

HMA Pavement - Grade and New
HSIPX-017-1(021)--3L-77

Polk COUNTY

LETTING DATE
03/19/2024



REVISIONS

TOTAL
65

PROJECT IDENTIFICATION NUMBER
22-77-017-010
PROJECT NUMBER
HSIPX-017-1(021)--3L-77
R.O.W. PROJECT NUMBER
STPN-017-1(022)--2J-77

INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	Title Sheets
A.1	Title Sheet
A.2	Location Map Sheet
A.3	Field Exam Questions
B Sheets	Typical Cross Sections and Details
B.1 - 4	Typical Cross Sections and Details
D Sheets	Mainline Plan and Profile Sheets
D.1	Plan & Profile Legend & Symbol Information Sheet
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E Sheets	Side Road Plan and Profile Sheets
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E.2	NW 110 Ave
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J.1	Staging Notes Stage
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L.6	Staking - IA 17 and State St/NW 110 Ave Intersection
W Sheets	Mainline Cross Sections
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X Sheets	Side Road Cross Sections
X.1 - 7	State St
X.5 - 9	NW 110 Ave

PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
Polk COUNTY
HMA Pavement - Grade and New
State St Intersection in Granger

SCALES: As Noted

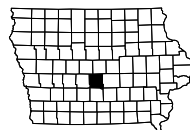
Refer to the Proposal Form for list of applicable specifications.

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



Project Location Map
on Sheet A.2

D5 Date: 09-23-2022
DM5 Date: 11-28-2023
D8 Date: 01-02-2024



DESIGN DATA RURAL			
2023	AADT	6600	V.P.D.
2043	AADT	9500	V.P.D.
2043	DHV	980	V.P.H.
	TRUCKS	6	%
	Total		
	Design ESALs	--	

INDEX OF SEALS		

PRELIMINARY PLANS

Subject to change by final design.

D3 PLAN - Date: 8-9-2022

141

2

R-26W

R-25W

6

City of Granger

END CONSTRUCTION
STA 45+10.00
M.P. 0.8

F31

T-80N

F31

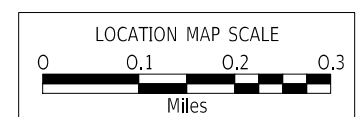
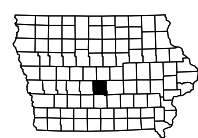
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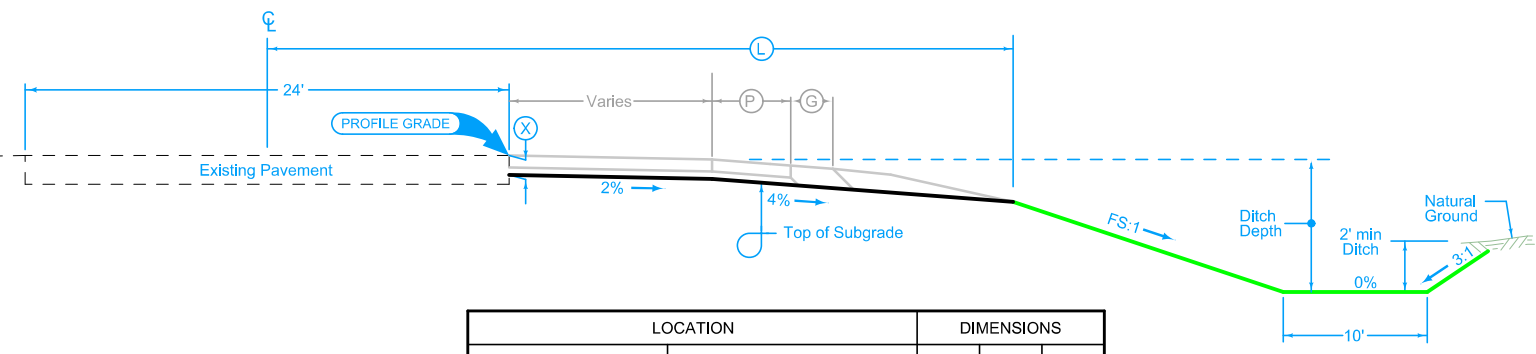
BEGIN CONSTRUCTION
STA 20+00.00
M.P. 0.4

11

12

7



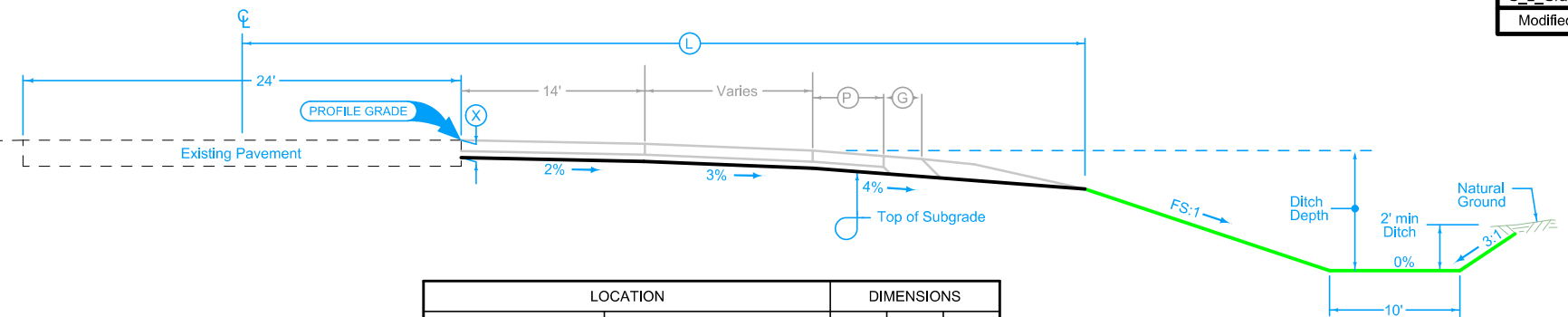


ROAD IDENTIFICATION	LOCATION		DIMENSIONS		
	STATION TO STATION		Ⓛ Feet	Ⓧ Inches	FS
IA 17	20+00.00	27+14.90	VAR	23	3:1
IA 17	43+02.58	45+10.00	VAR	23	3:1

GRADING

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

See plan & profile sheets and cross sections for additional details of ditches and backslopes.

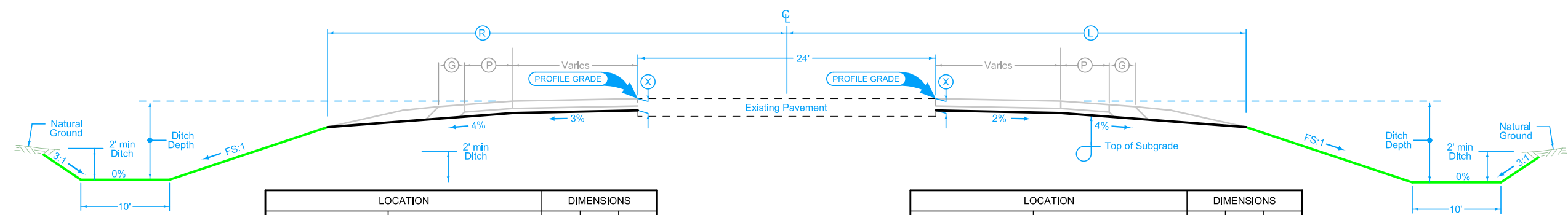


ROAD IDENTIFICATION	LOCATION		DIMENSIONS		
	STATION TO STATION		Ⓛ Feet	Ⓧ Inches	FS
IA 17	27+14.90	34+29.07	VAR	23	3:1

GRADING

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

See plan & profile sheets and cross sections for additional details of ditches and backslopes.



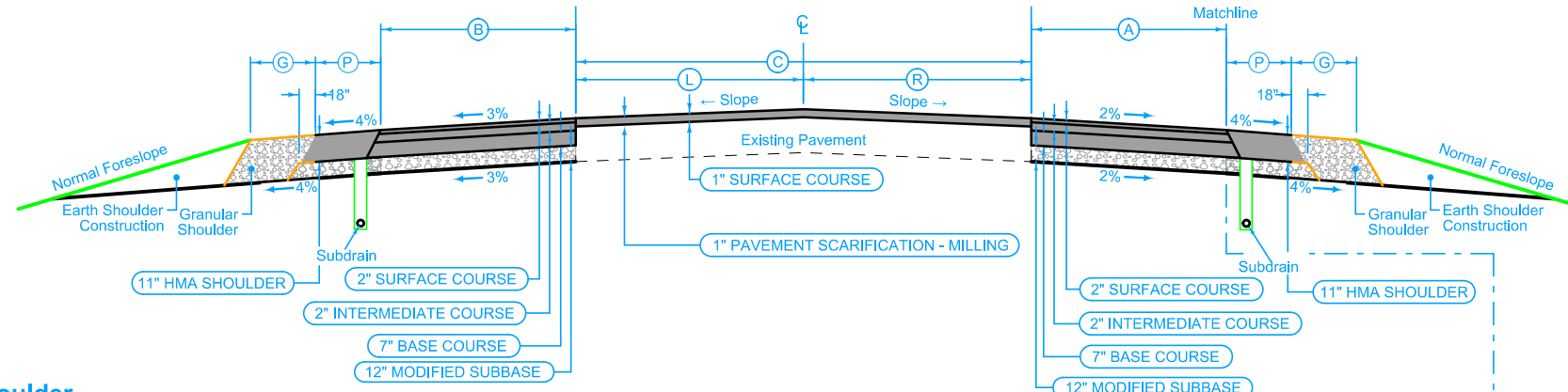
ROAD IDENTIFICATION	LOCATION		DIMENSIONS		
	STATION TO STATION		Ⓛ Feet	Ⓧ Inches	FS
IA 17	36+14.65	43+02.58	VAR	23	3:1

ROAD IDENTIFICATION	LOCATION		DIMENSIONS		
	STATION TO STATION		Ⓡ Feet	Ⓧ Inches	FS
IA 17	36+14.65	43+02.58	Var	23	3:1

GRADING

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

See plan & profile sheets and cross sections for additional details of ditches and backslopes.



Full Depth HMA Combination Shoulder

Shoulder Jointing:
Longitudinal joint: B

2_C_FullHMA_MODIFIED			
G Feet	P Feet	STATION TO STATION	
2	4	36+14.65	42+42.73
2-4	4-6	42+42.73	43+02.58

Turn Lane

Longitudinal joint: B

2_AuxLane_HMA_10-18-16		
B Feet	STATION TO STATION	
30.0-0	36+14.65	43+02.58

3R_Overlay_04-19-11				
STATION TO STATION		C Feet	L Feet	R Feet
20+00.00	45+10.00	24	12	12

Through Lane

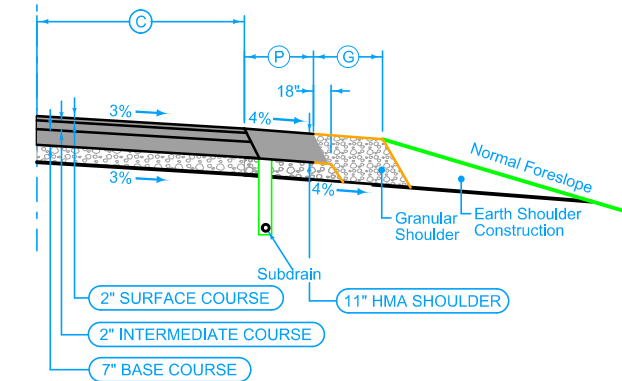
Longitudinal joint: B

2_AuxLane_HMA_10-18-16		
A Feet	STATION TO STATION	
0-14	20+00.00	27+14.90
14	27+14.90	37+95.10
14-0	37+95.10	45+10.00

Full Depth HMA Combination Shoulder

Shoulder Jointing:
Longitudinal joint: B

2_C_FullHMA_MODIFIED			
G Feet	P Feet	STATION TO STATION	
4	6	20+00.00	27+14.90
4	6	36+14.65	45+10.00



Turn Lane

Longitudinal joint: B

2_AuxLane_HMA_10-18-16		
C Feet	STATION TO STATION	
0-29.8	27+14.90	34+29.07

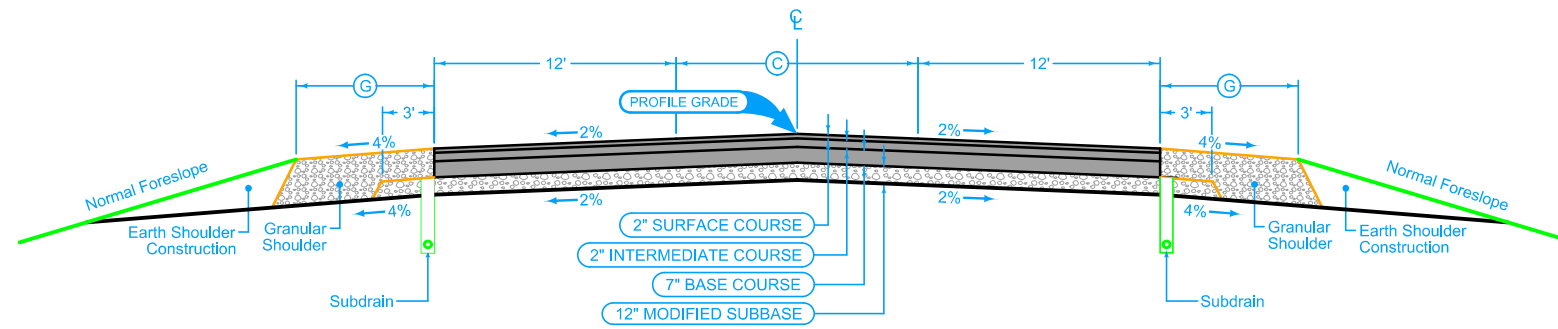
Full Depth HMA Combination Shoulder

Shoulder Jointing:
Longitudinal joint: B

2_C_FullHMA_MODIFIED			
G Feet	P Feet	STATION TO STATION	
4-2	6-4	27+14.90	27+72.02
2	4	27+72.02	34+29.07

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

IA 17 HMA WIDENING



Granular Shoulder

2_G_SR 04-21-20		Ⓞ
STATION TO STATION		Feet
133+45.00	133+94.65	5

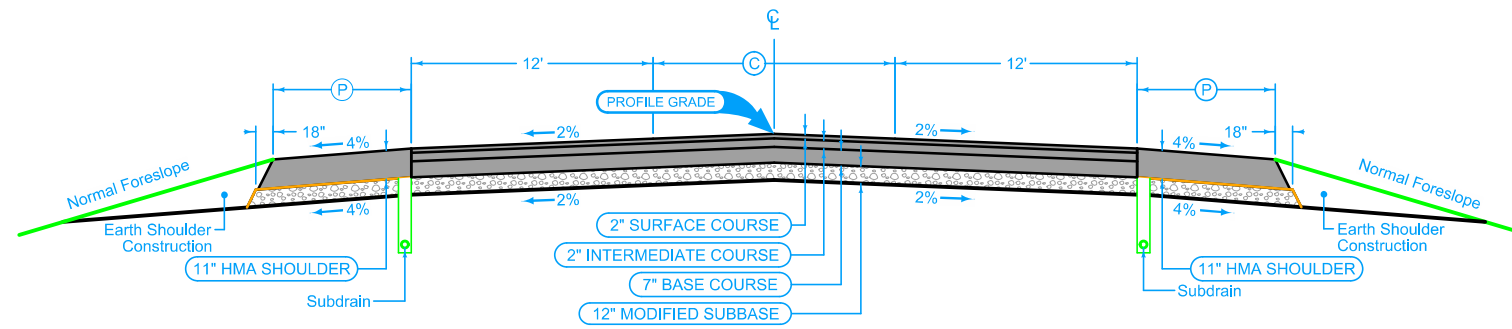
2H_TWLTL 04-21-20		Ⓞ
STATION TO STATION		Feet
133+45.00	133+94.65	14

Granular Shoulder

2_G_SR 04-21-20		Ⓞ
STATION TO STATION		Feet
133+45.00	133+94.65	5

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

STATE STREET HMA PAVING



Full Depth HMA Shoulder

Shoulder Jointing:
Longitudinal joint: B

2_P_FullHMA_04-21-20		
STATION TO STATION		(P) Feet
236+51.86	238+42.28	3

2H_TWLT_04-21-20		
STATION TO STATION		(C) Feet
236+51.86	236+67.28	14
236+67.28	238+42.28	14-0

Full Depth HMA Shoulder

Shoulder Jointing:
Longitudinal joint: B

2_P_FullHMA_04-21-20		
STATION TO STATION		(P) Feet
236+51.86	238+42.28	3

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

110TH AVE HMA PAVING

SURVEY SYMBOLS

	AST, Above Ground Storage Tank		PR, Electric Riser Pole
	BB, Billboard		PRO, Profile Shot
	BBB, Bottom of Bridge Beam		PT, Curve Point
	BCL, Bridge Centerline		REF, Reference Tie Point
	BD, Bridge Deck		RET, Retaining Walls
	BIN, Grain Bin		RIP, Rip-Rap
	BL, Topo Breakline		ROC, Rock Outcropping
	BLD, Building or Foundation		ROW, Right of Way Mark
	BLS, Bridge Low Steel		RR, Centerline of Railroad Tracks
	BM, Bench Mark		RRB, Railroad Signal Box
	BNK, Stream Bank		RRF, Railroad Frog
	BRG, Bridge		RRR, Railroad Rail
	C, Centerline BL of Road -ML or SR		RRS, Railroad Signal
	CAV, Cave		RRW, Railroad Switch
	CEL, Cell Phone Tower		RT, Radio Tower
	CIS, Cistern		S, Soil Sampling Site -Wetlands
	CON, Concrete or A/C Slab		SBR, Size of Bridge
	CP, Control Point		SC, Spiral Point
	CRP, Corporation Line		SCR, Section Corner
	CS, Curve Point		SEP, Septic Tank
	CU, Back of Curb		SF, Silt Fence -Wetlands
	CUL, Culvert		SG, Staff Gauge -Wetlands
	D, Centerline Draw or Stream -Down		SH, Paved Shoulder
	DAB, Drainage Area Boundary		SHR, Shrub
	DIK, Centerline of Dike or Dam		SI, Sign
	DTM, Photogrammetry Elv Control Check		SL, Speed Limit Sign
	DU, Centerline Draw or Stream -Up		SLN, Section Line
	EB, Electrical Box		SLO, Silo
	EG, Edge of Gravel Road		SNK, Sink Hole
	ENP, Edge Paved Entrance and Park Lot		SNP, Unpaved Shoulder
	ENT, Centerline BL of Entrance		SP, Stream Profile
	ENU, Edge Unpaved Entrance and Parking		STP, Stump
	EP, Edge of Paved Roads -ML or SR		SWK, Sidewalk
	EW, Edge of Water		SWP, Swamp or Marsh
	FCL, Chain Link and Security Fence		TA, Tower Anchor
	FENO, FENO Monument		TBO, Telephone Booth
	FHD, Fire Hydrants		TCB, Traffic Signal Box
	FLG, Flag Poles		TDC, Tree Deciduous
	FP, Filler Pipe		TDL, Traffic Detection Loop
	FW, Wire Fence		TER, Terrace
	FWD, Wood Fence		TEV, Evergreen Tree
	GDC, Guard Rail Cable		TFR, Tree Fruit
	GDL, Guard Rail Steel		TGP, Telegraph Pole
	GP, Guard Post -Less Than 4 Posts		TIL, Tile Line
	GPR, Guard Post -4 or More Posts		TLNL, Tree Line Left
	GR, Ground Shot		TLNR, Tree Line Right
	GRV, Grave		TOP, Top of Bridge Pier
	GU, Gutter In Front of Curb		TPA, Telephone Pole Co. 1
	GV, Gas Valve		TPB, Telephone Pole Co. 2
	HDG, Hedge Row		TPC, Telephone Pole Co. 3
	HS, Hydric Soil -Wetlands		TR, Telephone Riser Pole
	HT, Electrical Highline Tower		TRL, Trail
	IN, Storm Sewer Intake		TS, Spiral Point
	INB, Storm Sewer Beehive Intake		TSB, Telephone Switch Box
	LC, Lot Corner		TSG, Traffic Signal
	LIN, Miscellaneous Line		TSL, Traffic Signal and Luminaire
	LP, L.P. Tank		TV, Satelite TV Dish
	LUM, Luminaire		TVP, TV Pedestal
	MH, Utility Access -Manhole		TW, Top of Water
	MIS, Miscellaneous		UB, Utility Box
	MM, Mile Marker Post		UE, Utility Elevation
	OUT, Tile Outlet		UPH, Utility Pot Hole - Quality A
	PC, Curve Point		UST, Underground Tank
	PCP, Photo Control Point		UV, Underground Utility Vault
	PCT, Photo Control Target		VS, Channel Cross Section
	PI, Tangent Point		WC, Wild Card -Misc. Field Shot
	PIP, Pipe Culvert		WEL, Well
	PL, Location of Photo -Wetlands		WHD, Water Hydrant
	PLG, Location of General Photo		WHU, RV Water Hook Up
	POC, Curve Point		WM, Wind Mill
	POST, Spiral Point		WND, Wind Turbine
			WV, Water Valve

UTILITY LEGEND

	FO	FOID, CenturyLink - Quality D
	E1	ELID, MidAmerican Energy - Quality D
	TV2	TVID, Mediacom - Quality D
	TV2	TV2D, CenturyLink - Quality D
	T1	GLID, Black Hills Energy - Quality D
	SAN	TLID, CenturyLink - Quality D
	ST S	SAID, City of Granger - Quality D
	W	STID, City of Granger - Quality D
		WLID, Xenia Water - Quality D
		PPA, MidAmerican Energy

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

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

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

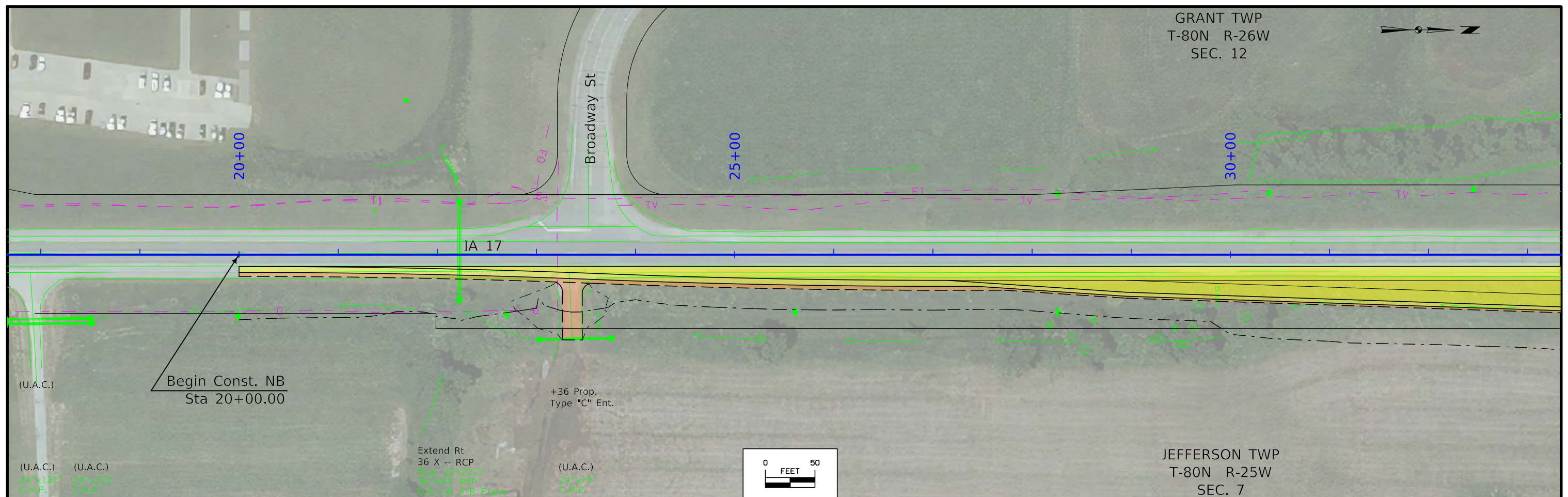
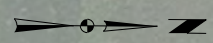
Symbol	Description
	Reference Point
	Station
	Section Corner
	Ground Line Intercept
	Saw Cut
	Guardrail
	Trench Drain
	HighTension Cable Guardrail
	Sheet Pile
	Pavement Removal
	Clearing & Grubbing Area

