LETTING DATE 02-15-2022

BRIDGE REPLACEMENT-PPCB
BRF-065-7(42)--38-35

FRANKLIN COUNTY

INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	**Title Sheets**
A.1	Title 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	US 65 Plan & Profile
G Sheets	**Survey Sheets**
G.1	Reference Ties and Bench Marks
G.2	Horizontal Control Tab. & Super for all Alignments
J Sheets	**Traffic Control and Staging Sheets**
* J.1	Traffic Control Plan
V Sheets	**Bridge and Culvert Situation Plans**
V.1 - 2	Bridge and Culvert Situation Plans
V.3	Proposed Flowage Easement
W Sheets	**Mainline Cross Sections**
* W.1 - 13	Mainline Cross Sections
Z Sheets	**Miscellaneous Cross Sections**
Z.1	ENTL1179
	* Color Plan Sheets

H Sheets

IOWA DOT

Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

FRANKLIN COUNTY

BRIDGE REPLACEMENT-PPCB

Bailey Creek 0.8 mi S of Jct Co Rd C13

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

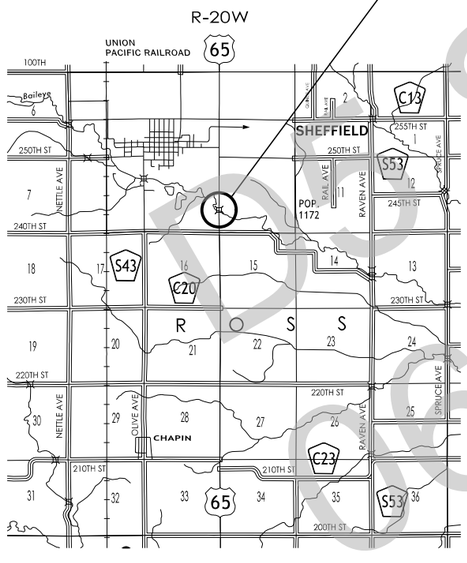
Value Engineering Saves. Refer to Article 1105.14 of the Specifications.

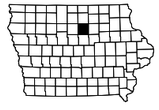
IOWA ONE CALL
1-800-292-8989
811
www.iowaonecall.com

REVISIONS

TOTAL
--
PROJECT IDENTIFICATION NUMBER
17-35-065-020
PROJECT NUMBER
BRF-065-7(42)--38-35
R.O.W. PROJECT NUMBER
NHSN-065-7(43)--2R-35

PROJECT LOCATION
Ref. Loc. 177.70
FHWA 025141
Maint. #3577.7S065
Design #0122





LOCATION MAP SCALE
0 1 2 3
Miles

DESIGN DATA RURAL

2022	AADT	2700	V.P.D.
2042	AADT	2900	V.P.D.
20 --	DHV	--	V.P.H.
TRUCKS		13	%
Total Design ESALs		--	

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

PRELIMINARY PLANS

Subject to change by final design.

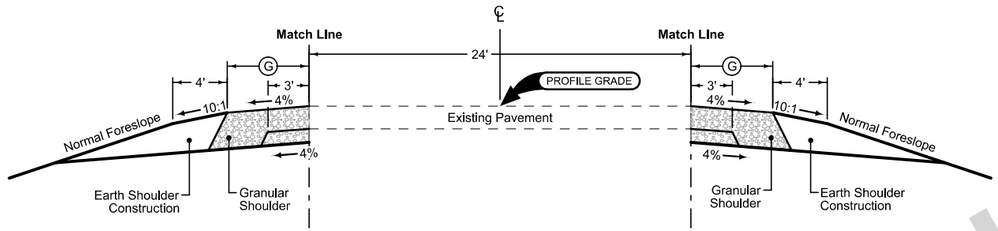
D5 PLAN – Date: 6–30–2021

FILE NO. 32052	ENGLISH	DESIGN TEAM Flattery/Bell/Jack	FRANKLIN COUNTY	PROJECT NUMBER BRF-065-7(42)--38-35	SHEET NUMBER A.1

10:33:46 AM 6/24/2021 akiebel pw:\\ntPwInt1.dot.int.lan:PWMain\Documents\Projects\3506502017\Design\CADD_Files\Sheet_Files\35065042_A01.dgn

Granular Shoulder

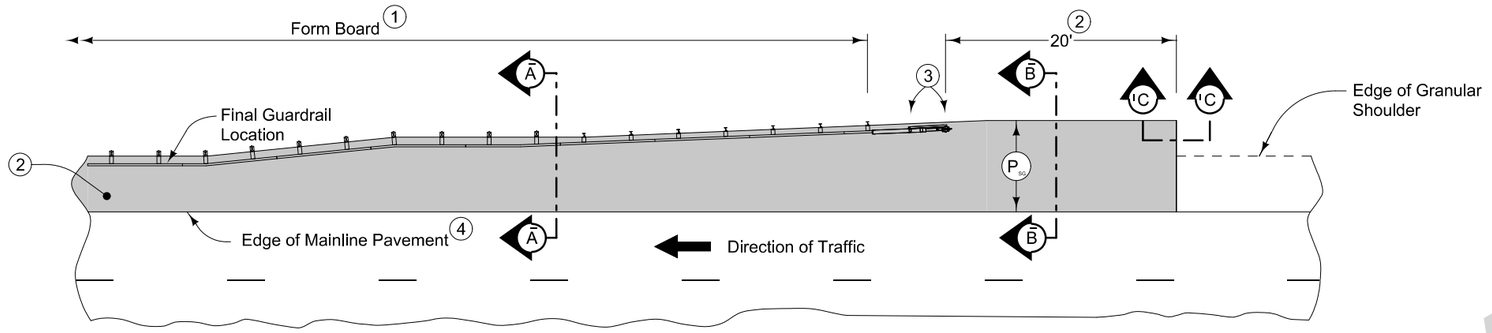
2_G_SR_ 04-21-20		
STATION TO STATION		(G) Feet
1178+90.51	1179+37.04	10
1179+37.04	1179+50.24	10-13.5
BRIDGE AND APPROACHES		
1184+50.64	1184+70.19	15.2-10
1184+70.19	1185+23.42	10



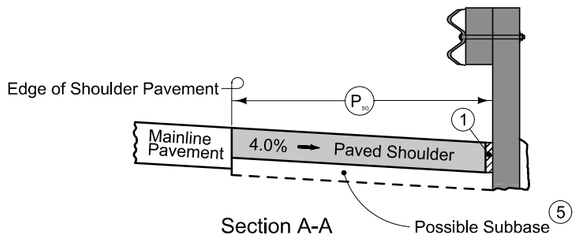
Granular Shoulder

2_G_SR_ 04-21-20		
STATION TO STATION		(G) Feet
1178+54.22	1179+05.97	10
1179+05.97	1179+25.36	10-15.2
BRIDGE AND APPROACHES		
1184+25.72	1184+39.11	13.6-10
1184+39.11	1185+04.51	10

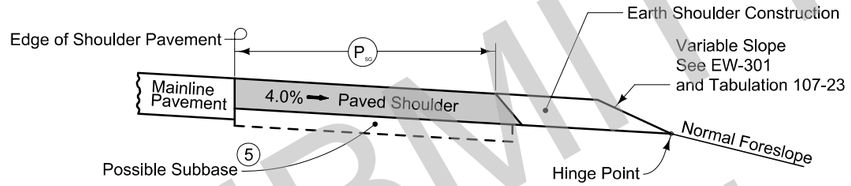
US HIGHWAY 65



PLAN VIEW

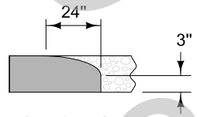


Section A-A



Section B-B

EXISTING SHOULDER



Section C-C
Roll down at granular shoulder or earth.

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

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

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

Refer to Tabulation 112-9 for shoulder quantities.

(1) PCC option only: When guardrail posts are installed prior to construction of PCC paved shoulder, fasten form board to the face of guardrail posts for the length shown.

(2) Continue paved shoulder 20 feet beyond the center of the first post.

(3) Shoulder may be notched for first 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.

(4) 'KT-1 joint for PCC shoulder.
'B' joint for HMA shoulder.

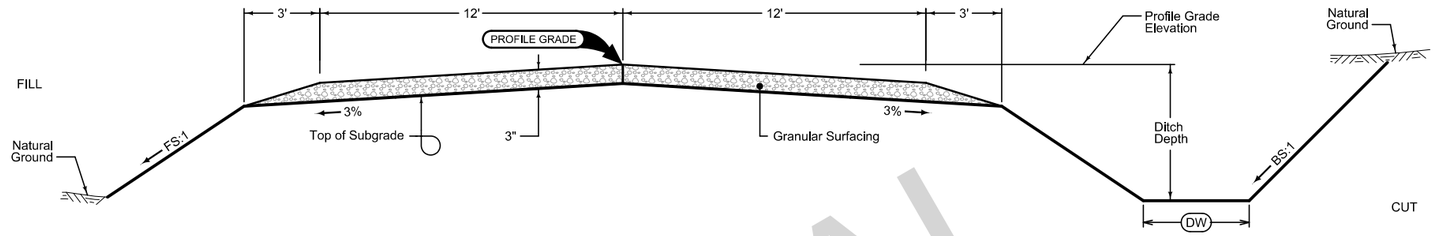
(5) Refer to other details in the plan.

PAVED SHOULDER AT GUARDRAIL
(GRANULAR SHOULDER ADJACENT TO MAINLINE)

LOCATION			DIMENSIONS		
ROAD IDENTIFICATION	STATION TO STATION		FS	BS	(DW) Feet
ENTL1179	0+21.99	0+76.61	8:1-6:1	-	-

G_2_GradeGran
10-17-17

DESIGNER INFO



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.

GRADING AND GRANULAR SURFACING

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)
- Septic Tank
- Cistern
- L.P. Gas Tank (No Footing)
- 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

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Topographic Features and Labels
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)	Existing Utilities
SHADING	**Design Color No.**	
Lavender	(9)	Temporary Pavement Shading
Gray, Light	(48)	Proposed Pavement Shading
Gray, Med	(80)	Proposed Granular Shading
Gray, Dark	(112)	Proposed Grade and Pave Shading "In conjunction with a paving project"
Brown, Light	(236)	Grading Shading
Tan	(8)	Proposed Sidewalk Shading
Blue, Light	(230)	Proposed Sidewalk Landing Shading
Pink	(11)	Proposed Sidewalk Ramp Shading
Red	(3)	Restricted Area

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Ground Line Profile
Blue	(1)	Proposed Profile and Annotation
Magenta	(5)	Existing Utilities
Blue, Light	(230)	Proposed Ditch Grades, Left
Black	(0)	Proposed Ditch Grades, Median
Rust	(14)	Proposed Ditch Grades, Right

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

RIGHT-OF-WAY LEGEND

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

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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

Clinton Twp.
T93N-R20W
Sec. 9

1175+00

1180+00

1185+00

Pi 1176+19.64

+00 Prop. Type "C" Ent. XX" UNCL PIPE

24" x 53' Conc. Pipe UAC

24" x 60' C.M.P. Remove

+76.60 ENT. CLOSE

18" C.M.P. Spring Outlet UAC

STA. 1182+92.75 (ML065)
START BRIDGE APPROACH CONSTR.

STA. 1178+90.51 (ML065)
BEGIN SB SHOULDER CONSTR.

STA. 1180+83.25 (ML065)
STOP BRIDGE APPROACH CONSTR.

STA. 1183+61.50 (ML065)
BEGIN BRIDGE APPROACH CONSTR.

