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C.1	Index of Tabulations
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PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
DUBUQUE COUNTY
Improvement of Crossing
Westbound U.S. 20 bridge
over the North Fork Maquoketa River
0.6 mile west of IA 136
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
		35
PROJECT IDENTIFICATION NUMBER		
21-31-020-020		
PROJECT NUMBER		
BRF-020-9(269)--38-31		
R.O.W. PROJECT NUMBER		

Paddling Portage Detour will be required since river is a DNR paddling route. Need signage in J sheets. Request info from Tom Lovan during Final Design.

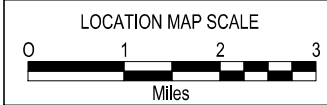
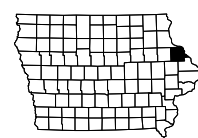
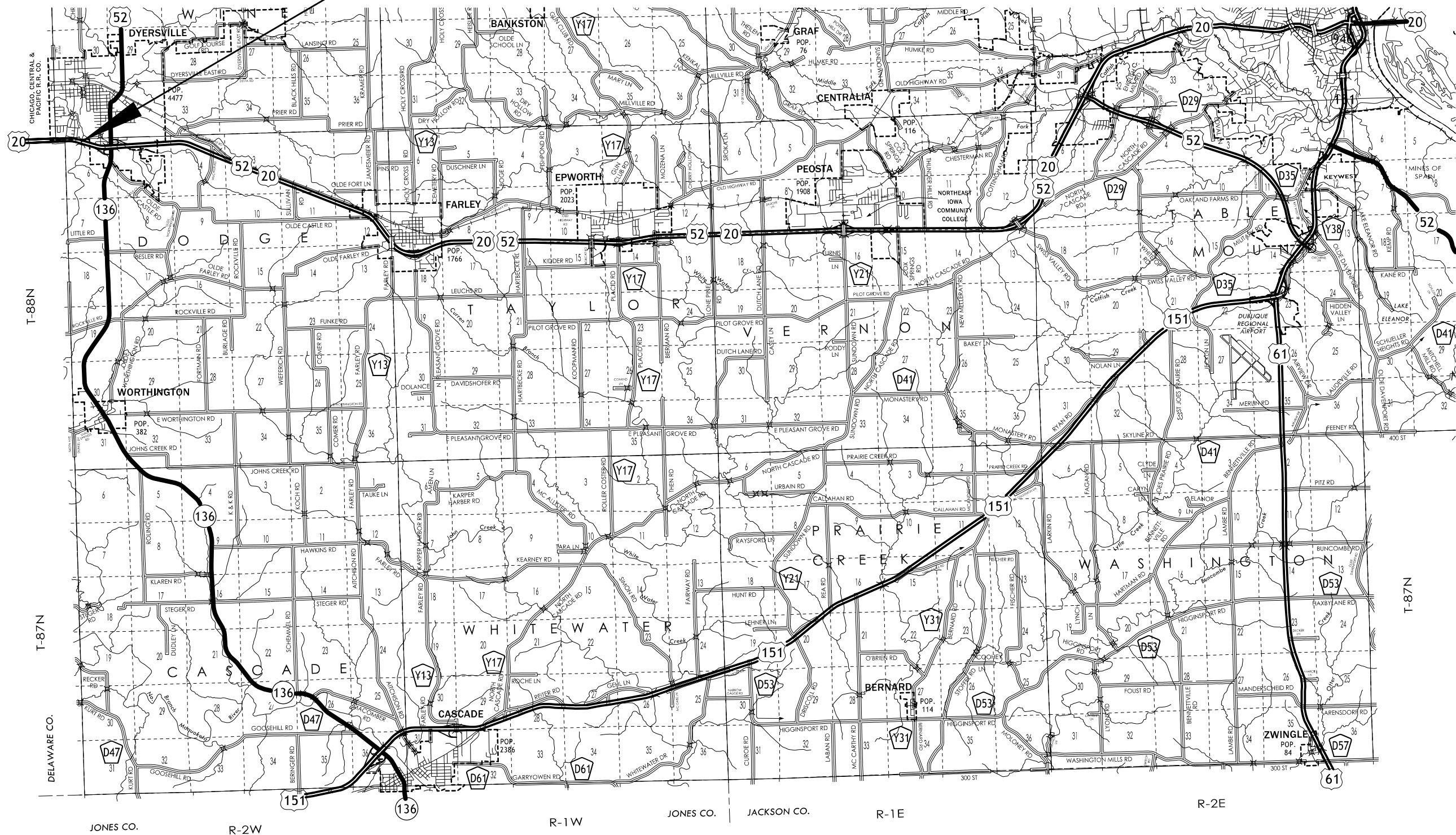
Salvage existing steel beam guardrail and deliver to Dyersville DOT Maintenance shop.

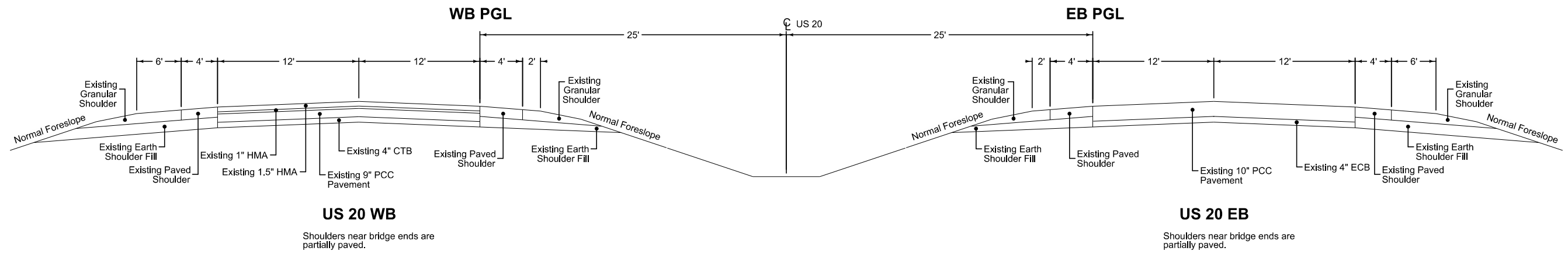
DESIGN DATA RURAL			
20 21	AA DT	10,900	V.P.D.
20 46	AA DT	15,300	V.P.D.
20 46	DH V	1,580	V.P.H.
	TRUCKS	17	%
	Total Design ESALs	--	

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

PRELIMINARY PLANS
Subject to change by final design.
D3 PLAN - Date: July 7, 2023

US 20 IMPROVEMENT OF CROSSING
 FHWA NO. 23780
 MAINT. 3193.5L020
 STA. 25+58.71



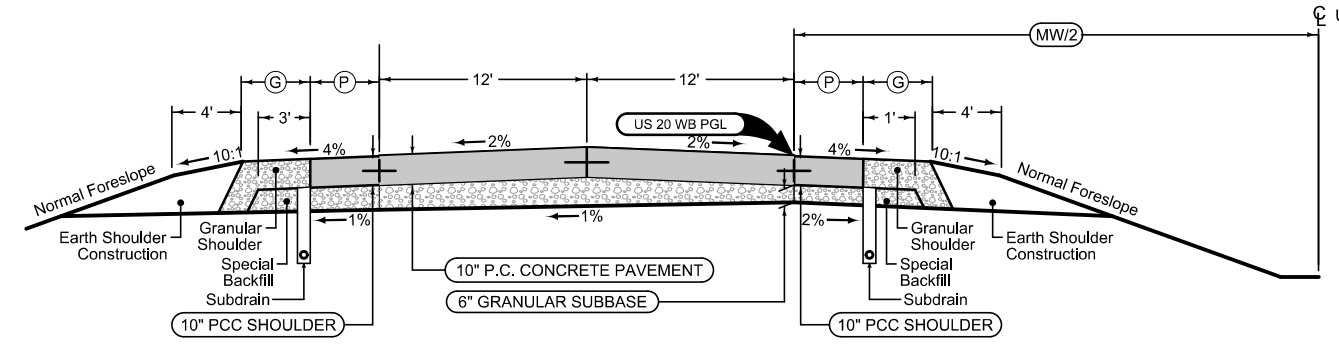


EXISTING US 20

Full Depth PCC Combination Shoulder

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

4_C_FullPCC_04-20-21				
Direction of Travel	BEGIN STATION	END STATION	(P) Feet	(G) Feet
WB	22+10.52	22+39.21	4	6



* See Sheet B.2 for "Paved Shoulder at Guardrail" Details
 Refer to Standard Road Plans for Bridge Approach Pavement.

Full Depth PCC Combination Shoulder

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

4_C_FullPCC_04-20-21				
Direction of Travel	BEGIN STATION	END STATION	(P) Feet	(G) Feet
WB	22+10.52	22+39.21	4	2

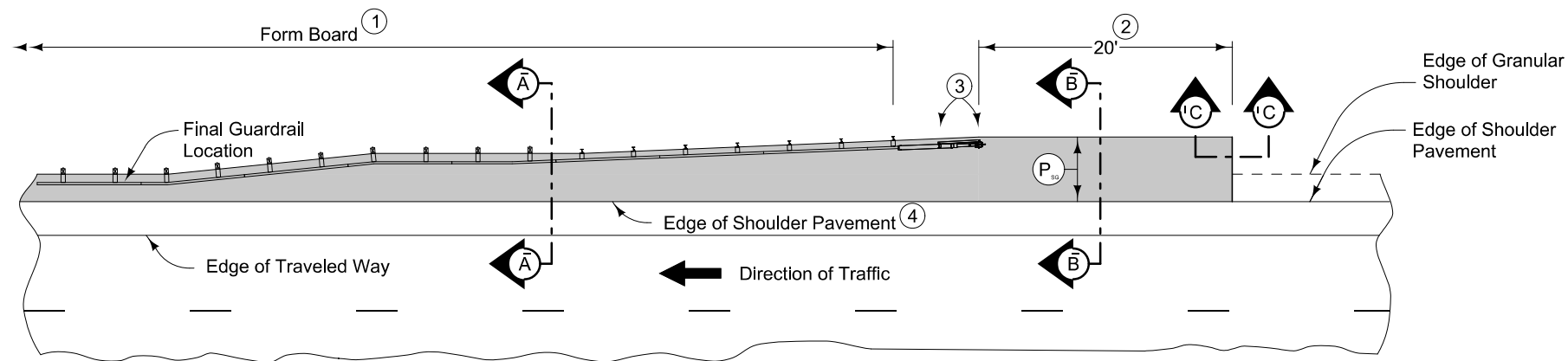
Mainline Jointing:
 Transverse joints: CD at 17' spacing
 Longitudinal joint: L-2

4DP_04-21-20			
Direction of Travel	BEGIN STATION	END STATION	(MW) Feet
WB	22+10.52	22+39.21	50

Plan to include Shoulder Strengthening (9" HMA/8"PCC) for inside shoulders (EB and WB) at both temporary median crossovers.

Anthony at District 6:
 Oct. 2023 letting for EB shoulders project includes standard 6" thickness. (ie: not thick enough to carry traffic during our project).

US 20 WB



PLAN VIEW

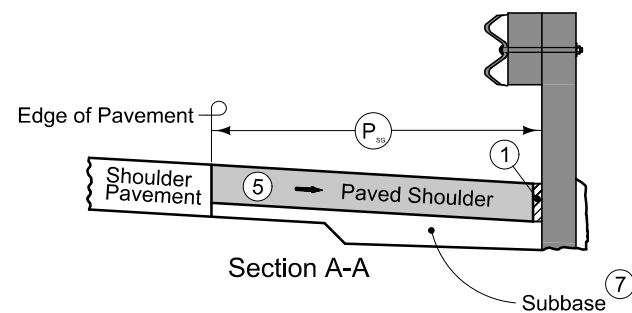
9" HMA Paved Shoulder at guardrail. 8" PCC may be substituted with the following jointing layout:

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

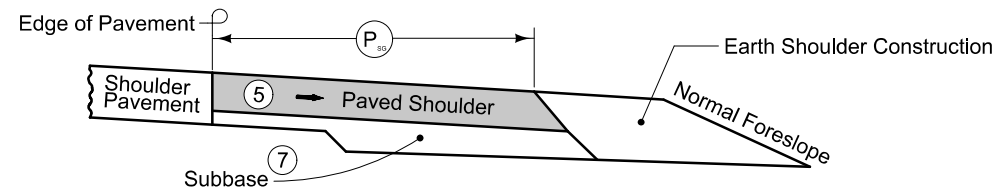
Compaction of HMA is required to face of guardrail post. Hand compaction will be allowed under guardrail. Removal and reinstallation of guardrail will be allowed with no additional payment.

Refer to Tabulation 112-9 for shoulder quantities.

- ① PCC option only: When guardrail posts are installed prior to construction of PCC paved shoulder, fasten form board to the face of guardrail posts for the length shown.
- ② Continue paved shoulder 20 feet beyond the center of the first post.
- ③ Shoulder may be notched for first 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.
- ④ 'KT' (per PV-101) joint for PCC shoulder. 'B' (per PV-101) joint for HMA shoulder.
- ⑤ Match shoulder slope.
- ⑥ The Contractor has the option to pave the paved shoulder at guardrail and the partial width paved shoulder as one operation.
- ⑦ Refer to other details in the plan.

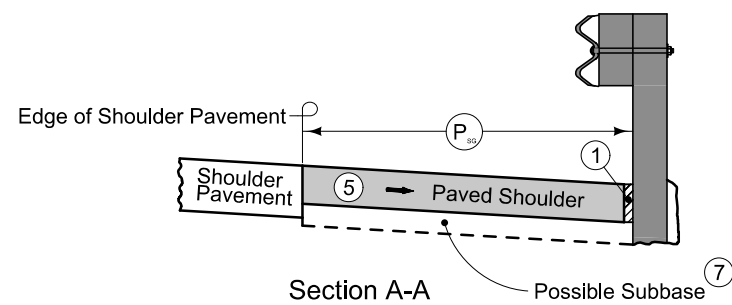


Section A-A

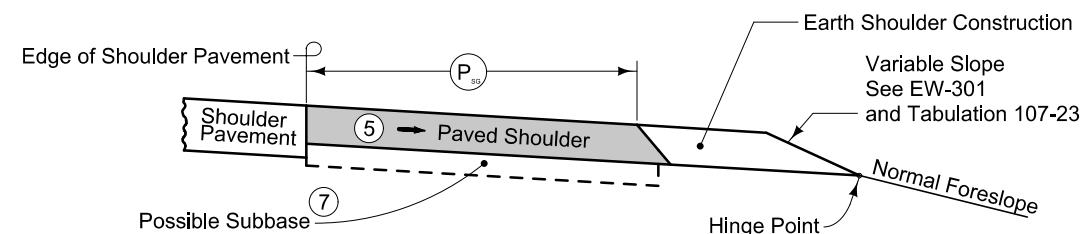


Section B-B

NEW CONSTRUCTION

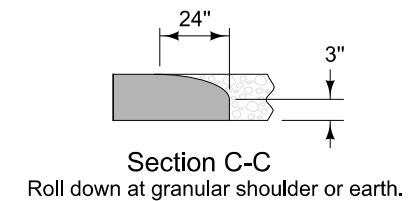


Section A-A



Section B-B

EXISTING SHOULDER



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

100-0A
10-28-97

ESTIMATED ROADWAY QUANTITIES (1 DIVISION PROJECT)

Item No.	Item Code	Item	Unit	Total	As Built Qty.

