

**UNION CO.**  
**PCC PAVEMENT - GRADE AND REPLACE**  
**BRFN-169-2(25)--39-88**

LETTING DATE  
 09-20-2022



**Highway Division**

PLANS OF PROPOSED IMPROVEMENT ON THE

**PRIMARY ROAD SYSTEM**

**UNION COUNTY**

**PCC PAVEMENT - GRADE AND REPLACE**

Abandoned RR 2.8 m1 N of N Jct US 34

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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



REVISIONS

TOTAL

17

PROJECT IDENTIFICATION NUMBER

18-88-169-010

PROJECT NUMBER

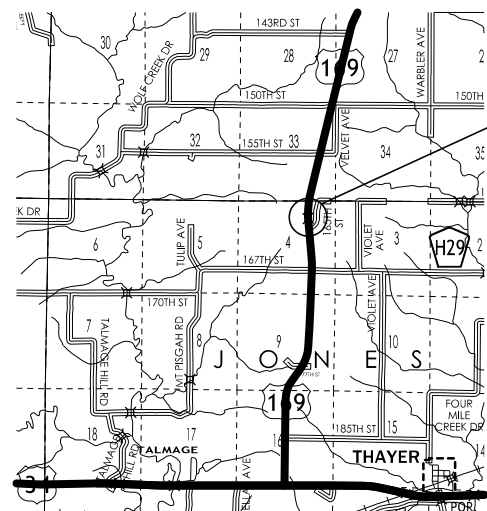
BRFN-169-2(25)--39-88

R.O.W. PROJECT NUMBER

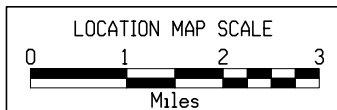
STPN-169-2(26)--2J-88

**INDEX OF SHEETS**

No.	DESCRIPTION
<b>A Sheets</b>	<b>Title Sheets</b>
A.1	Title Sheet
<b>B Sheets</b>	<b>Typical Cross Sections and Details</b>
B.1	Typical Cross Sections and Details
<b>D Sheets</b>	<b>Mainline Plan and Profile Sheets</b>
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2	US 169
<b>G Sheets</b>	<b>Survey Sheets</b>
G.1	Survey Information
G.2	Control Point Map
G.3	Horizontal and Vertical Control Coordinates
<b>J Sheets</b>	<b>Traffic Control and Staging Sheets</b>
J.1	Traffic Control Plan
* J.2	Detour Route for US 169
<b>W Sheets</b>	<b>Mainline Cross Sections</b>
W.1 - 8	Mainline Cross Sections
	* Color Plan Sheets



Sta. 150+32.68  
 Project Location  
 Ref. Loc. 49.2  
 Main. # 8849.2S169  
 FHWA # 50131



DESIGN DATA RURAL				
2023	AADT	1200	V.P.D.	
2043	AADT	1200	V.P.D.	
20--	DHV	--	V.P.H.	
	TRUCKS	17	%	
	Total			
	Design ESALs	--		

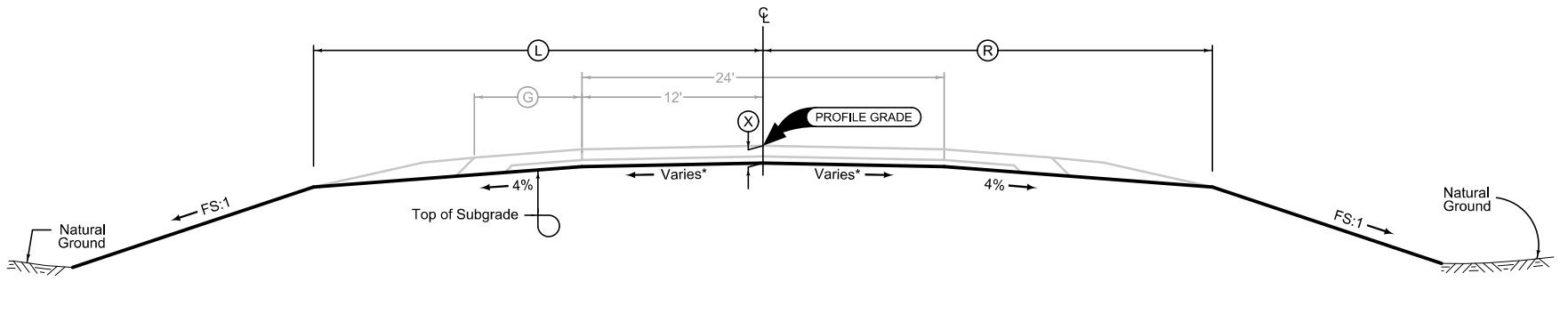
INDEX OF SEALS		
SHEET NO.	NAME	TYPE
A.1	Dung Ta	Primary Signature Block
x	x	x

**PRELIMINARY PLANS**

Subject to change by final design.

**D5 PLAN - Date: 10/15/2020**

LOCATION		DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION	Ⓛ Feet	Ⓡ Feet	Ⓧ Inches	FS
US 169	148+00.00 152+65.00	29.3	29.3	21	4:1



