LETTING DATE
April 15, 2025

Grading

NHSX-063-3(95)--3H-62

MAHASKA COUNTY

INDEX OF SHEETS

No.	DESCRIPTION
A Sheets	**Title Sheets**
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A.2	Location Map Sheet
B Sheets	**Typical Cross Sections and Details**
B.1 - 3	Typical Cross Sections and Details
C Sheets	**Quantities and General Information**
C.1 - 2	Estimated Project Quantities and Reference Notes
C.3	Standard Road Plans
C.3	Index of Tabulations
C.3 - 4	Tabulations
CD Sheets	**Drainage Tabulations**
CD.1 - 3	Drainage Tabulations
CS Sheets	**Soils Tabulations**
CS.1 - 5	Soils Tabulations
D Sheets	**Mainline Plan and Profile Sheets**
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D.2 - 17	US 63
E Sheets	**Side Road Plan and Profile Sheets**
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E.2 - 3	North Shore Drive
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E.12 - 13	220th Street
E.14	210th Street
F Sheets	**Entrance Plan and Profile Sheets**
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G Sheets	**Survey Sheets**
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G.2	Control Point Vicinity Map
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J Sheets	**Traffic Control and Staging Sheets**
J.1	Traffic Control Plan
K Sheets	**Interchange Sheets**
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K.3	Ramp A Plan and Profile Sheets
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Q Sheets	**Soils Sheets**
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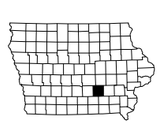
R Sheets	**Erosion Control Sheets**
RC.1 - 44	Est. Quantities, PPP, General Notes and Tabulations
RR.1 - 77	Erosion Control Legend, Basins, Site Map
T Sheets	**Earthwork Quantity Sheets**
T.1 - 2	Earthwork Legend Sheets
T.3 - 30	Earthwork Quantity Sheets
V Sheets	**Bridge and Culvert Situation Plans**
V.1 - 20	Culvert Situation Plans



IOWA DOT

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

MAHASKA COUNTY

Grading

NW Bypass of Oskaloosa

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
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www.iowaonecall.com
811 Know what's below. Call before you dig.

REVISIONS

	TOTAL
	859
PROJECT IDENTIFICATION NUMBER	
13-62-063-020	
PROJECT NUMBER	
NHSX-063-3(95)--3H-62	
R.O.W. PROJECT NUMBER	
NHSN-063-3(94)--2R-62	

INDEX OF SHEETS

No.	DESCRIPTION
W Sheets	**Mainline Cross Sections**
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X Sheets	**Side Road Cross Sections**
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X.200 - 229	Old IA 163
X.300 - 356	Kirby Avenue
X.400 - 432	220th Street
X.500 - 521	210th Street
X.600 - 609	Existing IA 163
Y Sheets	**Ramp Cross Sections**
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Y.200 - 223	Ramp B
Y.300 - 317	Ramp C
Z Sheets	**Cross Sections at Entrance Locations**
Z.1 - 2	Old IA 163
Z.3 - 5	Kirby Avenue
Z.6	220th Street

US63 North of Oskaloosa

DESIGN DATA RURAL

2014	AADT	3,500-4,500	V.P.D.
2040	AADT	4,200-6,700	V.P.D.
20--	DHV	--	V.P.H.
TRUCKS		12-20	%
Total Design ESALs		--	

US63 Through Oskaloosa

DESIGN DATA RURAL

2014	AADT	5,300-7,500	V.P.D.
2040	AADT	5,200-8,800	V.P.D.
20--	DHV	--	V.P.H.
TRUCKS		8-13	%
Total Design ESALs		--	

INDEX OF SEALS

SHEET NO.	NAME	TYPE	BID QUANTITY SHEETS
A.1	Angela K. Johnson	Primary Signature Block	C.1
CD.1	Travis L. Wallen	Hydraulic Design	CD.1
CS.1	Mark A. Dell	Soils Design	---
RC.1	Rachel A. Harris	Landscape Design	RC.1

ROADWAY DESIGN

LICENSED PROFESSIONAL ENGINEER
Angela K. Johnson
21636
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.

Angela Johnson — 2-4-2025
Signature — Date

Angela K. Johnson
Printed or Typed Name

My license renewal date is December 31, 2026

Pages or sheets covered by this seal: A.1-A.2, B.1-B.3, C.1-C.4, D.1-D.17, E.1-E.14, F.1, G.1-G.9, H.1-H.7, HE.1-HE.18, J.1, K.1-K.5, T.1-T.30, W.1-W.296, X.100-X.143, X.200-X.229, X.300-X.356, X.400-X.432, X.500-X.521, X.600-X.609, Y.100-Y.113, Y.200-Y.223, Y.300-Y.317, Z.1-Z.6

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER A.1

9:10:03 AM 2/27/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(095)_Grading\CADD_Files\Sheet_Files\A01_62063095Z09_ORD_Grading.dgn

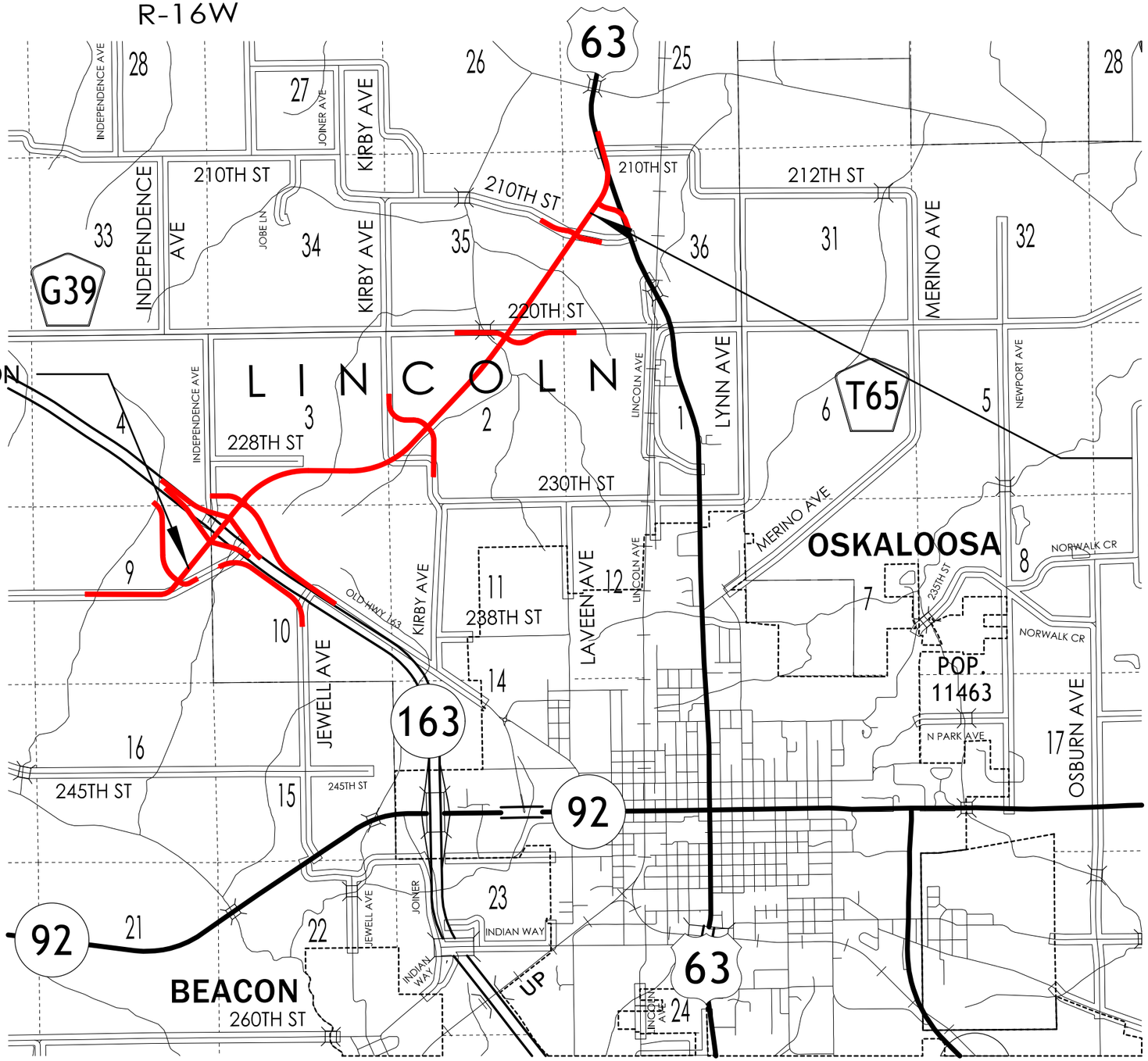
R-16W

BEGIN US 63 CONSTRUCTION
STA. 135+00.00

END US 63 CONSTRUCTION
STA. 303+00.00

T-75N

T-75N

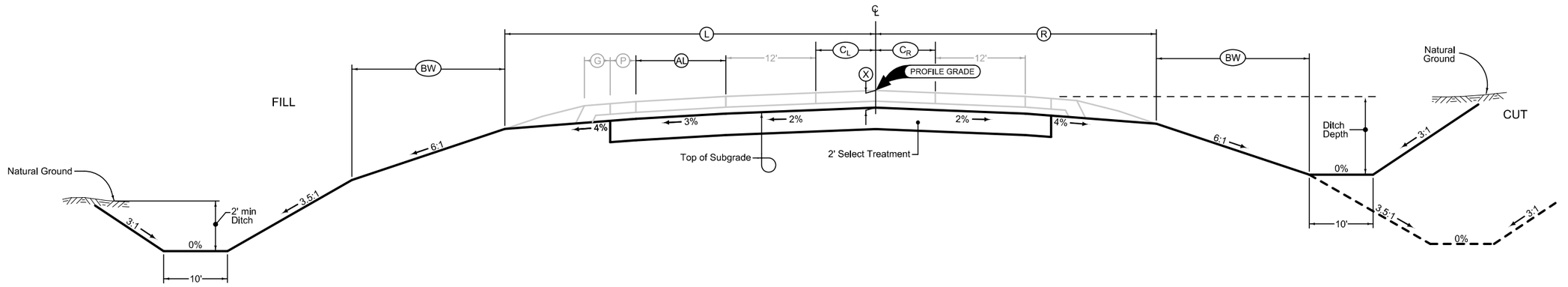


LOCATION MAP SCALE
0 0.5 1
Miles

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER A.2	

12:29:32 PM 12/30/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\A01_62063095Z09_ORD_Grading.dgn

G_2_Grade_BR
Modified



LOCATION			DIMENSIONS						
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	(C_L) Feet	(C_R) Feet	(AL) Feet	(BW) Feet
US 63	135+00.00	138+00.00	34.63	34.63	16	0	0	0	16.57
US 63	138+00.00	142+80.00	34.63-42.63	34.63-42.63	16	0-8	0-8	0	16.57
US 63	142+80.00	146+87.50	42.63	42.63	16	8	8	0	16.57
	Bridge & Approaches								
US 63	150+82.50	162+25.00	42.63	42.63	16	8	8	0	16.57
US 63	162+25.00	167+05.00	42.63-34.63	42.63-34.63	16	8-0	8-0	0	16.57
US 63	167+05.00	282+80.00	34.63	34.63	16	0	0	0	16.57
US 63	282+80.00	290+00.00	34.63-46.63	34.63	16	0	0	0-12	16.57
US 63	290+00.00	295+15.00	46.63	34.63	16	0	0	12	16.57
US 63	295+15.00	303+00.00	46.63-59.71	34.63	16	0-16	0	12	16.57

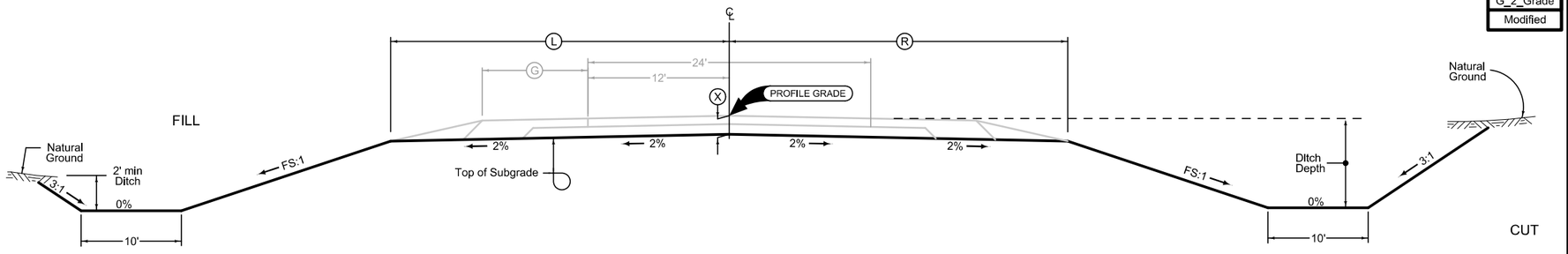
Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

See Plan & Profile sheets and cross sections for additional details of ditches and backslopes.

2 LANE GRADING
(Barnroof Section)

G_2_Grade
Modified

LOCATION			DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	FS
North Shore Drive	1000+08.14	1023+00.00	21.873	21.873	20	3
Old IA 163	5000+20.00	5022+00.00	21.873	21.873	20	3



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.

2 LANE GRADING

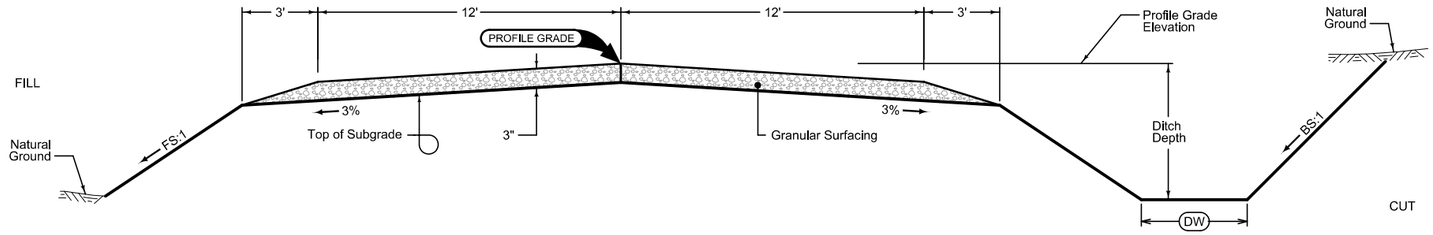
FILE NO.	ENGLISH	DESIGN TEAM **Flattery \ Johnson**	**MAHASKA** COUNTY	PROJECT NUMBER **NHSX-063-3(95)--3H-62**	SHEET NUMBER **B.1**

7:53:25 AM 1/28/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\B01_62063095Z09_ORD_Grading.dgn

G_2_GradeGran
10-17-17

LOCATION			DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION		FS	BS	(DW) Feet	Granular * Surfacing Ton
Kirby Ave. (N)	6000+50.00	6017+24.61	3	3	10	808
Kirby Ave. (S)	6017+93.87	6031+50.00	3	3	10	657
220th St. (N)	7011+25.00	7014+88.47	3	3	10	188
220th St. (S)	7015+57.73	7032+50.00	3	3	10	816
210th St. (N)	8002+00.00	8010+83.91	3	3	10	440
210th St. (S)	8011+65.23	8014+25.00	3	3	10	139	
						3,048

NOTE:
* Quantity includes 24' wide Granular Surfacing across US 63 grading surface for temporary connection.



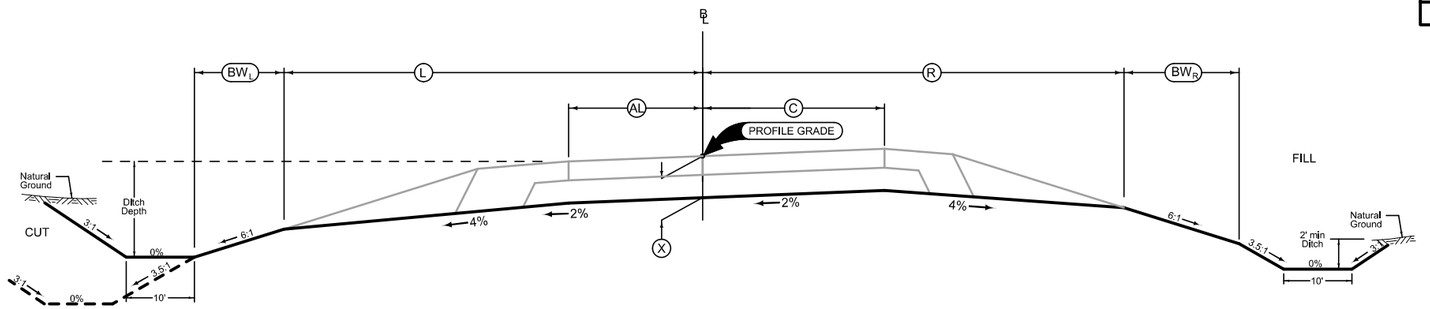
Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

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

GRADING AND GRANULAR SURFACING

G_Ramp_1

LOCATION				DIMENSIONS						
INTERCHANGE	RAMP	STATION TO STATION		(L) Feet	(R) Feet	(C) Feet	(AL) Feet	(X) Inches	(BW_L) Feet	(BW_R) Feet
IA 163 / US 63	A	11255+99.20	11258+85.00	27.500	33.768	16	8	22	16.654	16.867
IA 163 / US 63	A	11258+85.00	11259+65.00	27.5-19.5	33.768	16	8-0	22	16.654	16.867
IA 163 / US 63	A	11259+65.00	11265+00.00	19.501	33.768	16	0	22	16.654	16.867

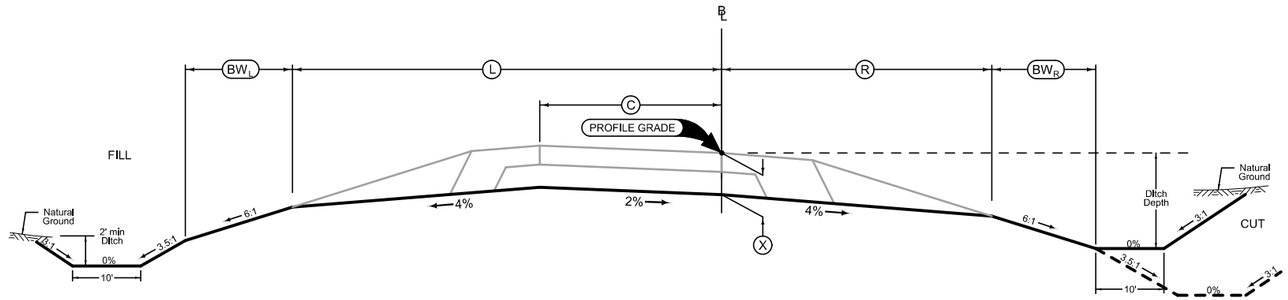


Normal sections shown may be appropriately modified for areas specifically designated by the Engineer such as intersections or superelevated curves.

RAMP GRADING

G_Ramp_3

LOCATION				DIMENSIONS					
INTERCHANGE	RAMP	STATION TO STATION		(L) Feet	(R) Feet	(C) Feet	(X) Inches	(BW_L) Feet	(BW_R) Feet
IA 163 / US 63	B	21242+00.00	21256+53.19	33.771	19.496	16	22	16.864	16.659
IA 163 / US 63	D	41255+76.01	41264+50.00	33.771	19.496	16	22	16.864	16.659



Normal sections shown may be appropriately modified for areas specifically designated by the Engineer such as intersections or superelevated curves.

RAMP GRADING

FILE NO.	ENGLISH	DESIGN TEAM **Flattery \ Johnson**	**MAHASKA** COUNTY	PROJECT NUMBER **NHSX-063-3(95)--3H-62**	SHEET NUMBER B.2

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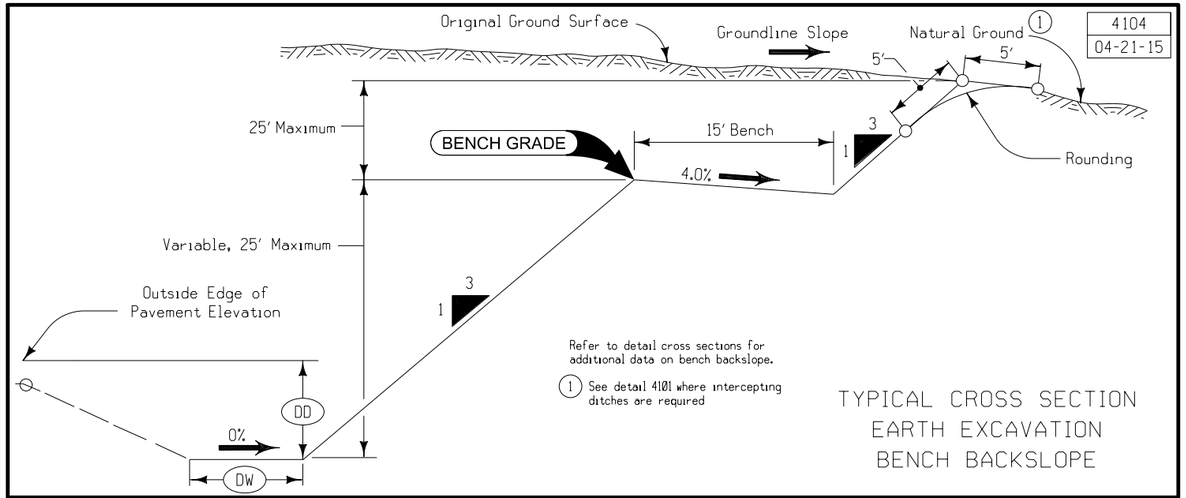
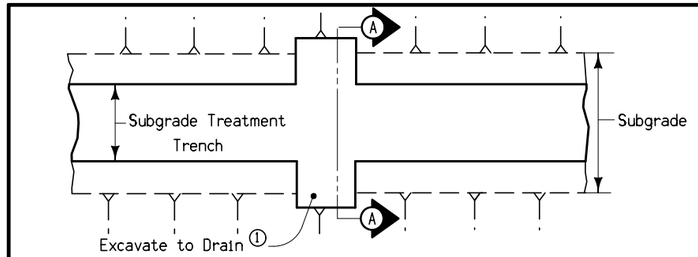
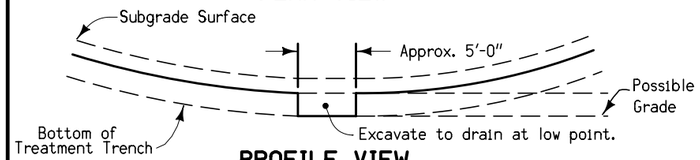


4104
04-21-15

TYPICAL CROSS SECTION
EARTH EXCAVATION
BENCH BACKSLOPE

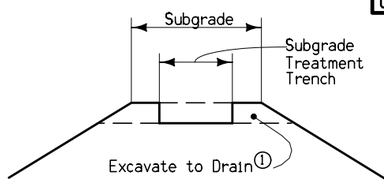


PLAN VIEW



PROFILE VIEW

8301
04-20-04



SECTION A-A

1 The contractor shall excavate a portion of subgrade as necessary to provide drainage for the treatment trench. When the subgrade treatment is granular soils, the contractor shall excavate a portion of the subgrade and backfill it with the granular soils every 300 feet.

This excavation shall be considered incidental.

TYPICAL DETAILS OF DRAIN FOR SUBGRADE TREATMENT TRENCH

FILE NO.	ENGLISH	DESIGN TEAM **Flattery \ Johnson**	**MAHASKA** COUNTY	PROJECT NUMBER **NHSX-063-3(95)--3H-62**	SHEET NUMBER B.3

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ESTIMATED PROJECT QUANTITIES AND REFERENCE NOTES

Roadway Items :

Item no.	Item Code	Item	Unit	Quantities Estimated Roadway Items	Estimate Reference Notes
1	2101-0850001	CLEARING AND GRUBBING	ACRE	176	Quantity includes all disturbed areas. A tree felling was performed prior to the project. Removal of field fence shall be incidental to the bid item.
2	2102-2624980	CONTRACTOR FURNISHED SELECT TREATMENT	CY	59,046	See Tab. 103-11 in the C sheets for locations and details. Overhaul shall be incidental to the bid item.
3	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY	1,076,574	See Tab. 107-28 in the T sheets for locations and details. Overhaul shall be incidental to the bid item.
4	2102-2710090	EXCAVATION, CLASS 10, WASTE	CY	862,071	See Tab. 300-99 in the CS sheets and Tab. 107-28 in the T sheets for locations and details. Overhaul shall be incidental to the bid item.
5	2102-2712015	EXCAVATION, CLASS 12, BOULDERS OR ROCK FRAGMENTS	CY	825	See Tab. 103-7 in the CS sheets.
6	2102-2712070	EXCAVATION, CLASS 12, ROADWAY AND BORROW	CY	364,334	See Tab. 300-99 in the CS sheets and Tab. 107-28 in the T sheets for locations and details. Item is for limestone and shale uncovered during excavation. Bedrock, mostly consisting of shale, was encountered at various depths across the project site. Some of the proposed cut excavations will extend into the bedrock. Rippability of the bedrock will vary depending on the type of bedrock. In general, significant penetration into the shale bedrock was possible when the soil borings were obtained. The shale material is typically weathered and behaves similar to hard soil. Therefore, excavation with backhoes equipped with teeth may be possible in the shale bedrock, although no guarantees of this condition can be made. All shale generated with this bid item shall be wasted. Overhaul shall be incidental to the bid item.
7	2102-2713090	EXCAVATION, CLASS 13, WASTE	CY	129,096	See Tab. 107-28 in the T sheets for locations and details. Overhaul shall be incidental to the bid item.
8	2102-4560000	LOCATING TILE LINES	STA	336	Estimated at twice the project length.
9	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD	CY	185,471	See Tab. 107-28 in the T sheets for locations and details. Overhaul shall be incidental to the bid item.

Item no.	Item Code	Item	Unit	Quantities	Estimate Reference Notes
				Estimated	
				Roadway Items	
10	2105-8425020	TOPSOIL, STRIP AND STOCKPILE	CY	214,612	See Tab. 103-10 in the CS sheets, Tab. 107-28 in the T sheets, and cross sections for locations and details. Overhaul shall be incidental to the bid item. Topsoil to remain on the project for future paving project. Excess ROW at Parcel 10 and 11 should be used for stockpile locations. Verify specific locations with the Engineer prior to beginning placement. See H sheets for Parcel locations.
11	2107-0875100	COMPACTION WITH MOISTURE CONTROL	CY	828,080	See Tab. 107-28 in the T sheets for locations and details.
12	2107-3825025	GRANULAR MATERIAL FOR BLANKET AND SUBDRAIN	CY	19,574.2	See Tab. 104-5C and Tab. 301-99 in the CS sheets for locations and details.
13	2112-0000100	WICK DRAIN	LF	41,452.5	See Tab. 301-99 in the CS sheets for locations and details.
14	2312-8260051	GRANULAR SURFACING ON ROAD, CLASS A CRUSHED STONE	TON	3,048	See Typical G_2_GradeGran in the B sheets for locations and details.
15	2315-8275025	SURFACING, DRIVEWAY, CLASS A CRUSHED STONE	TON	473	See Tab. 102-3 in the C sheets for locations and details.
16	2422-0360024	APRONS, UNCLASSIFIED, 24 IN. DIA.	EACH	14	
17	2422-1722024	CULVERT, UNCLASSIFIED ENTRANCE PIPE, 24 IN. DIA.	LF	426	
18	2502-8212024	SUBDRAIN, LONGITUDINAL, (BACKSLOPE) 4 IN. DIA.	LF	13,700	See Tab. 104-09B in the CS sheets for locations and details.
19	2502-8212204	SUBDRAIN, PERFORATED PLASTIC PIPE, 4 IN. DIA.	LF	2,360	See Tab. 104-09A in the CS sheets for locations and details.
20	2502-8221305	SUBDRAIN OUTLET, DR-305	EACH	12	
21	2502-8221306	SUBDRAIN OUTLET, DR-306	EACH	40	See Tab. 104-09B in the CS sheets for locations and details.
22	2520-3350010	FIELD LABORATORY	EACH	1	
23	2526-8285000	CONSTRUCTION SURVEY	LS	1	
24	2528-2518000	SAFETY CLOSURE	EACH	74	See Tab. 108-13A in the C sheets for locations and details.
25	2528-8445110	TRAFFIC CONTROL	LS	1	
26	2533-4980005	MOBILIZATION	LS	1	
27	2599-9999018	('SQUARE YARDS' ITEM) SHALE SCARIFICATION	SY	76,563.13	See Tab. 302-99 and associated note on sheet CS.5.

105-4
10-18-11

STANDARD ROAD PLANS

The following Standard Road Plans apply to construction work on this project.

Number	Date	Title
DR-651	04-18-17	Unclassified Pipe Culvert
EW-204	10-20-20	Bridge Berm Grading with Recoverable Slope (Barnroof Section)
EW-501	10-17-23	Rural Entrance
TC-1	10-15-19	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-402	04-18-23	Work Within 15 ft of Traveled Way

111-25
10-18-11

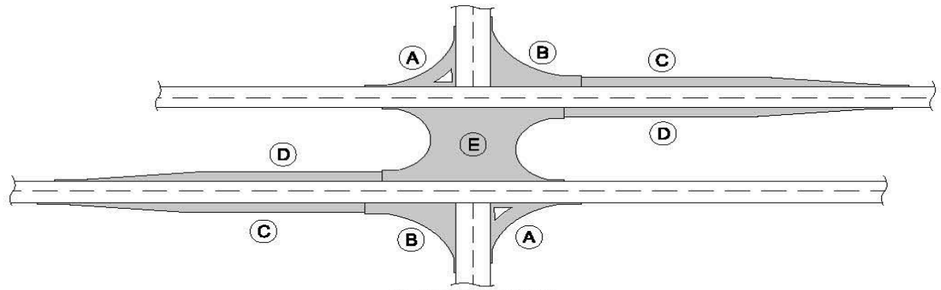
INDEX OF TABULATIONS

Tabulation	Tabulation Title	Sheet No.
C Sheets		
102-3	ACCESS POINTS AND SAFETY RAMPS	C.4
103-11	SELECT TREATMENT	C.3
105-4	STANDARD ROAD PLANS	C.3
108-13A	SAFETY CLOSURES	C.4
111-25	INDEX OF TABULATIONS	C.3

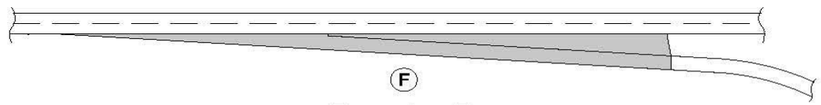
103-11
10-17-17

SELECT TREATMENT

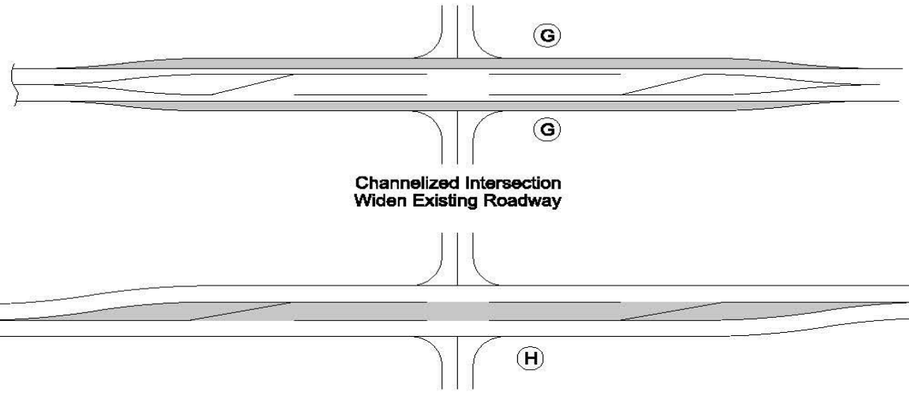
Possible Detail: G_4D_Grade_Delay_S



Typical Intersection



Ramp or Loop Taper



Channelized Intersection
Widen Existing Roadway

Channelized Intersection
Reconstructed Roadway

Moisture control is required for select soils treatment and is incidental to placement of the material.

Location				Mainline								Section Area												
						Shoulder Width																		
						Left Side		Right Side																
Road Identification	Direction of Travel	Station to Station		Length	Width	(GM)	(PM)	(PO)	(GO)	Pavement & Subgrade Thickness (X)	Area	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	Area	Total Area (Mainline + Section)	Select Treament Thickness (Y1)	Contractor Furnished Select Treatment	Remarks
				FT	FT	FT	FT	FT	FT	IN	SF	SF	SF	SF	SF	SF	SF	SF	SF	SF	SF	IN	CY	
US 63	NB	135+00.00	138+00.00	300.0	24.0	4.0	6.0	6.0	4.0	16.0	13200.0										13200.0	24.0	977.8	
US 63	NB	138+00.00	146+87.50	887.5	26.0	4.0	6.0	6.0	4.0	16.0	40825.0								10356.0	10356.0	51181.0	24.0	3791.2	
		Bridge and Approaches																						
US 63	NB	150+82.50	167+05.00	1622.5	26.0	4.0	6.0	6.0	4.0	16.0	74635.0			2520.0	4440.0					6960.0	81595.0	24.0	6044.1	
US 63	NB	167+05.00	282+80.00	11575.0	26.0	4.0	6.0	6.0	4.0	16.0	532450.0										532450.0	24.0	39440.7	
US 63	NB	282+80.00	303+00.00	2020.0	26.0	4.0	6.0	6.0	4.0	16.0	92920.0			720.0				19920.0	5135.0	25775.0	118695.0	24.0	8792.2	
TOTAL:																							**59046.0**	

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.

Location		Type	Length of Opening (1)			(1)(2)	(1)(2)	(2)	Pipe Culvert (3)					Aprons	Driveway Surface Area		Driveway Surfacing Material	Remarks
Station	Side	A, B, C, Safety Ramp, or Predetermined*	Case	1½" Dropped Curb	3" Dropped Curb	W	PR	SR	H	Size	Pipe Length	Lt.	Rt.		HMA	PCC		
			1 or 2	LF	LF	FT	FT	FT	FT	IN	LF	LF	LF	No.	SY	SY	TON	
5015+00.00	Rt	C				24.0		15.0	3.8	24.0	78.0	41.8	43.2	2			72.000	Old IA163
5015+00.00	Lt	C				24.0		15.0	3.8	24.0	82.0	45.0	44.0	2			44.000	Old IA163
6002+55.00	Rt	C				24.0		15.0									46.000	Kirby Ave. (N)
6004+00.00	Lt	C				24.0		15.0	6.7	24.0	64.0	35.0	36.0	2			73.000	Kirby Ave. (N)
6006+25.00	Rt	C				24.0		15.0	4.0	24.0	48.0	28.3	26.7	2			124.000	Kirby Ave. (N)
6030+50.00	Rt	C				24.0		15.0	1.8	24.0	36.0	20.8	22.2	2			45.000	Kirby Ave. (S)
7028+00.00	Rt	C				24.0		15.0	5.8	24.0	62.0	31.6	37.4	2			43.000	220th St. (S)
7028+00.00	Lt	C				24.0		15.0	5.0	24.0	56.0	33.6	29.4	2			26.000	220th St. (S)
TOTALS:											**426.0**			**14**			**473.000**	

SAFETY CLOSURES

Refer to Section 2518 of the Standard Specifications

Station	Closure Type		Remarks
	Road Qty.	Hazard Qty.	
Mainline US63			
135+00.00	1		Beginning of Project
137+75.00		2	At pipe 25' Lt. and Rt.
144+30.65	2		Ramps 50' Lt. and Rt.
147+00.00		1	IA 163 Bridge
151+00.00		1	IA 163 Bridge
153+44.47	2		Ramps 50' Lt. and Rt.
159+40.00	2		Old IA163 50' Lt. and Rt.
189+75.00		2	At pipe 25' Lt. and Rt.
209+58.00		2	At pipe 25' Lt. and Rt.
214+25.00		2	At pipe 25' Lt. and Rt.
221+34.00		2	At pipe 25' Lt. and Rt.
222+00.00	2		Kirby Ave. 50' Lt. and Rt.
222+60.00		2	At pipe 25' Lt. and Rt.
253+66.00		2	At RCB 25' Lt. and Rt.
257+50.00	2		220th St. 50' Lt. and Rt.
281+35.00		2	At pipe 25' Lt. and Rt.
294+50.00	2		210th St. 50' Lt. and Rt.
297+83.00		2	At pipe 25' Lt. and Rt.
303+00.00	1		End of Project
Ramp A			
11255+99.20	1		Begin Ramp Construction
11261+80.00		2	At pipe 25' Lt. and Rt.
11265+00.00	1		End Ramp Construction
Ramp B			
21242+00.00	1		Begin Ramp Construction
21246+00.00		2	At pipe 25' Lt. and Rt.
21256+53.19	1		End Ramp Construction
Ramp D			
41255+76.01	1		Begin Ramp Construction
41262+80.05		2	At pipe 25' Lt. and Rt.
41264+50.00	1		End Ramp Construction
Side Roads			
North Shore Drive			
1000+10.00	1		Begin SR Construction
1001+40.00		2	At RCB 25' Lt. and Rt.
1015+50.00		2	At pipe 25' Lt. and Rt.
1023+00.00	1		End SR Construction
Old IA 163			
5000+20.00	1		Begin SR Construction
5006+80.00		2	At pipe 25' Lt. and Rt.
5022+00.00	1		End SR Construction
Kirby Ave.			
6000+50.00	1		Begin SR Construction

108-13A
08-01-08

SAFETY CLOSURES

Refer to Section 2518 of the Standard Specifications

Station	Closure Type		Remarks
	Road Qty.	Hazard Qty.	
6017+47.24	1		End SR Construction
6017+71.24	1		Resume SR Construction
6020+27.00		2	At pipe 25' Lt. and Rt.
6031+50.00	1		End SR Construction
220th St.			
7011+25.00	1		Begin SR Construction
7014+59.00		2	At pipe 25' Lt. and Rt.
7015+11.10	1		End SR Construction
7015+35.10	1		Resume SR Construction
7015+87.00		2	At pipe 25' Lt. and Rt.
7032+50.00	1		End SR Construction
210th St.			
8002+00.00	1		Begin SR Construction
8011+06.54	1		End SR Construction
8011+42.54	1		Resume SR Construction
8014+25.00	1		End SR Construction
TOTALS:	36	38	
GRAND TOTAL:	**74**		

100-1A
Modified

ESTIMATED PROJECT QUANTITIES

Item No.	Item Code	Item	Unit	Total	As Built Qty.
1	2402-0425040	FLOODED BACKFILL	CY	3306	
2	2402-2720100	EXCAVATION, CLASS 20, FOR ROADWAY PIPE CULVERT	CY	8225	
3	2416-0100024	APRONS, CONCRETE, 24 IN. DIA.	EACH	9	
4	2416-0100030	APRONS, CONCRETE, 30 IN. DIA.	EACH	6	
5	2416-0100036	APRONS, CONCRETE, 36 IN. DIA.	EACH	10	
6	2416-0100042	APRONS, CONCRETE, 42 IN. DIA.	EACH	2	
7	2416-0100048	APRONS, CONCRETE, 48 IN. DIA.	EACH	3	
8	2416-0100066	APRONS, CONCRETE, 66 IN. DIA.	EACH	2	
9	2416-0100072	APRONS, CONCRETE, 72 IN. DIA.	EACH	4	
10	2416-0102242	APRON, LOW CLEARANCE CONCRETE, EQUIVALENT DIAMETER 42 IN.	EACH	2	
11	2416-1180024	CULVERT, CONCRETE ROADWAY PIPE, 24 IN. DIA.	LF	574	
12	2416-1180030	CULVERT, CONCRETE ROADWAY PIPE, 30 IN. DIA.	LF	452	
13	2416-1180036	CULVERT, CONCRETE ROADWAY PIPE, 36 IN. DIA.	LF	352	
14	2416-1180042	CULVERT, CONCRETE ROADWAY PIPE, 42 IN. DIA.	LF	50	
15	2416-1180048	CULVERT, CONCRETE ROADWAY PIPE, 48 IN. DIA.	LF	142	
16	2416-1180072	CULVERT, CONCRETE ROADWAY PIPE, 72 IN. DIA.	LF	132	
17	2416-1200242	CULVERT, LOW CLEARANCE CONCRETE ROADWAY PIPE, EQ. DIA. 42 IN.	LF	44	
18	2416-1240024	CULVERT, 3000D CONCRETE ROADWAY PIPE, 24 IN. DIA.	LF	178	
19	2416-1240036	CULVERT, 3000D CONCRETE ROADWAY PIPE, 36 IN. DIA.	LF	462	
20	2416-1240048	CULVERT, 3000D CONCRETE ROADWAY PIPE, 48 IN. DIA.	LF	150	
21	2416-1245066	CULVERT, 3750D CONCRETE ROADWAY PIPE, 66 IN. DIA.	LF	350	
22	2506-4984000	FLOWABLE MORTAR	CY	108	
23	2599-9999009	('LINEAR FEET ITEM') CULVERT, 4000D CONCRETE ROADWAY PIPE, 72 IN. DIA.	LF	394	

100-4A
Modified

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
1	**2402-0425040**	**FLOODED BACKFILL**
		--
2	**2402-2720100**	**EXCAVATION, CLASS 20, FOR ROADWAY PIPE CULVERT**
3	**2416-0100024**	**APRONS, CONCRETE, 24 IN. DIA.**
4	**2416-0100030**	**APRONS, CONCRETE, 30 IN. DIA.**
5	**2416-0100036**	**APRONS, CONCRETE, 36 IN. DIA.**
6	**2416-0100042**	**APRONS, CONCRETE, 42 IN. DIA.**
7	**2416-0100048**	**APRONS, CONCRETE, 48 IN. DIA.**
8	**2416-0100066**	**APRONS, CONCRETE, 66 IN. DIA.**
9	**2416-0100072**	**APRONS, CONCRETE, 72 IN. DIA.**
10	**2416-0102242**	**APRON, LOW CLEARANCE CONCRETE, EQUIVALENT DIAMETER 42 IN.**
11	**2416-1180024**	**CULVERT, CONCRETE ROADWAY PIPE, 24 IN. DIA.**
12	**2416-1180030**	**CULVERT, CONCRETE ROADWAY PIPE, 30 IN. DIA.**
13	**2416-1180036**	**CULVERT, CONCRETE ROADWAY PIPE, 36 IN. DIA.**
14	**2416-1180042**	**CULVERT, CONCRETE ROADWAY PIPE, 42 IN. DIA.**
15	**2416-1180048**	**CULVERT, CONCRETE ROADWAY PIPE, 48 IN. DIA.**
16	**2416-1180072**	**CULVERT, CONCRETE ROADWAY PIPE, 72 IN. DIA.**
17	**2416-1200242**	**CULVERT, LOW CLEARANCE CONCRETE ROADWAY PIPE, EQ. DIA. 42 IN.**
18	**2416-1240024**	**CULVERT, 3000D CONCRETE ROADWAY PIPE, 24 IN. DIA.**
19	**2416-1240036**	**CULVERT, 3000D CONCRETE ROADWAY PIPE, 36 IN. DIA.**
20	**2416-1240048**	**CULVERT, 3000D CONCRETE ROADWAY PIPE, 48 IN. DIA.**
21	**2416-1245066**	**CULVERT, 3750D CONCRETE ROADWAY PIPE, 66 IN. DIA.**
		Refer to Tab. 104-3 on Sheet CD.2 for locations and details.
22	**2506-4984000**	**FLOWABLE MORTAR**
		Includes 54 cu. yds. for fill and abandon culvert. Refer to Tab. 110-9 on Sheet CD.1 and typical 4315 on Sheet CD.3 for locations and details.
23	**2599-9999009**	**('LINEAR FEET ITEM') CULVERT, 4000D CONCRETE ROADWAY PIPE, 72 IN. DIA.**
		Refer to Tab. 104-3 on Sheet CD.2 for locations and details. Culvert must meet the requirements of Standard Specification Section 2416 and Section 4145.05 for strength.

105-4
Modified

STANDARD ROAD PLANS

The following Standard Road Plans apply to construction work on this project.

Number	Date	Title
DR-101	04-18-17	Pipe Culvert (Bedding and Backfill)
DR-102	04-21-15	Pipe Culvert (Cover and Camber)
DR-103	04-21-15	Pipe Culvert (Installation Details)
DR-104	04-19-16	Depth of Cover Tables for Concrete and Corrugated Pipe
DR-141	04-18-17	Pipe Bends and Half Pipe
DR-201	10-17-23	Concrete Aprons
DR-202	10-17-23	Low Clearance Concrete Pipe Aprons
DR-206	10-17-23	Low Clearance Concrete Pipe Apron With End Wall
DR-601	04-18-17	Reinforced Concrete Pipe Culvert
DR-621	04-18-17	Pipe Extension

110-9
10-18-11

CULVERT ABANDONMENT

Refer to Details 4315 and 4316

* Not a bid item

Location Station	Description	Fill Material		4" Perforated Subdrain*	Remarks
		Flowable Mortar	Granular Backfill*		
		CY	TON	LF	
1268+27.00	24" x 83' RCP	10.0	0.3	4.0	Plug and abandon during Stage 2 Construction
1268+56.72	30" x 242' RCP	44.0	0.3	4.5	Plug and abandon during Stage 2 Construction

Hydraulic Design

LICENSED PROFESSIONAL ENGINEER
Travis L. Wallen
28904
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 — Date: 12-30-2024

Travis L. Wallen
Printed or Typed Name

My license renewal date is December 31, 2025

Pages or sheets covered by this seal: CD.1 - CD.3, V.1 - V.20

DRAINAGE STRUCTURE BY ROAD CONTRACTOR

Length of unclassified pipe calculated is based on using Reinforced Concrete Pipe.
* Not a bid item
(1) Diameter or equivalent diameter
(2) UNCL = Unclassified Pipe CMP = Corrugated Metal Pipe RCP = Reinforced Concrete Pipe LCP = Arch or Elliptical Low Clearance Pipe SARC = Steel Arch Pipe
(3) Backfill according to DR-101

Drainage Area	Location	Type	Size (1)	Kind Of Pipe (2)	Length New Const.	Bedding Class	Design Cover (H)	Camber* (DR-102)	Apron No.		Apron Guard* (DR-213)	Elbow* (DR-141)	Diaphragm* (DR-501)	Tee Section* (DR-142)	"D" Section* (DR-141)	Reducer*	Type 'C' Connections* (DR-122)		Connected Pipe Joint* (DR-121)	4" Perforated Subdrain*	Flow Line Elevations				Dimensions Lin. Ft. Total		Dimensions Lin. Ft. Extensions		Skew Ahead Degrees		Dike Rt. / Lt.	Dike Location Station	Dike Top Elevation	Dike Type	Class 20	Flowable Mortar	Floodable* Backfill (A)	Porous* Backfill (B)	Flooded Backfill (3) (A+B)	Remarks
ACRE			IN		LF		FT	FT	IN	OUT	No.	No.	No.	No.	No.	No.	Type	No.	Type	FT	Lt.	Rt.	Other	Other	Lt.	Rt.	Lt.	Rt.	Lt.	Rt.	Lt.				CY	CY	CY	CY	CY	
	ML063																																							
14.2	137+75.00	DR-601	36	RCP	224	B	22.8	0.42	1	1							Type 3				815.50	809.86			110.3	129.7			0						1300.0		203.0	22.0	225.0	Note 3
0.8	147+89.00	DR-601	24	RCP	250	B	9.1	0.17	1	1							Type 3				825.00	828.01			172.3	89.3			0						55.0					Note 7
1.6	149+82.00	DR-601	24	RCP	256	B	10.0	0.17	1	1							Type 3				826.33	829.11			97.6	170.6			0						40.0					Note 7
95.7	189+75.00	DR-601	66	RCP	350	B	29.9	0.50	1	1							Type 3				782.26	790.80			200.3	166.3			21						1640.0		361.0	44.0	405.0	Note 1
11.8	209+58.00	DR-601	30	RCP	124	B	7.9	0.17	1	1							Type 3				788.45	785.60			62.0	74.3				22					230.0		55.0	11.0	66.0	
11.7	214+25.00	DR-601	30	RCP	166	B	14.8	0.25	1	1							Type 3				775.16	770.22			78.1	100.1			0						150.0		179.0	15.0	194.0	
16.4	221+34.00	DR-601	36	RCP	164	B	9.9	0.17	1	1							Type 3				768.04	760.83			69.3	110.8			0						565.0		203.0	16.0	219.0	
8.6	222+60.00	DR-601	30	RCP	162	B	9.2	0.17	1	1							Type 3				768.03	758.58			58.5	115.8			0						1120.0		80.0	15.0	95.0	
156.7	281+35.00	DR-601	72	RCP	394	B	37.4	0.58	1	1							Type 3				726.84	728.62			195.0	215.5				18					400.0		387.0	52.0	439.0	Note 2
14.8	297+83.00	DR-601	36	RCP	238	B	22.8	0.42	1	1							Type 3				770.09	775.47			141.7	112.3				10					145.0		272.0	23.0	295.0	Note 3
	SRNSHORE																																							
15.9	1015+50.00	DR-601	36	RCP	108	B	12.9	0.25	1	1							Type 3				812.00	808.35			56.7	67.3			0						60.0		154.0	11.0	165.0	
	SROLD163																																							
24.4	5006+80.00	DR-601	42	RCP	50	B	4.1	0.08	1	1							Type 3				842.74	841.96			34.3	31.8			0						40.0	15.0	77.0	6.0	83.0	
	SRKIRBY																																							
198.4	6020+27.00	DR-601	72	RCP	132	B	15.8	0.33	1	1							Type 3				751.58	753.34			75.3	73.3				21					440.0		302.0	19.0	321.0	
	SR220																																							
5.7	7014+59.00	DR-601	24	RCP	54	B	2.5	0.08	1	1							Type 3				719.29	717.83			31.0	35.3			5						80.0	10.0	47.0	5.0	52.0	
27.7	7015+87.00	DR-601	42	LCP	44	B	2.2	0.08	1	1							Type 3				718.50	718.13	719.22		28.0	32.0				5					130.0	14.0	67.0	5.0	72.0	Note 4
	RPA063																																							
52.1	11261+80.00	DR-601	48	RCP	142	B	13.2	0.25	1	1							Type 3				827.19	824.20			66.3	91.8			0						100.0		204.0	16.0	220.0	
	RPB063																																							
15.0	21246+00.00	DR-601	36	RCP	80	B	4.4	0.08	1	1							Type 3				814.10	812.62			52.5	43.5			0						1110.0	15.0	87.0	9.0	96.0	
	RPD063																																							
2.3	41261+93.00	DR-601	24	RCP	178	B	17.0	0.33	1	1							Type 3				824.74	809.32			78.1	112.1									400.0		124.0	15.0	139.0	Note 3
60.8	41262+80.05	DR-621	48	RCP	150	B	19.2	0.33		1		1					Type 3				816.11	806.22			40.3	117.8				2					210.0		204.0	16.0	220.0	Note 5
	SURUS163																																							
3.7	1237+34.78	DR-621	24	RCP	14	B	3.1	0.08		1		1					Type 3				791.40	790.65				128.6		137.9	0						10.0					Notes 6 & 7

All pipes are Classification 2000D unless noted otherwise.

NOTE 1: Pipe Classification = 3750D

NOTE 2: Pipe Classification = 4000D

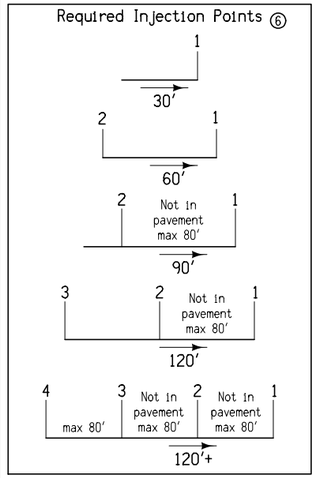
NOTE 3: Pipe Classification = 3000D

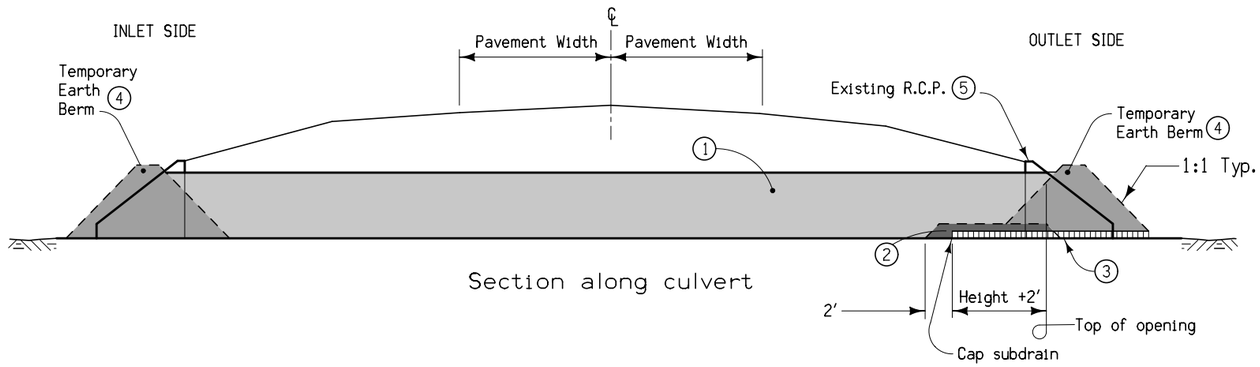
NOTE 4: Use DR-206 Apron End Wall Height = 1.09'

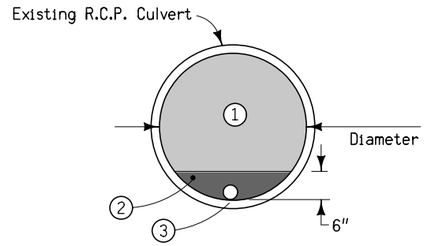
NOTE 5: Pipe Classification = 3000D. Note 3°30' Elbow (See DR-141)

NOTE 6: Pipe Classification = 2000D. Note 5°00' Elbow (See DR-141)

NOTE 7: Use Class 'C' Bedding and Backfill







4315
Modified

① Flowable Mortar.
② Granular Backfill.
③ 4″ subdrain at flowline elevation of culvert shall be extended into the culvert a distance of 2′ plus the height of the culvert. Granular Backfill covers subdrain and extends an additional 2′. Subdrain and granular backfill are incidental to flowable mortar.
④ Ends of culvert shall be plugged sufficiently to retain flowable mortar. Temporary earth berms are incidental to flowable mortar.
⑤ Outlet shall be filled first. See injection point detail for additional information.

DETAILS OF CULVERT ABANDONMENT WITH FLOWABLE MORTAR
(Circular structures less than 10′ Dia.)

FILE NO.	ENGLISH	DESIGN TEAM **JEO CONSULTING GROUP**	**MAHASKA** COUNTY	PROJECT NUMBER **NHSX-063-3(095)--3H-62**	SHEET NUMBER **CD.3**

12:33:23 PM 11/22/2024 twallen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\6206302013\Bridge\(97)_RCB Culvert-Unspecified\JEO\Support\CD03_62063095Z09_ORD.dgn

103_06
8/15/22

EMBANKMENT WITH MOISTURE CONTROL

Moisture Control is required for all Class 10 fill placed in all locations and depths. Stability berms placed outside the normal foreslope template and topsoil will not require Moisture Control.

103_10
8/15/22

TOPSOIL STRIPPING AND PLACEMENT

Line No.	Road Identification	Dir. of Traffic	Station From	Station To	Topsoil Stripping Thickness (IN)	Topsoil Placement Thickness (IN)	Remarks
1.0	US 63		118+00.00	322+00.00	12	8	
2.0	US 63 Ramp A		11255+00.00	11270+96.00	12	8	
3.0	US 63 Ramp B		21242+00.00	21256+00.00	12	8	
4.0	US 63 Ramp C		31246+50.00	31256+00.00	12	8	
5.0	US 63 Ramp D		41256+00.00	41265+75.00	12	8	
6.0	SR NSHORE		1000+08.00	1028+00.00	12	8	
7.0	JEWELL AVE		2000+75.00	2048+25.00	12	8	
8.0	INDEPENDENCE AVE		4000+00.00	4009+00.00	12	8	
9.0	OLD IA 163		5000+75.00	5039+75.00	12	8	
10.0	SR KIRBY		6000+50.00	6031+50.00	12	8	
11.0	SR 220		7011+25.00	7032+50.00	12	8	
12.0	SR 210		8002+00.00	8014+25.00	12	8	
13.0	OLD US 63		9000+50.00	9012+50.00	12	8	

103_07
8/15/22

SHRINKAGE DATA

Material	%	Remarks
Topsoil	40.0	
Boulders	0.0	825 CY
Unsuitable Soils	35.0	
Class 10	30.0	
Select Loam	15.0	
Shale	0.0	

103_05
1/14/25

SETTLEMENT PLATES

Refer to Standard Road Plan EW-212

Line No.	No.	Station	Side	Offset	Remarks
1.0	1	141+00.00	Left	35.0	60 days
2.0	2	143+00.00	Right	35.0	60 days
3.0	3	145+00.00	Left	35.0	60 days
4.0	4	147+00.00	Right	35.0	60 days
5.0	5	151+00.00	Right	35.0	60 days
6.0	6	153+00.00	Left	35.0	60 days
7.0	7	190+00.00	Right	30.0	180 days
8.0	8	191+00.00	Left	30.0	180 days
9.0	9	214+00.00	Right	30.0	120 days
10.0	10	216+00.00	Left	30.0	120 days
11.0	11	245+00.00	Right	30.0	180 days
12.0	12	247+00.00	Left	30.0	180 days
13.0	13	249+00.00	Right	30.0	180 days
14.0	14	251+00.00	Left	30.0	180 days
15.0	15	253+00.00	Right	30.0	180 days
16.0	16	281+00.00	Right	35.0	180 days
17.0	17	282+00.00	Left	35.0	180 days
18.0	18	283+00.00	Right	35.0	180 days
19.0	19	284+00.00	Left	35.0	180 days

NOTE: DAYS SHOWN IS THE MINIMAL AMOUNT OF TIME SURVEYING OF THE SETTLEMENT PLATES SHALL BE PERFORMED FOLLOWING COMPLETION OF EMBANKMENT CONSTRUCTION, CONTINGENT ON SETTLEMENT PLATE READINGS.

300_99
Modified

PAVEMENT SUBGRADE SHALE REMOVAL

General Tabulation SubTitle

Line No.	Alignment	Start Station	Ending Station	Removal Width (ft)	Removal Depth (ft)	Class 12 Removal Quantity (CY)	Class 10 Placement Quantity (CY)*	Remarks
1.0	US 63	201+50.00	212+50.00	44	1.0	1752	2277	
2.0	US 63	223+00.00	242+00.00	44	1.0	3096	4025	
Total:						**4848**	**6302**	

Notes: Shale removal directly below the pavement improvement layer and replaced with Class 10 Embankment.
* (with 30% shrinkage)

GEOTECHNICAL DESIGN

LICENSED PROFESSIONAL ENGINEER
Mark A. Dell
21208
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 — Date: 2/3/25

Mark A. Dell
Printed or Typed Name

My license renewal date is December 31, 20 25

Pages or sheets covered by this seal: CS.1-CS.5 Q.1-Q.45

FILE NO.	ENGLISH	DESIGN TEAM Dell\Immel\Hershey	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER CS.1

1/31/2025 7:49:48 AM Uneveranhedin@iowadot.us

LIST OF SUBDRAIN WORK

Possible Standards: DR-121, DR-201, DR-203, DR-301, DR-302, DR-303, DR-305 and DR-306. Possible Detail: 500-10.

* Not a bid item

Line No.	Station From	Station To	Type of Installation	Pipe Type	Pipe Diameter (IN)	Pipe Length (LF)	Apron Type	Apron Quantity	Outlet Type	Outlet Quantity	Connected Pipe Joints Type* (DR-121)	Connected Pipe Joints No.* (DR-121)	Trench Drain (LF)	Granular Blanket Material (CY)	Porous Backfill* (CY)	Class ""A"" Crushed Stone* (CY)	Remarks
1.0	175+00.00	179+00.00												2184.5			12 inches of Granular Material for Working Blanket
2.0	188+00.00	191+00.00												2155.2			12 inches of Granular Material for Working Blanket
3.0	209+00.00	210+00.00												275.1			12 inches of Granular Material for Working Blanket
4.0	214+15.00	214+35.00												139.8			12 inches of Granular Material for Working Blanket
5.0	221+20.00	221+45.00												222.9			12 inches of Granular Material for Working Blanket
6.0	226+25.00	227+25.00												412.1			12 inches of Granular Material for Working Blanket
7.0	232+50.00	233+00.00												280.7			12 inches of Granular Material for Working Blanket
8.0	244+00.00	253+00.00												5505.3			12 inches of Granular Material for Working Blanket
9.0	264+00.00	269+00.00												1146.4			12 inches of Granular Material for Working Blanket
10.0	280+50.00	282+25.00												334.9			12 inches of Granular Material for Working Blanket
11.0	280+50.00	282+25.00												464.1			12 inches of Granular Material for Working Blanket
12.0	296+75.00	299+00.00												1239.9			12 inches of Granular Material for Working Blanket
13.0	2018+50.00	2020+50.00												96.1			12 inches of Granular Material for Working Blanket
14.0	2024+75.00	2025+60.00												75.1			12 inches of Granular Material for Working Blanket
15.0	6014+00.00	6016+25.00												93.2			12 inches of Granular Material for Working Blanket
16.0	6019+75.00	6020+75.00												277.9			12 inches of Granular Material for Working Blanket
Total:														**14903.2**			

NOTE: THE WORKING BLANKETS SHOWN ON THE Q SHEETS AND ON TAB 104-5C MAY BE EXTENDED, REDUCED OR DELETED AS FIELD CONDITIONS DICTATE AT THE TIME OF CONSTRUCTION.

LONGITUDINAL SUBDRAIN BACKSLOPE

Refer to Soils Sheets

* Not a bid item.

Line No.	Road or Lane Identification	Station From	Station To	Side	Depth (IN) (D)	Subdrain Size (IN)	Length (FT)	Outlet Station	Outlet Type	Porous Backfill* (CY)	Remarks
1.0	US 63	182+25.00	186+25.00	Right	24.0	4.0	450.0	182+25.00	DR-306	6.9	Elev. 822' - 822'
2.0								186+25.00	DR-306		
3.0	US 63	192+00.00	196+25.00	Right	24.0	4.0	450.0	196+25.00	DR-306	6.9	Elev. 818' - 812'
4.0	US 63	193+25.00	198+00.00	Right	24.0	4.0	500.0	193+25.00	DR-306	7.7	Elev. 815' - 828'
5.0	US 63	199+00.00	204+25.00	Right	24.0	4.0	550.0	199+00.00	DR-306	8.5	Elev. 812' - 817'
6.0								201+50.00	DR-306		
7.0	US 63	265+00.00	274+00.00	Right	24.0	4.0	1000.0	265+00.00	DR-306	15.4	Elev. 750'
8.0								274+00.00	DR-306		
9.0	US 63	266+25.00	268+75.00	Right	24.0	4.0	275.0	268+75.00	DR-306	4.2	Elev. 748' - 744'
10.0	US 63	270+75.00	278+25.00	Right	24.0	4.0	800.0	271+50.00	DR-306	12.3	Elev. 787' - 756'
11.0								278+25.00	DR-306		
12.0	US 63	271+25.00	274+00.00	Right	24.0	4.0	400.0	271+25.00	DR-306	6.2	Elev. - 745' 750'
13.0	US 63	274+00.00	280+00.00	Right	24.0	4.0	650.0	274+00.00	DR-306	10.0	Elev. 749' - 754'
14.0								277+00.00	DR-306		
15.0	US 63	193+00.00	196+50.00	Left	24.0	4.0	375.0	196+50.00	DR-306	5.8	Elev. 812' - 808'
16.0	US 63	194+25.00	202+00.00	Left	24.0	4.0	825.0	194+25.00	DR-306	12.7	Elev. 812' - 818'
17.0								198+25.00	DR-306		
18.0	US 63	199+00.00	205+50.00	Left	24.0	4.0	700.0	199+00.00	DR-306	10.8	Elev. 811' - 824'
19.0								202+25.00	DR-306		
20.0	US 63	229+00.00	235+50.00	Left	24.0	4.0	700.0	229+00.00	DR-306	10.8	Elev. 780' - 793'
21.0								232+25.00	DR-306		
22.0	US 63	229+50.00	238+75.00	Left	24.0	4.0	975.0	229+50.00	DR-306	15.0	Elev. 758' - 778'
23.0								234+25.00	DR-306		
24.0	US 63	235+00.00	240+75.00	Left	24.0	4.0	625.0	235+00.00	DR-306	9.6	Elev. 748' - 760'
25.0								238+00.00	DR-306		
26.0	US 63	240+50.00	242+50.00	Left	24.0	4.0	225.0	240+50.00	DR-306	3.5	Elev. 738' - 743'
27.0	US 63	264+50.00	268+75.00	Left	24.0	4.0	475.0	268+75.00	DR-306	7.3	Elev. 749' - 744'
28.0								266+25.00	DR-306		
29.0	US 63	266+00.00	268+75.00	Left	24.0	4.0	300.0	268+75.00	DR-306	4.6	Elev. 748' - 744'
30.0	US 63	266+75.00	270+25.00	Left	24.0	4.0	375.0	266+75.00	DR-306	5.8	Elev. 775' - 782'
31.0	US 63	268+75.00	274+00.00	Left	24.0	4.0	575.0	274+00.00	DR-306	8.9	Elev. 764' - 749'
32.0								271+50.00	DR-306		
33.0	US 63	271+25.00	278+50.00	Left	24.0	4.0	775.0	271+25.00	DR-306	12.0	Elev 744' - 753'
34.0								275+00.00	DR-306		
35.0	Kirby Ave.	6007+50.00	6012+25.00	Right	24.0	4.0	525.0	6010+00.00	DR-306	8.1	Elev 818' - 807'
36.0								6012+25.00	DR-306		
37.0	Kirby Ave.	6007+75.00	6010+50.00	Right	24.0	4.0	300.0	6007+75.00	DR-306	4.6	Elev. 798' - 803'
38.0	Kirby Ave.	6005+75.00	6011+25.00	Left	24.0	4.0	600.0	6005+75.00	DR-306	9.3	Elev. 795' - 808'
39.0								6009+00.00	DR-306		
40.0	Kirby Ave.	6023+75.00	6026+25.00	Left	24.0	4.0	275.0	6026+25.00	DR-306	4.2	Elev. 797' - 794'
Total:							**13700**		**DR-306 = 40**	**211.1**	

NOTE: ALL LONGITUDINAL SUBDRAINS MAY BE ADJUSTED BOTH VERTICALLY OR HORIZONTALLY IN THE FIELD AS NECESSARY.

301_99
Modified

WICK DRAIN FIELDS

General Tabulation SubTitle

Line No.	Start Station	End Station	Center to Center Spacing	Pattern	Approx. Number of Wick Drains	Est. Avg. Tip Elevation (ft)	Est. Avg Installation Elevation (ft)	Est. Avg. Length of Wick Drain (ft)	Estimated Length of Wick Drains (ft)	Granular Blanket Material (CY)	Remarks
1.0	188+75	190+75	9.5	triangular	230	782.0	800.00	20.0	4600.0	778.0	See Q.43
2.0	248+00	253+25	11.0	triangular	450	689.0	720.0	33.0	14850.0	2333.0	See Q.44
3.0	280+75	283+50	7.5	triangular	677	701.5	732.0	32.5	22002.5	1560.0	See Q.45
Total:									**41452.5**	**4671**	

104_09A
5/6/24

LONGITUDINAL SUBDRAIN SHOULDER

* Not a bid item.

Line No.	Road or Lane Identification	Station From	Station To	Side	Depth (IN) (D)	Subdrain Size (IN)	Length (FT)	Outlet Station	Outlet Type	Porous Backfill* (CY)	Remarks
1.0	US 63	188+75.00	190+75.00	Left	8.0	4.0	230.0	188+75.00	DR-305 Type A	1.2	Place in Blanket for Wick Drain 1 (See Q.43)
2.0	US 63	190+75.00	190+75.00	Left	8.0	4.0	30.0	190+75.00	DR-305 Type A	0.2	Place in Blanket for Wick Drain 1 (See Q.43)
3.0	US 63	188+75.00	190+75.00	Right	8.0	4.0	230.0	188+75.00	DR-305 Type A	1.2	Place in blanket for Wick Drain 1 (See Q.43)
4.0	US 63	190+75.00	190+75.00	Right	8.0	4.0	30.0	190+75.00	DR-305 Type A	0.2	Place in blanket for Wick Drain 1 (See Q.43)
5.0	US 63	248+00.00	253+25.00	Left	8.0	4.0	555.0	248+00.00	DR-305 Type A	2.9	Place in blanket for Wick Drain 2 (See Q.44)
6.0	US 63	253+25.00	253+25.00	Left	8.0	4.0	30.0	253+25.00	DR-305 Type A	0.2	Place in blanket for Wick Drain 2 (See Q.44)
7.0	US 63	248+00.00	253+25.00	Right	8.0	4.0	555.0	248+00.00	DR-305 Type A	2.9	Place in blanket for Wick Drain 2 (See Q.44)
8.0	US 63	253+25.00	253+25.00	Right	8.0	4.0	30.0	253+25.00	DR-305 Type A	0.2	Place in blanket for Wick Drain 2 (See Q.44)
9.0	US 63	280+75.00	283+50.00	Left	8.0	4.0	305.0	280+75.00	DR-305 Type A	1.6	Place in blanket for Wick Drain 3 (See Q.45)
10.0	US 63	283+50.00	283+50.00	Left	8.0	4.0	30.0	283+50.00	DR-305 Type A	0.2	Place in blanket for Wick Drain 3 (See Q.45)
11.0	US 63	280+75.00	283+50.00	Right	8.0	4.0	305.0	280+75.00	DR-305 Type A	1.6	Place in blanket for Wick Drain 3 (See Q.45)
12.0	US 63	283+50.00	283+50.00	Right	8.0	4.0	30.0	283+50.00	DR-305 Type A	0.2	Place in blanket for Wick Drain 3 (See Q.45)
							2360		**DR-305 = 12**	**12.6**	
Outlet Type DR-305 Type A											
Total:							**2360**			**12.6**	

NOTE: ALL LONGITUDINAL SUBDRAINS ARE TYPE 7 WITH PCC OR TYPE 8 WITH HMA (ACC) UNLESS OTHERWISE NOTED IN REMARKS COLUMN.
NOTE: ALL LONGITUDINAL SUBDRAINS MAY BE ADJUSTED BOTH VERTICALLY OR HORIZONTALLY IN THE FIELD AS NECESSARY.

302_99
Modified

SHALE SCARIFICATION LIMITS

Line No.	Road Identification	Side	Start Station	End Station	Scarification Surface Area (SY)
1	US 63	Left	199+90.00	201+17.91	176.16
2	US 63	Left	201+51.73	207+13.68	3191.36
3	US 63	Left	207+35.38	208+89.55	649.65
4	US 63	Left	209+00	212+92.49	1308.74
5	US 63	Left	217+00	219+00.00	1374.8
6	US 63	Left	221+37.80	242+00	30312.07
7	US 63	Right	201+48.52	204+64.9	1499.12
8	US 63	Right	205+65.51	206+48.52	76.18
9	US 63	Right	207+67.60	207+94.37	19.29
10	US 63	Right	223+01.40	242+00	28175.84
11	Kirby	Left	6007+23.95	6010+04.37	890.3
12	Kirby	Left	6012+10	6016+80.00	2288.27
13	Kirby	Left	6023+47.41	6027+02.5	2221.26
14	Kirby	Left	6027+43.73	6028+62.41	337.36
15	Kirby	Right	6007+41.55	6011+48.65	1368.73
16	Kirby	Right	6012+10.01	6015+03.97	1166.5
17	Kirby	Right	6015+51.55	6016+70	439.93
18	Kirby	Right	6023+50.00	6025+44.50	1067.57
Total:					**76563.13**

2599-9999018 - Shale Scarification

The exposed shale bedrock surface at final grade shall be scarified prior to placing topsoil with the intent to provide better adhesion between these two materials. Refer to the Shale Scarification Limits tab on this sheet for approximate locations of these areas requiring scarification. Additional

compaction or operation of heavy equipment, other than that required for topsoil placement and shaping will not be allowed on areas scarified. For backslope, foreslope and ditch areas, perform scarification to an average depth of 12 inches prior to placing topsoil and seeding. Obtain Engineer’s approval

ction or operation of heavy equipment, other than that required for topsoil placement and shaping will not be allowed on areas scarified. For backslope, foreslope and ditch areas, perform scarification to an average depth of 12 inches prior to placing topsoil and seeding. Obtain Engineer’s approval for scarification equipment.

Shale Scarification - Method of Measurement: Square yard calculated from measurements to the nearest square yard.

Shale Scarification - Basis of Payment: Payment is full compensation for scarifying shale as required by the contract documents.

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

- PPA Power Pole Co. 1
- PR Electic Riser Pole
- E1 MidAmerican Energy - Quality D
- G MidAmerican Energy - Quality D
- G2 Kinder Morgan - Quality D
- FO Centurylink - Quality D
- FO2 Iowa Communications Network - Quality D
- SAN. Oskaloosa Municipal Utilities- Quality D
- T1 Centurylink - Quality D
- W Oskaloosa Municipal Utilities - Quality D
- W2 Mahaska Rural Water - Quality D

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

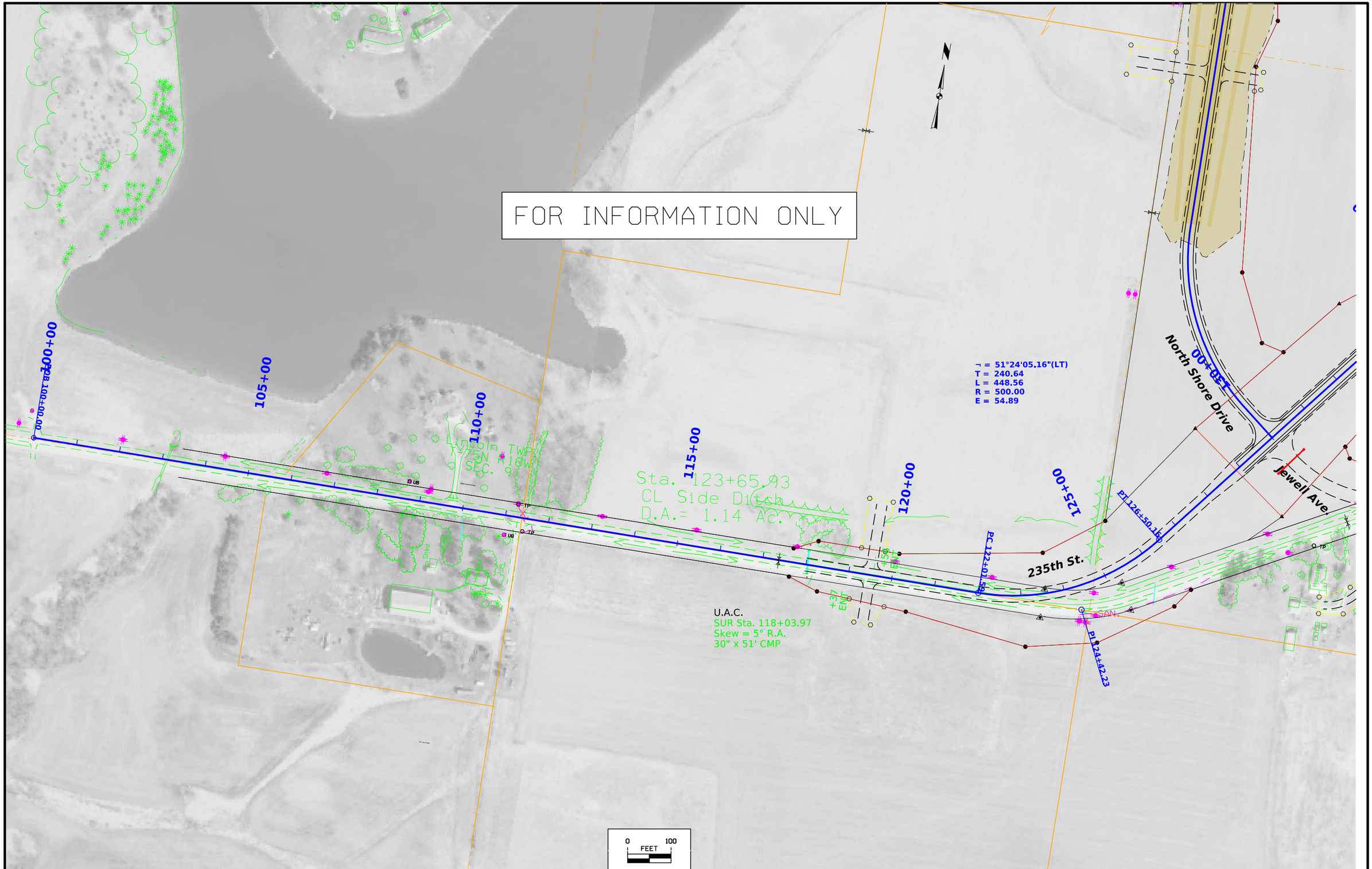
- Proposed Right-of-Way Symbol
- Proposed Right-of-Way Line
- Existing Right of Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Easement (Temporary) Symbol
- Easement (Temporary) Line
- Easement
- C/A Access Control
- Property Line Symbol
- Property Line

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER D.1

8:32:57 AM 12/24/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\LegendSheet_Seed.dgn



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER D.2

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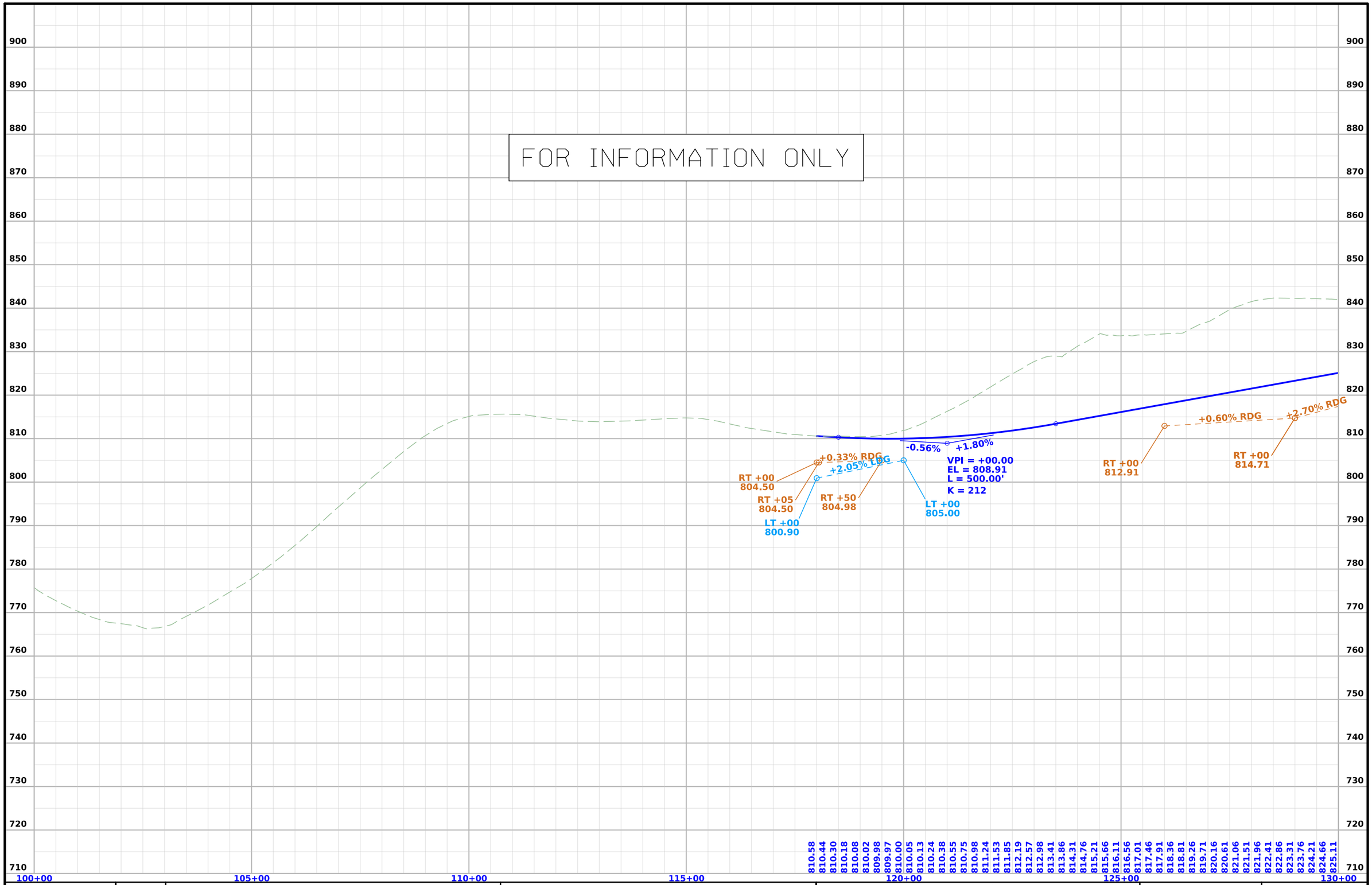
FOR INFORMATION ONLY



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER D.3

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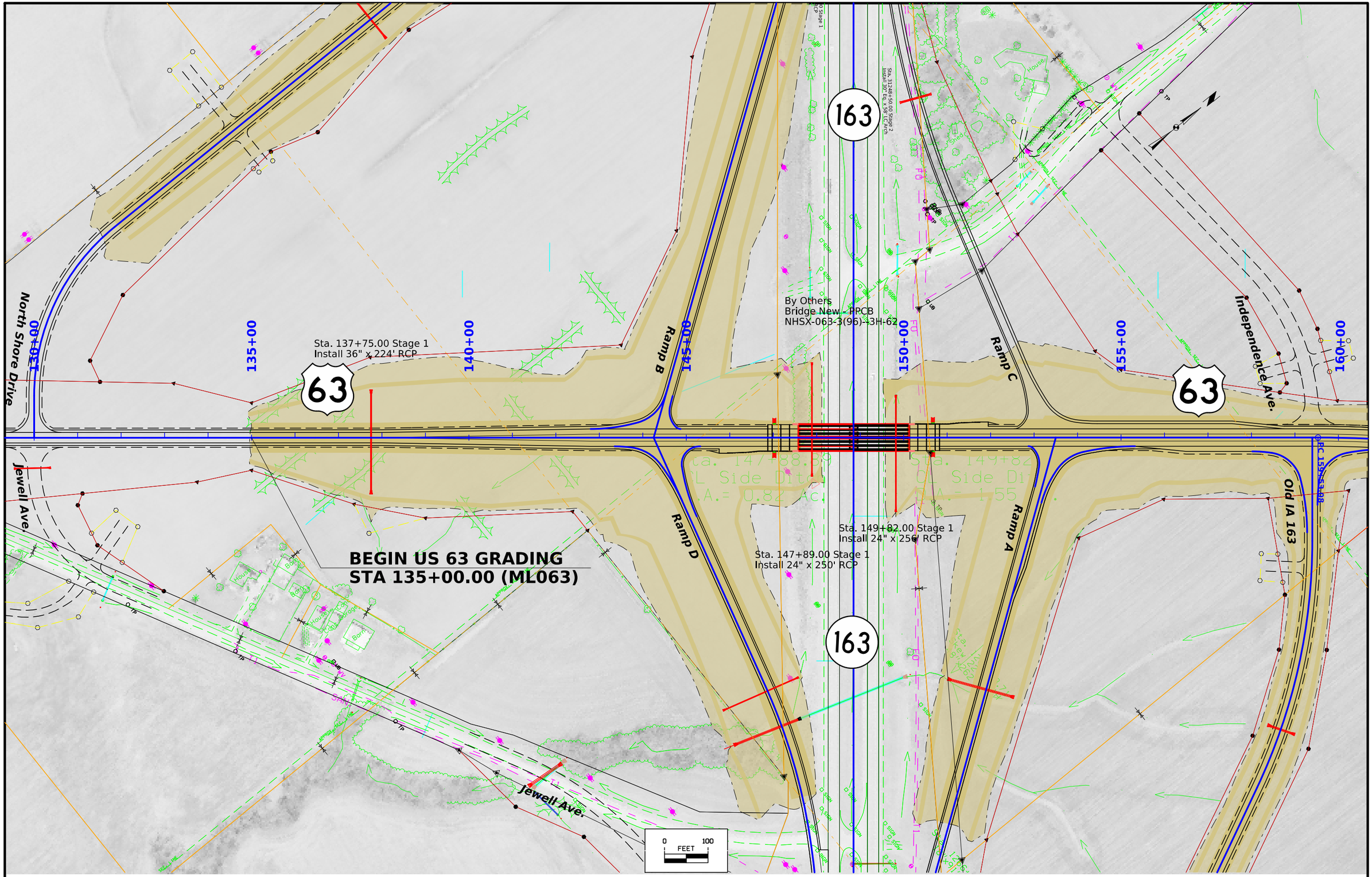


FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER D.4

8:46:34 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\D01_ML063_62063095Z09_ORD_Grading.dgn

TIE-IN
STA 135+00.00
EL 834.11

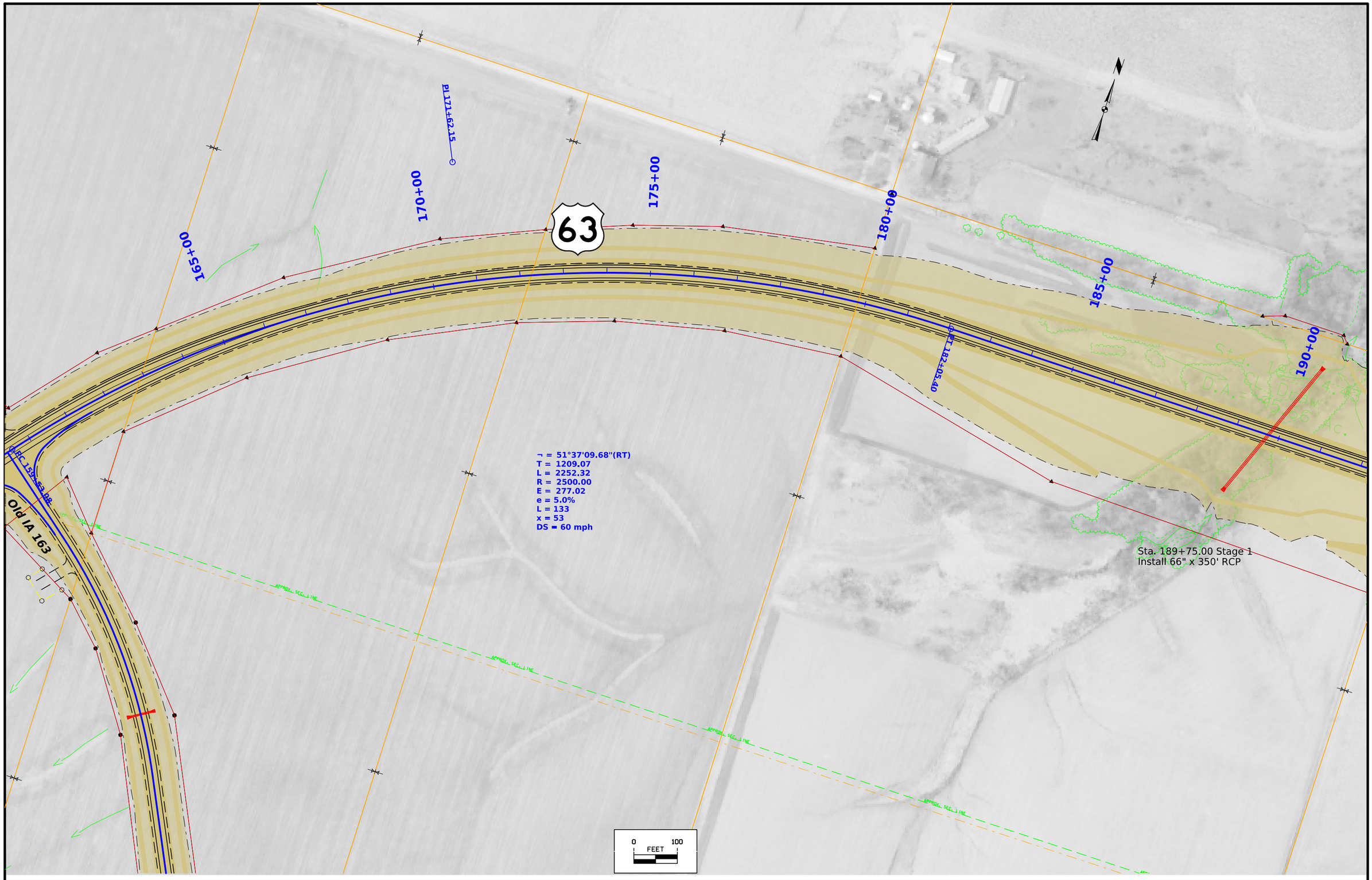
VPI = +75.00
EL = 858.86
L = 750.00'
K = 280

+1.80%
-0.88%

+2.70% RT Ditch Grade
RT +00
825.50
LT +00
829.11
RT +00
829.11
-4.95% LT Ditch Grade
-7.00% RDG
+0.40% LDG
LT +75
815.50
RT +75
809.86
+0.40% RDG
RT +00
810.36
+0.40% RDG
RT +50
810.96
LT +75
816.30
+2.20% LT Ditch Grade
+4.50% RT Ditch Grade
RT +60
829.41
-0.40% RT Ditch Grade
-0.40% LT Ditch Grade
LT +50
826.75
RT +90
828.09
LT +90
825.39
RT +85
828.83
LT +85
825.81
±2.00% LT Ditch Grade
+1.30% RT Ditch Grade
LT +50
845.11
RT +00
842.02

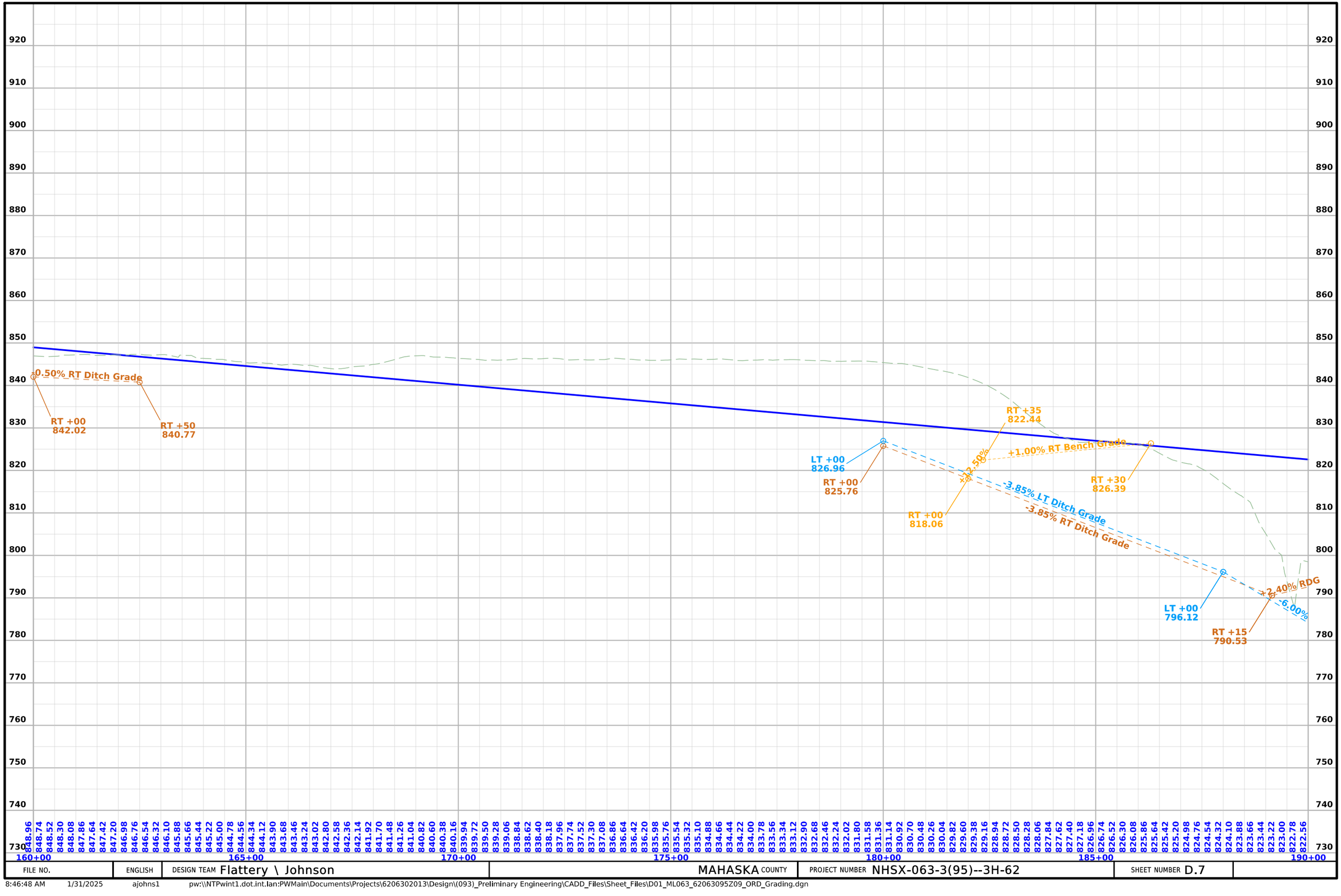
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER D.5

8:46:46 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\D01_ML063_62063095Z09_ORD_Grading.dgn



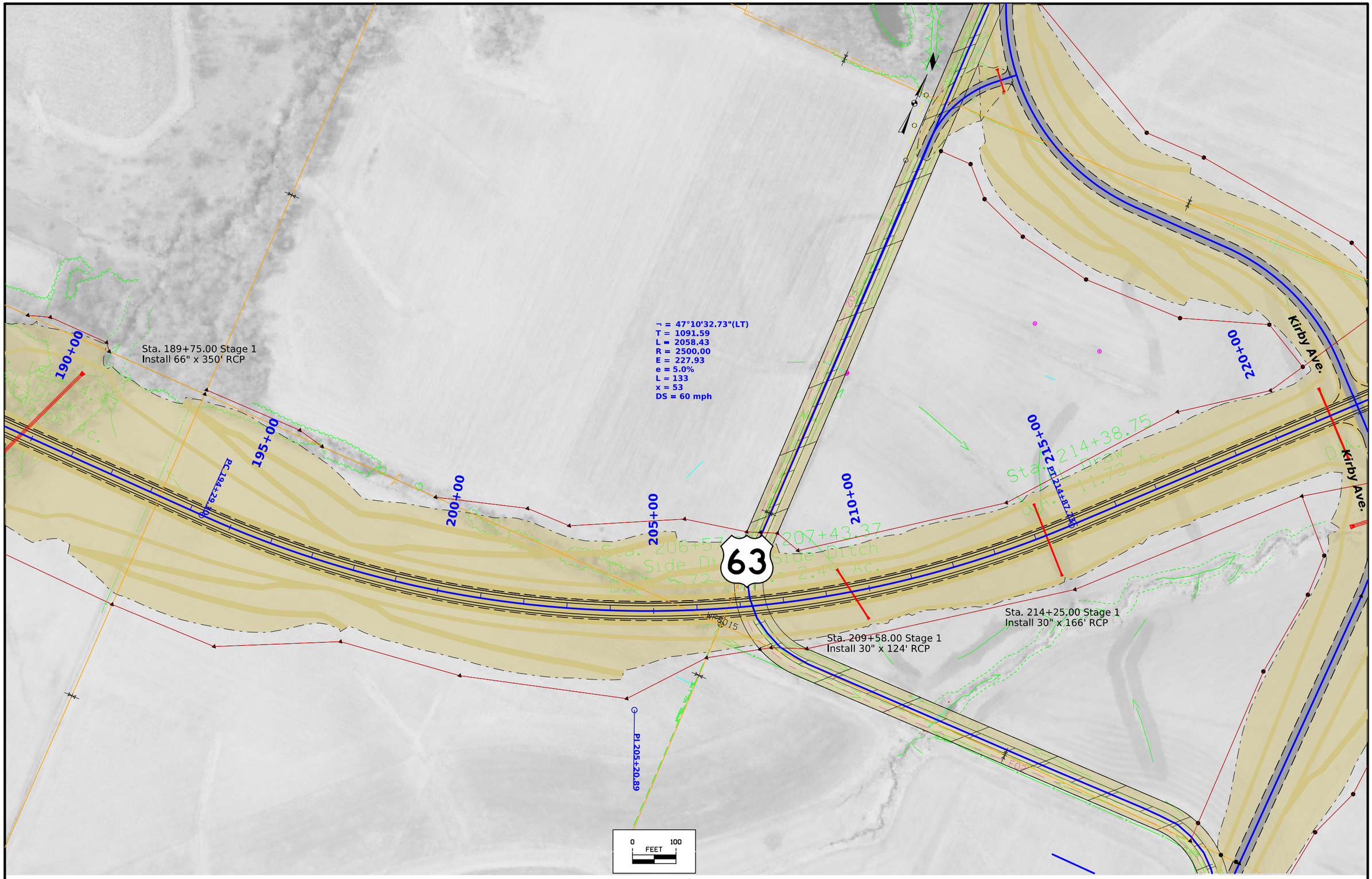
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER D.6	

