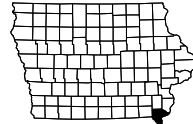


LEE COUNTY

Bridge Replacement-CCS
BRF-016-4(029)--38-56

LETTING DATE
Jan 19, 2028



INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	Title Sheets
A.1	Title Sheet
A.2	Location Map Sheet
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	IA 16
G Sheets	Survey Sheets
G.1	Survey Index
G.2	Control Point Vicinity Map
G.3	Horizontal Control Tab. & Super for all Alignments
J Sheets	Traffic Control and Staging Sheets
J.1	Traffic Control Plan
J.2	511 Travel Restrictions
J.3	Coordinated Operations
* J.4	Detour Route Map
V Sheets	Bridge and Culvert Situation Plans
V.1 - 2	Bridge and Culvert Situation Plans
W Sheets	Mainline Cross Sections
W.1	Cross Sections Legend & Symbol Information Sheet
W.2 - 9	Mainline Cross Sections
	* Color Plan Sheets



PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
LEE COUNTY
Bridge Replacement-CCS
IA 16 Bridge over Sugar Creek
0.3 mi W of U.S. 218

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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



REVISIONS

TOTAL	
	--
PROJECT IDENTIFICATION NUMBER	
22-56-016-010	
PROJECT NUMBER	
BRF-016-4(029)--38-56	
R.O.W. PROJECT NUMBER	

DESIGN DATA RURAL			
2027	AADT	1300	V.P.D.
2047	AADT	1300	V.P.D.
20	- DHV	-	V.P.H.
	TRUCKS	16	%
	Total		
	Design ESALs	-	

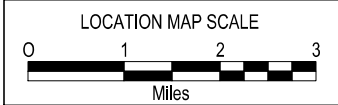
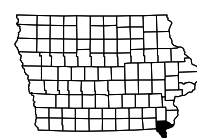
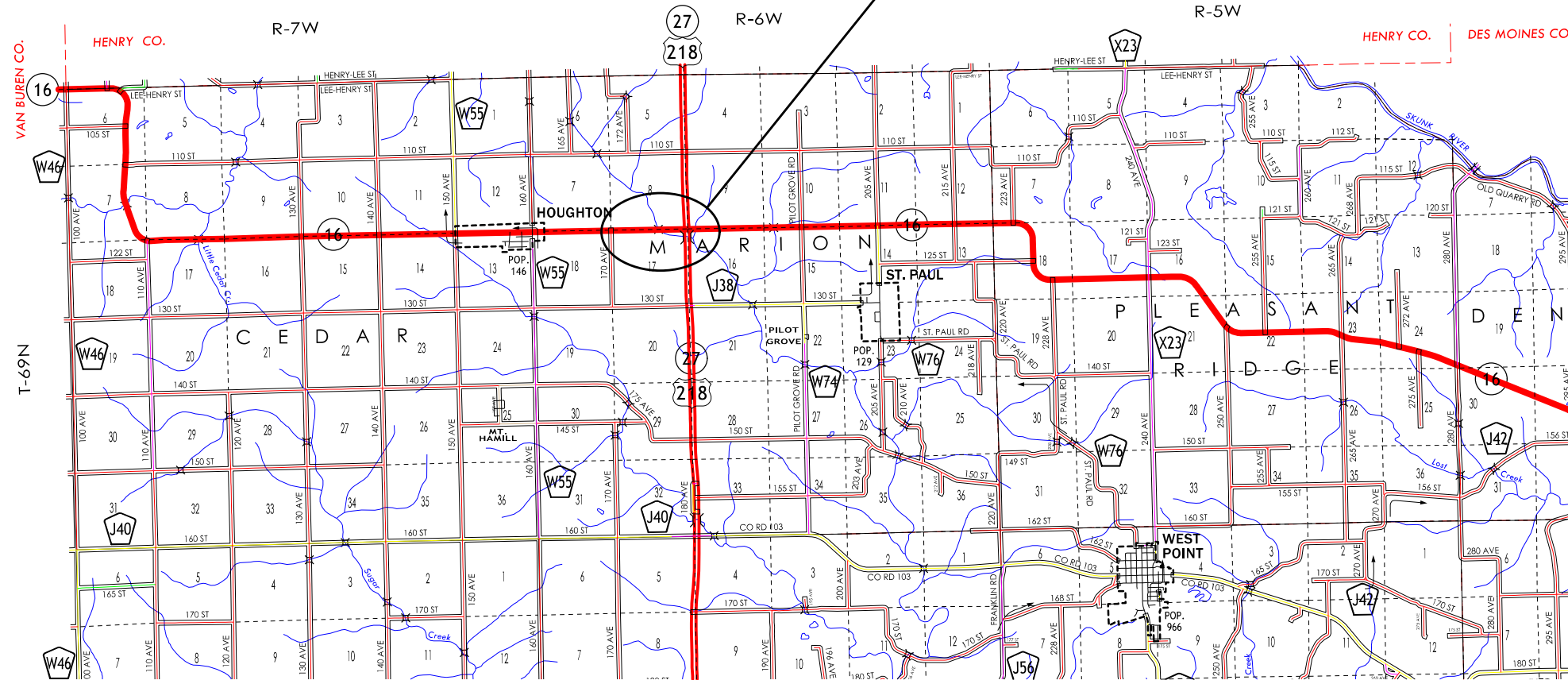
INDEX OF SEALS			
SHEET NO.	NAME	TYPE	BID QUANTITY SHEETS
A.1	Dung T. Ta	Primary Signature Block	X
V.1	Tamera C. Depke	Hydraulic Design	X

PRELIMINARY PLANS

Subject to change by final design.

D5 PLAN - Date: 12/23/2024

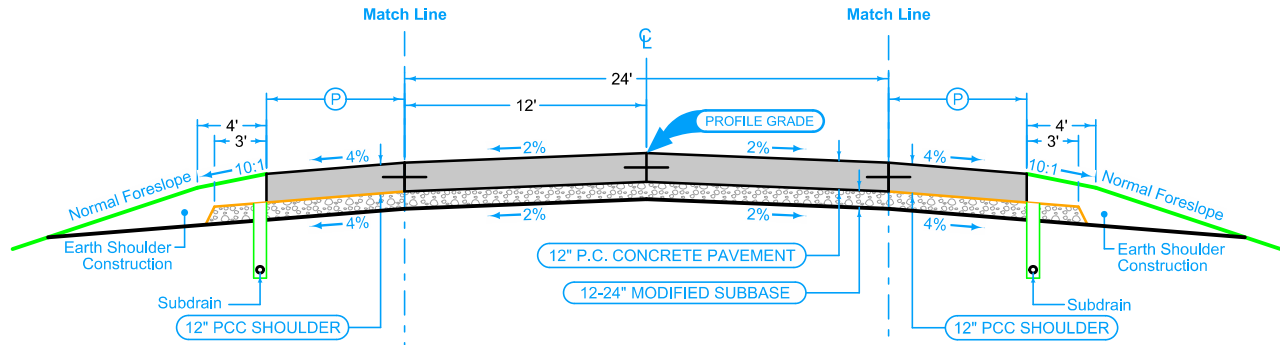
PROJECT LOCATION
 Sta. 553+44.00
 FHWA #: 33310
 Maint #: 5645.2S016



Full Depth PCC Shoulder

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

2_P_FullPCC_04-20-21		(P)
STATION TO STATION		Feet
552+20.44	552+88.70	8
Bridge		
553+90.28	554+66.06	8



Mainline Jointing:
 Approach Section, Refer to BR-203/BR-211 for details.

2P_04-21-20	
STATION TO STATION	
552+20.44	552+93.57
Bridge	
553+94.43	554+66.06

Full Depth PCC Shoulder

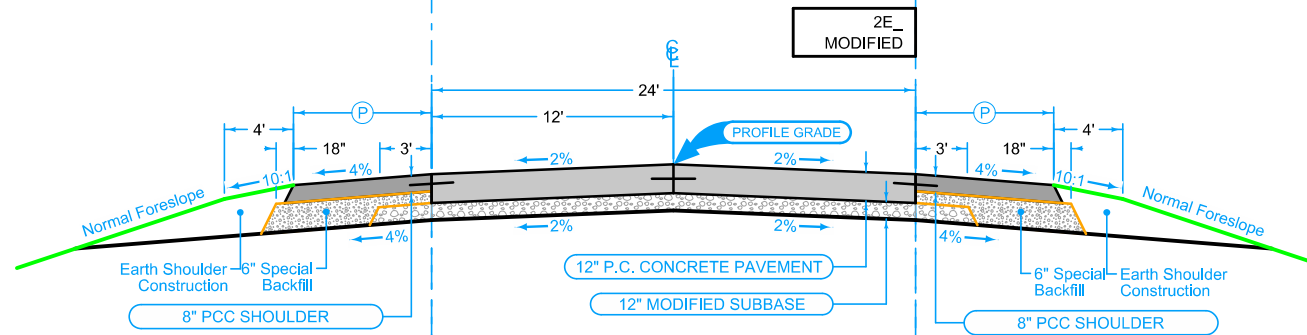
Shoulder Jointing:
 Longitudinal joint: BT-2, L-2 or KT-2
 Transverse joints: C at 17' spacing

2_P_FullPCC_04-20-21		(P)
STATION TO STATION		Feet
552+20.44	552+97.69	8
Bridge		
553+98.59	554+66.06	8

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		(P)
STATION TO STATION		Feet
551+61.92	552+20.44	Varies
554+66.06	555+38.86	Varies



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

2P_04-21-20	
STATION TO STATION	
551+47.64	552+20.44
554+66.06	555+77.34

Paved Shoulder at Guardrail

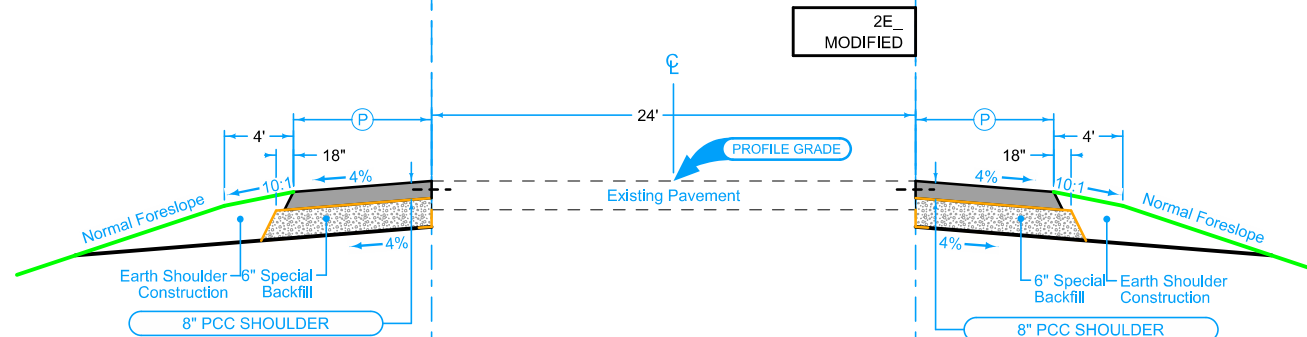
PCC Shoulder Jointing:
 Longitudinal joint: BT-1 or BT-5
 Transverse joints: C at mainline spacing
 HMA Shoulder Jointing:
 Longitudinal joint: B

