LETTING DATE
Nov 17 2026

Bridge Replacement-PPCB
BRF-015-1(013)--38-76

POCAHONTAS COUNTY

REVISIONS	TOTAL
	..

PROJECT IDENTIFICATION NUMBER
22-76-015-010
PROJECT NUMBER
BRF-015-1(013)--38-76
R.O.W. PROJECT NUMBER
STPN-015-1(014)--2J-76

IOWA DOT

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM
POCAHONTAS COUNTY
Bridge Replacement-PPCB
IA 15 Bridge over Pilot Creek
at the N Jct Co Rd C26

SCALES: As Noted

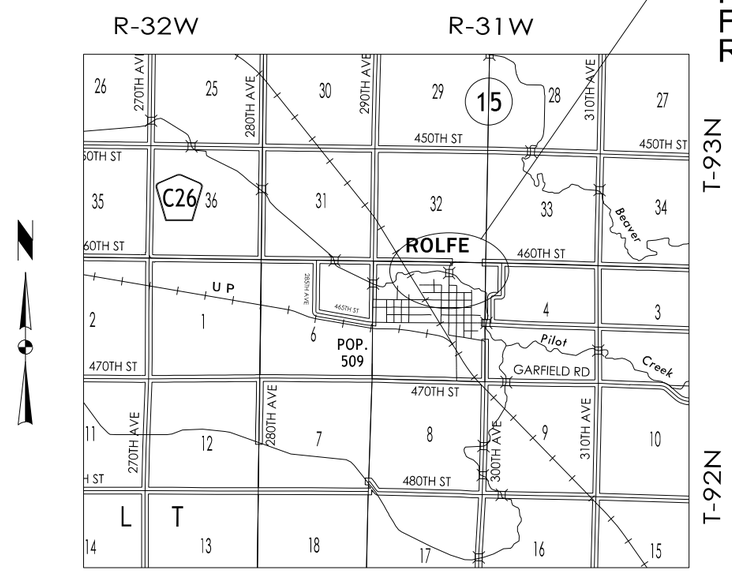
Refer to the Proposal Form for list of applicable specifications.

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

IOWA ONE CALL
1-800-292-8989
www.iowaonecall.com
811 Know what's below. Call before you dig.

INDEX OF SHEETS

PROJECT LOCATION
FHWA # 40310
REF LOC 6.6



DESIGN DATA RURAL			
2027	AADT	500	V.P.D.
2047	AADT	600	V.P.D.
20 --	DHV	–	V.P.H.
TRUCKS		17	%
Total Design ESALs		–	

INDEX OF SEALS

SHEET NO.	NAME	TYPE	BID QUANTITY SHEETS
A.1	X	Primary Signature Block	X
X	X	X	X

P9 PLAN - Date: 1/22/25
D4 PLAN - Date: 7/21/26

PRELIMINARY PLANS

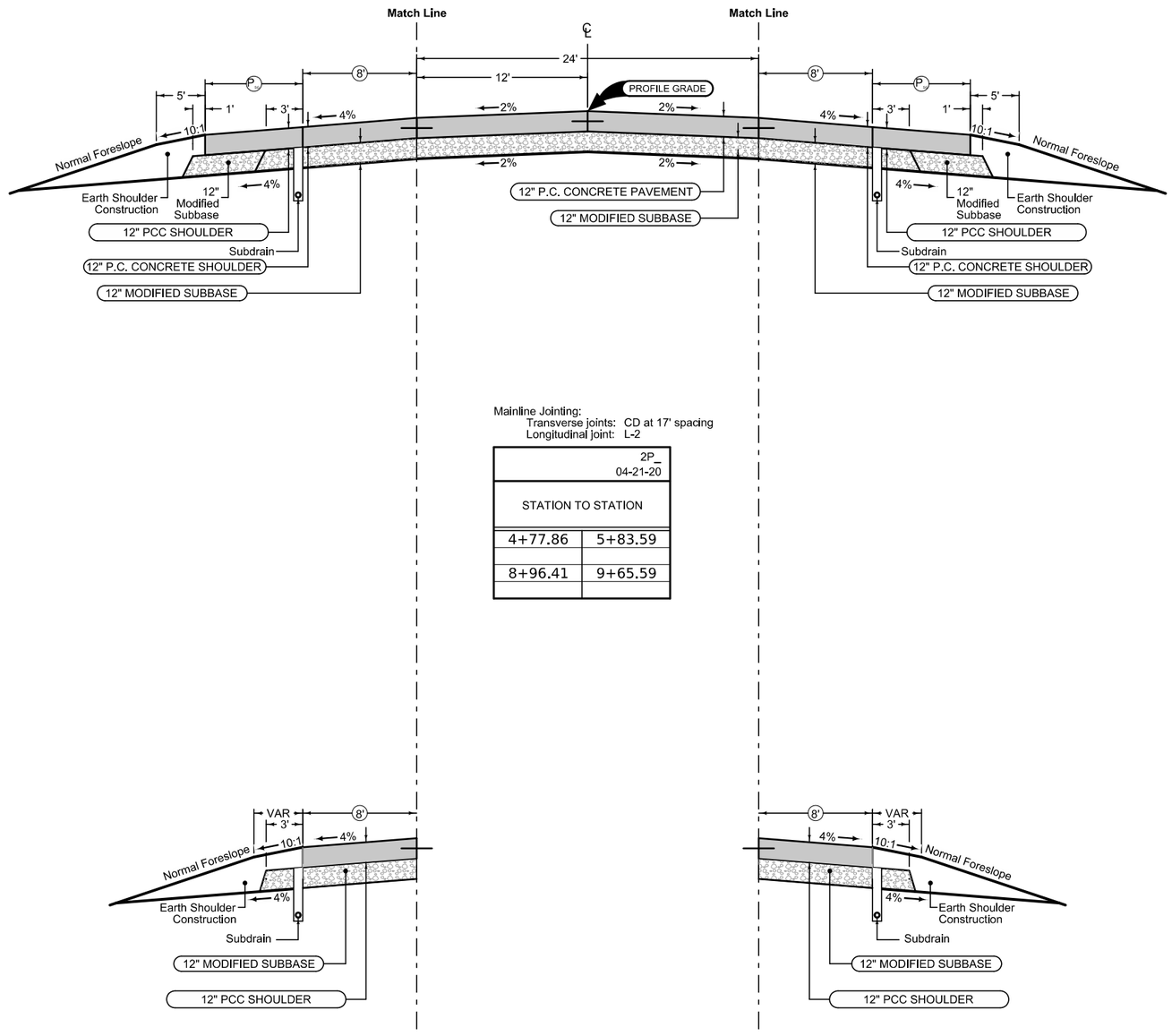
Subject to change by final design.

D5 PLAN - Date: 8/30/24

Full Depth PCC Shoulder with Paved Shoulder at Guardrail

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

2_P_FullPCC_ 04-20-21		
STATION TO STATION		(P) Feet
5+32.31	5+52.31	3.6
5+52.31	5+83.59	Varies
8+96.41	9+37.71	Varies
9+37.71	9+56.35	3.8



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

2P_ 04-21-20	
STATION TO STATION	
4+77.86	5+83.59
8+96.41	9+65.59

Full Depth PCC Shoulder with Paved Shoulder at Guardrail

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

2_P_FullPCC_ 04-20-21		
STATION TO STATION		(P) Feet
5+21.60	5+41.60	3.6
5+41.60	5+83.59	Varies
8+96.41	9+27.68	Varies
9+27.68	9+49.22	3.6

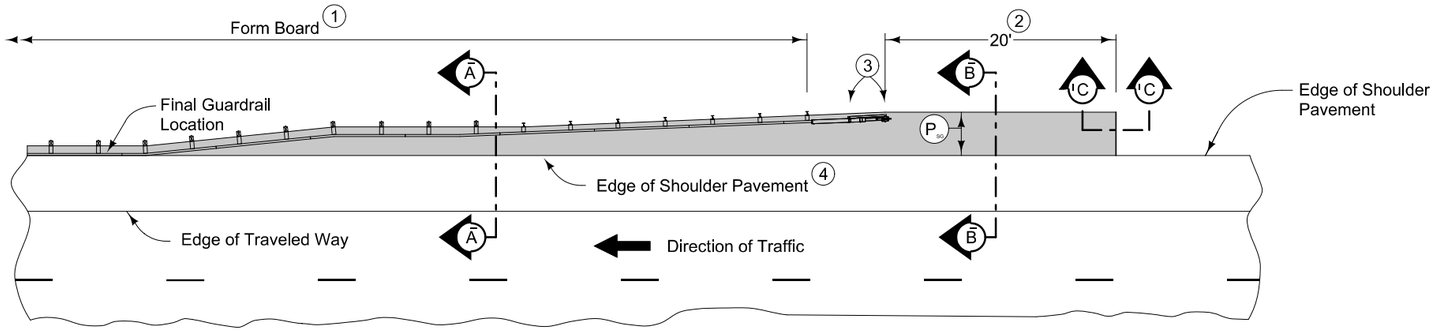
Full Depth PCC Shoulder

STATION TO STATION	
4+77.86	5+32.31
9+56.35	9+65.59

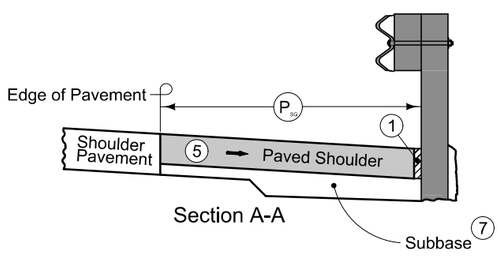
Full Depth PCC Shoulder

STATION TO STATION	
4+77.86	5+21.60
9+49.22	9+65.59

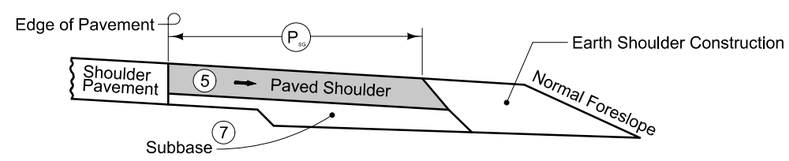
IA 15



PLAN VIEW

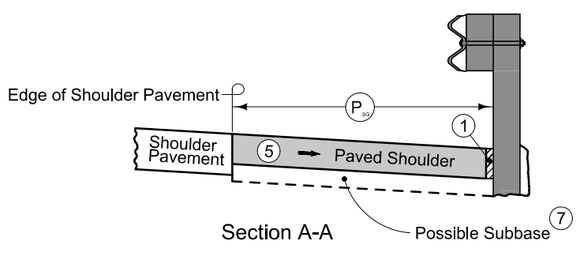


Section A-A

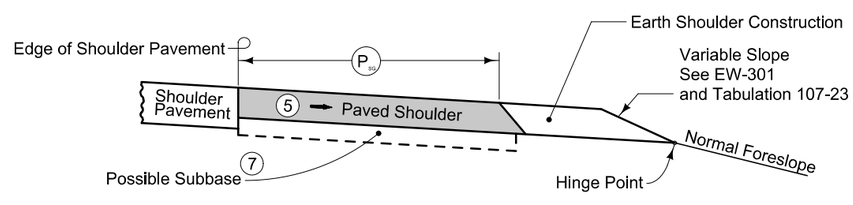


Section B-B

NEW CONSTRUCTION 6



Section A-A



Section B-B

EXISTING SHOULDER

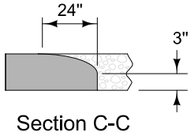
DESIGNER INFO | 7158M MODIFIED

12" PCC Paved Shoulder at guardrail.