8:46:47 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\D01_ML063_62063095Z09_ORD_Grading.dgn



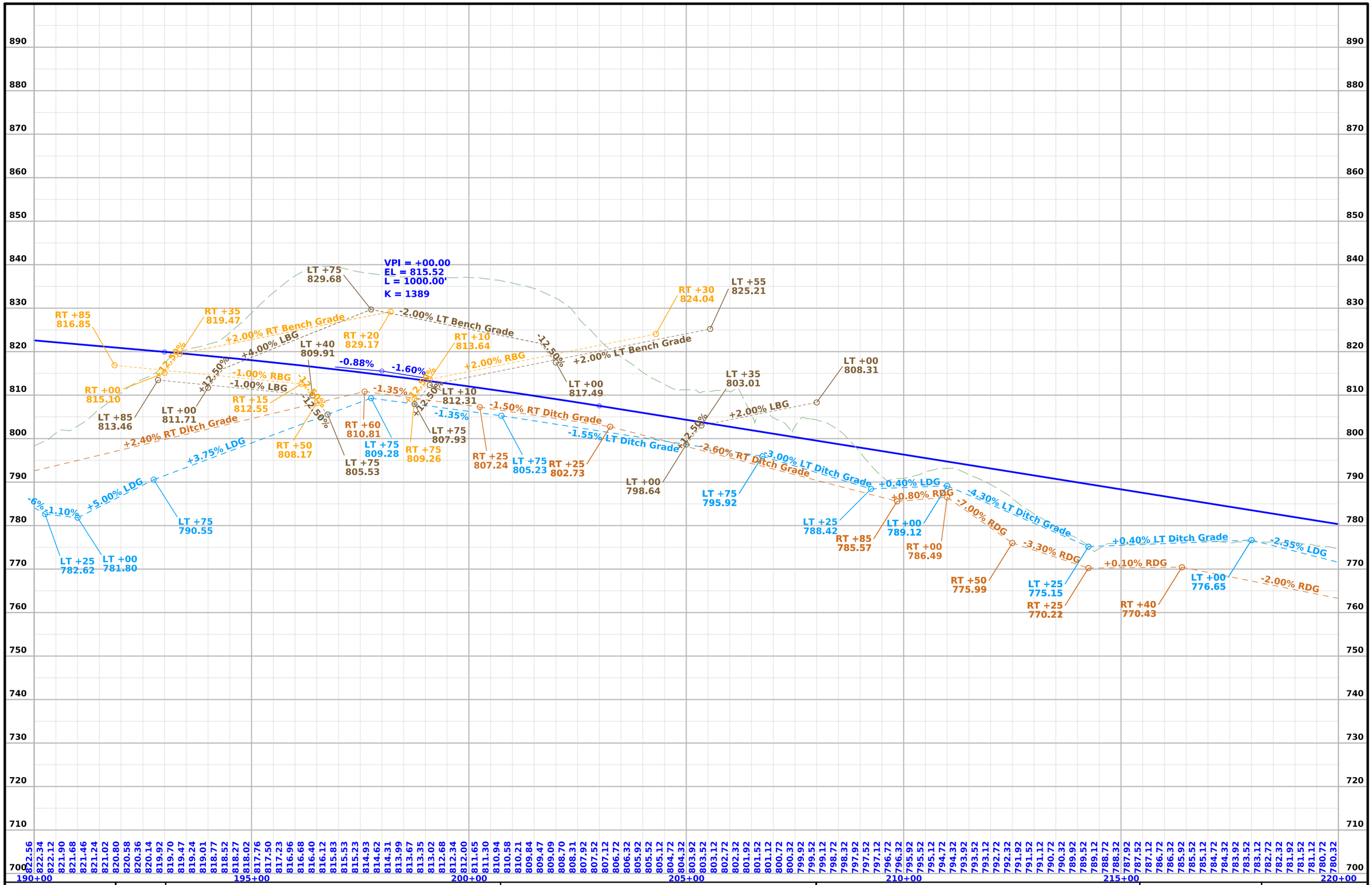
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER D.7

8:46:48 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\D01_ML063_62063095Z09_ORD_Grading.dgn



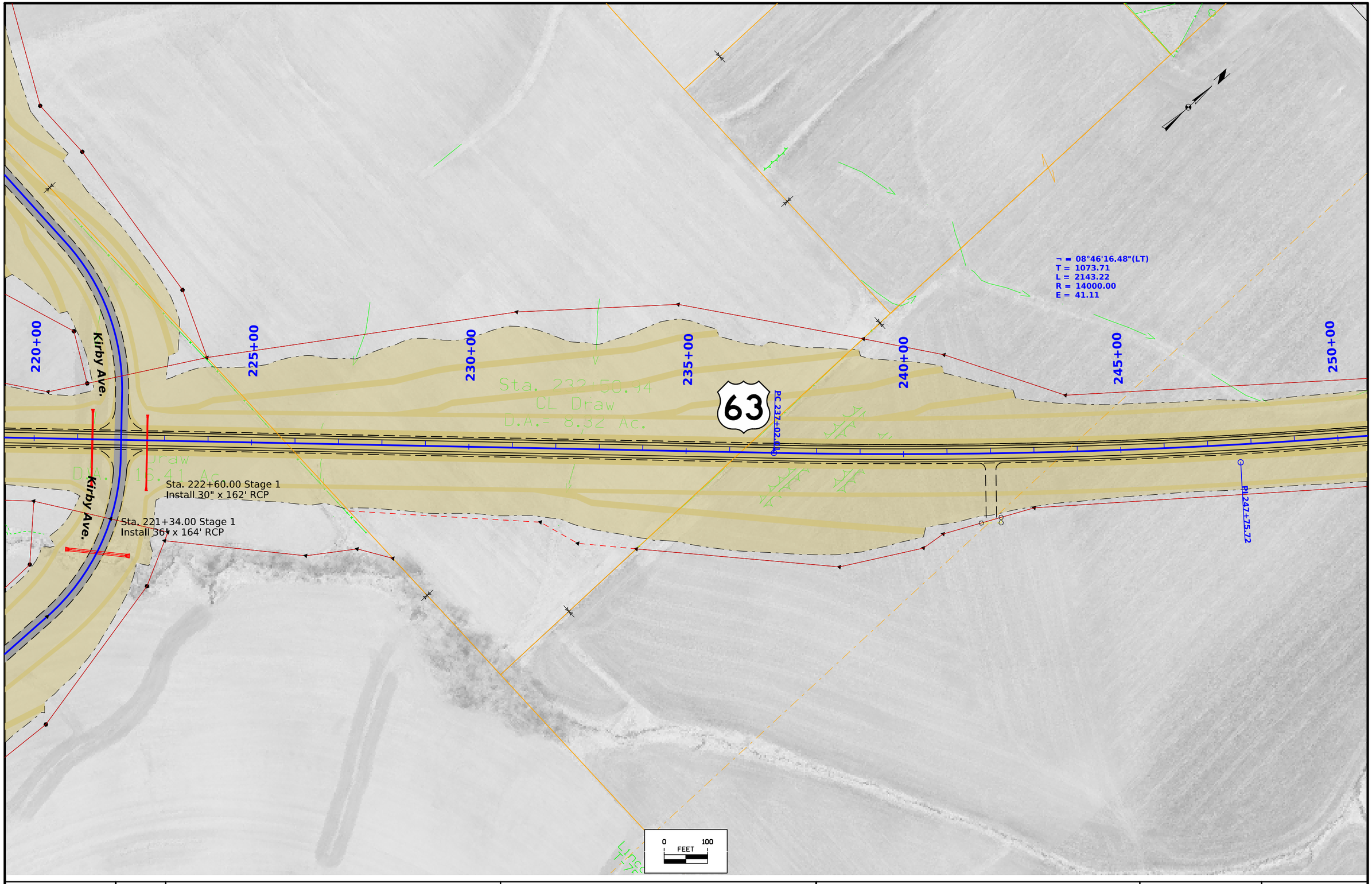
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER D.8	

8:46:49 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\D01_ML063_62063095Z09_ORD_Grading.dgn



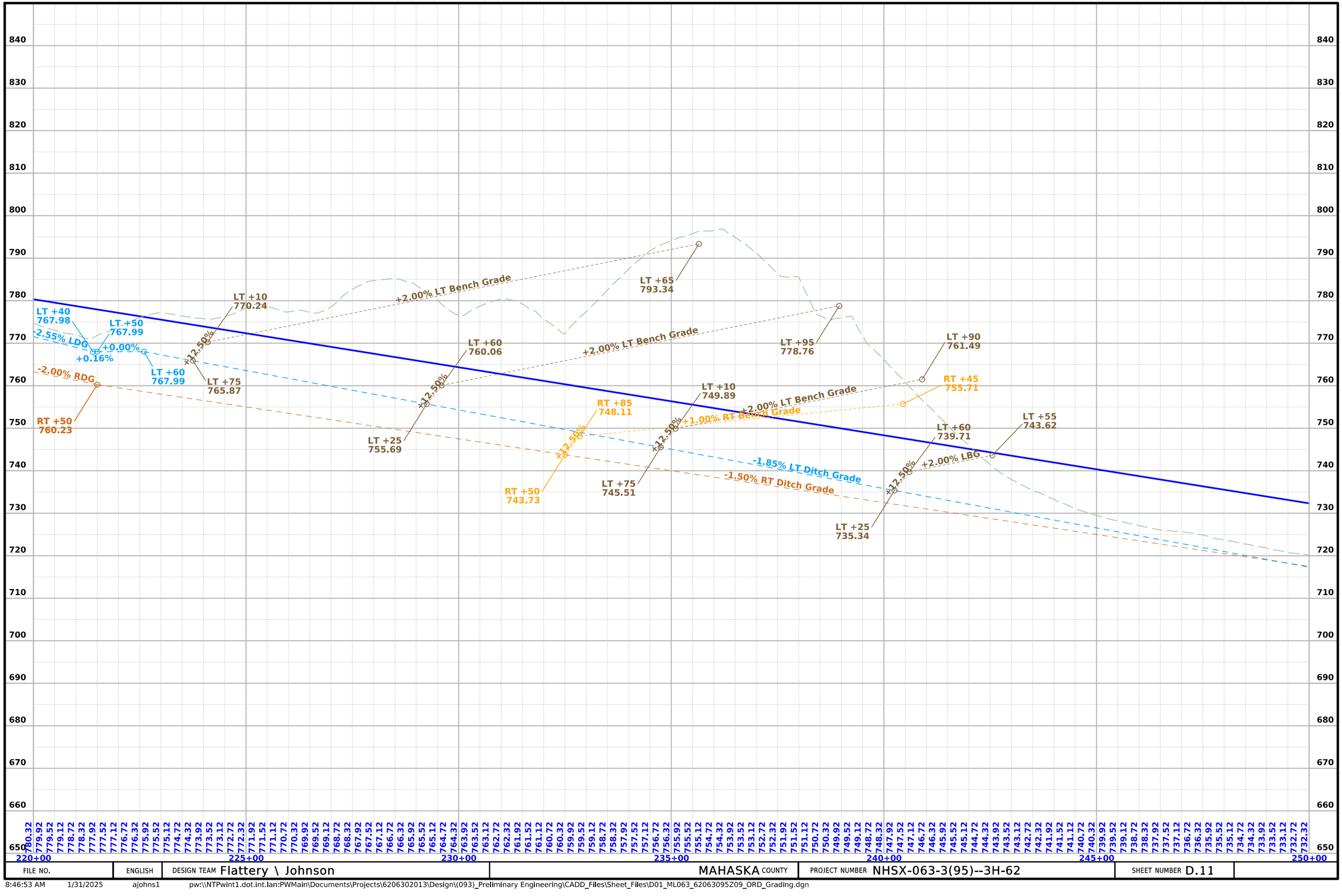
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER D.9

8:46:51 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\D01_ML063_62063095Z09_ORD_Grading.dgn



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER D.10

8:46:52 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\D01_ML063_62063095Z09_ORD_Grading.dgn



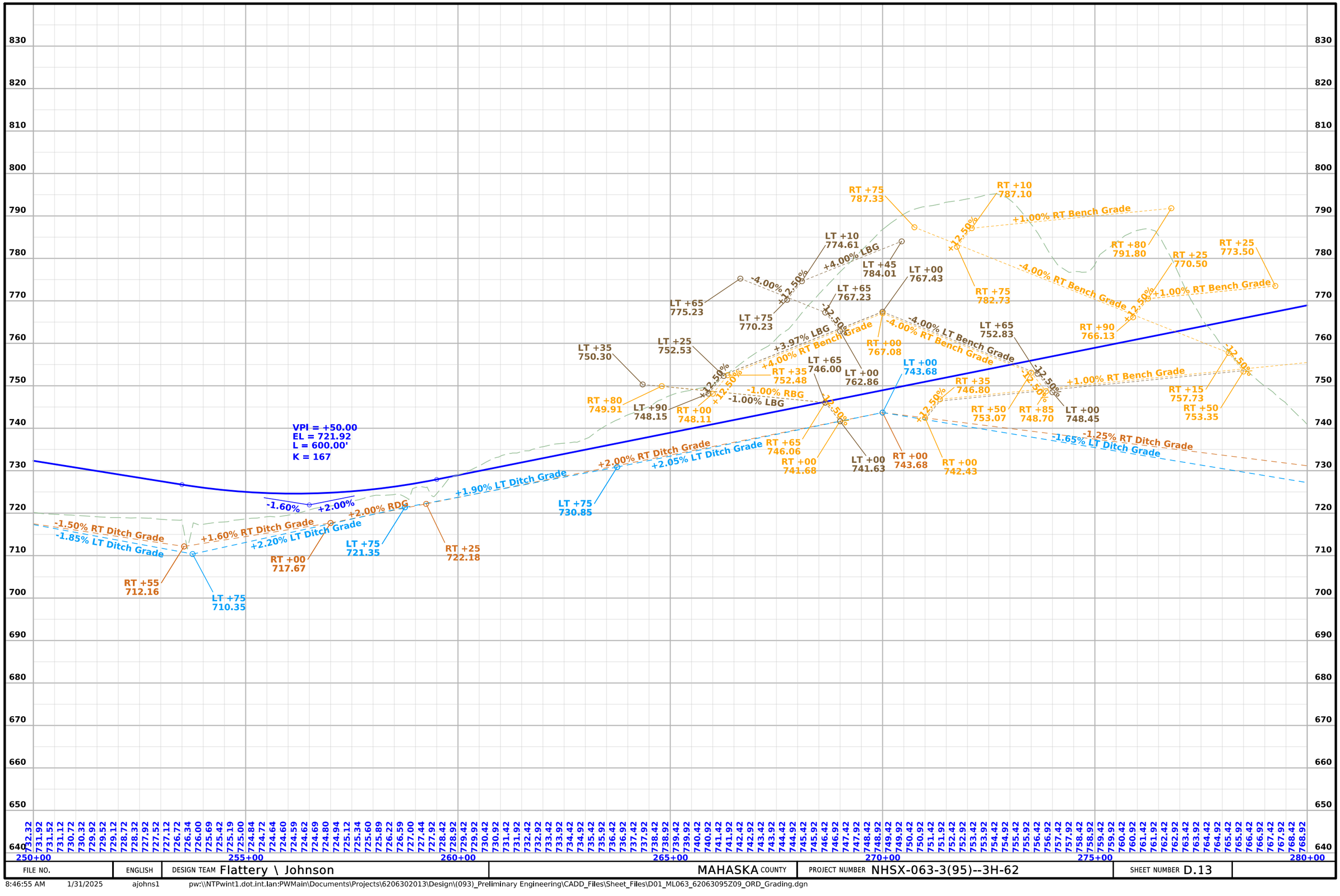
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER D.11

8:46:53 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\D01_ML063_62063095Z09_ORD_Grading.dgn

250+00
255+00
260+00
265+00
270+00
275+00
280+00
220th St.
220th St.
63
Sta. 100+00.00
Skew 15 FT AH
Twin 10'x12'x83.5' RCB
Sta. 259+38.89
CL Side Ditch
D.A.= 24.95 Ac.
Sta. 253+66.00 Stage 1
Install Twin 10' x 10' x 103' RCB
D.A.= 705.49 Ac.
Gate
Shed
0 FEET 100

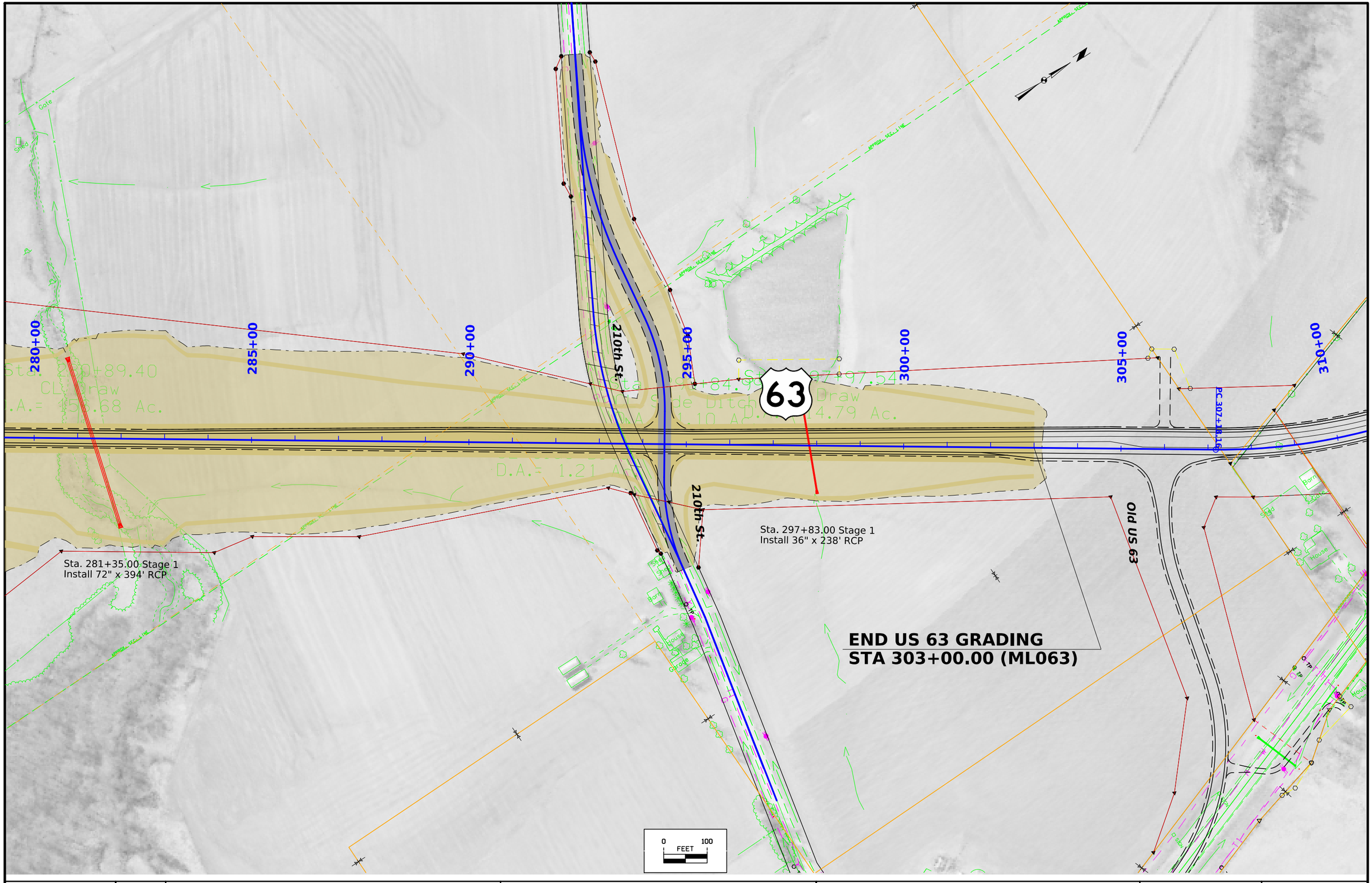
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER D.12	

8:46:54 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\D01_ML063_62063095Z09_ORD_Grading.dgn



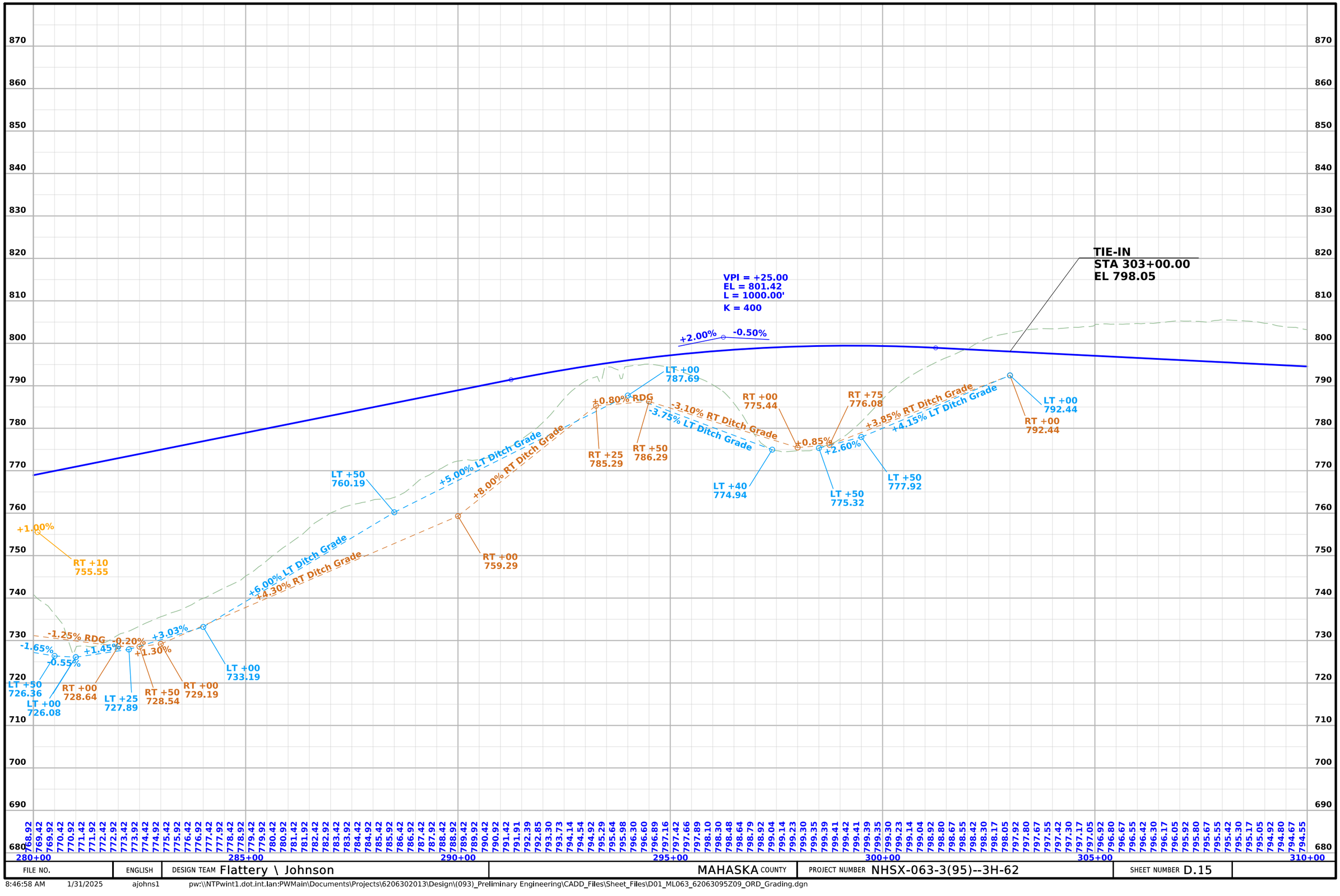
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER D.13

8:46:55 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\D01_ML063_62063095Z09_ORD_Grading.dgn



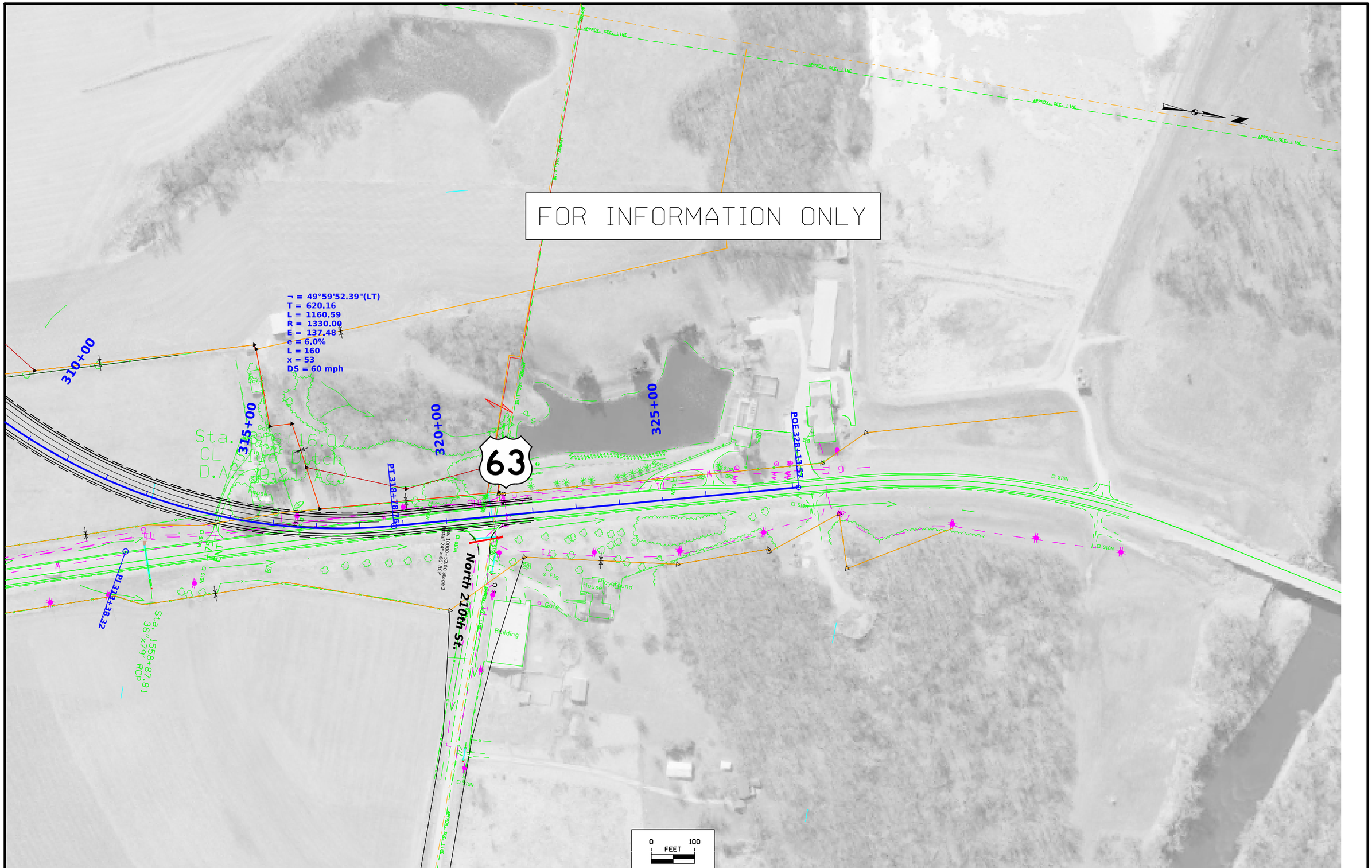
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER D.14	

8:46:57 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\D01_ML063_62063095Z09_ORD_Grading.dgn



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER D.15

8:46:58 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\D01_ML063_62063095Z09_ORD_Grading.dgn



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER D.16

8:46:59 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\D01_ML063_62063095Z09_ORD_Grading.dgn

FOR INFORMATION ONLY

VPI = +75.00
EL = 791.17
L = 800.00'
K = 167

-0.50%

-5.30%

-2.60% RDG

RT +00
763.41

RT +00
760.81

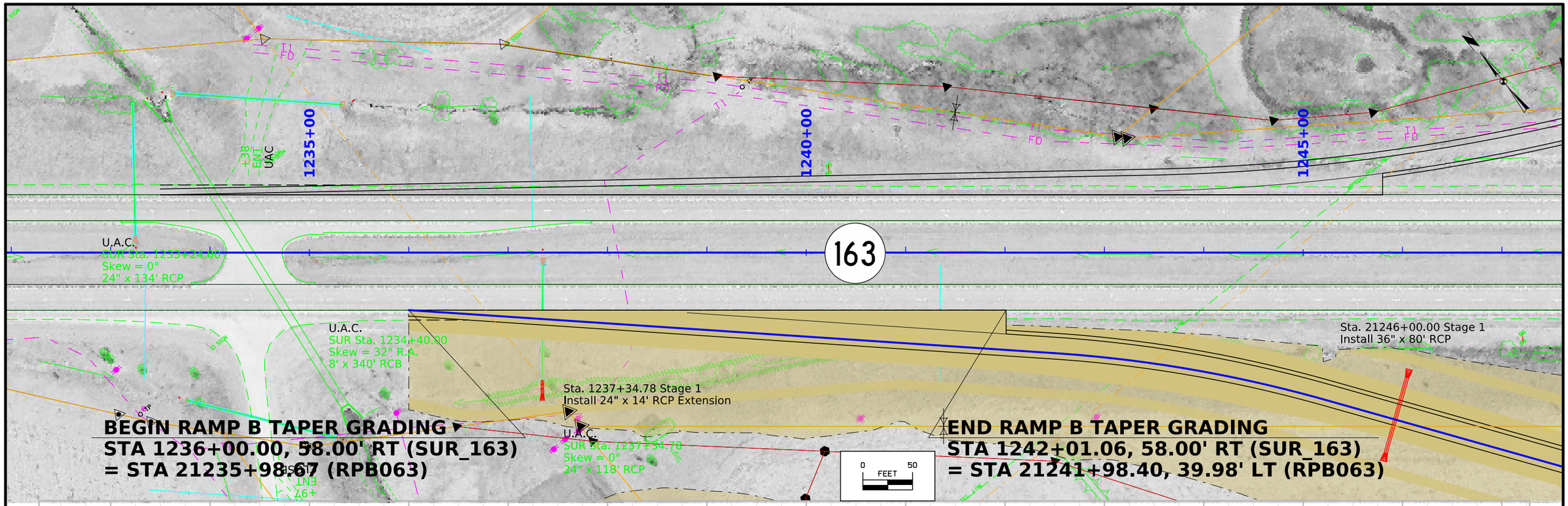
860 850 840 830 820 810 800 790 780 770 760 750 740 730 720 710 700 690 680 670

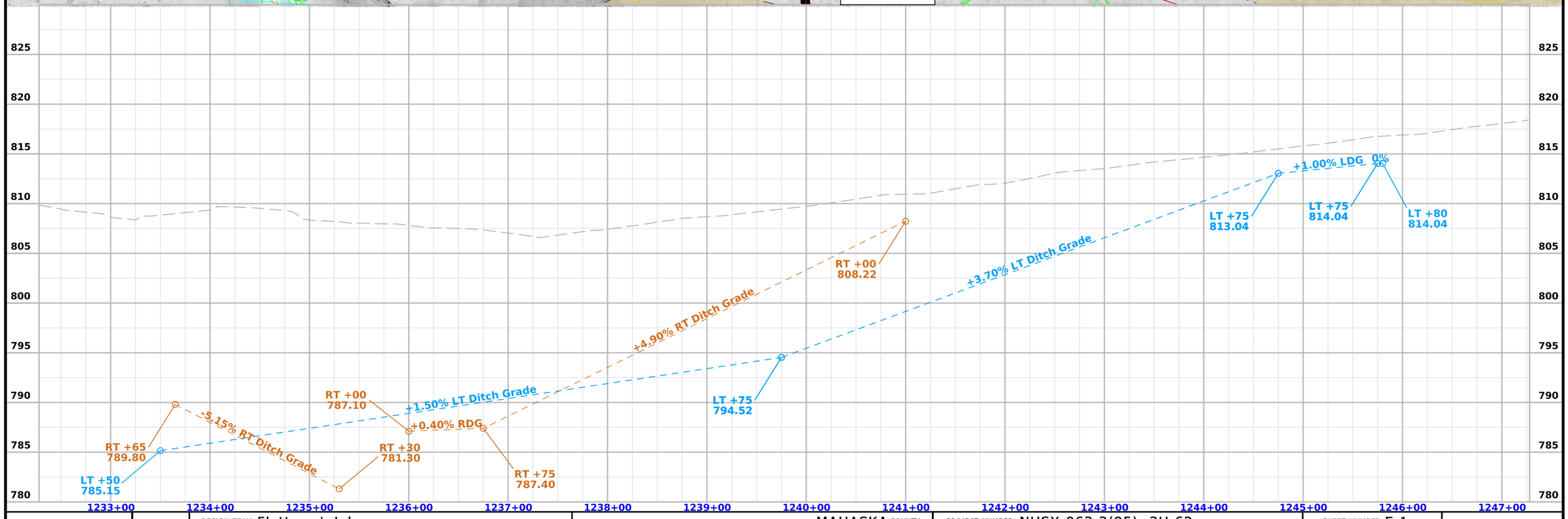
794.55 794.42 794.30 794.17 794.05 793.92 793.80 793.67 793.55 793.42 793.30 793.17 793.03 792.85 792.63 792.37 792.08 791.75 791.38 790.97 790.53 790.05 789.53 788.97 788.38 787.75 787.08 786.37 785.63 784.85 784.03 783.17 782.28 781.35 780.38 779.37 778.33 777.25 776.13 774.97 773.78 772.55 771.28 769.97 768.65 767.32 766.00 764.67 763.35

310+00 315+00 320+00 325+00 330+00 335+00 340+00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER D.17

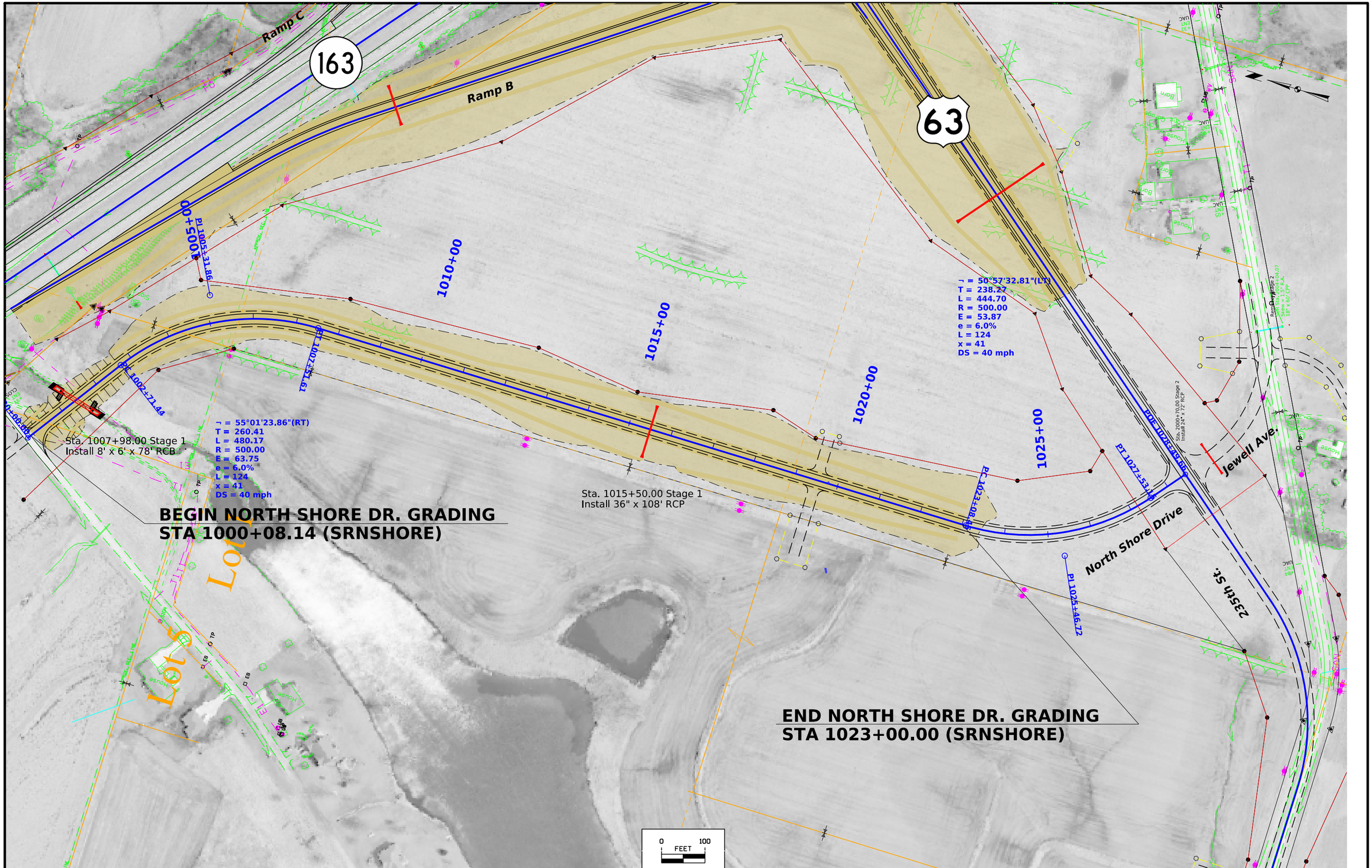
8:47:00 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\D01_ML063_62063095Z09_ORD_Grading.dgn





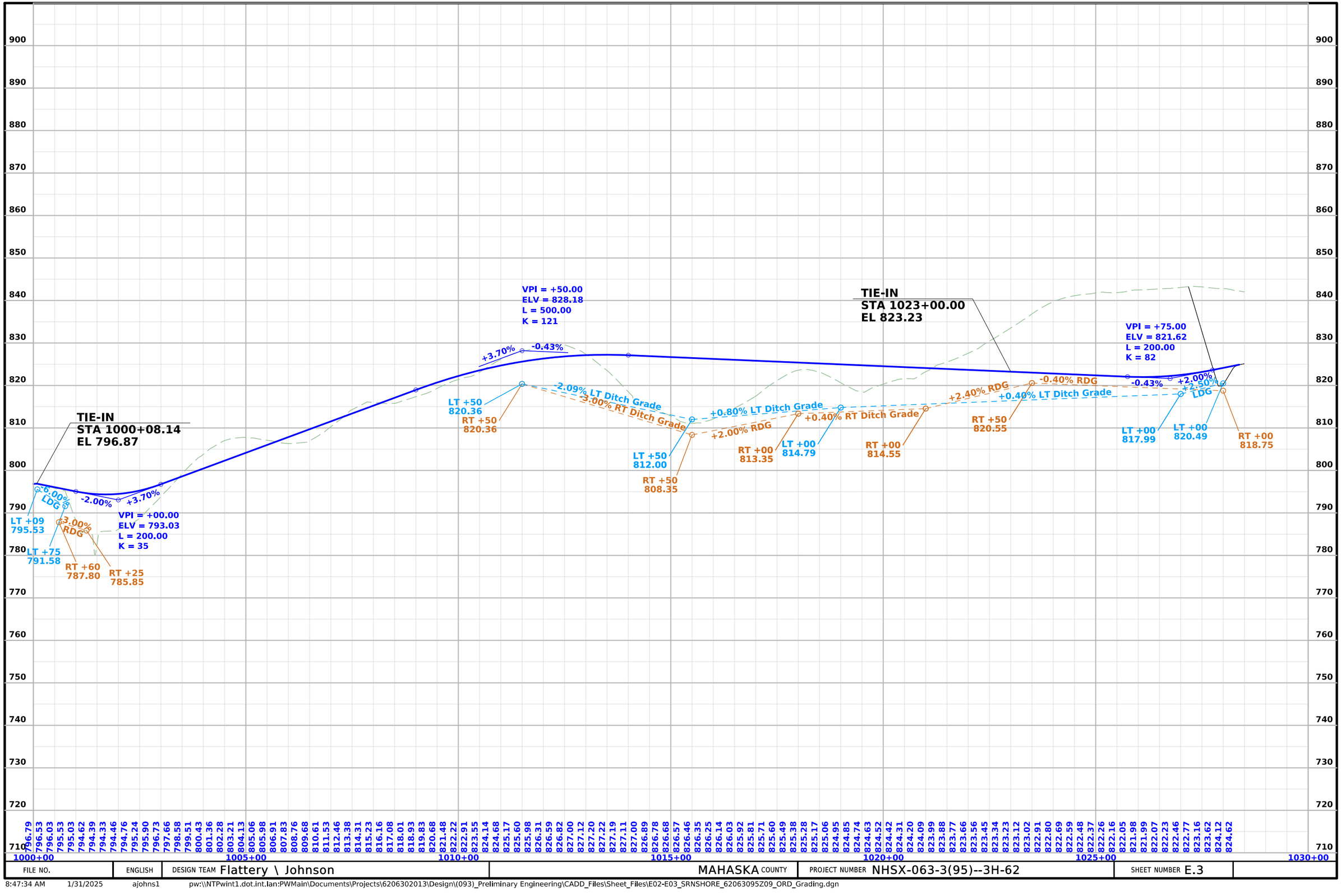
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER E.1

8:47:20 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\E01_SUR_163_62063095Z09_ORD_Grading.dgn



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER E.2

8:47:32 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\E02-E03_SRNSHORE_62063095Z09_ORD_Grading.dgn



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER E.3

8:47:34 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\E02-E03_SRNSHORE_62063095Z09_ORD_Grading.dgn

BEGIN OLD IA 163 GRADING
STA 5000+20.00 (SROLD163)
= STA 159+40.00,
20.00' RT (ML063)

5005+00

PI 5005+35.73

5010+00

5015+00

PC 5002+37.83

PT 5008+23.96

Old IA 163

BOB 5000+00.00

63

Sta. 5006+80.00 Stage 1
Install 42" x 50' RCP

+00.00 Prop.
Type "C" Ent. Lt.
24" Uncl. Pipe

+00.00 Prop.
Type "C" Ent. Rt.
24" Uncl. Pipe

Δ = 25°15'01.21" (RT)
T = 297.90'
L = 586.13'
R = 1330.00'
E = 32.96'
e = 6.0%
L = 160
x = 53
DS = 60 mph

0 50
FEET

TIE-IN
STA 5000+20.00
EL 848.89

VPI = +00.00
EL = 847.29
L = 150.00'
K = 63

-2.00%
+0.40%

+0.40% LT Ditch Grade
+0.40% RT Ditch Grade
+1.25% RDG
-0.59% LT Ditch Grade
-0.40% RT Ditch Grade
+0.20% LT Ditch Grade
+0.30% RT Ditch Grade

LT +20
841.88
RT +20
839.69
RT +75
841.11
LT +00
843.80
RT +00
842.67
LT +80
842.74
RT +80
841.95

865 860 855 850 845 840 835 830 825 820

848.89 848.79 848.34 847.99 847.74 847.59 847.54 847.59 847.69 847.79 847.89 847.99 848.09 848.19 848.29 848.39 848.49 848.59 848.69 848.79 848.89 848.99 849.09 849.19 849.29 849.39 849.49 849.59 849.69 849.79 849.89 849.99 850.09 850.19 850.29 850.39 850.49 850.59 850.69 850.79 850.89 850.99 851.09 851.19 851.29 851.39 851.49 851.59 851.69 851.79 851.89 851.99 852.09 852.19 852.29 852.39 852.49 852.59 852.69 852.79 852.89

5000+00 5001+00 5002+00 5003+00 5004+00 5005+00 5006+00 5007+00 5008+00 5009+00 5010+00 5011+00 5012+00 5013+00 5014+00 5015+00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER E.4

1:26:11 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\E04-E05_SROLD163_62063095Z09_ORD_Grading.dgn

+00.00 Prop. Type "C" Ent. Lt. 24" Uncl. Pipe

5015+00

Δ = 27°43'17.64" (LT)
T = 328.18'
L = 643.50'
R = 1330.00'
E = 39.89'
e = 6.0%
L = 160
x = 53
DS = 60 mph

END OLD IA 163 GRADING
STA 5022+00.00 (SROLD163)

5020+00

PC 5019+30.87

5025+00

PT 5025+74.37

PC 5028+59.49

5030+00

SAN.

SAN.

FO

0 50
FEET

TIE-IN
STA 5022+00.00
EL 853.26

VPI = +00.00
EL = 854.89
L = 500.00'
K = 417

+0.40% -0.80%

VPI = +50.00
EL = 849.69
L = 150.00'
K = 214

-0.80% -1.50%

+0.30% RT Ditch Grade

+0.20% LT Ditch Grade

LT +25
846.08

RT +25
846.88

RT +00
844.42

-3.10% RDG

LT +00
844.05

RT +75
842.10

-1.85% LT Ditch Grade

-1.60% RT Ditch Grade

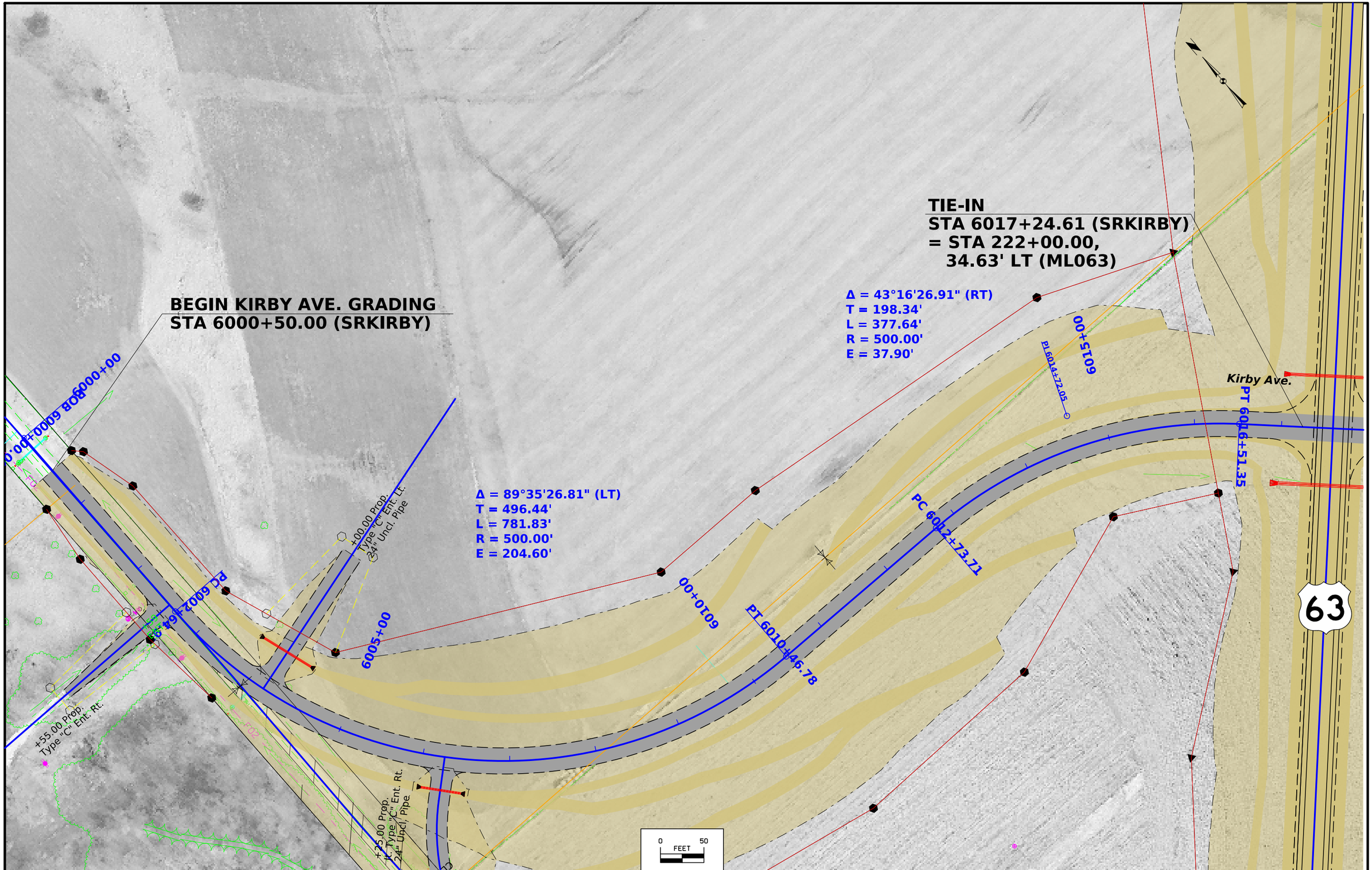
865 860 855 850 845 840 835 830 825 820

852.89 852.99 853.09 853.19 853.29 853.39 853.49 853.59 853.69 853.79 853.89 853.98 854.06 854.12 854.17 854.20 854.22 854.22 854.21 854.18 854.14 854.08 854.01 853.92 853.82 853.70 853.57 853.42 853.26 853.08 852.89 852.69 852.49 852.29 852.09 851.89 851.69 851.49 851.29 851.09 850.89 850.69 850.49 850.29 850.07 849.83 849.55 849.25 848.92 848.56 848.19 847.81 847.44 847.06 846.69 846.31 845.94 845.56 845.19 844.81 844.44

5015+00 5016+00 5017+00 5018+00 5019+00 5020+00 5021+00 5022+00 5023+00 5024+00 5025+00 5026+00 5027+00 5028+00 5029+00 5030+00

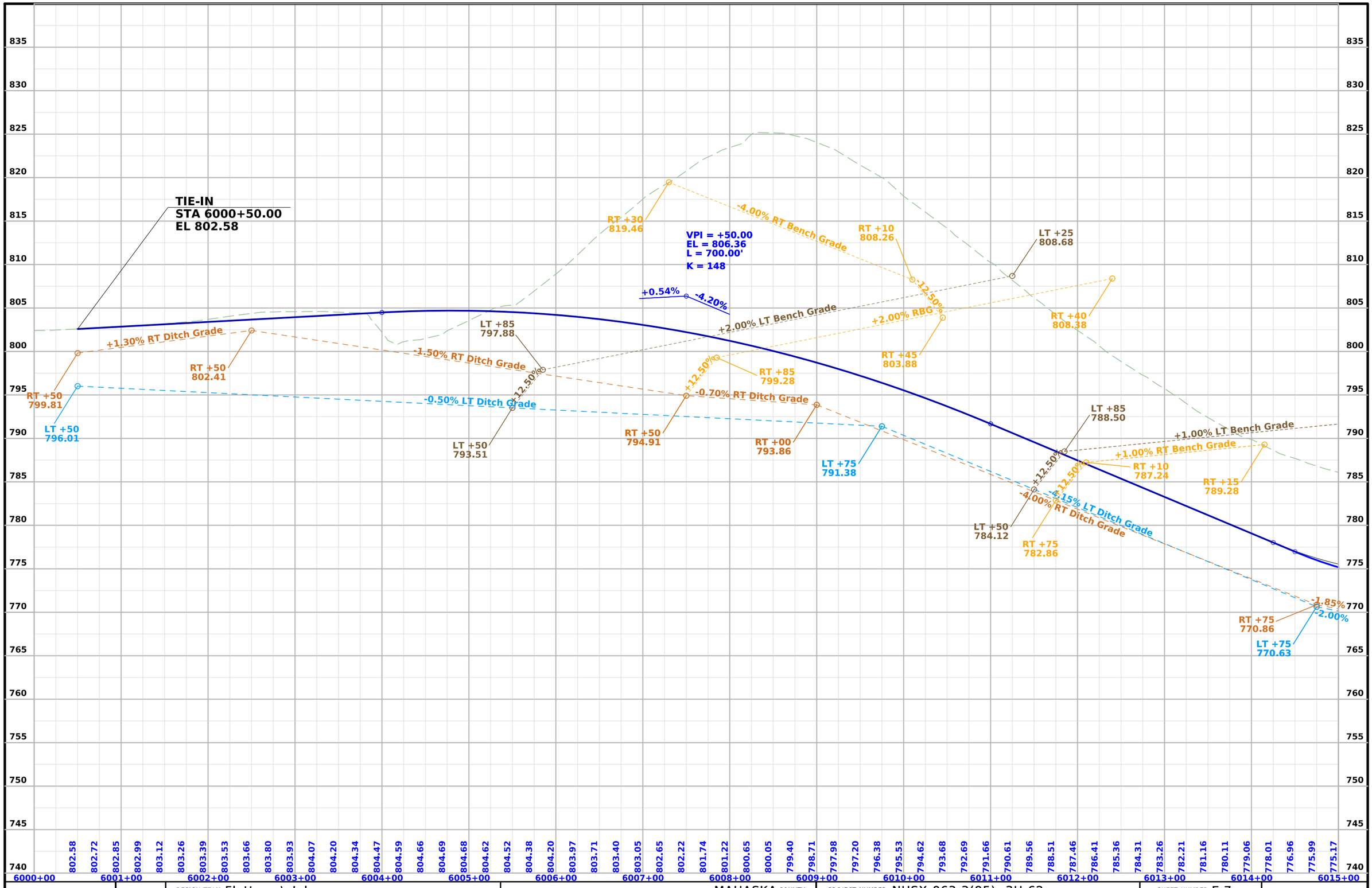
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER E.5

1:26:15 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\E04-E05_SROLD163_62063095Z09_ORD_Grading.dgn



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER E.6

8:48:02 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\E06-E11_SRKIRBY_62063095Z09_ORD_Grading.dgn



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER E.7

8:48:03 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\E06-E11_SRKIRBY_62063095Z09_ORD_Grading.dgn

Sta. 6020+27.00 Stage 1
Install 72" x 132' RCP

6020+00

PI 6020+20.43

Kirby Ave.

Kirby Ave.

PC 6018+00.73

PT 6016+51.35

PT 6022+14.74

6025+00

6030+00

Δ = 47°26'32.57" (RT)
T = 219.71'
L = 414.01'
R = 500.00'
E = 46.14'

TIE-IN
STA 6017+93.87 (SRKIRBY)
= STA 222+00.00, 34.63' RT (ML063)

TIE-IN
STA 6017+24.61 (SRKIRBY)
= STA 222+00.00,
34.63' LT (ML063)

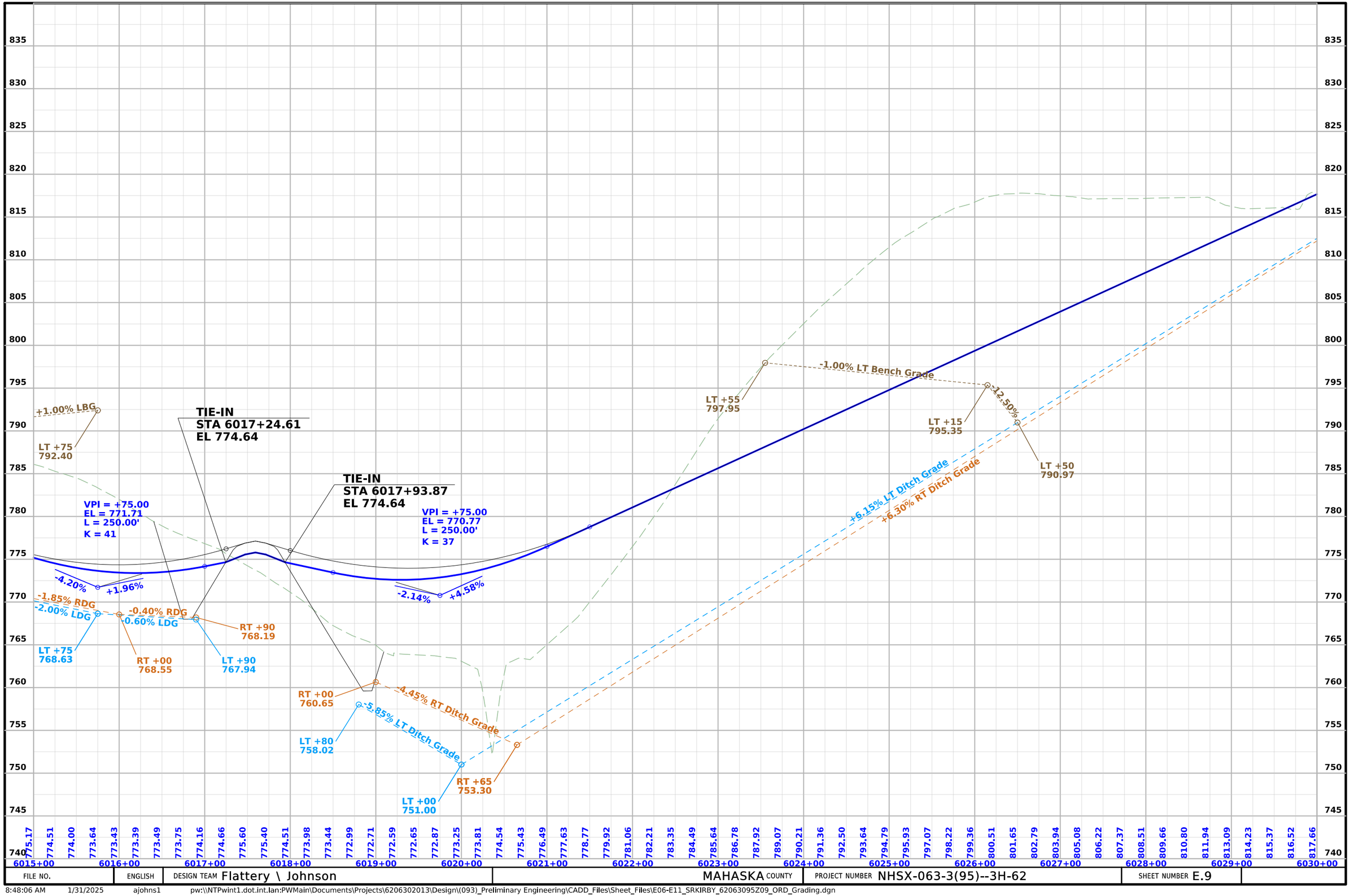
63

+50.00 Prop.
Type "C" Ent. Rt.
24" Uncl. Pipe

0 50
FEET

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER E.8	

8:48:05 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\E06-E11_SRKIRBY_62063095Z09_ORD_Grading.dgn



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER E.9

8:48:06 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\E06-E11_SRKIRBY_62063095Z09_ORD_Grading.dgn

6030+00

POE 6032+82.90

Kirby Ave.

+50.00 Prop.
Type "C" Ent. Rt.
24" Uncl. Pipe

END KIRBY AVE. GRADING
STA 6031+50.00 (SRKIRBY)

0 50
FEET

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER E.10

8:48:08 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\E06-E11_SRKIRBY_62063095Z09_ORD_Grading.dgn



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER E.11

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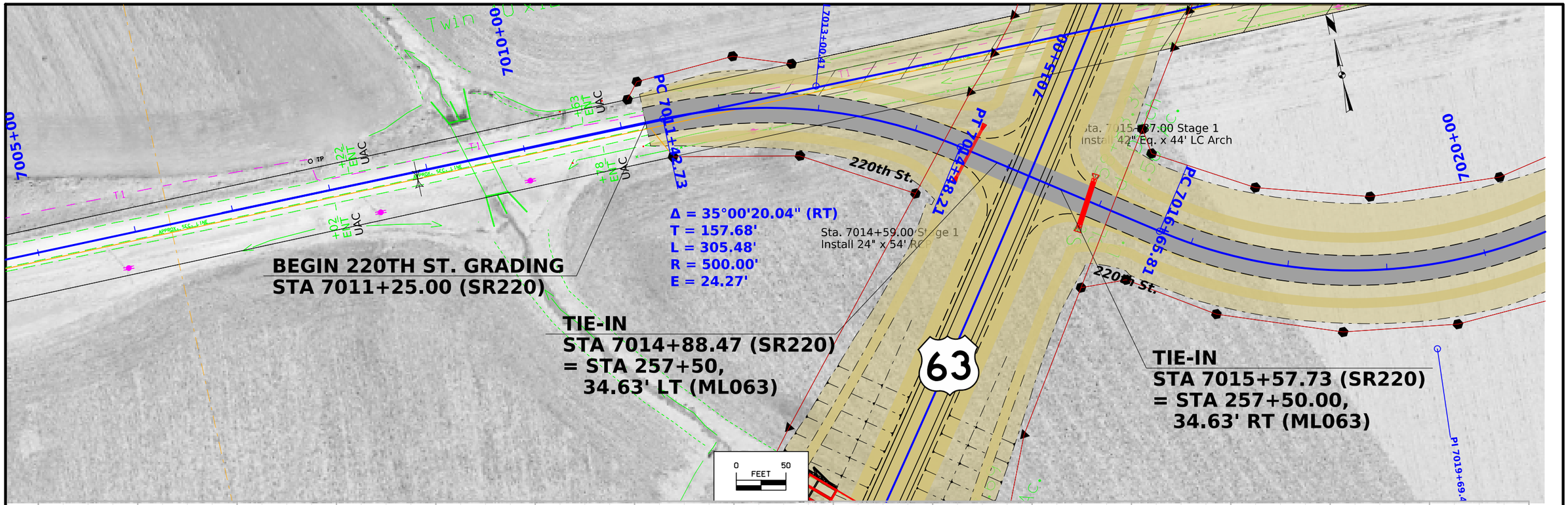

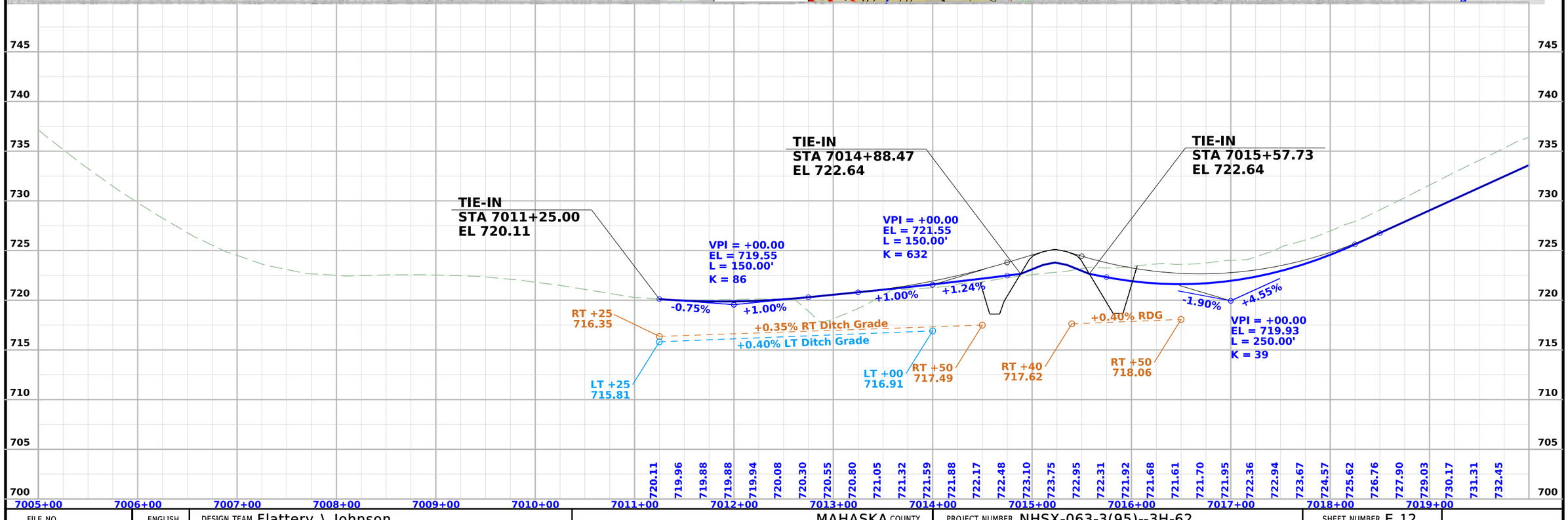

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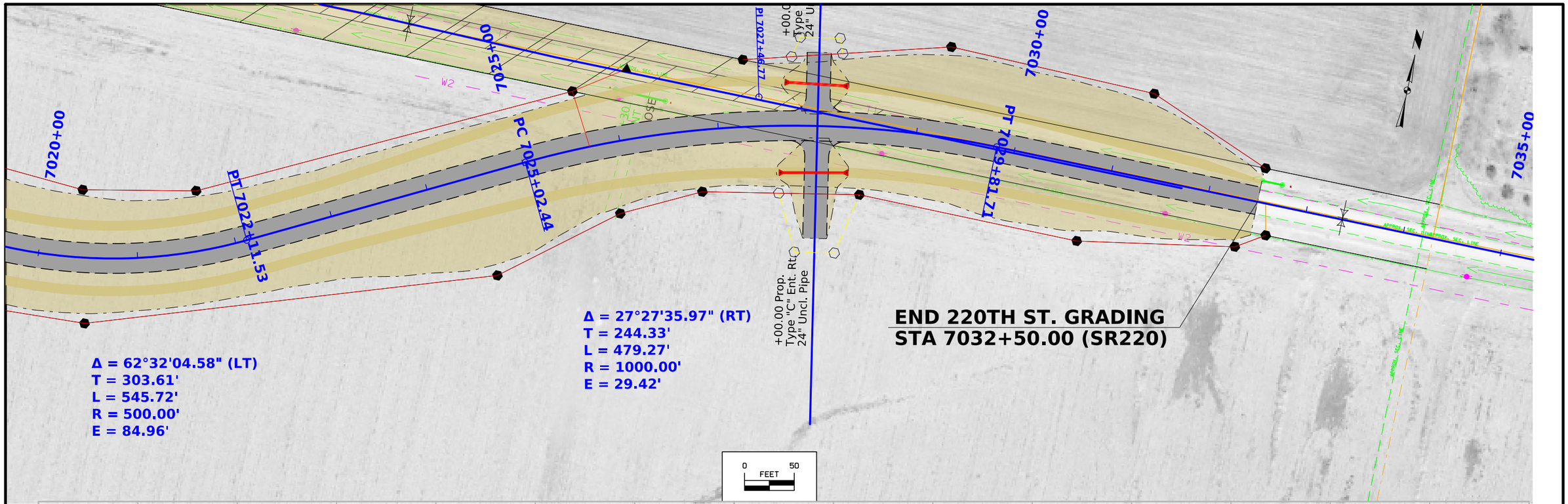
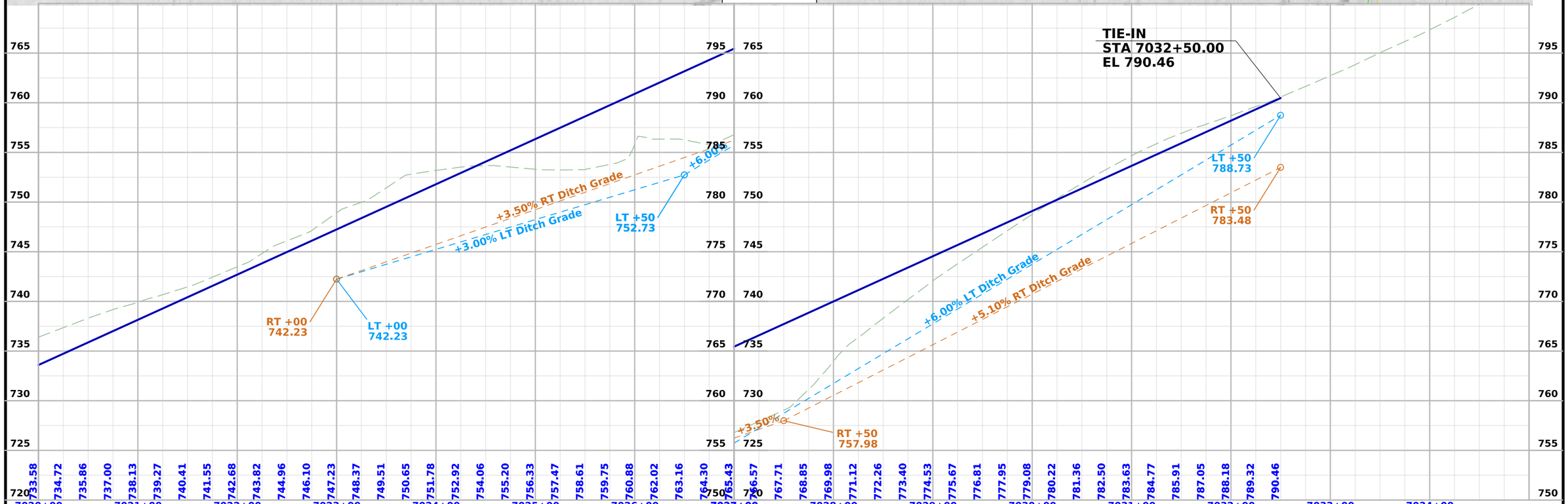
1:37:31 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\E12-E13_SR220_62063093Z09_ORD_Grading.dgn





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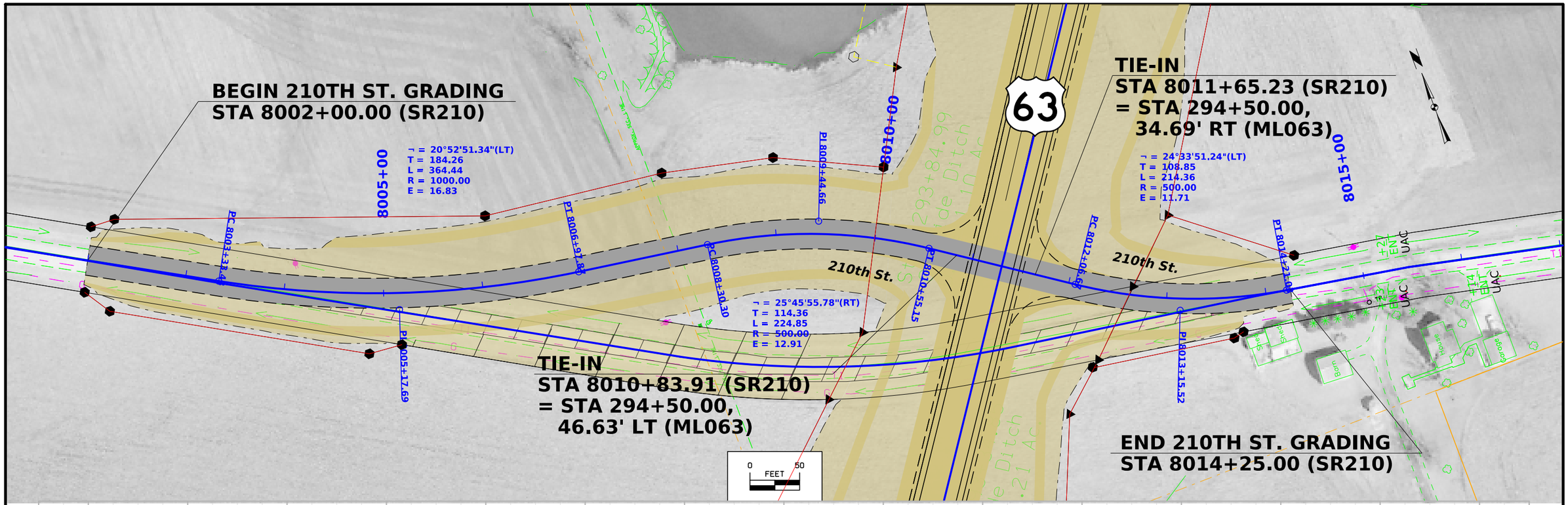
1:37:36 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\E12-E13_SR220_62063093Z09_ORD_Grading.dgn



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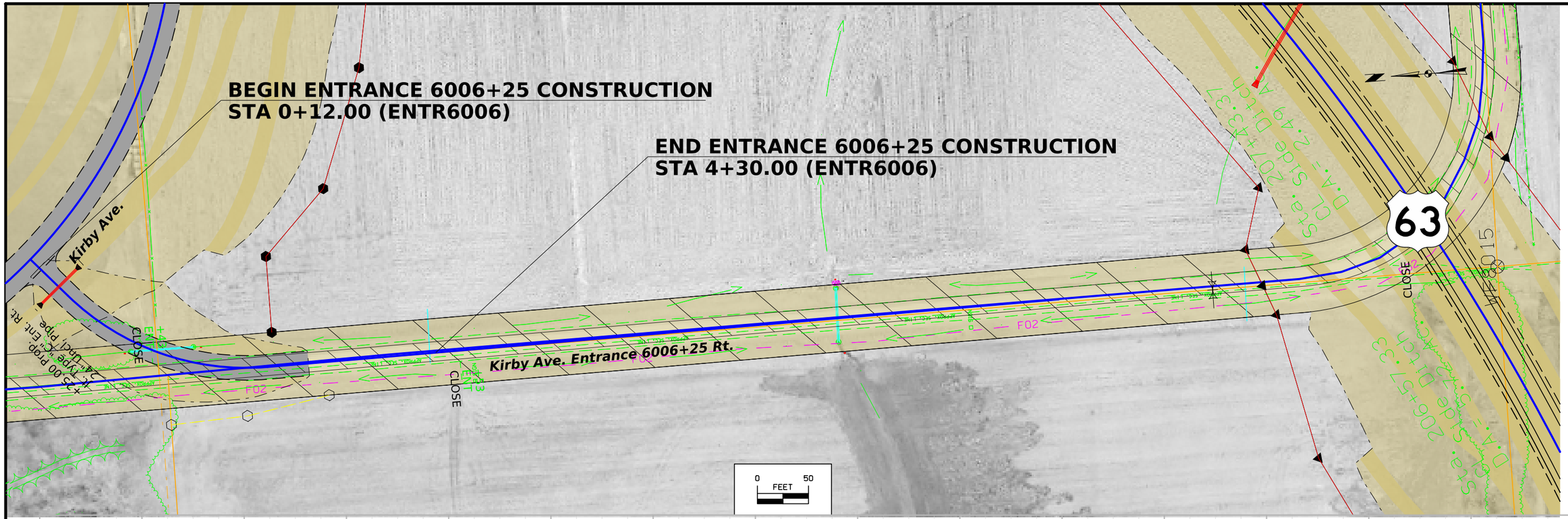
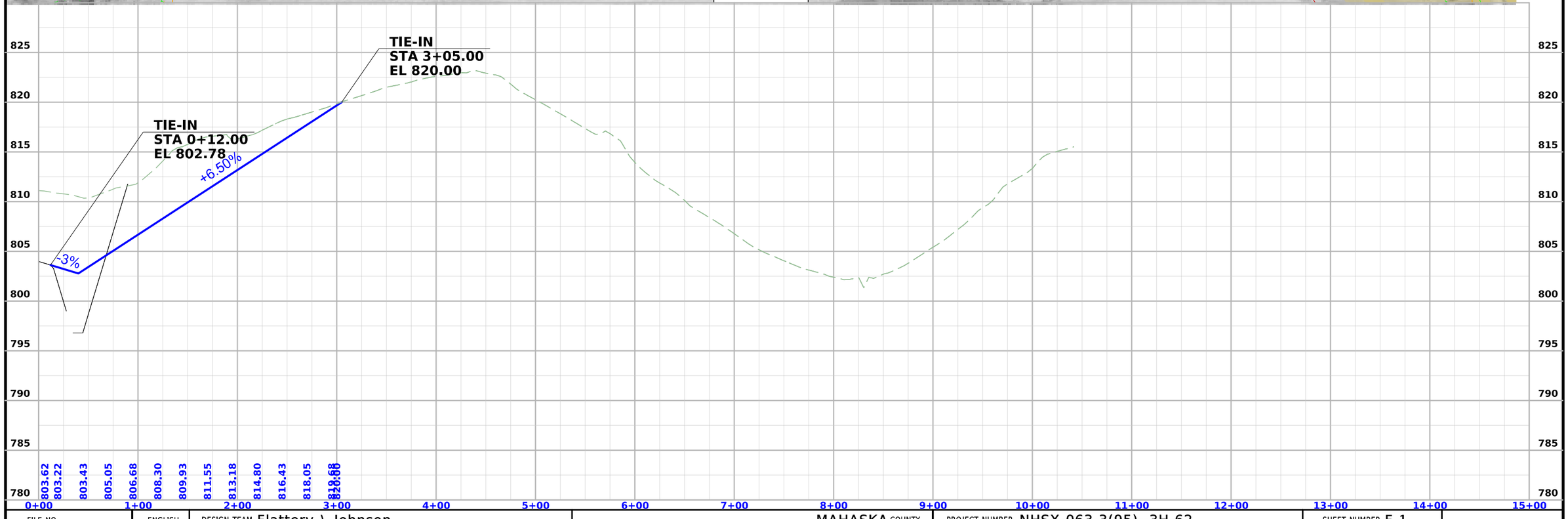
8:48:39 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\E14_SR210_62063095Z09_ORD_Grading.dgn

BEGIN ENTRANCE 6006+25 CONSTRUCTION
STA 0+12.00 (ENTR6006)

END ENTRANCE 6006+25 CONSTRUCTION
STA 4+30.00 (ENTR6006)





FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER F.1

11:12:43 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\F01_ENTR6006_62063095Z09_ORD_Grading.dgn

Survey Information

County: Mahaska
PIN: 04-16-080-020
Project Number: NHSx-063-3(593--3H-62
Location: Highway 63 Bypass NW of Oskaloosa
Project Directory: 6206302013
SAP 824.1

General Information:

Measurement units for this survey are US survey feet. This survey is for the proposed Highway 63 Oskaloosa Bypass. This project is a Partial DTM survey.

Vertical Control:

Vertical datum for this survey is relative to NAVD88, Geoid 12a.

Vertical positions were established by static observations and post processed using concurrent observations from the IaRTN Oskaloosa reference station static sessions.

Horizontal Control:

The project coordinate system is the Iowa Regional Coordinate System, Zone 9. Horizontal datum is NAD83 (2011) for Epoch 2010.00. The projection parameters for Zone 9 of the IaRCS is defined below:

Transverse Mercator Projection North American Datum of 1983
Origin Lat: 40°15'N
Origin Central Meridian: 092°49'W
Central Meridian Scale: 1.000027
False Northing: 7,200,000
False Easting: 19,500,000

The IaRTN base stations are the primary control for this project. The secondary control for five FENO monuments in the project vicinity originated from SAP 824. SAP 824 was original performed using unmodified Iowa State Plane South Zone. Coordinate values were reprojected to Zone 9 using Leica Geo Office 8.0. The coordinates of the five FENO monuments were verified using the IaRTN with three observations with appropriate time spans between. The averaged observations were within tolerance and the provided control was accepted. Additional control points were placed throughout the project using the IaRTN with multiple observations. Observations were averaged to determine control coordinates. The horizontal standard deviation of these observations was less than 0.04 ft.

Alignment Information:

IA 163
The horizontal alignment for this survey is a retrace of As-built Plans No. NHS-163-4(45)19-62 and NHS-163-4(9)19--62. Survey stationing was equated to the plan PC at Sta. 1216+35.62 (NHS-163-4(45)19-62) and run ahead without equation throughout the survey to PC Sta. 150+95.66 (NHS-163-4(9)1962). Stationing was equated to plans NHS-163-4(45)19-62.

Survey stationing relates to as built plan stationing as follows:

PC Sta. 1216+35.62 As-built Plans Project No. NHS-163-4(45)19-62
Survey PC Sta. 1216+35.62

PT Sta 1225+86.61 Project No. NHS-163-4(45)19-62
Survey PT Sta 1225+86.61

POT Sta 1260+15.89 Project No. NHS-163-4(45)19-62
POT Sta 93+00.00 Project No. NHS-163-4(9)19--62
Survey POT Sta 1260+15.83

PC Sta 104+72.55 Project No. NHS-163-4(9)1962
Survey PC Sta 1271+88.18

PT Sta 111+94.18 Project No. NHS-163-4(9)1962
Survey PT Sta 1279+11.11

POT Sta 119+74.39 Project No. NHS-163-4(9)1962
Survey POT Sta 1286+91.06

PC Sta 150+95.66 Project No. NHS-163-4(9)1962
Survey POT Sta 1318+12.27

US 63
The horizontal alignment for this survey is a retrace of As-built Plans No. BRF-63-3(73)38-62 (metric), F-63-3(25)20-62 and F 70(14). Survey stationing was equated to the plan POT at Sta. 1553+58.6 F 70(14) and run ahead and back without equation throughout the survey. Stationing was equated to plans F 70(14). Project BRF-63-3(73)38-62 originated in metric and was converted to US Survey Feet for this survey.

Survey stationing relates to as built plan stationing as follows:

PC Sta. 18+94.890 As-built Plans Project No. BRF-63-3(73)38-62 (metric)
Survey PC Sta. 1524+34.97

PT Sta. 23+67.471 As-built Plans Project No. BRF-63-3(73)38-62 (metric)
Survey PC Sta. 1539+84.74

PC Sta. 1553+58.6 As-built Plans Project No. F 70(14)
Survey PC Sta. 1553+58.6

PC Sta. 1570+67.0 As-built Plans Project No. F 70(14)
PC Sta. 1570+67.0 As-built Plans Project No. F-63-3(25)20-62
Survey PC Sta. 1570+68.47

TS Sta. 1573+95.41 As-built Plans Project No. F-63-3(25)20-62
Survey TS Sta. 1573+96.03

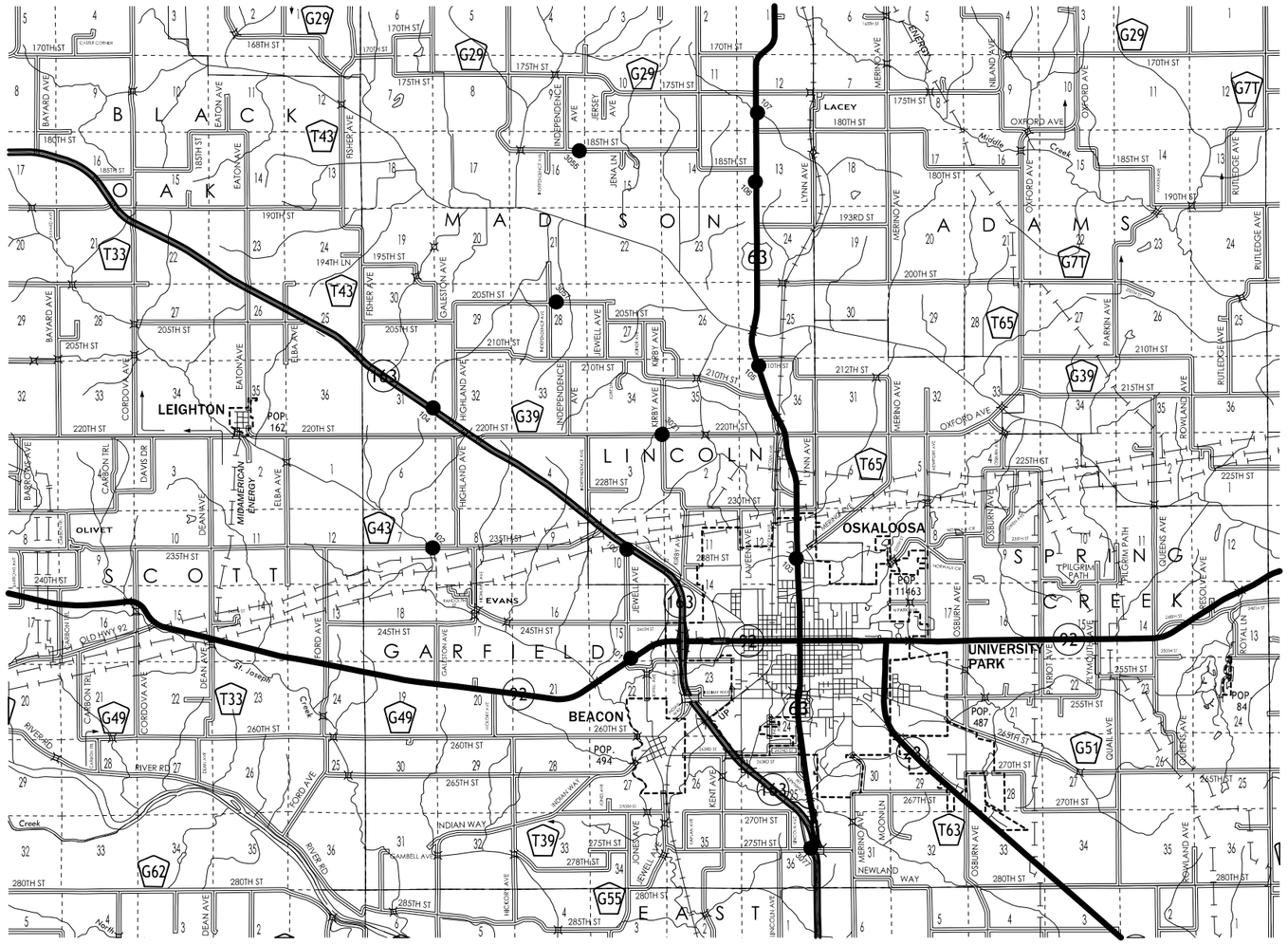
SC Sta. 1576+45.41 As-built Plans Project No. F-63-3(25)20-62
Survey SC Sta. 1576+46.03

CS Sta. 1581+74.46 As-built Plans Project No. F-63-3(25)20-62
Survey CS Sta. 1581+74.15

ST Sta. 1584+24.46 As-built Plans Project No. F-63-3(25)20-62
Survey ST Sta. 1584+24.15

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 2013.00
VERT. DATUM: NAVD88
Ia. Regional Coordinate System Zone 9

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 2013.00

VERT. DATUM: NAVD88

Ia. Regional Coordinate System Zone 9

Point Name	Northing	Easting	Elevation	Feature	Definition
100	7587601.591	19535103.070	842.52	FENO	SET FENO MONUMENT - SOUTH OF HWY 163 AND WEST OF JEWELL AVE, ±156' SOUTHEAST OF FIRST POWERPOLE SOUTH OF HWY 163, ±110' EAST-SOUTHEAST OF SECOND POWERPOLE SOUTH OF HWY 163.
101	7580036.108	19535386.670	756.22	CP	SET IRON ROD - EAST SIDE OF JEWELL AVE NORTH OF HWY 92, ±21' WEST OF WATERMAIN HANDHOLE, ±71' SOUTH OF WOOD GATE POST, ±28' NORTHWEST OF WOOD CORNER POST.
102	7587700.448	19521598.430	738.63	CP	SET IRON ROD - SOUTH SIDE OF 235TH, ±138' SOUTHEAST OF CUT "X" IN SOUTHEAST CORNER WINGWALL, ±68' SOUTH OF POWERPOLE.
103	7586965.049	19546901.230	762.82	CP	SET IRON ROD - SOUTH OF CONCRETE BIKE PATH AND WEST OF HWY 63, ±56' SOUTHWEST OF SOUTHWEST CORNER BOX CULVERT HEADWALL, ±40' SOUTHEAST OF BEEHIVE INTAKE, ±126' NORTHWEST OF POWERPOLE.
104	7597438.431	19521624.510	849.94	FENO	SET FENO MONUMENT - NORTH SIDE OF WEST BOUND LANES OF HWY 163, ±186' NORTHWEST OF MM 53 SIGN, ±67' NORTHEAST OF EDGE OF CONCRETE, ±63' EAST OF 26" CMP PIPE.
105	7600369.443	19544284.850	787.38	FENO	SET FENO MONUMENT - EAST SIDE OF HWY 63, ±76' SOUTH OF BENT CONCRETE ROW MONUMENT, ±47' SOUTHWEST OF ROW RAIL, ±114' NORTHWEST OF MAG NAIL IN WOOD FENCE POST.
106	7613166.423	19544053.700	792.64	CP	SET IRON ROD - WEST SIDE OF HWY 63, ±64' NORTHWEST OF 24" RCP, ±32' SOUTHEAST OF WHITE PLASTIC FENCE POST.
107	7617962.634	19544196.240	766.36	FENO	SET FENO MONUMENT - EAST SIDE HWY 163, ±51' NORTH OF CUT "X" TOP OF CULVERT HEADWALL, ±52' WEST OF CORNER POST, ±128' EAST OF POWERPOLE.
3031	7595589.053	19537556.730	765.45	CP	SET 1/2" REBAR WITH RED PLASTIC CAP NORTHWEST QUADRANT OF KIRBY AVE AND 220TH, ±50 NORTH OF CL OF 220TH, ±38' WEST OF POWERPOLE.
3055	7615319.075	19531801.220	816.89	CP	SET IRON ROD - SOUTH SIDE HICKORY AVE, ±20' NORTHEAST OF CORNER POST, ±30' NORTHEAST OF GATE POST.
3057	7604806.308	19530197.600	757.04	CP	SET IRON ROD - NORTH SIDE OF 205TH ST, ±12' SOUTH OF CORNER POST, ±14' SOUTHEAST OF WOOD FENCE POST.
3077	7566823.399	19547911.930	814.72	FENO	SET FENO MONUMENT - NORTH OF 275TH, WEST OF HWY 163, EAST OF RAMP, ±125' NORTH OF GAURD RAIL POST.