105-4
10-18-11

STANDARD ROAD PLANS

The following Standard Road Plans apply to construction work on this project.

Number	Date	Title
BA-200	04-20-21	Steel Beam Guardrail Components
BA-201	10-18-22	Steel Beam Guardrail Barrier Transition Section (MASH TL-3)
BA-202	10-20-15	Steel Beam Guardrail Bolted End Anchor
BA-205	10-17-23	Steel Beam Guardrail Tangent End Terminal (MASH TL-3)
BA-250	04-20-21	Steel Beam Guardrail Installation at Concrete Barrier or Bridge End Post (MASH TL-3)
BR-203	10-19-21	Double Reinforced 12" Approach
DR-303	10-17-17	Subdrains (Longitudinal)
DR-306	10-17-23	Precast Concrete Headwall for Subdrain Outlets
DR-402	04-19-22	Rock Flume for Bridge End Drain
EC-204	10-19-21	Perimeter, Slope and Ditch Check Sediment Control Devices
EC-502	04-21-15	Seeding in Rural Areas
EW-201	04-19-16	Bridge Berm Grading without Recoverable Slope (Barnroof Section)
EW-301	04-20-21	Guardrail Grading
PM-110	04-21-20	Line Types
PM-111	04-21-20	Symbols and Legends
PV-12	10-20-20	Milled Shoulder Rumble Strips
PV-101	04-19-22	Joints
PV-102	04-21-20	PCC Curb Details
PV-501	04-21-20	Median Crossover (50' Median) 16' Wide 1 Lane
SI-173	04-19-16	Object Markers
SI-211	10-18-22	Object Marker and Delineator Placement with Guardrail
SI-881	04-16-19	Special Signs for Workzones
SI-882	10-18-16	Special Signs for Restricted Width Traffic Control Zones
TC-1	10-15-19	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-61	10-17-23	Two-Lane, Two-way Operation
TC-252	04-21-20	Routes Closed to Traffic
TC-402	04-18-23	Work Within 15 ft of Traveled Way
TC-418	04-18-23	Lane Closure on Divided Highway
TC-420	10-16-18	Lane Closure at Ramps
TC-432	10-17-17	Shoulder Rumble Strip Operations
TC-433	10-17-17	Pavement Marking Operations

100-4A
10-29-02

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description

102-5
04-18-17

EXISTING PAVEMENT

No.	Location					Year	Type	Project Number	Surface		Base		Subbase		Removal		Coarse Aggregate			Reinforcement	Remarks	
	County	Route	Dir. of Travel	Begin Ref. Loc. Sign	End Ref. Loc. Sign				Type	Depth	Type	Depth	Type	Depth	Type	Depth	Source	Type	Durability Class			Type
	Dubuque	US-20	EB	293.16	294.55	2017	M	MP-020-6(706)283--76-28	PCC	10											PCC Patching	
						1987		F-20-9(66)--20-31	PCC	10	ECB	4					SUNDHEIM	C.LST	I			
	Dubuque	US-20	WB	293.15	294.55	2017	M	MP-020-6(706)283--76-28	PCC	10											PCC Patching	
						2013	V	NHSN-020-8(49)--3H-28	HMA	1.5	HMA	1			SCR	1					HMA overlay last 0.3mi	
						2000	S	MP-20-6(701)283--76-28	MSS													
						1988		NA	PCC	10	CTB	4										

112-8
04-15-14

MEDIAN CROSSOVERS

Refer to PV-500 Series.

* Not a bid item

Road Ident.	Location Station	Standard Road Plan No.	Detour Pavement SY	Special Backfill TON	Granular Shoulder TON	Embankment in Place CY	Class 10 Excavation CY	Class 13 Excavation CY	Removal of Pavement SY	Saw Cut* LF	18" Unclassified Roadway Pipe LF	36" CMP Slotted Drain/ 6" Grate LF	Beveled Pipe and Guard No.	Remarks
US 20	3+76.03	PV-501	1140.0	555.0	200.0									
US 20	35+22.59	PV-501	1140.0	555.0	200.0									

SURVEY SYMBOLS

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

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

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

<p>—E1(C)—</p> <p>—SAN.(C)—</p> <p>—W(C)—</p> <p>—F0(C)—</p> <p>—F02(C)—</p>	<p>ELIC, ALLIANT ANERGY - Quality C Mary Montgomery 319-786-4768 marymontgomery@alliantenergy.com</p> <p>SAIC, CITY OF DYERSVILLE- Quality C John Wandsnider 563-875-7724 jwandsnider@cityofdyersville.com</p> <p>WLIC, CITY OF DYERSVILLE - Quality C John Wandsnider 563-875-7724 jwandsnider@cityofdyersville.com</p> <p>FOIC, IOWA COMMUNICATIONS NETWORK - Quality C Tim Flickinger 515-725-4699 timothy.flickinger@icn.state.ia.us</p> <p>FO2C, MAQUOKETA VALLEY ELECTRIC CO-OP - Quality C Nic Schulte P.O. Box 370 319-462-3541 nschulte@mvec.com</p>
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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

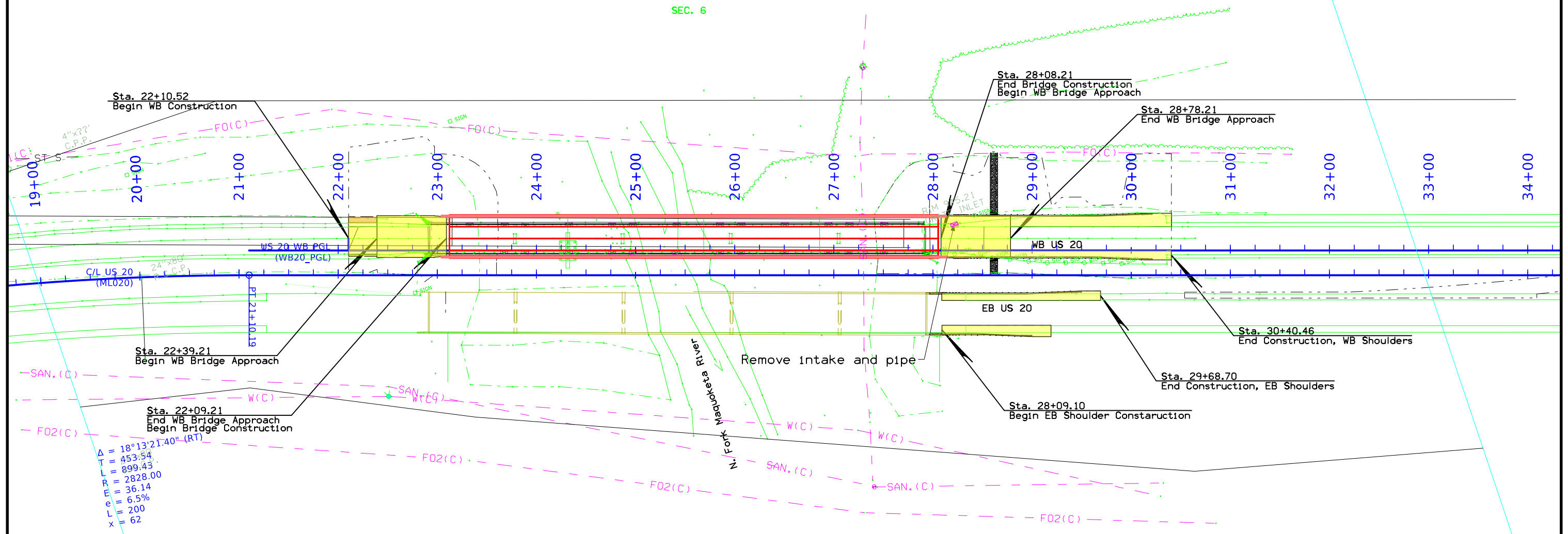
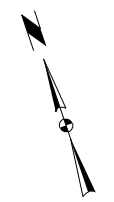
PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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

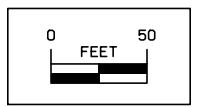
Refer to W sheets for superelevation runoff at west end of west approach pavement.

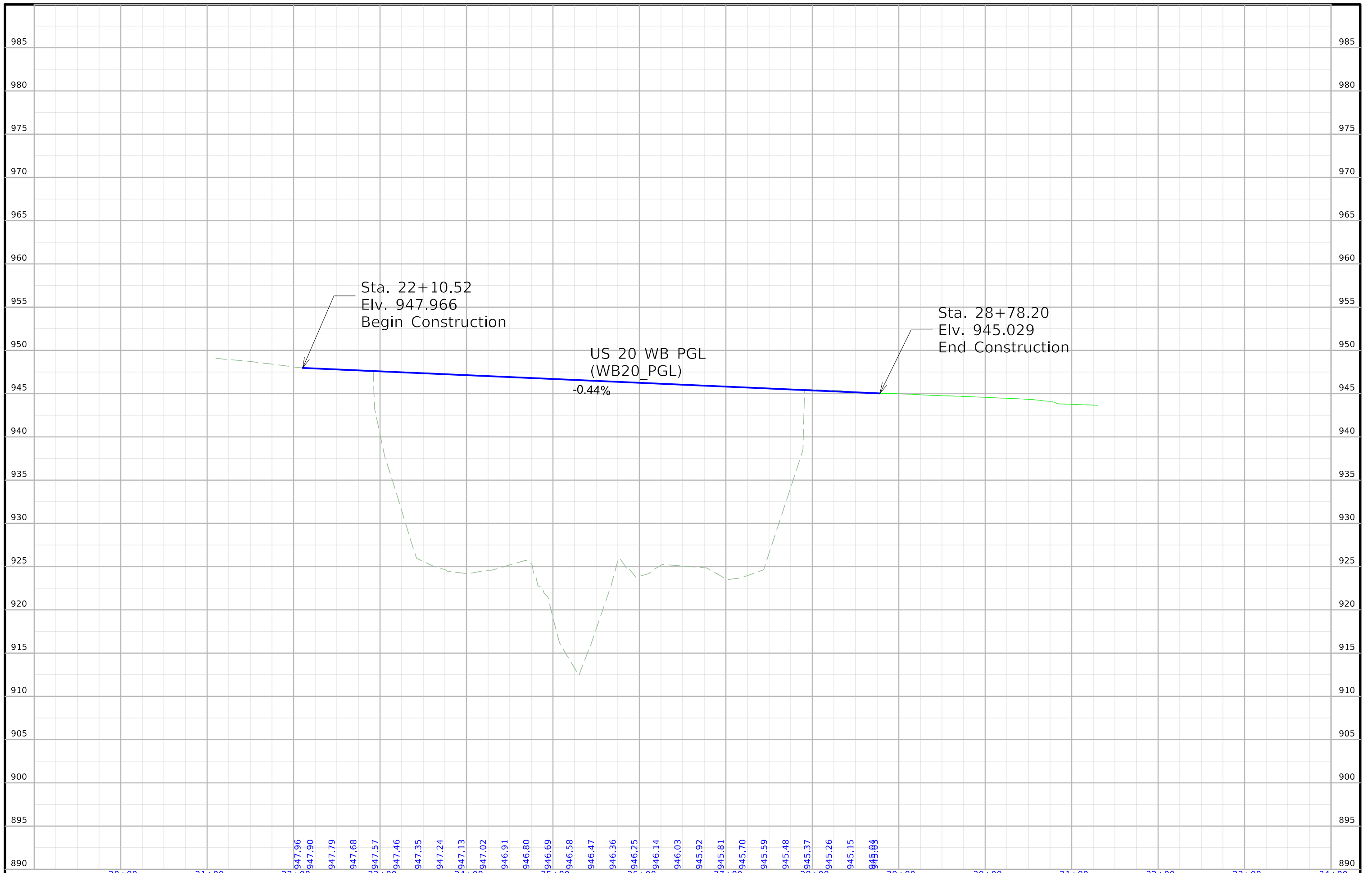
DOT mentioned that going forward, bridge projects should construct 300 ft of full depth/full width shoulders at all four corners of bridge. Discuss further during final design.

T-88N R-2W
SEC. 6



Refer to V sheets for notes regarding Steel Beam Guardrail connections to East end of EB US 20 bridge.





Survey Information

SURVEY INDEX

County: Dubuque
PIN: 21-31-020-020
Project Number: BRF-020-9(269)--38-31
Location: N. Fork Maquoketa River 0.6 Mi W of IA 136 (WB)
Type of Work: Bridge Replacement

(U.S. SURVEY FOOT)
VERTICAL DATUM: NAVD88
GEOID MODEL: GEOID12B

Alignment Information

NO alignment

Survey Personnel

Matthew Fouts – PLS
Daniel Marti – PLS
Drake Marti – Survey Technician
Joshua Randolph – Survey CADD Technician

Date(s) of Survey

Begin Date 01/31/2023
End Date 02/06/2023

General Information

This survey is for preliminary design for the section of approximately 0.2 miles of roadway, there is one bridge along the route. Project datum is provided by Design Survey Office. This project is a full DTM Survey.

Utility Information

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

Project Control

(RTN)
Nearby Iowa Real Time Network reference stations were utilized to obtain horizontal and vertical control on primary project control points. For additional details of the control survey, contact the Preliminary Survey department.

(Static)
Static observations were not used for this survey.

PROJECT DATUM: NAD83(2011) for EPOCH 2010.00
COORDINATE SYSTEM: IOWA REGIONAL COORDINATE SYSTEM ZONE 11
(Dubuque / Davenport).

