

Bridge Replacement PPCB
IMX-080-2(273)97--02-61

LETTING DATE
Oct 16, 2029

MADISON COUNTY

INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	Title Sheets
A.1	Title Sheet
A.2 - 10	Concept
A.11	Design Criteria
A.12	Field Exam Questions
B Sheets	Typical Cross Sections and Details
B.1 - 3	Typical Cross Sections and Details
D Sheets	Mainline Plan and Profile Sheets
D.1	Plan & Profile Legend & Symbol Information Sheet
D.2 - 3	Mainline I-80
E Sheets	Side Road Plan and Profile Sheets
E.1	Side Road P48
G Sheets	Survey Sheets
G.1 - 2	Reference Ties and Bench Marks
G.3	Horizontal Control Tab. & Super for all Alignments
J Sheets	Traffic Control and Staging Sheets
J.1	Coordinated Operations
J.2	Traffic Control Plan
J.3	511 Travel Restrictions Tab
J.4	Detour Map
J.5	Allowable Interstate Lane and Shoulder Closure Map
U Sheets	500 Series, Mod.Stds. and Detail Sheets
U.1	Modified BA-351 High Tension Cable Guardrail
V Sheets	Bridge and Culvert Situation Plans
V.1	Bridge and Culvert Situation Plans
W Sheets	Mainline Cross Sections
W.1	Cross Sections Legend & Symbol Information Sheet
W.2 - 15	Side Road P48 Cross Sections

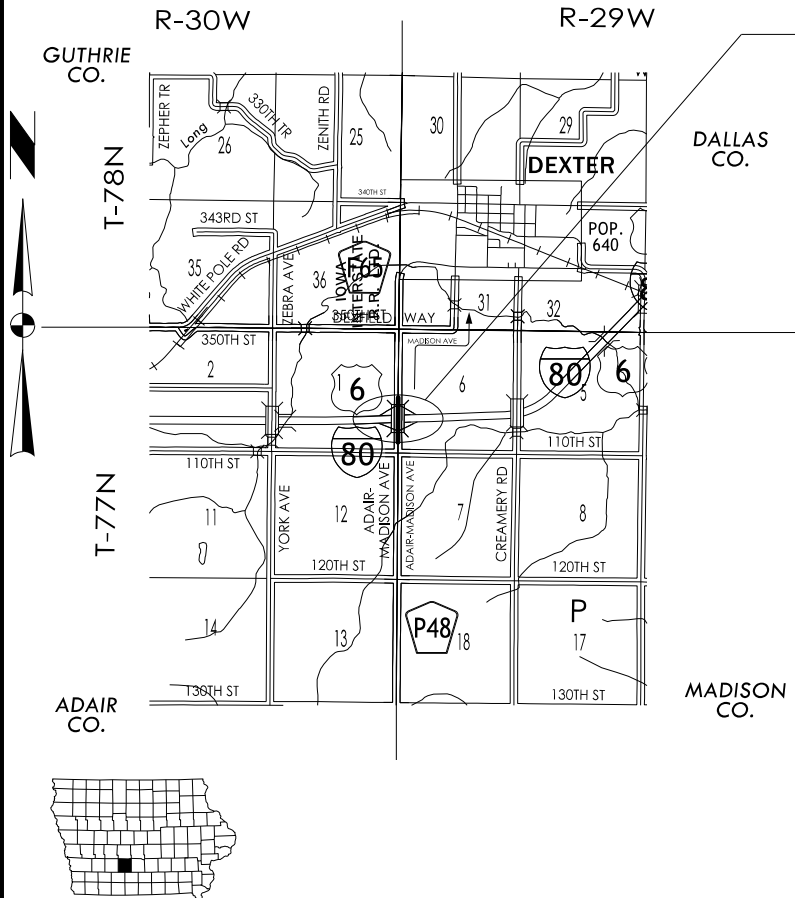


PLANS OF PROPOSED IMPROVEMENT ON THE
INTERSTATE ROAD SYSTEM
MADISON COUNTY
Bridge Replacement PPCB
At the Co Rd P48 Interchange

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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



PROJECT LOCATION
FHWA # 34830
REF LOC I-80 97.25

DESIGN DATA RURAL			
2028	AADT	29,500	V.P.D.
2048	AADT	34,000	V.P.D.
20	- DHV	-	V.P.H.
TRUCKS		36	%
Total			
Design ESALs		-	

REVISIONS

TOTAL	
44	
PROJECT IDENTIFICATION NUMBER	
23-61-080-010	
PROJECT NUMBER	
IMX-080-2(273)97--02-61	
R.O.W. PROJECT NUMBER	
IMN-080-2(282)97--0E-61	

D3 PLAN - Date: 7/10/26
D5 PLAN - Date: 11/16/26
P9 PLAN - Date: 4/14/27
D4 PLAN - Date: 6/12/29

PRELIMINARY PLANS

Subject to change by final design.

D2 PLAN - Date: 6/2/26

IOWA DEPARTMENT OF TRANSPORTATION

TO OFFICE:

District 4

DATE:

November 17, 2025

ATTENTION:

Scott Schram

PROJECT:

Madison County
IMX-080-2(273)97--02-61
PIN: 23-61-080-010

FROM:

John E. Bartholomew

BUREAU:

Design

SUBJECT:

Project Concept Statement; (Final, D0)

This project involves the replacement of the bridge over I-80 (Maint. No 6197.3O080) at the Co Rd P48 interchange.

A concept review was held on September 29, 2025. Those present included Nathaniel Epperson, Wes Mayberry, Claire Asberry, Scott Schram from the District 4 Office; Tom Lovan and Linda Narigon from the Bridges and Structures Bureau; Jacob Woodcock and Chelsea Duncan from the Location and Environment Bureau; Scott Ingersoll and Scott Dillavou from Foth; Nicole Cuva from Right of Way; and John Bartholomew, Yuejia Gu, and Jason Holst from the Design Bureau.

The alternative considered was:
1. Replace with 232’ x 30’ pretensioned prestressed concrete beam (PPCB) bridge utilizing offsite detour **(Estimated Cost \$2,475,200)**

Alternative 1 is the preferred alternative. Additional right of way may be required. Traffic will be maintained by off-site detour.

The Draft Project Concept Statement was sent out for review and comment with concerns to be resolved by Monday, November 17, 2025. Comments received during the review period have been considered and resolved.

This project is recommended for construction in FY 2030. The Design Bureau will coordinate plan preparation with assistance from the Bridges and Structures Bureau.

JEB: YG
Attach.
cc:

C. Purcell
M. Dell
M. A. Swenson
S. Majors
D. L. Newell
W. A. Sorenson
A. A. Welch
B. Hofer
D. Lorenzen
J. Holst
T. Lovan
D. Dudley
A. Knight
L. Narigon
M. E. Khoda
J. Sallach
J. Cihacek
S. Suhr
W. Mayberry
N. Mocha

K. D. Nicholson
J. S. Nelson
R. Miller
A. Poole
D. Breitbach
E. C. Wright
J. Harris
G. Karssen
S. Anderson
R. Harris
M. Solberg
L. Armstrong
A. Yates
J. Hauber
M. Gordy
J. Garton
D. Redmond
J. Woodcock
C. Schwienebart
B. Asberry

Y. Jia
M. Nop
C. C. Poole
K. Brink
J. W. Laaser-Webb
M. E. Ross
M. Van Dyke
D. Johnson
D. Stokes
B. Dolan
T. Gustafson
B. Smith
J. Ellis
S. Sersland
M. Todsén
O. Lechnowsky
N. Epperson
C. Asberry
T. Frank
J. Keller

FINAL PROJECT CONCEPT STATEMENT

Bridge over I-80 at the Co Rd P48 Interchange

Madison County
IMX-080-2(273)97--02-61
Project Code: 23-61-080-010
Maint. No. 6197.3O080
FHWA No. 34830

Highway Division
Design Bureau

John Bartholomew, P.E.
515-239-1540

November 17, 2025

Madison County
IMX-080-2(273)97--02-61
Project Code: 23-61-080-010
Page 2



Figure 1: with route, 2024



Figure 3: against route, 2024



Figure 2: left profile f-n, 2024



Figure 4: right profile f-n, 2024

I. STUDY AREA

A. Project Description

This project involves the replacement of the bridge over I-80 (Maint. No 6197.3O080) at the Co Rd P48 interchange.

The alternative considered was:

1. Replace with 232' x 30' pretensioned prestressed concrete beam (PPCB) bridge utilizing offsite detour **(Estimated Cost \$2,475,200)**

Alternative 1 is the preferred alternative due to the current condition of the existing bridge and hydraulic needs in the area.

B. Need for Project

This is a 218' x 28' pretensioned prestressed concrete beam (PPCB) bridge that was built in 1959 and overlaid in 1985. The overlay has reached the end of its service life. The deck has several large delaminated areas, hollow areas, cracks with leaching, and spalled areas with exposed rebar. The beams have spalls with exposed steel and PC patching. The substructure also has several large spalled and delaminated areas, and all abutment bearings have severe rust. Due to the overall condition of the bridge, a replacement is recommended.

C. Present Facility

The existing structure is a 218' x 28' PPCB bridge constructed in 1959.

I-80 in the project area under Co Rd P48 is 24' wide asphalt concrete (AC) pavement with 6' inside and 10' outside paved shoulders consisting of 4.5" type "A" AC over 12" rolled stone base and 12" granular subbase, constructed in 1959.

Type "A" AC resurfacing on the eastbound lanes was accomplished in 1964 consisting of 4" surface course over 1.5" binder course. The eastbound lanes were also overlaid with type "A" AC consisting of 1" surface course and 2" binder course in 1970 and 1972. The eastbound roadway was milled 9" and inlaid with 9" type "B" recycled AC base and 1.5" type "A" recycled AC surface course in 1982. The roadway was milled 3.5" and overlaid with 1.5" type "A" recycled AC surface course and 2" recycled AC binder course in 1986.

The eastbound lanes were milled 2” and resurfaced with 2” HMA in 2008.
The westbound lanes were paved with 10” PCC after removal of 230 mm of AC in 1979. Diamond grinding for the westbound lanes was done in 2020.
PCC patching was done for both directions in 2018 and 2019. HMA crack sealing was accomplished in 2021.

D. Traffic Estimates

The 2028 construction year and 2048 design year average daily traffic estimates for I-80 are 29,500 ADT with 36% trucks and 34,000 ADT with 36% trucks, respectively.

E. Sufficiency Ratings

I-80 is classified as an “Interstate” route and is a maintenance service level “A” roadway. The Bridge Condition Index is 55.2 and the structure is designated to be in Fair condition.

F. Access Control

Access rights will not be acquired for this project.

G. Crash History

During the five-year study period from January 1, 2020 through December 31, 2024, there was 1 personal injury crash, and 3 personal property crashes.

The potential for crash reduction (PCR) level for the interchange intersections with Co Rd P48 is negligible for all and severe crashes, and the PCR value is -0.001 and -0.00006 for all and severe crashes, respectively.

II. PROJECT CONCEPT

A. Feasible Alternatives

Alternative #1 - Replace with a bridge

The existing 218’ x 28’, PPCB bridge will be replaced with a two span, 232’ x 30’ PPCB bridge.

The typical cross section adjacent to the bridge approach will consist of a ~~24’ roadway~~ ^{22' roadway} with 4’ granular shoulders.

The existing grade will need to be raised a minimum of 1’ which will require approximately 255’ of roadway reconstruction. New bridge approaches will be constructed. The existing guardrail will be replaced with new guardrail and the shoulders will be paved 20’ beyond the ends of the guardrail. Class 10 will be necessary to flatten the existing foreslopes and to construct the new guardrail blisters. Class E revetment will be placed under the bridge for slope protection. New bridge end drains will be constructed on both ends of the bridge.

Apply erosion control and rural seeding and fertilizing to all disturbed areas.

It appears that right of way will not be required for this project.

Traffic will be maintained by an off-site detour.

Bridge Items	<u>Estimated Costs</u>
Bridge – 7794 ft ² @ \$160/ ft ²	\$1,247,000
Remove Exist. Bridge – 7421 ft ² @ \$20/ ft ²	148,000
Macadam Stone Slope Protection – 454 yd ² @ \$55/ yd ²	25,000
RCB Culvert, Extension – 87 yd ³ @ \$900/ yd ³	78,000
Mobilization (10%)	150,000
M&C (20%)	330,000
Bridge Costs	\$1,978,000

Roadway Items	<u>Estimated Costs</u>
Bridge Approaches	78,500
Removal of Pavement	13,600
Modified Subbase	13,400
PCC Pavement	61,200
Granular Shoulder	31,500
Embankment in place, contractor furnished	12,200
Excavation Class 13 Waste	15,200
Guardrail Removal	2,600
New Guardrail	28,700
Paved Shoulders for Guardrail	18,900
Class 10 for Guardrail Blisters	43,400
Bridge End Drains	14,000
Clearing and Grubbing	4,700
Seeding and Fertilizing	900
Erosion Control	9,400
Traffic Control - 5%	24,800

Mobilization - 5%	24,800
M & C - 20%	<u>99,400</u>
Roadway costs	\$479,200
Project Total	\$2,475,200

B. Detour Analysis

Co Rd P48 will be closed and an offsite detour will be utilized. It is anticipated the detour will be in place for approximately 180 days. The detour will utilize the interchange ramps and adjacent interchanges with Co Rd P 28 to the west and Co Rd P53 to the east of the project area. Out of distance travel is 8 miles. The total distance user cost is anticipated to be \$139,300. The cost for county road maintenance will be \$4,870 as calculated by the Gas Tax Method. Detour signing costs will be \$10,000.

C. Recommendations

It is recommended that the present structure be replaced with a bridge, as described in Alternative No. 1.

D. Construction Sequence

It is anticipated that all work on this project will be awarded to one prime contractor. The Bridges and Structures Bureau will coordinate the plan preparation with assistance from the Design Bureau.

E. ADA Accommodations

There are no bike paths or sidewalks adjacent to County Road P48 or I-80; therefore, no ADA accommodations are planned in conjunction with this project.

F. Special Considerations

This will not be a traffic critical project.

The ABC Rating Score of 33 is less than the first stage filter threshold of 50, therefore this bridge will be replaced utilizing traditional construction methods.

No bike path or sidewalk will be required as part of this project.

Special survey will be needed for the topography around the roadway box culvert under Co Rd P48 south of the existing bridge south abutment.

Right of Way does not appear to be required for this project.

An Environmental Research Study Area (ERSA) has been developed for this project and can be viewed in the concept attachments.

The Location and Environment Bureau has reviewed this project. Based on a preliminary desktop review, it is expected that the work will be covered by Nationwide Permit 14 and a 404 permit will be required. No mitigation is required.

G. Program Status

Site data has been developed by the Design Bureau. This project is listed in the 2026-2030 Iowa Transportation Improvement Program, with \$3,200,000 programmed for replacement in FY 2030. Costs for this project may be eligible for bridge replacement funds. A schedule of events will be developed following approval of the Project Concept.