ALIGNMENT COORDINATES

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
ML063																			
1	ML063	10000.000 R1	7587773.46	19528632.54															
2	ML063							12201.593 R1	7587764.55	19530834.11	12442.234 R1	7587763.57	19531074.75	12650.155 R1	7587951.03	19531225.64			
4	ML063							15953.080 R1	7590524.02	19533296.63	17162.148 R1	7591465.89	19534054.74	18205.399 R1	7591456.40	19535263.77			
6	ML063							19429.301 R1	7591446.79	19536487.64	20520.894 R1	7591438.22	19537579.20	21487.731 R1	7592232.99	19538327.47			
8	ML063							23702.011 R1	7593845.17	19539845.34	24775.719 R1	7594626.91	19540581.36	25845.230 R1	7595511.75	19541189.56			
10	ML063							30718.165 R1	7599527.52	19543949.82	31338.324 R1	7600038.60	19544301.11	31878.760 R1	7600636.22	19544135.43			
11	ML063	32813.570 R1	7601537.05	19543885.69															
SUR_163																			
1	SUR_163							121635.620 R1	7592163.18	19529494.75	122111.388 R1	7591896.52	19529888.76	122586.610 R1	7591598.12	19530259.32			
3	SUR_163							127188.184 R1	7588712.03	19533843.31	127549.917 R1	7588485.16	19534125.05	127911.110 R1	7588285.92	19534426.97			
4	SUR_163	131812.267 R1	7586137.18	19537683.03															
SRNSHORE																			
1	SRNSHORE	100000.000 R1	7590792.26	19530739.75															
2	SRNSHORE							100271.443 R1	7590637.48	19530962.74	100531.856 R1	7590488.98	19531176.66	100751.612 R1	7590228.57	19531177.62			
4	SRNSHORE							102308.452 R1	7588671.74	19531183.33	102546.721 R1	7588433.47	19531184.21	102753.154 R1	7588284.07	19531369.82			
5	SRNSHORE	102849.659 R1	7588223.56	19531445.00															
SROLD163																			
1	SROLD163	500000.000 R1	7590513.83	19533288.43															
2	SROLD163							500237.829 R1	7590364.71	19533473.70	500535.733 R1	7590177.92	19533705.77	500823.962 R1	7589909.98	19533835.99			
4	SROLD163							501930.871 R1	7588914.41	19534319.82	502259.047 R1	7588619.25	19534463.26	502574.368 R1	7588424.69	19534727.55			
6	SROLD163							502859.485 R1	7588255.66	19534957.16	503104.081 R1	7588110.65	19535154.13	503348.627 R1	7587972.61	19535356.06			
7	SROLD163	504201.843 R1	7587491.10	19536060.41															
SRKIRBY																			
1	SRKIRBY	600000.000 R1	7593722.86	19537665.61															
2	SRKIRBY							600264.949 R1	7593457.92	19537667.51	600761.390 R1	7592961.49	19537671.05	601046.776 R1	7592961.49	19538167.49			
4	SRKIRBY							601273.712 R1	7592961.49	19538394.43	601472.050 R1	7592961.49	19538592.77	601651.350 R1	7592825.53	19538737.17			
6	SRKIRBY							601800.725 R1	7592723.14	19538845.93	602020.430 R1	7592572.53	19539005.90	602214.738 R1	7592352.84	19539003.15			
7	SRKIRBY	603282.901 R1	7591284.77	19538989.79															
SRKIRBY_Exis																			
1	SRKIRBY_Exist	300000.000 R1	7594009.86	19537660.98															
2	SRKIRBY_Exist	300650.831 R1	7593359.08	19537669.00															
3	SRKIRBY_Exist	300876.693 R1	7593133.22	19537668.92															
4	SRKIRBY_Exist	301226.120 R1	7592783.85	19537675.50															
5	SRKIRBY_Exist	301873.731 R1	7592136.26	19537680.91															
6	SRKIRBY_Exist	301961.082 R1	7592048.91	19537681.32															
7	SRKIRBY_Exist	302117.553 R1	7591892.46	19537683.67															
8	SRKIRBY_Exist	302159.207 R1	7591850.99	19537687.60															
9	SRKIRBY_Exist	302199.190 R1	7591812.60	19537698.75															
10	SRKIRBY_Exist	302236.812 R1	7591780.37	19537718.17															
11	SRKIRBY_Exist	302285.235 R1	7591745.39	19537751.65															
12	SRKIRBY_Exist	302327.191 R1	7591723.44	19537787.41															
13	SRKIRBY_Exist	302369.795 R1	7591706.34	19537826.43															
14	SRKIRBY_Exist	302408.282 R1	7591699.94	19537864.38															
15	SRKIRBY_Exist	302445.920 R1	7591696.08	19537901.82															
16	SRKIRBY_Exist	302762.473 R1	7591697.45	19538218.37															
17	SRKIRBY_Exist	303055.280 R1	7591700.66	19538511.16															
18	SRKIRBY_Exist	303283.608 R1	7591704.22	19538739.46															
19	SRKIRBY_Exist	303327.511 R1	7591703.70	19538783.36															
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22	SRKIRBY_Exist	303461.426 R1	7591666.61	19538909.83															
23	SRKIRBY_Exist	303503.157 R1	7591638.43	19538940.61															
24	SRKIRBY_Exist	303529.364 R1	7591617.57	19538956.48															
25	SRKIRBY_Exist	303555.570 R1	7591596.72	19538972.35															
26	SRKIRBY_Exist	303598.095 R1	7591556.05	19538984.78															
27	SRKIRBY_Exist	303645.709 R1	7591509.10	19538992.71															
28	SRKIRBY_Exist	303730.552 R1	7591424.26	19538993.10															
29	SRKIRBY_Exist	303778.755 R1	7591376.13	19538990.37															
30	SRKIRBY_Exist	303940.461 R1	7591214.43	19538990.29															
31	SRKIRBY_Exist	304122.377 R1	7591032.53	19538992.66															
31	SRKIRBY_Exist	304322.158 R1	7590832.75	19538992.84															
SR220																			
1	SR220	700000.000 R1	7595563.93	19539644.19															
2	SR220							701142.731 R1	7595566.18	19540786.92	701300.407 R1	7595566.49	19540944.59	701448.212 R1	7595476.29	19541073.92			
4	SR220							701665.811 R1	7595351.82	19541252.40	701969.425 R1	7595178.14	19541501.43	702211.528 R1	7595319.00	19541770.40			
6	SR220							702502.440 R1	7595453.97	19542028.10	702746.769 R1	7595567.32	19542244.55	702981.708 R1	7595568.10	19542488.87			
7	SR220	703718.420 R1	7595570.44	19543225.58															
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2	SR220_Exist	400409.450 R1	7595565.20	19540742.94															
3	SR220_Exist	400913.071 R1	7595564.40	19541246.56															
4	SR220_Exist	401508.974 R1	7595566.47	19541842.46															
5	SR220_Exist	401702.075 R1	7595563.68	19542035.54															

ALIGNMENT COORDINATES

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
6	SR220_Exist	401848.607 R1	7595564.55	19542182.07															
6	SR220_Exist	402346.240 R1	7595566.30	19542679.70															
SR210																			
1	SR210	800000.000 R1	7598911.25	19542199.00															
2	SR210							800333.427 R1	7598746.46	19542488.86	800517.691 R1	7598655.40	19542649.04	800697.868 R1	7598627.41	19542831.17			
4	SR210							800830.300 R1	7598607.29	19542962.07	800944.657 R1	7598589.92	19543075.10	801055.147 R1	7598525.14	19543169.34			
6	SR210							801206.670 R1	7598439.31	19543294.21	801315.524 R1	7598377.65	19543383.91	801421.033 R1	7598358.86	19543491.13			
8	SR210	801546.046 R1	7598337.29	19543614.27															
8	SR210	801918.404 R1	7598255.61	19543977.56															
SR210_Exist																			
1	SR210_Exist	500000.000 R1	7598993.95	19542060.47															
2	SR210_Exist	500503.130 R1	7598740.74	19542495.24															
3	SR210_Exist							500965.197 R1	7598511.53	19542896.45	501132.183 R1	7598430.37	19543042.38	501295.834 R1	7598403.48	19543207.19			
5	SR210_Exist	501554.034 R1	7598363.71	19543462.31															
6	SR210_Exist	501708.275 R1	7598337.29	19543614.27															
7	SR210_Exist	501870.546 R1	7598301.70	19543772.59															
7	SR210_Exist	502160.718 R1	7598238.74	19544055.85															
RPA063																			
1	RPA063	125578.448 R1	7590054.22	19532918.49															
2	RPA063							126776.158 R1	7589081.74	19533617.63	126911.599 R1	7588971.77	19533696.69	127046.110 R1	7588879.99	19533796.29			
3	RPA063	127096.110 R1	7588846.11	19533833.06															
RPB063																			
1	RPB063	123598.668 R1	7590917.35	19531012.23															
2	RPB063	124200.000 R1	7590509.88	19531454.46															
3	RPB063							124250.000 R1	7590476.00	19531491.23	124389.056 R1	7590381.77	19531593.50	124527.105 R1	7590268.43	19531674.06			
4	RPB063	125673.975 R1	7589333.64	19532338.50															
RPD063																			
1	RPD063	125554.084 R1	7589333.64	19532338.50															
2	RPD063							126182.162 R1	7589174.97	19532946.20	126364.536 R1	7589128.90	19533122.66	126544.650 R1	7589037.02	19533280.20			
3	RPD063							126544.650 R1	7589037.02	19533280.20	126674.833 R1	7588971.44	19533392.66	126804.650 R1	7588891.83	19533495.67			
RETSWSROLD16																			
1	RETSWSROLD163							3000.000 R1	7590386.32	19533226.87	3022.542 R1	7590403.88	19533241.01	3045.000 R1	7590419.13	19533257.61			
2	RETSWSROLD163							3045.000 R1	7590419.13	19533257.61	3098.033 R1	7590455.01	19533296.66	3138.664 R1	7590433.01	19533344.92			
3	RETSWSROLD163							3138.664 R1	7590433.01	19533344.92	3201.491 R1	7590406.95	19533402.08	3263.664 R1	7590367.56	19533451.03			
RETSESROLD16																			
1	RETSESROLD163							4000.000 R1	7590425.99	19533416.70	4025.880 R1	7590442.22	19533396.54	4051.688 R1	7590460.91	19533378.64			
2	RETSESROLD163							4051.688 R1	7590460.91	19533378.64	4109.689 R1	7590502.80	19533338.52	4152.058 R1	7590553.95	19533365.86			
3	RETSESROLD163							4152.058 R1	7590553.95	19533365.86	4219.440 R1	7590613.38	19533397.61	4286.014 R1	7590662.28	19533443.97			
RETSWRPA063																			
1	RETSWRPA063							3000.000 R1	7589992.60	19532894.57	3006.312 R1	7589997.52	19532898.53	3011.950 R1	7589998.13	19532904.81			
2	RETSWRPA063							3011.950 R1	7589998.13	19532904.81	3036.897 R1	7590000.53	19532929.64	3058.231 R1	7589982.14	19532946.49			
3	RETSWRPA063							3058.231 R1	7589982.14	19532946.49	3081.654 R1	7589964.86	19532962.32	3105.043 R1	7589946.19	19532976.45			
RETSERPA063																			
1	RETSERPA063							4000.000 R1	7589934.37	19533014.51	4042.914 R1	7589969.22	19532989.46	4085.000 R1	7590010.42	19532977.46			
2	RETSERPA063							4085.000 R1	7590010.42	19532977.46	4123.950 R1	7590047.82	19532966.57	4159.285 R1	7590082.73	19532983.85			
3	RETSERPA063							4159.285 R1	7590082.73	19532983.85	4219.524 R1	7590136.72	19533010.57	4279.285 R1	7590183.64	19533048.34			
RETNWRPB063																			
1	RETNWRPB063							2000.000 R1	7589434.69	19532266.67	2014.845 R1	7589422.59	19532275.27	2029.675 R1	7589409.89	19532282.95			
2	RETNWRPB063							2029.675 R1	7589409.89	19532282.95	2075.602 R1	7589370.59	19532306.71	2114.608 R1	7589328.29	19532288.83			
3	RETNWRPB063							2114.608 R1	7589328.29	19532288.83	2170.521 R1	7589276.79	19532267.06	2225.714 R1	7589233.23	19532232.00			
RETNERPB063																			
1	RETNERPB063							1000.000 R1	7589394.48	19532361.79	1006.017 R1	7589389.80	19532358.02	1011.445 R1	7589389.01	19532352.06			
2	RETNERPB063							1011.445 R1	7589389.01	19532352.06	1039.837 R1	7589385.33	19532323.90	1063.088 R1	7589407.62	19532306.32			
3	RETNERPB063							1063.088 R1	7589407.62	19532306.32	1075.613 R1	7589417.45	19532298.56	1088.132 R1	7589427.66	19532291.30			
RETSWRPD063																			
1	RETSWRPD063							3000.000 R1	7589250.99	19532297.65	3019.455 R1	7589266.15	19532309.85	3038.855 R1	7589279.60	19532323.90			
2	RETSWRPD063							3038.855 R1	7589279.60	19532323.90	3081.098 R1	7589308.81	19532354.42	3118.794 R1	7589307.30	19532396.63			
3	RETSWRPD063							3118.794 R1	7589307.30	19532396.63	3168.396 R1	7589305.52	19532446.20	3217.599 R1	7589292.99	19532494.19			
RETSERPD063																			
1	RETSERPD063							4000.000 R1	7589297.09	19532541.85	4060.358 R1	7589312.33	19532483.45	4120.000 R1	7589342.43	19532431.13			
2	RETSERPD063							4120.000 R1	7589342.43	19532431.13	4154.606 R1	7589359.69	19532401.13	4177.058 R1	7589391.86	19532413.90			
3	RETSERPD063							4177.058 R1	7589391.86	19532413.90	4184.615 R1	7589398.88	19532416.68	4192.058 R1	7589404.77	19532421.42			
ENTL5015																			
1	ENTL5015	+00.00	7589301.95	19534131.48															
1	ENTL5015	3+00.00	7589433.08	19534401.31															

ALIGNMENT COORDINATES

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
ENTR5015																			
1	ENTR5015	+00.00	7589301.95	19534131.48															
1	ENTR5015	3+00.00	7589170.81	19533861.66															
ENTR6002																			
1	ENTR6002	+00.00	7593467.87	19537667.44															
1	ENTR6002	4+00.00	7593465.01	19537267.45															
ENTL6004																			
1	ENTL6004	+00.00	7593324.64	19537686.59															
1	ENTL6004	4+00.00	7593434.12	19538071.31															
ENTR6006																			
1	ENTR6006	+00.00	7593129.09	19537793.99															
2	ENTR6006							+51.05	7593095.15	19537755.86	1+65.00	7593019.39	19537670.73	2+64.88	7592905.45	19537672.08			
3	ENTR6006	10+41.68	7592128.71	19537681.23															
ENTR6030																			
1	ENTR6030	+00.00	7591517.65	19538992.70															
1	ENTR6030	4+00.00	7591522.65	19538592.73															
ENTL7028																			
1	ENTL7028	+00.00	7595551.06	19542308.22															
1	ENTL7028	3+00.00	7595845.95	19542253.07															
ENTR7028																			
1	ENTR7028	+00.00	7595551.06	19542308.22															
1	ENTR7028	3+00.00	7595256.17	19542363.37															

SPIRAL OR CIRCULAR CURVE DATA

Name	Location	ΔSCS	Horizontal Alignment Data												Remarks
			Spiral Data							Curve Data					
			θS	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	ΔC	T	L	R	E	
ML063															
C1	ML063										51.401	240.641	448.562	500.000	54.895	
C2	ML063										51.619	1209.068	2252.319	2500.000	277.021	
C3	ML063										47.176	1091.593	2058.431	2500.000	227.925	
C4	ML063										8.771	1073.707	2143.219	14000.000	41.113	
C5	ML063										49.998	620.159	1160.595	1330.000	137.480	
SUR_163															
C1	SUR_163										4.755	475.768	950.990	11459.160	9.872	
C2	SUR_163										5.422	361.733	722.926	7639.440	8.559	
SRNSHORE															
C1	SRNSHORE										55.023	260.413	480.169	500.000	63.751	
C2	SRNSHORE										50.959	238.269	444.702	500.000	53.870	
SROLD163															
C1	SROLD163										25.250	297.904	586.133	1330.000	32.955	
C2	SROLD163										27.722	328.176	643.497	1330.000	39.890	
C3	SROLD163										2.002	244.595	489.141	14000.000	2.137	
SRKIRBY															
C1	SRKIRBY										89.591	496.442	781.827	500.000	204.595	
C2	SRKIRBY										43.274	198.338	377.638	500.000	37.902	
C3	SRKIRBY										47.442	219.705	414.013	500.000	46.141	
SR220															
C1	SR220										35.006	157.676	305.481	500.000	24.273	
C2	SR220										62.535	303.614	545.717	500.000	84.963	
C3	SR220										27.460	244.328	479.267	1000.000	29.416	
SR210															
C1	SR210										20.881	184.264	364.441	1000.000	16.835	
C2	SR210										25.765	114.357	224.846	500.000	12.911	
C3	SR210										24.564	108.854	214.363	500.000	11.712	
SR210_Exist															
C1	SR210_Exist										19.815	166.986	330.637	956.049	14.474	
RPA063															
C1	RPA063										11.629	135.441	269.952	1330.000	6.879	
RPB063															
C1	RPB063										11.938	139.056	277.105	1330.000	7.250	
RPD063															
C1	RPD063										15.616	182.374	362.488	1330.000	12.446	
C2	RPD063										7.448	130.183	260.000	2000.000	4.232	
RETSWSROLD16															
C1	RETSWSROLD163										8.594	22.542	45.000	300.000	0.846	
C3	RETSWSROLD163										67.082	53.033	93.664	80.000	15.982	
C3	RETSWSROLD163										14.324	62.828	125.000	500.000	3.932	
RETSESROLD16															
C1	RETSESROLD163										7.404	25.880	51.688	400.000	0.836	
C3	RETSESROLD163										71.885	58.001	100.371	80.000	18.814	
C3	RETSESROLD163										15.350	67.381	133.956	500.000	4.520	
RETSWRPA063															
C1	RETSWRPA063										45.645	6.312	11.950	15.000	1.274	
C3	RETSWRPA063										53.034	24.948	46.281	50.000	5.878	
C3	RETSWRPA063										5.364	23.423	46.812	500.000	0.548	
RETSERPA063															
C1	RETSERPA063										19.481	42.914	85.000	250.000	3.657	
C3	RETSERPA063										42.562	38.950	74.285	100.000	7.318	
C3	RETSERPA063										12.501	60.239	120.000	550.000	3.289	
RETNWRPB063															
C1	RETNWRPB063										4.251	14.845	29.675	400.000	0.275	
C3	RETNWRPB063										54.070	45.927	84.933	90.000	11.041	
C3	RETNWRPB063										15.915	55.913	111.106	400.000	3.889	
RETNERPB063															
C1	RETNERPB063										43.716	6.017	11.445	15.000	1.162	
C3	RETNERPB063										59.179	28.392	51.644	50.000	7.499	
C3	RETNERPB063										2.870	12.524	25.043	500.000	0.157	
RETSWRPD063															
C1	RETSWRPD063										7.421	19.455	38.855	300.000	0.630	
C3	RETSWRPD063										45.802	42.244	79.940	100.000	8.557	

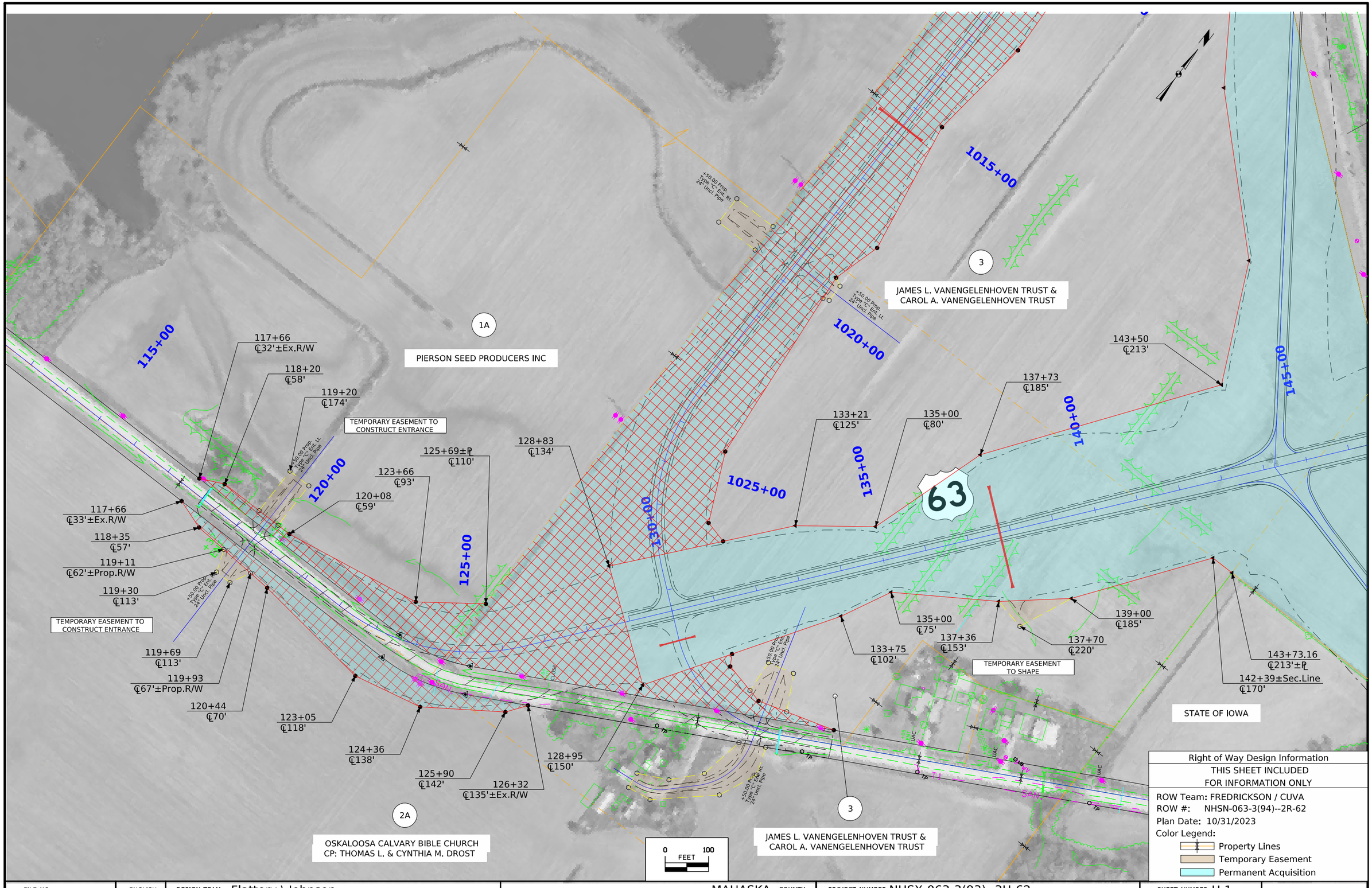
SPIRAL OR CIRCULAR CURVE DATA

Name	Location	ΔSCS	Horizontal Alignment Data												Remarks
			Spiral Data							Curve Data					
			θS	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	ΔC	T	L	R	E	
C3	RETSWRPD063										12.580	49.602	98.805	450.000	2.725	
RETSERPD063																
C1	RETSERPD063										15.279	60.358	120.000	450.000	4.030	
C3	RETSERPD063										81.729	34.606	57.058	40.000	12.892	
C3	RETSERPD063										17.189	7.557	15.000	50.000	0.568	
ENTR6006																
C1	ENTR6006										49.007	113.951	213.835	250.000	24.745	

SUPERELEVATION DATA

See PV-300 Series

Road Identification	Circular Curve or Spiral Curve Name	Radius	Superelevation Data			Standard Road Plan	Section A-A	Section B-B	Section C-C	Section D-D	Section E-E	Section F-F	Case A	Case B	Case C	Case S	Case T	Case U	Remarks
			e	L	x														
		FT	%	FT	FT														
ML063	ML0633	2500	5.0	133	53	PV-301	158+06.98	158+59.98	159+12.98	159+92.98			159+53.08			159+13.18			
							183+51.50	182+98.50	182+45.50	181+65.50			182+05.40			182+45.30			
ML063	ML0634	2500	5.0	133	53	PV-301	192+83.20	193+36.20	193+89.20	194+69.20			194+29.30			193+89.40			
							216+33.83	215+80.83	215+27.83	214+47.83			214+87.73			215+27.63			
ML063	ML0636	1330	6.0	160	53	PV-301	305+53.16	306+06.16	306+59.16	307+66.16			307+18.16			306+59.49	307+66.16		
							320+43.76	319+90.76	319+37.76	318+30.76			318+78.76			319+37.43	318+30.76		
SRNSHORE	SRNSHORE2	350	6.0	116	39	PV-301	1003+20.89	1003+59.89	1003+98.89	1004+75.89			1004+41.09			1003+98.56	1004+75.89		
							1011+46.48	1011+07.48	1010+68.48	1009+91.48			1010+26.28			1010+68.81	1009+91.48		
SRNSHORE	SRNSHORE3	650	5.2	100	39	PV-301	1012+48.79	1012+87.79	1013+26.79	1013+87.79			1013+57.79			1013+26.25			
							1020+42.91	1020+03.91	1019+64.91	1019+03.91			1019+33.91			1019+65.45			
SRNSHORE	SRNSHORE4	500	5.6	108	39	PV-301	1022+57.24	1022+96.24	1023+35.24	1024+04.24			1023+71.84			1023+34.81			
							1029+29.40	1028+90.40	1028+51.40	1027+82.40			1028+14.80			1028+51.83			
SROLD163	SROLD1632	1330	6.0	160	53	PV-301	5000+72.83	5001+25.83	5001+78.83	5002+85.83			5002+37.83			5001+79.16	5002+85.83		
							5009+88.96	5009+35.96	5008+82.96	5007+75.96			5008+23.96			5008+82.63	5007+75.96		
SROLD163	SROLD1633	1330	6.0	160	53	PV-301	5017+65.87	5018+18.87	5018+71.87	5019+78.87			5019+30.87			5018+72.20	5019+78.87		
							5027+39.37	5026+86.37	5026+33.37	5025+26.37			5025+74.37			5026+33.04	5025+26.37		
RPA063	RPA0632	1330	6.0	186	62	PV-303	11267+07.96		11267+76.16	11268+31.96						11267+07.96	11268+31.96		
							11271+14.31		11270+46.11	11269+90.31						11271+14.31	11269+90.31		
RPB063	RPB0632	1330	6.0	186	62	PV-303	21241+81.80		21242+50.00	21243+05.80						21241+81.80	21243+05.80		
							21245+95.30		21245+27.10	21244+71.30						21245+95.30	21244+71.30		
RPD063	RPD0632	1330	6.0	186	62	PV-303	41261+13.96		41261+82.16	41262+37.96						41261+13.96	41262+37.96		
							41266+12.85		41265+44.65	41264+88.85						41266+12.85	41264+88.85		
RPD063	RPD0633	2000	5.4	168	62	PV-303	41264+89.05		41265+44.65	41265+95.05						41264+89.27			
							41268+60.25		41268+04.65	41267+54.25						41268+60.03			



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(93)--3H-62	SHEET NUMBER H.1

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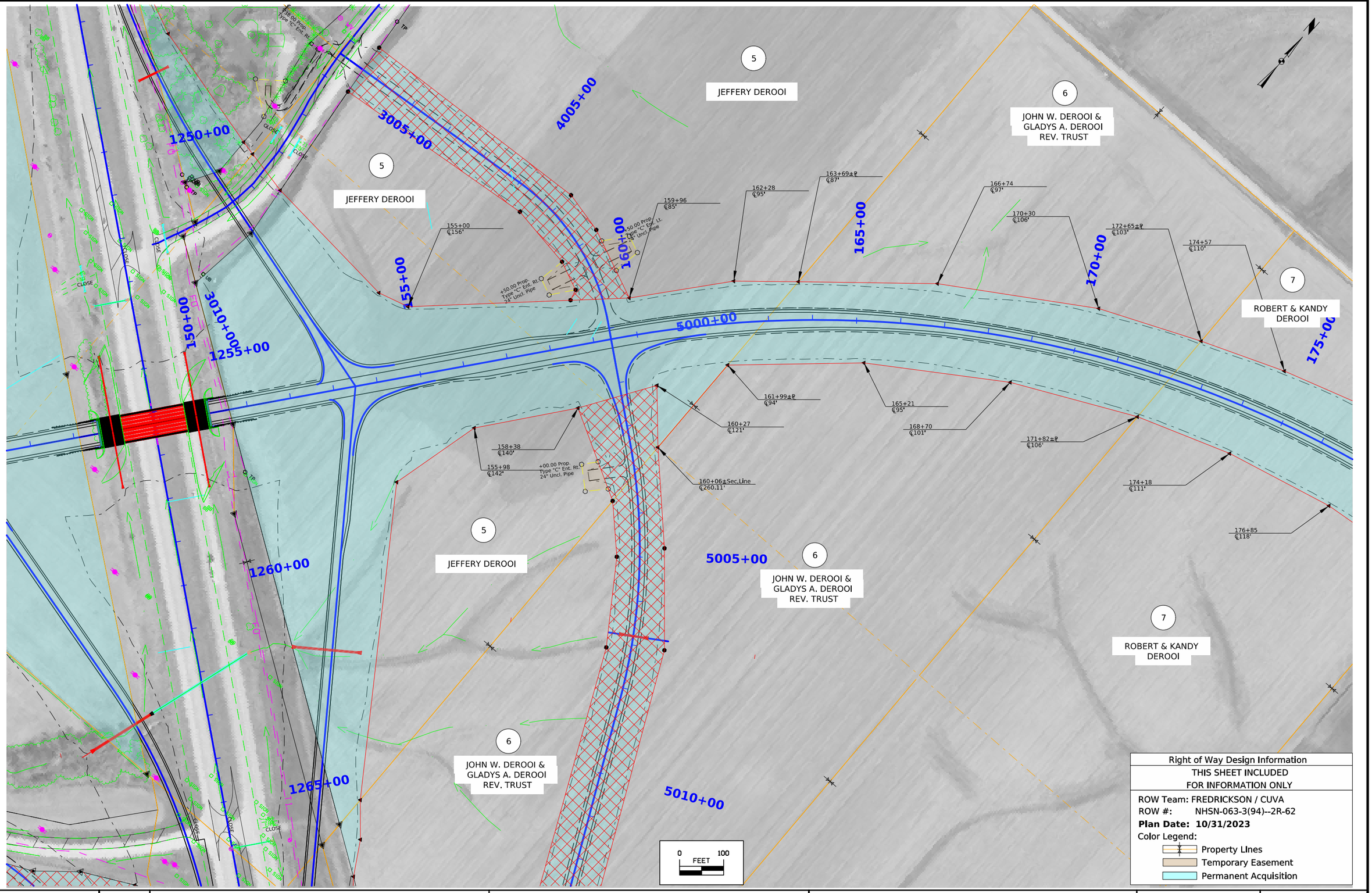

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: FREDRICKSON / CUVA

ROW #: NHSN-063-3(94)--2R-62

Plan Date: 10/31/2023

Color Legend:

- Property LInes
- Temporary Easement
- Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM **Flattery \ Johnson**	**MAHASKA** COUNTY	PROJECT NUMBER **NHSX-063-3(93)--3H-62**	SHEET NUMBER **H.2**

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7

ROBERT & KANDY DEROOI

8A

JEAN ARGO &
JAMES L. & MONA VANZOMEREN

9

MICHAEL S. OVERBERGEN

176+55
℄120'

179+99.33
℄261'±℞

179+91±℞
℄130'

180+00

189+25
℄272'

188+76
℄255'±℞

185+00

190+67
℄272'

190+81
℄256'±℞

190+00

193+21±℞
℄267'

193+22±℞
℄256.47'

195+70
℄267'

199+50
℄209±℞

196+38
℄250'±℞

195+00

201+83
℄219'

202+91
℄189'

200+00

205+79
℄210'

207+32±Ex.R/W
℄171'

205+00

CLOSE

176+85
℄118'

179+73±℞
℄130'

185+36
℄260'

193+26±℞
℄272'

195+65
℄268'

198+16
℄166'

200+82
℄184'

204+42
℄202'

206+16±℞
℄111'

7

ROBERT & KANDY DEROOI

8

THE CHARLES MICK CORPORATION

9

MICHAEL S. OVERBERGEN

0 100
FEET

Right of Way Design Information
THIS SHEET INCLUDED
FOR INFORMATION ONLY

ROW Team: FREDRICKSON / CUVA
ROW #: NHSN-063-3(94)--2R-62
Plan Date: 10/31/2023
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(93)--3H-62	SHEET NUMBER H.3

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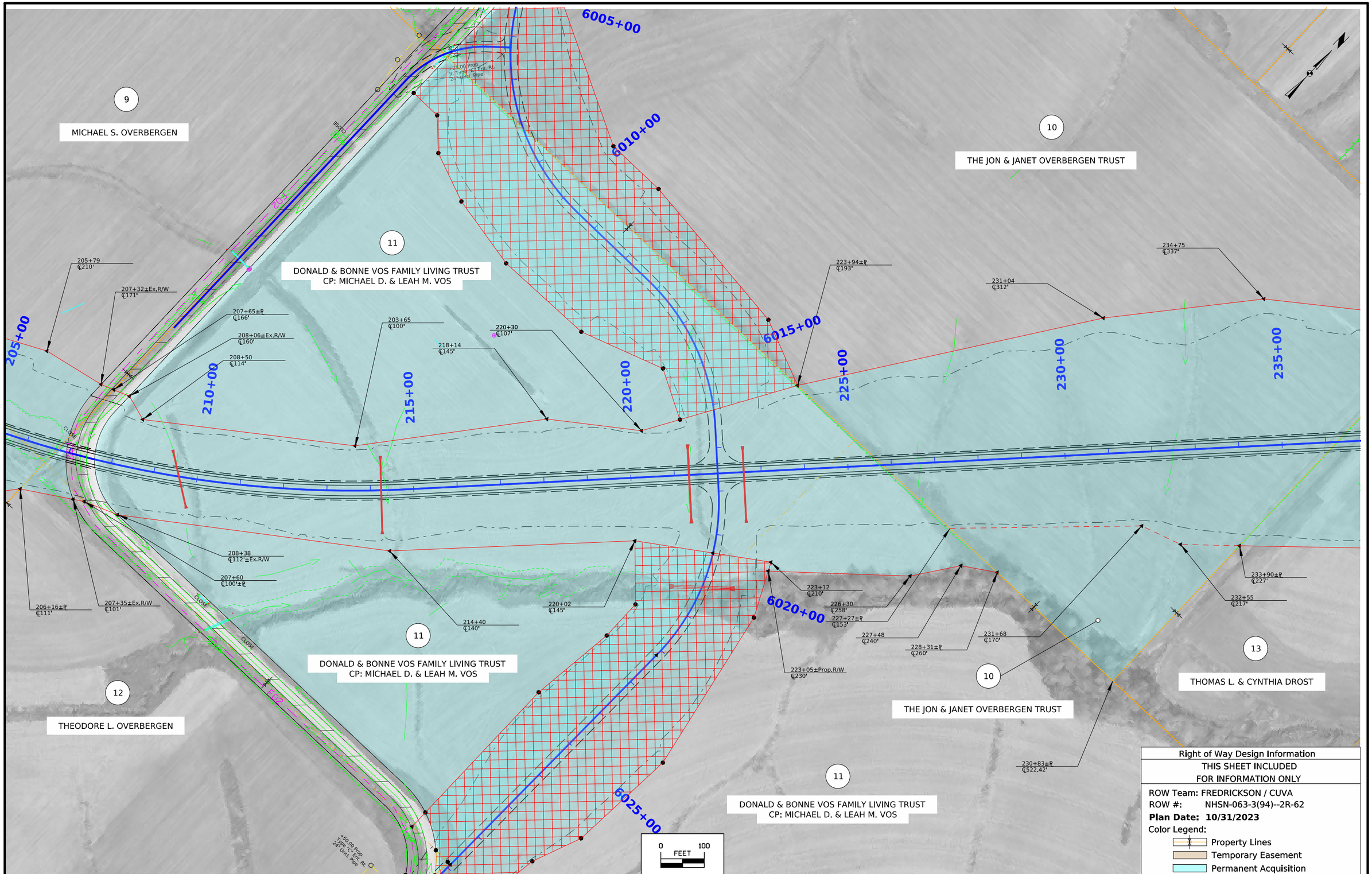

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(93)--3H-62	SHEET NUMBER H.4

10:59:54 AM 5/8/2024 afredri pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\ROW\ROW_62063094.dgn

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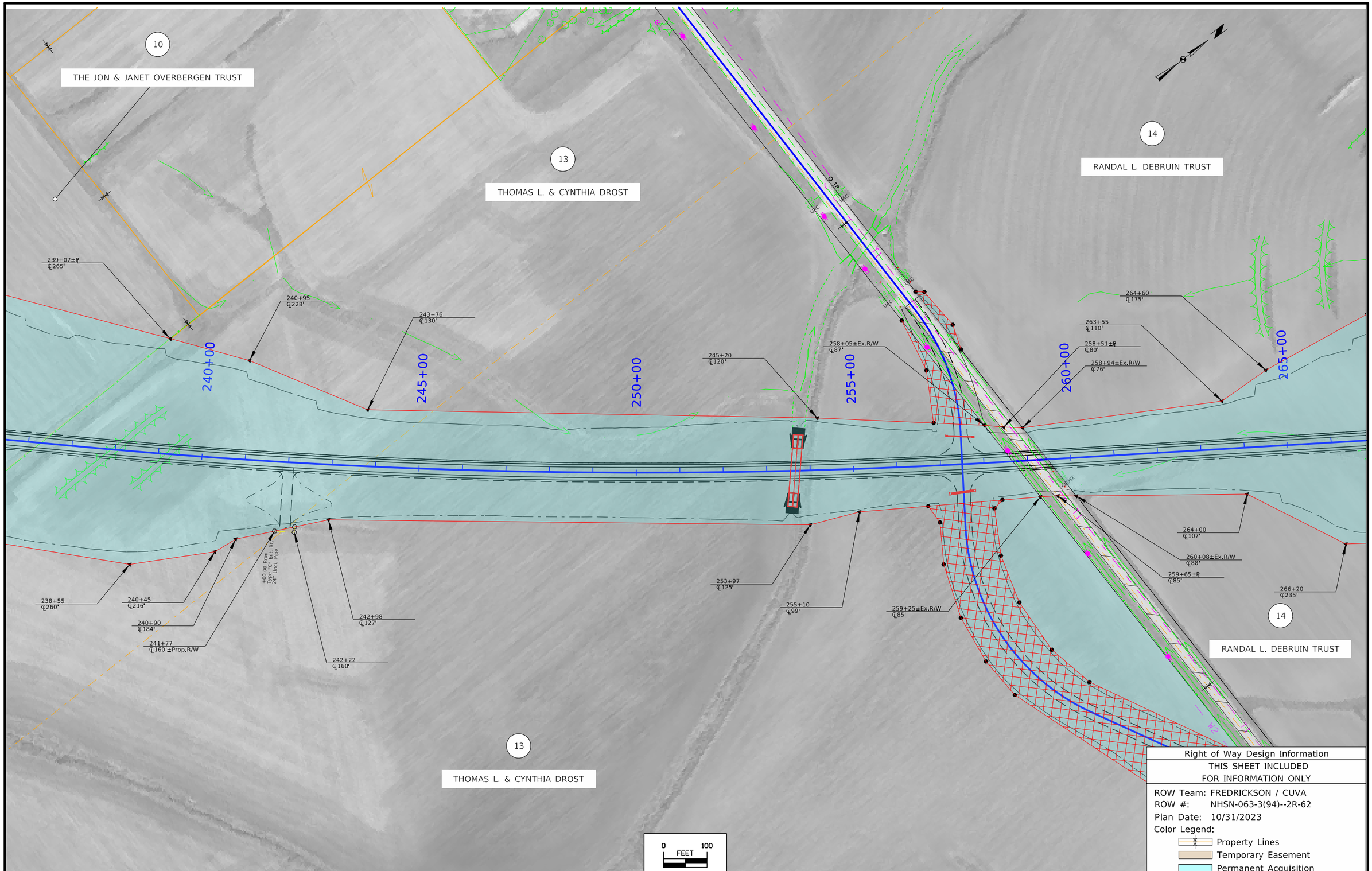

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ROW Team: FREDRICKSON / CUVA
ROW #: NHSN-063-3(94)--2R-62
Plan Date: 10/31/2023
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(93)--3H-62	SHEET NUMBER H.5

3:38:09 PM 1/5/2024 afredri pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\ROW\ROW_62063094.dgn

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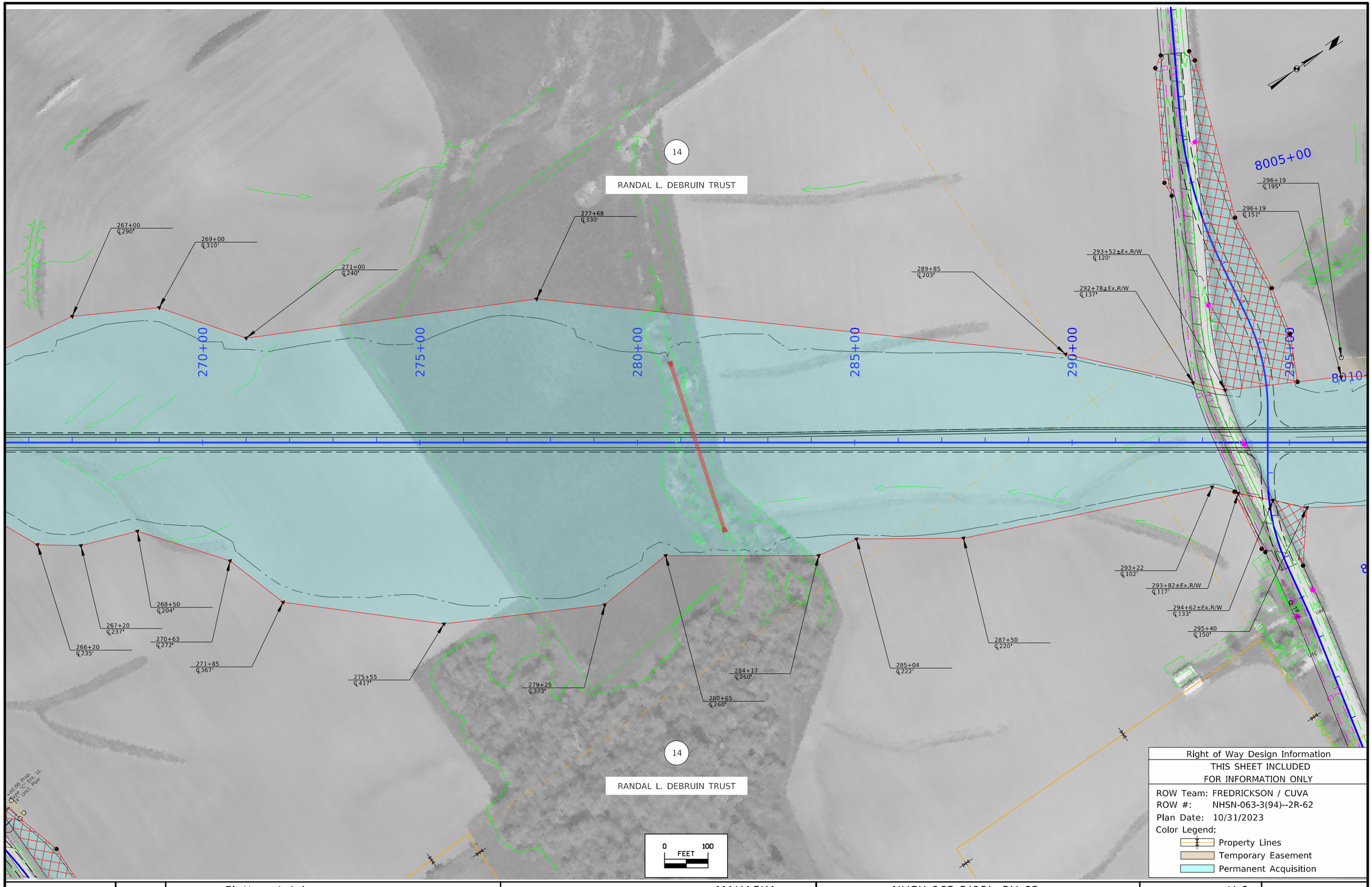

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(93)--3H-62	SHEET NUMBER H.6	

8:43:42 AM 11/2/2023 afredri pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\ROW\ROW_62063094.dgn

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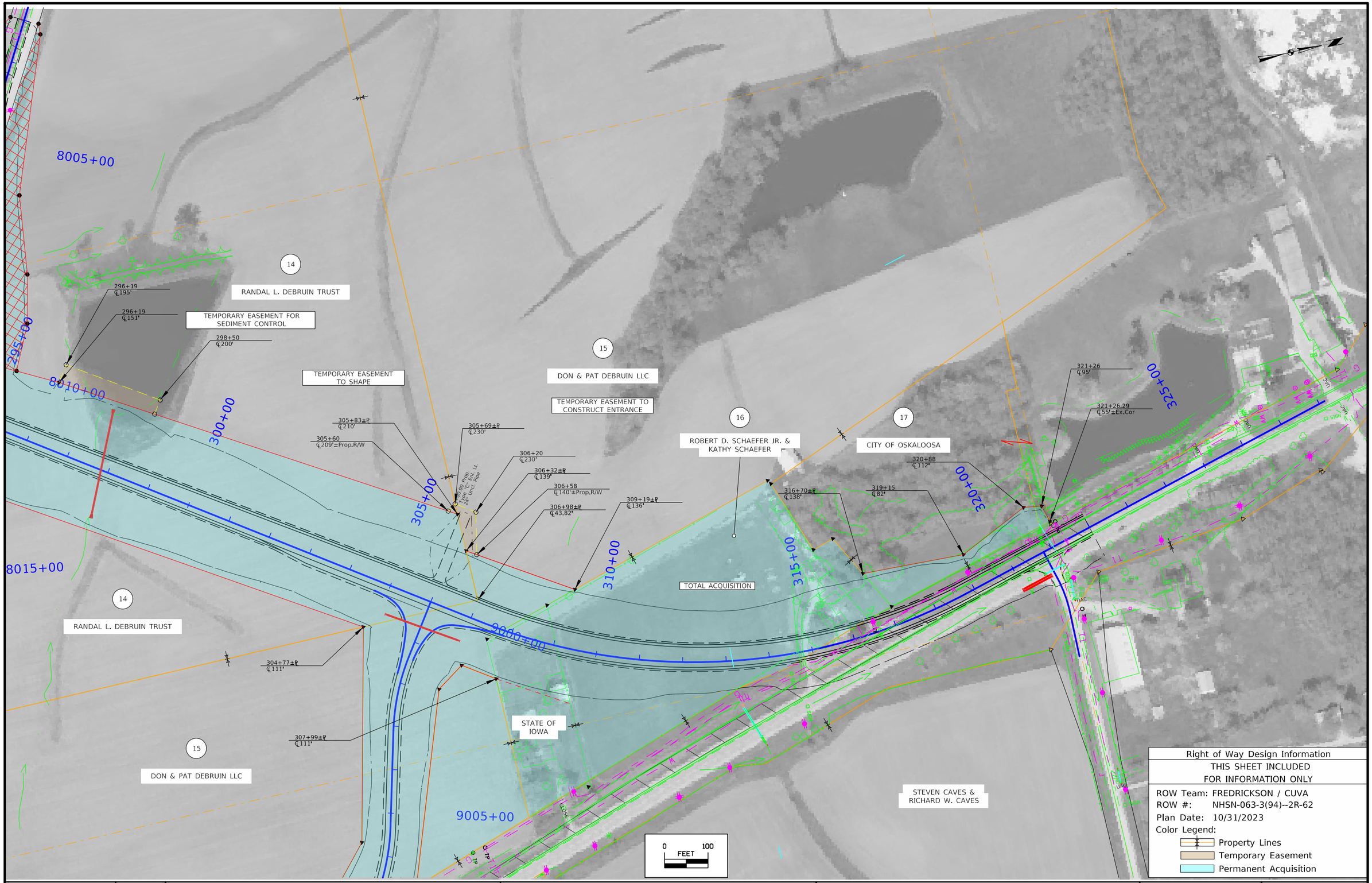

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(93)--3H-62	SHEET NUMBER H.7	

3:38:14 PM 1/5/2024 afredri pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\ROW\ROW_62063094.dgn

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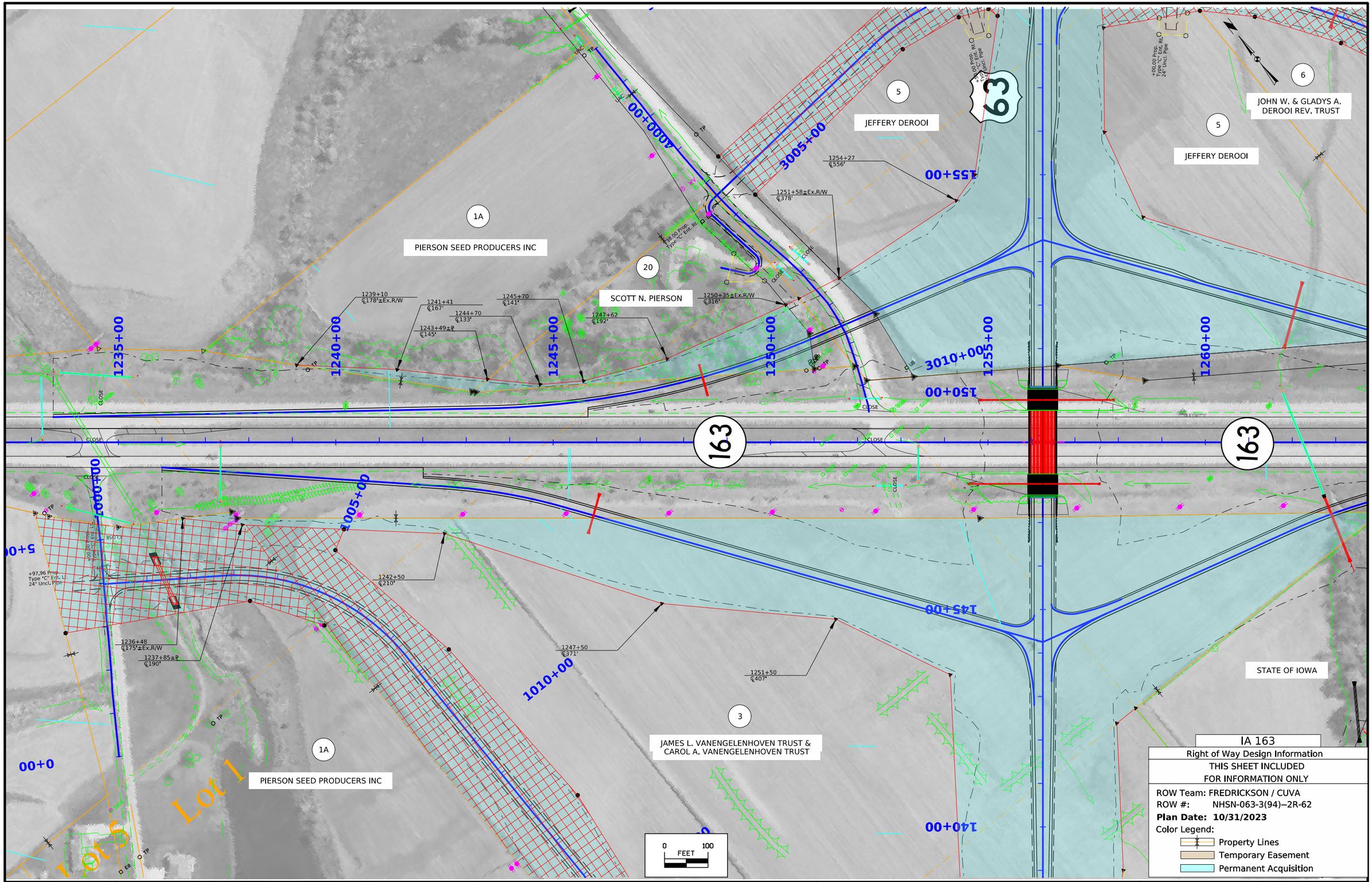

IA 163

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ROW #: NHSN-063-3(94)--2R-62
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Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM **Flattery \ Johnson**	**MAHASKA** COUNTY	PROJECT NUMBER **NHSX-063-3(93)--3H-62**	SHEET NUMBER **HE.1**

12:53:19 PM 5/14/2024 afredri pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\ROW\ROW_62063094.dgn

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7

ROBERT & KANDY DEROOI

8

CHARLES MICK CORPORATION

6

JOHN W. DEROOI & GLADYS A. DEROOI REVOCABLE TRUST

6

JOHN W. DEROOI & GLADYS A. DEROOI REVOCABLE TRUST

IA 163

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ROW #: NHSN-063-3(94)--2R-62

Plan Date: 10/31/2023

Color Legend:

- Property Lines
- Temporary Easement
- Permanent Acquisition

0 100 FEET

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(93)--3H-62	SHEET NUMBER HE.2	

2:01:34 PM 4/11/2024 afredri pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\ROW\ROW_62063094.dgn

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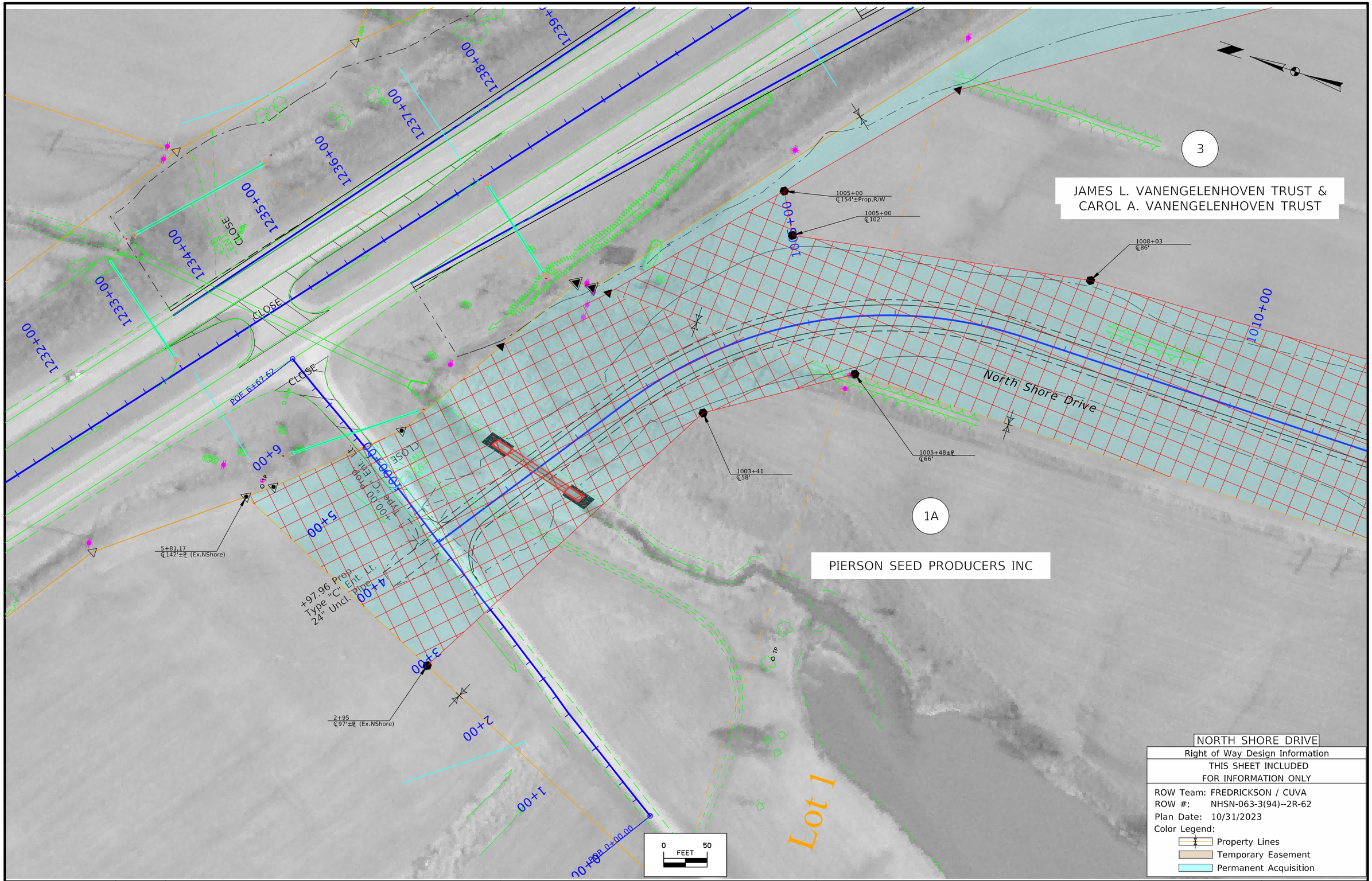

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(93)--3H-62	SHEET NUMBER HE.3	

8:44:12 AM 11/2/2023 afredri pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\ROW\ROW_62063094.dgn

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3

JAMES L. VANENGELENHOVEN TRUST &
CAROL A. VANENGELENHOVEN TRUST

TEMPORARY EASEMENT TO
CONSTRUCT ENTRANCE

1012+50
℄105'

1014+97
℄74'

1018+08
℄125'

1019+30
℄111'

1019+20
℄92'

+50.00 Prop.
Type "C" Ent. Lt.
24" Uncl. Pipe

1019+71
℄111'

1019+76
℄97'±Prop.R/W

1024+21
℄124'

1010+00

1015+00

1020+00

1025+00

1019+15
℄200'

1019+83
℄200'

+50.00 Prop.
Type "C" Ent. Rt.
24" Uncl. Pipe

1A

PIERSON SEED PRODUCERS INC

TEMPORARY EASEMENT TO
CONSTRUCT ENTRANCE

0 50
FEET

NORTH SHORE DRIVE

Right of Way Design Information

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ROW Team: FREDRICKSON / CUVA
ROW #: NHSN-063-3(94)--2R-62
Plan Date: 10/31/2023
Color Legend:

- Property Lines
- Temporary Easement
- Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(93)--3H-62	SHEET NUMBER HE.4	

3:38:22 PM 1/5/2024 afredri pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\ROW\ROW_62063094.dgn

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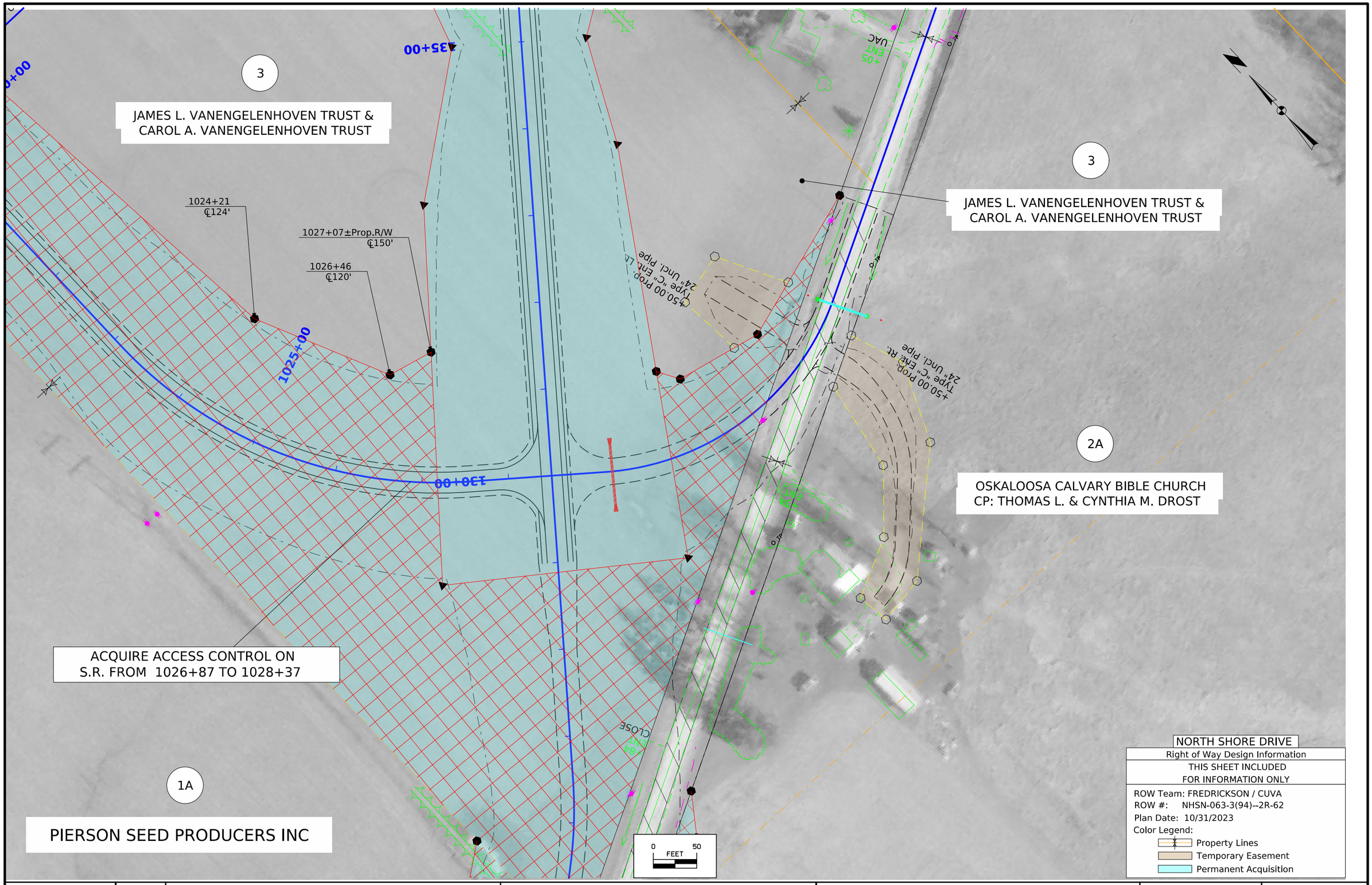

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(93)--3H-62	SHEET NUMBER HE.5

4:53:02 PM 7/24/2024 afredri pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\ROW\ROW_62063094.dgn

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1025+00

00+8CT

3

JAMES L. VANENGELENHOVEN TRUST &
CAROL A. VANENGELENHOVEN TRUST

STATE OF IOWA

TEMPORARY EASEMENT TO
CONSTRUCT ENTRANCE

JASON & VALERIE
BANDSTRA

CHRISTOPHER W. MCLAREN

2001+63±Prop.R/W
℄100'

2001+93
℄80'

2002+88
℄147'

2004+11
℄145'

2003+25
℄59'

2005+25
℄33'±Ex.R/W

+50.00 Prop.
Type "C" Ent. Lt.
24" Uncl. Pipe

+05
ENT
UAC

+96
ENT
UAC

+32
ENT
UAC

SAN.

2012+93.54
℄33'±Ex.R/W

2003+81
℄35'±Ex.R/W

2003+27
℄47'±Ex.R/W

2003+00
℄148'

2002+63
℄206'

2002+26
℄244'

+50.00 Prop.
Type "C" Ent. Rt.
24" Uncl. Pipe

2003+79
℄102'

2003+35
℄175'

2002+60
℄269'

2002+31
℄281'

6

JOHN W. DEROOI &
GLADYS A. DEROOI
REVOCABLE TRUST

2A

OSKALOOSA CALVARY BIBLE CHURCH
CP: THOMAS L. & CYNTHIA M. DROST

TEMPORARY EASEMENT TO
CONSTRUCT ENTRANCE

ACQUIRE ACCESS CONTROL ON
S.R. FROM 2000+12 TO 2001+62

0 50
FEET

JEWELL AVENUE

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ROW Team: FREDRICKSON / CUVA
ROW #: NHSN-063-3(94)--2R-62
Plan Date: 10/31/2023
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(93)--3H-62	SHEET NUMBER HE.6	

3:44:37 PM 7/24/2024 afredri pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\ROW\ROW_62063094.dgn

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STATE OF IOWA

2015+00

2020+00

2025+00

2014+70
℄100'

2016+60
℄72'

2018+76
℄62'

2021+19
℄77'

2024+75
℄60'

2027+74
℄63'

2012+93.54
℄33'±Ex.R/W

6

JOHN W. DEROOI &
GLADYS A. DEROOI
REVOCABLE TRUST

0 FEET 50

JEWELL AVENUE

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ROW #: NHSN-063-3(94)--2R-62
Plan Date: 10/31/2023
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Property Lines
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Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(93)--3H-62	SHEET NUMBER HE.7	

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1275+00
1280+00
2030+00
2035+00
2040+00
CLOSE
CLOSE
2027+74
℄63'
2028+97
℄45'
2029+03
℄35'
2030+56
℄46'
2036+65
℄35'
2038+75
℄44'
2041+22
℄43'
6
JOHN W. DEROOI &
GLADYS A. DEROOI
REVOCABLE TRUST
0 50
FEET
JEWELL AVENUE
Right of Way Design Information
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ROW Team: FREDRICKSON / CUVA
ROW #: NHSN-063-3(94)--2R-62
Plan Date: 10/31/2023
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(93)--3H-62	SHEET NUMBER HE.8	

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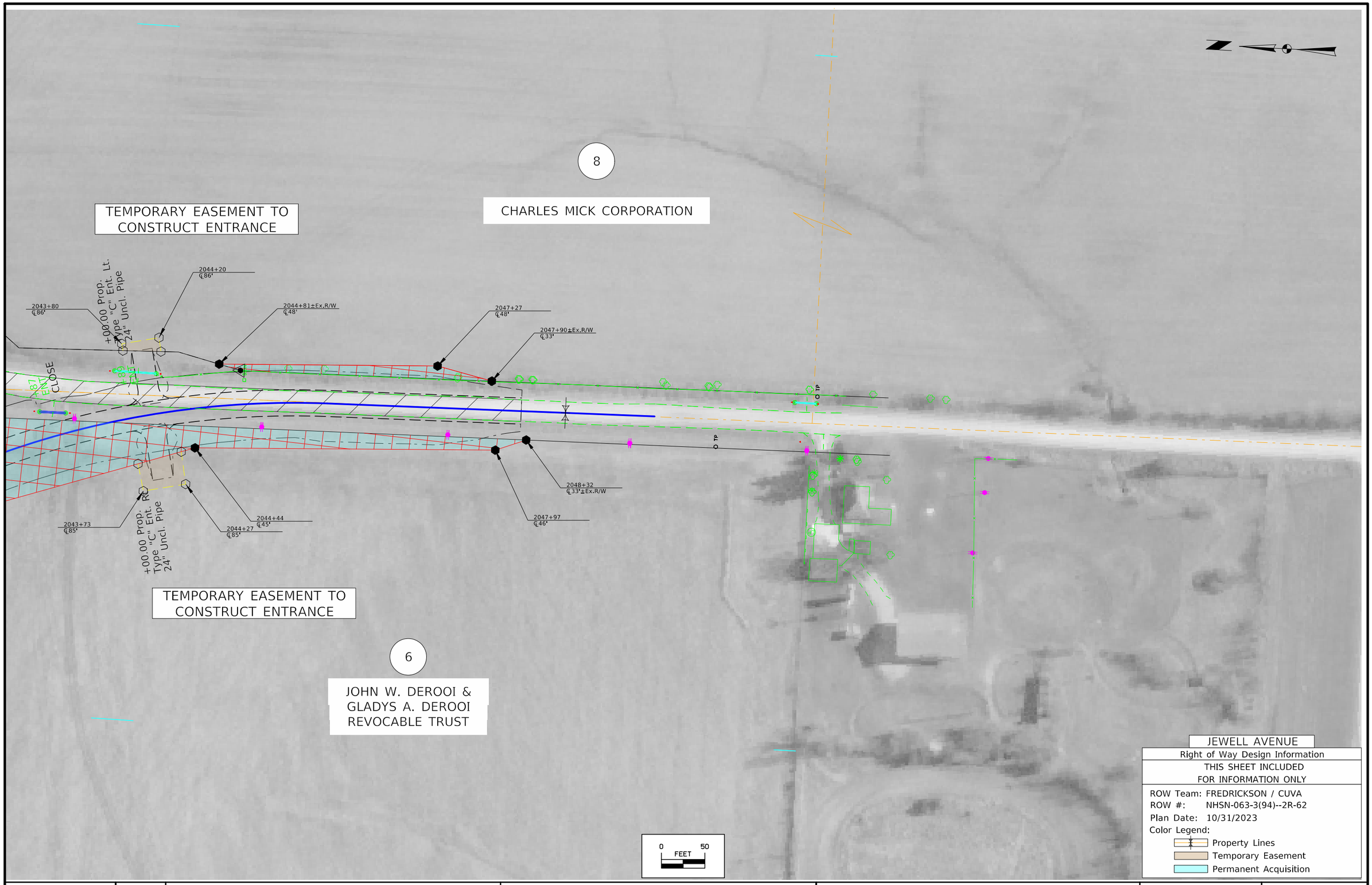

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(93)--3H-62	SHEET NUMBER HE.9

8:44:42 AM 11/2/2023 afredri pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\ROW\ROW_62063094.dgn

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TEMPORARY EASEMENT TO CONSTRUCT ENTRANCE

ACQUIRE ACCESS CONTROL ON S.R. FROM 4007+50 TO 4009+00

4007+33 ℄111'

4007+67 ℄111'

4007+15 ℄51'±Prop.R/W

4007+83 ℄50'±Prop.R/W

4006+90 ℄53'

4006+02 ℄56'

+50.00 Prop. Type "C" Ent. Lt. 24" Uncl. Pipe

5

JEFFERY DEROOI

4005+00

4000+00

5000+00

@PC 159+53.08

4000+64±Ex.R/W ℄62'

1A

PIERSON SEED PRODUCERS INC

4007+11 ℄51'

4007+90 ℄51'

4007+23 ℄111'

4008+11±Prop.R/W ℄70'

4007+76 ℄111'

4005+45 ℄52'

+50.00 Prop. Type "C" Ent. Rt. 24" Uncl. Pipe

TEMPORARY EASEMENT TO CONSTRUCT ENTRANCE

3005+00

4000+64±Ex.R/W ℄60'

5

JEFFERY DEROOI

+38.00 Prop. Type "C" Ent. Rt.

3005+58 ℄69'±Ex.R/W

20

SCOTT N. PIERSON

155+00

+00.00 Prop. Type "C" Ent. Rt. 24" Uncl. Pipe

5

JEFFERY DEROOI

3005+80 ℄130'

3006+50 ℄71'±Ex.R/W

TEMPORARY EASEMENT TO CONSTRUCT ENTRANCE

3000+00

3250+00

0 FEET 50

INDEPENDENCE AVE

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ROW Team: FREDRICKSON / CUVA

ROW #: NHSN-063-3(94)–2R-62

Plan Date: 10/31/2023

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FILE NO.	ENGLISH	DESIGN TEAM **Flattery \ Johnson**	**MAHASKA** COUNTY	PROJECT NUMBER **NHSX-063-3(93)--3H-62**	SHEET NUMBER **HE.10**

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ACQUIRE ACCESS CONTROL ON
S.R. FROM 5000+20 TO 5001+70

6

JOHN W. DEROOI &
GLADYS A. DEROOI
REV. TRUST

5004+80
℄56'

5005+00

5007+00
℄75'

5010+00

5015+22
℄130'

5014+79
℄130'

5015+47
℄65'±Prop.R/W

+00.00 Prop.
Type "C" Ent. Lt.

TEMPORARY EASEMENT TO
CONSTRUCT ENTRANCE

5014+55
℄66'±Prop.R/W

5015+00

5005+00
℄52'

5003+67±P
℄57'

5007+16
℄56'

5013+20
℄68'

5014+53
℄68'±Prop.R/W

TEMPORARY EASEMENT TO
CONSTRUCT ENTRANCE

5015+50
℄69'±Prop.R/W

5003+38
℄117'

5002+70
℄117'

+00.00 Prop.
Type "C" Ent. Rt.
24"Uncl. Pipe

TEMPORARY EASEMENT TO
CONSTRUCT ENTRANCE

5

JEFFERY DEROOI

6

JOHN W. DEROOI &
GLADYS A. DEROOI
REV. TRUST

5014+75
℄197'

5015+22
℄197'

+00.00 Prop.
Type "C" Ent. Rt.

0 50
FEET

OLD IA 163

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ROW #: NHSN-063-3(94)--2R-62
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FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(93)--3H-62	SHEET NUMBER HE.11	

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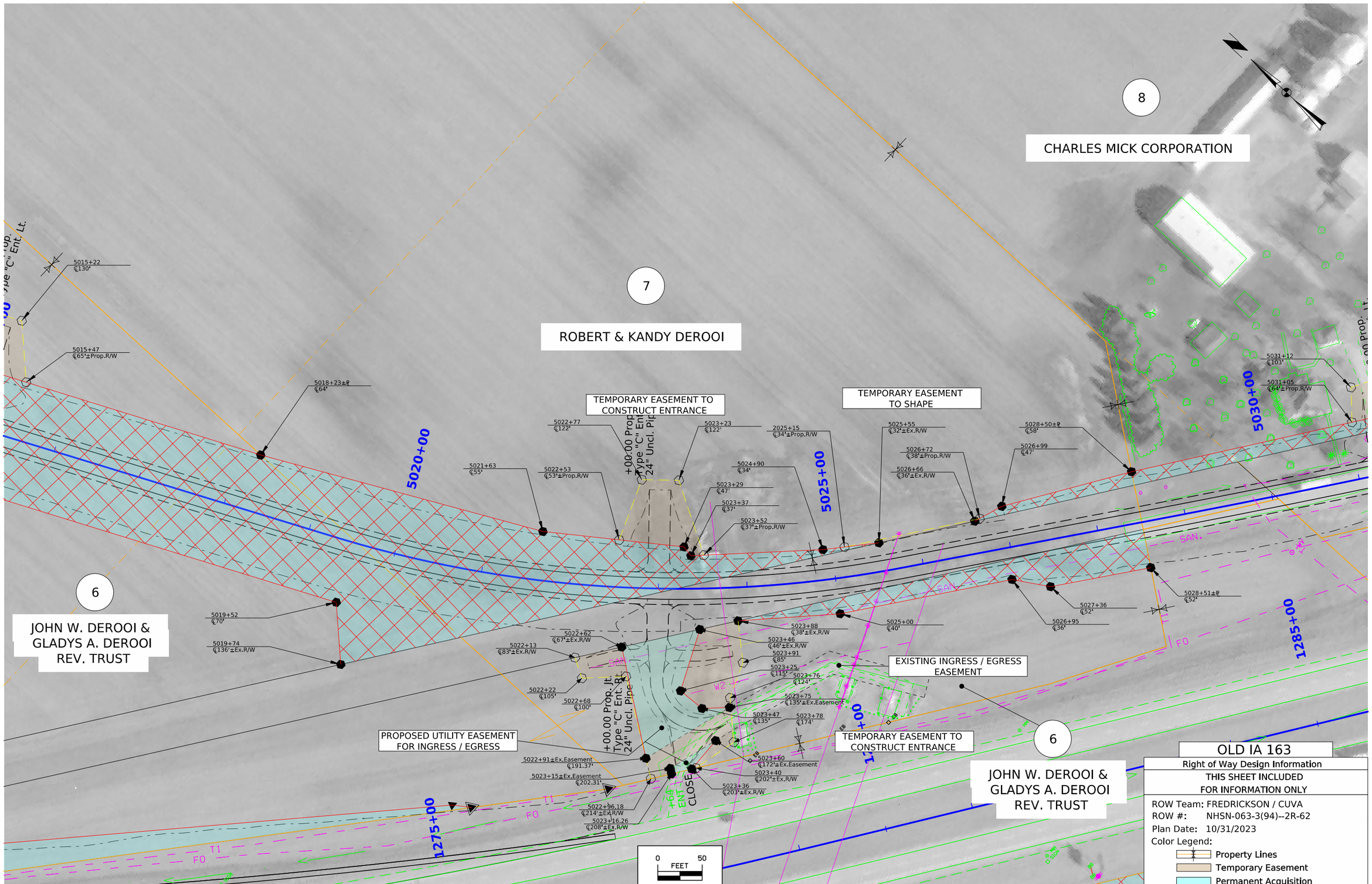

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(93)--3H-62	SHEET NUMBER HE.12

9:42:25 AM 3/27/2024 afredri pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\ROW\ROW_62063094.dgn

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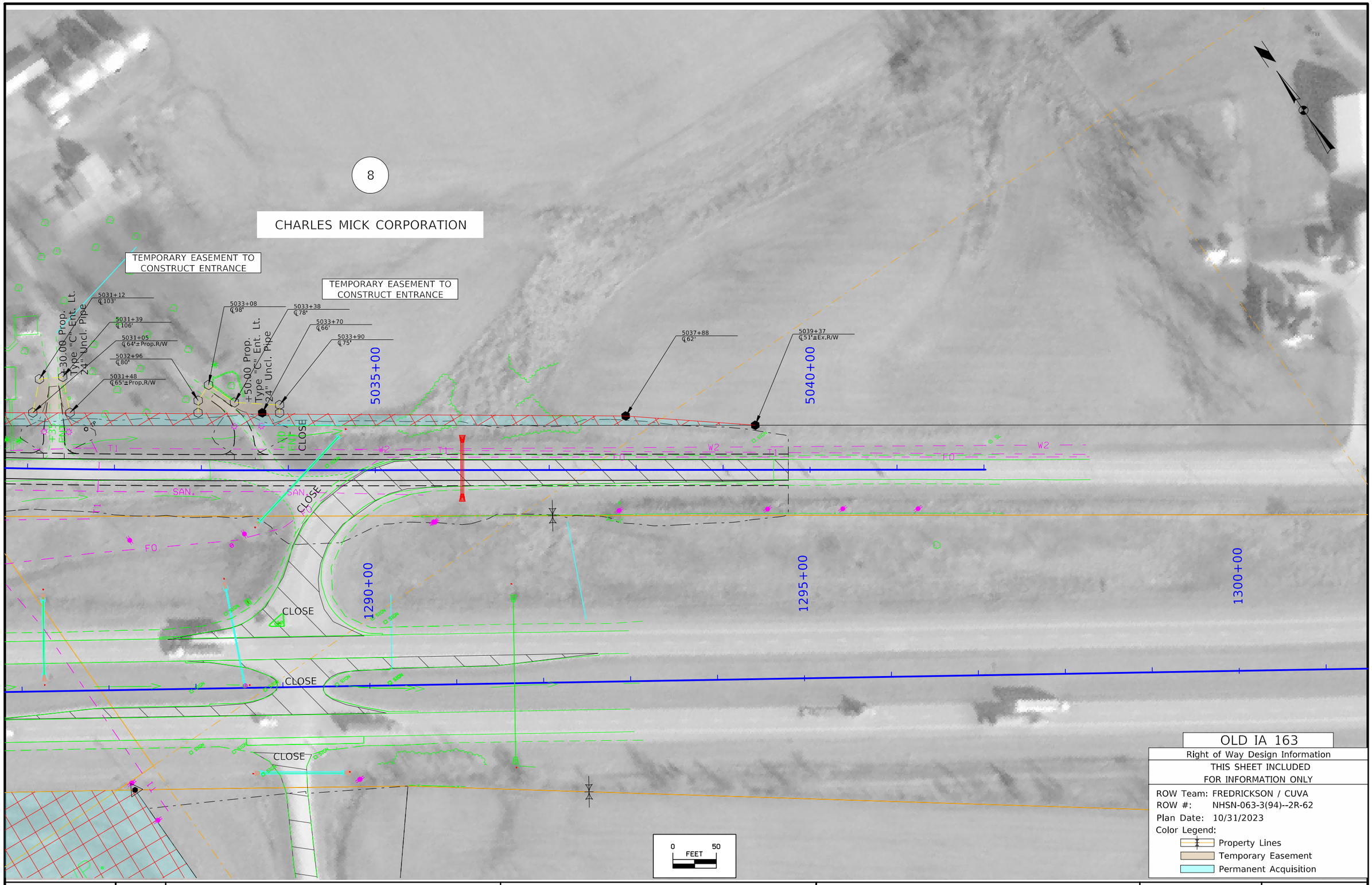

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(93)--3H-62	SHEET NUMBER HE.13

8:44:52 AM 11/2/2023 afredri pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\ROW\ROW_62063094.dgn

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ACQUIRE ACCESS CONTROL ON
S.R. FROM 6017+71 TO 6019+21

6020+40
℄138'

11

DONALD & BONNIE VOS FAMILY LIVING TRUST
CP: MICHAEL D. & LEAH M. VOS

10

THE JON & JANET OVERBERGEN TRUST

6014+71
℄178'

ACQUIRE ACCESS CONTROL ON
S.R. FROM 6015+97 TO 6017+47

Kirby Ave.

Kirby Ave.

6023+81
℄184'

6026+37
℄172'

6027+53
℄129'

6028+91
℄113'

6028+90.71
℄8'±℄

6029+63.26
℄9'±℄

6031+05
℄57'

6031+55
℄34'±Ex.R/W

6031+55
℄32'±Ex.R/W

6031+48
℄40'

6003+65
℄195'

6003+48
℄72'±Prop.R/W

6002+88
℄59'

6001+24
℄58'

6000+57
℄41'

6000+47
℄31'±Ex.R/W

6000+79.24
℄34'±Ex.R/W

6001+48
℄43'

6002+29
℄43'±Prop.R/W

6002+37
℄166'

6003+60
℄43'±Ex.R/W

6002+77
℄42'±Prop.R/W

6002+70
℄43'

6002+70
℄166'

6011+44
℄168'

6009+78
℄164'

6004+36
℄195'

6004+55
℄78'

6016+27±Prop.R/W
℄80'

6014+78
℄89'

6012+43
℄192'

6010+20
℄199'

6008+94
℄199'

6008+06
℄203'

6007+45
℄183'

6006+46.52
℄145'±Ex.R/W

6007+03
℄228'±Ex.R/W

6006+11±℄
℄212'

6006+50
℄260'

6006+92
℄310'±Ex.R/W

6021+51
℄113'

6022+63
℄113'

6024+66
℄133'

6028+90.44
℄47'±Ex.R/W

6028+46±Ex.R/W
℄125'

6029+80
℄57'±Ex.R/W

6030+20.00
℄129'

6030+78
℄129'

TEMPORARY EASEMENT TO
CONSTRUCT ENTRANCE

TEMPORARY EASEMENT TO
CONSTRUCT ENTRANCE

TEMPORARY EASEMENT TO
CONSTRUCT ENTRANCE

TEMPORARY EASEMENT TO
CONSTRUCT ENTRANCE

25

CHRISTOPHER L. &
KELLY J. PIERSON

BERT E. & RUTH ELAINE BANDSTRA
FAMILY LIVING TRUST

9

MICHAEL S. OVERBERGEN

11

DONALD & BONNIE VOS FAMILY LIVING TRUST
CP: MICHAEL D. & LEAH M. VOS

12

THEODORE L. OVERBERGEN

6000+00
6005+00
6010+00
6015+00
220+00
225+00
6020+00
6025+00
6030+00
215+00
210+00

±30.00 Prop. Type C Ent. Lt. 24" Dirct. Pipe

±30.00 Prop. Type C Ent. Rt. 24" Dirct. Pipe

±30.00 Prop. Type C Ent. Rt. 24" Dirct. Pipe

Type C Ent. Rt.

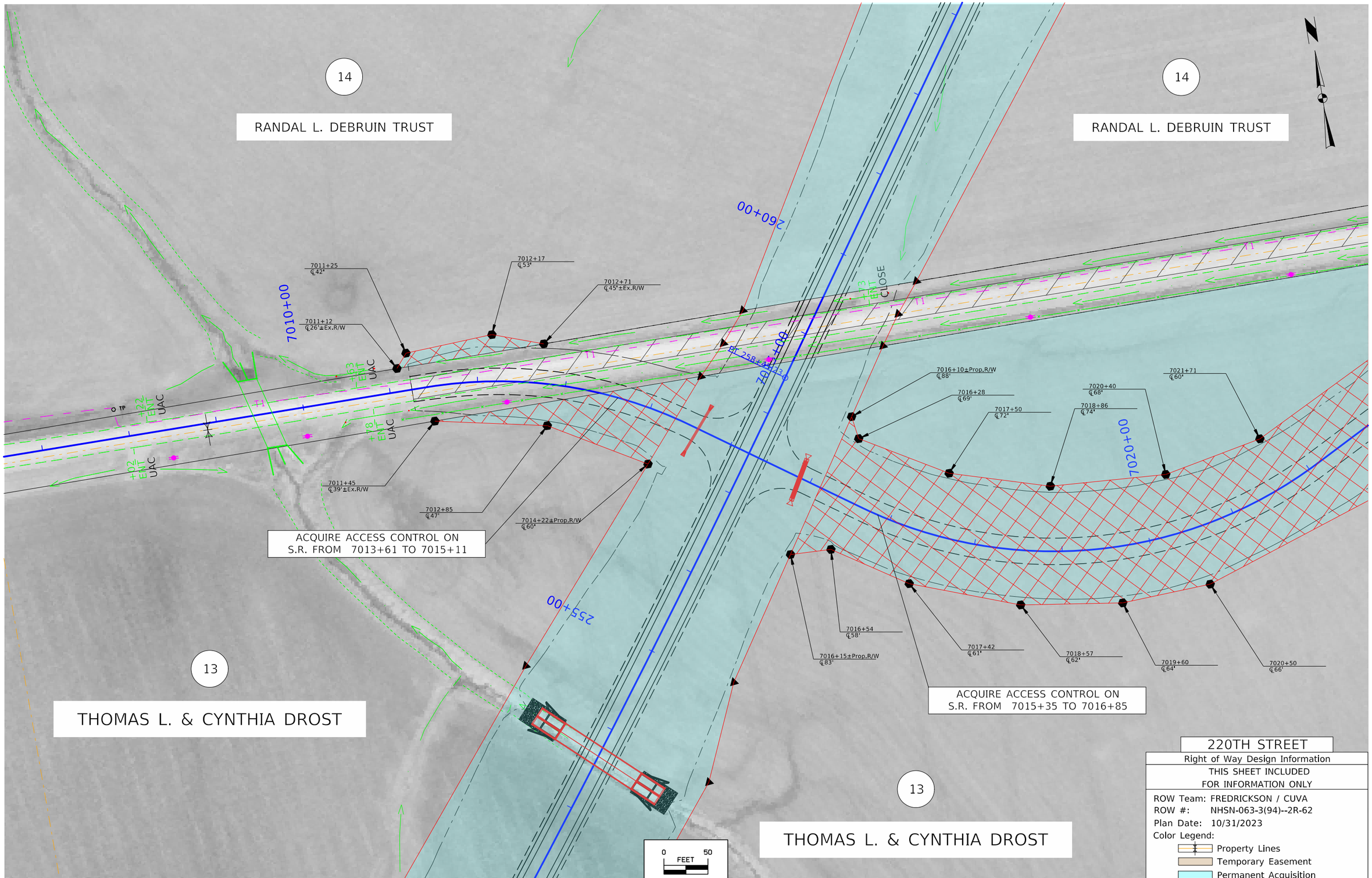
Type C Ent. Rt.

Type C Ent. Rt.

CLOSE

CLOSE

CLOSE



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(93)--3H-62	SHEET NUMBER HE.15

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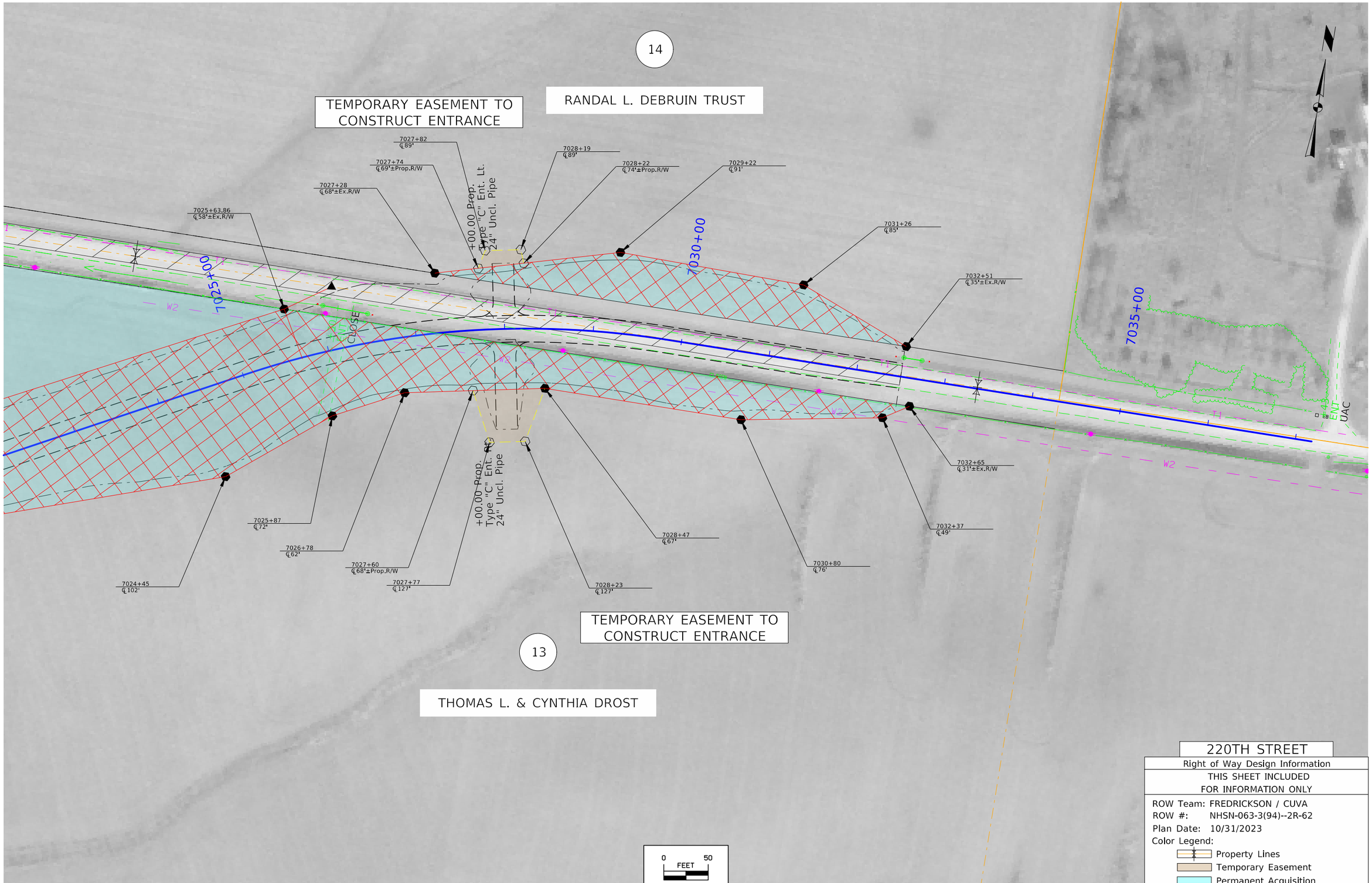

220TH STREET

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ROW #: NHSN-063-3(94)--2R-62
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Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(93)--3H-62	SHEET NUMBER HE.16

8:45:05 AM 11/2/2023 afredri pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\ROW\ROW_62063094.dgn

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14

RANDAL L. DEBRUIN TRUST

ACQUIRE ACCESS CONTROL ON
S.R. FROM 8009+56 TO 8011+06

8001+98
℄34'±Ex.R/W

8002+20
℄45'

8002+30
℄47'

8002+02
℄32'±Ex.R/W

8004+86
℄61'

8005+17
℄52'±Ex.R/W

8006+11
℄71'

8005+00

8008+00
℄80'

8009+02
℄78'

8009+99±Prop.R/W
℄72'

8010+00

295+00

290+00

8014+35
℄33'±Ex.R/W

8015+08

8013+74
℄36'±Ex.R/W

8013+65
℄41'

8012+40±Ex.R/W
℄78'

UAC

14

RANDAL L. DEBRUIN TRUST

ACQUIRE ACCESS CONTROL ON
S.R. FROM 8011+42 TO 8012+92

0 FEET 50

210TH STREET

Right of Way Design Information

THIS SHEET INCLUDED
FOR INFORMATION ONLY

ROW Team: FREDRICKSON / CUVA
ROW #: NHSN-063-3(94)--2R-62
Plan Date: 10/31/2023
Color Legend:

- Property Lines
- Temporary Easement
- Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(93)--3H-62	SHEET NUMBER HE.17

8:45:09 AM 11/2/2023 afredri pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\ROW\ROW_62063094.dgn

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16

ROBERT D. JR & KATHY SCHAEFER

TOTAL ACQUISITION

STATE OF IOWA

26

TEMPORARY EASEMENT TO CONSTRUCT ENTRANCE

9006+45
℄305'

9006+28
℄282'±Ex.R/W

9006+92
℄227'±Ex.R/W

9007+28.63
℄210'±Ex.R/W

9007+73
℄179'

9007+89
℄152'±Ex.R/W

TAAF & DEBBIE L. VERMEULEN

TEMPORARY EASEMENT TO SHAPE

27

RYAN R. & ANGELA L. WOLVER

TEMPORARY EASEMENT TO CONSTRUCT ENTRANCE

9010+37±R
℄81'

9010+09
℄75'±Ex.R/W

9010+67
℄84'±Prop.R/W

9010+78
℄85'

9011+04
℄85'

9011+88±R
℄78'

+85.00 Prop. Type "C" Ent. Lt. 24" Uncl. Pipe

9006+50±Ex.R/W
℄80'

+50.00 Prop. Type "C" Ent. Lt. 24" Uncl. Pipe

9001+09
℄120'

9001+89
℄90'

9005+75
℄63'

9008+36
℄91'

9010+10
℄75'±Ex.R/W

310+00

9005+00

9010+00

9000+00

305+00

PC 307+18.16

15

DON & PAT DEBRUIN LLC

ACQUIRE ACCESS CONTROL ON S.R. FROM 9000+12 TO 9001+62

15

DON & PAT DEBRUIN LLC

14

RANDAL L. DEBRUIN TRUST

0 50
FEET

OLD US 63

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: FREDRICKSON / CUVA
ROW #: NHSN-063-3(94)--2R-62
Plan Date: 10/31/2023
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM **Flattery \ Johnson**	**MAHASKA** COUNTY	PROJECT NUMBER **NHSX-063-3(93)--3H-62**	SHEET NUMBER **HE.18**

11:21:31 AM 5/22/2024 afredri pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\ROW\ROW_62063094.dgn

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108-23A
08-01-08

TRAFFIC CONTROL PLAN

Traffic on US 63 and IA 163 will be maintained at all times.

108-25
10-21-14

511 TRAVEL RESTRICTIONS

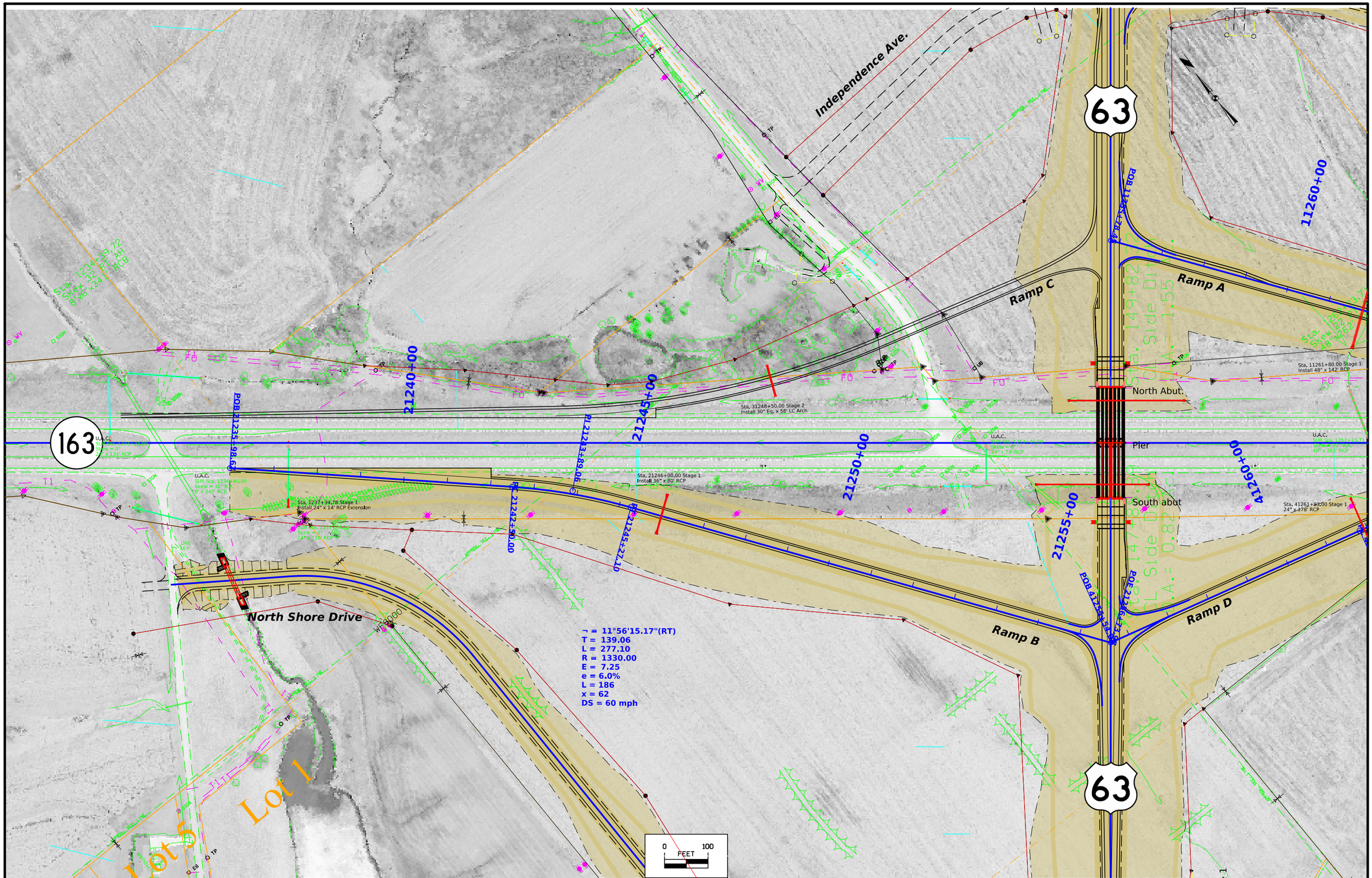
Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No., Structure ID, or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
			No Restrictions expected.									

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
NHSX-063-3(96)--3H-62	Bridge New - PPCB



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER K.1

8:49:07 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\K01-K02_INTGEOPLAN_62063095Z09_ORD_Grading.dgn

Old IA 163

11260+00

11265+00

11270+00

41265+00

Ramp A

Ramp D

Old IA 163

Jewell Ave.

