



PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
CHICKASAW COUNTY

Bridge Replacement
US 18 over Little Cedar River
1.0 Miles East of Co Rd T74

SCALES: As Noted

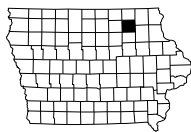
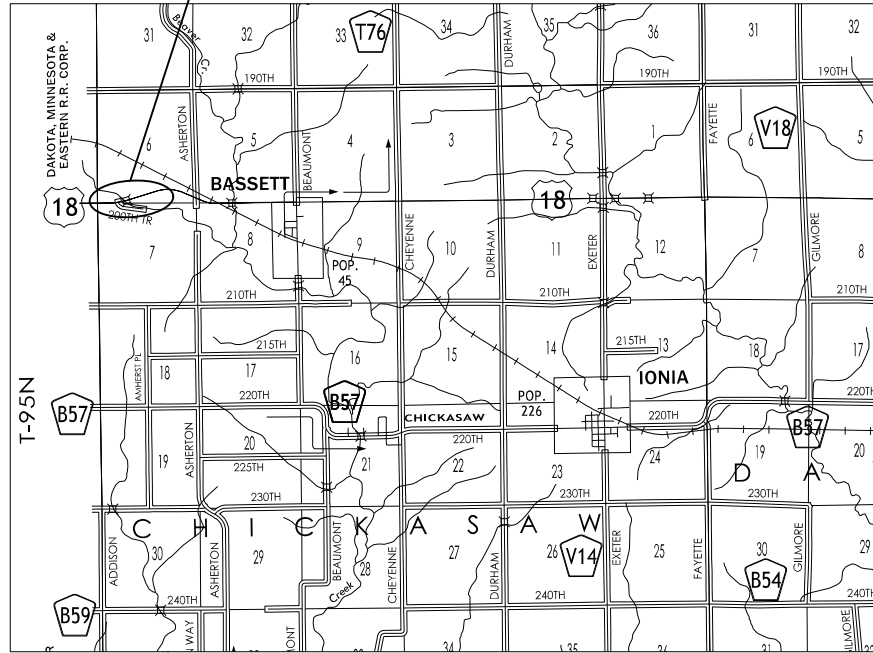
Refer to the Proposal Form for list of applicable specifications.

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

The Iowa Department of Transportation Standard Specifications for Highway and Bridge Construction, Series 2015, plus applicable General Supplemental Specifications, Developmental Specifications, Supplemental Specifications, and Special Provisions shall apply to the construction work on this project.

LEGEND	
INTERSTATE HIGHWAY	
PRIMARY HIGHWAY-DIVIDED	
PRIMARY HIGHWAY	
PORTLAND CEMENT CONCRETE ROAD	
ASPHALT ROAD	
BITUMINOUS ROAD	
GRAVEL ROAD	
EARTHEN ROAD	
INTERSTATE HIGHWAY	
UNITED STATES HIGHWAY	
STATE HIGHWAY	
COUNTY HIGHWAY	
RAILROAD	
PIPELINE	
AIRPORT	
HYDROLOGY	
BRIDGE	
STATE BOUNDARY	
COUNTY BOUNDARY	
CORPORATE BOUNDARY	
TOWNSHIP LINE	
SECTION LINE	
ROAD NAMES	
UNINCORPORATED PLACE	
ABBAY ROAD	
ELWOOD	

Project Location
Design No 0127
FHWA 19571



REVISIONS

TOTAL

PROJECT IDENTIFICATION NUMBER

21-19-018-010

PROJECT NUMBER

BRF-018-7(71)--38-19

R.O.W. PROJECT NUMBER

PROJECTWISE DIRECTORY

1901801021

INDEX OF SHEETS

NO.	DESCRIPTION
A.1	TITLE SHEET
B.1 - B.2	ROADWAY TYPICAL CROSS SECTIONS
D.1	D-SHEET LEGEND
D.2	US 18 PLAN/PROFILE
G.1-G.3	SURVEY INFORMATION
J.1	DETOUR PLAN
V.1-V.3	DESIGN 0127
W.1	CROSS SECTION SHEET LEGEND
W.2-W.17	US 18 CROSS SECTIONS

ENGLISH STANDARD
BRIDGE PLANS

STANDARD	ISSUED	REVISED

DESIGN DATA RURAL

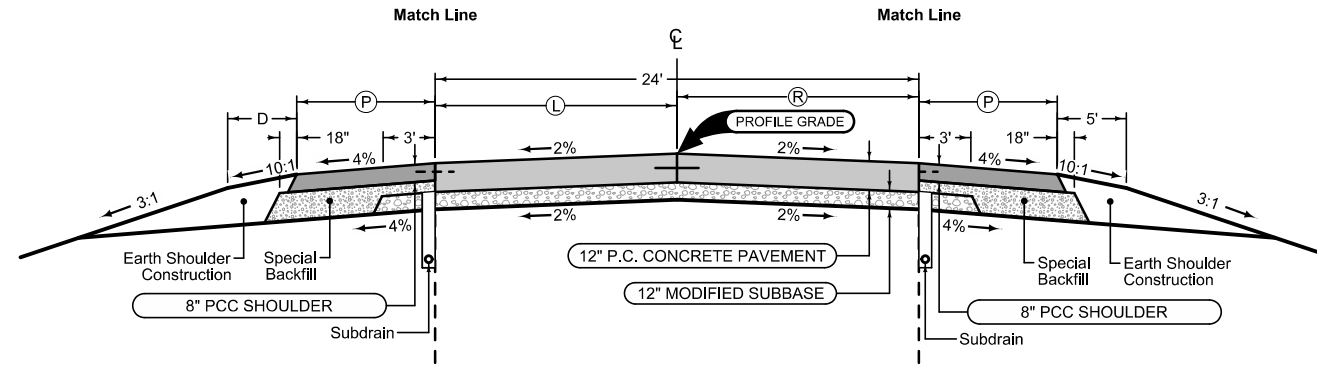
2026	AADT	2600	V.P.D.
	TRUCKS	15	%
2046	AADT	2960	V.P.D.
	TRUCKS	15	%



INDEX OF SEALS

SHEET NO.	NAME	TYPE
V.1	Daniel Kimball	Hydraulic Design

U.S. 18 Typical Section - Normal Crown



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

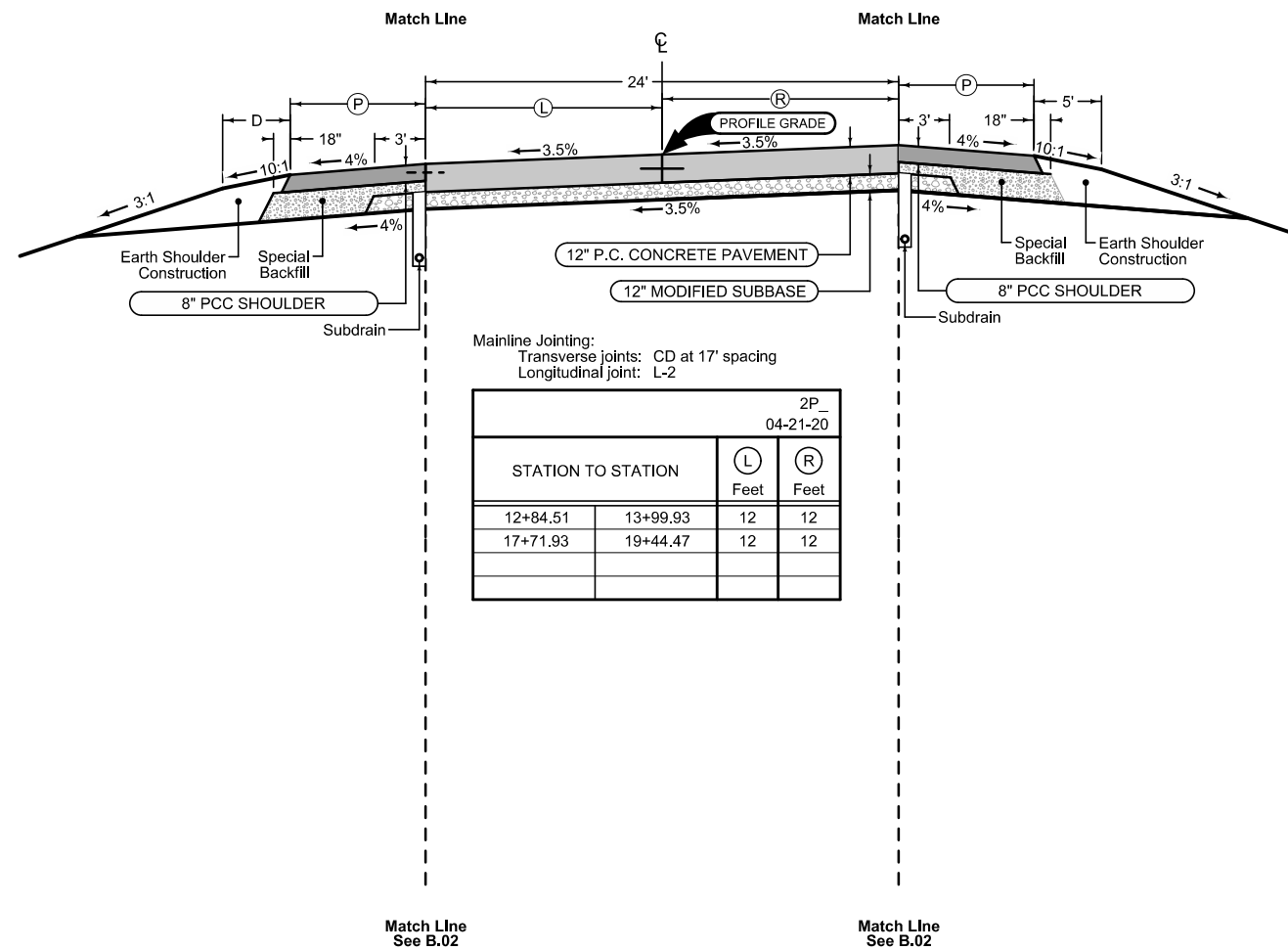
2_P_Guard_ 04-21-20			
STATION TO STATION		(P) Feet	(D) Feet
12+84.51	12+98.08	11.7-11.6	5
12+98.08	13+99.93	11.6	5
17+71.93	18+19.21	11.6	10-18
18+19.21	18+71.87	11.6-13.5	
18+71.87	18+88.11	13.5	18-10

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	
12+84.51	13+09.49	14	
13+09.49	13+52.74	14-11.6	
13+52.74	13+99.93	11.6	
17+71.93	18+65.78	11.6	
18+65.78	19+20.57	11.6-13.5	
19+20.57	19+44.47	13.5	

U.S. 18 Typical Section - Full Superelevation



2P_ 04-21-20			
STATION TO STATION		(L) Feet	(R) Feet
12+84.51	13+99.93	12	12
17+71.93	19+44.47	12	12

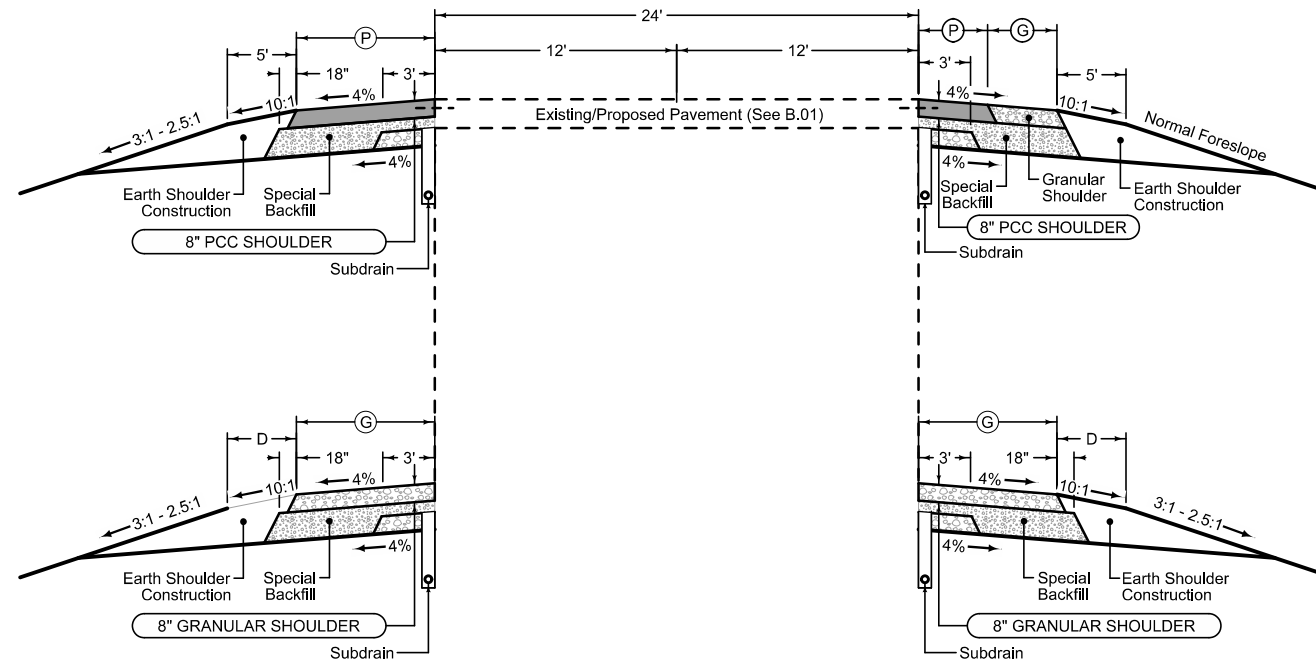
Paved Shoulder at Guardrail

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	
12+29.06	12+36.87	13
12+36.87	12+84.51	13-11.7

