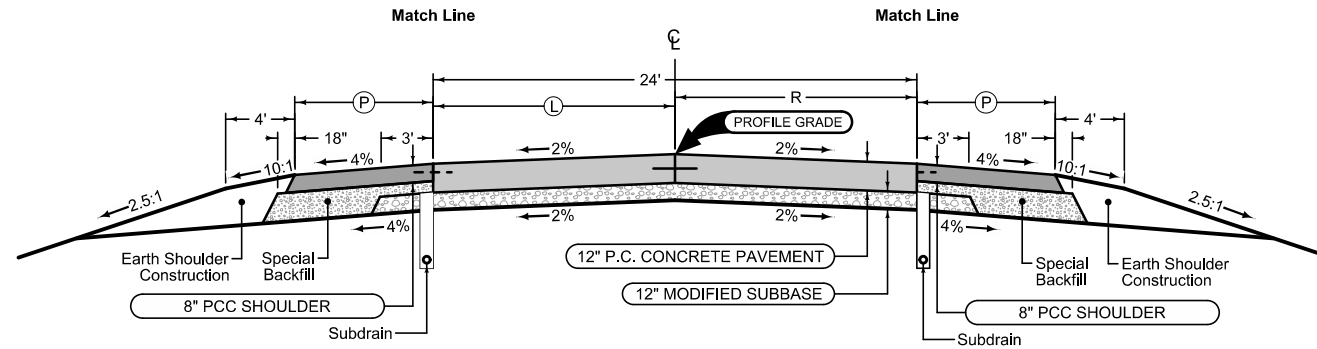


**Paved Shoulder at Guardrail**

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

2_P_Guard_04-21-20		
STATION TO STATION		(P) Feet
947+61.75	947+71.75	14.63-13.63
947+71.75	948+19.63	13.63-11.58
948+19.63	948+81.75	11.58
951+16.25	951+78.70	11.58
951+78.70	952+26.25	11.58-13.63
952+26.25	952+36.25	13.63-14.63



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

2P_04-21-20			
STATION TO STATION		(L) Feet	(R) Feet
947+61.75	947+71.75	11-12	11-12
947+71.75	948+81.75	12	12
951+16.25	952+26.25	12	12
952+26.25	952+36.25	11-12	11-12

**Paved Shoulder at Guardrail**

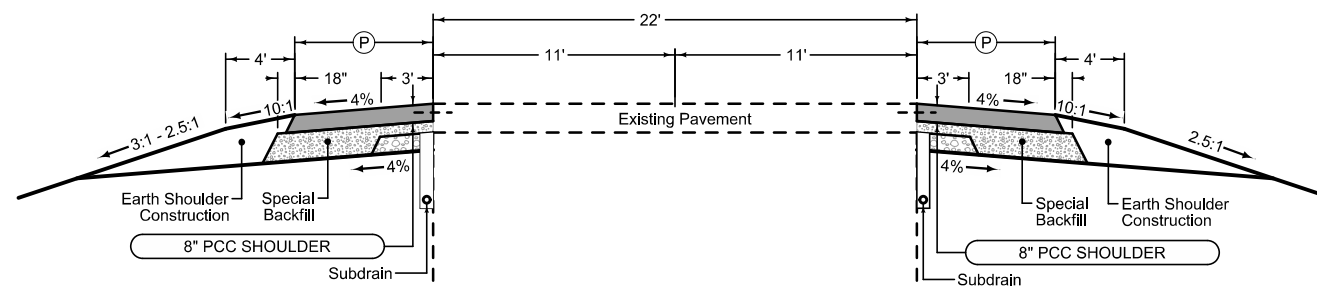
PCC Shoulder Jointing:  
 Longitudinal joint: BT-1 or BT-5  
 Transverse joints: C at mainline spacing  
 HMA Shoulder Jointing:  
 Longitudinal joint: B

2_P_Guard_04-21-20		
STATION TO STATION		(P) Feet
947+61.75	947+71.75	14.63-13.63
947+71.75	948+19.63	13.63-11.58
948+19.63	948+81.75	11.58
951+16.25	951+78.70	11.58
951+78.70	952+26.25	11.58-13.63
952+26.25	952+36.25	13.63-14.63

**Paved Shoulder at Guardrail**

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

2_P_Guard_04-21-20		
STATION TO STATION		(P) Feet
947+49.59	947+61.75	14.63
952+36.25	952+48.41	14.63



**Paved Shoulder at Guardrail**

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

2_P_Guard_04-21-20		
STATION TO STATION		(P) Feet
947+49.59	947+61.75	14.63
952+36.25	952+48.41	14.63

**Granular Shoulder**

2_G_04-21-20			
STATION TO STATION		(G) Feet	(D) Feet
946+74.59	947+49.59	0-8.5	0-4
952+48.41	953+19.41	11.1-0	4-0



**Granular Shoulder**

2_G_04-21-20			
STATION TO STATION		(G) Feet	(D) Feet
946+74.59	947+49.59	0-8.5	0-4
952+48.41	953+19.41	11.1-0	4-0

### 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

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

LINEWORK		Design Color No.
Green	(2)	Existing Topographic Features and Labels
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)	Existing Utilities
SHADING		Design Color No.
Lavender	(9)	Temporary Pavement Shading
Yellow	(4)	Proposed Pavement Shading
Orange	(6)	Proposed Granular Shading
Orange	(70)	Proposed Shoulder Granular Shading
Yellow	(68)	Proposed Shoulder Paved Full Depth Shading
Yellow	(132)	Proposed Shoulder Paved Partial Depth Shading
Gray, Dark	(112)	Proposed Grade and Pave Shading "In conjunction with a paving project"
Brown, Light	(236)	Grading Shading
Orange, Light	(134)	Proposed Granular Entrance Shading
Yellow	(220)	Proposed Paved Entrance Shading
Tan	(8)	Proposed Sidewalk Shading
Blue, Light	(230)	Proposed Sidewalk Landing Shading
Pink	(11)	Proposed Sidewalk Ramp Shading
Green, Light	(225)	Existing Pavement Shading
Red	(3)	Proposed Structure Shading