STA. 1185+23.42 (ML065)
END SB SHOULDER CONSTR.

65

APPROX. SEC. LINE

FO

T1

STA. 1178+54.22 (ML065)
BEGIN NB SHOULDER CONSTR.

Δ = 01°38'02.00" (RT)
T = 304.79
L = 609.53
R = 21374.59
E = 2.17
e = ___
L = ___
x = ___

Pi 1179+24.39

STA. 1180+14.50 (ML065)
BEGIN BRIDGE APPROACH CONSTR.

STA. 1185+04.51 (ML065)
END NB SHOULDER CONSTR.

18" x 24' C.M.P. UAC

+13.31 ENT. UAC

24" x 31' Conc. Pipe UAC

Sta. 1181+90.0
180' x 28' Continuous I-Beam Bridge
Design No. 155
D.A. = 3 sq. mi.-R (from plans)
Build 204' x 44' PPCB Bridge

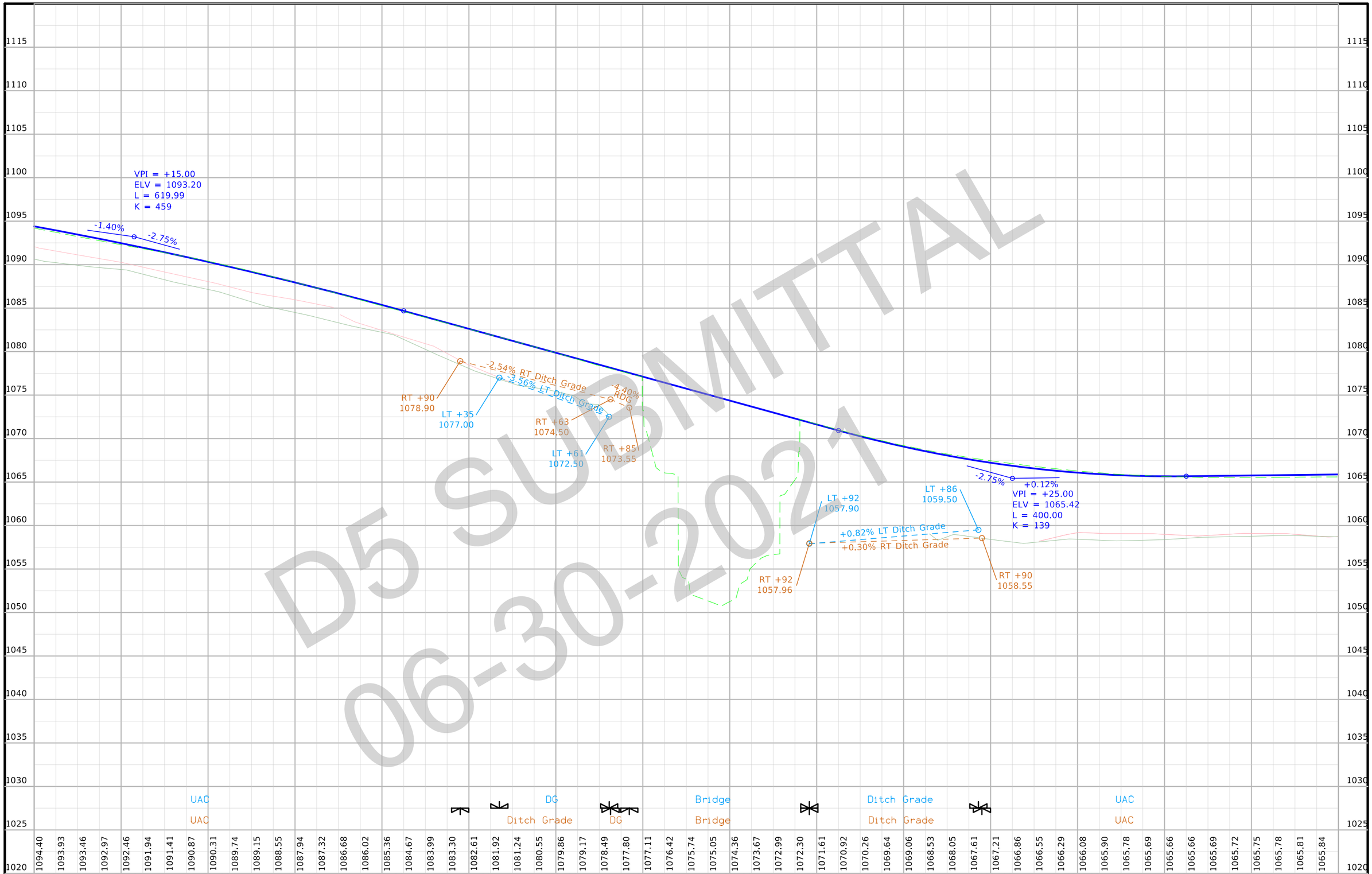
0 100
FEET

Clinton Twp.
T93N-R20W
Sec. 10

US HIGHWAY 65

FILE NO. 32052	ENGLISH	DESIGN TEAM Flattery/Bell/Kiebel/Jack	FRANKLINFRANKLIN COUNTY	PROJECT NUMBER BRF-065-7(42)--38-35BRF-065-7(42)--38-35	SHEET NUMBER D.2

1:06:09 PM 6/24/2021 akiebel pw:\\ntPwInt1.dot.int.lan:PWMain\Documents\Projects\3506502017\Design\CADD_Files\Sheet_Files\35065042_D02.dgn



FILE NO. 32052	ENGLISH	DESIGN TEAM Flattery/Bell/Kiebel/Jack	FRANKLIN COUNTY	PROJECT NUMBER BRF-065-7(42)--38-35	SHEET NUMBER D.3

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Survey Information

Franklin County
BRFN-065-7(42)—39-35
Bailey Creek 0.8 mi S of S Jct. Co Rd C13
Bridge - Unspecified
PIN 17-35-065-020
Sap-864.3

General Information

Measurement units for this survey are US survey feet. This survey is for proposed Bridge replacement. Project datum and control information is provided by the Design Survey Office. This project is a Partial DTM with Photo control. This survey request was for the Highway 65 and Bailey Creek corridor.

Vertical Control

Vertical datum for this survey is NAVD88 (Computed using Geoid12B). GRS80 Ellipsoidal Height was computed at project control Pts. 2004-037, CP1, CP2, HILL_ET, and Sheffield by conducting one concurrent six-hour static observation. Additional benchmarks were placed throughout the project using a GNSS Base-Rover setup relative to Pt. CP1 and Pt. CP2. Two observations with a minimum of four-hours between were collected and used in a weighted average.

This survey observed 1 NGS Control Monument with published NAVD88 height to compare to local ground control:

NGS 1st. order class II mark designated Sheffield has a published Elev. Of 1077.17
Survey Elev. = 1077.23

This survey observed 2 local area county Control Monuments with published NAVD88 heights to compare to local ground control:

Franklin County Control mark HILL ET has a published Elev. of 1110.99
Survey Elev. = 1110.93

Franklin County Control mark 2004-037 has a published Elev. of 1111.07
Survey Elev. = 1110.99

No As-Built Plan benchmarks could be located, however survey elevations obtained on the bridge seats have a close vertical difference relationship with the plan bridge seat elevations as follows:

As-built Plan FN-212 Bridges and Culverts Design No. 155

North abutment bridge seat plan elev. = 1076.49
Survey elev. = 1068.50

South abutment bridge seat plan elev. = 1081.32
Survey elev. = 1073.27

The average vertical difference is -8.02 to be applied to as built elevations.

Horizontal Control

The project coordinate system for this survey is Iowa RCS Zone 4 (U.S. Survey Feet). This survey control is relative to IaRTN reference stations. IaRTN Reference Station coordinates are relative to the National Reference Station network datum: NAD83 (2011) for Epoch 2010.00. Coordinates were determined by conducting one concurrent six-hour static observation at project control Pts. 2004-037, CP1, CP2, HILL_ET, and Sheffield. Additional control points were placed throughout the project using a GNSS Base-Rover setup relative to Pt. CP1 and Pt. CP2. Two observations with a minimum of four-hours between were collected and used in a weighted average.

Alignment Information

The horizontal alignment for this survey is a retrace of As-built Plans No. FN-212. Survey stationing was equated to the plan POT at STA 1181+90.0 and run back and ahead without equation throughout the survey.

Survey stationing relates to as built plan stationing as follows:

PI Sta. 1166+06.5 As-built Plans Project No. FN-212
Survey PI Sta. 1166+06.40

PI Sta. 1176+19.6 Project No. FN-212
Survey PI Sta. 1176+19.64

POT Sta. 1188+90 Project No. FN-212
Survey PI Sta. 1188+90.00

POT Sta. 1192+35.9 Project No. PWFA-212 A (2)
Survey POT Sta. 1192+36.05

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) EPOCH 2010.00
VERT. DATUM: NAVD88
Ia. Regional Coordinate System Zone 4

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) EPOCH 2010.00

VERT. DATUM: NAVD88

Ia. Regional Coordinate System Zone 4

Point Name	Northing	Easting	Elevation	Code	Description
CP1	8730024.15	14937109.49	1107.64	BM	SET FENO MONUMENT TOP OF BACKSLOPE 590 FT NORTH OF 140TH ST AND 85 FT WEST OF HWY 65
CP2	8734829.89	14937174.64	1070.00	BM	FD ROW RAIL WITH DRILL HOLE IN BALL 121 FT NORTH OF 150TH ST AND 60 FT EAST OF HWY 65
2004-037	8724232.02	14937297.20	1110.99	BM	FD FRANKLIN CO GPS CONTROL BERNTSEN MONUMENT AS DESCRIBED
HILL_ET	8729892.88	14958216.99	1110.93	BM	FD USGS MONUMENT DESIGNATED HILL ET AS DESCRIBED
SHEFFIELD	8735277.73	14933406.01	1077.23	BM	FD USC&GS CONCRETE MONUMENT DESIGNATED SHEFFIELD AS DESCRIBED
500	8730928.04	14937184.37	1079.74	BM	FND IDOT BRASS PLUG TOP SE WING WALL
501	8731115.90	14937146.76	1072.51	BM	SET CUT X TOP NW WING FOUNDATION

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	

1185+90
℄1015'

1

CHARLES E SUKUP REV. TRUST &
MARY BETH SUKUP REV. TRUST

1188+31±℄
℄769'

2

PERMANENT
FLOWAGE EASEMENT

FLOGOLA LLC

1182+85
℄660'

PERMANENT
FLOWAGE EASEMENT

Exported from TUFLOW Results
1.5' contour

1182+09
℄343'

Concept Q100 204' Bridge Backwater
greater than 1.5 feet

1183+77
℄79'±Ex.R/W

1193+54
℄ 235'

1193+54
℄ 125'±Ex.R/W

1170+00

1175+00

1180+00

1185+00

1190+00

TEMPORARY EASEMENT TO
CONSTRUCT ENTRANCE

1178+85
℄87'

1179+13
℄87'

1179+17
℄78±Ex.R/W

24" x 80'
RCP

FO

FO

FO

65

65

T1

T1

O T P

STA 1179+30.91
OFF 109.00'

0 100
FEET

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY
ROW Team: CUVA / CARMAN
ROW #: NHSN-065-7(43)--2R-35
Plan Date: 10/05/2021
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO. 32052	ENGLISH	DESIGN TEAM Flattery/Bell/Jack	Franklin COUNTY	PROJECT NUMBER BRF-065-7(42)--38-35	SHEET NUMBER H.1	

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108-23A
08-01-08

TRAFFIC CONTROL PLAN

Traffic will be maintained via an off-site detour.
Proposed detour route: US 65 / County Road C-25 east / County Road S-56 north / County Road C-13 west / US 65.
Detour maintained by: XXXXXXX

Contractor is required to provide access to the two entrances within the reconstruction limits at all times.

