

PCC PAVEMENT - GRADE AND REPLACE  
IMX-080-5(390)147--02-77

POLK COUNTY

LETTING DATE  
02-17-2026

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## Highway Division

# PLANS OF PROPOSED IMPROVEMENT ON THE INTERSTATE ROAD SYSTEM POLK COUNTY PCC PAVEMENT - GRADE AND REPLACE

Rest Area I-80 near Mitchellville (EB)

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

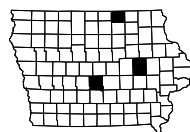
Value Engineering Saves. Refer to Article 1105.14 of the Specifications.



REVISIONS	TOTAL

PROJECT IDENTIFICATION NUMBER	22-77-080-080
PROJECT NUMBER	IMX-080-5(390)147--02-77
R.O.W. PROJECT NUMBER	IMN-080-5(393)147--0E-77

For Project Location Map  
Refer to Sheet No. A.2



I-80 EB	
DESIGN DATA RURAL	
2022 AADT	19350 V.P.D.
2022 AADT	-- V.P.D.
20 -- DHV	-- V.P.H.
TRUCKS	29.6 %
Total Design ESALs	--

INDEX OF SEALS			
SHEET NO.	NAME	TYPE	BID QUANTITY SHEETS
A.1	X	Primary Signature Block	X
X	X	X	X

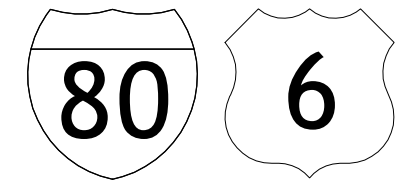
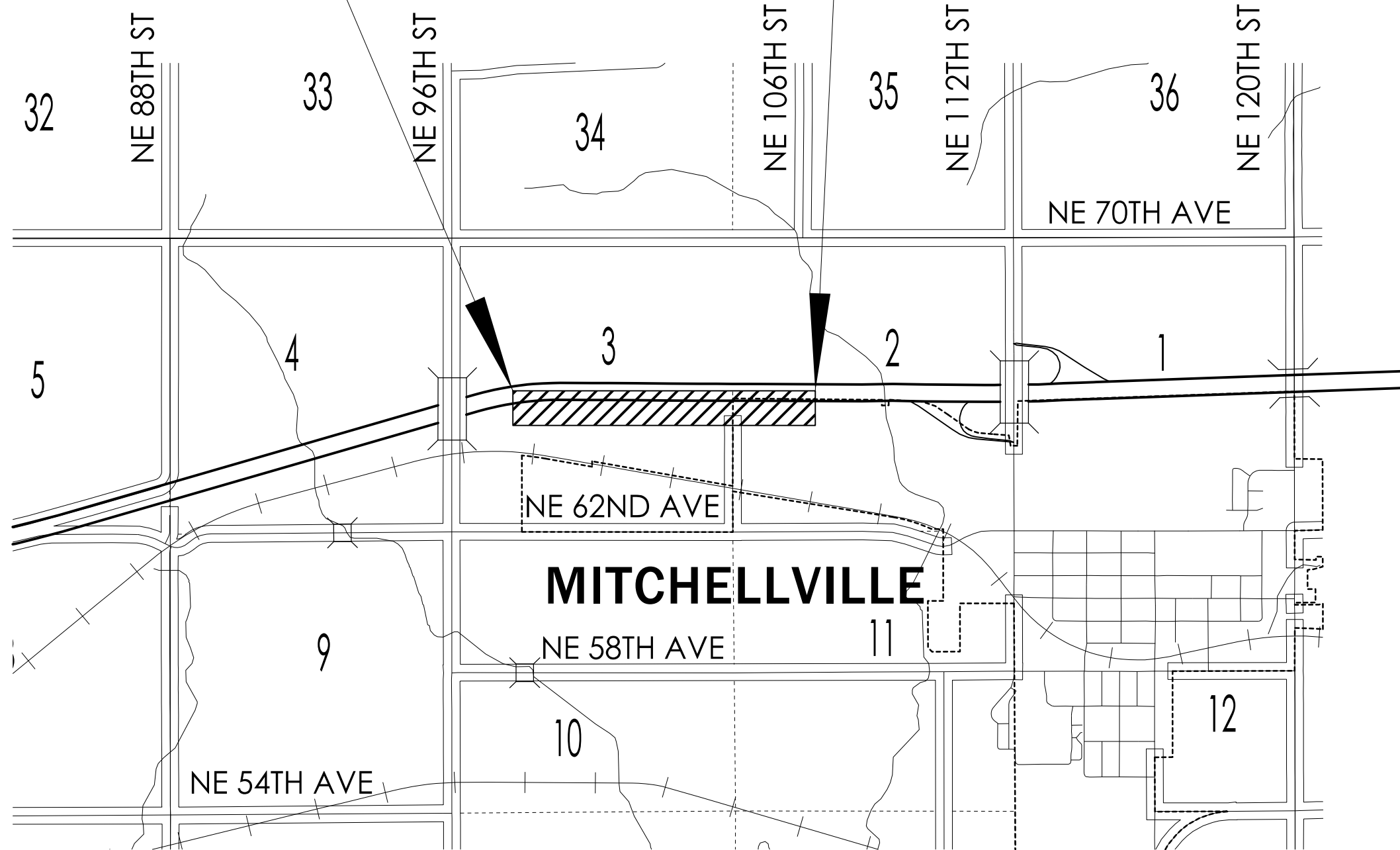
**PRELIMINARY PLANS**

Subject to change by final design.

D2 PLAN - Date: 08/15/2023

STA. 1568+45.00  
BEGIN CONSTRUCTION

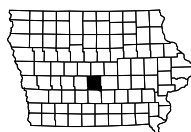
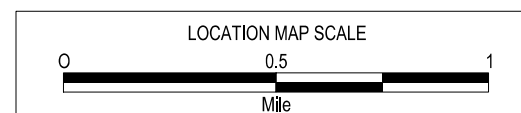
STA. 1640+40.00  
END CONSTRUCTION



T-80N

T-79N

R-22W



# FIELD EXAM CHECKLIST

- 1. Rest Area Building
  - a. Schedule / Future Building
  
- 2. Right-of-Way
  - a. Anticipated Impact
  - b. Schedule
  
- 3. Drainage
  - a. 66" RCP at Sta. 1625+00: Extend or Protect with Guardrail
  - b. Curb Cuts / Open Drainage System
  
- 4. Truck Parking
  - a. TPIMS Accommodations - Cabinets and Pucks
  
- 5. Construction Staging
  - a. Temporary Pavement Markings
  - b. Temporary Pedestrian Accommodations
  
- 6. Additional Project Impacts
  - a. Existing Shed and Propane Tanks
  - b. Lighting
  - c. Utilities



**EXISTING CONDITIONS AND CAUSES OF DISTRESS:**

The existing pavement is a 10 in non-reinforced PCC over a 12 in special backfill base, originally constructed in 1987. There are currently 24 truck parking stalls, 48 passenger vehicle parking stalls and 2 handicap parking stalls.

Overall the pavement is in fair condition. There is considerable patching and deterioration along the edges of the parking area and the entrance and exit ramps. There is some spalling occurring along the joints which is a maintenance issue. Due to high truck parking volume overnight, the shoulders on the entrance and exit ramps have begun to fall apart.

**SAFETY CONSIDERATION:**

Crash History

There is no crash history located within the project limits.

**FEASIBLE ALTERNATES:**

**ALTERNATIVE 1 (RECONSTRUCTION)**

This project involves the reconstruction of the eastbound Mitchellville Rest Area, 1.4 mi W of Co Rd S27 on I-80.

The existing truck parking area, center median, passenger car parking and the entrance and exit ramps will be removed and reconstructed with 10 in PCC pavement over 12 in of modified subbase. A subgrade polymer grid will be used under the entire area to be reconstructed. Currently there are 24 truck stalls, 48 passenger car stalls and 2 handicap parking stalls. The new design will include 35 truck parking stalls, 47 passenger car stalls, and 4 handicap stalls. New sidewalk will be constructed and tied into the existing sidewalk along with the extended car parking.

The existing lighting along the entrance and exit ramps will need to be relocated or replaced and additional lighting added to the relocated center median.

The existing entrance and exit ramps at the rest area will be removed, relocated, and reconstructed to provide an adequate deceleration and acceleration lanes. The entrance ramp (ending at the auto/truck separation and continued on the Truck parking entrance lane) will be 30 ft wide (16 ft lane with 10 ft outside and 4 ft inside shoulders) x 10 in PCC on 12 in modified subbase. The remainder of the auto parking lane will be 26 ft wide (16 ft lane with 6 ft outside and 4 ft inside shoulders) x 10 in PCC on 12 in modified subbase. The exit ramp will be 26 ft wide (16 ft lane with 6 ft outside and 4 ft inside shoulders) x 10 in PCC on 12 in modified subbase.

Construction of the new rest area building is preferred to be completed before replacement/construction of the new ramps and parking areas, currently it is scheduled for FY 28.

A lane shift will need to occur during construction to allow the replacement of the entrance and exit ramps of the rest area. Because of this the inside shoulder of the westbound lane in front of the rest area will be replaced with 10 in. full depth PCC over a 12 in. modified subbase.

Additional right of way of approximately 15 acres will be required.

**ESTIMATED COST:**

<u>Item</u>	<u>Estimated Cost</u>
Clear & Grubb	\$27,400
Embankment in place, Contractor Furnish	345,600
Excavation, Class 13 Waste	94,800
Subgrade Polymer Grid	85,100
Modified Subbase	444,600
PCC Pavement 10"	1,899,500
Subdrain, Long, shoulder 4"	33,600
Subdrain outlet. DR-306	4,900
Removal of Pavement	146,700
Erosion Control	50,000
Pavement Markings	14,300
Traffic Control (5%)	209,800
Mobilization (5%)	209,800
M & C (15%)	629,300
<b>Total Alternative No. 1</b>	<b>\$4,195,400</b>

<u>Item</u>	<u>Estimated Cost</u>
Lighting	\$75,000
Traffic Signs	11,000
Right of Way	150,000
<b>Total</b>	<b>\$236,000</b>

**RECOMMENDATIONS:**

The recommended method of rehabilitation for this project is the removal, replacement and relocation of the entrance and exit ramps and the truck and passenger car parking. The estimated cost of this project is \$4,195,400.

Right of way is required.

The Office of Location and Environment Bureau (LEB) has reviewed this project to determine potential impacts to wetlands or other protected waters. Based on the information provided to date, they have determined that a Section 404 Permit is NOT required for this project. If the project concept changes, additional ROW becomes necessary, or extra work is identified during construction, further review by the Office of Location and Environment Bureau may be necessary.

**SPECIAL CONSIDERATIONS**

This will be a traffic critical project. Due to reconstruction of the ramps being work within 15 ft. of the mainline, I-80 EB traffic will be shifted onto the median shoulder for the duration of the ramp tie-in construction. Two lanes will be maintained on I-80 EB at all times. The rest area will be closed during construction.

**FUNDS PROGRAMMED:**

This proposed 4R project is listed in the 2023-2027 program listed at \$1,891,000 for grading and paving, \$75,000 for lighting, \$11,000 for traffic signs and \$150,000 for right of way in 2026. It has been identified by the District 1 office for construction in FY 2026. A schedule of events for plan development will be determined following approval of the Project Concept.

JEB: jaa

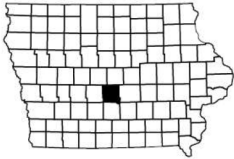
# POLK COUNTY

Utilities

PROJECT LOC



EB Mitchellville Rest Area 1.2 mi W of Co Rd S27  
 IMX-080-5(390)147--02-77  
 PIN: 22-77-080-080



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<b>Roadway</b>	I-80 EB Rest Area - Mitchellville		
<b>PIN Number</b>	22-77-080-080	<b>Submittal Date</b>	08/01/23
<b>Project Number</b>	IMX-080-5(390)147--02-77		<b>Approval Date</b>
<b>District</b>	District 1	<b>Assistant District Engineer</b>	Allison Smyth
<b>County</b>	Polk	<b>or</b>	
<b>Route</b>	I-80	<b>Office Director</b>	
<b>Location</b>	EB Rest Area near Mitchellville		
<b>Work Type</b>	PCC Pavement - Grade and Replace		
<b>Segment Manager</b>			
<b>Designer</b>	HNTB		

Design Manual Section 1C-1 Last Updated: 04-29-19		<b>Ramps</b>		
Design Element		Preferred Values	Acceptable Values	Project Values
Design speed (mph)		See Design Speed for Ramps Table Below	See Design Speed for Ramps Table Below	60 / 40
Design lane width (ft)				
Turn-lane width (ft)	Interstate ramps	12	12	N/A
	Non-Interstate ramps	12	10	N/A
Pavement cross-slope (on tangent sections)		2%	1.5% minimum, 2% maximum	2%
Shoulder cross-slope (on tangent sections)		4	Shoulder cross-slope cannot be less than the adjacent lane, 6% max for paved or granular shoulders, 8% max for earth shoulders	4%
Foreslope (For fill areas greater than 40 ft, contact the Soils Design Section for assistance)	Adjacent to shoulder	10:1 for 4' then 6:1	4:1 for interstates*, 3:1 for other roadways	10:1 / 6:1
	Beyond standard ditch depth and design clear zone	3.5:1	3:1	3.5:1
	Curbed roadways	2%	not steeper than 3:1	2%
Bridge width—new**		design lane widths + effective shoulder widths	design lane widths + effective shoulder widths	N/A
Bridge width—existing**		design lane widths + effective shoulder widths	design lane widths + effective shoulder widths	N/A
Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks)	Over primary	16.5	16	N/A
	over non-primary	16.5 at interchange locations, 15 at all other locations	14	N/A
	over railroad	23.3	23.3	N/A
	sign truss and pedestrian bridges	17.5	17	N/A
Structural Capacity		Contact Office of Bridges and Structures	Contact Office of Bridges and Structures	N/A

\*Design Exception required for ramps on the Interstate system only  
\*\*FHWA notification via email is required if acceptable criteria is not met on the Interstate or NHS systems (No formal design exception required)



Ramp Design Speed (mph) = 60/40

Design Manual Section 1C-1  
Last Updated: 04-29-19

Design Criteria for Ramps Based Upon Design Speed

Design Element	Preferred Criteria									Acceptable Criteria								Project Values									
	Design Speed, mph									Design Speed, mph																	
	25	30	35	40	45	50	55	60	25	30	35	40	45	50	55	60											
Stopping sight distance (ft) (Refer to Section 6D-1)	155	200	250	305	360	425	495	570	155	200	250	305	360	425	495	570	570 / 305										
Minimum horizontal curve radius (ft) and superelevation rate (Refer to Sections 2A-2 and 2A-3)	Method 2 superelevation and side friction distribution	e = 4% max									See Table 10 in Section 2A-3									N/A							
	Method 5 superelevation and side friction distribution	e <sub>max</sub> = 6%									144	231	340	485	643	833	1060	1330	144	231	340	485	643	833	1060	1330	1330 / 485
		e <sub>max</sub> = 8%									--	--	--	--	--	--	--	--	134	214	314	444	587	758	960	1200	N/A
Minimum vertical curve length (ft) (Refer to Section 2B-1)	75	90	105	120	135	150	165	180	75	90	105	120	135	150	165	180	180 / 120										
Minimum Rate of Vertical Curvature (Refer to Section 2B-1)	crest vertical curves		12	19	29	44	61	84	114	151	12	19	29	44	61	84	114	151	151 / 44								
	sag vertical curves	roadways without fixed-source lighting	26	37	49	64	79	96	115	136	26	37	49	64	79	96	115	136	136 / 64								
		roadways with fixed-source lighting	26	37	49	64	79	96	115	136	14	20	27	35	44	54	66	78	136 / 64								
Minimum gradient (%) (Refer to Section 2B-1)	0.5									0.3% with a curb, 0.0% without a curb								0.5									
Maximum gradient (%) on ramps (Refer to Sections 2B-1)	Upgrades		4									8	7	6	6	5	5	5	5	4							
	Downgrades											Equal to the maximum upgrade gradient. In special cases, may be 2% greater but in no case greater than 8%								4							
Clear zone	See "Preferred Clear Zone" table in Section 8A-2									See "Acceptable Clear Zone" table in Section 8A-2								32 / 16									

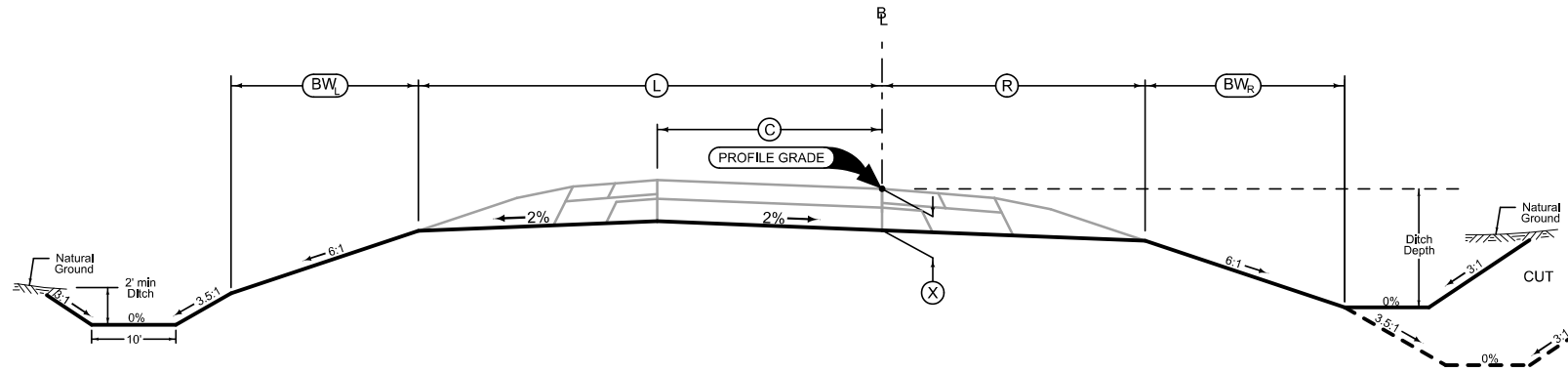
**Ramp Design Speed (mph) = 60/40**

Design Manual Section 1C-1  
Last Updated: 04-29-19

**Design Speed for Ramps**

Design Element	Ramp Type									Project Values	
	Preferred					Acceptable					
	All curves near free flow terminals	Diagonal	Loop	Semi-Directional	Directional	All curves near free flow terminals	Diagonal	Loop	Semi-Directional		Directional
Curves near at-grade terminals		Curves near at-grade terminals									
Design speed (mph)	60	40	30	50	60	50	35	25	40	40	60 / 40
Maximum superelevation rate (Refer to Section 2A-2 for details)	6%	4%	6%			8%				6%	

LOCATION				DIMENSIONS				
INTERCHANGE	RAMP	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	(BW <sub>L</sub> ) Feet	(BW <sub>R</sub> ) Feet
EB Rest Area	B	2003+76.24	2007+87.00	29-32	19	22	0-19	2-15
EB Rest Area	B	2007+87.00	2009+00.00	32-36	19-16	22	19-10	15-3
EB Rest Area	B	2009+00.00	2011+70.00	36-24	16-13	22	10-0	3
EB Rest Area	B	2011+70.00	2014+00.00	24-26	13-18	22	0	3-0
EB Rest Area	D	4000+50.00	4003+75.00	30-33	17-14	22	0	0-2
EB Rest Area	D	4003+75.00	4005+70.00	33	14	22	0	2
EB Rest Area	D	4005+70.00	4009+65.38	33-27	14-21	22	0	2-0
EB Rest Area	F	6005+93.63	6009+68.72	26-38	24-20	22	0-4	0-9
EB Rest Area	F	6009+68.72	6013+45.00	38-41	20-24	22	4-13	9-7
EB Rest Area	F	6013+45.00	6015+10.00	41	6-28	22	13-19	0
EB Rest Area	H	8002+25.00	8003+00.00	49-44	14-10	22	3	1-0
EB Rest Area	H	8003+00.00	8008+00.00	44-43	23-20	22	3-0	9-4
EB Rest Area	H	8008+00.00	8010+27.27	28-23	20-24	22	0	4-0

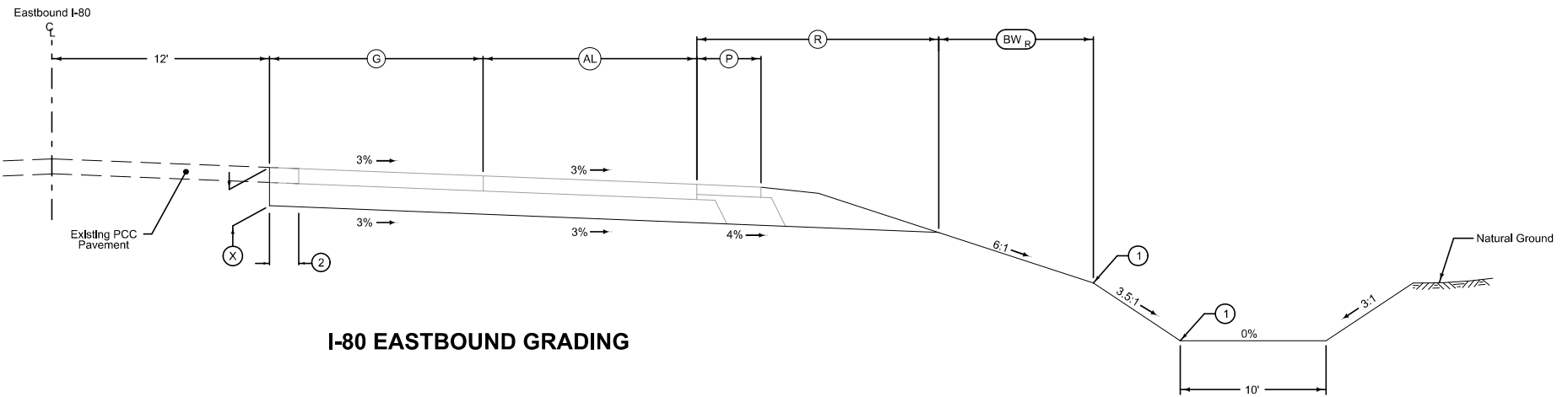


**RAMP GRADING**

**Gore, Acceleration and Deceleration Lane**

Section view is in the direction of traffic.

Direction of Travel	BEGIN STATION	END STATION	(G) Feet	(AL) Feet	(X) Inches	(P) Feet	(R) Feet	(BWR) Feet
EB	1574+00.00	1574+89.85	0	0-6	22	12-6	30-21	0-4
EB	1574+89.85	1577+00.00	0	6-20	22	6	21	4
EB	1577+00.00	1580+00.55	4-24	16	22	6	21	4
EB	1580+00.55	1580+35.00	0	0	22	12	14-15	0
EB	1580+35.00	1586+65.00	0	0	0	0	16-27	0-18
EB	1586+65.00	1593+75.00	0	0	22	12	27	18
EB	1593+75.00	1607+00.00	0	0	0	0	27	18
EB	1607+00.00	1619+07.00	0	0	22	12	27	18-0
EB	1619+07.00	1620+57.52	20-2	16	22	6	25	9
EB	1620+57.52	1622+17.67	0	18-12	22	6	25-22	9-13
EB	1622+17.67	1632+17.67	0	12	22	6	22	13
EB	1632+17.67	1635+17.67	0	12-6	22	6	22	13
EB	1635+17.67	1638+17.67	0	6-0	22	6-12	22-20	13-0



**I-80 EASTBOUND GRADING**

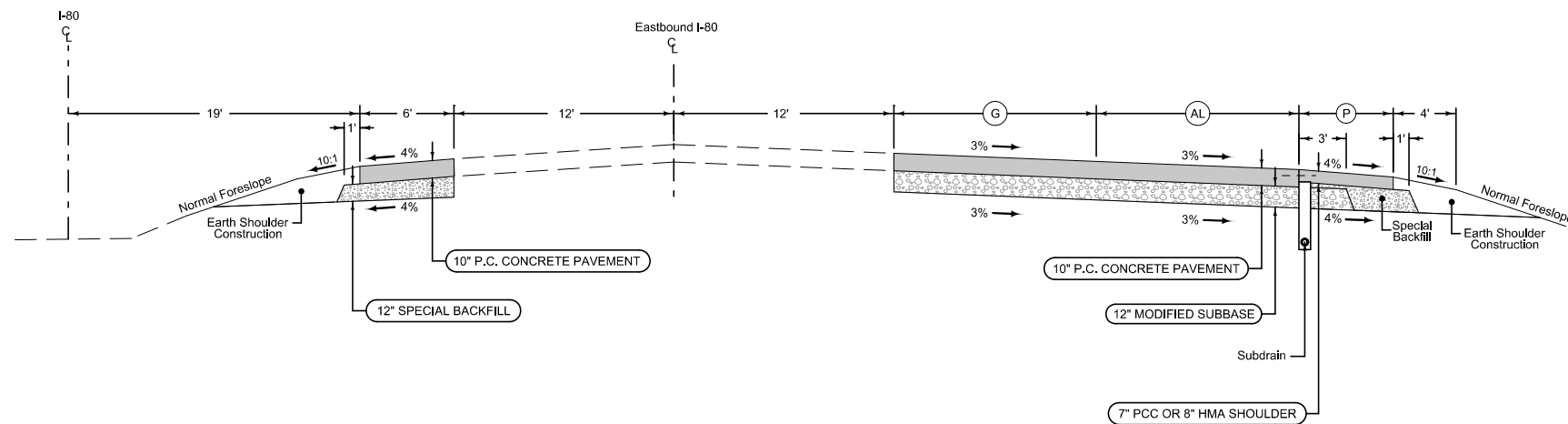
**GRADING TYPICALS**

- Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.
- ① Refer to project plan and cross sections for specific location of foreslope change and ditch details.
  - ② Remove 2'-0" existing slab.

**PCC Paved Shoulder**

Longitudinal joint: KT-2  
 Transverse joints: CD matching mainline joints

Direction of Travel	BEGIN STATION	END STATION
EB	1568+45.00	1640+40.00



**Paved Shoulder Alternates**

PCC Shoulder Jointing:  
 Longitudinal joint: BT-1 or BT-5  
 Transverse joints: C at 17' spacing  
 HMA Shoulder Jointing:  
 Longitudinal joint: B

Direction of Travel	BEGIN STATION	END STATION	(P) Feet
EB	1574+00.00	1574+89.85	12-6
EB	1574+89.85	1580+00.55	6
EB	1580+00.55	1580+35.00	12
EB	1586+65.00	1593+75.00	12
EB	1607+00.00	1619+07.52	12
EB	1619+07.52	1635+17.73	6
EB	1635+17.73	1638+17.67	6-12

**Gore, Acceleration and Deceleration Lane**

Longitudinal joint: L or KT  
 Transverse joint: Match Mainline

Direction of Travel	BEGIN STATION	END STATION	(G) Feet	(AL) Feet
EB	1574+00.00	1577+00.00	0	0-20
EB	1577+00.00	1580+00.55	4-24	16
EB	1619+07.52	1620+57.52	20-2	16
EB	1620+57.52	1622+17.67	0	18-12
EB	1622+17.67	1632+17.67	0	12
EB	1632+17.67	1638+17.67	0	0-12

**I-80 EASTBOUND PAVING**

**Paved Shoulder Alternates**

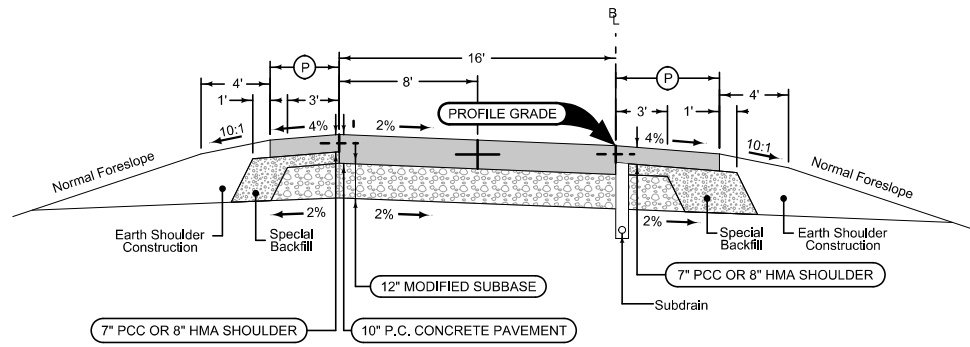
PCC Shoulder Jointing:  
 Longitudinal joint: BT-1 or BT-5  
 Transverse joints: C at 17' spacing  
 HMA Shoulder Jointing:  
 Longitudinal joint: B

ROAD IDENTIFICATION	BEGIN STATION	END STATION	(P) Feet
Ramp B	2003+76.24	2014+03.66	4
Ramp D	4000+37.55	4009+65.38	4
Ramp F	6005+93.63	6015+77.52	4
Ramp H	8002+25.81	8010+27.28	4

**Paved Shoulder Alternates**

PCC Shoulder Jointing:  
 Longitudinal joint: BT-1 or BT-5  
 Transverse joints: C at 17' spacing  
 HMA Shoulder Jointing:  
 Longitudinal joint: B

ROAD IDENTIFICATION	BEGIN STATION	END STATION	(P) Feet
Ramp B	2000+00.00	2014+03.66	6
Ramp D	4000+37.55	4014+63.17	6
Ramp F	6005+93.63	6009+68.51	6
Ramp F	6013+45.15	6015+18.10	4
Ramp H	8002+00.09	8003+02.60	4
Ramp H	8008+00.00	8010+27.28	6

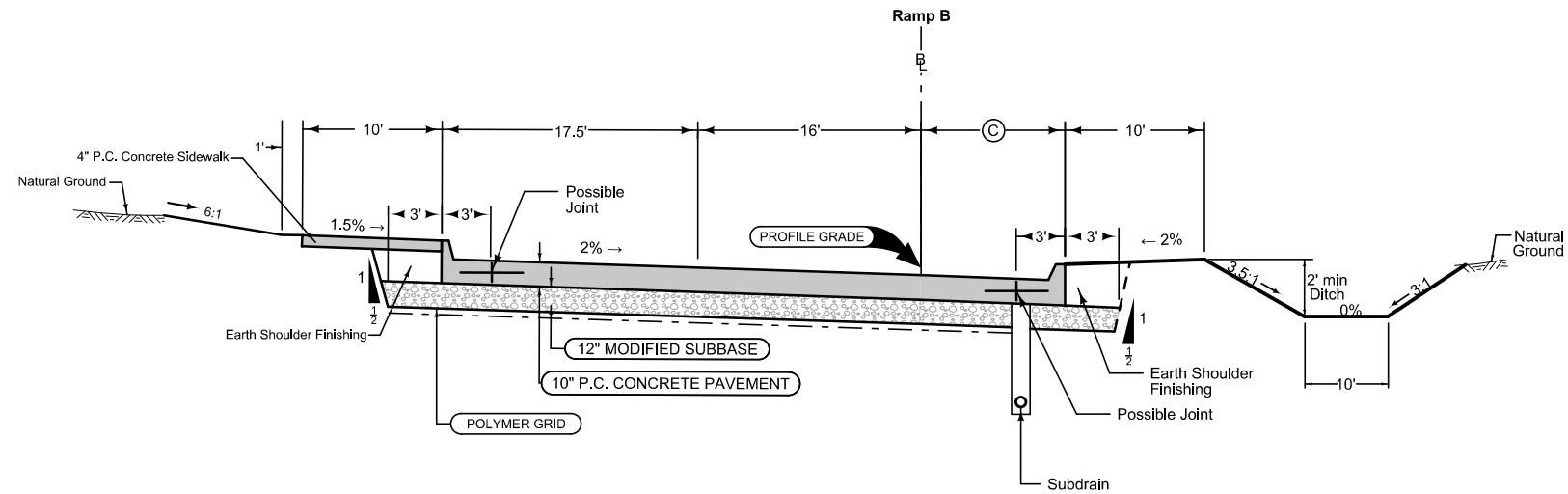


Section shown in the direction of traffic.

Ramp Jointing:  
 Transverse joints: CD at 17' spacing.  
 Longitudinal joints: L-2

ROAD IDENTIFICATION	BEGIN STATION	END STATION
Ramp B	2000+00.00	2014+03.66
Ramp D	4000+37.55	4014+63.17
Ramp F	6005+93.63	6015+18.10
Ramp H	8002+25.81	8010+27.28

**RAMP PAVING**



**Integral Curb**

Shoulder jointing:  
 Longitudinal joint not required when distance from back of curb to nearest joint is less than 16':

Transverse: CD at 17' spacing  
 Single pour: L-2  
 Staged : KT-2

ROAD IDENTIFICATION	BEGIN STATION	END STATION	Curb Type See PV-102
Ramp B	2014+05.79	2019+50.00	6" Standard
Ramp D	4000+00.00	4000+37.55	6" Standard

ROAD IDENTIFICATION	BEGIN STATION	END STATION	(C) Feet
Ramp B	2014+03.66	2014+53.66	0-10
Ramp B	2014+53.66	2019+37.55	10
Ramp B	2019+37.55	2019+50.00	10-7.7
Ramp D	4000+00.00	4000+37.55	7.7-0

Confirm locations of polymer grid, including under auto parking lot.

**Integral Curb**

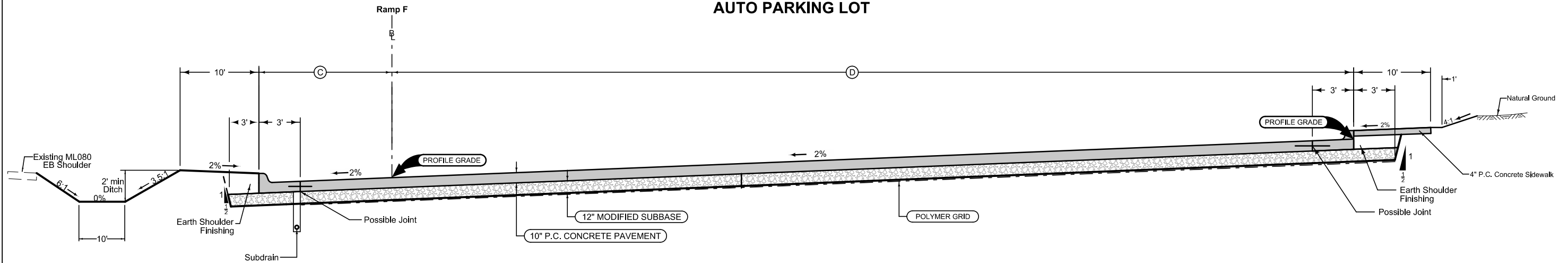
Shoulder jointing:  
 Longitudinal joint not required when distance from back of curb to nearest joint is less than 16':

Transverse: CD at 17' spacing  
 Single pour: L-2  
 Staged : KT-2

ROAD IDENTIFICATION	BEGIN STATION	END STATION	Curb Type See PV-102
Ramp B	2014+32.31	2019+50.00	6" Standard
Ramp D	4000+00.00	4000+08.83	6" Standard

Section view is in direction of traffic.

**AUTO PARKING LOT**



**Integral Curb**

Shoulder jointing:  
 Longitudinal joint not required when distance from back of curb to nearest joint is less than 16':

Transverse: CD at 17' spacing  
 Single pour: L-2  
 Staged : KT-2

ROAD IDENTIFICATION	BEGIN STATION	END STATION	Curb Type See PV-102
Ramp F	6015+88.96	6034+75.11	6" Standard
Ramp H	8000+00.00	8002+25.81	6" Standard

ROAD IDENTIFICATION	BEGIN STATION	END STATION	(C) Feet	(D) Feet
Ramp F	6015+18.10	6015+77.52	16	6.8-22.7
Ramp F	6015+77.52	6016+27.52	16-31.5	22.7-36.1
Ramp F	6016+27.52	6017+57.85	31.5	36.1-64
Ramp F	6017+57.85	6034+75.11	31.5	64
Ramp H	8000+00.00	8002+25.81	31.5-0	64-35

**Integral Curb**

Shoulder jointing:  
 Longitudinal joint not required when distance from back of curb to nearest joint is less than 16':

Transverse: CD at 17' spacing  
 Single pour: L-2  
 Staged : KT-2

ROAD IDENTIFICATION	BEGIN STATION	END STATION	Curb Type See PV-102
Ramp F	6015+18.10	6034+75.11	6" Standard
Ramp H	8000+00.00	8002+00.09	6" Standard

Section view is in direction of traffic.

**TRUCK PARKING LOT**

**REST AREA GRADING AND PAVING**



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

### UTILITY LEGEND

- E1 - MIDAMERICAN ENERGY (ELECTRIC)  
CRAIG RANFIELD  
5152526632  
mecdsmdesignlocates@midamerican.com
- E2 - IOWA D.O.T. (ELECTRIC)
- FO - IOWA COMMUNICATIONS NETWORK (FIBER OPTIC)  
SHANNON MARLOW  
8005723940  
lcnoutsldelplantiowaonecall@iowa.gov
- G - IOWA D.O.T. (GAS)
- SAN - IOWA D.O.T. (SAN. SEWER)
- T1 - CENTURYLINK (TELEPHONE)  
SADIE HULL  
9185470147  
sadie.hull@lumen.com
- W - DES MOINES WATER WORKS (WATER)
- ST S - IOWA D.O.T. (STORM SEWER)

### 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

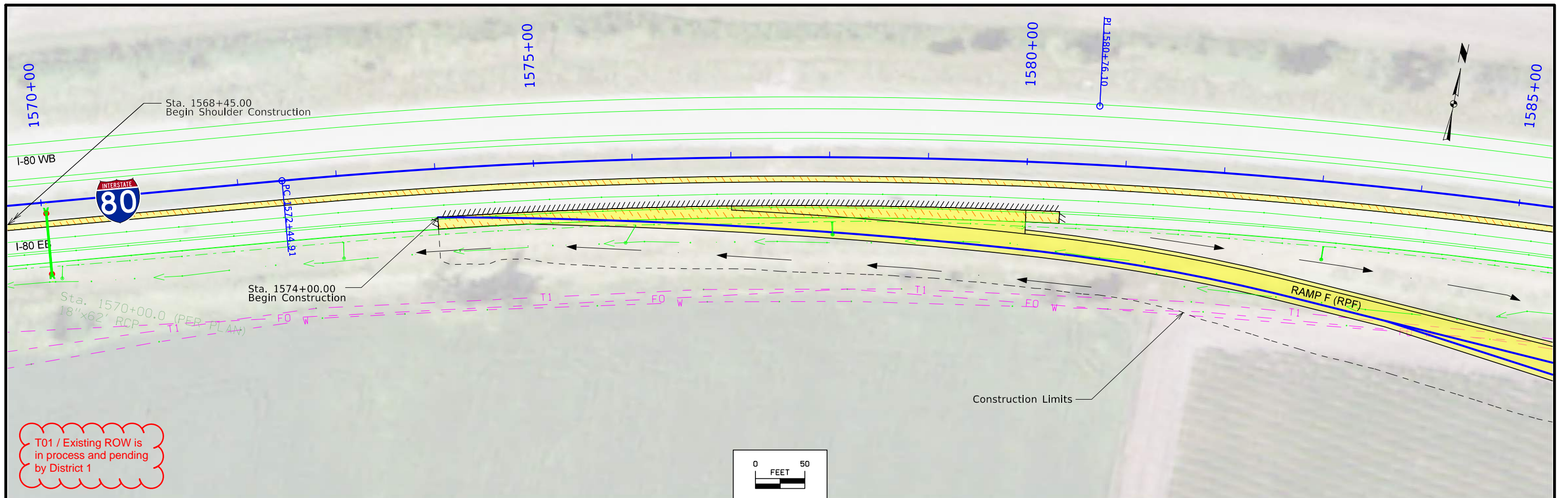
- Reference Point
- Station
- Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Trench Drain
- HighTension Cable Guardrail
- Sheet Pile
- Pavement Removal
- Clearing & Grubbing Area

### RIGHT-OF-WAY LEGEND

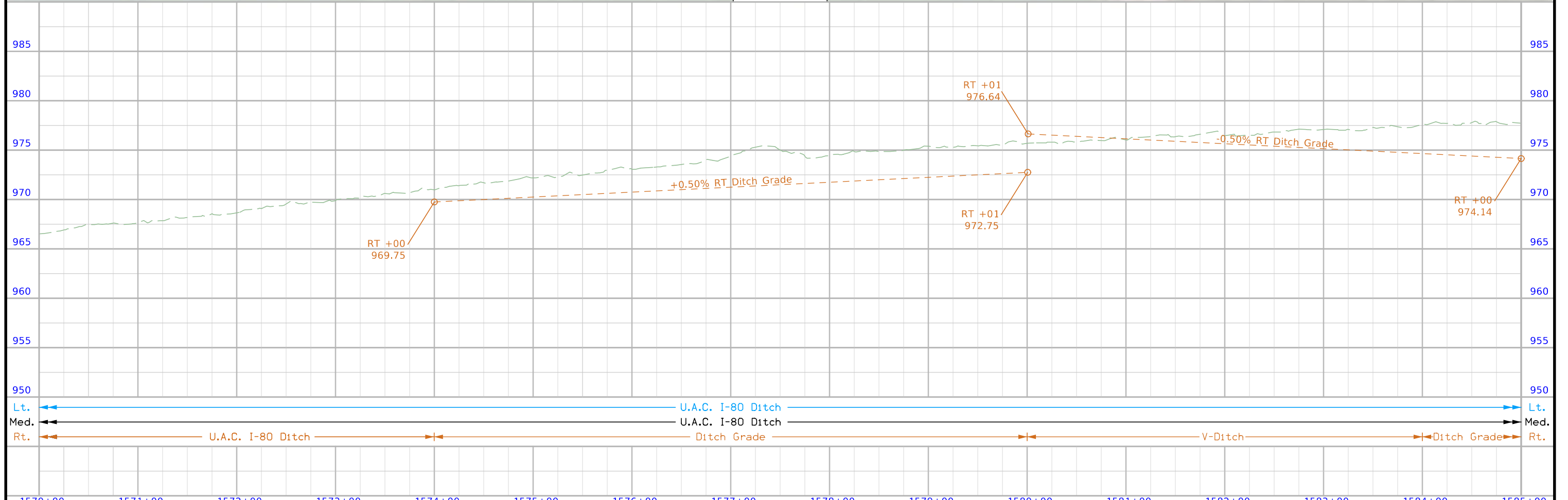
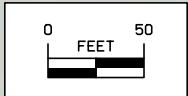
- Proposed Right-of-Way
- Existing Right of Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Easement (Temporary)
- Easement
- Access Control
- Property Line

## PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

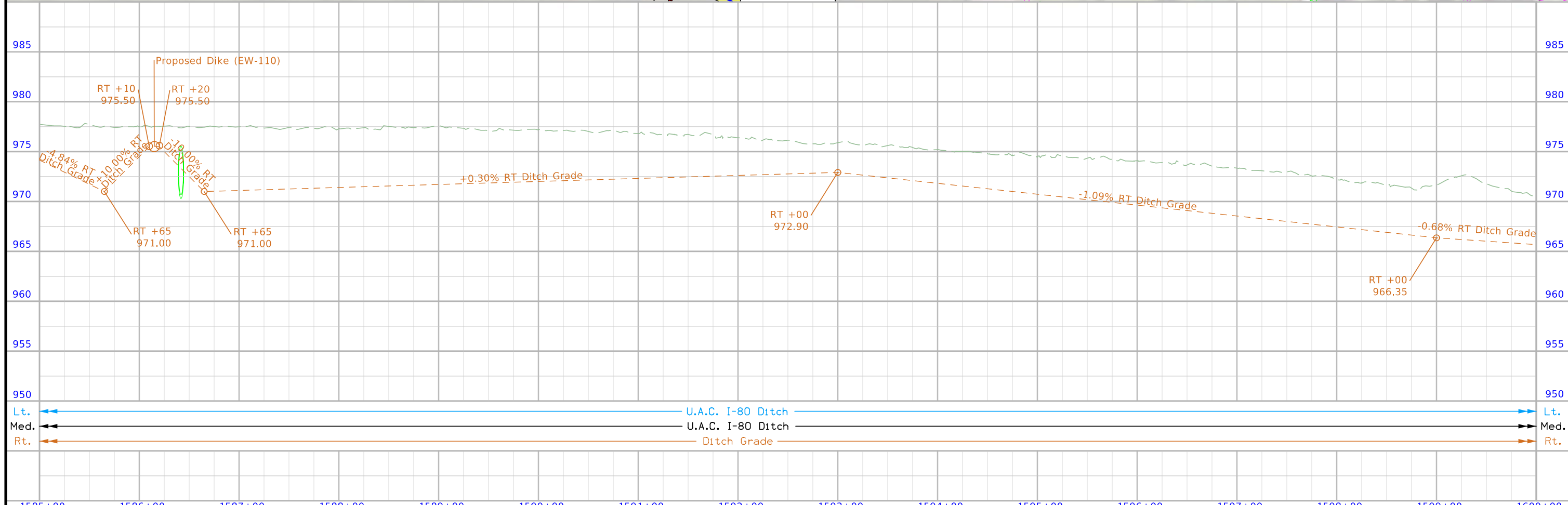
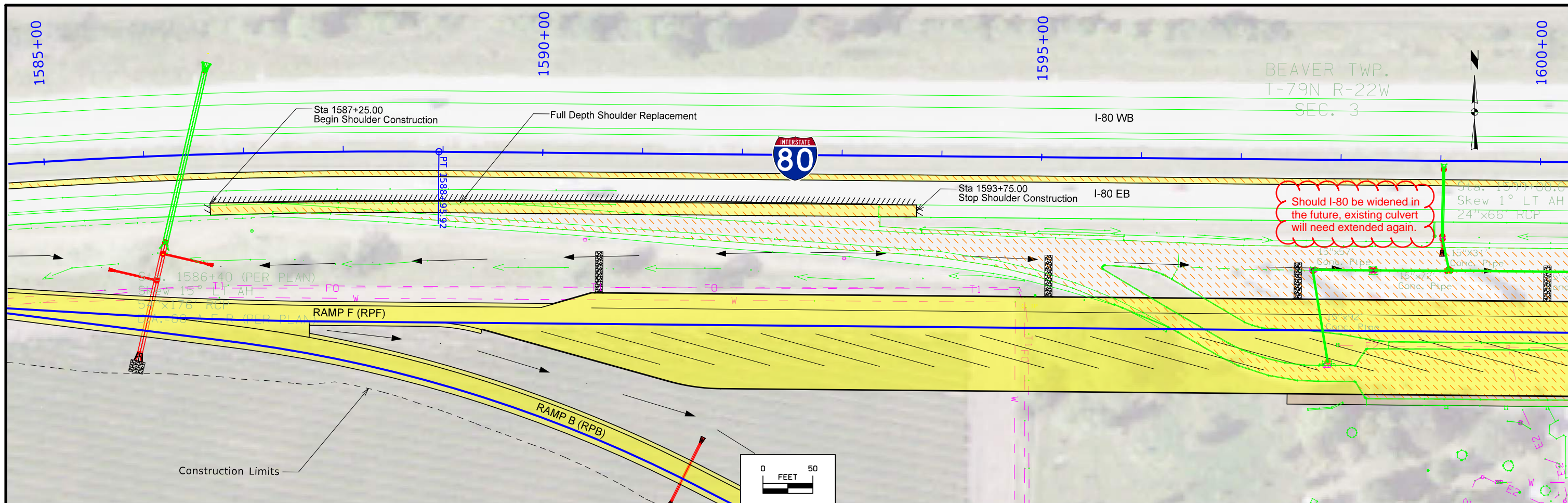
(COVERS SHEET SERIES D & K)



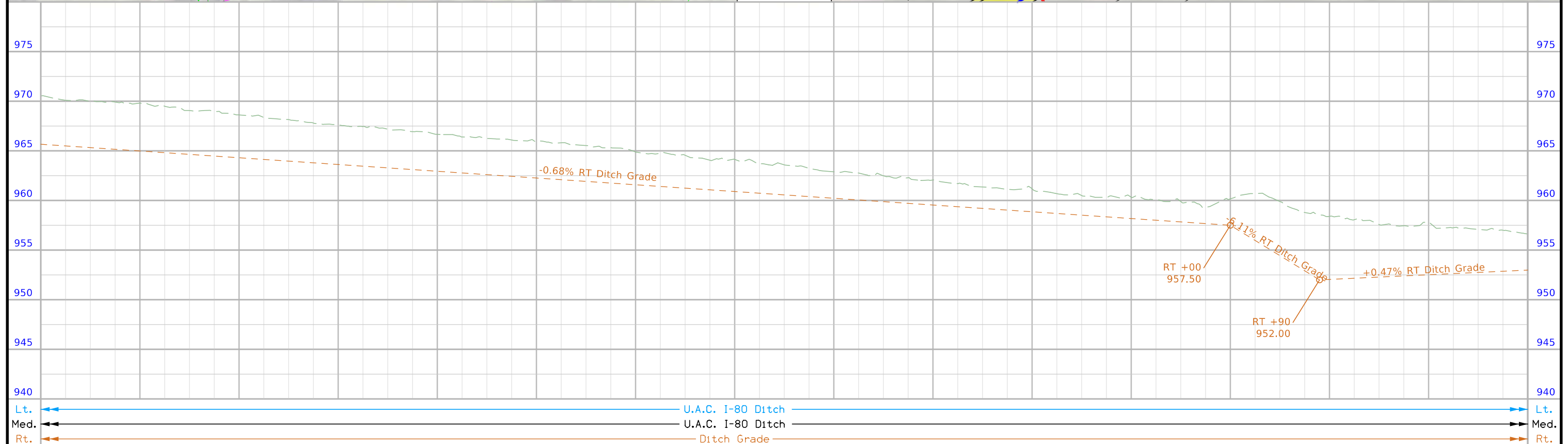
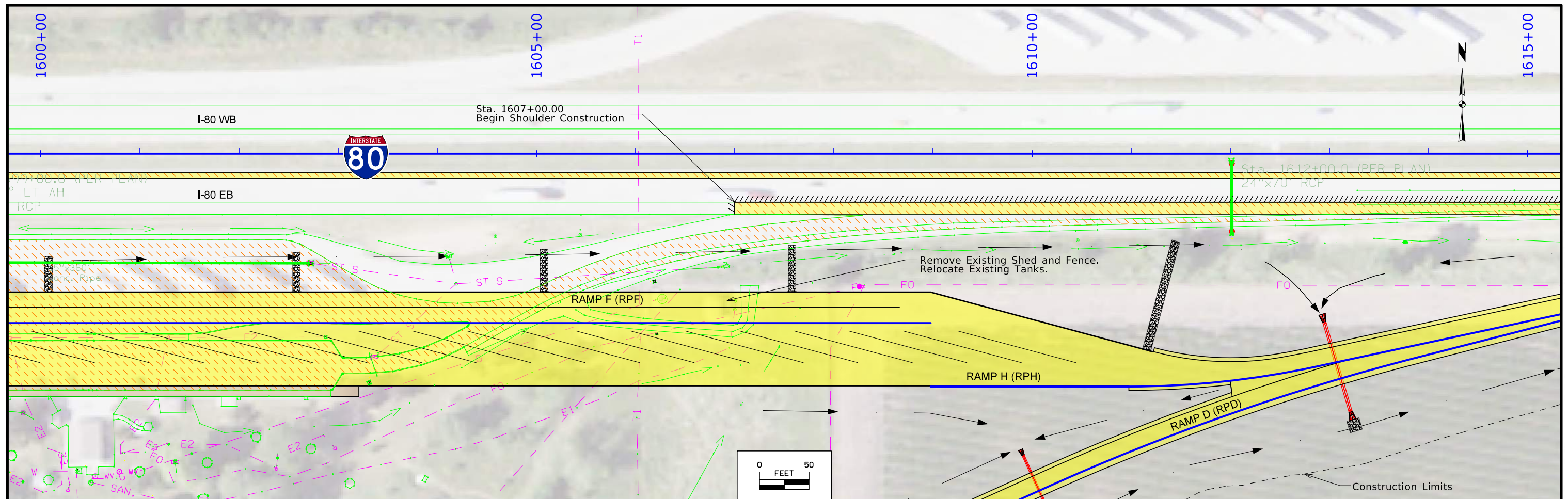
T01 / Existing ROW is in process and pending by District 1



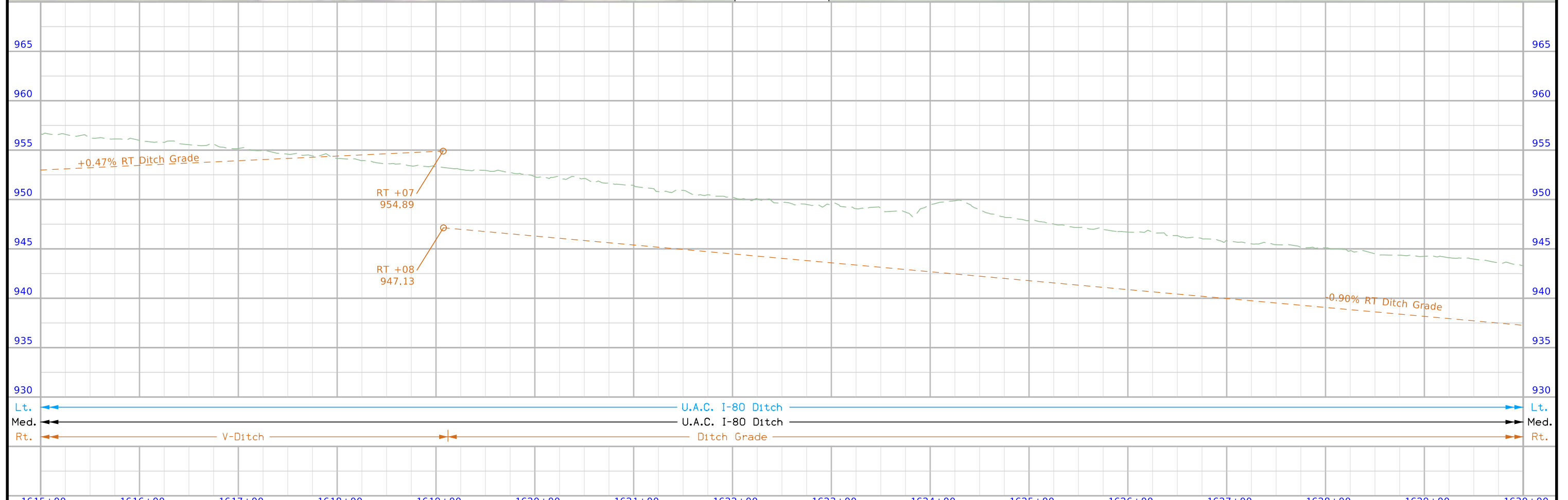
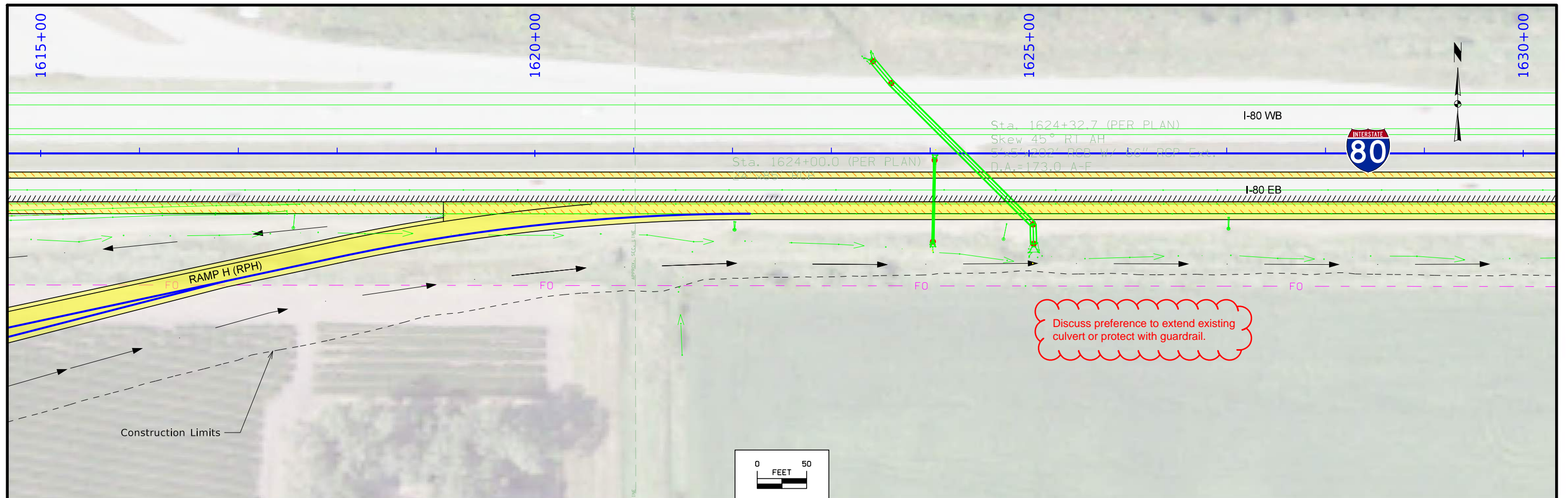
1570+00	1571+00	1572+00	1573+00	1574+00	1575+00	1576+00	1577+00	1578+00	1579+00	1580+00	1581+00	1582+00	1583+00	1584+00	1585+00
FILE NO.	ENGLISH	DESIGN TEAM HNTB	POLK COUNTY			PROJECT NUMBER IMX-080-5(390)147--02-77					SHEET NUMBER D.2				

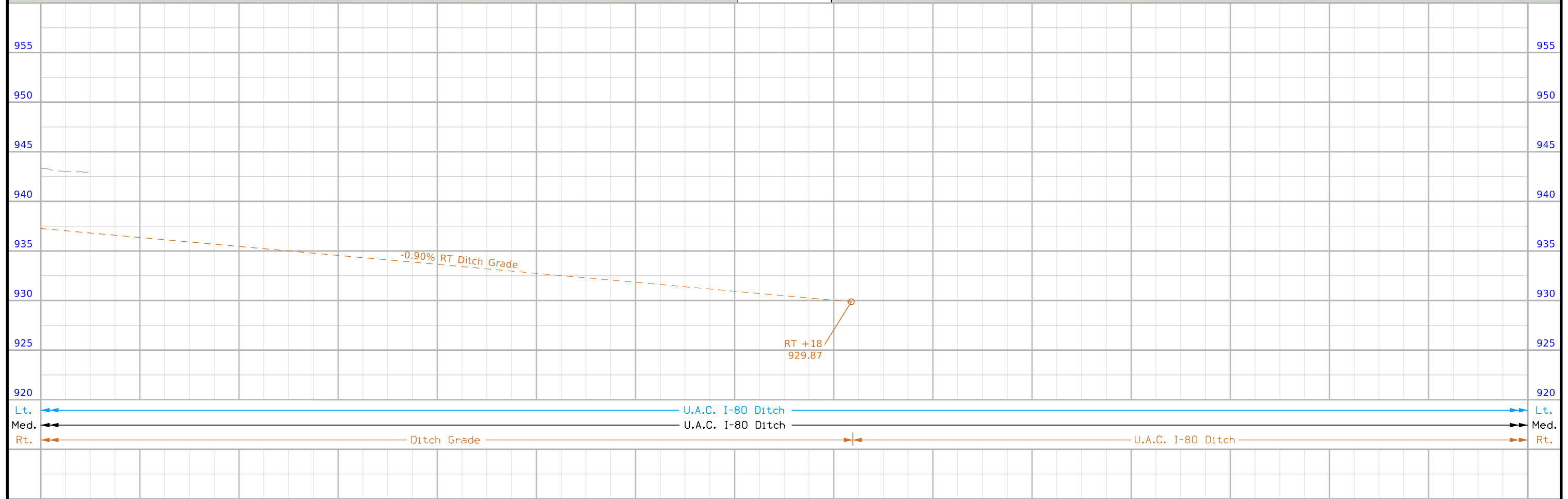
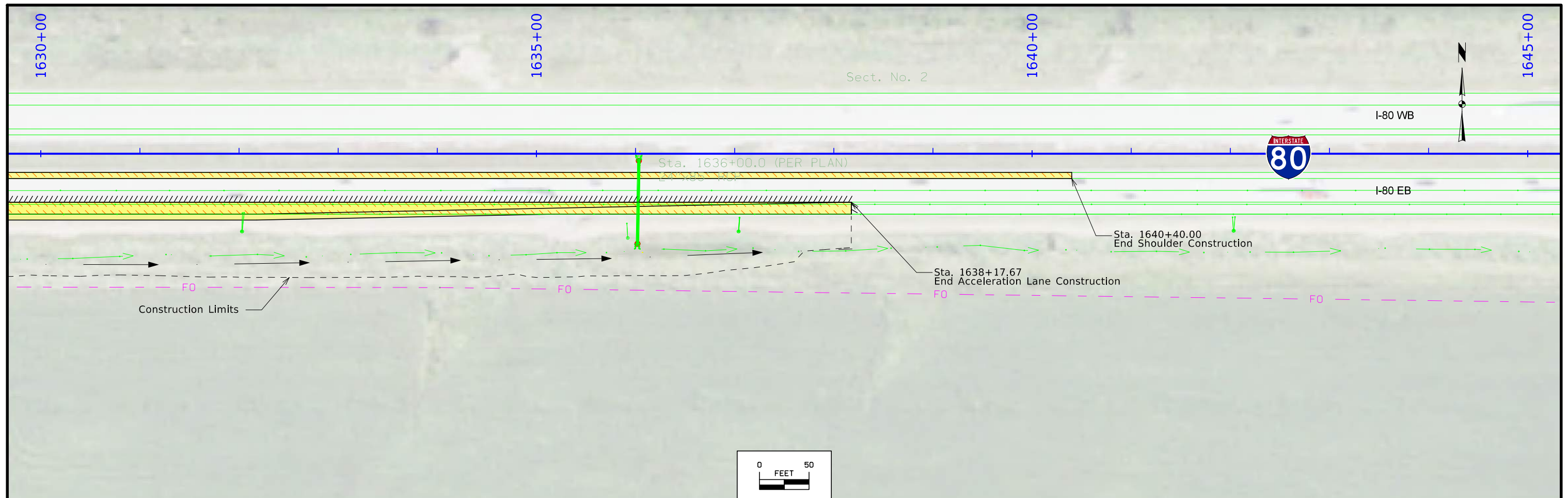


1585+00	1586+00	1587+00	1588+00	1589+00	1590+00	1591+00	1592+00	1593+00	1594+00	1595+00	1596+00	1597+00	1598+00	1599+00	1600+00
FILE NO.	ENGLISH	DESIGN TEAM HNTB	POLK COUNTY			PROJECT NUMBER	IMX-080-5(390)147--02-77				SHEET NUMBER D.3				



1600+00	1601+00	1602+00	1603+00	1604+00	1605+00	1606+00	1607+00	1608+00	1609+00	1610+00	1611+00	1612+00	1613+00	1614+00	1615+00
FILE NO.	ENGLISH	DESIGN TEAM HNTB	POLK COUNTY			PROJECT NUMBER IMX-080-5(390)147--02-77					SHEET NUMBER D.4				





1630+00	1631+00	1632+00	1633+00	1634+00	1635+00	1636+00	1637+00	1638+00	1639+00	1640+00	1641+00	1642+00	1643+00	1644+00	1645+00
FILE NO.	ENGLISH	DESIGN TEAM HNTB				POLK COUNTY	PROJECT NUMBER IMX-080-5(390)147--02-77			SHEET NUMBER D.6					

## Survey Information

### SURVEY INDEX

**County: Polk**

**PIN: 22-77-080-080**

**Project Number: IMN-080-5(393)147--OE-77**

**Location: Mitchelville Rest Area 1.4 mi W of Co Rd S27 (EB)**

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

**Project Directory: 7708008022**

### Survey Personnel

John Hahn – Survey Party Chief

Robert Fredrickson – Assistant Survey Party Chief

### Date(s) of Survey

Begin Date 03/01/2023

End Date 05/15/2023

### General Information

This survey is for PCC Pavement Grading and Replacing at the Interstate 80 east-bound rest area 1.4 miles west of County Road S27, near Mitchelville. This project is a Partial Field DTM with Photo control.

### 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 8**

**(U.S. SURVEY FOOT)**

**VERTICAL DATUM: NAVD88**

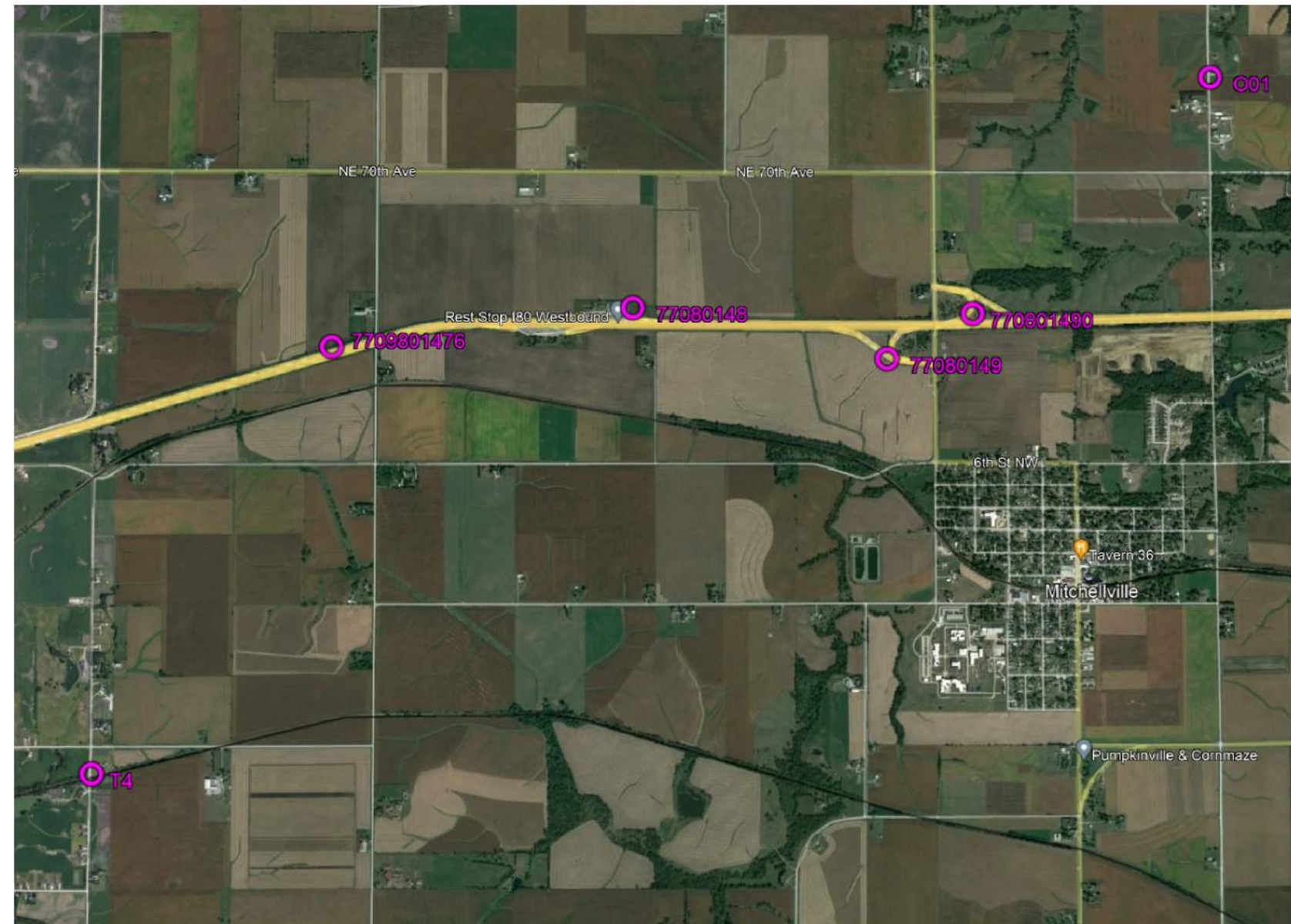
**GEOID MODEL: 2018u3**

### Alignment Information

No alignment is requested for this survey.

