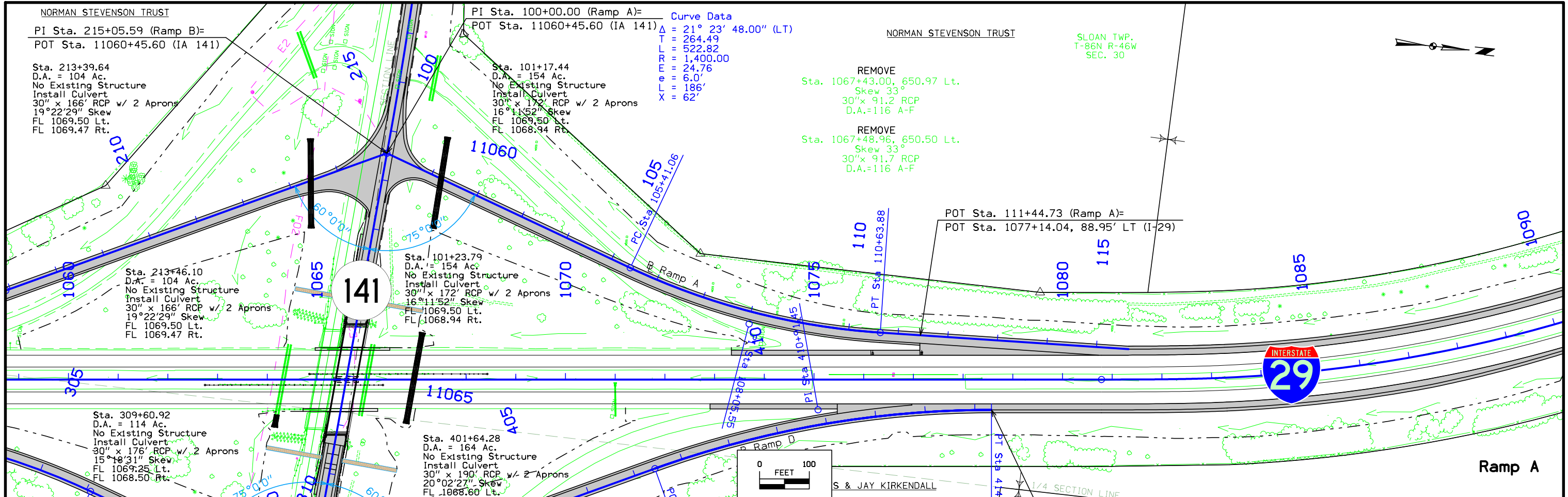
NORMAN STEVENSON TRUST

SLOAN TWP.
T-86N R-46W
SEC. 30

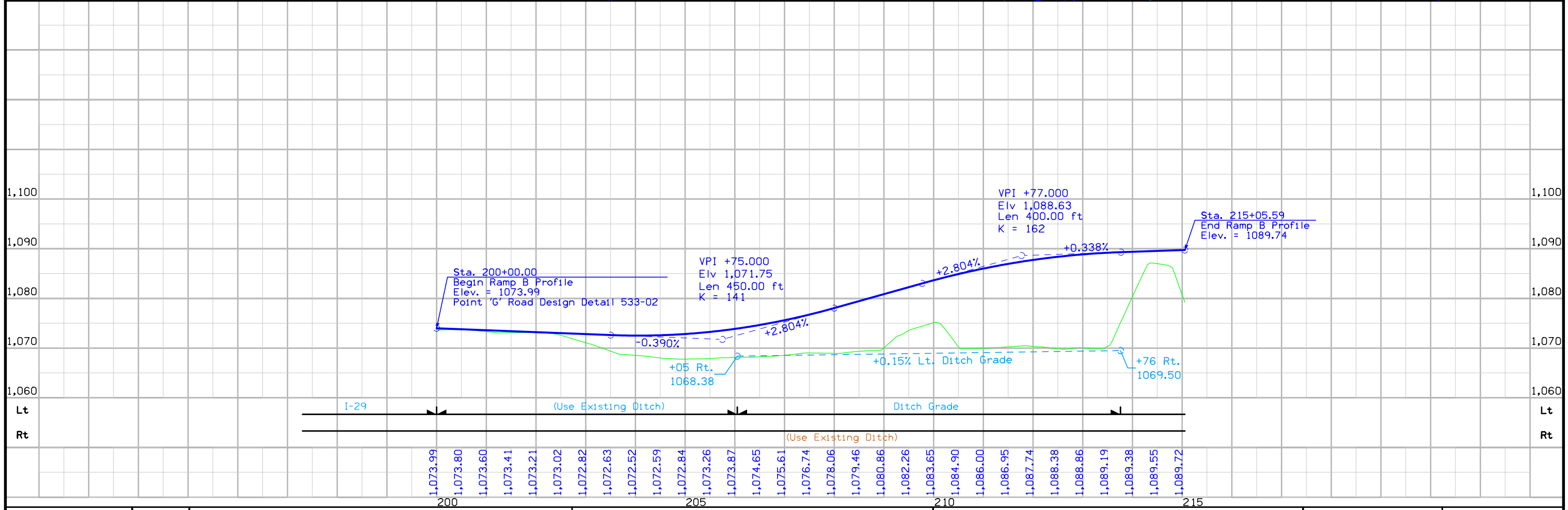
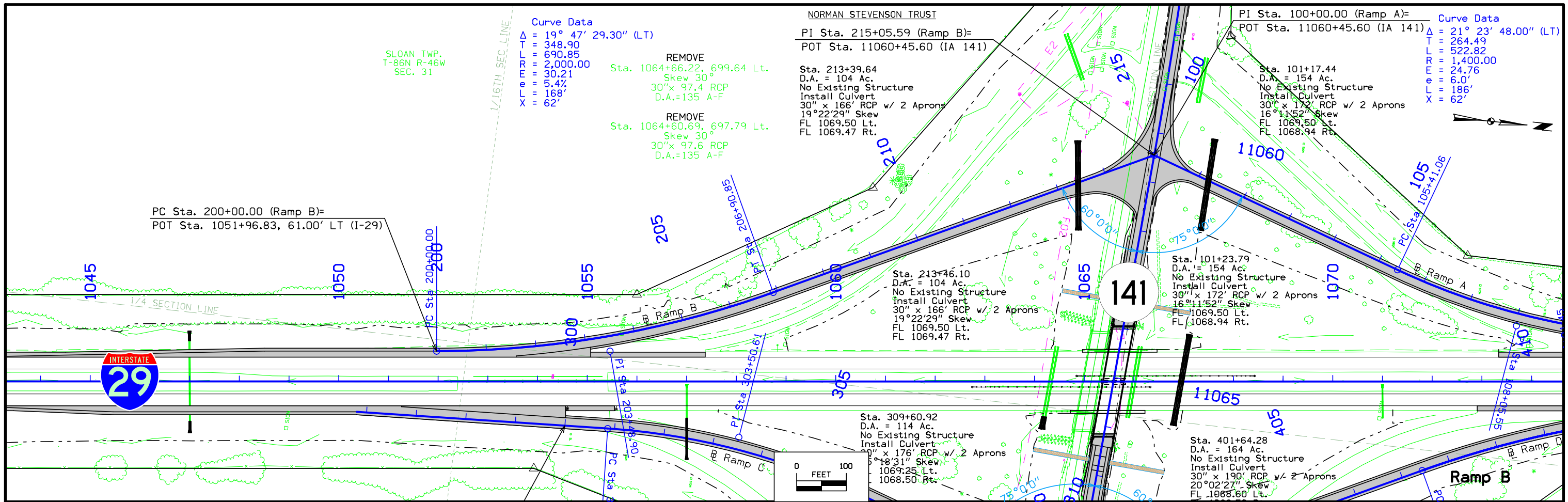
REMOVE
Sta. 1067+43.00, 650.97 Lt.
Skew 33°
30" x 91.2 RCP
D.A.=116 A-F

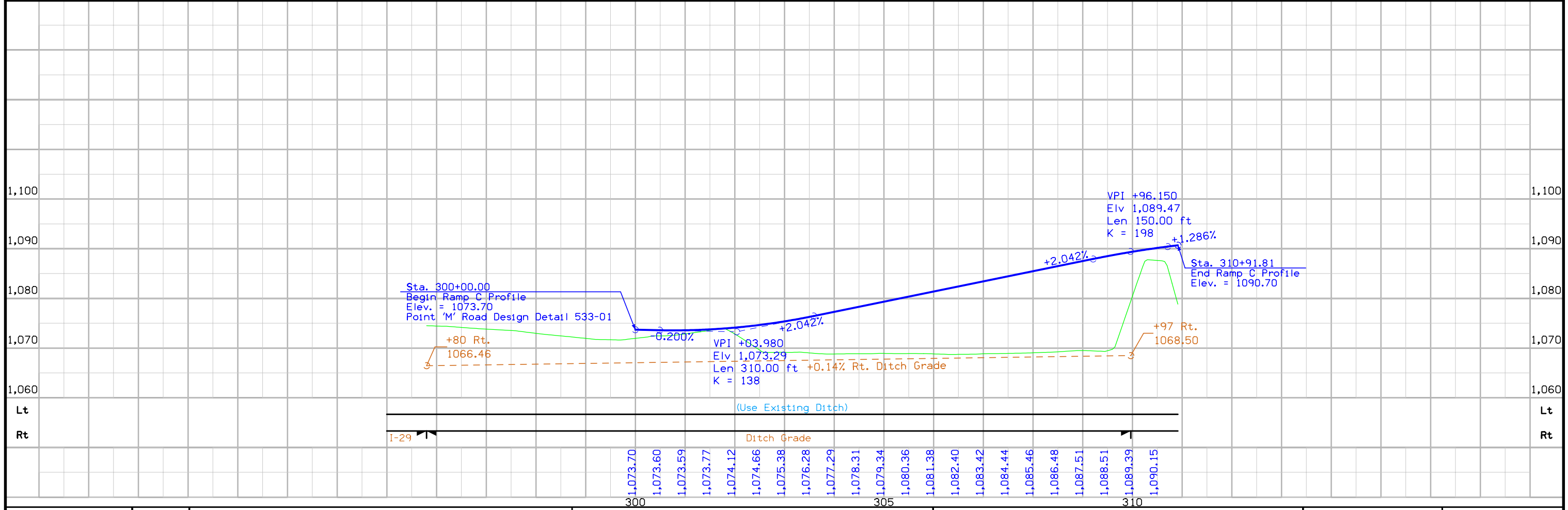
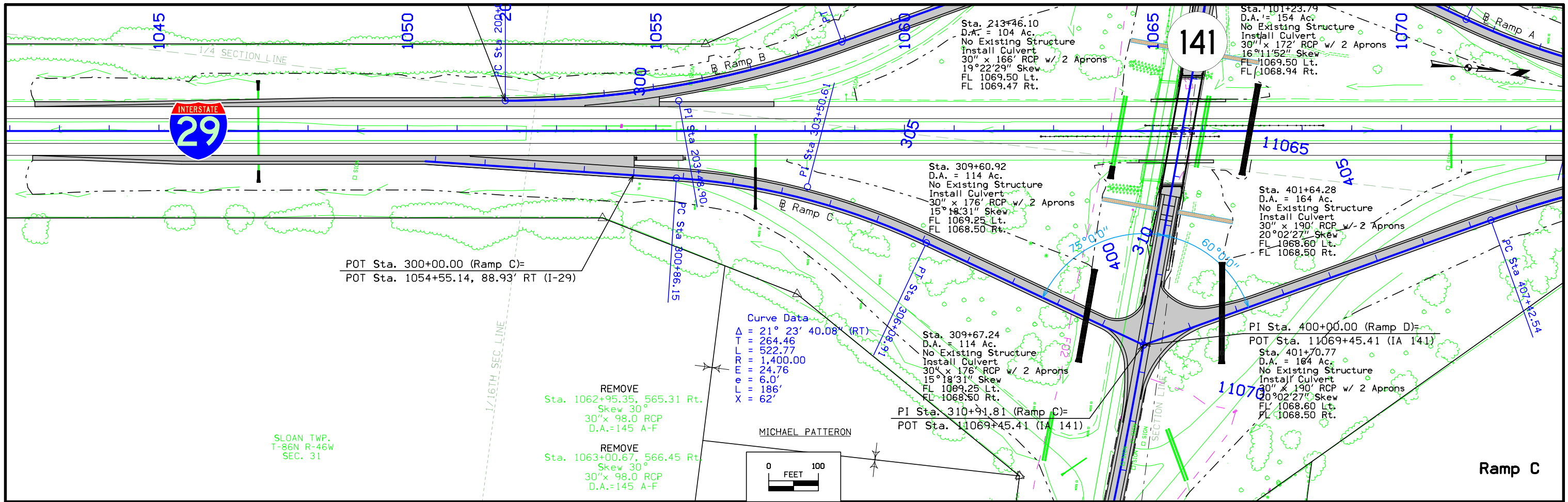
REMOVE
Sta. 1067+48.96, 650.50 Lt.
Skew 33°
30" x 91.7 RCP
D.A.=116 A-F

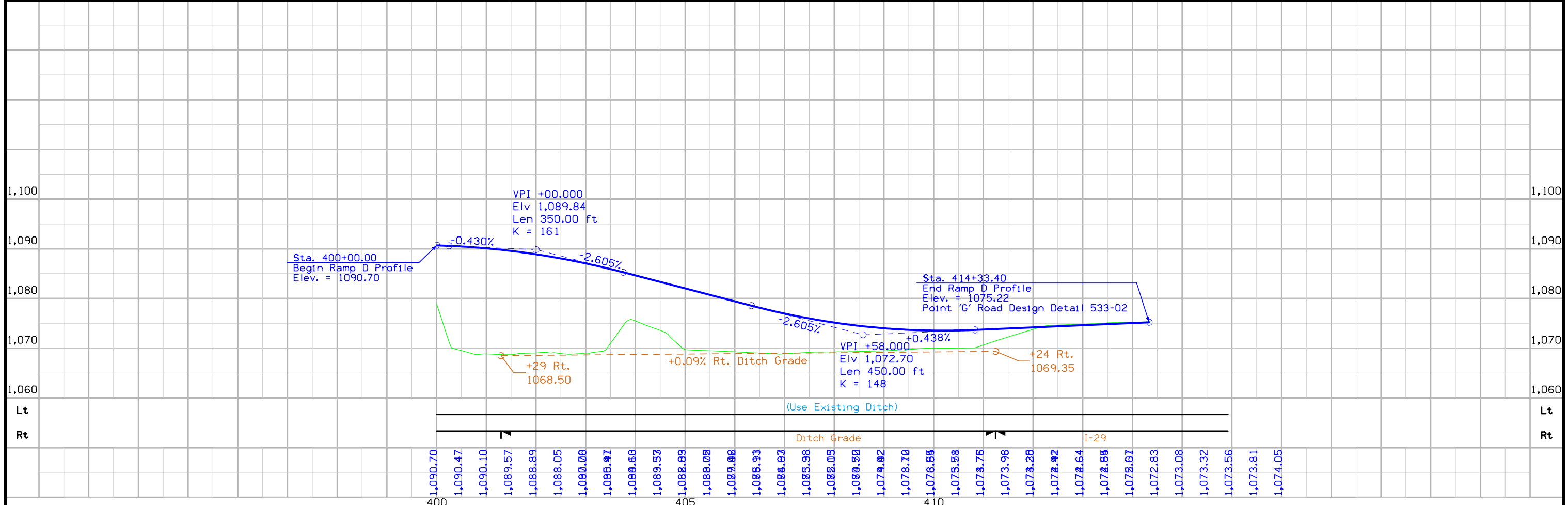
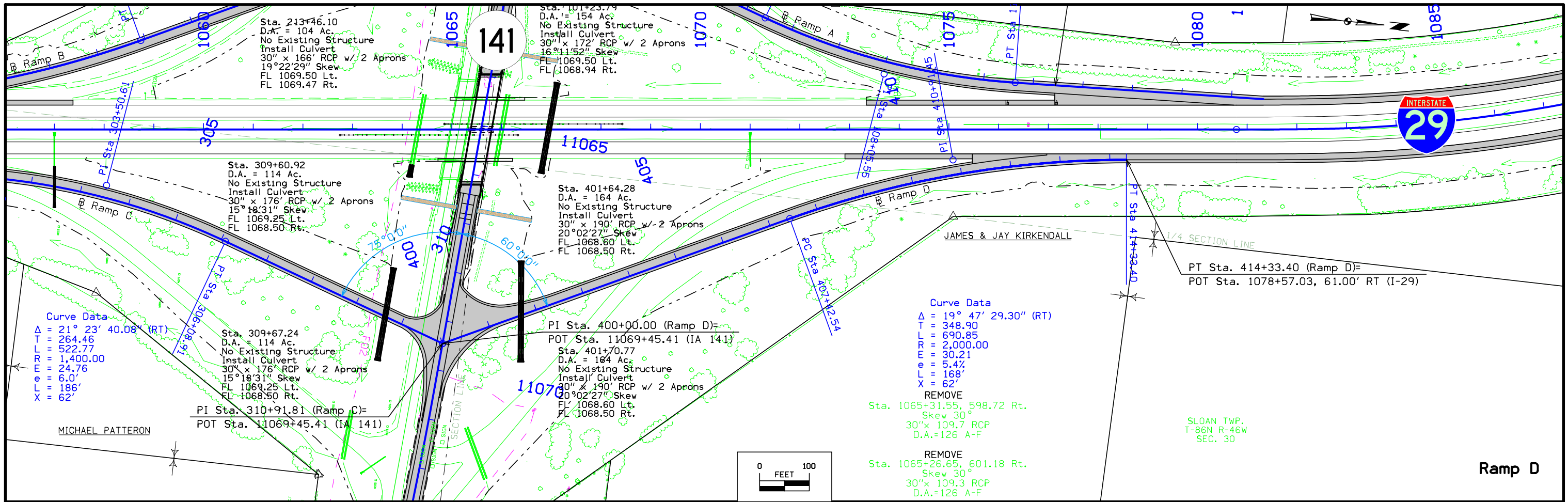
POT Sta. 111+44.73 (Ramp A)=
POT Sta. 1077+14.04, 88.95' LT (I-29)



FILE NO. 31724	ENGLISH	DESIGN TEAM IOWA DOT \ TranSystems	WOODBURY COUNTY	PROJECT NUMBER IMX-029-6(294)127--02-97	SHEET NUMBER K.3
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LINE STYLE LEGEND OF CROSS SECTION SHEETS (ROAD)

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

LINE STYLE LEGEND OF CROSS SECTION SHEETS (SOILS)

- Topsoil (Class 10)
- Slope Dressing Only
- Class 10 Materials
- Select Loams And Clay-Loams
- Select Sand
- Unsuitable Type A Disposal
- Unsuitable Type B Disposal
- Unsuitable Type C Disposal
- Shale
- Waste
- Broken and Weathered Rock
- Solid Rock
- 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.

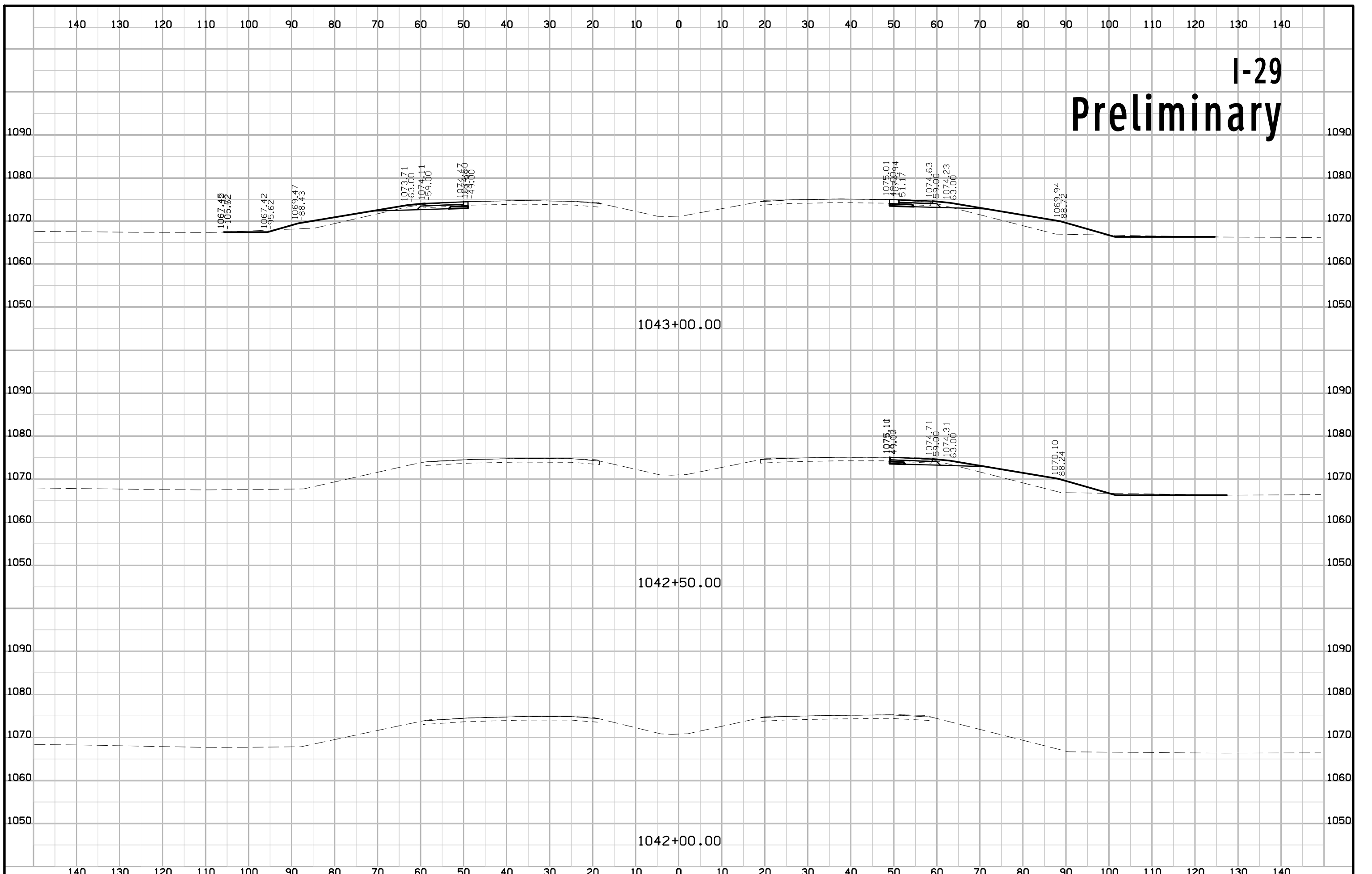
SYMBOL LEGEND OF CROSS SECTION SHEETS

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

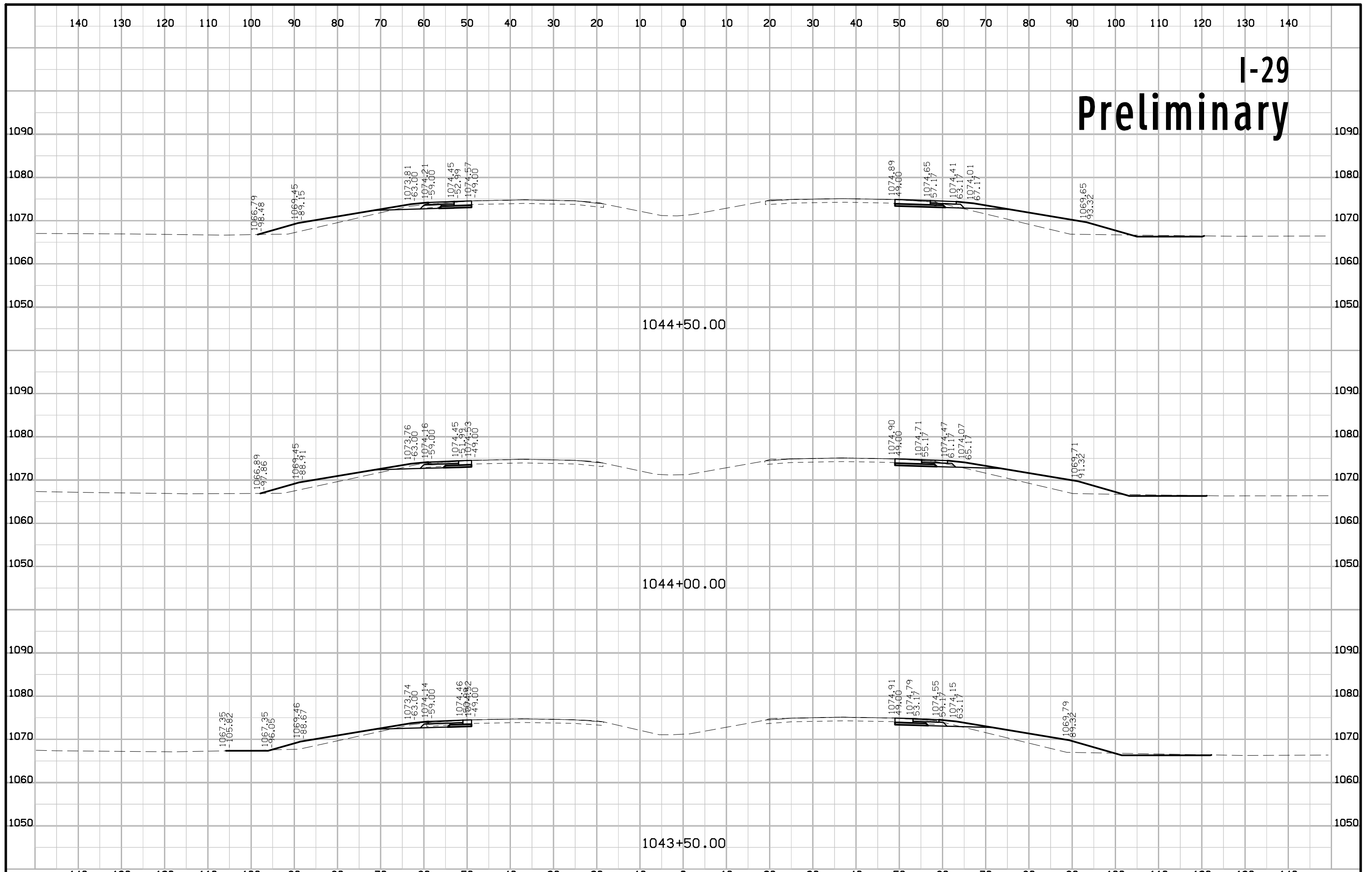
**CROSS SECTION
LEGEND AND SYMBOL
INFORMATION SHEET**

