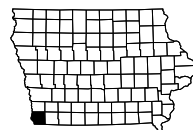


Fremont COUNTY

Bridge - Unspecified
BRF-002-1(147)--38-36

LETTING DATE
Oct 19 2027



INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	Title Sheets
A.1	Title Sheet
A.2	Location Map Sheet
B Sheets	Typical Cross Sections and Details
B.1 - 4	Typical Cross Sections and Details
C Sheets	Quantities and General Information
C.1	Access Points and Safety Ramps
D Sheets	Mainline Plan and Profile Sheets
D.1	Plan & Profile Legend & Symbol Information Sheet
D.2	IA 2 Plan and Profile
F Sheets	Detour or Temporary Pavement Sheets
F.1 - 3	Detour Plan and Profile Sheets
G Sheets	Survey Sheets
G.1	Reference Ties and Bench Marks
G.2	Control Point Vicinity Map
G.3	Horizontal and Vertical Control Tab.
J Sheets	Traffic Control and Staging Sheets <-- H Sheets
J.1	Traffic Control Plan
J.2	Detour Map
V Sheets	Bridge and Culvert Situation Plans
V.1 - 3	Bridge and Culvert Situation Plans
W Sheets	Mainline Cross Sections
W.1	Cross Sections Legend & Symbol Information Sheet
W.2 - 26	IA 2 Cross Sections
Z Sheets	Detour Cross Sections
Z.1 - 31	WOF Detour Cross Sections



PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
Fremont COUNTY
 Bridge - Unspecified
 IA 2 Bridge over the W Nishnabotna Overflow
 1.1 mi E of E Jct US 275

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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



DESIGN DATA RURAL		
20	AADT	2100 V.P.D.
20	AADT	2300 V.P.D.
20	DHV	- V.P.H.
	TRUCKS	10 %
	Total	
	Design ESALs	-

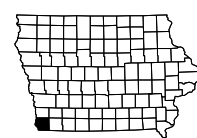
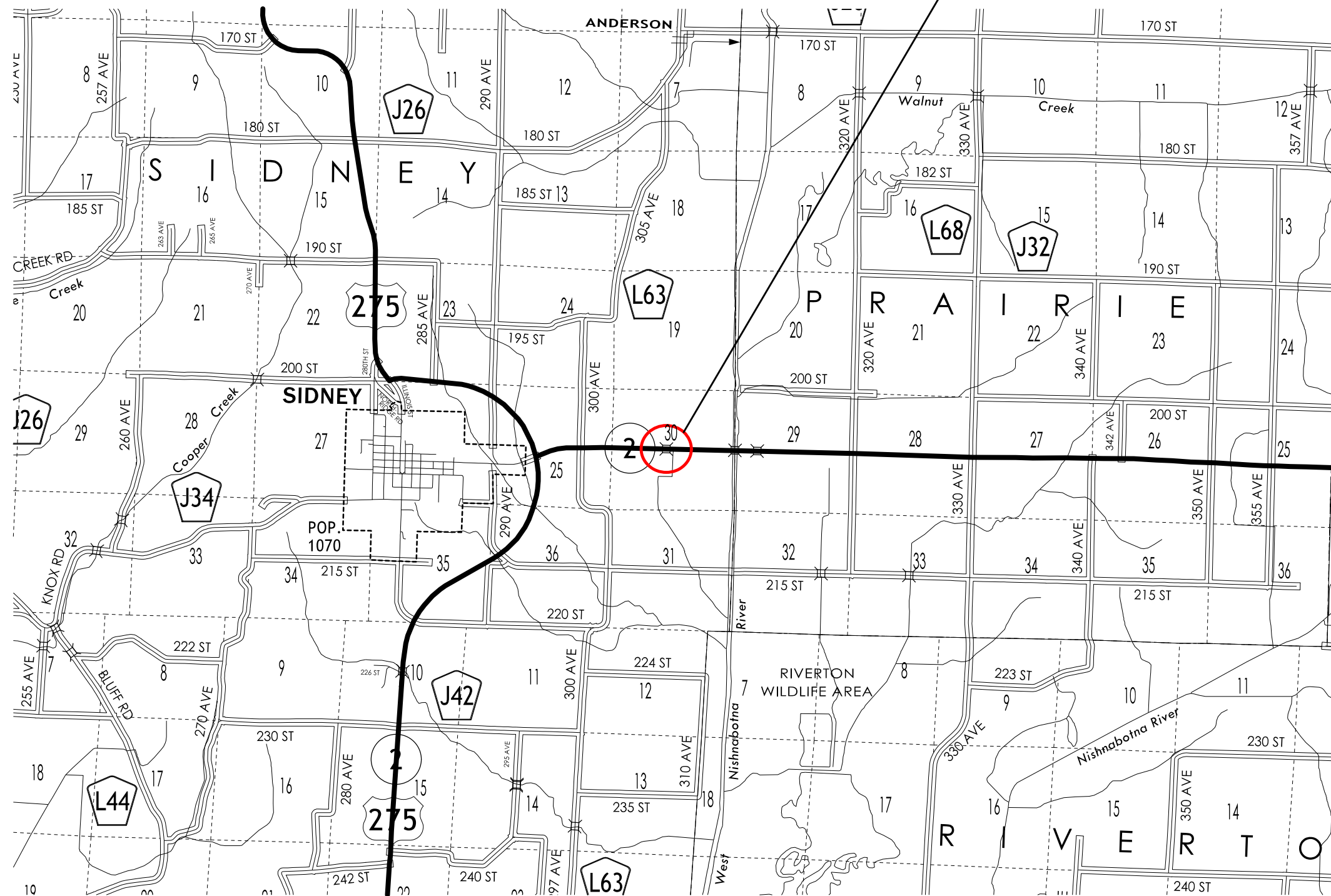
PRELIMINARY PLANS

Subject to change by final design.

D5 PLAN - Date: 2/27/2026

REVISIONS	
	TOTAL 77
PROJECT IDENTIFICATION NUMBER	
22-36-002-020	
PROJECT NUMBER	
BRF-002-1(147)--38-36	
R.O.W. PROJECT NUMBER	
STPN-002-1(148)--2J-36	

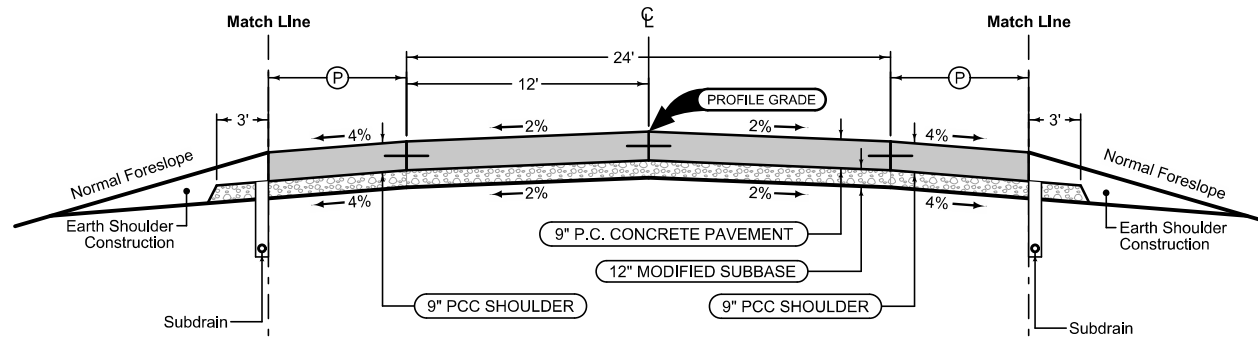
PROJECT LOCATION
 FHWA # 025370
 REF LOC 16.9



Full Depth PCC Shoulder

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

2_P_FullPCC_ Modified		
STATION TO STATION	(P)	Feet
88+70.50	90+83.28	8
98+69.22	100+69.50	8



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

2P_ Modified	
STATION TO STATION	(P)
88+70.50	91+70.50
97+69.50	100+69.50

Full Depth PCC Shoulder

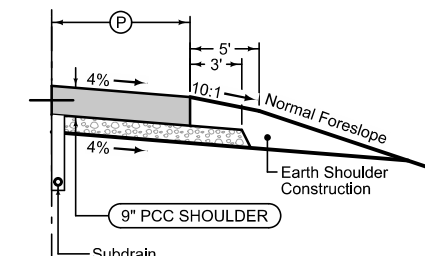
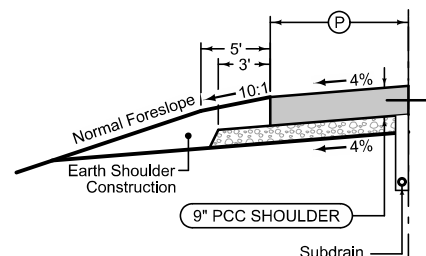
Shoulder Jointing:
 Longitudinal joint: BT-2 or L-2
 Transverse joints: C at 17' spacing

2_P_FullPCC_ Modified		
STATION TO STATION	(P)	Feet
88+70.50	90+70.78	8
98+56.72	100+69.50	8

Paved Shoulder at Guardrail

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

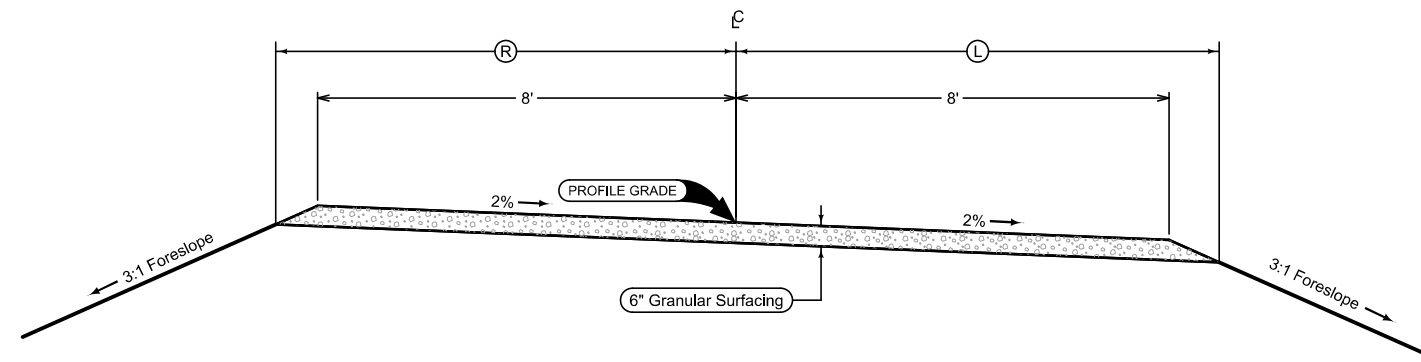
2_P_FullPCC_ 04-15-25		
STATION TO STATION	(P)	Feet
90+83.28	91+70.50	Var.
97+69.50	98+69.22	Var.



Paved Shoulder at Guardrail

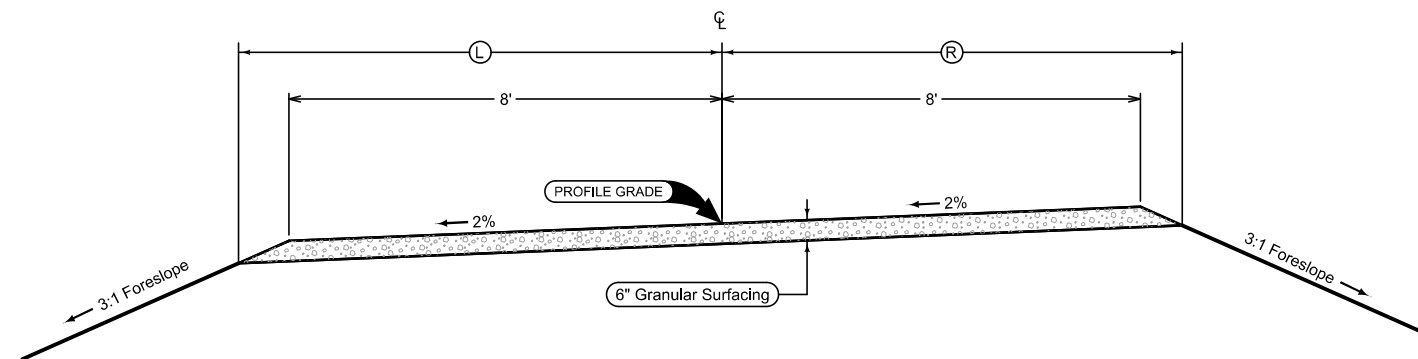
Shoulder Jointing:
 Longitudinal joint: BT-2, or L-2
 Transverse joints: C at 17' spacing

2_P_FullPCC_ 04-15-25		
STATION TO STATION	(P)	Feet
90+70.78	91+70.50	Var.
97+69.50	98+56.72	Var.



WOF Detour Grading

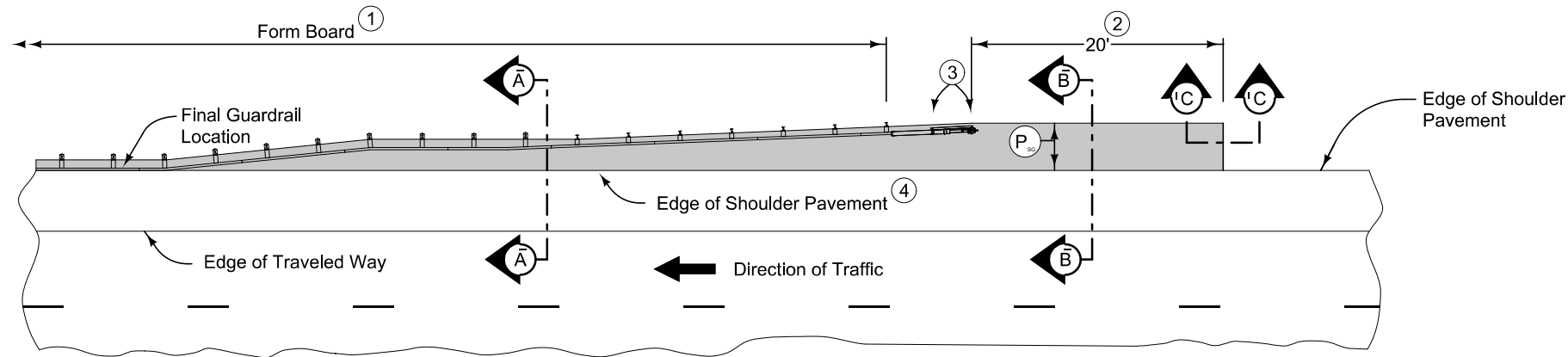
STATION TO STATION		(L) Feet	(R) Feet
12000+46.03	12024+34.91	9.4	9.6



WOF Detour Grading

STATION TO STATION		(L) Feet	(R) Feet
12025+50.96	12035+39.20	9.6	9.4

7158
Modified



PLAN VIEW

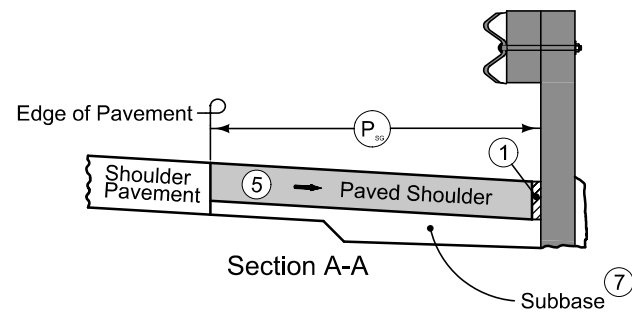
9" PCC Paved Shoulder at guardrail should use the following jointing layout:

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.

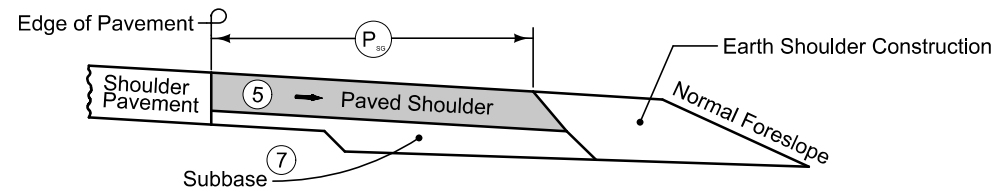
Refer to Tabulation 112-9 for shoulder quantities.

- ① 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.
- ② Continue paved shoulder 20 feet beyond the center of the first post.
- ③ Shoulder may be notched for first 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.
- ④ 'BT' (per PV-101) joint for PCC shoulder. 'B' (per PV-101) joint for HMA shoulder.
- ⑤ Match shoulder slope.
- ⑥ The Contractor has the option to pave the paved shoulder at guardrail and the full width paved shoulder as one operation.
- ⑦ Refer to other details in the plan.



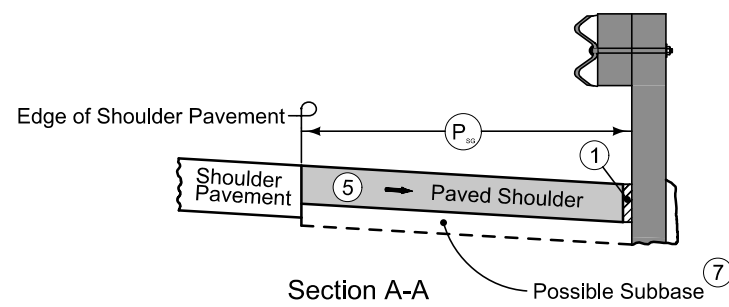
Section A-A

Subbase ⑦



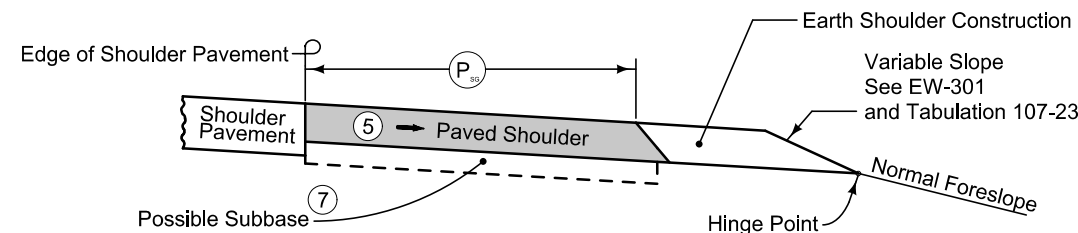
Section B-B

NEW CONSTRUCTION



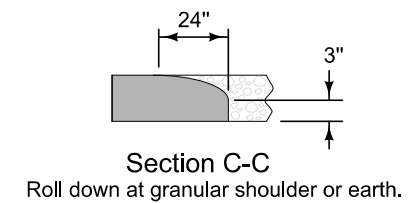
Section A-A

Possible Subbase ⑦



Section B-B

EXISTING SHOULDER



PAVED SHOULDER AT GUARDRAIL (ADJACENT TO FULL WIDTH PAVED SHOULDER)

ACCESS POINTS AND SAFETY RAMPS

Refer to Cross-Sections

Length of Unclassified Pipe calculated is based on using Corrugated Metal Pipe.

(1) Refer to MI-210.

(2) Refer to EW-501.

(3) Refer to EW-501 or EW-502.

*Predetermined for access point not constructed with this project.