CONTROL POINT VICINITY MAP

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



HORIZ. DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 Adjustment) - Iowa RCS Zone 11 (U.S. Survey Foot)

VERT. DATUM: NAVD88 - Geoid Model: 12B

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

HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING
HORIZ. DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 Adjustment)
Ia. Regional Coordinate System Zone 11 (U.S. Survey Foot)
VERT. DATUM: NAVD88
Geoid Model: 12B

POINT NAME	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP2	8409852.23	21339787.30	954.00	SET 5/8" REBAR ON SOUTH SIDE OF WEST BOUND LANE ALONG HIGHWAY 20 WEST OF BRIDGE AND 250'+/- SOUTH OF CENTERLINE OF HIGHWAY 20
CP5	8409722.04	21340187.51	945.71	SET 5/8" REBAR ON EAST END OF THE BRIDGE ON TOP OF SLOPE
CP8	8409545.08	21340680.65	945.51	SET 5/8" REBAR ON WEST END OF THE BRIDGE ON TOP OF SLOPE
CP9	8409440.07	21341192.88	942.47	SET 5/8" REBAR 250'+/- EAST OF BRIDGE NORTH OF CENTERLINE OF HIGHWAY 20 OF WEST BOUND LANE
CP10	8409640.45	21340384.44	925.87	SET 5/8" REBAR ON SOUTH SIDE OF HIGHWAY 20 SECOND PIER FROM THE WEST ON TOP OF BANK WEST SIDE OF RIVER
CP11	8409721.85	21340368.23	926.15	SET 5/8" REBAR ON NORTH SIDE OF HIGHWAY 20 30'+/- NORTHWEST OF SECOND PIER TO THE WEST OF THE RIVER
BM200	8409609.80	21340115.53	942.76	SET ON WEST BOLT ON FIRE HYDRANT SOUTH OF HIGHWAY 20 WEST END OF BRIDGE AT RIGHT OF WAY

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)
1	US 20 (ML020)	+00.00	8409929.69	21337927.47															
2	US 20 (ML020)						12+10.76	8409919.86	21339138.19	16+64.31	8409916.18	21339591.72	21+10.19	8409770.86	21340021.36				
3	US 20 (ML020)						39+25.98	8409189.06	21341741.42	44+52.24	8409020.44	21342239.93	49+67.18	8409037.60	21342765.91				
4	US 20 (ML020)	115+61.56	8409252.69	21349356.77															
1	US 20 (WB20_PGL)	21+10.19	8409794.54	21340029.37															
2	US 20 (WB20_PGL)	39+25.98	8409212.74	21341749.43															

SPIRAL OR CIRCULAR CURVE DATA

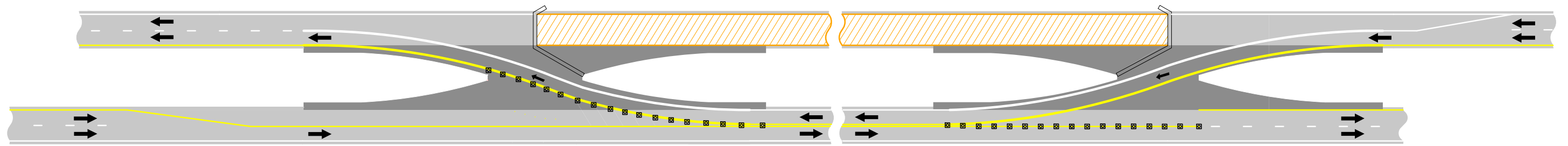
Name	Location	ΔSCS	Horizontal Alignment Data												Remarks			
			Spiral Data						Curve Data									
			θS	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	ΔC	T	L	R		E		
C1	US 20 (ML020)													18.223°	453.545	899.430	2828.000	36.138
C2	US 20 (ML020)													20.557°	526.257	1041.200	2902.000	47.331

108-23A 08-01-08
TRAFFIC CONTROL PLAN
<ol style="list-style-type: none"> At least one lane of traffic in both directions shall be maintained on US 20 at all times. Refer to Standard Road Plans shown on Tab 105-4 in C Sheets for other information. Refer to Staging Notes (Tabulation 108-26A) and other J sheets for details of specific closures. All interchange ramps shall be maintained at all times.

111-01 04-17-12								
COORDINATED OPERATIONS								
Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.								
<table border="1" style="width: 100%;"> <tr> <th style="width: 50%;">Project</th> <th style="width: 50%;">Type of Work</th> </tr> <tr> <td>None provided</td> <td></td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>	Project	Type of Work	None provided					
Project	Type of Work							
None provided								

108-26A 08-01-08
STAGING NOTES
<p>Stage 1 Traffic Control: Close US 20 EB and WB inside lanes. Maintain outside lanes of traffic in both directions. Construction: Construct west and east median crossovers (PV-500); also construct shoulder and guardrail for eastbound bridge trailing side.</p> <p>Stage 2 Traffic Control: Close US 20 westbound. Maintain 2-lane 2-way traffic in the eastbound lanes between west and east crossovers. Construction: Improve US 20 westbound bridge, approaches, shoulder and guardrail.</p>

108-25 10-21-14												
511 TRAVEL RESTRICTIONS												
Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No., Structure ID, or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
None												



See Sheets 2 and 4 for Details

See Sheets 3 and 4 for Details

OVERVIEW OF CROSSOVER

Place Two-Way Traffic symbol and DO NOT PASS signs alternately on both sides of the roadway at a maximum of one-half mile intervals for both directions of travel. Always have signs in sight of motorists.

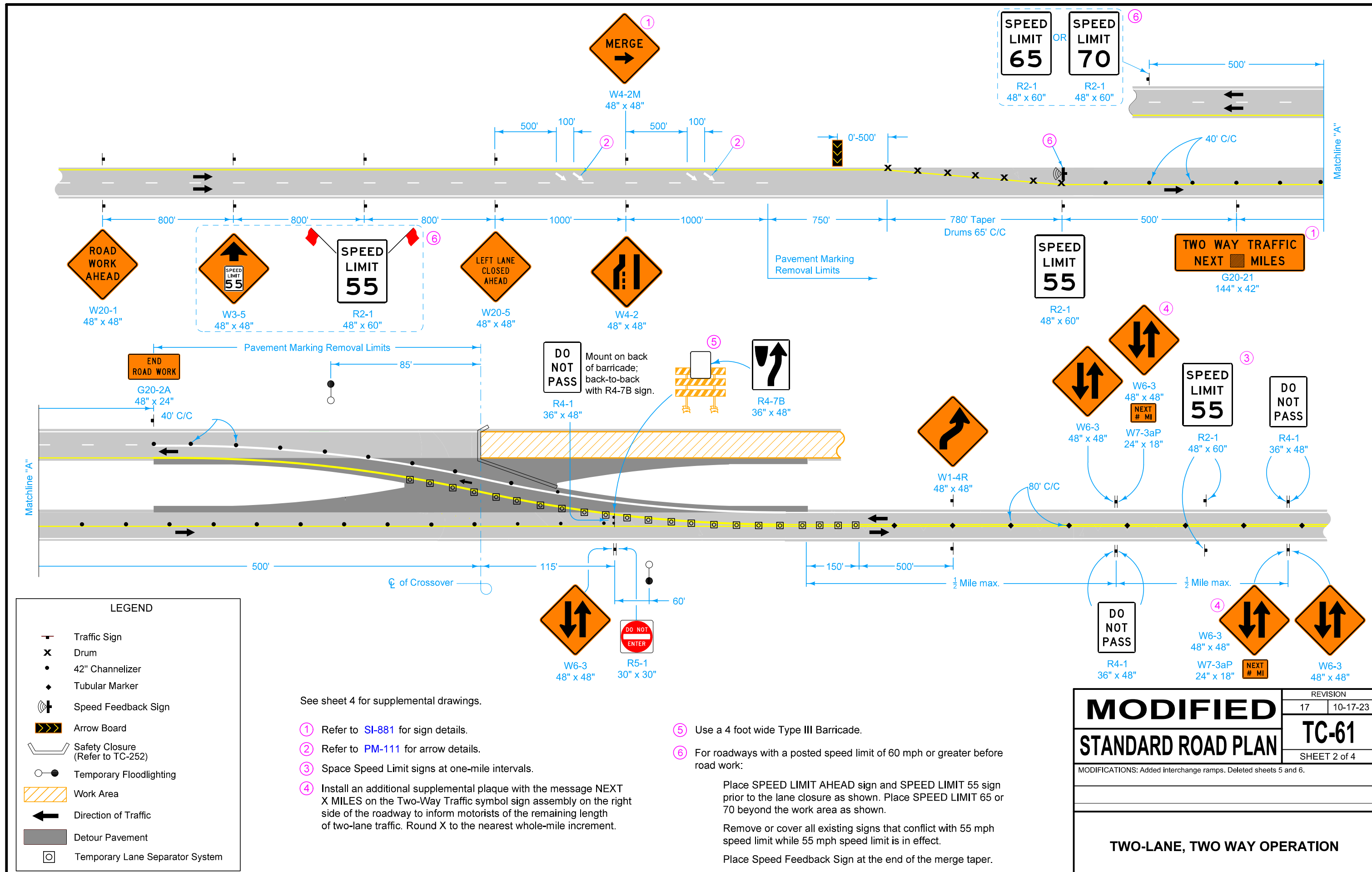
Possible Contract Items:

- Painted Symbols and Legends
- Pavement Marking Items
- Pavement Marking Removed
- Safety Closures
- Temporary Floodlighting
- Temporary Lane Separator System
- Traffic Control

Possible Tabulations:

[108-13A](#), [108-22](#), [108-27](#), [108-29](#), [108-30](#), [108-33](#), [108-35](#)

MODIFIED	REVISION	
	17	10-17-23
STANDARD ROAD PLAN		TC-61
		SHEET 1 of 4
MODIFICATIONS: Added interchange ramps. Deleted sheets 5 and 6.		
TWO-LANE, TWO WAY OPERATION		



LEGEND

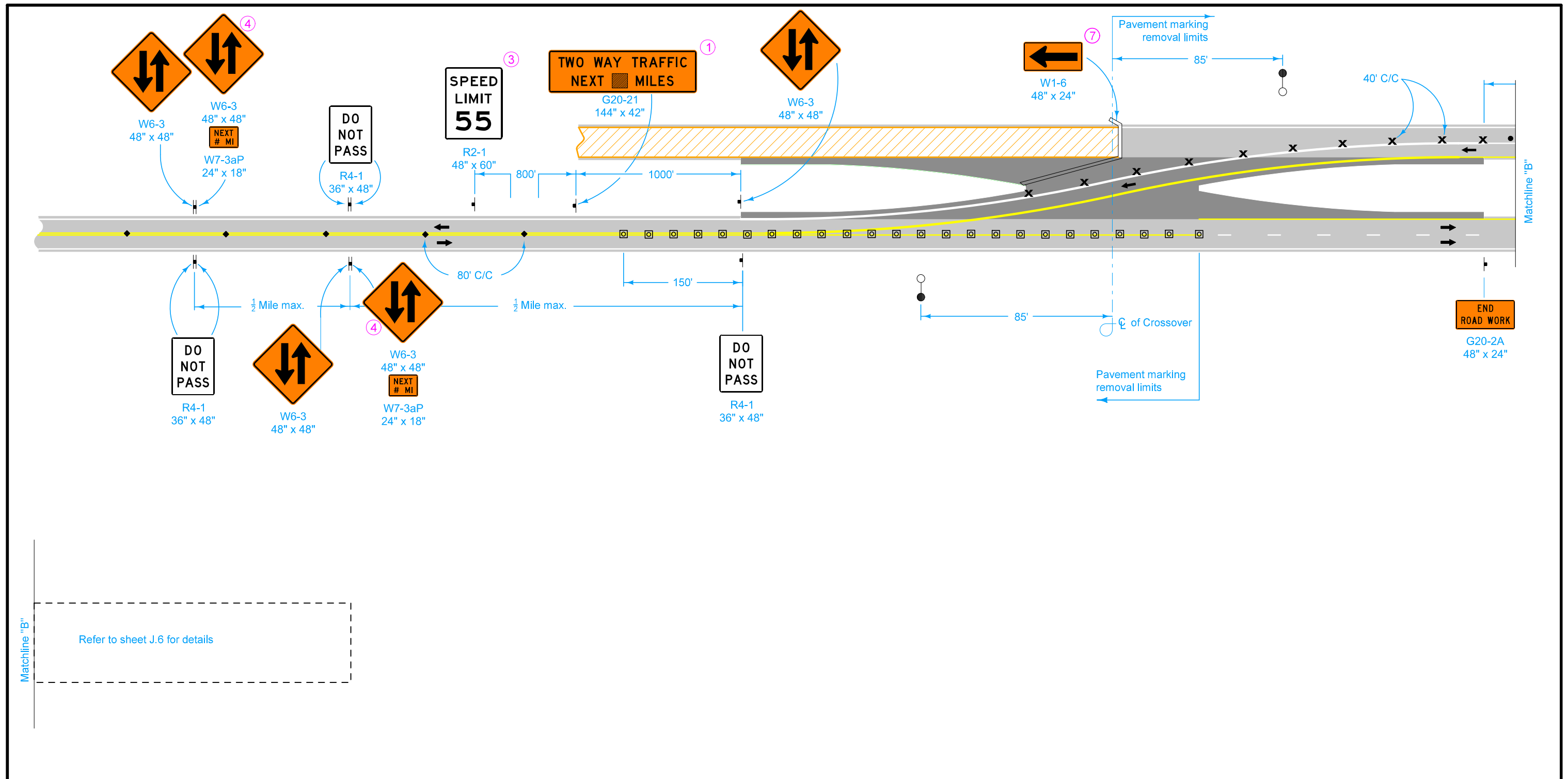
- Traffic Sign
- Drum
- 42" Channelizer
- Tubular Marker
- Speed Feedback Sign
- Arrow Board
- Safety Closure (Refer to TC-252)
- Temporary Floodlighting
- Work Area
- Direction of Traffic
- Detour Pavement
- Temporary Lane Separator System

See sheet 4 for supplemental drawings.

- ① Refer to SI-881 for sign details.
- ② Refer to PM-111 for arrow details.
- ③ Space Speed Limit signs at one-mile intervals.
- ④ Install an additional supplemental plaque with the message NEXT X MILES on the Two-Way Traffic symbol sign assembly on the right side of the roadway to inform motorists of the remaining length of two-lane traffic. Round X to the nearest whole-mile increment.

- ⑤ Use a 4 foot wide Type III Barricade.
- ⑥ For roadways with a posted speed limit of 60 mph or greater before road work:
 - Place SPEED LIMIT AHEAD sign and SPEED LIMIT 55 sign prior to the lane closure as shown. Place SPEED LIMIT 65 or 70 beyond the work area as shown.
 - Remove or cover all existing signs that conflict with 55 mph speed limit while 55 mph speed limit is in effect.
 - Place Speed Feedback Sign at the end of the merge taper.