Symbol	Description
	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

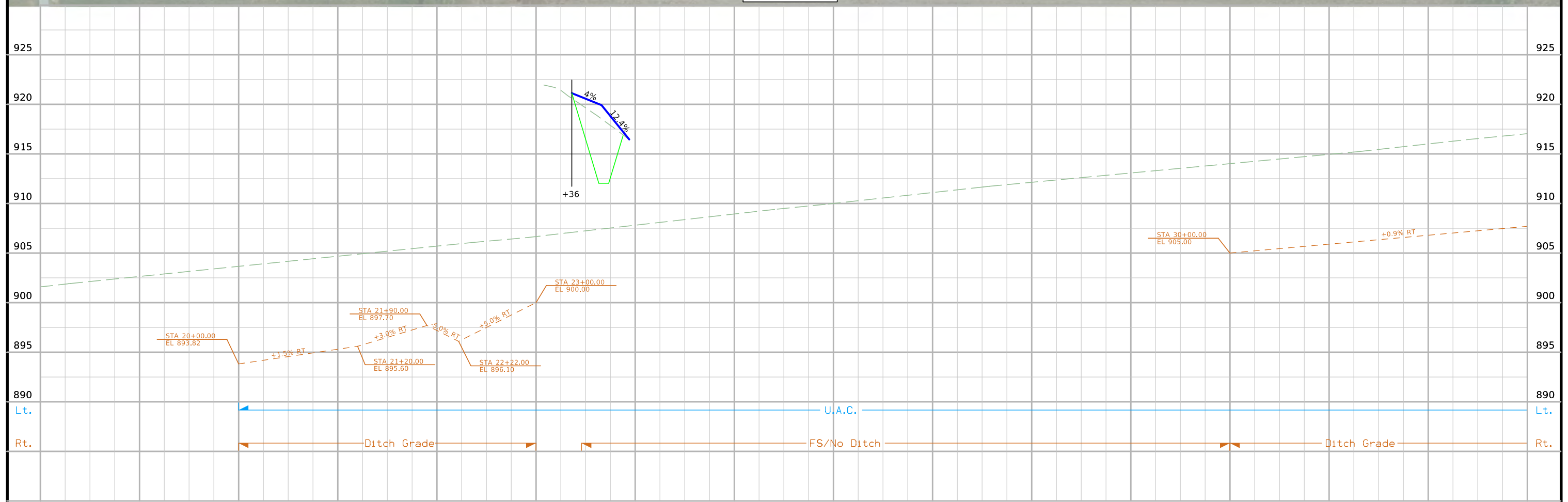
PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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

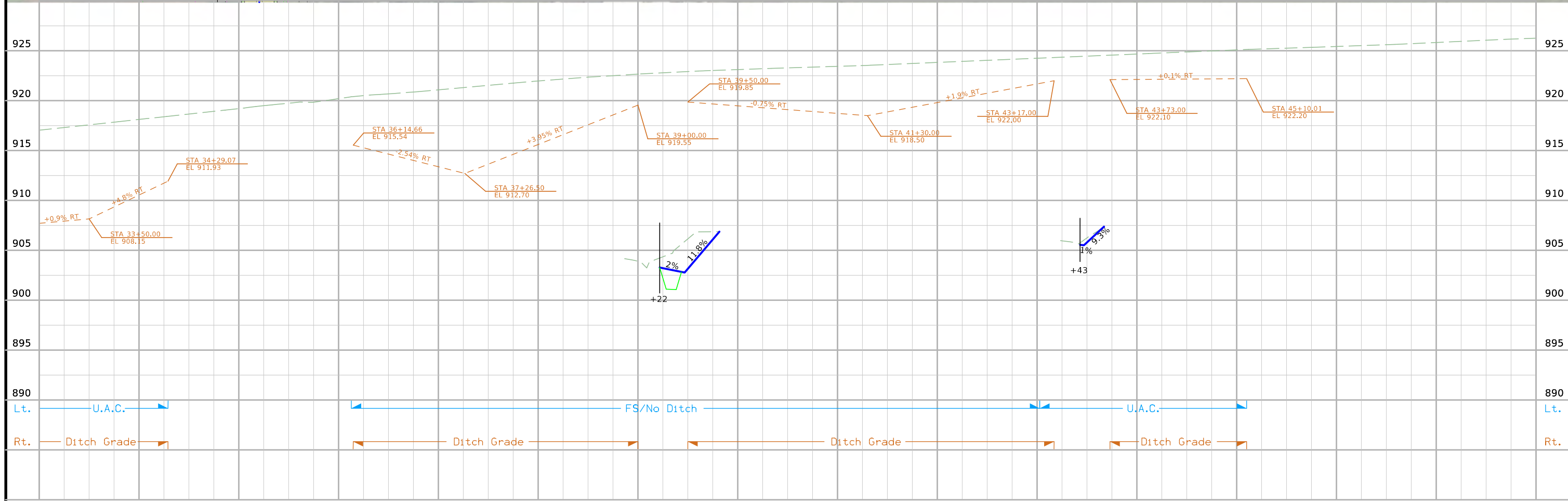
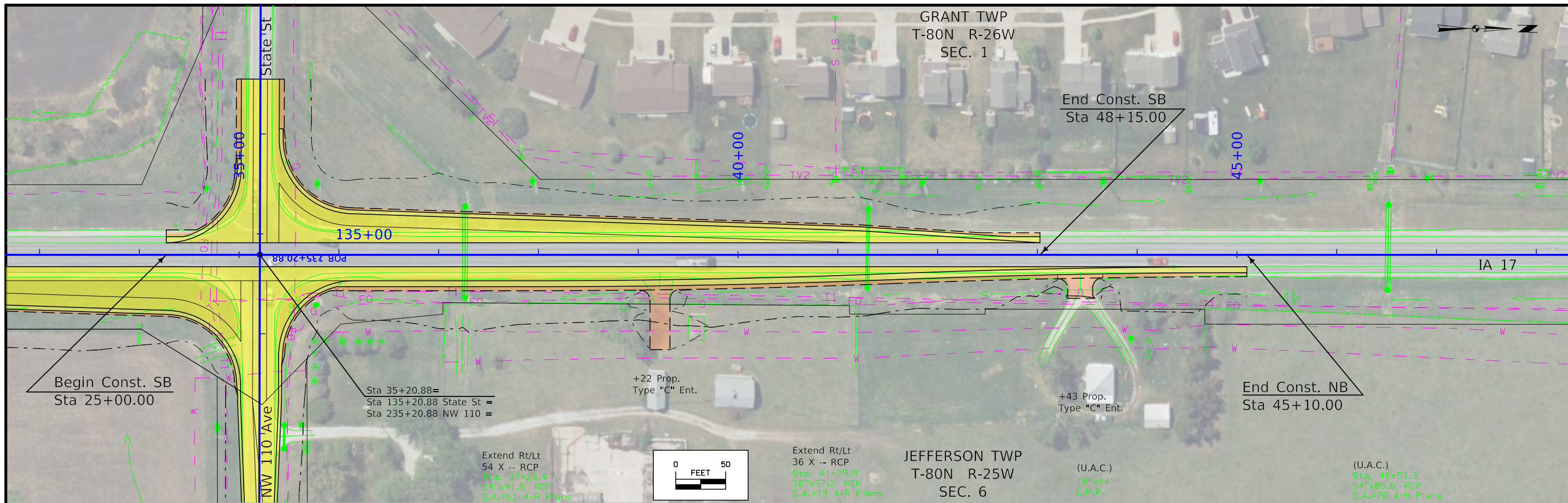
GRANT TWP
T-80N R-26W
SEC. 12



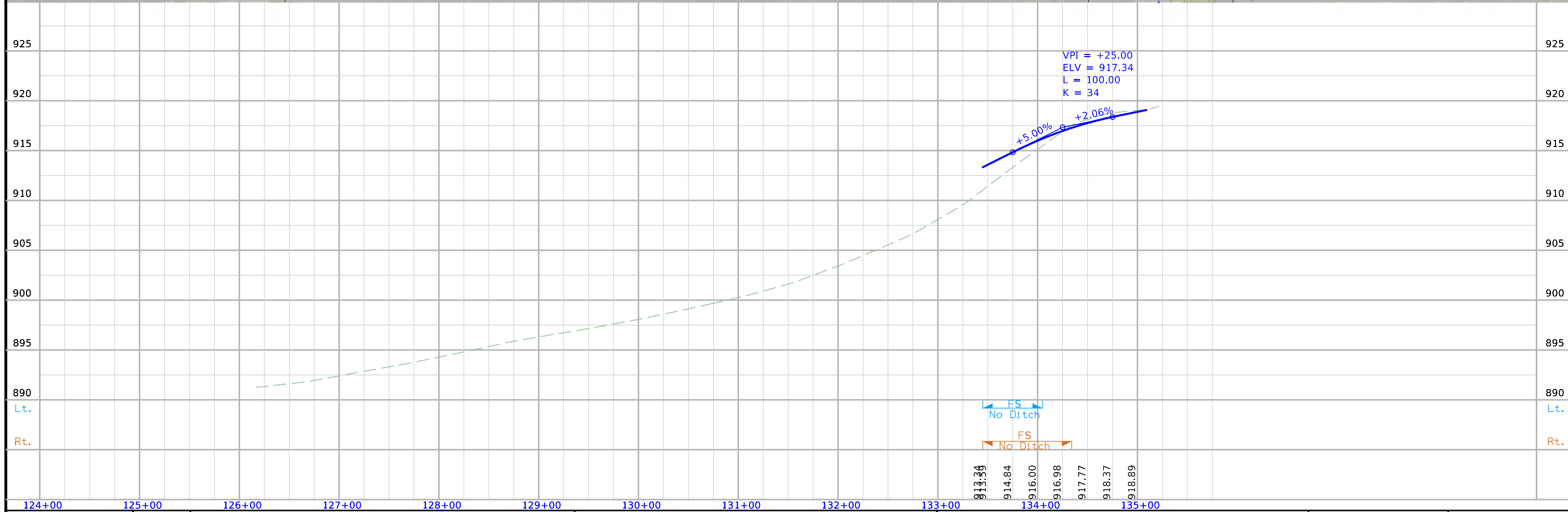
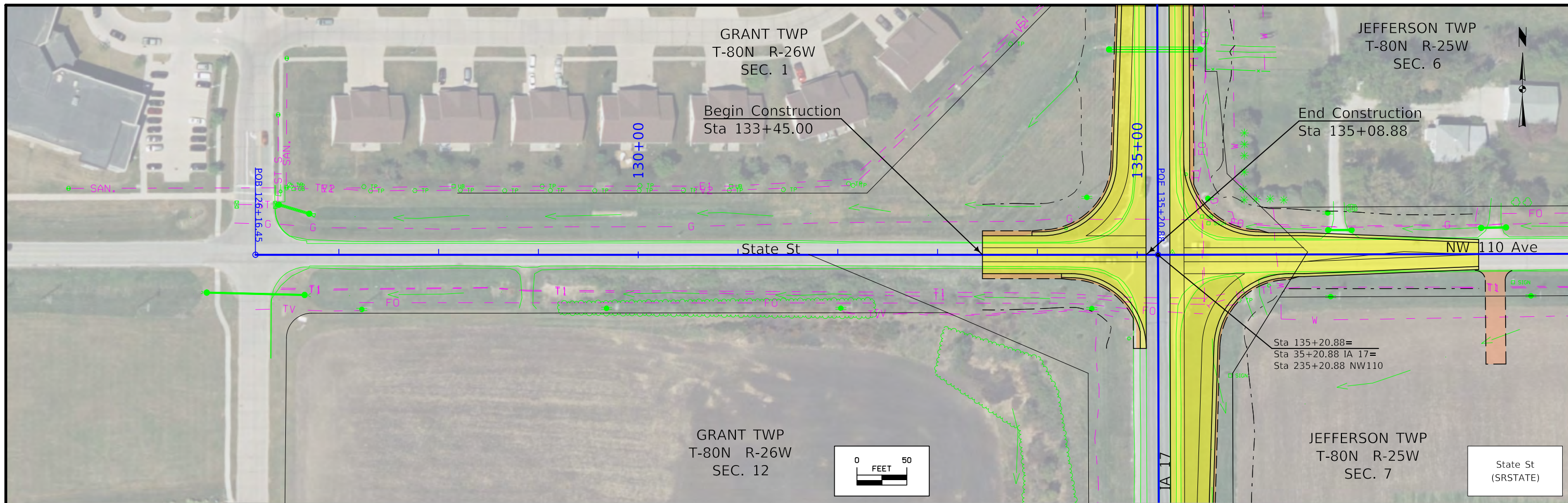
JEFFERSON TWP
T-80N R-25W
SEC. 7

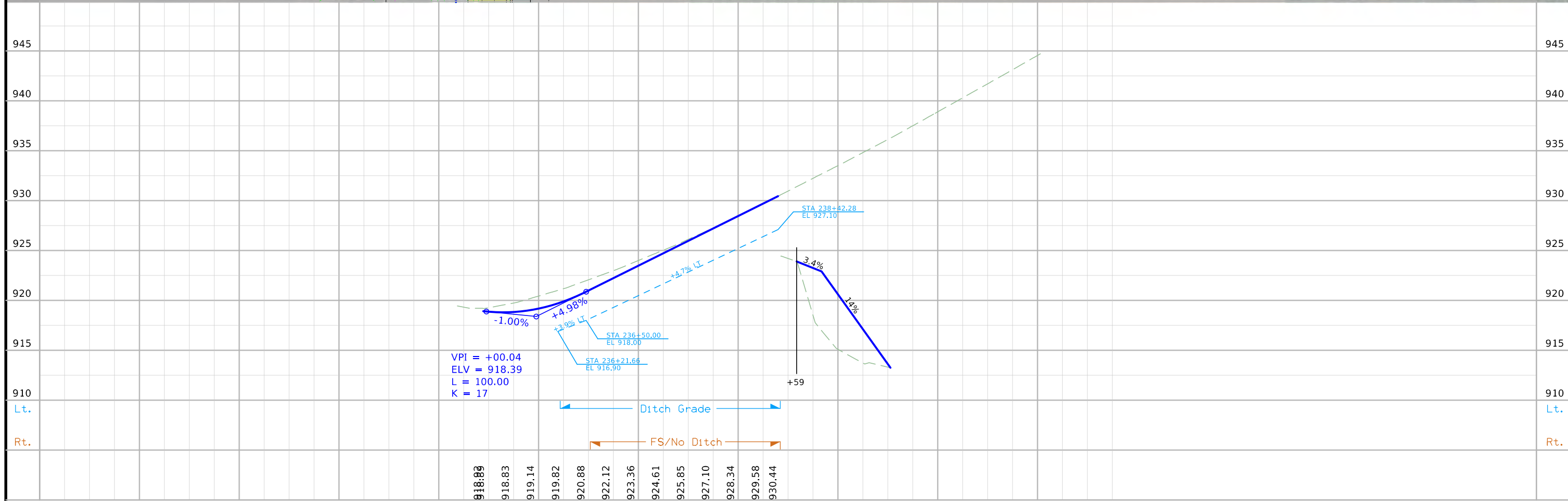
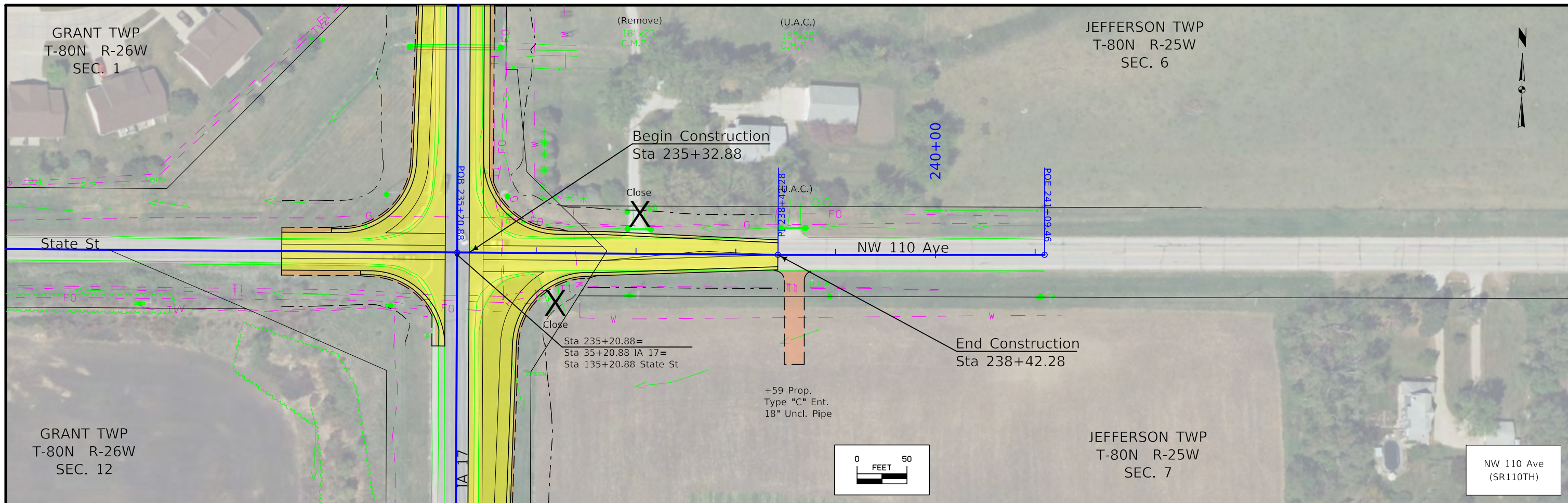


18+00	19+00	20+00	21+00	22+00	23+00	24+00	25+00	26+00	27+00	28+00	29+00	30+00	31+00	32+00	33+00
FILE NO.	ENGLISH	DESIGN TEAM	Schrock / Dudley			Polk COUNTY	PROJECT NUMBER	HSIPX-017-1(021)--3L-77				SHEET NUMBER	D.2		



33+00	34+00	35+00	36+00	37+00	38+00	39+00	40+00	41+00	42+00	43+00	44+00	45+00	46+00	47+00	48+00
FILE NO.	ENGLISH	DESIGN TEAM	Schrock / Dudley			Polk COUNTY	PROJECT NUMBER	HSIPX-017-1(021)--3L-77			SHEET NUMBER	D.3			





231+00	232+00	233+00	234+00	235+00	236+00	237+00	238+00	239+00	240+00	241+00		
FILE NO.	ENGLISH	DESIGN TEAM	Schrock / Dudley				Polk COUNTY	PROJECT NUMBER	HSIPX-017-1(021)--3L-77		SHEET NUMBER	E.2

Survey Information

SURVEY INDEX

County: Polk
PIN: 22-77-017-010
Project Number: HSIPX-017-1(21)--3L-77
Location: State St Intersection in Granger
Type of Work: Undecided
Project Directory: 7701701022

Survey Personnel

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

Date(s) of Survey

Begin Date 02/08/2021
End Date 03/14/2022

General Information

Measurement units for this survey are US survey feet. This survey is for IA Hwy 17 intersection with State St in Granger.

Project Control

Nearby Iowa Real Time Network reference stations were utilized to obtain horizontal and vertical control on primary project control points. Two five-minute observations were taken with appropriate time spans 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) EPOCH 2010.00
VERTICAL DATUM: NAVD88
COORDINATE SYSTEM: IOWA REGIONAL COORDINATE SYSTEM ZONE 8

Alignments Information

Alignment provided for this survey by the district 1 office.

Chain Ia17 is a retrace of as-built plans for project F-1104(1) and NHS-141-6(33)--19-25. Stationing was held at the intersection of Ia141 and Ia17 (P.O.T. 461+18.01 (Ia141) = P.O.T. 2461+18.01 (Ia17)(Proj. NHS-141-6(33)--19-25) and was ran ahead with an equation at 2464+05.39 (BK) = 0+00.00 (AH).

Starting at...

P.O.T. 2461+18.01 (Proj. NHS-141-6(33)--19-25) = P.O.T. 2461+18.01 (This survey)
Found ½” re-rod (flush)
Eq. P.O.T. 2464+05.39 (BK) (this survey) = P.O.T. 0+00.00 (AH) (Proj. F-1104(1))
Nothing found or set
P.I. 84+90.20 (Proj. F-1104(1)) = P.I. 84+90.2 (This survey)
Found ½” iron pin (flush)
...End of chain

CONTROL POINT VICINITY MAP

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



HORIZ. DATUM: NAD83(2011) EPOCH 2010.00 - Ia. RCS Zone 08

VERT. DATUM: NAVD88 - Geoid Model g2012bu3

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) EPOCH 2010.00
 1a. Regional Coordinate System Zone 08

VERT. DATUM: NAVD88
 Geoid Model g2012bu3
 Project Control Marks are Bench Marks

Point Name	Northing	Easting	Elevation	Feature Definition-Description
G154	7554373.223	18473172.865	952.929	CP G154 PLACED 5/8"X6' ALUM ROD WITH CAP WEST SIDE IOWA HIGHWAY 17 0.5 MILE NORTH OF 190TH ST (NW 110TH AVE. POLK CO) IN SECT. 1 T80N R26W NEAR ADDRESS 1833 HIGHWAY 17. HIGHWAY 17 STATIONING IS ABOUT 73+00
25141146	7549080.736	18470771.664	878.916	CP 25141146 FROM INTERSECTION OF HWY 141 AND HWY 17 AT GRANGER GO 0.6MI NW ALONG HWY 141 FENO TYPE MONUMENT IN NORTH DITCH 55FT SW OF A LUM 89FT S OF FIRE HYD 20FT NE MM 146
77141147	7545812.749	18474873.445	867.452	CP 77141147 FROM INTERSECTION OF HWY 141 AND HWY 17 AT GRANGER GO 0.3MI SE ALONG HWY 141 FENO TYPE MONUMENT IN SOUTH DITCH 16FT SOUTH MM 147

NOTE:

The first two digits in the control point name refer to the county number.
 The next 3 digits refer to the highway number.
 The next 3 digits refer to the highway milepost.
 The last digit refers to the distance from the referenced milepost to the nearest tenth of a mile.

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 Anticipated									

108-26A
08-01-08

STAGING NOTES

*****Stage 1*****
 Traffic Control:
 - Maintain traffic on existing configuration
 Construction:
 - Shoulder strengthen/pave IA 17 SB shoulder.