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

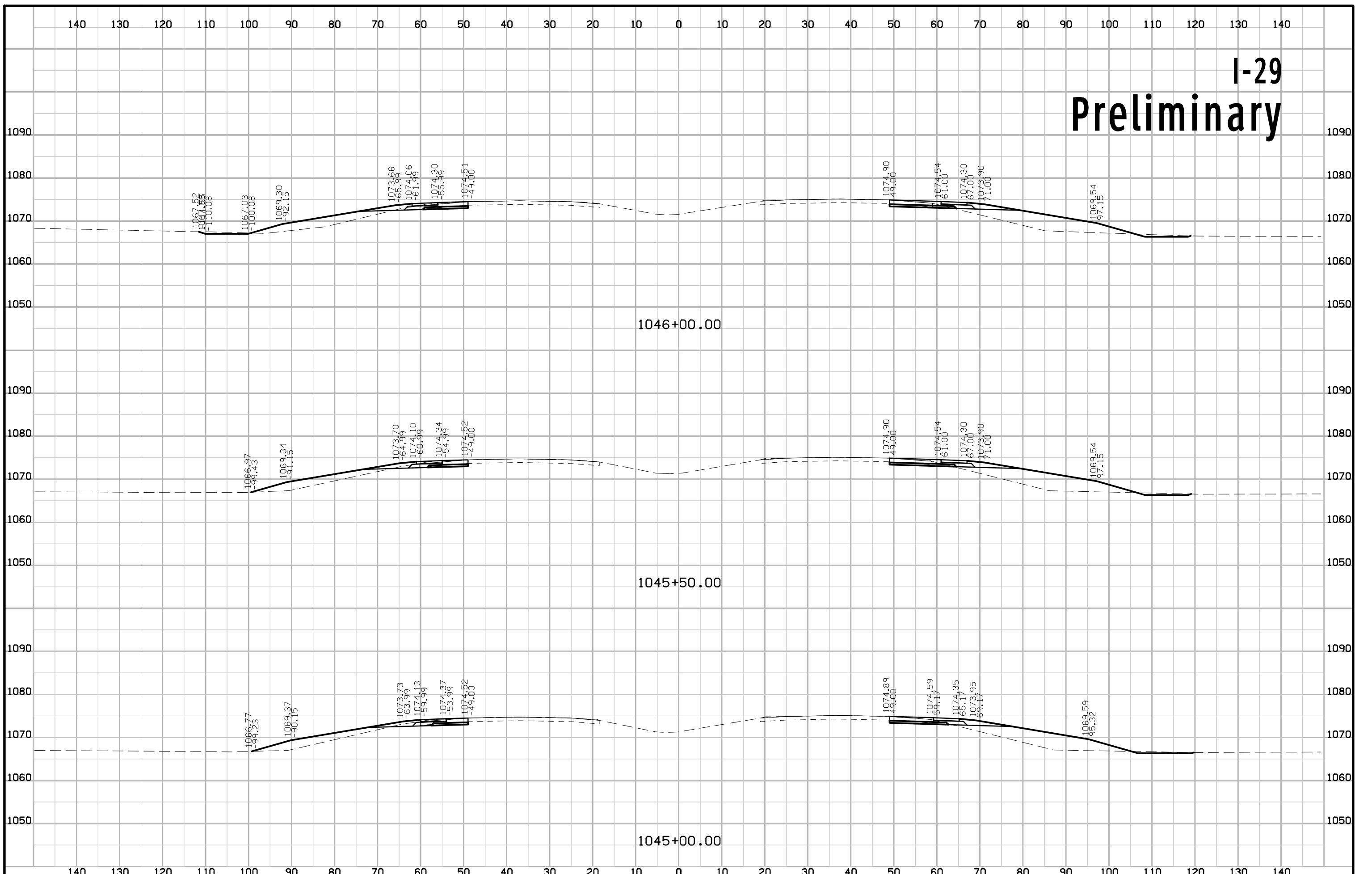
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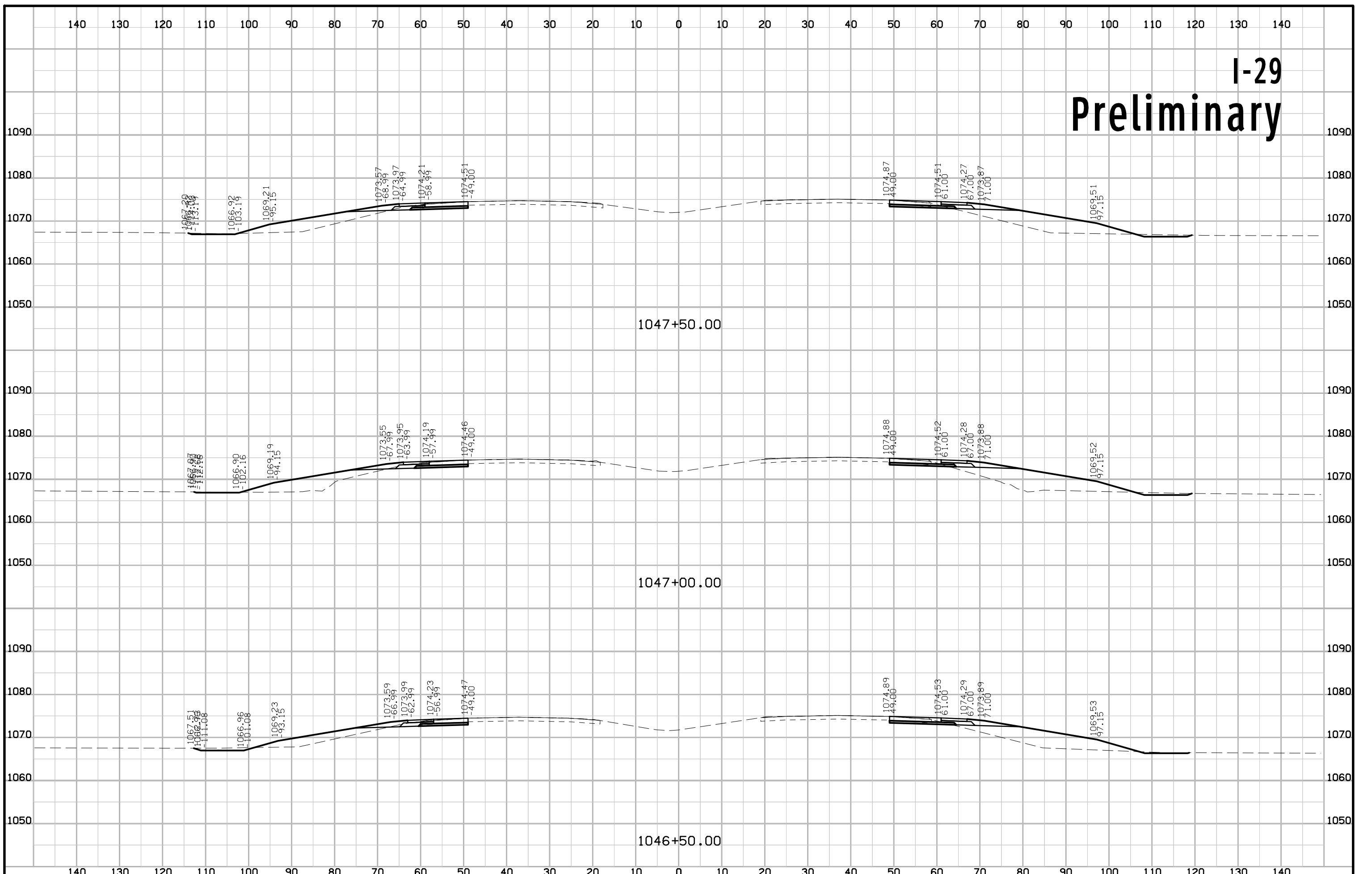
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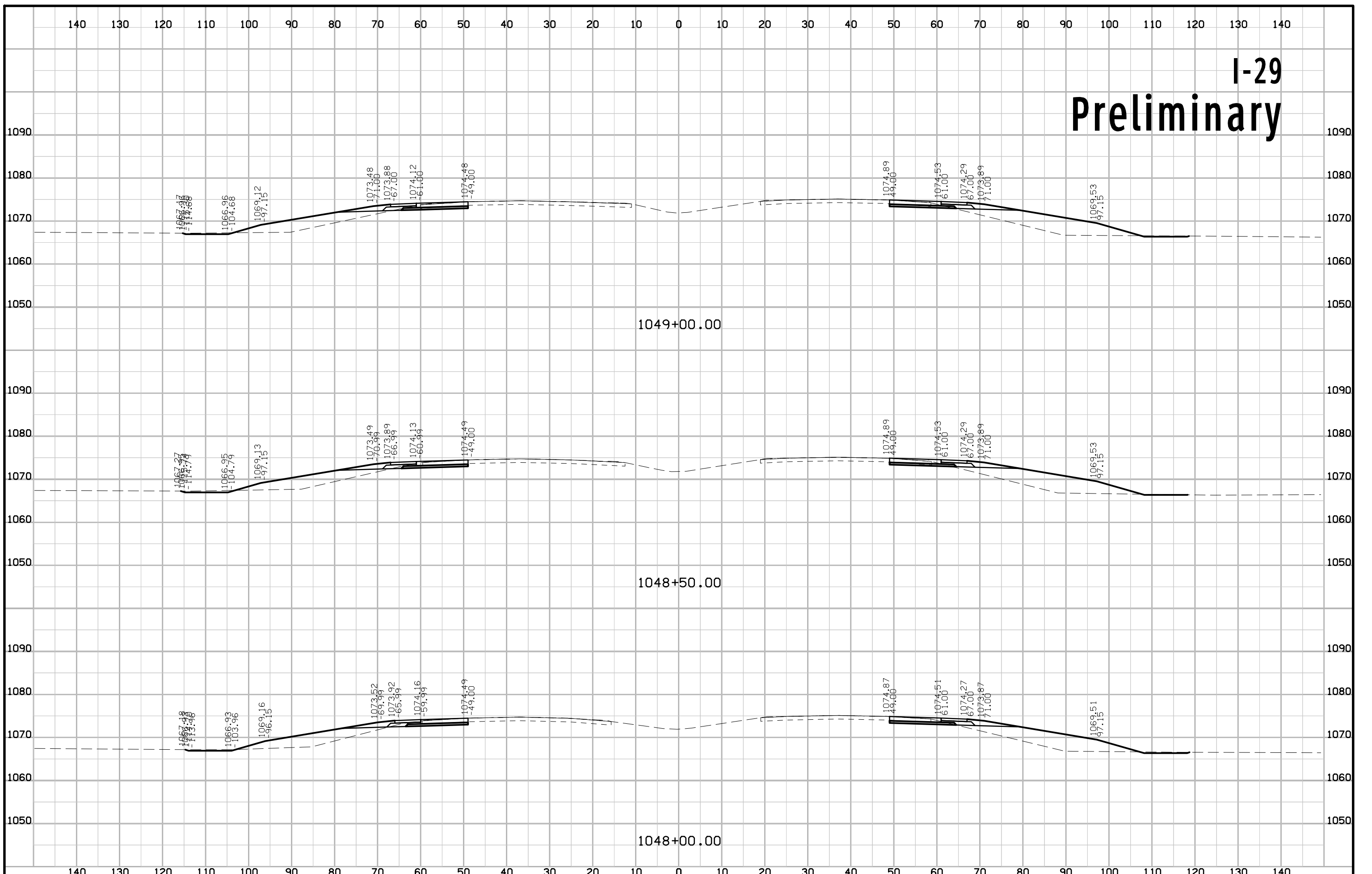
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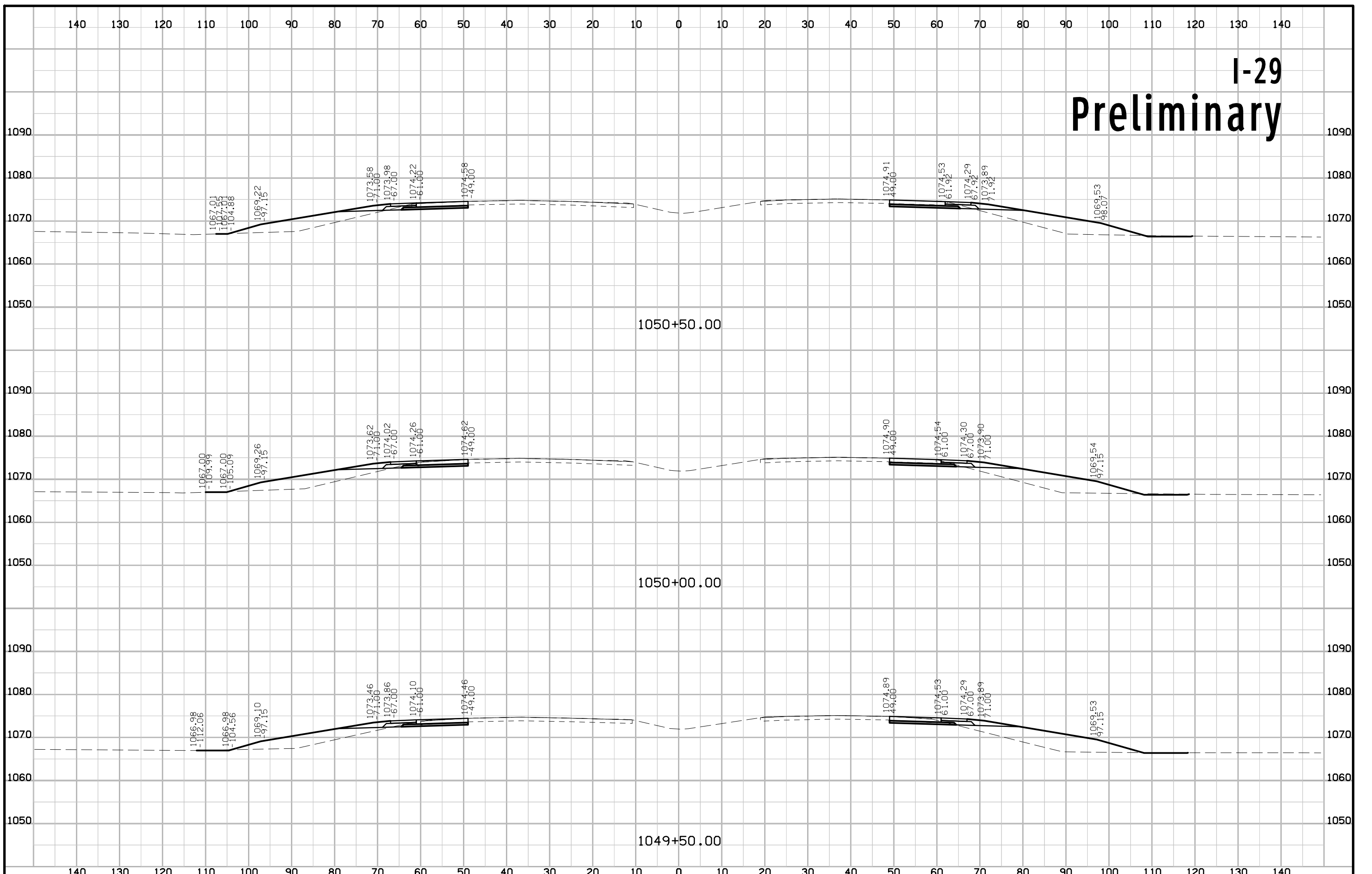
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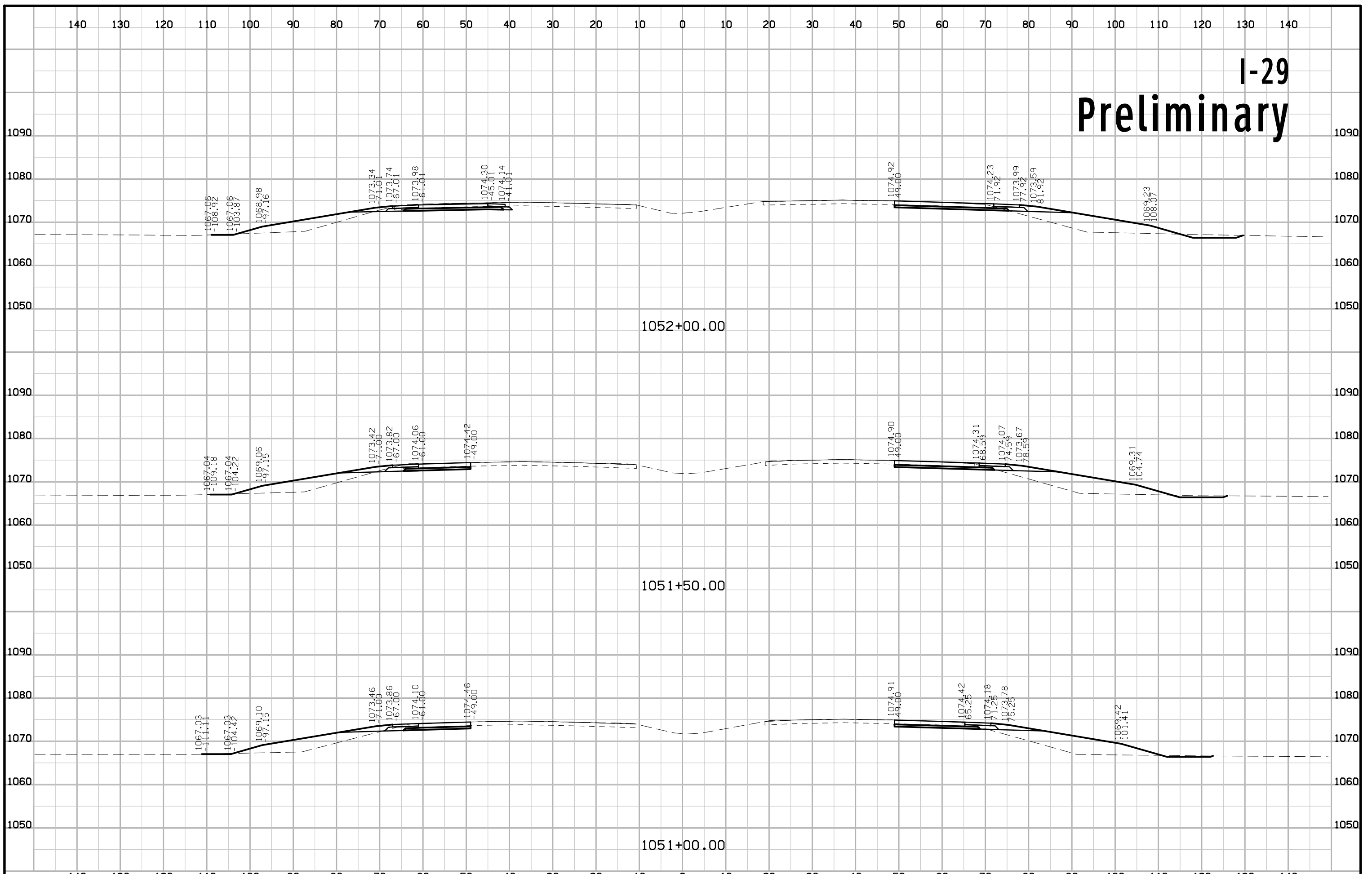
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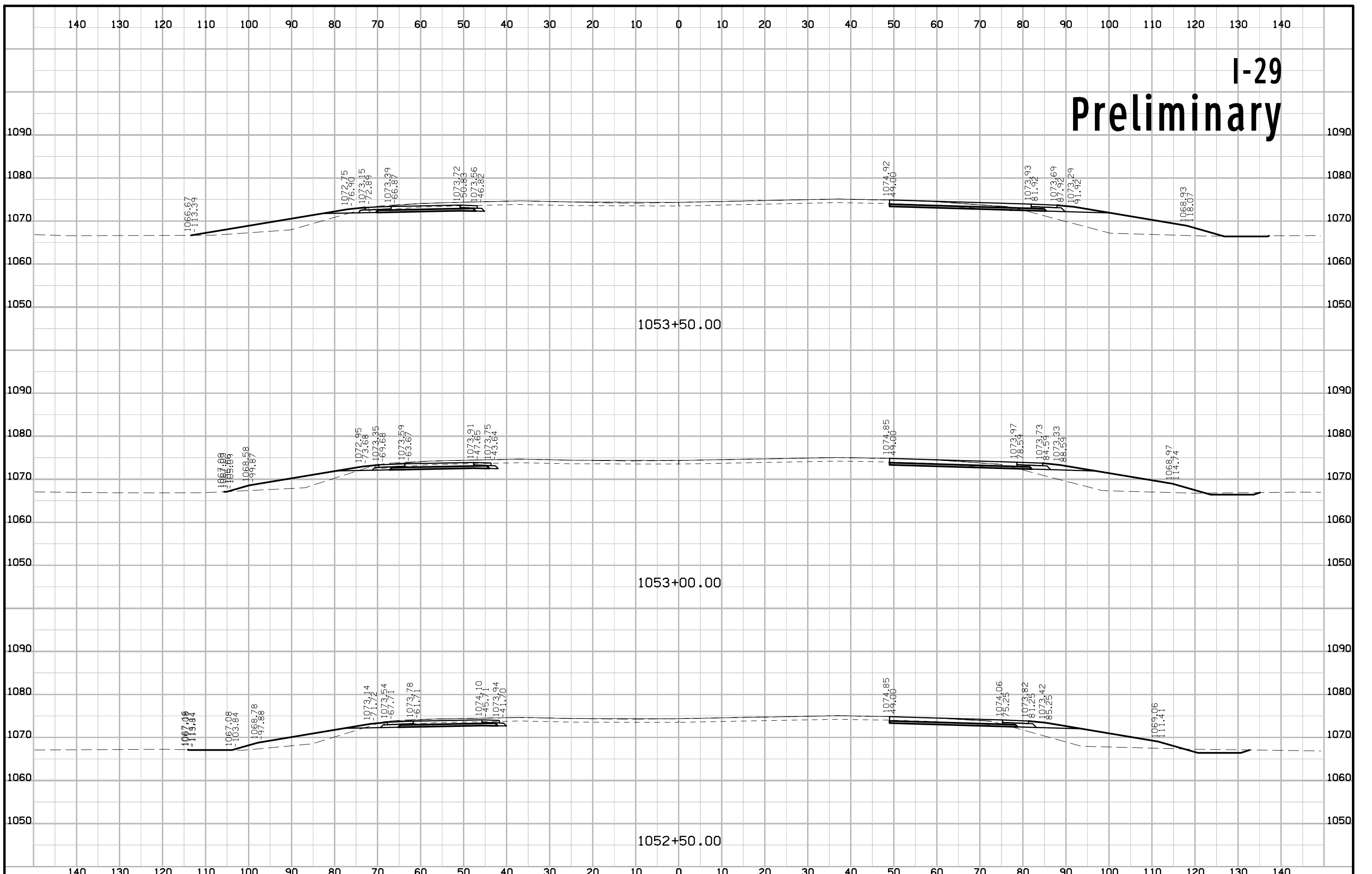
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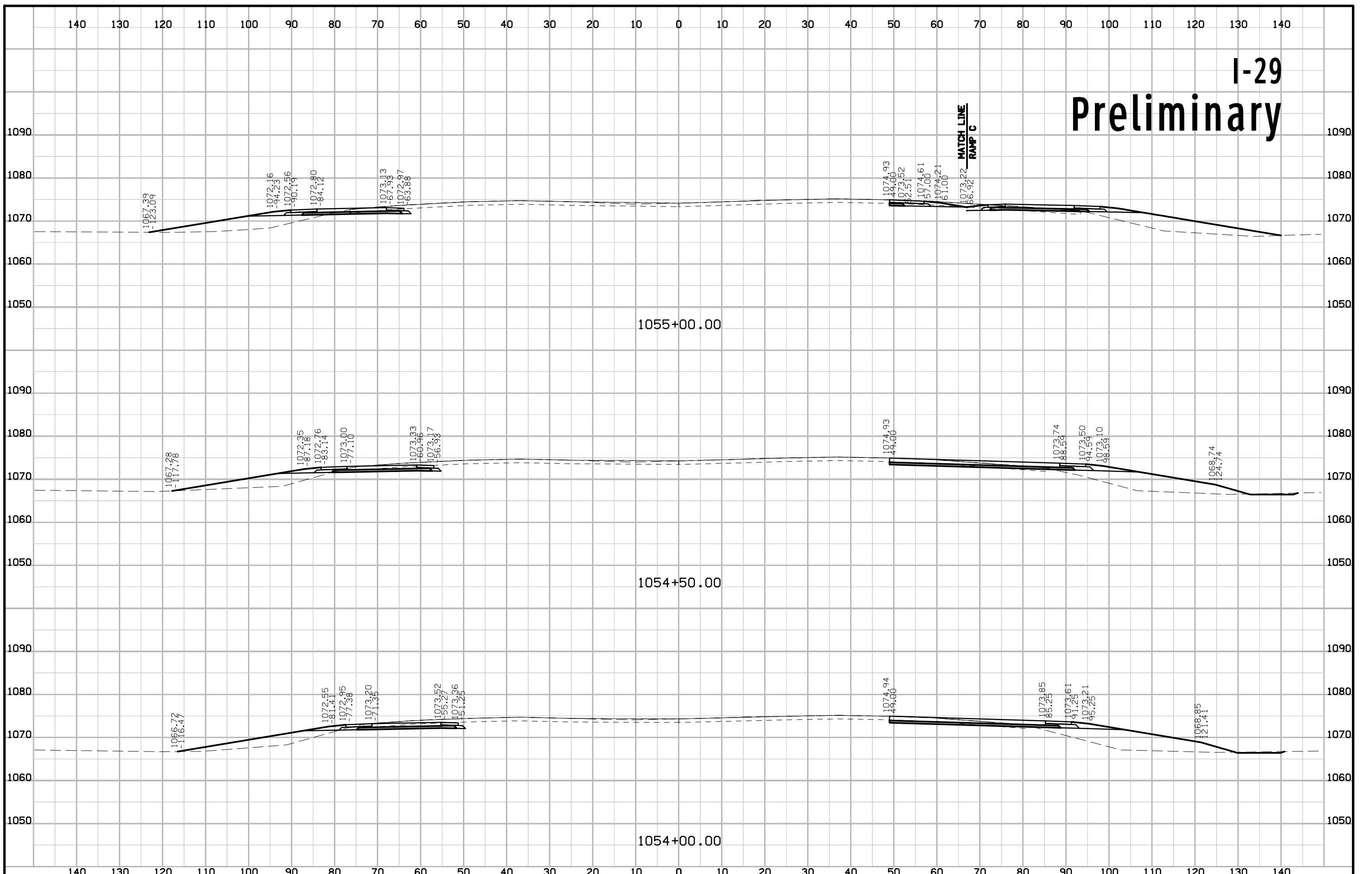
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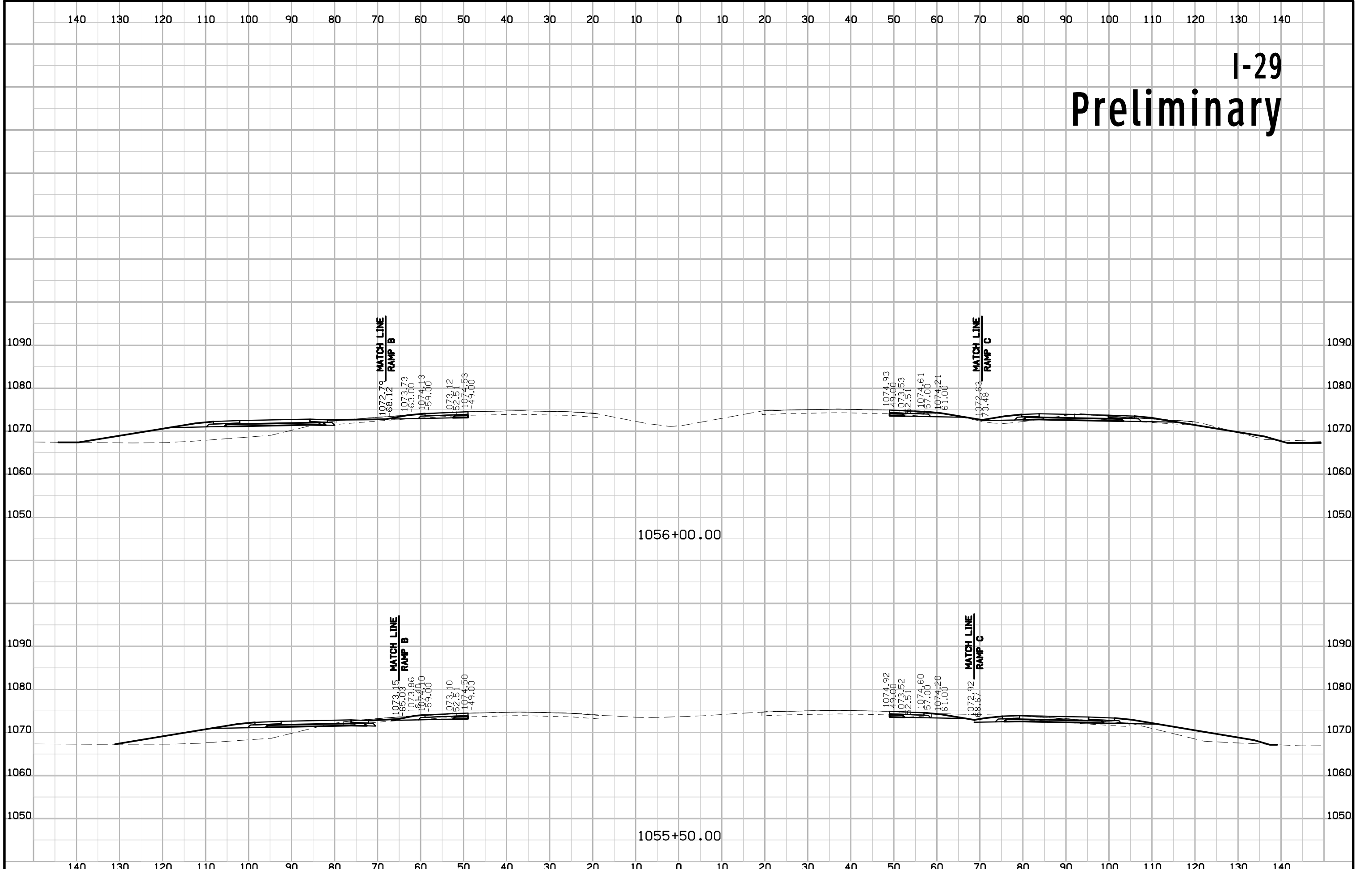
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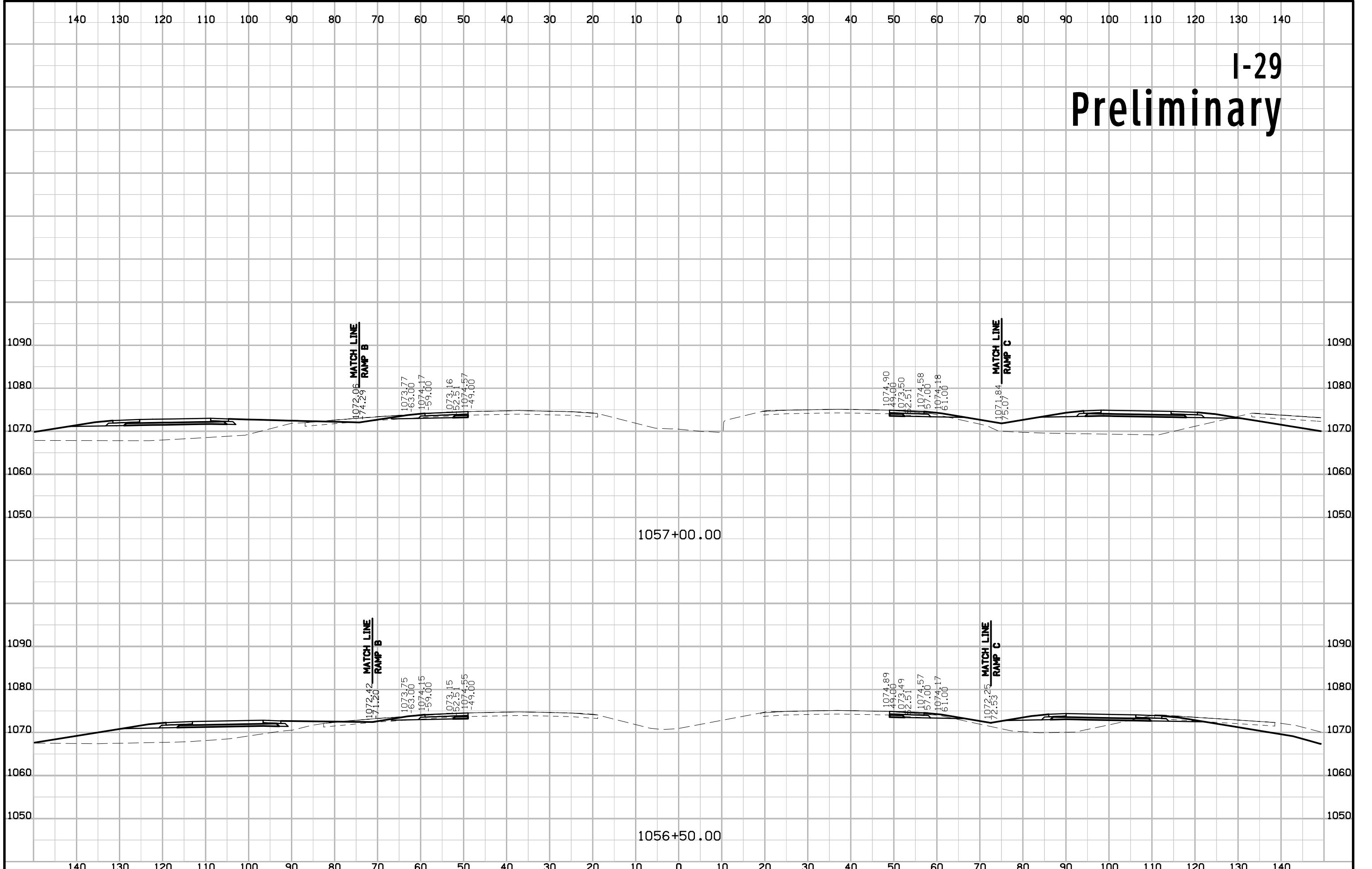
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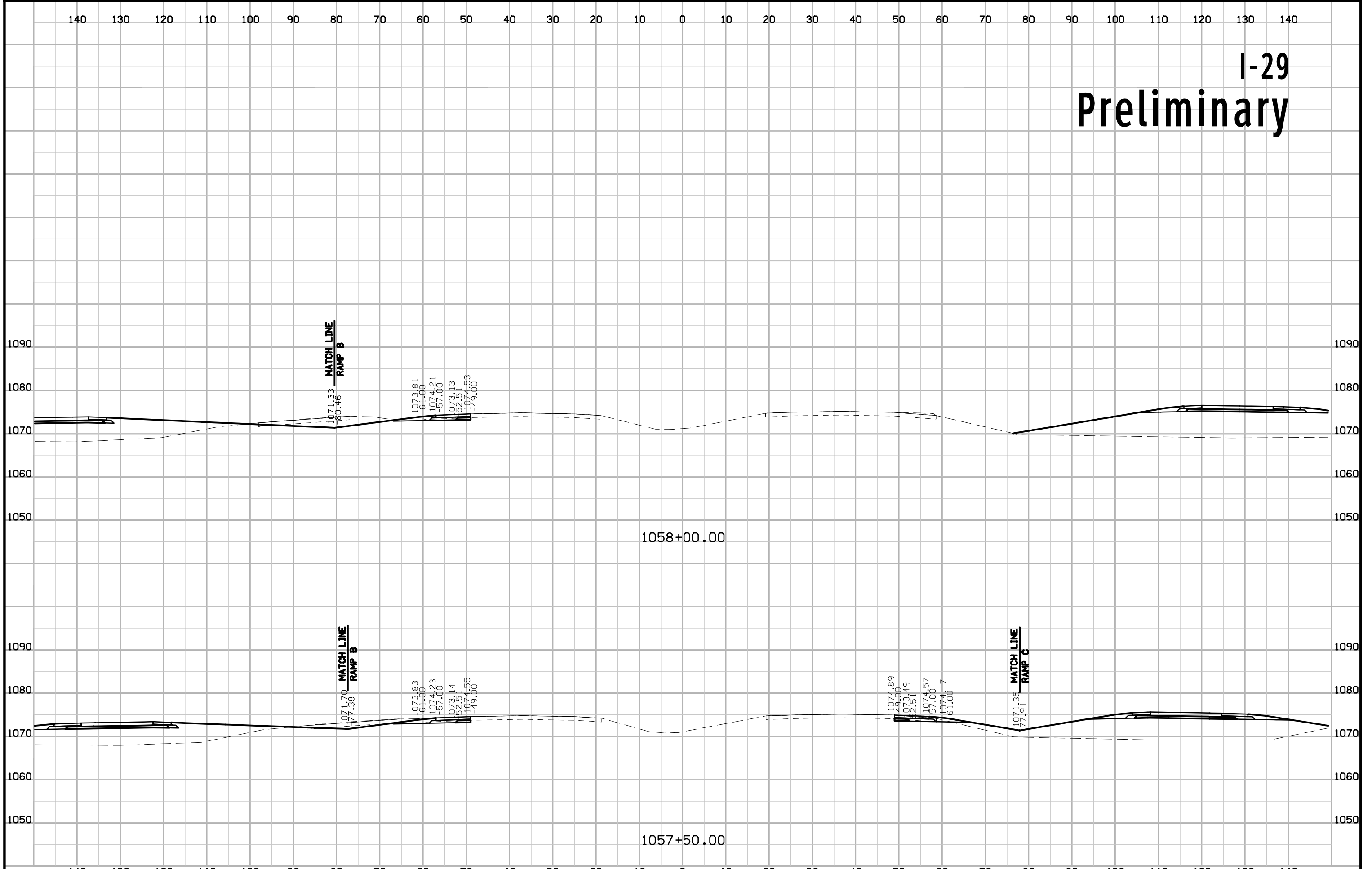
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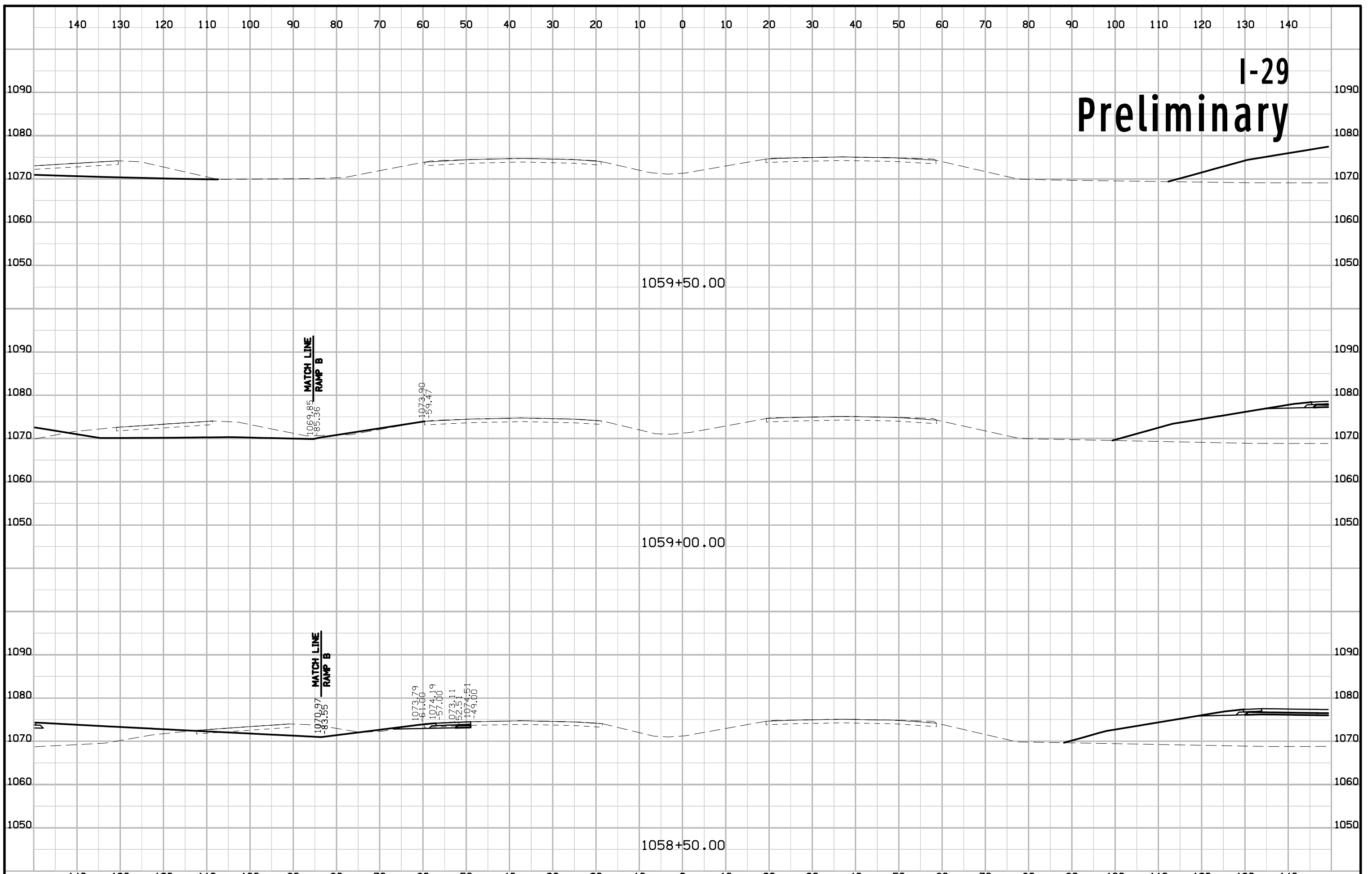
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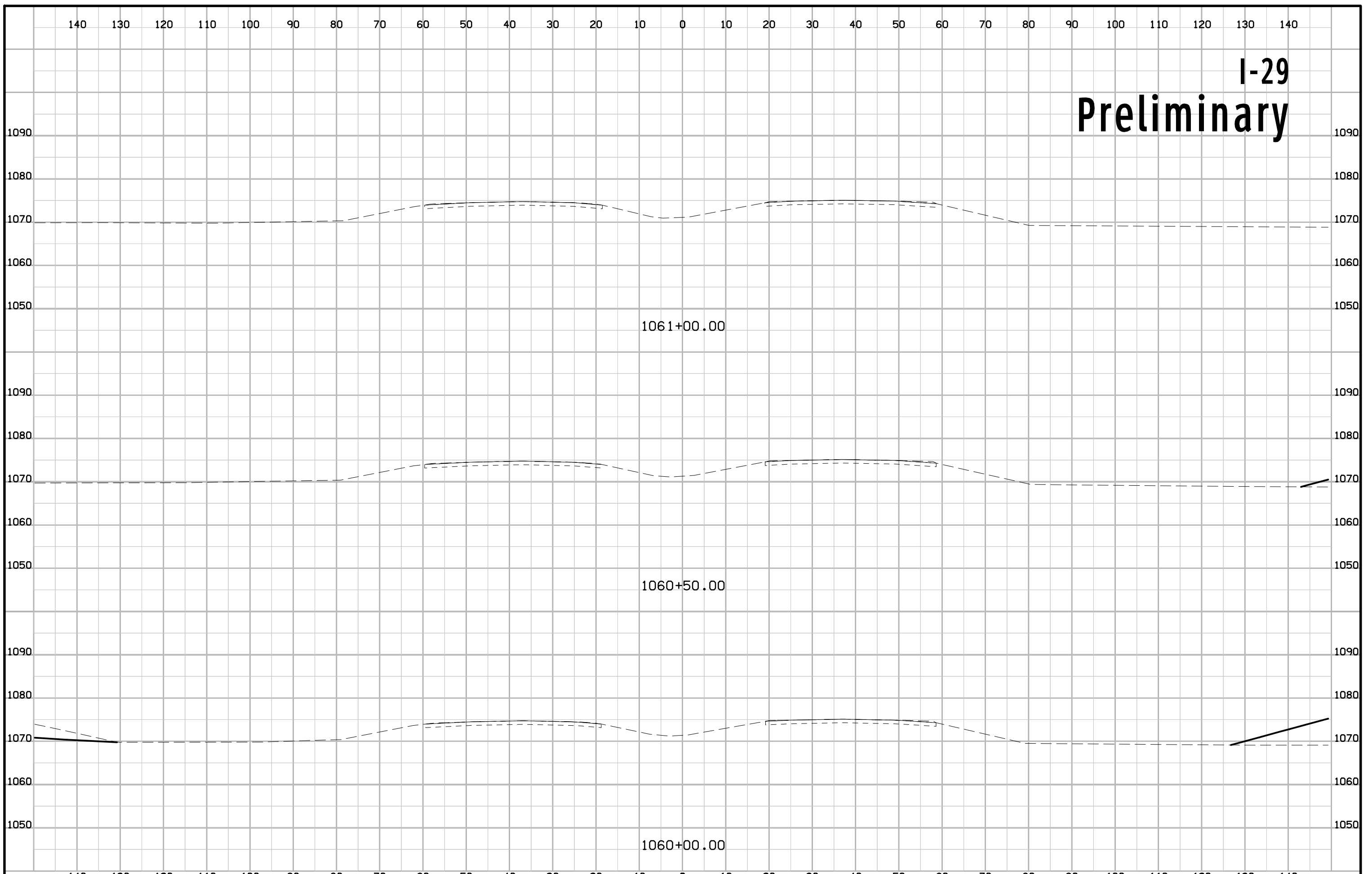
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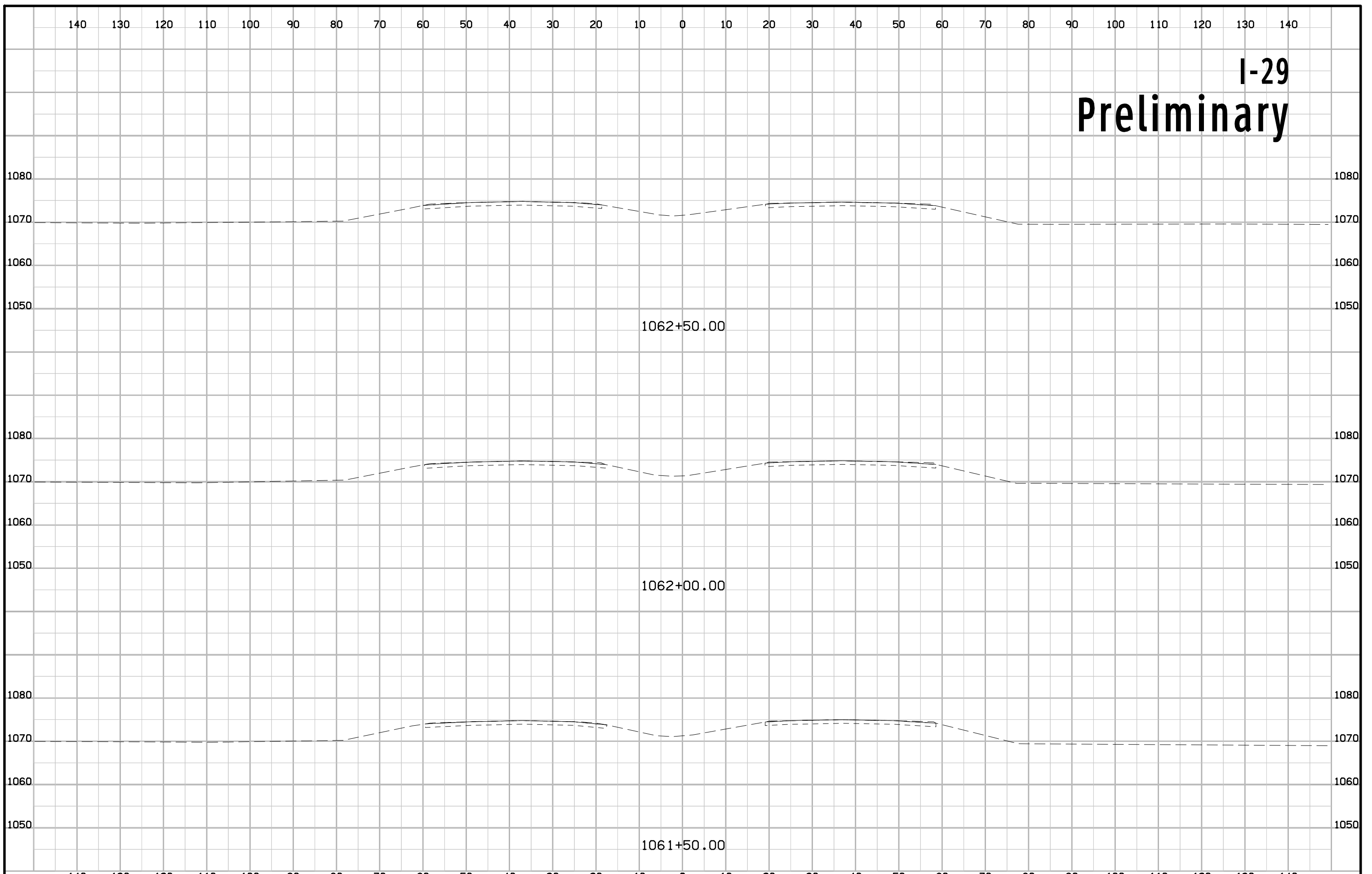
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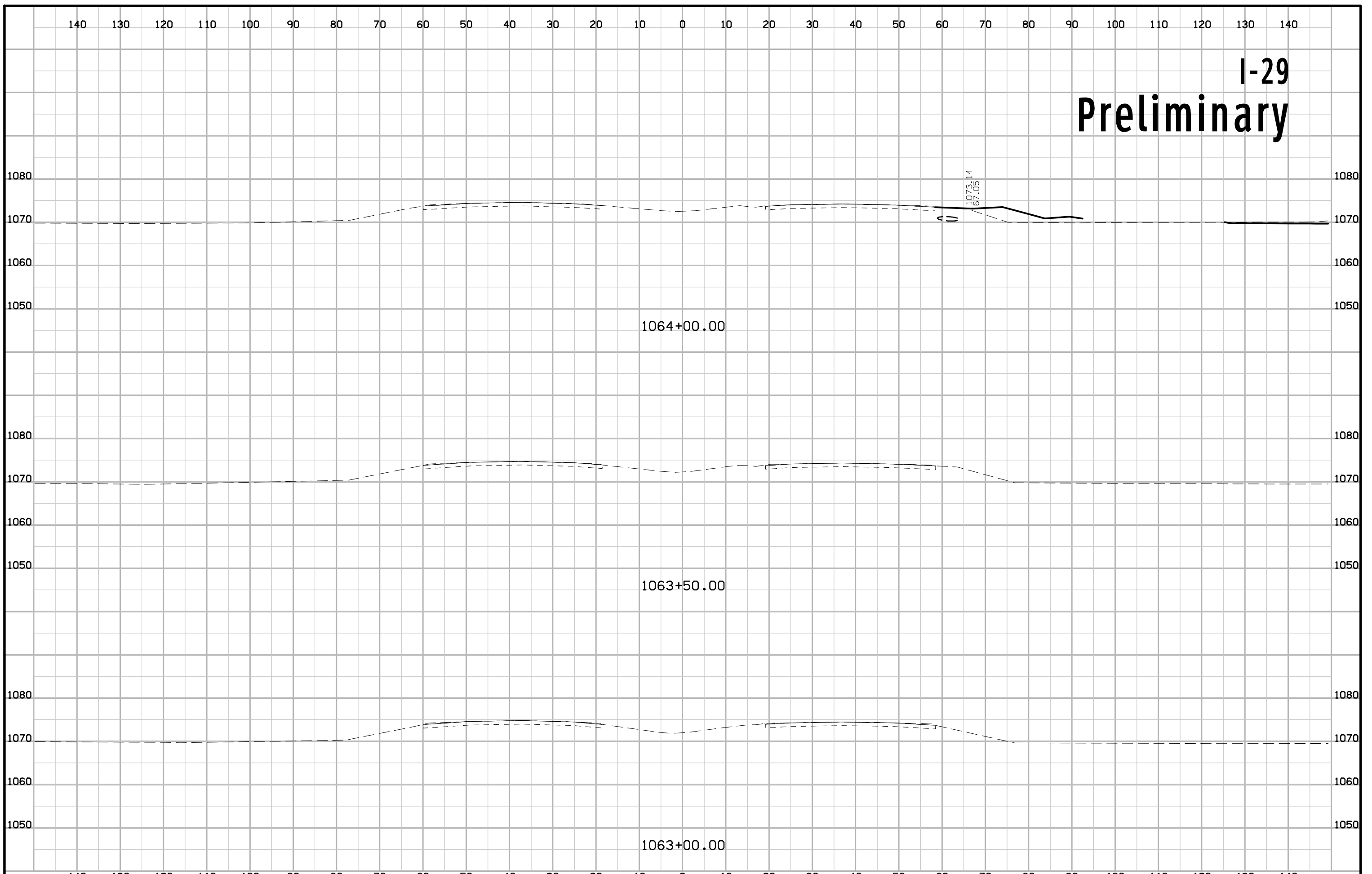
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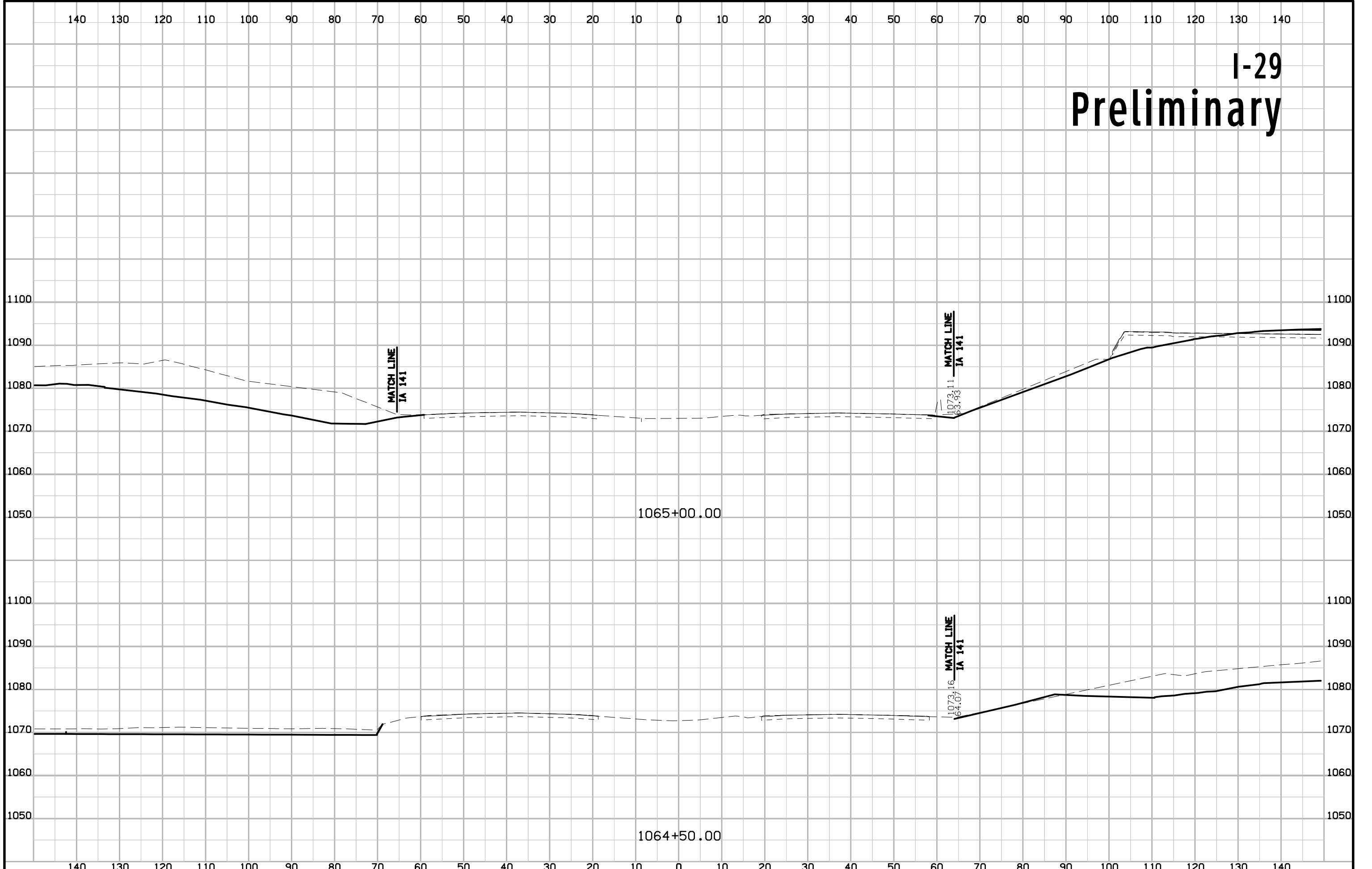
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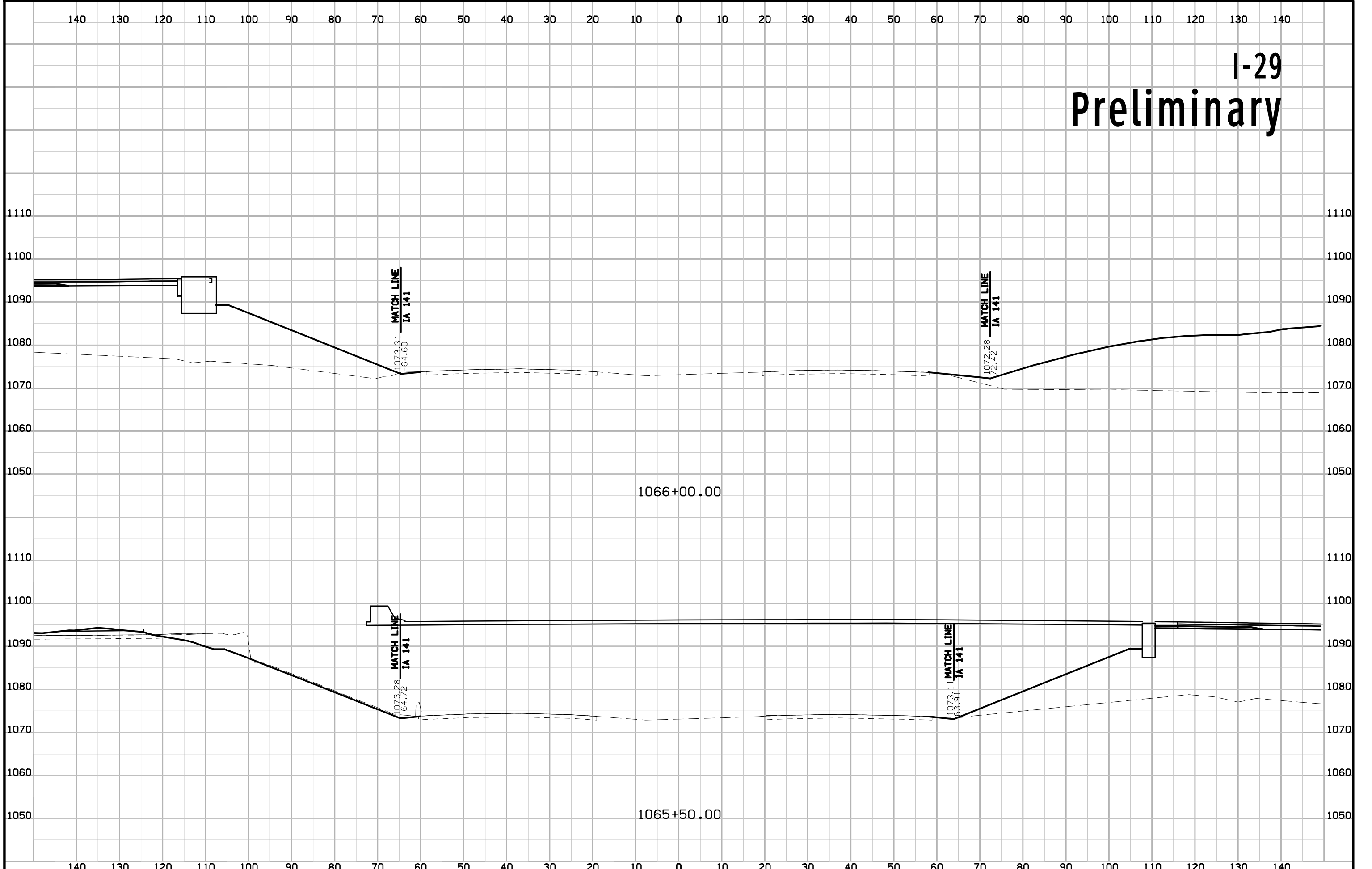
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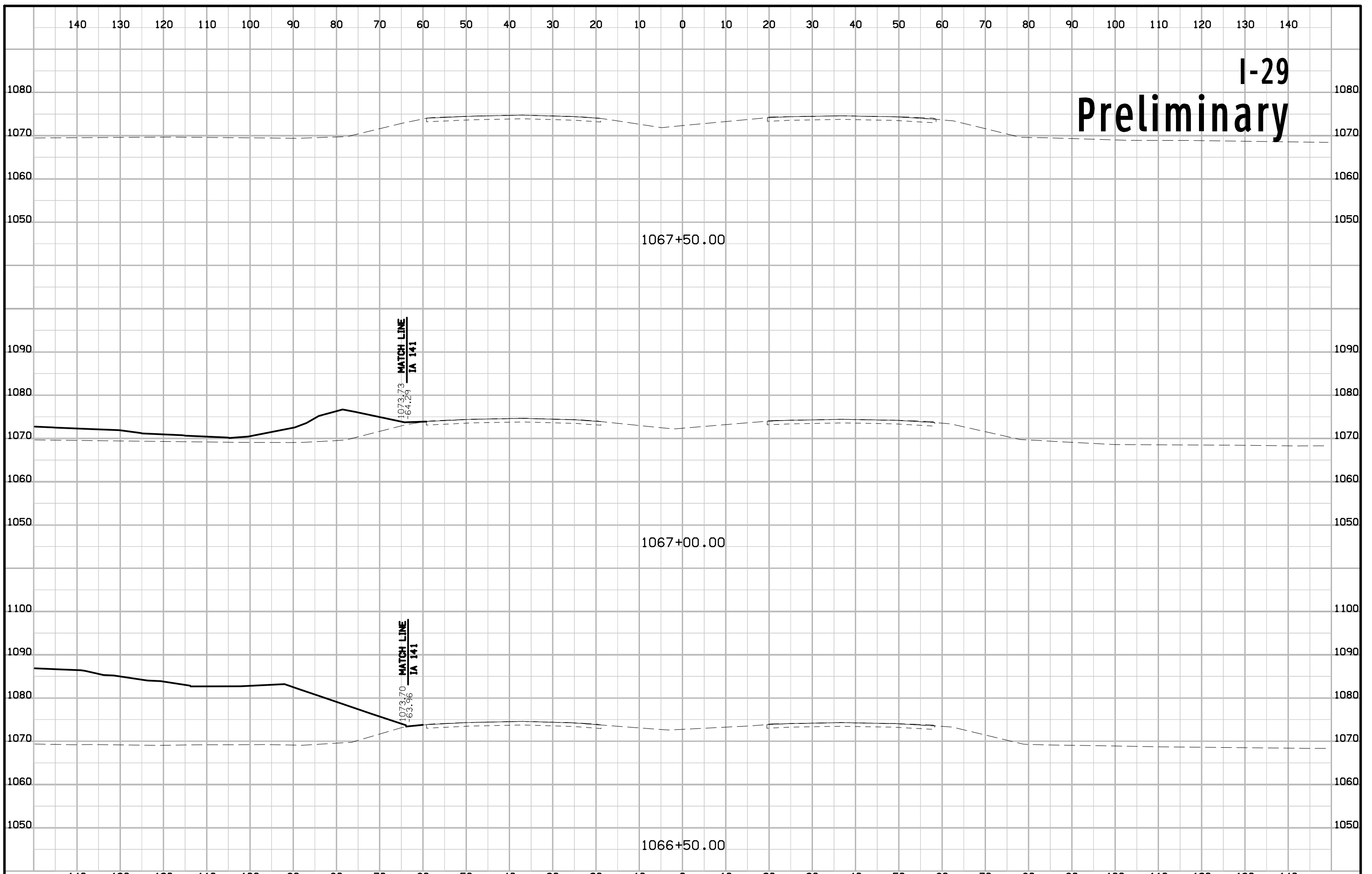
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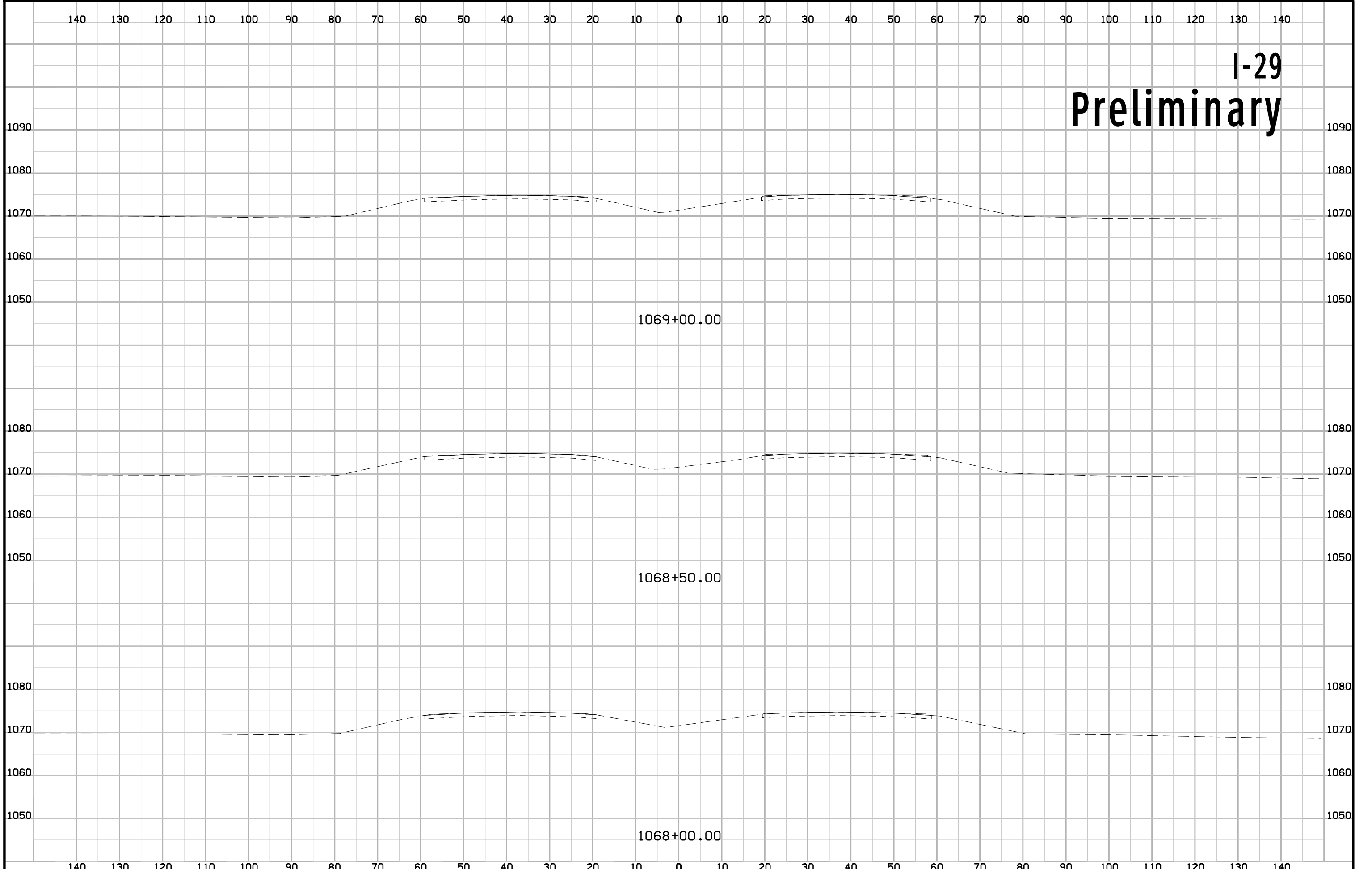
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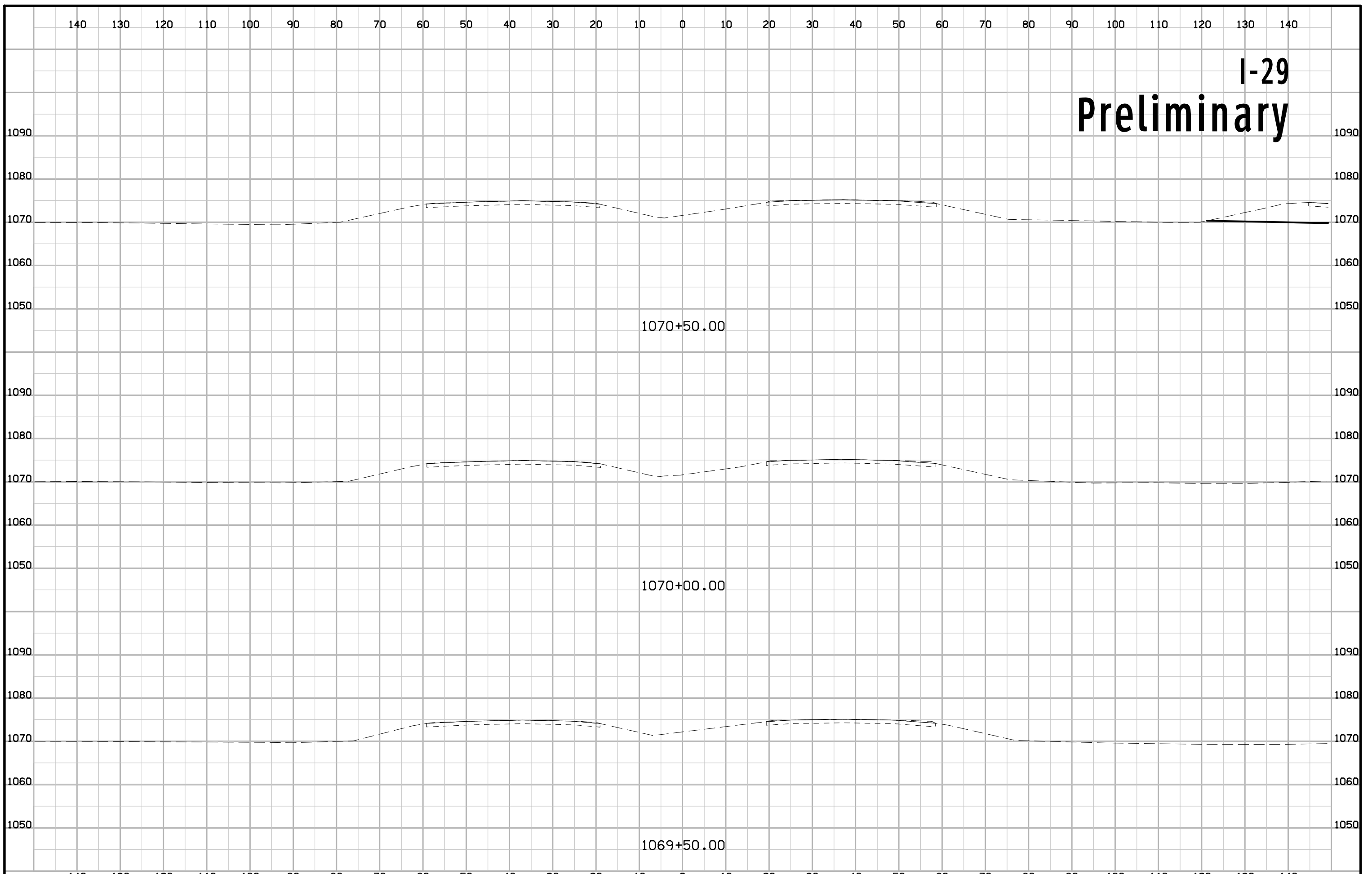
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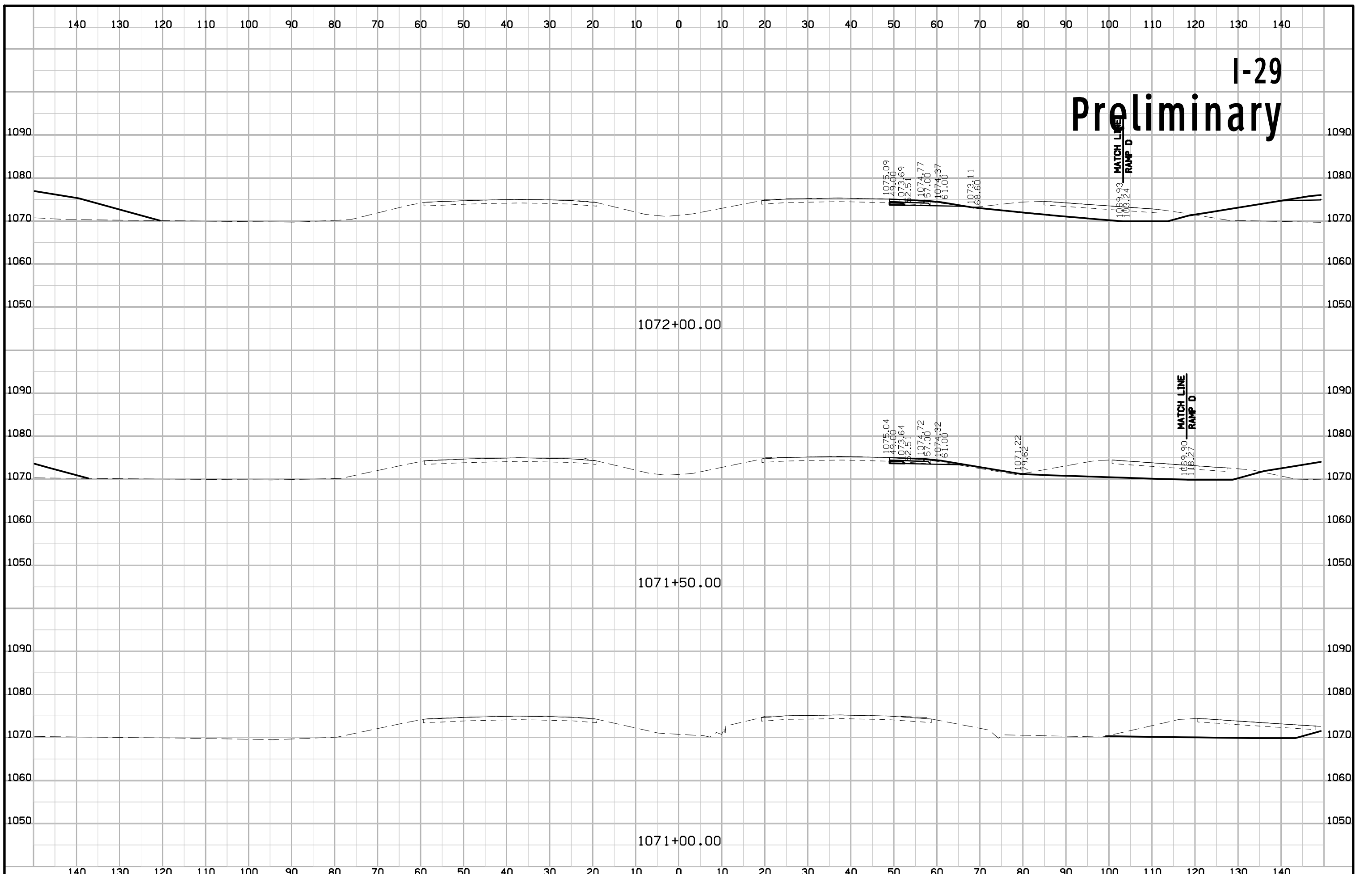
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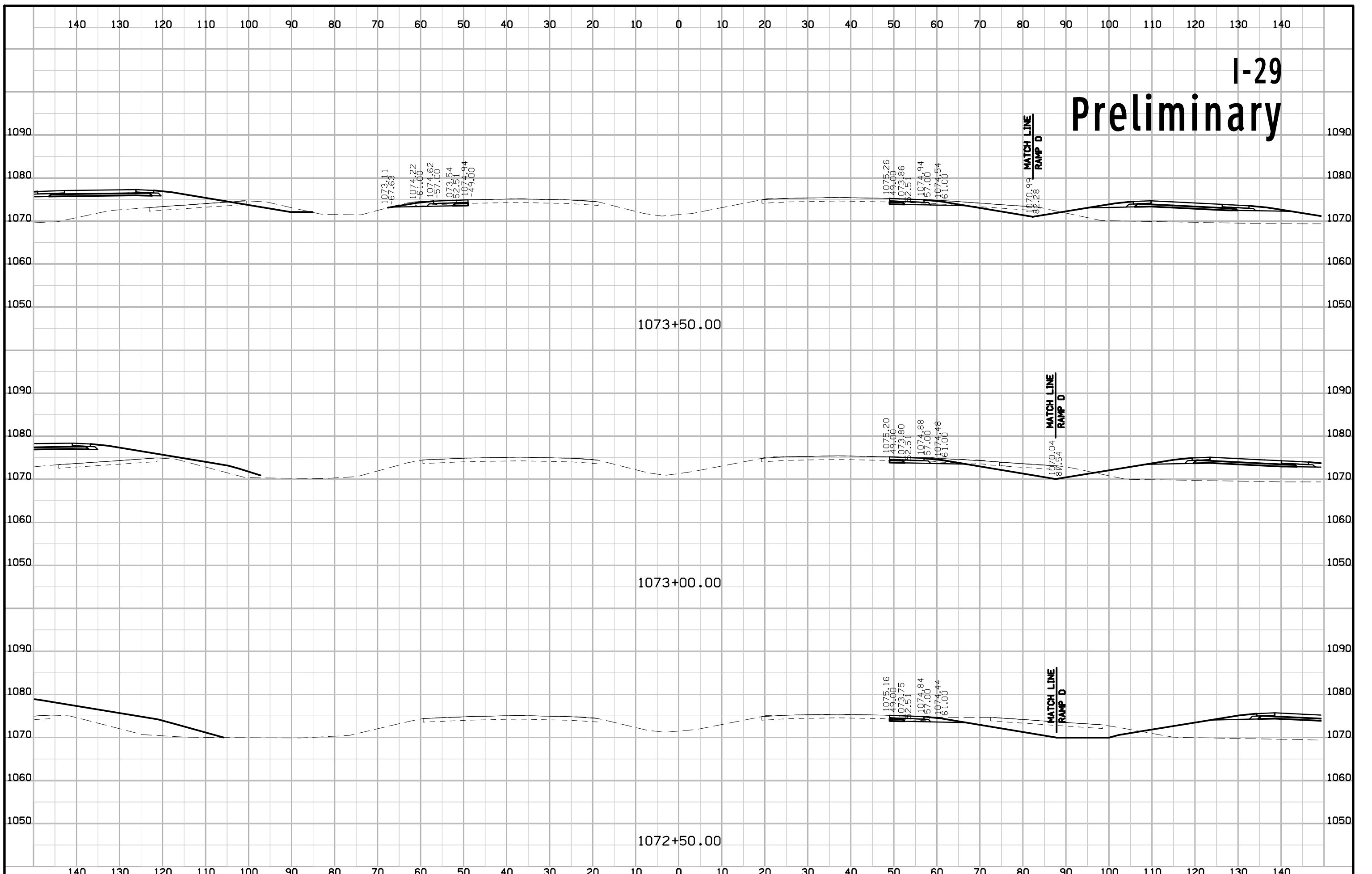
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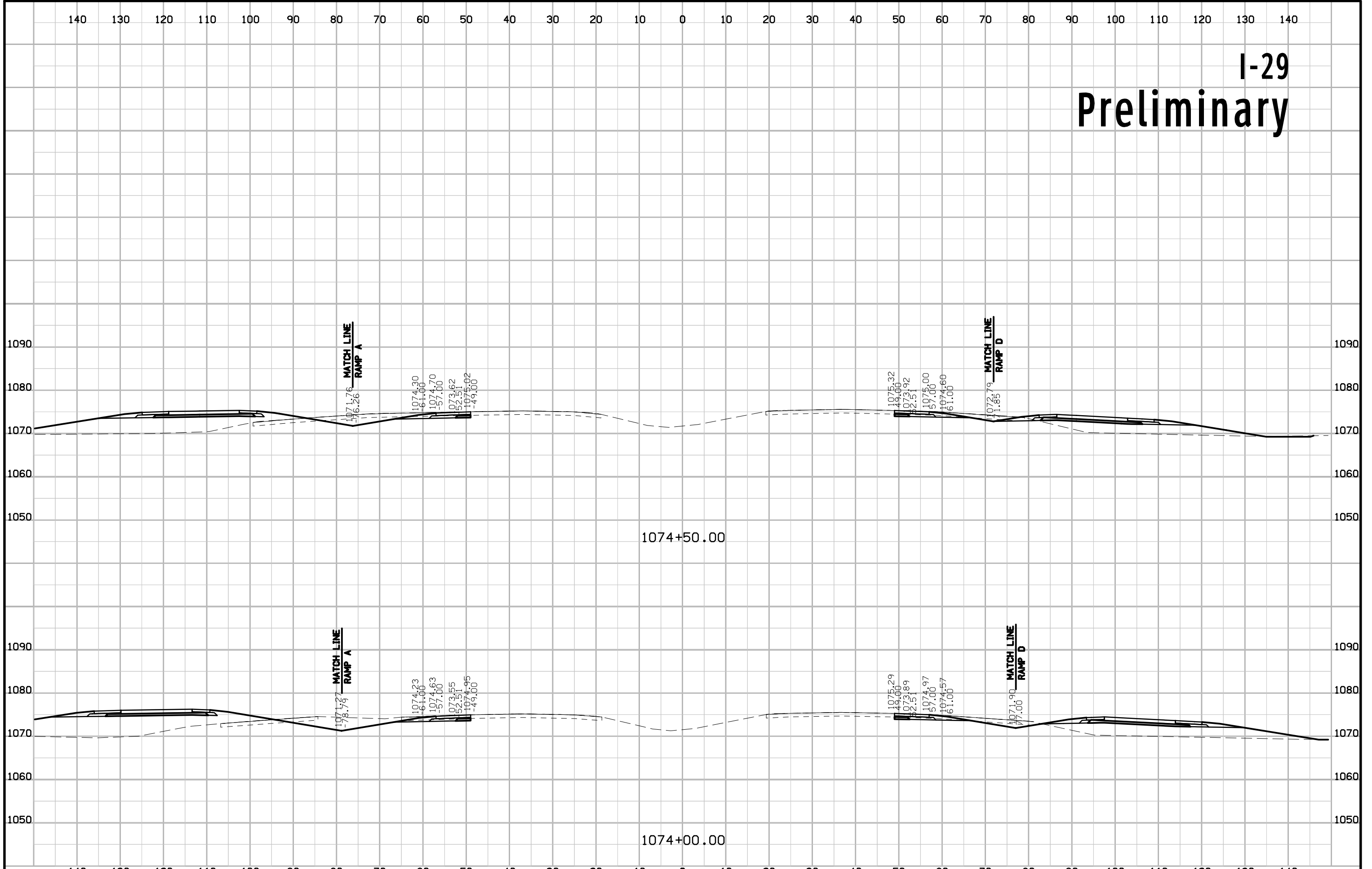
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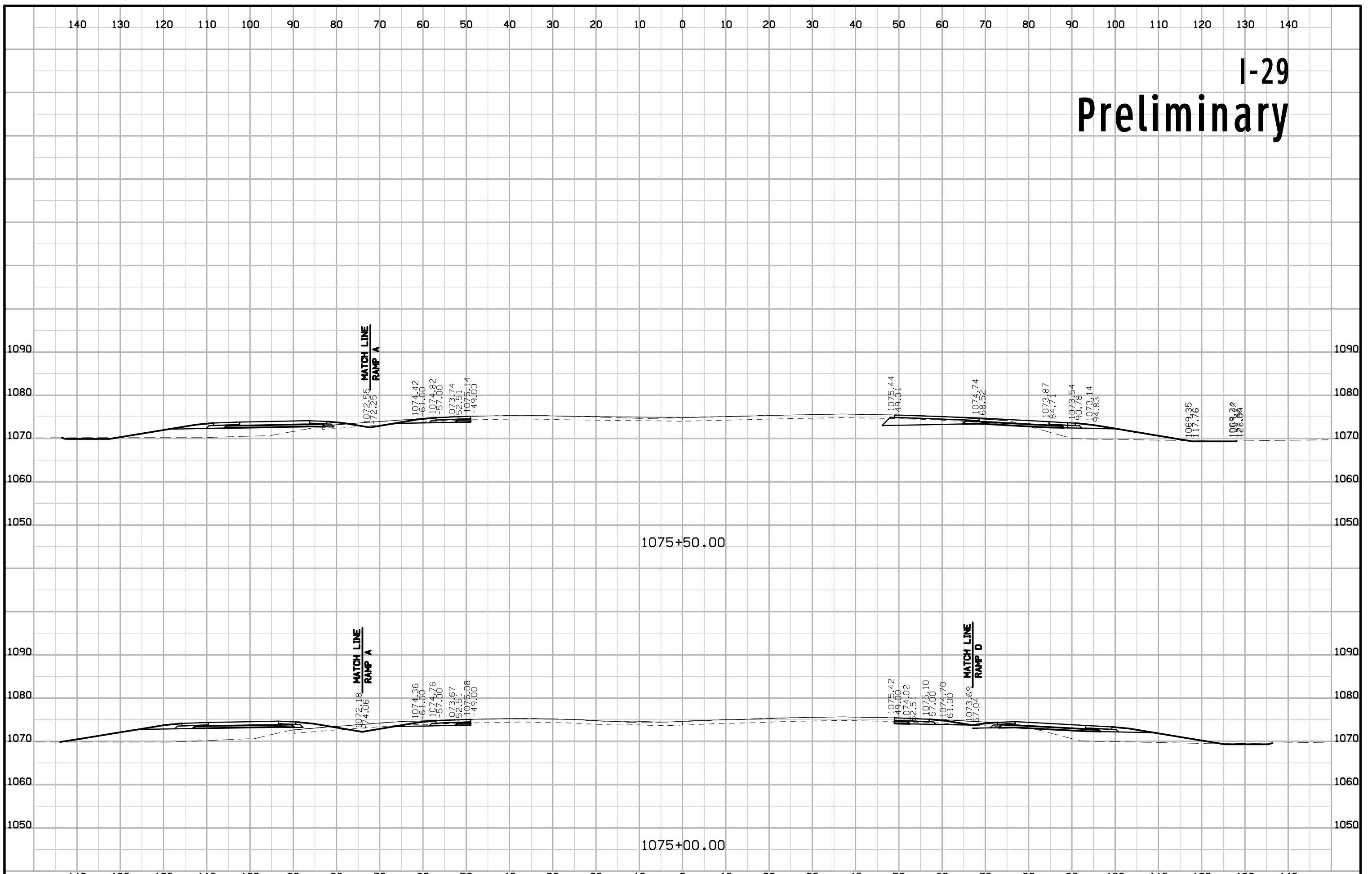
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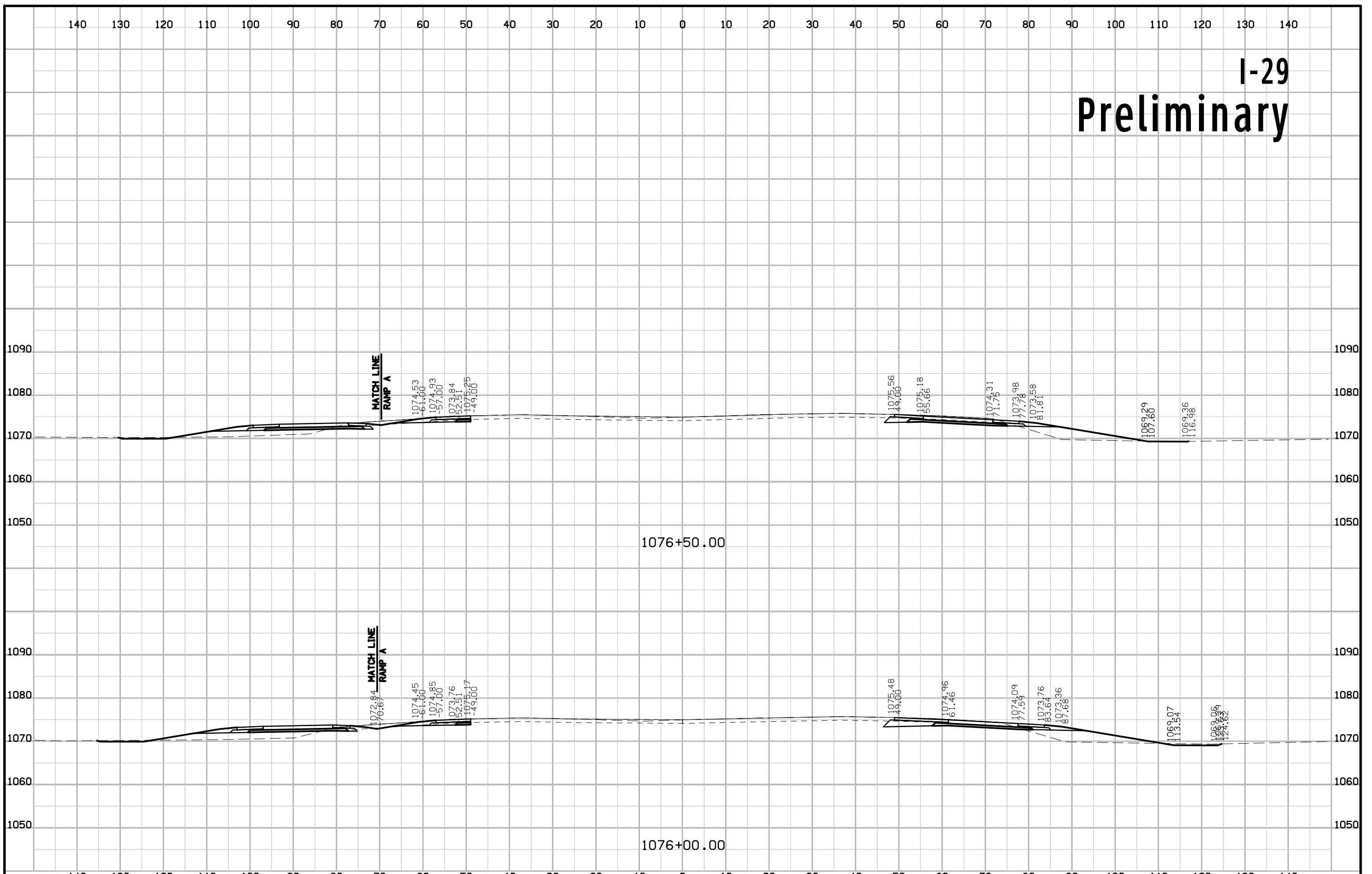
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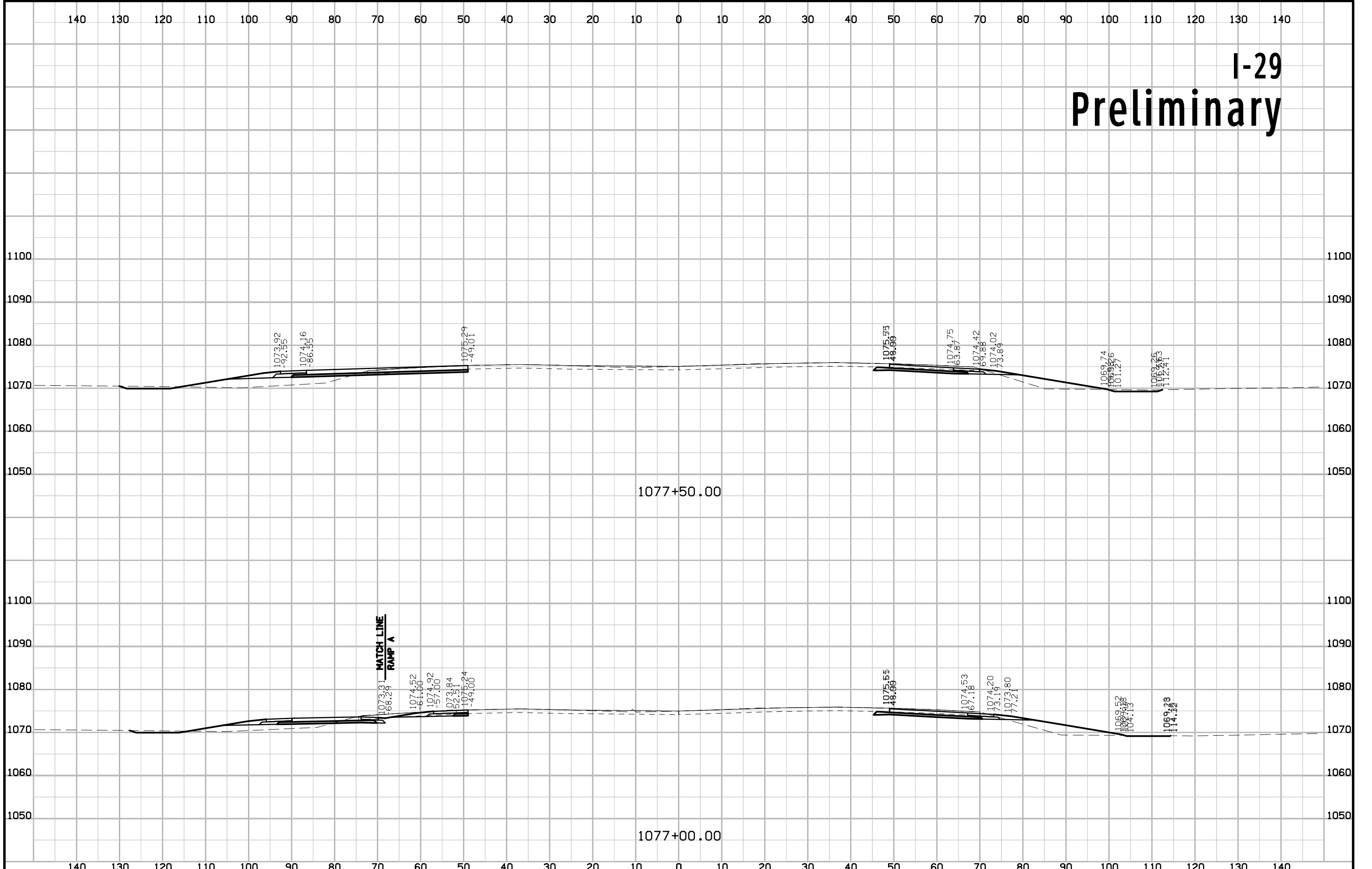
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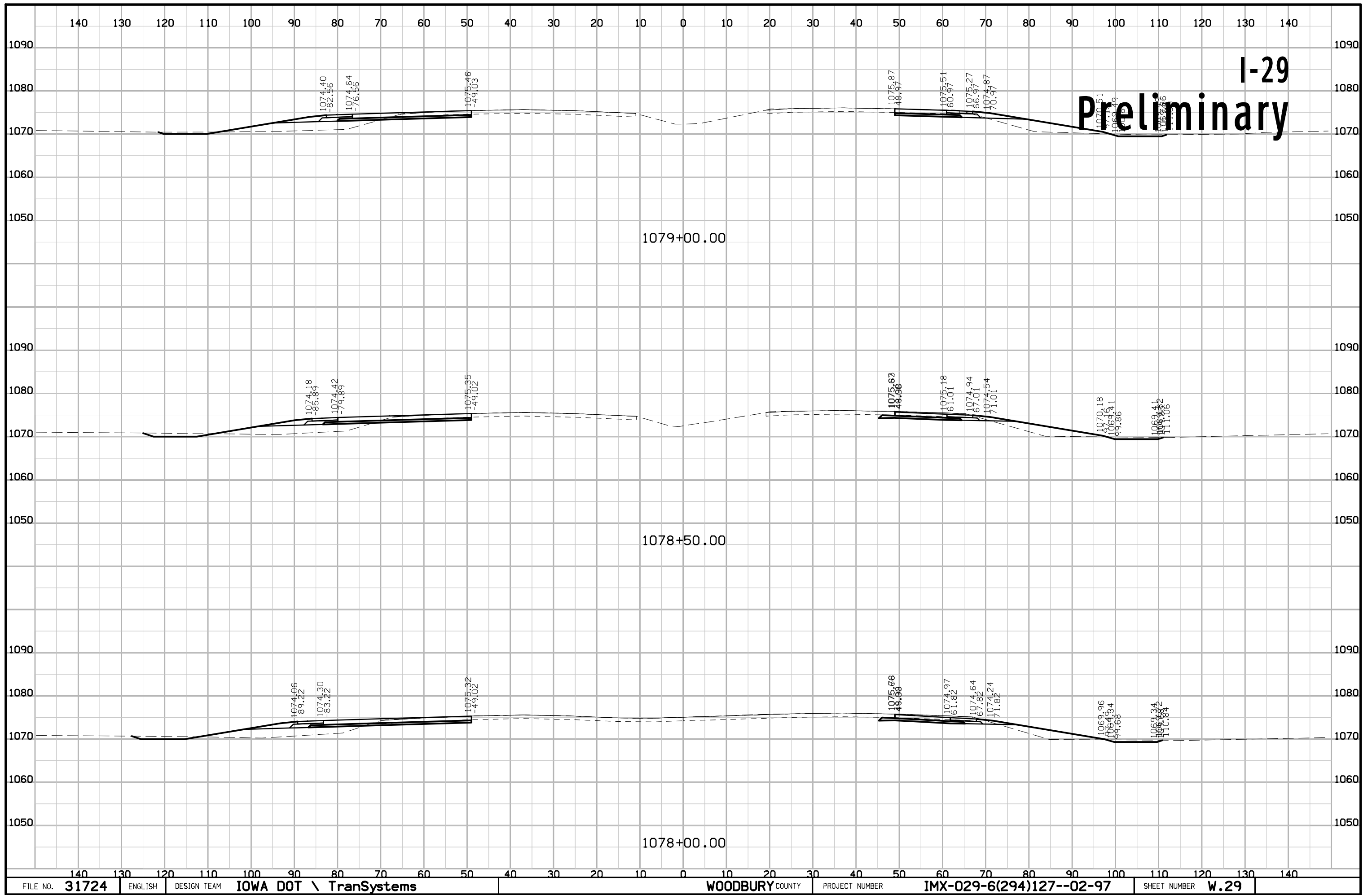