JEB: YG

Utilities

Coon Valley Co-op Telephone
Jim Nelson
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Locates@coonvalleytelco.com

Farmers Electric Cooperative
Dave Shike
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dshike@farmersrec.com

Iowa Communications Network
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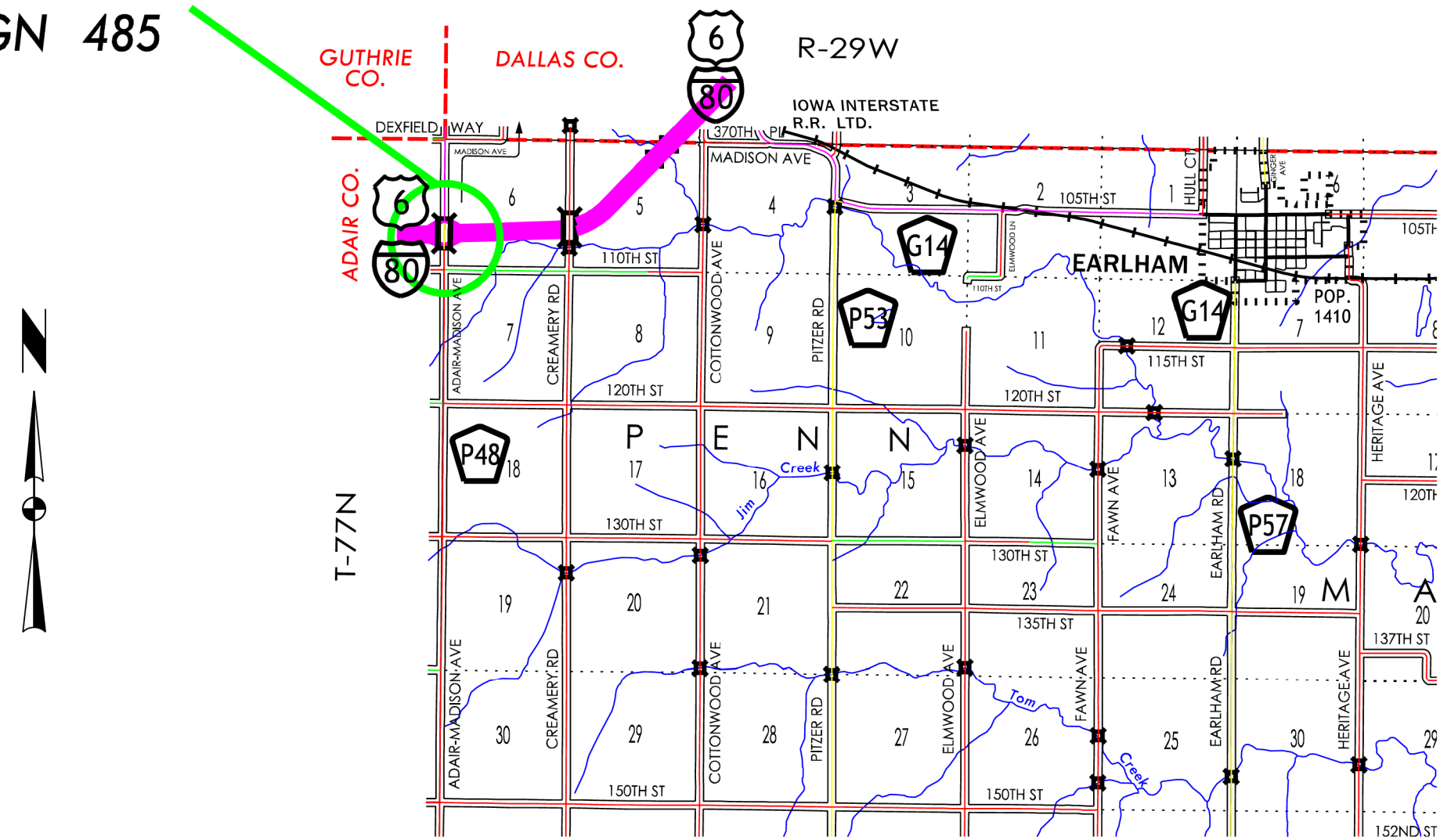
Iowa DOT
Pete Wonders 515-834-2368
Peter.wonders@dot.iowa.gov

Warren Water District
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wwd@warrenwaterdistrict.com

Xenia Rural Water District
Laird Van Dee
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lvandee@xeniawater.org

STA 1346 + 14.40 (I-80)
FHWA 34830
MAINT. NO. 6197.30080
DESIGN 485

MADISON COUNTY



ON I-80, AT THE CO RD P48 INTERCHANGE
IMX-080-2(273)97--02-61
PROJECT CODE: 23-61-080-010

61

Bridge Bureau Attachment for Concept Statement

Date: August 14, 2025
By: Foth IE
Location: P48 over I-80

County: Madison
Phase No.: IMX-080-2(273)97--02-61
Project Code: 23-61-080-010

1. Regulatory/Coordination
- a. Iowa DNR Flood Plain permit = No

b. Iowa DNR Sovereign Lands permit = No

c. Local Record of Coordination = No

d. Flood Insurance Study = No

e. Drainage District = No

f. Corps of Engineers Section 408 = No

g. State Water Trail or Paddling Route = No

h. Historic Structure = No

i. Federally owned land in vicinity = No

j. USGS or Iowa Flood Center (IFC) gage or sensor impacted? No

k. Obstruction Evaluation/Airport Airspace Analysis per FAA website = No
2. Hydrologic/Hydraulic Analysis/RIDB Dataset
- a. Design discharge methodology = Not Applicable

b. Hydraulic analysis done = Not Applicable.

c. If DA > 10 sq. mi. Riverine Infrastructure Database (RIDB) dataset is required with B1 submittal = Not Applicable
3. Structure/Roadway Layout Considerations
- a. Roadway profile grade raise of approximately 1' has been anticipated and drafted by Foth.

b. Recoverable berm grading based on Standard Road Plan EW-203 with 5'shoulder offset.

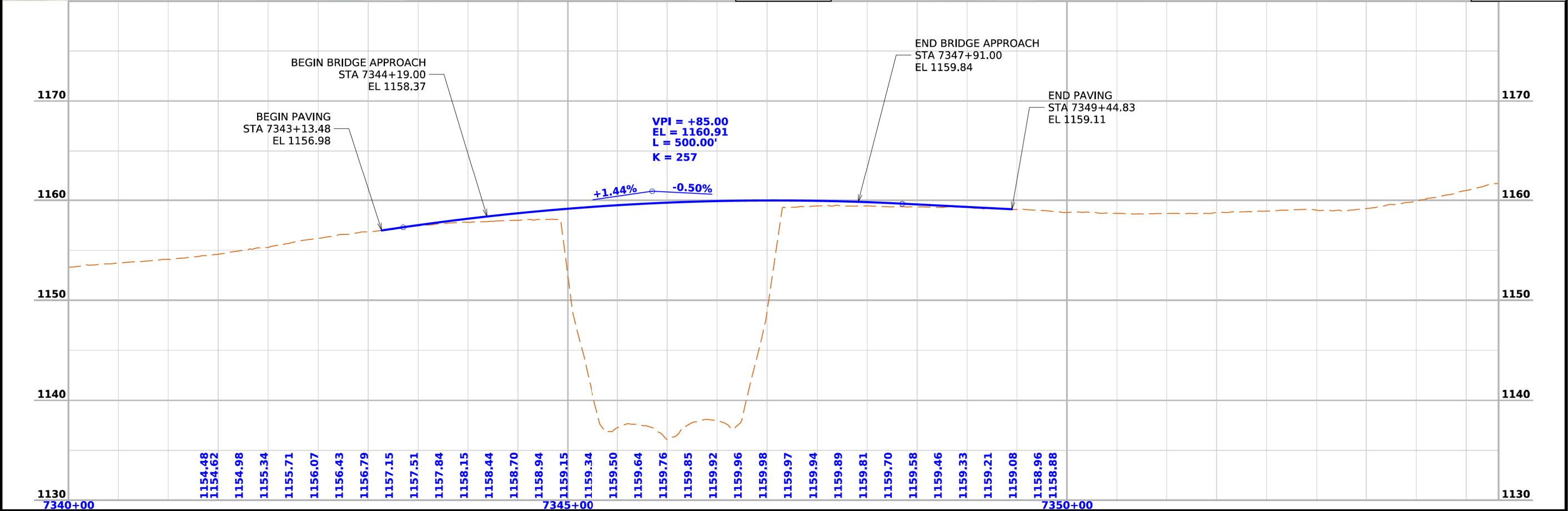
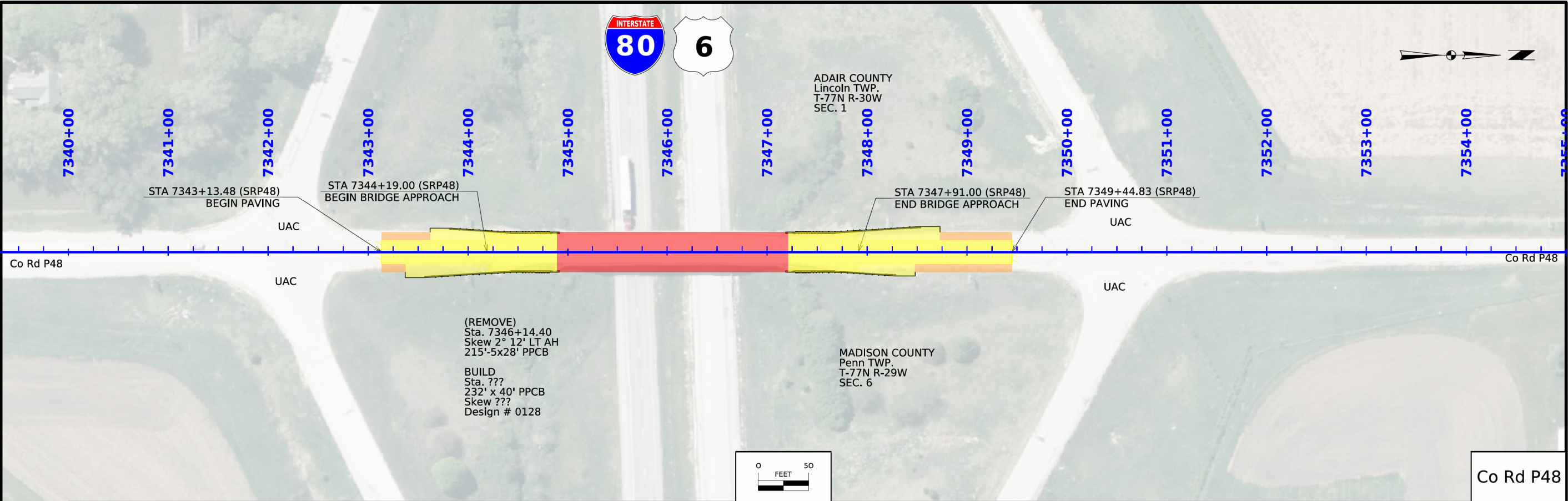
c. Existing 8'x6' RCB culvert will require extensions at both ends based on proposed roadway typical section and recoverable berm slope grading.
4. Special construction issues
- a. Proposed abutments located behind existing abutments. Final design to locate proposed pile to minimize conflicts with existing timber piles.

b. Existing center pier footing will interfere with pier pile driving and will require full removal of existing footing. Final design to locate proposed pile to minimize conflicts with existing timber piles.
5. Special survey = Yes-See below
6. Aesthetic enhancements = No
7. Other

- a. An off-site detour is feasible utilizing the interchange ramps and adjacent interchanges with County Road P28 to the west and County Road P53 to the east/northeast. Maximum out-of-distance travel is approximately 8 miles.

Special Survey:

Structure information and general topography around the roadway box culvert under P48, roughly 18' south of existing south abutment.



FILE NO. 32572	ENGLISH	DESIGN TEAM MILLER / FINCH / RYAN	MADISON COUNTY	PROJECT NUMBER IMX-080-2(273)97--02-61	SHEET NUMBER E.1
2:55:34 PM	9/12/2025	jryan3	pw:\\NTPwint1.dot.int.lan:PWMain\\Documents\\Projects\\6108001023\\Design\\CADD_Files\\Sheet_Files\\SHT_61080273_E01.dgn		

FIELD EXAM NOTES/QUESTIONS			FIELD EXAM NOTES/QUESTIONS		
	Bridge Approach Pavement Depth? 10' or 12'? Salvage Guardrail? Extend 165' RCB at 97+50.3 SR Stationing changed to match survey. Bridge station needs to be updated. Safety Edge?				

FILE NO. 32572	ENGLISH	DESIGN TEAM MILLER / FINCH / RYAN	MADISON COUNTY	PROJECT NUMBER IMX-080-2(273)97--02-61	SHEET NUMBER A.12	
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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
96+15.84	97+04.72	Varies
100+76.72	101+76.96	Varies

Granular Shoulder

2_G_SR_ 04-21-20		
STATION TO STATION		(G) Feet
95+65.00	96+15.84	4
101+76.96	102+60.00	4

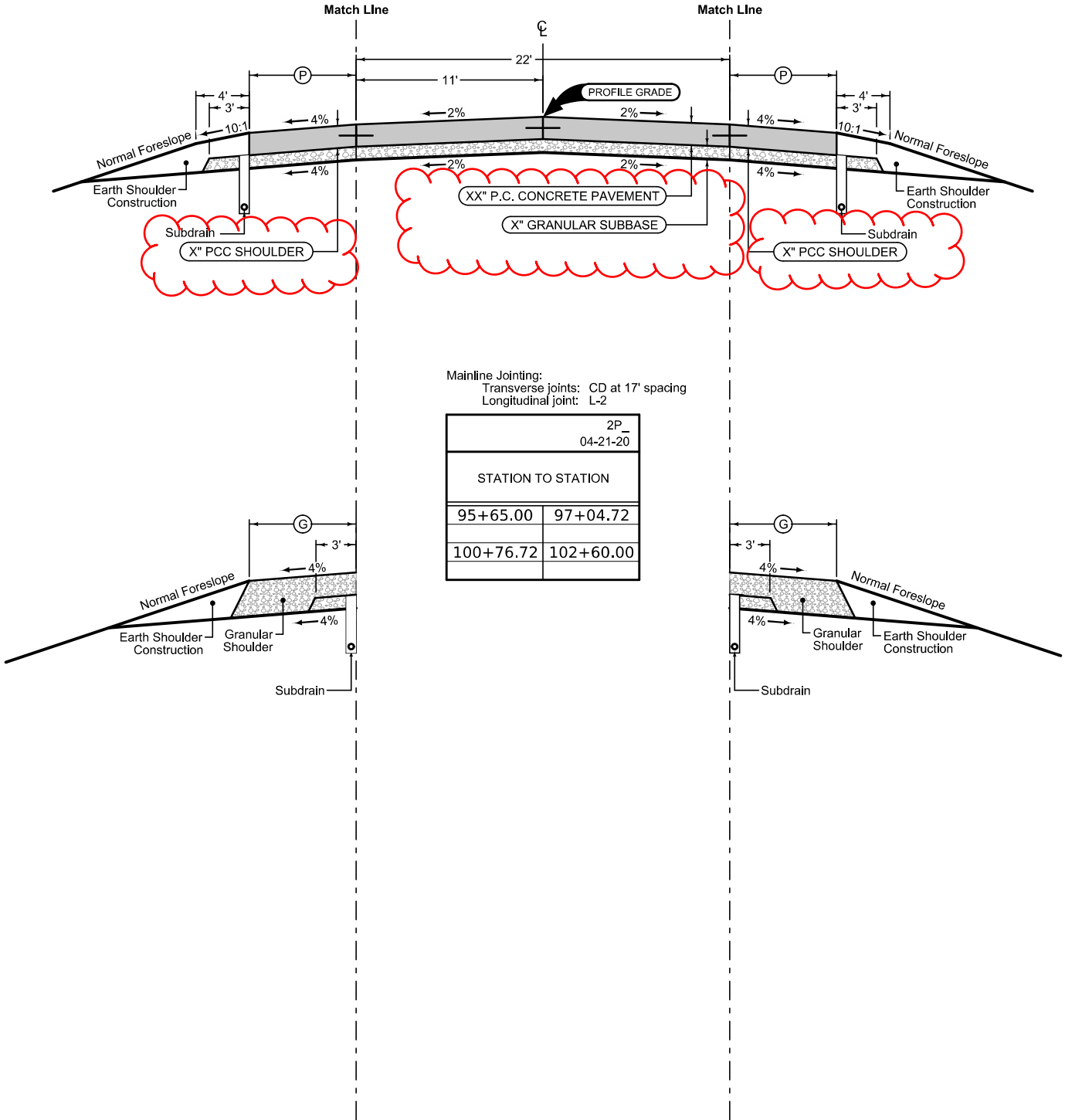
Paved Shoulder at Guardrail

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

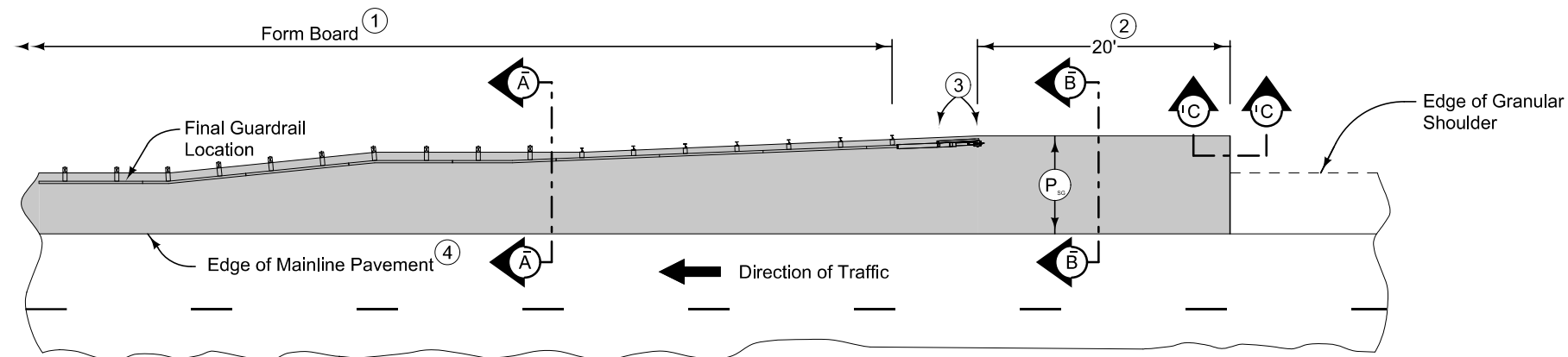
2_P_Guard_ 04-21-20		
STATION TO STATION		(P) Feet
96+04.42	97+04.72	Varies
100+76.72	101+65.69	Varies

Granular Shoulder

2_G_SR_ 04-21-20		
STATION TO STATION		(G) Feet
95+65.00	96+04.42	4
101+65.69	102+60.00	4



Side Road
County Highway P48



PLAN VIEW

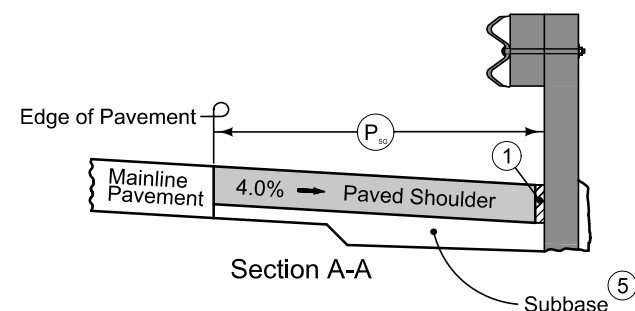
9" HMA Paved Shoulder at guardrail. 8" PCC may be substituted with the following jointing layout:

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.