Line No.	Station	Side	Access Type	Descriptor	Case	Curb Type	Curb Length (1) (LF)	Width (FT)	PR (1) (2) (FT)	SR (2) (FT)	Pipe Culvert (H) (3) (FT)	Pipe Culvert Size (3) (IN)	Culvert Length (3) (LF)	Pipe Culvert Lt. (3) (LF)	Pipe Culvert Rt. (3) (LF)	Culvert Aprons (3) (No.)	Driveway Surface Type	Driveway Surface Area (SY)	Driveway Surfacing Material (TON)	Remarks	
1.0	87+47.41	Right						16.0													Temporary Field Access
2.0	90+95.70	Right									1.5	36.0	34.0	14.66	19.34	2					126.67' R Offset from Mainline CL, Ditch Crossing
3.0	96+84.72	Right									2.0	24.0	50.0	27.40	22.60	2					110.75' R Offset from Mainline CL, Ditch Crossing

SURVEY SYMBOLS

- Interstate Highway Symbol
- U.S. Highway Symbol
- Iowa Highway Symbol
- County Road Highway Symbol
- Evergreen Tree
- Deciduous Tree
- Fruit Tree
- Shrub (Bushes)
- Timber
- Hedge
- Stump
- Swamp
- Rock Outcrop
- Broken Concrete
- Revetment (Rip Rap)
- Cemetery
- Grave
- Cave
- Sink Hole
- Board Fence
- Chain Link or Security Fence
- Wire Fence
- Terrace
- Earth Dam or Dike (Existing)
- Tile Outlet
- Edge of Water
- Existing Drainage
- Right of Way Rail or Lot Corner
- Concrete Monument
- Well
- Windmill
- Beehive Intake
- Existing Intake
- Existing Utility Access (Manhole)
- Fire Hydrant
- Water Hydrant (Rural)
- Septic Tank
- Cistern
- L.P. Gas Tank (No Footing)
- Underground Storage Tank
- Latrine
- Satellite TV Dish
- Water Hook Up
- Radio Tower
- Tower Anchor
- Guardrail (Beam or Cable)
- Guard Post (one or two)
- Guard Post (over two)
- Filler Pipe
- Gas Valve
- Water Valve
- Speed Limit Sign
- Mile Marker Post
- SIGN Sign
- TCB Traffic Signal Control Box
- RRB Rail Road Signal Control Box
- TSB Telephone Switch Box
- EB Electric Box

UTILITY LEGEND

- Windstream Communications Fiber Distribution
Mark Hussman, Construction Manager - CLEC
9850 M ST
Omaha, IA 68127
ph: 402-827-6355 cell: 402-677-5874
Mark.Hussman@windstream.com
- Iowa Communications Network Fiber Distribution
Michael Dalen, OSP Engineer
400 East 14th Street
Des Moines, IA 50319
ph: 515-725-4707 cell: 515-499-1642
mike.dalen@iowa.gov
- MidAmerican Energy Company Electric Distribution
Scott Behrens, Lead, Electric Distribution Engineering SW Iowa
3003 S. 11th St
Council Bluffs, IA 51501
ph: 712-366-5636 cell: 402-657-1059
scott.behrens@midamerican.com
- City of Sidney Water Works
Chris Sokolowski, Water/Wastewater Superintendent
604 Clay Street, Box 335
Sidney, IA 51652
ph: 712-374-2223 cell: 712-242-7949
csokolowski@sidneyiowa.net

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.	Transparency
Pink, Dark	(13)		Temporary Pavement Shading 50%
Yellow	(4)		Proposed Pavement Shading 50%
Orange	(6)		Proposed Granular Shading 50%
Orange	(70)		Proposed Shoulder Granular Shading 50%
Yellow	(68)		Proposed Shoulder Paved Full Depth Shading 50%
Yellow	(132)		Proposed Shoulder Paved Partial Depth Shading 50%
Brown, Light	(236)		Grading Shading 50%
Orange, Light	(134)		Proposed Granular Entrance Shading 50%
Yellow	(220)		Proposed Paved Entrance Shading 50%
Tan	(8)		Proposed Sidewalk Shading 50%
Blue, Light	(230)		Proposed Sidewalk Landing Shading 50%
Pink	(11)		Proposed Sidewalk Ramp Shading 50%
Red	(3)		Proposed Structure Shading 50%
Red	(3)		Delineates Restricted Areas 0%

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK		Design Color No.	
Green	(10)		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

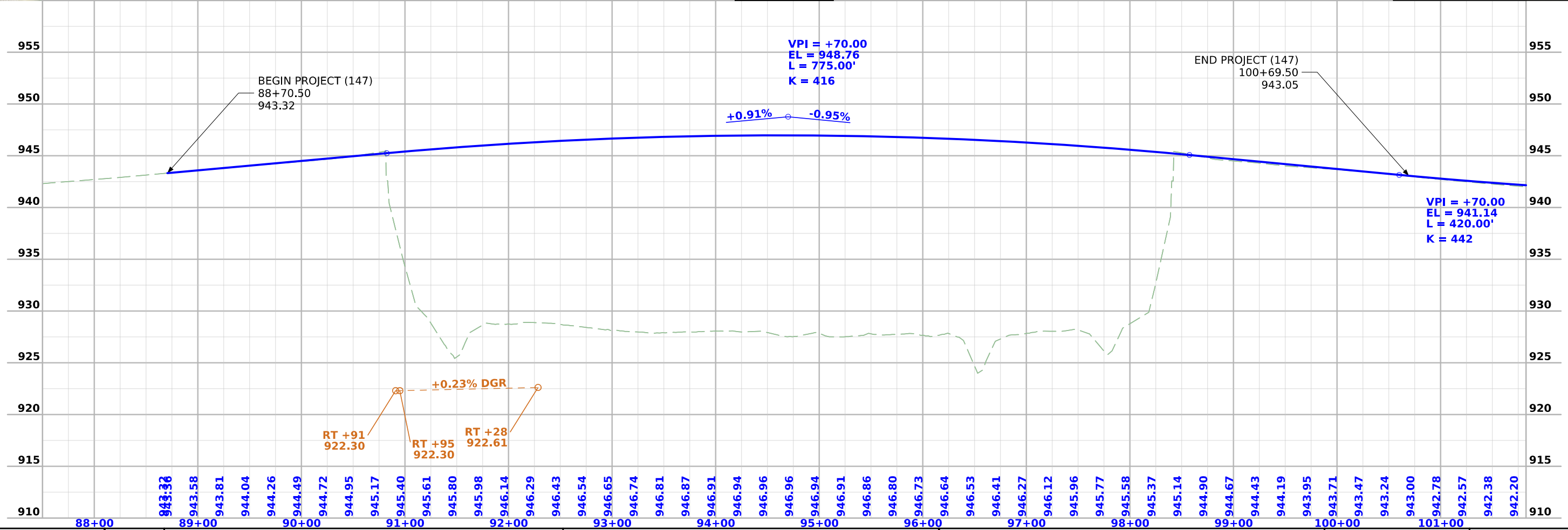
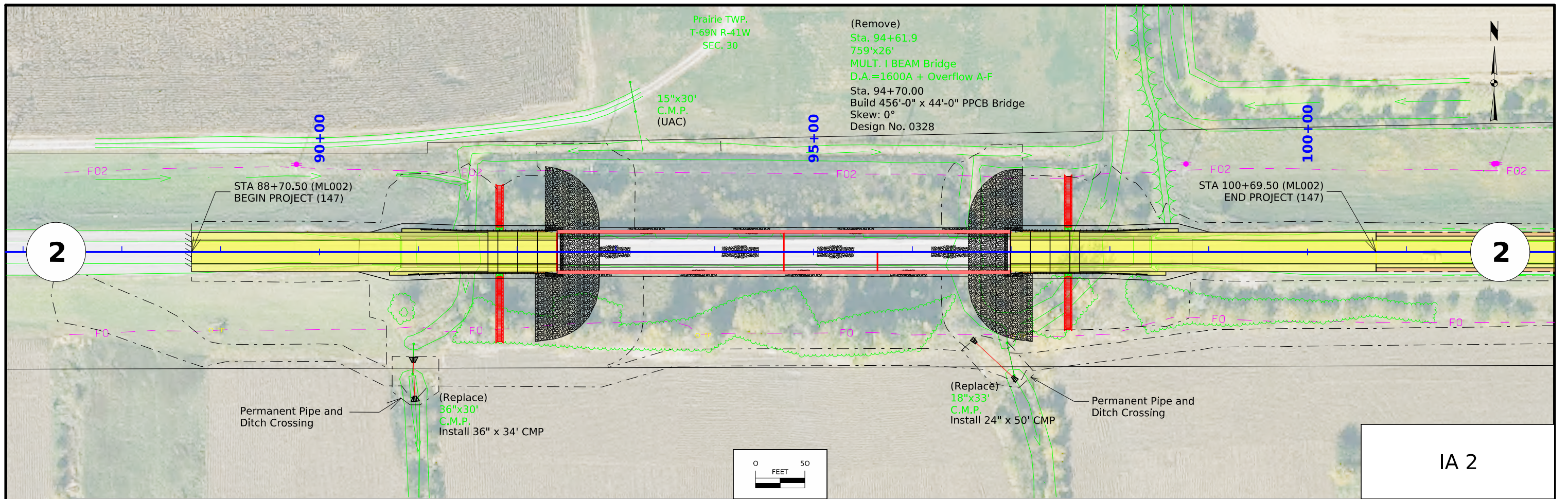
- Reference Point
- Station
- Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Trench Drain
- HighTension Cable Guardrail
- Sheet Pile
- Pavement Removal
- Clearing & Grubbing Area

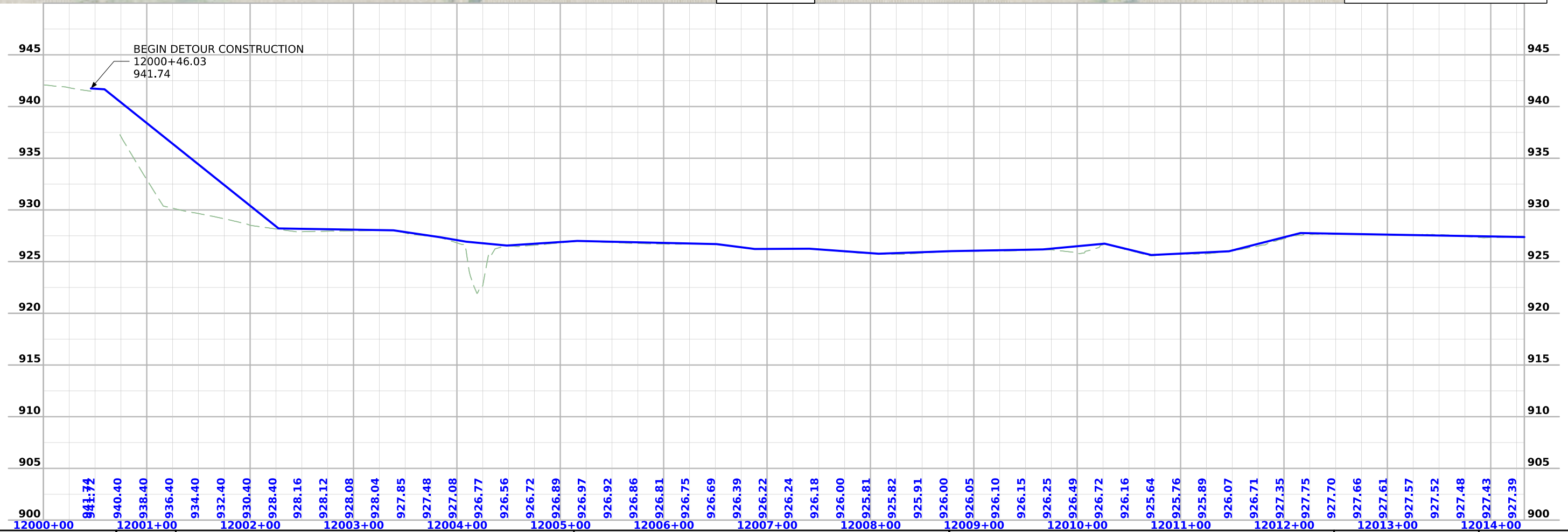
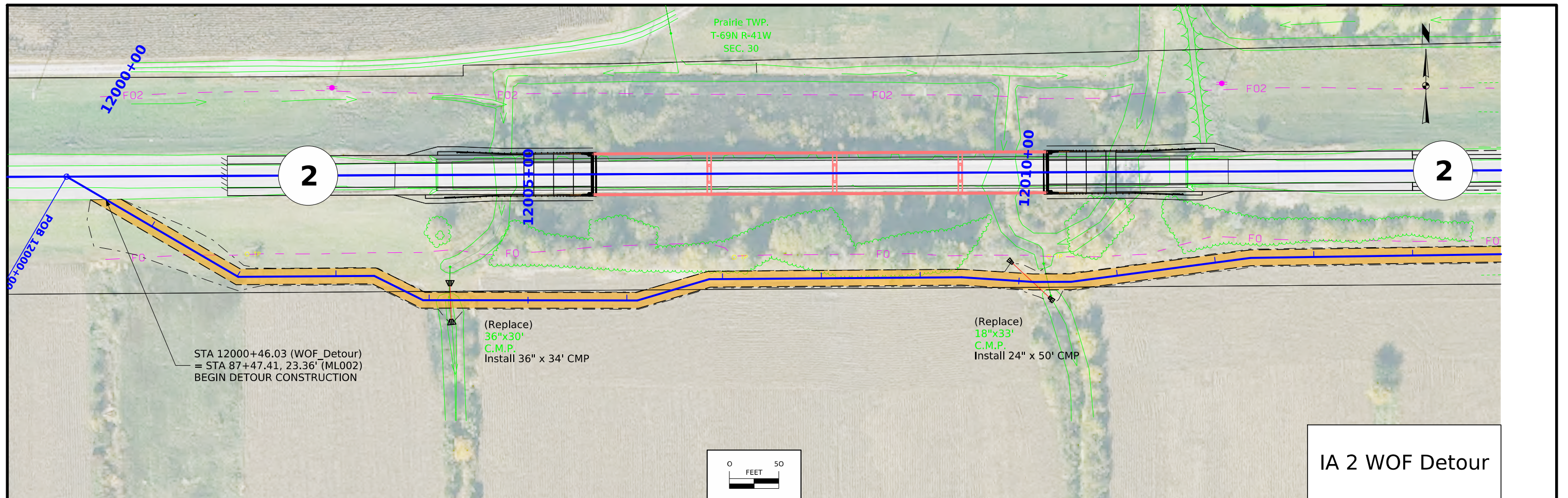
RIGHT-OF-WAY LEGEND

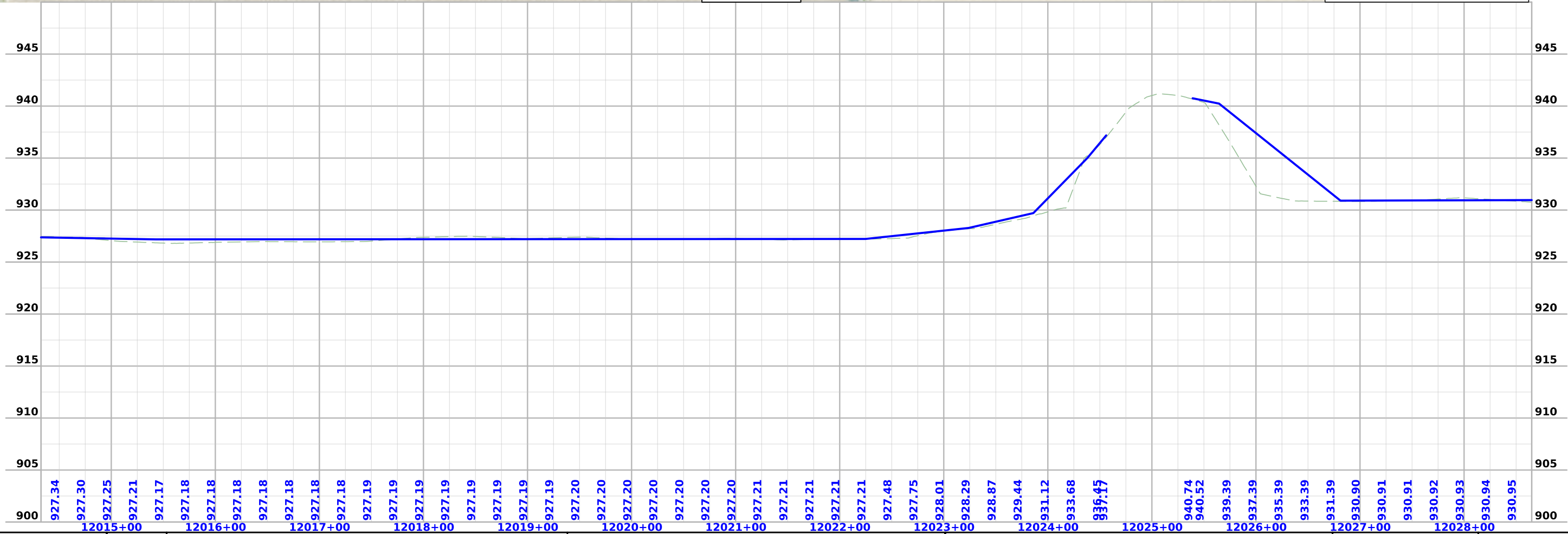
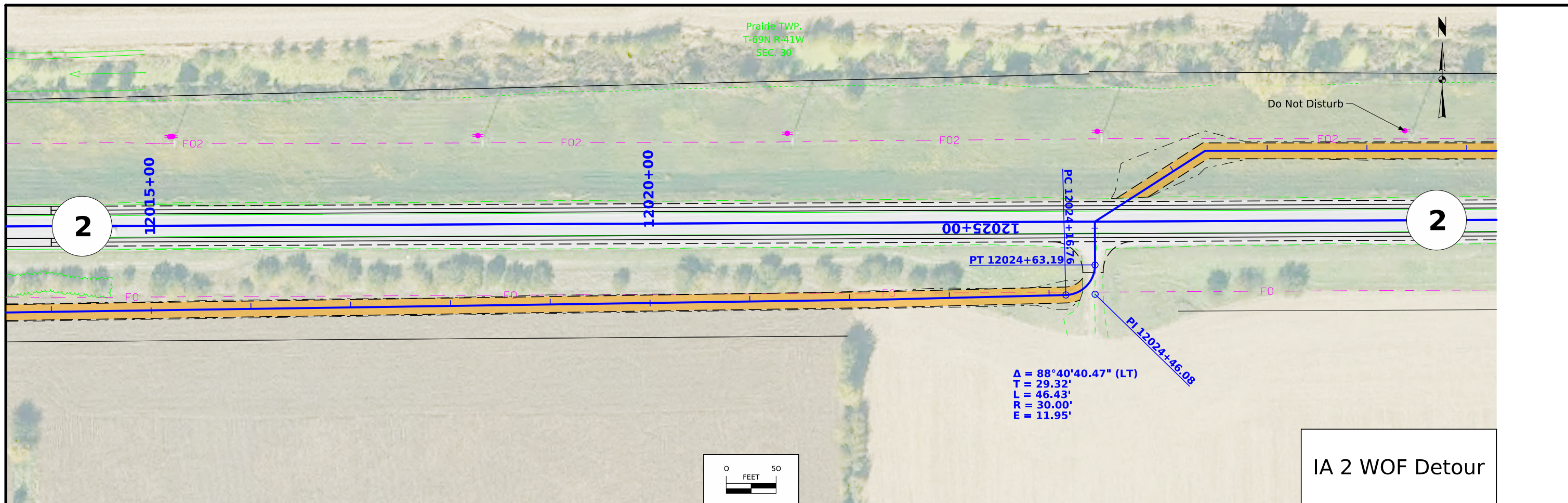
- Proposed Right-of-Way Symbol
- Proposed Right-of-Way Line
- Existing Right of Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Easement (Temporary) Symbol
- Easement (Temporary) Line
- Easement
- C/A Access Control
- Property Line Symbol
- Property Line

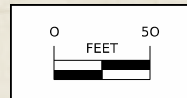
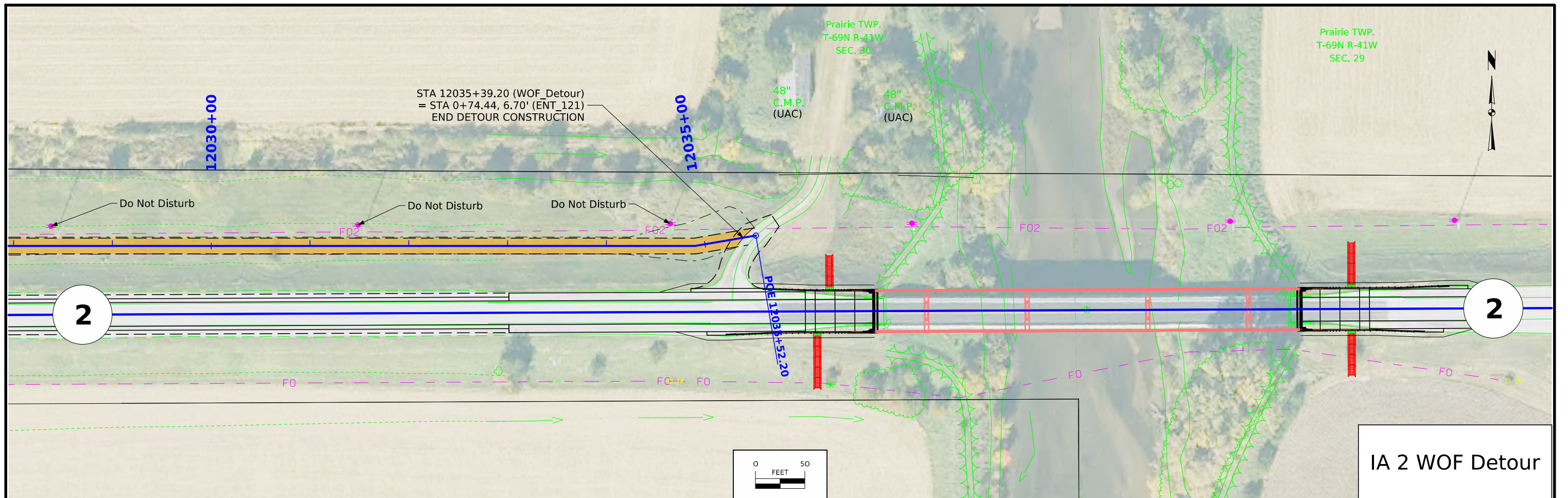
PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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

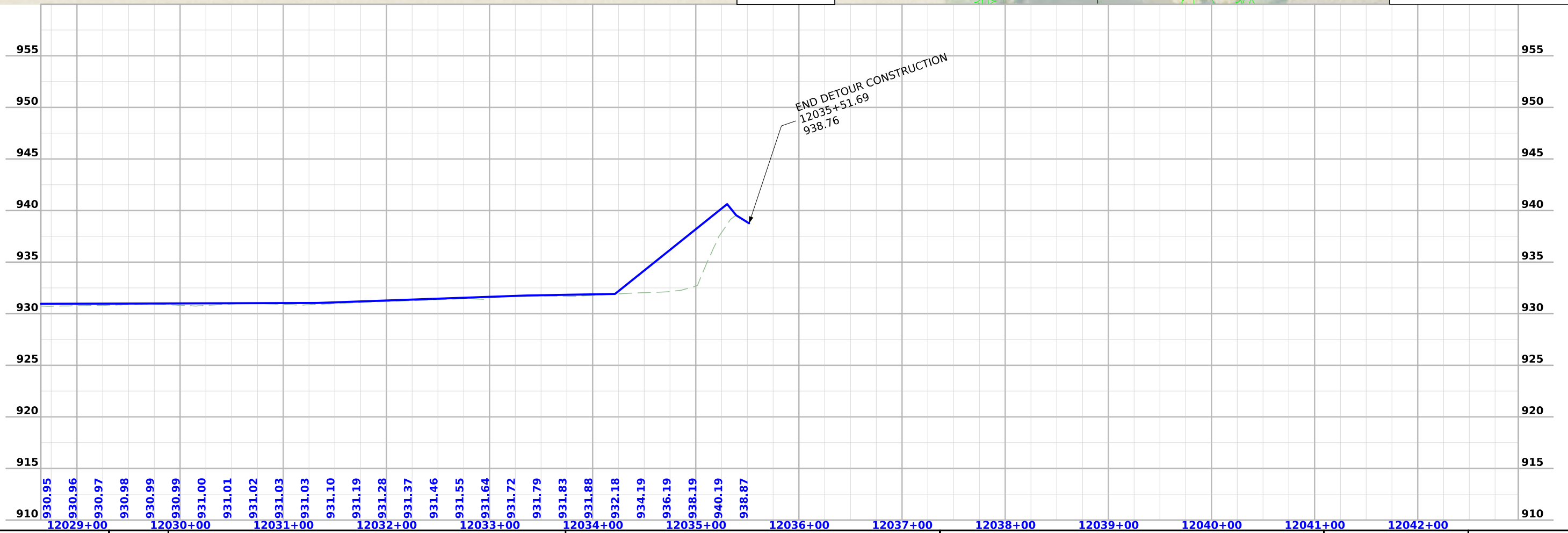








IA 2 WOF Detour



Survey Information

SURVEY INDEX

County: Fremont

PIN: 22-36-002-020

Project Number: BRF-002-1(147)—38-36

Location: W Nishnabotna River Overflow 1.1mi E of Jct US 275

Type of Work: Bridge Unspecified

Project Directory: 3600202022

Survey Personnel

Paul Harry – Survey Party Chief

Robert Fredrickson – Assistant Survey Party Chief

Date(s) of Survey

Begin Date 10/16/2023

End Date 02/21/2024

General Information

This survey is for Hwy 2 overflow bridge west of the Nishnabotna river. This project is a Full Field DTM survey.