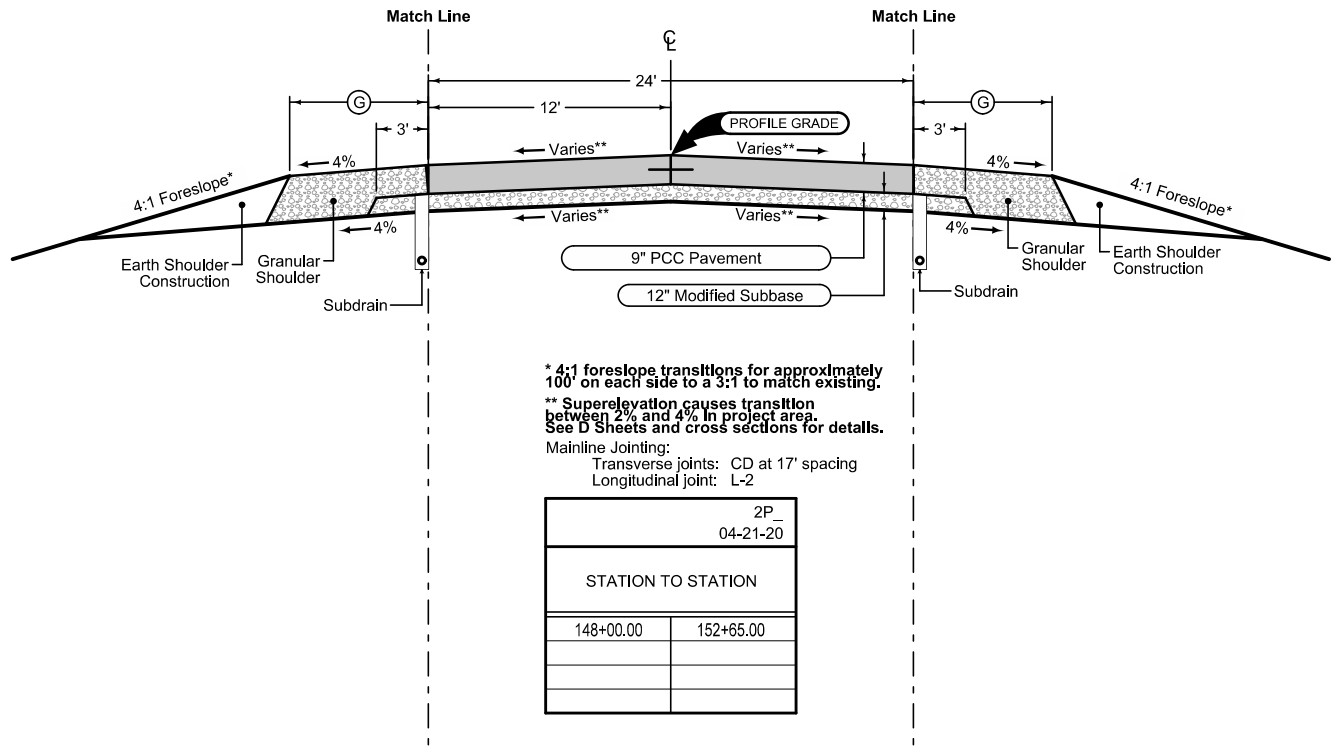
Normal section shown may be modified appropriately in areas of super-elevated curves or other locations specifically designated by the Engineer.

\*Superelevation causes slope transition between 2% and 4% in the project area. See D sheets and cross sections for details.

**2 LANE GRADING**

**Granular Shoulder**

2_G_ Modified		
STATION TO STATION		Ⓛ Feet
148+00.00	152+65.00	10



\* 4:1 foreslope transitions for approximately 100' on each side to a 3:1 to match existing.

\*\* Superelevation causes transition between 2% and 4% in project area. See D Sheets and cross sections for details.

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

2P_ 04-21-20		
STATION TO STATION		
148+00.00	152+65.00	

**Granular Shoulder**

2_G_ Modified		
STATION TO STATION		Ⓛ Feet
148+00.00	152+65.00	10

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

**IA 169**

### SURVEY SYMBOLS

- BM Bench Mark
- WC Wild Card (Misc. Field Shot)
- SNP Unpaved Shoulder
- EP Edge of Paved Roads (ML or SR)
- C Centerline BL of Road (ML or SR)
- BL Topo Breakline
- TL1D Telephone Line Co. 1 - Quality D
- D Centerline Draw or Stream (Down)
- BNK Stream Bank
- DU Centerline Draw or Stream (Up)
- EL1D Electric Line Co. 1 - Quality D
- EW Edge of Water
- GR Ground Shot
- OUT Tile Outlet
- TIL Tile Line
- RIP Rip-Rap
- CON Concrete or A/C Slab
- CUL Culvert
- PRO Profile Shot
- CP Control Point
- PIP Pipe Culvert
- TDC Tree Deciduous
- TEV Evergreen Tree
- PLG Location of General Photo
- SOP Size of Pipe or Culvert
- DAB Drainage Area Boundary

### UTILITY LEGEND

- Southern Iowa Rural Water  
Water Main - Quality D  
Name  
Title  
Address  
Address  
Phone  
Email
- T1 Telephone Line - Quality D  
Name  
Title  
Address  
Address  
Phone  
Email
- F0 Casey Mutual Telephone Company  
Fiber Optic Line - Quality D  
Name  
Title  
Address  
Address  
Phone  
Email
- F02 Grand River Mutual Telephone Company  
Fiber Optic Line - Quality D  
Name  
Title  
Address  
Address  
Phone  
Email

### PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

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

### PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

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

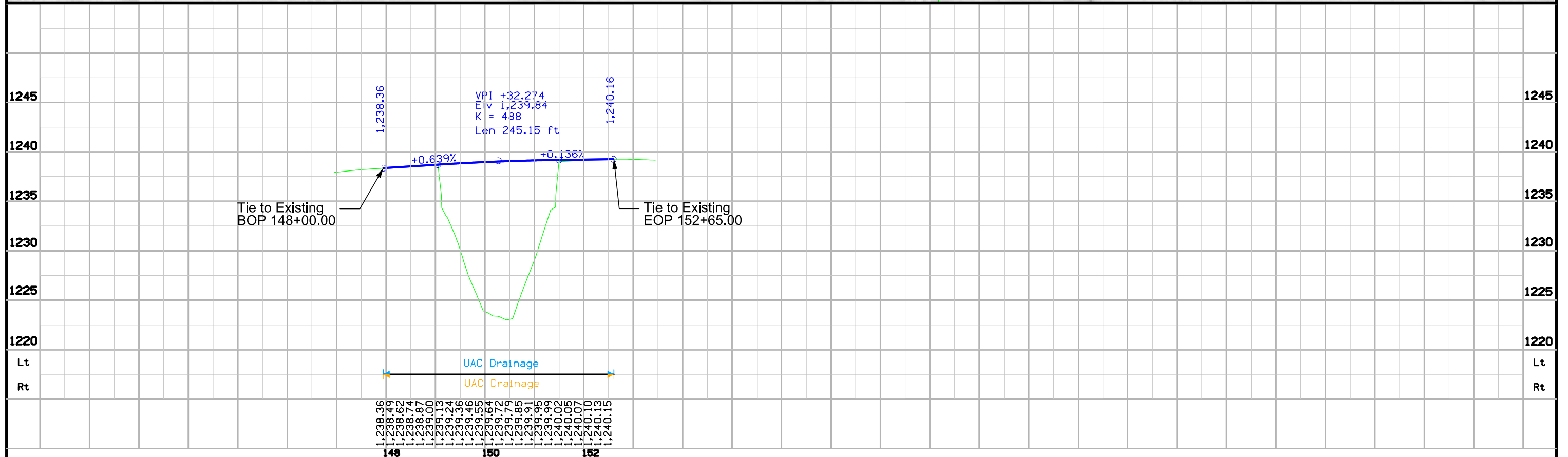
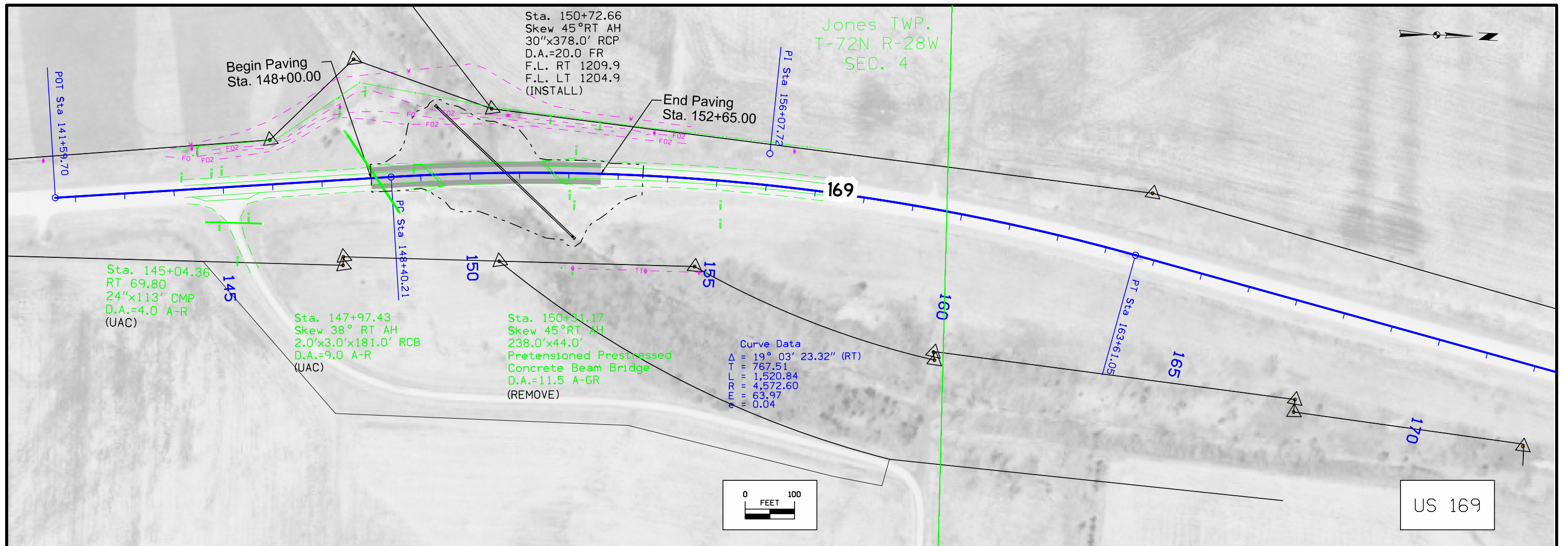
- Reference Point
- Station
- Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Trench Drain
- HighTension Cable Guardrail
- Sheet Pile
- Pavement Removal
- Clearing & Grubbing Area

### 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
- C/A Access Control
- Property Line

## PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES D)



Survey Information

**County: Union**

**SAP 952.0**

**PIN: 18-88-169-010**

**Project Number: BRFN-169-2(25)--39-88**

**Location: Abandoned RR 2.8 mi N of N Jct US 34**

**Type of Work: PCC Pavement - Grade and Replace**

**Project Directory: 8816901018**

**Party Personnel**

Seth Woodcock- Party Chief

Jeffrey Duncan- Design Technician Specialist

**Date(s) of Survey**

Begin Date 02/03/2020

End Date 05/20/2020

**General Information**

Measurement units for this survey are US survey feet. This survey is for proposed bridge replacement along US Highway 169. This project is a Full DTM without Photo control.

**Vertical Control**

The vertical datum is NAVD88. Vertical Control was established by averaging laRTN RTK observations. Geoid 12 B was used in computing orthometric height.

**Horizontal Control**

The project coordinate system for this survey is Iowa RCS Zone 12 (U.S. Survey Feet). This survey control is relative to laRTN reference stations. laRTN Reference Station coordinate are relative to the National Reference Station network datum NAD83 (2011) for Epoch 2010.00. Local ground monuments were located within the vicinity of the project Coordinates were determined by averaging laRTN RTK observations.

**Alignment Information**

The horizontal alignment for this survey is provided by District 4 ROW.

### 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 12

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 12

Point	North	East	Elevation	Feature Code-Description
200	6256540.1	22410106.32	1235.02	CP CM STATION 164+04 430FT NORTH OF FIELD ENTRANCE TO THE WEST 77FT E CL U.S. 169
202	6253634.31	22409972.36	1222.16	CP CM STATION 134+69 190FT NORTH OF DRIVEWAY ON WEST 75FT W CL U.S. 169
205	6255770.18	22409841.64	1230.6	CP CM STATION 156+00 64FT W CL U.S. 169 36.5FT SOUTH EAST OF PWER POLE

108-23A  
08-01-08

### TRAFFIC CONTROL PLAN

Traffic on US 169 will be detoured during construction.  
Refer to the detour route on Sheet J.2.