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 C-C
Roll down at granular shoulder or earth.

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

ACCESS POINTS AND SAFETY RAMPS

Refer to Cross-Sections

Length of Unclassified Pipe calculated is based on using Corrugated Metal Pipe.
(1) Refer to MI-210.
(2) Refer to EW-501.
(3) Refer to EW-501 or EW-502.
*Predetermined for access point not constructed with this project.

Line No.	Station	Side	Access Type	Descriptor	Case	Curb Type	Curb Length (1) (LF)	Width (FT)	PR (1) (2) (FT)	SR (2) (FT)	Pipe Culvert (H) (3) (FT)	Pipe Culvert Size (3) (IN)	Culvert Length (3) (LF)	Pipe Culvert Lt. (3) (LF)	Pipe Culvert Rt. (3) (LF)	Culvert Aprons (3) (No.)	Driveway Surface Type	Driveway Surface Area (SY)	Driveway Surfacing Material (TON)	Remarks
1.0	4+98.00	Right	C					20.0		10.0	1.3	18.0	40.0	28.10	23.28	2		63.8	0.372	

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
- WH Water Hydrant (Rural)
- ST Septic Tank
- C Cistern
- LP L.P. Gas Tank (No Footing)
- UST Underground Storage Tank
- Latrine
- Satellite TV Dish
- WHU Water Hook Up
- RT Radio Tower
- TA Tower Anchor
- Guardrail (Beam or Cable)
- GP Guard Post (one or two)
- Guard Post (over two)
- FP Filler Pipe
- GV Gas Valve
- WV Water Valve
- SL Speed Limit Sign
- MM Mile Marker Post
- SIGN Sign
- TCB Traffic Signal Control Box
- RRB Rail Road Signal Control Box
- TSB Telephone Switch Box
- EB Electric Box

UTILITY LEGEND

Utilities Contact Information

E1

Billie Reid
Real Estate and ROW Representative II
Alliant Energy
200 1st St SE
Cedar Rapids, IA 5240
(319) 786-3703
billiereid@alliantenergy.com

T1

Bruce Schany
Plant Tech
Northwest Communications
844 Wood Street
Havelock, IA 50546
(712) 776-2222
bschany@ncn,net

G
W

Angela Montag
City Clerk
ROLFE
319 Garfield Street
Rolfe, IA 50581-1119
(712) 848-3124
rolfeclerk@ncn.net

FO
T2

John Thatcher
OSP Engineer
Windstream Communications
901 E Taylor St.
Creston, IA 50801
(641) 782-4546 Cell: (641) 990-3291
John.Thatcher@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

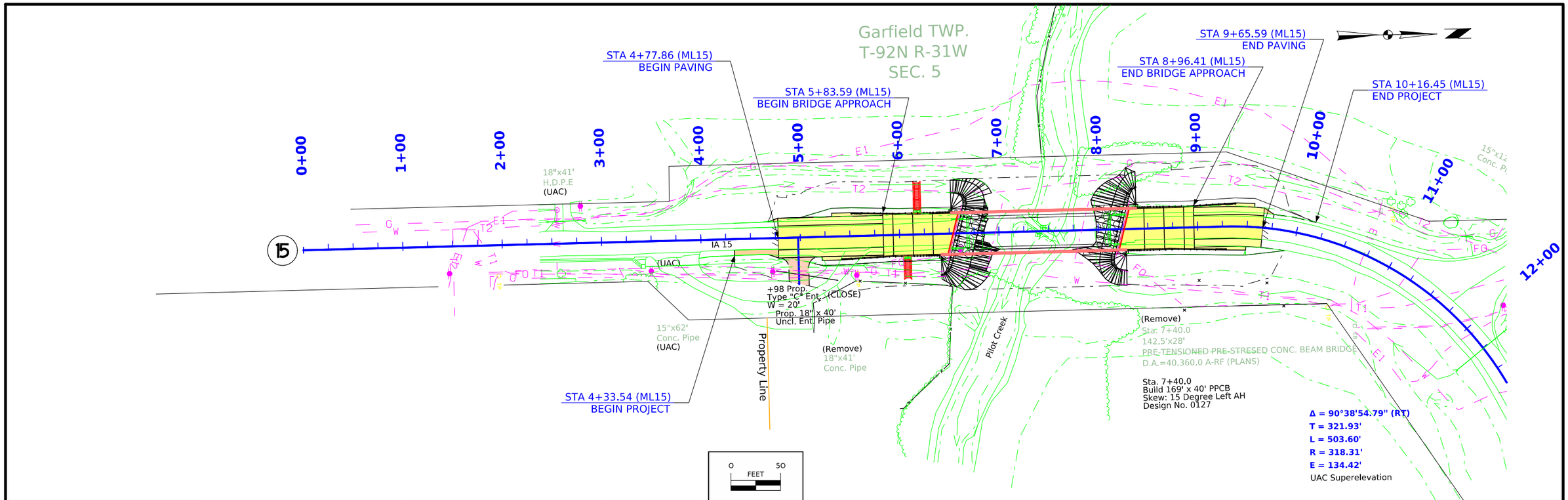
- Reference Point
- Station
- Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Trench Drain
- HighTension Cable Guardrail
- Sheet Pile
- Pavement Removal
- Clearing & Grubbing Area

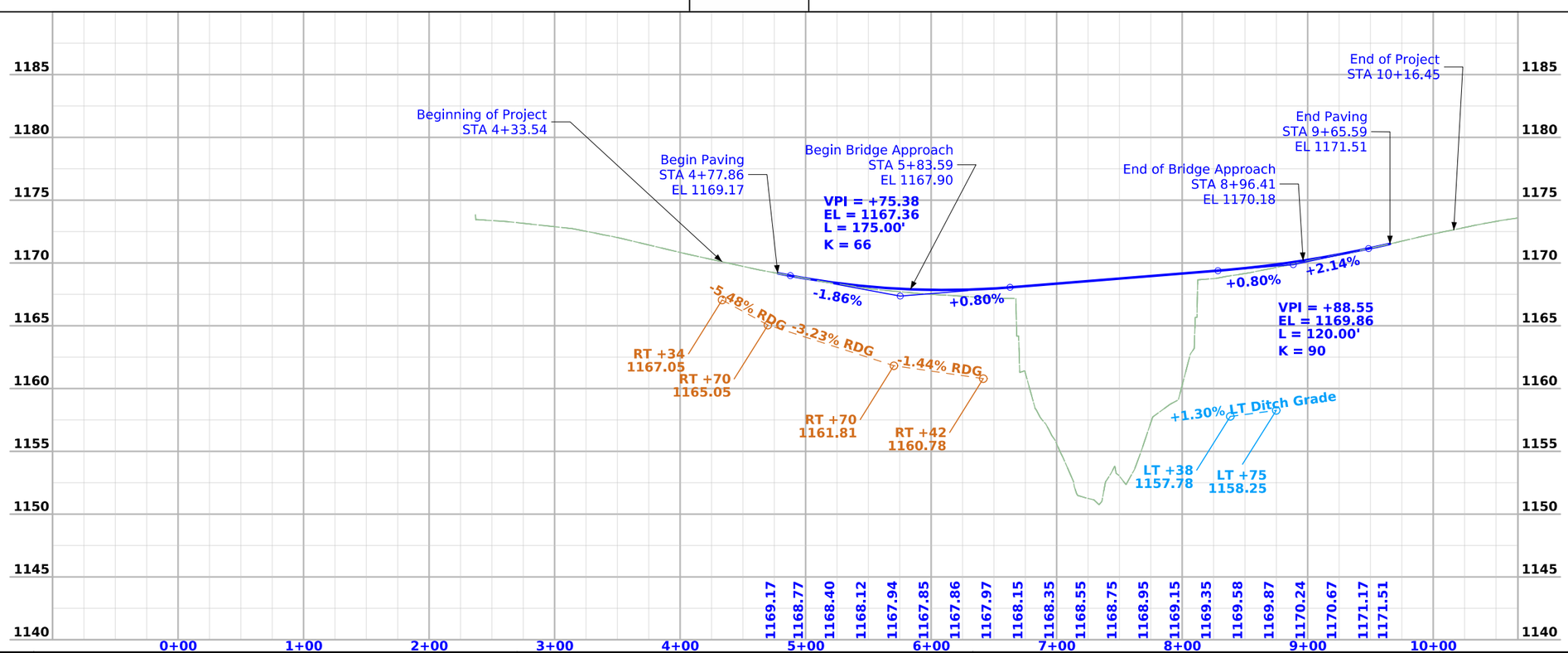
RIGHT-OF-WAY LEGEND

- 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)





FILE NO.	ENGLISH	DESIGN TEAM Jia/Schoenrock/Ryan	POCAHONTAS COUNTY	PROJECT NUMBER BRF-015-1(013)--38-76	SHEET NUMBER D.2

2:25:14 PM 8/29/2024 jryan3 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\7601501022\Design\CADD_Files\Sheet_Files\SHT_76015013_D02.dgn

SURVEY INDEX

Pocahontas County
BRF-015-1(13)--38-76
Pilot Creek at the N Jct Co Rd C26
PIN: 22-76-015-010
Type of Work: Bridge Replacement
Project Directory: 7601501022

Survey Personnel

Daniel Duncan – Survey Party Chief

Date(s) of Survey

Begin Date	09/20/2023
End Date	11/14/2023

General Information

This survey is for IA Hwy 15 Bridge replacement of the bridge that crosses Pilot Creek approximately 0.1 miles South of the Intersection of 460th Street and IA 15, on the North end of the town of Rolfe. 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 04 (U.S. SURVEY FOOT)
VERTICAL DATUM: NAVD88
GEOID MODEL: 2018u3

Alignment Information

The horizontal alignment for Iowa Hwy. 15 this survey is a retrace of As-built Plans No. F-1062(2). Survey stationing was equated to the plan center of bridge Sta. 7+40.0 and carried back and ahead without equation throughout the survey.

Survey stationing relates to as built plan stationing as follows:

PC Sta. 9+28.6 As-built Plans Project No. F-1062(2)
Survey PC Sta. 9+28.43

PI Sta. 12+51.4 As-built Plans Project No. F-1062(2)
Survey PI Sta. 12+50.37

PI Sta. 28+25.0 As-built Plans Project No. F-1062(2)
Survey PI Sta. 28+24.97

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 04 (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 04 (U.S. Survey Foot)
VERT. DATUM: NAVD88
Geoid Model: 2018u3

Point Name	Northing	Easting	Elevation	Feature Definition - Description
76300CP1	8703287.7	14583961.29	1158.62	CP SET IDOT FENO MONUMENT 3 IN DEEP LOCATED .25MI NORTH OF 465TH STREET ON 300TH AVE IN THE NORTH DITCH
76300CP2	8704315.25	14584427.29	1182.6	CP SET IDOT FENO MONUMENT 3 IN DEEP LOCATED .1MI SOUTH OF 460TH STREET ON 300TH AVE IN THE EAST DITCH
760150085	8704205.29	14581936.62	1166.65	CP SET 5/8 X 40 RBR 3 IN DEEP LOCATED .25MI NORTH OF OAK STREET ON IA15 ON THE WEST SHOULDER
760150089	8704880.4	14582848.08	1183.48	CP FND IDOT ROW RAIL 6 IN ABOVE GROUND SET DIMPLE IN FLANGE LOCATED .3MI WEST OF THE 460TH STREET/300TH AVE INTERSECTION IN THE NORTH DITCH OF IA15

108_23A
8/15/22

TRAFFIC CONTROL PLAN

IA 15 will be closed during construction. Traffic will be maintained by an off-site detour. See Sheet J.4 for detour route.