108-25
10-21-14

511 TRAVEL RESTRICTIONS

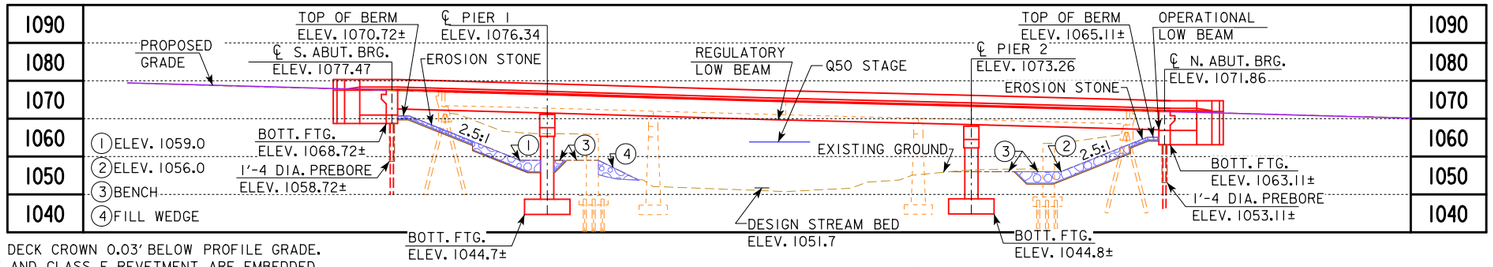
Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No., Structure ID, or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
			No Travel Restrictions Anticipated at this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

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.	



NOTES:

1. TOP OF BRIDGE DECK CROWN 0.03' BELOW PROFILE GRADE.
2. EROSION STONE AND CLASS E REVETMENT ARE EMBEDDED.

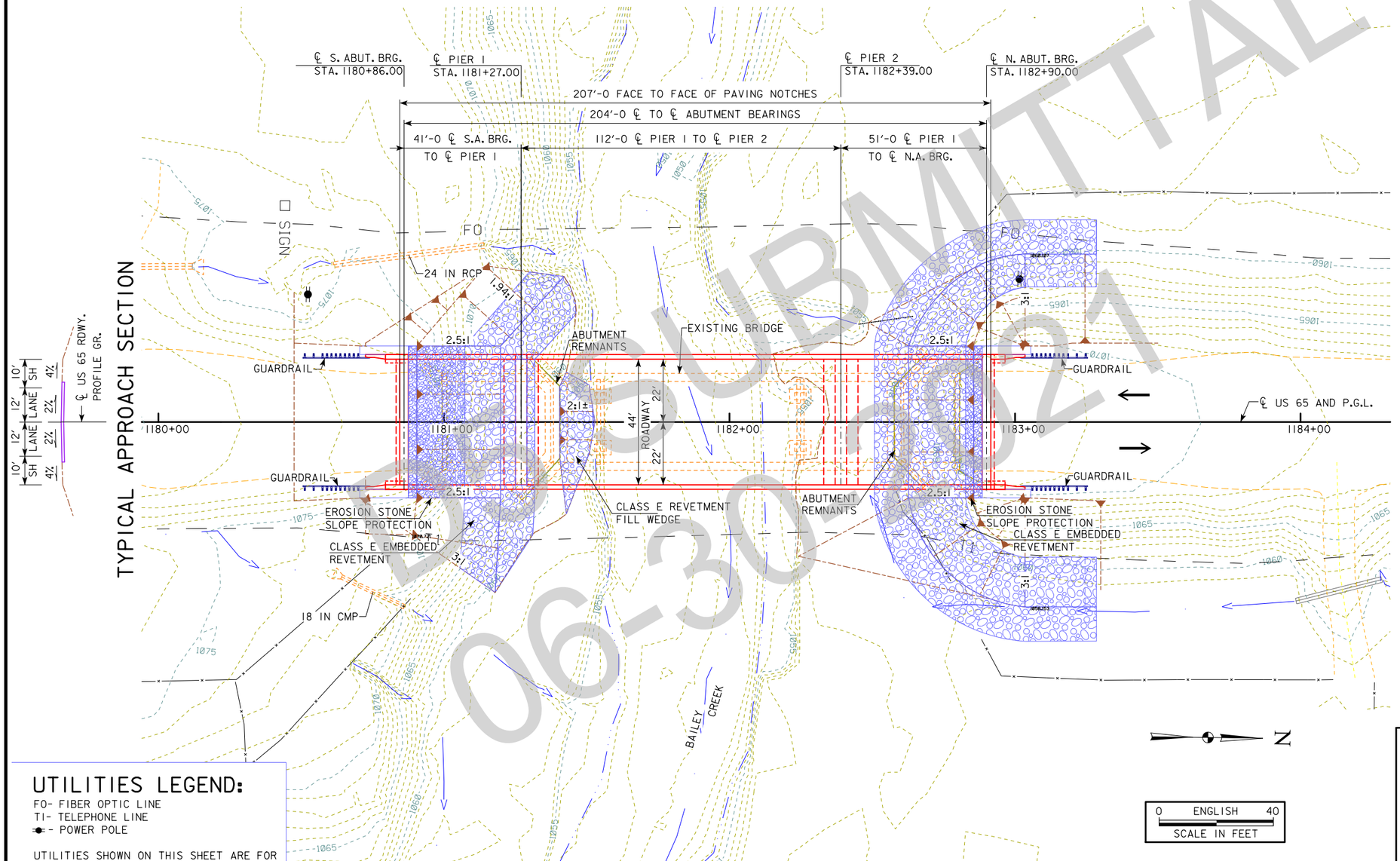
LONGITUDINAL SECTION ALONG ℄ APPROACH ROADWAY

BENCH MARK NO. CP1: NORTHING 8730024.15, EASTING 14937109.49, ELEV. 1107.64 SET FENO MONUMENT TOP OF BACKSLOPE 590 FT NORTH OF 240TH ST AND 85 FT WEST OF HWY 65

G = -2.750%

PVT STA = 1178+24.995
PVT ELEV = 1084.675
PVC STA = 1183+25.000
PVC ELEV = 1070.925

PROPOSED PROFILE GRADE US 65



TYPICAL APPROACH SECTION

UTILITIES LEGEND:

FO- FIBER OPTIC LINE
TI- TELEPHONE LINE
- POWER POLE

UTILITIES SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY, SEE ROAD DESIGN SHEETS FOR FINAL UTILITY INFORMATION.

SITUATION PLAN

HYDRAULIC DATA

DRAINAGE AREA = 89.2 SQ. MI.
STREAM SLOPE = 6.3 FT./MI.
AVG. LOW WATER STAGE = 1053.3

Q_{25} = 5620 CFS
STAGE = 1063.2

Q_{50} = 6760 CFS = Q OVERTOP
STAGE = 1063.8
REGULATORY LOW BEAM = 1069.67
BACKWATER = 2.1 FT.
AVG. BRIDGE VELOCITY = 4.8 FPS
CALCULATED DESIGN AND CHECK SCOUR WILL BE LIMITED BY THE ELEVATION OF COMPETENT ROCK.

Q_{100} = 7870 CFS
STAGE = 1064.2
OPERATIONAL LOW BEAM = 1066.86
BACKWATER = 2.3 FT.
AVG. BRIDGE VELOCITY = 5.2 FPS

ROADWAY OVERTOP 1065.5
STA. 1087+92
Q_{200} = 9950 CFS
Q_{500} = 10,800 CFS

TRAFFIC ESTIMATE

2022 AADT	2700	V.P.D.
2042 AADT	2900	V.P.D.
202_ DHV	_	V.P.H.
TRUCKS	13	%
TOTAL DESIGN ESALs	_	

LOCATION

US 65 OVER BAILEY CREEK
CITY OF SHEFFIELD
T-93N R-20W
SECTION 9-10
ROSS TOWNSHIP
FRANKLIN COUNTY
FHWA NO. 25141
BRIDGE MAINT. NO. 3577.7S065
LATITUDE 42.881260°
LONGITUDE -93.202336°

PRELIMINARY

DESIGN FOR 0° SKEW

204'-0 x 44'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

41'-0, 51'-0 END SPANS (BTC BEAM TYPE) 112'-0 INTERIOR SPAN

SITUATION PLAN

STATION 1181+88.00 (US 65) APRIL 2021

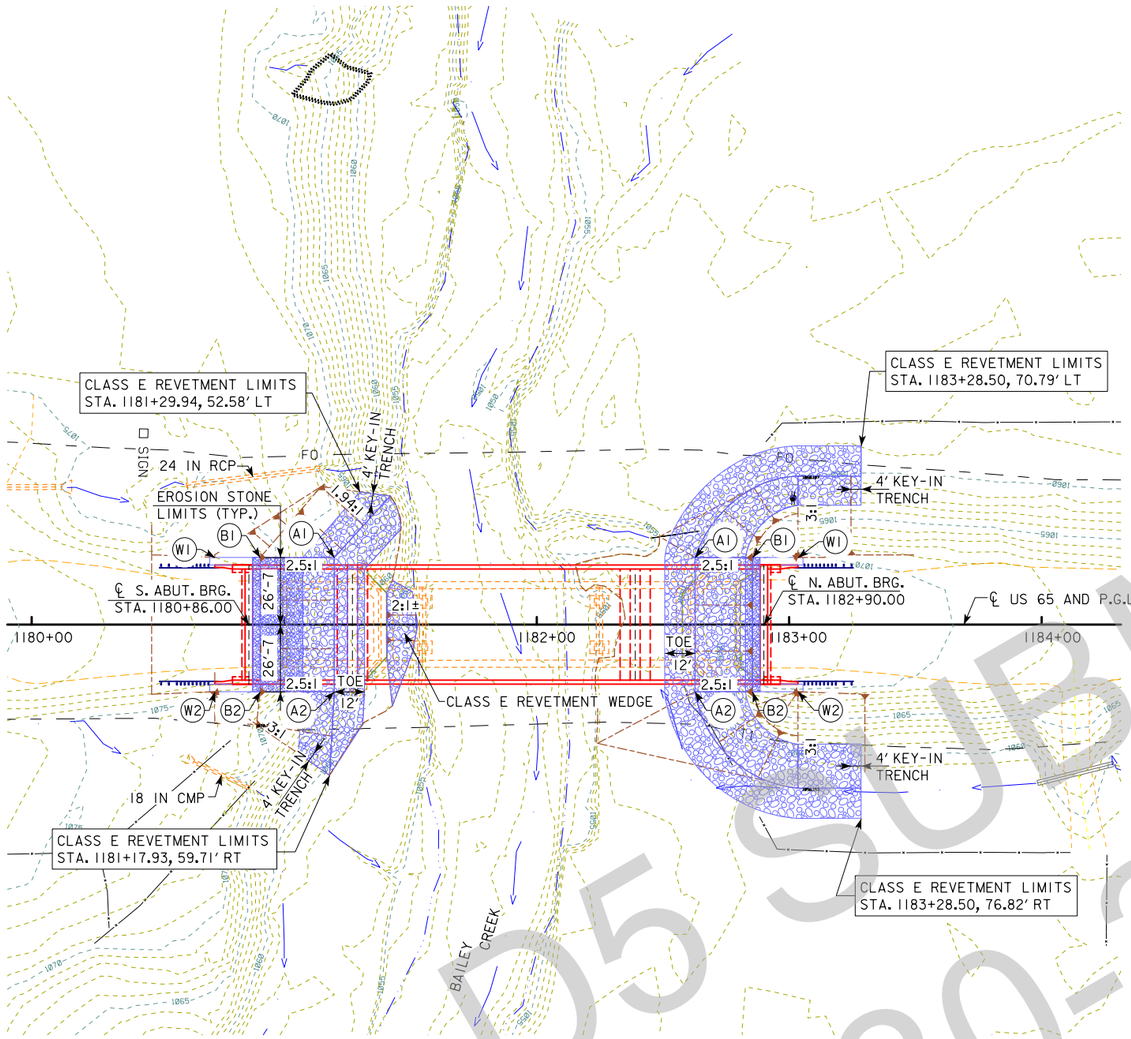
FRANKLIN COUNTY

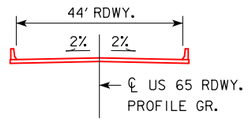
IOWA DOT - TRANSPORTATION DEVELOPMENT DIVISION

DESIGN SHEET NO. 1 OF 2 FILE NO. 32052 DESIGN NO. 122

DESIGN TEAM	FRANKLIN COUNTY	PROJECT NUMBER BRF-065-7(42)--38-35	SHEET NUMBER ??