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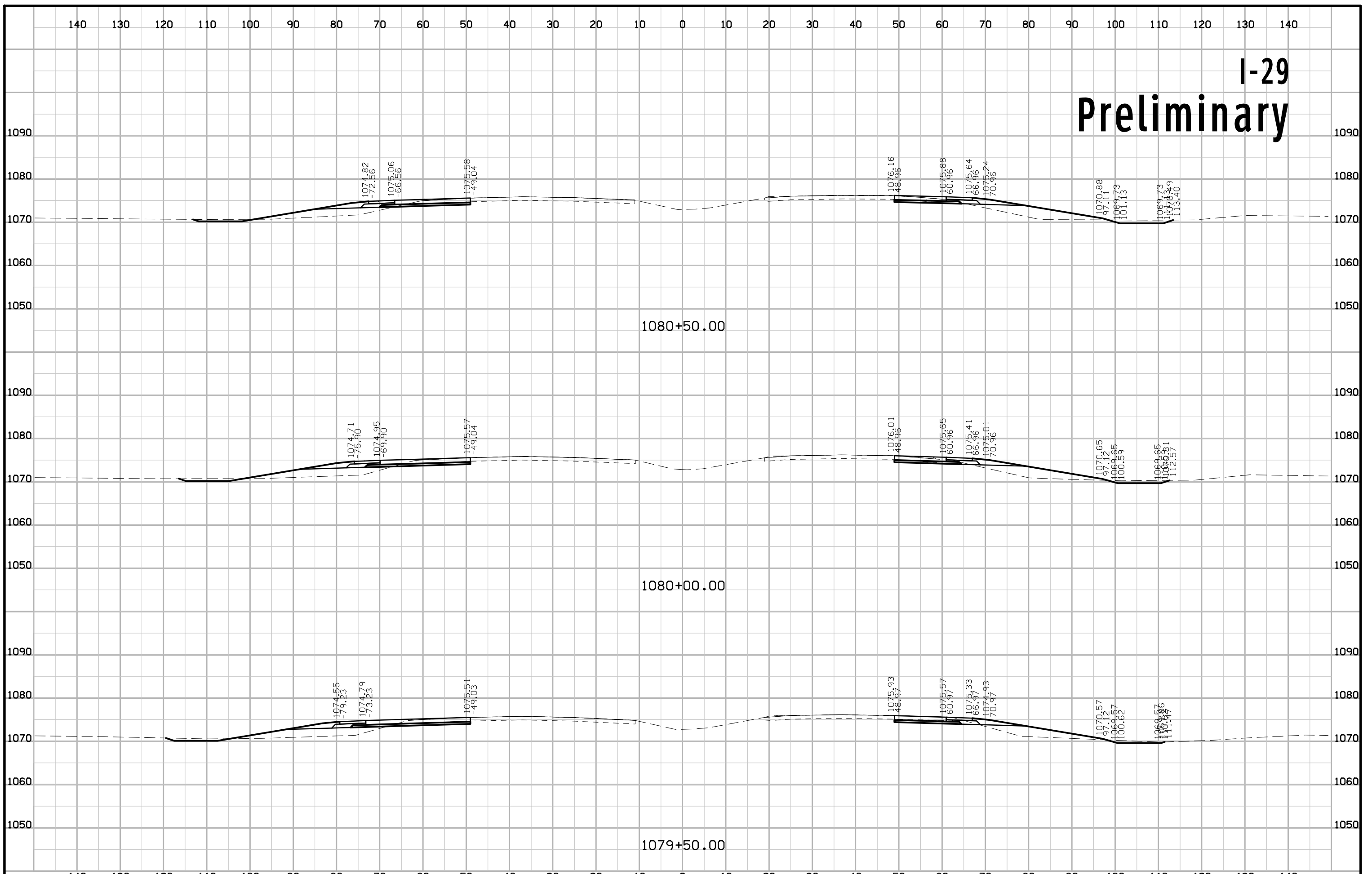


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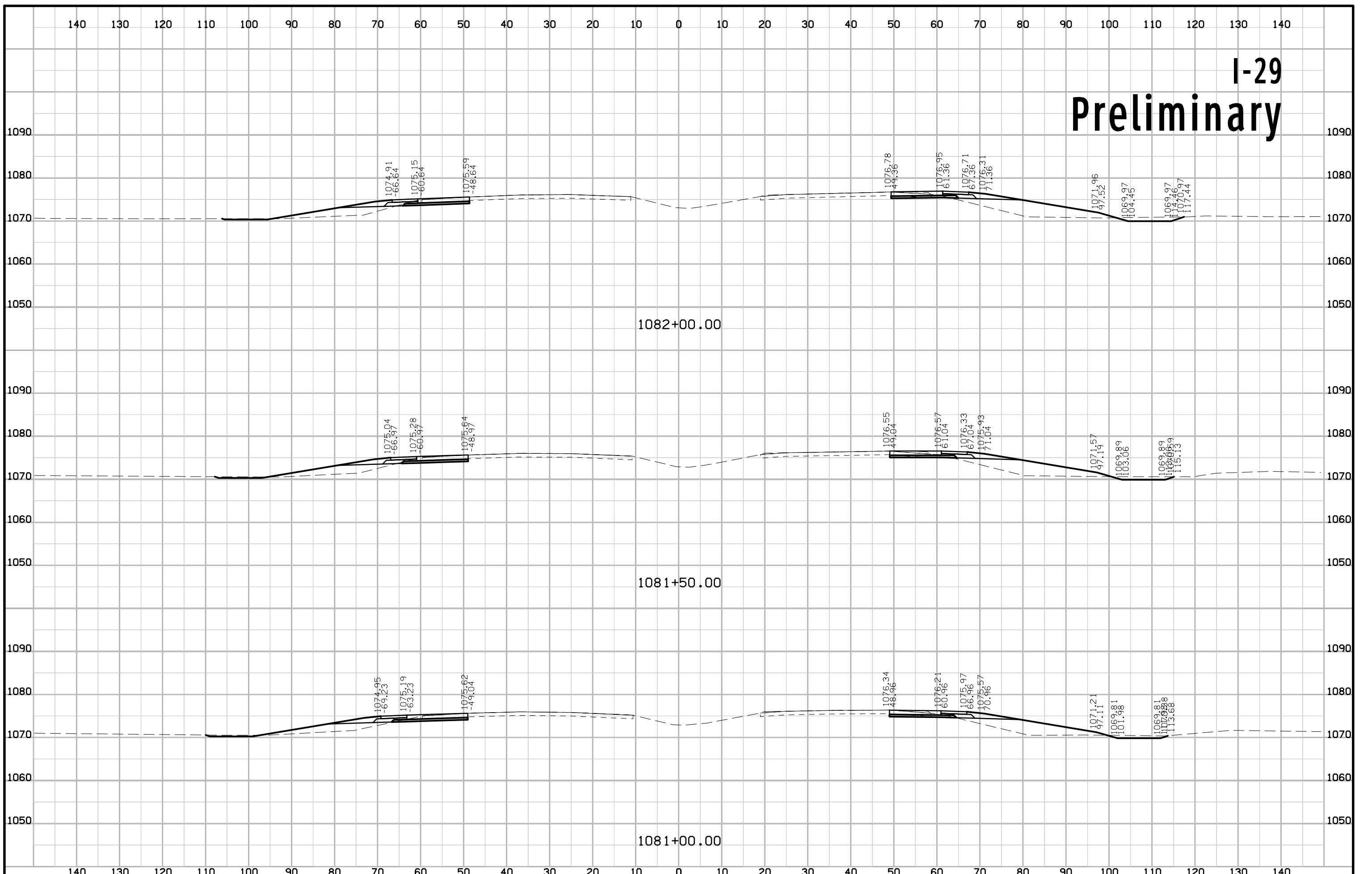