Utility Information

For logging data and other utility details see Utility Survey and Ownership Report in the Utility folder of the PrelimSurvey project directory.

Project Control

Coordinates were determined for primary project control points by conducting concurrent six-hour static observations. Post processing is constrained to nearby Iowa Real Time Network reference stations. For additional details of the control survey, contact the Preliminary Survey department.

PROJECT DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 ADJUSTMENT)

COORDINATE SYSTEM: IOWA REGIONAL COORDINATE SYSTEM ZONE 06

(U.S. SURVEY FOOT)

VERTICAL DATUM: NAVD88

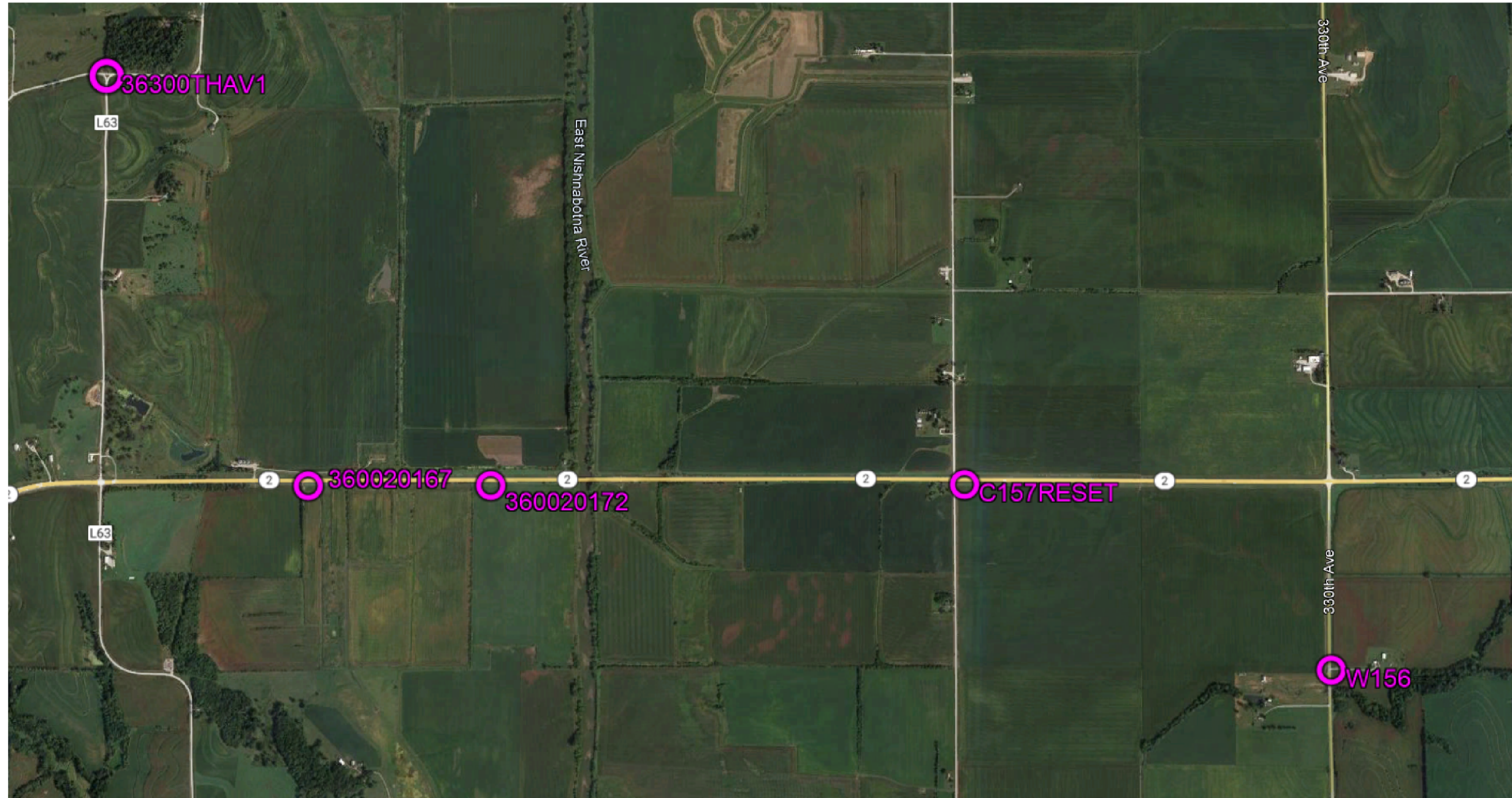
GEOID MODEL: 2018u2

Alignment Information

The horizontal alignment for Hwy 2 was provided by the District 4 ROW Office.

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) for EPOCH 2010.00 (IaRTN 2019 Adjustment) - Iowa RCS Zone 06 (U.S. Survey Foot)

VERT. DATUM: NAVD88 - Geoid Model: 2018u2

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

HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING
HORIZ. DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 Adjustment)
Ia. Regional Coordinate System Zone 06 (U.S. Survey Foot)
VERT. DATUM: NAVD88
Geoid Model: 2018u2

Point Name	Northing	Easting	Elevation	Feature Definition-Description
36300THAV1	6788029.61	16531764.67	1081.29	CP SET FENO MON IN CENTER ISLAND AT INTERSECTION OF 300TH AVE AND 195TH ST
360020167	6782278.32	16534635.17	930.69	CP SET FENO MON 0.9 MILES EAST OF HWY 275 ALONG HWY 2 NEAR FIELD INT
360020172	6782275.30	16537199.23	931.52	CP SET FENO MON 1.4MILES EAST OF HWY 275 ALONG HWY 2 NEAR FIELD INT
C157RESET	6782309.95	16543865.00	942.62	CP FND NGS 3RD ORDER VERTICAL MARK AS DESCRIBED
W156	6779713.72	16549056.54	964.08	CP FND NGS 2ND ORDER CLASS 0 VERTICAL MARK AS DESCRIBED

Fremont STPN-002-1(148)--2J-36
 W Nishnabotna River Overflow 1.1 mi E of E Jct US 275
[3600202022](#)

Project Code 22-36-002-020

Route IA 2

Parcel No	Owner Name	State		County		City		Excess	Temp Ease		Mitigation	Other	Relocation Needed	A/C Only	Total Acq
		Fee	Ease	Fee	Ease	Fee	Ease		Fee	Ease					
1	ORTON FARMS LLC		0.06 AC						0.05 AC						
2D	SPRING BRANCH-WEST NISHNABOTNA RIVER DRAINAGE DISTRICT														

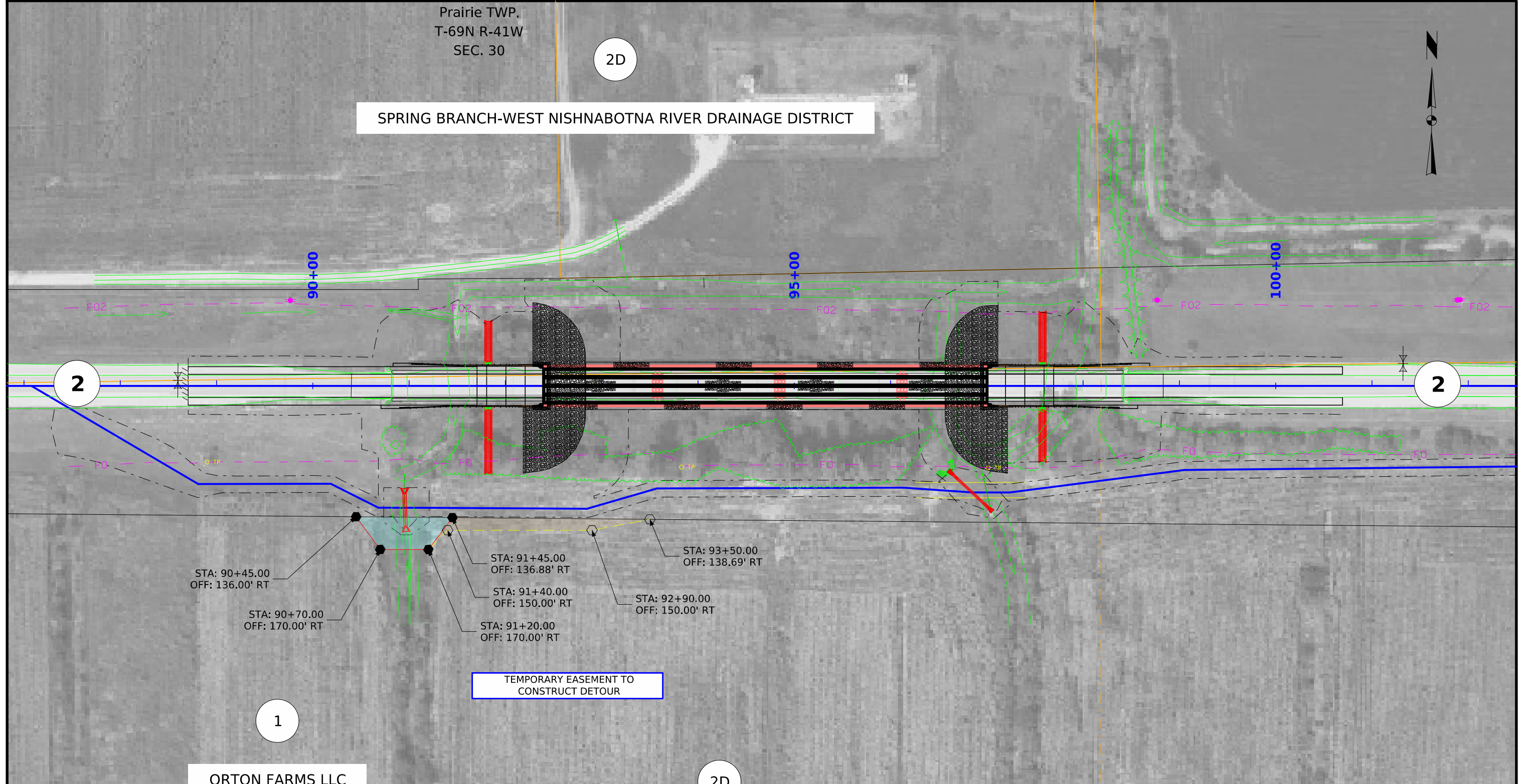
2 Parcels

NO ACCESS RIGHTS ARE TO BE ACQUIRED ON THIS PROJECT.

Prairie TWP.
T-69N R-41W
SEC. 30

2D

SPRING BRANCH-WEST NISHNABOTNA RIVER DRAINAGE DISTRICT



2

2

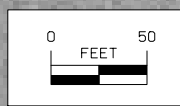
1

ORTON FARMS LLC

2D

SPRING BRANCH-WEST NISHNABOTNA RIVER DRAINAGE DISTRICT

Prairie TWP.
T-69N R-41W
SEC. 30



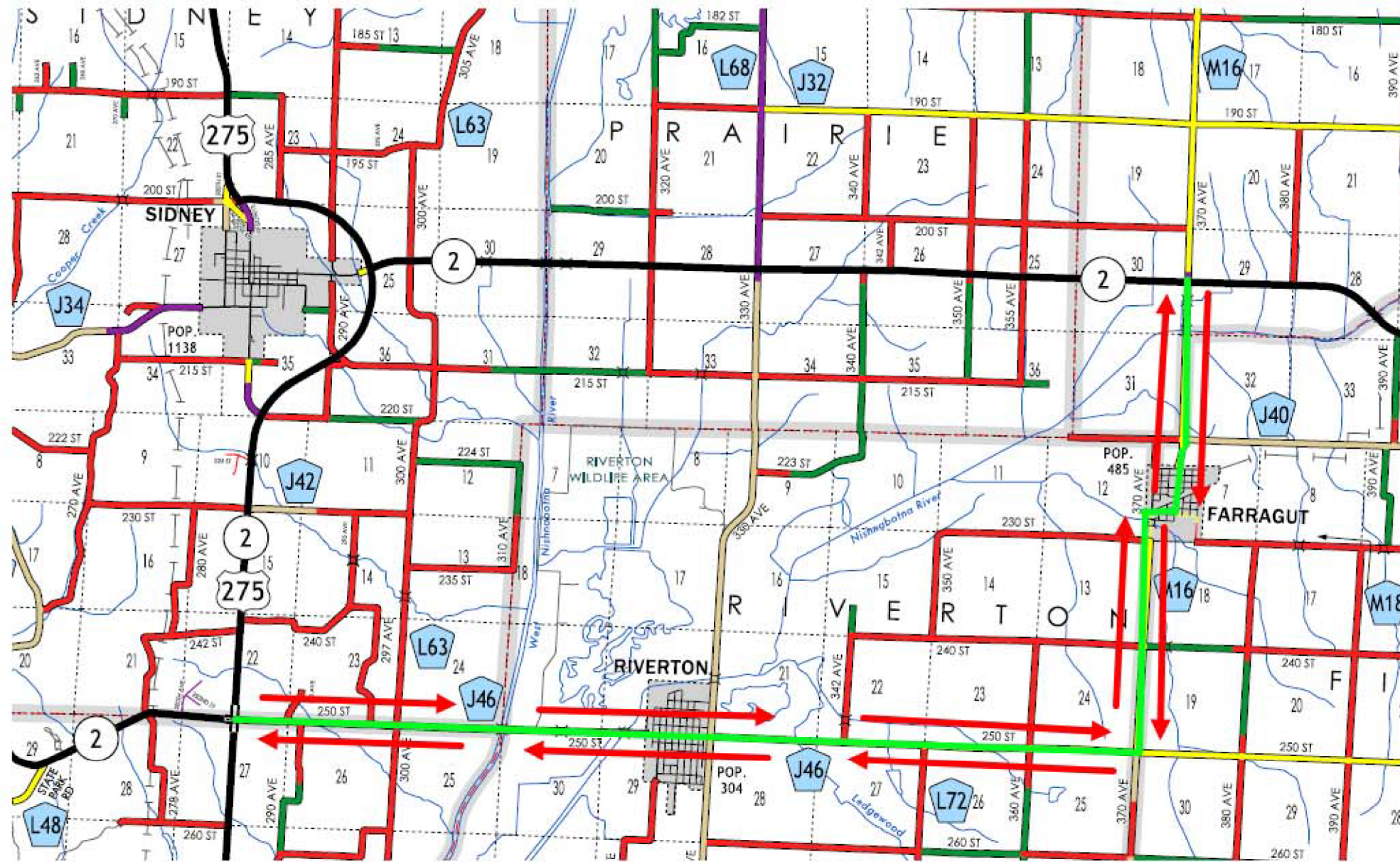
Right of Way Design Information	
THIS SHEET INCLUDED FOR INFORMATION ONLY	
ROW Team: Crystal / Cuva	
ROW #: STPN-002-1(148)--2J-36	
Plan Date: 3/9/2026	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition
	Permanent Acquisition County
	Permanent Acquisition City

108_23A
8/15/22

TRAFFIC CONTROL PLAN

Traffic from IA 2 will be maintained at all times via an offsite detour. Refer to J.2 for detour route.

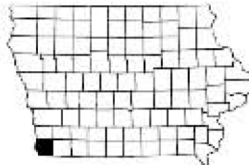
West overflow detour will be in place before closing the road.

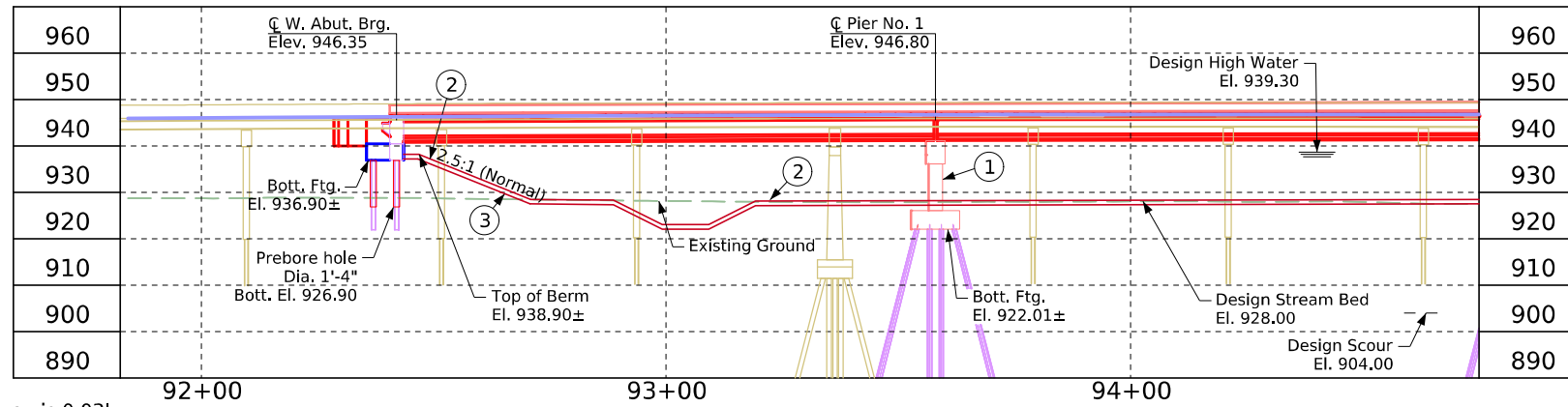


← DETOUR

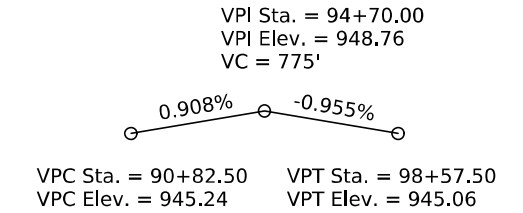
Fremont County

West Nishnabotna River Overflow 1.1 mi E of E Jct US 275
 BRF-002-1(147)--38-36
 PIN: 22-36-002-020





- ① T-Pier
- ② Grading Surface
- ③ Class E Revetment (Embedded)



Proposed Profile Grade IA 2

Note:
Top of bridge deck at centerline roadway is 0.03' below the profile grade to account for deck cross slope and parabolic crown.
This design is for the replacement of the existing 759'-0" x 26'-0" Continuous Steel I-Beam Bridge Design No. 151, FHWA No. 025370, Maint. No. 3606.95002
Class E Revetment is embedded.
This bridge will be designed to withstand the applicable effects of ice and the horizontal stream loads and uplift forces associated with the Q_{100}

Design Notes:
1. TSS TL-4 single slope bridge railing proposed.
2. BTB beams proposed.
3. Pier Type - T-pier and assumed width of 3' proposed.
4. An Iowa DNR Flood Plain Permit is required. Preliminary Design will submit the application and place the permit in the PW Regulatory_Permits subdirectory folder upon receipt.
5. Density used for Class E revetment quantity calculations is 1.5 T/cy. Density used for Erosion Stone quantity calculations is 1.6 T/cy.
6. The bridge does not meet the Iowa DOT's desired freeboard. The bridge is a floodplain overflow structure.
7. Bottom of footing elevations and pier piles shall be designed for scour.