*****Stage 2*****
 Traffic Control:
 - Close 110th Ave
 - Shift traffic west to strengthened shoulder
 Construction:
 - Construct widening to the east on IA 17
 - Reconstruct 110th Ave connection to IA 17










*****Stage 3*****
 Traffic Control
 - Reopen 110th Ave
 - Shift IA 17 east to new widened pavement
 - Close State St
 Construction:
 - Construct SB right-turn-lane
 - Reconstruct State St connection to IA 17

*****Stage 4*****
 Traffic Control
 - Reopen State St
 - Update IA 17 and State St to final traffic layout

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

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

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





















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

PLAN VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

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

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

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

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

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

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

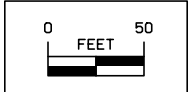
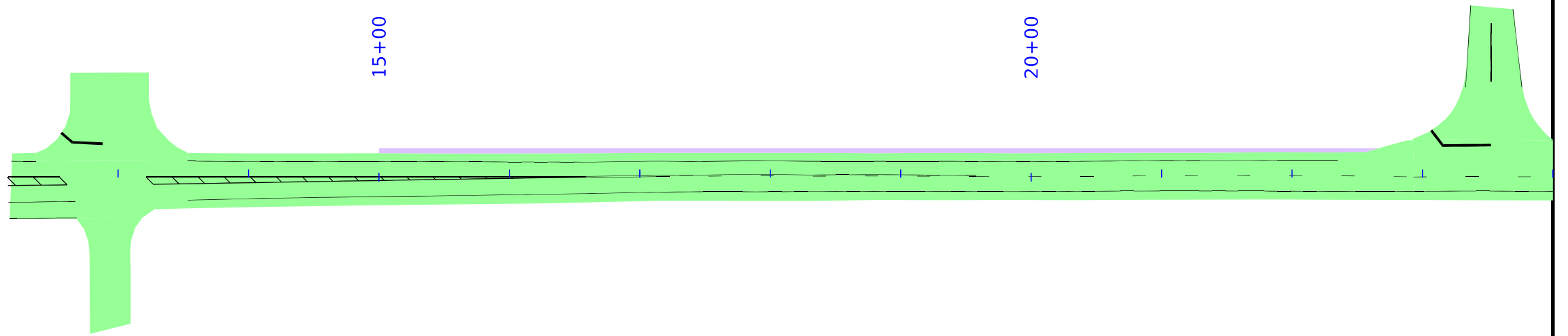
(COVERS SHEET SERIES J)



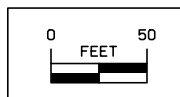
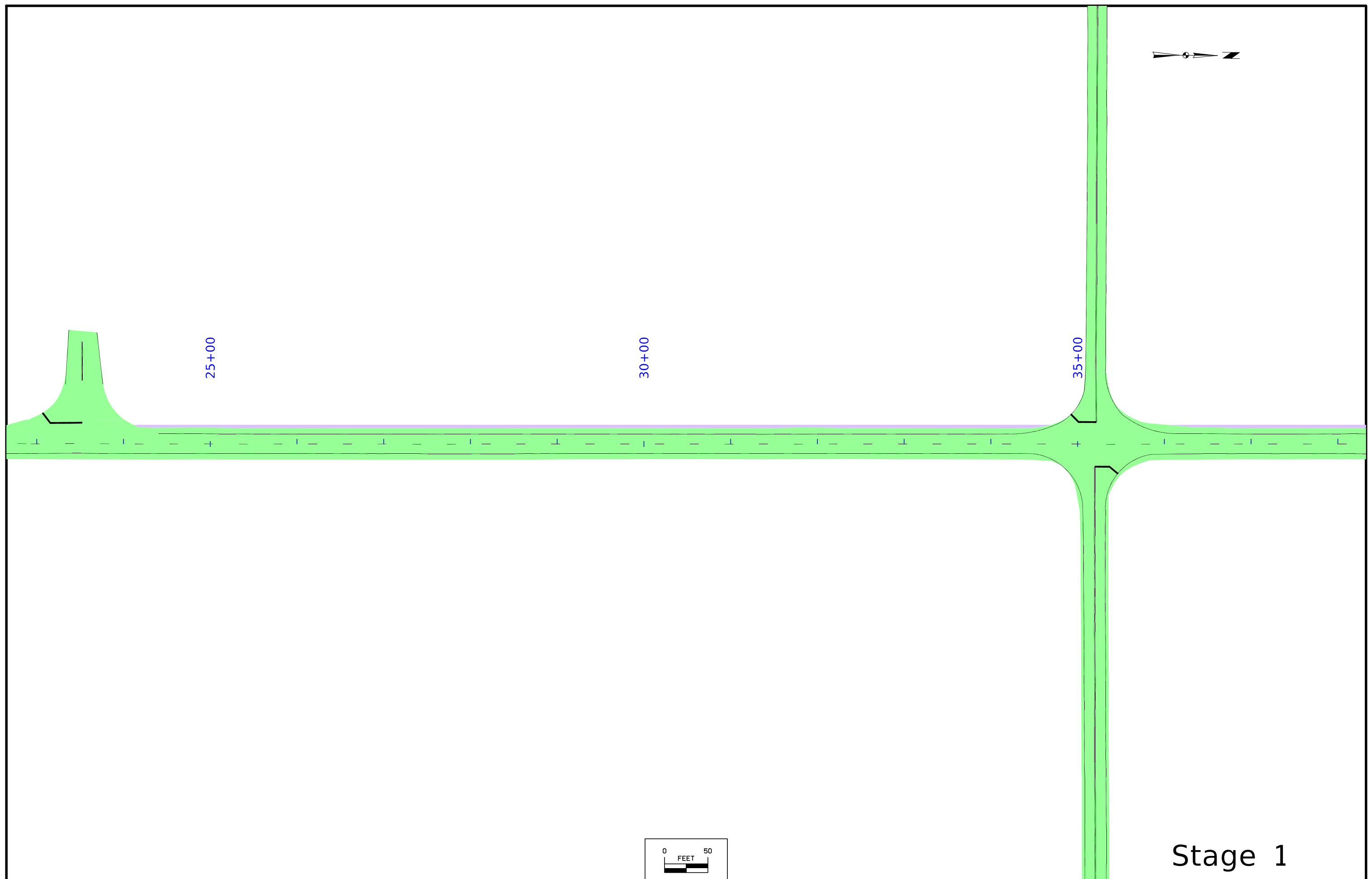
10+00

15+00

20+00



Stage 1



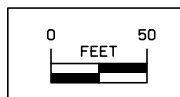
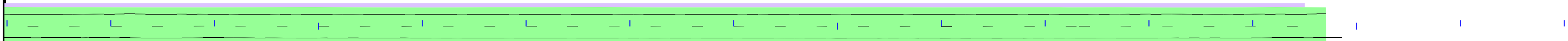
Stage 1



40+00

45+00

50+00



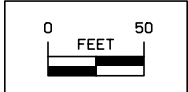
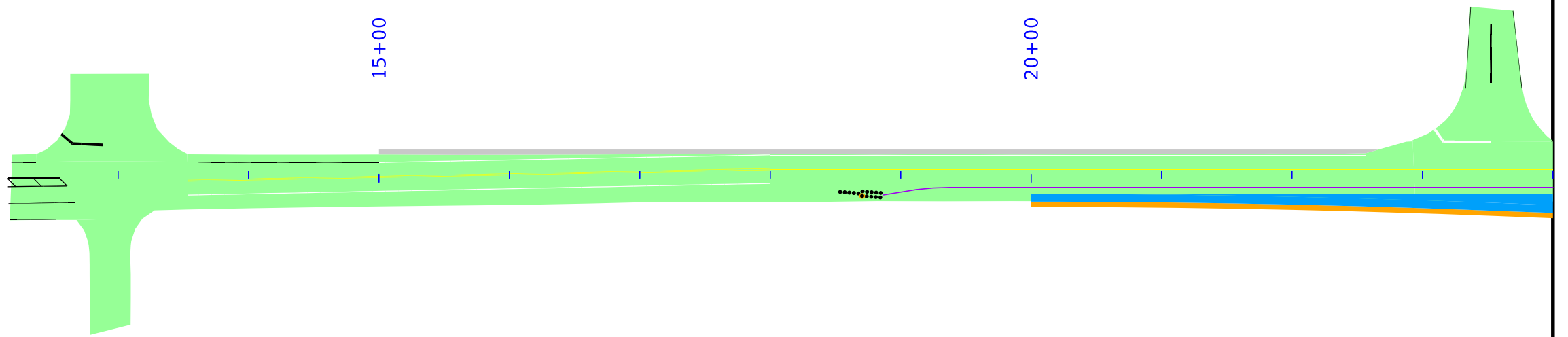
Stage 1



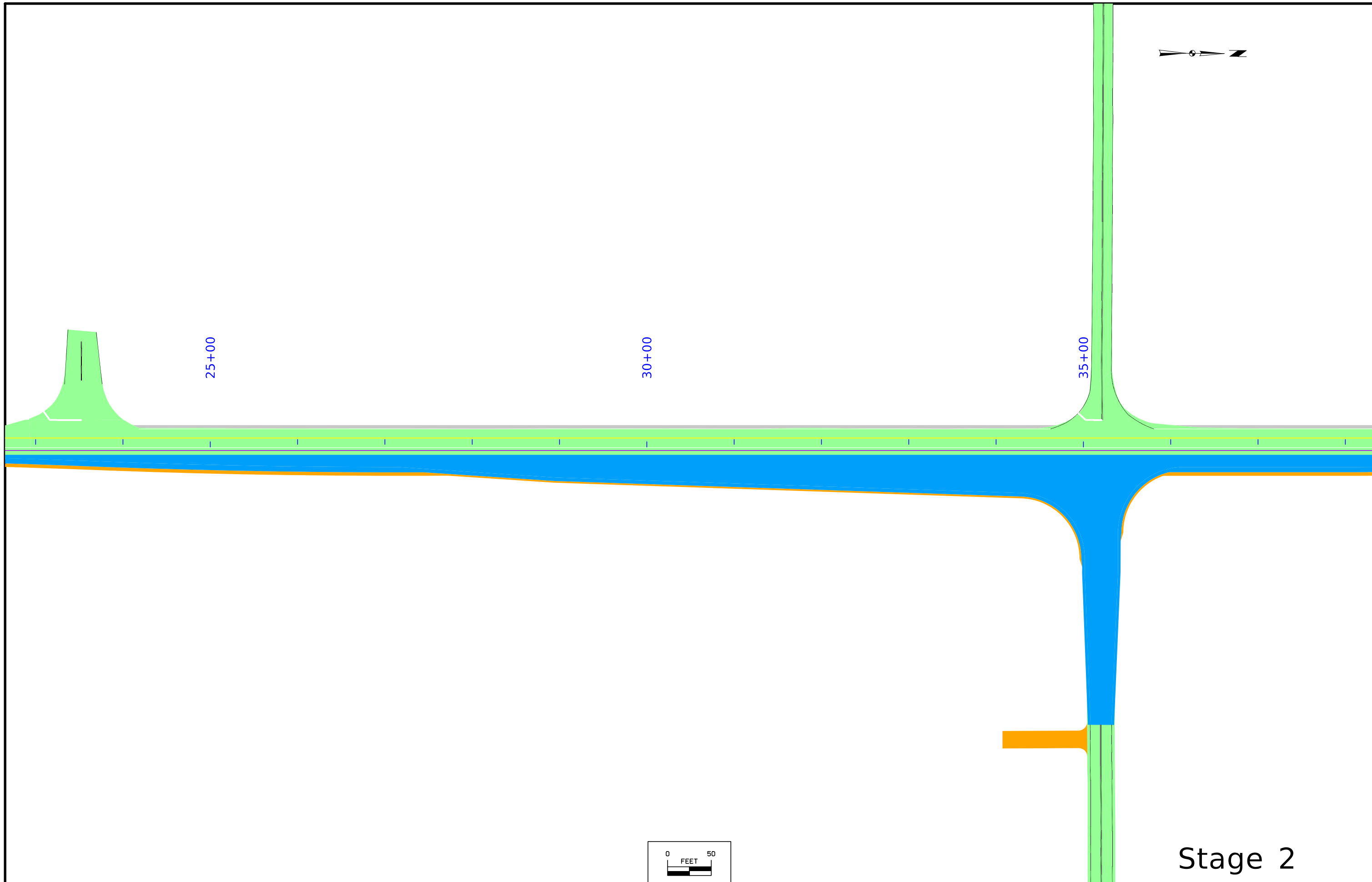
10+00

15+00

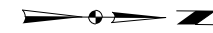
20+00



Stage 2



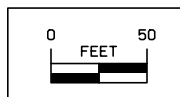
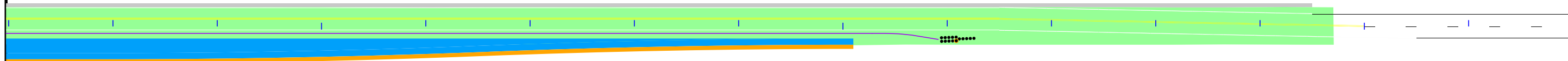
Stage 2



40+00

45+00

50+00



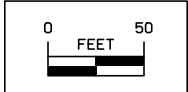
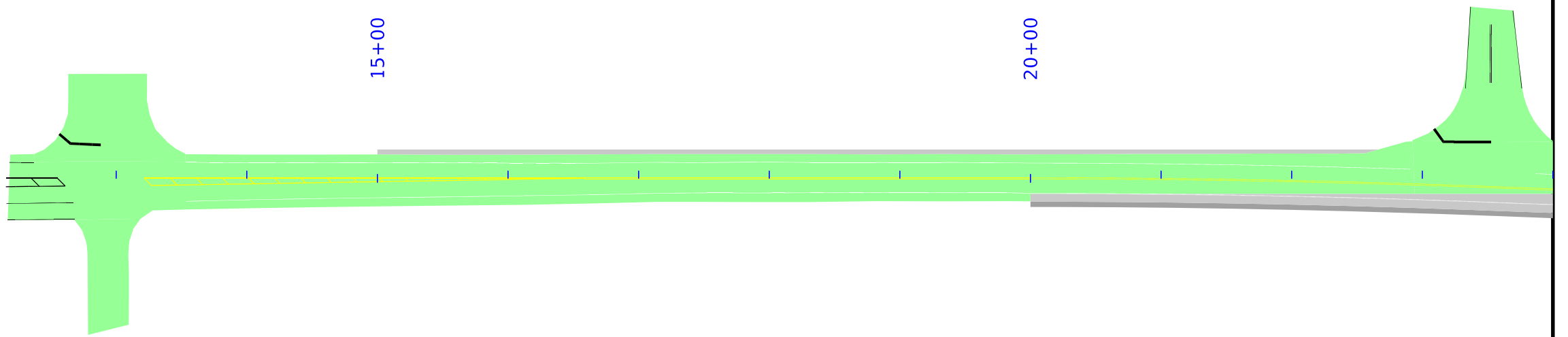
Stage 2



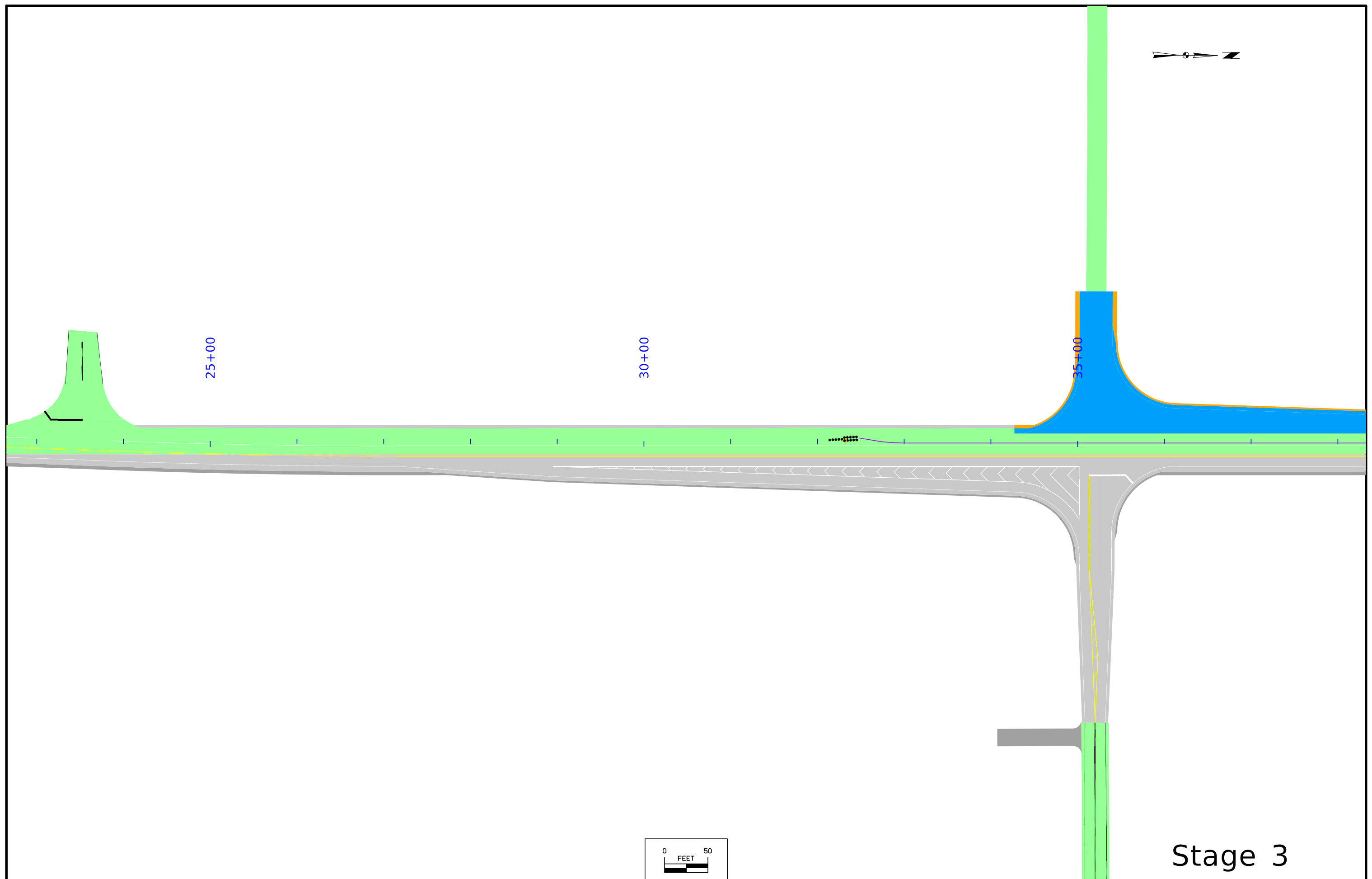
10+00

15+00

20+00



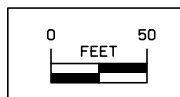
Stage 3



25+00

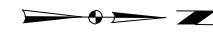
30+00

35+00



Stage 3

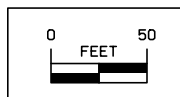
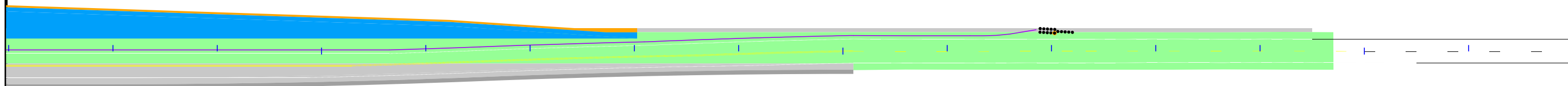
FILE NO.	ENGLISH	DESIGN TEAM Schrock / Dudley	Polk COUNTY	PROJECT NUMBER HSIPX-017-1(021)--3L-77	SHEET NUMBER J.10
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40+00

45+00

50+00



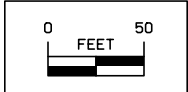
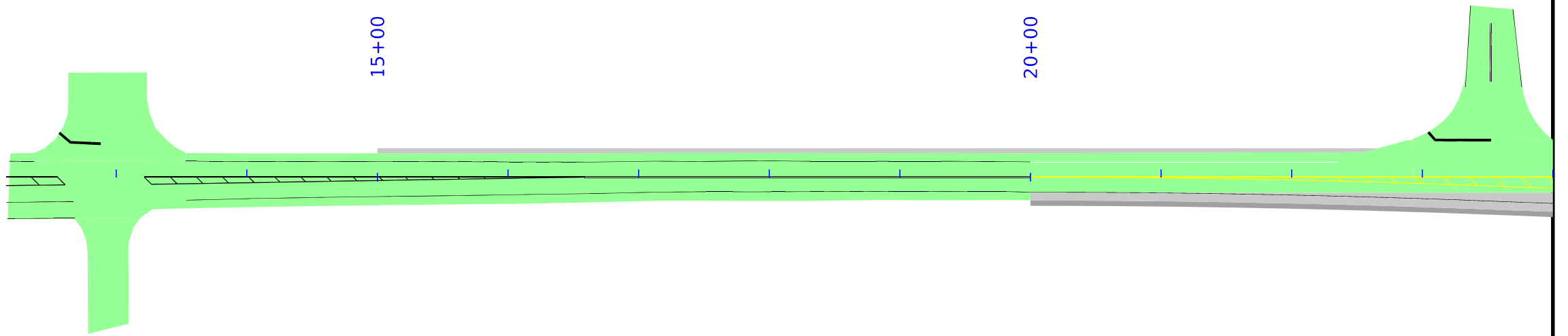
Stage 3



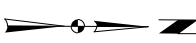
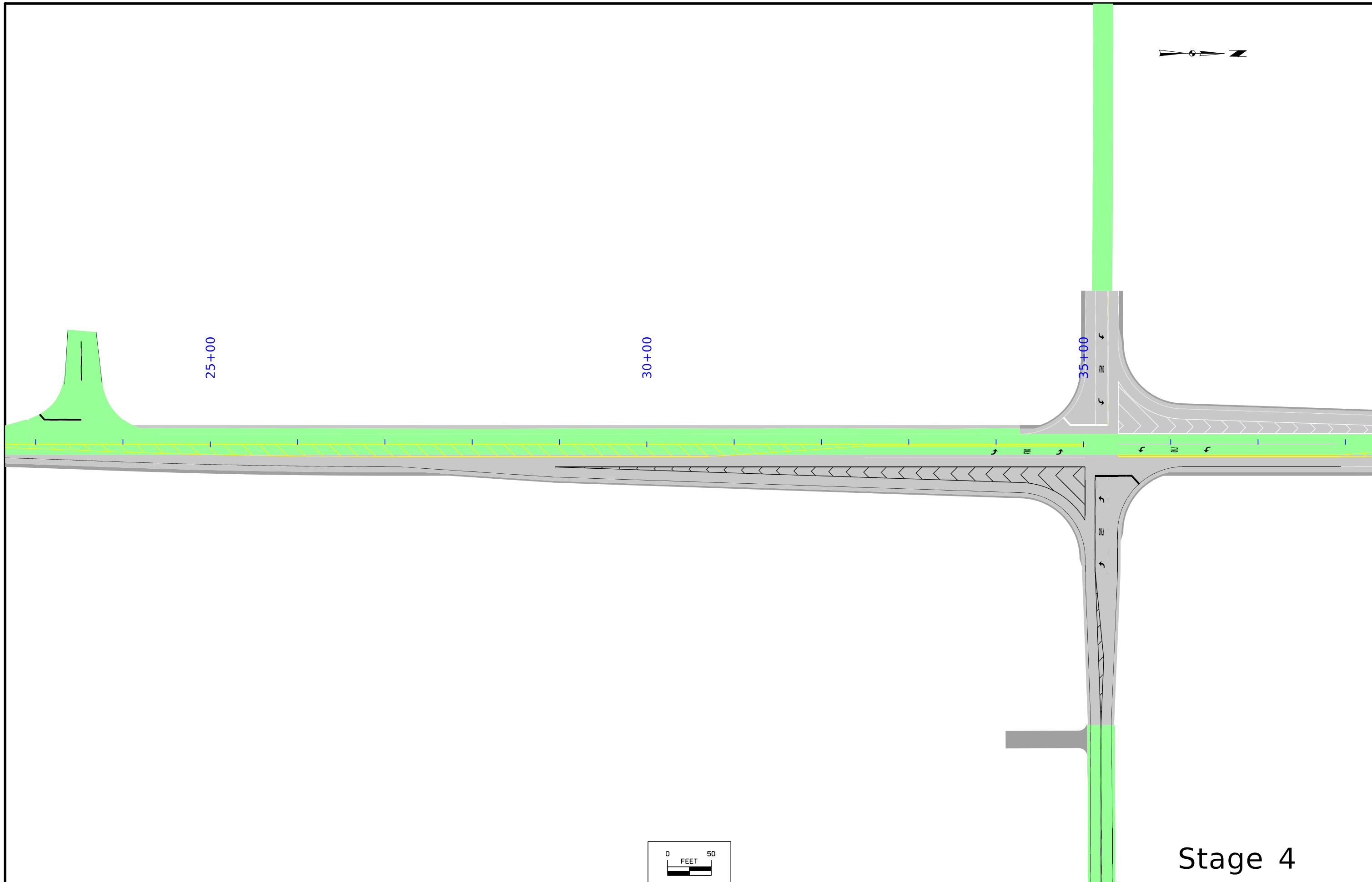
10+00

15+00

20+00



Stage 4

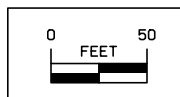


25+00

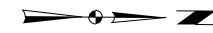
30+00

35+00

Stage 4



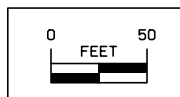
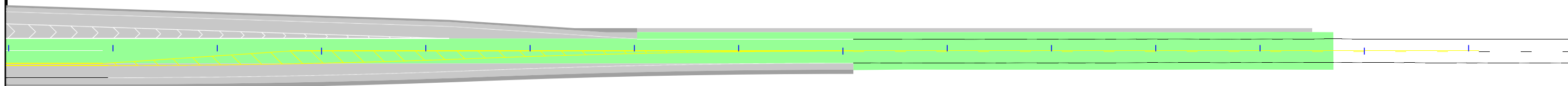
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40+00

45+00

50+00



Stage 4

GRANT TWP
T-80N R-26W
SEC. 12



19+00

20+00

21+00

22+00

23+00

24+00

Broadway St

IA 17

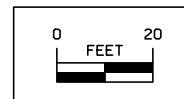
12'

Profile Grade Location

9130' R

STA 20+00.00
OFF 12.00'
Begin Curve

STA 23+57.45
OFF 19.00'
PRC



JEFFERSON TWP
T-80N R-25W
SEC. 7

Geometric Details
Intersection of
IA 17 and State St

GRANT TWP
T-80N R-26W
SEC. 12



25+00

26+00

27+00

28+00

29+00

30+00

IA 17

Profile Grade Location

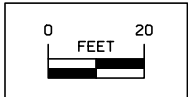
9130' R

STA 27+14.90
OFF 26.00'
End Curve
Begin Taper

180' 15:1 Taper

STA 28+94.90
OFF 38.00'
End Taper
Begin Taper

534.27' 30:1 Taper

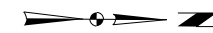


JEFFERSON TWP
T-80N R-25W
SEC. 7

Geometric Details
Intersection of
IA 17 and State St

GRANT TWP
T-80N R-26W
SEC. 12

GRANT TWP
T-80N R-26W
SEC. 1



31+00

32+00

33+00

34+00

35+00

36+00

STA 35+02.14
OFF -86.78'