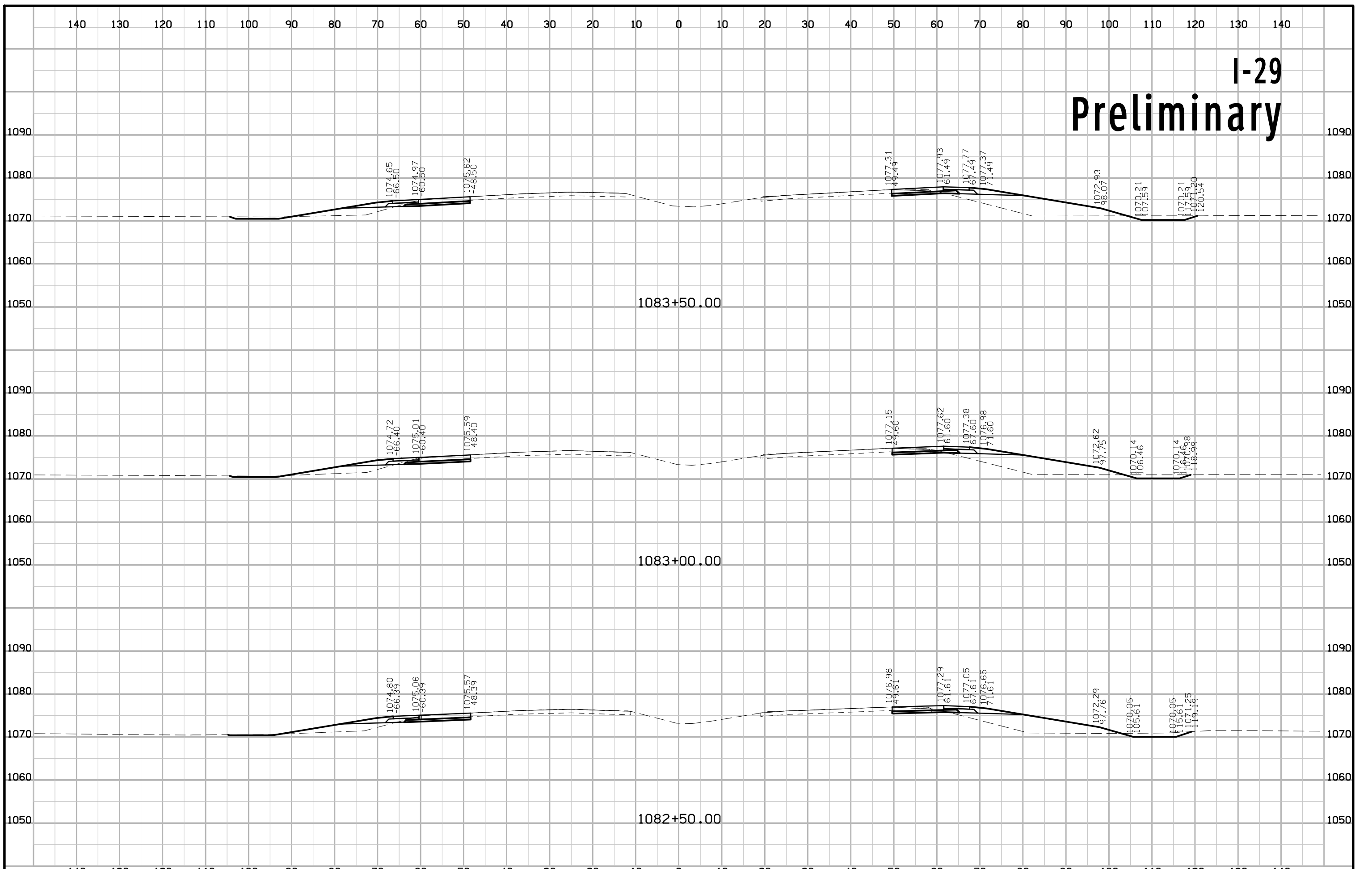
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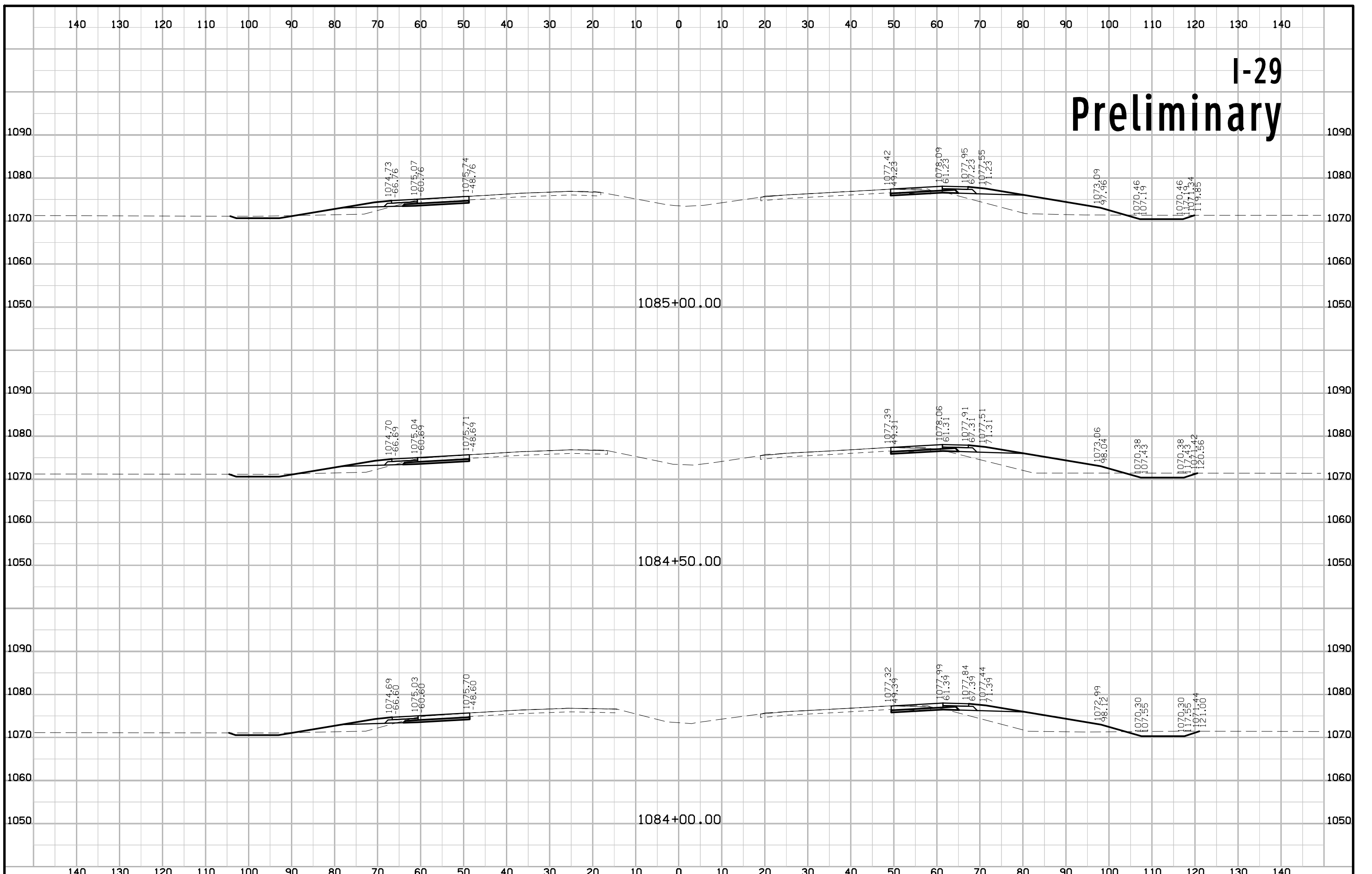
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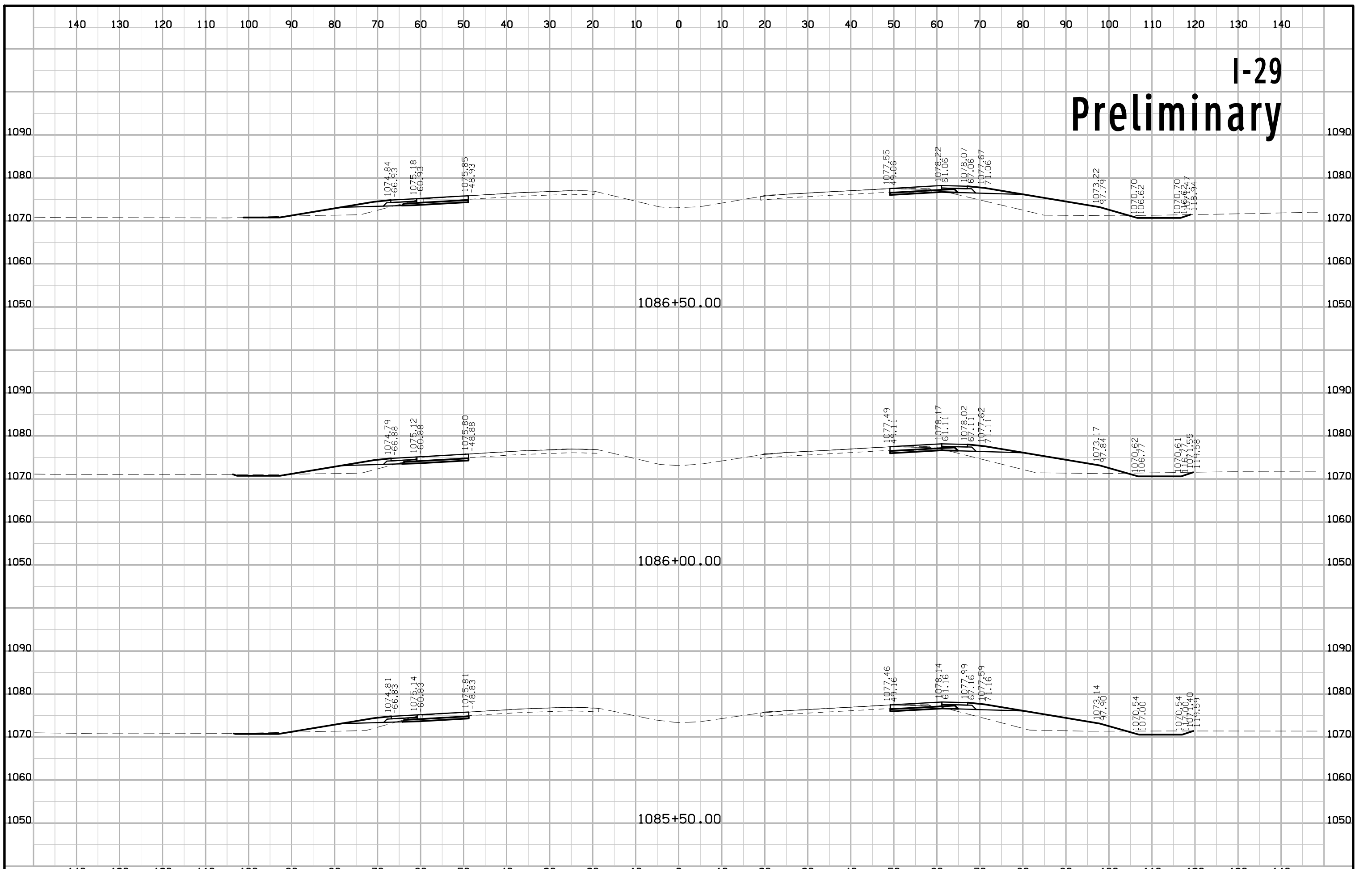
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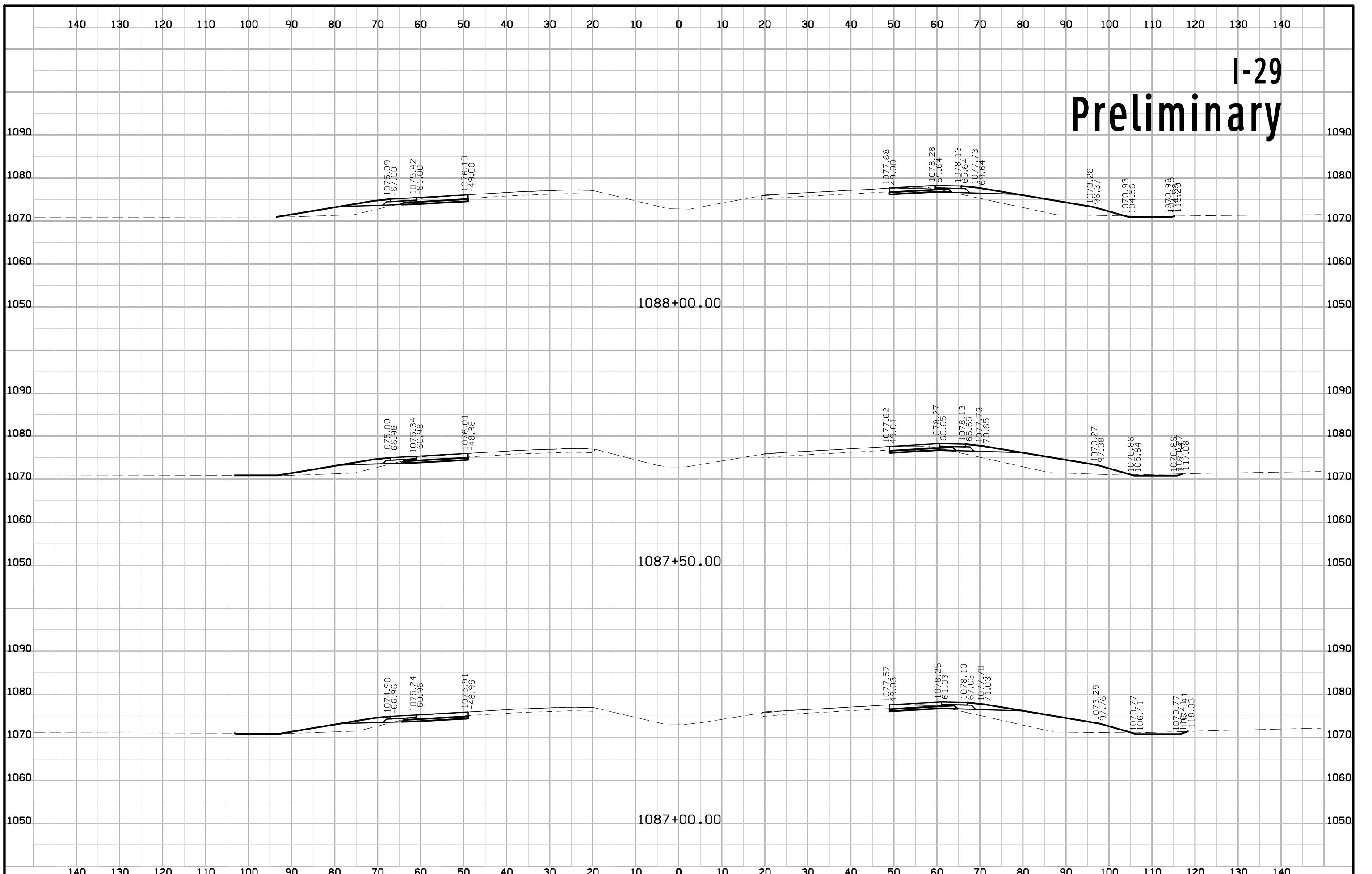
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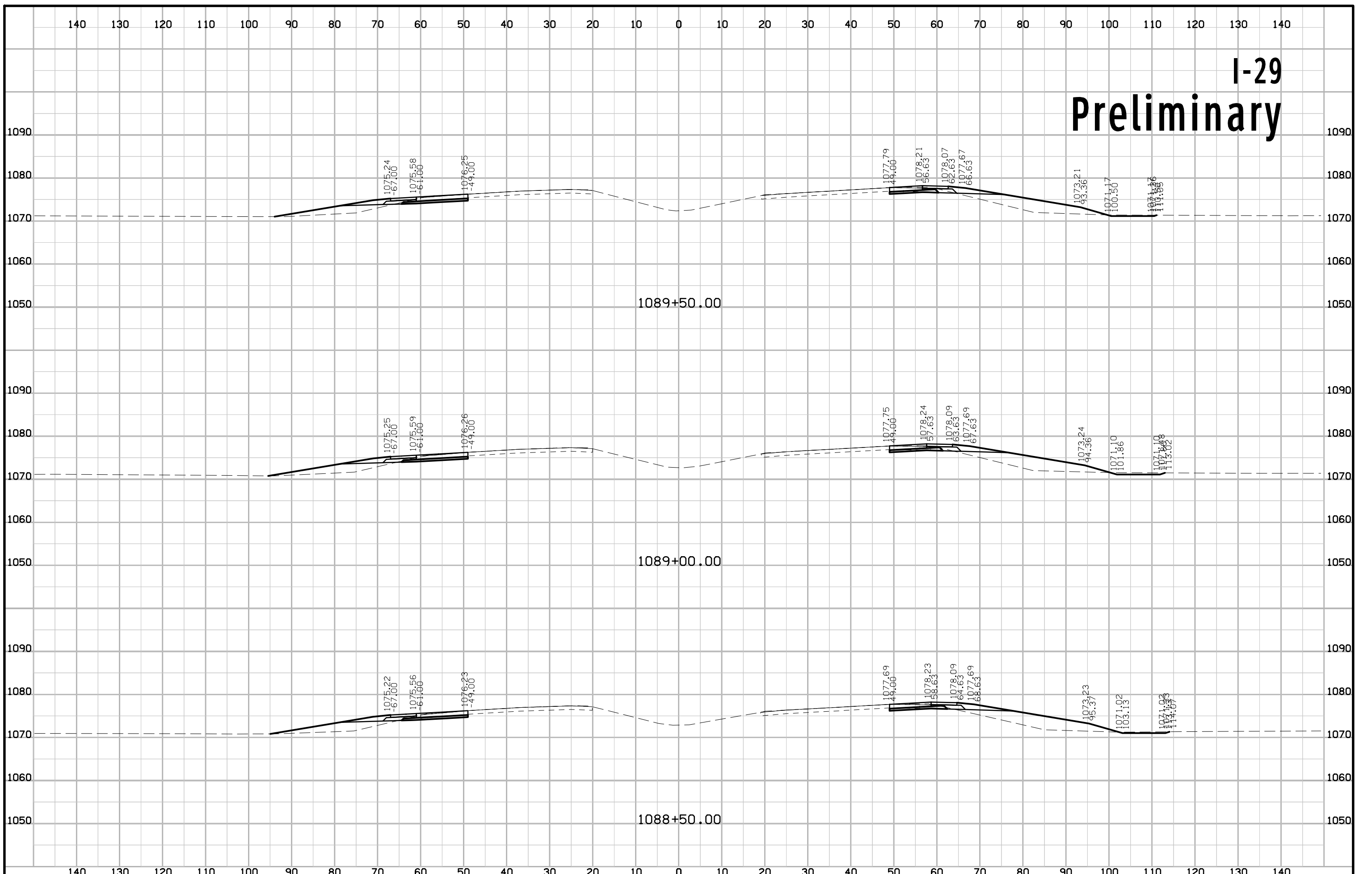
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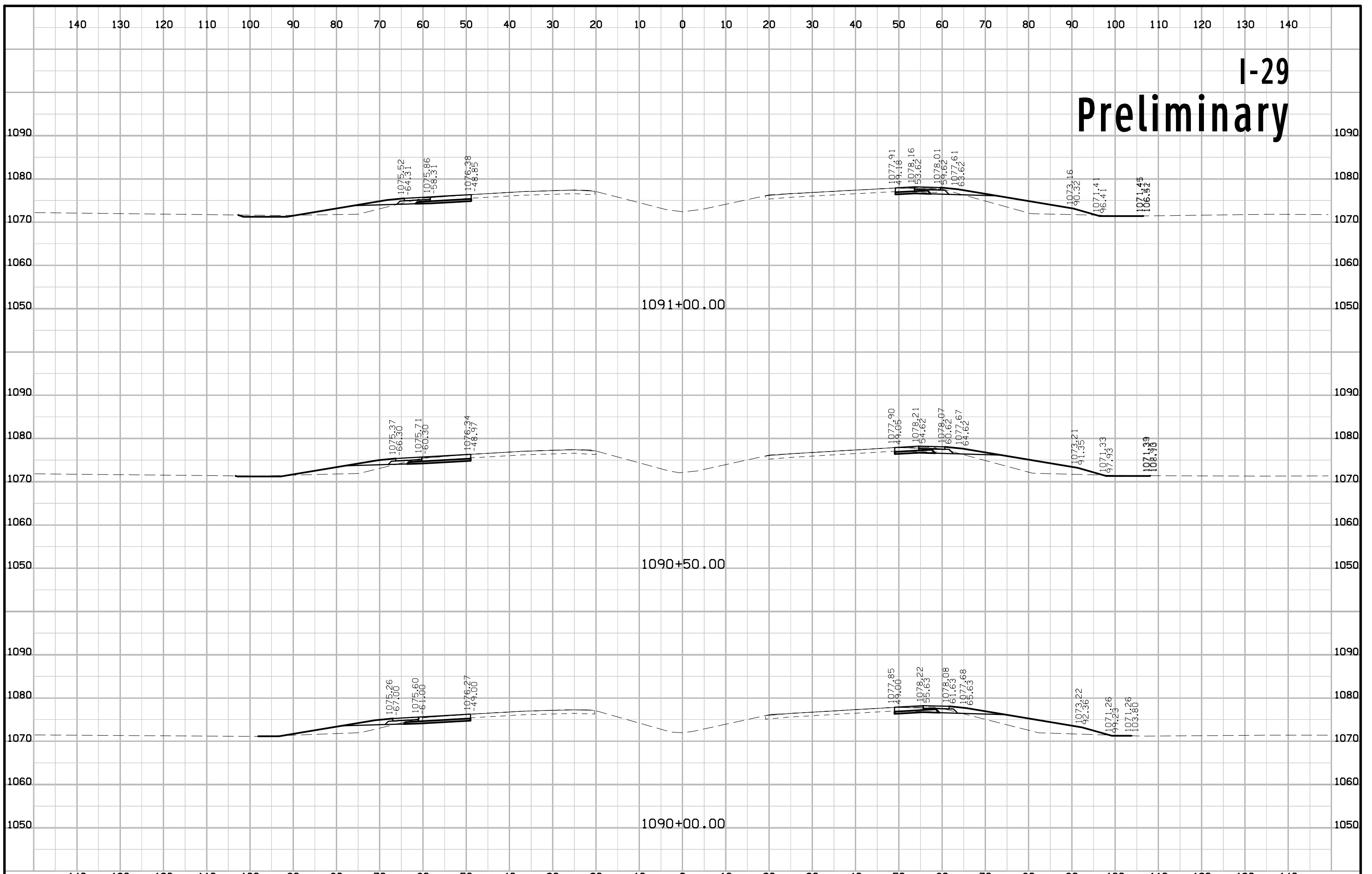
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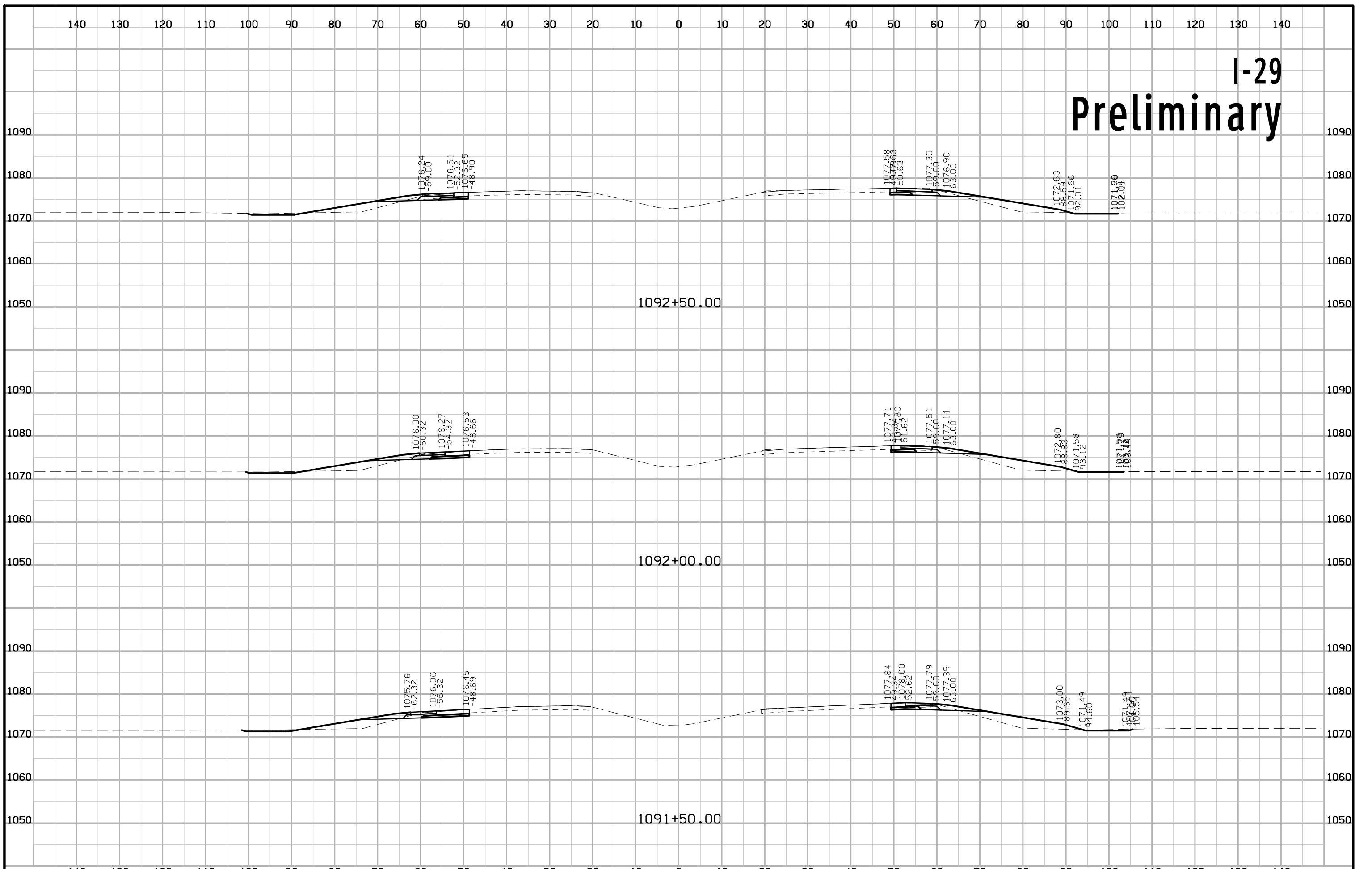
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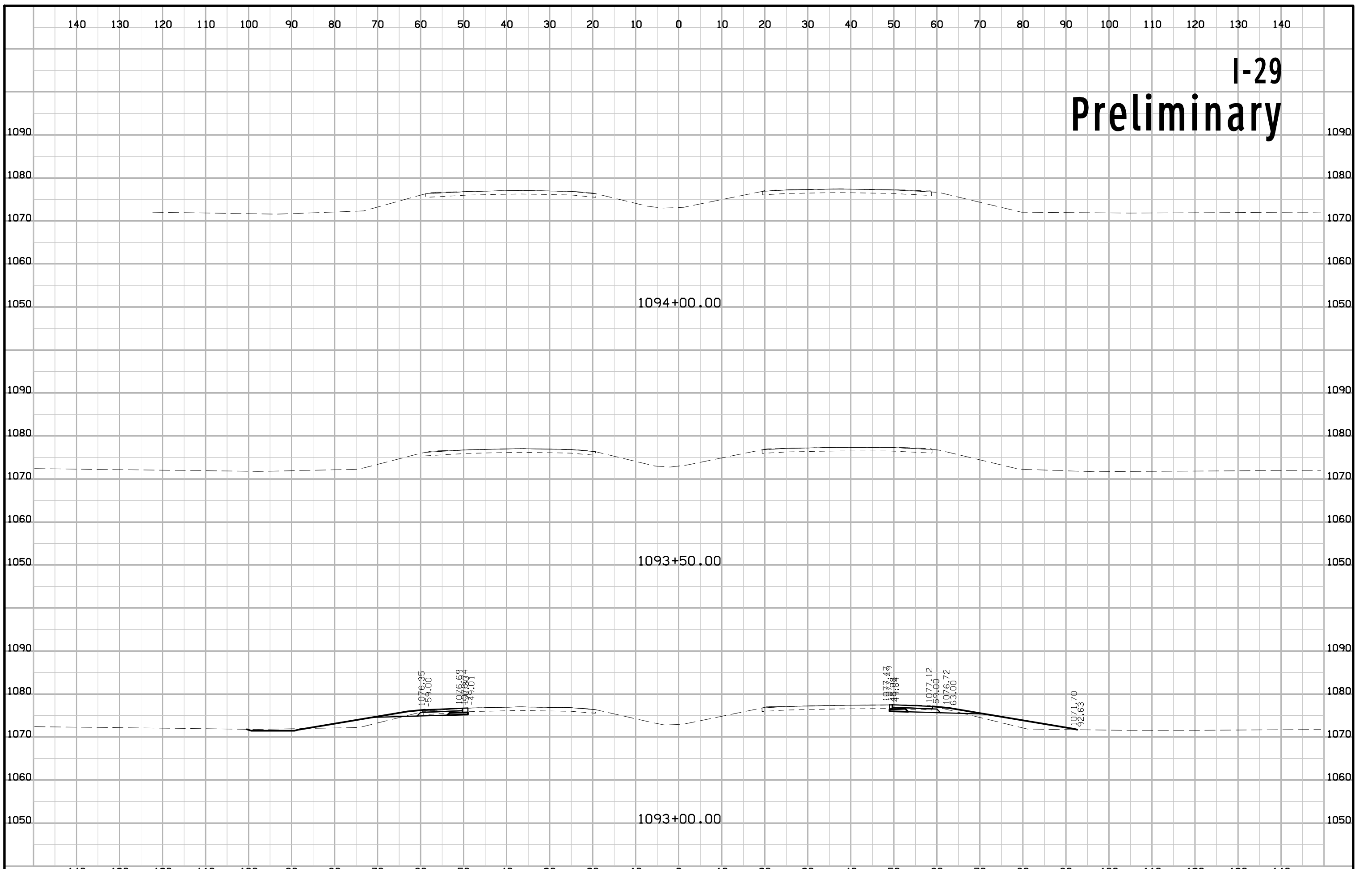
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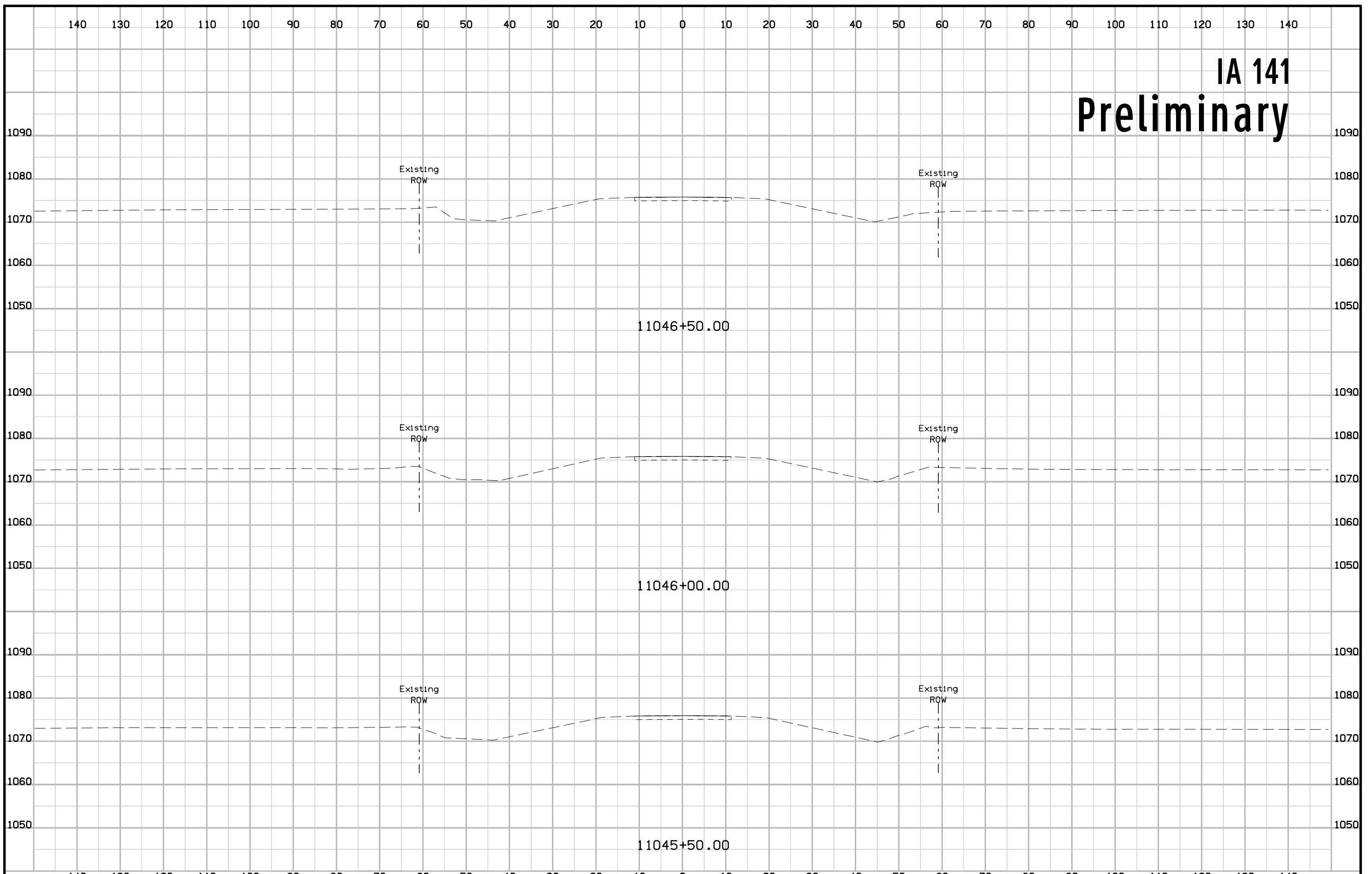
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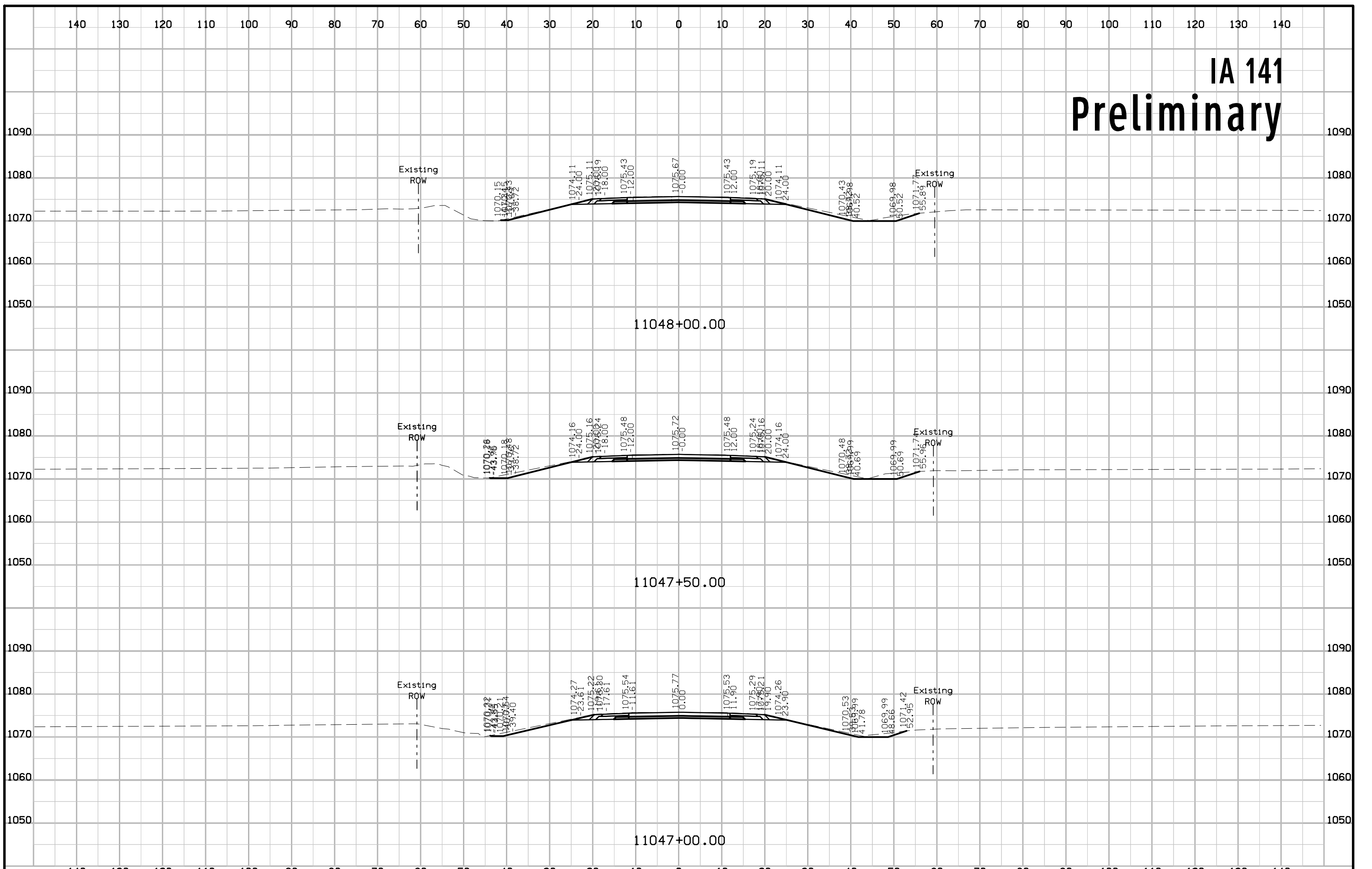
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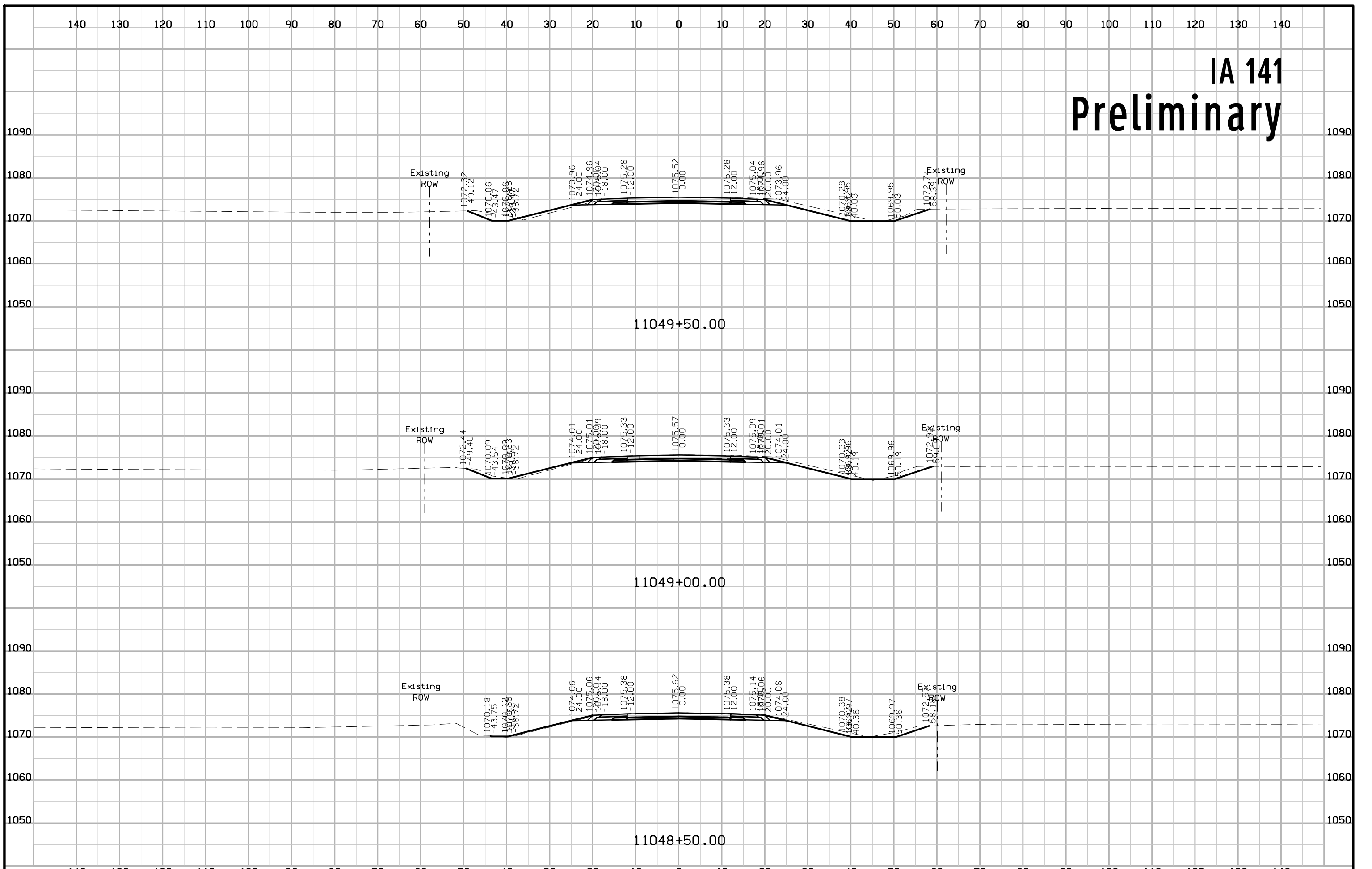
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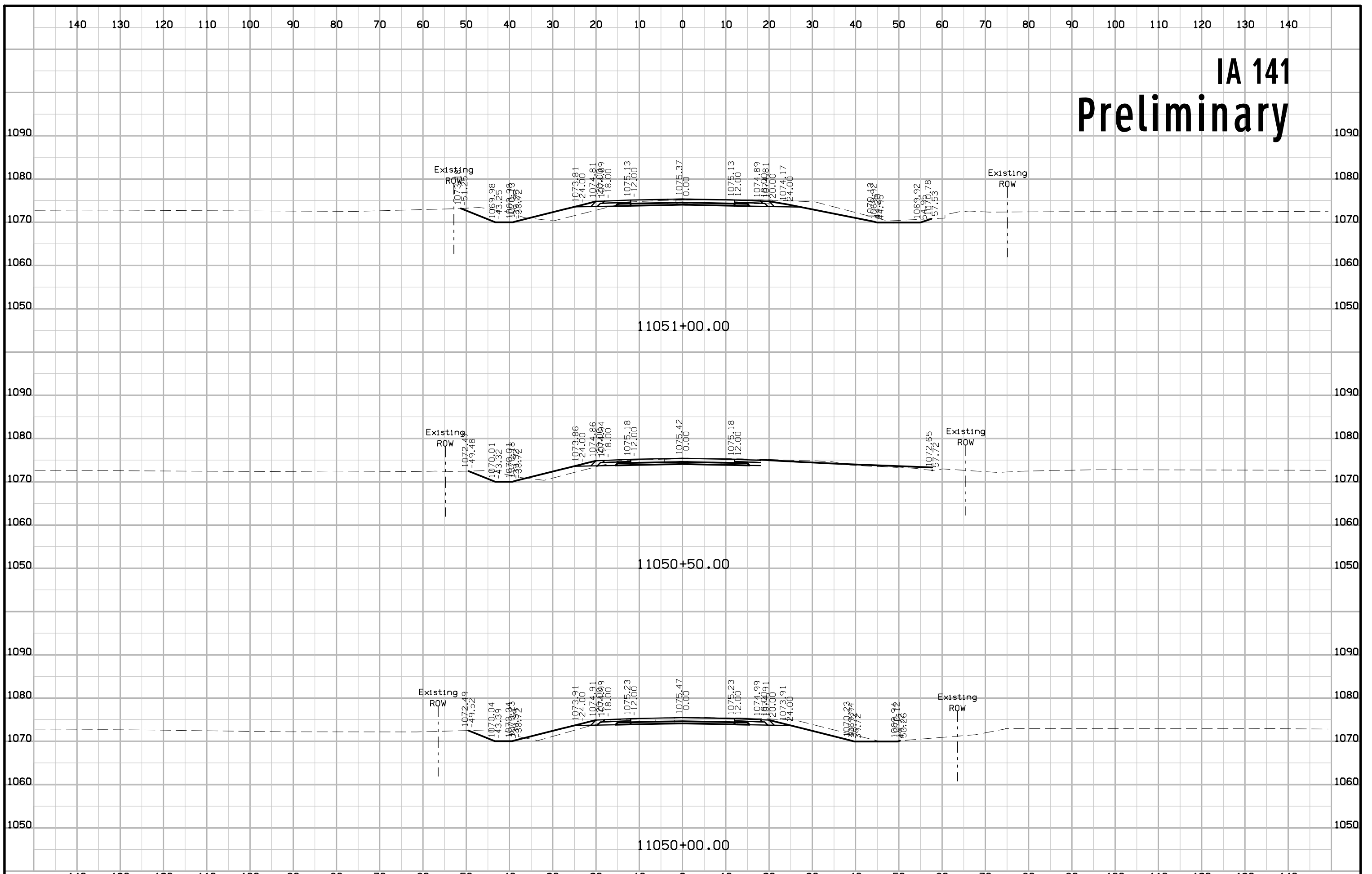
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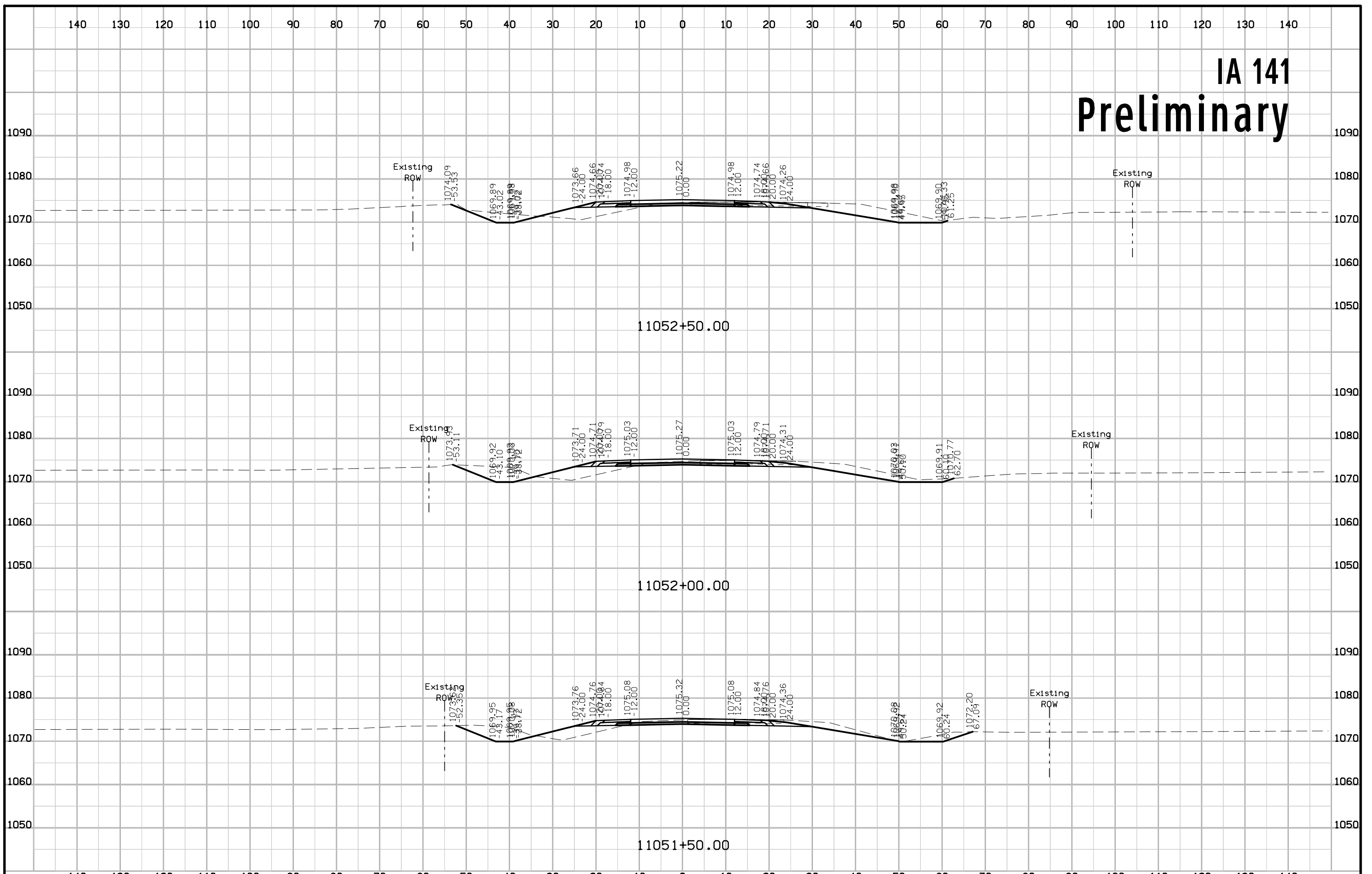
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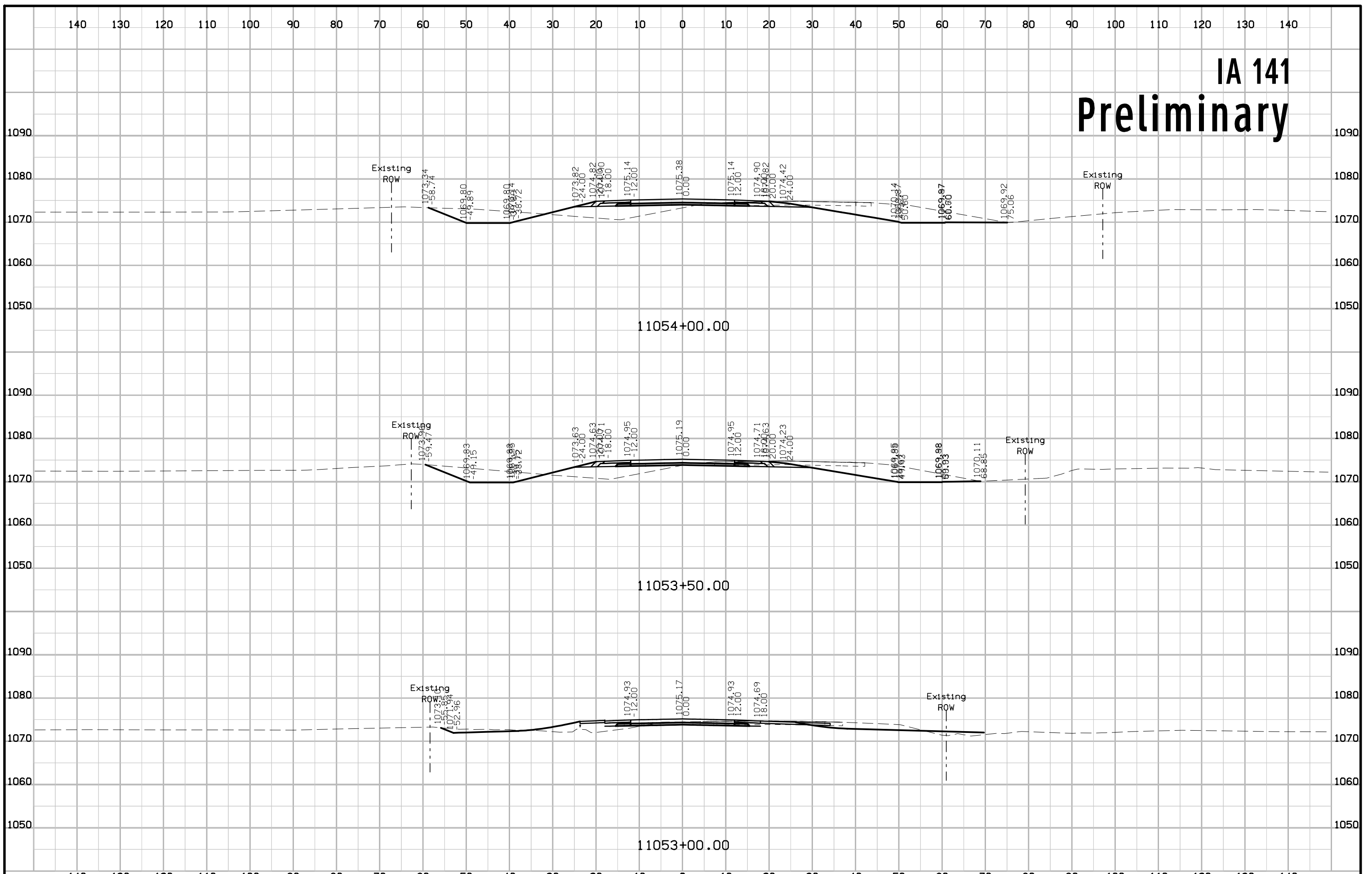
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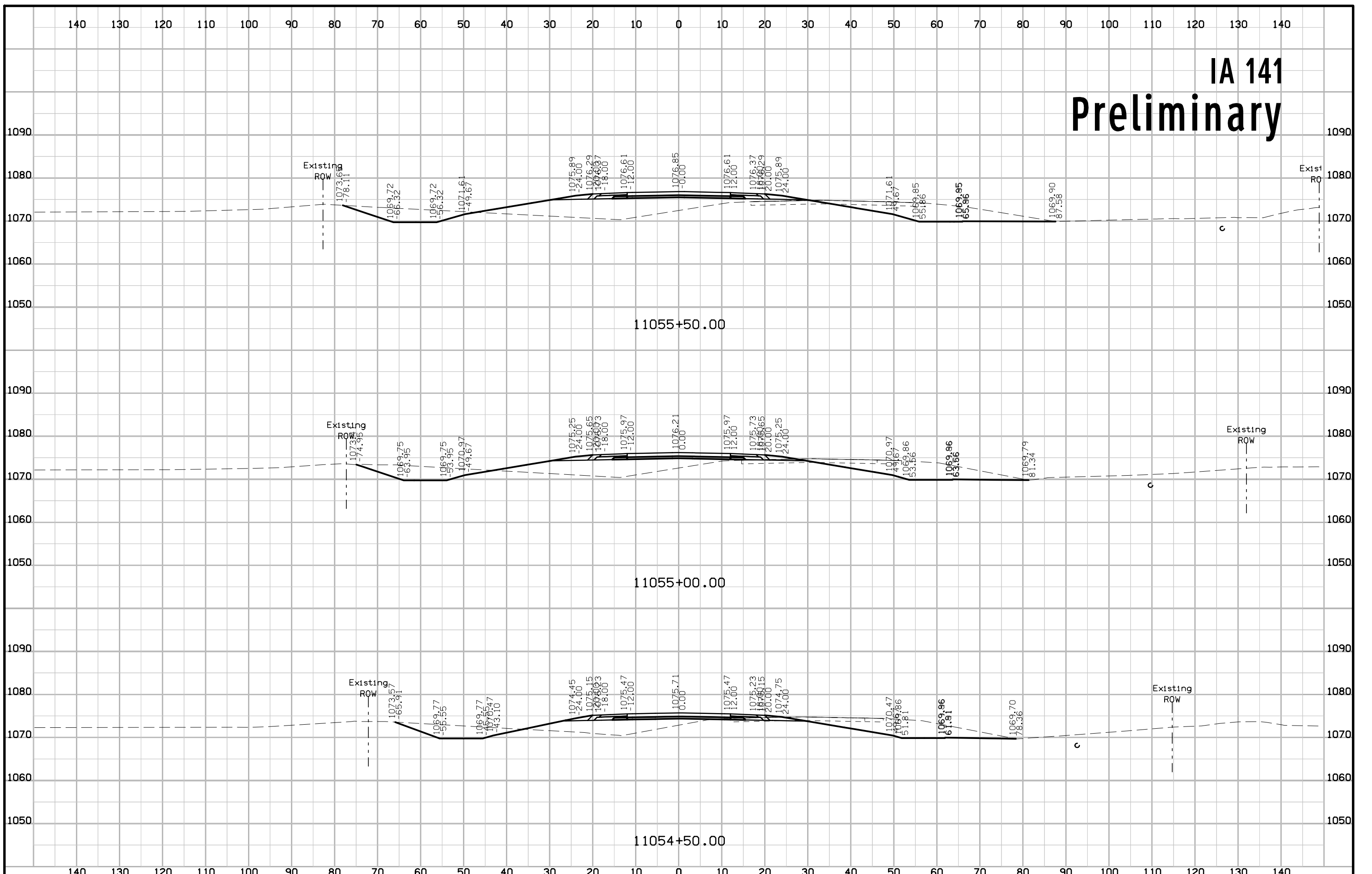
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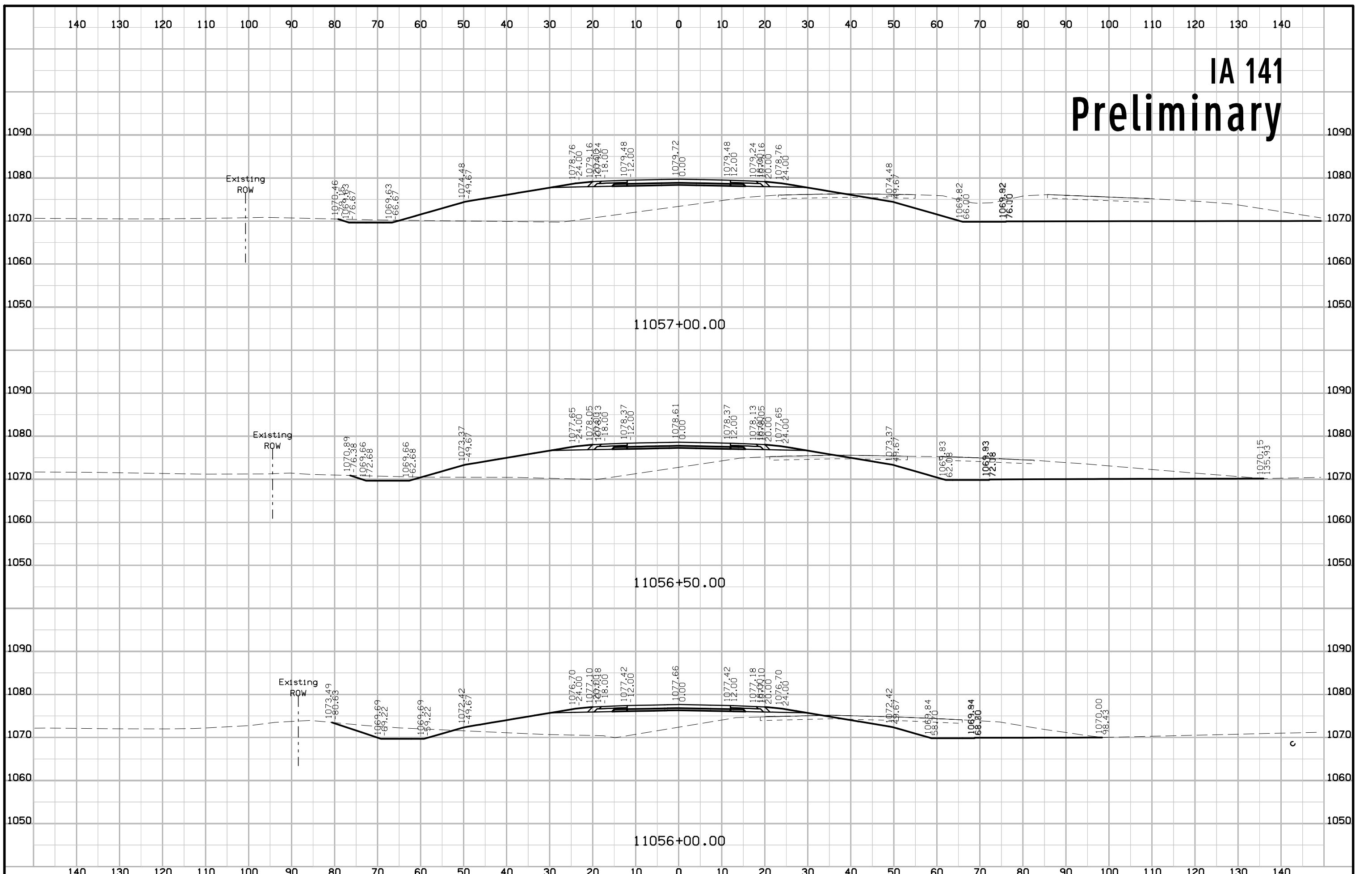
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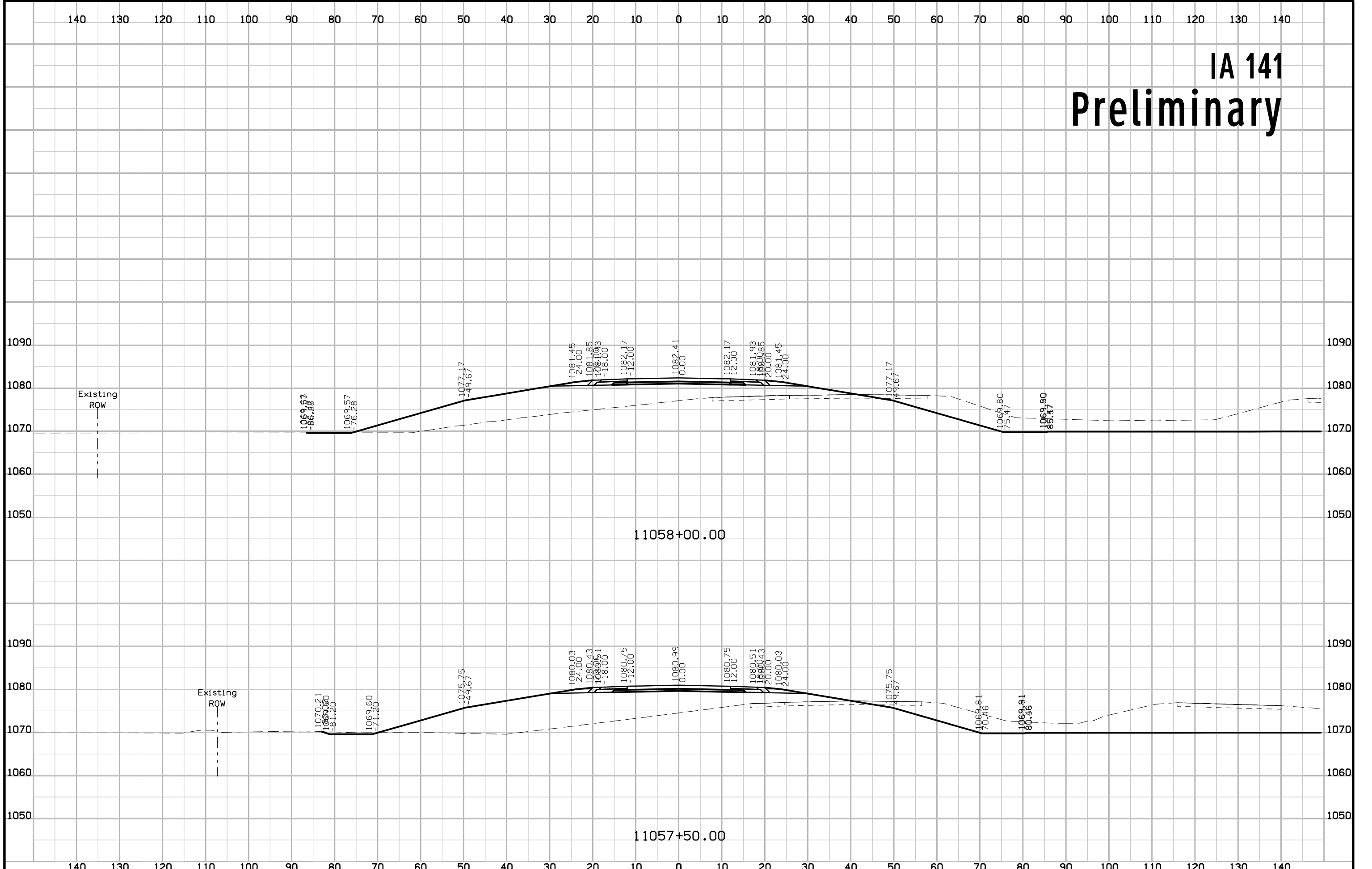
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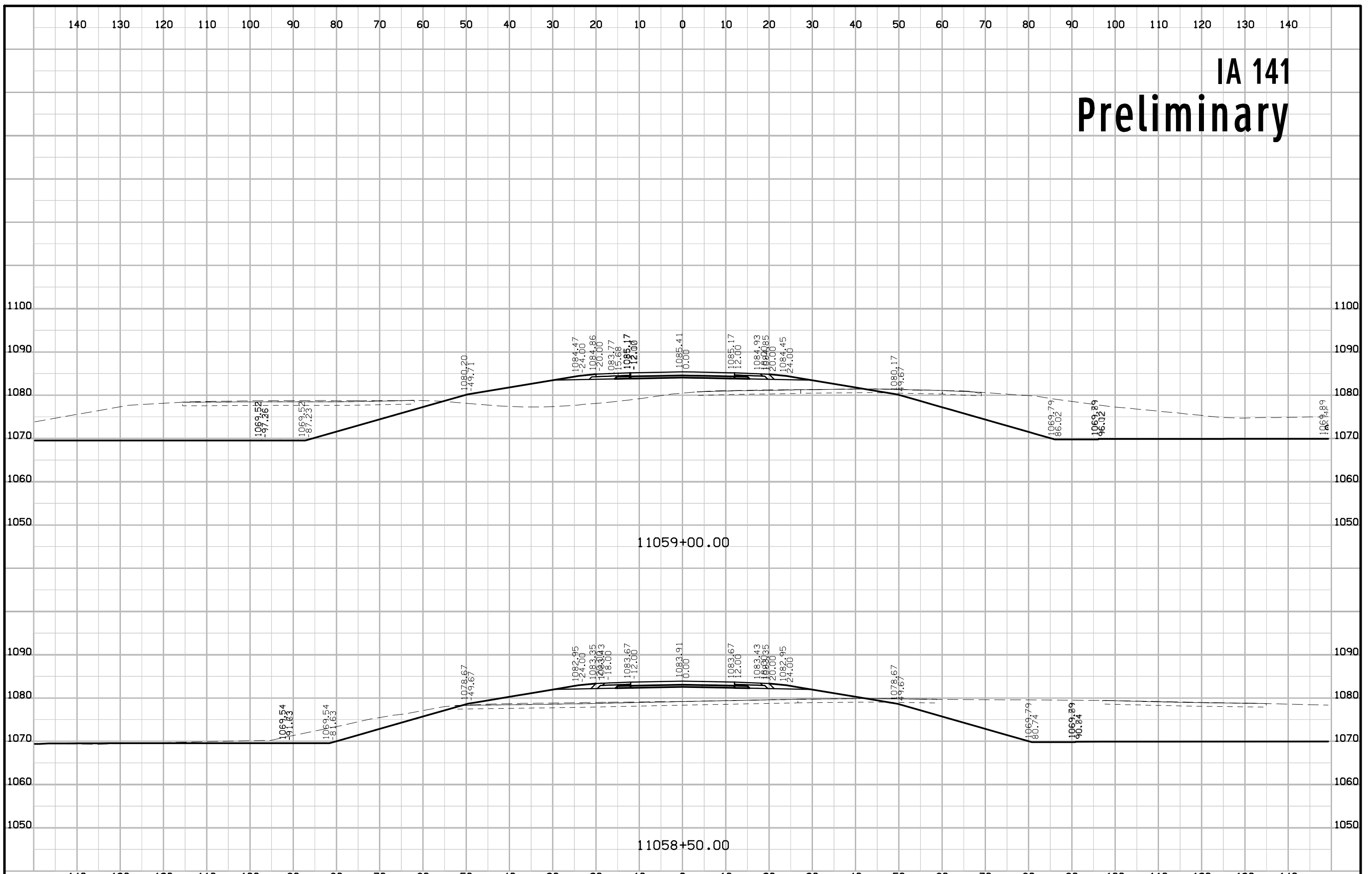
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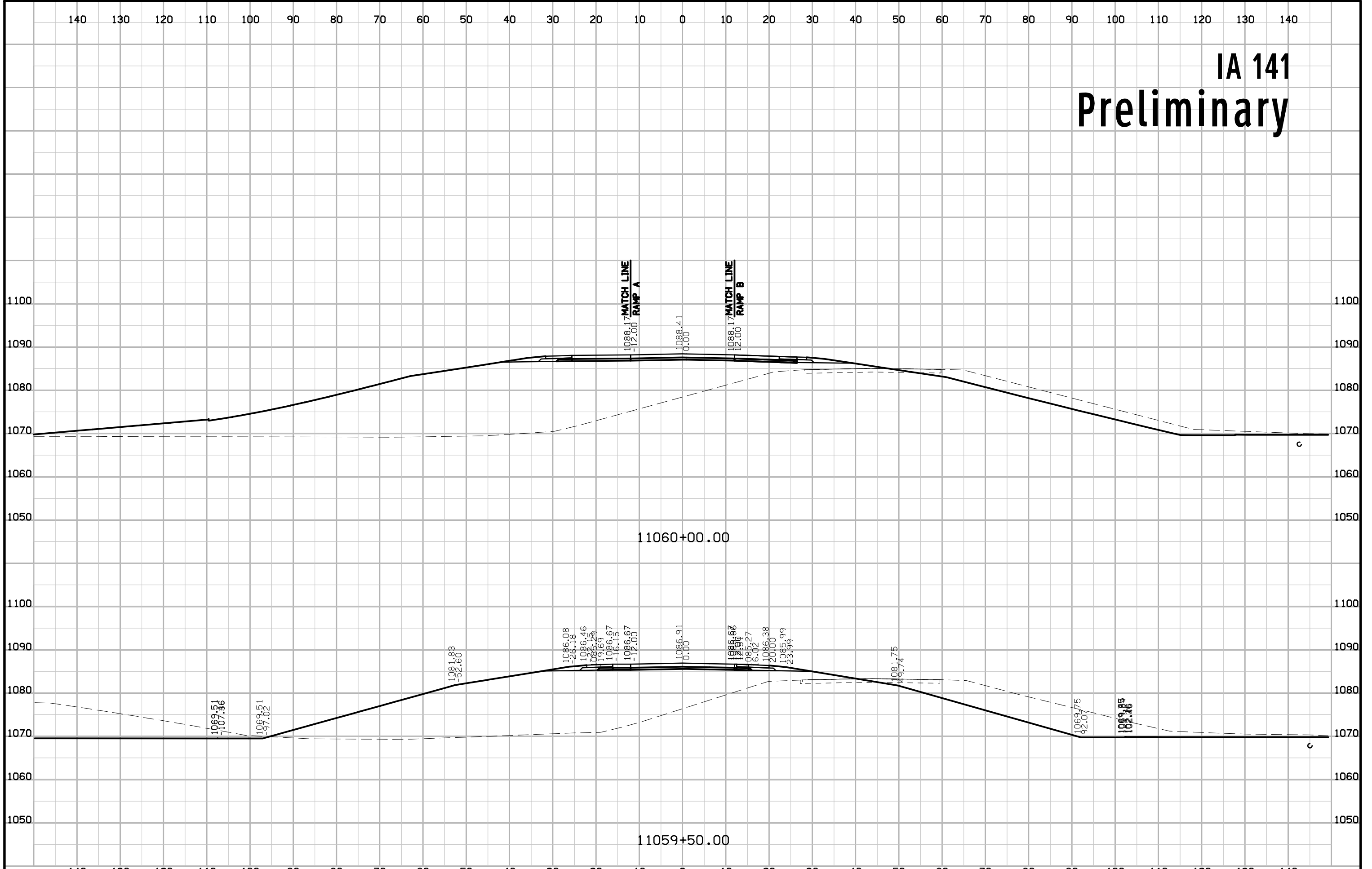
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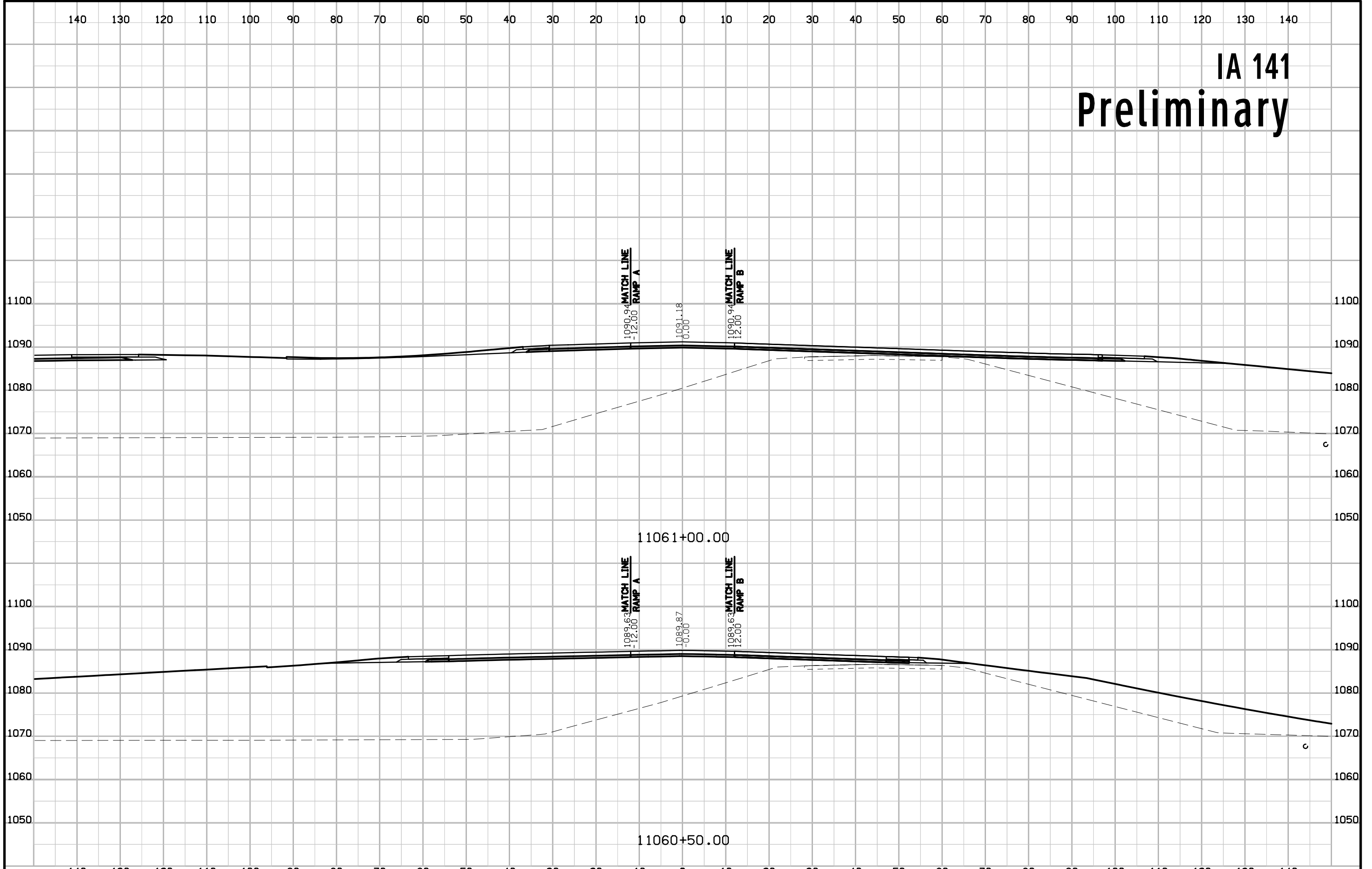
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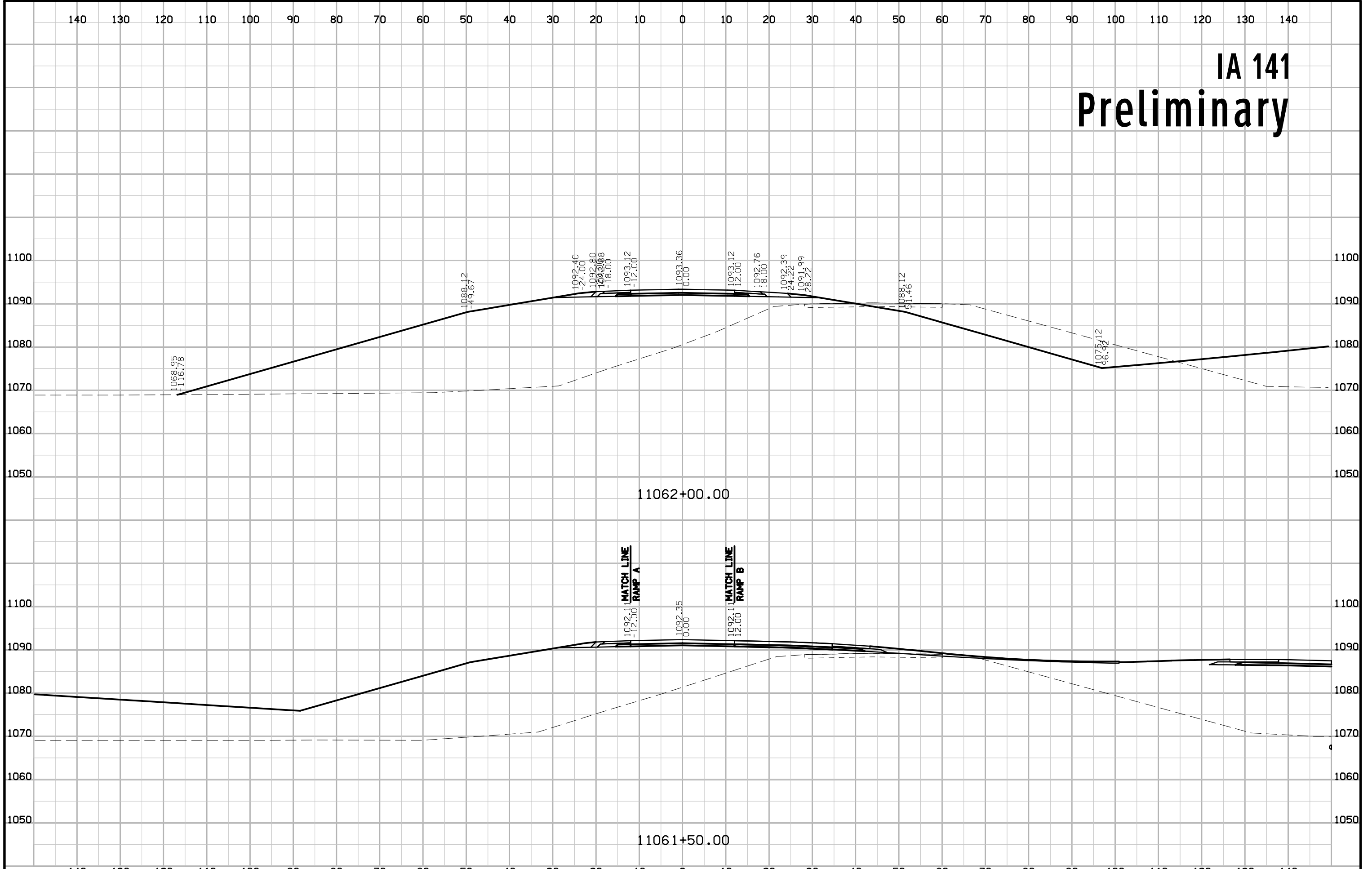
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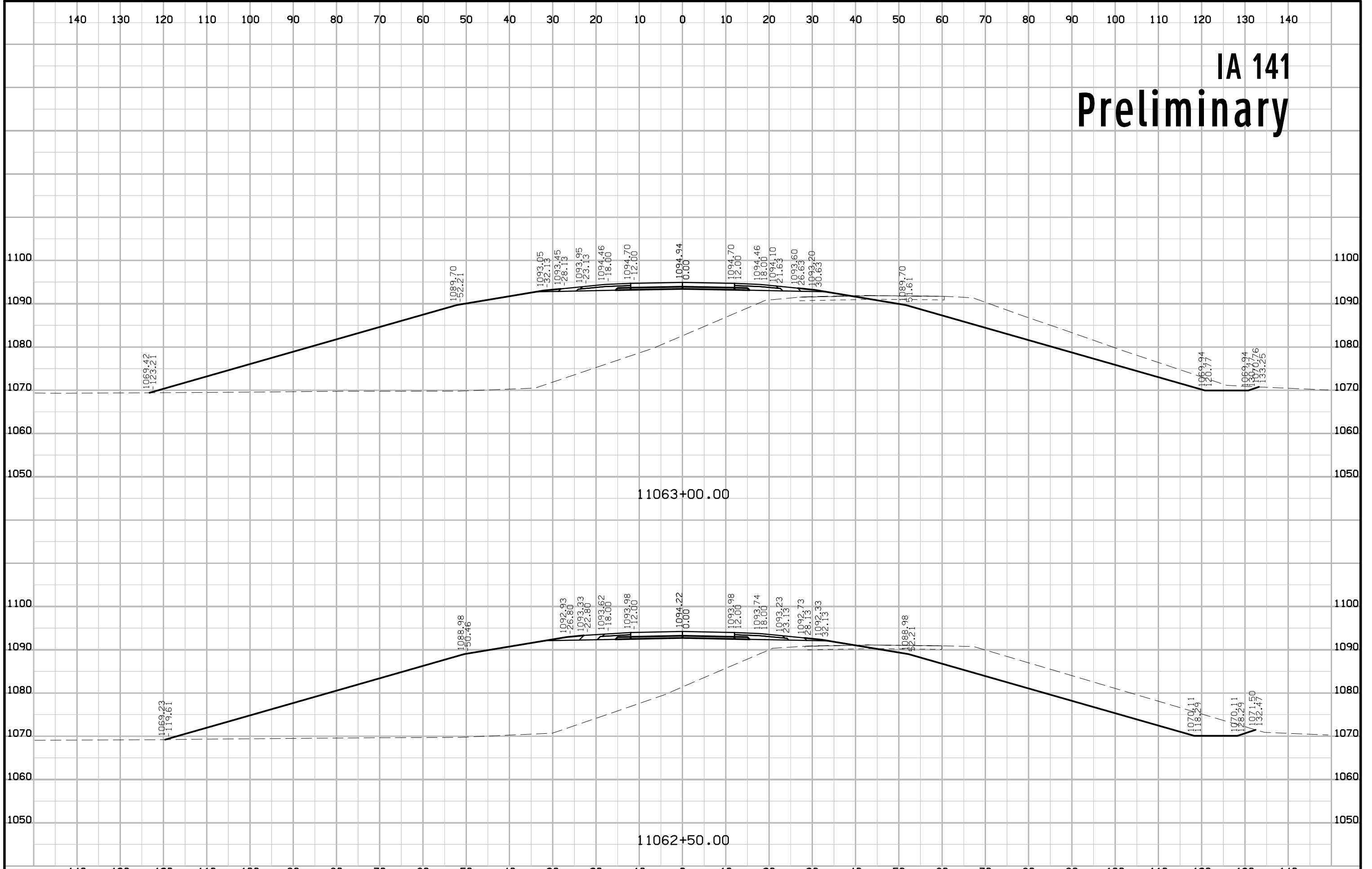
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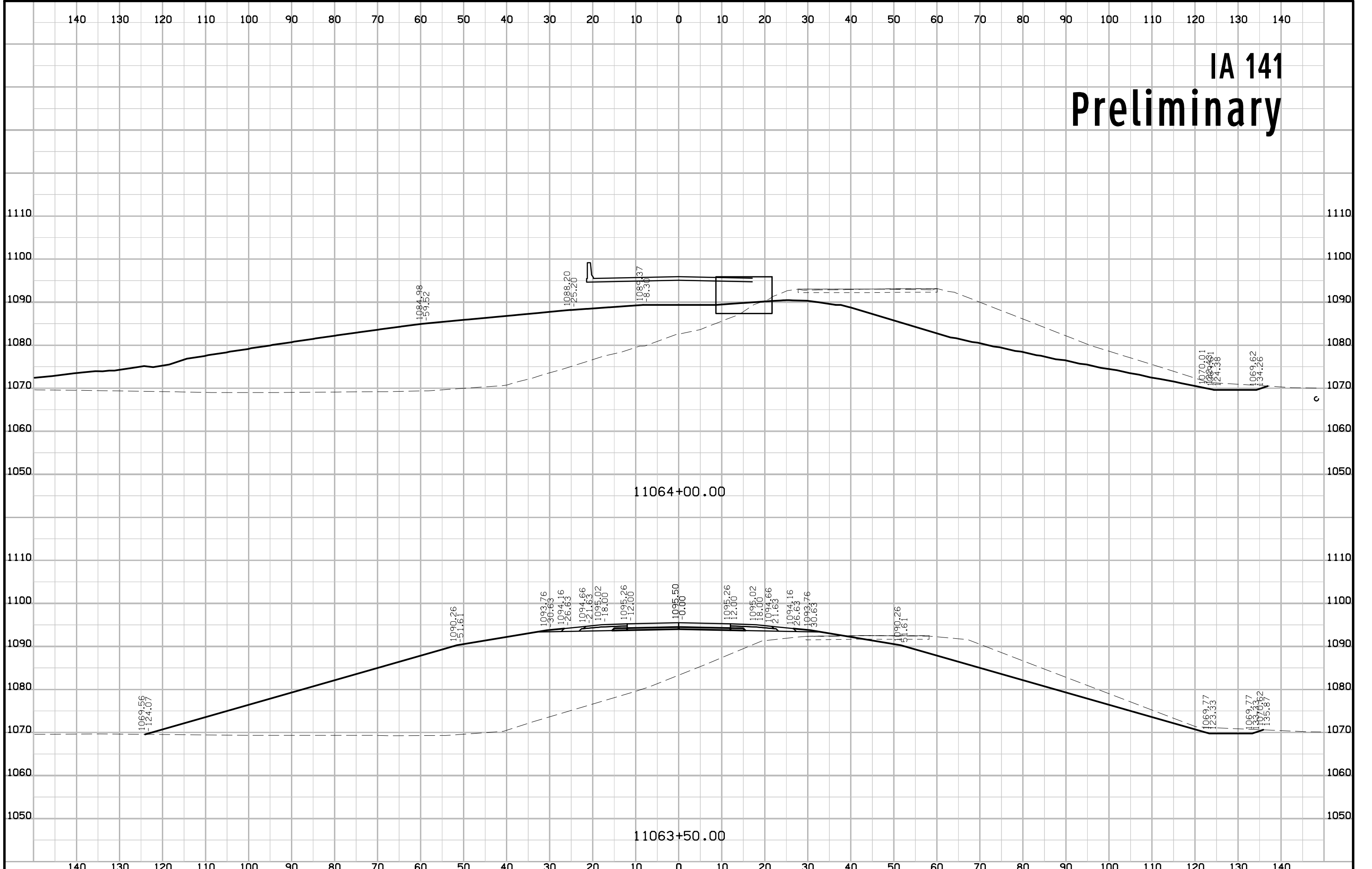
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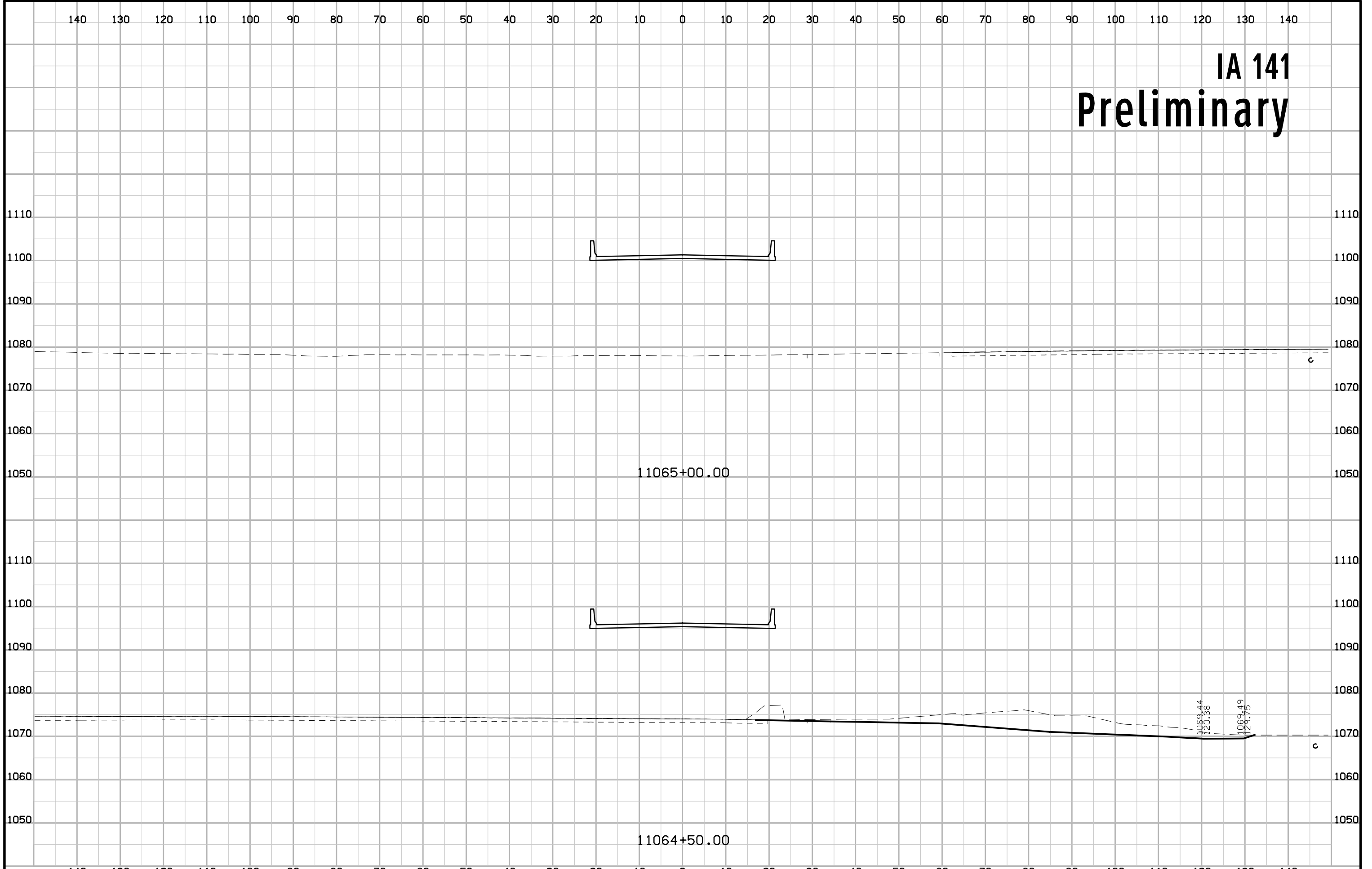
