Bridge-Unspecified
BRF-038-4(046)--38-28
LETTING DATE 12/21/2027

DELAWARE COUNTY

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	IA-38
G Sheets	**Survey Sheets**
* G.1	Survey Legend
G.2	Reference Ties and Bench Marks
G.3	Alignment Coordinates
J Sheets	**Traffic Control and Staging Sheets**
J.1	Traffic Control Plan
J.1	Coordinated Operations
J.1	511 Travel Restrictions
* JD.1	Delaware County Detour Route
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 - 8	IA-38 Cross Sections
Z Sheets	**Entrance Cross Sections**
* Z.100	IA-38 Entrances
	* Color Plan Sheets

<-- H Sheets

IOWA DOT

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

DELAWARE COUNTY

Bridge-Unspecified

Plum Creek 3.5 mi N of Co Rd D22

SCALES: As Noted

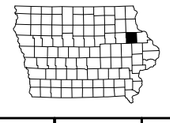
Refer to the Proposal Form for list of applicable specifications.

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.

REVISIONS

TOTAL 21
PROJECT IDENTIFICATION NUMBER
23-28-038-010
PROJECT NUMBER
BRF-038-4(046)--38-28
R.O.W. PROJECT NUMBER



DESIGN DATA RURAL			
2023	AADT	1290	V.P.D.
20 –	AADT	–	V.P.D.
20 –	DHV	–	V.P.H.
TRUCKS		20.16	%
Total Design ESALs		–	

INDEX OF SEALS			
SHEET NO.	NAME	TYPE	BID QUANTITY SHEETS
A.1	Kelly C. Bell	Primary Signature Block	X
X	X	X	X

PRELIMINARY PLANS

Subject to change by final design.

REVISED D5 - Date: 04/02/26

FILE NO. -	ENGLISH	DESIGN TEAM Flattery\Bell\Ofilanda	DELAWARE COUNTY	PROJECT NUMBER BRF-038-4(046)--38-28	SHEET NUMBER A.1

9:00:31 AM 4/2/2026 npalmer pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\2803801023\Design\BRF-038-4(046)--38-28_Bridge-Unspecified\CADD_Files\Sheet_Files\A01_28038046Z03.dgn

PROJECT LOCATION:
BRIDGE
IA-38 over Plum Creek
FHWA# 23330 (EXST)
MAINT. NO. 2890.2S038

LOCATION MAP SCALE
0 1 2 3
Miles

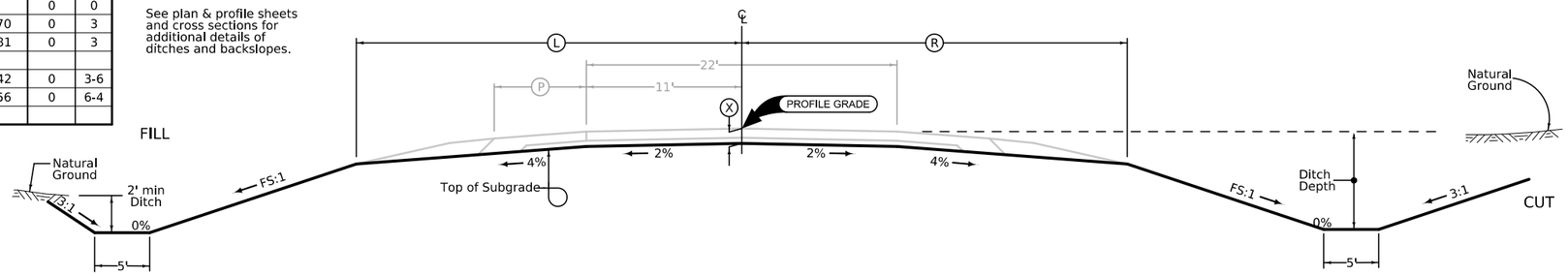
FILE NO. -	ENGLISH	DESIGN TEAM Flattery\Bell\Ofilanda	DELAWARE COUNTY	PROJECT NUMBER BRF-038-4(046)--38-28	SHEET NUMBER A.2

1:57:10 PM 12/16/2025 jofilan pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\2803801023\Design\BRF-038-4(046)--38-28_Bridge-Unspecified\CADD_Files\Sheet_Files\A01_28038046Z03.dgn

LOCATION		DIMENSIONS		
STATION TO STATION		Ⓛ Feet	Ⓧ Inches	FS
185+10.00	185+48.20	18.00	0	0
185+48.20	185+73.64	18.00-30.70	0	3
185+73.64	186+25.00	30.70-28.81	0	3
Bridges & Approaches				
188+55.00	189+04.50	28.57-36.42	0	3-6
189+04.50	189+50.00	36.42-20.56	0	6-4

Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

See plan & profile sheets and cross sections for additional details of ditches and backslopes.



G_2_Grade
04-21-20

LOCATION		DIMENSIONS		
STATION TO STATION		Ⓡ Feet	Ⓧ Inches	FS
185+00.00	185+48.13	21.70-30.23	0	4.7-3
185+48.13	185+68.15	30.23	0	3
185+68.15	186+25.00	30.23-28.07	0	3
Bridges & Approaches				

2 LANE GRADING

See Tab 112-9 for shoulder quantities.

Iowa Highway 38

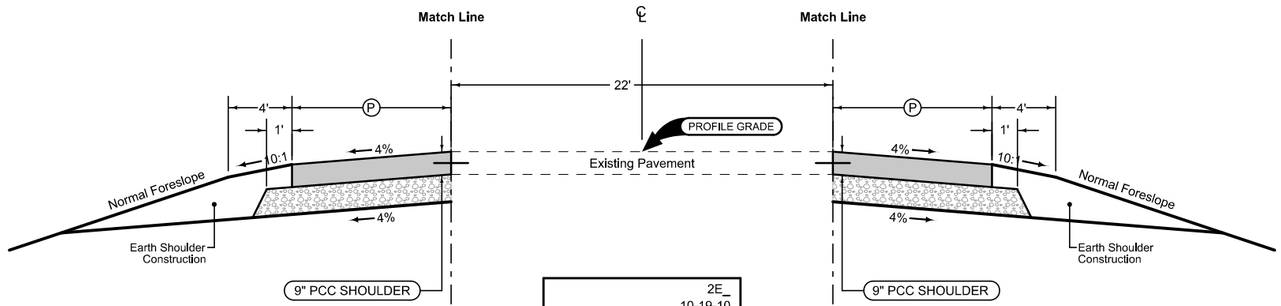
FILE NO. -	ENGLISH	DESIGN TEAM Flattery\Bell\Ofilanda	DELAWARE COUNTY	PROJECT NUMBER BRF-038-4(046)--38-28	SHEET NUMBER B.1	

2:01:33 PM 12/16/2025 jofilan pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\2803801023\Design\BRF-038-4(046)--38-28_Bridge-Unspecified\CADD_Files\Sheet_Files\B01_28038046Z03.dgn

Full Depth PCC Shoulder

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

2_P_FullPCC_ 04-20-21		
STATION TO STATION		Ⓟ Feet
185+10.00	185+73.64	4.0
185+73.64	185+93.64	13.0
185+93.64	186+25.00	13.0-11.5
Bridge and Approaches		
188+55.00	188+84.50	11.3-12.6
188+84.50	189+04.50	12.6
189+04.50	189+50.00	4.0



2E_ 10-19-10	
STATION TO STATION	
185+00.00	186+25.00
Bridge and Approaches	
188+55.00	189+50.00

Full Depth PCC Shoulder

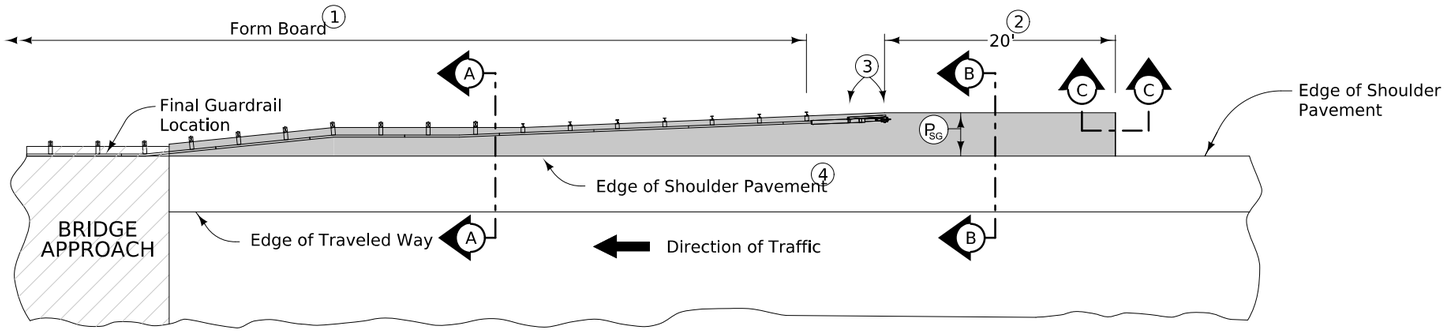
Shoulder Jointing:
Longitudinal joint: BT-2 or L-2
Transverse joints: C at 17' spacing