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
None Provided	

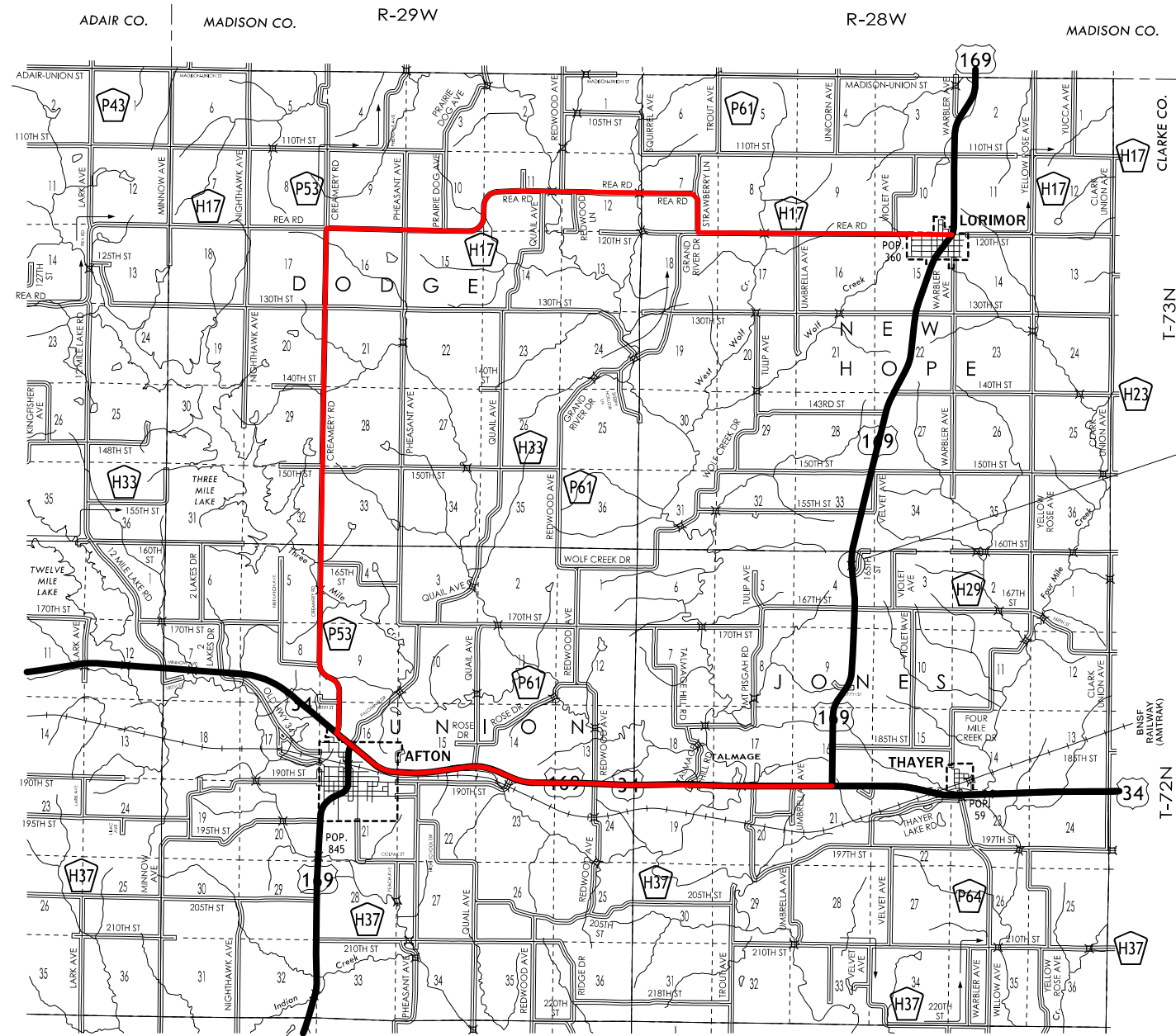
108-25  
10-21-14

### 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