BENCH MARK NO. CP1: NORTHING 8730024.15, EASTING 14937109.49, ELEV. 1107.64 SET FENO MONUMENT TOP OF BACKSLOPE 590 FT NORTH OF 240TH ST AND 85 FT WEST OF HWY 65



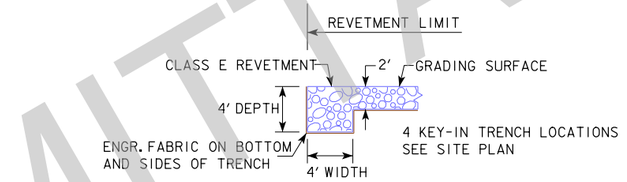


TYPICAL BRIDGE SECTION

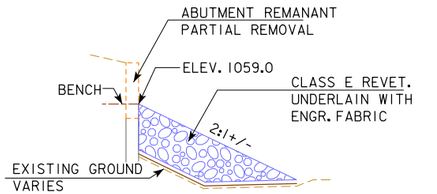
ESTIMATED ARMORING QUANTITIES

LOCATION	REVETMENT CL. E (TON)	EROSION STONE (TON)	ENGINEERING FABRIC (SY)	EXCAVATION (CY)
BERM LININGS - SOUTH ABUT.	345.9	49.8	458.3	247.4
BERM LININGS - NORTH ABUT.	855.3	14.2	824.6	543.4
CLASS E REVETMENT WEDGE	68.5	-	81.4	-
TOTALS	1269.7	64.0	1364.3	790.8

EXCAVATION QUANTITY CALCULATED FROM GRADING SURFACE.
SEE ROAD PLANS FOR DITCH LET-DOWN ARMORING QUANTITIES.

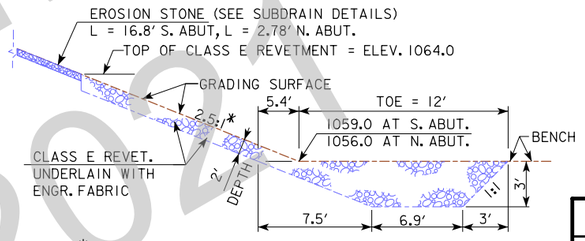


TYPICAL SECTION THRU KEY-IN IN TRENCH



NOTE: TIE-IN TO UP AND DOWNSTREAM BANKS SUCH THAT TOP OF REVETMENT MATCHES THE EXISTING GROUND.

TYPICAL SECTION THRU REVETMENT WEDGE



*SEE SITE PLAN - SLOPE VARIES BEYOND LIMITS OF THE EROSION STONE

TYPICAL SECTION THRU EMBEDDED REVETMENT

GENERAL NOTES: (to be incorporated into the General Notes of the final plan set, and removed from the TSL)

1. THIS DESIGN IS FOR THE REPLACEMENT OF THE EXISTING 180'x28' CONTINUOUS I-BEAM BRIDGE, FRANKLIN DESIGN NO 155, FHWA NUMBER 25140, MAINT. NO. 3577.7S065.

2. WORK UNDER THIS DESIGN SHALL INCLUDE REMOVAL OF A PORTION OF DESIGN 1224 FRANKLIN ABUTMENT REMNANTS PER STANDARD SPECIFICATIONS TO ACCOMMODATE PROPOSED GRADING AND REVETMENT PLACEMENT.

NOTES TO DESIGNER (notes to be removed from final plan):

1. PRELIMINARY ASSUMPTION FOR PIER TYPE = T-PIER OR WALL PIER, STEM/WALL WIDTH 4.0' ASSUMED FOR HYDRAULIC MODELING.
2. BEAM TYPE = BULB-TEE C
3. TL-4 BRIDGE RAILING PROPOSED.
4. 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.
5. ALTHOUGH CENTER SPAN ALONG GRADE VS. HORIZONTAL DIFFERENCE IS 0.508 INCHES, ALONG GRADE SHALL BE NEGLECTED PER FINAL DESIGN PREFERENCE.
6. BERM SLOPES TO BE CONFIRMED DURING FINAL DESIGN.
7. THERE IS A HORIZONTAL CURVE BACK OF THE BRIDGE, BUT THERE IS NOT SUPERELEVATION. THE BRIDGE IS ON NORMAL CROWN.
8. IT IS RECOMMENDED THAT THE 24 INCH RCP AND THE 18 INCH CMP WILL BE REMOVED AND REPLACED WITH A ROADWAY DITCH AND REVETMENT LET-DOWN.

BERM SLOPE LOCATION TABLE

POINTS	SOUTH ABUTMENT			NORTH ABUTMENT		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
A1	1181+19.80	26.58' LT	1059.00	1182+62.72	26.58' LT	1056.00
A2	1181+19.80	26.58' RT	1059.00	1182+62.72	26.58' RT	1056.00
B1	1180+90.50	26.58' LT	1070.72	1182+85.50	26.58' LT	1065.11
B2	1180+90.50	26.58' RT	1070.72	1182+85.50	26.58' RT	1065.11
W1	1180+72.50	26.58' LT	1077.28	1183+03.50	26.58' LT	1070.93
W2	1180+72.50	26.58' RT	1077.28	1183+03.50	26.58' RT	1070.93

BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE

SITUATION PLAN

N

0 ENGLISH 60
SCALE IN FEET

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.

Patricia G. Schwarz 13170 IOWA LICENSED PROFESSIONAL ENGINEER

Patricia G. Schwarz — 4-5-2021
Signature — Date

Patricia G. Schwarz
Printed or Typed Name

My license renewal date is December 31, 2022

Pages or sheets covered by this seal: 1 AND 2 OF 2

PRELIMINARY

DESIGN FOR 0° SKEW

204'-0 x 44'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

41'-0, 51'-0 END SPANS (BTC BEAM TYPE) 112'-0 INTERIOR SPAN

SITUATION PLAN - SITE

STATION 1181+88.00 (US 65) APRIL 2021

FRANKLIN COUNTY

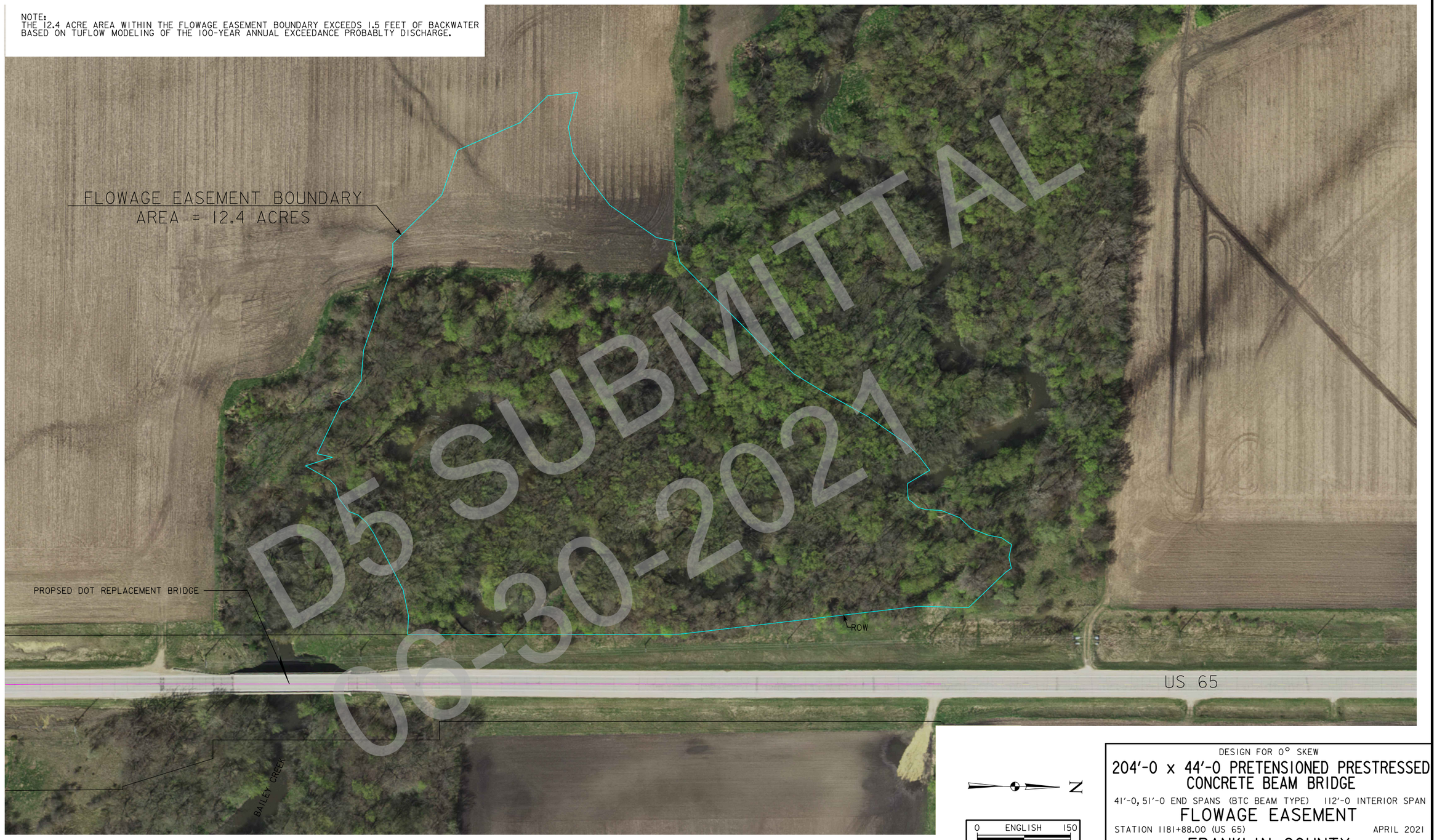
IOWA DOT - TRANSPORTATION DEVELOPMENT DIVISION

DESIGN SHEET NO. 2 OF 2 FILE NO. 32052 DESIGN NO. 122

DESIGN TEAM | FRANKLIN COUNTY | PROJECT NUMBER BRF-065-7(42)--38-35 | SHEET NUMBER ??