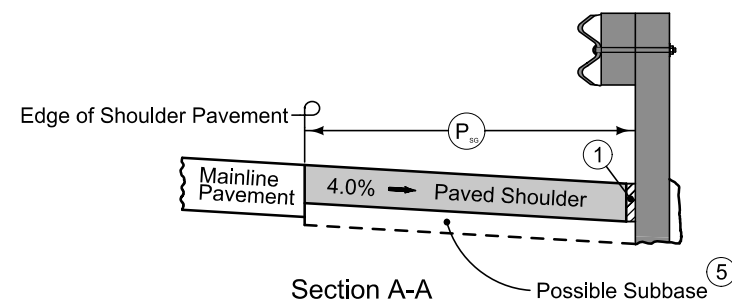
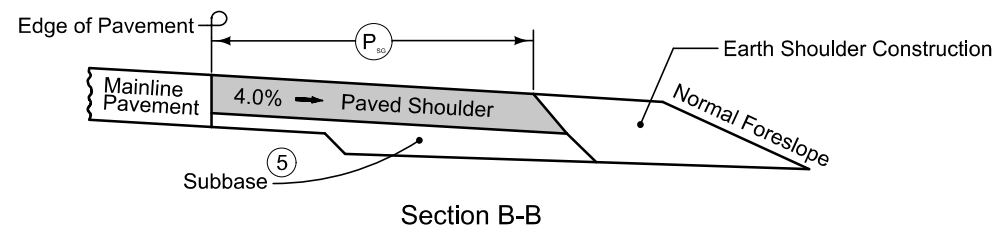
Compaction of HMA is required to face of guardrail post. Hand compaction will be allowed under guardrail. Removal and reinstallation of guardrail will be allowed with no additional payment.

Refer to Tabulation 112-9 for shoulder quantities.

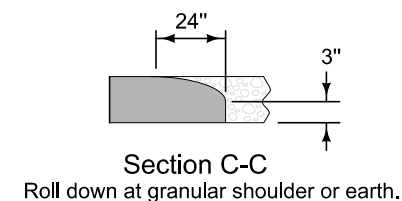
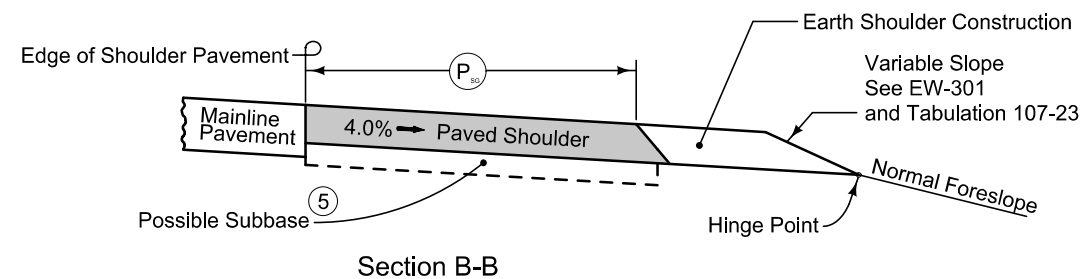
- ① PCC option only: When guardrail posts are installed prior to construction of PCC paved shoulder, fasten form board to the face of guardrail posts for the length shown.
- ② Continue paved shoulder 20 feet beyond the center of the first post.
- ③ Shoulder may be notched for first 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.
- ④ 'BT' joint (per PV-101) for PCC shoulder.
'B' joint (per PV-101) for HMA shoulder.
- ⑤ Refer to other details in the plan.

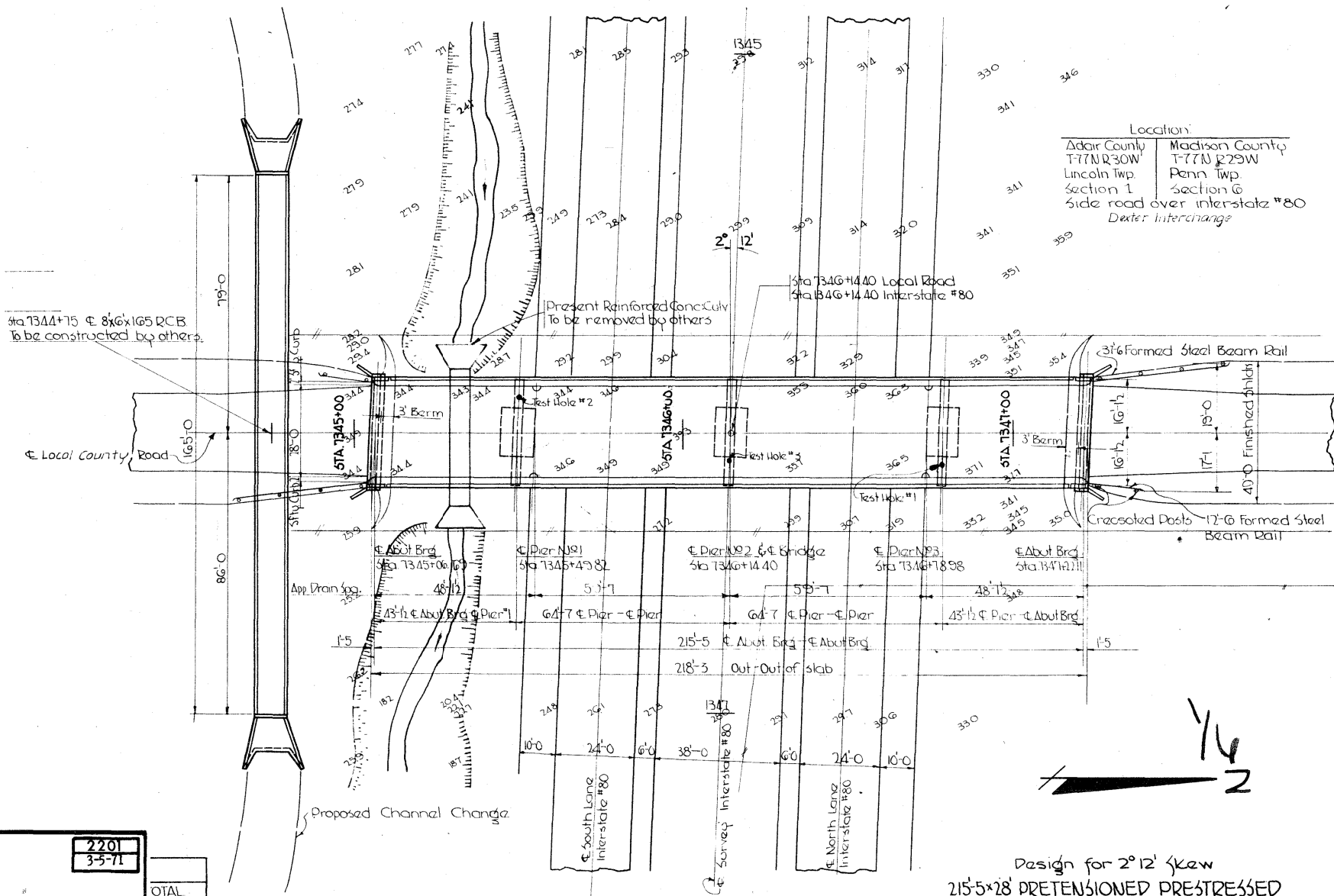


NEW CONSTRUCTION

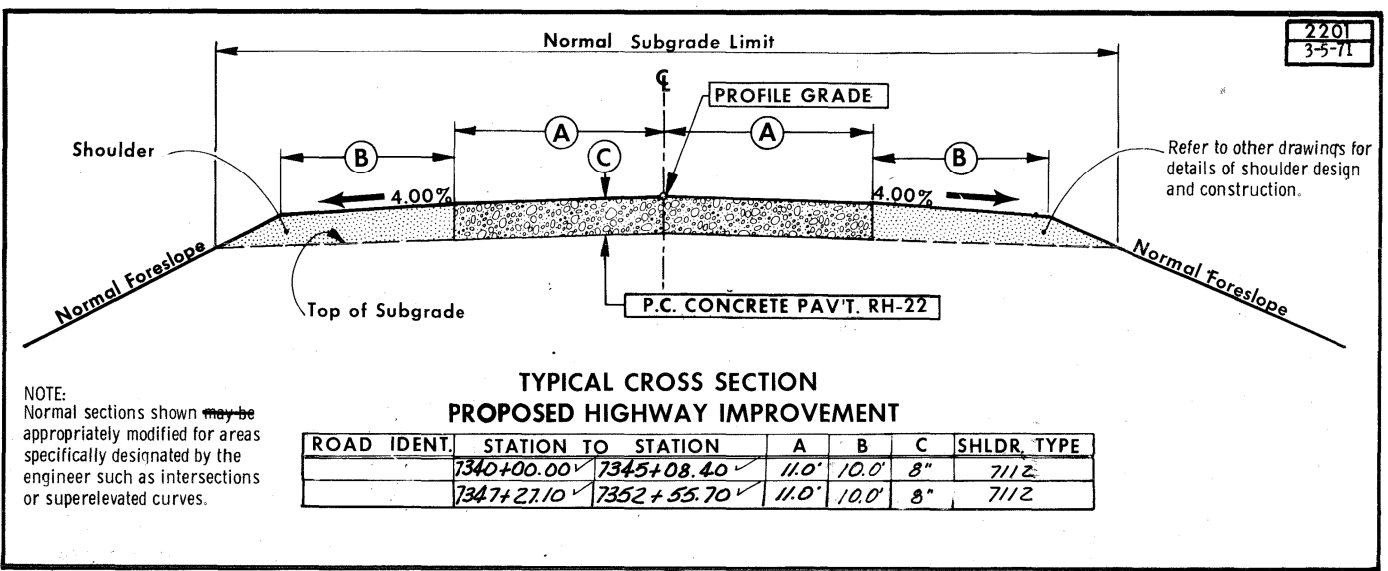


EXISTING SHOULDER

PAVED SHOULDER AT GUARDRAIL
(GRANULAR SHOULDER ADJACENT TO MAINLINE)



Location:
 Adair County T-77N R-30W
 Lincoln Twp. Section 1
 Side road over Interstate #80
 Dexter Interchange
 Madison County T-77N R-29W
 Penn Twp. Section 6
 Side road over Interstate #80
 Dexter Interchange



TOTAL
890 c.y.
1713 lbs
1142 ft
18 ms
18 ms
420 lf
116 c.y.
00 lf
12 Posts

SITUATION PLAN
Scale 1"=20'

Design for 2° 12' skew
 215'5x28' PRETENSIONED PRESTRESSED
 CONCRETE BEAM BRIDGE
 43'-1/2' End spans 2@ 6'-7' Interior spans
 Concrete floor & substructure Aluminum Rail
 SITUATION PLAN
 Sta 7346+14.40
 ADAIR-MADISON COUNTIES
 Iowa State Highway Commission
 April 1958
 Project No. I-16-80-283
 Project No. I-16-80-283
 Sheet 1 of 6

FOR
 INFORMATION
 ONLY

SURVEY SYMBOLS

	AST, Above Ground Storage Tank
	BB, Billboard
	BBB, Bottom of Bridge Beam
	BCL, Bridge Centerline
	BD, Bridge Deck
	BIN, Grain Bin
	BL, Topo Breakline
	BLD, Building or Foundation
	BLS, Bridge Low Steel
	BM, Bench Mark
	BNK, Stream Bank
	BRG, Bridge
	C, Centerline BL of Road -ML or SR
	CAV, Cave
	CEL, Cell Phone Tower
	CIS, Cistern
	CON, Concrete or A/C Slab
	CP, Control Point
	CRP, Corporation Line
	CS, Curve Point
	CU, Back of Curb
	CUL, Culvert
	D, Centerline Draw or Stream -Down
	DAB, Drainage Area Boundary
	DIK, Centerline of Dike or Dam
	DTM, Photogrammetry Elv Control Check
	DU, Centerline Draw or Stream -Up
	EB, Electrical Box
	EG, Edge of Gravel Road
	ENP, Edge Paved Entrance and Park Lot
	ENT, Centerline BL of Entrance
	ENU, Edge Unpaved Entrance and Parking
	EP, Edge of Paved Roads -ML or SR
	EW, Edge of Water
	FCL, Chain Link and Security Fence
	FENO, FENO Monument
	FHD, Fire Hydrants
	FLG, Flag Poles
	FP, Filler Pipe
	FW, Wire Fence
	FWD, Wood Fence
	GDC, Guard Rail Cable
	GDL, Guard Rail Steel
	GP, Guard Post -Less Than 4 Posts
	GPR, Guard Post -4 or More Posts
	GR, Ground Shot
	GRV, Grave
	GU, Gutter In Front of Curb
	GV, Gas Valve
	HDG, Hedge Row
	HS, Hydric Soil -Wetlands
	HT, Electrical Highline Tower
	IN, Storm Sewer Intake
	INB, Storm Sewer Beehive Intake
	LC, Lot Corner
	LIN, Miscellaneous Line
	LP, L.P. Tank
	LUM, Luminaire
	MH, Utility Access -Manhole
	MIS, Miscellaneous
	MM, Mile Marker Post
	OUT, Tile Outlet
	PC, Curve Point
	PCP, Photo Control Point
	PCT, Photo Control Target
	PI, Tangent Point
	PIP, Pipe Culvert
	PL, Location of Photo -Wetlands
	PLG, Location of General Photo
	POC, Curve Point
	POST, Spiral Point