Utilities Note:

Utilities shown on this sheet are for information only. See Road Design sheets for utility information.

General Utility Symbols:

- E - Electric Line
- G - Gas Line
- SAN - Sanitary Sewer
- T - Telephone Line
- W - Water Line
- FO - Fiber Optic Line
- GHP - Gas High Pressure
- ST S - Storm Sewer
- TV - TV
- - Power Poles

RIDB: Nishnabotna R 12.06
Drainage Area = 1620 Sq. Mi.
Stream Slope = 0.857 ft./Mi.
Avg. Low Water Stage = 920.56

Operational Low Beam = 940.55
Channel Low Beam = 941.17

Q_{50} = 28089 cfs
Stage = 938.45
Operational Freeboard = 2.10 ft.
Avg. Bridge Velocity = 8.42 fps

Hydraulic Data

Q_{100} = 48269 cfs
Stage = 939.30
Operational Freeboard = 1.25 ft.
Backwater = 0.45 ft.
Avg. Bridge Velocity = 7.59 fps

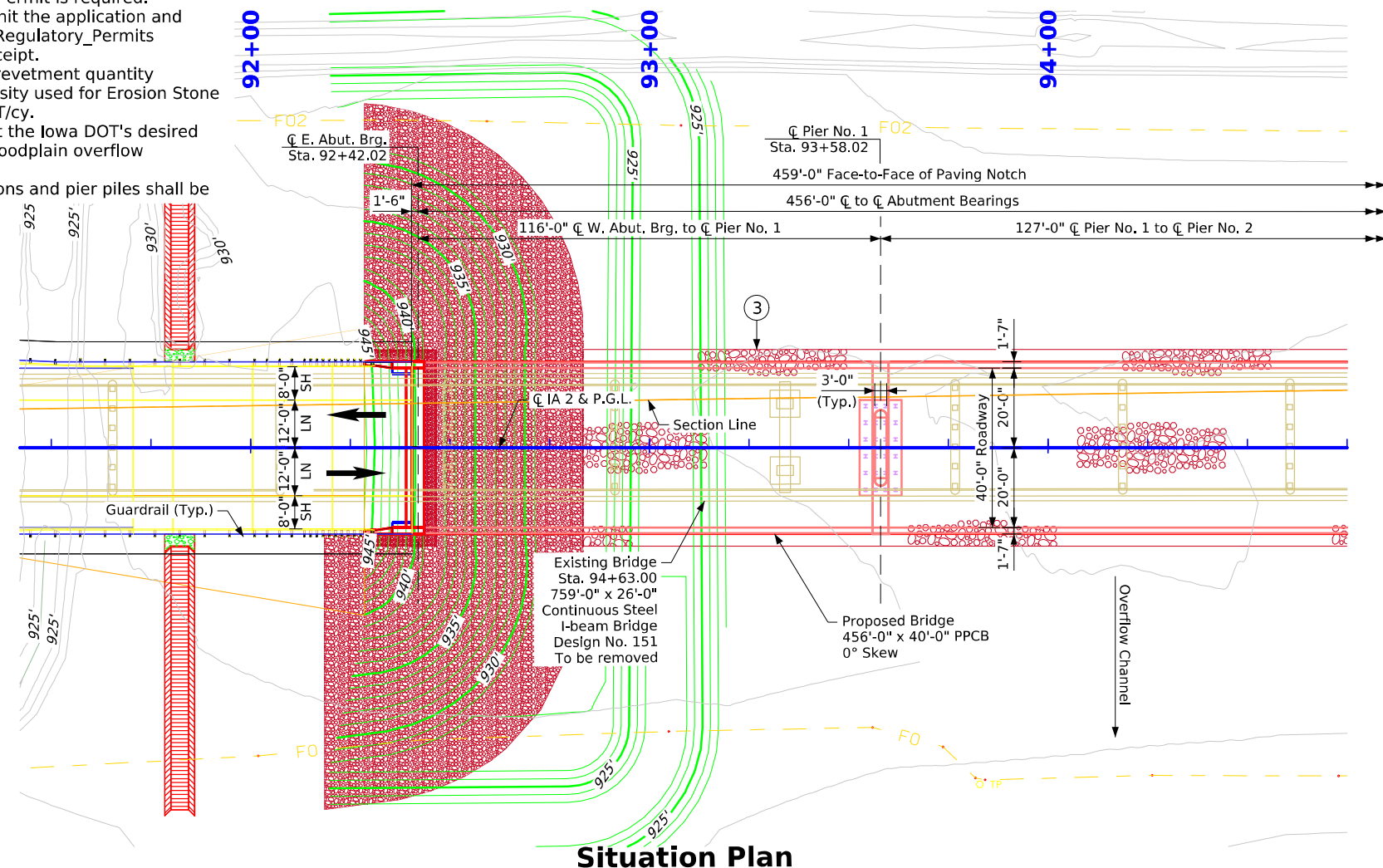
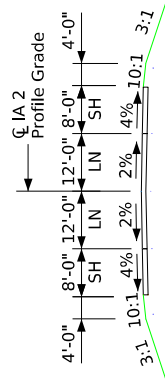
Q_{200} = 52284 cfs
Stage = 939.37
Calculated Design Scour = 904.00

Traffic Estimate

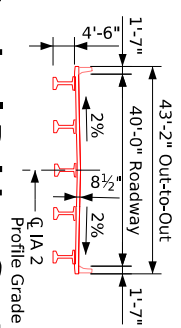
2027 AADT	2,100 V.P.D.
2047 AADT	2,300 V.P.D.
2047 DHV	230 V.P.H.
TRUCKS	10 %
Total Design ESALS	-

Roadway Overtop 941.03
Sta. 113+18

Typical Approach Section



Typical Bridge Section



Hydraulic 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.

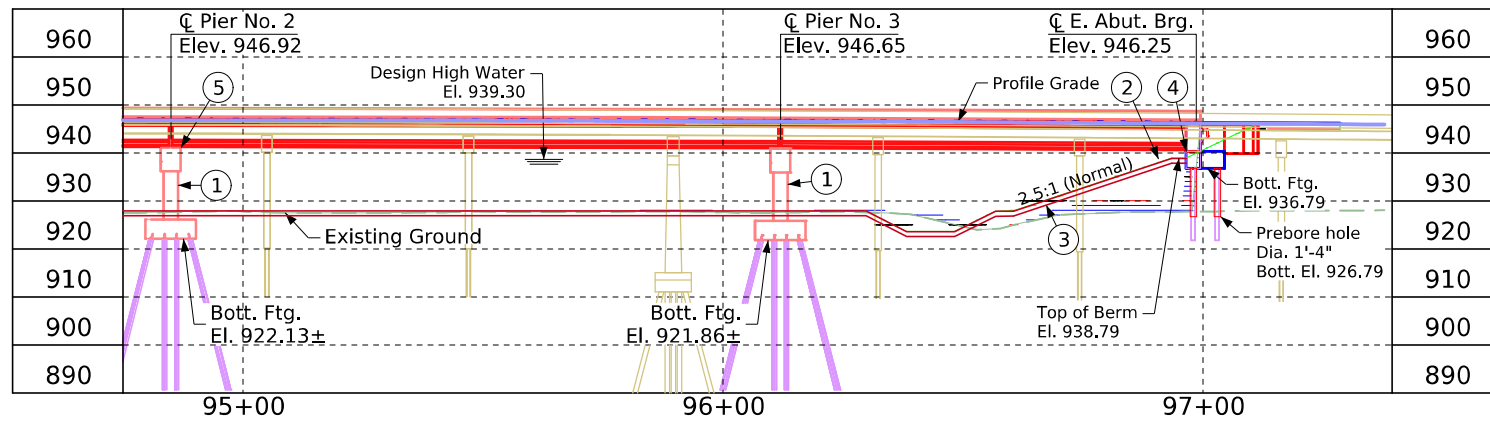
Heidi Lane 1/27/2026
Signature Heidi Lane Date
Printed or Typed Name
My license renewal date is December 31, _____

Pages or sheets covered by this seal: V.1-V.3

Location
IA 2 over West Nishnabotna River Overflow
T-69N R-41W
Section 30
Sidney Township
Fremont County
FHWA No. 25371
Bridge Maint. No. 3616.95002
Latitude 40.750520°
Longitude -95.606498°

PRELIMINARY

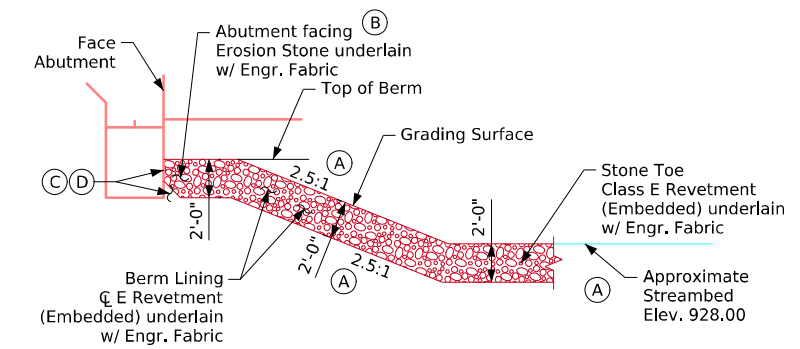
Design For 0° Skew
**456'-0" x 40'-0" Prestressed
Prestressed Conc. Beam Bridge**
116'-0" & 86'-0" End Spans BTB Beams 127'-0" Interior Spans
Situation Plan
STA. 94+70.00 (IA 2) Turn-in Date: Jan 2026
Fremont County
IOWA DEPARTMENT OF TRANSPORTATION
Design No. 0328 Design Sheet No. 1 of 3 FHWA No. 25371



Longitudinal Section Along Centerline of Prop. IA 2

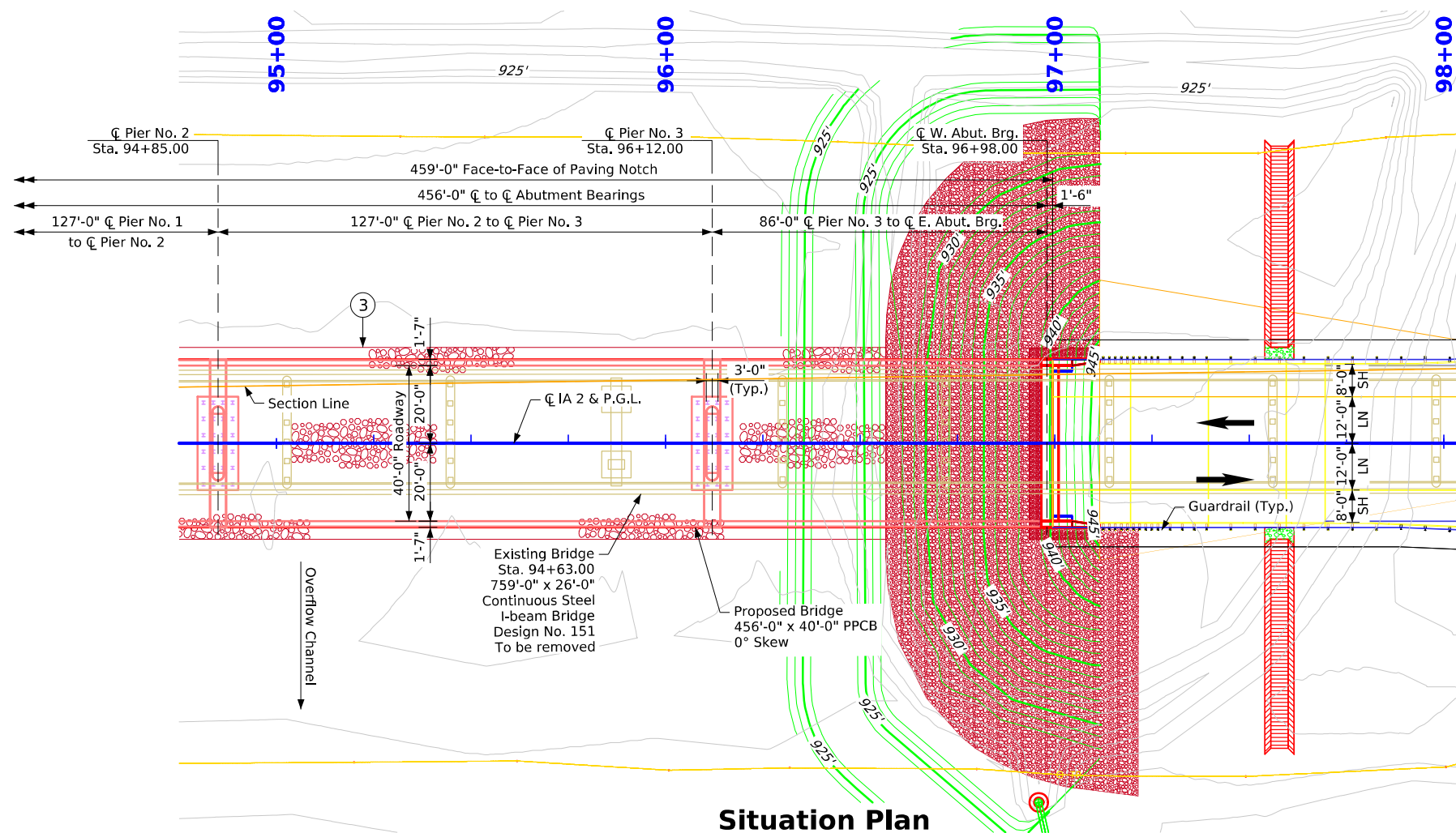
Note:
 Top of bridge deck at centerline roadway is 0.03' below the profile grade to account for deck cross slope and parabolic crown.
 This design is for the replacement of the existing 759'-0" x 26'-0" Continuous Steel I-Beam Bridge Design No. 151, FHWA No. 025370, Maint. No. 3606.9S002
 Class E Revetment is embedded.
 This bridge will be designed to withstand the applicable effects of ice and the horizontal stream loads and uplift forces associated with the Q₁₀₀

- ① T-pier
- ② Grading Surface
- ③ Class E Revetment (Embedded)
- ④ Operational Low Superstructure Elev. 940.55
- ⑤ Channel Low Superstructure Elev. 941.17



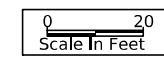
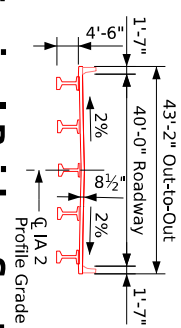
Section through Berm Lining and Stone Toe

- (A) Slope normal to centerline of abutment / grading control line.
- (B) Extend facing out to lateral limits of wing armoring.
- (C) 1' x 1' soil wedge at face abutment.
- (D) Carry engineering fabric up soil wedge and face abutment.



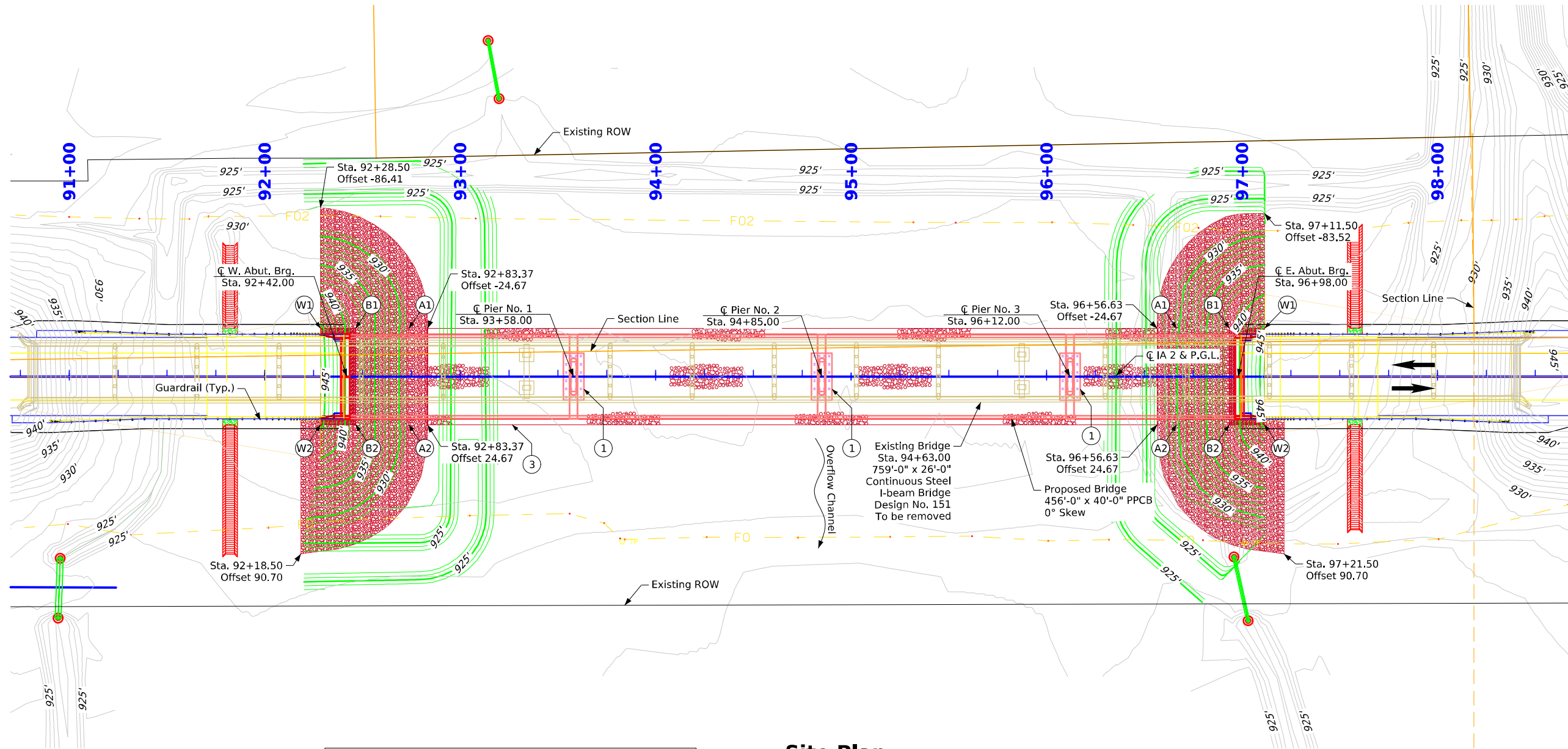
Situation Plan

Typical Bridge Section



PRELIMINARY

Design For 0° Skew
**456'-0" x 40'-0" Prestressed
 Precast Conc. Beam Bridge**
 116'-0" & 86'-0" End Spans BTD Beams 127'-0" Interior Spans
Situation Plan
 STA. 94+70.00 (IA 2) Turn-in Date: Jan 2026
Fremont County
 IOWA DEPARTMENT OF TRANSPORTATION
 Design No. 0328 Design Sheet No. 2 of 3 FHWA No. 25371



Berm Slope Location Table

Points	West Abutment			East Abutment		
	Station	Offset	Elev.	Station	Offset	Elev.
A1	92+73.74	24.67' Lt.	928.00	96+66.52	24.67' Lt.	928.00
A2	92+73.74	24.67' Rt.	928.00	96+66.52	24.67' Rt.	928.00
B1	92+46.50	24.67' Lt.	938.90	96+93.50	24.67' Lt.	938.79
B2	92+46.50	24.67' Rt.	938.90	96+93.50	24.67' Rt.	938.79
W1	92+28.50	24.67' Lt.	945.76	97+11.50	24.67' Lt.	945.65
W2	92+28.50	24.67' Rt.	945.76	97+11.50	24.67' Rt.	945.65

Estimated Berm Armoring Quantities

Location	Revetment CL E (Ton)	Erosion Stone (Ton)	Engineering Fabric (SY)	CL 10 Channel Excavation (CY)
Berm Lining (West)	959	28	985	657
Berm Lining (East)	955	28	982	654
Channel Lining	2046		2046	1364
Totals	3960	56	4013	2675

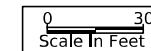
Excavation quantity calculated from grading surface. Excavation quantity if for embedded revetment core out only, and does not include excavation to the grading surface. Excavation quantity to the grading surface is determined by Road Design and included in the Road Plans.

Site Plan

Design Notes:

- TSS TL-4 single slope bridge railing proposed.
- BTD beams proposed.
- Pier Type - T-pier and assumed width of 3' proposed.
- An Iowa DNR Flood Plain Permit is required. Preliminary Design will submit the application and place the permit in the PW Regulatory_Permits subdirectory folder upon receipt.
- Density used for Class E revetment quantity calculations is 1.5 T/cy. Density used for Erosion Stone quantity calculations is 1.6 T/cy.
- The bridge does not meet the Iowa DOT's desired freeboard. The bridge is a floodplain overflow structure.
- Bottom of footing elevations and pier piles shall be designed for scour.