## 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 2012 bu3

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 2012bu3  
 Project Control Marks are Bench Marks

Point Name	Northing	Easting	Elevation	Code/Description
77080149	7520713.04	18594415.09	946.43	CP FD ROW RAIL 72FT SW OF CL EB OFF RAMP 54FT NW OF GAS LINE MARKER POST 1FT S OF ROW FENCE
T4	7512877.12	18579522.40	938.62	CP FD NGS MON IN GOOD CONDITION AS DESCRIBED
O01	7526108.73	18600590.03	913.21	CP FD JASPER CO GPS MON IN GOOD CONDITION AS DESCRIBED
770801490	7521570.48	18596032.60	963.85	CP SET FENO 69FT E OF SH OF ON RAMP 123FT N OF SH OF I-80 702FT E OF SH OF CO RD S27 AT NE BARRIER RAIL
77080148	7521659.11	18589608.68	950.21	CP FD FENO MON IN GOOD CONDITION 85FT NE OF NEAR EDGE OFF RAMP SH 67FT E OF NE COR CONC PAD 60FT W OF SINGLE WOOD POST
770801467	7520898.22	18583911.30	972.08	CP SET FENO 59FT N OF SH I-80 853FT W OF NW ABUTMENT OF NE 96TH ST 394FT E OF E EDGE OF CROSSOVER ON I-80

**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.

**ALIGNMENT COORDINATES**

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
ML I-80	Point ML080_1	1496+77.40	7519016.58	18577913.78															
	Curve ML080_2						1572+44.91	7521139.96	18585177.27	1580+76.10	7521373.19	18585975.07	1588+95.92	7521371.71	18586806.26				
	Point ML080_3	1674+08.52	7521356.59	18595318.54															
Ramp B	Point RPB_1	2000+00.00	7521215.48	18586301.57															
	Curve RPB_2						2003+00.00	7521180.15	18586599.48	2005+45.97	7521151.19	18586843.73	2007+86.96	7521040.70	18587063.49				
	Curve RPB_3						2010+28.58	7520932.17	18587279.35	2011+43.18	7520880.69	18587381.75	2012+53.66	7520880.49	18587496.35				
	Point RPB_4	2019+50.00	7520879.25	18588192.69															
Ramp D	Point RPD_1	4000+00.00	7520879.25	18588192.69															
	Curve RPD_2						4001+87.55	7520878.91	18588380.25	4003+92.25	7520878.55	18588584.95	4005+90.79	7520962.52	18588771.63				
	Curve RPD_3						4007+55.39	7521030.04	18588921.75	4009+55.63	7521112.18	18589104.37	4011+54.87	7521161.53	18589298.43				
	Point RPD_4	4014+63.17	7521237.50	18589597.23															
Ramp F	Curve RPF_1						6000+00.00	7521134.09	18585339.18	6002+97.09	7521190.33	18585630.90	6005+93.63	7521215.87	18585926.88				
	Curve RPF_2						6005+93.63	7521215.87	18585926.88	6007+31.39	7521227.71	18586064.13	6008+68.71	7521220.63	18586201.70				
	Curve RPF_3						6011+42.39	7521206.55	18586475.02	6012+48.00	7521201.11	18586580.49	6013+53.57	7521200.93	18586686.10				
	Point RPF_4	6034+75.11	7521197.16	18588807.64															
Ramp H	Point RPH_1	8000+00.00	7521133.16	18588807.52															
	Curve RPH_2						8002+00.09	7521132.80	18589007.61	8002+95.30	7521132.63	18589102.82	8003+89.80	7521152.39	18589195.96				
	Curve RPH_3						8009+14.60	7521261.28	18589709.34	8011+26.18	7521305.19	18589916.31	8013+36.19	7521304.81	18590127.89				

**SUPERELEVATION DATA**

See PV-300 Series

Road Identification	Circular Curve or Spiral Curve Name	Radius FT	Superelevation Data			Standard Road Plan	Section A-A	Section B-B	Section C-C	Section D-D	Section E-E	Section F-F	Case A	Case B	Case C	Case S	Case T	Case U	Remarks
			e	L	x														
			%	FT	FT														
Ramp B	RPB_1	1400	4.2	136	56	PV-303	2002+69.76		2003+00.00	2003+41.00					2003+34.52			40 mph	
					64.76		2008+28.24		2007+86.96	2007+57.00					2007+63.48			40 mph - Shared B-B with RPB_2 PC	
Ramp B	RPB_2	485	6.0	194	64.76	PV-303	2008+28.24	2008+93.00	2010+28.58	2010+87.00					2010+22.33			40 mph - Shared B-B with RPB_1 PT	
					56		2014+46.00	2013+90.00	2012+53.66	2011+96.00					2012+60.67			40 mph	
Ramp D	RPD_1	950	5.0	161	56	PV-303	4000+19.00	4000+75.00	4001+87.55	4002+36.00					4002+03.80			40 mph	
					64.76		4007+61.67	4006+97.00	4005+90.79	4005+36.00					4005+68.20			40 mph - Shared B-B with RPD_2 PC	
Ramp D	RPD_2	2300	3.0	97	64.76	PV-303	4007+61.67		4007+55.39	4007+94.00								40 mph - Shared B-B with RPD_1 PT	
					56		4011+58.33		4011+54.87	4011+26.00								40 mph	
Ramp F	RPF_2	2000	5.4	225	72	PV-303	6005+93.63		6005+93.63	6006+77.00					6006+18.67			60 mph - A-A at 3.40% at the ML080 gore	
					72		6009+43.67		6008+68.71	6008+02.00					6008+60.33			60 mph	
Ramp H	RPH_1	900	3.8	109	49	PV-303	8001+81.37		8002+00.09	8002+33.00								30 mph	
					49		8005+15.00	8004+66.00	8003+89.80	8003+57.00								30 mph	
Ramp H	RPH_2	2000	5.4	225	72	PV-303	8008+40.33		8009+14.60	8009+82.00					8009+23.67			60 mph	
					72		See Remarks		8013+36.19	8012+69.00					See Remarks			60 mph - A-A at 3.0% and Case S occurs in ML080 gore.	

**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

**108-23A**  
08-01-08

**TRAFFIC CONTROL PLAN**

Maintain traffic on EB Interstate 80 at all times in accordance with J Sheets. Single lane closures will be permitted as necessary during nighttime hours to complete shoulder strengthening and set TBR in accordance with Tab. 108-23B Modified. The rest area will be open to passenger vehicle traffic during the project, but will be closed to truck traffic in Stage 2.

Refer to Tab. 108-26A for Staging Notes.

For additional information, refer to Part 6 of the Manual on Uniform Traffic Control Devices, Iowa DOT Standard Road Plan TC Series, and the current Standard Specifications.

**111-01**  
04-17-12

**COORDINATED OPERATIONS**

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

Project	Type of Work

**108-26A**  
08-01-08

**STAGING NOTES**

Prior to Stage 1

Traffic: Close the inside lane of eastbound I-80 in accordance with Standard Road Plan TC-418 and allowable nighttime closures in accordance with Tab. 108-23B Modified.

Construction: Construct I-80 inside shoulder strengthening in order to shift traffic in Stage 1.

Stage 1

Traffic: Shift eastbound I-80 traffic to the inside as shown in the J Sheets. Existing rest area ramps and parking will be open.

Construction: Construct new deceleration and acceleration lanes, Ramps B, D, F, and H, and off-alignment truck parking and passenger vehicle parking as shown in J sheets.

Complete other Stage 1 construction.

Stage 2

Traffic: Maintain eastbound I-80 traffic shift on the inside shoulder. Open new Ramps B and D to passenger vehicles only. Implement closure of the rest area to truck parking. Close existing deceleration and acceleration lanes.

Construction: Construct the remainder of the truck parking. Remove existing deceleration lane, acceleration lane, and remaining previous rest area parking pavement as shown in J Sheets.

Complete other Stage 2 construction.

Final

Traffic: Open new ramps and rest area parking to all traffic. Place eastbound I-80 traffic back on existing lanes.

Set up pavement marking operations utilizing Standard Road Plan TC-433.  
Set up rumble strip operations in accordance with Standard Road Plan TC-432.

Construction: Complete final pavement markings and mill rumble strips.

Nighttime Closures Only  
Sun: 9 PM - Mon: 6 AM  
Mon - Thurs: 8 PM - 6 AM Nightly

NE 88TH ST

NE 96TH ST

NE 112TH ST

NE 120TH ST

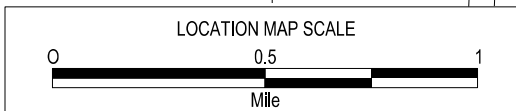
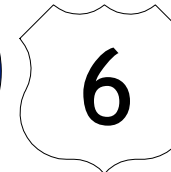
NE 70TH AVE

NE 62ND AVE

**MITCHELLVILLE**

NE 58TH AVE

NE 54TH AVE



### 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 (Unpinned)		Permanent Barrier Rail
	Lane Open To Traffic		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

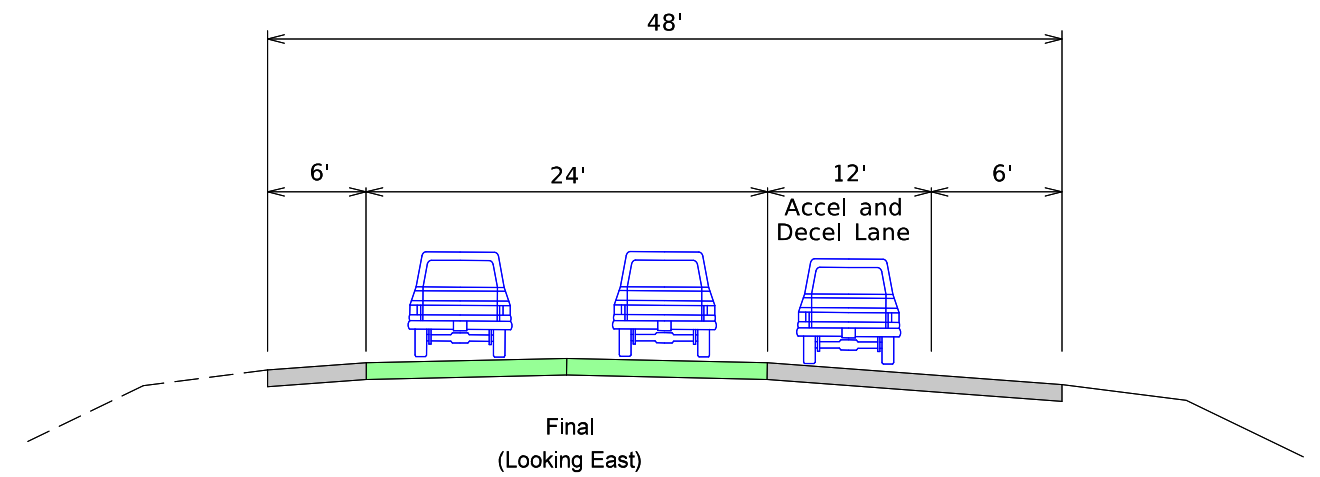
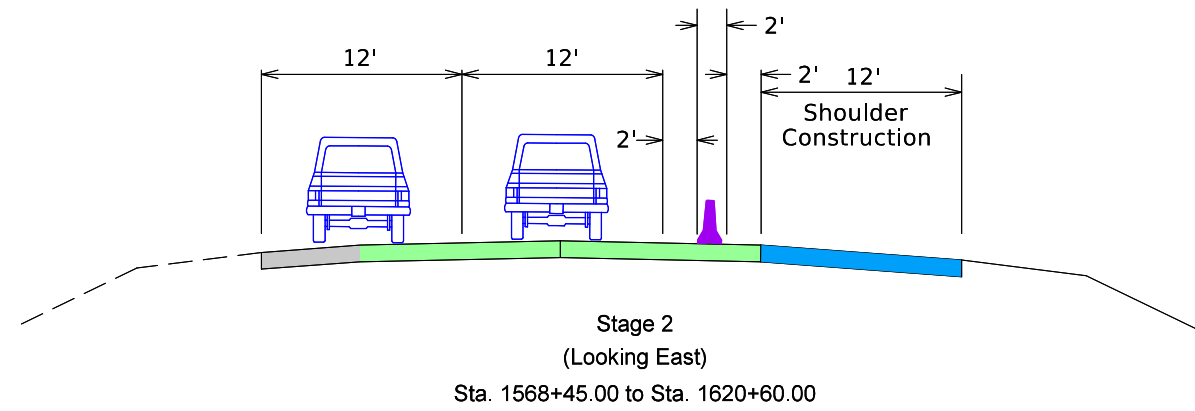
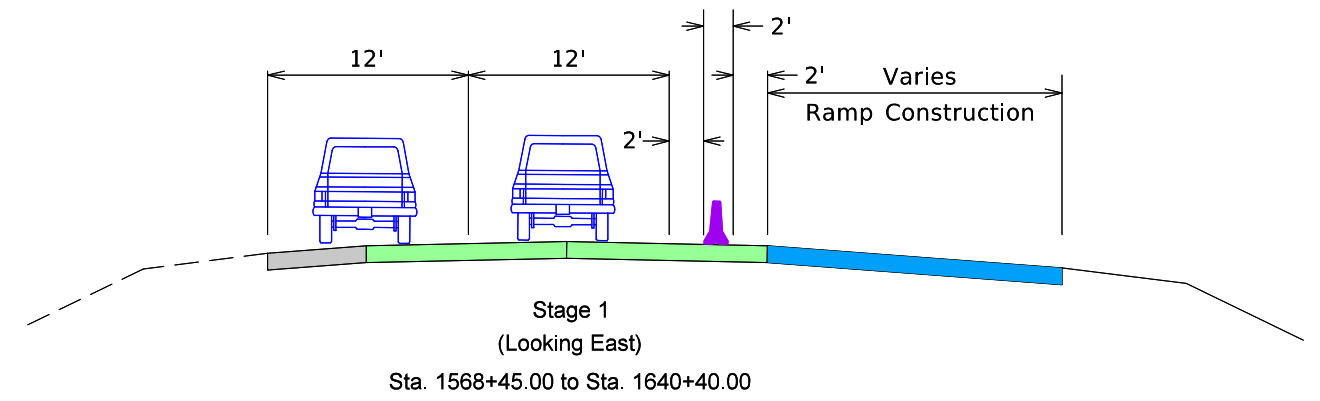
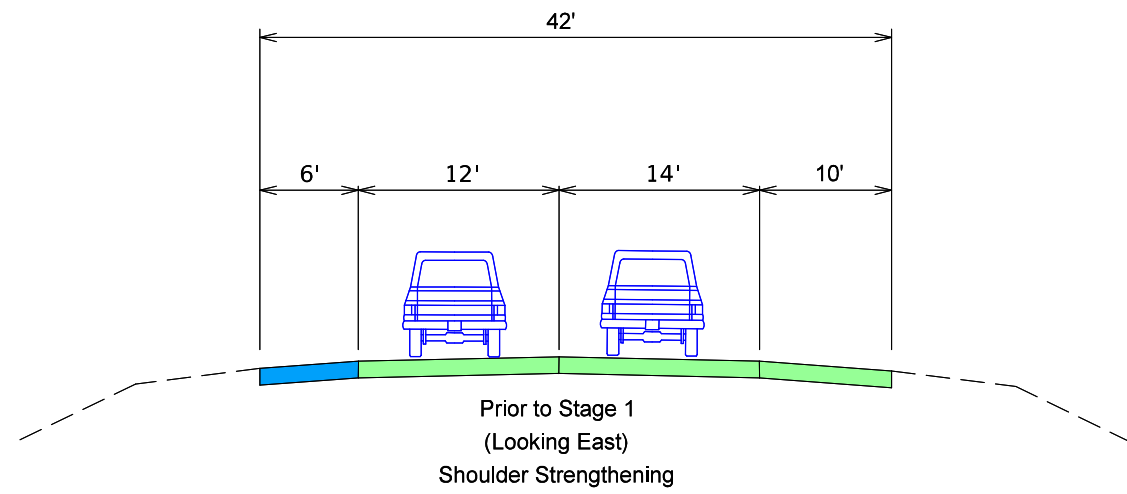
### PLAN VIEW PATTERN AND SYMBOL LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

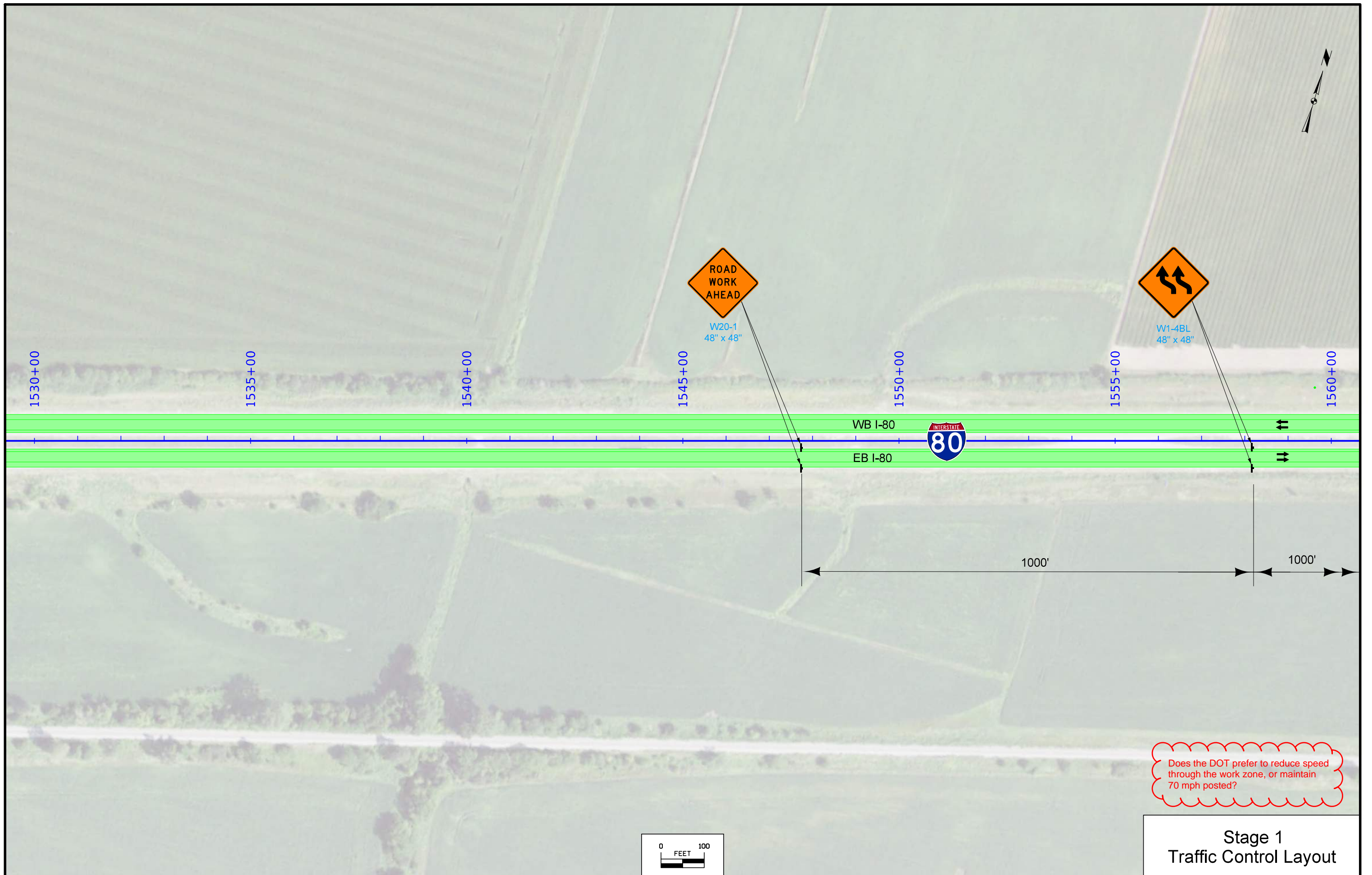
	Channelizing Device		Crash Cushion (Temp or Perm)
	Drum		Traffic Signal
	Temporary Lane Separator		Flagger
	Tubular Marker		Temporary Floodlighting
	Channelizer Marker		Traffic Sign
	Concrete Barrier Marker		Type III Barricade
	Delineator		Type A Warning Light
	Temporary Barrier Rail (Unpinned)		Direction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

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

## TRAFFIC CONTROL AND STAGING LEGEND AND SYMBOL INFORMATION SHEET

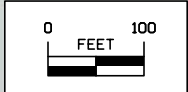
(COVERS SHEET SERIES J)

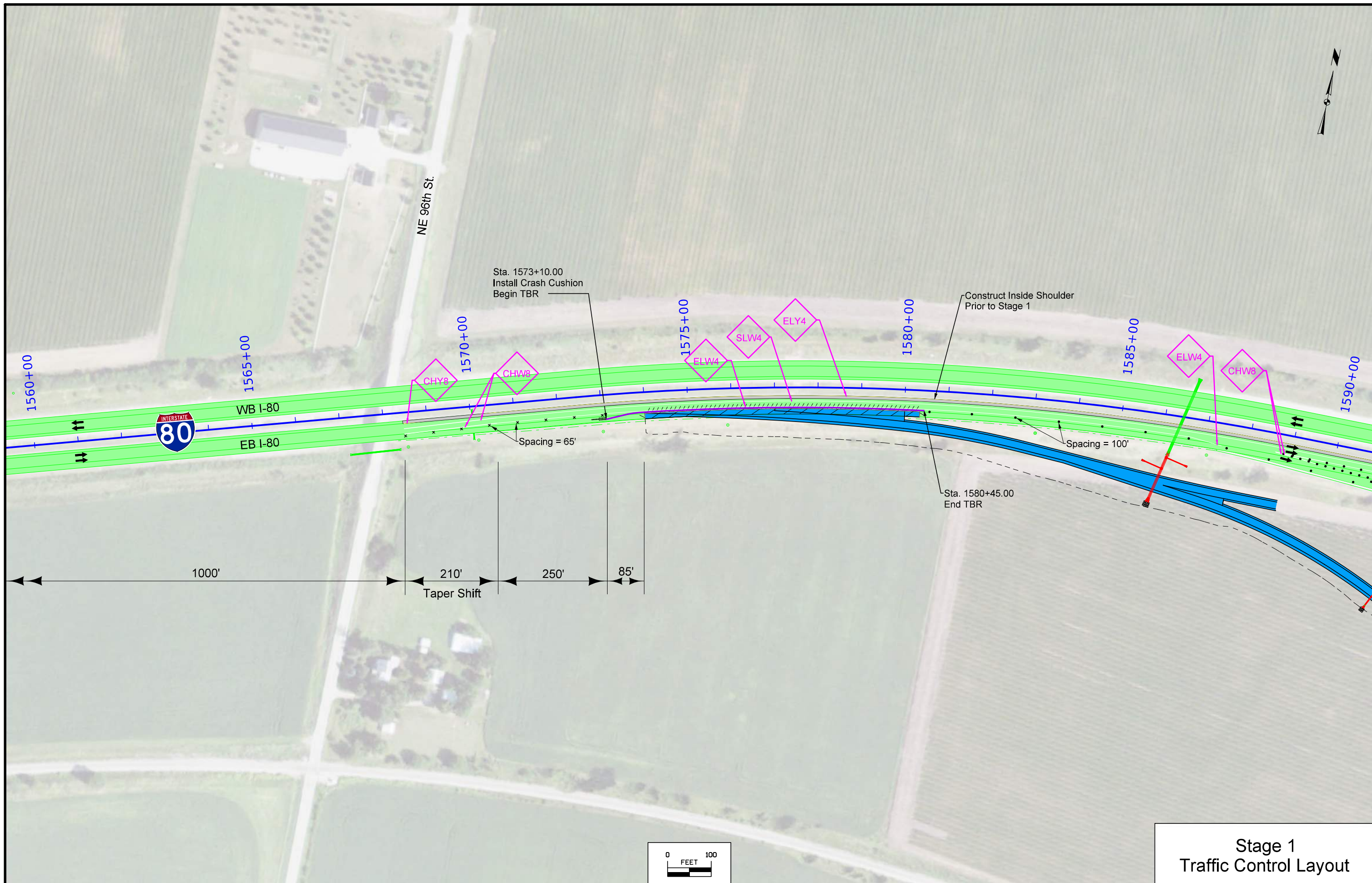




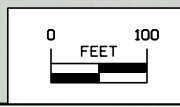
Does the DOT prefer to reduce speed through the work zone, or maintain 70 mph posted?

**Stage 1  
Traffic Control Layout**

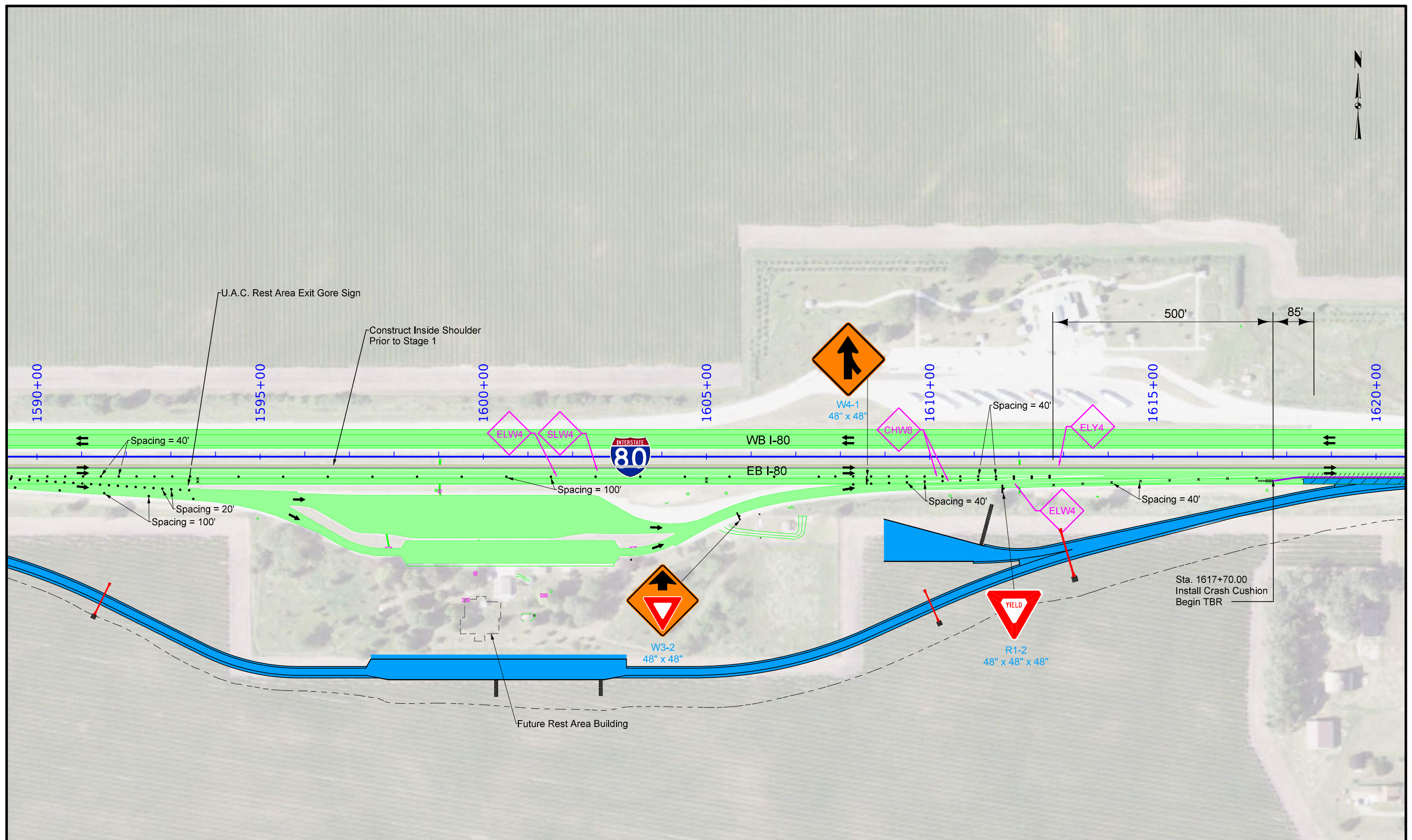




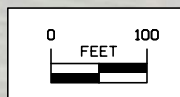
**Stage 1  
Traffic Control Layout**

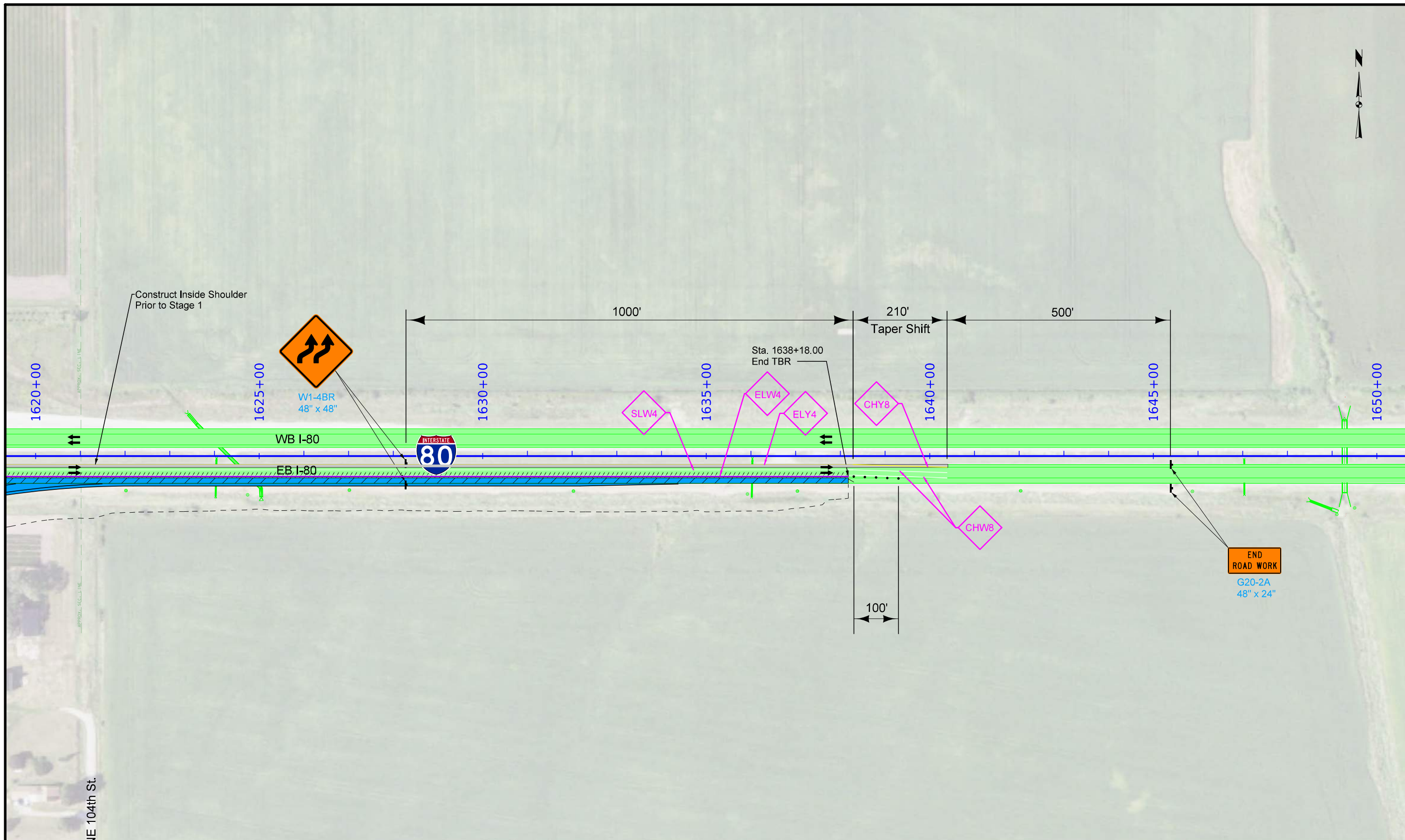




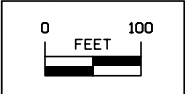


Stage 1  
Traffic Control Layout

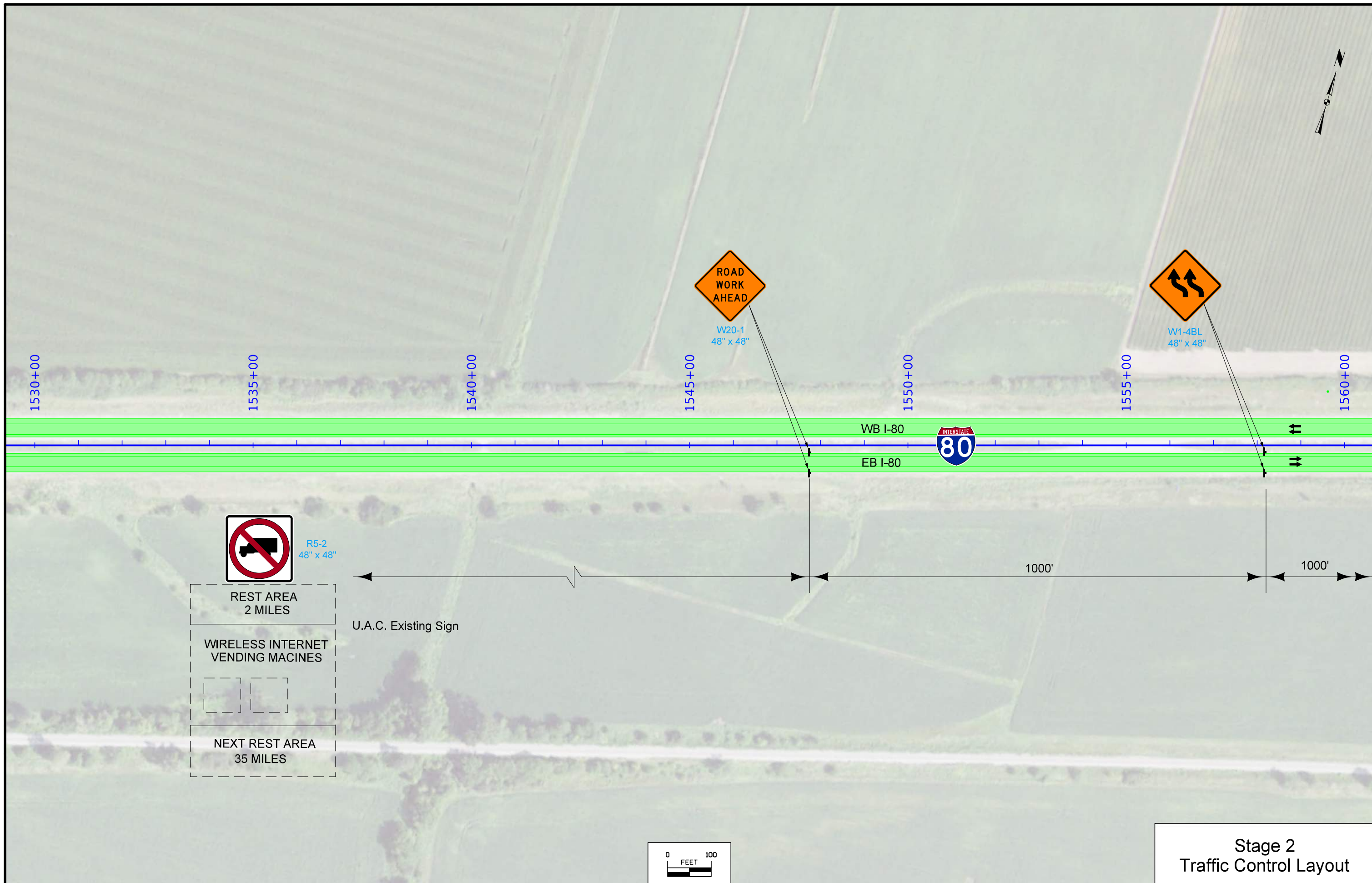




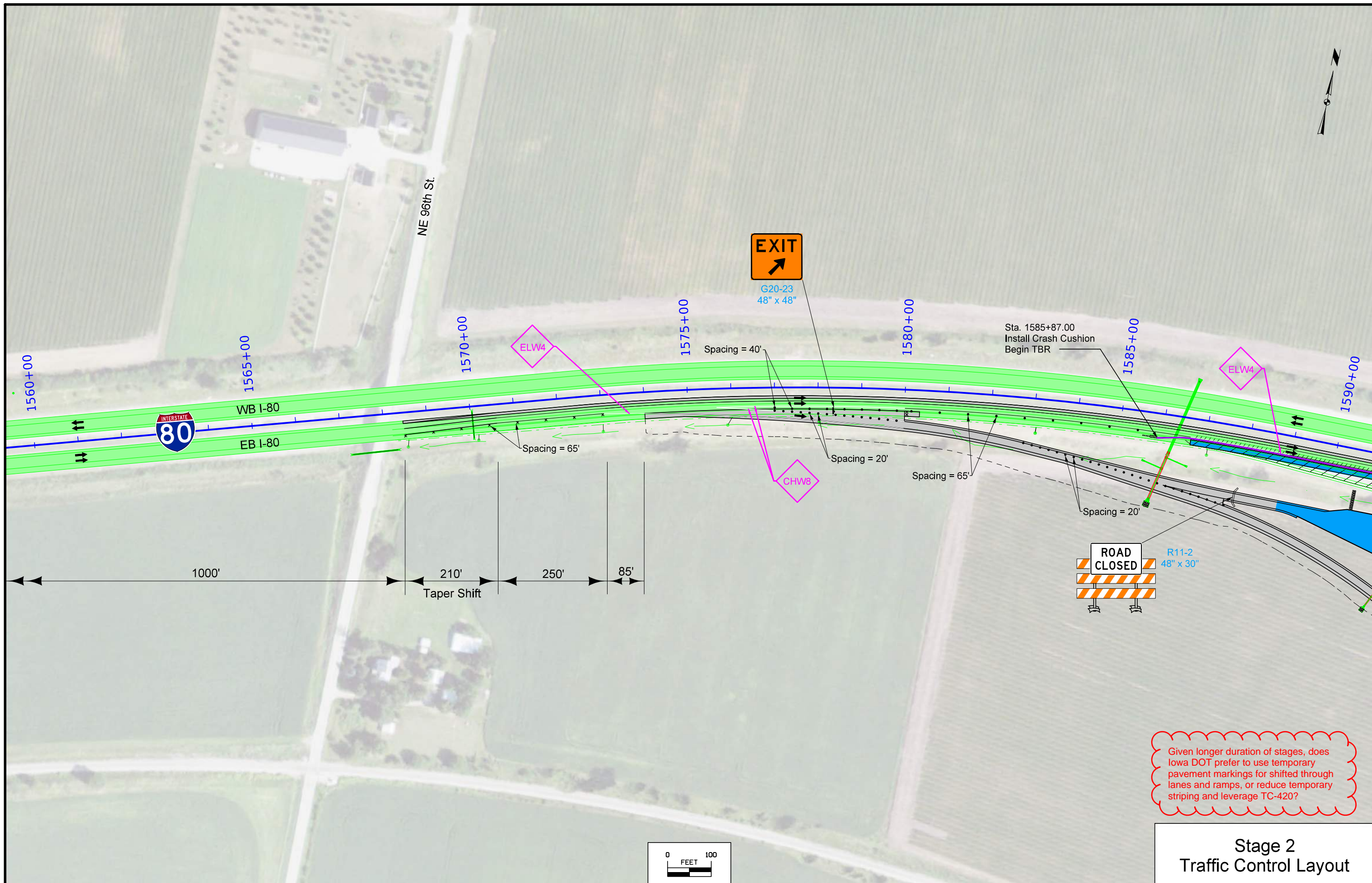
Stage 1  
Traffic Control Layout



FILE NO.	ENGLISH	DESIGN TEAM HNTB	POLK COUNTY	PROJECT NUMBER IMX-080-5(390)147--02-77	SHEET NUMBER J.8
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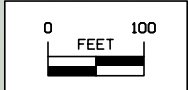


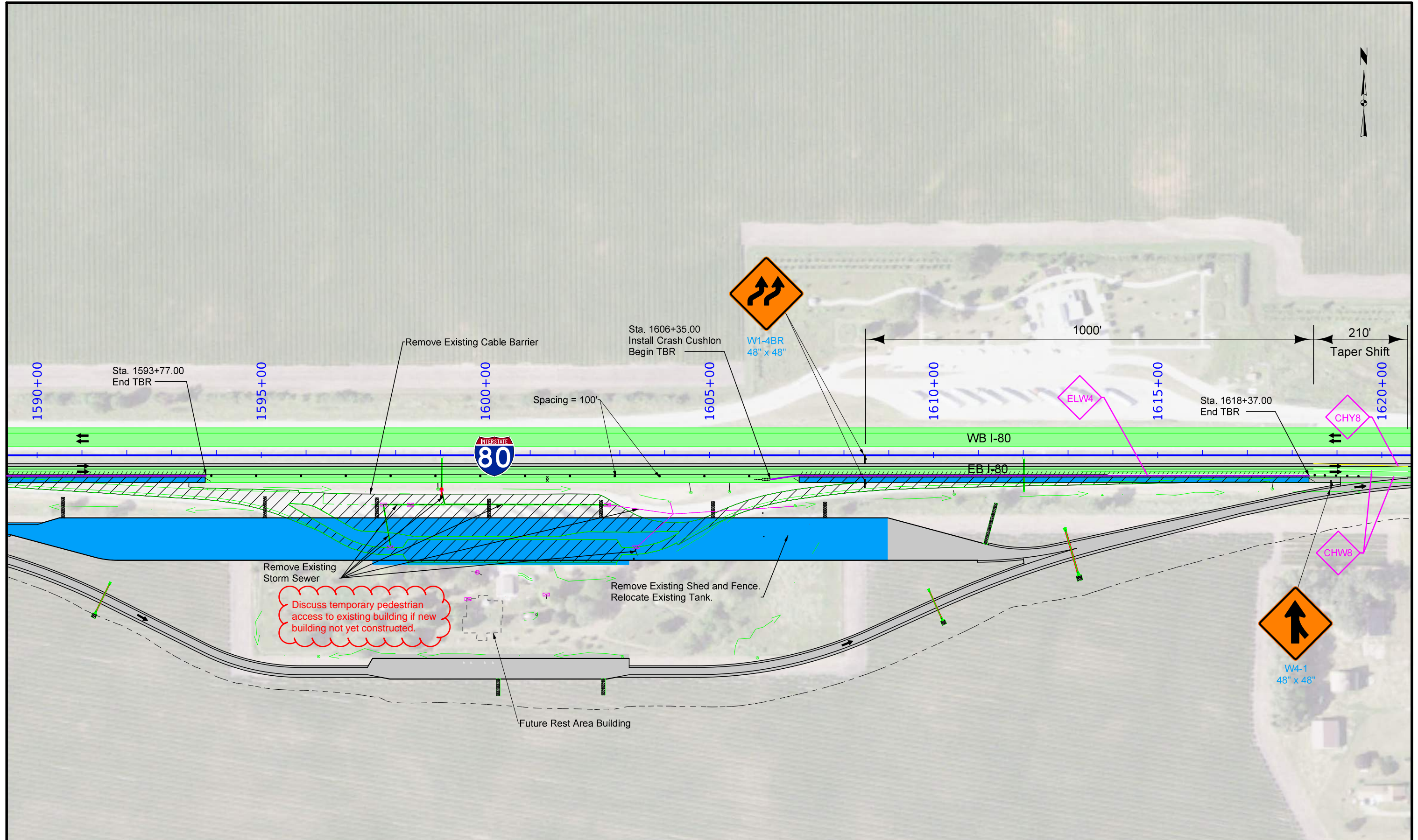
Stage 2  
Traffic Control Layout



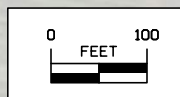
Given longer duration of stages, does Iowa DOT prefer to use temporary pavement markings for shifted through lanes and ramps, or reduce temporary striping and leverage TC-420?

**Stage 2  
Traffic Control Layout**

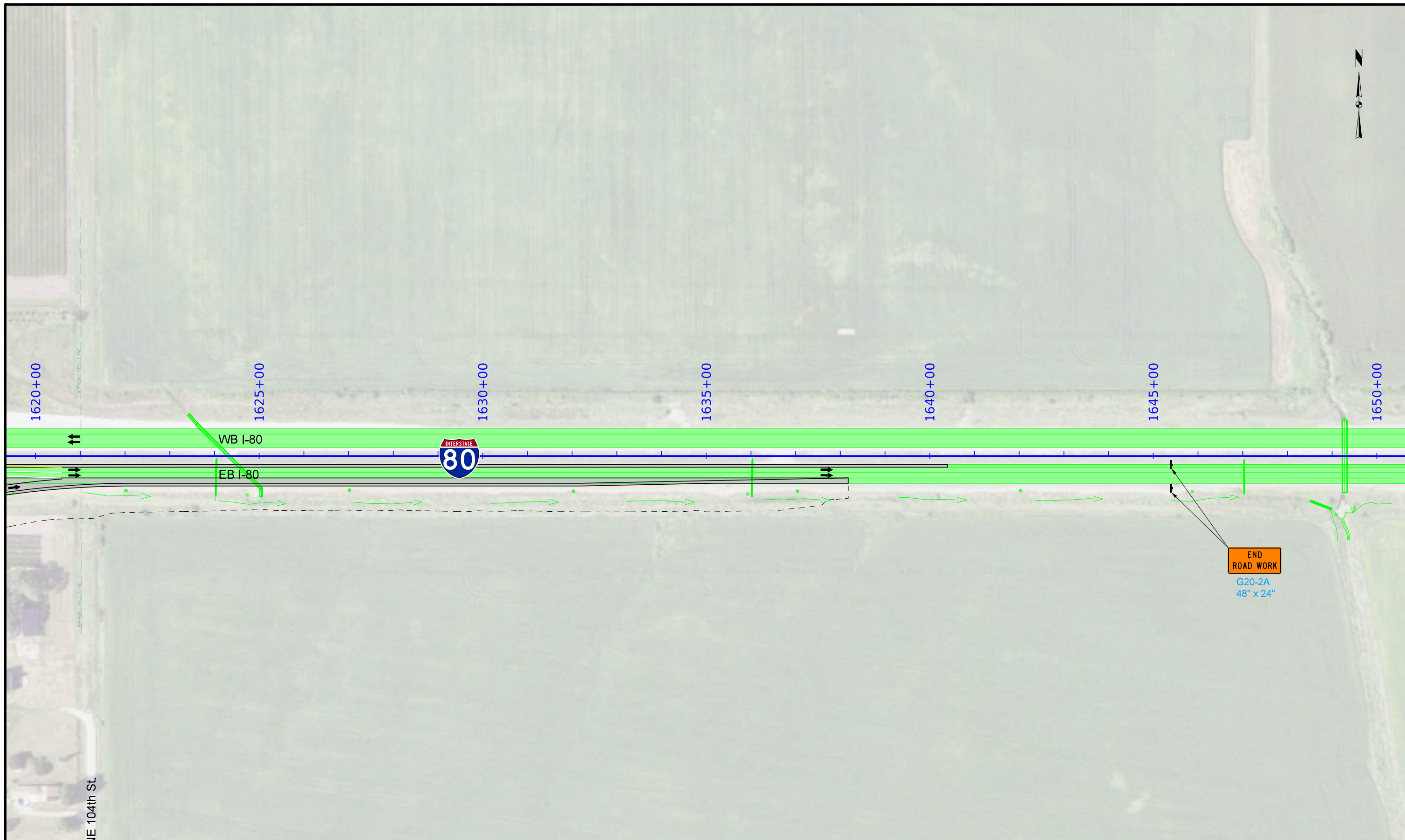




Discuss temporary pedestrian access to existing building if new building not yet constructed.

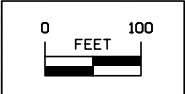


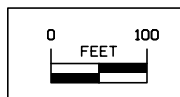
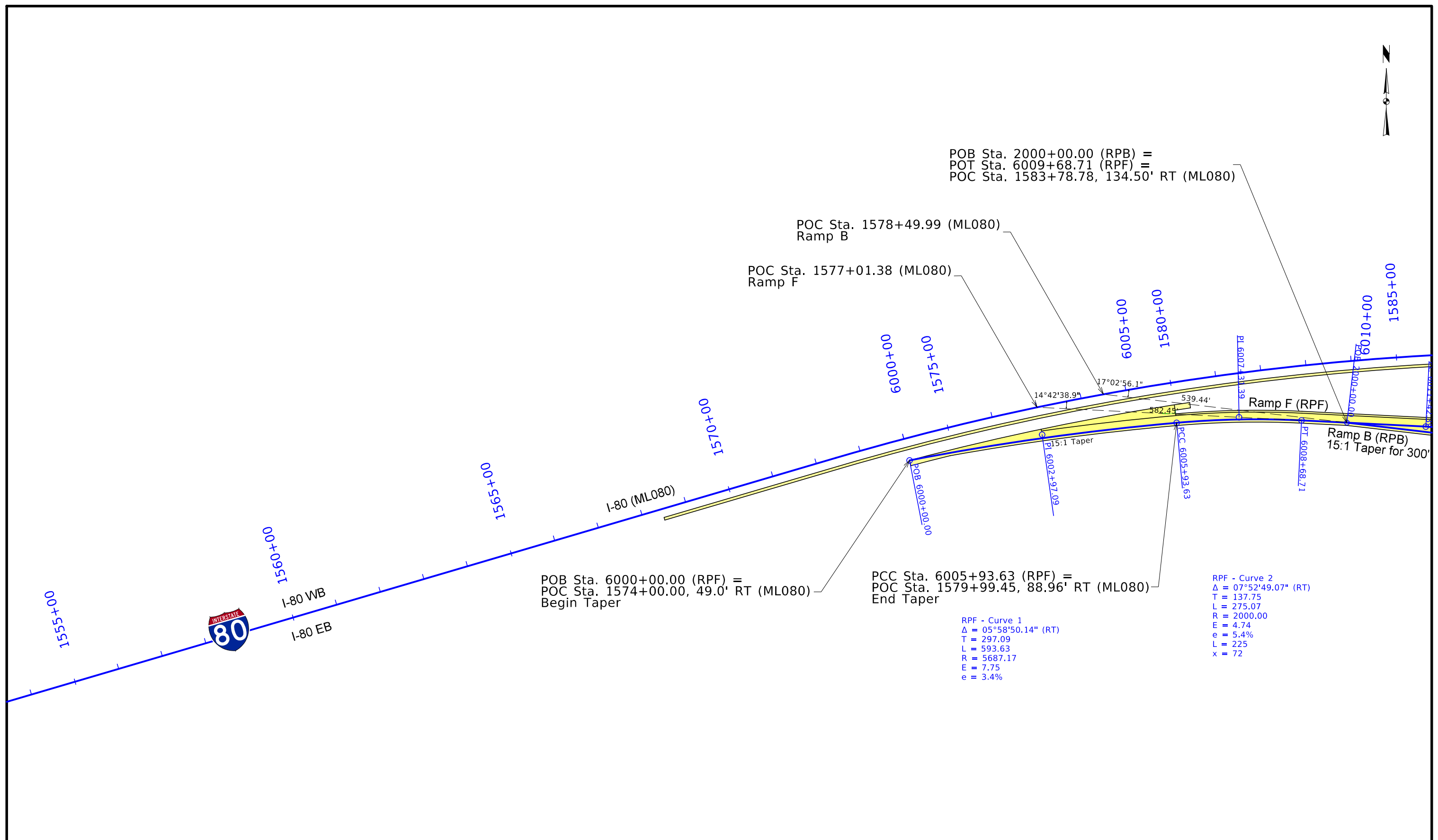
Stage 2  
Traffic Control Layout



END  
ROAD WORK  
G20-2A  
48" x 24"

Stage 2  
Traffic Control Layout





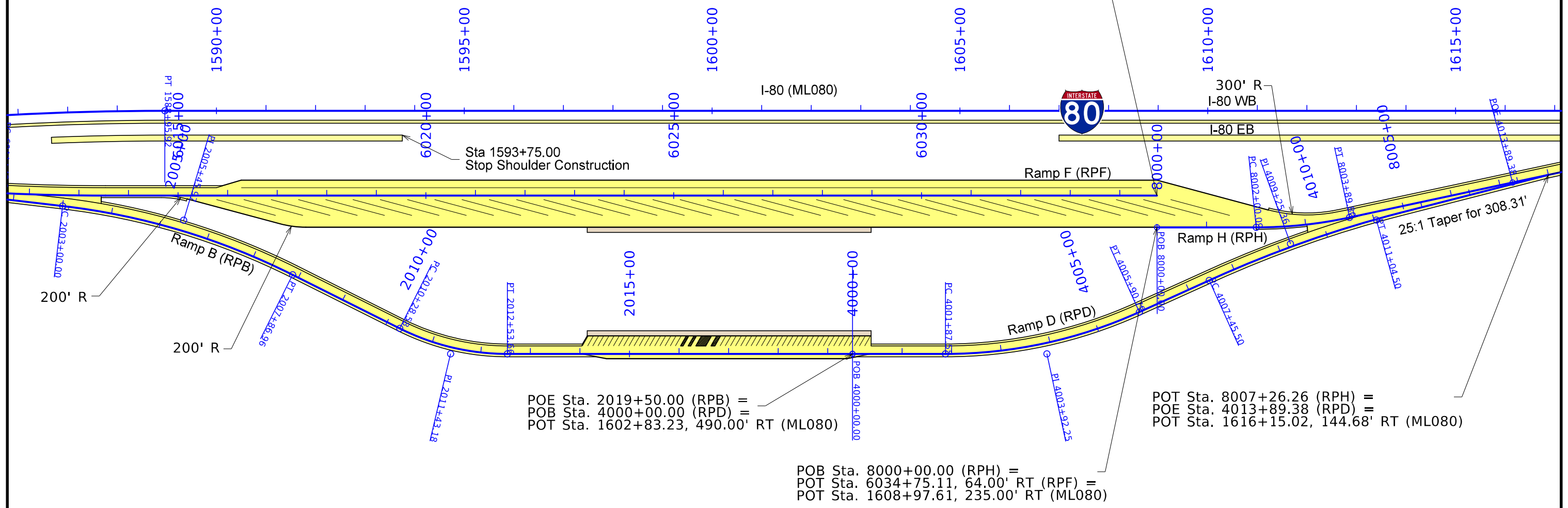
# Geometric Plan



RPF - Curve 3  
 $\Delta = 02^{\circ}50'49.12''$  (LT)  
 T = 105.61  
 L = 211.18  
 R = 4250.00  
 E = 1.31  
 e = Normal Crown

RPH - Curve 1  
 $\Delta = 12^{\circ}04'39.57''$  (LT)  
 T = 95.21  
 L = 189.72  
 R = 900.00  
 E = 5.02  
 e = 3.8%  
 L = 109  
 x = 49

POE Sta. 6034+75.11 (RPF) =  
 POT Sta. 1608+97.61, 171.00' RT (ML080)

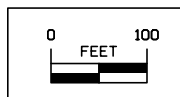


RPB - Curve 1  
 $\Delta = 19^{\circ}55'44.85''$  (RT)  
 T = 245.97  
 L = 486.96  
 R = 1400.00  
 E = 21.44  
 e = 4.2%  
 L = 136  
 x = 56

RPB - Curve 2  
 $\Delta = 26^{\circ}35'24.67''$  (LT)  
 T = 114.61  
 L = 225.08  
 R = 485.00  
 E = 13.36  
 e = 6.0%  
 L = 194  
 x = 56

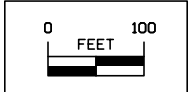
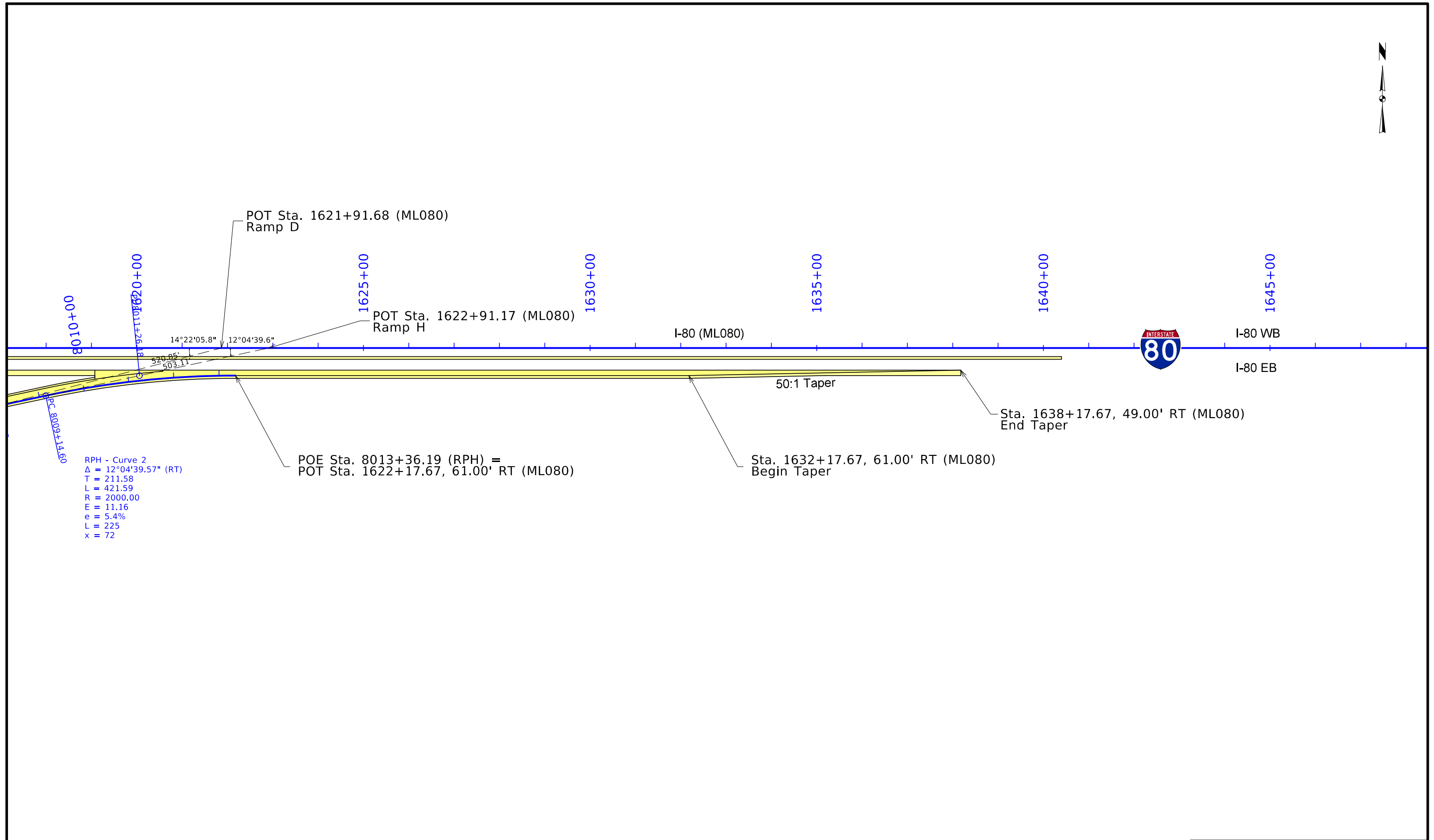
RPD - Curve 1  
 $\Delta = 24^{\circ}19'10.45''$  (LT)  
 T = 204.70  
 L = 403.23  
 R = 950.00  
 E = 21.80  
 e = 5.0%  
 L = 161  
 x = 56

RPD - Curve 2  
 $\Delta = 09^{\circ}57'04.69''$  (RT)  
 T = 200.24  
 L = 399.47  
 R = 2300.00  
 E = 8.70  
 e = 3.0%  
 L = 97  
 x = 56

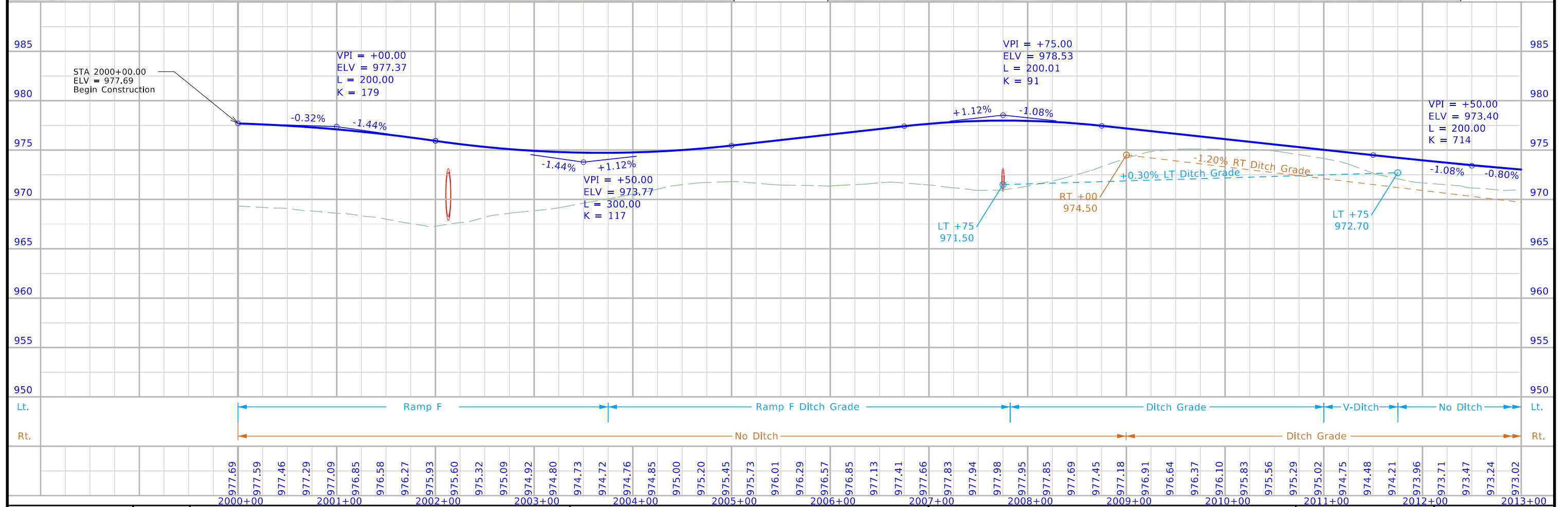
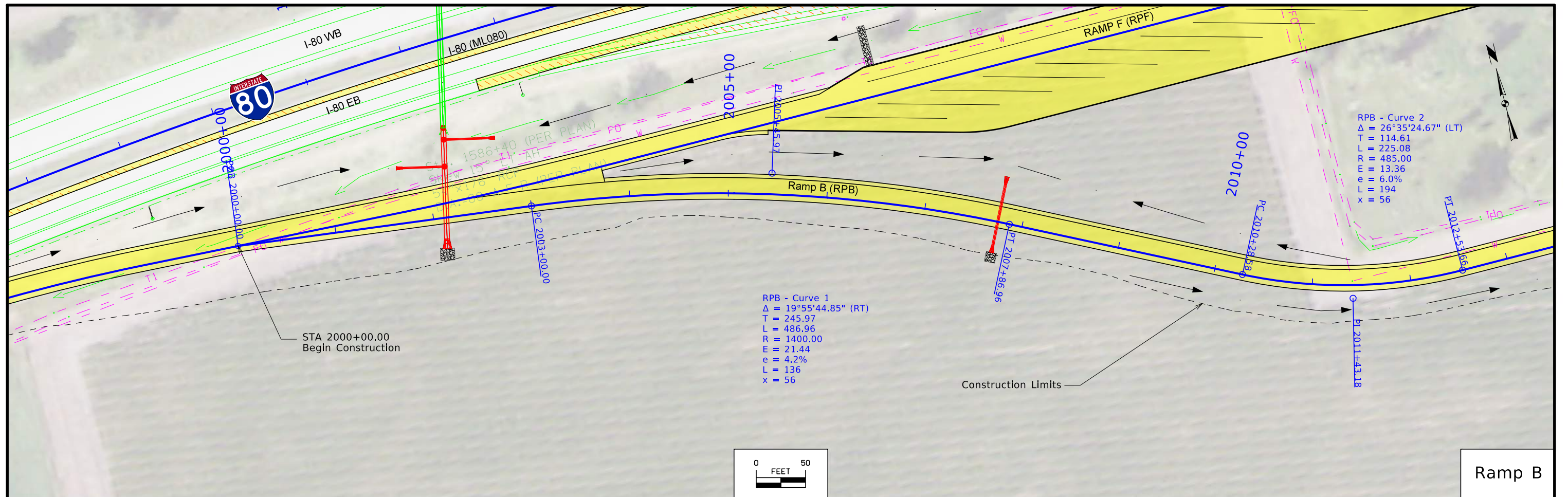


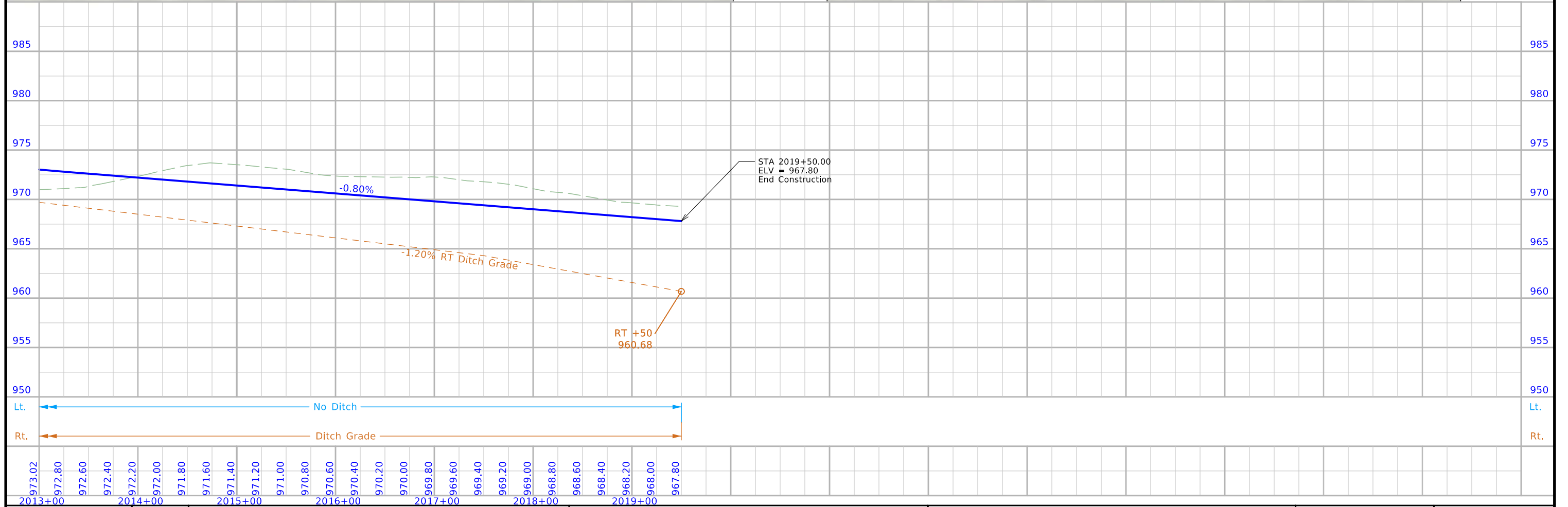
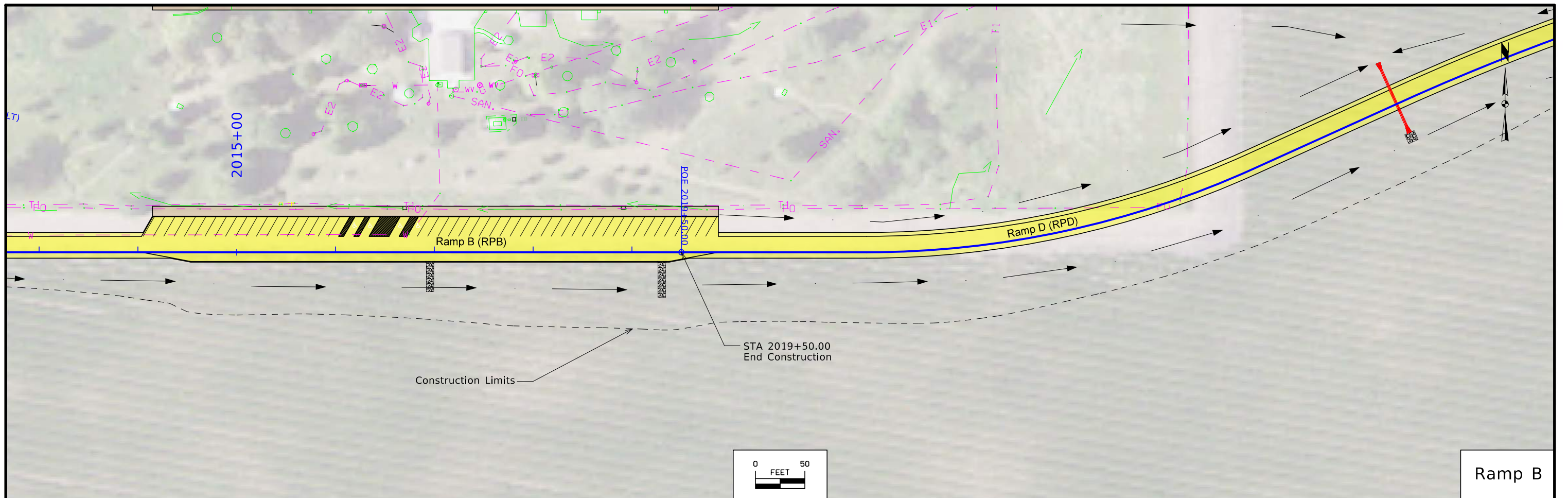
**Geometric Plan**