511 TRAVEL RESTRICTIONS

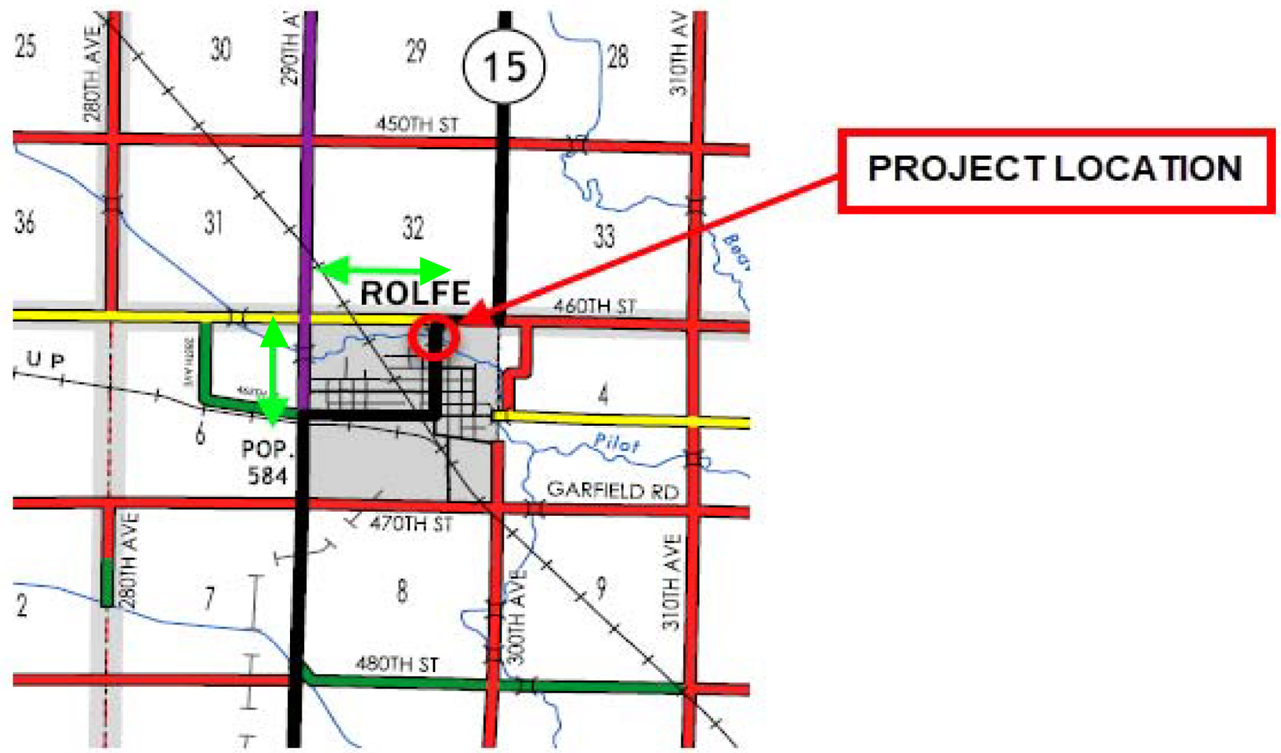
Line No.	Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No. or Structure ID or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
1.0	IA 15		Pocahontas					None					No Restrictions

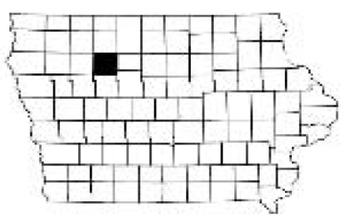
111_01
10/14/22

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	





Pocahontas County

Pilot Creek at the N Jct Co Rd C26

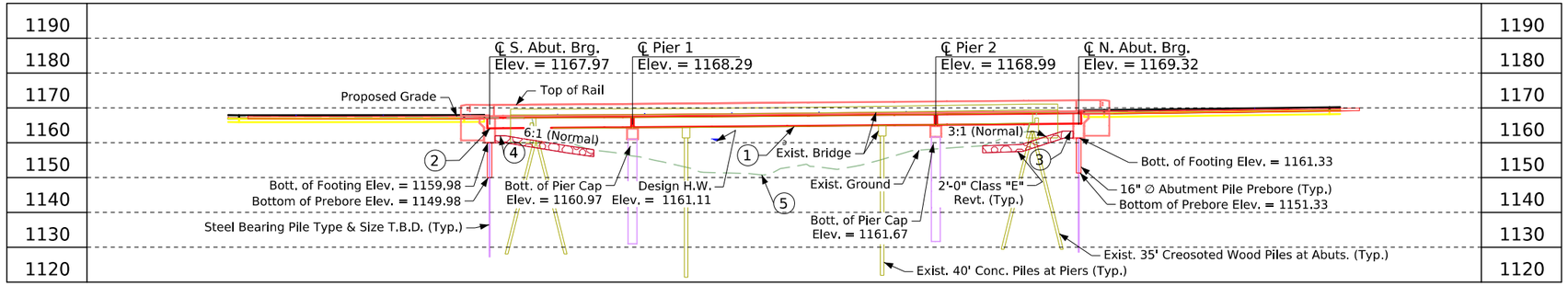
BRF-015-1(013)- -38-76

PIN: 22-76-015-010

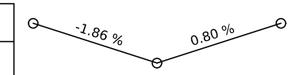
FILE NO.	ENGLISH	DESIGN TEAM Jia/Schoenrock/Ryan	POCAHONTAS COUNTY	PROJECT NUMBER BRF-015-1(013)--38-76	SHEET NUMBER J.4

1:48:54 PM 4/22/2024 jryan3 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\7601501022\Design\CADD_Files\Sheet_Files\SHT_76015013_J5.dgn

Control Point: 760150089 FND IDOT ROW RAIL 6 IN ABOVE GROUND SET DIMPLE IN FLANGE LOCATED .3MI WEST OF THE 460TH STREET/300TH AVE INTERSECTION IN THE NORTH DITCH OF IA15, N=8704880.4, E=14582848.08, EL.=1183.48
760150085 SET 5/8 X 40 RBR 3 IN DEEP LOCATED 0.25 MI NORTH OF OAK STREET ON IA 14 ON THE WEST SHOULDER, N=8704205.29, E=14581936.62, EL.=1166.65



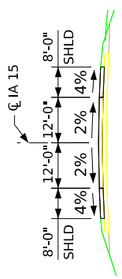
Longitudinal Section Along ℄ Approach Roadway



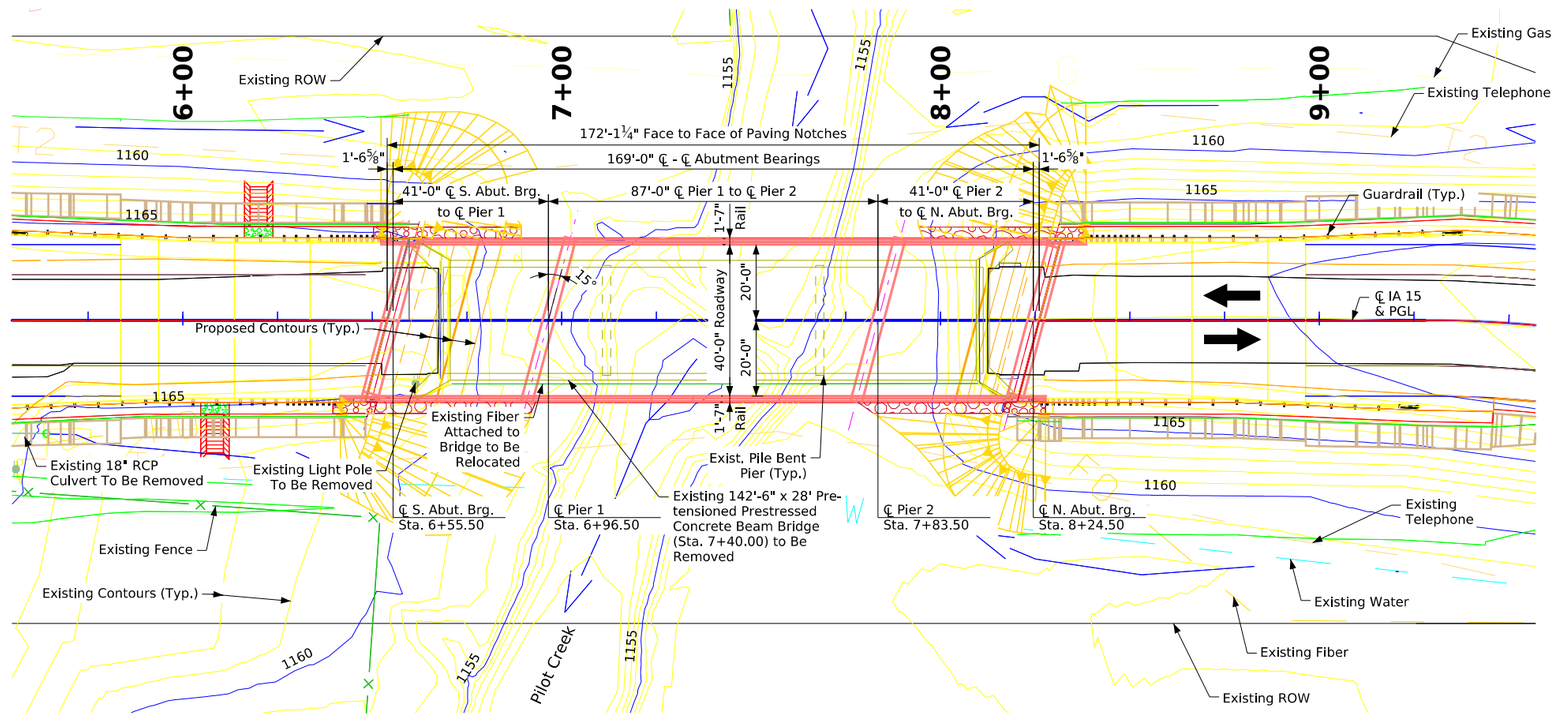
VPI Sta. = 5+75.375
VPI Elev. = 1167.355
L = 175'

Proposed Profile Grade IA 15

① Channel Low Beam = See Hydraulic Data
② Operational Low Beam = See Hydraulic Data
③ Top of North Berm Elev. = 1163.33
④ Top of South Berm Elev. = 1161.98
⑤ Streambed Elev. = 1150.74 ±



Typical Roadway Section



Situation Plan

0 20
Scale In Feet

Hydraulic Data

RIDB: PILOTC_POCA, River Mile 6.95
Discharges from USGS SIR 2013-5086
Regression Equations for Region 1

Drainage Area = 65.5 Sq. Mi.
(D.A.) Main Channel Slope = 3.5 Ft./Mi.
Site Stream (HGL) Slope = 0.065% (3.4Ft./MI.)
Extreme Highwater Stage = Unknown
Avg. Low Water Stage = ~1152.4

Operational Low Beam = 1163.70
Channel Low Beam = 1164.39

Roadway Overtop El. 1167.85 (>Q_{500})
Sta. 6+10

Q_{25} = 1880 cfs
Stage = 1160.73

Q_{50} (Design) = 2250 cfs
Stage = 1161.11
Operational Freeboard = 2.59 Ft.
Backwater = 0.35 Ft.
Avg. Bridge Velocity = 3.7fps

Q_{100} = 2650 cfs
Stage = 1161.49
Operational Freeboard = 2.21 Ft.
Backwater = 0.46 Ft.
Avg. Bridge Velocity = 4.0 fps

Q_{200} = 3070 cfs
Stage = 1161.84
Backwater = 0.57
Calculated Design Scour = 1141.06

Q_{500} = 3540 cfs
Stage = 1162.21
Operational Freeboard = 1.49 Ft.
Backwater = 0.70 Ft.
Avg. Bridge Velocity = 4.6 fps
Calculated Check Scour = 1140.51

General Notes:

--This design is for the replacement of the existing 142'-6 x 28' Prestressed Pretensioned Concrete Beam Bridge, Pocahontas Co. Design 556, FHWA No. 40310, Maint. No. 7606.6S015.