2_P_Guard_04-21-20		(P)
STATION TO STATION		Feet
551+47.64	552+20.44	Varies
554+66.06	555+24.58	Varies

Partial Depth Paved Shoulder

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

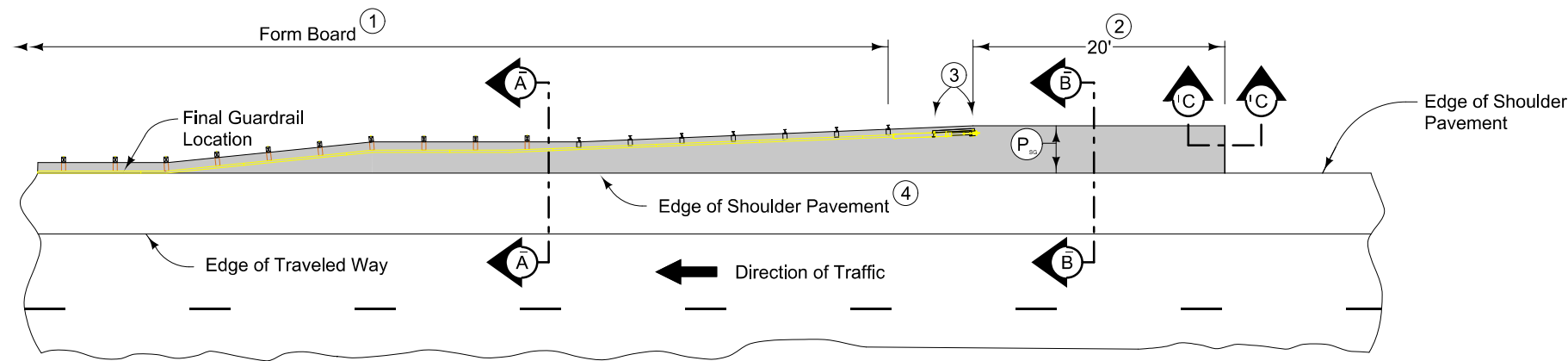
2_P_Guard_04-21-20		(P)
STATION TO STATION		Feet
549+18.00	551+61.92	Varies
555+38.86	557+69.00	Varies



Partial Depth Paved Shoulder

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		(P)
STATION TO STATION		Feet
549+18.00	551+47.64	Varies
555+24.58	557+69.00	Varies



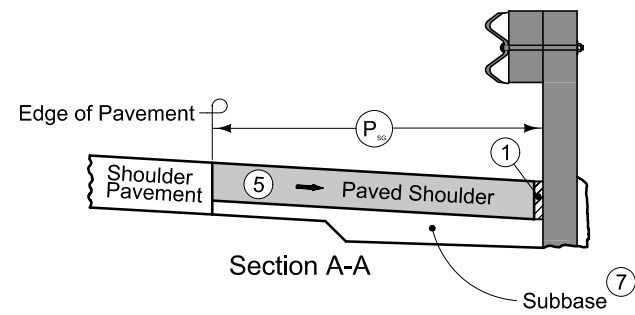
PLAN VIEW

8" PCC Paved Shoulder at guardrail with the following jointing layout:

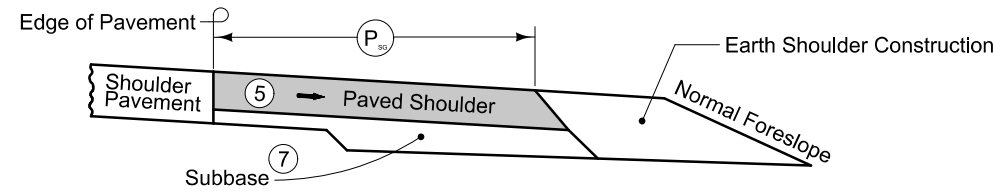
Match mainline pavement joint spacing. When mainline pavement is 8" or greater in thickness, place additional transverse 'C' joints in shoulder at mid-panel of the mainline pavement. Place longitudinal 'C' joint at P/2 from edge of mainline pavement when P is greater than 10' wide. Terminate longitudinal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

Refer to Tabulation 112-9 for shoulder quantities.

- ① 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.
- ⑤ Match shoulder slope.
- ⑥ The Contractor has the option to pave the paved shoulder at guardrail and the full width paved shoulder as one operation.
- ⑦ Refer to other details in the plan.

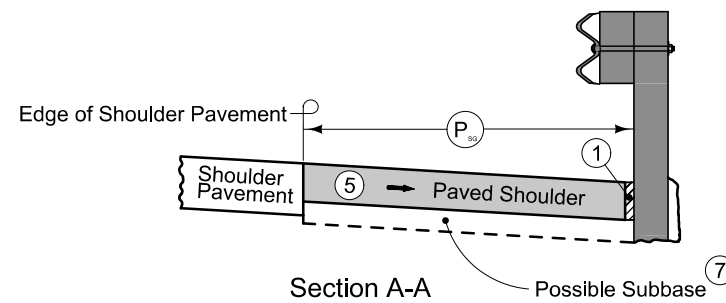


Section A-A

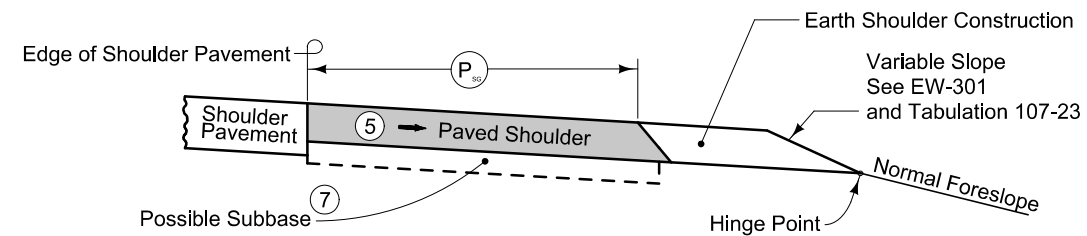


Section B-B

NEW CONSTRUCTION

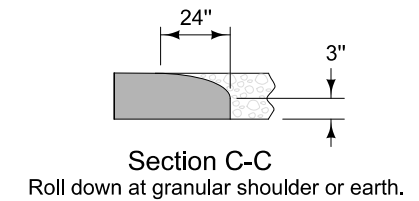


Section A-A



Section B-B

EXISTING SHOULDER



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

SURVEY SYMBOLS

- Interstate Highway Symbol
- U.S. Highway Symbol
- Iowa Highway Symbol
- County Road Highway Symbol
- Evergreen Tree
- Deciduous Tree
- Fruit Tree
- Shrub (Bushes)
- Timber
- Hedge
- Stump
- Swamp
- Rock Outcrop
- Broken Concrete
- Revetment (Rip Rap)
- Cemetery
- Grave
- Cave
- Sink Hole
- Board Fence
- Chain Link or Security Fence
- Wire Fence
- Terrace
- Earth Dam or Dike (Existing)
- Tile Outlet
- Edge of Water
- Existing Drainage
- Right of Way Rail or Lot Corner
- Concrete Monument
- Well
- Windmill
- Beehive Intake
- Existing Intake
- Existing Utility Access (Manhole)
- Fire Hydrant
- Water Hydrant (Rural)
- Septic Tank
- Cistern
- L.P. Gas Tank (No Footing)
- Underground Storage Tank
- Latrine
- Satellite TV Dish
- Water Hook Up
- Radio Tower
- Tower Anchor
- Guardrail (Beam or Cable)
- Guard Post (one or two)
- Guard Post (over two)
- Filler Pipe
- Gas Valve
- Water Valve
- Speed Limit Sign
- Mile Marker Post
- Sign
- Traffic Signal Control Box
- Rail Road Signal Control Box
- Telephone Switch Box
- Electric Box

UTILITY LEGEND

- Alliant Energy (ASE)
Alliant Energy Field Engineer
Phone: 800-255-4268
Email: locate_IPL@alliantenergy.com
- Rathbun Regional Water (RBW)
Scott Jackson
Phone: 641-647-1086
Email: onecall@rrwa.net
- Windstream Communications (WINIA)
Locate Desk
Phone 800-289-1901
Email: LOCATE.DESK@WINDSTREAM.COM

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 50%
Yellow	(4)		Proposed Pavement Shading 50%
Orange	(6)		Proposed Granular Shading 50%
Orange	(70)		Proposed Shoulder Granular Shading 50%
Yellow	(68)		Proposed Shoulder Paved Full Depth Shading 50%
Yellow	(132)		Proposed Shoulder Paved Partial Depth Shading 50%
Brown, Light	(236)		Grading Shading 50%
Orange, Light	(134)		Proposed Granular Entrance Shading 50%
Yellow	(220)		Proposed Paved Entrance Shading 50%
Tan	(8)		Proposed Sidewalk Shading 50%
Blue, Light	(230)		Proposed Sidewalk Landing Shading 50%
Pink	(11)		Proposed Sidewalk Ramp Shading 50%
Red	(3)		Proposed Structure Shading 50%
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