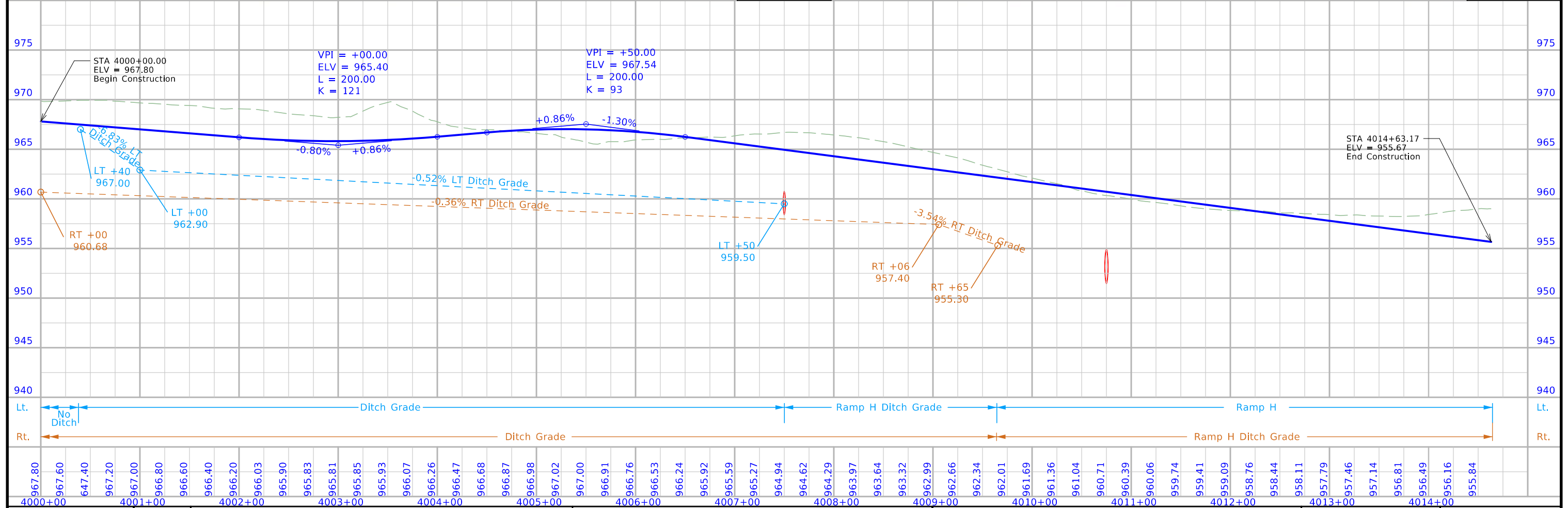
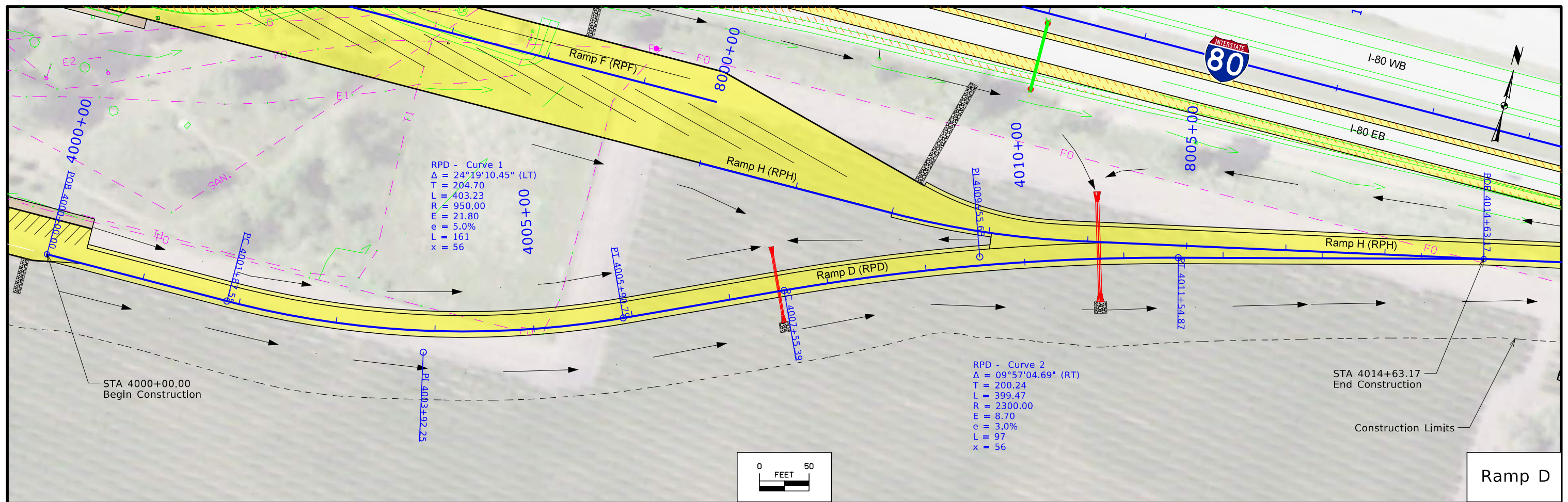


Geometric Plan

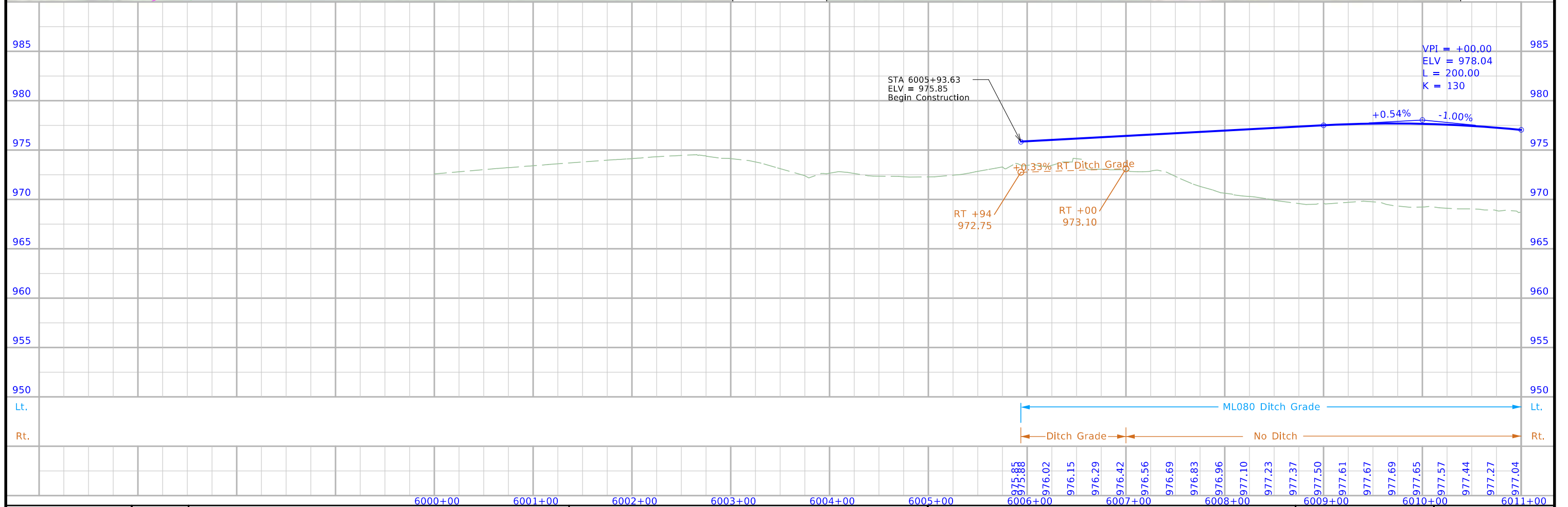
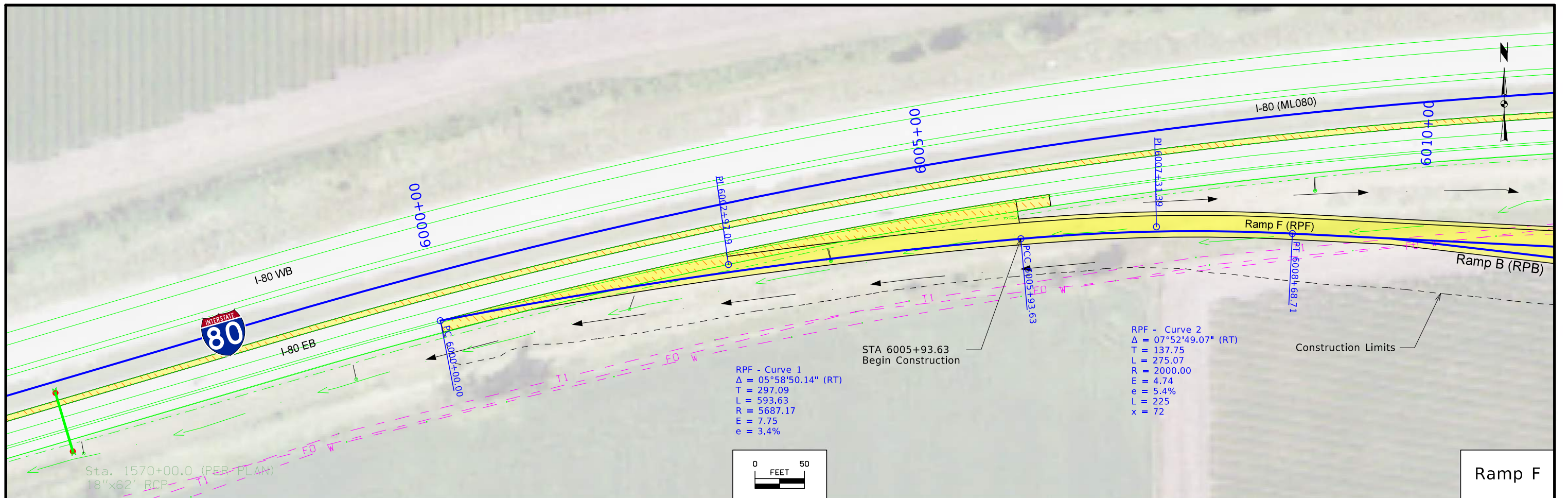


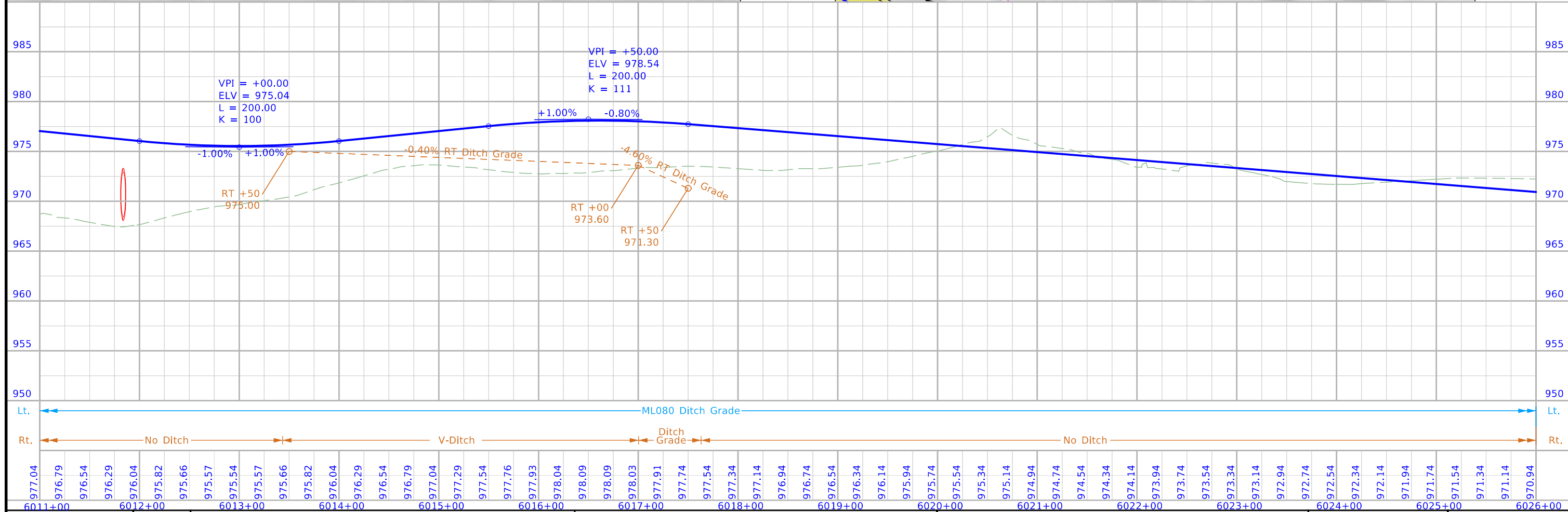
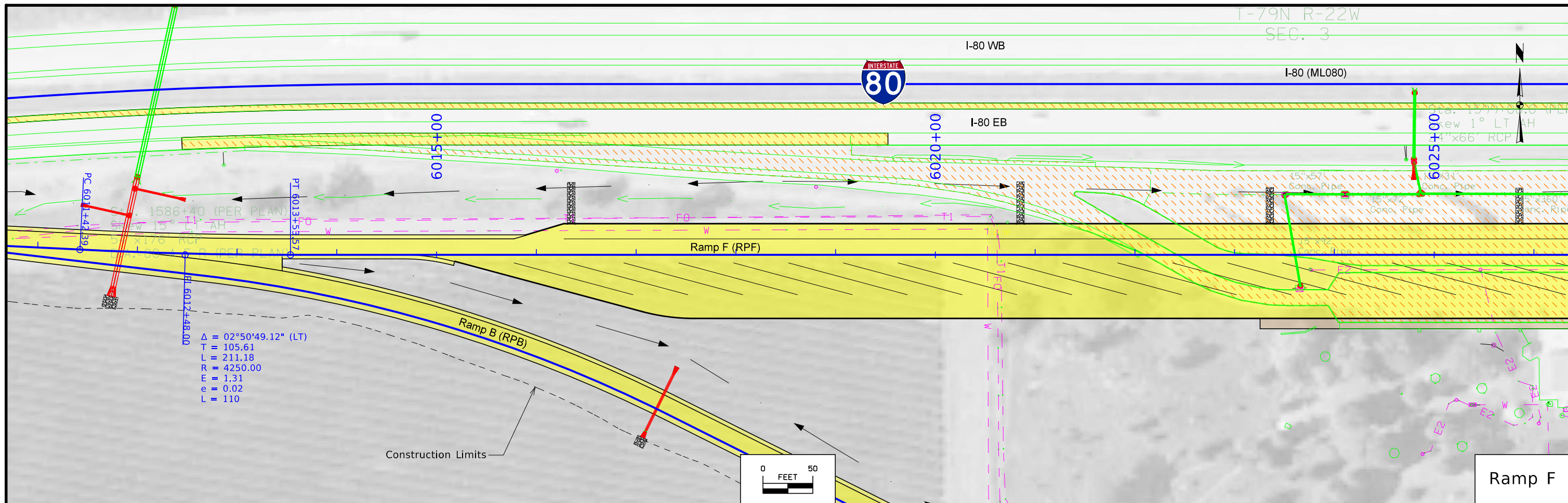


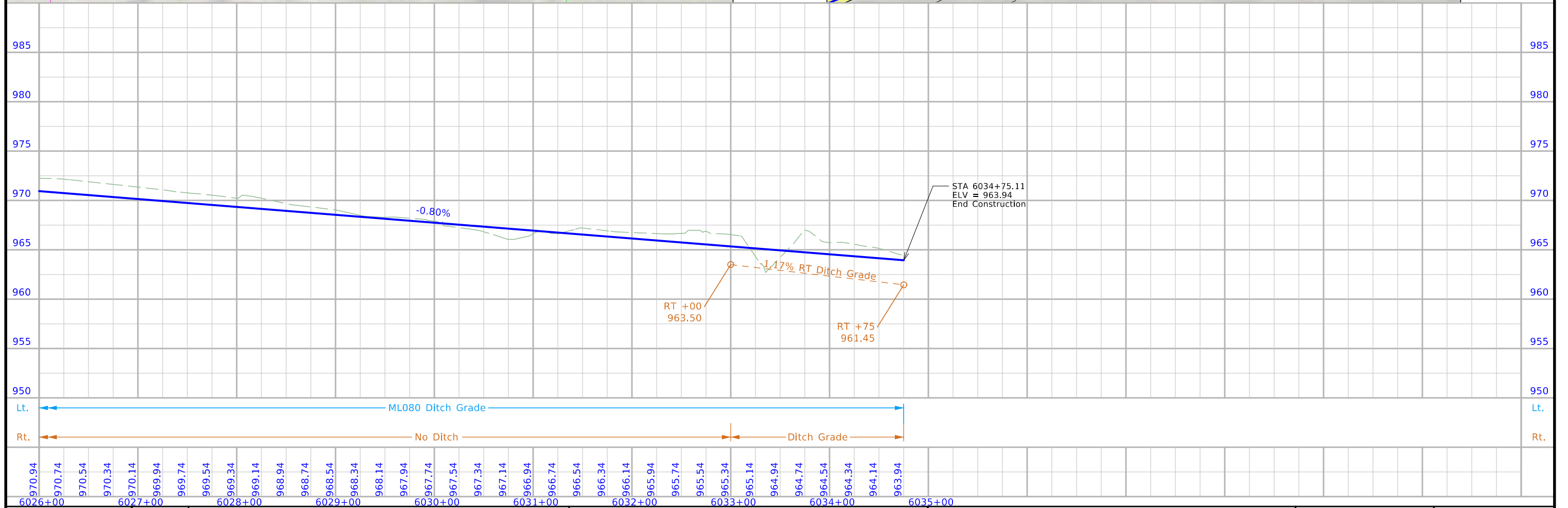
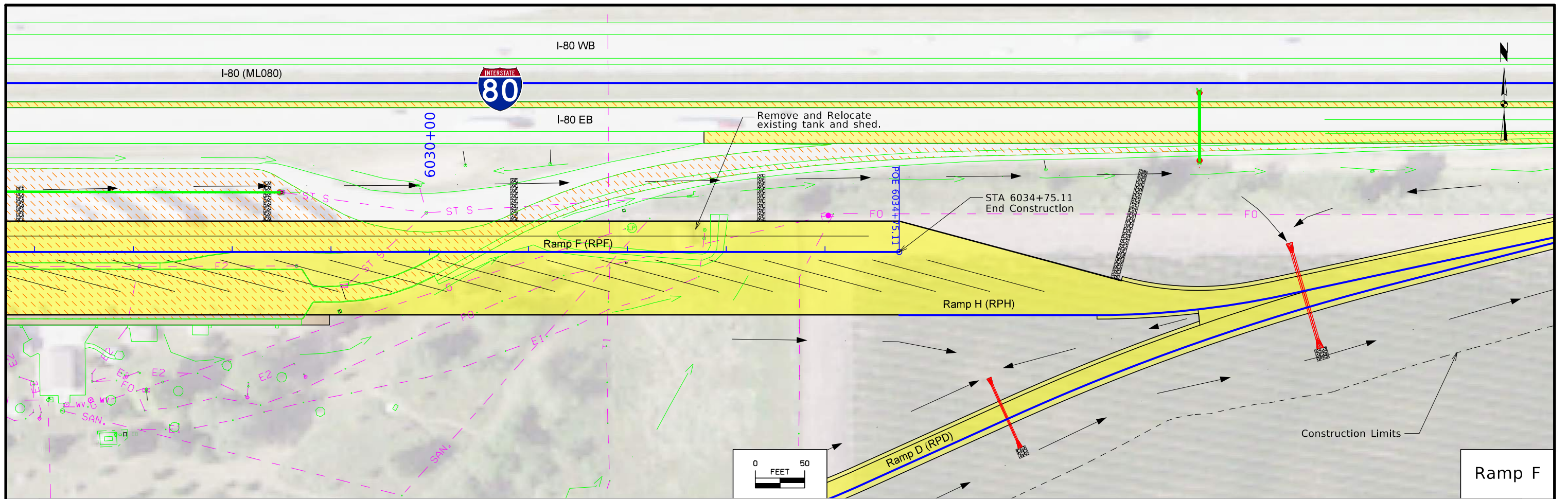
FILE NO.	ENGLISH	DESIGN TEAM HNTB	POLK COUNTY	PROJECT NUMBER IMX-080-5(390)147--02-77	SHEET NUMBER K.5
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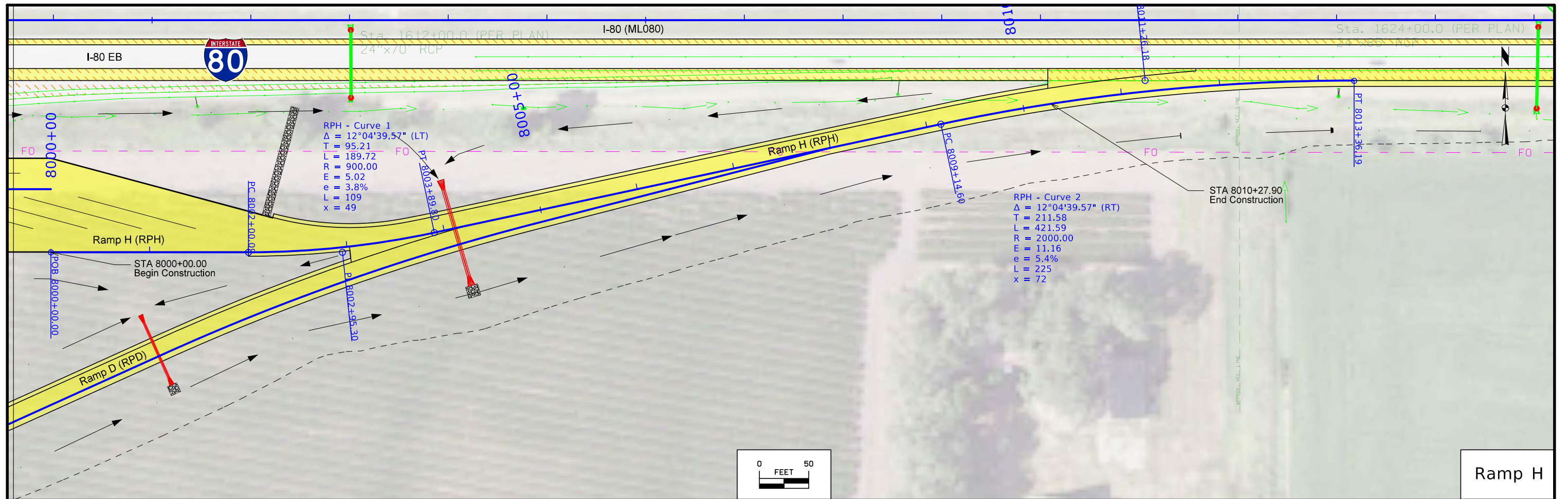
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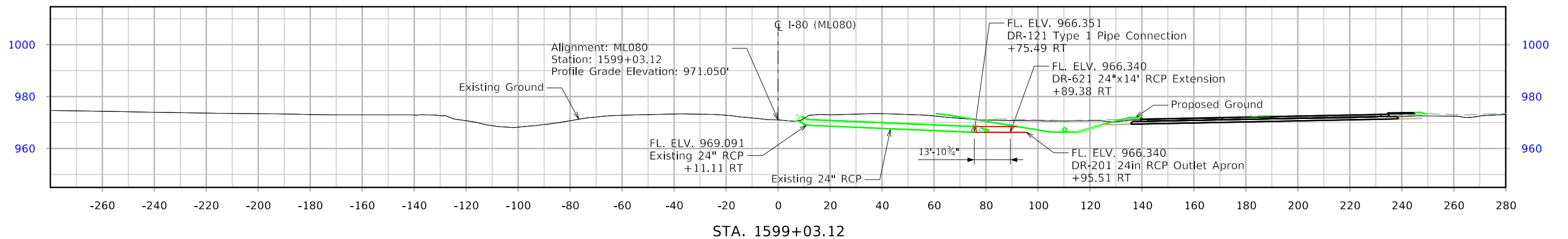
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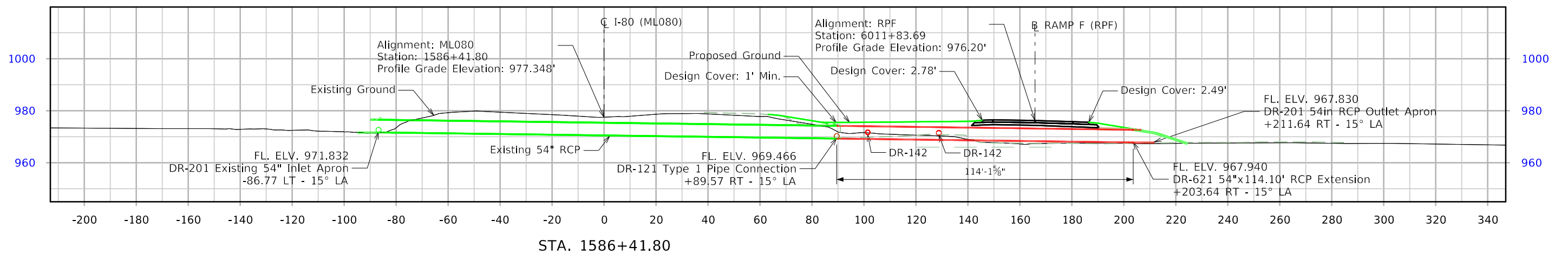


# I-80 (ML080)

DR-621 14ft extension of 24" RCP. Connect to existing pipe using DR-121 Type 1 pipe connection with a DR-201 apron on outlet.

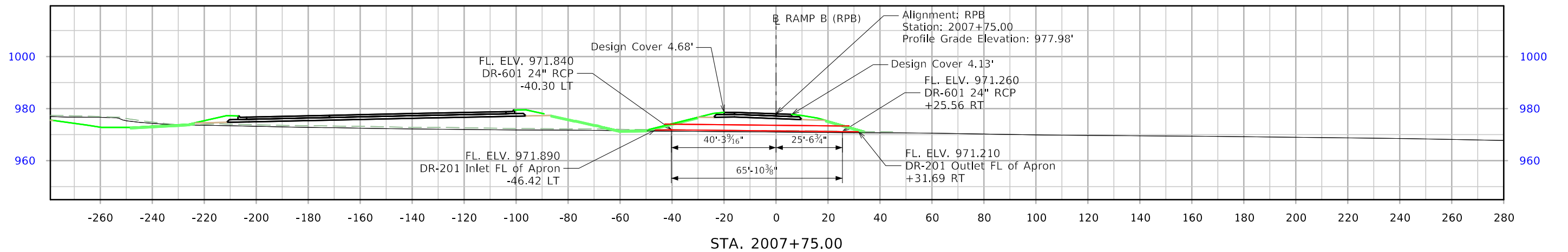


DR-621 114ft extension of 54" RCP. Connect to existing pipe using DR-121 Type 1 pipe connection with a DR-201 apron on outlet.  
Connect two perpendicular networks using DR-142 tee sections - see M. sheets for details.



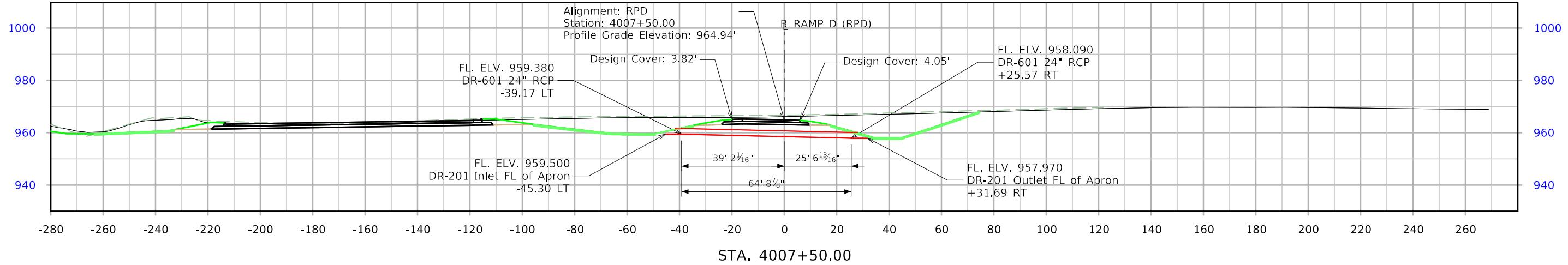
# I-80 Ramp B (RPB)

Lay 83ft 24" RCP with DR-201 apron on Inlet and DR-201 on outlet



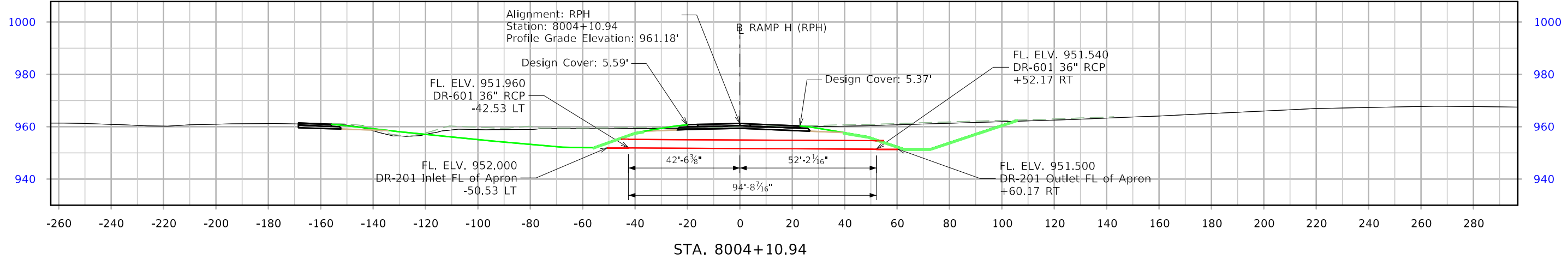
# I-80 Ramp D (RPD)

Lay 66ft 24" RCP with DR-201 apron on Inlet and DR-201 on outlet



# I-80 Ramp H (RPH)

Lay 95ft 36" RCP with DR-201 apron on Inlet and DR-201 on outlet.



## CROSS SECTION VIEW COLOR LEGEND

Design Color No.	Feature	Design Color No.	Feature
<b>Aggregate</b>			
(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	<b>Grading</b>	
(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	<b>Substrata</b>	
<b>Asphalt</b>			
(207)	HMA Base Course	(128)	Boulder Substrata
(207)	HMA Interim Course	(48)	Broken Weathered Substrata
(207)	HMA Surface Course	(3)	Core Out Substrata
<b>Concrete</b>			
(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	<b>Unsuitable / Waste</b>	
<b>Shoulder</b>			
(209)	Shoulder HMA	(3)	Unsuitable Type A
(0)	Shoulder PCC	(13)	Unsuitable Type B
(6)	Shoulder Granular	(11)	Unsuitable Type C
(3)		(3)	Waste
<b>Existing</b>			
(0)	Existing Pavement		

**NOTES:**

Text

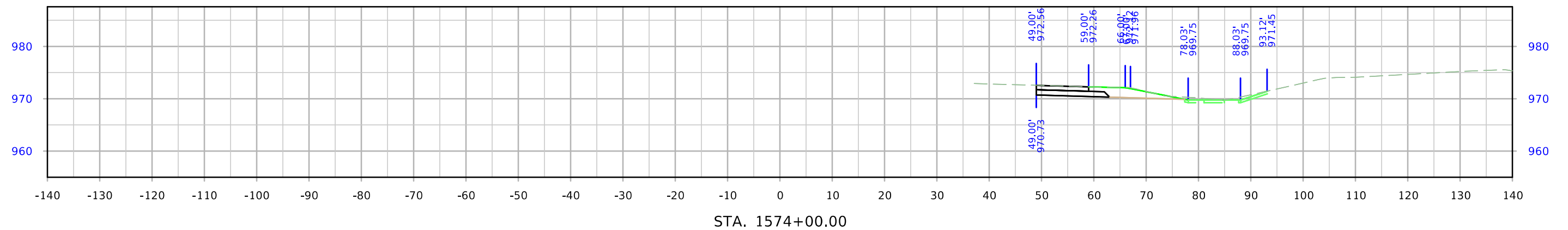
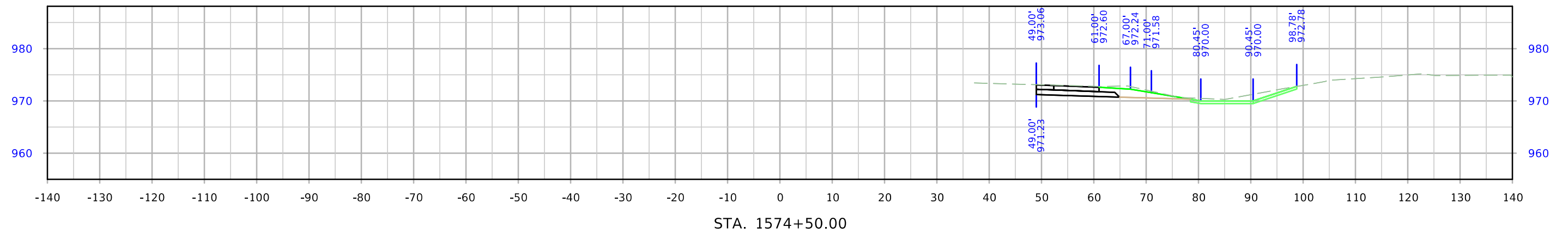
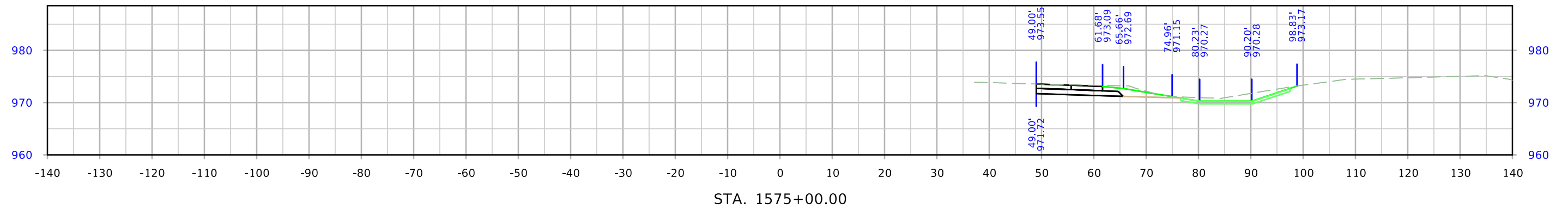
**NOTES:**

Text

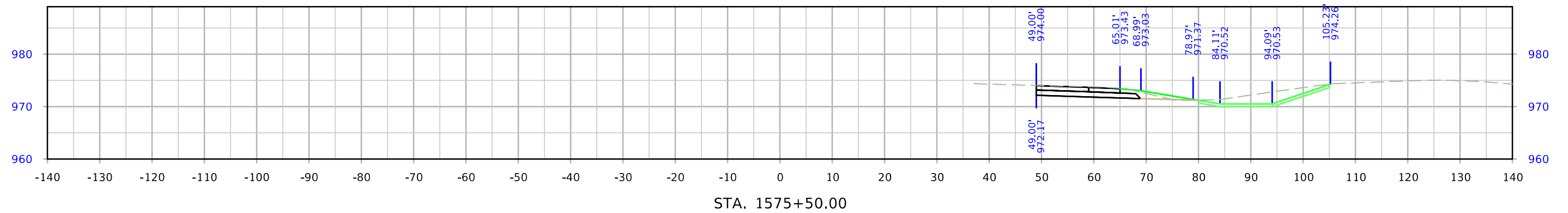
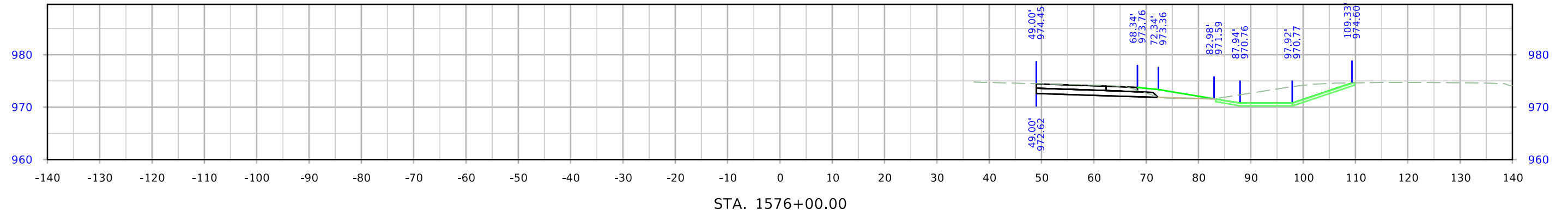
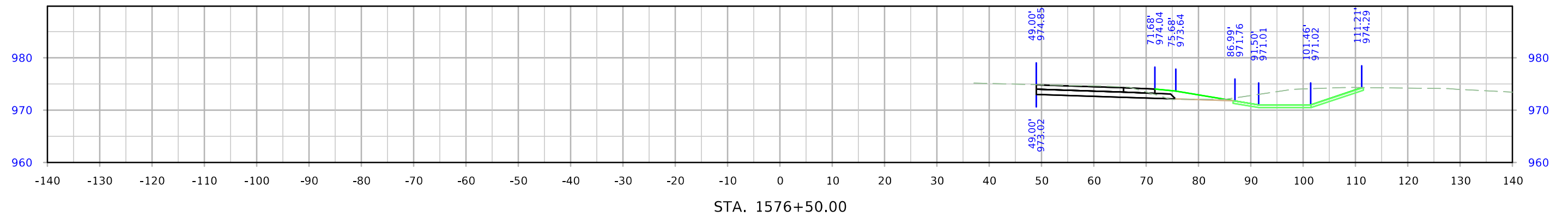
## CROSS SECTIONS LEGEND AND INFORMATION SHEET

(COVERS SHEET SERIES W, & Y)

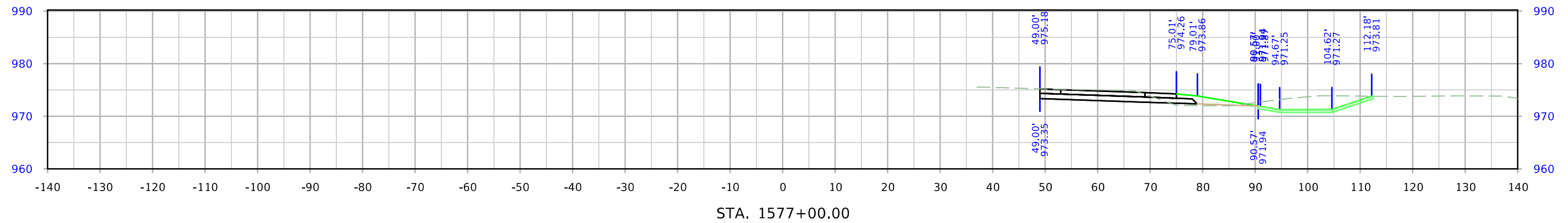
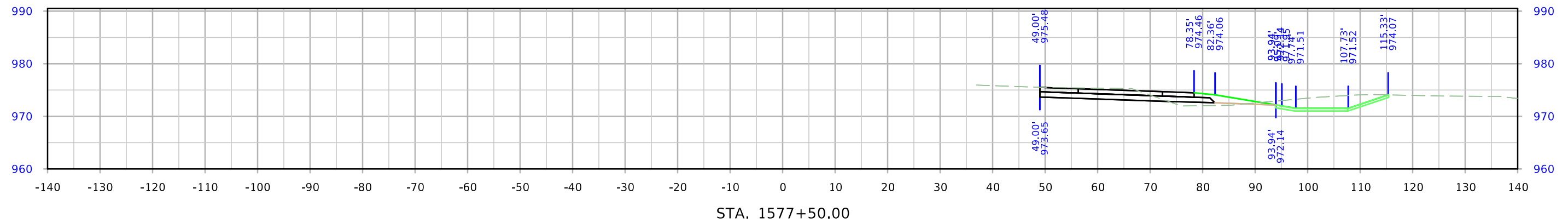
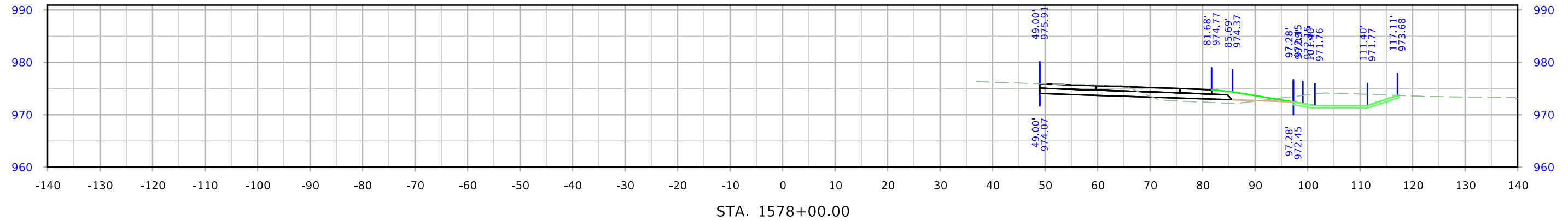
# I-80 Eastbound



# I-80 Eastbound

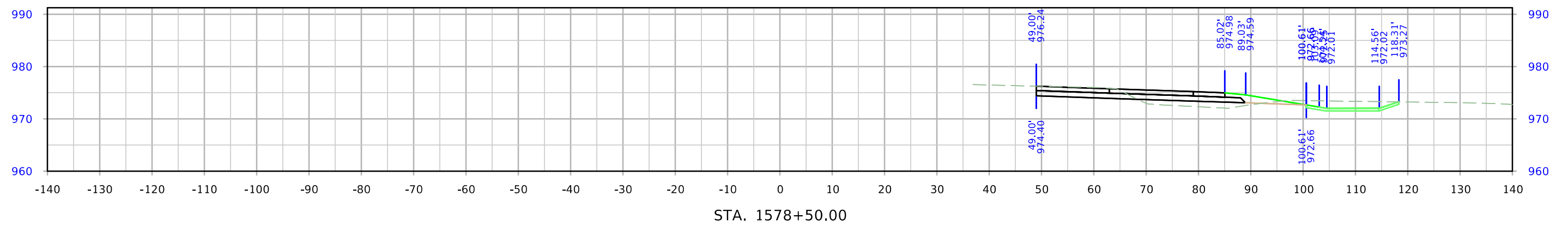
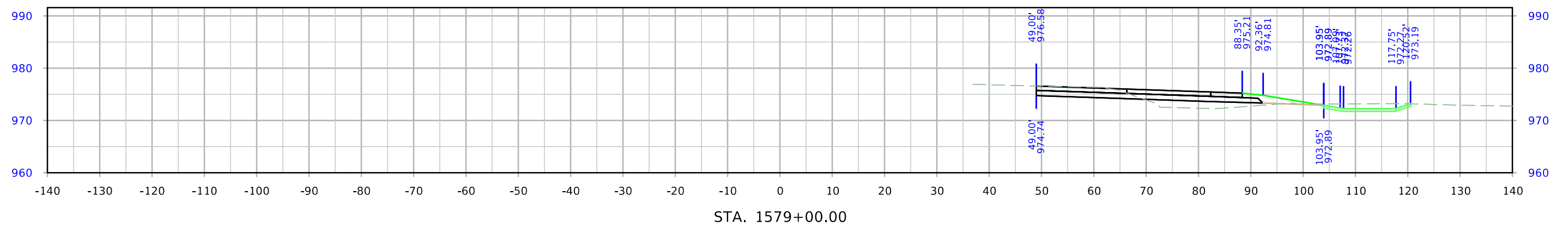
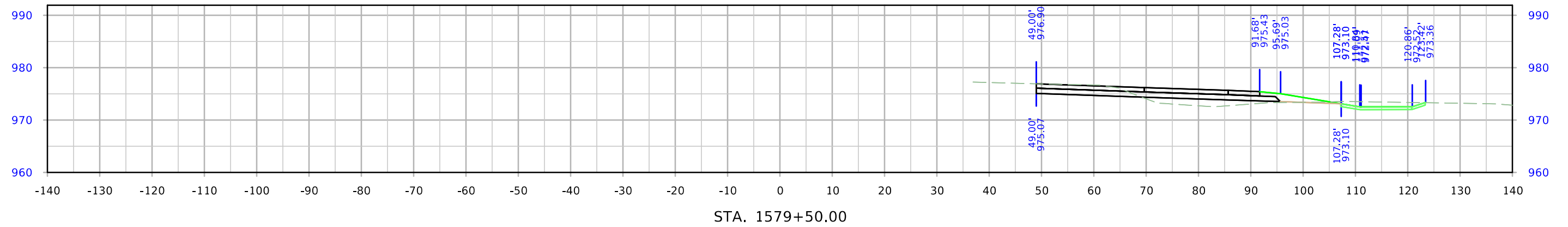


# I-80 Eastbound

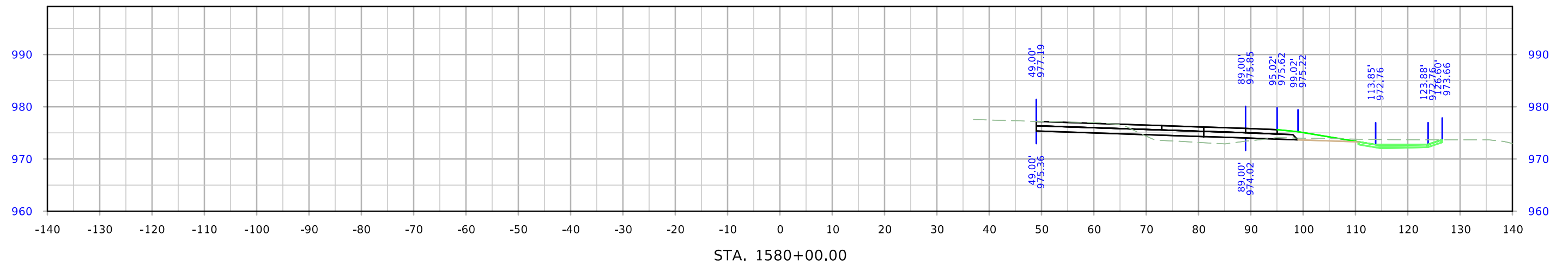
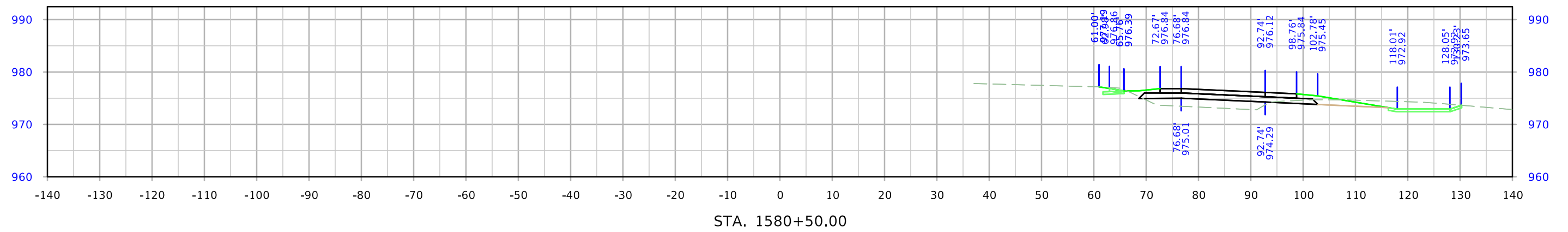
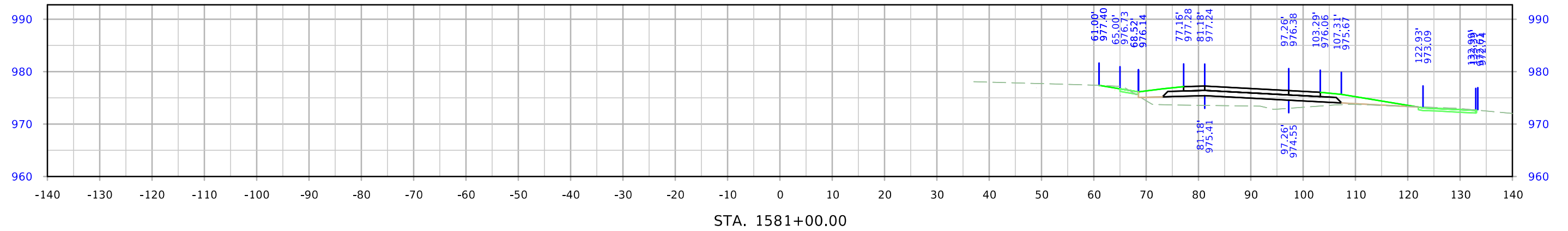




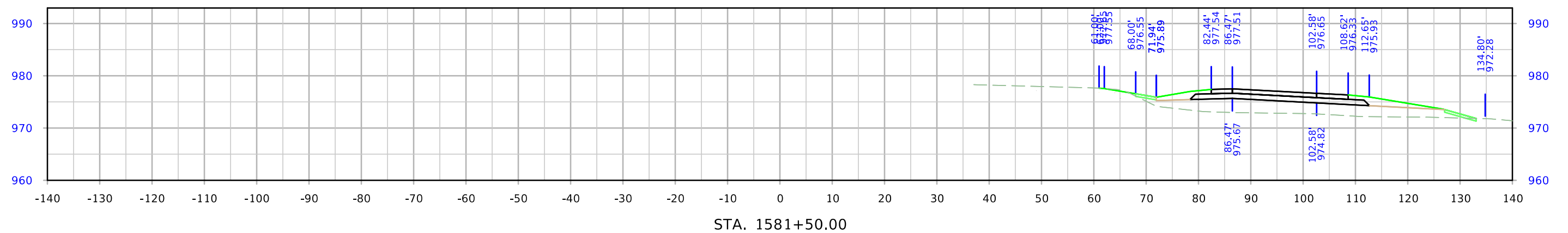
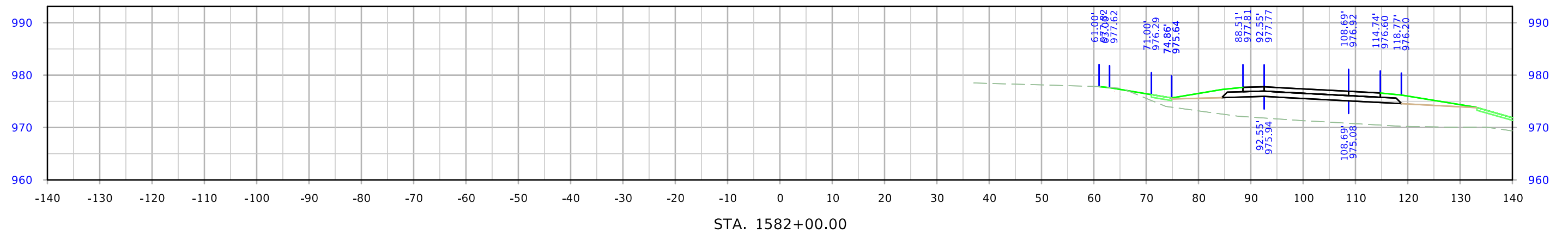
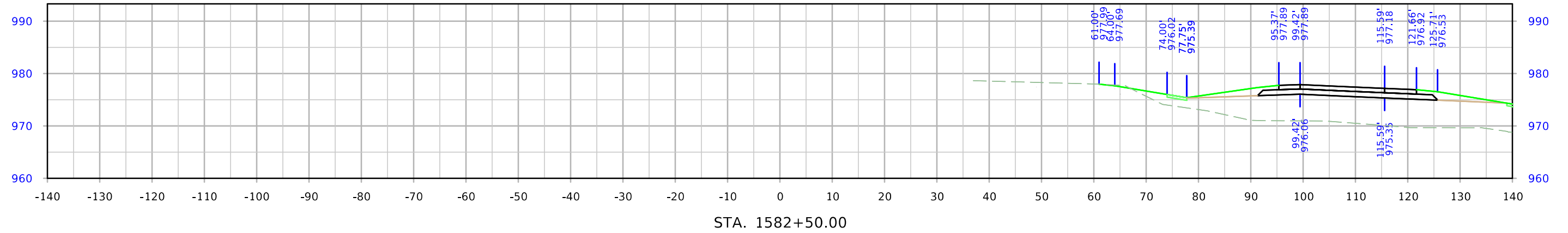
# I-80 Eastbound



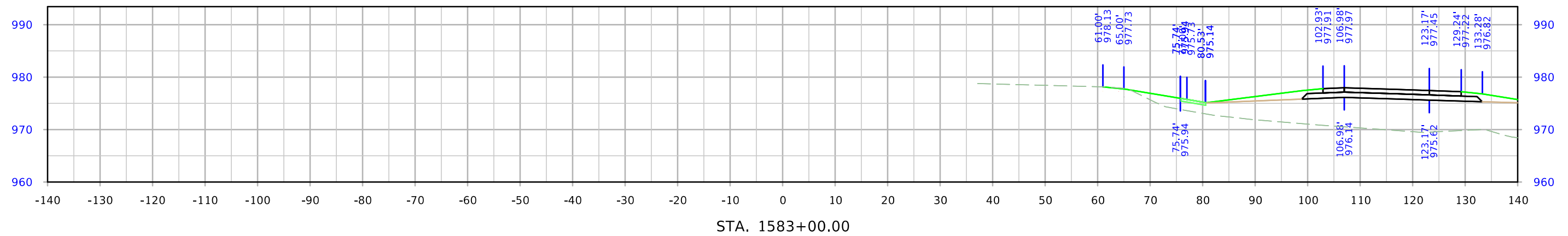
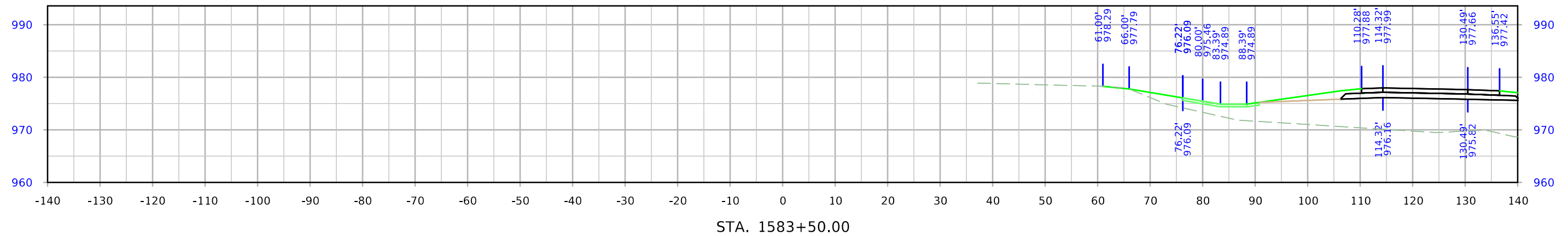
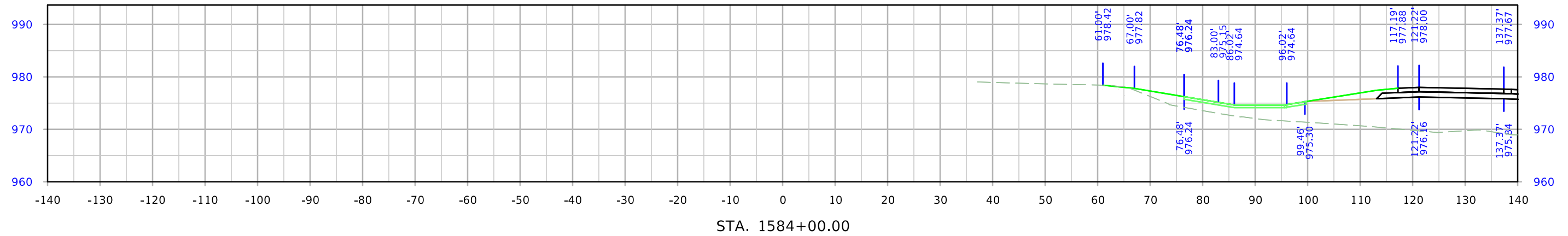
# I-80 Eastbound



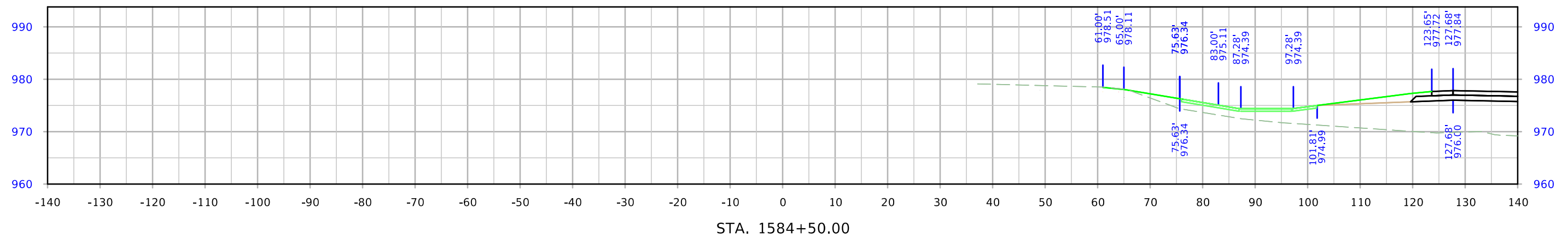
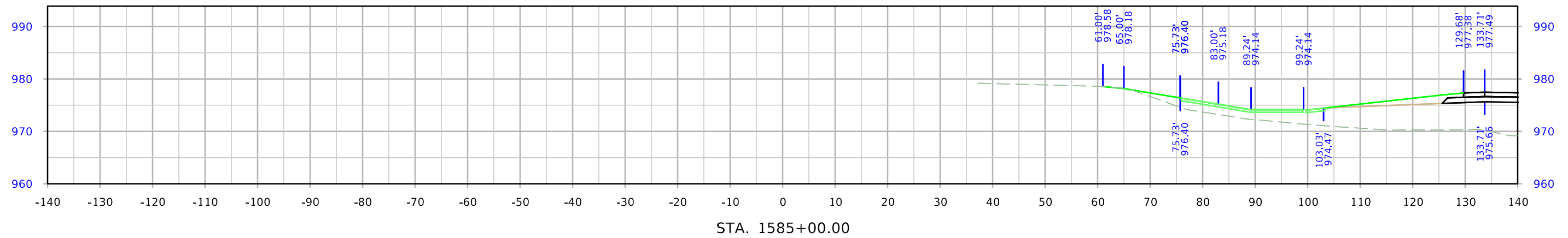
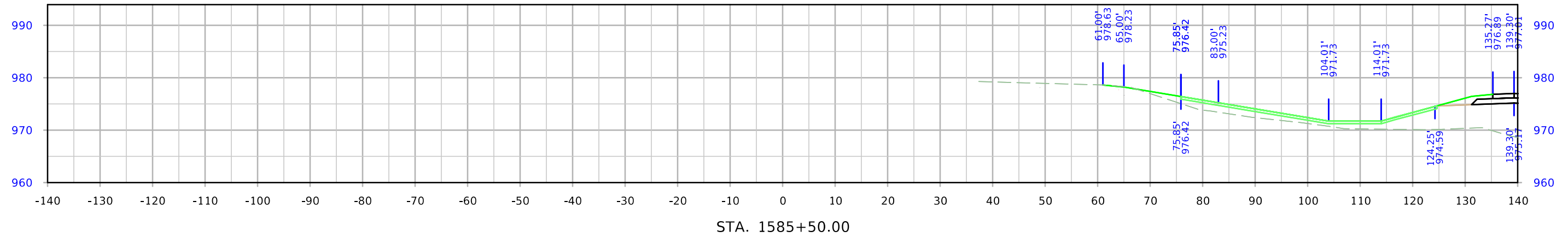
# I-80 Eastbound



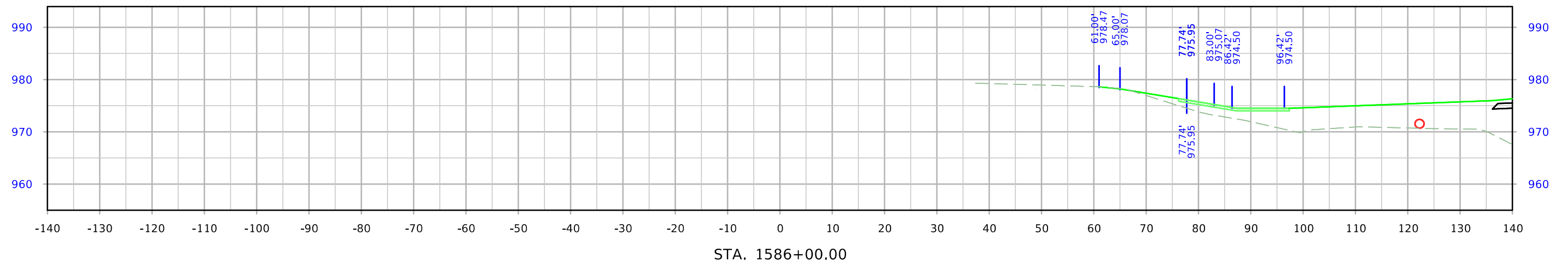
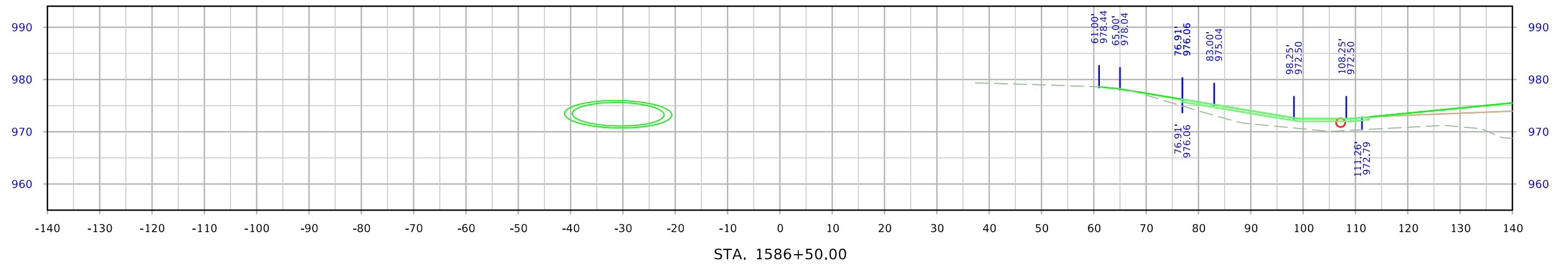
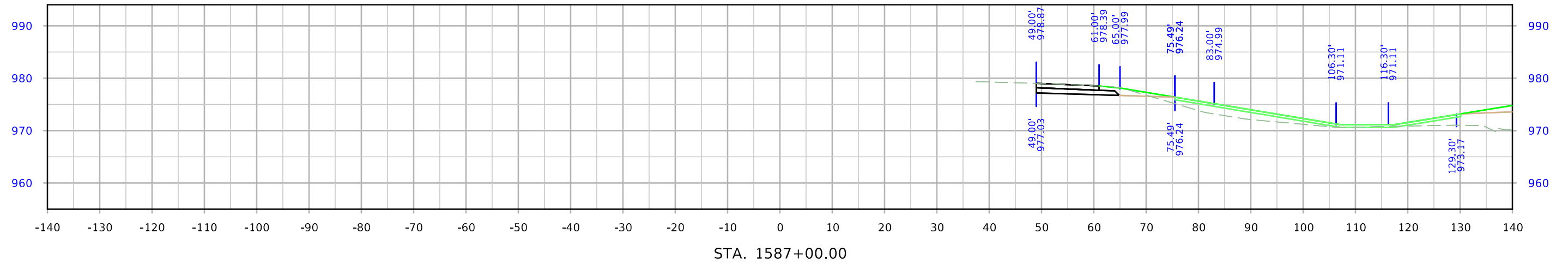
# I-80 Eastbound



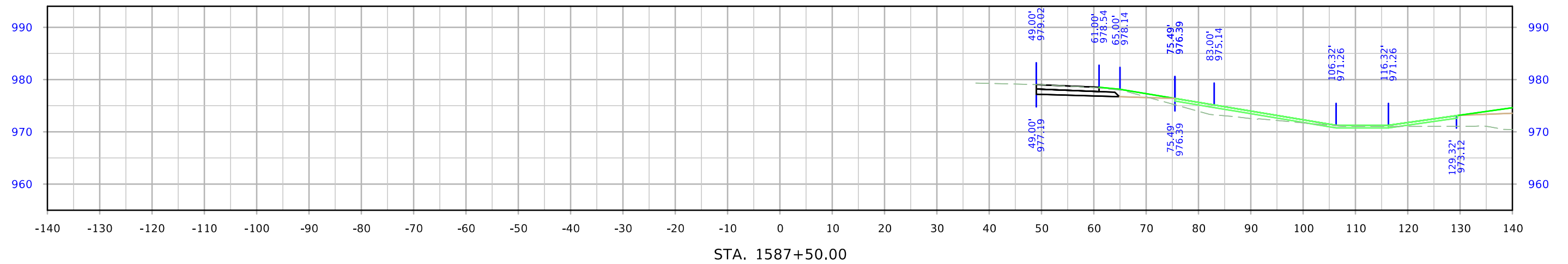
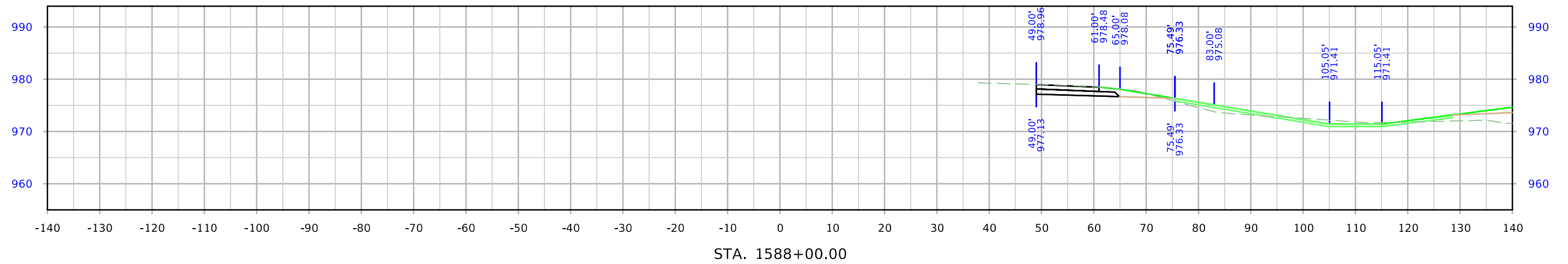
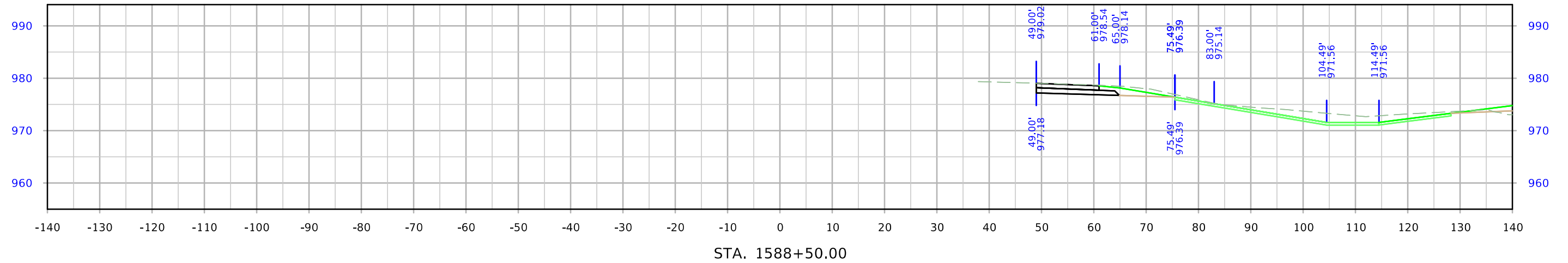
# I-80 Eastbound



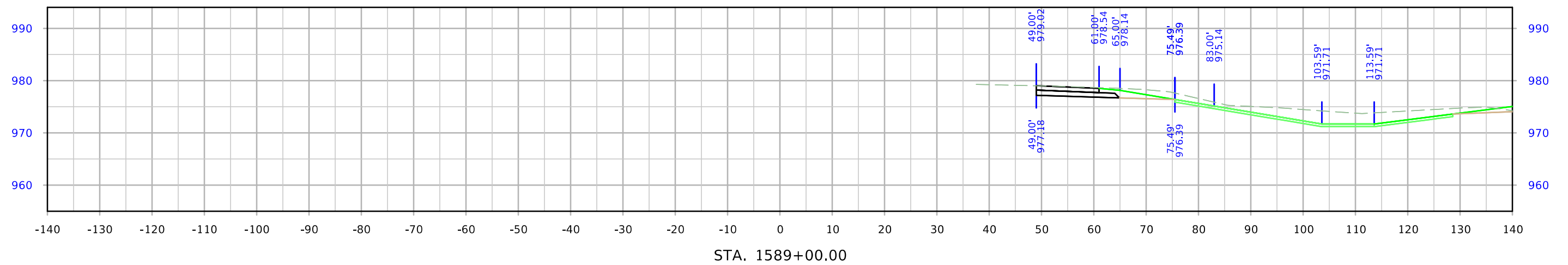
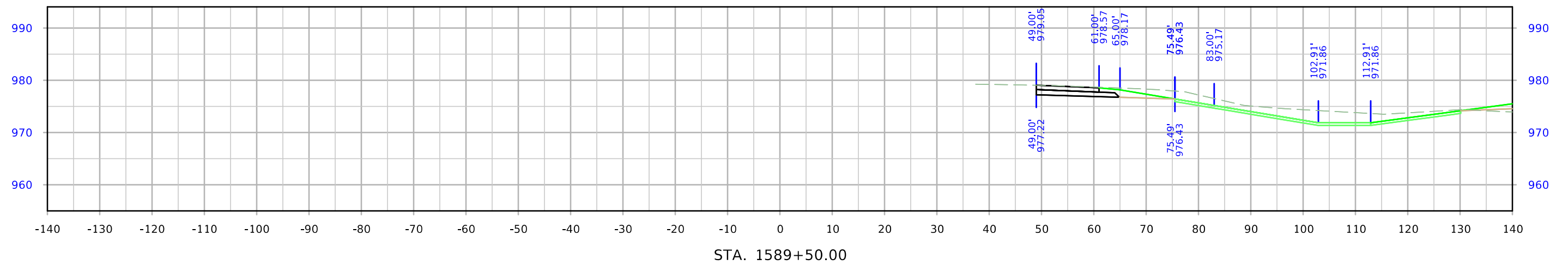
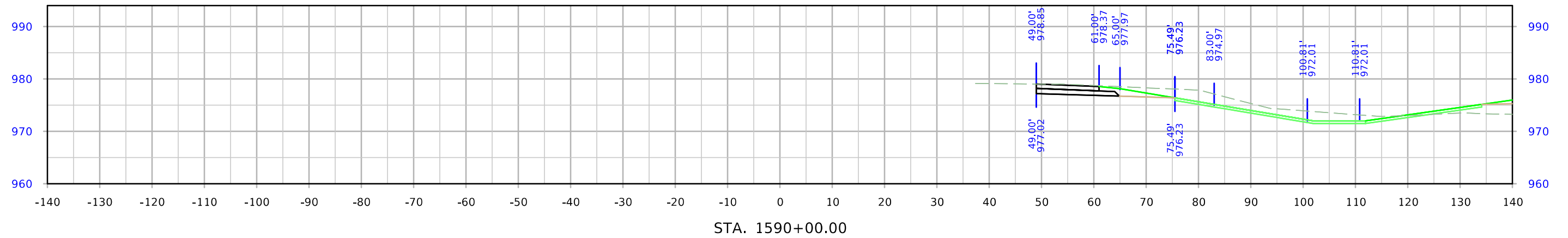
# I-80 Eastbound



