

GRADING
 IMN-029-6(280)132-0E-97
 LETTING DATE
 OCT. 16, 2018

WOODBURY CO.

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Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM WOODBURY COUNTY GRADING

County Road K-35/Carroll Ave. over I-29
4.2 miles North of IA 141

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.15 of the Specifications.



REVISIONS

TOTAL

63

PROJECT IDENTIFICATION NUMBER

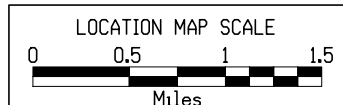
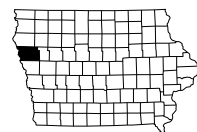
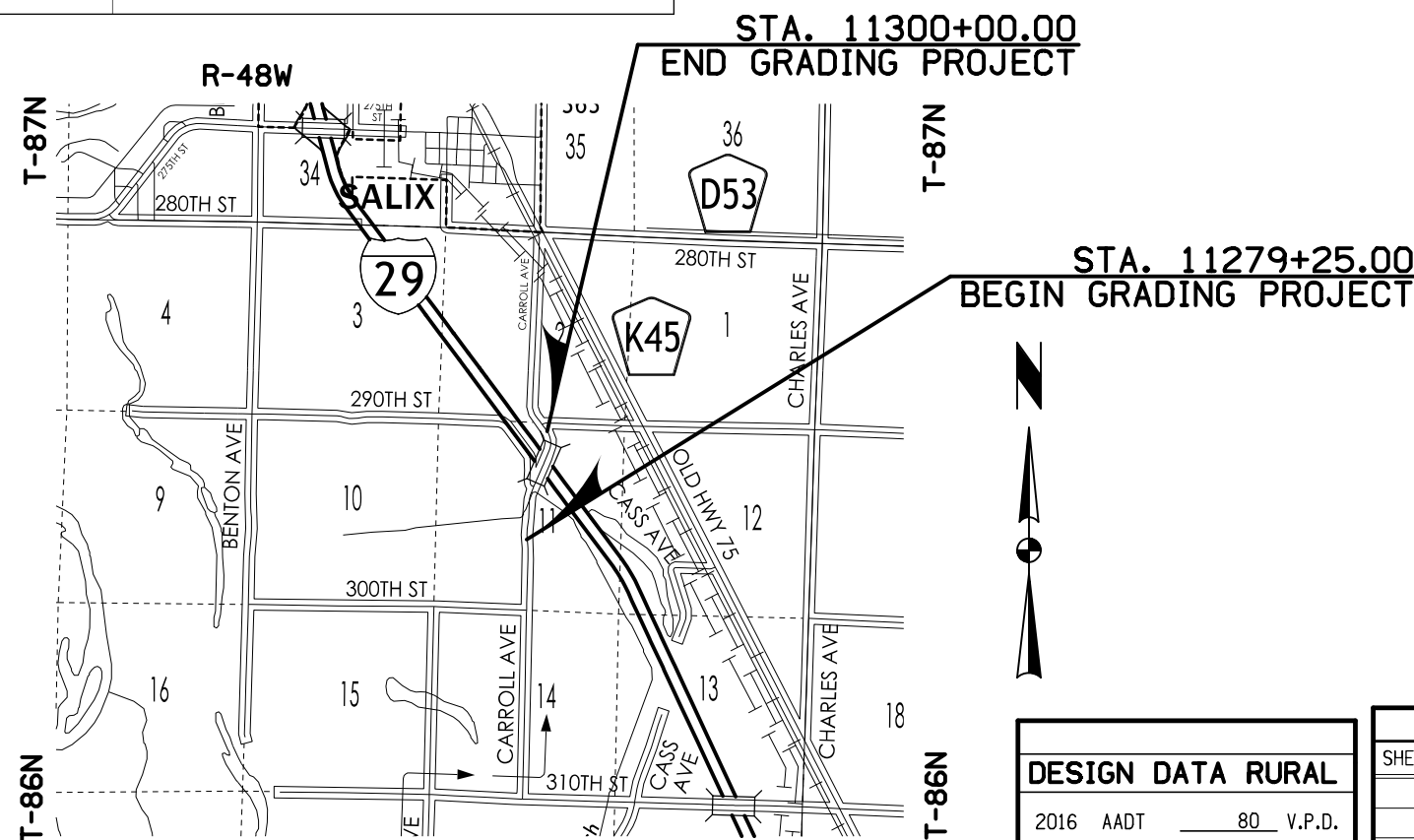
16-97-029-050

PROJECT NUMBER

IMN-029-6(280)132-0E-97

R.O.W. PROJECT NUMBER

IMN-029-6(282)132-0E-97



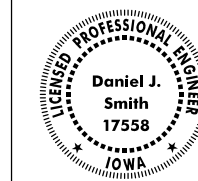
DESIGN DATA RURAL

2016	AADT	80	V.P.D.
20--	AADT	TBD	V.P.D.
20--	DHV	TBD	V.P.H.
	TRUCKS	TBD	%
Total			
Design	ESALs	TBD	

INDEX OF SEALS

SHEET NO.	NAME	TYPE
A.1	Daniel Smith	Primary Signature Block

ROADWAY DESIGN



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

Signature Daniel J. Smith, P.E. Date _____
 Printed or Typed Name
 My license renewal date is December 31, 2018

Pages or sheets covered by this seal: A.1-A.2, B.1, C.1, D.1-D.2, E.1-E.3, G.1-G.4, H.1-H.2, J.1-J.4, Q.1-Q.3, U.1-U.2, W.1, X.1-X.38

PRELIMINARY PLANS

Subject to change by final design.

D5 PLAN - Date: Dec. 18, 2017

FILE NO.

ENGLISH

DESIGN TEAM Iowa DOT\CH2M

WOODBURY COUNTY

PROJECT NUMBER

IMN-029-6(280)132-0E-97

SHEET NUMBER

A.1

Design Criteria Worksheet

Roadway			
PIN Number	16-97-029-050	Submittal Date	9/15/2017
Project Number	IMN-029-6(280)132--0E-97	Revision Date	
District	District 3		
County	Woodbury		
Route	K-35		
Location	County Road K-35 over I-29, 4.2 miles north of IA 141		
Work Type	Bridge Raising and Grading		
Segment Manager			
Designer	CH2M		
Design year ADT =	80		
Design Manual Section 1C-1 Last Updated: 05-26-17	Secondary Roads		
Design Elements	Project value	Local Systems I.M. 3.210 value	Remarks
Design speed (mph)	40	50	
Design lane width (ft.)	12 (a)	10	
Shoulder width (ft.)	3 (a)	3	
Bridge width - new (ft.)	NA	24	
Bridge width - existing (ft.)	24	20	
Maximum super elevation rate (%)	4% (b)	8%	
Minimum radius (ft.)	572 (b)	758	
Stopping sight distance (ft.)	305 (d)	425	
Vertical curve length (ft.)	120 (c)	NA	
Minimum rate of vertical curvature (K)	Crest	44 (d)	84
	Sag	64 (d)	96
Minimum gradient (%)	0.5% (c)	NA	
Maximum gradient (%)	6%	6%	
Foreslope	3:1 (e)	2:1	
Backslope	3:1 (f)	NA	
Traverse slopes	8:1 (g)	NA	
Clearzone	8-10	8-10	See I.M. 3.215
Notes:			
a) Based on existing roadway approach top width of 30'			
b) Based on existing roadway alignment and design speed 40 mph			
c) Per Iowa DOT Design Manual Chapter 2B-1			
d) Per Iowa DOT Design Manual Chapter 6D-1			
e) See Project Statement			
f) Per Iowa Design Manual Chapter 1C-1, Rural Two Lane, 3:1 preferred and 2.5:1 acceptable			
g) Per Iowa DOT Design Manual Chapter 3F-3			

SURVEY SYMBOLS

- CP Control Point
- BM Bench Mark
- RET Retaining Walls
- EP Edge of Paved Roads (ML or SR)
- BRG Bridge
- BD Bridge Deck
- BCL Bridge Centerline
- CU Back of Curb
- GU Gutter In Front of Curb
- SI Sign
- GDL Guard Rail Steel
- PIP Pipe Culvert
- SH Paved Shoulder
- C Centerline BL of Road (ML or SR)
- GDC Guard Rail Cable
- GR Ground Shot
- BL Topo Breakline
- PPA Power Pole Co. 1
- TDC Tree Deciduous
- Default_Point Default Point Feature
- FW Wire Fence
- MIS Miscellaneous
- TLNR Tree Line Right
- TEV Evergreen Tree
- TPD Telephone Pedestal
- SNP Unpaved Shoulder
- EG Edge of Gravel Road
- FWD Wood Fence
- BBB Bottom of Bridge Beam
- TOP Top of Bridge Pier
- TLNL Tree Line Left

UTILITY LEGEND

— E1 — (Overhead) MidAmerican Energy Company
 Contact: Pat Lee
 Phone: 712-233-4832

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

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

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

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

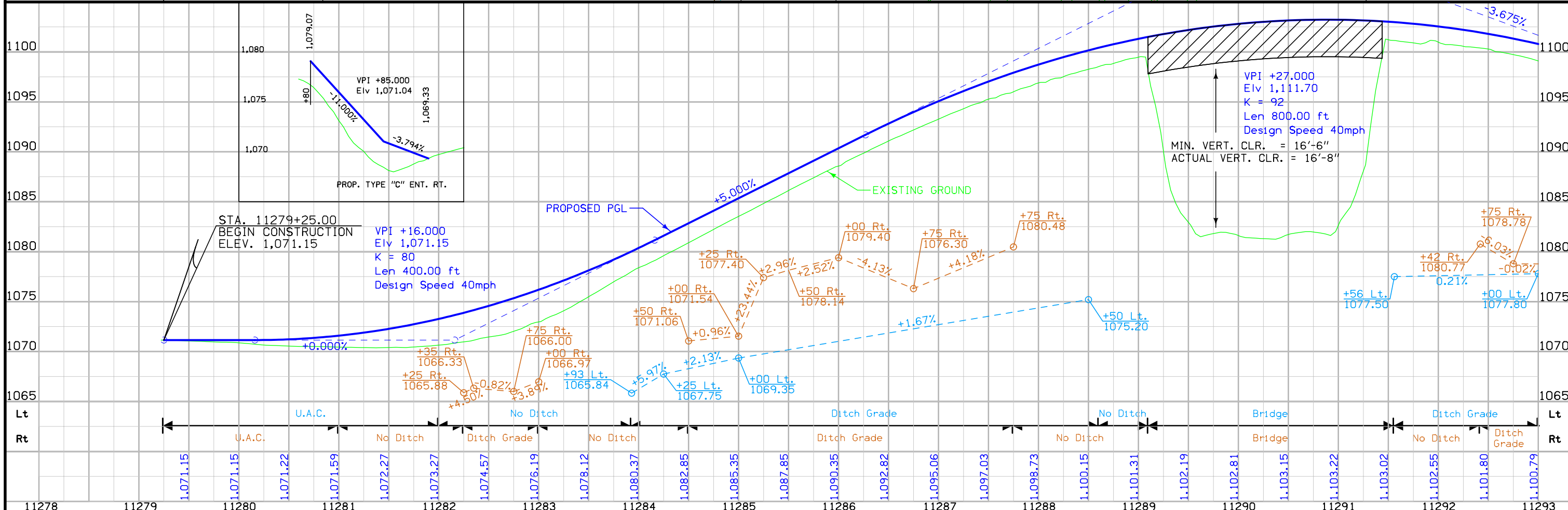
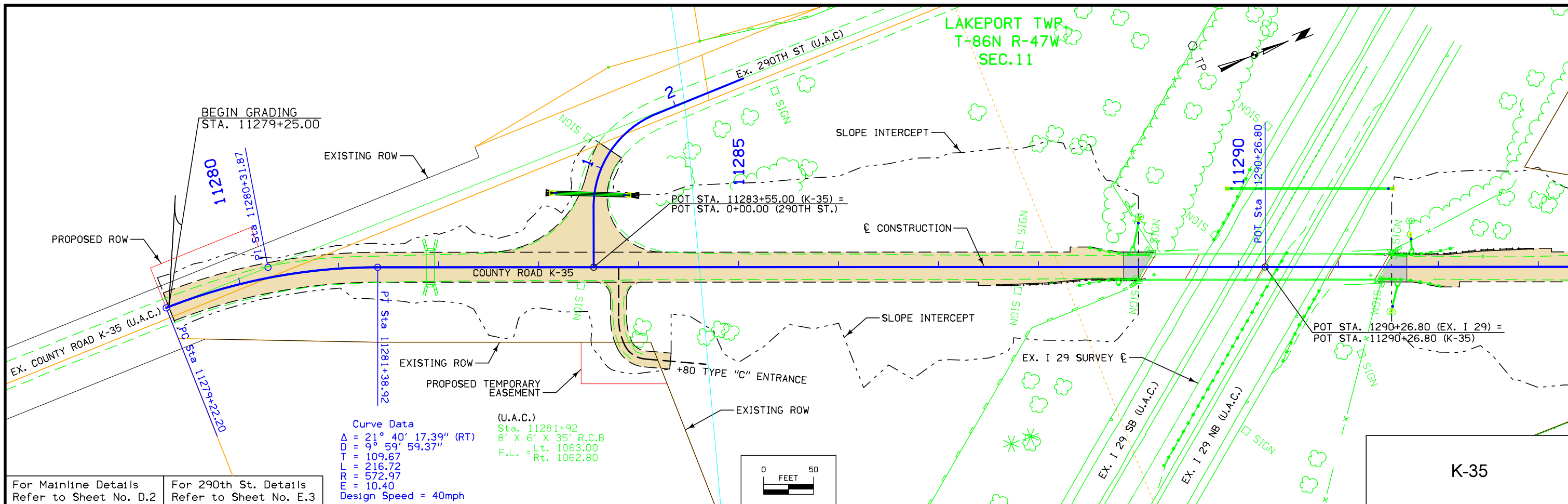
- Reference Point
- Station
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Trench Drain
- HighTension Cable Guardrail
- Sheet Pile
- Pavement Removal
- Clearing & Grubbing Area

RIGHT-OF-WAY LEGEND

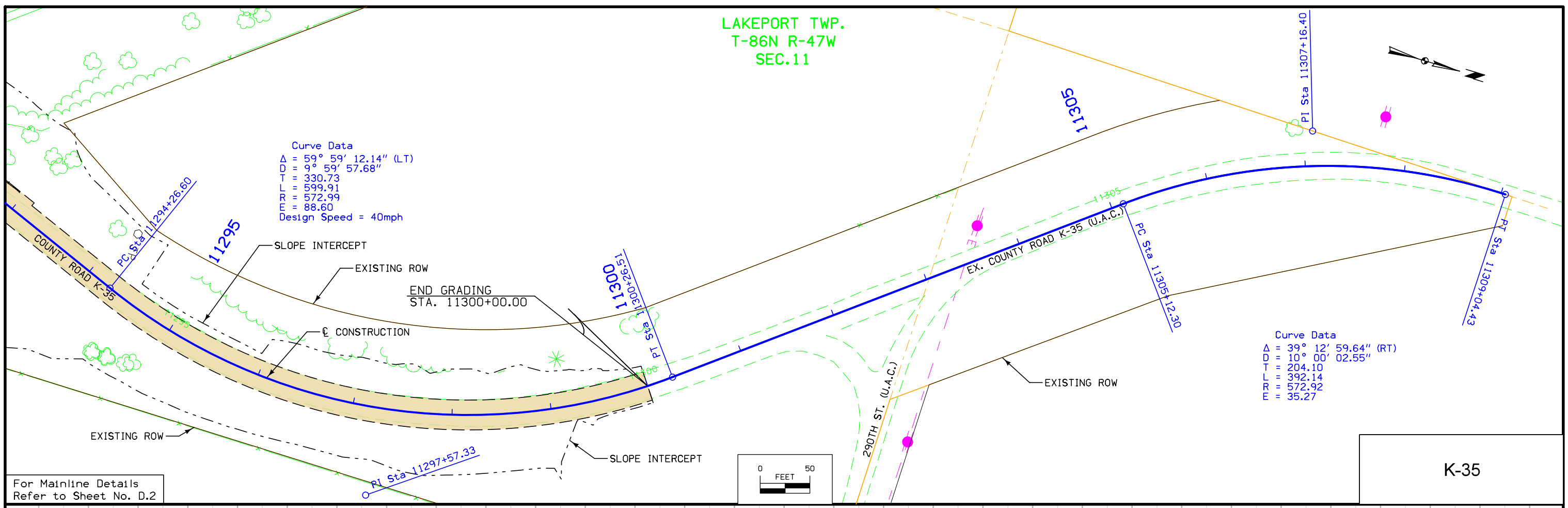
- Proposed Right-of-Way
- Existing Right of Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Easement (Temporary)
- Easement
- Access Control
- Property Line

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

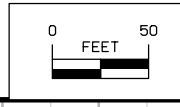
(COVERS SHEET SERIES D & E)



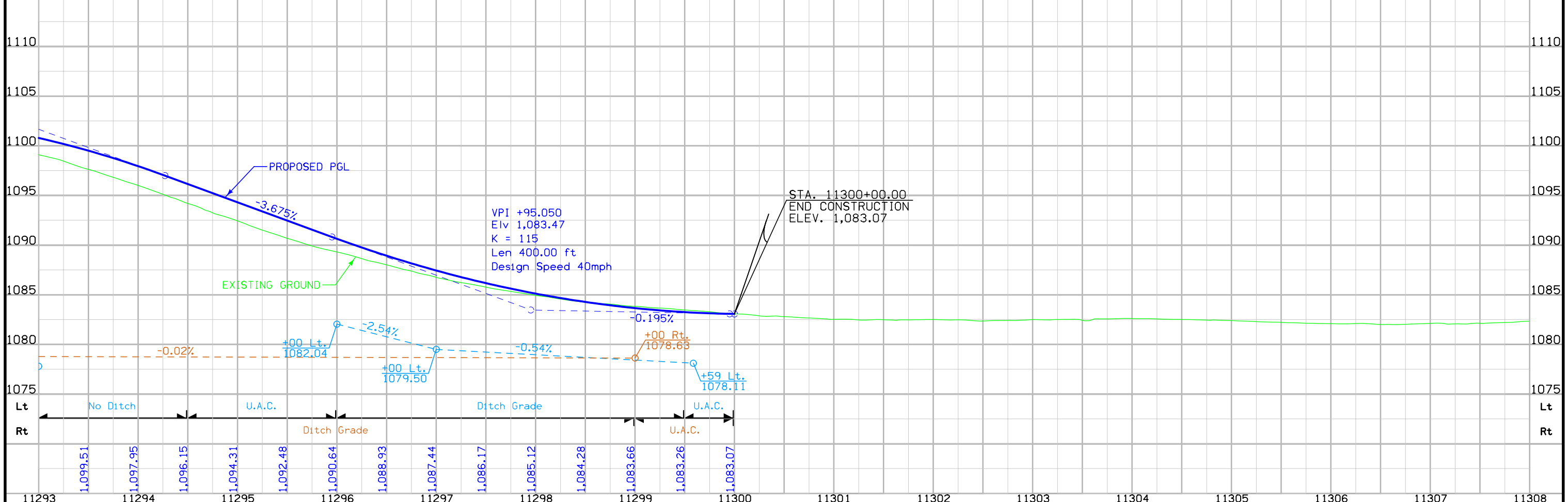
LAKEPORT TWP.
T-86N R-47W
SEC.11



For Mainline Details
Refer to Sheet No. D.2



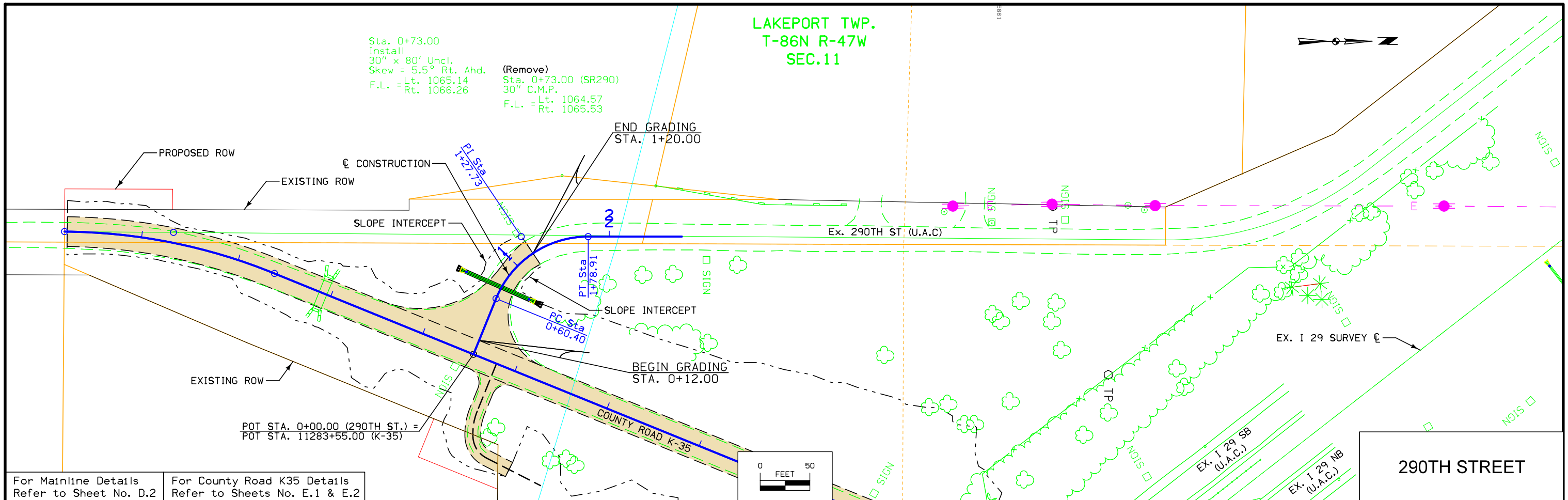
K-35



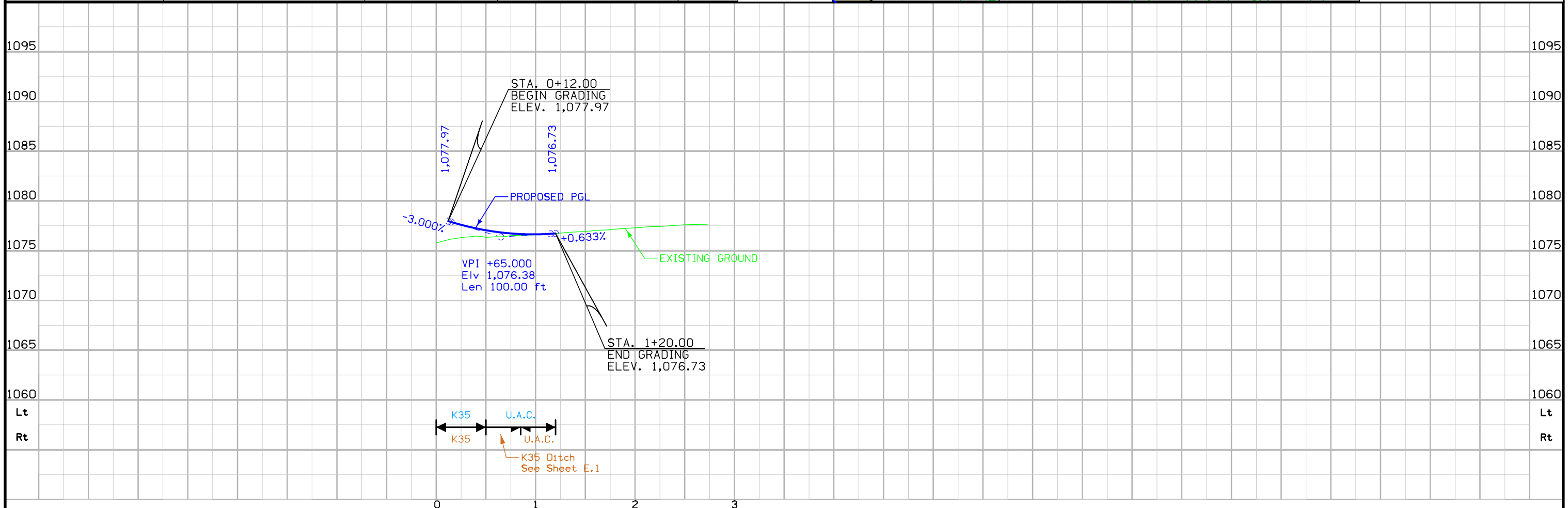
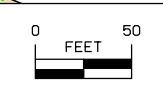
LAKEPORT TWP.
T-86N R-47W
SEC.11

Sta. 0+73.00
Install
30" x 80' Uncl.
Skew = 5.5° Rt. Ahd.
F.L. = Lt. 1065.14
Rt. 1066.26

(Remove)
Sta. 0+73.00 (SR290)
30" C.M.P.
F.L. = Lt. 1064.57
Rt. 1065.53



For Mainline Details Refer to Sheet No. D.2
For County Road K35 Details Refer to Sheets No. E.1 & E.2



Survey Information

WOODBURY COUNTY
IMN-029-6(280)132-0E-97
290TH STREET AND CARROLL AVENUE K-35

General Information

Measurement units for this survey are US survey feet. This survey is for proposed Bridge reconstruction and reconstruction of County Road Carroll Ave over I-29. Project datum and control information is provided by Shive-Hattery, Inc.