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

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

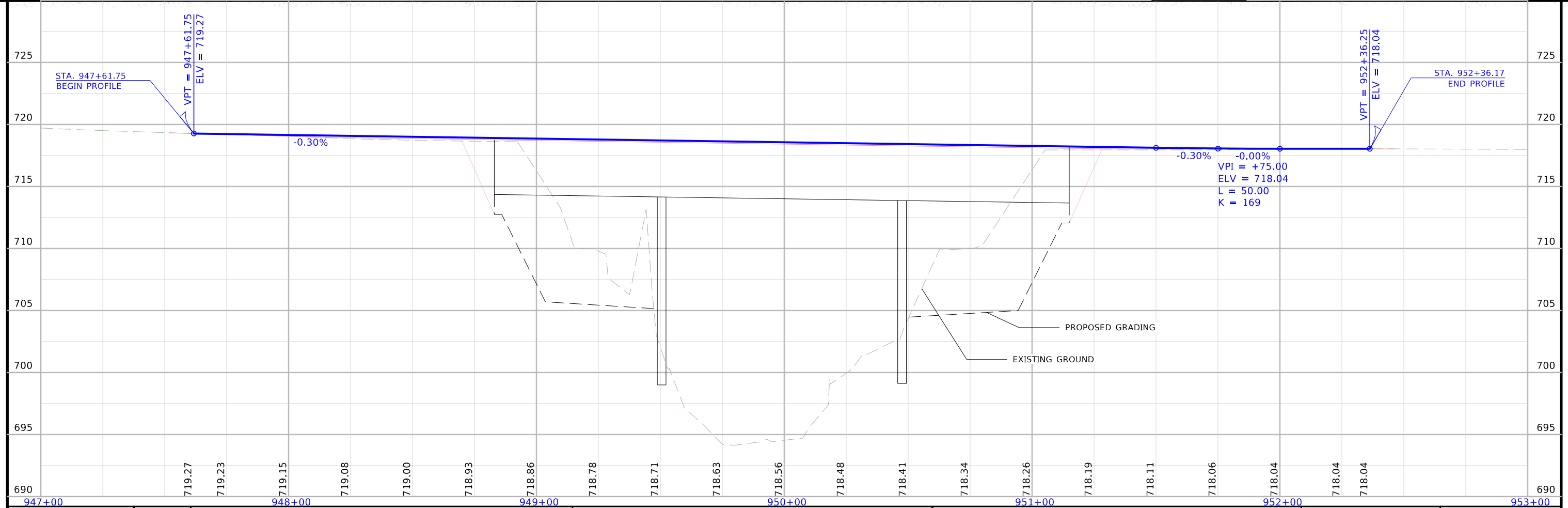
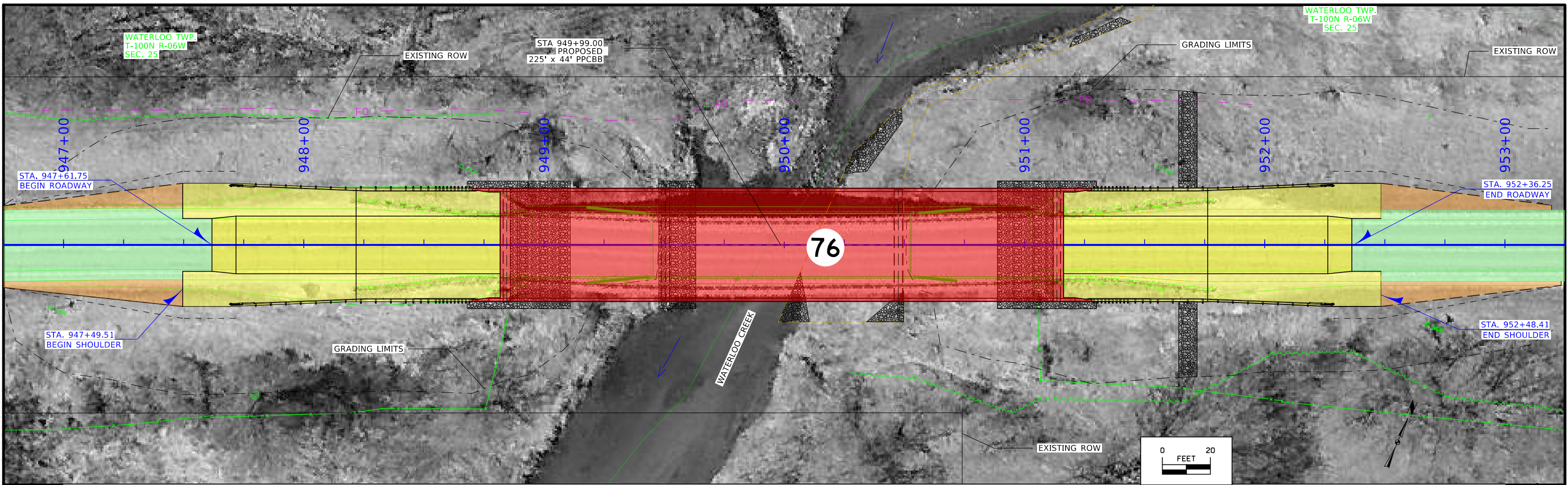
- Reference Point
- Station
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Trench Drain
- HighTension Cable Guardrail
- Sheet Pile
- Pavement Removal
- Clearing & Grubbing Area

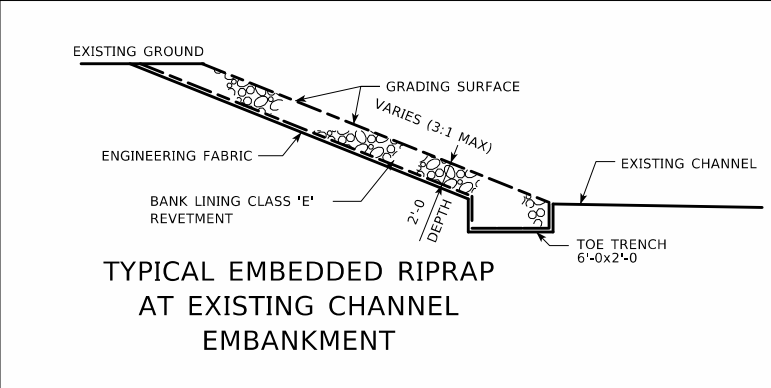
### RIGHT-OF-WAY LEGEND

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

## PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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





BEGIN GRADING  
N: 9467161.43  
E: 13419821.32

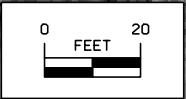
END GRADING  
N: 9467332.44  
E: 13420001.83

EXISTING ROW

959+00  
POE 959+02.08

76

WATERLOO CREEK



## Survey Information

### **General Information**

Measurement units for this survey are US survey feet. This survey is for IA. 76 Bridge over Waterloo Creek, 2.2 miles North of County Road A26 in Allamakee County.

### **Vertical Control**

Vertical datum for this survey is NAVD88. Allamakee County GPS Control Points 2002-210 and 2002-217 were used for vertical control for this project. Additional benchmarks and elevations on control points were then established using 3 GPS measurements and averaging the results. Then completing a benchmark circuit through the control points.

### **Horizontal Control**

The project coordinate system for this survey is the Iowa Regional Coordinate System (IaRCS) Zone 3 (U.S. Survey Feet). Allamakee County GPS Control Points 2002-210 and 2002-217 were converted from Iowa State Plane Coordinates (Ia North 1401-U.S. Survey Feet) to Iowa Regional Coordinate System (IaRCS) Zone 3 (U.S. Survey Feet). Four additional control points were established throughout the project using the Iowa Regional Coordinate System (IaRCS) Zone 3 (U.S. Survey Feet)

## 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: IA. REGIONAL COORDINATE SYSTEM ZONE 03  
VERT. DATUM: NAVD88

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: IA. REGIONAL COORDINATE SYSTEM ZONE 03

VERT. DATUM: NAVD88

Project Control Marks are Bench Marks

Point Name	Northing	Easting	Elevation	Description
WC1	9466490.92	13418572.00	719.92	SET 5/8 IN REBAR MONUMENT. TO LOCATE MONUMENT FROM EDGE OF WATERLOO CREEK BRIDGE ON HWY 76 GO WEST ALONG HWY 76 257.57 FT. MONUMENT IS 10.64 FT NORTH OF HMA PAVED SHOULDER AND 35 FT EAST OF GRAVEL ROAD CENTERLINE.
WC2	9466575.87	13418866.94	718.49	SET 5/8 IN REBAR MONUMENT. TO LOCATE MONUMENT FROM EDGE OF WATERLOO CREEK BRIDGE ON HWY 76 GO WEST ALONG HWY 76 23.45 FT. MONUMENT IS 3.00 FT SOUTH OF HMA PAVED SHOULDER BEHIND GUARDRAIL AND 15.17 FT WEST OF SW CORNER OF BRIDGE ABUTMENT WALL.
WC3	9466705.36	13419083.66	717.59	SET 5/8 IN REBAR MONUMENT. TO LOCATE MONUMENT FROM EDGE OF WATERLOO CREEK BRIDGE ON HWY 76 GO EAST ALONG HWY 76 13.62 FT. MONUMENT IS 5.93 FT NORTH OF HMA PAVED SHOULDER BEHIND GUARDRAIL AND 4.47 FT EAST OF NORTHEAST CORNER OF BRIDGE ABUTMENT WALL.
WC4	9466931.86	13419709.27	716.65	SET 5/8 IN REBAR MONUMENT. TO LOCATE MONUMENT FROM EDGE OF WATERLOO CREEK BRIDGE ON HWY 76 GO EAST ALONG HWY 76 677.65 FT. MONUMENT IS 4.11 FT SOUTH OF HMA PAVED SHOULDER AND 37 FT WEST OF GRAVEL ROAD CENTERLINE.
BM	9466587.28	13418889.99	721.28	US DEPARTMENT OF INTERIOR BRASS DISK - TOP CONCRETE BARRIER RAIL SW CORNER BRIDGE.