2_P_FullPCC_ 04-20-21		
STATION TO STATION		Ⓟ Feet
185+00.00	185+48.13	4.0
185+48.13	185+68.15	11.8
185+68.15	186+25.00	11.8-10.1
Bridge and Approaches		
188+55.00	189+10.00	4.0

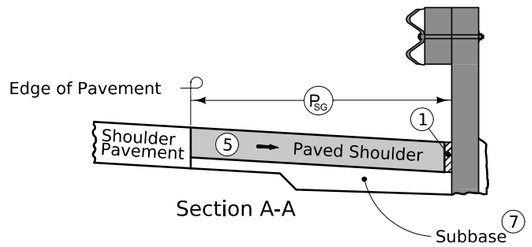
See Tab 112-9 for shoulder quantities.

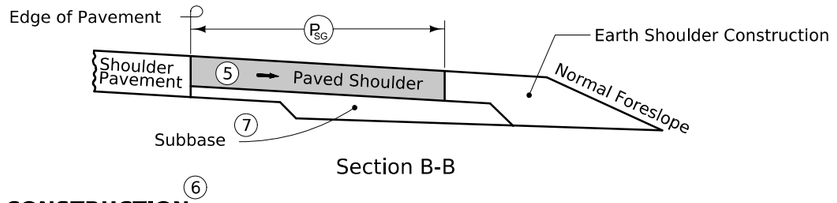
Iowa Highway 38

7158B
MODIFIED



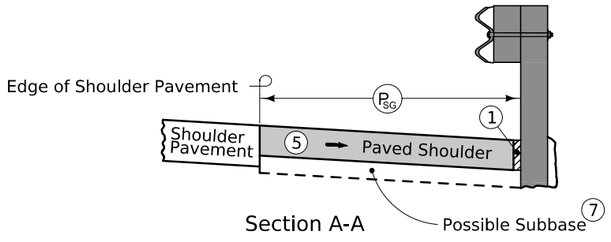
PLAN VIEW

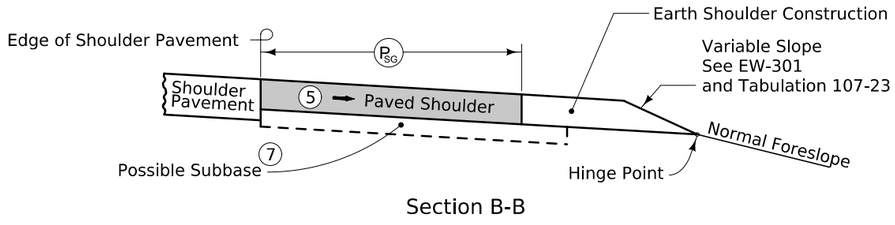




6

NEW CONSTRUCTION





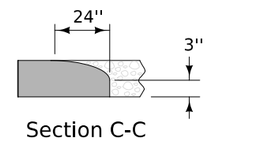
EXISTING SHOULDER

9" 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. 'BT' joint (per PV-101) for PCC shoulder.
5. Match shoulder slope.
6. The Contractor has the option to pave the paved shoulder at guardrail and the partial width paved shoulder as one operation.
7. Refer to other details in the plan.



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
- 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

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

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

— T1 — Maquoketa Valley Electric Cooperative

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

RIGHT-OF-WAY LEGEND

- Proposed Right-of-Way 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)

Oneida TWP.
T-89N R-4W
SEC. 8

180+00

185+00

190+00

Pl 181+50.48

UAC
Station: 181+96.4
Skew 43° LT AH
8'x5'x54.5' RCB
D.A.=250 A-R (Plan)

STA 185+73.69 (ML038)
BEGIN SB SHOULDER CONSTR.

STA 185+90.00 (ML038)
BEGIN BRIDGE APPROACH CONSTR.

UAC

Remove
Station: 187+38.95
40'x30'
Concrete Slab Bridge
D.A.=3300 A-R (Plan)

Build
Station: 187+38.95
80'x40'-0"
Cont. Conc. Slab Bridge

Plum Creek

UAC
Station: 189+36.3
Skew 33° LT AH
8'x5'x46.9' RCB
D.A.=130 A-RF (Plan)

STA 189+50.00 (ML038)
END SB SHOULDER CONSTR.

UAC

UAC

38

38

UAC
18"
C.M.P.

STA 185+00.00 (ML038)
BEGIN NB SHOULDER CONSTR.

PT 187+10.22

+96 Prop. Type "C" Ent.

STA 189+25.00 (ML038)
END NB SHOULDER CONSTR.

UAC

STA 188+55.00 (ML038)
END BRIDGE APPROACH CONSTR.

Δ = 05°45'52.15" (RT)
T = 560.68'
L = 1120.42'
R = 11136.37'
E = 14.11'
e = ___
L = ___
x = ___

Plum Creek

UAC
4'X4'x17'
RCB

0 50
FEET

IA 38

1050

VPI = +25.00
EL = 1033.87
L = 180.00'
K = 112

TIE-IN
Station: 185+90.00
Elev. 1032.73

TIE-IN
Station: 188+55.00
Elev. 1033.08

+1.00%

-0.61%

LT +00
1029.54

-1.20%
LDG

-4.50%
LDG

-1.60% RDG

RT +00
1028.15

RT +10
1026.39

LT +40
1029.06

LT +93
1026.65

1032.87 1033.11 1033.30 1033.43 1033.51 1033.53 1033.49 1033.40 1033.26 1033.11 1033.08

1050 1045 1040 1035 1030 1025 1020 1015 1010 1005 1000

180+00 181+00 182+00 183+00 184+00 185+00 186+00 187+00 188+00 189+00 190+00 191+00 192+00 193+00 194+00

FILE NO. -	ENGLISH	DESIGN TEAM Flattery\Bell\Ofilanda	DELAWARE COUNTY	PROJECT NUMBER BRF-038-4(046)--38-28	SHEET NUMBER D.2

9:23:10 AM 4/2/2026 npalmer pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\2803801023\Design\BRF-038-4(046)--38-28_Bridge-Unspecified\CADD_Files\Sheet_Files\D02_28038046Z03.dgn

SURVEY INDEX

County: Delaware
Project Code: 23-28-038-010
Phase Number: BRF-038-4(046)--38-28
Location: Plum Creek 3.5 mi N of Co Rd D22
Type of Work: Bridge-Unspecified
Project Directory: 2803801023

Survey Personnel

John Hahn – Survey Party Chief

Date(s) of Survey

Begin Date	11/18/2024
End Date	03/26/2025

General Information

This survey is for the replacement of the IA 38 bridge (2890.2S038) over Plum Creek, 2.5 mi North of County Road D22. This survey request was for the IA38 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 3 (U.S. SURVEY FOOT)
VERTICAL DATUM: NAVD88
GEOID MODEL: 2018u3

Alignment Information

The horizontal alignment for U.S. Hwy 18 this survey is a best-fit of As-built Plans No. RN-934. Survey stationing was equated to the plan PC at Sta. 175+89.8 and carried ahead without equation throughout the survey.