- ① T-Pier
- ③ Class E Revetment (Embedded)



PRELIMINARY

Design For 0° Skew
**456'-0" x 40'-0" Prestressed
 Prestressed Conc. Beam Bridge**
 116'-0" & 86'-0" End Spans BTD Beams 127'-0" Interior Spans
Situation Plan-Site
 STA. 94+70.00 (IA 2) Turn-in Date: Jan 2026
Fremont County
 IOWA DEPARTMENT OF TRANSPORTATION
 Design No. 0328 Design Sheet No. 3 of 3 FHWA No. 25371

CROSS SECTION VIEW COLOR LEGEND

Design Color No.	Feature	Design Color No.	Feature
Aggregate			
(64)	Choke Stone	(8)	Behind Curb Cut
(42)	Engineering Fabric	(6)	Granular
(8)	Flooded Backfill	(13)	Granular Back Fill
(92)	Macadam Stone	(48)	Rock Undercut
(20)	Modified	(8)	Shoulder Earth Fill
(12)	Plowing Shaping	(2)	Side Slopes
(14)	Porous Backfill	(226)	Side Slopes Dressing
(8)	Revetment Class A	Substrata	
(6)	Revetment Class B	(128)	Boulder
(62)	Revetment Class C	(209)	Boulder Removed
(188)	Revetment Class D	(48)	Broken Weathered
(28)	Revetment Class E	(210)	Broken Weathered Removed
(12)	Shoulder Special Backfill	(3)	Core Out
(12)	Special Backfill	(115)	Core Out Remove Only
(20)	Subbase	(195)	Core Out Remove and Replace
(20)	Subbase Lower	(203)	Existing Pavement
(20)	Subbase Upper	(184)	Existing Pavement Remove Only
(118)	Subgrade Treatment	(200)	Existing Pavement Remove and Replace
Asphalt			
(207)	HMA Base Course	(6)	Loam
(207)	HMA Interim Course	(211)	Loam Removed
(207)	HMA Surface Course	(80)	Rock
Bridge			
(0)	Bridge	(212)	Rock Removed
Concrete			
(0)	Barrier Concrete	(4)	Select Sand
(0)	Barrier Concrete Footing	(214)	Select Sand Removed
(0)	Curb Gutter	(3)	Shale
(48)	Flowable Mortar	(215)	Shale Removed
(0)	Median Concrete	(10)	Topsoil
(0)	PCC Pavement	(2)	Topsoil Remove Only
(0)	Sidewalk	(4)	Topsoil Remove and Replace
Unsuitable / Waste			
(0)	Existing Pavement	(3)	Unsuitable Type A
Shoulder			
(209)	Shoulder HMA	(216)	Unsuitable Type A Removed
(0)	Shoulder PCC	(13)	Unsuitable Type B
(6)	Shoulder Granular	(217)	Unsuitable Type B Removed
Structural			
(112)	Noise Wall	(11)	Unsuitable Type C
(112)	Noise Wall Footing	(218)	Unsuitable Type C Removed
(112)	Retaining Wall Back	(3)	Waste
(112)	Retaining Wall Back Excavate	(219)	Waste Removed
(112)	Retaining Wall Face		
(112)	Retaining Wall Front Excavate		
(112)	Retaining Wall Front Footing		
(112)	Retaining Wall MSE Gutter		
(112)	Retaining Wall Reinforced Earth		

NOTES:

Text

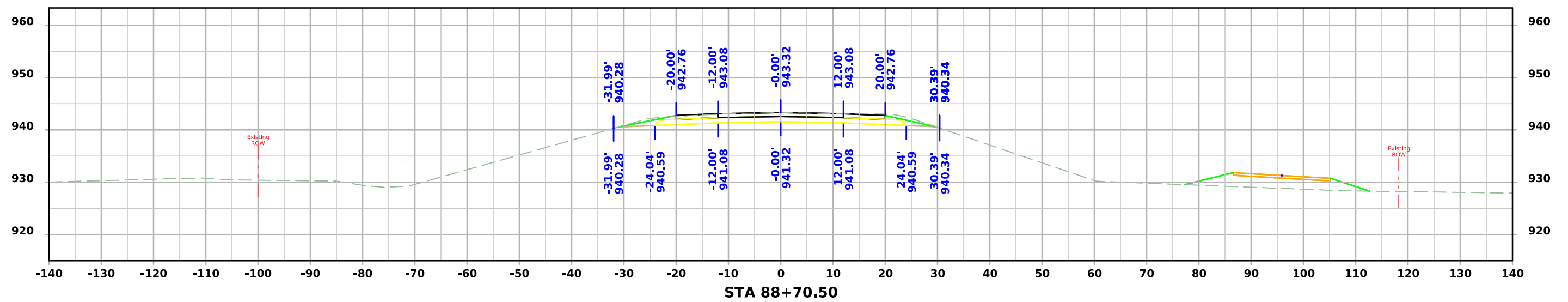
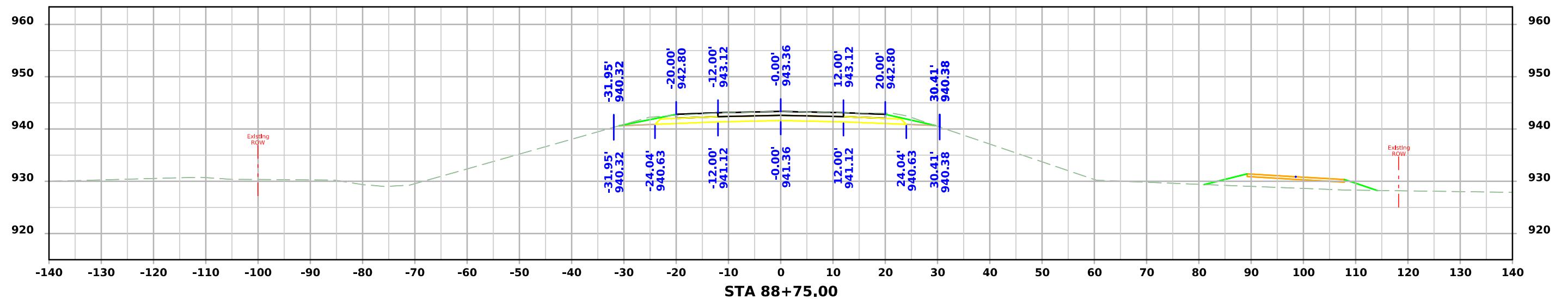
NOTES:

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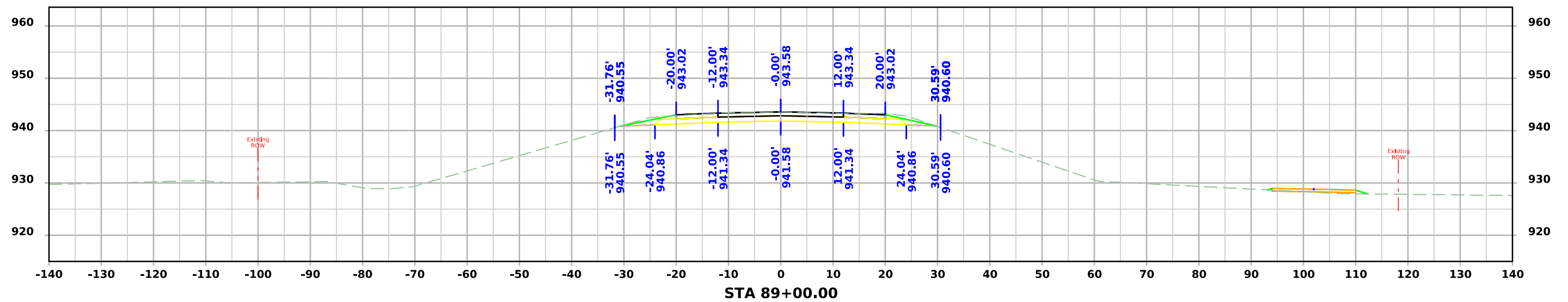
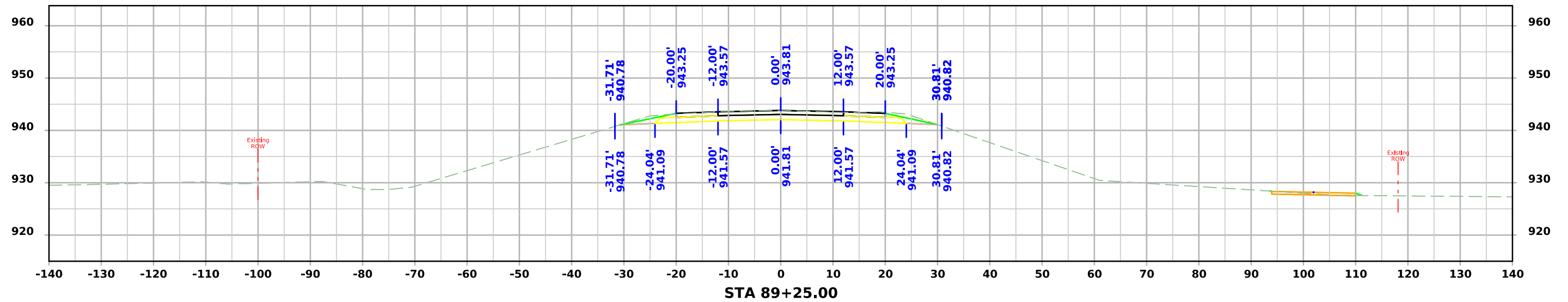
CROSS SECTIONS LEGEND AND INFORMATION SHEET