	PR, Electric Riser Pole
	PRO, Profile Shot
	PT, Curve Point
	REF, Reference Tie Point
	RET, Retaining Walls
	RIP, Rip-Rap
	ROC, Rock Outcropping
	ROW, Right of Way Mark
	RR, Centerline of Railroad Tracks
	RRB, Railroad Signal Box
	RRF, Railroad Frog
	RRR, Railroad Rail
	RRS, Railroad Signal
	RRW, Railroad Switch
	RT, Radio Tower
	S, Soil Sampling Site -Wetlands
	SBR, Size of Bridge
	SC, Spiral Point
	SCR, Section Corner
	SEP, Septic Tank
	SF, Silt Fence -Wetlands
	SG, Staff Gauge -Wetlands
	SH, Paved Shoulder
	SHR, Shrub
	SI, Sign
	SL, Speed Limit Sign
	SLN, Section Line
	SLO, Silo
	SNK, Sink Hole
	SNP, Unpaved Shoulder
	SP, Stream Profile
	STP, Stump
	SWK, Sidewalk
	SWP, Swamp or Marsh
	TA, Tower Anchor
	TBO, Telephone Booth
	TCB, Traffic Signal Box
	TDC, Tree Deciduous
	TDL, Traffic Detection Loop
	TER, Terrace
	TEV, Evergreen Tree
	TFR, Tree Fruit
	TGP, Telegraph Pole
	TIL, Tile Line
	TLNL, Tree Line Left
	TLNR, Tree Line Right
	TOP, Top of Bridge Pier
	TPA, Telephone Pole Co. 1
	TPB, Telephone Pole Co. 2
	TPC, Telephone Pole Co. 3
	TR, Telephone Riser Pole
	TRL, Trail
	TS, Spiral Point
	TSB, Telephone Switch Box
	TSG, Traffic Signal
	TSL, Traffic Signal and Luminaire
	TV, Satelite TV Dish
	TVP, TV Pedestal
	TW, Top of Water
	UB, Utility Box
	UE, Utility Elevation
	UPH, Utility Pot Hole - Quality A
	UST, Underground Tank
	UV, Underground Utility Vault
	VS, Channel Cross Section
	WC, Wild Card -Misc. Field Shot
	WEL, Well
	WHD, Water Hydrant
	WHU, RV Water Hook Up
	WM, Wind Mill
	WND, Wind Turbine
	WV, Water Valve

UTILITY LEGEND

	E1	EL1D, Electric Line Greenfield REC - Quality D PPA, Power Pole Greenfield REC Farmers Electric Cooperative Greenfield Electric Distribution David Shike 641-745-5050 dshike@farmersrec.com
	E2	EL2D, Electric Line Iowa DOT - Quality D Iowa DOT Jason Dale ITS Maintenance Engineer jason.dale@iowadot.us
	F0	FO1D, Fiber Optic Mediacom - Quality D Mediacom Jerry Broughton Construction Supervisor (845) 587-2521 jbroughton@mediacomcc.com
	F02	FO2D, Fiber Optic Iowa DOT - Quality D Iowa Communication Network/Iowa DOT TOB Fiber David Augspurger Sr Telecom Specialist (515) 229-2013 david.augspurger@icn.state.ia.us
	F03	FO3D, Fiber Optic ICN - Quality D Iowa Communication Network/Iowa DOT TOB Fiber David Augspurger Sr Telecom Specialist (515) 229-2013 david.augspurger@icn.state.ia.us

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.	Transparency
Pink, Dark	(13)		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
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
Red	(3)		Proposed Structure Shading
Red	(3)		Delineates Restricted Areas
			0%

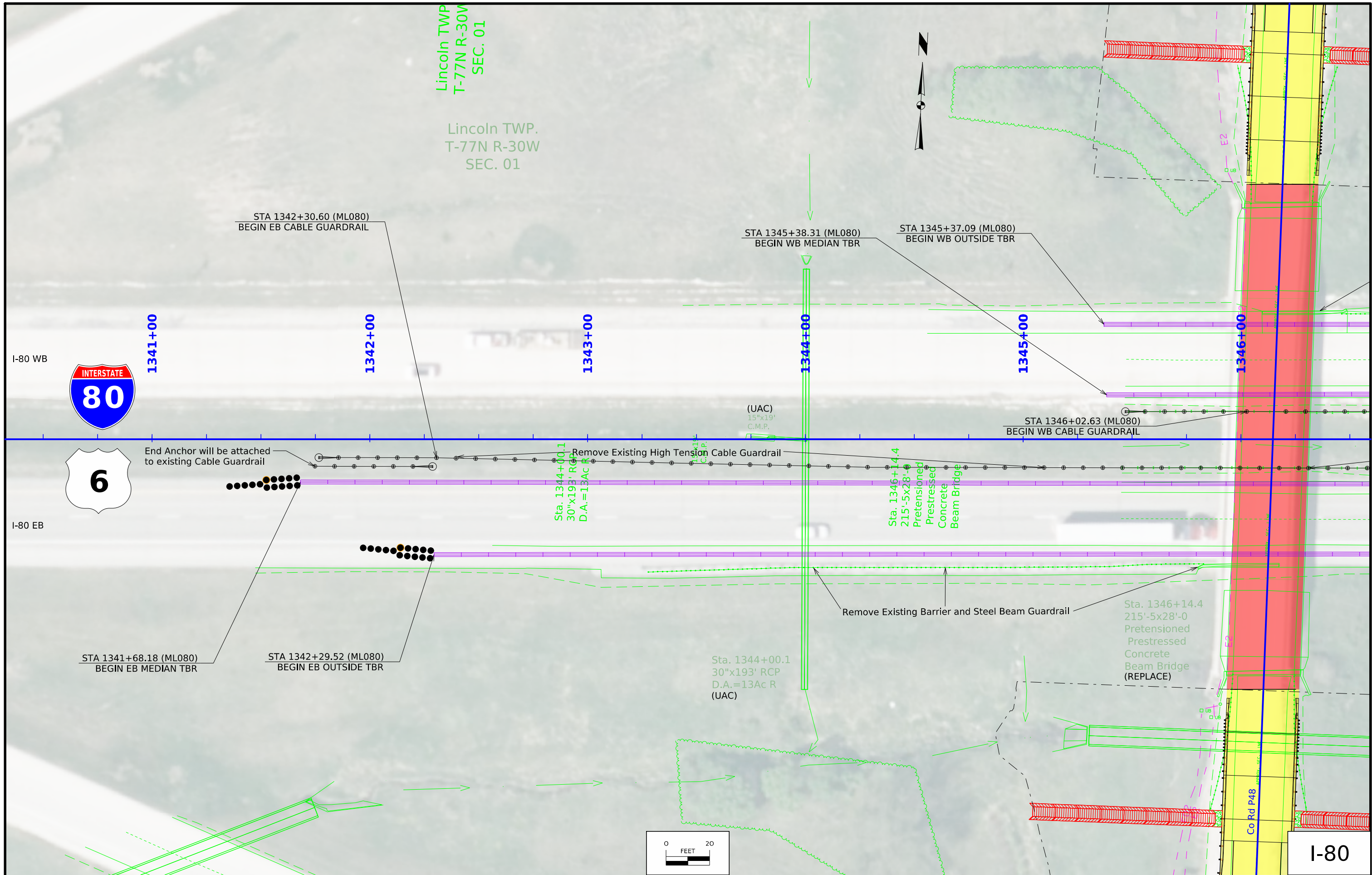
PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

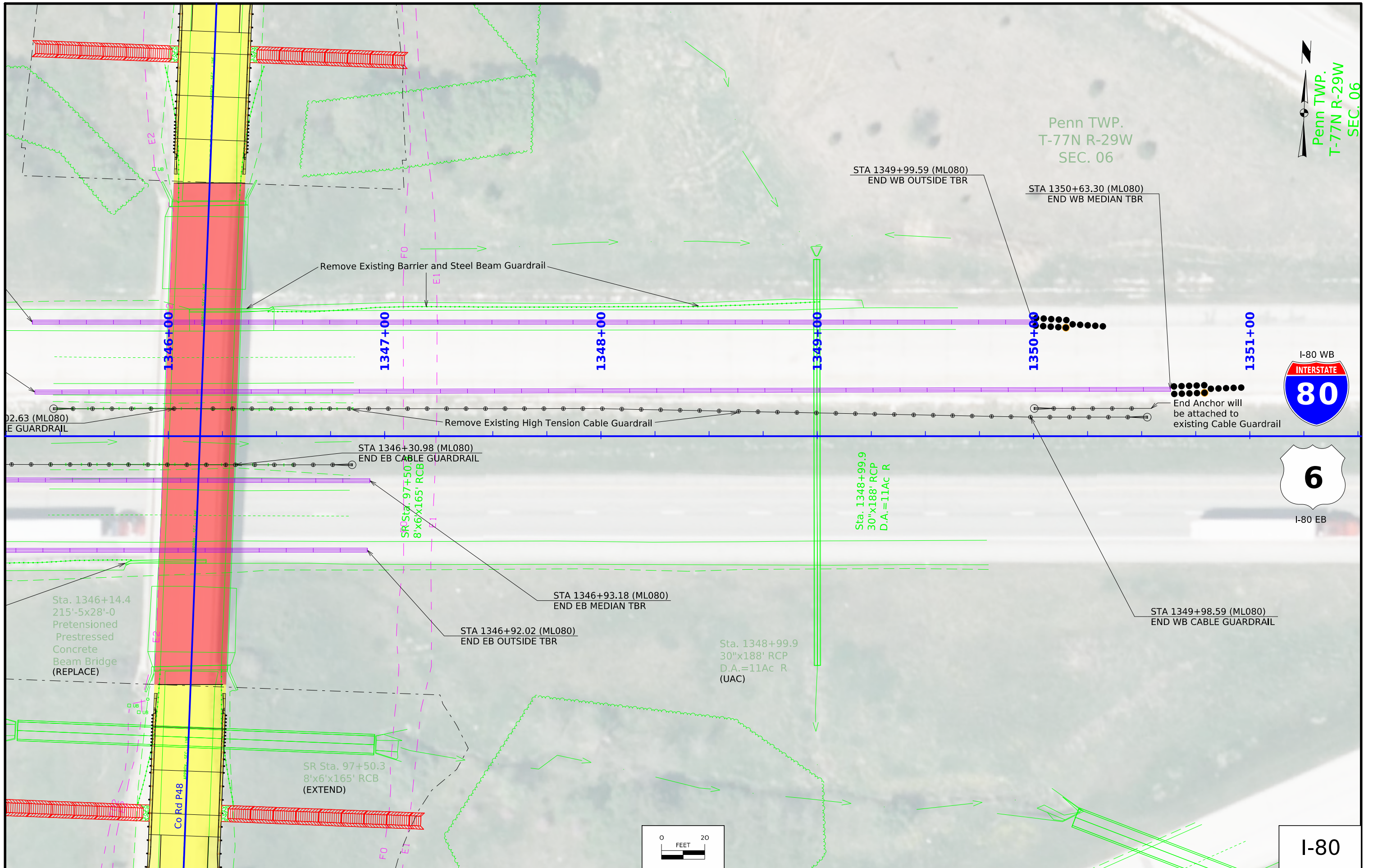
LINEWORK		Design Color No.	
Green	(10)		Existing Ground Line Profile
Blue	(1)		Proposed Profile and Annotation
Magenta	(5)		Existing Utilities
Blue, Light	(230)		Proposed Ditch Grades, Left
Black	(0)		Proposed Ditch Grades, Median
Rust	(14)		Proposed Ditch Grades, Right

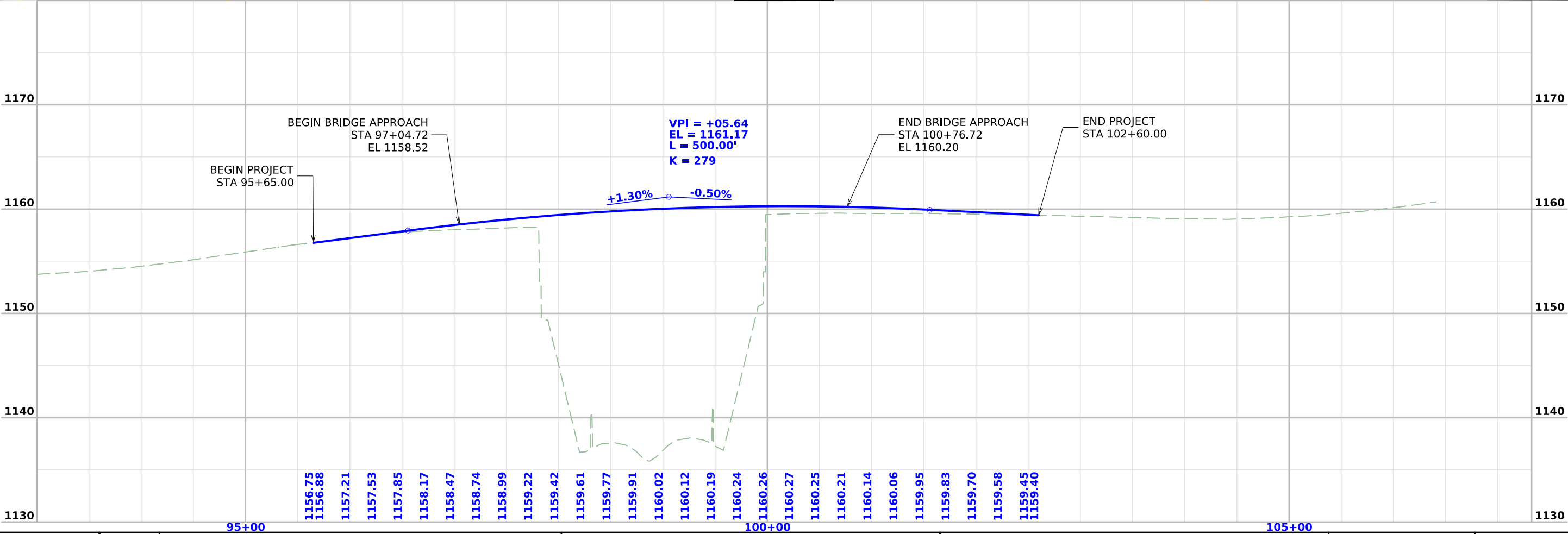
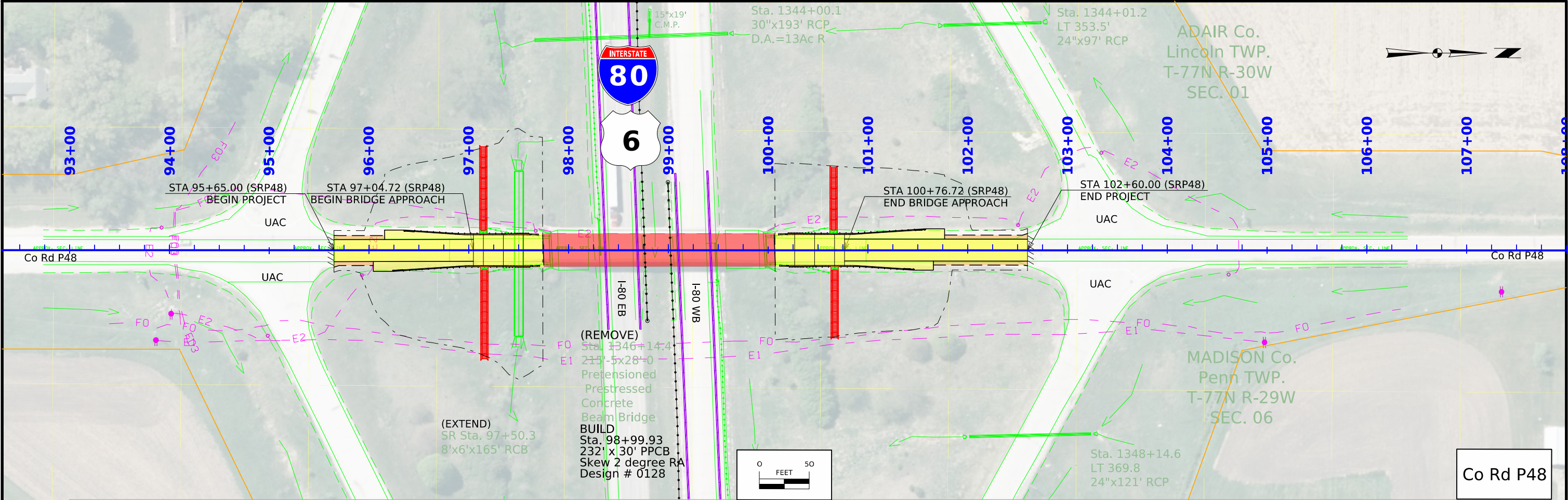
Reference Point		RIGHT-OF-WAY LEGEND	
	Station		Proposed Right-of-Way Symbol
	Section Corner		Proposed Right-of-Way Line
	Ground Line Intercept		Existing Right of Way
	Saw Cut		Existing and Proposed Right-of-Way
	Guardrail		Easement and Existing Right-of-Way
	Trench Drain		Easement (Temporary) Symbol
	HighTension Cable Guardrail		Easement (Temporary) Line
	Sheet Pile		Easement
	Pavement Removal		C/A Access Control
	Clearing & Grubbing Area		Property Line Symbol
			Property Line

PLAN AND PROFILE
LEGEND AND SYMBOL
INFORMATION SHEET

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







Survey Information

SURVEY INDEX

County: Madison
Project Code: 23-61-080-010
Phase Number: IMX-080-2(273)97--02-61
Location: At the Co Rd P48 Interchange
Work Code: 2001-Bridge-Unspecified
Project Directory: 6108001023

Survey Personnel

Paul Harry – Survey Party Chief
Bob Fredrickson – Assistant Survey Party Chief

Date(s) of Survey

Begin Date 09/22/2025
End Date 12/17/2025

General Information

This survey is for County Road P-48 bridge replacement over I-80. This project is a Full Field 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

Coordinates were determined for primary project control points by conducting concurrent six-hour static observations. Post processing is constrained to nearby Iowa Real Time Network reference stations. 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 08
(U.S. SURVEY FOOT)
VERTICAL DATUM: NAVD88
GEOID MODEL: 2018u3

Alignment Information

The horizontal alignment for County Road P-58 was provided by the Dallas County Engineers Office.