Vertical Control

Bench Mark IHC CAP from IOWA DOT PLANS VERTICAL DATUM: NAVD88

Horizontal Control

HORIZONTAL DATUM: NAD83(2011) EPOCH 2013.00
1a. Regional Coordinate System Zone 4

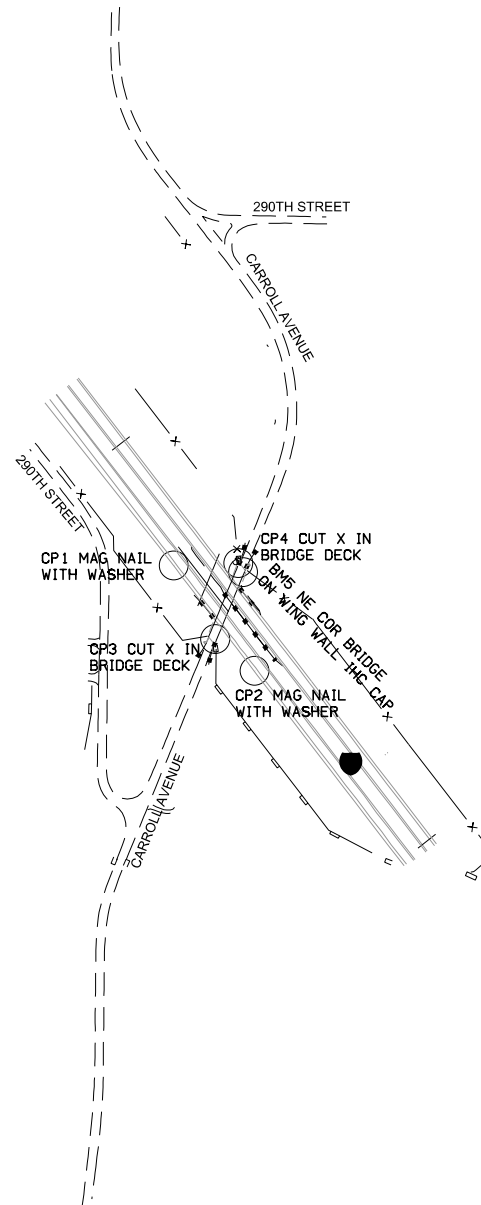
Point Name	Northing	Eastng	Elevation	Description
1	8512366.8409	14108561.4788	1082.5680	CP1 MAG NAIL WITH WASHER
2	8512051.925	414108803.1848	1081.5880	CP2 MAG NAIL WITH WASHER
3	8512146.7252	14108685.6728	1099.8140	CP3 CUT X IN BRIDGE DECK
4	8512346.9661	14108768.7950	1101.3250	CP4 CUT X IN BRIDGE DECK
5	8512373.8515	14108754.80181	101.6100	BMS NE COR BRIDGE ON WING WALL IHC CAP

Alignment Information

No horizontal alignment was created for this project.

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 2013.00

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 2013.00

VERT. DATUM: NAVD88

Ia. Regional Coordinate System Zone 4

Point Name	Northing	Easting	Elevation	Description
1	8512366.8409	14108561.4788	1082.5680	CP1 MAG NAIL WITH WASHER
2	8512051.925	414108803.1848	1081.5880	CP2 MAG NAIL WITH WASHER
3	8512146.7252	14108695.6728	1099.8140	CP3 CUT X IN BRIDGE DECK
4	8512346.9661	14108768.7950	1101.3250	CP4 CUT X IN BRIDGE DECK
5	8512373.8515	14108754.80181	101.6100	BM5 NE COR BRIDGE ON WING WALL IHC CAP

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)	
SRDK35	K-35																
CUR SRK35_1		11290+26.80	8,512,252.3871	14,108,720.8857													
SRK354																	
CUR SRK35_6																	
CUR SRK35_9																	
SR290	290TH ST.																
SRD290		0+00.00	8,511,631.5025	14,108,464.3290													
CUR SRD2901																	
SRD291		2+73.04	8,511,841.7308	14,108,347.2690													
ML029	EX. I-29																
1001		1256+62.74	8,509,584.8970	14,110,770.6090													
1000		1379+34.36	8,519,315.5370	14,103,293.4980													

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		
SRDK35	K-35																	
CUR SRK35_1																		
CUR SRK35_6																		
CUR SRK35_9																		
SR290	290TH ST.																	
CUR SRD2901																		

SUPERELEVATION DATA

See PV-300 Series

Road Identification	Circular Curve or Spiral Curve Name	Radius	Superelevation Data			Standard Road Plan	Section A-A	Section B-B	Section C-C	Section D-D	Section E-E	Section F-F	Case A	Case B	Case C	Case S	Case T	Case U	Remarks	
			e %	L FT	x FT															
SRDK35	SRK35_1	572.97	4.0	83	62	PV-301	11279+25.00	11279+35.33	11279+97.33	11280+18.33									High side ties to existing -0.5%	
							11282+59.02	11281+97.02	11281+35.02	11281+14.02									High side ties to existing 3.0%	
SRDK35	SRK35_6	572.99	4.0	83	62	PV-301	11293+06.50	11293+68.50	11294+30.50	11294+51.50										
							11299+58.00	11300+00.00												

Woodbury	ROW: IMN-029-6(282)132--0E-97				PIN	16-97-029-050													
	Co Rd K35 4.2 mi N of IA 141 (Raise Bridge)																		
		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	Derek C Godfredson Revocable Trust - Fee		0.04 AC																
2	Iowa Conservation Commission - Fee									3666 SF									
2 Parcels	"TOTALS	0 AC	0.04 AC	0 AC	0 AC	0 AC	0 AC	0 AC	0 AC	0 AC	0 AC	0 AC	0 AC	0 AC					
		0 SF		0 SF	0 SF	0 SF	0 SF	0 SF	0 SF	0 SF	0 SF	0 SF	0 SF	0 SF					

LAKEPORT TWP.
T-86N R-47W
SEC. 11

①
DEREK C GODFREDSON
REVOCABLE TRUST

Sta. 0+73.00
Install
30' x 80' Uncl. Ahd.
Skew = 5.5° Rt.
Lt. 1065.14
F.L. = Rt. 1066.26

Sta. 0+73.00 (SR290)
30' C.M.P.
Lt. 1064.57
F.L. = Rt. 1065.53

11280+00
±40'

11279+15
±40'

11280+30
±34'±EX R/W

11279+00
±22'±EX R/W

11283+40
±120'

Sta. 11281+92
8' X 6' X 35' R.C.B
Lt. 1063.00
F.L. = Rt. 1062.80

11284+30
±121'±EX R/W

TEMPORARY EASEMENT
TO SHAPE

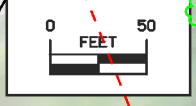
②
IOWA CONSERVATION COMMISSION

CENTER
SECTION

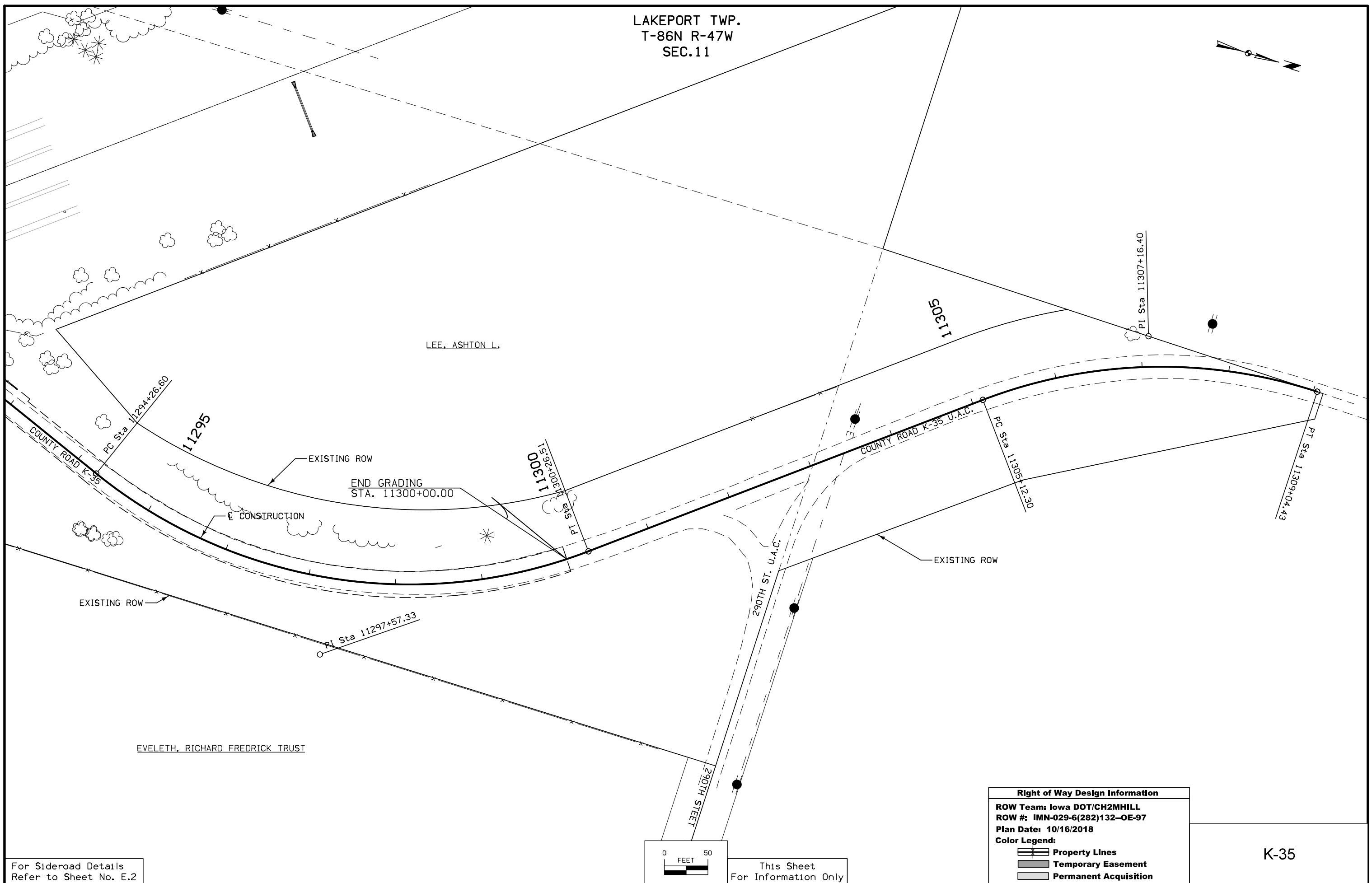
Right of Way Design Information
**THIS SHEET INCLUDED
FOR INFORMATION ONLY**

ROW Team: ATINKEN / LARSON
ROW #: IMN-029-6(282)132-0E-97
Plan Date: 6/27/2018

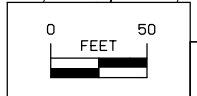
Color Legend:
 Property Lines
 Temporary Easement
 Permanent Acquisition



LAKEPORT TWP.
T-86N R-47W
SEC.11



For Sideroad Details
Refer to Sheet No. E.2



This Sheet
For Information Only

Right of Way Design Information	
ROW Team: Iowa DOT/CH2MHILL	
ROW #: IMN-029-6(282)132-OE-97	
Plan Date: 10/16/2018	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition

K-35

**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)

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
K-35	Both	Woodbury	K-35/Carroll Ave closed 4.2 miles north of IA 141	I-29	Bridge	9731.80029						

108-23A
08-01-08

TRAFFIC CONTROL PLAN

1. Woodbury County Road K-35/Carroll Avenue will be closed from just south of the intersection with 290th Avenue west of I-29 to just south of the intersection with 290th Street east of I-29 during construction. Woodbury County will provide an off-site detour route for County Road K-35/Carroll Avenue.
2. 290th Street will be closed at County Road K-35/Carroll Avenue west of I-29. Woodbury County will provide an off-site detour route for 290th Avenue.
3. Access to adjacent properties via an existing entrance located within the reconstruction limits of County Road K-35/Carroll Avenue shall be maintained at all times.
4. Traffic is to be maintained along I-29 northbound and southbound at all times. The inside northbound and southbound I-29 shoulder may be closed as needed to provide temporary barrier protection of the workzone within the existing I-29 median.
5. Traffic control shall be in accordance with Iowa DOT Standard Road Plans including TC-1, TC-202, TC-252, and TC-402. For additional traffic control information, refer to Part 6 of the Manual on Uniform Traffic Control Devices (MUTCD) and the current Iowa DOT Standard Specifications.

111-01
04-17-12

COORDINATED OPERATIONS

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

Project	Type of Work
IMN-029-6(279)130-0E-97	Bridge Raising

108-26A
08-01-08

STAGING NOTES

PROPOSED SEQUENCE OF CONSTRUCTION

Stage 1

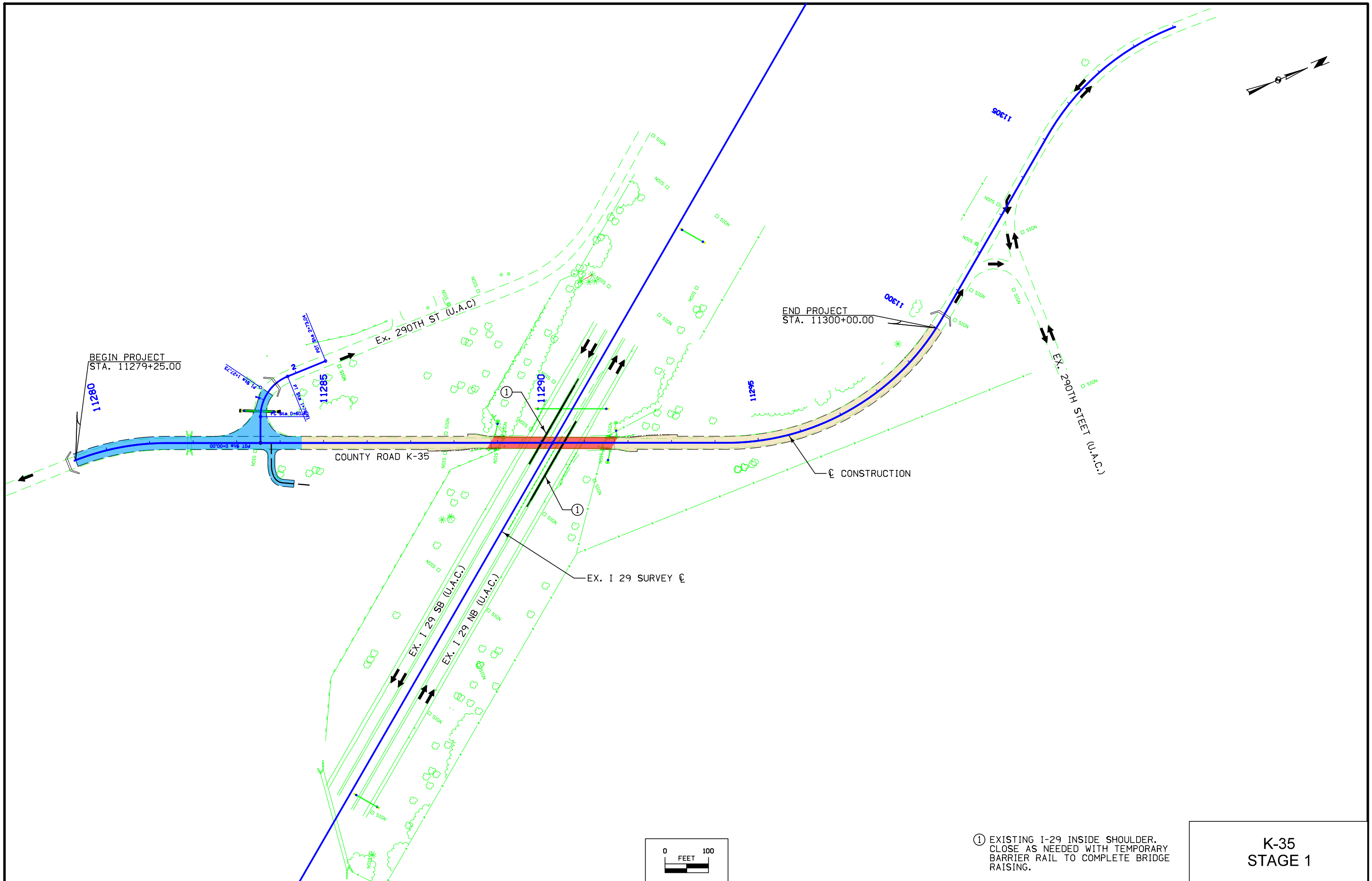
- Close County Road K-35/Carroll Avenue from just south of 290th Avenue west of I-29 to just south of 290th Avenue east of I-29. Close 290th Avenue at the intersection with County Road K-35/Carroll Avenue west of I-29.
- Remove existing I-29 overpass paved approach slabs and begin bridge repair and raising work.
- Begin grading approach roadways east and west of the I-29 crossing.
- Complete 290th Street/County Road K-35/Carroll Avenue intersection grading and County Road K-35/Carroll Avenue grading south of this intersection and apply granular surfacing. Reopen the 290th Street intersection west of I-29 upon completion. County Road K-35/Carroll Avenue remains closed to the north.

Stage 2

- Maintain traffic at the County Road K-35/Carroll Avenue intersection with 290th Avenue west of I-29.
- Complete approach roadway grading east and west of I-29. Construct granular surfacing and paved bridge approach slabs.
- Complete bridge repair and raising work.
- Construct guardrails.

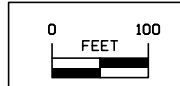
Stage 3

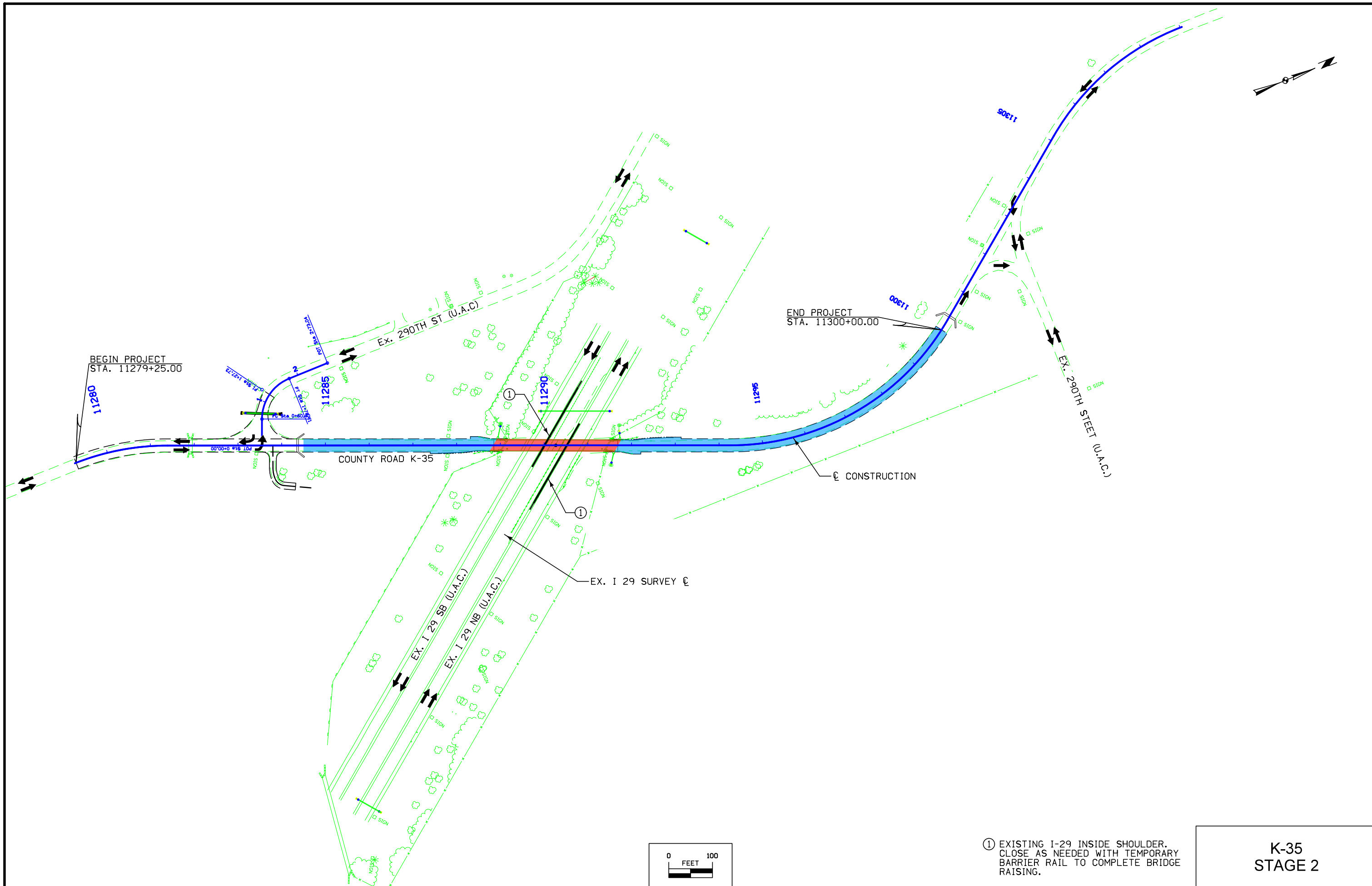
- Open County Road K-35/Carroll Avenue I-29 overpass to traffic.



① EXISTING I-29 INSIDE SHOULDER.
CLOSE AS NEEDED WITH TEMPORARY
BARRIER RAIL TO COMPLETE BRIDGE
RAISING.

**K-35
STAGE 1**





① EXISTING I-29 INSIDE SHOULDER. CLOSE AS NEEDED WITH TEMPORARY BARRIER RAIL TO COMPLETE BRIDGE RAISING.

**K-35
STAGE 2**

SURVEY SYMBOLS

- CP Control Point
- BM Bench Mark
- RET Retaining Walls
- EP Edge of Paved Roads (ML or SR)
- BRG Bridge
- BD Bridge Deck
- BCL Bridge Centerline
- CU Back of Curb
- GU Gutter In Front of Curb
- SI Sign
- GDL Guard Rail Steel
- PIP Pipe Culvert
- SH Paved Shoulder
- C Centerline BL of Road (ML or SR)
- GDC Guard Rail Cable
- GR Ground Shot
- BL Topo Breakline
- PPA Power Pole Co. 1
- TDC Tree Deciduous
- Default_Point Default Point Feature
- FW Wire Fence
- MIS Miscellaneous
- TLNR Tree Line Right
- TEV Evergreen Tree
- TPD Telephone Pedestal
- SNP Unpaved Shoulder
- EG Edge of Gravel Road
- FWD Wood Fence
- BBB Bottom of Bridge Beam
- TOP Top of Bridge Pier
- TLNL Tree Line Left

UTILITY LEGEND

- E1 — (Overhead) MidAmerican Energy Company
Contact: Pat Lee
Phone: 712-233-4832

PLAN VIEW COLOR LEGEND OF SOILS SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Topographic Features and Labels
Purple (Halo)	(15)	Backslope Drains
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
SHADING		
Brown, Light	(236)	Core Out

PROFILE VIEW COLOR LEGEND OF SOILS SHEETS

LINEWORK	Design Color No.	
Blue	(1)	Proposed Alignment, Stationing, and Alignment Annotation
Green	(2)	Existing Ground Line Profile
Green, Med	(227)	Topsoil
Green, Med	(227)	Slope Dressing Only
Orange	(6)	Loam
Brown, Dark	(238)	Class 10
Brown, Med	(237)	Sand
Red	(3)	Unsuitable A
Pink, Dark	(13)	Unsuitable B
Pink	(11)	Unsuitable C
Red	(3)	Shale
Red	(3)	Waste
Gray, Light	(48)	Broken and Weathered Rock
Gray, Med	(80)	Rock
Gray, V.Dark	(128)	Boulders

PATTERN AND SYMBOL LEGEND OF SOILS SHEETS

		Soils Book No. _____
		Date(s) Drilled _____
	Drill	
	Water	
	Dry	
	Sample	
	Plugged	
	Moisture	
	Shelby	
	Blow Count	
	Dens. Core	

	Reference Point
	Station
	Survey Line
	Section Corner
	Ground Line Intercept
	Saw Cut
	Guardrail
	Clearing & Grubbing Area
	Pavement Removal

RIGHT-OF-WAY LEGEND

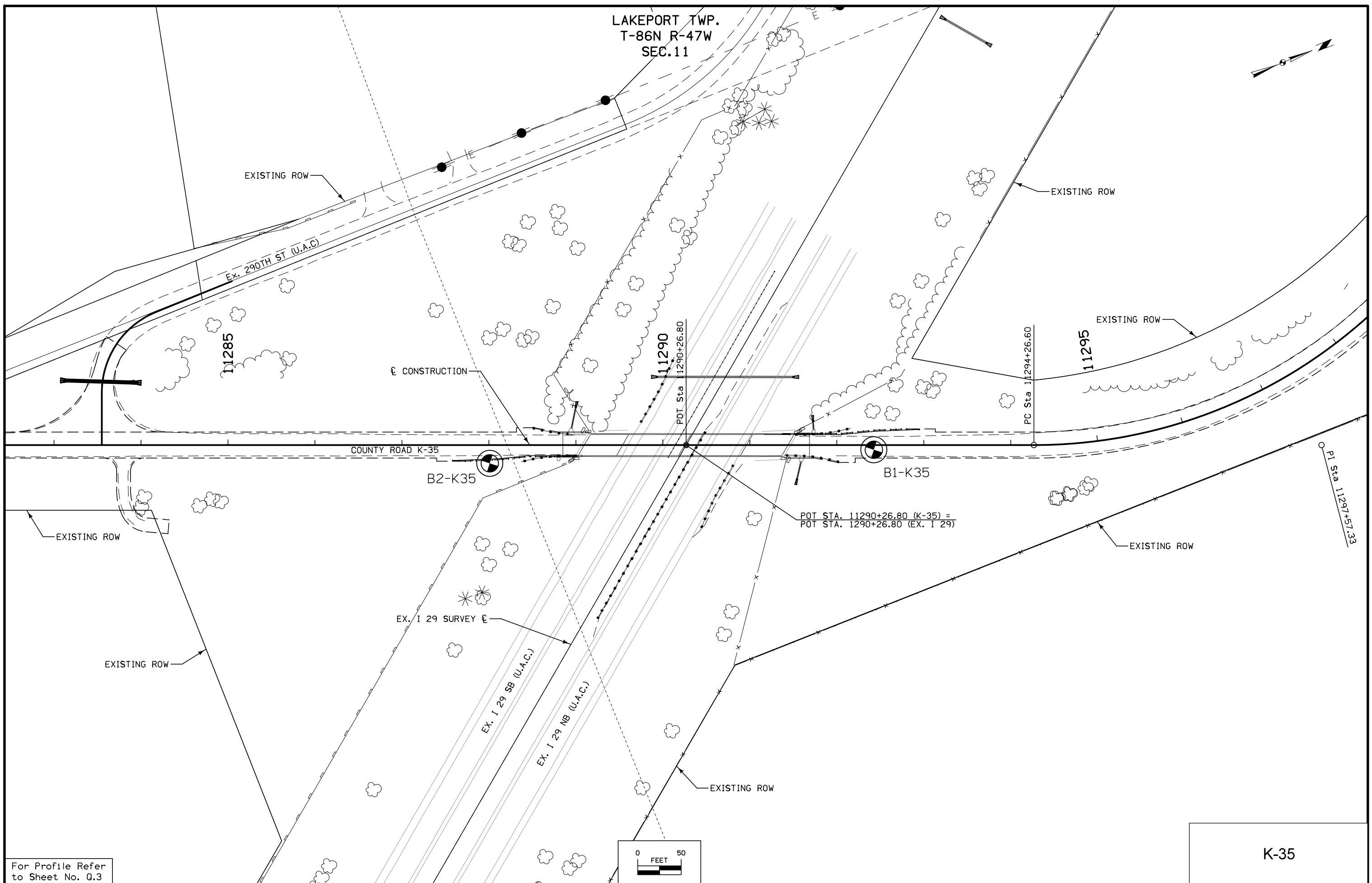
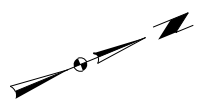
	Proposed Right-of-Way
	Existing and Proposed Right-of-Way
	Easement and Existing Right-of-Way
	Borrow
	Easement (Temporary)
	Easement
	Excess
	A/C Access Control

NOTE: Sounding and test boring data shown in the plans were accumulated for designing and estimating purposes. Their appearance on the plans does not constitute a guarantee that conditions other than those indicated will be encountered. Details and notes shown elsewhere shall be used for roadway and structure construction.