Design Notes:

--TL-4 Bridge Railing Proposed
--Pier type - Pile Bent (individually encased) Assumed Width = 2'-0"
--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.

Plan Notes:

--Top of bridge deck at centerline roadway is 0.03' below the profile grade to account for deck cross slope and parabolic crown.
--Class E revetment stone is embedded.
--The bridge will be designed to withstand the applicable effects of ice and the horizontal stream loads and uplift forces associated with the Q_{100} flood.

Traffic Data

2027 AADT	500 V.P.D.
TRUCKS	17 %

Utilities Note:

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

General Utility Symbols:

E - Electric Line
T - Telephone Line
W - Water Line
FO - Fiber Optic Line
G - Gas Line
Power Poles

Location

IA 15 over Pilot Creek
In City of Rolfe
T-92N R-31W
Section 5
Garfield Township
Pocahontas County
FHWA No. 40310 (Existing)
FHWA No. 40311 (Proposed)
Bridge Maint. No. 7606.6S015
Latitude 42.818936°
Longitude -94.527898°

Hydraulic Design

LICENSED PROFESSIONAL ENGINEER Brian J. Birkland 17375 IOWA

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: Brian J. Birkland — Date: 7-26-2024
Printed or Typed Name: Brian J. Birkland
My license renewal date is December 31, 2024
Pages or sheets covered by this seal: V.1-V.3

PRELIMINARY

Design For 15° LA
169'-0" x 40'-0" Pretensioned Prestressed Concrete Beam Bridge
41'-0" End Spans — BTB Beams — 87'-0" Interior Span

Situation Plan
STA. 7+40.00 (IA 15)
Turn-in Date: July, 2024

Pocahontas County
IOWA DEPARTMENT OF TRANSPORTATION
Design No. 0127 — Design Sheet No. 1 of 3 — FHWA No. 40311

FILE NO. 32449	ENGLISH	DESIGN TEAM WHKS & Co.	Pocahontas COUNTY	PROJECT NUMBER BRF-015-1(13)--38-76	SHEET NUMBER V.1

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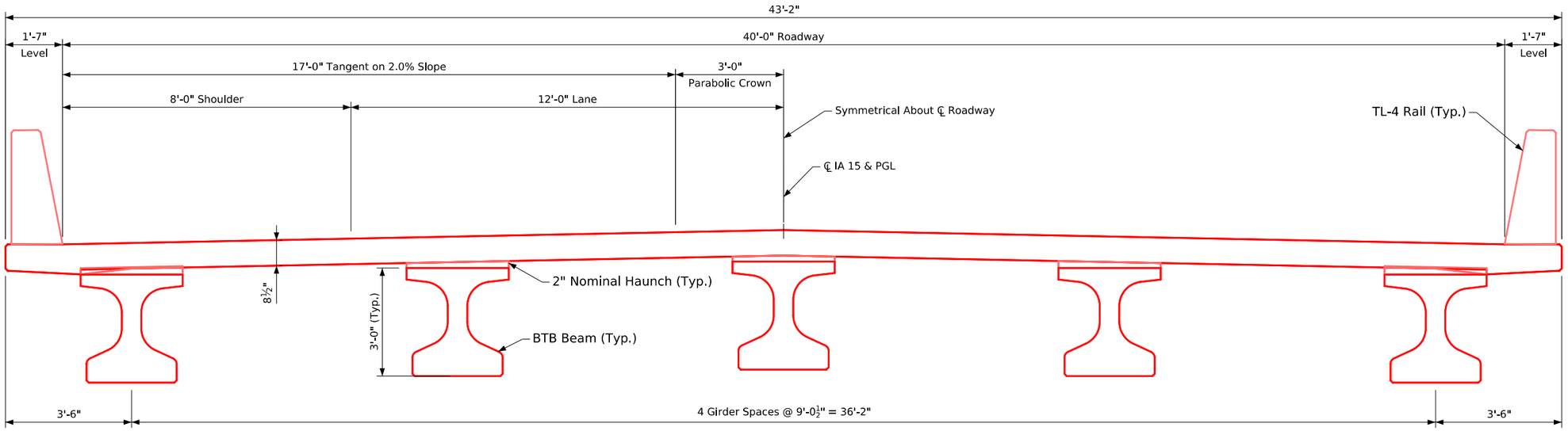


Transverse Section

(Looking North)

PRELIMINARY

Design For 15° LA

169'-0" x 40'-0" Pretensioned Prestressed Concrete Beam Bridge

41'-0" End Spans | BTB Beams | 87'-0" Interior Span

Situation Plan - Misc.

STA. 7+40.00 (IA 15)

Turn-in Date: July, 2024

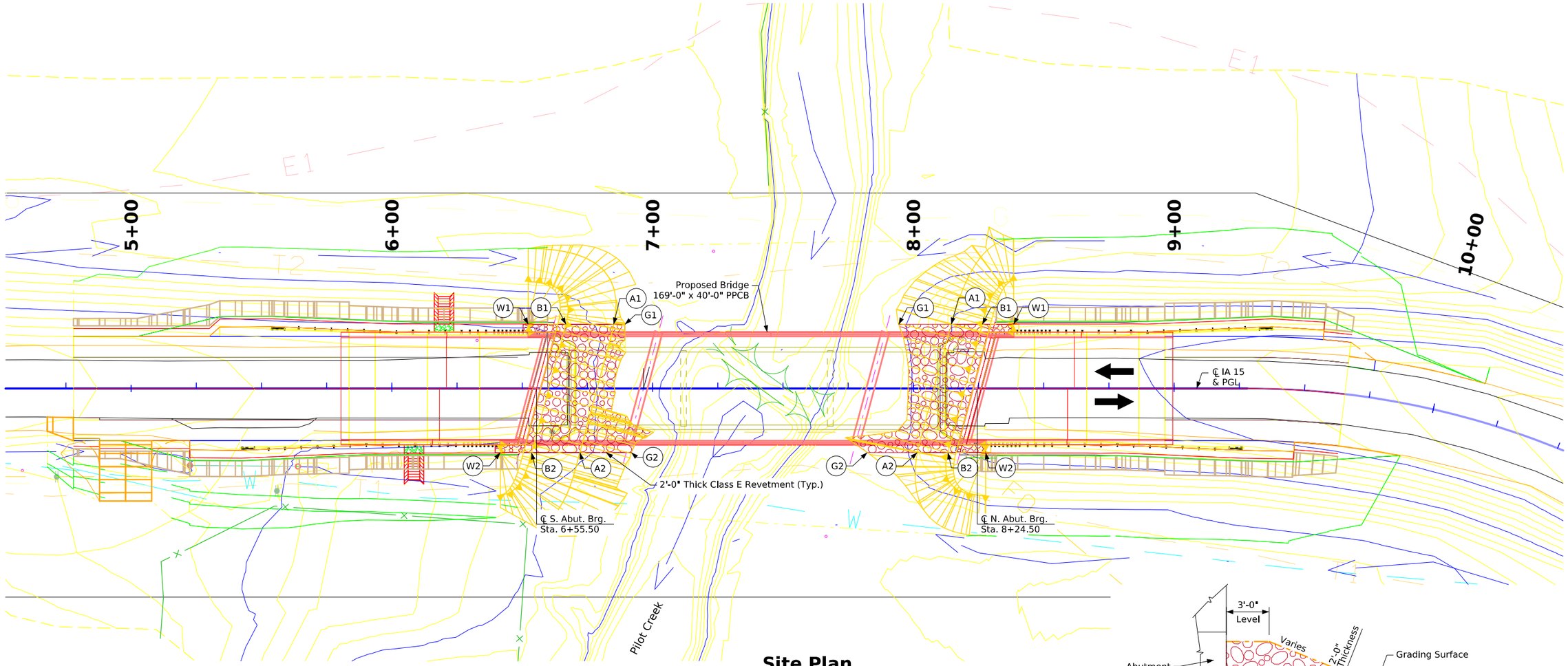
Pocahontas County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. 0127 | Design Sheet No. 2 of 3 | FHWA No. 40311

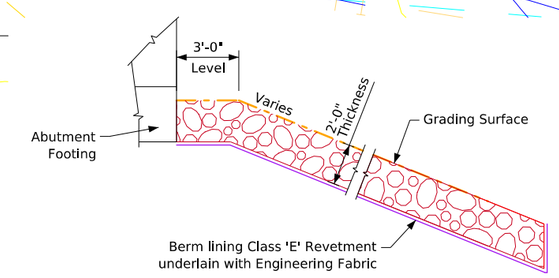
FILE NO. 32449	ENGLISH	DESIGN TEAM WHKS & Co.	Pocahontas COUNTY	PROJECT NUMBER BRF-015-1(13)--38-76	SHEET NUMBER V.2

Control Point: 760150089 FND IDOT ROW RAIL 6 IN ABOVE GROUND SET DIMPLE IN FLANGE LOCATED .3MI WEST OF THE 460TH STREET/300TH AVE INTERSECTION IN THE NORTH DITCH OF IA15, N=8704880.4, E=14582848.08, EL.=1183.48
760150085 SET 5/8 X 40 RBR 3 IN DEEP LOCATED 0.25 MI NORTH OF OAK STREET ON IA 14 ON THE WEST SHOULDER, N=8704205.29, E=14581936.62, EL.=1166.65



Site Plan

0 20
Scale In Feet



Section Thru Embedded Berm Lining

Normal to Berm Slope

Berm Slope Location Table

Points	South Abutment			North Abutment		
	Station	Offset	Elev.	Station	Offset	Elev.
A1	6+85.07	24.58' Lt.	1158.0	8+14.53	24.58' Lt.	1159.5
A2	6+72.08	24.58' Rt.	1158.0	8+01.48	24.58' Rt.	1159.5
B1	6+66.75	24.58' Lt.	1161.98	8+26.43	24.58' Lt.	1163.33
B2	6+53.37	24.58' Rt.	1161.98	8+13.25	24.58' Rt.	1163.33
G1	6+89.40	24.58' Lt.	1158.0	7+94.35	24.58' Lt.	1159.5
G2	6+91.83	24.58' Rt.	1158.0	7+82.31	24.58' Rt.	1159.5
W1	6+52.31	24.58' Lt.	1167.43	8+38.41	24.58' Lt.	1168.91
W2	6+41.59	24.58' Rt.	1167.37	8+27.69	24.58' Rt.	1168.82

Berm slope elevations reflect the grading surface.