The horizontal alignment for I-80 this survey is a retrace of As-built Plans No. 80-2(12)96. Survey stationing was equated to the plan POT at Sta. 1346+14.4 and carried back and ahead with/without equation throughout the survey.

Survey stationing relates to as built plan stationing as follows:

PI Sta. 1319+79.4 As-built Plans Project No. 80-2(12)96
Survey POT Sta. 1319+80.45

POT Sta. 1346+14.4 As-built Plans Project No. 80-2(12)96
Survey POT Sta. 1346+14.4

POT Sta. 1369+18.50 As-built Plans Project No. 80-2(12)96
Survey POT Sta. 1369+19.17

TS Sta. 1390+16.15 As-built Plans Project No. 80-2(12)96
Survey TS Sta. 1390+15.46

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 08 (U.S. Survey Foot)

VERT. DATUM: NAVD88 - Geoid Model: 2018u3

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 08 (U.S. Survey Foot)
VERT. DATUM: NAVD88
Geoid Model: 2018u3

Point Name	Northing	Easting	Elevation	Code Description
FENO01	7452088.27	18356143.73	1162.78	CP Set Feno Monument
FENO02	7452697.29	18351025.01	1126.07	CP Set Feno Monument
FENO03	7446812.56	18356606.55	1172.22	CP Set Feno Monument
G107	7457143.80	18371735.51	1108.27	CP Found County Monument
G108	7457455.89	18356250.89	1152.22	CP Found County Monument

111_01
10/14/22

COORDINATED OPERATIONS

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

Project	Type of Work

108_23A
8/15/22

TRAFFIC CONTROL PLAN

I-80
Maintain traffic at all times during construction.

Country Road P48
Road will be closed during construction.
Traffic will be maintained by an off-site detour. See Sheet J.4 for detour route.

108_25
3/28/24

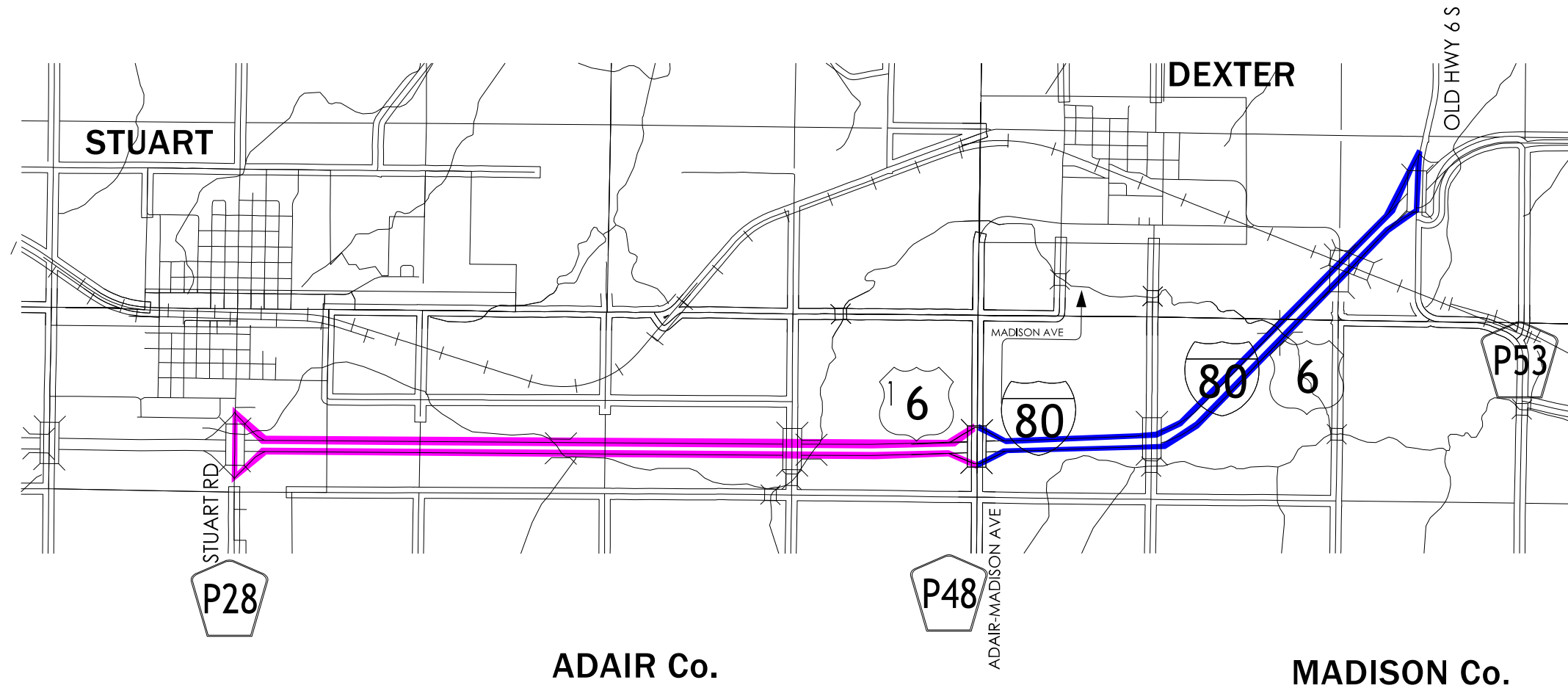
511 TRAVEL RESTRICTIONS													
Line No.	Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No. or Structure ID or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
1.0	Co Rd P48	Both	Madison	Bridge over I-80 at Co Rd P48	I-80	Bridge	34830	Vertical	22'	0'	Closed		

Preliminary Detour Map drawn from Concept description to utilizing ramps.

DETOUR

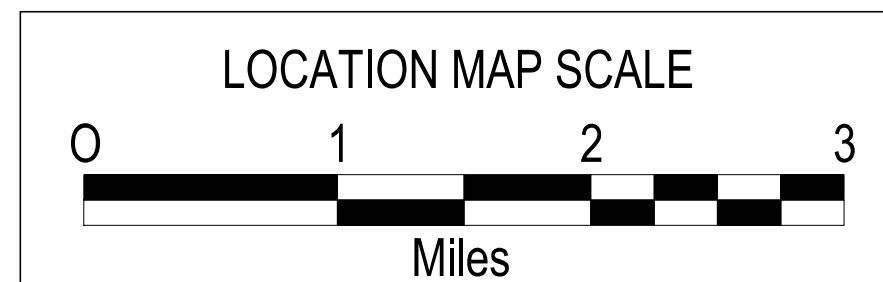
GUTHRIE Co.

DALLAS Co.

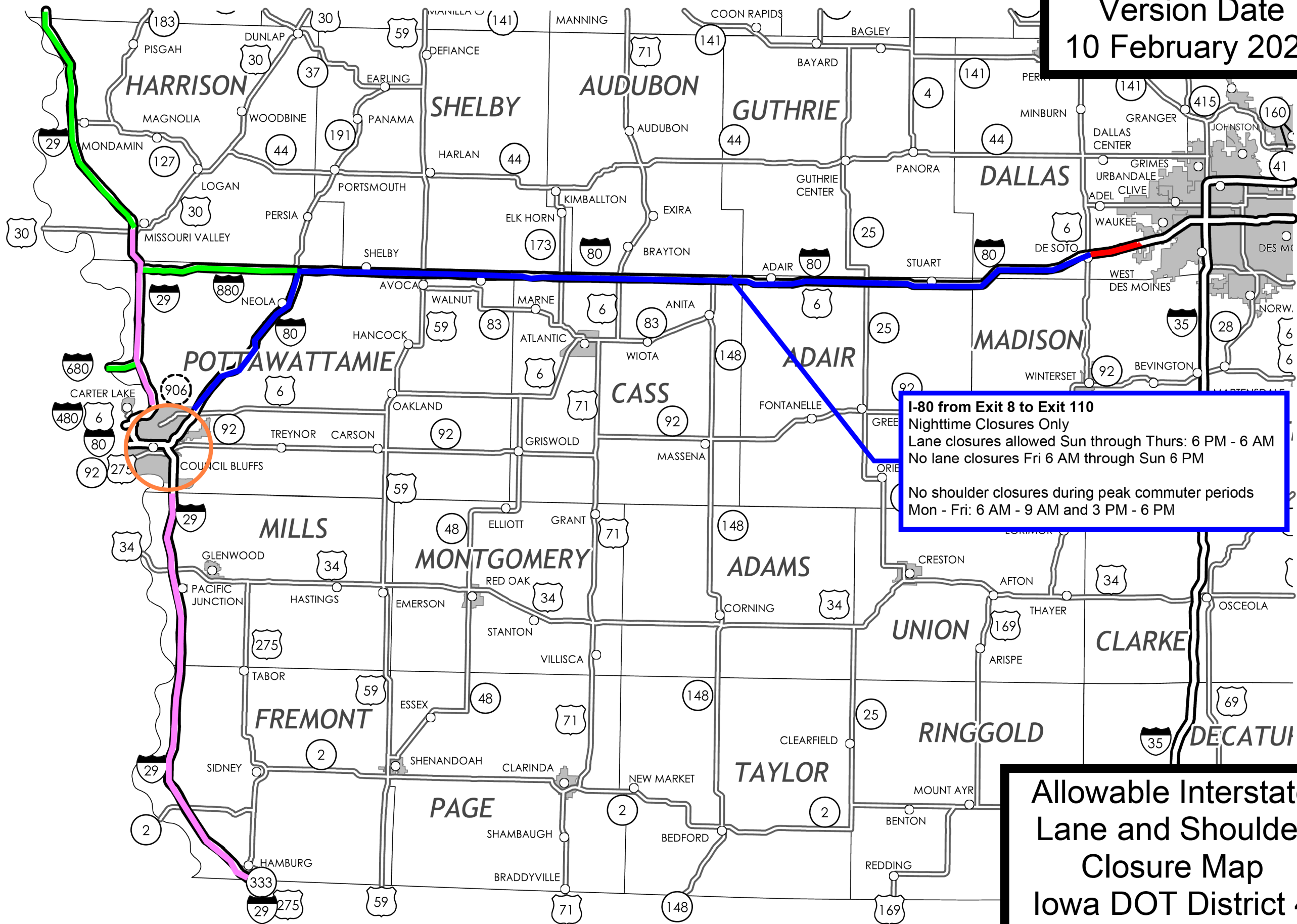


ADAIR Co.

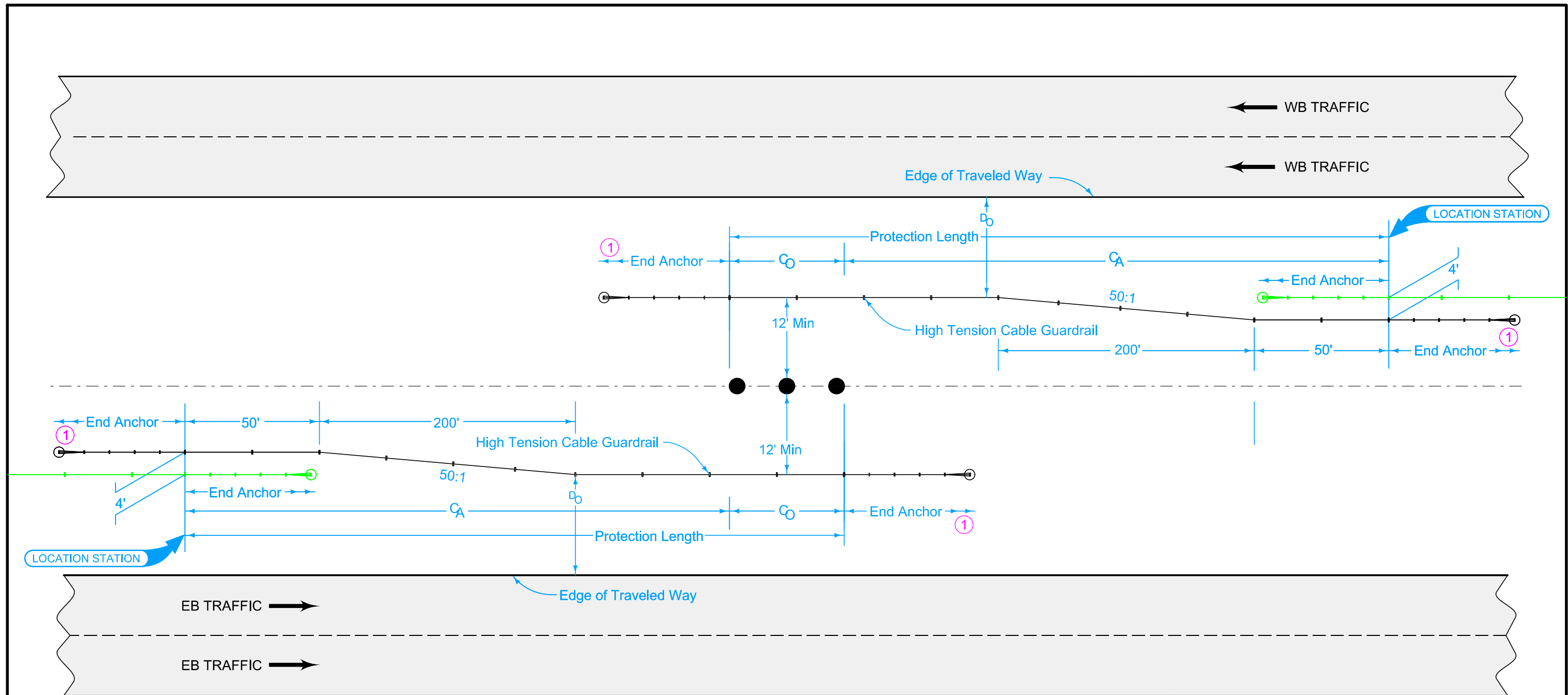
MADISON Co.



Version Date
10 February 2023



Allowable Interstate
Lane and Shoulder
Closure Map
Iowa DOT District 4



MEDIAN OBJECT PROTECTION

① Length varies depending on High Tension Cable Guardrail system.