MODIFIED STANDARD ROAD PLAN	REVISION	
	17	10-17-23
TC-61		
SHEET 2 of 4		
MODIFICATIONS: Added interchange ramps. Deleted sheets 5 and 6.		
TWO-LANE, TWO WAY OPERATION		



Matchline "B"

Refer to sheet J.6 for details

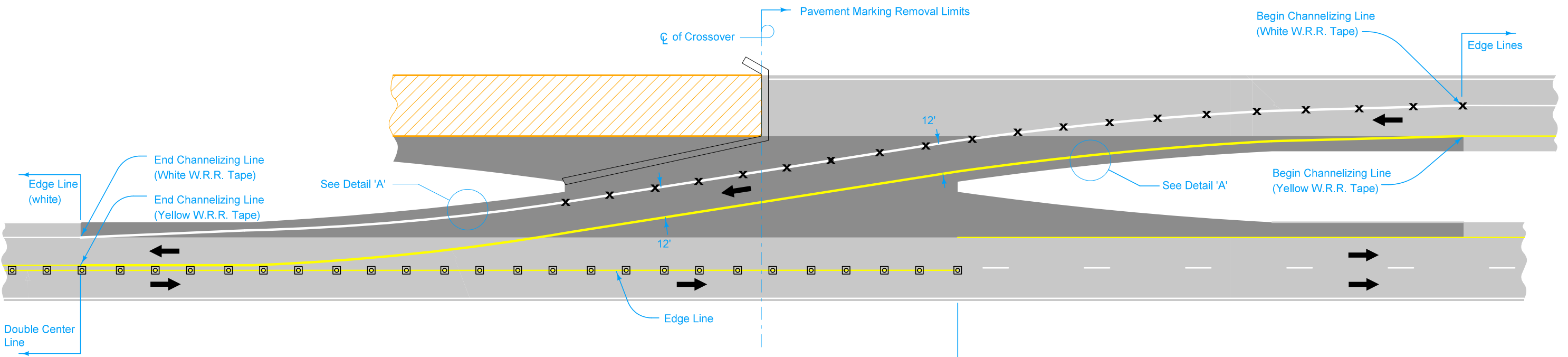
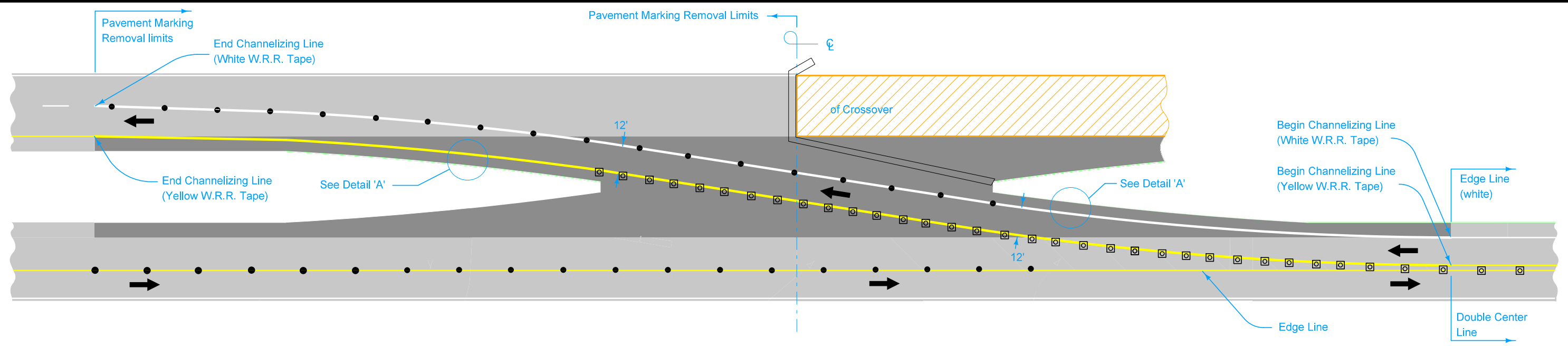
See sheet 4 for supplemental drawings.

LEGEND	
	Traffic Sign
	Drum
	42" Channelizer
	Tubular Marker
	Temporary Lane Separator System
	Speed Feedback Sign
	Arrow Board
	Safety Closure (Refer to TC-252)
	Temporary Floodlighting
	Work Area
	Direction of Traffic
	Detour Pavement

- ① Refer to SI-881 for sign details.
- ② Refer to PM-111 for arrow details.
- ③ Space Speed Limit signs at one-mile intervals.
- ④ Install an additional supplemental plaque with the message NEXT X MILES on the Two-Way Traffic symbol sign assembly on the right side of the roadway to inform motorists of the remaining length of two-lane traffic. Round X to the nearest whole-mile increment.

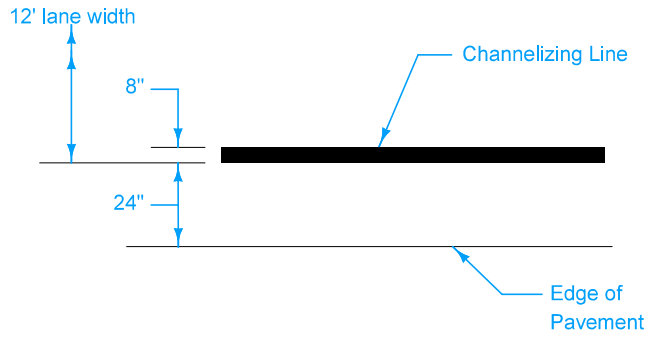
- ⑥ For roadways with a posted speed limit of 60 mph or greater before road work:
 - Place SPEED LIMIT AHEAD sign and SPEED LIMIT 55 sign prior to the lane closure as shown. Place SPEED LIMIT 65 or 70 beyond the work area as shown.
 - Remove or cover all existing signs that conflict with 55 mph speed limit while 55 mph speed limit is in effect.
 - Place Speed Feedback Sign at the end of the merge taper.
- ⑦ Add below R11-2 already included in Safety Closure.

MODIFIED STANDARD ROAD PLAN	REVISION	
	17	10-17-23
TC-61		
SHEET 3 of 4		
MODIFICATIONS: Added interchange ramps. Deleted sheets 5 and 6.		
TWO-LANE, TWO WAY OPERATION		



LEGEND

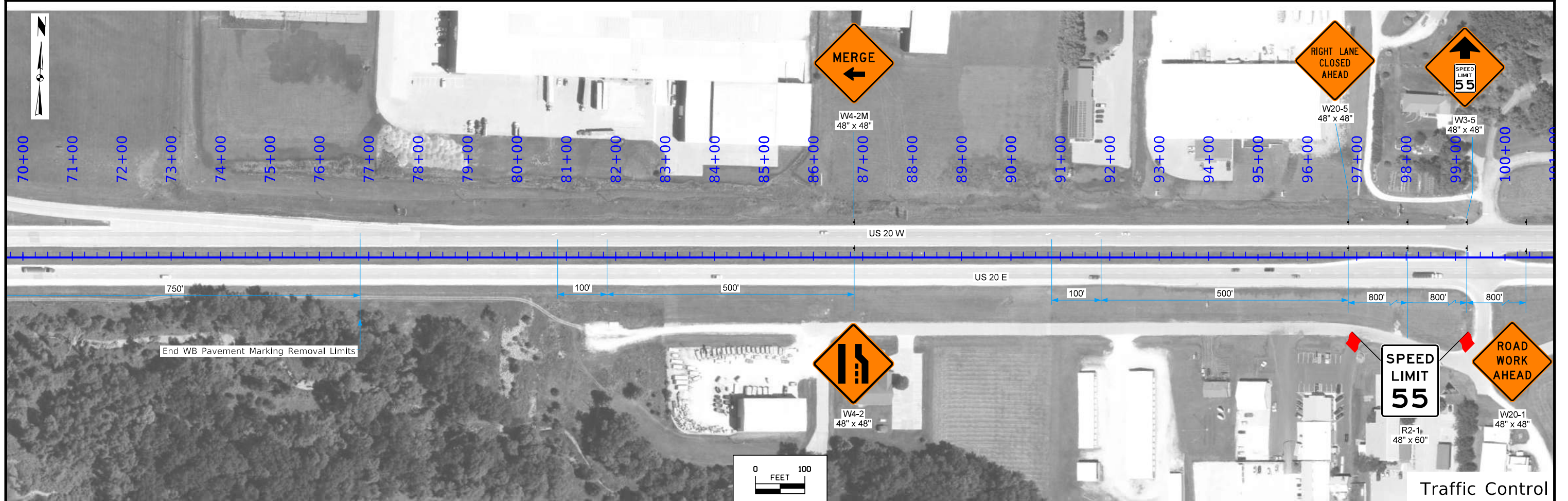
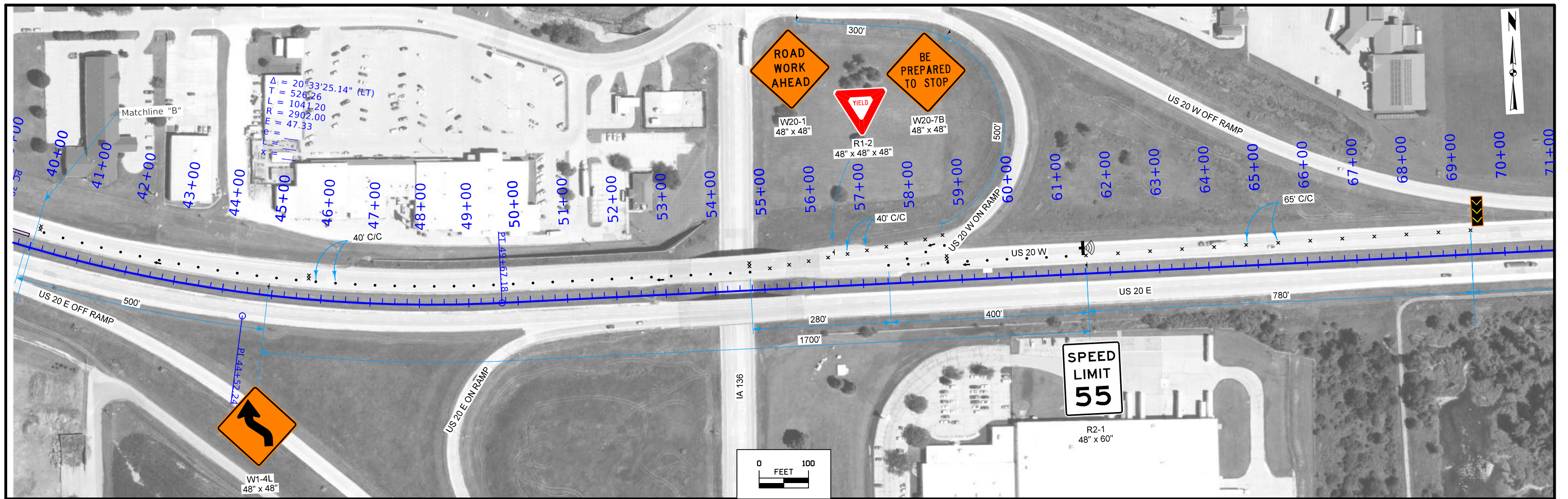
- Drum
- 42" Channelizer
- Work Area
- Direction of Traffic
- Detour Pavement
- Safety Closure (Refer to TC-252)
- Temporary Lane Separator System



SUPPLEMENTAL CROSSOVER DRAWINGS 8

8 Details shown hereon are intended to provide additional information to the requirements shown on sheets 2 and 3.

MODIFIED STANDARD ROAD PLAN	REVISION	
	17	10-17-23
TC-61		
SHEET 4 of 4		
MODIFICATIONS: Added interchange ramps. Deleted sheets 5 and 6.		
TWO-LANE, TWO WAY OPERATION		

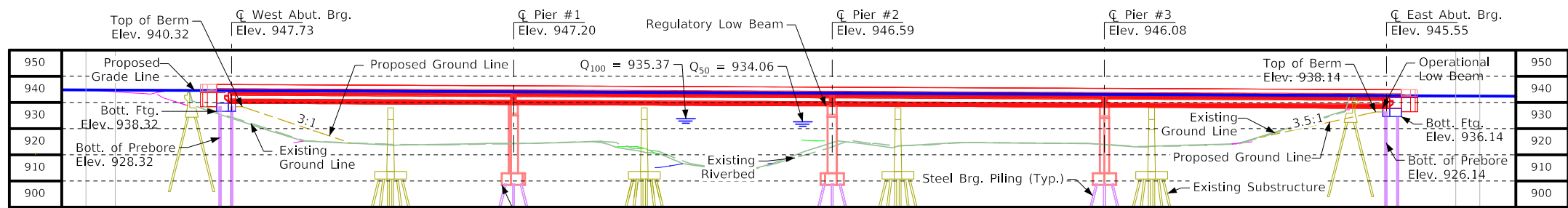


FILE NO. TBD	ENGLISH	DESIGN TEAM Stanley Consultants Inc.	DUBUQUE COUNTY	PROJECT NUMBER BRF-020-9(269)--38-31	SHEET NUMBER J.6
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CROSSOVERS LAYOUT

PROGRESS PLANS, NOT FOR CONSTRUCTION



BENCH MARK NO. CP10: N:8409640.45 E:21340384.44; ELEV 925.87
 SET 3/8" REBAR ON SOUTH SIDE OF HIGHWAY 20 SECOND PIER FROM THE WEST ON TOP OF BANK WEST SIDE OF RIVER

-0.44%
 VPI Sta. = 22+10.52 VPI Elev. = 947.966
 VPI Sta. = 28+78.20 VPI Elev. = 945.029

Proposed Profile Grade U.S. 20

Note:
 Top of bridge deck at CL W.B. US 20 is 0.21' above the profile grade to account for deck cross slope and parabolic crown.

Longitudinal Section Along CL US 20

Hydraulic Data

RIDB: MaquoketaR_NF_71.5
 Stream Gauge number: NWSDYR14
 Drainage Area = 122.0 Sq. Mi.
 Stream Slope (HGL) = 7.69 Ft./Mi.

Q₅₀ = 13,181 cfs
 Stage = 934.06 Ft.

Q₁₀₀ = 15,895 cfs
 Stage = 935.37 Ft.
 Backwater = 0.10 Ft.
 Avg. Bridge Velocity = 3.16 fps

Q₂₀₀ = 20,470 cfs
 Stage = 937.57 Ft.
 Calculated Design Scour = 910.7 Ft.

Q₅₀₀ = 25,678 cfs
 Stage = 939.52 Ft.
 Avg. Bridge Velocity = 3.72 fps
 Calculated Check Scour = 910.4 Ft.