Estimated Berm Armoring Quantities

Location	Revetment CL. E (Ton)	Engineering Fabric (SY)	CL. 10 Channel Excavation (CY)
South Abutment Berm	171.3	215.8	120.9
North Abutment Berm	154.1	199.3	108.7
Totals	325.4	415.1	229.6

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.

PRELIMINARY

Design For 15° LA

169'-0" x 40'-0" Pretensioned Prestressed Concrete Beam Bridge

41'-0" End Spans BTB Beams 87'-0" Interior Span

Situation Plan - Site

STA. 7+40.00 (IA 15) Turn-in Date: July, 2024

Pocahontas County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. 0127 Design Sheet No. 3 of 3 FHWA No. 40311

CROSS SECTION VIEW COLOR LEGEND

Design Color No.	Feature
Aggregate	
(64)	Choke Stone
(42)	Engineering Fabric
(8)	Flooded Backfill
(92)	Macadam Stone
(20)	Modified
(12)	Plowing Shaping
(14)	Porous Backfill
(8)	Revetment Class A
(6)	Revetment Class B
(62)	Revetment Class C
(188)	Revetment Class D
(28)	Revetment Class E
(12)	Shoulder Special Backfill
(12)	Special Backfill
(20)	Subbase
(20)	Subbase Lower
(20)	Subbase Upper
(118)	Subgrade Treatment
Asphalt	
(207)	HMA Base Course
(207)	HMA Interim Course
(207)	HMA Surface Course
Bridge	
(0)	Bridge
Concrete	
(0)	Barrier Concrete
(0)	Barrier Concrete Footing
(0)	Curb Gutter
(48)	Flowable Mortar
(0)	Median Concrete
(0)	PCC Pavement
(0)	Sidewalk
Existing	
(0)	Existing Pavement
Shoulder	
(209)	Shoulder HMA
(0)	Shoulder PCC
(6)	Shoulder Granular
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

Design Color No.	Feature
Grading	
(8)	Behind Curb Cut
(6)	Granular
(13)	Granular Back Fill
(48)	Rock Undercut
(8)	Shoulder Earth Fill
(2)	Side Slopes
(226)	Side Slopes Dressing
Substrata	
(128)	Boulder
(209)	Boulder Removed
(48)	Broken Weathered
(210)	Broken Weathered Removed
(3)	Core Out
(115)	Core Out Remove Only
(195)	Core Out Remove and Replace
(203)	Existing Pavement
(184)	Existing Pavement Remove Only
(200)	Existing Pavement Remove and Replace
(6)	Loam
(211)	Loam Removed
(80)	Rock
(212)	Rock Removed
(4)	Select Sand
(214)	Select Sand Removed
(3)	Shale
(215)	Shale Removed
(10)	Topsoil
(2)	Topsoil Remove Only
(4)	Topsoil Remove and Replace
Unsuitable / Waste	
(3)	Unsuitable Type A
(216)	Unsuitable Type A Removed
(13)	Unsuitable Type B
(217)	Unsuitable Type B Removed
(11)	Unsuitable Type C
(218)	Unsuitable Type C Removed
(3)	Waste
(219)	Waste Removed

NOTES:

Text

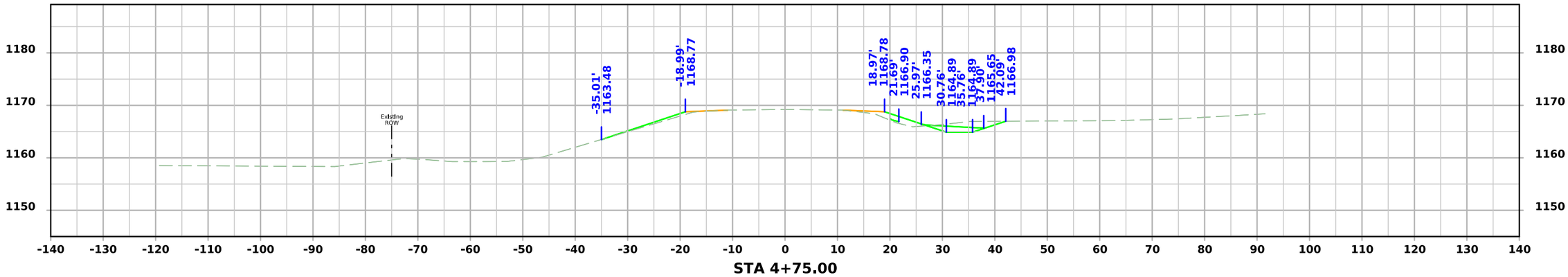
NOTES:

Text

CROSS SECTIONS
LEGEND AND INFORMATION SHEET

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

ML - IA15



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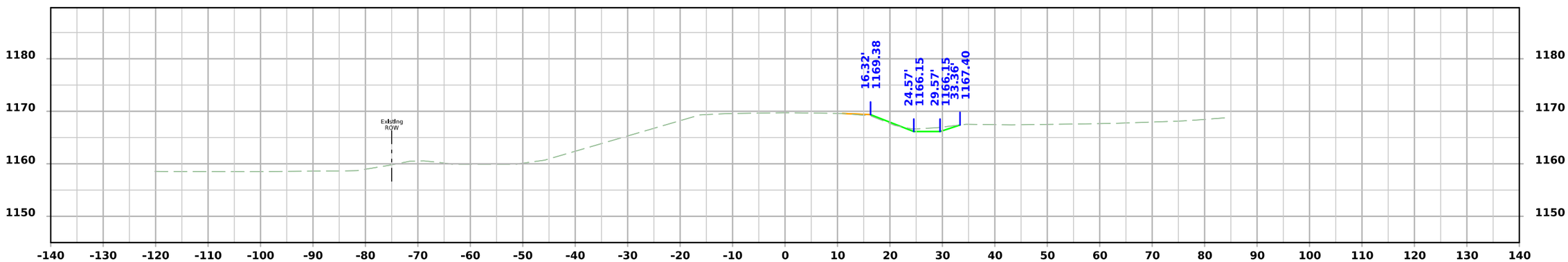

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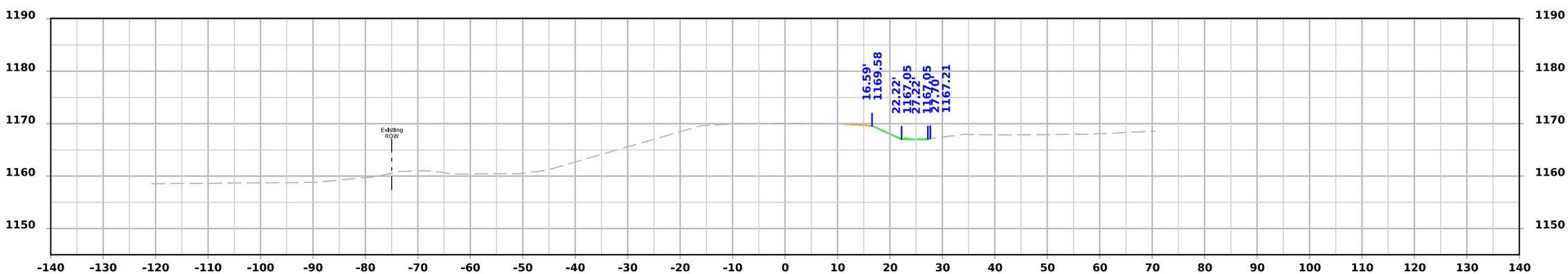

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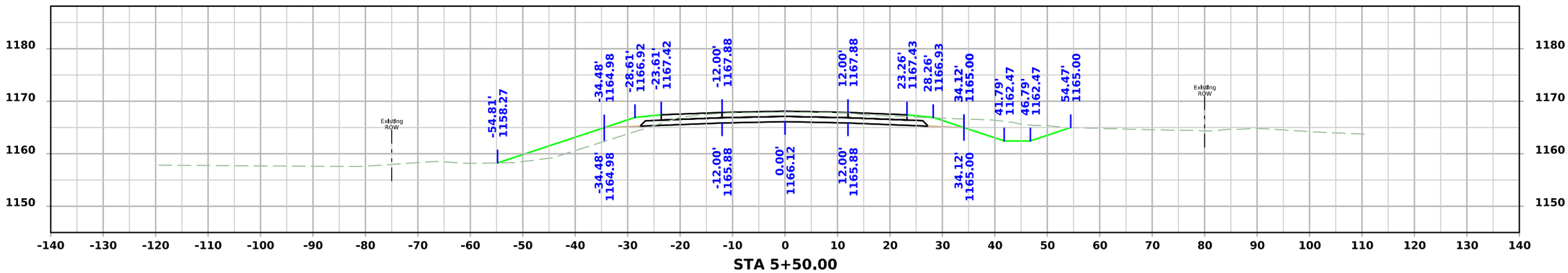
FILE NO.	ENGLISH	DESIGN TEAM Jia/Schoenrock/Ryan	POCAHONTAS COUNTY	PROJECT NUMBER BRF-015-1(013)--38-76	SHEET NUMBER W.2

ML - IA15



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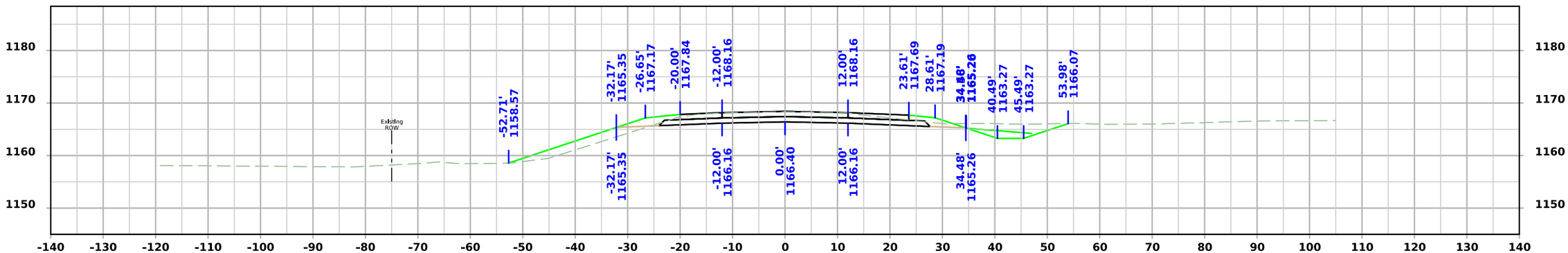