SOILS LEGEND AND SYMBOL INFORMATION SHEET

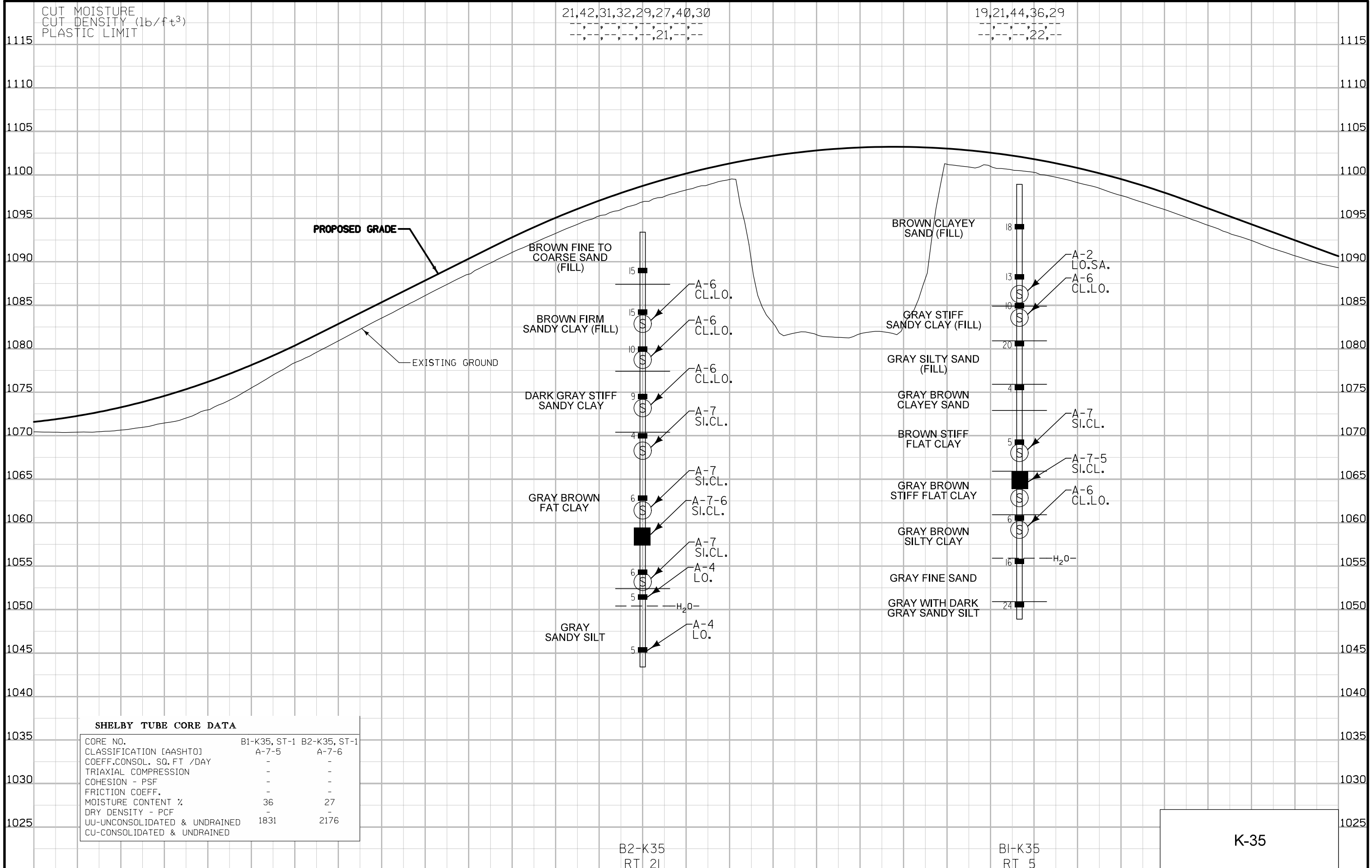
(COVERS SHEET SERIES Q & R)

LAKEPORT TWP.
T-86N R-47W
SEC.11



For Profile Refer
to Sheet No. Q.3

K-35



CUT MOISTURE
 CUT DENSITY (lb/ft³)
 PLASTIC LIMIT

21,42,31,32,29,27,40,30
 ---,---,---,---,---,---,---,---
 ---,---,---,---,21,---,---

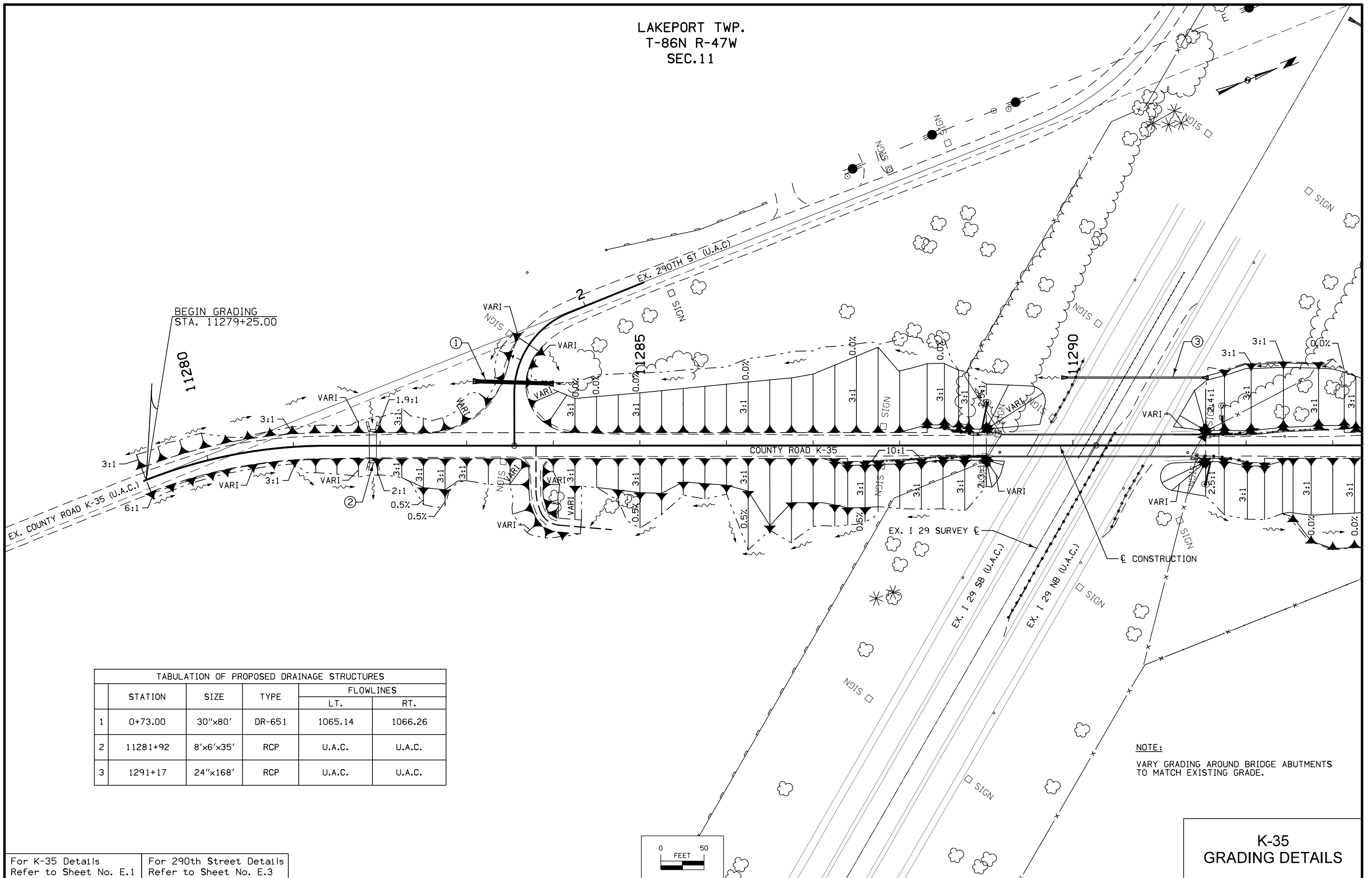
19,21,44,36,29
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 ---,---,---,22,---

SHELBY TUBE CORE DATA

CORE NO.	B1-K35, ST-1	B2-K35, ST-1
CLASSIFICATION [AASHTO]	A-7-5	A-7-6
COEFF. CONSOL. SQ. FT / DAY	-	-
TRIAxIAL COMPRESSION	-	-
COHESION - PSF	-	-
FRICTION COEFF.	-	-
MOISTURE CONTENT %	36	27
DRY DENSITY - PCF	-	-
UU-UNCONSOLIDATED & UNDRAINED	1831	2176
CU-CONSOLIDATED & UNDRAINED	-	-

K-35

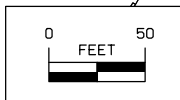
LAKEPORT TWP.
T-86N R-47W
SEC.11



BEGIN GRADING
STA. 11279+25.00

TABULATION OF PROPOSED DRAINAGE STRUCTURES					
STATION	SIZE	TYPE	FLOWLINES		
			LT.	RT.	
1	0+73.00	30"x80'	DR-651	1065.14	1066.26
2	11281+92	8'x6'x35'	RCP	U.A.C.	U.A.C.
3	1291+17	24'x168'	RCP	U.A.C.	U.A.C.

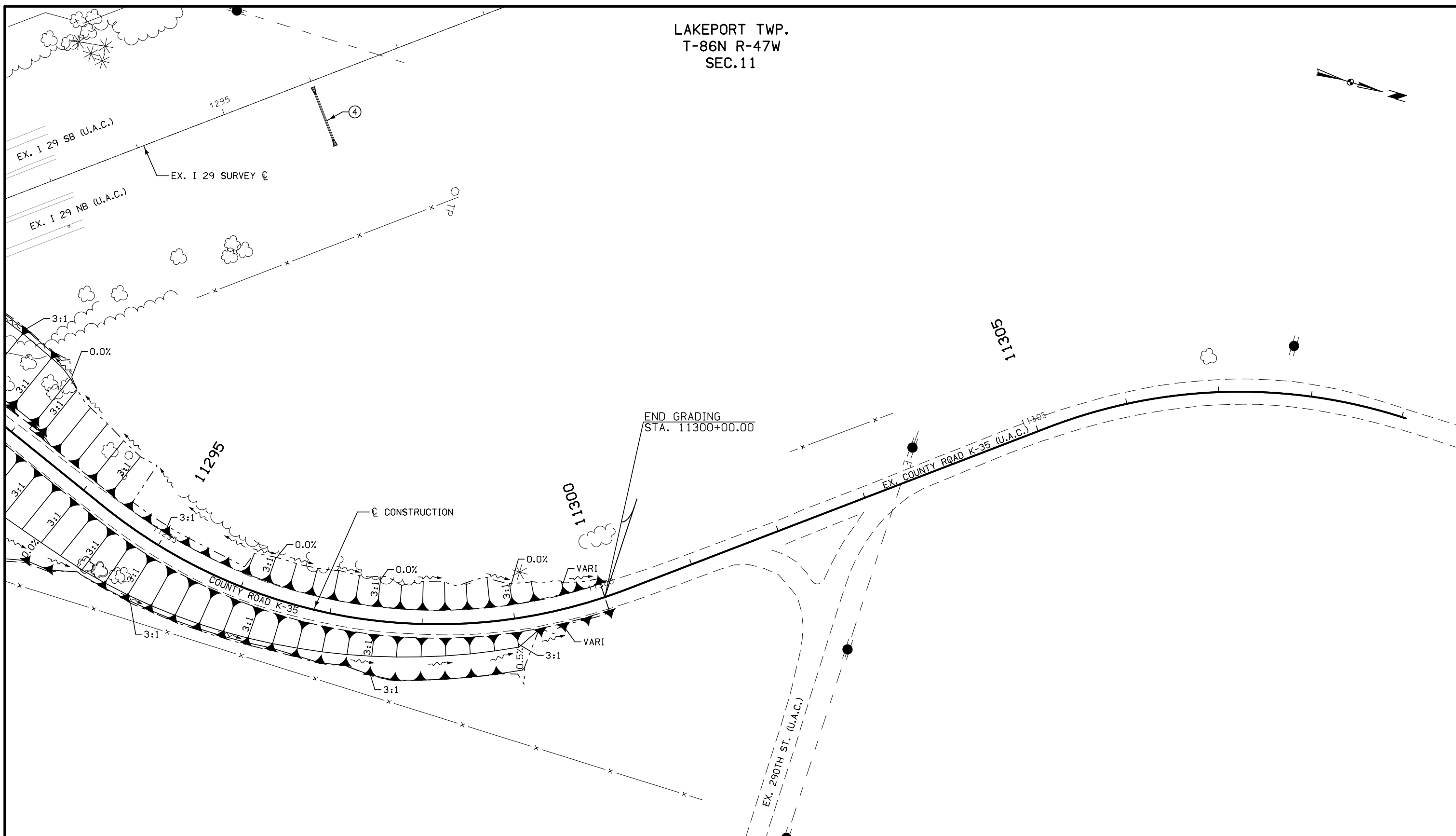
NOTE:
VARY GRADING AROUND BRIDGE ABUTMENTS
TO MATCH EXISTING GRADE.



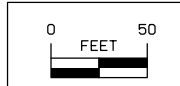
K-35
GRADING DETAILS

For K-35 Details Refer to Sheet No. E.1
For 290th Street Details Refer to Sheet No. E.3

LAKEPORT TWP.
T-86N R-47W
SEC. 11



TABULATION OF PROPOSED DRAINAGE STRUCTURES					
	STATION	SIZE	TYPE	FLOWLINES	
				LT.	RT.
4	1296+00	24"x66'	RCP	U.A.C.	U.A.C.



K-35
GRADING DETAILS

For K-35 Details
Refer to Sheet No. E.2

LINE STYLE LEGEND OF CROSS SECTION SHEETS (ROAD)

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

LINE STYLE LEGEND OF CROSS SECTION SHEETS (SOILS)

- TS————— Topsoil (Class 10)
- SLOPE DRESSING — Slope Dressing Only
- CL 10————— Class 10 Materials
- SEL 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.

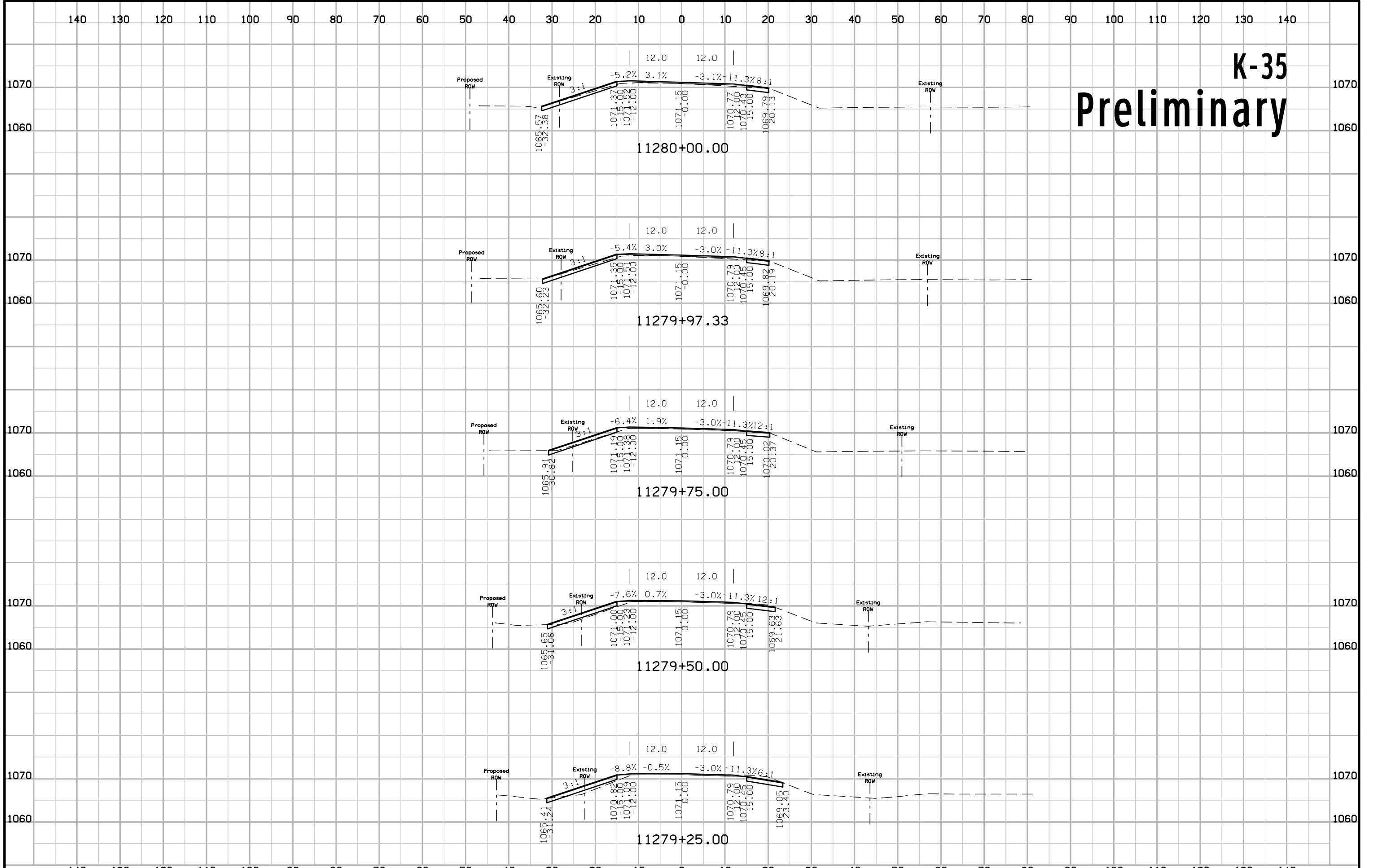
SYMBOL LEGEND OF CROSS SECTION SHEETS

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

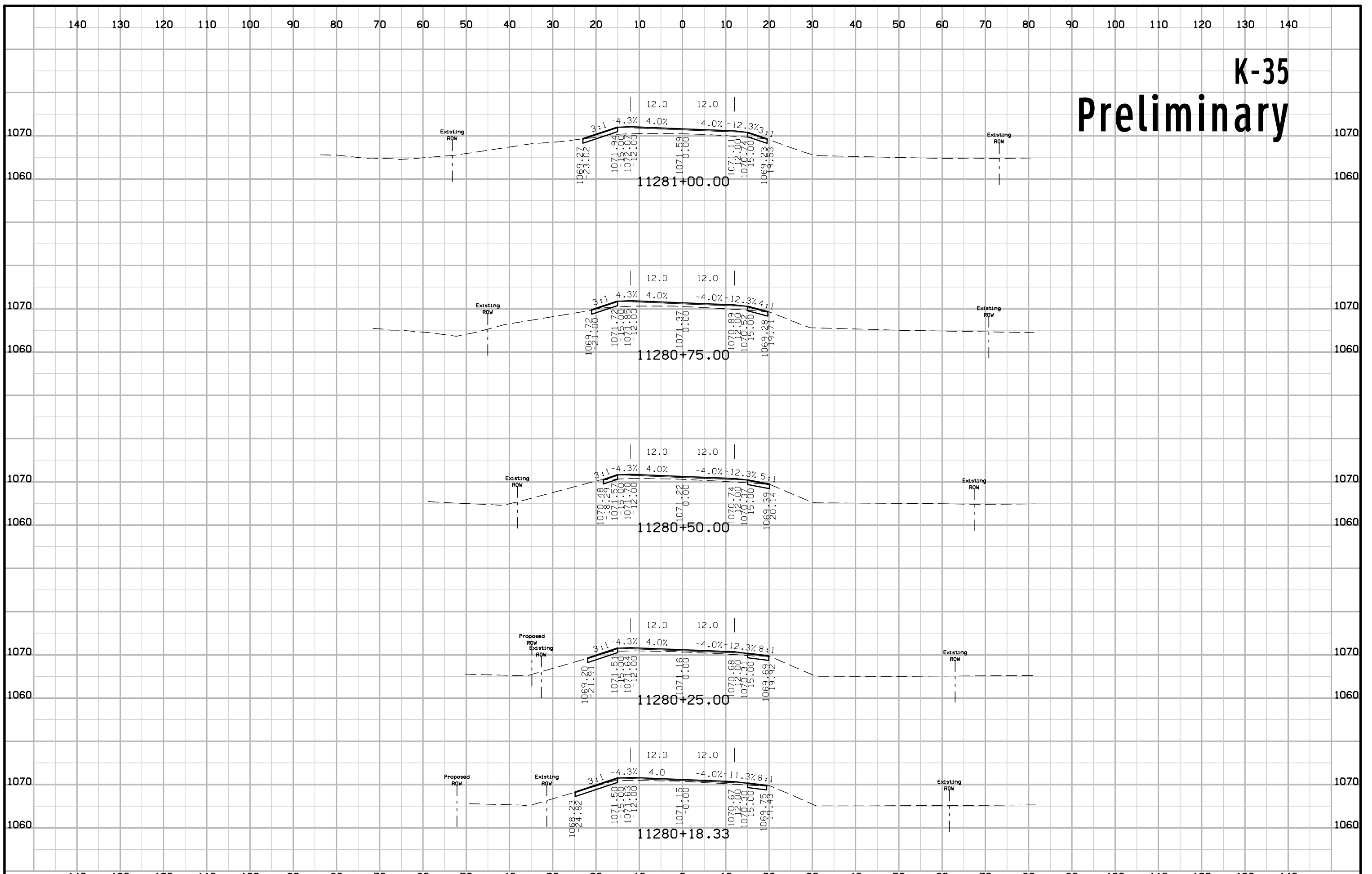
**CROSS SECTION
LEGEND AND SYMBOL
INFORMATION SHEET**

(COVERS SHEET SERIES W & X)