# I-80 Eastbound

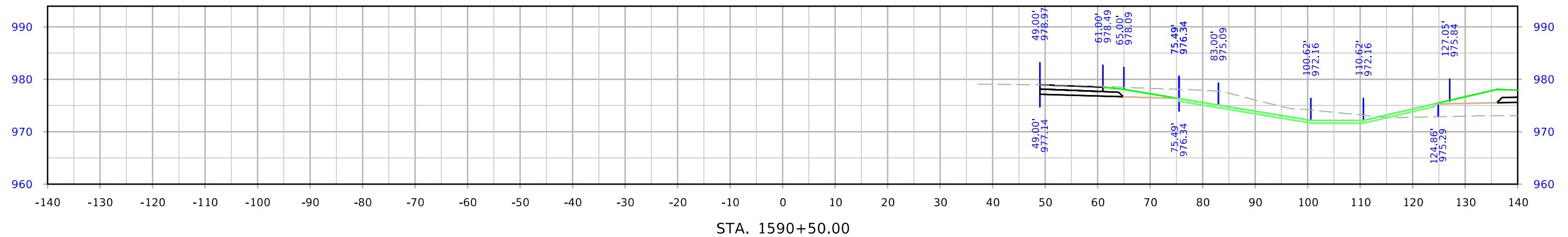
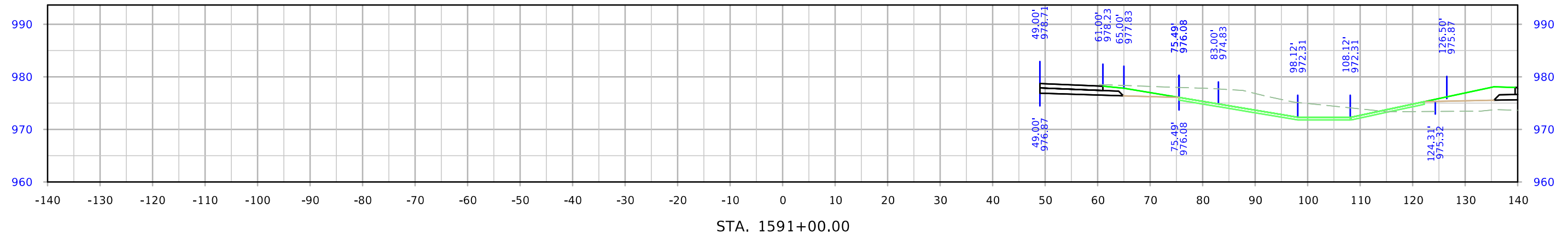
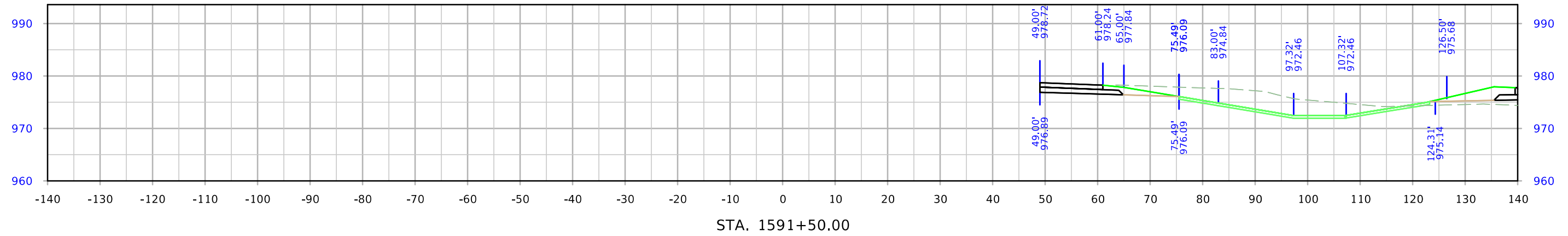


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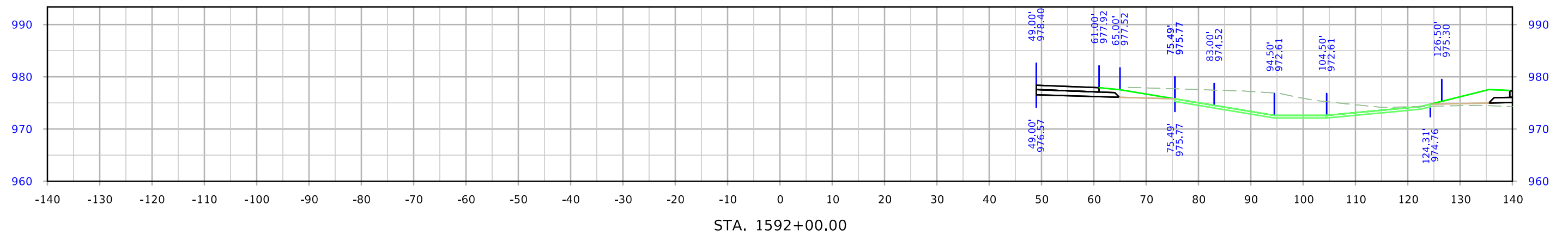
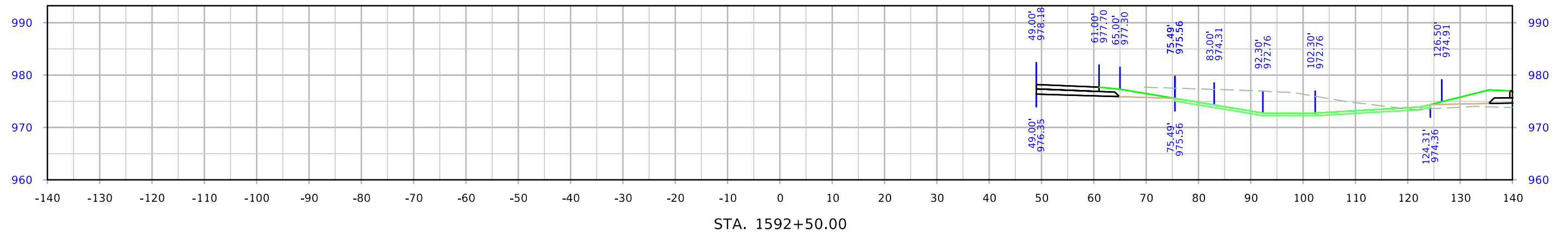
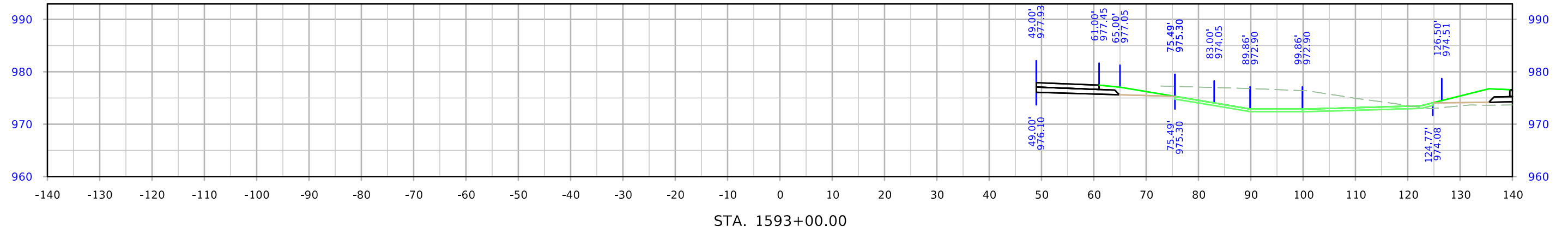




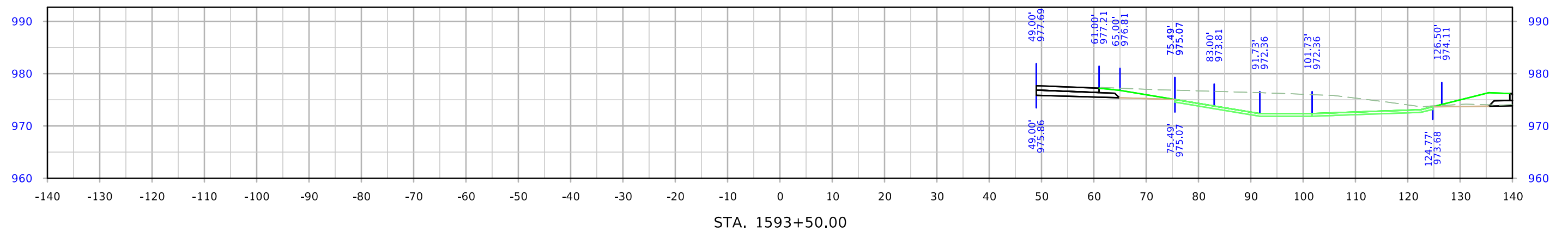
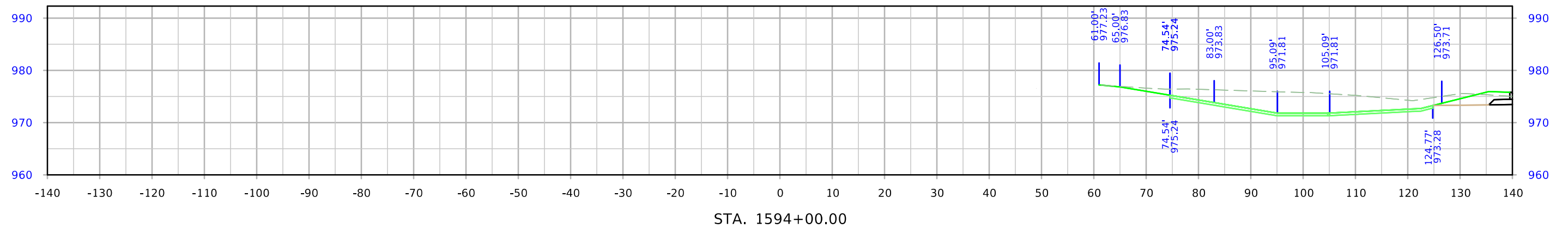
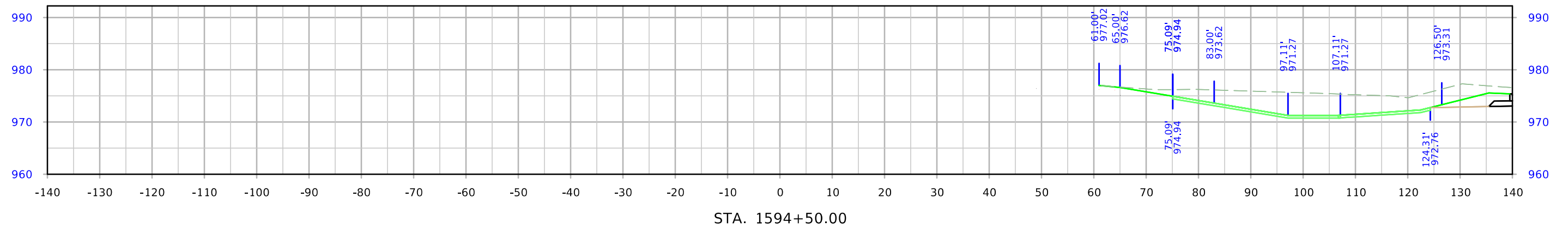
# I-80 Eastbound



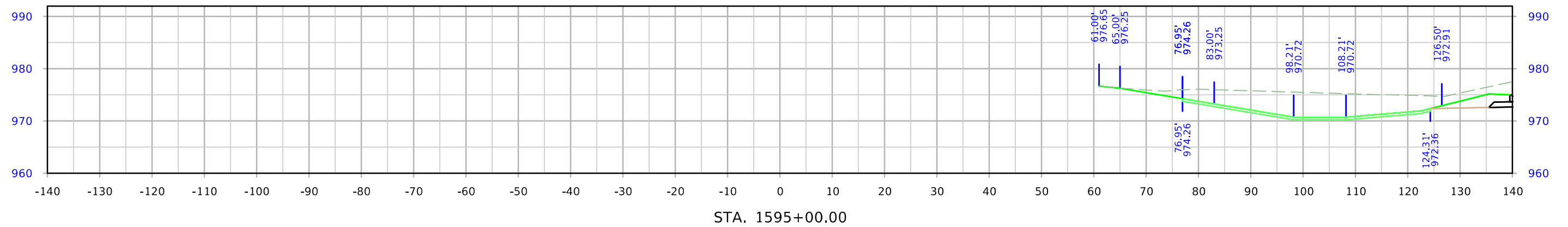
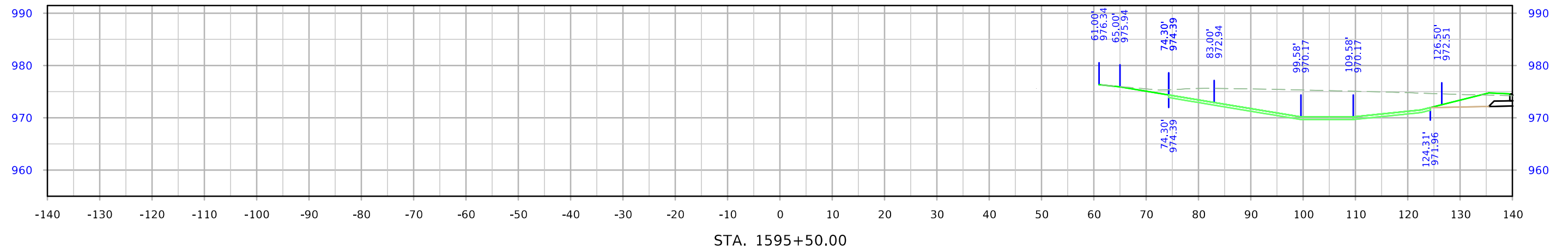
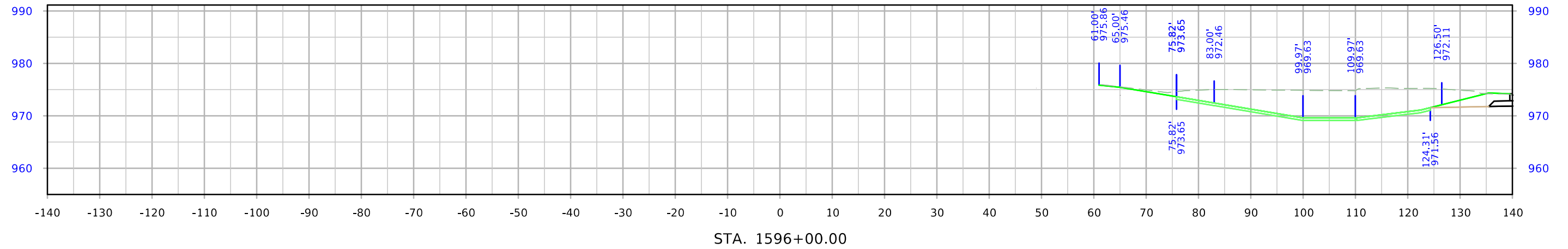
# I-80 Eastbound



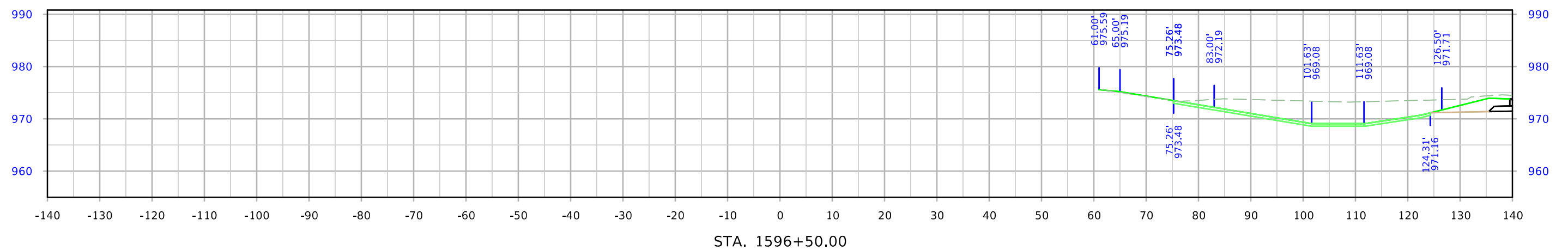
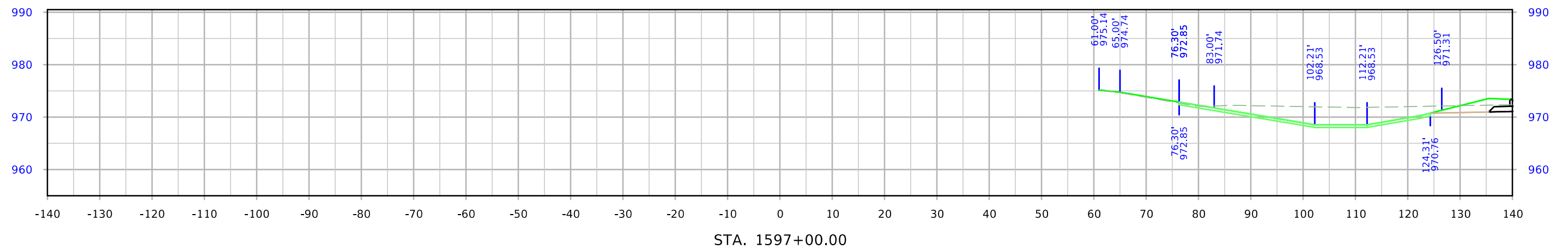
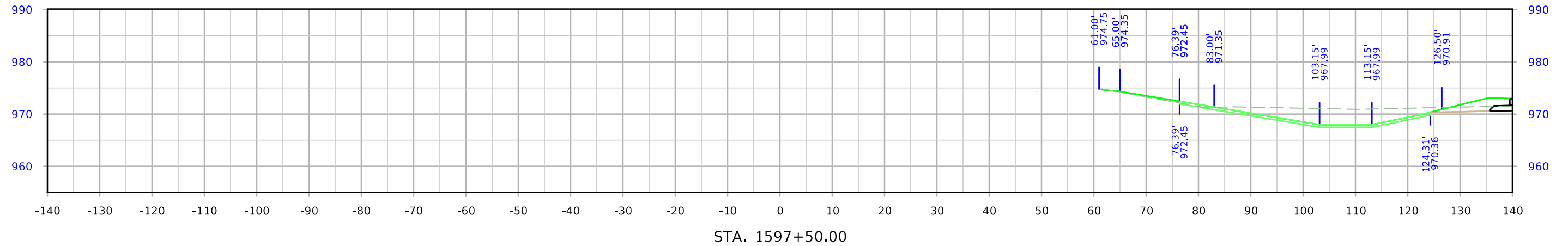
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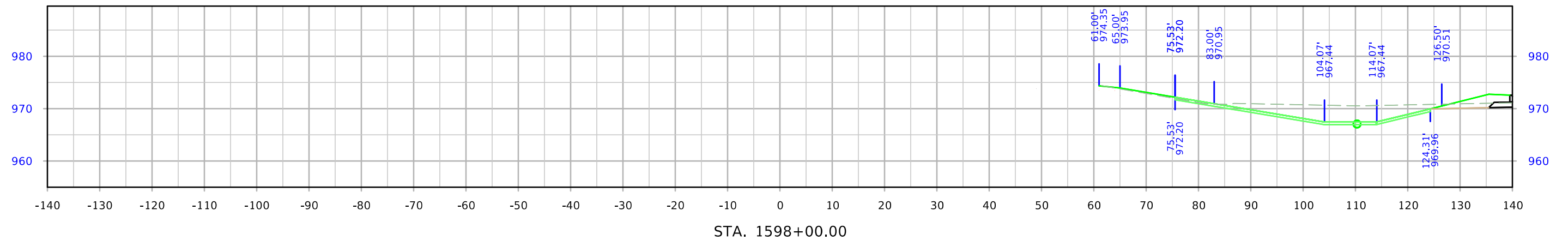
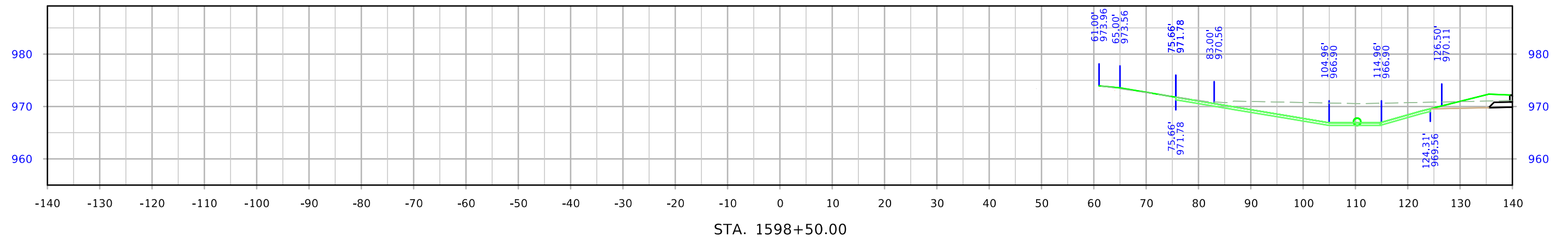
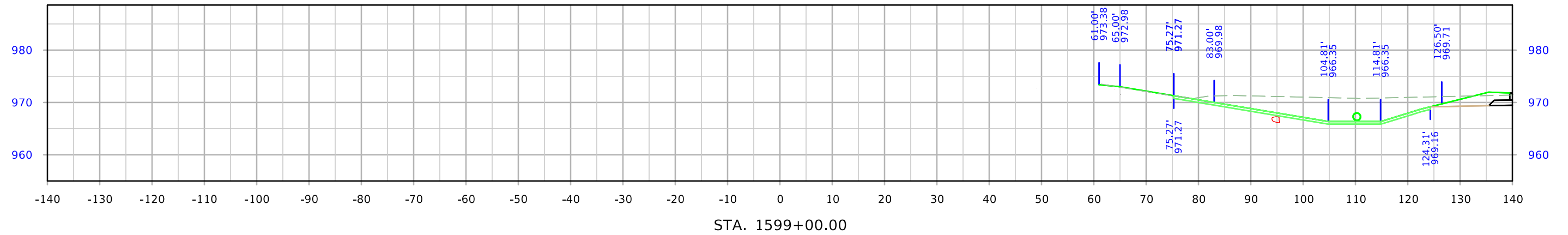
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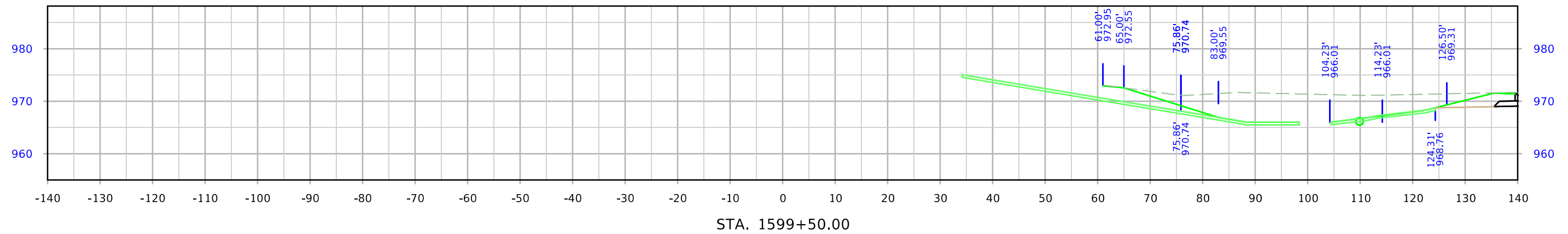
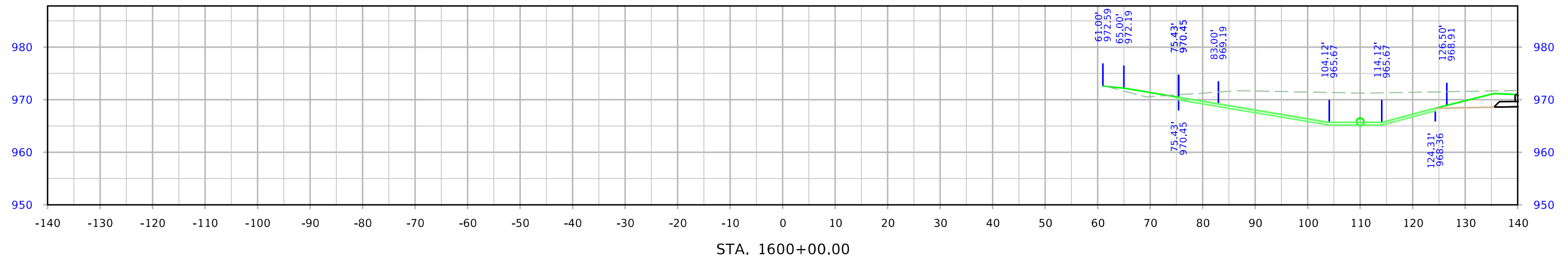
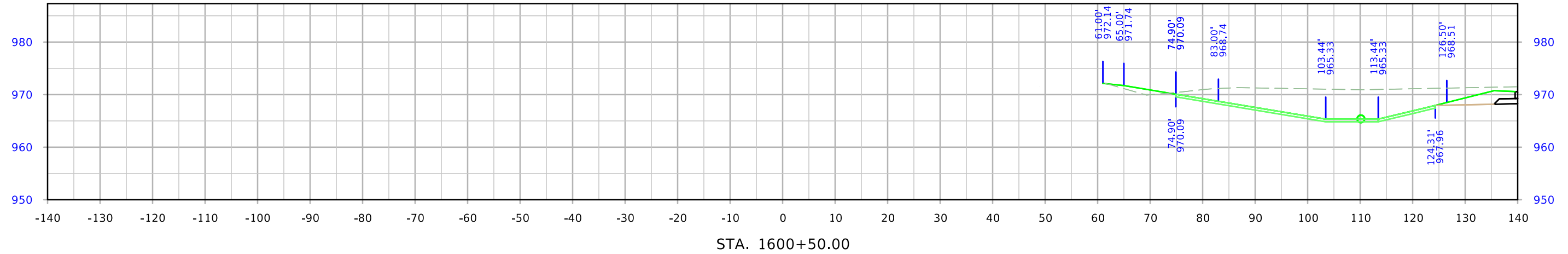
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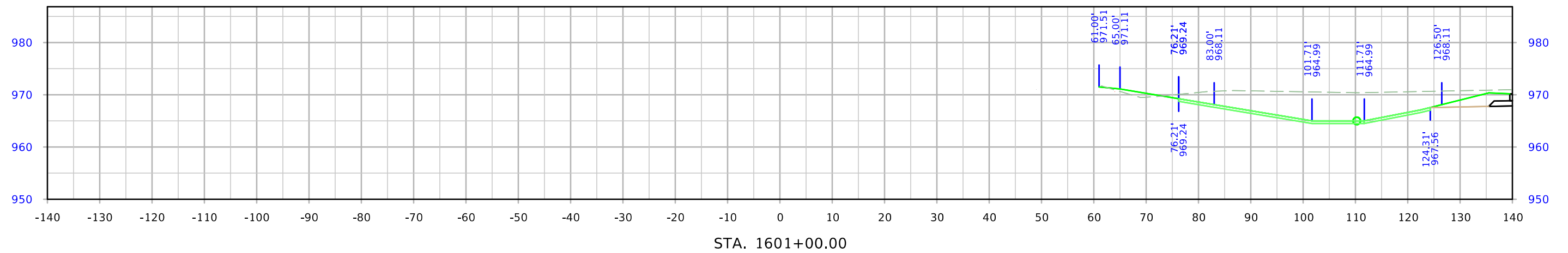
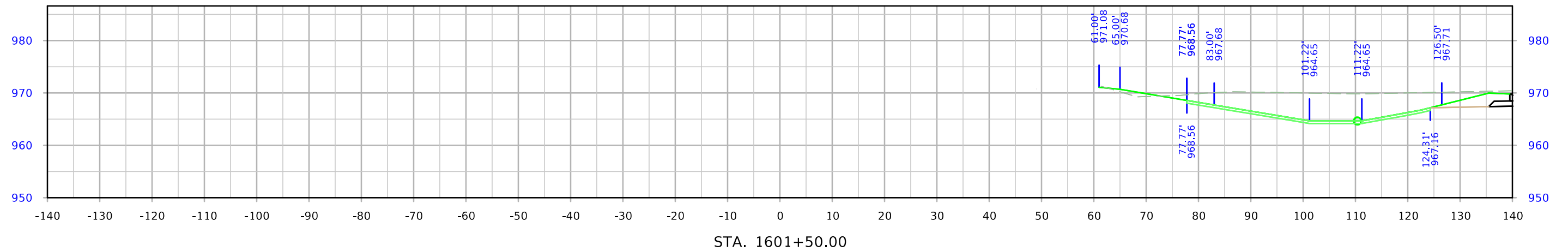
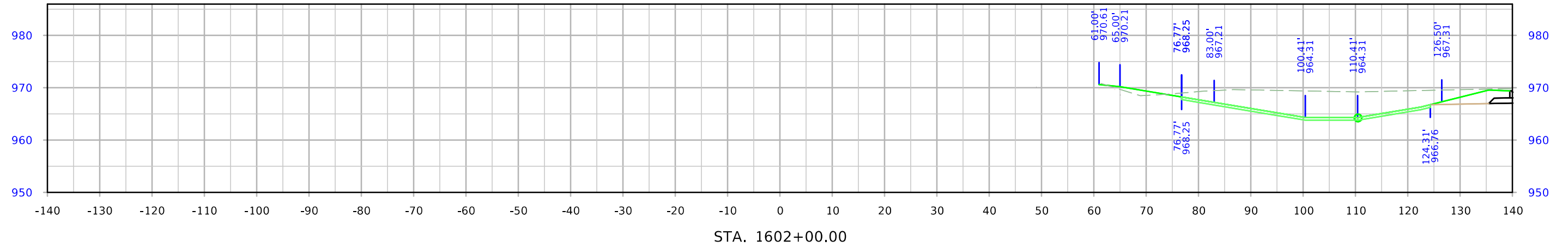
# I-80 Eastbound



# I-80 Eastbound

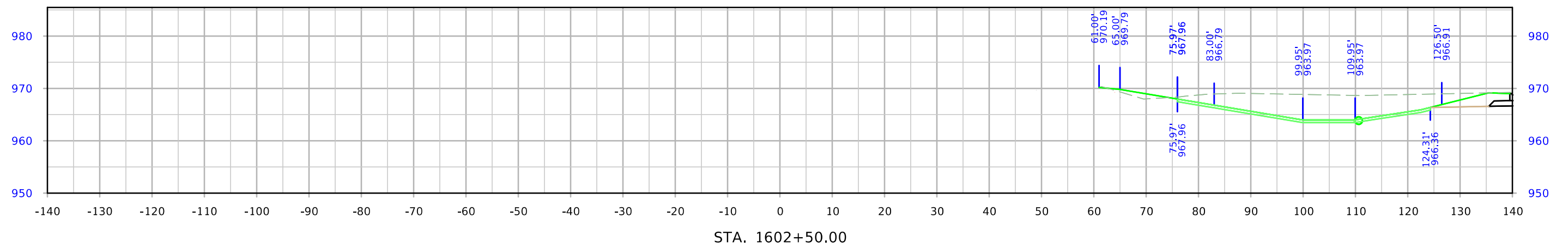
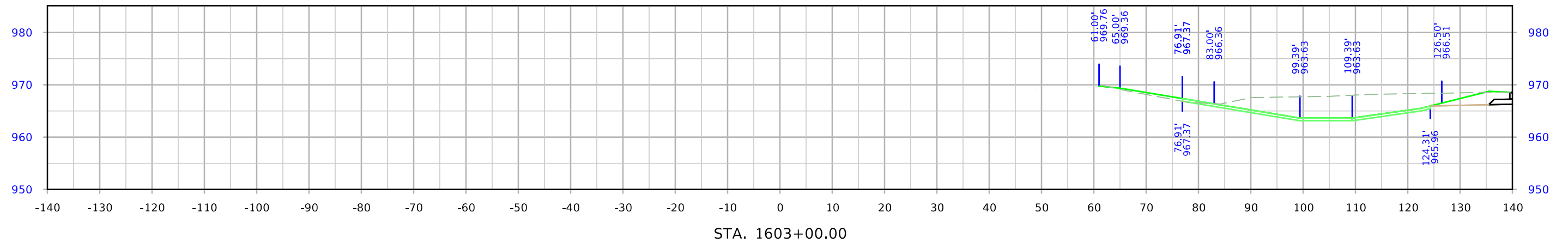
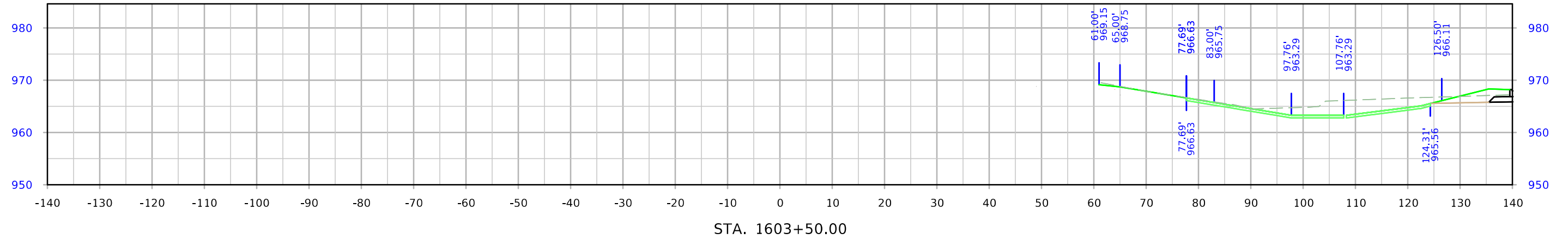


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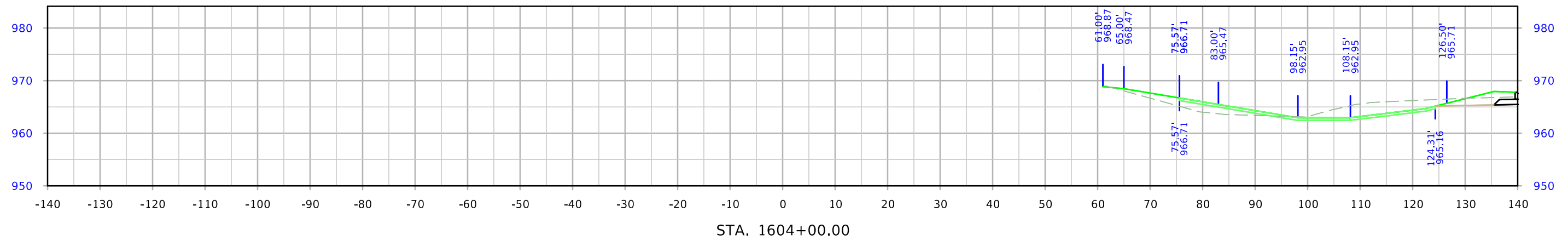
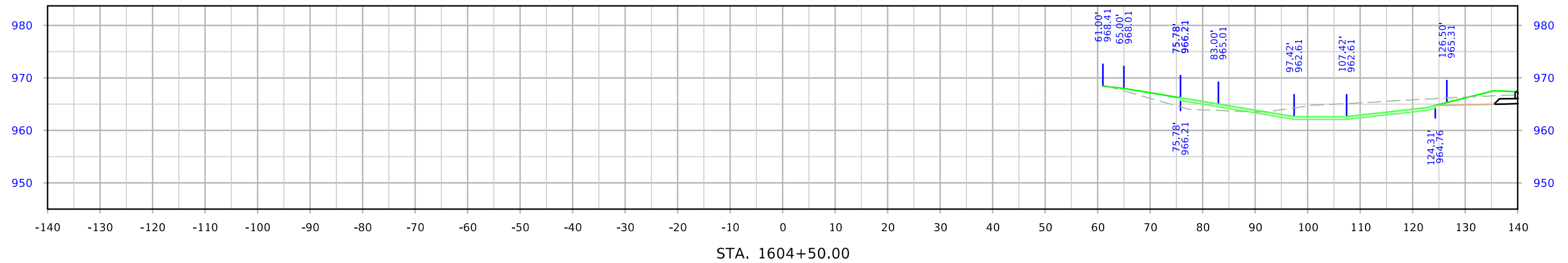
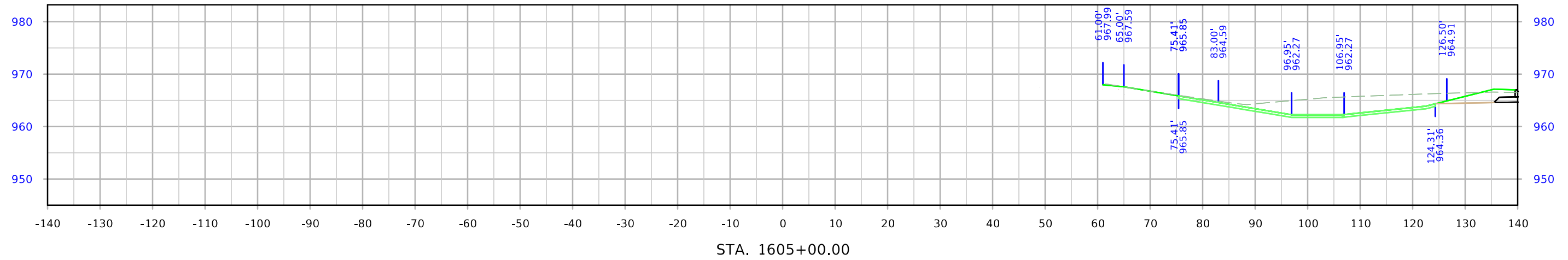




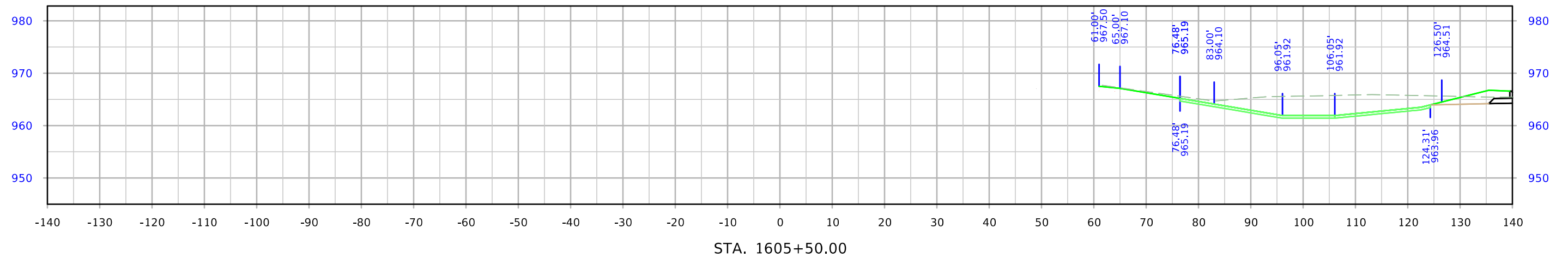
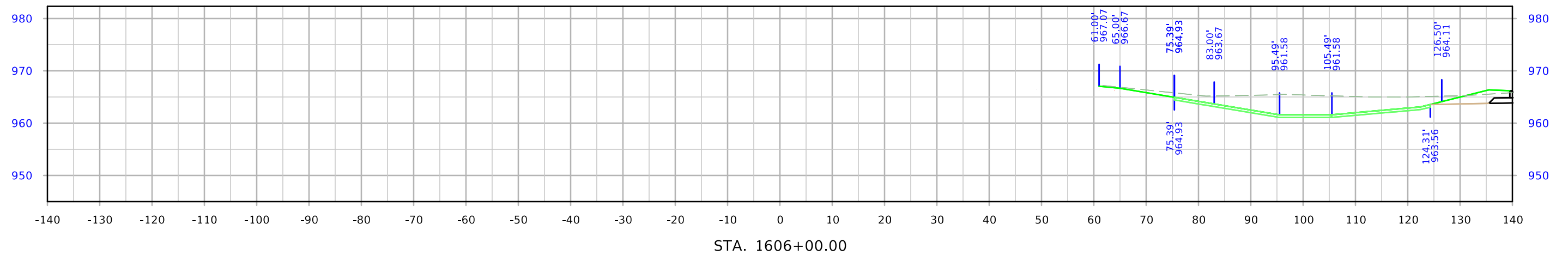
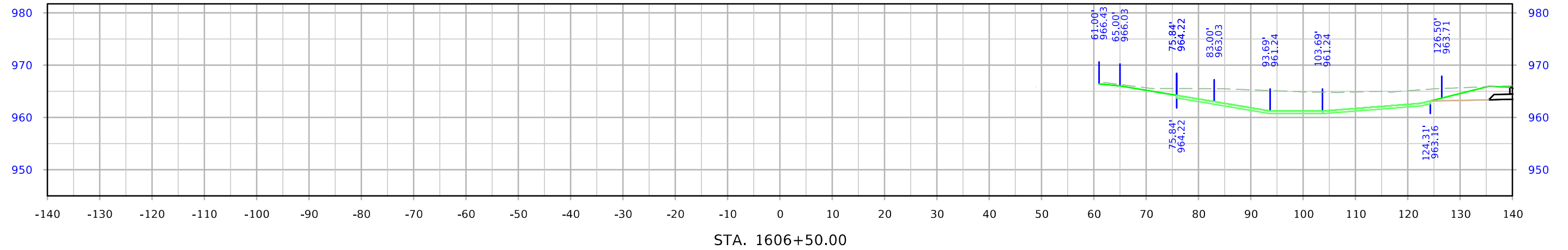
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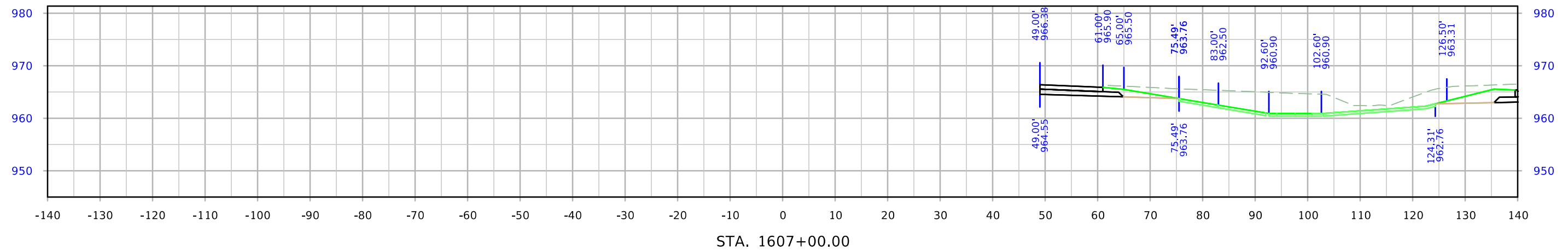
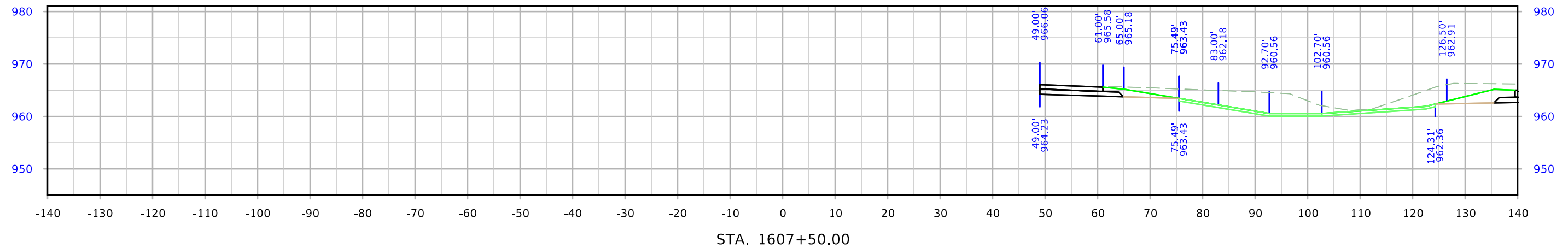
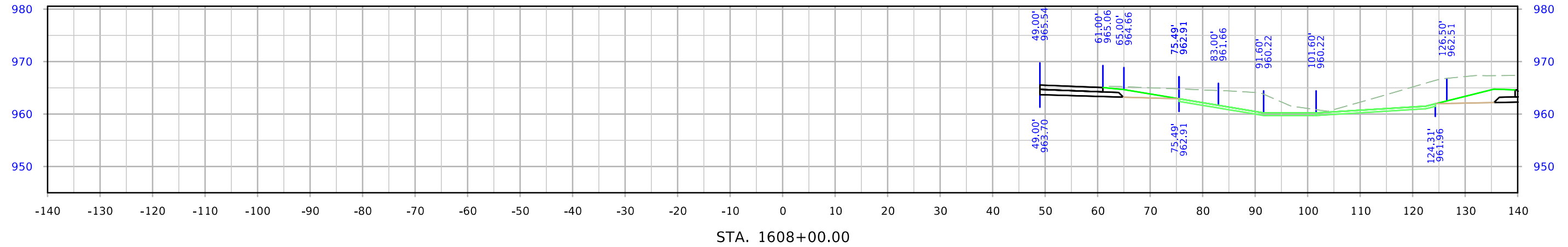
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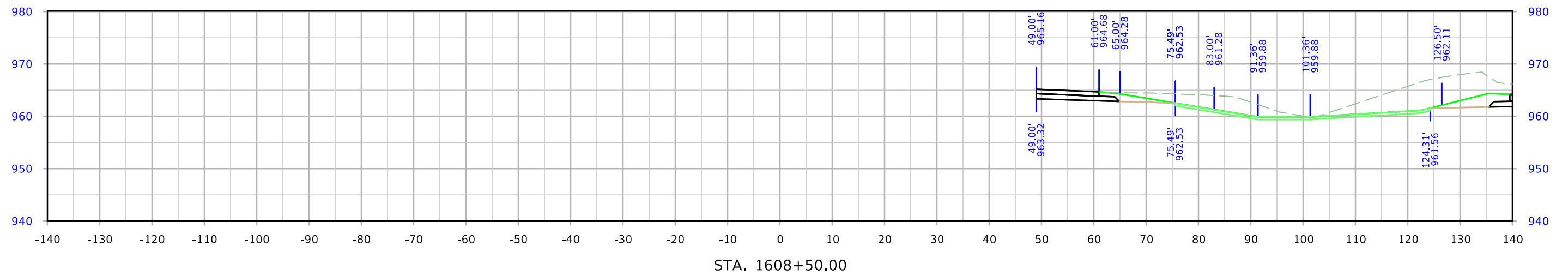
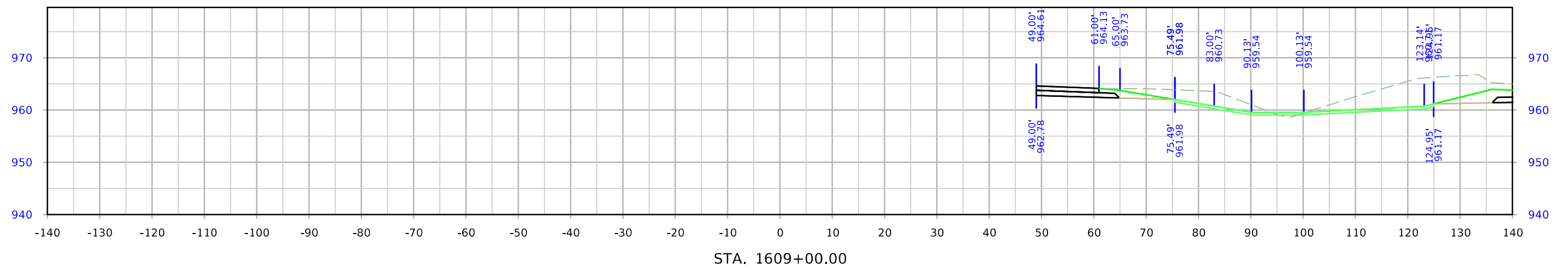
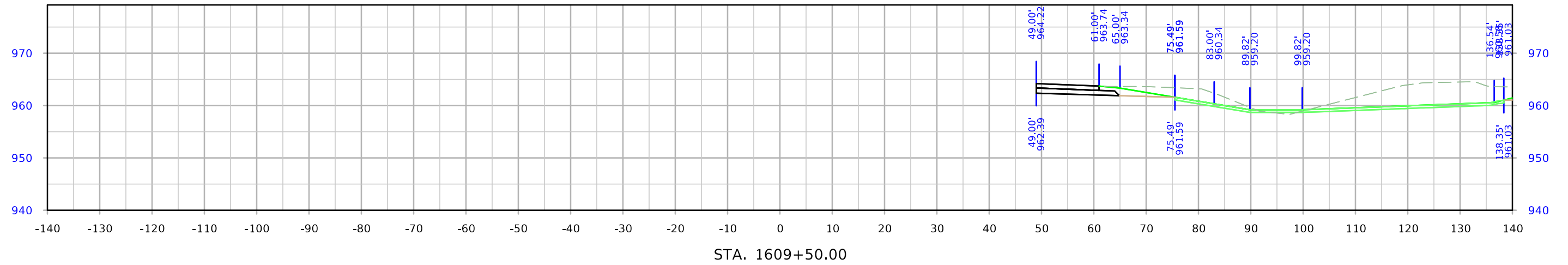
# I-80 Eastbound



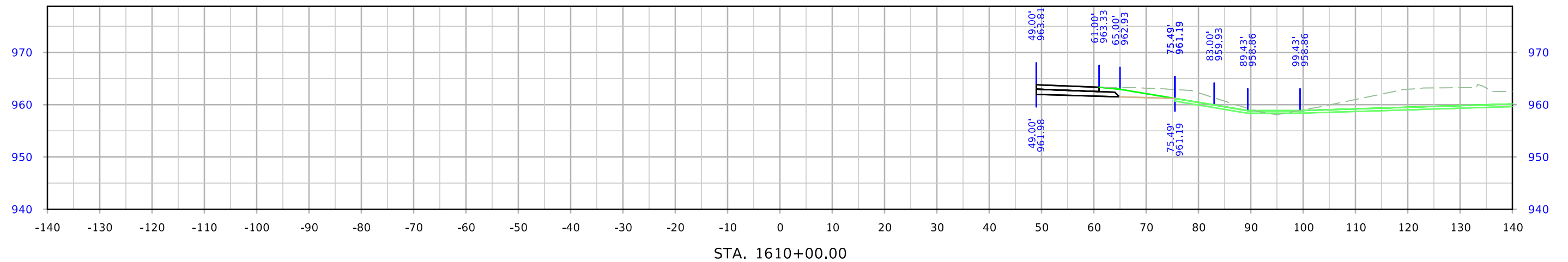
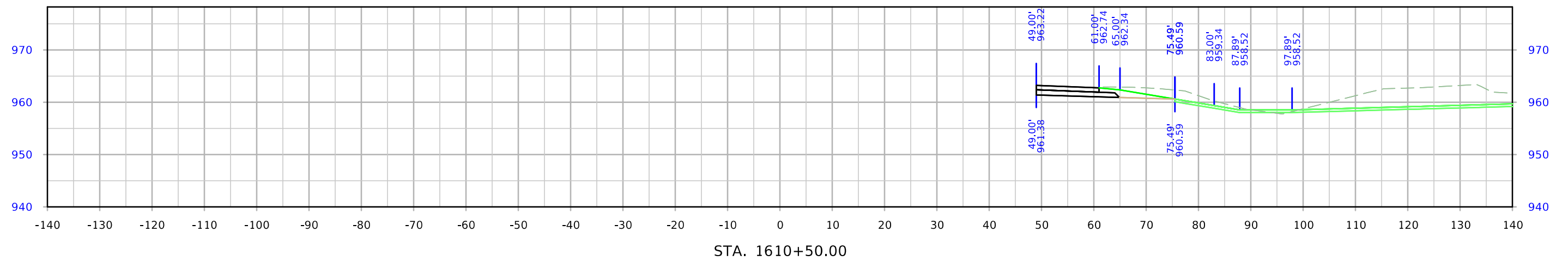
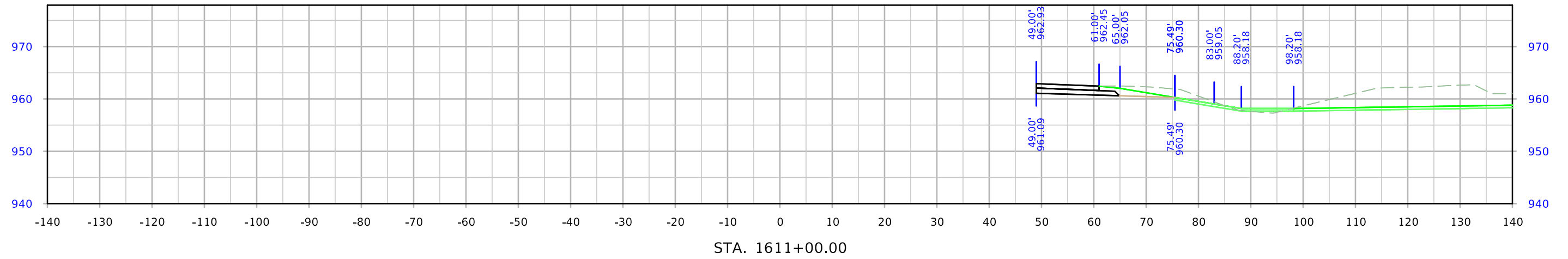
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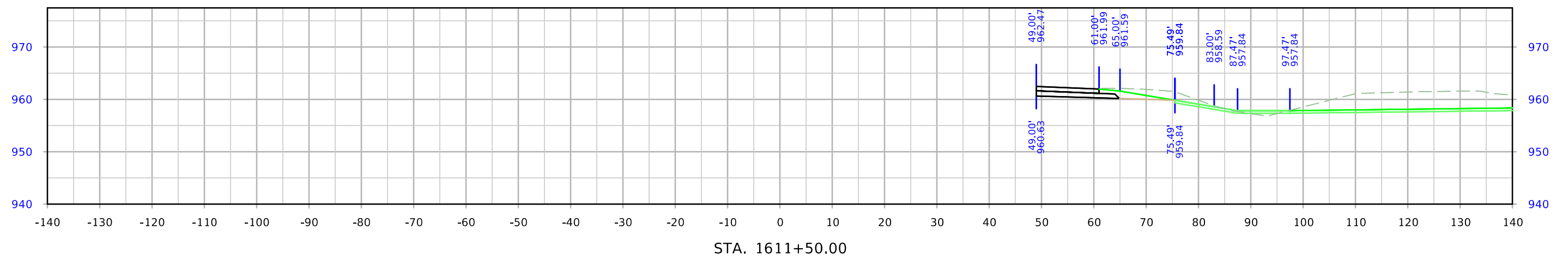
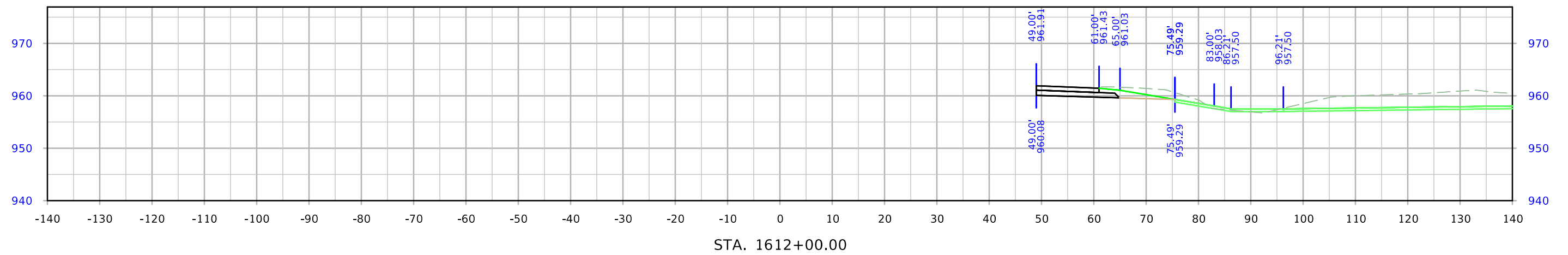
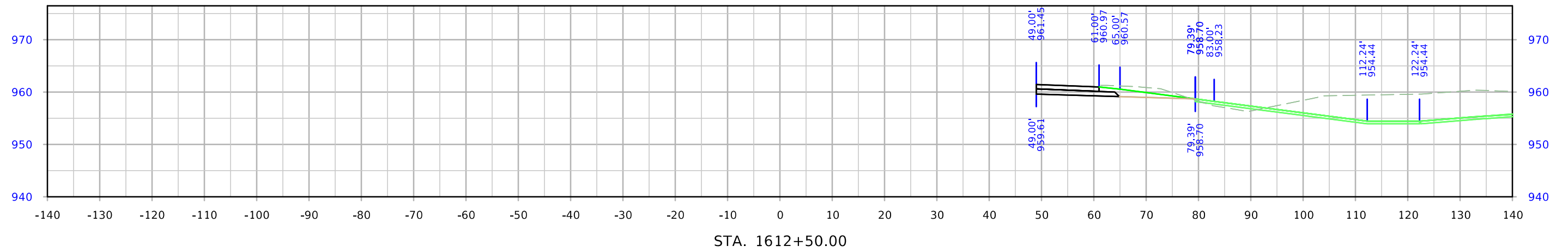
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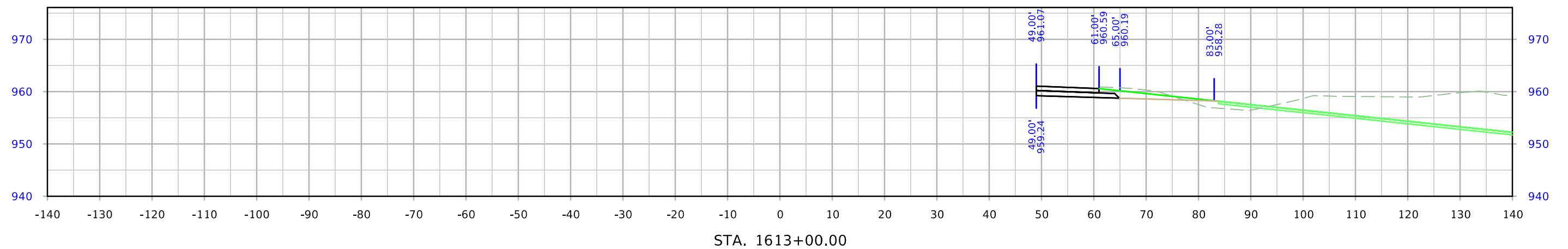
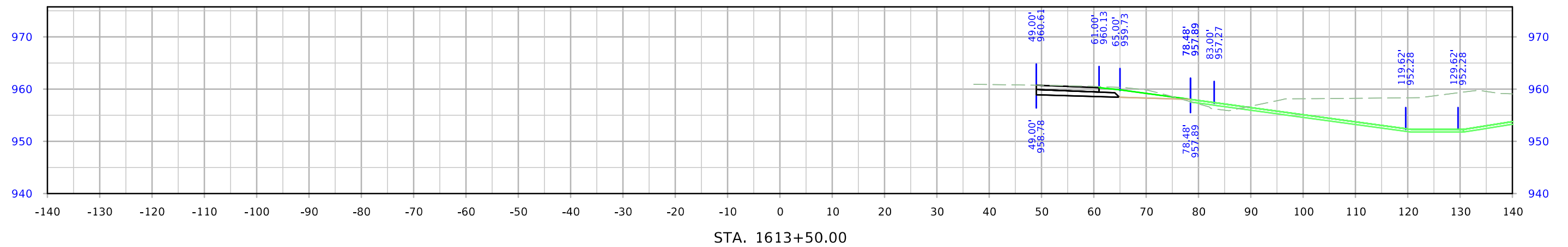
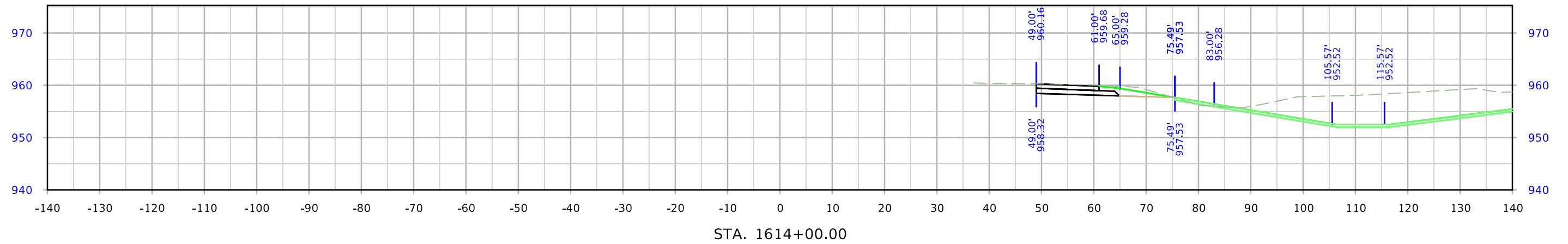
# I-80 Eastbound



# I-80 Eastbound

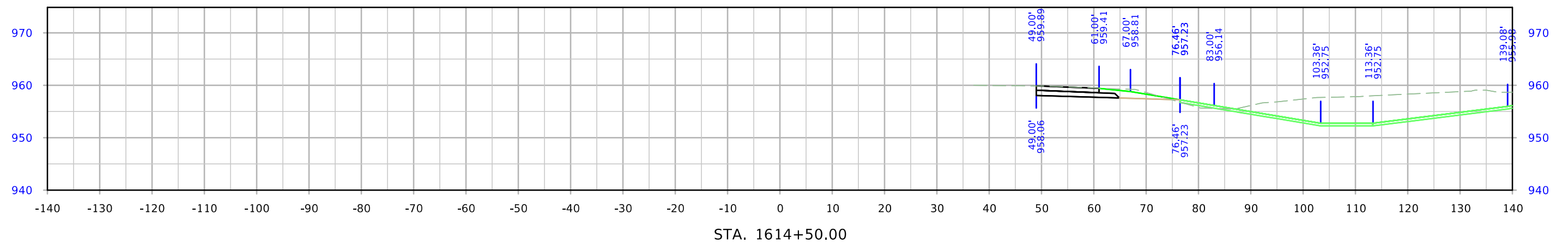
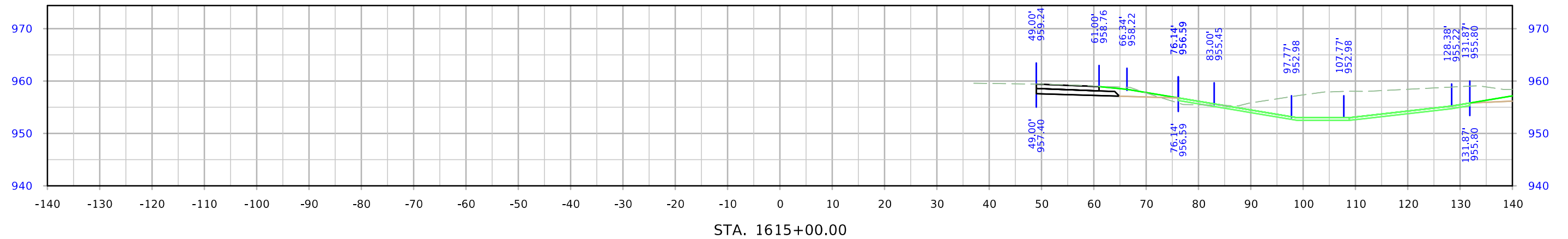
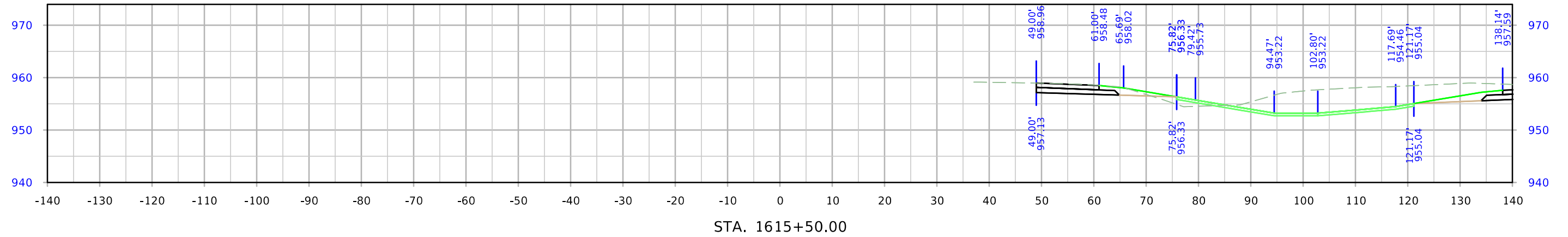


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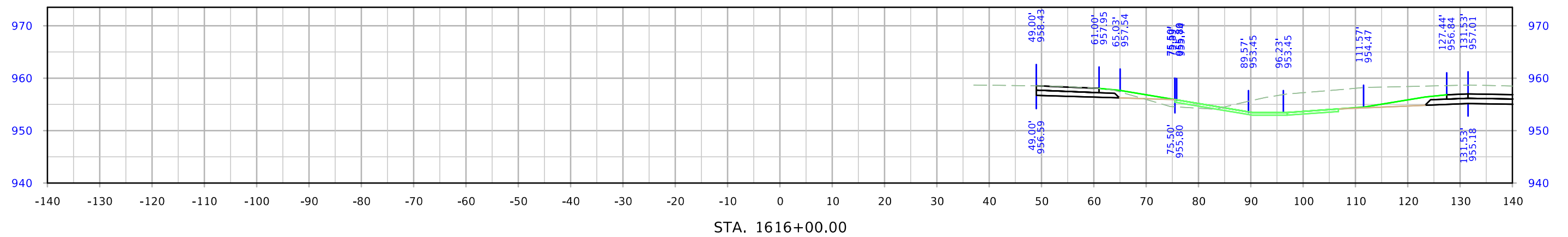
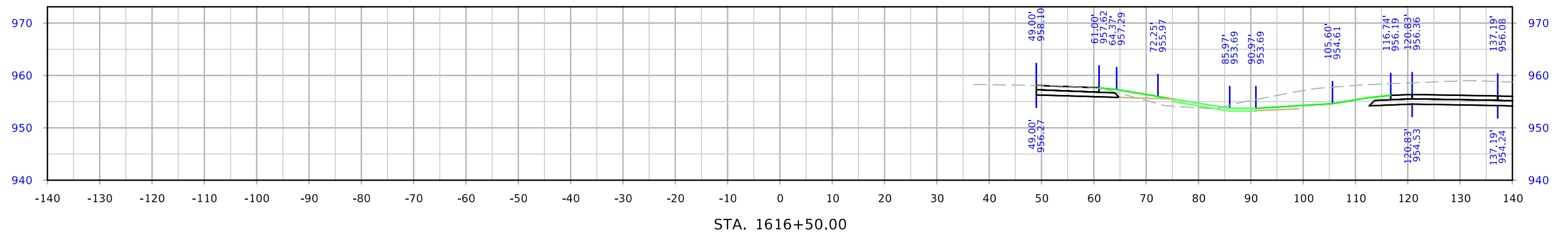
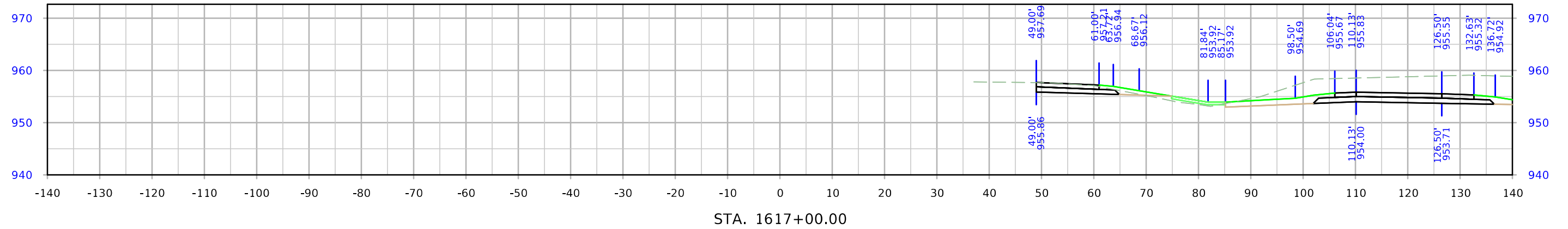