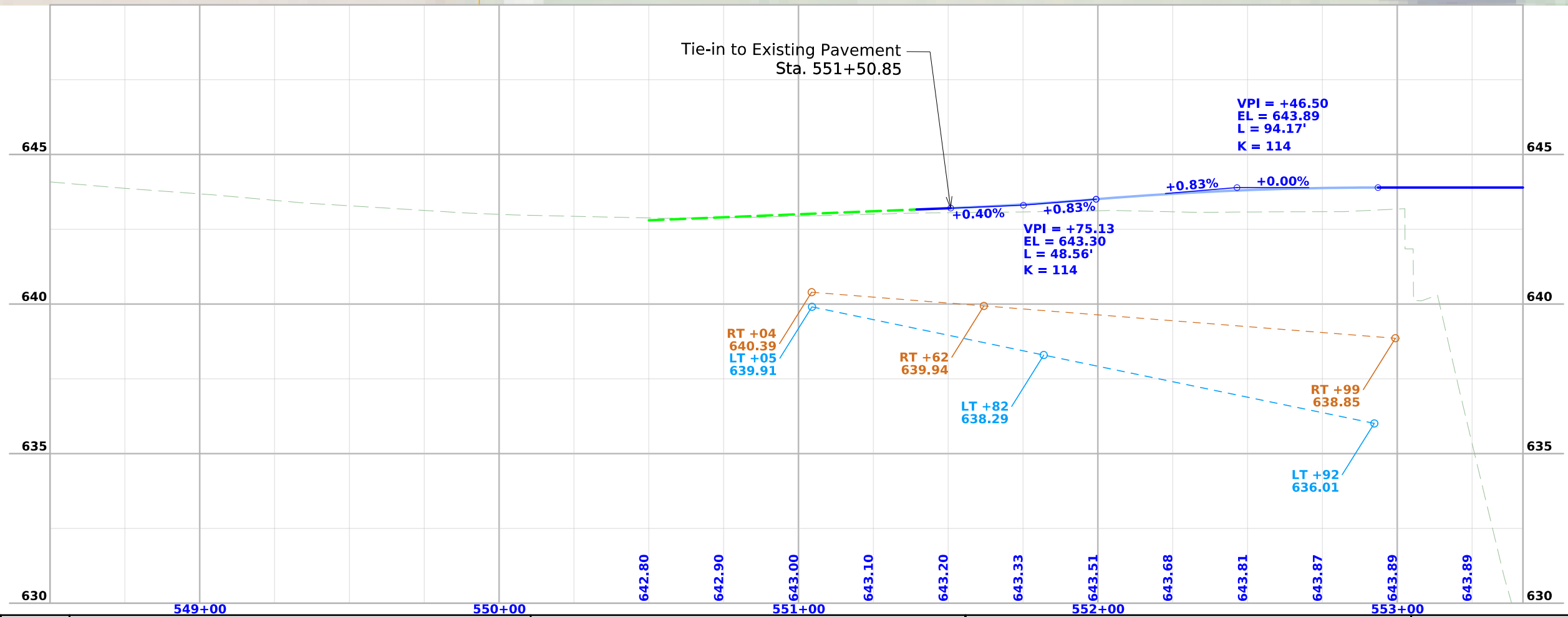
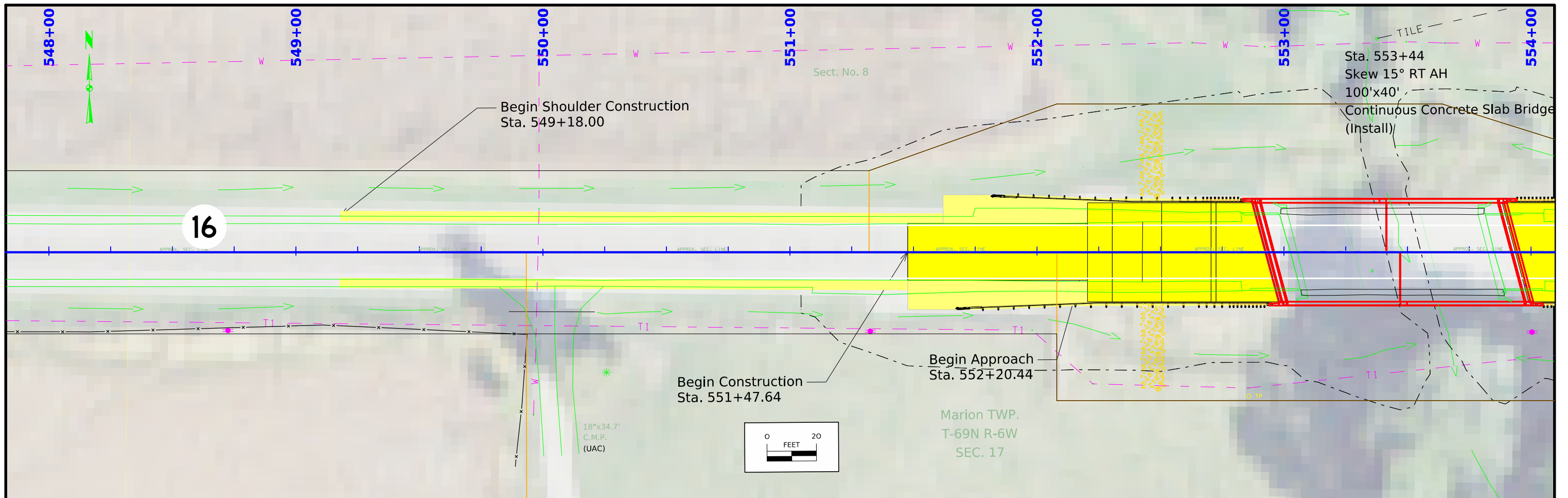
- Reference Point
- Station
- Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Trench Drain
- HighTension Cable Guardrail
- Sheet Pile
- Pavement Removal
- Clearing & Grubbing Area

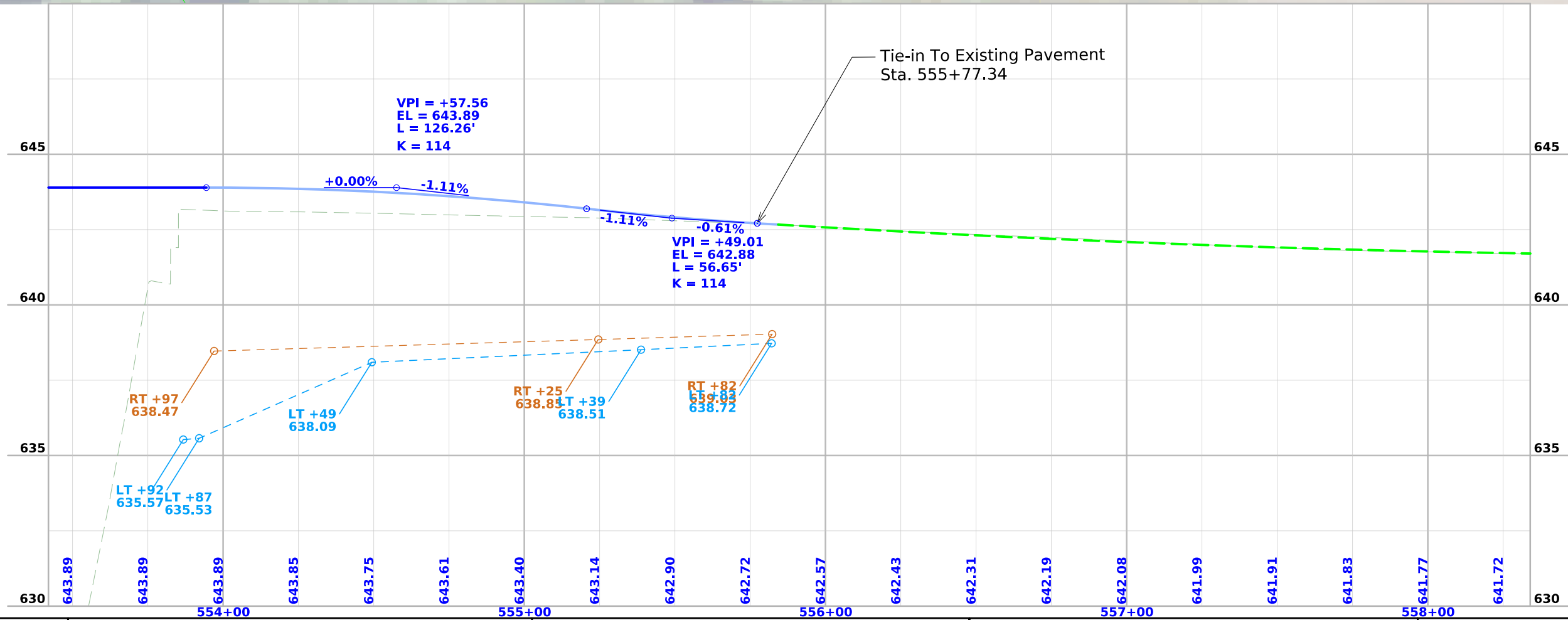
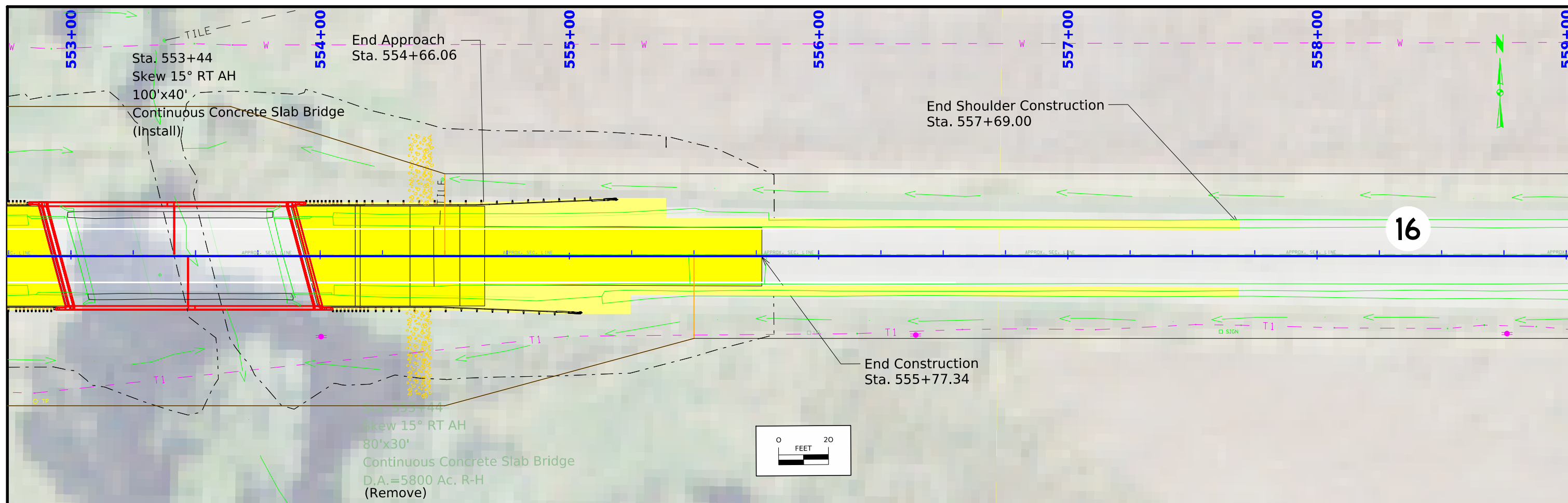
RIGHT-OF-WAY LEGEND

- Proposed Right-of-Way Symbol
- Proposed Right-of-Way Line
- Existing Right of Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Easement (Temporary) Symbol
- Easement (Temporary) Line
- Easement
- C/A Access Control
- Property Line Symbol
- Property Line

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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





Survey Information

SURVEY INDEX

Lee County
BRF-016-4(29)--38-56
Sugar Creek 0.3 mi W of US 218
PIN: 22-56-016-010
Type of Work: Unspecified Bridge Work
Project Directory: 5601601022

Survey Personnel

Samuel Schilb – Assistant Survey Party Chief

Date(s) of Survey

Begin Date 08/10/2023
End Date 01/08/2024

General Information

This survey is for the unspecified bridge work at Sugar Creek 0.3 mi W of US 218 on Hwy 16. This survey request was for the Hwy 16 corridor only. 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.

