

POTTAWATTAMIE COUNTY

Bridge-Unspecified
BRF-059-3(47)--38-78

LETTING DATE
10/21/2025



PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
POTTAWATTAMIE COUNTY
Bridge-Unspecified
At Jct IA 92

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

77

PROJECT IDENTIFICATION NUMBER

78-0593-047

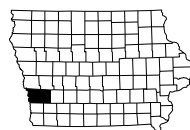
PROJECT NUMBER

BRF-059-3(47)--38-78

R.O.W. PROJECT NUMBER

NHSX-059-3(48)--2R-78

INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	Title Sheets
A.1	Title Sheet
A.2	Location Map Sheet
A.3 - 9	Concept
B Sheets	Typical Cross Sections and Details
B.1 - 5	Typical Cross Sections and Details
D Sheets	Mainline Plan and Profile Sheets
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - 5	"US 59"
E Sheets	Side Road Plan and Profile Sheets
* E.1	"IA 92"
G Sheets	Survey Sheets
G.1	Reference Ties and Bench Marks
G.2 - 3	Horizontal Control Tab. & Super for all Alignments
J Sheets	Traffic Control and Staging Sheets
* J.1	Traffic Control Plan
* J.2	Staging Notes Stage
* J.3	Plan Legend of Traffic Control and Staging Sheet
K Sheets	Interchange Sheets
* K.1	"IA 92" RAMP "Southeast" Plan and Profile Sheets
* K.2	"IA 92" RAMP "Northeast" Plan and Profile Sheets
W Sheets	Mainline Cross Sections
W.1	Cross Sections Legend & Symbol Information Sheet
W.2	Mainline Cross Sections
Y Sheets	Ramp Cross Sections
Y.1	Ramp Cross Sections
	* Color Plan Sheets

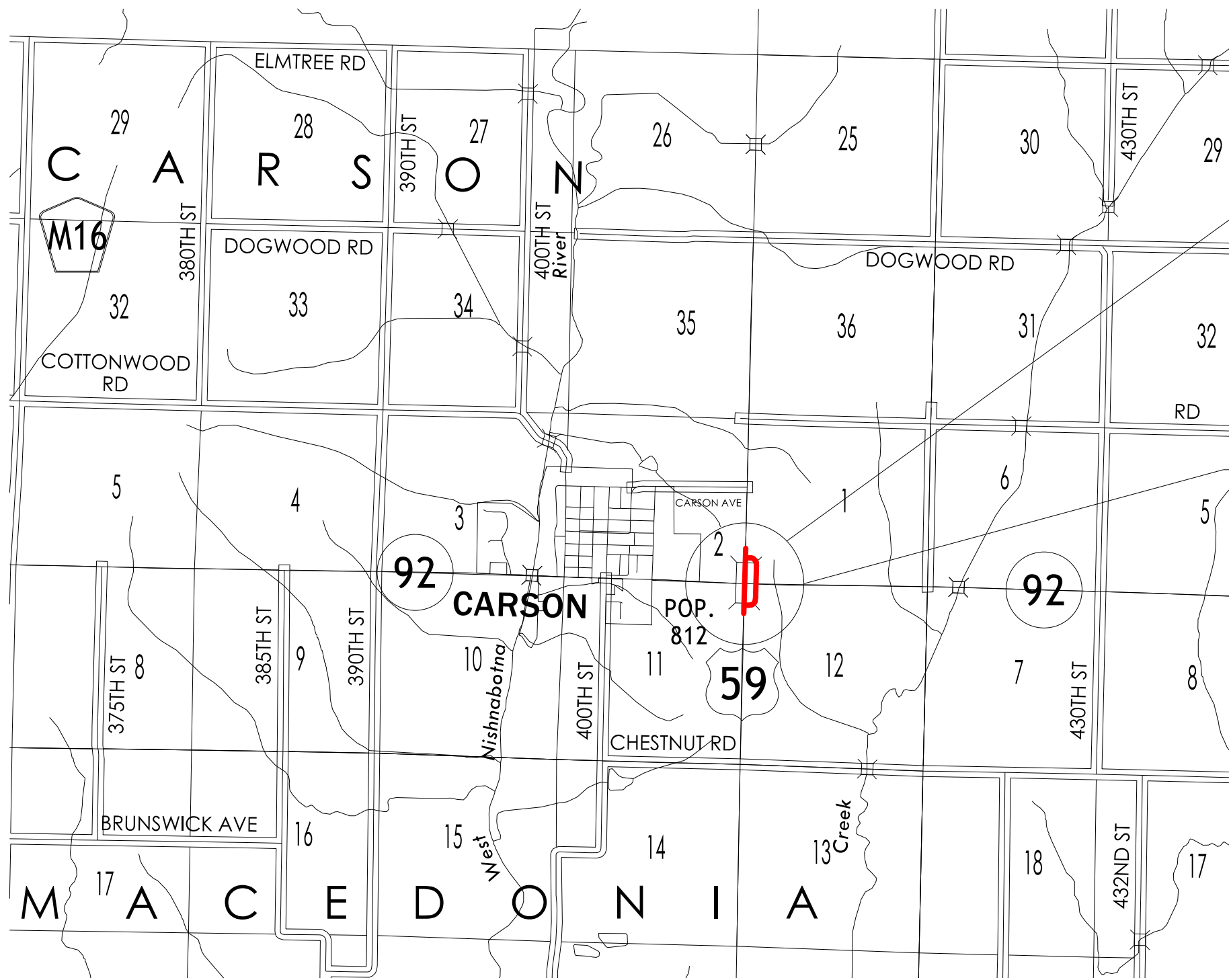


INDEX OF SEALS			
SHEET NO.	NAME	TYPE	BID QUANTITY SHEETS
A.1	Kelly C. Bell	Primary Signature Block	C.1-C.n, RC.1-RC.n
X	X	X	X
X	X	X	X

PRELIMINARY PLANS

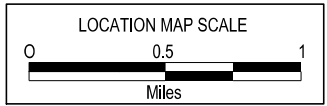
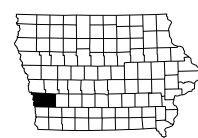
Subject to change by final design.

D2/D3 PLAN - Date: May 10, 2023



PROJECT LOCATION
ML059
MP 45.3

Ex. Asset ID/FWHA US 59
#043340
Ex. Maint:
#7845.3S059



FINAL PROJECT CONCEPT STATEMENT

US 59 Bridge over IA 92

Pottawattamie County
BRF-059-3(47)- -38-78
PIN: 20-78-059-020
Maint. No.7845.3S059
FHWA No. 43340

Highway Division
Design Bureau

John Bartholomew, P.E.
515-239-1540

October 24, 2022

Pottawattamie County
BRF-059-3(47)- -38-78
PIN: 20-78-059-020
Page 2

condition of the overall structure, it is recommended the bridge be replaced.



US 59 looking North



US 59 looking South



On IA 92 Right Profile



On IA 92 Left Profile

I. STUDY AREA

A. Project Description

This project involves the replacement of the US 59 bridge (Maint. No 7845.3S059) over IA 92.

The two alternatives considered were:

1. Replace existing bridge on US 59 with a 200' x 44' CWPG Bridge incorporating a 1.5' grade raise.
2. At grade intersection with bridge removal and new alignment.

Alternative 1 is the preferred alternative. A new alignment and at-grade intersection would create a new conflict point between US 59 and IA 92 that does not exist in the current layout (a two-way stop condition would have to be added to accommodate this new conflict point). Additional right of way will be required. Traffic will be maintained by offsite detour

B. Need for Project

This is a 152' X 28' steel girder bridge that was built in 1957. An overlay was added in 1992 and has reached the end of its service life. The deck has leaching cracks and the joints need replacement. The superstructure has severe rust. The substructure has spalls with exposed steel, delamination, and cracks and requires reconstruction. Due to the

C. Present Facility

The existing structure is a 152' x 28' steel I-beam bridge constructed in 1957 and overlaid in 1992. Existing vertical clearance is 15' 01". In 2013 the center span I beams were repaired due to a vehicle strike.

US 59 on the north side of the project area is 28' wide HMA pavement with 4' wide granular shoulders and 3:1 foreslopes with a 12' auxiliary lane, constructed in 1956. HMA resurfacing and widening was accomplished in 2013.

US 59 on the south side of the project area is 24' wide HMA pavement with 8' wide granular shoulders and 3:1 foreslopes, with a 12' auxiliary lane constructed in 1956. HMA resurfacing and widening was accomplished in 2022.

D. Traffic Estimates

The 2025 construction year and 2045 design year average daily traffic estimates are 1800 ADT with 16 % trucks and 2000 ADT with 16 % trucks, respectively.

E. Sufficiency Ratings

US 59 is classified as an area development route and is a maintenance service level "C" roadway. The federal bridge sufficiency rating is 64.5.

F. Access Control

Access rights will not be acquired for this project.

G. Crash History

During the five-year study period from January 1, 2017, through December 31, 2021, there was 1 personal injury crash, and 1 personal property crash.

II. PROJECT CONCEPT

A. Feasible Alternatives

Alternative #1 - Replace with a bridge

The existing 152' x 28' continuous steel I beam bridge will be replaced with a 3 span, 200' x 44', CWPG bridge.

The typical cross section adjacent to the bridge will consist of a 24' roadway with 10' effective shoulders (4' outside pavement and 6' granular) and 3:1 foreslopes. The bridge approach section will consist of a 24 ft roadway with 10 ft paved shoulder panels

The existing grade will need to be raised a minimum of 1.5' which will require approximately 600' of roadway reconstruction north of IA 92 and 500' south. New bridge approaches will be constructed. The existing guardrail will be replaced with new guardrail and the shoulders will be paved 20' beyond the ends of the guardrail. Class 10 will be necessary to flatten the existing foreslopes and to construct the new

guardrail blisters. Class E revetment will be placed under the bridge for slope protection. New bridge end drains will be constructed on both ends of the bridge.

Both North and South Ramps will be removed and replaced to accommodate the 1.5' grade raise on US 59. The Northbound turning lane for the south ramp will also be removed and replaced to accommodate the grade raise.

Apply erosion control and rural seeding and fertilizing to all disturbed areas.

It appears right of way will be required for this project.

US 59 will be closed during construction and an offsite detour will be utilized.

Bridge Items	<u>Estimated Costs</u>
New Bridge	\$ 1,437,300
Bridge Removal	52,000
Mobilization - 10%	149,000
M & C - 15%	<u>245,700</u>
Bridge Costs	\$ 1,884,000

Roadway Items	
Embankment in place, contractor furnished	\$51,700
Excavation Class 13 Waste	204,300
Modified Subbase	212,400
Bridge Approach, BR-203	183,400
Pavement PCC	611,000
Bridge End Drains	5,300
Guardrail (includes removal)	24,000
Rmvl of Pavement	129,500
Erosion Control	50,000
Seeding and Fertilizing	11,300
Traffic Control - 5%	92,700
Mobilization - 5%	92,700
M & C - 10%	<u>185,400</u>
Roadway costs	\$1,853,700

Project Total **\$3,737,700**

Alternative #2 - Replace with at grade intersection

The existing 150' x 28' continuous steel I beam bridge will be removed and replaced with a new alignment utilizing the existing entrance/exit ramps for IA 92, creating an at grade intersection.

The typical cross section will consist of a 24' roadway with 10' effective shoulders (4' outside pavement and 6' granular) and 3:1 foreslopes. The horizontal and vertical alignment of US 59 will utilize 45 and 35 mph design speed curves to slow traffic on US 59 to approaching stop signs at the intersection of IA 92. This will require approximately 200' of roadway reconstruction north and south of IA 92.

Apply erosion control and rural seeding and fertilizing to all disturbed areas.

It appears that right of way will be required for this project.

One lane of traffic in each direction will be maintained by onsite detour utilizing the existing exit entrance ramps.

Bridge Items	<u>Estimated Costs</u>
Bridge Removal	52,000
Mobilization - 10%	5,200
M & C - 15%	<u>7,800</u>
Bridge Costs	\$ 65,000

Roadway Items	
Embankment in place, contractor furnished	365,400
Excavation Class 13 Waste	863,400
Modified Subbase	153,700
Granular Shld, type A	68,000
Shld Construction, Earth	16,800
Pavement PCC	942,400
Guardrail (Includes Removal)	3,200
Removal of Pavement	54,800
Erosion Control	50,000
Seeding and Fertilizing	8,200
Traffic Control - 5%	180,400
Mobilization - 5%	180,400
M & C - 20%	<u>721,700</u>
Roadway costs	\$ 3,608,400

Project Total **\$3,673,400**

B. Detour Analysis

U.S. 59 will be closed and an offsite detour will be utilized. It is anticipated the detour will be in place for approximately 180 days. The detour is as follows, heading North on US 59, turn East on Brothers Ave (H12) for 8.88 miles. Turn North on H Ave (M47) for 11.89 miles. Turn East on US 6 for 7.90 miles back to US 59. Total miles – 28.67, total out of distance is 16.78 miles.

C. Recommendations

It is recommended that the present structure be replaced, as described in Alternative No. 1.

D. Construction Sequence

It is anticipated that all work on this project will be awarded to one prime contractor. The Bridges and Structures Bureau will coordinate the plan preparation with assistance from the Design Bureau.

E. ADA Accommodations

There are no bike paths or sidewalks adjacent to U.S. 59; therefore, no ADA accommodations are planned in conjunction with this project.

F. Special Considerations

This will not be a traffic critical project.

The ABC Rating Score of 35 is less or more than the first stage filter threshold of 50, therefore this bridge will not be considered further as a candidate for ABC construction.

No bike path or sidewalk will be required as part of this project. Right of Way appears to be required for this project.

The Location and Environment Bureau has reviewed this project and based on preliminary desktop observations, has determined that a Section 404 Permit will not be required. It is expected that the work will be covered by Nationwide Permit 14.

POTTAWATTAMIE COUNTY

G. Program Status

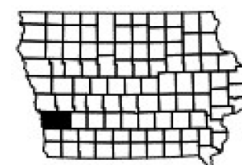
Site data has been developed by the Design Bureau. This project is listed in the 2023-2027 Iowa Transportation Improvement Program, with \$5,000 programmed for right of way in FY 2025, and \$2,540,000 for replacement/repair in FY 2026. Costs for this project may be eligible for bridge replacement funds. A schedule of events will be developed following approval of the Project Concept.

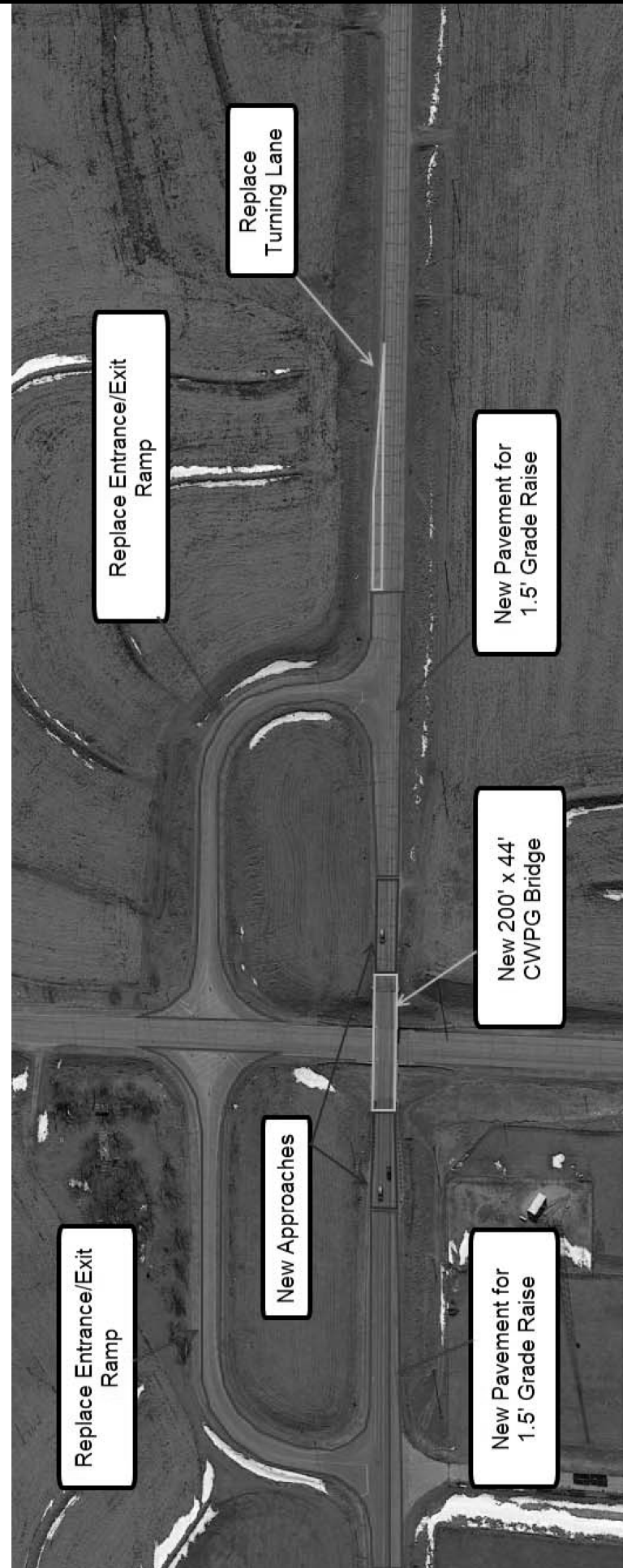
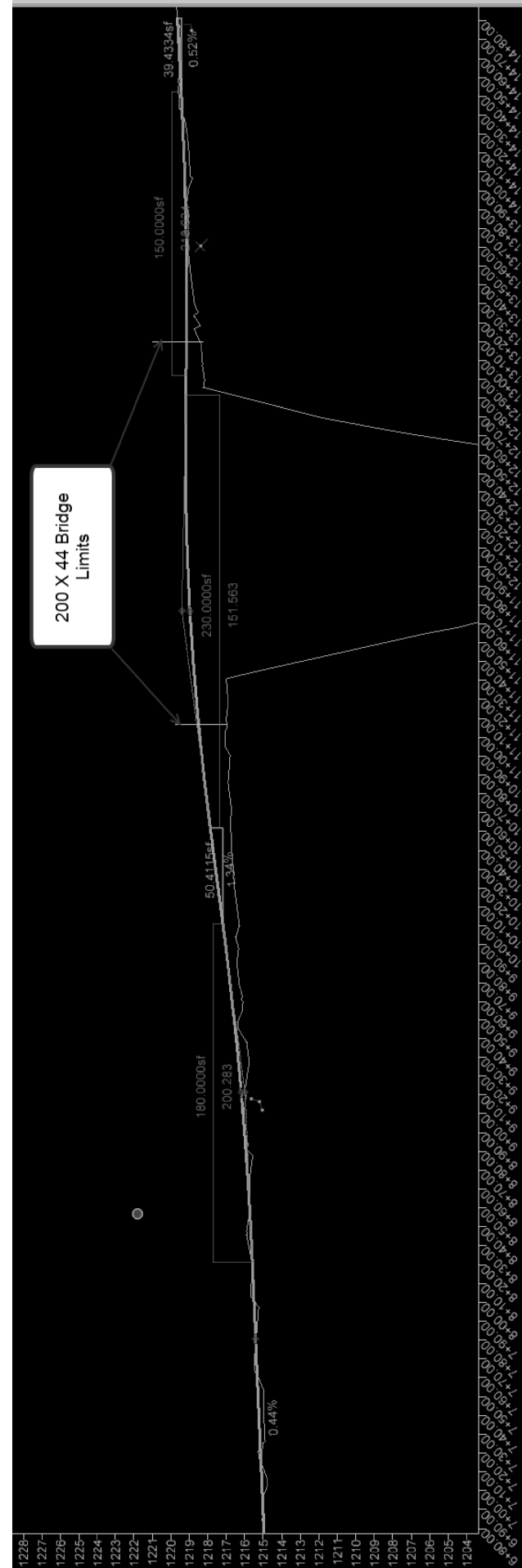
JEB:jaa

PROJECT LOC
MILEPOST 45.3



ON US 59, AT JUNCTION OF IA 92
BRF-059-3(47)- -38-78
PIN: 20-78-059-020





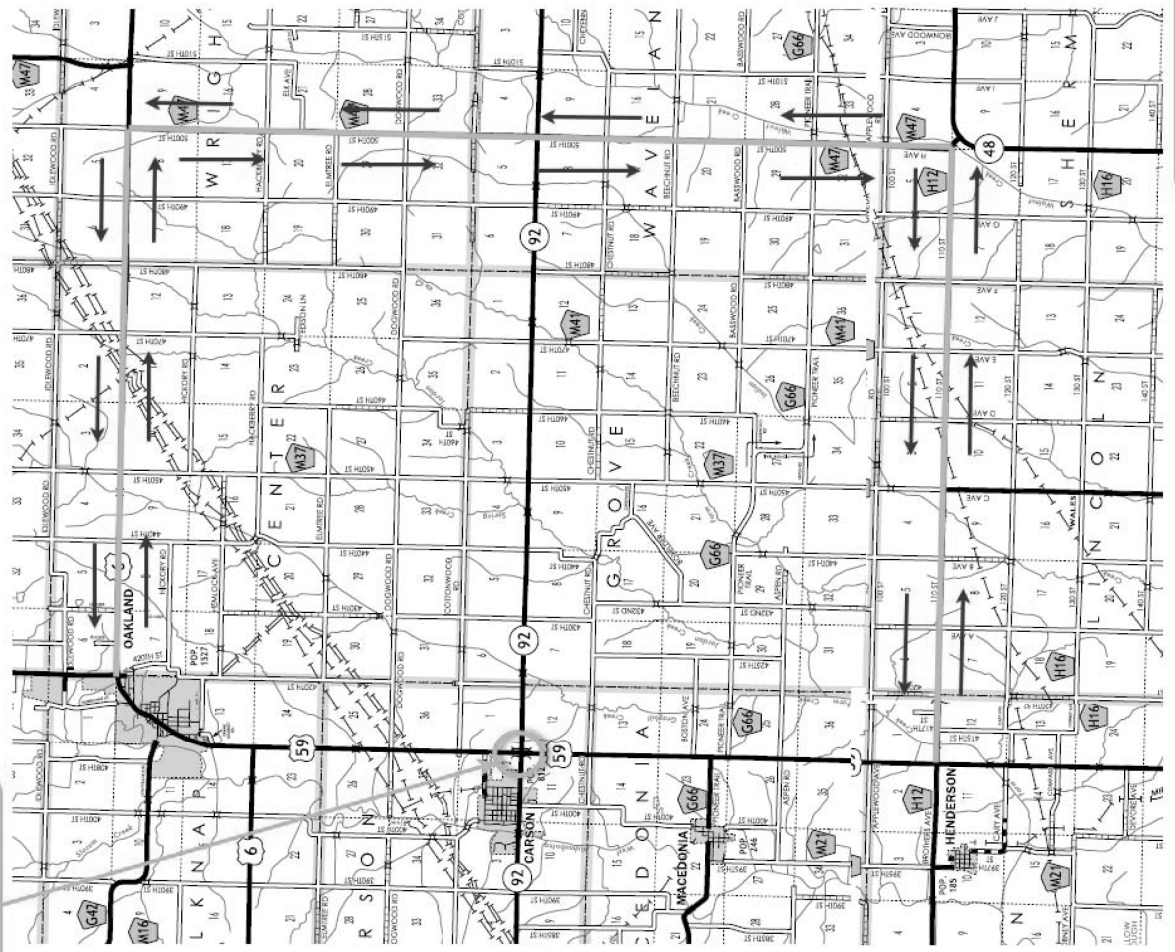
Pottawattamie County
BRF-059-3(47)--38-78
PIN: 20-78-059-020

UTILITIES

Jeff Klocko
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Trent Flockhart
Frontier Communications
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PROJECT SITE

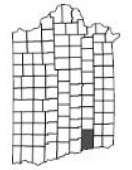


← DETOUR



POTTAWATTAMIE COUNTY

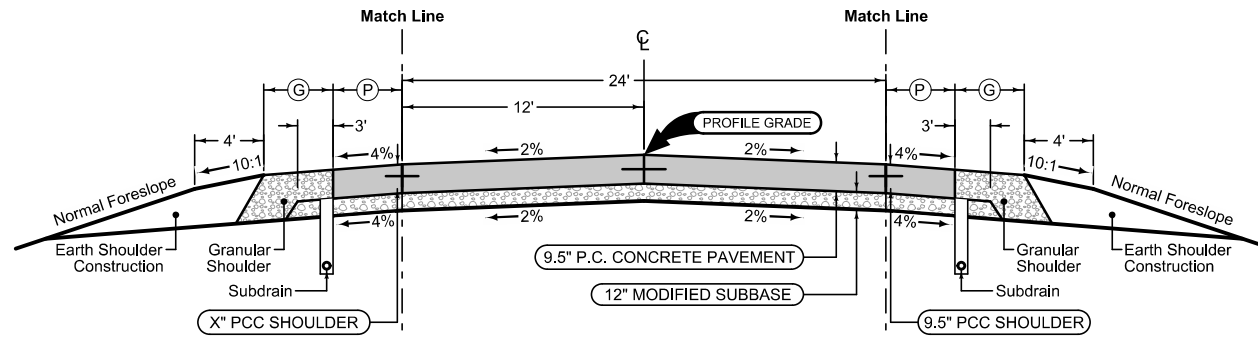
At Junction of IA 92
BRF-059-3(47)--38-78
PIN: 20-78-059-020



Full Depth PCC Combination Shoulder

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

2_C_FullPCC_04-20-21			
STATION TO STATION		(P) Feet	(G) Feet
1936+50.00	1940+63.00	6	4
1944+05.00	1947+48.00	6	4



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

2P_04-21-20	
STATION TO STATION	
1936+50.00	1940+63.00
1944+05.00	1950+50.00

Full Depth PCC Combination Shoulder

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

2_C_FullPCC_04-20-21			
STATION TO STATION		(P) Feet	(G) Feet
1938+22.27	1940+63.00	6	4
1944+05.00	1945+14.26	6	4
1949+22.52	1950+50.00	6	4



Ex. ML059
 Ⓞ

Auxiliary Lane

Longitudinal joint: L or KT
 Transverse joint: Match Mainline

2_AuxLane_PCC_10-18-16			
STATION TO STATION		(AL) Feet	(G) Feet
1949+37.00	1952+92.00		6

Auxiliary Lane

Granular Shoulder

2_AL_Shldr_G_04-21-20	
(AL) Feet	(G) Feet
	6

Auxiliary Lane

Longitudinal joint: L or KT
 Transverse joint: Match Mainline

2_AuxLane_PCC_10-18-16			
STATION TO STATION		(AL) Feet	(G) Feet
1945+14.26	1947+49.00		6

Auxiliary Lane

Granular Shoulder

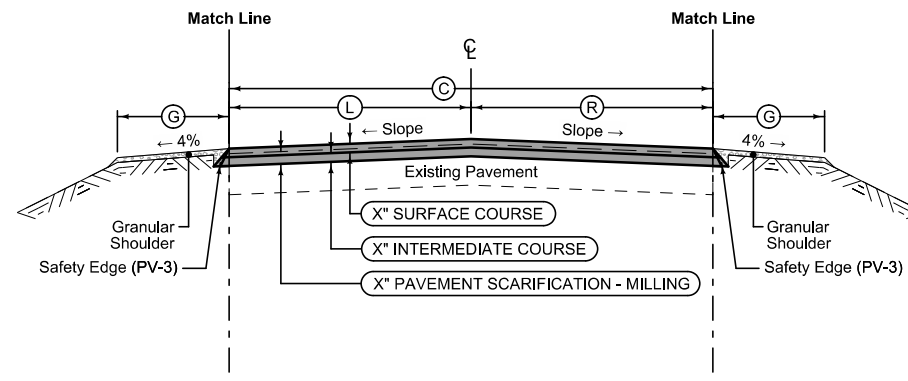
2_AL_Shldr_G_04-21-20	
(AL) Feet	(G) Feet
	6

See Tab 100-24M
 See Tab 112-9M for shoulder quantities.

US Highway 59

Granular Shoulder

3R_Shldr_G_Milling_04-19-11		
STATION TO STATION		Ⓞ Feet
SE Ramp		
10+00.00	16+69.75	4
NE Ramp		
0+00.00	7+76.72	4



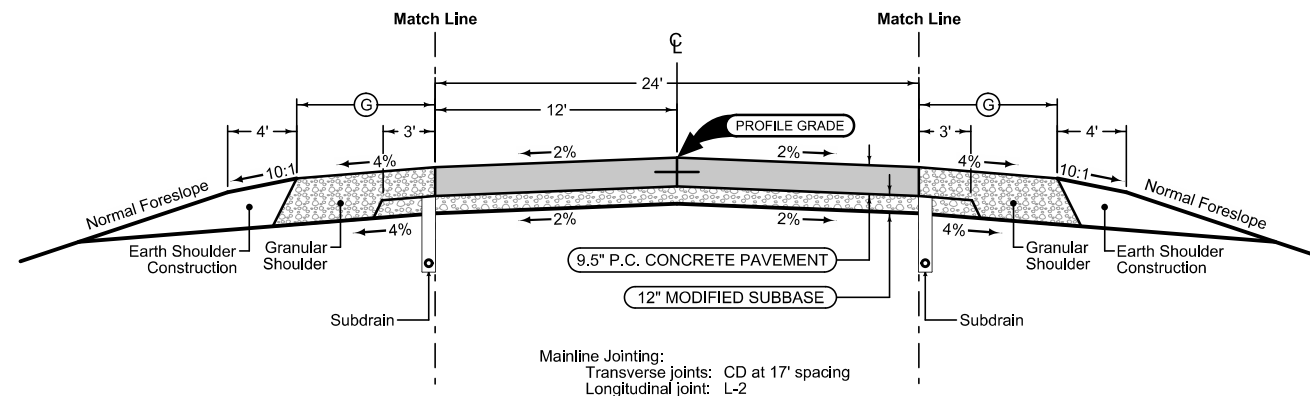
3R_MillingOverlay_04-19-11				
STATION TO STATION	Ⓞ Feet	Ⓛ Feet	Ⓡ Feet	Pavement Scarification SY
SE Ramp				
10+00.00	16+69.75			
NE Ramp				
0+00.00	7+76.72			

Granular Shoulder

3R_Shldr_G_Milling_04-19-11		
STATION TO STATION		Ⓞ Feet
SE Ramp		
10+00.00	16+69.75	
NE Ramp		
0+00.00	7+76.72	

Granular Shoulder

2_G_SR_04-21-20		
STATION TO STATION		Ⓞ Feet
SE Ramp		
10+00.00	16+69.75	
NE Ramp		
0+00.00	7+76.72	



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

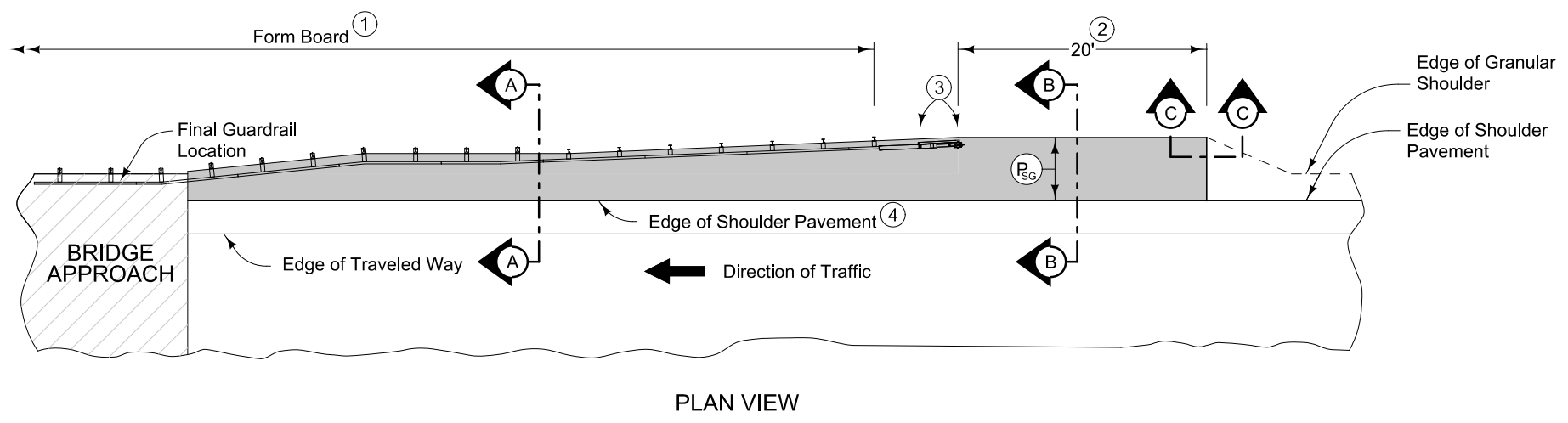
2P_04-21-20		
STATION TO STATION		
SE Ramp		
10+00.00	16+69.75	
NE Ramp		
0+00.00	7+76.72	

Granular Shoulder

2_G_SR_04-21-20		
STATION TO STATION		Ⓞ Feet
SE Ramp		
10+00.00	16+69.75	
NE Ramp		
0+00.00	7+76.72	

See Tab 100-24M
 See Tab 112-9M for shoulder quantities.