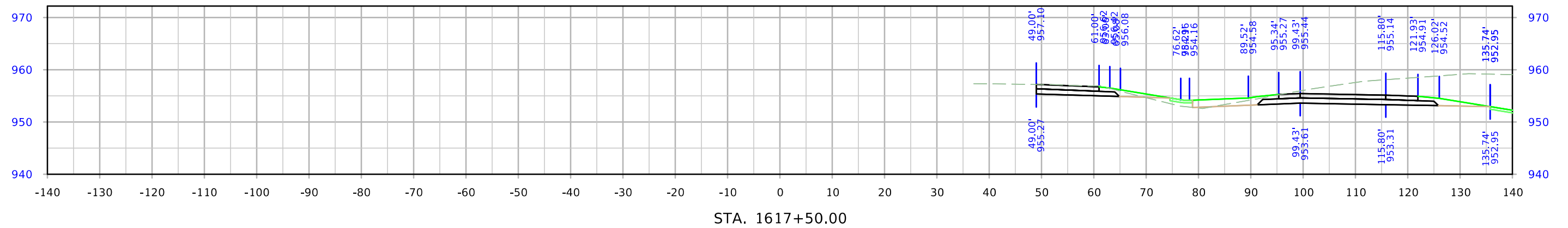
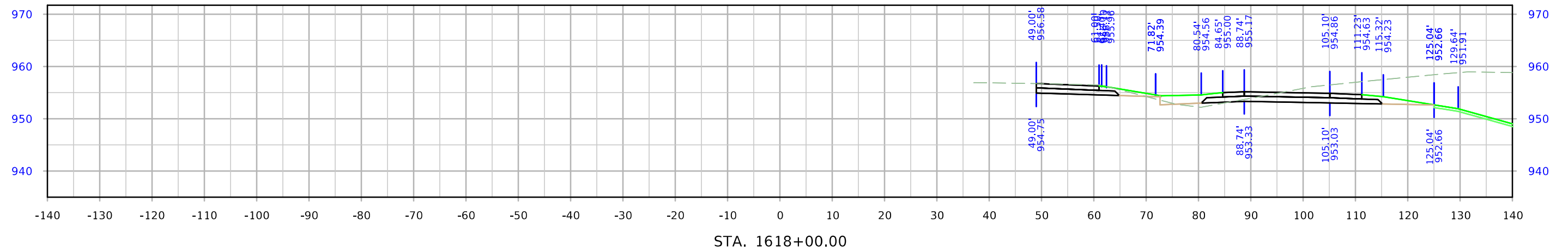
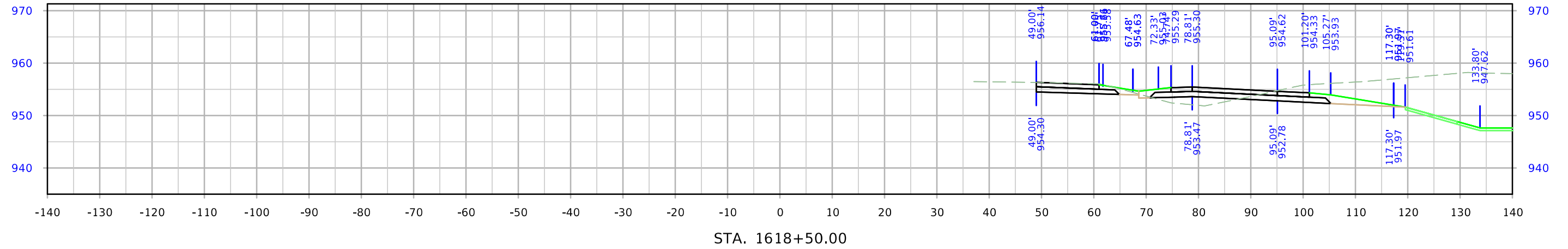
# I-80 Eastbound



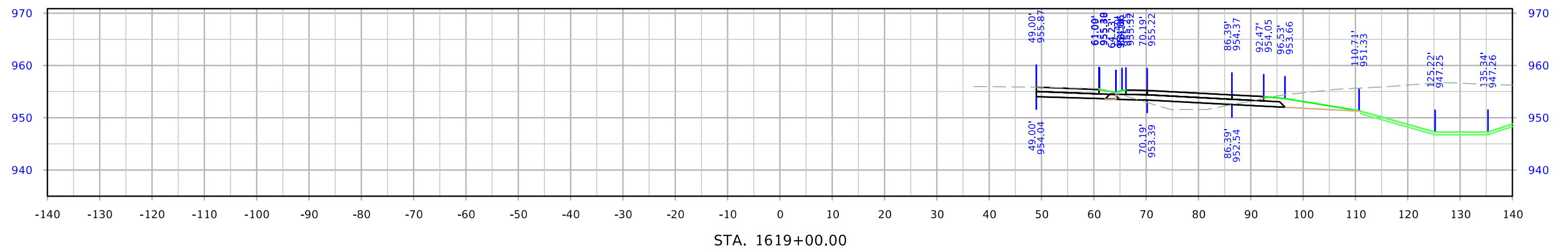
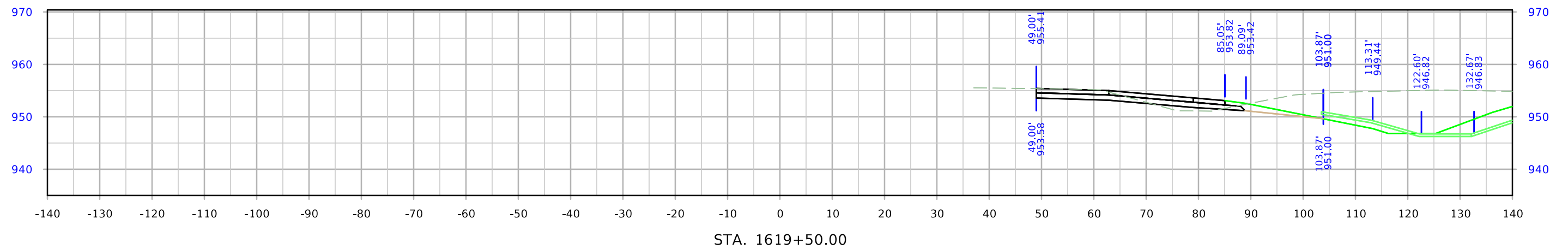
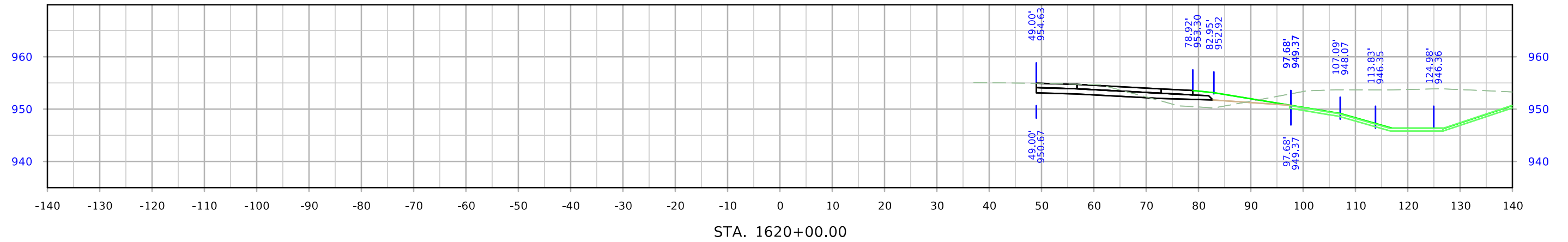
# I-80 Eastbound



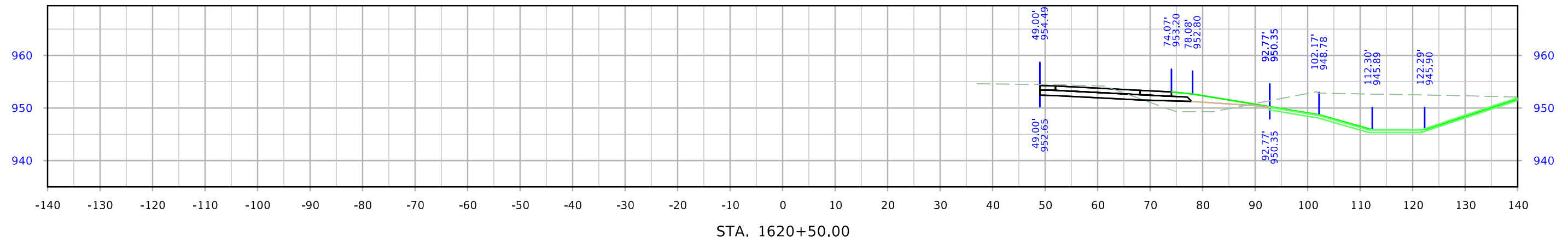
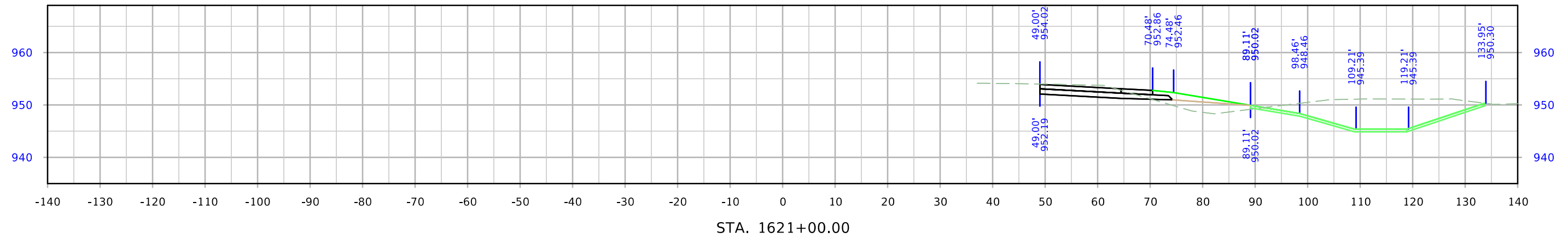
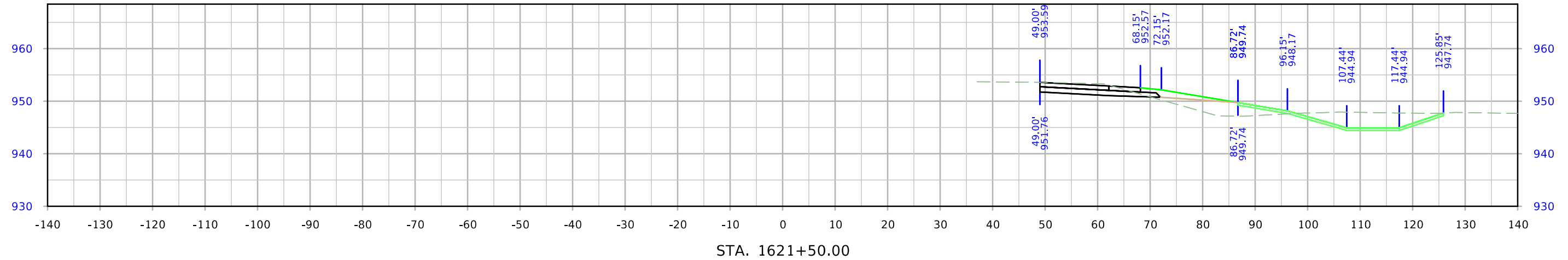
# I-80 Eastbound



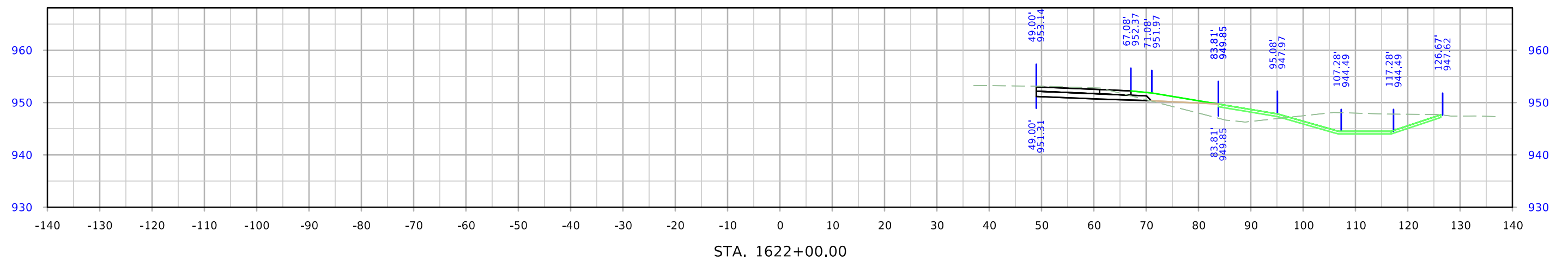
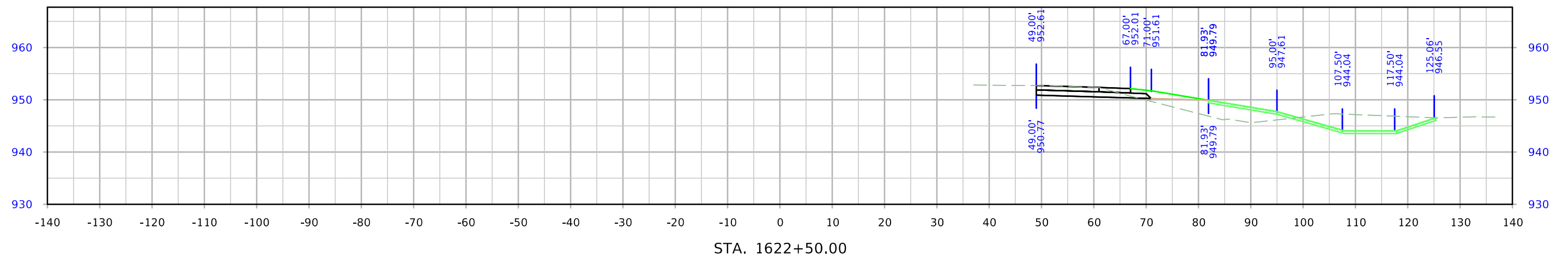
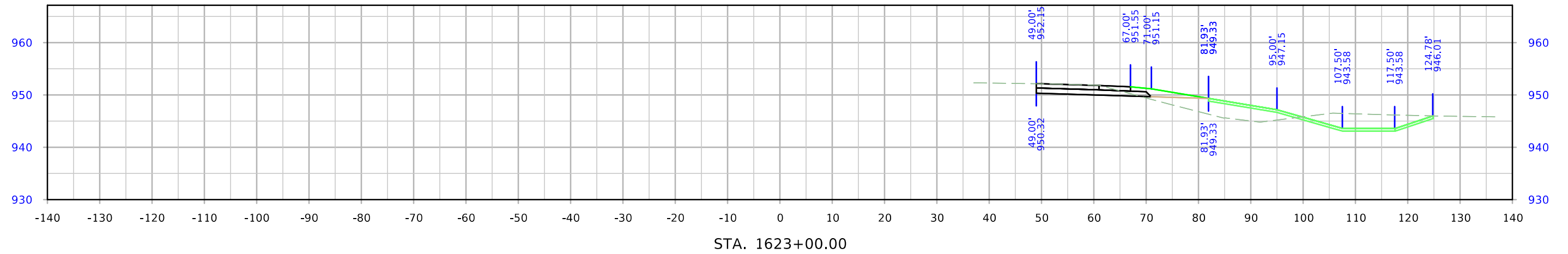
# I-80 Eastbound



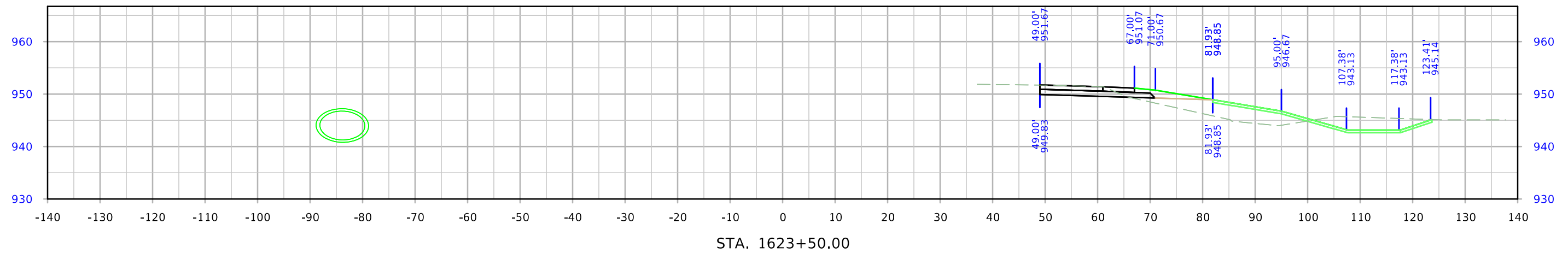
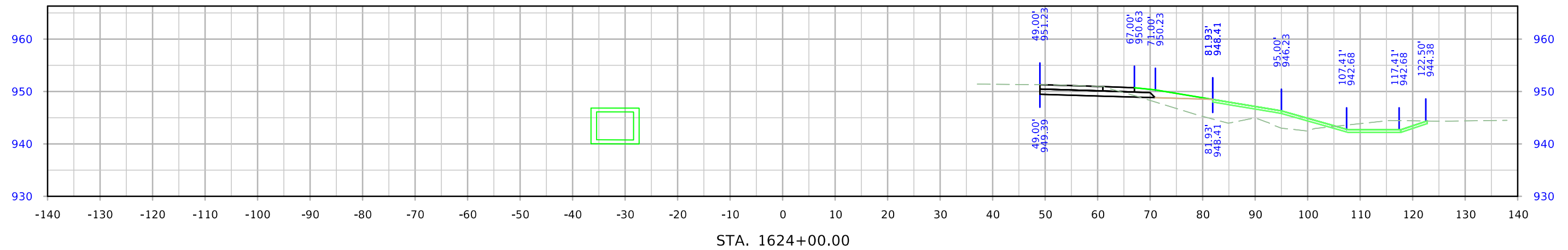
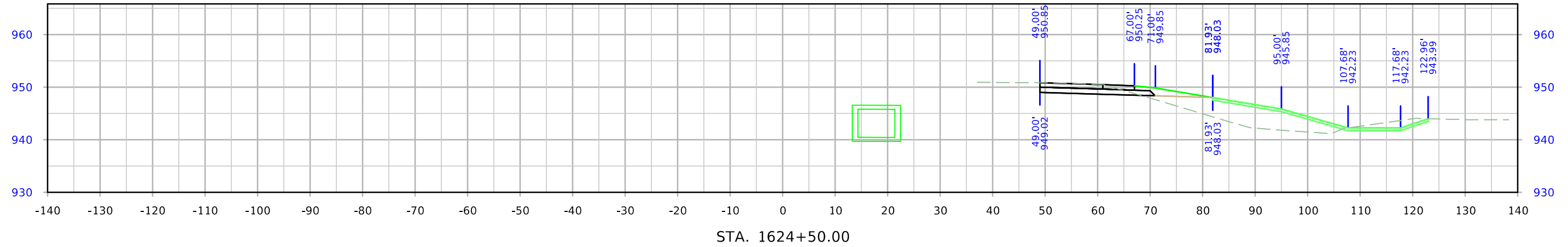
# I-80 Eastbound



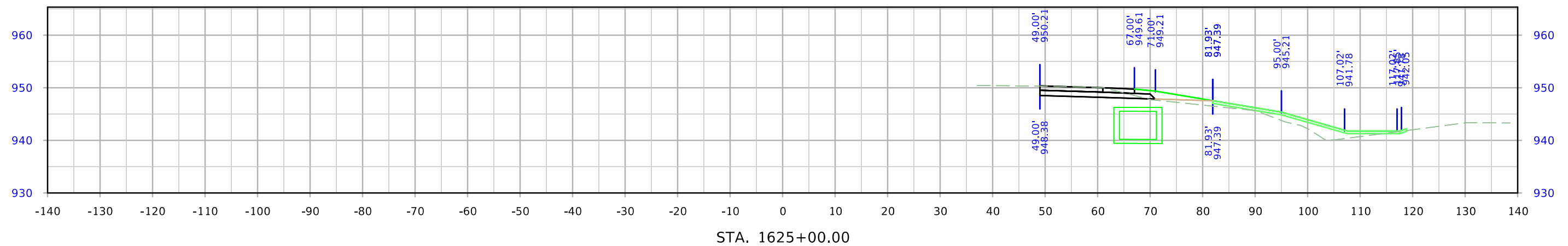
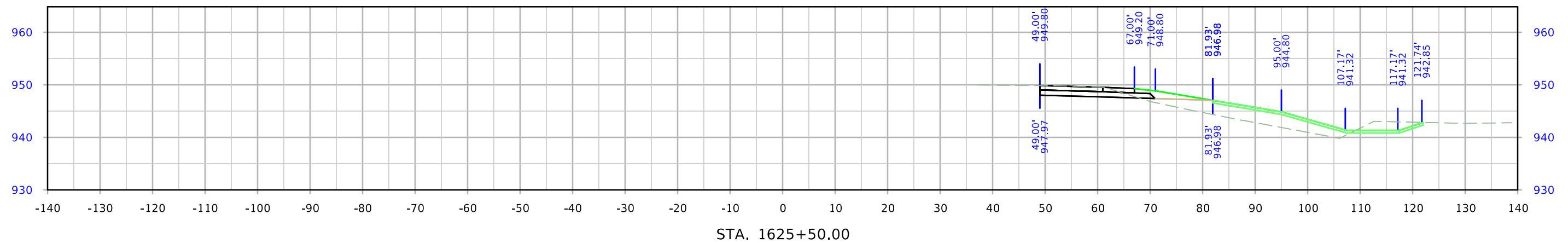
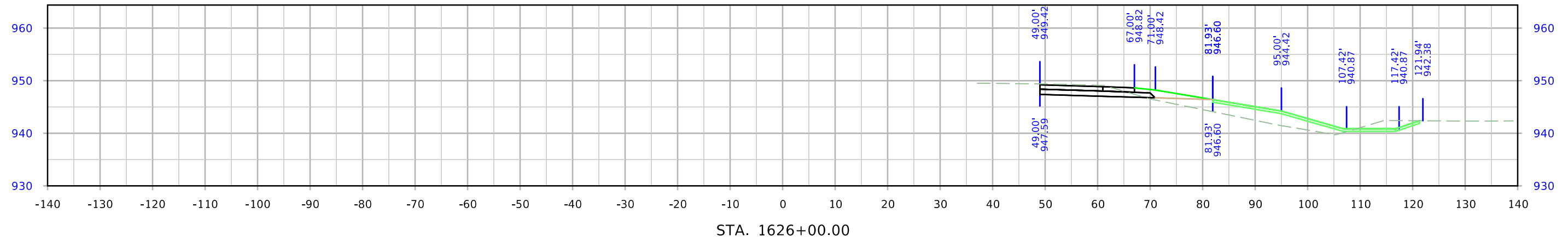
# I-80 Eastbound



# I-80 Eastbound

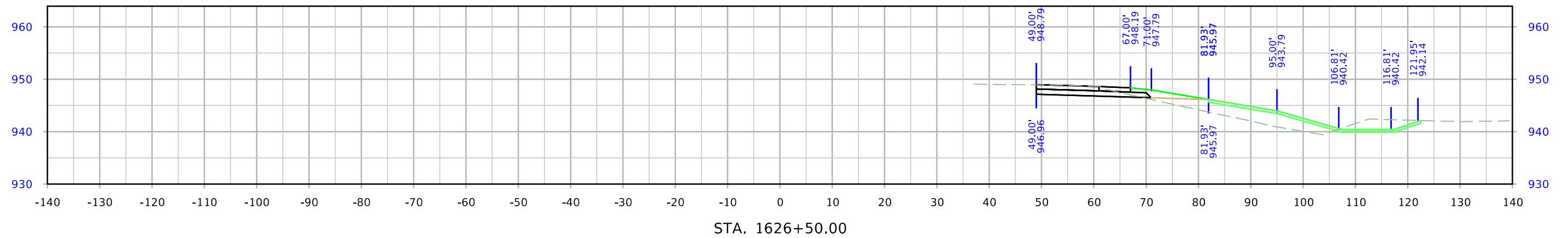
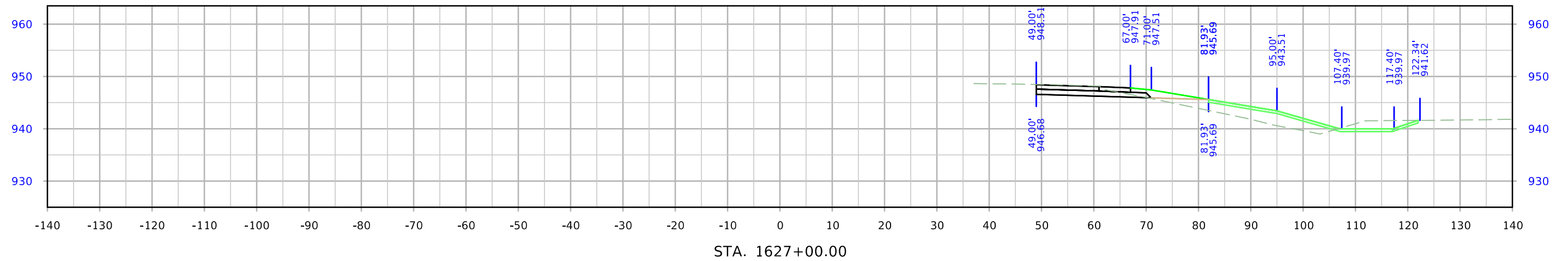
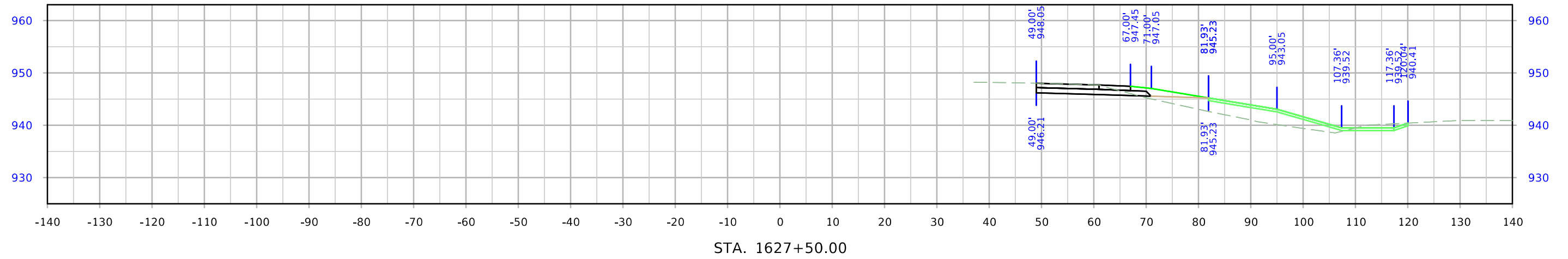


# I-80 Eastbound

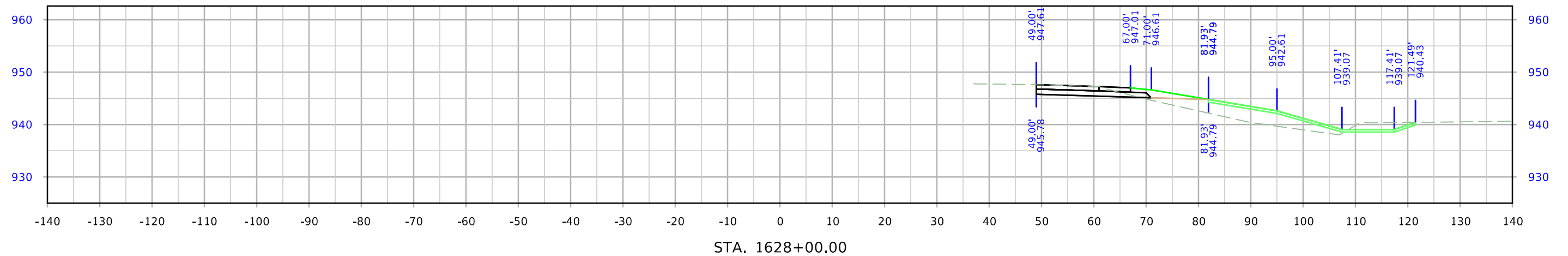
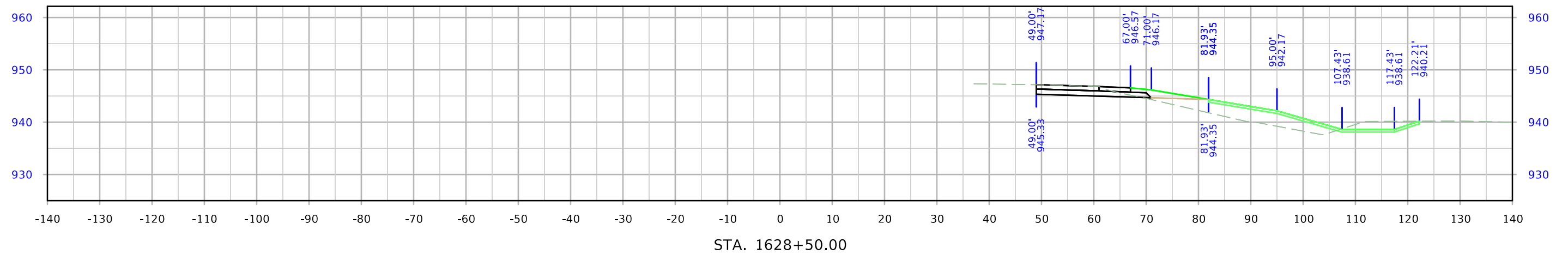
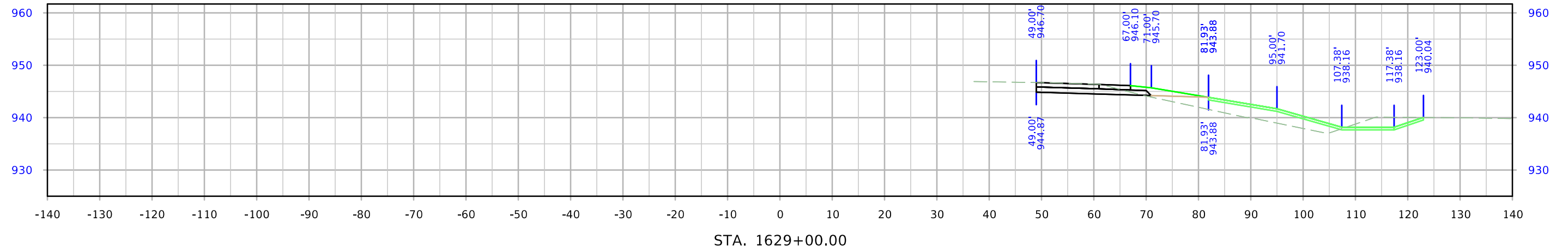




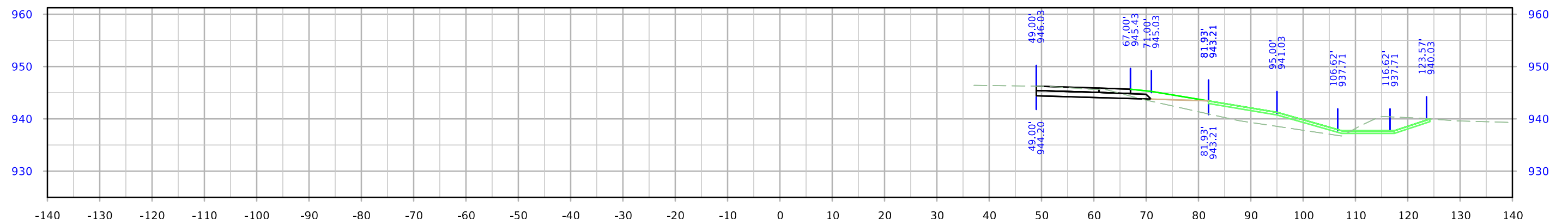
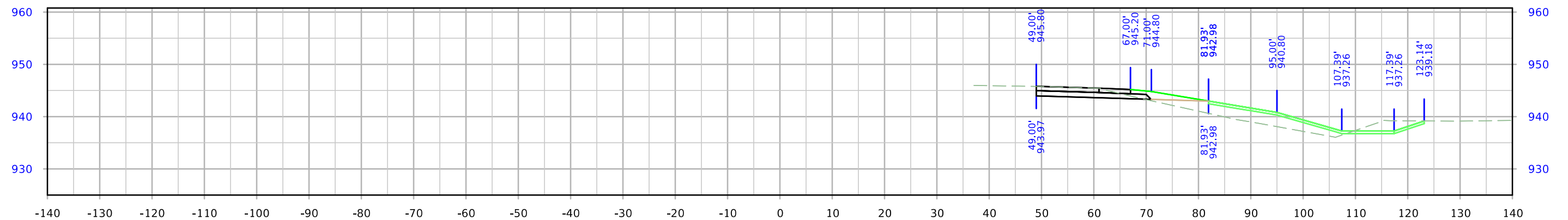
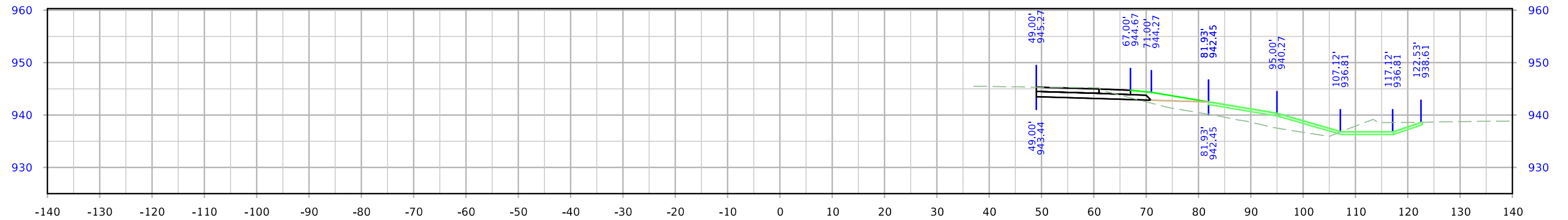
# I-80 Eastbound



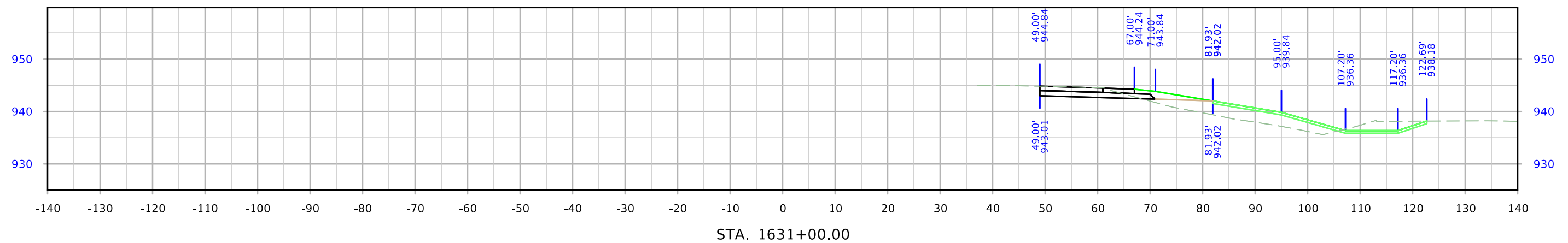
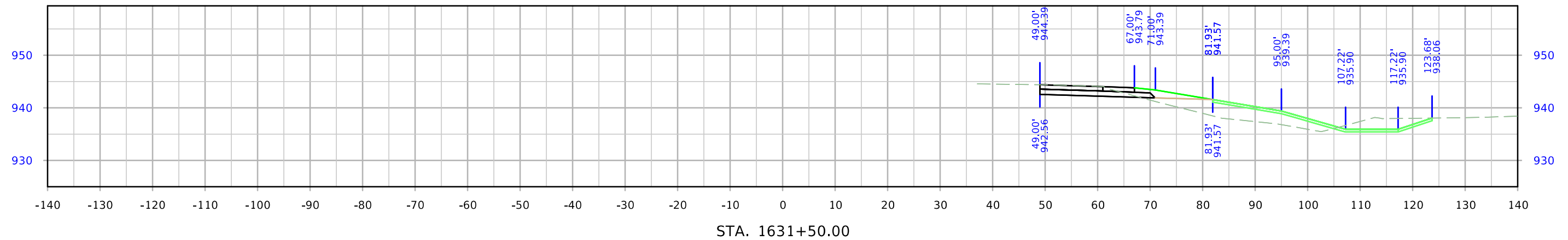
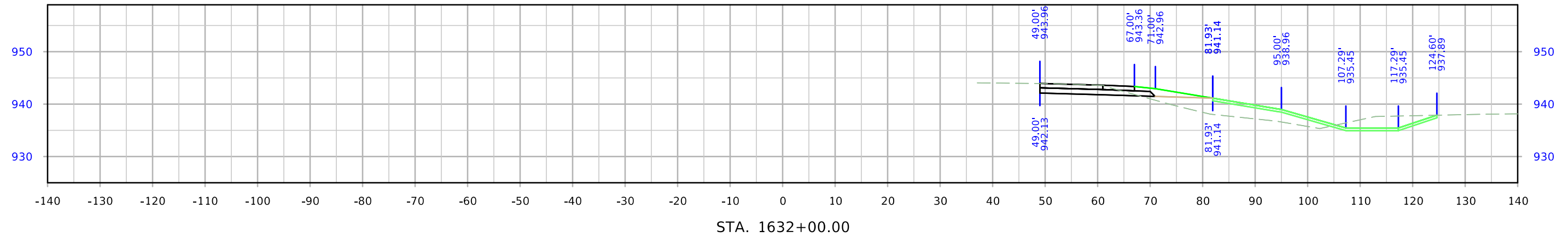
# I-80 Eastbound



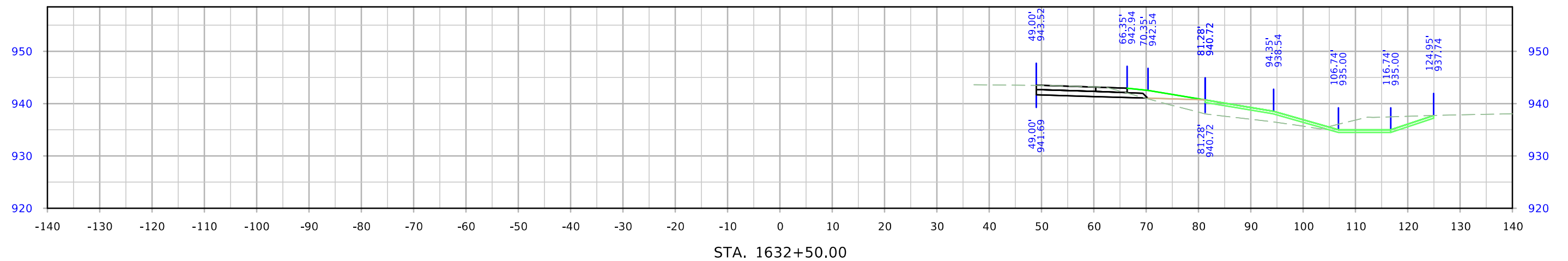
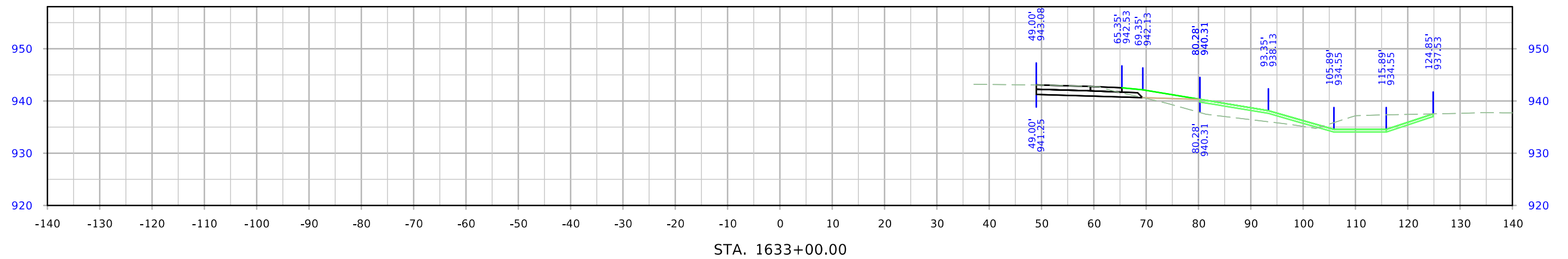
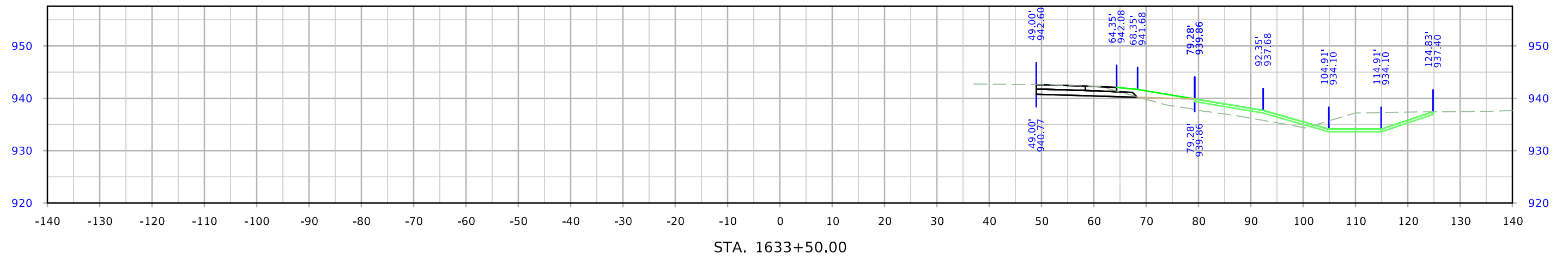
# I-80 Eastbound



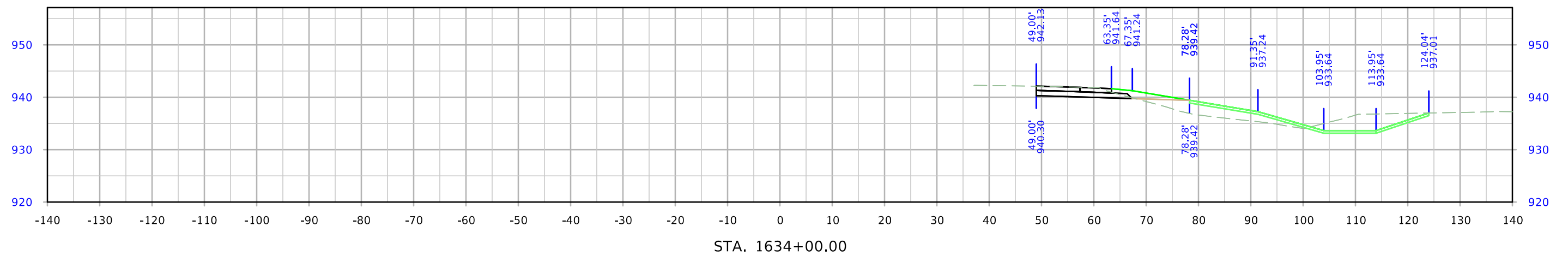
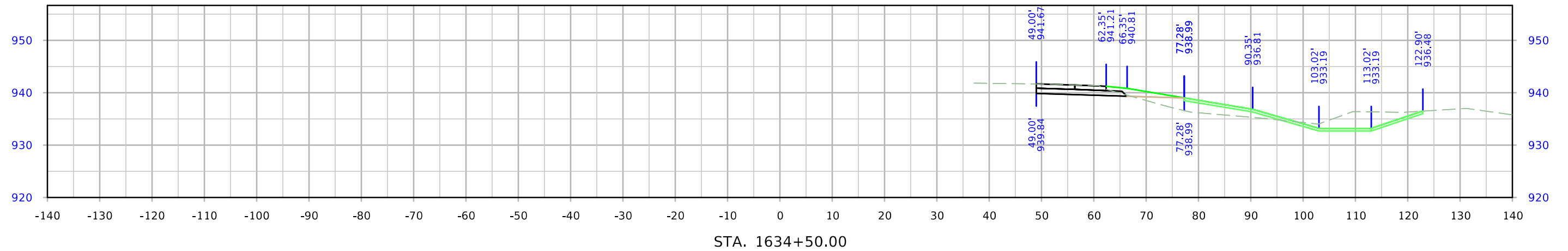
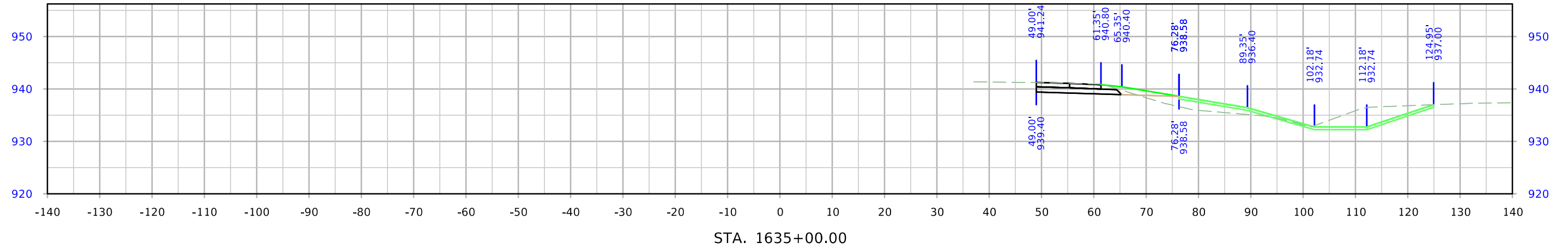
# I-80 Eastbound



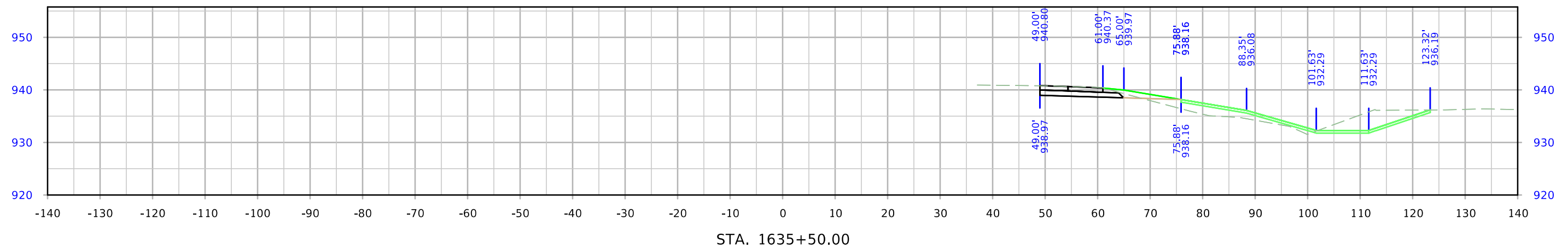
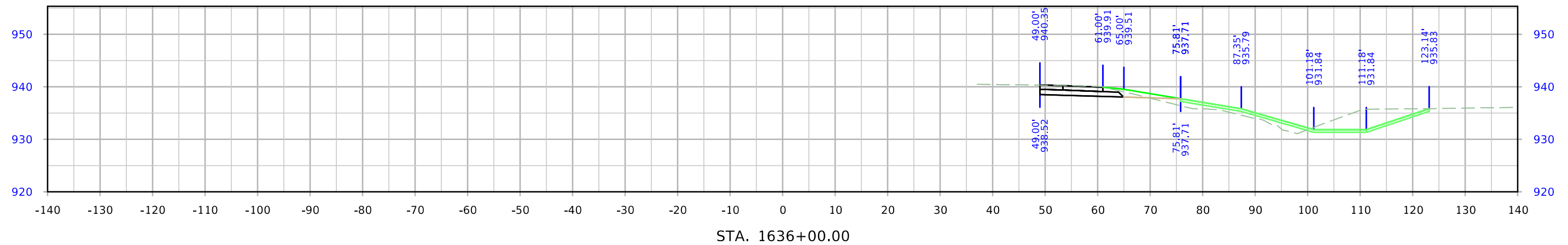
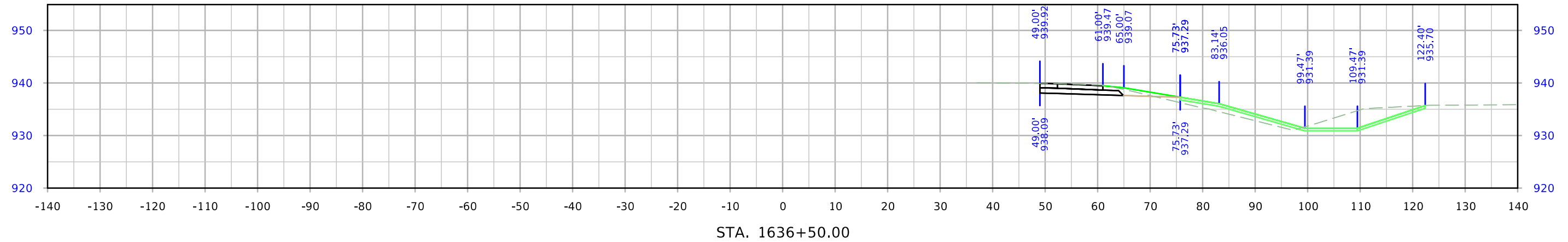
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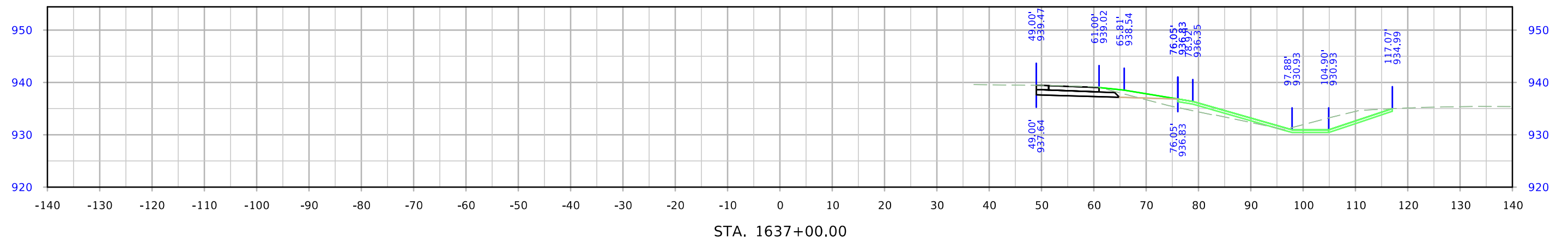
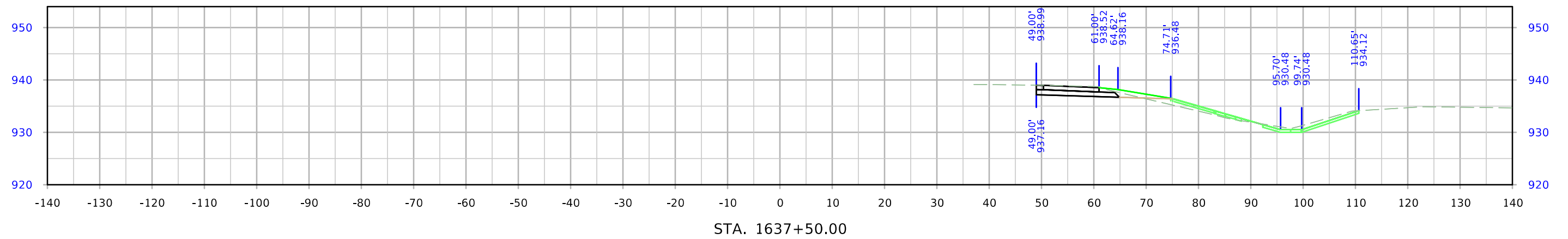
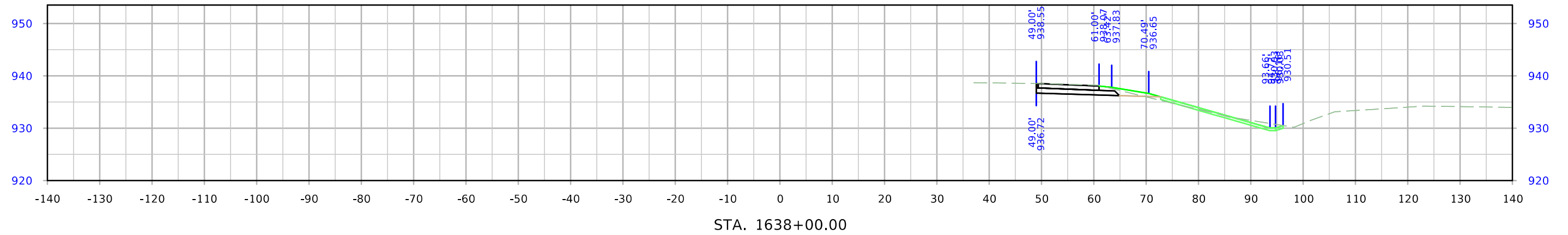
# I-80 Eastbound



# I-80 Eastbound

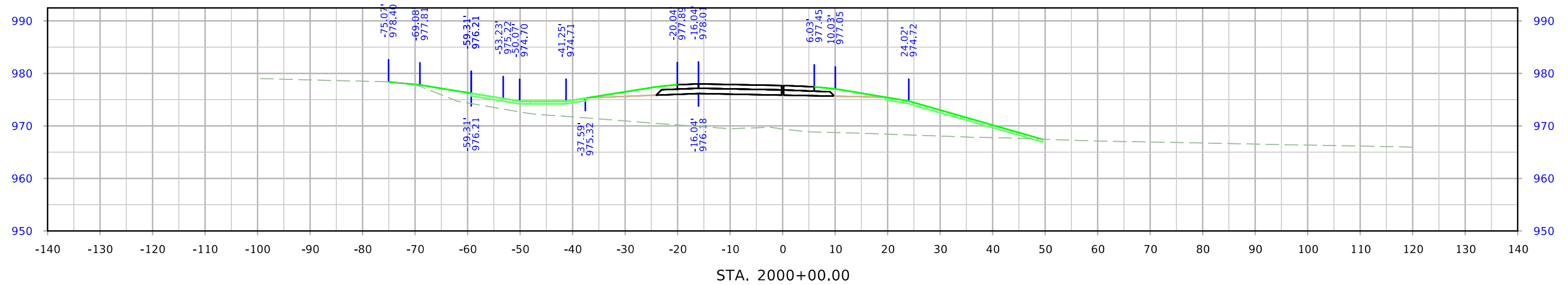
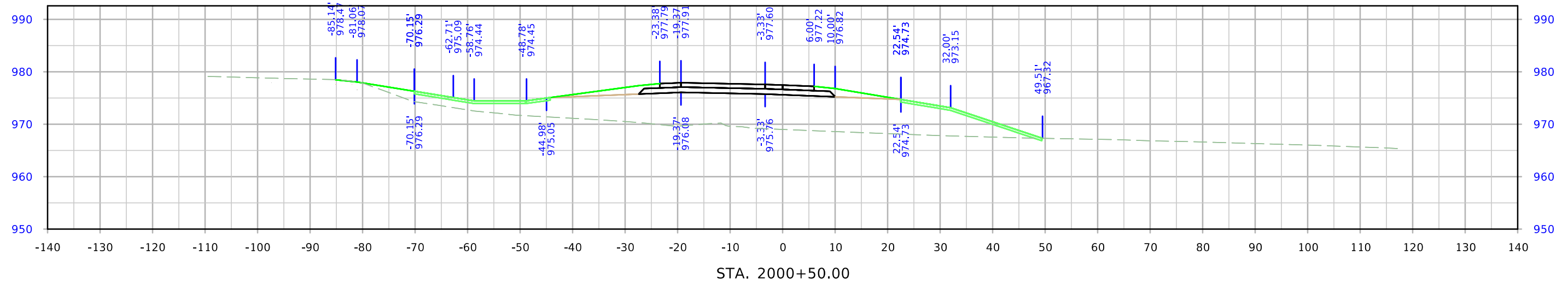
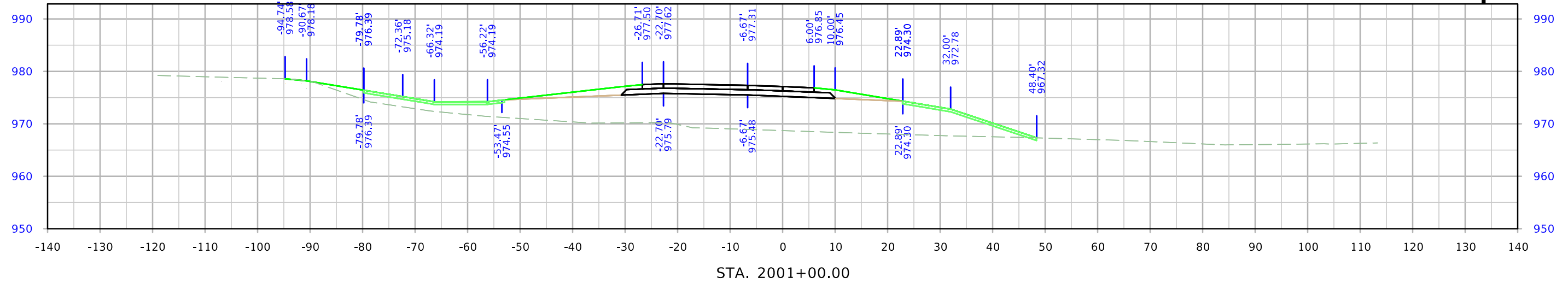


# I-80 Eastbound

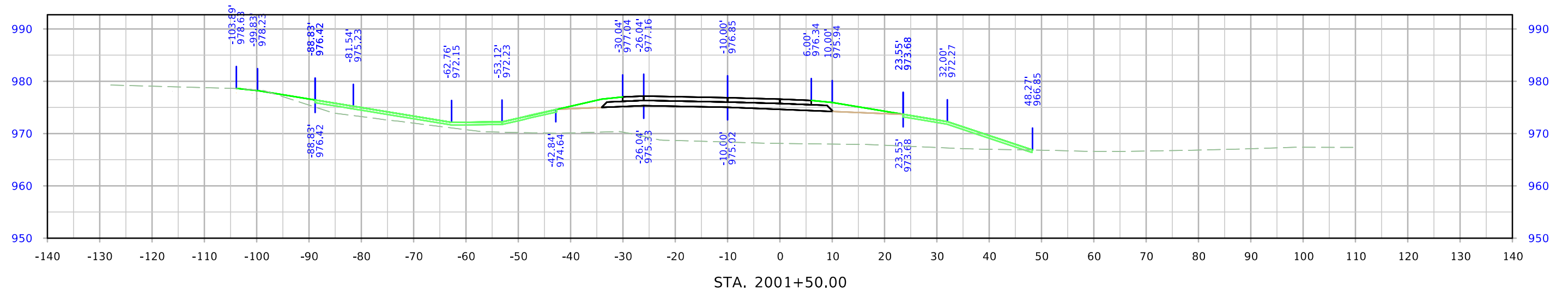
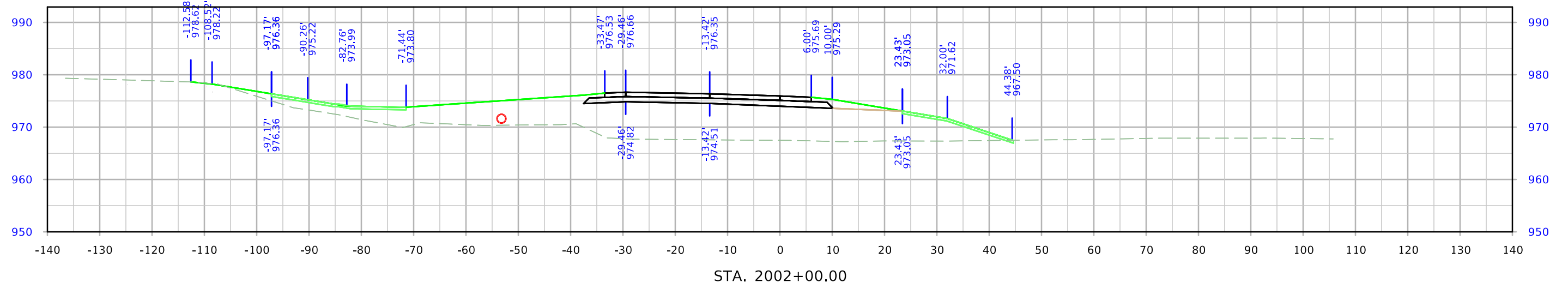
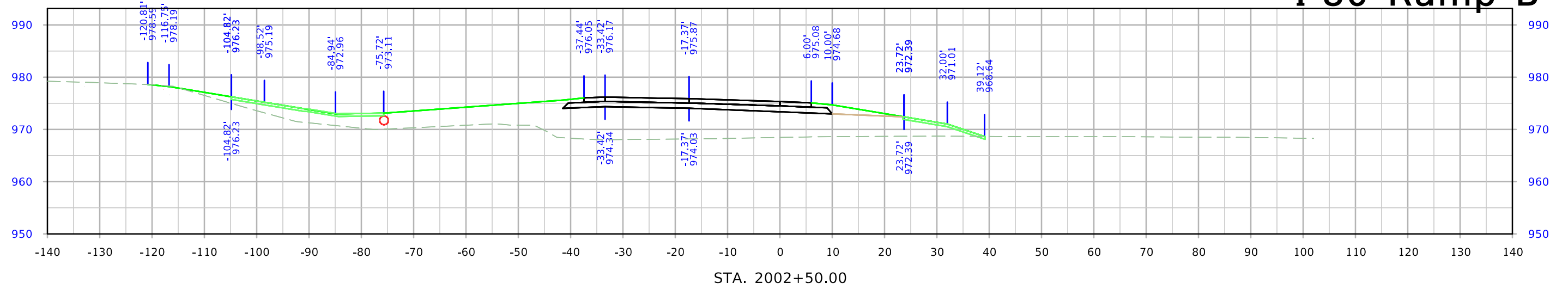




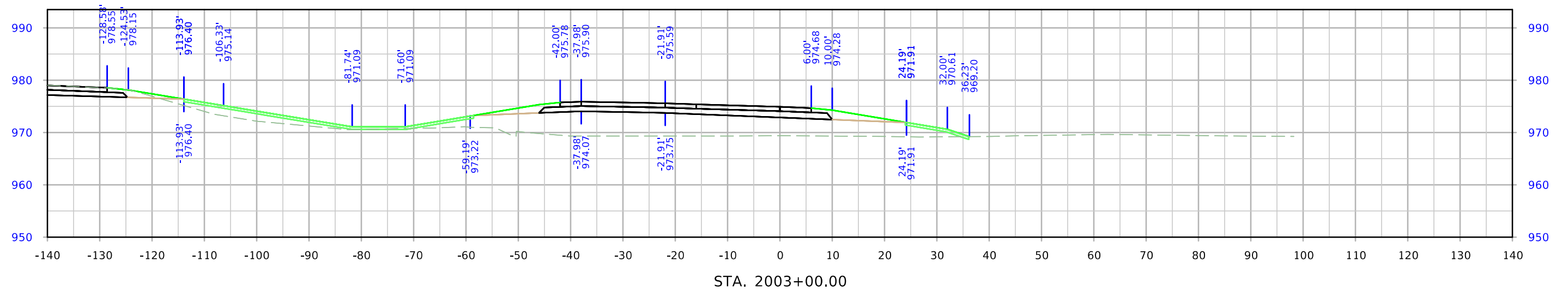
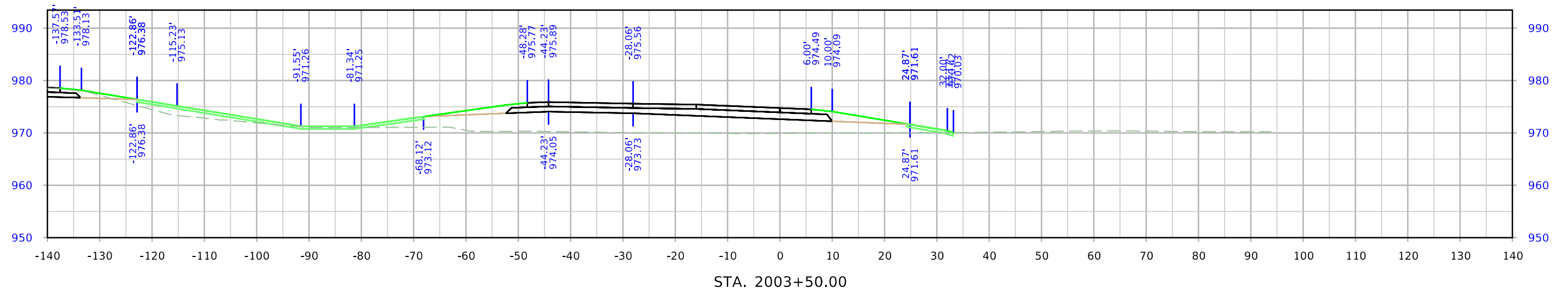
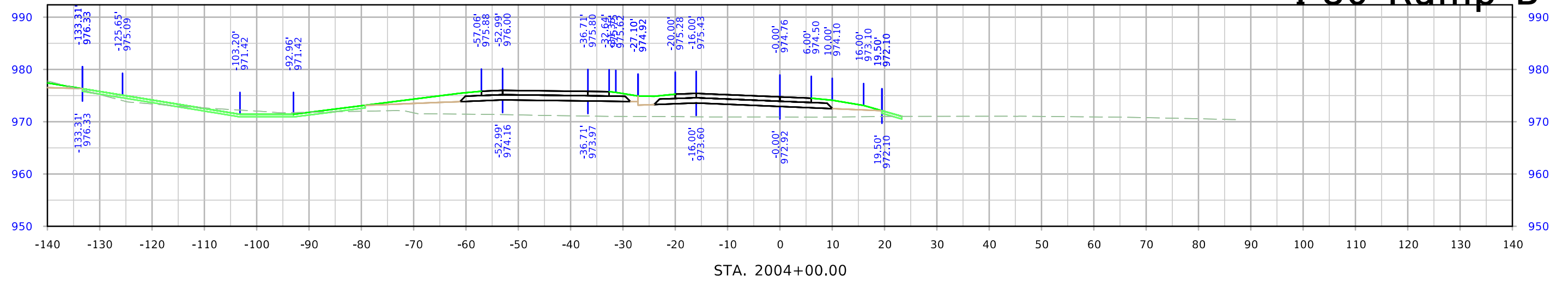
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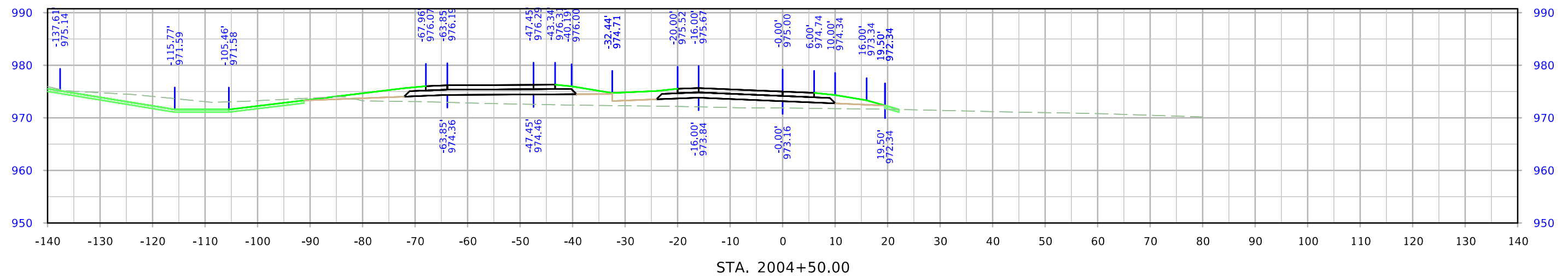
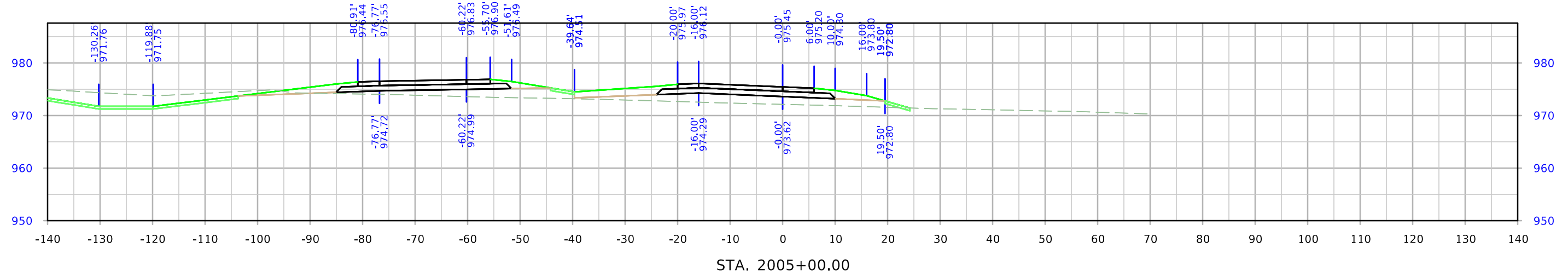
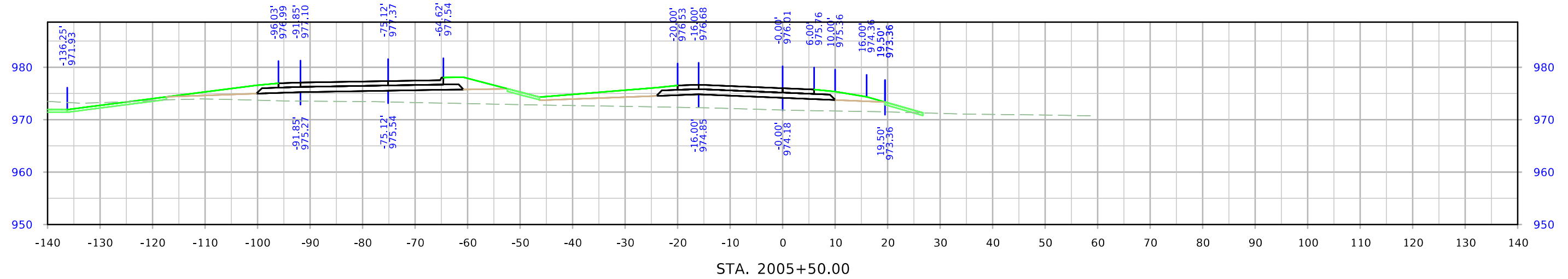
# I-80 Ramp B