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

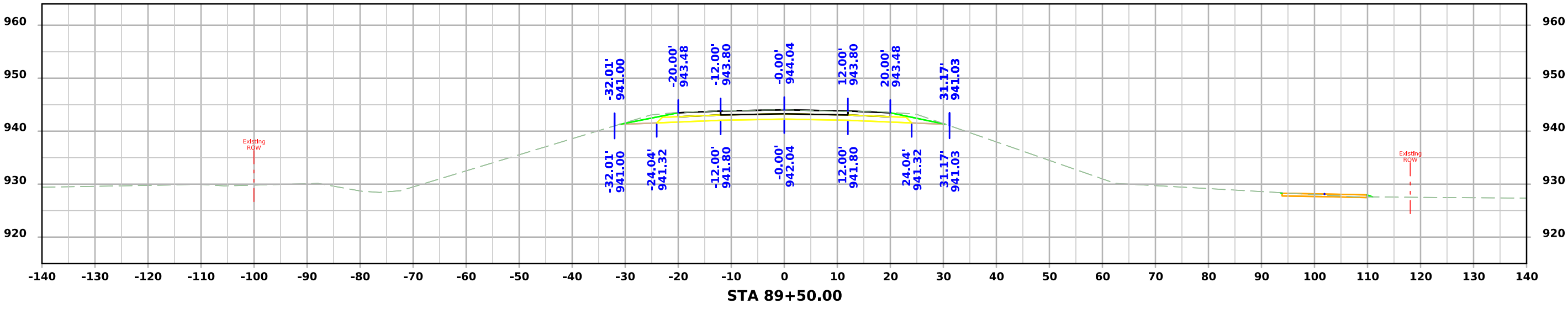
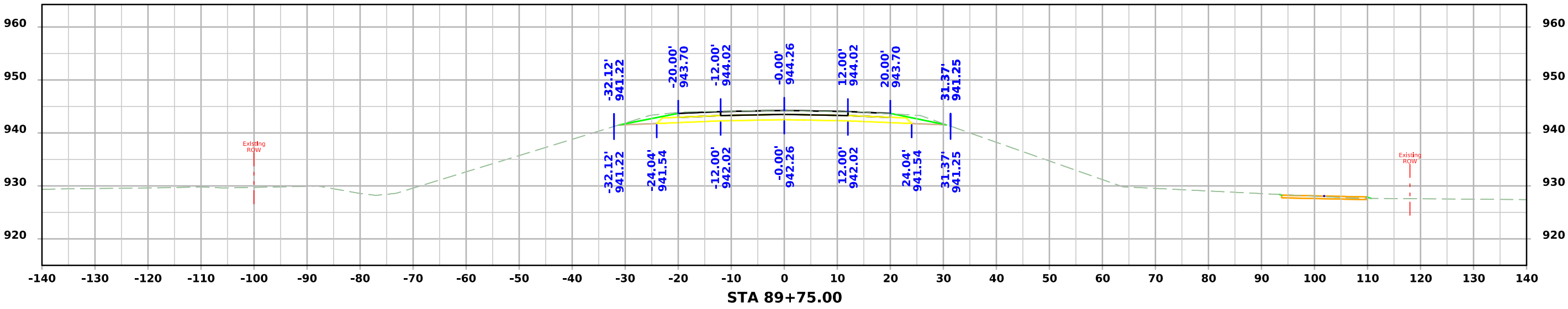
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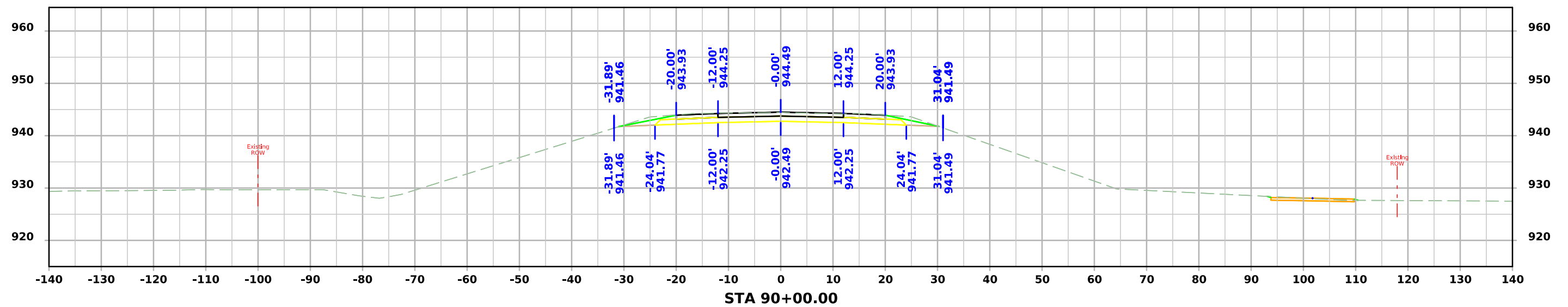
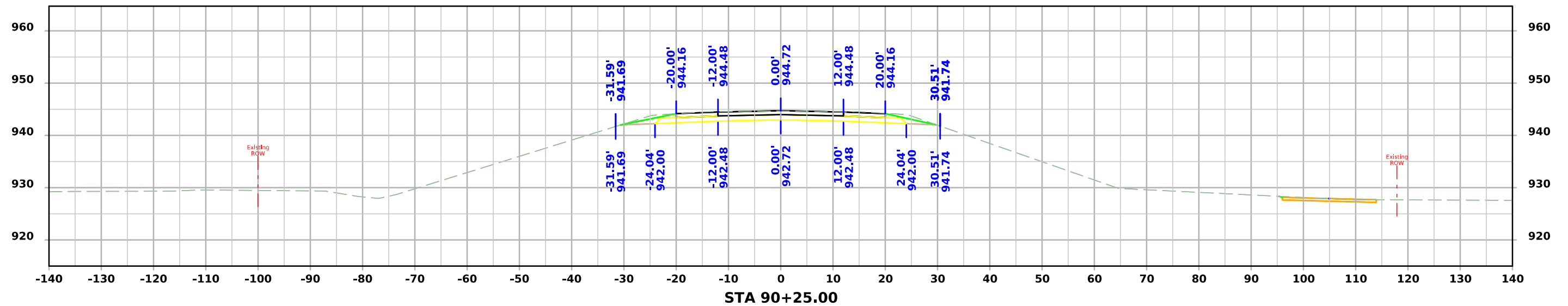
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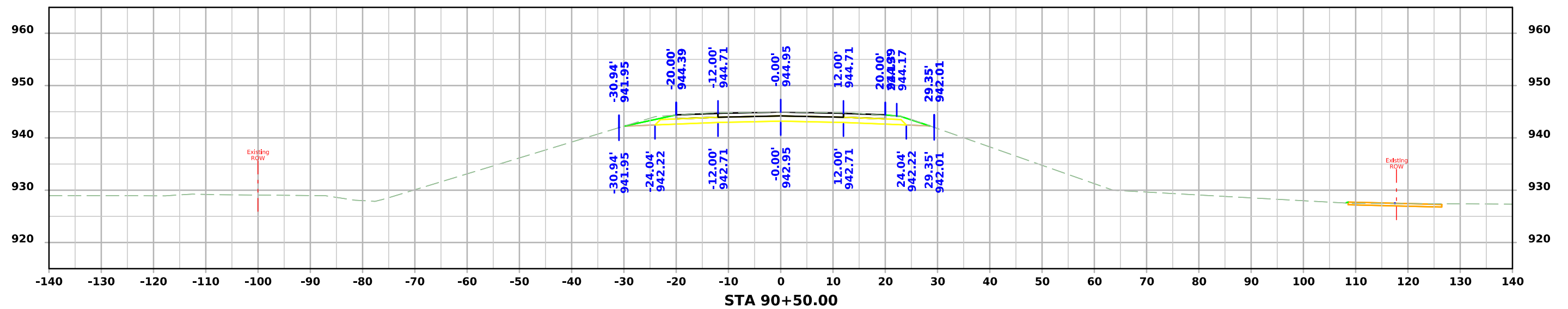
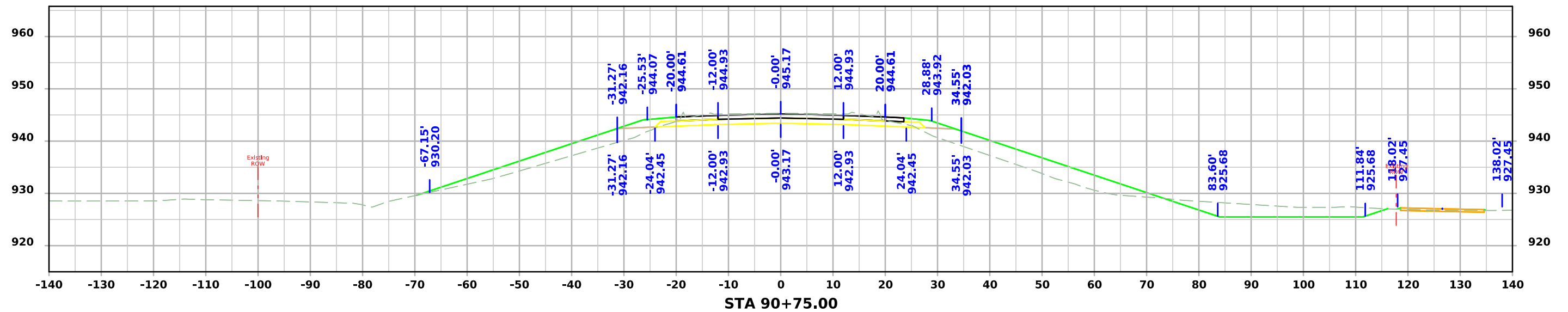
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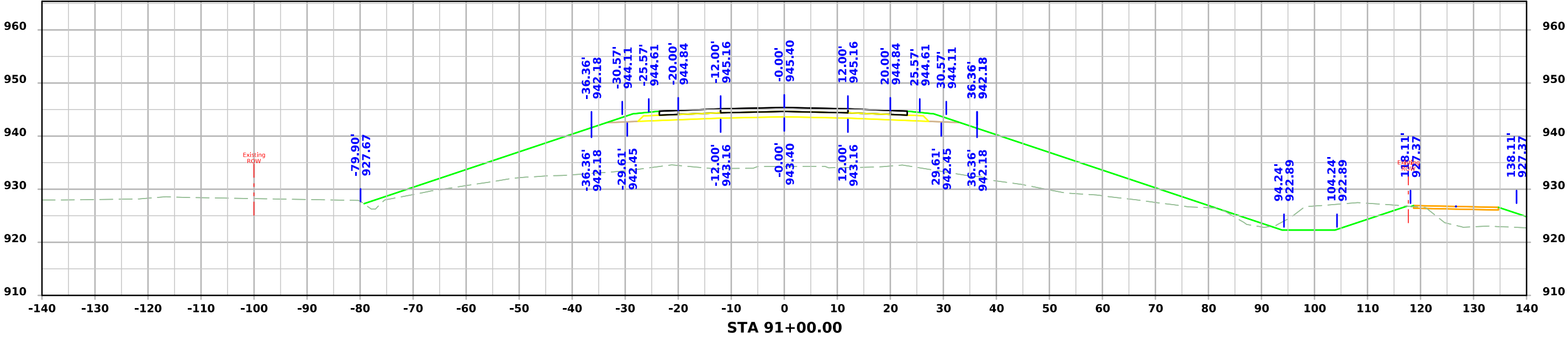
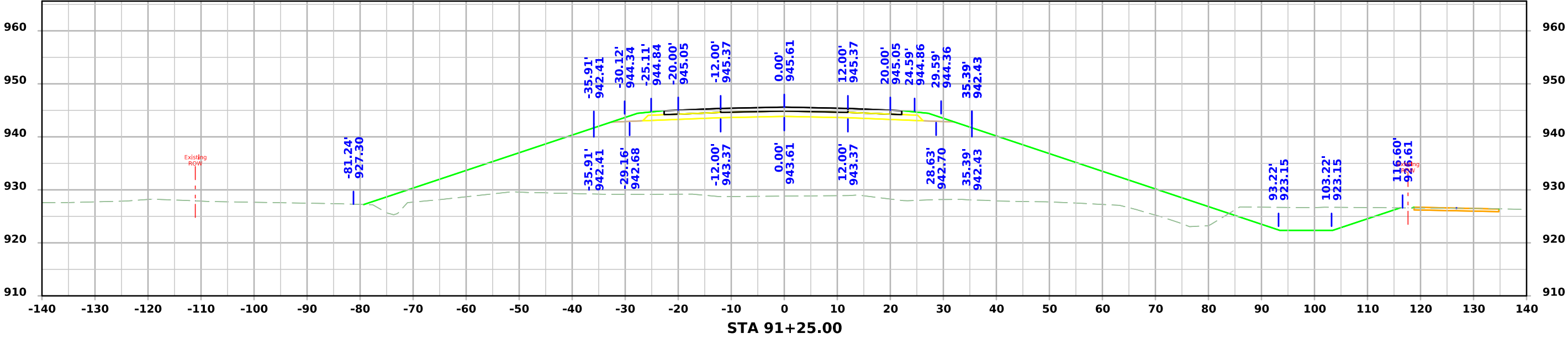
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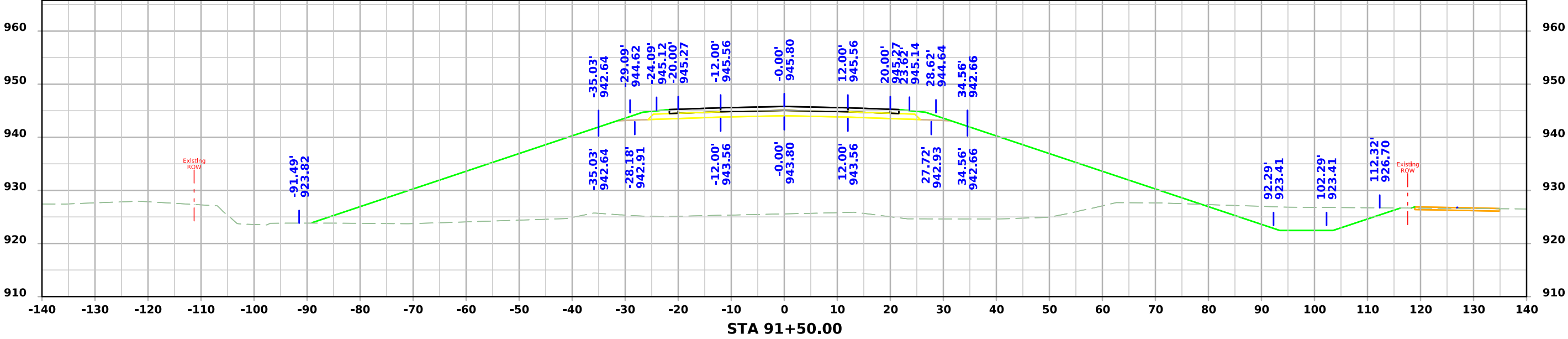
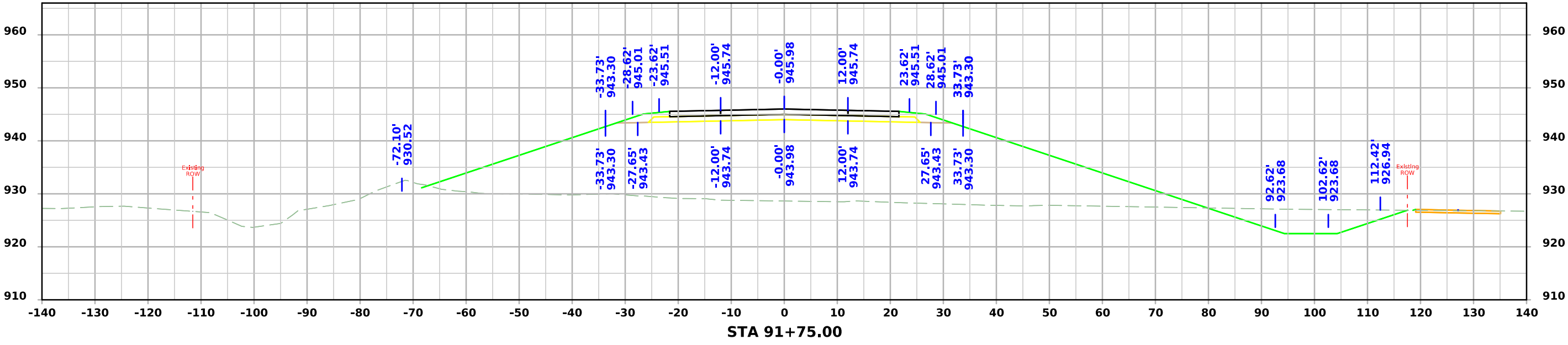
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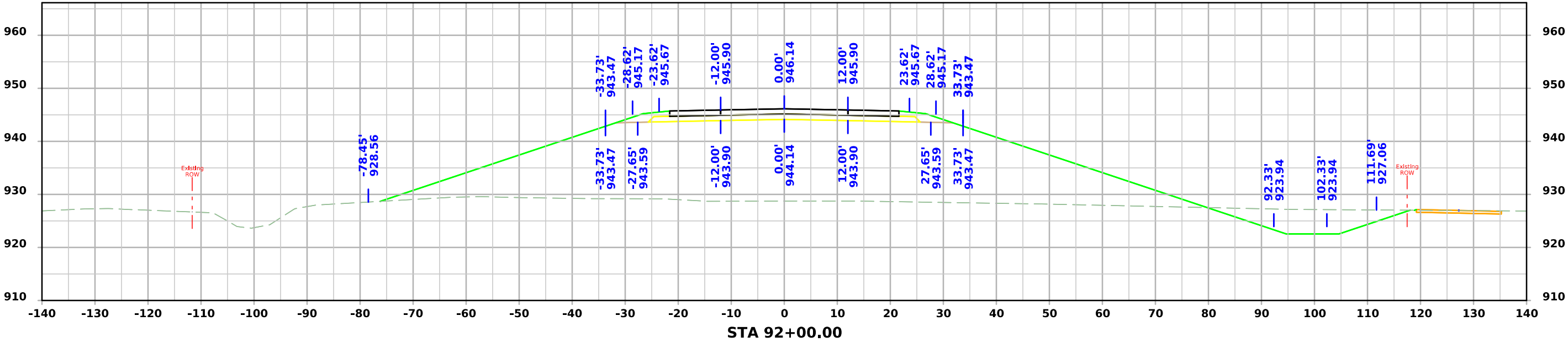
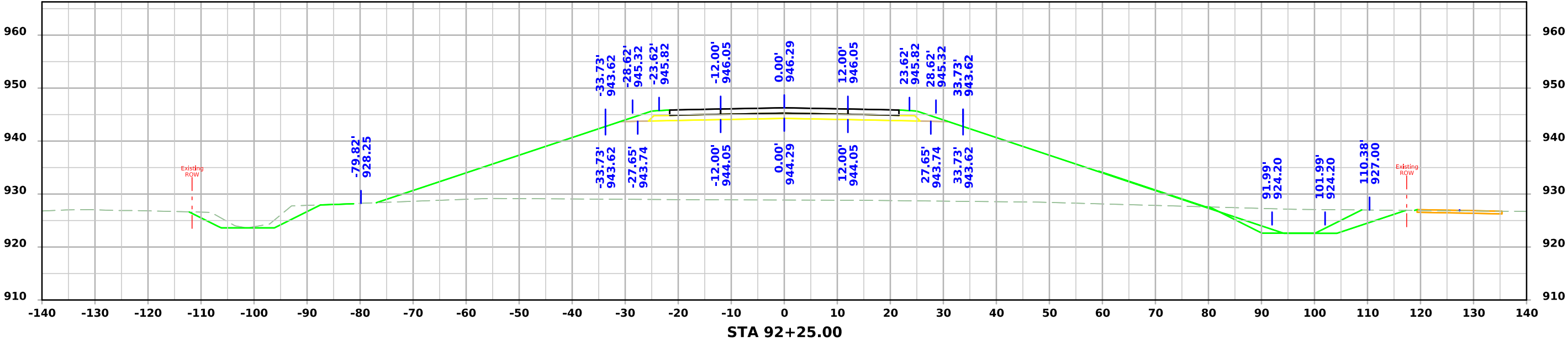
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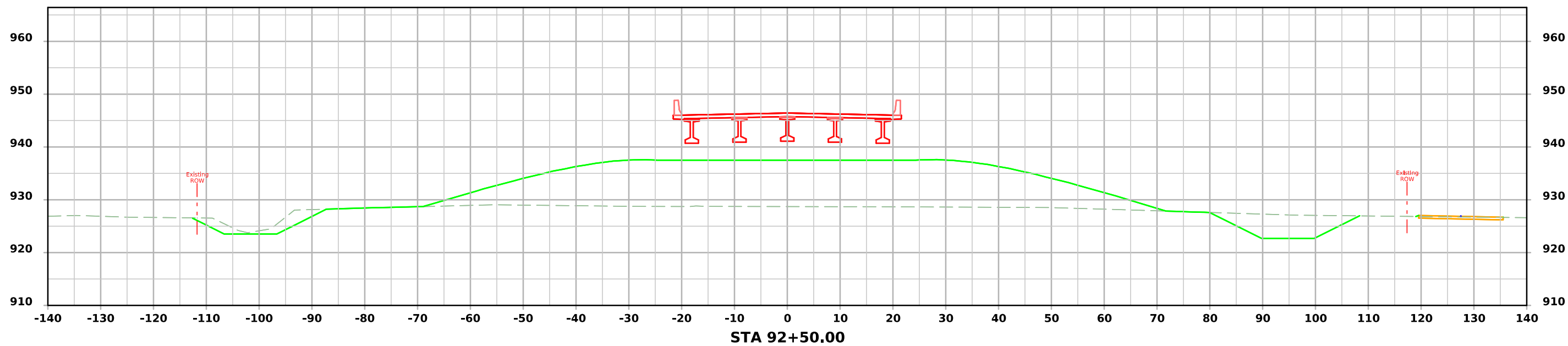
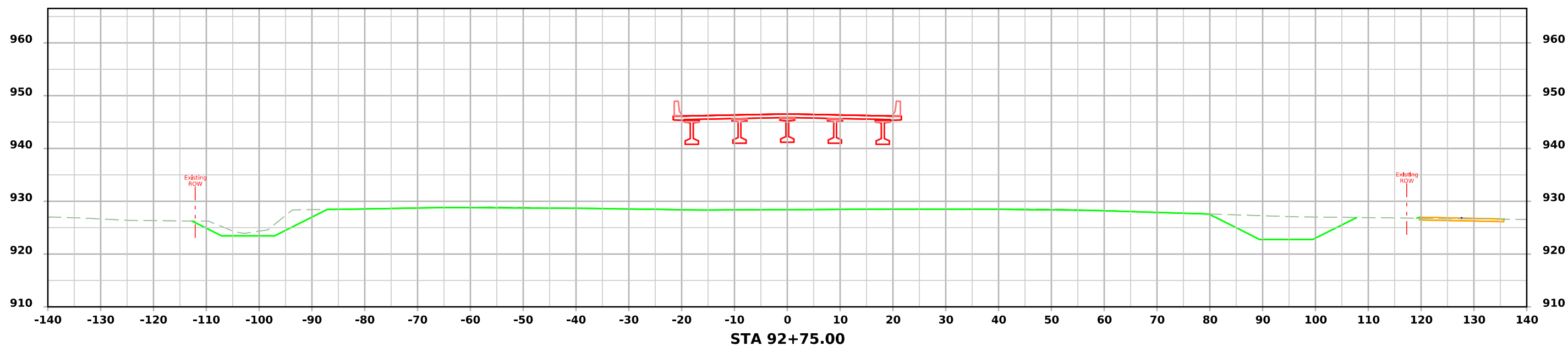
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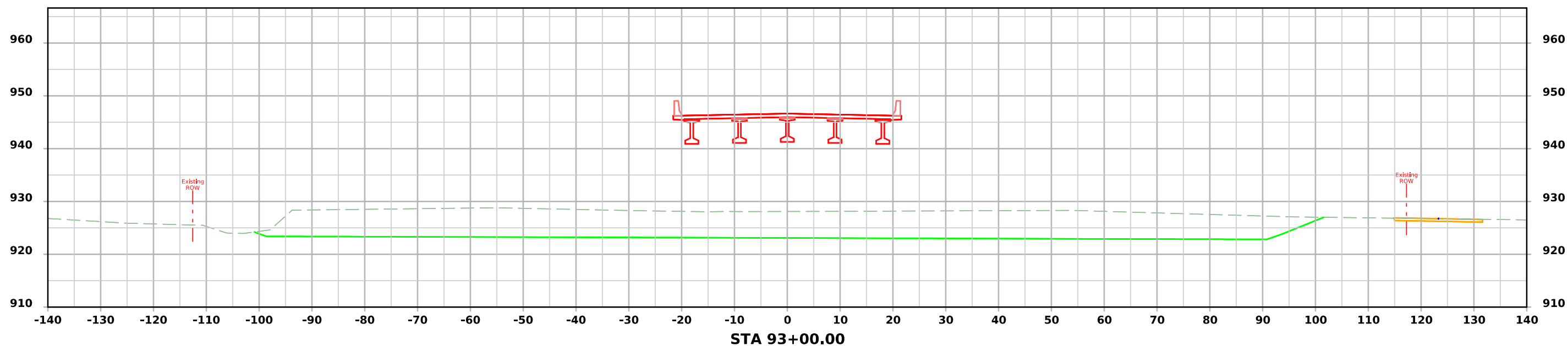