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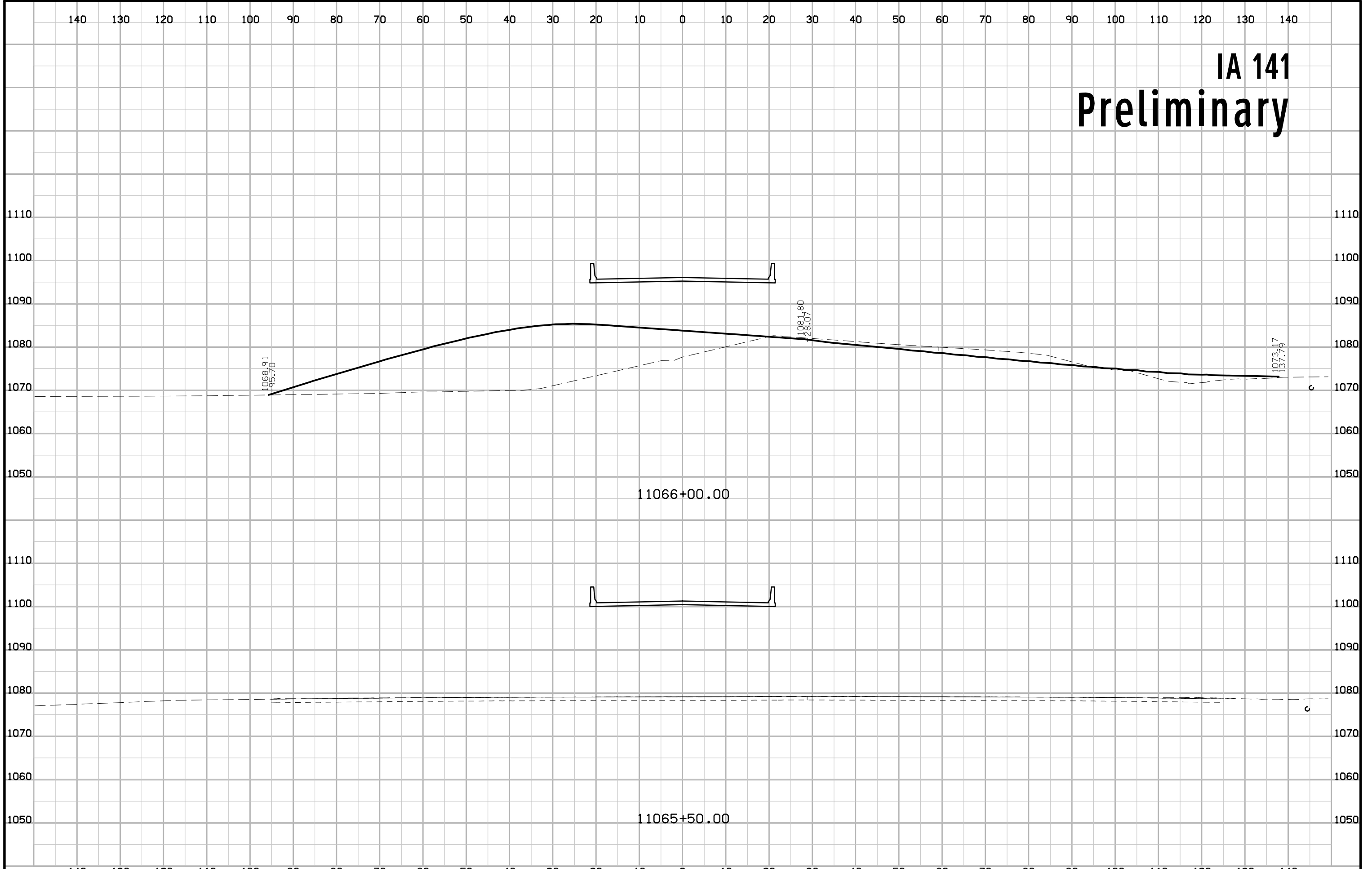
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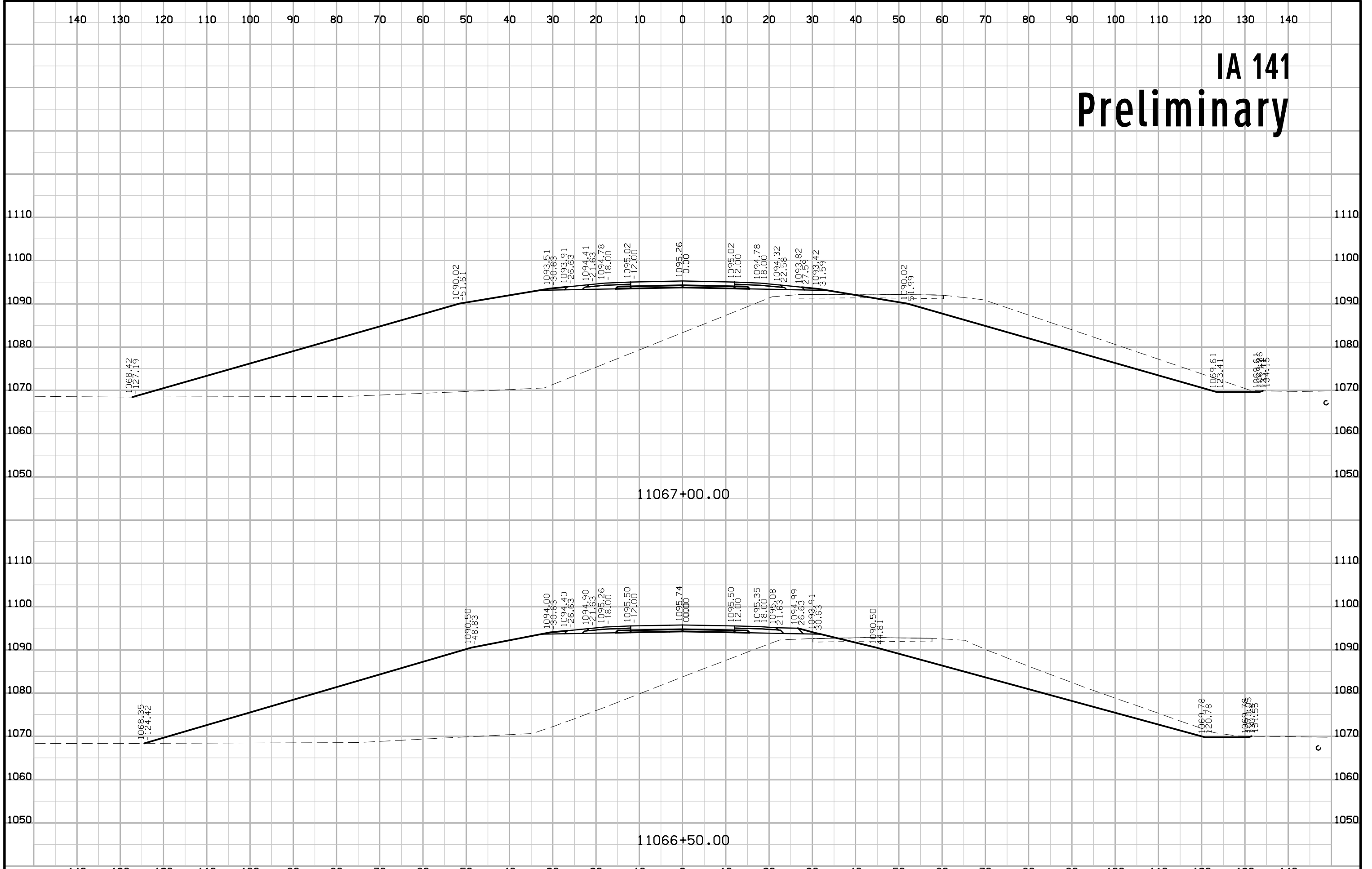
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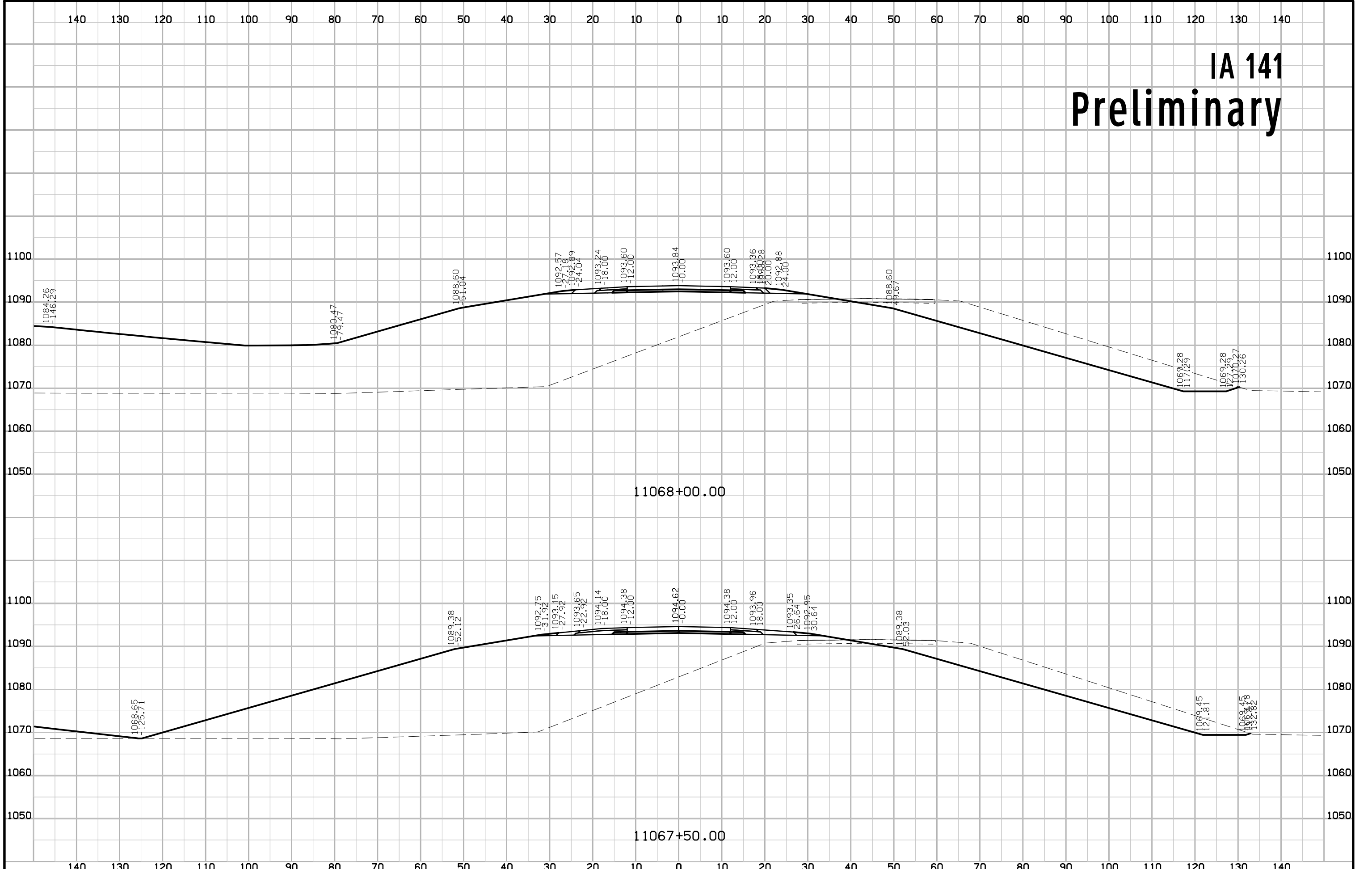
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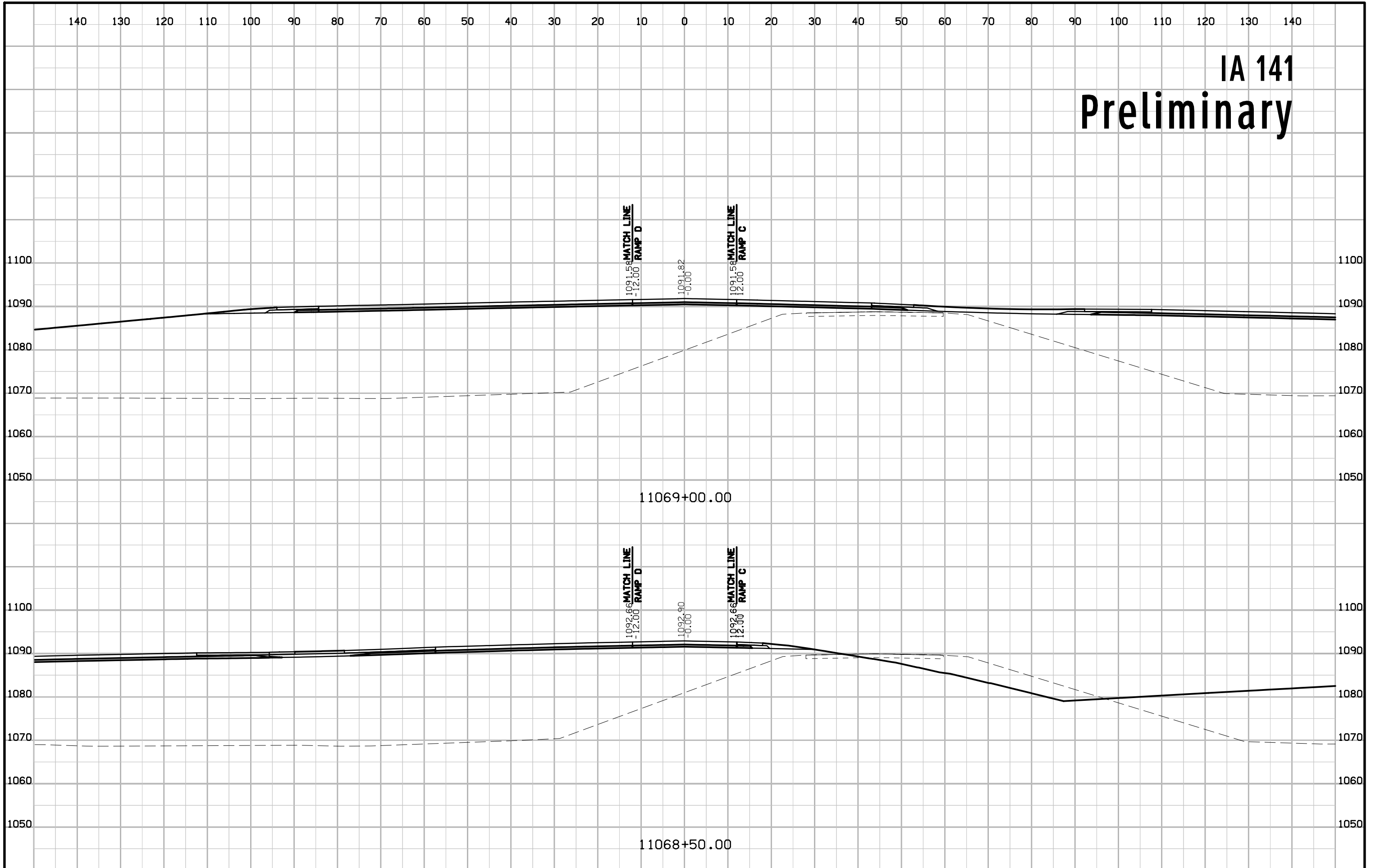
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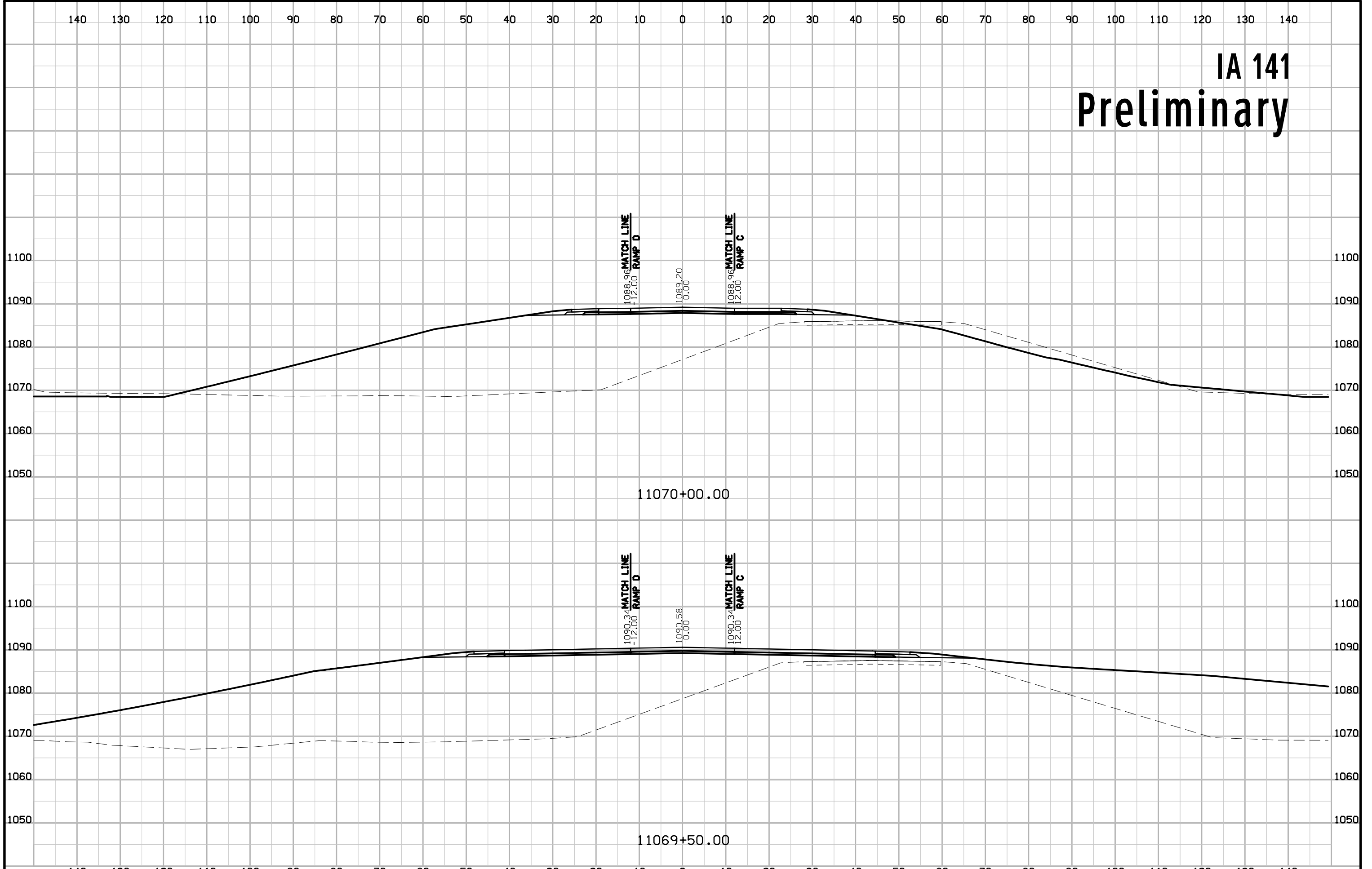
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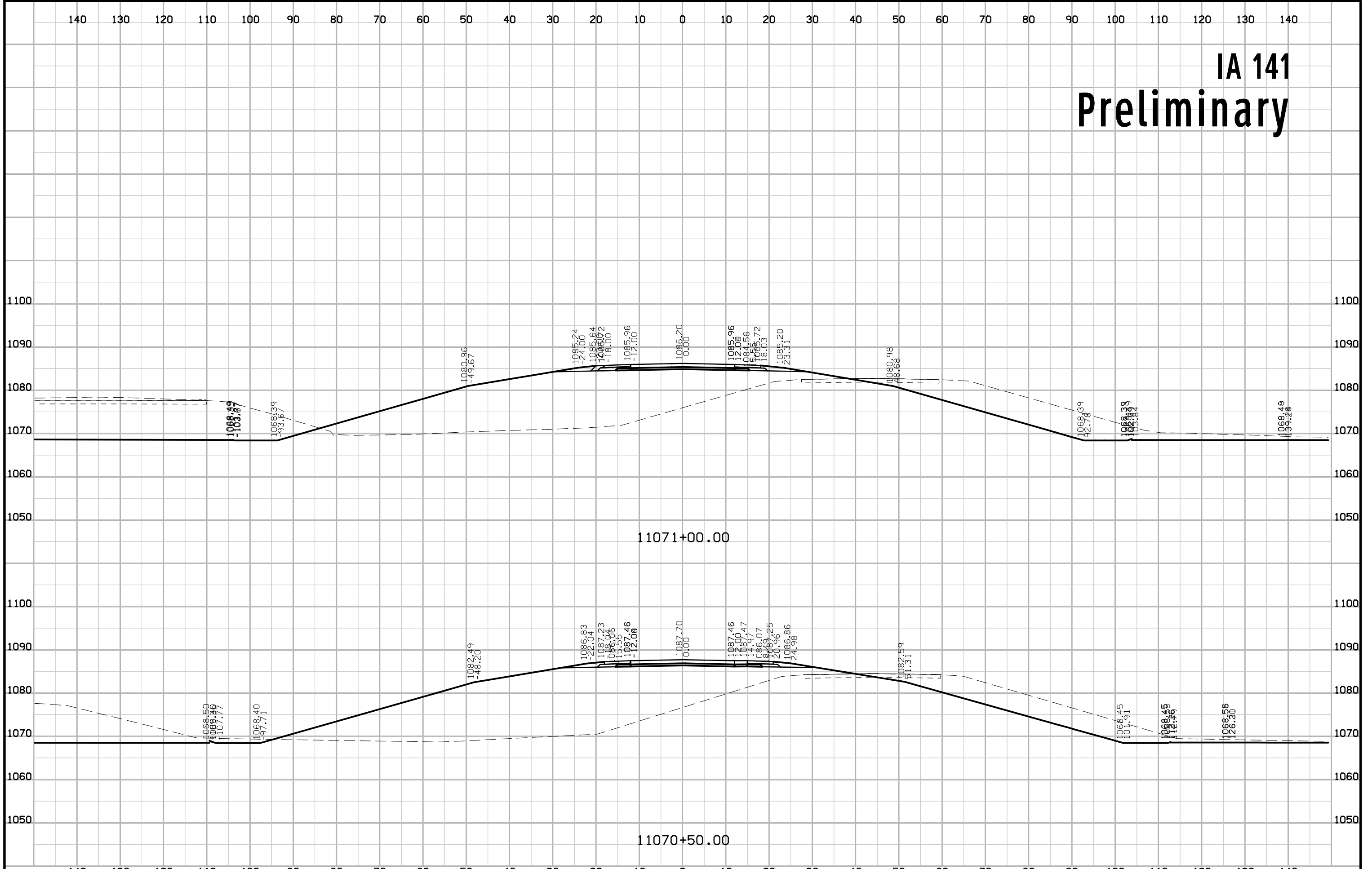
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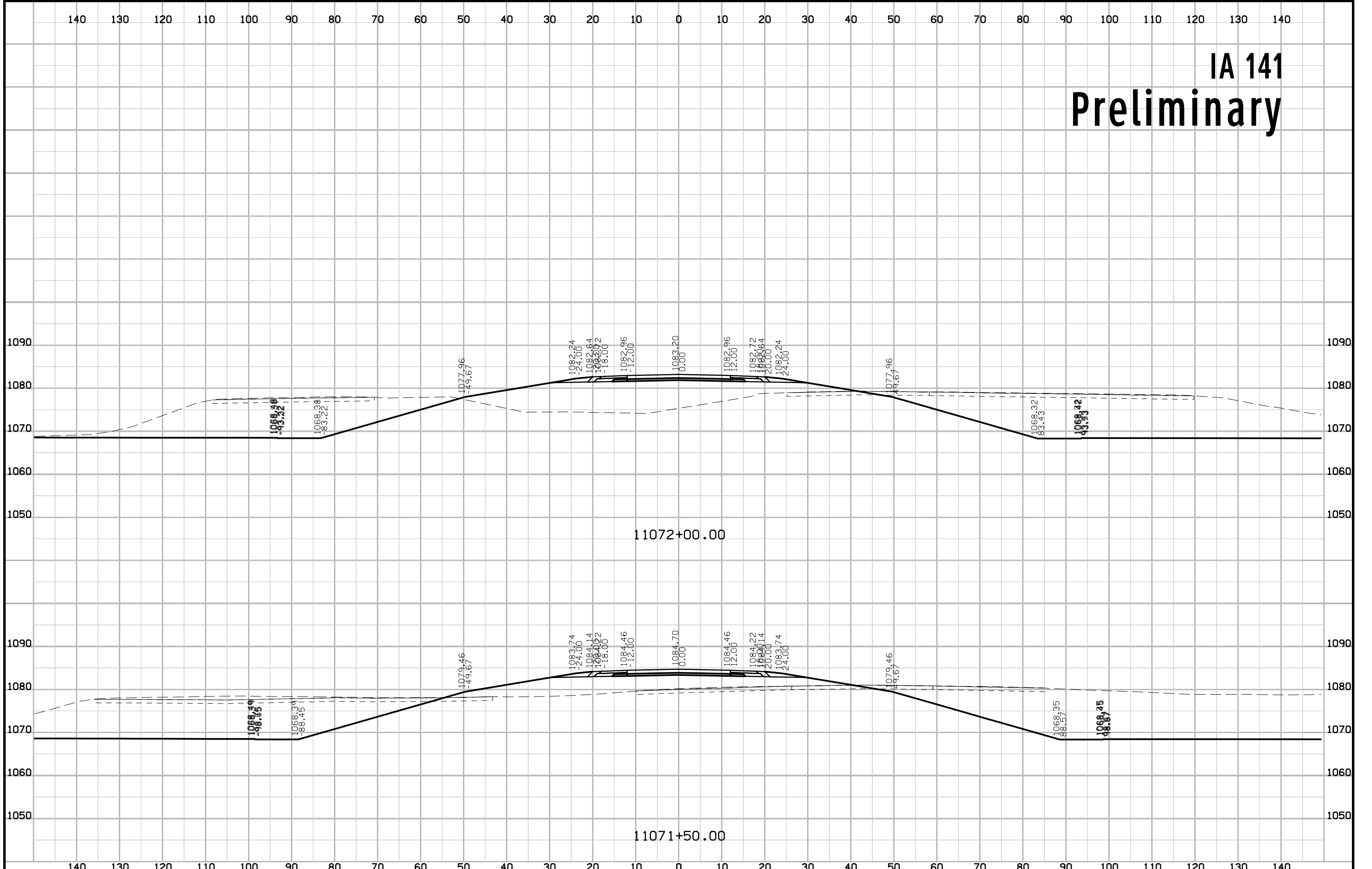
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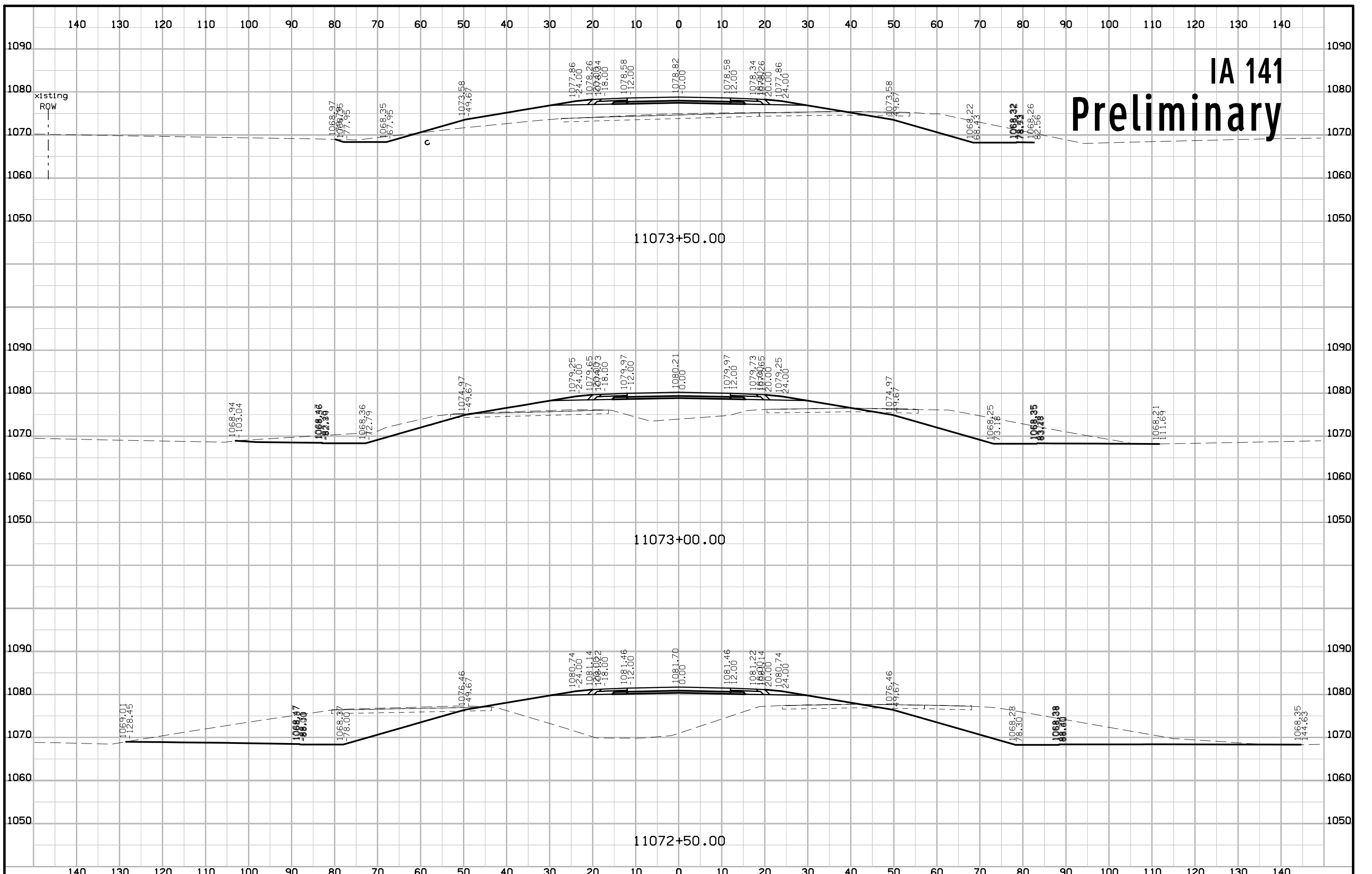
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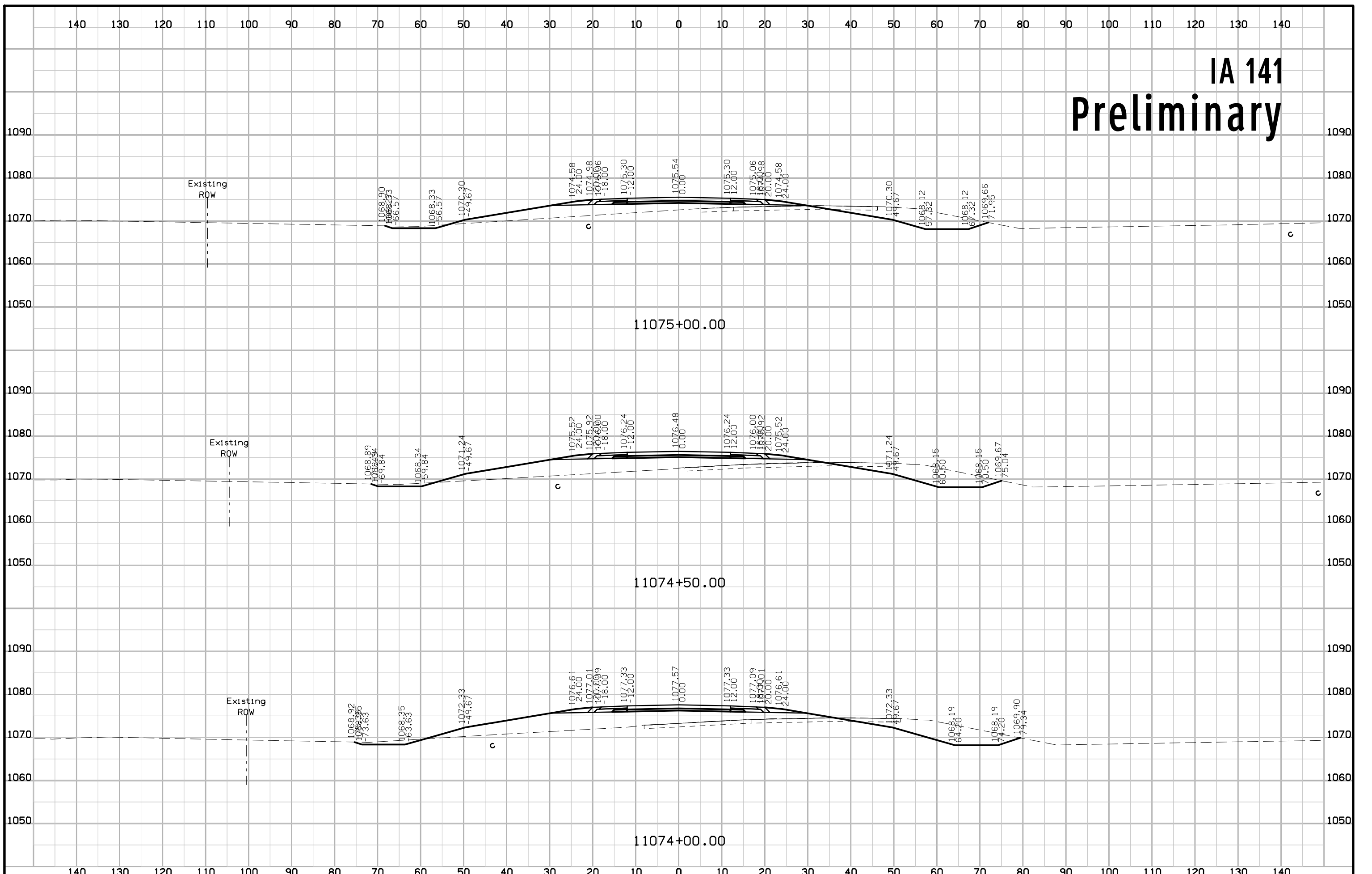
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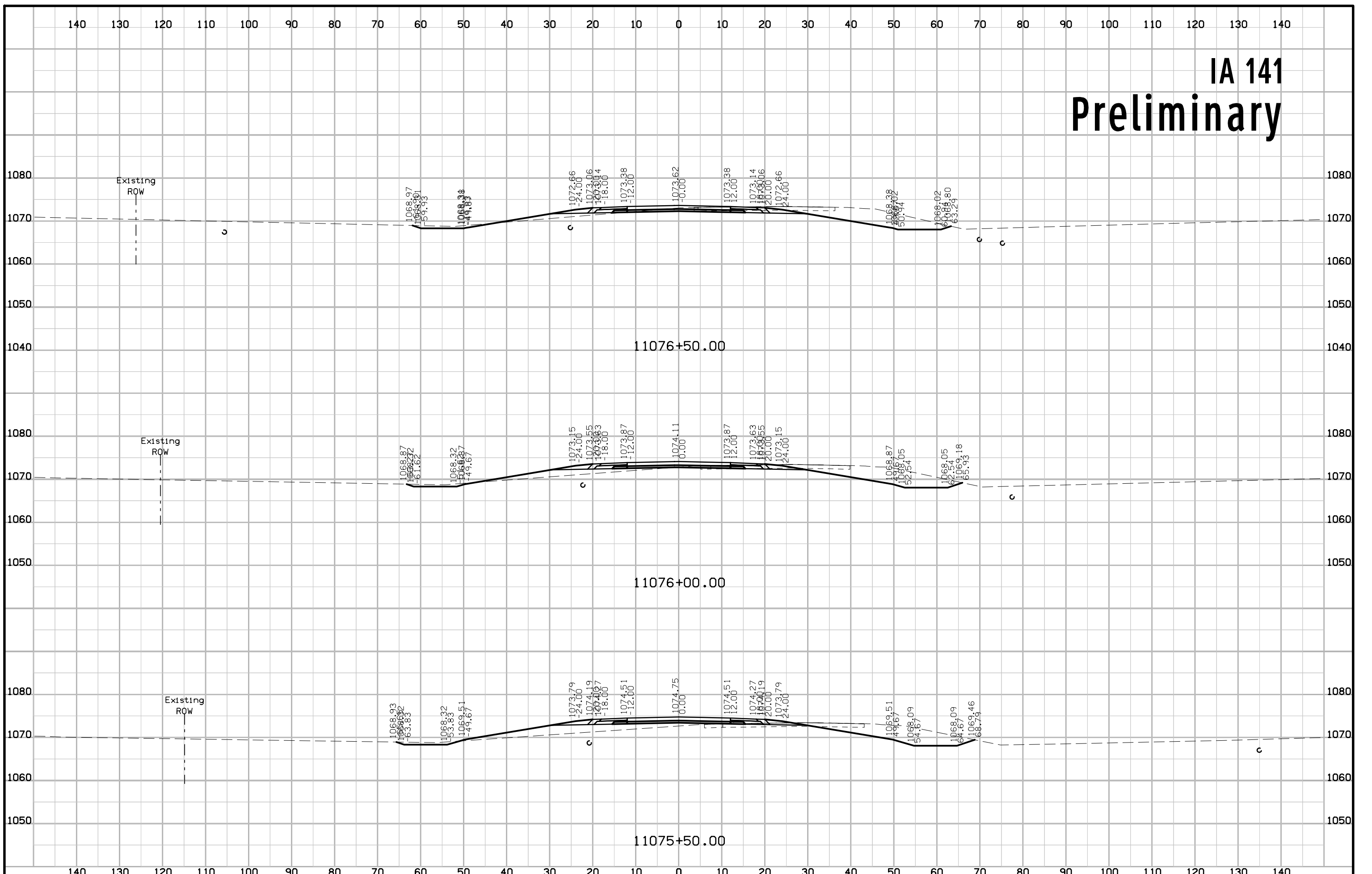
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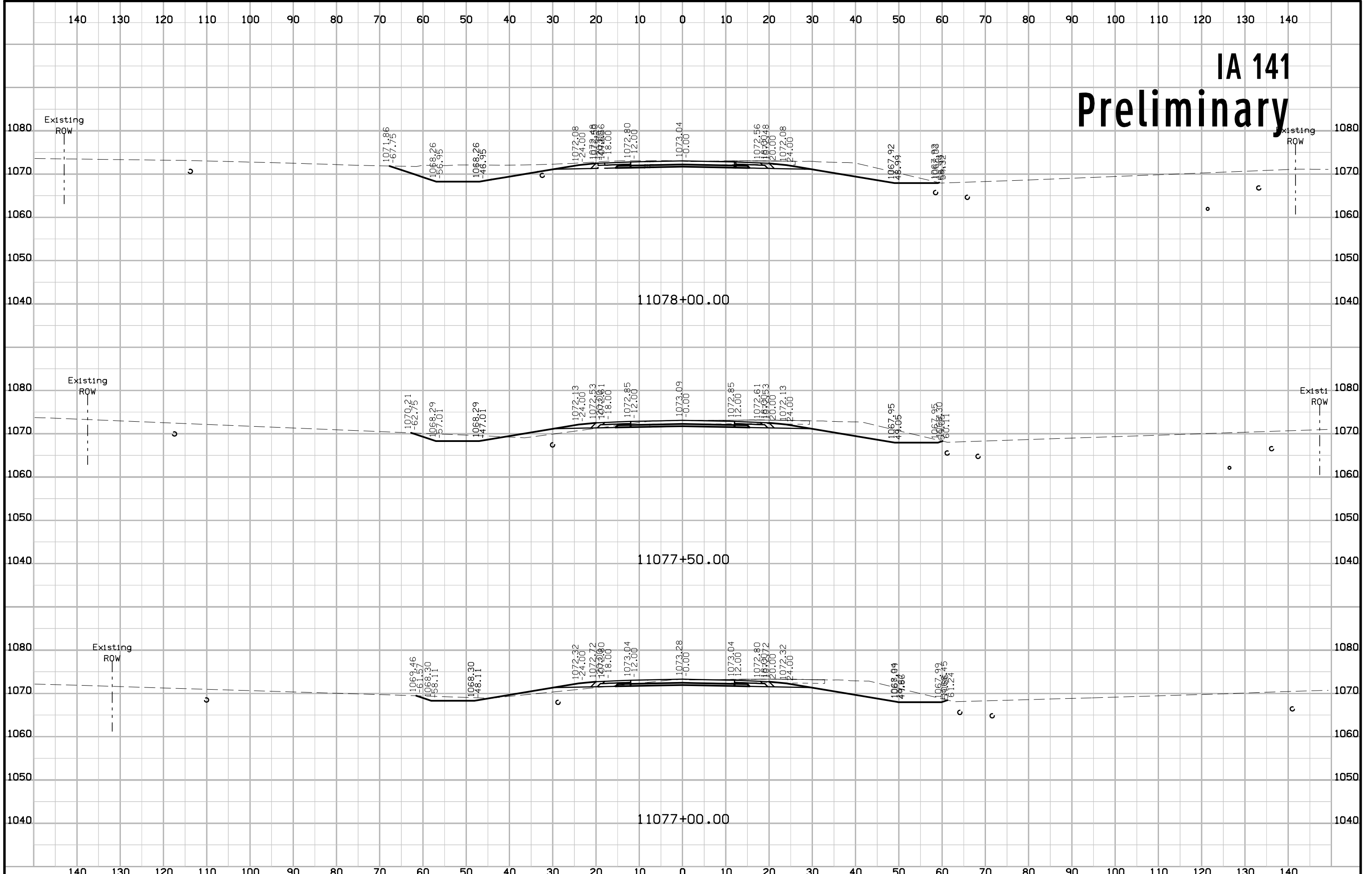
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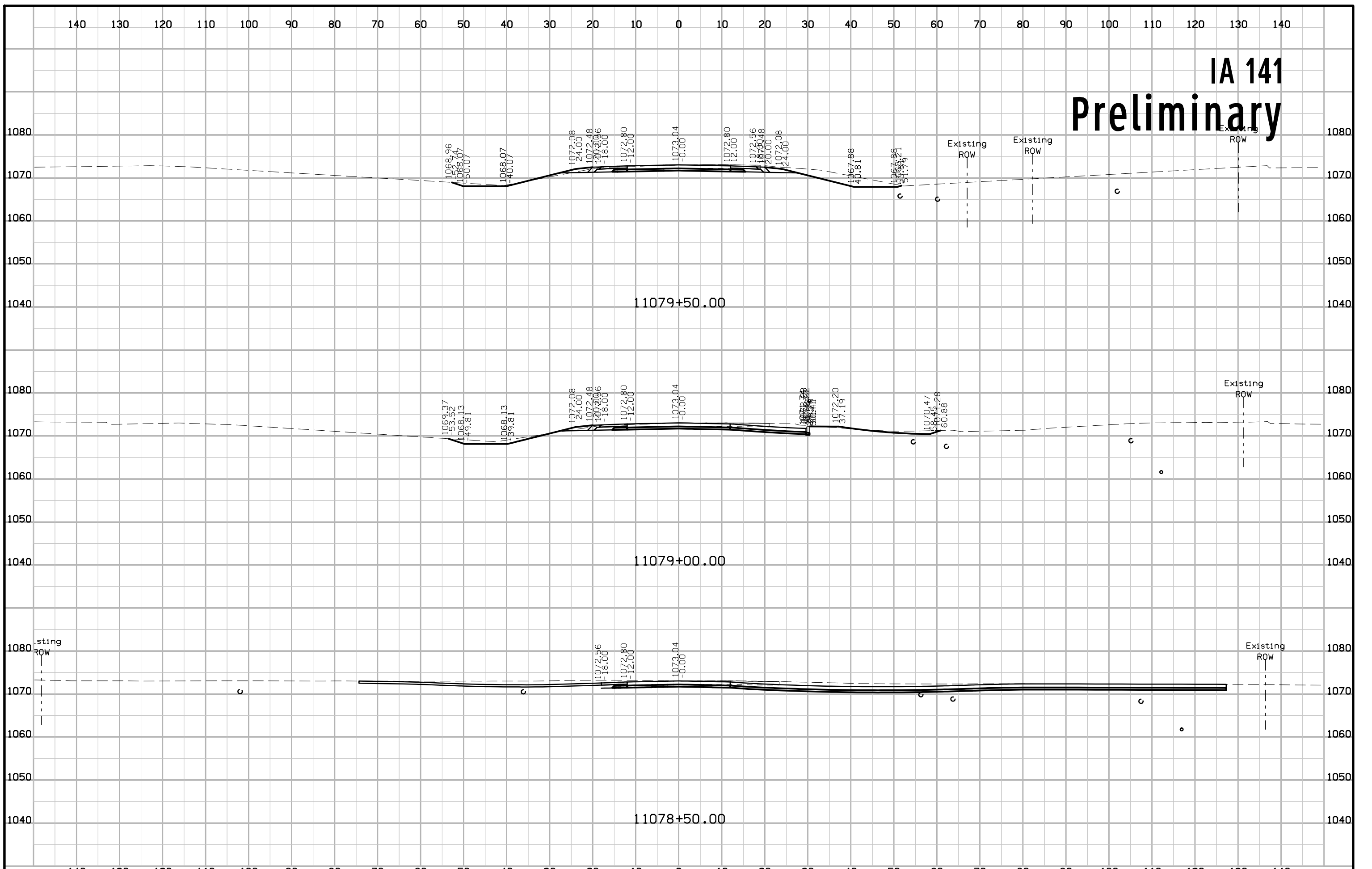
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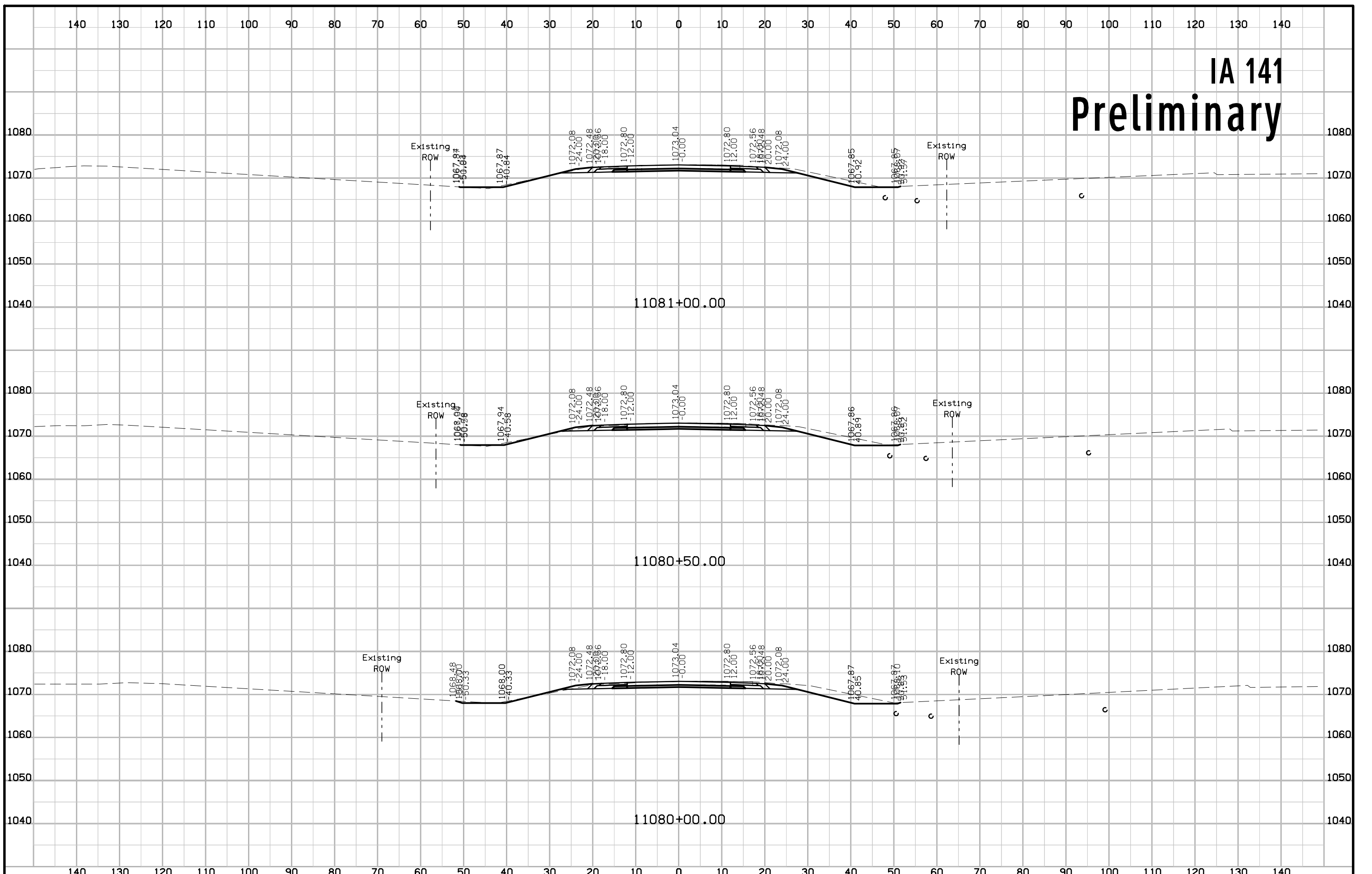
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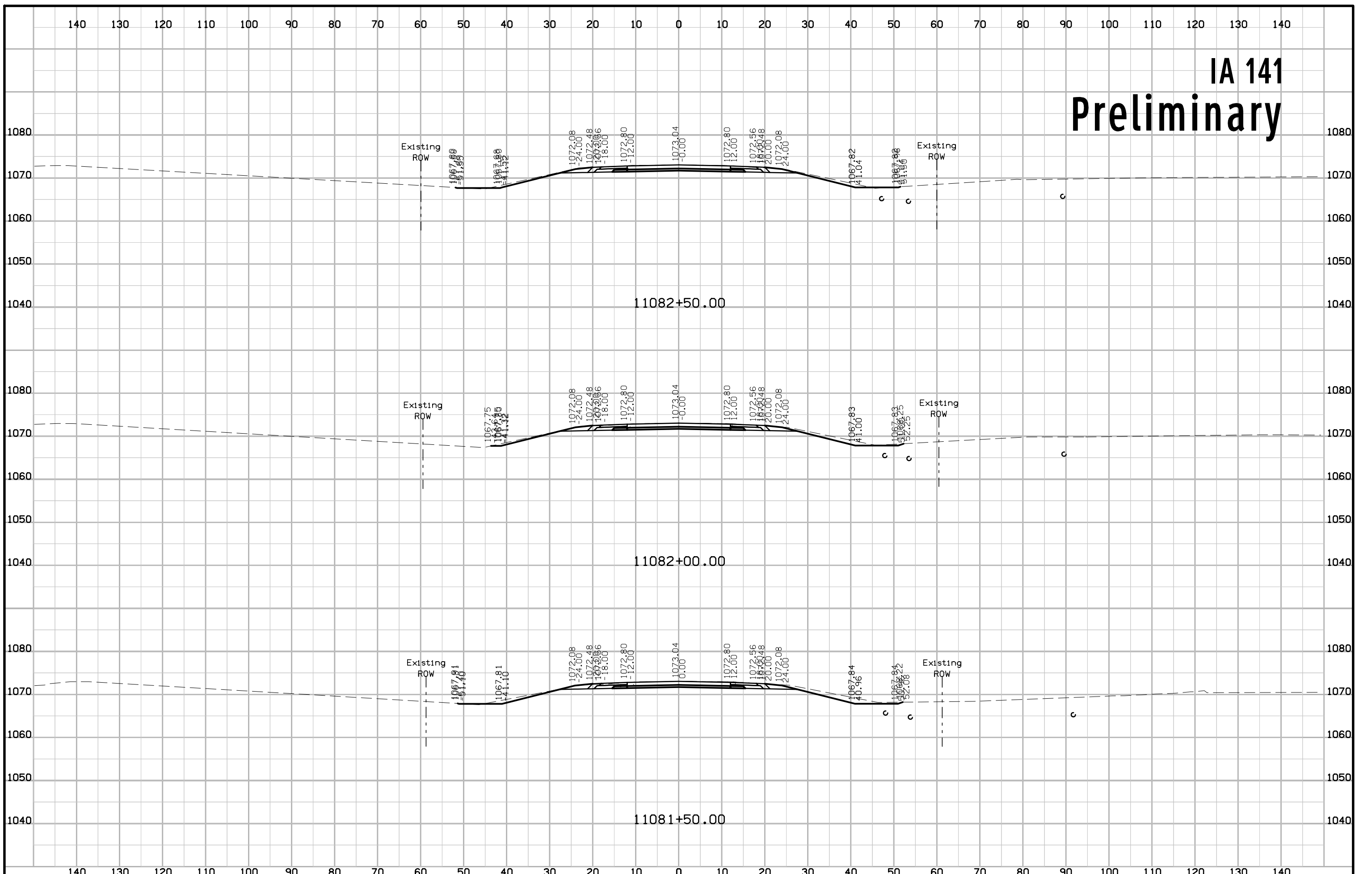
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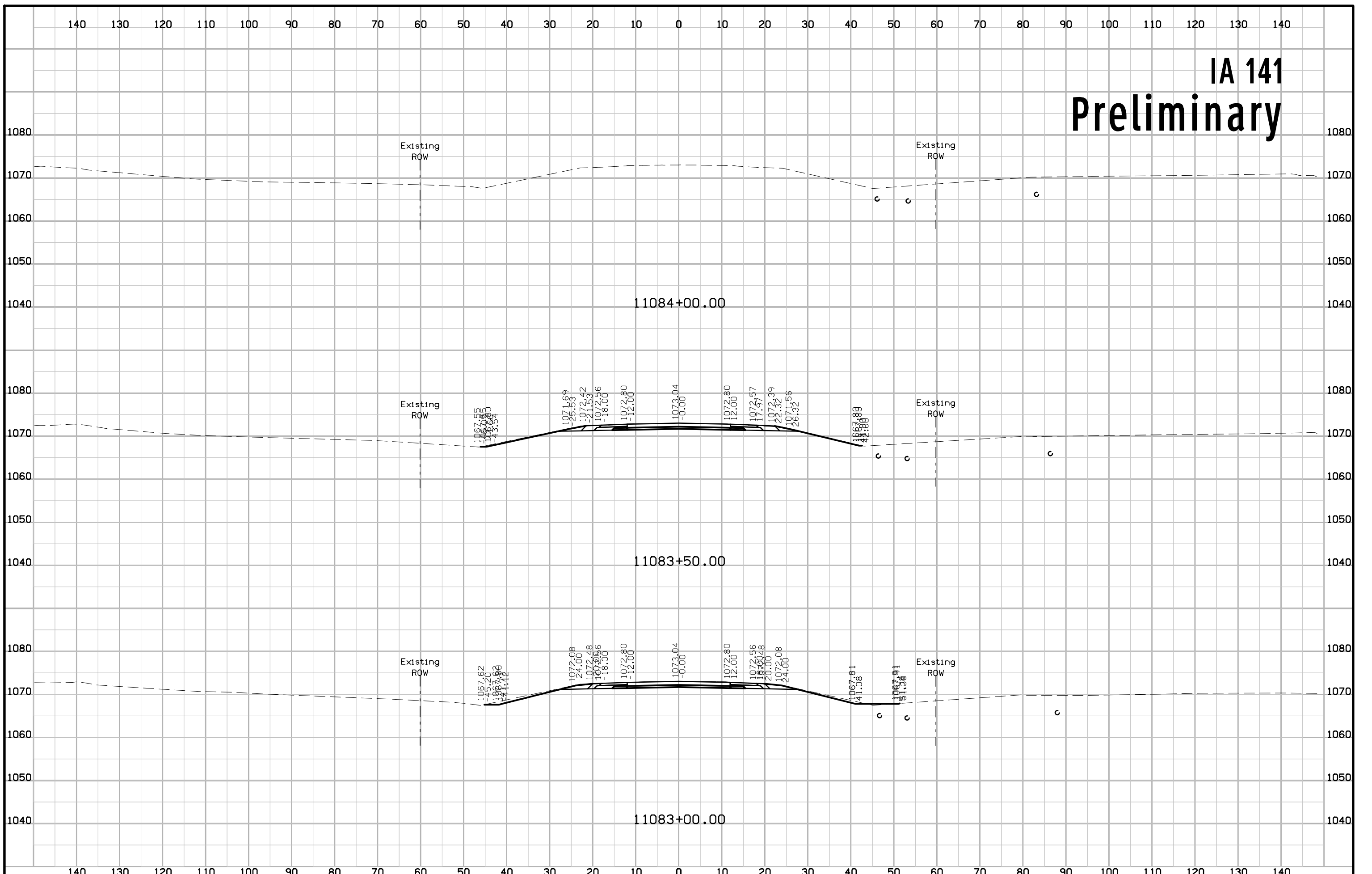
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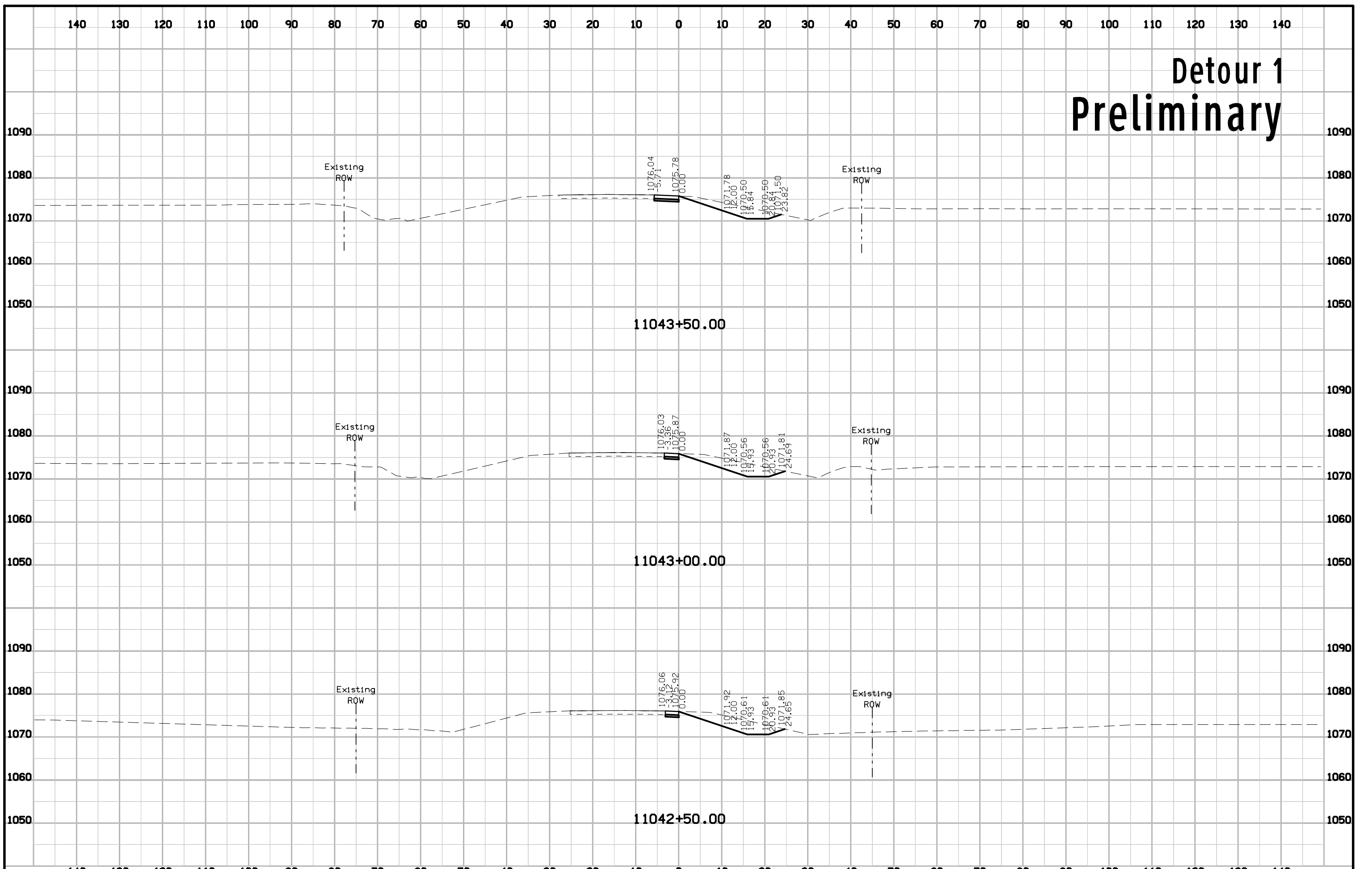
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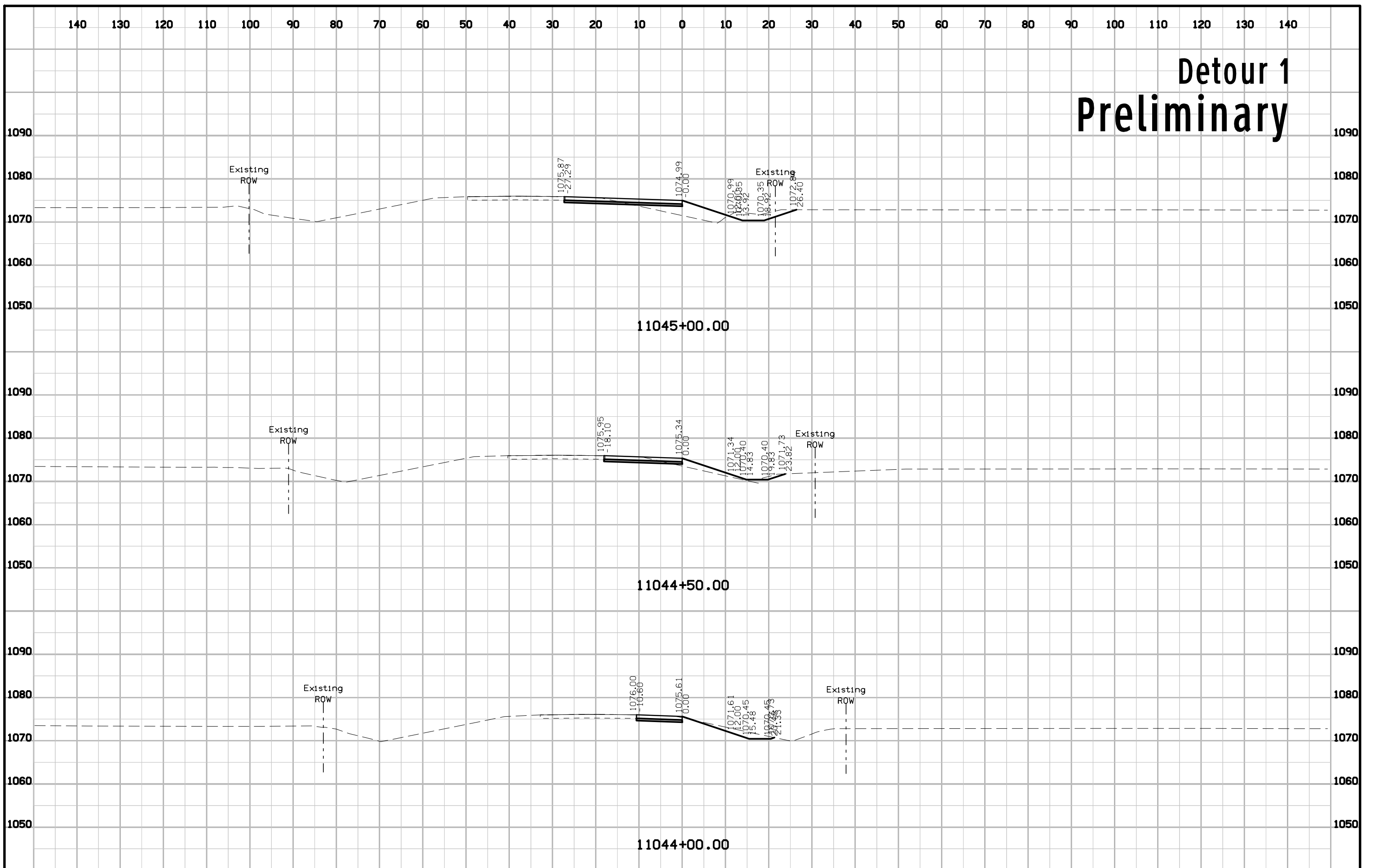
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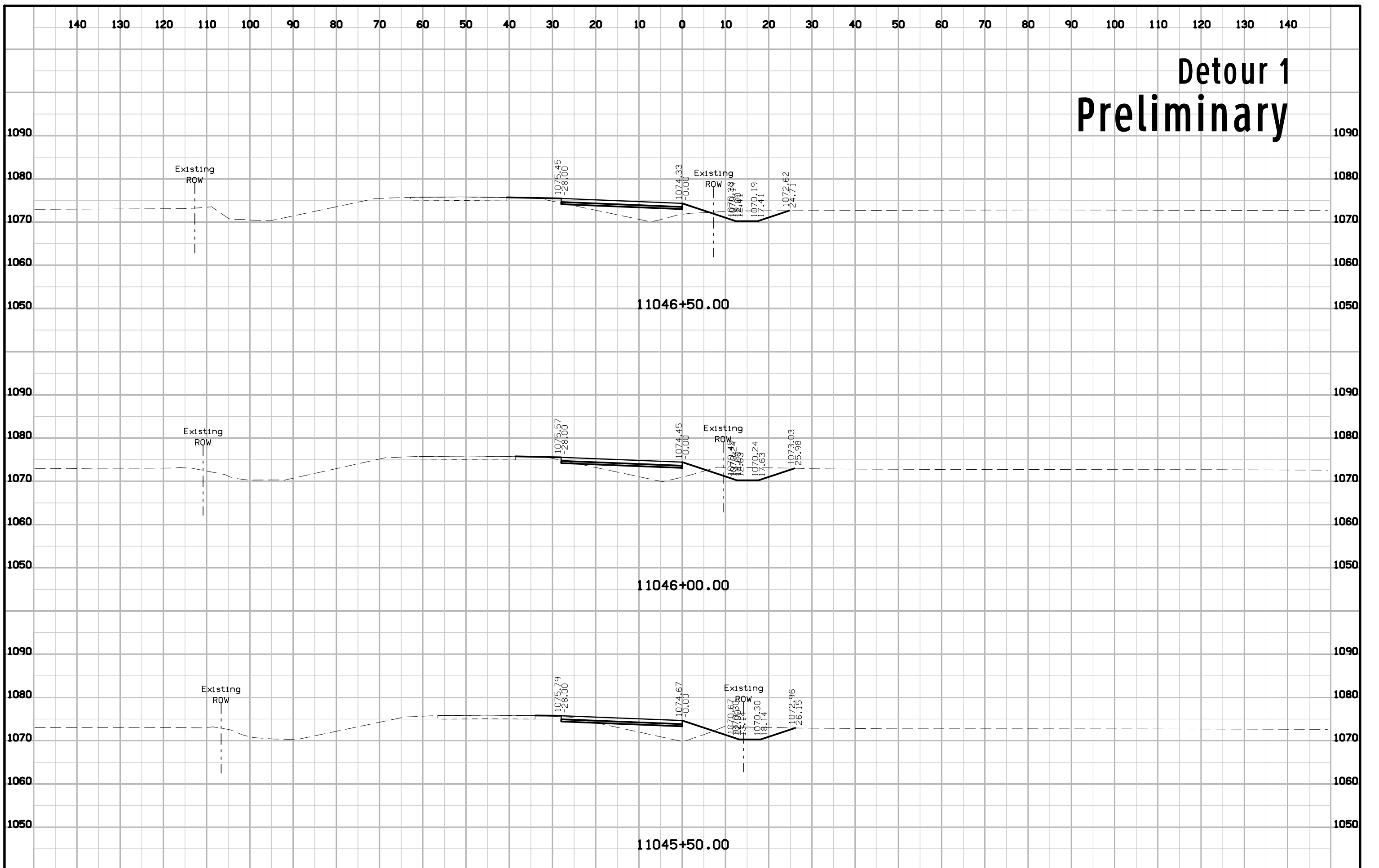
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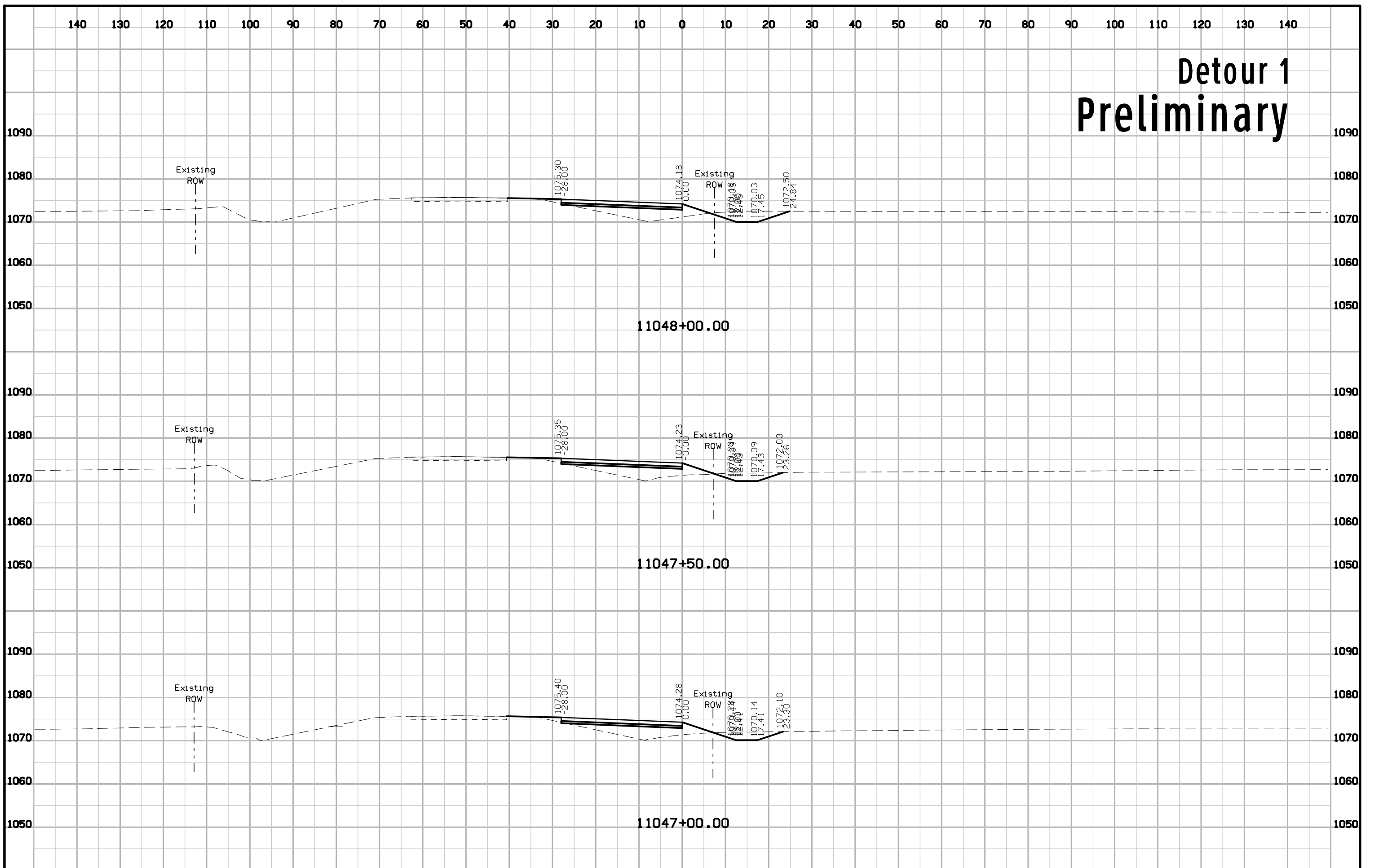
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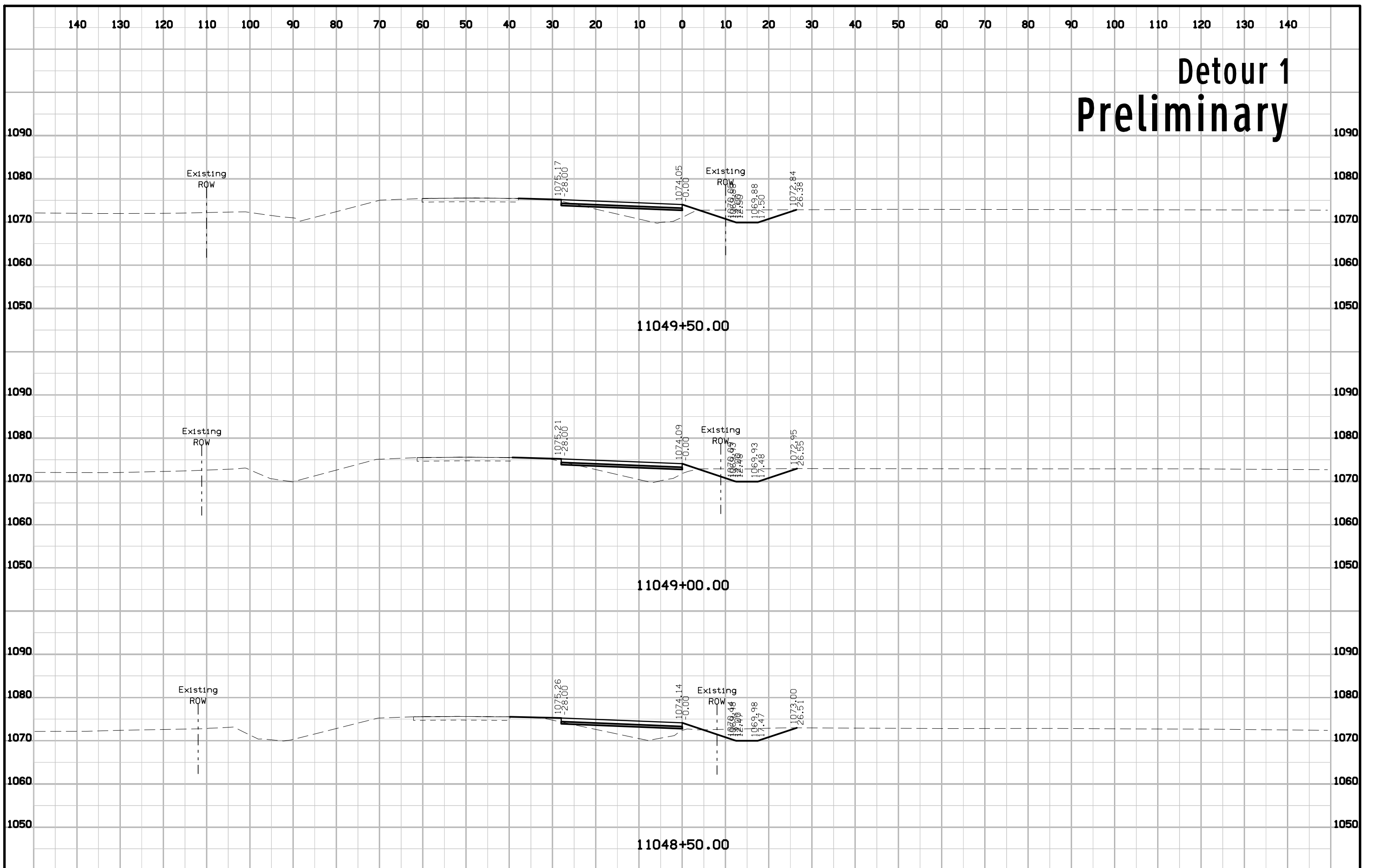
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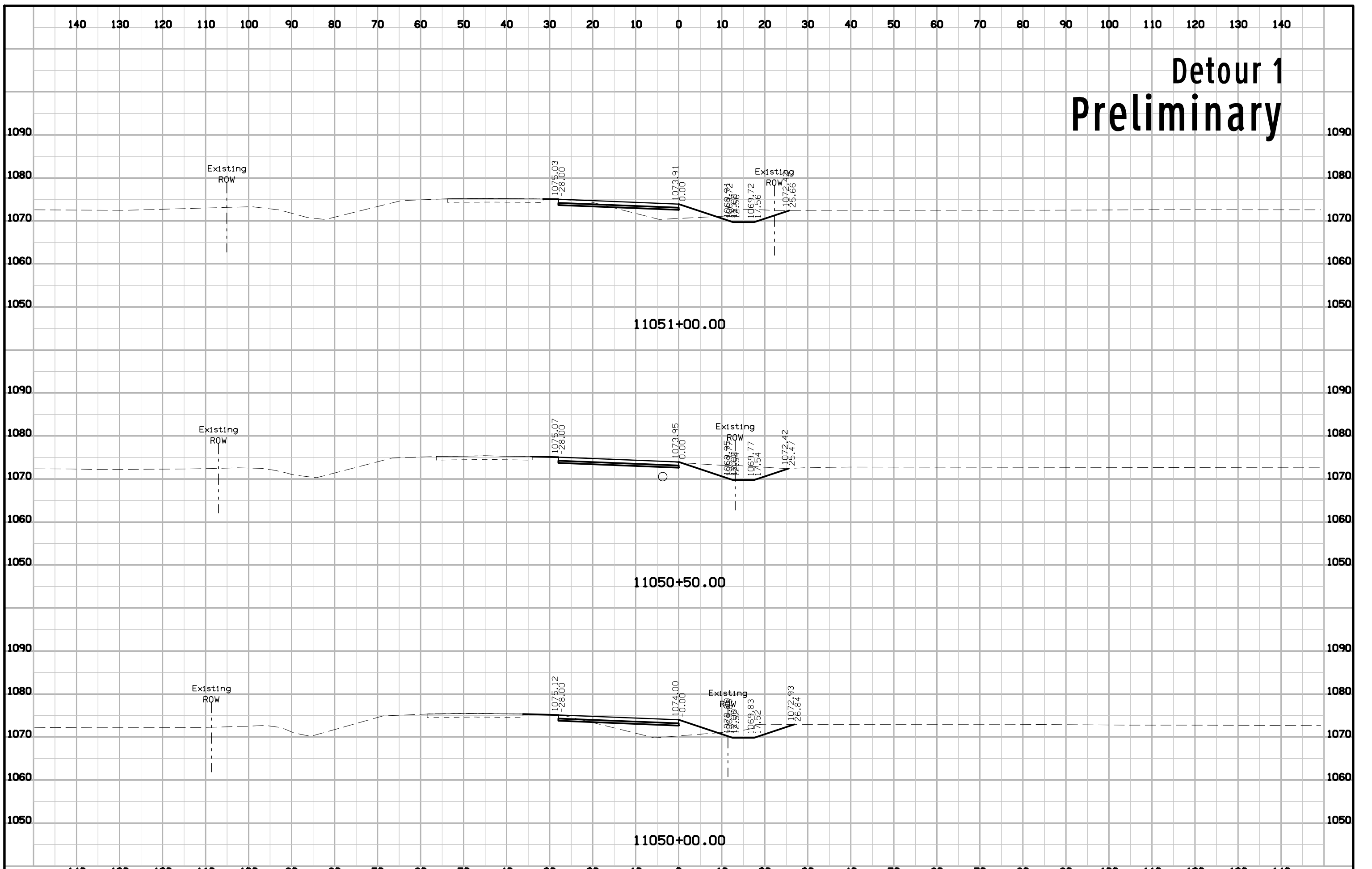
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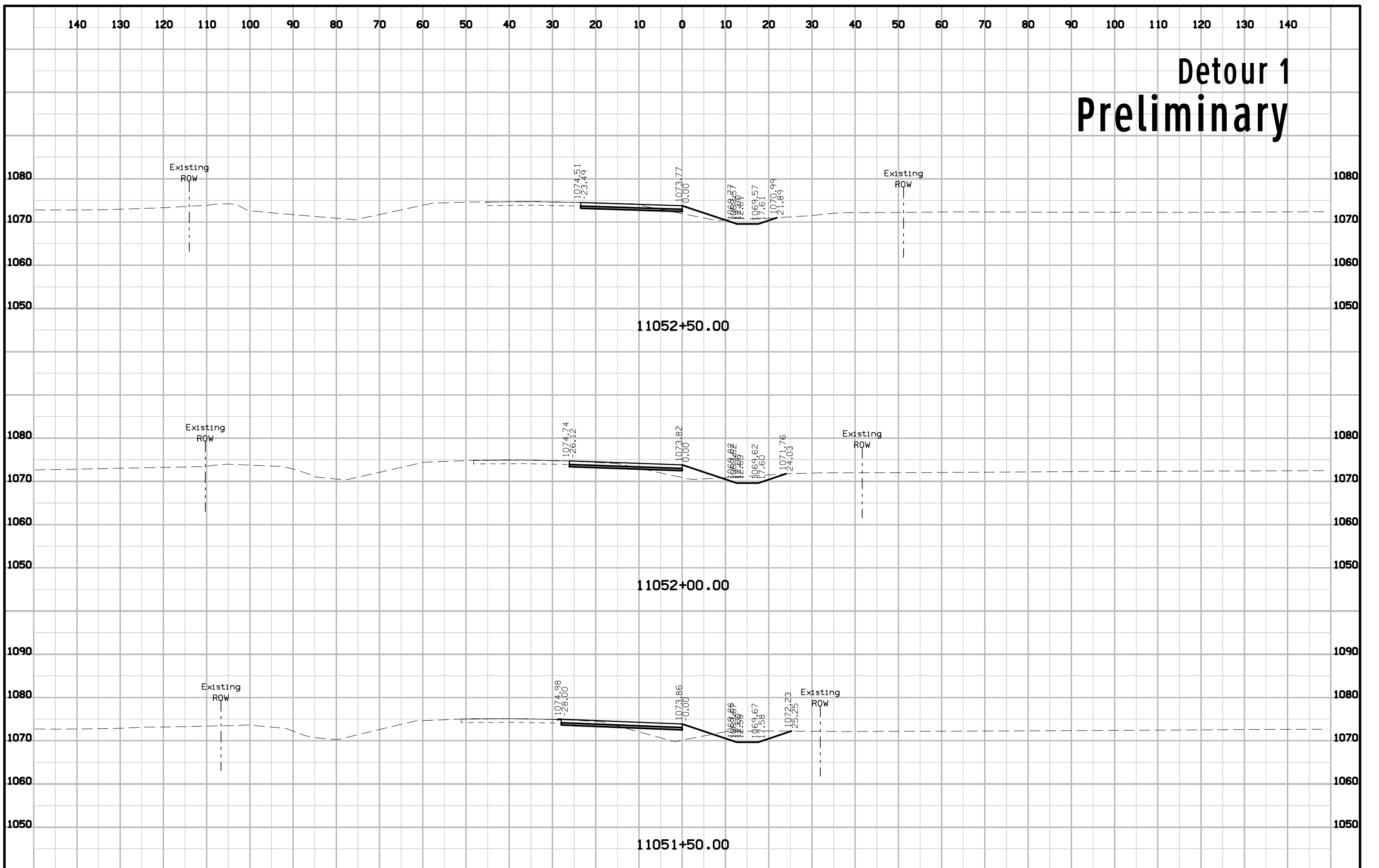
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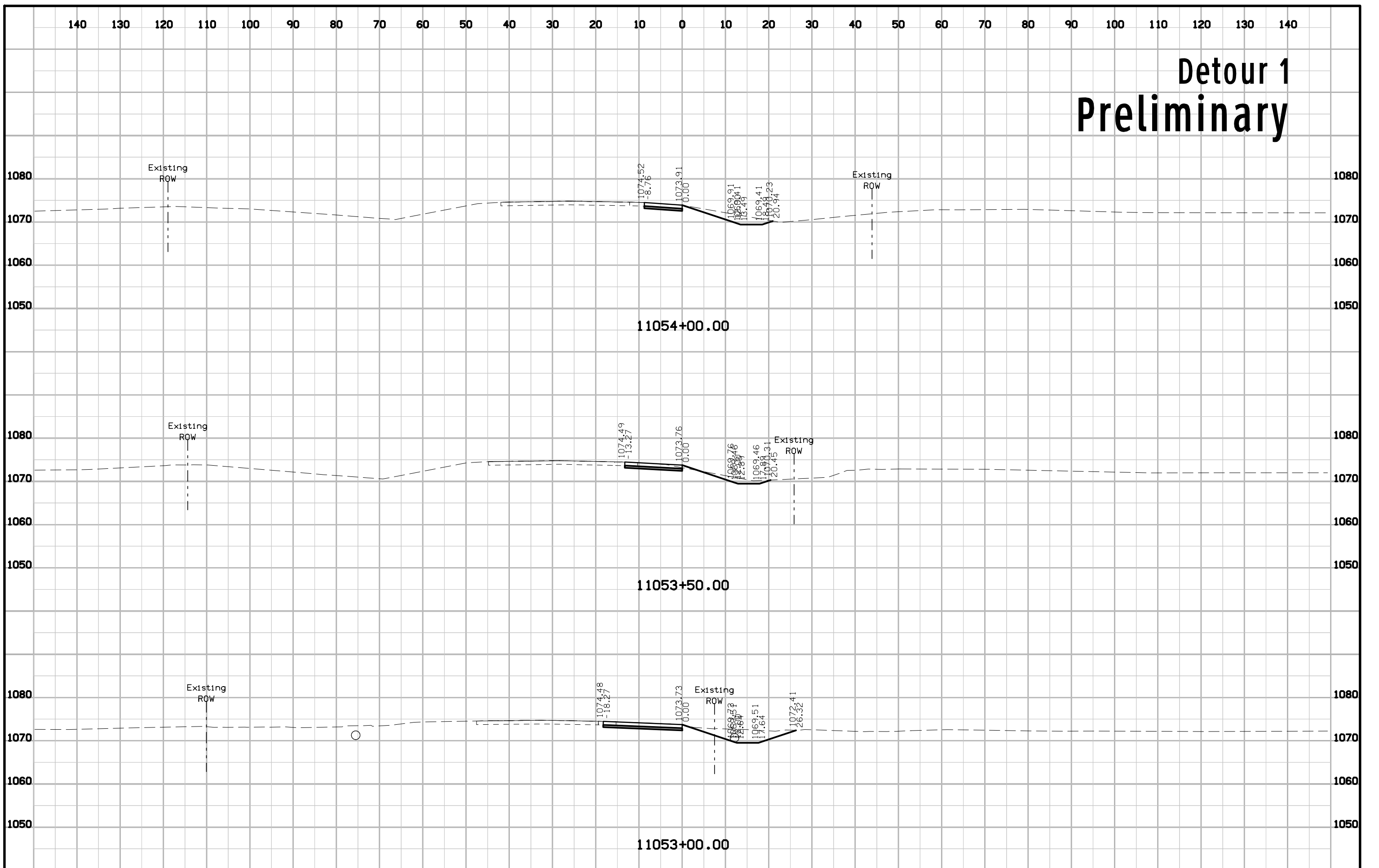
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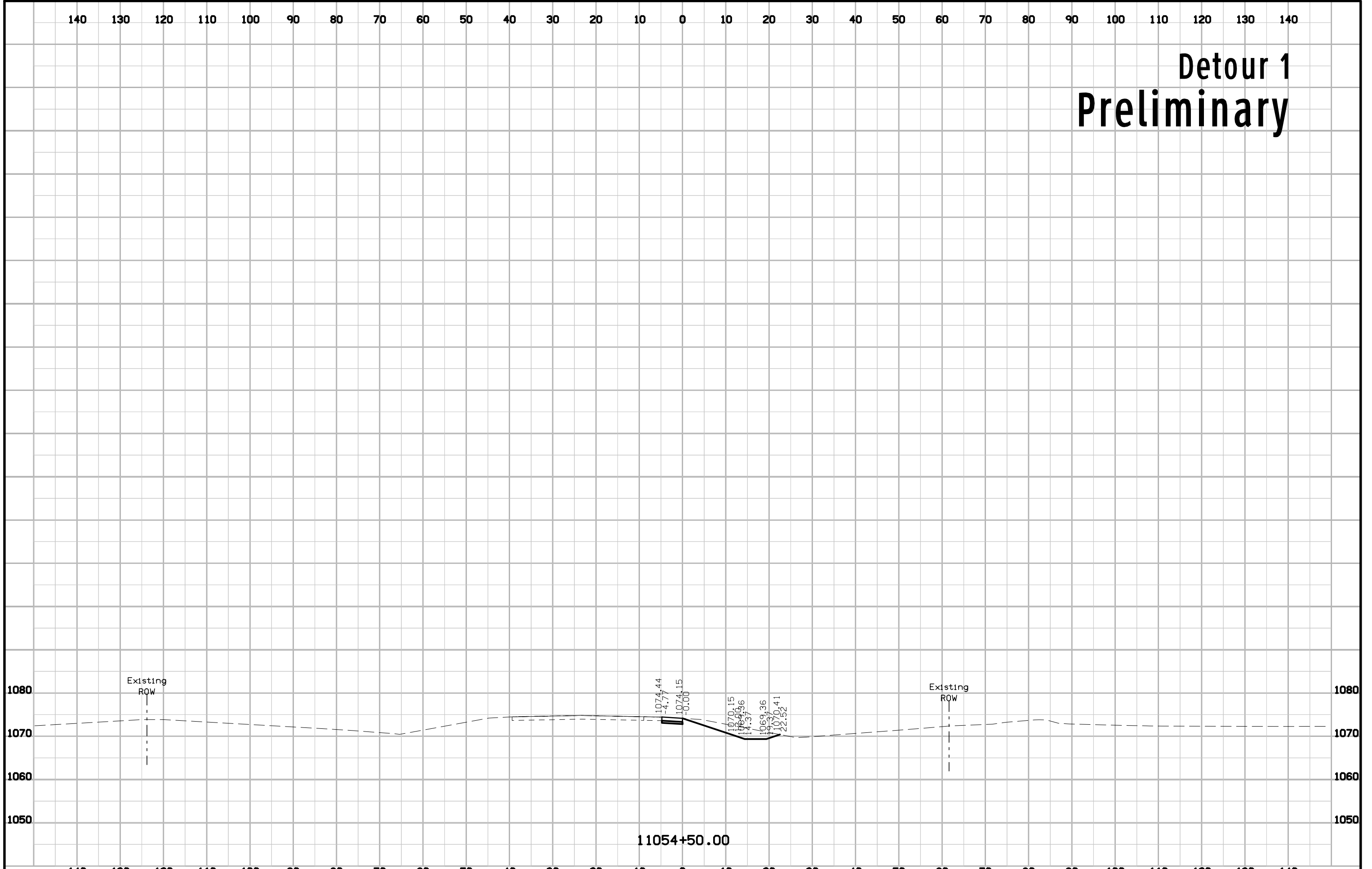
Detour 1 Preliminary