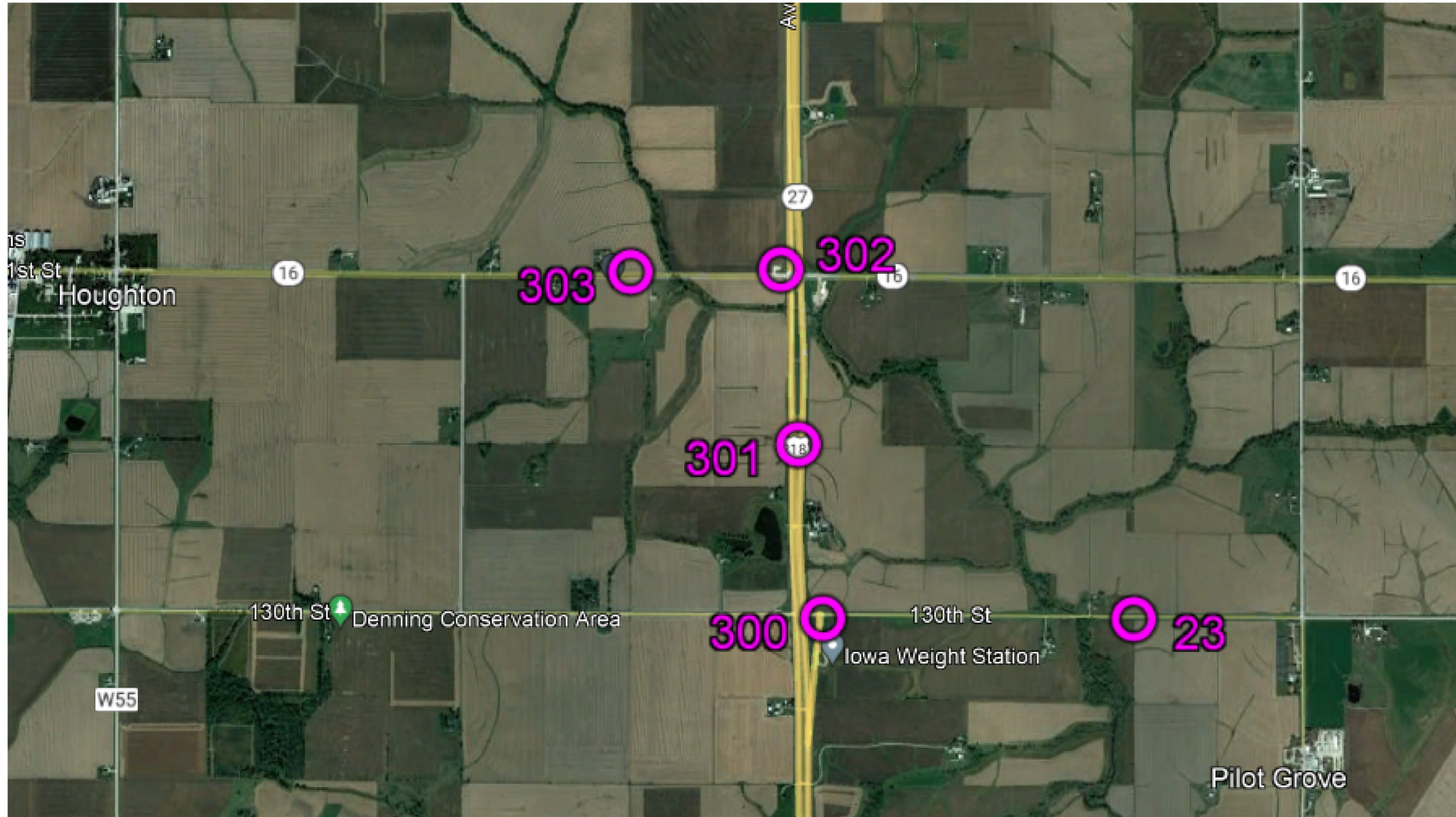
PROJECT DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 ADJUSTMENT)
COORDINATE SYSTEM: IOWA REGIONAL COORDINATE SYSTEM ZONE 14
(U.S. SURVEY FOOT)
VERTICAL DATUM: NAVD88
GEOID MODEL: 2018u3

Alignment Information

The horizontal alignment for U.S. Hwy 16 was created by using information provided by the district 5 land survey office. Survey stationing was equated to the bridge station from As-built Plans No. FN-16-4(2)—21-56 at Sta. 553+44 and carried back and ahead without equation throughout the survey.

CONTROL POINT VICINITY MAP

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



HORIZ. DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 Adjustment) - Iowa RCS Zone 14 (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 14(U.S. Survey Foot)
VERT. DATUM: NAVD88
Geoid Model: 2018u3

Point Name	Northing	Easting	Elevation	Code Description
300	6389473.63	24413402.52	691.88	CP Set 5/8th"x42" Rebar from the intersection of Hwy 218 and 130th St proceed E 400' point is 90' S 4" below surface
301	6392225.05	24413004.86	675.71	CP Set 5/8th"x42" Rebar from the intersection of Hwy 218 and 130th St proceed N 2657' point is 40' W of NBL near cross over 4" below surface
302	6394970.15	24412741.31	642.45	CP Set 5/8th"x42" Rebar from the intersection of Hwy 218 and Hwy 16 proceed W 240' point is 82' N of the CL of Hwy 16 4" below surface
303	6394937.18	24410370.86	641.73	CP Fnd 5/8th" Rebar W/ Blue Cap from the intersection of Hwy 16 and 170th Ave proceed E 2657' point is 34' N of the CL of Hwy 16 4" below surface
23	6389459.96	24418277.58	637.38	CP LEE Co GPS Ctl Point Fnd as described

108_23A
8/15/22

TRAFFIC CONTROL PLAN

Traffic on IA 16 shall be maintained at all times via an offsite detour as shown in following J sheets.

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	IA-16	Both	Lee	Bridge over Sugar Creek		Traffic Control Device		Road Closure					

111_01
10/14/22

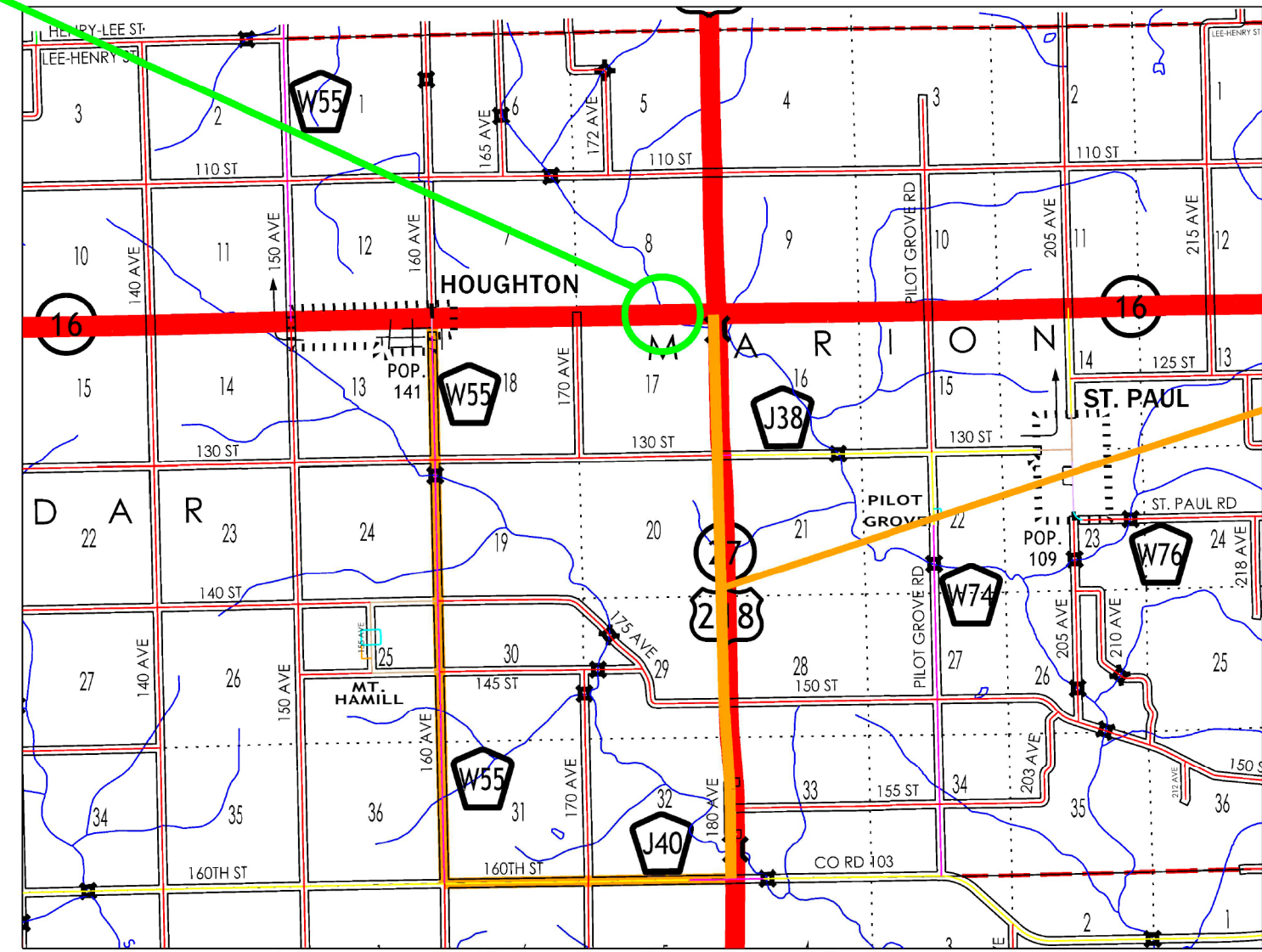
COORDINATED OPERATIONS

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.

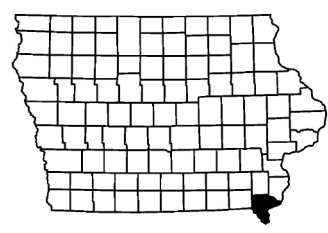
Project	Type of Work
None Provided	

STA 553+44.00
FHWA 33310
MAINT. 5645.2S016
DESIGN 466

LEE COUNTY



DETOUR



ON IA 16, OVER SUGAR CREEK 0.3 MILES W
OF US 218
BRF-016-4(029)-38-56
PIN: 22-56-016-010



General Notes:
 This design is for the replacement of the existing 80' x 30' Continuous Concrete Slab Bridge, Lee design No. 0466, FHWA No. 033310., Maint. No. 5645.2S016

Top of bridge deck crown 0.03 feet below Profile Grade.

Design Notes:
 Standard Bridge Index No. J40. Verify Abutment, Wingwall, and End Barrier geometries after Standard J40 is updated to the CONNECT Version.

TL-4 Single Slope Bridge railing proposed.