US 169	Both	Union	No Restrictions Anticipated									



# US 169 Detour Route

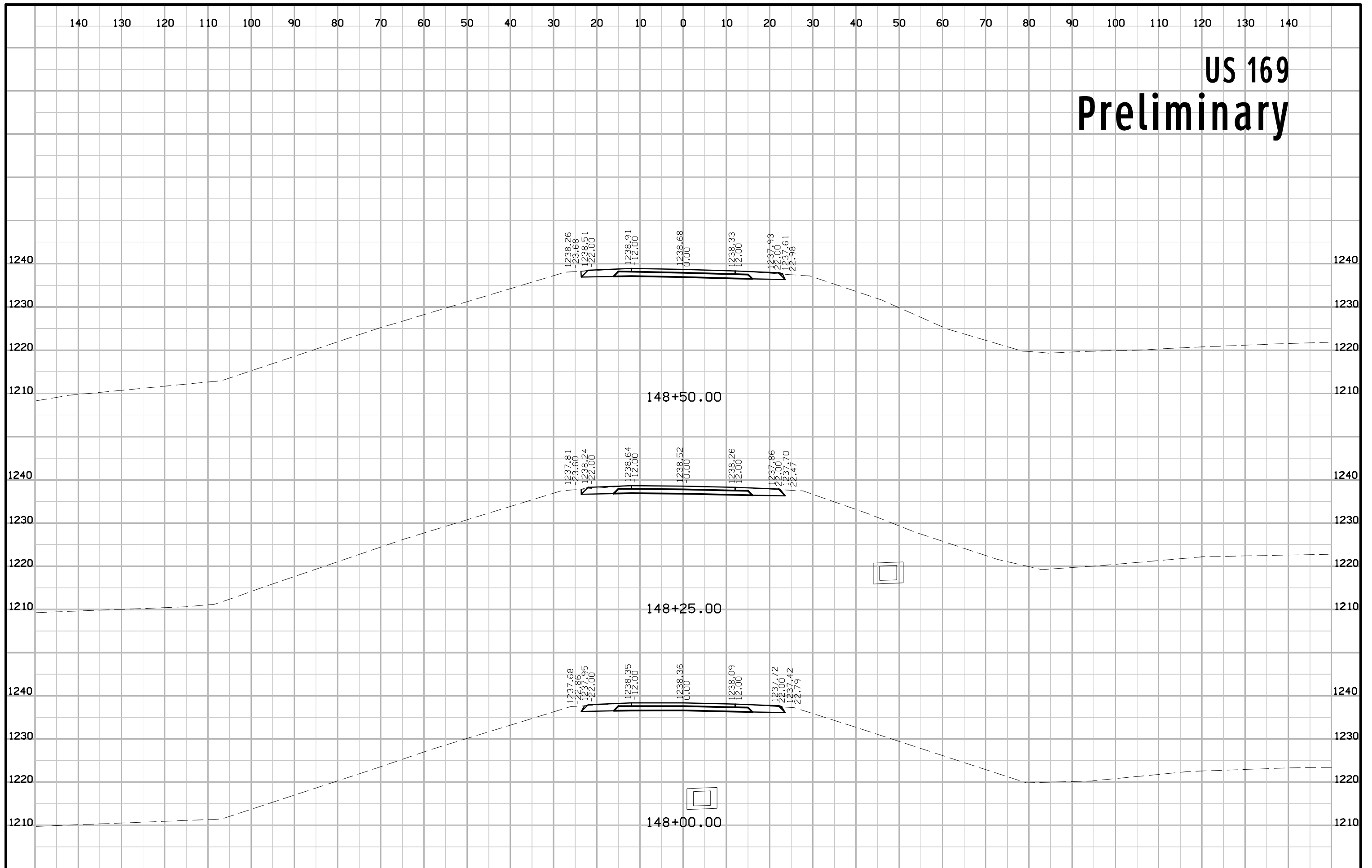


Project Location  
FHWA # 50131

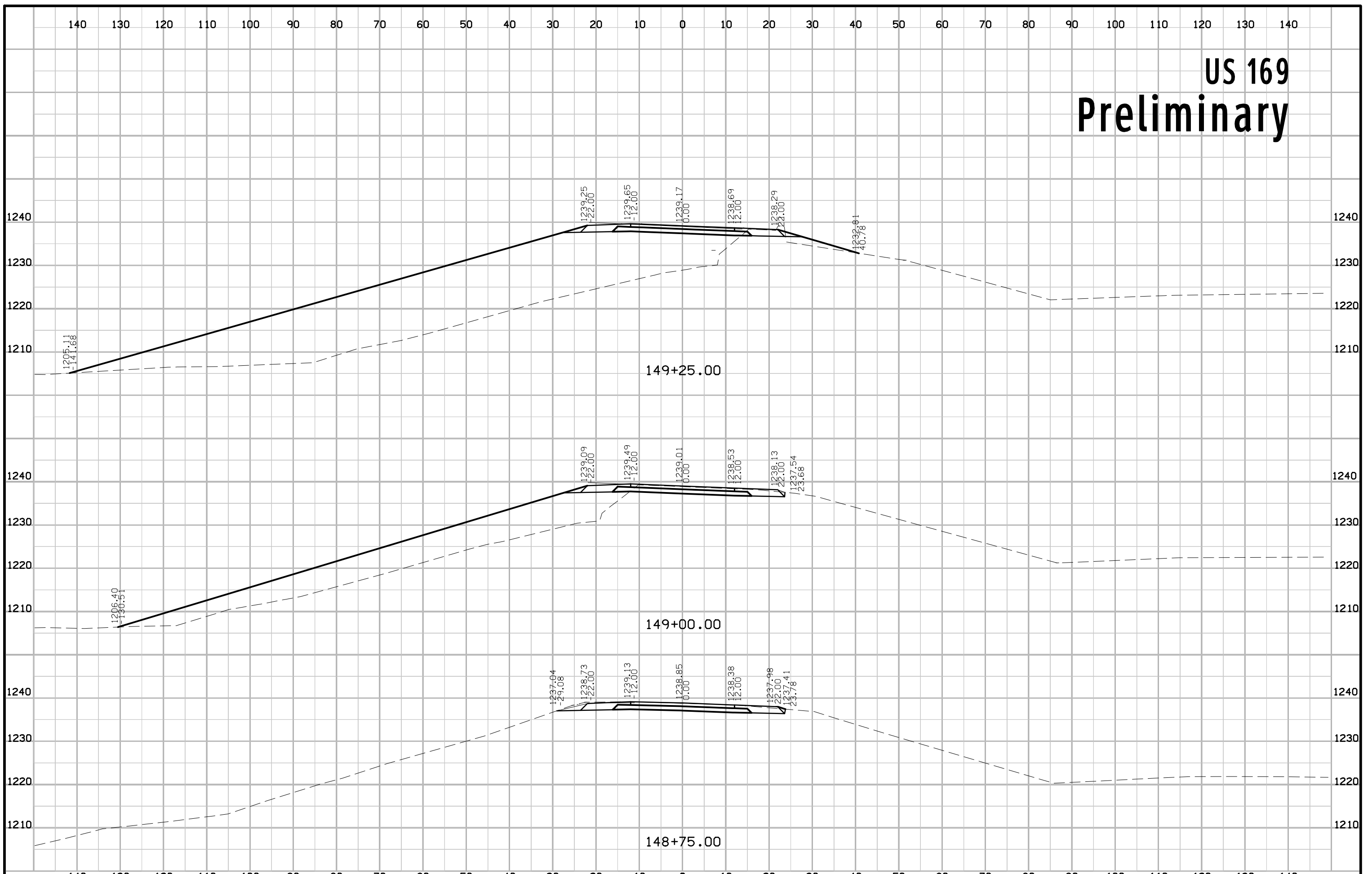