MODIFIED

MODIFICATIONS: Median Cable Layout following Bridge Pier work

HIGH TENSION CABLE GUARDRAIL

BA-351

12:05:31 PM 2/3/2026 jryan3 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6108001023\Bridge\273 Bridge-Unspecified\SHT 61080273 FOTH 128 034831 Z08

CROSS SECTION VIEW COLOR LEGEND			
Design Color No.	Feature	Design Color No.	Feature
Aggregate		Grading	
(64)	Choke Stone	(8)	Behind Curb Cut
(42)	Engineering Fabric	(6)	Granular
(8)	Flooded Backfill	(13)	Granular Back Fill
(92)	Macadam Stone	(48)	Rock Undercut
(20)	Modified	(8)	Shoulder Earth Fill
(12)	Plowing Shaping	(2)	Side Slopes
(14)	Porous Backfill	(226)	Side Slopes Dressing
(8)	Revetment Class A	Substrata	
(6)	Revetment Class B	(128)	Boulder
(62)	Revetment Class C	(209)	Boulder Removed
(188)	Revetment Class D	(48)	Broken Weathered
(28)	Revetment Class E	(210)	Broken Weathered Removed
(12)	Shoulder Special Backfill	(3)	Core Out
(12)	Special Backfill	(115)	Core Out Remove Only
(20)	Subbase	(195)	Core Out Remove and Replace
(20)	Subbase Lower	(203)	Existing Pavement
(20)	Subbase Upper	(184)	Existing Pavement Remove Only
(118)	Subgrade Treatment	(200)	Existing Pavement Remove and Replace
Asphalt		(6)	Loam
(207)	HMA Base Course	(211)	Loam Removed
(207)	HMA Interim Course	(80)	Rock
(207)	HMA Surface Course	(212)	Rock Removed
Bridge		(4)	Select Sand
(0)	Bridge	(214)	Select Sand Removed
Concrete		(3)	Shale
(0)	Barrier Concrete	(215)	Shale Removed
(0)	Barrier Concrete Footing	(10)	Topsoil
(0)	Curb Gutter	(2)	Topsoil Remove Only
(48)	Flowable Mortar	(4)	Topsoil Remove and Replace
(0)	Median Concrete	Unsuitable / Waste	
(0)	PCC Pavement	(3)	Unsuitable Type A
(0)	Sidewalk	(216)	Unsuitable Type A Removed
Existing		(13)	Unsuitable Type B
(0)	Existing Pavement	(217)	Unsuitable Type B Removed
Shoulder		(11)	Unsuitable Type C
(209)	Shoulder HMA	(218)	Unsuitable Type C Removed
(0)	Shoulder PCC	(3)	Waste
(6)	Shoulder Granular	(219)	Waste Removed
Structural			
(112)	Noise Wall		
(112)	Noise Wall Footing		
(112)	Retaining Wall Back		
(112)	Retaining Wall Back Excavate		
(112)	Retaining Wall Face		
(112)	Retaining Wall Front Excavate		
(112)	Retaining Wall Front Footing		
(112)	Retaining Wall MSE Gutter		
(112)	Retaining Wall Reinforced Earth		

NOTES:

Text

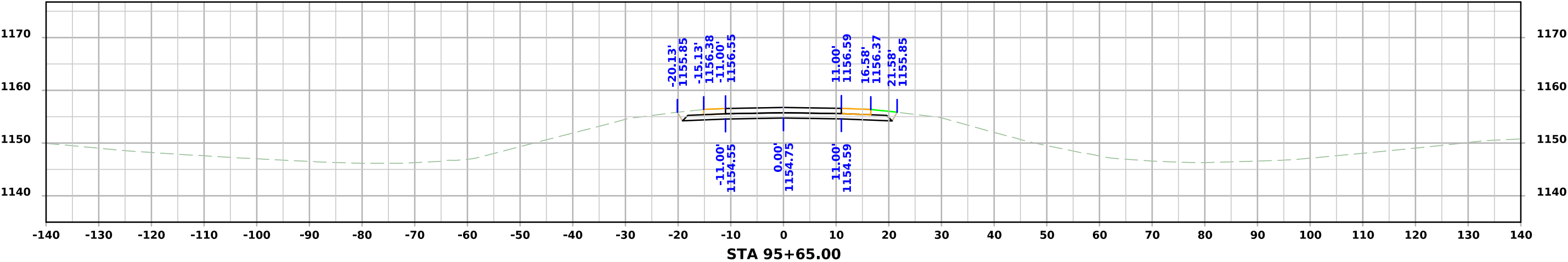
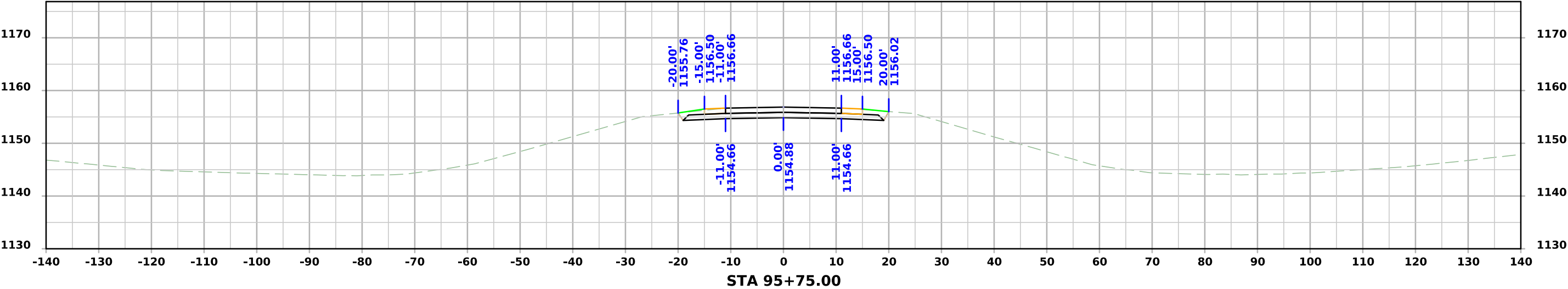
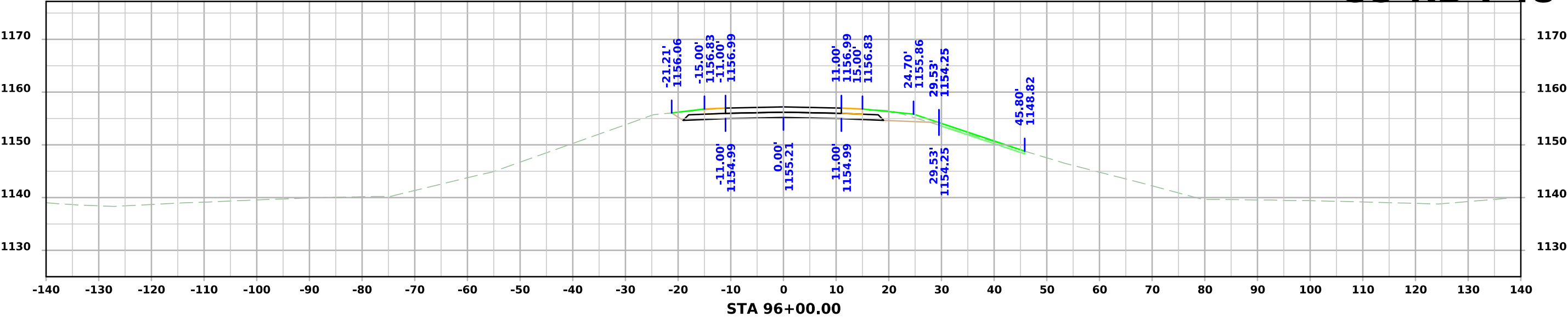
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Text

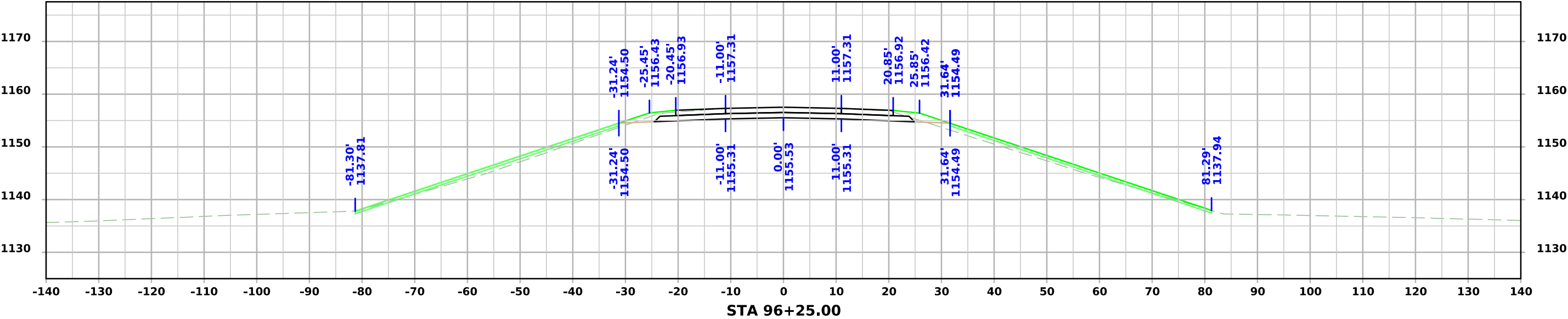
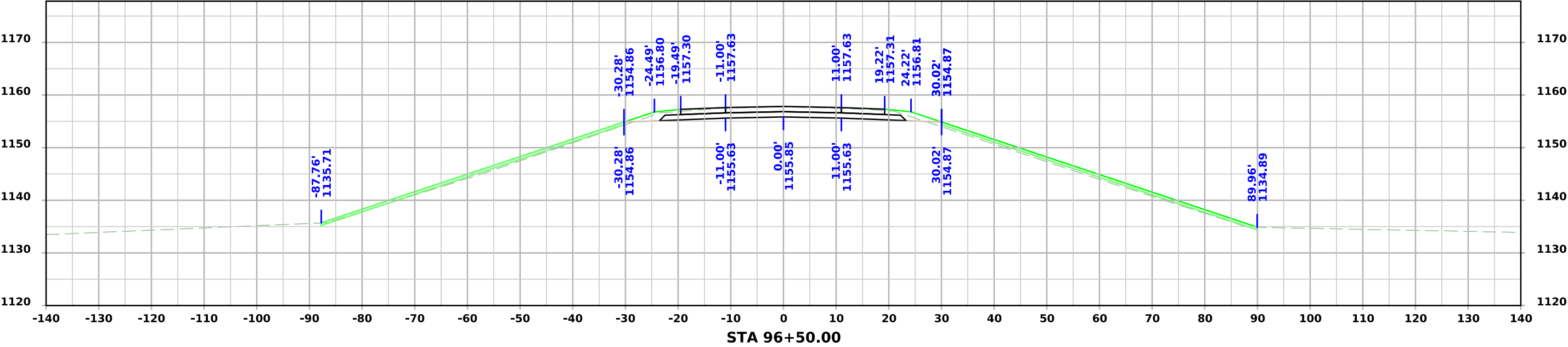
CROSS SECTIONS
LEGEND AND INFORMATION SHEET