4/7/2021 1:31:34 PM pschwar pw:\\ntPwInt1.dot.int.lan:PWMain\Documents\Projects\3506502017\BRPrelim\STR_35065042_DOT_Z04.dgn TSL_35_0122_02 11x17_pdf.pltcfg

NOTE:
THE 12.4 ACRE AREA WITHIN THE FLOWAGE EASEMENT BOUNDARY EXCEEDS 1.5 FEET OF BACKWATER BASED ON TUFLOW MODELING OF THE 100-YEAR ANNUAL EXCEEDANCE PROBABLTY DISCHARGE.



PROPOSED FLOWAGE EASEMENT

N

0 ENGLISH 150
SCALE IN FEET

DESIGN FOR 0° SKEW

204'-0 x 44'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

41'-0, 51'-0 END SPANS (BTC BEAM TYPE) 112'-0 INTERIOR SPAN

FLOWAGE EASEMENT

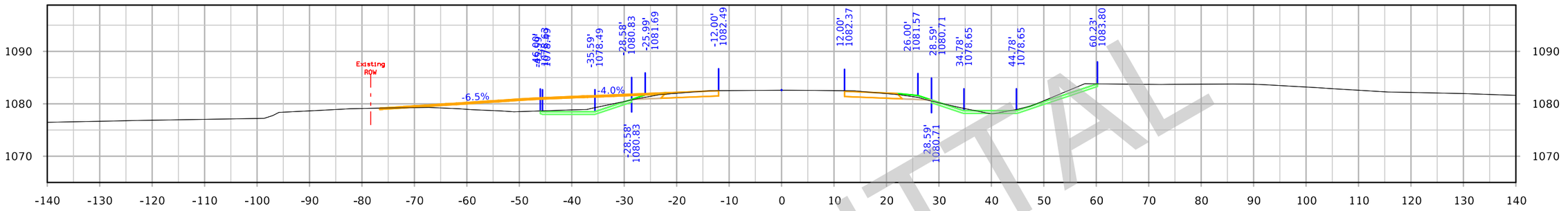
STATION 1181+88.00 (US 65) APRIL 2021

FRANKLIN COUNTY

IOWA DOT - TRANSPORTATION DEVELOPMENT DIVISION

DESIGN SHEET NO. 1 OF 1 FILE NO. 32052 DESIGN NO. 122

DESIGN TEAM	FRANKLIN COUNTY	PROJECT NUMBER BRF-065-7(42)--38-35	SHEET NUMBER



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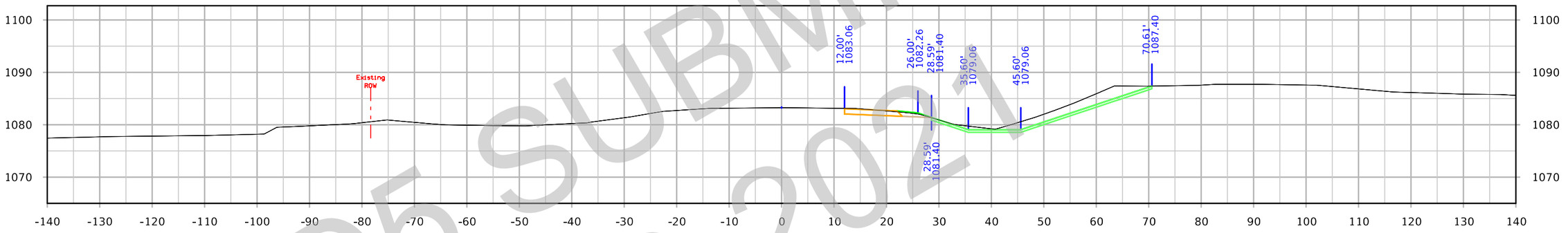
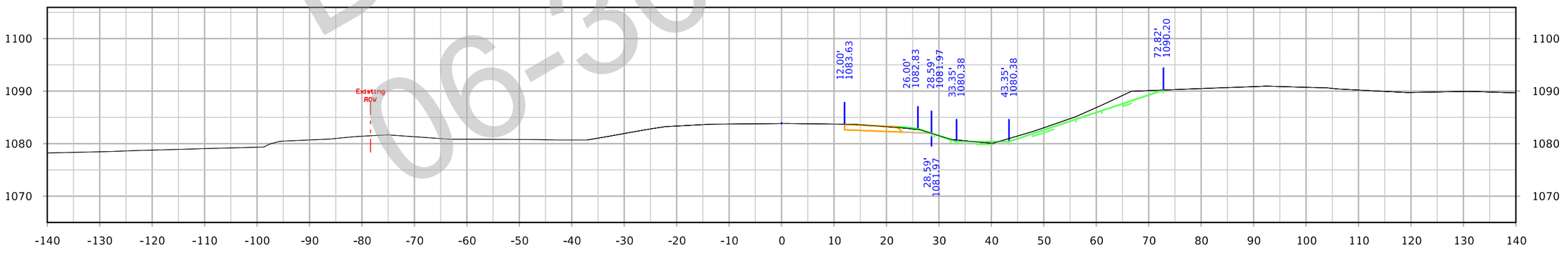


STA. 1178+75.00



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FILE NO. 32052	ENGLISH	DESIGN TEAM Flattery/Bell/Jack	FRANKLIN COUNTY	PROJECT NUMBER BRF-065-7(42)--38-35	SHEET NUMBER W.1

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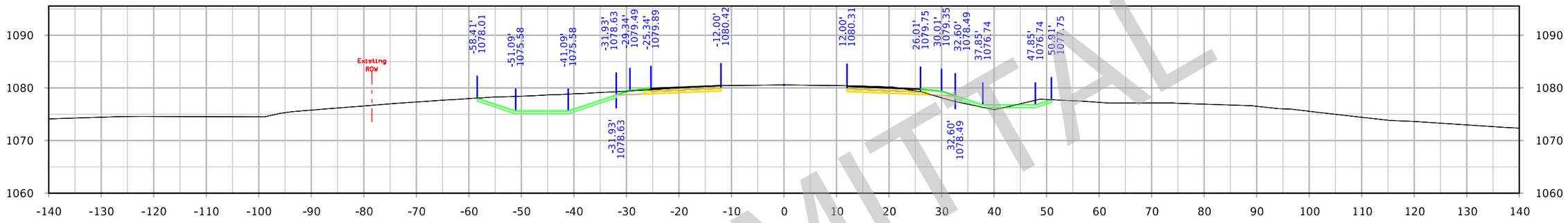

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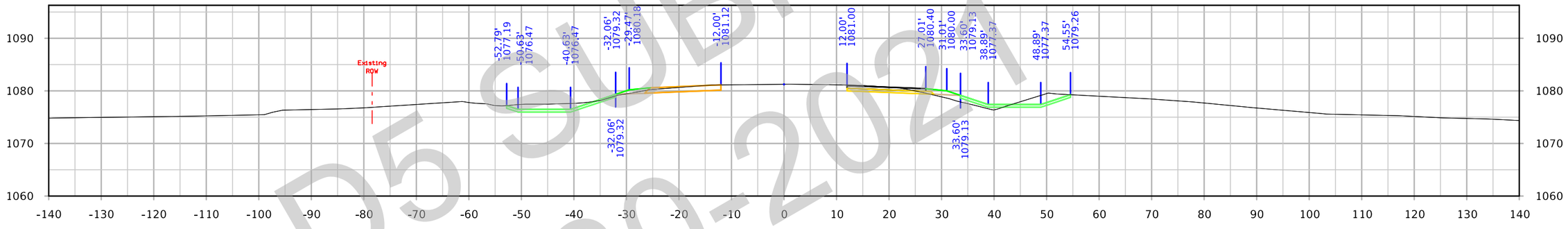

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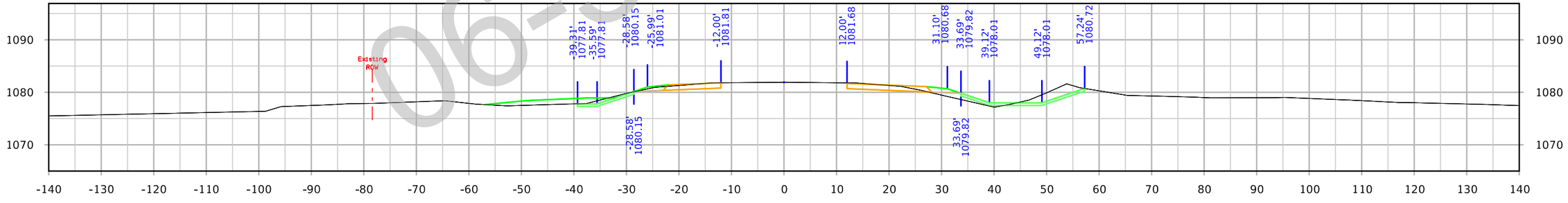

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FILE NO. 32052	ENGLISH	DESIGN TEAM Flattery/Bell/Jack	FRANKLIN COUNTY	PROJECT NUMBER BRF-065-7(42)--38-35	SHEET NUMBER W.2

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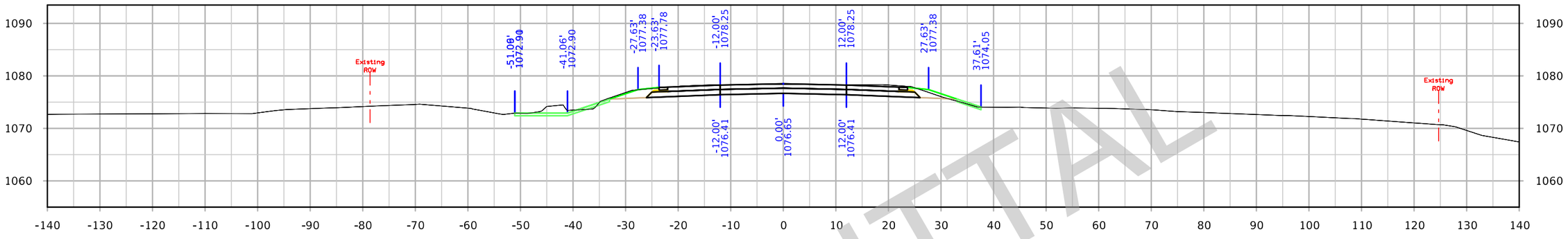

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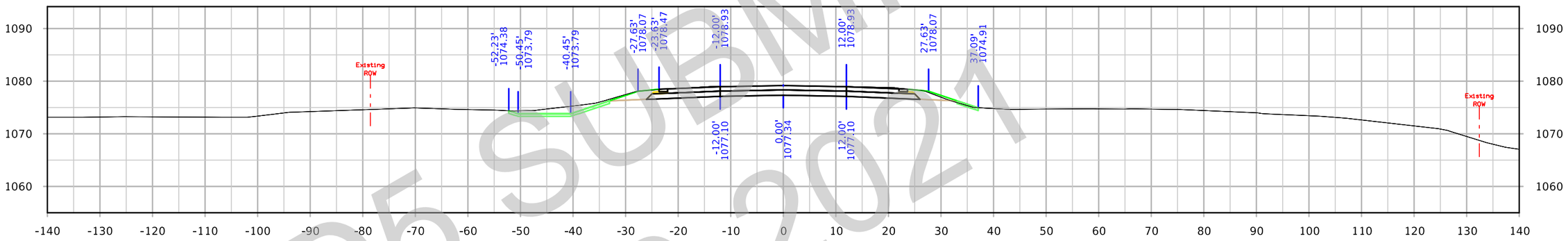