US 59 Highway Ramp Alternates

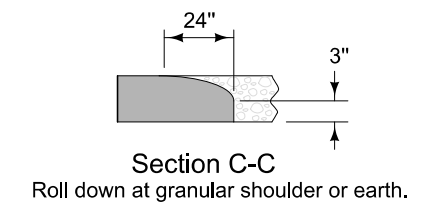
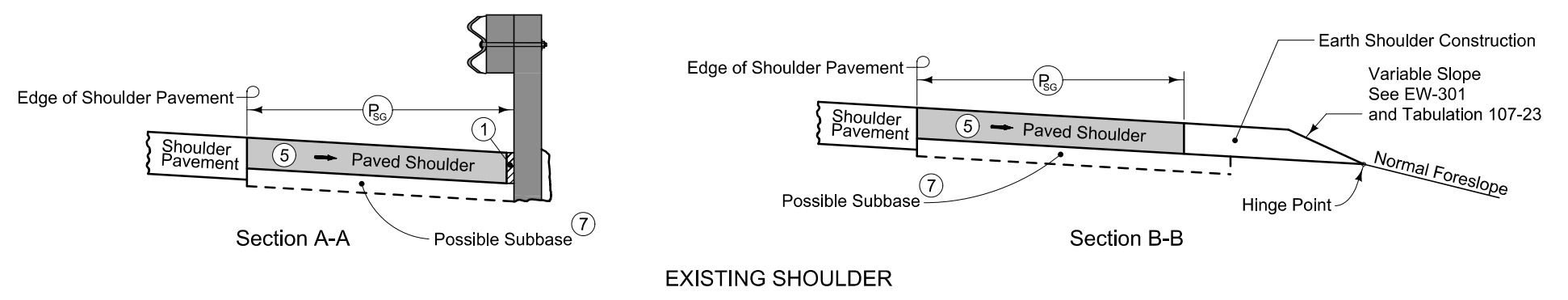
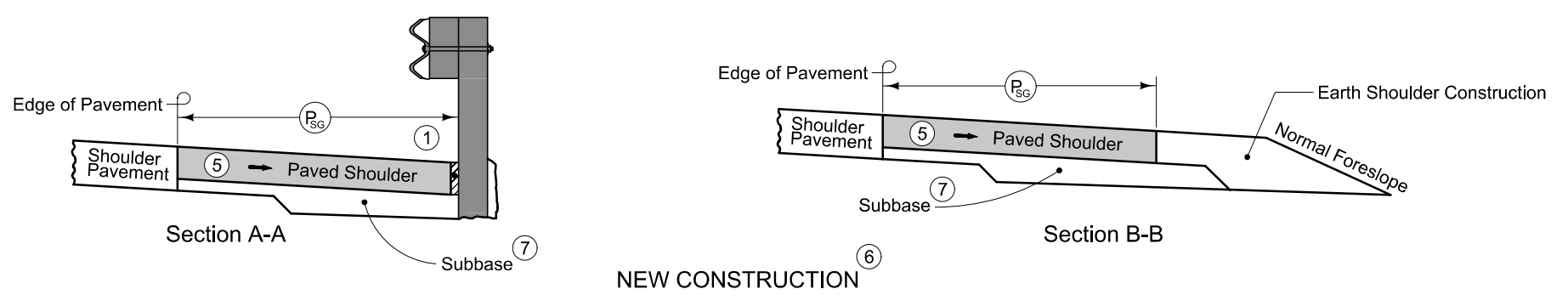


8" PCC Paved Shoulder at guardrail with the following jointing layout:

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

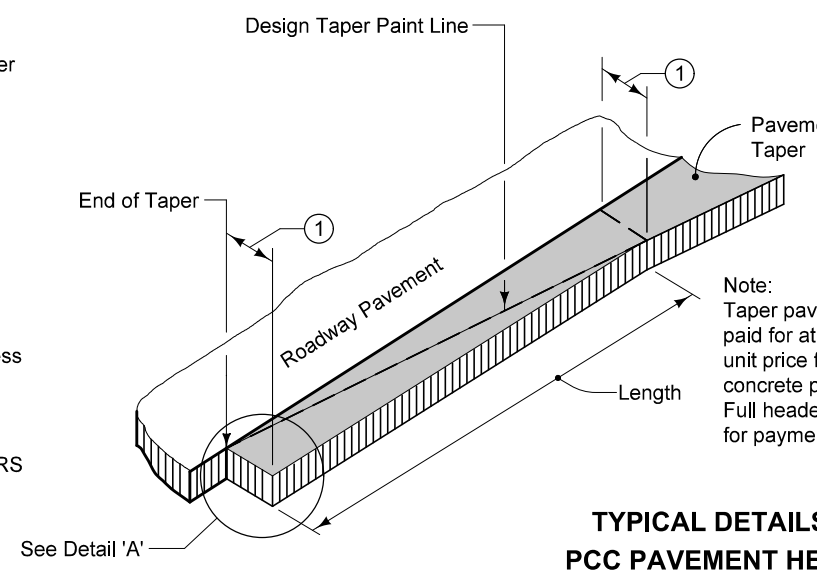
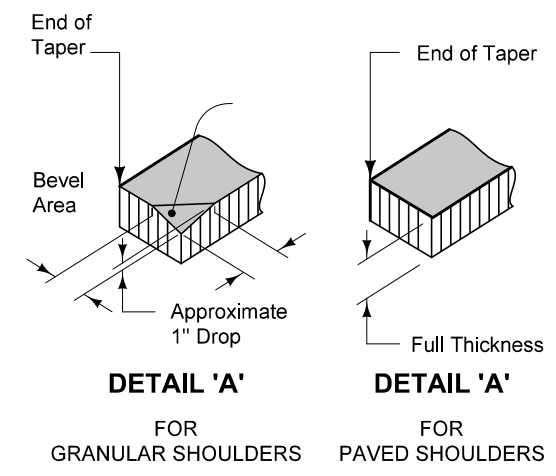
Refer to Tabulation 112-9 for shoulder quantities.

- ① 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 'KT' joint (per PV-101) for PCC shoulder.
- ⑤ Match shoulder slope.
- ⑥ The Contractor has the option to pave the paved shoulder at guardrail and the partial width paved shoulder as one operation.
- ⑦ Refer to other details in the plan.



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

7101
10-19-10



Note:
Taper pavement to be paid for at the contract unit price for P.C. concrete pavement. Full header is included for payment.

TYPICAL DETAILS OF PCC PAVEMENT HEADER

○ Normal width is 2'-0". Construct 4'-0" width when butting into 4' wide HMA shoulders (See Typical 7154A).

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
- Traffic Signal Control Box
- Rail Road Signal Control Box
- Telephone Switch Box
- Electric Box

UTILITY LEGEND

Sub-Surface Utility Mapping Quality Level is in accordance with C1/ASCE 38-02 Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data.

Remark Abbreviations
 QLA Quality Level A Highest guideline quality level
 QLD Quality Level D Lowest guideline quality level

- * PPA, MIDAMERICAN ENERGY
- E1 ELID, IOWA DOT - Quality D
- F0 FOID, FRONTIER COMM. - Quality D
- F02 FO2D, AUREON NETWORK SERVICES - Quality D
- F03 FO3D, OMNITEL - Quality D
- F04 FO4D, AT&T - Quality D
- F05 FO5D, CENTURYLINK - Quality D
- F06 FO6D, VERIZON - Quality D

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.
Lavender	(9)	Temporary Pavement Shading
Yellow	(4)	Proposed Pavement Shading
Orange	(6)	Proposed Granular Shading
Orange	(70)	Proposed Shoulder Granular Shading
Yellow	(68)	Proposed Shoulder Paved Full Depth Shading
Yellow	(132)	Proposed Shoulder Paved Partial Depth Shading
Gray, Dark	(112)	Proposed Grade and Pave Shading "In conjunction with a paving project"
Brown, Light	(236)	Grading Shading
Orange, Light	(134)	Proposed Granular Entrance Shading
Yellow	(220)	Proposed Paved Entrance Shading
Tan	(8)	Proposed Sidewalk Shading
Blue, Light	(230)	Proposed Sidewalk Landing Shading
Pink	(11)	Proposed Sidewalk Ramp Shading
Green, Light	(225)	Existing Pavement Shading
Red	(3)	Proposed Structure Shading
Red	(3)	Delineates Restricted Areas

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

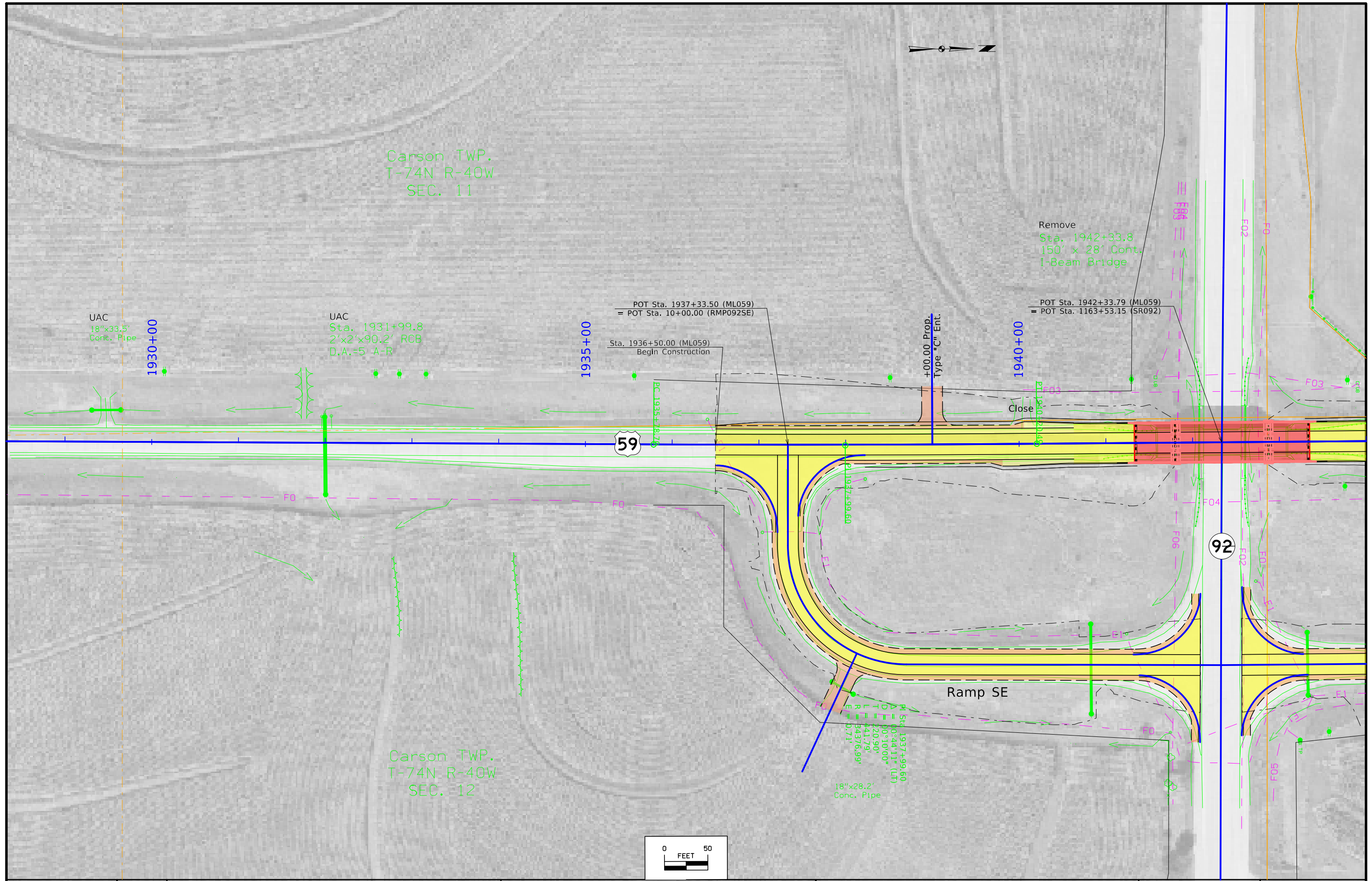
- Reference Point
- Station
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Trench Drain
- HighTension Cable Guardrail
- Sheet Pile
- Pavement Removal
- Clearing & Grubbing Area

RIGHT-OF-WAY LEGEND

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

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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



Carson TWP.
T-74N R-40W
SEC. 11

Remove
Sta. 1942+33.8
150' x 28' Cont.
I-Beam Bridge

UAC
18"x33.5'
Cont. Pipe
1930+00

UAC
Sta. 1931+99.8
2'x2'x90.2' RCB
D.A.=5 A-R

1935+00

POT Sta. 1937+33.50 (ML059)
= POT Sta. 10+00.00 (RMP092SE)

Sta. 1936+50.00 (ML059)
Begin Construction

+00.00 Prop.
Type "C" Ent.

1940+00

POT Sta. 1942+33.79 (ML059)
= POT Sta. 1163+53.15 (SR092)

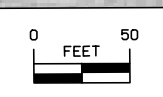
59

92

Ramp SE

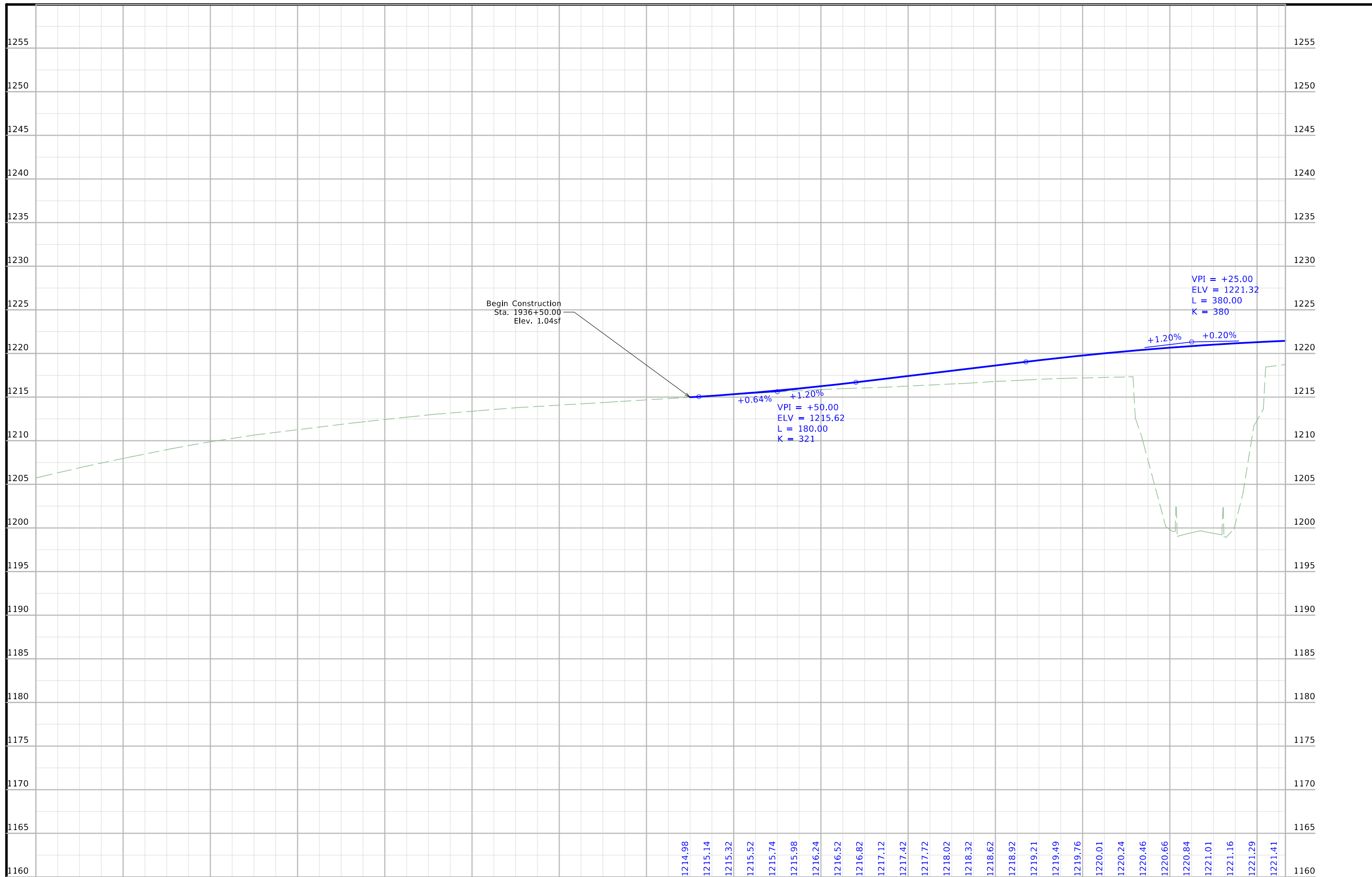
Carson TWP.
T-74N R-40W
SEC. 12

PI Sta. 1937+99.60
Δ = 00:44.11" (LT)
D = 00:10'00"
T = 220.90'
L = 441.79'
R = 34376.99'
E = 0.71'
18'x28.2'
Conc. Pipe

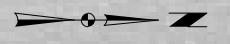


FILE NO.	ENGLISH	DESIGN TEAM Flattery/Bell/	POTTAWATTAMIE COUNTY	PROJECT NUMBER BRF-059-3(47)--38-78	SHEET NUMBER D.2
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1930+00	1931+00	1932+00	1933+00	1934+00	1935+00	1936+00	1214.98	1215.14	1215.32	1215.52	1215.74	1215.98	1216.24	1216.52	1216.82	1217.12	1217.42	1217.72	1218.02	1218.32	1218.62	1218.92	1219.21	1219.49	1219.76	1220.01	1220.24	1220.46	1220.66	1220.84	1221.01	1221.16	1221.29	1221.41	1943+00
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Carson TWP.
T-74N R-40W
SEC. 2

Remove
Sta. 1942+33.8
150' x 28' Cont.
I-Beam Bridge

POT Sta. 1942+33.79 (ML059)
= POT Sta. 1163+53.15 (SR092)

POT Sta. 1948+33.52 (ML059)
= POT Sta. 0+00.00 (RMP092NE)

Sta. 1950+50.00 (ML059)
End Construction

Sta. 1952+92.00 (ML059)
End Auxiliary Lane Construction

+35.00 Prop.
Type "C" Ent.

1945+00

1950+00

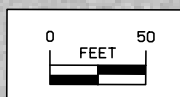
1955+00

59

92

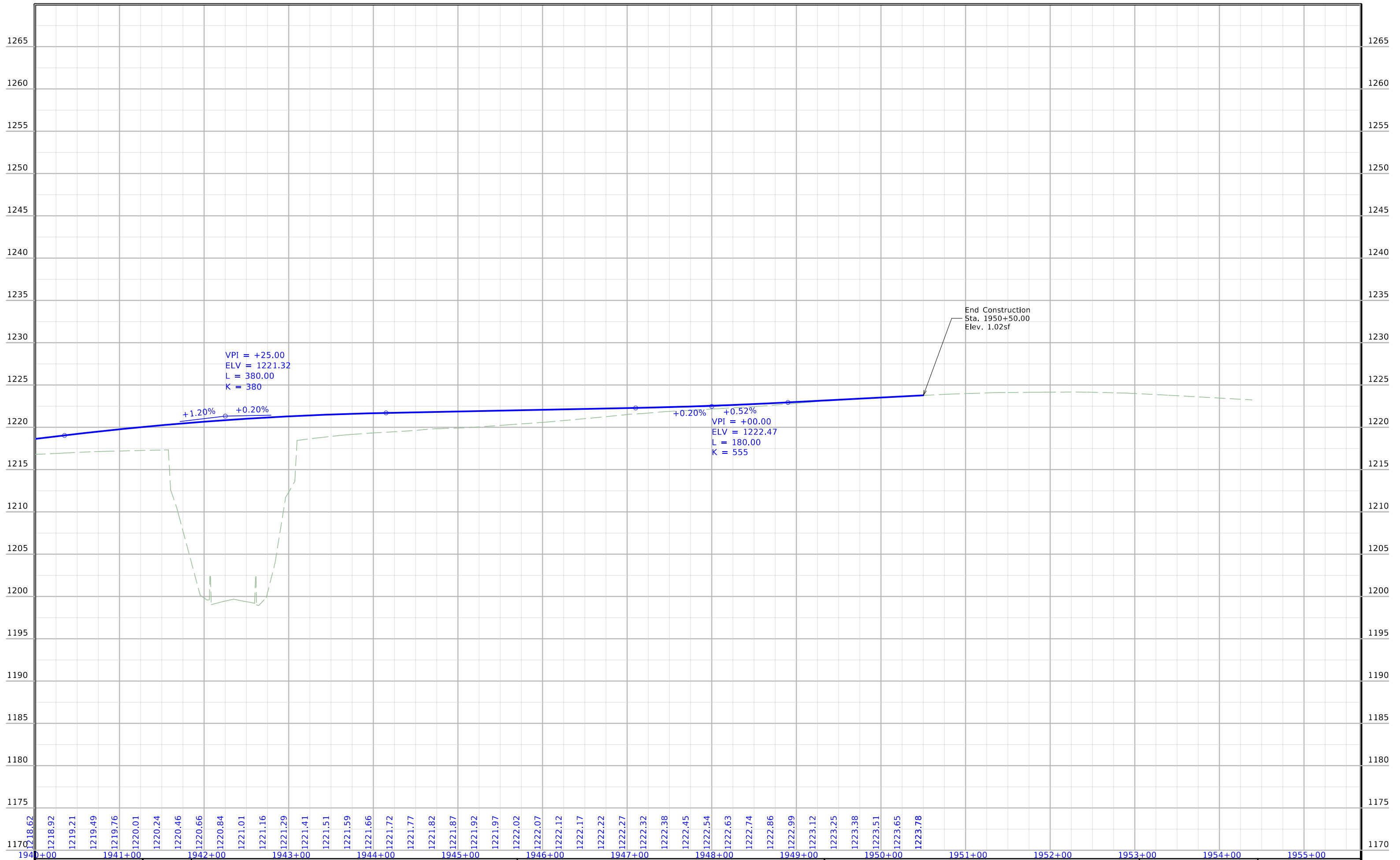
Ramp NE

Carson TWP.
T-74N R-40W
SEC. 1

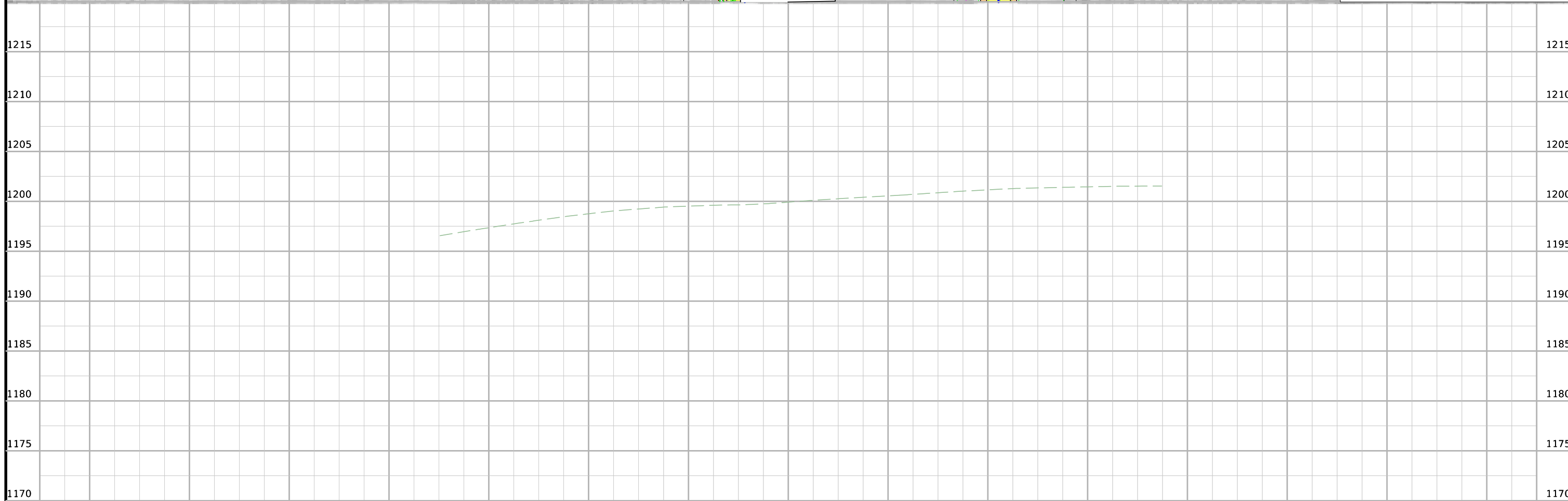
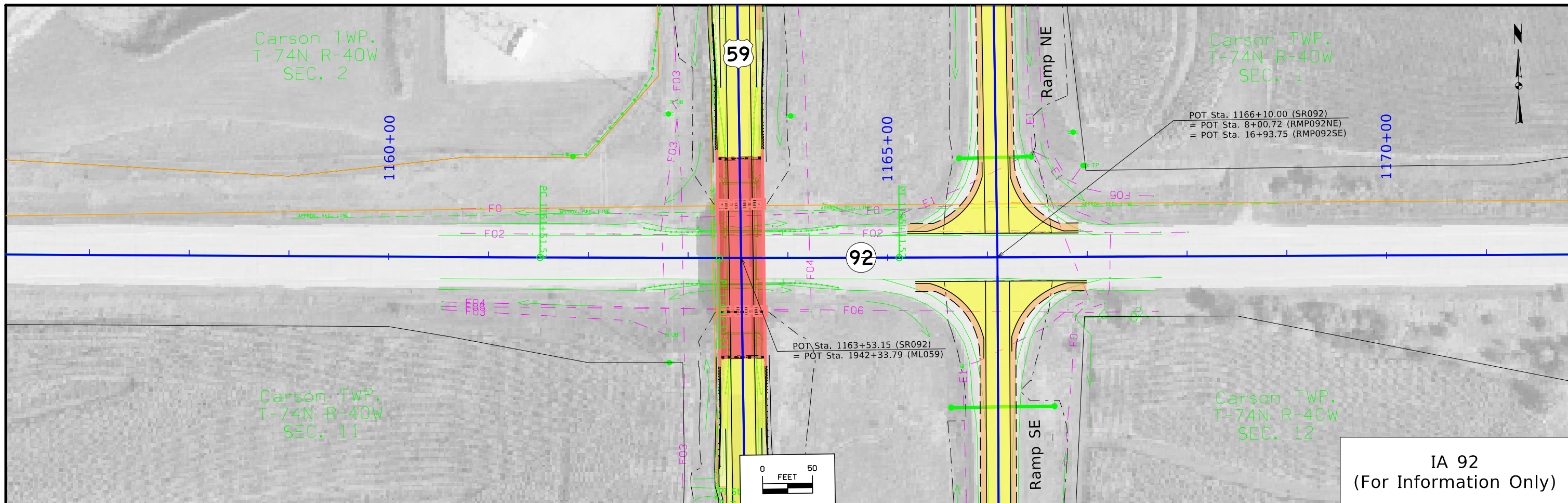


FILE NO.	ENGLISH	DESIGN TEAM Flattery/Bell/	POTTAWATTAMIE COUNTY	PROJECT NUMBER BRF-059-3(47)--38-78	SHEET NUMBER D.4
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1218.62	1218.92	1219.21	1219.49	1219.76	1220.01	1220.24	1220.46	1220.66	1220.84	1221.01	1221.16	1221.29	1221.41	1221.51	1221.59	1221.66	1221.72	1221.77	1221.82	1221.87	1221.92	1221.97	1222.02	1222.07	1222.12	1222.17	1222.22	1222.27	1222.32	1222.38	1222.45	1222.54	1222.63	1222.74	1222.86	1222.99	1223.12	1223.25	1223.38	1223.51	1223.65	1223.78	1940+00	1941+00	1942+00	1943+00	1944+00	1945+00	1946+00	1947+00	1948+00	1949+00	1950+00	1951+00	1952+00	1953+00	1954+00	1955+00
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FILE NO.	ENGLISH	DESIGN TEAM	POTTAWATTAMIE COUNTY										PROJECT NUMBER	SHEET NUMBER			
		Flattery/Bell/	1157+00	1158+00	1159+00	1160+00	1161+00	1162+00	1163+00	1164+00	1165+00	1166+00	1167+00	1168+00	1169+00	1170+00	E.1
												BRF-059-3(47)--38-78					

Survey Information

County: Pottawattamie
PIN: 20-78-059-020
Project Number: BRF-059-3(47)--38-78
Location: At Jct IA 92
Type of Work: Undecided
Project Directory: 7805902020

Survey Personnel

Clayton Henningsen – Survey Party Chief
Jason Arn – Survey Party Chief
Robert Fredrickson – Assistant Survey Party Chief

Date(s) of Survey

Begin Date 10/21/2022
End Date 11/17/2022

General Information

This survey is for possible changes and reconstruction of US 59/IA 92 intersection. This survey request was for the US Hwy 59 and IA Hwy 92 corridors. 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

Nearby Iowa Real Time Network reference stations were utilized to obtain horizontal and vertical control on primary project control points. Three five-minute observations were taken with a minimum two-hour time span between and used in a weighted average to obtain final coordinate values. 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 6
(U.S. SURVEY FOOT)
VERTICAL DATUM: NAVD88
GEOID MODEL: 2018u3

Alignment Information

The horizontal alignments for IA 92 and US 59 were provided by the district 4 survey 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: 2018u3

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: 2018u3

<u>Point Name</u>	<u>Northing</u>	<u>Easting</u>	<u>Elevation</u>	<u>Feature Definition-Description</u>
78059045	6956696.64	16590762.68	1204.20	CP FENO MONUMENT APPROX .3 MILE S OF US59/IA92 INTERSECTION ON US 59 ON EAST TOP OF BACKSLOPE
780590455	6959548.53	16590756.06	1221.02	CP FENO MONUMENT APPROX .3 MILE N OF US59/IA92 INTERSECTION ON US 59 ON EAST TOP OF BACKSLOPE
500	6960361.81	16590671.70	1202.52	BM FD IHC INLET HDWL 2X2 RCB
780920289	6958265.85	16592019.94	1204.78	CP CENTER PUNCH ON IRON PIN IN CONC MONUMENT APPROX .3 MILE E OF US59/IA92 INTERSECTION ON IA 92 ON NORTH TOP OF BACKSLOPE
F149 RESET	6953031.81	16590813.29	1197.13	CP NGS MONUMENT AS DESCRIBED IN GOOD CONDITION
H149 RESET	6958174.41	16585416.88	1067.59	CP NGS MONUMENT AS DESCRIBED IN GOOD CONDITION

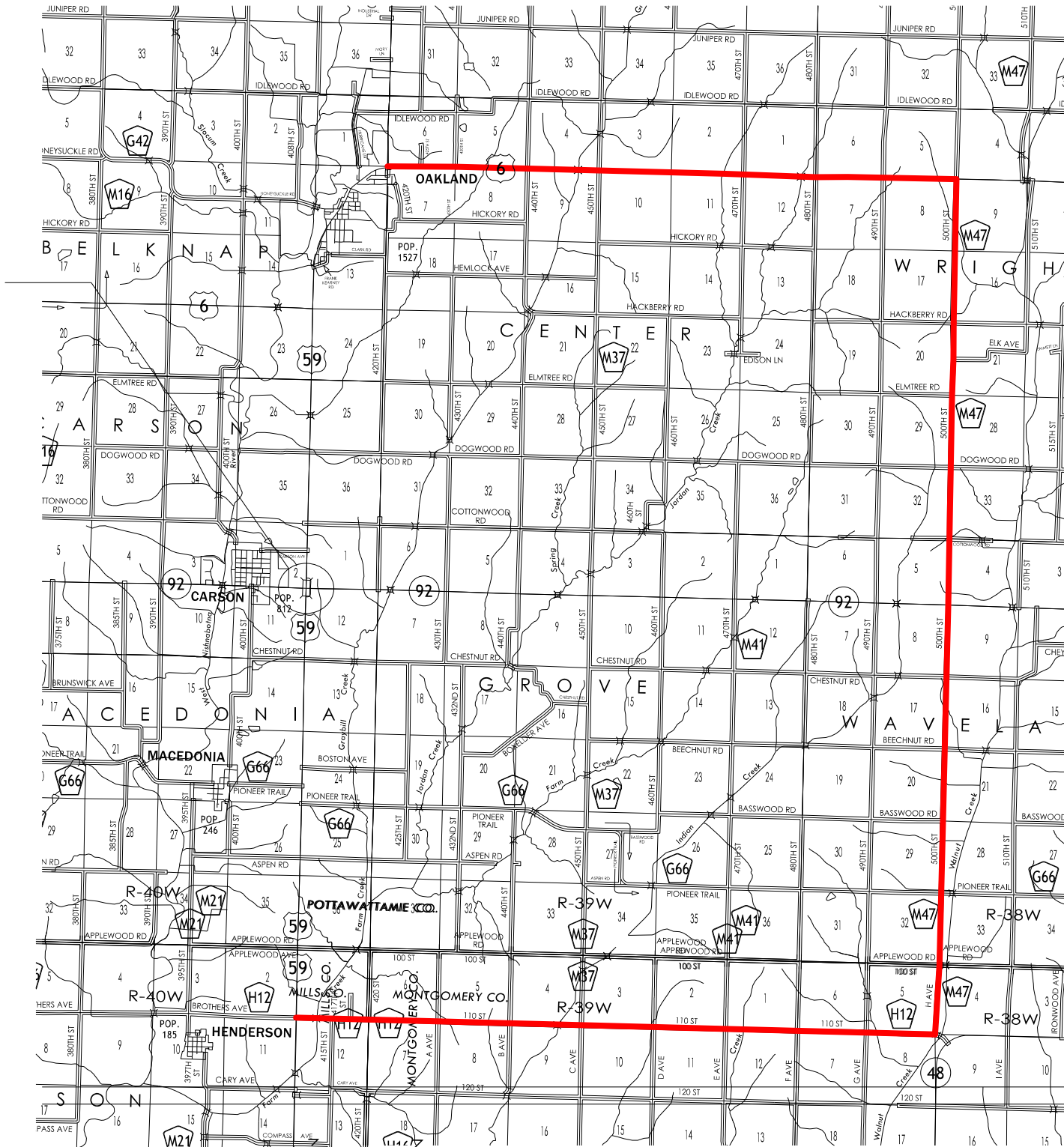
108-23A 08-01-08
TRAFFIC CONTROL PLAN
Maintain traffic on US 59 at all times via the ramps. Maintain traffic on IA 92 at all times except during bridge removal and beam placement. Maintain traffic on ramps; only one ramp may be closed at a time.