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

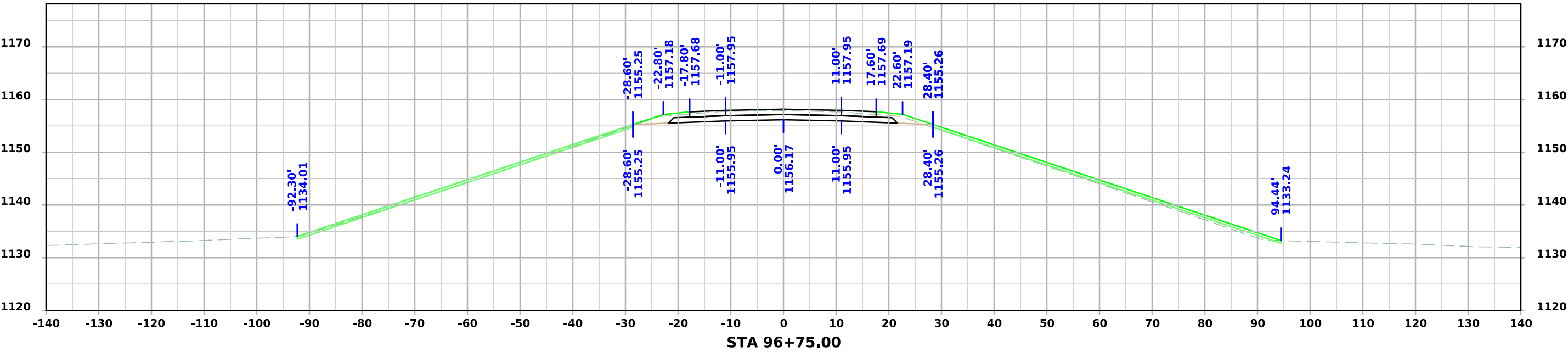
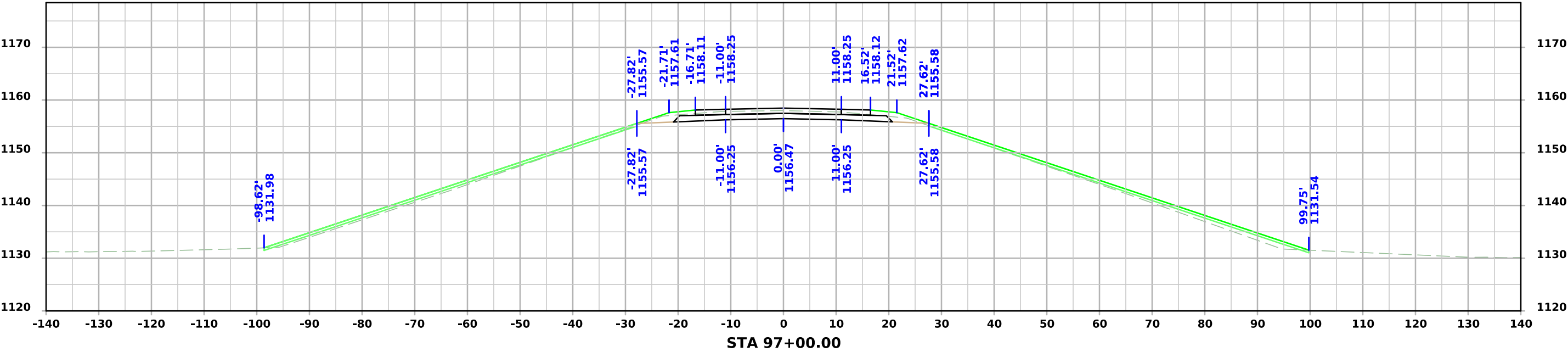
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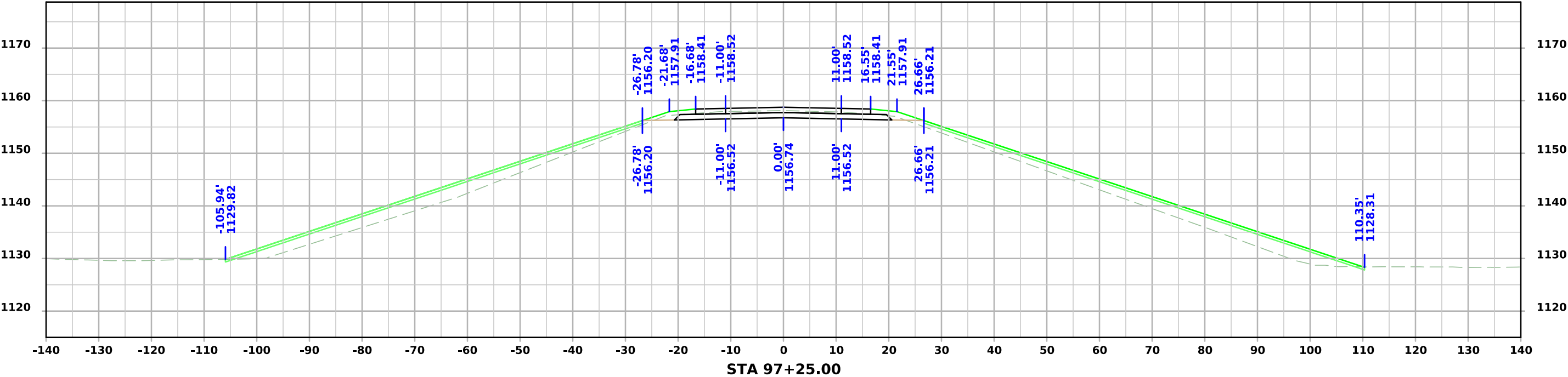
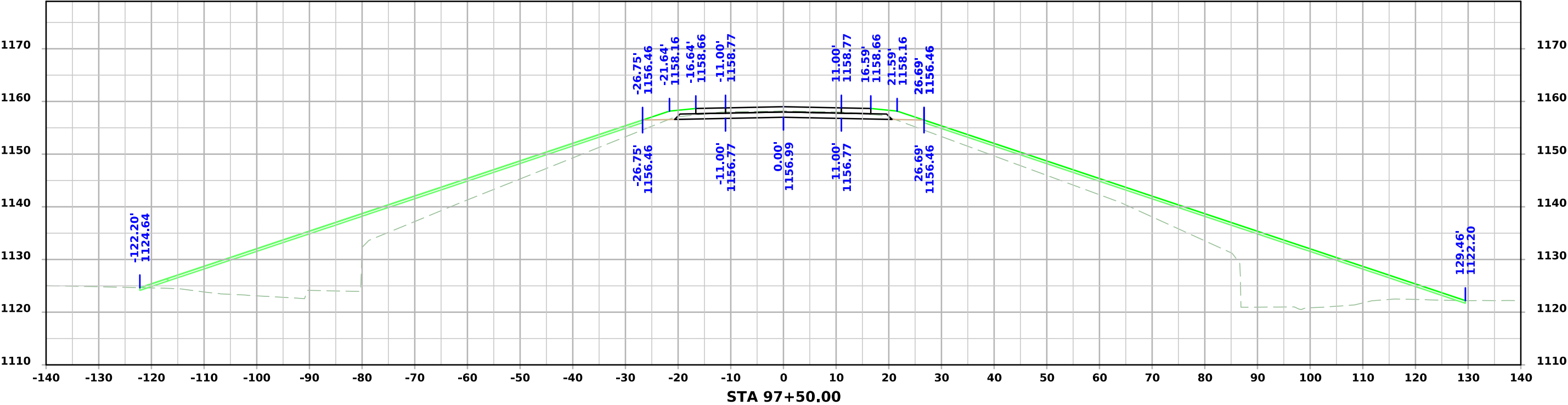
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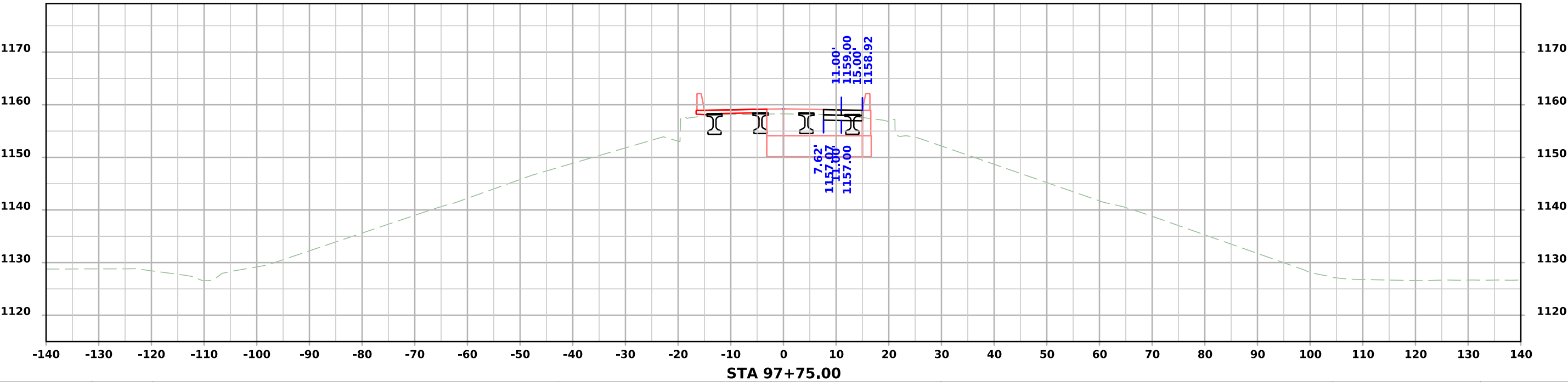
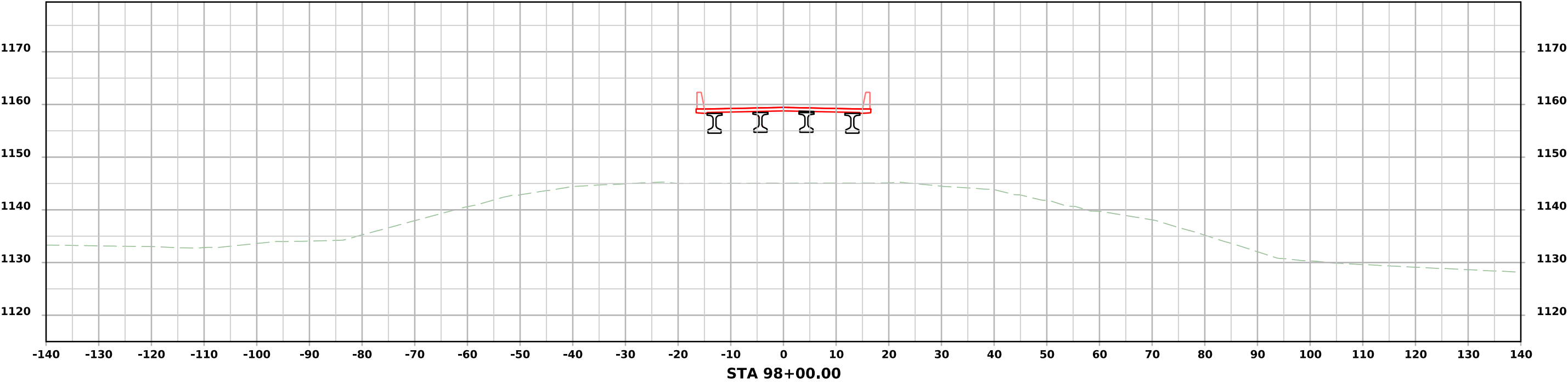
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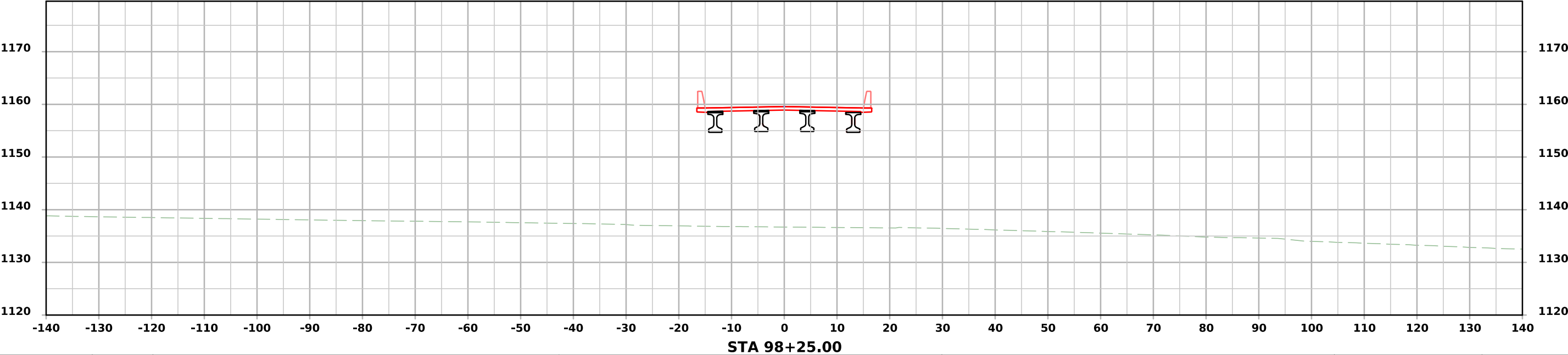
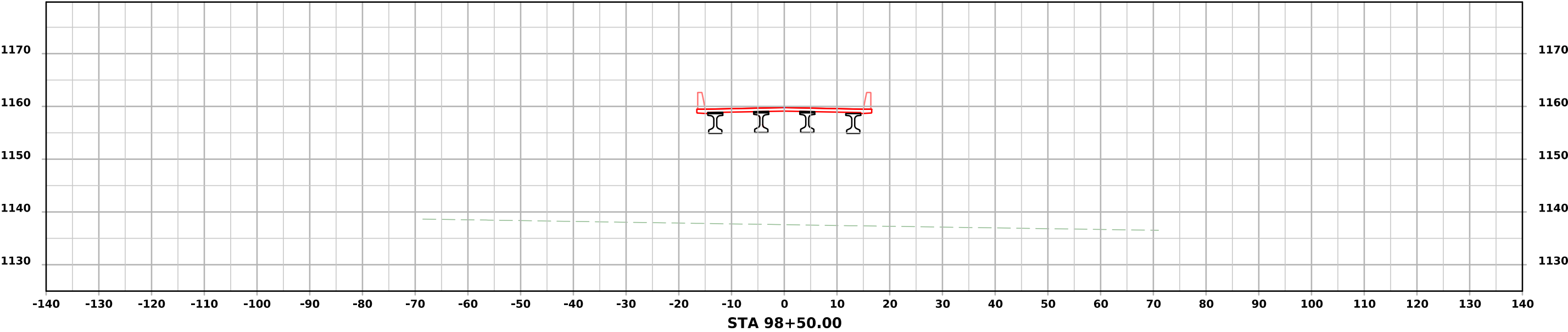
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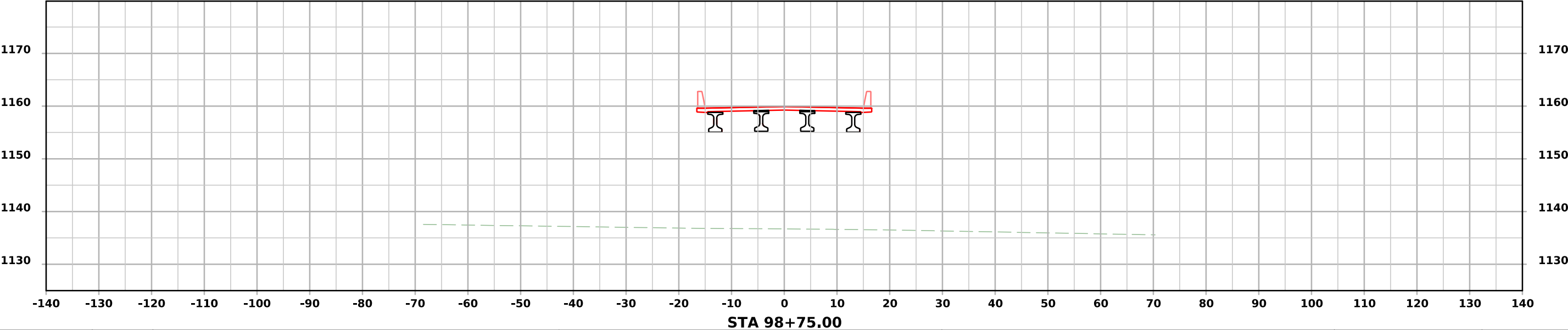
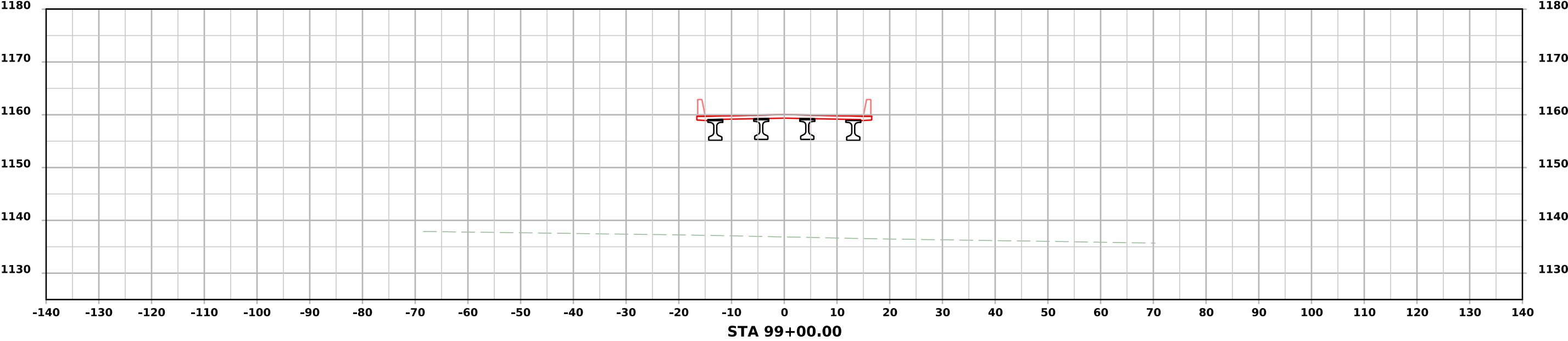
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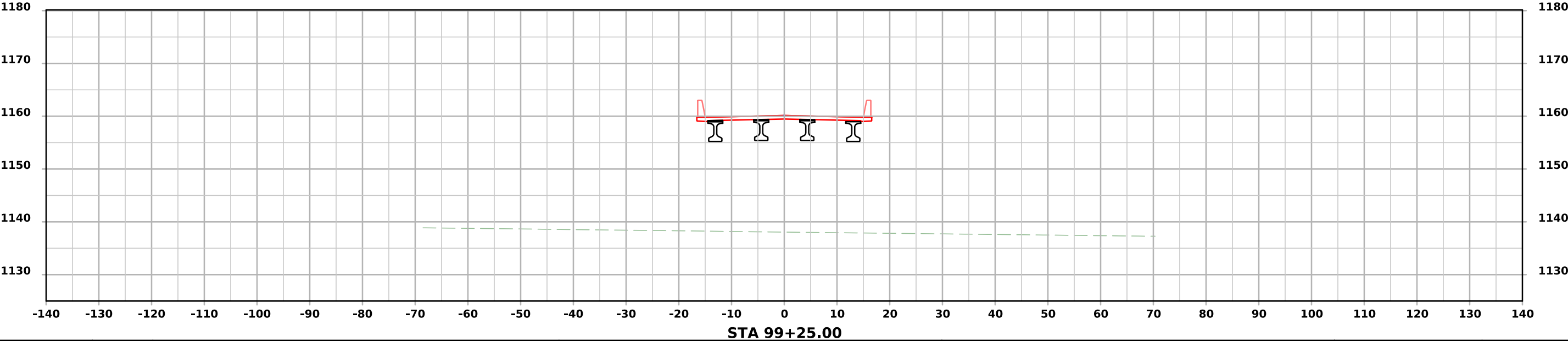