— Detour Route



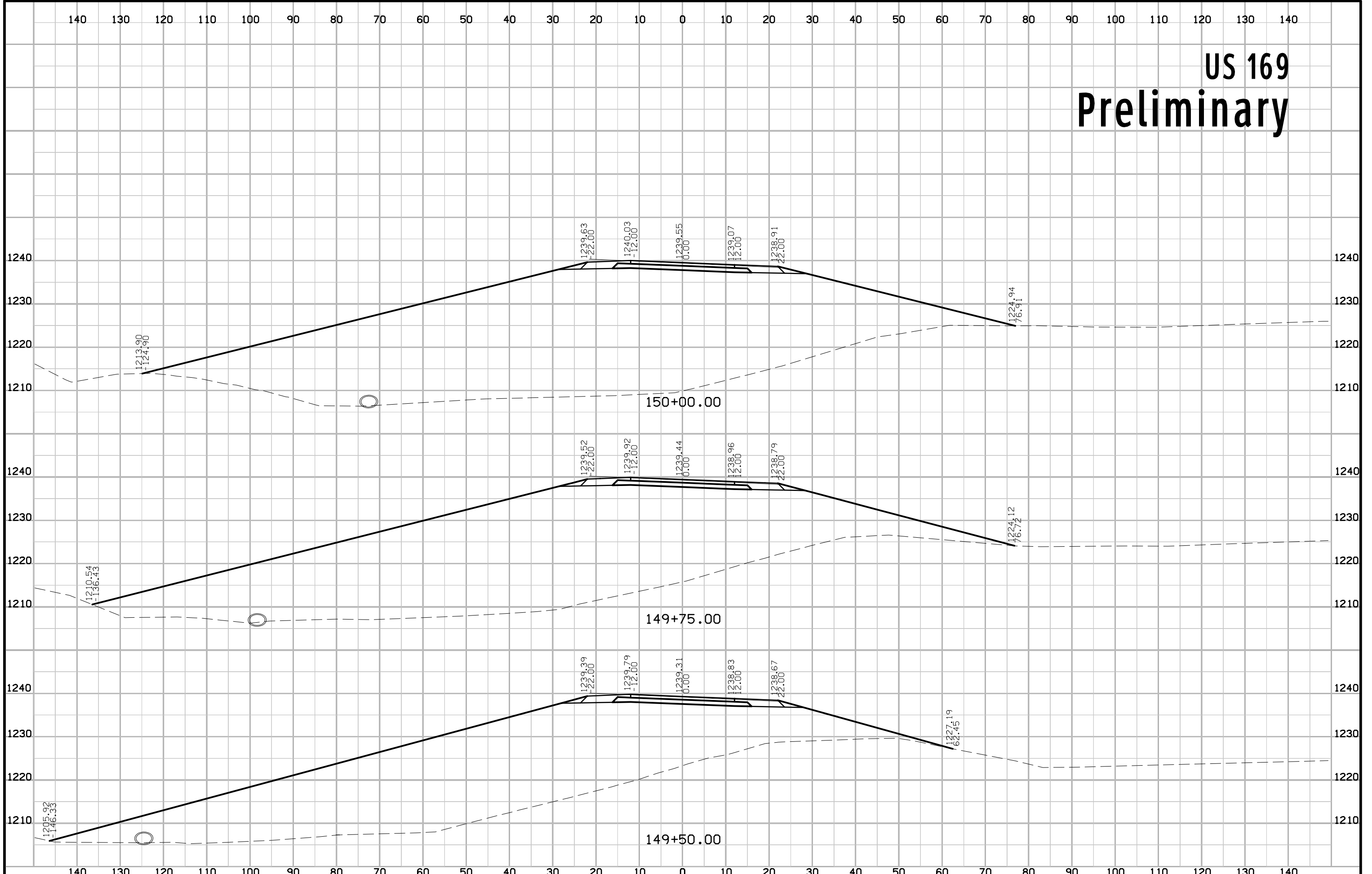
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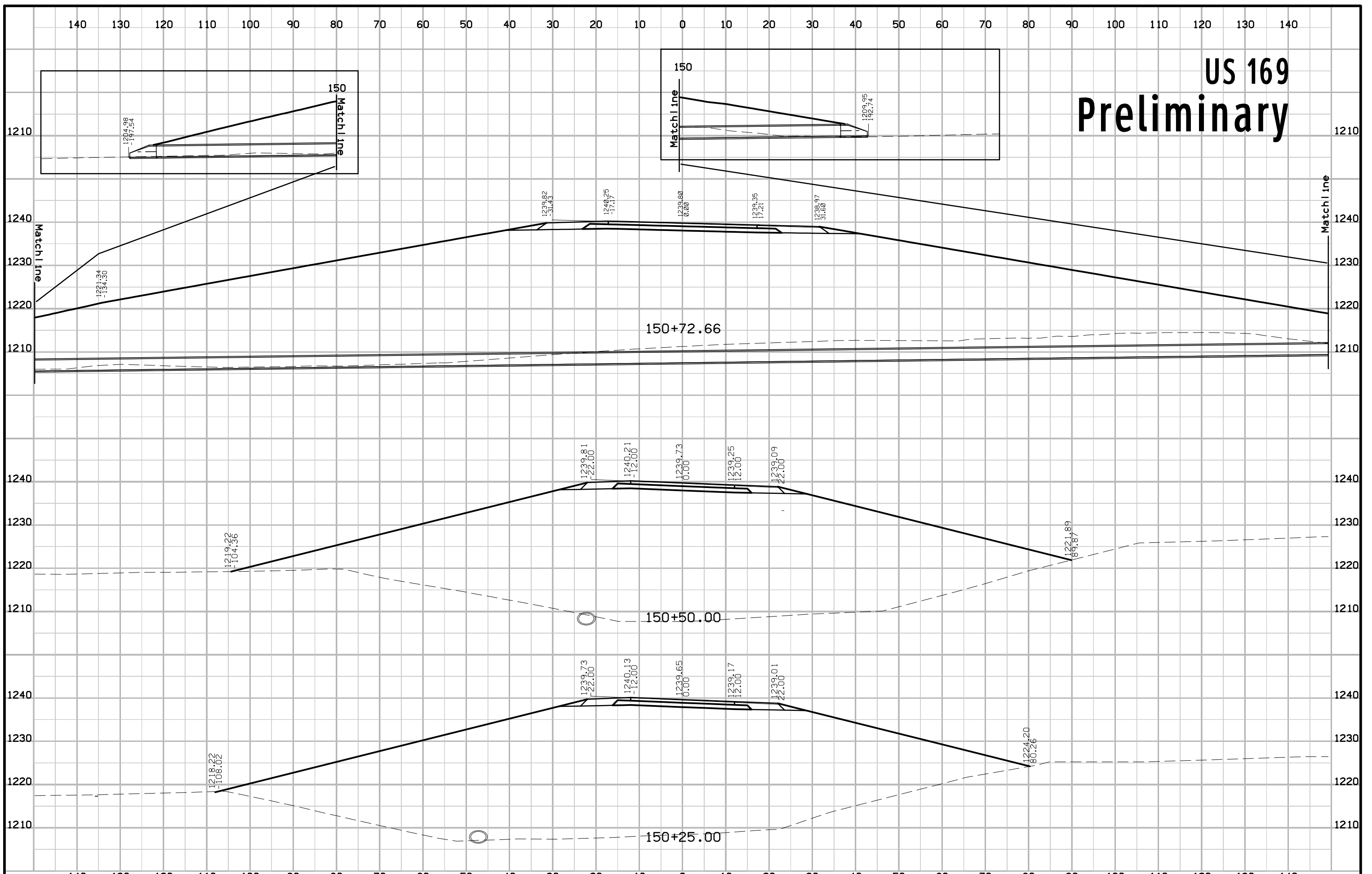