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.										
<table border="1" style="width: 100%;"> <thead> <tr> <th style="width: 50%;">Project</th> <th style="width: 50%;">Type of Work</th> </tr> </thead> <tbody> <tr> <td>None provided.</td> <td></td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	Project	Type of Work	None provided.							
Project	Type of Work									
None provided.										

108-26A 08-01-08
STAGING NOTES
<p>Stage 1: Remove US 59 bridge over IA 92 Build new bridge Grade and pave US 59 from Sta. to Sta.</p> <p>Stage 2: Resurface ramps</p>

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
			None provided.									

PROJECT SITE
ML059
MP 45.3












POTTAWATTAMIE COUNTY DETOUR
At Junction of IA 92
BRF-059-3(47)-38-78
PIN: 20-78-059-020

LEGEND	
CONCEPT DETOUR ROUTE	—
POTTAWATTAMIE TRAFFIC CONTROL	

**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

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

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

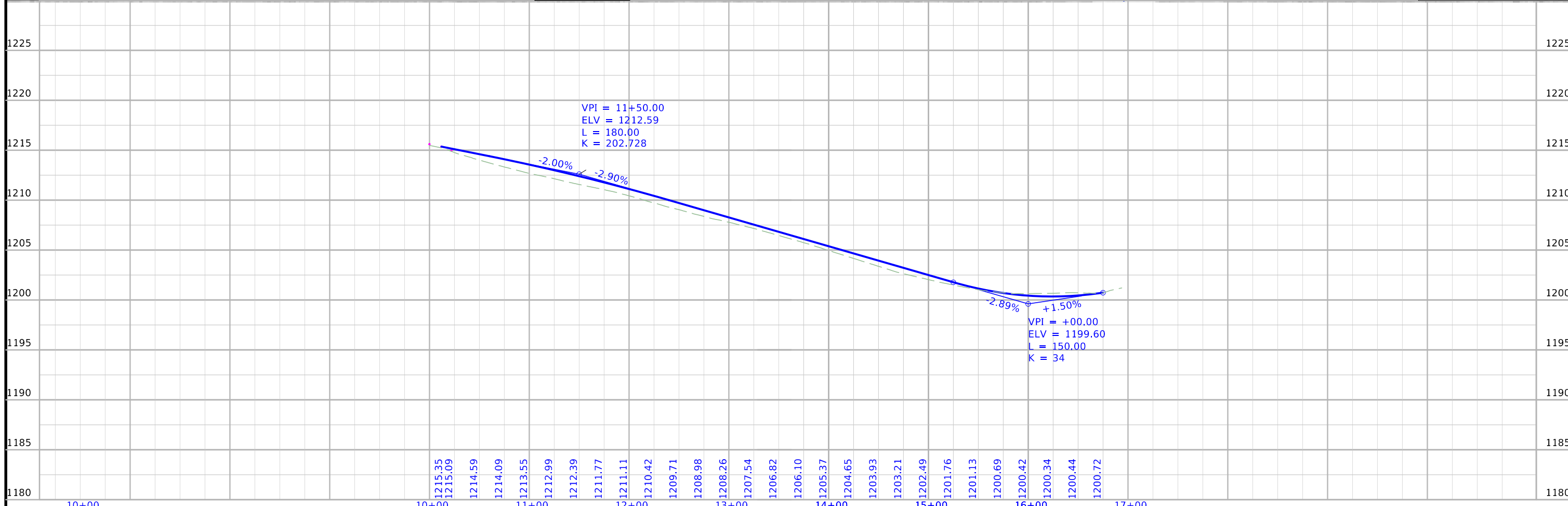
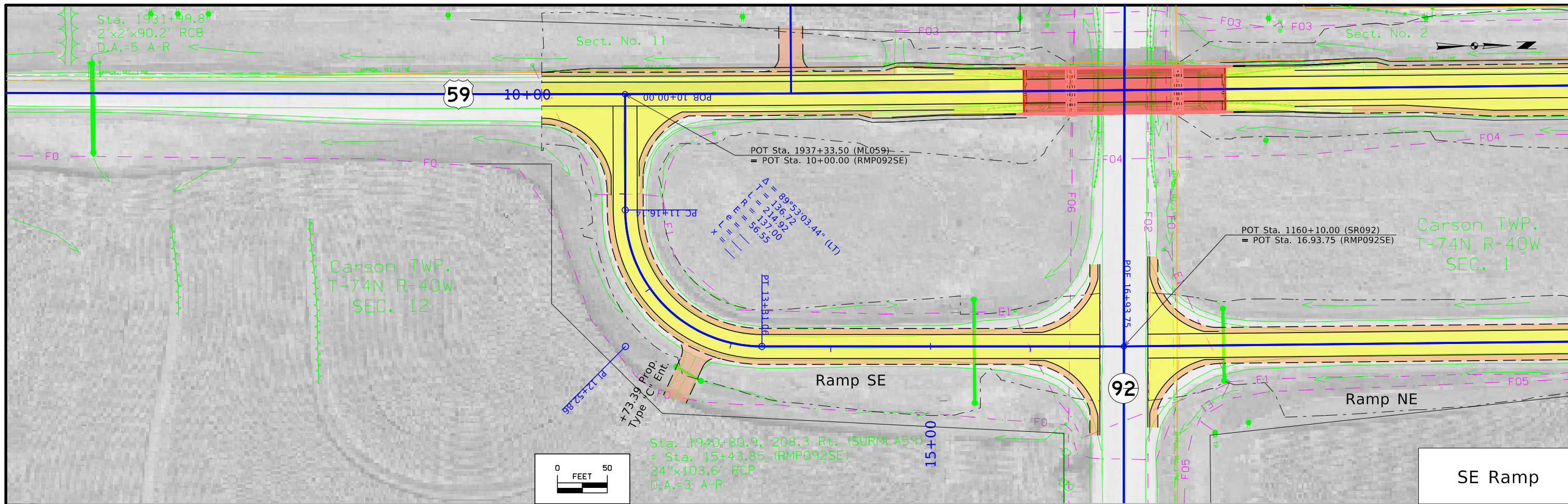
**PLAN VIEW PATTERN AND SYMBOL LEGEND
OF TRAFFIC CONTROL AND STAGING SHEETS**

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

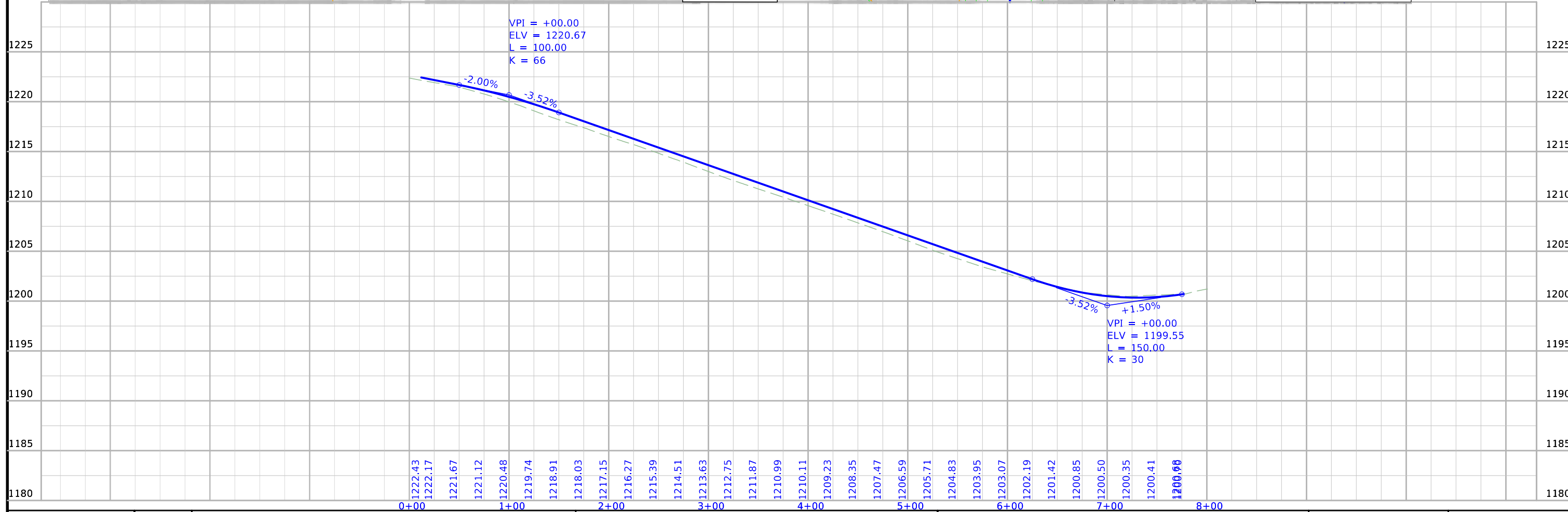
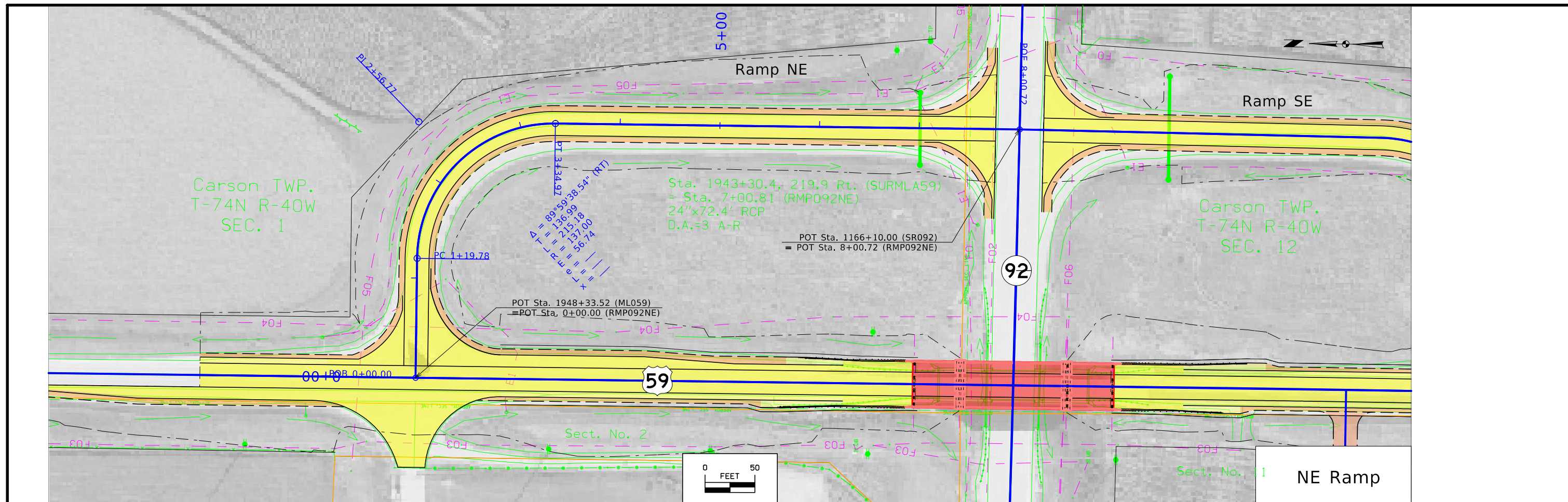
NOTE: Device spacing according to Standard Road Plans unless specifically dimensioned.

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

(COVERS SHEET SERIES J)



FILE NO.	ENGLISH	DESIGN TEAM Flattery/Bell/	POTTAWATTAMIE COUNTY	PROJECT NUMBER BRF-059-3(47)--38-78	SHEET NUMBER K.1
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FILE NO.	ENGLISH	DESIGN TEAM Flattery/Bell/	POTTAWATTAMIE COUNTY	PROJECT NUMBER BRF-059-3(47)--38-78	SHEET NUMBER K.2
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CROSS SECTION VIEW COLOR LEGEND

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

NOTES:

Text

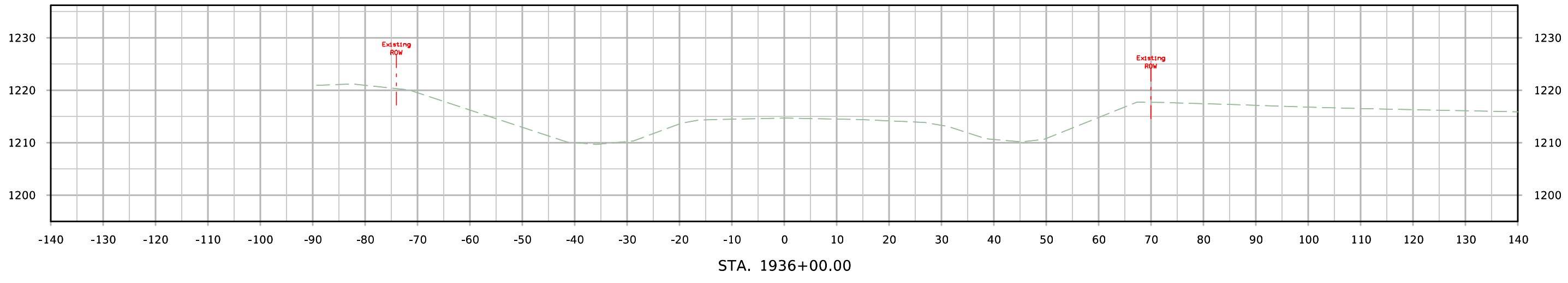
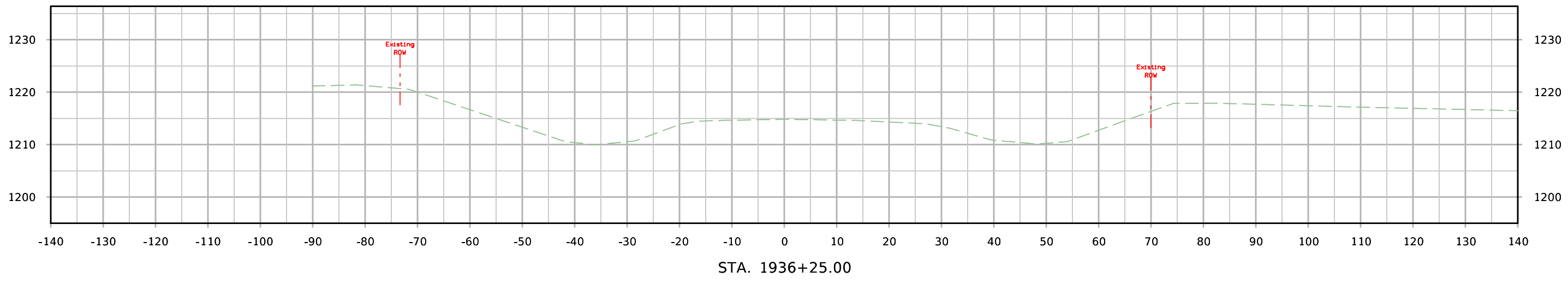
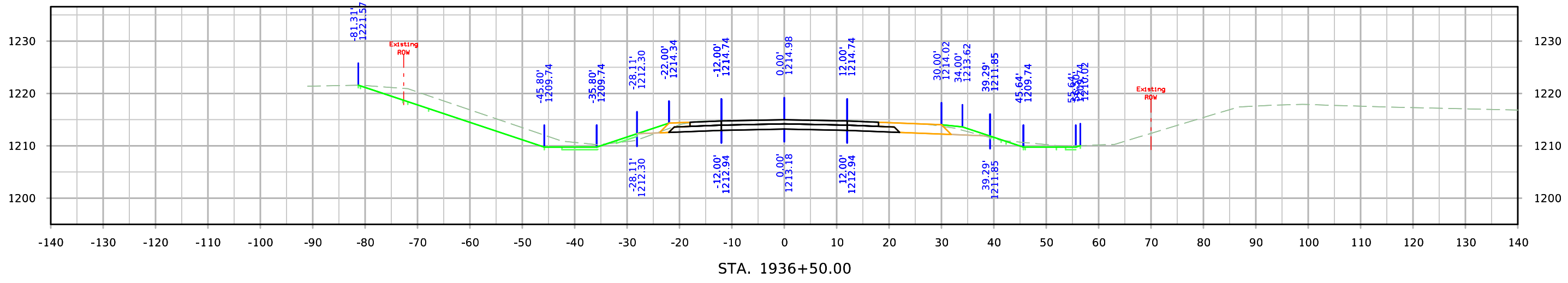
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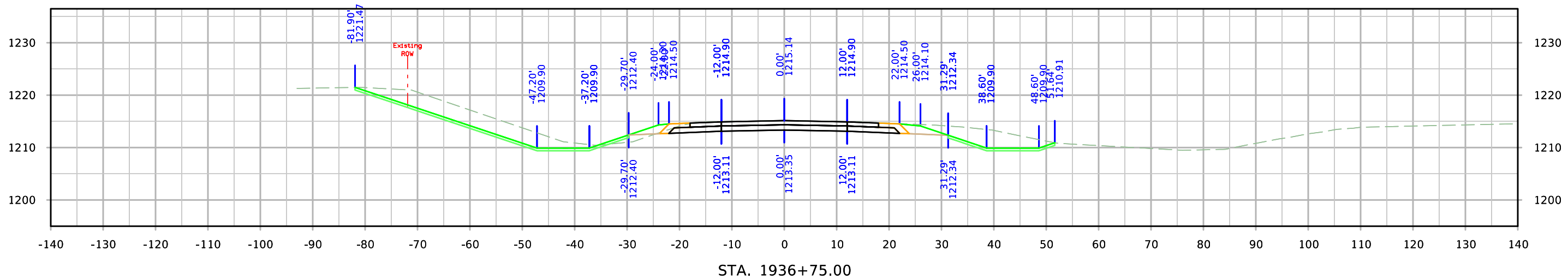
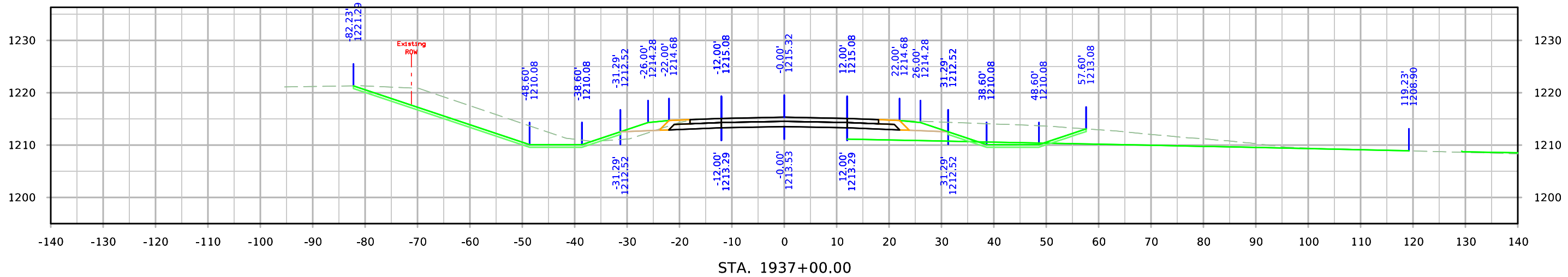
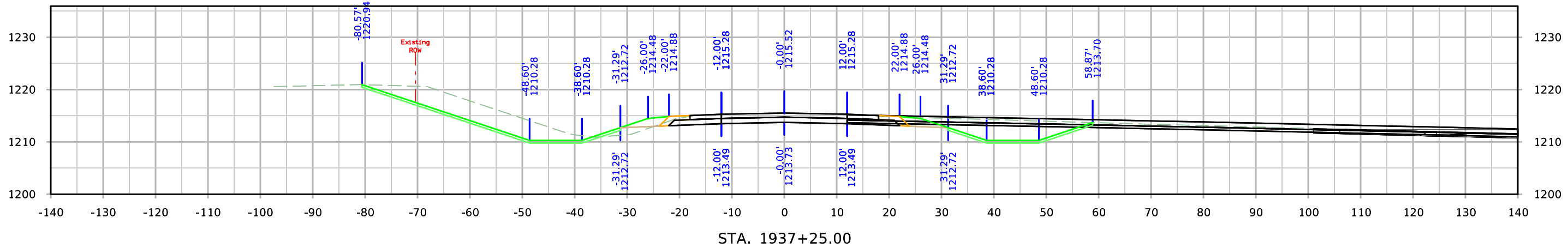
CROSS SECTIONS LEGEND AND INFORMATION SHEET

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

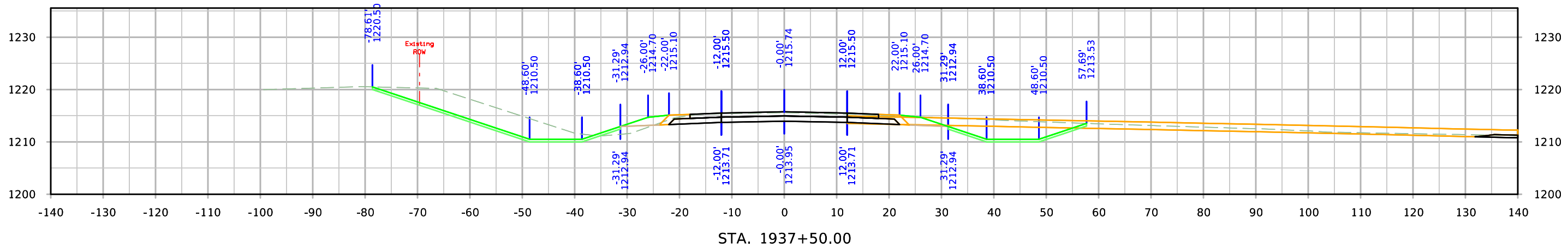
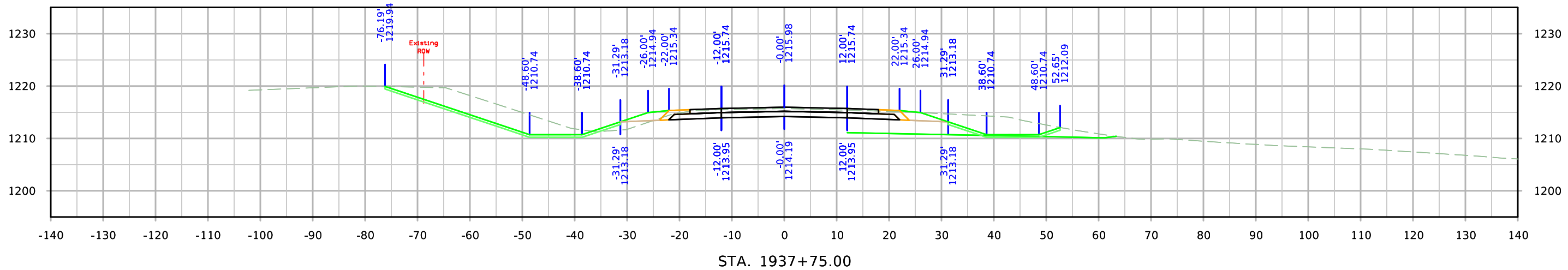
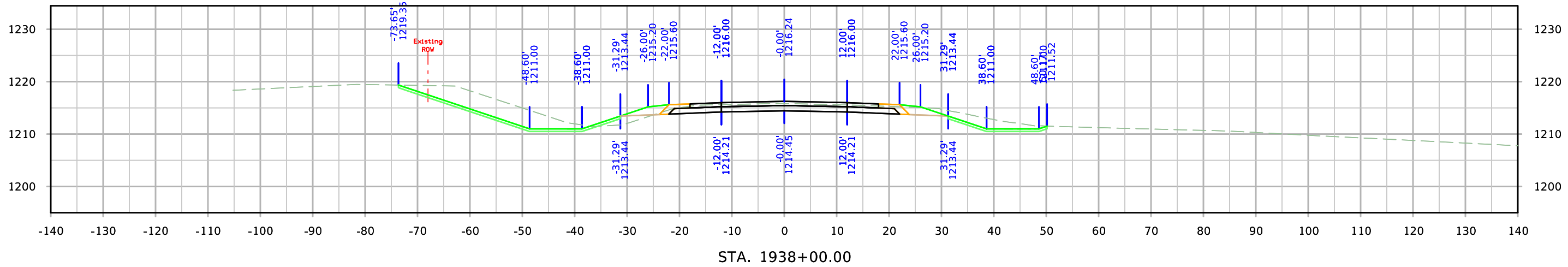
ML059