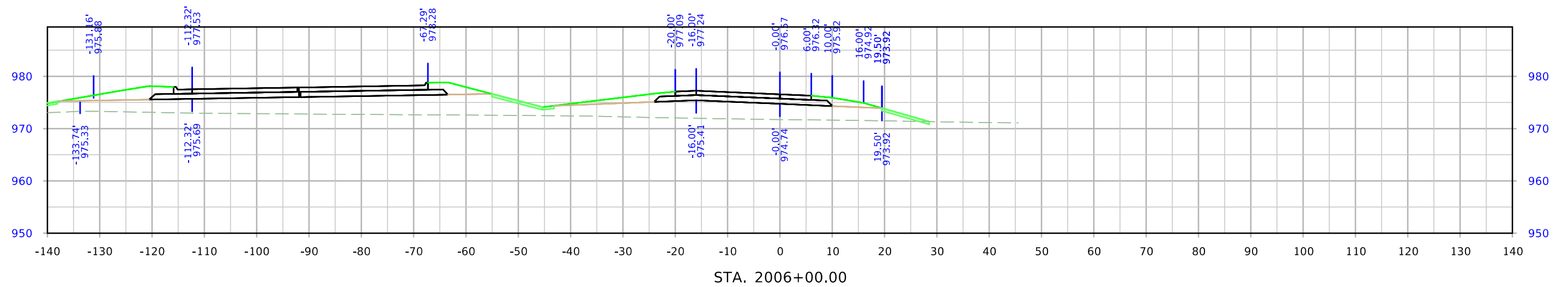
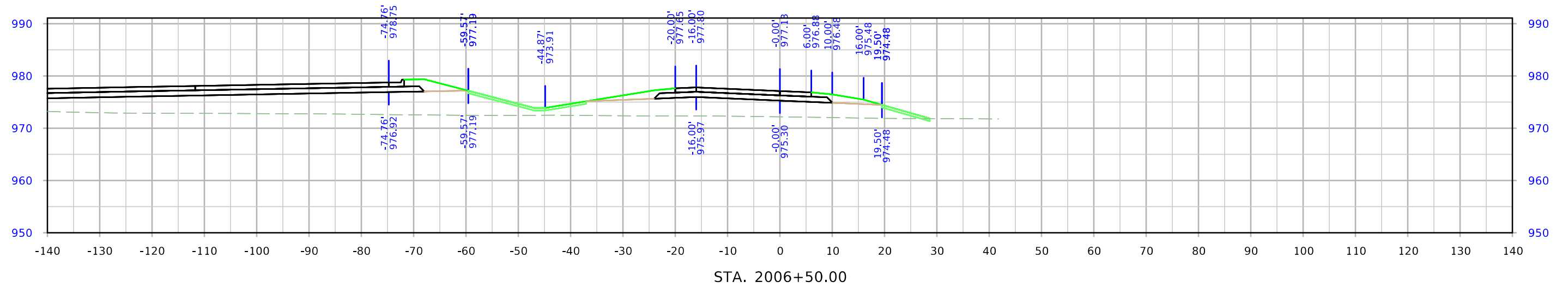
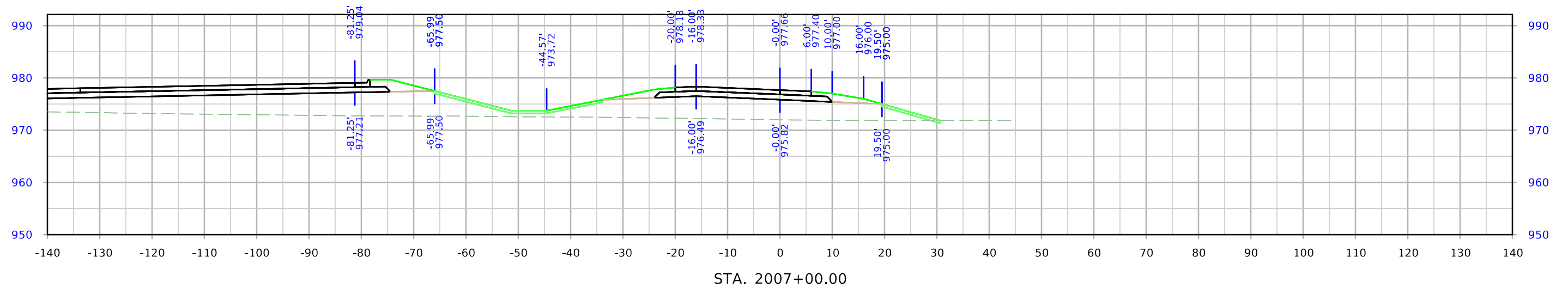
# I-80 Ramp B



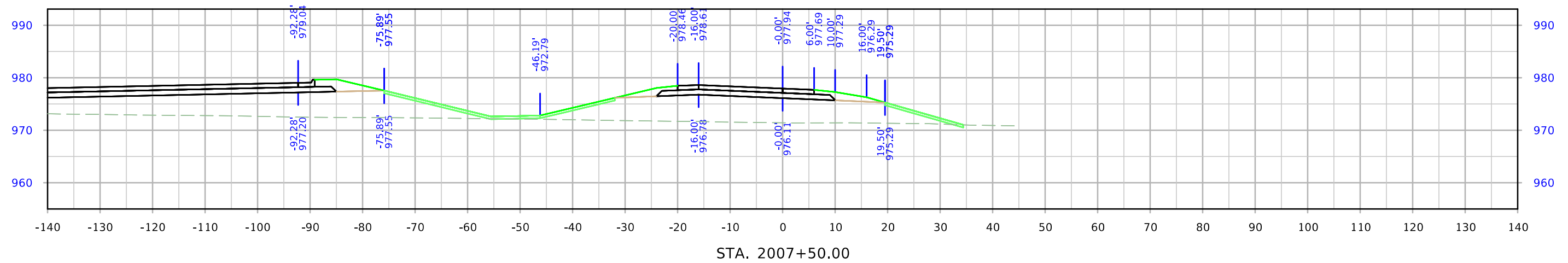
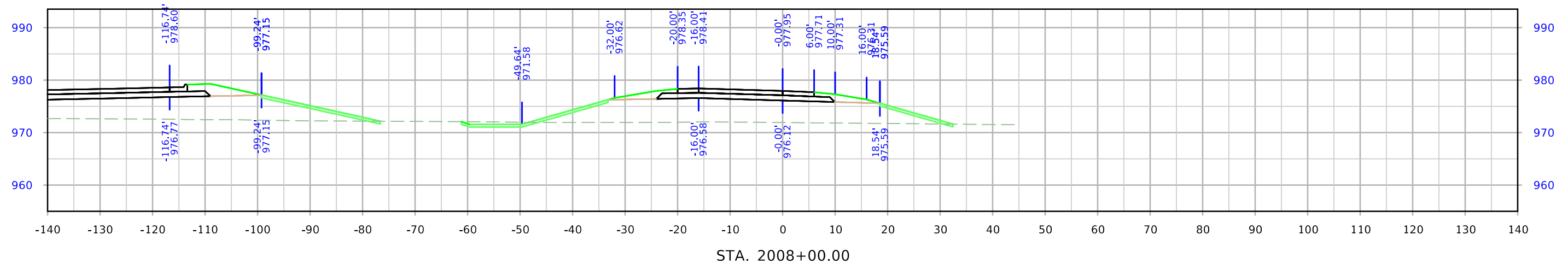
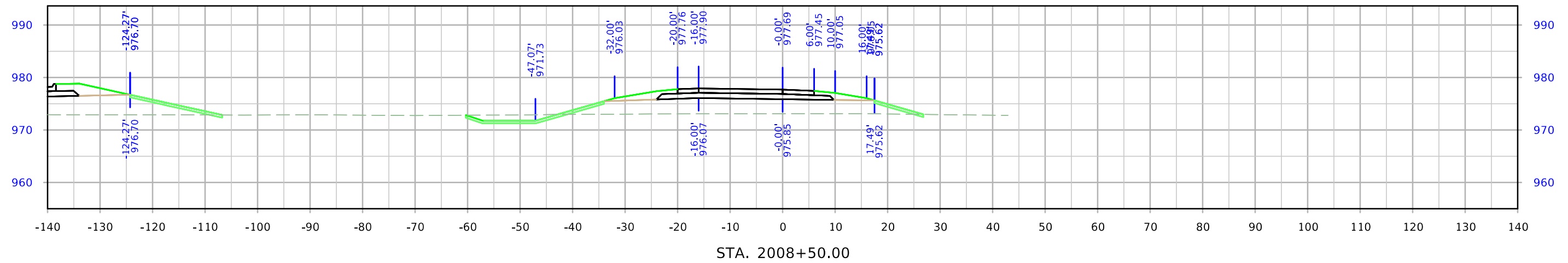
# I-80 Ramp B



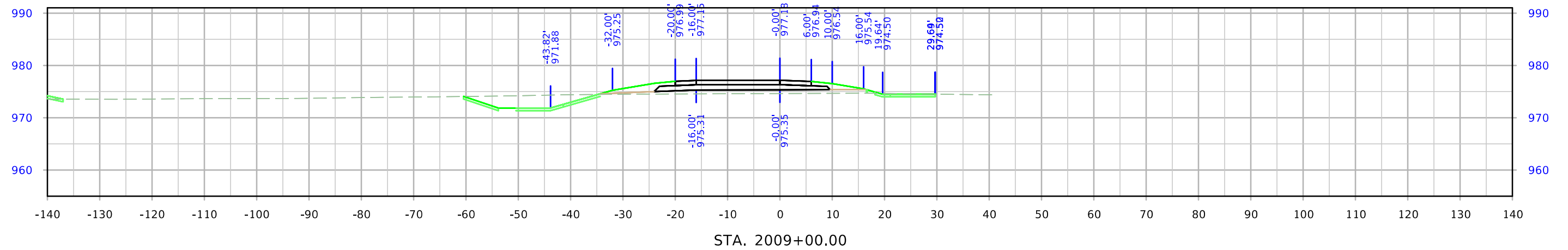
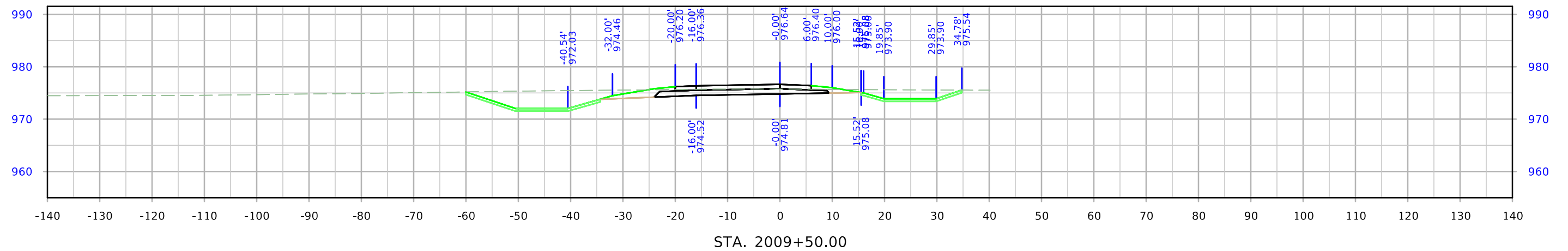
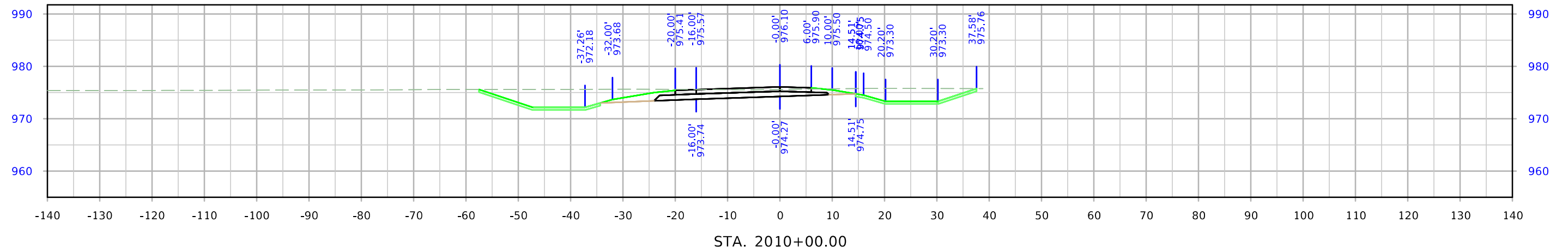
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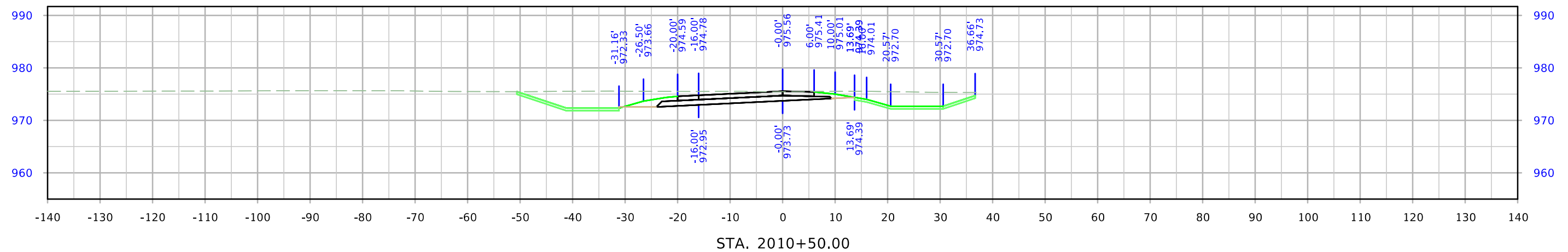
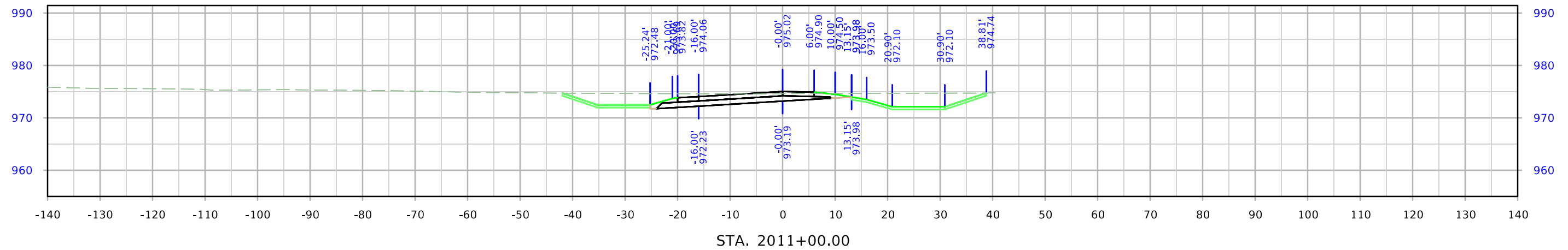
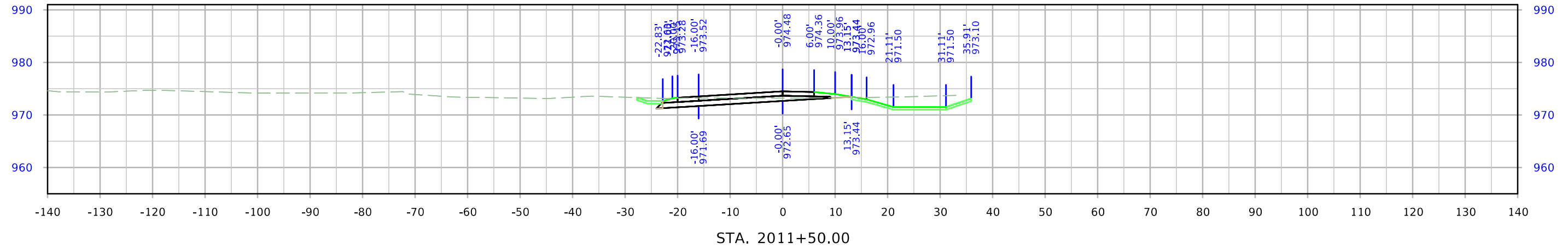
# I-80 Ramp B



# I-80 Ramp B

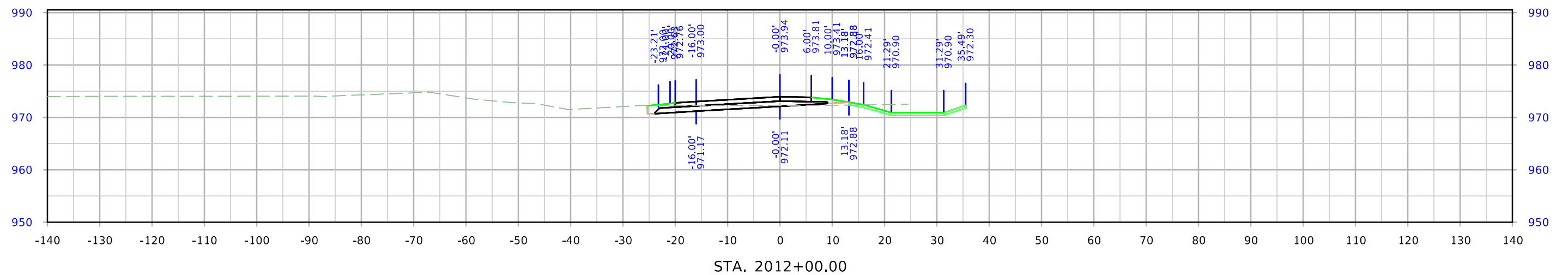
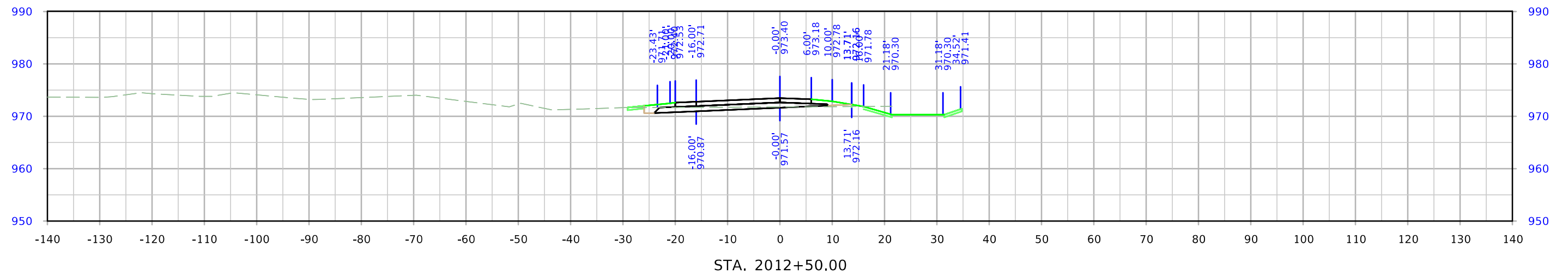
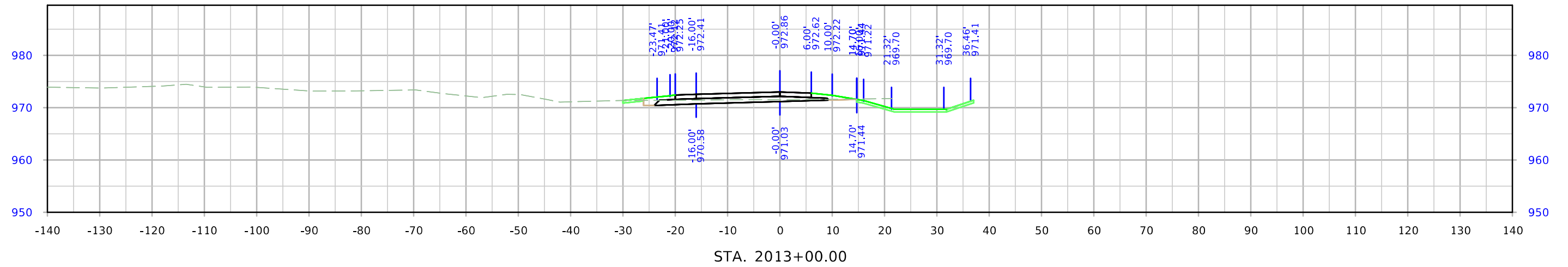


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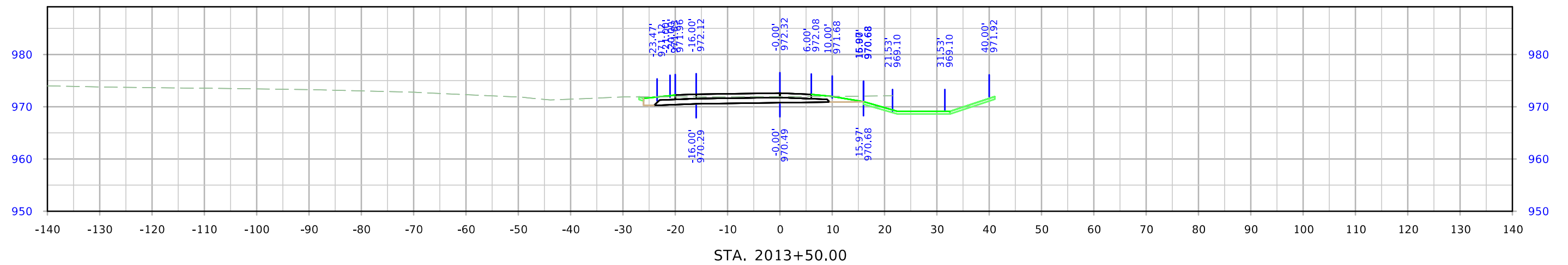
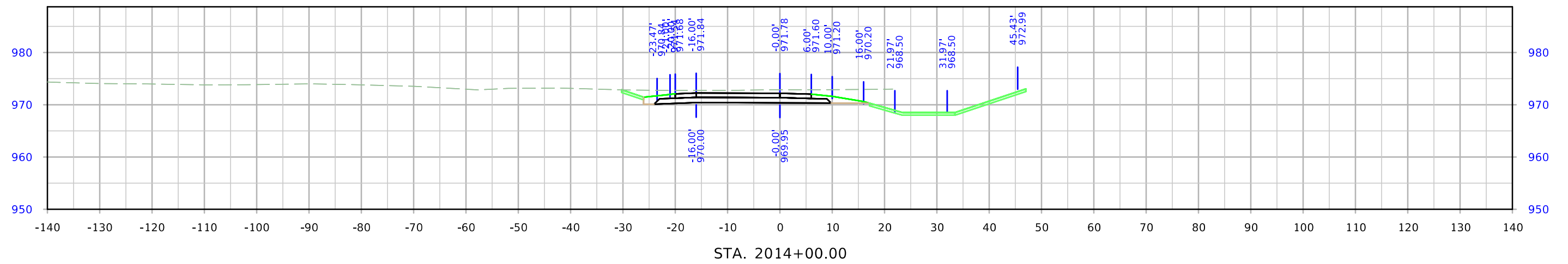
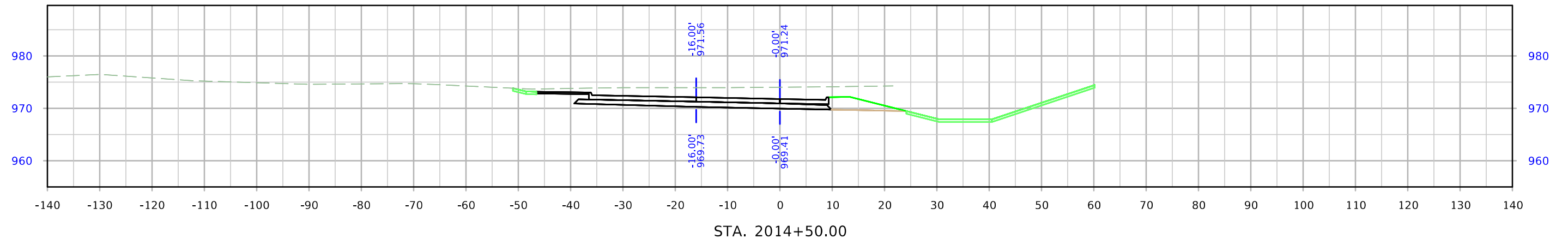




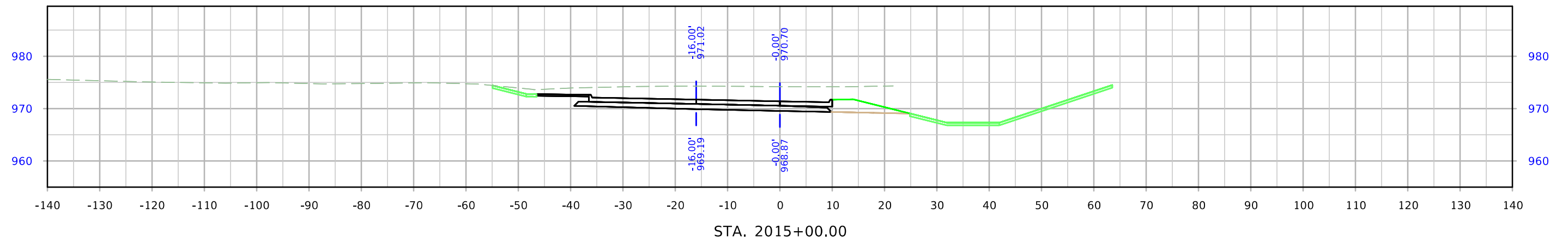
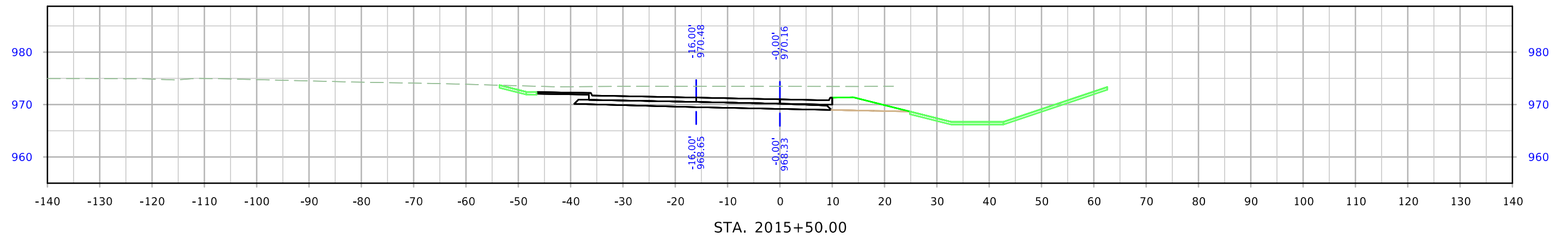
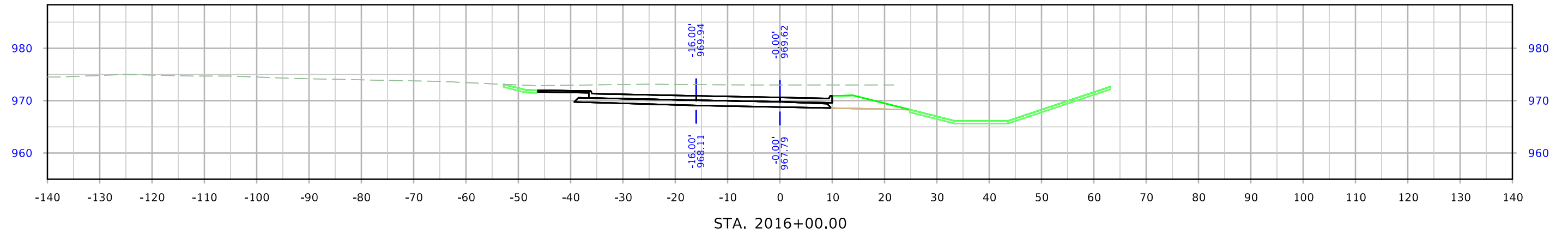
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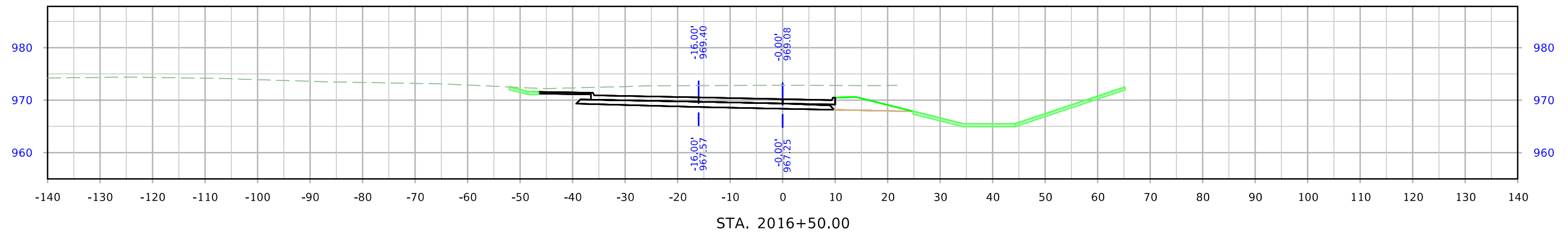
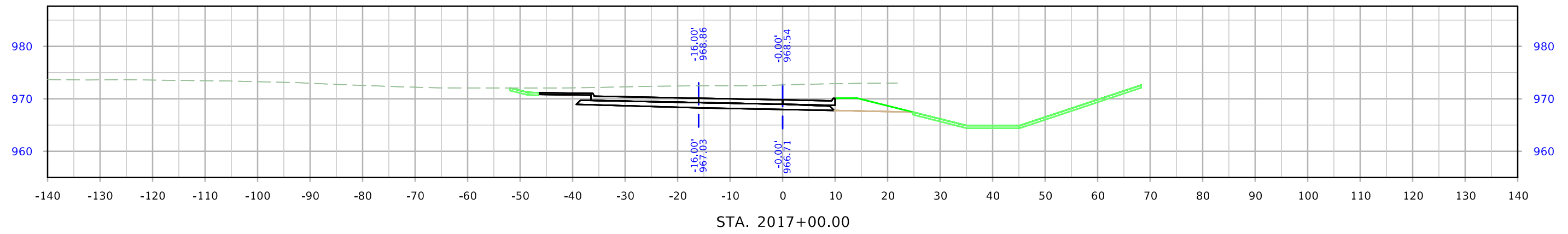
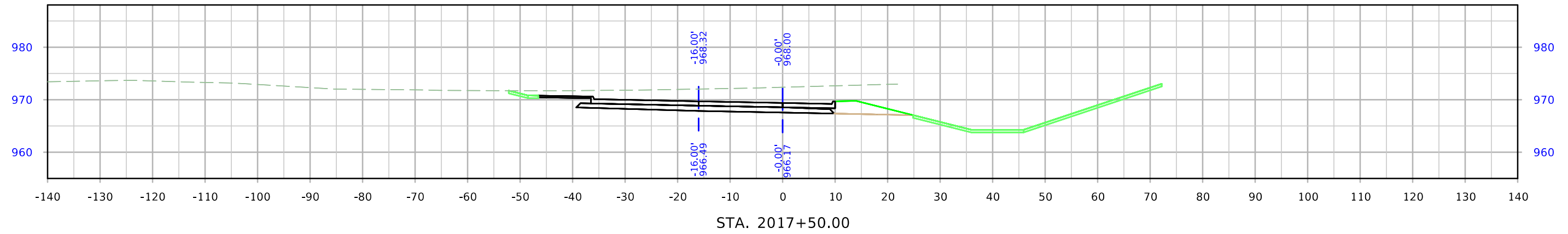
# I-80 Ramp B



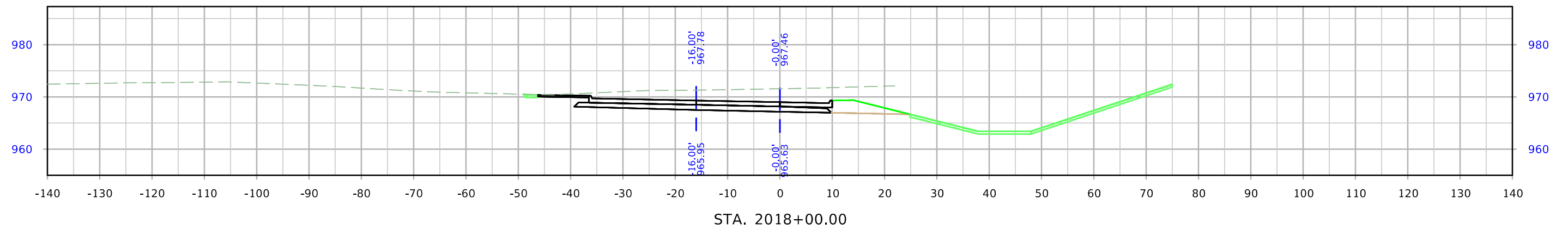
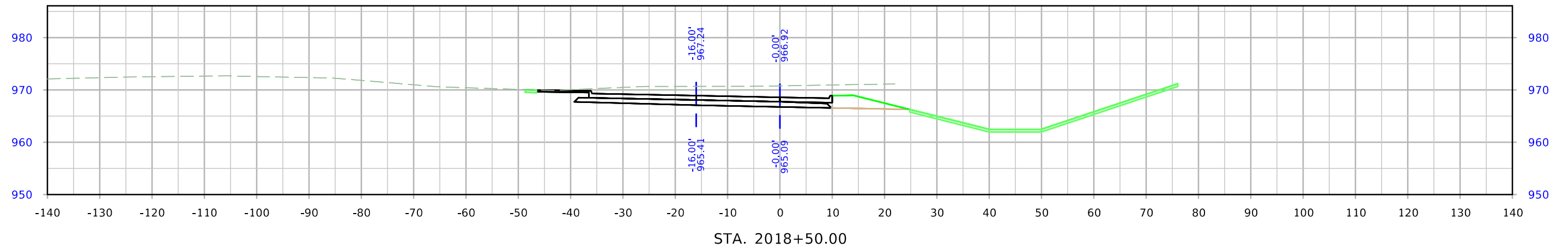
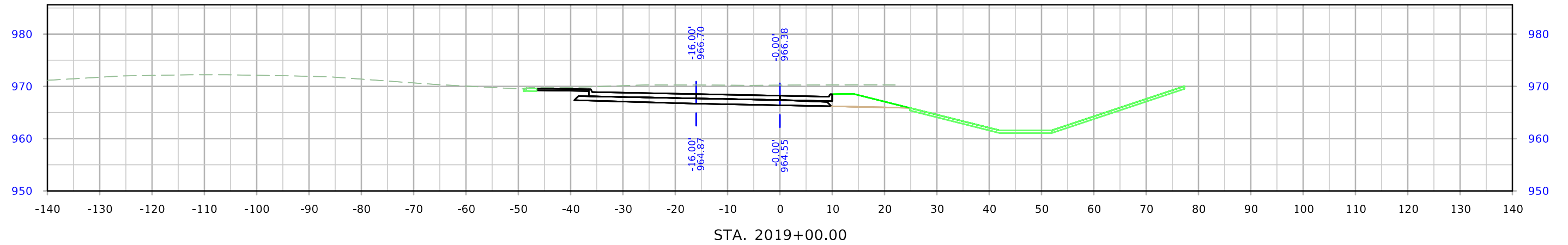
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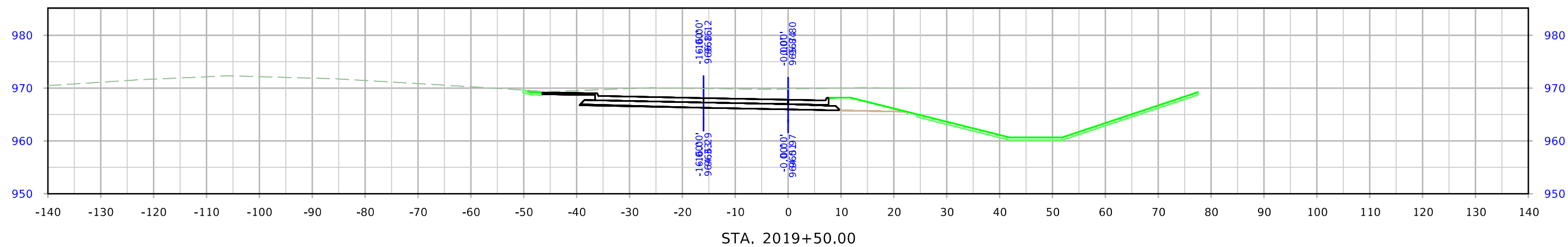
# I-80 Ramp B



# I-80 Ramp B

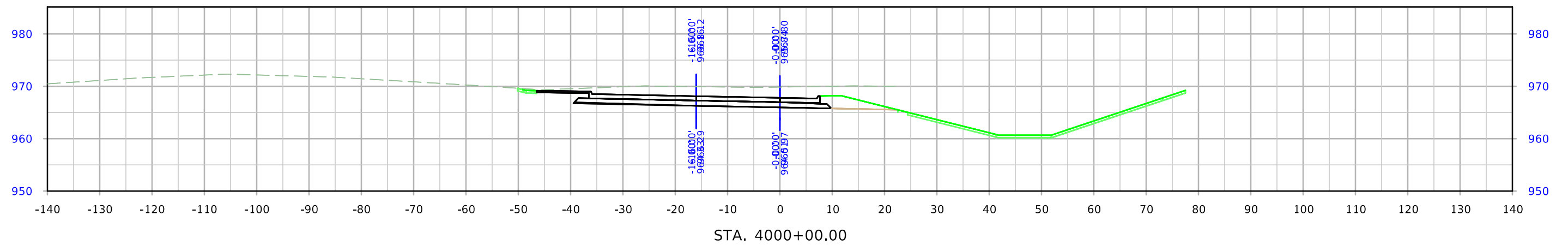
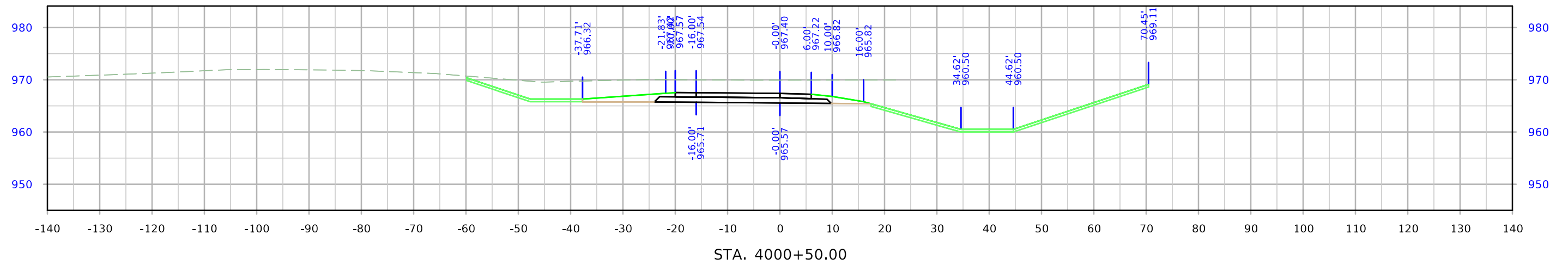
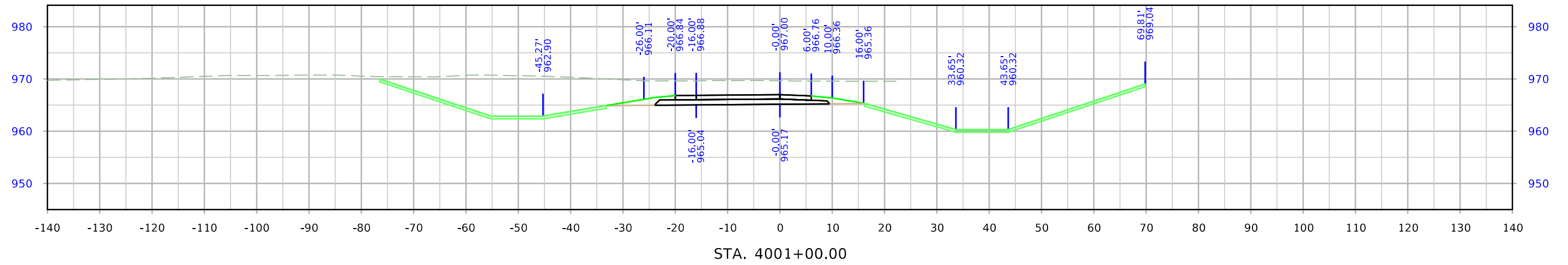


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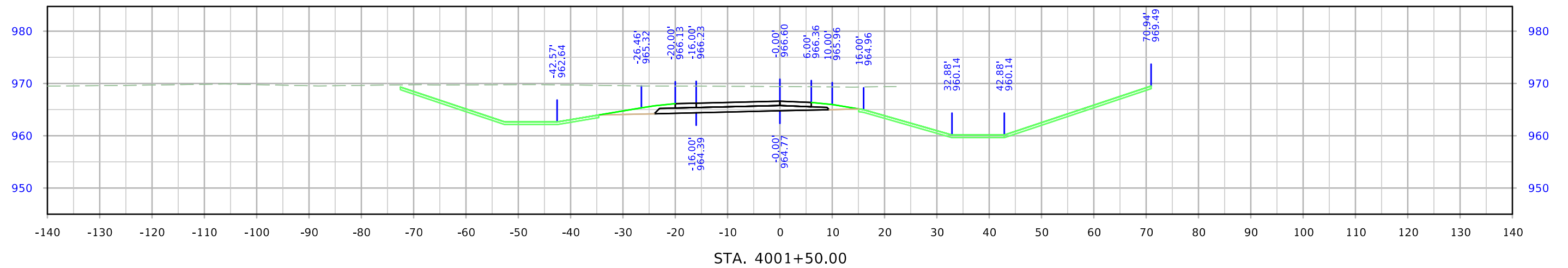
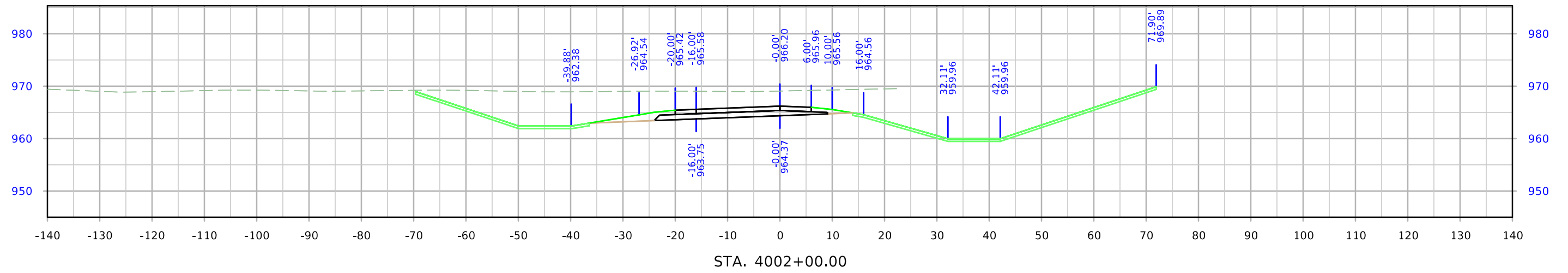
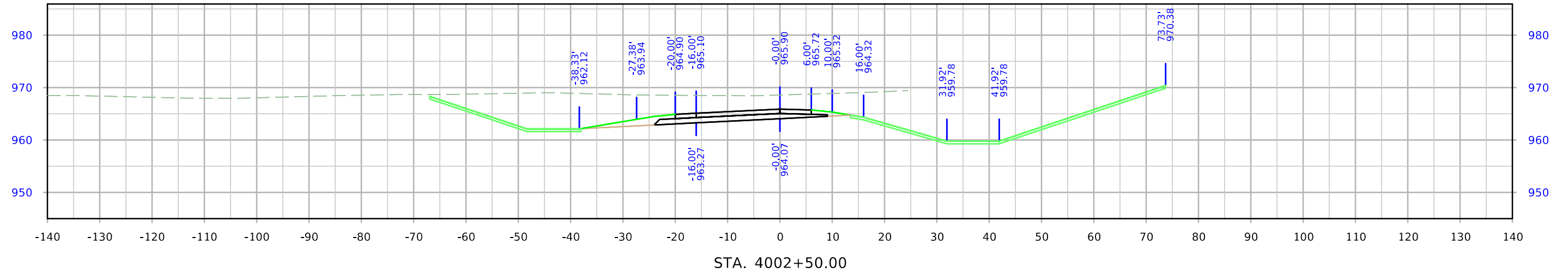


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# I-80 Ramp D

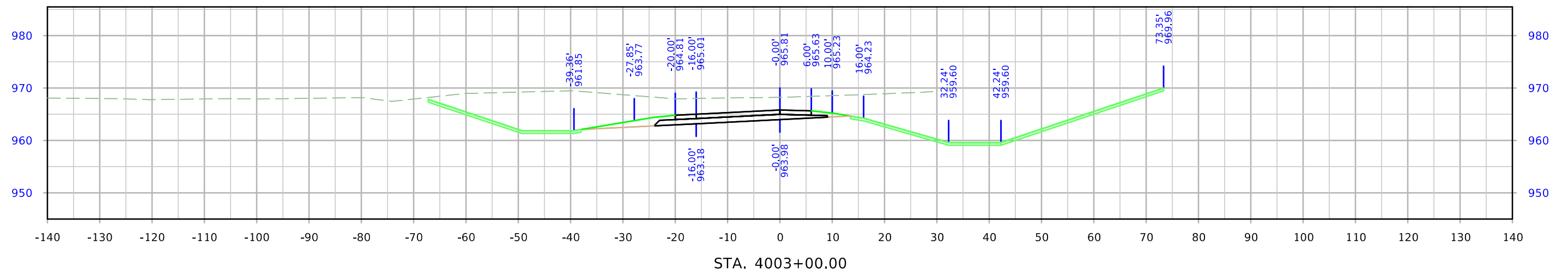
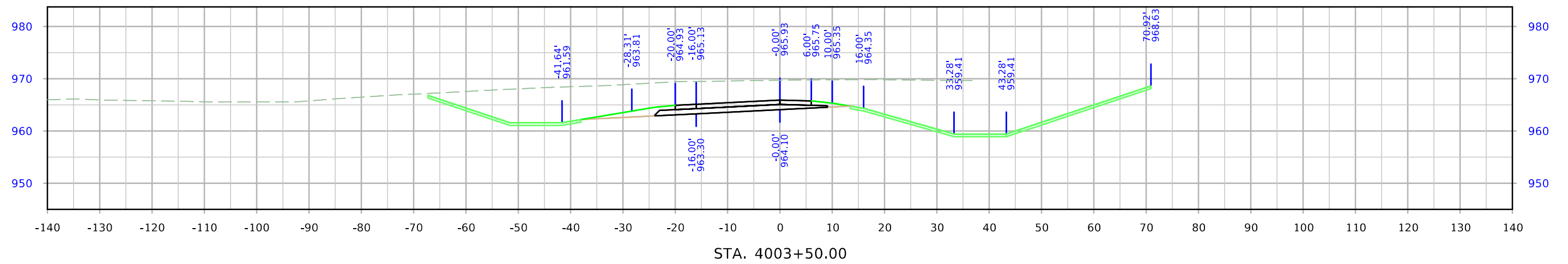
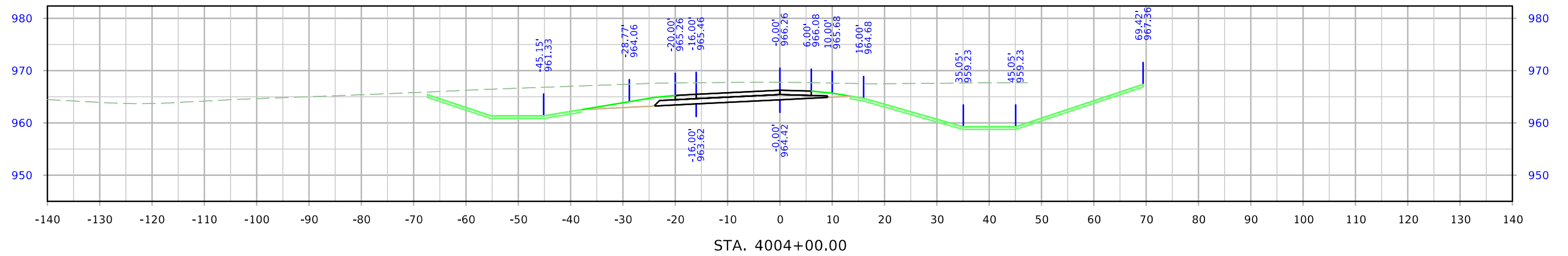


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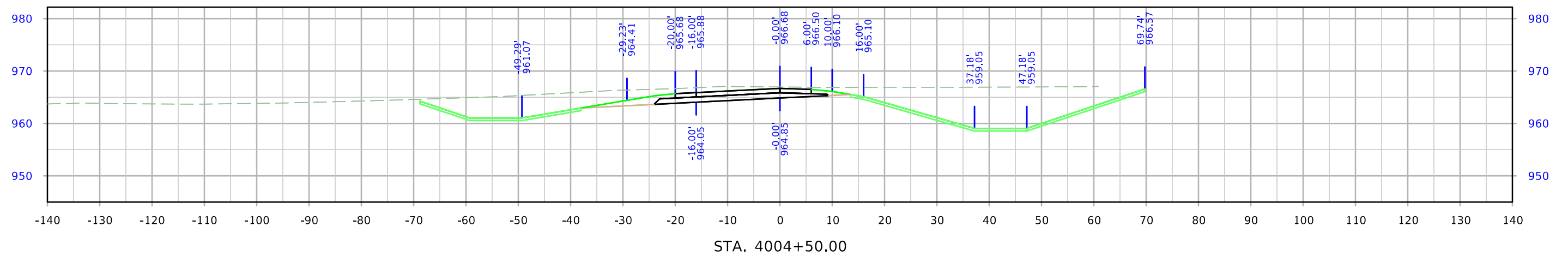
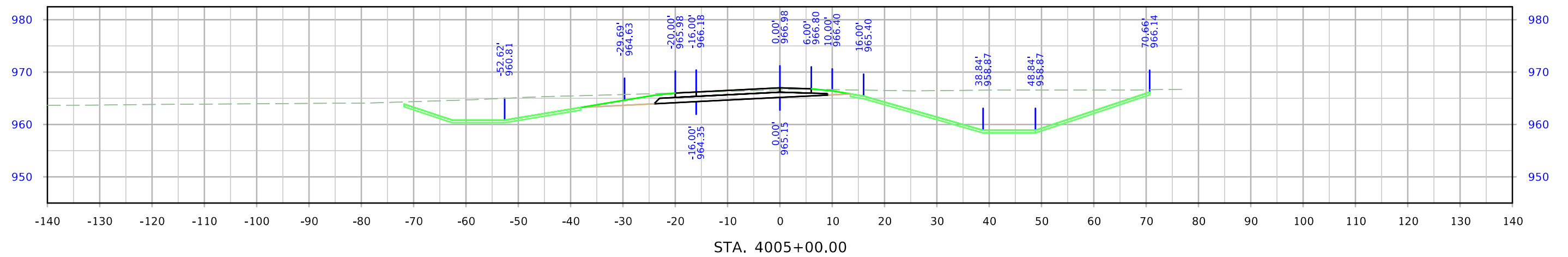
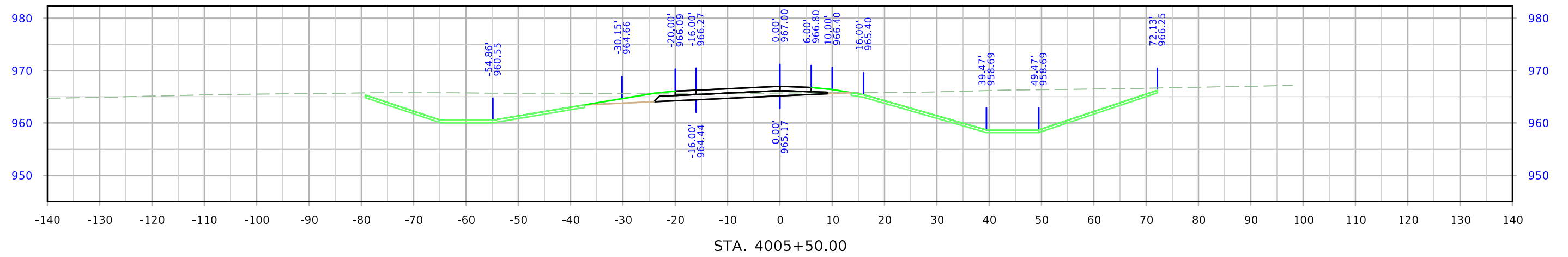




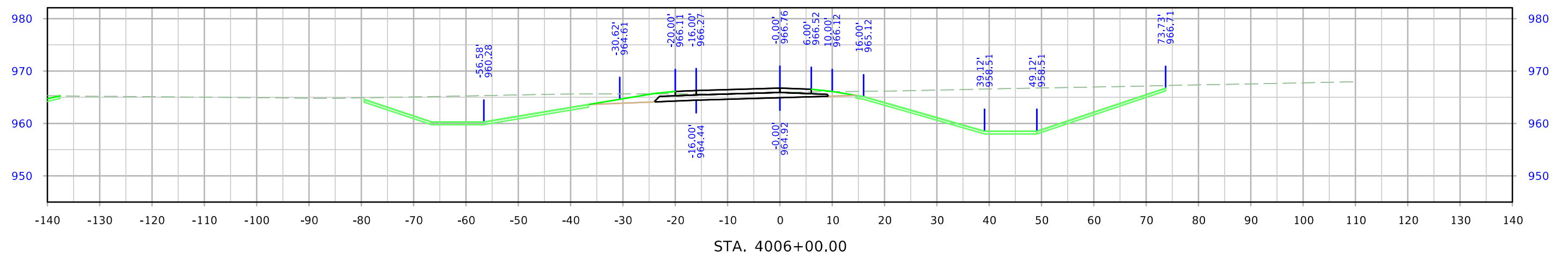
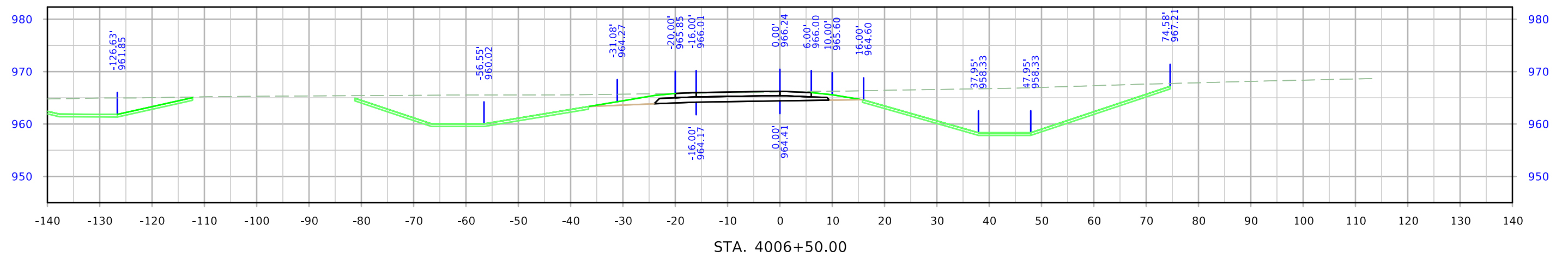
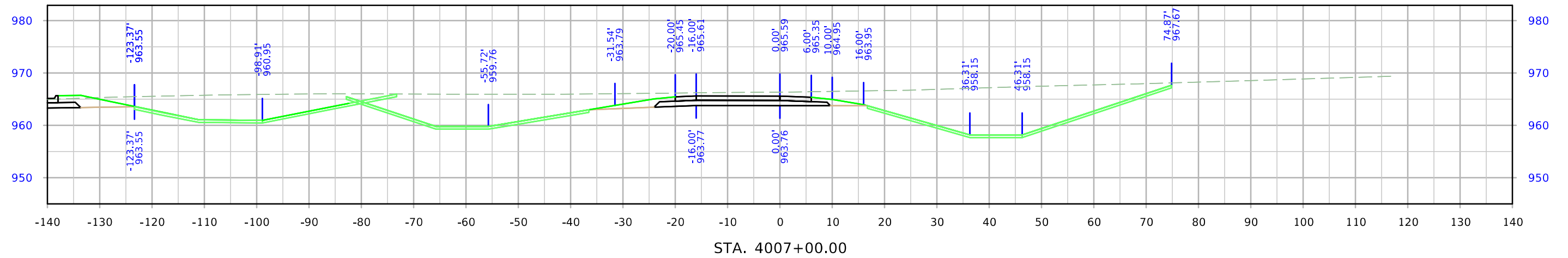
# I-80 Ramp D



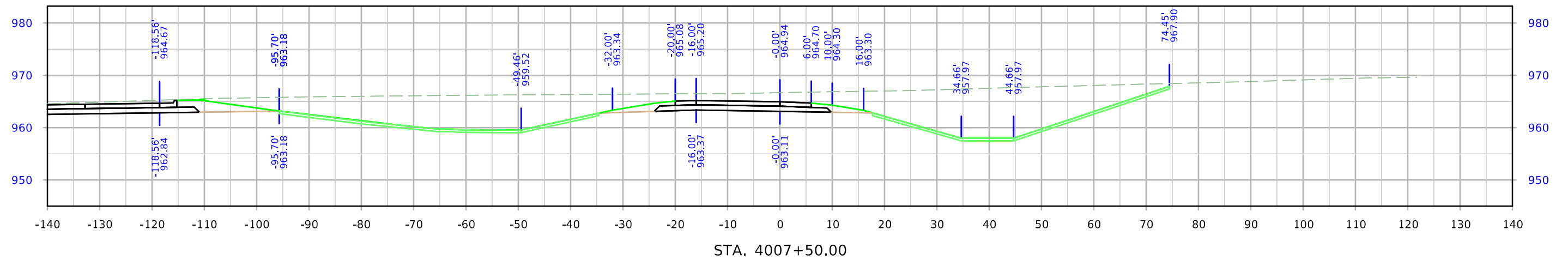
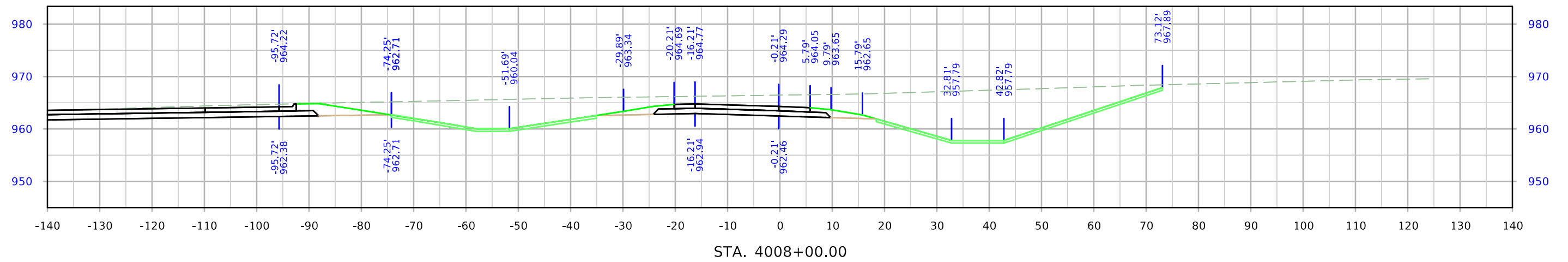
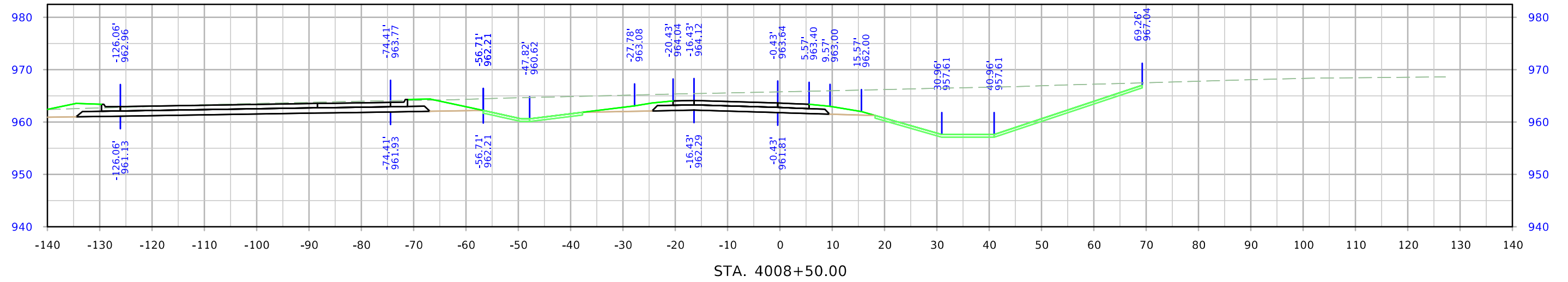
# I-80 Ramp D



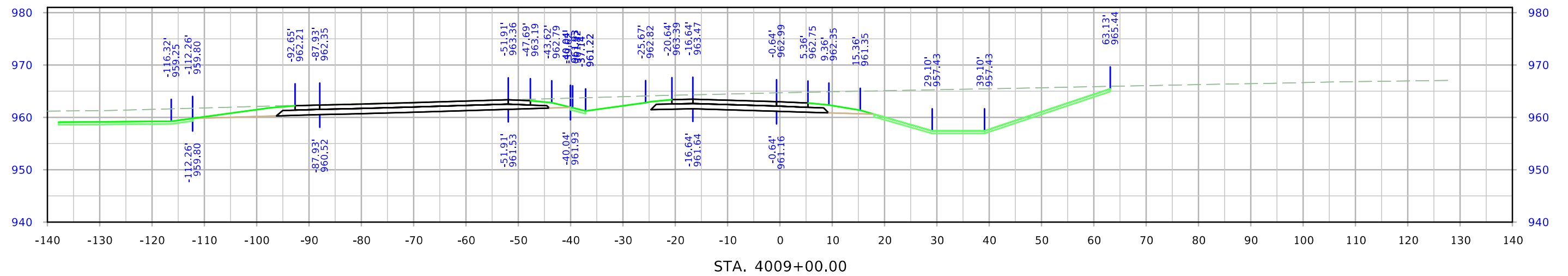
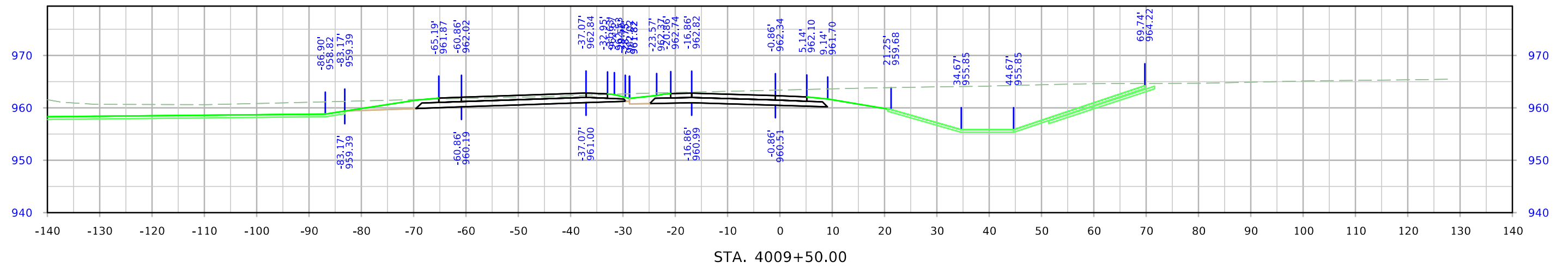
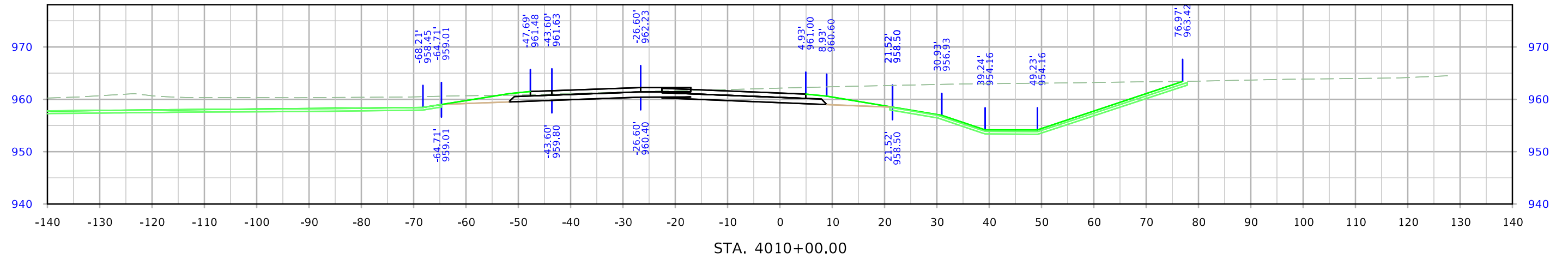
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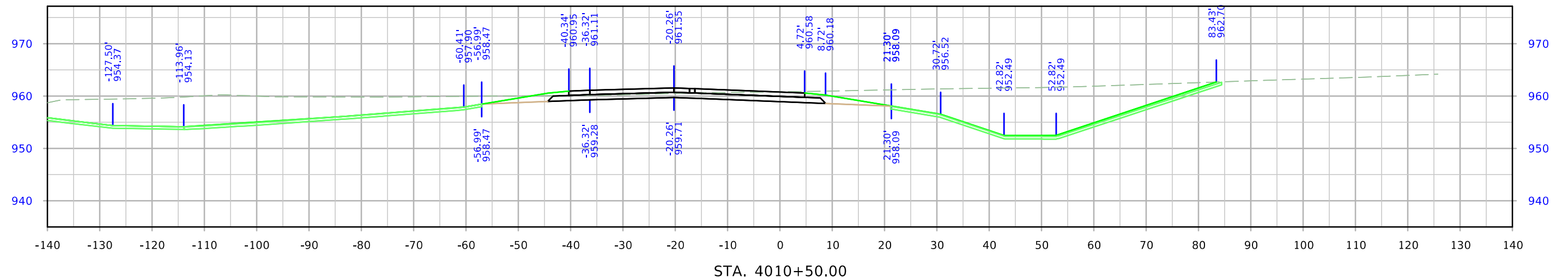
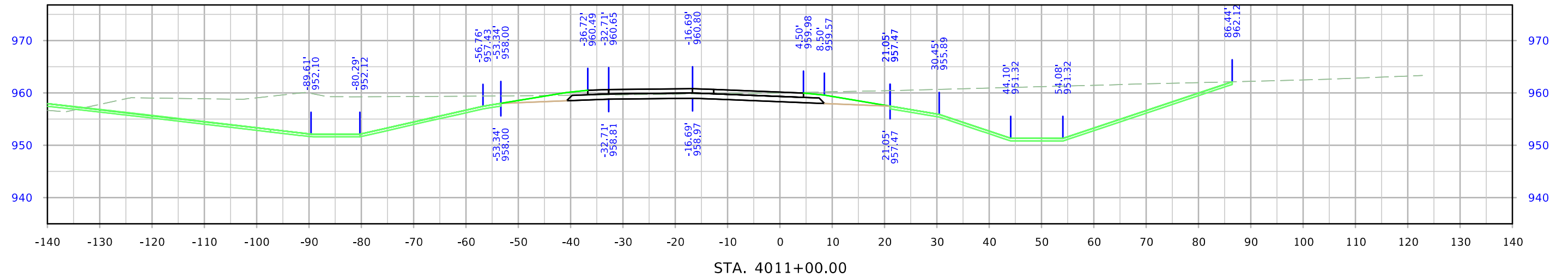
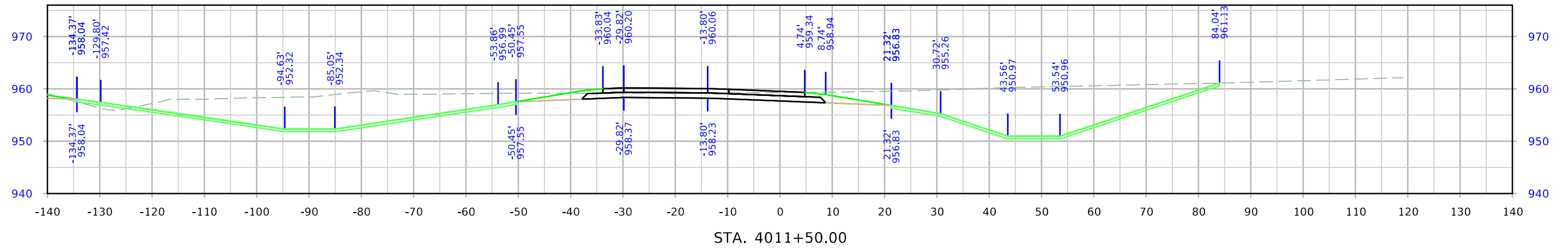
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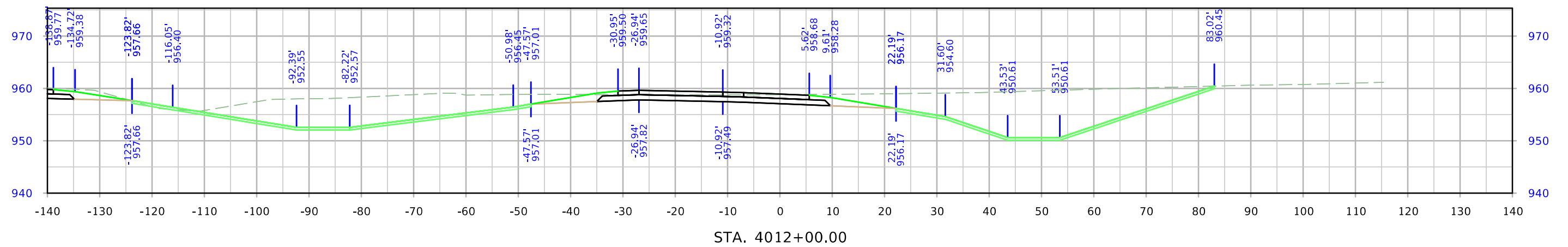
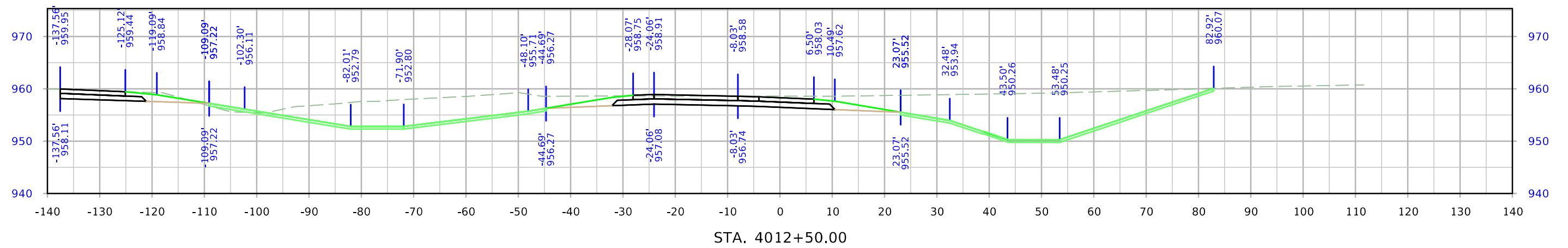
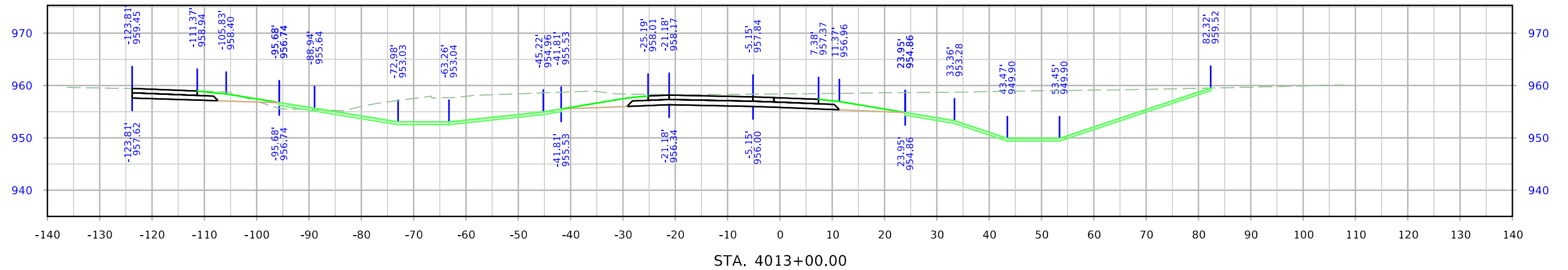
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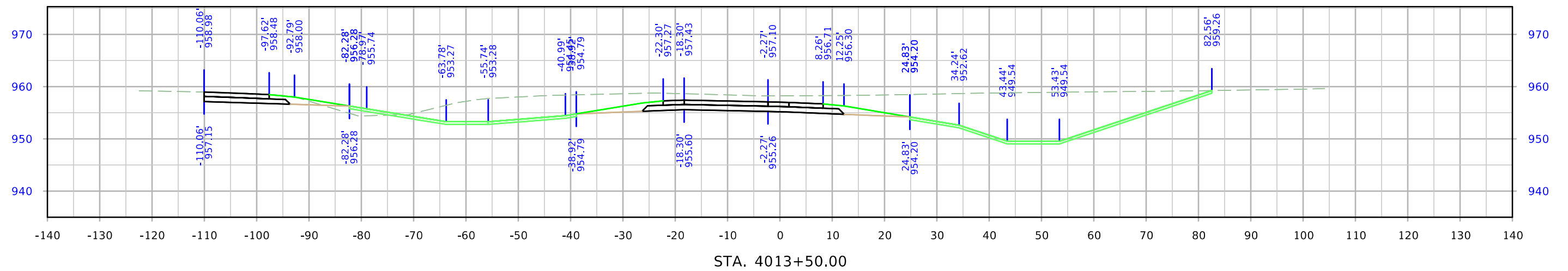
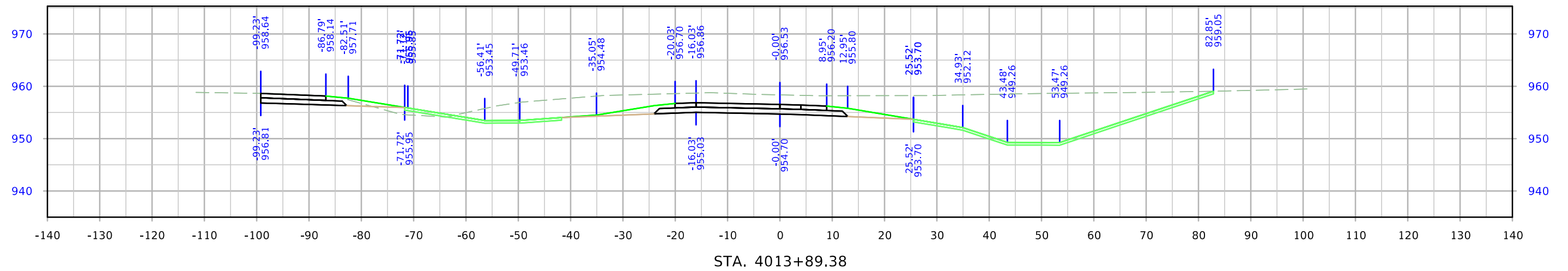
# I-80 Ramp D