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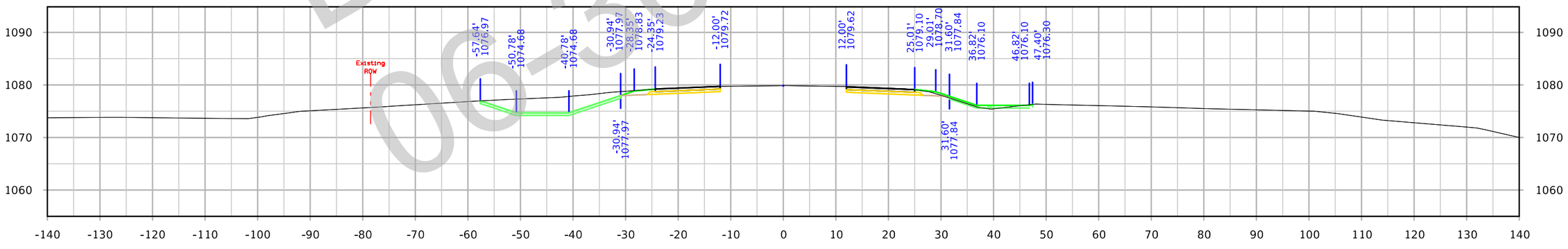

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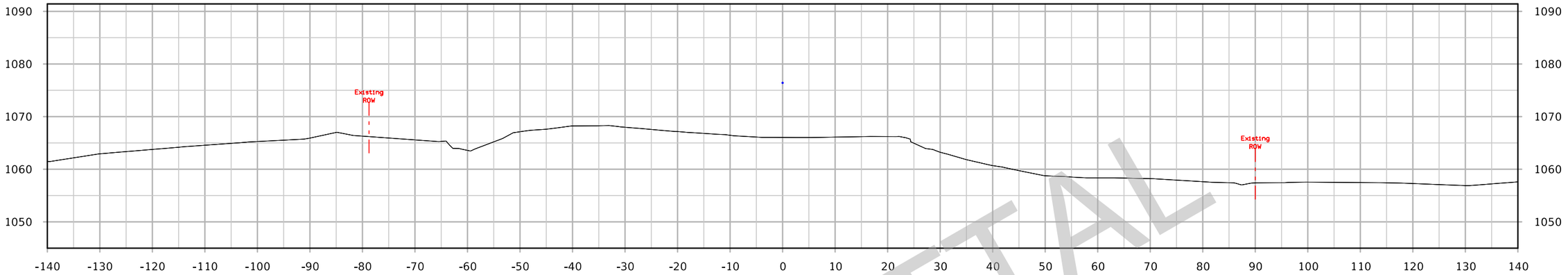

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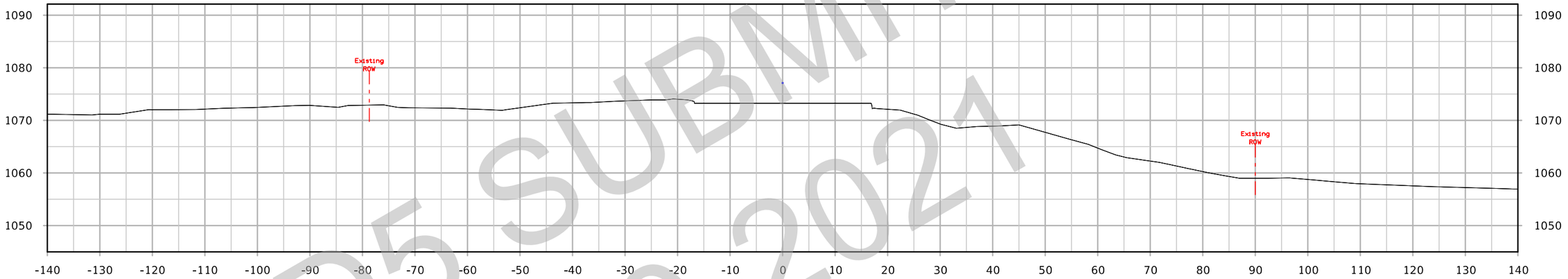

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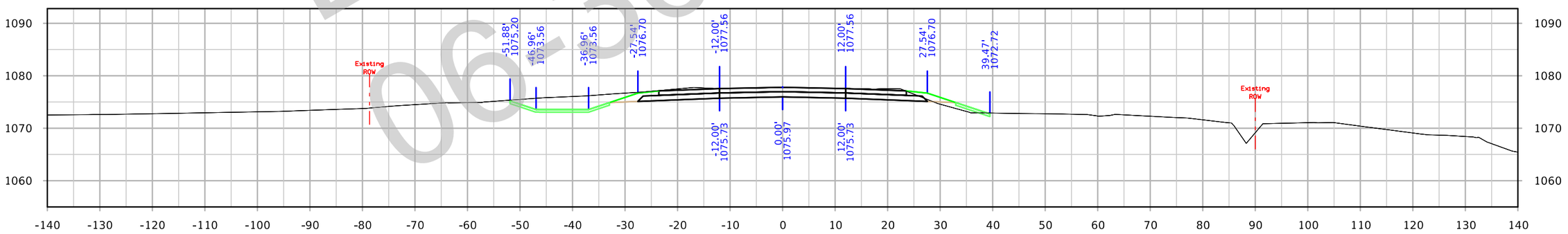

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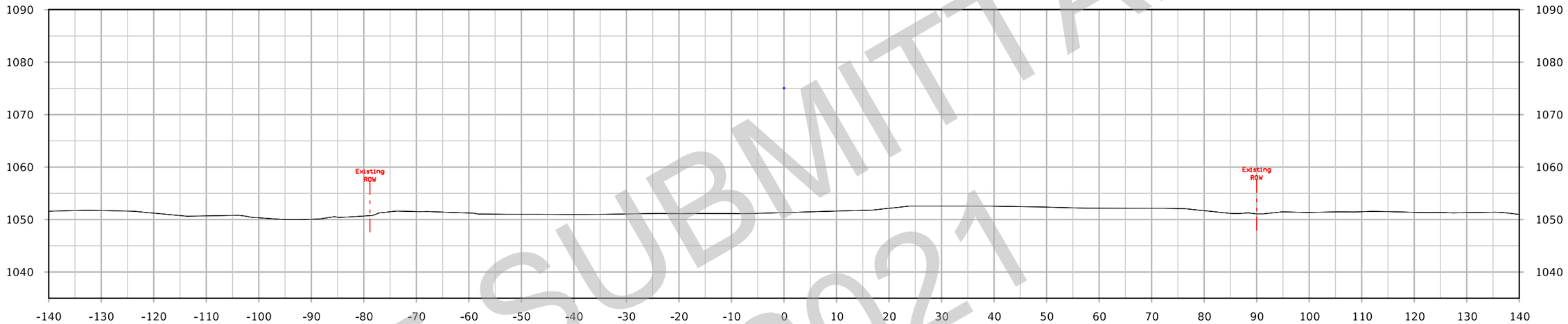

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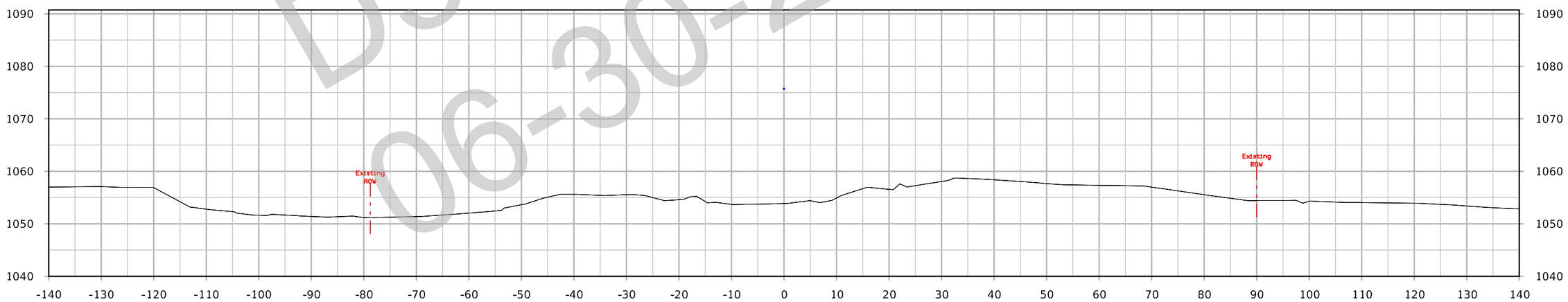

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FILE NO. 32052	ENGLISH	DESIGN TEAM Flattery/Bell/Jack	FRANKLIN COUNTY	PROJECT NUMBER BRF-065-7(42)--38-35	SHEET NUMBER W.5

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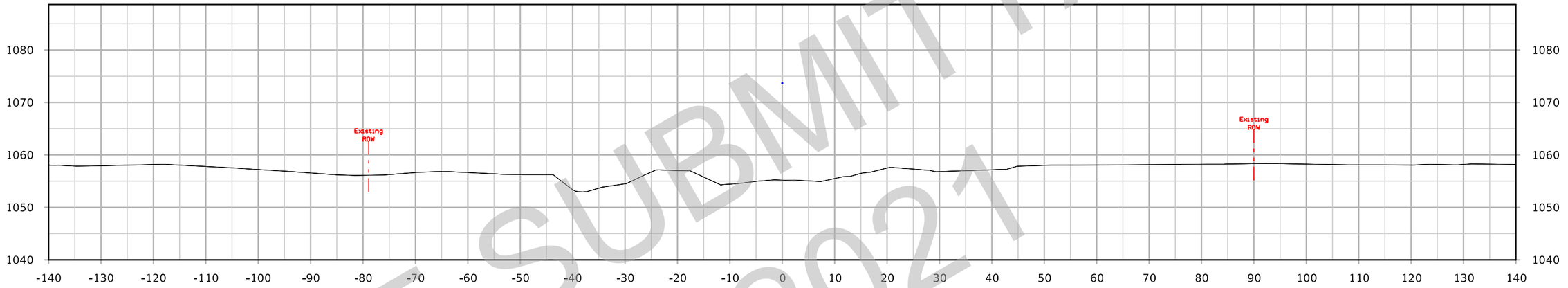

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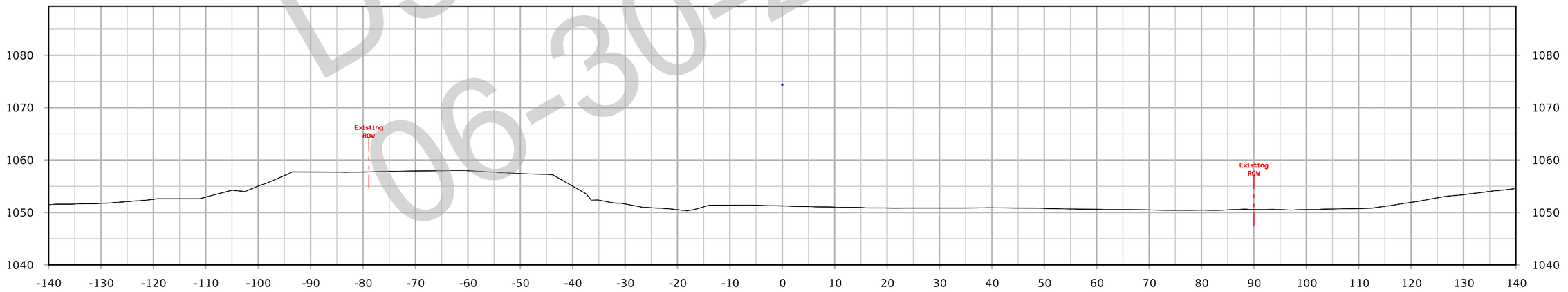