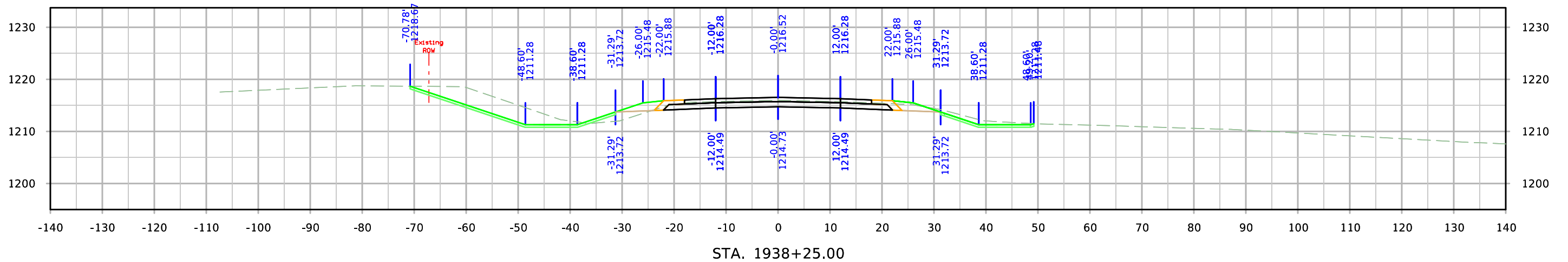
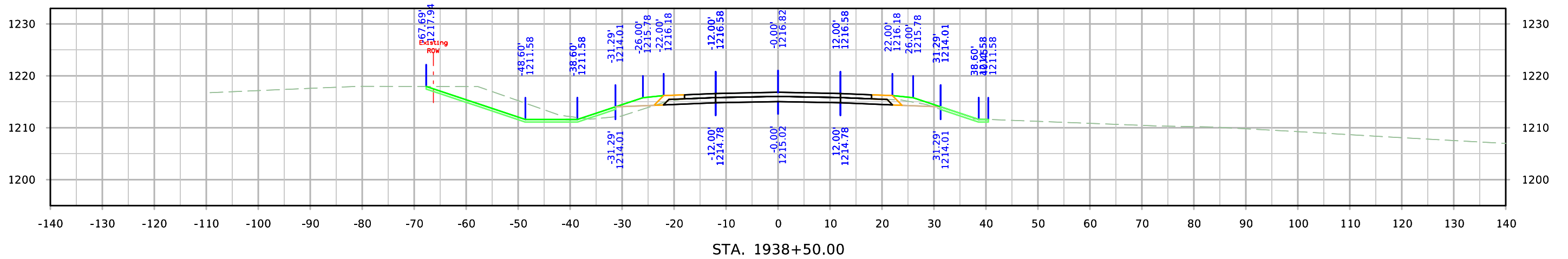
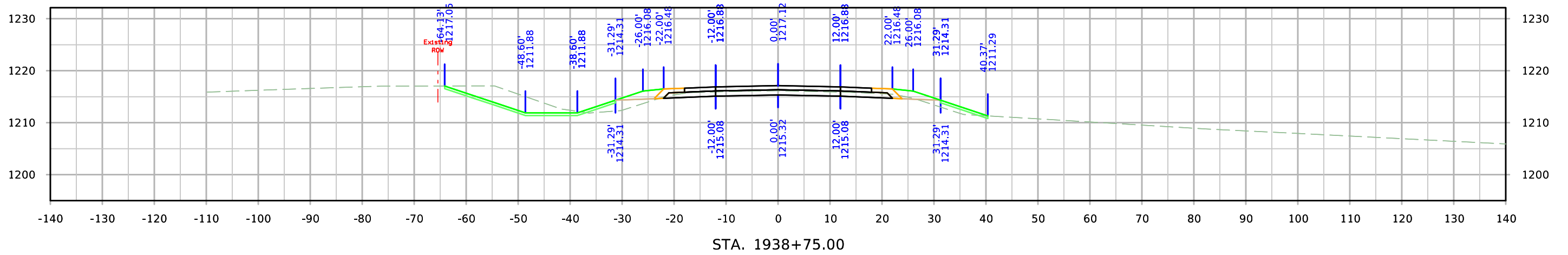
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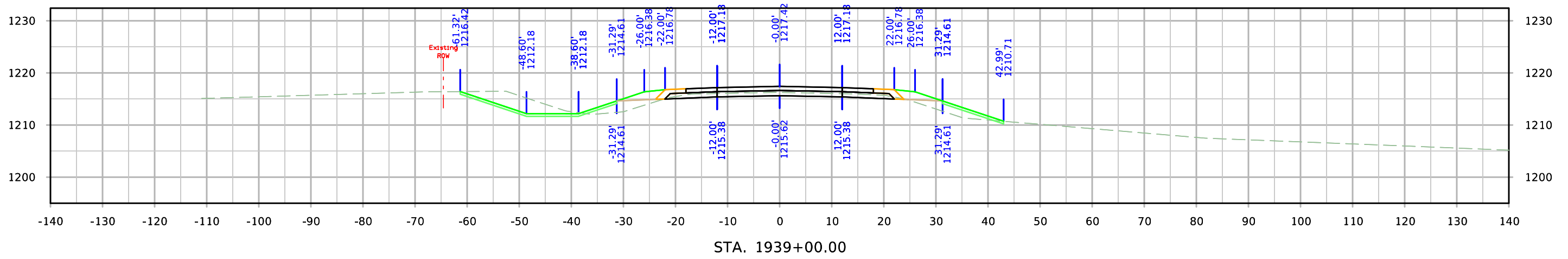
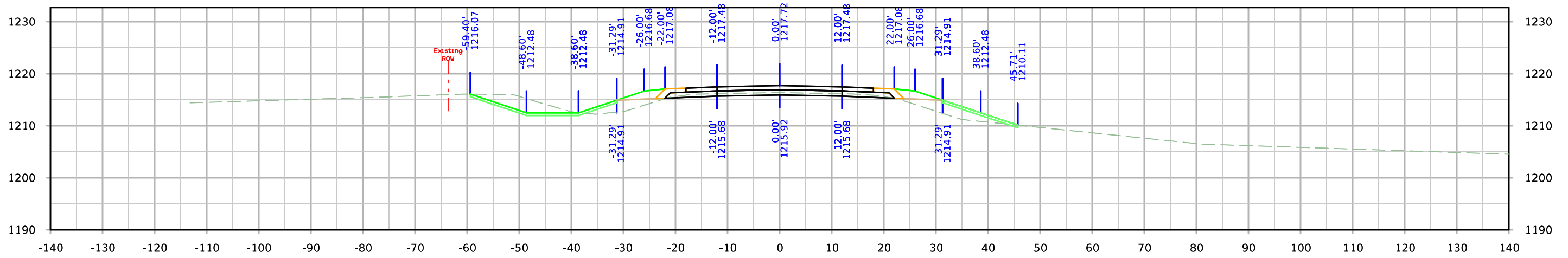
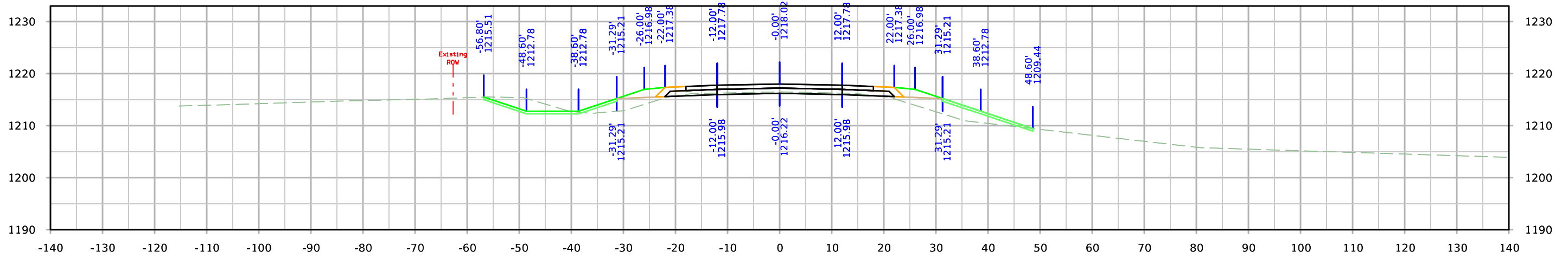
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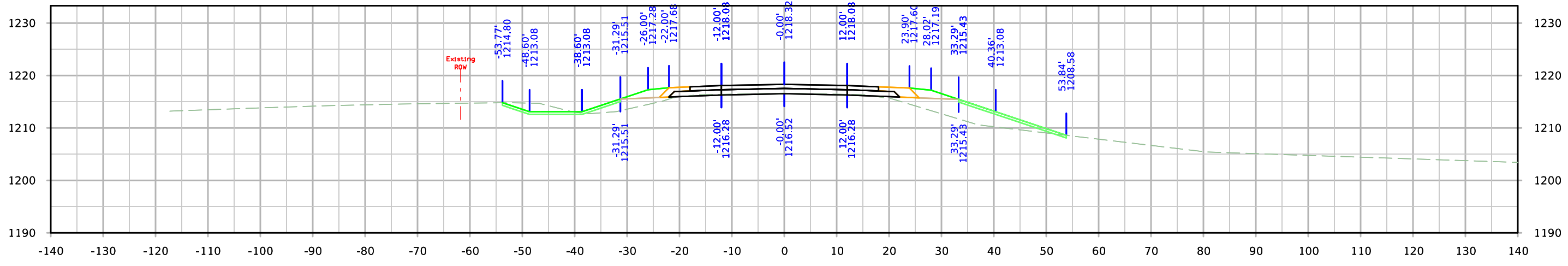
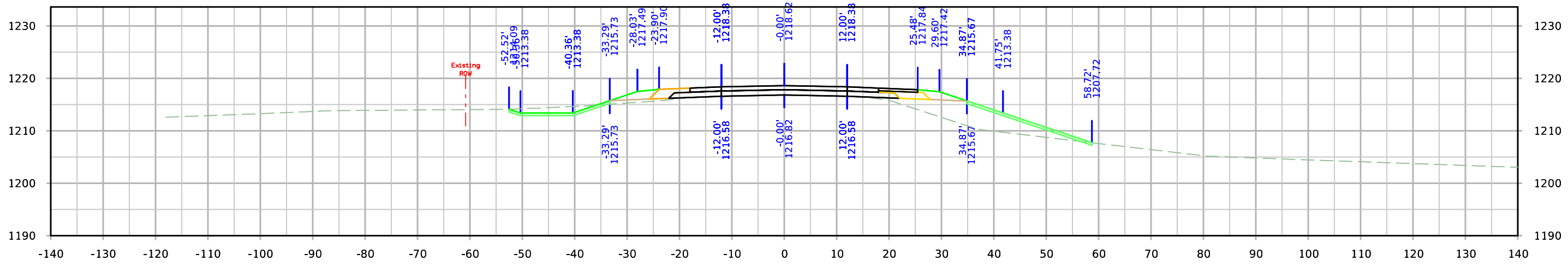
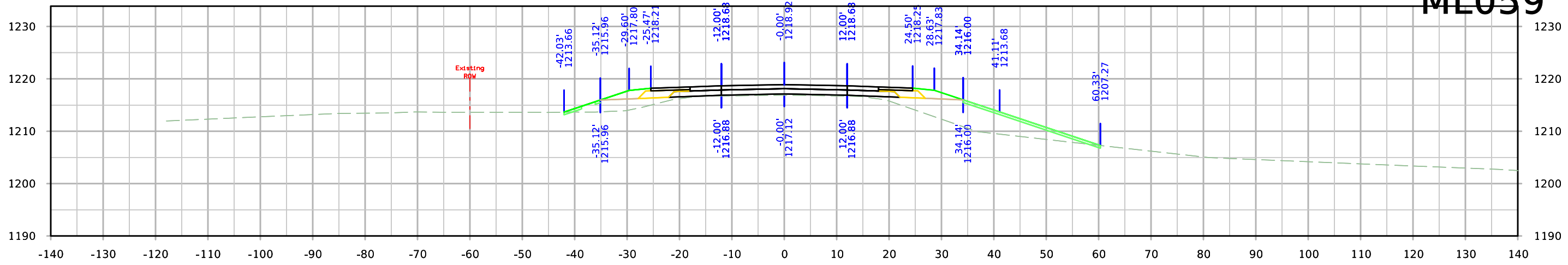
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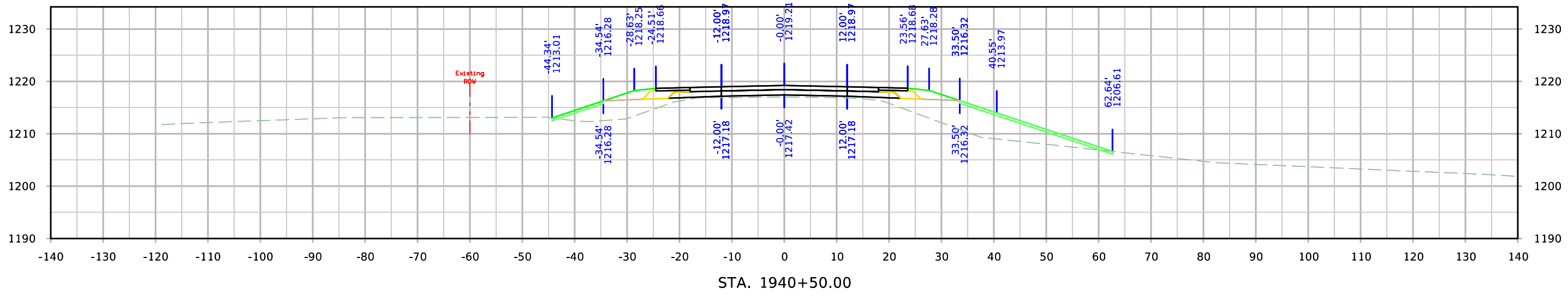
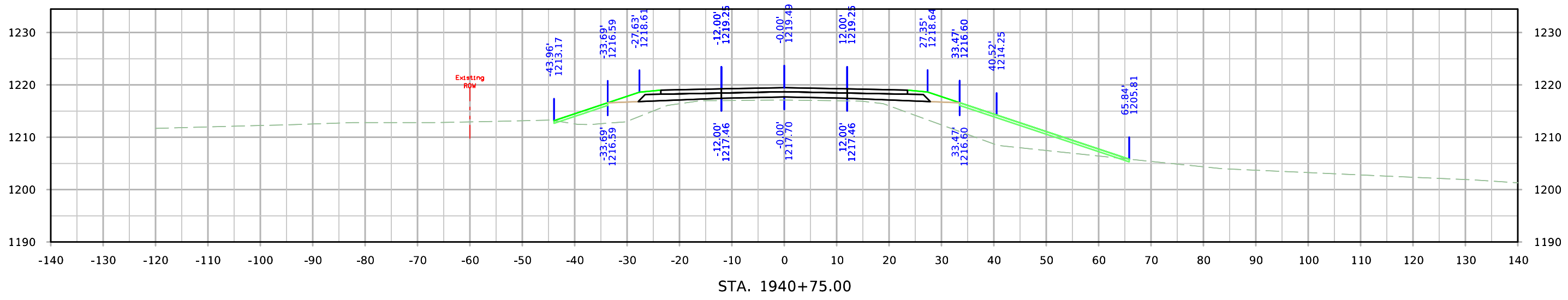
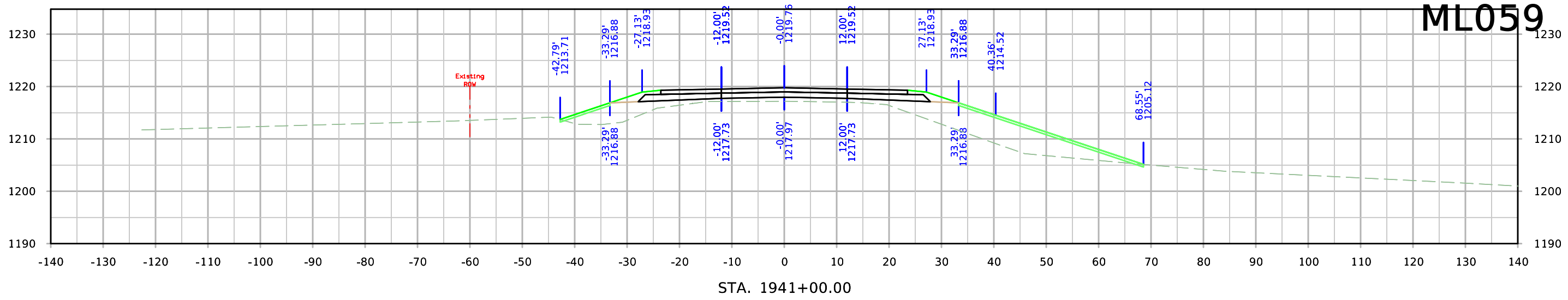
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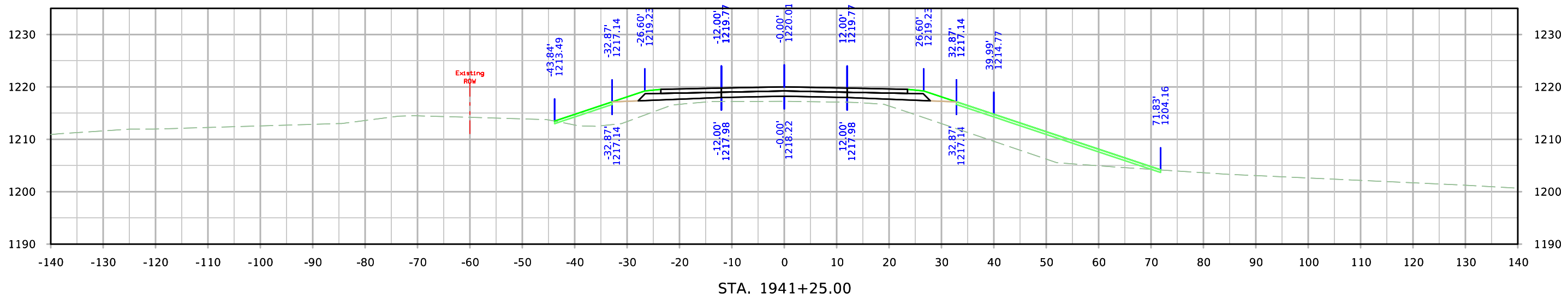
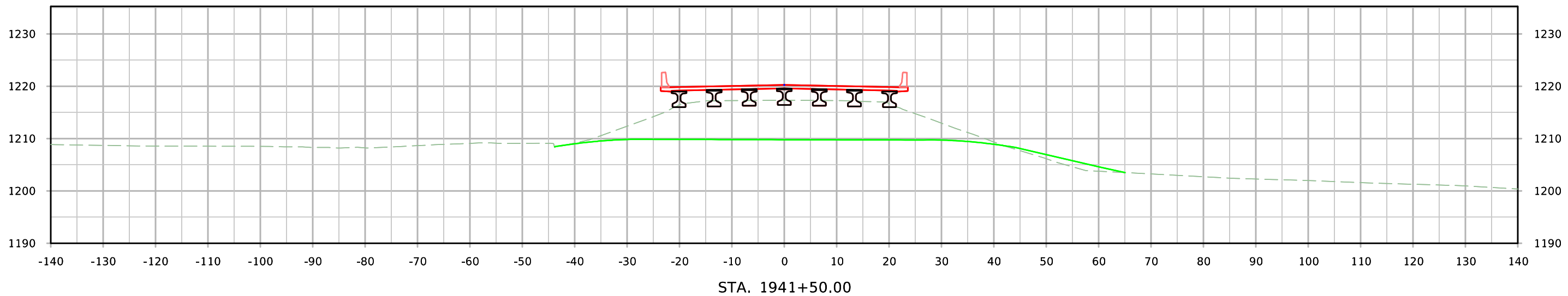


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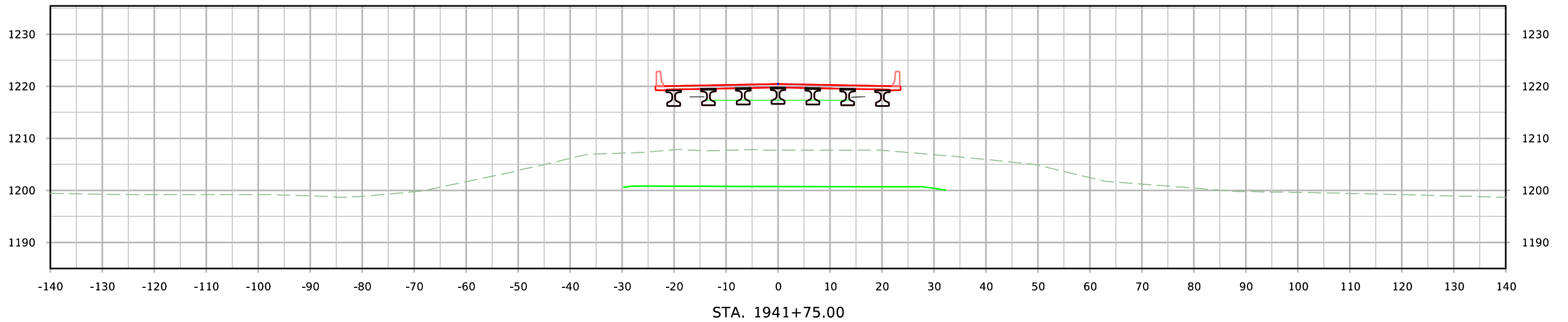
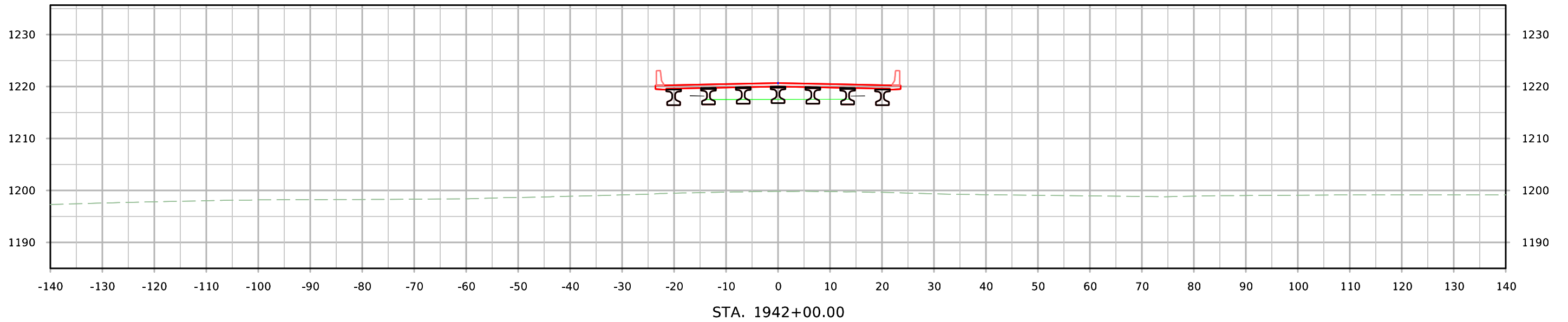


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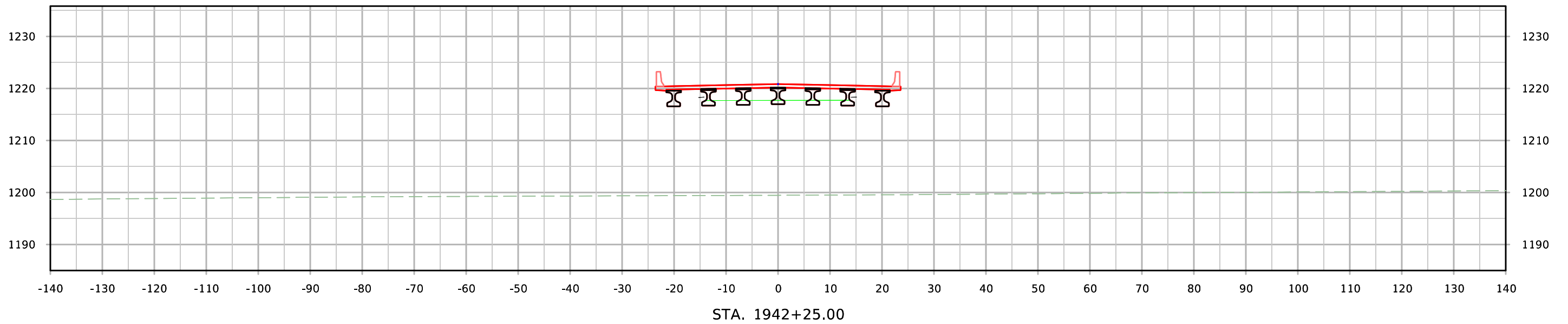
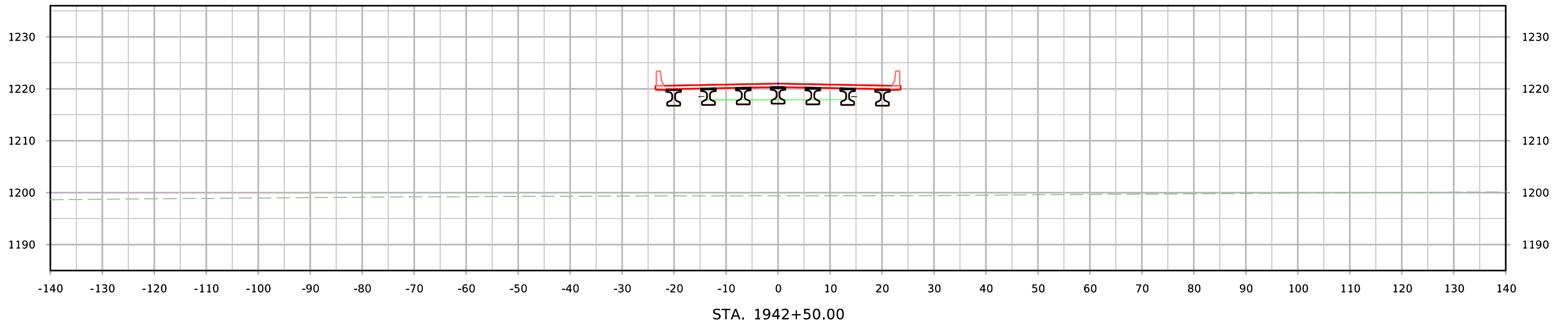


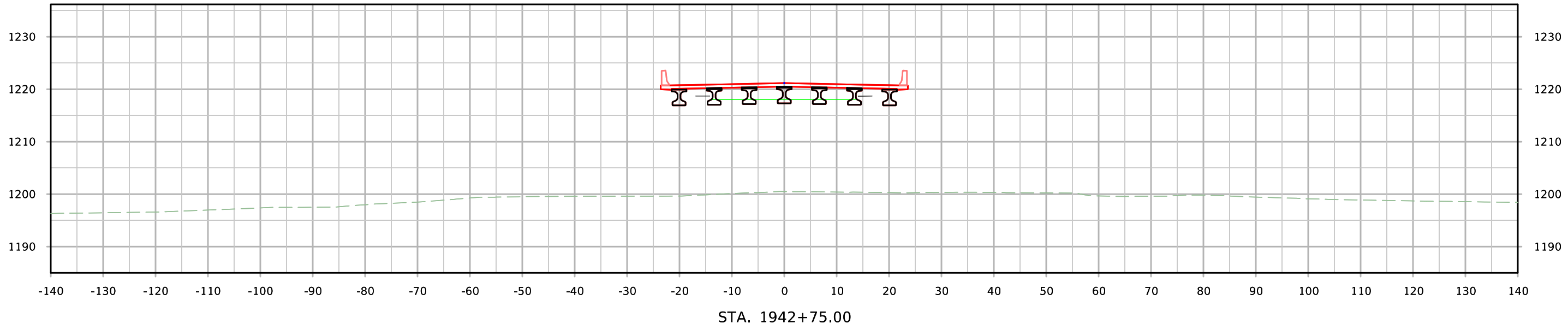
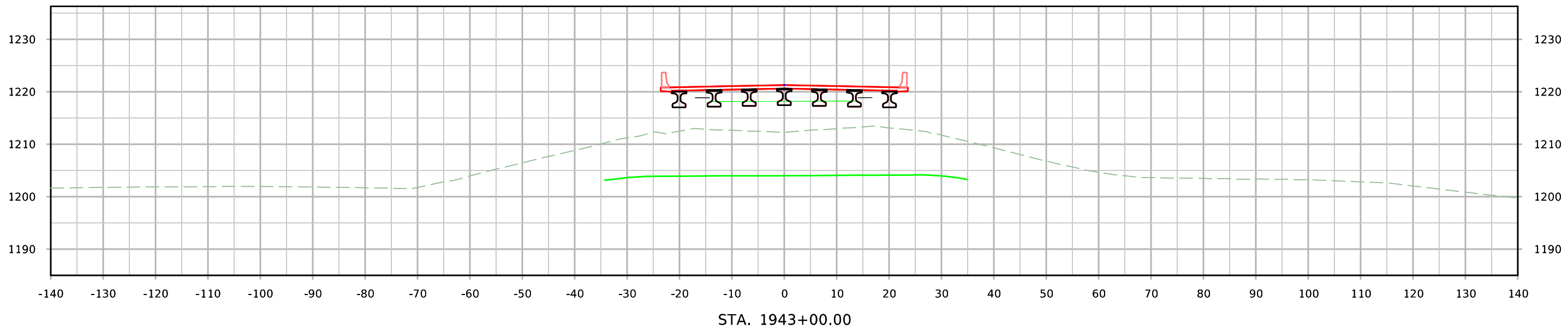


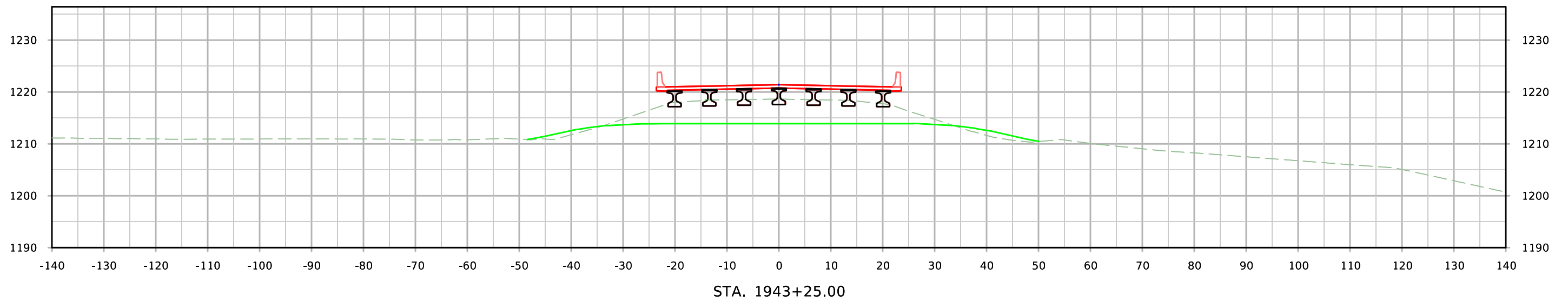
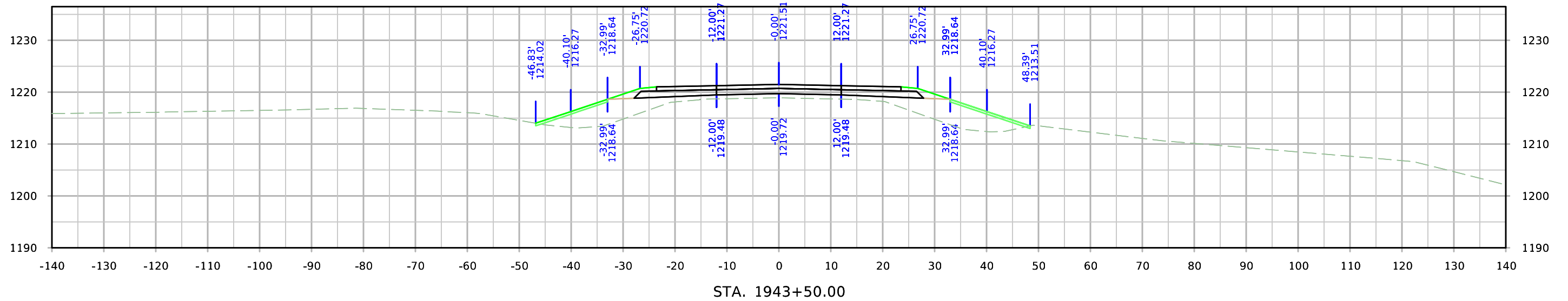
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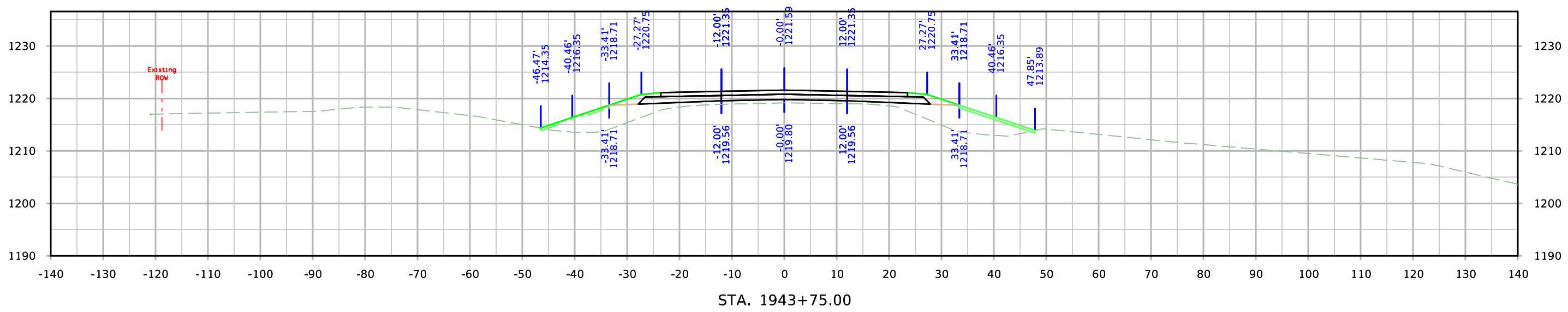
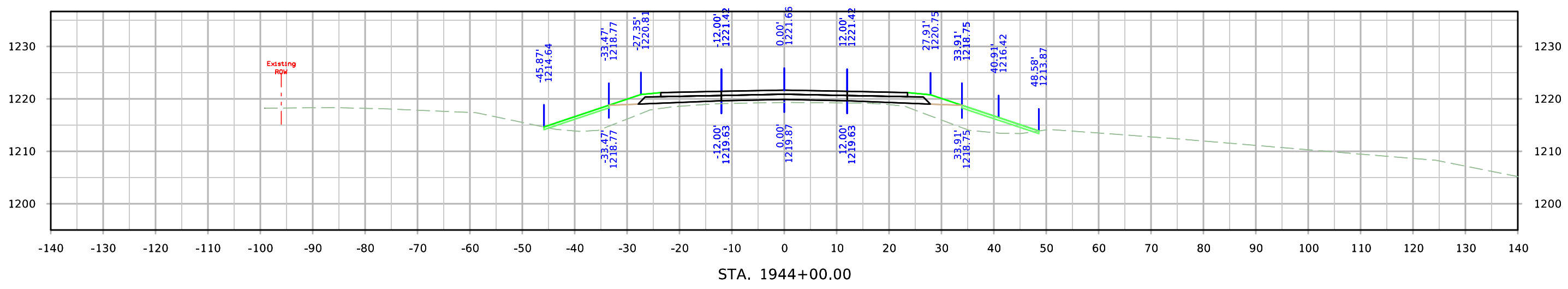
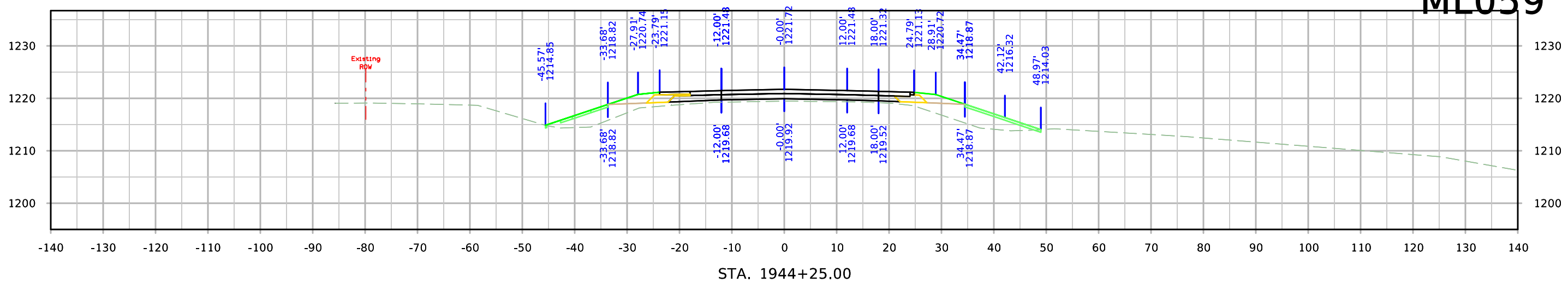
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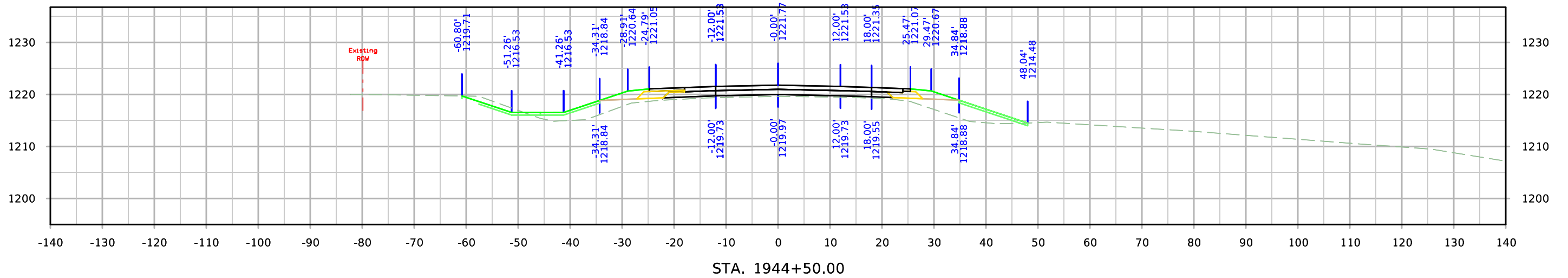
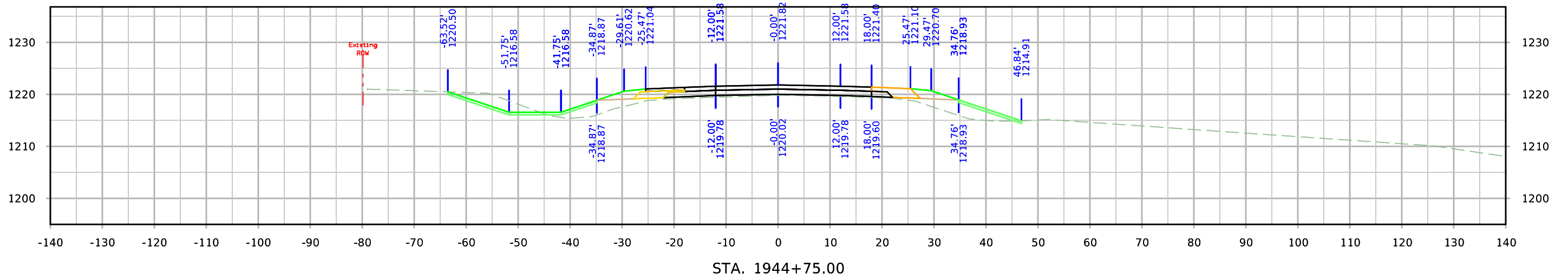
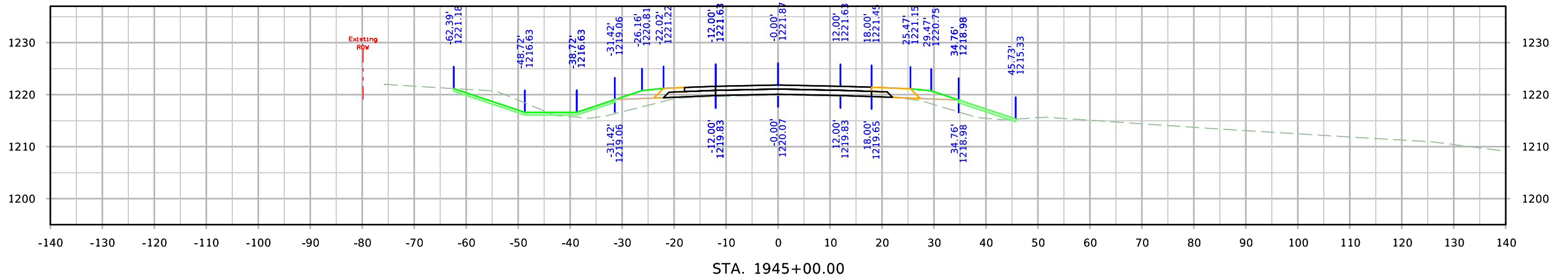