Granular Shoulder

2_G_ 04-21-20			
STATION TO STATION	(G) Feet	(D) Feet	
18+79.30	19+44.47	13.5-16.5	10-4



Combination Shoulder

Shoulder Jointing:
 Longitudinal joint: B

2_C_ 04-21-20			
STATION TO STATION	(P) Feet	(G) Feet	
12+17.26	12+84.51	4	Tie to Exist.

Granular Shoulder

2_G_ 04-21-20			
STATION TO STATION	(G) Feet	(D) Feet	
19+44.47	19+58.08	13.5-16.2	5

SURVEY SYMBOLS

- | | | | |
|--|-----------------------------------|--|------------------------------|
| | Interstate Highway Symbol | | Septic Tank |
| | U.S. Highway Symbol | | Cistern |
| | Iowa Highway Symbol | | L.P. Gas Tank (No Footing) |
| | County Road Highway Symbol | | Underground Storage Tank |
| | Evergreen Tree | | Latrine |
| | Deciduous Tree | | Satellite TV Dish |
| | Fruit Tree | | Water Hook Up |
| | Shrub (Bushes) | | Radio Tower |
| | Timber | | Tower Anchor |
| | Hedge | | Guardrail (Beam or Cable) |
| | Stump | | Guard Post (one or two) |
| | Swamp | | Guard Post (over two) |
| | Rock Outcrop | | Filler Pipe |
| | Broken Concrete | | Gas Valve |
| | Revetment (Rip Rap) | | Water Valve |
| | Cemetery | | Speed Limit Sign |
| | Grave | | Mile Marker Post |
| | Cave | | Sign |
| | Sink Hole | | Traffic Signal Control Box |
| | Board Fence | | Rail Road Signal Control Box |
| | Chain Link or Security Fence | | Telephone Switch Box |
| | Wire Fence | | Electric Box |
| | 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) | | |

UTILITY LEGEND

- TI CenturyLink
 Contact: Sadie Hull
 Phone: 9185470147
 Email: sadie.hull@lumen.com
- FO Iowa Communications Network
 Contact: Shannon Marlow
 Phone: 8005723940
 Email: icnoutsideplantiowaonecall@iowa.gov

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

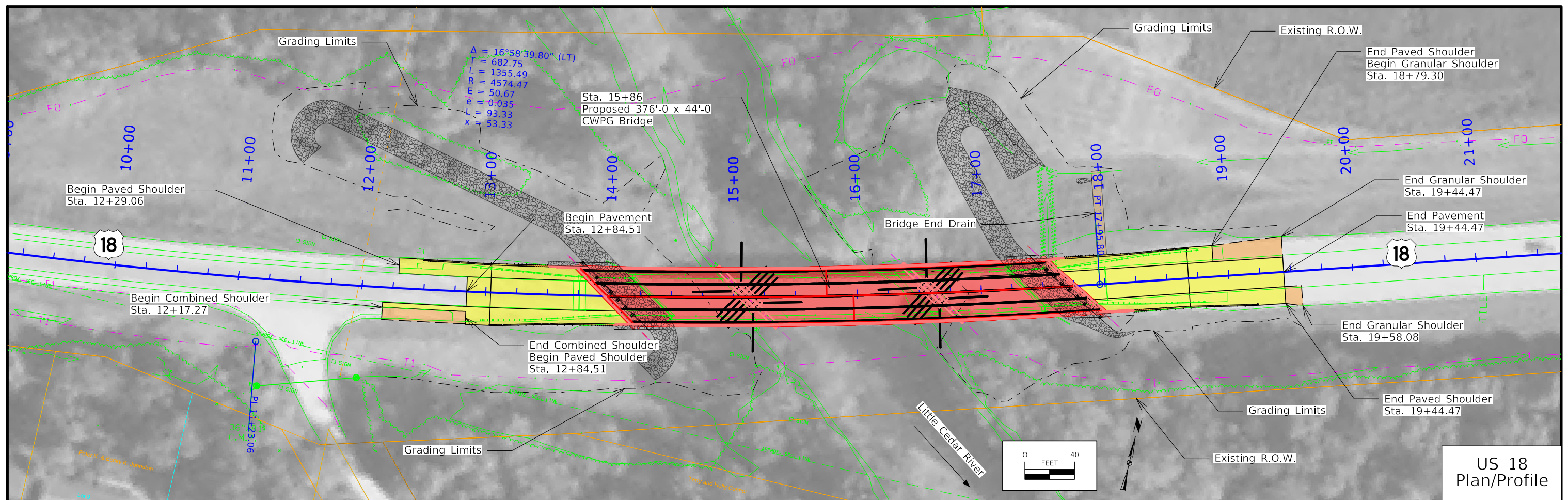
- | | | | |
|--|-----------------------------|--|--------------------------|
| | Reference Point | | Survey Line |
| | Station | | Section Corner |
| | Ground Line Intercept | | Saw Cut |
| | Guardrail | | Trench Drain |
| | HighTension Cable Guardrail | | Sheet Pile |
| | Pavement Removal | | Clearing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

RIGHT-OF-WAY LEGEND

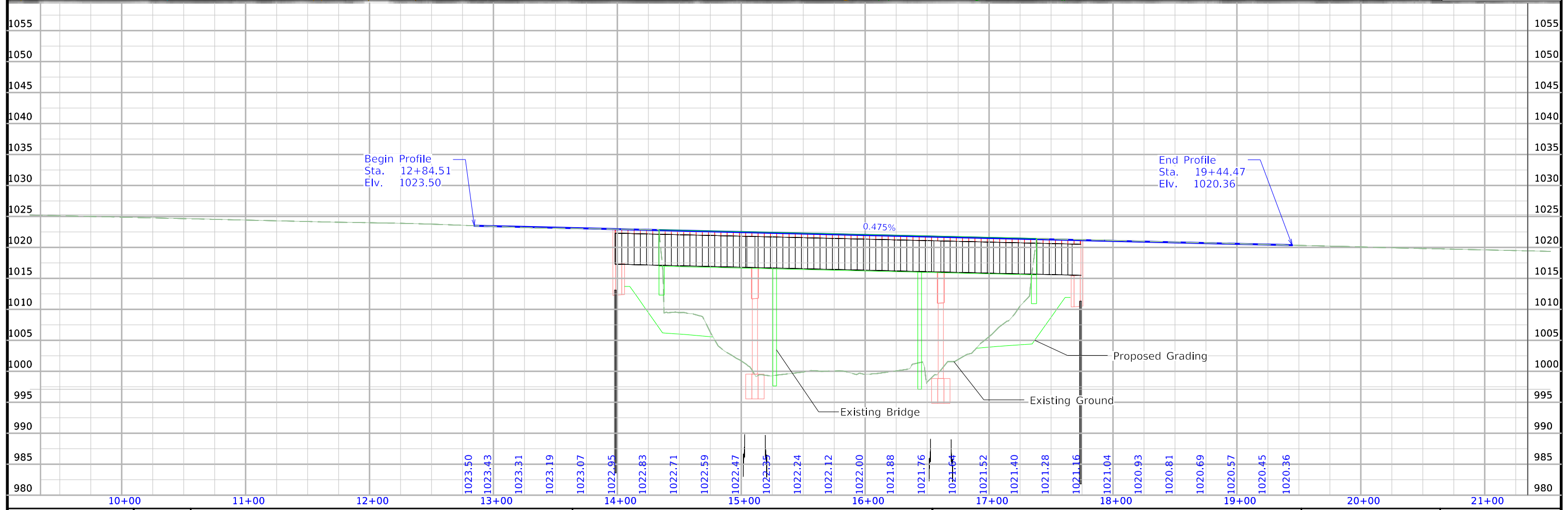
- | | |
|--|------------------------------------|
| | Proposed Right-of-Way |
| | Existing Right of Way |
| | Existing and Proposed Right-of-Way |
| | Easement and Existing Right-of-Way |
| | Easement (Temporary) |
| | Easement |
| | Access Control |
| | Property Line |

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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



US 18
Plan/Profile



FILE NO.	ENGLISH	DESIGN TEAM AECOM	CHICKASAW COUNTY	PROJECT NUMBER BRF-018-7(71)--38-19	SHEET NUMBER D.2
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Survey Information

SURVEY INDEX

County: Chickasaw
PIN: 21-19-018-010
Project Number: BRF-018-7(71)--38-19
Location: Little Cedar River 0.3 mi E of Floyd Co Line
Type of Work: Bridge-Unspecified
Project Directory: 1901801021

Survey Personnel

John Hahn – Survey Party Chief
Robert Frederickson– Assistant Survey Party Chief

Date(s) of Survey

Begin Date 04/14/2022
End Date 10/05/2022

General Information

Measurement units for this survey are US survey feet. This is a full DTM survey for US Hwy 18 Bridge Replacement 0.3 mi East of Floyd County Line.

Project Control

Nearby Iowa Real Time Network reference stations were utilized to obtain horizontal and vertical control on primary project control points. Five five-minute observations were taken with appropriate time spans between and used in a weighted average to obtain final coordinate values for Control Point 190182186. Three additional control points were established with a Base-Rover setup relative to point 190182186. Three 2-minute observations with appropriate time spans between were collected and used in a weighted average. 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 02
(U.S. survey foot)
VERTICAL DATUM: NAVD88
GEOID MODEL: 2012bu3

Alignment Information

The horizontal alignment for this survey is a retrace of As-built Plans Project No. F-160(4). Survey stationing was equated to the plan Section Corner & PI at Sta. 0+68.5 and run ahead without equation.