STA 35+40.23
OFF -116.18'

STA 34+27.14
OFF -12.00'

STA 36+12.73
OFF -40.99'
Begin Taper

509.80'
30:1 Taper

IA, 17

State St

NW 110 Ave

Profile Grade Location

Profile Grade Location

12'
14'

12'
14'

12'

12'
14'

534.27' 30:1 Taper

STA 36+14.65
OFF 26.00'

STA 34+29.07
OFF 55.80'
End Taper

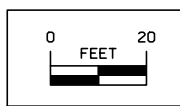
STA 35+01.58
OFF 130.94'

STA 35+39.65
OFF 100.83'

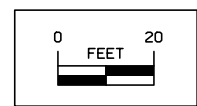
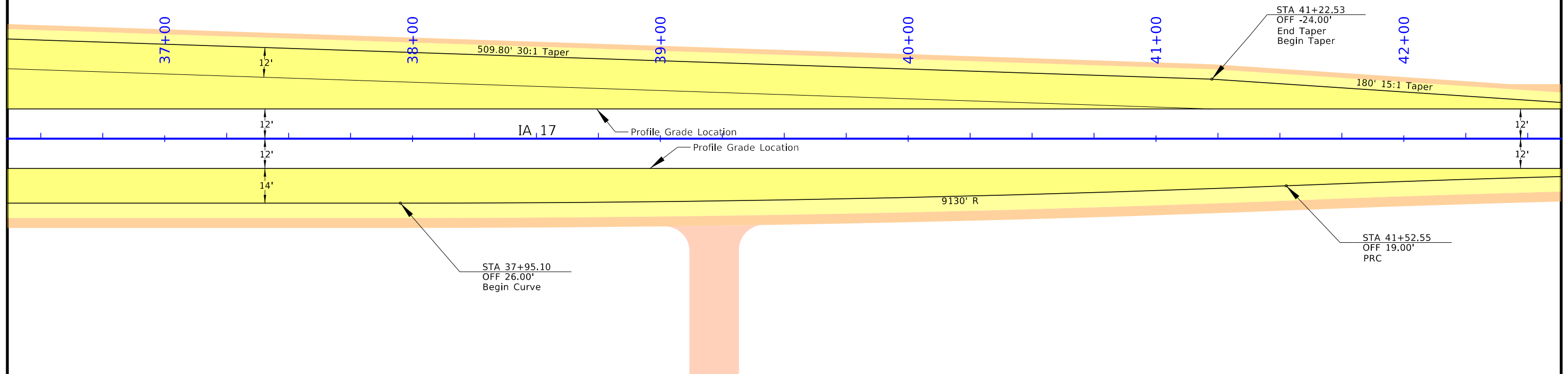
JEFFERSON TWP
T-80N R-25W
SEC. 6

JEFFERSON TWP
T-80N R-25W
SEC. 7

Geometric Details
Intersection of
IA 17 and State St



GRANT TWP
T-80N R-26W
SEC. 1

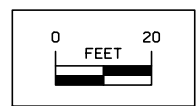
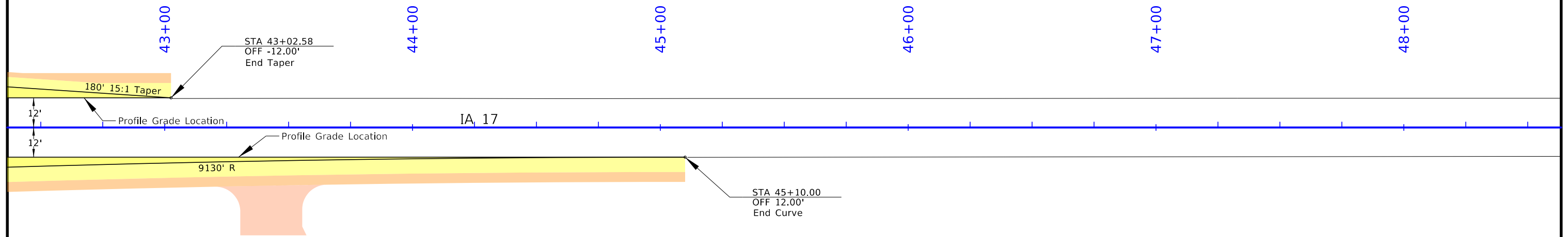


JEFFERSON TWP
T-80N R-25W
SEC. 6

Geometric Details
Intersection of
IA 17 and State St

FILE NO.	ENGLISH	DESIGN TEAM Schrock / Dudley	Dallas/Polk COUNTY	PROJECT NUMBER HSIPX-017-1(021)--3L-77	SHEET NUMBER L,4
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GRANT TWP
T-80N R-26W
SEC. 1



JEFFERSON TWP
T-80N R-25W
SEC. 6

Geometric Details
Intersection of
IA 17 and State St

FILE NO.	ENGLISH	DESIGN TEAM Schrock / Dudley	Dallas/Polk COUNTY	PROJECT NUMBER HSIPX-017-1(021)--3L-77	SHEET NUMBER L.5
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GRANT TWP
T-80N R-26W
SEC. 1

JEFFERSON TWP
T-80N R-25W
SEC. 6



133+00

STA 134+04.65
OFF -19.00'

134+00

135+00

12'
7'
7'
12'

State St

Profile Grade Location

STA 134+34.16
OFF 19.00'

POB 235+20.88

IA 17

236+00

STA 236+21.66
OFF -19.00'

237+00

STA 236+67.28
OFF -19.00'
Begin Taper

12'
7'
7'
12'

NW 110 Ave

Profile Grade Location

STA 236+67.28
OFF 19.00'
Begin Taper

STA 236+51.86
OFF 19.00'

175' 25:1 Taper

175' 25:1 Taper

238+00

PI 238+42.28

STA 238+42.28
OFF -12.00'
End Taper

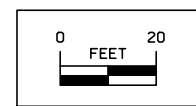
STA 238+42.28
OFF 12.00'
End Taper

239+00

GRANT TWP
T-80N R-26W
SEC. 12

JEFFERSON TWP
T-80N R-25W
SEC. 7

Geometric Details
Intersection of
IA 17 and State St



GRANT TWP
T-80N R-26W
SEC. 12

GRANT TWP
T-80N R-26W
SEC. 1



32+00

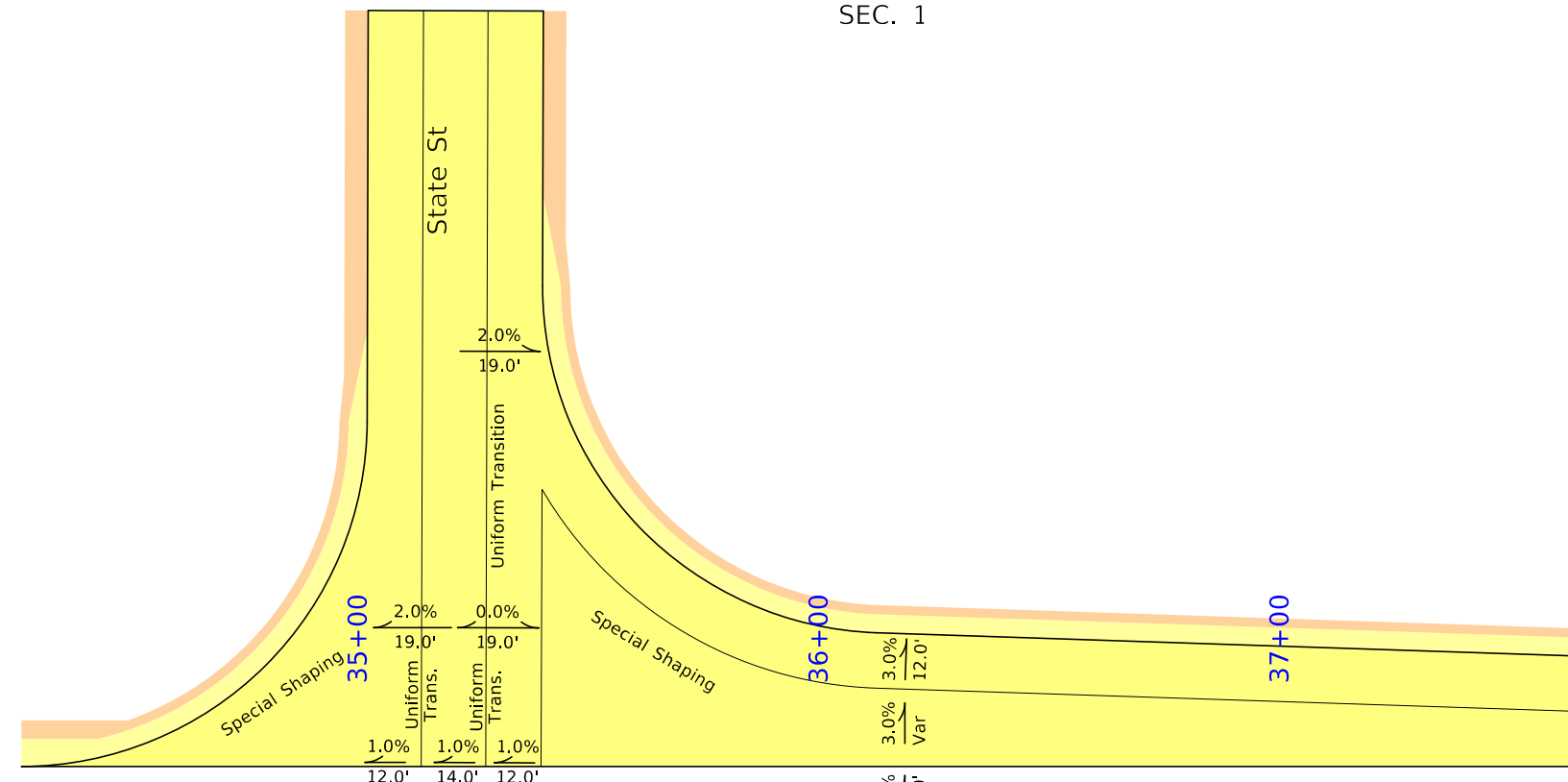
33+00

34+00

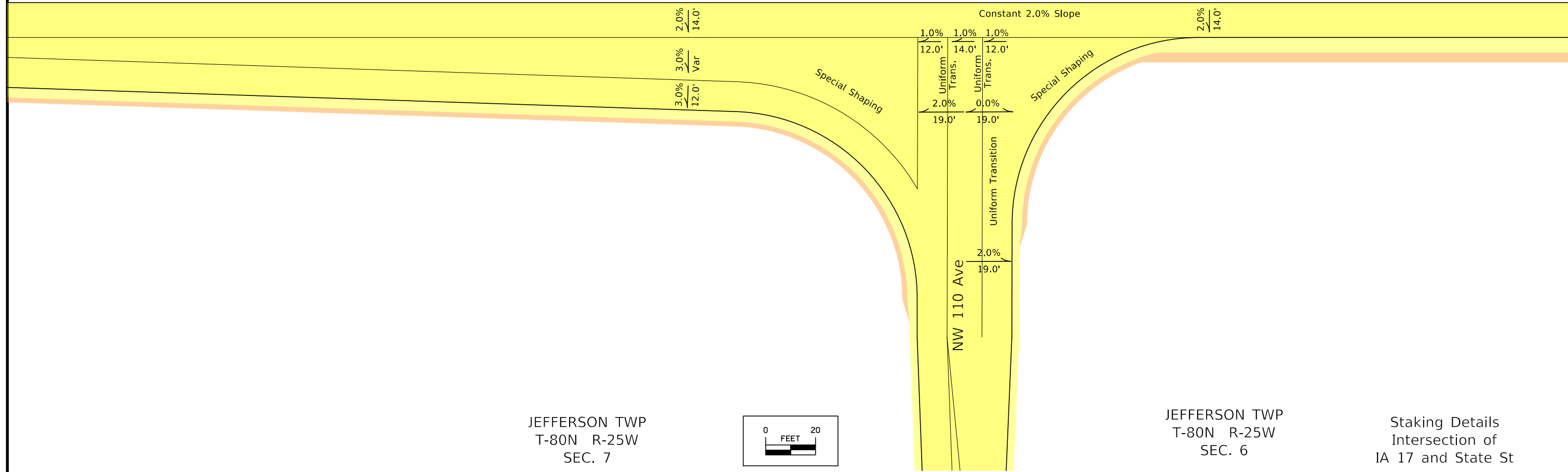
35+00

36+00

37+00



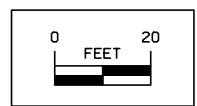
IA 17



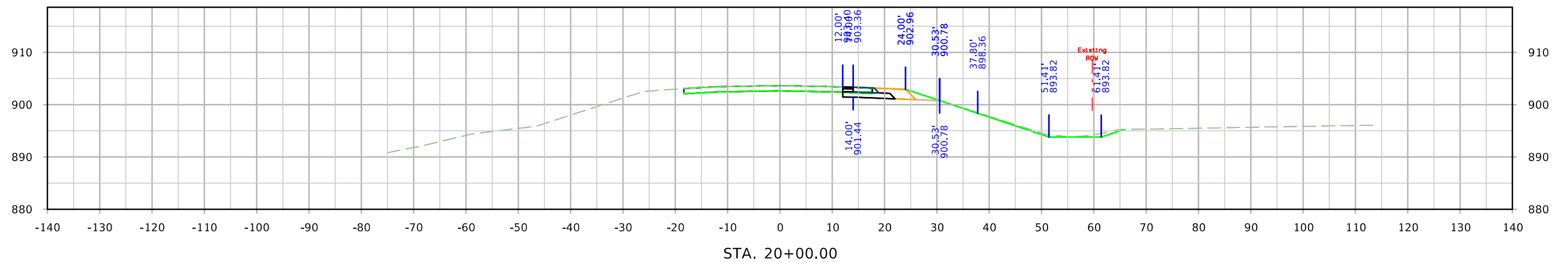
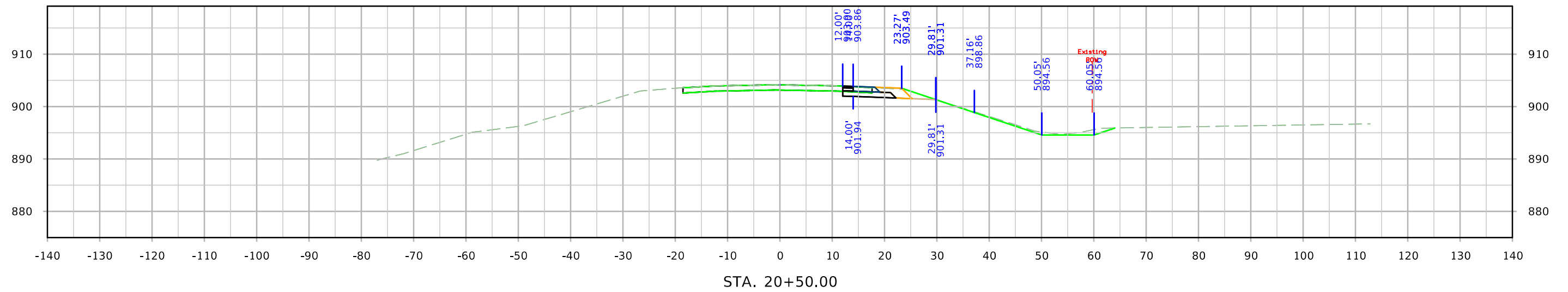
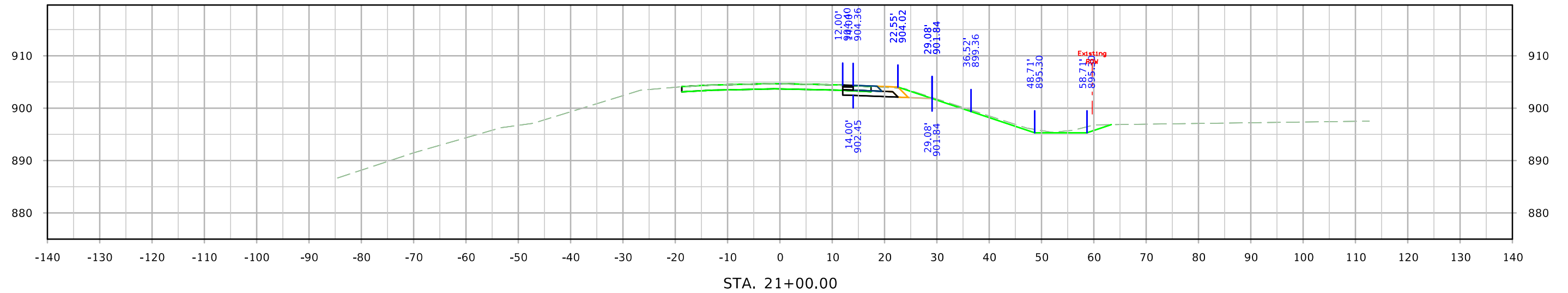
JEFFERSON TWP
T-80N R-25W
SEC. 7

JEFFERSON TWP
T-80N R-25W
SEC. 6

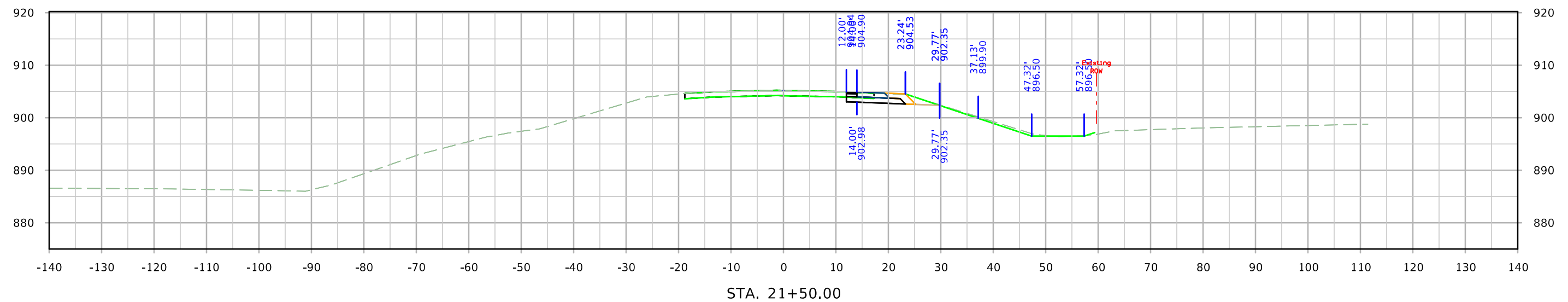
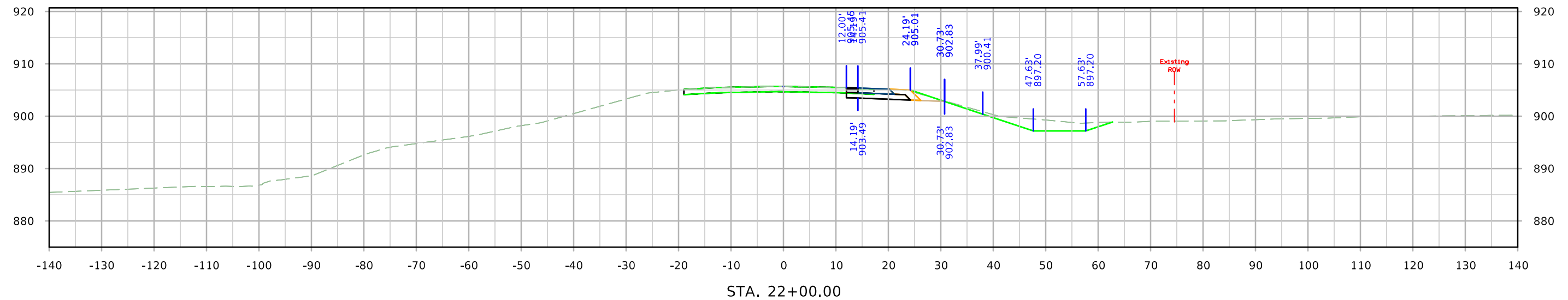
Staking Details
Intersection of
IA 17 and State St



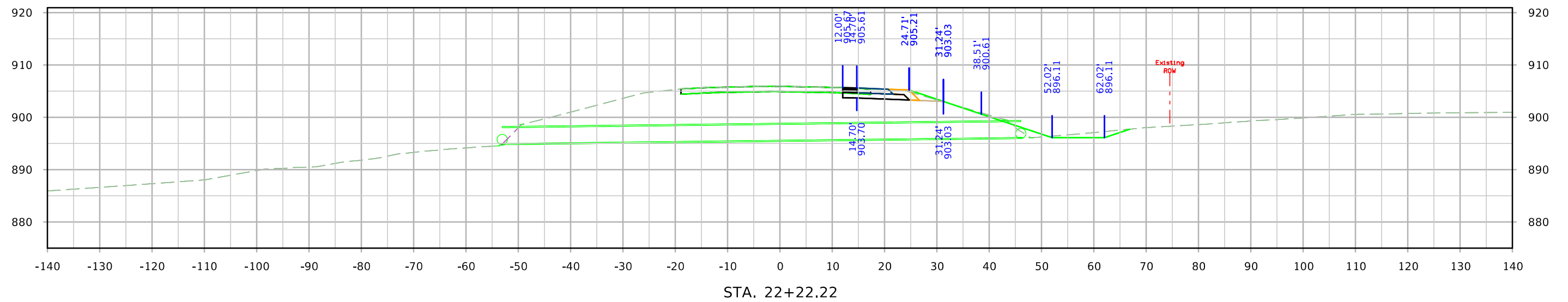
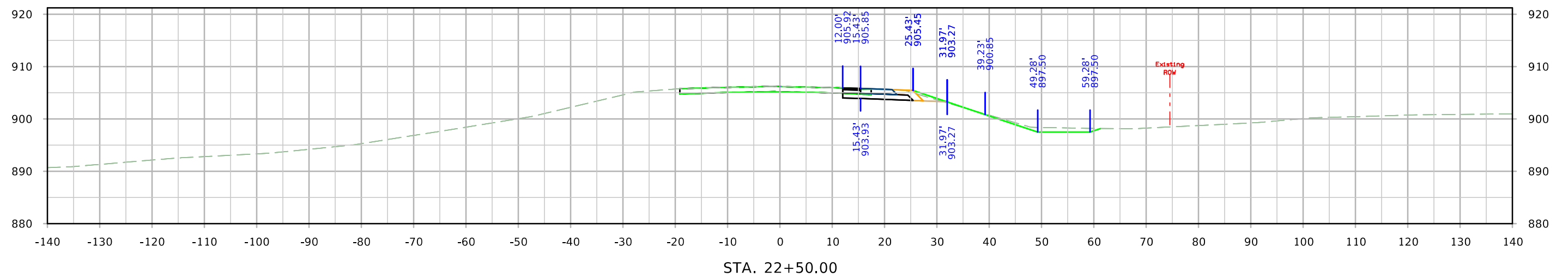
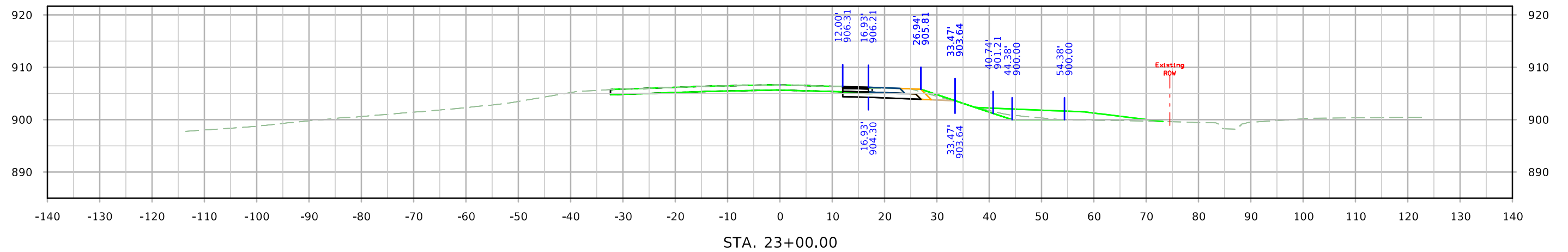
ML - IA17