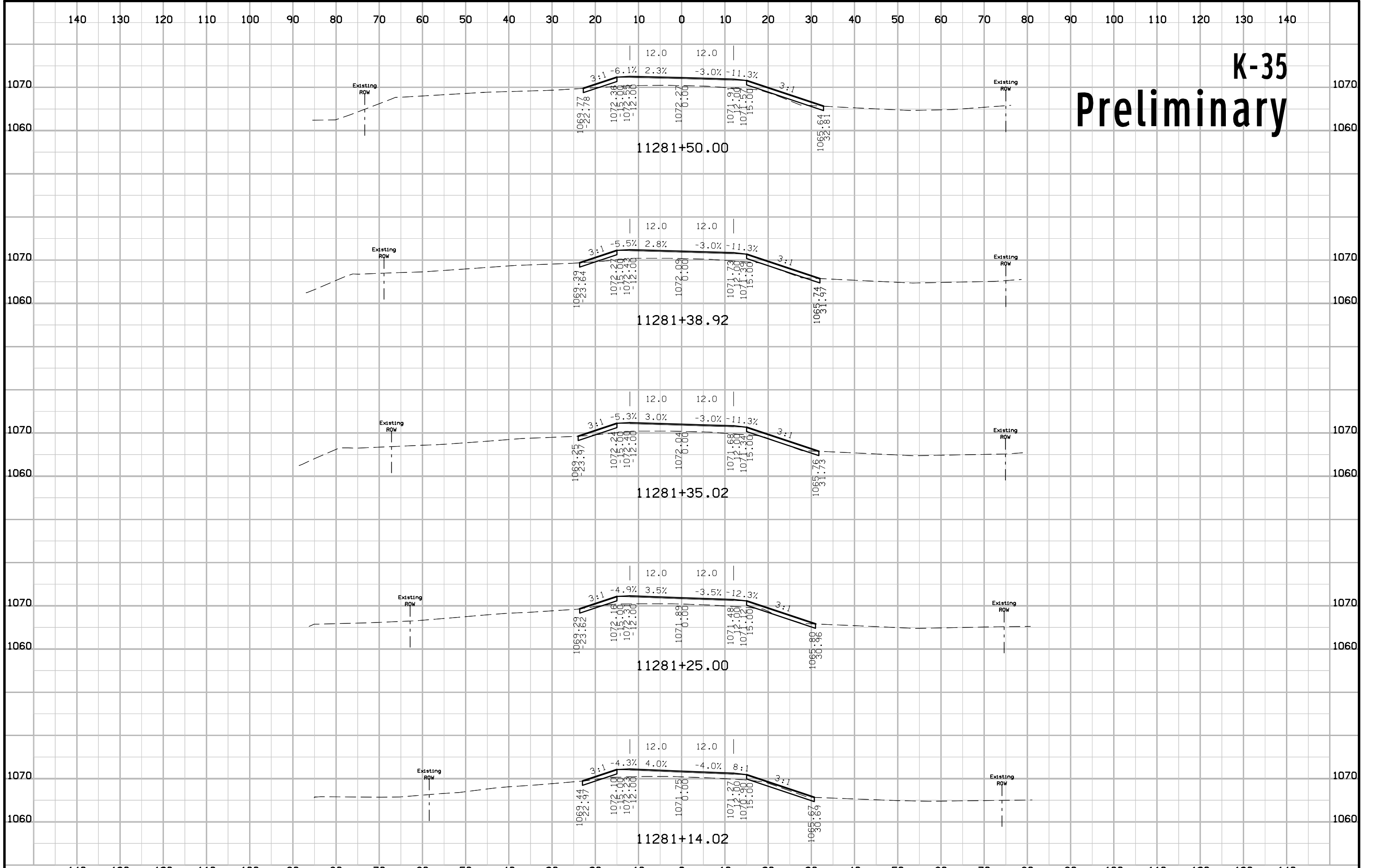
K-35 Preliminary



K-35 Preliminary

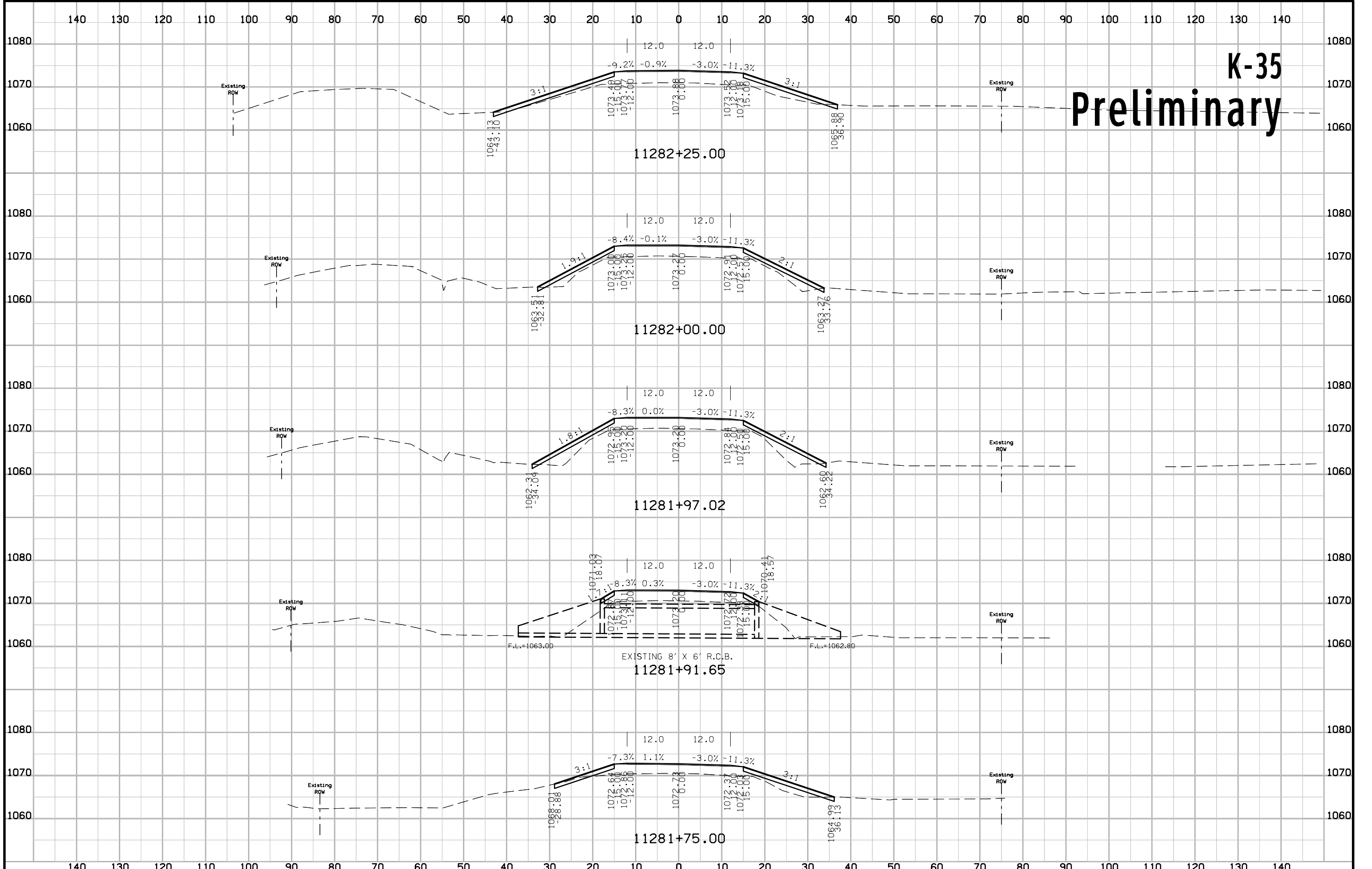


K-35 Preliminary

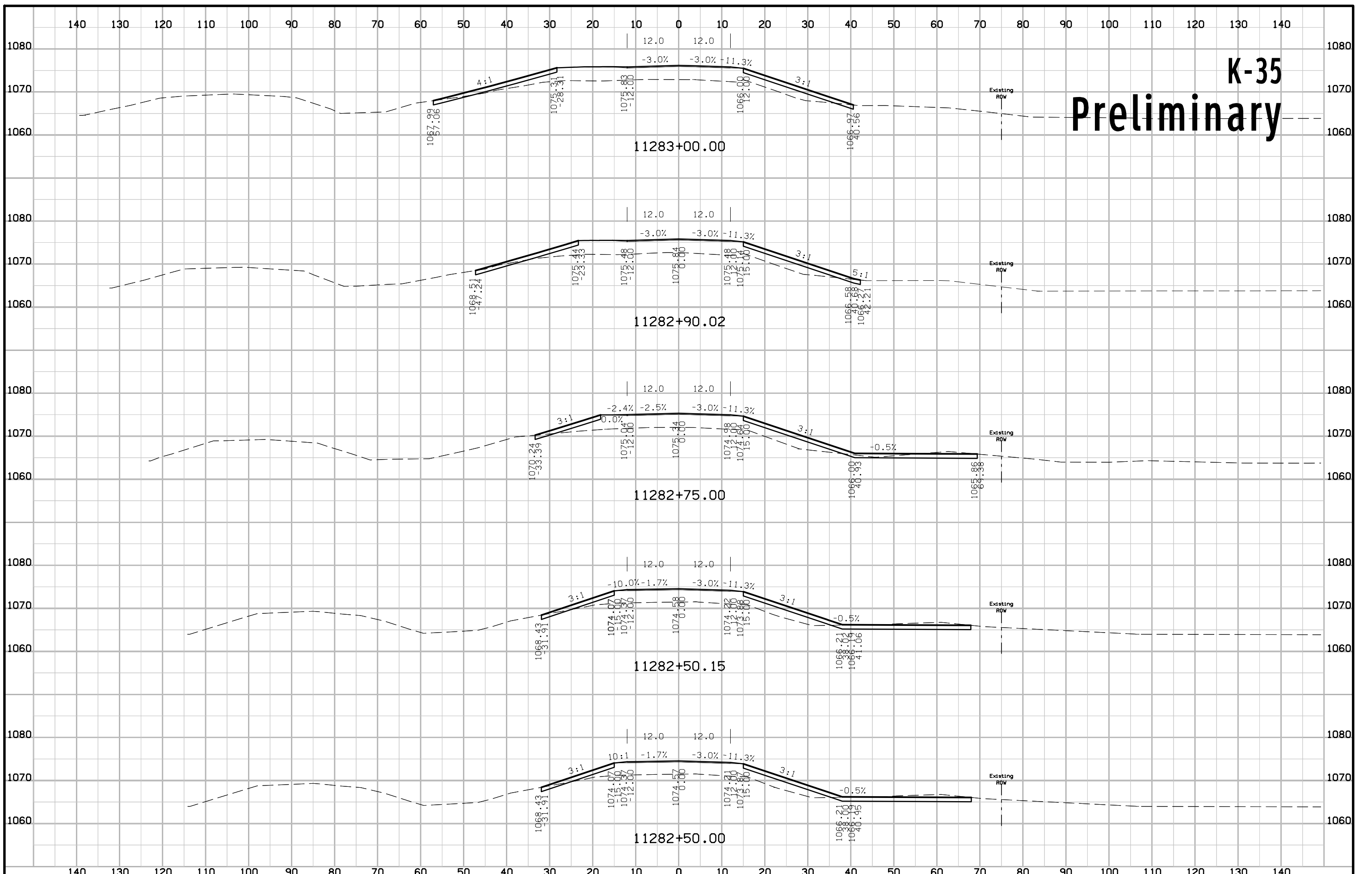


K-35

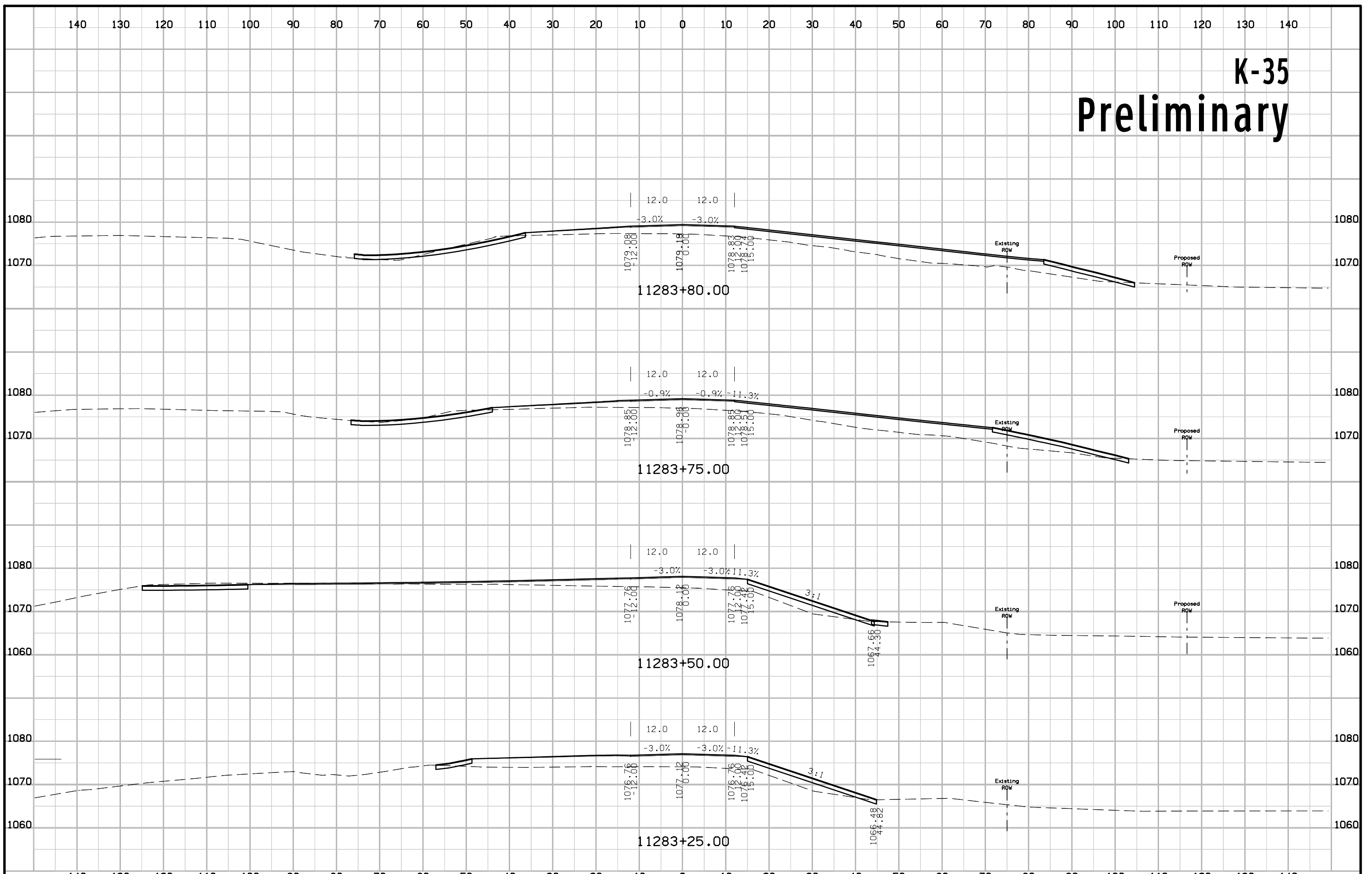
Preliminary



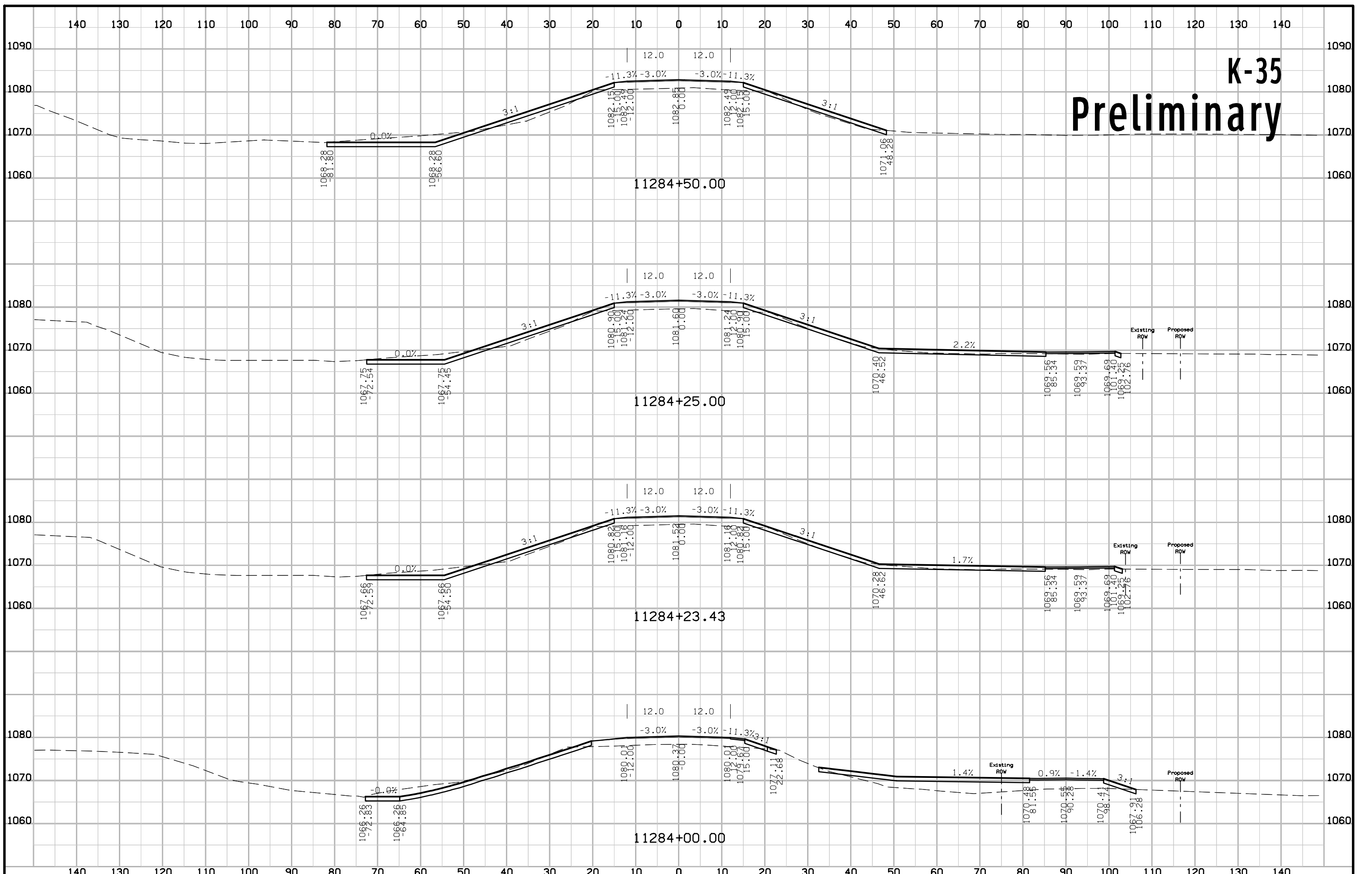
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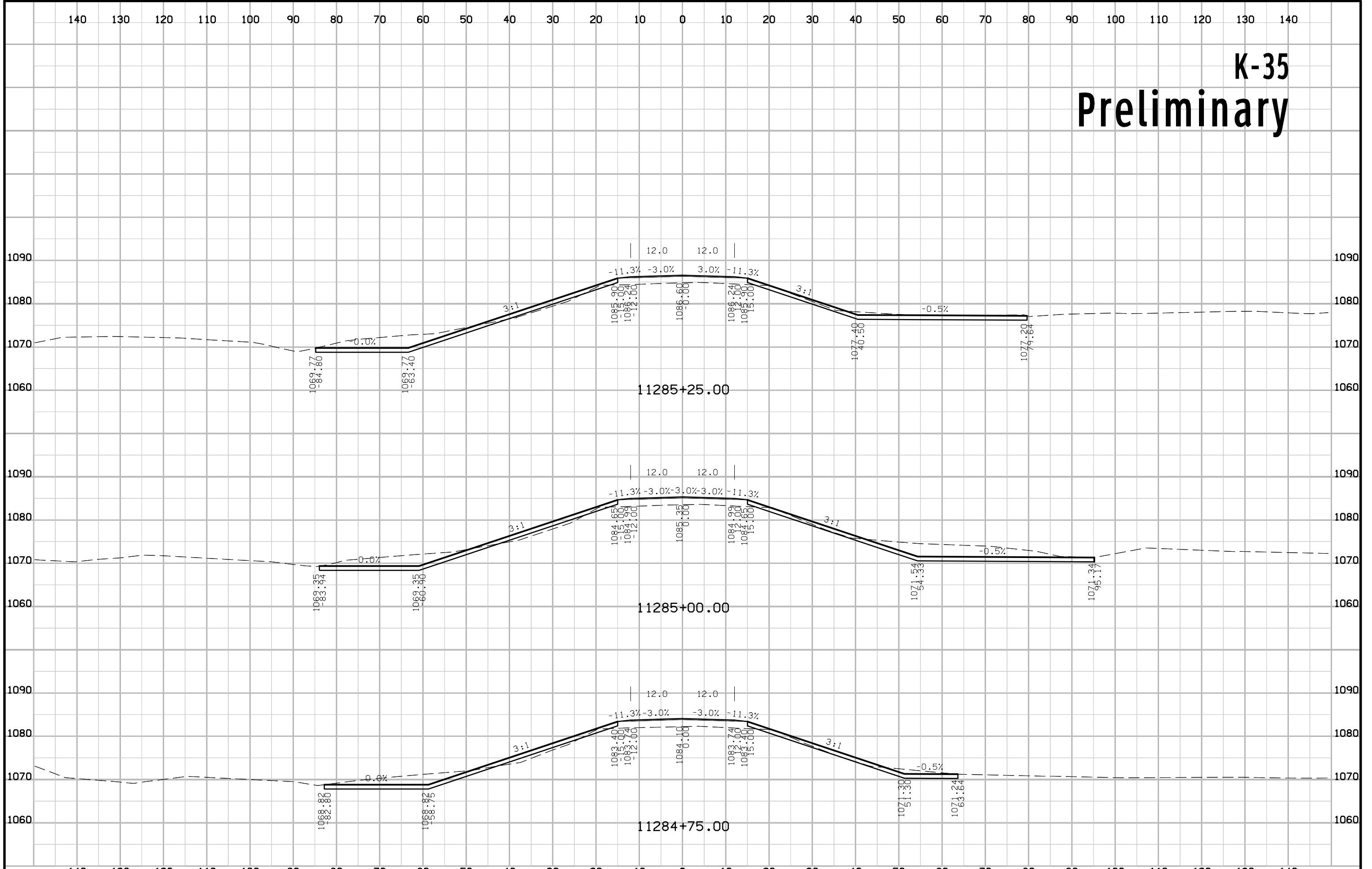
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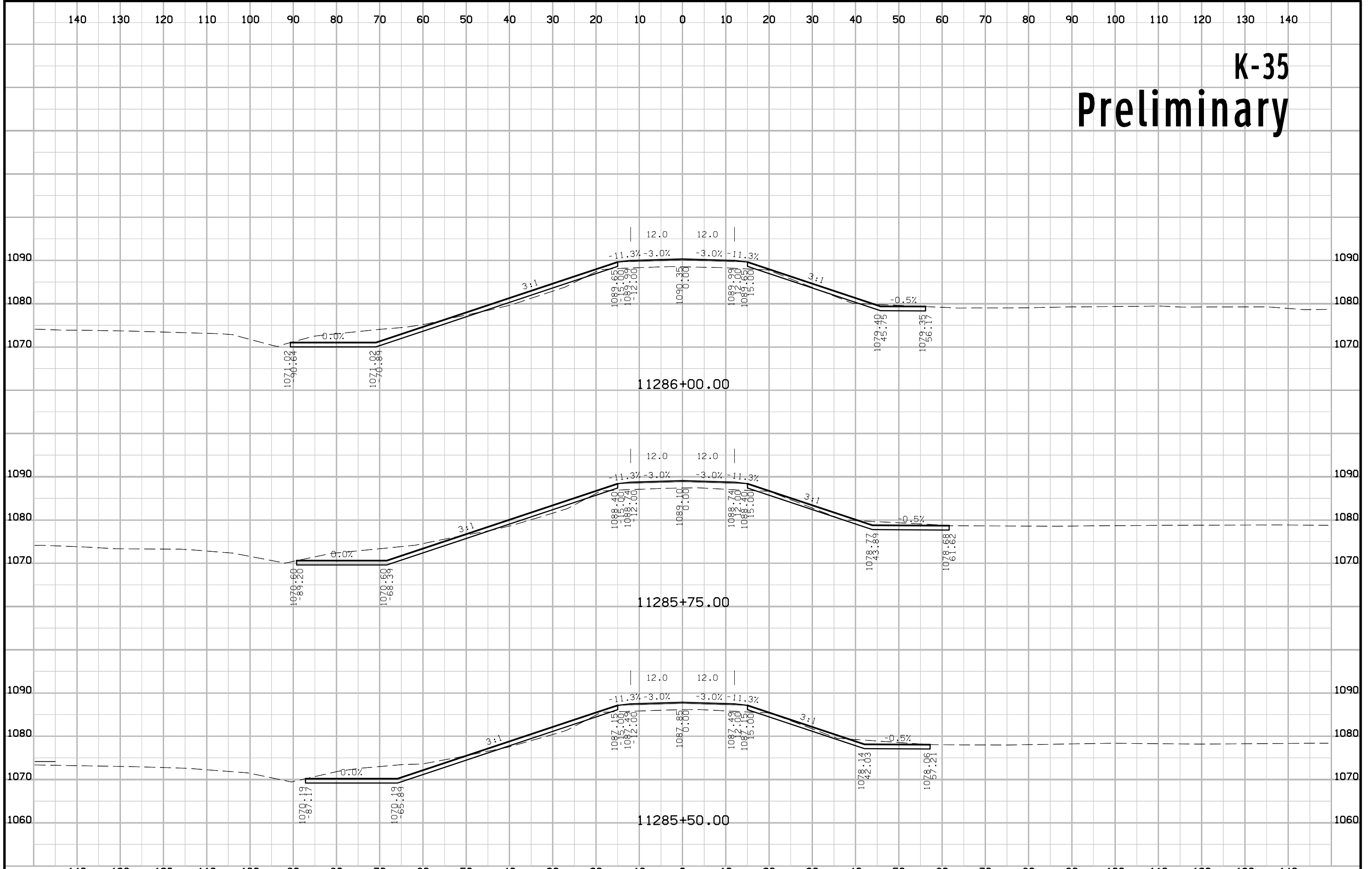
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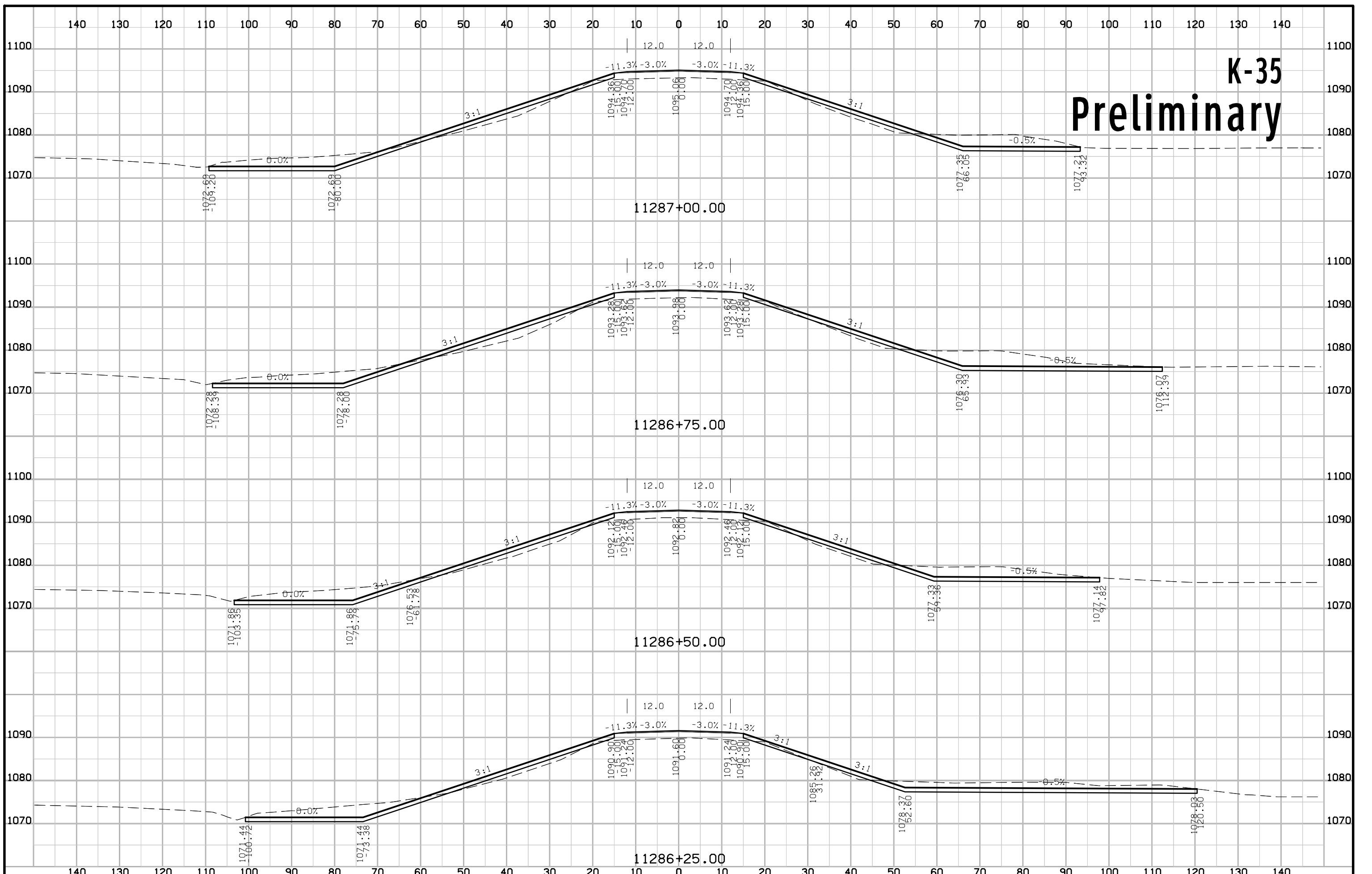
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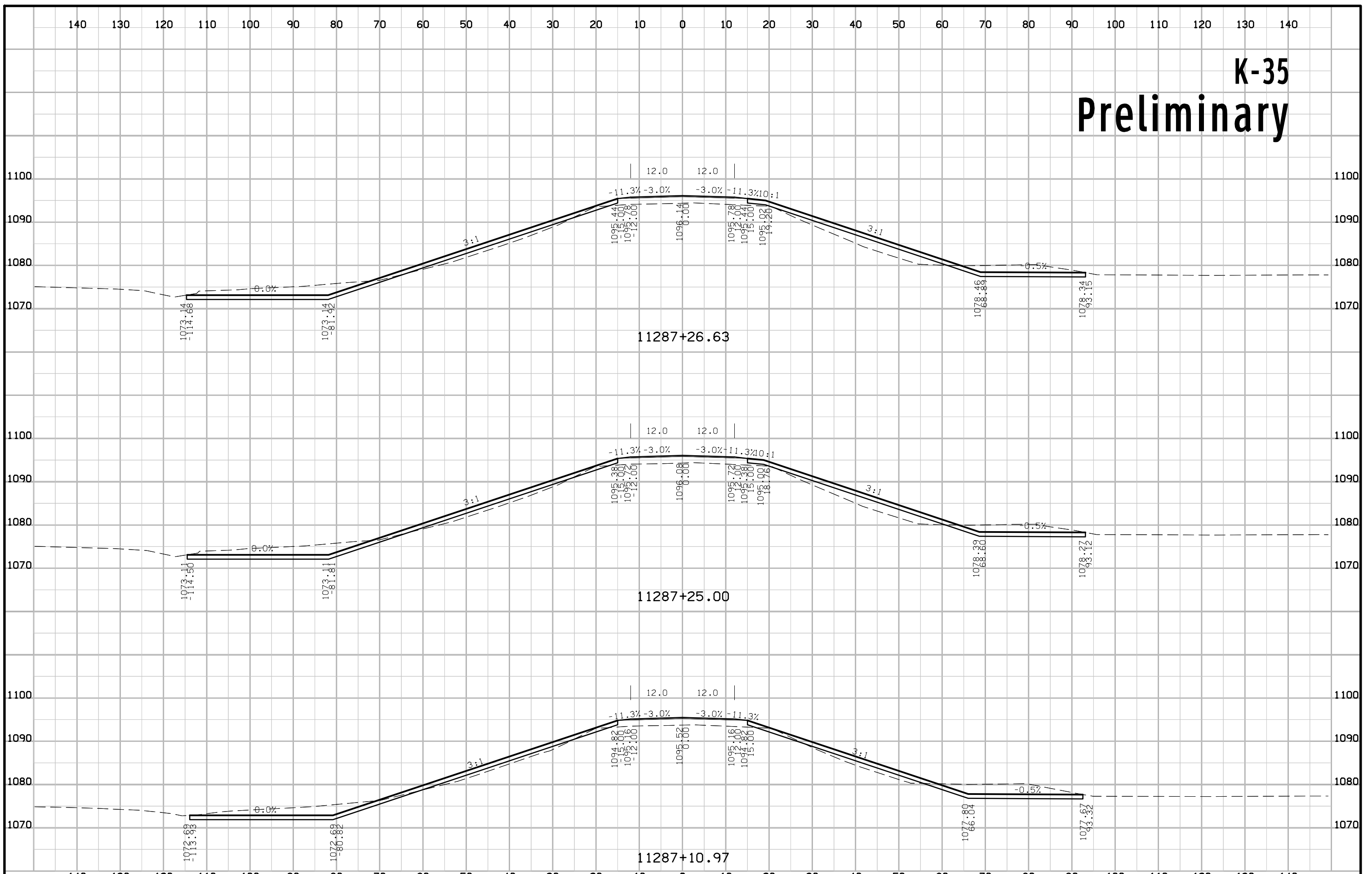
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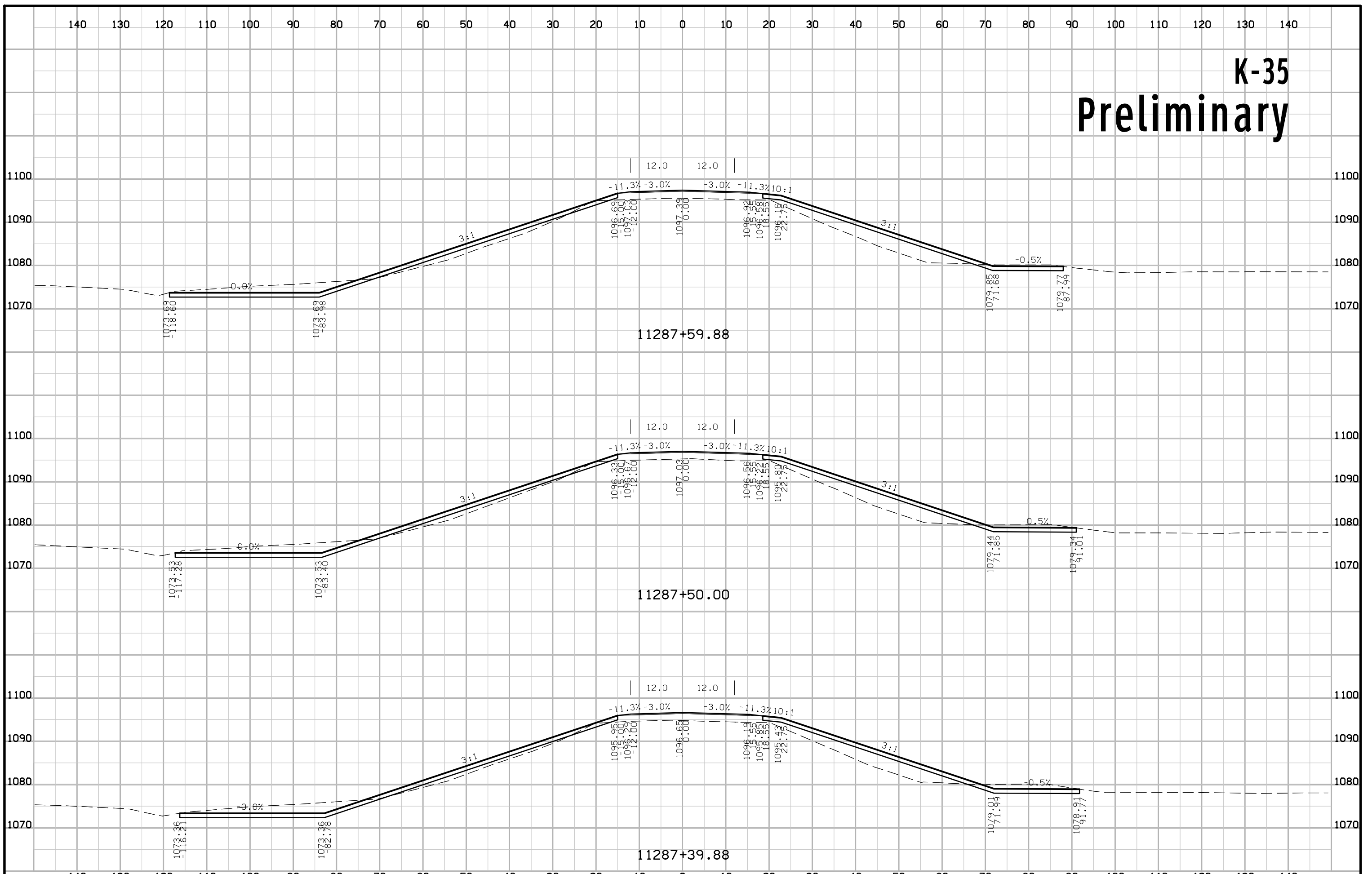