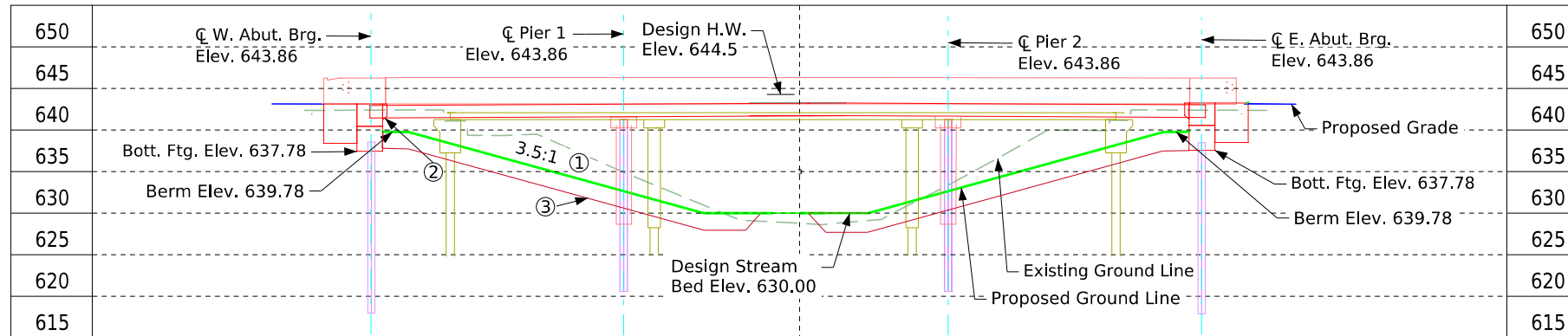
Pier Type - Fully Encased Pile Bent with an assumed cap width of 3'-0" and encasement thickness of 22".

Class E Revetment Stone is embedded.

The bridge will be designed to withstand the applicable effects of Ice and Horizontal Stream loads and uplift forces associated with the Q100.

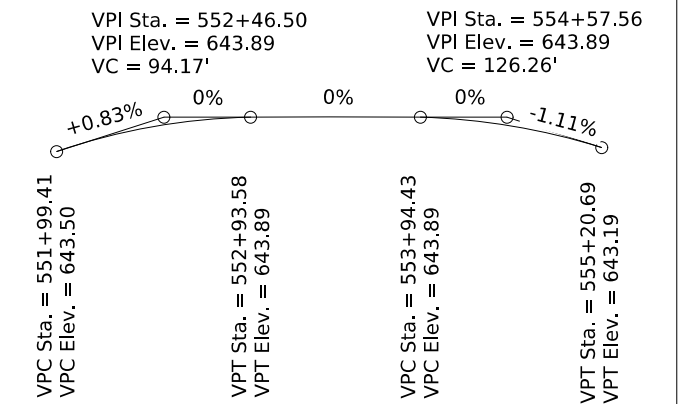
The bridge does not meet Iowa DOT's desired (operational or channel) freeboard per BDM 3.2.2.4. The proposed bridge does not increase backwater or reduce freeboard when compared to the existing bridge.

Control Point: CP3, N 6394937.18, E 24410370.86, 641.73, CP Fnd 5/8th" Rebar W/ Blue Cap from the intersection of Hwy 16 and 170th Ave proceed E 2657' point is 34' N of the CL of Hwy 16 4" below surface



- ① Berm Slope Normal to CL Abutment
- ② Operational and Channel Low Chord
- ③ 2'-0" Class E Revetment (Embedded)

Longitudinal Section Along CL IA 16



Proposed Profile Grade On CL Iowa 16

Hydraulic Data

RIDB: Stream ID: = SugarC_MR_Lee
 Drainage Area = 8.93 Sq. Mi.
 Stream Slope (HGL) = 5.6 ft./Mi.

Operational Low Beam = 642.0
 Channel Low Beam = 642.0

Q₅₀ = 3,990 cfs (Design)
 Stage = 644.5
 Operational Freeboard = -2.5 ft.*
 Avg. Bridge Velocity = 1.0 fps

Q₁₀₀ = 4,790 cfs
 Stage = 645.4
 Operational Freeboard = -3.4 ft.*
 Backwater = 0.0 ft.
 Avg. Bridge Velocity = 0.8 fps

Q₂₀₀ = 5,640 cfs
 Stage = 646.4

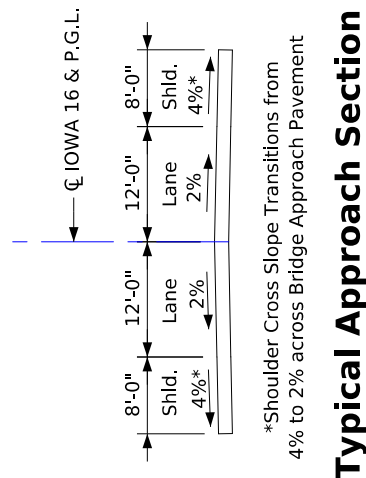
Q Overtop = 2,230 cfs
 Avg. Bridge Velocity = 3.4 fps
 Calculated Check Scour = 7.6 ft

Q₅₀₀ = 6,760 cfs
 Operational Freeboard = -5.6 ft.*

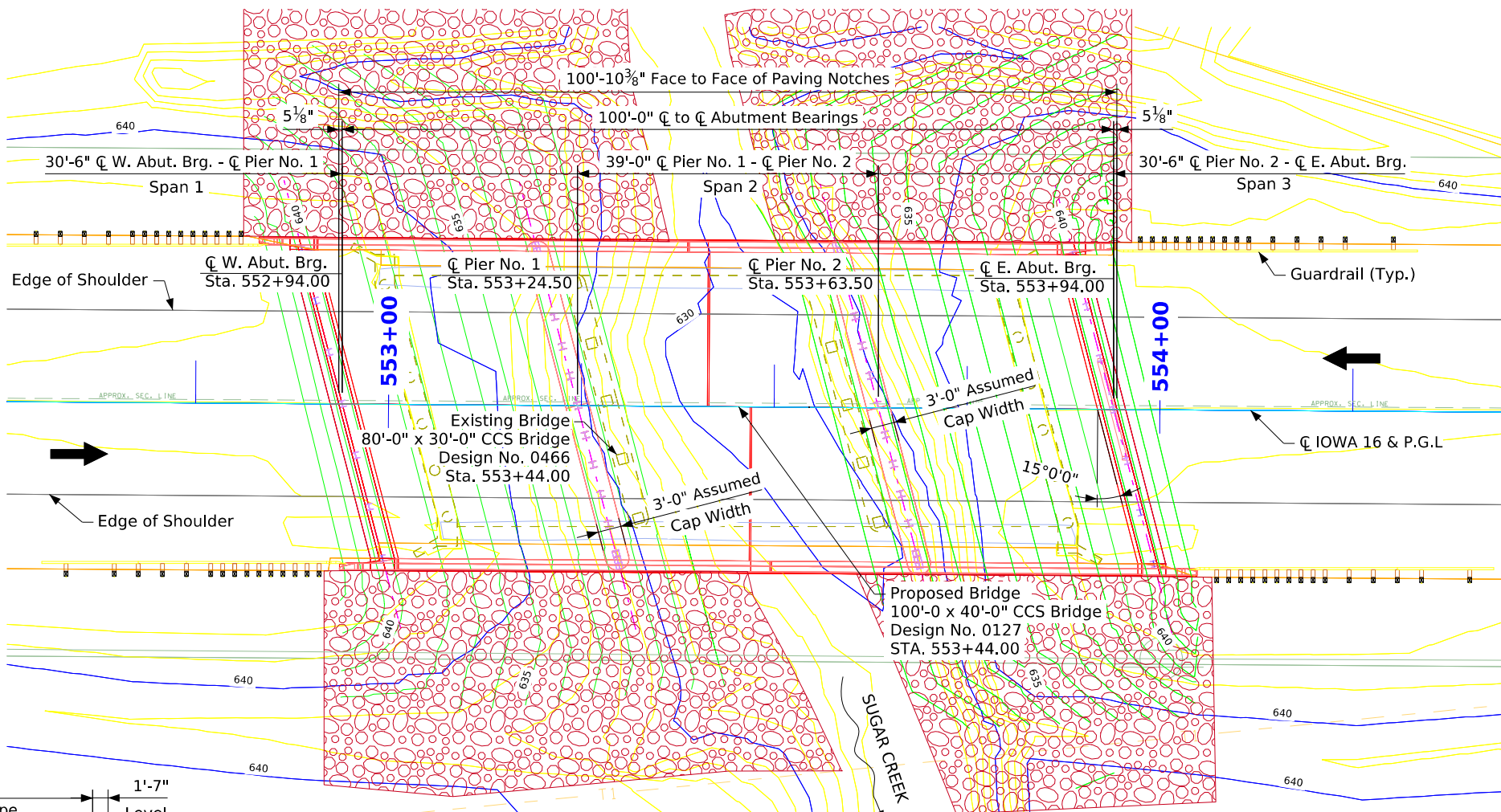
Roadway Overtop 641.6 ft.
 Sta. 559+33

Site is located within
 City or/County Lee County F.I.S., Dated 7/22/2020,
 Zone A

*Operational Freeboard values have been approved by Iowa DOT.



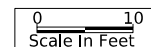
Typical Approach Section



Situation Plan

Location

IA 16 OVER SUGAR CREEK
 0.3 MI. W. OF US 218
 T-69-N R-6-W
 SECTION 8 & SECTION 17
 MARION TOWNSHIP
 LEE COUNTY
 FHWA NO. 033310
 BRIDGE MAIN. NO. 5645.2S016
 LATITUDE 40.78451393°
 LONGITUDE -91.5714894°



Hydraulic Design

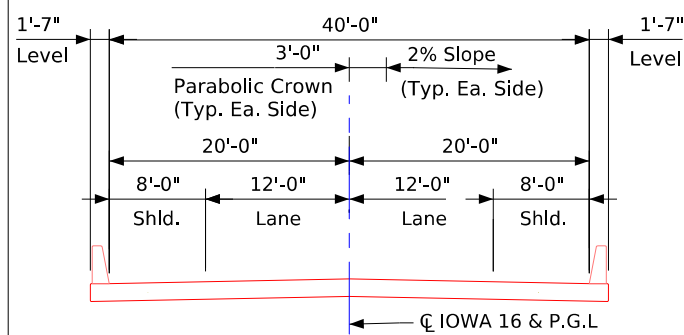
I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Tamera C. Depke 12-20-2024
 Signature Tamera C. Depke Date
 Printed or Typed Name
 My license renewal date is December 31, 2025

Pages or sheets covered by this seal: V.1 & V.2

Design For 15° Skew (RA)
100'-0" x 40'-0" Continuous Concrete Slab Bridge
 30'-6" End Slabs 39'-0" Interior Span
Situation Plan
 STA. 553+44.00 (IA 16) December 2024
Lee County
 IOWA DEPARTMENT OF TRANSPORTATION
 Design No. 0127 Design Sheet No. 1 of 2 FHWA No. 033311