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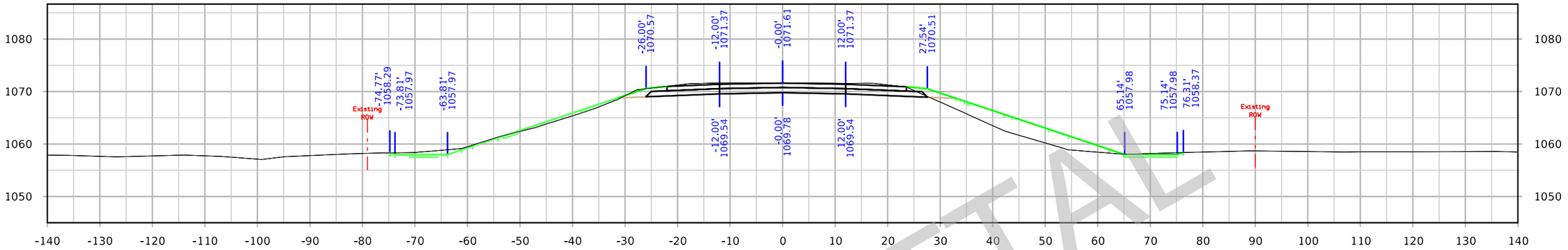

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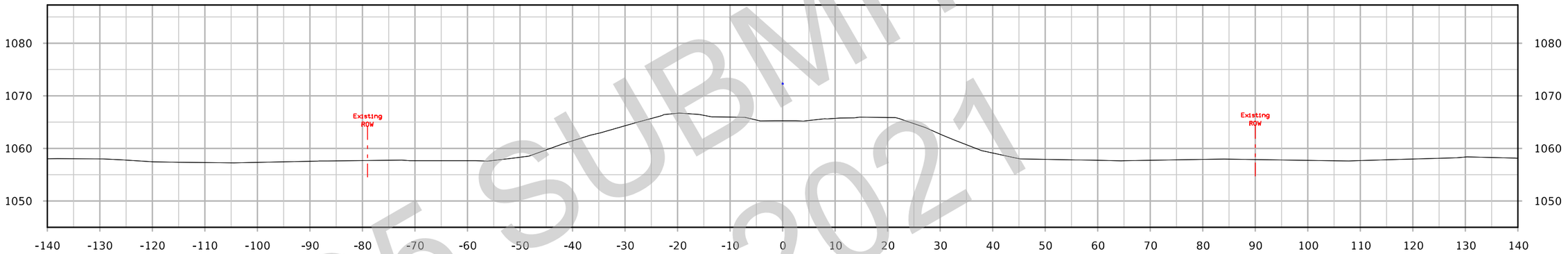

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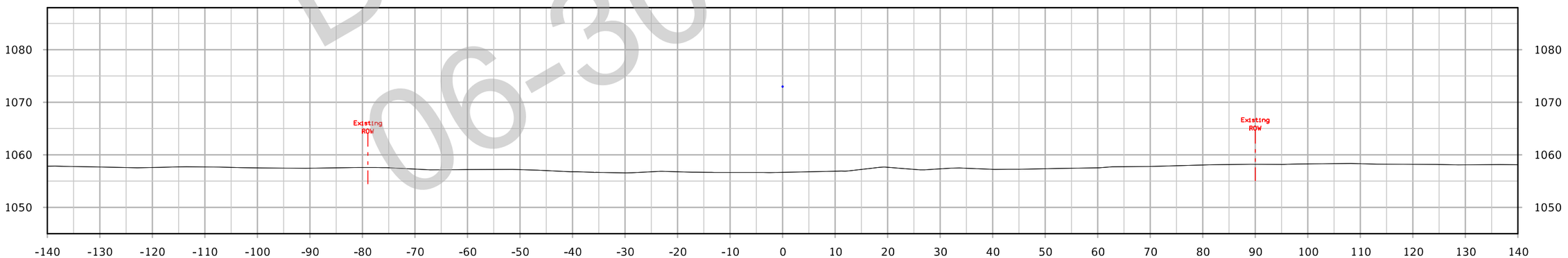

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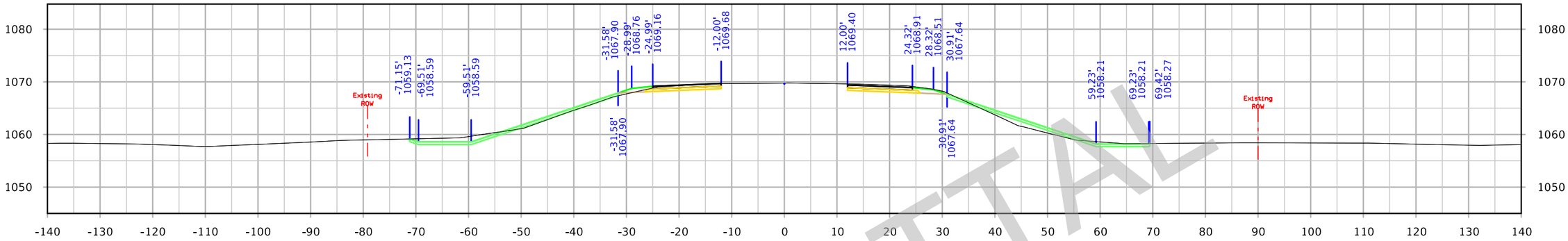

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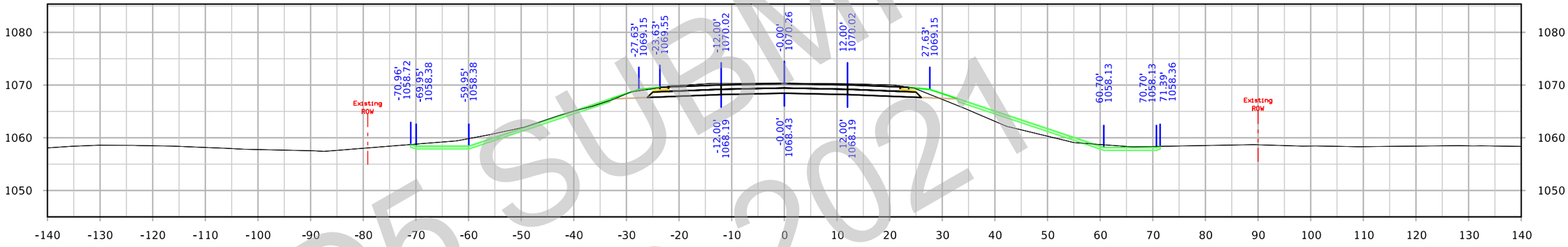

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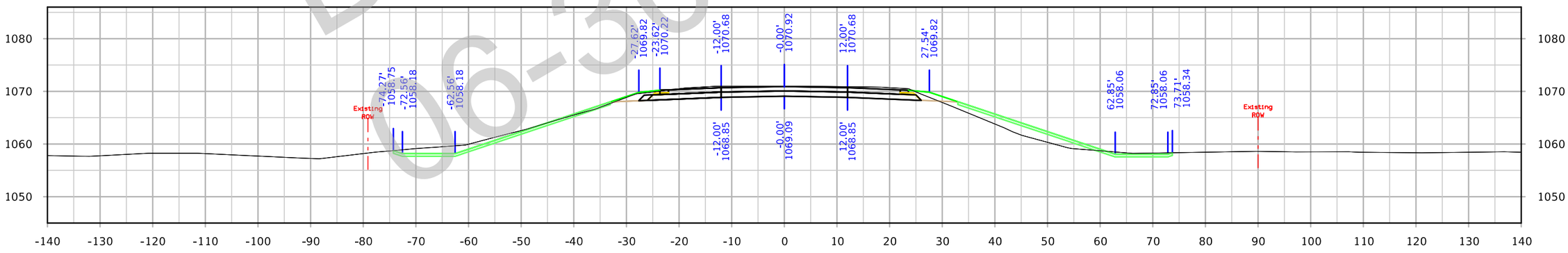

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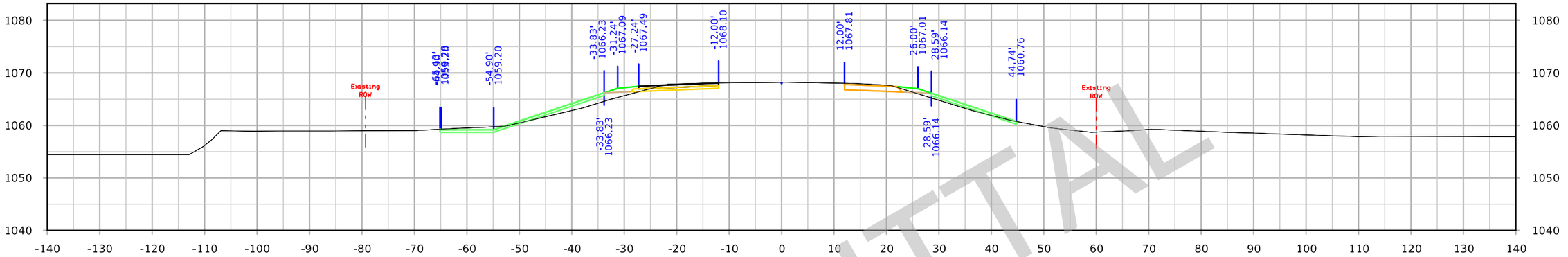

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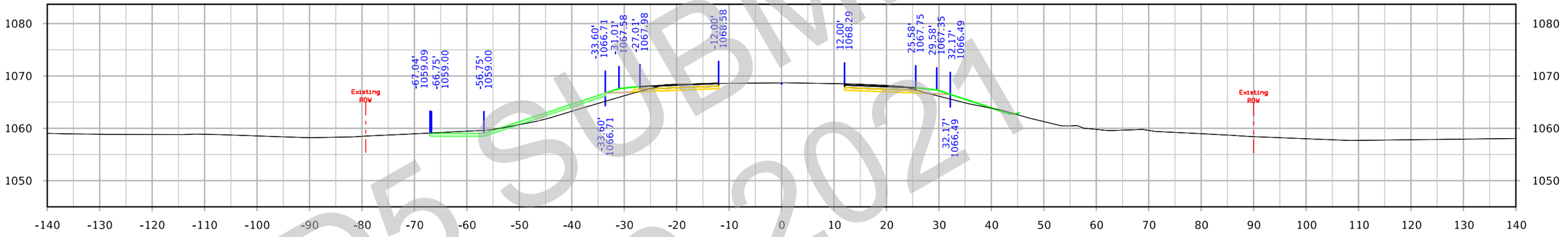

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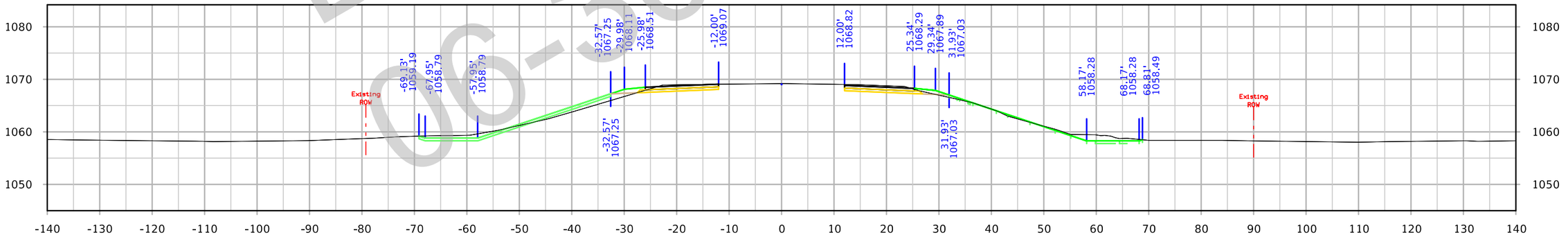