Survey stationing relates to as built plan stationing as follows:

PC Sta. 175+89.8 As-built Plans Project No. FN-934
Survey PC Sta. 175+89.8

PT Sta. 187+09.8 As-built Plans Project No. FN-934
Survey PT Sta. 187+10.22

PC Sta. 208+75.8 As-built Plans Project No. FN-934
Survey PT Sta. 208+76.54

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 3 (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 3 (U.S. Survey Foot)
VERT. DATUM: NAVD88
Geoid Model: 2018u3

Point Name	Northing	Easting	Elevation	Code/Description
24	9141131.27	13472401.63	1090.25	CP FND DELAWARE COUNTY GPS CONTROL POINT 2001-24 AS DESCRIBED IN GOOD CONDITION
32	9124863.67	13453737.63	1051.45	CP FND DELAWARE COUNTY GPS CONTROL POINT 2001-32 AS DESCRIBED IN GOOD CONDITION
33	9124870.85	13472177.55	1011.06	CP FND DELAWARE COUNTY GPS CONTROL POINT 2001-33 AS DESCRIBED IN GOOD CONDITION
CPN	9134379.60	13461860.22	1035.33	CP SET IDOT FENO MONUMENT
CPS	9132021.60	13461953.34	1044.18	CP SET IDOT FENO MONUMENT

Delaware **STPN-038-4(047)--2J-28**
Plum Creek 3.5 mi N of Co Rd D22
2803801023

Project Code **23-28-038-010**

Route **IA 38**

		State			County			City				Temp Ease						
Parcel No	Owner Name	Fee	Ease		Fee	Ease		Fee	Ease		Excess			Mitigation	Other	Relocation Needed	A/C Only	Total Acq
1	Delaware County		0.18 AC															
2	Donald J Pottebaum		0.24 AC															

2 Parcels

NO ACCESS RIGHTS ARE TO BE ACQUIRED ON THIS PROJECT.

FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT * OFFICE OF ROW	COUNTY	PROJECT NUMBER	SHEET NUMBER	

2
Donald J Pottebaum
1
Delaware County
STA: 187+47.23
OFF: 85.00' LT
STA: 188+58.02
OFF: 32.75' LT
STA: 186+75.00
OFF: 80.00' LT
STA: 188+80.98
OFF: 69.75' LT
STA: 189+97.76
OFF: 70.00' LT
180+00
185+00
190+00
+50 Prop. Type "C" Ent.
STA: 186+30.00
OFF: 60.00' LT
STA: 185+40.65
OFF: 61.08' LT
STA: 189+75.71
OFF: 32.76' LT
38
38
STA: 187+50.73
OFF: 60.27' RT
STA: 189+18.00
OFF: 60.25' RT
+96 Prop. Type "C" Ent.
2
STA: 187+51.72
OFF: 101.40' RT
Donald J Pottebaum
STA: 188+94.96
OFF: 97.37' RT
0
50
FEET
Right of Way Design Information
THIS SHEET INCLUDED
FOR INFORMATION ONLY
ROW Team: Crystal / Cuva
ROW #: STPN-038-4(047)--2J-28
Plan Date: 3/3/2026
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition
Permanent Acquisition County
Permanent Acquisition City

FILE NO.	ENGLISH	DESIGN TEAM Flattery\Bell\Oflanda		DELAWARE COUNTY	PROJECT NUMBER BRF-038-4(046)--38-28	SHEET NUMBER H.1

108-23A
08-01-08

TRAFFIC CONTROL PLAN

IA 38 will be closed to thru traffic during construction.

IA 38 shall be maintained via offsite detour. Detour will be signed and maintenance shall be done by the contractor. See JD.1 for detour.

111-01
04-17-12

COORDINATED OPERATIONS

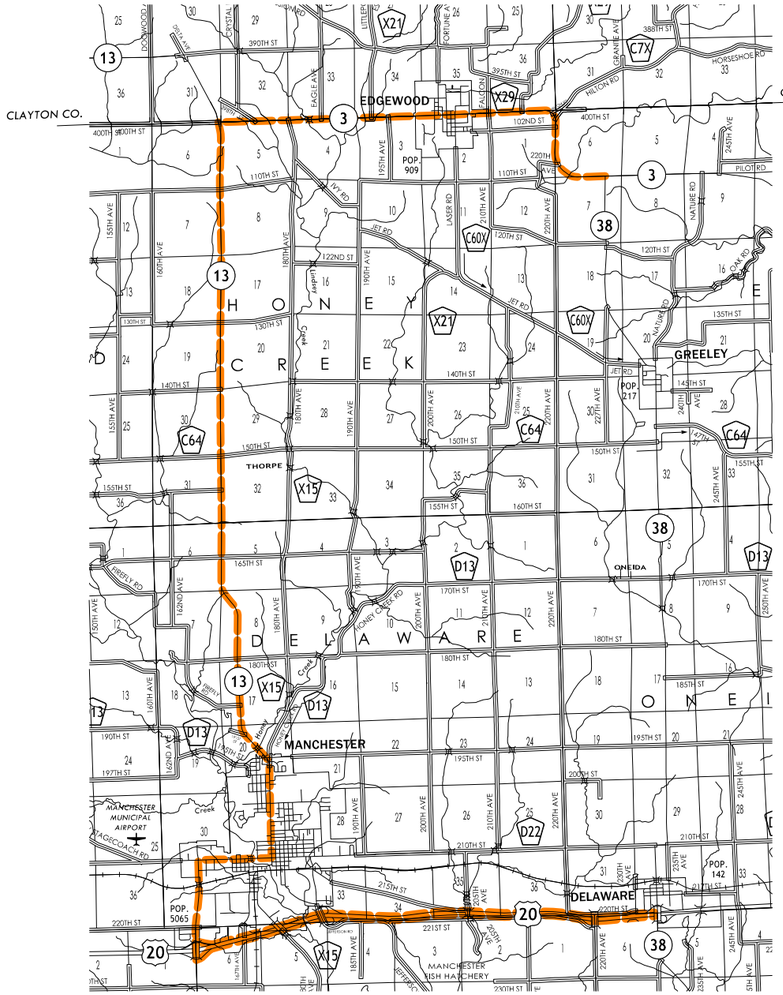
Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.

Project	Type of Work
None Provided	

108-25
10-21-14

511 TRAVEL RESTRICTIONS

Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No., Structure ID, or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
			No Travel Restrictions Expected									



NOT TO SCALE

LEGEND
DETOUR ROUTE

DETOUR

Plum Creek 3.5mi N of Co Rd D22
BRF-038-4(046)--38-28
PIN: 23-28-038-010

IA 38
DETOUR ROUTE

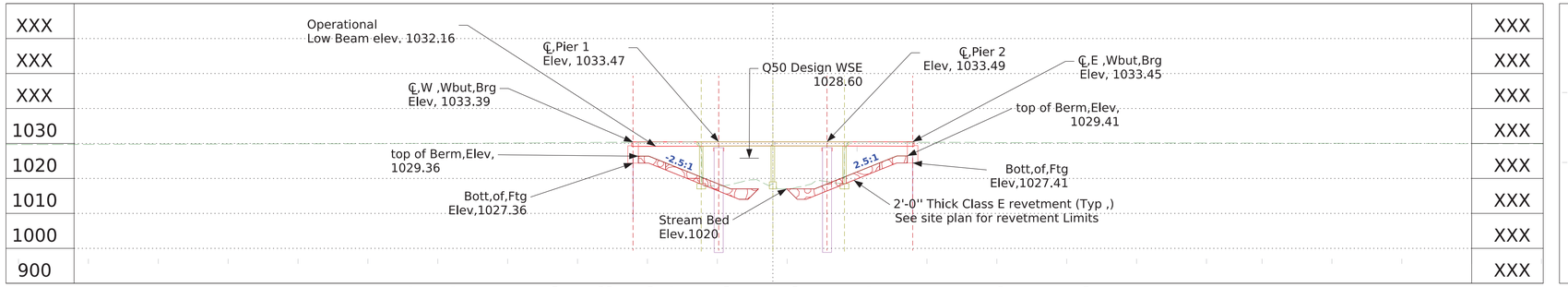
FILE NO. -	ENGLISH	DESIGN TEAM Flattery\Bell\Ofilanda	DELAWARE COUNTY	PROJECT NUMBER BRF-038-4(046)--38-28	SHEET NUMBER JD.1

2:27:13 PM 12/16/2025 jofilan pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\2803801023\Design\BRF-038-4(046)--38-28_Bridge-Unspecified\CADD_Files\Sheet_Files\JD01_28038046Z03.dgn

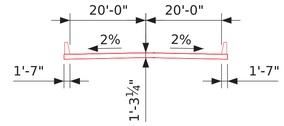
Control Point:

24,9141131.265,13472401.629,1090.248,CP FND DELAWARE COUNTY GPS CONTROL POINT 2001-24 AS DESCRIBED IN GOOD CONDITION

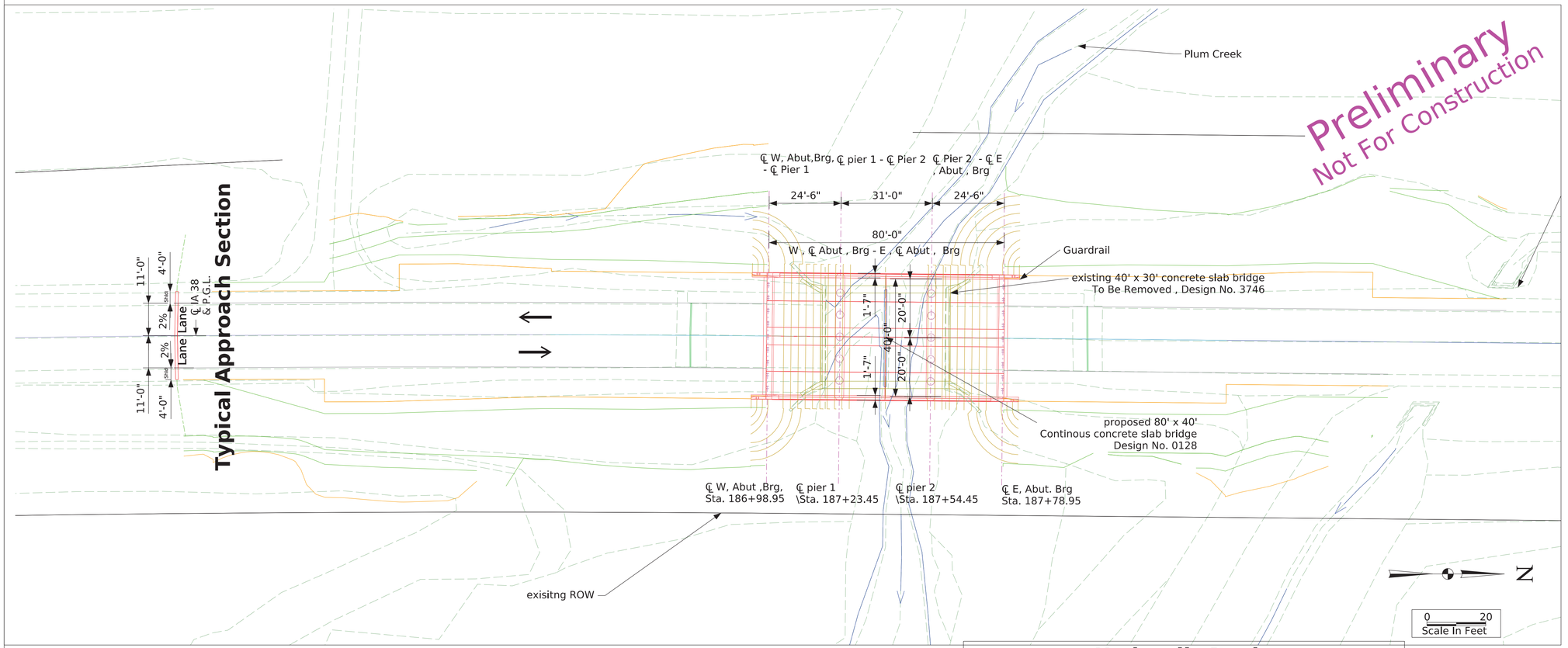
Note:
1-This design is for the replacement of the existing 40' X 30' Concrete Slab Bridge Delware CountyDesign No. 3746, FHWA No. 23330, Maint. No. *2890.25038*.
2-Top of bridge deck at centerline roadway is '0.03' below the profile grade to account for deck cross slope and parabolic crown.
3- 2' thick layer of class E revetment Stone on the Berm slopes is embeded and underlain with enggineering fabric.



BRG TSL Longitudinal Section Along ℄ Approach Roadway



Typical Deck Section



Hydraulic Data

RIDB:"Not Applicable"
Drainage Area = 5.78 Sq. Mi.
Stream Slope (HGL) = 10.03 ft./Mi.
Avg. Low Water Stage = 1026.95

Operational Low Beam = 1032.16'

Q_{50} = 2730cfs
Stage = 1028.60
Operational Freeboard = 3.56ft.
Avg. Bridge Velocity = 6.37 fps

Q_{100} = 3340cfs
Stage = 1029.20'
Operational Freeboard = 2.96' ft.
Backwater = - 0.43'
Avg. Bridge Velocity = 7.13 fps

Q200= 3970cfs
Stage = 1029.76'
Operational Freeboard = 2.4' ft.
Calculated Design Scour = 9.42'

Q_{500} = 4830 cfs
Stage =1030.15'
Channel Freeboard = 2' ft.
Avg. Bridge Velocity = 8.55 fps
Calculated Check Scour = 10.56'

Location

Plum Creek
3.5 mi N of Co Rd D22 over IA38
T-89N R-4W
Section 8
Oneida Township
Delware County
FHWA No. 0*23331*
Bridge Maint. No. *2890.25038*
Latitude 42.53603465°
Longitude -91.34136036°

Traffic Estimate

2023 AADT	1290 V.P.D.
20?? AADT	??? V.P.D.
20?? DHV	??? V.P.H.
TRUCKS	20.16% %
Total Design ESALs	???

Utilities Note:

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

General Utility Symbols:

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

VPI Sta. = 187+25 L =180
VPI Elev. = 1033.87

Proposed Profile Grade ML038

Curve Data

PI Sta. 187+25
D = 05°45'52.15" (RT)
T = 560.68'
L = 1120.42'
E = 14.11'
PC Sta. 186+25
PT Sta. 188+55

Situation Plan

Hydraulic Design

LICENSED PROFESSIONAL ENGINEER
Jimmy D. Ellis
15557
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 Jim D. Ellis Date XX-XX-XXXX

Printed or Typed Name Jimmy D. Ellis

My license renewal date is December 31, 2026

Pages or sheets covered by this seal: XXXX

Design For 0 degree skew

80'-0'' x 40'-0'' Continuous Concrete Slab Bridge

24' 6'' End Spans 31' Interior Span

Situation Plan

STA. 187+38.95 (IA 38) Turn-in Date: Jan 01 2015

Delaware County

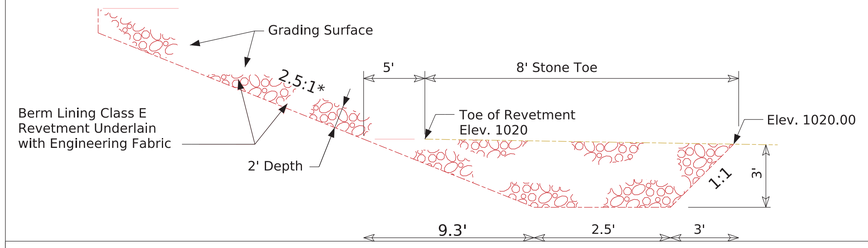
IOWA DEPARTMENT OF TRANSPORTATION

Design No. 0128 Design Sheet No. 1 of 1 FHWA No. 023331

FILE NO. **32868** | ENGLISH | DESIGN TEAM **MD/IDOT** | **Delaware** COUNTY | PROJECT NUMBER **BRF-038-4(046)--38-28** | SHEET NUMBER V.1