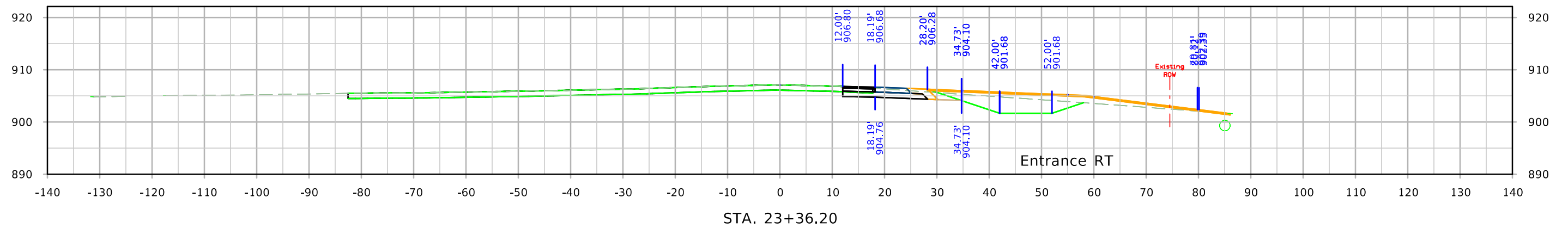
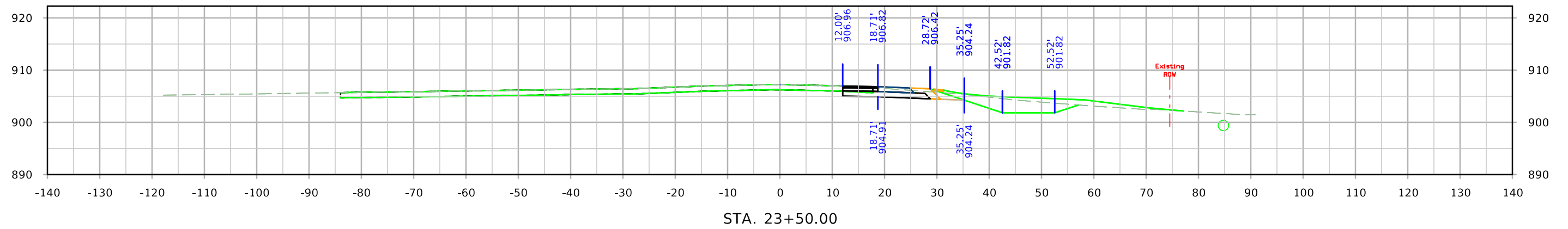
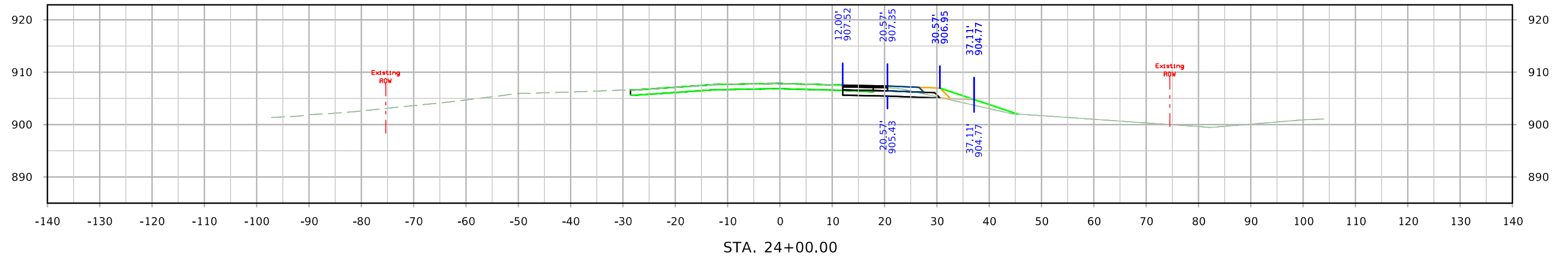
ML - IA17



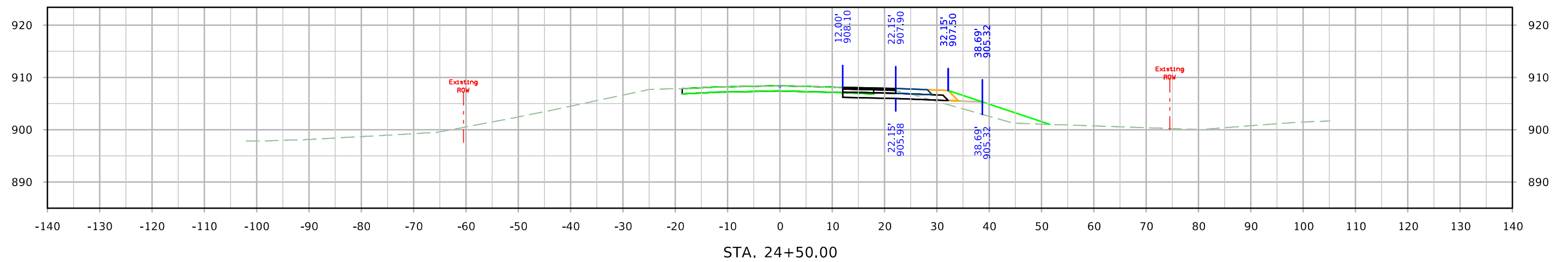
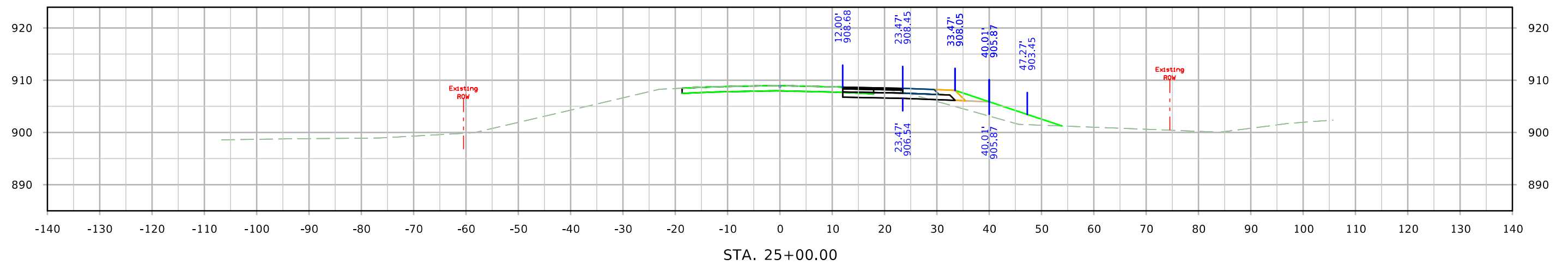
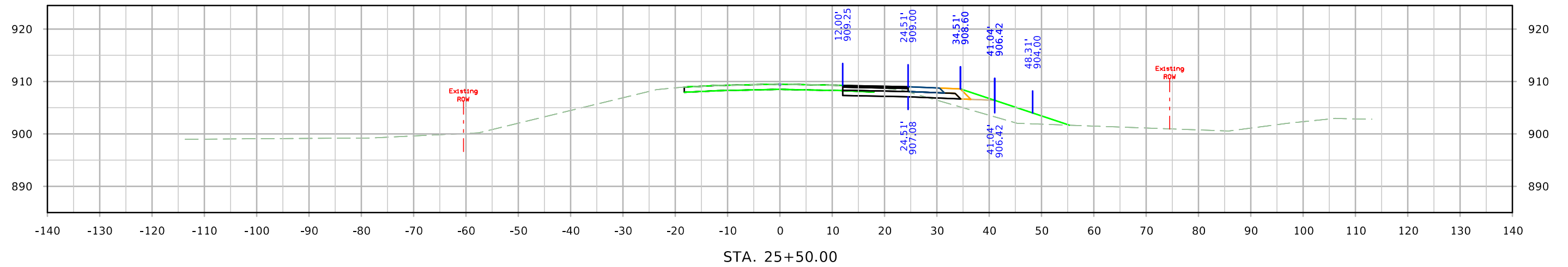
ML - IA17



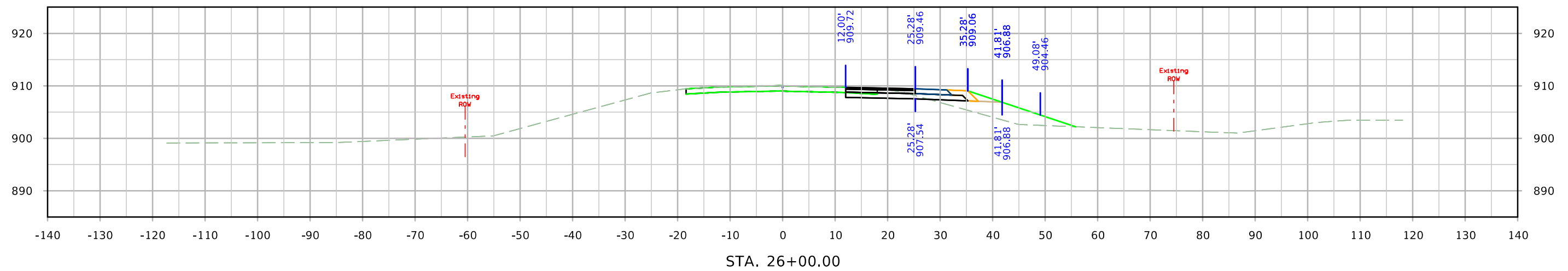
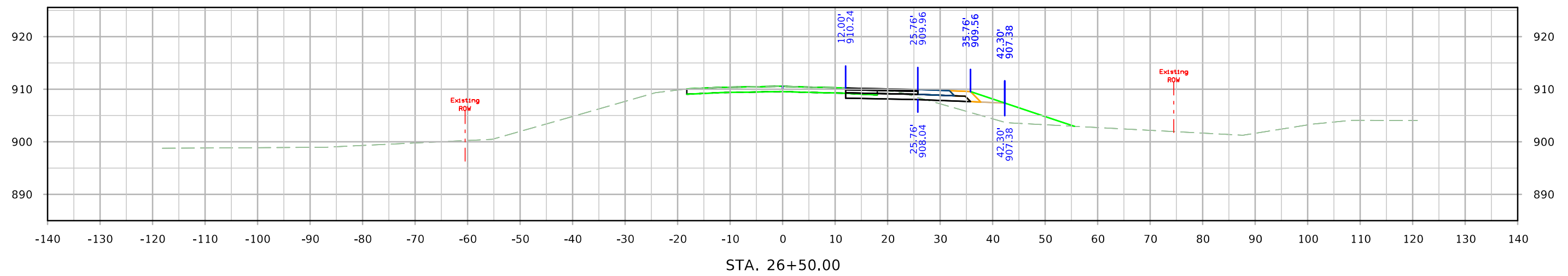
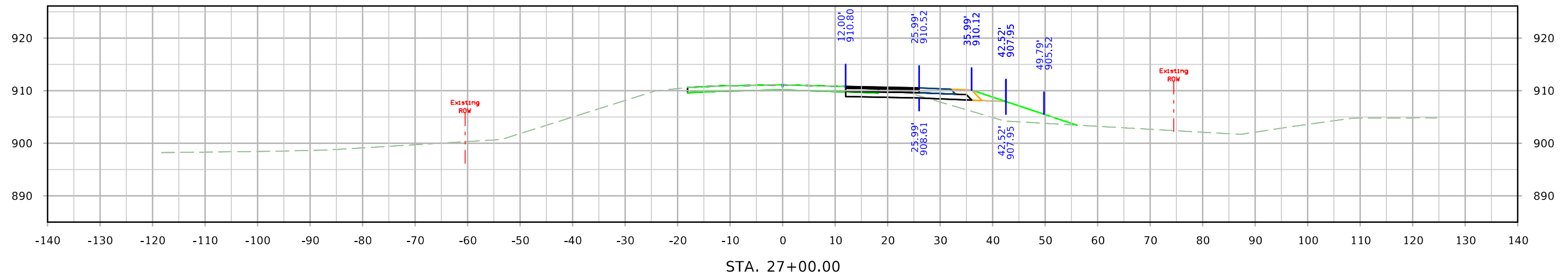
ML - IA17



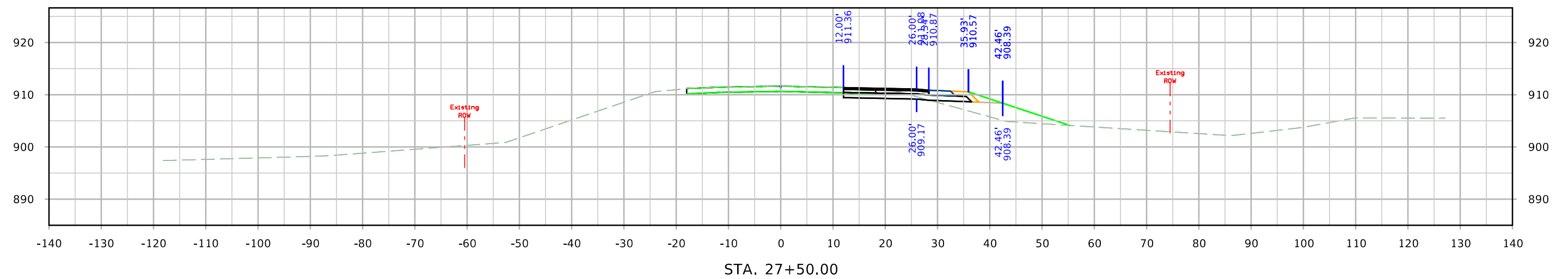
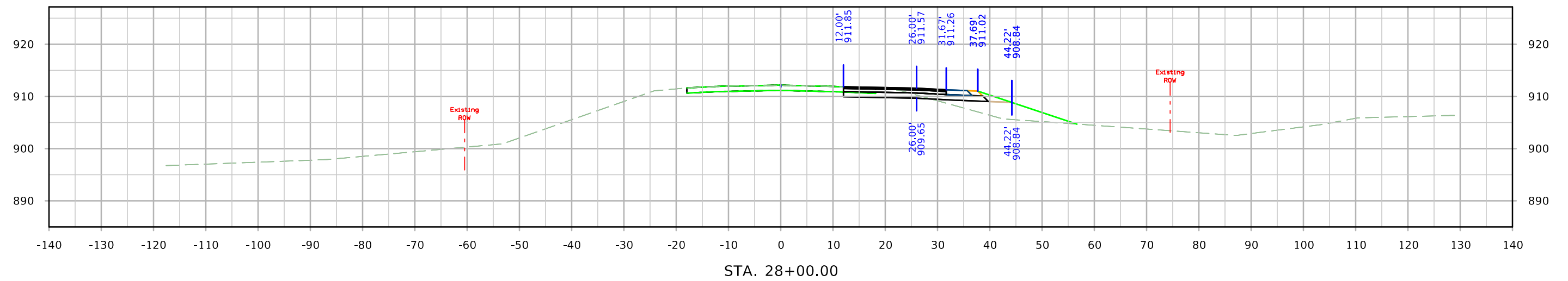
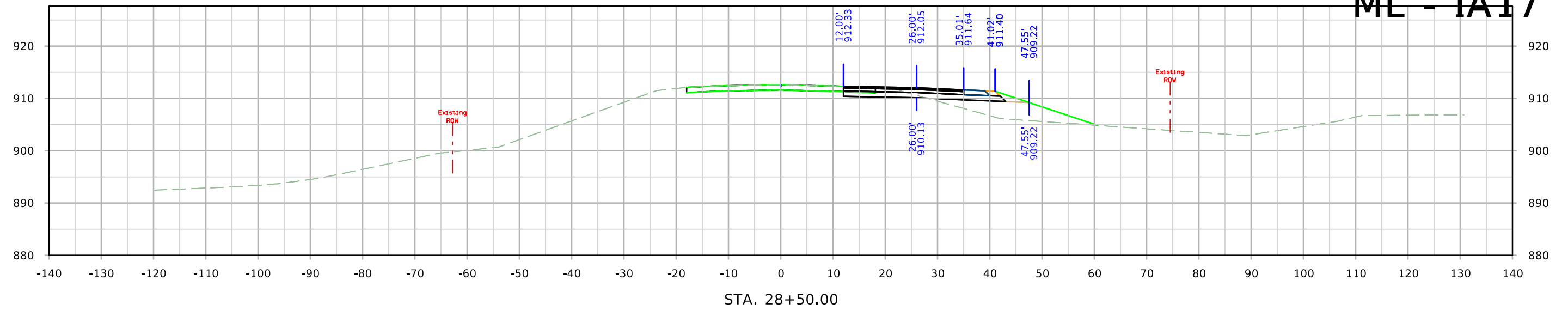
ML - IA17



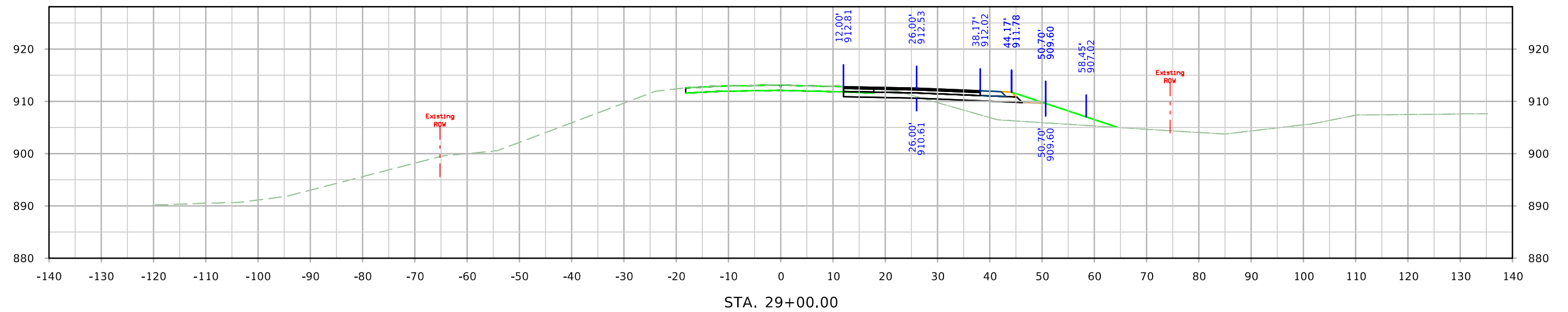
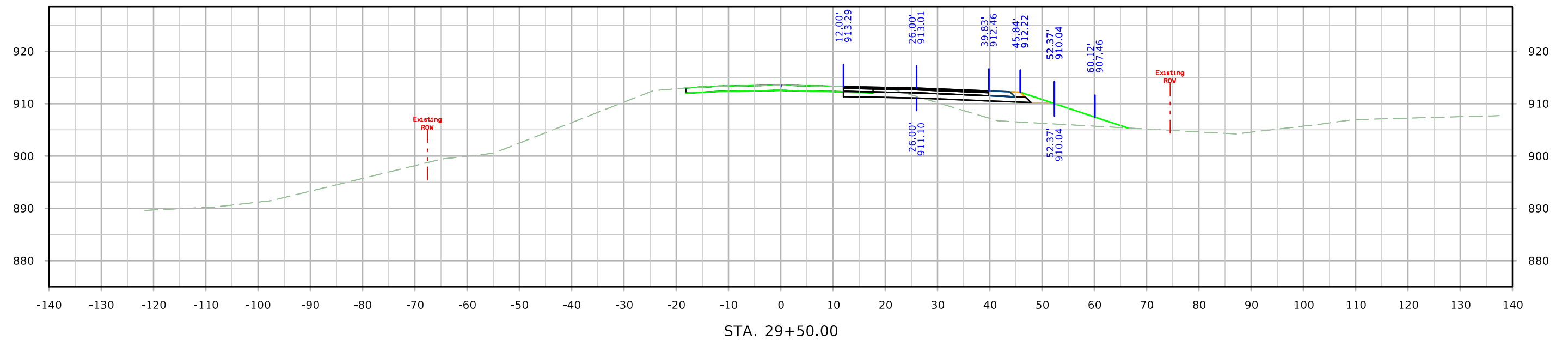
ML - IA17



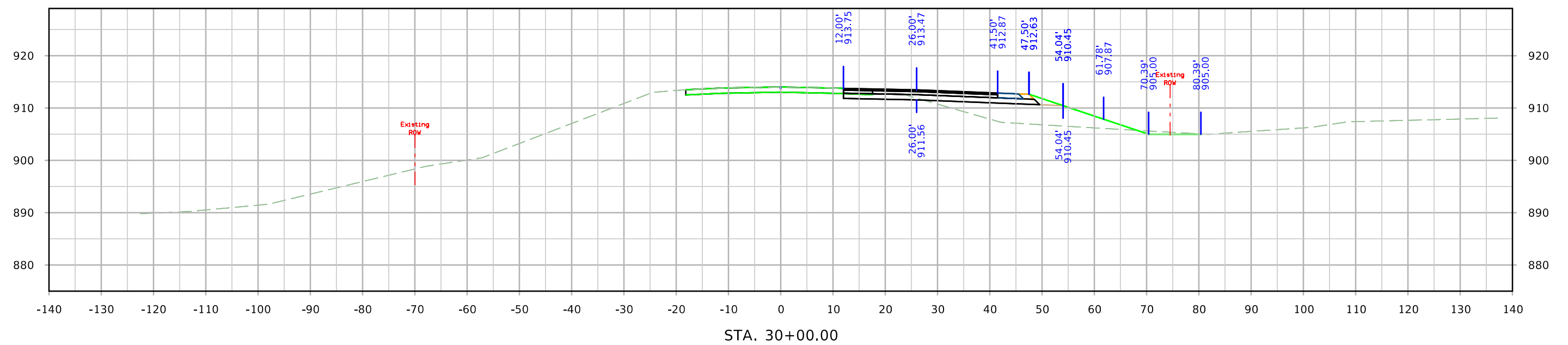
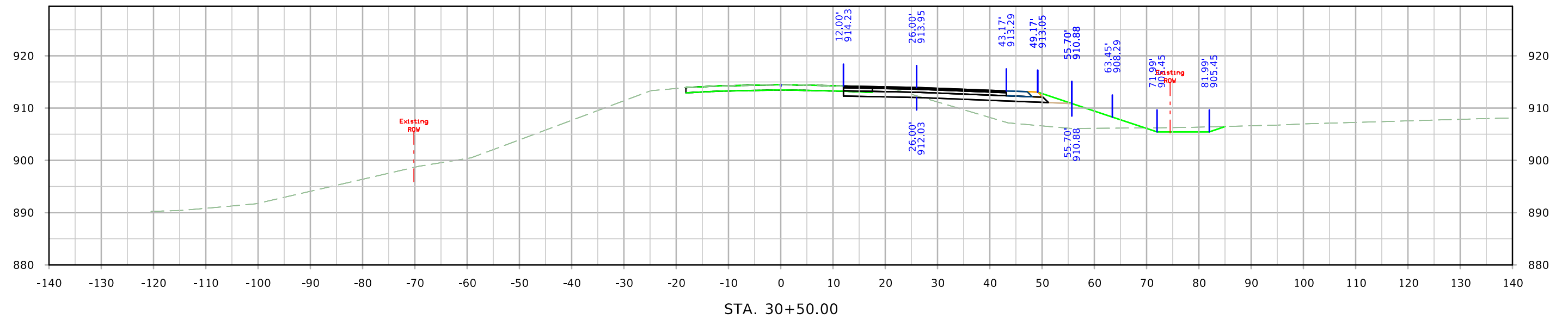
ML - IA17