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FILE NO. 32052	ENGLISH	DESIGN TEAM Flattery/Bell/Jack	FRANKLIN COUNTY	PROJECT NUMBER BRF-065-7(42)--38-35	SHEET NUMBER W.9

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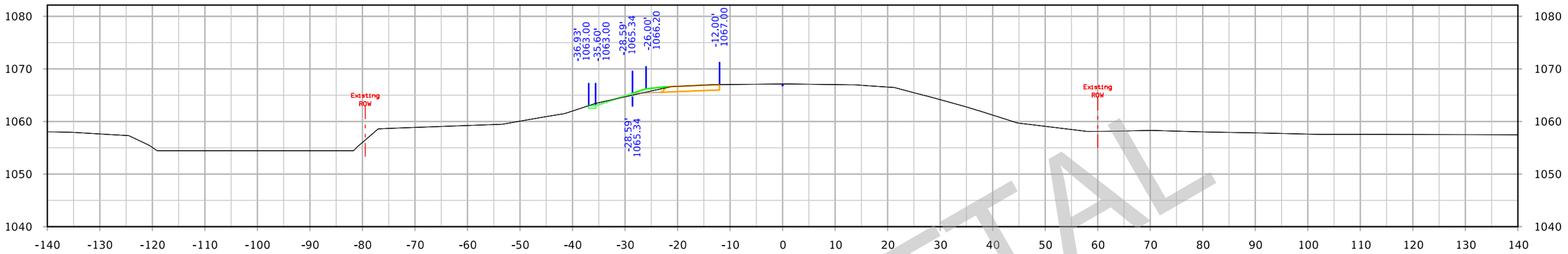

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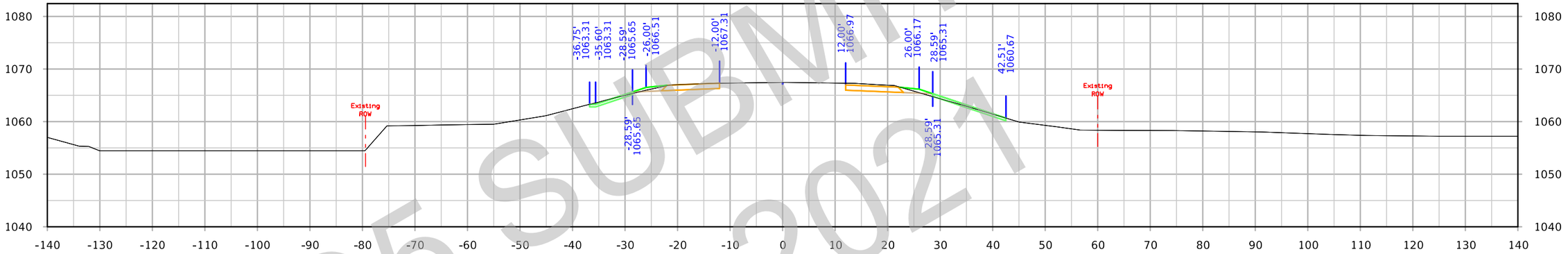

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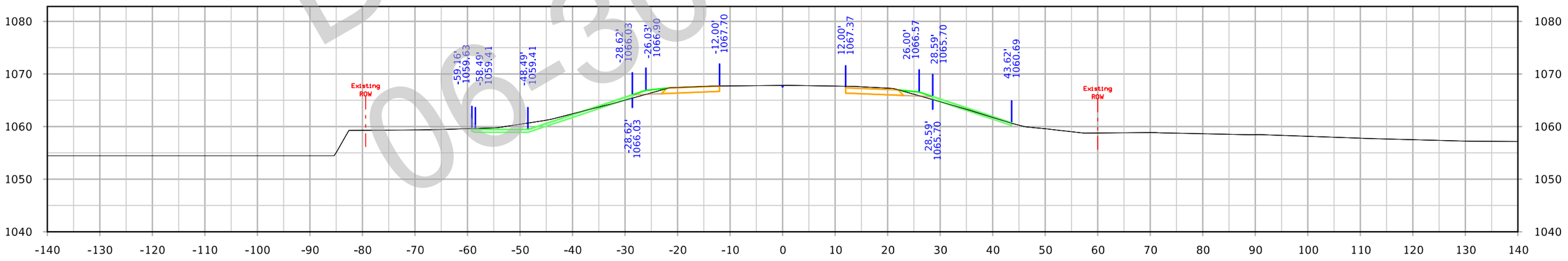

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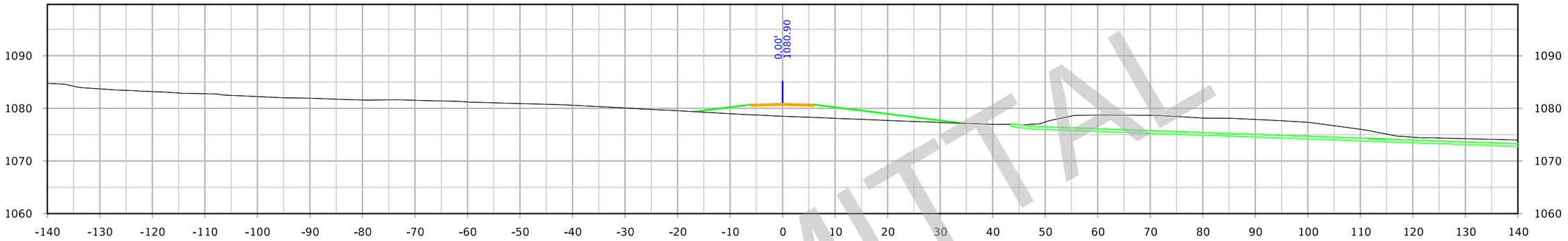

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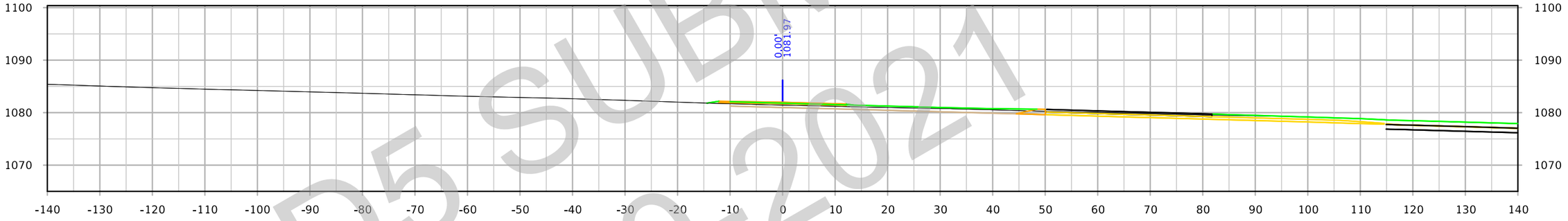

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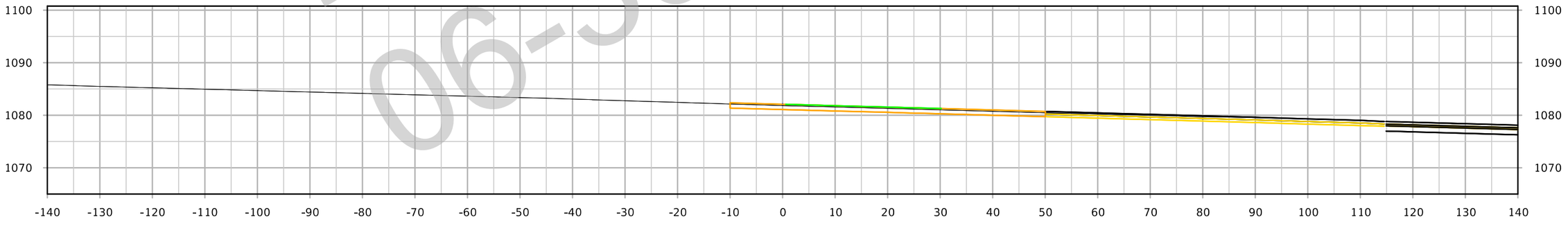

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FILE NO. 32052	ENGLISH	DESIGN TEAM Flattery/Bell/Kiebel/Jack	FRANKLIN COUNTY	PROJECT NUMBER BRF-065-7(42)--38-35	SHEET NUMBER Z.1

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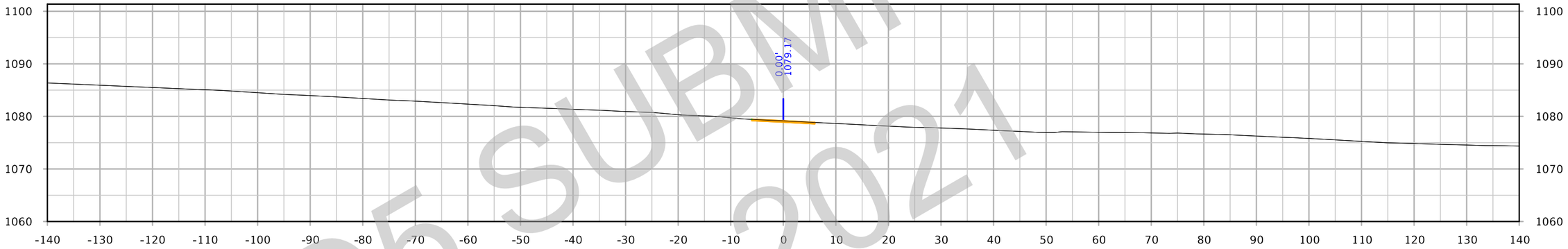

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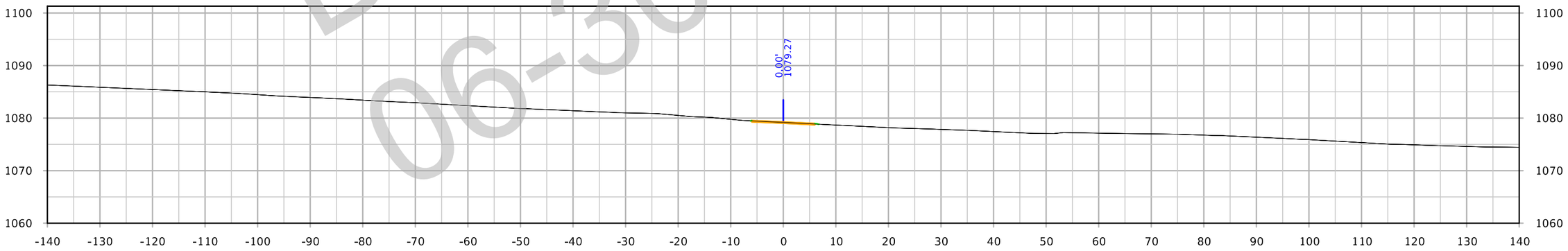

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FILE NO. 32052	ENGLISH	DESIGN TEAM Flattery/Bell/Kiebel/Jack	FRANKLIN COUNTY	PROJECT NUMBER BRF-065-7(42)--38-35	SHEET NUMBER Z.2

10:29:47 AM 6/24/2021 akiebel pw:\\ntPwInt1.dot.int.lan:PWMain\Documents\Projects\3506502017\Design\CADD_Files\Cross_Sections\XS_ENTL1179_35065042Z04.dgn