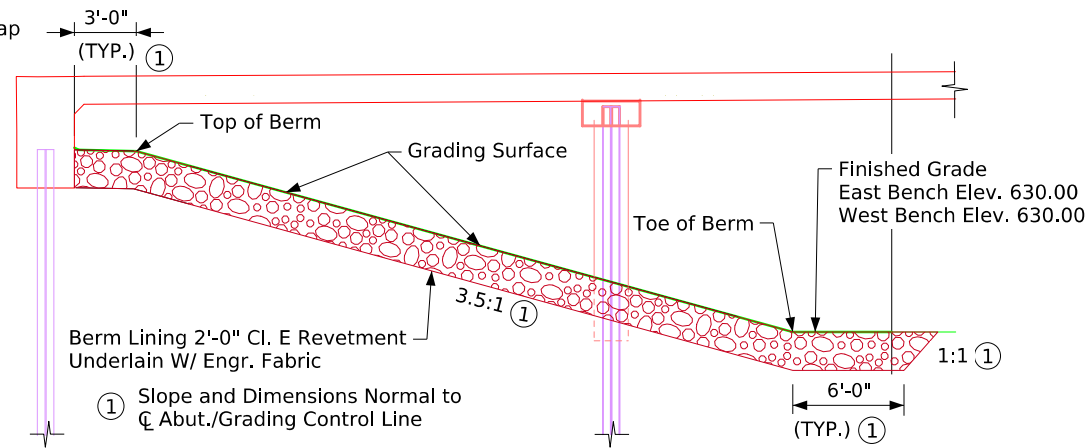
Typical Bridge Section (Looking East)



Control Point: CP3, N 6394937.18, E 24410370.86, 641.73, CP Fnd 5/8th" Rebar W/ Blue Cap from the intersection of Hwy 16 and 170th Ave proceed E 2657' point is 34' N of the CL of Hwy 16 4" below surface

Berm Slope Location Table						
Points	West Abutment			East Abutment		
	Station	Offset	Elev.	Station	Offset	Elev.
A1	553+27.51	24.58' LT	630.00	553+47.32	24.58' LT	630.00
A2	553+40.68	24.58' RT	630.00	553+60.49	24.58' RT	630.00
B1	552+92.07	24.58' LT	639.78	553+82.75	24.58' LT	639.78
B2	553+05.25	24.58' RT	639.78	553+95.93	24.58' RT	639.78
W1	552+83.09	24.58' LT	643.34	553+94.19	24.58' LT	643.34
W2	552+93.81	24.58' RT	643.34	554+04.91	24.58' RT	643.34

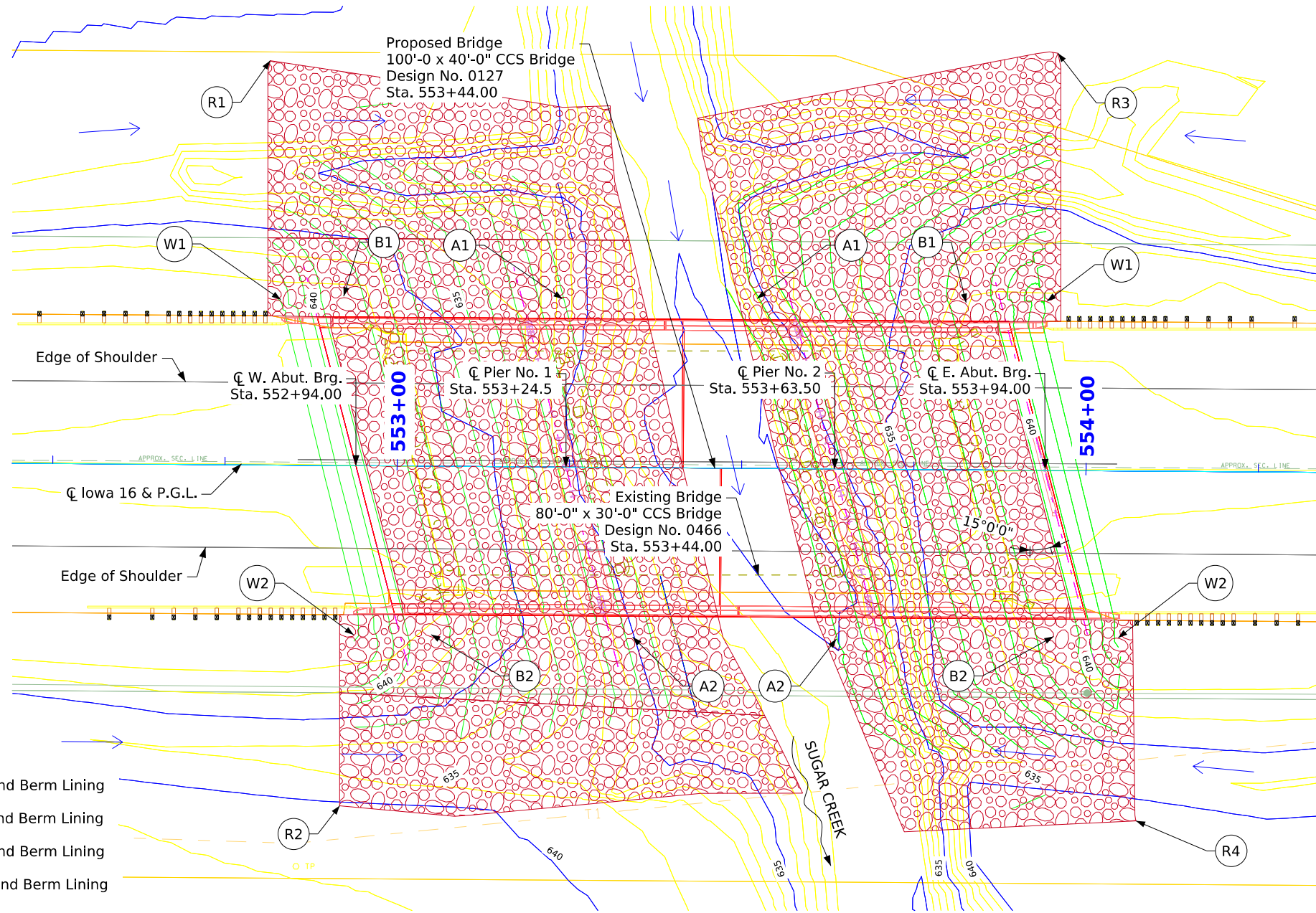
Berm slope elevations reflect the grading surface.



Revetment Quantities				
Location	Revetment CL. E (Ton)	Erosion Stone (Ton)	Engineering Fabric (SY)	CL. 10 Channel Excavation (CY)
Berm Lining - East	649.8	-	609.2	363.2
Berm Lining - West	712.8	-	668.2	386.7
Stone Protection - East	-	-	-	-
Stone Protection - West	-	-	-	-
Totals	1362.6		1277.4	749.9

Revetment and erosion stone estimated at 1.6 Ton/CY.

Section Through Berm Lining (Embedded)



0 10 Scale In Feet

Revetment Layout:

- R1 - Sta. 552+56.15, 58.74' LT, North End Berm Lining
- R2 - Sta. 552+92.01, 49.41' RT South End Berm Lining
- R3 - Sta. 553+95.51, 60.62' LT, North End Berm Lining
- R4 - Sta. 554+07.63, 50.81' RT, South End Berm Lining

IA 16 Traffic Estimate

2027 AADT	1,300	V.P.D.
2047 AADT	1,300	V.P.D.
2047 DHV	130	V.P.H.
TRUCKS	16	%
Total Design ESALs	???	

Utilities Note:

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

General Utility Symbols:

- T1 - Buried Tele. Cable, Windstream Communications (WINA)
- - Power Poles, Alliant Energy (ASE)

Design For 15° Skew (RA)

100'-0' x 40'-0" Continuous Concrete Slab Bridge

30'-6" End Slabs 39'-0" Interior Span

Site Plan

December 2024

STA. 553+44.00 (IA 16)

Lee County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. 0127 Design Sheet No. 2 of 2 FHWA No. 033311

CROSS SECTION VIEW COLOR LEGEND

Design Color No.	Feature	Design Color No.	Feature
Aggregate			
(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			
(207)	HMA Base Course	(6)	Loam
(207)	HMA Interim Course	(211)	Loam Removed
(207)	HMA Surface Course	(80)	Rock
Bridge			
(0)	Bridge	(212)	Rock Removed
Concrete			
(0)	Barrier Concrete	(4)	Select Sand
(0)	Barrier Concrete Footing	(214)	Select Sand Removed
(0)	Curb Gutter	(3)	Shale
(48)	Flowable Mortar	(215)	Shale Removed
(0)	Median Concrete	(10)	Topsoil
(0)	PCC Pavement	(2)	Topsoil Remove Only
(0)	Sidewalk	(4)	Topsoil Remove and Replace
Unsuitable / Waste			
(0)	Existing Pavement	(3)	Unsuitable Type A
Shoulder			
(209)	Shoulder HMA	(216)	Unsuitable Type A Removed
(0)	Shoulder PCC	(13)	Unsuitable Type B
(6)	Shoulder Granular	(217)	Unsuitable Type B Removed
Structural			
(112)	Noise Wall	(11)	Unsuitable Type C
(112)	Noise Wall Footing	(218)	Unsuitable Type C Removed
(112)	Retaining Wall Back	(3)	Waste
(112)	Retaining Wall Back Excavate	(219)	Waste Removed
(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