SYSTEMTIME SYSTEMDATE USERNAME DGNSPEC

*Slope varies in transition areas



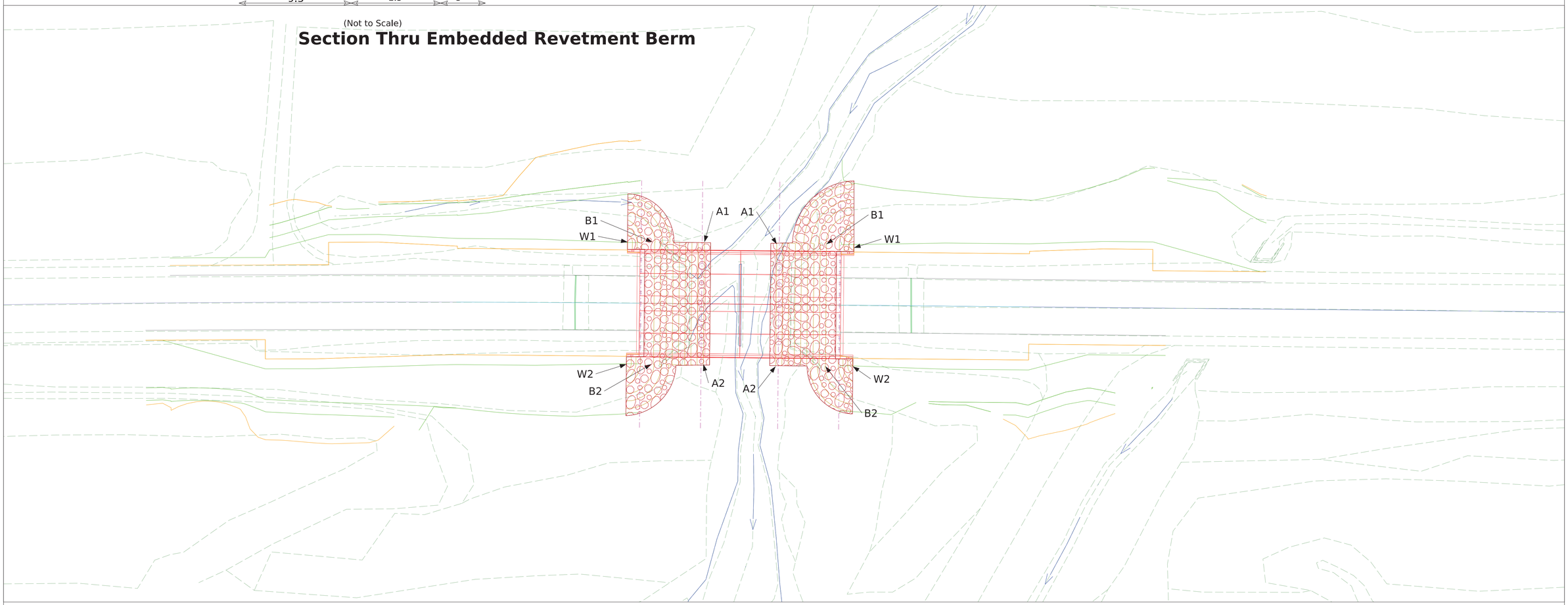
Berm Slope Location Table

Points	Near Abutment			Far Abutment		
	Station	Offset	Elev.	Station	Offset	Elev.
A1	187+26.79	24.583	1020.00	187+50.97	24.583	1020.00
A2	187+26.79	24.583	1020.00	187+50.97	24.583	1020.00
B1	187+03.145	24.583	1029.36	187+74.45	24.583	1029.41
B2	187+03.145	24.583	1029.36	187+74.45	24.583	1029.41
W1	186+93.45	24.583	1033.02	187+84.45	24.583	1033.08
W2	186+93.45	24.583	1033.02	187+84.45	24.583	1033.08

Berm slope elevations reflect the grading surface.

(Not to Scale)

Section Thru Embedded Revetment Berm



Estimated Berm Armoring Quantities

Location	Revetment CL. E (Ton)	Erosion Stone (Ton)	Engineering Fabric (SY)	CL. 10 Channel Excavation (CY)
Berm Lining/Stone Toe-W.Abut	530	XX	529	352.7
Berm Lining/Stone Toe-E.Abut	530	N/A	529	352.7
Totals	1060		1028	705.4

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.

N

0 20
Scale In Feet

Design For 0 Degree Skew

80'-0'' x 40'-0'' Continuous

24'6'' End Spans 31' Interior Span

Concrete Slab Bridge

STA. 187+38.95 (IA38)

Turn-in Date:

Delware County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. 0128 Design Sheet No. 2 of 2 FHWA No. 023331

FILE NO. 32868	ENGLISH	DESIGN TEAM XX XX XX	COUNTY	PROJECT NUMBER BRF-038-4(046)--38-28	SHEET NUMBER V.2	REVISED

SYSTEMTIME SYSTEMDATE USERNAME DGNSPEC

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
Concrete	
(0)	Barrier Concrete
(0)	Barrier Concrete Footing
(0)	Curb Gutter
(48)	Flowable Mortar
(0)	Median Concrete
(0)	PCC Pavement
(0)	Sidewalk
Shoulder	
(209)	Shoulder HMA
(0)	Shoulder PCC
(6)	Shoulder Granular
Existing	
(0)	Existing Pavement
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
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 Substrata
(48)	Broken Weathered Substrata
(3)	Core Out Substrata
(203)	Existing Pavement Substrata
(6)	Loam Substrata
(80)	Rock Substrata
(4)	Select Sand Substrata
(3)	Shale Substrata
(10)	Topsoil Substrata
Unsuitable / Waste	
(3)	Unsuitable Type A
(13)	Unsuitable Type B
(11)	Unsuitable Type C
(3)	Waste

NOTES:

Text

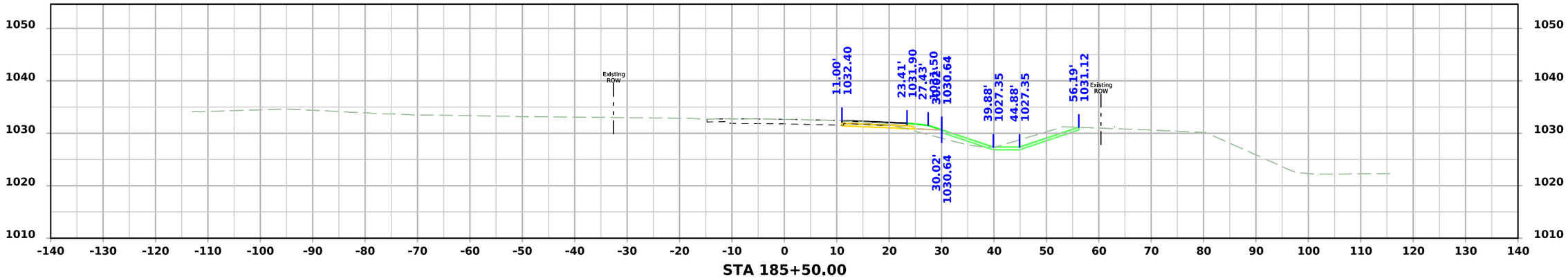
NOTES:

Text

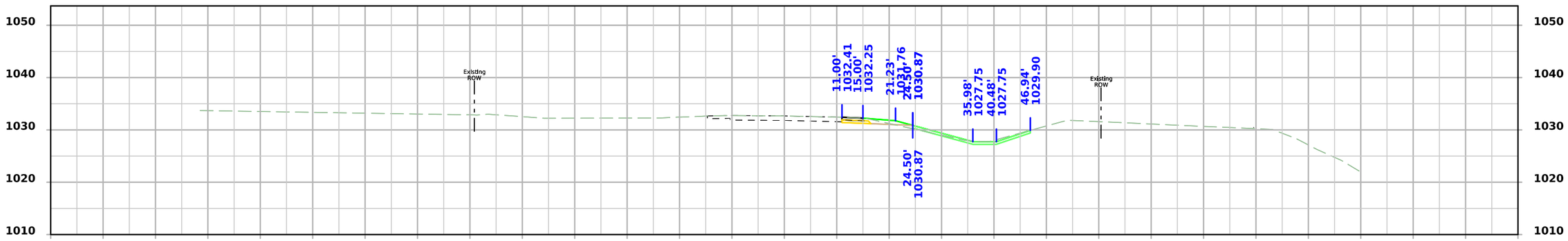
CROSS SECTIONS
LEGEND AND INFORMATION SHEET

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

IA38



STA 185+50.00



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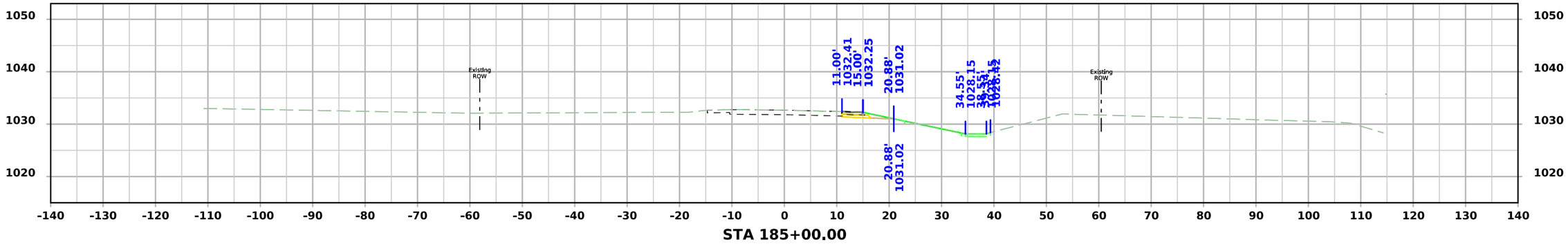

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FILE NO. –	ENGLISH	DESIGN TEAM Flatterly\Bell\Ofilanda	DELAWARE COUNTY	PROJECT NUMBER BRF-038-4(046)--38-28	SHEET NUMBER W.2