Detour 1 Preliminary

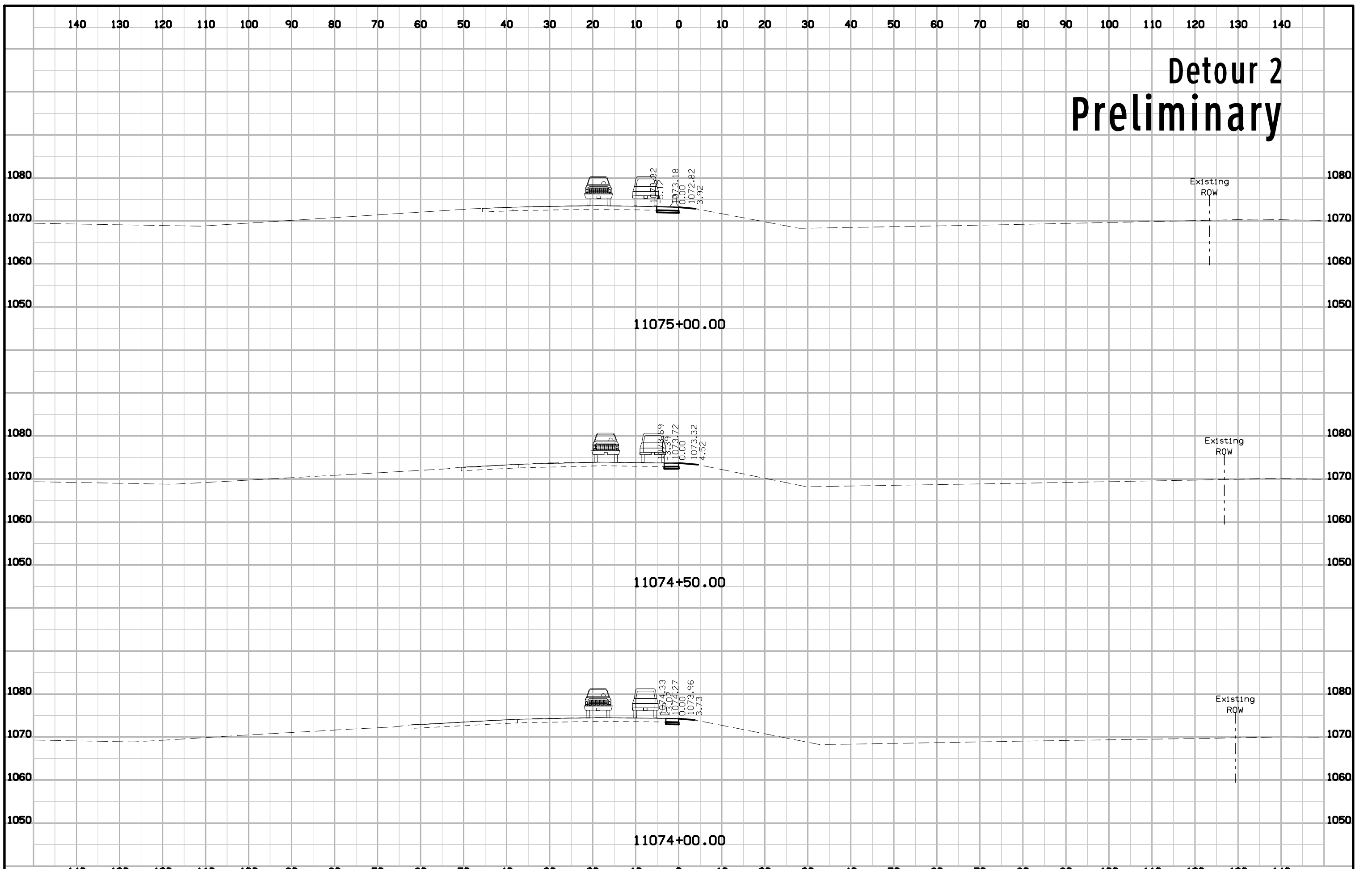


Detour 1 Preliminary

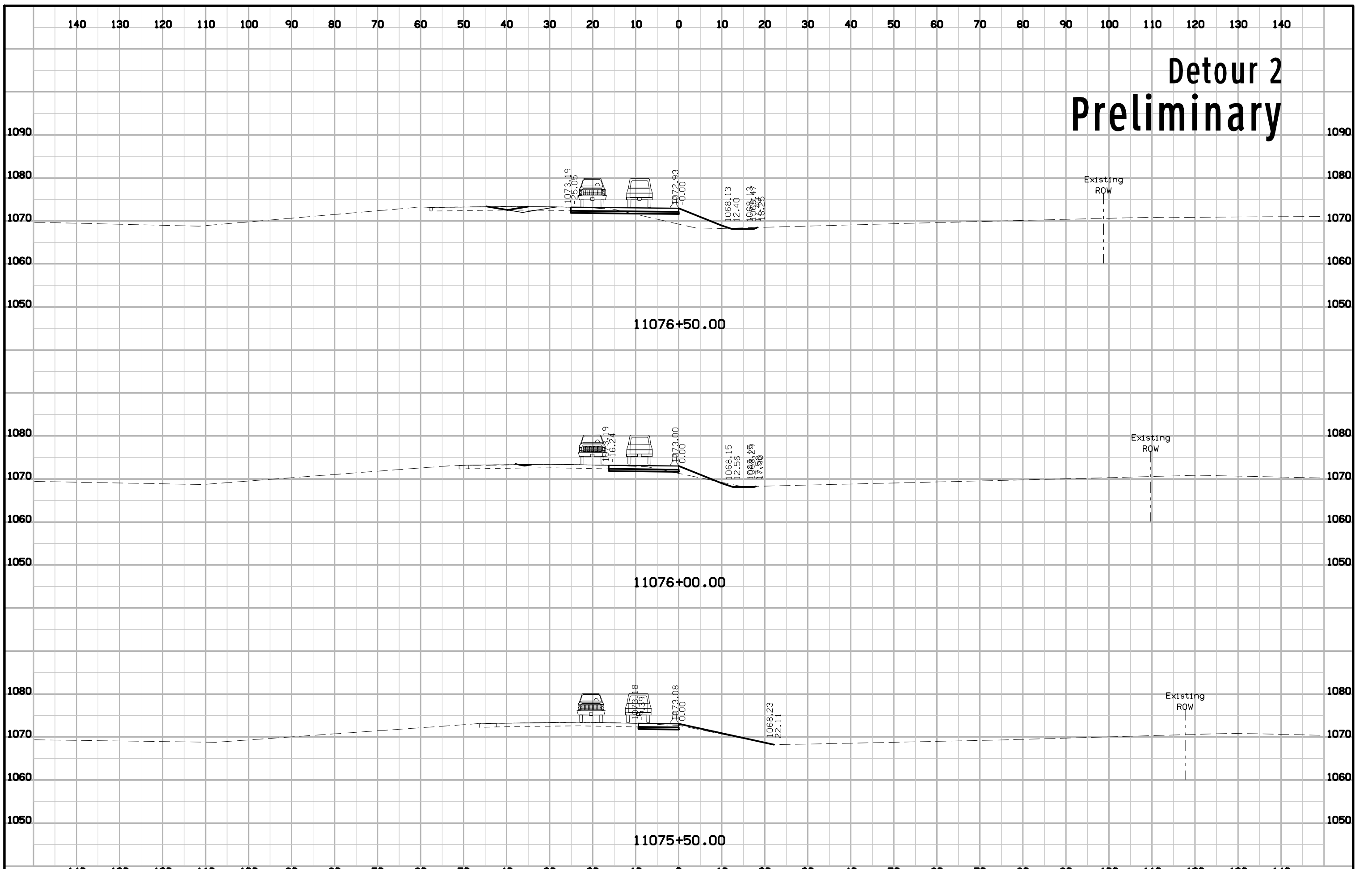


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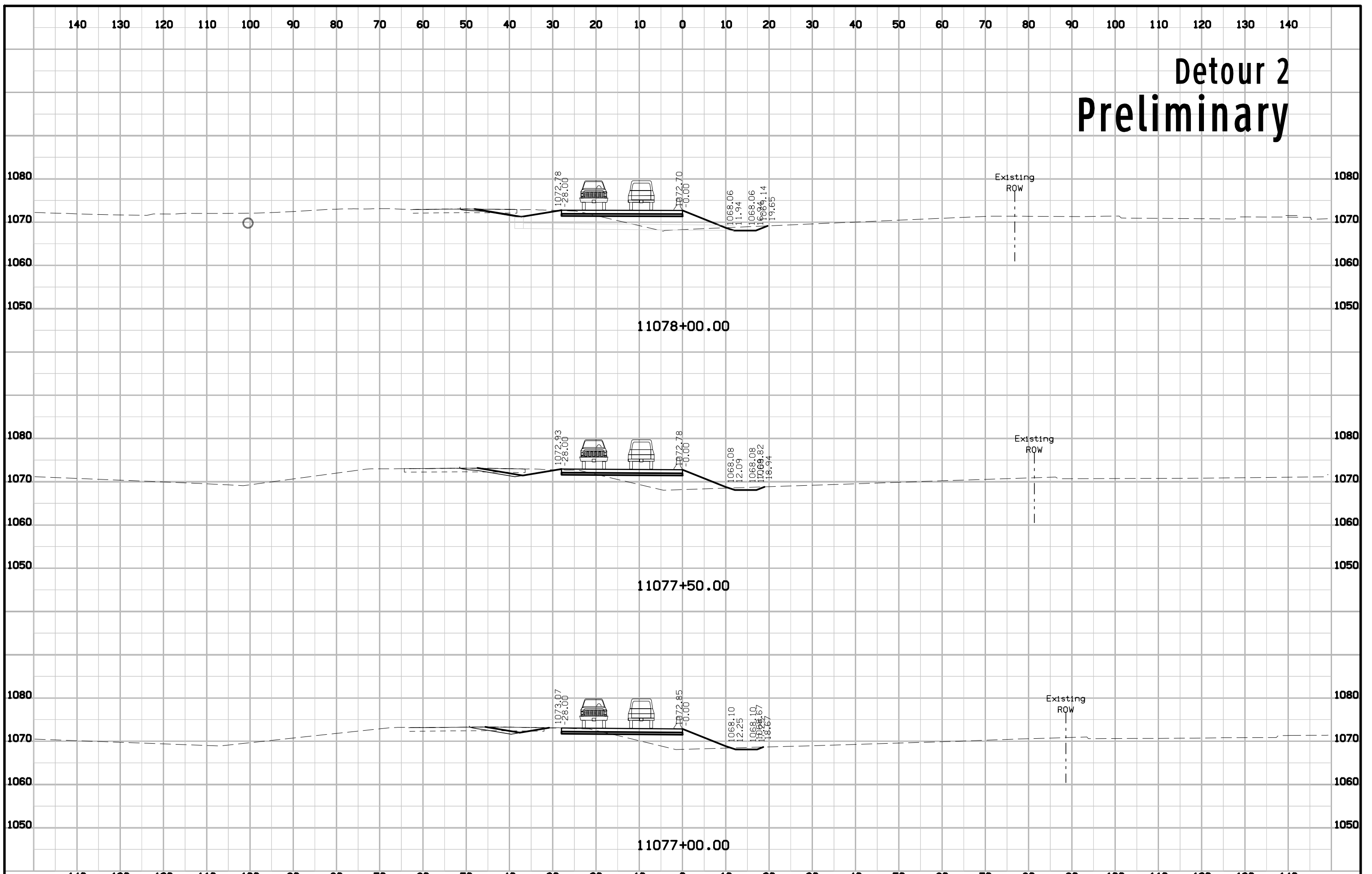
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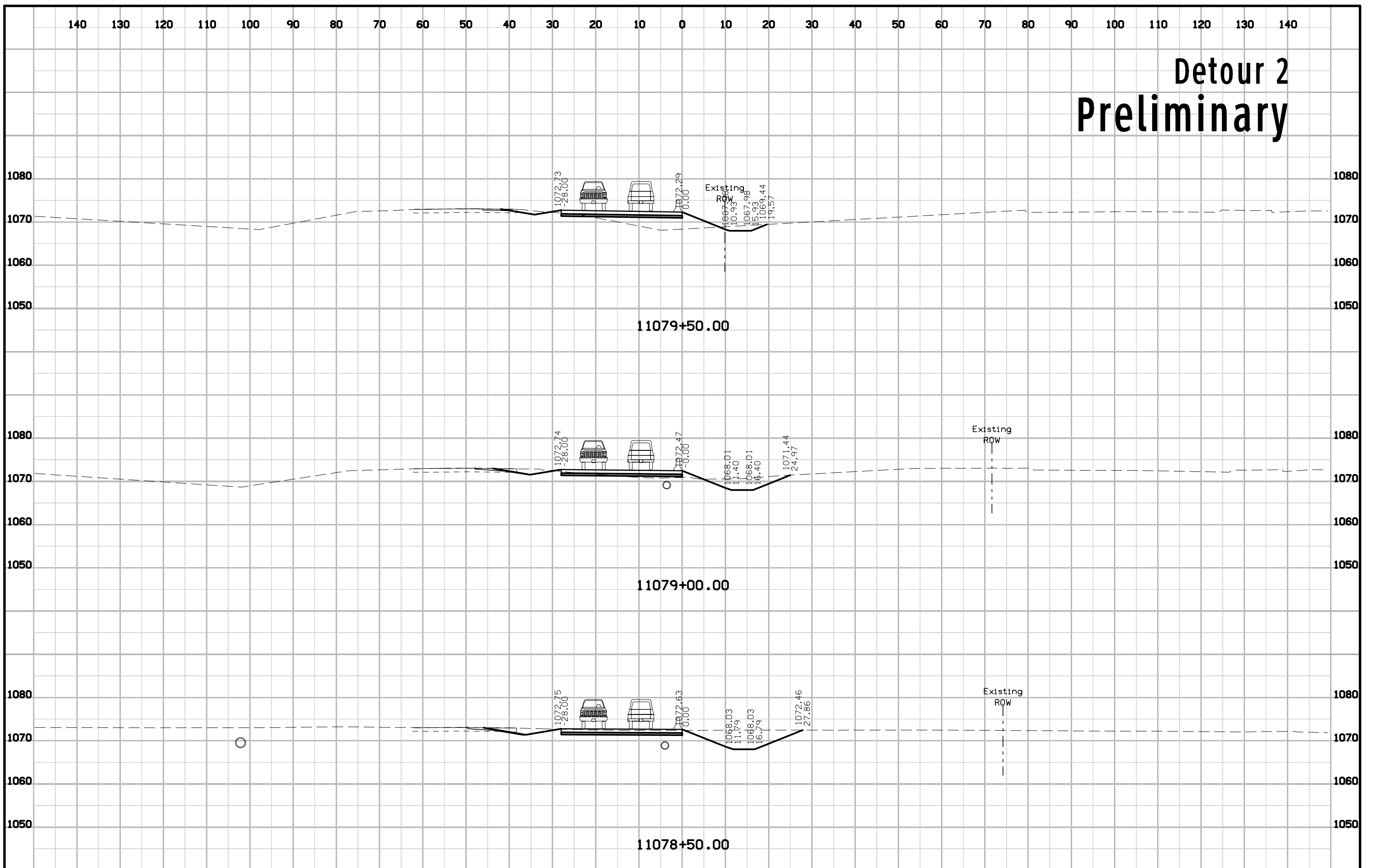
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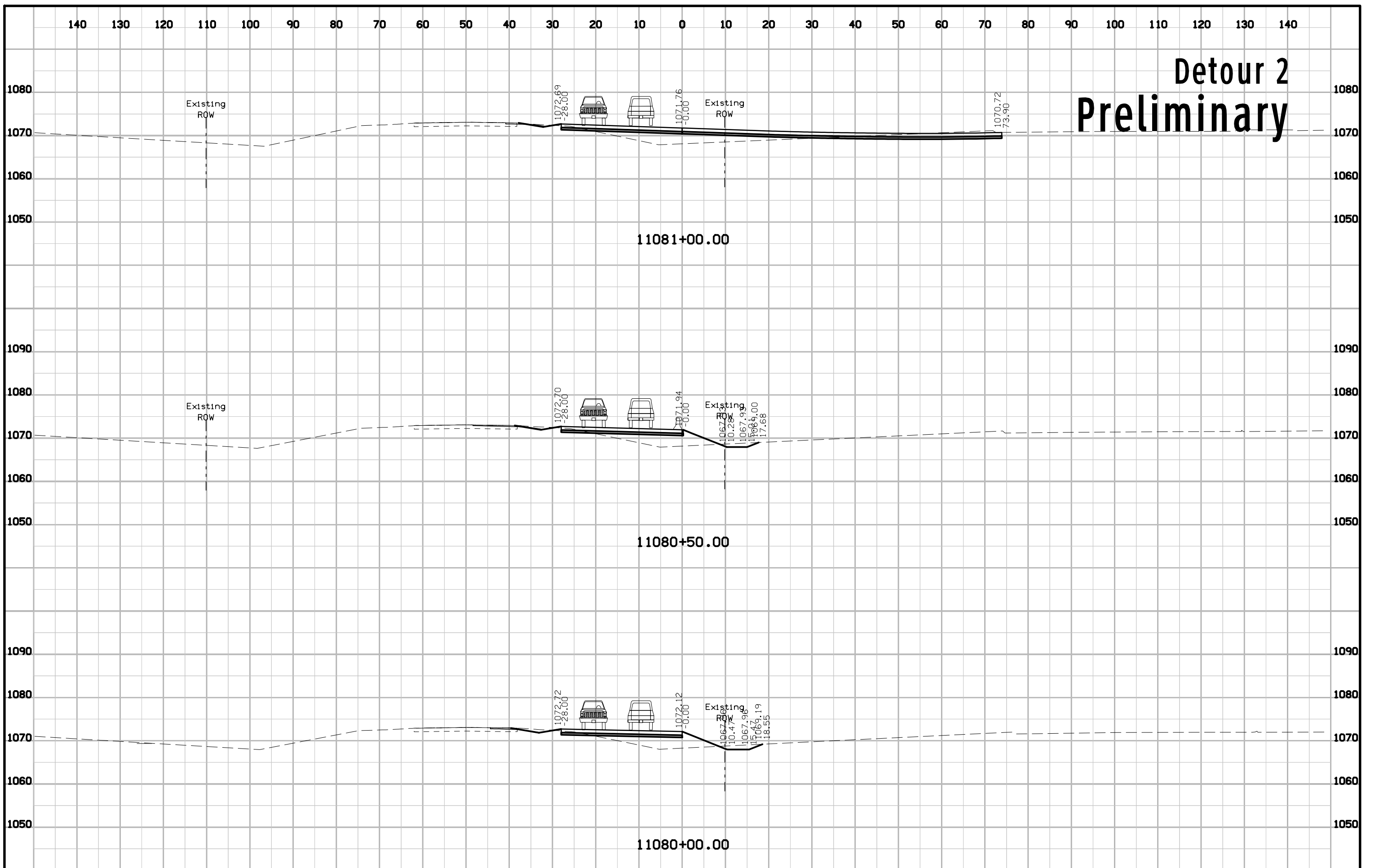
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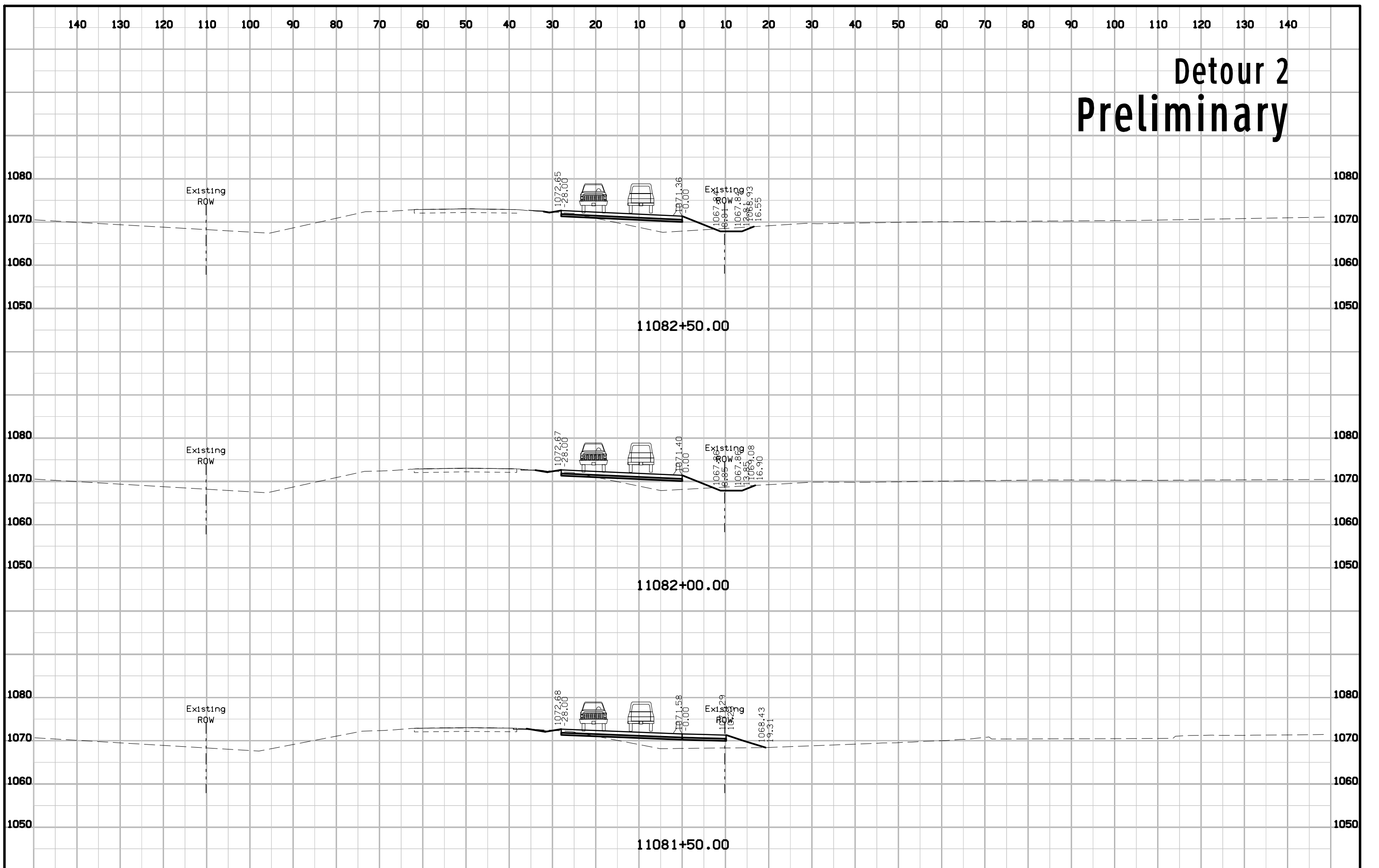
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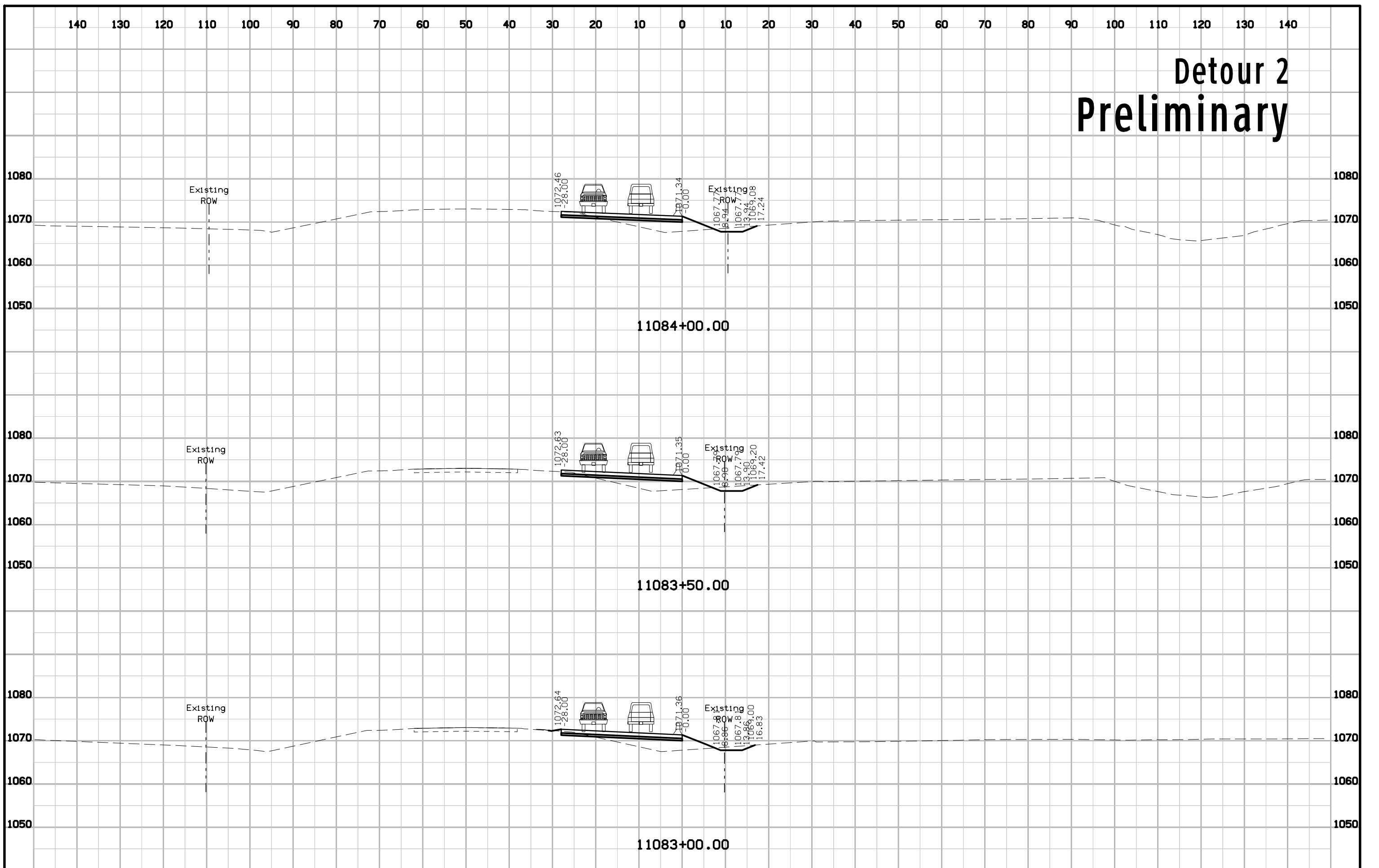
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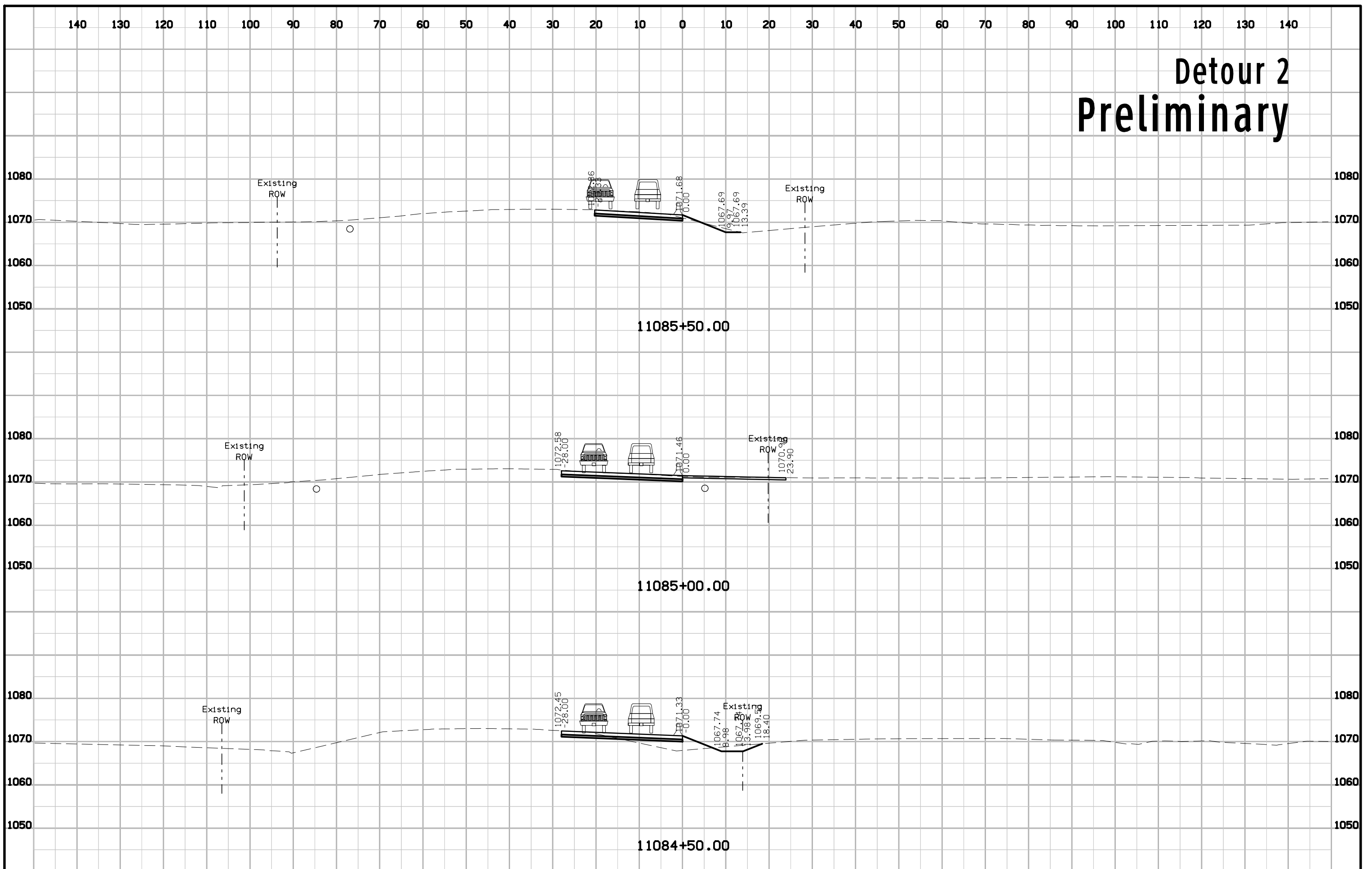
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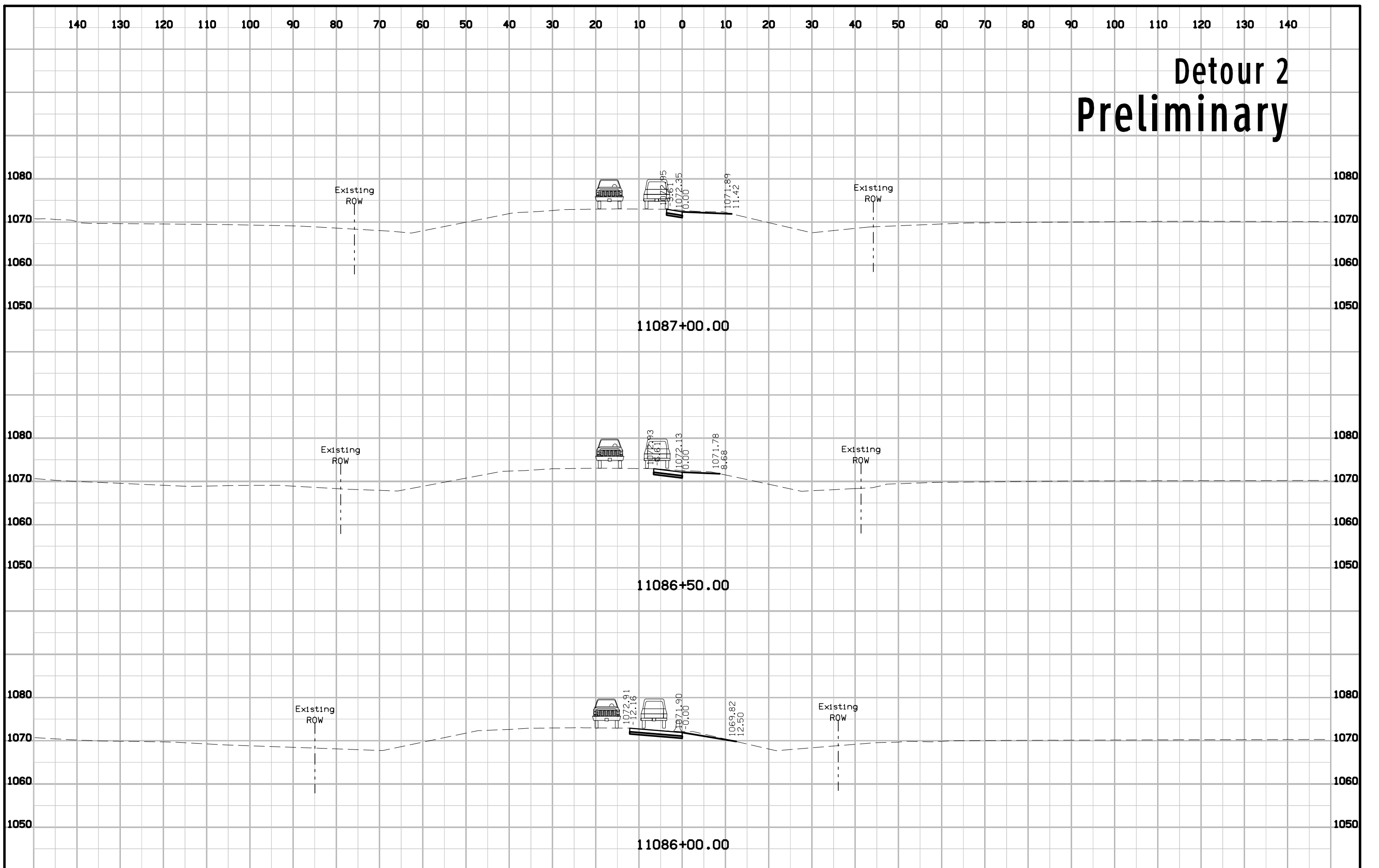
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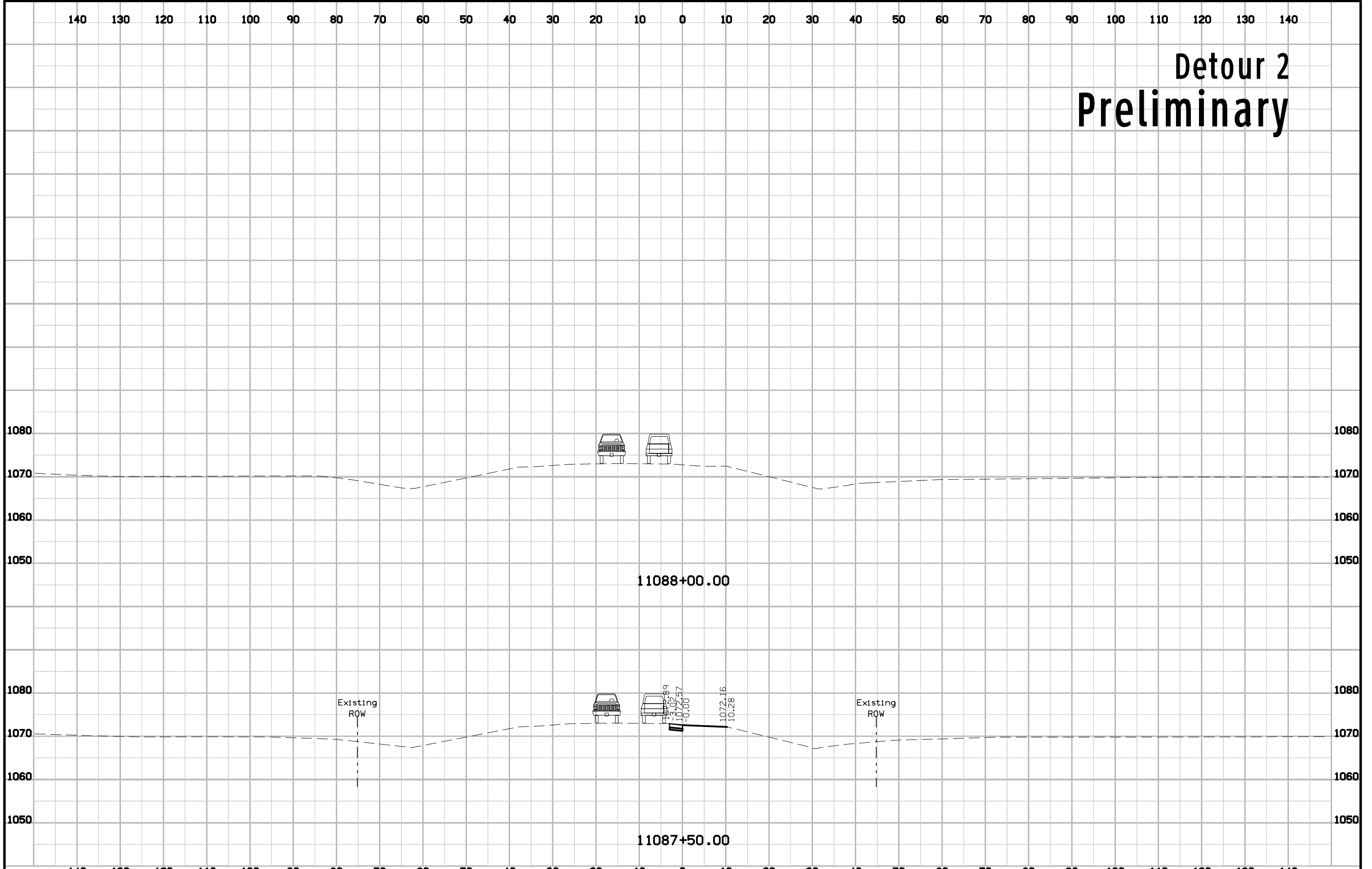
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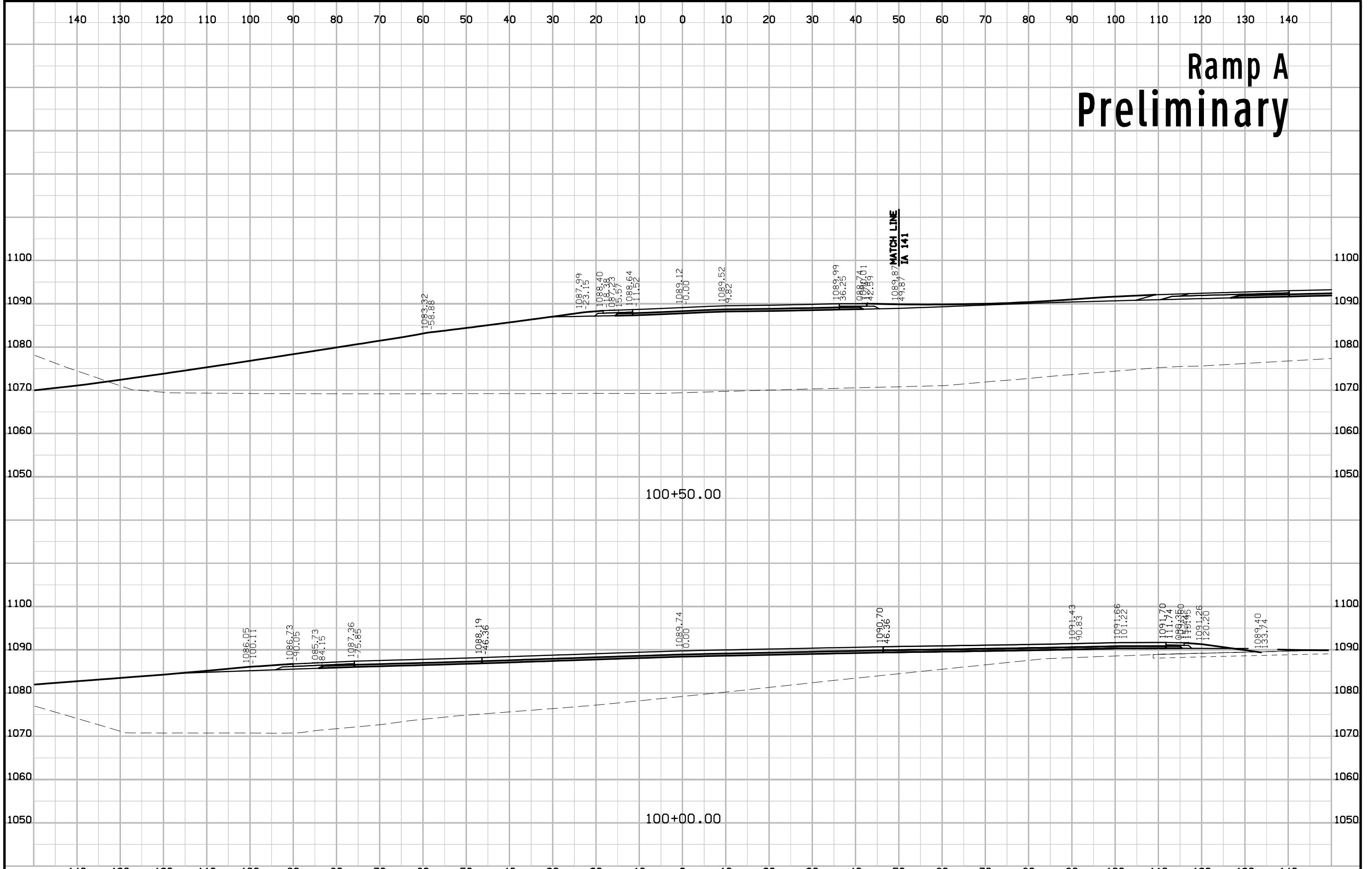
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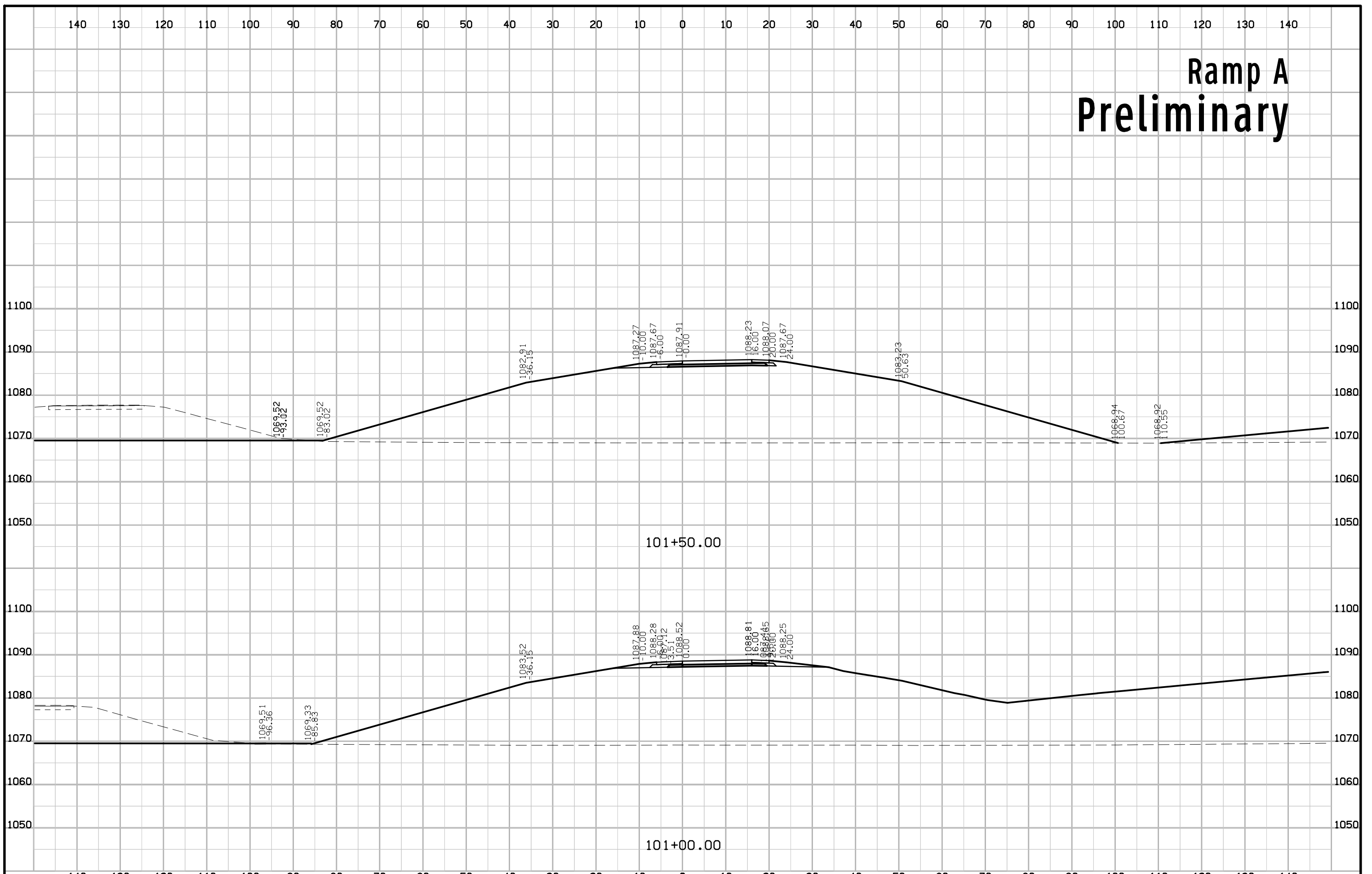
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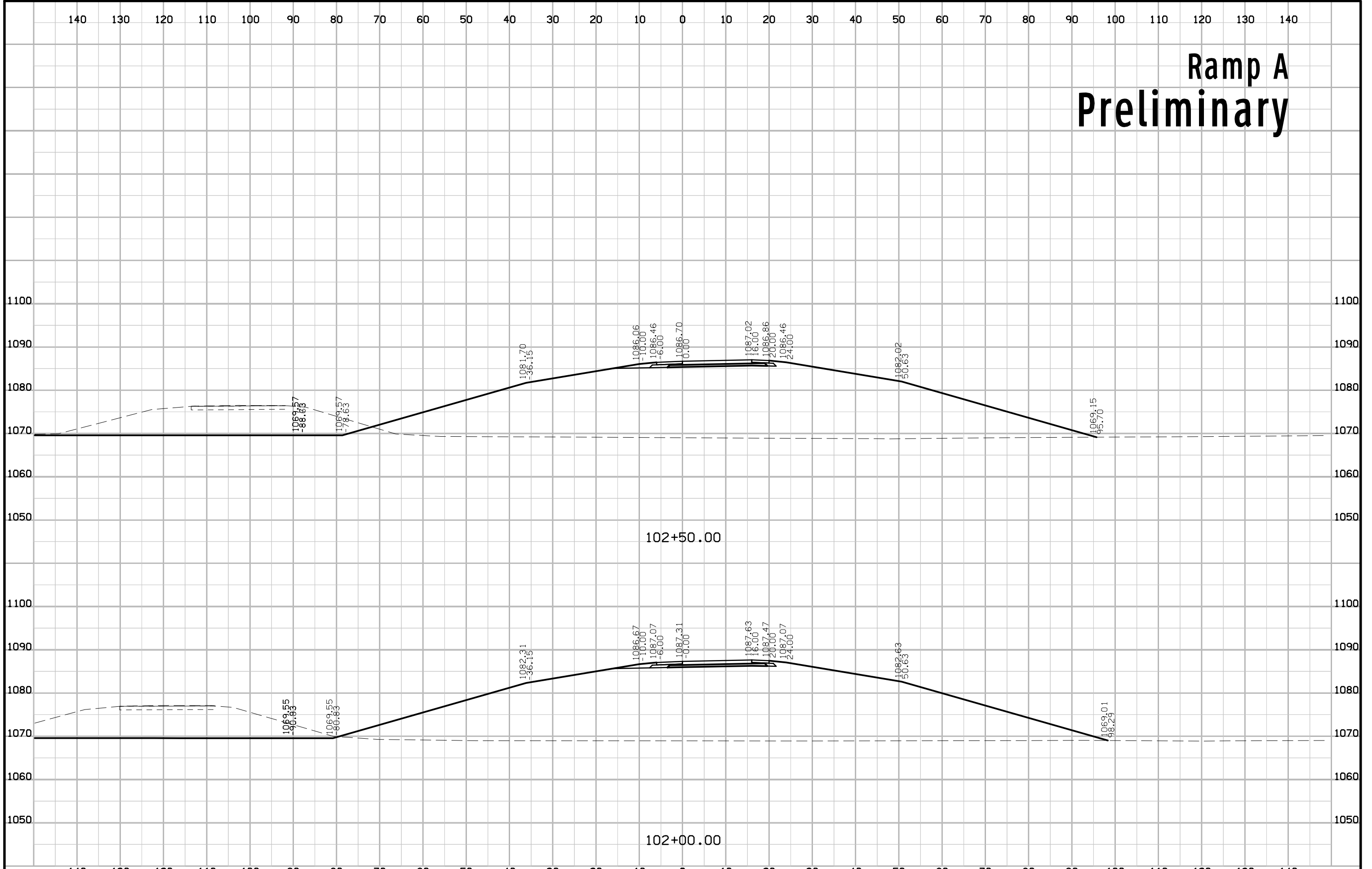
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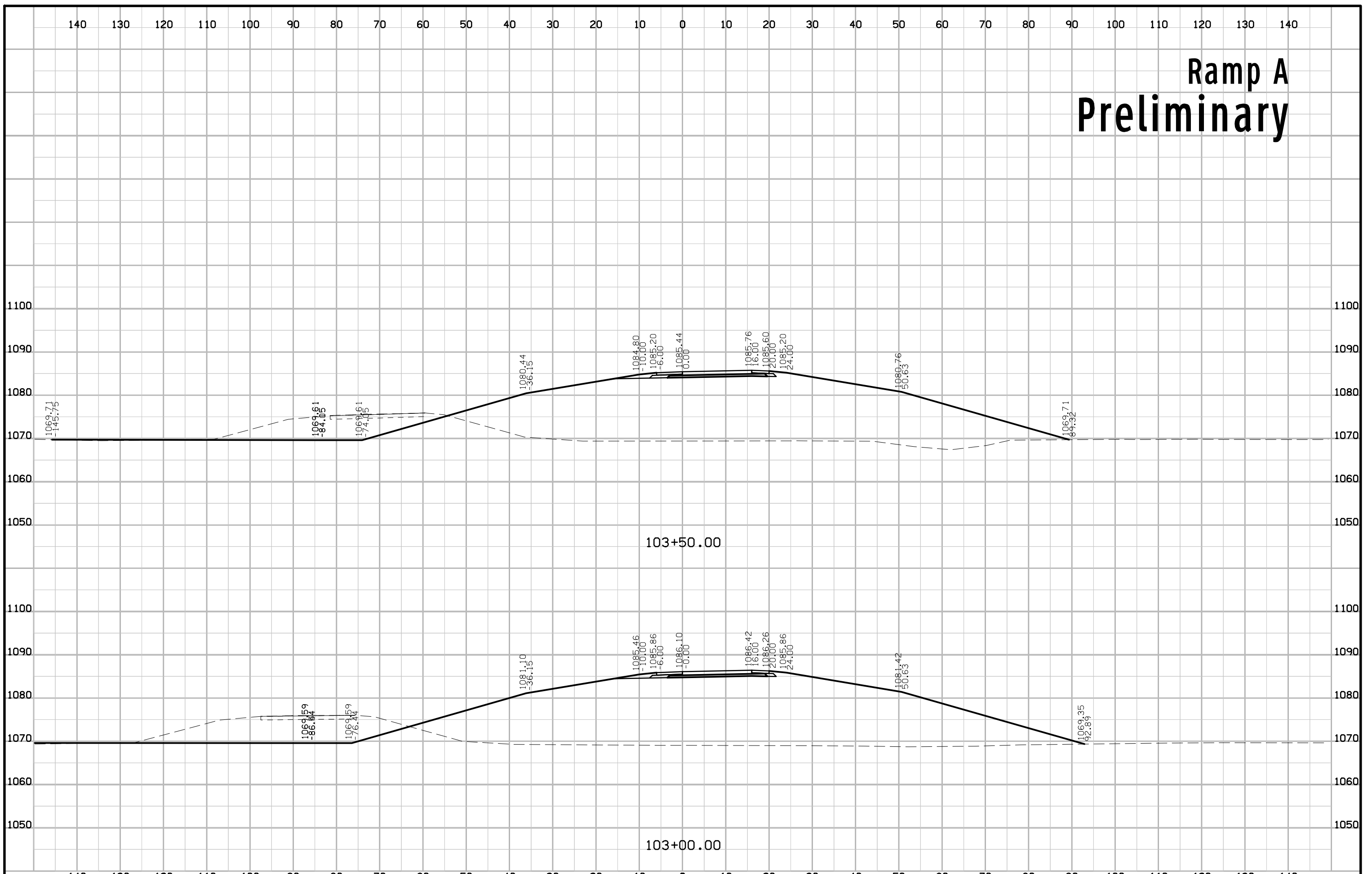
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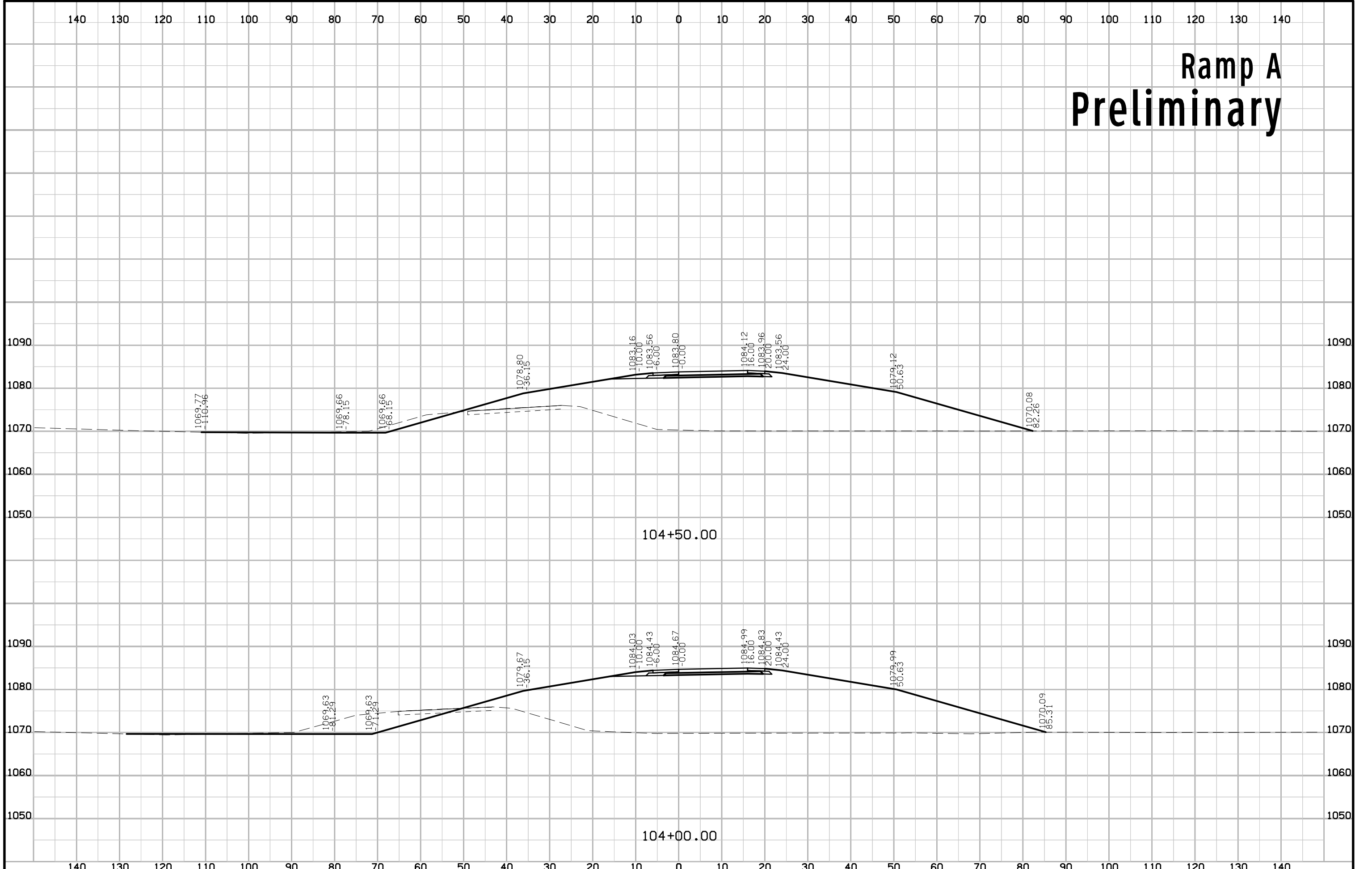
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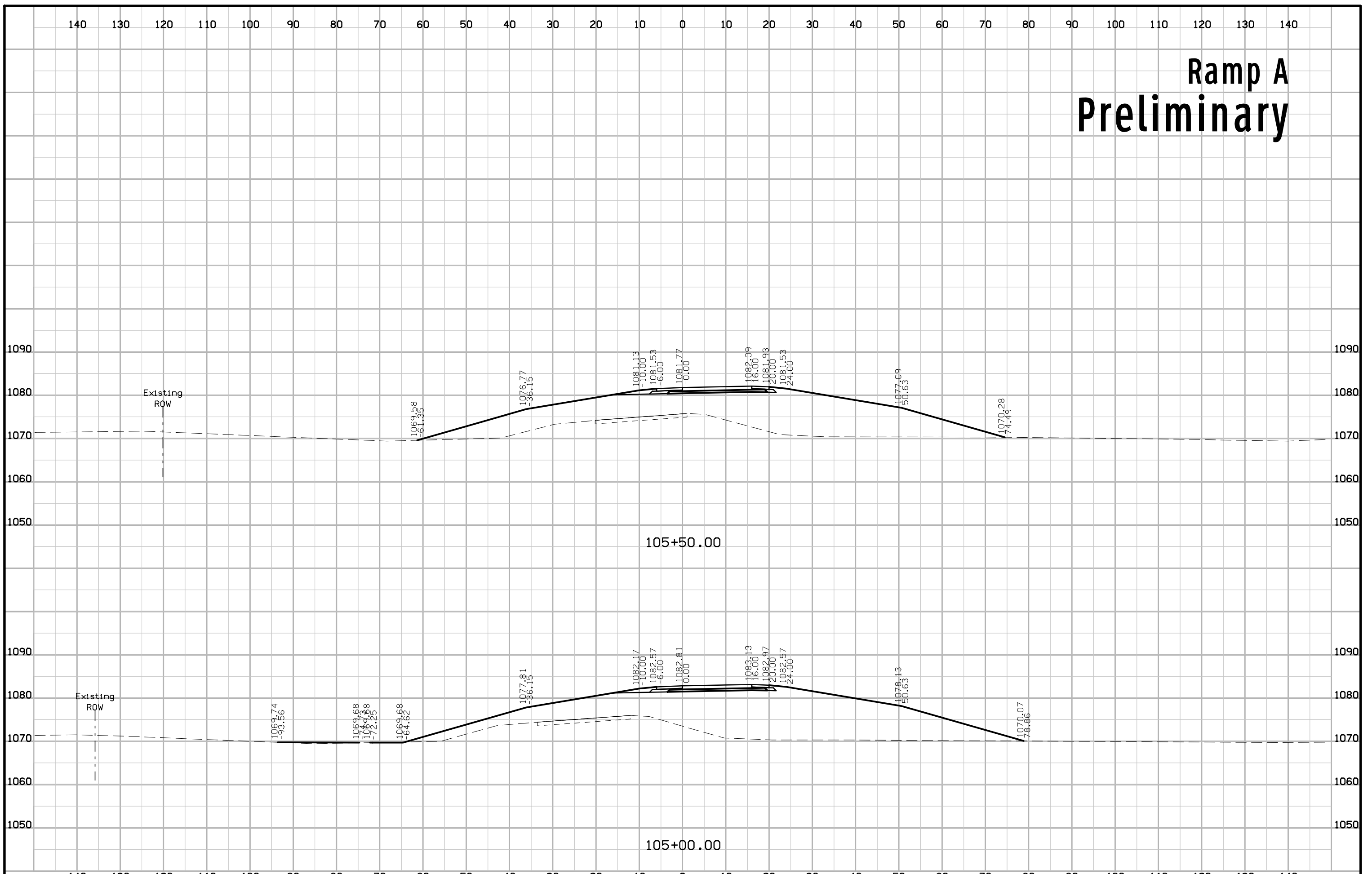
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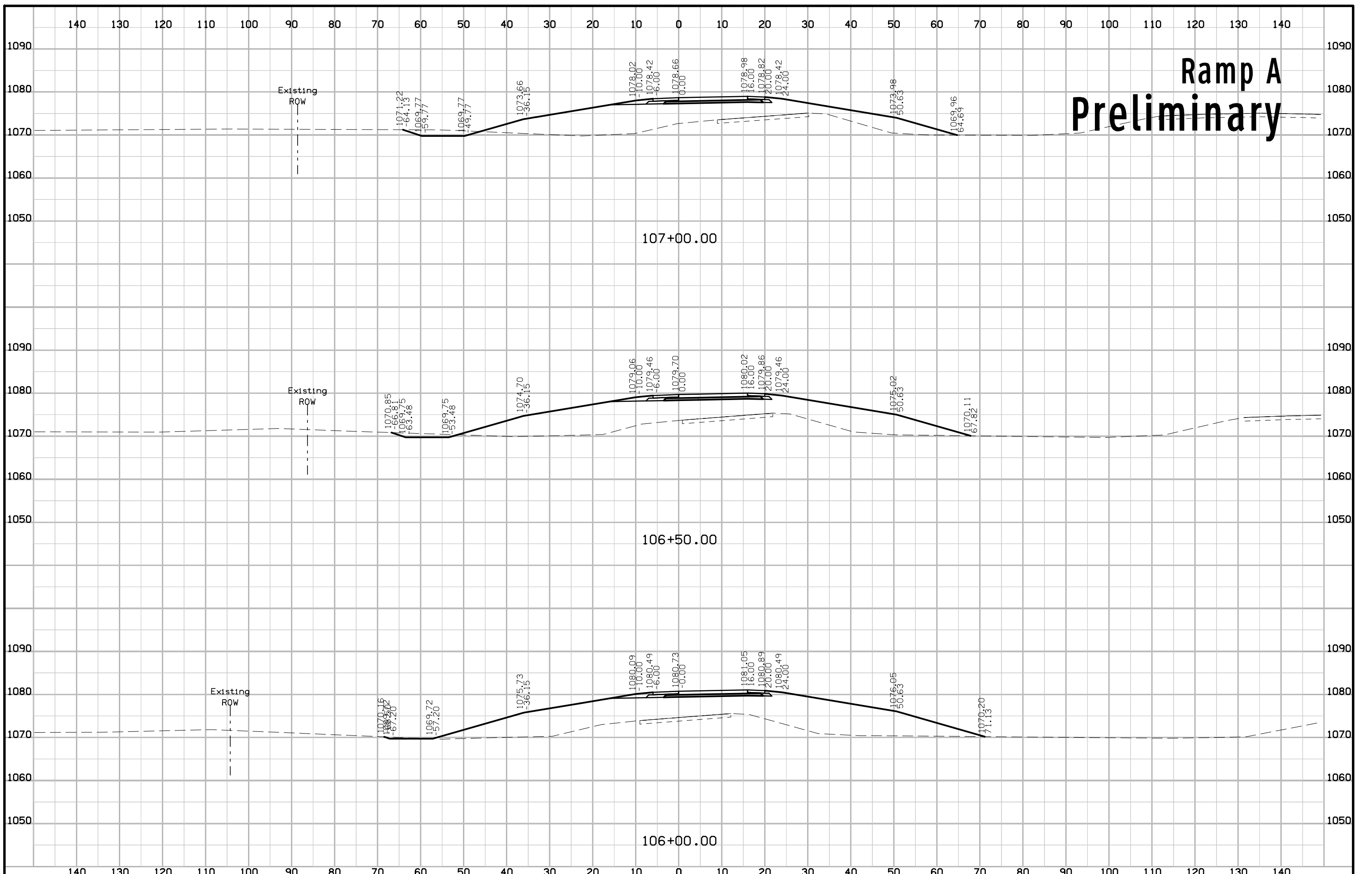