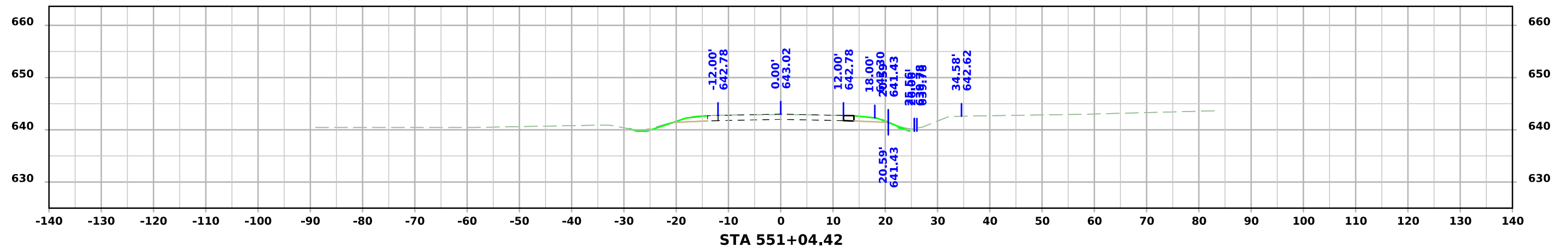
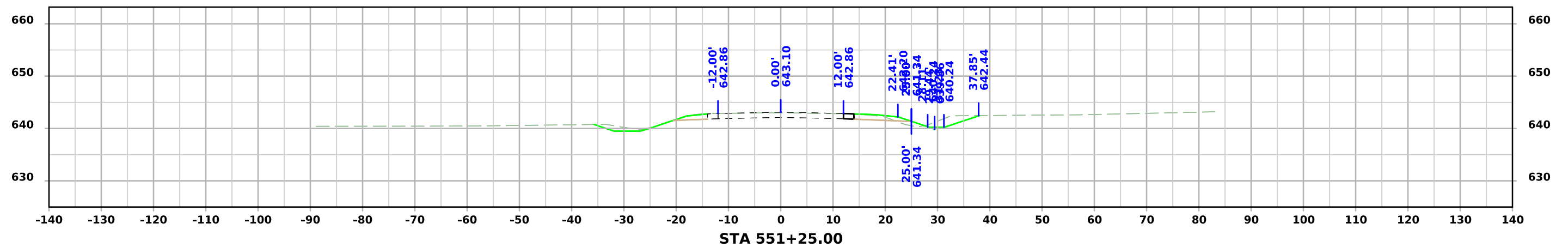
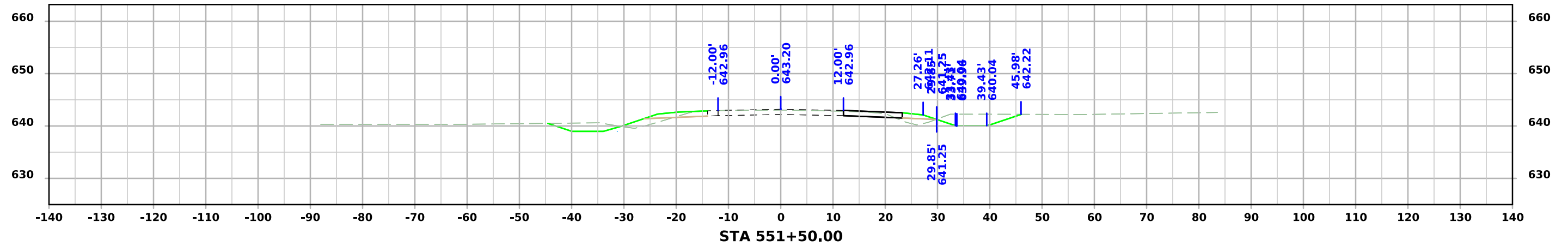
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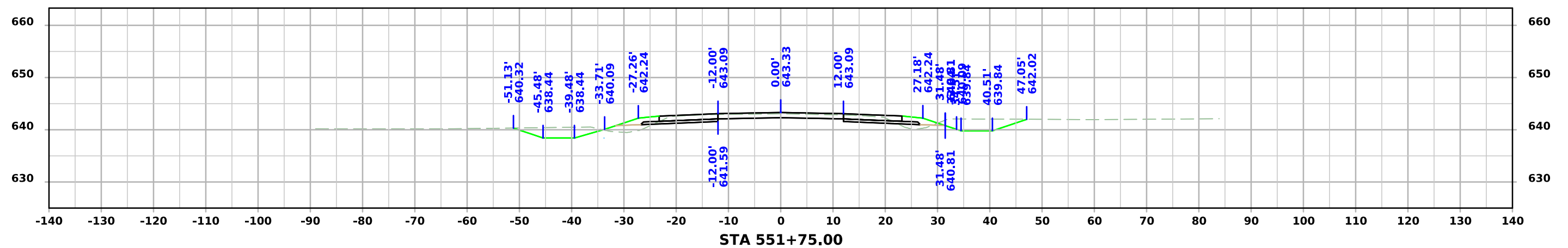
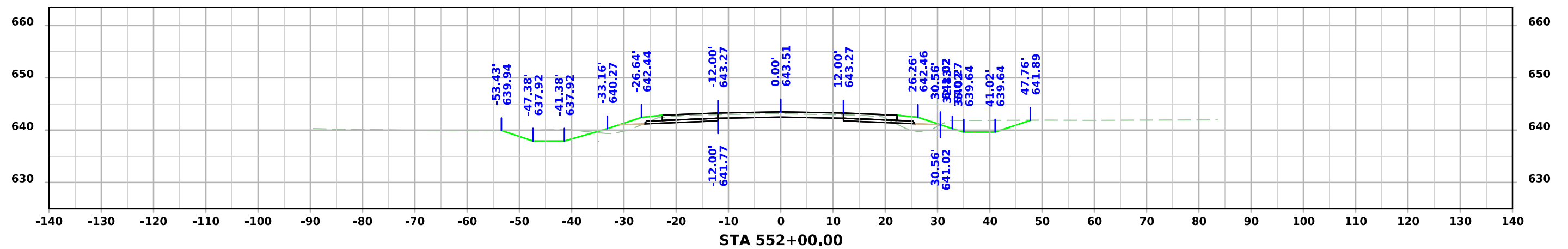
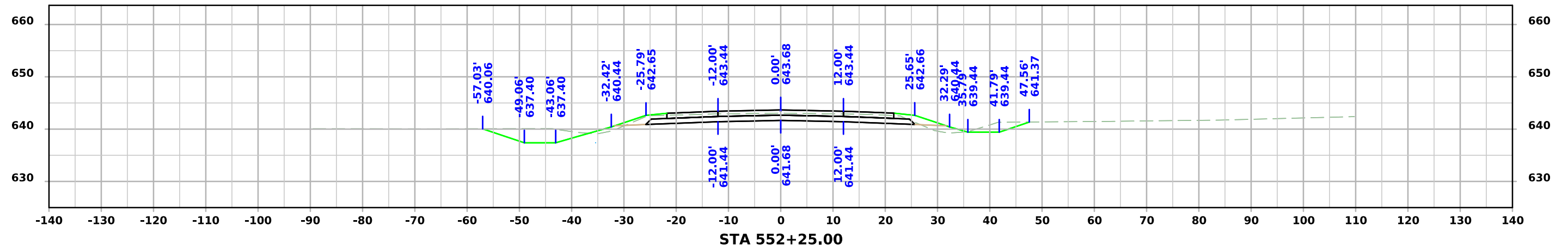
CROSS SECTIONS LEGEND AND INFORMATION SHEET