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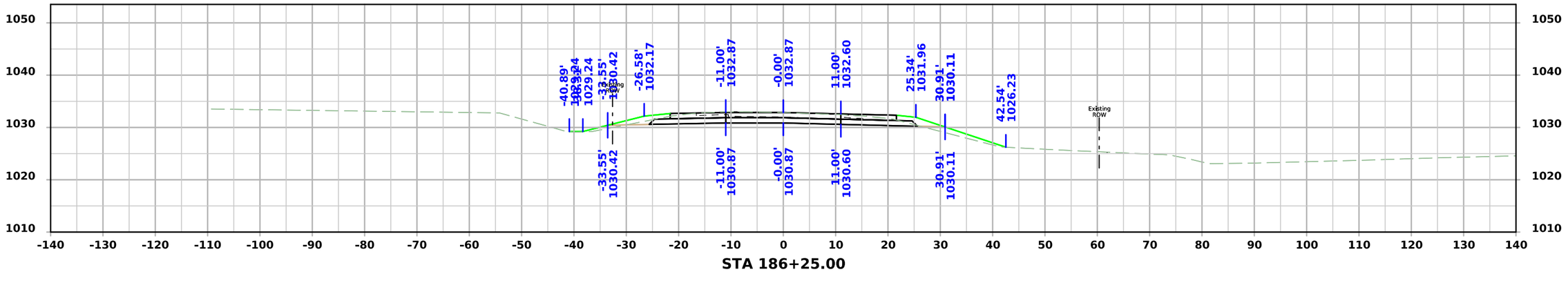

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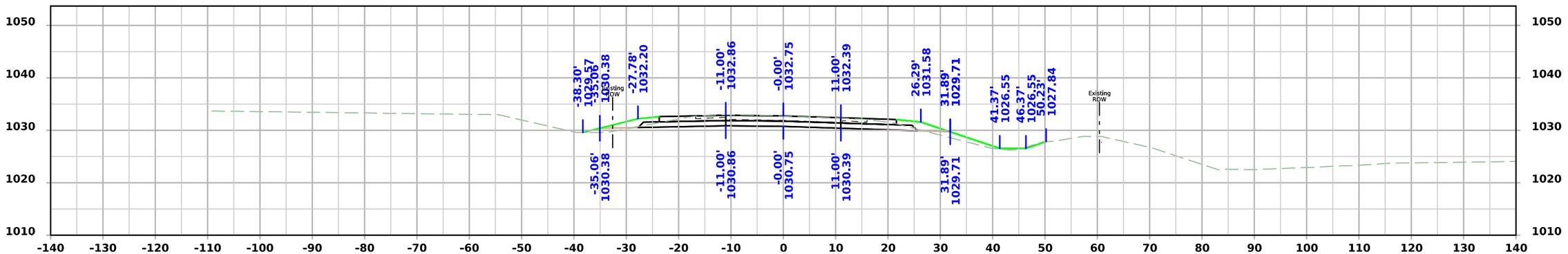

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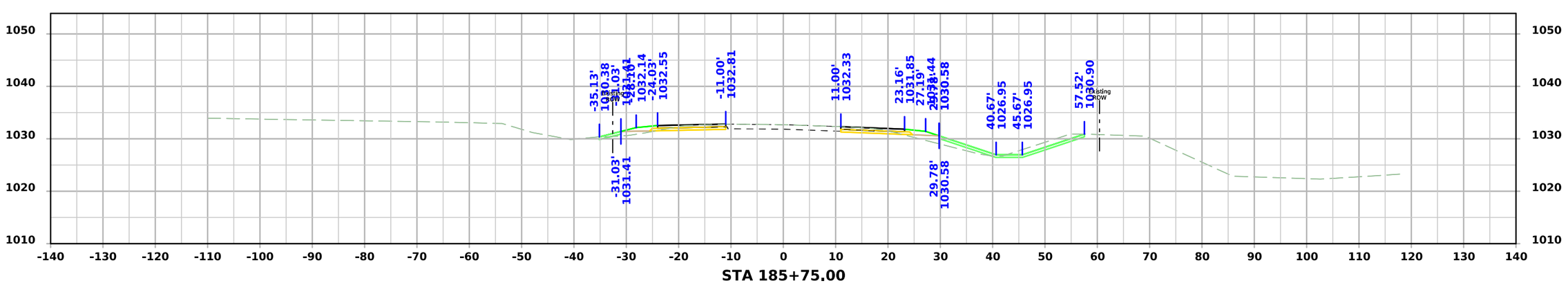

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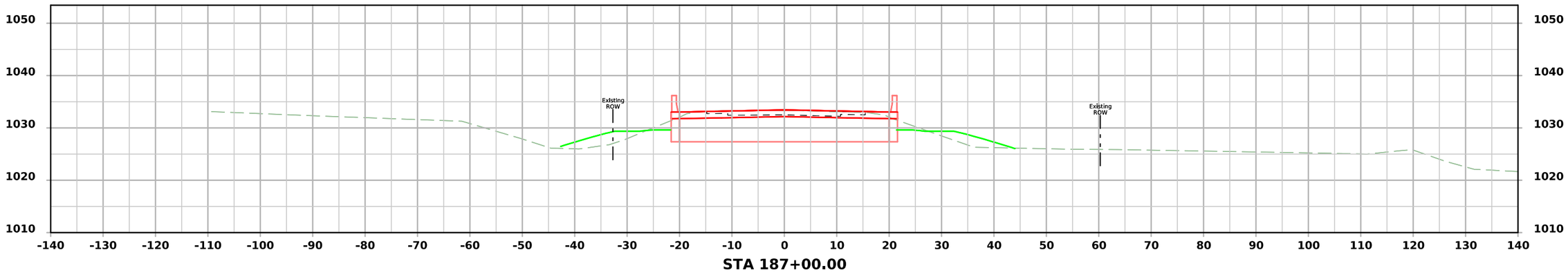

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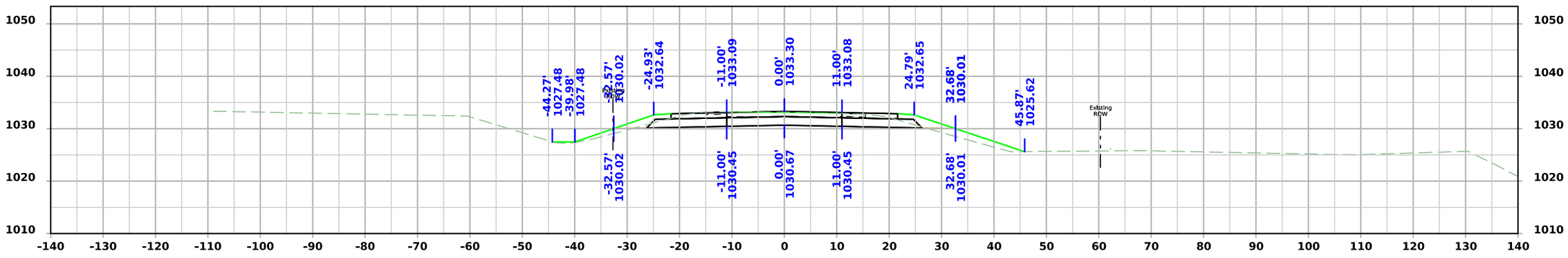

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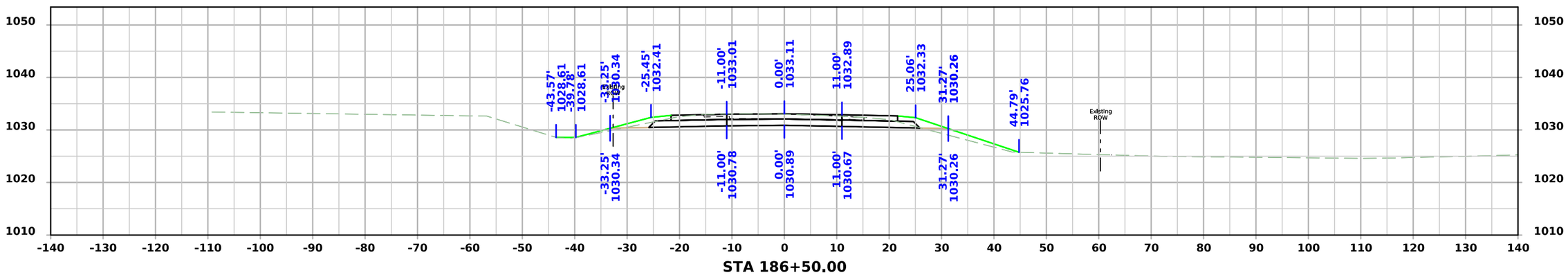