163

¬ = 11°37'45.83"(LT)
T = 135.44
L = 269.95
R = 1330.00
E = 6.88
e = 6.0%
L = 186
x = 62
DS = 60 mph

¬ = 15°36'56.87"(RT)
T = 182.37
L = 362.49
R = 1330.00
E = 12.45
e = 6.0%
L = 186
x = 62
DS = 60 mph

¬ = 07°26'54.43"(RT)
T = 130.18
L = 260.00
R = 2000.00
E = 4.23
e = 5.4%
L = 168
x = 62
DS = 60 mph

PC 11262+76.83

PT 11270+46.83

POE 11270+59.83

PC 41265+44.65

POE 41268+04.65

PI 11262+23.71

PI 11265+56.72

PI 41263+64.83

PI 41268+04.65

PI 41265+44.65

PI 41265+44.65 = 216

Sta. 11261+80.00 Stage 1
Install 48" x 142' RCP

U.A.C.
SUR Sta. 1266+27.71
Skew = 0°
18" x 90' RCP

Plug & Abandon, Stage 1
SUR Sta. 1268+27.00
Skew = 0°
24" x 83' RCP

Plug & Abandon, Stage 2
SUR Sta. 1269+56.72
Skew = 45° R.A.
30" x 242' RCP

U.A.C.
SUR Sta. 1262+23.71
Skew = 0°
48" x 262' RCP

Sta. 41262+00.05 Stage 1
Install 48" x 200' RCP Extension

93+00 Stage 1
CP

Sta. 5036+00.00 Stage 2
Install 36" x 60' RCP

U.A.C.
SUR Sta. 1286+25.00
Skew = 0°
24" x 87' RCP

U.A.C.
SUR Sta. 1288+49.00
Skew = 16° R.A.
15" x 114' RCP

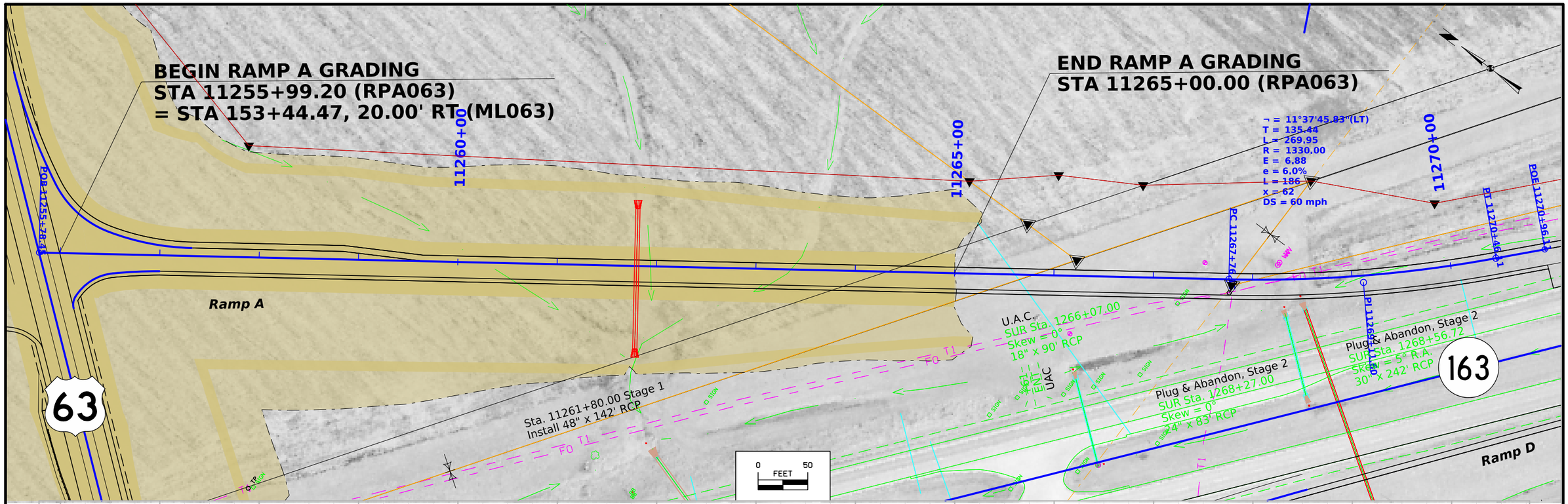
U.A.C.
SUR Sta. 1291+66.39
Skew = 0°
36" x 178' RCP

Lincoln TWP
T76N R16W
10
SEC

0 100
FEET

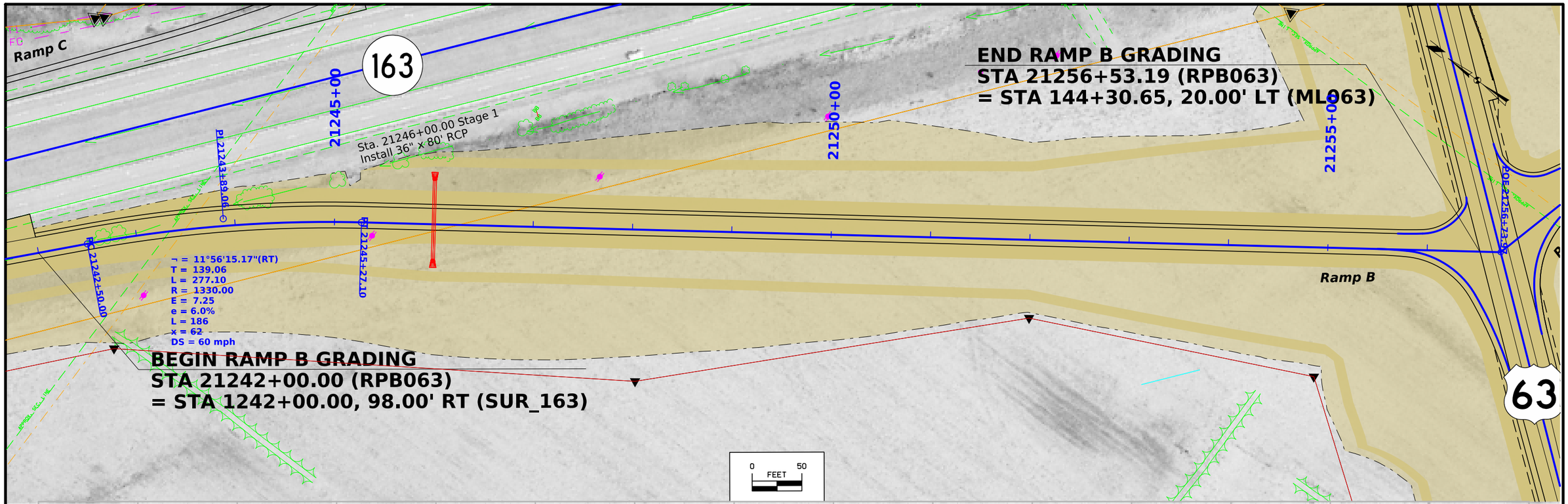
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER K.2	

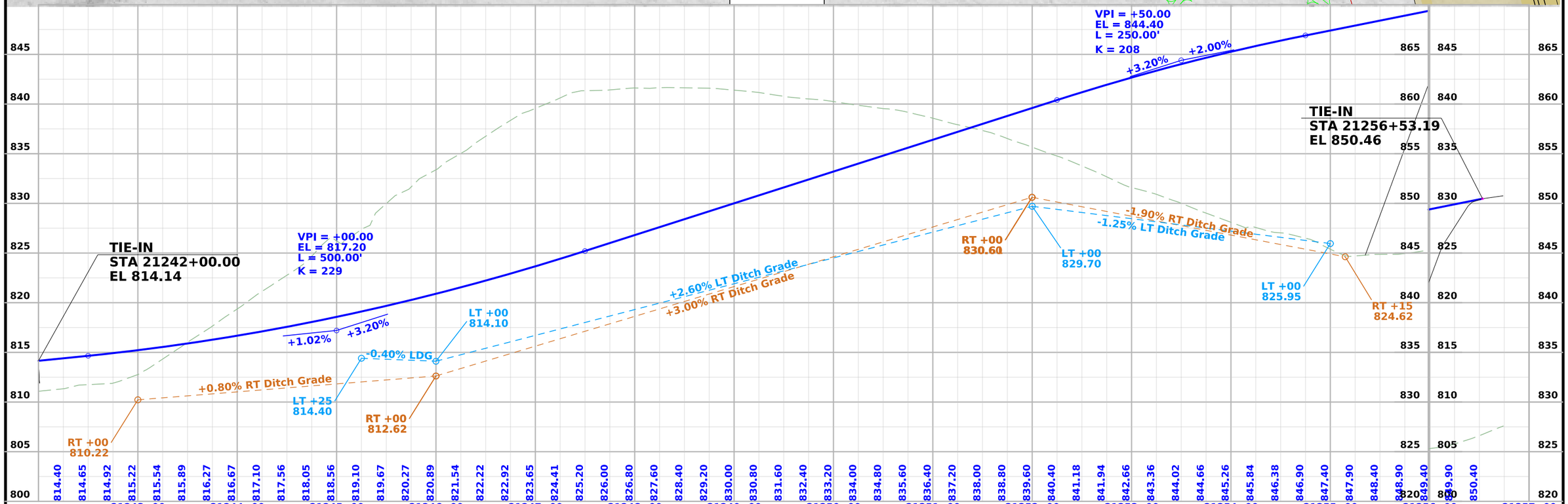
1:27:31 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\K01-K02_INTGEOPLAN_62063095Z09_ORD_Grading.dgn



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER K.3

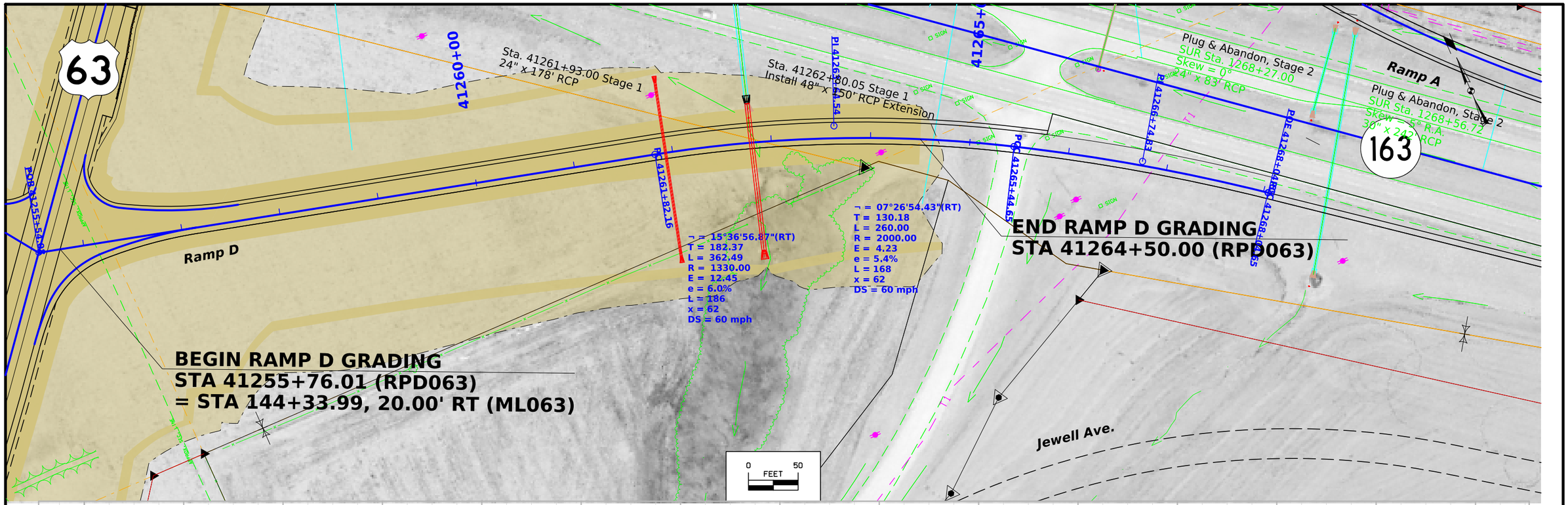
8:49:42 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\K03_RPA063_62063095Z09_ORD_Grading.dgn

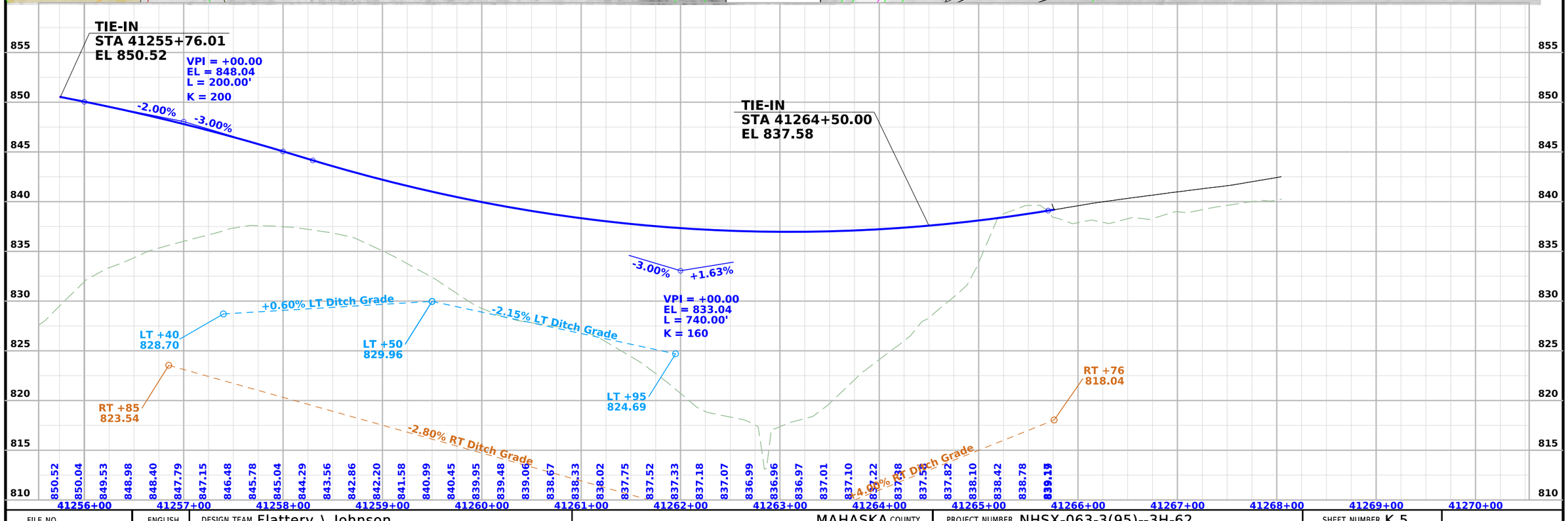




FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER K.4

8:49:55 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\K04_RPB063_62063095Z09_ORD_Grading.dgn





FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER K.5

8:50:06 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\K05_RPD063_62063095Z09_ORD_Grading.dgn

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

- PPA Power Pole Co. 1
- PR Electic Riser Pole
- MidAmerican Energy - Quality D
- MidAmerican Energy - Quality D
- Kinder Morgan - Quality D
- Centurylink - Quality D
- Iowa Communications Network - Quality D
- Oskaloosa Municipal Utilities- Quality D
- Centurylink - Quality D
- Oskaloosa Municipal Utilities - Quality D
- Mahaska Rural Water - Quality D

PLAN VIEW COLOR LEGEND OF SOILS SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Topographic Features and Labels
Purple (Halo)	(15)	Backslope Drains
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
SHADING	**Design Color No.**	
Brown, Light	(236)	Core Out

PROFILE VIEW COLOR LEGEND OF SOILS SHEETS

LINEWORK	Design Color No.	
Blue	(1)	Proposed Alignment, Stationing, and Alignment Annotation
Green	(2)	Existing Ground Line Profile
Green, Med	(2)	Topsoil
Green, Med	(2)	Slope Dressing Only
Orange	(6)	Loam
Aqua (Cyan)	(7)	Class 10
Brown, Med	(4)	Sand
Red	(3)	Unsuitable A
Pink, Dark	(13)	Unsuitable B
Pink	(11)	Unsuitable C
Red	(3)	Shale
Red	(3)	Waste
Gray, Light	(48)	Broken and Weathered Rock
Gray, Med	(80)	Rock
Gray, V.Dark	(128)	Boulders

PATTERN AND SYMBOL LEGEND OF SOILS SHEETS

- Drill
- Dig/Core
- Date(s) Drilled _____
- Water
- Dry
- Sample
- Plugged
- Moisture
- Shelby
- Blow Count
- Dens. Core
- Treatment
- Sand Blanket
- Soil Remediation Area
- Select Soil
- Select Sand
- Slope Dressing Only
- Broken and Weathered Rock
- Rock
- Sandstone
- Unsuitable A
- Unsuitable B
- Unsuitable C
- Sandy Soil
- Boulders
- Shale

- Reference Point
- Station
- Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Clearing & Grubbing Area
- Pavement Removal

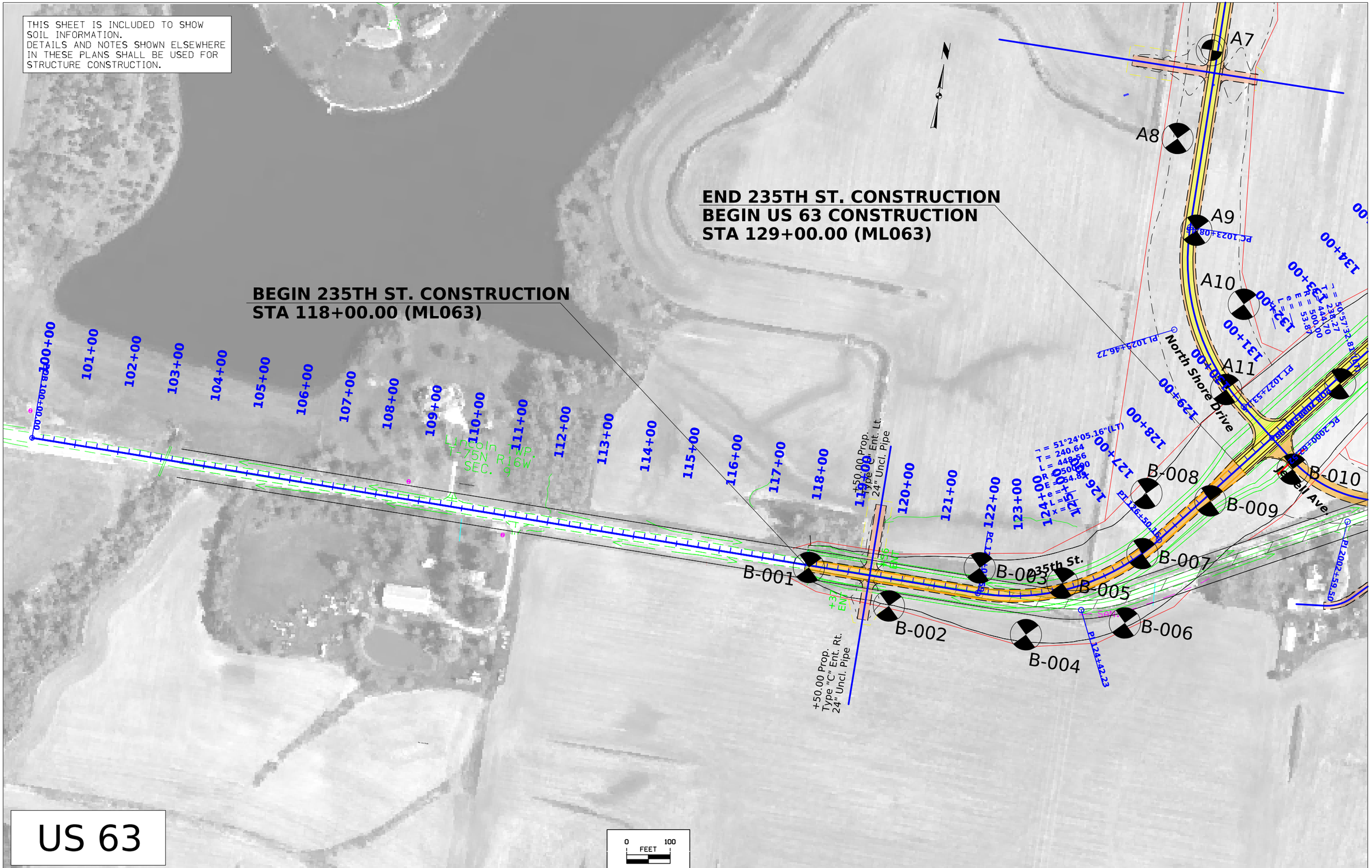
RIGHT-OF-WAY LEGEND

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

NOTE: Sounding and test boring data shown in the plans were accumulated for designing and estimating purposes. Their appearance on the plans does not constitute a guarantee that conditions other than those indicated will be encountered. Details and notes shown elsewhere shall be used for roadway and structure construction.

SOILS LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES Q)



FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Rhedin	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.2

9:33:33 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_ML063_Qsheets.dgn

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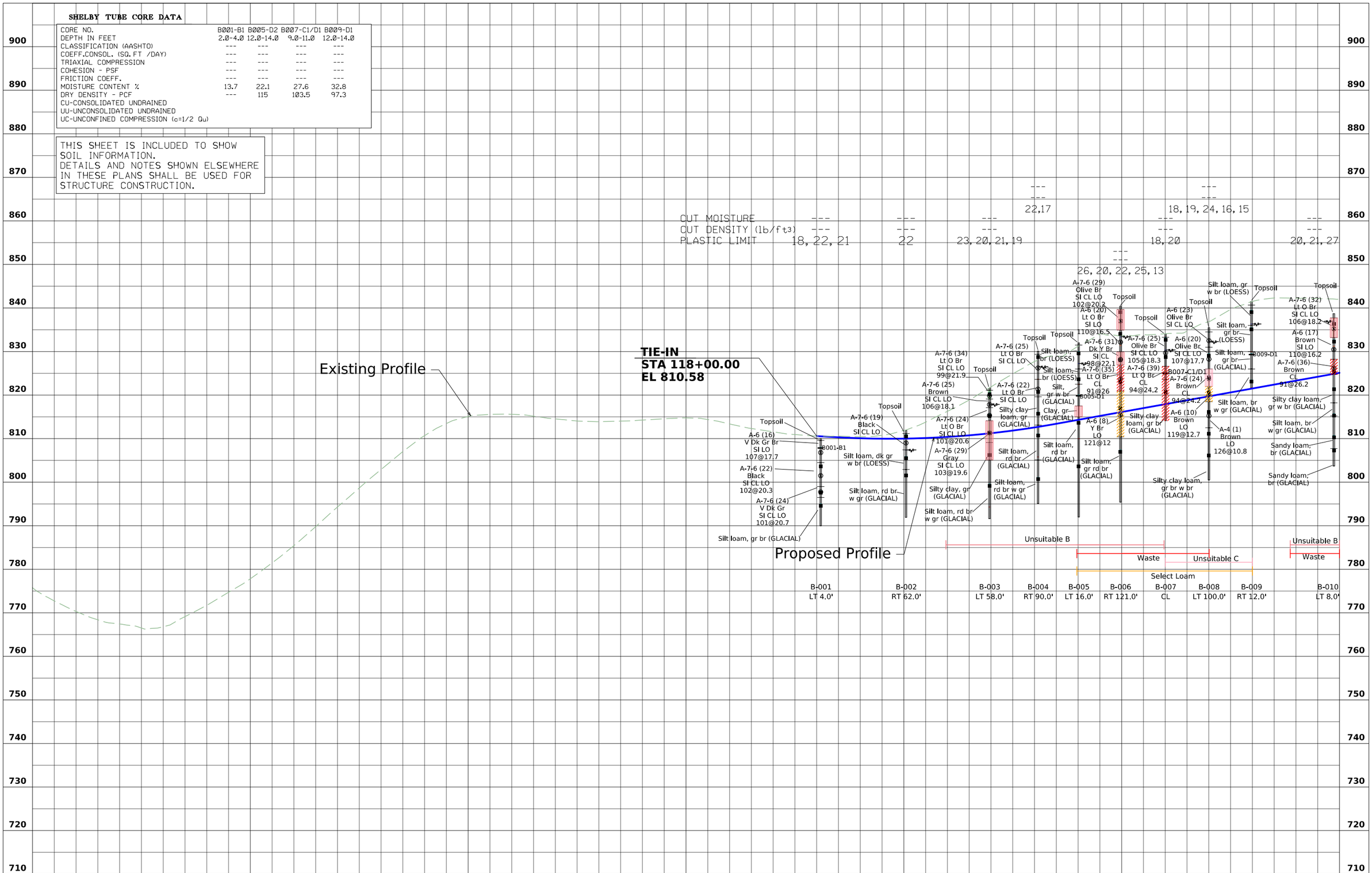
SHELBY TUBE CORE DATA

CORE NO.	B001-B1	B005-D2	B007-C1/D1	B009-D1
DEPTH IN FEET	2.0-4.0	12.0-14.0	9.0-11.0	12.0-14.0
CLASSIFICATION (AASHTO)	---	---	---	---
COEFF.CONSOL. (SQ.FT /DAY)	---	---	---	---
TRIAXIAL COMPRESSION	---	---	---	---
COHESION - PSF	---	---	---	---
FRICTION COEFF.	---	---	---	---
MOISTURE CONTENT %	13.7	22.1	27.6	32.8
DRY DENSITY - PCF	---	115	103.5	97.3

CU-CONSOLIDATED UNDRAINED
UU-UNCONSOLIDATED UNDRAINED
UC-UNCONFINED COMPRESSION (c=1/2 Qu)

THIS SHEET IS INCLUDED TO SHOW SOIL INFORMATION.
DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.



FILE NO. **32164**	ENGLISH	DESIGN TEAM **Dell/Immel/Rhedin**	**Mahaska** COUNTY	PROJECT NUMBER **NHSX-063-3(95)--3H-62**	SHEET NUMBER **Q.3**

9:33:34 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_ML063_Qsheets.dgn

THIS SHEET IS INCLUDED TO SHOW SOIL INFORMATION.
DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.

US 63

FILE NO.	ENGLISH	DESIGN TEAM		COUNTY	PROJECT NUMBER	SHEET NUMBER
32164		**Dell/Immel/Rhedin**	**Mahaska**		**NHSX-063-3(95)--3H-62**	**Q.4**

9:34:02 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_ML063_Qsheets.dgn

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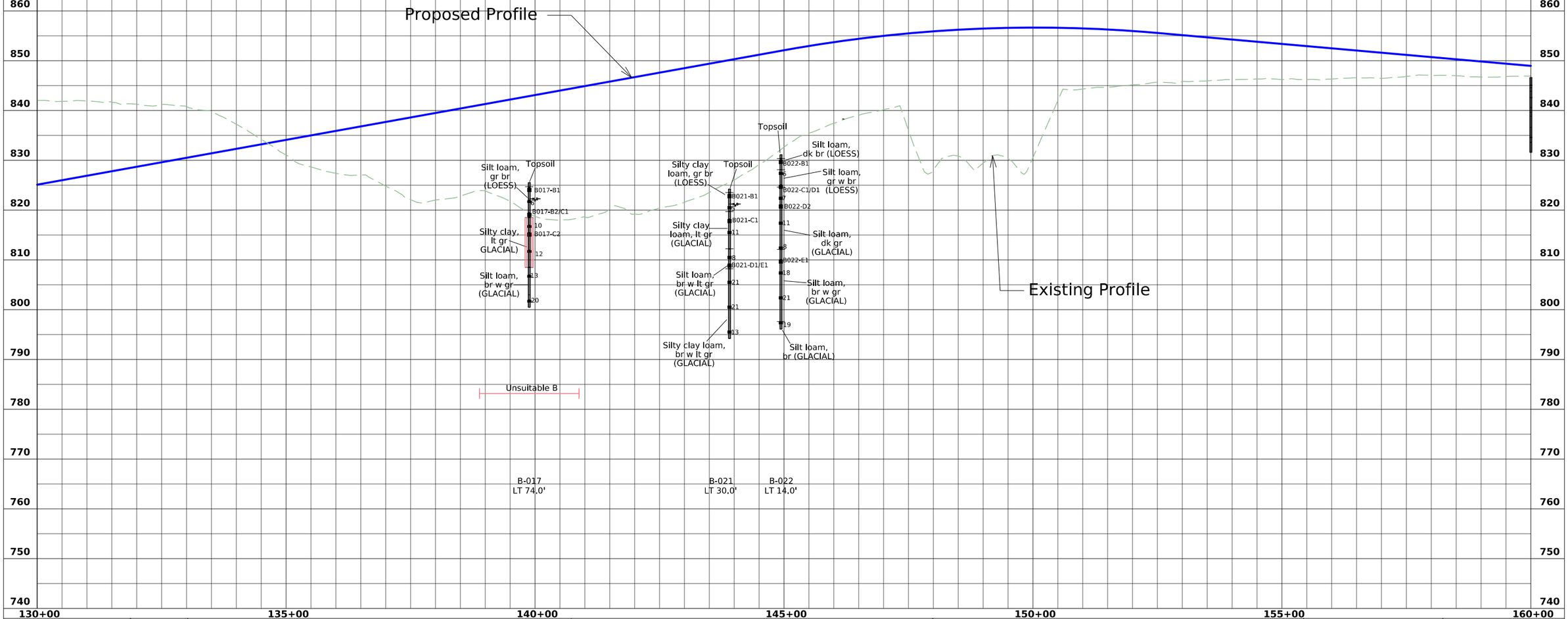
Left Offset Borings

SHELBY TUBE CORE DATA

CORE NO.	B017-B1	B017-B2/C1	B017-C2	B021-B1	B021-C1	B021-D1/E1	B022-B1	B022-C1/D1	B022-D2	B022-E1
DEPTH IN FEET	1.0-3.0	6.0-8.0	10.0-12.0	1.0-3.0	6.0-8.0	10.0-12.0	1.0-3.0	6.0-8.0	10.0-12.0	21.0-23.0
CLASSIFICATION (AASHTO)	---	---	---	---	---	---	---	---	---	---
COEFF.CONSOL. (SQ.FT /DAY)	---	---	---	---	---	---	---	---	---	---
TRIAXIAL COMPRESSION	---	---	---	---	---	---	---	---	---	---
COHESION - PSF	---	---	---	---	---	---	---	---	---	---
FRICTION COEFF.	---	---	---	---	---	---	---	---	---	---
MOISTURE CONTENT %	27.8	21.1	19.3	27.5	22.6	12.9	28.3	22.4	23.1	14.0
DRY DENSITY - PCF	102.3	111.8	117.9	102.8	113.6	135.7	92.0	112.9	111.7	132.0

CU-CONSOLIDATED UNDRAINED
UU-UNCONSOLIDATED UNDRAINED
UC-UNCONFINED COMPRESSION (c=1/2 Q_u)

THIS SHEET IS INCLUDED TO SHOW SOIL INFORMATION.
DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.



FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Rhedin	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.5

9:34:03 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_ML063_Qsheets.dgn

SHELBY TUBE CORE DATA

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DEPTH IN FEET	14.0-16.0	1.0-3.0	6.0-8.0	10.0-12.0	1.0-3.0	6.0-8.0	10.0-12.0	1.0-3.0	6.0-8.0	15.0-17.0	1.0-3.0	6.0-8.0	10.0-12.0	1.0-3.0	6.0-8.0	10.0-12.0	1.0-3.0	6.0-8.0	10.0-12.0	1.0-3.0	6.0-8.0	1.0-3.0
CLASSIFICATION (AASHTO)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
COEFF.CONSOL. (SQ.FT /DAY)	---	---	---	---	0.076	---	---	---	---	---	---	---	---	---	0.075	---	---	---	---	0.026	---	---
TRIAXIAL COMPRESSION	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
COHESION - PSF	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
FRICTION COEFF.	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MOISTURE CONTENT %	27.5	26	21.1	21.3	26.7	23.2	14.1	25.9	28.2	14.4	30.3	27.6	17.0	31.1	23.9	5.3	25.1	25.4	17.6	24.2	16.2	28.7
DRY DENSITY - PCF	105.6	---	116.9	116.9	98.9	112.5	130.8	104.8	101.3	130.9	97.2	98.5	125	93.9	100.71	136.1	101.2	95.5	124.2	99.7	127.3	98.9
CU-CONSOLIDATED UNDRAINED																						
UU-UNCONSOLIDATED UNDRAINED																						
UC-UNCONFINED COMPRESSION (c=1/2 Qu)																						

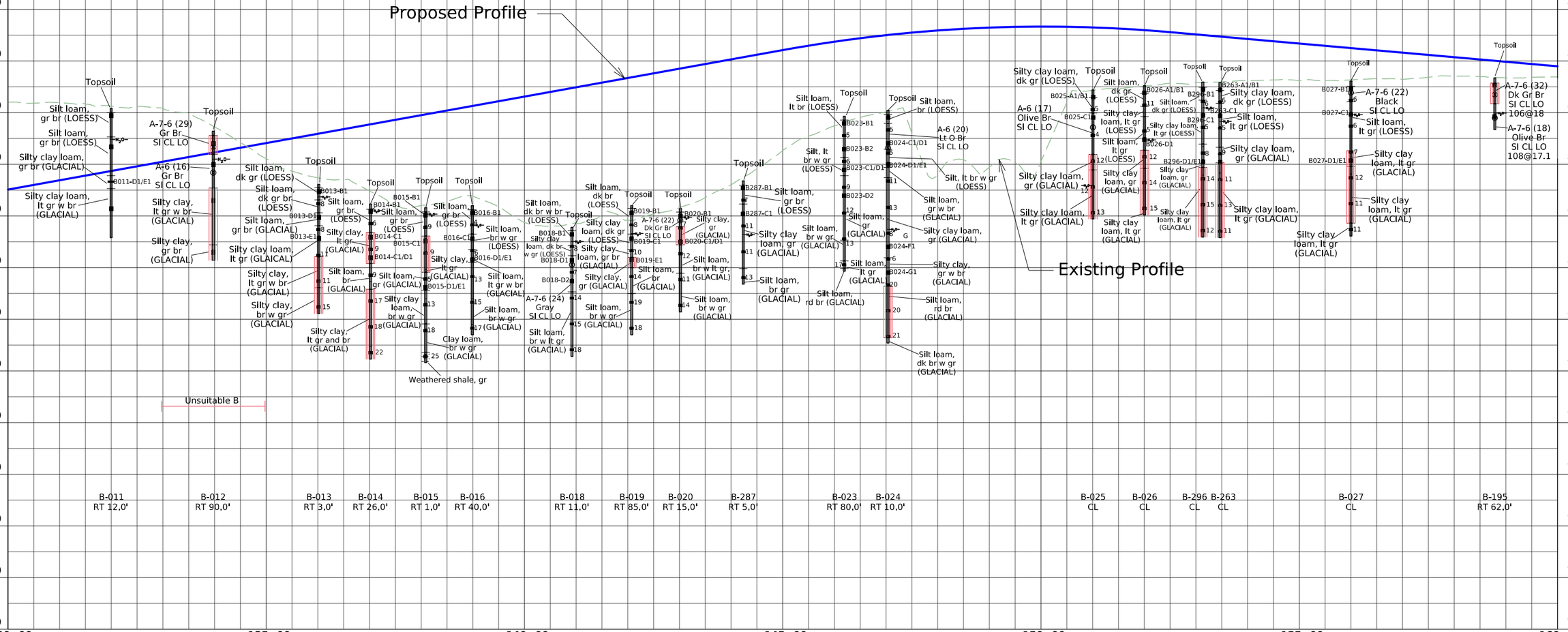
THIS SHEET IS INCLUDED TO SHOW SOIL INFORMATION.
DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.

SHELBY TUBE CORE DATA

CORE NO.	B023-B2	B023-C1/D1	B023-D2	B024-C1/D2	B024-D2/E1	B024-F1	B024-G1	B025-A1/B1	B025-C1	B026-A1/B1	B026-D1	B296-B1	B296-C1	B296-D1/E1	B263-A1/B1	B263-C1	B027-B1	B027-C1	B027-D1/E1
DEPTH IN FEET	6.0-8.0	10.0-12.0	15.0-17.0	6.0-8.0	10.0-12.0	26.0-28.0	31.0-33.0	1.0-3.0	6.0-7.5	1.0-3.0	10.0-12.0	1.0-3.0	6.0-8.0	15.0-17.0	1.0-3.0	6.0-8.0	1.0-3.0	6.0-8.0	15.0-17.0
CLASSIFICATION (AASHTO)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
COEFF.CONSOL. (SQ.FT /DAY)	---	---	---	0.380	---	---	---	---	0.755	---	---	---	---	---	---	---	0.256	---	---
TRIAXIAL COMPRESSION	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
COHESION - PSF	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
FRICTION COEFF.	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MOISTURE CONTENT %	30.1	22.4	24.9	27.6	22.5	19.3	13.5	29.0	28.6	28.1	30.8	28.7	32.3	26.7	29.3	32.1	28.8	31.0	26.3
DRY DENSITY - PCF	96.9	112.8	107.3	84.9	111.6	118.2	129.1	98.0	94.0	98.8	100.3	98.7	93.2	105.9	98.5	96.3	92.4	98.0	107.3
CU-CONSOLIDATED UNDRAINED																			
UU-UNCONSOLIDATED UNDRAINED																			
UC-UNCONFINED COMPRESSION (c=1/2 Qu)																			

Right Offset Borings

CUT																						
MOISTURE	---																					
CUT DENSITY (lb/ft^3)	---																					
PLASTIC LIMIT	25, 20				21			22			22				21			26			20, 22	



FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Rhedin	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.6

9:34:04 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_ML063_Qsheets.dgn

THIS SHEET IS INCLUDED TO SHOW SOIL INFORMATION.
DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.

NOTE: THE WORKING BLANKETS SHOWN ON THE Q SHEETS AND ON TAB 104-5C MAY BE EXTENDED. REDUCED. OR DELETED AS FIELD CONDITIONS DICTATE AT TIME OF CONSTRUCTION

See Q.43 for details on Wick Drain Area 1

Working Blanket #1

Working Blanket #2

Drain Outlet
Sta. 182+25

Backslope Drain #1

Drain Outlet
Sta. 186+25

Wick Drain Area 1

US 63

0 100 FEET

FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Rhedin	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.7

9:34:13 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_ML063_Qsheets.dgn

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SHELBY TUBE CORE DATA

CORE NO.	B028-B1	B029-B1	B033-C1	B035-D1/E1	B038-D1	B040-D1	B042-E1	B045-B1	B047-B1	B048-B1	B048-B2
DEPTH IN FEET	2.0-4.0	2.0-4.0	8.0-10.0	13.0-15.0	13.0-15.0	10.0-12.0	14.0-16.0	2.0-4.0	2.0-4.0	1.0-3.0	6.0-8.0
CLASSIFICATION (AASHTO)	---	---	---	---	---	---	---	---	---	---	---
COEFF.CONSOL. (SQ. FT /DAY)	---	---	---	---	---	---	---	---	---	---	---
TRIAXIAL COMPRESSION	---	---	---	---	---	---	---	---	---	---	---
COHESION - PSF	---	---	---	---	---	---	---	---	---	---	---
FRICTION COEFF.	---	---	---	---	---	---	---	---	---	---	---
MOISTURE CONTENT %	30.2	29.5	27.4	31.5	23.5	23.6	26.0	27.6	23.4	17.4	13.6
DRY DENSITY - PCF	98.7	100.1	101.3	99.5	110.9	100.6	109.3	103.0	111.8	125.6	134.3

CU-CONSOLIDATED UNDRAINED
UU-UNCONSOLIDATED UNDRAINED
UC-UNCONFINED COMPRESSION (c=1/2 Qu)

THIS SHEET IS INCLUDED TO SHOW SOIL INFORMATION.
DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.

CUT MOISTURE
CUT DENSITY (lb/ft³)
PLASTIC LIMIT

21, 22	28, 23	19, 18, 18	27, 20, 21	23, 18, 18, 19	19, 18, 22, 18	23, 22, 18, 24	26, 20, 26, 24, 17	24, 17, 16

Existing Profile
Proposed Profile

B028-B1: Topsoil; A-7-6 (18) Lt O Br LO; A-6 (16) Olive Br SI LO; Silt loam, br w gr (LOESS)
B029-B1: Topsoil; A-7-6 (22) Olive Br CL LO; Silt loam, gr (LOESS)
B030: Topsoil; Silty clay loam, br (LOESS); Silt loam, lt gr (LOESS); Silty clay loam, gr (LOESS)
B031: Topsoil; A-7-6 (31) Dk O Gr SI CL LO 100@21.4; A-6 (21) Dk O Gr SI CL LO 110@16.3; A-7-6 (24) Olive Br SI CL LO 109@16.9
B032: Topsoil; Silty clay loam, lt gr (LOESS); Silt loam, lt gr (LOESS); Silty clay loam, br w gr (GLACIAL); Silty clay loam, gr (GLACIAL)
B033-C1: Topsoil; Silt loam, lt gr (LOESS); Silt loam, lt gr br (LOESS); A-7-6 (25) Olive Br SI CL LO; A-6 (14) Olive Br SI CL LO; A-7-6 (46) Lt Gr Br SI CL 97@22.6; Silty clay loam, gr (GLACIAL)
B034: Topsoil; Silt loam, lt gr (LOESS); Silty clay loam, gr (GLACIAL)
B035-D1/E1: Topsoil; Silt loam, lt gr (LOESS); Silt loam, br w lt gr (LOESS); Silty clay loam, gr (GLACIAL); Silty clay loam, lt gr (GLACIAL); A-7-6 (36) Olive Br SI CL LO 103@19.8; A-6 (21) Olive Br SI CL LO 109@16.8; A-7-6 (42) Lt O Br SI CL 92@26; A-7-6 (41) Gray SI CL 98@22.3
B036-D1: Topsoil; Silty clay loam, br w lt gr (LOESS); Silt loam, lt gr w br (LOESS); Silty clay loam, gr (GLACIAL); Silty clay loam, lt gr (GLACIAL)
B037: Topsoil; Silty clay loam, br w lt gr (LOESS); Silty clay loam, gr (GLACIAL)
B038-D1: Topsoil; A-7-6 (33) Dk Gr Br SI CL LO 103@19.8; A-6 (17) Olive Br SI LO 111@15.8; A-7-6 (46) Lt O Br SI CL 101@20.9; A-7-6 (43) Gr Br SI CL 98@22
B039: Topsoil; Silt loam, lt br (LOESS); Silt loam, br w gr (LOESS); Silt loam, gr w br (GLACIAL); Clay, lt gr (GLACIAL); Clay, dk gr (GLACIAL)
B040-D1: Topsoil; A-7-6 (28) Dk Gr Br SI CL LO; A-6 (18) Olive Br SI CL LO; A-7-6 (26) Lt O Br SI CL LO; A-7-6 (47) Gray SI CL; Silt loam, gr (GLACIAL)
B041: Topsoil; Silt loam, lt br w gr (LOESS); Silt, lt br (LOESS); Silt loam, gr w br (GLACIAL); Silty clay loam, gr (GLACIAL)
B042-E1: Topsoil; Silt loam, br w gr (LOESS); Silt, br w gr (LOESS); Silt loam, lt gr (GLACIAL); Silty clay, gr (GLACIAL); Silty clay loam, dk gr (GLACIAL)
B043: Topsoil; A-7-6 (26) Olive Br SI CL LO 97@22.8; A-7-6 (41) Pale SI CL 110@16.4; A-7-6 (46) Gray CL 97@22.9; A-7-6 (26) Lt Gr Br CL LO 105@18.7
B044: Topsoil; A-6 (20) Brown SI LO 108@17.1; Silt loam, lt br w lt gr (GLACIAL); Silt loam, gr (GLACIAL)
B045-B1: Topsoil; Silt loam, lt br (LOESS); Silt loam, lt gr w br (GLACIAL); Silty clay loam, gr (GLACIAL)
B046: Topsoil; Silt loam, lt br w gr (LOESS); A-7-6 (24) Olive Br SI CL LO; A-6 (24) Gr Br CL LO; A-6 (10) Lt O Br CL LO
B047-B1: Topsoil; Silt loam, rd br w gr (GLACIAL)
B048-B1: Topsoil; 12
B048-B2: 14; 18

Unsuitable B
Waste

B-028	B-029	B-030	B-031	B-032	B-033	B-034	B-035	B-036	B-037	B-038	B-039	B-040	B-041	B-042	B-043	B-044	B-045	B-046	B-047	B-048
RT 10.0'	LT 20.0'	RT 85.0'	LT 93.0'	RT 98.0'	CL	LT 96.0'	CL	RT 110.0'	LT 100.0'	CL	RT 118.0'	Rt 4.0'	LT 131.0'	LT 1.0'	RT 115.0'	RT 110.0'	CL	RT 100.0'	RT 18.0'	CL

160+00 165+00 170+00 175+00 180+00 185+00 190+00

FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Rhedin	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.8

9:34:14 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_ML063_Qsheets.dgn

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DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.

NOTE: THE WORKING BLANKETS SHOWN ON THE Q SHEETS AND ON TAB 104-5C MAY BE EXTENDED. REDUCED. OR DELETED AS FIELD CONDITIONS DICTATE AT TIME OF CONSTRUCTION

Wick Drain Area 1

Backslope Subdrain #4
Drain Outlet Sta. 194+25
Drain Outlet Sta. 196+50
Drain Outlet Sta. 198+25
Drain Outlet Sta. 199+00
Drain Outlet Sta. 202+25
Backslope Subdrain #6
Backslope Drain #5

¬ = 47°10'32.73"(LT)
T = 1091.59
L = 2058.43
R = 2500.00
E = 227.93
e = ___
L = ___
x = ___

Settlement Plate #8 at Sta. 191+00 Lt. 30
Settlement Plate #7 at Sta. 190+00 Rt. 30
Settlement Plate #10 at Sta. 216+00 Lt. 30
Settlement Plate #9 at Sta. 214+00 Rt. 30

Drain Outlet Sta. 193+25
Backslope Drain #3
Backslope Drain #2
Drain Outlet Sta. 196+25
Drain Outlet Sta. 199+00
Drain Outlet Sta. 201+50
Backslope Drain #3

Working Blanket #3
Working Blanket #4

PI 205+20.89

63

B-049 B-050 B-051 B-052 B-053 B-054 B-055 B-056 B-057 B-058 B-059 B-059A B-060 B-061 B-061A B-062 B-063 B-063A B-064 B-065 B-065A B-066 B-066A B-067 B-067A B-068 B-069 B-070 B-071 B-071A B-072 B-221 B-223 B-225 B-227 B-229 B-232 B-236 B-238 B-240

0 100 FEET

US 63

FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Rhedin	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.9

9:34:24 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_ML063_Qsheets.dgn

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Left Offset Borings

SHELBY TUBE CORE DATA

CORE NO.	B050-B1	B050-B2	B068-B1
DEPTH IN FEET	1.0-3.0	6.0-8.0	2.0-4.0
CLASSIFICATION (AASHTO)	---	---	---
COEFF.CONSOL. (SQ.FT /DAY)	---	---	---
TRIAXIAL COMPRESSION	---	---	---
COHESION - PSF	---	---	---
FRICTION COEFF.	---	---	---
MOISTURE CONTENT %	16.2	13.5	30.6
DRY DENSITY - PCF	125.5	135.0	99.4

CU-CONSOLIDATED UNDRAINED
UU-UNCONSOLIDATED UNDRAINED
UC-UNCONFINED COMPRESSION (c=1/2 Qu)

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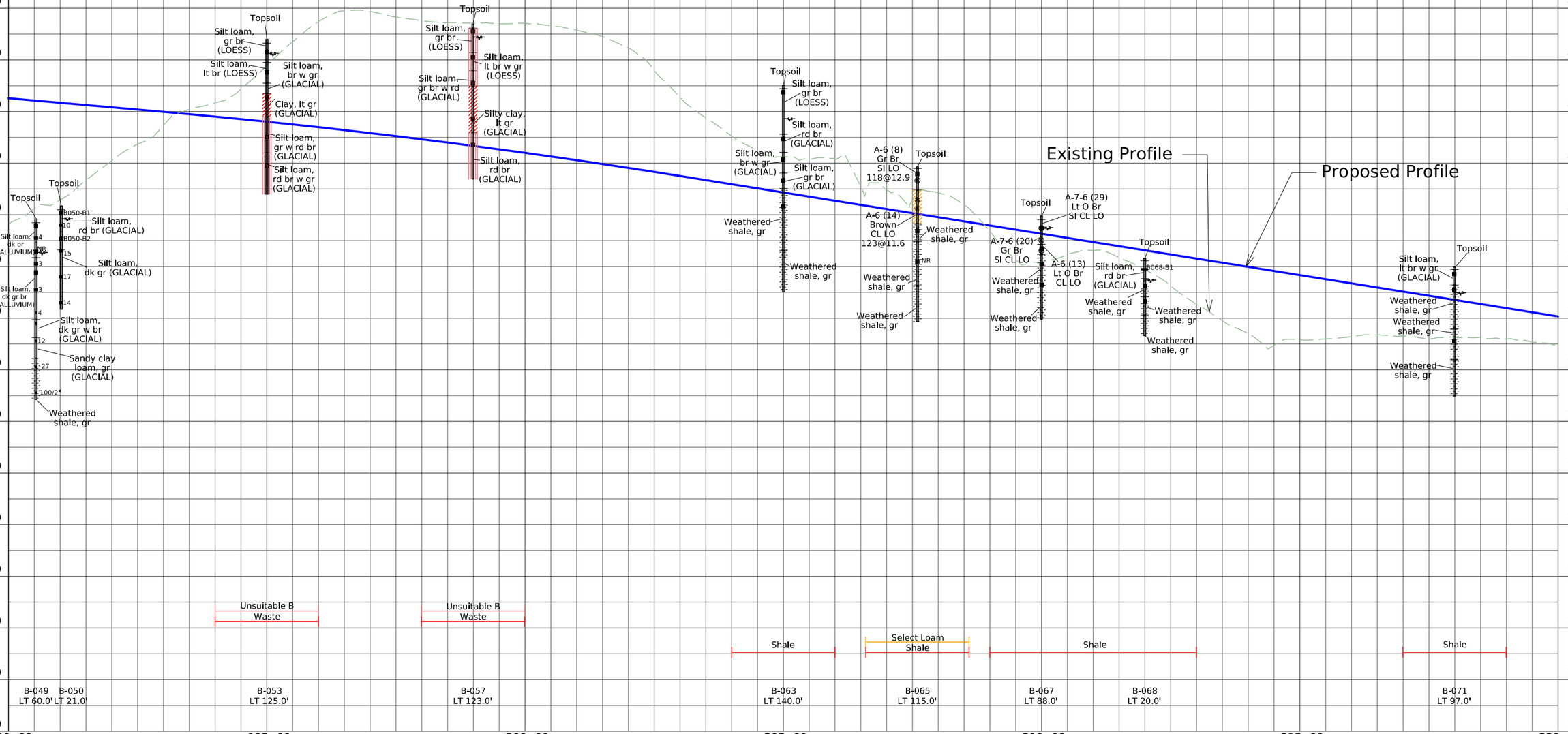
CUT MOISTURE	---	---
CUT DENSITY (lb/ft^3)	---	---
PLASTIC LIMIT	20, 19	19, 22, 18



FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Rhedin	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.10

9:34:25 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_ML063_Qsheets.dgn

Right Offset Borings

SHELBY TUBE CORE DATA

CORE NO.	B054-G1	B056-E1	B058-B1	B060-F2	B062-D1	B064-D2/E1	B069-B1	B069-C1/D1	B069-E1/F1	B069-G1	B070-B1
DEPTH IN FEET	22.0-24.0	23.0-25.0	3.0-5.0	23.0-25.0	12.0-14.0	13.0-15.0	1.0-3.0	6.0-8.0	10.0-12.0	15.0-17.0	1.0-3.0
CLASSIFICATION (AASHTO)	---	---	---	---	---	---	---	---	---	---	---
COEFF.CONSOL. (SQ.FT /DAY)	---	---	---	---	---	---	---	---	---	---	0.288
TRIAXIAL COMPRESSION	---	---	---	---	---	---	---	---	---	---	---
COHESION - PSF	---	---	---	---	---	---	---	---	---	---	---
FRICTION COEFF.	---	---	---	---	---	---	---	---	---	---	---
MOISTURE CONTENT %	18.9	16.2	29.7	15.2	17.5	16.3	26.2	20.5	20.4	17.4	30.1
DRY DENSITY - PCF	119.2	127.0	100.6	124.1	124.7	128.1	105.6	118.2	116.4	123.0	88.5
CU-CONSOLIDATED UNDRAINED											
UU-UNCONSOLIDATED UNDRAINED											
UC-UNCONFINED COMPRESSION (q_c=1/2 Q_u)											

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CUT MOISTURE
CUT DENSITY (lb/ft³)
PLASTIC LIMIT

CUT MOISTURE
CUT DENSITY (lb/ft³)
PLASTIC LIMIT 20, 17, 14, 14, 14

22, 20, 20, 22, 14, 20

21, 19, 18, 28, 21, 16, 13, 14, 15, 21

8.4 (SPOON)

10.7 (SPOON)

17.2 (SPOON)

14.7 (SPOON)

17.9, 16 (SPOON)

19.5 (SPOON)

23.0

25.9, 20

24, 20, 21 | 23, 21, 22, 12, 16, 25 | 21 | 21, 19, 23, 16, 14 | 25, 16, -, 21, 21 | 25

Existing Profile

Proposed Profile

Boring 72 moved slightly for clarity

Waste
Unsuitable B
Unsuitable C
Select Loam
Shale

B-051 RT 16.0' | B-052 RT 120.0' | B-054 CL | B-055 RT 135.0' | B-056 CL | B-058 RT 1.0' | B-059A RT 5.0' | B-060 CL | B-061 RT 145.0' | B-061A CL | B-062 CL | B-063A CL | B-064 CL | B-065A CL | B-066 RT 70.0' | B-066A CL | B-067A RT 15.0' | B-069 RT 20.0' | B-070 RT 20.0' | B-071A CL | B-072 RT 20.0'

190+00 | 195+00 | 200+00 | 205+00 | 210+00 | 215+00 | 220+00

FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Rhedin	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.11

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NOTE: THE WORKING BLANKETS SHOWN ON THE Q SHEETS AND ON TAB 104-5C MAY BE EXTENDED. REDUCED. OR DELETED AS FIELD CONDITIONS DICTATE AT TIME OF CONSTRUCTION

See Q.44 for details on Wick Drain Area 2

Working Blanket #8

Drain Outlet Sta. 229+50
Drain Outlet Sta. 229+00
Drain Outlet Sta. 232+25
Backslope Drain #7
Drain Outlet Sta. 234+25
Backslope Drain #8
Drain Outlet Sta. 240+40
Backslope Drain #10

220+00 221+00 222+00 223+00 224+00 225+00 226+00 227+00 228+00 229+00 230+00 231+00 232+00 233+00 234+00 235+00 236+00 237+00 238+00 239+00 240+00 241+00 242+00 243+00 244+00 245+00 246+00 247+00 248+00 249+00 250+00 251+00

B-223 B-227 B-229 B-231 B-232 B-072 B-073 B-074 B-075 B-076 B-077 B-077A B-078 B-079 B-079A B-080 B-080A B-081 B-081A B-082 B-083 B-084 B-085 B-086 B-086A B-087 B-087A B-088 B-088A B-089 B-089A B-090 B-091 B-092 B-233 B-234

Kirby Ave.

63

Working Blanket #6
Working Blanket #7
Working Blanket #5

Drain Outlet Sta. 235+00
Drain Outlet Sta. 238+00

+00.00 Prop. Type "C" Ent. Rt. 24" Uncl. Pipe

Backslope Drain #9

Settlement Plate #12 at Sta. 247+00 Lt. 30
Settlement Plate #11 at Sta. 245+00 Rt. 30
Settlement Plate #13 at Sta. 249+00 Rt. 30

PI 247+75.72
Δ = 08°46'16.48"(LT)
D = 1073.71
R = 2143.22
T = 14000.00
L = 41.11

Wick Drain Area 2

0 100 FEET

US 63

FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Rhedin	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.12

9:34:36 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_ML063_Qsheets.dgn

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DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.

SHELBY TUBE CORE DATA

CORE NO.	B073-B1	B090-B1
DEPTH IN FEET	2.0-4.0	2.0-4.0
CLASSIFICATION (AASHTO)	---	---
COEFF.CONSOL. (SQ.FT /DAY)	---	---
TRIAXIAL COMPRESSION	---	---
COHESION - PSF	---	---
FRICTION COEFF.	---	---
MOISTURE CONTENT %	23.5	29.0
DRY DENSITY - PCF	111.0	101.9

CU-CONSOLIDATED UNDRAINED
UU-UNCONSOLIDATED UNDRAINED
UC-UNCONFINED COMPRESSION (c=1/2 Qu)

CUT MOISTURE	---	---
CUT DENSITY (lb/ft^3)	---	---
PLASTIC LIMIT	22 16, 17	24, 22

Existing Profile

Proposed Profile

B-073
LT 20.0'
Topsoil
Silt loam, lt br w gr (GLACIAL)
B073-B1
Weathered shale, gr
Weathered shale, gr
Weathered shale, gr

B-074
LT 118.0'
A-7-6 (27) Gr Br Sl CL LO 107@17.5
A-6 (19) Y Br Sl CL LO 115@14.2
A-7-6 (17) Lt Y Br CL LO 116@13.8
Topsoil
Silt loam, rd br (GLACIAL)
Weathered Shale, gr
Weathered Shale, gr
Weathered Shale, gr
Weathered Shale, gr
Limestone

B-075
LT 130.0'
Topsoil
Weathered Shale, gr
Weathered Shale, gr
100/0.5"

B-077A
LT 15.0'
Topsoil
Silt loam, lt br gr (LOESS)
Silt loam, dk br (ALLUVIUM)
Weathered shale, gr
Weathered shale, gr
100/7"
Shale, gr

B-087
LT 5.0'
B-087A
LT 10.0'
Topsoil
Silt loam, br gr (LOESS)
Silt loam lt br (LOESS)
Weathered shale, gr
Limestone
Run 1
Weathered shale, gr
Run 2
Weathered shale, gr
Run 3
Run 4
Weathered shale, gr
Run 5
Weathered shale, gr

B-090
LT 40.0'
Topsoil
B090-B1
A-7-6 (21) Dk O Br Sl CL LO 99@21.9
A-6 (18) Brown Sl LO 104@19.2

Topsoil
Silt loam, br (FILL)
Silt loam, lt br (LOESS)
Weathered shale, gr
Weathered shale, gr

Shale
Shale
Limestone

ROCK CORE COMPRESSIVE STRENGTH TESTING REPORT			ROCK CORE INFORMATION					
Sample Number	Elevation	Material Description	Boring	Approx.Surf.El.(ft)	Run No.	Interval(ft)	Recovery(%)	RQD(%)
B-087A- Run 1	763.6'-761.6'	Limestone	B-087A	775.5'	1	13.0-15.0	100.0	N/A
B-087A- Run 2	761.6'-756.6'	Shale			2	15.0-20.0	100.0	N/A
B-087A- Run 3	756.6'-751.6'	Shale			3	20.0-25.0	100.0	N/A
B-087A- Run 4	751.6'-746.6'	Shale			4	25.0-30.0	100.0	N/A
B-087A- Run 5	746.6'-741.6'	Shale			5	30.0-35.0	100.0	N/A

840 830 820 810 800 790 780 770 760 750 740 730 720 710 700 690 680 670 660 650

220+00 225+00 230+00 235+00 240+00 245+00 250+00

Right Offset Borings

SHELBY TUBE CORE DATA

CORE NO.	B078-G1	B089-E1	B091-B1	B091-C1	B091-D1	B091-E1/F1	B092-B1	B092-C1/D1	B092-E1	B092-F1
DEPTH IN FEET	22.0-24.0	12.0-14.0	1.0-3.0	6.0-8.0	10.0-12.0	15.0-17.0	1.0-3.0	6.0-8.0	10.0-12.0	20.0-22.0
CLASSIFICATION (AASHTO)	---	---	---	---	---	---	---	---	---	---
COEFF.CONSOL. (SQ. FT /DAY)	---	---	---	0.187	---	---	0.034	---	---	---
TRIAXIAL COMPRESSION	---	---	---	---	---	---	---	---	---	---
COHESION - PSF	---	---	---	---	---	---	---	---	---	---
FRICTION COEFF.	---	---	---	---	---	---	---	---	---	---
MOISTURE CONTENT %	27.5	19.6	25.9	27.5	34.6	10.4	30.5	27.4	47.0	27.1
DRY DENSITY - PCF	---	121.8	105.8	94.6	94.0	142.9	88.0	104.8	79.0	105.2
CU-CONSOLIDATED UNDRAINED										
UU-UNCONSOLIDATED UNDRAINED										
UC-UNCONFINED COMPRESSION (c=1/2 Qu)										

THIS SHEET IS INCLUDED TO SHOW SOIL INFORMATION. DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.

| | | | | | | | | | |

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DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.

NOTE: THE WORKING BLANKETS SHOWN ON THE Q SHEETS AND ON TAB 104-5C MAY BE EXTENDED. REDUCED. OR DELETED AS FIELD CONDITIONS DICTATE AT TIME OF CONSTRUCTION

48"(LT)

250+00 251+00 252+00 253+00 254+00 255+00 256+00 257+00 258+00 259+00 260+00 261+00 262+00 263+00 264+00 265+00 266+00 267+00 268+00 269+00 270+00 271+00 272+00 273+00 274+00 275+00 276+00 277+00 278+00 279+00 280+00

B-242 B-093 B-094 B-095 B-096 B-097 B-098 B-099 B-100 B-101 B-102 B-103 B-104 B-105 B-106 B-107 B-108 B-109 B-110 B-111 B-112 B-113 B-114 B-245

220th St.

63

Settlement Plate #14 at Sta. 251+00 Lt. 30

Settlement Plate #15 at Sta. 253+00 Rt. 30

Working Blanket #8

Working Blanket #9

Wick Drain Area 2

Wick Drain Area 3

Backslope Subdrain #13

Backslope Subdrain #14

Backslope Subdrain #15

Backslope Subdrain #16

Backslope Subdrain #17

Backslope Subdrain #12

Backslope Drain #11

Backslope Drain #12

Drain Outlet Sta 266+25

Drain Outlet Sta 268+75

Drain Outlet Sta. 266+75

Drain Outlet Sta. 271+25

Drain Oulet Sta. 271+50

Drain Oulet Sta. 274+00

Drain Outlet Sta. 275+00

Drain Outlet Sta. 265+00

Drain Outlet Sta. 268+75

Drain Outlet Sta. 271+50

Drain Outlet Sta. 274+00

Drain Outlet Sta. 278+25

0 100 FEET

US 63

FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Rhedin	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.15

9:34:48 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_ML063_Qsheets.dgn

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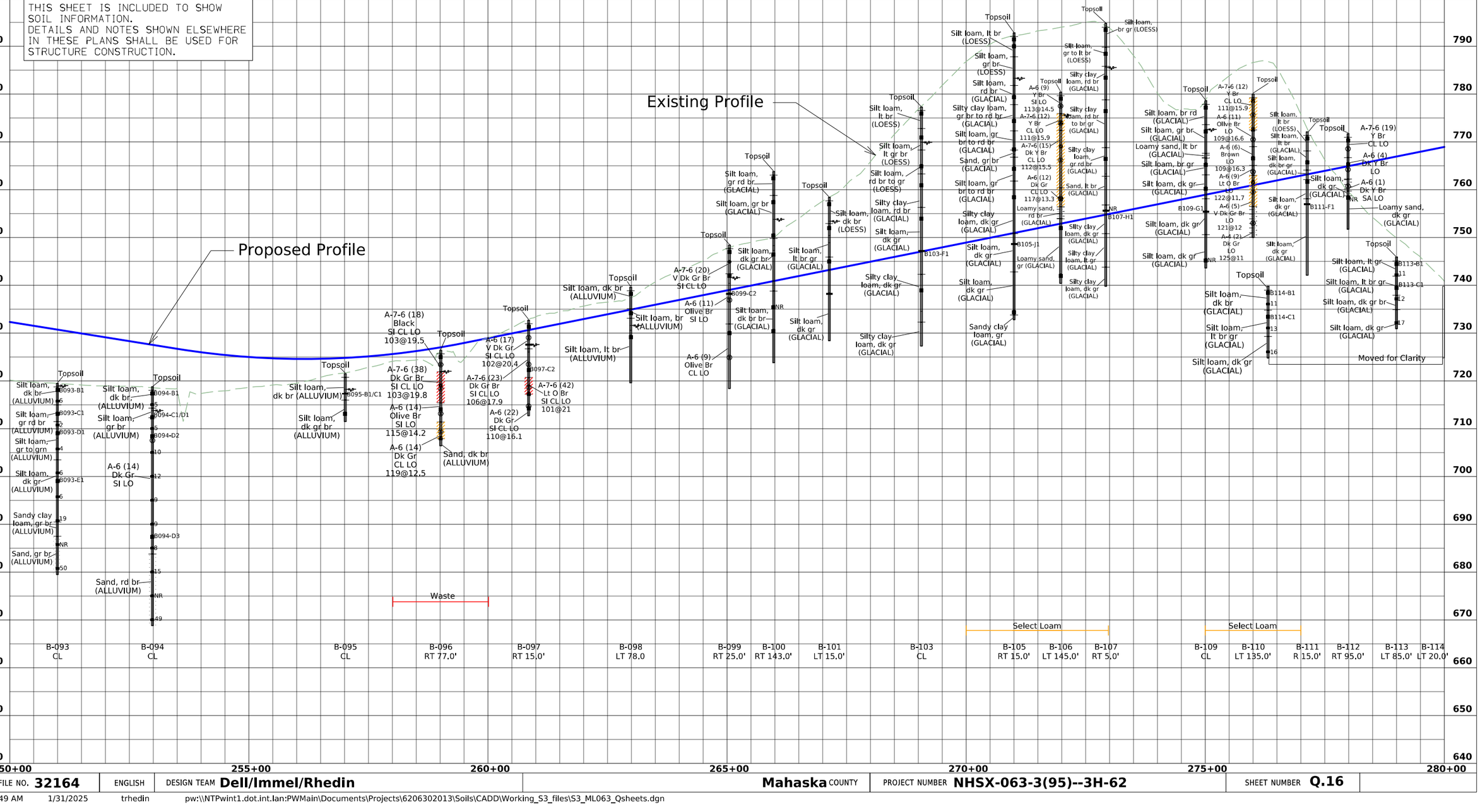
SHELBY TUBE CORE DATA

CORE NO.	B093-B1	B093-C1	B093-D1	B093-E1	B094-B1	B094-C1/D1	B094-D3	B095-B1/C1	B097-C2	B099-C2	B103-F2	B105-J1	B107-H1	B109-G1	B111-F1	B113-B1	B113-C1	B114-B1	B114-C1
DEPTH IN FEET	1.0-3.0	6.0-8.0	10.0-12.0	20.0-22.0	1.0-3.0	6.0-8.0	10.0-12.0	4.0-6.0	10.0-12.0	10.0-12.0	30.0-32.0	44.0-46.0	39.0-41.0	23.0-25.0	15.0-17.0	1.0-3.0	6.0-8.0	1.0-3.0	6.0-8.0
CLASSIFICATION (AASHTO)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
COEFF.CONSOL. (SQ.FT /DAY)	---	---	---	---	---	---	0.258	---	---	---	---	---	---	---	---	---	---	---	---
TRIAXIAL COMPRESSION	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
COHESION - PSF	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
FRICTION COEFF.	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MOISTURE CONTENT %	31.1	28.9	31.7	29.5	25.6	29.2	35.4	29.3	29.2	23.1	18.6	21.2	11.2	14.0	12.7	22.7	19.3	14.8	19.2
DRY DENSITY - PCF	95.8	93.7	94.5	---	105.9	100.4	86.4	102.0	100.6	110.9	124.1	---	137.0	129.9	---	111.5	119.7	114.1	120.7

CU-CONSOLIDATED UNDRAINED
UU-UNCONSOLIDATED UNDRAINED
UC-UNCONFINED COMPRESSION (c=1/2 Qu)

CUT MOISTURE	---					---		---			---						---		---
CUT DENSITY (lb/ft³)	---					---		---			---						---		---
PLASTIC LIMIT	22					22, 20, 15, 14		21, 19, 18, 18			20, 18, 17						17, 19, 19, 15		16, 14, 13, 14, 14, 12		18, 19, 14		

THIS SHEET IS INCLUDED TO SHOW SOIL INFORMATION.
DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.



FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Rhedin	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.16

9:34:49 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_ML063_Qsheets.dgn

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NOTE: THE WORKING BLANKETS SHOWN ON THE Q SHEETS AND ON TAB 104-5C MAY BE EXTENDED. REDUCED. OR DELETED AS FIELD CONDITIONS DICTATE AT TIME OF CONSTRUCTION

See Q.45 for details on Wick Drain Area 3

Working Blanket #10

Working Blanket #11

Working Blanket #12

Wick Drain Area 3

280+00 281+00 282+00 283+00 284+00 285+00 286+00 287+00 288+00 289+00 290+00 291+00 292+00 293+00 294+00 295+00 296+00 297+00 298+00 299+00 300+00 301+00 302+00 303+00 304+00 305+00 306+00 307+00 308+00 309+00 310+00 311+00

210th St.

211th St.

Old US 63

+00.00 Prop. Type "C" Ent. Lt. 24" Uncl. Pipe

PC 307+18

Settlement Plate #16 at Sta. 281+00 Rt. 35

Settlement Plate #17 at Sta. 282+00 Lt. 35

Settlement Plate #18 at Sta. 283+00 Rt. 35

Settlement Plate #19 at Sta. 284+00 Lt. 35

B-114 B-115 B-116 B-117 B-118 B-119 B-120 B-121 B-122 B-123 B-124 B-125 B-126 B-127 B-128 B-129 B-130 B-131 B-132 B-133 B-134 B-135 B-136 B-137 B-138 B-139 B-252 B-255 B-256 B-257 B-258 B-259 B-260 B-261 B-262

63

I J K L

0 100 FEET

US 63

FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Rhedin	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.17

9:35:00 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_ML063_Qsheets.dgn

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SHELBY TUBE CORE DATA

	B118-B1	B127-B1	B127-C2	B127-D1	B129-C1
CORE NO.					
DEPTH IN FEET	1.0-3.0	1.0-3.0	6.0-8.0	15.0-17.0	6.0-8.0
CLASSIFICATION (AASHTO)	---	---	---	---	---
COEFF.CONSOL. (SQ.FT /DAY)	---	---	1.207	---	---
TRIAXIAL COMPRESSION	---	---	---	---	---
COHESION - PSF	---	---	---	---	---
FRICTION COEFF.	---	---	---	---	---
MOISTURE CONTENT %	14.8	26.9	28.2	19.5	28.1
DRY DENSITY - PCF	122.3	100.7	95.9	---	102.3

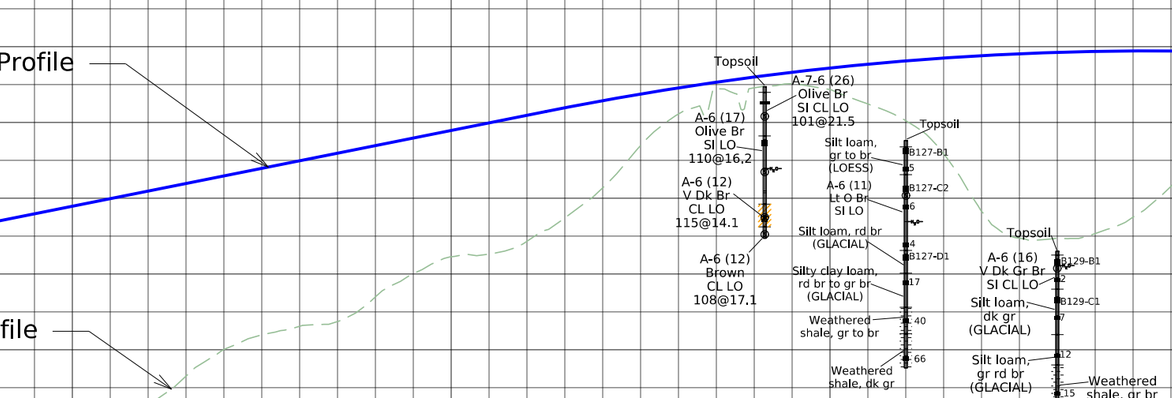
CU-CONSOLIDATED UNDRAINED
UU-UNCONSOLIDATED UNDRAINED
UC-UNCONFINED COMPRESSION (c=1/2 Qu)

CUT MOISTURE
CUT DENSITY (lb/ft^3)
PLASTIC LIMIT

B-118	B-126	B-127	B-129	B-133	B-137
---	---	---	---	---	---
---	---	---	---	---	---
21, 21, 18, 18	21	23		22, 20, 17	

Proposed Profile

Existing Profile



280+00 285+00 290+00 295+00 300+00 305+00 310+00

680 690 700 710 720 730 740 750 760 770 780 790 800 810 820 830 840 850 860 870

FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Rhedin	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.18

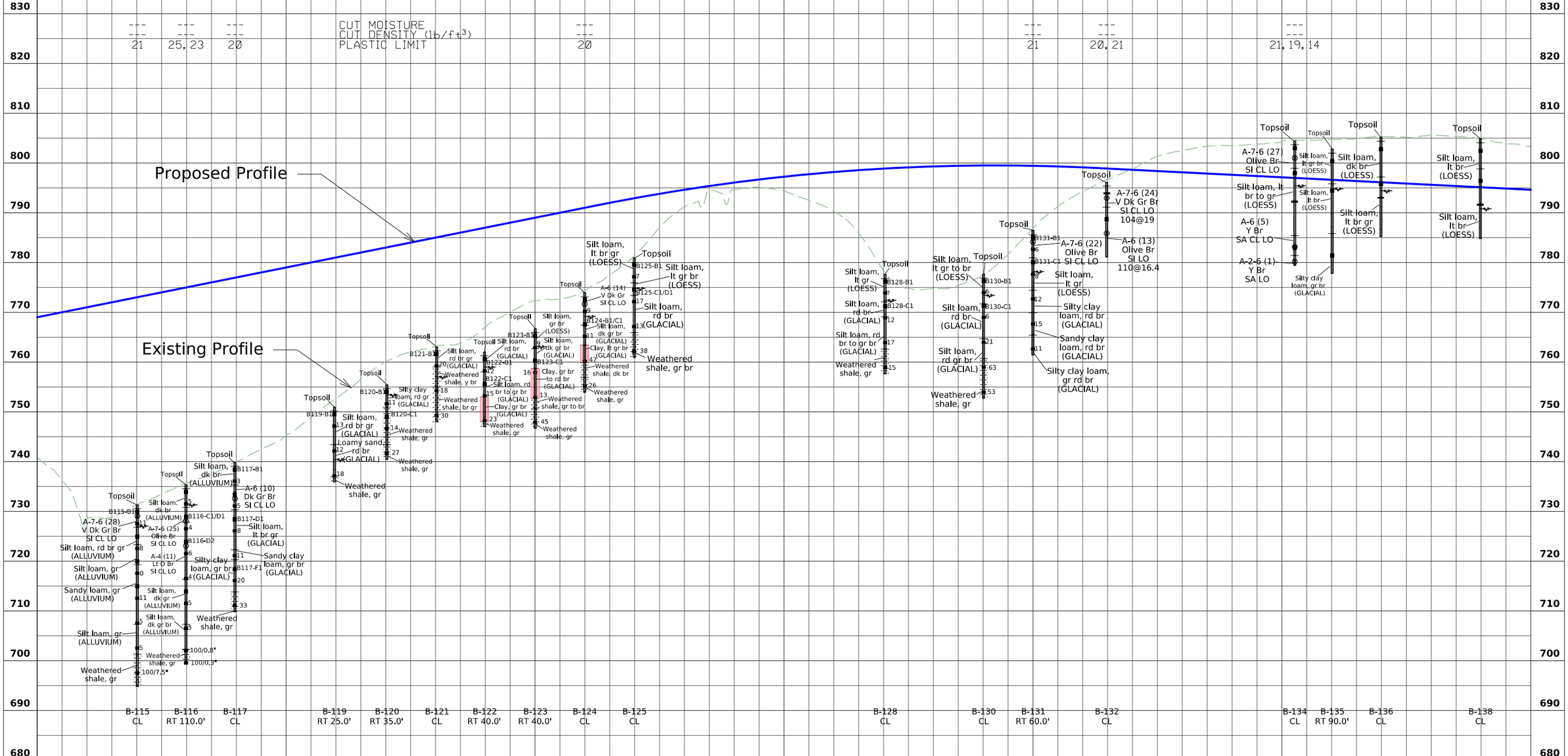
9:35:01 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_ML063_Qsheets.dgn

SHELBY TUBE CORE DATA

CORE NO.	B115-B1	B117-B1	B117-C1	B117-D1	B117-F1	B119-B1	B120-B1	B120-C1	B121-B1	B122-B1	B122-C1	B123-B1	B123-C1	B124-B1	B124-B2/C1	B125-B1	B125-C1/D1	B128-B1	B128-C1	B130-B1	B130-C1	B131-B1	B131-C1
DEPTH IN FEET	1.0-3.0	1.0-3.0	6.0-8.0	11.0-13.0	21.0-23.0	1.0-3.0	1.0-3.0	6.0-8.0	1.0-3.0	1.0-3.0	6.0-8.0	1.0-3.0	6.0-8.0	1.0-3.0	6.0-8.0	1.0-3.0	6.0-8.0	1.0-3.0	6.0-8.0	1.0-3.0	6.0-8.0	1.0-3.0	6.0-8.0
CLASSIFICATION (AASHTO)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
COEFF.CONSOL. (SQ.FT /DAY)	0.093	---	0.201	---	---	---	---	---	---	---	---	---	---	0.754	---	---	---	---	---	---	---	0.191	---
TRIAXIAL COMPRESSION	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
COHESION - PSF	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
FRICTION COEFF.	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MOISTURE CONTENT %	22.8	23.4	26.0	14.0	17.0	17.0	23.8	6.9	13.7	19.5	19.0	23.1	18.1	24.6	22.4	25.5	17.2	27.0	19.4	25.1	17.2	26.0	24.8
DRY DENSITY - PCF	97.7	107.1	95.3	133.3	125.1	116.4	109.7	127.5	136.4	104.9	122.6	111.9	123.9	92.4	113.5	105.7	120.9	105.1	116.2	106.2	117.5	90.0	109.9
CU-CONSOLIDATED UNDRAINED																							
UU-UNCONSOLIDATED UNDRAINED																							
UC-UNCONFINED COMPRESSION (c=1/2 Qu)																							

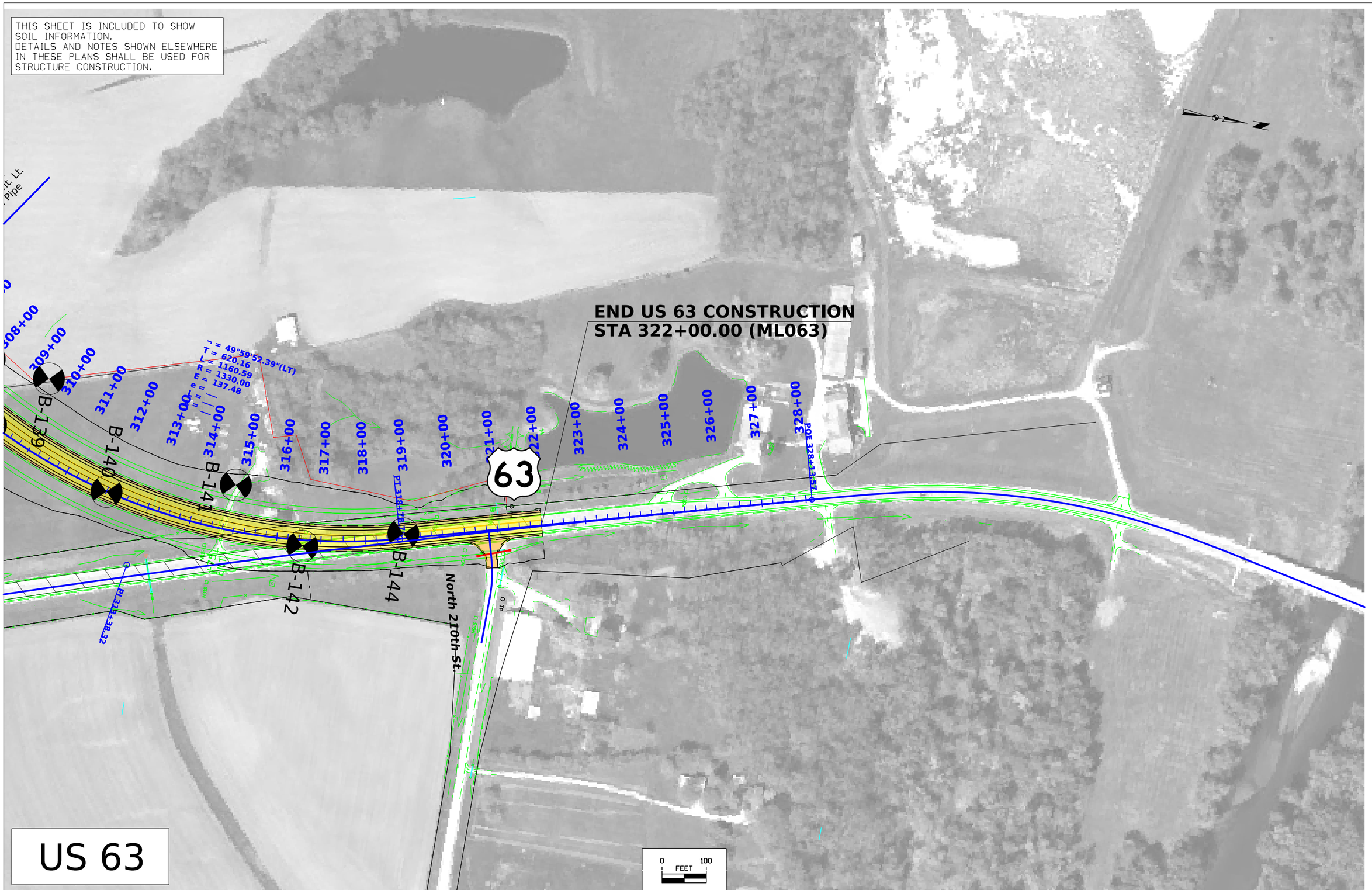
Right Offset Borings

THIS SHEET IS INCLUDED TO SHOW SOIL INFORMATION.
DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.



FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Rhedin	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.19

9:35:02 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_ML063_Qsheets.dgn



FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Rhedin	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.20

9:35:10 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_ML063_Qsheets.dgn

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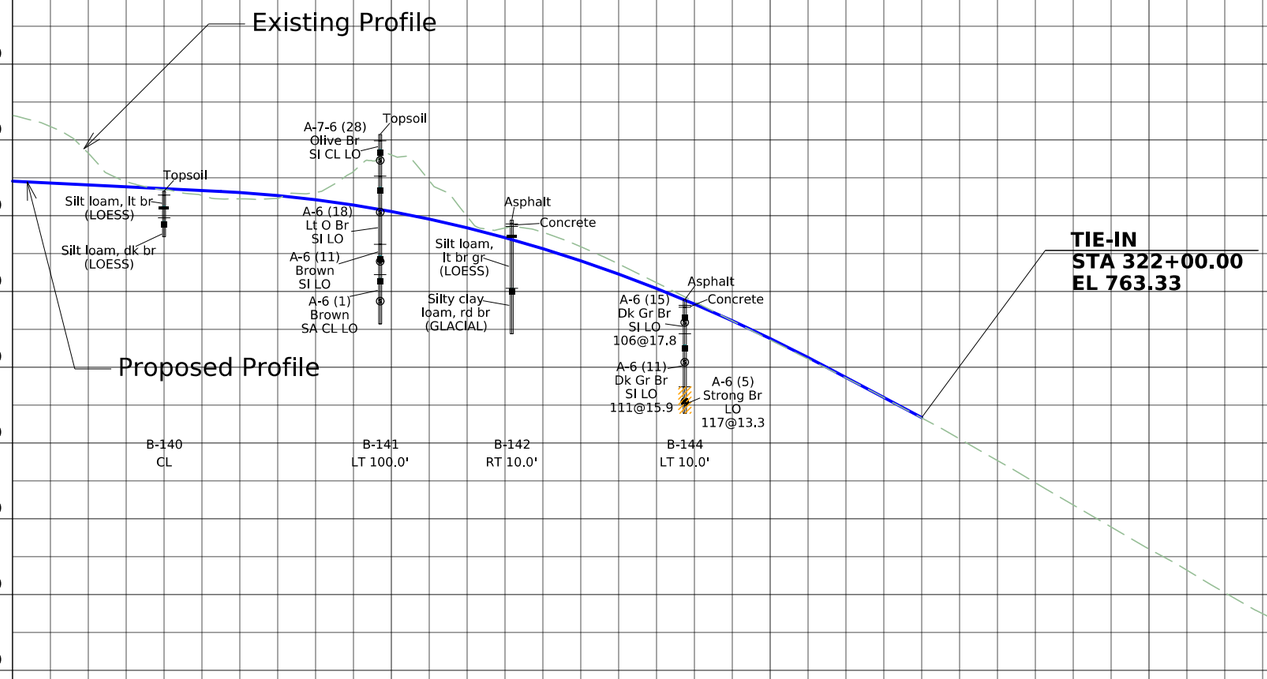
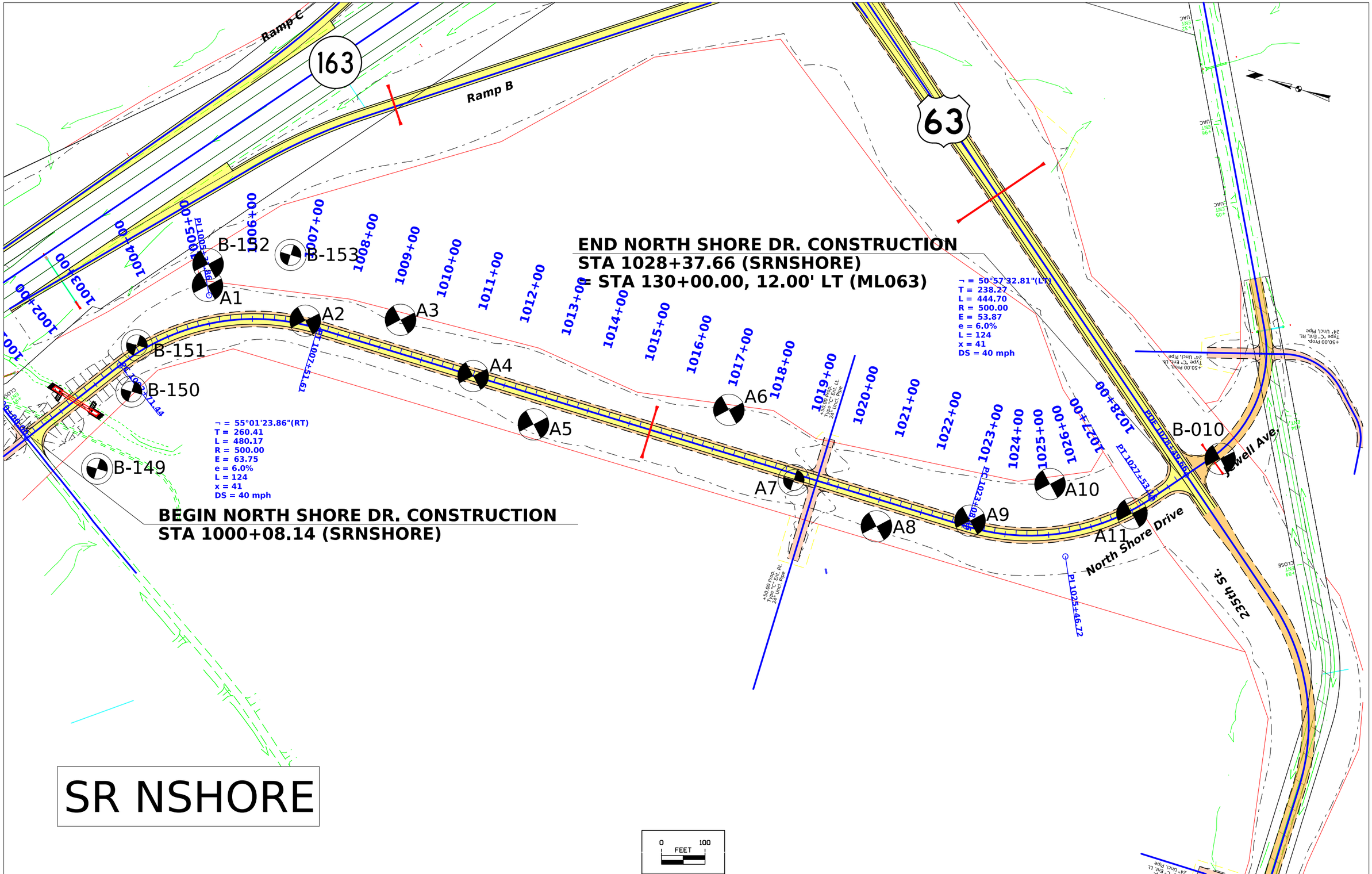
	B-140 CL	B-141 LT 100.0'	B-142 RT 10.0'	B-144 LT 10.0'
CUT MOISTURE	---	---		---
CUT DENSITY (lb/ft^3)	---	---		---
PLASTIC LIMIT		22, 21, 19, 15		21, 19, 13



FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Rhedin	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.21

9:35:11 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_ML063_Qsheets.dgn



FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Rhedin	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.22

9:35:36 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_SRNSHORE_Qsheets.dgn

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SHELBY TUBE CORE DATA

CORE NO.	B149-B1	B149-B3/C1	B149-C3/D1	B150-B1/C1	B150-D1	B151-B1	B151-D1	B153-B1	B153-C1	A2-B1	A4-B1	A7-B1	A9-C1	A11-C1
DEPTH IN FEET	1.0-3.0	6.0-8.0	10.0-12.0	1.0-3.0	6.0-8.0	1.0-3.0	6.0-8.0	1.0-3.0	6.0-8.0	1.0-2.5	3.5-5.0	0.7-2.0	12.0-14.0	22.0-24.0
CLASSIFICATION (AASHTO)	---	---	---	---	---	---	---	---	---	---	---	---	---	---
COEFF.CONSOL. (SQ.FT /DAY)	0.779	---	---	---	---	---	---	---	---	---	---	---	---	---
TRIAXIAL COMPRESSION	---	---	---	---	---	---	---	---	---	---	---	---	---	---
COHESION - PSF	---	---	---	---	---	---	---	---	---	---	---	---	---	---
FRICTION COEFF.	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MOISTURE CONTENT %	28.0	30.0	17.3	27.3	16.7	20.6	14.2	18.4	16.0	26.7	19.0	24.2	18.2	21.8
DRY DENSITY - PCF	89.0	100.9	124.0	101.0	127.4	115.2	---	---	126.5	101.9	112	97.8	110.7	105.0

CU-CONSOLIDATED UNDRAINED
UU-UNCONSOLIDATED UNDRAINED
UC-UNCONFINED COMPRESSION (c=1/2 Qu)

CUT MOISTURE
CUT DENSITY (lb/ft^3)
PLASTIC LIMIT

30 | 39 / 16, 17, 13, 15 | 11 | 15 | 17 | 16, 18 | 21 | 20 | 16 | 20, 16 | 19, 21 | 21, 19, 12 | 20, 21, 27

Topsoil
A-6 (11) LO Red
B153-B1
Silty clay loam, gr (GLACIAL)
B153-C1
Silty clay loam, gr w rd br (GLACIAL)
Silt loam, rd br (LOESS)
Silty clay loam, rd (GLACIAL)
B149-B1
A-7-5 (17) Black SI LO
B149-B3/C1
Silty clay, dk gr w br (GLACIAL)
B149-C3/D1
Loamy sand, rd br (GLACIAL)
Weathered shale, dk br
Silty clay loam, dk br (ALLUVIUM)
Silt loam, br w gr (LOESS)
B150-B1/C1
B150-D1
Weathered shale, gr w br
COAL
Weathered shale, gr
A2-B1
A-6 (5) Red LO 115.5@13.6
Silt loam, rd w gr (GLACIAL)
B151-B1
B151-D1
Weathered shale, lt gr
Very stiff, lt br w gr (GLACIAL)
Weathered shale, gr
A-7-6 (23) Red SI CL LO 108@16.8
A-7-6 (12) Dk Y Br CL LO
A-6 (7) Brown LO
A-6 (6) Dk Y Br LO
A-6 (5) Y Br LO
A4-B1
A-6 (9) Red SI LO
A-6 (13) Red SI LO 107@16.5
A-6 (10) Red CL LO 110.7@15.1
A-7-6 (26) Red CL 104.1@18.6
Silt Loam, lt or br (GLACIAL)
A-7-6 (24) Dk red gr
A7-B1
Silty clay loam, or br w gr (GLACIAL)
Loam, red (LOESS)
Silty clay loam, or br w gr (GLACIAL)
A-7-6 (25) Red SI CL LO 104.9@16.8
Silty clay loam, gr or br (GLACIAL)
A9-C1
A-6 (8) Red LO 116.6@13.1
A-7-6 (23) Red SI LO 103.7@19.5
A-7-6 (36) Red SI CL LO 100.2@20.7
Loamy Sand, or br (GLACIAL)
A-7-6 (34) Red SI CL LO 100@19.9
A-7-6 (13) Red CL LO 105.7@16.8
A-6 (4) Red LO 120.4@11.2
A11-C1
A-7-6 (32) Lt O Br SI CL LO 106@18.2
A-7-6 (36) Brown CL 91@26.2
A-6 (17) Brown SI LO 110@16.2
Silty clay loam, gr w br (GLACIAL)
Silt loam, br w gr (GLACIAL)
Sandy loam, br (GLACIAL)
Sandy loam, br (GLACIAL)

Select Loam
Select Loam
Select Loam
Waste
Waste
Waste
Unsuit Type B

A1 LT 97.0'
A2 LT 16.0'
A3 LT 83.0'
A4 LT 9.0'
A5 RT 56.0'
A6 LT 104.0'
A7 RT 5.0'
A8 RT 51.0'
A9 LT 21.0'
A10 LT 121.0'
A11 CL

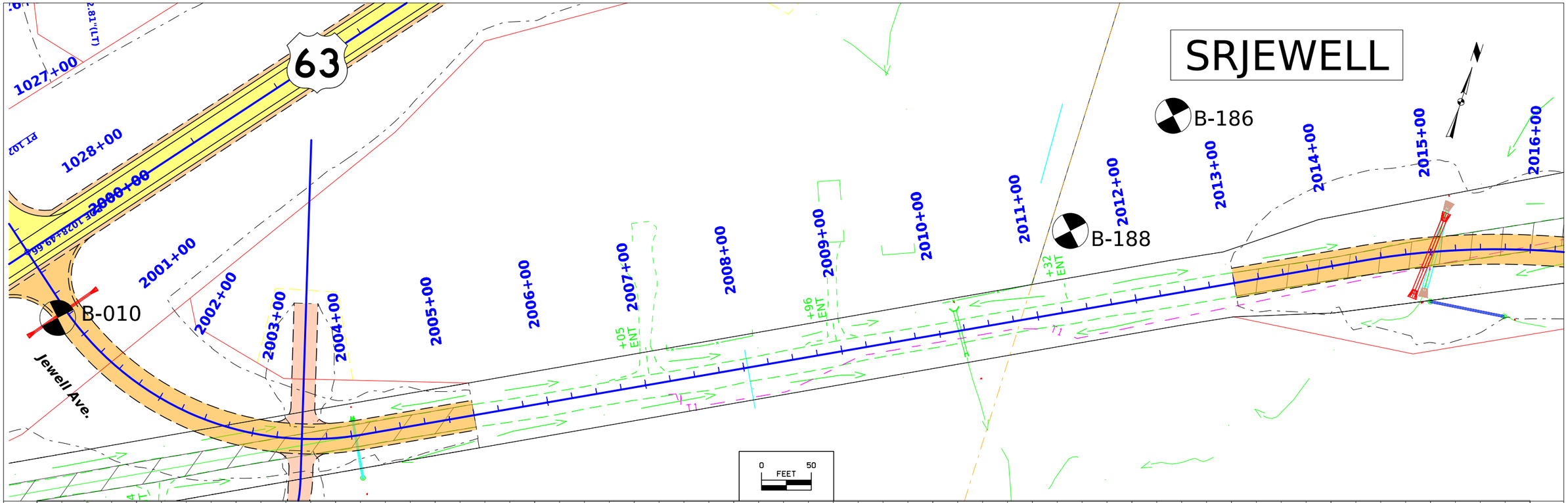
B-149 RT 17.0'
B-150 RT 53.0'
B-151 LT 13.0'
B-152 LT 77.0'
B-153 RT 20.0'
B-010 LT 8.0'

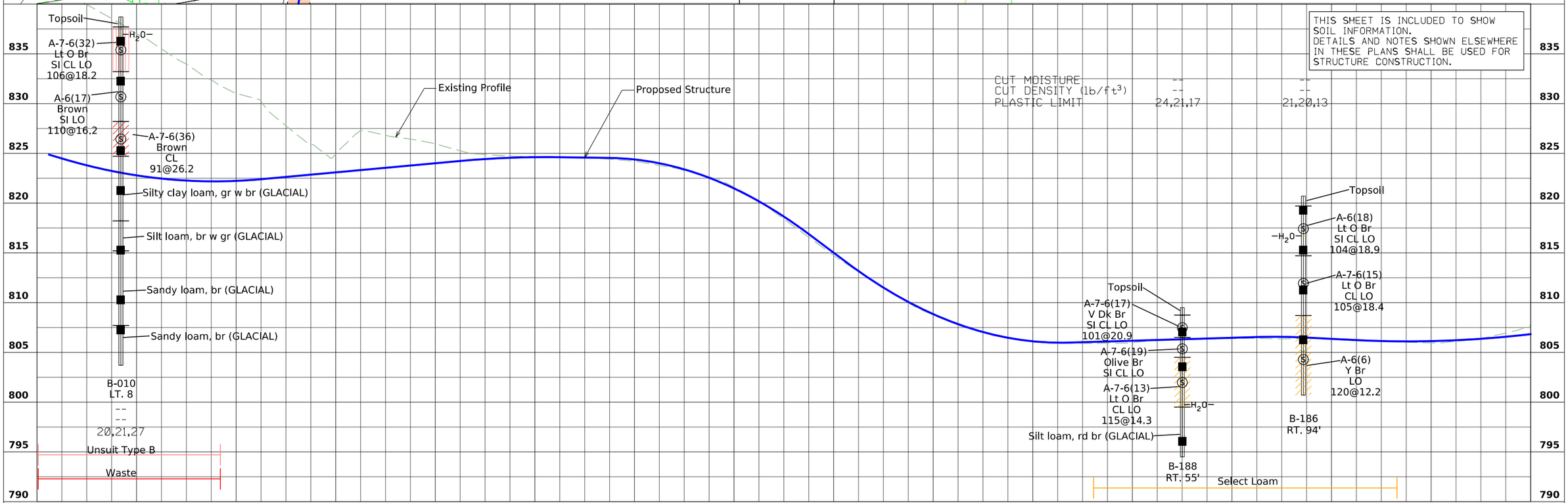
1000+00 | 1005+00 | 1010+00 | 1015+00 | 1020+00 | 1025+00

FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Rhedin	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.23

9:35:41 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_SRNSHORE_Qsheets.dgn

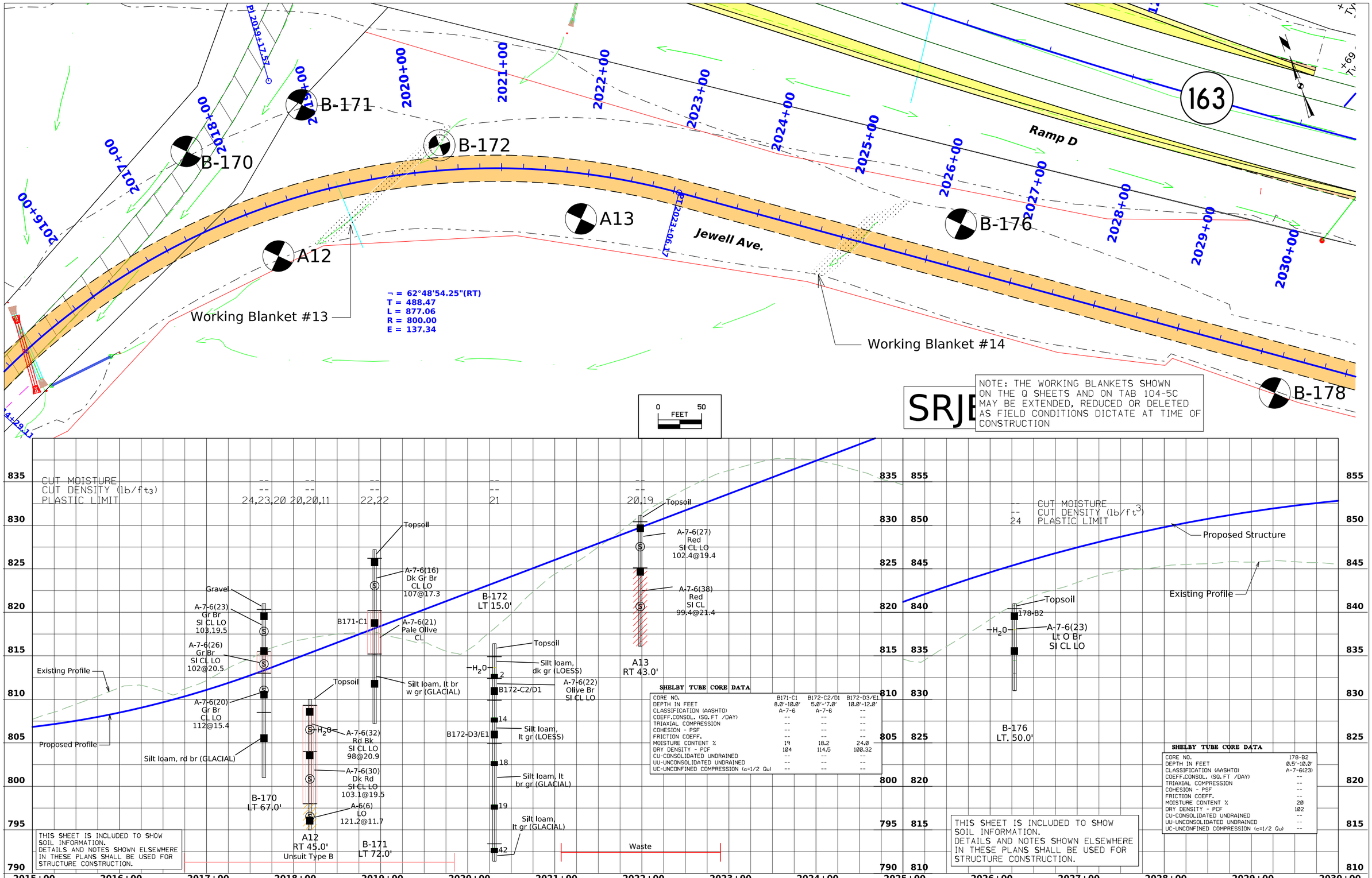
SRJEWELL





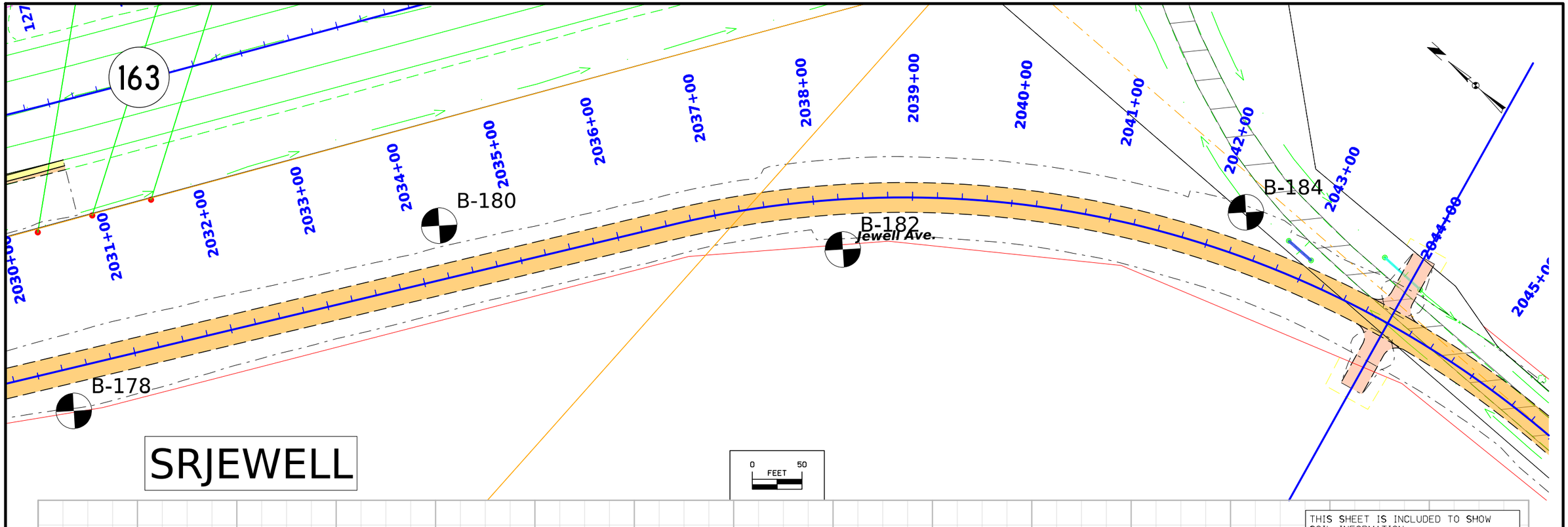
FILE NO.	ENGLISH	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER
32164		**Dell/Immel/Hershey**	**Mahaska**	**NHSX-063-3(95)--3H-62**	**Q.24**

9:35:57 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_SRJEWELL_Qsheets.dgn



FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Hershey	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.25

9:36:01 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_SRJEWELL_Qsheets.dgn



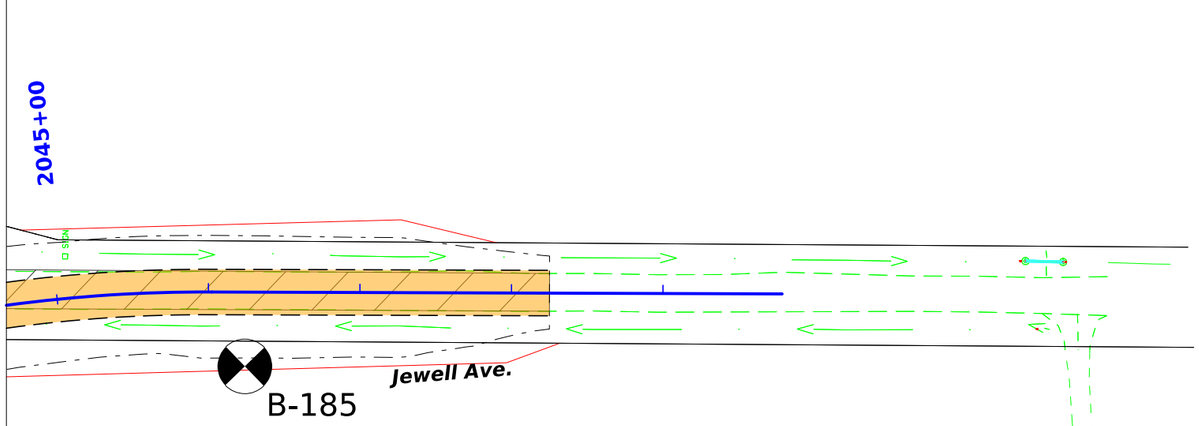
THIS SHEET IS INCLUDED TO SHOW SOIL INFORMATION.
DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.