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

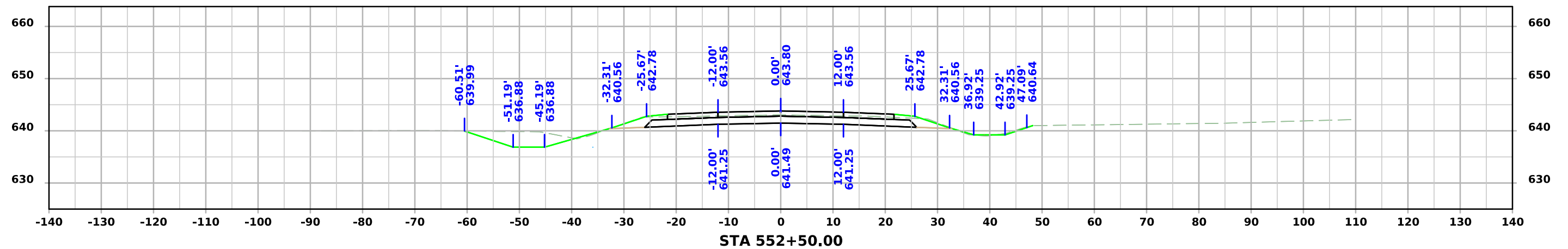
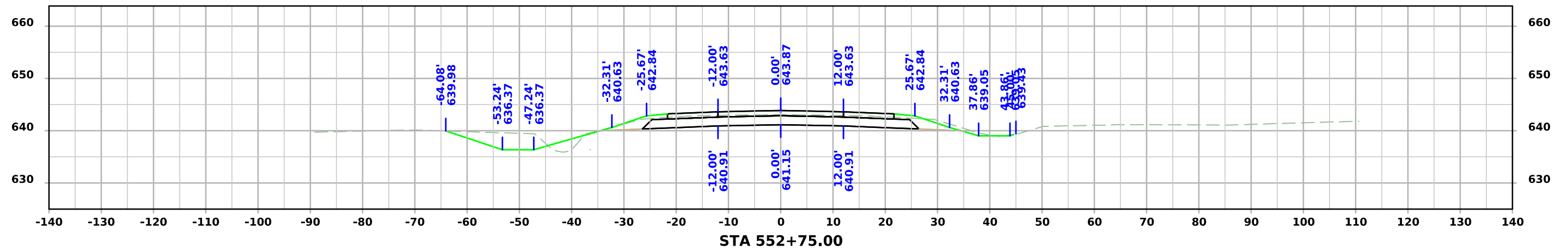
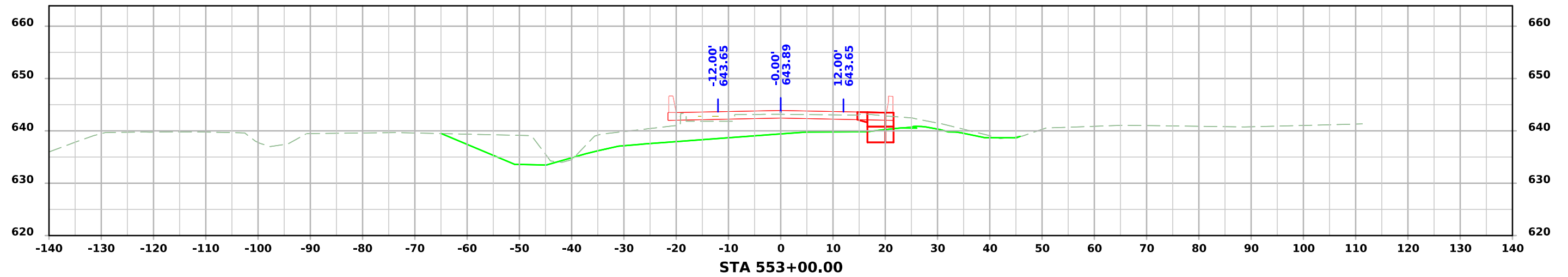
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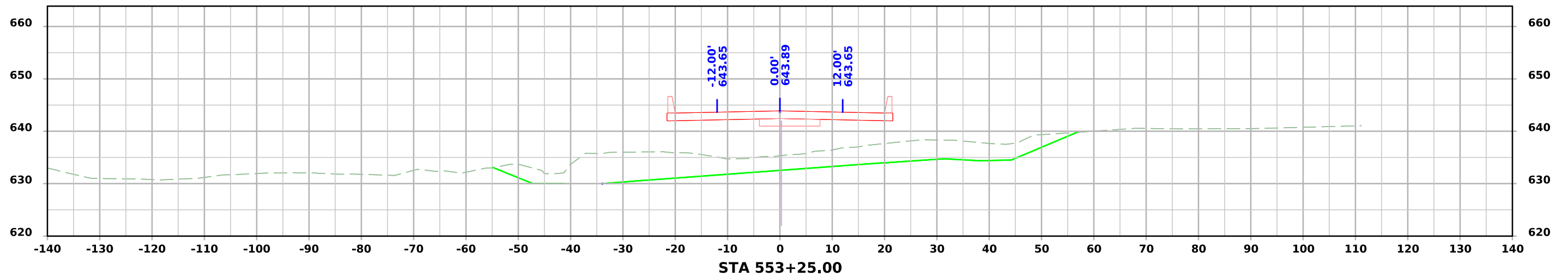
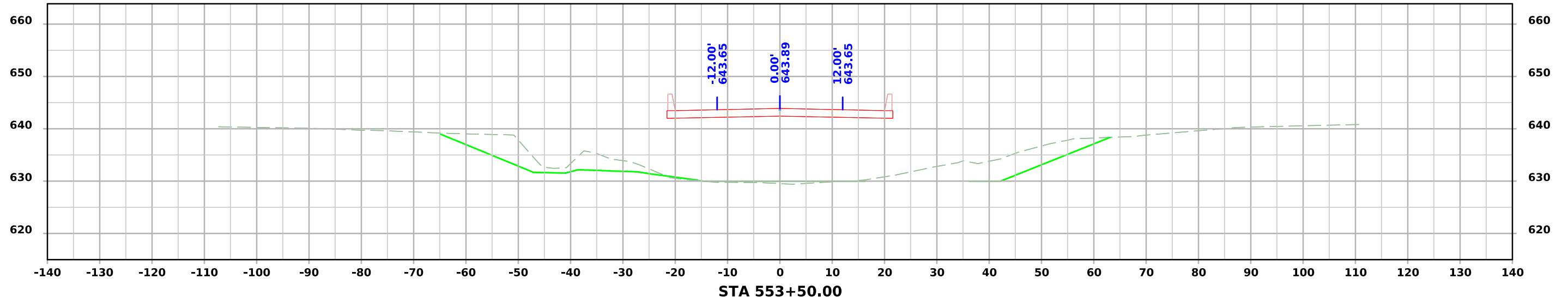
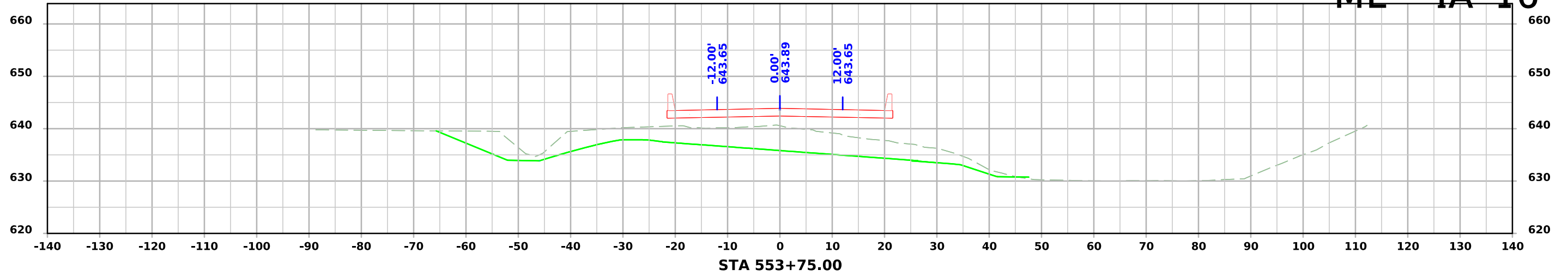
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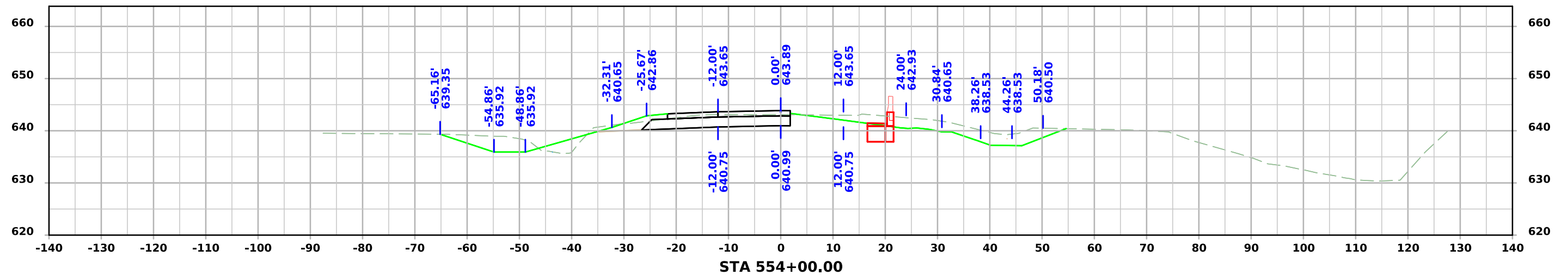
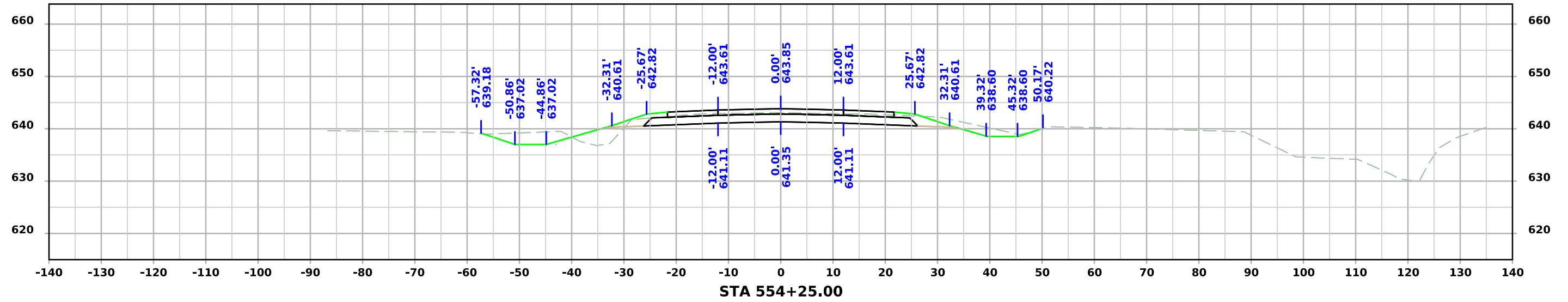


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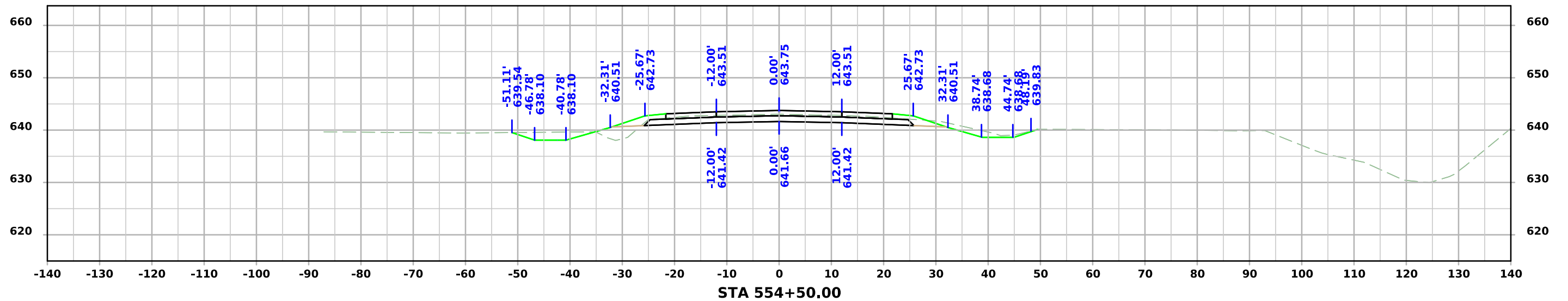
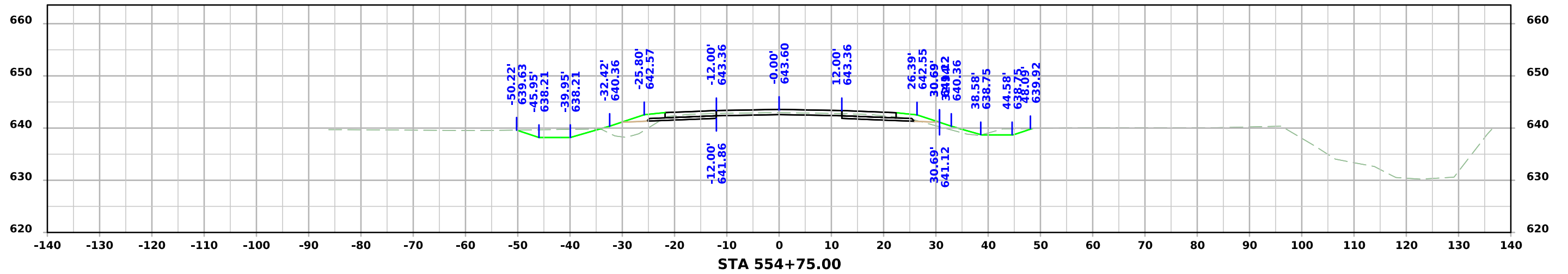
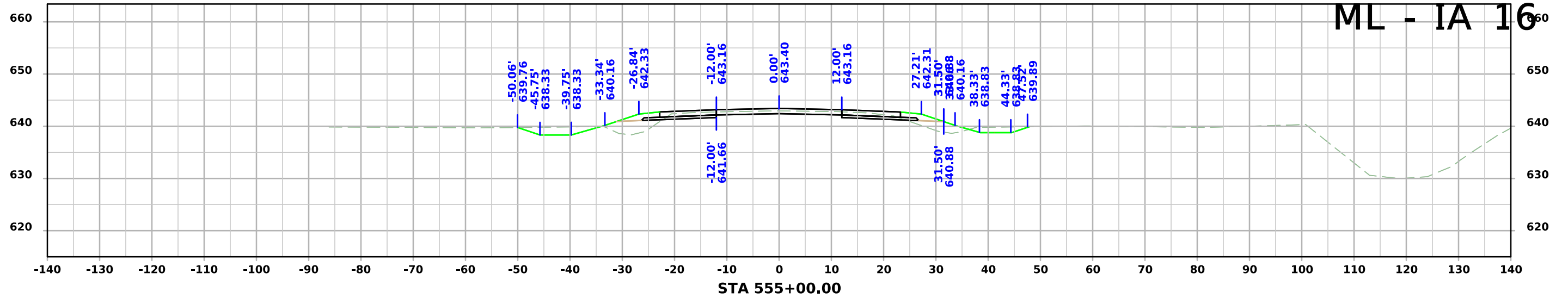


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