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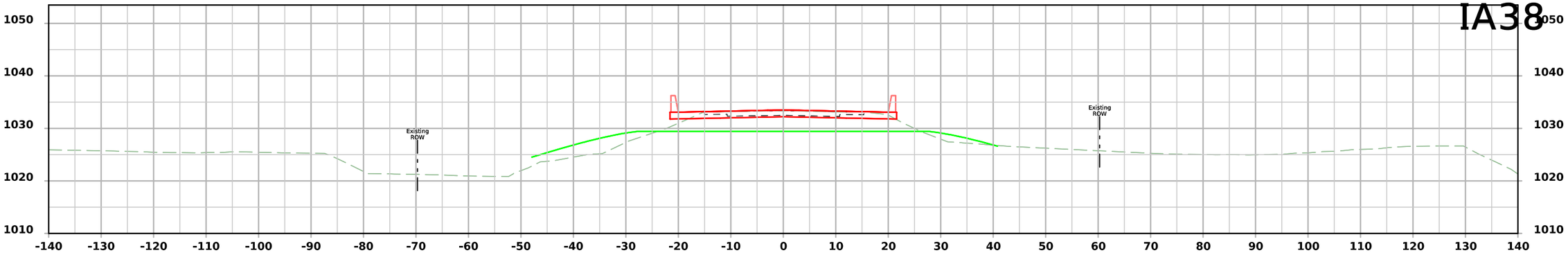

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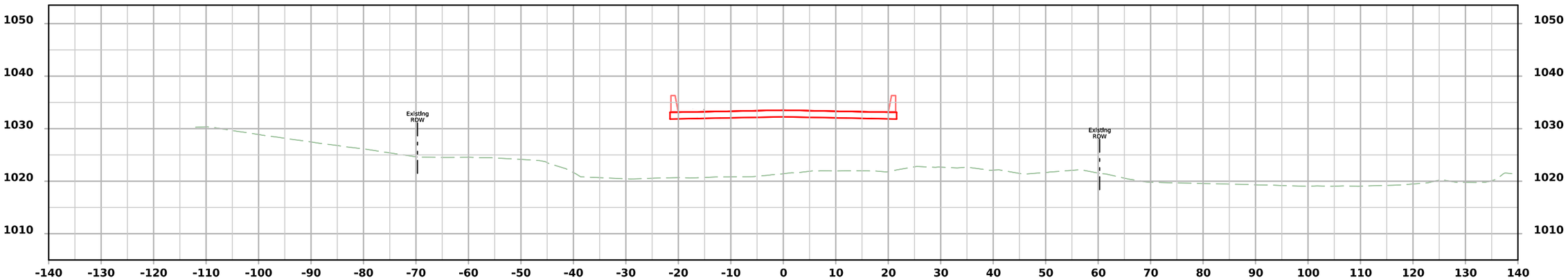

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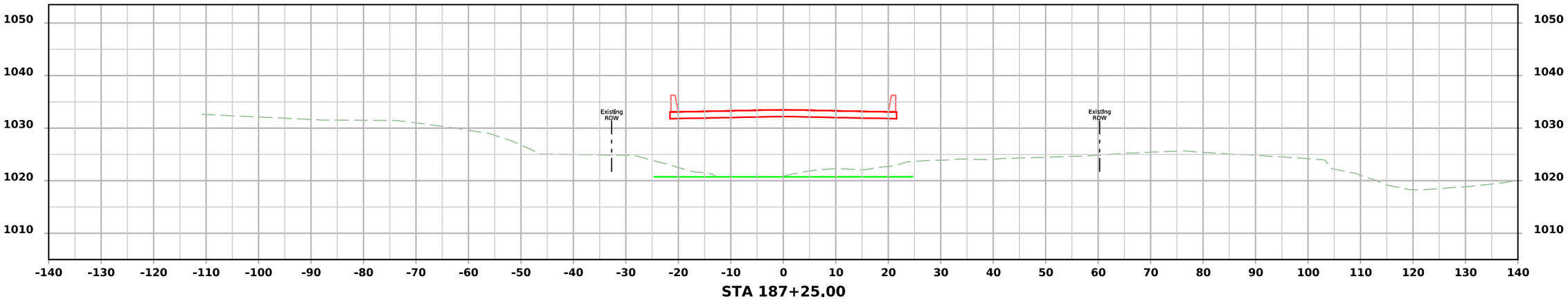

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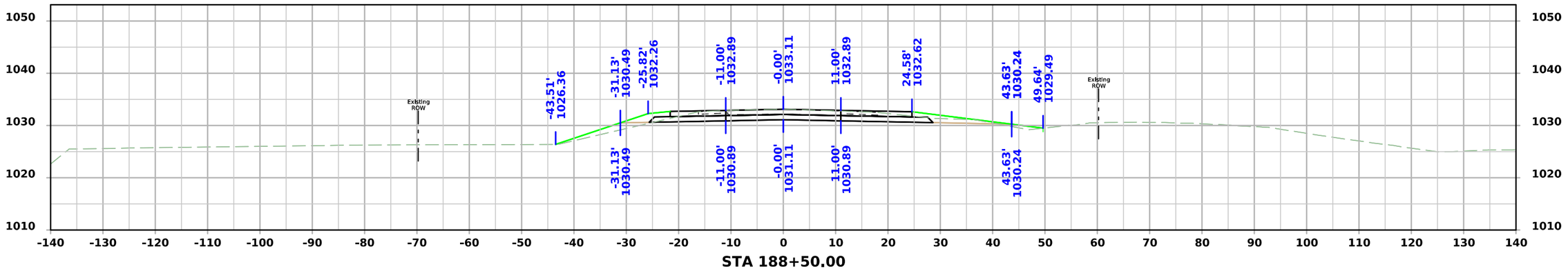

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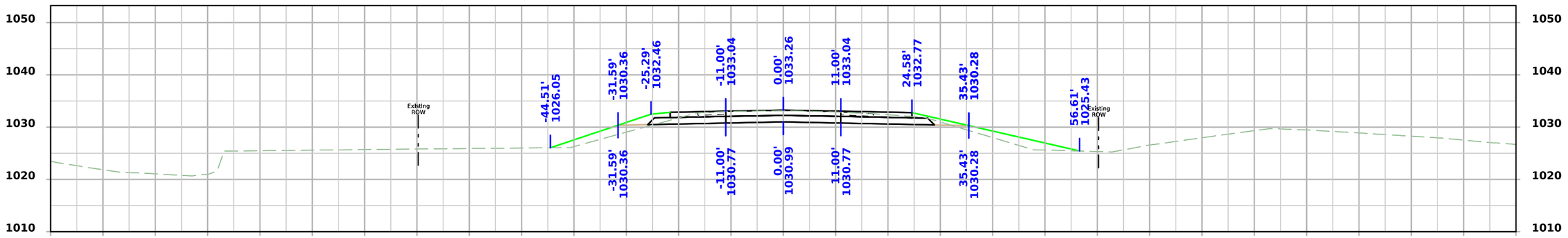

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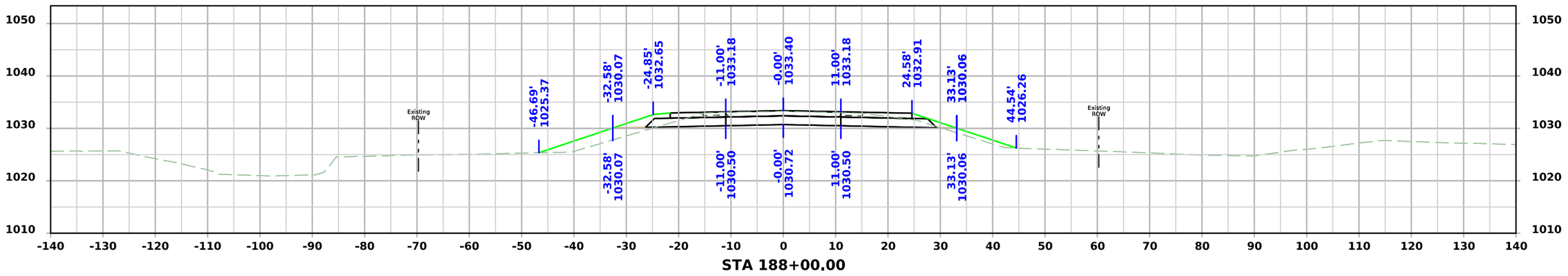