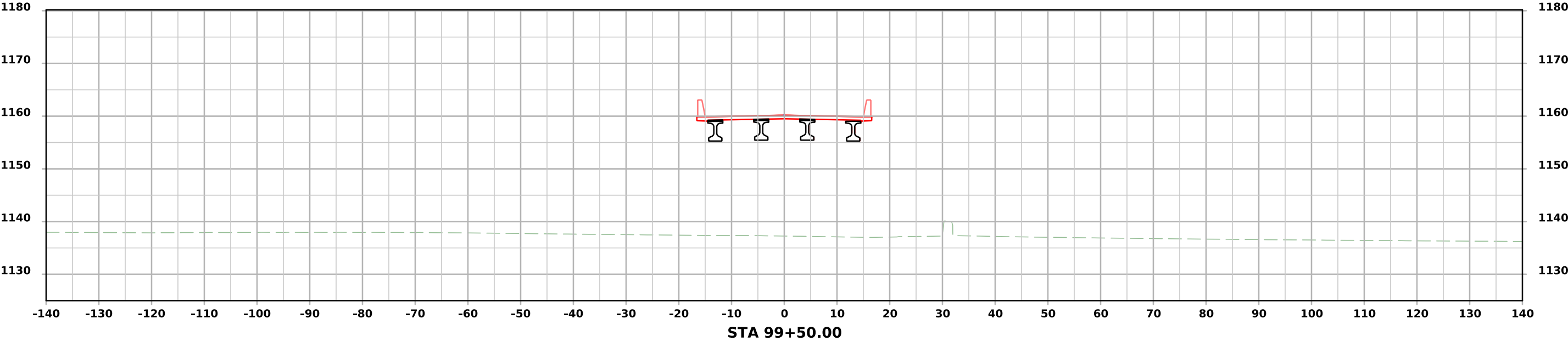
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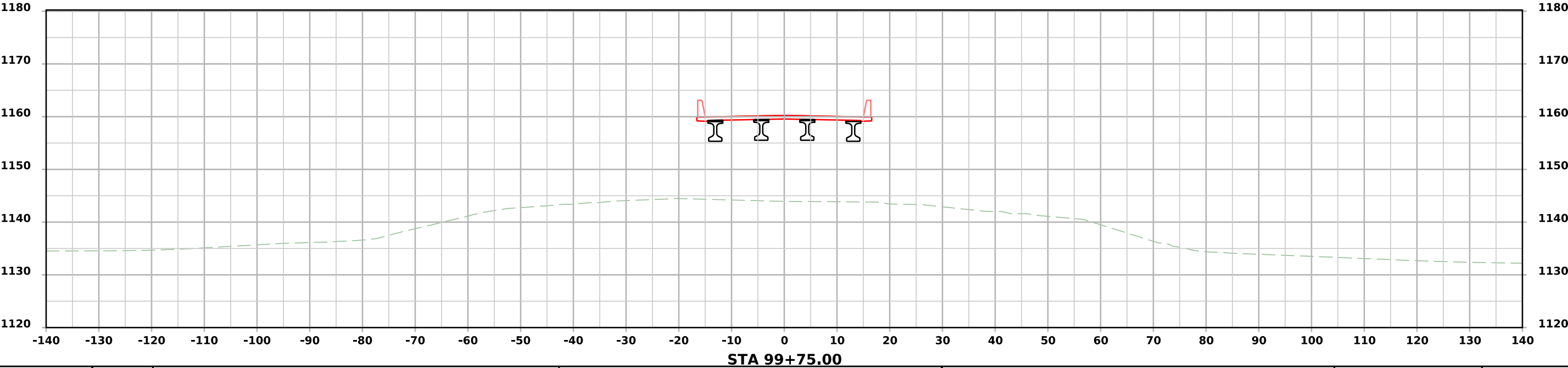
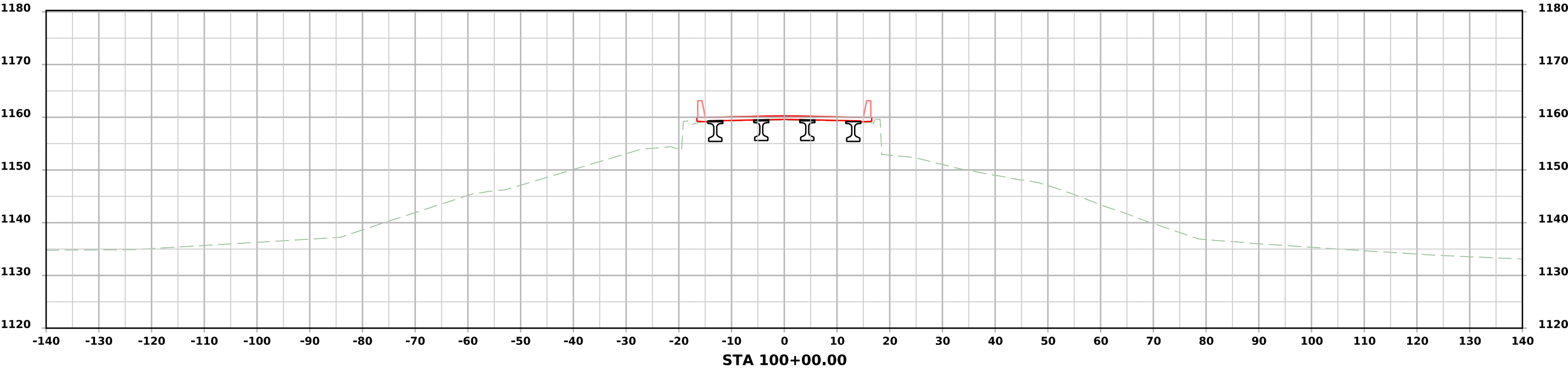
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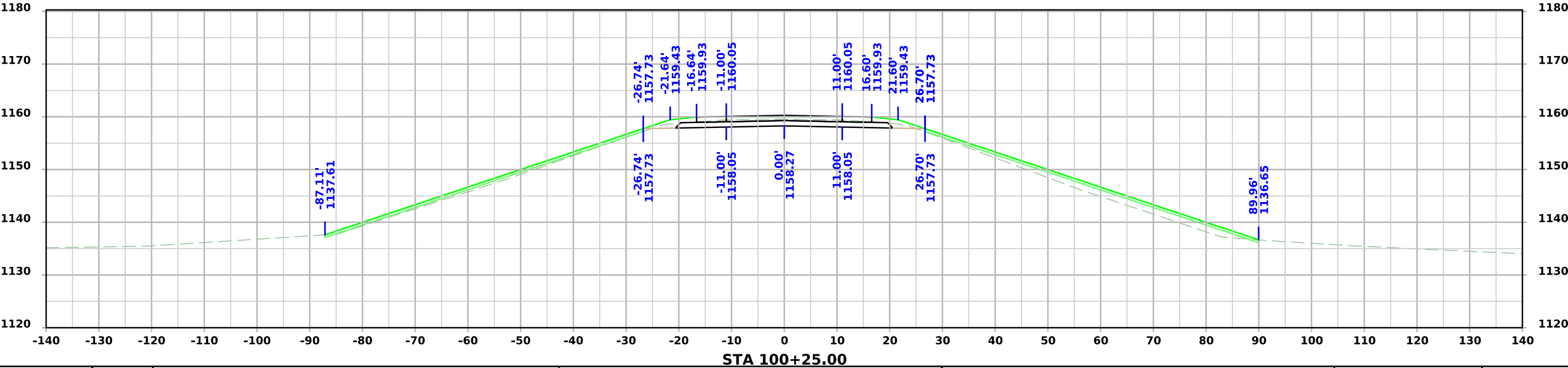
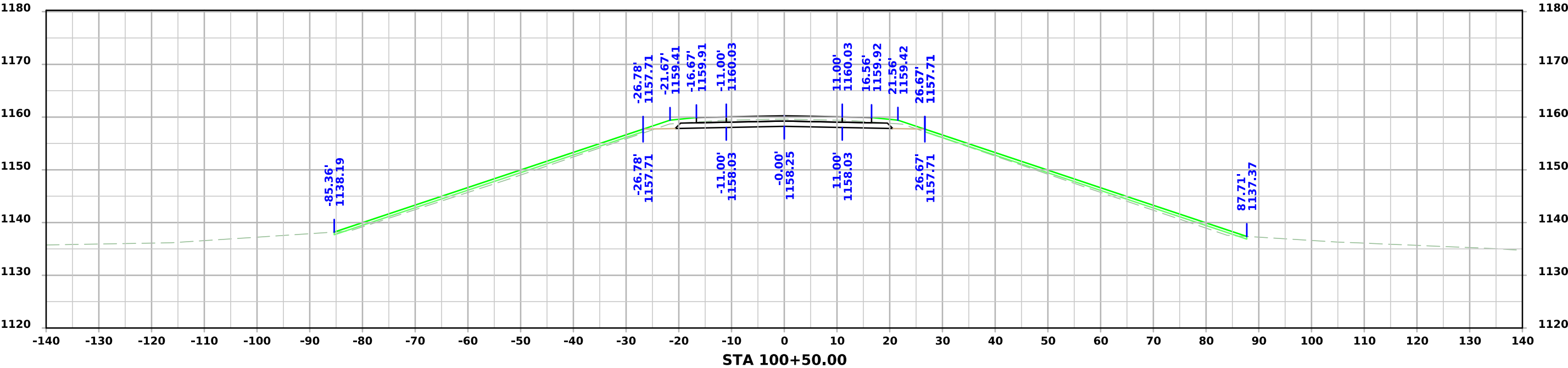
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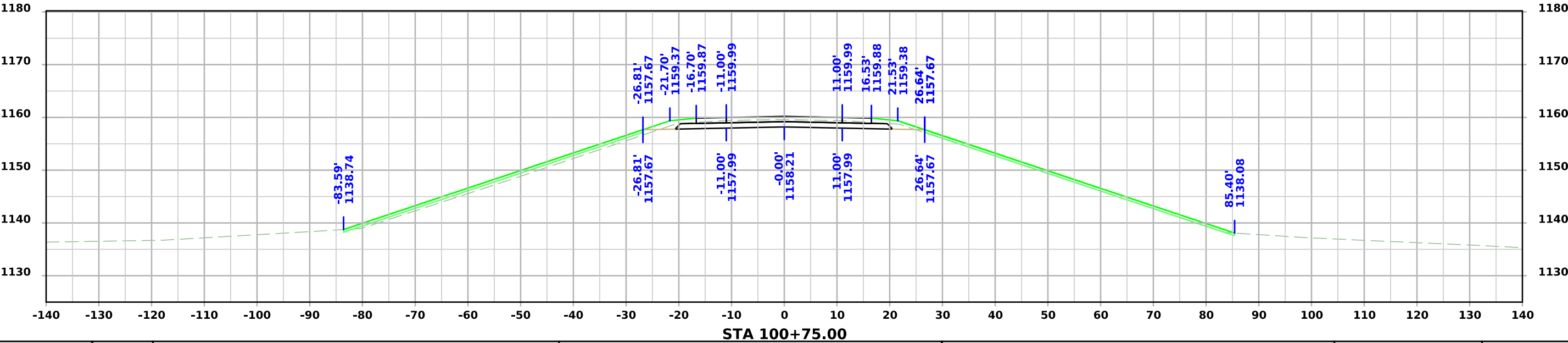
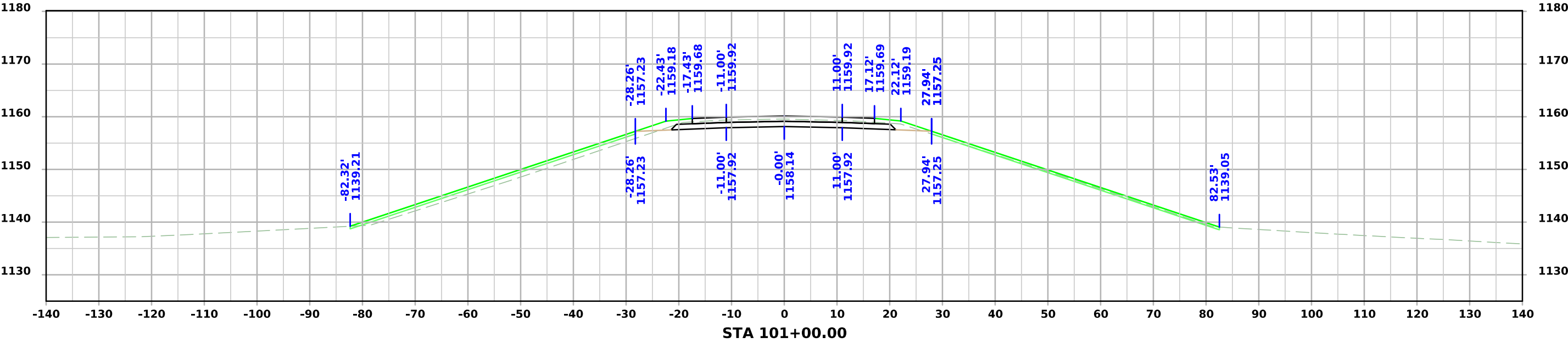
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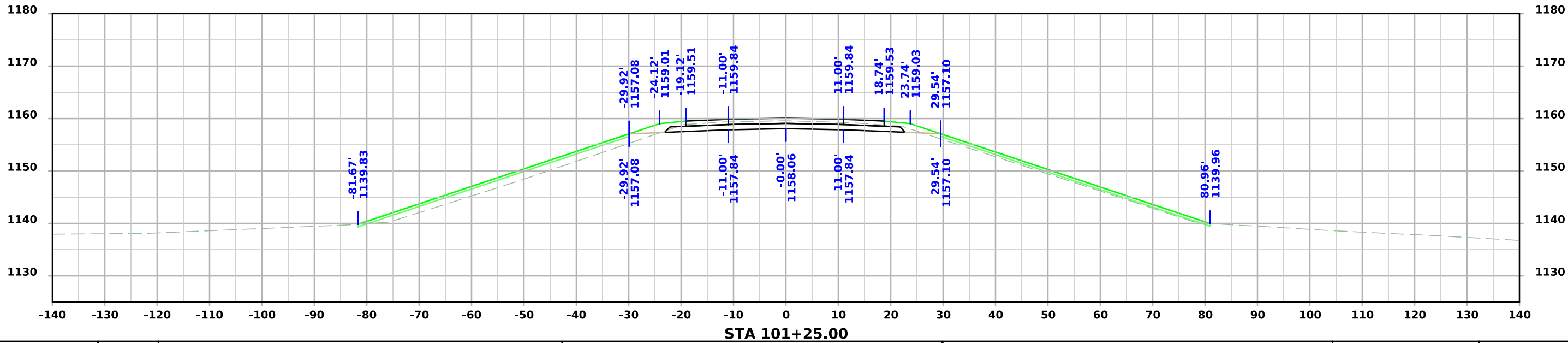
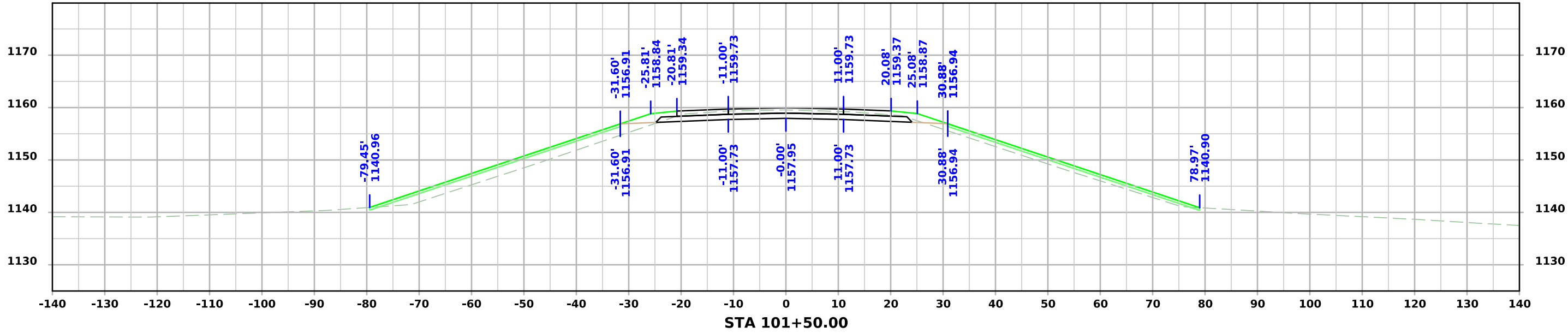
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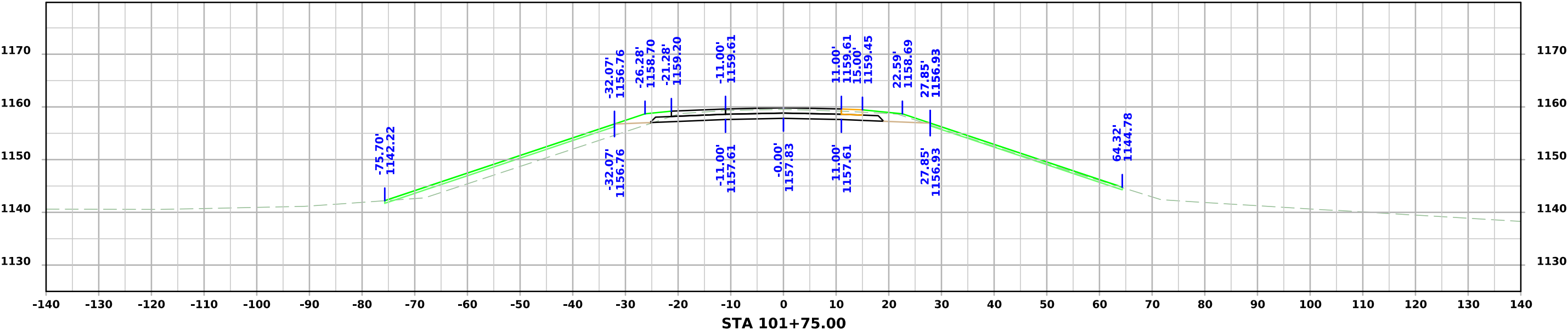
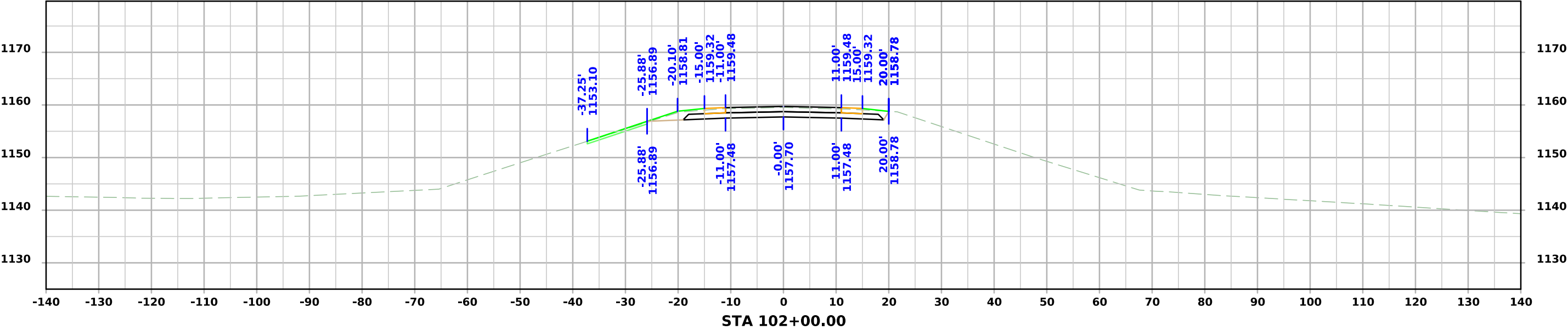
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CO RD P48



CO RD P48