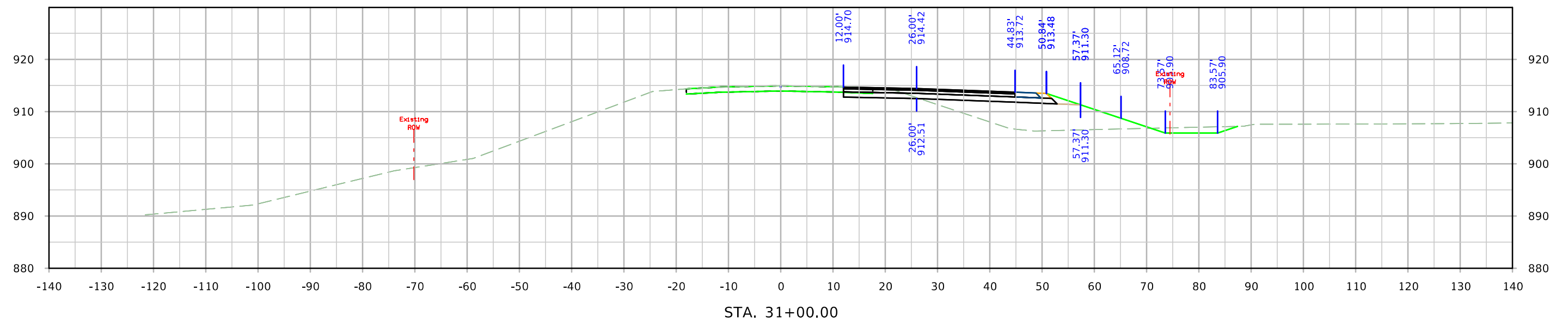
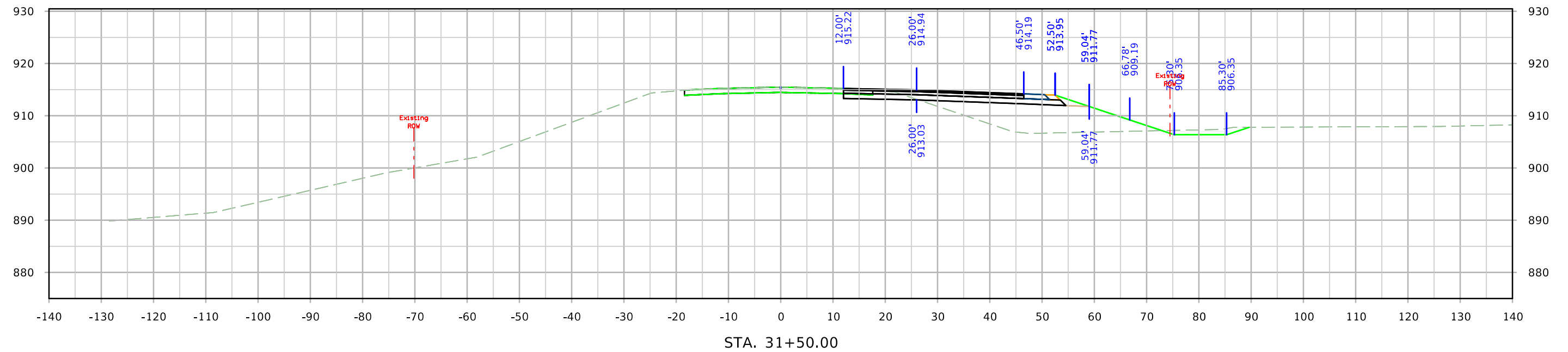
ML - IA17



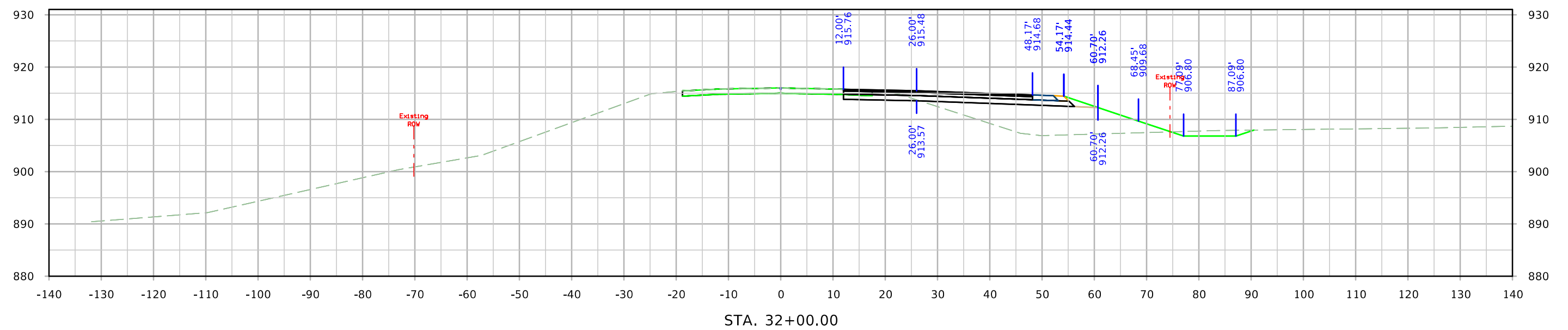
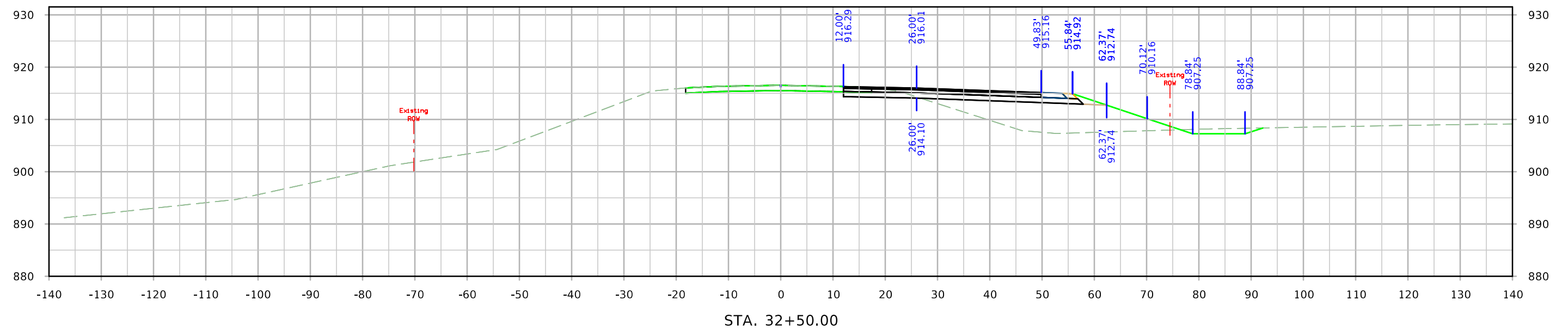
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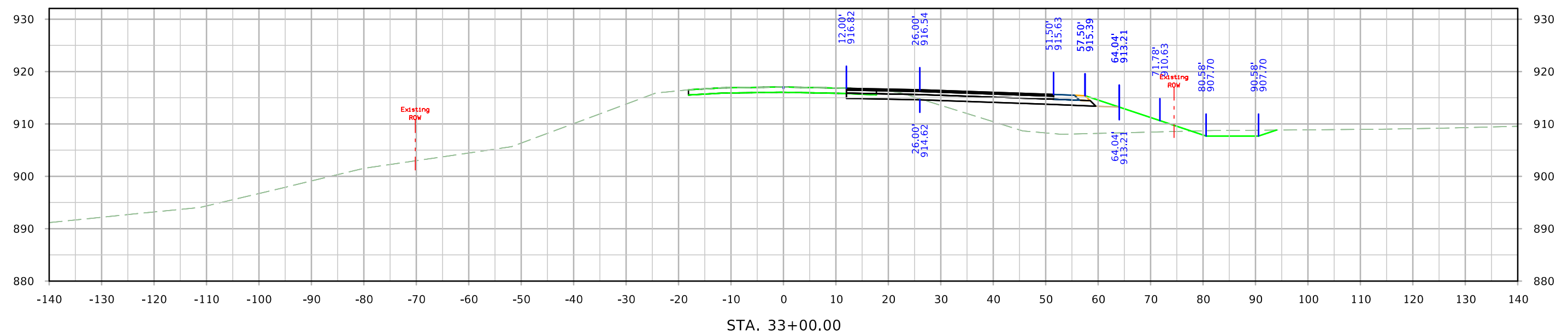
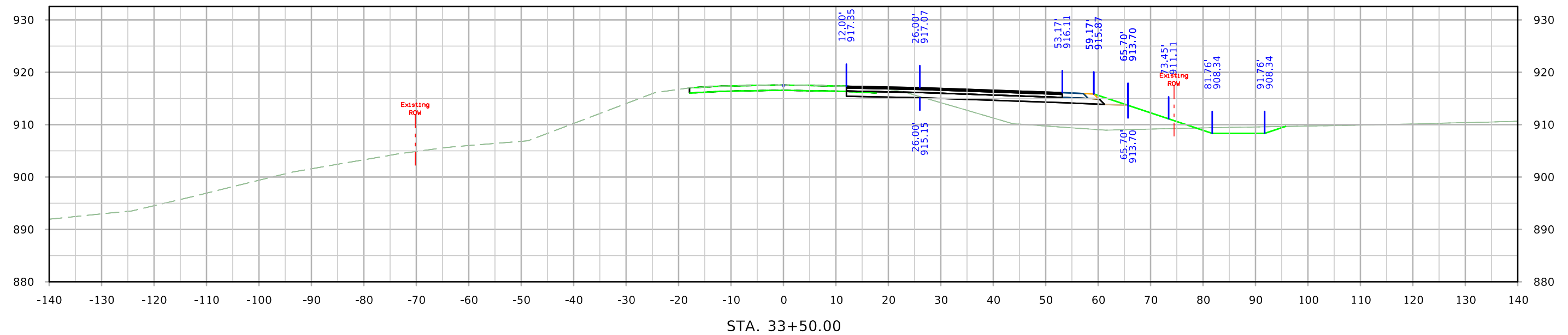
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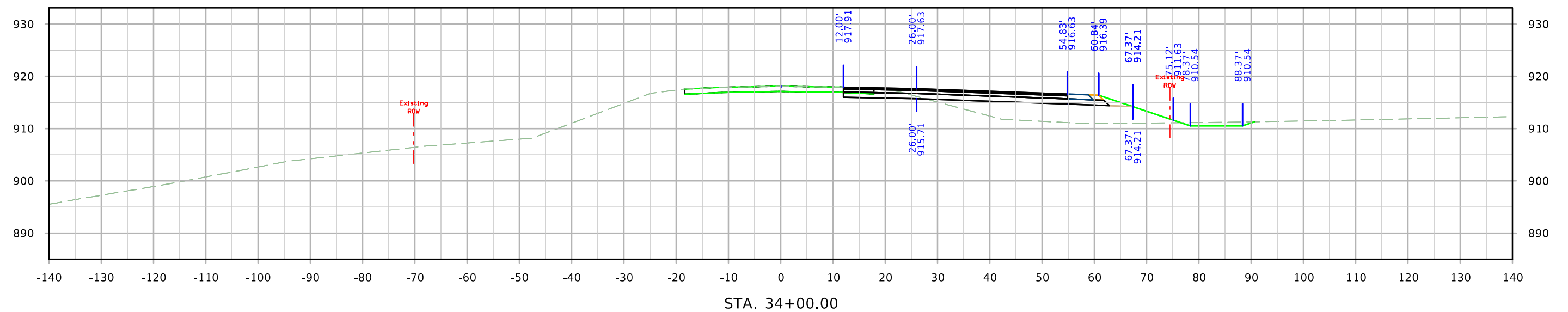
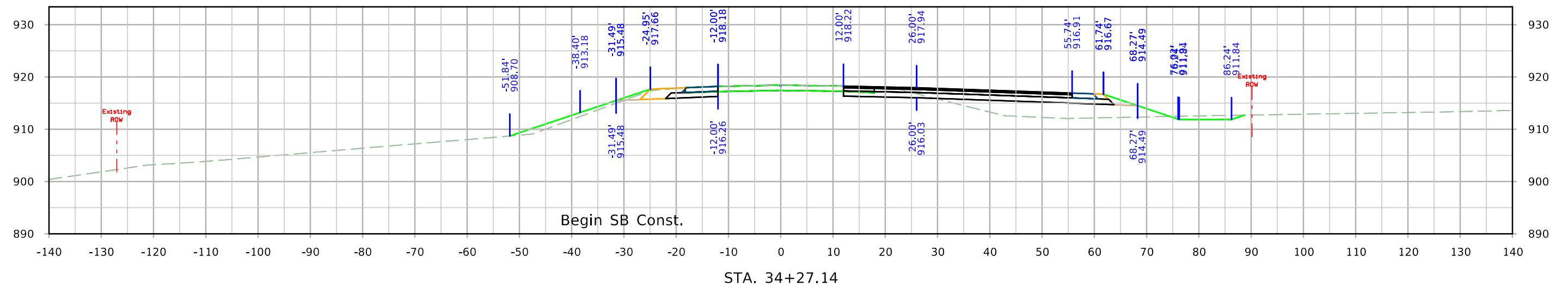


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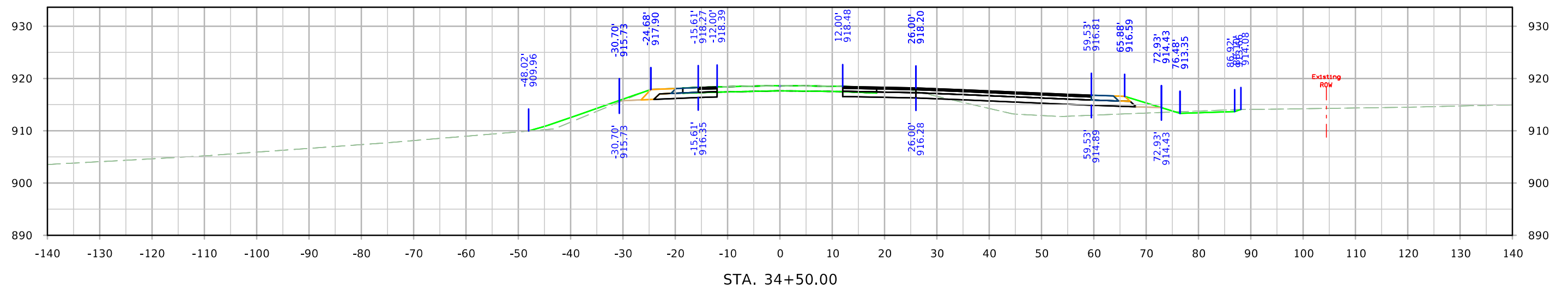
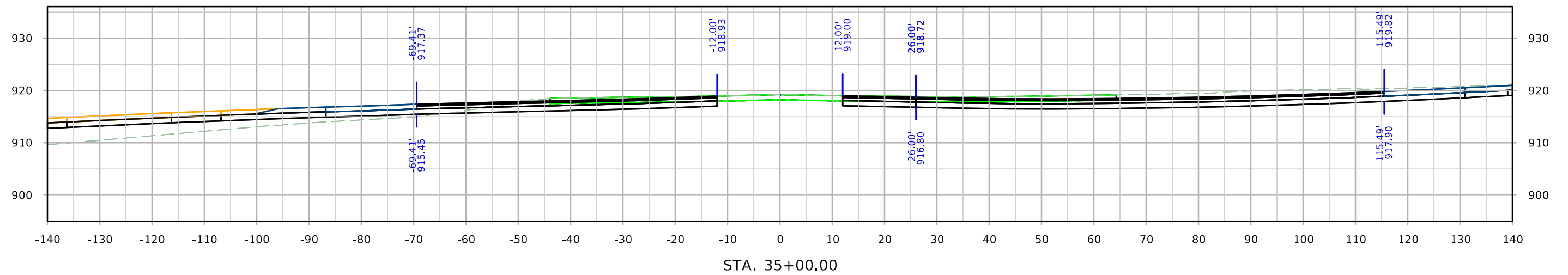
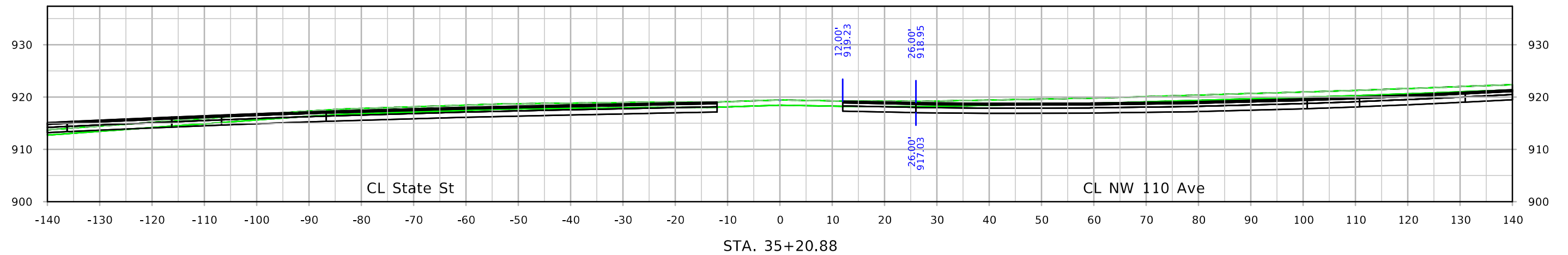


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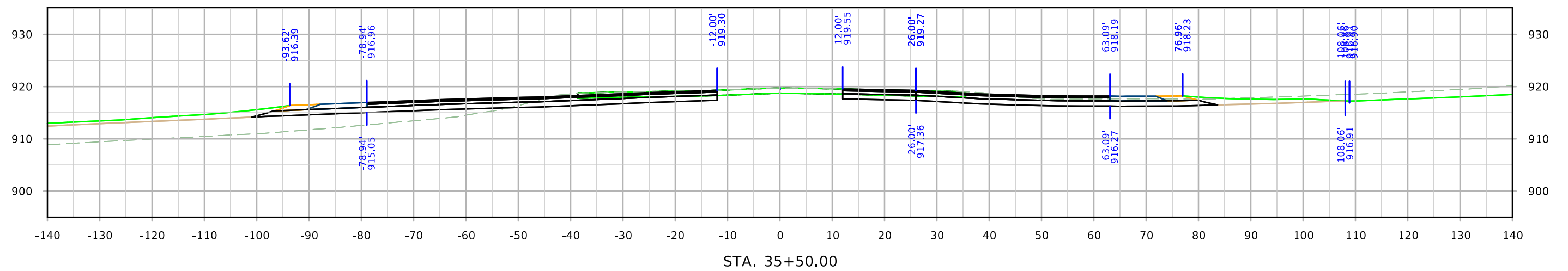
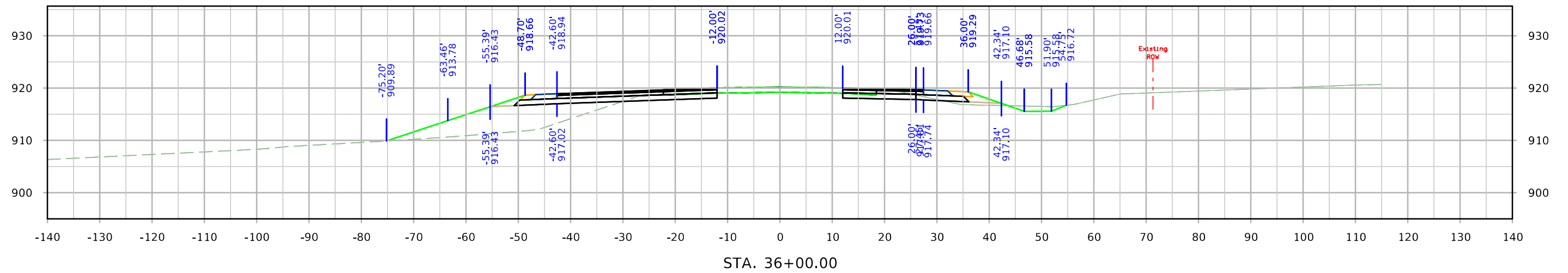
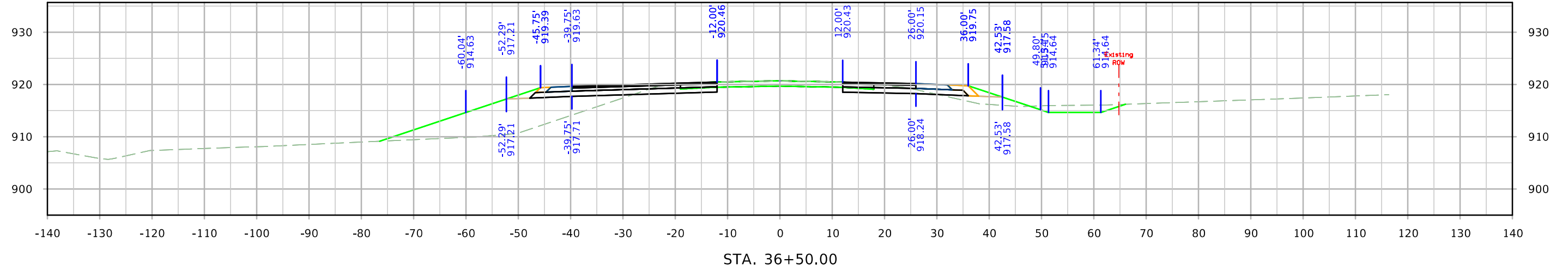