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

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

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

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

### PLAN VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

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

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

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

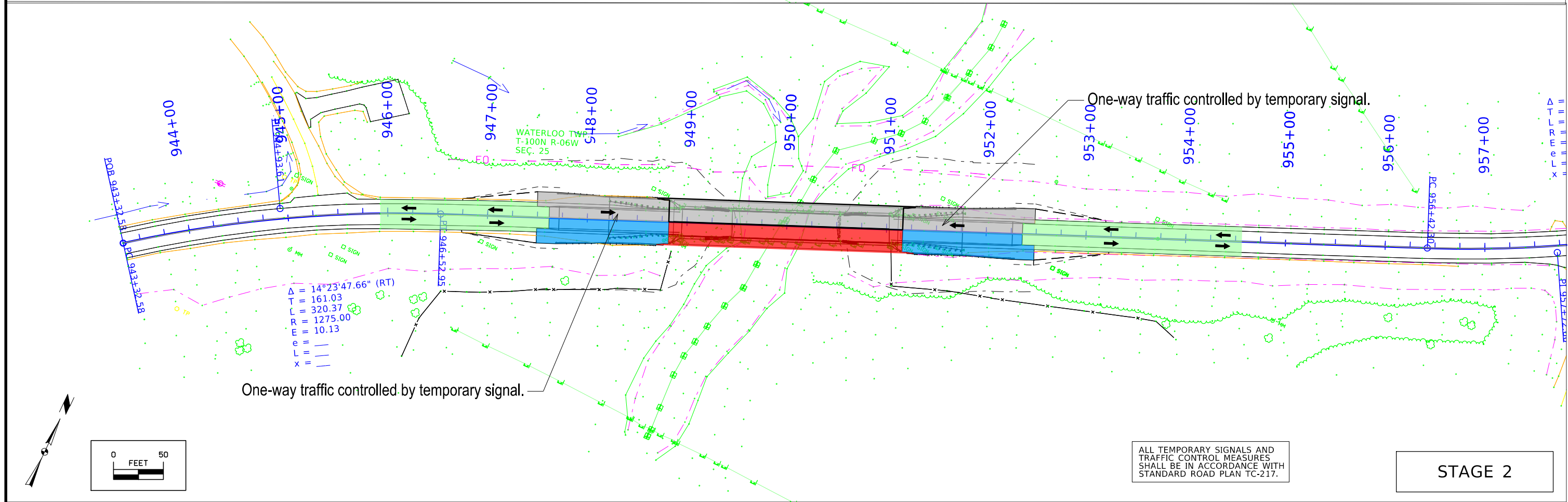
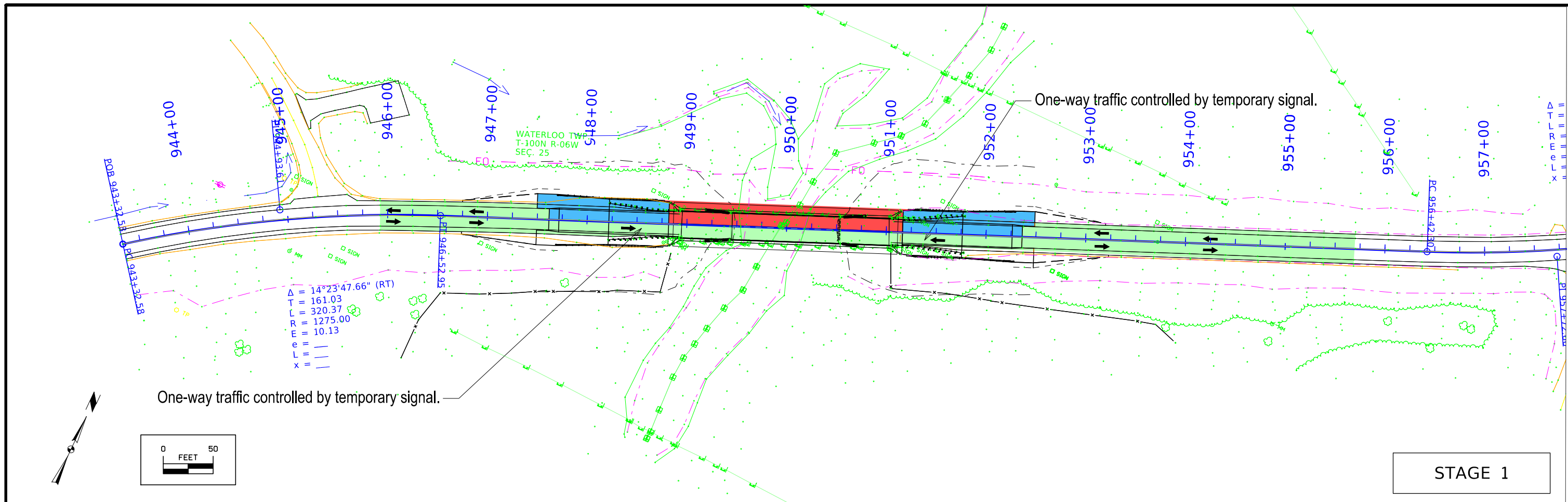
	Channelizing Device		Crash Cushion (Temp or Perm)
	Drum		Traffic Signal
	Temporary Lane Separator		Flagger
	Tubular Marker		Temporary Floodlighting
	Channelizer Marker		Traffic Sign
	Concrete Barrier Marker		Type III Barricade
	Delineator		Type A Warning Light
	Temporary Barrier Rail		Direction of Traffic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

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

## TRAFFIC CONTROL AND STAGING LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES J)





ALL TEMPORARY SIGNALS AND TRAFFIC CONTROL MEASURES SHALL BE IN ACCORDANCE WITH STANDARD ROAD PLAN TC-217.

## 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
(6)	Shoulder Granular	(3)	Waste
<b>Existing</b>			
(0)	Existing Pavement		

**NOTES:**

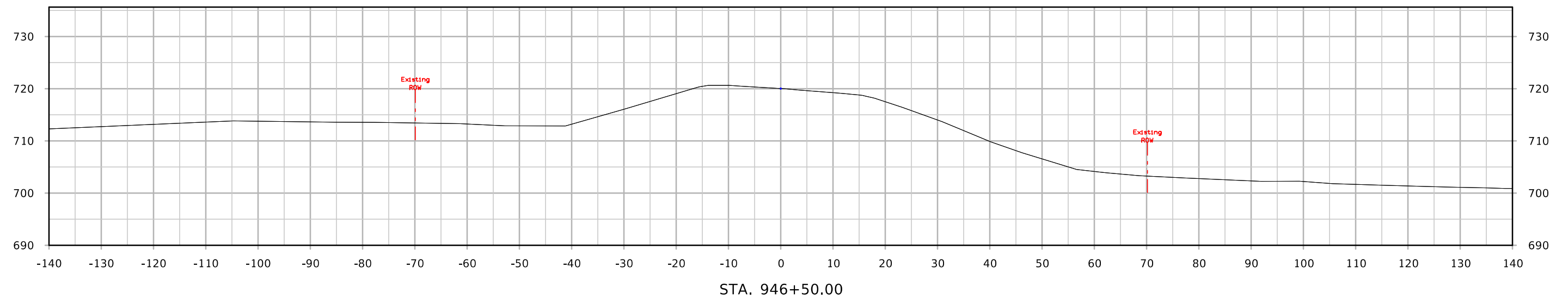
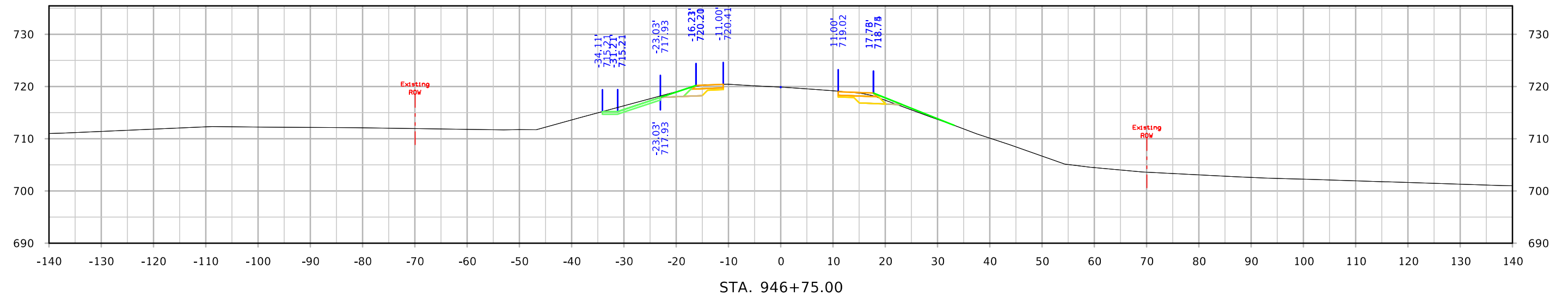
Text