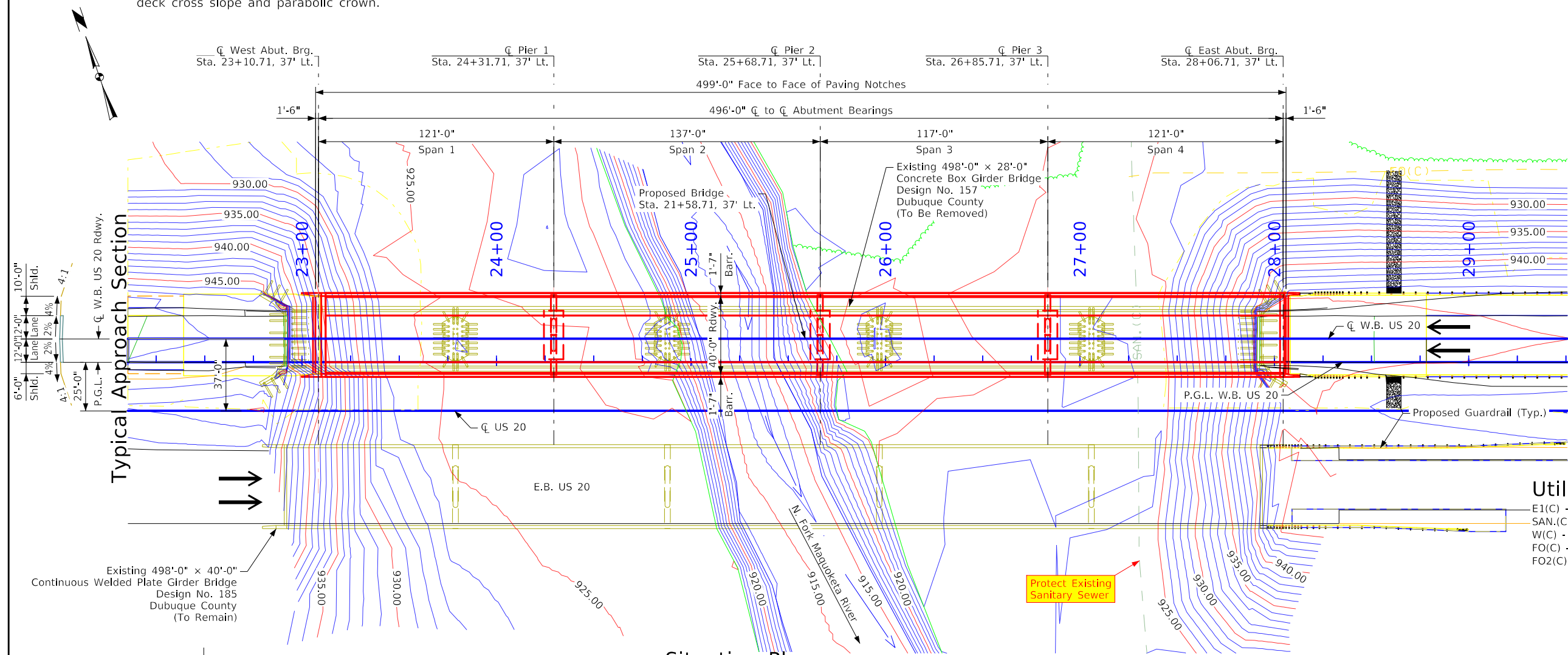
50- 100-, 500-year stages and discharges from Dubuque County F.I.S., Dated August 10, 2021. F.I.S. Datum = NAVD88

Utilities Legend:

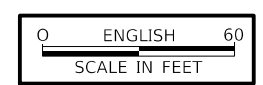
- E1(C) - Electric Line - Alliant Energy
- SAN(C) - Sanitary Sewer - City of Dyersville
- W(C) - Water Line - City of Dyersville
- FO(C) - Fiber Optic - Iowa Communications Network
- FO2(C) - Fiber Optic - Maquoketa Valley Electric Co-op

Traffic Estimate

2021 AADT 10,900 V.P.D.
 (Includes EB and WB traffic)
 TRUCKS 19 %



Situation Plan



Location

W.B. US 20 over N Fork Maquoketa River
 T-88N R-2W
 Section 6
 Dodge Township
 Dubuque County
 FHWA No. 23780
 Bridge Maint. No. 3193.5L020
 Latitude 42.470288°
 Longitude -91.123804°

Notes

All units are in feet unless noted otherwise.
 TL-4 Bridge Railing proposed
 Pier Type = Tee Piers
 Beam Type = BTB Beams
 Foundation type to be confirmed during final design.
 Berm slopes to be confirmed during final design.

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.

Signature: MARK D. WERNER Date: _____

Printed or Typed Name

My license renewal date is December 31, 2023

Pages or sheets covered by this seal: _____ V.01

PRELIMINARY

Design For 0° Skew

496'-0" x 40'-0" Pretensioned Prestressed Concrete Beam Bridge

121'-0" End Spans | 137'-0", 117'-0" Interior Span

Situation Plan

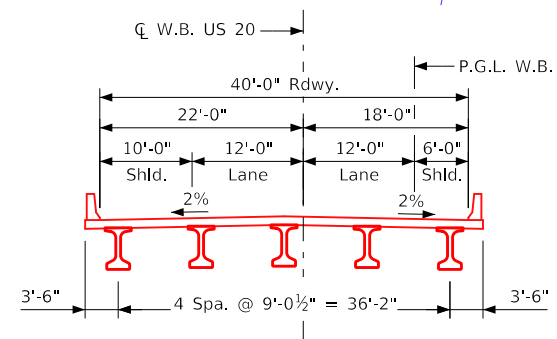
STA. 25+58.71, 37' Lt. (CL US 20) | Turn-in Date: July 2023

Dubuque County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. TBD | Design Sheet No. 1 of 2 | FHWA No. 23780

Typical Bridge Section (Looking East)

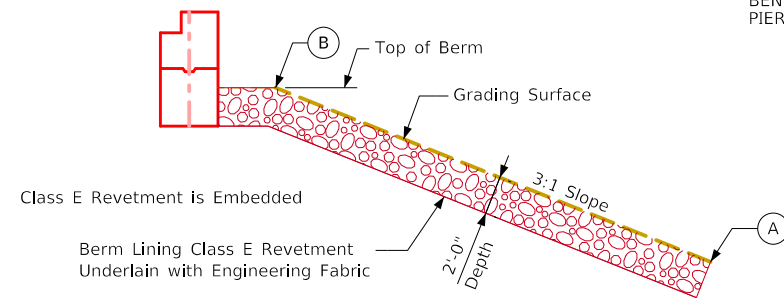


PROGRESS PLANS, NOT FOR CONSTRUCTION

Design Notes

All units are in feet unless noted otherwise.
 TL-4 Bridge Railing proposed
 Pier Type = Tee Piers
 Beam Type = BTB Beams
 Foundation type to be confirmed during final design.
 Berm slopes to be confirmed during final design.

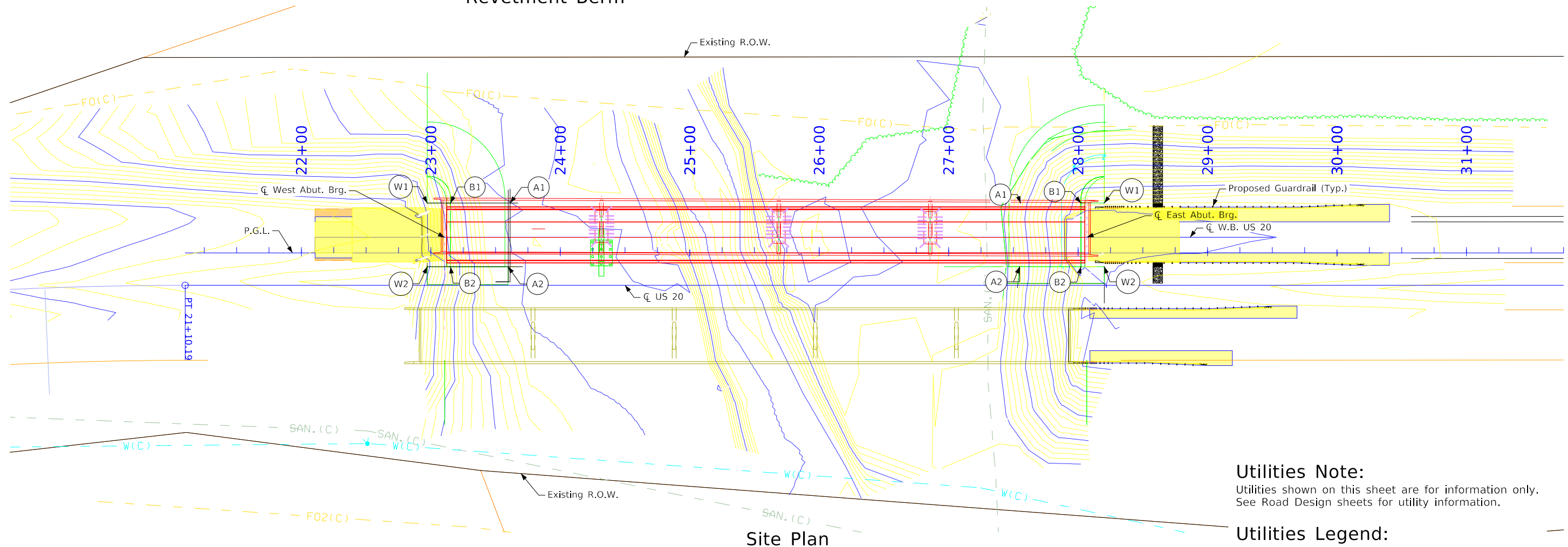
BENCH MARK: SET 3/8" REBAR ON SOUTH SIDE OF HIGHWAY 20 SECOND PIER FROM THE WEST ON TOP OF BANK WEST SIDE OF RIVER



Section Thru Embedded Revetment Berm

Points	West Abutment			East Abutment		
	Station	Offset	Elev.	Station	Offset	Elev.
A1	23+61.26	63.58' LT	925.00	27+55.56	63.58' LT	924.81
A2	23+59.67	14.42' LT	925.50	27+54.86	14.42' LT	924.61
B1	23+15.21	63.58' LT	940.32	28+02.21	63.58' LT	938.14
B2	23+15.21	14.42' LT	940.32	28+02.21	14.42' LT	938.14
W1	22+97.21	63.58' LT	947.20	28+20.21	63.58' LT	944.90
W2	22+97.21	14.42' LT	947.28	28+20.21	14.42' LT	944.98

Berm slope elevations reflect the grading surface.



Site Plan

Utilities Note:

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

Utilities Legend:

- E1(C) - Electric Line - Alliant Energy
- SAN.(C) - Sanitary Sewer - City of Dyersville
- W(C) - Water Line - City of Dyersville
- FO(C) - Fiber Optic - Iowa Communications Network
- FO2(C) - Fiber Optic - Maquoketa Valley Electric Co-op

Estimated Berm Armoring Quantities				
Location	Revetment CL. E (Ton)	Erosion Stone (Ton)	Engineering Fabric (SY)	CL. 10 Channel Excavation (CY)
Berm Lining - West	642		747	680
Berm Lining - East	868		1010	920
Totals	1510		1757	1600

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

This design is for the replacement of the existing 498'-0" x 28'-0" Concrete Box Girder Bridge, Dubuque Design No. 157, FHWA 23780, Maint. No. 3193.5L020. An Iowa DNR Flood Plain Permit is required. Preliminary Design will submit the application and place the permit in the PW Regulatory_Permits subdirectory folder upon receipt. 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.

PRELIMINARY

Design for 0° Skew

496'-0" x 40'-0" Pretensioned Prestressed Concrete Beam Bridge

121'-0" End Spans 137'-0", 117'-0" Interior Span

Site Plan

STA. 25+58.71, 37' Lt. (CL US 20) Turn-in Date: July 2023

Dubuque County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. TBD Design Sheet No. 2 of 2 FHWA No. 23780

CROSS SECTION VIEW COLOR LEGEND

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

NOTES:

Text

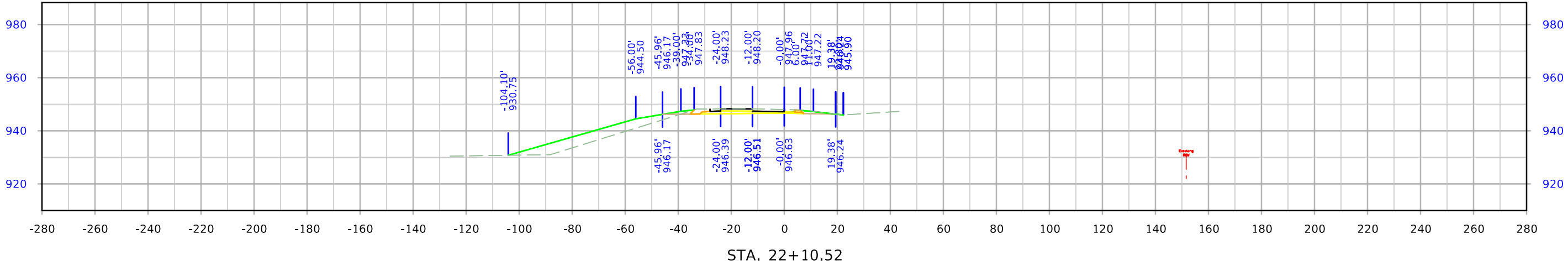
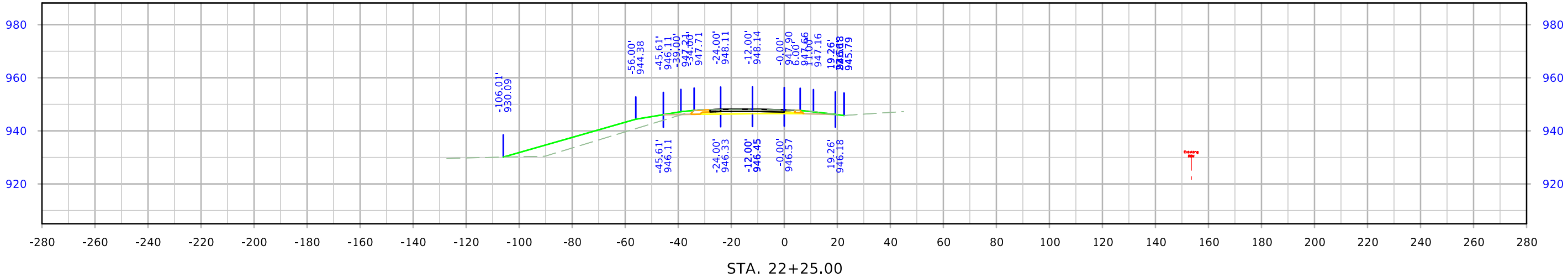
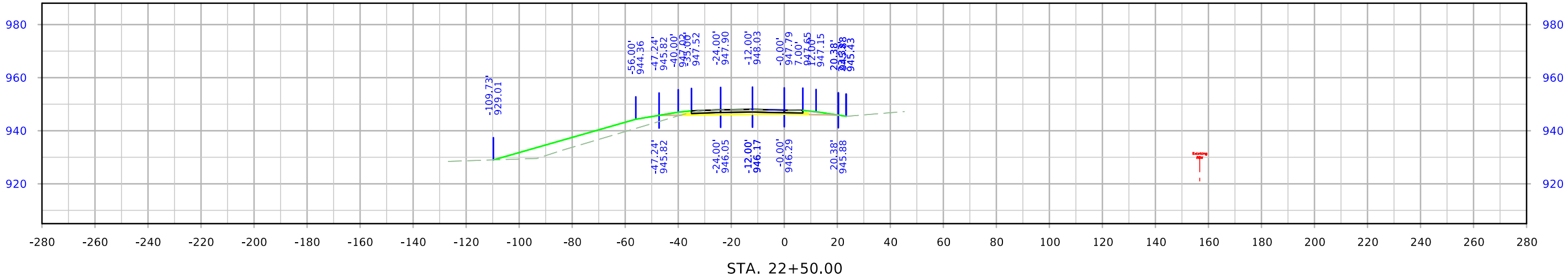
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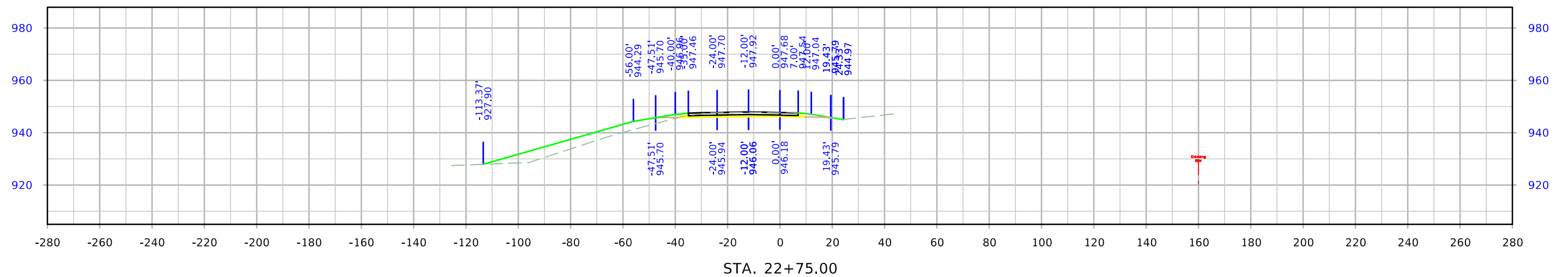
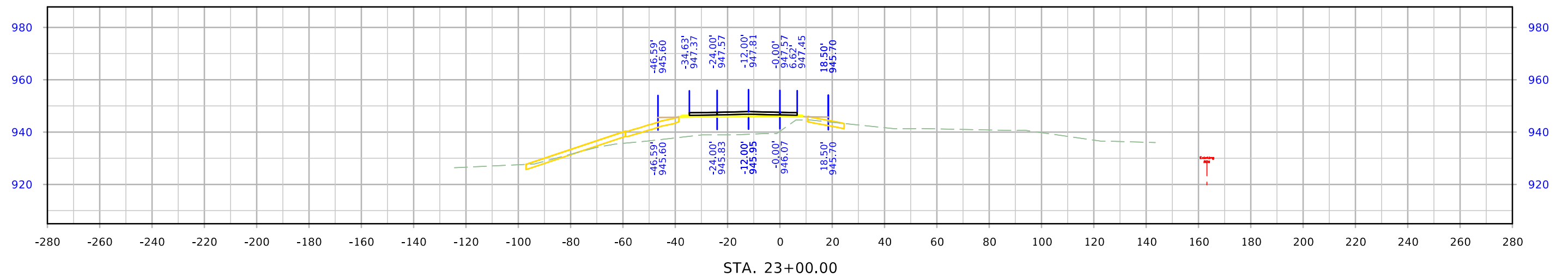
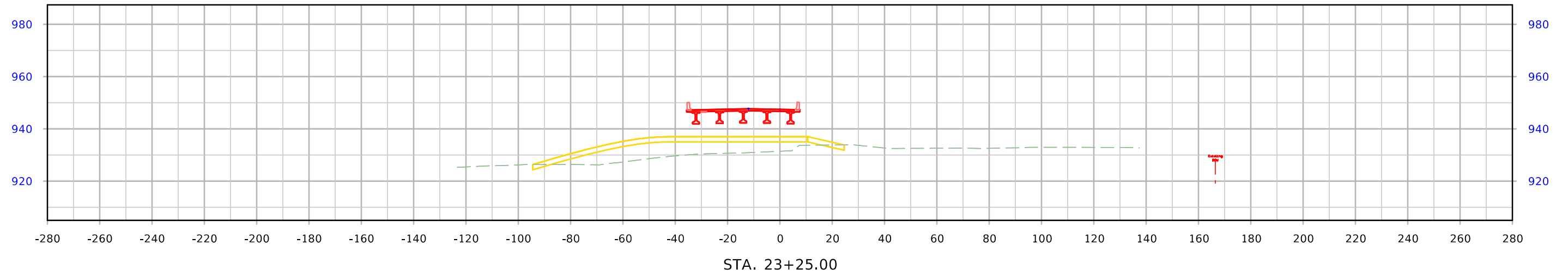
CROSS SECTIONS LEGEND AND INFORMATION SHEET

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

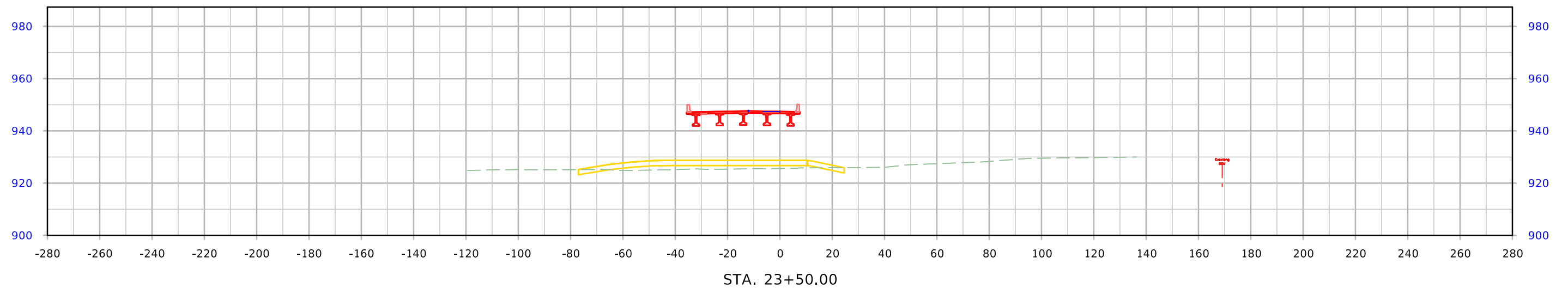
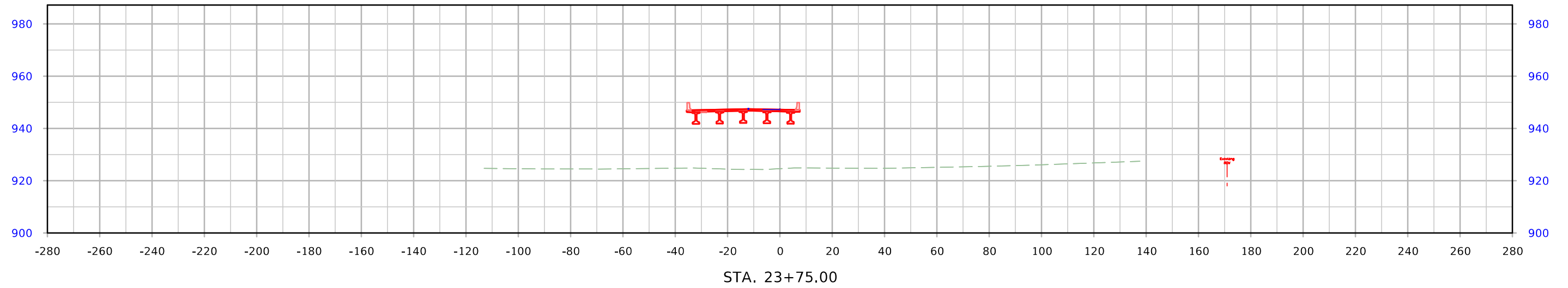
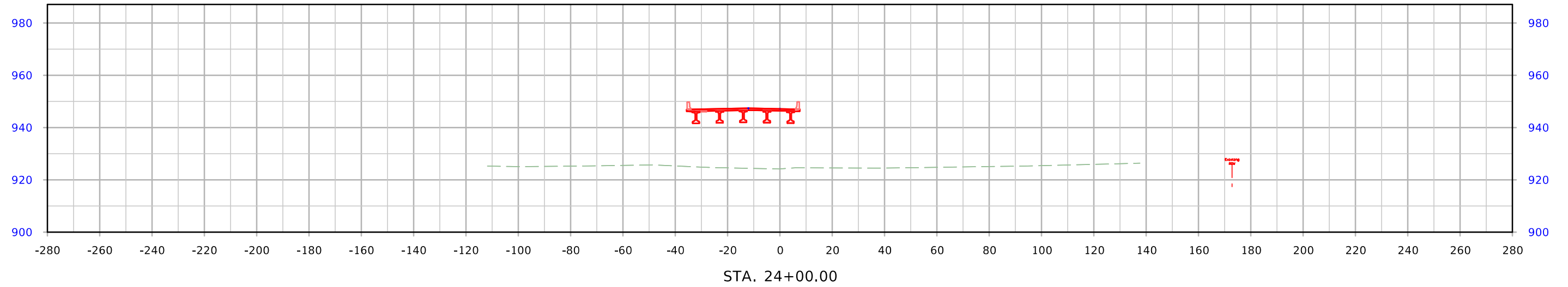
WB US 20



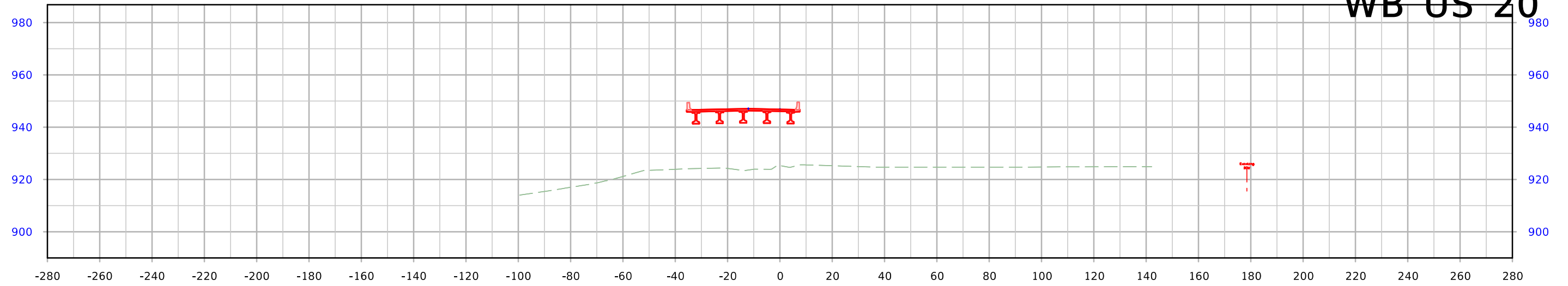
WB US 20



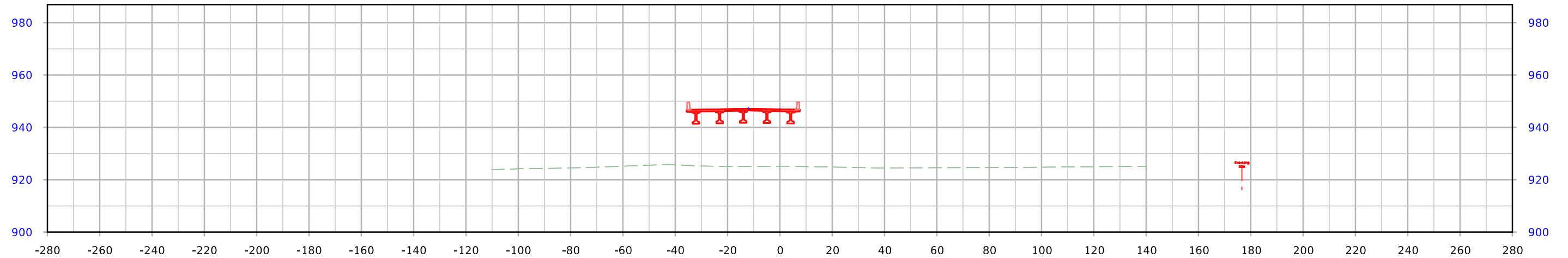
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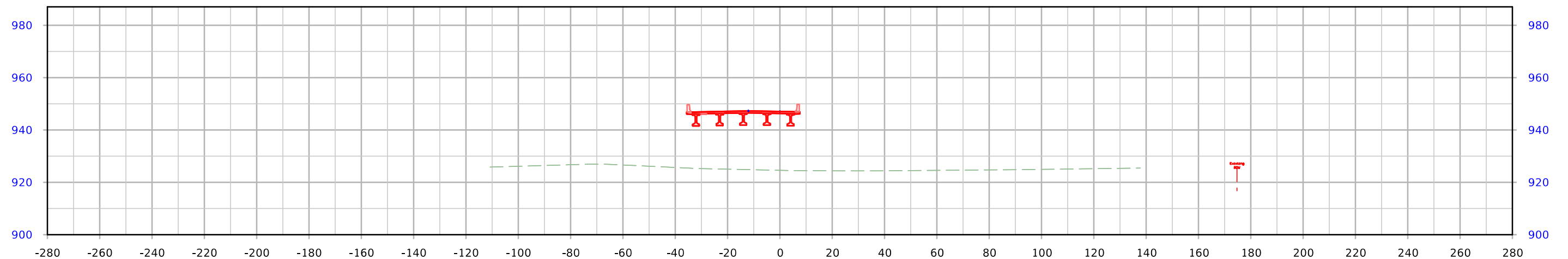
WB US 20