Survey stationing relates to As-built plan stationing as follows:

PI Sta. 0+68.5 As-built Plans Project No. F-160(4)
= Survey PI Sta. 0+68.5

PC Sta. 4+40.56 As-built Plans Project No. F-160(4)
= Survey PC Sta. 4+40.31

PT Sta. 17+96.0 As-built Plans Project No. F-160(4)
=Survey PT Sta. 17+95.80

Utility Information

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

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 02
VERT. DATUM: NAVD88 - Geoid Model g2012bu3

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

HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING

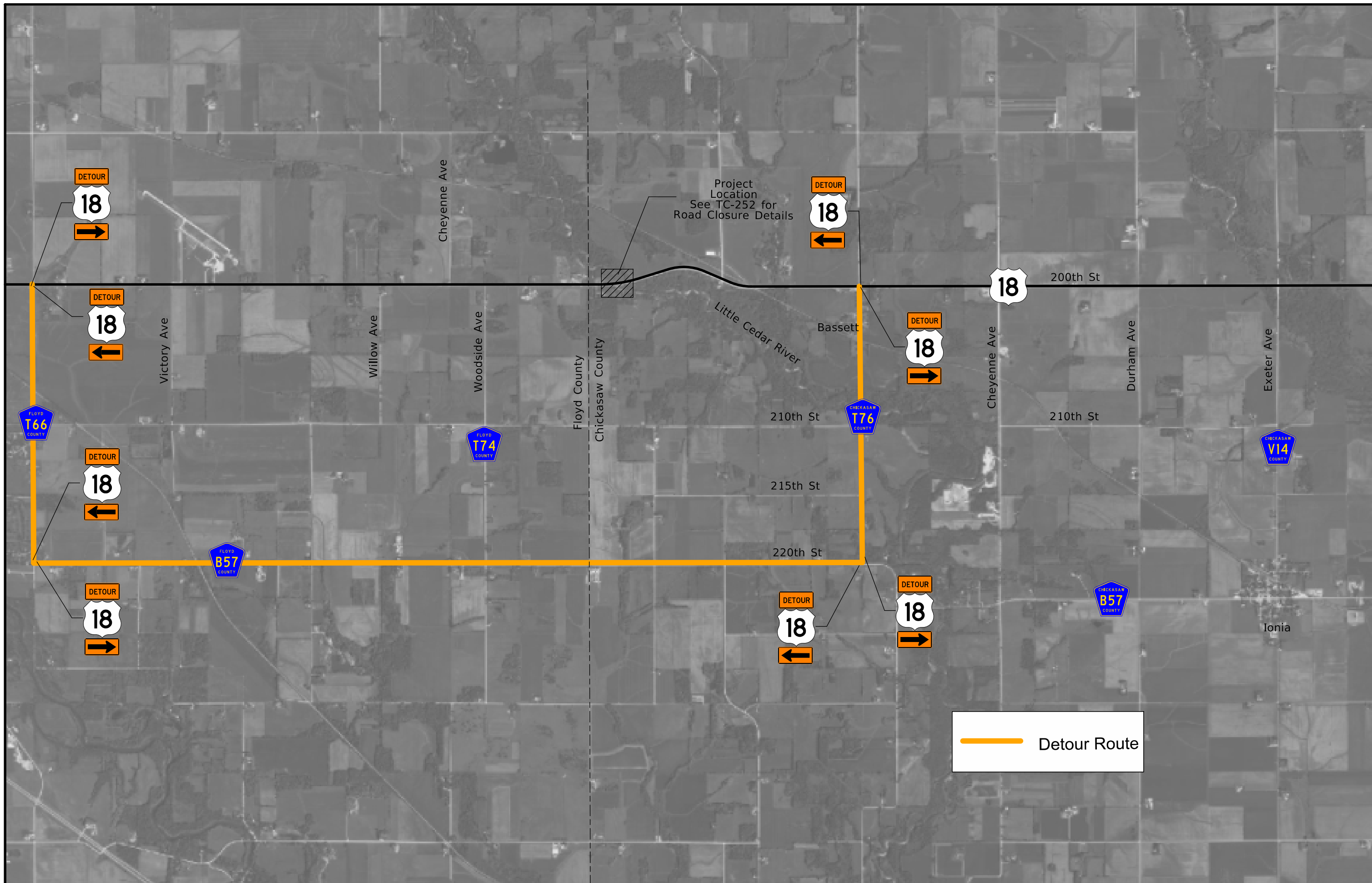
HORIZ. DATUM: NAD83(2011) EPOCH 2010.00
 1a. Regional Coordinate System Zone 02

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

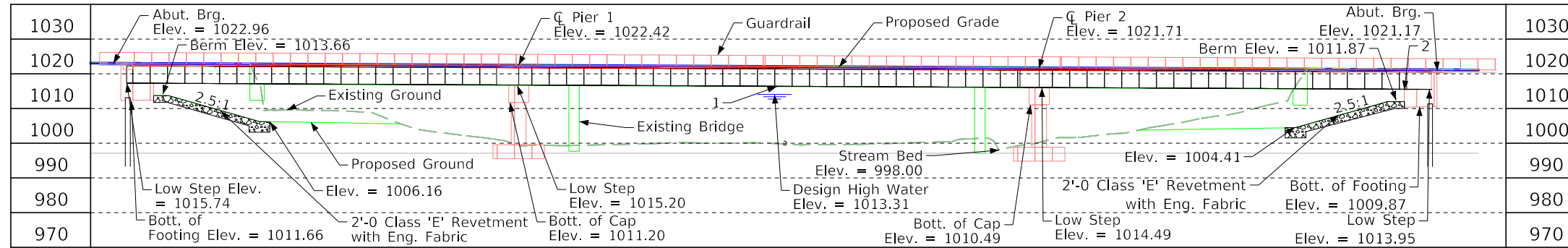
Point Name	Northing	Easting	Elevation	Code/Description
190182186	9763683.28	12550013.61	1101.92	CP SET 5/8X40 REBAR 387 FEET EAST OF CL OF RESIDENTIAL DRIVEWAY ON SOUTH SIDE OF 18- 126 FEET ESE OF RESIDENTIAL DRIVEWAY ON NORTH SIDE OF 18- 1408 FEET WEST OF NEXT DRIVEWAY ON NORTH SIDE OF HWY 18
190182192	9763805.58	12553692.88	1024.18	SET CUT X 24.5 FEET SE OF CL OF HWY18- 300 FEET EAST OF CL OF 200TH TRAIL- 1132 FEET ENE OF CL OF FILED ENTRANCE ON NORTH SIDE OF HWY 18
190182197	9764497.94	12556076.00	1013.79	CP SET FENO 100 FEET NORTH OF CL OF HWY 18- 426 FEET SW OF SOUTH RAIL OF RR- 1475 FEET SW OF INTERSECTION OF HWY 18 AND ASHERTON AVENUE
204	9769610.12	12552388.76	1095.79	CP FND CHICKASAW COUNTY GPS CONTROL AS DESCRIBED IN GOOD CONDITION

NOTE:

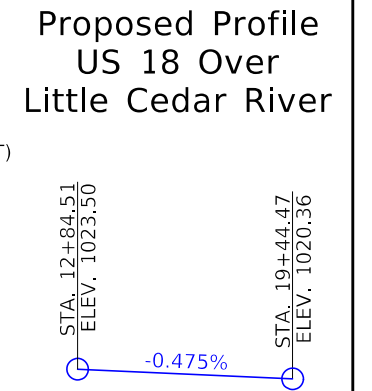
The first two digits in the control point name refer to the county number.
 The next 3 digits refer to the highway number.
 The next 3 digits refer to the highway milepost.
 The last digit refers to the distance from the referenced milepost to the nearest tenth of a mile.



Control Point:
 Northing: 12553692.88, 9763805.57, Elev.: 1024.17 24.5 FEET SE OF CL OF HWY18-
 300 FEET EAST OF CL OF 200TH TRAIL- 1132 FEET ENE OF CL OF FILED ENTRANCE ON NORTH SIDE OF HWY 18



Horizontal Curve Data
 PI Sta. 11+23.06
 D = 16°58'39.80" (LT)
 T = 682.75
 L = 1355.49
 E = 50.67
 R = 9148.93
 e = 0.035
 l = 93.33
 x = 53.33
 PC Sta. 4+40.31
 PT Sta. 17+95.80



General Notes

The design is for the replacement of existing 300' x 30' CWPG bridge, Design No. 165, FHWA No. 19570, Maint. No. 1919.35018.

Class 'E' Revetment is embedded.

All dimensions are horizontal unless otherwise noted.

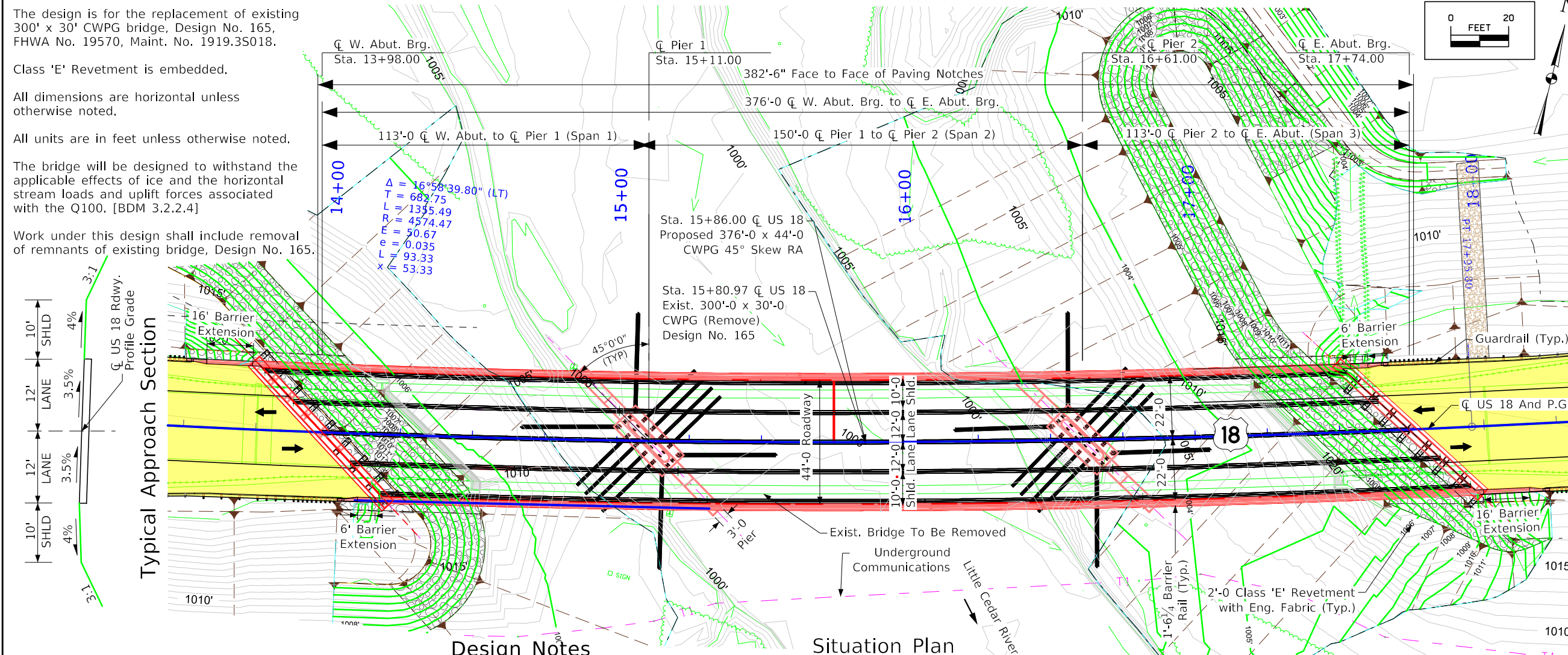
All units are in feet unless otherwise noted.

The bridge will be designed to withstand the applicable effects of ice and the horizontal stream loads and uplift forces associated with the Q100. [BDM 3.2.2.4]

Work under this design shall include removal of remnants of existing bridge, Design No. 165.

Longitudinal Section Along CL US 18

- 1 Channel Low Beam Elev. = 1015.35
- 2 Operational Low Beam Elev. = 1014.45



Hydraulic Data

RIDB: CedarR_Little_12.9
 Drainage Area = 269 Sq. Mi.
 Stream Slope (HGL) = 3.7 Ft./Mi.
 Avg. Low Water Stage = 1001

Q₂₅ = 12,800 cfs
 Stage = 1012.35

Q₅₀ = 15,500 cfs
 Stage = 1013.31
 Backwater = 1.37 Ft.
 Avg. Bridge Velocity = 5.46 fps

Q₁₀₀ = 18,200 cfs
 Stage = 1014.20
 Backwater = 1.50 Ft.
 Avg. Bridge Velocity = 5.98 fps

Q₂₀₀ = 22,300 cfs
 Stage = 1014.54
 Calculated Design Scour = 990.19

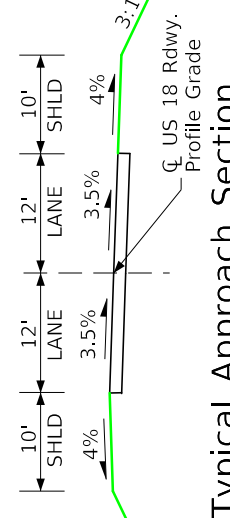
Q₅₀₀ = 24,900 cfs
 Stage = 1015.60
 Calculated Check Scour = 980.53

Traffic Estimate

2026 AADT	2600 V.P.D.
2046 AADT	2960 V.P.D.
TRUCKS	15 %

Location

US 18 Over Little Cedar River
 T-95N R-14W
 Section 6
 Chickasaw Township
 Chickasaw County
 FHWA No. 19570
 Bridge Maint. No. 1919.35018
 Latitude 43.067340°
 Longitude -92.548603°



Typical Approach Section

Design Notes

- TSS TL-4 Bridge Railing
- Pier Type - T-Pier
- Non-Standard Abutment Wing Wall
- Proposed Beam Type - CWPG
- Stub Abutments
- An Iowa DNR sovereign lands permit is required.
- An Iowa DNR Flood Plain Permit is required.