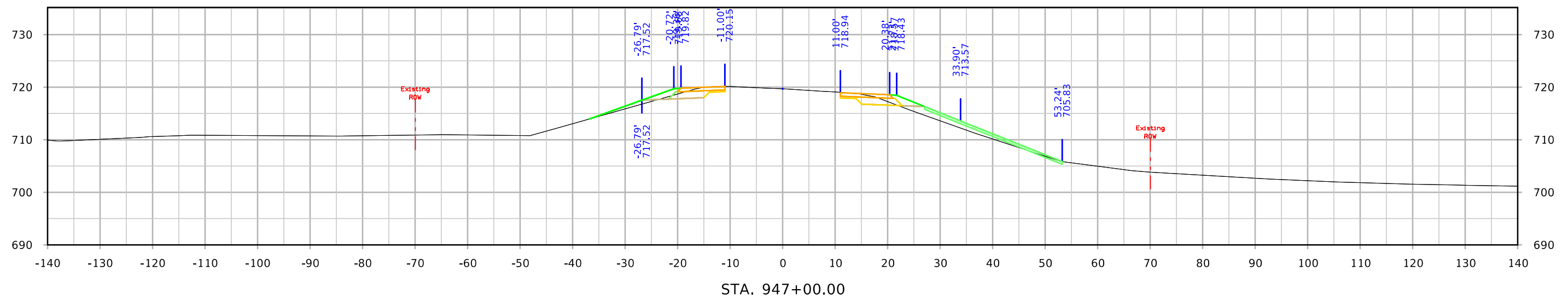
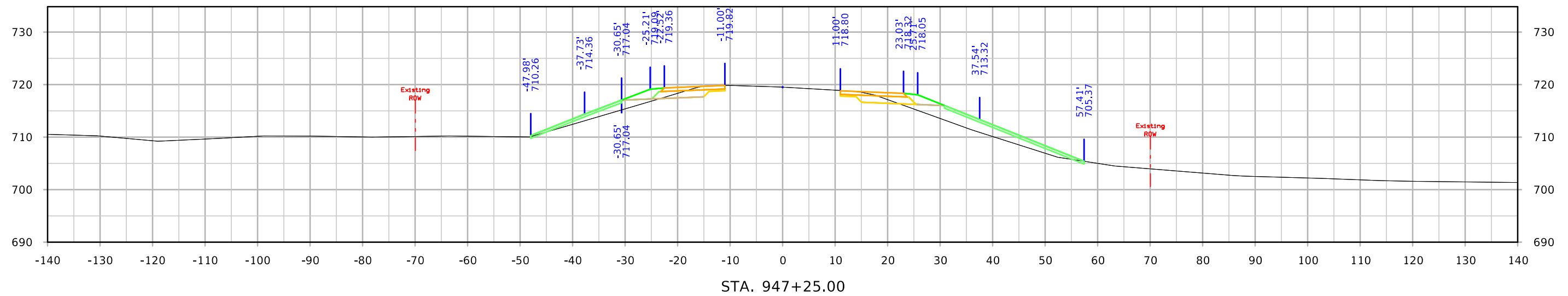
**NOTES:**

Text

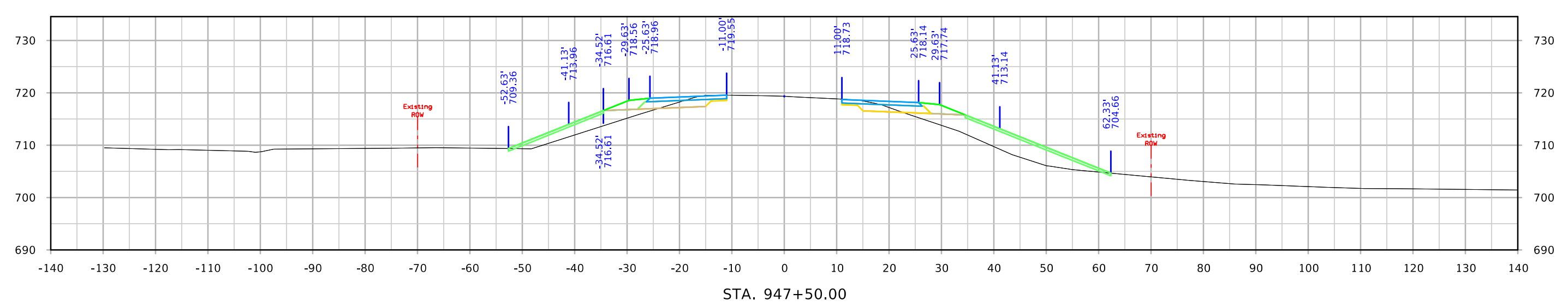
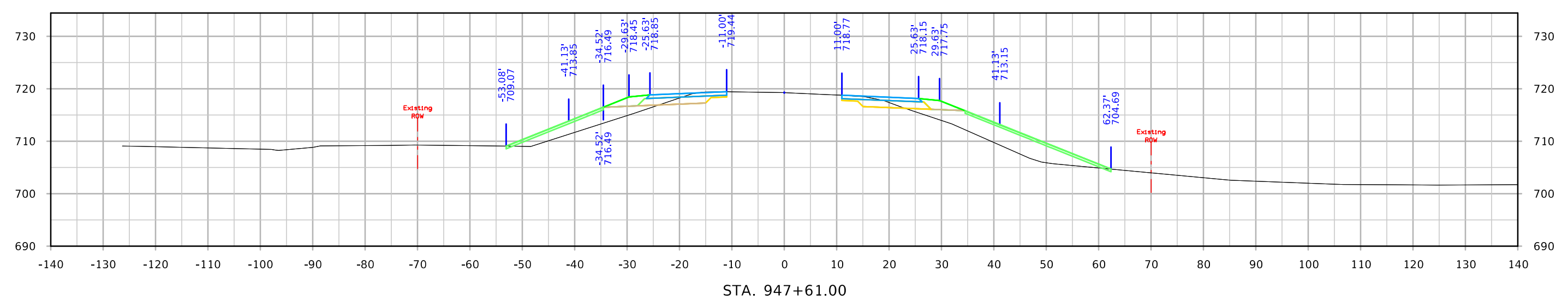
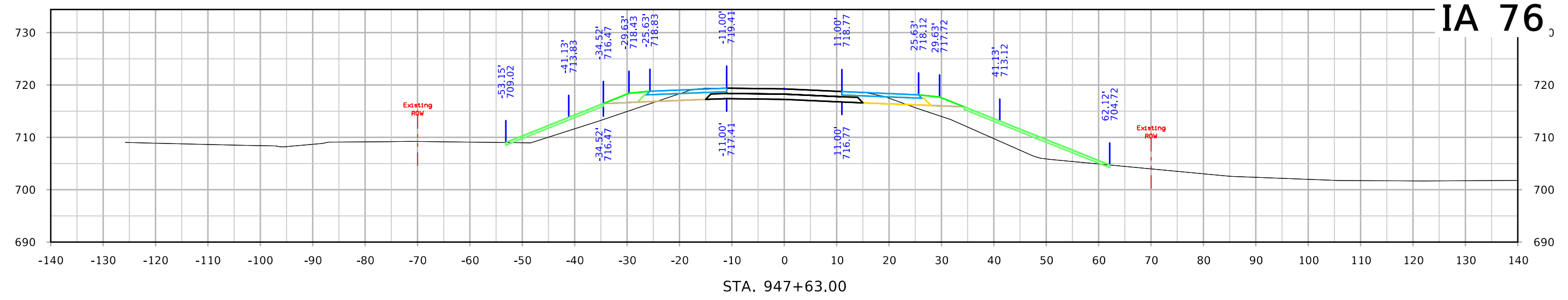
## CROSS SECTIONS LEGEND AND INFORMATION SHEET