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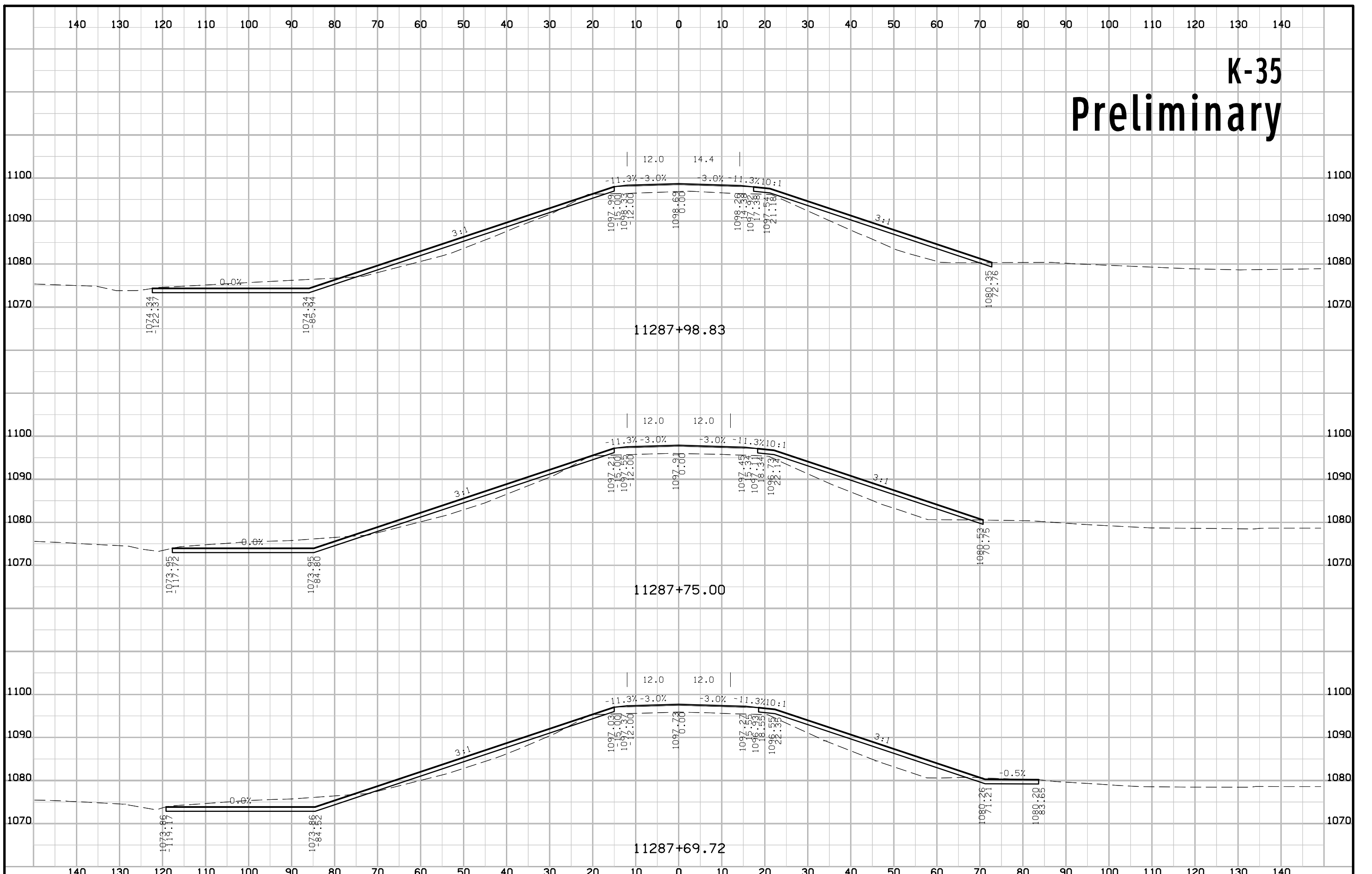
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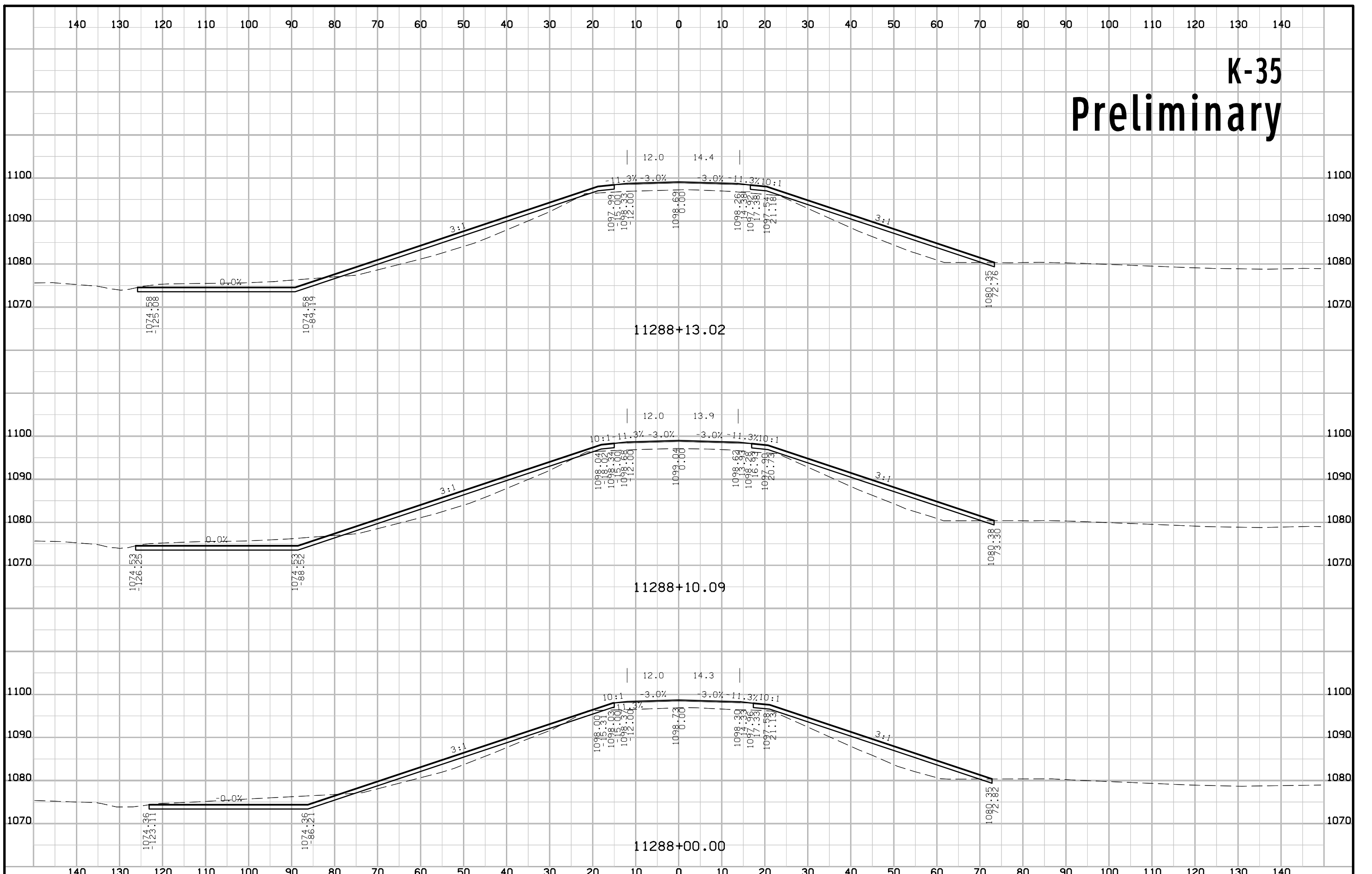
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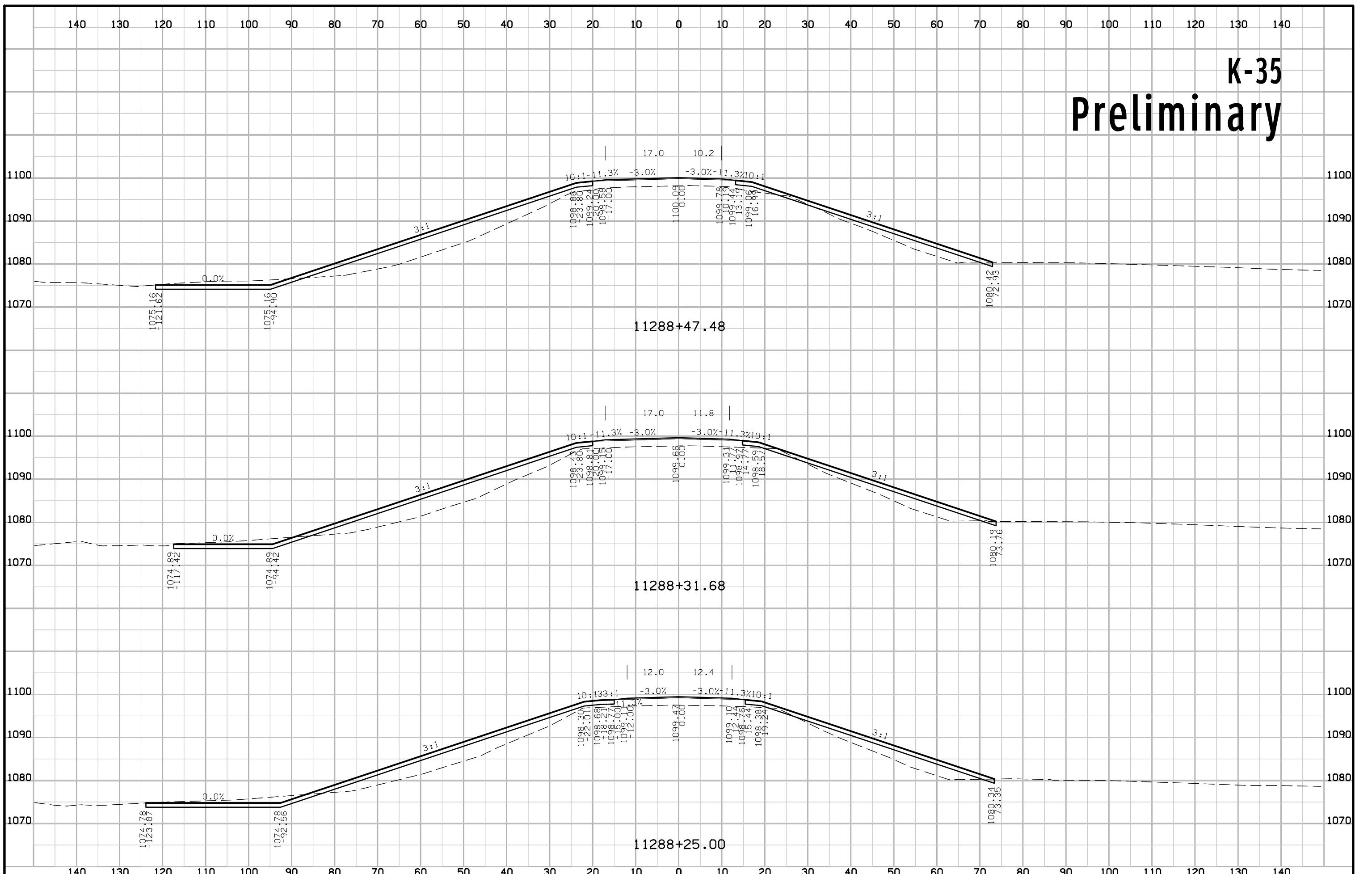
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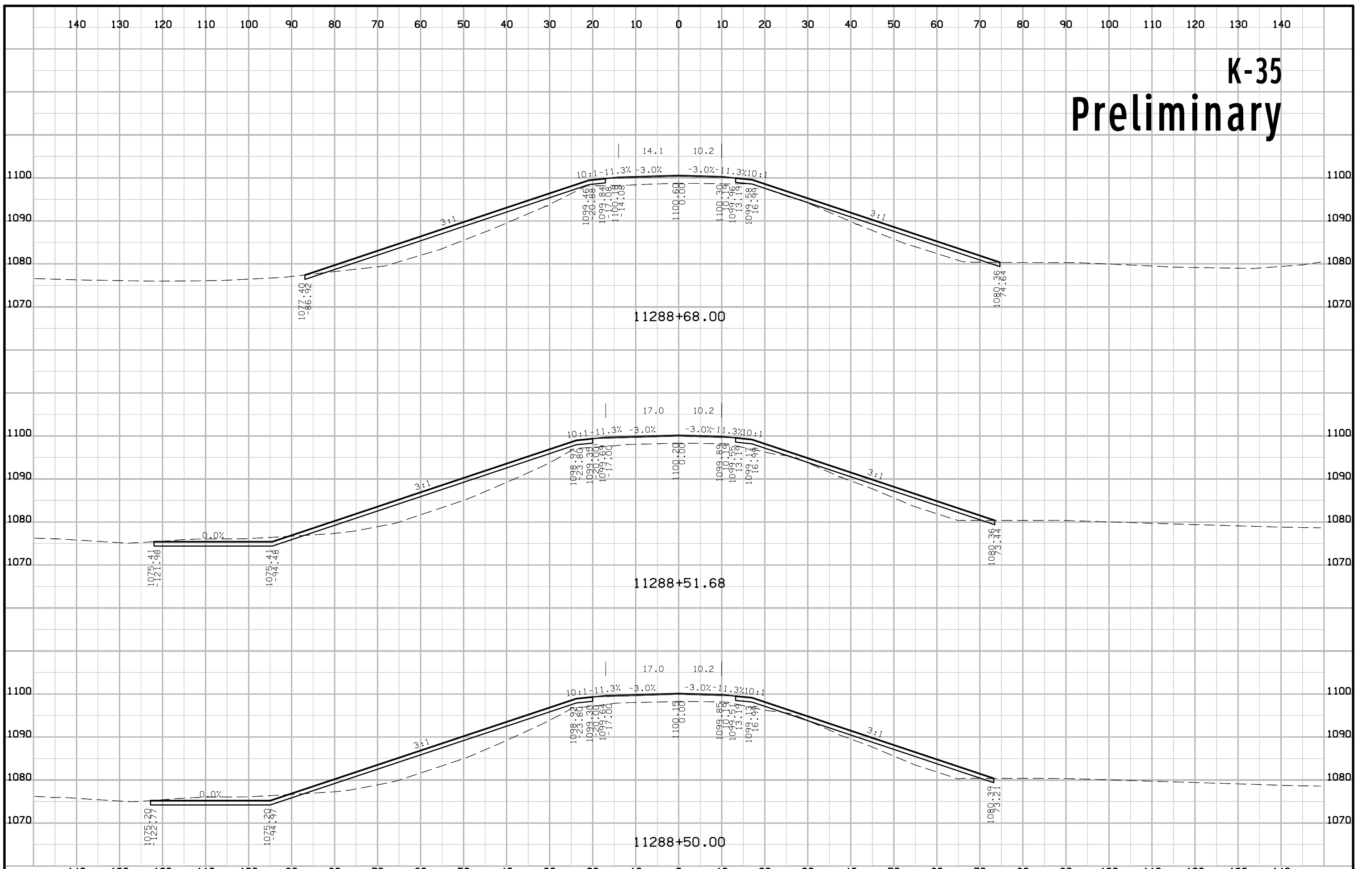
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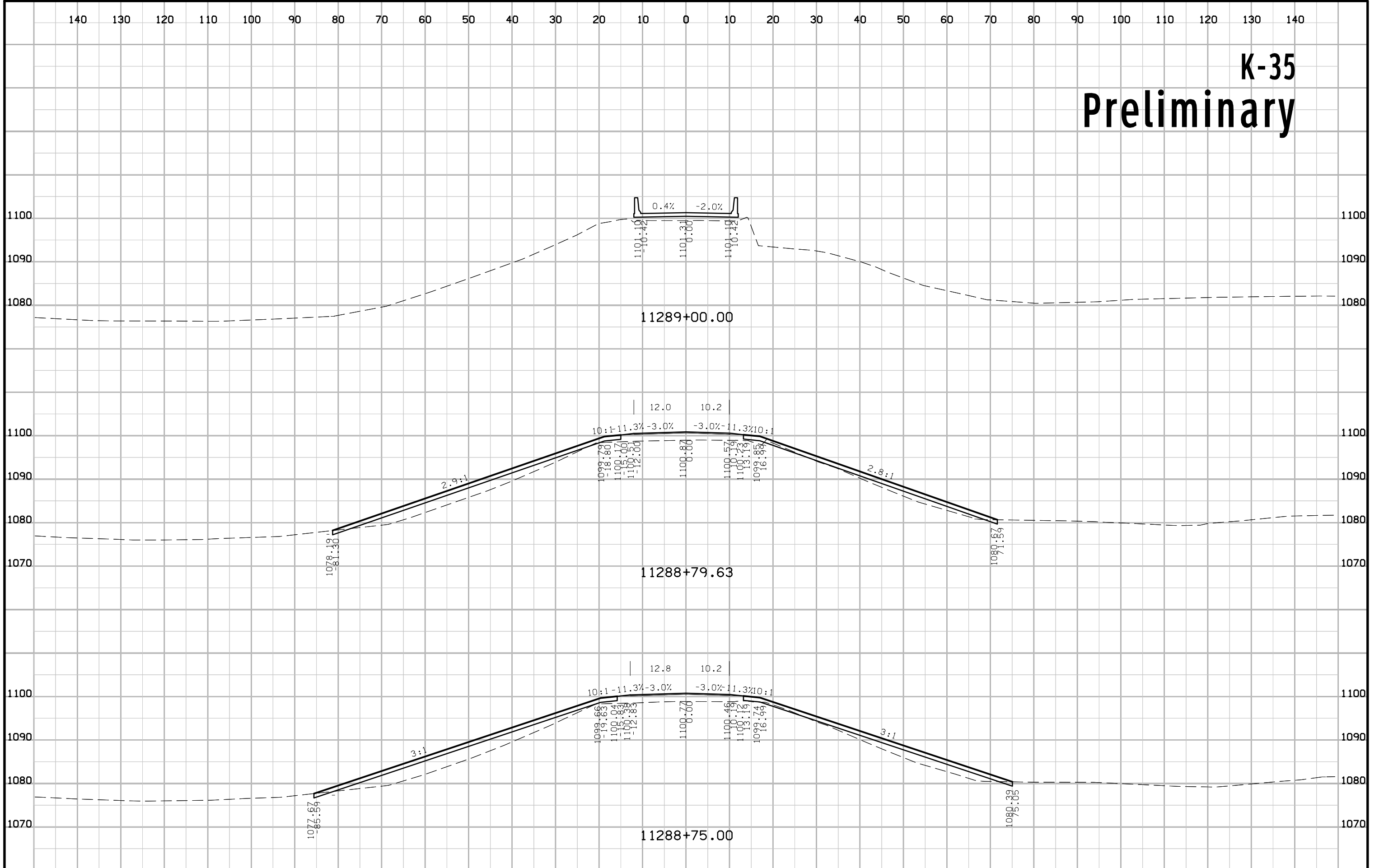
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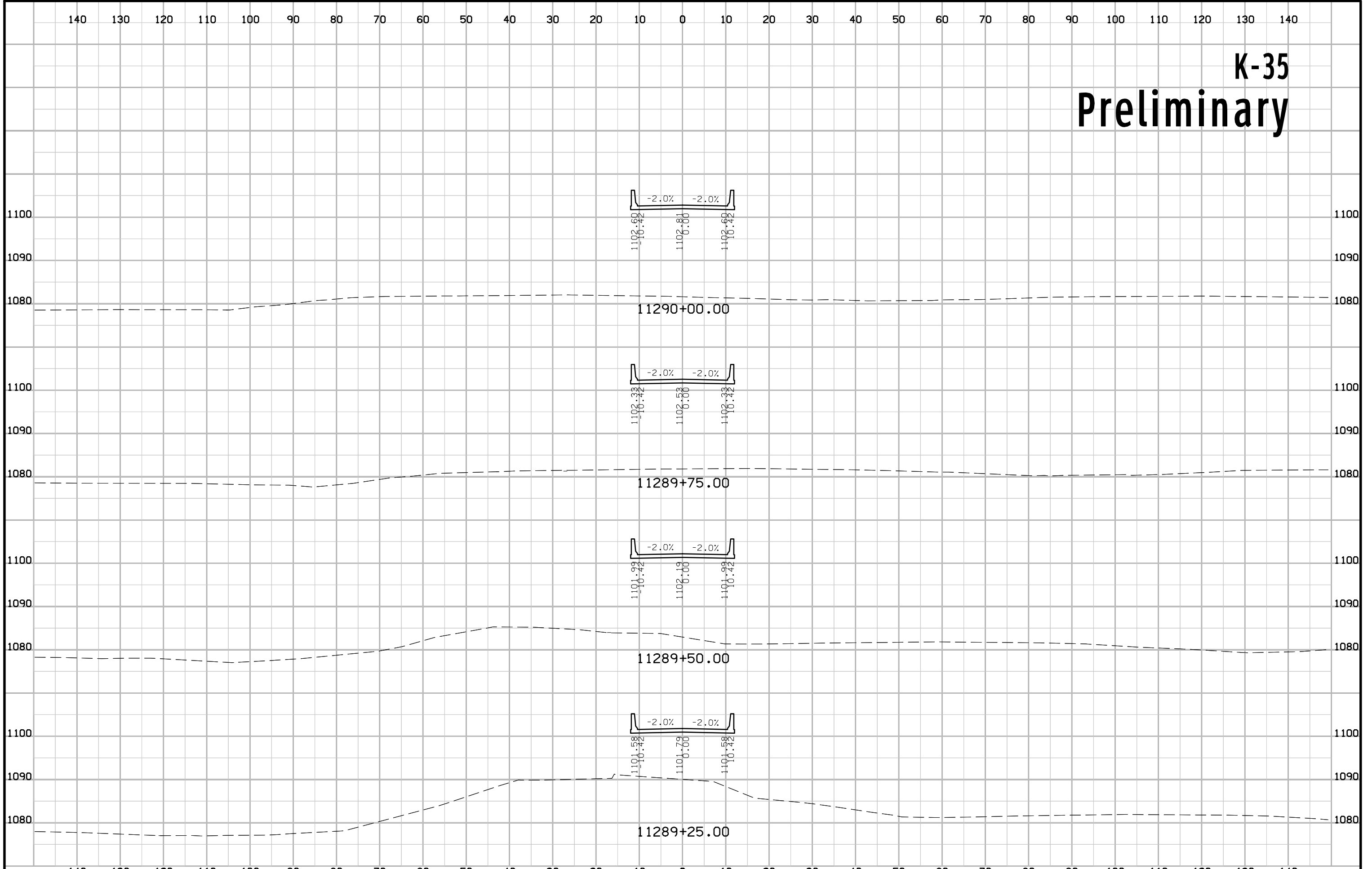
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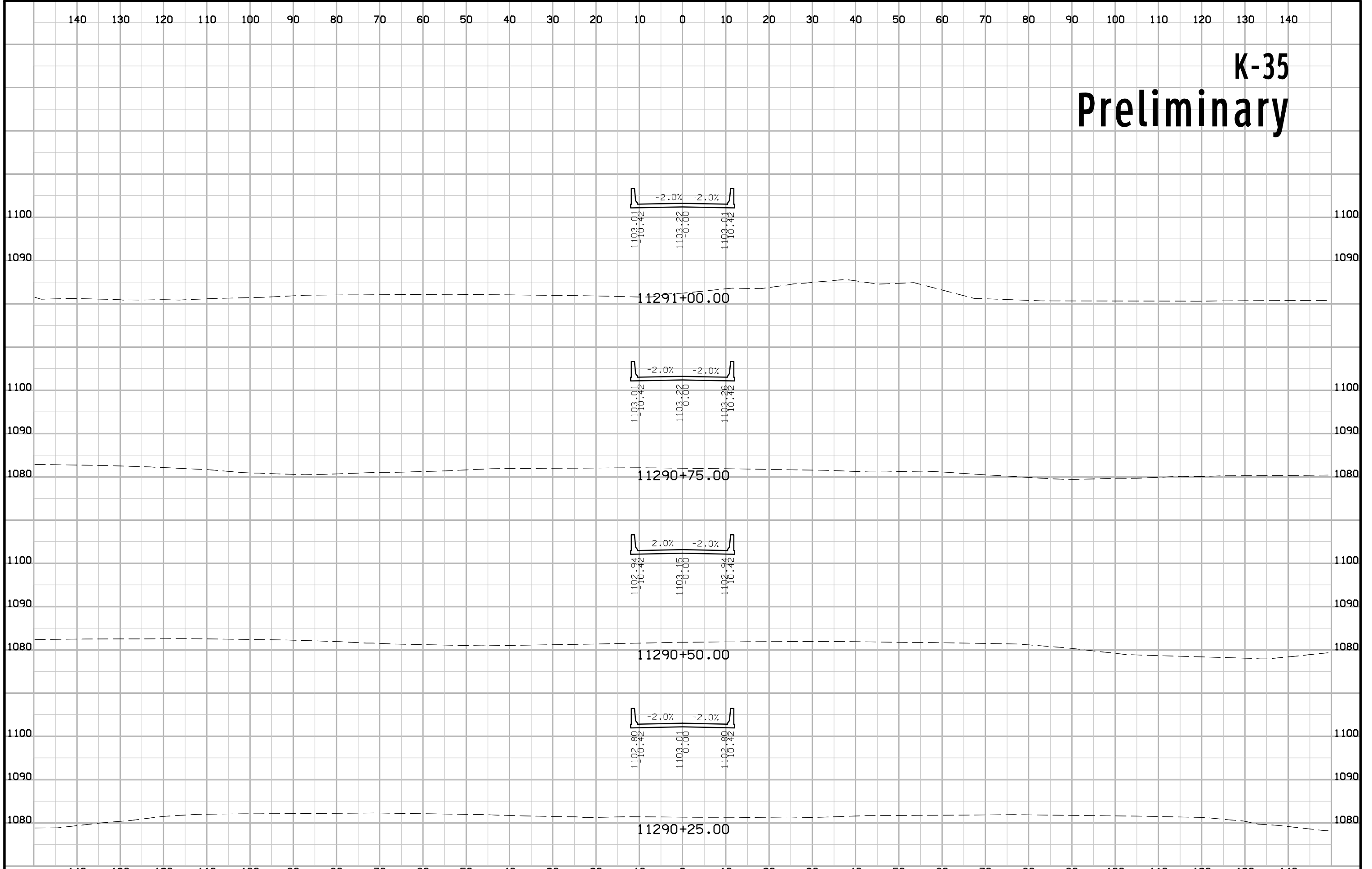
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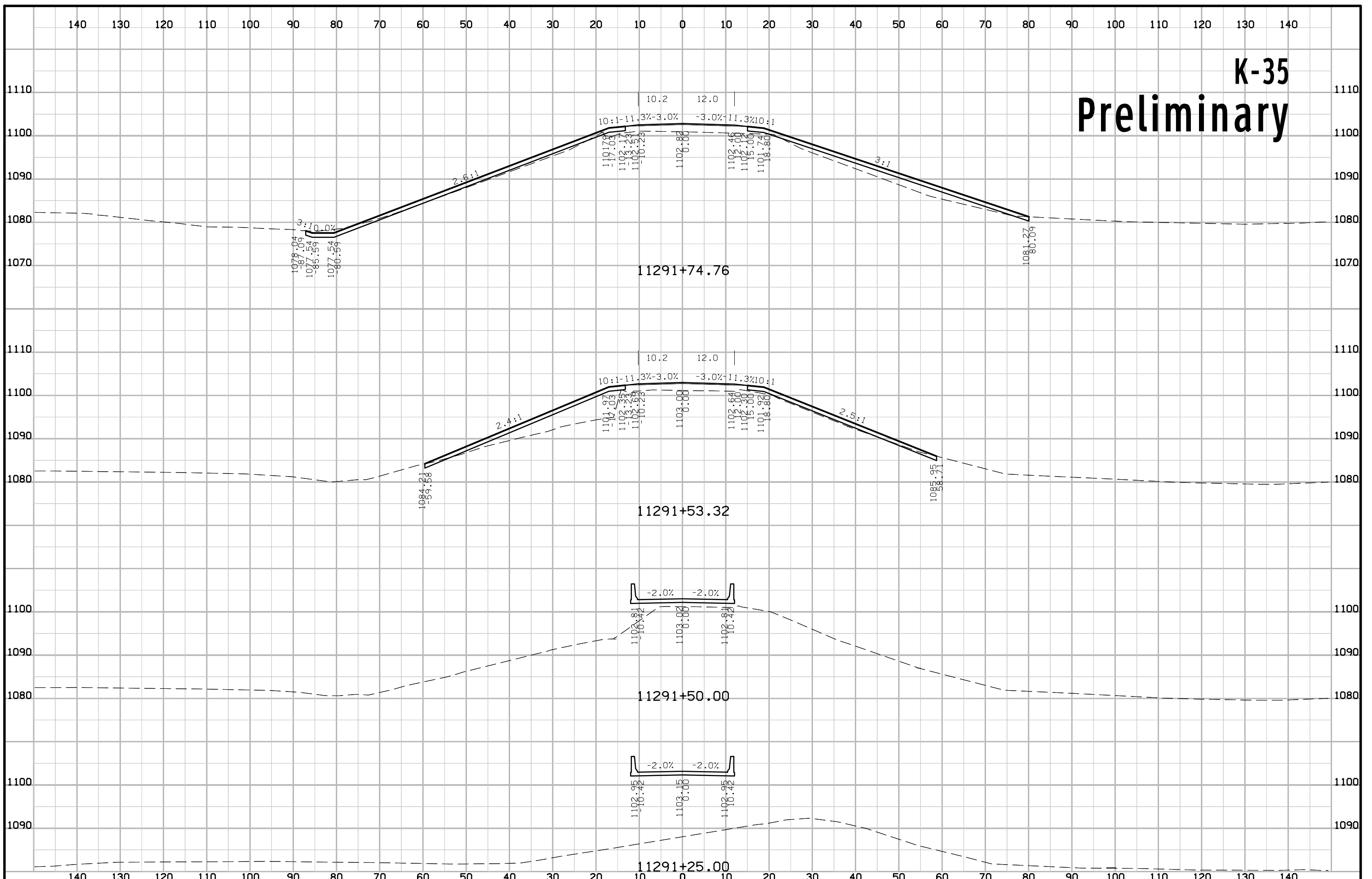
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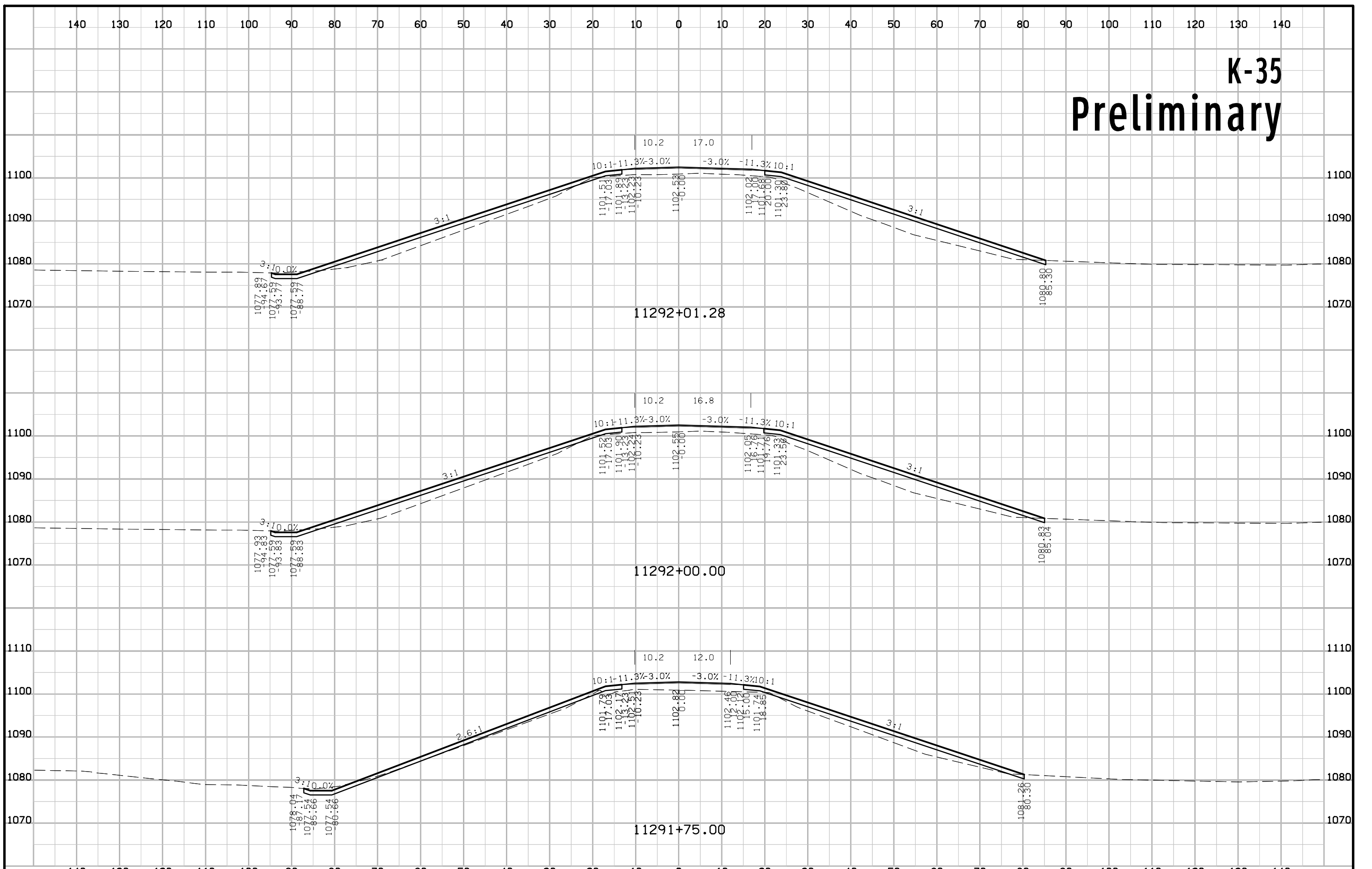