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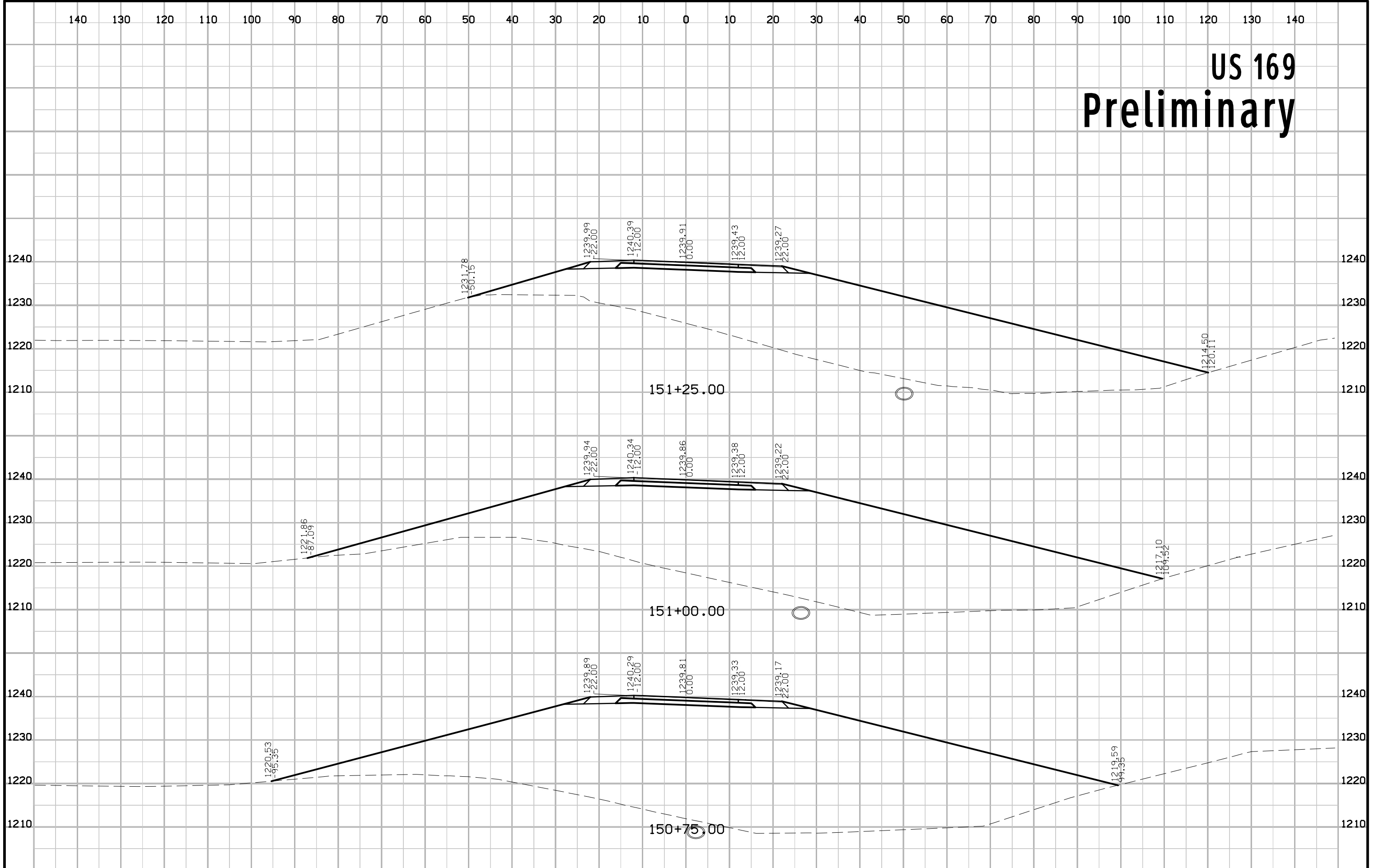
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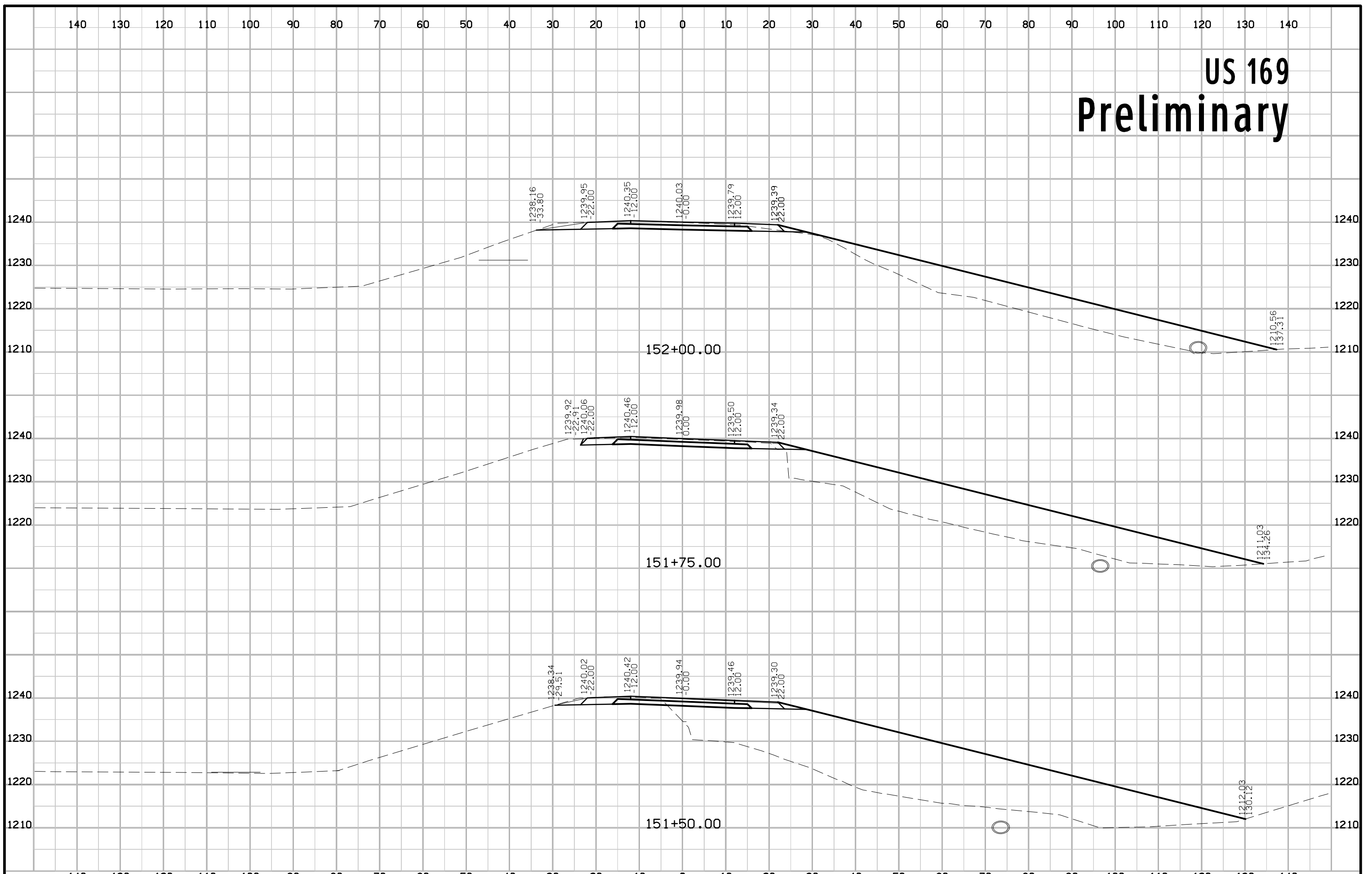