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

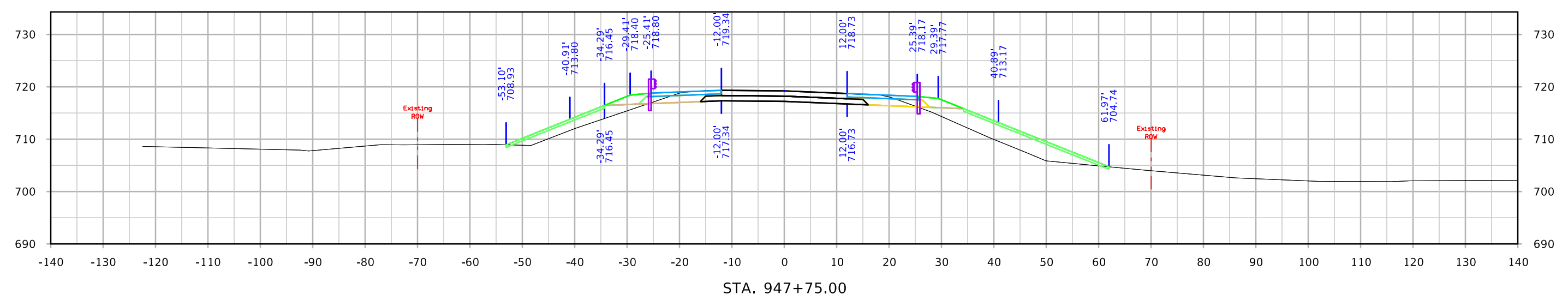
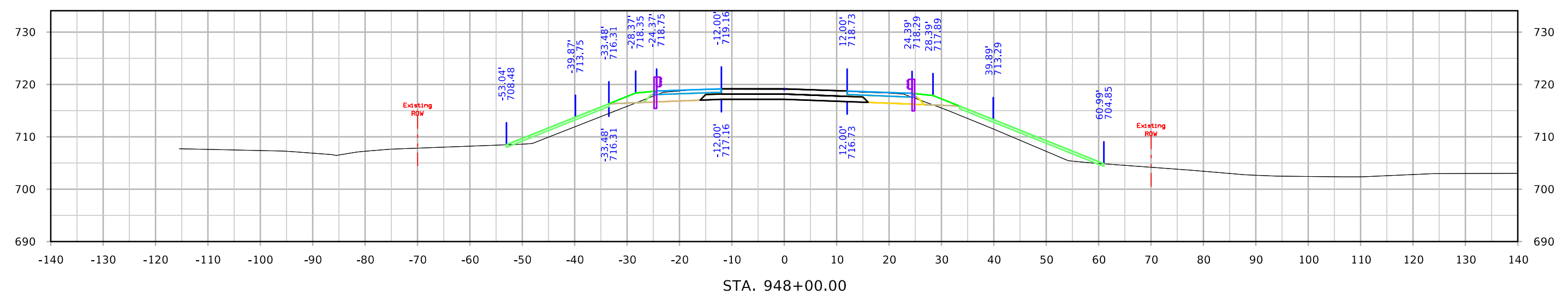
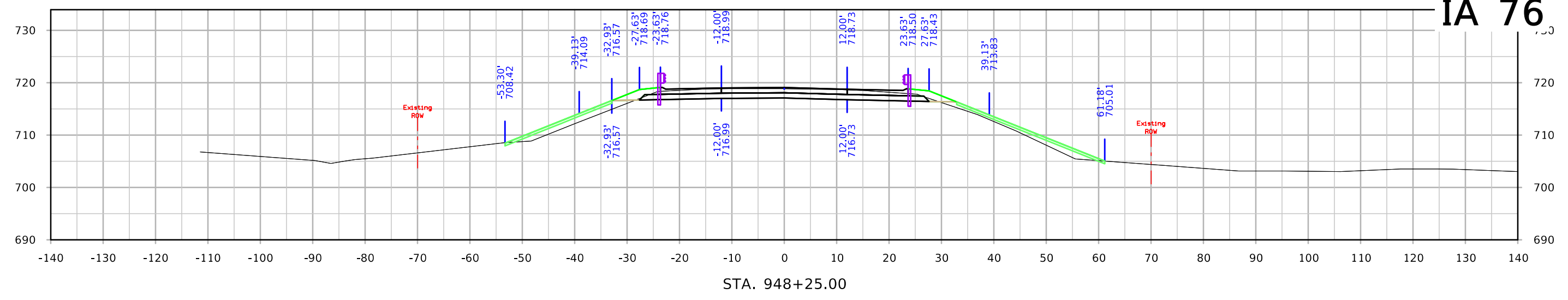


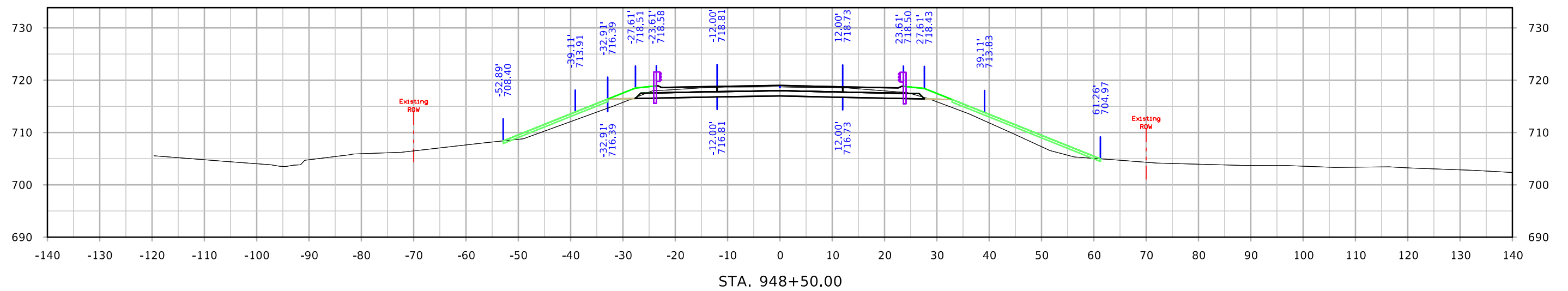
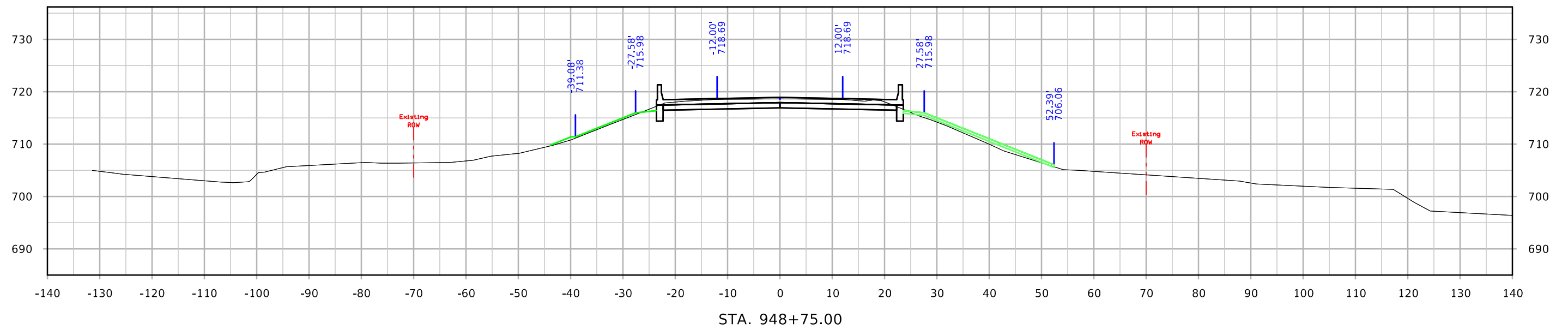