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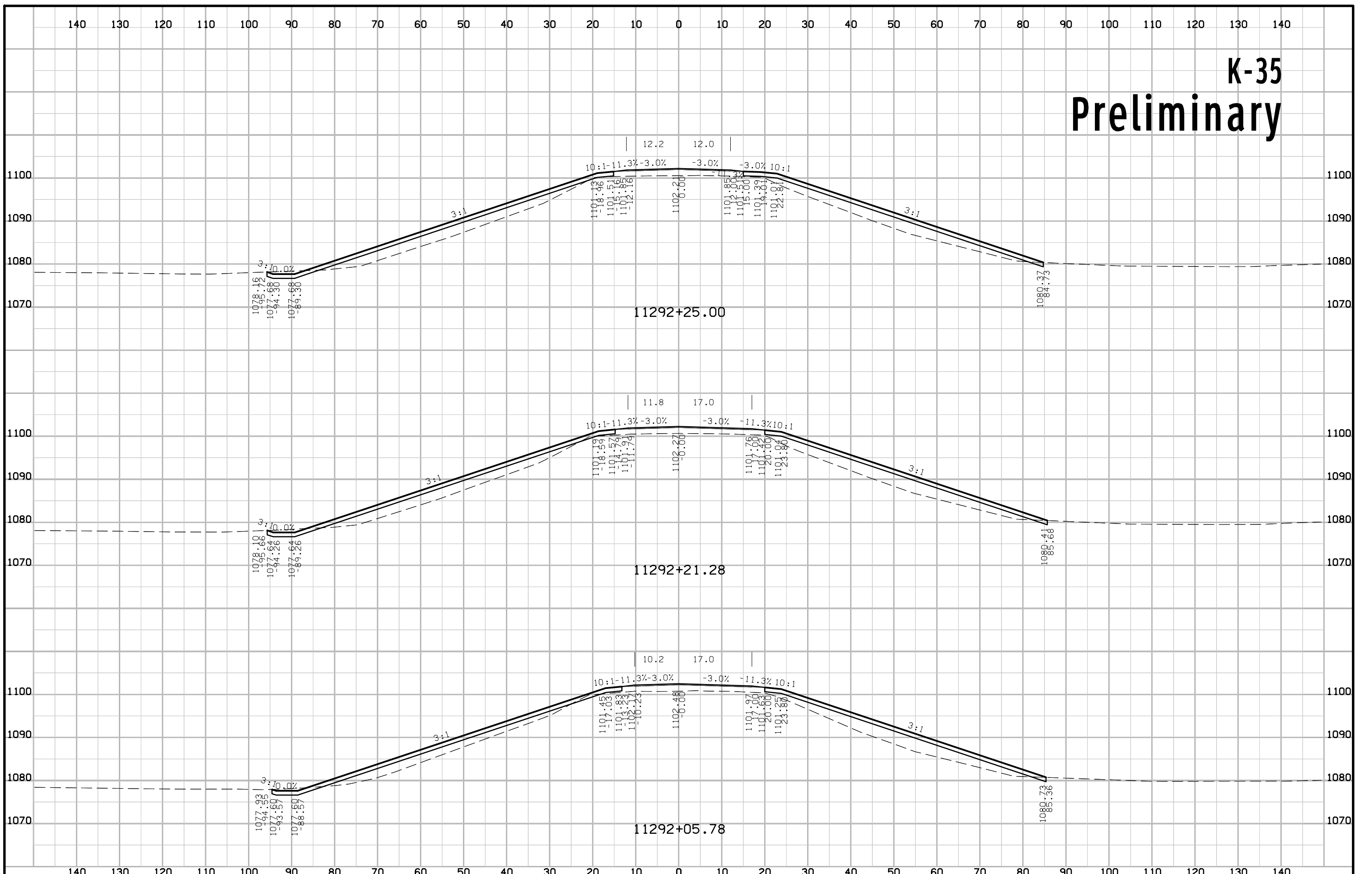
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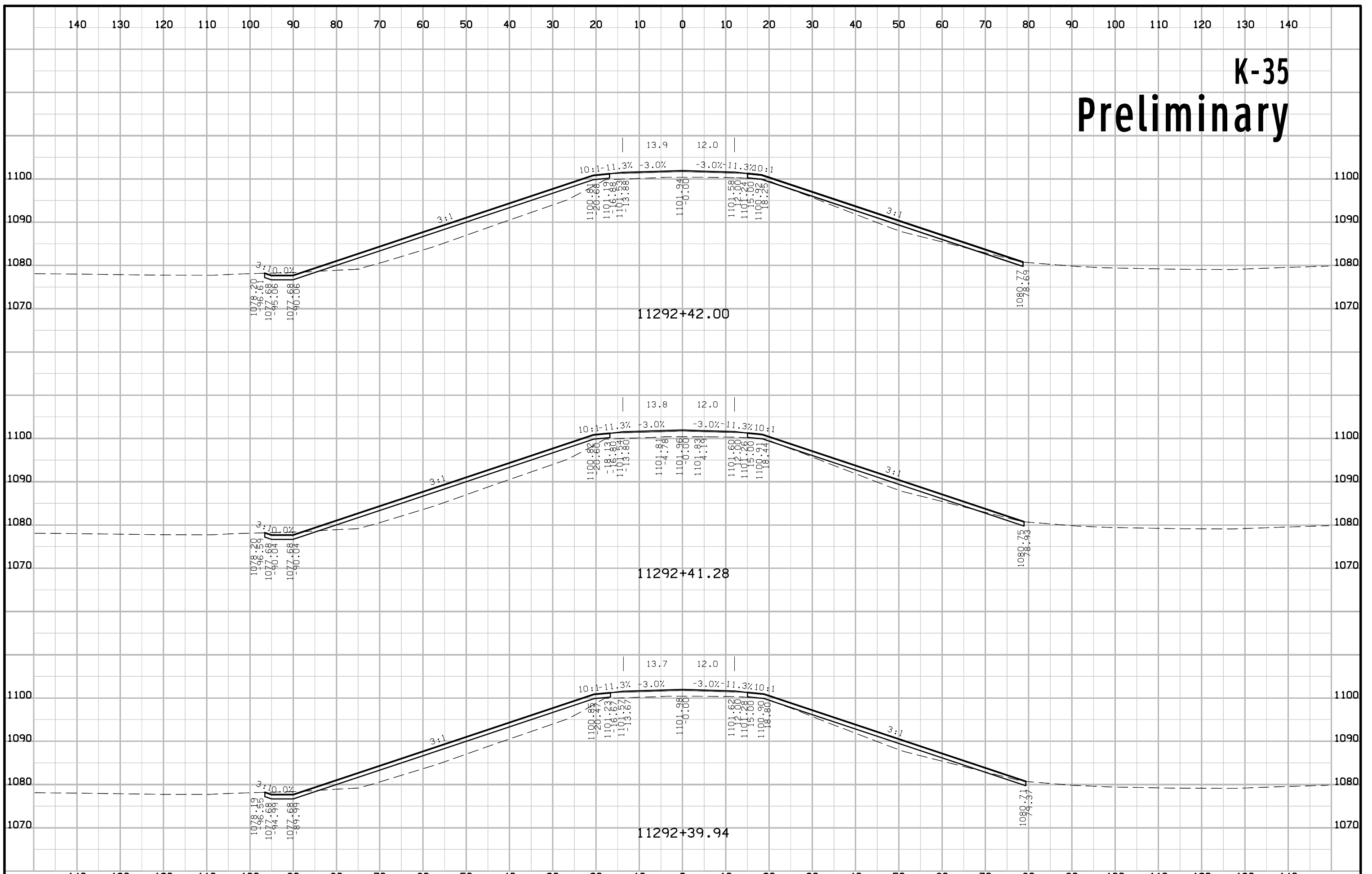
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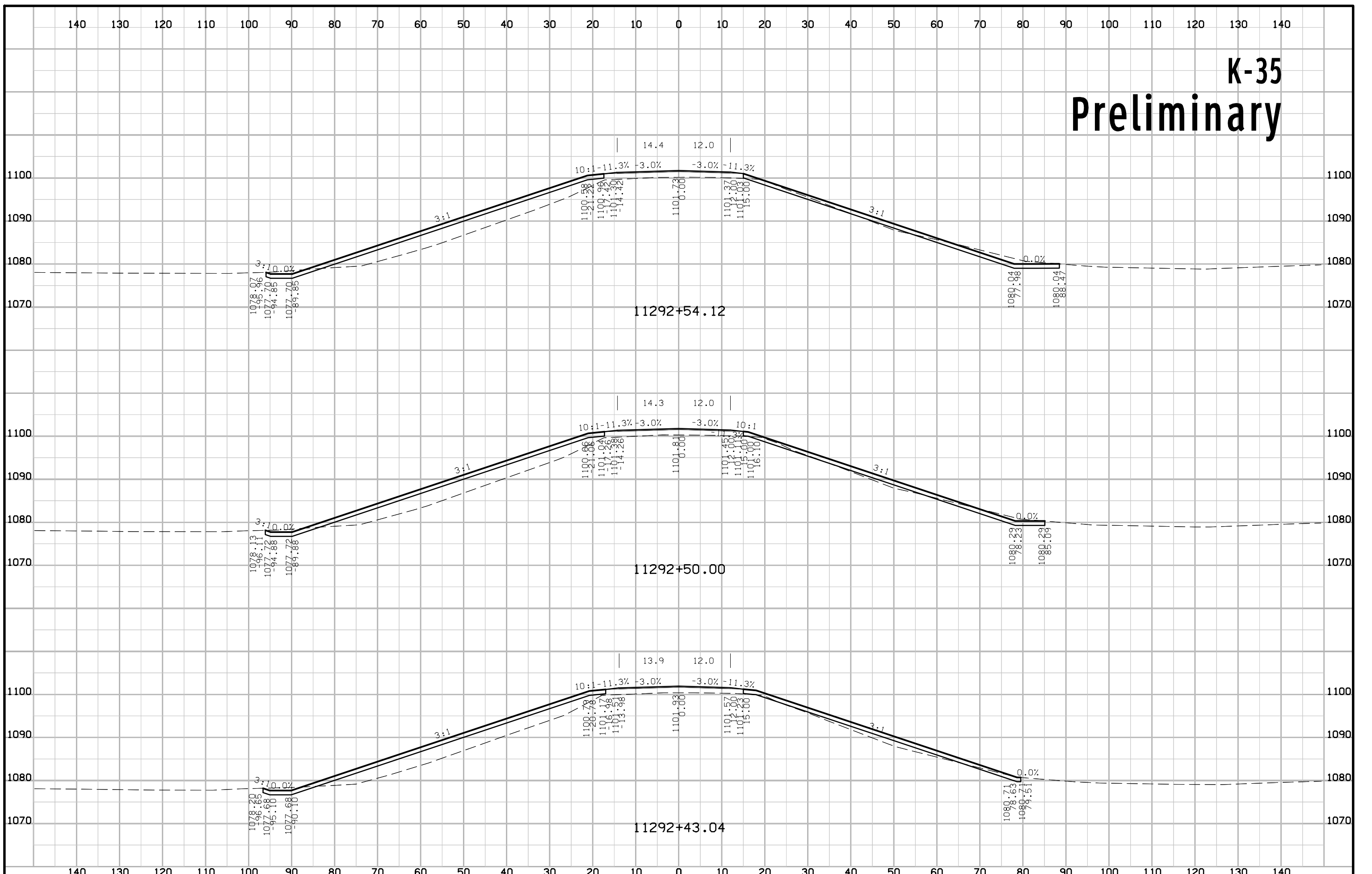
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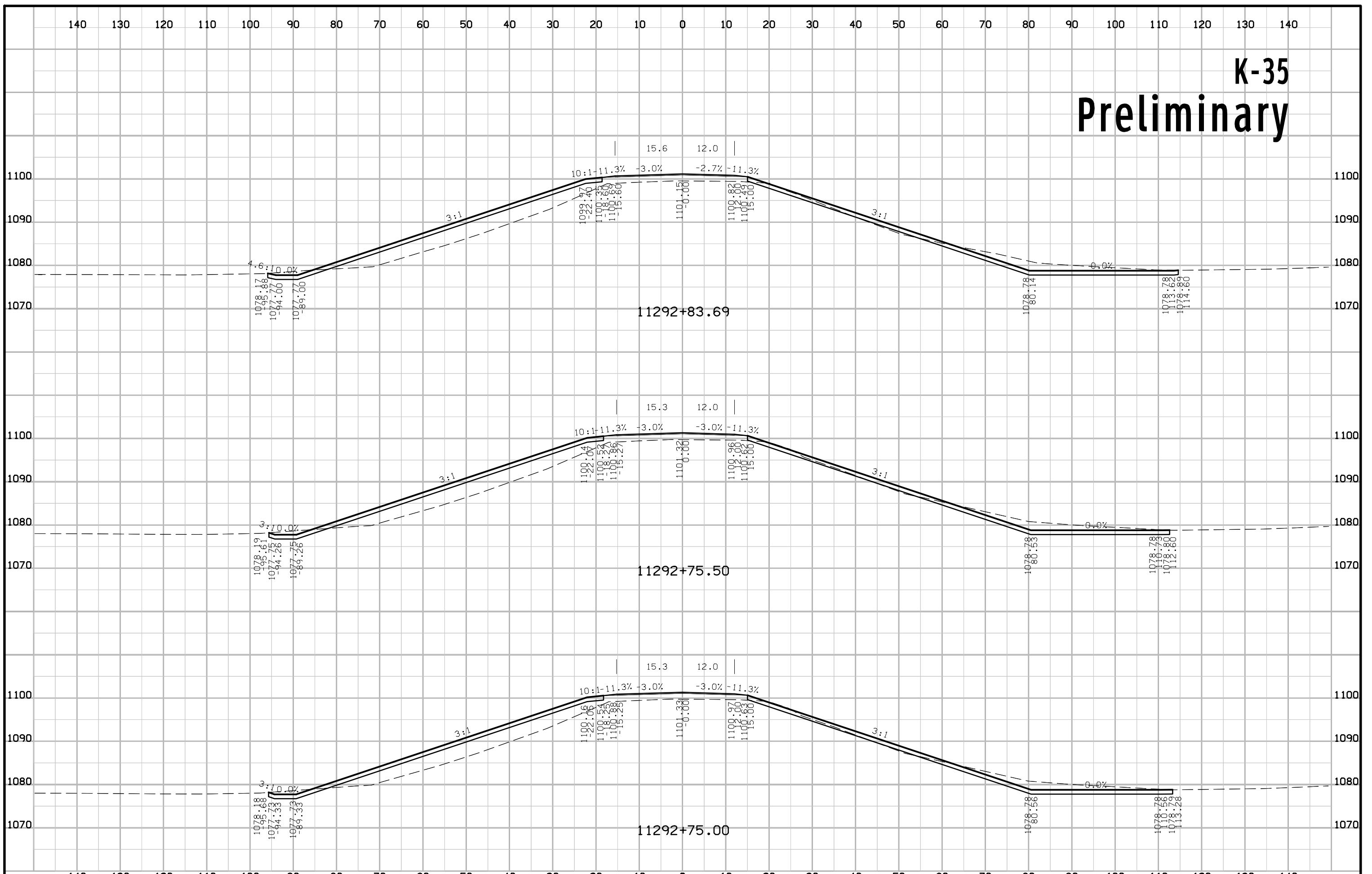
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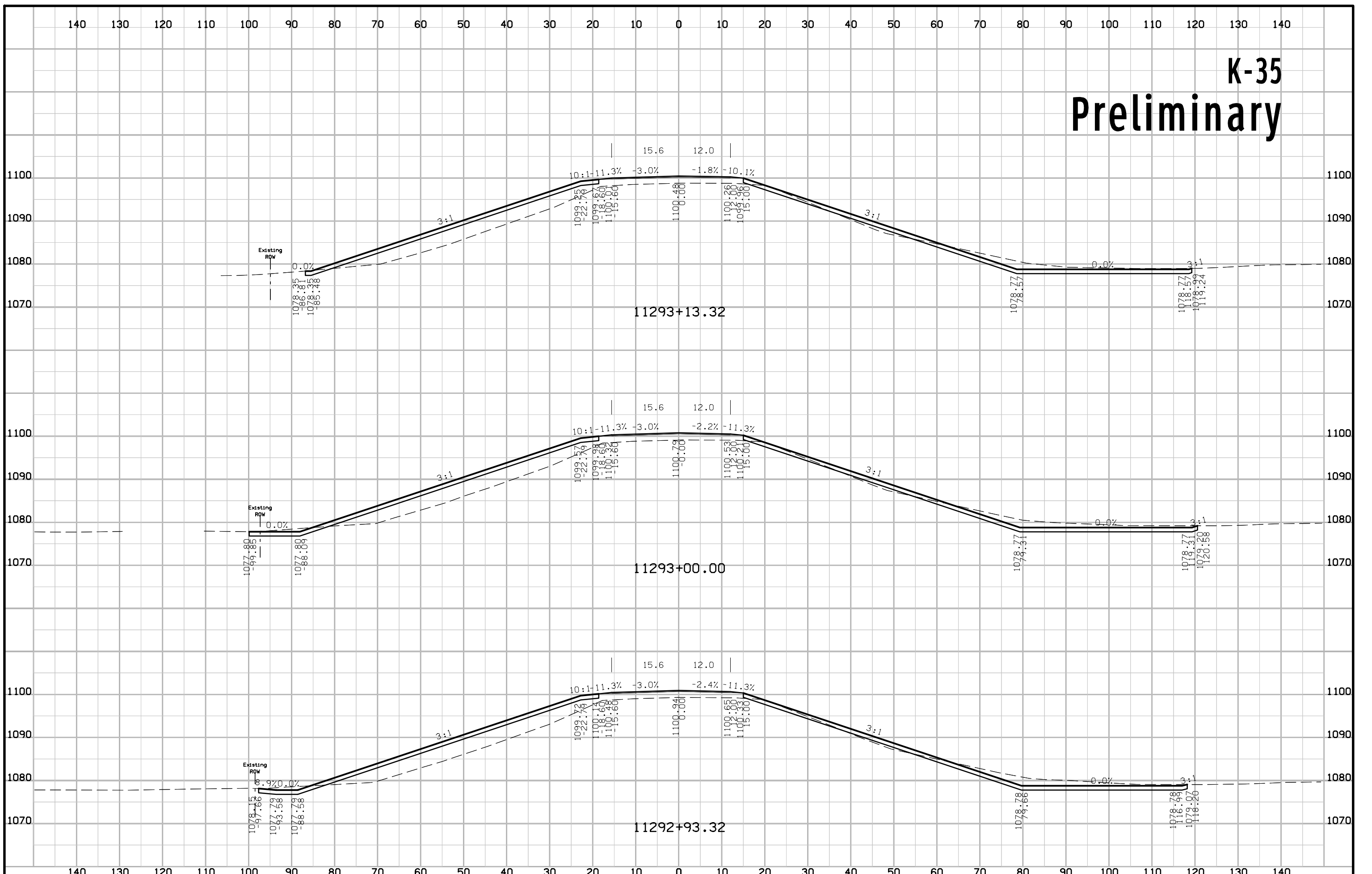
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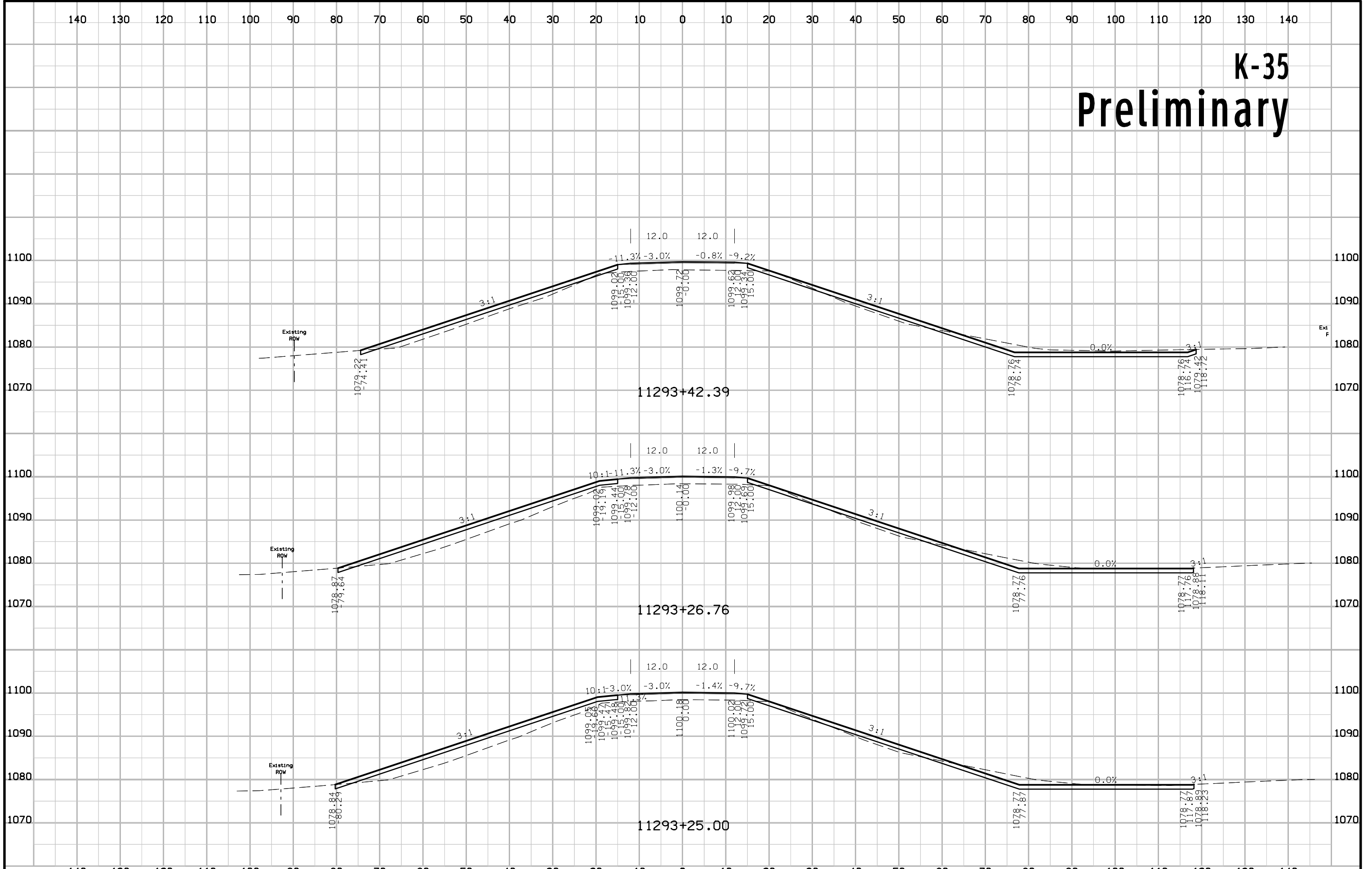
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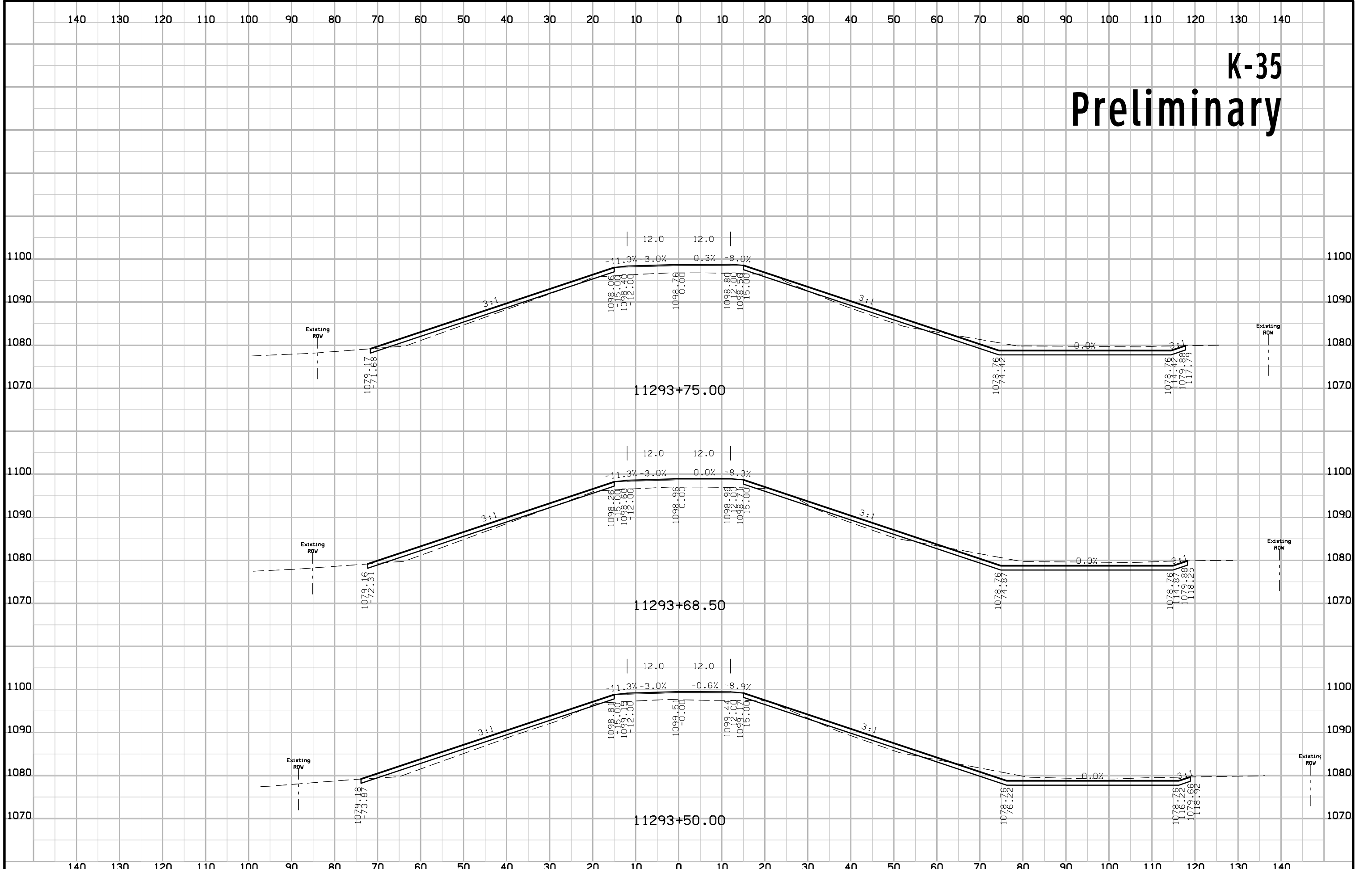
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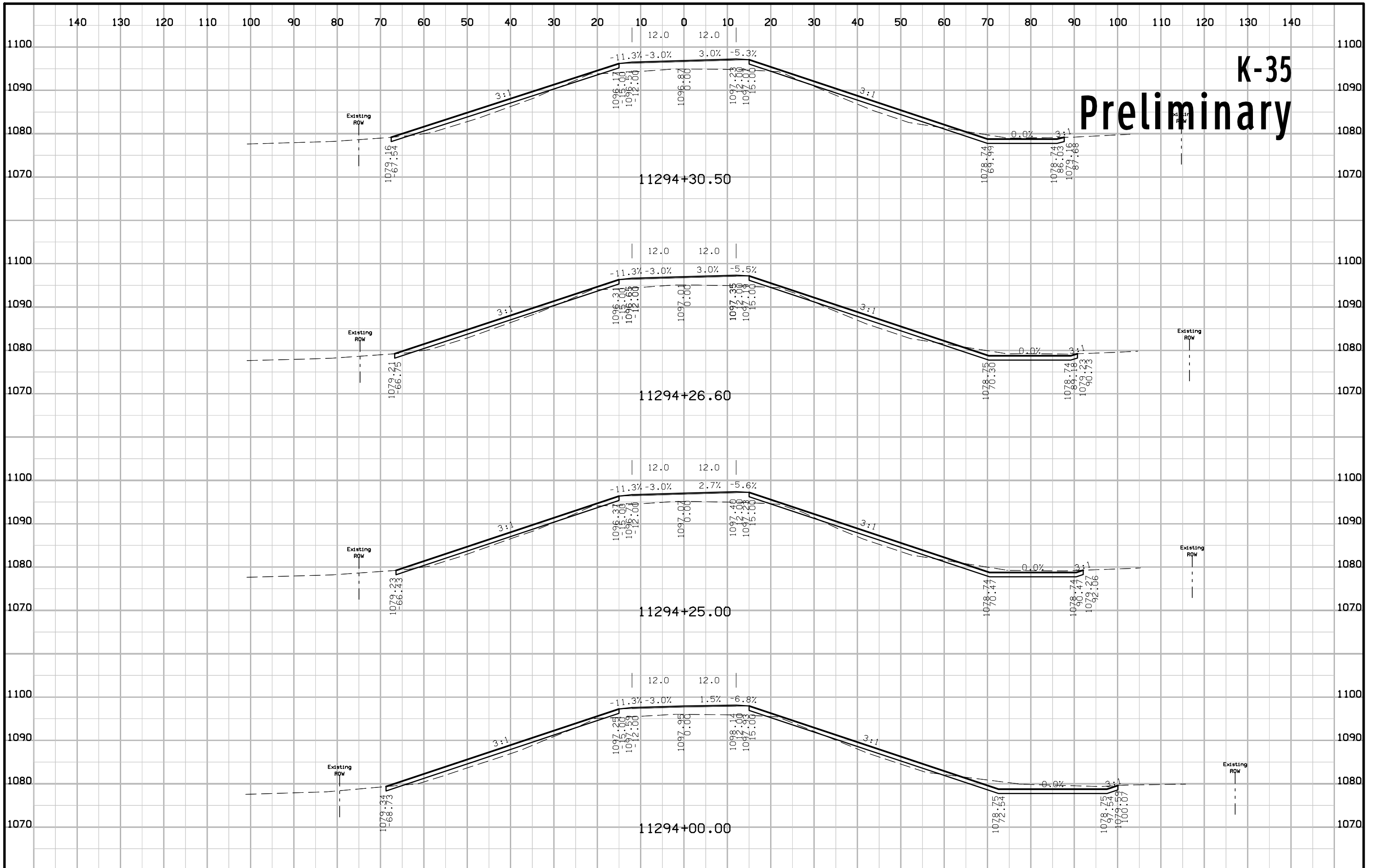
K-35 Preliminary