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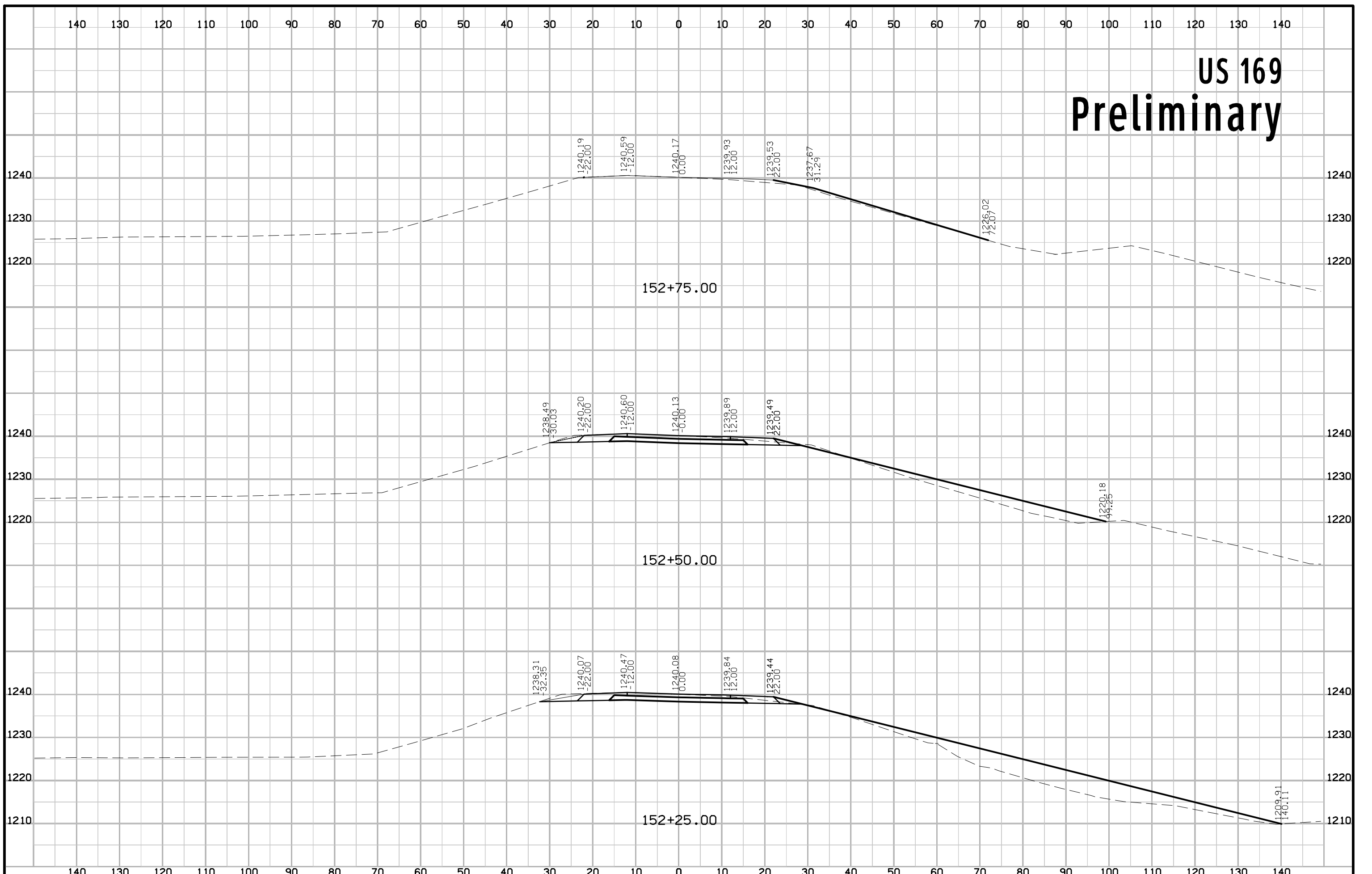
# US 169 Preliminary



# US 169 Preliminary



# US 169 Preliminary





# US 169 Preliminary