STA. 24+75.00

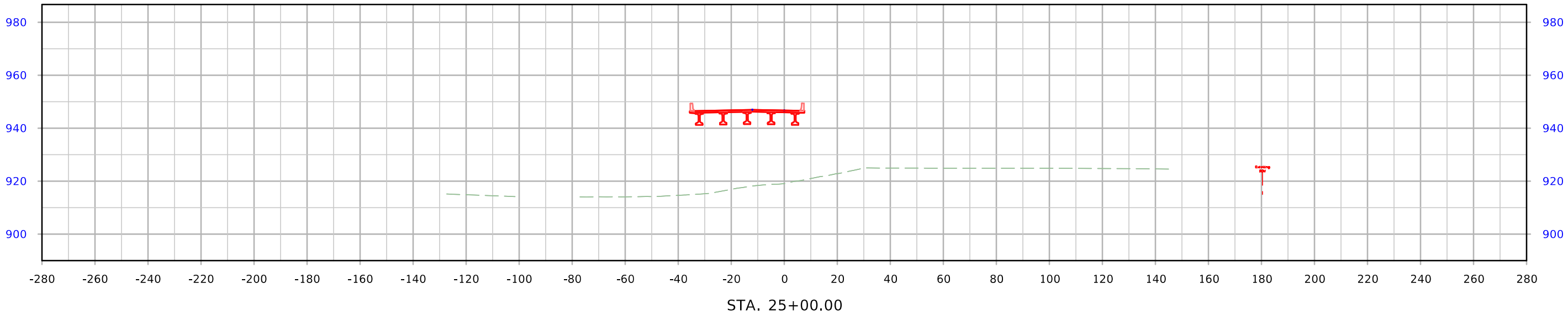
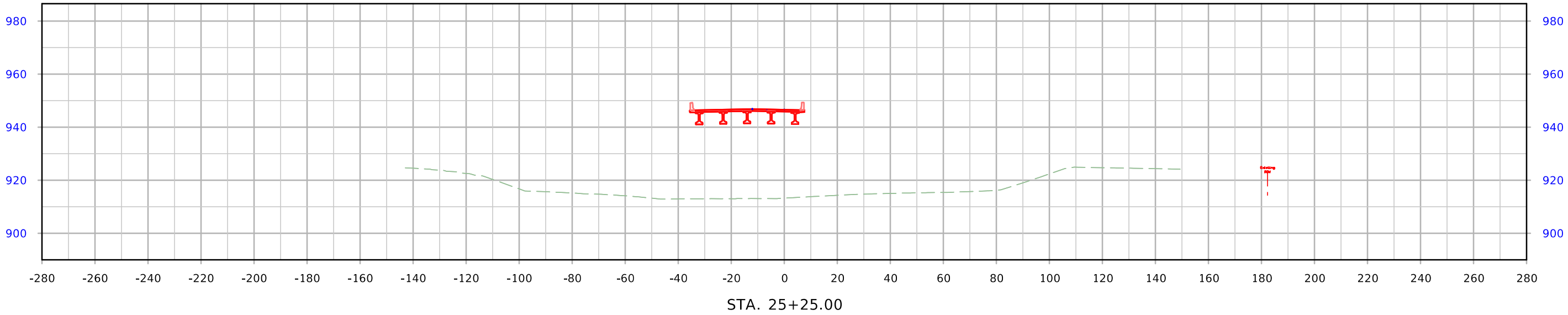


STA. 24+50.00

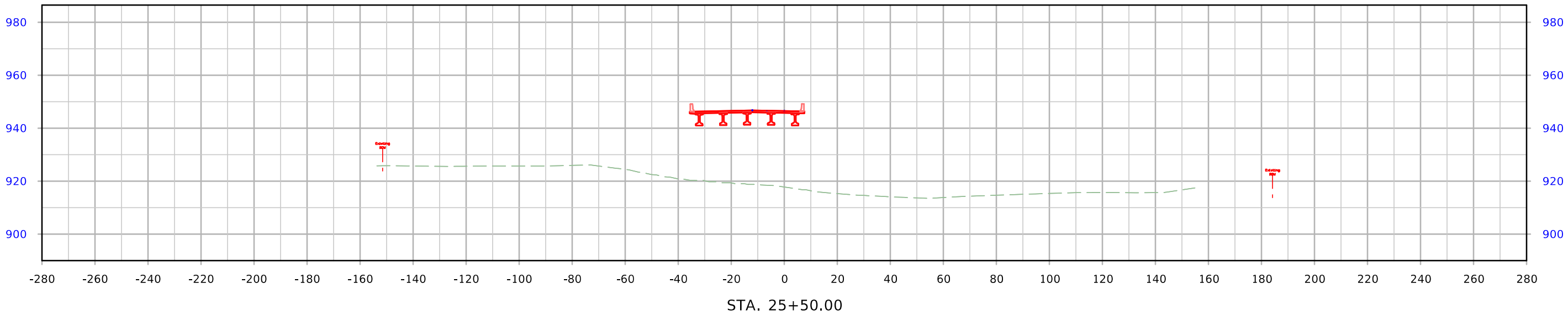
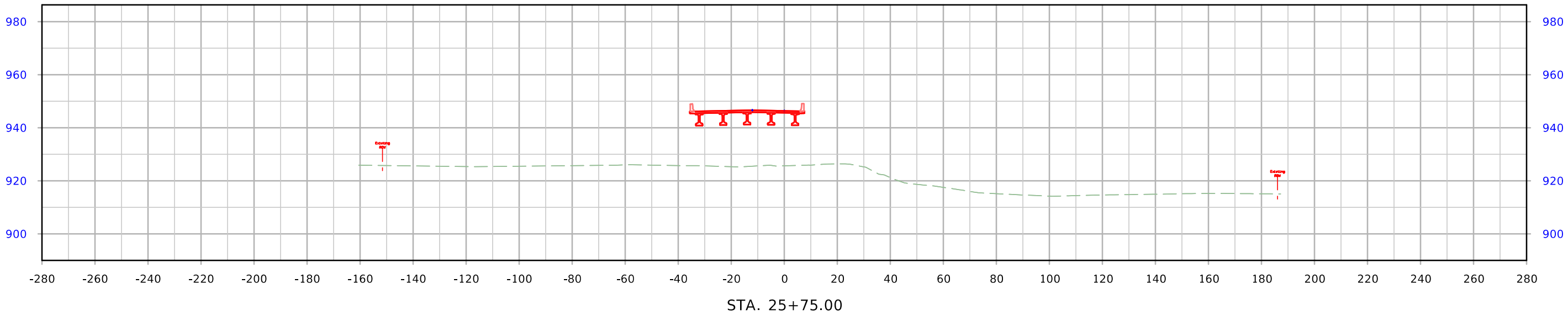


STA. 24+25.00

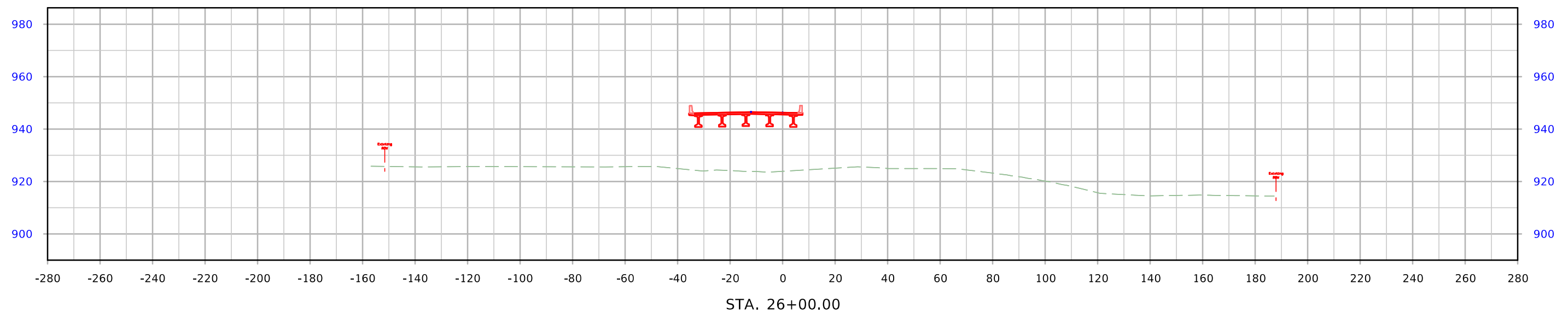
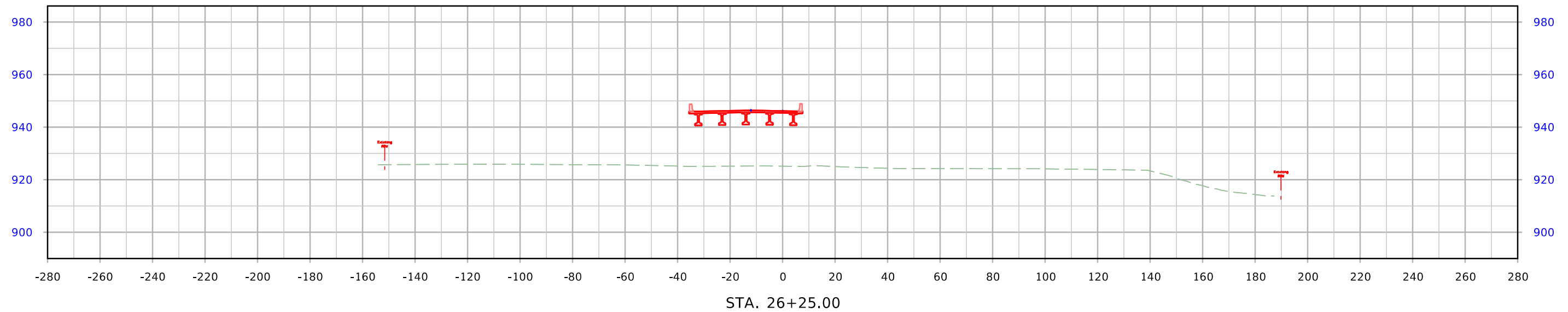
WB US 20