Situation Plan

As this project requires sovereign lands permit, bid item reference notes shall restrict broken concrete as a substitute for revetment. [BDM 3.2.7.3.5]

Berm slopes to be confirmed during final design.

There is potential for conflicts with existing foundations from 1925 bridge that was replaced in 1967. Existing piles that were left in place are likely timber.

Requirements for a state water trail or paddling route are applicable. Signage, plan notes, and bid items shall be addressed by the Design Bureau and included in the road plans. [BDM 3.2.2.11]

Utilities Note:

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

General Utility Symbols:

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

Hydraulic Design

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Daniel D. Kimball 11-22-23

Signature DANIEL D. KIMBALL Date
 Printed or Typed Name
 My license renewal date is December 31, 2023

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

Design For 45 Degree Skew RA

376'-0 x 44'-0 Continuous Welded Steel Girder Bridge

113'-0 End Spans RADIUS = 9148.93' 150'-0 Interior Span

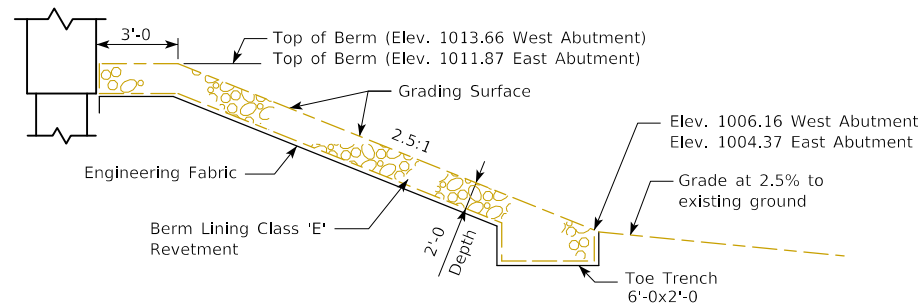
Situation Plan

STA. 15+86.00 (CL US 18) Turn-In Date: October 2023

Chickasaw County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. 0127 Design Sheet No. 1 of 3 FHWA No. 19571



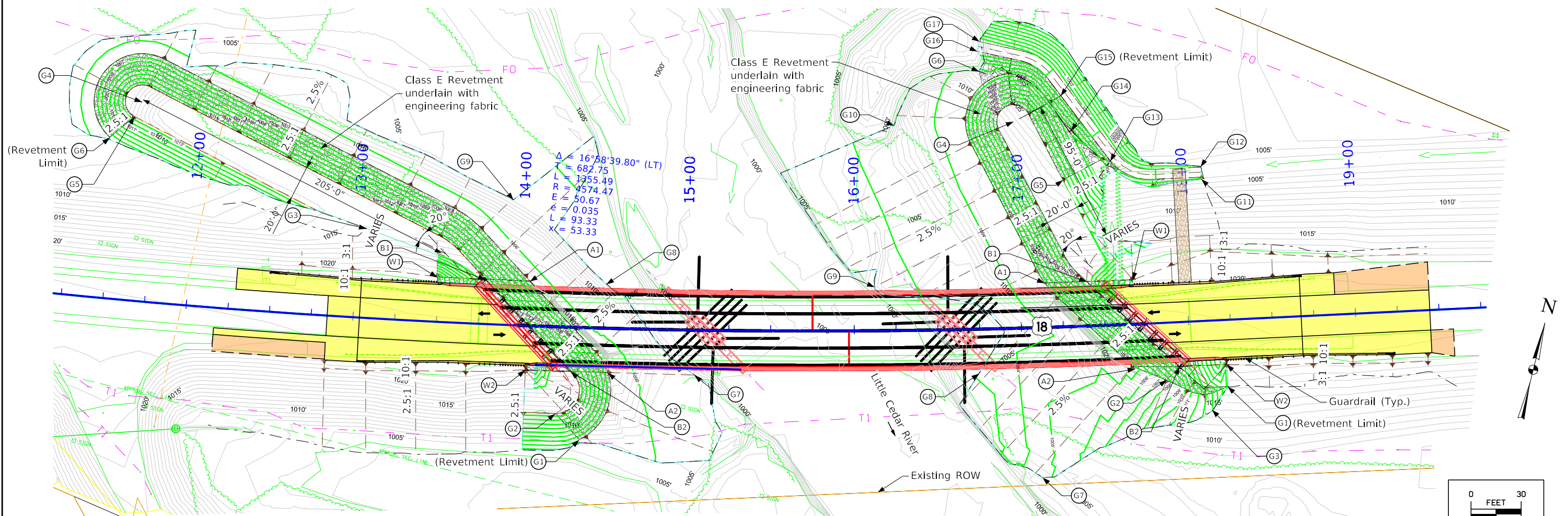
Typ. Embedded Riprap at Abutment

Points	West Abutment			East Abutment		
	Station	Offset	Elev.	Station	Offset	Elev.
A1	14+05.04	26.58' LT	1006.16	17+14.76	26.58' LT	1004.37
A2	14+53.29	26.58' RT	1006.16	17+66.97	26.58' RT	1004.37
B1	13+77.65	26.58' LT	1013.66	17+40.02	26.58' LT	1011.87
B2	14+31.38	26.58' RT	1013.66	17+93.36	26.58' RT	1011.87
W1	13+49.94	26.58' LT	1022.38	17+67.77	26.58' LT	1020.41
W2	14+04.08	26.58' RT	1023.81	18+21.66	26.58' RT	1021.59

Berm slope elevations reflect the grading surface.

Points	West Abutment			East Abutment		
	Station	Offset	Elev.	Station	Offset	Elev.
G1	14+37.43	66.96 RT	1006.87	18+21.65	39.86 RT	1017.17
G2	14+22.87	51.71 RT	1013.66	17+85.04	34.13 RT	1007.49
G3	13+05.00	53.48 LT	1015.06	18+11.95	53.75 RT	1009.64
G4	11+55.88	126.63 LT	1013.66	16+88.48	124.19 LT	1011.87
G5	11+59.01	109.84 LT	1013.66	17+27.71	87.82 LT	1011.87
G6	11+44.16	95.14 LT	1006.13	16+77.92	154.36 LT	1004.21
G7	15+05.12	26.94 RT	1005.68	17+10.11	89.66 RT	1004.71
G8	14+51.09	26.44 LT	1005.51	16+62.19	44.70 RT	1002.68
G9	13+93.25	75.00 LT	1005.64	16+12.32	26.17 LT	1002.71
G10				16+25.26	122.60 LT	1003.56
G11				18+11.83	84.63 LT	1004.23
G12				18+11.84	92.29 LT	1003.79
G13				17+48.34	110.13 LT	1004.25
G14				17+39.51	122.42 LT	1005.58
G15				17+27.66	138.78 LT	1005.60
G16				16+77.30	165.98 LT	1000.00
G17				16+78.77	171.81 LT	1000.00

See standard road plan EW-210 for wing dike details.



Situation Plan

Location	Revetment CL. E (Ton)	Erosion Stone (Ton)	Engineering Fabric (SY)	CL. 10 Channel Excavation (CY)
Berm Lining - W. Abut.	993	-	1040	700
Berm Lining - E. Abut.	807	-	807	569
Totals	1800	-	1847	1269

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

General Notes

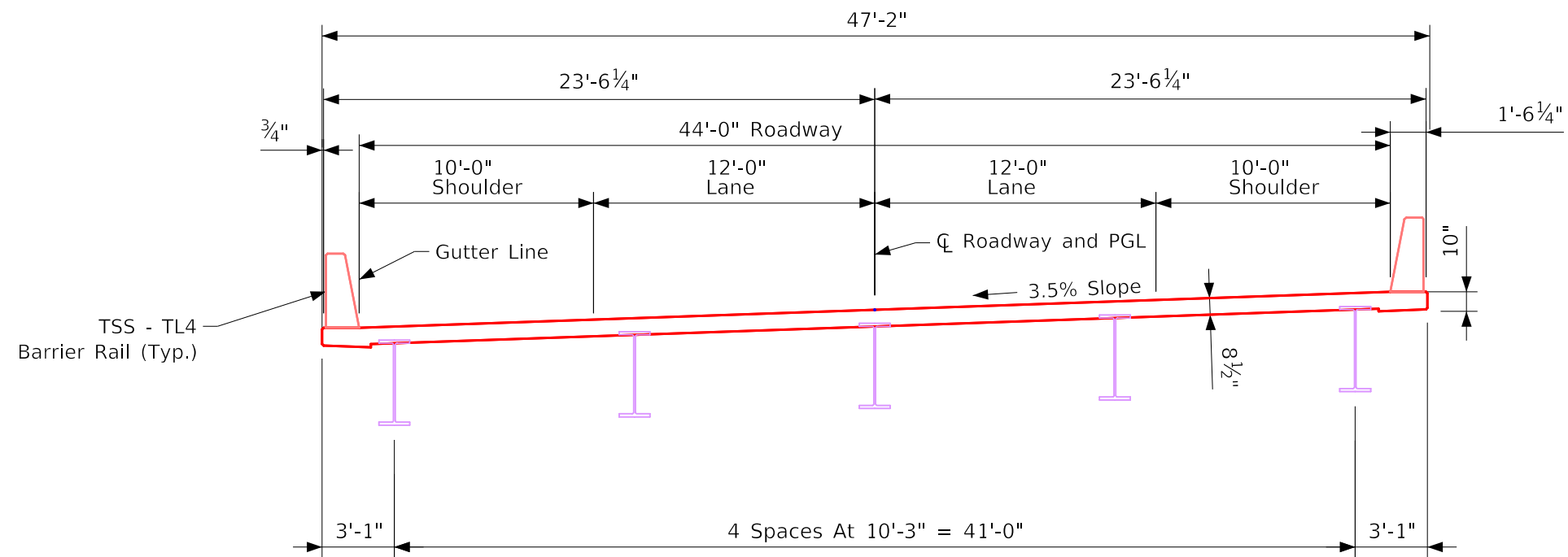
The design is for the replacement of existing 300' x 30' CWPG bridge, Design No. 165, FHWA No. 19570, Maint. No. 1919.3S018.

Class 'E' Revetment is embedded.

All dimensions are horizontal unless otherwise noted.

All units are in feet unless otherwise noted.