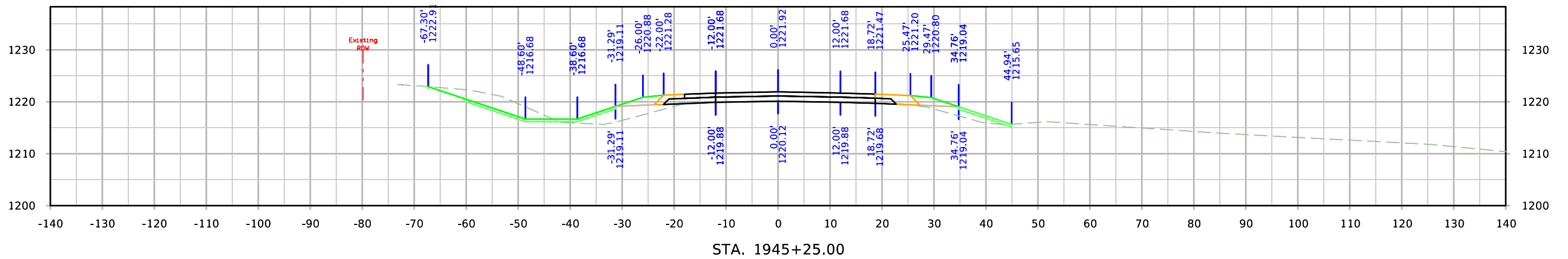
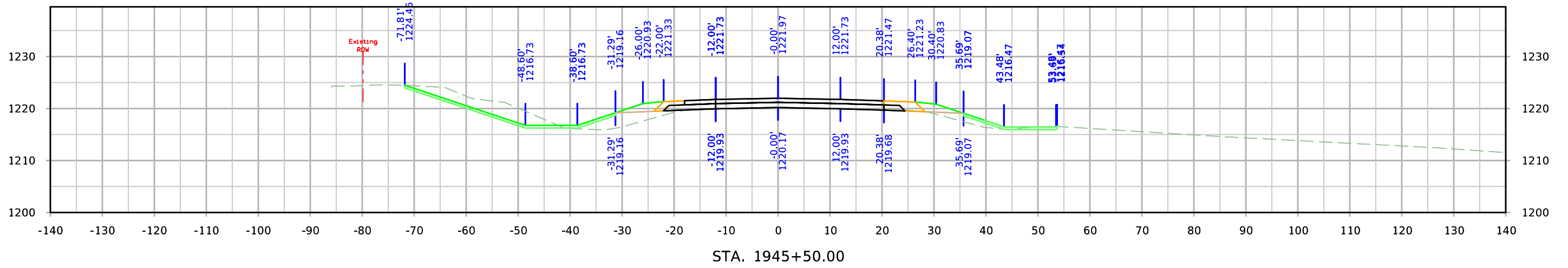
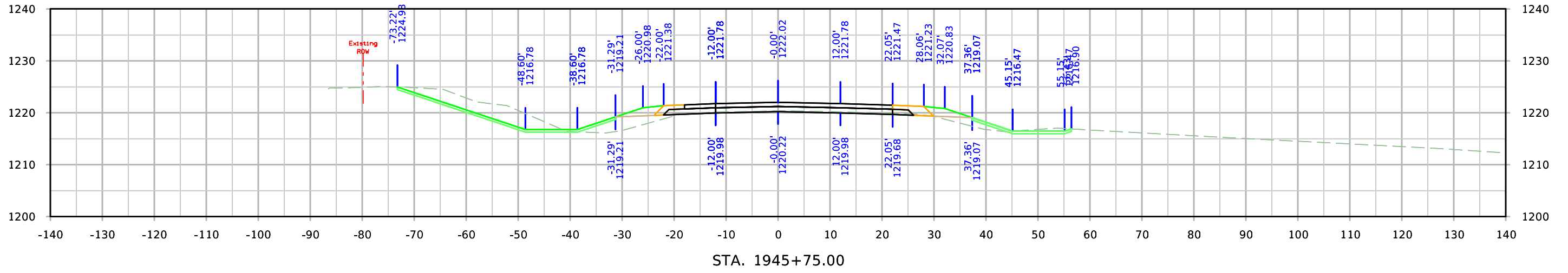
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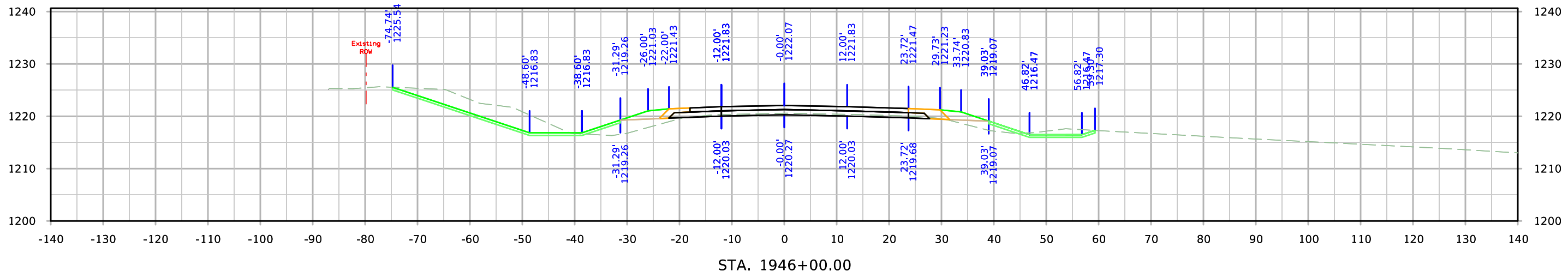
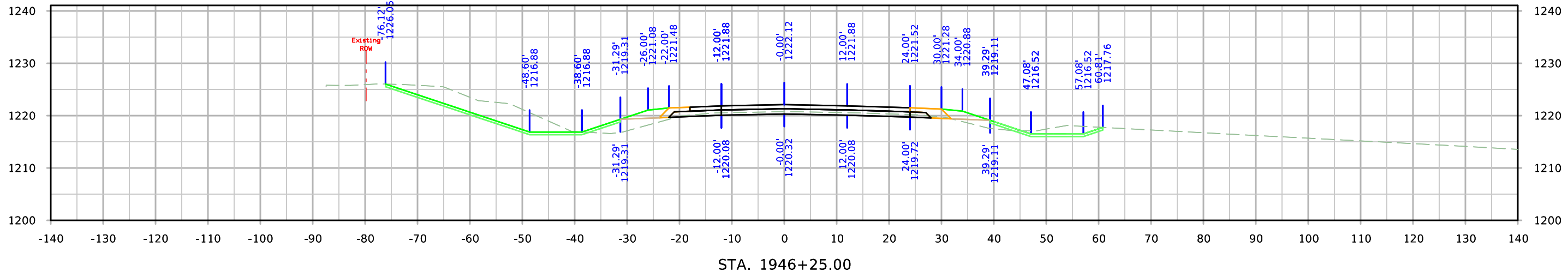
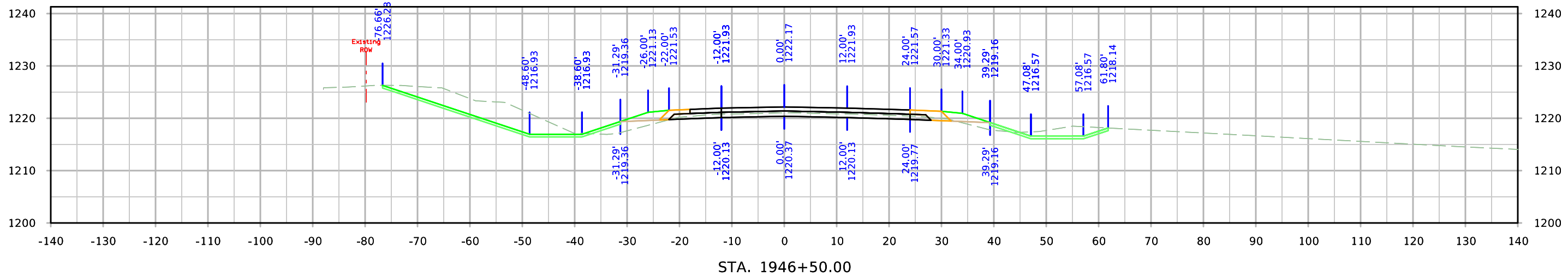
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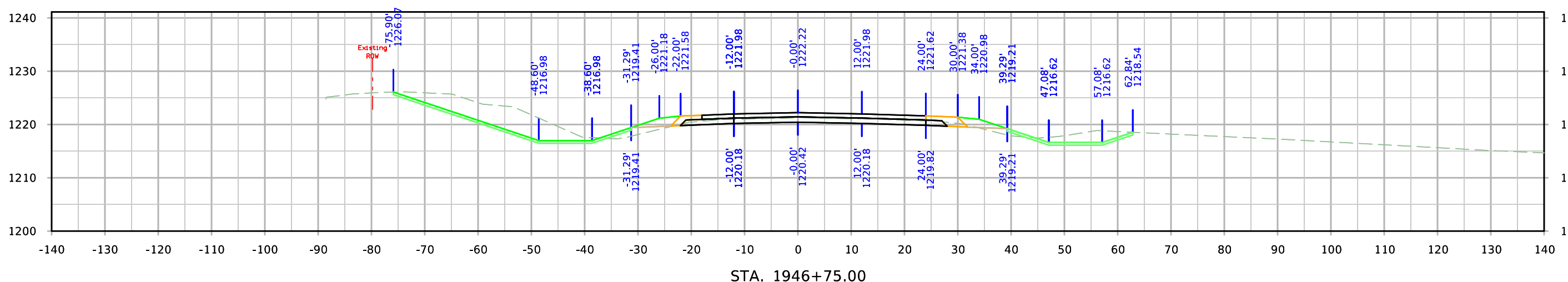
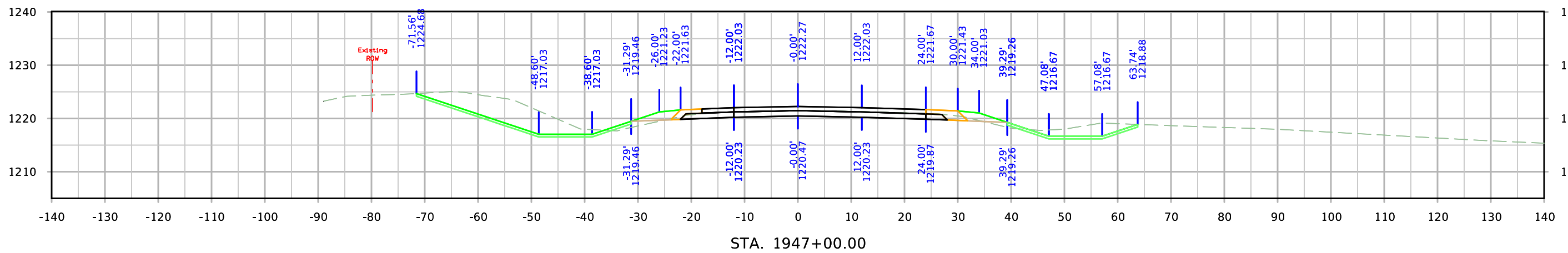
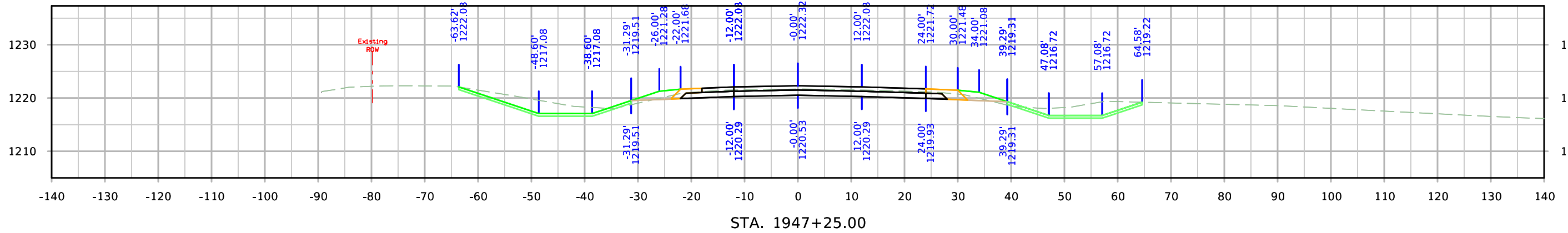
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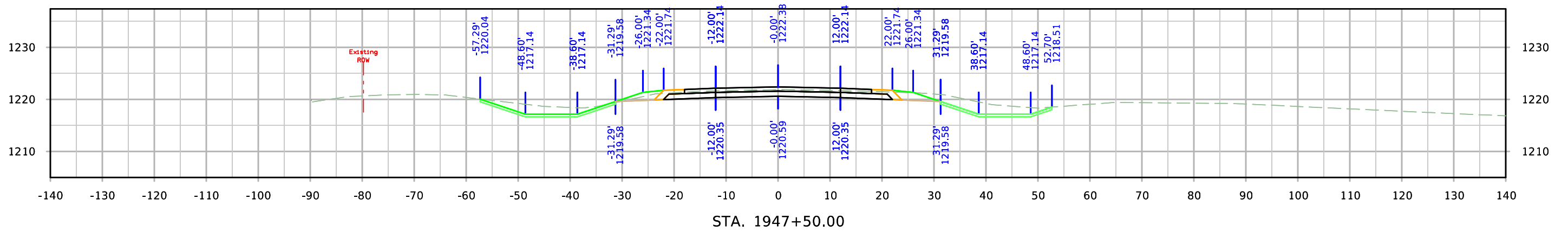
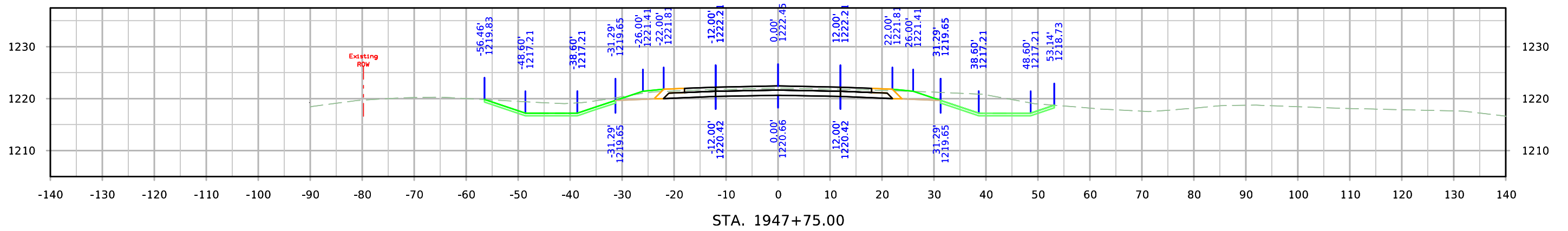
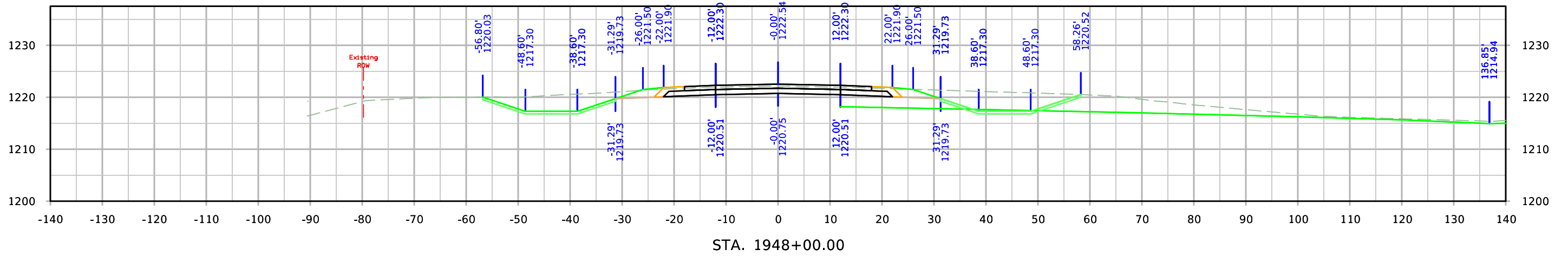
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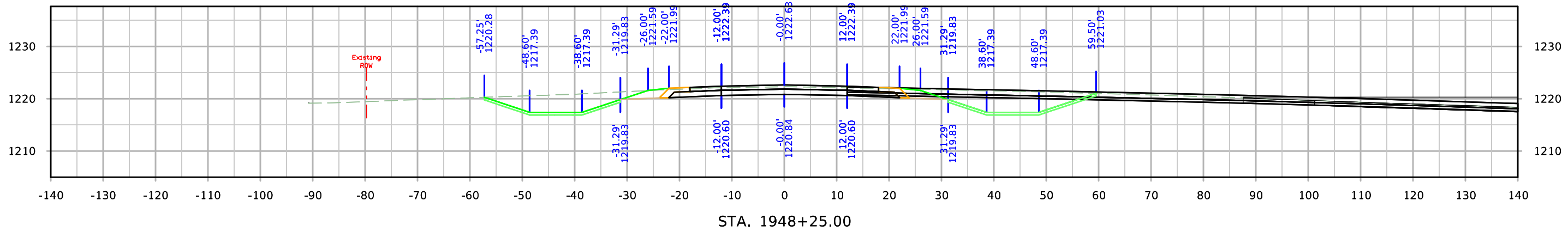
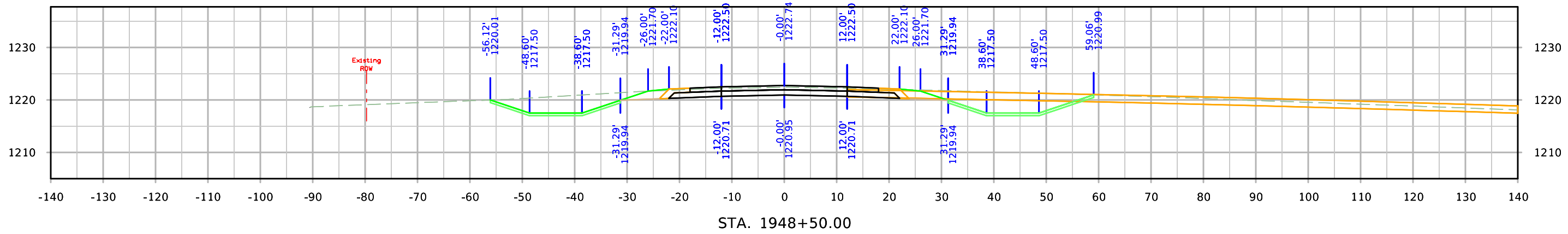
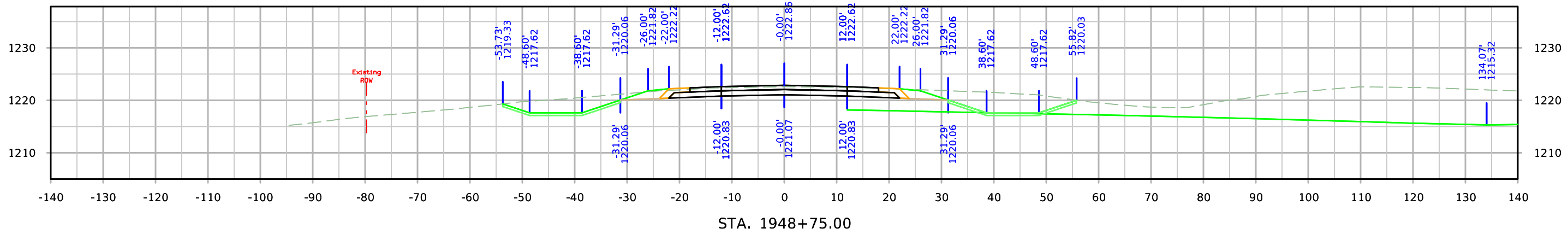
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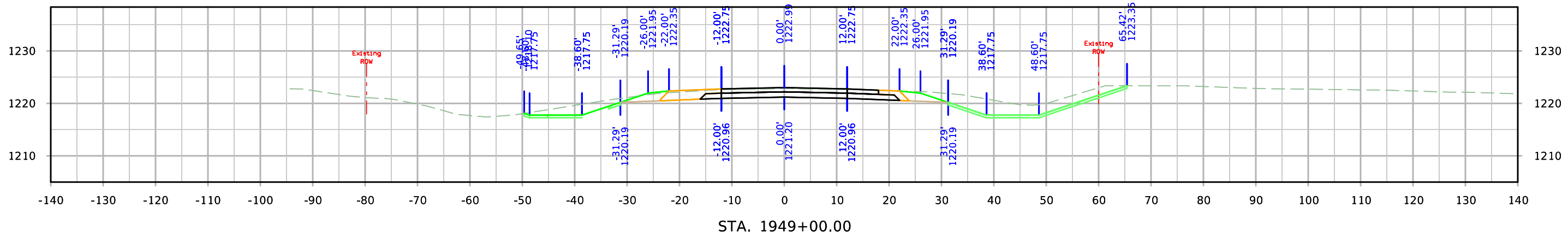
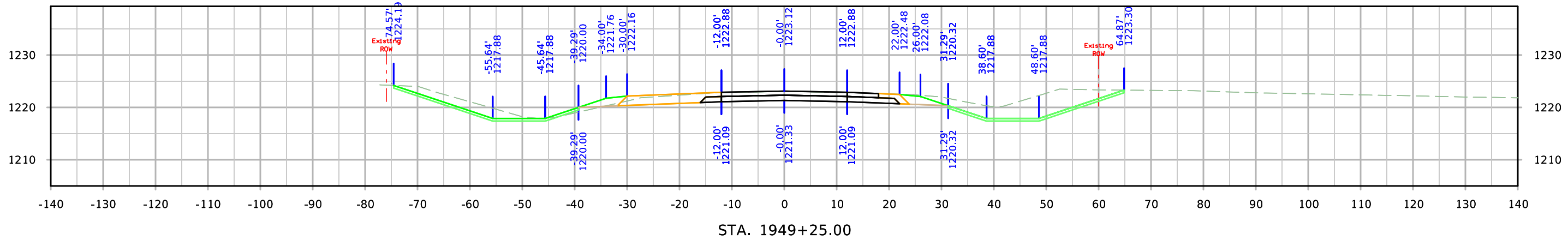
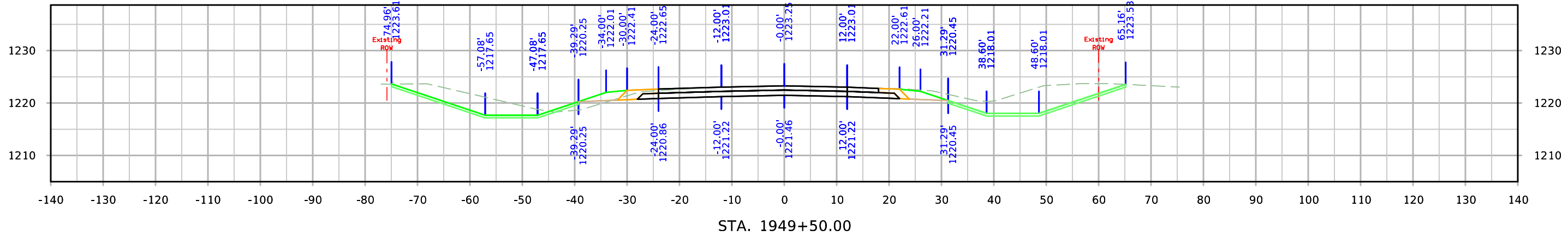
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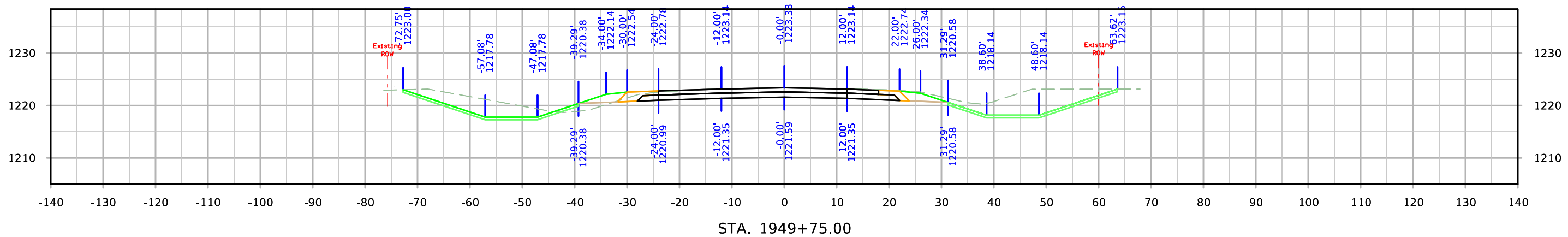
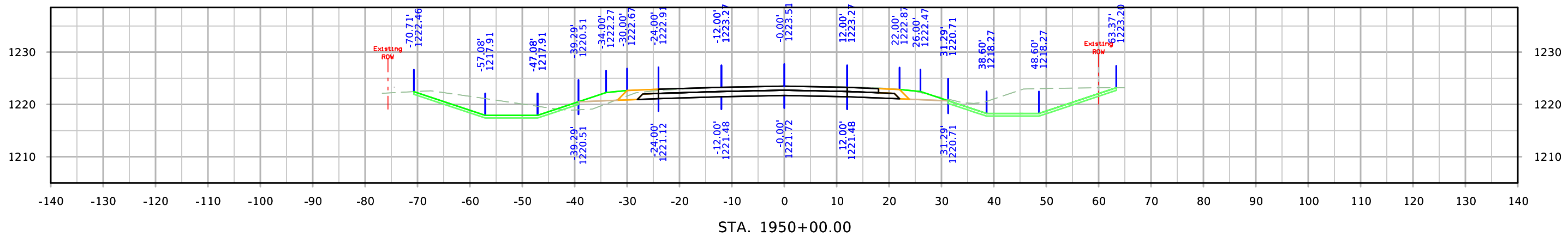
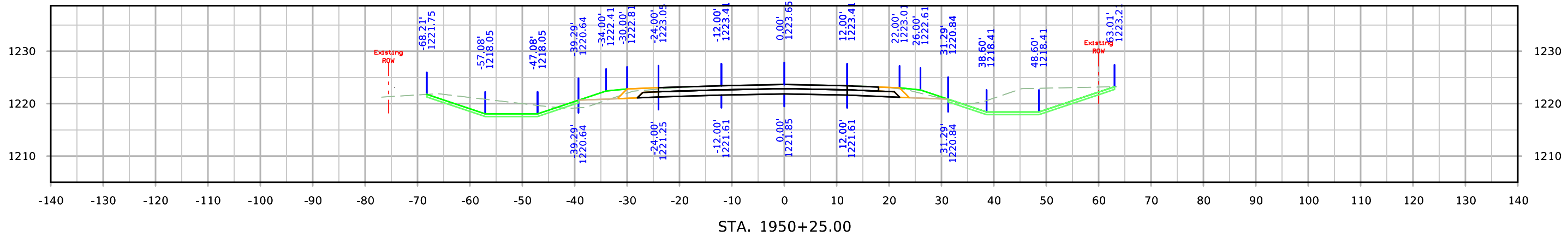
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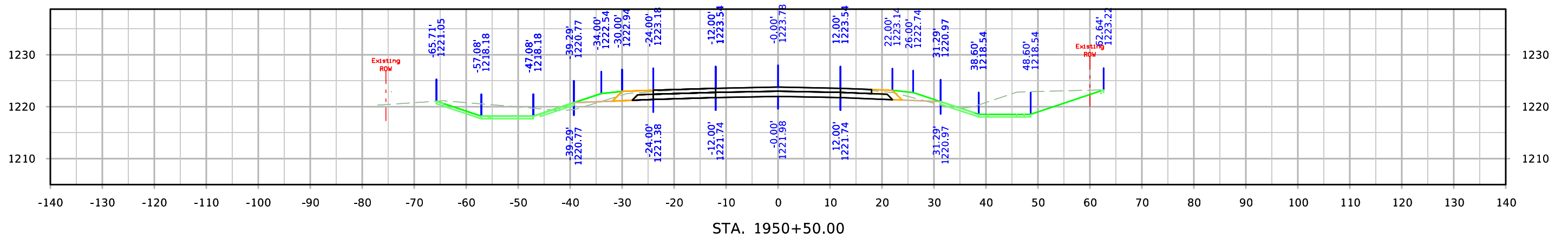
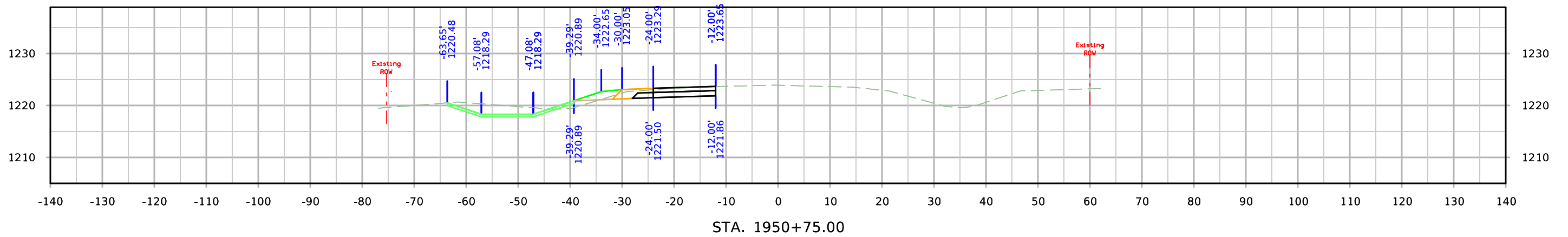
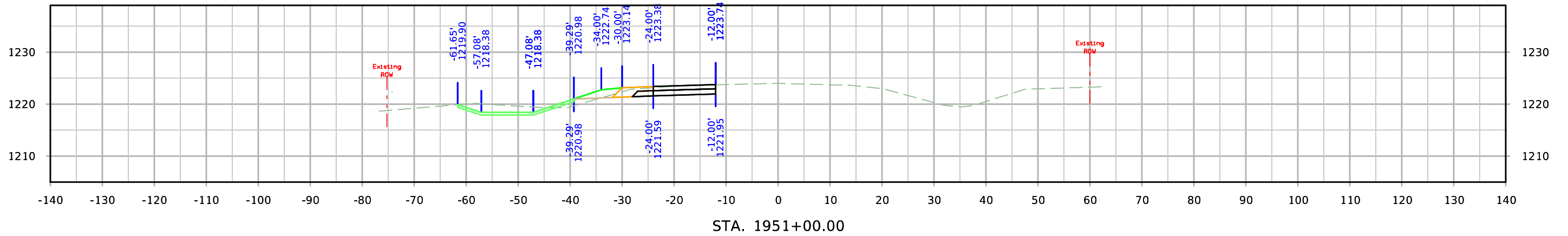
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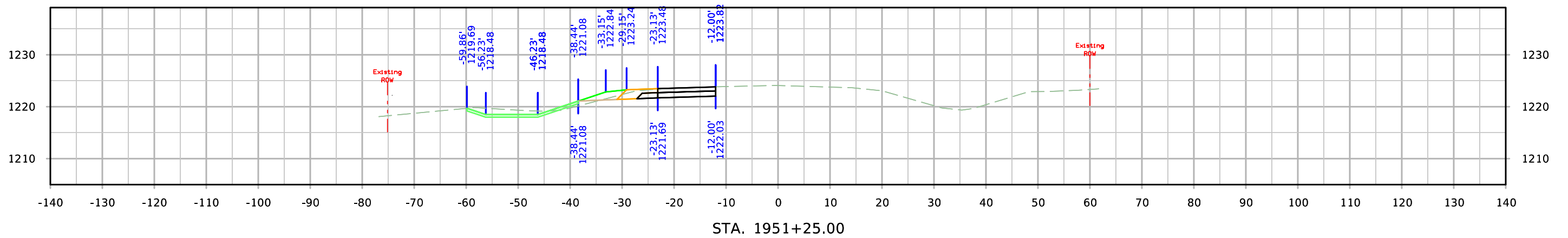
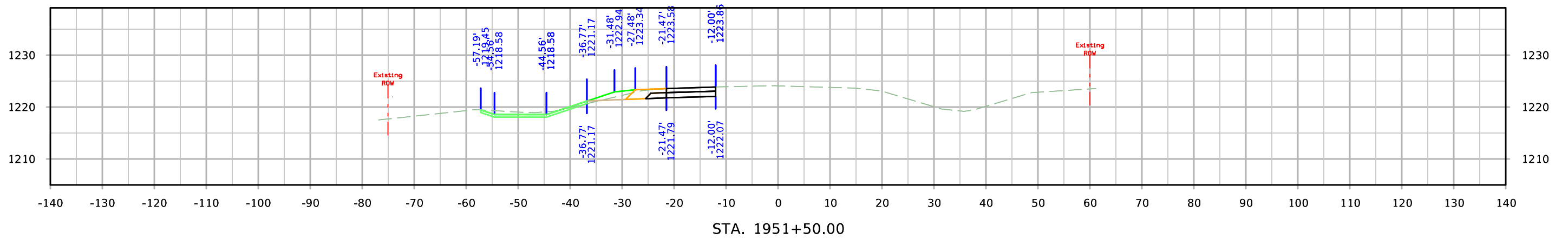
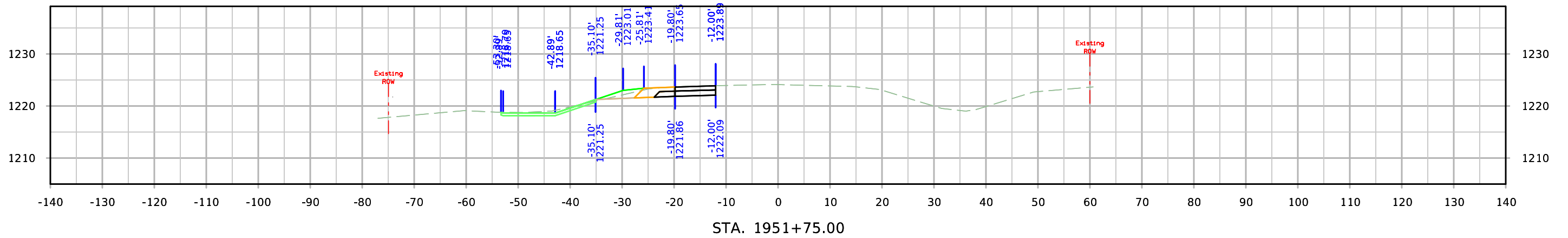
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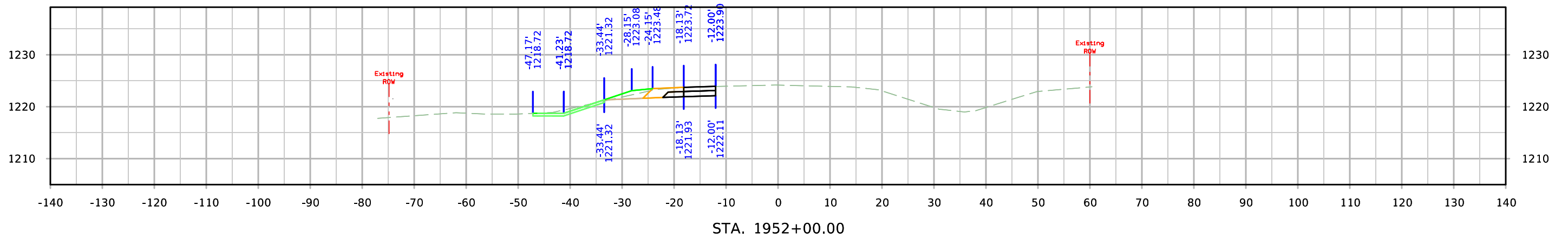
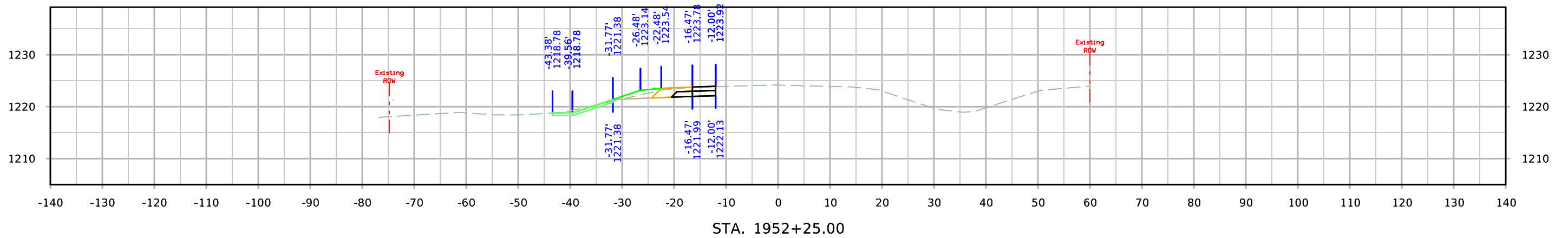
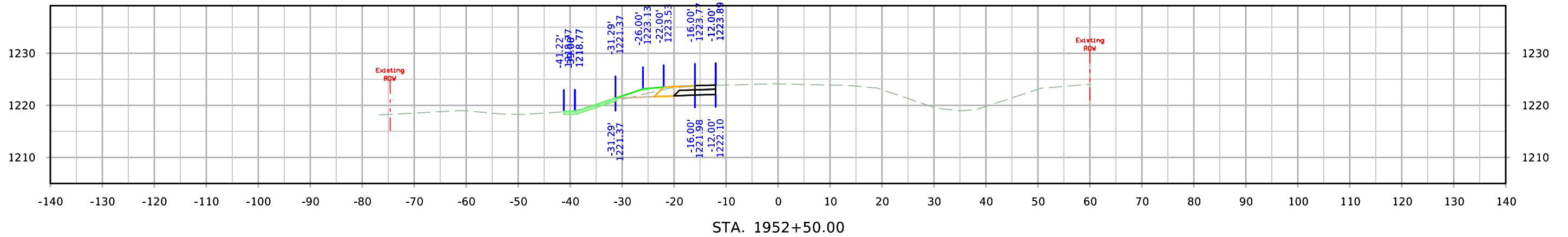
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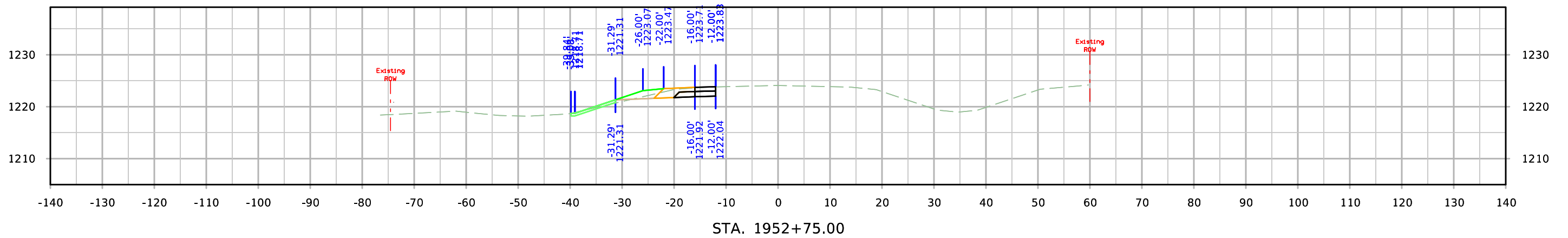
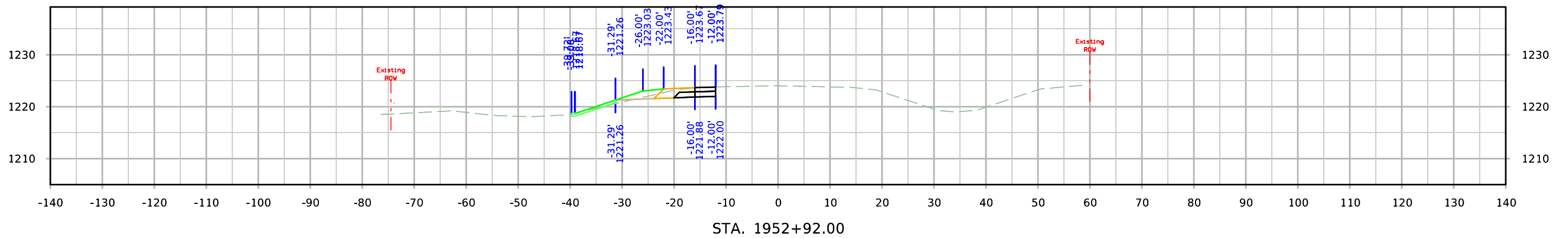
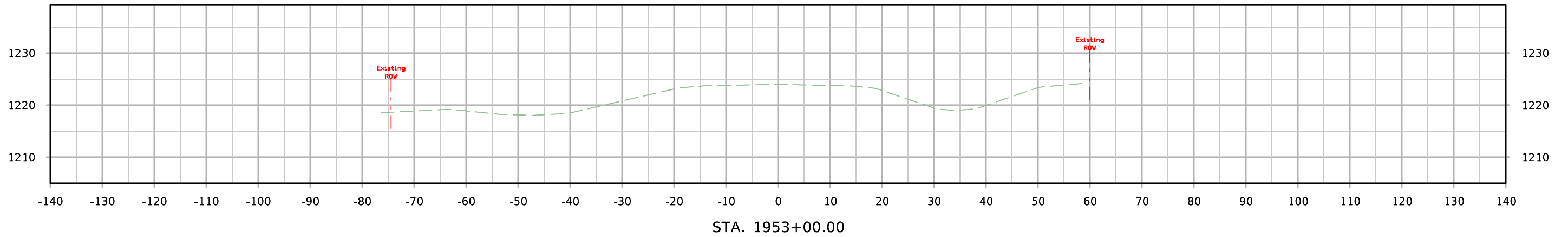
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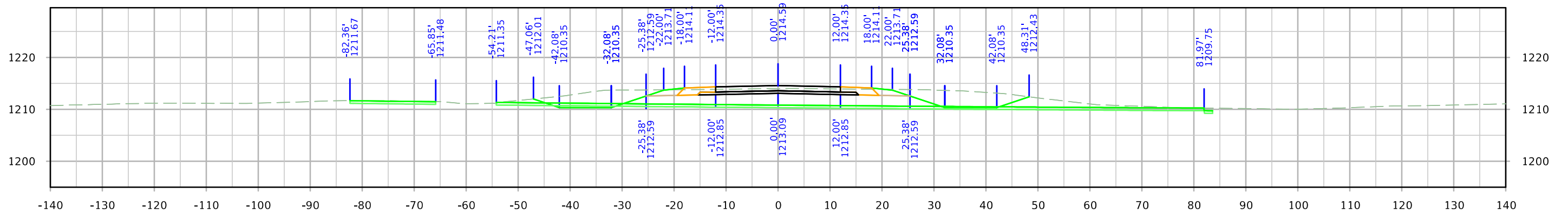
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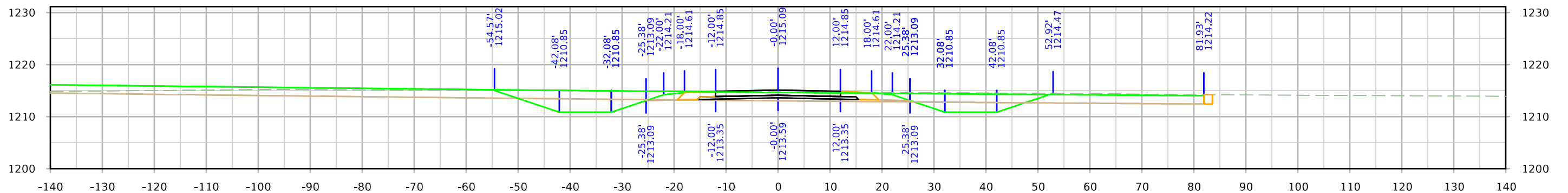
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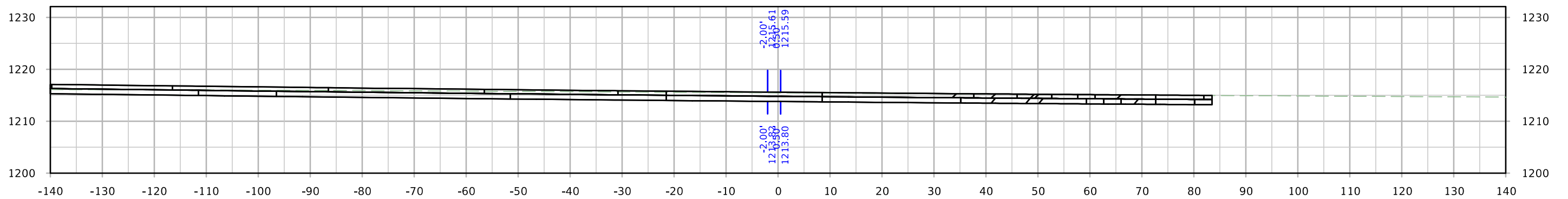
Ramp SE