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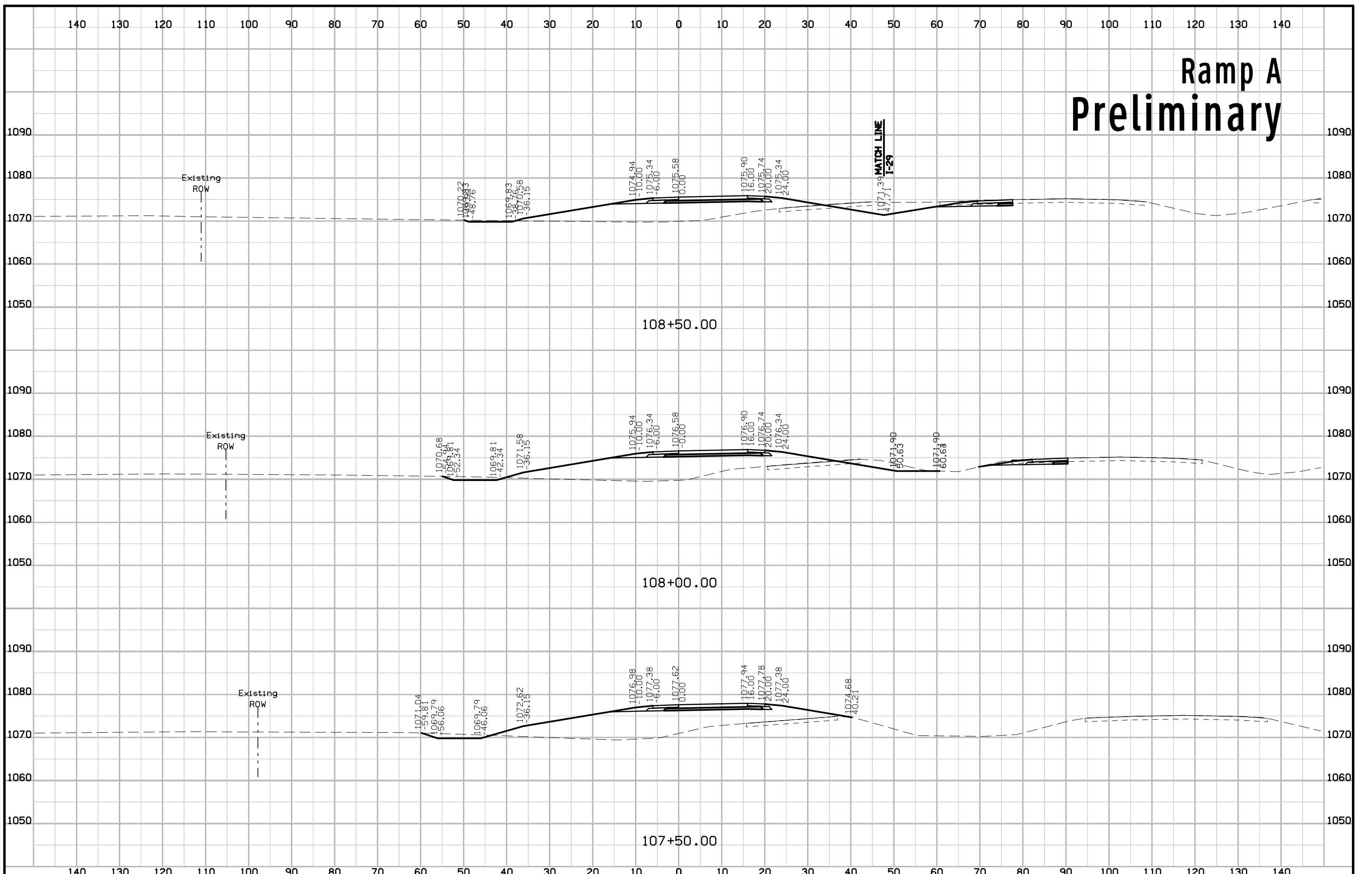
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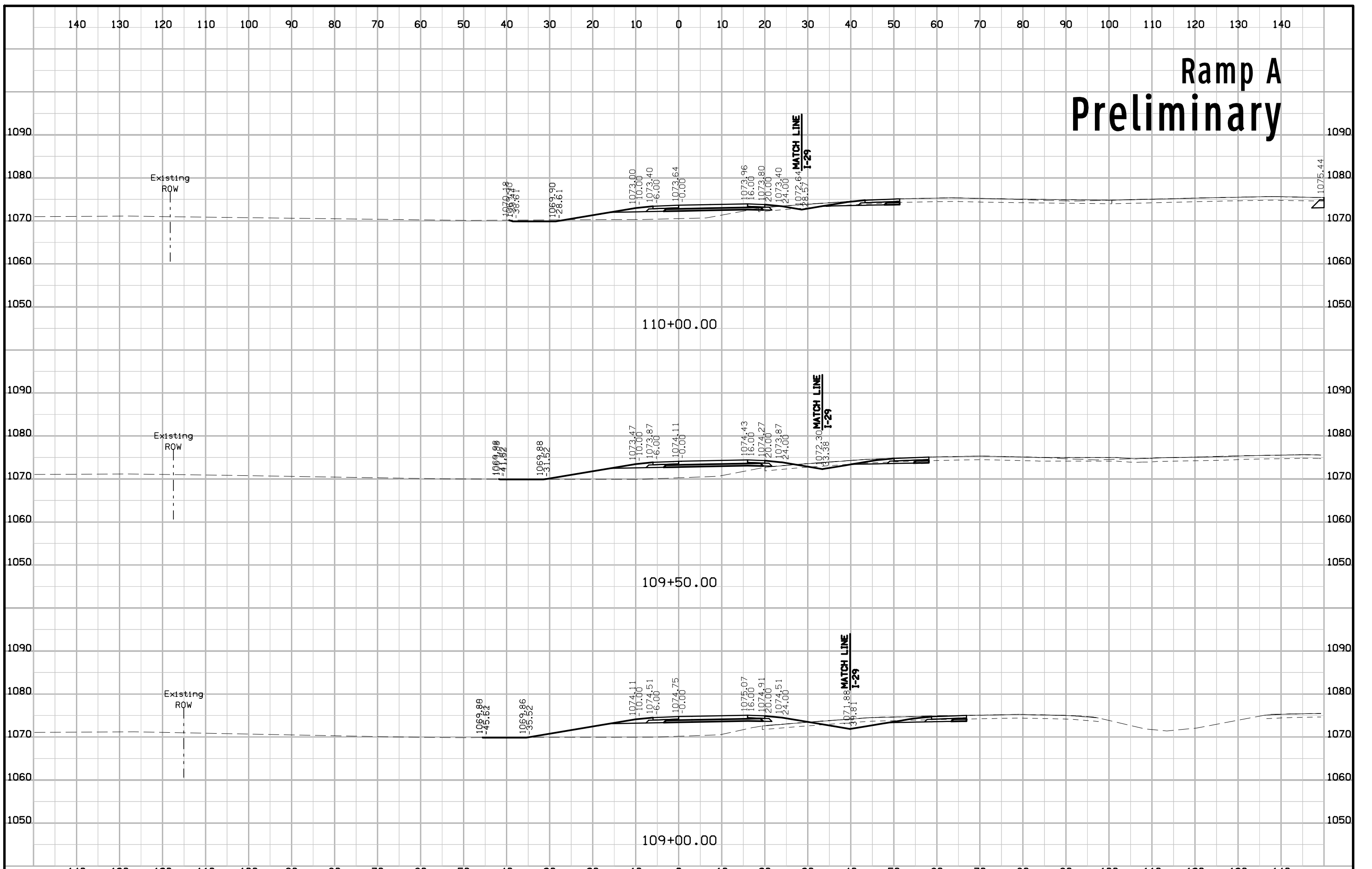
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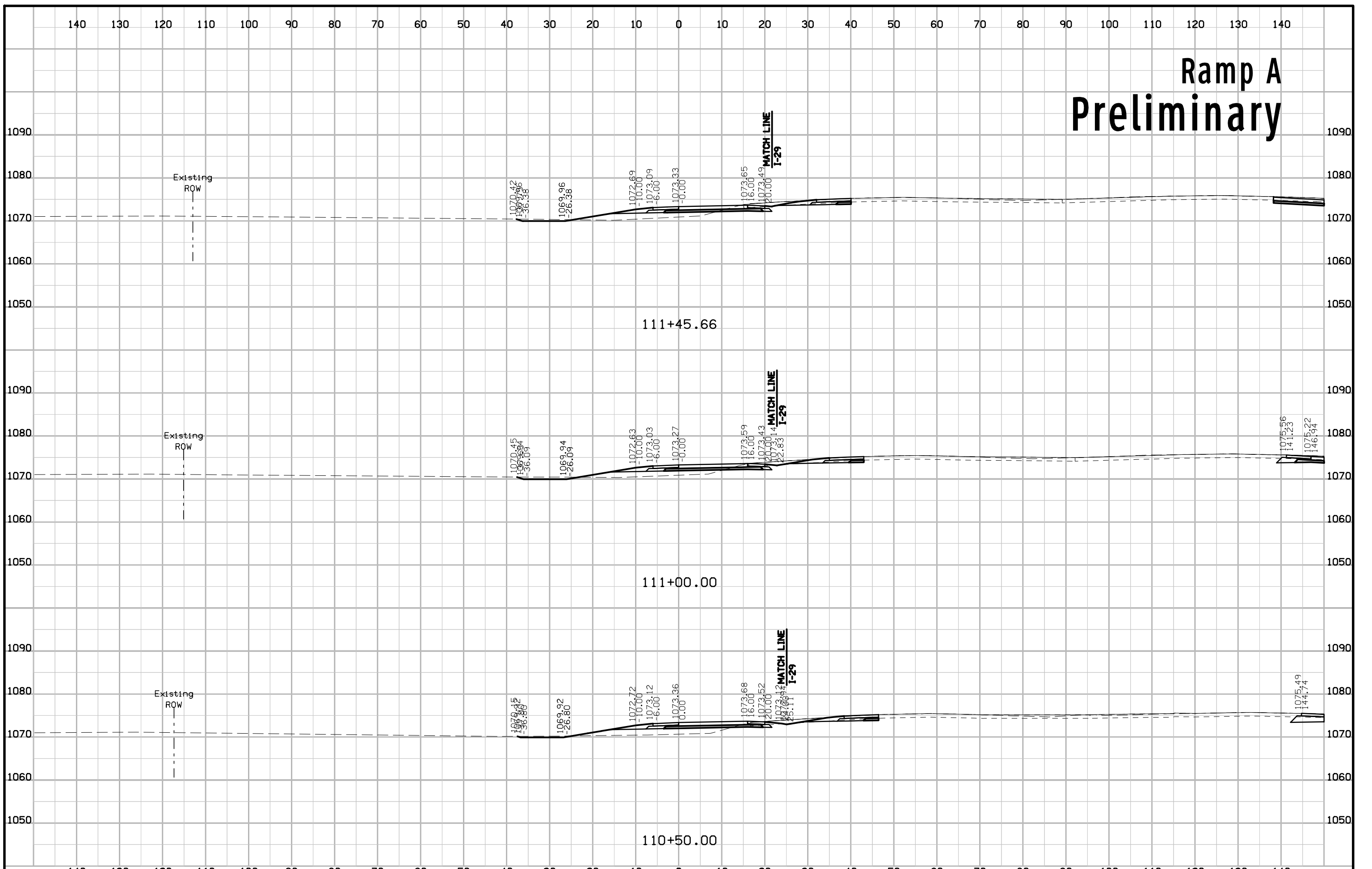
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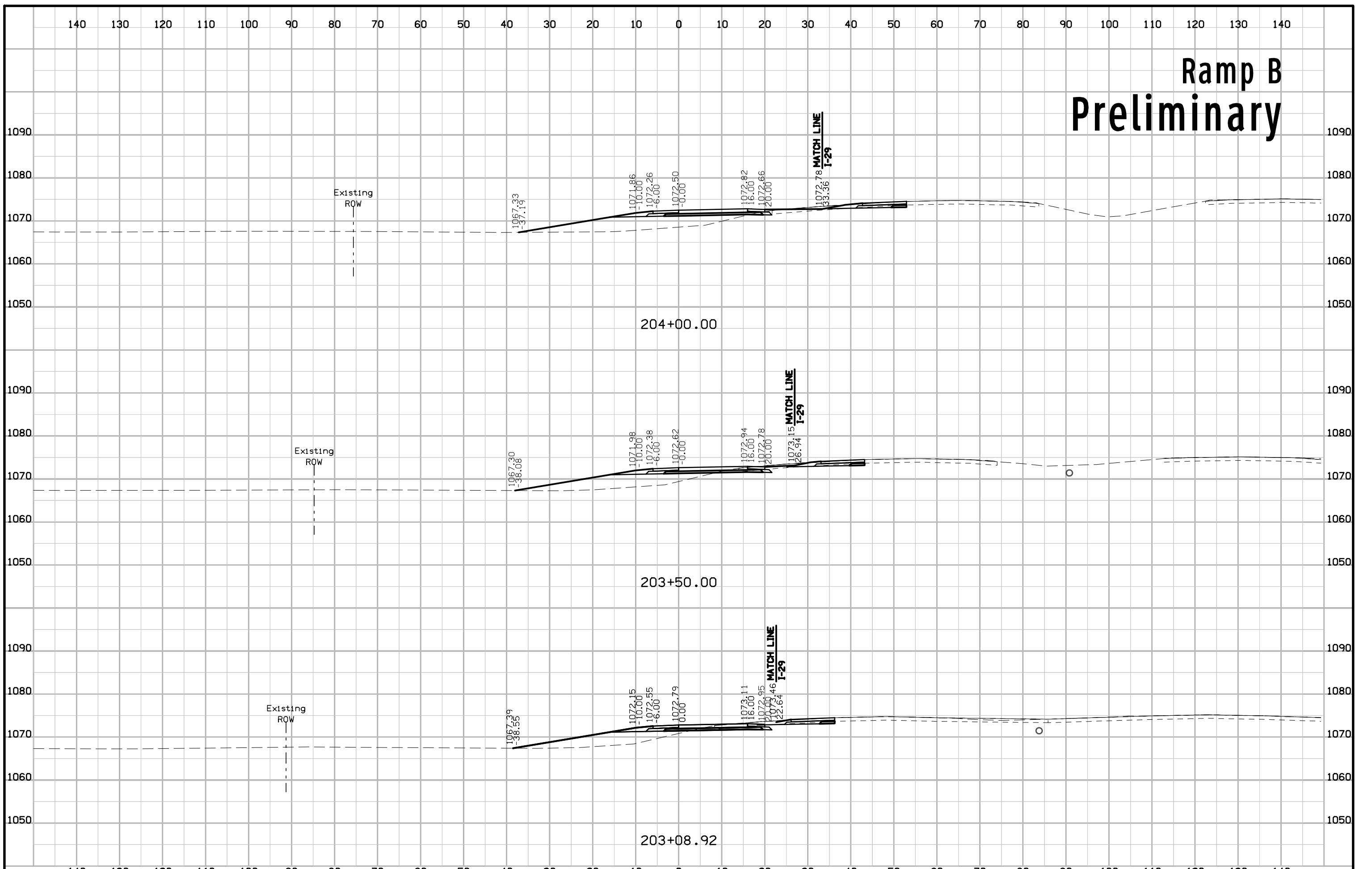
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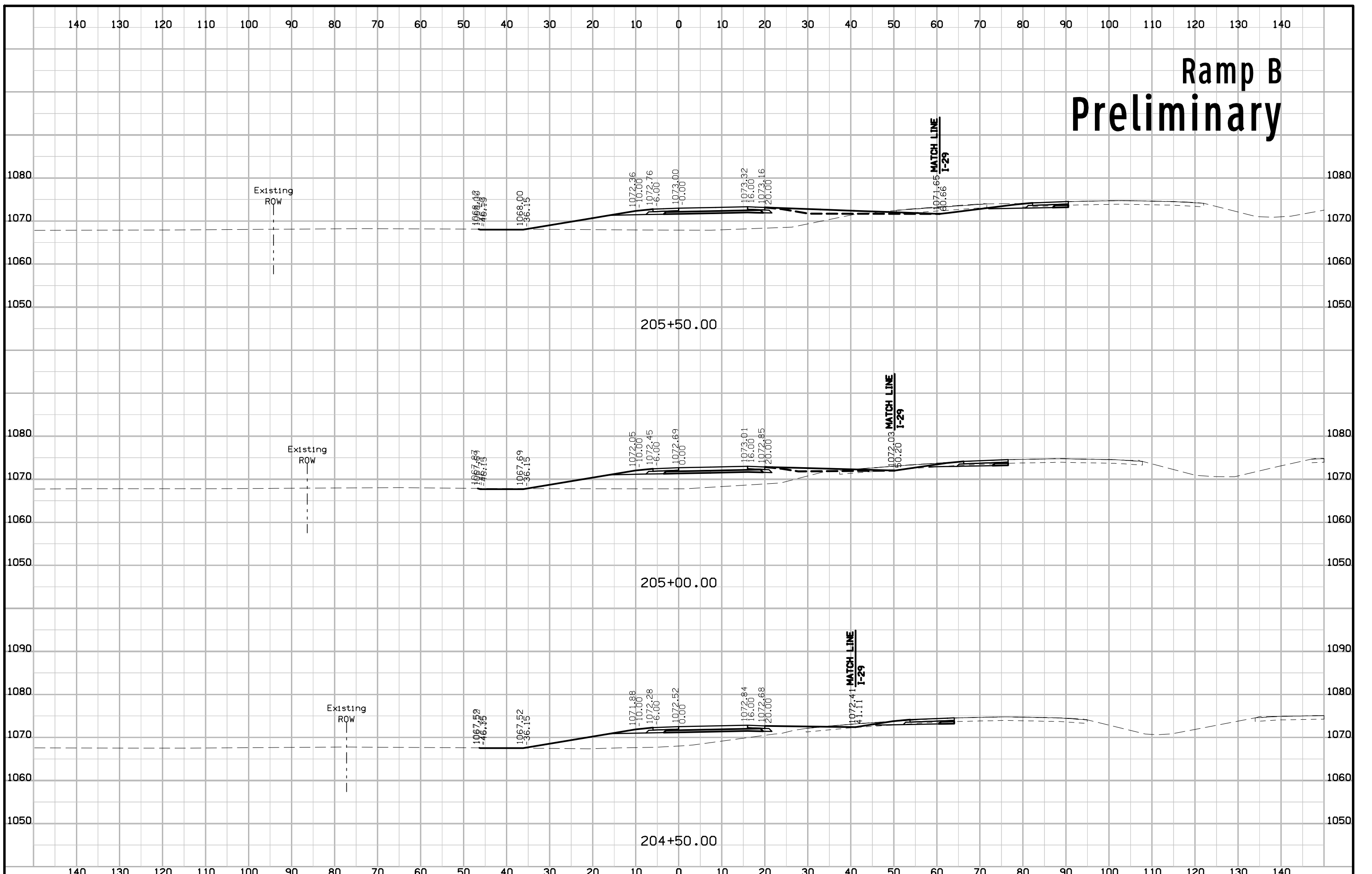
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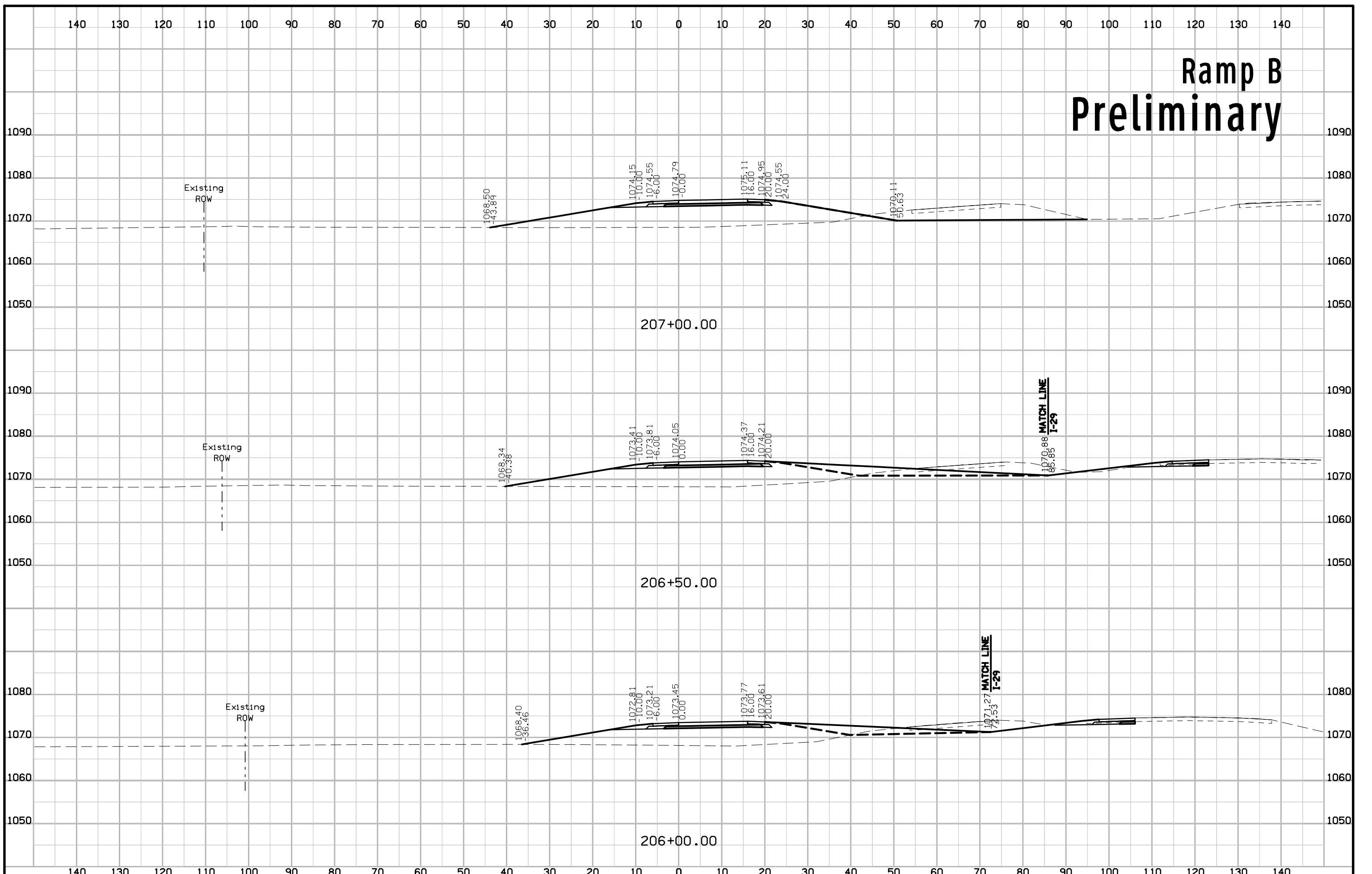
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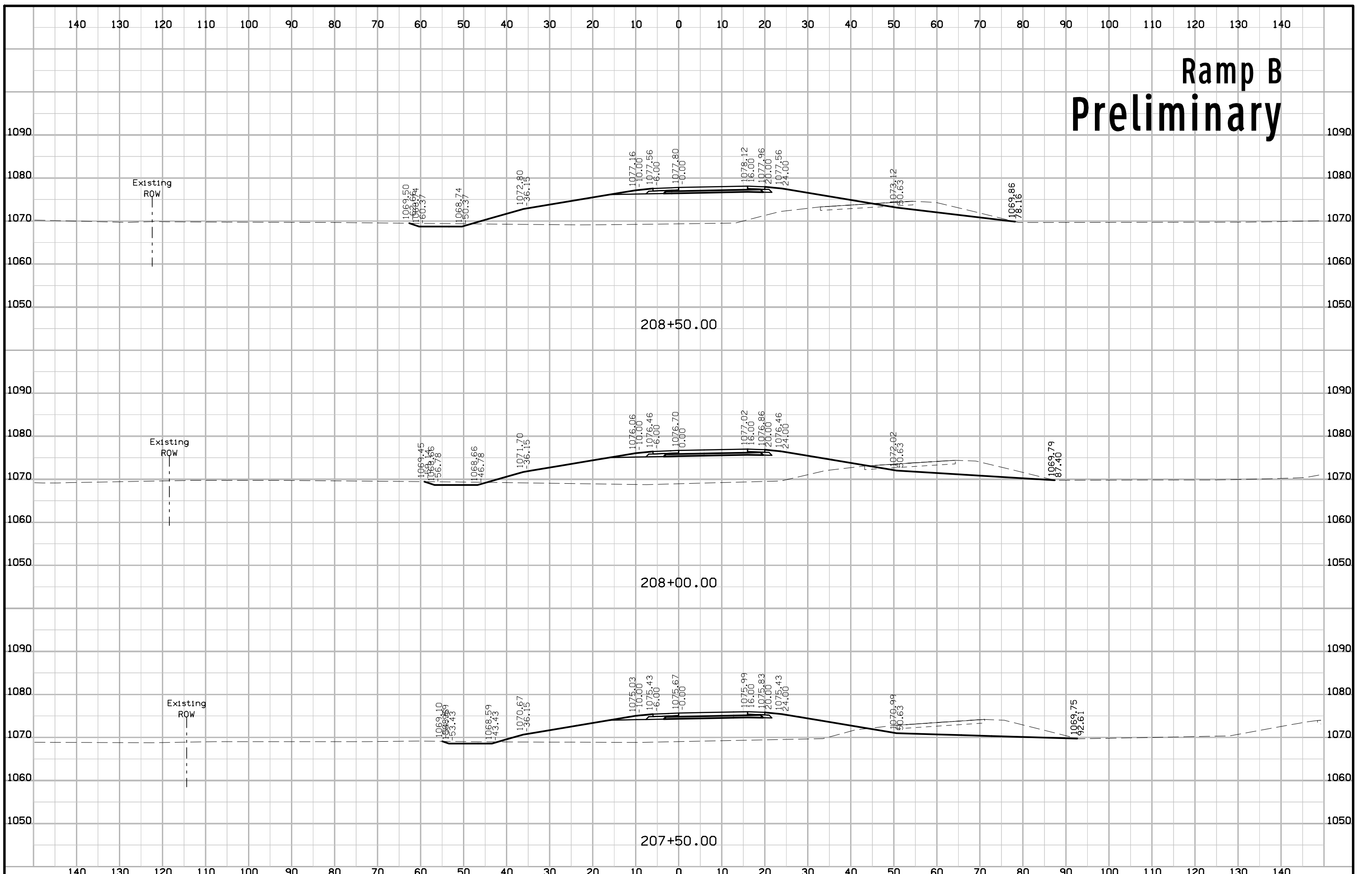
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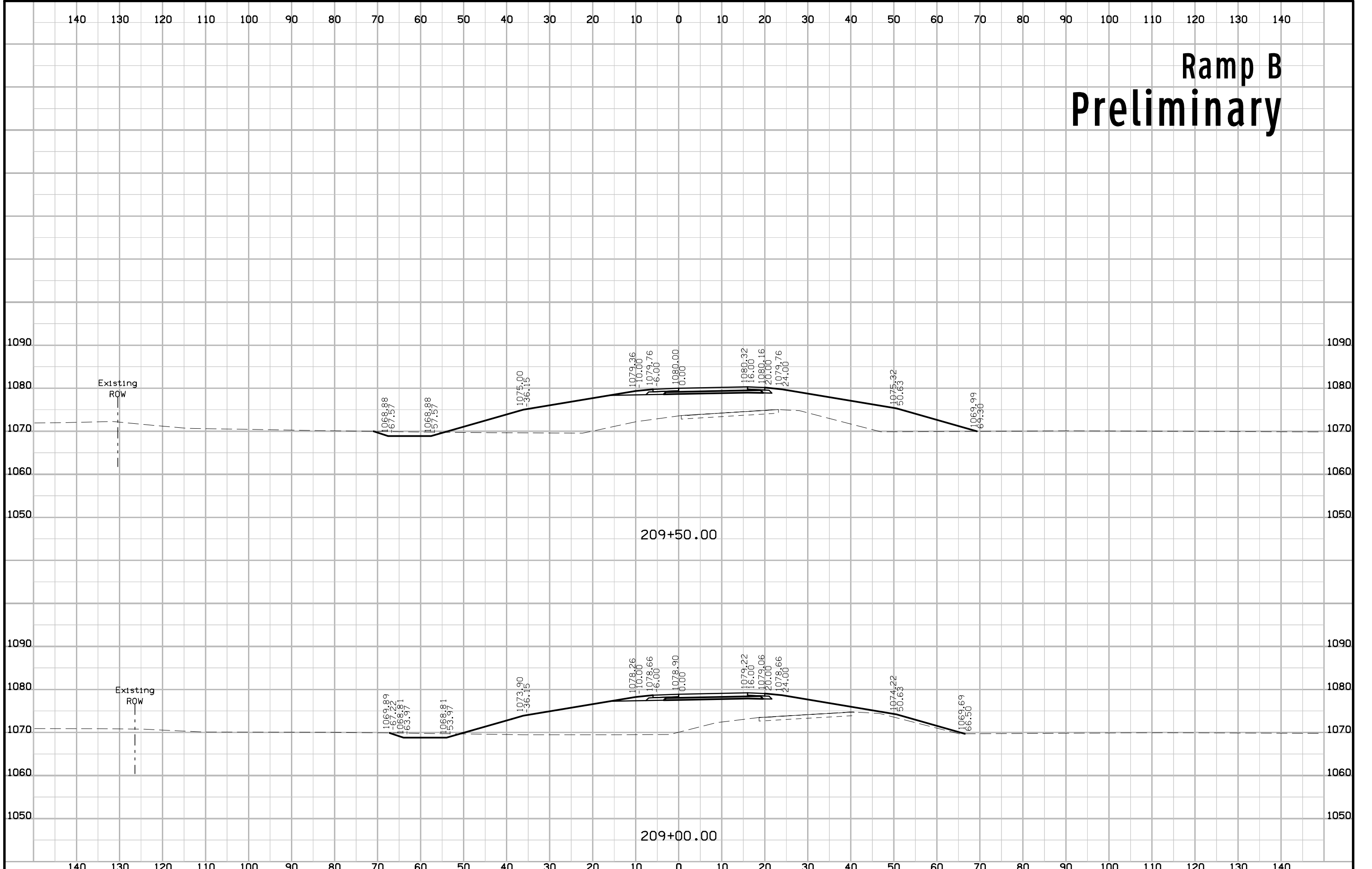
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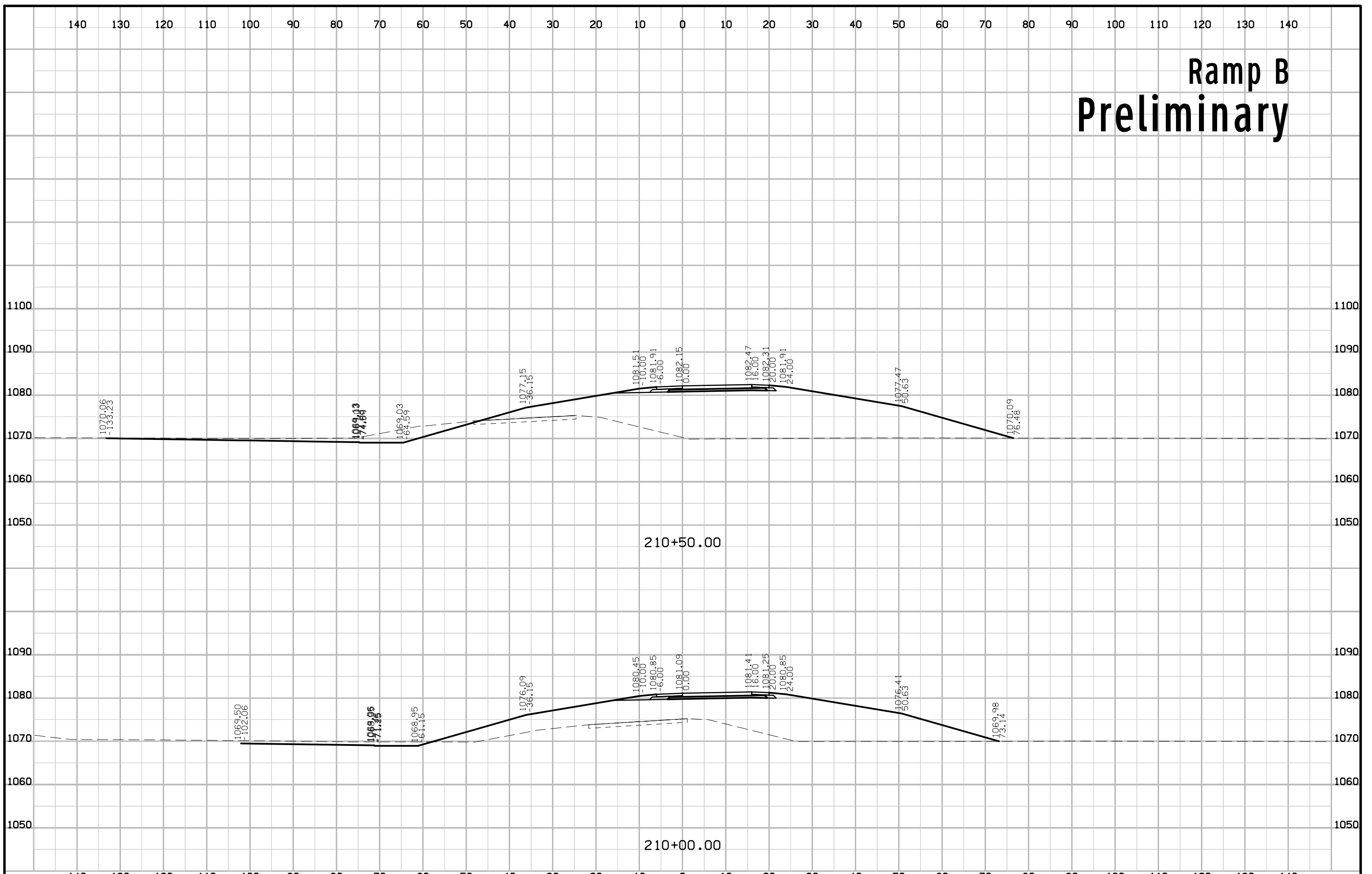
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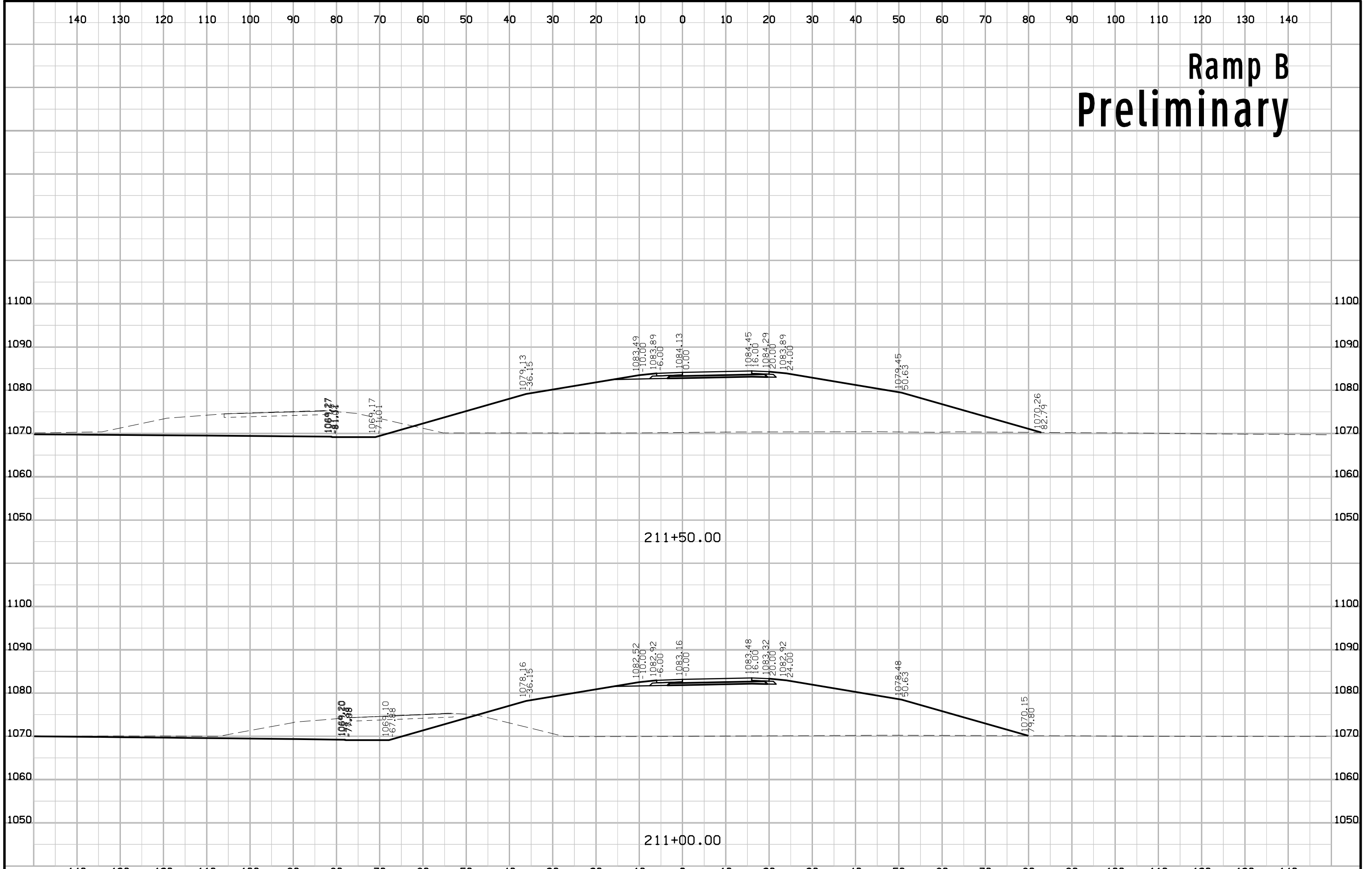
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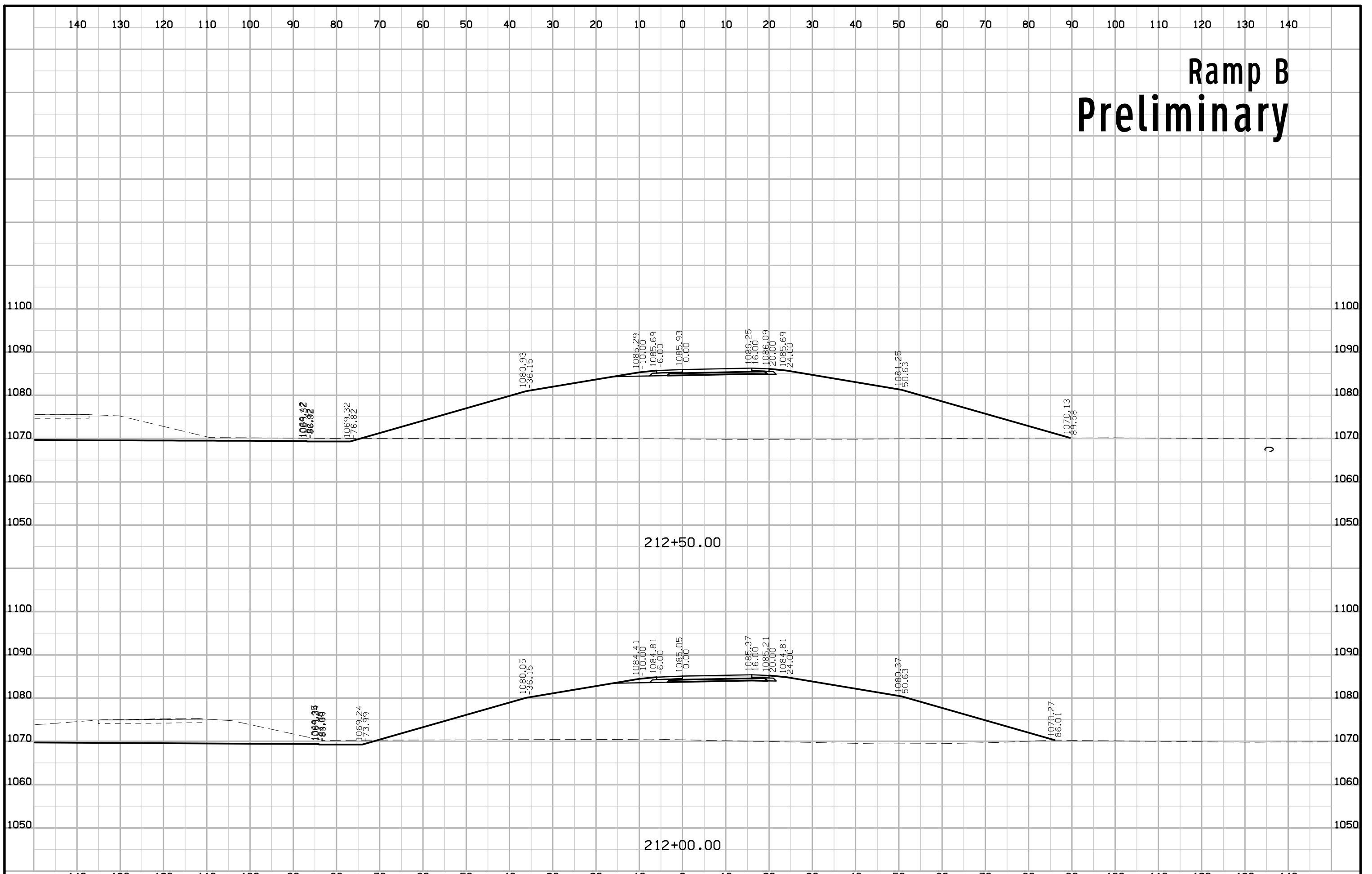
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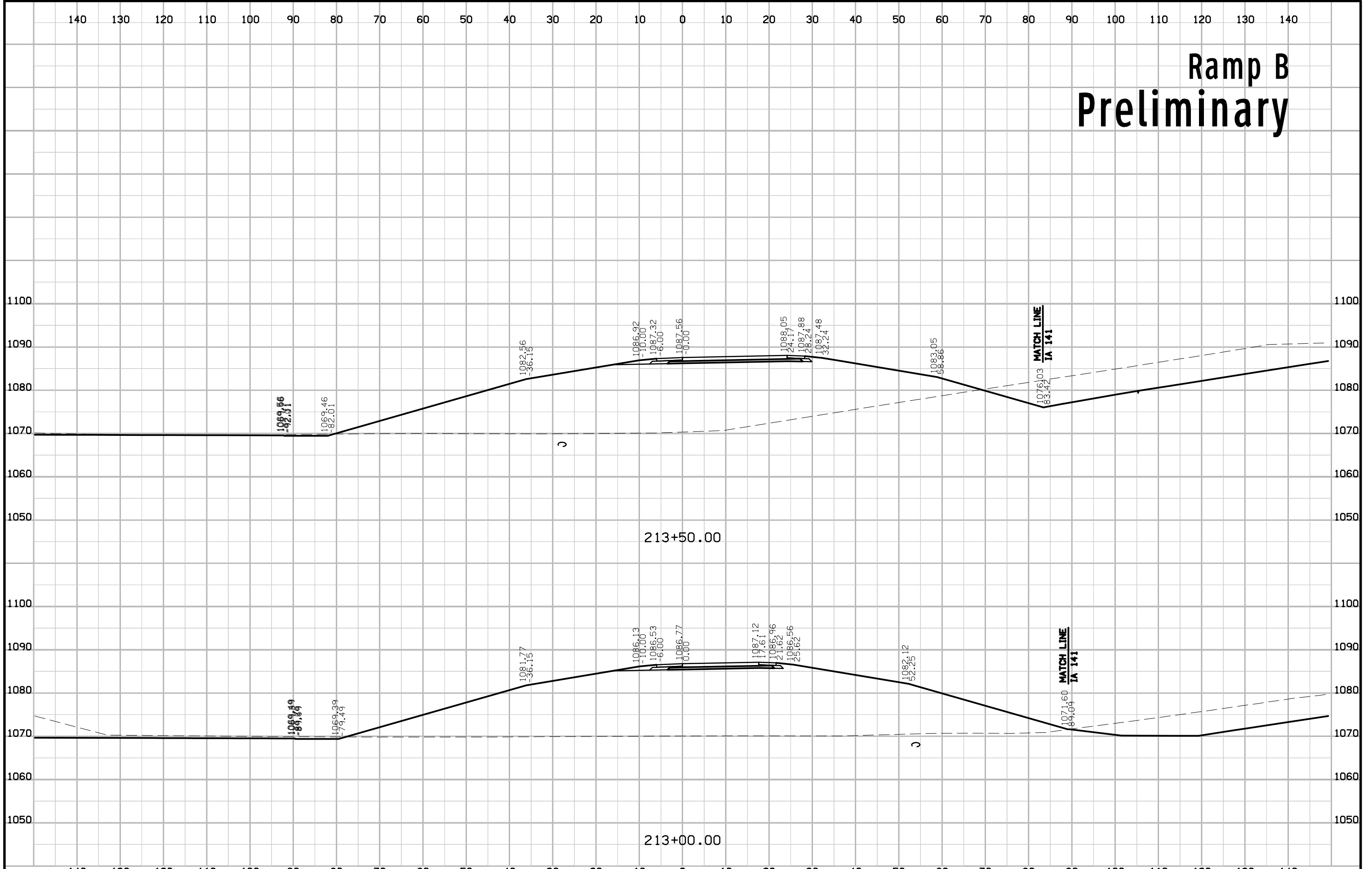
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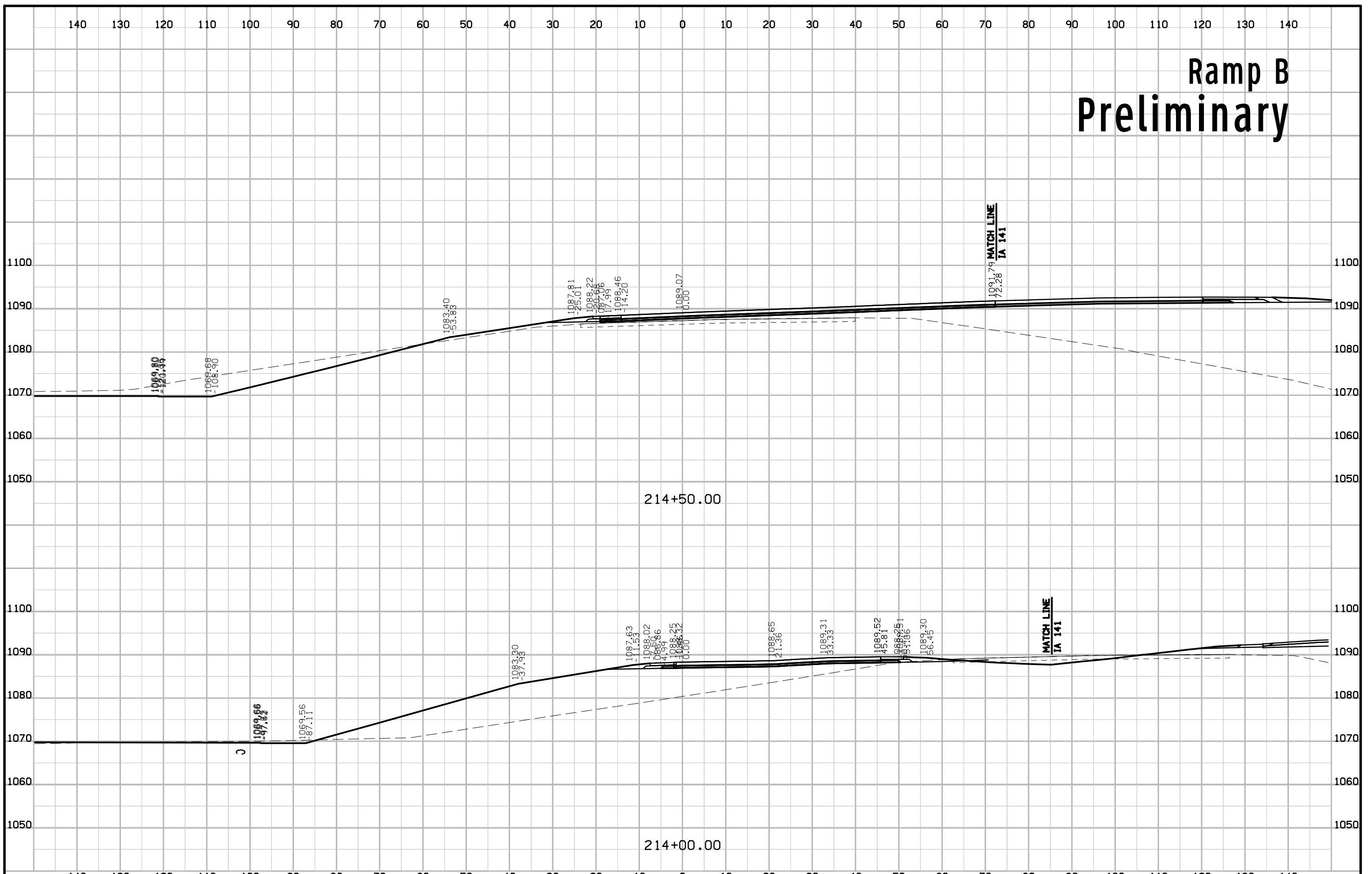
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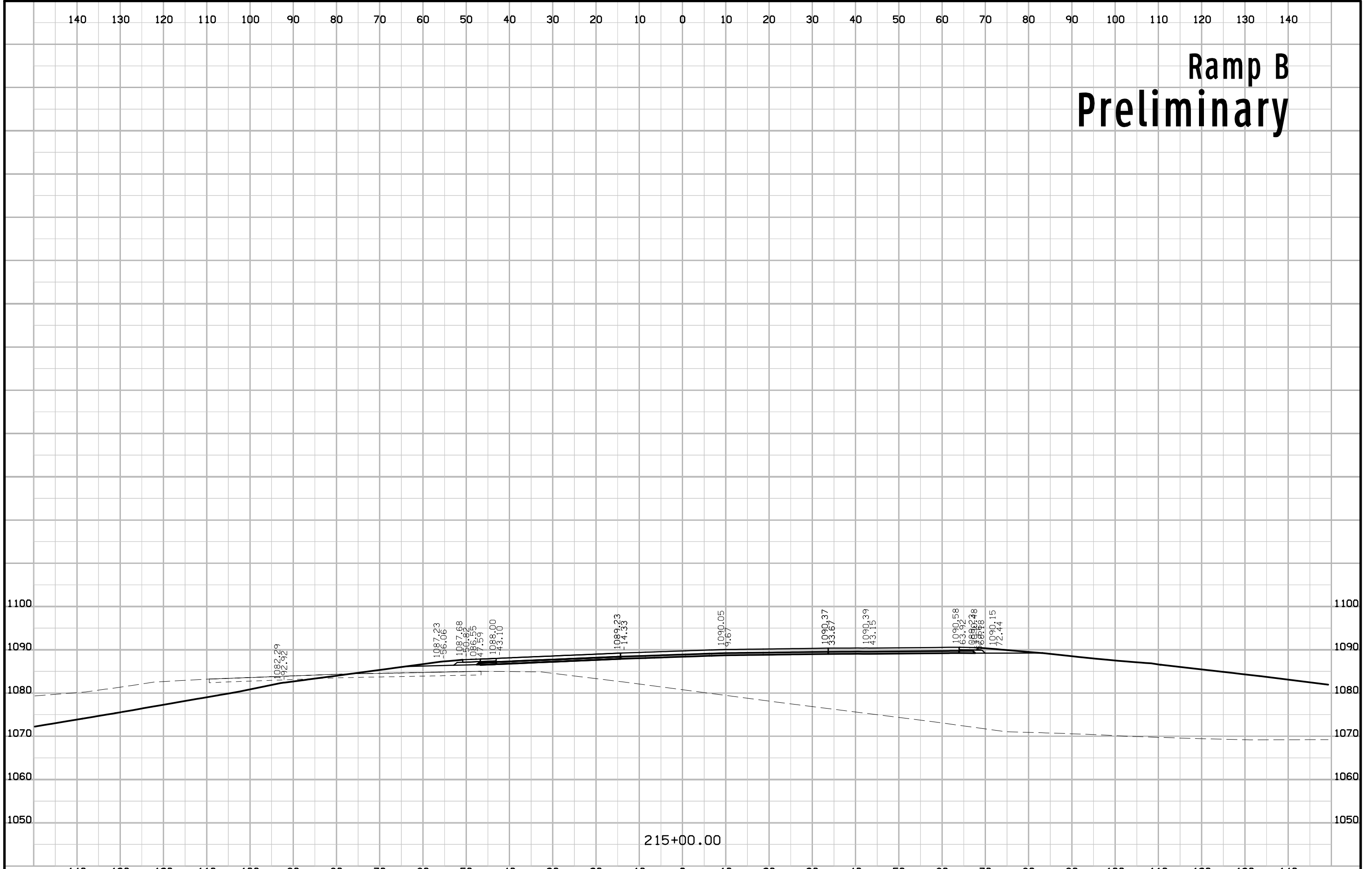
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Ramp B Preliminary

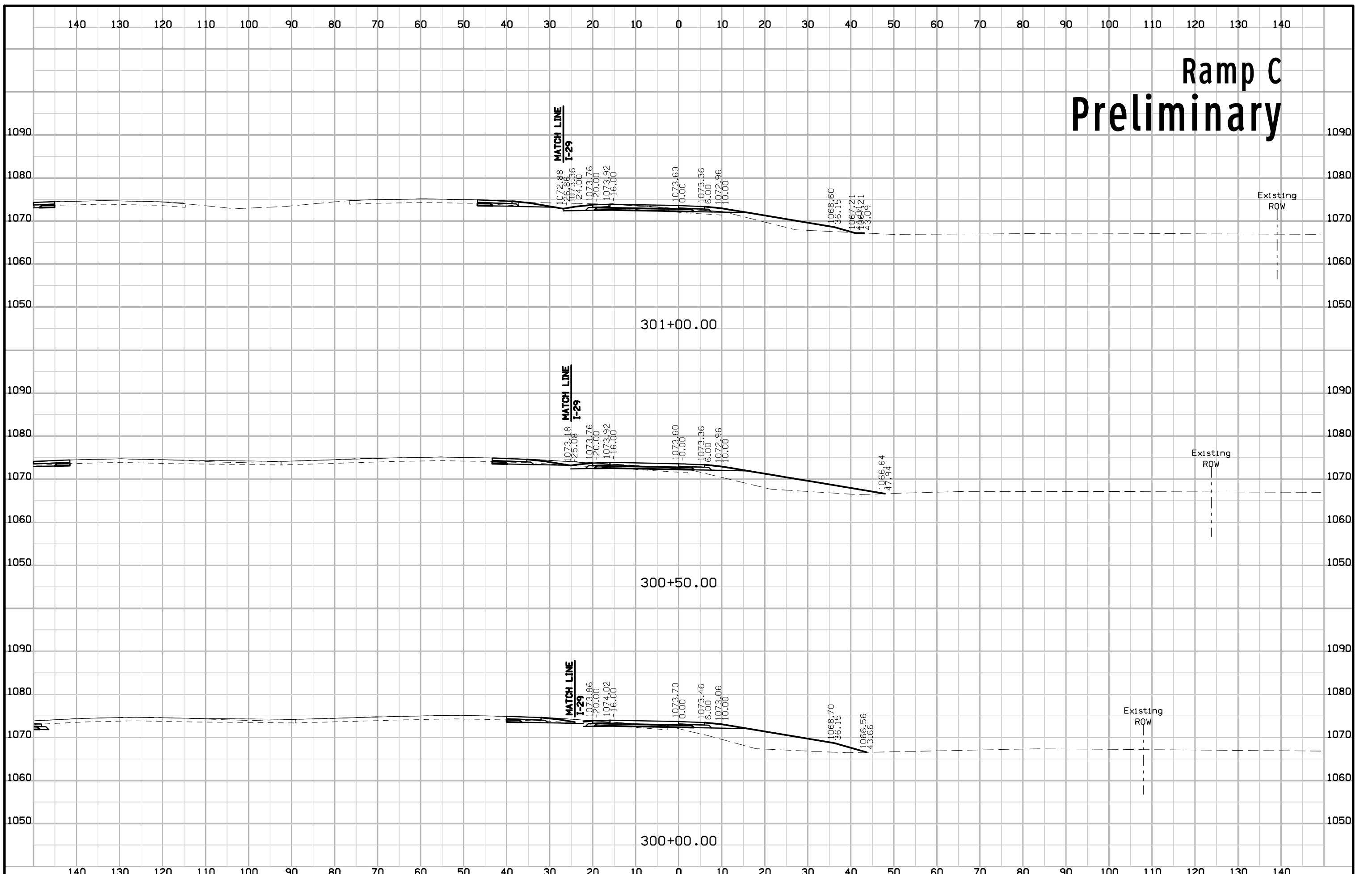


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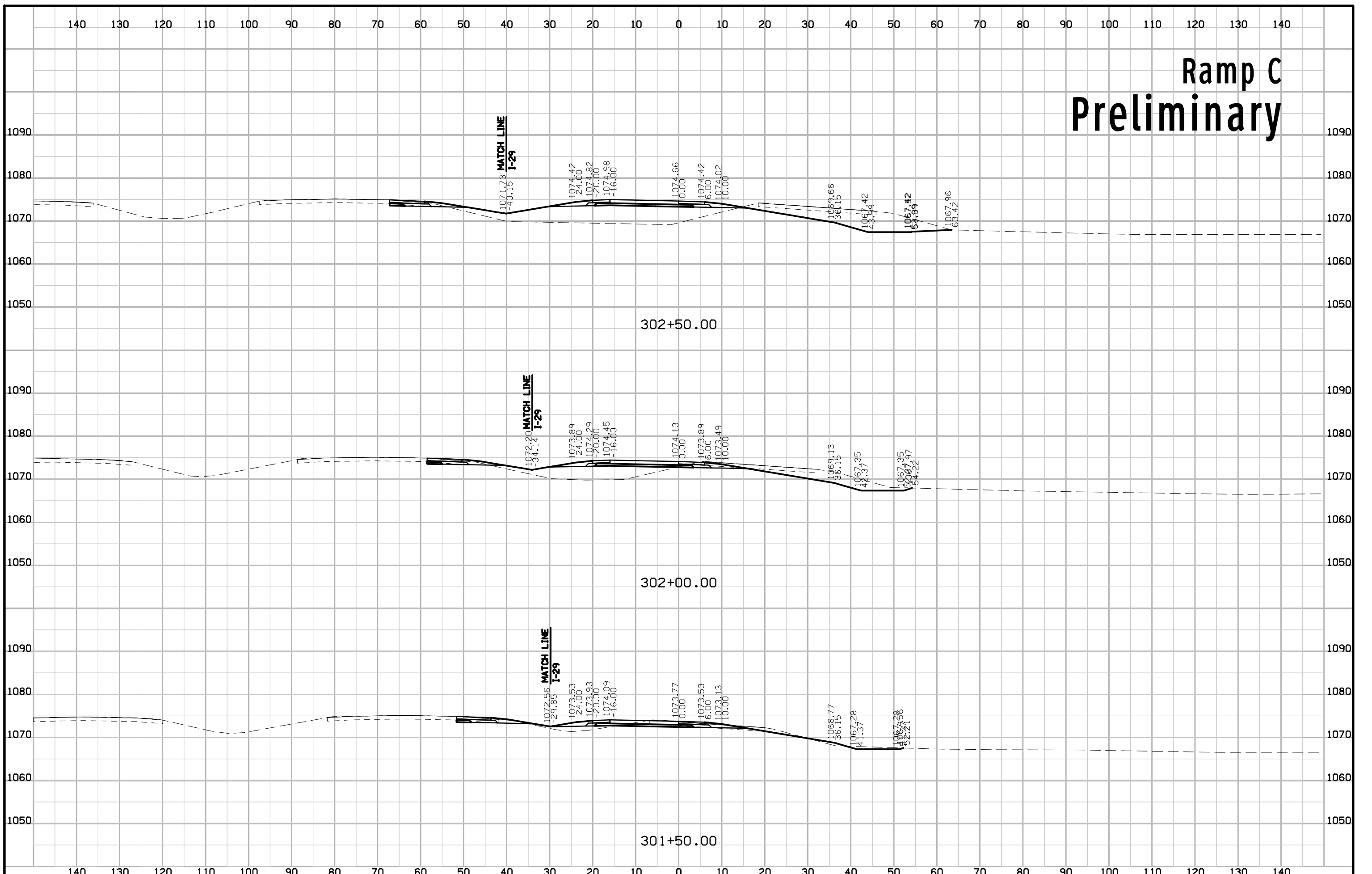