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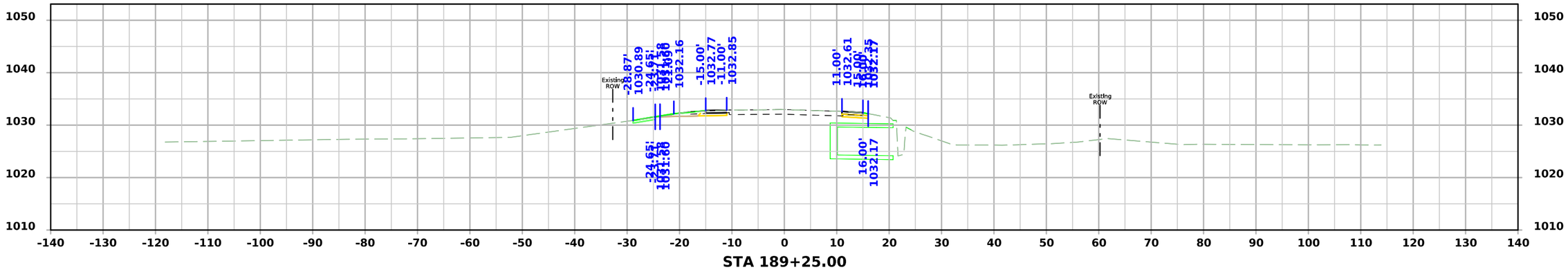
IA38



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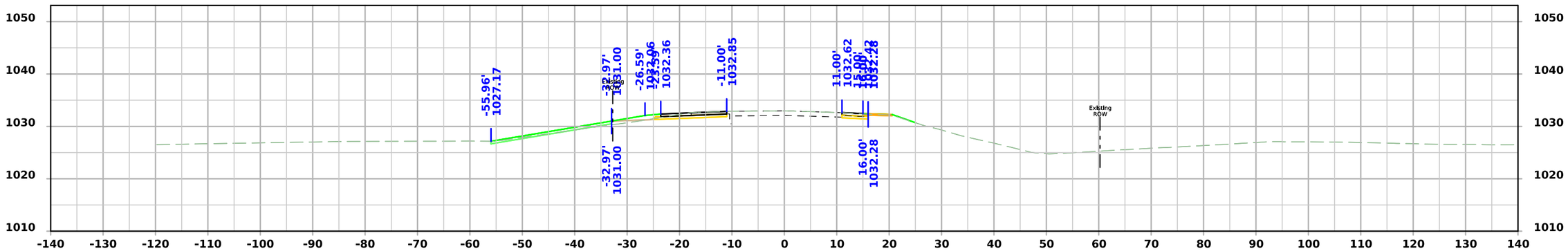

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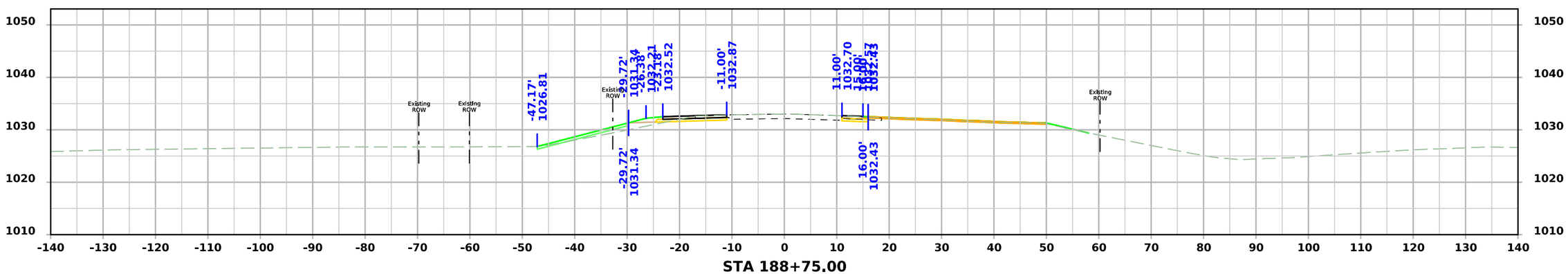

STA 188+75.00

FILE NO. -	ENGLISH	DESIGN TEAM Flatterly\Bell\Ofilanda	DELAWARE COUNTY	PROJECT NUMBER BRF-038-4(046)--38-28	SHEET NUMBER W.7

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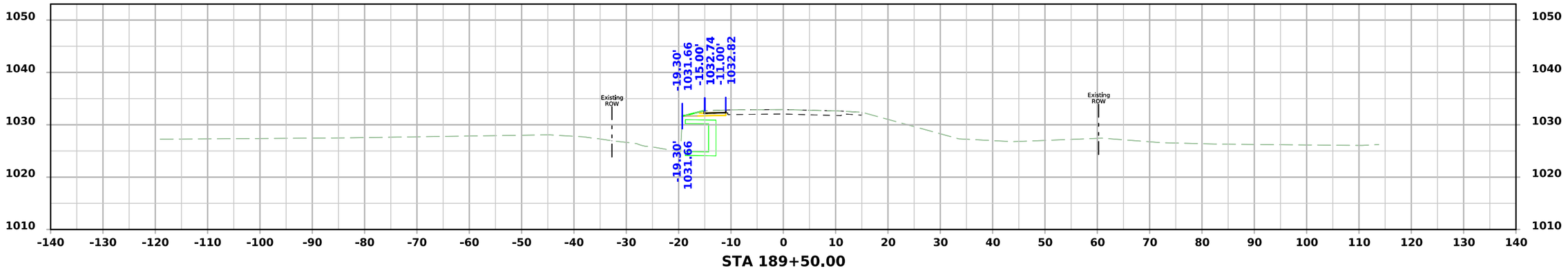

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FILE NO. -	ENGLISH	DESIGN TEAM Flattery\Bell\Ofilanda	DELAWARE COUNTY	PROJECT NUMBER BRF-038-4(046)--38-28	SHEET NUMBER W.8

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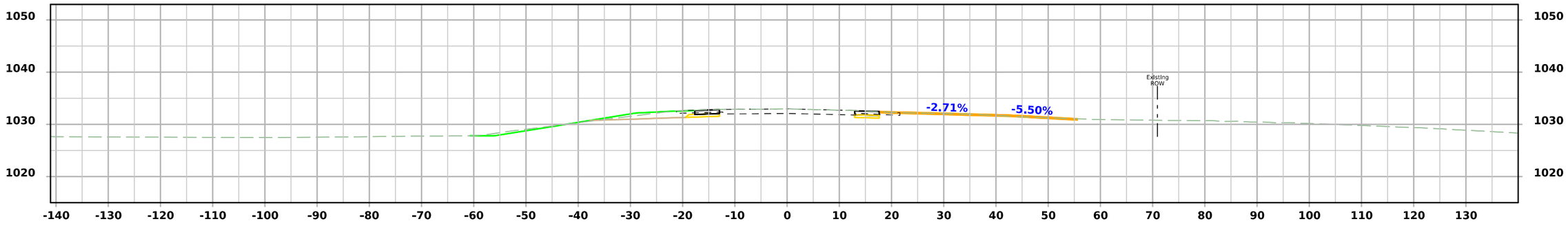
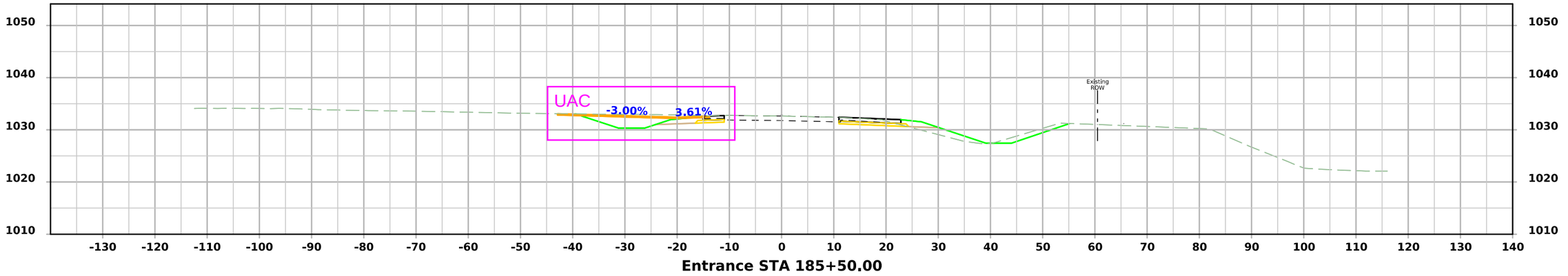
IA 38 Entrances



Entrance STA 188+96.50



Entrance STA 185+50.00

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