STA. 10+50.00

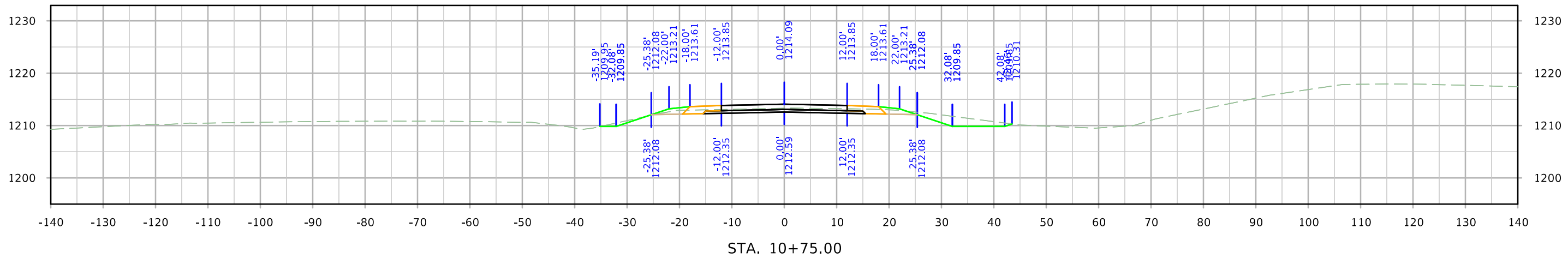
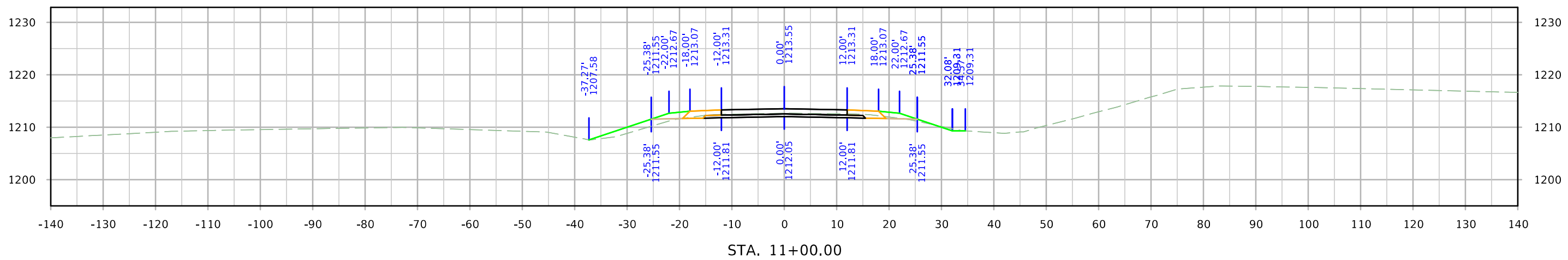
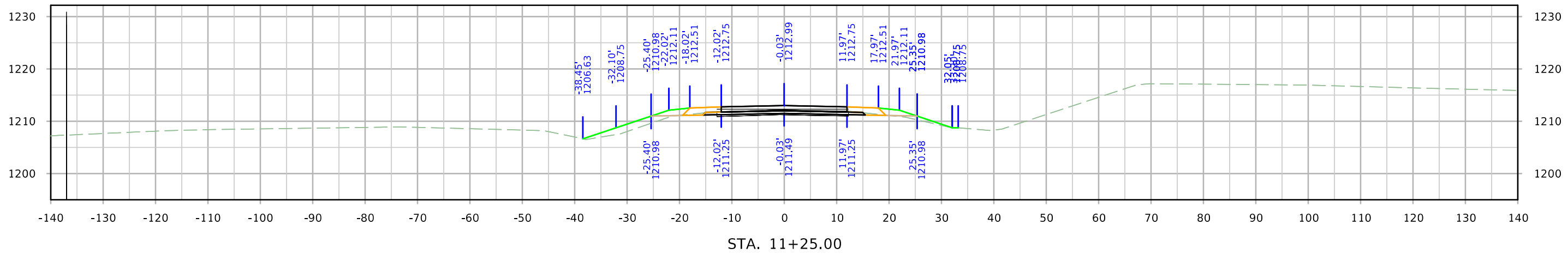


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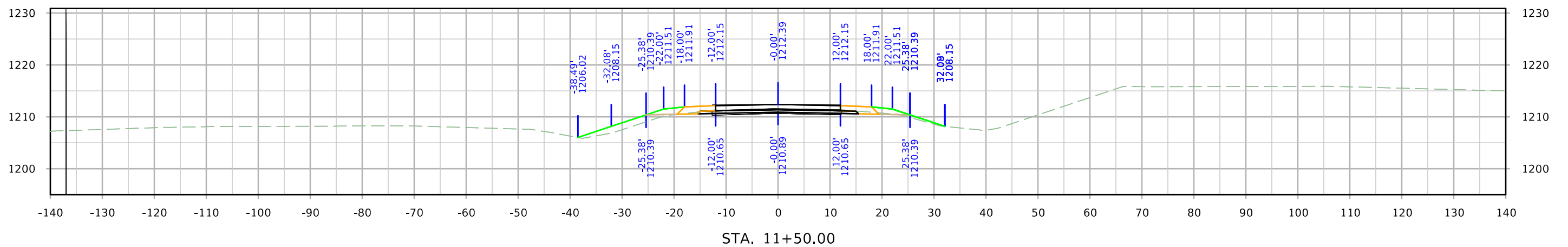
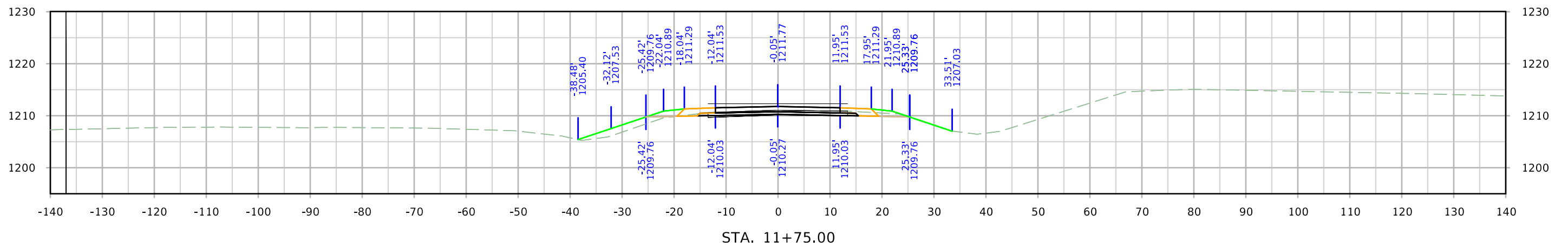
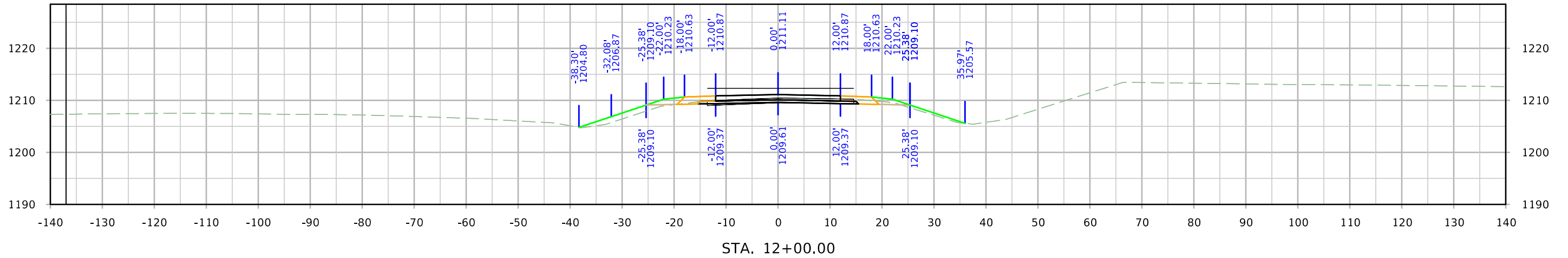