SHELBY TUBE CORE DATA

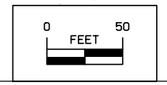
CORE NO.	B178-B1
DEPTH IN FEET	1'-2.5'
CLASSIFICATION (AASHTO)	A-7-6(23)
COEFF.CONSOL. (SQ.FT /DAY)	--
TRIAXIAL COMPRESSION	--
COHESION - PSF	--
FRICTION COEFF.	--
MOISTURE CONTENT %	20
DRY DENSITY - PCF	102
CU-CONSOLIDATED UNDRAINED	--
UU-UNCONSOLIDATED UNDRAINED	--
UC-UNCONFINED COMPRESSION (q=1/2 Qu)	--

FILE NO.	ENGLISH	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER
32164		Dell/Immel/Hershey	Mahaska	NHSX-063-3(95)--3H-62	Q.26

9:36:03 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_SRJEWELL_Qsheets.dgn



SRJEWELL



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IN THESE PLANS SHALL BE USED FOR
STRUCTURE CONSTRUCTION.



FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Hershey	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.27

9:36:04 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_SRJEWELL_Qsheets.dgn

END INDEPENDENCE AVE. CONSTRUCTION
STA 4009+04.88 (SRINDEP)
= STA 159+40.00, 20.00' LT (ML063)

SRINDEP

BEGIN INDEPENDENCE AVE. CONSTRUCTION
STA 4000+12.92 (SRINDEP)

Independence Ave.

Old IA 163

63

B-193 A14 A15 A16 B-195

Δ = 43°49'04.58"(RT)
T = 201.09
L = 382.38
R = 500.00
E = 38.92

+50.00 Prop. Ent. Pipe "C" Type "C" 24" Uncl. Pipe

Prop. Ent. Rt. Pipe

0 FEET 50

TIE-IN
STA 4000+12.92
EL 838.23

TIE-IN
STA 4009+04.88
EL 850.09

CUT MOISTURE
CUT DENSITY (lb/ft³)
PLASTIC LIMIT

22, 21 — 22, 22 20 — 20, 19 — 22, 22

Existing Profile
Proposed Profile

Topsoil
A-7-6 (36) Dk Y Br SI CL LO 99.8@20.5
A-7-6 (45) Red SI CL 96.5@23.1
Unsuitable B
A14 LT 36.0'

Topsoil
A-7-6 (28) Lt O Br SI CL LO
A-6 (17) Lt O Br SI CL LO
Silty clay loam, gr (GLACIAL)
Topsoil
A-7-6 (25) Red SI CL LO 102.9@19
Silt Loam, lt gr br (LOESS)
B-193 RT 48.0' A15 RT 35.0'

Topsoil
A-7-6 (28) Red SI CL LO 101.6@19.5
A-6 (21) Red SI CL LO 105.8@16.8
A16 LT 42.0'

Topsoil
A-7-6 (32) Dk Gr Br SI CL LO 106@18
A-7-6 (18) Olive Br SI CL LO 108@17.1
B-195 RT 62.0'

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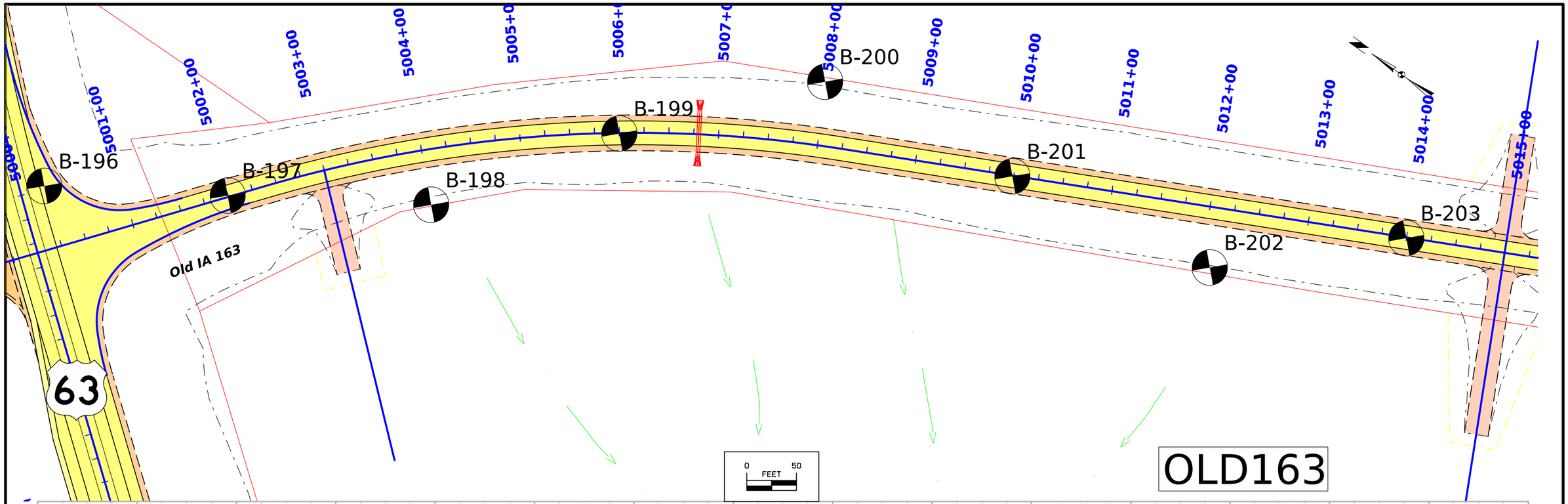
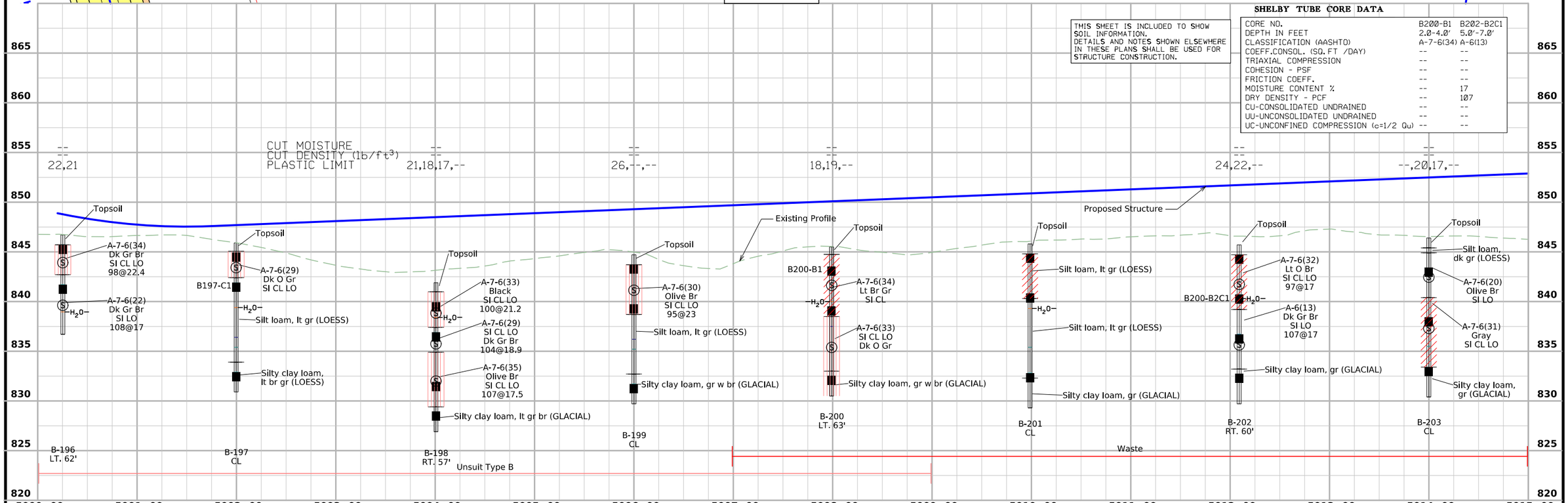
FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Rhedin	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.28

9:36:16 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_SRINDEP_Qsheets.dgn





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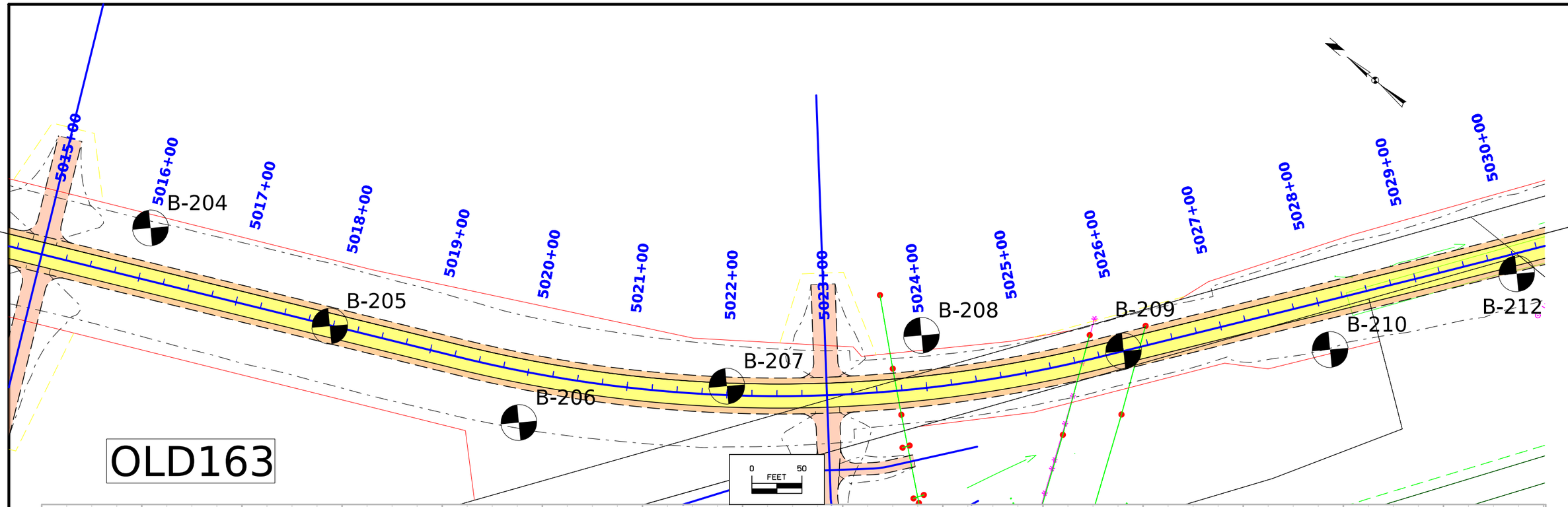
SHELBY TUBE CORE DATA

CORE NO.	B200-B1	B202-B2C1
DEPTH IN FEET	2.0-4.0'	5.0'-7.0'
CLASSIFICATION (AASHTO)	A-7-6(34)	A-6(13)
COEFF.CONSOL. (SQ.FT /DAY)	--	--
TRIAXIAL COMPRESSION	--	--
COHESION - PSF	--	--
FRICTION COEFF.	--	--
MOISTURE CONTENT %	--	17
DRY DENSITY - PCF	--	107
CU-CONSOLIDATED UNDRAINED	--	--
UU-UNCONSOLIDATED UNDRAINED	--	--
UC-UNCONFINED COMPRESSION (c=1/2 Qu)	--	--

FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Hershey	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.29

9:36:37 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_SROLD163_Qsheets.dgn



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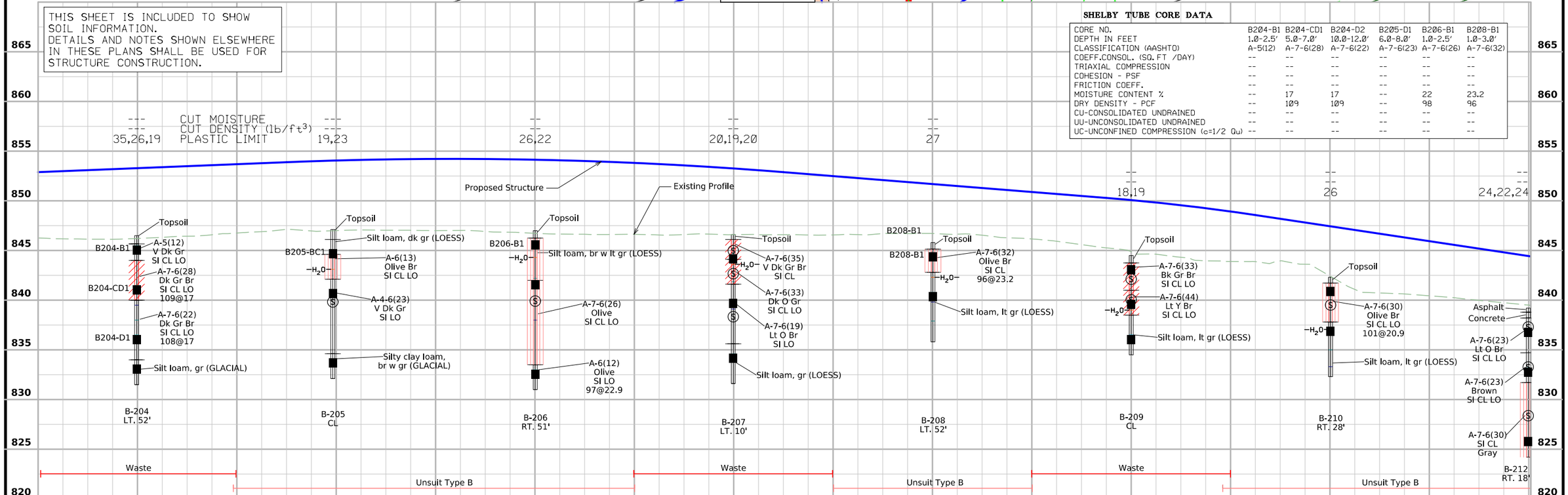
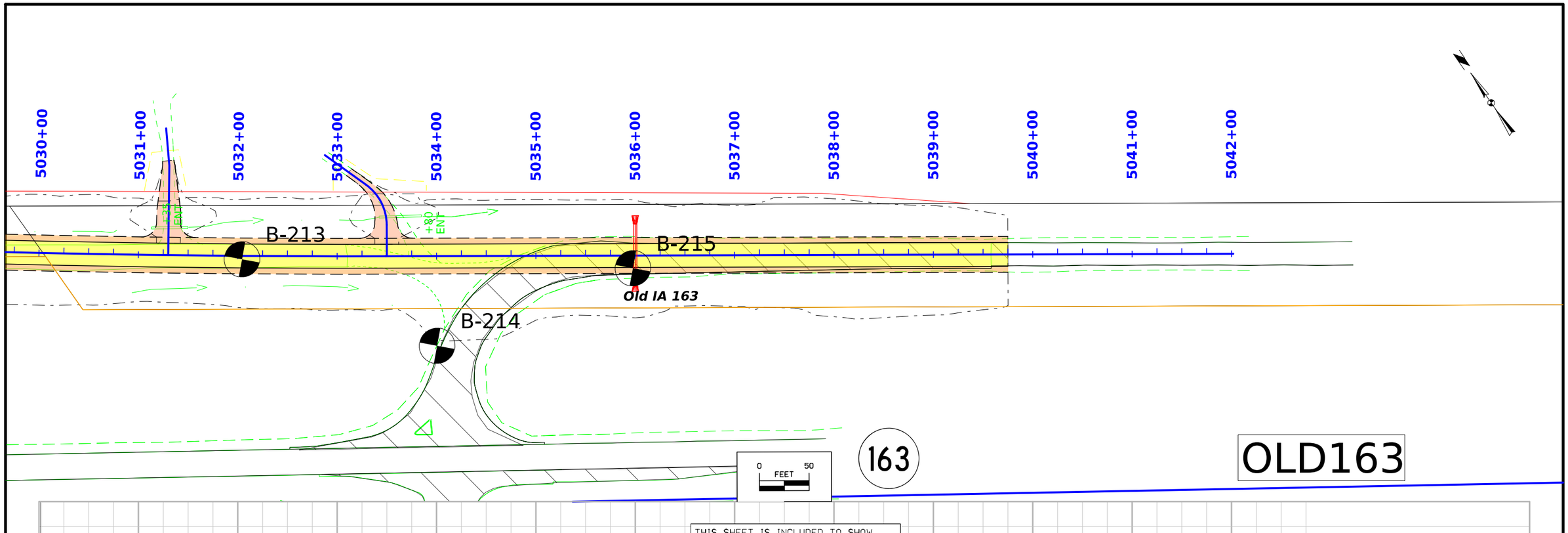
SHELBY TUBE CORE DATA

CORE NO.	B204-B1	B204-CD1	B204-D2	B205-D1	B206-B1	B208-B1
DEPTH IN FEET	1.0-2.5'	5.0-7.0'	10.0-12.0'	6.0-8.0'	1.0-2.5'	1.0-3.0'
CLASSIFICATION (AASHTO)	A-5(12)	A-7-6(28)	A-7-6(22)	A-7-6(23)	A-7-6(26)	A-7-6(32)
COEFF.CONSOL. (SQ.FT /DAY)	--	--	--	--	--	--
TRIAXIAL COMPRESSION	--	--	--	--	--	--
COHESION - PSF	--	--	--	--	--	--
FRICTION COEFF.	--	--	--	--	--	--
MOISTURE CONTENT %	--	17	17	--	22	23.2
DRY DENSITY - PCF	--	109	109	--	98	96
CU-CONSOLIDATED UNDRAINED	--	--	--	--	--	--
UU-UNCONSOLIDATED UNDRAINED	--	--	--	--	--	--
UC-UNCONFINED COMPRESSION (c=1/2 Qu)	--	--	--	--	--	--



FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Hershey	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.30

9:36:41 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_SROLD163_Qsheets.dgn



CUT MOISTURE	--	--			
CUT DENSITY (lb/ft³)	--	--			
PLASTIC LIMIT	21,25,23,22	18,22,24			

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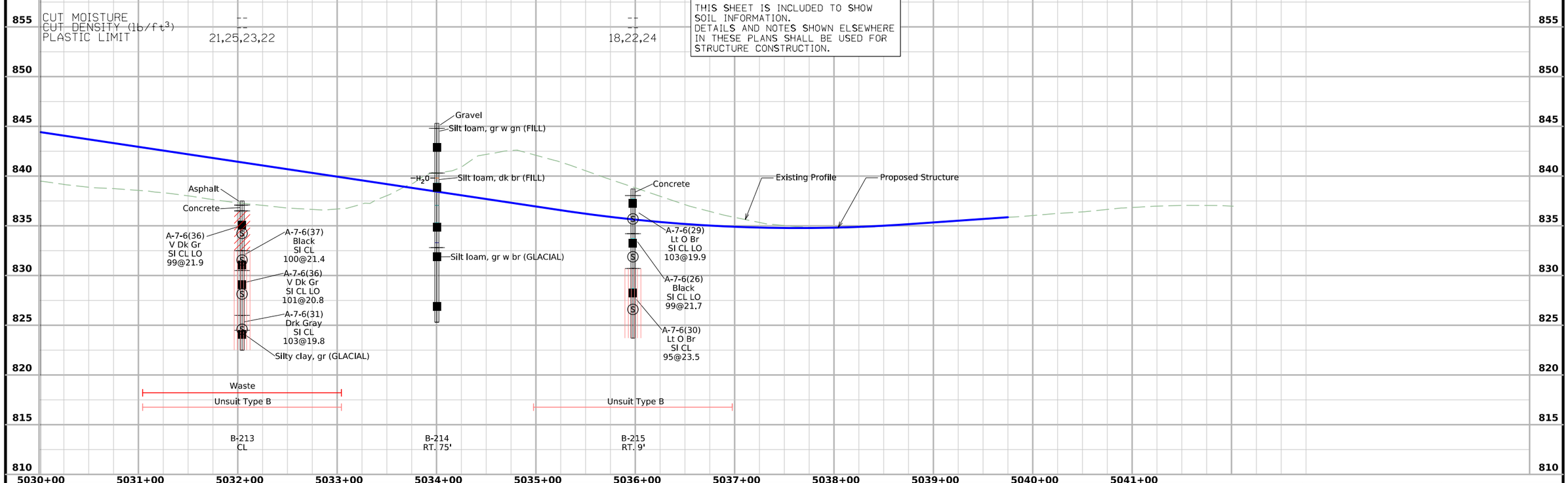

FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Hershey	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.31

9:36:42 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_SROLD163_Qsheets.dgn

KIRBY AVE

NOTE: THE WORKING BLANKETS SHOWN ON THE Q SHEETS AND ON TAB 104-5C MAY BE EXTENDED, REDUCED OR DELETED AS FIELD CONDITIONS DICTATE AT TIME OF CONSTRUCTION

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BEGIN KIRBY AVE. CONSTRUCTION
STA 6000+50.00 (SRKIRBY)

TIE-IN
STA 6017+47.24 (SRKIRBY)
= STA 222+00.00,
12.00' LT (ML063)

Working Blanket #15

Backslope Subdrain #20

Drain Outlet
Sta. 6005+75

Drain Outlet
Sta. 6009+00

Drain Outlet
Sta. 6007+75

Drain Outlet
Sta. 6012+25

Backslope Subdrain #19

Drain Outlet
Sta. 6010+00

Backslope Subdrain #18

+00.00 Prop. Type "C" Ent. Lt. 24" Uncl. Pipe

+55.00 Prop. Type "C" Ent. Rt.

+25.00 Prop. Jct. Type "C" Ent. Rt. 24" Uncl. Pipe

B-216 B-219 B-221 B-223 B-225 B-227 B-229 B-231 B-232 B-073

Kirby Ave.

63

0 50 FEET

FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Rhedin	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.32

9:36:54 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_SRKIRBY_Qsheets.dgn

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CUT MOISTURE
CUT DENSITY (lb/ft^3)
PLASTIC LIMIT

21, 22, 18 | 21, 19, 21, 19 | 37, 20, 19, 13, 17, 27 | 22, 20, 14, 15, 13 | 20, 20, 15, 20, 15 | 22, 18, 14, 13 | 24, 20, 26

TIE-IN
STA 6000+50.00
EL 802.58

Existing Profile
Proposed Profile

Gravel
A-7-6 (20)
V Dk Gr Br
Sl CL LO
103@19.8
A-6 (17)
V Dk Gr Br
Sl CL LO
104@18.9
A-7-6 (18)
Dk Y Br
CL LO
103@19.4

Gravel
A-7-6 (24)
Dk Gr
Sl CL LO
108@17.3
A-7-6 (27)
Black
Sl CL LO
101@20.9
A-7-6 (33)
Olive Br
Sl CL LO
106@20.3
A-7-6 (26)
Lt O Br
CL LO
104@19.3
Silt loam,
lt gr br
(GLACIAL)

Topsoil
A-7-5 (16)
Lt O Br
Sl CL LO
100@21.4
H_2O
A-7-6 (16)
Y Br
CL LO
102@20.4
A-6 (10)
Y Br
CL LO
115@14.2
A-7-6 (13)
Y Br
CL LO
106@18.1
A-6 (11)
Y Br
CL LO
119@12.7
A-7-6 (20)
Gray
Sl CL
114@14.2
Shale

Topsoil
A-7-6 (28)
Lt O Br
Sl CL LO
A-6 (18)
Lt O Br
Sl LO
H_2O
A-6 (7)
Dk Y Br
Sl LO
A-7-6 (21)
Olive Br
CL LO
A-6 (8)
Brown
LO
Sandy clay loam,
rd br (GLACIAL)
Weathered shale,
dk br w rd
Weathered
shale, gr
Weathered shale,
lt gr to rd

Topsoil
A-7-6 (31)
Lt O Br
Sl CL LO
99@21.8
H_2O
A-6 (19)
Dk Gr Br
Sl LO
109@16.7
A-4 (3)
Brown
Sl LO
120@12.1
A-7-6 (24)
Y Br
CL
101@20.5
A-6 (8)
Y Br
LO
119@12.7
Silt loam, rd
br gr (GLACIAL)
Weathered
shale, rd br
Weathered
shale, gr
Weathered
shale, gr
Weathered shale,
dk gr br

Topsoil
A-7-6 (21)
V Dk Gr Br
Sl CL LO
H_2O
A-7-6 (23)
Dk Gr Br
CL LO
A-6 (14)
Lt O Br
CL LO
A-6 (12)
Olive Br
CL LO
Weathered
shale, gr

Topsoil
A-6 (15)
Black
Sl CL LO
100@21.4
H_2O
A-6 (21)
Dk Gr Br
Sl CL LO
104@18.9
A-6 (25)
Dk Gr Br
CL
107@17.4
Weathered shale, dk gr
Weathered shale, lt gr
Moved for Clarity

Unsuit Type B
Unsuit Type B
Select Loam
Shale
Shale

B-216
RT 13.0'
B-219
RT 3.0'
B-221
RT 98.0'
B-223
LT 118.0'
B-225
RT 122.0'
B-227
LT 100.0'
B-229
RT 80.0'

835 830 825 820 815 810 805 800 795 790 785 780 775 770 765 760 755 750 745 740

6000+00 6001+00 6002+00 6003+00 6004+00 6005+00 6006+00 6007+00 6008+00 6009+00 6010+00 6011+00 6012+00 6013+00 6014+00 6015+00

FILE NO. **32164**	ENGLISH	DESIGN TEAM **Dell/Immel/Rhedin**	**Mahaska** COUNTY	PROJECT NUMBER **NHSX-063-3(95)--3H-62**	SHEET NUMBER **Q.33**

9:36:55 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_SRKIRBY_Qsheets.dgn

NOTE: THE WORKING BLANKETS SHOWN ON THE Q SHEETS AND ON TAB 104-5C MAY BE EXTENDED, REDUCED OR DELETED AS FIELD CONDITIONS DICTATE AT TIME OF CONSTRUCTION

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Working Blanket #16

Backslope Subdrain #21

Drain Outlet
Sta. 6026+25

Kirby Ave.

B-073

B-229

B-231

B-232

B-233

B-234

B-236

B-238

B-240

63

6016+00
6017+00
6018+00
6019+00
6020+00
6021+00
6022+00
6023+00
6024+00
6025+00
6026+00
6027+00
6028+00
6029+00
6030+00
6031+00

Δ = 47°26'32.57"(RT)
T = 219.71
L = 414.01
R = 500.00
E = 46.14

TIE-IN
STA 6017+71.24 (SRKIRBY)
= STA 222+00.00, 12.00' RT (ML063)

TIE-IN
STA 6017+47.24 (SRKIRBY)
= STA 222+00.00,
12.00' LT (ML063)

+50.00 Prop.
Type "C" Ent. Rt.
24" Uncl. Pipe

KIRBY AVE

0 FEET 50

FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Rhedin	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.34

9:36:57 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_SRKIRBY_Qsheets.dgn

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---	---	---	---	---	---
---	---	---	---	---	---
18, 20, 20	24, 21, 20, 18	21	CUT MOISTURE CUT DENSITY (lb/ft^3) PLASTIC LIMIT	21, 15, 13, 15, 14	21, 17, 15, 14	23, 23, 15, 14

SHELBY TUBE CORE DATA

CORE NO.	B234-C1
DEPTH IN FEET	6.0-8.0
CLASSIFICATION (AASHTO)	---
COEFF.CONSOL. (SQ.FT /DAY)	0.376
TRIAXIAL COMPRESSION	---
COHESION - PSF	---
FRICTION COEFF.	---
MOISTURE CONTENT %	27.7
DRY DENSITY - PCF	94.1
CU-CONSOLIDATED UNDRAINED	---
UU-UNCONSOLIDATED UNDRAINED	---
UC-UNCONFINED COMPRESSION (c=1/2 Qu)	---

TIE-IN
STA 6017+47.24
EL 776.88

TIE-IN
STA 6017+71.24
EL 776.88

Existing Profile

Proposed Profile

B-231
Lt 6.0'
Topsoil
A-7-6 (31)
Olive Br
SI CL LO
H_2O
A-6 (17)
Lt O Br
SI CL LO
A-7-6 (34)
Lt Y Br
SI CL
Weathered
shale, lt gr

B-232
RT 95.0'
Topsoil
A-7-6 (21)
Black
SI CL LO
99@21.6
H_2O
A-7-6 (24)
V Dk Gr
SI CL LO
105@18.4
A-7-6 (23)
Dk Gr Br
SI CL LO
107@18.5
A-6 (9)
Dk Gr Br
CL LO
117@13.2

B-073
CL
Topsoil
Silt loam,
lt br w gr
(GLACIAL)
Weathered
shale, gr
Weathered
shale, gr
Weathered
shale, gr

B-233
LT 2.0'
Topsoil
Silt loam, dk
br (ALLUVIUM)
H_2O
7
Silt loam,
dk br w gr
(GLACIAL)
7
Silt loam,
gr w dk br
(GLACIAL)
4
Silt loam, lt gr
(GLACIAL)
0
17
41
Weathered
shale, gr br
Weathered
shale, lt gr
100

B-234
RT 48.0'
Topsoil
B234-B1
Silt loam, dk br
(ALLUVIUM)
7
A-7-6 (19)
Dk Gr
SI CL LO
B234-C1
H_2O
7
Silt loam, dk br
(ALLUVIUM)
B234-E1
33
96
Weathered
shale, dk gr
70

B-236
LT 6.0'
Topsoil
A-7-6 (22)
Lt O Br
SI CL LO
108@17.2
H_2O
A-6 (7)
Brown
LO
116@13.5
A-6 (7)
Y Br
LO
109@16.3
A-4 (0)
Dk Y Br
SA LO
126@10.7
A-6 (4)
LO
117@13.1
Weathered
shale, dk gr

B-238
LT 5.0'
Topsoil
A-7-6 (31)
Dk Gr Br
SI CL LO
H_2O
A-6 (17)
Gr Br
SI LO
A-6 (11)
Brown
CL LO
A-6 (5)
Brown
LO
Silt loam, gr
rd br (GLACIAL)
Weathered
shale, dk gr

B-240
LT 2.0'
Topsoil
A-7-6 (20)
Gr Br
SI CL LO
105@18.5
H_2O
A-7-6 (21)
Brown
CL
102@20.4
A-6 (7)
Brown
LO
A-6 (5)
Brown
LO
124@11.1
Weathered shale,
dk rd br

Unsuit Type B
Shale
Select Loam
Unsuit Type B
Select Loam
Unsuit Type B

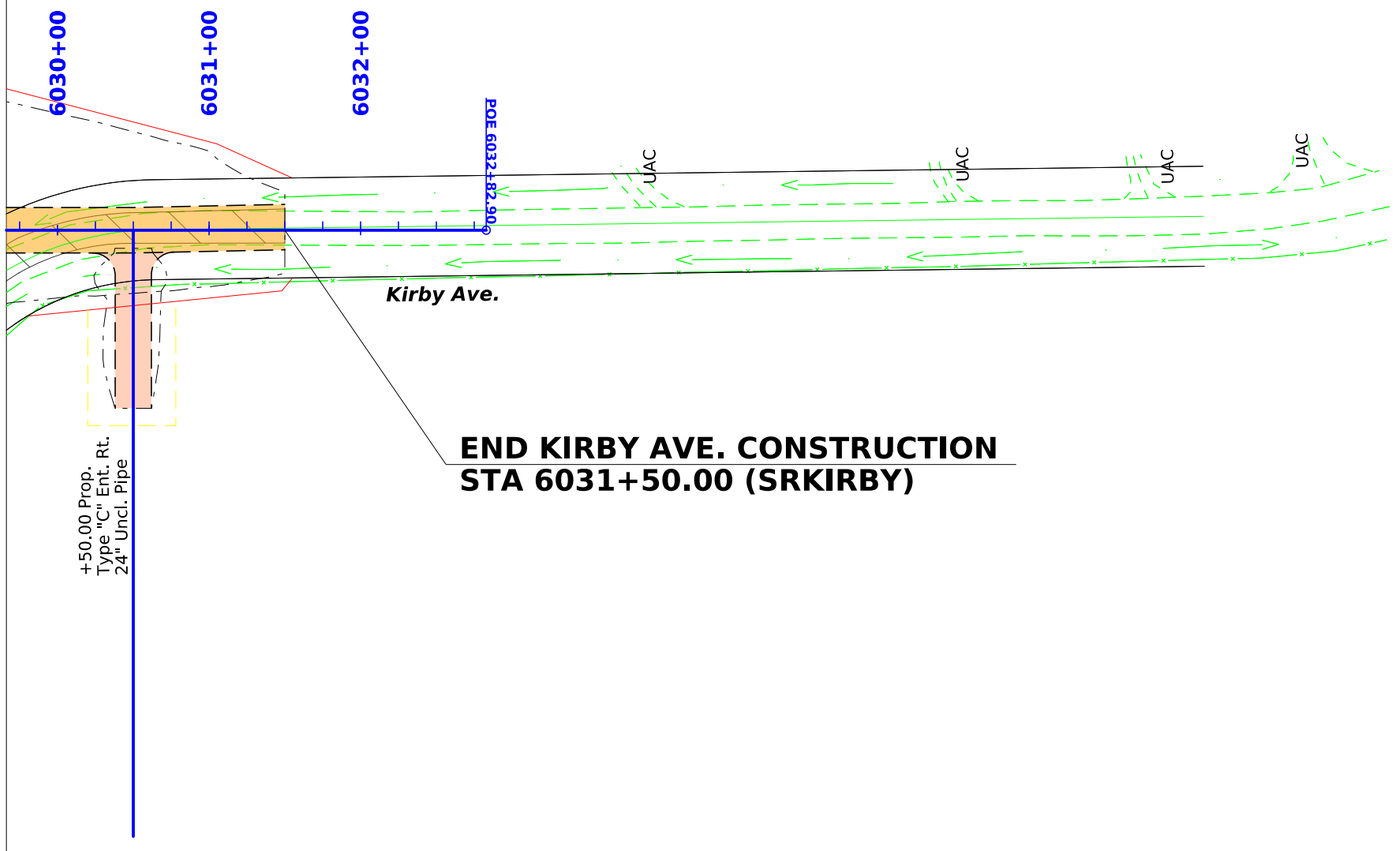
6015+00 6016+00 6017+00 6018+00 6019+00 6020+00 6021+00 6022+00 6023+00 6024+00 6025+00 6026+00 6027+00 6028+00 6029+00 6030+00

FILE NO.	ENGLISH	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER
32164		**Dell/Immel/Rhedin**	**Mahaska**	**NHSX-063-3(95)--3H-62**	**Q.35**

9:36:59 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_SRKIRBY_Qsheets.dgn

KIRBY AVE

THIS SHEET IS INCLUDED TO SHOW SOIL INFORMATION.
DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.



END KIRBY AVE. CONSTRUCTION
STA 6031+50.00 (SRKIRBY)

0 50 FEET

FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Rhedin	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.36	

9:37:00 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_SRKIRBY_Qsheets.dgn

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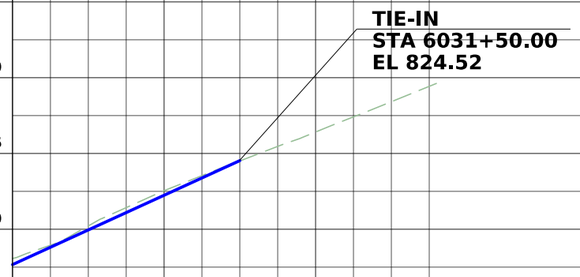
DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.



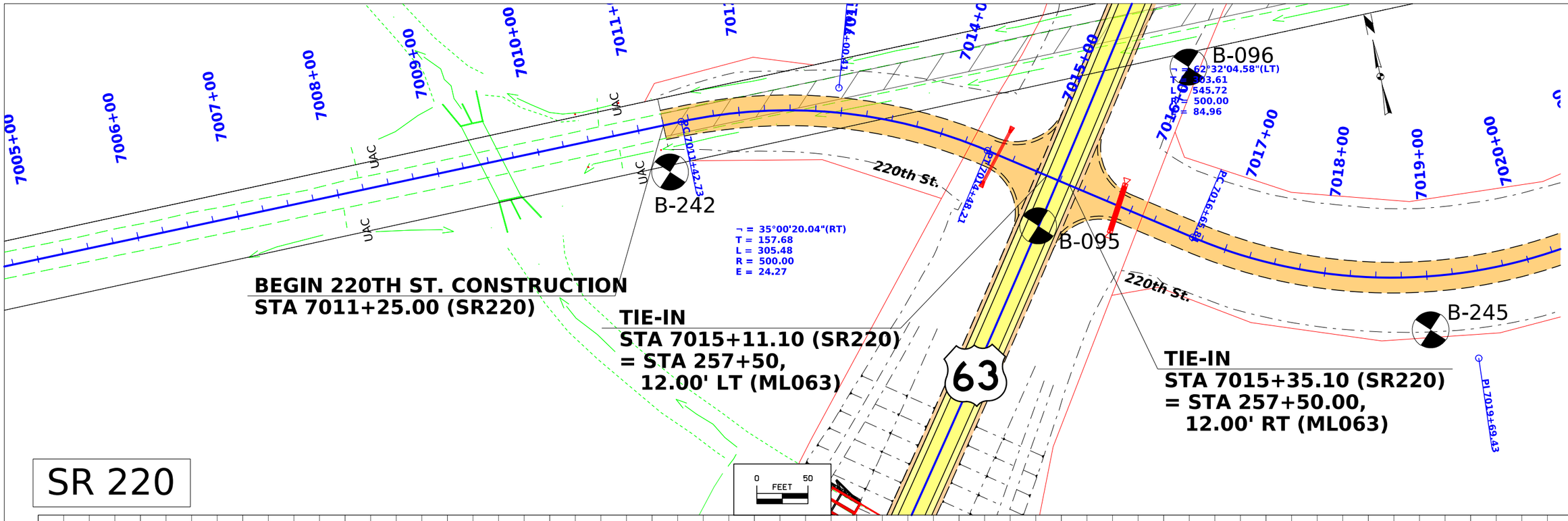
865 860 855 850 845 840 835 830 825 820 815 810 805 800 795 790 785 780 775 770

6030+00 6031+00 6032+00

FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Rhedin	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.37

9:37:00 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_SRKIRBY_Qsheets.dgn

SR 220



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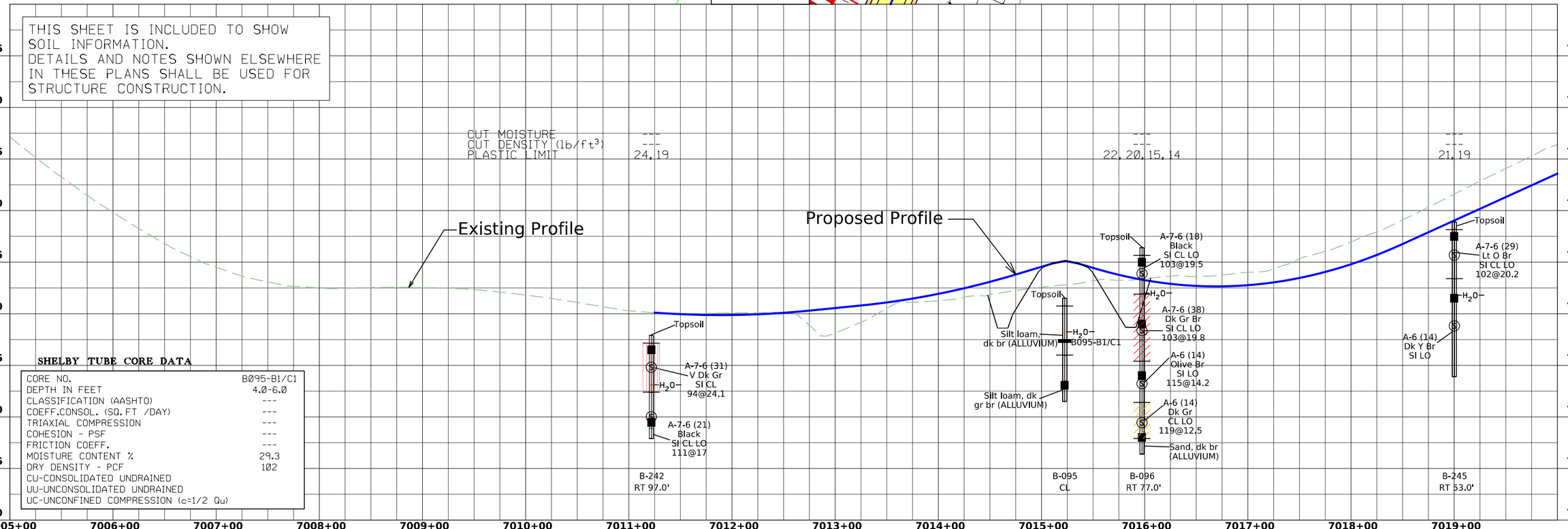
DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.

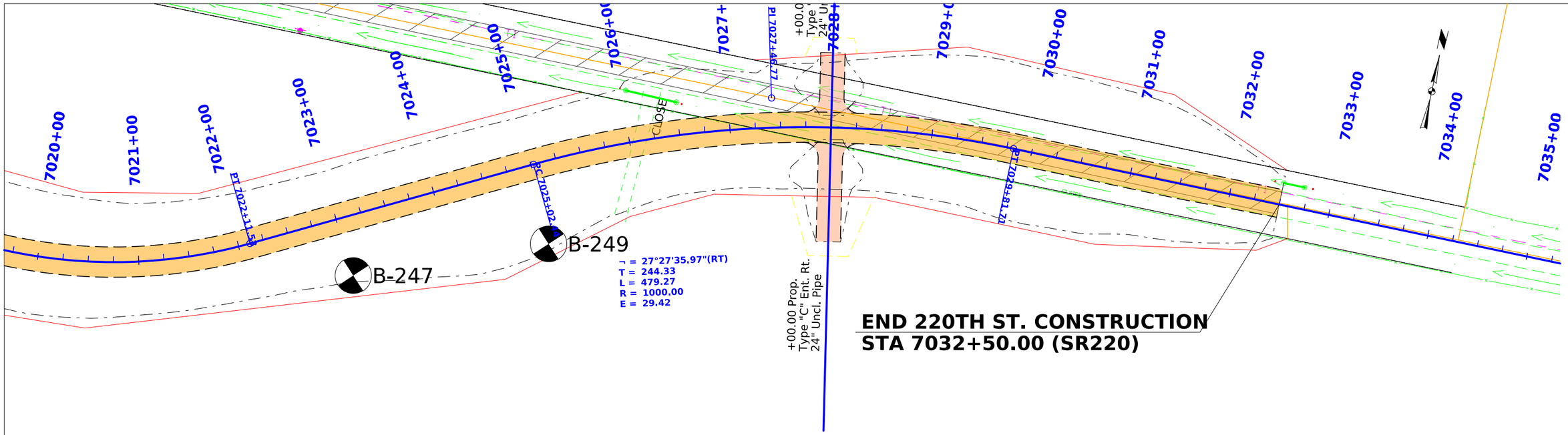


SHELBY TUBE CORE DATA

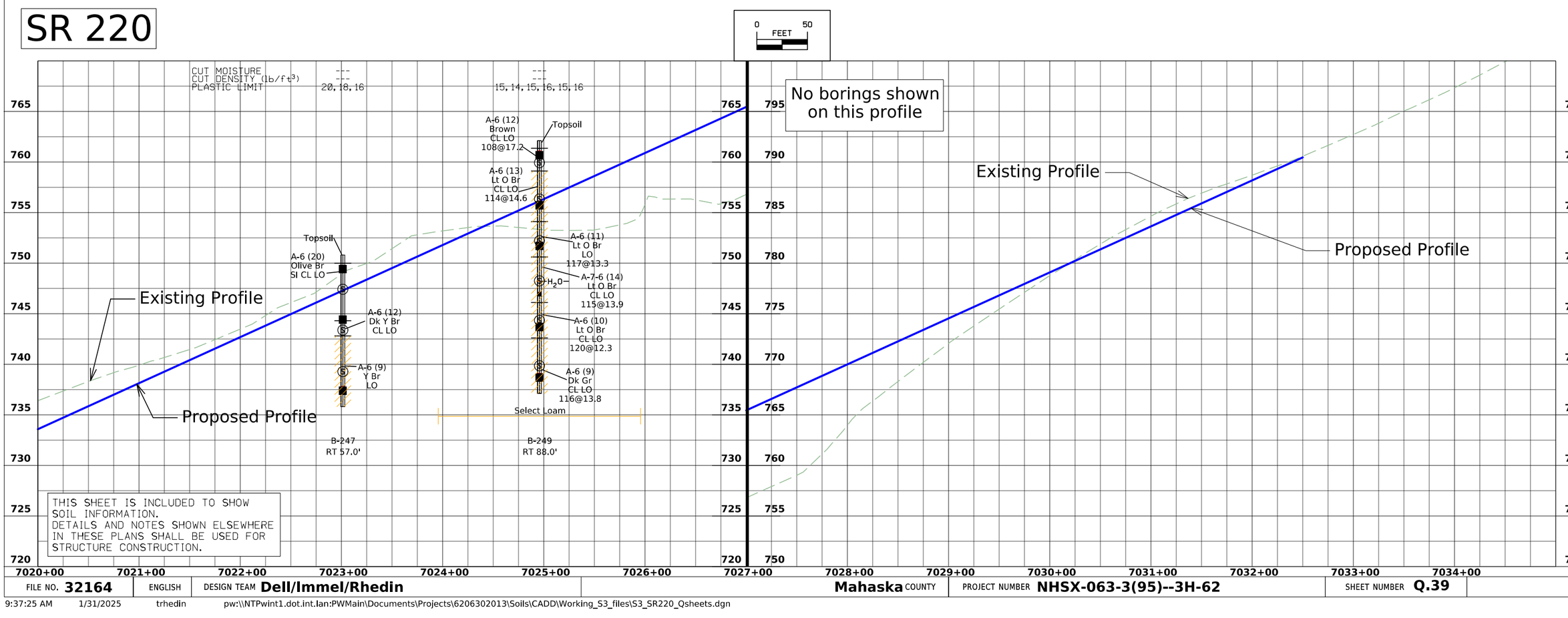
CORE NO.	B095-B1/C1
DEPTH IN FEET	4.0-6.0
CLASSIFICATION (AASHTO)	---
COEFF.CONSOL. (SQ.FT /DAY)	---
TRIAXIAL COMPRESSION	---
COHESION - PSF	---
FRICTION COEFF.	---
MOISTURE CONTENT %	29.3
DRY DENSITY - PCF	102
CU-CONSOLIDATED UNDRAINED	
UU-UNCONSOLIDATED UNDRAINED	
UC-UNCONFINED COMPRESSION (c=1/2 Qu)	

FILE NO.	ENGLISH	DESIGN TEAM		PROJECT NUMBER	SHEET NUMBER
32164		Dell/Immel/Rhedin	Mahaska COUNTY	NHSX-063-3(95)--3H-62	Q.38

9:37:21 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_SR220_Qsheets.dgn



SR 220



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DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.

FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Rhedin	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.39

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BEGIN 210TH ST. CONSTRUCTION
STA 8002+00.00 (SR210)

TIE-IN
STA 8011+42.54 (SR210)
= STA 294+50.00,
12.00' RT (ML063)

TIE-IN
STA 8011+06.54 (SR210)
= STA 294+50.00, 24.00' LT (ML063)

END 210TH ST. CONSTRUCTION
STA 8014+25.00 (SR210)

63

210th St.

UAC

B-251
B-252
B-126
B-255
B-256

SR 210

0 FEET 50

THIS SHEET IS INCLUDED TO SHOW SOIL INFORMATION.
DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.

CUT MOISTURE
CUT DENSITY (lb/ft^3)
PLASTIC LIMIT

| | | |

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DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.

SR OLD 63

¬ = 20°00'23.07"(LT)
T = 88.19
L = 174.59
R = 500.00
E = 7.72
e = 6.0%
L = 124
x = 41
DS = 40 mph

¬ = 56°39'19.01"(RT)
T = 269.53
L = 494.41
R = 500.00
E = 68.02
e = 6.0%
L = 124
x = 41
DS = 40 mph

END OLD US 63 CONSTRUCTION
STA 9012+50.00 (SROLD63)

BEGIN OLD US 63 CONSTRUCTION
STA 9000+12.00 (SROLD63)
= STA 306+00.00, 12.00' RT (ML063)

B-135
B-257
B-258
B-259
B-260
B-261
B-262

+50.00 Prop. Type "C" Ent. Lt. 24" Uncl. Pipe
+85.00 Prop. Type "C" Ent. Lt. 24" Uncl. Pipe

Old IA 63

63

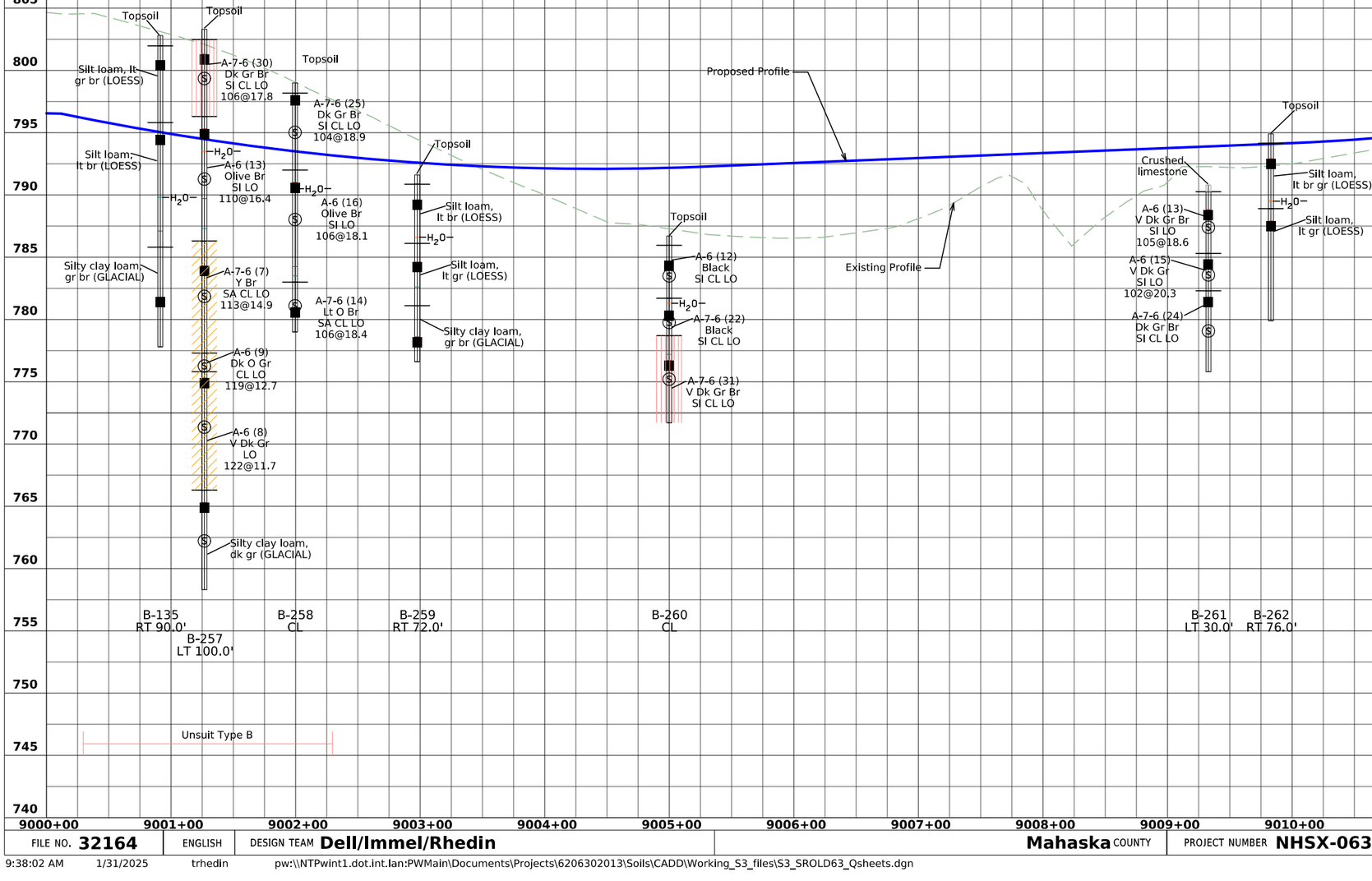
0 FEET 50

FILE NO. 32164	ENGLISH	DESIGN TEAM Dell/Immel/Rhedin	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Q.41

9:37:57 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_SROLD63_Qsheets.dgn

THIS SHEET IS INCLUDED TO SHOW SOIL INFORMATION.
DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.

CUT MOISTURE
CUT DENSITY (lb/ft^3)
PLASTIC LIMIT

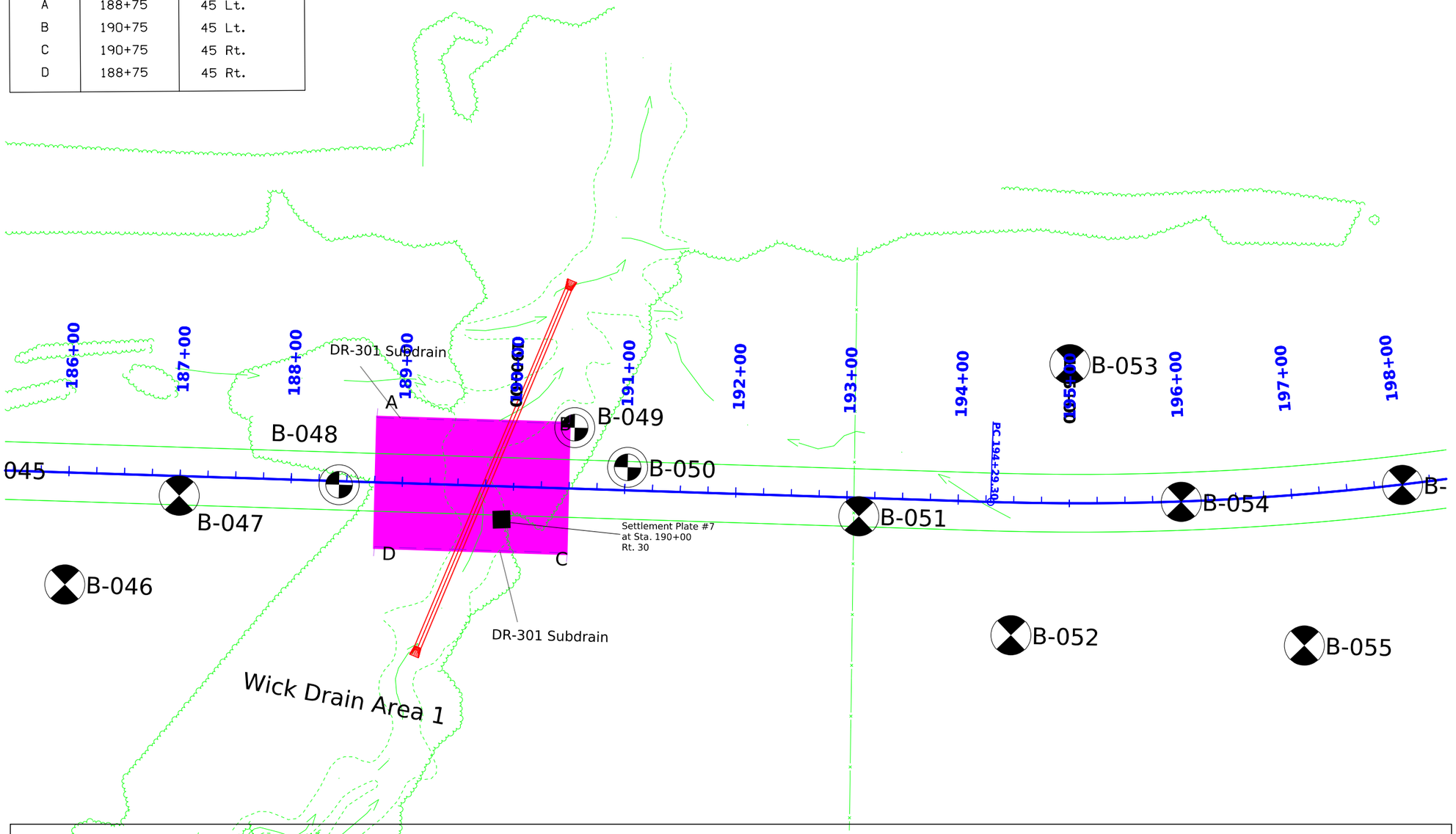


9000+00	9001+00	9002+00	9003+00	9004+00	9005+00	9006+00	9007+00	9008+00	9009+00	9010+00	9011+00	9012+00

FILE NO. **32164**	ENGLISH	DESIGN TEAM **Dell/Immel/Rhedin**	**Mahaska** COUNTY	PROJECT NUMBER **NHSX-063-3(95)--3H-62**	SHEET NUMBER **Q.42**

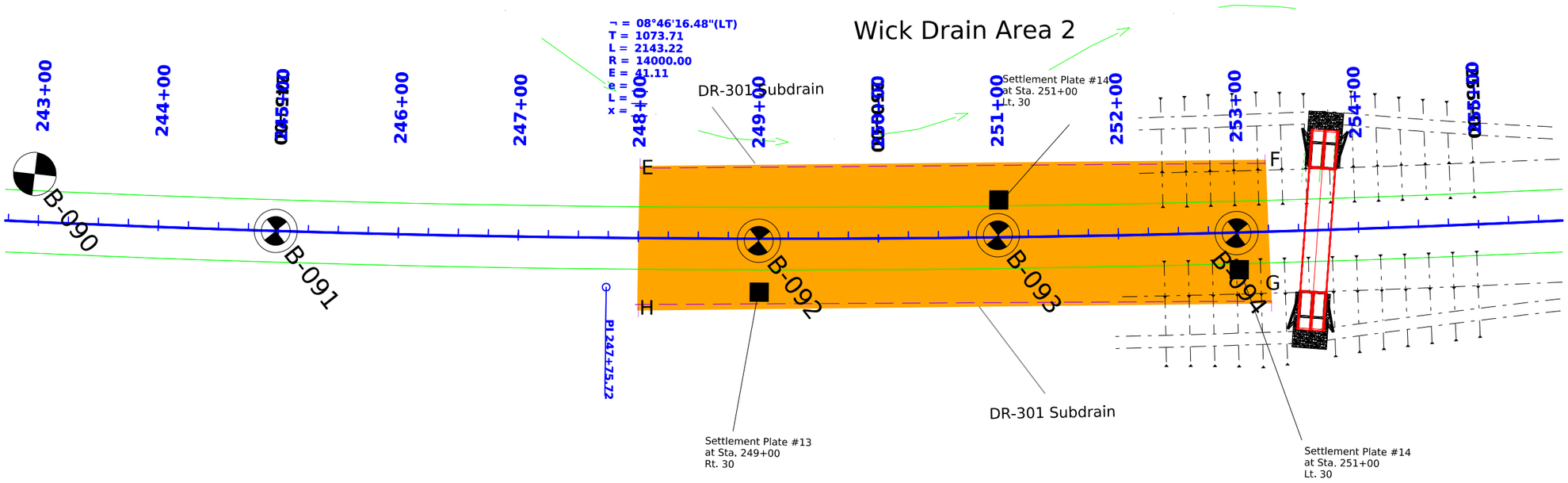
9:38:02 AM 1/31/2025 trhedin pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Soils\CADD\Working_S3_files\S3_SROLD63_Qsheets.dgn

Corner Coordinates of Wick Drain Layout #1		
Corner	Station	Offset
A	188+75	45 Lt.
B	190+75	45 Lt.
C	190+75	45 Rt.
D	188+75	45 Rt.



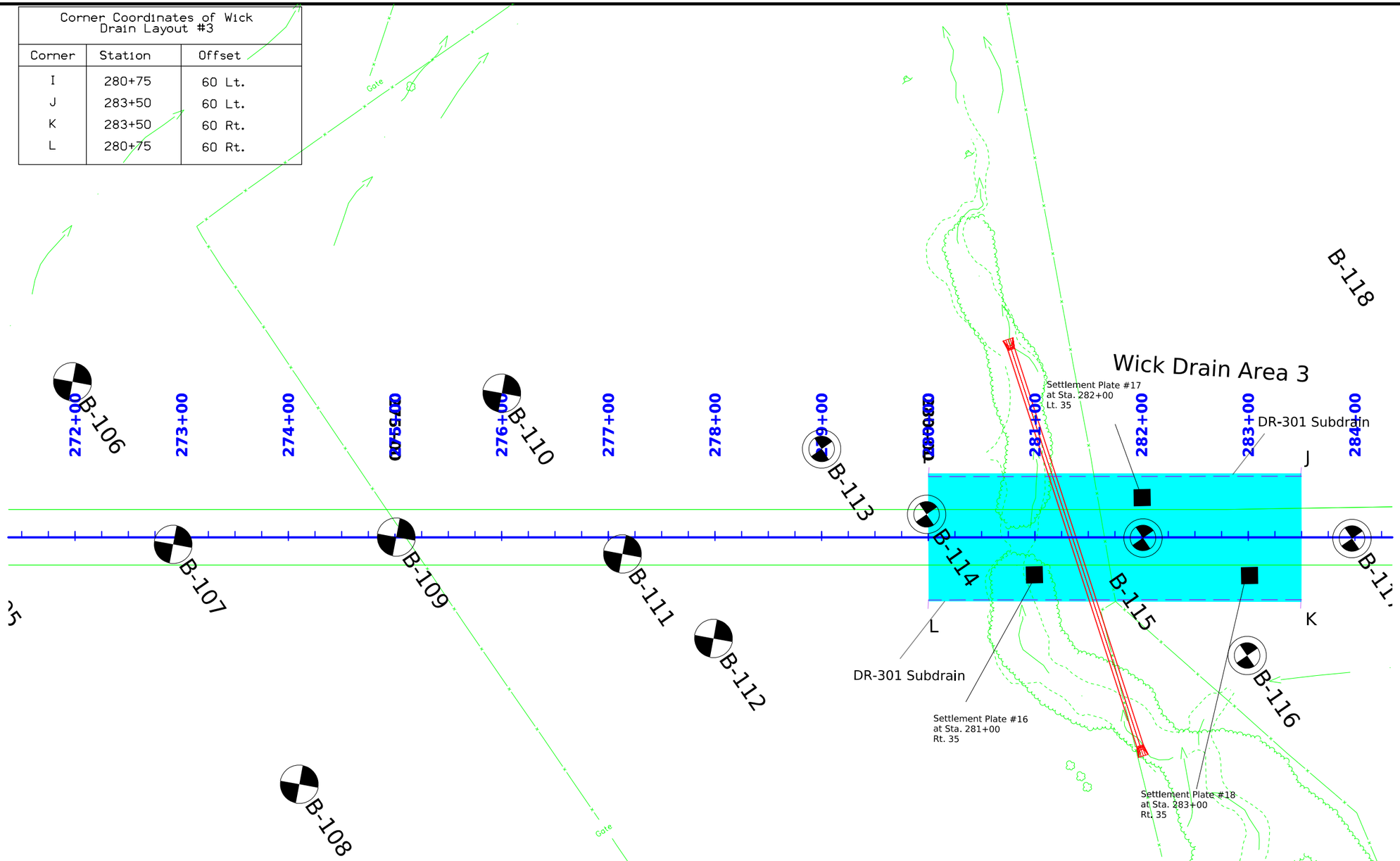
Design Intent and Notes for Wick Drains (Location No. 1)
From Station 188+75 to Station 190+75, install a total of 230 prefabricated vertical (wick) drains in a triangular pattern with a center-to-center spacing of 9.5 feet. Install the wick drains from the ground surface through the compressible soils. Each drain shall be property anchored in the underlying glacial till materials or medium dense to dense sand soils. Installation shall be in accordance with Iowa DOT Specification 2112 for wick drains. Install 1-foot thick Granular Blanket with drains and outlets. Extend the granular blankets 5 feet beyond the limits of the wick drains on all sides. Blankets will be drained by DR-301, Type 2 subdrains placed longitudinally as shown in plan view above. The longitudinal subdrains will then be drained by DR-305, Type A or similar outlets, extending beyond the embankment foreslope on both sides. The settlement waiting period for Wick Drain Area ABCD shall be 180 days following completion of embankment construction, contingent on settlement plate readings.
If full depth installation becomes difficult due to stiffer soil layers at depth, contact IDOT Soils Design to allow reassessment of the tip elevations.
See Sheet CS.4 for a tabular summary of quantities associated with wick drain installation.

Corner Coordinates of Wick Drain Layout #2		
Corner	Station	Offset
E	248+00	45 Lt.
F	253+25	45 Lt.
G	253+25	45 Rt.
H	248+00	45 Rt.



Design Intent and Notes for Wick Drains (Location No. 2)
From Station 248+00 to Station 253+25, install a total of 450 prefabricated vertical (wick) drains in a triangular pattern with a center-to-center spacing of 11 feet. Install the wick drains from the ground surface through the compressible soils. Each drain shall be property anchored in the underlying glacial till materials or medium dense to dense sand soils. Installation shall be in accordance with Iowa DOT Specification 2112 for wick drains. Install 1-foot thick Granular Blanket with drains and outlets. Extend the granular blankets 5 feet beyond the limits of the wick drains on all sides. Blankets will be drained by DR-301, Type 2 subdrains placed longitudinally as shown in plan view above. The longitudinal subdrains will then be drained by DR-305, Type A or similar outlets, extending beyond the embankment foreslope on both sides. The settlement waiting period for Wick Drain Area EFGH shall be 180 days following completion of embankment construction, contingent on settlement plate readings.
If full depth installation becomes difficult due to stiffer soil layers at depth, contact IDOT Soils Design to allow reassessment of the tip elevations.
See Sheet CS.4 for a tabular summary of quantities associated with wick drain installation.

Corner Coordinates of Wick Drain Layout #3		
Corner	Station	Offset
I	280+75	60 Lt.
J	283+50	60 Lt.
K	283+50	60 Rt.
L	280+75	60 Rt.



Design Intent and Notes for Wick Drains (Location No. 3)
From Station 280+75 to Station 283+50, install a total of 677 prefabricated vertical (wick) drains in a triangular pattern with a center-to-center spacing of 7.5 feet. Install the wick drains from the ground surface through the compressible soils. Each drain shall be property anchored in the underlying glacial till materials or medium dense to dense sand soils. Installation shall be in accordance with Iowa DOT Specification 2112 for wick drains. Install 1-foot thick Granular Blanket with drains and outlets. Extend the granular blankets 5 feet beyond the limits of the wick drains on all sides. Blankets will be drained by DR-301, Type 2 subdrains placed longitudinally as shown in plan view above. The longitudinal subdrains will then be drained by DR-305, Type A or similar outlets, extending beyond the embankment foreslope on both sides. The settlement waiting period for Wick Drain Area IJKL shall be 180 days following completion of embankment construction, contingent on settlement plate readings.
If full depth installation becomes difficult due to stiffer soil layers at depth, contact IDOT Soils Design to allow reassessment of the tip elevations.
See Sheet CS.4 for a tabular summary of quantities associated with wick drain installation.

LANDSCAPE DESIGN

STATE OF IOWA
Rachel
A. Harris
LA000775
PROFESSIONAL LANDSCAPE ARCHITECT

I hereby certify that the portion of this technical submission described below was prepared by me or under my direct supervision and responsible charge. I am a duly licensed professional landscape architect under the laws of the state of Iowa.

Signature — 02-14-2025 Date

Rachel A. Harris
Printed or Typed Name

My license renewal date is June 30, 2026

Pages or sheets covered by this seal: RC.1 - RC.40; RR.1 - RR.77

FILE NO.	ENGLISH	DESIGN TEAM **Harris/Pohlen/McDonald**	**Mahaska** COUNTY	PROJECT NUMBER **NHSX-063-3(95)--3H-62**	SHEET NUMBER **RC.1**	

11:25:56 AM 2/14/2025 npohlen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Roadside\(095)\62063095_Sign_RC01.dgn

ESTIMATED PROJECT QUANTITIES AND REFERENCE NOTES

Item no.	Item Code	Item	Unit	Quantities	Estimate Reference Notes
				Estimated	
				Roadside	
1	2507-3250005	ENGINEERING FABRIC	SY	7,362.8	Refer to Tab. 100-23 for locations. Refer to Standard Road Plan EC-301. Use material specified for embankment erosion control according to Article 4196.01, B, 3. of the Standard Specifications. Material will be measured in sq. yds. of actual area covered. Refer to details. The tabulation includes estimated locations for placement of "Engineering Fabric" to address erosion concerns. The bid quantity includes an additional 30% for other locations as needed. Verify the additional locations with the Engineer prior to placement.
2	2507-6800061	REVETMENT, CLASS E	TON	4,329.9	Refer to Tab. 100-23 for locations. Refer to Standard Road Plan EC-301. The tabulation includes estimated locations for placement of "Revetment, Class E" to address erosion concerns. The bid quantity includes an additional 30% for other locations as needed. Verify the additional locations with the Engineer prior to placement. Estimated at 1.4 ton/cu yd. Class E revetment shall meet requirements of Article 4130 of the Standard Specifications.
3	2507-8029000	EROSION STONE	TON	558.2	Refer to Tab. 100-23 for locations. Refer to Standard Road Plan EC-301. The tabulation includes estimated locations for placement of "Erosion Stone" to address erosion concerns. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 30% additional quantity for other locations of erosion. Estimated at 1.6 ton/cu yd. Erosion Stone shall meet requirements of Article 4130 of the Standard Specifications.
4	2601-2634100	MULCHING	ACRE	239	Perform mulching according to Article 2601.03, E, 2, of the Standard Specifications. Anchor mulch into the soil using mulch anchoring equipment with a minimum of two passes. Item is included for areas requiring reshaping and seedbed preparation except where slope protection has been applied. Use mulch that is Certified Noxious Weed Seed Free Mulch as certified by the Iowa Crop Improvement Association or adjacent states Crop Improvement Associations. Mulch Rate: 1 1/2 tons of dry cereal straw or native grass straw per acre.

Item no.	Item Code	Item	Unit	Quantities	Estimate Reference Notes
				Estimated	
				Roadside	
5	2601-2636043	SEEDING AND FERTILIZING (RURAL)	ACRE	234.1	Refer to sheets RR.39 - RR.75 for seeding locations. Refer to Standard Road Plan EC-502. Seed and fertilize all areas 8 foot adjacent to the shoulder mainline, medians, and side according to Article 2601.03, C, 3, of the Standard Specifications. Use ground driven equipment. Rural seeding will be used as a long term stabilizing crop on this project.
6	2601-2638352	SLOPE PROTECTION, WOOD EXCELSIOR MAT	SQ	32,871	Refer to Tab. 100-22 for locations. Refer to Standard Road Plan EC-103. Prepare seedbed according to Article 2601.03, B, 4 and Article 2601.03, H, 1 of the Standard Specifications prior to seeding and fertilizing under the slope protection. Seed and fertilize according to Article 2601.03, H, 5, of the Standard Specifications prior to the installation of slope protection. Install Special Ditch Control according to Article 2601.03, H, 5, of the Standard Specifications.
7	2601-2640350	SPECIAL DITCH CONTROL, WOOD EXCELSIOR MAT	SQ	966	Refer to Tab. 100-22 for locations. Refer to Standard Road Plan EC-101. Prepare seedbed according to Article 2601.03, B, 4 and Article 2601.03, H, 1 of the Standard Specifications prior to seeding and fertilizing. Seed and fertilize according to Article 2601.03, H, 2, of the Standard Specifications prior to installation of Special Ditch Control. Install Special Ditch Control according to Article 2601.03, H, 2, of the Standard Specifications.
8	2601-2642100	STABILIZING CROP - SEEDING AND FERTILIZING	ACRE	234.1	Item is included for disturbed areas. Stabilizing crop will need to be placed on all disturbed areas as temporary erosion control. Preparation and seeding shall be performed in accordance with Article 2601.03, C, 1, of the Standard Specifications. If stabilizing crop must be used, place immediately following completions of finished grading. Reseeding of these areas will be required at contractors expense if damage occurs due to contractors negligence during the contract period. It is not necessary to place stabilizing crop in locations that have been covered by slope protection mat.

Item no.	Item Code	Item	Unit	Quantities	Estimate Reference Notes
				Estimated	
				Roadside	
9	2601-2643110	WATERING FOR SOD, SPECIAL DITCH CONTROL, OR SLOPE PROTECTION	MGAL	8,471	Estimate for watering Special Ditch Control, Slope Protection Areas, Turf Reinforcement Mat, or Transition Mat is based on a total of four waterings at a rate of 50 gallons maximum per square, per watering. The first watering should be done no later than the day following placement of the materials with 3 additional watering at intervals of 5 to 8 calendar days. The amount of water used should be sufficient to saturate the seedbed to a depth of approximately 2 inches.
10	2601-2643300	MOBILIZATION FOR WATERING	EACH	3	
11	2601-2643412	TURF REINFORCEMENT MAT, TYPE 2	SQ	8,516	Refer to Tab. 100-22 for locations. Refer to Standard Road Plan EC-104. Prepare seedbed according to Article 2601.03, B, 4, and Article 2601.03, H, 1, of the Standard Specifications prior to seeding and fertilizing under the Turf Reinforcement Mat. Seed and fertilize according to Article 2601.03, H, 3, of the Standard Specifications prior to the installation of Turf Reinforcement Mat. Install Turf Reinforcement Mat according to Article 2601.03, H, 3, of the Standard Specifications.
12	2602-0000020	SILT FENCE	LF	46,609	Refer to Tab. 100-17 for locations. Refer to Standard Road Plan EC-201. The tabulation includes estimated locations for placement of "Silt Fence" to address erosion concerns. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 25% additional quantity for field adjustments and replacements.
13	2602-0000030	SILT FENCE FOR DITCH CHECKS	LF	17,904	Refer to Tab 100-18 for locations. Refer to Standard Road Plan EC-201. The tabulation includes estimated locations for placement of "Silt Fence for Ditch Checks" to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 50% additional quantity for field adjustments and replacements.
14	2602-0000050	SILT BASINS	EACH	136	Refer to Tab. 100-14 for locations Refer to Standard Road Plan EW-403. The tabulation includes estimated locations for placement of "Silt Basins". Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 100% additional quantity for field adjustment and maintenance.
15	2602-0000071	REMOVAL OF SILT FENCE OR SILT FENCE FOR DITCH CHECKS	LF	64,513	This item is included for silt fence and silt fence for ditch check removal required for staging reasons, removal to allow for replacement (replacement to be paid separately), or for areas that have achieved 70% permanent growth. Remove silt fence and posts after 70% vegetation is established and approved by the Engineer.

Item no.	Item Code	Item	Unit	Quantities	Estimate Reference Notes
				Estimated	
				Roadside	
16	2602-0000101	MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK	LF	6,451	This item is included for clean-out and repair of the silt fence and silt fence for ditch checks during the project.
17	2602-0000150	STABILIZED CONSTRUCTION ENTRANCE, EC-303	LF	2,000	Refer to Standard Road Plan EC-303.
18	2602-0000312	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA.	LF	128,330	Refer to Tab. 100-19 for locations. Refer to Standard Road Plan EC-204. The tabulation includes estimated locations for placement of "Perimeter and Slope Sediment Control Device, 12 in. dia." to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 25% additional quantity for field adjustments and replacements.
19	2602-0000320	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 20 IN. DIA.	LF	128,330	Refer to Standard Road Plan EC-204. Item is included for temporary perimeter sediment control, inlet protection, and water velocity reduction on slopes or ditches at locations to be determined during construction. Verify specific locations with the Engineer prior to beginning placement. Item may be used in addition to, or as a direct replacement for "Perimeter and Slope Sediment Control Device, 12 in. dia." upon Engineer approval.
20	2602-0000351	REMOVAL OF PERIMETER AND SLOPE OR DITCH CHECK SEDIMENT CONTROL DEVICE	LF	288,180	Bid item is for the removal and disposal of Perimeter Slope and Sediment Control Devices at the request of the Engineer or IA DOT representative.
21	2602-0000362	DITCH CHECK SEDIMENT CONTROL DEVICE, 12 IN. DIA.	LF	15,760	Refer to Tab. 100-19 for locations. Refer to Standard Road Plan EC-204. The tabulation includes estimated locations for placement of "Perimeter and Slope and Ditch Check Sediment Control Device, 12 in. dia." to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 25% additional quantity for field adjustments and replacements.
22	2602-0000370	DITCH CHECK SEDIMENT CONTROL DEVICE, 20 IN. DIA.	LF	15,760	Refer to Standard Road Plan EC-204. Item is included for temporary perimeter sediment control, inlet protection, and water velocity reduction on slopes or ditches at locations to be determined during construction. Verify specific locations with the Engineer prior to beginning placement. Item may be used in addition to, or as a direct replacement for "Perimeter and Slope, Ditch Check Sediment Control Device, 12 in. dia." upon Engineer approval.
23	2602-0010010	MOBILIZATIONS, EROSION CONTROL	EACH	1	

Item no.	Item Code	Item	Unit	Quantities	Estimate Reference Notes
				Estimated	
				Roadside	
24	2602-0010020	MOBILIZATIONS, EMERGENCY EROSION CONTROL	EACH	1	

281_01
9/28/22

SECTION 404 PERMIT AND CONDITIONS

Construct this project according to the requirements of U.S. Army Corps of Engineers Nationwide, Permit No. 14. A copy of this permit is available from the Iowa DOT website (http://www.envpermits.iowadot.gov/). The U.S. Army Corps of Engineers reserves the right to visit the site without prior notice.

281_03
11/9/23

STORM WATER BEST MANAGEMENT PRACTICES

When the following best management practices are used, they are intended to account for disturbed areas where storage volume cannot be provided: Silt Basins, Silt Fences, Silt Fence For Ditch Checks, Perimeter and Slope and Ditch Check Sediment Control Devices, Turf Reinforcement Mat - Type 2, Slope Protection, Special Ditch Control, Rock Ditch, Rock Splash Basin and Seeding.

111_25
10/23/24

INDEX OF TABULATIONS

Tabulation	Tabulation Title	Sheet No.
111_25	INDEX OF TABULATIONS	RC.8
105_04	STANDARD ROAD PLANS	RC.9
100_14	SILT BASINS	RC.10
100_17	TABULATION OF SILT FENCES	RC.11 - RC.12
100_18	SILT FENCES FOR DITCH CHECKS	RC.13 - RC.24
100_19	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE	RC.25 - RC.32
100_22	ROLLED EROSION CONTROL	RC.33 - RC.35
100_23	ROCK EROSION CONTROL	RC.36
100_34	STORMWATER DRAINAGE BASIN	RC.37 - RC.38
110_12	POLLUTION PREVENTION PLAN	RC.39 - RC.40

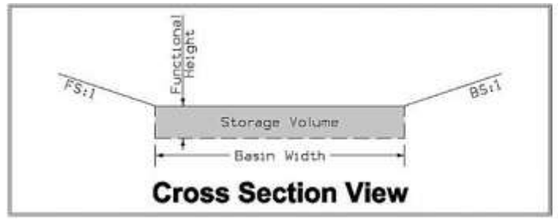
STANDARDS

The following Standards apply to construction work on this project.