Design For 45 Degree Skew RA
376'-0 x 44'-0 Continous Welded Steel Girder Bridge
 113'-0 End Spans RADIUS = 9148.93' 150'-0 Interior Span
 Situation Plan - Site
 STA. 15+86.00 (C US 18) Turn-In Date: October 2023
Chickasaw County
 IOWA DEPARTMENT OF TRANSPORTATION
 Design No. 0127 Design Sheet No. 2 of 3 FHWA No. 19571



Design For 45 Degree Skew RA

**376'-0 x 44'-0 Continous Welded
Steel Girder Bridge**

113'-0 End Spans RADIUS = 9148.93' 150'-0 Interior Span

Cross Section View

STA. 15+86.00 (☉ US 18) Turn-In Date: October 2023

Chickasaw County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. 0127 Design Sheet No. 3 of 3 FHWA No. 19571

CROSS SECTION VIEW COLOR LEGEND

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

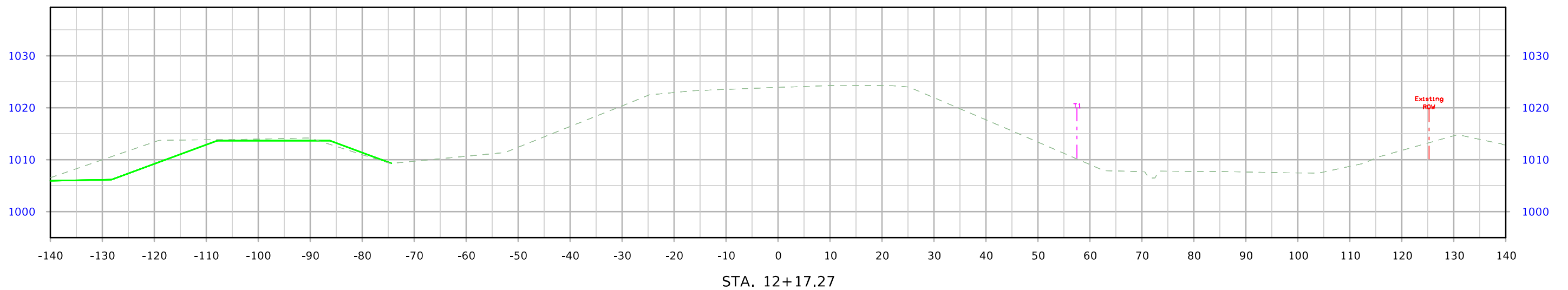
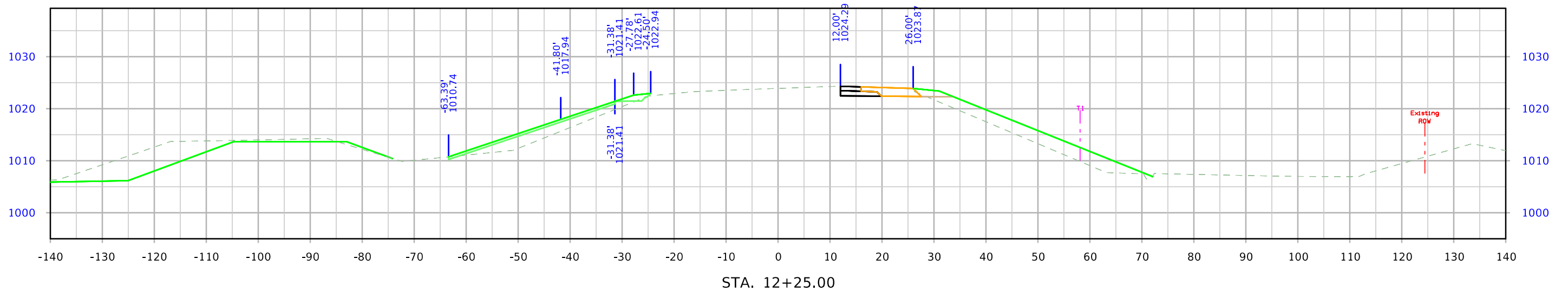
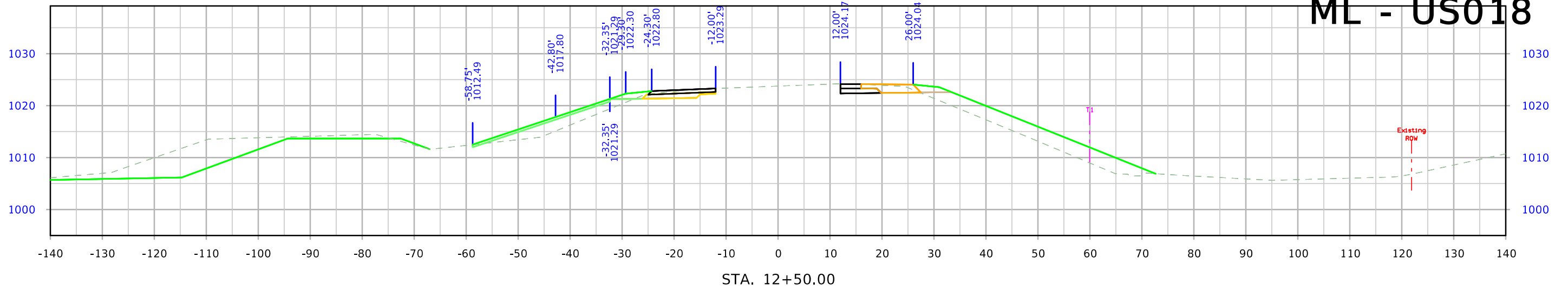
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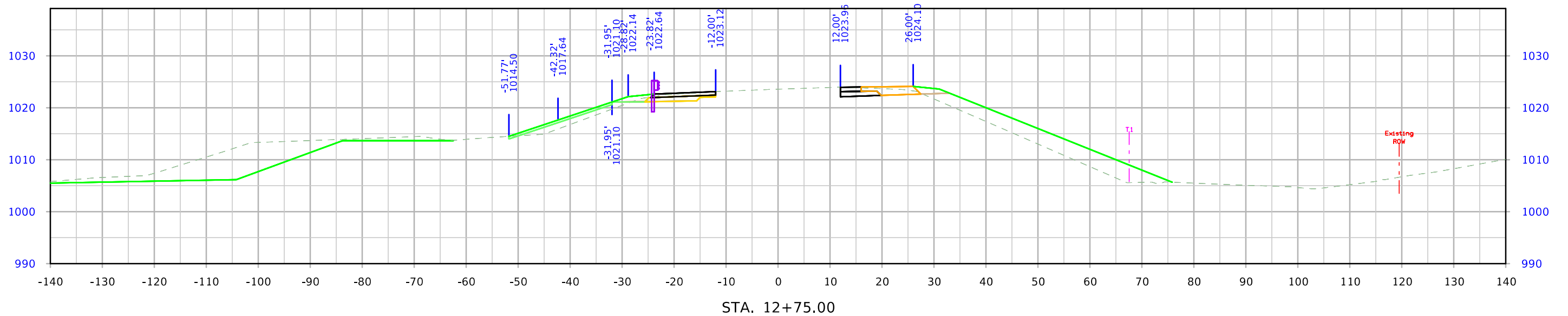
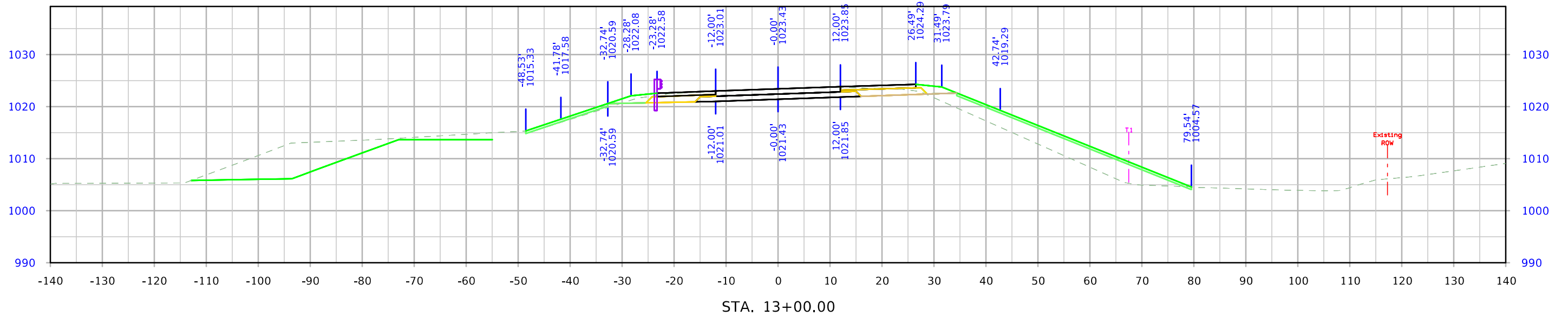
CROSS SECTIONS LEGEND AND INFORMATION SHEET