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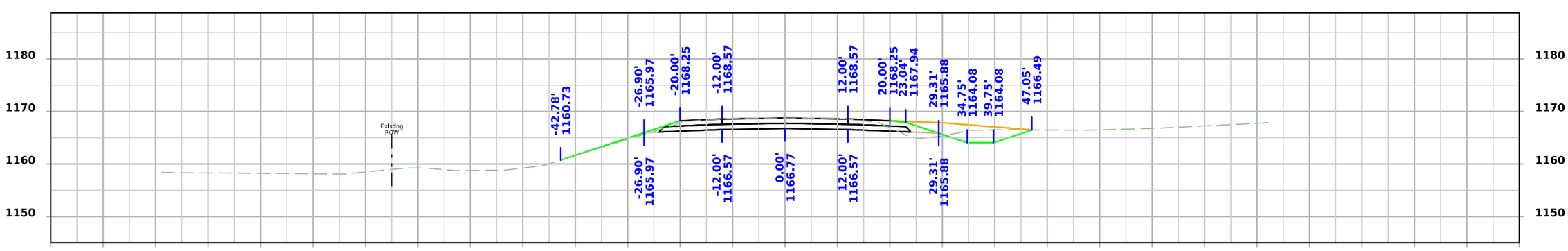

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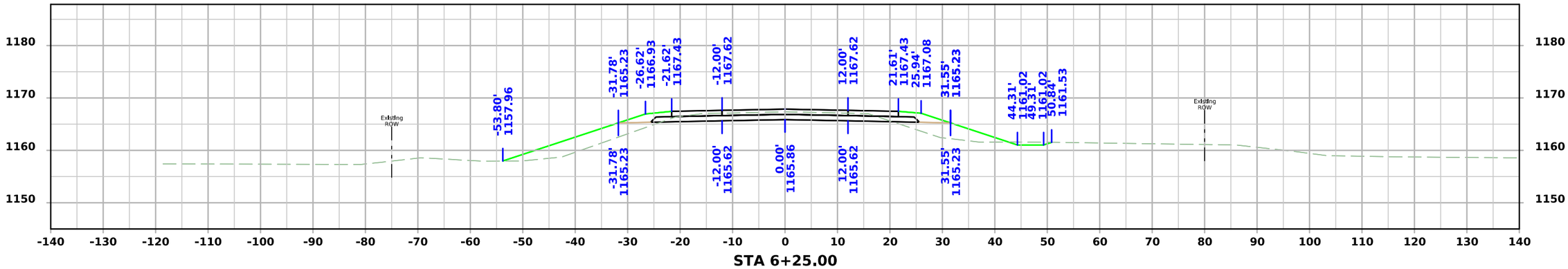
ML - IA15



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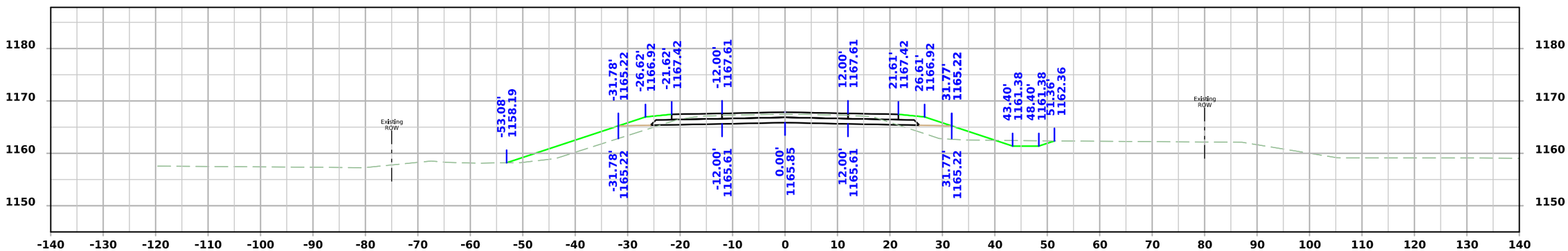

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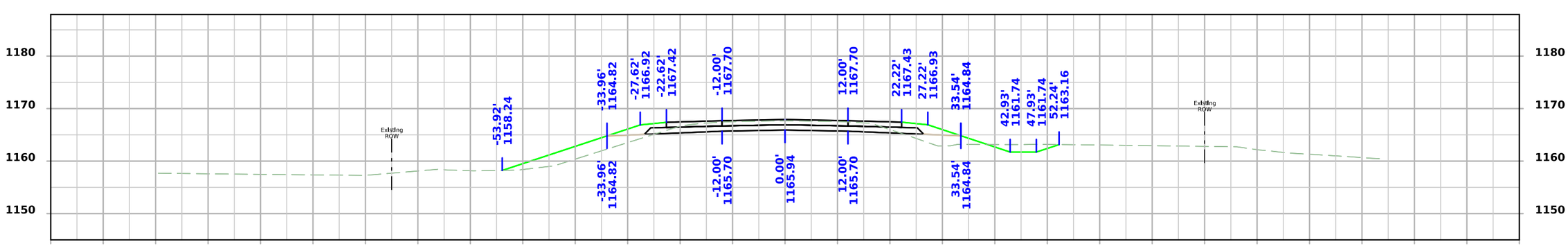

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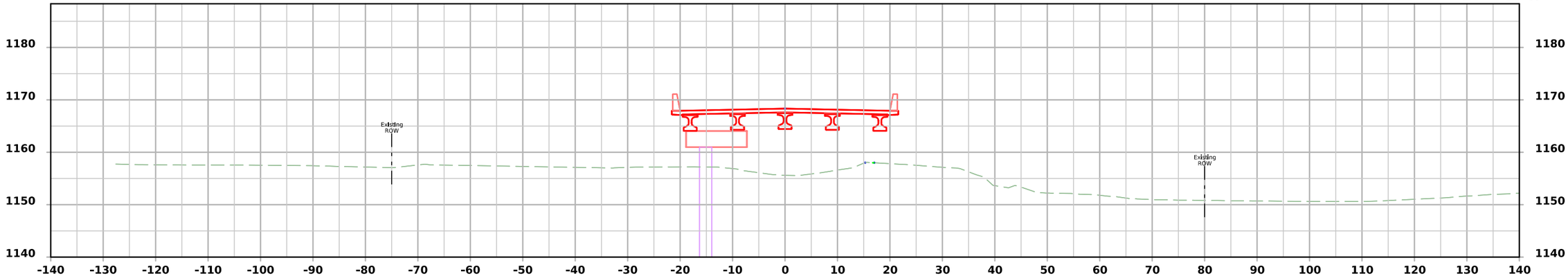
ML - IA15



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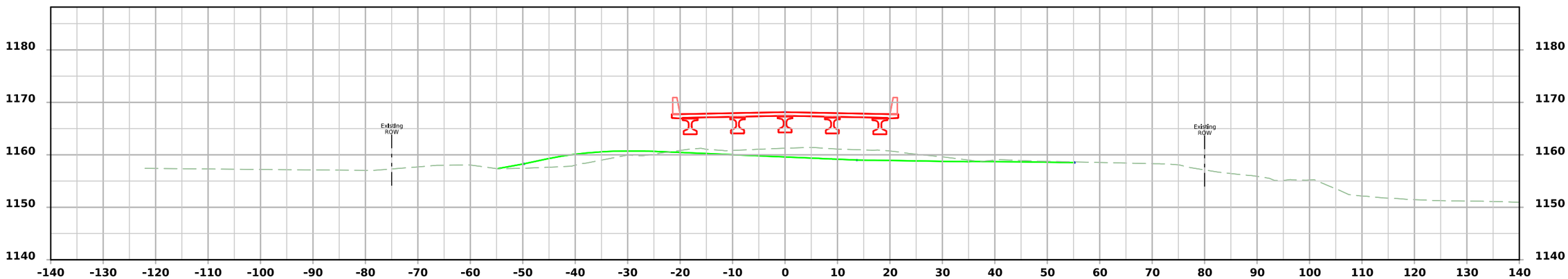

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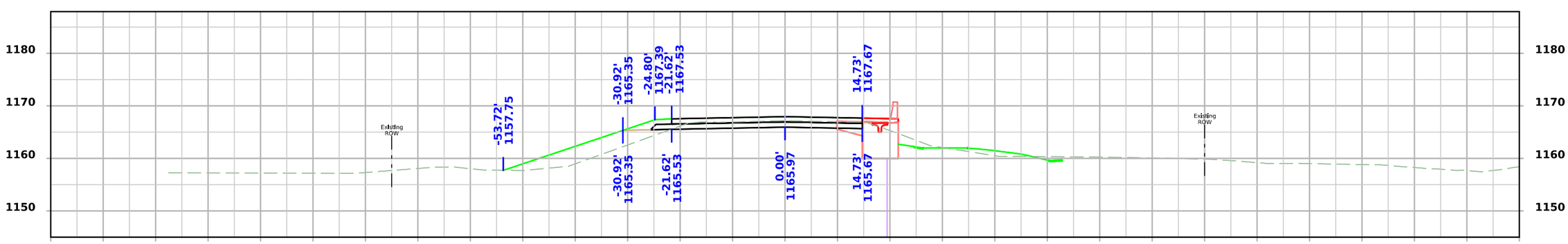

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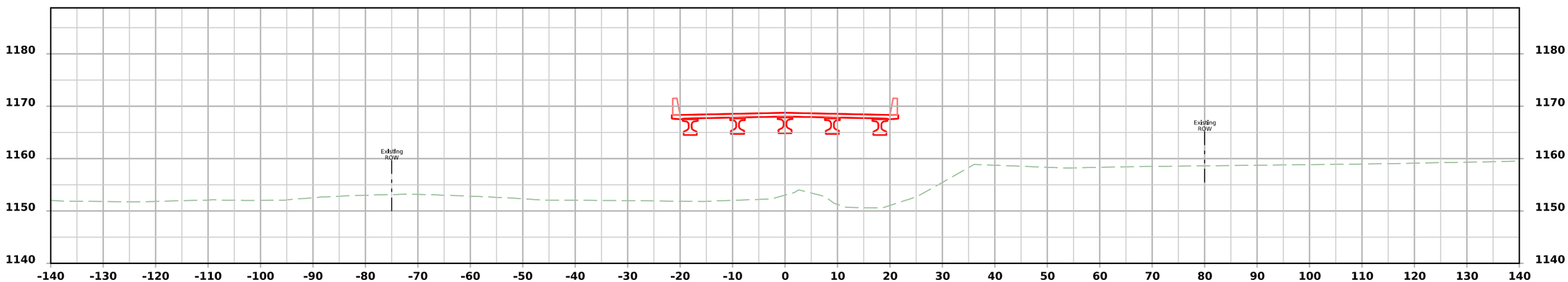
ML - IA15