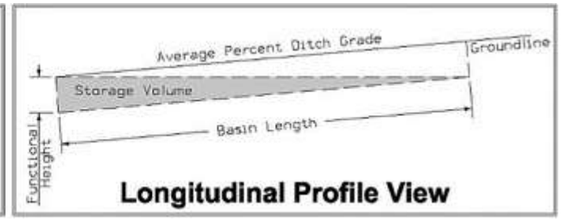
Number	Date	Title
EC-101	04-19-16	Wood Excelsior Mat for Ditch Protection
EC-103	04-21-15	Wood Excelsior Mat for Slope Protection
EC-104	04-17-18	Turf Reinforced Mat (TRM)
EC-201	04-20-21	Silt Fence
EC-204	10-19-21	Perimeter, Slope and Ditch Check Sediment Control Devices
EC-301	10-18-22	Rock Erosion Control (REC)
EC-303	10-19-21	Stabilized Construction Entrance
EC-502	04-21-15	Seeding in Rural Areas
EW-403	04-18-17	Temporary Erosion Control Measures

SILT BASINS

Possible Standard: EW-403



Cross Section View



Longitudinal Profile View

* The functional height used in the volume equation is 95% of effective height. Effective height is 3 feet as shown in EW-403.
* Volume equation: (0.5*Length*(Width*Height+Width*(Height-Length*Avg%Slope))

Basin No.	Station	Side	Installation (Each)	Removal (Each)	Basin Width (FT)	Basin Length (FT)	Height (FT)	Avg. % Slope	Volume (CF)	Remarks
3	1015+20.00	Right	1.0		10.0	50.0	2.85	3.0	1050.00	N. Shore
3	1015+87.00	Right	1.0		10.0	50.0	2.85	2.0	1175.00	N. Shore
6	1015+20.00	Left	1.0		10.0	50.0	2.85	2.1	1162.50	N. Shore
6	1015+87.00	Left	1.0		10.0	50.0	2.85	0.8	1325.00	N. Shore
7	137+40.00	Left	1.0		10.0	50.0	2.85	5.0	800.00	US 63
7	138+12.00	Left	1.0		10.0	50.0	2.85	0.4	1375.00	US 63
8	137+40.00	Right	1.0		10.0	50.0	2.85	7.0	712.50	US 63
8	138+12.00	Right	1.0		10.0	50.0	2.85	0.4	1375.00	US 63
9	21237+78.00	Right	1.0		10.0	50.0	2.85	4.9	812.50	Ramp B
9	21246+38.00	Right	1.0		10.0	50.0	2.85	2.6	1100.00	Ramp B
10	21246+38.00	Left	1.0		10.0	50.0	2.85	3.0	1050.00	Ramp B
11	41261+60.00	Right	1.0		10.0	50.0	2.85	2.8	1075.00	Ramp D
11	41263+14.00	Right	1.0		10.0	50.0	2.85	4.0	925.00	Ramp D
12	2014+97.00	Left	1.0		10.0	50.0	2.85	4.1	912.50	Jewell
12	2015+64.00	Left	1.0		10.0	50.0	2.85	4.0	925.00	Jewell
15	2014+47.00	Right	1.0		10.0	50.0	2.85	6.7	712.50	Jewell
15	2015+19.00	Right	1.0		10.0	50.0	2.85	4.1	912.50	Jewell
16	41261+60.00	Left	1.0		10.0	50.0	2.85	2.2	1150.00	Ramp D
18	147+48.00	Left	1.0		10.0	50.0	2.85	0.4	1375.00	US 63
19	31248+81.00	Right	1.0		10.0	50.0	2.85	0.4	1375.00	Ramp C
20	31248+81.00	Left	1.0		10.0	50.0	2.85	1.0	1300.00	Ramp C
21	11261+53.00	Right	1.0		10.0	50.0	2.85	1.7	1212.50	Ramp A
21	11262+11.00	Right	1.0		10.0	50.0	2.85	2.3	1137.50	Ramp A
22	11261+53.00	Left	1.0		10.0	50.0	2.85	1.7	1212.50	Ramp A
22	11262+11.00	Left	1.0		10.0	50.0	2.85	1.0	1300.00	Ramp A
24	5006+48.00	Right	1.0		10.0	50.0	2.85	0.4	1375.00	Old 163
24	5007+14.00	Right	1.0		10.0	50.0	2.85	0.3	1387.50	Old 163
25	5035+71.00	Right	1.0		10.0	50.0	2.85	1.6	1225.00	Old 163
25	5036+31.00	Right	1.0		10.0	50.0	2.85	0.4	1375.00	Old 163
26	5035+71.00	Left	1.0		10.0	50.0	2.85	1.7	1212.50	Old 163
26	5036+31.00	Left	1.0		10.0	50.0	2.85	4.0	925.00	Old 163
27	5006+48.00	Left	1.0		10.0	50.0	2.85	0.6	1350.00	Old 163
27	5007+14.00	Left	1.0		10.0	50.0	2.85	0.2	1400.00	Old 163
28	188+75.00	Right	1.0		10.0	50.0	2.85	3.9	937.50	US 63
28	189+45.00	Right	1.0		10.0	50.0	2.85	2.4	1125.00	US 63
30	190+28.00	Left	1.0		10.0	50.0	2.85	6.0	712.50	US 63
30	190+91.00	Left	1.0		10.0	50.0	2.85	5.0	800.00	US 63
31	208+98.00	Left	1.0		10.0	50.0	2.85	3.0	1050.00	US 63
31	209+67.00	Left	1.0		10.0	50.0	2.85	0.4	1375.00	US 63
32	209+56.00	Right	1.0		10.0	50.0	2.85	2.6	1100.00	US 63
32	210+18.00	Right	1.0		10.0	50.0	2.85	0.8	1325.00	US 63
32	214+54.00	Right	1.0		10.0	50.0	2.85	0.3	1387.50	US 63
33	213+93.00	Left	1.0		10.0	50.0	2.85	4.3	887.50	US 63

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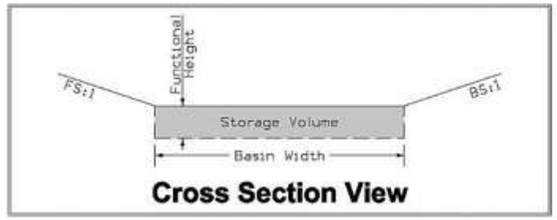
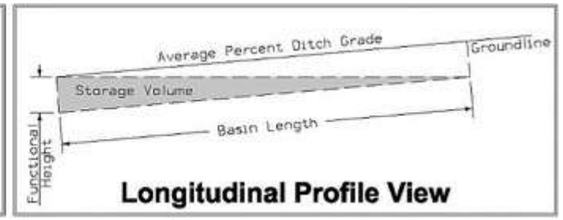
SILT BASINS

Possible Standard: EW-403



Cross Section View



Longitudinal Profile View

* The functional height used in the volume equation is 95% of effective height. Effective height is 3 feet as shown in EW-403.
* Volume equation: (0.5*Length*(Width*Height+Width*(Height-Length*Avg%Slope))

Basin No.	Station	Side	Installation (Each)	Removal (Each)	Basin Width (FT)	Basin Length (FT)	Height (FT)	Avg. % Slope	Volume (CF)	Remarks
33	214+55.00	Left	1.0		10.0	50.0	2.85	0.4	1375.00	US 63
34	221+07.00	Left	1.0		10.0	50.0	2.85	2.6	1100.00	US 63
34	6016+54.00	Right	1.0		10.0	50.0	2.85	4.0	925.00	Kirby
34	253+28.00	Left	1.0		10.0	50.0	2.85	1.9	1187.50	US 63
34	254+22.00	Left	1.0		10.0	50.0	2.85	2.2	1150.00	US 63
35	221+07.00	Right	1.0		10.0	50.0	2.85	2.0	1175.00	US 63
35	253+07.00	Right	1.0		10.0	50.0	2.85	1.5	1237.50	US 63
35	254+03.00	Right	1.0		10.0	50.0	2.85	1.6	1225.00	US 63
35	258+10.00	Right	1.0		10.0	50.0	2.85	2.0	1175.00	US 63
35	258+10.00	Left	1.0		10.0	50.0	2.85	2.0	1175.00	
37	6020+21.00	Right	1.0		10.0	50.0	2.85	4.5	862.50	Kirby
37	6021+12.00	Right	1.0		10.0	50.0	2.85	6.3	712.50	Kirby
38	6019+79.00	Left	1.0		10.0	50.0	2.85	5.9	712.50	Kirby
38	6020+32.00	Left	1.0		10.0	50.0	2.85	6.2	712.50	Kirby
41	280+48.00	Left	1.0		10.0	50.0	2.85	1.7	1212.50	US 63
41	281+04.00	Left	1.0		10.0	50.0	2.85	1.5	1237.50	US 63
42	281+62.00	Right	1.0		10.0	50.0	2.85	1.3	1262.50	US 63
42	281+51.00	Right	1.0		10.0	50.0	2.85	4.3	887.50	US 63
47	297+72.00	Right	1.0		10.0	50.0	2.85	3.1	1037.50	US 63
47	298+37.00	Right	1.0		10.0	50.0	2.85	3.9	937.50	US 63
50	9006+52.00	Right	1.0		10.0	50.0	2.85	1.2	1275.00	Old 63
50	9007+21.00	Right	1.0		10.0	50.0	2.85	0.8	1325.00	Old 63
51	320+17.00	Right	1.0		10.0	50.0	2.85	2.6	1100.00	US 63
52	9006+52.00	Left	1.0		10.0	50.0	2.85	0.8	1325.00	Old 63
52	9007+21.00	Left	1.0		10.0	50.0	2.85	1.0	1300.00	Old 63
Total:			**68**							

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TABULATION OF SILT FENCES

Refer to EC-201

Station From	Station To	Side	Length (FT)	Remarks
118+00.00	119+32.00	Left	130.00	
119+72.00	121+72.00	Left	200.00	
121+62.00	123+68.00	Left	200.00	
123+58.00	125+68.00	Left	200.00	
125+58.00	127+60.00	Left	200.00	
127+50.00	129+51.00	Left	200.00	
135+00.00	137+00.00	Left	200.00	
136+90.00	137+74.00	Left	85.00	
137+74.00	139+74.00	Left	200.00	
139+64.00	141+64.00	Left	200.00	
141+54.00	143+54.00	Left	200.00	
142+38.00	144+38.00	Left	200.00	
144+83.00	146+83.00	Left	200.00	
146+73.00	148+01.00	Left	130.00	
149+62.00	151+62.00	Left	200.00	
151+52.00	152+76.00	Left	126.00	
153+41.00	155+41.00	Left	200.00	
155+31.00	157+31.00	Left	200.00	
157+21.00	159+00.00	Left	180.00	
159+69.00	161+69.00	Left	200.00	
161+58.00	163+58.00	Left	200.00	
163+47.00	165+47.00	Left	200.00	
165+36.00	167+36.00	Left	200.00	
167+25.00	169+25.00	Left	200.00	
169+14.00	171+14.00	Left	200.00	
170+95.00	173+03.00	Left	200.00	
172+12.00	174+92.00	Left	200.00	
174+70.00	176+81.00	Left	200.00	
176+64.00	178+70.00	Left	200.00	
178+47.00	180+59.00	Left	200.00	
180+48.00	182+48.00	Left	200.00	
182+37.00	184+37.00	Left	200.00	
184+26.00	186+26.00	Left	200.00	
186+15.00	188+15.00	Left	200.00	
188+04.00	190+04.00	Left	200.00	
189+90.00	191+90.00	Left	200.00	
191+80.00	193+80.00	Left	200.00	
193+70.00	195+70.00	Left	200.00	
195+60.00	197+60.00	Left	200.00	
197+60.00	199+60.00	Left	200.00	
199+52.00	201+52.00	Left	200.00	
201+46.00	203+46.00	Left	200.00	
203+42.00	205+42.00	Left	200.00	
205+38.00	207+38.00	Left	200.00	
207+34.00	209+34.00	Left	200.00	
209+30.00	210+86.00	Left	150.00	
210+86.00	212+86.00	Left	200.00	
212+76.00	214+28.00	Left	145.00	
214+18.00	216+18.00	Left	200.00	
216+08.00	218+08.00	Left	200.00	
218+06.00	220+06.00	Left	200.00	
219+96.00	221+61.00	Left	166.00	
160+00.00	161+96.00	Left	200.00	Left of Ditch
161+86.00	163+79.00	Left	200.00	Left of Ditch
163+69.00	165+66.00	Left	200.00	Left of Ditch

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TABULATION OF SILT FENCES

Refer to EC-201

Station From	Station To	Side	Length (FT)	Remarks
165+56.00	167+47.00	Left	200.00	Left of Ditch
222+26.00	224+26.00	Left	200.00	
224+16.00	226+16.00	Left	200.00	
226+08.00	228+08.00	Left	200.00	
228+00.00	230+00.00	Left	200.00	
229+92.00	231+92.00	Left	200.00	
231+84.00	233+84.00	Left	200.00	
233+76.00	235+76.00	Left	200.00	
235+68.00	237+68.00	Left	200.00	
237+60.00	239+60.00	Left	200.00	
239+52.00	241+52.00	Left	200.00	
241+44.00	243+44.00	Left	200.00	
243+36.00	245+36.00	Left	200.00	
245+28.00	247+27.00	Left	200.00	
247+20.00	249+18.00	Left	200.00	
249+12.00	251+09.00	Left	200.00	
251+04.00	253+00.00	Left	200.00	
252+96.00	253+73.00	Left	80.00	
253+63.00	253+63.00	Left	200.00	
253+53.00	257+20.00	Left	164.00	
249+63.00	251+66.00	Left	200.00	Left of Ditch
251+56.00	253+56.00	Left	200.00	Left of Ditch
253+86.00	255+88.00	Left	200.00	Left of Ditch
255+78.00	257+84.00	Left	150.00	Left of Ditch
258+08.00	260+08.00	Left	200.00	
260+00.00	262+00.00	Left	200.00	
261+92.00	263+92.00	Left	200.00	
263+84.00	265+84.00	Left	200.00	
265+76.00	267+76.00	Left	200.00	
267+68.00	269+68.00	Left	200.00	
269+60.00	270+00.00	Left	50.00	
294+87.00	296+87.00	Left	200.00	
296+77.00	297+78.00	Left	103.00	
297+68.00	299+68.00	Left	200.00	
299+58.00	301+58.00	Left	200.00	
301+48.00	303+02.00	Left	153.00	
303+02.00	305+02.00	Left	200.00	
304+92.00	305+83.00	Left	90.00	
306+17.00	308+20.00	Left	200.00	
308+10.00	310+21.00	Left	200.00	
310+11.00	312+24.00	Left	200.00	
312+14.00	314+22.00	Left	200.00	
118+00.00	119+30.00	Right	130.00	
118+06.00	119+36.00	Right	131.00	Right of Ditch
119+71.00	121+70.00	Right	200.00	
121+60.00	123+54.00	Right	200.00	
123+44.00	125+37.00	Right	200.00	
125+27.00	127+20.00	Right	200.00	
127+10.00	129+09.00	Right	200.00	
128+99.00	129+72.00	Right	70.00	
130+35.00	132+33.00	Right	200.00	
132+23.00	134+24.00	Right	200.00	
134+14.00	135+00.00	Right	85.00	
144+97.00	146+97.00	Right	200.00	
146+87.00	147+93.00	Right	108.00	

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TABULATION OF SILT FENCES

Refer to EC-201

Station From	Station To	Side	Length (FT)	Remarks
147+83.00	149+84.00	Right	200.00	
149+74.00	151+74.00	Right	200.00	
151+64.00	153+04.00	Right	141.00	
153+84.00	155+84.00	Right	200.00	
155+74.00	157+70.00	Right	200.00	
157+60.00	157+62.00	Right	99.00	
160+08.00	162+07.00	Right	200.00	
161+97.00	164+00.00	Right	200.00	
163+90.00	165+97.00	Right	200.00	
165+87.00	167+91.00	Right	200.00	
167+81.00	169+86.00	Right	200.00	
169+76.00	171+80.00	Right	200.00	
171+70.00	173+71.00	Right	200.00	
173+61.00	175+63.00	Right	200.00	
175+53.00	177+58.00	Right	200.00	
177+48.00	179+52.00	Right	200.00	
179+42.00	181+45.00	Right	200.00	
181+35.00	183+35.00	Right	200.00	
183+25.00	185+25.00	Right	200.00	
185+15.00	187+15.00	Right	200.00	
187+05.00	189+05.00	Right	200.00	
188+95.00	189+64.00	Right	200.00	
189+54.00	191+49.00	Right	200.00	
191+39.00	193+40.00	Right	200.00	
193+30.00	195+29.00	Right	200.00	
195+19.00	197+16.00	Right	200.00	
197+06.00	197+65.00	Right	60.00	
197+65.00	199+62.00	Right	200.00	
199+52.00	201+52.00	Right	200.00	
201+42.00	203+39.00	Right	200.00	
203+29.00	205+26.00	Right	200.00	
205+16.00	207+12.00	Right	200.00	
207+02.00	209+03.00	Right	200.00	
208+93.00	209+80.00	Right	90.00	
209+70.00	211+70.00	Right	200.00	
211+60.00	213+59.00	Right	200.00	
213+39.00	215+34.00	Right	200.00	
215+24.00	216+34.00	Right	110.00	
316+34.00	218+32.00	Right	200.00	
218+22.00	220+20.00	Right	200.00	
220+10.00	221+60.00	Right	147.00	
222+25.00	224+23.00	Right	200.00	
224+13.00	226+15.00	Right	200.00	
226+05.00	228+06.00	Right	200.00	
227+96.00	229+95.00	Right	200.00	
229+85.00	231+86.00	Right	200.00	
231+76.00	233+78.00	Right	200.00	
233+68.00	235+67.00	Right	200.00	
235+57.00	237+58.00	Right	200.00	
237+48.00	239+48.00	Right	200.00	
239+38.00	241+38.00	Right	200.00	
241+28.00	241+85.00	Right	56.00	
242+22.00	244+18.00	Right	200.00	
244+08.00	246+08.00	Right	200.00	
245+98.00	247+99.00	Right	200.00	

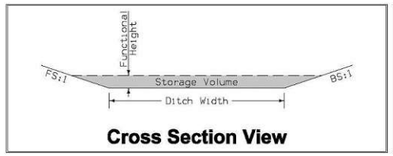
TABULATION OF SILT FENCES

Refer to EC-201

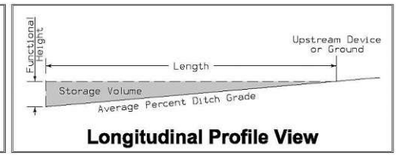
Station From	Station To	Side	Length (FT)	Remarks
247+89.00	249+91.00	Right	200.00	
249+81.00	251+81.00	Right	200.00	
251+71.00	253+68.00	Right	200.00	
253+58.00	255+60.00	Right	200.00	
255+50.00	257+18.00	Right	170.00	
249+48.00	251+48.00	Right	200.00	Right of Ditch
251+38.00	253+38.00	Right	200.00	Right of Ditch
253+75.00	255+72.00	Right	200.00	Right of Ditch
255+62.00	257+33.00	Right	171.00	Right of Ditch
270+14.00	272+14.00	Right	200.00	
272+04.00	274+04.00	Right	200.00	
273+94.00	275+94.00	Right	200.00	
275+84.00	277+84.00	Right	200.00	
277+74.00	279+74.00	Right	200.00	
279+64.00	281+64.00	Right	200.00	
281+54.00	283+54.00	Right	200.00	
283+44.00	285+44.00	Right	200.00	
285+34.00	287+34.00	Right	200.00	
287+25.00	289+25.00	Right	200.00	
289+16.00	291+16.00	Right	200.00	
291+07.00	293+07.00	Right	200.00	
292+98.00	294+19.00	Right	120.00	
294+80.00	296+80.00	Right	200.00	
296+70.00	297+97.00	Right	127.00	
297+87.00	299+86.00	Right	200.00	
299+76.00	301+76.00	Right	200.00	
301+66.00	303+36.00	Right	170.00	
303+36.00	305+36.00	Right	200.00	
306+81.00	308+75.00	Right	200.00	
308+65.00	310+63.00	Right	200.00	
310+53.00	312+46.00	Right	200.00	
312+36.00	314+30.00	Right	200.00	
314+20.00	316+16.00	Right	200.00	
316+06.00	318+03.00	Right	200.00	
Total:			**37287**	

SILT FENCES FOR DITCH CHECKS

Possible Standard: EC-201



Cross Section View



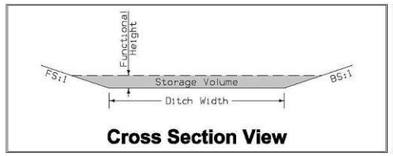
Longitudinal Profile View

* The functional height used in the volume equation is 85% of effective height. Effective height is 1.58 feet as shown on EC-201.
* Volume equation: [0.5*Spacing*(0.5*H^2*FS+DW*H+0.5*H^2*BS)]

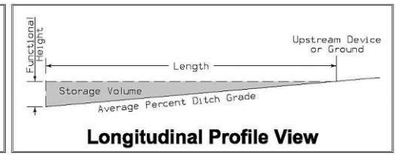
Basin No.	Type	Station	Side	Installation (LF)	Maintenance (LF)	Removal (LF)	Foreslope (FS:1)	Backslope (BS:1)	Ditch Width (FT)	Avg. % Slope Ditch Grade	Volume (CF)	Remarks
1	Type 1	118+00.00	Left	23.0	2.3	23.0	3.5	3.0	10.0	2.0	723.38	US 63
1	Type 1	118+75.00	Left	23.0	2.3	23.0	3.5	3.0	10.0	2.0	723.38	US 63
1	Type 1	120+00.00	Left	23.0	2.3	23.0	3.5	3.0	10.0	0.1	3038.17	US 63
1	Type 1	123+20.00	Left	23.0	2.3	23.0	3.5	3.0	10.0	0.1	3038.17	US 63
1	Type 1	126+52.00	Left	23.0	2.3	23.0	3.5	3.0	10.0	0.1	3038.17	US 63
1	Type 1	1023+71.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	0.4	2967.30	N. Shore
1	Type 1	1026+68.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	0.4	2967.30	N. Shore
2	Type 1	119+18.00	Right	23.0	2.3	23.0	3.5	3.0	10.0	0.3	3038.17	US 63
2	Type 1	122+31.00	Right	23.0	2.3	23.0	3.5	3.0	10.0	0.1	3038.17	US 63
2	Type 1	126+00.00	Right	23.0	2.3	23.0	3.5	3.0	10.0	0.6	1494.97	US 63
2	Type 1	127+53.00	Right	23.0	2.3	23.0	3.5	3.0	10.0	0.6	1494.97	US 63
2	Type 1	129+04.00	Right	23.0	2.3	23.0	3.5	3.0	10.0	0.6	1494.97	US 63
2	Type 1	130+58.00	Right	23.0	2.3	23.0	3.5	3.0	10.0	2.7	482.25	US 63
2	Type 1	131+08.00	Right	23.0	2.3	23.0	3.5	3.0	10.0	2.7	482.25	US 63
2	Type 1	131+58.00	Right	23.0	2.3	23.0	3.5	3.0	10.0	2.7	482.25	US 63
2	Type 1	132+08.00	Right	23.0	2.3	23.0	3.5	3.0	10.0	2.7	482.25	US 63
2	Type 1	132+58.00	Right	23.0	2.3	23.0	3.5	3.0	10.0	2.7	482.25	US 63
2	Type 1	133+08.00	Right	23.0	2.3	23.0	3.5	3.0	10.0	2.7	482.25	US 63
2	Type 1	2001+33.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.6	1460.10	Jewell
2	Type 1	2002+72.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.6	1460.10	Jewell
2	Type 1	2004+32.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.6	1460.10	Jewell
2	Type 1	2001+35.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.5	565.20	Jewell
2	Type 1	2001+85.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.5	565.20	Jewell
2	Type 1	2002+35.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.5	565.20	Jewell
2	Type 1	2002+85.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.5	565.20	Jewell
2	Type 1	2003+35.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.5	565.20	Jewell
2	Type 1	2003+76.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.5	565.20	Jewell
2	Type 1	2004+26.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.5	565.20	Jewell
3	Type 1	1011+93.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	3.0	471.00	N. Shore
3	Type 1	1012+38.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	3.0	471.00	N. Shore
3	Type 1	1012+83.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	3.0	471.00	N. Shore
3	Type 1	1013+28.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	3.0	471.00	N. Shore
3	Type 1	1013+73.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	3.0	471.00	N. Shore
3	Type 1	1014+18.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	3.0	471.00	N. Shore
3	Type 1	1014+63.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	3.0	471.00	N. Shore
3	Type 1	1016+45.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.0	706.50	N. Shore
3	Type 1	1017+05.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.0	706.50	N. Shore
3	Type 1	1017+65.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.0	706.50	N. Shore
3	Type 1	1018+25.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.0	706.50	N. Shore
3	Type 1	1018+85.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.0	706.50	N. Shore
3	Type 1	1020+00.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.0	706.50	N. Shore
3	Type 1	1020+60.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.0	706.50	N. Shore
3	Type 1	1021+20.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.4	565.20	N. Shore
3	Type 1	1021+80.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.4	565.20	N. Shore
3	Type 1	1022+40.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.4	565.20	N. Shore

SILT FENCES FOR DITCH CHECKS

Possible Standard: EC-201



Cross Section View



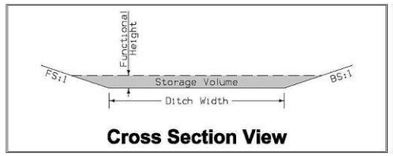
Longitudinal Profile View

* The functional height used in the volume equation is 85% of effective height. Effective height is 1.58 feet as shown on EC-201.
* Volume equation: [0.5*Spacing*(0.5*H^2*FS+DW*H+0.5*H^2*BS)]

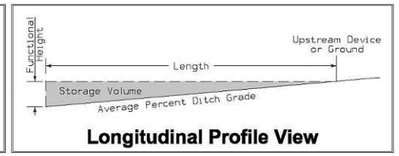
Basin No.	Type	Station	Side	Installation (LF)	Maintenance (LF)	Removal (LF)	Foreslope (FS:1)	Backslope (BS:1)	Ditch Width (FT)	Avg. % Slope Ditch Grade	Volume (CF)	Remarks
3	Type 1	1023+00.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.4	565.20	N. Shore
6	Type 1	1011+91.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	2.1	565.20	N. Shore
6	Type 1	1012+51.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	2.1	565.20	N. Shore
6	Type 1	1013+11.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	2.1	565.20	N. Shore
6	Type 1	1013+71.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	2.1	565.20	N. Shore
6	Type 1	1014+31.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	2.1	565.20	N. Shore
6	Type 1	1014+91.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	2.1	565.20	N. Shore
6	Type 1	1016+16.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.8	1460.10	N. Shore
6	Type 1	1017+71.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.8	1460.10	N. Shore
6	Type 1	1019+26.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.8	1460.10	N. Shore
6	Type 1	1020+81.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.8	1460.10	N. Shore
6	Type 1	1022+36.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.8	1460.10	N. Shore
6	Type 1	1023+91.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.8	1460.10	N. Shore
6	Type 1	1025+46.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.8	1460.10	N. Shore
6	Type 1	1027+01.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.8	1460.10	N. Shore
6	Type 1	131+00.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.7	482.25	US 63
6	Type 1	131+50.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.7	482.25	US 63
6	Type 1	132+00.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.7	482.25	US 63
6	Type 1	132+50.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.7	482.25	US 63
6	Type 1	132+00.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.7	482.25	US 63
6	Type 1	132+50.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.7	482.25	US 63
6	Type 1	133+00.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.7	482.25	US 63
6	Type 1	133+50.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.7	482.25	US 63
6	Type 1	134+00.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.7	482.25	US 63
6	Type 1	134+50.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.7	482.25	US 63
7	Type 1	139+37.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	0.4	3038.17	US 63
7	Type 1	140+06.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.2	578.70	US 63
7	Type 1	140+66.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.2	578.70	US 63
7	Type 1	141+26.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.2	578.70	US 63
7	Type 1	141+86.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.2	578.70	US 63
7	Type 1	142+46.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.2	578.70	US 63
7	Type 1	143+06.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.2	578.70	US 63
7	Type 1	143+66.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.2	578.70	US 63
7	Type 1	21252+75.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.9	723.38	Ramp B
7	Type 1	21253+50.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.9	723.38	Ramp B
7	Type 1	21254+25.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.9	723.38	Ramp B
7	Type 1	21255+00.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.9	723.38	Ramp B
8	Type 1	138+87.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	0.4	3038.17	US 63
8	Type 1	140+50.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	0.4	3038.17	US 63
9	Type 1	21241+00.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	0.8	1494.97	Ramp B
9	Type 1	21242+55.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	0.8	1494.97	Ramp B
9	Type 1	21244+10.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	0.8	1494.97	Ramp B
9	Type 1	21245+65.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	0.8	1494.97	Ramp B
9	Type 1	21246+62.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	3.0	482.25	Ramp B
9	Type 1	21247+07.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	3.0	482.25	Ramp B
9	Type 1	21247+52.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	3.0	482.25	Ramp B
9	Type 1	21247+97.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	3.0	482.25	Ramp B

SILT FENCES FOR DITCH CHECKS

Possible Standard: EC-201



Cross Section View



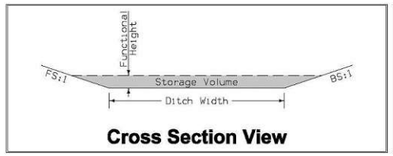
Longitudinal Profile View

* The functional height used in the volume equation is 85% of effective height. Effective height is 1.58 feet as shown on EC-201.
* Volume equation: [0.5*Spacing*(0.5*H^2*FS+DW*H+0.5*H^2*BS)]

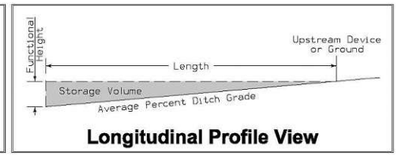
Basin No.	Type	Station	Side	Installation (LF)	Maintenance (LF)	Removal (LF)	Foreslope (FS:1)	Backslope (BS:1)	Ditch Width (FT)	Avg. % Slope Ditch Grade	Volume (CF)	Remarks
9	Type 1	21248+42.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	3.0	482.25	Ramp B
9	Type 1	21248+87.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	3.0	482.25	Ramp B
9	Type 1	21249+32.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	3.0	482.25	Ramp B
9	Type 1	21249+77.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	3.0	482.25	Ramp B
9	Type 1	21250+22.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	3.0	482.25	Ramp B
9	Type 1	21250+67.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	3.0	482.25	Ramp B
9	Type 1	21251+12.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	3.0	482.25	Ramp B
9	Type 1	21251+57.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	3.0	482.25	Ramp B
10	Type 1	21246+79.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.6	482.25	Ramp B
10	Type 1	21247+29.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.6	482.25	Ramp B
10	Type 1	21247+79.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.6	482.25	Ramp B
10	Type 1	21248+29.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.6	482.25	Ramp B
10	Type 1	21248+79.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.6	482.25	Ramp B
10	Type 1	21249+29.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.6	482.25	Ramp B
10	Type 1	21249+79.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.6	482.25	Ramp B
10	Type 1	21250+29.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.6	482.25	Ramp B
10	Type 1	21250+79.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.6	482.25	Ramp B
10	Type 1	21251+29.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.6	482.25	Ramp B
10	Type 1	21251+79.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.6	482.25	Ramp B
11	Type 1	41257+70.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.8	482.25	Ramp D
11	Type 1	41258+20.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.8	482.25	Ramp D
11	Type 1	41258+70.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.8	482.25	Ramp D
11	Type 1	41259+20.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.8	482.25	Ramp D
11	Type 1	41259+70.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.8	482.25	Ramp D
11	Type 1	41260+20.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.8	482.25	Ramp D
11	Type 1	41260+70.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.8	482.25	Ramp D
11	Type 1	41261+20.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.8	482.25	Ramp D
11	Type 1	41263+62.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.8	482.25	Ramp D
11	Type 1	41264+14.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.8	482.25	Ramp D
11	Type 1	41264+66.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.8	482.25	Ramp D
11	Type 1	41265+18.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.8	482.25	Ramp D
11	Type 1	41265+70.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.8	482.25	Ramp D
11	Type 1	41266+22.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.8	482.25	Ramp D
11	Type 1	41266+75.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.8	482.25	Ramp D
11	Type 1	41267+28.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.8	482.25	Ramp D
11	Type 1	41267+81.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.8	482.25	Ramp D
11	Type 1	41268+34.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.8	482.25	Ramp D
11	Type 1	41268+87.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.8	482.25	Ramp D
11	Type 1	41269+40.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.8	482.25	Ramp D
11	Type 1	41269+93.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.8	482.25	Ramp D
12	Type 1	2023+25.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	3.0	471.00	Jewell
12	Type 1	2023+70.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	3.0	471.00	Jewell
12	Type 1	2024+15.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	3.0	471.00	Jewell
12	Type 1	2024+60.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	3.0	471.00	Jewell
12	Type 1	2025+05.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	3.0	471.00	Jewell

SILT FENCES FOR DITCH CHECKS

Possible Standard: EC-201



Cross Section View



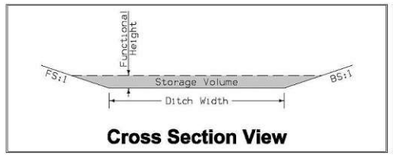
Longitudinal Profile View

* The functional height used in the volume equation is 85% of effective height. Effective height is 1.58 feet as shown on EC-201.
* Volume equation: [0.5*Spacing*(0.5*H^2*FS+DW*H+0.5*H^2*BS)]

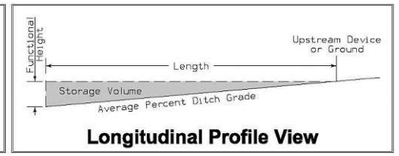
Basin No.	Type	Station	Side	Installation (LF)	Maintenance (LF)	Removal (LF)	Foreslope (FS:1)	Backslope (BS:1)	Ditch Width (FT)	Avg. % Slope Ditch Grade	Volume (CF)	Remarks
12	Type 1	2025+50.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	3.0	471.00	Jewell
12	Type 1	2025+95.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	3.0	471.00	Jewell
12	Type 1	2026+40.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	3.0	471.00	Jewell
12	Type 1	2026+85.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	3.0	471.00	Jewell
12	Type 1	2027+30.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	3.0	471.00	Jewell
12	Type 1	2027+75.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	3.0	471.00	Jewell
12	Type 1	2028+20.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	3.0	471.00	Jewell
12	Type 1	2028+65.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	3.0	471.00	Jewell
12	Type 1	2029+10.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	3.0	471.00	Jewell
12	Type 1	2029+55.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	3.0	471.00	Jewell
13	Type 1	2038+00.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.4	2967.30	Jewell
13	Type 1	2041+11.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.4	2967.30	Jewell
13	Type 1	2044+22.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.4	2967.30	Jewell
13	Type 1	2047+35.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.4	2967.30	Jewell
14	Type 1	2039+00.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	0.4	2967.30	Jewell
14	Type 1	2042+20.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	0.4	2967.30	Jewell
14	Type 1	2045+53.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	0.4	2967.30	Jewell
15	Type 1	2023+25.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	3.4	423.90	Jewell
15	Type 1	2023+70.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	3.4	423.90	Jewell
15	Type 1	2024+15.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	3.4	423.90	Jewell
15	Type 1	2024+60.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	3.4	423.90	Jewell
15	Type 1	2025+05.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	3.4	423.90	Jewell
15	Type 1	2025+50.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	3.4	423.90	Jewell
15	Type 1	2025+95.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	3.4	423.90	Jewell
15	Type 1	2026+40.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	3.4	423.90	Jewell
15	Type 1	2026+85.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	3.4	423.90	Jewell
15	Type 1	2027+30.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	3.4	423.90	Jewell
15	Type 1	2027+75.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	3.4	423.90	Jewell
15	Type 1	2028+20.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	3.4	423.90	Jewell
15	Type 1	2028+65.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	3.4	423.90	Jewell
17	Type 1	145+53.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	0.4	3038.17	US 63
17	Type 1	147+44.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	0.4	3038.17	US 63
17	Type 1	150+07.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.3	964.50	US 63
17	Type 1	151+05.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.3	964.50	US 63
17	Type 1	152+03.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.3	964.50	US 63
18	Type 1	21253+00.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.3	964.50	Ramp B
18	Type 1	21254+00.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.3	964.50	Ramp B
18	Type 1	146+00.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	0.4	3038.17	Ramp B
18	Type 1	149+95.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
18	Type 1	150+59.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
18	Type 1	151+15.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
18	Type 1	154+66.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
18	Type 1	155+10.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
18	Type 1	155+70.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
18	Type 1	156+30.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63

SILT FENCES FOR DITCH CHECKS

Possible Standard: EC-201



Cross Section View



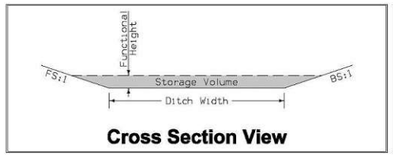
Longitudinal Profile View

* The functional height used in the volume equation is 85% of effective height. Effective height is 1.58 feet as shown on EC-201.
* Volume equation: [0.5*Spacing*(0.5*H^2*FS+DW*H+0.5*H^2*BS)]

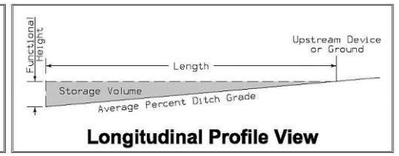
Basin No.	Type	Station	Side	Installation (LF)	Maintenance (LF)	Removal (LF)	Foreslope (FS:1)	Backslope (BS:1)	Ditch Width (FT)	Avg. % Slope Ditch Grade	Volume (CF)	Remarks
18	Type 1	156+90.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
18	Type 1	157+50.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
18	Type 1	158+10.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
18	Type 1	158+70.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
19	Type 1	31250+00.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.0	1494.97	Ramp C
19	Type 1	31251+00.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.0	1494.97	Ramp C
19	Type 1	31252+00.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.7	482.25	Ramp C
19	Type 1	31252+50.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.7	482.25	Ramp C
19	Type 1	31253+00.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.7	482.25	Ramp C
19	Type 1	31253+50.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.7	482.25	Ramp C
19	Type 1	31254+00.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.7	482.25	Ramp C
20	Type 1	31236+00.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	0.4	3394.13	Ramp C
20	Type 1	31239+46.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	0.4	3394.13	Ramp C
20	Type 1	31245+00.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	0.4	3394.13	Ramp C
20	Type 1	31248+20.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	1.0	1670.13	Ramp C
20	Type 1	31249+20.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	1.0	1670.13	Ramp C
20	Type 1	31250+20.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	1.0	1670.13	Ramp C
20	Type 1	31251+20.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	1.0	1670.13	Ramp C
20	Type 1	31252+20.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	2.7	538.75	Ramp C
20	Type 1	31252+70.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	2.7	538.75	Ramp C
20	Type 1	31253+20.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	2.7	538.75	Ramp C
20	Type 1	31253+70.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	2.7	538.75	Ramp C
20	Type 1	31254+20.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	2.7	538.75	Ramp C
20	Type 1	31254+70.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	2.7	538.75	Ramp C
21	Type 1	11258+00.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.7	723.38	Ramp A
21	Type 1	11258+75.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.7	723.38	Ramp A
21	Type 1	11259+50.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.7	723.38	Ramp A
21	Type 1	11260+25.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.7	723.38	Ramp A
21	Type 1	11261+00.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.7	723.38	Ramp A
21	Type 1	11262+52.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.3	578.70	Ramp A
21	Type 1	11263+02.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.3	578.70	Ramp A
21	Type 1	11263+52.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.3	578.70	Ramp A
21	Type 1	11264+02.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.3	578.70	Ramp A
21	Type 1	11264+51.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.3	578.70	Ramp A
21	Type 1	11265+00.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.3	578.70	Ramp A
21	Type 1	11265+49.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.3	578.70	Ramp A
21	Type 1	11265+98.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.3	578.70	Ramp A
21	Type 1	11266+47.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.3	578.70	Ramp A
21	Type 1	11266+96.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.3	578.70	Ramp A
22	Type 1	11257+53.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	1.7	808.13	Ramp A
22	Type 1	11258+24.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	1.7	808.13	Ramp A
22	Type 1	11258+99.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	1.7	808.13	Ramp A
22	Type 1	11259+74.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	1.7	808.13	Ramp A
22	Type 1	11260+49.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	1.7	808.13	Ramp A
22	Type 1	11261+24.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	1.7	808.13	Ramp A

SILT FENCES FOR DITCH CHECKS

Possible Standard: EC-201



Cross Section View



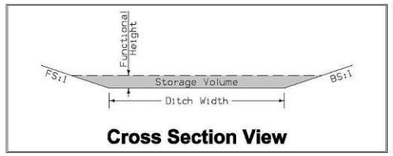
Longitudinal Profile View

* The functional height used in the volume equation is 85% of effective height. Effective height is 1.58 feet as shown on EC-201.
* Volume equation: [0.5*Spacing*(0.5*H^2*FS+DW*H+0.5*H^2*BS)]

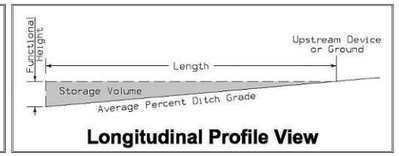
Basin No.	Type	Station	Side	Installation (LF)	Maintenance (LF)	Removal (LF)	Foreslope (FS:1)	Backslope (BS:1)	Ditch Width (FT)	Avg. % Slope Ditch Grade	Volume (CF)	Remarks
22	Type 1	11262+49.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	1.0	1670.13	Ramp A
22	Type 1	11263+49.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	1.0	1670.13	Ramp A
22	Type 1	11264+49.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	1.0	1670.13	Ramp A
22	Type 1	11265+49.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	1.0	1670.13	Ramp A
22	Type 1	11266+49.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	1.0	1670.13	Ramp A
22	Type 1	11267+49.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	1.0	1670.13	Ramp A
22	Type 1	11268+49.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	1.0	1670.13	Ramp A
22	Type 1	11269+49.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	1.0	1670.13	Ramp A
22	Type 1	11270+55.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	2.8	538.75	Ramp A
22	Type 1	11271+07.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	2.8	538.75	Ramp A
22	Type 1	11271+59.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	2.8	538.75	Ramp A
22	Type 1	11272+11.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	2.8	538.75	Ramp A
22	Type 1	11272+63.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	2.8	538.75	Ramp A
22	Type 1	11273+15.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	2.8	538.75	Ramp A
22	Type 1	11273+67.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	2.8	538.75	Ramp A
22	Type 1	11274+19.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	2.8	538.75	Ramp A
22	Type 1	11274+71.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	2.8	538.75	Ramp A
22	Type 1	11275+23.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	2.8	538.75	Ramp A
22	Type 1	11275+75.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	2.8	538.75	Ramp A
22	Type 1	11276+27.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	2.8	538.75	Ramp A
22	Type 1	11276+79.00	Left	28.0	2.8	28.0	3.0	6.0	10.0	2.8	538.75	Ramp A
23	Type 1	154+82.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.3	964.50	US 63
23	Type 1	155+82.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.3	964.50	US 63
23	Type 1	156+82.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.3	964.50	US 63
23	Type 1	157+82.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.3	964.50	US 63
23	Type 1	5001+39.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	0.4	2967.30	Old 163
23	Type 1	5004+52.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	0.4	2967.30	Old 163
24	Type 1	5005+43.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	0.4	2967.30	Old 163
24	Type 1	5007+47.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	0.3	2967.30	Old 163
24	Type 1	5010+62.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	0.3	2967.30	Old 163
24	Type 1	5013+77.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	0.3	2967.30	Old 163
24	Type 1	5016+92.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	0.3	2967.30	Old 163
24	Type 1	5020+07.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	0.3	2967.30	Old 163
24	Type 1	5022+53.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	0.3	2967.30	Old 163
25	Type 1	5029+00.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	1.6	706.50	Old 163
25	Type 1	5029+75.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	1.6	706.50	Old 163
25	Type 1	5030+50.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	1.6	706.50	Old 163
25	Type 1	5031+25.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	1.6	706.50	Old 163
25	Type 1	5032+00.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	1.6	706.50	Old 163
25	Type 1	5032+75.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	1.6	706.50	Old 163
25	Type 1	5033+50.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	1.6	706.50	Old 163
25	Type 1	5034+25.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	1.6	706.50	Old 163
25	Type 1	5035+00.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	1.6	706.50	Old 163
25	Type 1	5036+75.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	0.4	2967.30	Old 163
25	Type 1	5039+00.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	0.4	2967.30	Old 163

SILT FENCES FOR DITCH CHECKS

Possible Standard: EC-201



Cross Section View



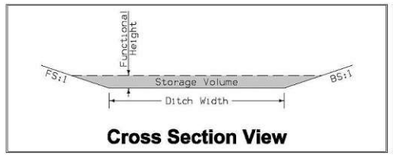
Longitudinal Profile View

* The functional height used in the volume equation is 85% of effective height. Effective height is 1.58 feet as shown on EC-201.
* Volume equation: [0.5*Spacing*(0.5*H^2*FS+DW*H+0.5*H^2*BS)]

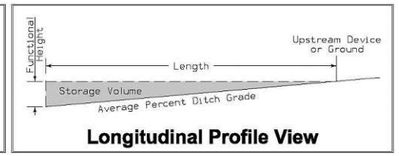
Basin No.	Type	Station	Side	Installation (LF)	Maintenance (LF)	Removal (LF)	Foreslope (FS:1)	Backslope (BS:1)	Ditch Width (FT)	Avg. % Slope Ditch Grade	Volume (CF)	Remarks
26	Type 1	5028+00.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	1.9	706.50	Old 163
26	Type 1	5028+75.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	1.9	706.50	Old 163
26	Type 1	5029+50.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	2.0	706.50	Old 163
26	Type 1	5030+10.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	2.0	706.50	Old 163
26	Type 1	5030+70.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	2.0	706.50	Old 163
26	Type 1	5031+90.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	2.0	706.50	Old 163
26	Type 1	5032+50.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	2.0	706.50	Old 163
26	Type 1	5033+10.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	1.7	706.50	Old 163
26	Type 1	5033+85.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	1.7	706.50	Old 163
26	Type 1	5034+60.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	1.7	706.50	Old 163
26	Type 1	5035+35.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	1.7	706.50	Old 163
26	Type 1	5036+65.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	1.4	942.00	Old 163
26	Type 1	5037+65.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	1.4	942.00	Old 163
26	Type 1	5038+65.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	3.8	376.80	Old 163
26	Type 1	5039+05.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	3.8	376.80	Old 163
26	Type 1	5039+45.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	3.8	376.80	Old 163
27	Type 1	5005+00.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.6	1460.10	Old 163
27	Type 1	5007+40.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.2	2967.30	Old 163
27	Type 1	5010+55.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.2	2967.30	Old 163
27	Type 1	5013+70.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.2	2967.30	Old 163
27	Type 1	5016+85.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.2	2967.30	Old 163
27	Type 1	5020+00.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.2	2967.30	Old 163
27	Type 1	5023+15.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.2	2967.30	Old 163
28	Type 1	5001+00.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.4	2967.30	Old 163
28	Type 1	5004+17.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.4	2967.30	Old 163
28	Type 1	160+55.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	0.5	3038.17	US 63
28	Type 1	162+14.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	0.5	3038.17	US 63
28	Type 1	163+73.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	0.5	3038.17	US 63
28	Type 1	165+32.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	0.5	3038.17	US 63
28	Type 1	166+91.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	0.5	3038.17	US 63
28	Type 1	168+50.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	0.5	3038.17	US 63
28	Type 1	170+09.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	0.5	3038.17	US 63
28	Type 1	171+68.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	0.5	3038.17	US 63
28	Type 1	173+27.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	0.5	3038.17	US 63
28	Type 1	174+85.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	0.5	3038.17	US 63
28	Type 1	176+43.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	0.5	3038.17	US 63
28	Type 1	178+01.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	0.5	3038.17	US 63
28	Type 1	189+83.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.4	578.70	US 63
28	Type 1	190+43.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.4	578.70	US 63
28	Type 1	191+03.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.4	578.70	US 63
28	Type 1	191+63.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.4	578.70	US 63
28	Type 1	192+23.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.4	578.70	US 63
28	Type 1	192+83.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.4	578.70	US 63
28	Type 1	193+43.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.4	578.70	US 63
28	Type 1	194+03.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.4	578.70	US 63

SILT FENCES FOR DITCH CHECKS

Possible Standard: EC-201



Cross Section View



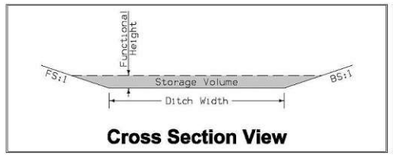
Longitudinal Profile View

* The functional height used in the volume equation is 85% of effective height. Effective height is 1.58 feet as shown on EC-201.
* Volume equation: [0.5*Spacing*(0.5*H^2*FS+DW*H+0.5*H^2*BS)]

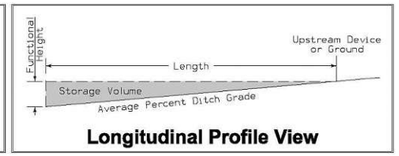
Basin No.	Type	Station	Side	Installation (LF)	Maintenance (LF)	Removal (LF)	Foreslope (FS:1)	Backslope (BS:1)	Ditch Width (FT)	Avg. % Slope Ditch Grade	Volume (CF)	Remarks
28	Type 1	194+63.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.4	578.70	US 63
28	Type 1	195+23.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.4	578.70	US 63
28	Type 1	195+83.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.4	578.70	US 63
28	Type 1	196+43.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.4	578.70	US 63
28	Type 1	197+03.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.4	578.70	US 63
28	Type 1	197+63.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.4	578.70	US 63
30	Type 1	160+00.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	0.1	3038.17	US 63
30	Type 1	163+07.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	0.1	3038.17	US 63
30	Type 1	166+14.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	0.1	3038.17	US 63
30	Type 1	169+21.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	0.1	3038.17	US 63
30	Type 1	172+28.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	0.1	3038.17	US 63
30	Type 1	175+35.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	0.1	3038.17	US 63
30	Type 1	178+42.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	0.1	3038.17	US 63
31	Type 1	198+40.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.6	723.38	US 63
31	Type 1	199+15.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.6	723.38	US 63
31	Type 1	199+90.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.6	723.38	US 63
32	Type 1	198+20.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.5	964.50	US 63
32	Type 1	198+93.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.5	964.50	US 63
32	Type 1	199+66.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.5	964.50	US 63
32	Type 1	200+39.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.5	964.50	US 63
32	Type 1	201+12.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.5	964.50	US 63
32	Type 1	206+96.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.5	964.50	US 63
32	Type 1	207+69.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	3.0	482.25	US 63
32	Type 1	208+14.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	3.0	482.25	US 63
32	Type 1	208+59.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	3.0	482.25	US 63
32	Type 1	209+04.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	0.4	3038.17	US 63
32	Type 1	211+00.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	0.4	3038.17	US 63
34	Type 1	6002+57.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.5	2967.30	Kirby
34	Type 1	6003+25.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.5	2967.30	Kirby
34	Type 1	244+75.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.9	723.38	US 63
34	Type 1	245+50.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.9	723.38	US 63
34	Type 1	246+25.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.9	723.38	US 63
34	Type 1	247+00.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.9	723.38	US 63
34	Type 1	247+75.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.9	723.38	US 63
34	Type 1	248+50.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.9	723.38	US 63
34	Type 1	249+25.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.9	723.38	US 63
34	Type 1	250+00.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.9	723.38	US 63
34	Type 1	250+75.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.9	723.38	US 63
34	Type 1	251+50.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.9	723.38	US 63
34	Type 1	252+25.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.9	723.38	US 63
34	Type 1	255+00.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.6	723.38	US 63
34	Type 1	255+75.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.6	723.38	US 63
34	Type 1	256+50.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.6	723.38	US 63
34	Type 1	258+50.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.6	723.38	US 63
34	Type 1	259+24.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.6	723.38	US 63

SILT FENCES FOR DITCH CHECKS

Possible Standard: EC-201



Cross Section View



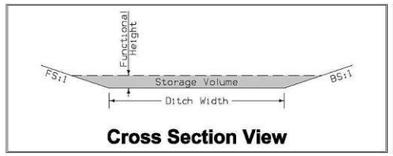
Longitudinal Profile View

* The functional height used in the volume equation is 85% of effective height. Effective height is 1.58 feet as shown on EC-201.
* Volume equation: [0.5*Spacing*(0.5*H^2*FS+DW*H+0.5*H^2*BS)]

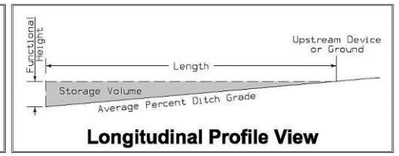
Basin No.	Type	Station	Side	Installation (LF)	Maintenance (LF)	Removal (LF)	Foreslope (FS:1)	Backslope (BS:1)	Ditch Width (FT)	Avg. % Slope Ditch Grade	Volume (CF)	Remarks
34	Type 1	259+98.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.6	723.38	US 63
34	Type 1	260+72.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.6	723.38	US 63
34	Type 1	261+46.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.6	723.38	US 63
34	Type 1	262+20.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.6	723.38	US 63
34	Type 1	262+94.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.6	723.38	US 63
34	Type 1	263+68.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.6	723.38	US 63
34	Type 1	264+42.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.6	723.38	US 63
34	Type 1	265+17.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.6	723.38	US 63
34	Type 1	265+92.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.6	723.38	US 63
34	Type 1	266+67.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.6	723.38	US 63
34	Type 1	267+43.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.6	723.38	US 63
34	Type 1	268+19.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.6	723.38	US 63
34	Type 1	268+95.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.6	723.38	US 63
34	Type 1	269+71.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.6	723.38	US 63
35	Type 1	242+35.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.5	964.50	US 63
35	Type 1	243+10.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.5	964.50	US 63
35	Type 1	243+85.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.5	964.50	US 63
35	Type 1	244+60.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.5	964.50	US 63
35	Type 1	245+35.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.5	964.50	US 63
35	Type 1	246+10.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.5	964.50	US 63
35	Type 1	246+85.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.5	964.50	US 63
35	Type 1	247+60.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.5	964.50	US 63
35	Type 1	248+35.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.5	964.50	US 63
35	Type 1	249+10.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.5	964.50	US 63
35	Type 1	249+85.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.5	964.50	US 63
35	Type 1	250+60.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.5	964.50	US 63
35	Type 1	251+35.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.5	964.50	US 63
35	Type 1	252+10.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.5	964.50	US 63
35	Type 1	252+85.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.5	964.50	US 63
35	Type 1	254+40.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.6	723.38	US 63
35	Type 1	255+15.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.6	723.38	US 63
35	Type 1	258+45.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
35	Type 1	259+05.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
35	Type 1	259+65.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
35	Type 1	260+25.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
35	Type 1	260+85.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
35	Type 1	261+45.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
35	Type 1	262+05.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
35	Type 1	262+65.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
35	Type 1	263+25.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
35	Type 1	263+85.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
35	Type 1	264+45.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
35	Type 1	265+05.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
35	Type 1	265+65.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
35	Type 1	266+25.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63

SILT FENCES FOR DITCH CHECKS

Possible Standard: EC-201



Cross Section View



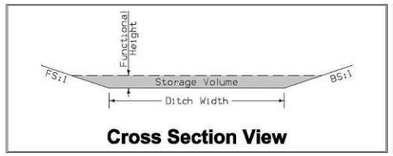
Longitudinal Profile View

* The functional height used in the volume equation is 85% of effective height. Effective height is 1.58 feet as shown on EC-201.
* Volume equation: [0.5*Spacing*(0.5*H^2*FS+DW*H+0.5*H^2*BS)]

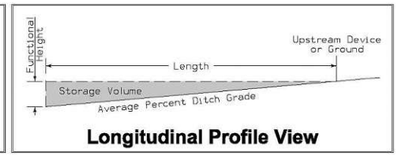
Basin No.	Type	Station	Side	Installation (LF)	Maintenance (LF)	Removal (LF)	Foreslope (FS:1)	Backslope (BS:1)	Ditch Width (FT)	Avg. % Slope Ditch Grade	Volume (CF)	Remarks
35	Type 1	266+85.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
35	Type 1	267+45.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
35	Type 1	268+05.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
35	Type 1	268+65.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
35	Type 1	269+25.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
35	Type 1	269+85.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	2.0	723.38	US 63
36	Type 1	6001+00.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	1.3	942.00	Kirby
36	Type 1	6002+00.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	1.3	942.00	Kirby
39	Type 1	7012+00.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	0.4	2967.30	220th
39	Type 1	7014+35.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	0.4	2967.30	220th
40	Type 1	7012+00.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.4	2967.30	220th
40	Type 1	7014+35.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.4	2967.30	220th
41	Type 1	270+25.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.7	723.38	US 63
41	Type 1	271+00.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.7	723.38	US 63
41	Type 1	271+75.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.7	723.38	US 63
41	Type 1	272+50.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.7	723.38	US 63
41	Type 1	273+25.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.7	723.38	US 63
41	Type 1	274+00.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.7	723.38	US 63
41	Type 1	274+75.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.7	723.38	US 63
41	Type 1	275+50.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.7	723.38	US 63
41	Type 1	276+25.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.7	723.38	US 63
41	Type 1	277+00.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.7	723.38	US 63
41	Type 1	277+75.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.7	723.38	US 63
41	Type 1	278+50.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.7	723.38	US 63
41	Type 1	279+25.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.7	723.38	US 63
41	Type 1	280+00.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.7	723.38	US 63
41	Type 1	281+45.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.5	964.50	US 63
41	Type 1	282+20.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	1.5	964.50	US 63
42	Type 1	270+50.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.3	964.50	US 63
42	Type 1	271+50.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.3	964.50	US 63
42	Type 1	272+50.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.3	964.50	US 63
42	Type 1	273+50.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.3	964.50	US 63
42	Type 1	274+50.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.3	964.50	US 63
42	Type 1	275+50.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.3	964.50	US 63
42	Type 1	276+50.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.3	964.50	US 63
42	Type 1	277+50.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.3	964.50	US 63
42	Type 1	278+50.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.3	964.50	US 63
42	Type 1	279+50.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.3	964.50	US 63
42	Type 1	280+50.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.3	964.50	US 63
42	Type 1	281+30.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	1.3	964.50	US 63
42	Type 1	282+75.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	0.2	3038.17	US 63
44	Type 1	8003+00.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	0.4	2967.30	210th
44	Type 1	8004+50.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.6	471.00	210th
44	Type 1	8004+98.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.6	471.00	210th
44	Type 1	8005+46.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.6	471.00	210th

SILT FENCES FOR DITCH CHECKS

Possible Standard: EC-201



Cross Section View



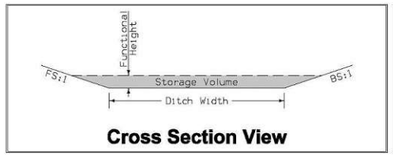
Longitudinal Profile View

* The functional height used in the volume equation is 85% of effective height. Effective height is 1.58 feet as shown on EC-201.
* Volume equation: [0.5*Spacing*(0.5*H^2*FS+DW*H+0.5*H^2*BS)]

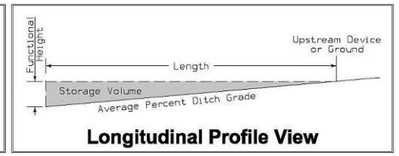
Basin No.	Type	Station	Side	Installation (LF)	Maintenance (LF)	Removal (LF)	Foreslope (FS:1)	Backslope (BS:1)	Ditch Width (FT)	Avg. % Slope Ditch Grade	Volume (CF)	Remarks
44	Type 1	8005+94.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.6	471.00	210th
44	Type 1	8006+42.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.6	471.00	210th
44	Type 1	8006+90.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.6	471.00	210th
44	Type 1	8007+38.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.6	471.00	210th
44	Type 1	8007+86.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.6	471.00	210th
44	Type 1	8008+34.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.6	471.00	210th
44	Type 1	8008+82.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	3.8	376.80	210th
44	Type 1	8009+42.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	3.8	376.80	210th
44	Type 1	8009+86.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	3.8	376.80	210th
45	Type 1	8003+00.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	2.3	565.20	210th
45	Type 1	8003+60.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	2.3	565.20	210th
45	Type 1	8004+20.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	1.7	706.50	210th
45	Type 1	8004+96.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	1.7	706.50	210th
45	Type 1	8005+72.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	1.7	706.50	210th
45	Type 1	8006+48.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	1.7	706.50	210th
45	Type 1	8007+24.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	1.7	706.50	210th
45	Type 1	8008+00.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	1.7	706.50	210th
46	Type 1	295+15.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	3.8	385.80	US 63
46	Type 1	295+55.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	3.8	385.80	US 63
46	Type 1	295+95.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	3.8	385.80	US 63
46	Type 1	296+35.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	3.8	385.80	US 63
46	Type 1	299+27.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	3.9	385.80	US 63
46	Type 1	299+67.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	3.9	385.80	US 63
46	Type 1	300+07.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	3.9	385.80	US 63
46	Type 1	300+47.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	3.9	385.80	US 63
46	Type 1	300+87.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	3.9	385.80	US 63
46	Type 1	301+27.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	3.9	385.80	US 63
46	Type 1	301+67.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	3.9	385.80	US 63
46	Type 1	302+07.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	3.9	385.80	US 63
46	Type 1	302+47.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	3.9	385.80	US 63
46	Type 1	302+87.00	Left	23.0	2.3	23.0	3.0	3.5	10.0	3.9	385.80	US 63
47	Type 1	295+18.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	3.8	385.80	US 63
47	Type 1	295+55.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	3.8	385.80	US 63
47	Type 1	295+92.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	3.8	385.80	US 63
47	Type 1	296+29.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	3.8	385.80	US 63
47	Type 1	296+66.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	3.8	385.80	US 63
47	Type 1	297+03.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	3.8	385.80	US 63
47	Type 1	298+67.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	0.4	3038.17	US 63
49	Type 1	303+56.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	3.9	385.80	US 63
49	Type 1	303+96.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	3.9	385.80	US 63
49	Type 1	304+36.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	3.9	385.80	US 63
49	Type 1	304+76.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	3.9	385.80	US 63
49	Type 1	305+16.00	Right	23.0	2.3	23.0	3.0	3.5	10.0	3.9	385.80	US 63
50	Type 1	9001+24.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	0.1	2967.30	Old 63
50	Type 1	9004+20.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	1.2	942.00	Old 63

SILT FENCES FOR DITCH CHECKS

Possible Standard: EC-201



Cross Section View



Longitudinal Profile View

* The functional height used in the volume equation is 85% of effective height. Effective height is 1.58 feet as shown on EC-201.
* Volume equation: [0.5*Spacing*(0.5*H^2*FS+DW*H+0.5*H^2*BS)]

Basin No.	Type	Station	Side	Installation (LF)	Maintenance (LF)	Removal (LF)	Foreslope (FS:1)	Backslope (BS:1)	Ditch Width (FT)	Avg. % Slope Ditch Grade	Volume (CF)	Remarks
50	Type 1	9005+20.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	1.2	942.00	Old 63
50	Type 1	9007+57.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	0.8	1460.10	Old 63
50	Type 1	9008+69.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	0.8	1460.10	Old 63
50	Type 1	9009+76.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.5	565.20	Old 63
50	Type 1	9010+26.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.5	565.20	Old 63
50	Type 1	9010+76.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.5	565.20	Old 63
50	Type 1	9011+26.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.5	565.20	Old 63
50	Type 1	9011+76.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.5	565.20	Old 63
50	Type 1	9012+26.00	Right	22.0	2.2	22.0	3.0	3.0	10.0	2.5	565.20	Old 63
52	Type 1	9001+00.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	1.8	706.50	Old 63
52	Type 1	9001+77.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	1.8	706.50	Old 63
52	Type 1	9002+54.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	1.8	706.50	Old 63
52	Type 1	9003+31.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	1.8	706.50	Old 63
52	Type 1	9004+08.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.8	1460.10	Old 63
52	Type 1	9005+06.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.8	1460.10	Old 63
52	Type 1	9006+04.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	0.8	1460.10	Old 63
52	Type 1	9007+75.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	1.0	1460.10	Old 63
52	Type 1	9008+70.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	1.0	1460.10	Old 63
52	Type 1	9009+65.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	1.0	1460.10	Old 63
52	Type 1	9010+60.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	1.0	1460.10	Old 63
52	Type 1	9011+30.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	3.2	423.90	Old 63
52	Type 1	9011+75.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	3.2	423.90	Old 63
52	Type 1	9012+20.00	Left	22.0	2.2	22.0	3.0	3.0	10.0	3.2	423.90	Old 63
Total:				**11936**	**1193.6**	**11936**						

PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE

Possible Standards: EC-204

Station From	Station To	Side	Sediment Control Device Type	Diameter Size	Length (LF)	Remarks
120+13.00	122+84.00	Left	Perimeter and Slope	12 inch	270.00	
122+68.00	126+03.00	Left	Perimeter and Slope	12 inch	300.00	
125+71.00	129+49.00	Left	Perimeter and Slope	12 inch	410.00	
122+00.00	122+83.00	Left	Perimeter and Slope	12 inch	80.00	30' Offset
124+08.00	126+05.00	Left	Perimeter and Slope	12 inch	170.00	30' Offset
126+00.00	129+19.00	Left	Perimeter and Slope	12 inch	340.00	30' Offset
119+76.00	121+78.00	Right	Perimeter and Slope	12 inch	210.00	
121+64.00	124+26.00	Right	Perimeter and Slope	12 inch	290.00	
124+11.00	126+96.00	Right	Perimeter and Slope	12 inch	310.00	
126+78.00	129+51.00	Right	Perimeter and Slope	12 inch	310.00	
121+16.00	121+78.00	Right	Perimeter and Slope	12 inch	70.00	30' Offset
122+04.00	124+26.00	Right	Perimeter and Slope	12 inch	260.00	30' Offset
124+11.00	126+96.00	Right	Perimeter and Slope	12 inch	330.00	30' Offset
126+78.00	129+30.00	Right	Perimeter and Slope	12 inch	280.00	30' Offset
124+11.00	126+96.00	Right	Perimeter and Slope	12 inch	340.00	60' Offset
126+78.00	129+00.00	Right	Perimeter and Slope	12 inch	240.00	60' Offset
130+45.00	131+44.00	Left	Perimeter and Slope	12 inch	170.00	
131+31.00	134+49.00	Left	Perimeter and Slope	12 inch	300.00	
130+75.00	131+44.00	Left	Perimeter and Slope	12 inch	110.00	30' Offset
131+31.00	133+70.00	Left	Perimeter and Slope	12 inch	220.00	30' Offset
130+50.00	131+71.00	Right	Perimeter and Slope	12 inch	150.00	
131+64.00	134+81.00	Right	Perimeter and Slope	12 inch	320.00	
130+80.00	131+75.00	Right	Perimeter and Slope	12 inch	100.00	30' Offset
137+76.00		Left	Perimeter and Slope	12 inch	40.00	Inlet Protection
135+46.00	143+96.00	Left	Perimeter and Slope	12 inch	890.00	
137+11.00	140+11.00	Left	Perimeter and Slope	12 inch	310.00	Left of Ditch
135+43.00	141+27.00	Left	Perimeter and Slope	12 inch	610.00	Left of Ditch
138+57.00	144+31.00	Right	Perimeter and Slope	12 inch	610.00	
135+39.00	143+33.00	Right	Perimeter and Slope	12 inch	830.00	30' Offset
136+24.00	142+64.00	Right	Perimeter and Slope	12 inch	650.00	60' Offset
137+60.00	140+58.00	Right	Perimeter and Slope	12 inch	300.00	90' Offset
145+00.00	148+07.00	Left	Perimeter and Slope	12 inch	390.00	
145+33.00	148+07.00	Left	Perimeter and Slope	12 inch	330.00	30' Offset
146+12.00	148+07.00	Left	Perimeter and Slope	12 inch	200.00	60' Offset
146+03.00	147+80.00	Left	Perimeter and Slope	12 inch	180.00	Left of Ditch
145+23.00	148+15.00	Right	Perimeter and Slope	12 inch	350.00	
145+67.00	148+15.00	Right	Perimeter and Slope	12 inch	270.00	30' Offset
146+42.00	147+41.00	Right	Perimeter and Slope	12 inch	110.00	Right of Ditch
147+89.00		Right	Perimeter and Slope	12 inch	40.00	Inlet Protection
149+43.00	152+22.00	Left	Perimeter and Slope	12 inch	320.00	
149+43.00	151+80.00	Left	Perimeter and Slope	12 inch	260.00	30' Offset
149+82.00		Left	Perimeter and Slope	12 inch	40.00	Inlet Protection
150+03.00	151+39.00	Left	Perimeter and Slope	12 inch	190.00	Left of Ditch
150+41.00	151+08.00	Left	Perimeter and Slope	12 inch	80.00	Left of Ditch 30' Offset
149+44.00	152+63.00	Right	Perimeter and Slope	12 inch	380.00	
149+44.00	152+30.00	Right	Perimeter and Slope	12 inch	300.00	30' Offset
150+39.00	151+76.00	Right	Perimeter and Slope	12 inch	150.00	Right of Ditch
153+54.00	157+21.00	Left	Perimeter and Slope	12 inch	400.00	
154+45.00	157+86.00	Left	Perimeter and Slope	12 inch	360.00	Left of Ditch
153+80.00	158+76.00	Right	Perimeter and Slope	12 inch	540.00	
154+94.00	158+42.00	Right	Perimeter and Slope	12 inch	370.00	Right of Ditch
160+60.00	171+38.00	Right	Perimeter and Slope	12 inch	1040.00	Right of Ditch
171+22.00	181+24.00	Right	Perimeter and Slope	12 inch	970.00	Right of Ditch 30' Offset
175+25.00	181+32.00	Right	Perimeter and Slope	12 inch	590.00	
181+20.00	182+91.00	Right	Perimeter and Slope	12 inch	180.00	

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PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE

Possible Standards: EC-204

Station From	Station To	Side	Sediment Control Device Type	Diameter Size	Length (LF)	Remarks
182+83.00	185+38.00	Right	Perimeter and Slope	12 inch	260.00	
185+29.00	187+67.00	Right	Perimeter and Slope	12 inch	250.00	
186+14.00	188+44.00	Right	Perimeter and Slope	12 inch	240.00	
181+20.00	182+91.00	Right	Perimeter and Slope	12 inch	180.00	Right of Ditch 30' Offset
182+81.00	185+29.00	Right	Perimeter and Slope	12 inch	260.00	Right of Ditch 30' Offset
185+22.00	186+47.00	Right	Perimeter and Slope	12 inch	130.00	Right of Ditch 30' Offset
182+74.00	185+25.00	Right	Perimeter and Slope	12 inch	260.00	Right of Ditch 60' Offset
185+16.00	185+85.00	Right	Perimeter and Slope	12 inch	70.00	Right of Ditch 60' Offset
168+69.00	172+47.00	Left	Perimeter and Slope	12 inch	390.00	
172+82.00	180+87.00	Left	Perimeter and Slope	12 inch	850.00	
180+85.00	182+05.00	Left	Perimeter and Slope	12 inch	130.00	
181+97.00	182+80.00	Left	Perimeter and Slope	12 inch	90.00	
182+87.00	184+79.00	Left	Perimeter and Slope	12 inch	190.00	
184+73.00	185+57.00	Left	Perimeter and Slope	12 inch	90.00	
186+62.00	188+09.00	Left	Perimeter and Slope	12 inch	260.00	
188+14.00	189+06.00	Left	Perimeter and Slope	12 inch	120.00	
188+93.00	189+34.00	Left	Perimeter and Slope	12 inch	50.00	
189+31.00	189+85.00	Left	Perimeter and Slope	12 inch	60.00	
189+81.00	190+43.00	Left	Perimeter and Slope	12 inch	70.00	
172+40.00	180+88.00	Left	Perimeter and Slope	12 inch	900.00	Left of Ditch 30' Offset
180+77.00	181+97.00	Left	Perimeter and Slope	12 inch	130.00	Left of Ditch 30' Offset
181+91.00	182+74.00	Left	Perimeter and Slope	12 inch	90.00	Left of Ditch 30' Offset
182+68.00	184+72.00	Left	Perimeter and Slope	12 inch	210.00	Left of Ditch 30' Offset
184+67.00	185+50.00	Left	Perimeter and Slope	12 inch	90.00	Left of Ditch 30' Offset
185+44.00	188+06.00	Left	Perimeter and Slope	12 inch	270.00	Left of Ditch 30' Offset
188+02.00	188+85.00	Left	Perimeter and Slope	12 inch	100.00	Left of Ditch 30' Offset
188+83.00	189+23.00	Left	Perimeter and Slope	12 inch	60.00	Left of Ditch 30' Offset
189+20.00	189+73.00	Left	Perimeter and Slope	12 inch	60.00	Left of Ditch 30' Offset
189+74.00	190+46.00	Left	Perimeter and Slope	12 inch	80.00	Left of Ditch 30' Offset
184+88.00	190+09.00	Left	Perimeter and Slope	12 inch	520.00	
190+09.00	196+67.00	Left	Perimeter and Slope	12 inch	660.00	
187+30.00	194+87.00	Left	Perimeter and Slope	12 inch	770.00	30' Offset
188+30.00	193+39.00	Left	Perimeter and Slope	12 inch	530.00	60' Offset
189+55.00	192+12.00	Left	Perimeter and Slope	12 inch	270.00	90' Offset
183+46.00	194+71.00	Right	Perimeter and Slope	12 inch	1130.00	
185+06.00	194+79.00	Right	Perimeter and Slope	12 inch	980.00	30' Offset
187+02.00	192+54.00	Right	Perimeter and Slope	12 inch	560.00	60' Offset
189+15.00		Right	Perimeter and Slope	12 inch	50.00	Inlet Protection
190+44.00	195+48.00	Right	Perimeter and Slope	12 inch	530.00	Right of Ditch
193+18.00	200+00.00	Right	Perimeter and Slope	12 inch	730.00	Right of Ditch
199+16.00	205+09.00	Right	Perimeter and Slope	12 inch	620.00	Right of Ditch
193+30.00	197+62.00	Right	Perimeter and Slope	12 inch	470.00	Right of Ditch 60' Offset
199+14.00	204+09.00	Right	Perimeter and Slope	12 inch	530.00	Right of Ditch 60' Offset
192+56.00	196+52.00	Left	Perimeter and Slope	12 inch	410.00	Left of Ditch
195+39.00	201+84.00	Left	Perimeter and Slope	12 inch	630.00	
199+11.00	207+52.00	Left	Perimeter and Slope	12 inch	830.00	
205+82.00	208+67.00	Left	Perimeter and Slope	12 inch	280.00	
209+46.00	211+87.00	Left	Perimeter and Slope	12 inch	240.00	
195+30.00	202+06.00	Left	Perimeter and Slope	12 inch	640.00	Left of Ditch 60' Offset
202+06.00	205+43.00	Left	Perimeter and Slope	12 inch	340.00	Left of Ditch 60' Offset
209+41.00		Left	Perimeter and Slope	12 inch	40.00	Inlet Protection
212+18.00	216+31.00	Right	Perimeter and Slope	12 inch	430.00	
216+29.00	221+53.00	Right	Perimeter and Slope	12 inch	530.00	
214+25.00		Left	Perimeter and Slope	12 inch	40.00	Inlet Protection
214+68.00	220+21.00	Left	Perimeter and Slope	12 inch	560.00	

PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE

Possible Standards: EC-204

Station From	Station To	Side	Sediment Control Device Type	Diameter Size	Length (LF)	Remarks
216+63.00	219+20.00	Left	Perimeter and Slope	12 inch	260.00	Left of Ditch 30' Offset
221+34.00		Left	Perimeter and Slope	12 inch	40.00	Inlet Protection
222+61.00		Left	Perimeter and Slope	12 inch	40.00	Inlet Protection
223+23.00	228+74.00	Left	Perimeter and Slope	12 inch	560.00	
225+61.00	232+84.00	Left	Perimeter and Slope	12 inch	730.00	
230+12.00	240+84.00	Left	Perimeter and Slope	12 inch	1090.00	
233+20.00	235+93.00	Left	Perimeter and Slope	12 inch	280.00	
235+44.00	242+26.00	Left	Perimeter and Slope	12 inch	690.00	
226+52.00	237+84.00	Left	Perimeter and Slope	12 inch	1140.00	Left of Ditch 30' Offset
238+16.00	241+40.00	Left	Perimeter and Slope	12 inch	330.00	
223+20.00	234+23.00	Left	Perimeter and Slope	12 inch	1120.00	Left of Ditch 60' Offset
235+07.00	239+66.00	Left	Perimeter and Slope	12 inch	470.00	Left of Ditch 60' Offset
231+49.00	237+20.00	Left	Perimeter and Slope	12 inch	580.00	Left Of Ditch 90' Offset
227+83.00	231+86.00	Left	Perimeter and Slope	12 inch	410.00	Left Of Ditch 120' Offset
233+88.00	235+07.00	Left	Perimeter and Slope	12 inch	130.00	Left Of Ditch 120' Offset
222+45.00	225+19.00	Right	Perimeter and Slope	12 inch	300.00	
225+05.00	228+47.00	Right	Perimeter and Slope	12 inch	350.00	
228+38.00	230+48.00	Right	Perimeter and Slope	12 inch	220.00	
230+37.00	231+71.00	Right	Perimeter and Slope	12 inch	140.00	
231+61.00	233+51.00	Right	Perimeter and Slope	12 inch	200.00	
233+38.00	235+52.00	Right	Perimeter and Slope	12 inch	220.00	
235+42.00	237+34.00	Right	Perimeter and Slope	12 inch	200.00	
237+18.00	238+91.00	Right	Perimeter and Slope	12 inch	180.00	
238+80.00	241+05.00	Right	Perimeter and Slope	12 inch	230.00	
240+94.00	241+54.00	Right	Perimeter and Slope	12 inch	70.00	
222+75.00	239+86.00	Right	Perimeter and Slope	12 inch	1730.00	Right of Ditch
227+78.00	238+34.00	Right	Perimeter and Slope	12 inch	1060.00	Right of Ditch
234+75.00	241+39.00	Right	Perimeter and Slope	12 inch	670.00	Right of Ditch
237+66.00	241+61.00	Right	Perimeter and Slope	12 inch	410.00	Right of Ditch
235+33.00	238+62.00	Right	Perimeter and Slope	12 inch	340.00	Left Of Ditch 90' Offset
162+92.00	168+58.00	Left	Perimeter and Slope	12 inch	470.00	Left of Ditch
273+80.00	278+93.00	Left	Perimeter and Slope	12 inch	530.00	Left of Ditch
275+59.00	279+53.00	Left	Perimeter and Slope	12 inch	410.00	Left of Ditch
266+07.00	273+86.00	Left	Perimeter and Slope	12 inch	800.00	Left of Ditch 30' Offset
273+22.00	278+53.00	Left	Perimeter and Slope	12 inch	540.00	Left of Ditch 30' Offset
264+61.00	267+28.00	Left	Perimeter and Slope	12 inch	270.00	Left of Ditch 45' Offset
268+20.00	271+63.00	Left	Perimeter and Slope	12 inch	350.00	Left of Ditch 60' Offset
270+70.00	278+00.00	Left	Perimeter and Slope	12 inch	750.00	Left of Ditch 60' Offset
265+64.00	268+75.00	Left	Perimeter and Slope	12 inch	320.00	Left of Ditch 90' Offset
268+00.00	271+53.00	Left	Perimeter and Slope	12 inch	280.00	Left of Ditch130' Offset
266+65.00	268+59.00	Left	Perimeter and Slope	12 inch	200.00	Left of Ditch 140' Offset
267+67.00	270+30.00	Left	Perimeter and Slope	12 inch	260.00	Left of Ditch185' Offset
263+30.00	266+68.00	Right	Perimeter and Slope	12 inch	340.00	Right of Ditch
271+27.00	280+50.00	Right	Perimeter and Slope	12 inch	940.00	Right of Ditch
277+94.00	281+60.00	Right	Perimeter and Slope	12 inch	390.00	Right of Ditch
268+24.00	271+76.00	Right	Perimeter and Slope	12 inch	370.00	Right of Ditch 30' Offset
264+80.00	266+20.00	Right	Perimeter and Slope	12 inch	150.00	Right of Ditch 45' Offset
266+16.00	273+71.00	Right	Perimeter and Slope	12 inch	770.00	Right of Ditch 45' Offset
271+61.00	277+58.00	Right	Perimeter and Slope	12 inch	610.00	Right of Ditch 75' Offset
277+46.00	280+00.00	Right	Perimeter and Slope	12 inch	260.00	Right of Ditch 75' Offset
265+54.00	268+36.00	Right	Perimeter and Slope	12 inch	290.00	Right of Ditch 85' Offset
266+12.00	275+06.00	Right	Perimeter and Slope	12 inch	910.00	Right of Ditch125' Offset
276+21.00	279+53.00	Right	Perimeter and Slope	12 inch	340.00	Right of Ditch 100' Offset
269+78.00	272+57.00	Right	Perimeter and Slope	12 inch	290.00	Right of Ditch 105' Offset
273+94.00	279+25.00	Right	Perimeter and Slope	12 inch	540.00	Right of Ditch 130' Offset

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PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE

Possible Standards: EC-204

Station From	Station To	Side	Sediment Control Device Type	Diameter Size	Length (LF)	Remarks
271+00.00	275+56.00	Right	Perimeter and Slope	12 inch	470.00	Right of Ditch 160' Offset
271+84.00	278+26.00	Right	Perimeter and Slope	12 inch	660.00	Right of Ditch 160' Offset
271+71.00	273+89.00	Right	Perimeter and Slope	12 inch	220.00	Right of Ditch 230' Offset
271+04.00	286+15.00	Left	Perimeter and Slope	12 inch	1530.00	
276+77.00	287+55.00	Left	Perimeter and Slope	12 inch	1090.00	
279+43.00	288+85.00	Left	Perimeter and Slope	12 inch	950.00	
284+53.00	290+73.00	Left	Perimeter and Slope	12 inch	630.00	
288+93.00	292+43.00	Left	Perimeter and Slope	12 inch	360.00	
274+36.00	284+74.00	Left	Perimeter and Slope	12 inch	1060.00	30' Offset
278+09.00	282+91.00	Left	Perimeter and Slope	12 inch	510.00	80' Offset
272+63.00	287+28.00	Right	Perimeter and Slope	12 inch	1480.00	
280+96.00	288+90.00	Right	Perimeter and Slope	12 inch	800.00	
281+66.00	290+30.00	Right	Perimeter and Slope	12 inch	870.00	
282+00.00		Right	Perimeter and Slope	12 inch	50.00	Inlet Protection
285+25.00	291+38.00	Right	Perimeter and Slope	12 inch	620.00	
289+40.00	292+43.00	Right	Perimeter and Slope	12 inch	310.00	
274+47.00	285+33.00	Right	Perimeter and Slope	12 inch	1110.00	30' Offset
280+00.00	283+48.00	Right	Perimeter and Slope	12 inch	270.00	105' Offset
285+32.00	286+45.00	Left	Perimeter and Slope	12 inch	120.00	
286+40.00	288+00.00	Left	Perimeter and Slope	12 inch	170.00	
287+35.00	290+09.00	Left	Perimeter and Slope	12 inch	290.00	
288+30.00	291+91.00	Left	Perimeter and Slope	12 inch	380.00	
290+68.00	293+35.00	Left	Perimeter and Slope	12 inch	280.00	
283+83.00	285+09.00	Right	Perimeter and Slope	12 inch	140.00	Right of Ditch
285+00.00	286+43.00	Right	Perimeter and Slope	12 inch	150.00	Right of Ditch
286+37.00	287+77.00	Right	Perimeter and Slope	12 inch	150.00	Right of Ditch
287+72.00	288+90.00	Right	Perimeter and Slope	12 inch	130.00	Right of Ditch
288+85.00	290+00.00	Right	Perimeter and Slope	12 inch	120.00	Right of Ditch
294+91.00	301+29.00	Left	Perimeter and Slope	12 inch	650.00	
296+51.00	299+19.00	Left	Perimeter and Slope	12 inch	270.00	
295+02.00	301+17.00	Right	Perimeter and Slope	12 inch	630.00	
297+24.00	299+09.00	Right	Perimeter and Slope	12 inch	190.00	
298+03.00		Right	Perimeter and Slope	12 inch	40.00	Inlet Protection
295+23.00	296+09.00	Right	Perimeter and Slope	12 inch	100.00	Right of Ditch
301+13.00	302+38.00	Left	Perimeter and Slope	12 inch	140.00	Left of Ditch
302+35.00	305+83.00	Left	Perimeter and Slope	12 inch	360.00	Left of Ditch
300+60.00	300+99.00	Right	Perimeter and Slope	12 inch	50.00	Right of Ditch
300+97.00	301+45.00	Right	Perimeter and Slope	12 inch	50.00	Right of Ditch
301+42.00	302+02.00	Right	Perimeter and Slope	12 inch	70.00	Right of Ditch
302+00.00	302+89.00	Right	Perimeter and Slope	12 inch	100.00	Right of Ditch
302+80.00	305+12.00	Right	Perimeter and Slope	12 inch	240.00	Right of Ditch
307+42.00	313+97.00	Left	Perimeter and Slope	12 inch	590.00	Left of Ditch
313+87.00	318+05.00	Left	Perimeter and Slope	12 inch	390.00	Left of Ditch
306+48.00	311+41.00	Left	Perimeter and Slope	12 inch	460.00	Left of Ditch 30' Offset
311+33.00	316+55.00	Left	Perimeter and Slope	12 inch	490.00	Left of Ditch 30' Offset
306+69.00	311+91.00	Right	Perimeter and Slope	12 inch	590.00	Right of Ditch
306+99.00	310+38.00	Right	Perimeter and Slope	12 inch	380.00	Right of Ditch 30' Offset
320+00.00	321+20.00	Left	Perimeter and Slope	12 inch	130.00	
320+94.00	322+00.00	Right	Perimeter and Slope	12 inch	110.00	Right of Ditch
1000+84.00	1002+68.00	Left	Perimeter and Slope	12 inch	190.00	N. Shore
1000+21.00	1003+08.00	Right	Perimeter and Slope	12 inch	310.00	N. Shore
1003+44.00	1005+32.00	Left	Perimeter and Slope	12 inch	210.00	N. Shore Left of Ditch
1005+27.00	1006+18.00	Left	Perimeter and Slope	12 inch	100.00	N. Shore Left of Ditch
1006+11.00	1006+73.00	Left	Perimeter and Slope	12 inch	70.00	N. Shore Left of Ditch
1006+68.00	1007+59.00	Left	Perimeter and Slope	12 inch	110.00	N. Shore Left of Ditch

PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE

Possible Standards: EC-204

Station From	Station To	Side	Sediment Control Device Type	Diameter Size	Length (LF)	Remarks
1007+53.00	1008+27.00	Left	Perimeter and Slope	12 inch	80.00	N. Shore Left of Ditch
1008+26.00	1009+23.00	Left	Perimeter and Slope	12 inch	100.00	N. Shore Left of Ditch
1009+17.00	1010+17.00	Left	Perimeter and Slope	12 inch	110.00	N. Shore Left of Ditch
1010+12.00	1013+61.00	Left	Perimeter and Slope	12 inch	340.00	N. Shore Left of Ditch
1004+41.00	1005+76.00	Left	Perimeter and Slope	12 inch	150.00	N. Shore Left of Ditch 30' Offset
1011+04.00	1012+50.00	Left	Perimeter and Slope	12 inch	150.00	N. Shore Left of Ditch 30' Offset
1011+95.00	1019+28.00	Right	Perimeter and Slope	12 inch	740.00	N. Shore
1014+80.00	1016+25.00	Right	Perimeter and Slope	12 inch	150.00	N. Shore 30' Offset
1011+66.00	1013+50.00	Right	Perimeter and Slope	12 inch	190.00	N. Shore Right of Ditch
1011+72.00	1016+29.00	Left	Perimeter and Slope	12 inch	460.00	N. Shore
1016+24.00	1019+29.00	Left	Perimeter and Slope	12 inch	310.00	N. Shore
1015+08.00	1016+69.00	Left	Perimeter and Slope	12 inch	170.00	N. Shore 30' Offset
1015+50.00		Left	Perimeter and Slope	12 inch	40.00	N. Shore Inlet Protection
1016+23.00	1018+57.00	Left	Perimeter and Slope	12 inch	240.00	N. Shore
1017+29.00	1019+93.00	Left	Perimeter and Slope	12 inch	170.00	N. Shore 30' Offset
1019+74.00	1023+18.00	Left	Perimeter and Slope	12 inch	350.00	N. Shore
1019+70.00	1027+24.00	Left	Perimeter and Slope	12 inch	710.00	N. Shore Left of Ditch
1022+03.00	1027+27.00	Left	Perimeter and Slope	12 inch	460.00	N. Shore Left of Ditch 30' Offset
1019+72.00	1023+08.00	Right	Perimeter and Slope	12 inch	340.00	N. Shore
1021+50.00	1022+95.00	Right	Perimeter and Slope	12 inch	150.00	N. Shore Right of Ditch
1022+90.00	1027+33.00	Right	Perimeter and Slope	12 inch	490.00	N. Shore Right of Ditch
1023+30.00	1027+32.00	Right	Perimeter and Slope	12 inch	480.00	N. Shore Right of Ditch 30' Offset
2000+70.00		Left	Perimeter and Slope	12 inch	40.00	Jewell Inlet Protection
2001+31.00	2003+35.00	Left	Perimeter and Slope	12 inch	180.00	Jewell Left of Ditch
2001+40.00	2002+13.00	Left	Perimeter and Slope	12 inch	60.00	Jewell Left of Ditch
2001+27.00	2002+14.00	Right	Perimeter and Slope	12 inch	100.00	Jewell Right of Ditch
2001+32.00	2002+32.00	Right	Perimeter and Slope	12 inch	120.00	Jewell Right of Ditch
2013+18.00	2014+78.00	Left	Perimeter and Slope	12 inch	170.00	Jewell Left of Ditch
2014+48.00	2015+38.00	Left	Perimeter and Slope	12 inch	100.00	Jewell Left of Ditch
2014+20.00	2016+59.00	Left	Perimeter and Slope	12 inch	250.00	Jewell
2015+19.00		Left	Perimeter and Slope	12 inch	40.00	Jewell Inlet Protection
2013+32.00	2017+05.00	Right	Perimeter and Slope	12 inch	370.00	Jewell
2016+94.00	2017+92.00	Right	Perimeter and Slope	12 inch	100.00	Jewell
2017+88.00	2019+04.00	Right	Perimeter and Slope	12 inch	120.00	Jewell
2018+96.00	2020+00.00	Right	Perimeter and Slope	12 inch	100.00	Jewell
2014+70.00	2016+18.00	Right	Perimeter and Slope	12 inch	140.00	Jewell Right of Ditch
2015+80.00	2017+00.00	Left	Perimeter and Slope	12 inch	140.00	Jewell Left of Ditch
2017+00.00	2019+29.00	Left	Perimeter and Slope	12 inch	260.00	Jewell Left of Ditch
2018+42.00	2019+90.00	Left	Perimeter and Slope	12 inch	160.00	Jewell Left of Ditch 30' Offset
21246+00.00		Left	Perimeter and Slope	12 inch	40.00	Ramp B Inlet Protection
21236+00.00	21240+28.00	Right	Perimeter and Slope	12 inch	430.00	Ramp B
21236+00.00	21238+39.00	Right	Perimeter and Slope	12 inch	240.00	Ramp B 30' Offset
21239+23.00	21240+83.00	Right	Perimeter and Slope	12 inch	170.00	Ramp B Right of Ditch
21241+07.00	21247+36.00	Right	Perimeter and Slope	12 inch	630.00	Ramp B Right of Ditch
21243+63.00	21251+07.00	Right	Perimeter and Slope	12 inch	740.00	Ramp B Right of Ditch 30' Offset
21246+64.00	21250+36.00	Right	Perimeter and Slope	12 inch	380.00	Ramp B Right of Ditch 30' Offset
21247+63.00	21249+26.00	Left	Perimeter and Slope	12 inch	170.00	Ramp B Left of Ditch
21249+28.00	21252+45.00	Left	Perimeter and Slope	12 inch	320.00	Ramp B Left of Ditch
21252+09.00	21254+94.00	Left	Perimeter and Slope	12 inch	290.00	Ramp B
21251+25.00	21255+52.00	Right	Perimeter and Slope	12 inch	440.00	Ramp B
41257+51.00	41264+47.00	Left	Perimeter and Slope	12 inch	710.00	Ramp D
41261+91.00		Right	Perimeter and Slope	12 inch	40.00	Ramp D Inlet Protection
41256+91.00	41259+67.00	Right	Perimeter and Slope	12 inch	280.00	Ramp D
41257+15.00	41265+82.00	Right	Perimeter and Slope	12 inch	870.00	Ramp D 40' Offset
41259+45.00	41265+00.00	Right	Perimeter and Slope	12 inch	530.00	Ramp D 80' Offset

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PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE

Possible Standards: EC-204

Station From	Station To	Side	Sediment Control Device Type	Diameter Size	Length (LF)	Remarks
41262+79.00		Right	Perimeter and Slope	12 inch	40.00	Ramp D Inlet Protection
31248+50.00		Right	Perimeter and Slope	12 inch	40.00	Ramp C Inlet Protection
11257+33.00	11261+05.00	Left	Perimeter and Slope	12 inch	380.00	Ramp A
11260+91.00	11263+73.00	Left	Perimeter and Slope	12 inch	290.00	Ramp A
11257+49.00	11259+49.00	Right	Perimeter and Slope	12 inch	210.00	Ramp A
11259+35.00	11263+72.00	Right	Perimeter and Slope	12 inch	440.00	Ramp A
11261+80.00		Right	Perimeter and Slope	12 inch	40.00	Ramp A Inlet Protection
4000+66.00	4007+36.00	Left	Perimeter and Slope	12 inch	690.00	Independence
4000+60.00	4004+89.00	Right	Perimeter and Slope	12 inch	440.00	Independence
4004+78.00	4007+26.00	Right	Perimeter and Slope	12 inch	230.00	Independence
5006+80.00		Left	Perimeter and Slope	12 inch	40.00	Old 163 Inlet Protection
5036+00.00		Right	Perimeter and Slope	12 inch	40.00	Old 163 Inlet Protection
9006+86.00		Left	Perimeter and Slope	12 inch	40.00	Old 63 Inlet Protection
135+19.00		Left	Ditch Check	12 inch	23.00	
135+37.00		Left	Ditch Check	12 inch	23.00	
135+55.00		Left	Ditch Check	12 inch	23.00	
135+73.00		Left	Ditch Check	12 inch	23.00	
135+91.00		Left	Ditch Check	12 inch	23.00	
136+09.00		Left	Ditch Check	12 inch	23.00	
136+27.00		Left	Ditch Check	12 inch	23.00	
136+45.00		Left	Ditch Check	12 inch	23.00	
136+63.00		Left	Ditch Check	12 inch	23.00	
136+81.00		Left	Ditch Check	12 inch	23.00	
136+99.00		Left	Ditch Check	12 inch	23.00	
137+17.00		Left	Ditch Check	12 inch	23.00	
140+51.00		Right	Ditch Check	12 inch	23.00	
140+69.00		Right	Ditch Check	12 inch	23.00	
140+87.00		Right	Ditch Check	12 inch	23.00	
141+05.00		Right	Ditch Check	12 inch	23.00	
141+23.00		Right	Ditch Check	12 inch	23.00	
141+41.00		Right	Ditch Check	12 inch	23.00	
141+59.00		Right	Ditch Check	12 inch	23.00	
141+77.00		Right	Ditch Check	12 inch	23.00	
141+95.00		Right	Ditch Check	12 inch	23.00	
142+13.00		Right	Ditch Check	12 inch	23.00	
142+31.00		Right	Ditch Check	12 inch	23.00	
142+49.00		Right	Ditch Check	12 inch	23.00	
142+67.00		Right	Ditch Check	12 inch	23.00	
142+84.00		Right	Ditch Check	12 inch	23.00	
143+01.00		Right	Ditch Check	12 inch	23.00	
143+18.00		Right	Ditch Check	12 inch	23.00	
180+00.00		Left	Ditch Check	12 inch	23.00	
180+40.00		Left	Ditch Check	12 inch	23.00	
180+80.00		Left	Ditch Check	12 inch	23.00	
181+20.00		Left	Ditch Check	12 inch	23.00	
181+60.00		Left	Ditch Check	12 inch	23.00	
182+00.00		Left	Ditch Check	12 inch	23.00	
182+40.00		Left	Ditch Check	12 inch	23.00	
182+80.00		Left	Ditch Check	12 inch	23.00	
183+20.00		Left	Ditch Check	12 inch	23.00	
183+60.00		Left	Ditch Check	12 inch	23.00	
184+00.00		Left	Ditch Check	12 inch	23.00	
184+40.00		Left	Ditch Check	12 inch	23.00	
184+80.00		Left	Ditch Check	12 inch	23.00	
185+20.00		Left	Ditch Check	12 inch	23.00	

PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE

Possible Standards: EC-204

Station From	Station To	Side	Sediment Control Device Type	Diameter Size	Length (LF)	Remarks
185+60.00		Left	Ditch Check	12 inch	23.00	
186+00.00		Left	Ditch Check	12 inch	23.00	
186+40.00		Left	Ditch Check	12 inch	23.00	
186+80.00		Left	Ditch Check	12 inch	23.00	
187+20.00		Left	Ditch Check	12 inch	23.00	
187+60.00		Left	Ditch Check	12 inch	23.00	
188+00.00		Left	Ditch Check	12 inch	23.00	
179+59.00		Right	Ditch Check	12 inch	23.00	
179+99.00		Right	Ditch Check	12 inch	23.00	
180+39.00		Right	Ditch Check	12 inch	23.00	
180+79.00		Right	Ditch Check	12 inch	23.00	
181+19.00		Right	Ditch Check	12 inch	23.00	
181+59.00		Right	Ditch Check	12 inch	23.00	
181+99.00		Right	Ditch Check	12 inch	23.00	
182+39.00		Right	Ditch Check	12 inch	23.00	
182+79.00		Right	Ditch Check	12 inch	23.00	
183+19.00		Right	Ditch Check	12 inch	23.00	
183+59.00		Right	Ditch Check	12 inch	23.00	
183+99.00		Right	Ditch Check	12 inch	23.00	
184+39.00		Right	Ditch Check	12 inch	23.00	
184+79.00		Right	Ditch Check	12 inch	23.00	
185+19.00		Right	Ditch Check	12 inch	23.00	
185+59.00		Right	Ditch Check	12 inch	23.00	
185+99.00		Right	Ditch Check	12 inch	23.00	
186+39.00		Right	Ditch Check	12 inch	23.00	
186+79.00		Right	Ditch Check	12 inch	23.00	
187+19.00		Right	Ditch Check	12 inch	23.00	
187+59.00		Right	Ditch Check	12 inch	23.00	
187+99.00		Right	Ditch Check	12 inch	23.00	
188+39.00		Right	Ditch Check	12 inch	23.00	
191+15.00		Left	Ditch Check	12 inch	23.00	
191+29.00		Left	Ditch Check	12 inch	23.00	
191+43.00		Left	Ditch Check	12 inch	23.00	
191+59.00		Left	Ditch Check	12 inch	23.00	
191+77.00		Left	Ditch Check	12 inch	23.00	
191+95.00		Left	Ditch Check	12 inch	23.00	
192+13.00		Left	Ditch Check	12 inch	23.00	
192+31.00		Left	Ditch Check	12 inch	23.00	
192+49.00		Left	Ditch Check	12 inch	23.00	
192+67.00		Left	Ditch Check	12 inch	23.00	
193+08.00		Left	Ditch Check	12 inch	23.00	
193+48.00		Left	Ditch Check	12 inch	23.00	
193+88.00		Left	Ditch Check	12 inch	23.00	
194+28.00		Left	Ditch Check	12 inch	23.00	
194+68.00		Left	Ditch Check	12 inch	23.00	
195+08.00		Left	Ditch Check	12 inch	23.00	
195+48.00		Left	Ditch Check	12 inch	23.00	
195+88.00		Left	Ditch Check	12 inch	23.00	
196+28.00		Left	Ditch Check	12 inch	23.00	
196+68.00		Left	Ditch Check	12 inch	23.00	
197+08.00		Left	Ditch Check	12 inch	23.00	
197+48.00		Left	Ditch Check	12 inch	23.00	
200+65.00		Left	Ditch Check	12 inch	23.00	
201+40.00		Left	Ditch Check	12 inch	23.00	
202+15.00		Left	Ditch Check	12 inch	23.00	

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PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE

Possible Standards: EC-204

Station From	Station To	Side	Sediment Control Device Type	Diameter Size	Length (LF)	Remarks
202+90.00		Left	Ditch Check	12 inch	23.00	
203+65.00		Left	Ditch Check	12 inch	23.00	
204+40.00		Left	Ditch Check	12 inch	23.00	
205+15.00		Left	Ditch Check	12 inch	23.00	
205+68.00		Left	Ditch Check	12 inch	23.00	
205+68.00		Left	Ditch Check	12 inch	23.00	
206+21.00		Left	Ditch Check	12 inch	23.00	
206+21.00		Left	Ditch Check	12 inch	23.00	
206+74.00		Left	Ditch Check	12 inch	23.00	
206+74.00		Left	Ditch Check	12 inch	23.00	
207+27.00		Left	Ditch Check	12 inch	23.00	
207+27.00		Left	Ditch Check	12 inch	23.00	
207+80.00		Left	Ditch Check	12 inch	23.00	
208+33.00		Left	Ditch Check	12 inch	23.00	
211+26.00		Left	Ditch Check	12 inch	23.00	
211+44.00		Left	Ditch Check	12 inch	23.00	
211+62.00		Left	Ditch Check	12 inch	23.00	
211+80.00		Left	Ditch Check	12 inch	23.00	
211+98.00		Left	Ditch Check	12 inch	23.00	
212+16.00		Left	Ditch Check	12 inch	23.00	
212+34.00		Left	Ditch Check	12 inch	23.00	
212+52.00		Left	Ditch Check	12 inch	23.00	
212+70.00		Left	Ditch Check	12 inch	23.00	
212+88.00		Left	Ditch Check	12 inch	23.00	
213+06.00		Left	Ditch Check	12 inch	23.00	
213+24.00		Left	Ditch Check	12 inch	23.00	
213+42.00		Left	Ditch Check	12 inch	23.00	
216+00.00		Left	Ditch Check	12 inch	23.00	
218+50.00		Left	Ditch Check	12 inch	23.00	
218+50.00		Left	Ditch Check	12 inch	23.00	
219+00.00		Left	Ditch Check	12 inch	23.00	
219+50.00		Left	Ditch Check	12 inch	23.00	
220+00.00		Left	Ditch Check	12 inch	23.00	
220+50.00		Left	Ditch Check	12 inch	23.00	
223+00.00		Left	Ditch Check	12 inch	23.00	
223+75.00		Left	Ditch Check	12 inch	23.00	
224+50.00		Left	Ditch Check	12 inch	23.00	
225+25.00		Left	Ditch Check	12 inch	23.00	
226+00.00		Left	Ditch Check	12 inch	23.00	
226+75.00		Left	Ditch Check	12 inch	23.00	
227+50.00		Left	Ditch Check	12 inch	23.00	
228+25.00		Left	Ditch Check	12 inch	23.00	
229+00.00		Left	Ditch Check	12 inch	23.00	
229+75.00		Left	Ditch Check	12 inch	23.00	
230+50.00		Left	Ditch Check	12 inch	23.00	
231+25.00		Left	Ditch Check	12 inch	23.00	
232+00.00		Left	Ditch Check	12 inch	23.00	
232+75.00		Left	Ditch Check	12 inch	23.00	
233+50.00		Left	Ditch Check	12 inch	23.00	
234+25.00		Left	Ditch Check	12 inch	23.00	
235+00.00		Left	Ditch Check	12 inch	23.00	
235+75.00		Left	Ditch Check	12 inch	23.00	
236+50.00		Left	Ditch Check	12 inch	23.00	
237+25.00		Left	Ditch Check	12 inch	23.00	
238+00.00		Left	Ditch Check	12 inch	23.00	
238+75.00		Left	Ditch Check	12 inch	23.00	

PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE

Possible Standards: EC-204

Station From	Station To	Side	Sediment Control Device Type	Diameter Size	Length (LF)	Remarks
239+50.00		Left	Ditch Check	12 inch	23.00	
240+25.00		Left	Ditch Check	12 inch	23.00	
241+00.00		Left	Ditch Check	12 inch	23.00	
241+75.00		Left	Ditch Check	12 inch	23.00	
242+50.00		Left	Ditch Check	12 inch	23.00	
243+25.00		Left	Ditch Check	12 inch	23.00	
244+00.00		Left	Ditch Check	12 inch	23.00	
201+85.00		Right	Ditch Check	12 inch	23.00	
202+58.00		Right	Ditch Check	12 inch	23.00	
203+31.00		Right	Ditch Check	12 inch	23.00	
204+04.00		Right	Ditch Check	12 inch	23.00	
204+77.00		Right	Ditch Check	12 inch	23.00	
205+50.00		Right	Ditch Check	12 inch	23.00	
206+23.00		Right	Ditch Check	12 inch	23.00	
212+47.00		Right	Ditch Check	12 inch	23.00	
212+70.00		Right	Ditch Check	12 inch	23.00	
212+93.00		Right	Ditch Check	12 inch	23.00	
213+16.00		Right	Ditch Check	12 inch	23.00	
213+39.00		Right	Ditch Check	12 inch	23.00	
213+62.00		Right	Ditch Check	12 inch	23.00	
213+85.00		Right	Ditch Check	12 inch	23.00	
214+08.00		Right	Ditch Check	12 inch	23.00	
214+83.00		Right	Ditch Check	12 inch	23.00	
217+00.00		Right	Ditch Check	12 inch	23.00	
217+60.00		Right	Ditch Check	12 inch	23.00	
218+20.00		Right	Ditch Check	12 inch	23.00	
218+80.00		Right	Ditch Check	12 inch	23.00	
219+40.00		Right	Ditch Check	12 inch	23.00	
220+00.00		Right	Ditch Check	12 inch	23.00	
220+60.00		Right	Ditch Check	12 inch	23.00	
223+00.00		Right	Ditch Check	12 inch	23.00	
223+60.00		Right	Ditch Check	12 inch	23.00	
224+20.00		Right	Ditch Check	12 inch	23.00	
224+80.00		Right	Ditch Check	12 inch	23.00	
225+40.00		Right	Ditch Check	12 inch	23.00	
226+00.00		Right	Ditch Check	12 inch	23.00	
226+60.00		Right	Ditch Check	12 inch	23.00	
227+20.00		Right	Ditch Check	12 inch	23.00	
227+80.00		Right	Ditch Check	12 inch	23.00	
228+40.00		Right	Ditch Check	12 inch	23.00	
229+00.00		Right	Ditch Check	12 inch	23.00	
229+60.00		Right	Ditch Check	12 inch	23.00	
230+20.00		Right	Ditch Check	12 inch	23.00	
230+80.00		Right	Ditch Check	12 inch	23.00	
231+40.00		Right	Ditch Check	12 inch	23.00	
232+00.00		Right	Ditch Check	12 inch	23.00	
232+60.00		Right	Ditch Check	12 inch	23.00	
233+35.00		Right	Ditch Check	12 inch	23.00	
234+10.00		Right	Ditch Check	12 inch	23.00	
234+85.00		Right	Ditch Check	12 inch	23.00	
235+60.00		Right	Ditch Check	12 inch	23.00	
236+35.00		Right	Ditch Check	12 inch	23.00	
237+10.00		Right	Ditch Check	12 inch	23.00	
237+85.00		Right	Ditch Check	12 inch	23.00	
238+60.00		Right	Ditch Check	12 inch	23.00	

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PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE