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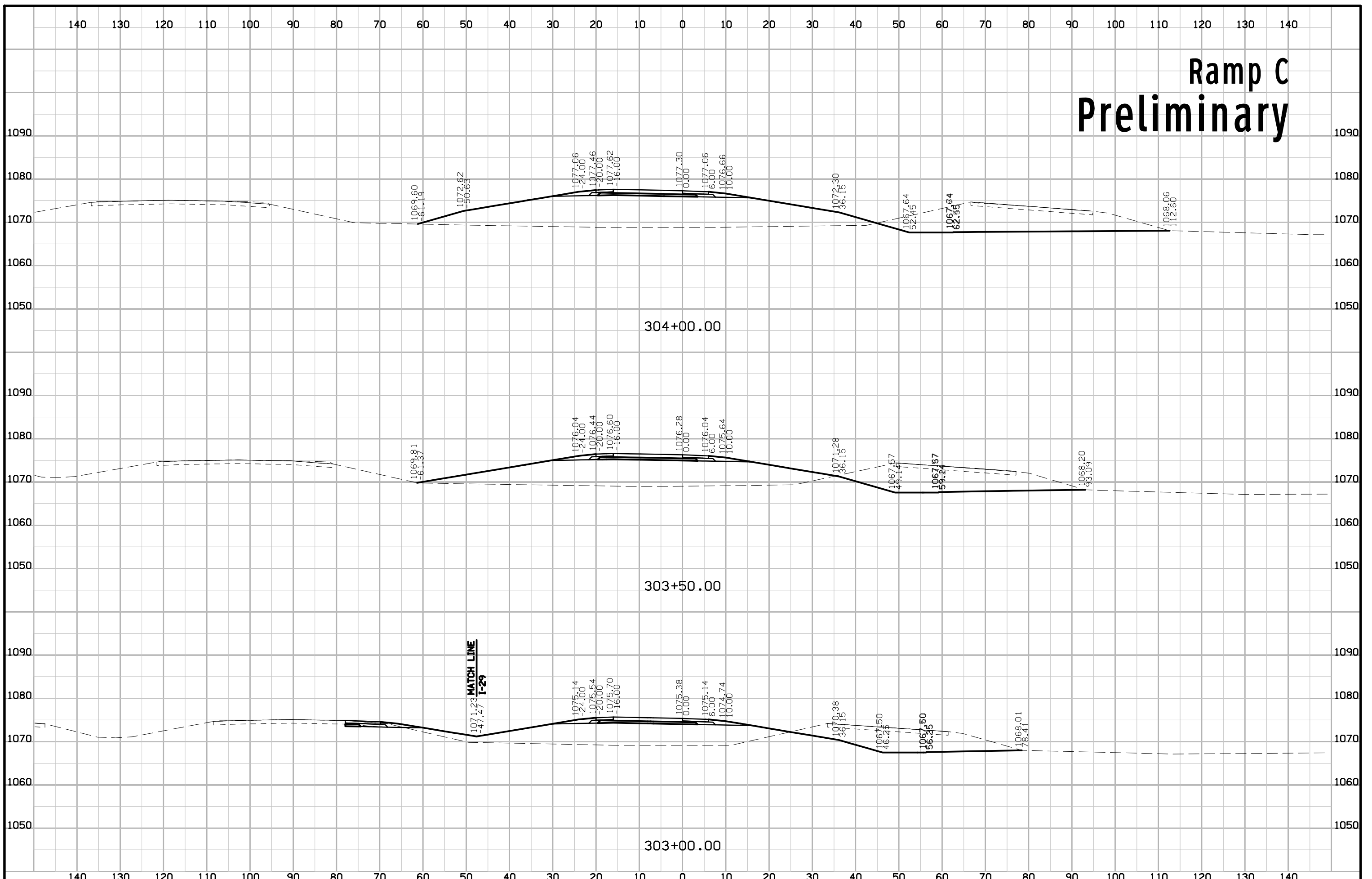
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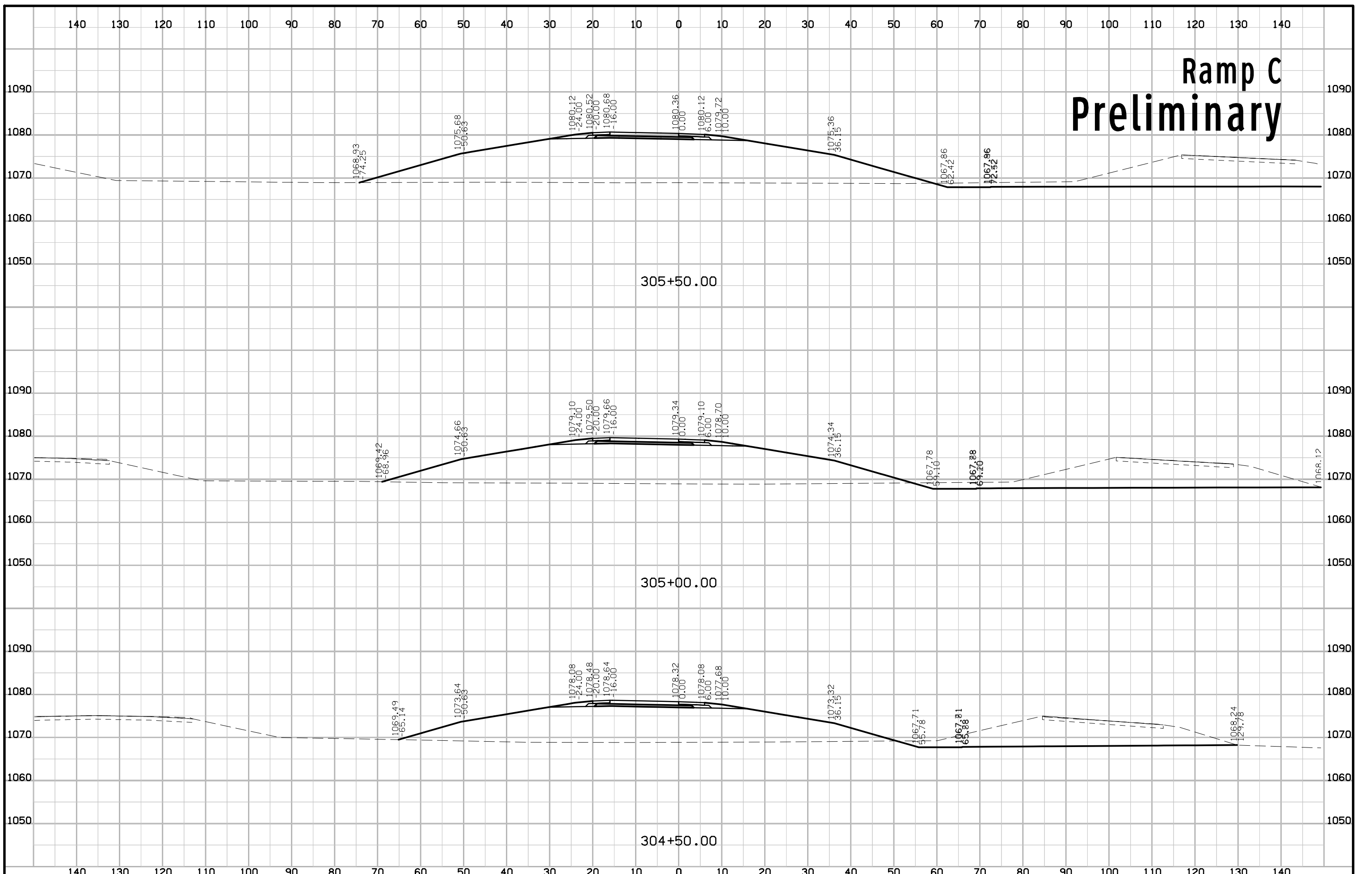
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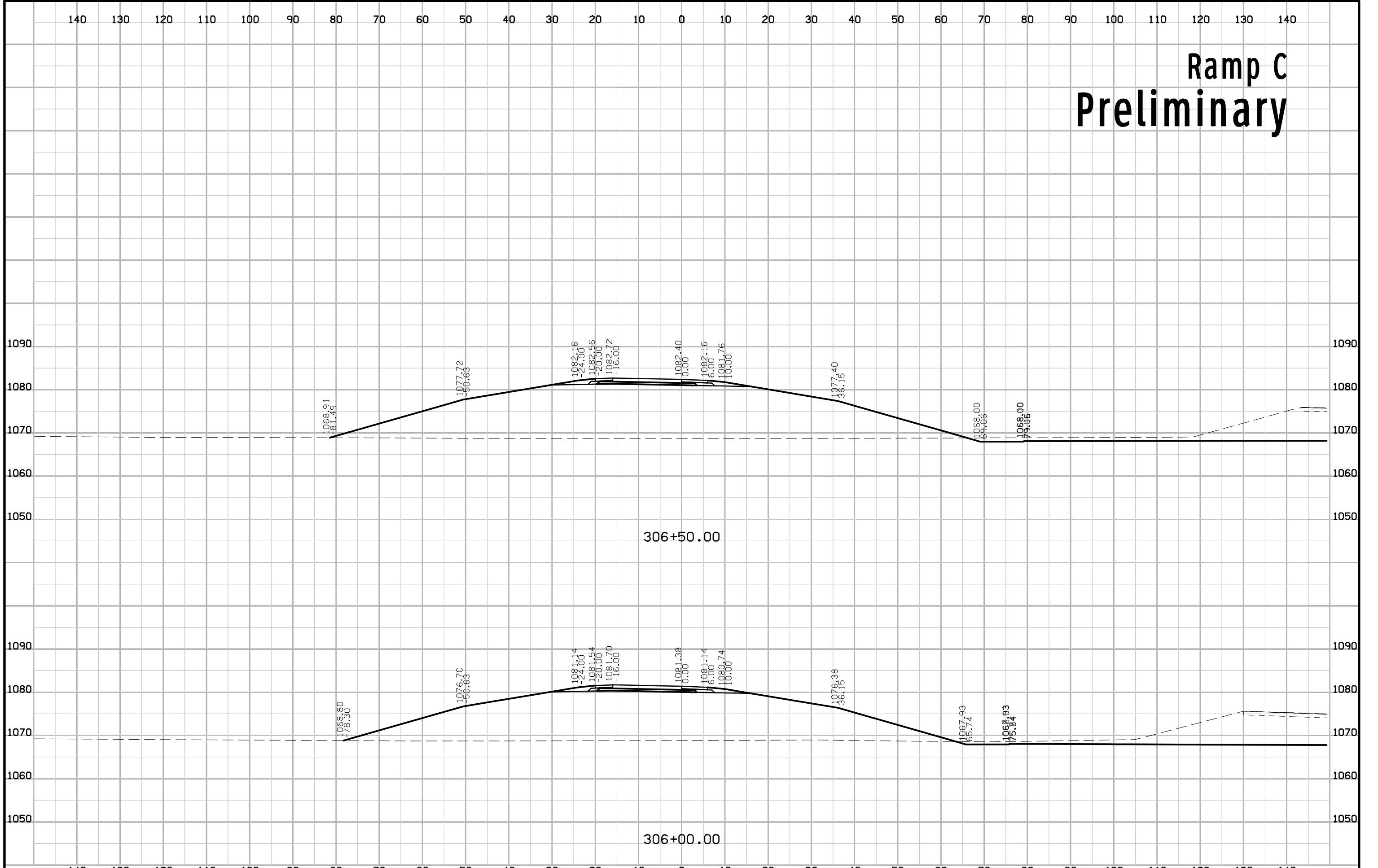
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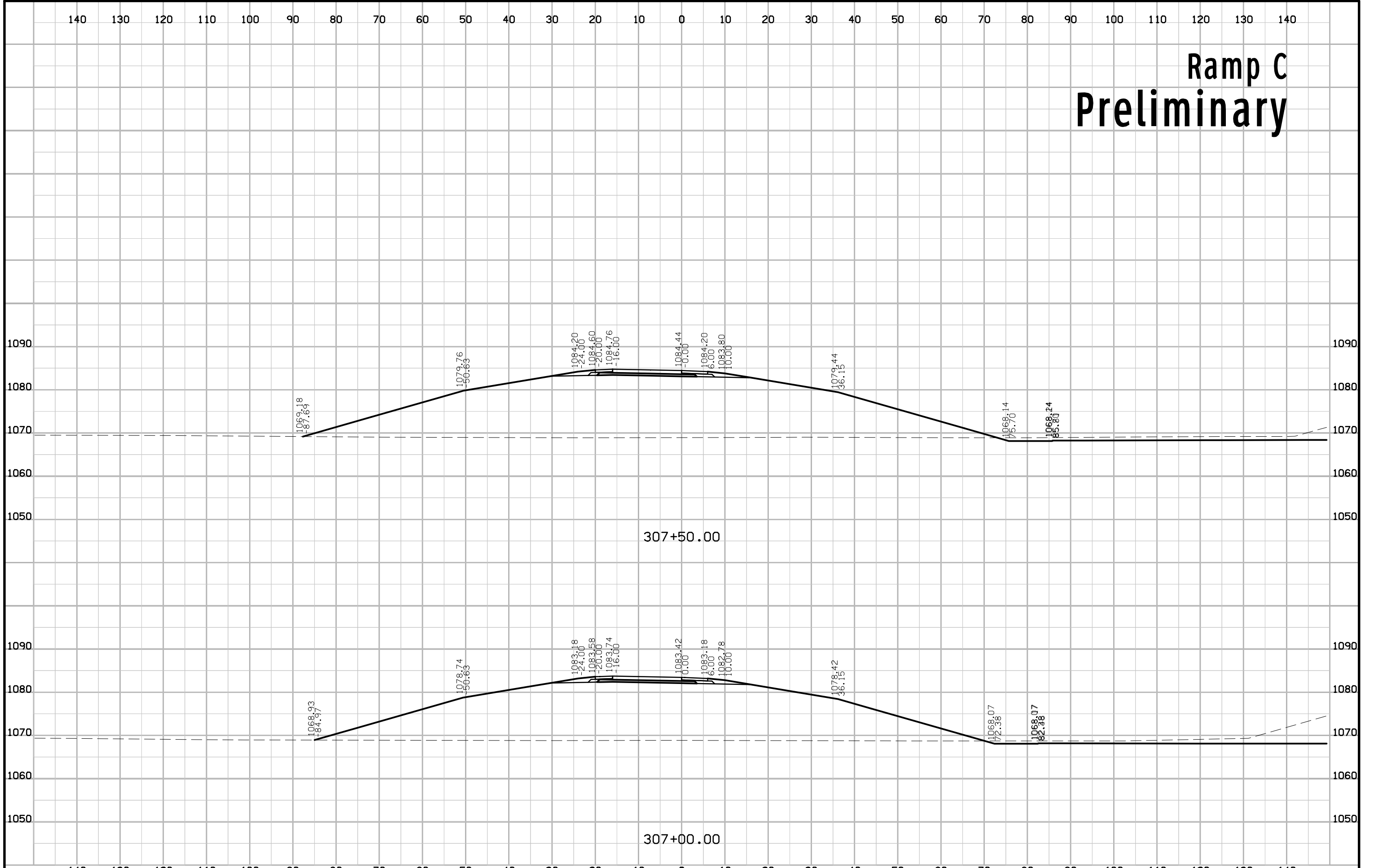
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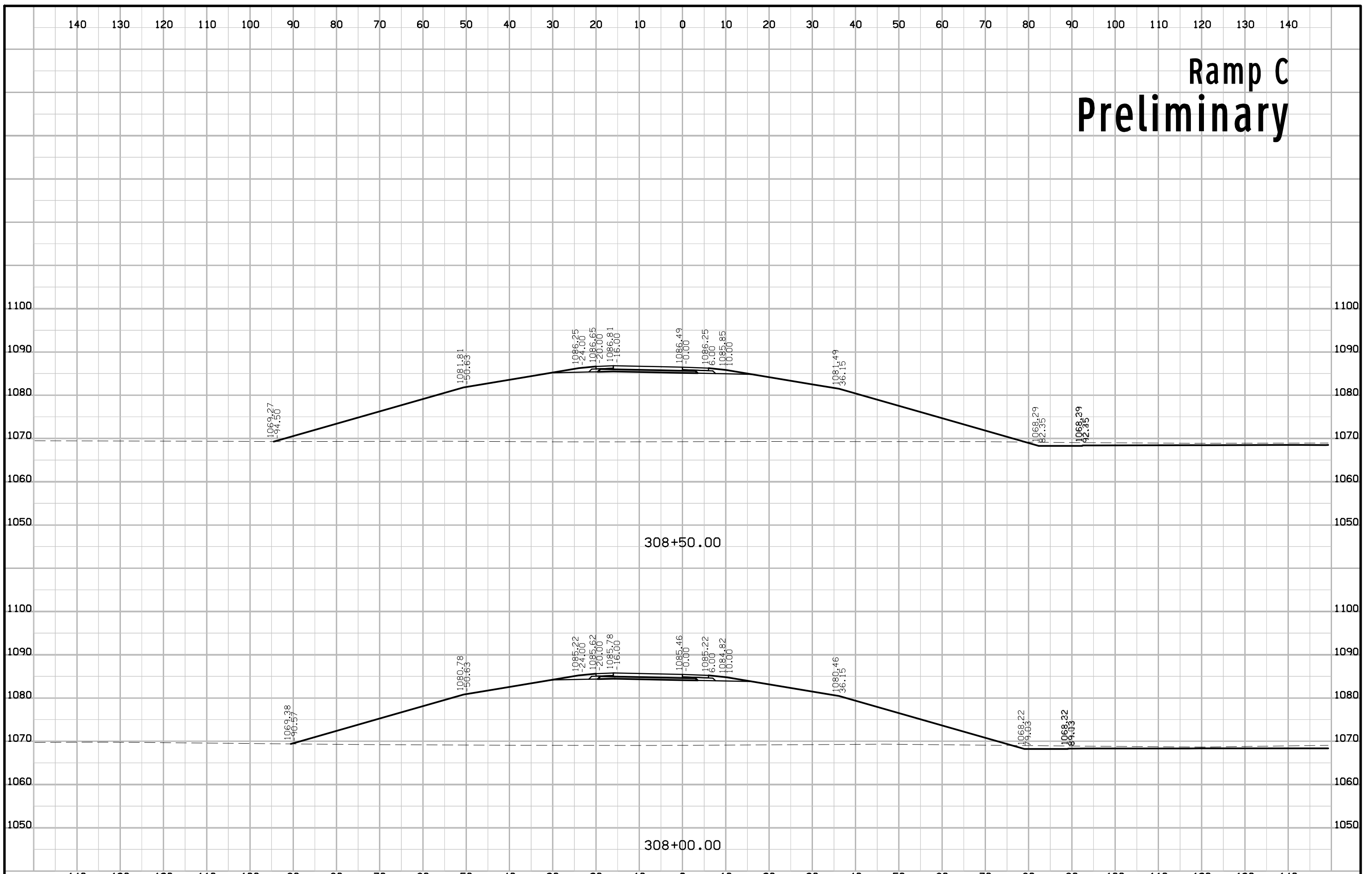
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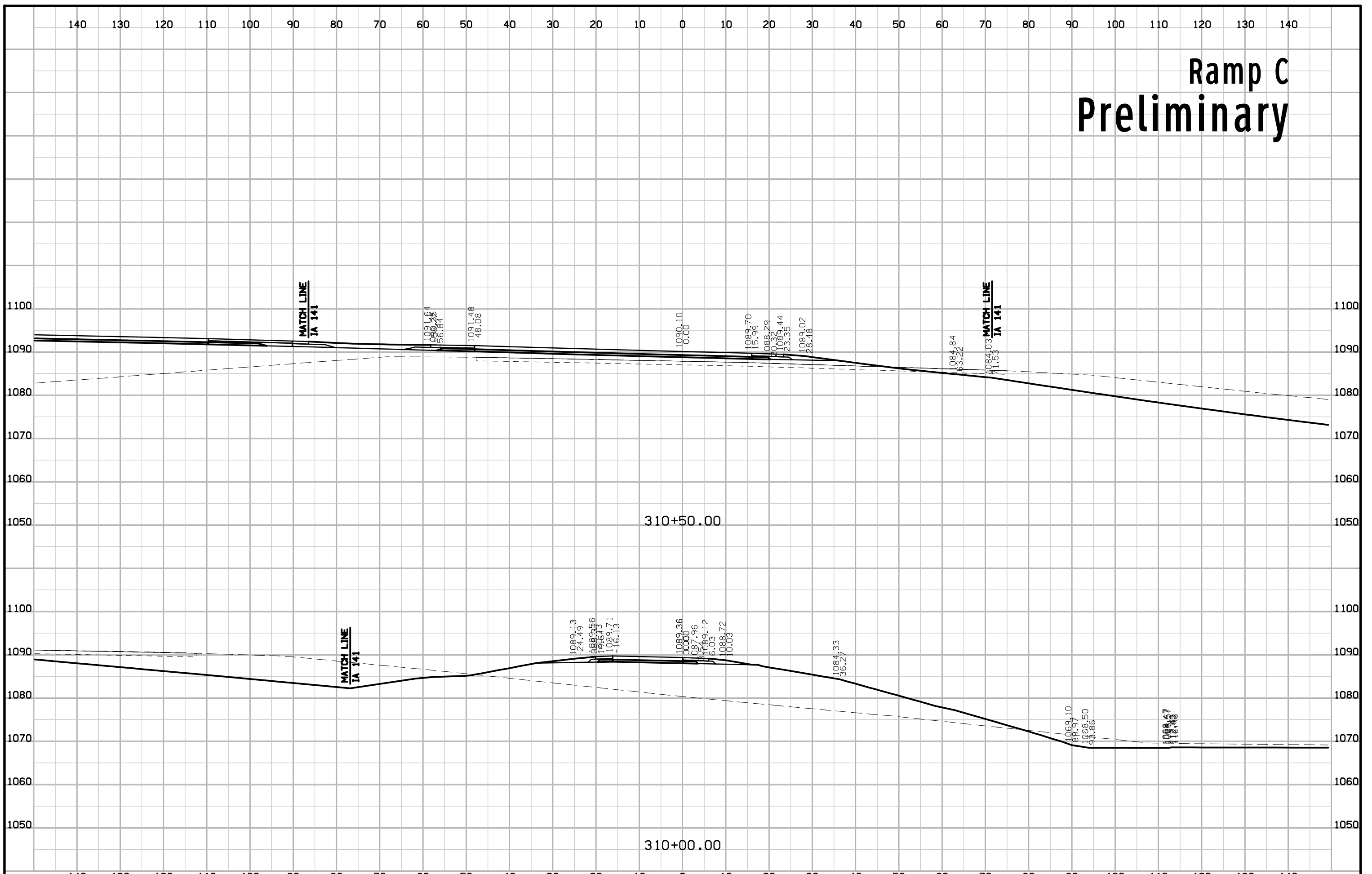
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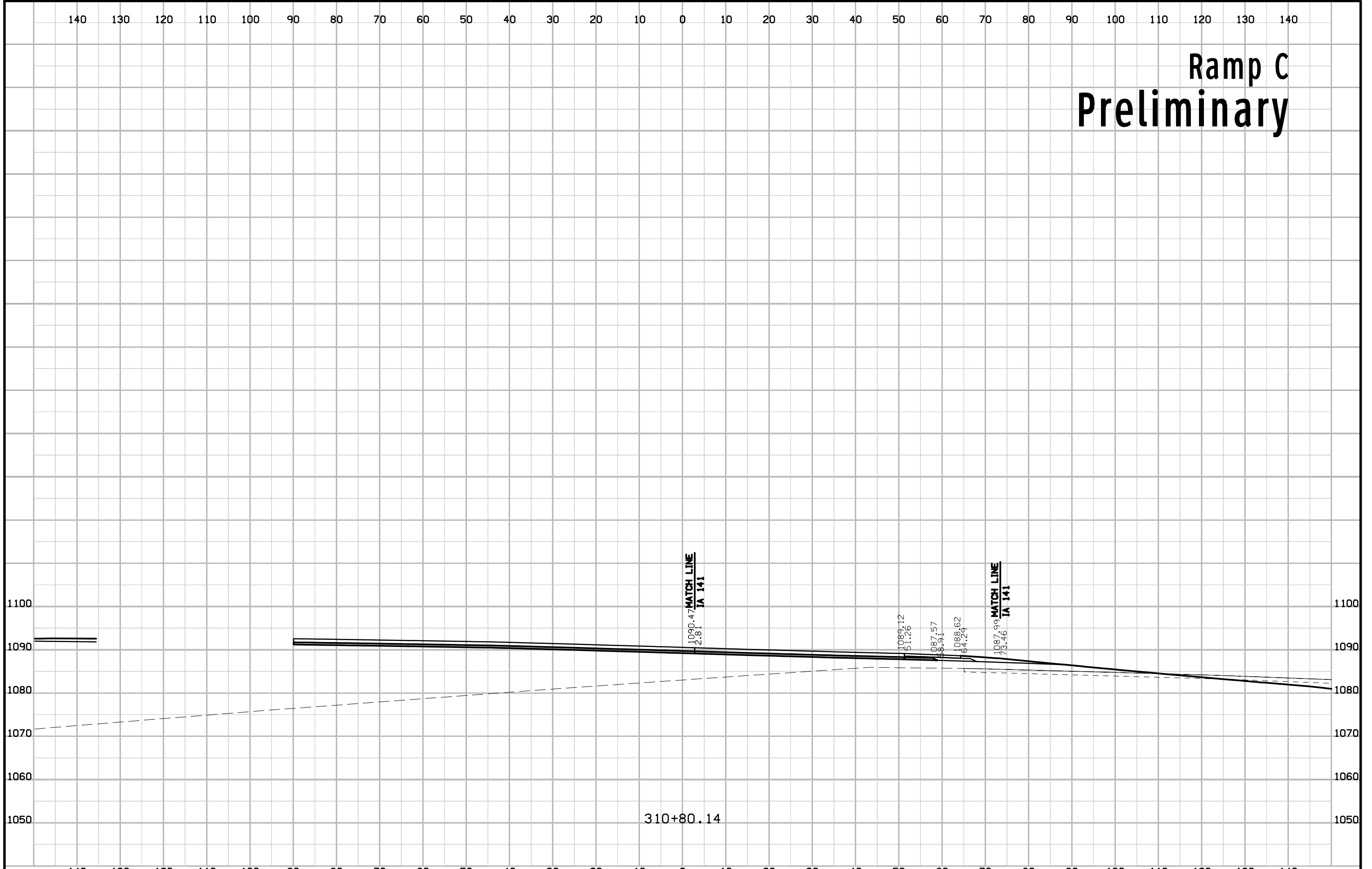
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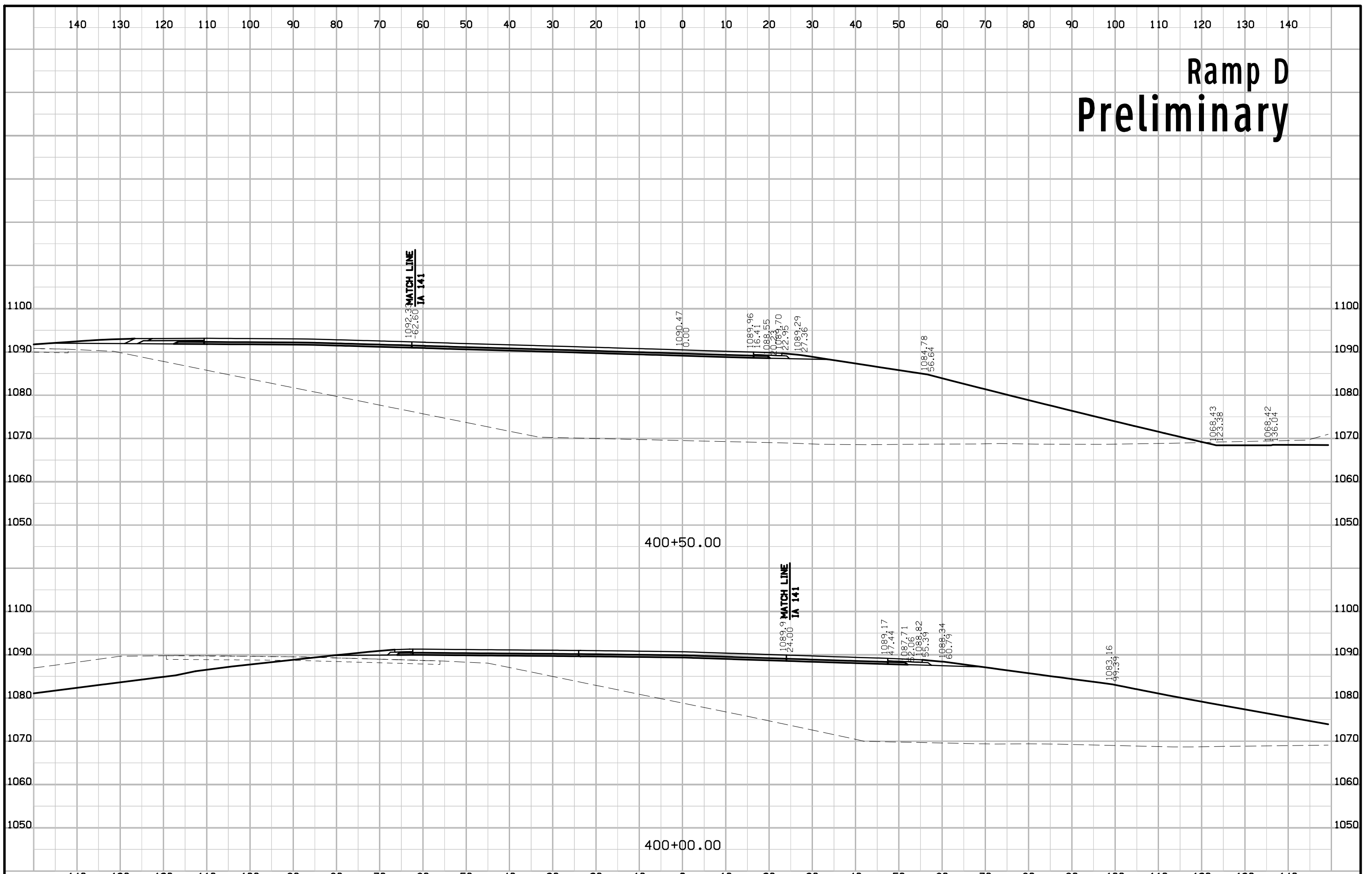
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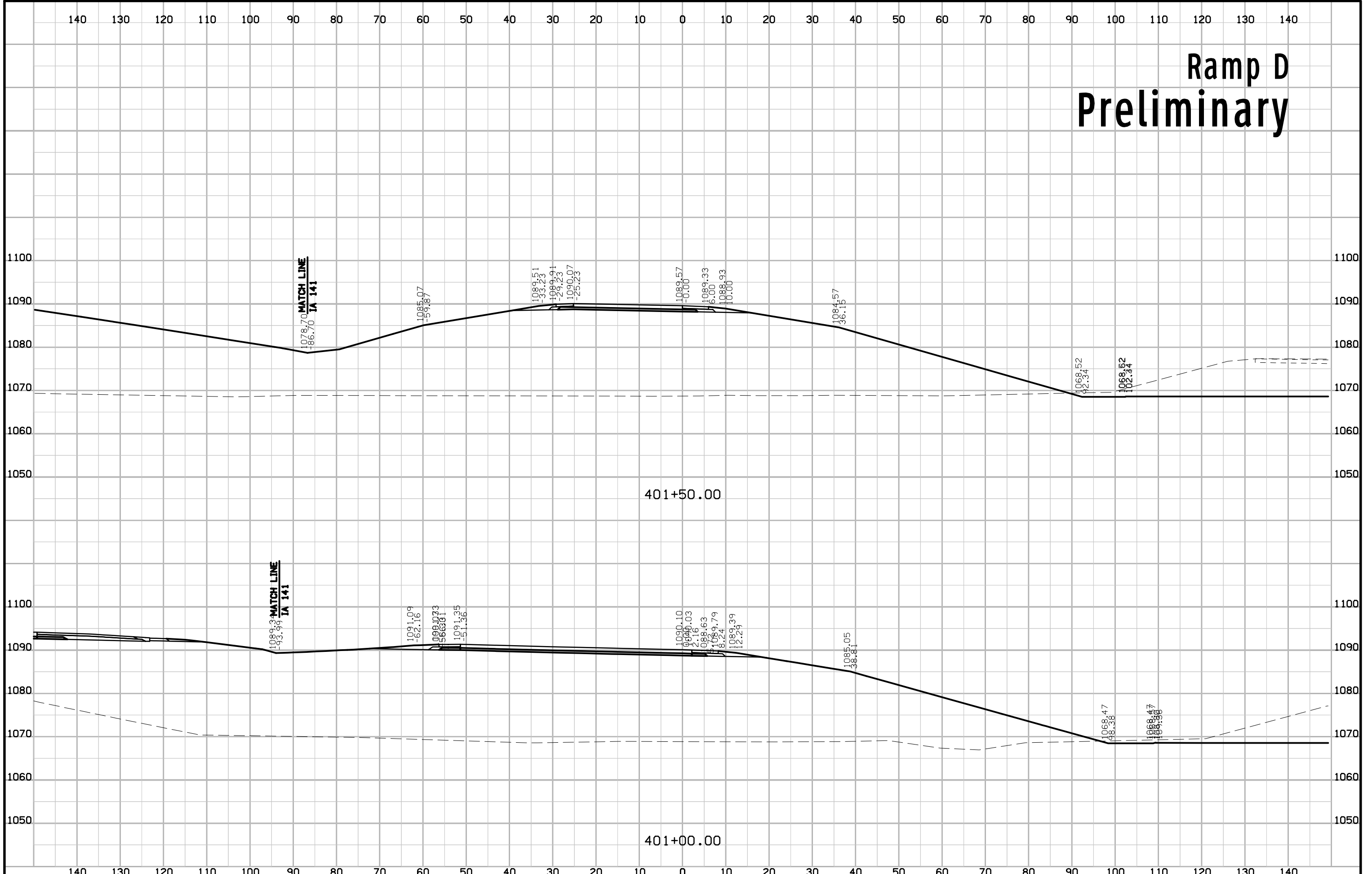
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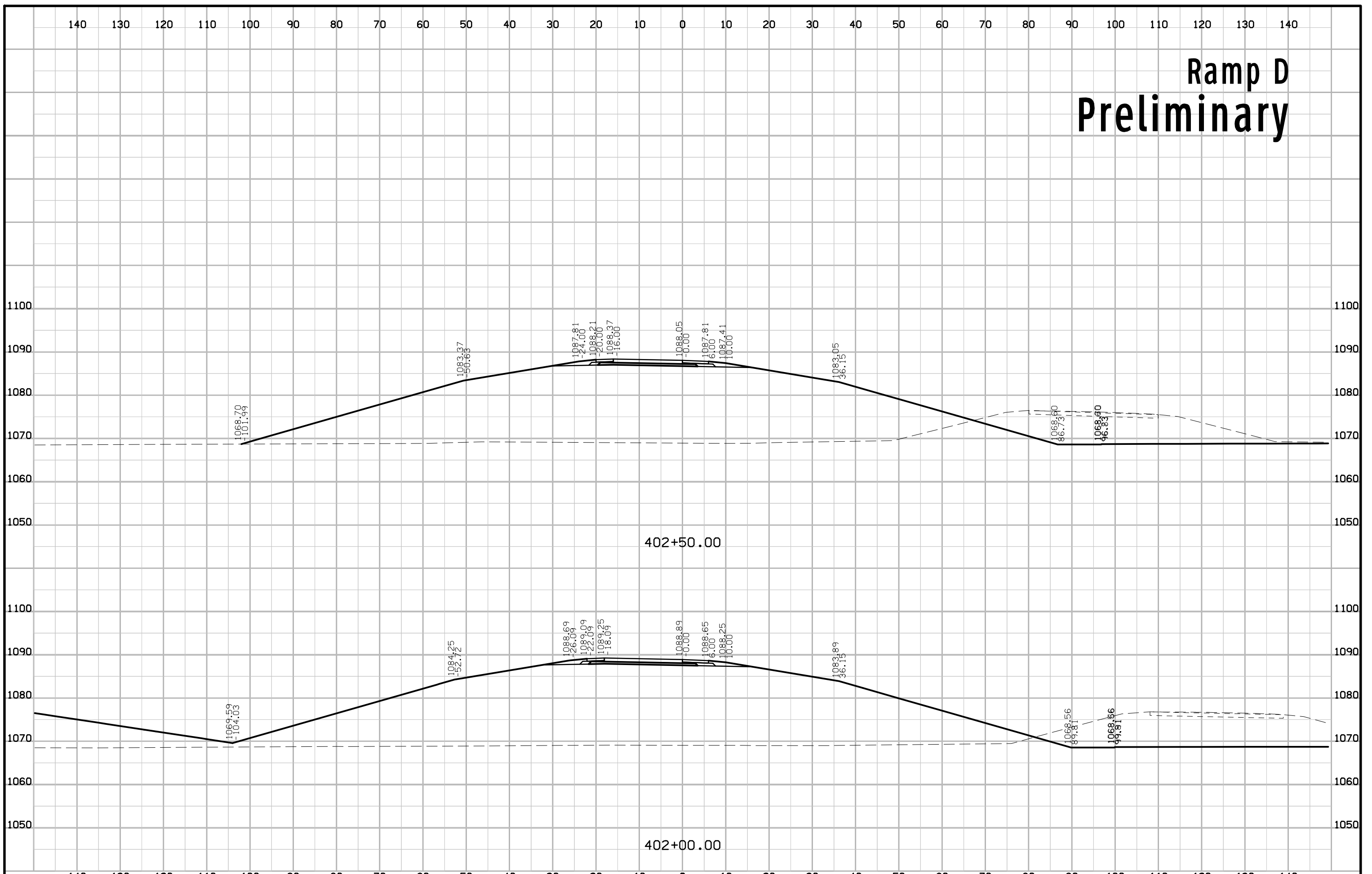
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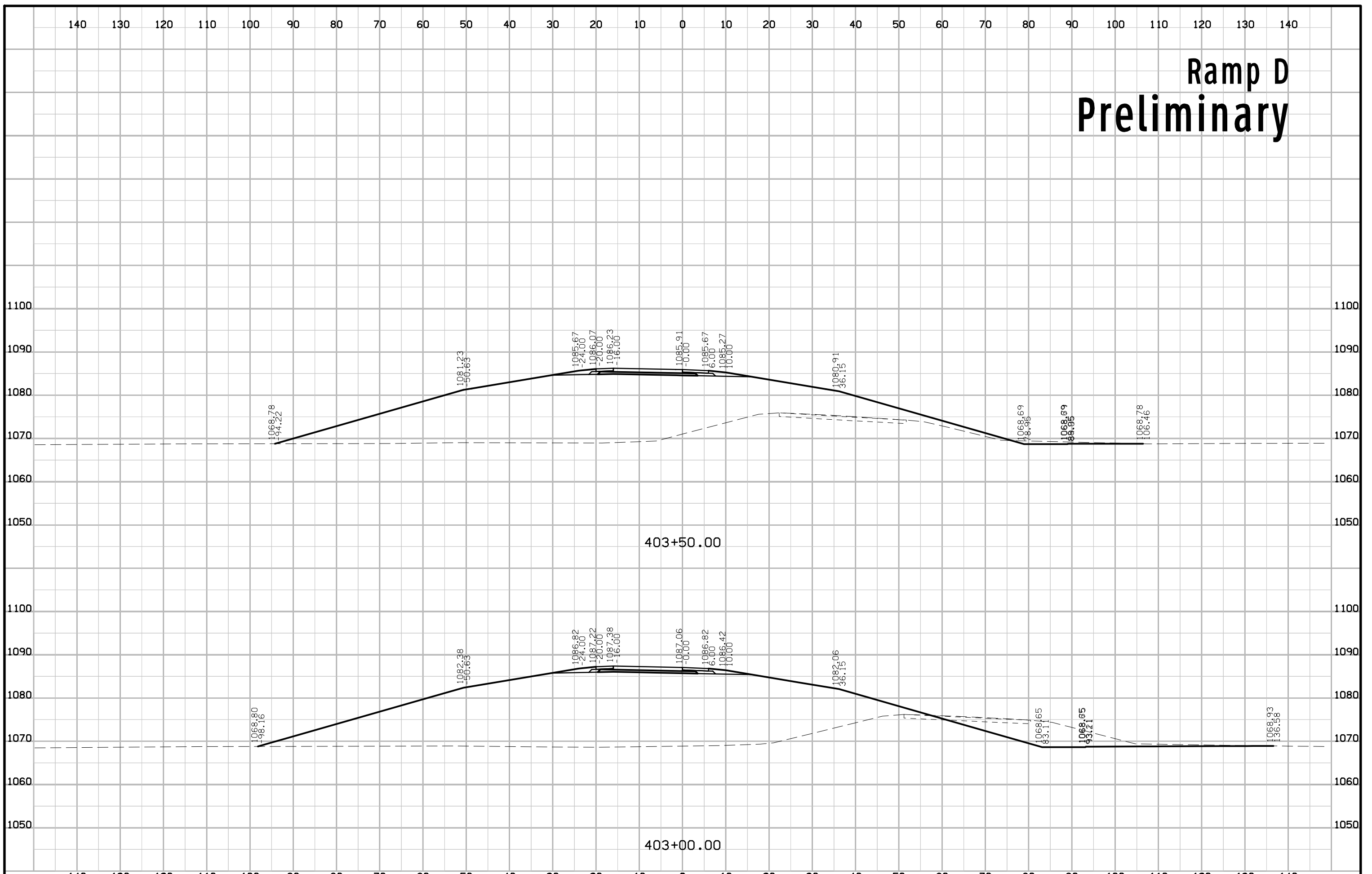
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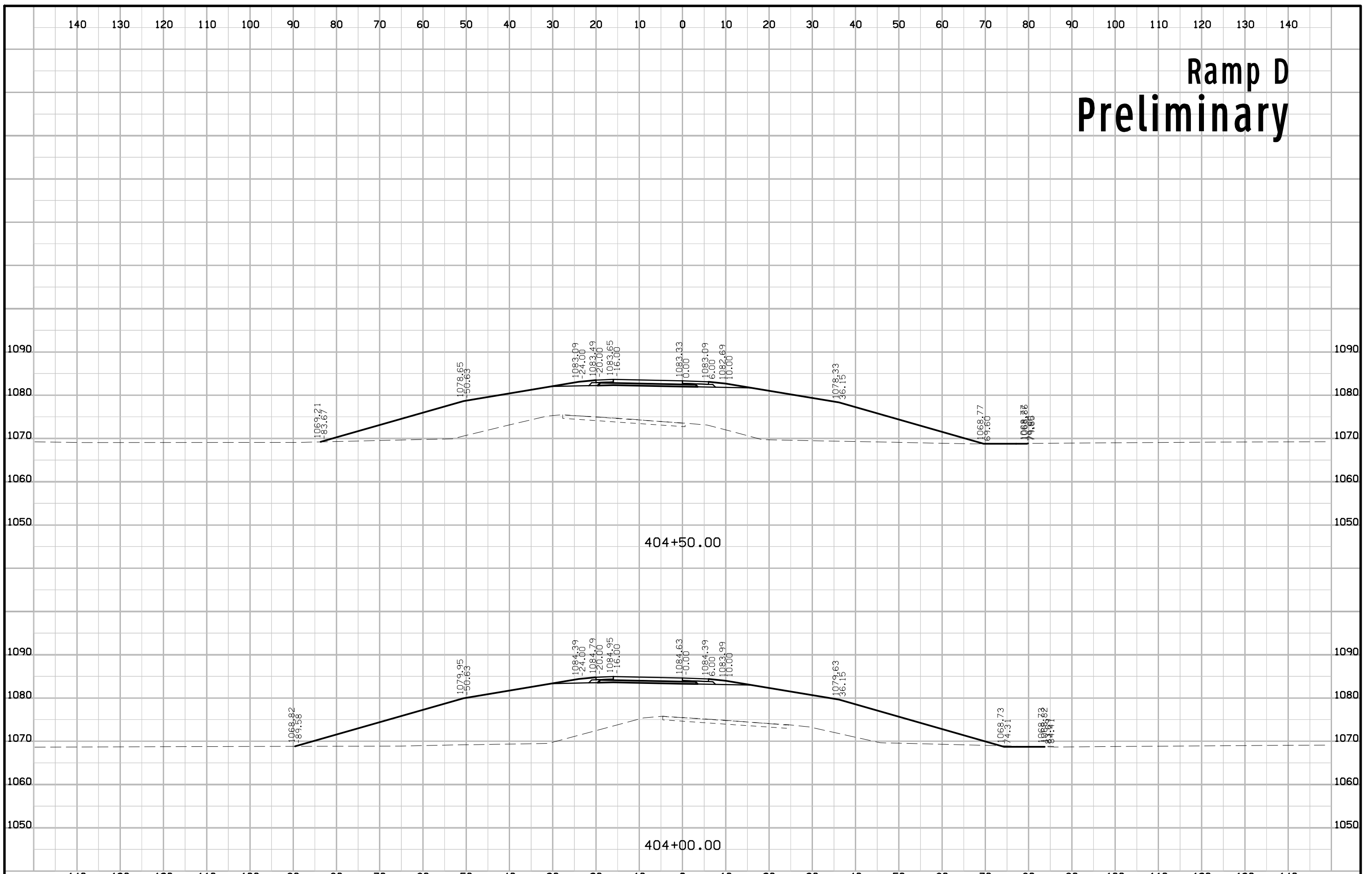
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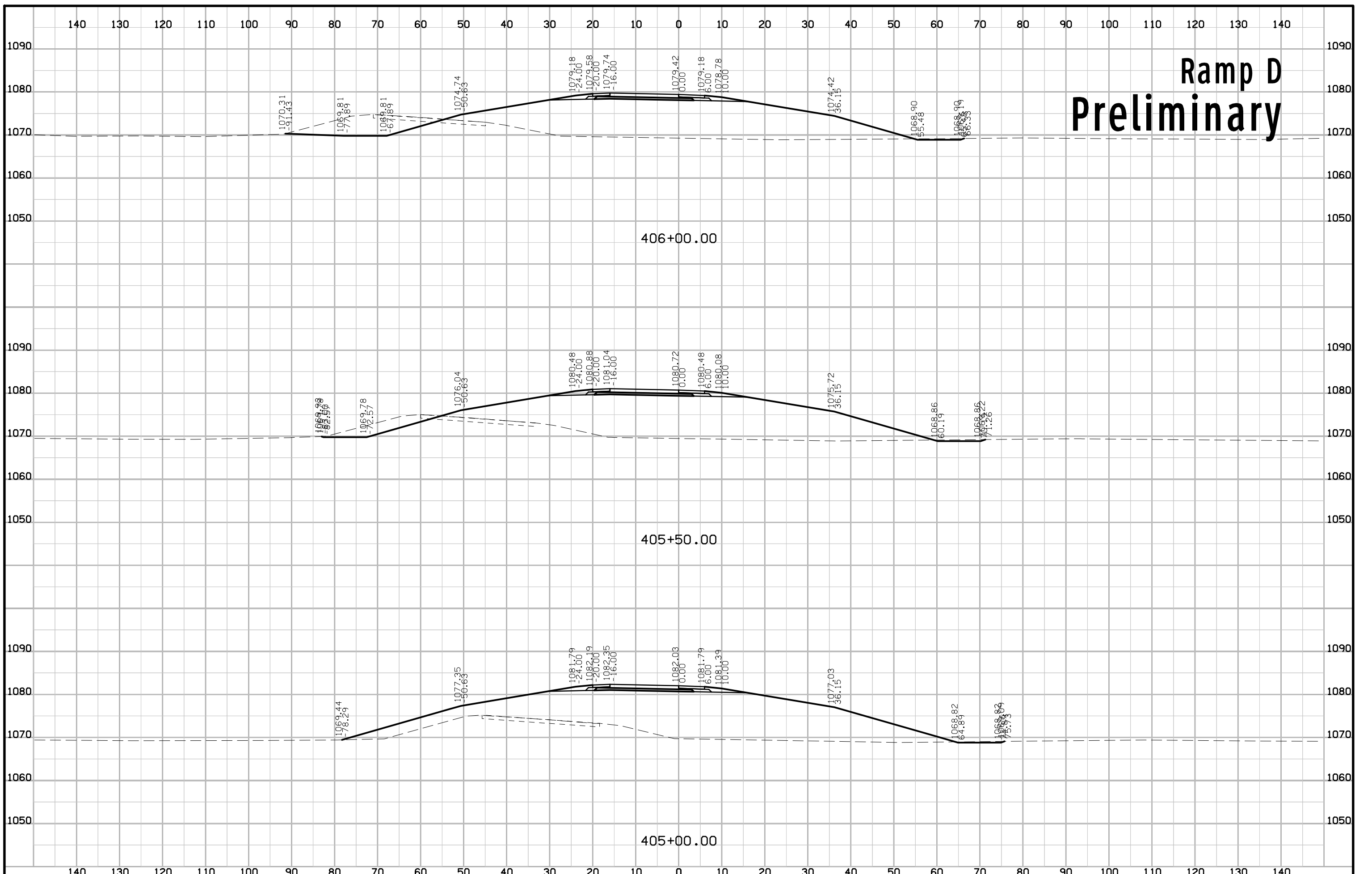
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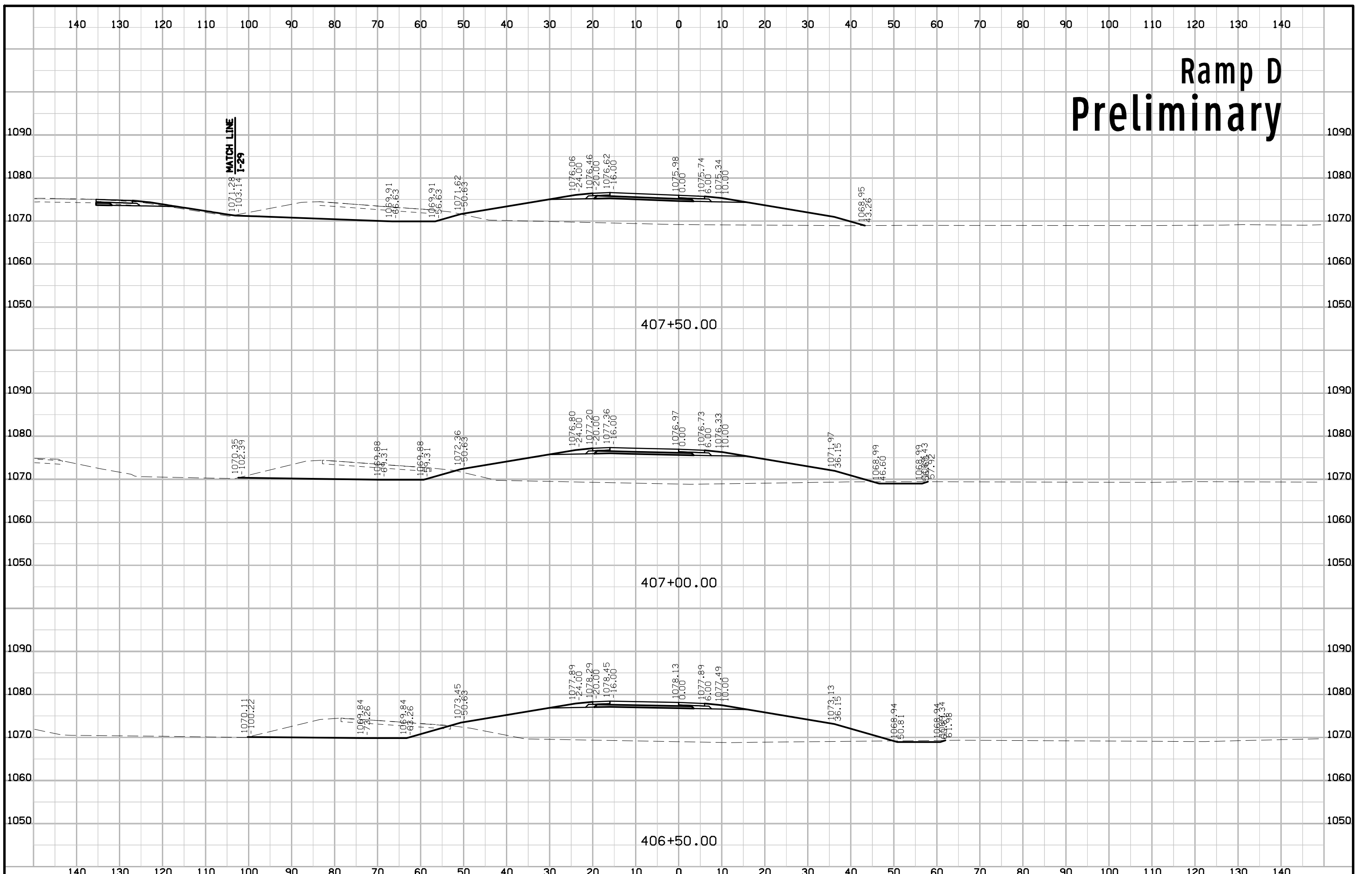
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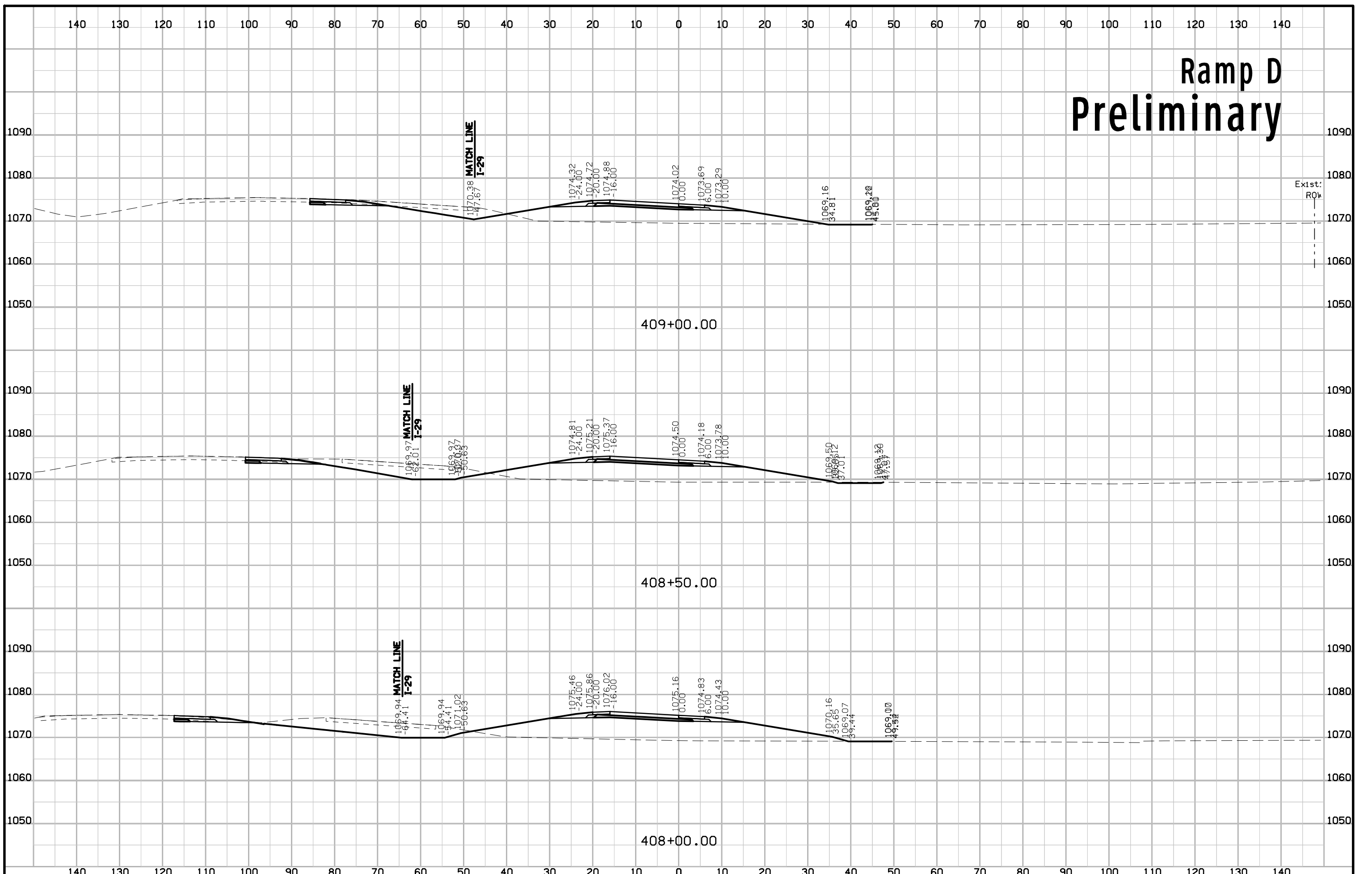
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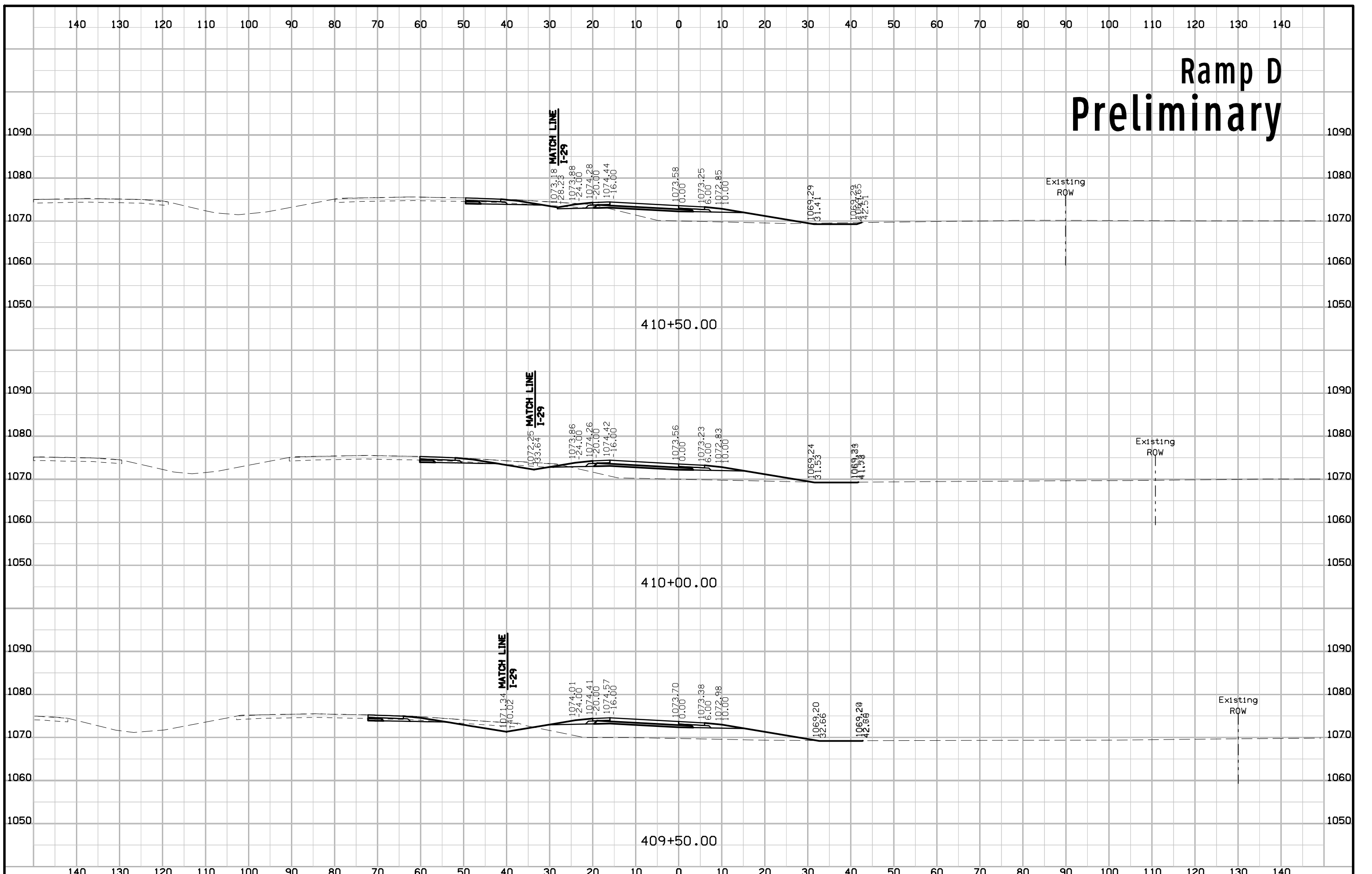
Ramp D Preliminary



Ramp D Preliminary



Ramp D Preliminary



Ramp D Preliminary