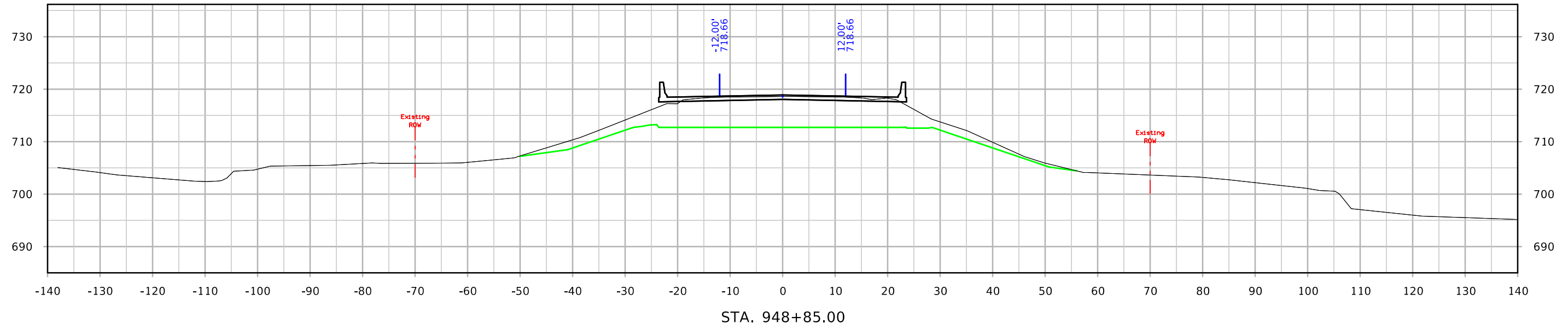
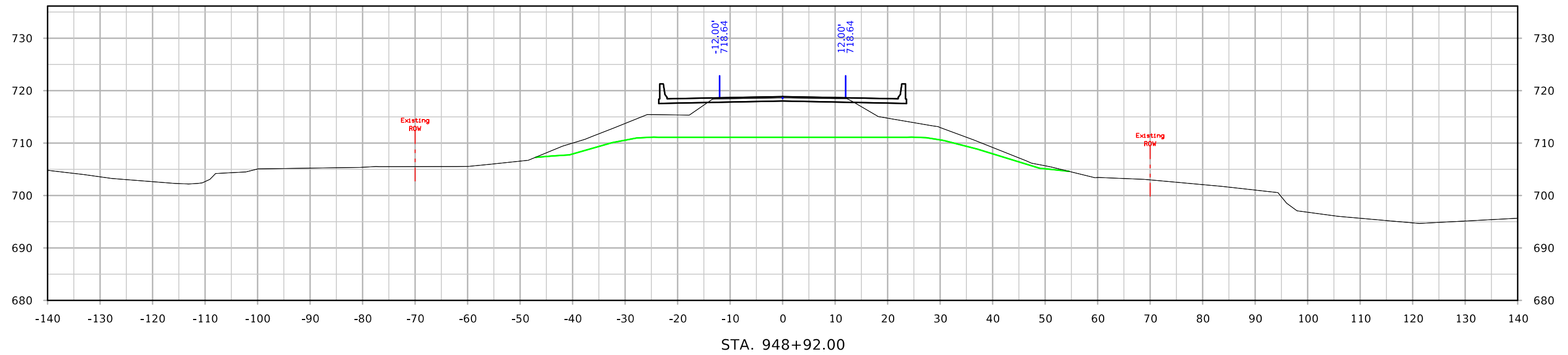
# IA 76



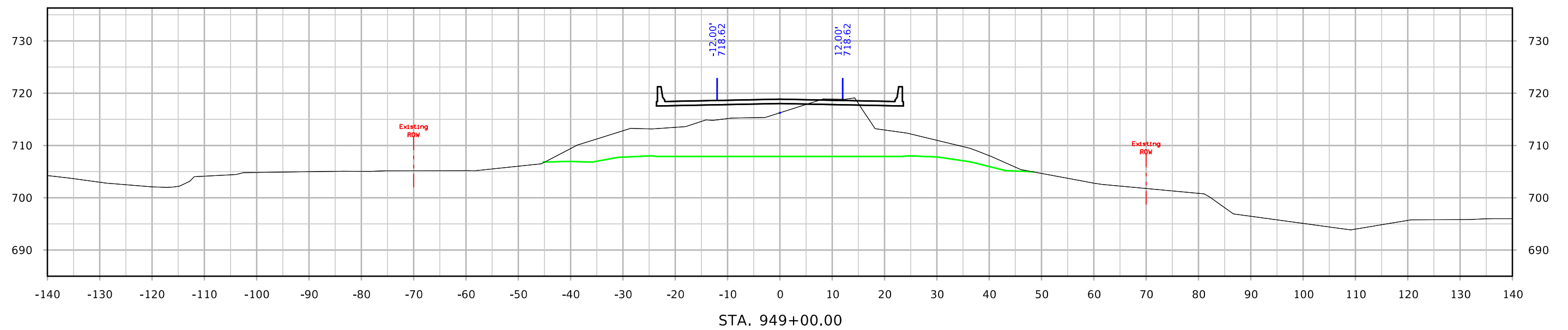
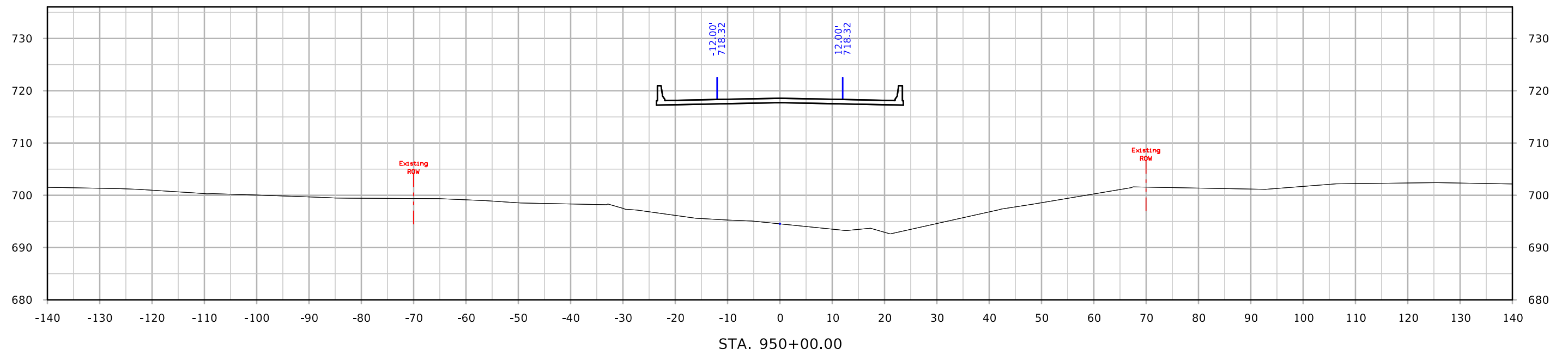
# IA 76