# I-80 Ramp D

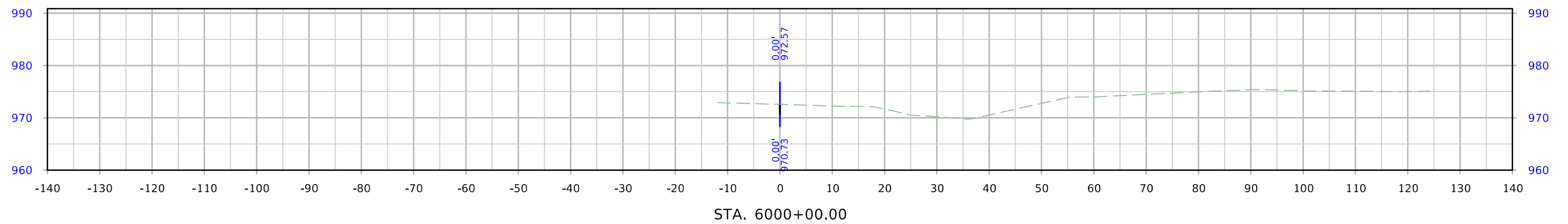
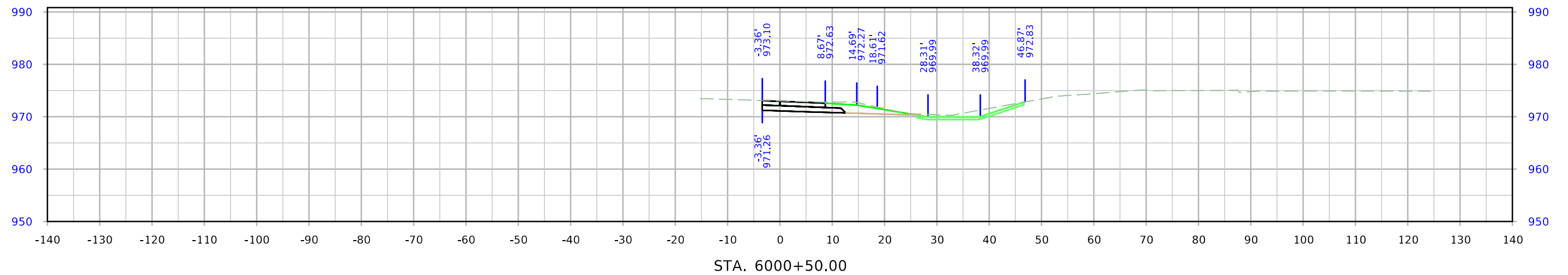
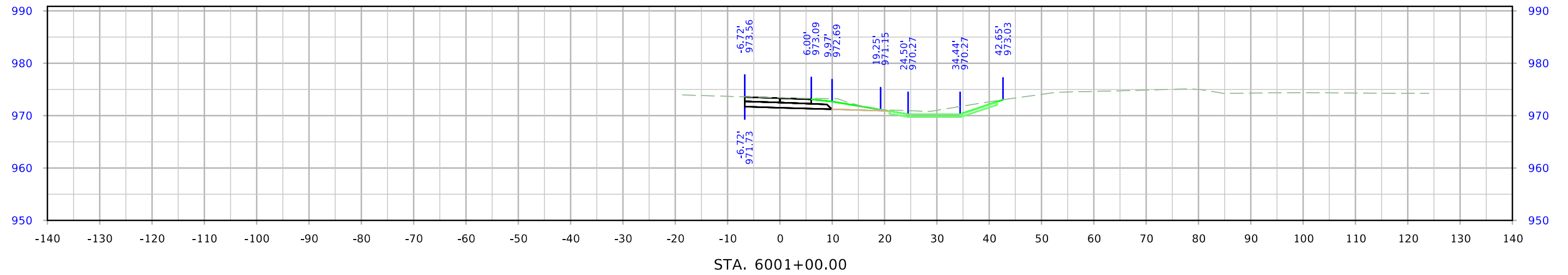


# I-80 Ramp D

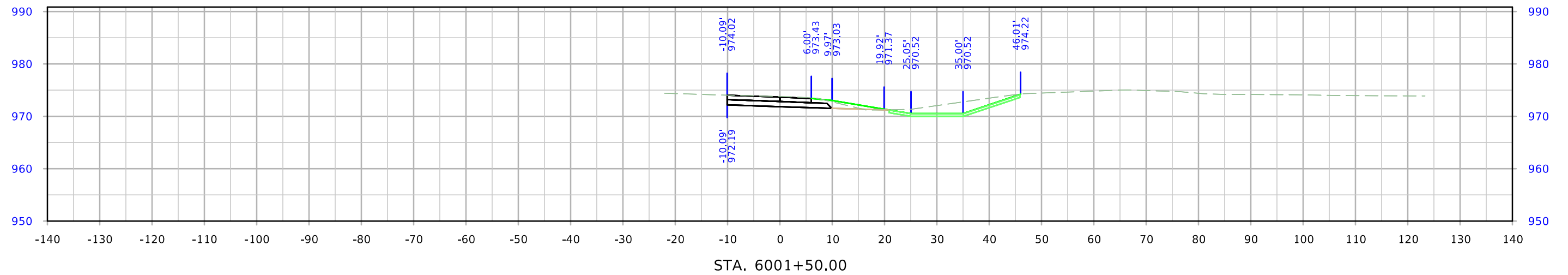
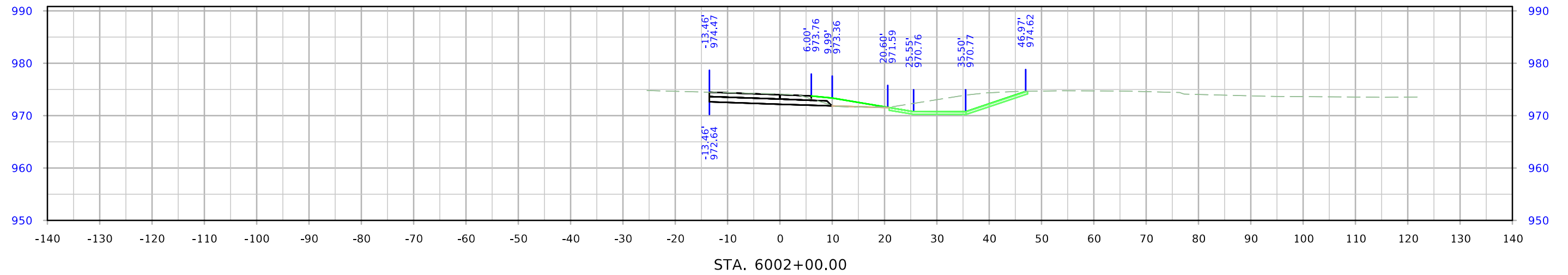
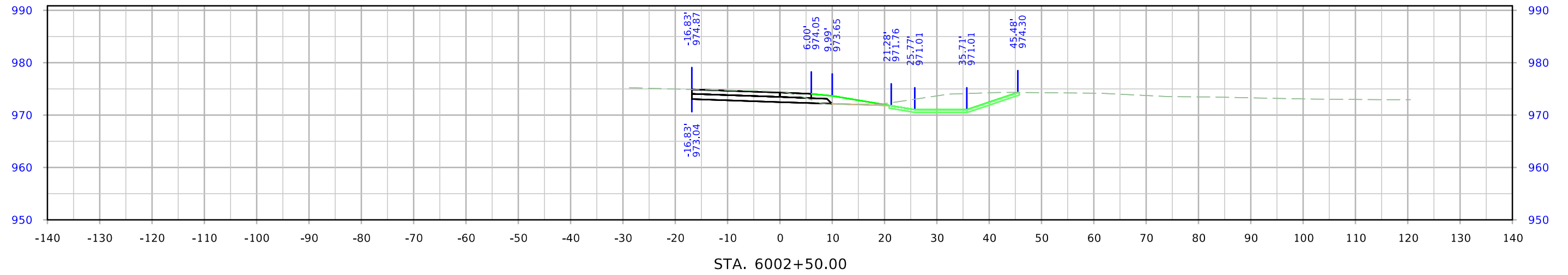




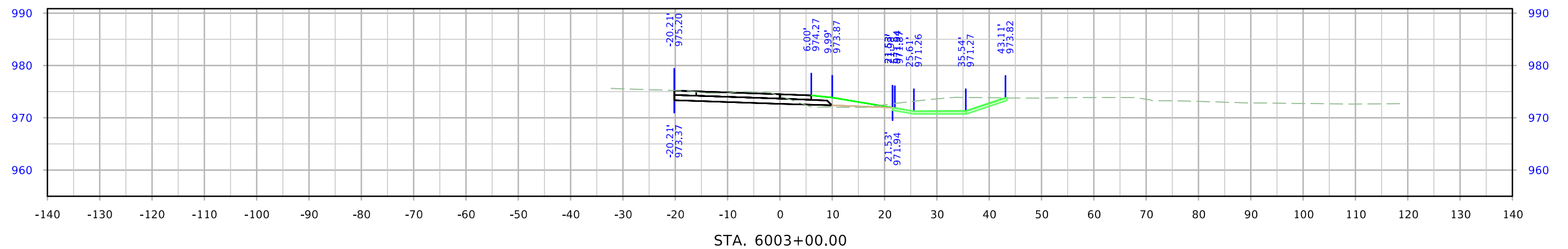
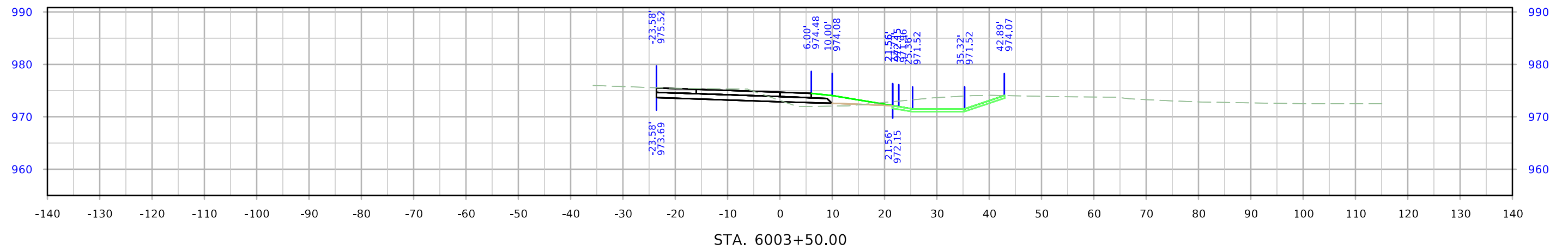
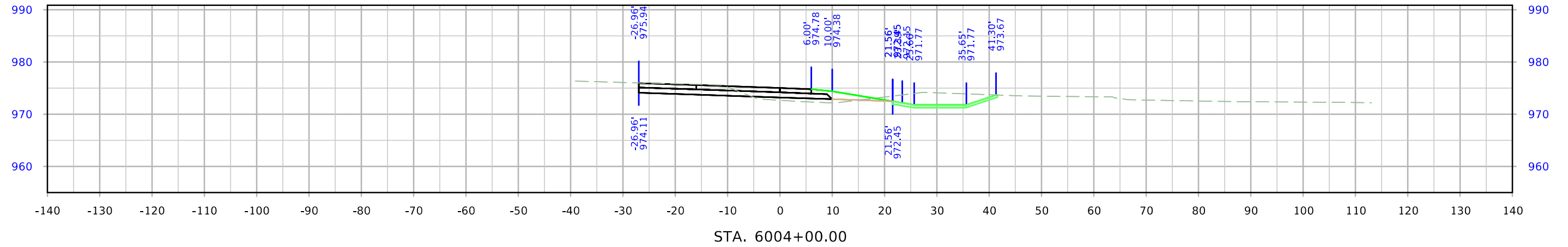
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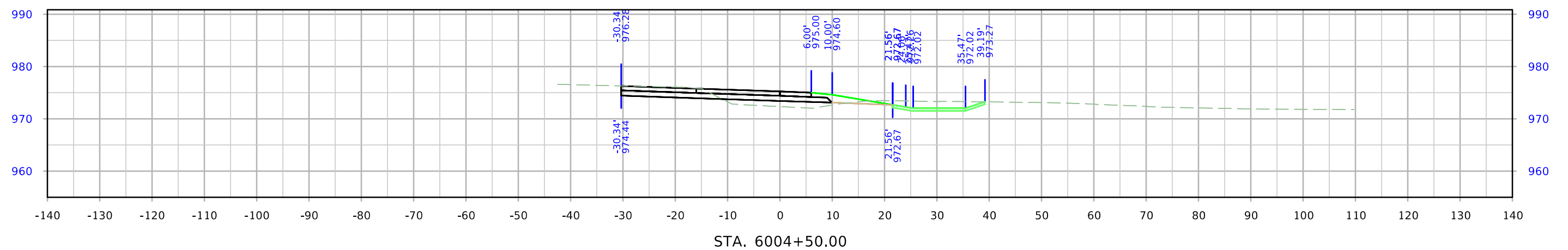
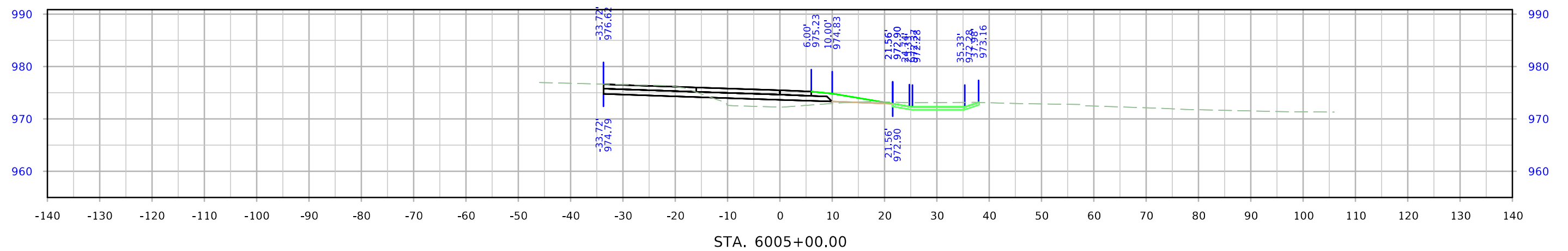
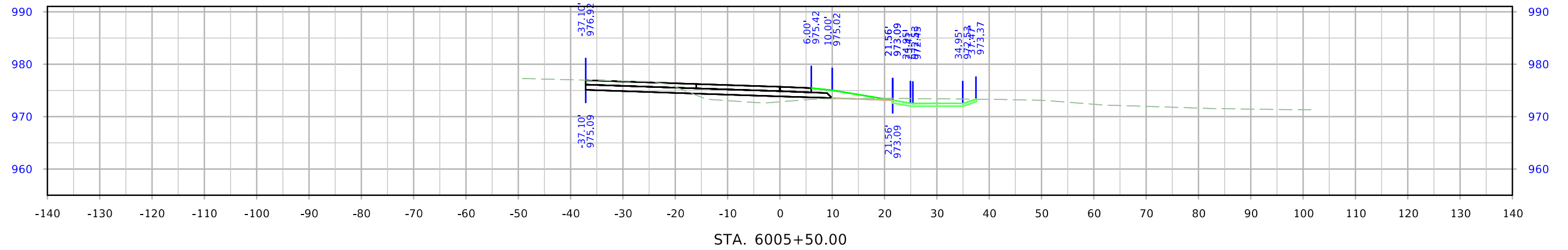
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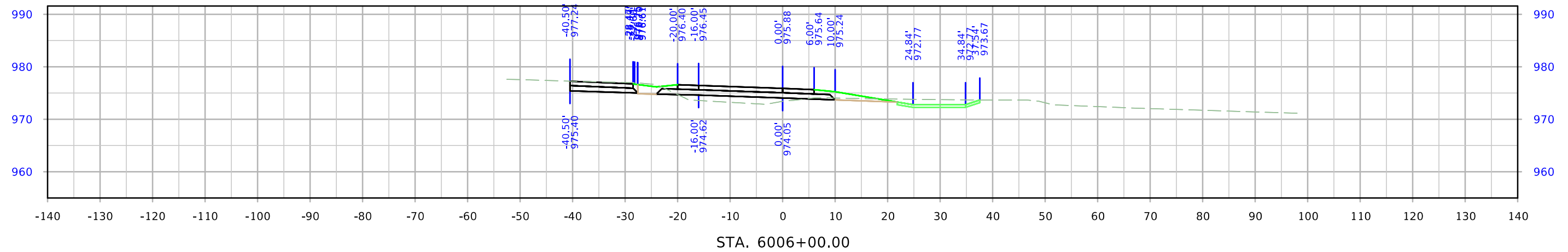
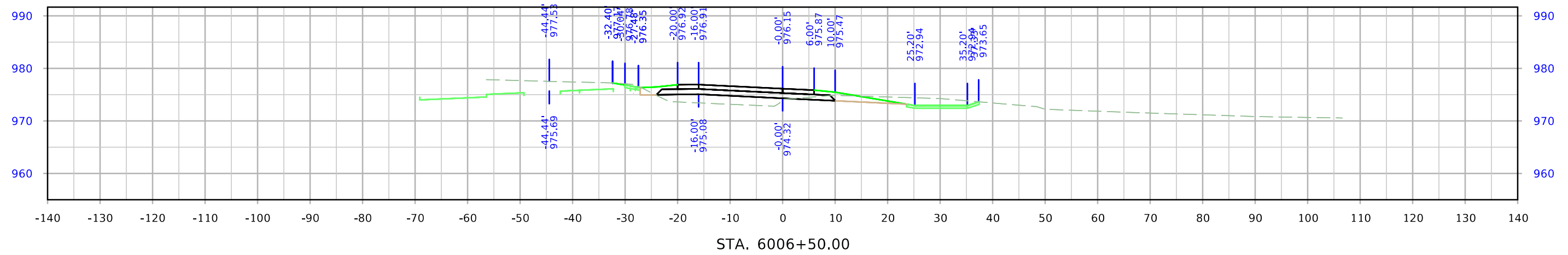
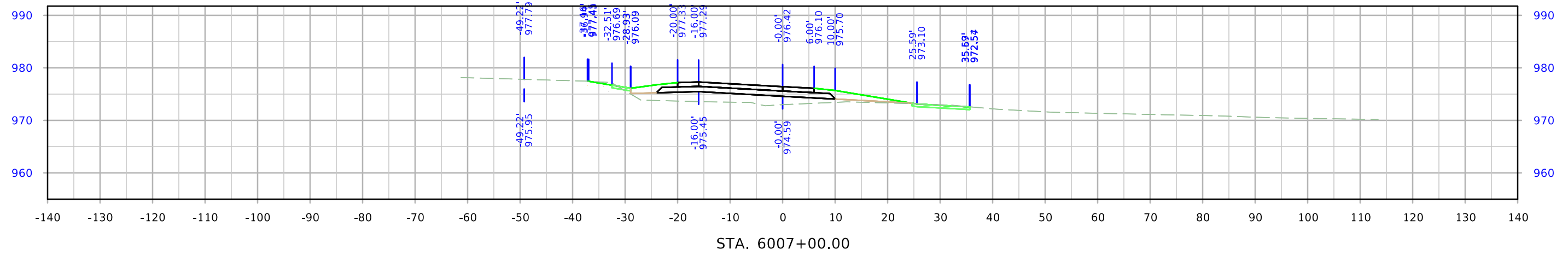
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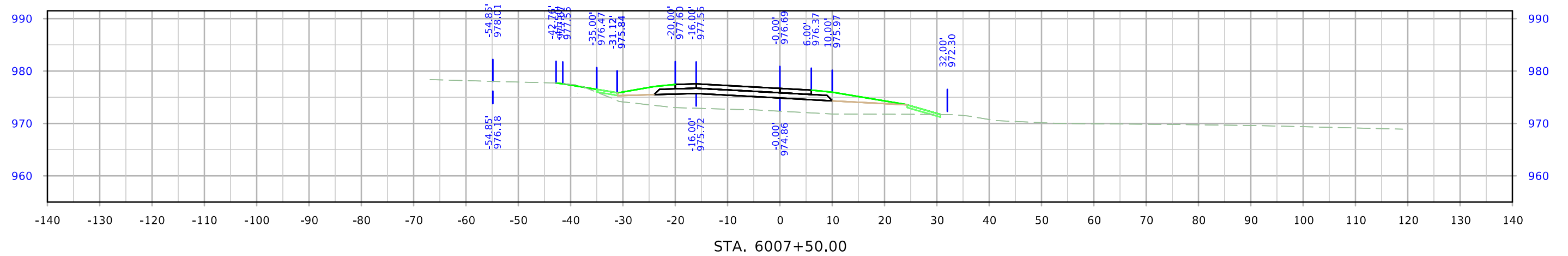
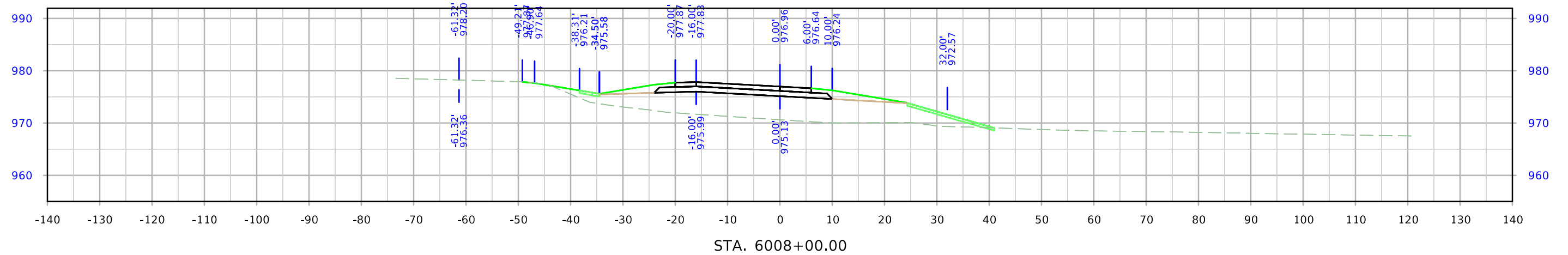
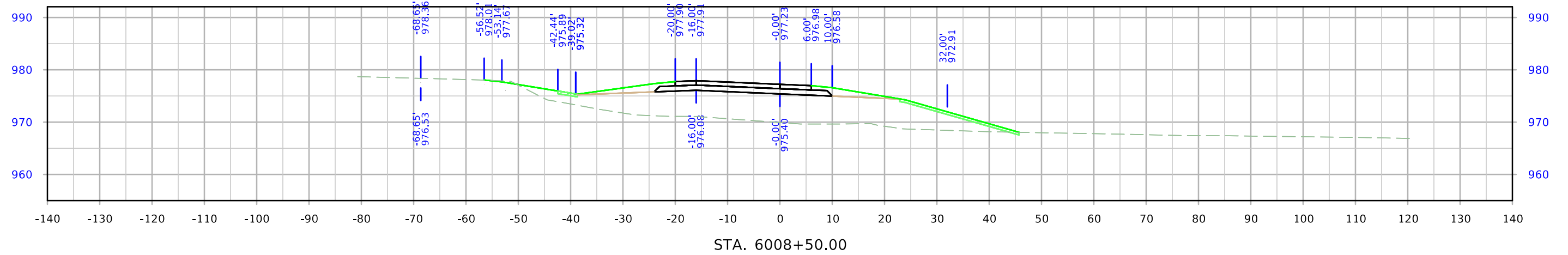
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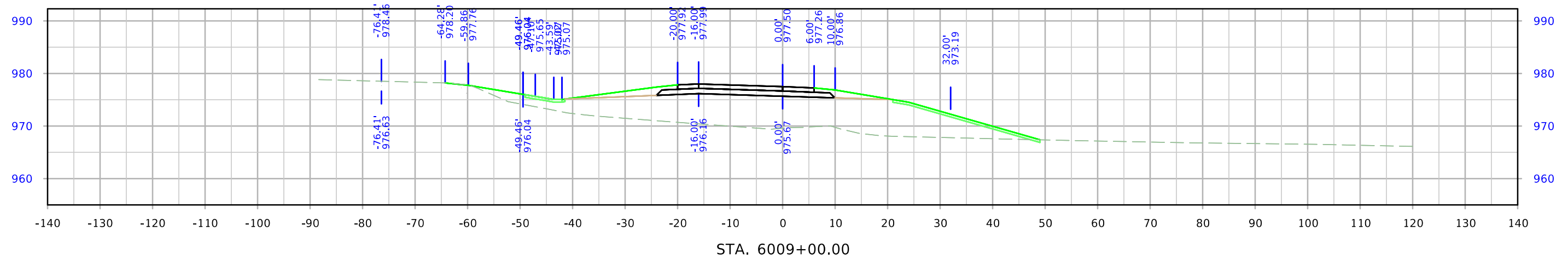
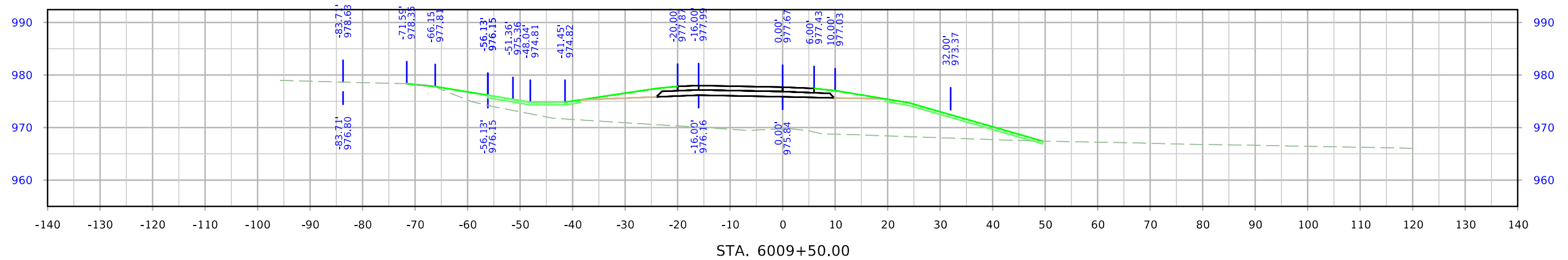
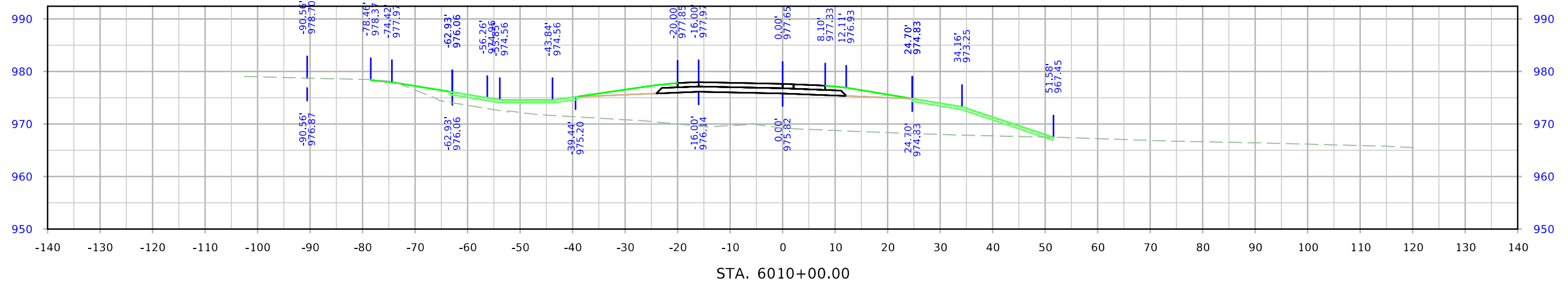
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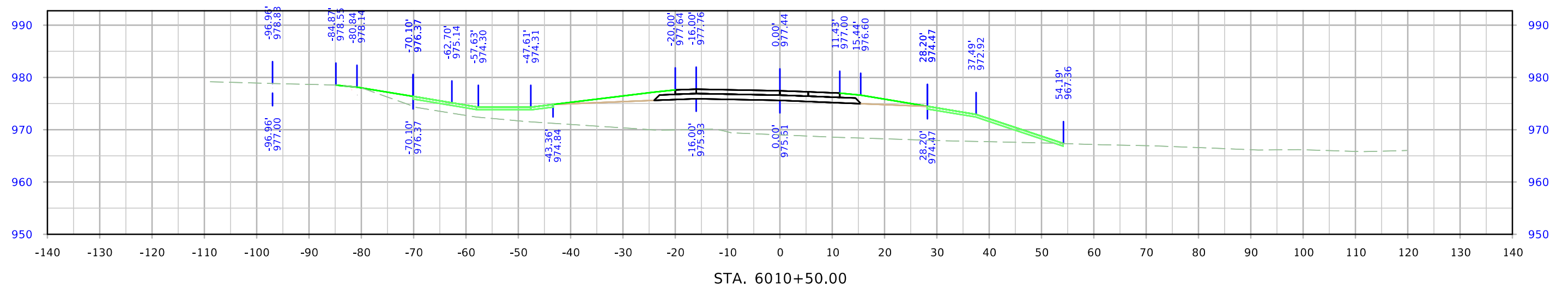
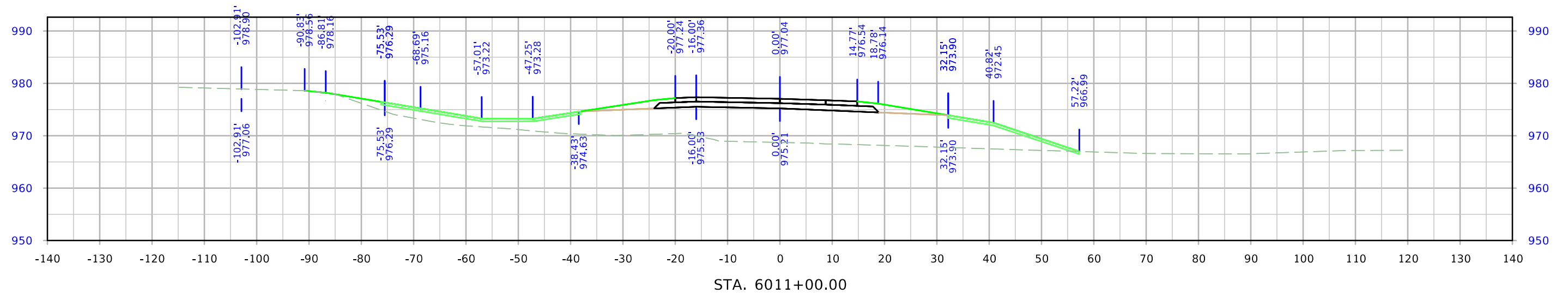
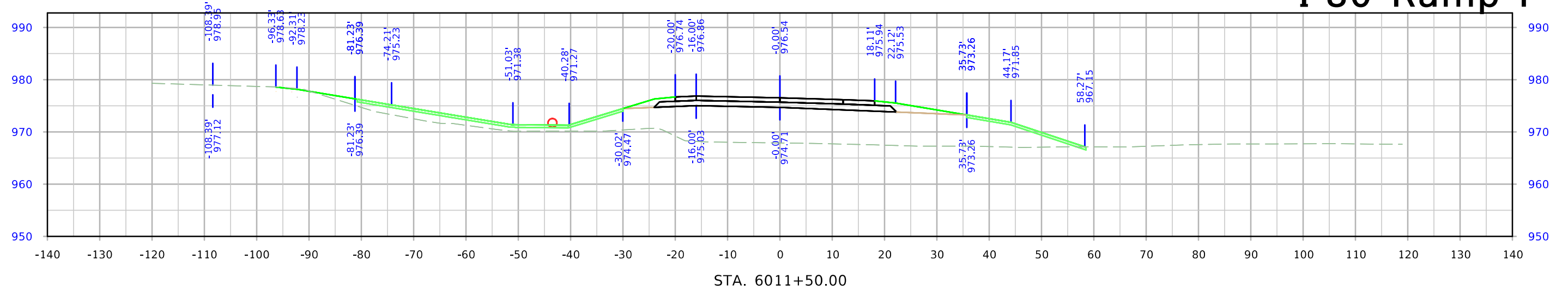
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# I-80 Ramp F

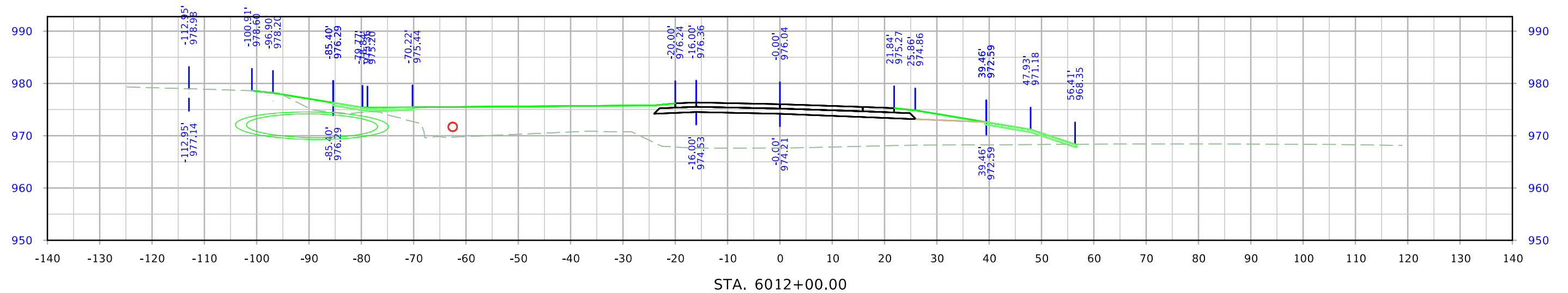
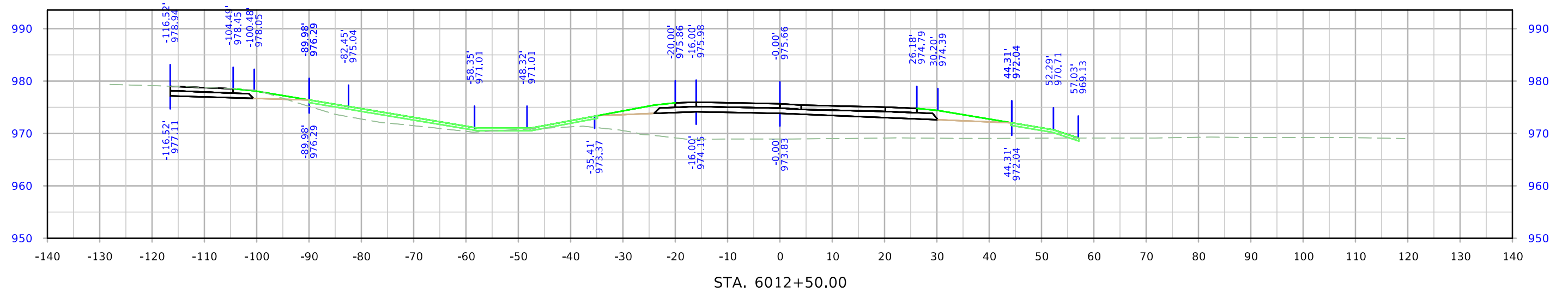
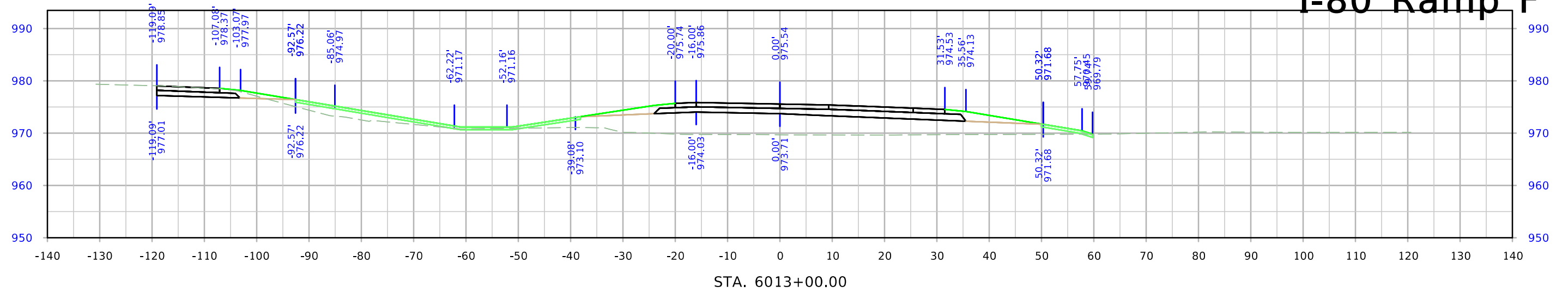


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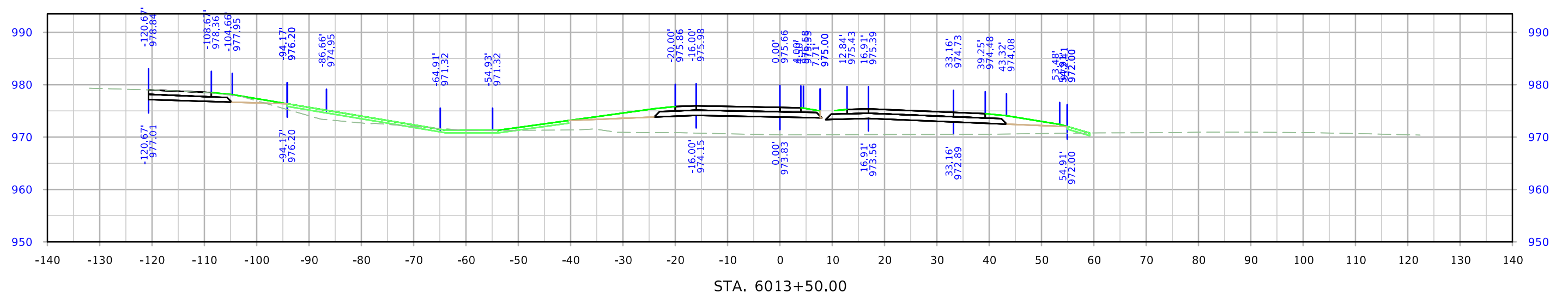
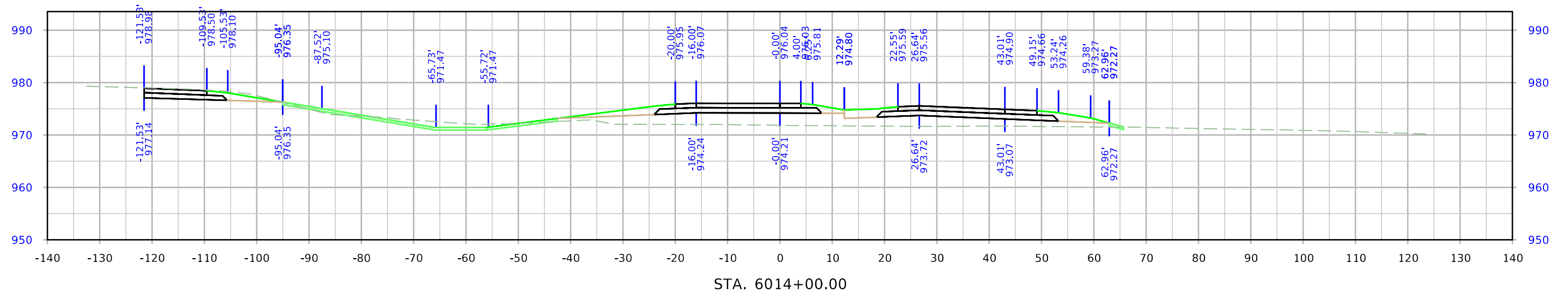
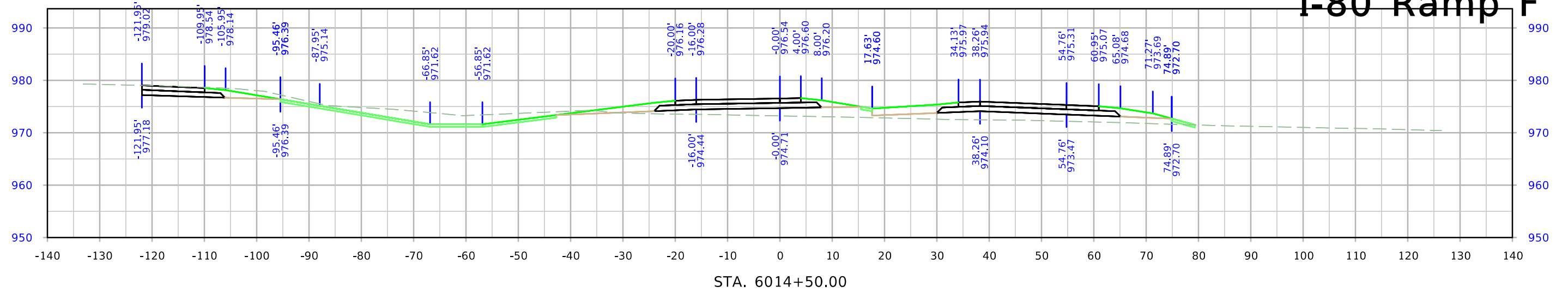




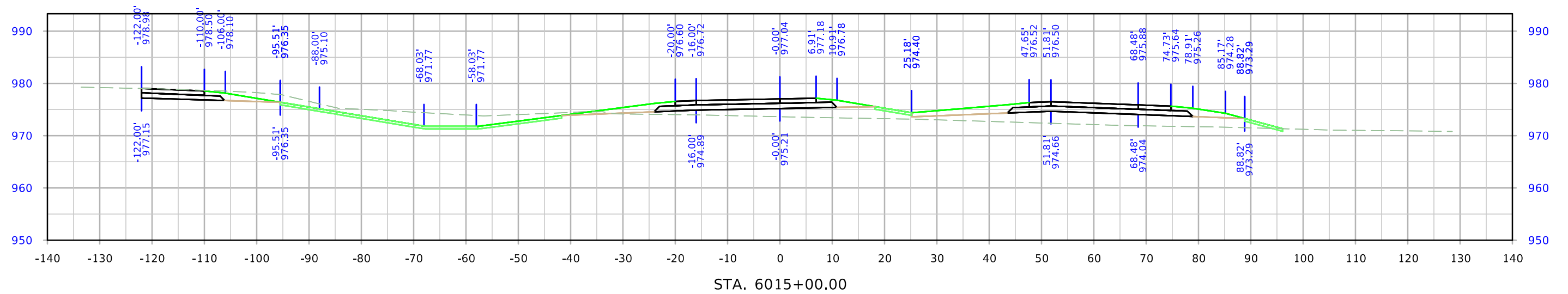
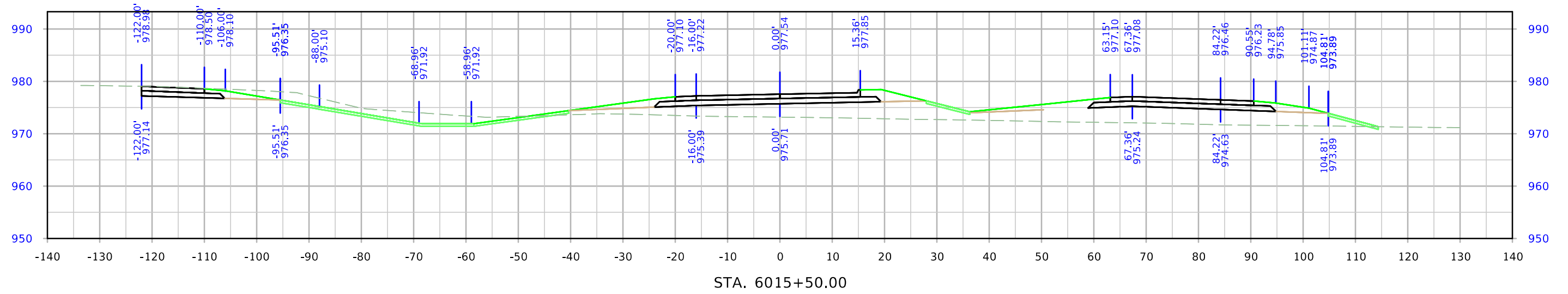
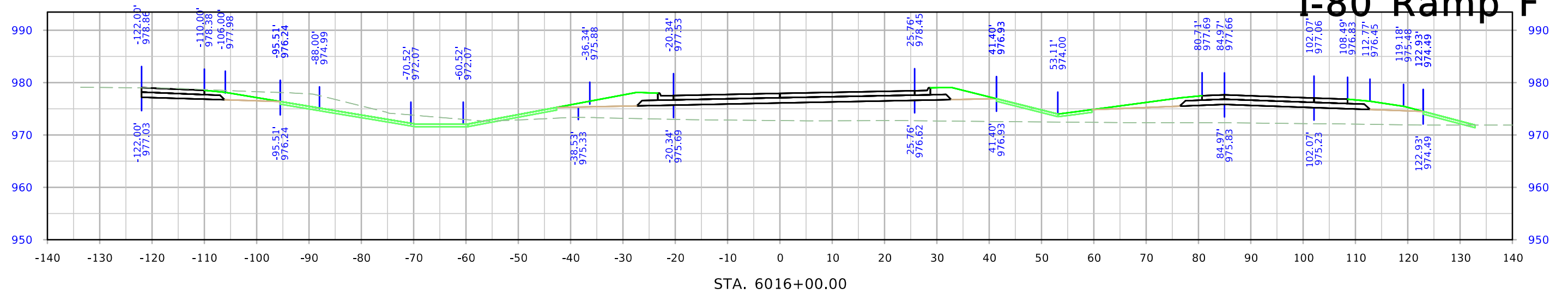
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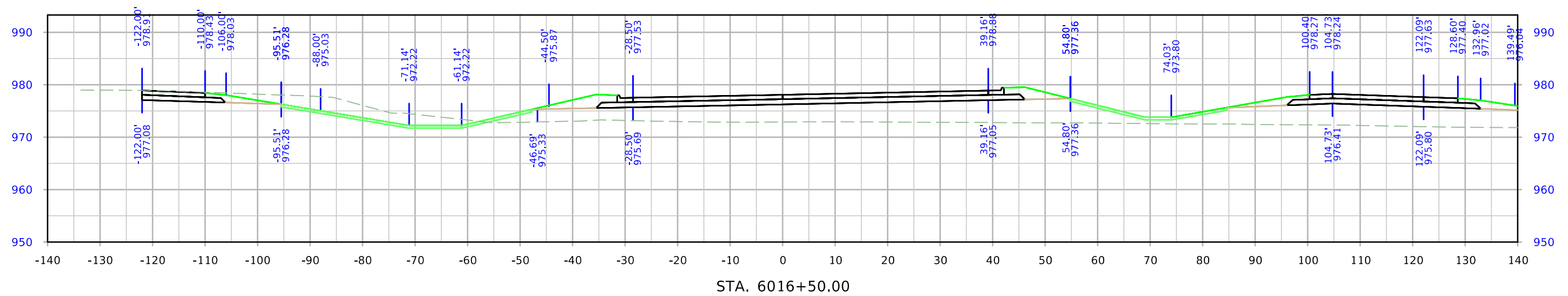
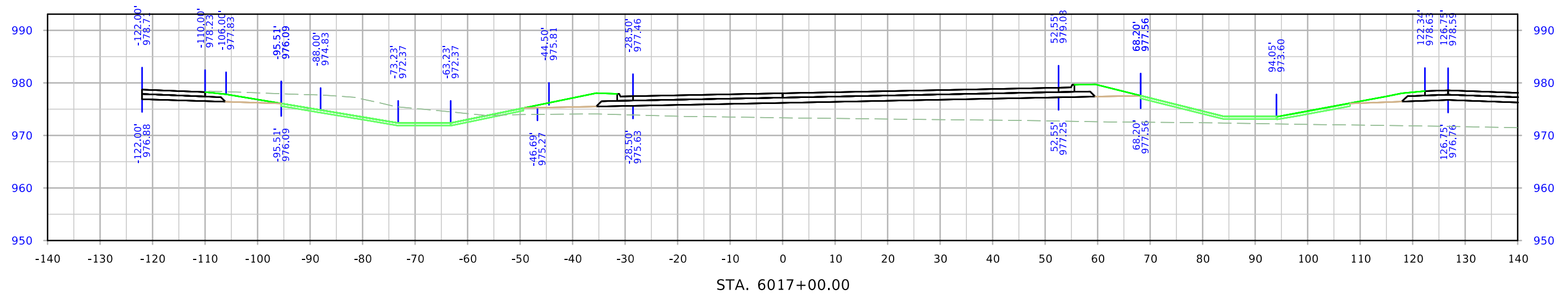
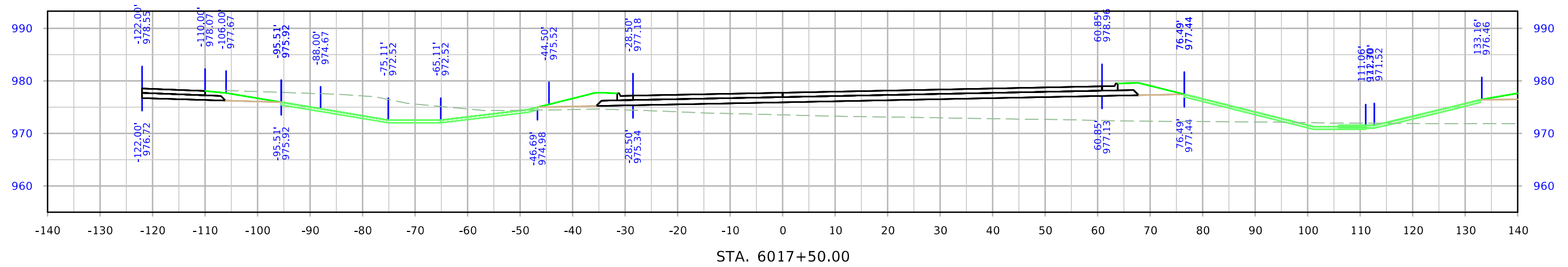
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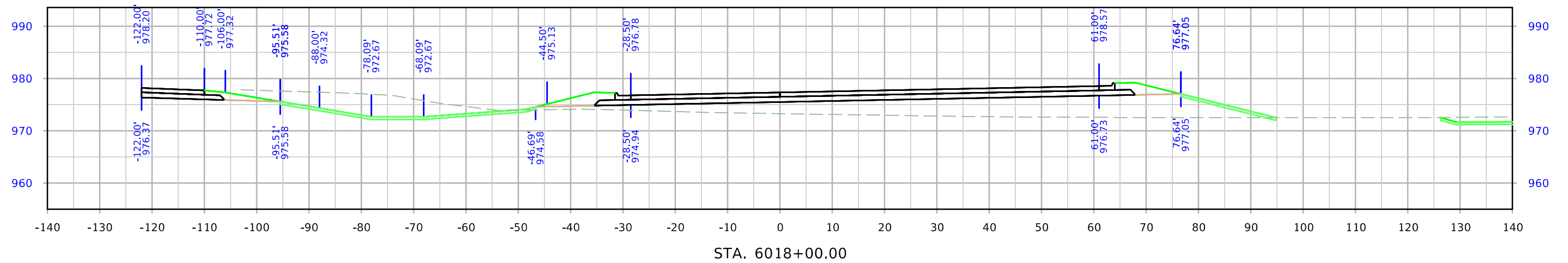
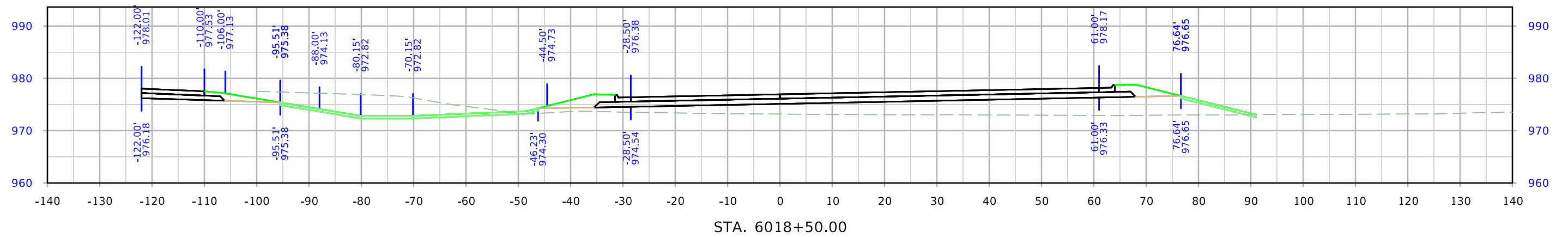
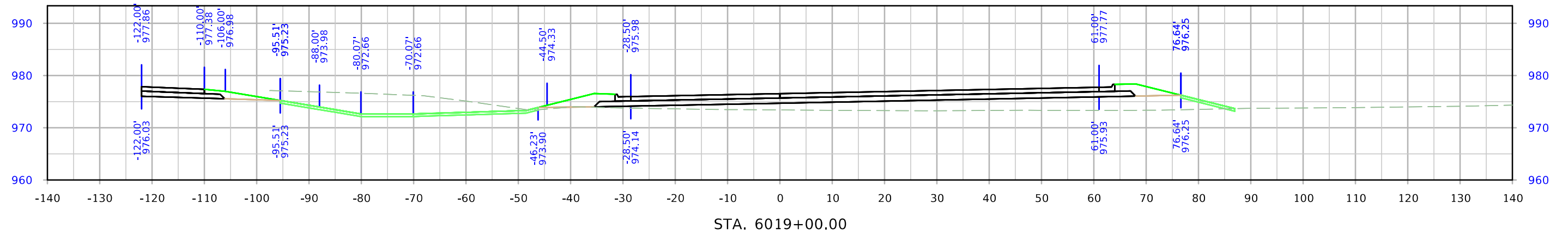
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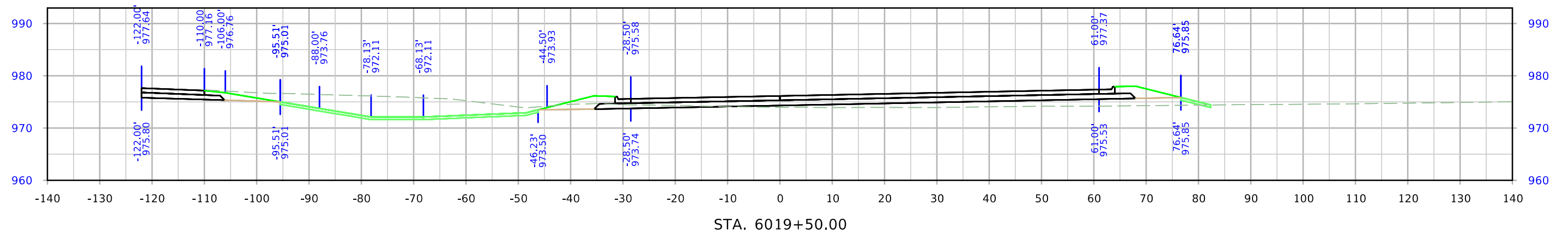
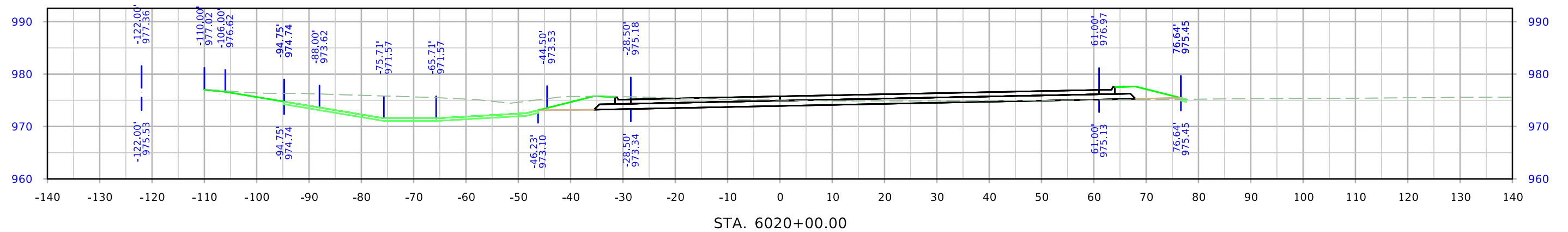
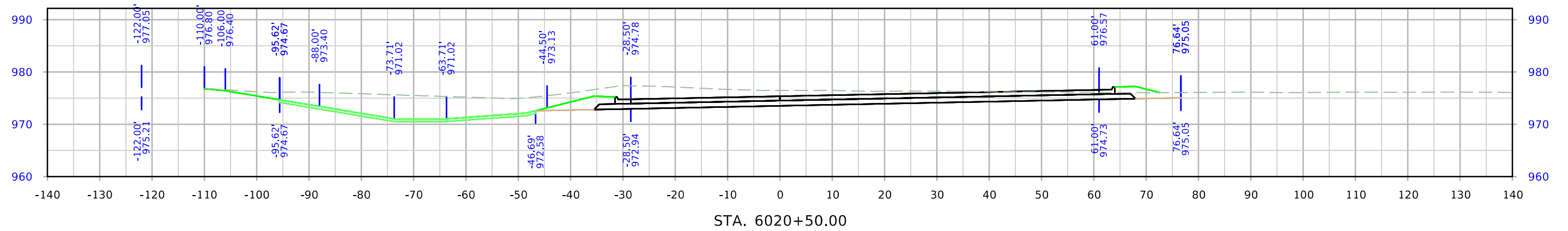
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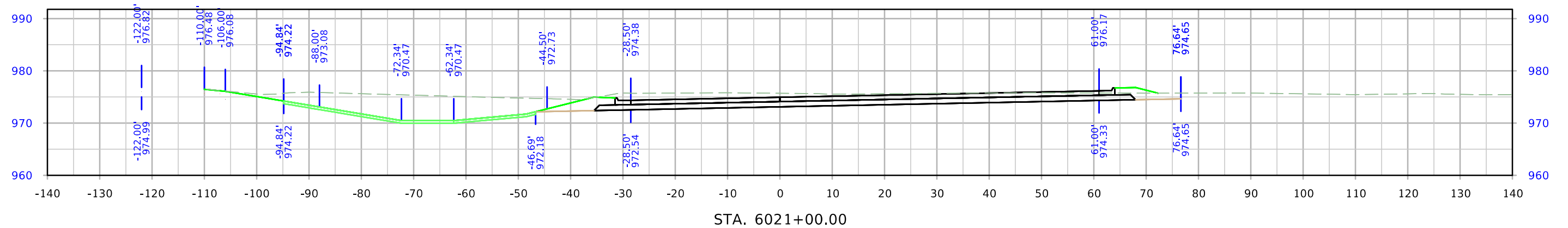
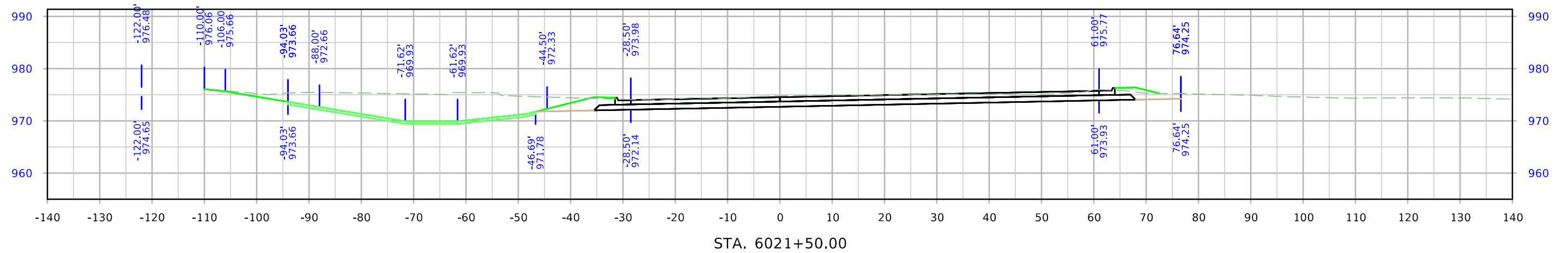
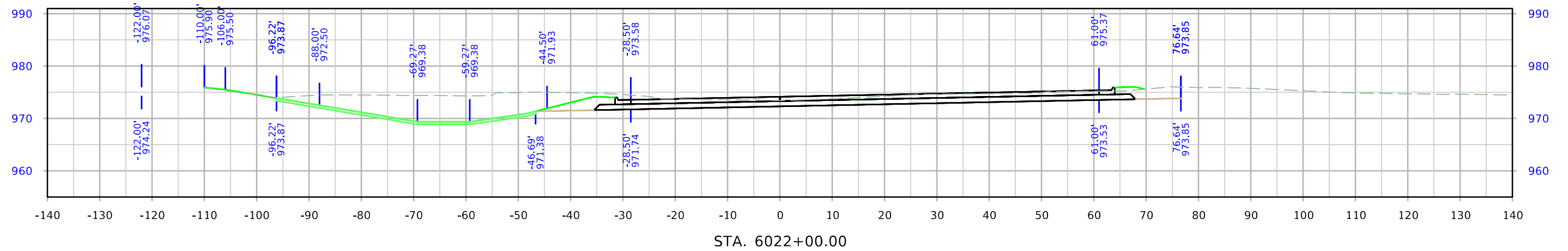
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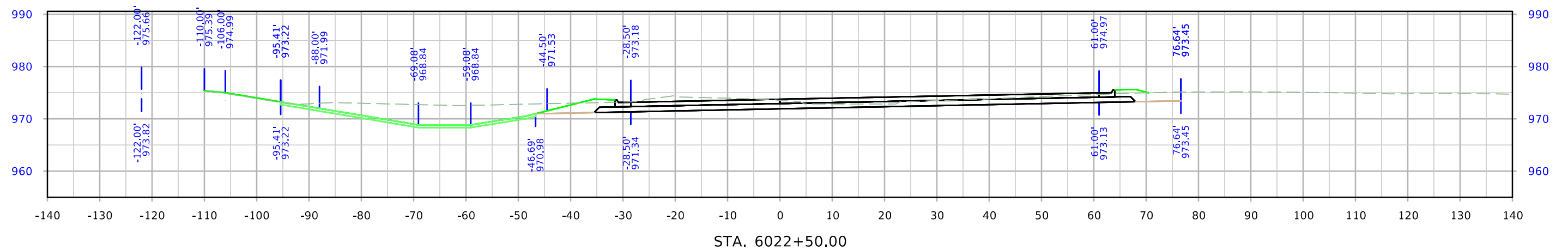
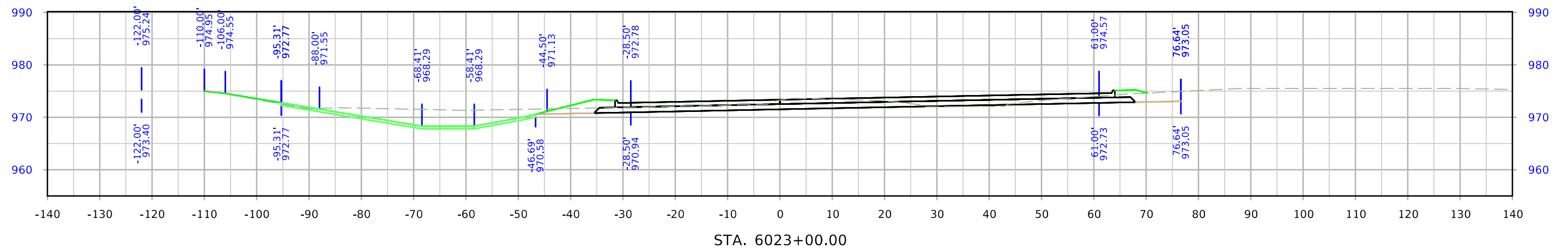
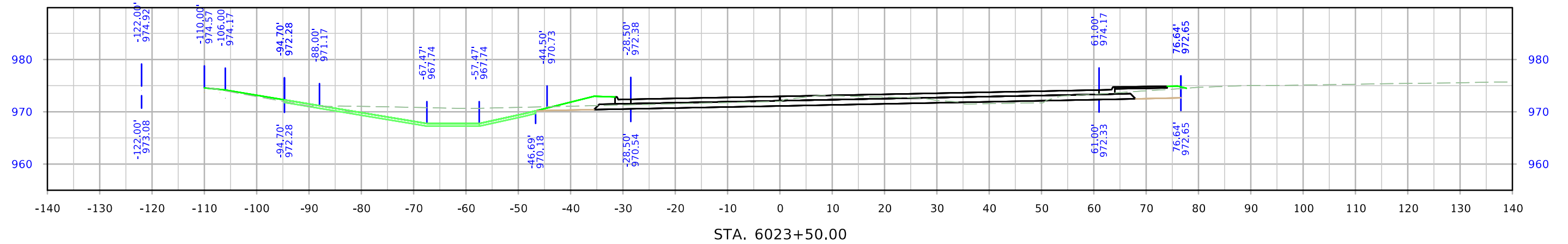
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# I-80 Ramp F