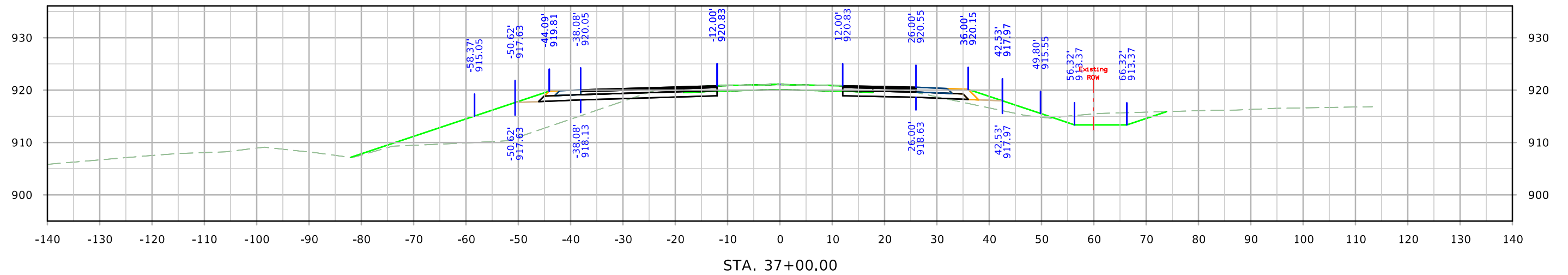
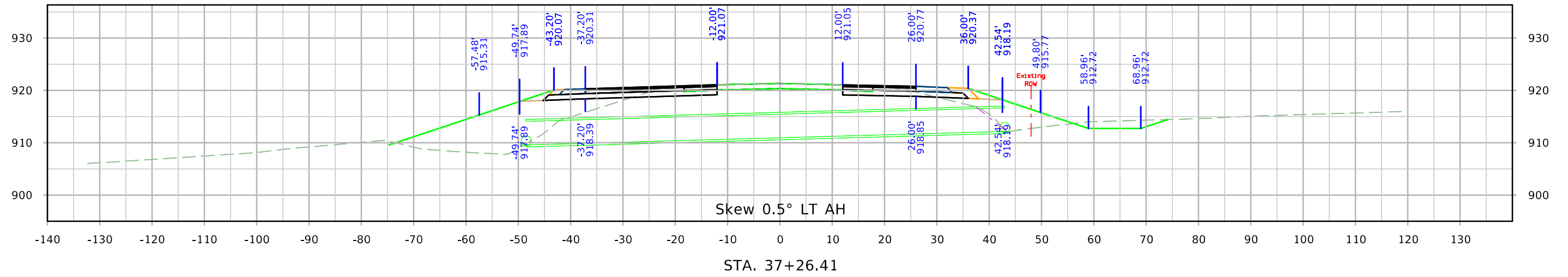
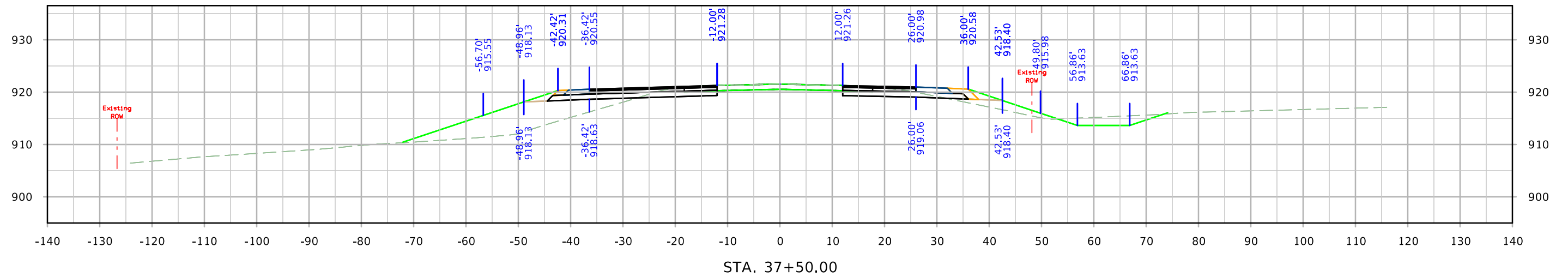
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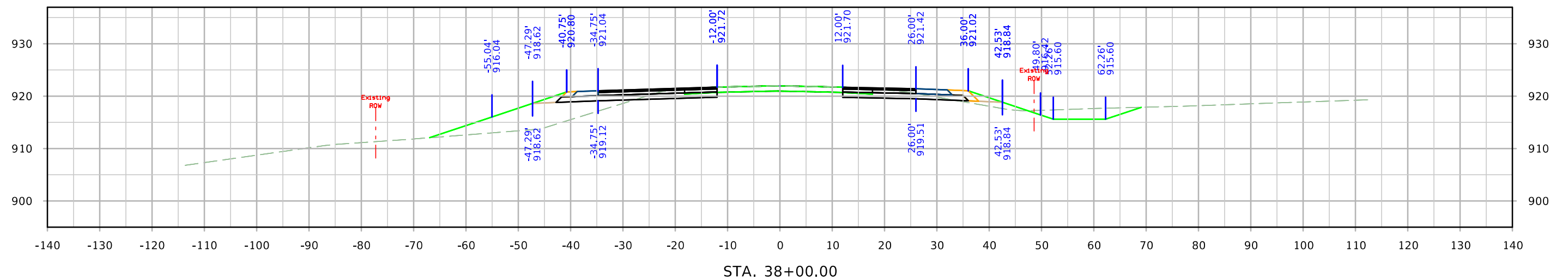
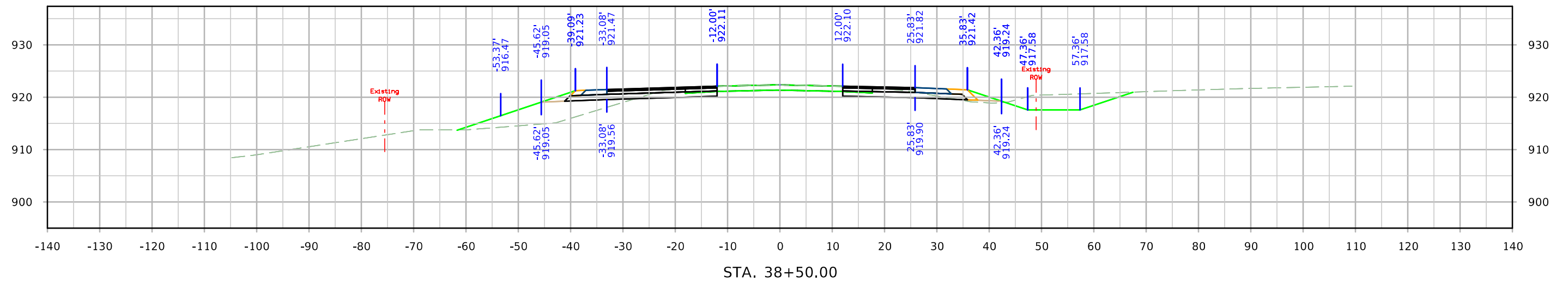
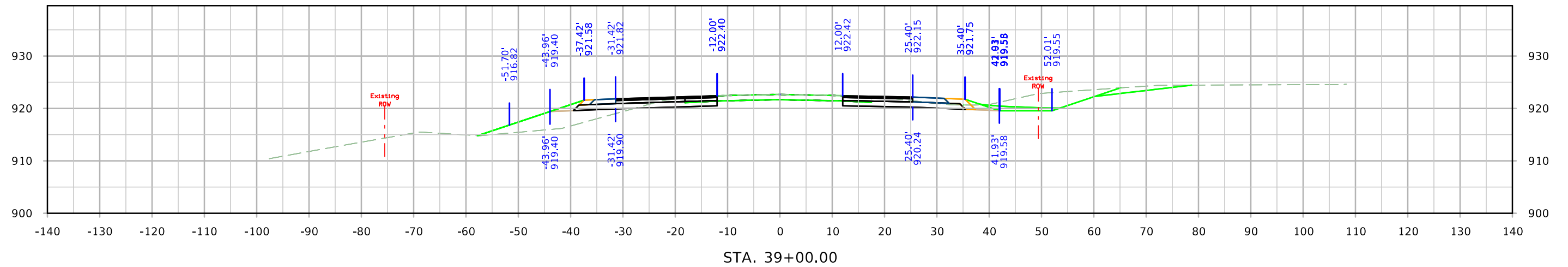
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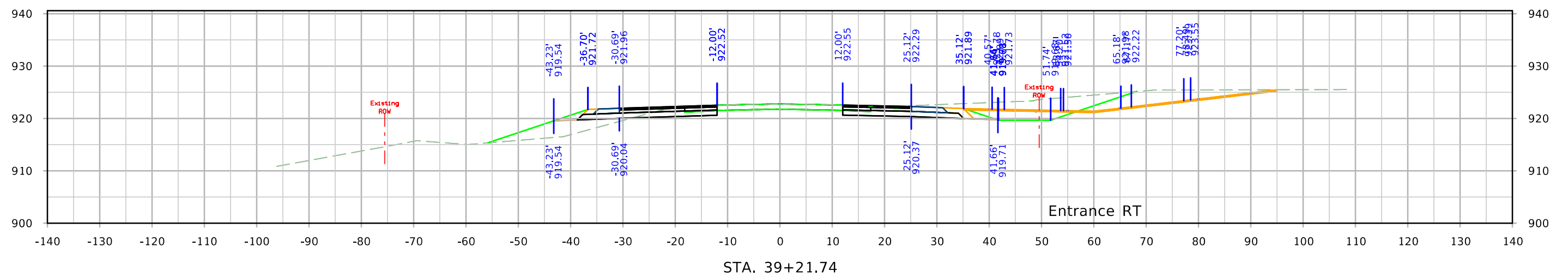
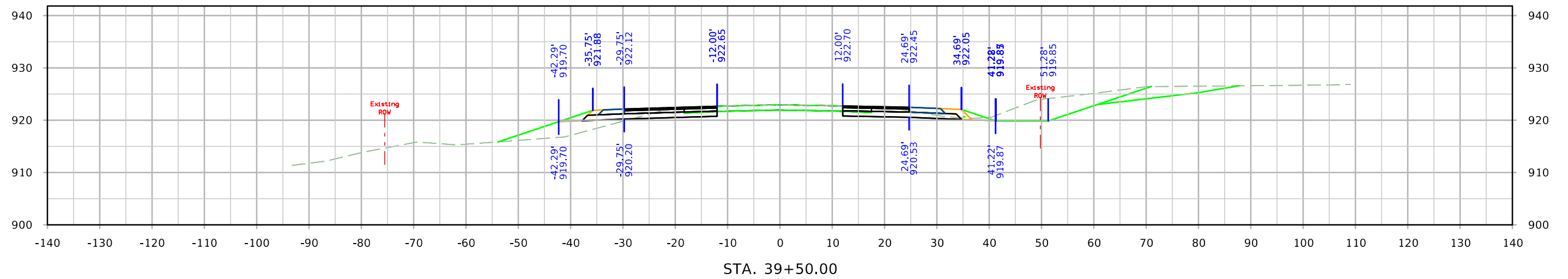
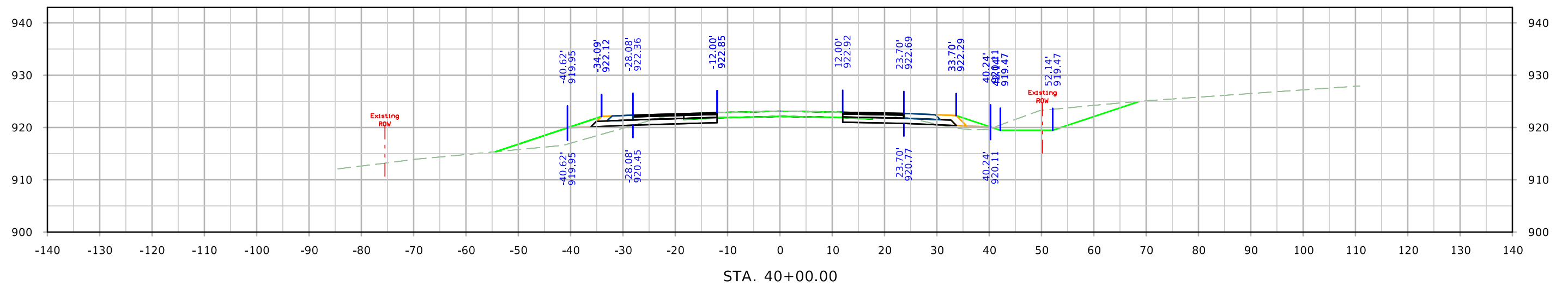
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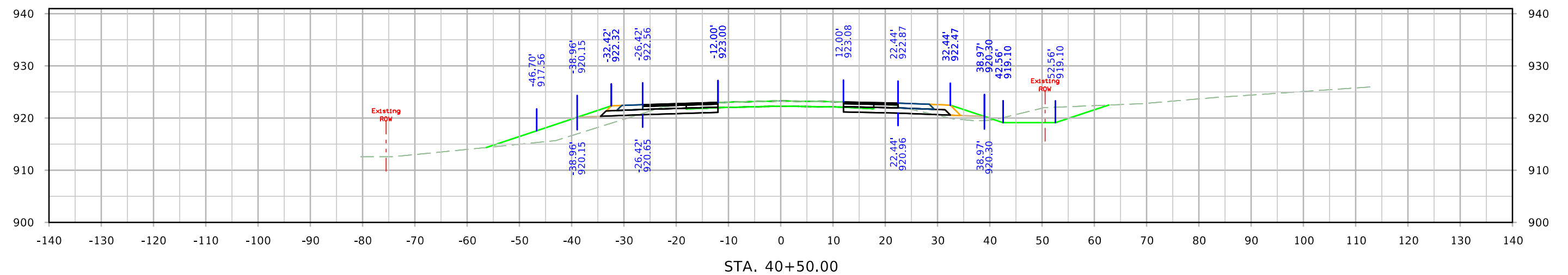
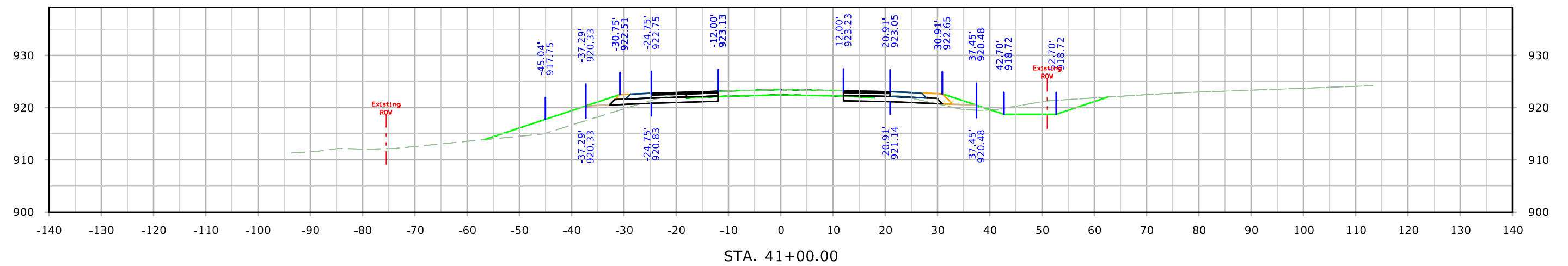
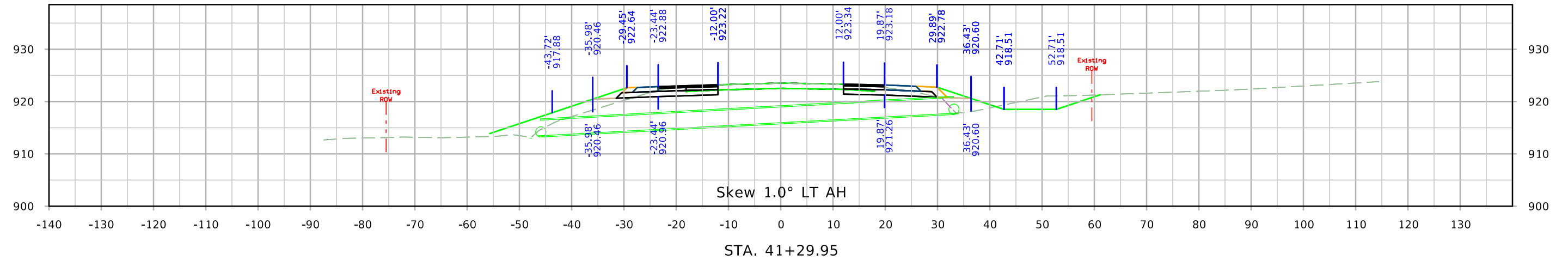
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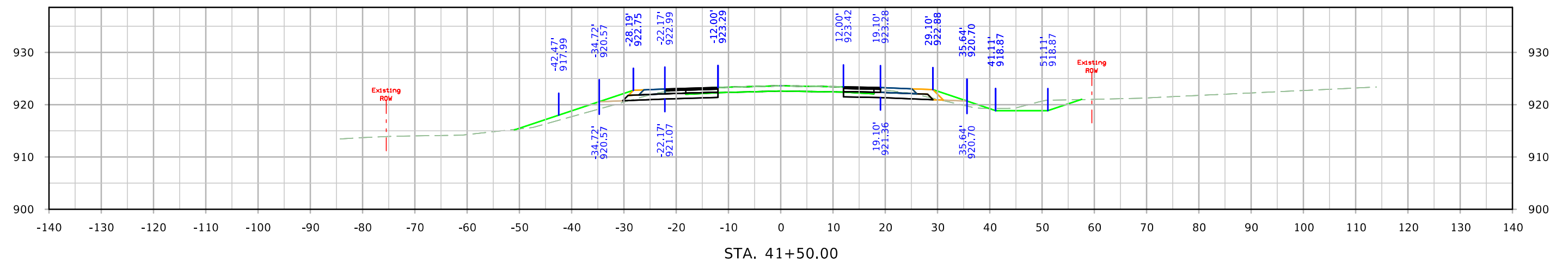
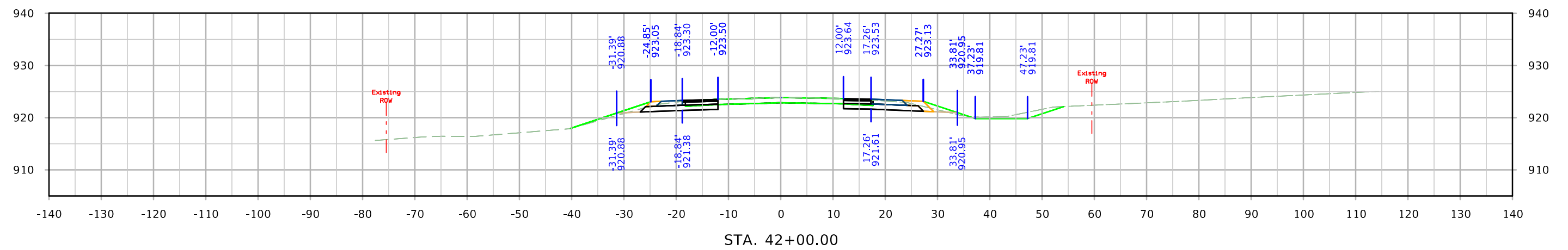
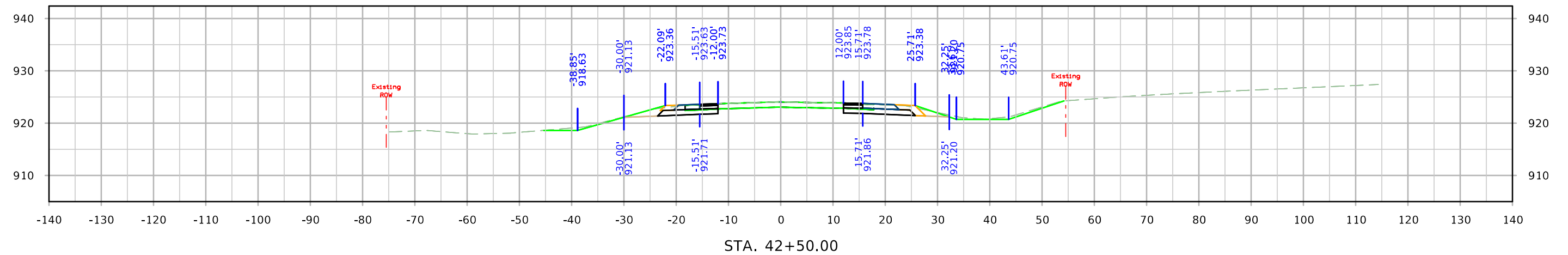
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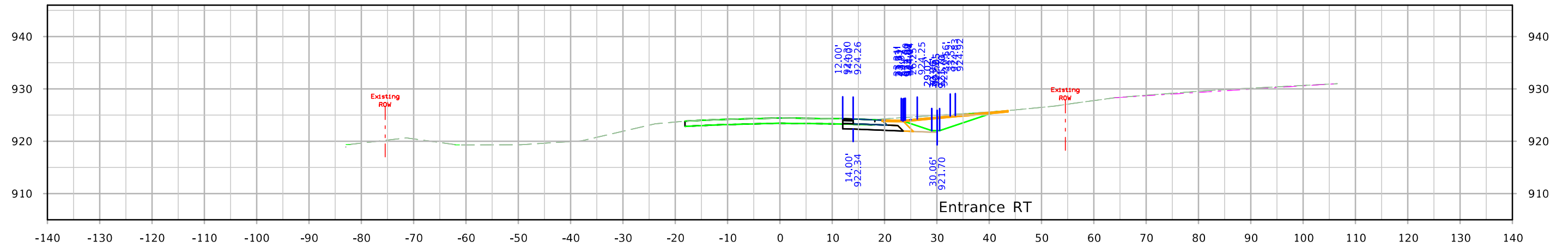
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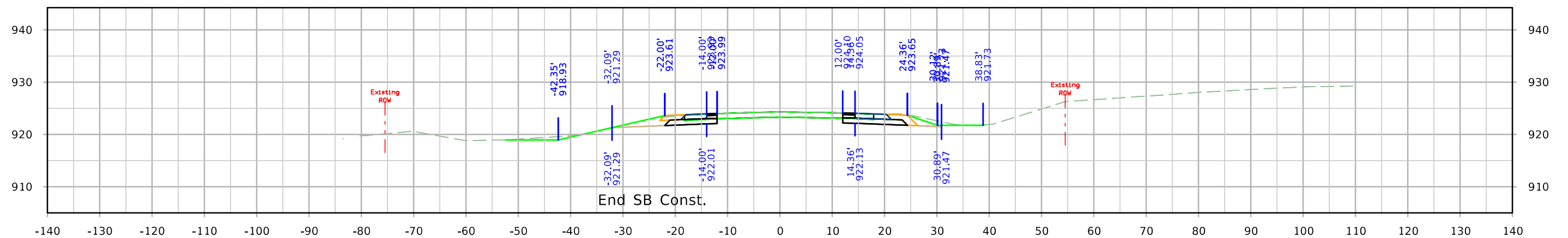
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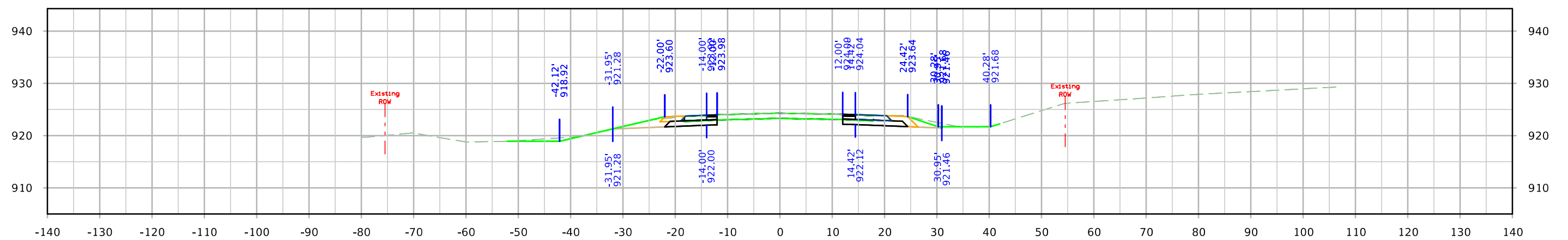
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STA. 43+42.98

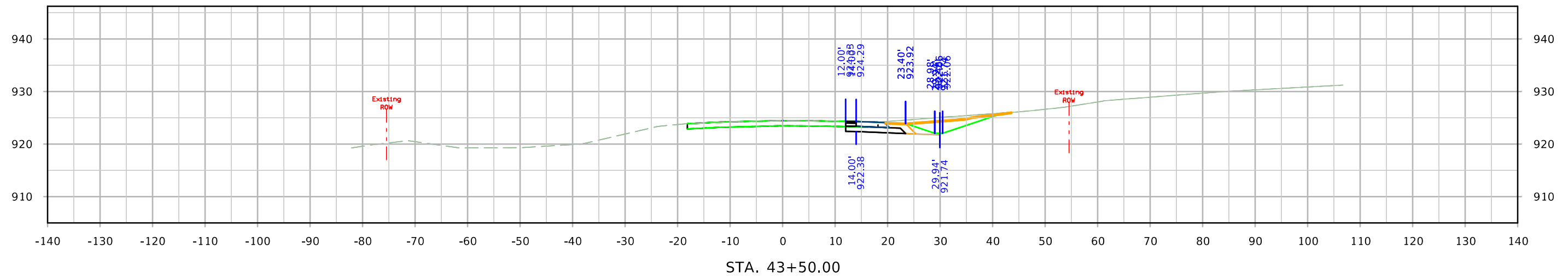
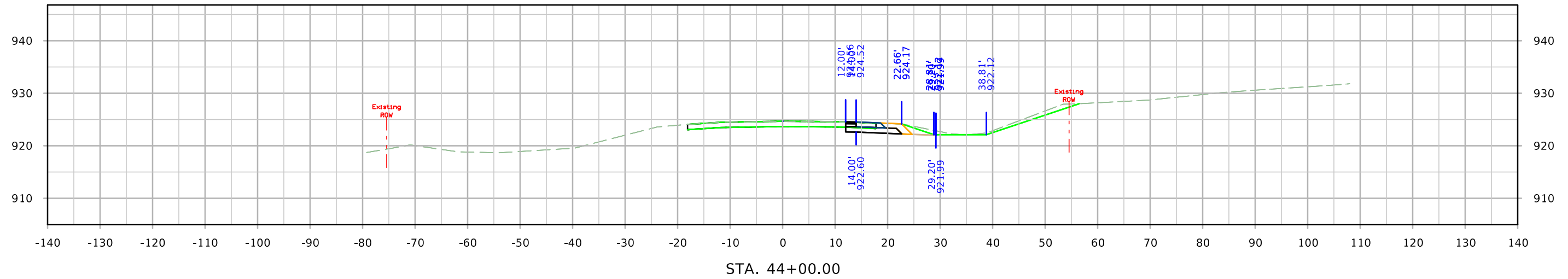
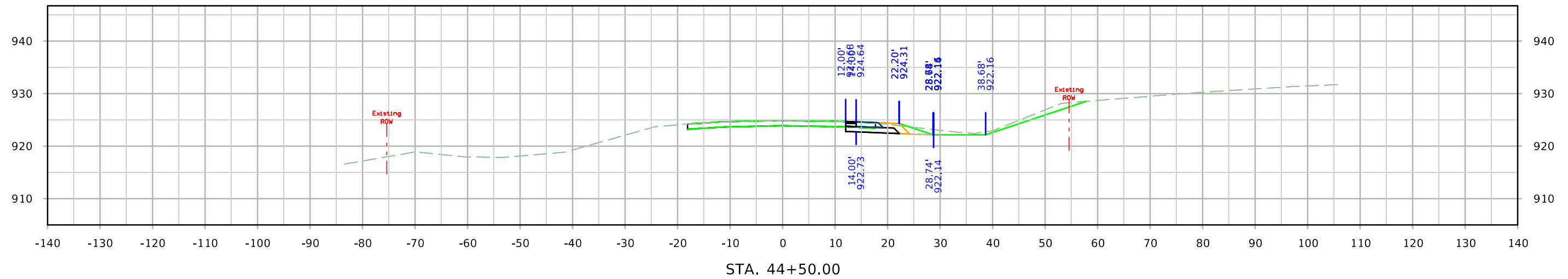