K-35 Preliminary

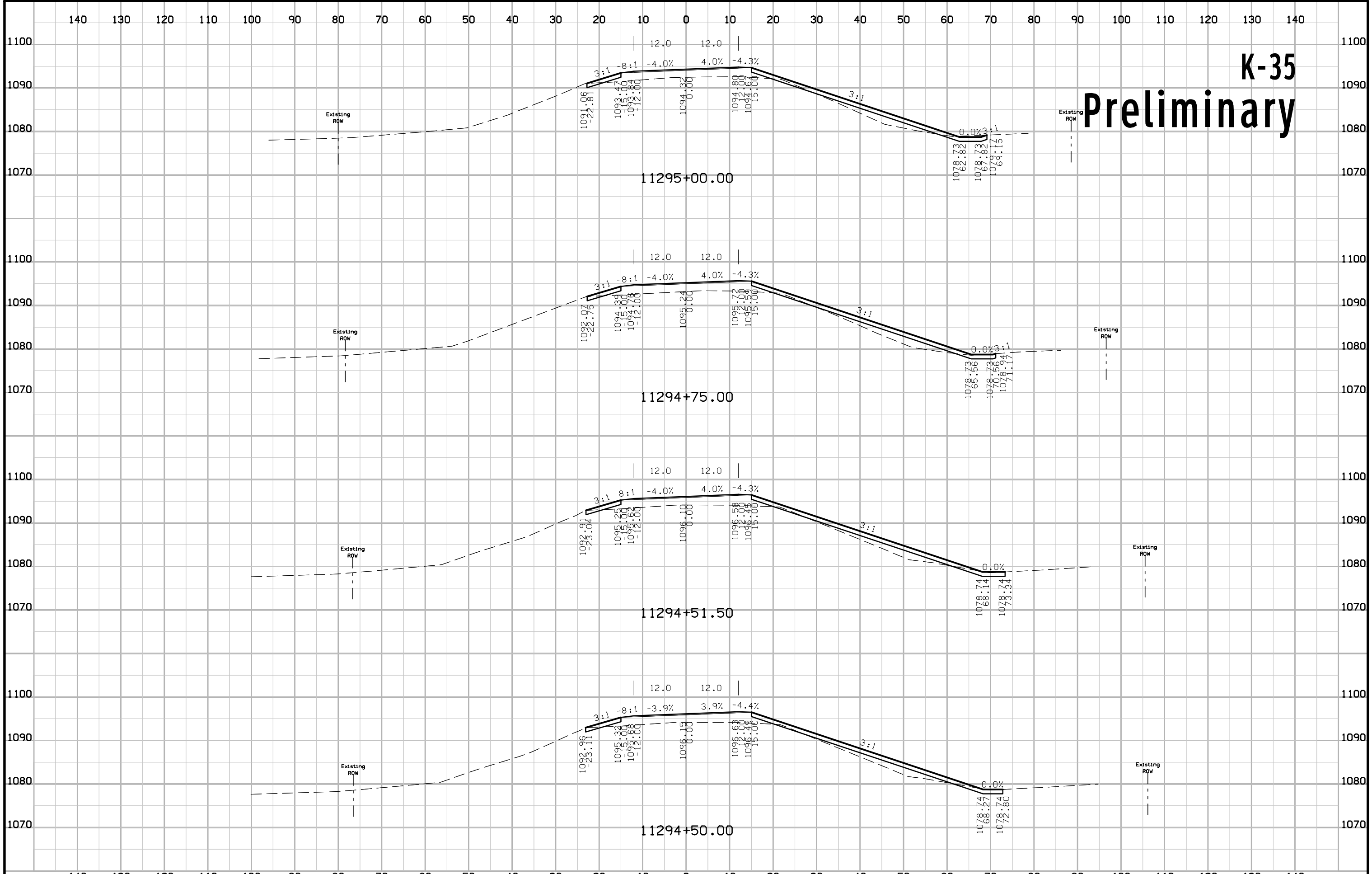


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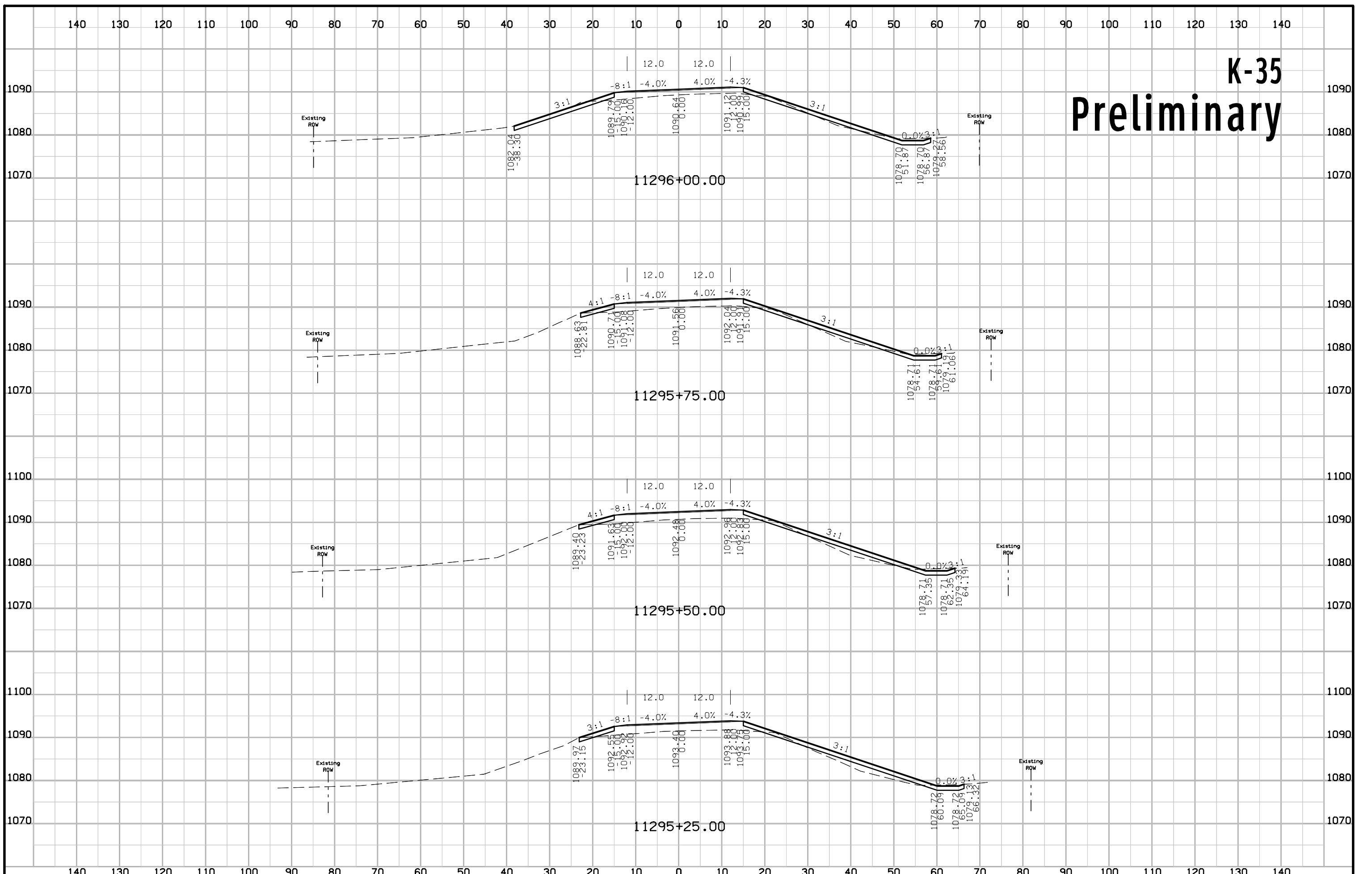