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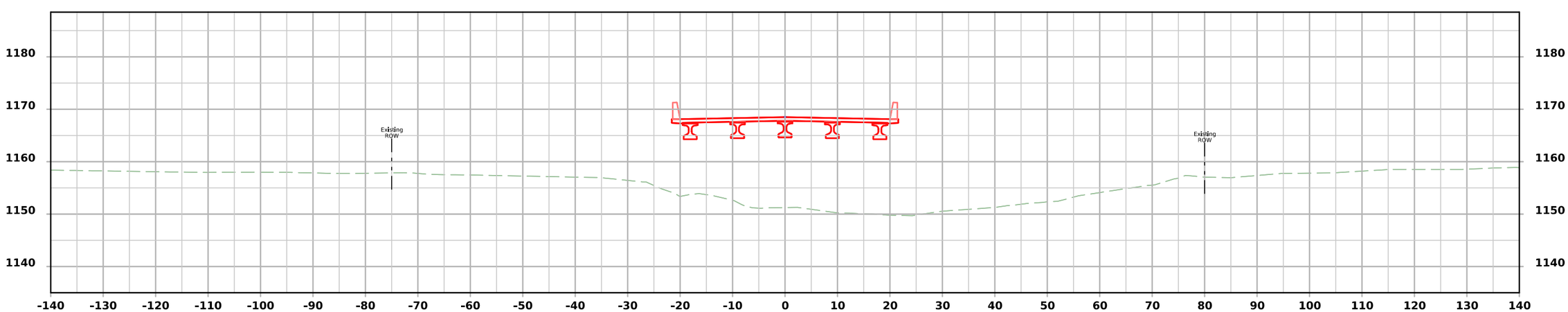

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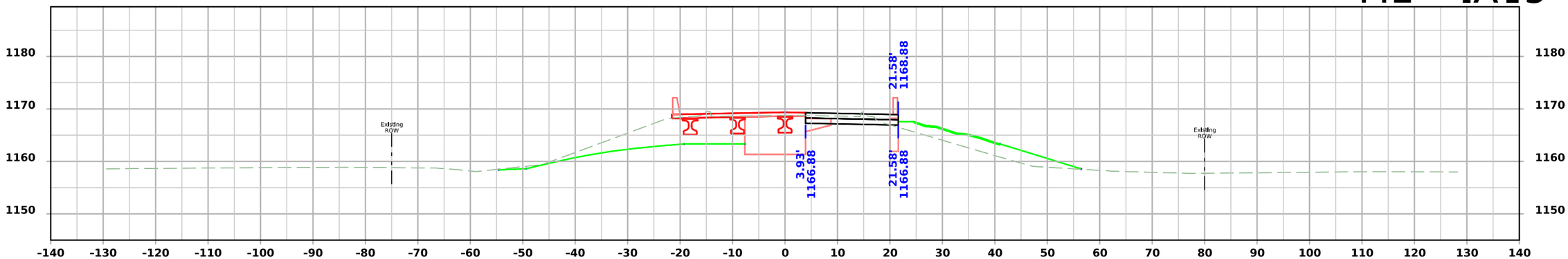
ML - IA15



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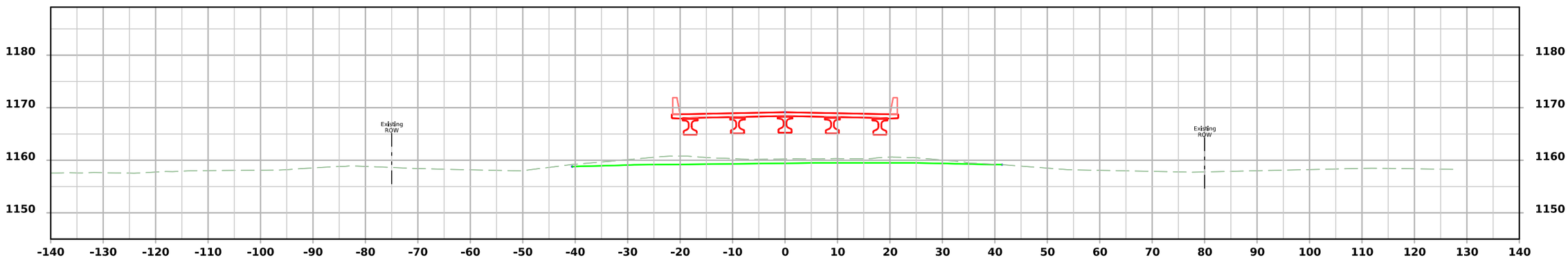

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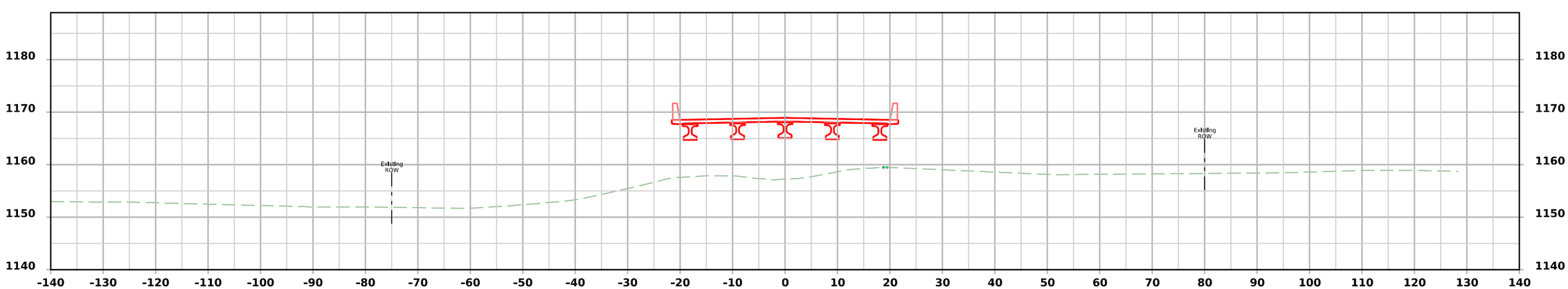

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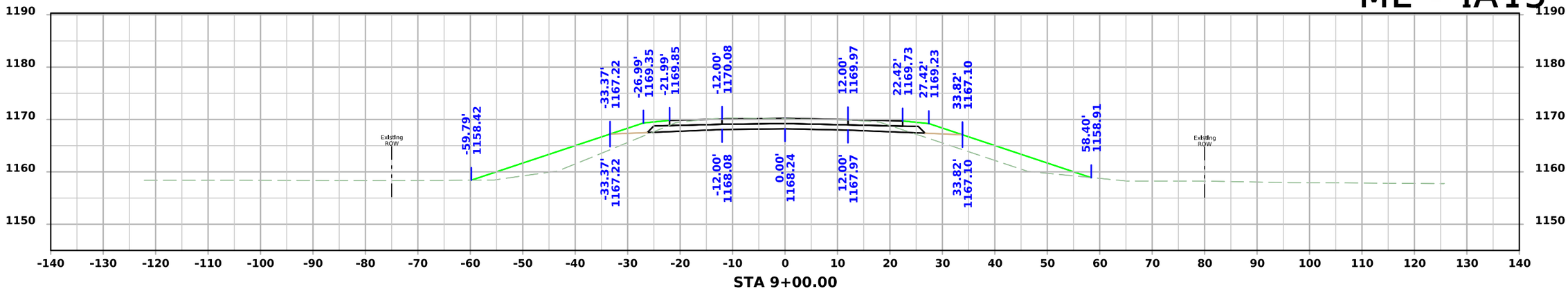
ML - IA15



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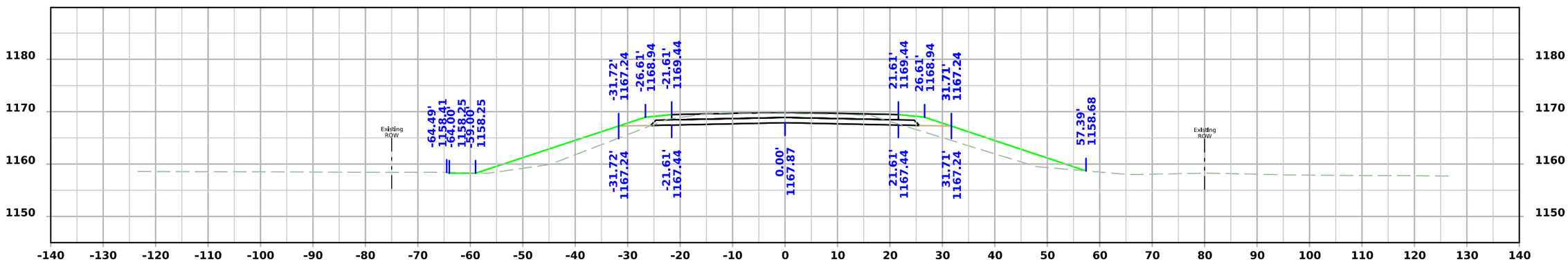

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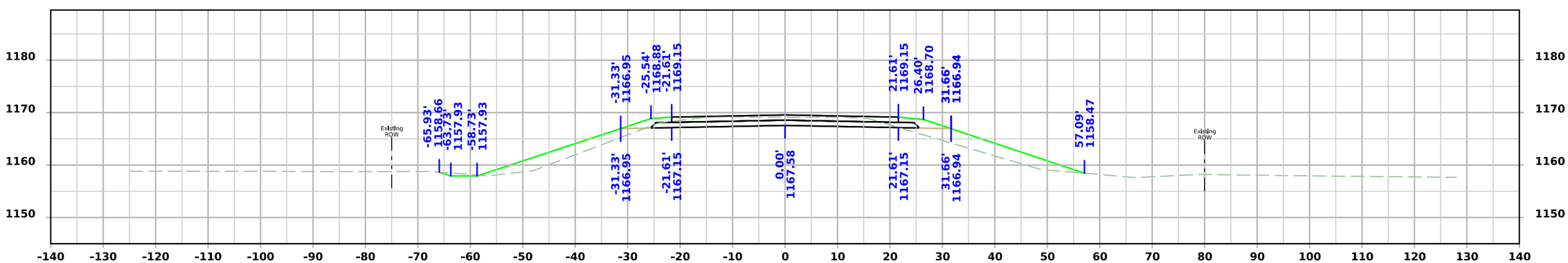

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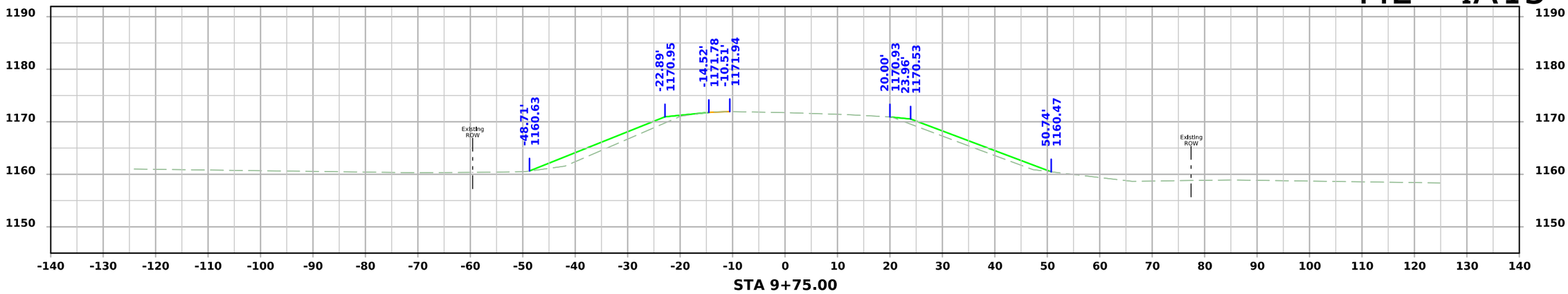
ML - IA15