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

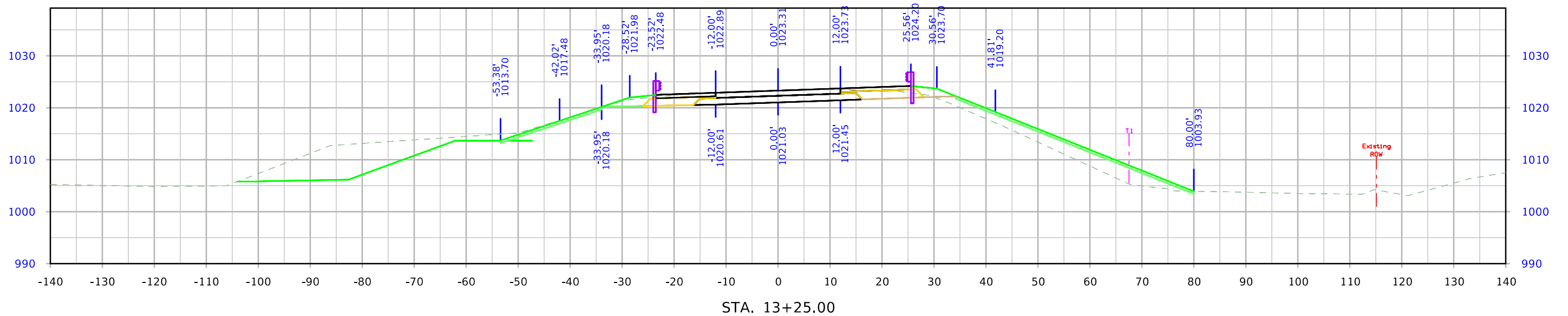
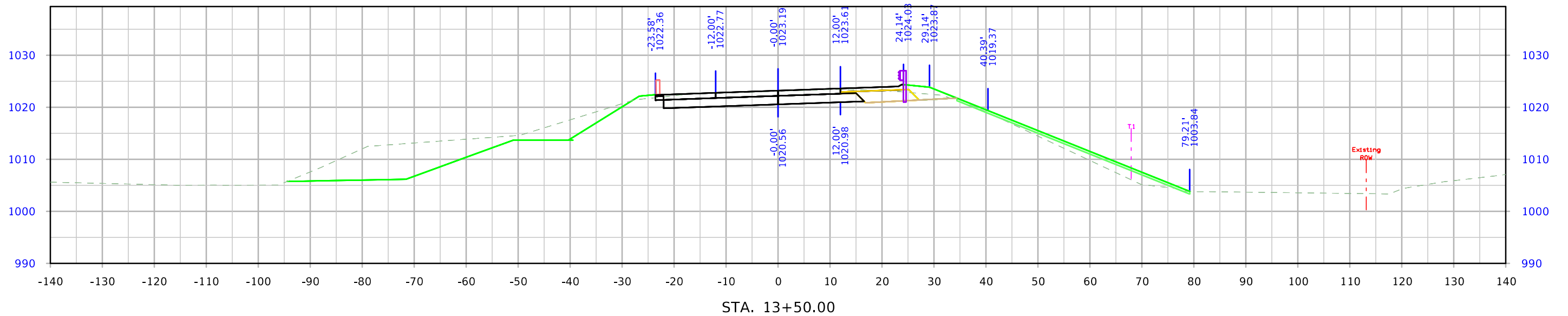
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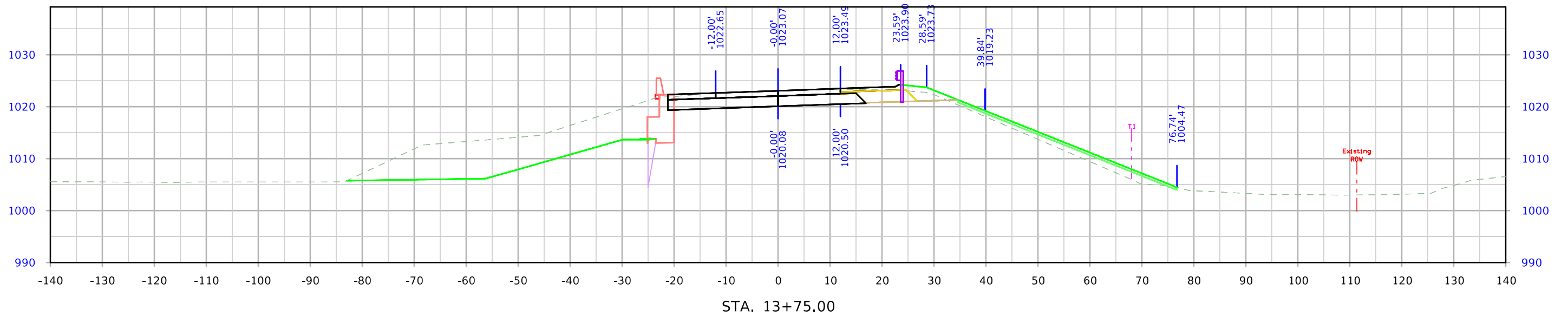
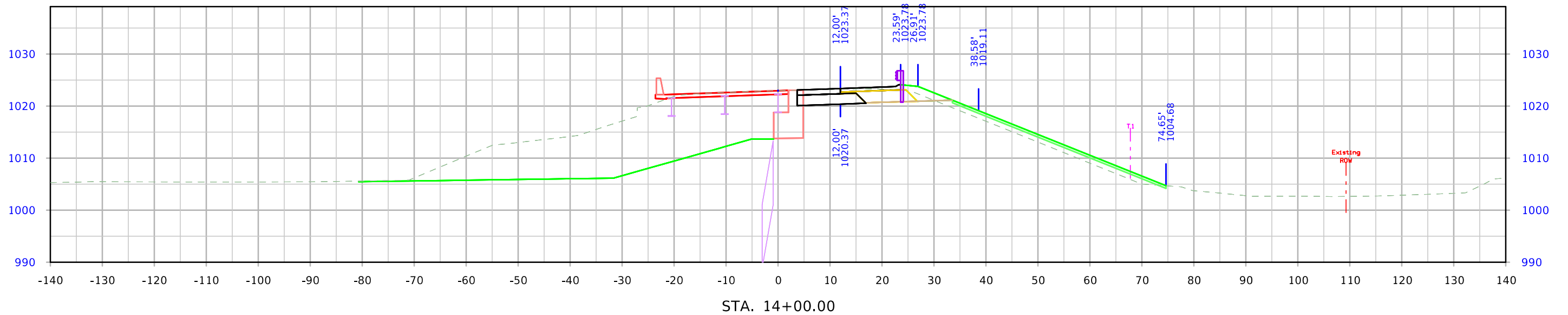
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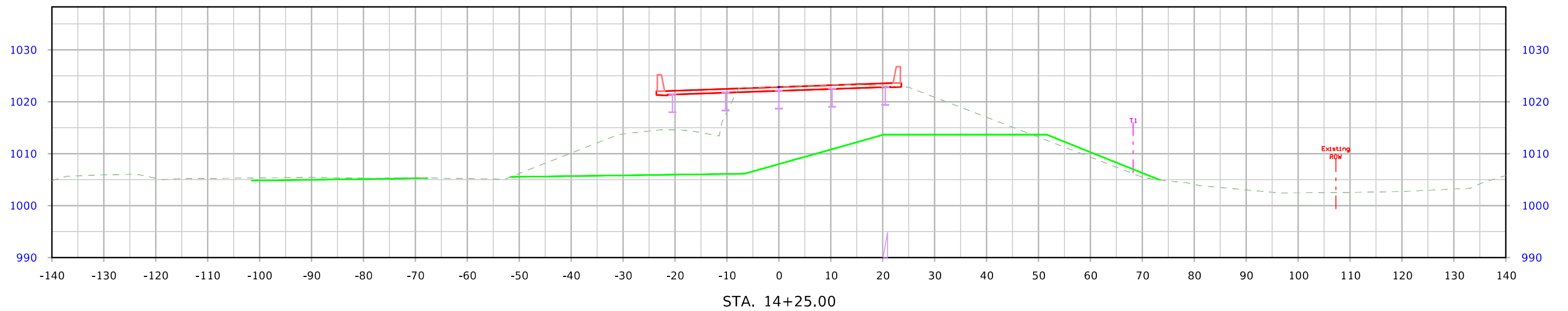
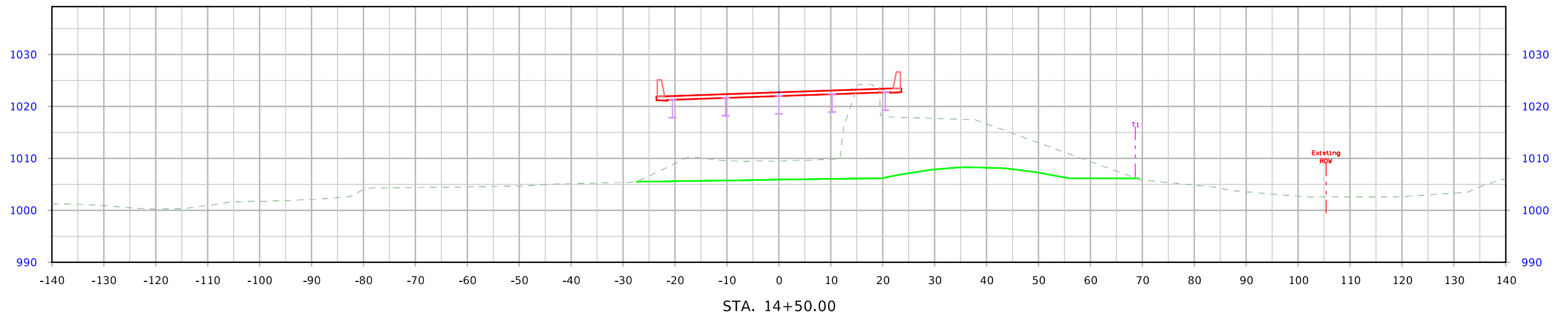
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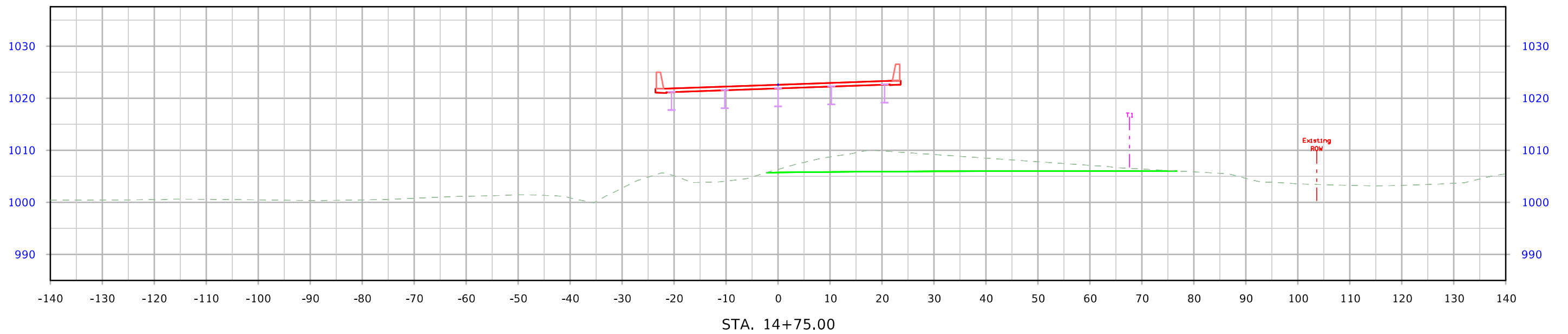
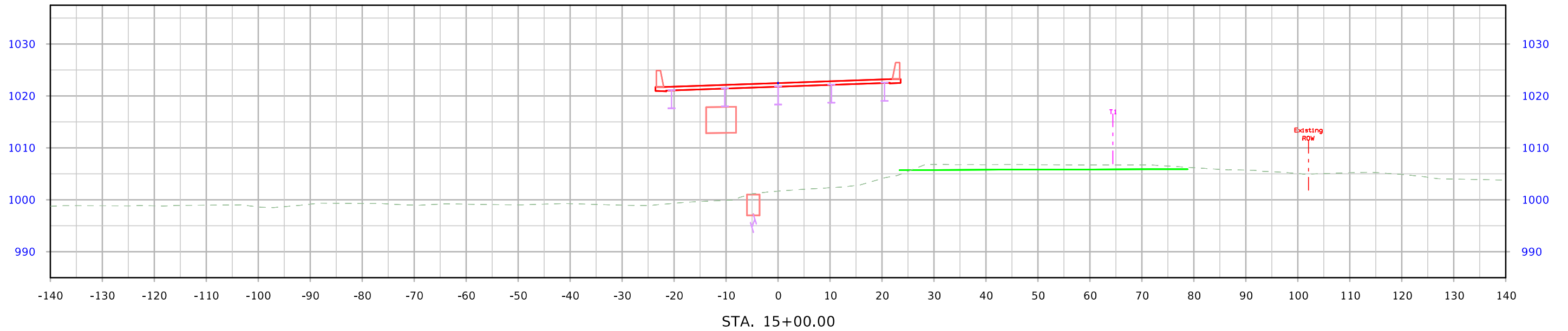
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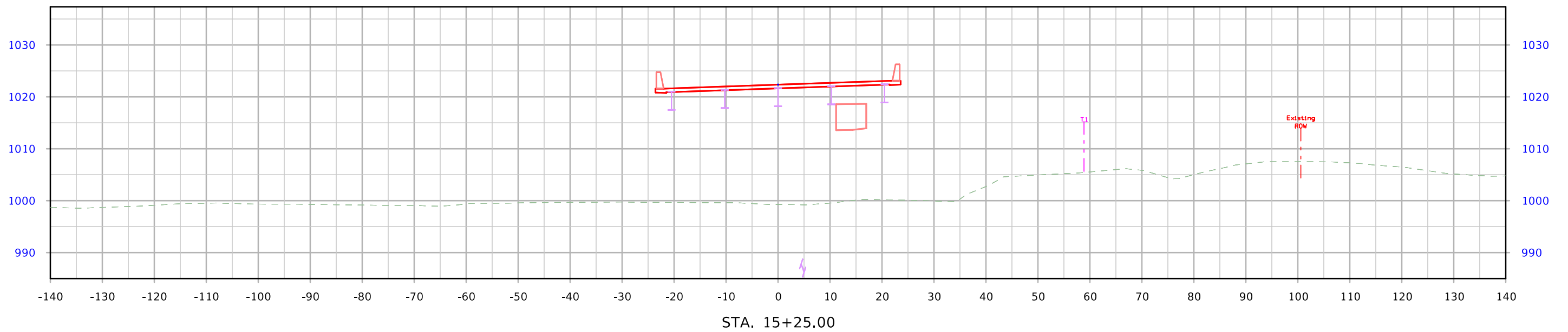
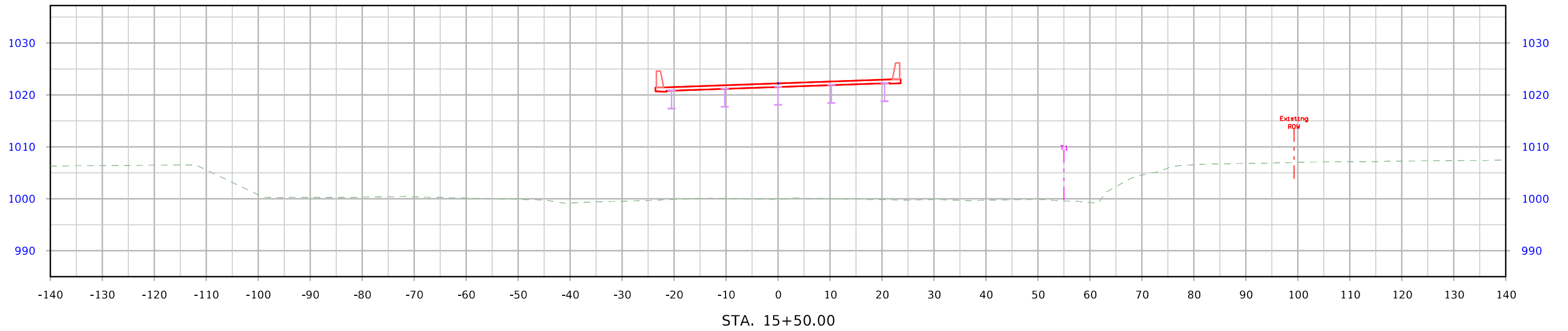
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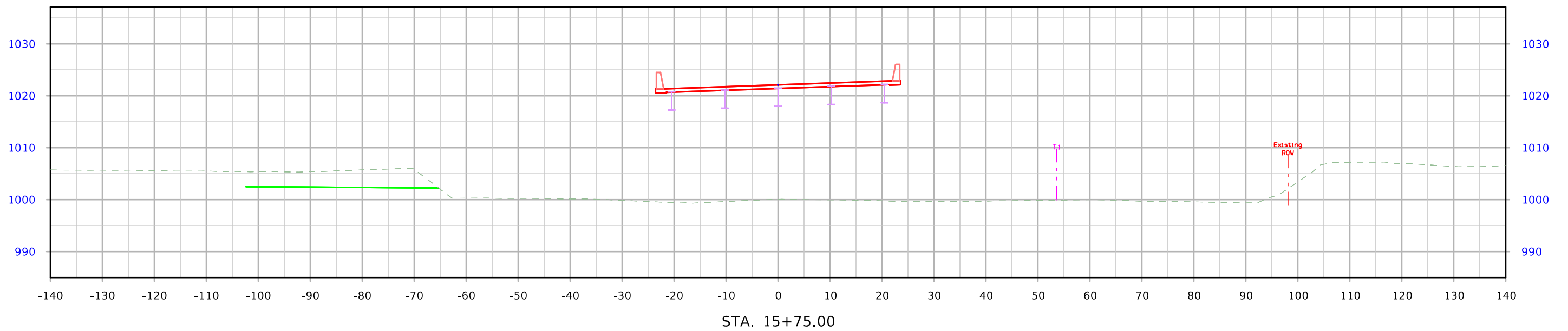
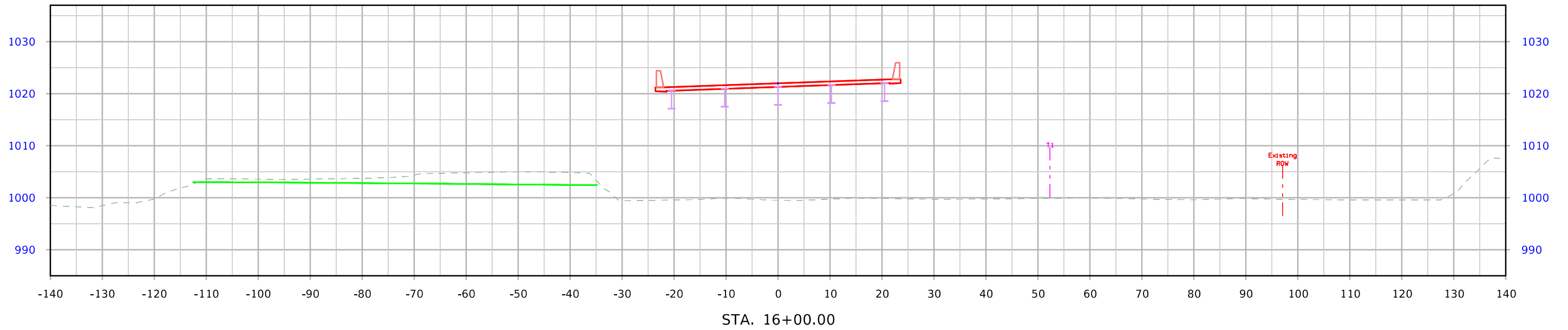