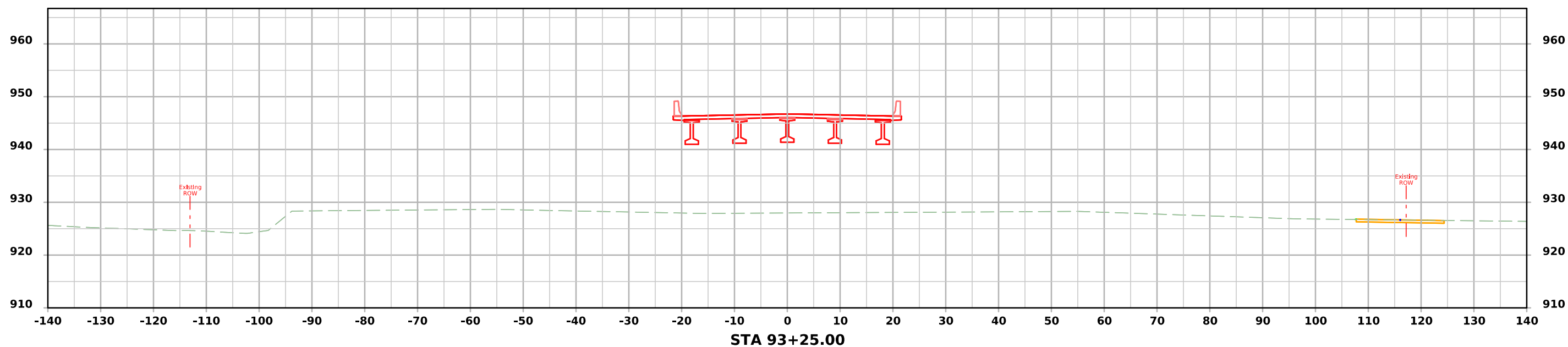
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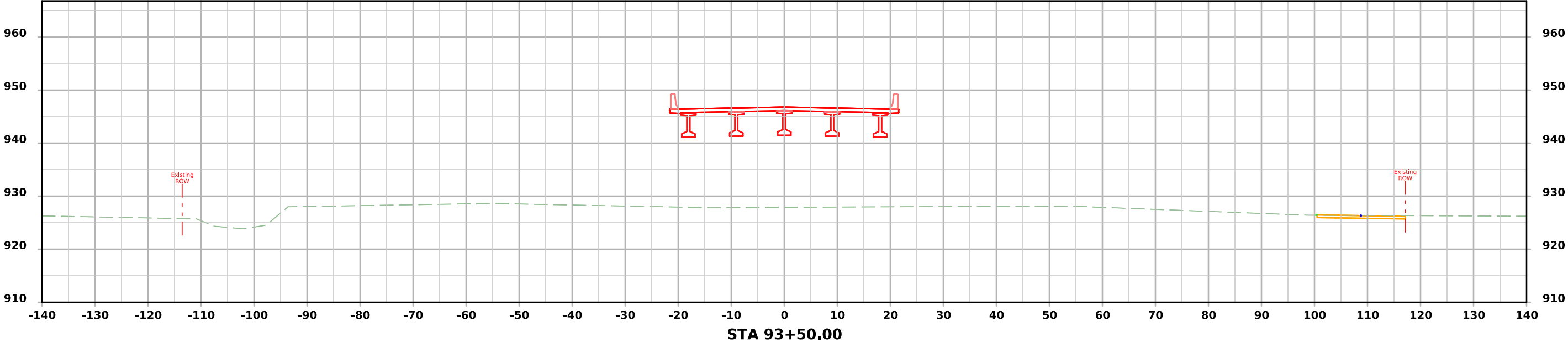
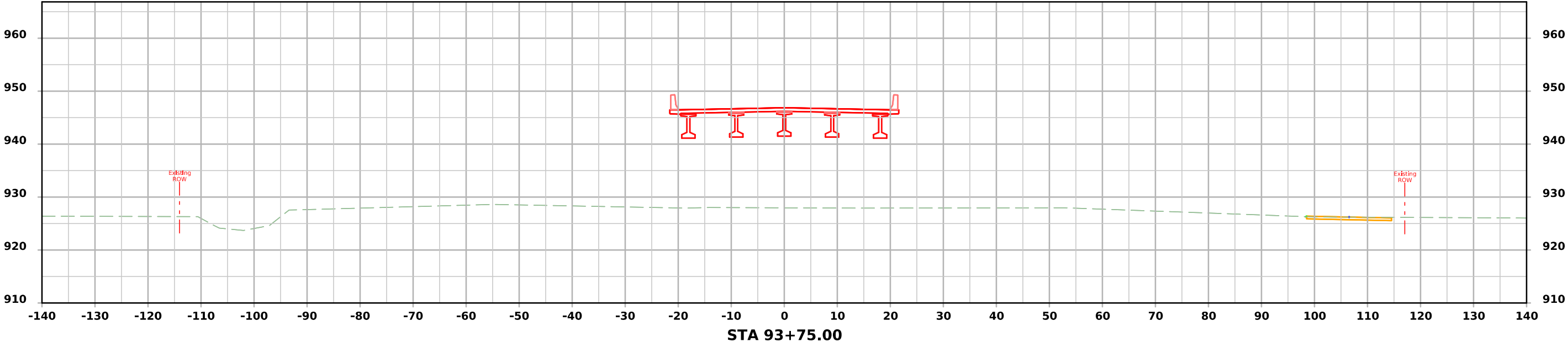
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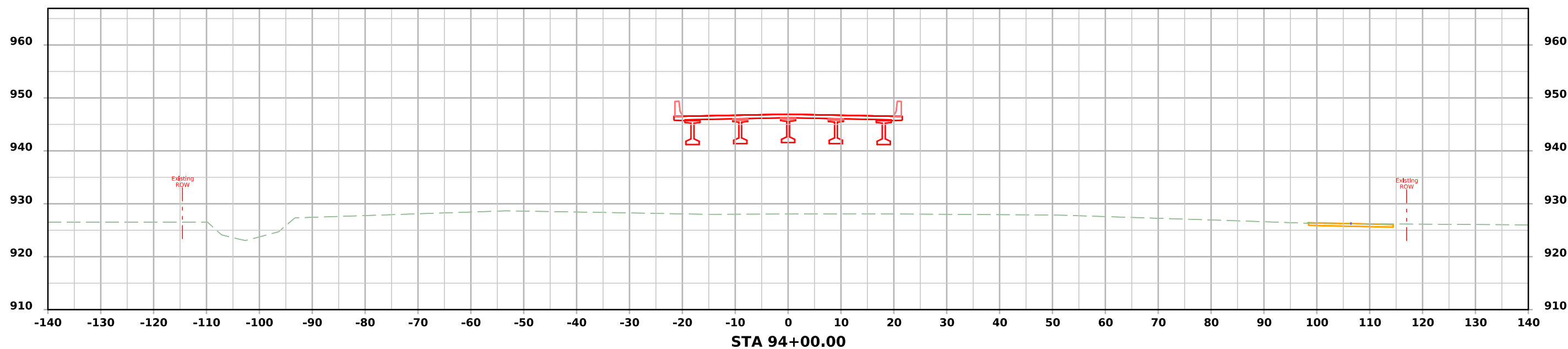
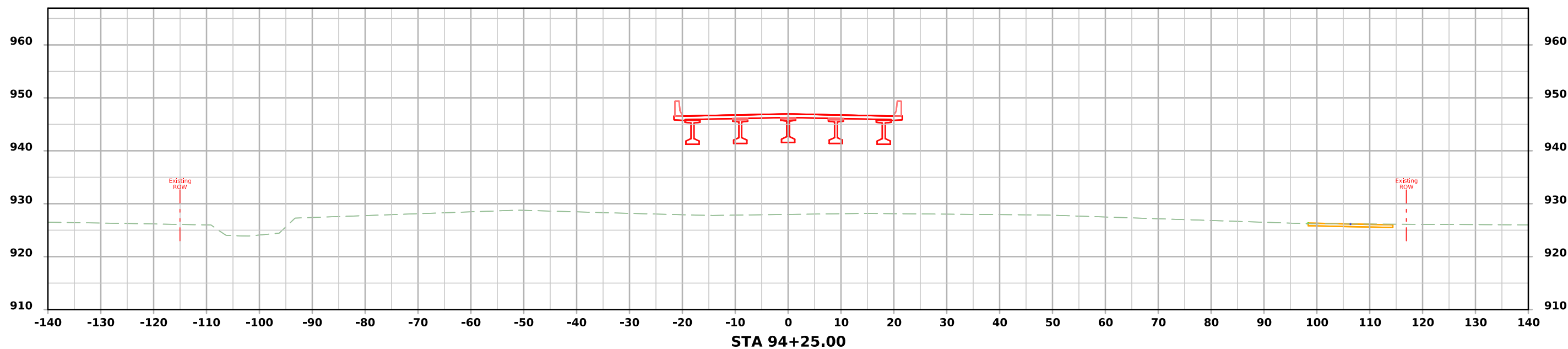
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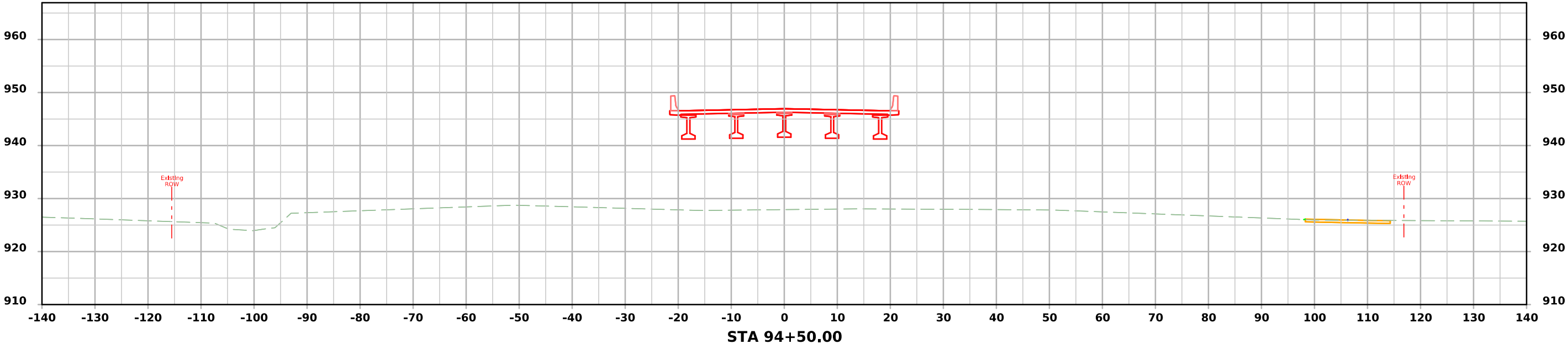
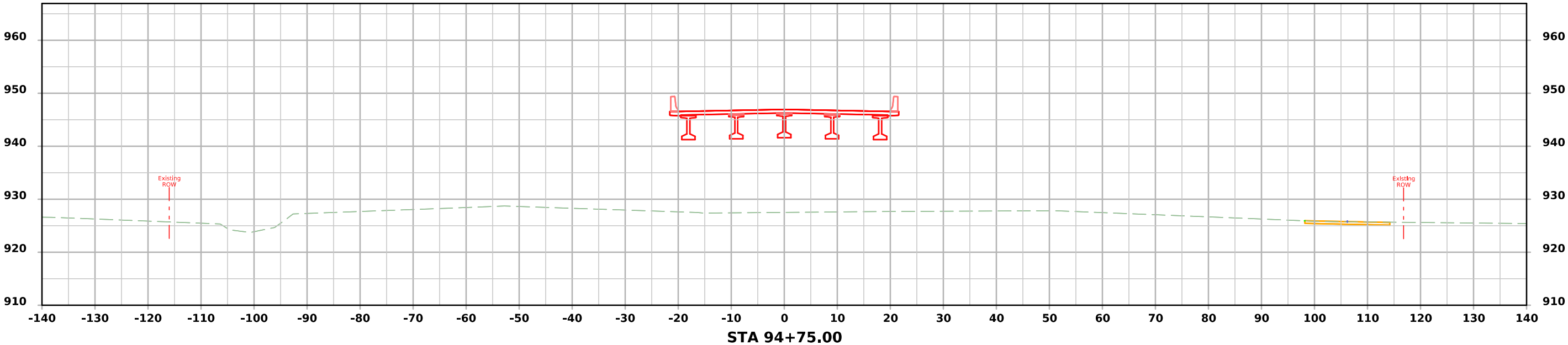
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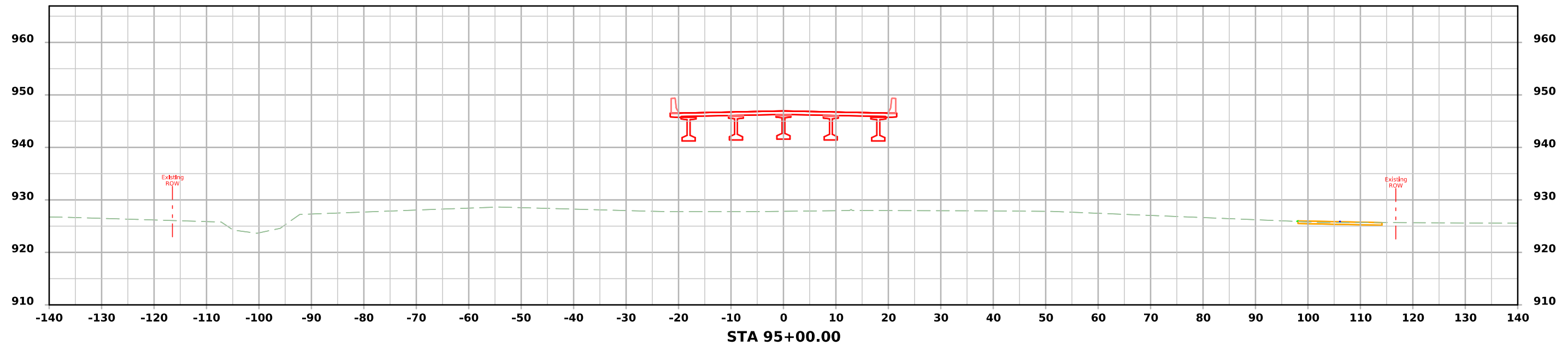
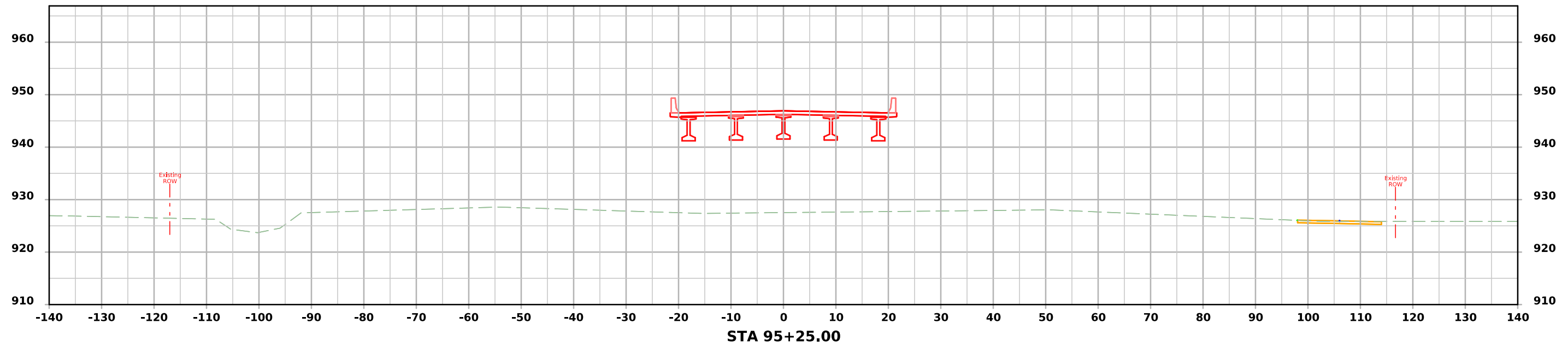
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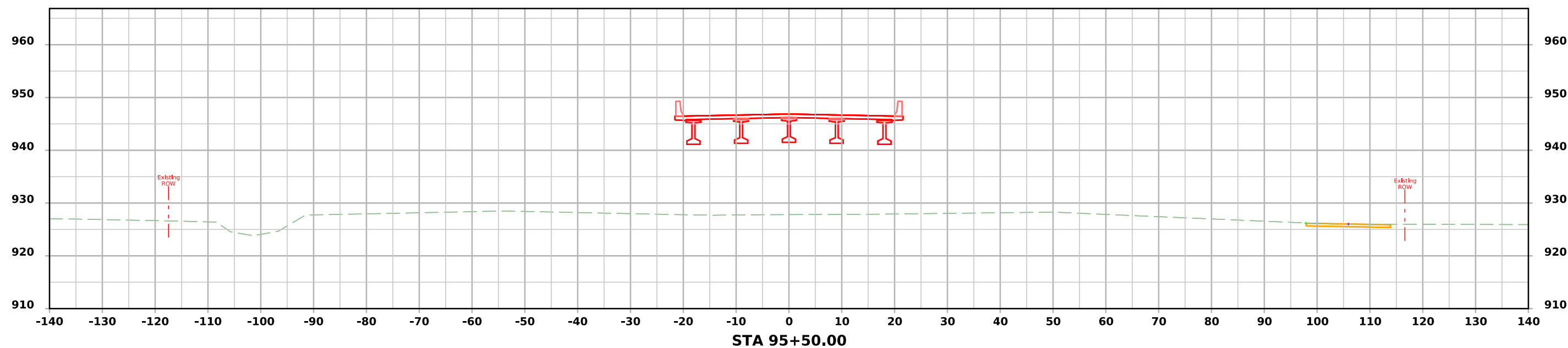
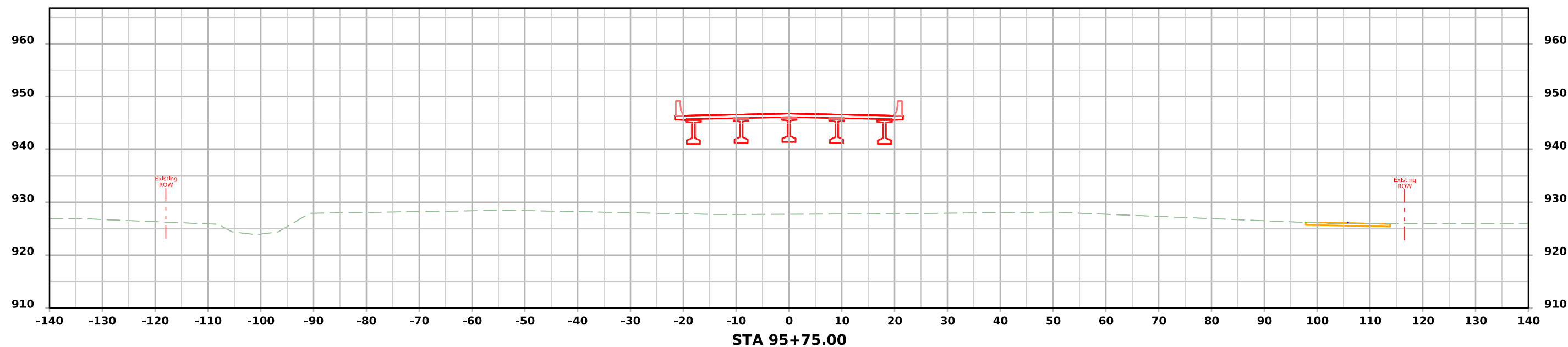
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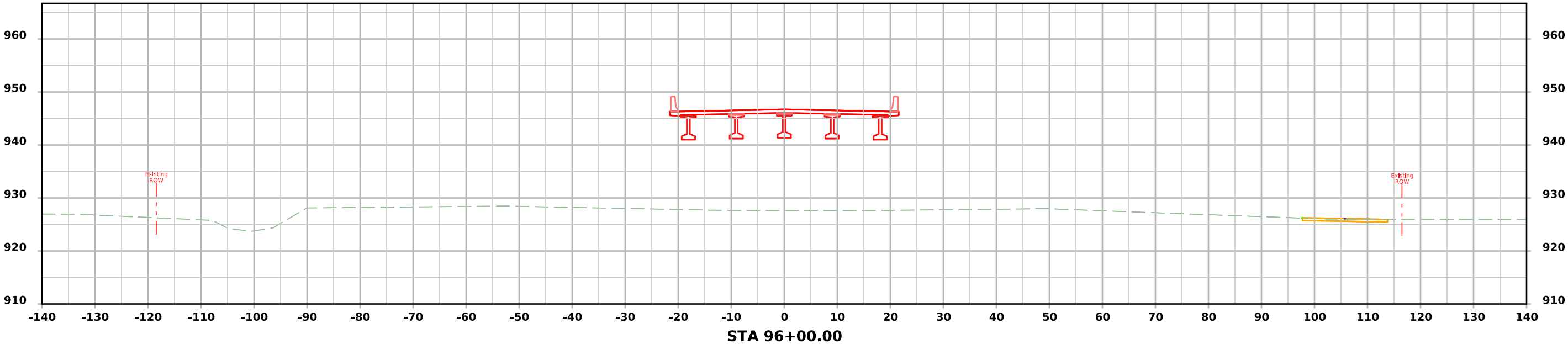
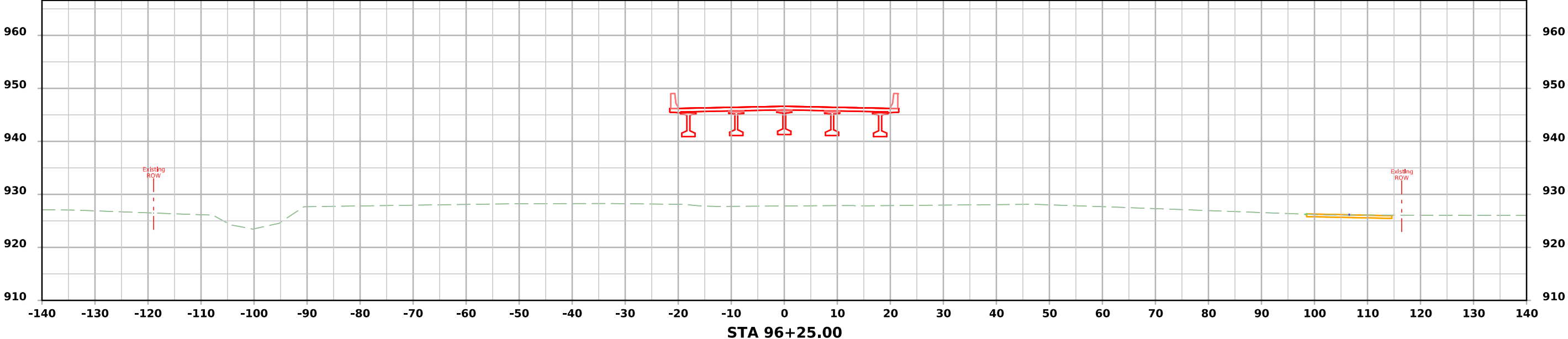
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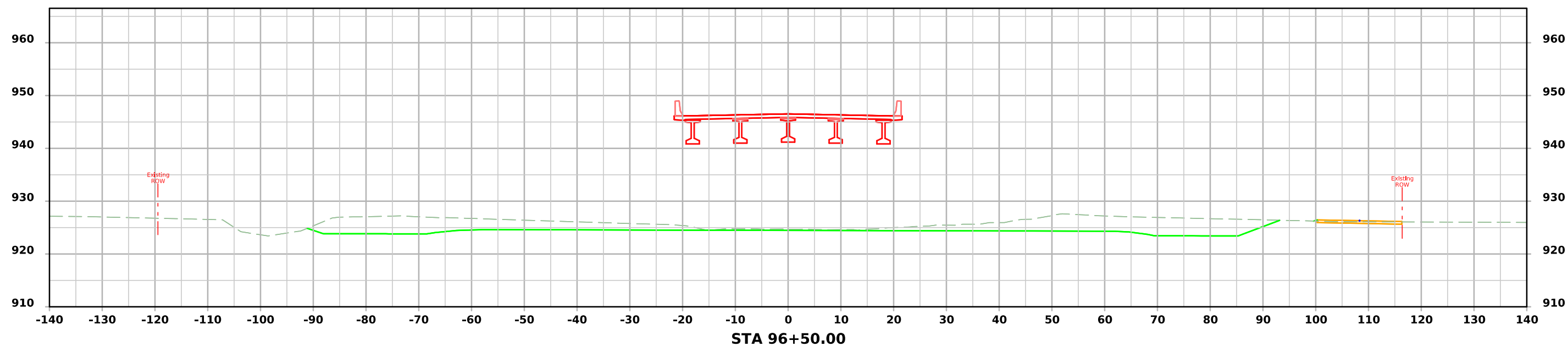
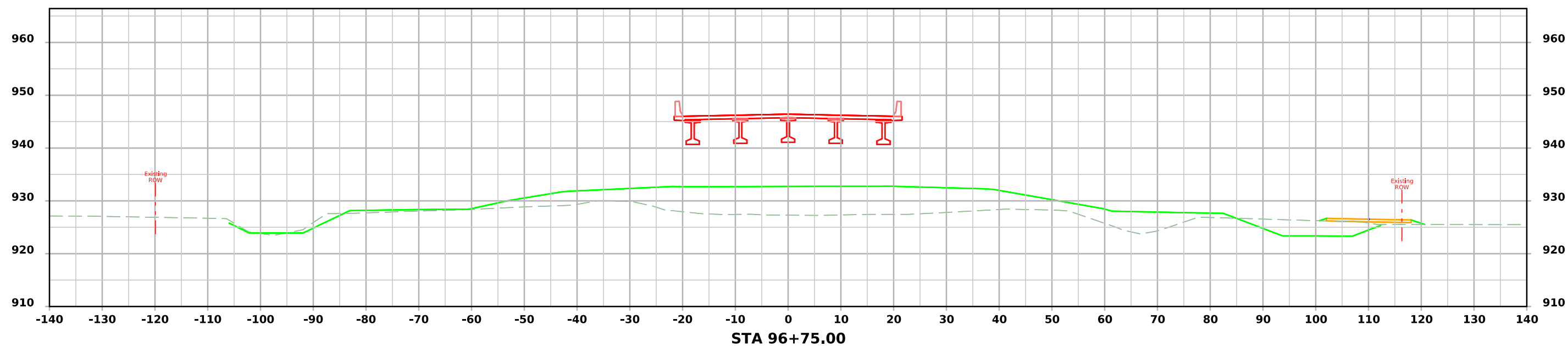