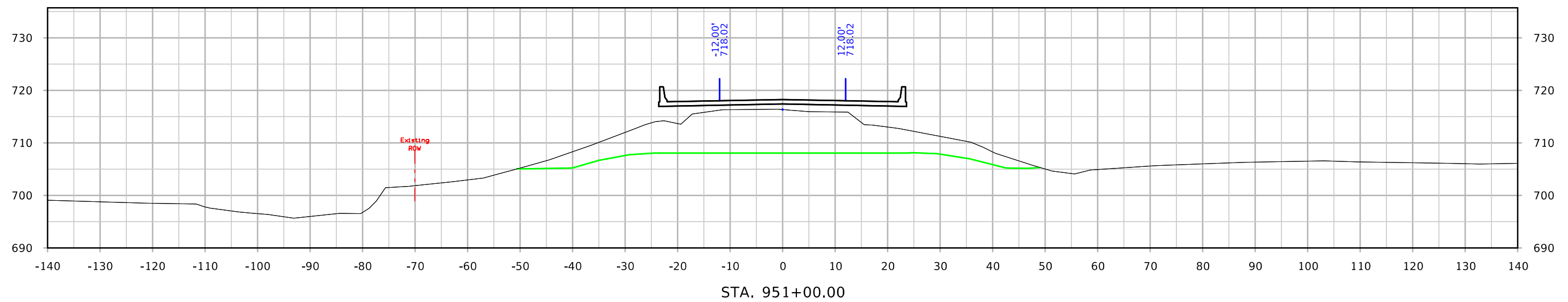
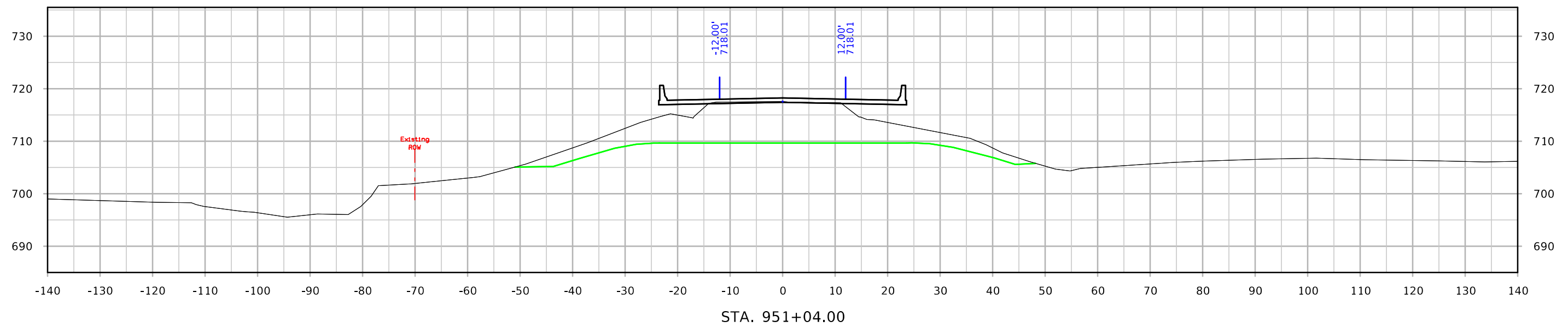


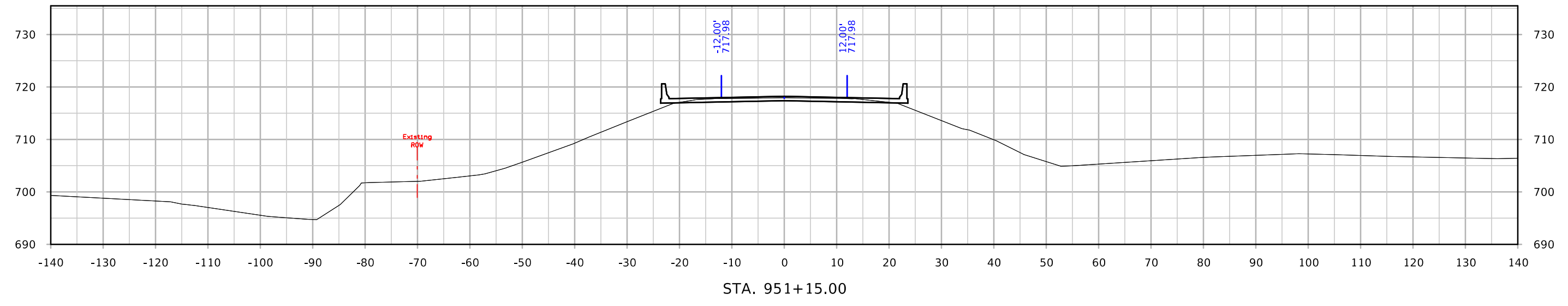
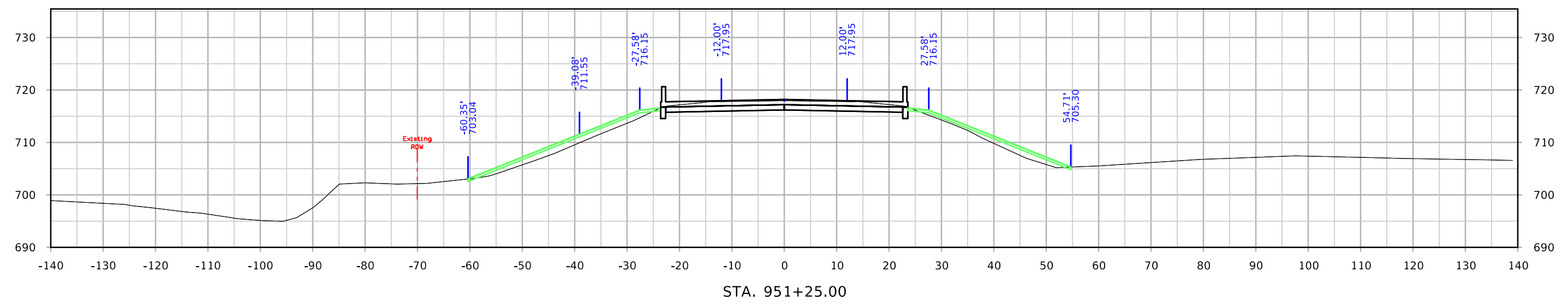
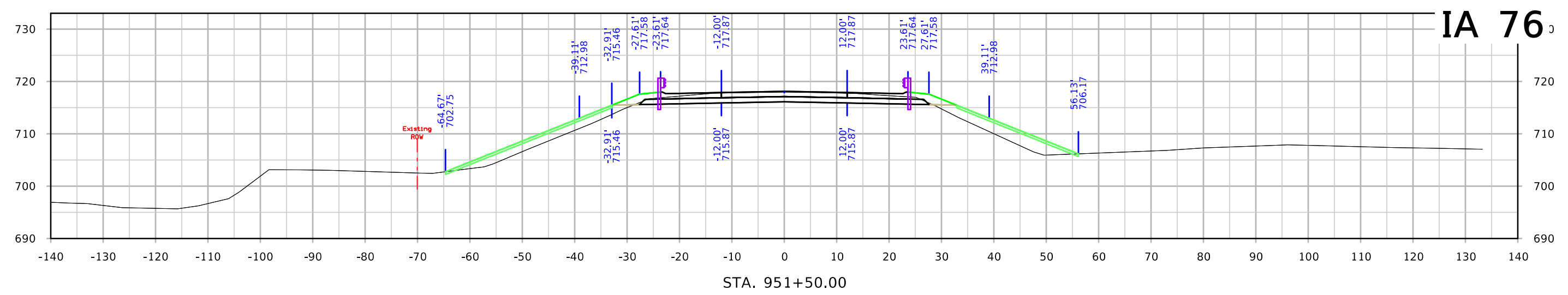