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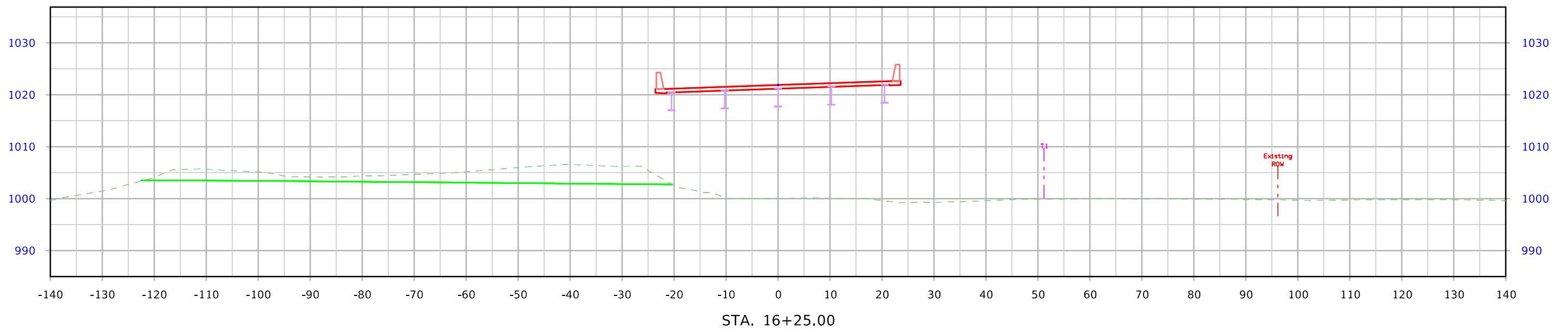
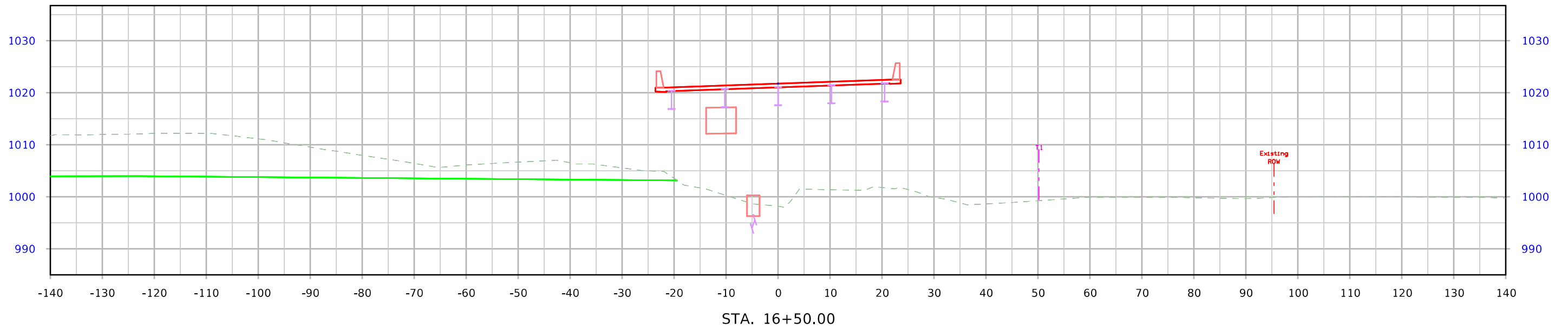
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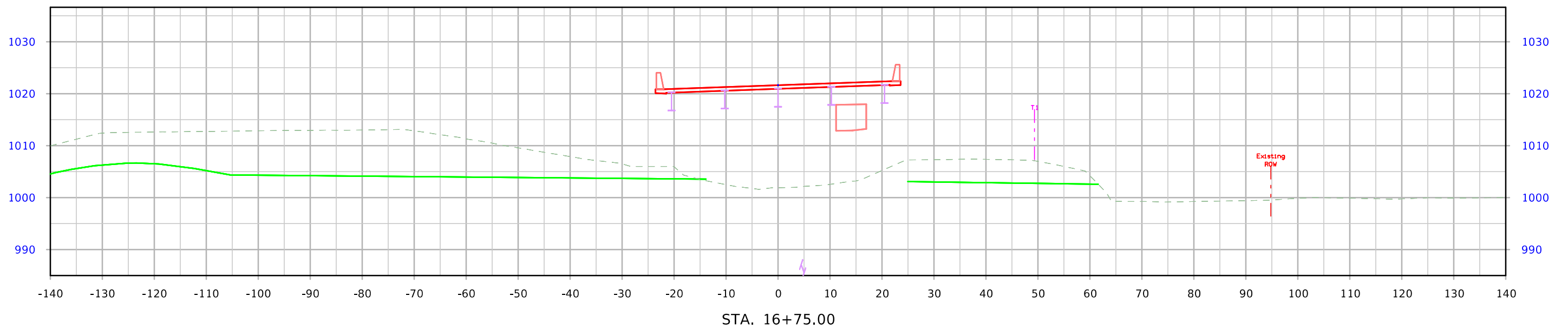
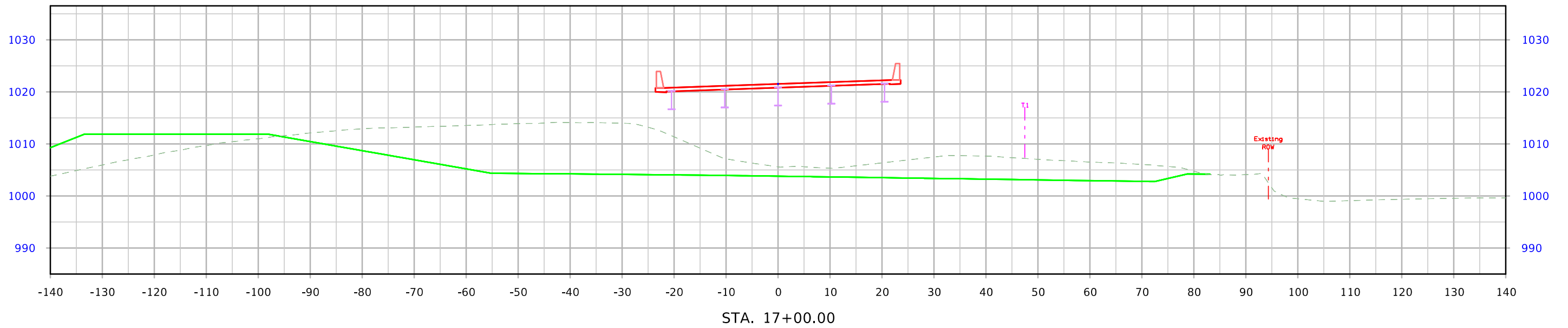
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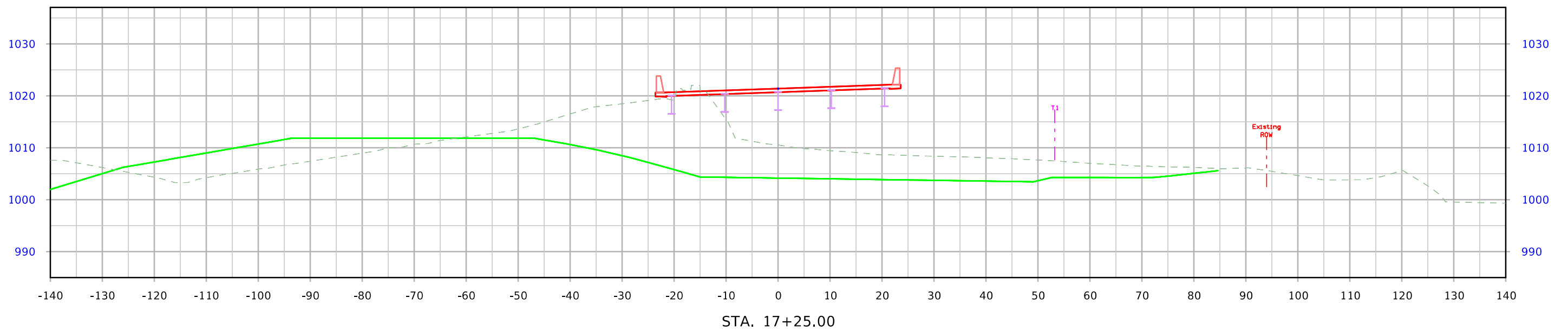
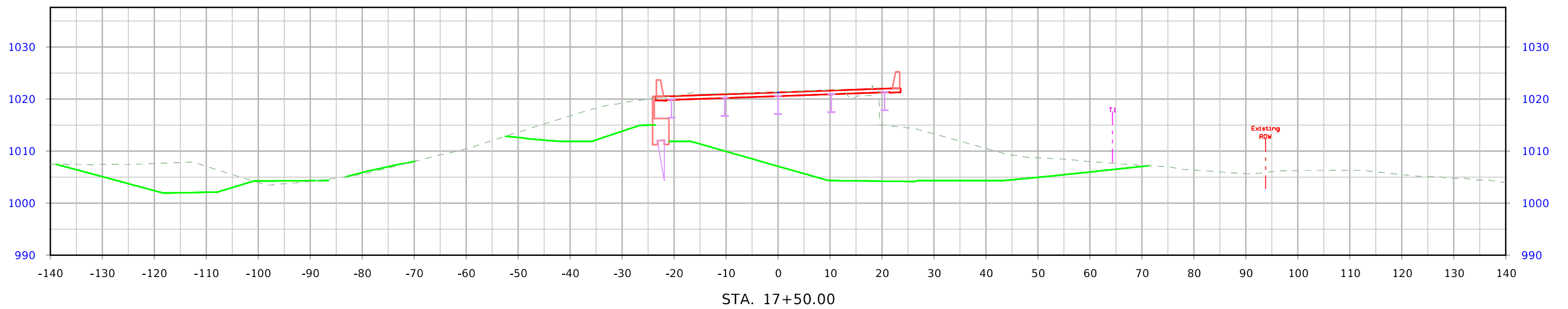
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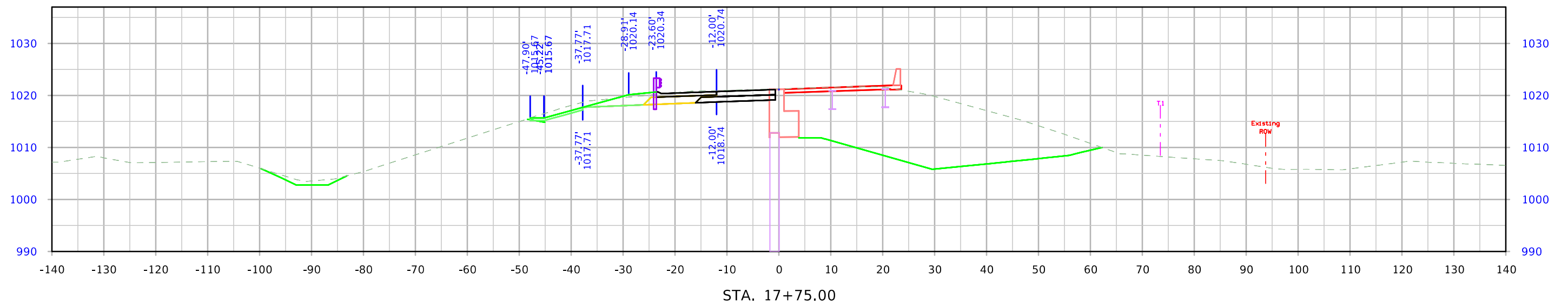
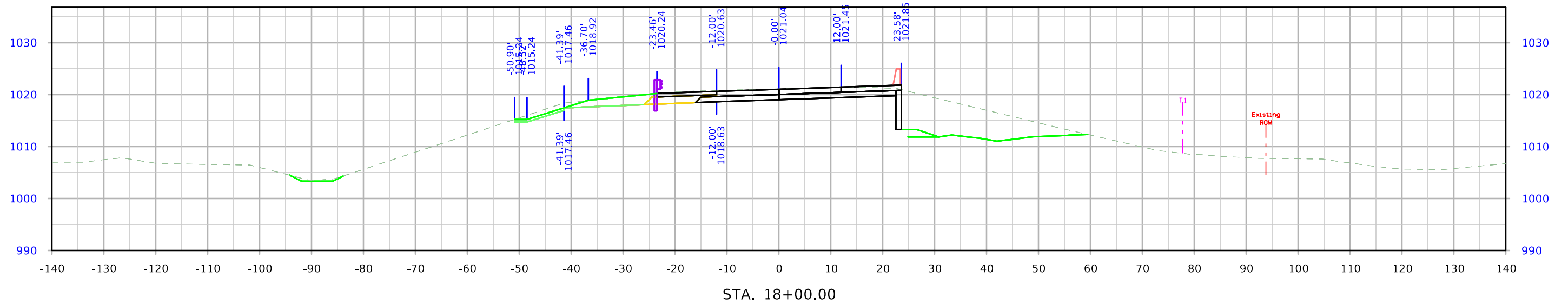
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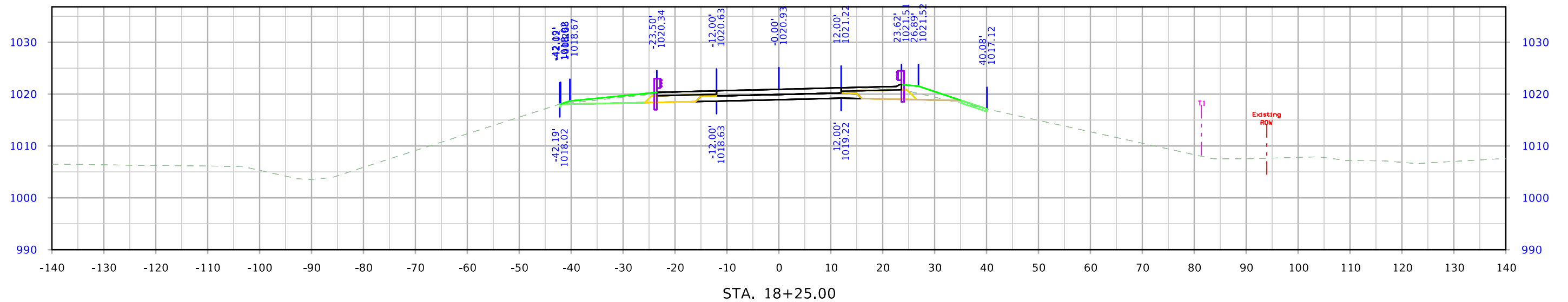
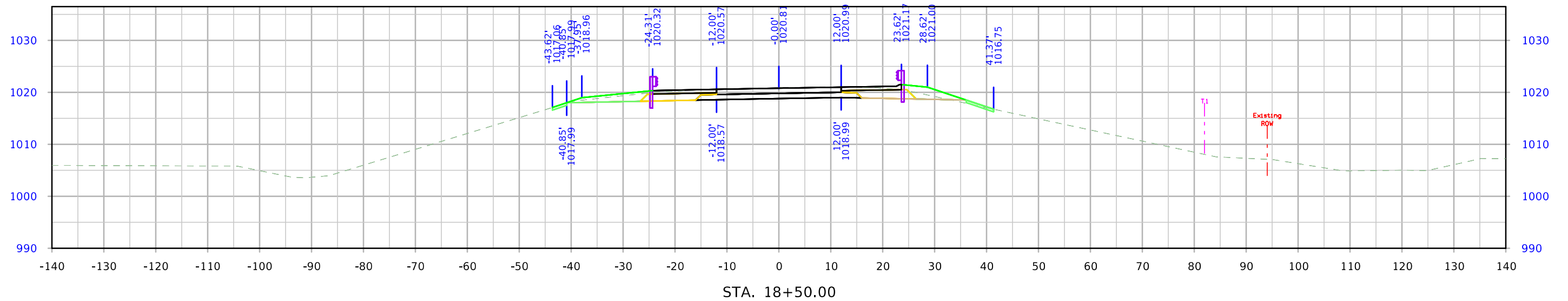
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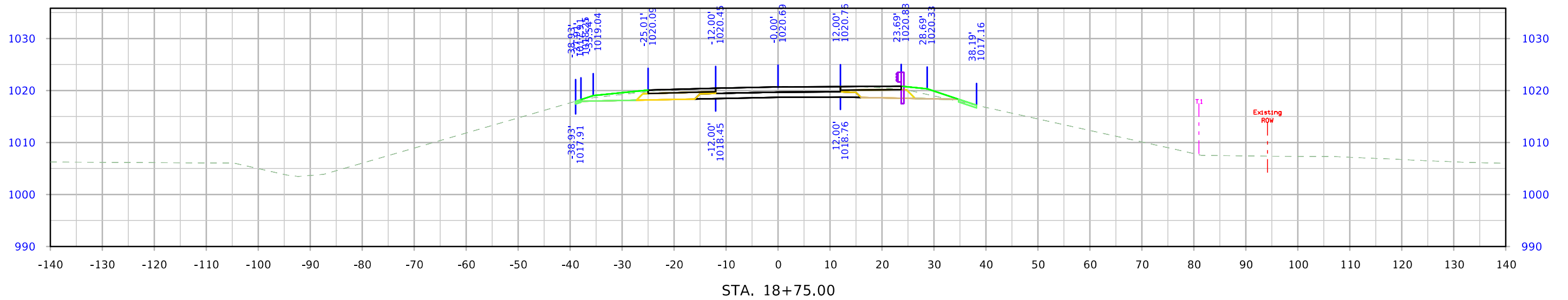
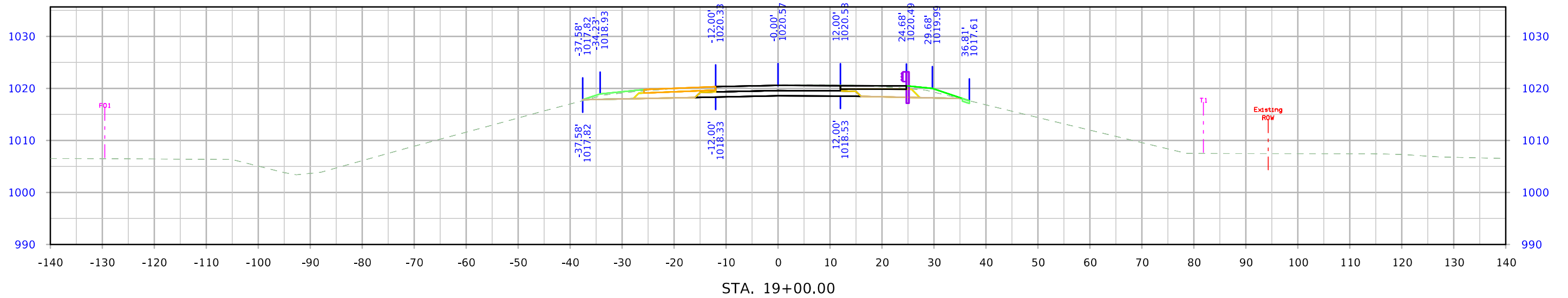