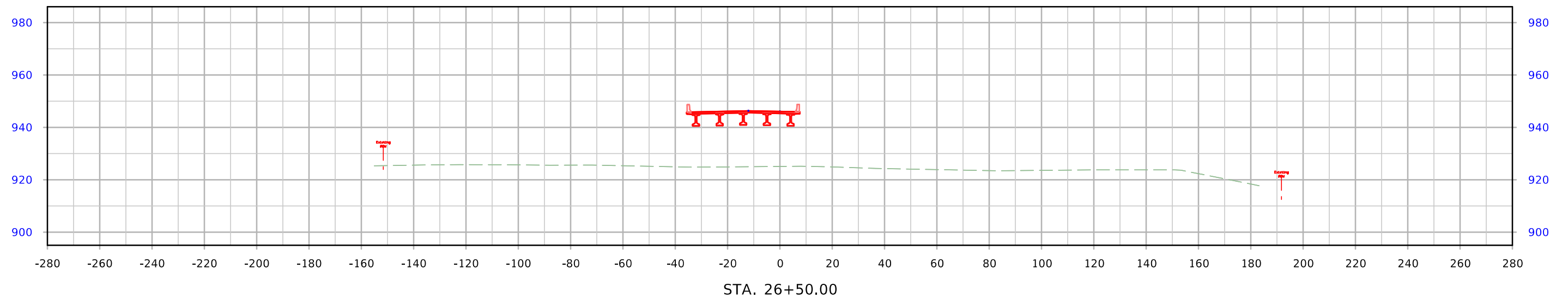
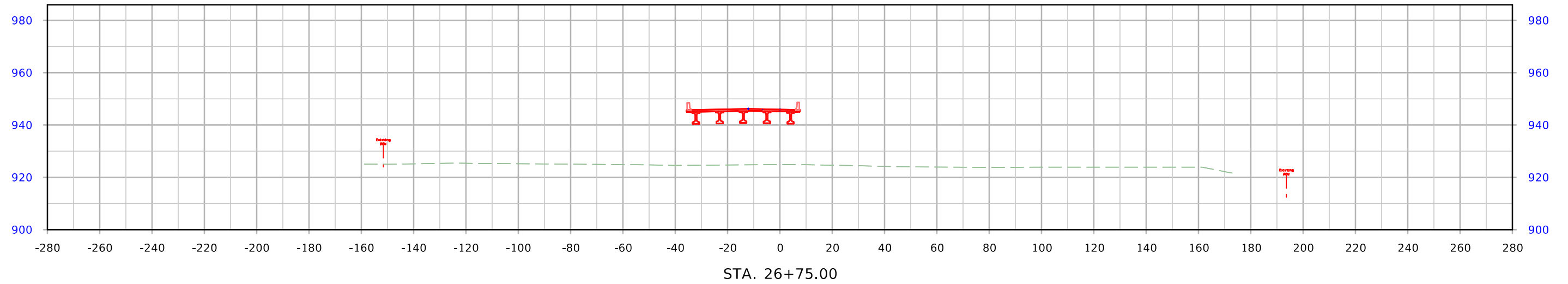
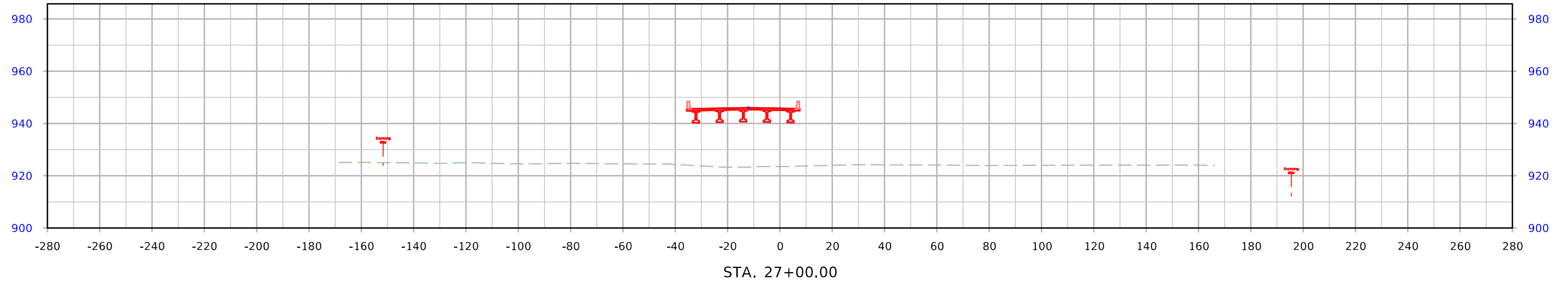
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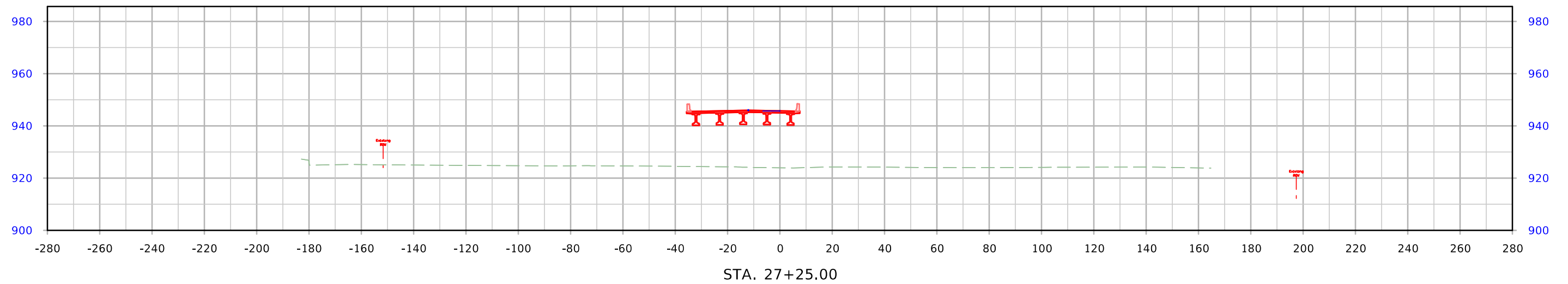
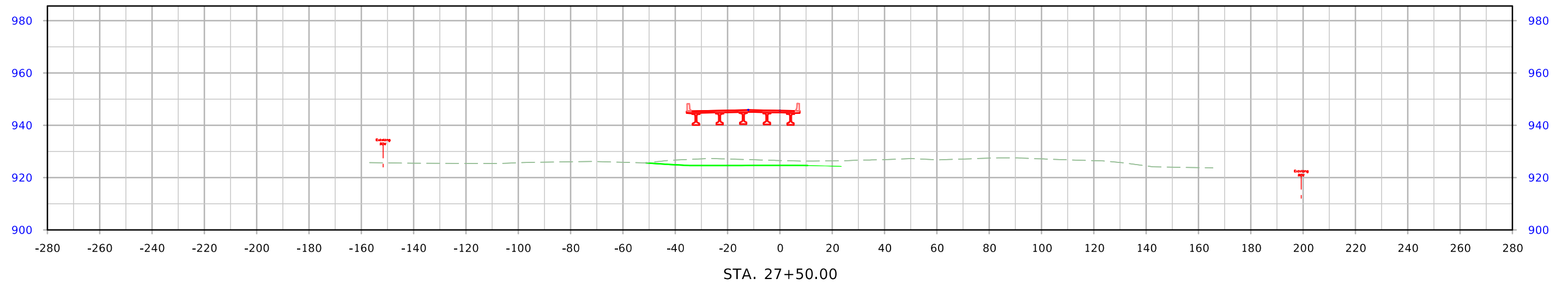
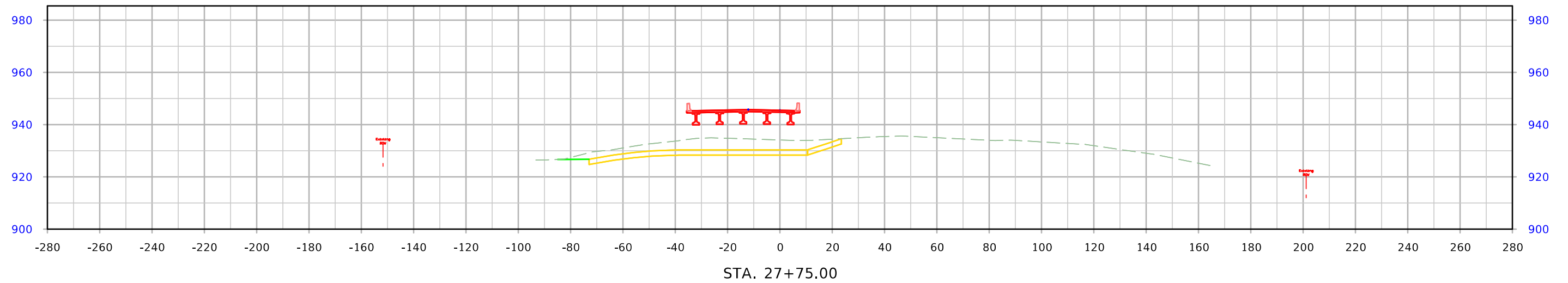
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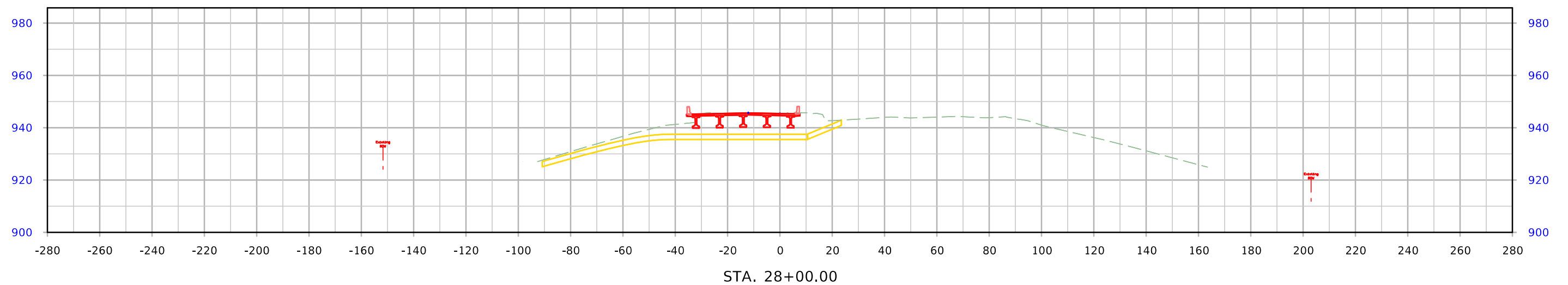
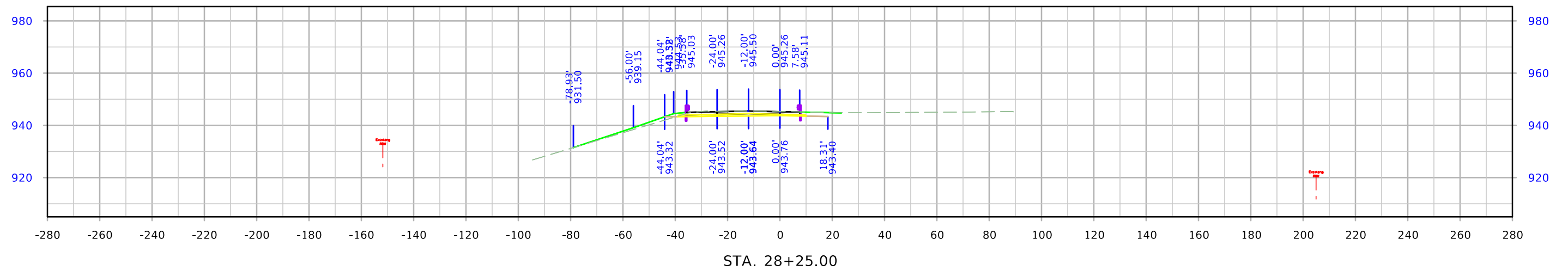
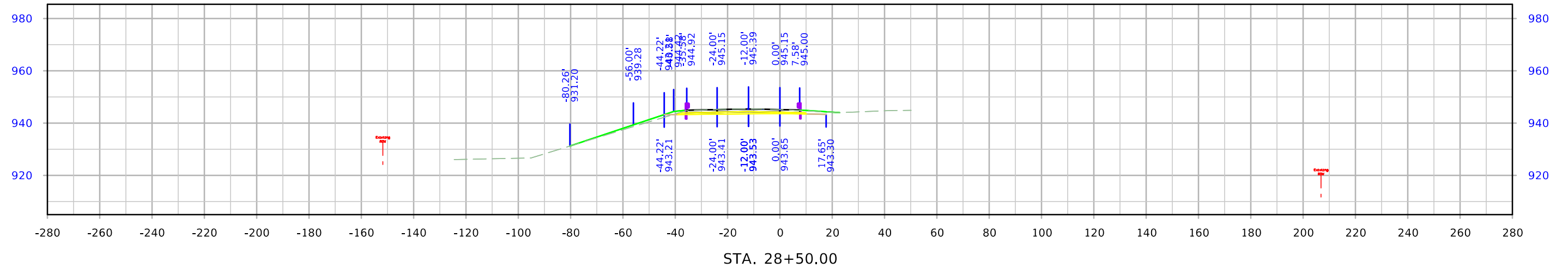
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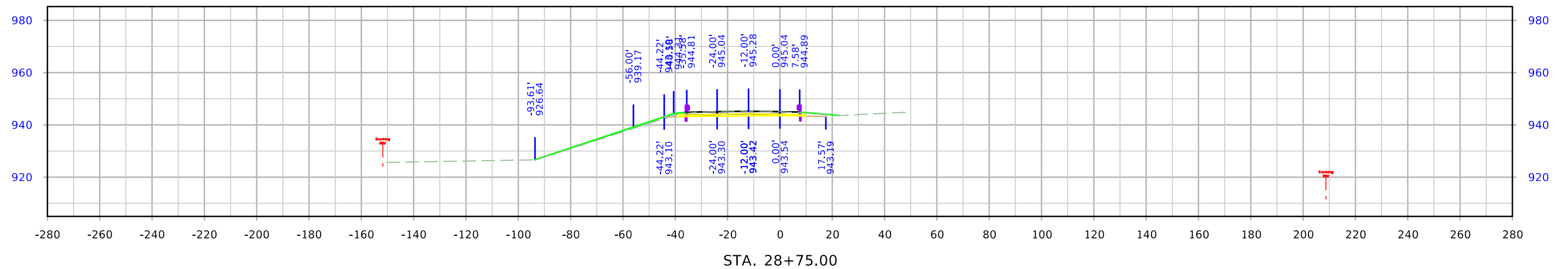
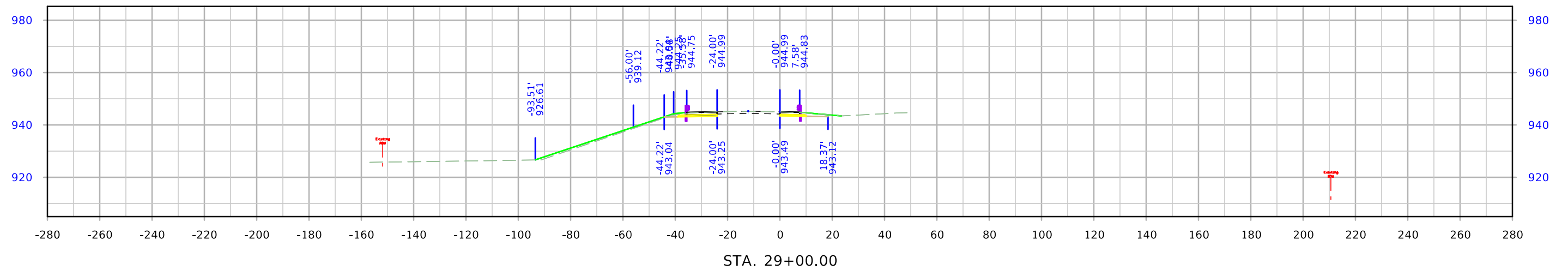
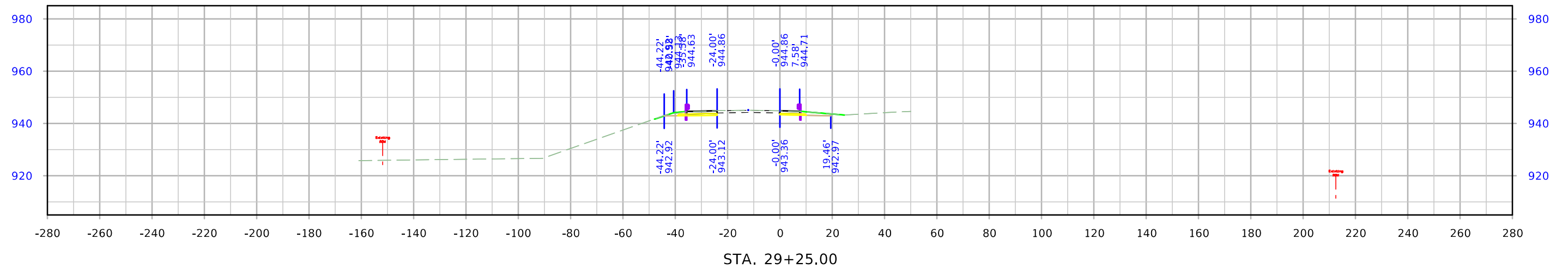
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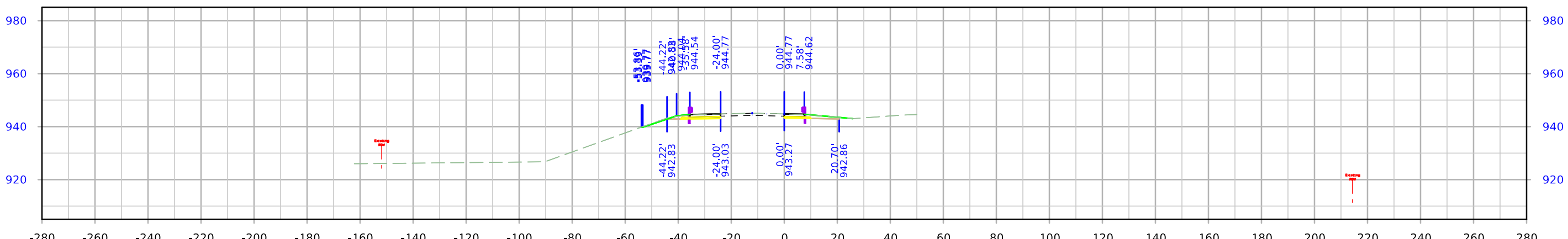
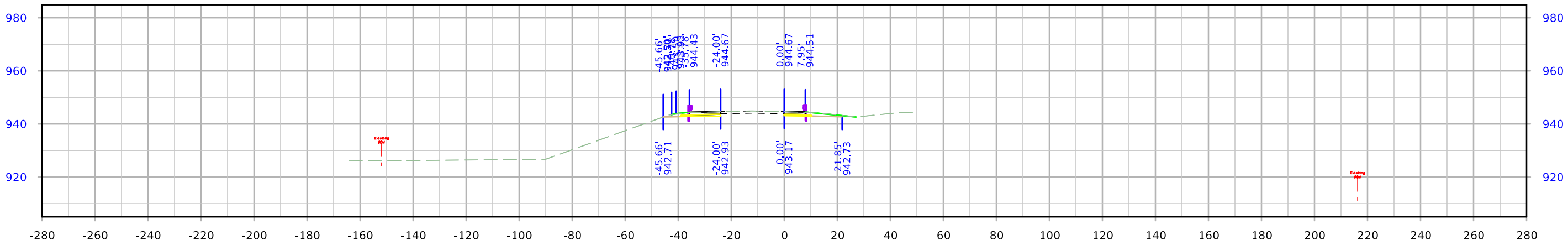
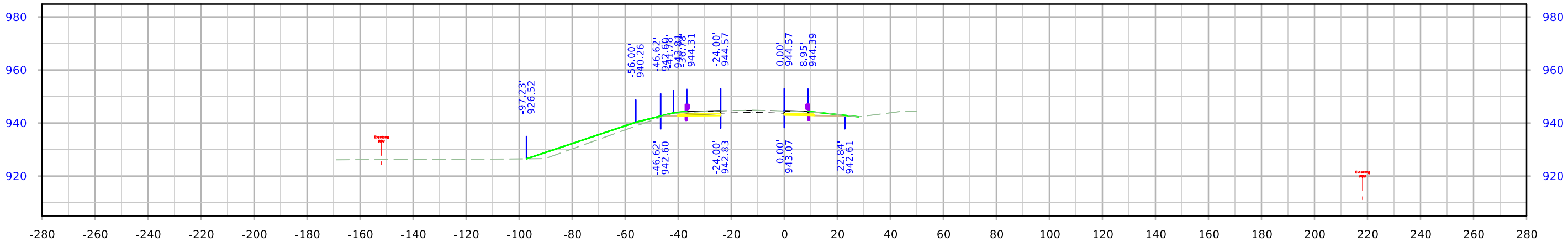
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