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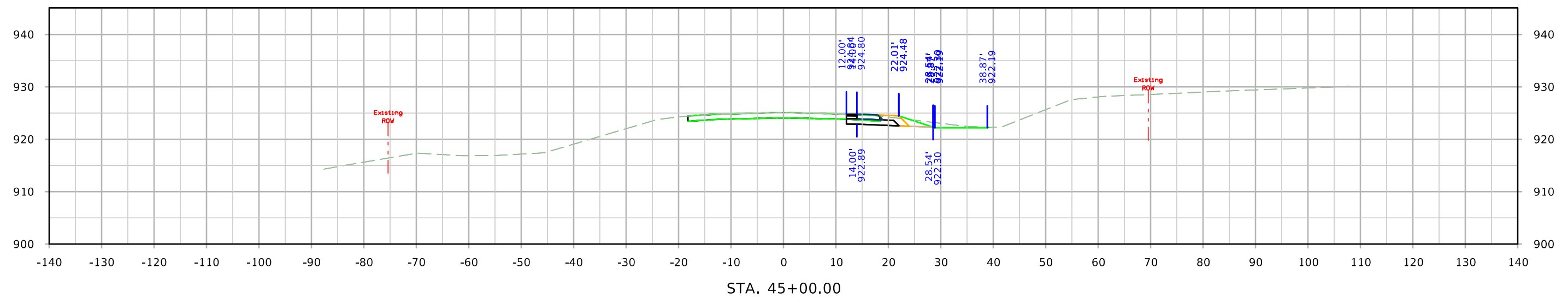
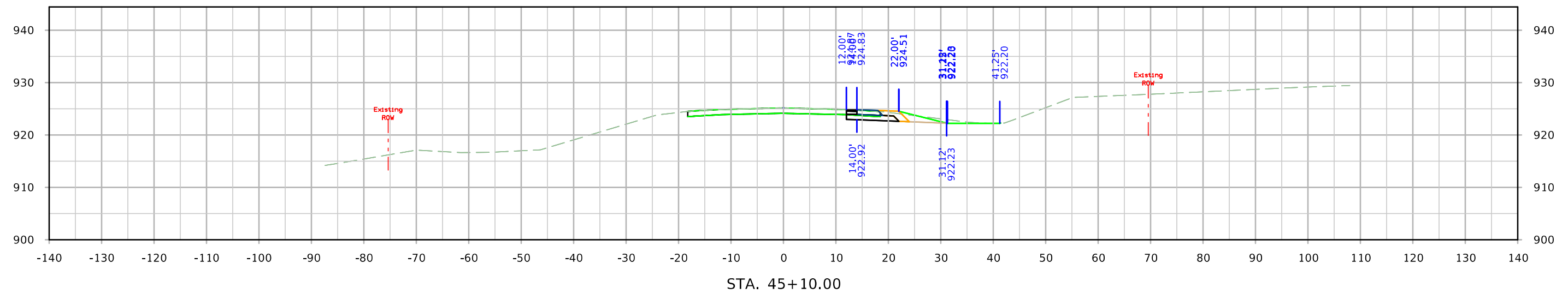


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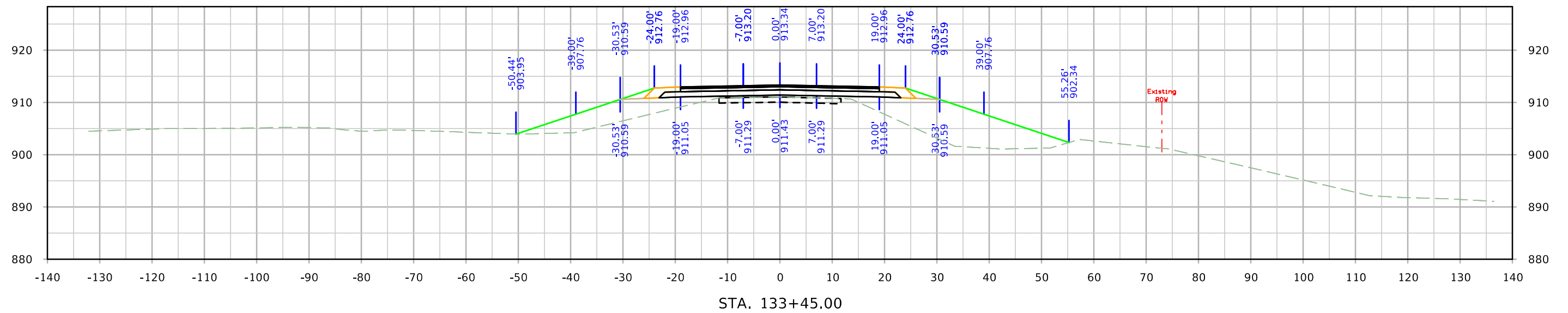
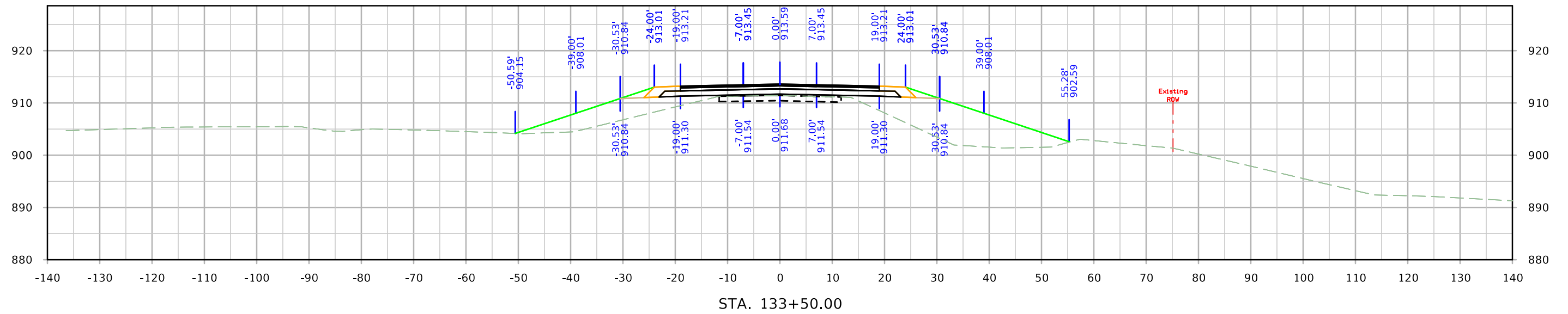
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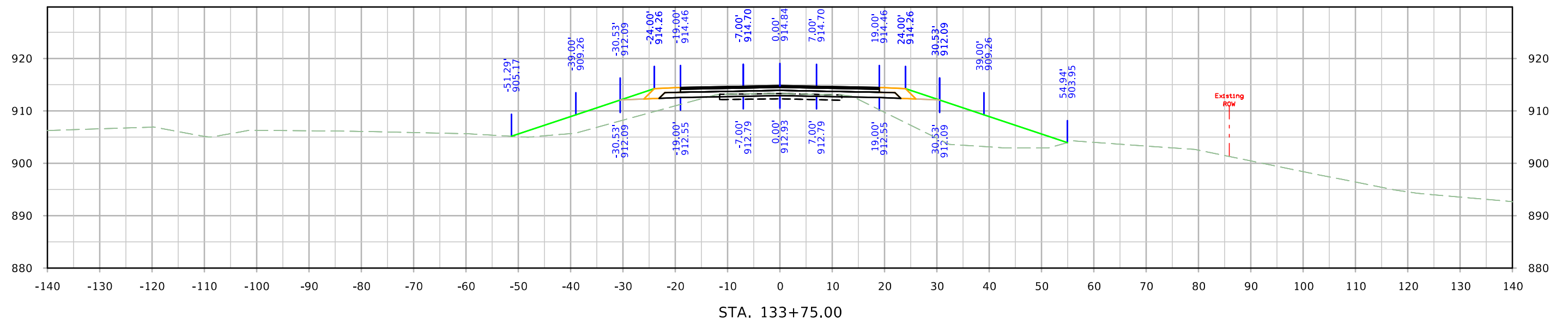
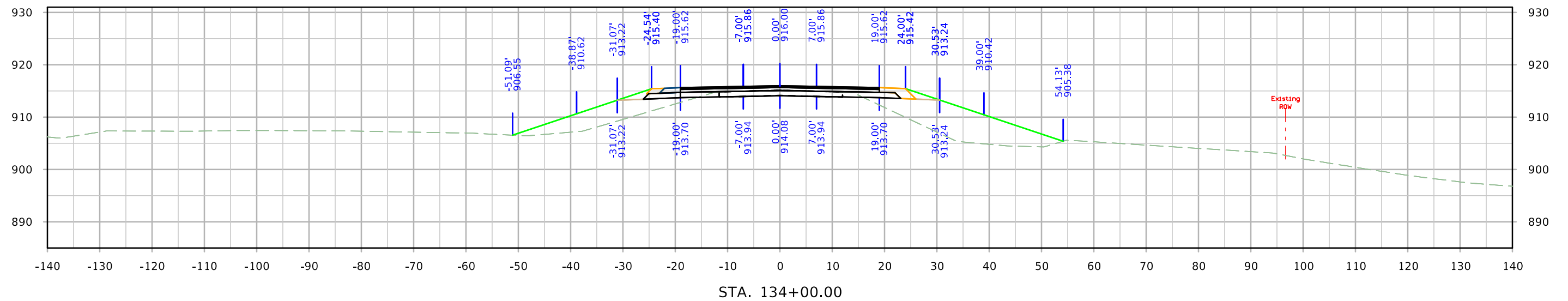
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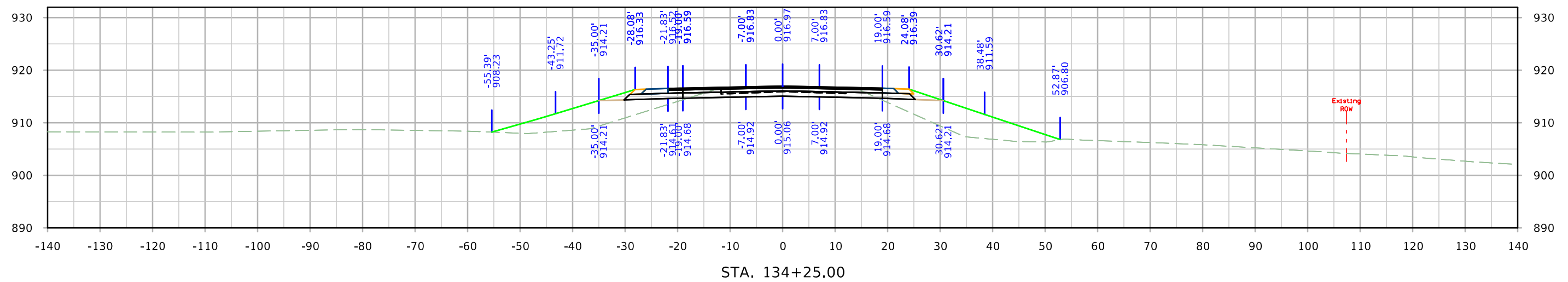
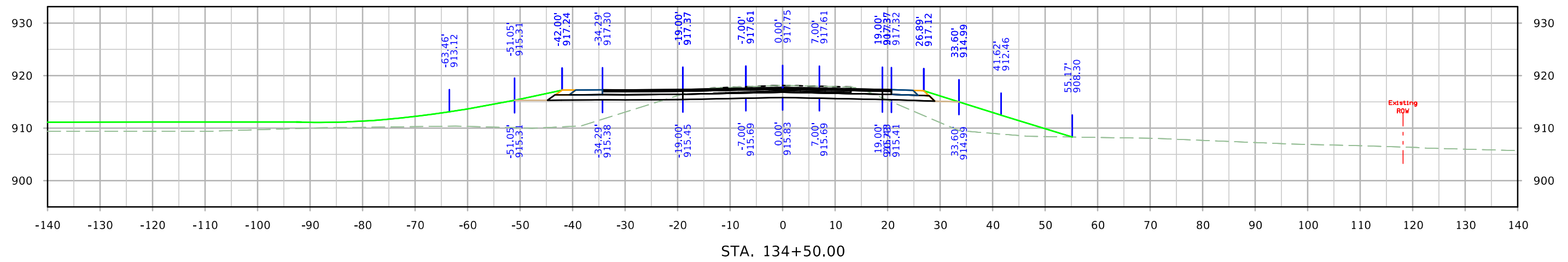
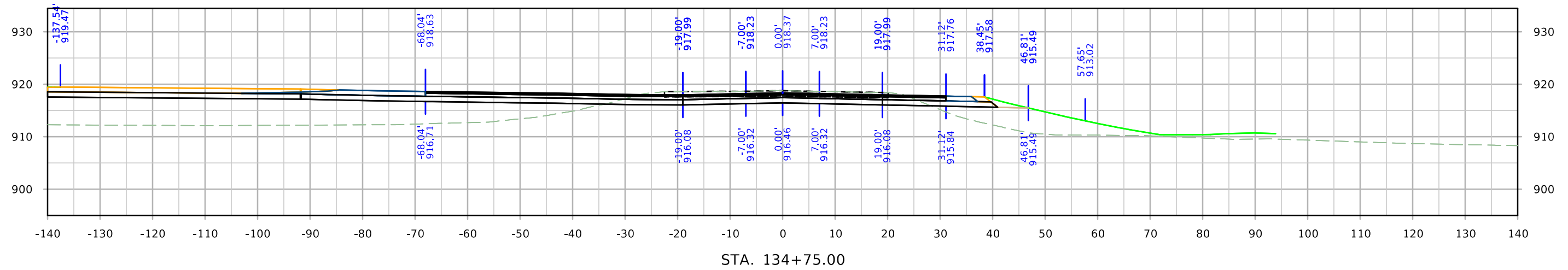
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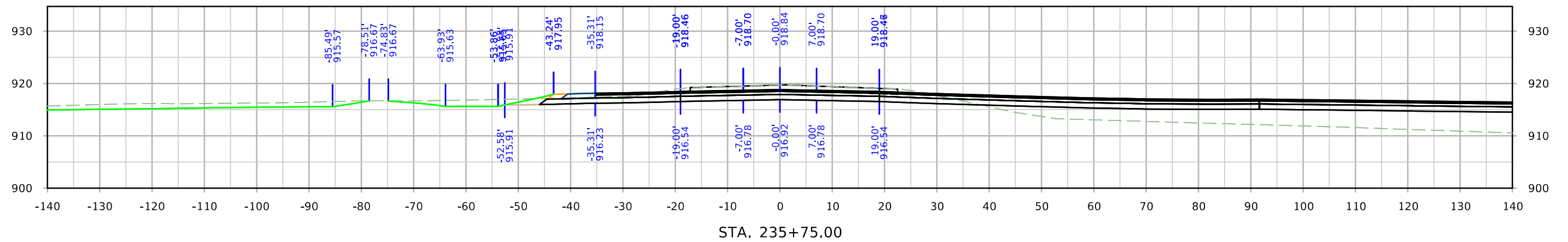
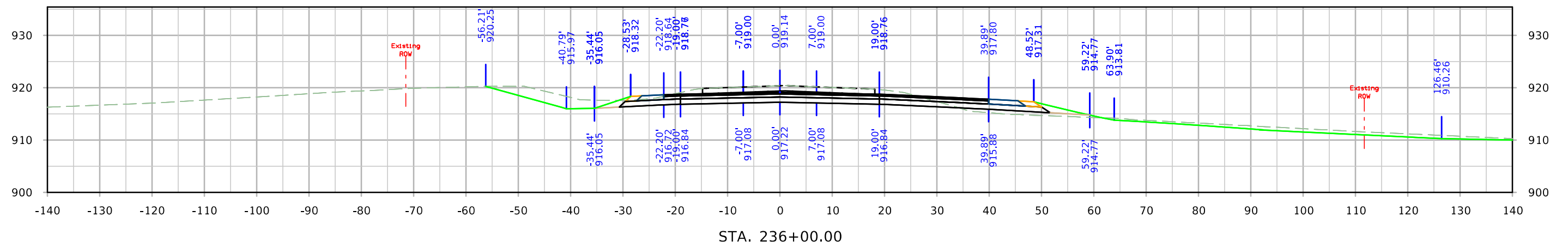
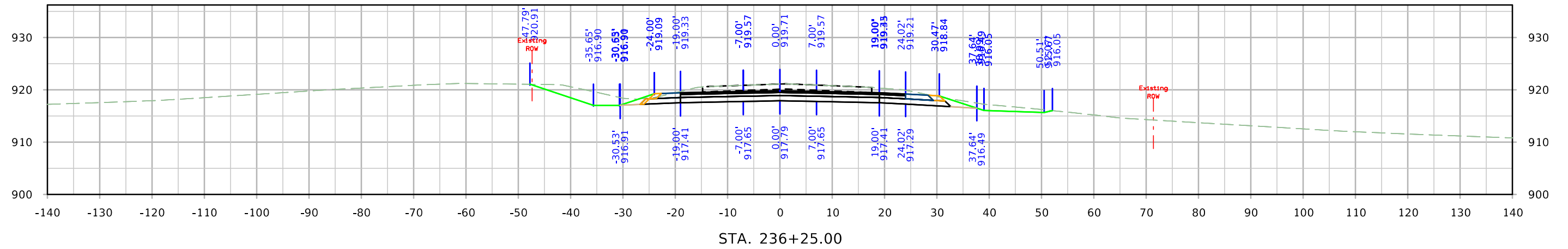
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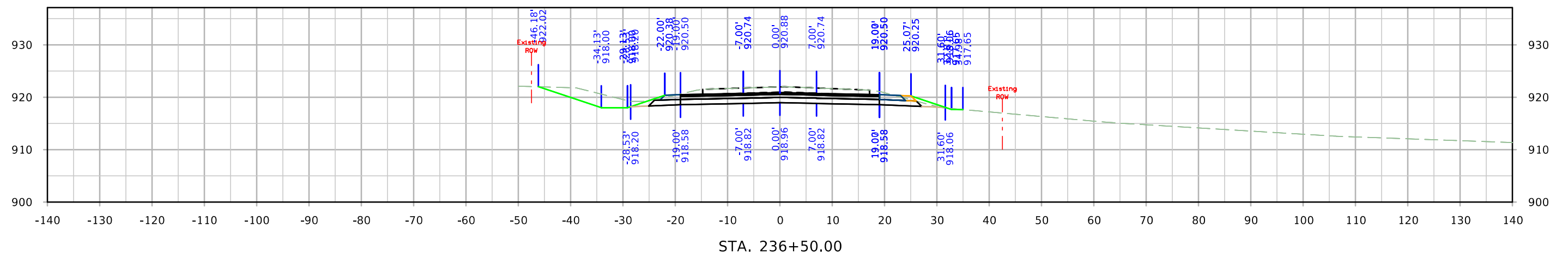
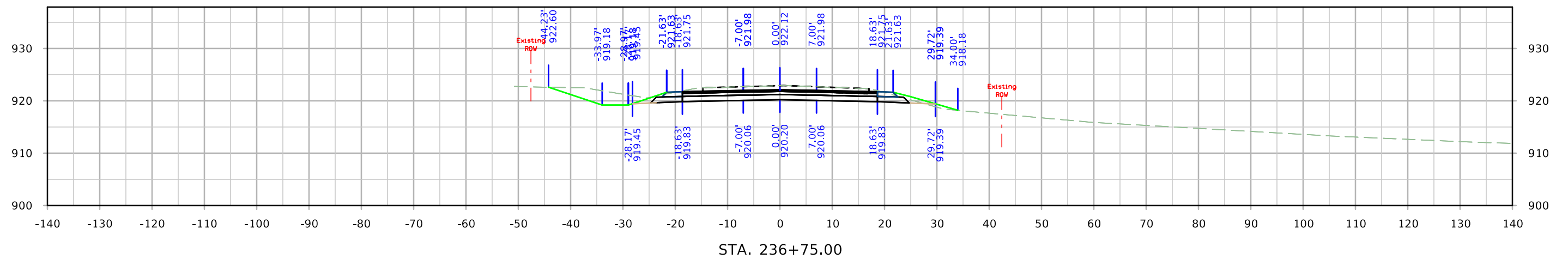
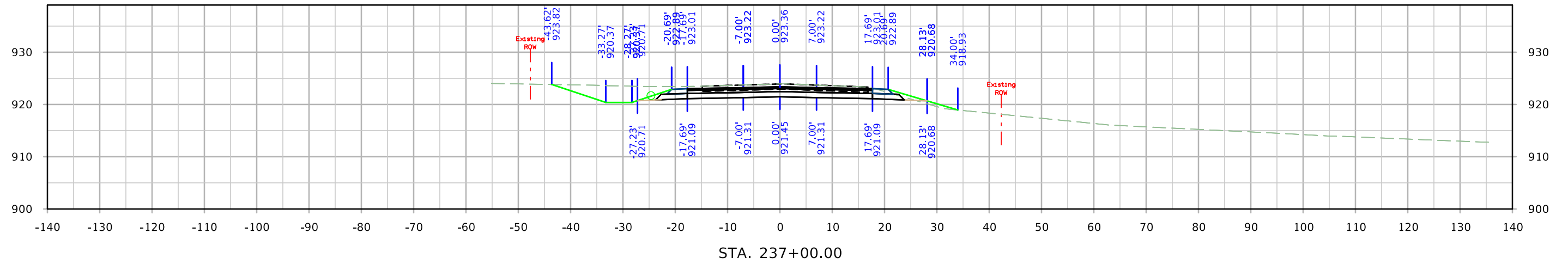
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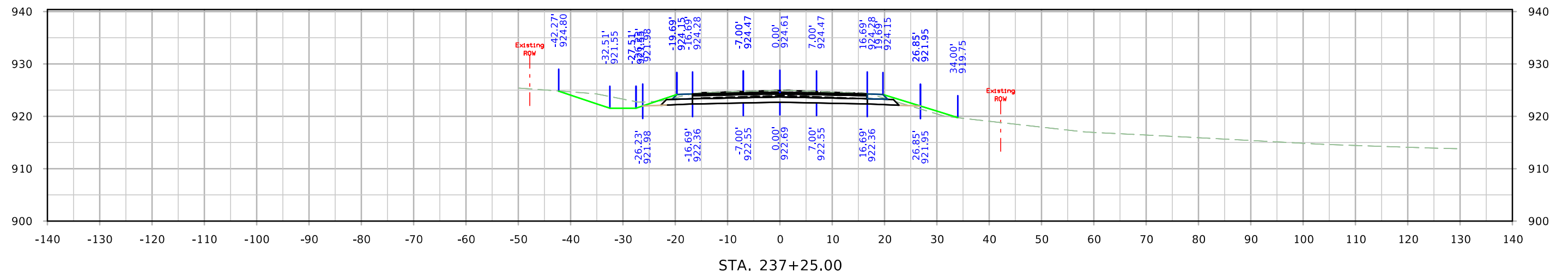
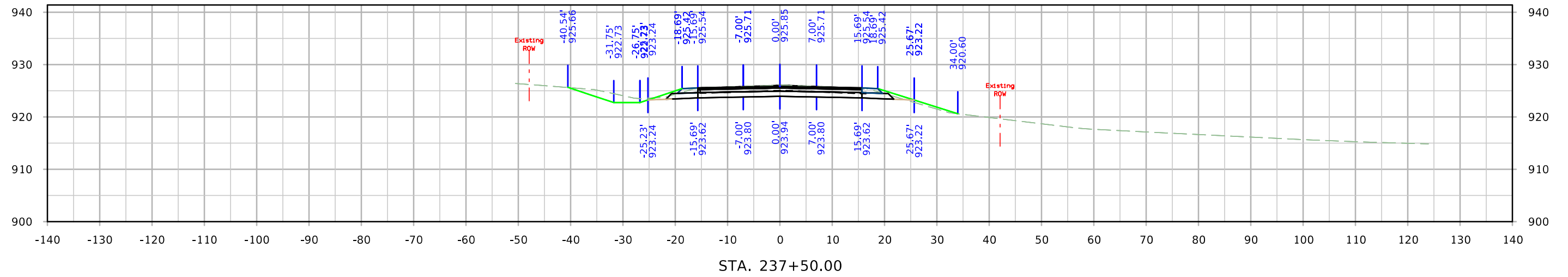
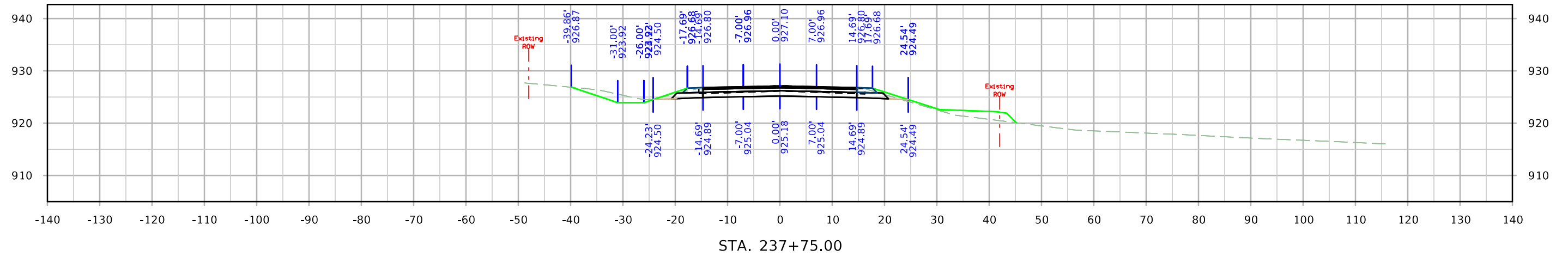
NW 110th



NW 110th



NW 110th



NW 110th