Possible Standards: EC-204

Station From	Station To	Side	Sediment Control Device Type	Diameter Size	Length (LF)	Remarks
239+35.00		Right	Ditch Check	12 inch	23.00	
240+10.00		Right	Ditch Check	12 inch	23.00	
240+85.00		Right	Ditch Check	12 inch	23.00	
241+60.00		Right	Ditch Check	12 inch	23.00	
283+02.00		Right	Ditch Check	12 inch	23.00	
283+13.00		Right	Ditch Check	12 inch	23.00	
283+28.00		Right	Ditch Check	12 inch	23.00	
283+42.00		Right	Ditch Check	12 inch	23.00	
283+54.00		Right	Ditch Check	12 inch	23.00	
283+73.00		Right	Ditch Check	12 inch	23.00	
283+91.00		Right	Ditch Check	12 inch	23.00	
284+09.00		Right	Ditch Check	12 inch	23.00	
284+27.00		Right	Ditch Check	12 inch	23.00	
284+45.00		Right	Ditch Check	12 inch	23.00	
284+63.00		Right	Ditch Check	12 inch	23.00	
284+81.00		Right	Ditch Check	12 inch	23.00	
284+99.00		Right	Ditch Check	12 inch	23.00	
285+17.00		Right	Ditch Check	12 inch	23.00	
285+35.00		Right	Ditch Check	12 inch	23.00	
285+53.00		Right	Ditch Check	12 inch	23.00	
285+71.00		Right	Ditch Check	12 inch	23.00	
285+89.00		Right	Ditch Check	12 inch	23.00	
286+07.00		Right	Ditch Check	12 inch	23.00	
286+25.00		Right	Ditch Check	12 inch	23.00	
286+43.00		Right	Ditch Check	12 inch	23.00	
286+61.00		Right	Ditch Check	12 inch	23.00	
286+79.00		Right	Ditch Check	12 inch	23.00	
286+97.00		Right	Ditch Check	12 inch	23.00	
287+15.00		Right	Ditch Check	12 inch	23.00	
287+33.00		Right	Ditch Check	12 inch	23.00	
287+51.00		Right	Ditch Check	12 inch	23.00	
287+69.00		Right	Ditch Check	12 inch	23.00	
287+87.00		Right	Ditch Check	12 inch	23.00	
288+05.00		Right	Ditch Check	12 inch	23.00	
288+23.00		Right	Ditch Check	12 inch	23.00	
288+41.00		Right	Ditch Check	12 inch	23.00	
288+59.00		Right	Ditch Check	12 inch	23.00	
288+77.00		Right	Ditch Check	12 inch	23.00	
288+95.00		Right	Ditch Check	12 inch	23.00	
289+13.00		Right	Ditch Check	12 inch	23.00	
289+31.00		Right	Ditch Check	12 inch	23.00	
289+49.00		Right	Ditch Check	12 inch	23.00	
289+67.00		Right	Ditch Check	12 inch	23.00	
289+85.00		Right	Ditch Check	12 inch	23.00	
290+03.00		Right	Ditch Check	12 inch	23.00	
289+50.00		Left	Ditch Check	12 inch	23.00	
289+65.00		Left	Ditch Check	12 inch	23.00	
289+80.00		Left	Ditch Check	12 inch	23.00	
289+95.00		Left	Ditch Check	12 inch	23.00	
290+10.00		Left	Ditch Check	12 inch	23.00	
290+25.00		Left	Ditch Check	12 inch	23.00	
290+40.00		Left	Ditch Check	12 inch	23.00	
290+55.00		Left	Ditch Check	12 inch	23.00	
290+70.00		Left	Ditch Check	12 inch	23.00	
290+85.00		Left	Ditch Check	12 inch	23.00	

PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE

Possible Standards: EC-204

Station From	Station To	Side	Sediment Control Device Type	Diameter Size	Length (LF)	Remarks
291+00.00		Left	Ditch Check	12 inch	23.00	
291+15.00		Left	Ditch Check	12 inch	23.00	
291+30.00		Left	Ditch Check	12 inch	23.00	
291+45.00		Left	Ditch Check	12 inch	23.00	
291+60.00		Left	Ditch Check	12 inch	23.00	
291+74.00		Left	Ditch Check	12 inch	23.00	
291+88.00		Left	Ditch Check	12 inch	23.00	
292+02.00		Left	Ditch Check	12 inch	23.00	
292+16.00		Left	Ditch Check	12 inch	23.00	
292+30.00		Left	Ditch Check	12 inch	23.00	
292+44.00		Left	Ditch Check	12 inch	23.00	
292+58.00		Left	Ditch Check	12 inch	23.00	
292+72.00		Left	Ditch Check	12 inch	23.00	
292+86.00		Left	Ditch Check	12 inch	23.00	
293+00.00		Left	Ditch Check	12 inch	23.00	
293+14.00		Left	Ditch Check	12 inch	23.00	
293+28.00		Left	Ditch Check	12 inch	23.00	
293+42.00		Left	Ditch Check	12 inch	23.00	
293+56.00		Left	Ditch Check	12 inch	23.00	
293+70.00		Left	Ditch Check	12 inch	23.00	
293+84.00		Left	Ditch Check	12 inch	23.00	
299+03.00		Right	Ditch Check	12 inch	23.00	
299+26.00		Right	Ditch Check	12 inch	23.00	
299+49.00		Right	Ditch Check	12 inch	23.00	
299+72.00		Right	Ditch Check	12 inch	23.00	
299+95.00		Right	Ditch Check	12 inch	23.00	
300+18.00		Right	Ditch Check	12 inch	23.00	
300+41.00		Right	Ditch Check	12 inch	23.00	
300+64.00		Right	Ditch Check	12 inch	23.00	
301+10.00		Right	Ditch Check	12 inch	23.00	
301+33.00		Right	Ditch Check	12 inch	23.00	
301+56.00		Right	Ditch Check	12 inch	23.00	
301+79.00		Right	Ditch Check	12 inch	23.00	
302+02.00		Right	Ditch Check	12 inch	23.00	
302+25.00		Right	Ditch Check	12 inch	23.00	
302+48.00		Right	Ditch Check	12 inch	23.00	
302+71.00		Right	Ditch Check	12 inch	23.00	
315+14.00		Right	Ditch Check	12 inch	23.00	
315+32.00		Right	Ditch Check	12 inch	23.00	
315+50.00		Right	Ditch Check	12 inch	23.00	
315+68.00		Right	Ditch Check	12 inch	23.00	
315+86.00		Right	Ditch Check	12 inch	23.00	
316+04.00		Right	Ditch Check	12 inch	23.00	
316+22.00		Right	Ditch Check	12 inch	23.00	
316+40.00		Right	Ditch Check	12 inch	23.00	
316+58.00		Right	Ditch Check	12 inch	23.00	
316+76.00		Right	Ditch Check	12 inch	23.00	
316+94.00		Right	Ditch Check	12 inch	23.00	
317+12.00		Right	Ditch Check	12 inch	23.00	
317+30.00		Right	Ditch Check	12 inch	23.00	
317+47.00		Right	Ditch Check	12 inch	23.00	
317+64.00		Right	Ditch Check	12 inch	23.00	
317+81.00		Right	Ditch Check	12 inch	23.00	
317+98.00		Right	Ditch Check	12 inch	23.00	

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PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE

Possible Standards: EC-204

Station From	Station To	Side	Sediment Control Device Type	Diameter Size	Length (LF)	Remarks
318+15.00		Right	Ditch Check	12 inch	23.00	
318+32.00		Right	Ditch Check	12 inch	23.00	
318+49.00		Right	Ditch Check	12 inch	23.00	
318+66.00		Right	Ditch Check	12 inch	23.00	
318+83.00		Right	Ditch Check	12 inch	23.00	
319+00.00		Right	Ditch Check	12 inch	23.00	
319+17.00		Right	Ditch Check	12 inch	23.00	
319+34.00		Right	Ditch Check	12 inch	23.00	
319+51.00		Right	Ditch Check	12 inch	23.00	
319+68.00		Right	Ditch Check	12 inch	23.00	
319+85.00		Right	Ditch Check	12 inch	23.00	
315+39.00		Left	Ditch Check	12 inch	23.00	
315+58.00		Left	Ditch Check	12 inch	23.00	
315+77.00		Left	Ditch Check	12 inch	23.00	
315+96.00		Left	Ditch Check	12 inch	23.00	
316+15.00		Left	Ditch Check	12 inch	23.00	
316+34.00		Left	Ditch Check	12 inch	23.00	
316+53.00		Left	Ditch Check	12 inch	23.00	
316+72.00		Left	Ditch Check	12 inch	23.00	
316+91.00		Left	Ditch Check	12 inch	23.00	
317+10.00		Left	Ditch Check	12 inch	23.00	
317+29.00		Left	Ditch Check	12 inch	23.00	
317+48.00		Left	Ditch Check	12 inch	23.00	
317+67.00		Left	Ditch Check	12 inch	23.00	
317+86.00		Left	Ditch Check	12 inch	23.00	
318+05.00		Left	Ditch Check	12 inch	23.00	
318+24.00		Left	Ditch Check	12 inch	23.00	
318+43.00		Left	Ditch Check	12 inch	23.00	
318+62.00		Left	Ditch Check	12 inch	23.00	
318+81.00		Left	Ditch Check	12 inch	23.00	
319+00.00		Left	Ditch Check	12 inch	23.00	
1002+67.00		Left	Ditch Check	12 inch	22.00	N. Shore
1002+90.00		Left	Ditch Check	12 inch	22.00	N. Shore
1003+13.00		Left	Ditch Check	12 inch	22.00	N. Shore
1003+36.00		Left	Ditch Check	12 inch	22.00	N. Shore
1003+55.00		Left	Ditch Check	12 inch	22.00	N. Shore
1003+74.00		Left	Ditch Check	12 inch	22.00	N. Shore
1003+93.00		Left	Ditch Check	12 inch	22.00	N. Shore
1004+15.00		Left	Ditch Check	12 inch	22.00	N. Shore
1004+37.00		Left	Ditch Check	12 inch	22.00	N. Shore
1004+61.00		Left	Ditch Check	12 inch	22.00	N. Shore
1004+82.00		Left	Ditch Check	12 inch	22.00	N. Shore
1005+03.00		Left	Ditch Check	12 inch	22.00	N. Shore
1005+24.00		Left	Ditch Check	12 inch	22.00	N. Shore
1005+46.00		Left	Ditch Check	12 inch	22.00	N. Shore
1005+67.00		Left	Ditch Check	12 inch	22.00	N. Shore
1005+90.00		Left	Ditch Check	12 inch	22.00	N. Shore
1006+11.00		Left	Ditch Check	12 inch	22.00	N. Shore
1006+29.00		Left	Ditch Check	12 inch	22.00	N. Shore
1006+52.00		Left	Ditch Check	12 inch	22.00	N. Shore
1006+73.00		Left	Ditch Check	12 inch	22.00	N. Shore
1006+95.00		Left	Ditch Check	12 inch	22.00	N. Shore
1007+15.00		Left	Ditch Check	12 inch	22.00	N. Shore
1007+39.00		Left	Ditch Check	12 inch	22.00	N. Shore
1007+62.00		Left	Ditch Check	12 inch	22.00	N. Shore

PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE

Possible Standards: EC-204

Station From	Station To	Side	Sediment Control Device Type	Diameter Size	Length (LF)	Remarks
1007+84.00		Left	Ditch Check	12 inch	22.00	N. Shore
1008+06.00		Left	Ditch Check	12 inch	22.00	N. Shore
1008+28.00		Left	Ditch Check	12 inch	22.00	N. Shore
1008+50.00		Left	Ditch Check	12 inch	22.00	N. Shore
1008+75.00		Left	Ditch Check	12 inch	22.00	N. Shore
1008+99.00		Left	Ditch Check	12 inch	22.00	N. Shore
1009+21.00		Left	Ditch Check	12 inch	22.00	N. Shore
1009+44.00		Left	Ditch Check	12 inch	22.00	N. Shore
1009+67.00		Left	Ditch Check	12 inch	22.00	N. Shore
1009+90.00		Left	Ditch Check	12 inch	22.00	N. Shore
1010+13.00		Left	Ditch Check	12 inch	22.00	N. Shore
1010+36.00		Left	Ditch Check	12 inch	22.00	N. Shore
1010+59.00		Left	Ditch Check	12 inch	22.00	N. Shore
1010+82.00		Left	Ditch Check	12 inch	22.00	N. Shore
1011+05.00		Left	Ditch Check	12 inch	22.00	N. Shore
1011+28.00		Left	Ditch Check	12 inch	22.00	N. Shore
1002+87.00		Right	Ditch Check	12 inch	22.00	N. Shore
1003+13.00		Right	Ditch Check	12 inch	22.00	N. Shore
1003+37.00		Right	Ditch Check	12 inch	22.00	N. Shore
1003+61.00		Right	Ditch Check	12 inch	22.00	N. Shore
1003+86.00		Right	Ditch Check	12 inch	22.00	N. Shore
1004+12.00		Right	Ditch Check	12 inch	22.00	N. Shore
1004+35.00		Right	Ditch Check	12 inch	22.00	N. Shore
1004+61.00		Right	Ditch Check	12 inch	22.00	N. Shore
1004+61.00		Right	Ditch Check	12 inch	22.00	N. Shore
1004+82.00		Right	Ditch Check	12 inch	22.00	N. Shore
1005+03.00		Right	Ditch Check	12 inch	22.00	N. Shore
1005+24.00		Right	Ditch Check	12 inch	22.00	N. Shore
1005+46.00		Right	Ditch Check	12 inch	22.00	N. Shore
1005+67.00		Right	Ditch Check	12 inch	22.00	N. Shore
1005+90.00		Right	Ditch Check	12 inch	22.00	N. Shore
1006+11.00		Right	Ditch Check	12 inch	22.00	N. Shore
1006+29.00		Right	Ditch Check	12 inch	22.00	N. Shore
1006+52.00		Right	Ditch Check	12 inch	22.00	N. Shore
1006+73.00		Right	Ditch Check	12 inch	22.00	N. Shore
1006+95.00		Right	Ditch Check	12 inch	22.00	N. Shore
1007+15.00		Right	Ditch Check	12 inch	22.00	N. Shore
1007+39.00		Right	Ditch Check	12 inch	22.00	N. Shore
1007+62.00		Right	Ditch Check	12 inch	22.00	N. Shore
1007+84.00		Right	Ditch Check	12 inch	22.00	N. Shore
1008+06.00		Right	Ditch Check	12 inch	22.00	N. Shore
1008+28.00		Right	Ditch Check	12 inch	22.00	N. Shore
1008+50.00		Right	Ditch Check	12 inch	22.00	N. Shore
1008+75.00		Right	Ditch Check	12 inch	22.00	N. Shore
1008+99.00		Right	Ditch Check	12 inch	22.00	N. Shore
1009+21.00		Right	Ditch Check	12 inch	22.00	N. Shore
1009+44.00		Right	Ditch Check	12 inch	22.00	N. Shore
1009+67.00		Right	Ditch Check	12 inch	22.00	N. Shore
1009+90.00		Right	Ditch Check	12 inch	22.00	N. Shore
1010+13.00		Right	Ditch Check	12 inch	22.00	N. Shore
1010+36.00		Right	Ditch Check	12 inch	22.00	N. Shore
1010+59.00		Right	Ditch Check	12 inch	22.00	N. Shore
1010+82.00		Right	Ditch Check	12 inch	22.00	N. Shore
1011+05.00		Right	Ditch Check	12 inch	22.00	N. Shore
1011+28.00		Right	Ditch Check	12 inch	22.00	N. Shore

100_19
10/15/24

PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE

Possible Standards: EC-204

Station From	Station To	Side	Sediment Control Device Type	Diameter Size	Length (LF)	Remarks
2013+44.00		Left	Ditch Check	12 inch	22.00	Jewell
2013+67.00		Left	Ditch Check	12 inch	22.00	Jewell
2013+90.00		Left	Ditch Check	12 inch	22.00	Jewell
2014+13.00		Left	Ditch Check	12 inch	22.00	Jewell
2014+36.00		Left	Ditch Check	12 inch	22.00	Jewell
2014+59.00		Left	Ditch Check	12 inch	22.00	Jewell
2013+23.00		Right	Ditch Check	12 inch	22.00	Jewell
2013+46.00		Right	Ditch Check	12 inch	22.00	Jewell
2013+68.00		Right	Ditch Check	12 inch	22.00	Jewell
2015+57.00		Right	Ditch Check	12 inch	22.00	Jewell
2015+82.00		Right	Ditch Check	12 inch	22.00	Jewell
2016+07.00		Right	Ditch Check	12 inch	22.00	Jewell
2016+32.00		Right	Ditch Check	12 inch	22.00	Jewell
2016+55.00		Right	Ditch Check	12 inch	22.00	Jewell
2016+80.00		Right	Ditch Check	12 inch	22.00	Jewell
2017+04.00		Right	Ditch Check	12 inch	22.00	Jewell
2017+29.00		Right	Ditch Check	12 inch	22.00	Jewell
2017+54.00		Right	Ditch Check	12 inch	22.00	Jewell
2017+77.00		Right	Ditch Check	12 inch	22.00	Jewell
2018+00.00		Right	Ditch Check	12 inch	22.00	Jewell
2018+24.00		Right	Ditch Check	12 inch	22.00	Jewell
2018+50.00		Right	Ditch Check	12 inch	22.00	Jewell
2018+76.00		Right	Ditch Check	12 inch	22.00	Jewell
2019+00.00		Right	Ditch Check	12 inch	22.00	Jewell
2019+23.00		Right	Ditch Check	12 inch	22.00	Jewell
2019+46.00		Right	Ditch Check	12 inch	22.00	Jewell
2019+69.00		Right	Ditch Check	12 inch	22.00	Jewell
2019+97.00		Right	Ditch Check	12 inch	22.00	Jewell
2020+22.00		Right	Ditch Check	12 inch	22.00	Jewell
2020+47.00		Right	Ditch Check	12 inch	22.00	Jewell
2020+69.00		Right	Ditch Check	12 inch	22.00	Jewell
2020+93.00		Right	Ditch Check	12 inch	22.00	Jewell
2021+18.00		Right	Ditch Check	12 inch	22.00	Jewell
2021+43.00		Right	Ditch Check	12 inch	22.00	Jewell
2021+66.00		Right	Ditch Check	12 inch	22.00	Jewell
2021+91.00		Right	Ditch Check	12 inch	22.00	Jewell
2022+16.00		Right	Ditch Check	12 inch	22.00	Jewell
2022+40.00		Right	Ditch Check	12 inch	22.00	Jewell
2022+63.00		Right	Ditch Check	12 inch	22.00	Jewell
2022+88.00		Right	Ditch Check	12 inch	22.00	Jewell
2023+11.00		Right	Ditch Check	12 inch	22.00	Jewell
2015+82.00		Left	Ditch Check	12 inch	22.00	Jewell
2016+07.00		Left	Ditch Check	12 inch	22.00	Jewell
2016+32.00		Left	Ditch Check	12 inch	22.00	Jewell
2016+55.00		Left	Ditch Check	12 inch	22.00	Jewell
2016+80.00		Left	Ditch Check	12 inch	22.00	Jewell
2017+04.00		Left	Ditch Check	12 inch	22.00	Jewell
2017+29.00		Left	Ditch Check	12 inch	22.00	Jewell
2017+54.00		Left	Ditch Check	12 inch	22.00	Jewell
2017+77.00		Left	Ditch Check	12 inch	22.00	Jewell
2018+00.00		Left	Ditch Check	12 inch	22.00	Jewell
2018+24.00		Left	Ditch Check	12 inch	22.00	Jewell
2018+50.00		Left	Ditch Check	12 inch	22.00	Jewell
2018+76.00		Left	Ditch Check	12 inch	22.00	Jewell
2019+00.00		Left	Ditch Check	12 inch	22.00	Jewell

100_19
10/15/24

PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE

Possible Standards: EC-204

Station From	Station To	Side	Sediment Control Device Type	Diameter Size	Length (LF)	Remarks
2019+23.00		Left	Ditch Check	12 inch	22.00	Jewell
2019+46.00		Left	Ditch Check	12 inch	22.00	Jewell
2019+69.00		Left	Ditch Check	12 inch	22.00	Jewell
2019+97.00		Left	Ditch Check	12 inch	22.00	Jewell
2020+22.00		Left	Ditch Check	12 inch	22.00	Jewell
2020+47.00		Left	Ditch Check	12 inch	22.00	Jewell
2020+69.00		Left	Ditch Check	12 inch	22.00	Jewell
2020+93.00		Left	Ditch Check	12 inch	22.00	Jewell
2021+18.00		Left	Ditch Check	12 inch	22.00	Jewell
2021+43.00		Left	Ditch Check	12 inch	22.00	Jewell
2021+66.00		Left	Ditch Check	12 inch	22.00	Jewell
2021+91.00		Left	Ditch Check	12 inch	22.00	Jewell
2022+16.00		Left	Ditch Check	12 inch	22.00	Jewell
2022+40.00		Left	Ditch Check	12 inch	22.00	Jewell
2022+63.00		Left	Ditch Check	12 inch	22.00	Jewell
2022+88.00		Left	Ditch Check	12 inch	22.00	Jewell
2023+11.00		Left	Ditch Check	12 inch	22.00	Jewell
21236+10.00		Right	Ditch Check	12 inch	23.00	Ramp B
21236+25.00		Right	Ditch Check	12 inch	23.00	Ramp B
21236+40.00		Right	Ditch Check	12 inch	23.00	Ramp B
21236+55.00		Right	Ditch Check	12 inch	23.00	Ramp B
21236+70.00		Right	Ditch Check	12 inch	23.00	Ramp B
21236+85.00		Right	Ditch Check	12 inch	23.00	Ramp B
21237+00.00		Right	Ditch Check	12 inch	23.00	Ramp B
21237+15.00		Right	Ditch Check	12 inch	23.00	Ramp B
21237+30.00		Right	Ditch Check	12 inch	23.00	Ramp B
21238+43.00		Right	Ditch Check	12 inch	23.00	Ramp B
21238+61.00		Right	Ditch Check	12 inch	23.00	Ramp B
21238+79.00		Right	Ditch Check	12 inch	23.00	Ramp B
21238+97.00		Right	Ditch Check	12 inch	23.00	Ramp B
21239+15.00		Right	Ditch Check	12 inch	23.00	Ramp B
21239+33.00		Right	Ditch Check	12 inch	23.00	Ramp B
21239+51.00		Right	Ditch Check	12 inch	23.00	Ramp B
21239+69.00		Right	Ditch Check	12 inch	23.00	Ramp B
21239+87.00		Right	Ditch Check	12 inch	23.00	Ramp B
21240+05.00		Right	Ditch Check	12 inch	23.00	Ramp B
21240+23.00		Right	Ditch Check	12 inch	23.00	Ramp B
21240+41.00		Right	Ditch Check	12 inch	23.00	Ramp B
21240+59.00		Right	Ditch Check	12 inch	23.00	Ramp B
21240+77.00		Right	Ditch Check	12 inch	23.00	Ramp B
21240+95.00		Right	Ditch Check	12 inch	23.00	Ramp B
6006+00.00		Left	Ditch Check	12 inch	22.00	Kirby
6007+52.00		Left	Ditch Check	12 inch	22.00	Kirby
6009+18.00		Left	Ditch Check	12 inch	22.00	Kirby
6005+00.00		Right	Ditch Check	12 inch	22.00	Kirby
6005+70.00		Right	Ditch Check	12 inch	22.00	Kirby
6006+41.00		Right	Ditch Check	12 inch	22.00	Kirby
6007+13.00		Right	Ditch Check	12 inch	22.00	Kirby
6007+81.00		Right	Ditch Check	12 inch	22.00	Kirby
6009+30.00		Right	Ditch Check	12 inch	22.00	Kirby
7028+35.00		Right	Ditch Check	12 inch	22.00	220th
7028+51.00		Right	Ditch Check	12 inch	22.00	220th
7028+66.00		Right	Ditch Check	12 inch	22.00	220th
7028+81.00		Right	Ditch Check	12 inch	22.00	220th
7029+00.00		Right	Ditch Check	12 inch	22.00	220th

100_19
10/15/24

PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE

Possible Standards: EC-204

Station From	Station To	Side	Sediment Control Device Type	Diameter Size	Length (LF)	Remarks
7029+15.00		Right	Ditch Check	12 inch	22.00	220th
7029+30.00		Right	Ditch Check	12 inch	22.00	220th
7029+45.00		Right	Ditch Check	12 inch	22.00	220th
7029+63.00		Right	Ditch Check	12 inch	22.00	220th
7029+78.00		Right	Ditch Check	12 inch	22.00	220th
7029+93.00		Right	Ditch Check	12 inch	22.00	220th
7030+09.00		Right	Ditch Check	12 inch	22.00	220th
7030+24.00		Right	Ditch Check	12 inch	22.00	220th
7030+39.00		Right	Ditch Check	12 inch	22.00	220th
7030+54.00		Right	Ditch Check	12 inch	22.00	220th
7030+69.00		Right	Ditch Check	12 inch	22.00	220th
7030+84.00		Right	Ditch Check	12 inch	22.00	220th
7030+99.00		Right	Ditch Check	12 inch	22.00	220th
7031+14.00		Right	Ditch Check	12 inch	22.00	220th
7031+29.00		Right	Ditch Check	12 inch	22.00	220th
7031+44.00		Right	Ditch Check	12 inch	22.00	220th
7031+59.00		Right	Ditch Check	12 inch	22.00	220th
7031+74.00		Right	Ditch Check	12 inch	22.00	220th
7031+89.00		Right	Ditch Check	12 inch	22.00	220th
Total:					**115264**	

ROLLED EROSION CONTROL

Refer to EC-101, EC-103 and EC-104.

Road Identification	Station From	Station To	Side	Length (FT)	Width (FT)	TRM Type (EC-104)	TRM Quantity (Squares)	Slope Protection (EC-103) (Squares)	Special Ditch Control (EC-101) (Squares)	Remarks
US 63	201+88.00	206+29.00	Right	453.0	86.0	Type 2	422.0			
US 63	198+39.00	213+42.00	Left	1508.0	95.0	Type 2	1378.0			
US 63	211+23.00	221+83.00	Right	1070.0	40.0	Type 2	572.0			
US 63	211+75.00	214+19.00	Left	239.0	19.0	Type 2	46.0			
US 63	214+42.00	221+86.00	Left	750.0	50.0	Type 2	362.0			
US 63	222+08.00	241+82.00	Right	1996.0	40.0	Type 2	1136.0			
US 63	222+39.00	244+62.00	Left	2219.0	175.0	Type 2	3340.0			
US 63	222+68.00	241+89.00	Right	1939.0	110.0	Type 2	1260.0			
US 63	119+62.00	129+59.00	Right	1066.0	90.0			641.0		
US 63	120+00.00	129+55.00	Left	901.0	55.0			380.0		
US 63	130+44.00	134+84.00	Left	430.0	50.0			188.0		
US 63	130+46.00	134+81.00	Right	937.0	35.0			130.0		
US 63	135+40.00	144+63.00	Left	685.0	32.0			371.0		
US 63	135+45.00	141+28.00	Left	596.0	40.0			184.0		
US 63	135+38.00	144+80.00	Right	910.0	90.0			804.0		
US 63	145+94.00	147+84.00	Left	190.0	20.0			28.0		
US 63	144+60.00	148+11.00	Left	345.0	70.0			248.0		
US 63	144+94.00	148+17.00	Right	320.0	55.0			173.0		
US 63	146+29.00	147+80.00	Right	125.0	35.0			41.0		
US 63	150+03.00	151+42.00	Left	109.0	40.0			42.0		
US 63	149+47.00	152+84.00	Left	336.0	65.0			221.0		
US 63	149+44.00	153+06.00	Right	354.0	55.0			209.0		
US 63	150+00.00	151+91.00	Right	162.0	33.0			52.0		
US 63	154+43.00	158+90.00	Left	455.0	12.0			57.0		
US 63	152+90.00	159+12.00	Left	612.0	40.0			181.0		
US 63	153+25.00	158+97.00	Right	548.0	50.0			266.0		
US 63	154+56.00	158+44.00	Right	398.0	20.0			64.0		
US 63	160+62.00	188+95.00	Right	2767.0	60.0			1175.0		
US 63	168+75.00	190+98.00	Left	2268.0	50.0			951.0		
US 63	181+82.00	195+56.00	Right	1383.0	80.0			722.0		
US 63	182+34.00	196+55.00	Left	1423.0	90.0			828.0		
US 63	189+23.00	201+88.00	Right	1308.0	76.0			1128.0		
US 63	191+08.00	198+39.00	Left	732.0	105.0			717.0		
US 63	242+14.00	244+08.00	Right	200.0	25.0			34.0		
US 63	242+14.00	255+83.00	Right	1374.0	30.0			305.0		
US 63	242+98.00	255+71.00	Left	1267.0	35.0			304.0		
US 63	261+43.00	281+95.00	Right	2060.0	230.0			2823.0		
US 63	261+50.00	280+35.00	Left	1883.0	115.0			2093.0		
US 63	271+05.00	294+29.00	Left	2330.0	130.0			1747.0		
US 63	271+54.00	293+19.00	Right	2177.0	130.0			1729.0		
US 63	283+51.00	293+35.00	Left	2326.0	130.0			366.0		
US 63	283+50.00	293+90.00	Right	1042.0	20.0			174.0		
US 63	294+64.00	302+29.00	Left	784.0	65.0			343.0		
US 63	294+67.00	302+77.00	Right	857.0	50.0			294.0		
US 63	295+15.00	297+03.00	Right	189.0	25.0			43.0		
US 63	300+42.00	305+86.00	Left	548.0	20.0			123.0		
US 63	300+60.00	305+38.00	Right	479.0	25.0			107.0		
US 63	306+11.00	318+79.00	Left	1147.0	40.0			399.0		
US 63	306+65.00	311+91.00	Right	553.0	40.0			184.0		
US 63	319+50.00	321+24.00	Left	171.0	45.0			64.0		
US 63	320+95.00	322+00.00	Right	110.0	25.0			28.0		
N. Shore	1000+84.00	1019+37.00	Left	1875.0	30.0			312.0		
N. Shore	1000+11.00	1019+35.00	Right	1906.0	50.0			363.0		
N. Shore	1003+23.00	1014+35.00	Left	1102.0	35.0			295.0		
N. Shore	1003+38.00	1005+76.00	Right	213.0	15.0			23.0		

ROLLED EROSION CONTROL

Refer to EC-101, EC-103 and EC-104.

Road Identification	Station From	Station To	Side	Length (FT)	Width (FT)	TRM Type (EC-104)	TRM Quantity (Squares)	Slope Protection (EC-103) (Squares)	Special Ditch Control (EC-101) (Squares)	Remarks
N. Shore	1011+66.00	1014+14.00	Right	230.0	20.0			37.0		
N. Shore	1016+22.00	1019+37.00	Left	270.0	30.0			91.0		
N. Shore	1019+62.00	1027+20.00	Left	687.0	56.0			358.0		
N. Shore	1019+62.00	1026+30.00	Left	652.0	16.0			88.0		
N. Shore	1019+62.00	1023+07.00	Right	347.0	17.0			52.0		
N. Shore	1021+24.00	1027+22.00	Right	652.0	47.0			275.0		
Jewell	2001+24.00	2003+14.00	Right	200.0	40.0			67.0		
Jewell	2001+31.00	2003+34.00	Left	165.0	30.0			45.0		
Jewell	2013+00.00	2015+38.00	Left	250.0	38.0			72.0		
Jewell	2013+29.00	2029+00.00	Right	1541.0	20.0			471.0		
Jewell	2014+19.00	2029+60.00	Left	1566.0	25.0			433.0		
Jewell	2014+62.00	2023+71.00	Right	840.0	25.0			117.0		
Jewell	2015+63.00	2020+32.00	Left	496.0	40.0			152.0		
Jewell	2021+31.00	2028+16.00	Left	701.0	25.0			101.0		
Ramp A	11257+15.00	11263+73.00	Left	637.0	61.0			364.0		
Ramp A	11257+47.00	11263+73.00	Right	624.0	73.0			420.0		
Ramp B	21236+00.00	21240+63.00	Right	459.0	66.0			223.0		
Ramp B	21237+60.00	21252+67.00	Right	1493.0	60.0			625.0		
Ramp B	21246+16.00	21255+17.00	Right	905.0	50.0			290.0		
Ramp B	21246+35.00	21255+15.00	Left	880.0	43.0			283.0		
Ramp B	21246+89.00	21252+95.00	Left	590.0	32.0			123.0		
Ramp C	31252+26.00	31255+70.00	Left	329.0	58.0			171.0		
Ramp C	31252+26.00	31255+07.00	Right	283.0	67.0			187.0		
Ramp C	31252+32.00	31254+35.00	Right	166.0	50.0			84.0		
Ramp D	41256+73.00	41265+76.00	Right	868.0	100.0			816.0		
Ramp D	41256+79.00	41261+76.00	Right	510.0	39.0			147.0		
Ramp D	41257+40.00	41264+49.00	Left	713.0	65.0			446.0		
Independence	4000+16.00	4007+36.00	Left	737.0	18.0			107.0		
Independence	4000+19.00	4007+36.00	Right	692.0	20.0			114.0		
Kirby	6005+00.00	6006+13.00	Right	126.0	50.0			60.0		
Kirby	6005+11.00	6016+35.00	Left	1081.0	100.0			1132.0		
Kirby	6006+35.00	6016+41.00	Right	1036.0	120.0			1155.0		
Kirby	6018+81.00	6020+50.00	Right	164.0	15.0			22.0		
Kirby	6018+97.00	6027+75.00	Left	898.0	40.0			335.0		
Kirby	6019+06.00	6027+85.00	Right	849.0	37.0			332.0		
Kirby	6020+50.00	6030+02.00	Left	1017.0	67.0			622.0		
Kirby	6020+70.00	6028+85.00	Right	777.0	50.0			271.0		
220th	7022+41.00	7025+88.00	Right	342.0	35.0			105.0		
220th	7028+14.00	7032+08.00	Left	399.0	34.0			124.0		
US 63	135+00.00	137+12.00	Left	214.0	10.0				21.0	
US 63	140+50.00	143+21.00	Right	278.0	10.0				27.0	
US 63	179+59.00	188+38.00	Right	879.0	10.0				88.0	
US 63	179+94.00	188+03.00	Left	818.0	10.0				82.0	
US 63	191+15.00	197+68.00	Left	660.0	10.0				66.0	
US 63	283+00.00	290+08.00	Right	728.0	10.0				73.0	
US 63	288+47.00	294+97.00	Left	554.0	10.0				55.0	
US 63	298+98.00	302+88.00	Right	394.0	10.0				40.0	
US 63	315+13.00	319+84.00	Right	490.0	10.0				49.0	
US 63	315+41.00	319+14.00	Left	358.0	10.0				36.0	
N. Shore	1000+58.00	1001+30.00	Right	75.0	10.0				7.0	
N. Shore	1002+68.00	1011+28.00	Left	901.0	10.0				90.0	
N. Shore	1002+83.00	1011+29.00	Right	814.0	10.0				81.0	
Jewell	2013+00.00	2014+69.00	Left	174.0	10.0				17.0	
Jewell	2013+00.00	2013+88.00	Right	88.0	10.0				9.0	
Jewell	2016+00.00	2023+17.00	Left	761.0	10.0				76.0	

ROLLED EROSION CONTROL

Refer to EC-101, EC-103 and EC-104.

Road Identification	Station From	Station To	Side	Length (FT)	Width (FT)	TRM Type (EC-104)	TRM Quantity (Squares)	Slope Protection (EC-103) (Squares)	Special Ditch Control (EC-101) (Squares)	Remarks
Jewell	2015+52.00	2023+20.00	Right	729.0	10.0				72.0	
Ramp B	21236+00.00	21237+32.00	Right	130.0	10.0				13.0	
Ramp B	21238+18.00	21240+95.00	Right	282.0	10.0				28.0	
220th	7028+31.00	7032+00.00	Right	357.0	10.0				36.0	
Total:							**8516**	**32871**	**966**	

2/14/2025 2:57:45 PM nathan.pohlen@iowadot.us

ROCK EROSION CONTROL

Refer to EC-301 and Detail 570-8

Road Identification	Station From	Station To	Side	Length (FT)	Width (FT)	Rock Erosion Control Type	Engineering Fabric (SY)	Class E Revetment (TON)	Erosion Stone (TON)	Remarks
US 63	135+16.00	137+63.00	Right	260.00	10.0	Type 2 - Rock Ditch	408.9	269.600		
US 63	137+75.00		Right	13.00	13.0	Type 4 - Rock Splash Basin	30.3		20.000	
US 63	147+90.00		Left	13.00	13.0	Type 4 - Rock Splash Basin	30.3		20.000	
US 63	149+80.00		Right	13.00	13.0	Type 4 - Rock Splash Basin	30.3		20.000	
US 63	188+03.00	189+95.00	Left	206.00	10.0	Type 2 - Rock Ditch	324.9	213.600		
US 63	190+45.00		Left	15.00	15.0	Type 4 - Rock Splash Basin	38.3		26.700	
US 63	209+84.00		Right	11.50	11.5	Type 4 - Rock Splash Basin	24.9		15.700	
US 63	214+25.00		Right	11.50	11.5	Type 4 - Rock Splash Basin	24.9		15.700	
US 63	221+35.00		Right	11.50	11.5	Type 4 - Rock Splash Basin	24.9		15.700	
US 63	222+60.00		Right	11.50	11.5	Type 4 - Rock Splash Basin	24.9		15.700	
US 63	253+60.00		Left	29.00	21.5	Type 4 - Rock Splash Basin	91.7	64.600		
US 63	253+75.00		Right	29.00	21.5	Type 4 - Rock Splash Basin	91.7	64.600		
US 63	280+70.00		Left	16.00	16.0	Type 4 - Rock Splash Basin	42.7		30.300	
US 63	283+61.00	288+46.00	Left	490.00	10.0	Type 2 - Rock Ditch	766.7	508.200		
US 63	290+08.00	293+27.00	Right	326.00	10.0	Type 2 - Rock Ditch	511.6	338.100		
US 63	297+55.00		Left	12.50	12.5	Type 4 - Rock Splash Basin	28.5		18.500	
N. Shore	1001+20.00		Left	17.00	16.5	Type 4 - Rock Splash Basin	46.1	29.100		
N. Shore	1001+65.00		Right	17.00	16.5	Type 4 - Rock Splash Basin	46.1	29.100		
N. Shore	1015+50.00		Right	12.50	12.5	Type 4 - Rock Splash Basin	28.5		18.500	
Jewell	2000+70.00		Right	12.50	12.5	Type 4 - Rock Splash Basin	28.5		18.500	
Jewell	2014+75.00		Right	17.00	17.0	Type 4 - Rock Splash Basin	47.2		34.300	
Ramp B	21246+00.00		Right	12.50	12.5	Type 4 - Rock Splash Basin	28.5		18.500	
Ramp D	41261+93.00		Left	12.50	12.5	Type 4 - Rock Splash Basin	28.5		18.500	
Ramp D	41262+80.00		Left	12.50	12.5	Type 4 - Rock Splash Basin	28.5		18.500	
Ramp C	31248+50.00		Left	12.50	12.5	Type 4 - Rock Splash Basin	28.5		18.500	
Ramp A	11261+80.00		Left	12.50	12.5	Type 4 - Rock Splash Basin	28.5		18.500	
Old 163	5006+80.00		Right	12.50	12.5	Type 4 - Rock Splash Basin	28.5		18.500	
Kirby	6020+08.00		Left	16.00	16.0	Type 4 - Rock Splash Basin	42.7		30.300	
Kirby	6020+61.00	6029+66.00	Left	933.00	10.0	Type 2 - Rock Ditch	1455.8	967.600		
Kirby	6021+42.00	6029+71.00	Right	816.00	10.0	Type 2 - Rock Ditch	1273.8	846.200		
Old 63	9006+85.00		Right	12.50	12.5	Type 4 - Rock Splash Basin	28.5		18.500	
Total:							**5663.7**	**3330.7**	**429.4**	

STORMWATER DRAINAGE BASIN

Refer to EC Standards and 570s Details.

Basin No.	Station From	Station To	Direction of Traffic	Side	Discharge Station	Discharge Side	Total Disturbed Area (ACRES)	Disturbed Area with Storage Provided (ACRES)	Disturbed Area without Storage Provided (ACRES)	Best Management Practice	Total Storage Volume Provided (CF)	Total Storage Volume Required (CF)	Storage Volume Met	Remarks
1	118+00.00	1023+44.00		Left	118+00.00		3.3	3.3		Silt Fence for Ditch Check (EC-201)	16496.00	11880.0	Yes	
2	118+00.00	135+00.00		Right	118+00.00		5.9	5.9		Silt Fence for Ditch Check (EC-201)	21791.00	21240.0	Yes	
3	1011+48.00	1023+45.00		Right	1015+51.00		2.2	2.2		Silt Basin (EW-403)	2225.00	7920.0		
3	1011+48.00	1023+45.00		Right	1015+51.00		2.2	2.2		Silt Fence for Ditch Check (EC-201)	10503.00	7920.0	Yes	
4	999+72.00	1011+47.00		Right	1001+91.00		1.4	1.4				5040.0	No	
5	999+72.00	1011+47.00		Left	1001+91.00		1.7	1.7				6120.0	No	
6	1011+48.00	135+00.00		Left	1015+51.00		4.6	4.6		Silt Basin (EW-403)	2488.00	16560.0		
6	1011+48.00	135+00.00		Left	1015+51.00		4.6	4.6		Silt Fence for Ditch Check (EC-201)	18930.00	16560.0	Yes	
7	135+00.00	21252+03.00		Left	137+77.00		4.2	4.2		Silt Basin (EW-403)	2175.00	15120.0		
7	135+00.00	21252+03.00		Left	137+77.00		4.2	4.2		Silt Fence for Ditch Check (EC-201)	9983.00	15120.0	No	
8	135+00.00	144+46.00		Right	137+77.00		3.2	3.2		Silt Basin (EW-403)	2088.00	11520.0		
8	135+00.00	144+46.00		Right	137+77.00		3.2	3.2		Silt Fence for Ditch Check (EC-201)	6076.00	11520.0	No	
9	21235+99.00	21252+03.00		Right	21235+99.00		4.5	4.5		Silt Basin (EW-403)	1913.00	16200.0		
9	21235+99.00	21252+03.00		Right	21235+99.00		4.5	4.5		Silt Fence for Ditch Check (EC-201)	11767.00	16200.0	No	
10	21242+00.00	21252+03.00		Left	21245+00.00		1.5	1.5		Silt Basin (EW-403)	1050.00	5400.0		
10	21242+00.00	21252+03.00		Left	21245+00.00		1.5	1.5		Silt Fence for Ditch Check (EC-201)	5305.00	5400.0	Yes	
11	41256+00.00	41278+09.00		Right	41260+80.00		7.0	7.0		Silt Basin (EW-403)	2000.00	25200.0		
11	41256+00.00	41278+09.00		Right	41260+80.00		7.0	7.0		Silt Fence for Ditch Check (EC-201)	10127.00	25200.0	Yes	
12	2013+00.00	2032+06.00		Left	2015+00.00		3.0	3.0		Silt Basin (EW-403)	1838.00	10800.0		
12	2013+00.00	2032+06.00		Left	2015+00.00		3.0	3.0		Silt Fence for Ditch Check (EC-201)	7065.00	10800.0	No	
13	2032+06.00	2048+25.00		Left	2048+25.00		2.9	2.9		Silt Fence for Ditch Check (EC-201)	11869.00	10440.0	Yes	
14	2032+06.00	2048+25.00		Right	2048+25.00		1.4	1.4		Silt Fence for Ditch Check (EC-201)	8902.00	5040.0	Yes	
15	2013+00.00	2032+06.00		Right	2015+00.00		2.5	2.5		Silt Basin (EW-403)	1625.00	9000.0		
15	2013+00.00	2032+06.00		Right	2015+00.00		2.5	2.5		Silt Fence for Ditch Check (EC-201)	5511.00	9000.0	No	
16	41257+69.00	41265+77.00		Left	41261+79.00		1.3	1.3		Silt Basin (EW-403)	1150.00	4680.0	No	
17	144+44.00	153+26.00		Right	149+00.00		2.9	2.9		Silt Fence for Ditch Check (EC-201)	8970.00	10440.0	No	
18	21252+03.00	3999+35.00		Left	4000+63.00		8.0	8.0		Silt Basin (EW-403)	1375.00	28800.0		
18	21252+03.00	3999+35.00		Left	4000+63.00		8.0	8.0		Silt Fence for Ditch Check (EC-201)	12924.00	28800.0	No	
19	31245+74.00	31254+64.00		Right	31247+51.00		1.6	1.6		Silt Basin (EW-403)	1375.00	5760.0		
19	31245+74.00	31254+64.00		Right	31247+51.00		1.6	1.6		Silt Fence for Ditch Check (EC-201)	5401.00	5760.0	Yes	
20	31233+50.00	31254+64.00		Left	31233+50.00		4.9	4.9		Silt Basin (EW-403)	1300.00	17640.0		
20	31233+50.00	31254+64.00		Left	31233+50.00		4.9	4.9		Silt Fence for Ditch Check (EC-201)	20095.00	17640.0	Yes	
21	153+24.00	11270+96.00		Right	11261+80.00		3.1	3.1		Silt Basin (EW-403)	2350.00	11160.0		
21	153+24.00	11270+96.00		Right	11261+80.00		3.1	3.1		Silt Fence for Ditch Check (EC-201)	9404.00	11160.0	Yes	
22	153+47.00	1277+00.00		Left	11261+80.00		3.9	3.9		Silt Basin (EW-403)	2513.00	14040.0		
22	153+47.00	1277+00.00		Left	11261+80.00		3.9	3.9		Silt Fence for Ditch Check (EC-201)	25214.00	14040.0	Yes	
23	153+47.00	5004+86.00		Right	155+00.00		2.3	2.3		Silt Fence for Ditch Check (EC-201)	9793.00	8280.0	Yes	
24	5004+86.00	5024+44.00		Right	5006+81.00		2.8	2.8		Silt Basin (EW-403)	2763.00	10080.0		
24	5004+86.00	5024+44.00		Right	5006+81.00		2.8	2.8		Silt Fence for Ditch Check (EC-201)	20771.00	10080.0	Yes	
25	5024+44.00	5039+75.00		Right	5036+00.00		1.9	1.9		Silt Basin (EW-403)	2600.00	6840.0		
25	5024+44.00	5039+75.00		Right	5036+00.00		1.9	1.9		Silt Fence for Ditch Check (EC-201)	12293.00	6840.0	Yes	
26	5024+44.00	5039+75.00		Left	5036+00.00		1.7	1.7		Silt Basin (EW-403)	2138.00	6120.0		
26	5024+44.00	5039+75.00		Left	5036+00.00		1.7	1.7		Silt Fence for Ditch Check (EC-201)	10786.00	6120.0	Yes	
27	5004+86.00	5024+44.00		Left	5006+81.00		2.6	2.6		Silt Basin (EW-403)	2750.00	9360.0		
27	5004+86.00	5024+44.00		Left	5006+81.00		2.6	2.6		Silt Fence for Ditch Check (EC-201)	19264.00	9360.0	Yes	
28	5004+86.00	197+73.00		Right	189+75.00		13.3	13.3		Silt Basin (EW-403)	2063.00	47880.0		
28	5004+86.00	197+73.00		Right	189+75.00		13.3	13.3		Silt Fence for Ditch Check (EC-201)	50494.00	47880.0	Yes	
29	3999+60.00	4009+25.00		Left	4000+50.00		1.0	1.0				3600.0	No	

STORMWATER DRAINAGE BASIN

Refer to EC Standards and 570s Details.

Basin No.	Station From	Station To	Direction of Traffic	Side	Discharge Station	Discharge Side	Total Disturbed Area (ACRES)	Disturbed Area with Storage Provided (ACRES)	Disturbed Area without Storage Provided (ACRES)	Best Management Practice	Total Storage Volume Provided (CF)	Total Storage Volume Required (CF)	Storage Volume Met	Remarks
30	159+40.00	197+73.00		Left	189+75.00		11.7	11.7		Silt Basin (EW-403)	1513.00	42120.0		
30	159+40.00	197+73.00		Left	189+75.00		11.7	11.7		Silt Fence for Ditch Check (EC-201)	21267.00	42120.0	No	
31	197+73.00	210+84.00		Left	209+58.00		6.0	6.0		Silt Basin (EW-403)	2425.00	21600.0		
31	197+73.00	210+84.00		Left	209+58.00		5.0	6.0	-1.0	Silt Fence for Ditch Check (EC-201)	2170.00	21600.0	No	
32	197+73.00	217+36.00		Right	209+58.00		7.0	7.0		Silt Basin (EW-403)	3813.00	25200.0		
32	197+73.00	217+36.00		Right	209+58.00		7.0	7.0		Silt Fence for Ditch Check (EC-201)	13310.00	25200.0	No	
33	210+84.00	218+00.00		Left	214+25.00		1.7	1.7				6120.0	No	
34	217+36.00	270+00.00		Left	253+77.00		27.6	27.6		Silt Basin (EW-403)	4363.00	99360.0		
34	217+36.00	270+00.00		Left	253+77.00		27.6	27.6		Silt Fence for Ditch Check (EC-201)	27636.00	99360.0	No	
35	216+48.00	270+00.00		Right	253+77.00		22.8	22.8		Silt Basin (EW-403)	5988.00	82080.0		
35	216+48.00	270+00.00		Right	253+77.00		22.8	22.8		Silt Fence for Ditch Check (EC-201)	30382.00	82080.0	No	
36	6000+50.00	6002+55.00		Left	6000+50.00		0.2	0.2		Silt Fence for Ditch Check (EC-201)	1884.00	720.0	Yes	
37	6018+95.00	6031+50.00		Right	6020+27.00		2.6	2.6		Silt Basin (EW-403)	1575.00	9360.0	No	
38	6018+95.00	6031+50.00		Left	6020+27.00		3.5	3.5		Silt Basin (EW-403)	1425.00	12600.0	No	
39	7011+25.00	7014+93.00		Right	7011+25.00		0.3	0.3		Silt Fence for Ditch Check (EC-201)	5935.00	1080.0	Yes	
40	7011+25.00	7014+93.00		Left	7011+26.00		0.6	0.6		Silt Fence for Ditch Check (EC-201)	5935.00	2160.0	Yes	
41	270+00.00	293+81.00		Left	281+35.00		11.8	11.8		Silt Basin (EW-403)	2450.00	42480.0		
41	270+00.00	293+81.00		Left	281+35.00		11.8	11.8		Silt Fence for Ditch Check (EC-201)	12056.00	42480.0	No	
42	270+00.00	294+50.00		Right	281+35.00		14.1	14.1		Silt Basin (EW-403)	2150.00	50760.0		
42	270+00.00	294+50.00		Right	281+35.00		14.1	14.1		Silt Fence for Ditch Check (EC-201)	14612.00	50760.0	No	
43	293+81.00	294+50.00		Left	293+81.00		0.2	0.2				720.0	No	
44	8002+00.00	8010+26.00		Right	8002+00.00		1.6	1.6		Silt Fence for Ditch Check (EC-201)	8337.00	5760.0	Yes	
45	8002+00.00	8010+26.00		Left	8002+00.00		1.1	1.1		Silt Fence for Ditch Check (EC-201)	5369.00	3960.0	Yes	
46	294+50.00	303+18.00		Left	297+82.00		2.7	2.7		Silt Fence for Ditch Check (EC-201)	5401.00	9720.0	No	
47	294+50.00	303+18.00		Right	297+82.00		2.7	2.7		Silt Basin (EW-403)	1975.00	9720.0		
47	294+50.00	303+18.00		Right	297+82.00		2.7	2.7		Silt Fence for Ditch Check (EC-201)	5353.00	9720.0	No	
48	303+18.00	322+00.00		Left	319+23.00		4.9	4.9				17640.0	No	
49	303+18.00	306+00.00		Right	305+00.00		0.6	0.6		Silt Fence for Ditch Check (EC-201)	1929.00	2160.0	No	
50	9000+69.00	9012+50.00		Right	9006+82.00		1.7	1.7		Silt Basin (EW-403)	2600.00	6120.0		
50	9000+69.00	9012+50.00		Right	9006+82.00		1.7	1.7		Silt Fence for Ditch Check (EC-201)	11163.00	6120.0	Yes	
51	306+19.00	322+00.00		Right	322+00.00		3.7	3.7		Silt Basin (EW-403)	1100.00	13320.0		
52	9000+69.00	9012+50.00		Left	9006+82.00		1.9	1.9		Silt Basin (EW-403)	2625.00	6840.0		
52	9000+69.00	9012+50.00		Left	9006+82.00		1.9	1.9		Silt Fence for Ditch Check (EC-201)	14318.00	6840.0	Yes	

POLLUTION PREVENTION PLAN

This project is regulated by the requirements of the Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) General Permit No. 2 OR an Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) individual storm water permit. The Contractor shall carry out the terms and conditions of this permit and the Pollution Prevention Plan (PPP).

This Base PPP includes information on Roles and Responsibilities, Project Site Description, Controls, Maintenance Procedures, Inspection Requirements, Non-Storm Water Controls, Potential Sources of Off Right-of-Way Pollution, and Definitions. This plan references other documents rather than repeating the information contained in the documents. A copy of this Base Pollution Prevention Plan, amended as needed during construction, will be readily available for review.

All contractors shall conduct their operations in a manner that controls pollutants, minimizes erosion, and prevents sediments from entering waters of the state and leaving the highway right-of-way. The Contractor shall be responsible for compliance and implementation of the PPP for their entire contract. This responsibility shall be further shared with subcontractors whose work is a source of potential pollution as defined in this PPP.

I. ROLES AND RESPONSIBILITES

A. Designer:
1. Prepares Base PPP included in the project plan.
2. Prepares Notice of Intent (NOI) submitted to Iowa DNR.
3. Is signature authority on the Base PPP. If consultant designed, signature from Contracting Authority is also required.

B. Contractor:
1. Signs a co-permittee certification statement adhering to the requirements of the NPDES permit and this PPP. All co-permittees are legally required under the Clean Water Act and the Iowa Administrative Code to ensure compliance with the terms and conditions of this PPP.
2. Designates a Water Pollution Control Manager (WPCM), who has the duties and responsibilities as defined in Section 2602 of the Standard Specifications.
3. Submits an Erosion Control Implementation Plan (ECIP) and ECIP updates according to Section 2602 of the Standard Specifications.
4. Installs and maintains appropriate controls. This work may be subcontracted as documented through Subcontractor Request Forms (Form 830231).
5. Supervises and implements good housekeeping practices according to Paragraph III, C, 2.
6. Conducts joint required inspections of the site with inspection staff. When Contractor is not mobilized on site, Contractor may delegate this responsibility to a trained or certified subcontractor. Contracting Authority also may waive joint inspection requirement during winter shutdown. In both circumstances, WPCM (or trained or certified delegate from the Contractor) is still responsible to review and sign inspection reports.
7. Complies with training and certification requirements of Section 2602 of the Standard Specifications.
8. Submits amended PPP site map according to Section 2602 of the Standard Specifications.

C. Subcontractors:
1. Sign a co-permittee certification statement adhering to the requirements of the NPDES permit and this PPP if: responsible for sediment or erosion controls; involved in land disturbing activities; or perorming work that is a source of potential pollution as defined in this PPP. Subcontracted work items are identified in Subcontractor Request Forms (Form 830231). All co-permittees are legally required under the Clean Water Act and the Iowa Administrative Code to ensure compliance with the terms and conditions of this PPP.
2. Implement good housekeeping practices according to Paragraph III, C, 2.

D. RCE/Project Engineer:
1. Is Project Storm Water Manager.
2. On projects where DOT is the Contracting Authority, is current with erosion control training or certification.
3. Takes actions necessary to ensure compliance with storm water requirements including, where appropriate, issuing stop work orders, and directing additional inspections at construction project sites that are experiencing problems with achieving permit compliance.
4. Orders the taking of measures to cease, correct, prevent, or minimize the consequences of non-compliance with the storm water requirements of the Applicable Permit.
5. Supervises all work necessary to meet storm water requirements at the Project, including work performed by contractors and subcontractors.
6. Requires employees, contractors, and subcontractors to take appropriate responsive action to comply with storm water requirements, including requiring any such person to cease or correct a violation of storm water requirements, and to order or recommend such other actions as necessary to meet storm water requirements.
7. Is familiar with the Project PPP and storm water site map.
8. On projects where DOT is Contracting Authority, is responsible for periodically monitoring inspection reports to determine whether deficiencies identified in inspection reports were adequately and timely addressed, and if not, has the authority and responsibility to direct immediate actions to correct the deficiencies.
9. Is the point of contact for the Project for regulatory officials, Inspector, contractors, and subcontractors regarding storm water requirements.
10. Is signature authority on Notice of Discontinuation.
11. Maintains an up-to-date record of contractors, subcontractors, and subcontracted work items through Subcontractor Request Forms (Form 830231).
12. Makes information to determine permit compliance available to the DNR upon their request.

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POLLUTION PREVENTION PLAN

E. Inspector:
1. Updates PPP through fieldbook entries and storm water site inspection reports if there is a change in design, construction, operation, or maintenance which has a significant effect on the discharge of pollutants from the project.
2. Makes information to determine permit compliance available to the DNR upon their request.
3. Conducts joint required inspections of the site with the contractor/subcontractor.
4. Completes an inspection report after each inspection.
5. Is signature authority on storm water inspection reports.

II. PROJECT SITE DESCRIPTION

A. This Pollution Prevention Plan (PPP) is for the Grading of US 63 on Mahaska County.

B. This PPP covers approximately 325.1 acres with an estimated 234.3 acres being disturbed. The portion of the PPP covered by this contract has 234.3 acres disturbed.

C. The PPP is located in an area of Otley-Ladoga soil association.
The estimated weighted average runoff coefficient number for this PPP after completion will be 0.27.

D. Storm Water Site Map is located in the R sheets. Proposed slopes are shown in cross sections, details, or standard road plans. Supplemental information is located in the Tabulations in the C or CE sheets.

E. The base storm water site map is amended by contract modifications and progress payments (fieldbook entries) of completed erosion control work. Also, due to project phasing, erosion and sediment controls shown on project plans may not be installed until needed, based on site conditions. For example, silt fence ditch checks will typically not be installed until the ditch has been installed. Installed locations may also be modified from tabulation locations by field staff. Installed locations will be documented by fieldbook entries and amended PPP site map.

F. Runoff from this work will flow into the South Skunk River and Muchakinock Creek to The Des Moines River.

III. CONTROLS

A. The Contractor’s ECIP specified in Article 2602.03 of the Standard Specifications for accomplishment of storm water controls should clearly describe the intended sequence of major activities, and for each activity define the control measure and the timing during the construction process that the measure will be implemented.

B. Preserve vegetation in areas not needed for construction.

C. Sections 2601 and 2602 of the Standard Specifications define requirements to implement erosion and sediment control measures. Actual quantities used and installed locations may vary from the Base PPP and amendment of the plan will be documented via fieldbook entries, amended PPP site map, or by contract modification. Additional erosion and sediment control items may be required as determined by the inspector and/or contractor during storm water site inspections. If the work involved is not applicable to any contract items, the work will be paid for according to Article 1109.03 paragraph B of the Standard Specifications.

1. EROSION AND SEDIMENT CONTROLS

a. Stabilization Practices
1) Site plans will ensure that existing vegetation or natural buffers are preserved where attainable and disturbed portions of the site will be stabilized.
2) Initialize stabilization of disturbed areas immediately after clearing, grading, excavating, or other earth disturbing activities have:
a) Permanently ceased on any portion of the site, or
b) Temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days.
3) Staged permanent and/or temporary stabilizing seeding and mulching shall be completed as the disturbed areas are completed. Incomplete areas shall be stabilized according to paragraph III, C, 1, a, 2, b above.
4) Permanent and Temporary Stabilization practices to be used for this project are located in the storm water site map, Estimated Project Quantities (100-0A, 100-1A, or 100-1C), and Estimate Reference Information (100-4A) located in the C or R sheets. Typical drawings detailing construction of the practices to be used on this project are referenced in the Standard Road Plans Tabulation (105-4) in the C or R sheets.
5) Preservation of existing vegetation within right-of-way or easements will act as vegetative buffer strips.
6) Preservation of topsoil: Bid items to be used for this project are located in the Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C or R sheets. Additional information may be found in the Tabulations in the C or T Tabulation sheets, or is referenced in Section 2105 of the Standard Specifications.

b. Structural Practices
1) Structural practices will be implemented to divert flows from exposed soils and detain or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Additionally, structural practices may include: silt basins that provide 3600 cubic feet of storage per acre drained or equivalent sediment controls, outlet structures that withdraw water from surface when discharging basins, and controls to direct storm water to vegetated areas.
2) Structural practices to be used for this project are located in the storm water site map, Estimated Project Quantities (100-0A, 100-1A, or 100-1C), and Estimate Reference Information (100-4A) located in the C or R sheets, as well as all other item specific Tabulations. Typical drawings detailing construction of the devices to be used on this project can be found on the B or R sheets or are referenced in the Standard Road Plans Tabulation (105-4) located in the C or R sheets.

POLLUTION PREVENTION PLAN

c. Storm Water Management
Measures shall be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. This may include velocity dissipation devices at discharge locations and along length of outfall channel as necessary to provide a non-erosion velocity flow from structure to water course. If included with this project, these items are located in the storm water site map and Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C or R sheets, as well as all other item specific Tabulations. Typical drawings detailing construction of the practices to be used on this project are referenced in the Standard Road Plans Tabulation. The installation of these devices may be subject to Section 404 of the Clean Water Act.

2. OTHER CONTROLS
Contractor disposal of unused construction materials and construction material wastes shall comply with applicable state and local waste disposal, sanitary sewer, or septic system regulations. In the event of a conflict with other governmental laws, rules and regulations, the more restrictive laws, rules or regulations shall apply.

a. Vehicle Entrances and Exits - Construct and maintain entrances and exits to prevent tracking of sediments onto roadways.
b. Material Delivery, Storage and Use - Implement practices to prevent discharge of construction materials during delivery, storage, and use.
c. Stockpile Management - Install controls to reduce or eliminate pollution of storm water from stockpiles of soil and paving.
d. Waste Disposal - Do not discharge any materials, including building materials, into waters of the state, except as authorized by a Section 404 permit.
e. Spill Prevention and Control - Implement chemical spill and leak prevention and response procedures to contain and clean up spills and prevent material discharges to the storm drain system and waters of the state.
f. Concrete Residuals and Washout Wastes - Waste shall not be discharged to a surface water and is not allowed to adversely affect a water of the state. Designate temporary concrete washout facilities for rinsing out concrete trucks. Provide directions to truck drivers where designated washout facilities are located. Designated washout areas should be located at least 50 feet away from storm drains, streams or other water bodies. Care should be taken to ensure these facilities do not overflow during storm events.
g. Concrete Grooving/Grinding Slurry – Do not discharge slurry to a waterbody or storm drain. Slurry may be applied on foreslopes or removed from the project.
h. Vehicle and Equipment Storage and Maintenance Areas - Perform on site fueling and maintenance in accordance with all environment laws such as proper storage of onsite fuels and proper disposal of used engine oil or other fluids on site. Employ washing practices that prevent contamination of surface and ground water from wash water. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge.
i. Litter Management - Ensure employees properly dispose of litter. Minimize exposure of trash if exposure to precipitation or storm water would result in a discharge of pollutants.
j. Dewatering – Properly treat water to remove suspended sediment before it re-enters a waterbody or discharges off-site. Measures are also to be taken to prevent scour erosion at dewatering discharge point.

3. APPROVED STATE OR LOCAL PLANS
During the course of this construction, it is possible that situations will arise where unknown materials will be encountered. When such situations are encountered, they will be handled according to all federal, state, and local regulations in effect at the time.

IV. MAINTENANCE PROCEDURES
The Contractor is required to maintain all temporary erosion and sediment control measures in proper working order, including cleaning, repairing, or replacing them throughout the contract period. This shall begin when the features have lost 50% of their capacity.

V. INSPECTION REQUIREMENTS
A. Inspections shall be made jointly by the Contractor and the Contracting Authority's inspector at least once every seven calendar days. Storm water site inspections will include:
1. Date of the inspection.
2. Summary of the scope of the inspection.
3. Name and qualifications of the personnel making the inspection.
5. Review of erosion and sediment control measures within disturbed areas for the effectiveness in preventing impacts to receiving waters.
6. Major observations related to the implementation of the PPP.
7. Identification of corrective actions required to maintain or modify erosion and sediment control measures.

B. Include storm water site inspection reports in the Amended PPP. Incorporate any additional erosion and sediment control measures determined as a result of the inspection. Immediately begin corrective actions on all deficiencies found within 3 calendar days of the inspection and complete within 7 calendar days following the inspection. If it is determined that making the corrections less than 72 hours after the inspection is impracticable, it should be documented why it is impracticable and indicate an estimated date by which the corrections will be made.

VI. NON-STORM WATER DISCHARGES

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POLLUTION PREVENTION PLAN

This includes subsurface drains (i.e. longitudinal and standard subdrains) and slope drains. The velocity of the discharge from these features may be controlled by the use of headwalls or blocks, Class A stone, erosion stone or other appropriate materials. This also includes uncontaminated groundwater from dewatering operations, which will be controlled as discussed in Section III of the PPP.

VII. POTENTIAL SOURCES OF OFF RIGHT-OF-WAY (ROW) POLLUTION
Silts, sediment, and other forms of pollution may be transported onto highway right-of-way (ROW) as a result of a storm event. Potential sources of pollution located outside highway ROW are beyond the control of this PPP. Pollution within highway ROW will be conveyed and controlled per this PPP.

VIII. DEFINITIONS
A. Base PPP - Initial Pollution Prevention Plan.
B. Amended PPP - Base PPP amended during construction. May include Plan Revisions or Contract Modifications for new items, storm water site inspection reports, fieldbook entries made by the inspector, amended PPP site map by the Contractor, ECIP, NOI, co-permittee certifications, and Subcontractor Request Forms. Items amending the PPP are stored electronically and are readily available upon request.
C. Fieldbook Entries – This contains the inspector’s daily diary and bid item postings.
D. Controls - Methods, practices, or measures to minimize or prevent erosion, control sedimentation, control storm water, or minimize contaminants from other types of waste or materials. Also called Best Management Practices (BMPs).
E. Signature Authority - Representative authorized to sign various storm water documents.

CERTIFICATION STATEMENT

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Nathan Pohlen

Signature

Nathan J. Pohlen
Print Name

LINE STYLE LEGEND OF LANDSCAPE SHEETS

LINESTYLE	Design Element
- - - - - - - - - - - - -	Living Snow Fence Single Row
:::::::::::::::::::	Living Snow Fence Double Row
———	Mechanical Edge

CELL LEGEND OF LANDSCAPE SHEETS

CELL	Design Element	Plant Diameter
	Clearing	
	Proposed Shrub	6 FT
	Proposed Understory Tree	12 FT
	Proposed Conifer Tree	18 FT
	Proposed Overstory Tree	30 FT

PATTERN LEGEND OF LANDSCAPE SHEETS

- Brush Clearing
- Spray Area
- Clearing & Grubbing

LINE STYLE LEGEND OF EROSION CONTROL SHEETS

LINESTYLE	Design Element
	Silt Fence
9	Perimeter and Slope Sediment Control Device (9")
12	Perimeter and Slope Sediment Control Device (12")
20	Perimeter and Slope Sediment Control Device (20")
	Open-Throat Curb Intake Sediment Filter
	Concentrated Flow
	Rock Check and Rock Check Dam
	Sheet Flow

CELL LEGEND OF EROSION CONTROL SHEETS

CELL	Design Element
	Temporary Sediment Control basin
	Erosion Control for Circular Intake or Manhole Well
	Erosion Control for Rectangular Intake or Manhole Well
	Grate Intake Sediment Filter Bag
	Silt Basin
	Silt Fence Tail
	Stormwater Drainage Basin Discharge Point

PLAN VIEW COLOR LEGEND OF EROSION CONTROL 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
Black	(0)	Permanent Erosion Control Features
Blaze Orange	(222)	Temporary Erosion Control Features

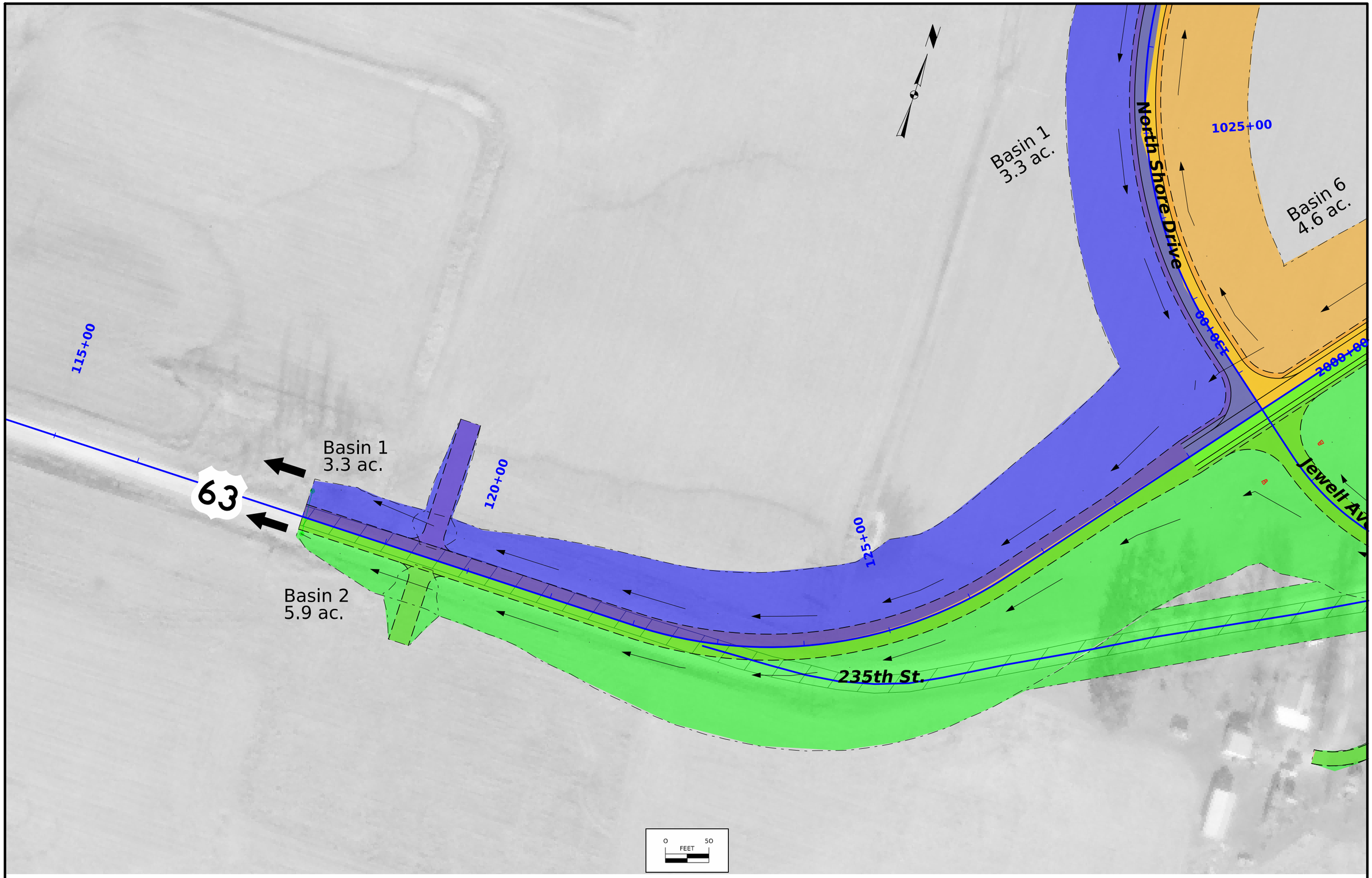
SHADING	Design Color No.		Transparency
Citron	(234)	Mulching, All Types	50%
Light Brown	(238)	Special Ditch Control, Wood Excelsior Mat	0%
Grass Green	(233)	8FT Mow Strip	50%
Red	(3)	Delineates Restricted Areas	0%

PATTERN LEGEND OF EROSION CONTROL SHEETS

Seeding and Fertilizing	Turf Reinforcement Mat Type 1
R Seeding and Fertilizing (Rural)	Turf Reinforcement Mat Type 2
U Seeding and Fertilizing (Urban)	Turf Reinforcement Mat Type 3
N Native Grass Seeding	Turf Reinforcement Mat Type 4
ST Salt Tolerant Seeding	Slope Protection, Wood Excelsior Mat
WL Wetland Grass Seeding	Transition Mat
WF Wildflower Seeding	Rock Features, Permanent
SOD Sodding	Rock Features, Temporary

EROSION CONTROL LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES R)



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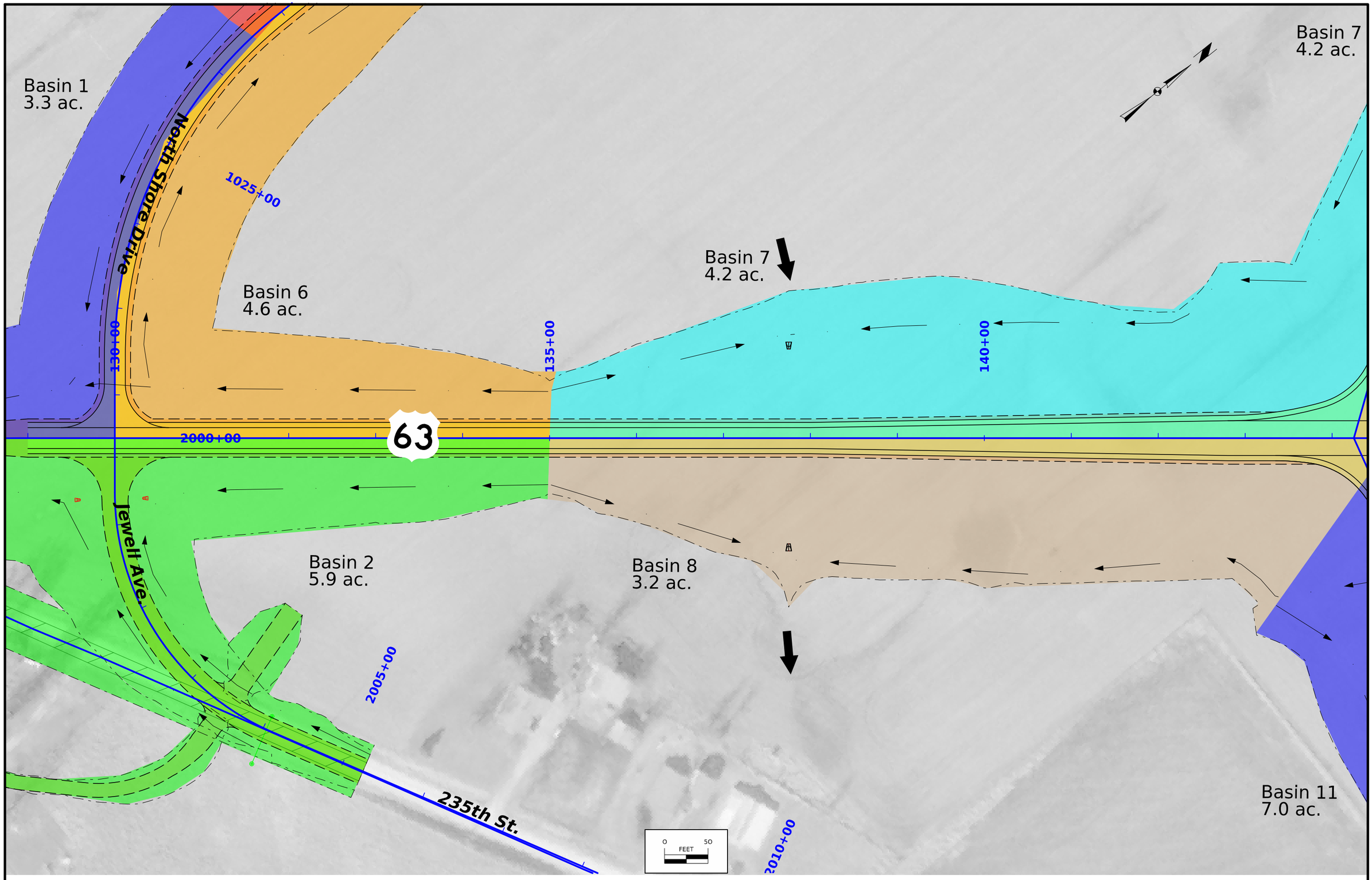

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Basin 7
4.2 ac.

Basin 10
1.5 ac.

Basin 18
7.3 ac.

Basin 19
1.6 ac.

Basin 20
4.2 ac.

Basin 18
8.0 ac.

Ramp B

Ramp C

21255+00

145+00

12555+00

150+00

31255+00

155+00

400

63

Ramp D

Basin 17
2.9 ac.

Basin 21
3.1 ac.

Ramp A

Basin 22
3.9 ac.

Basin 23
2.3 ac.

163

41260+00

1260+00

Basin 16
1.3 ac.

Basin 11
7.0 ac.

11260+00

Basin 24
2.8 ac.

0 50
FEET

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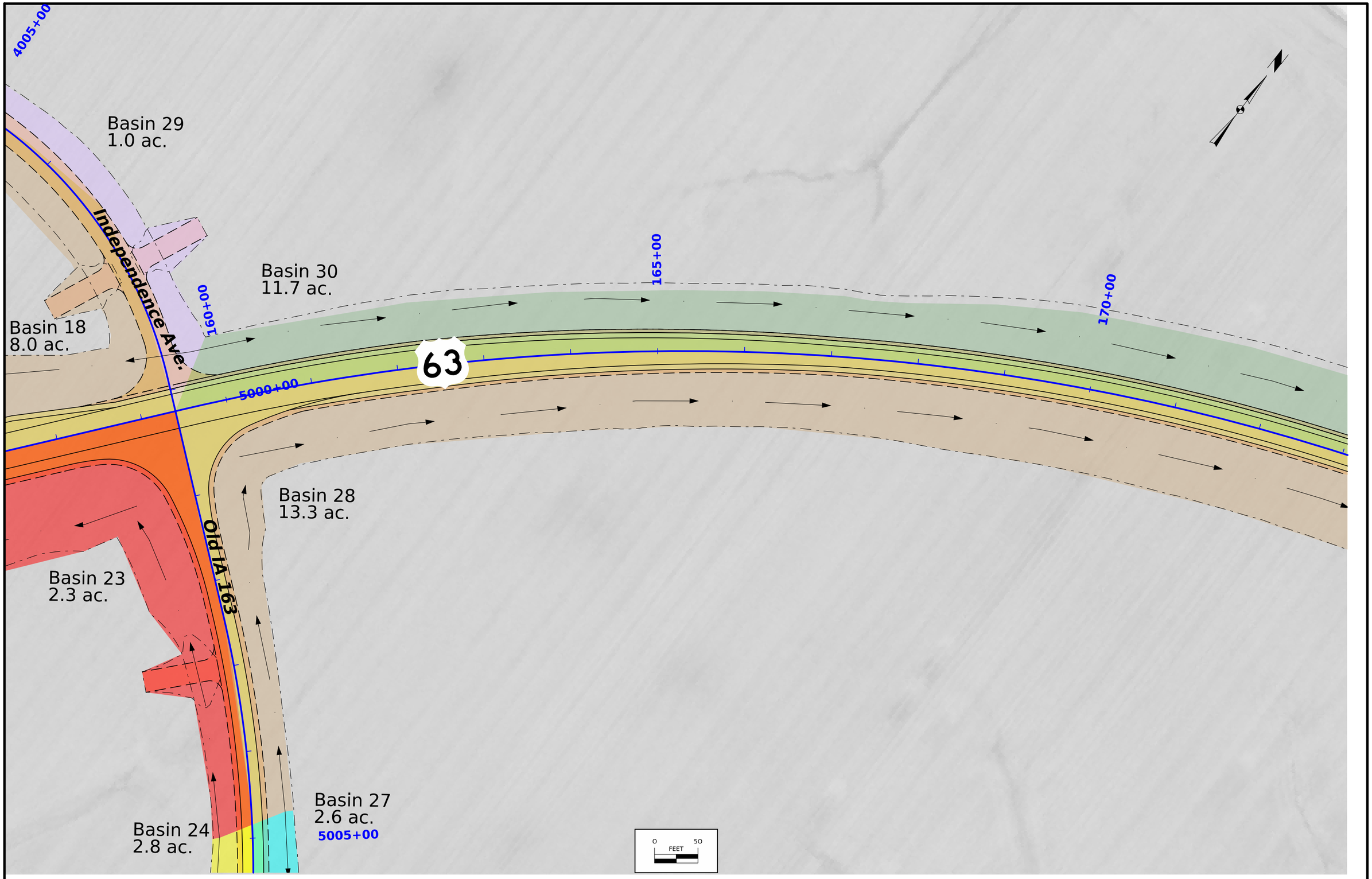

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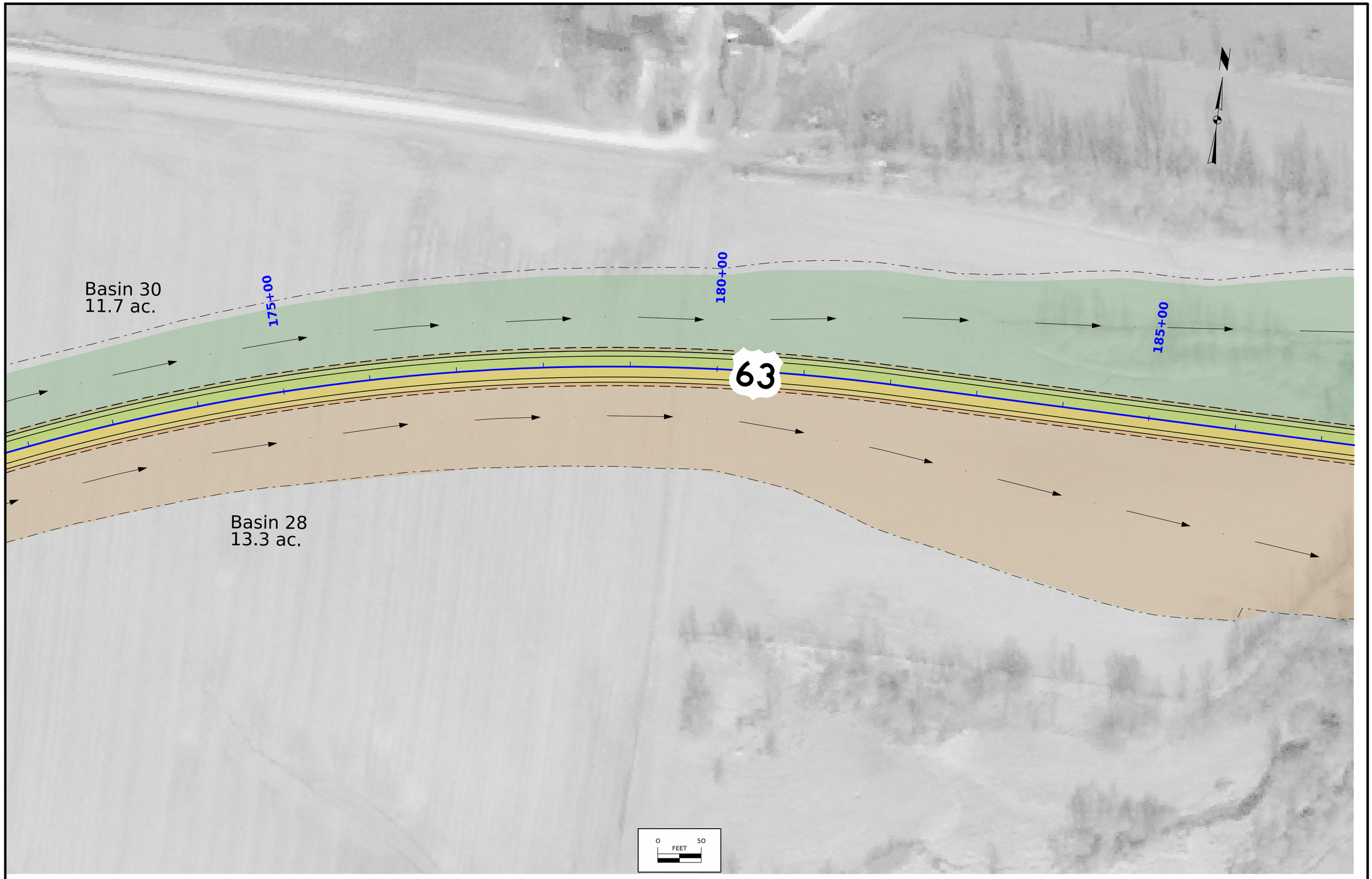

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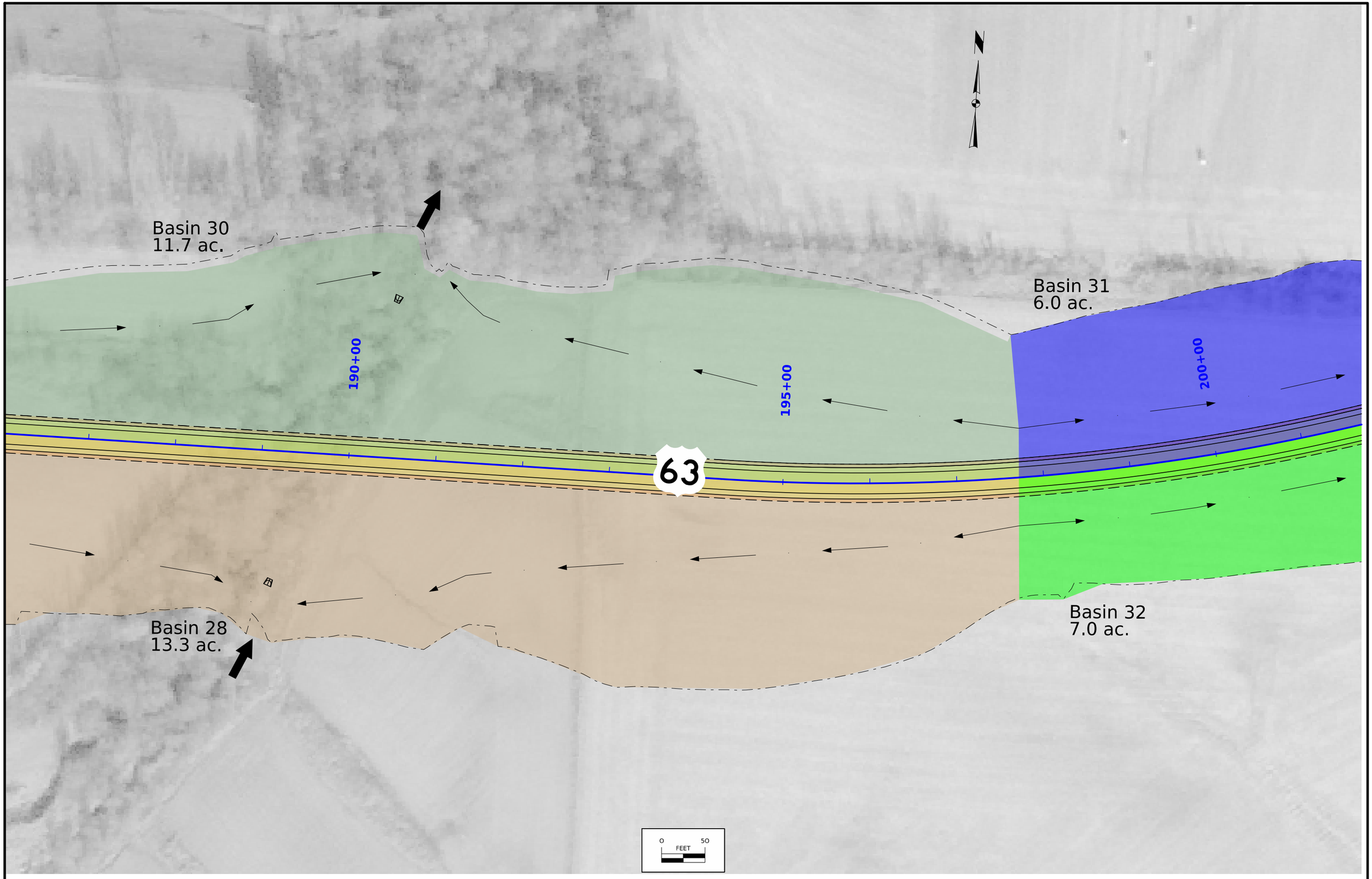

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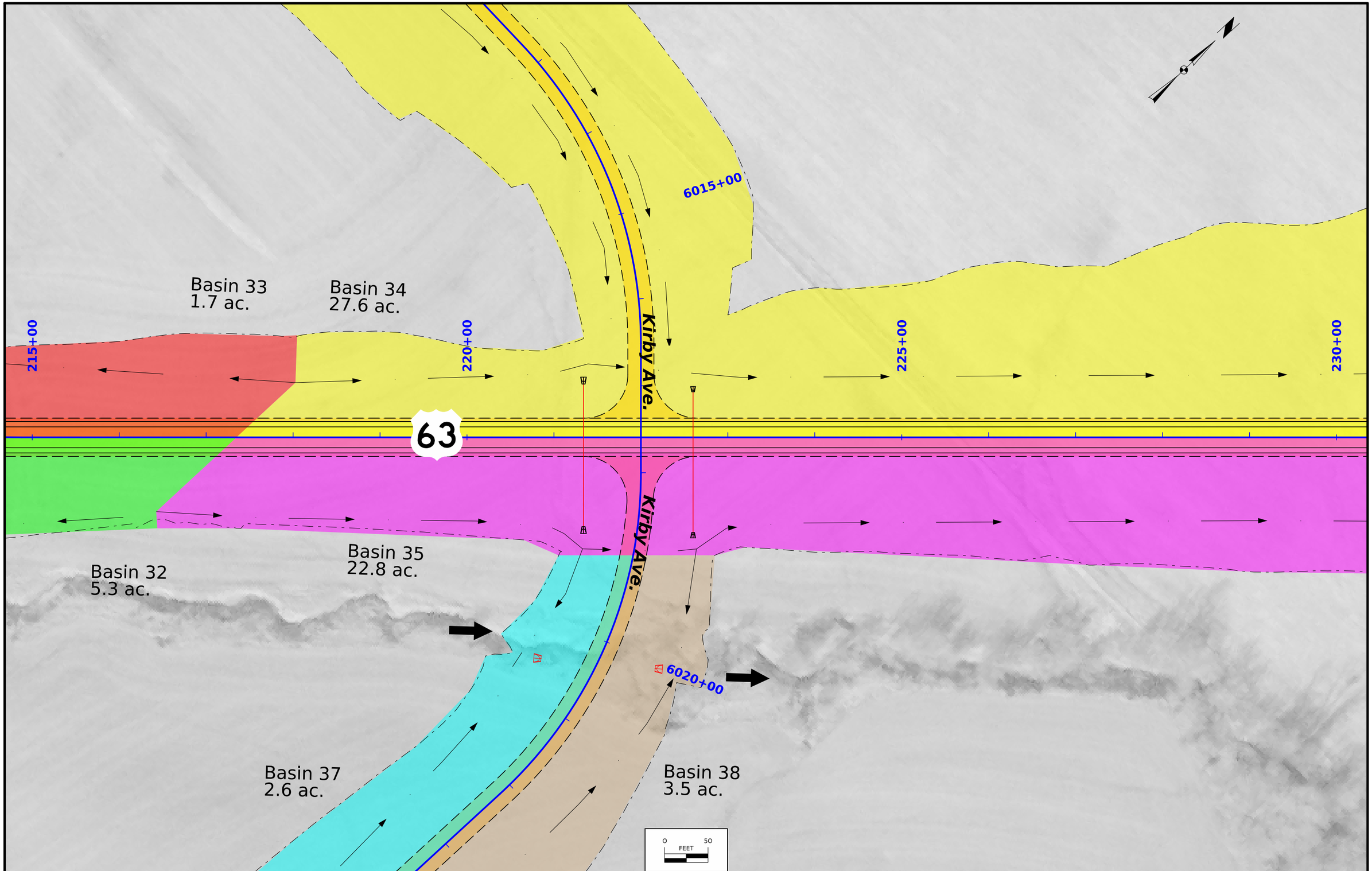

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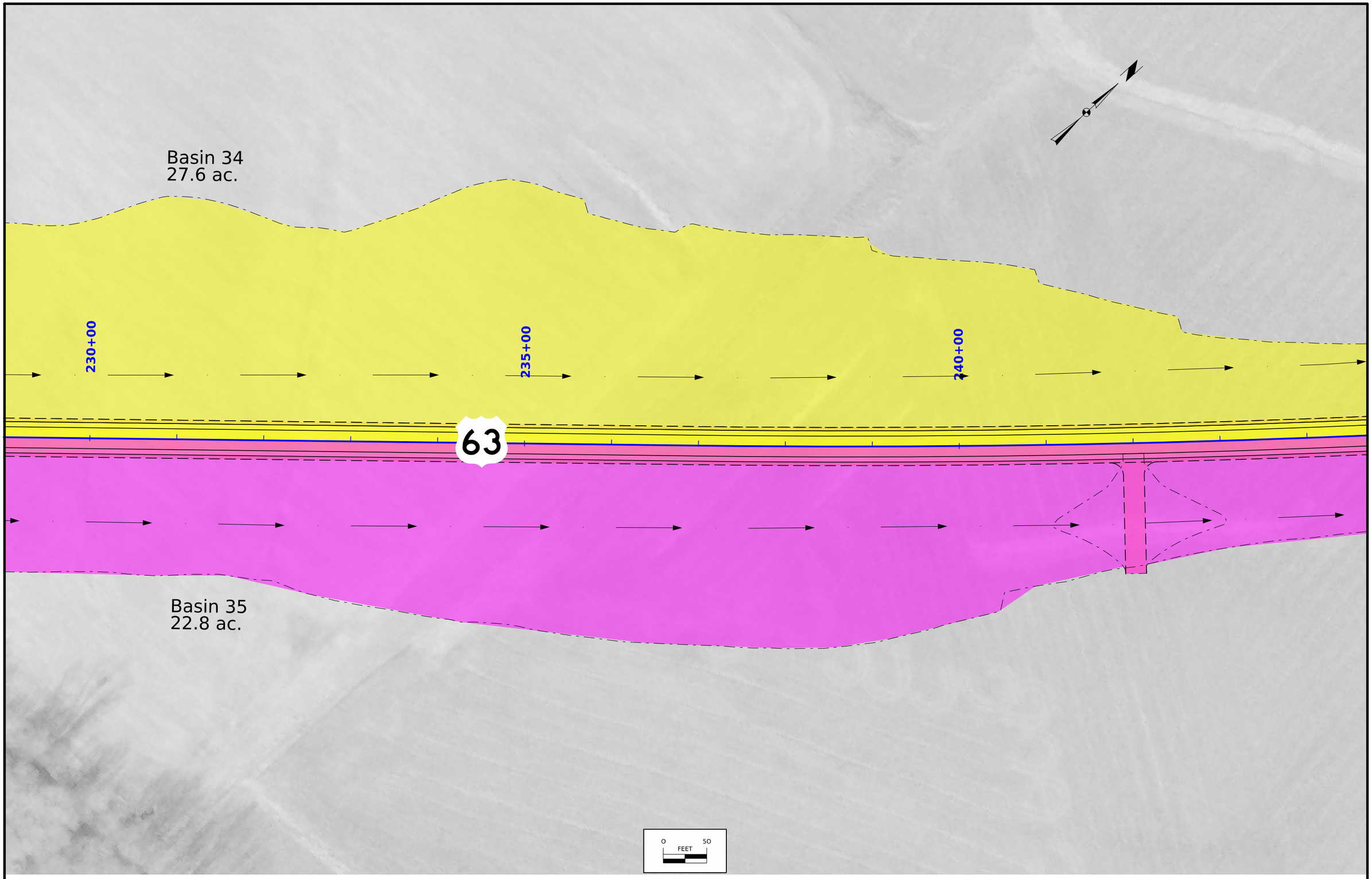

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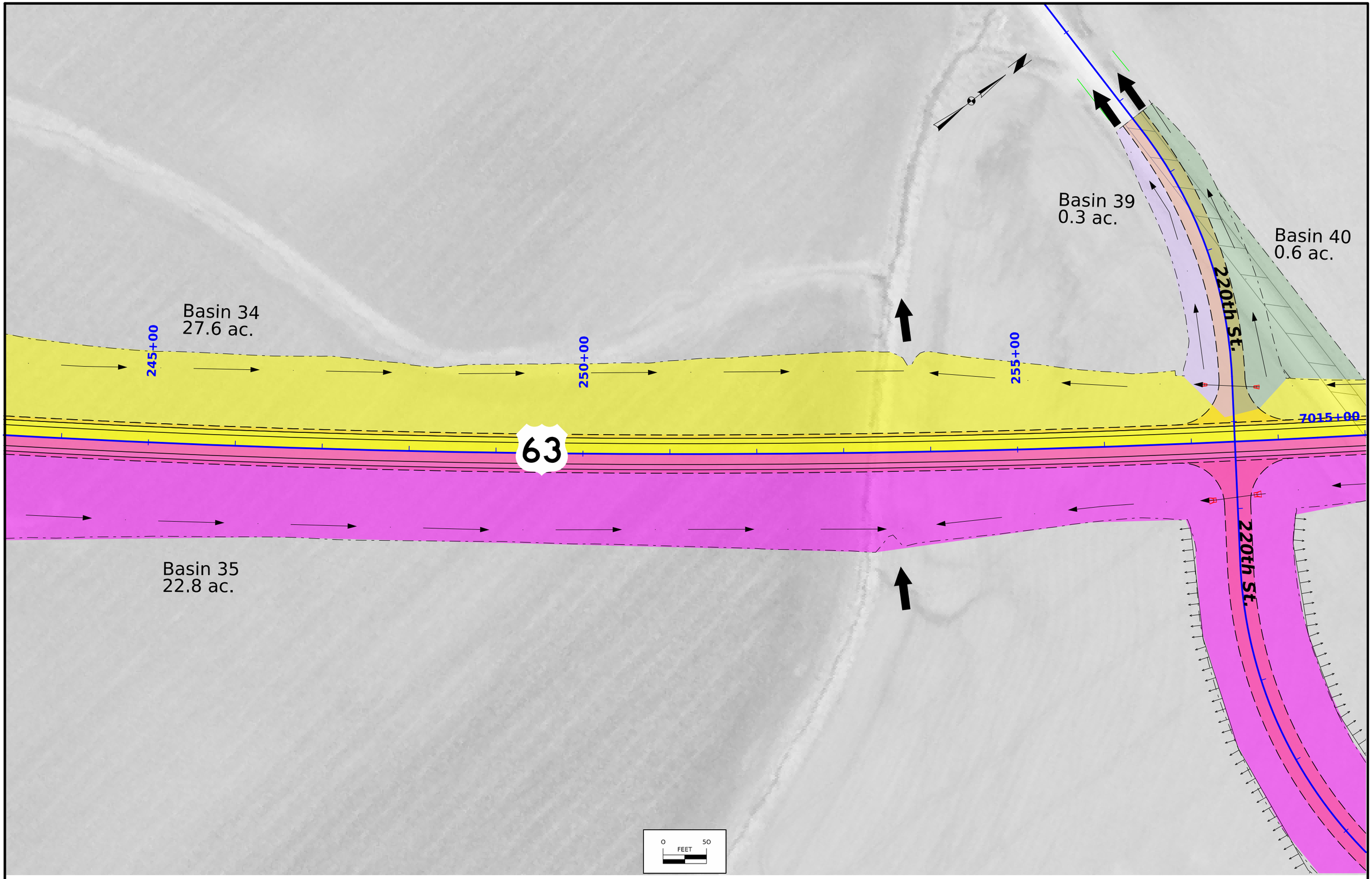