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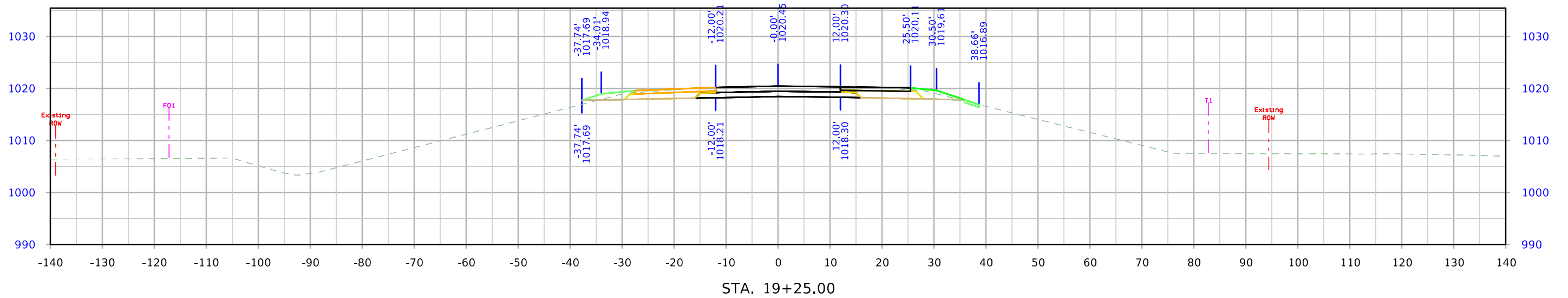
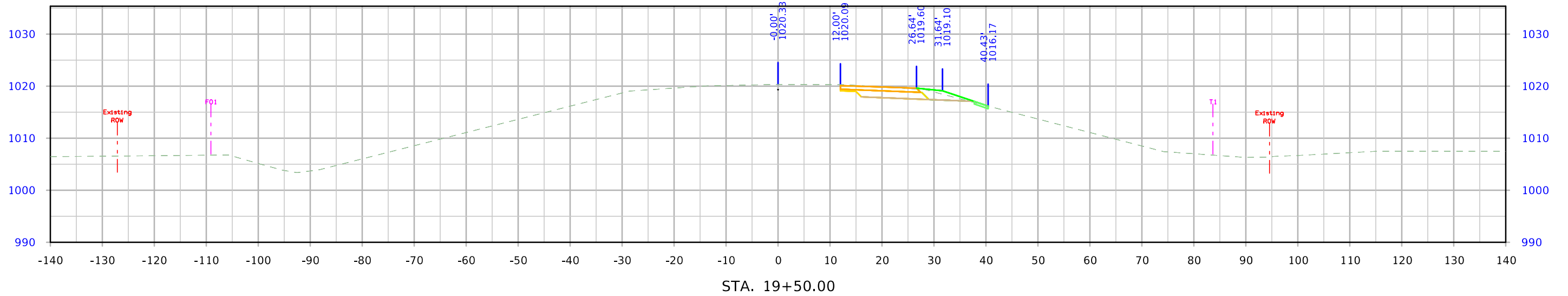


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