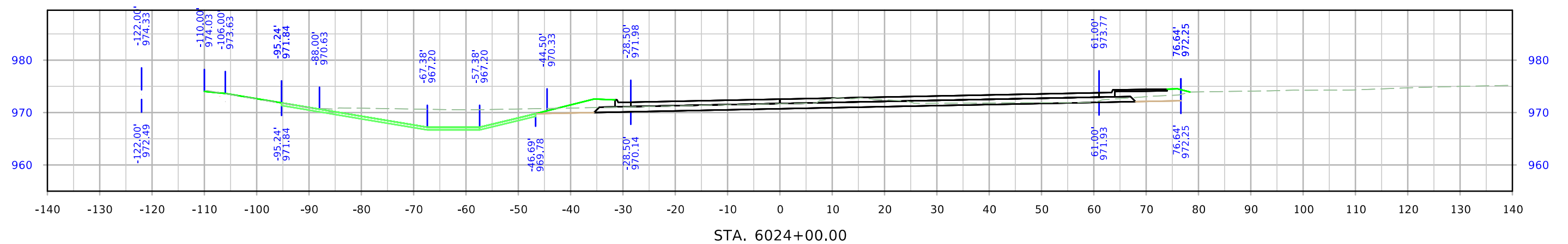
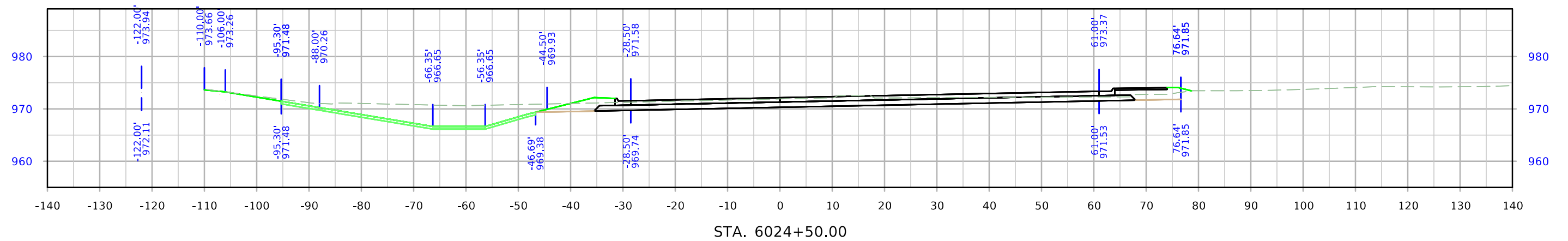
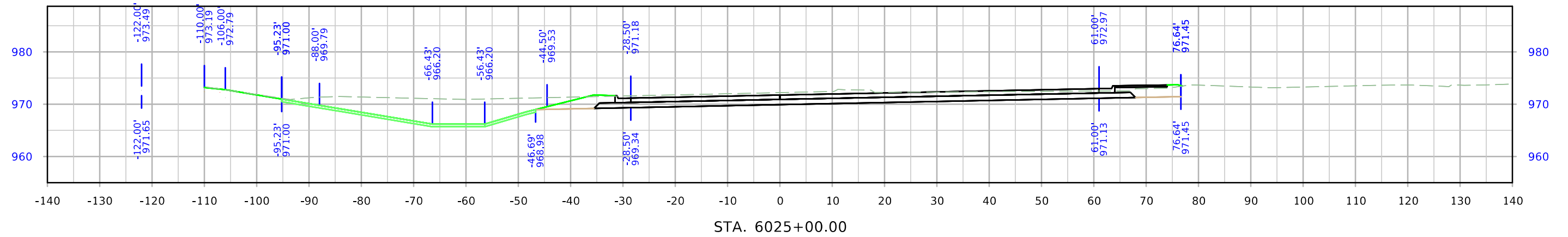


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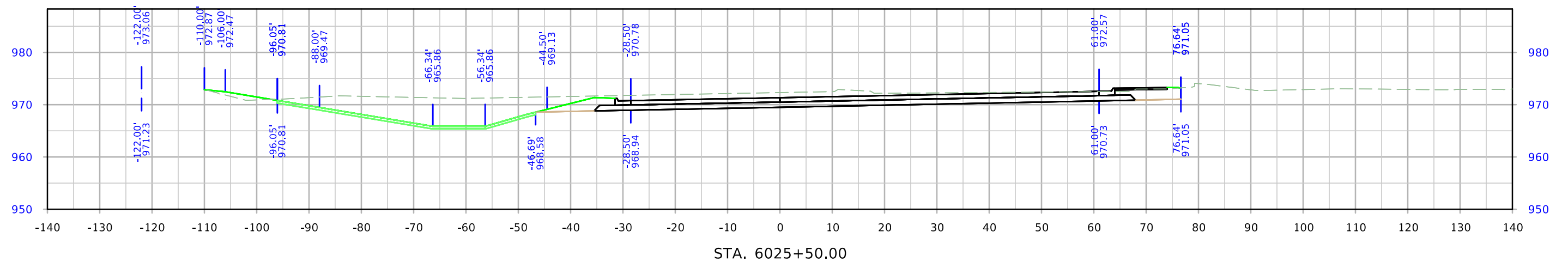
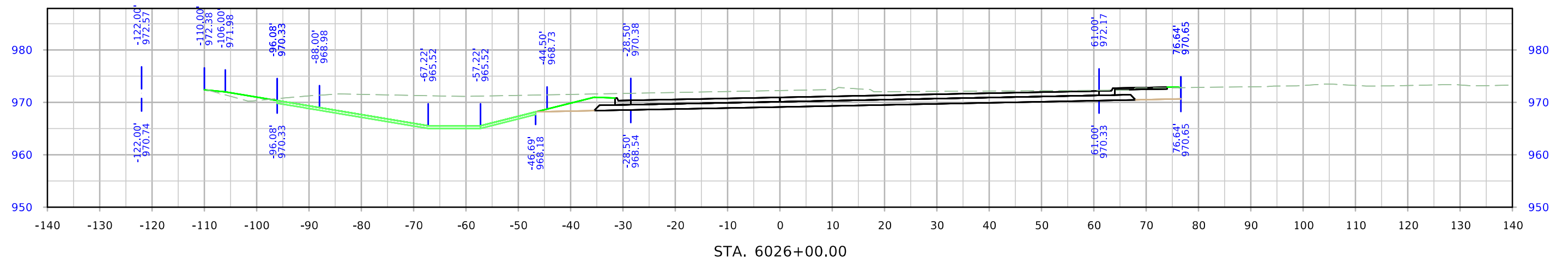
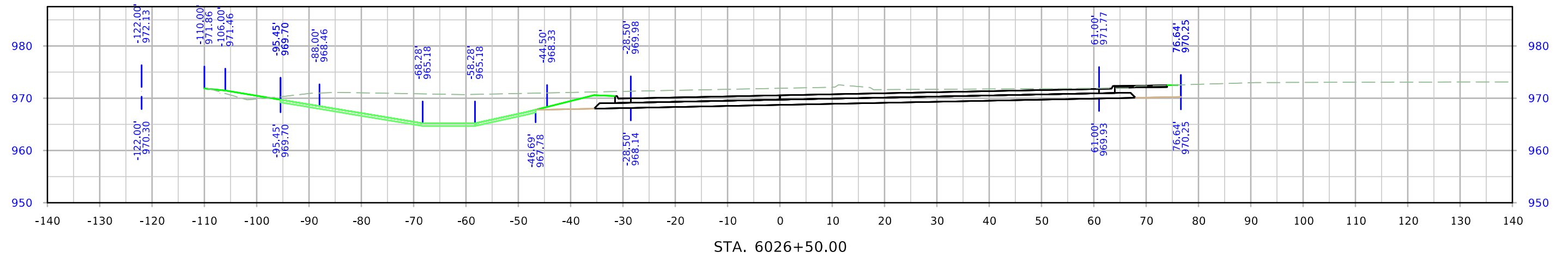




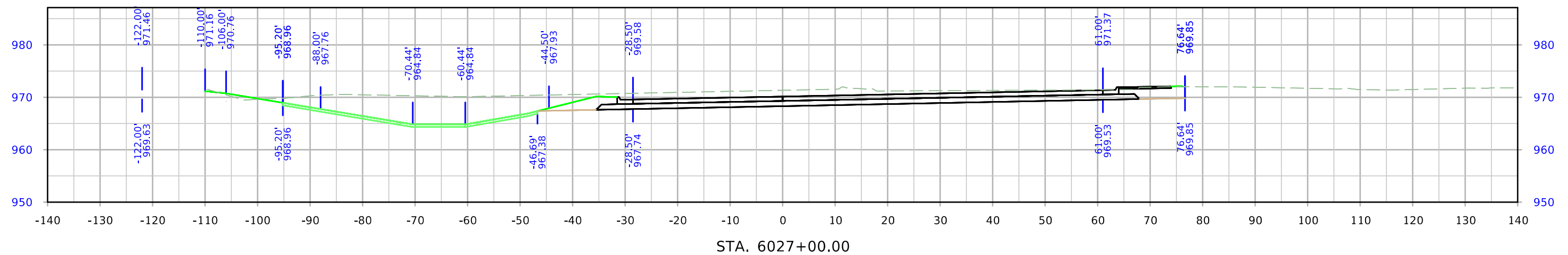
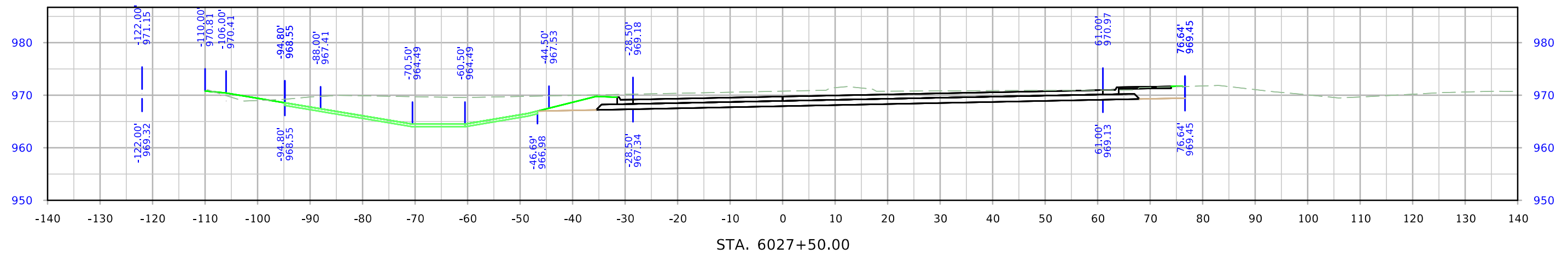
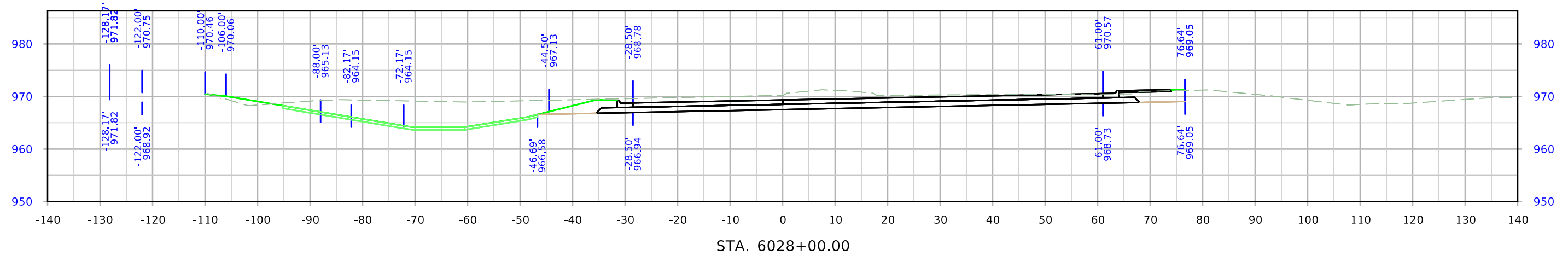
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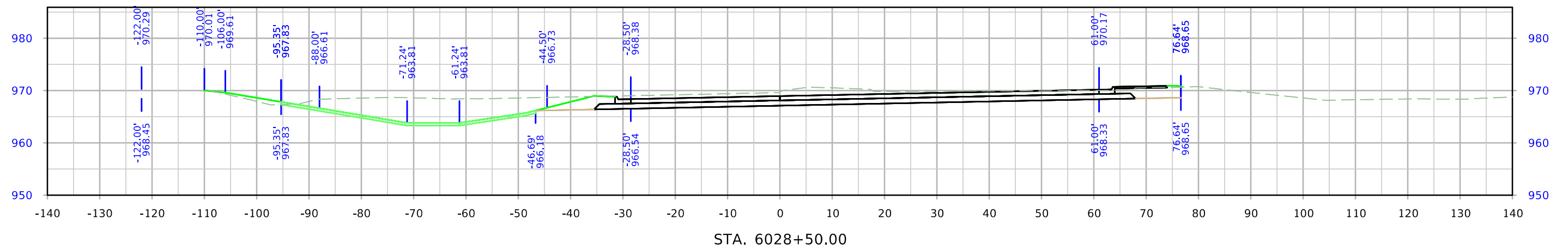
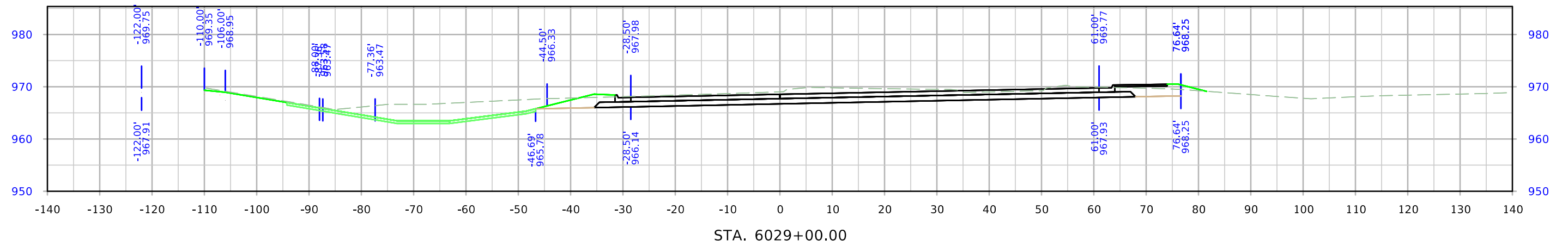
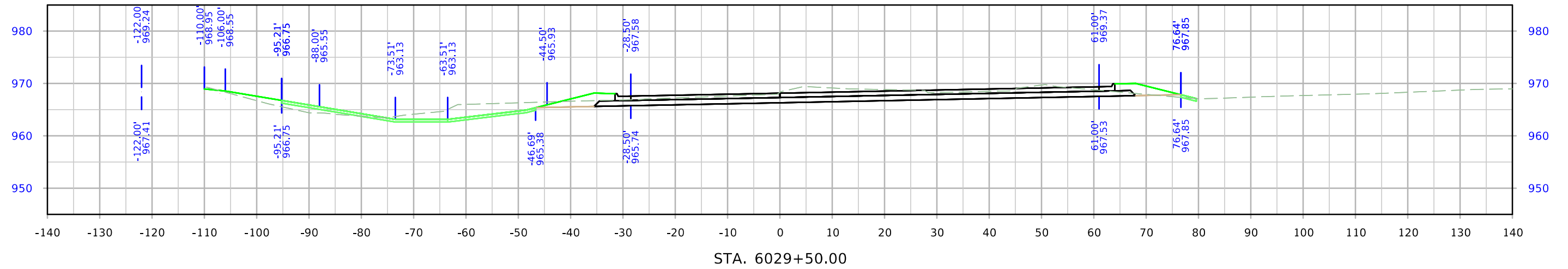
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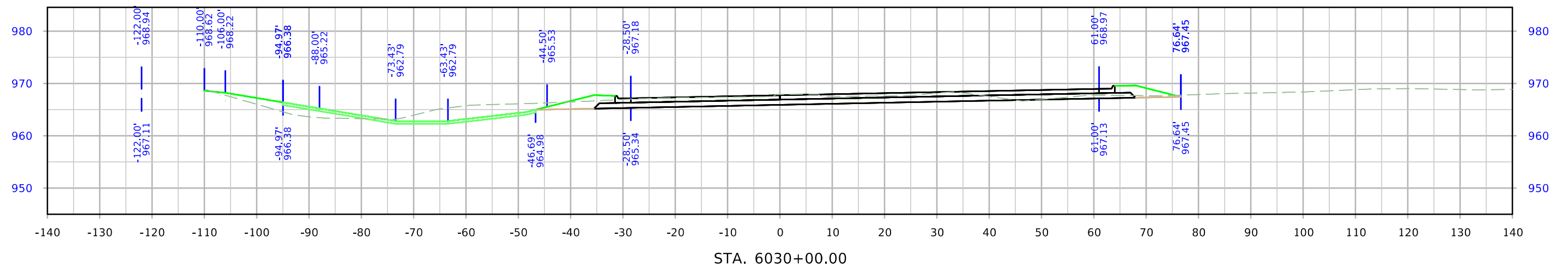
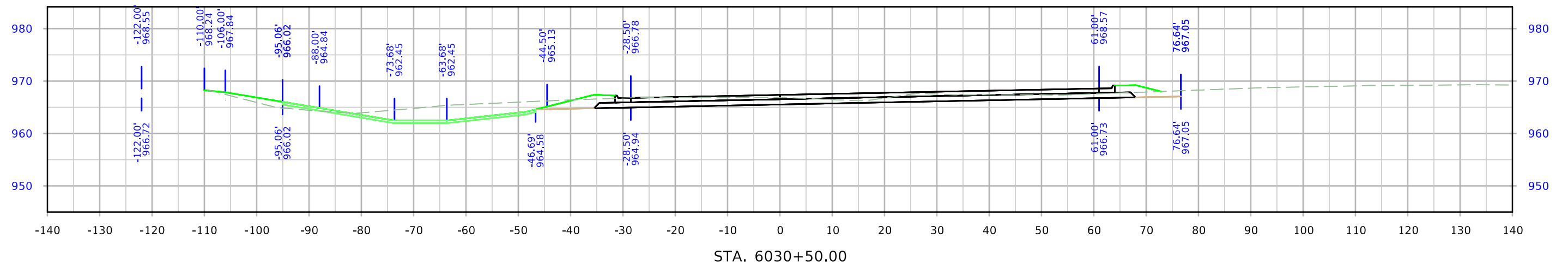
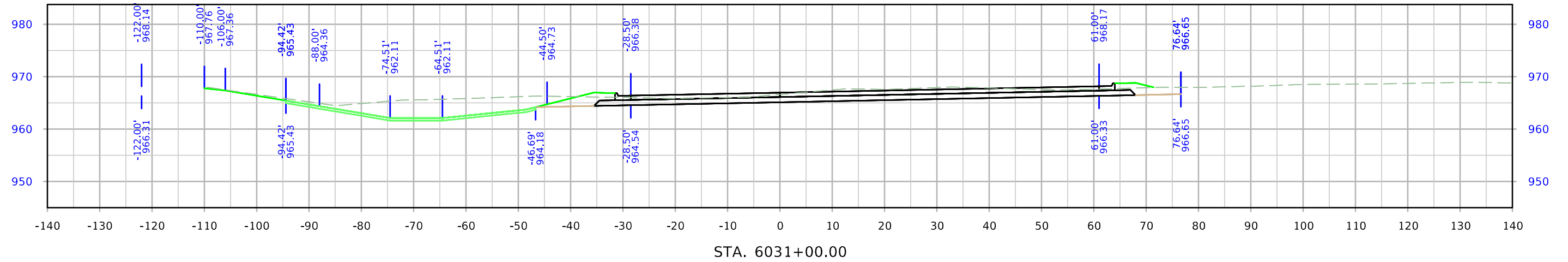
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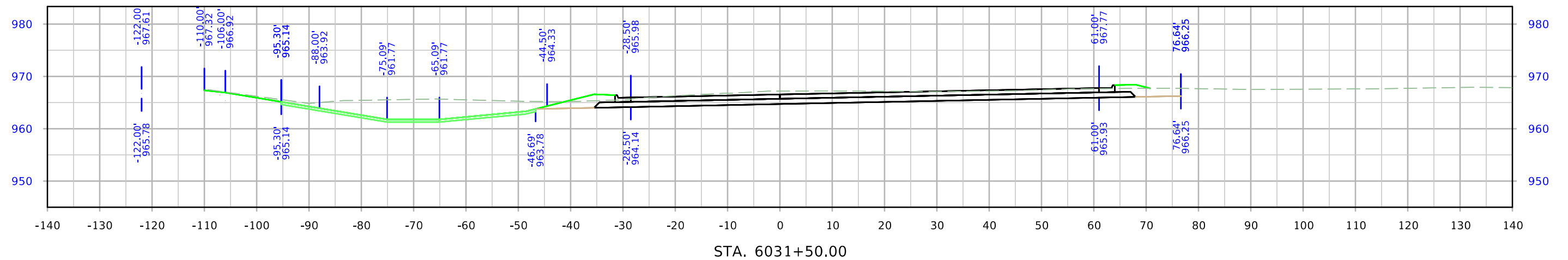
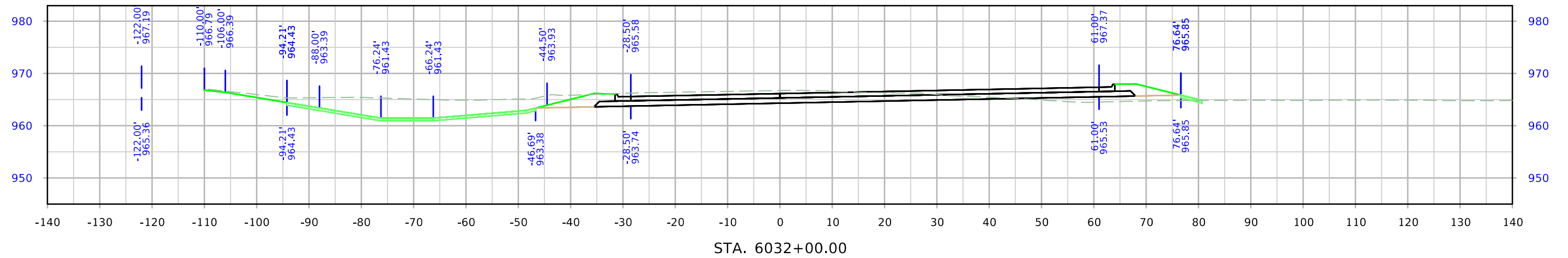
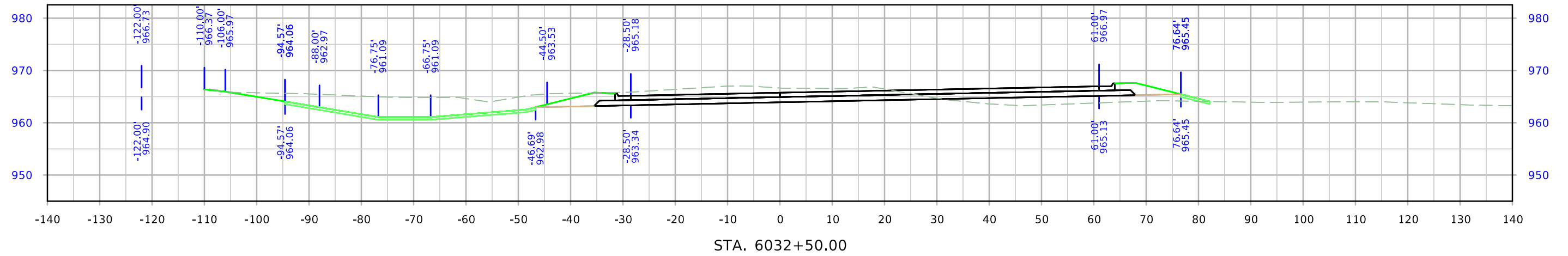
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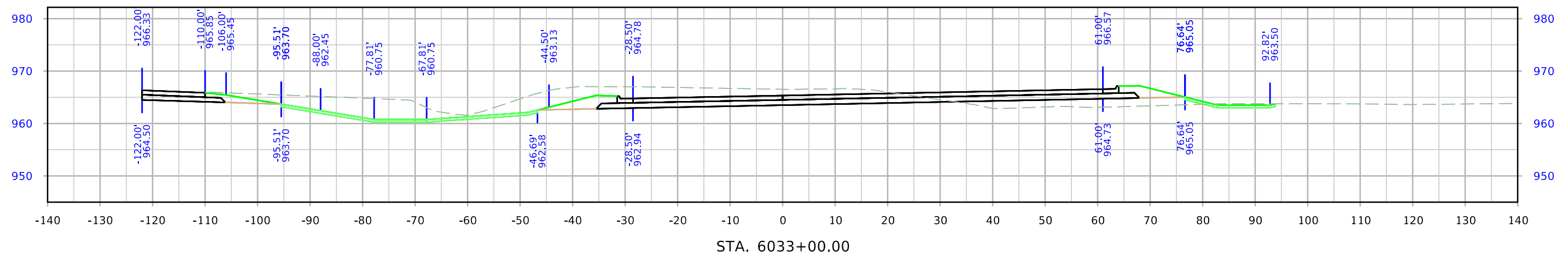
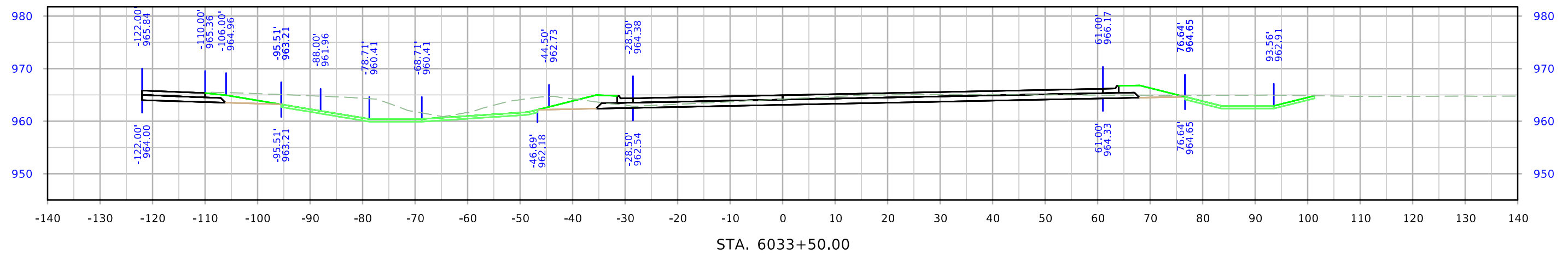
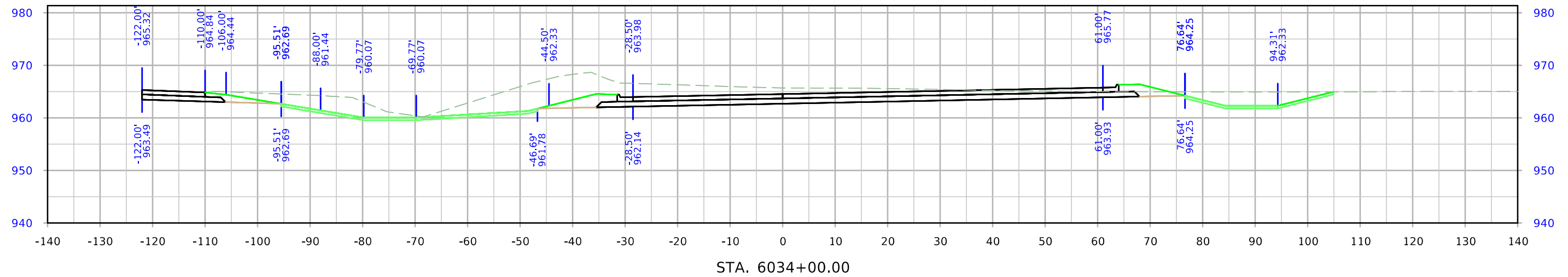
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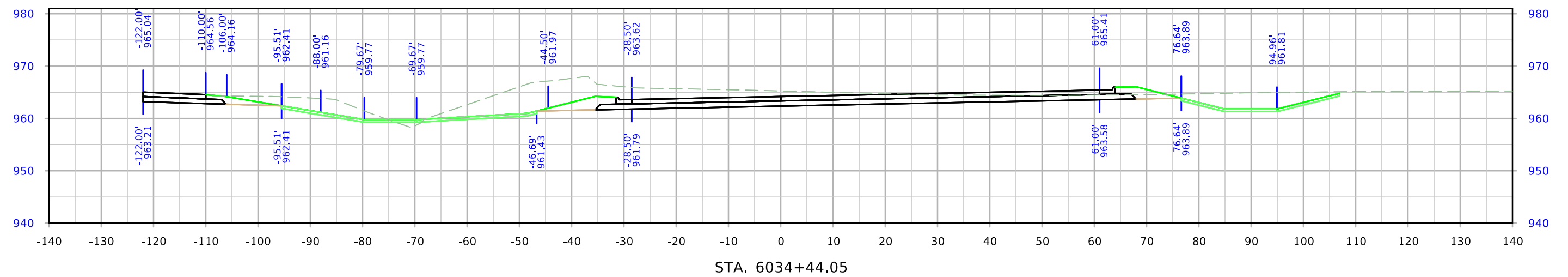
# I-80 Ramp F



# I-80 Ramp F

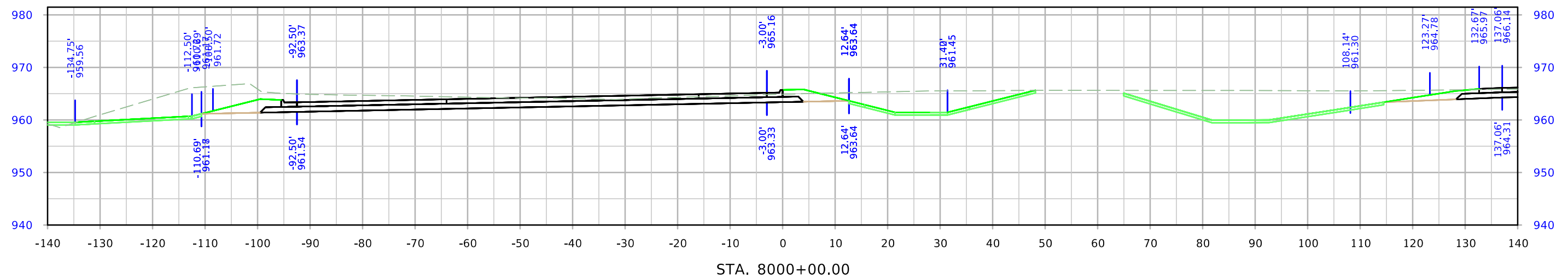
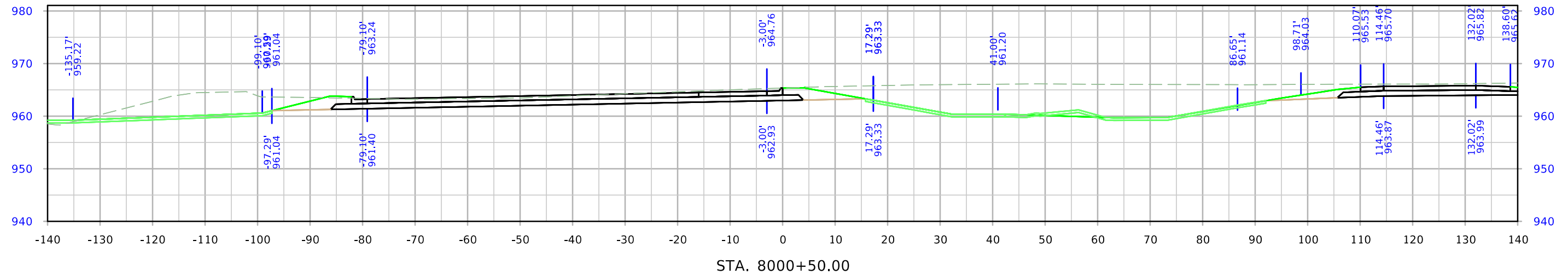
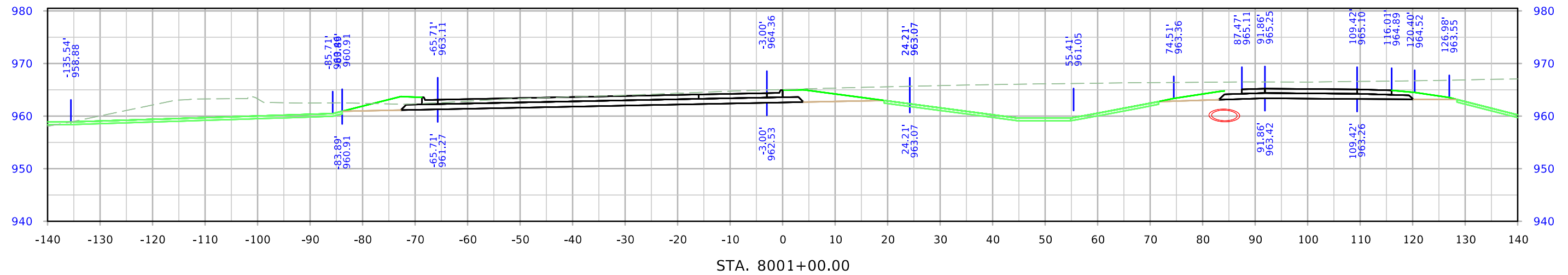


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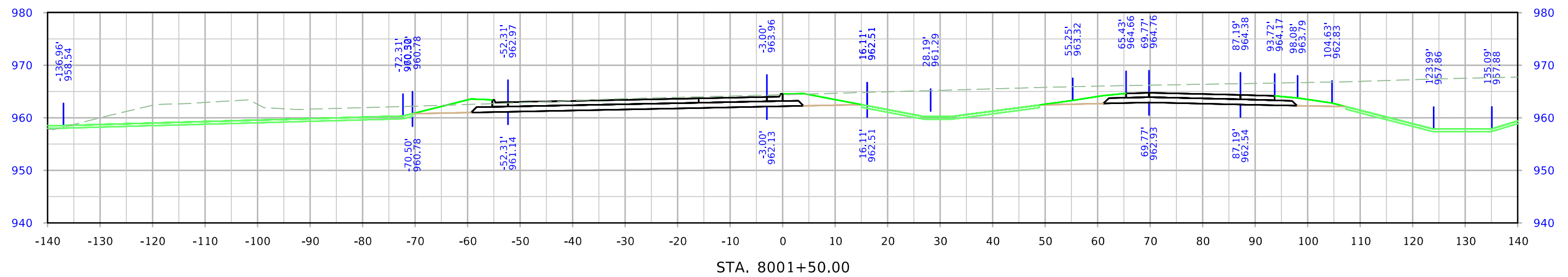
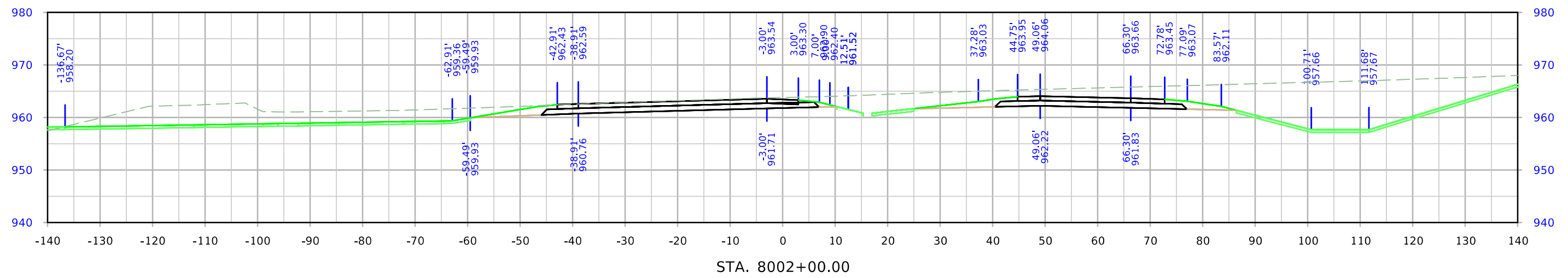
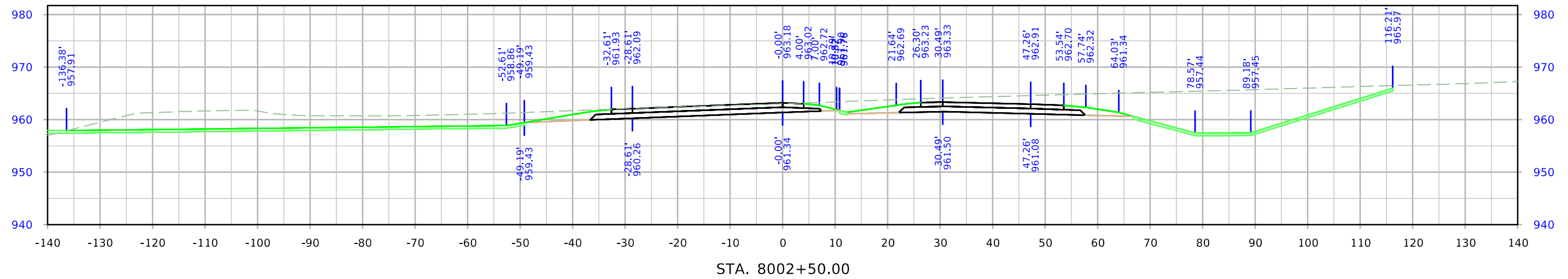




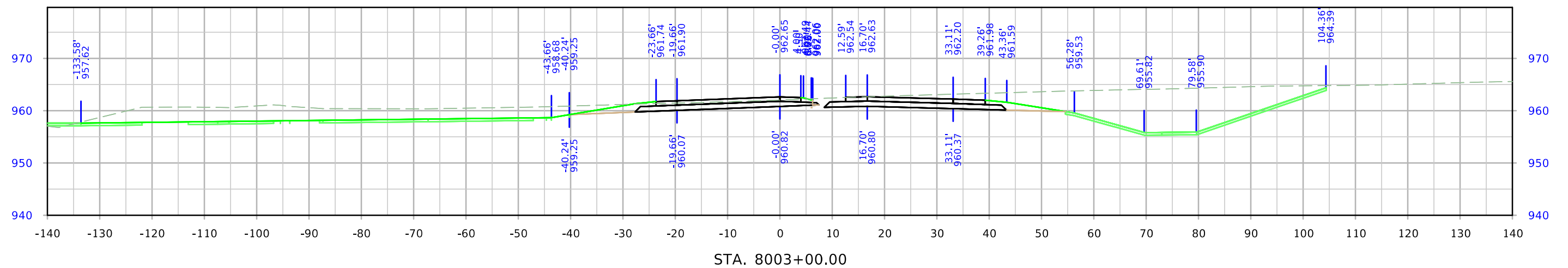
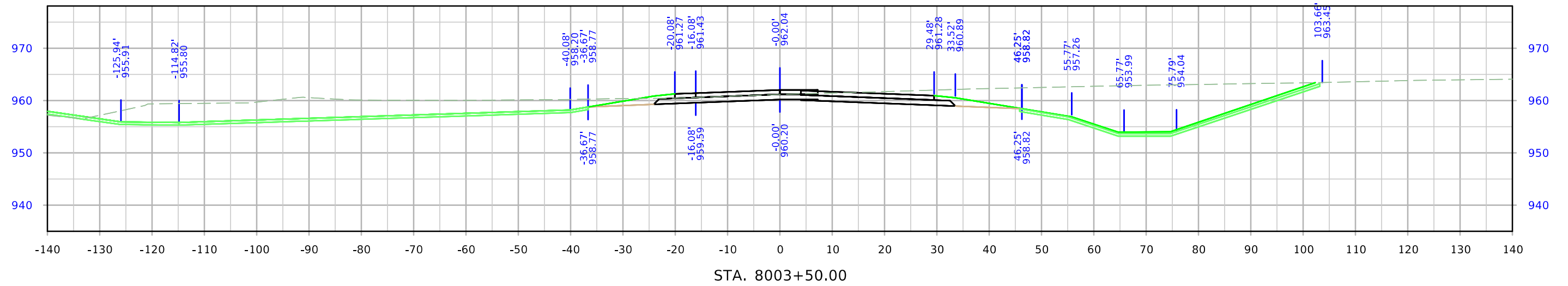
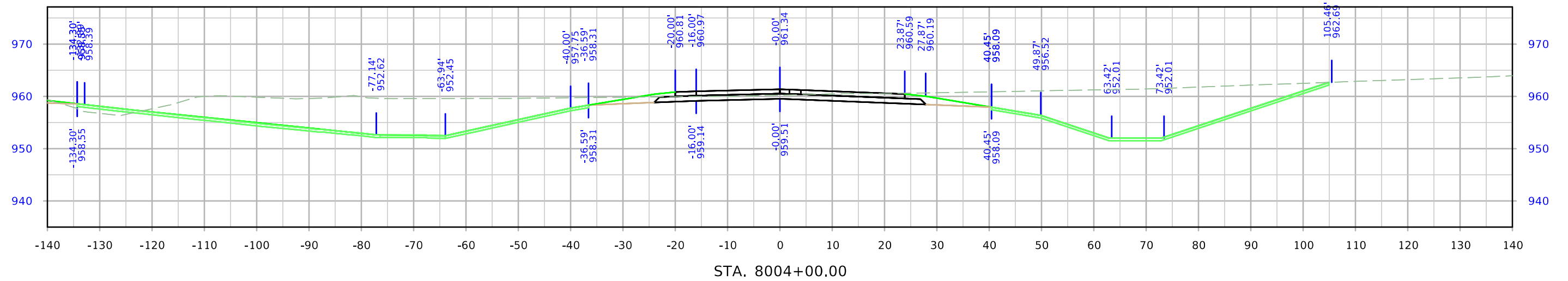
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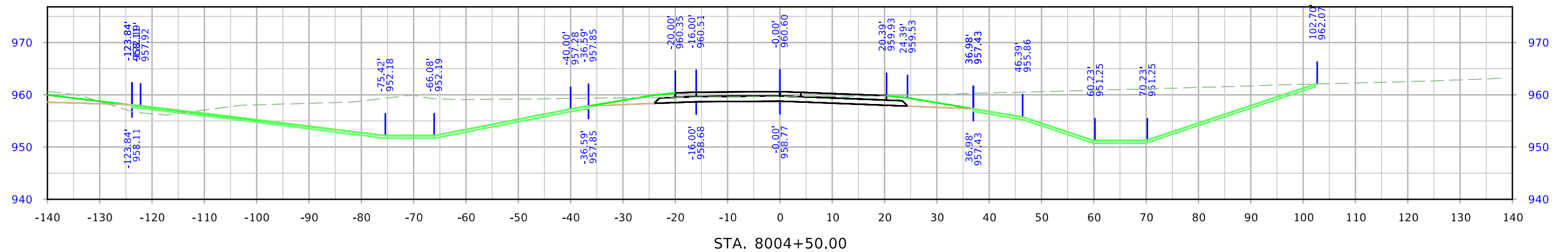
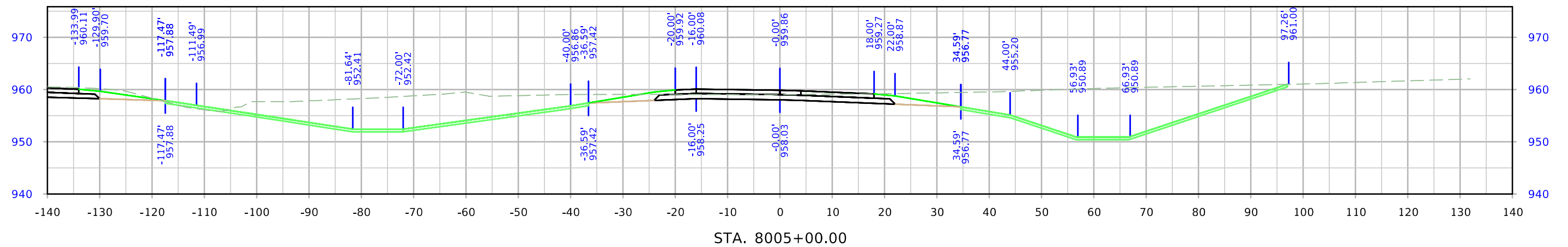
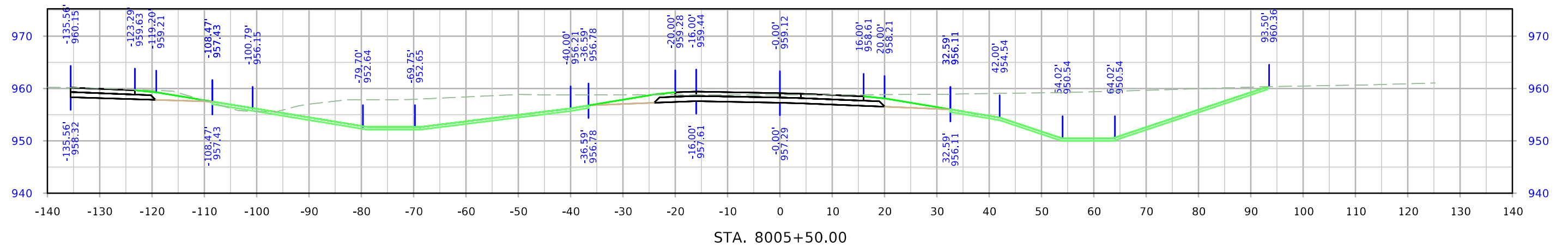
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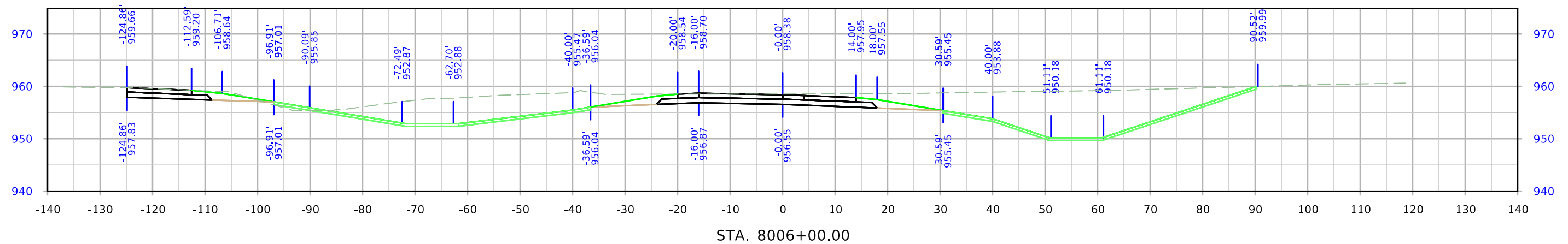
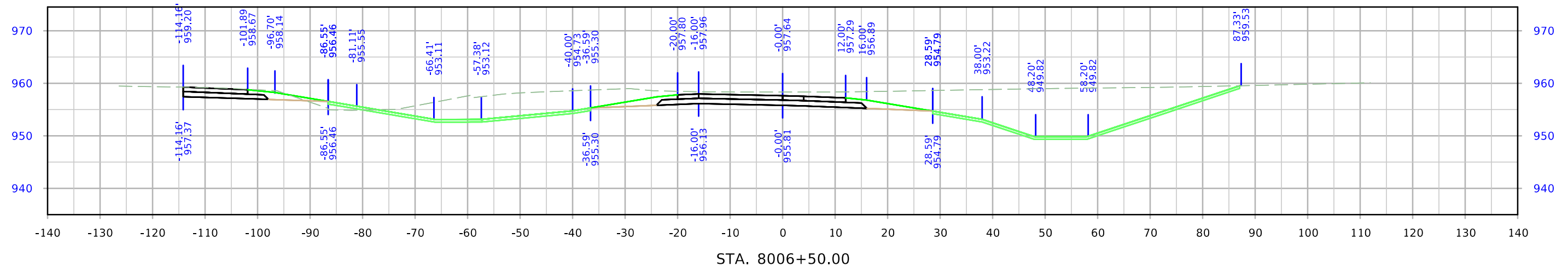
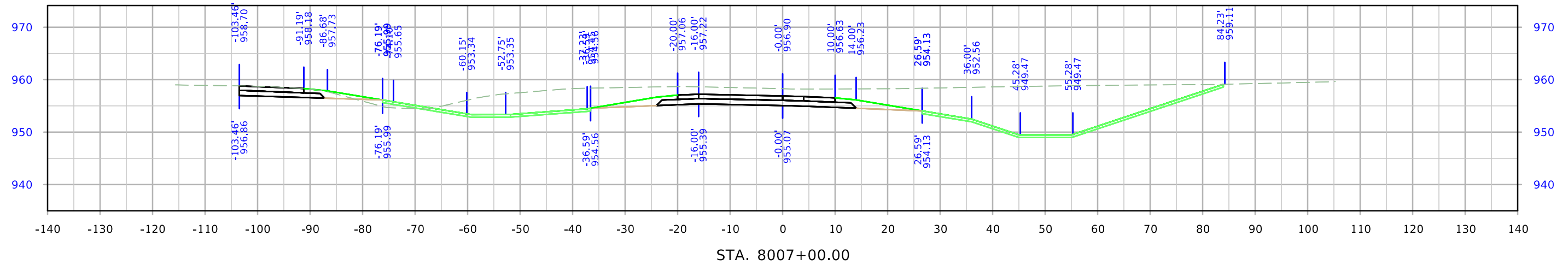
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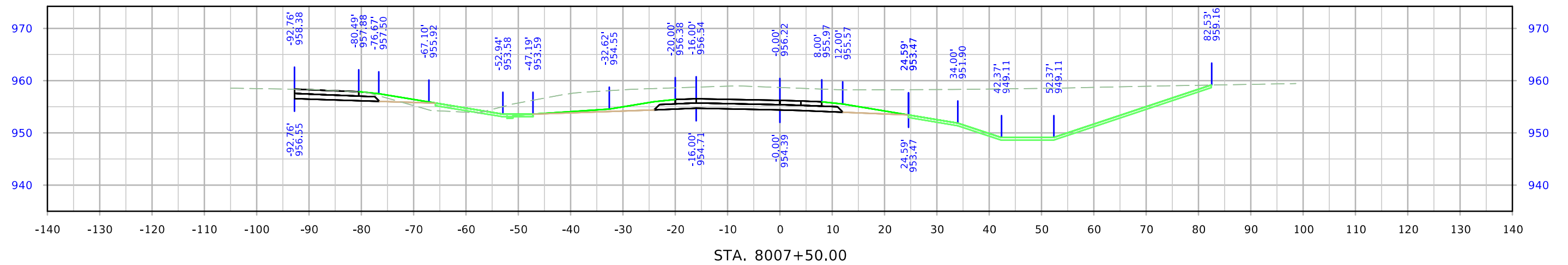
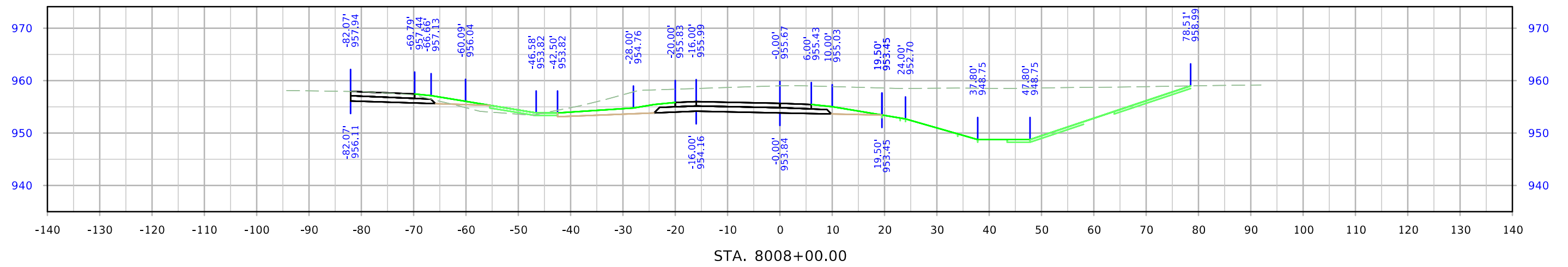
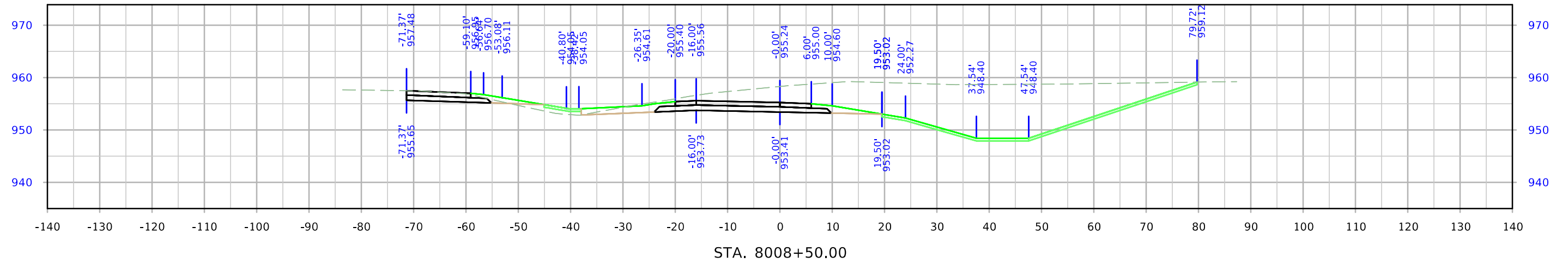
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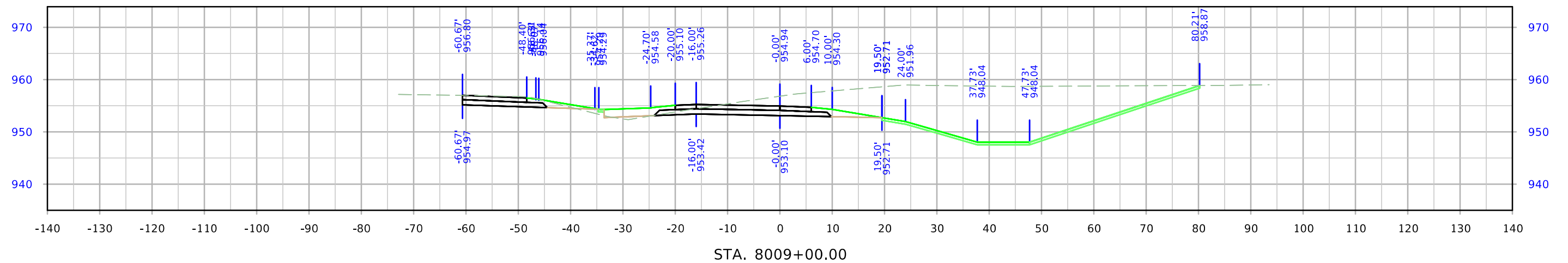
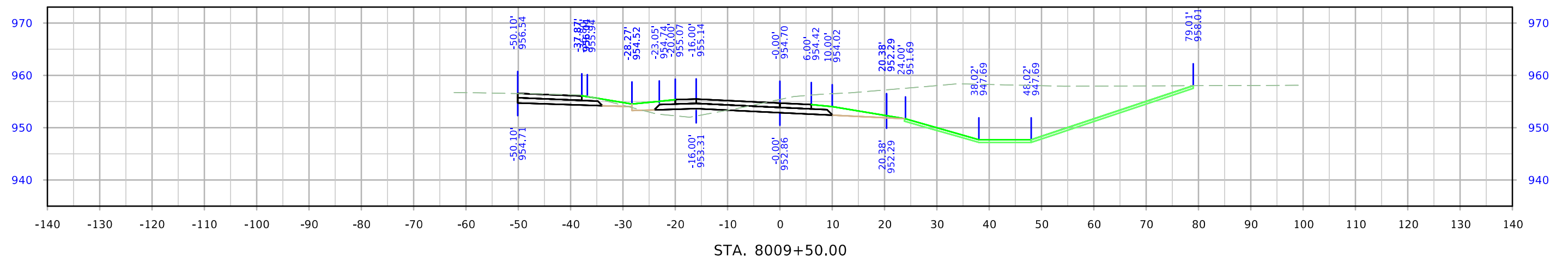
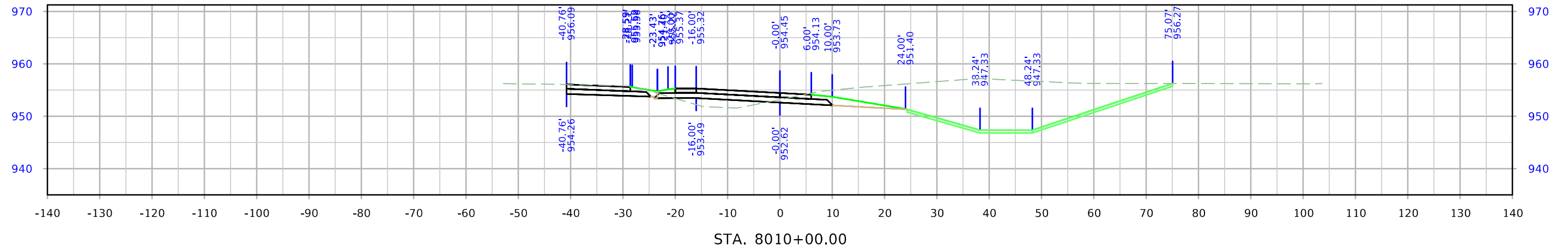
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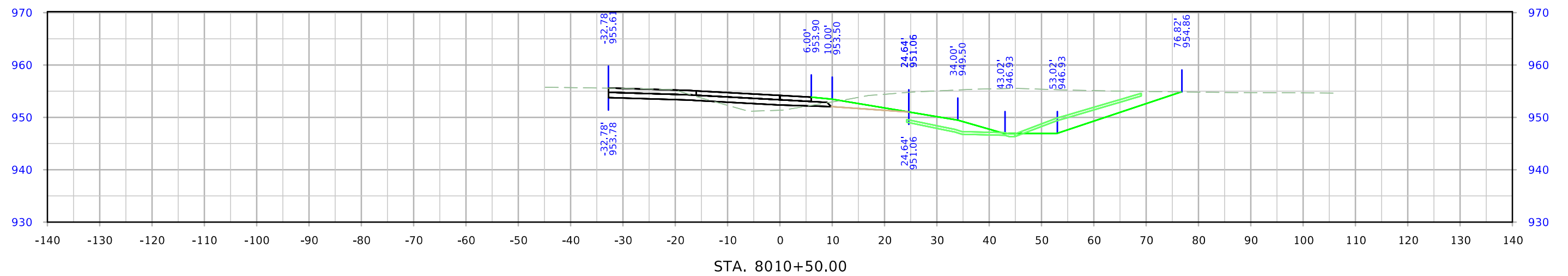
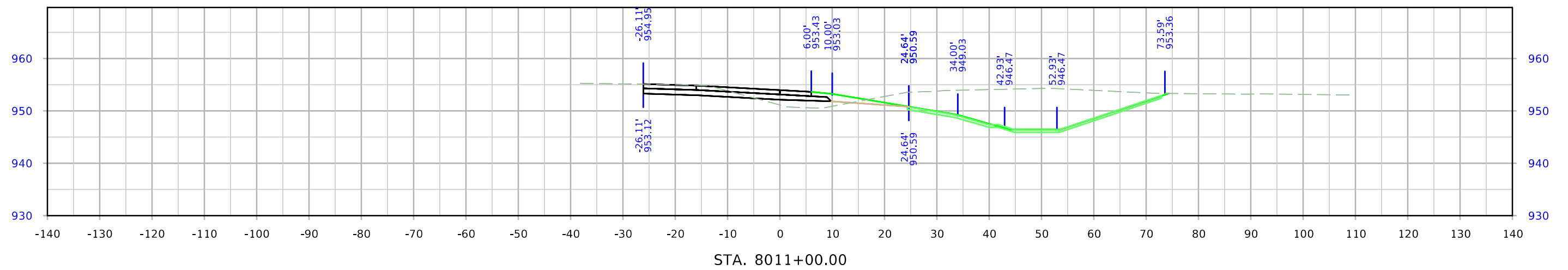
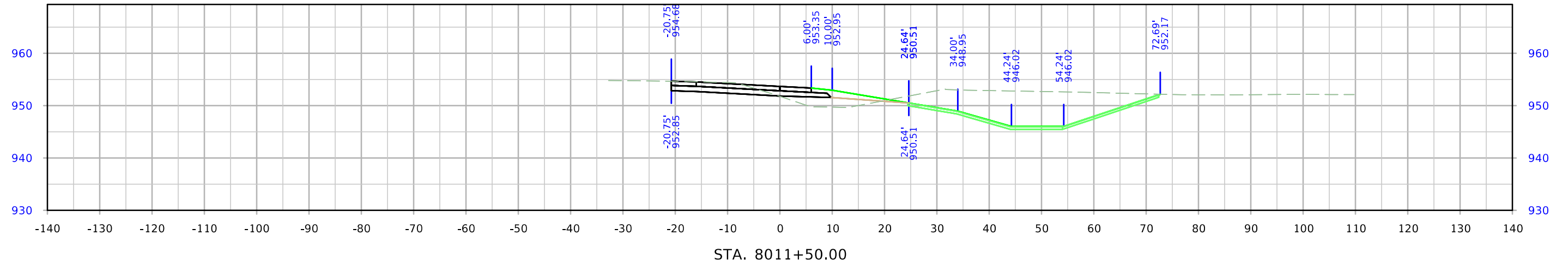
# I-80 Ramp H



# I-80 Ramp H

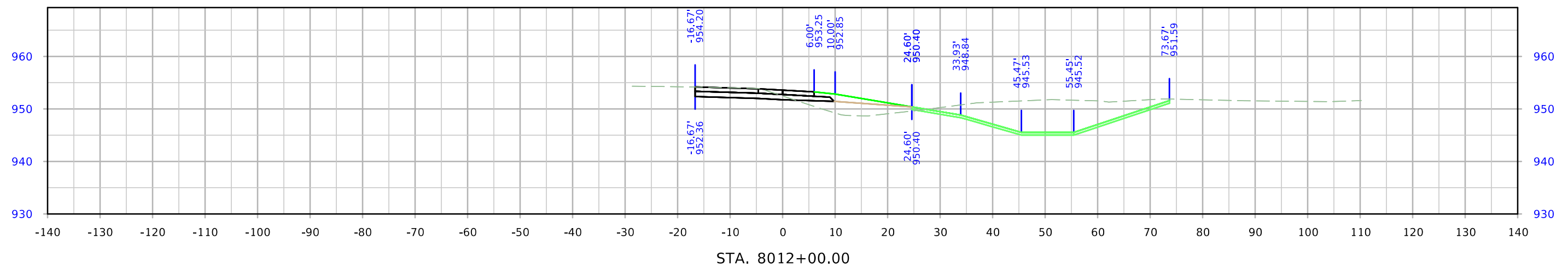
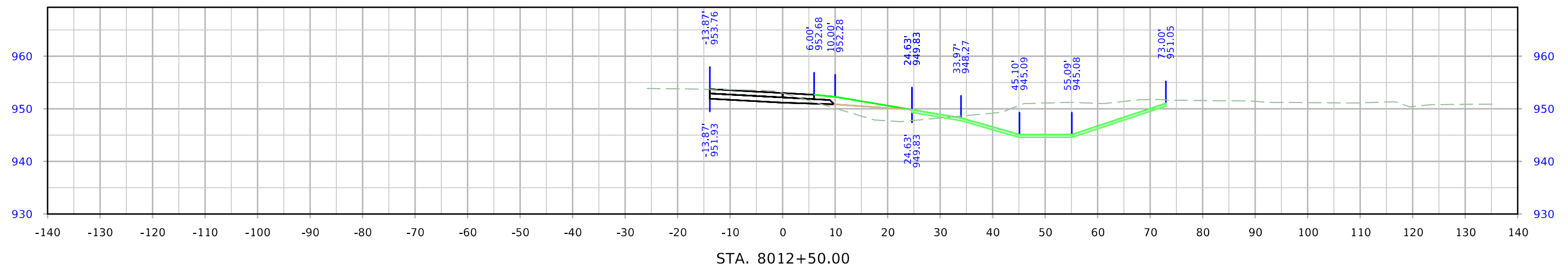
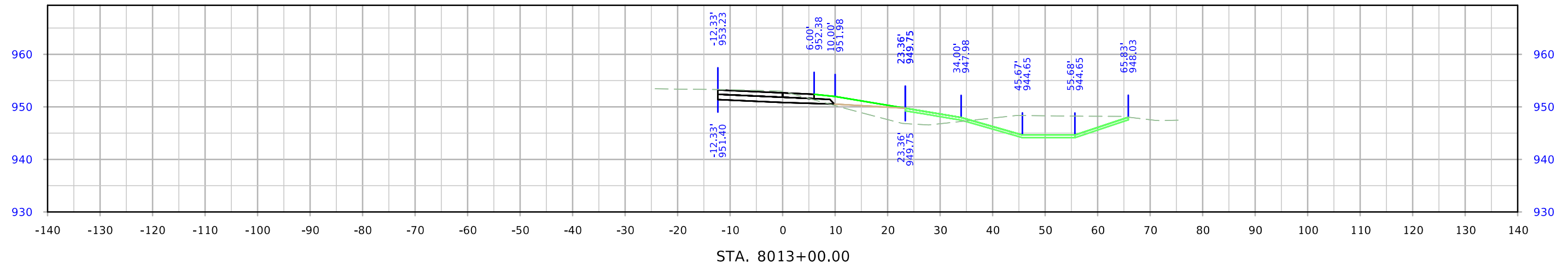


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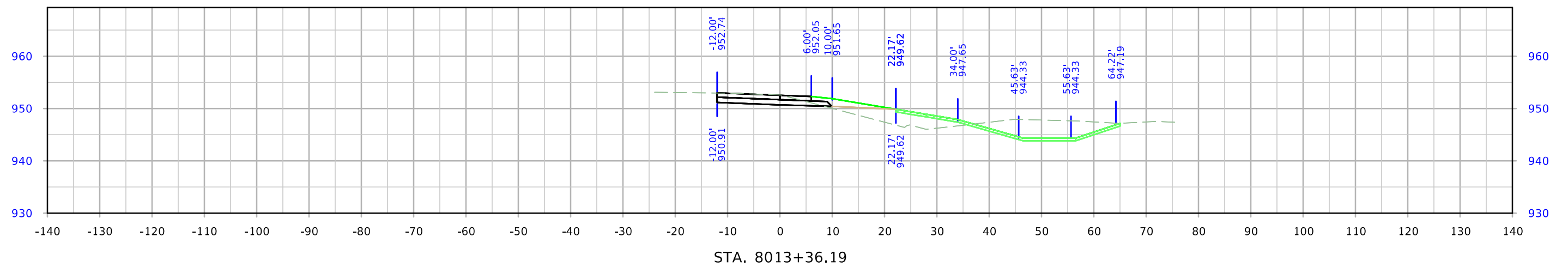




# I-80 Ramp H



# I-80 Ramp H



STA. 8013+36.19