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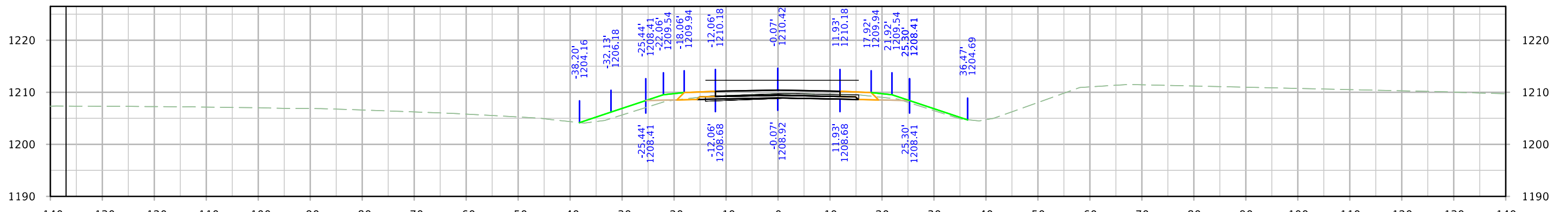
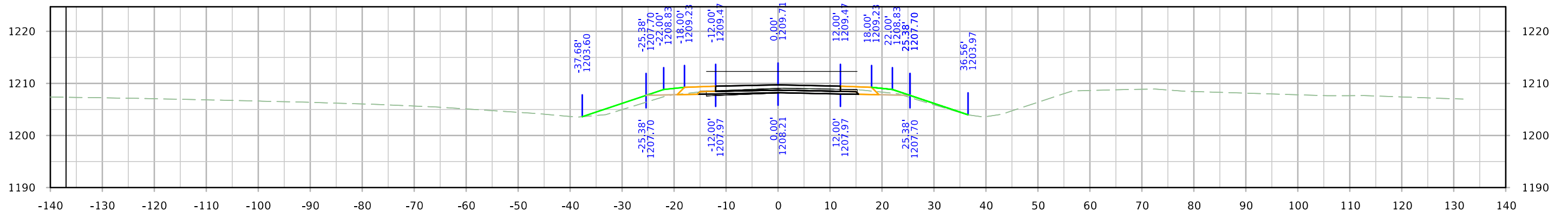
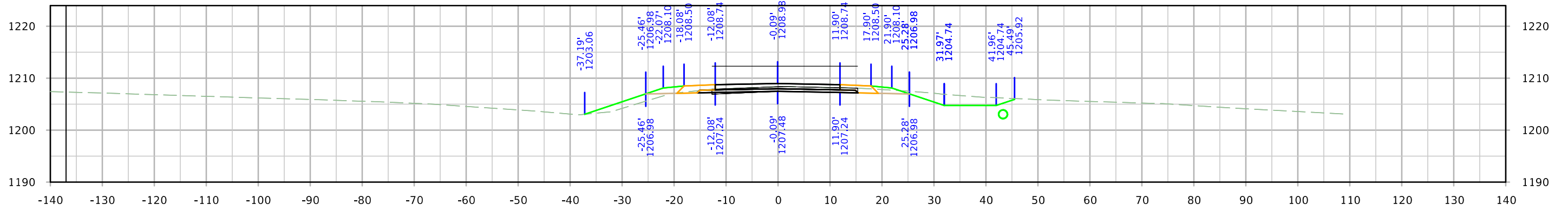
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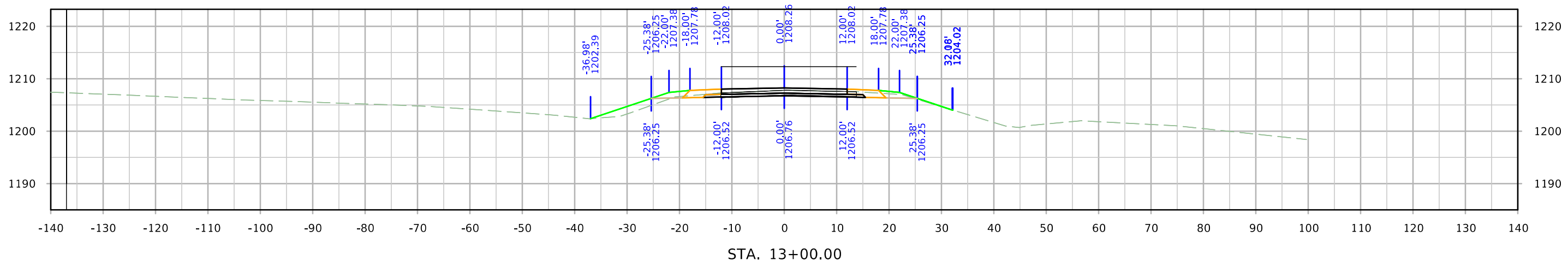
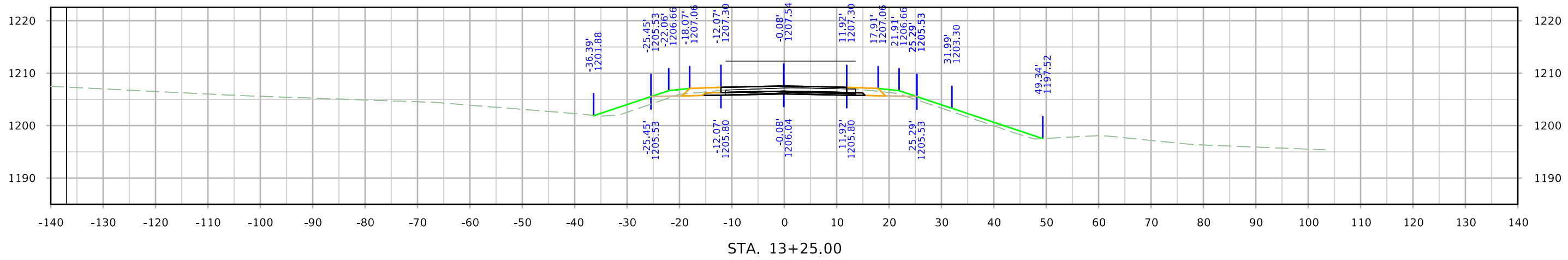
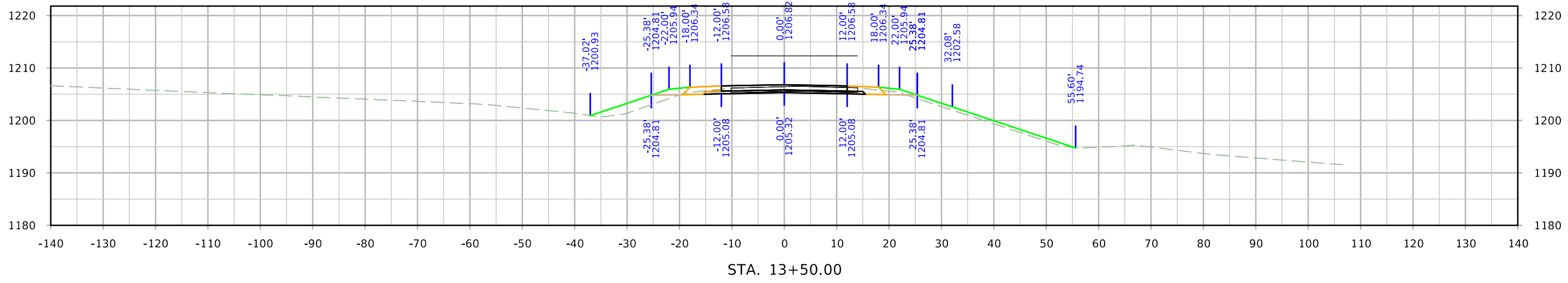
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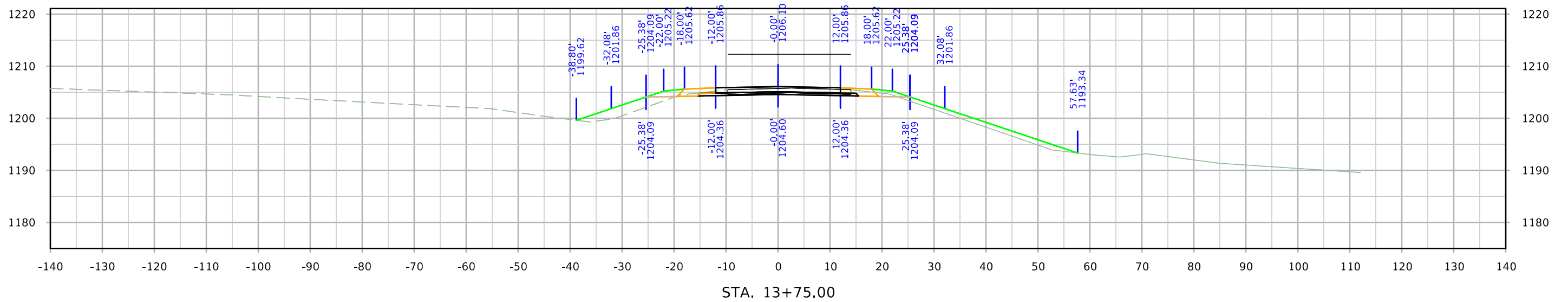
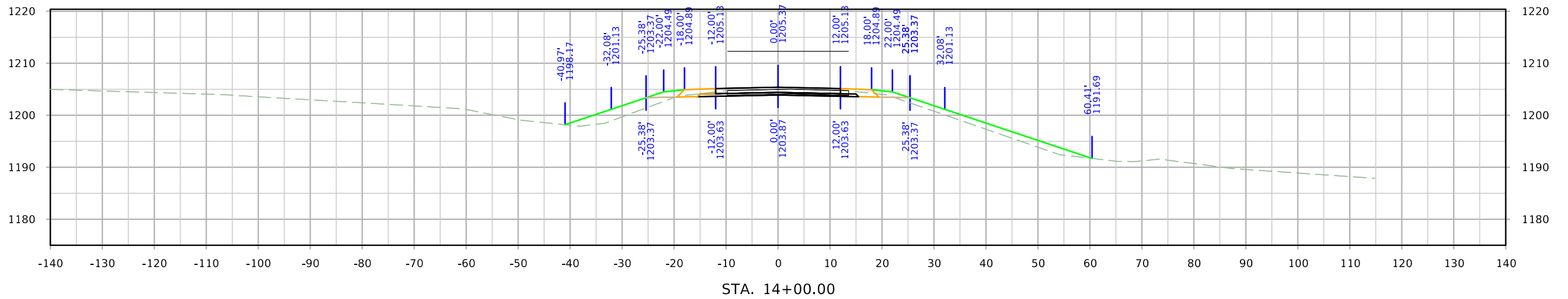
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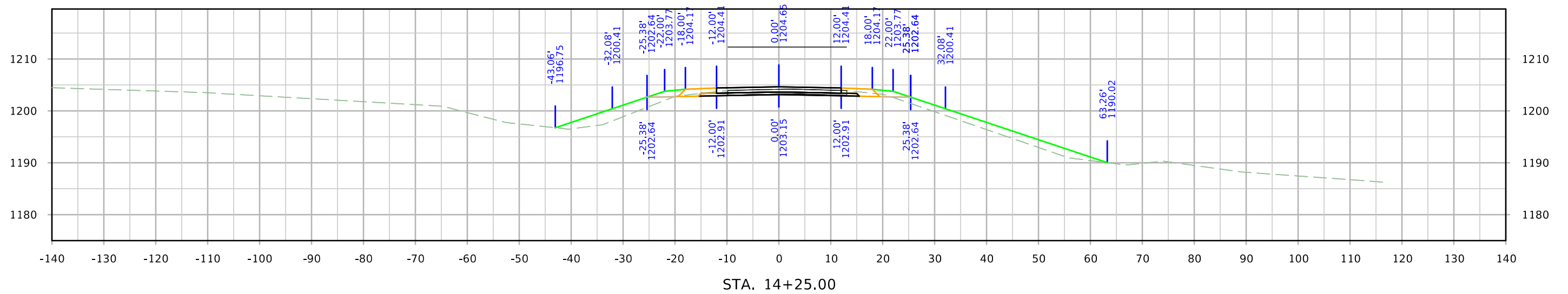
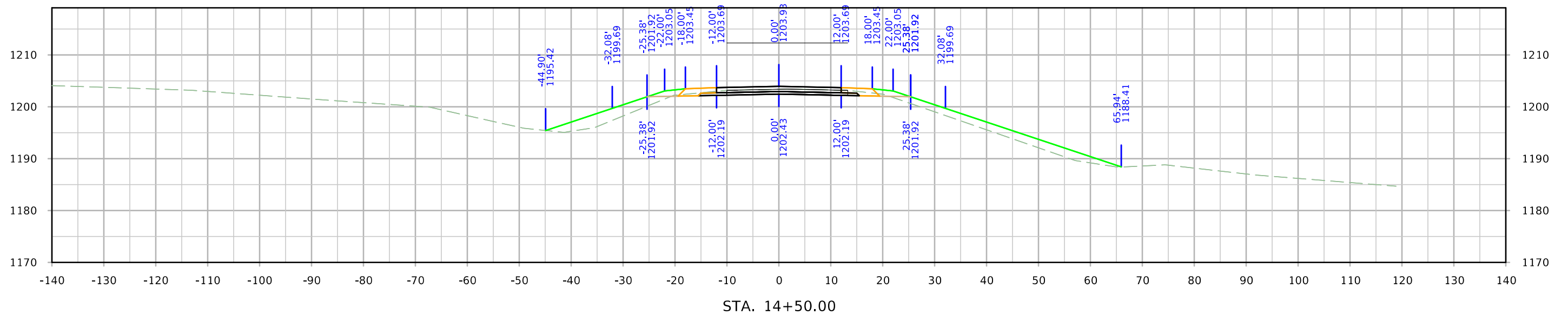
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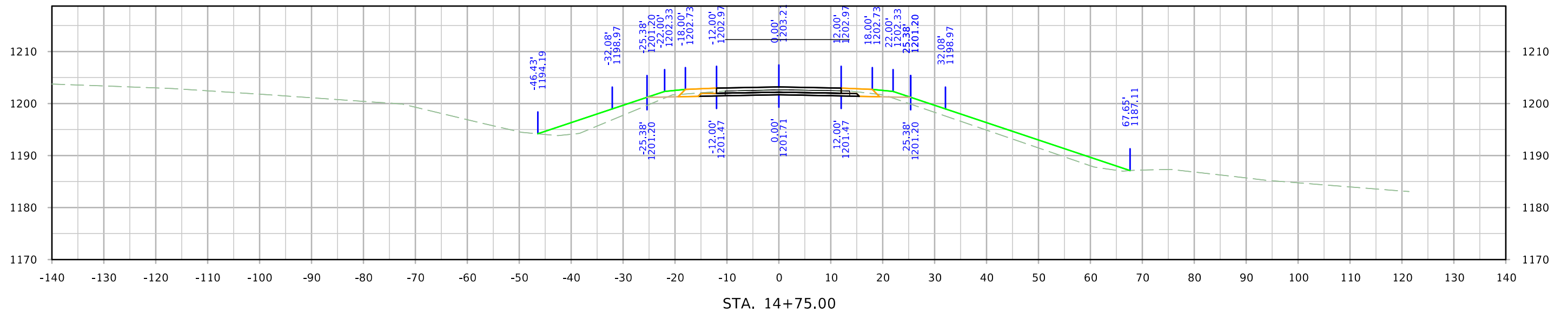
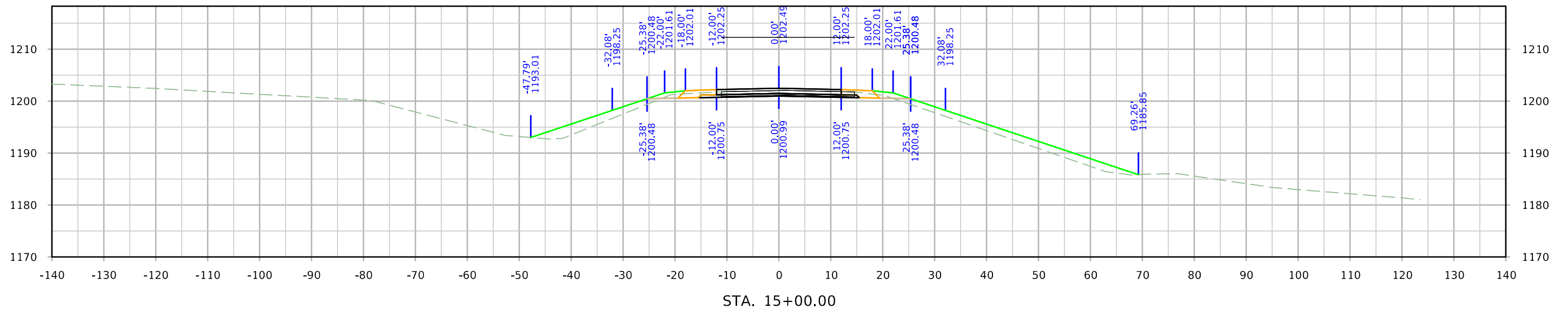
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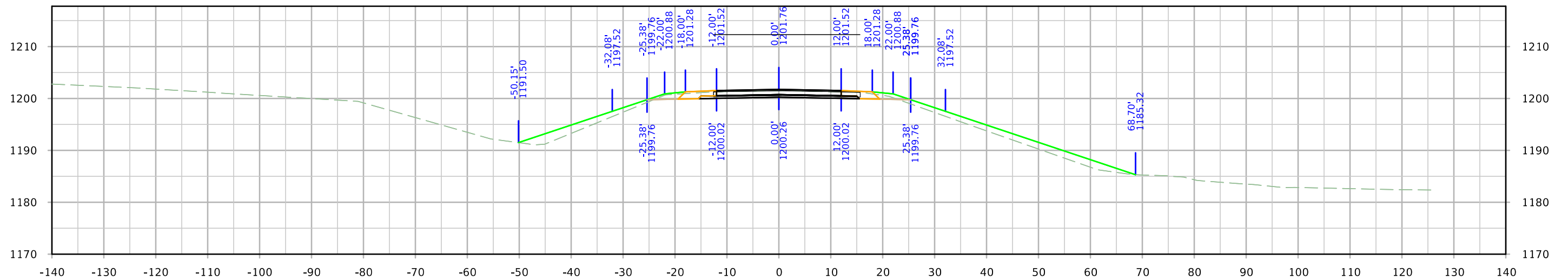
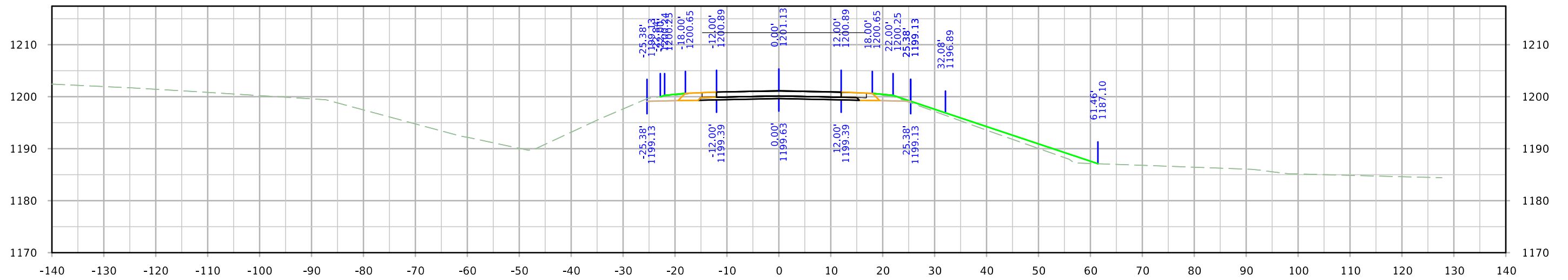
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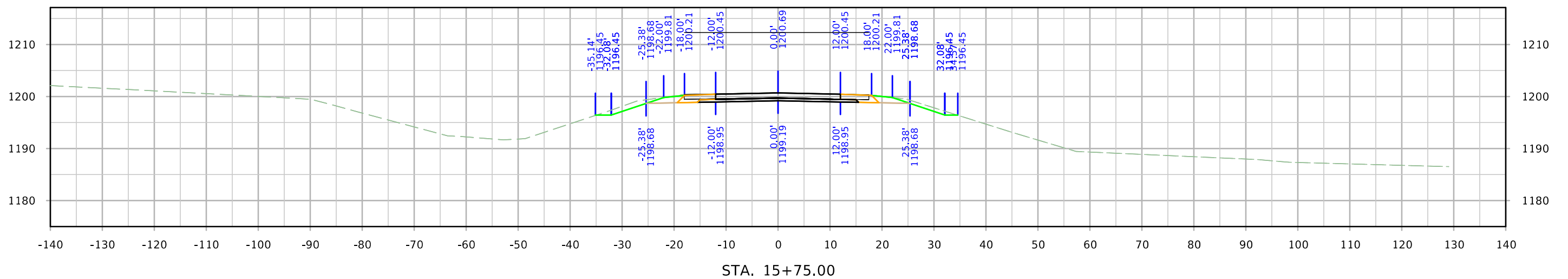
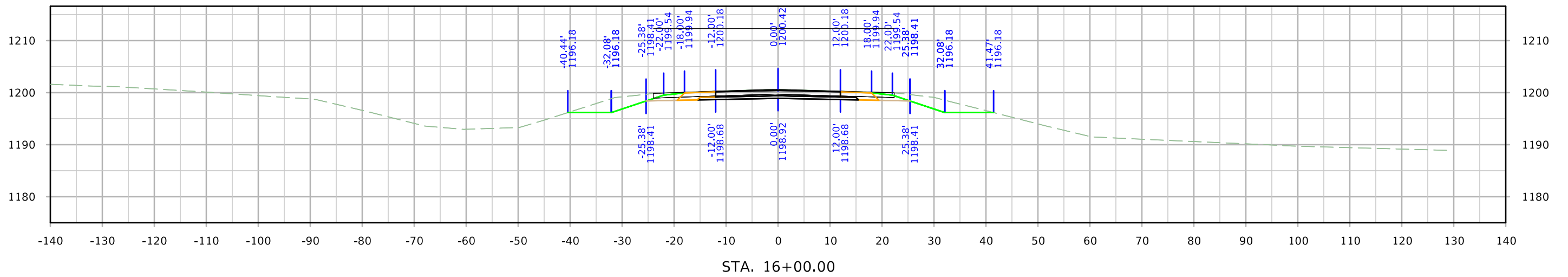
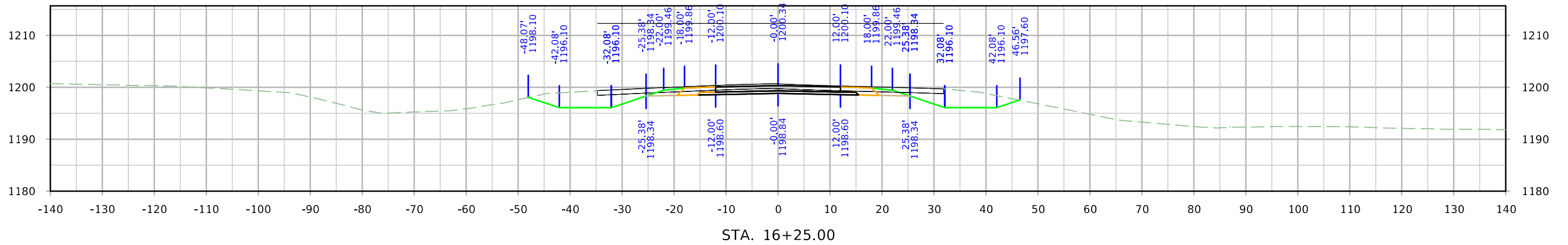
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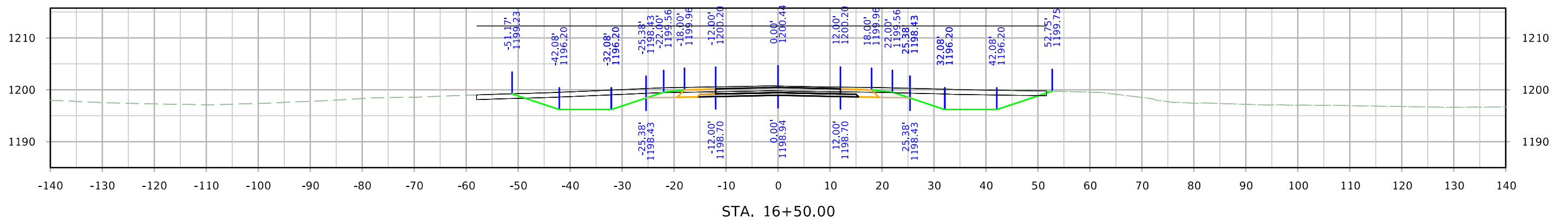
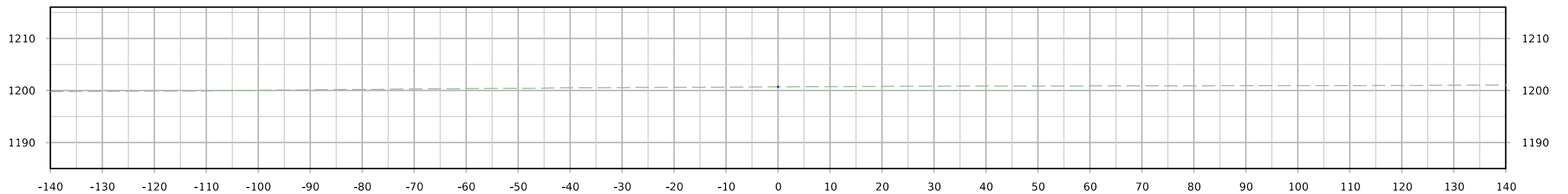
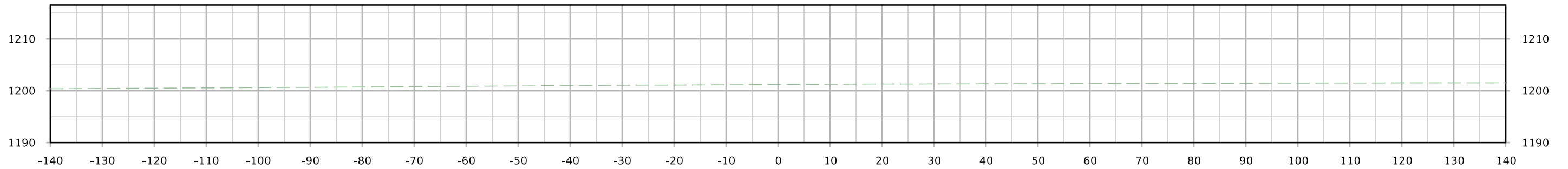
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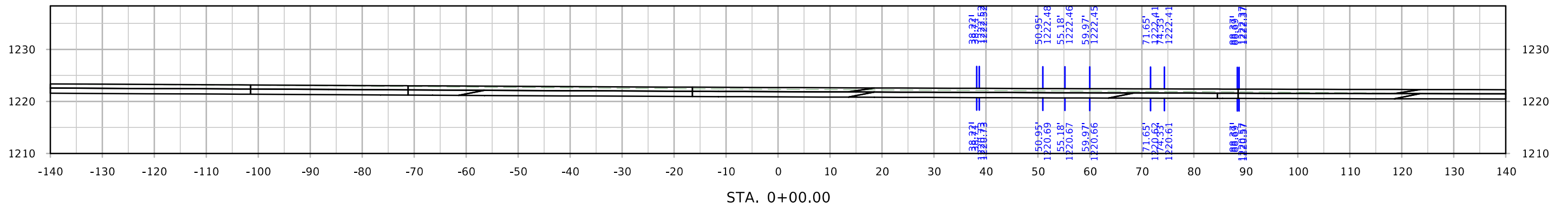
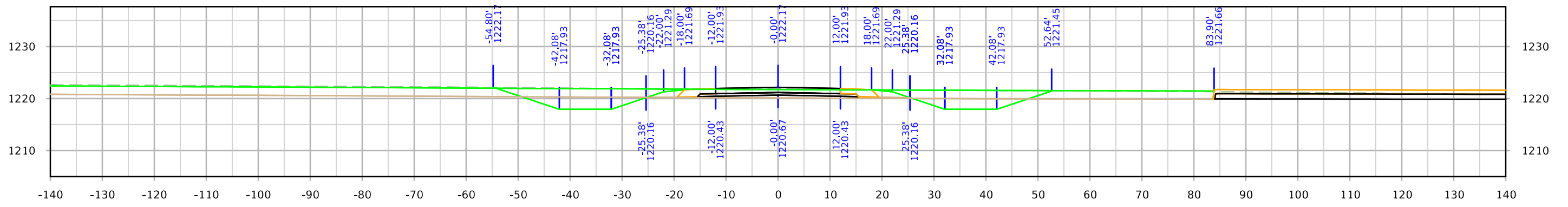
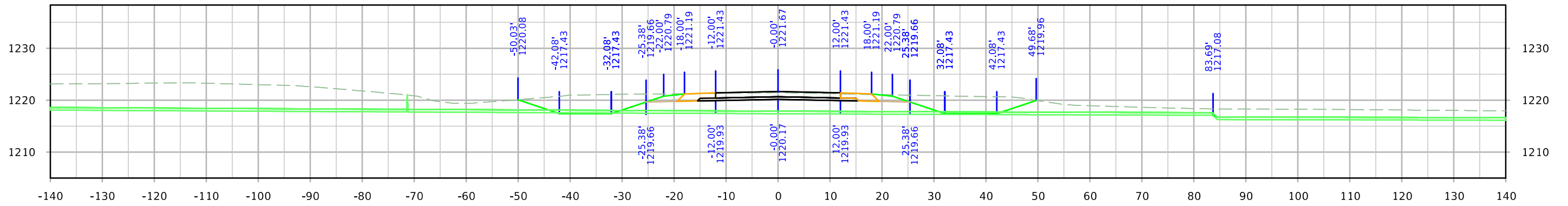
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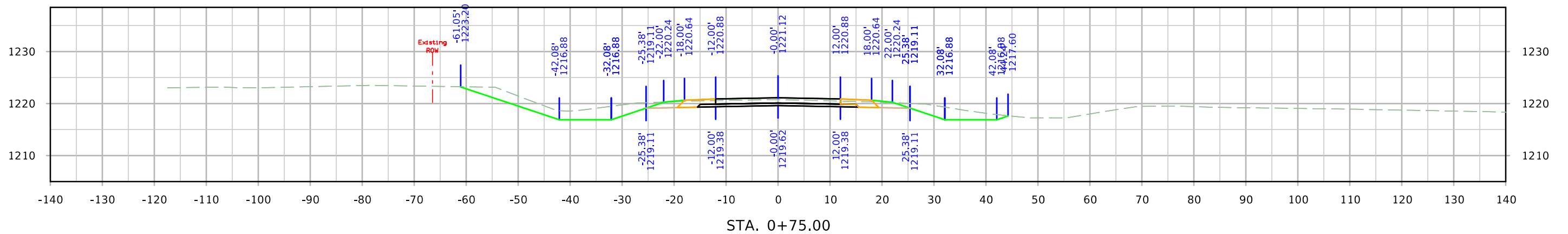
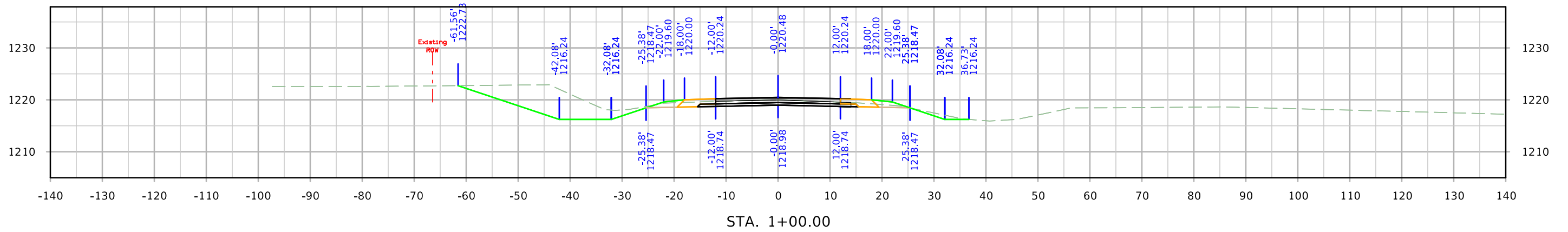
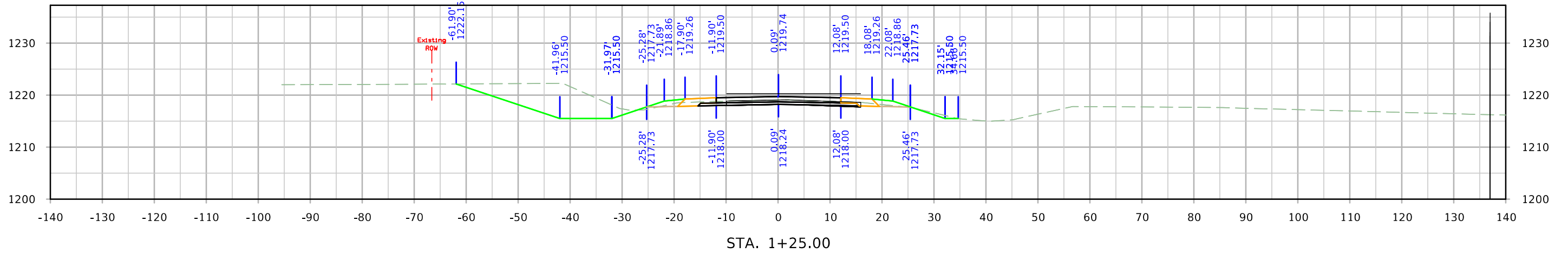
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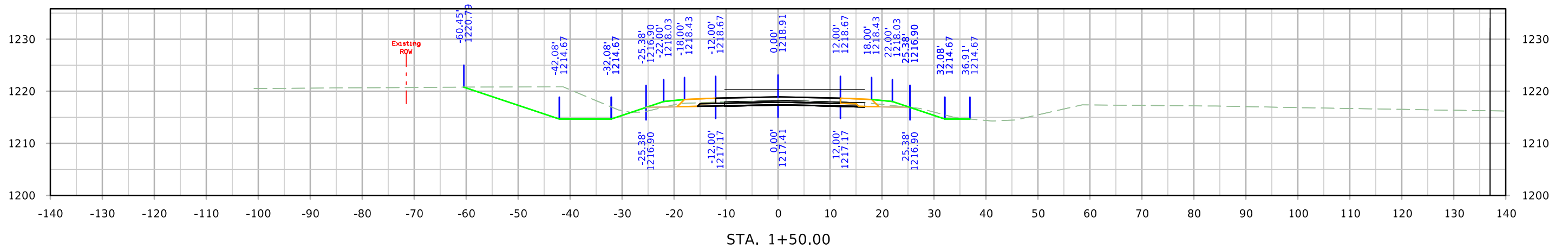