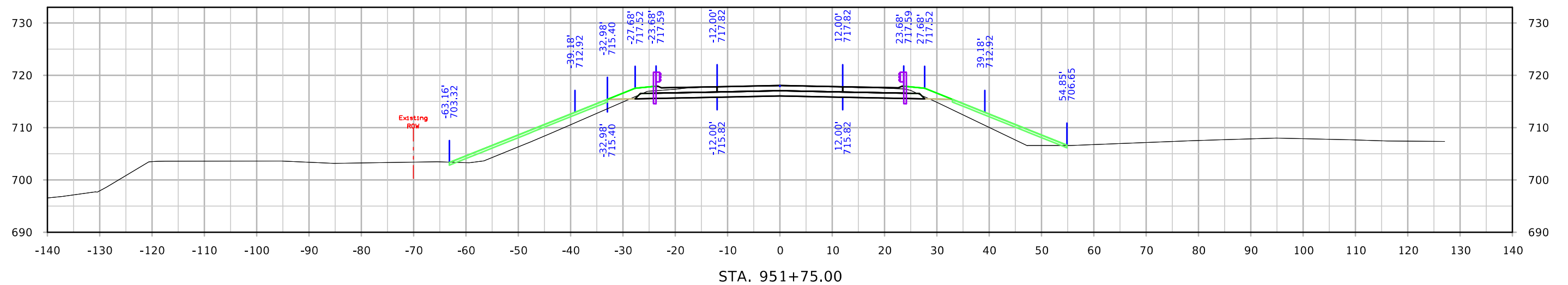
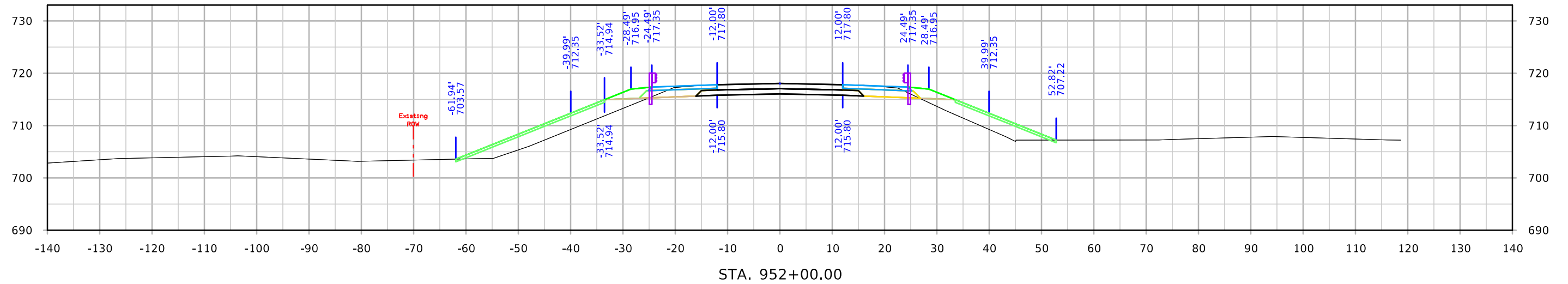
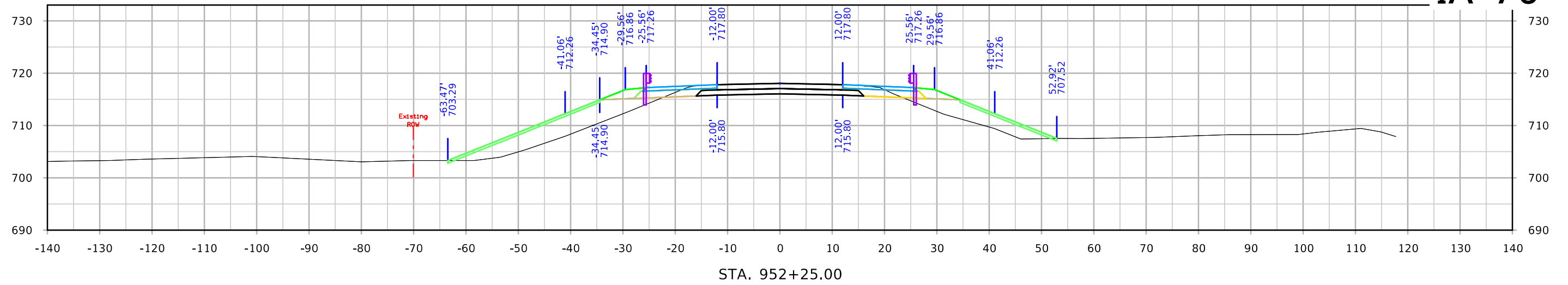




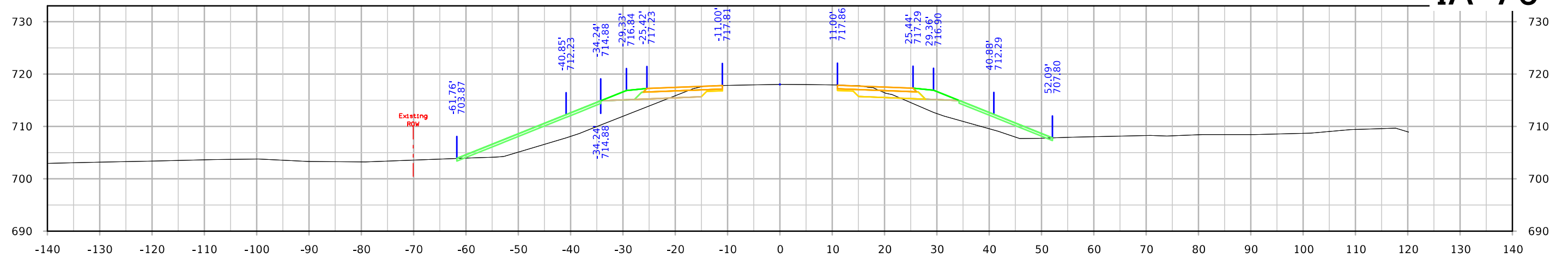




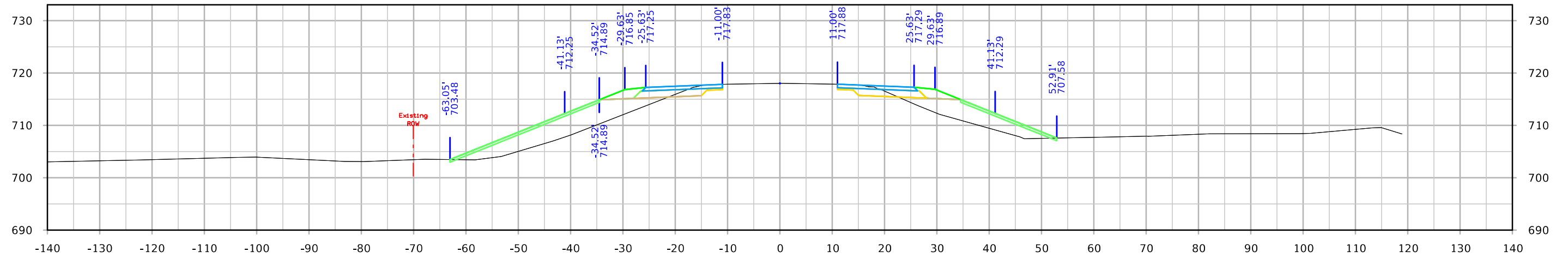




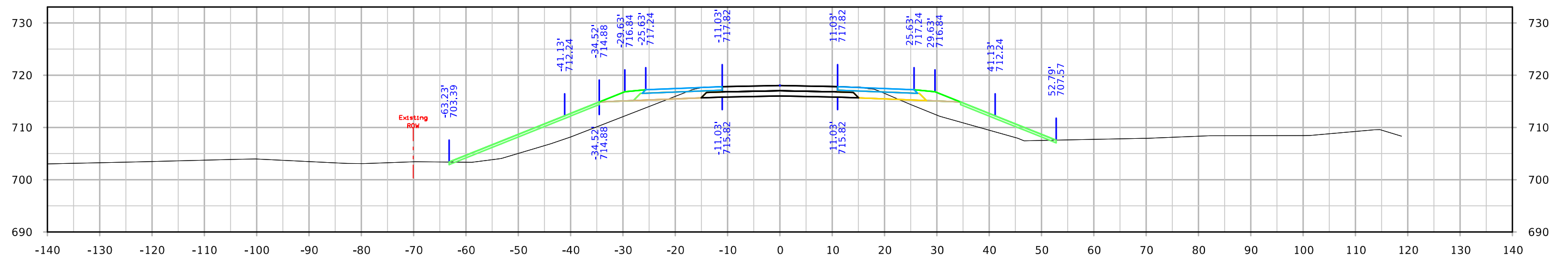
# IA 76



STA. 952+50.00



STA. 952+37.00



STA. 952+36.00