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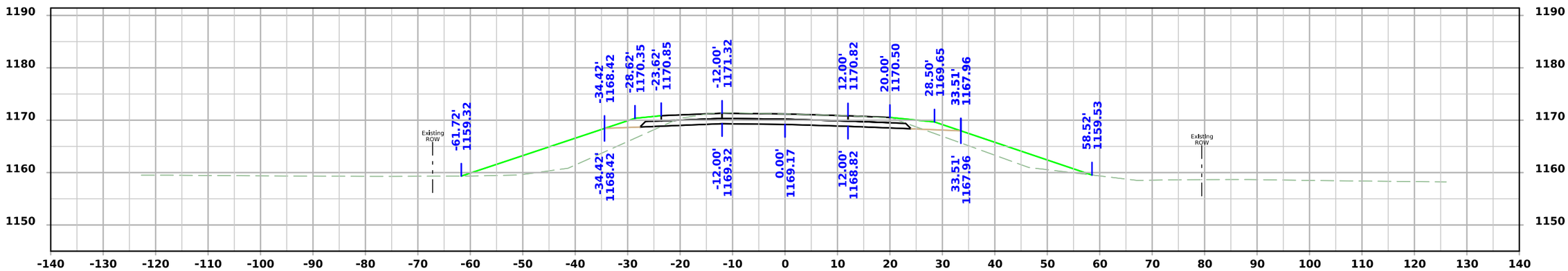

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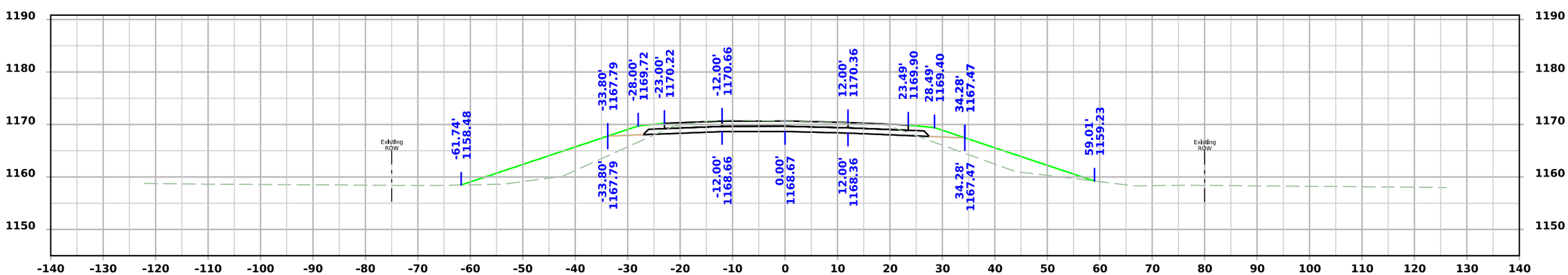

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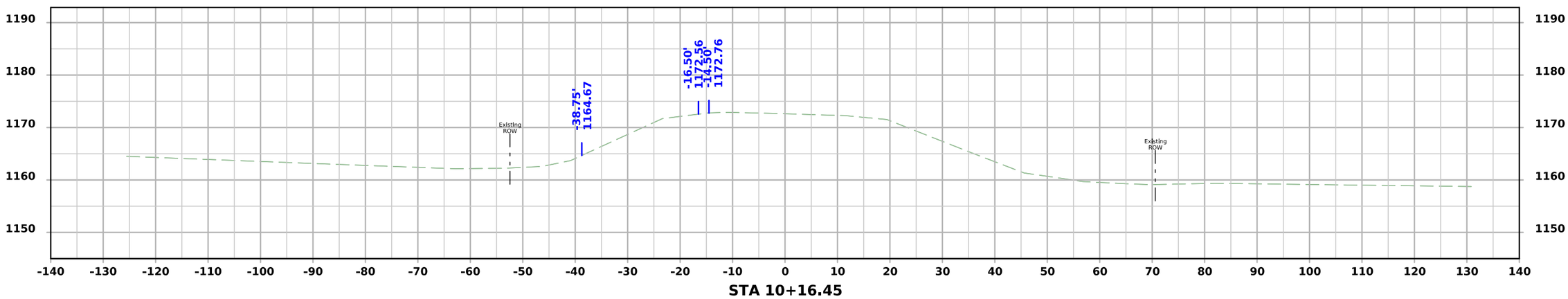
ML - IA15



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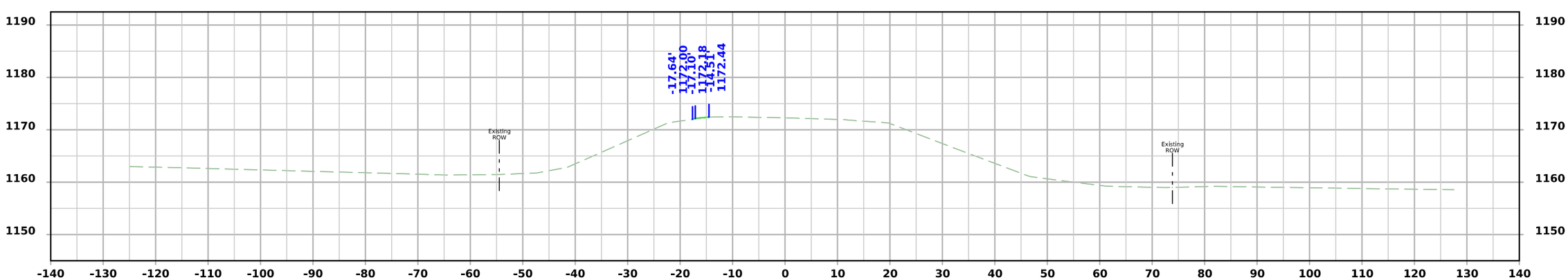

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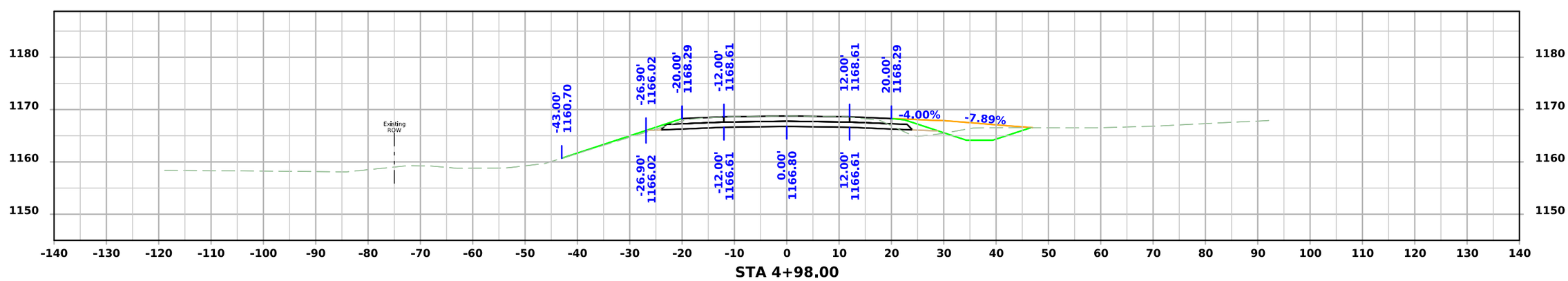
FILE NO.	ENGLISH	DESIGN TEAM Jia/Schoenrock/Ryan	POCAHONTAS COUNTY	PROJECT NUMBER BRF-015-1(013)--38-76	SHEET NUMBER W.10

ML - IA15
Entrance at Sta. 4+98.00



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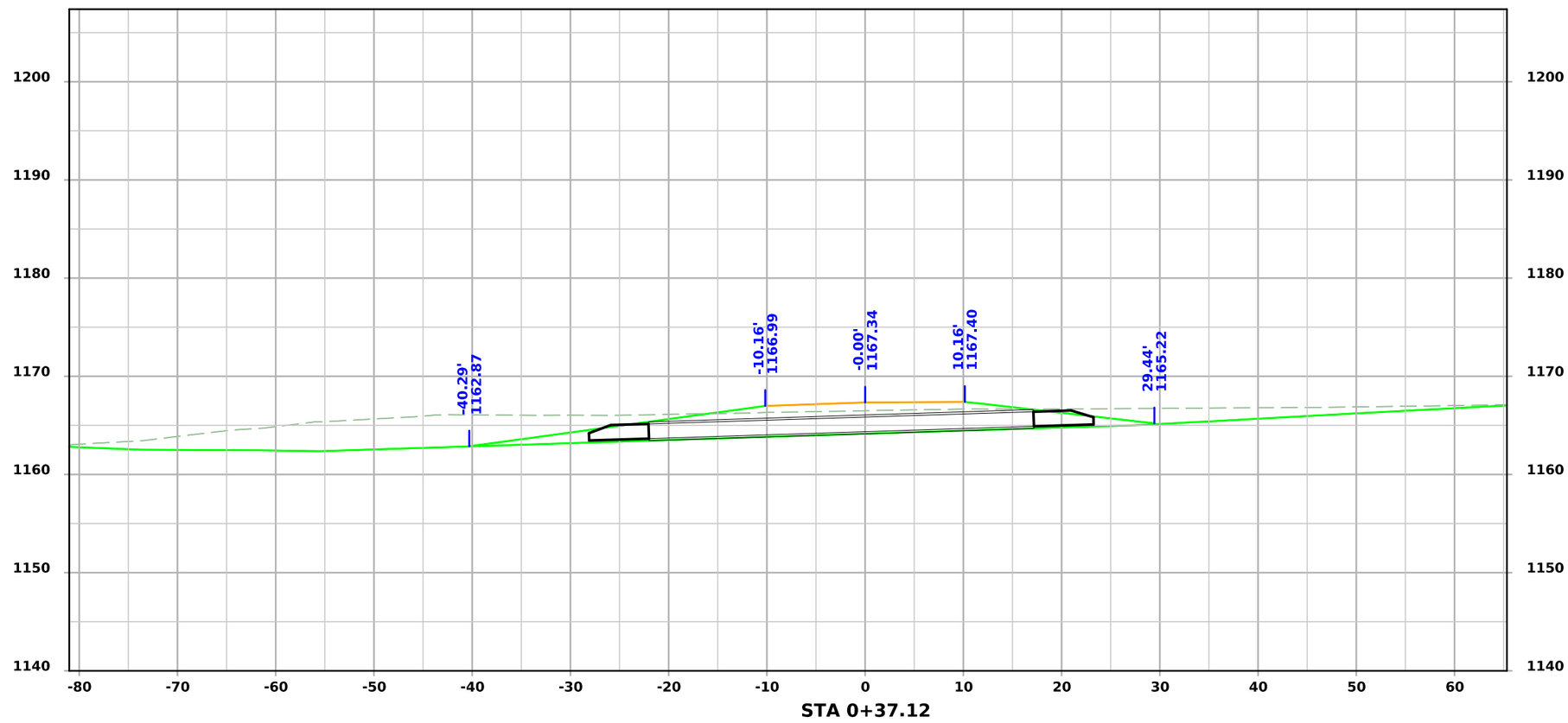
ML - IA15
Entrance Pipe Cross Section



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