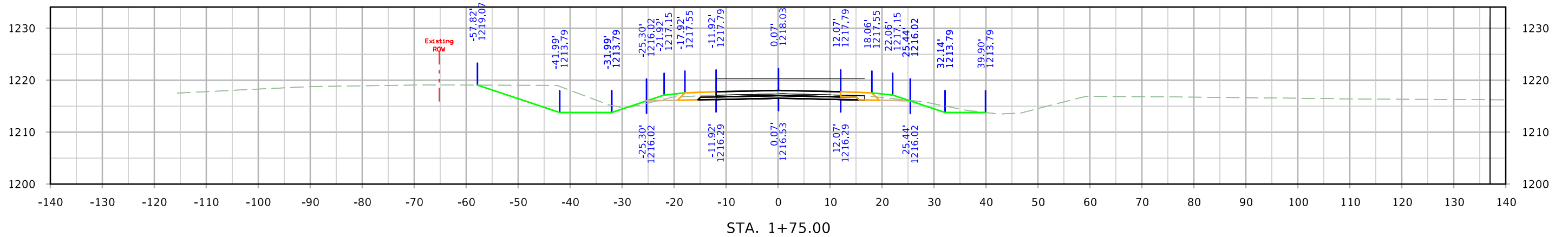
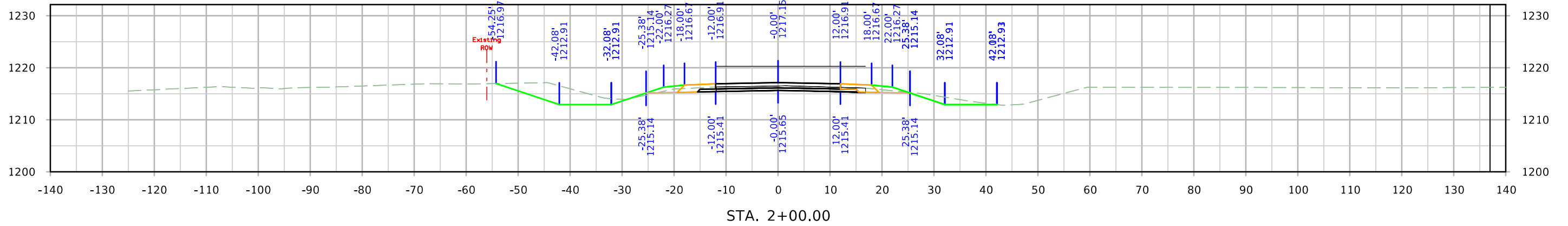
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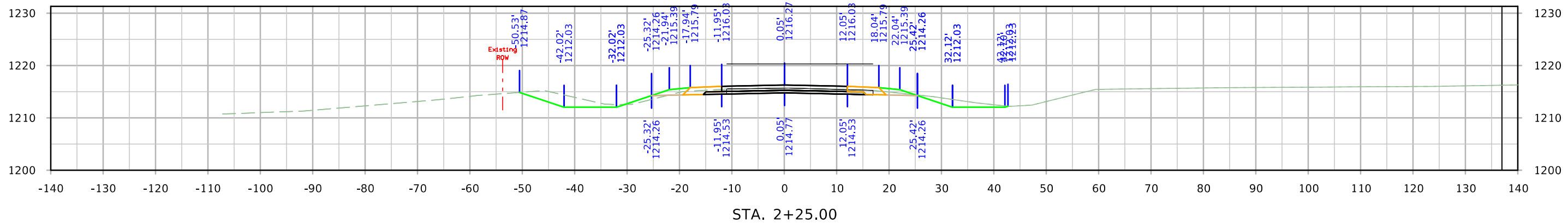
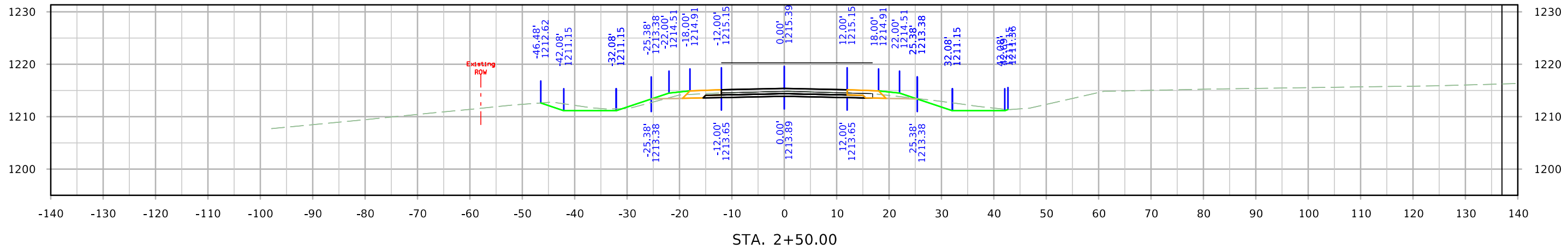
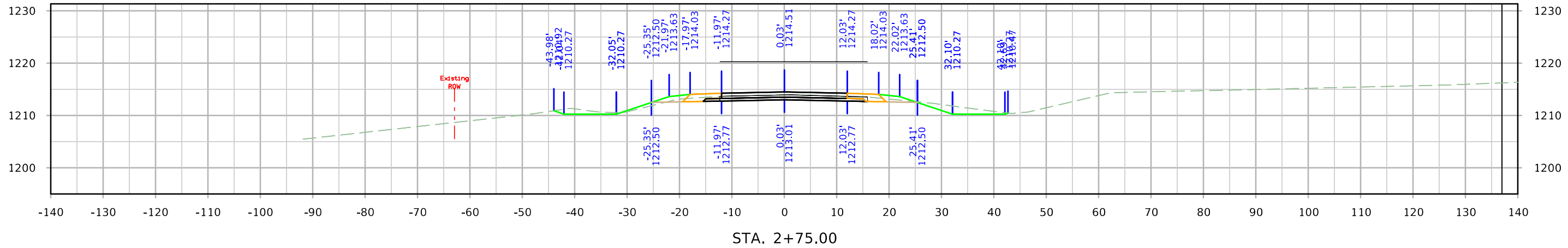
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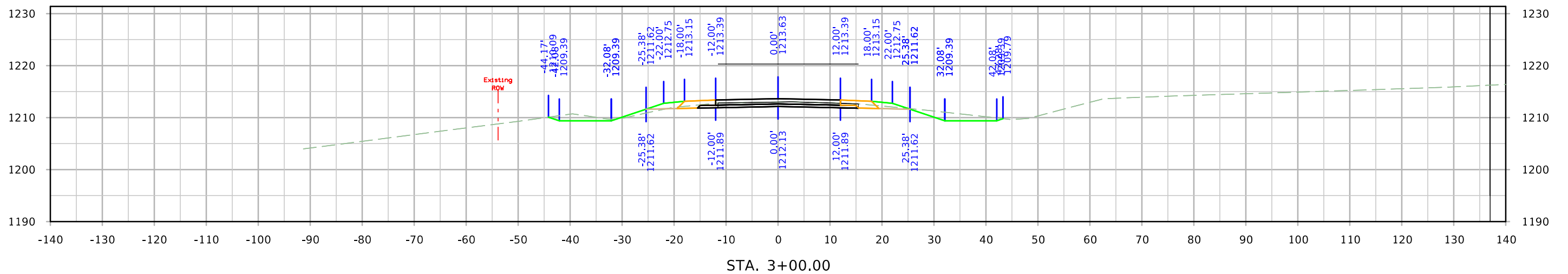
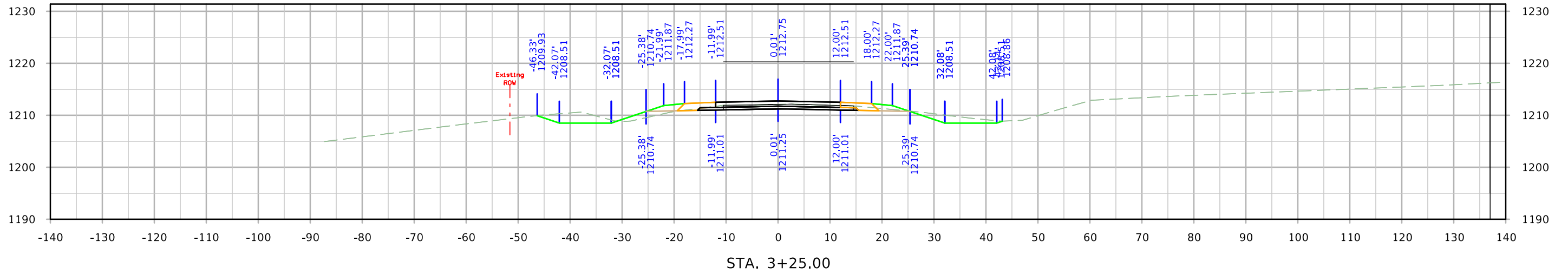
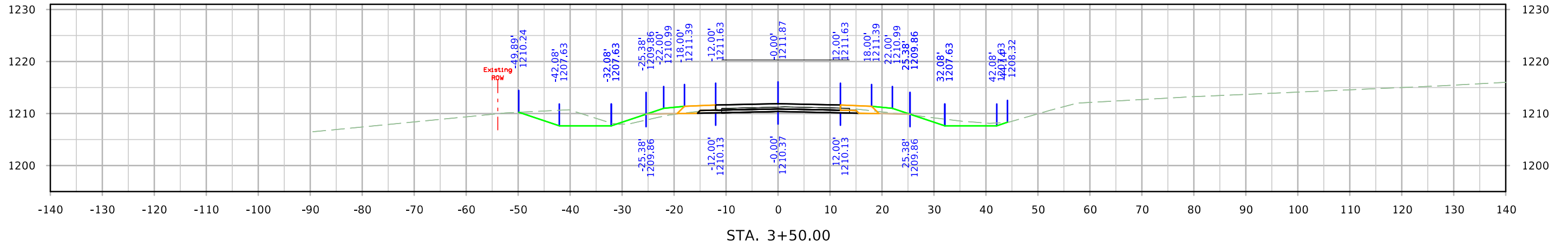
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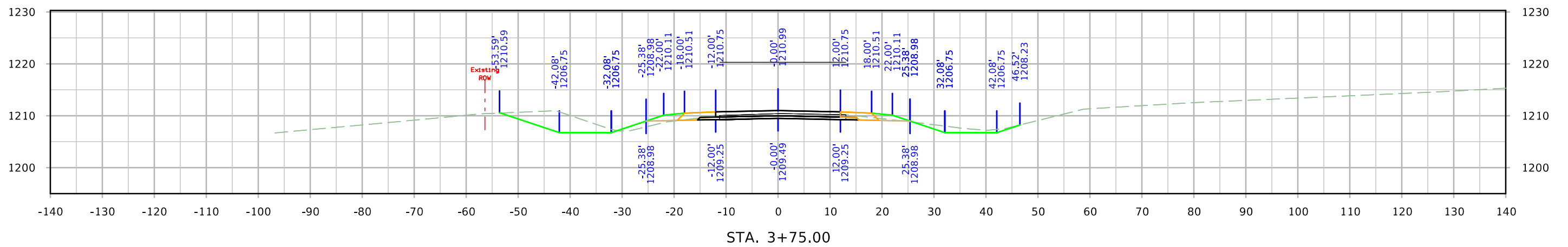
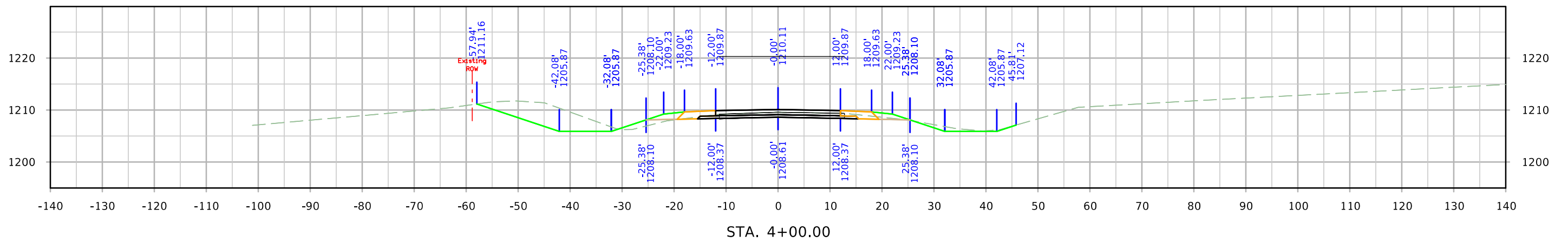
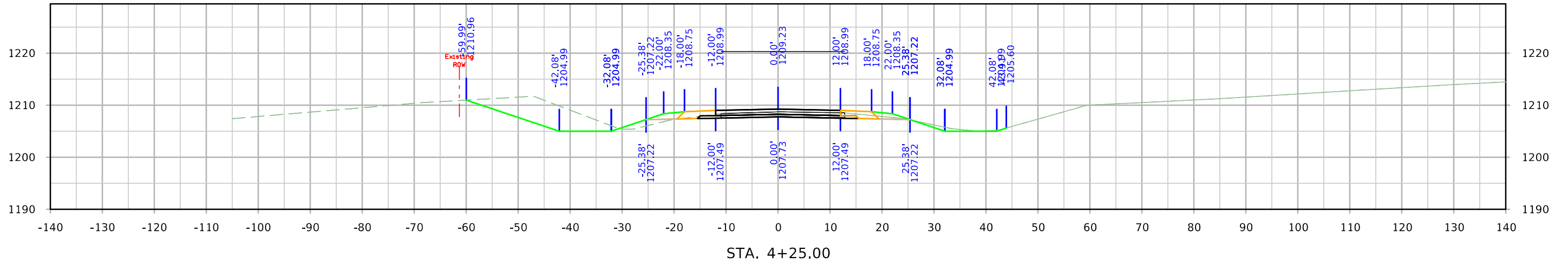
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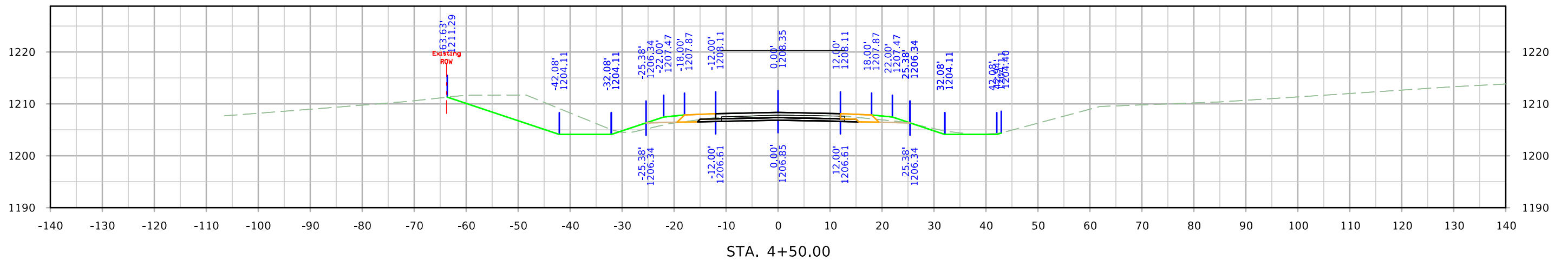
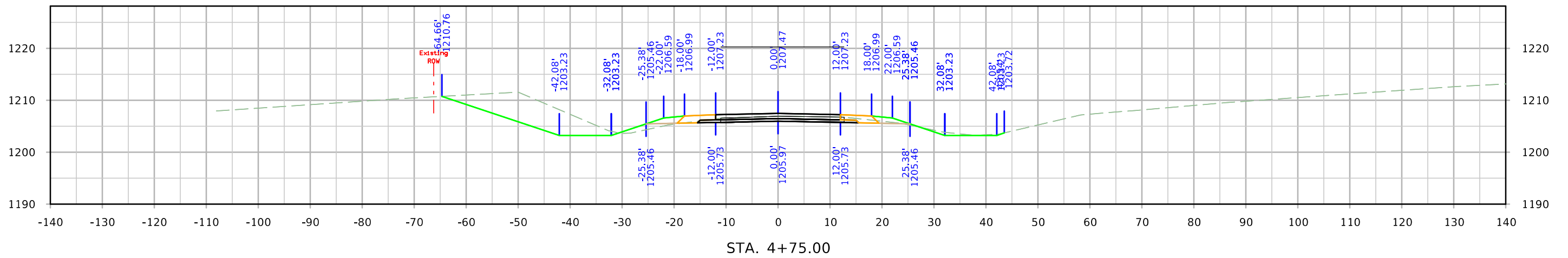
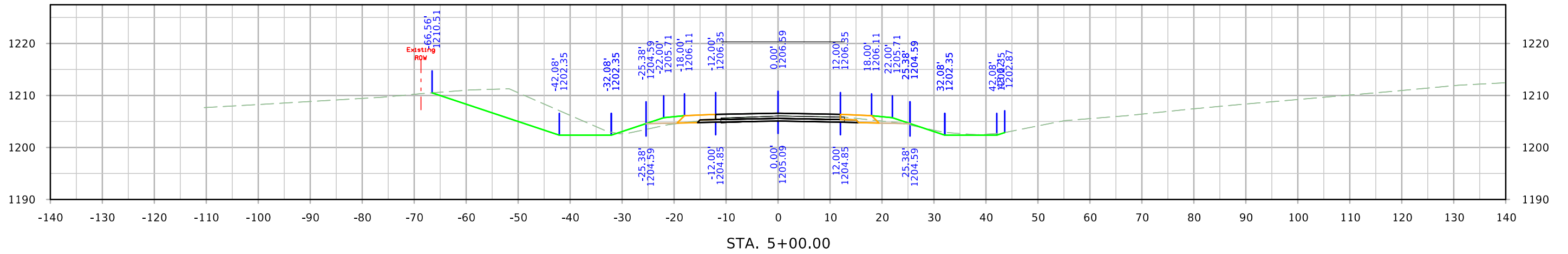
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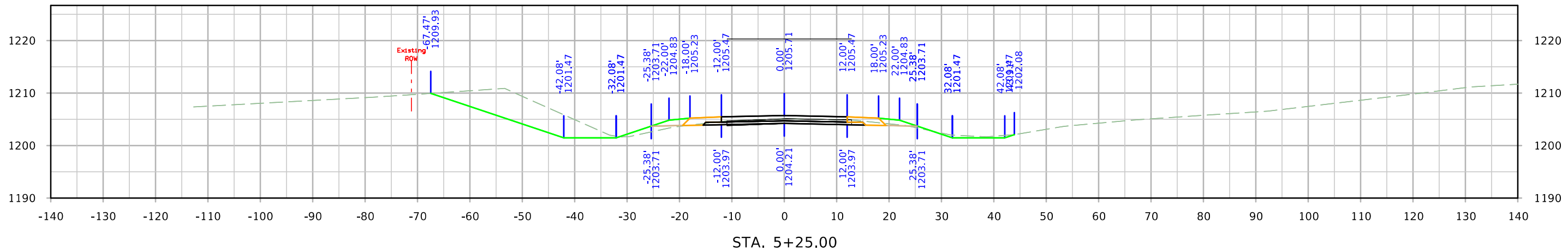
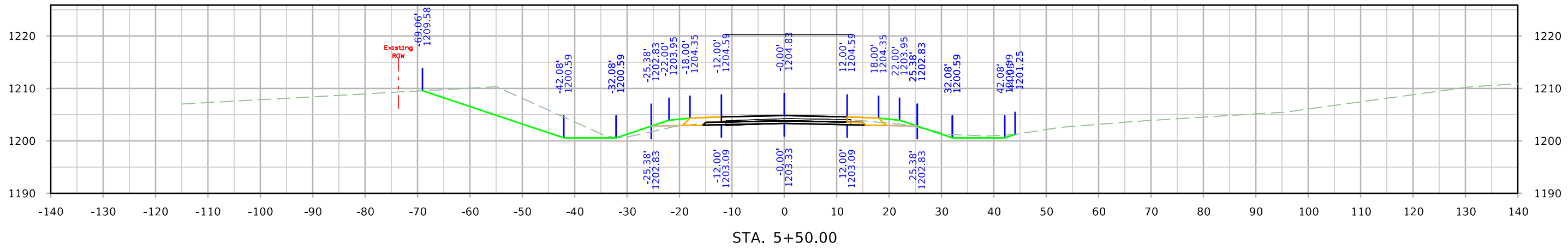
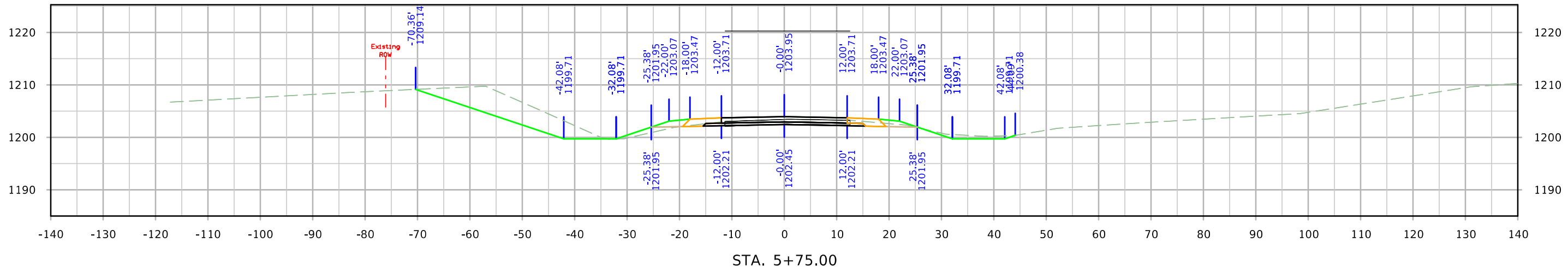
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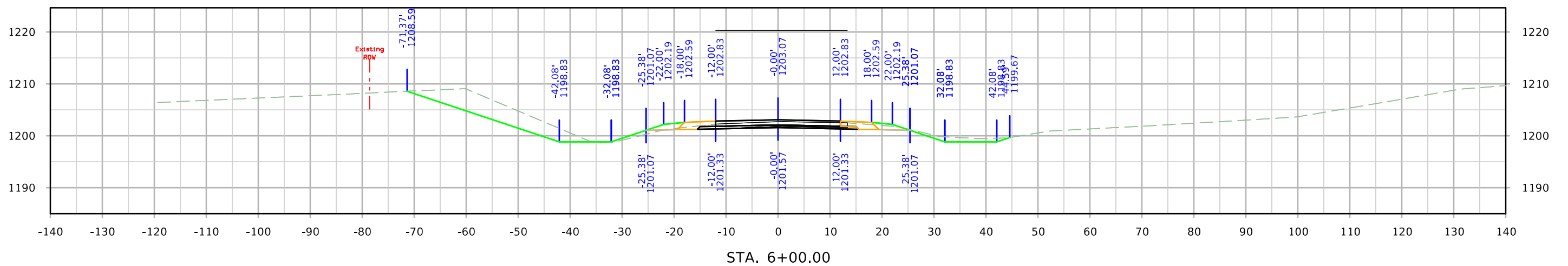
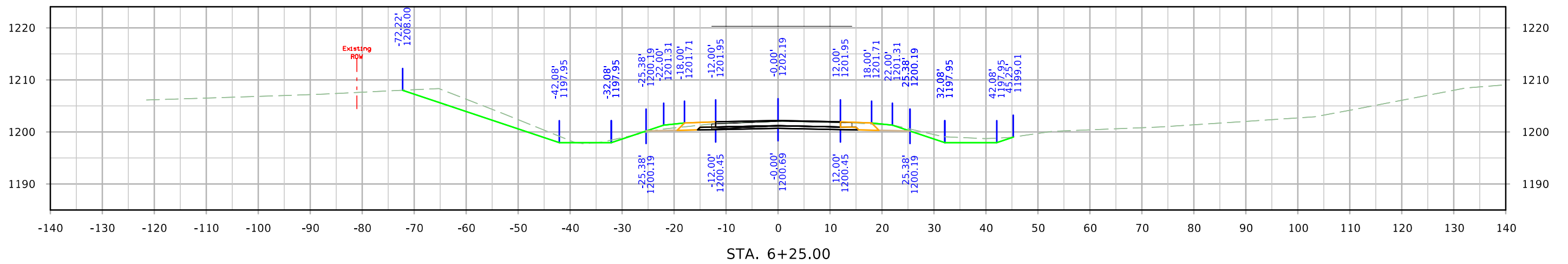
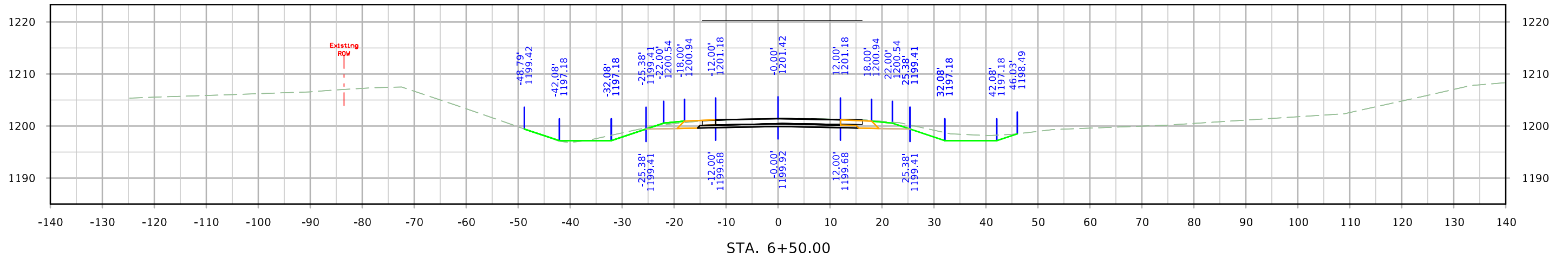
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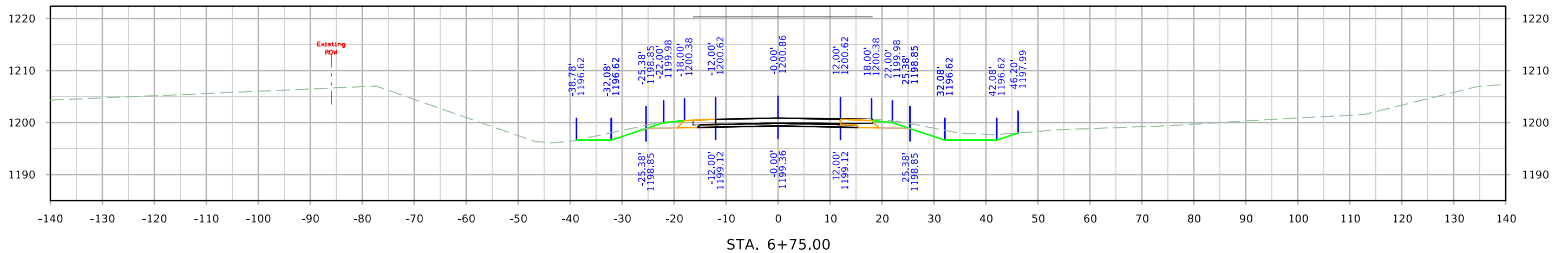
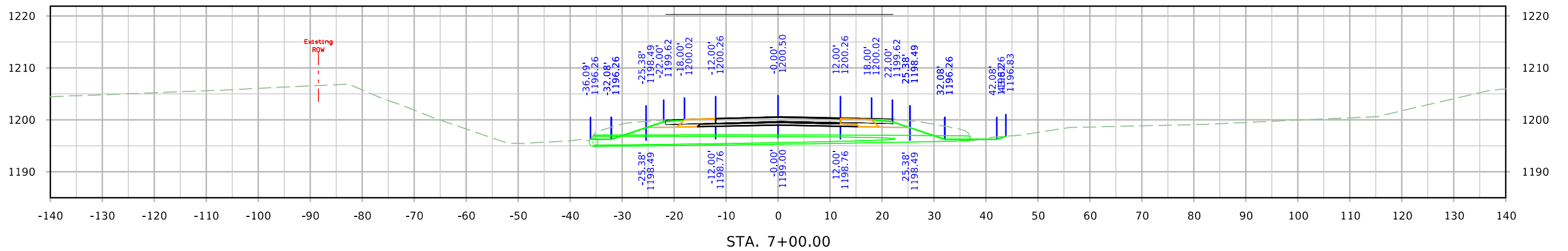
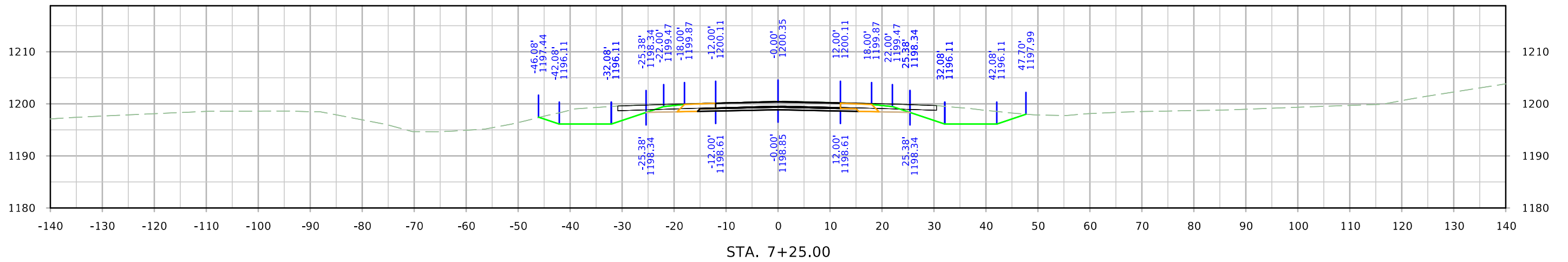
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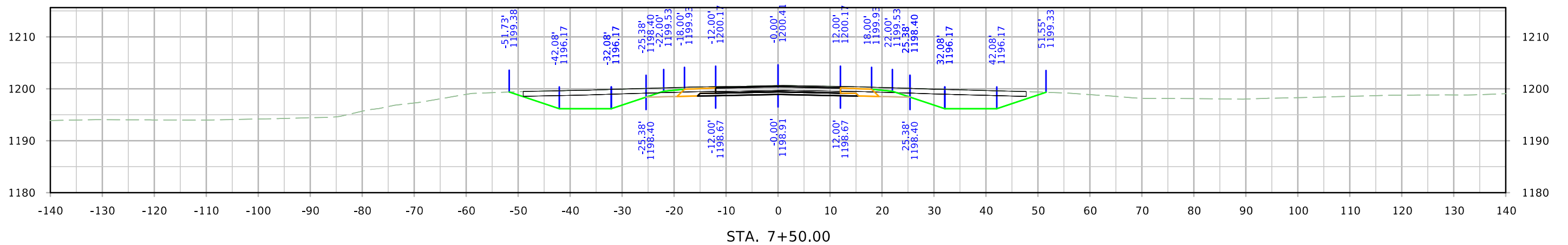
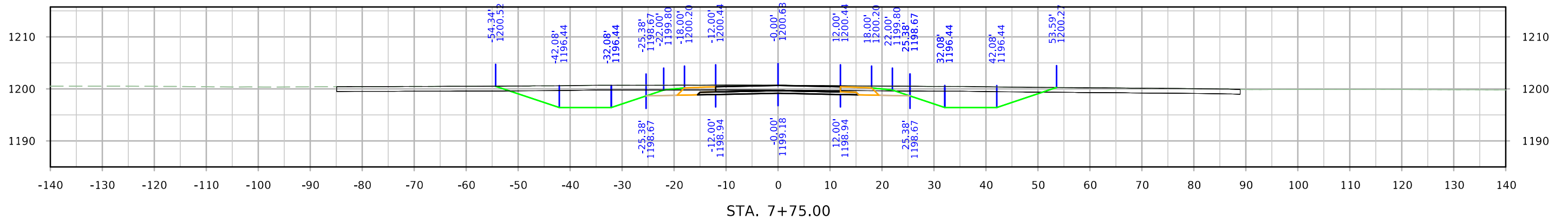
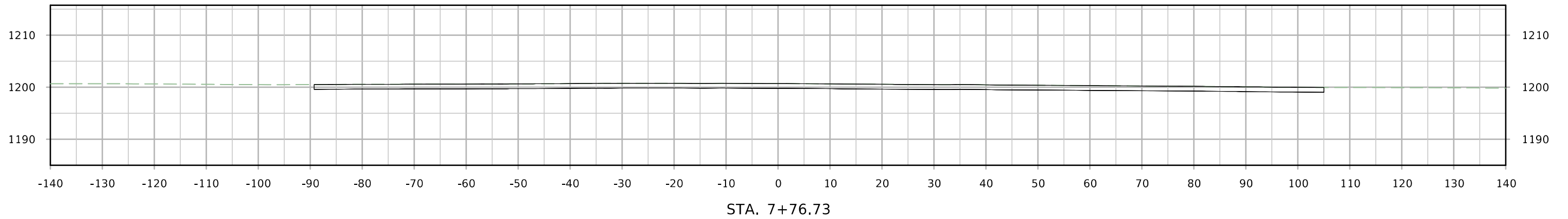
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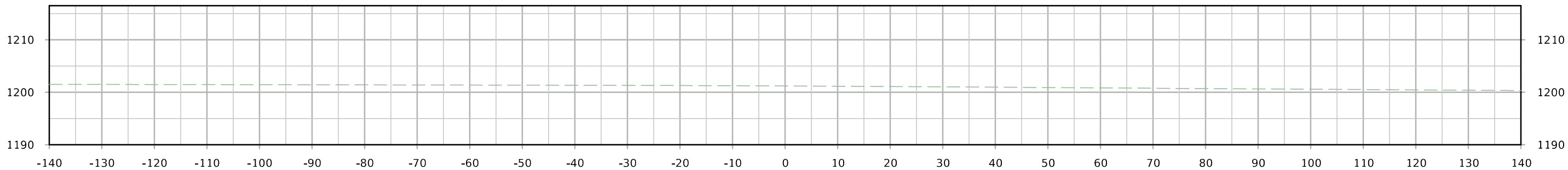
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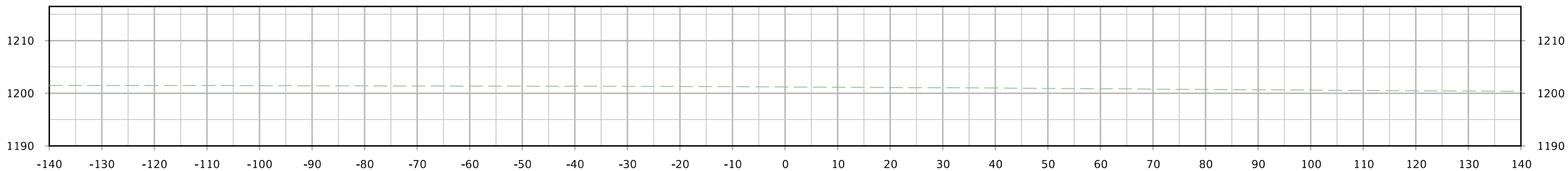
Ramp NE



Ramp NE



STA. 8+00.72



STA. 8+00.00