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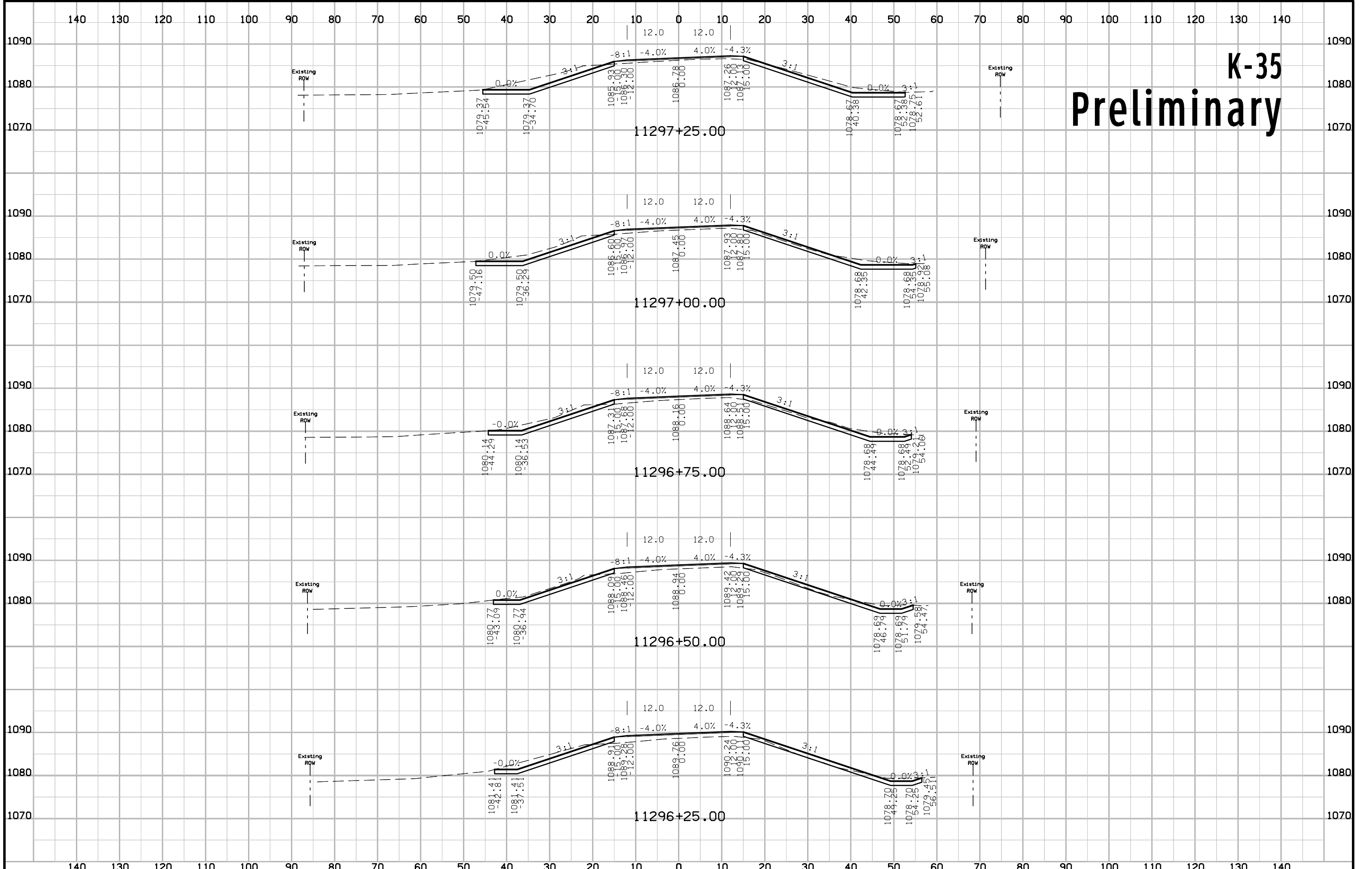
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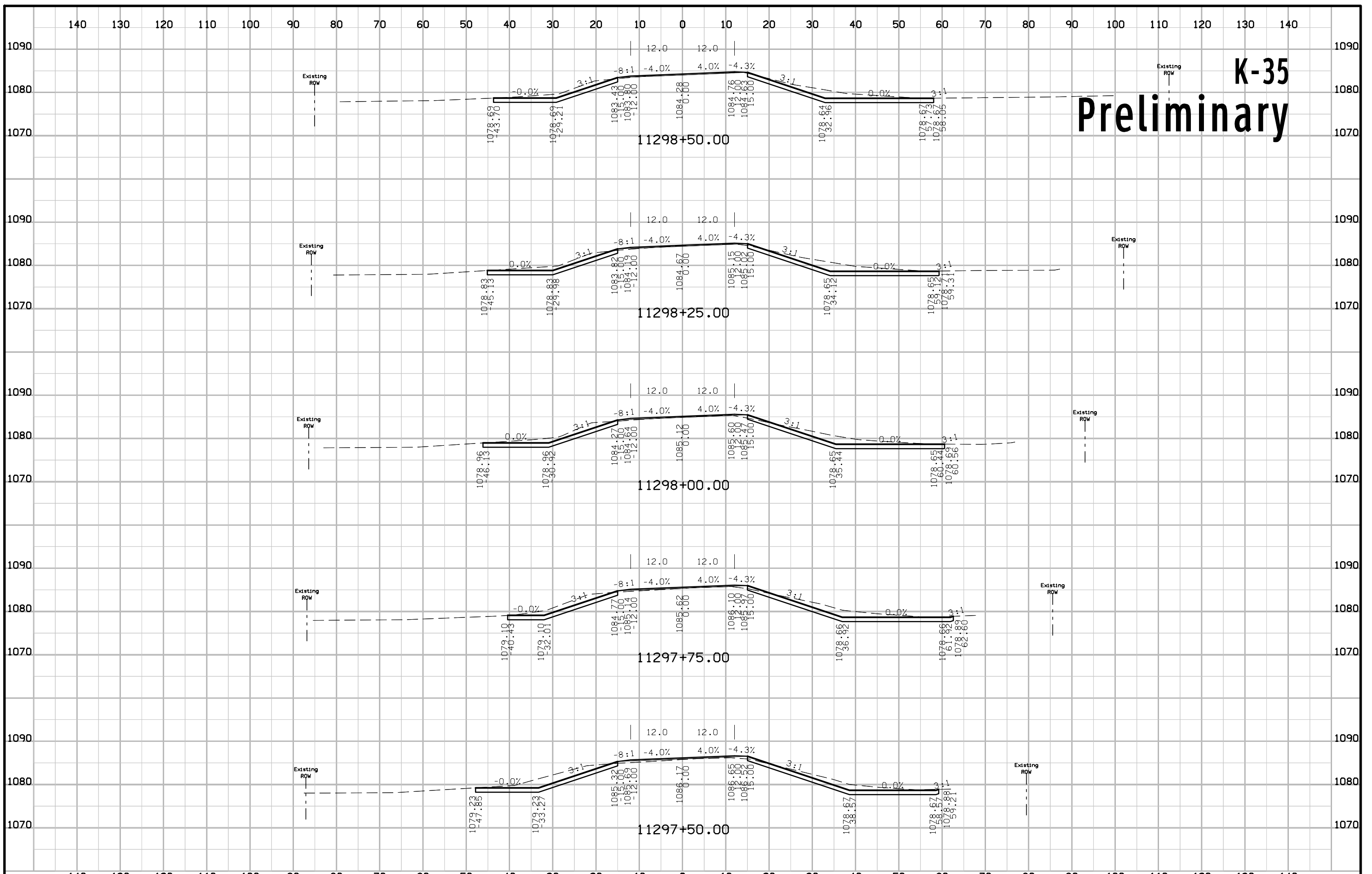
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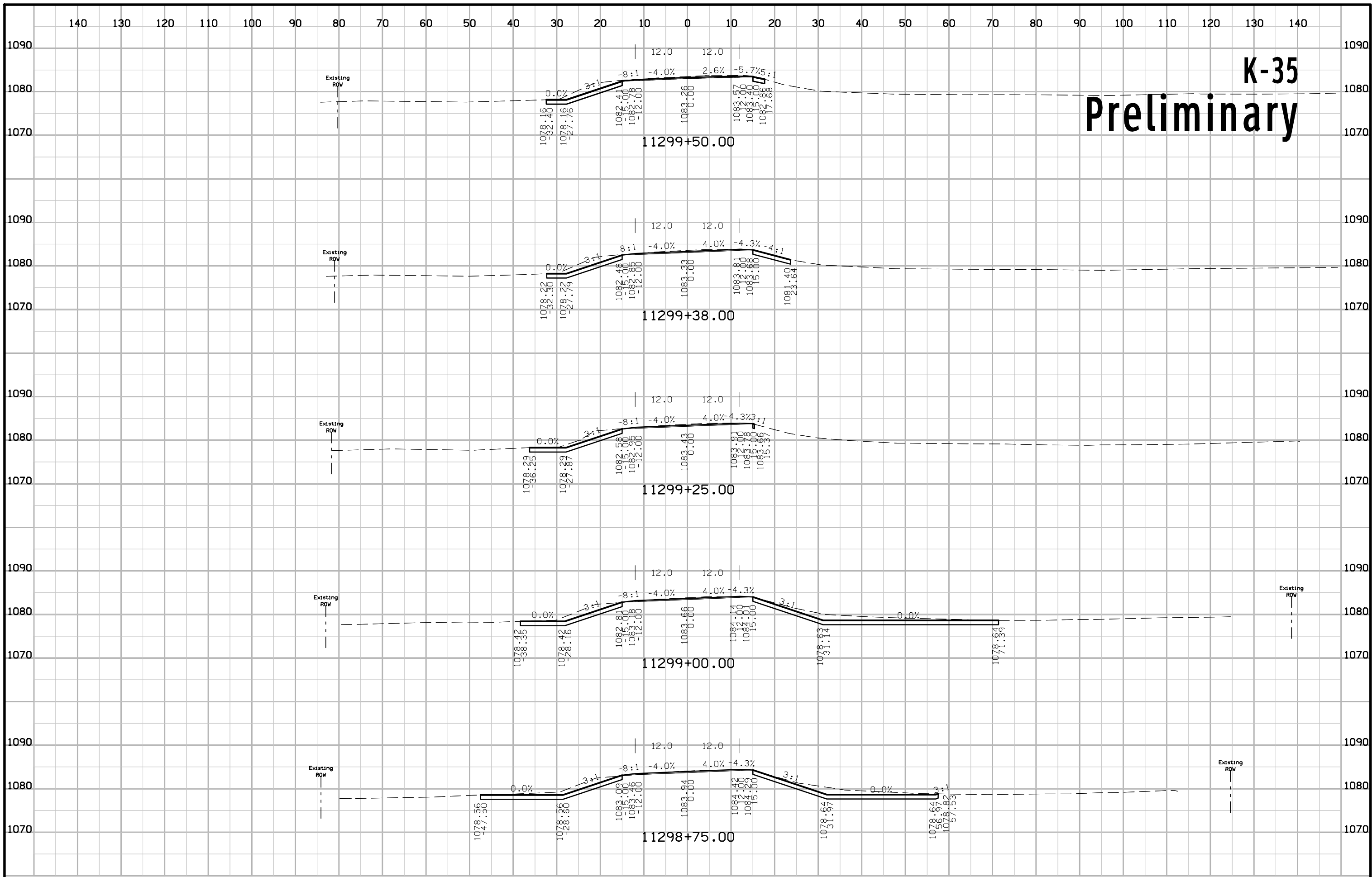


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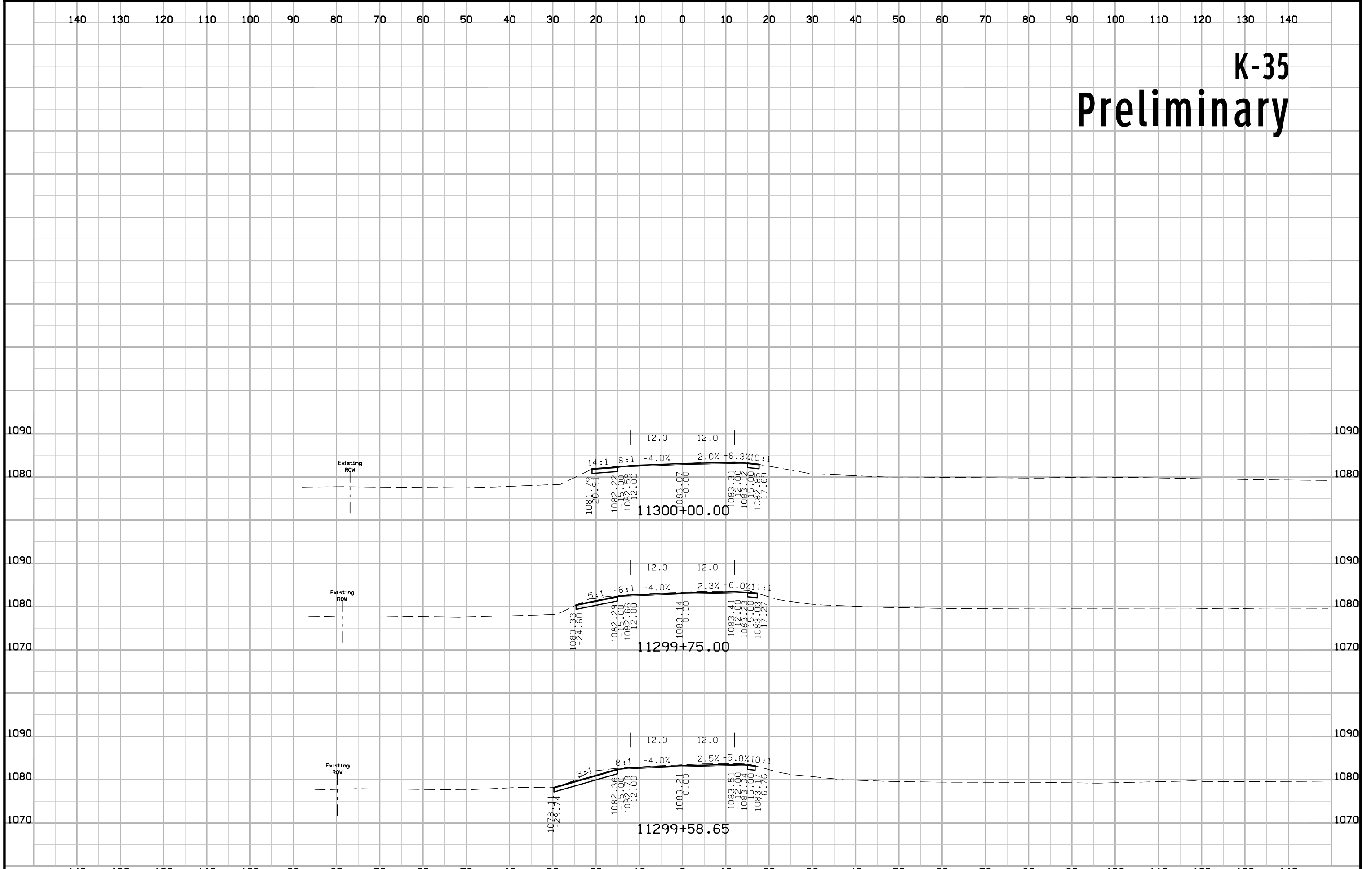


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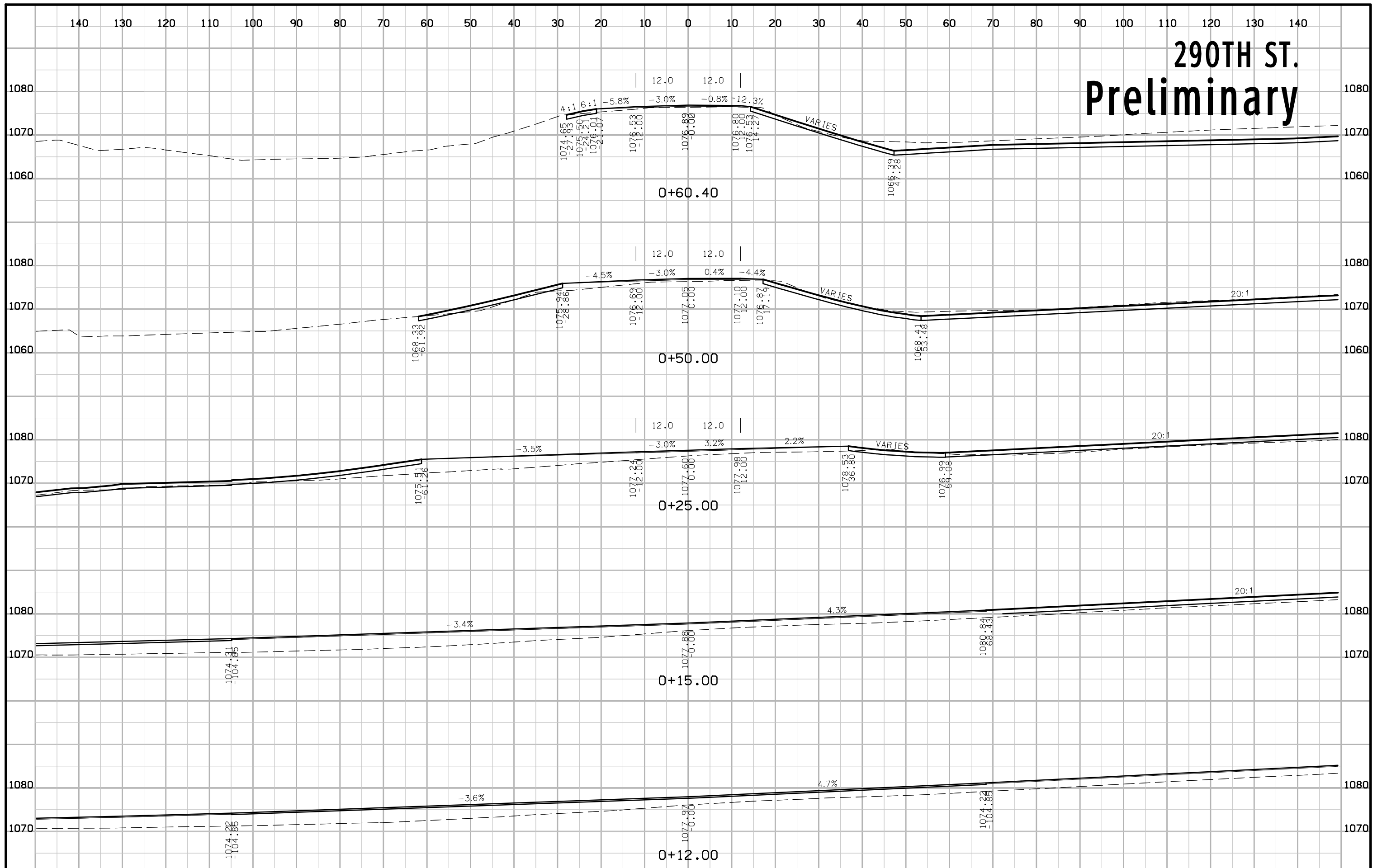




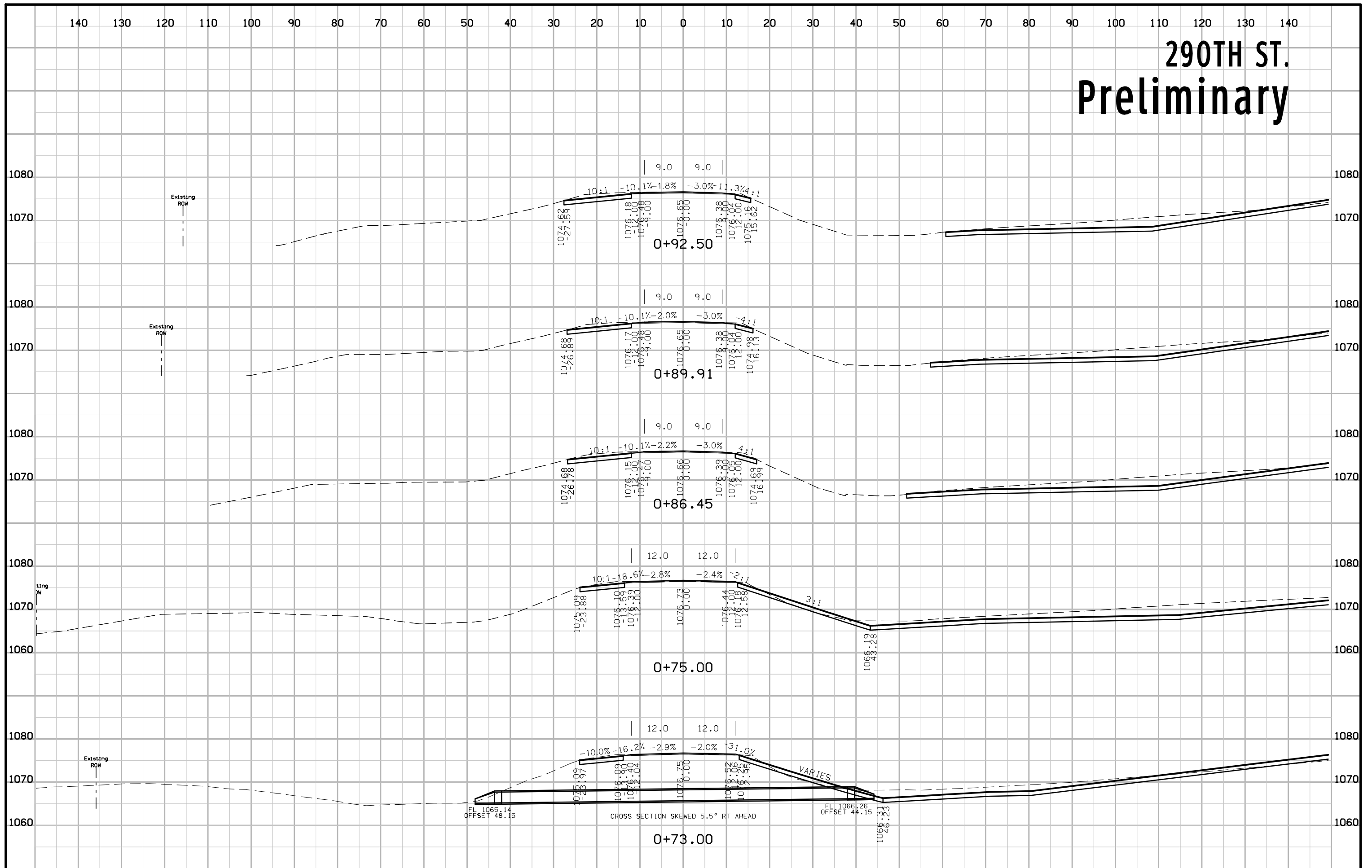
K-35 Preliminary



290TH ST. Preliminary



290TH ST. Preliminary



290TH ST. Preliminary