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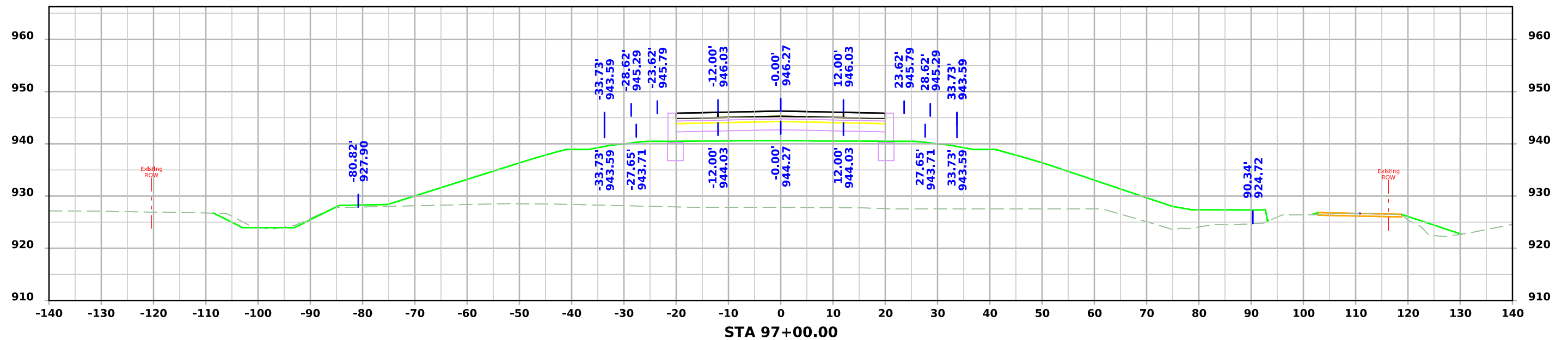
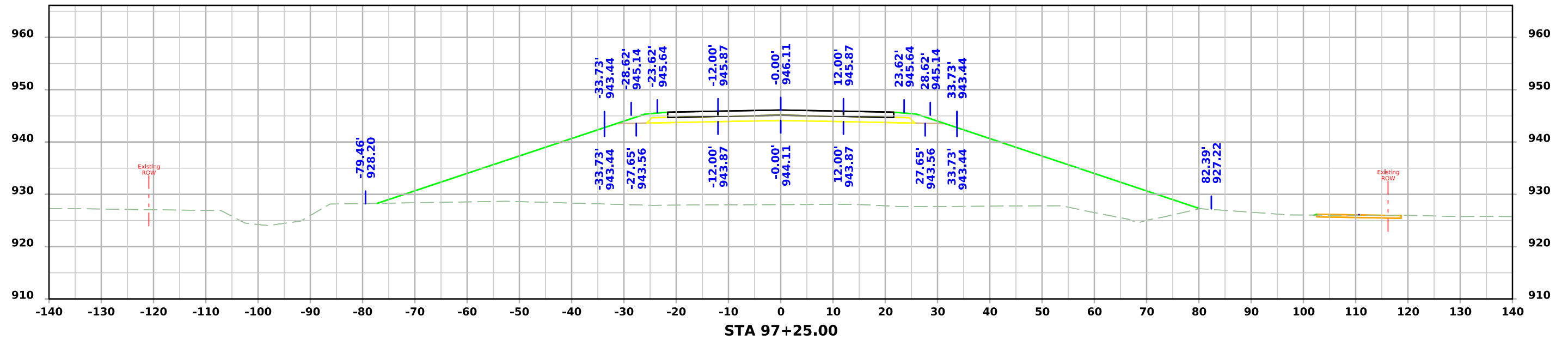
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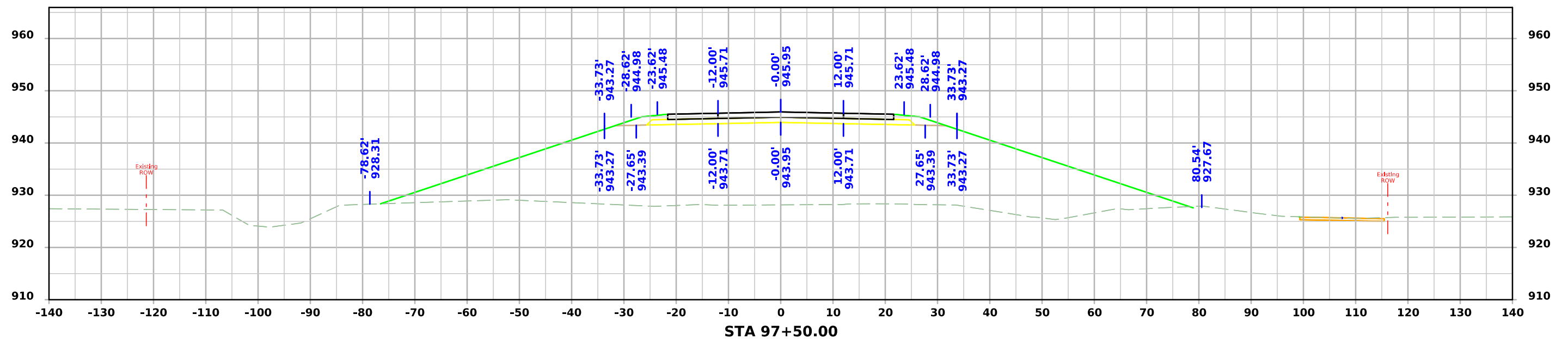
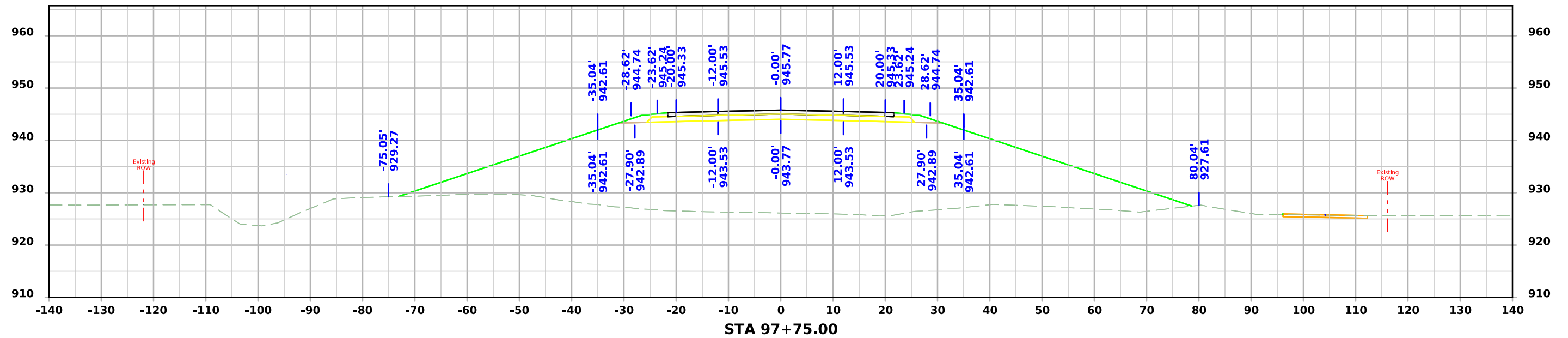
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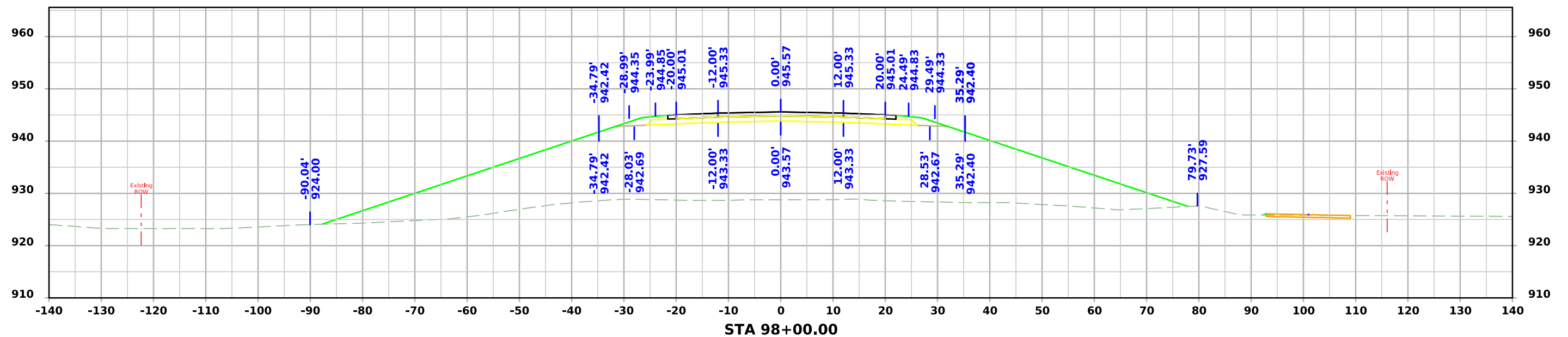
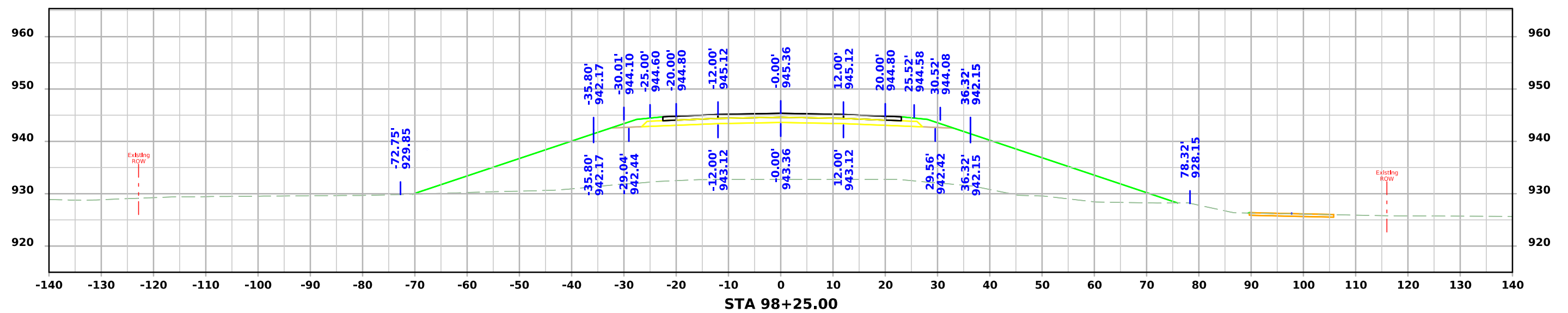
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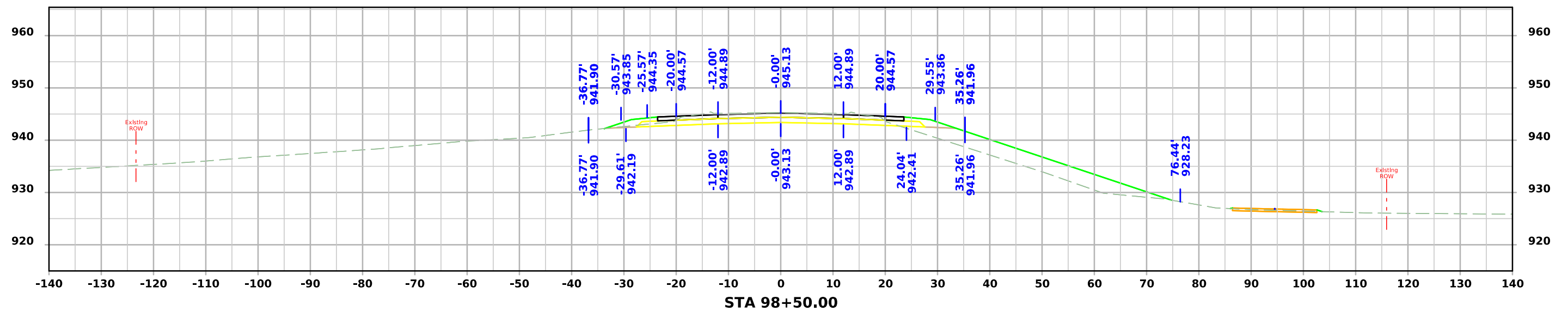
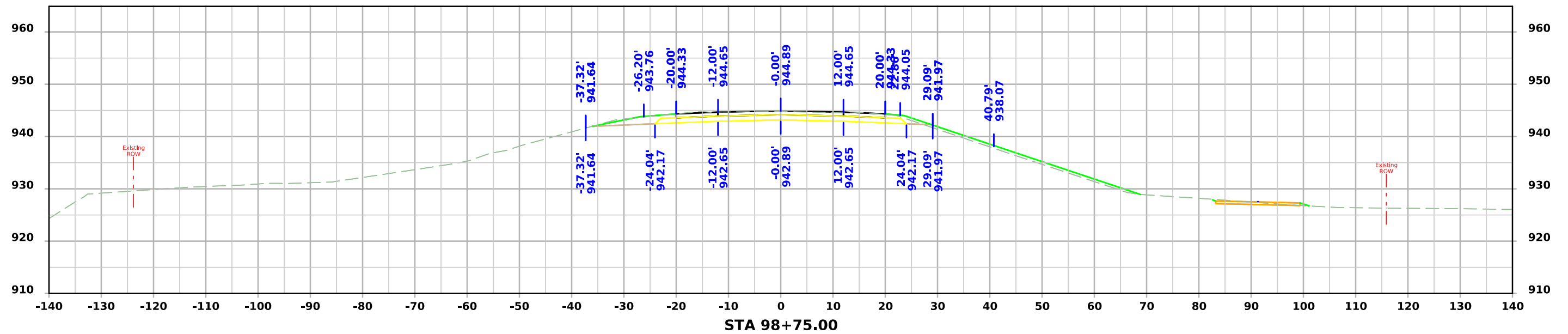
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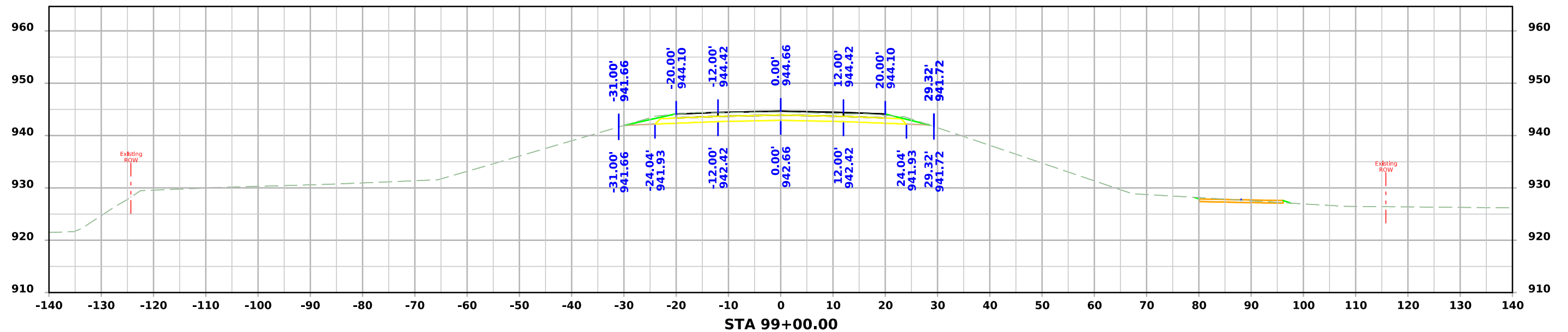
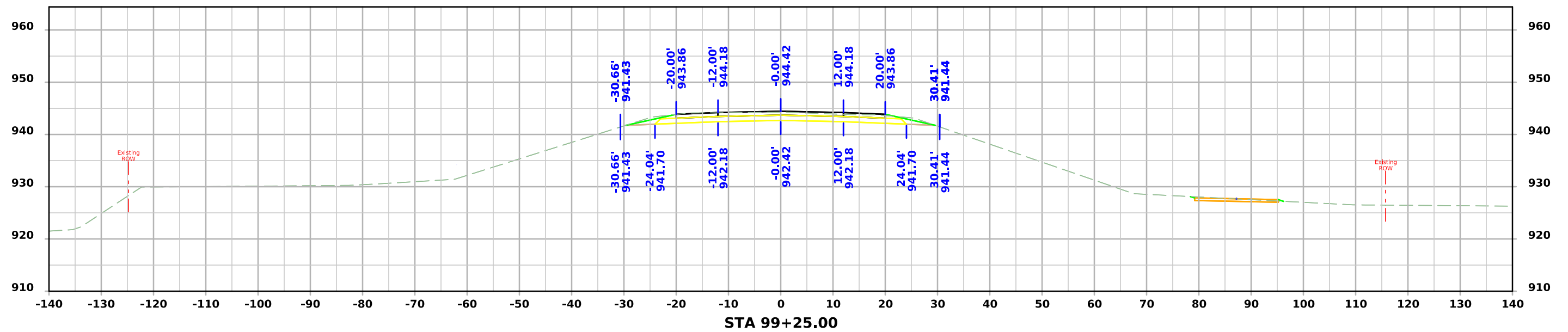
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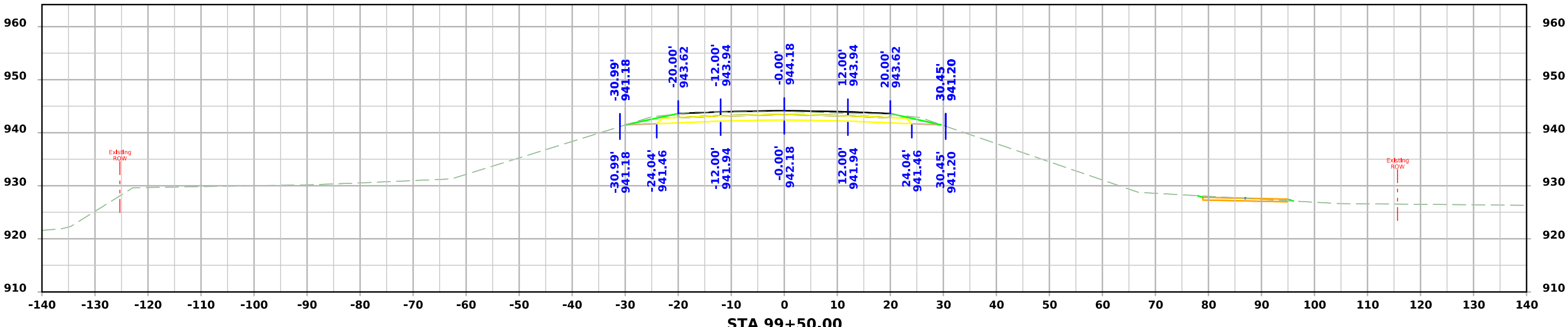
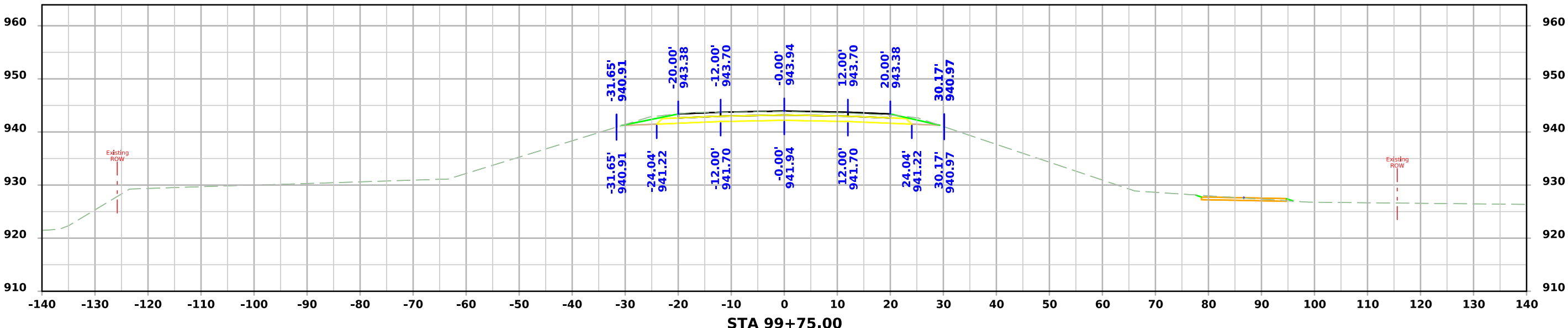
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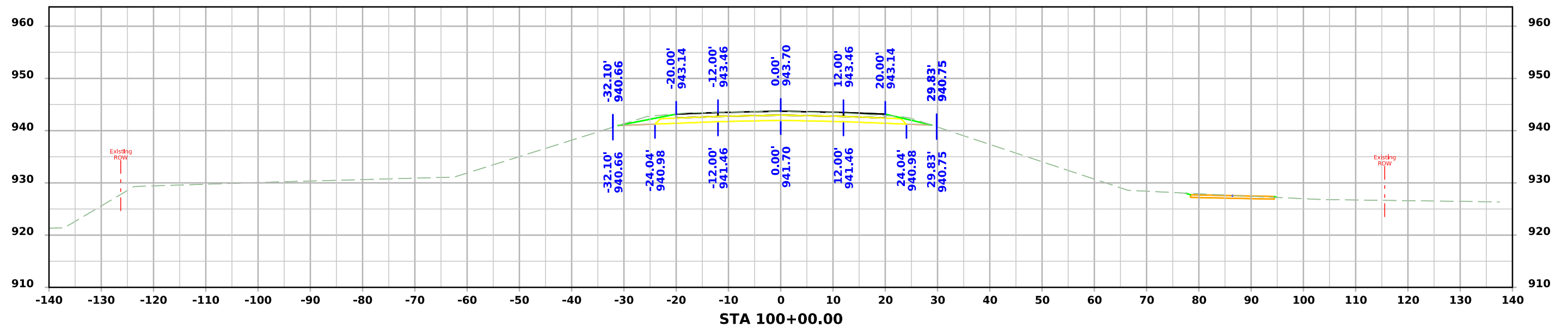
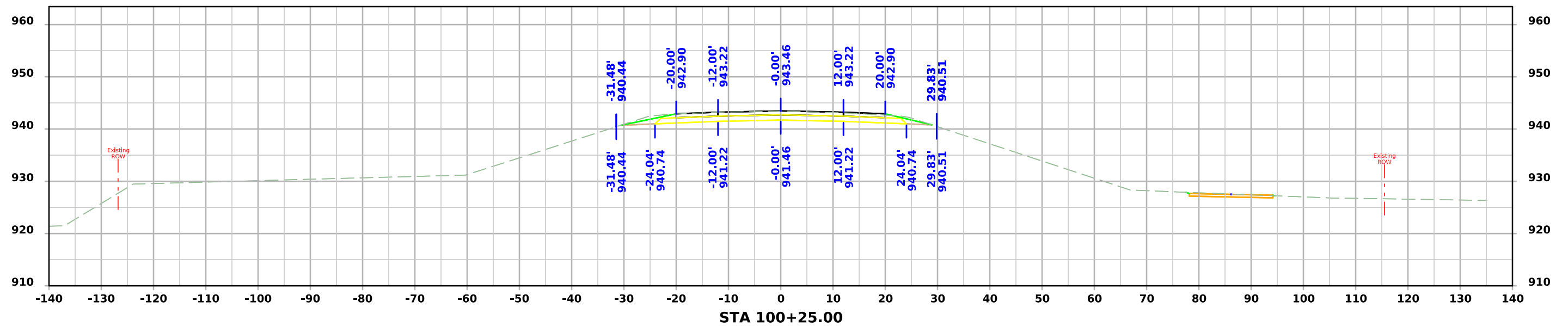
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ML - IA 2



ML - IA 2



ML - IA 2