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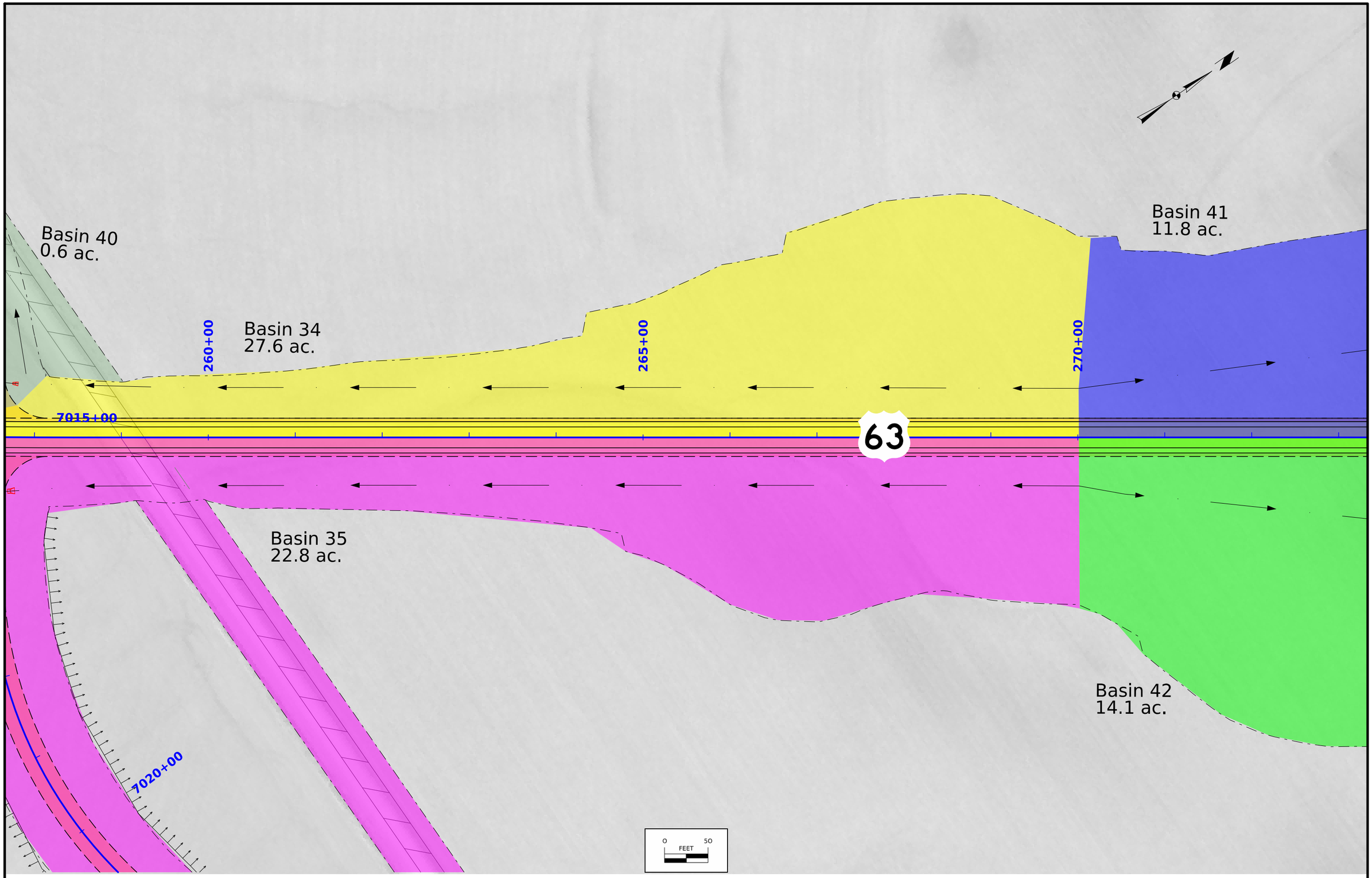

FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.12	

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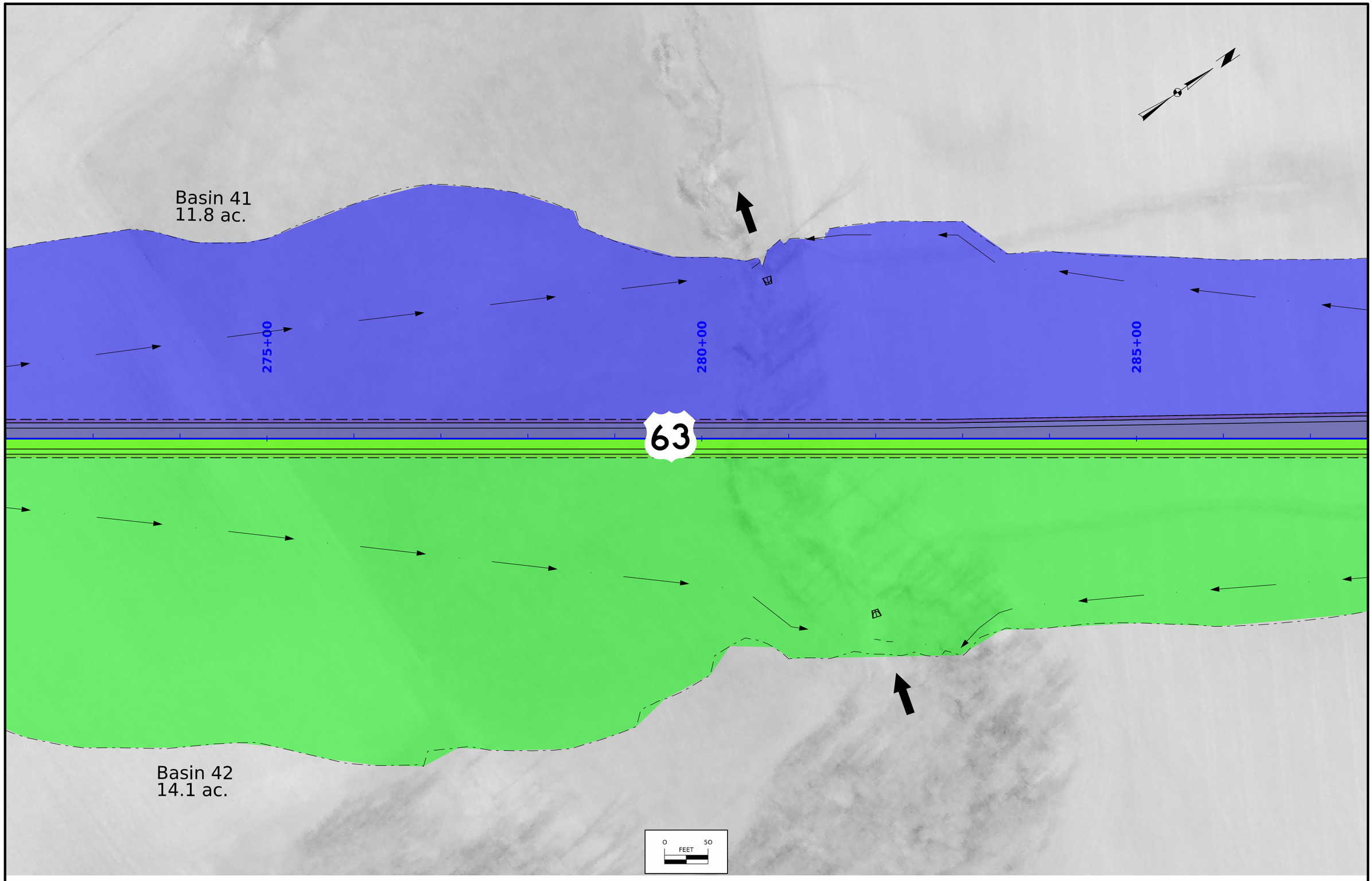

FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.13	

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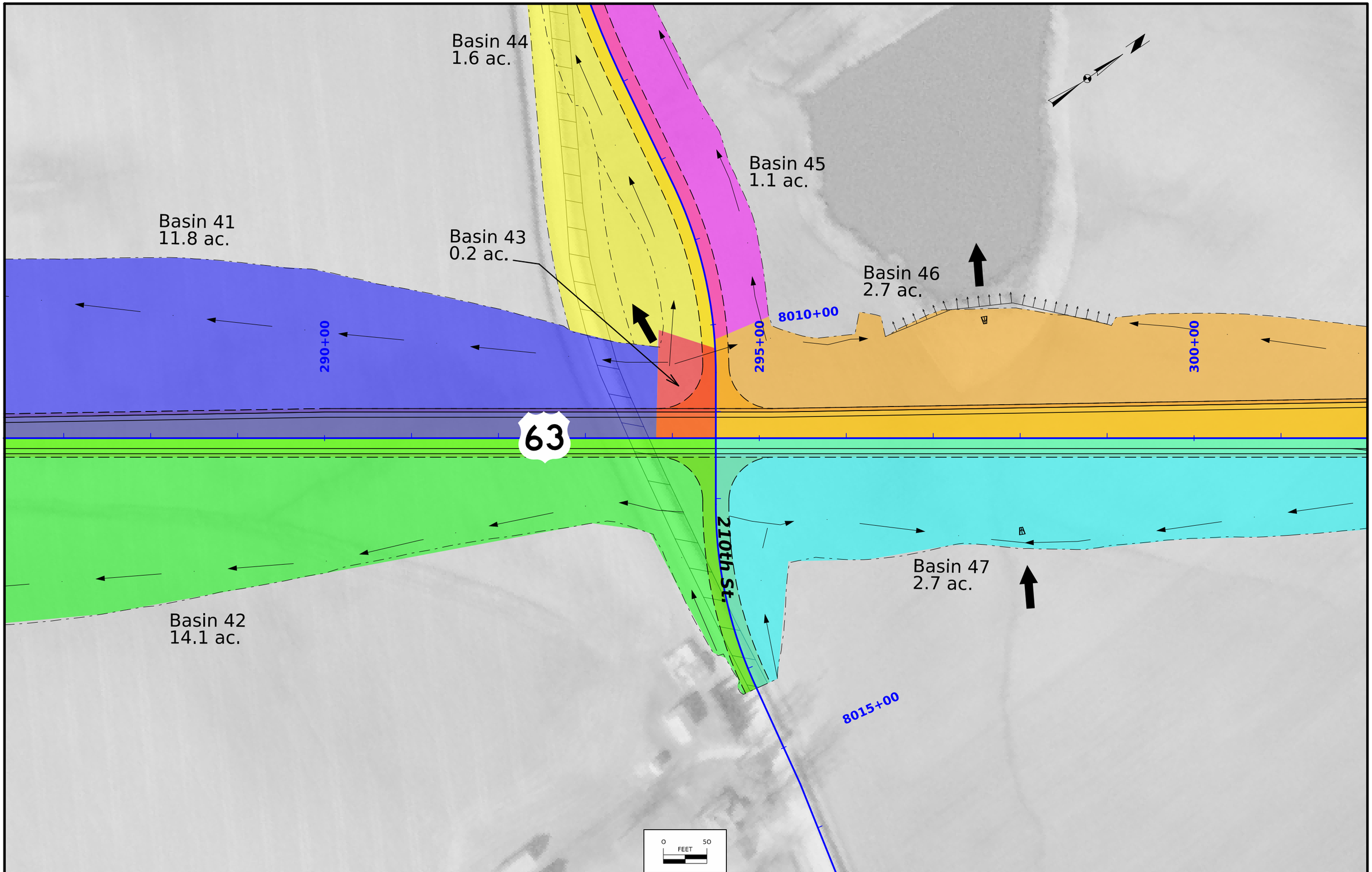

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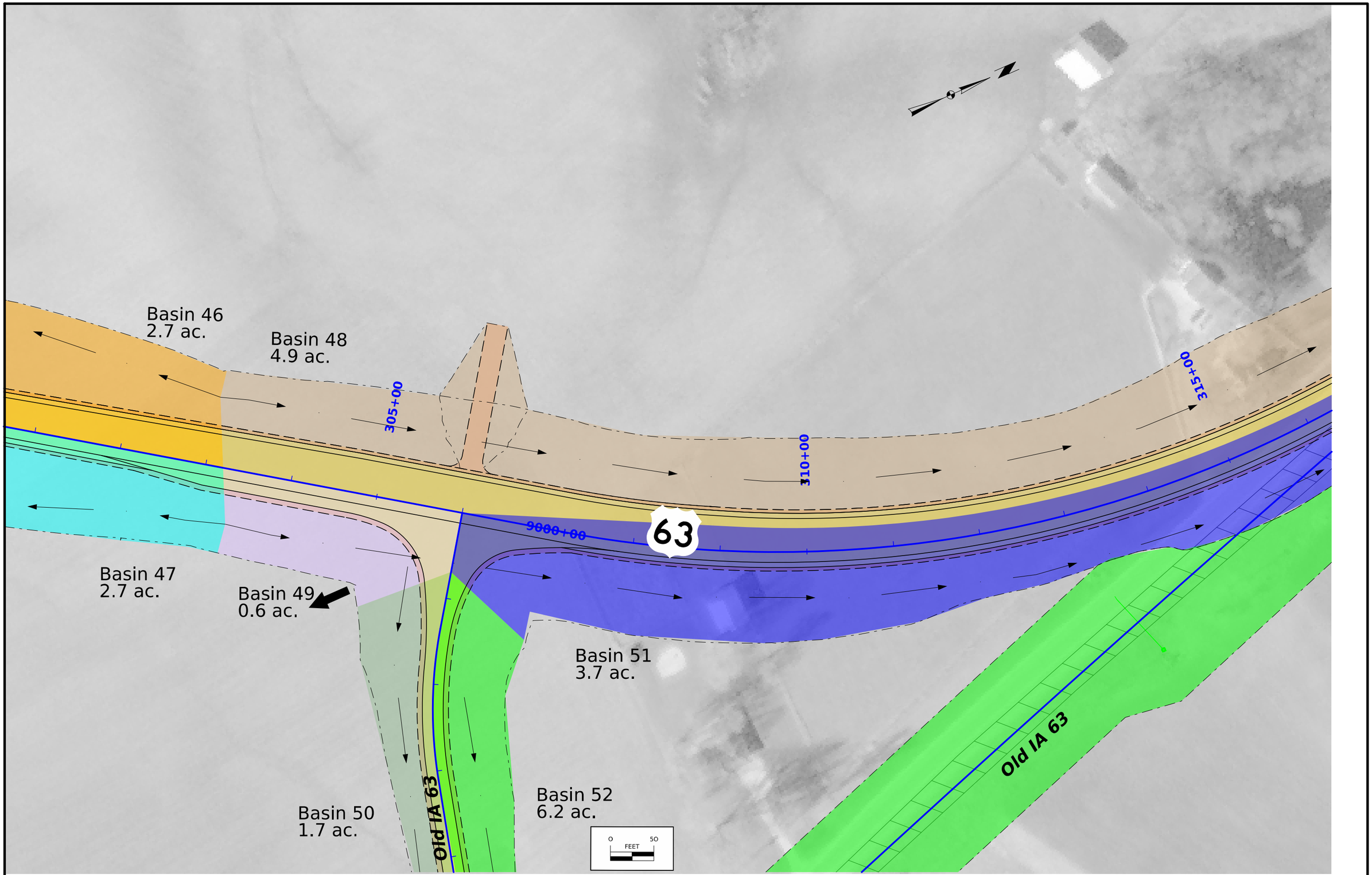

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FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.16	

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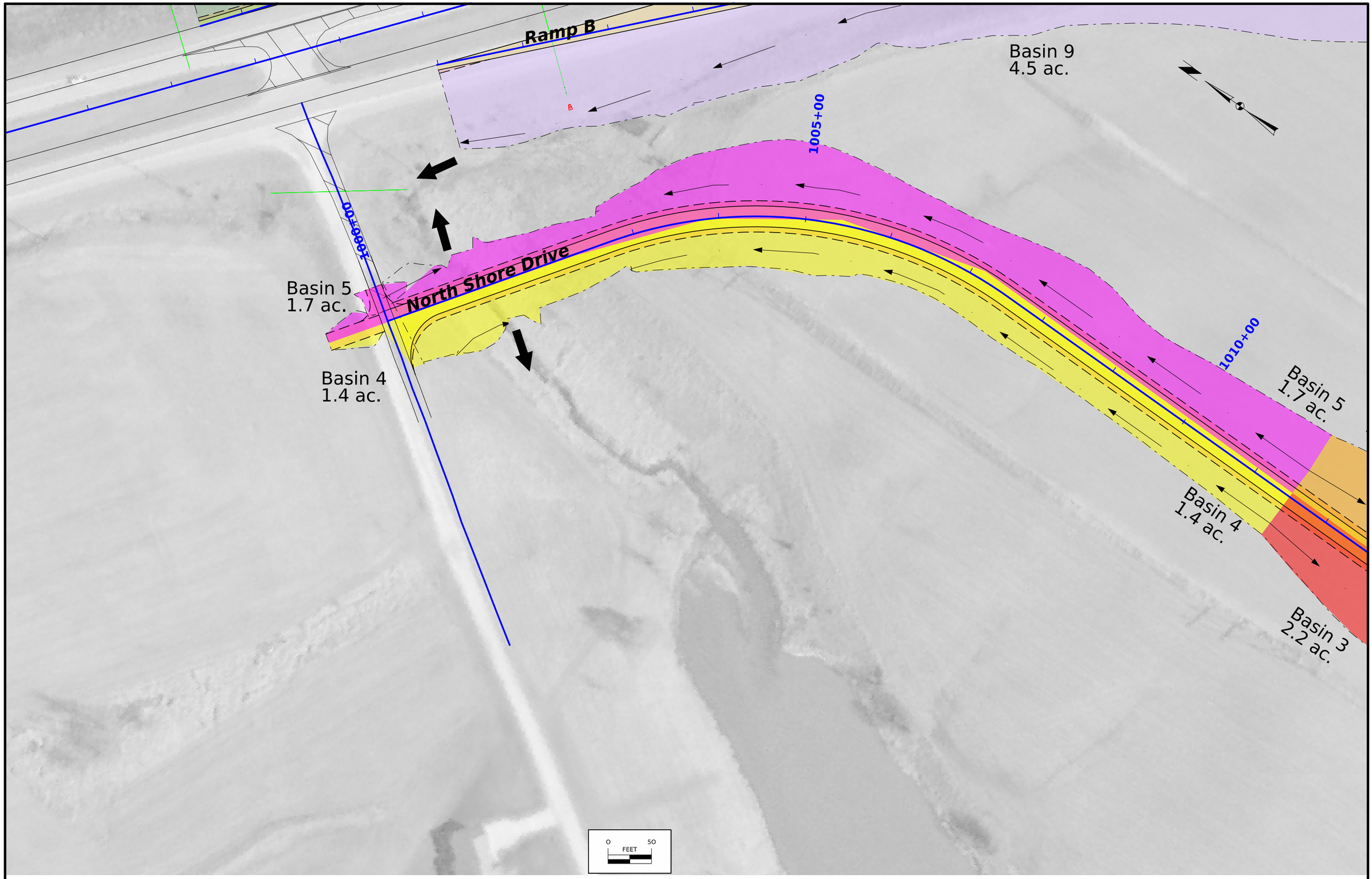

FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.17	

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FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.18	

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FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.19	

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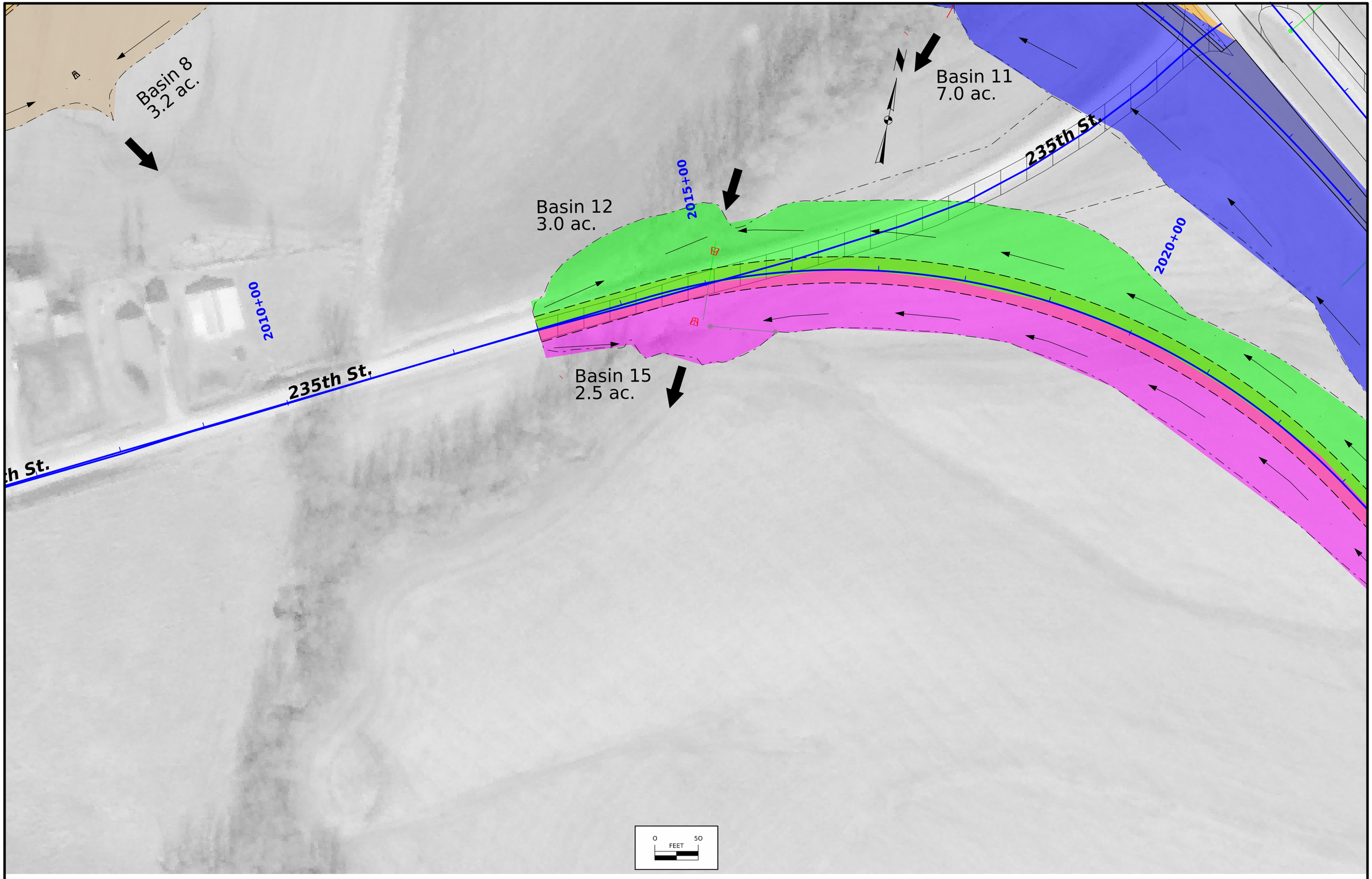

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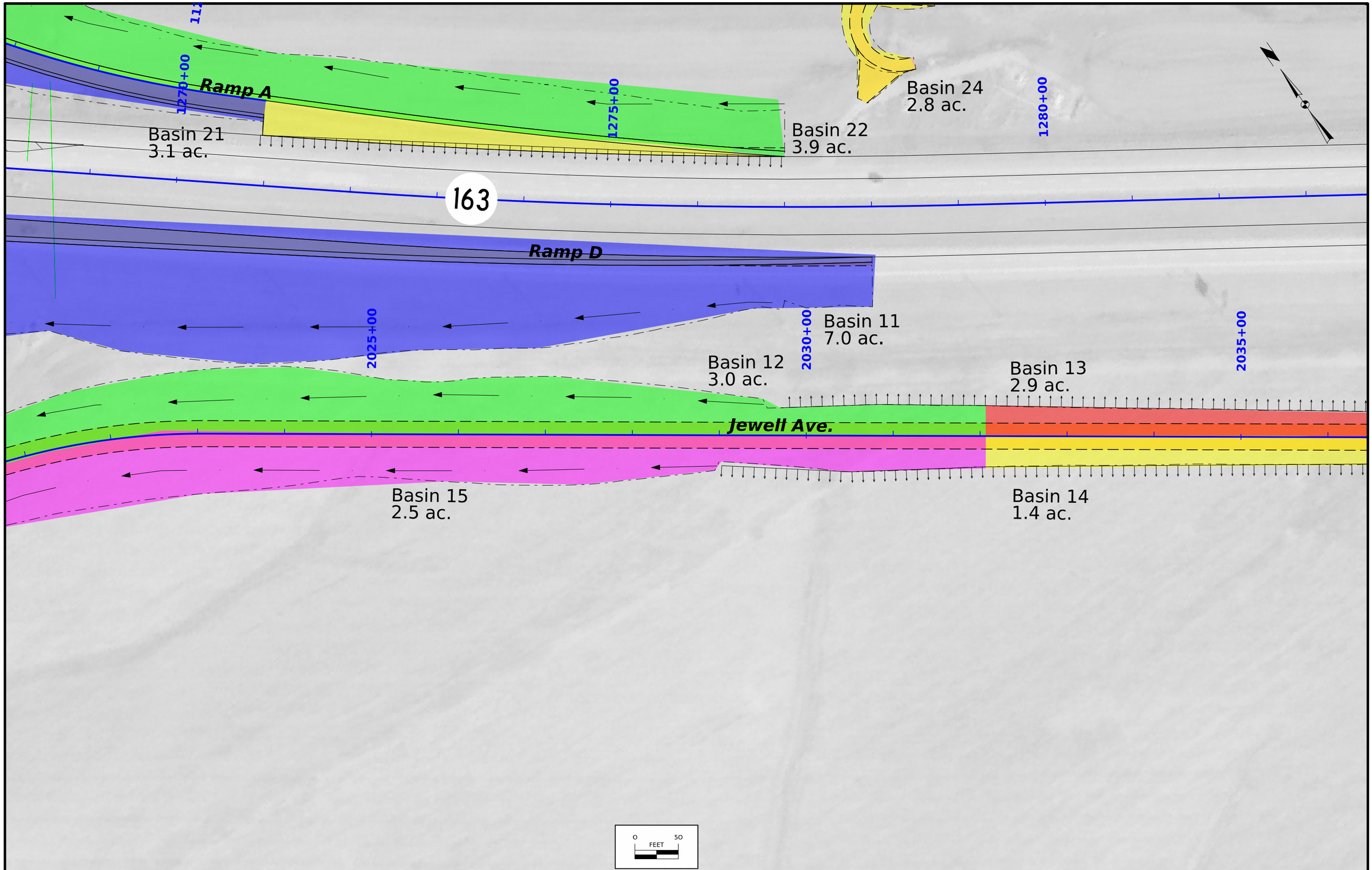

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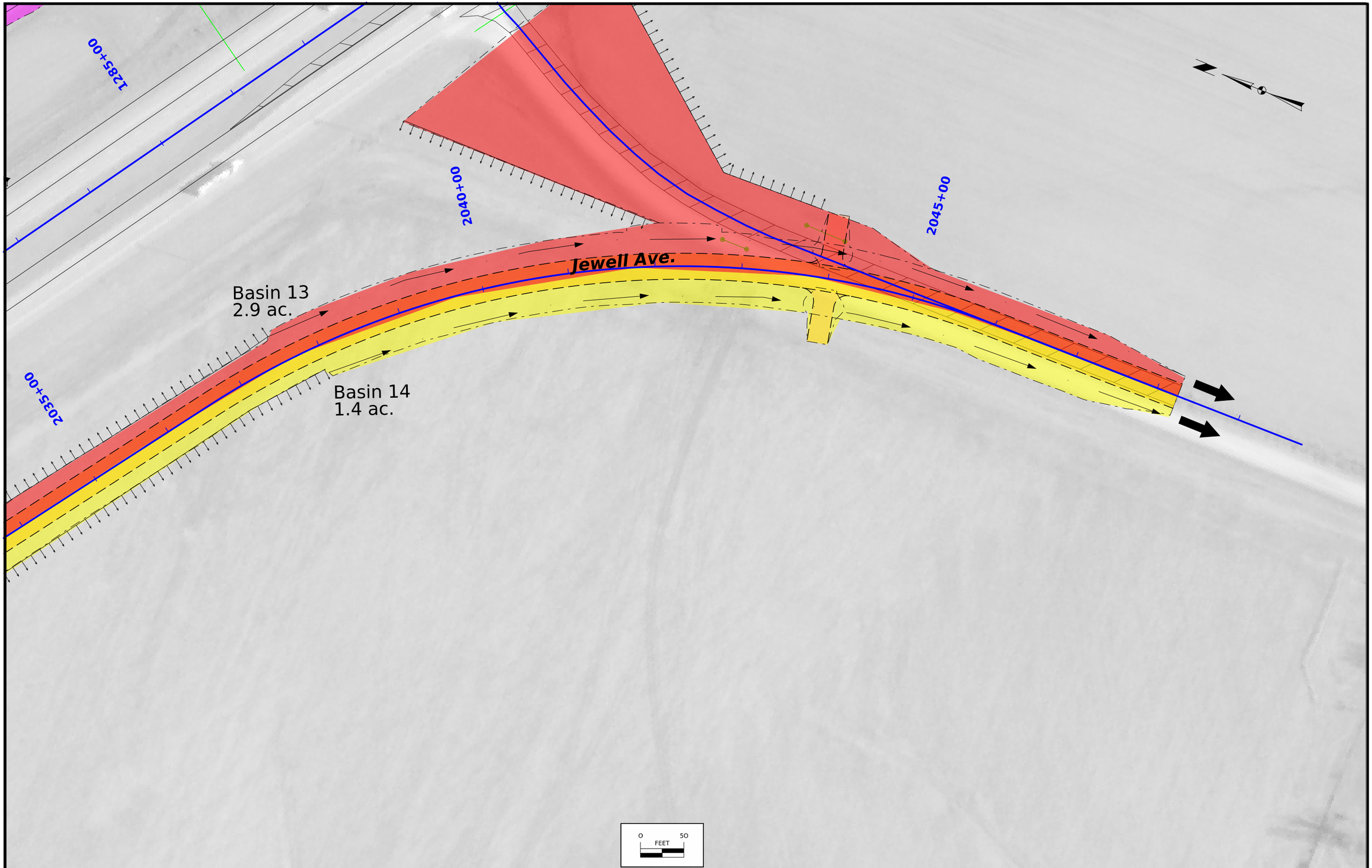

FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.22	

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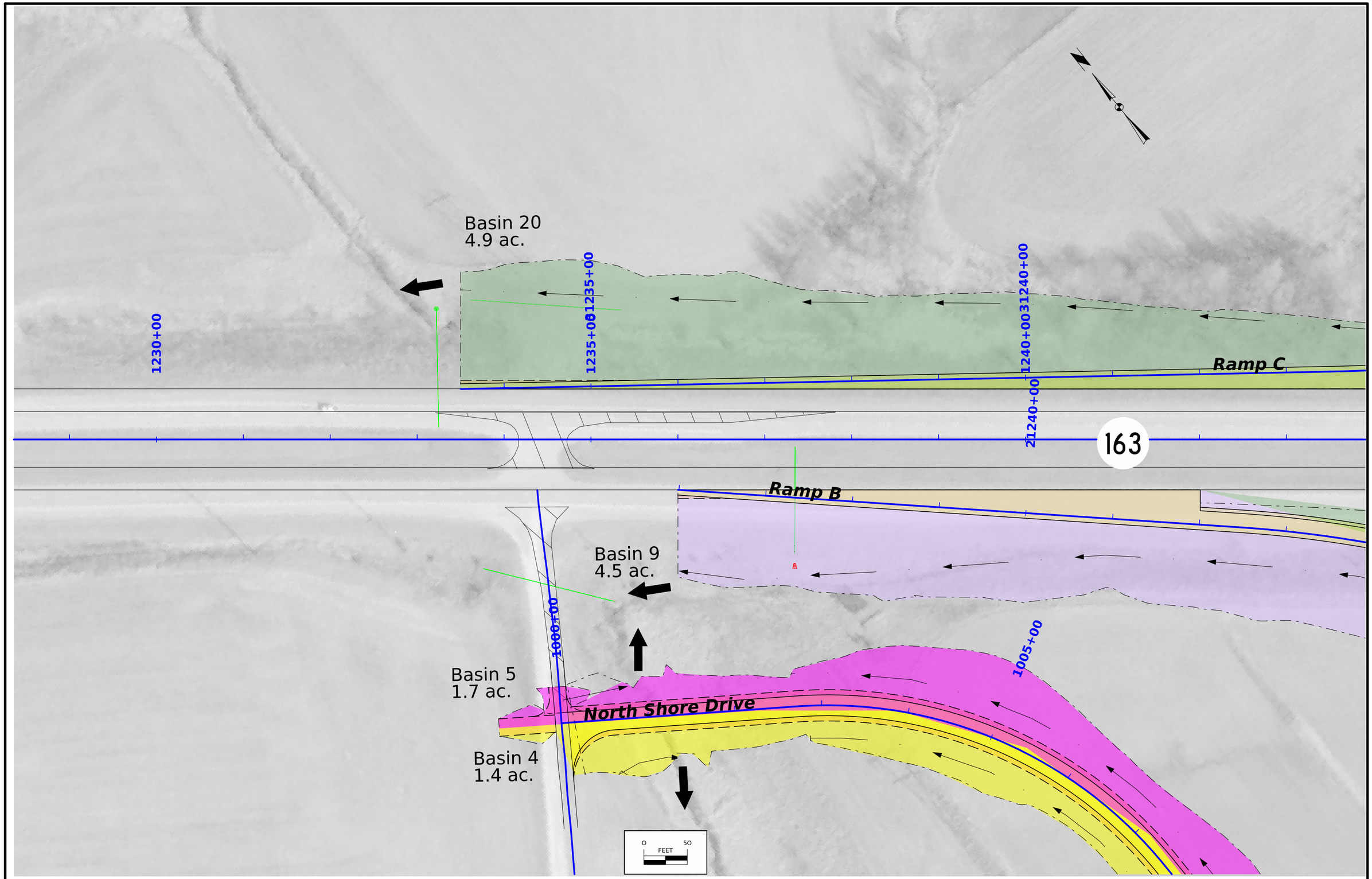

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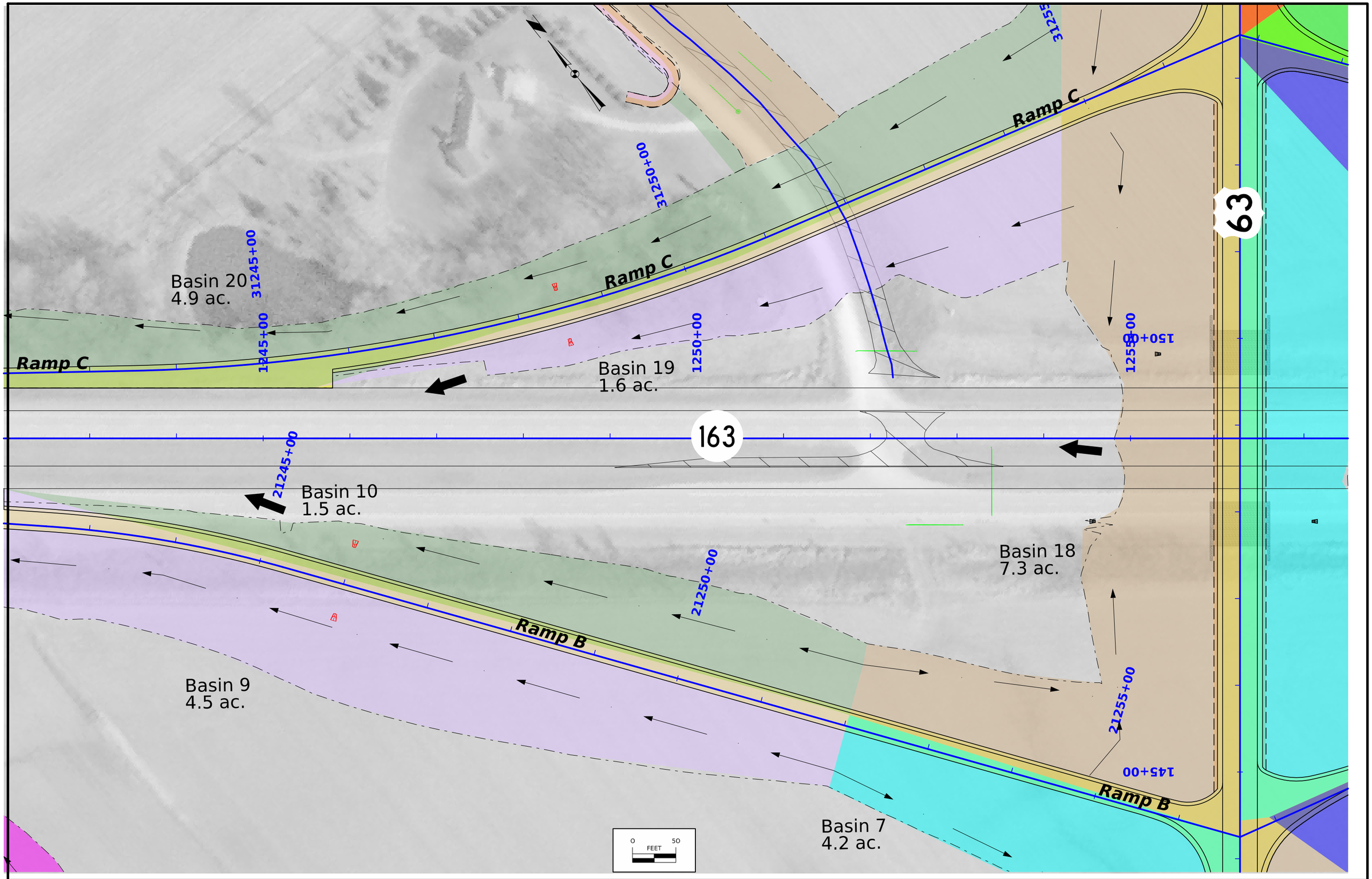

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Basin 22
3.9 ac.

Ramp A

11260+00

11265+00

11270+00

Basin 21
3.1 ac.

1260+00

1265+00

Ramp A

Basin 21
3.1 ac.

63

163

Basin 17
2.9 ac.

41265

41260+00

Ramp D

Basin 16
1.3 ac.

Ramp D

235th St.

2020+00

Basin 12
3.0 ac.

Basin 11
7.0 ac.

0 50
FEET

Basin 15
2.5 ac.

FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.25	

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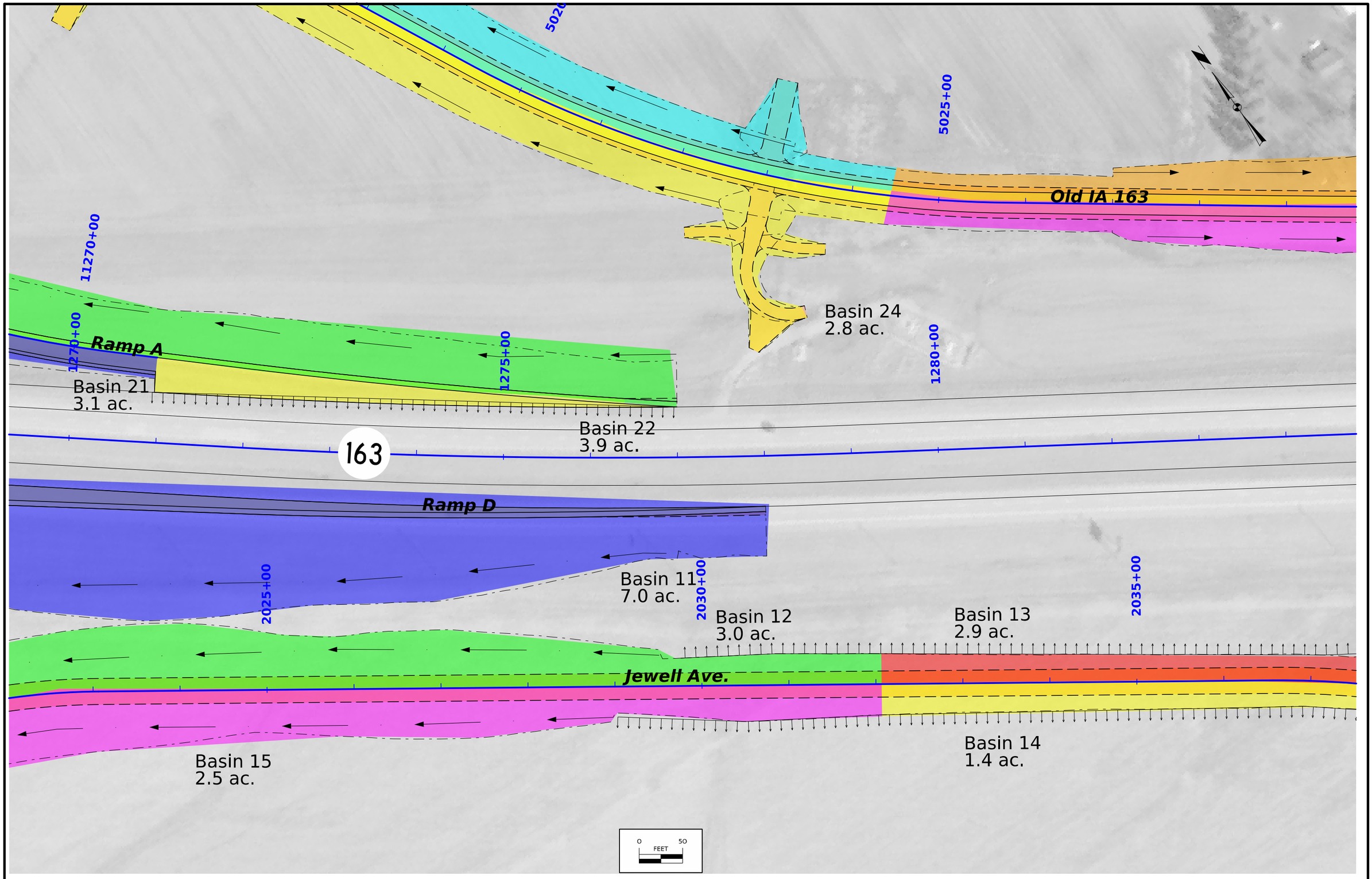

FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.26

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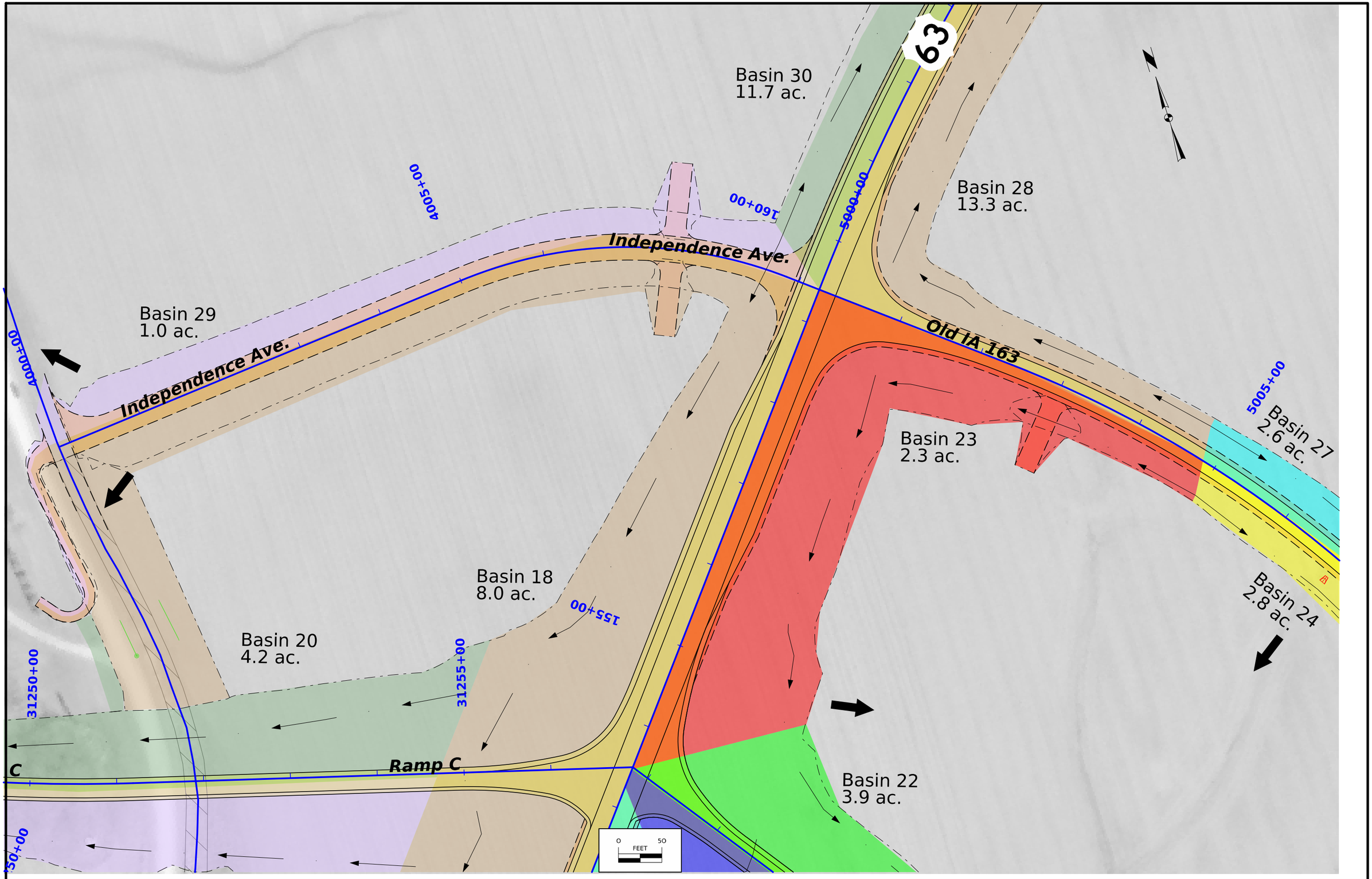

FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.27	

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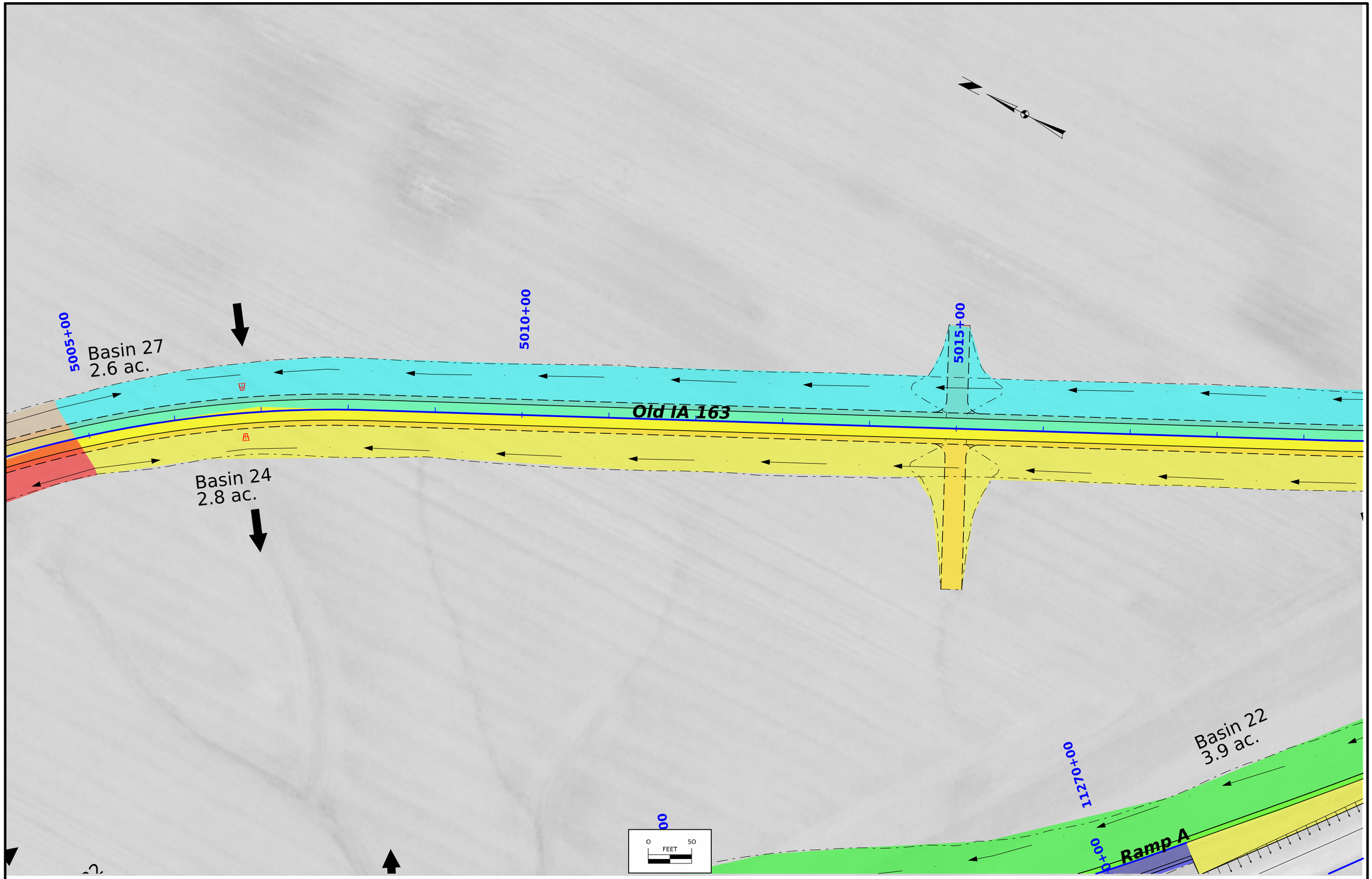

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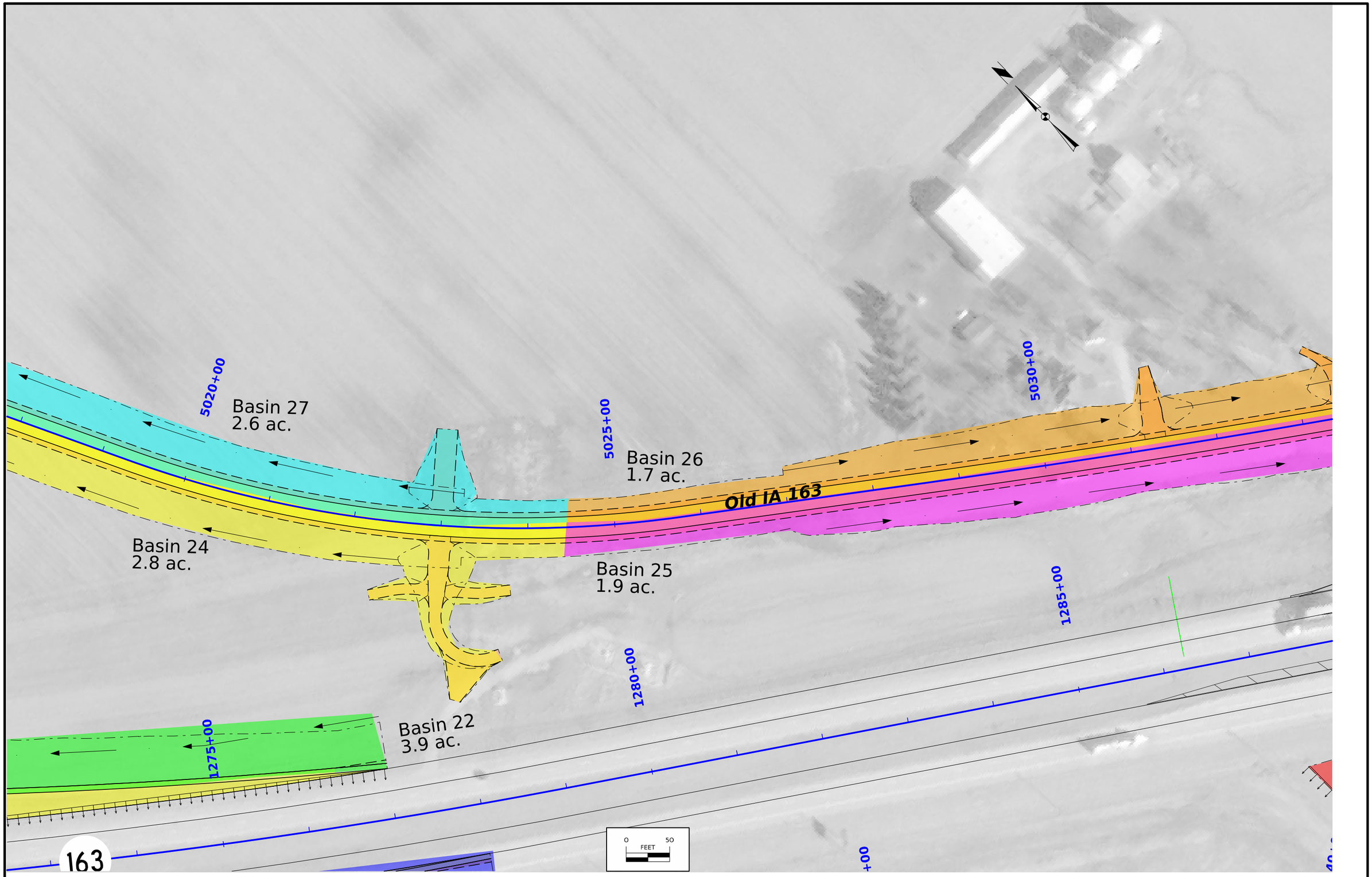

FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.29	

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Basin 26
1.7 ac.

5035+00

5040+00

Old IA 163

Basin 25
1.9 ac.

1290+00

1295+00

1300+00

163

Basin 13
2.9 ac.

0+00

0 50
FEET

FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.30

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FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.31	

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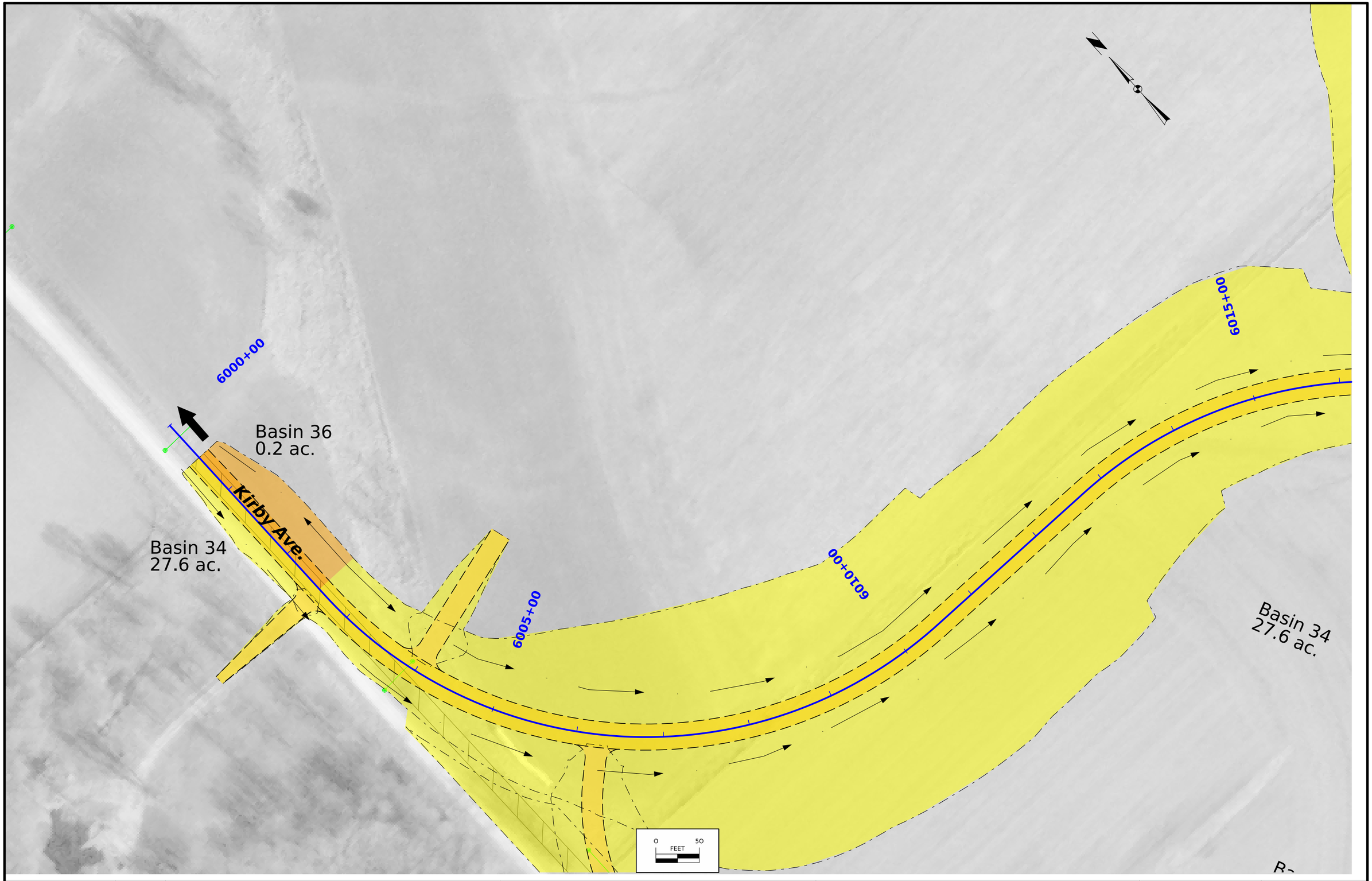

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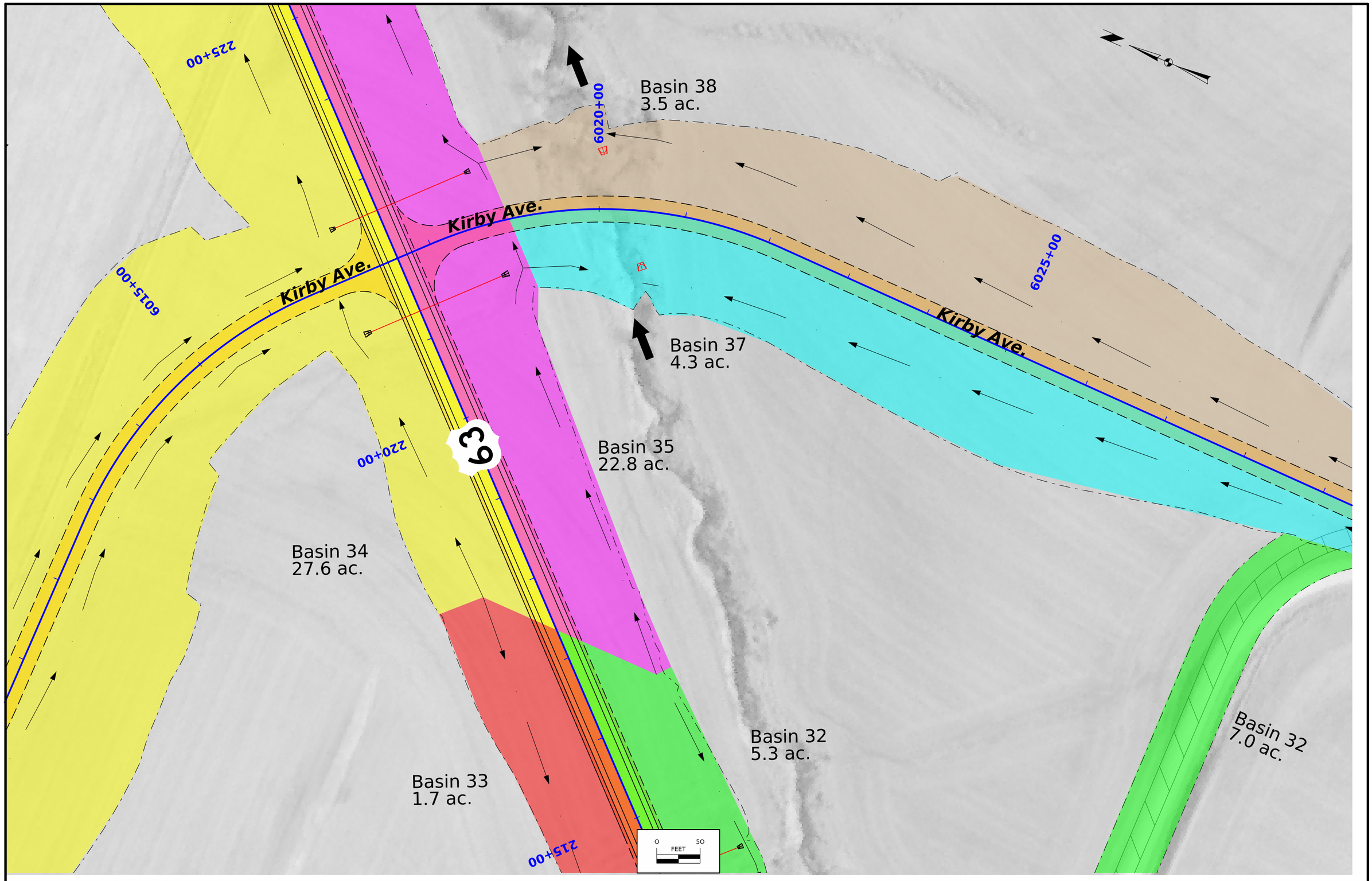

FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.33	

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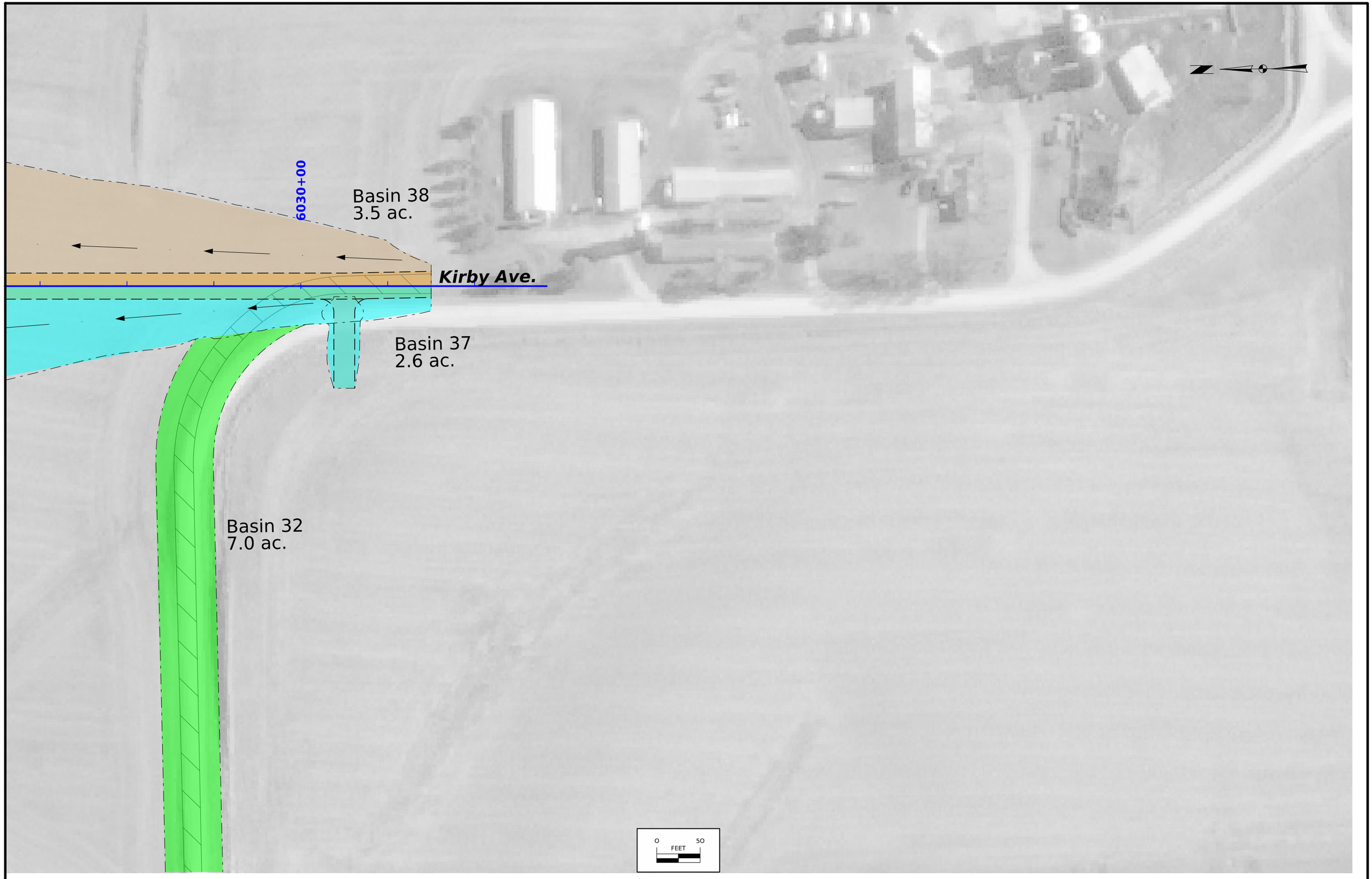

FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.34	

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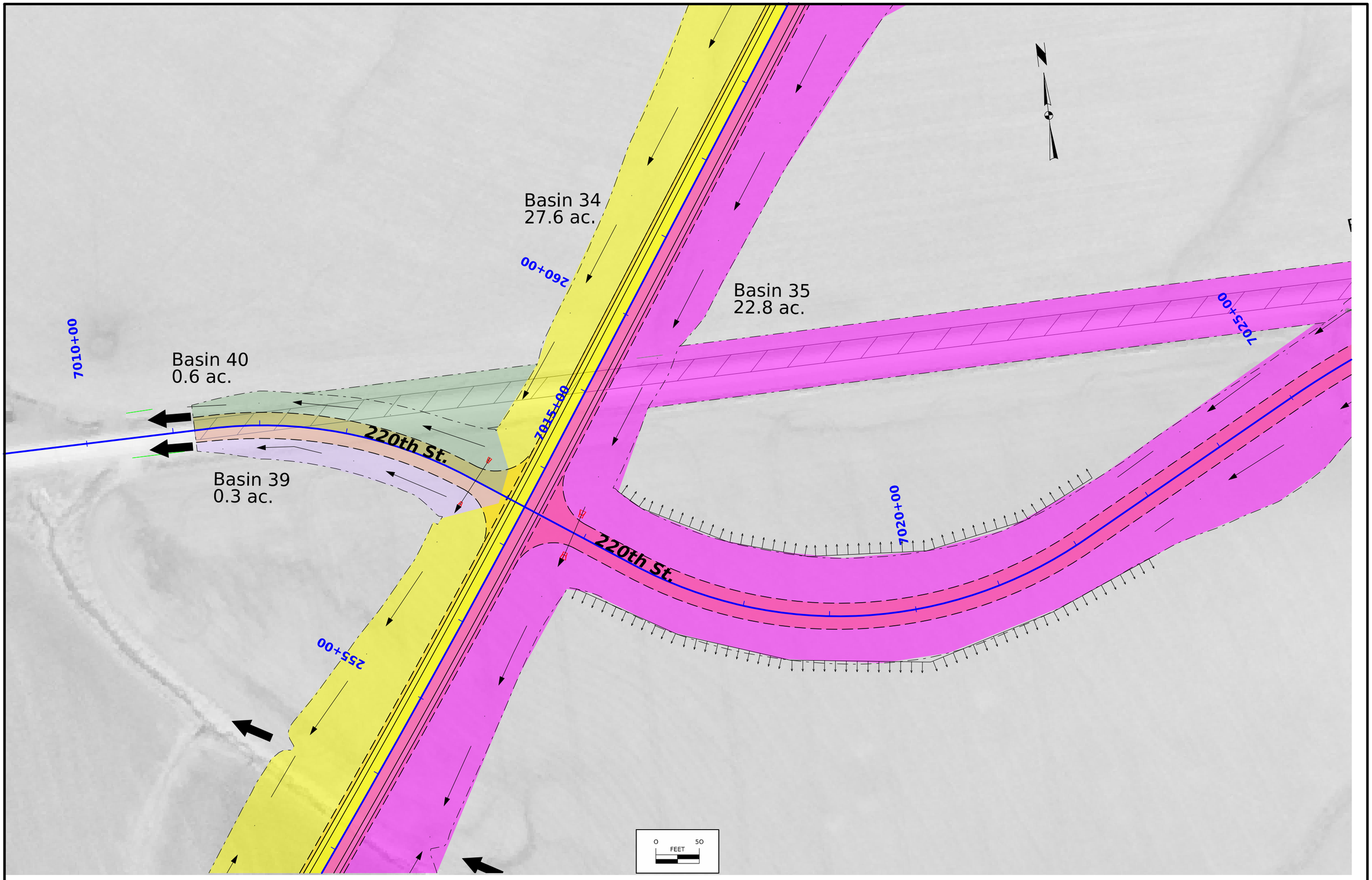

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FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.36	

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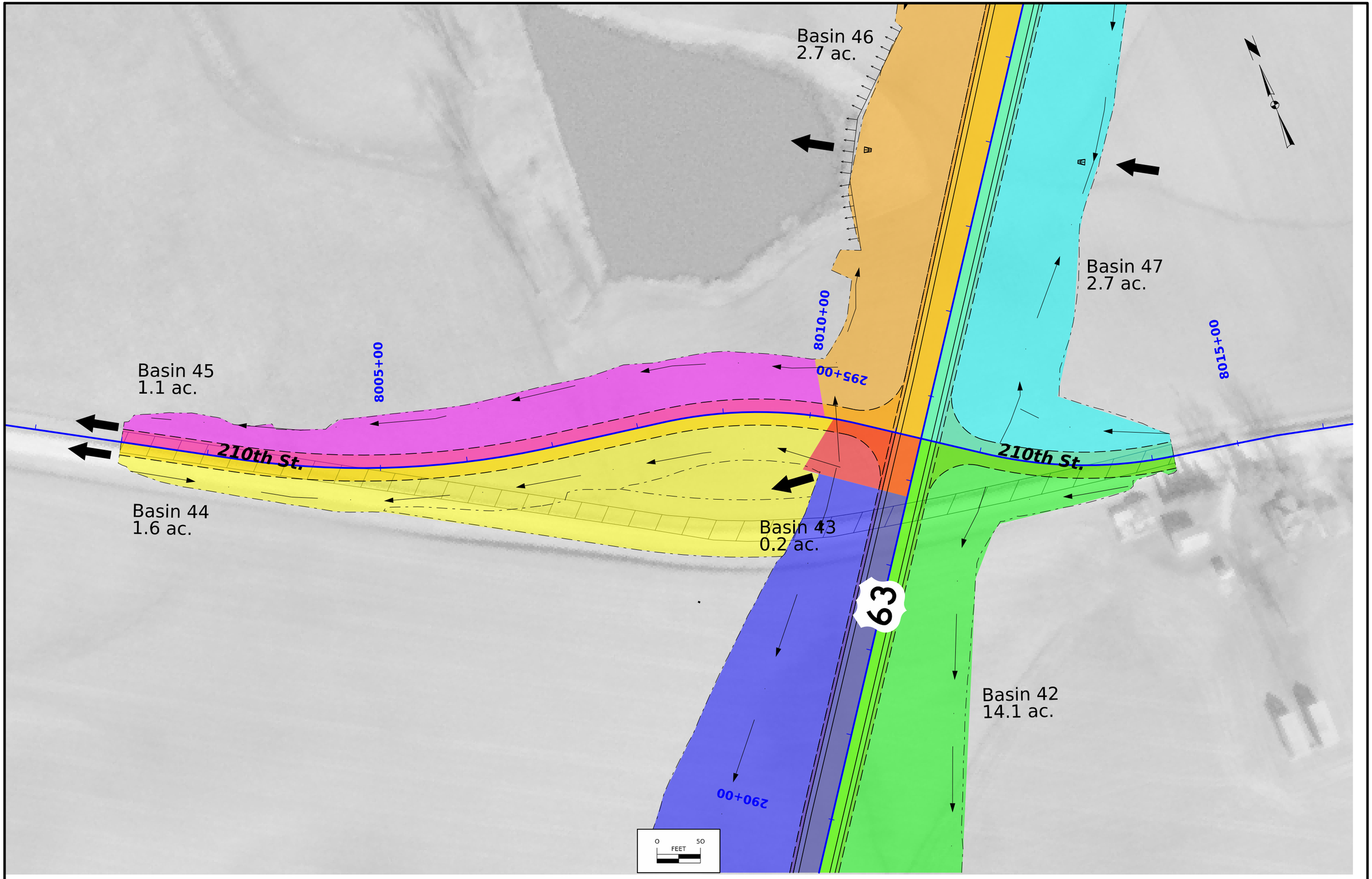

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Old IA 63

9005+00

Basin 50
1.7 ac.

Old IA 63

Basin 52
6.2 ac.

9010+00

0 50
FEET

FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.38	

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63

310+00

315+00

320+00

10000+00

Basin 48
4.9 ac.

Old IA 63

Basin 52
6.2 ac.

Basin 51
3.7 ac.

North 210th St.

0 50
FEET

FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.39	

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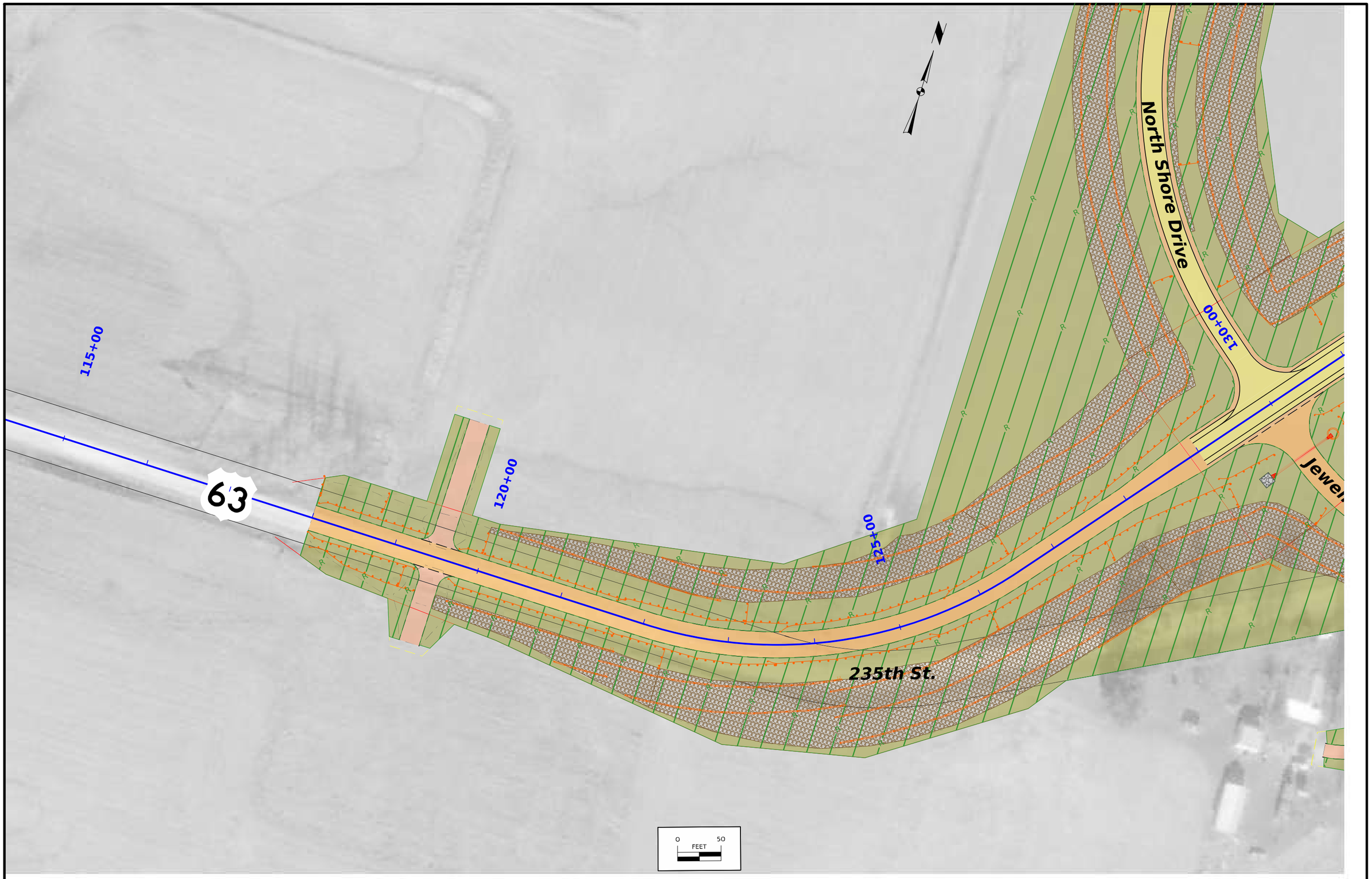

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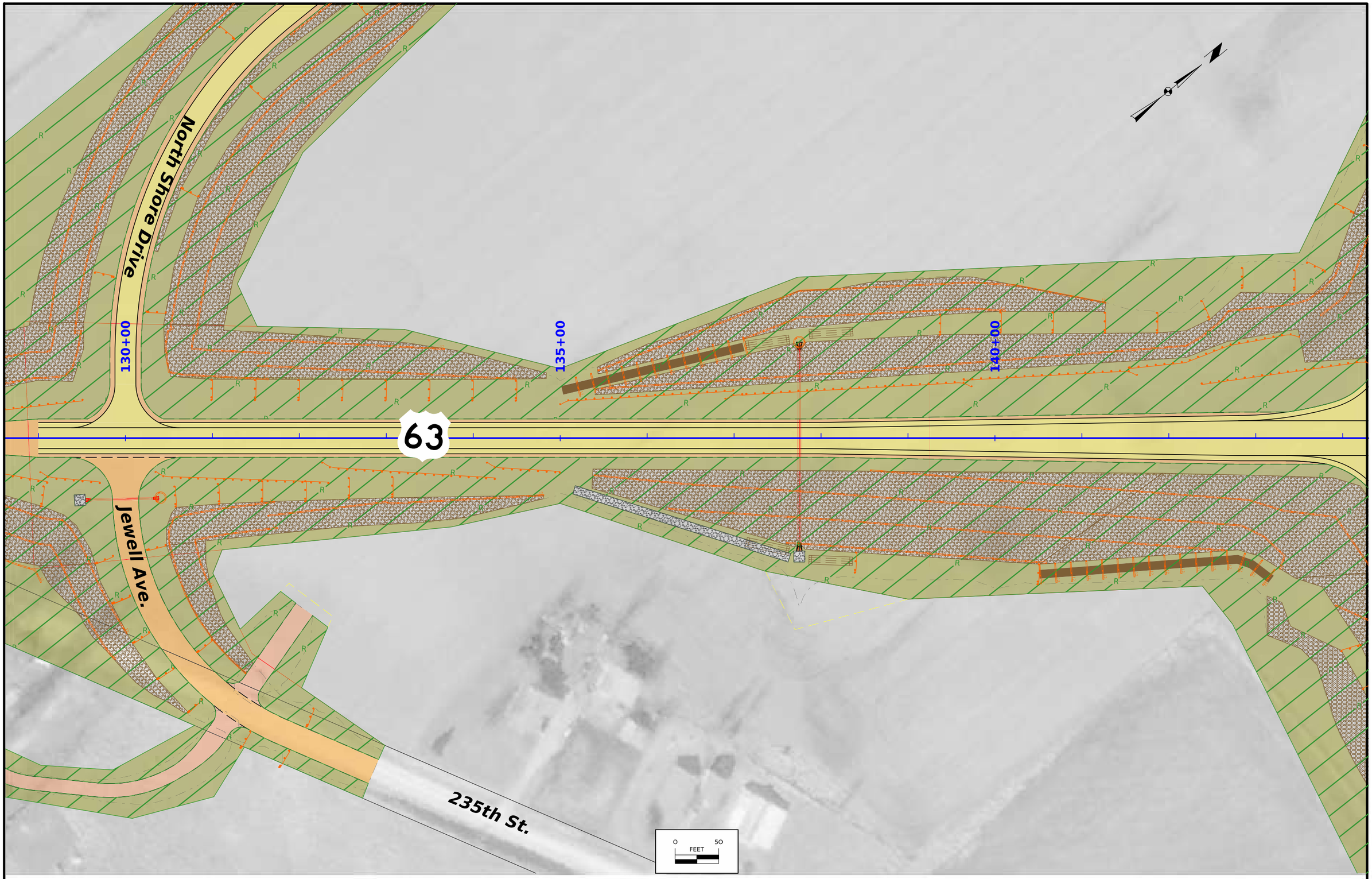

FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.41	

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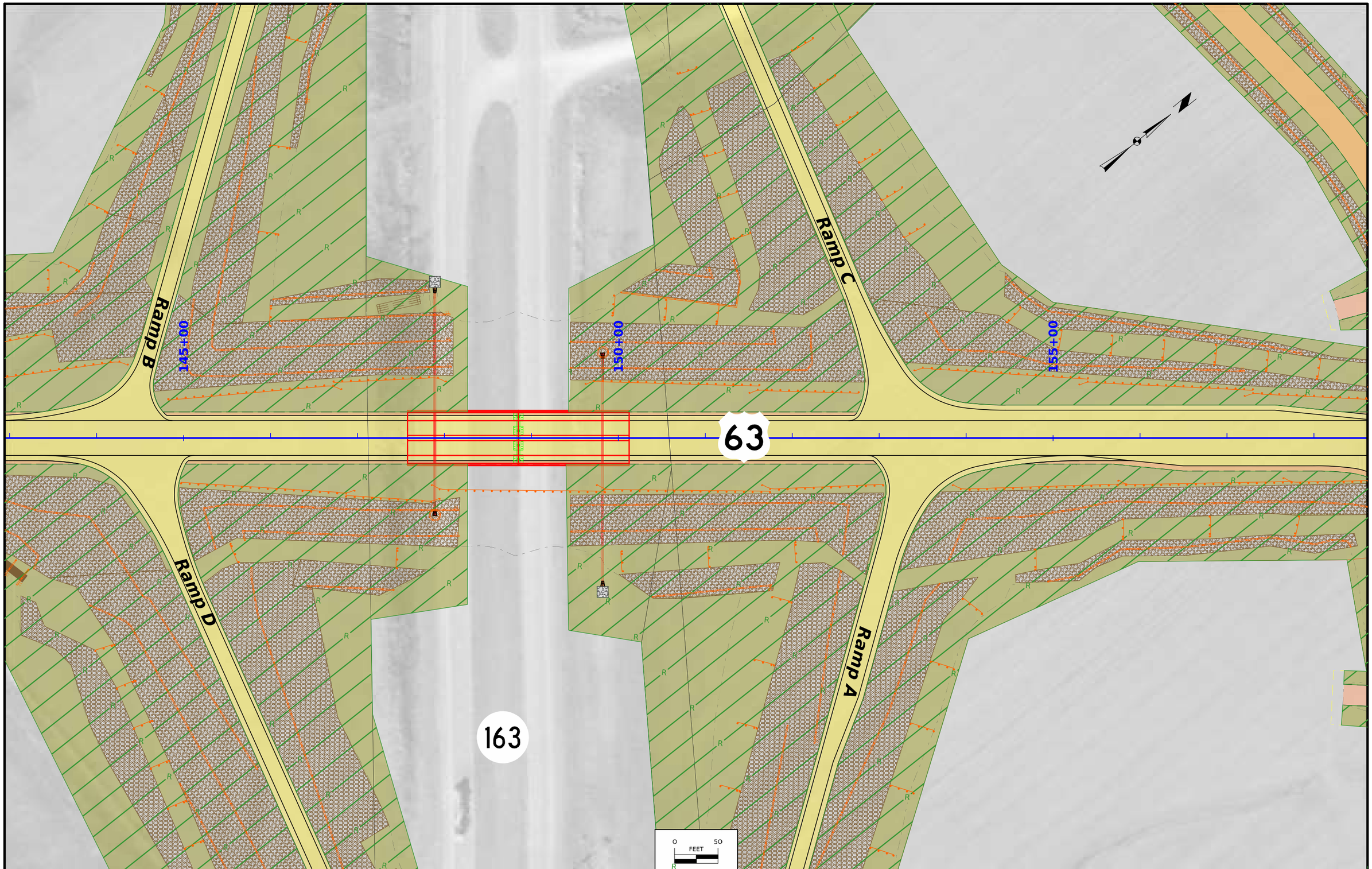

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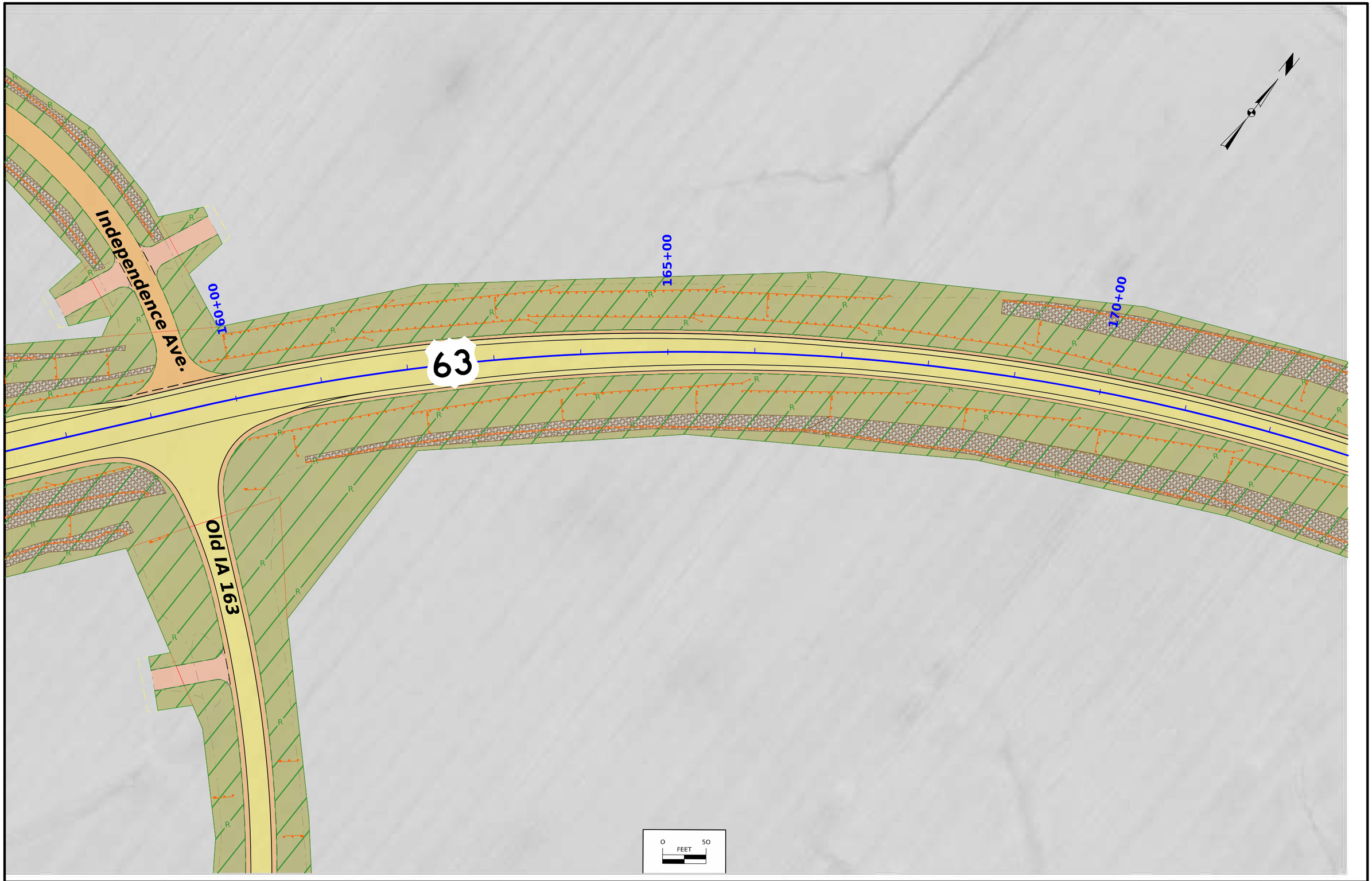

FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.43	

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FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.44	

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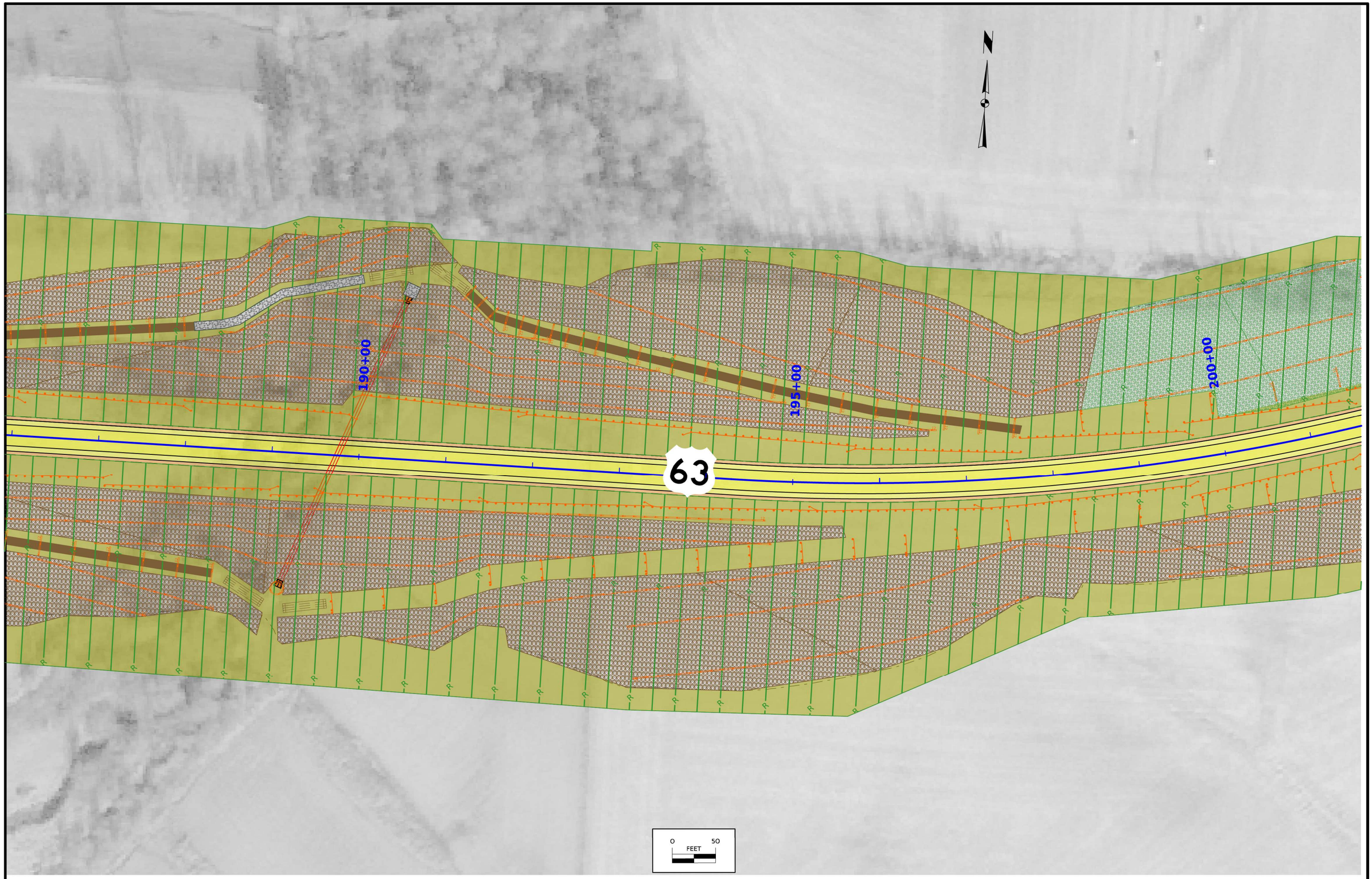

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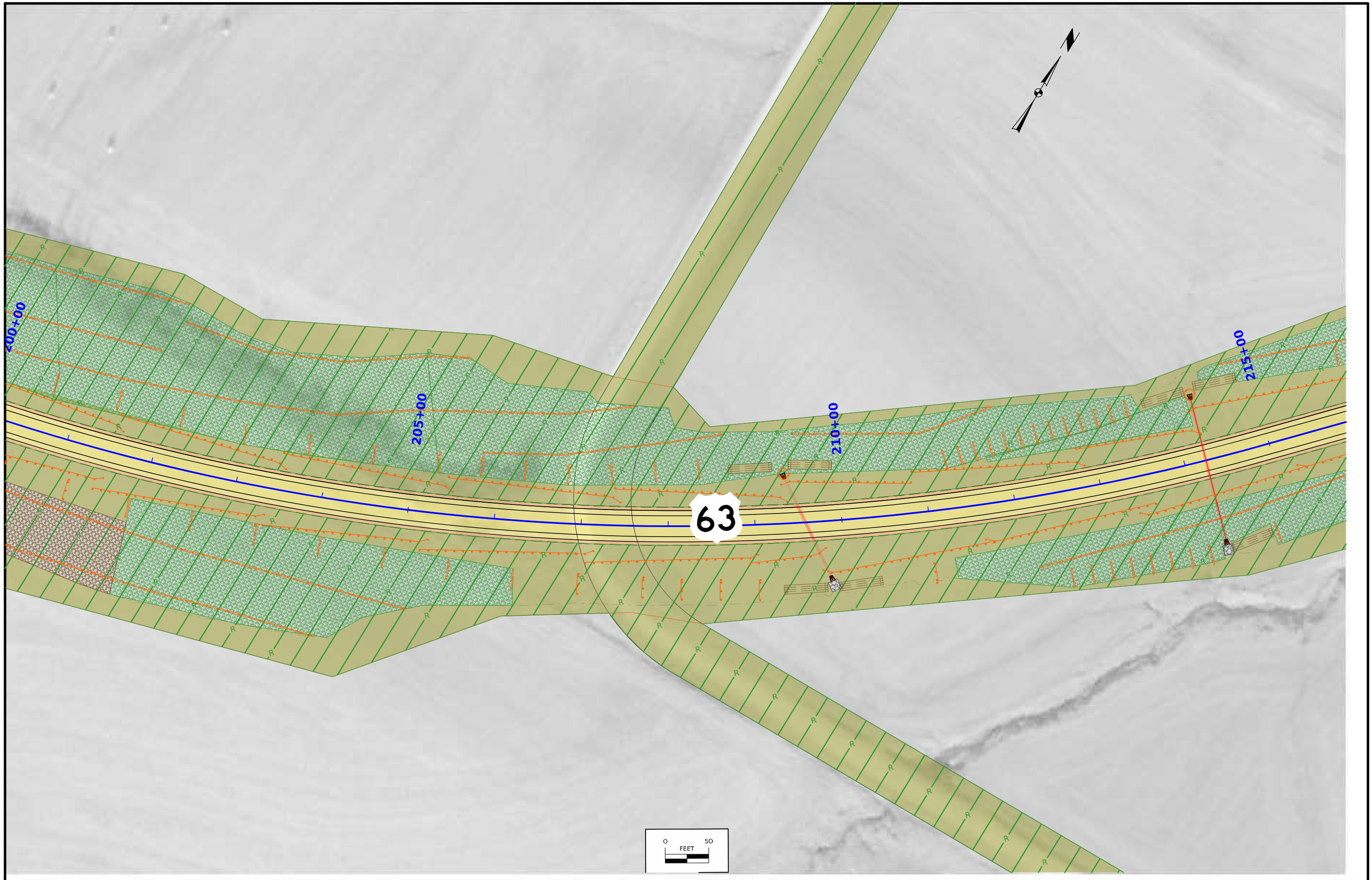

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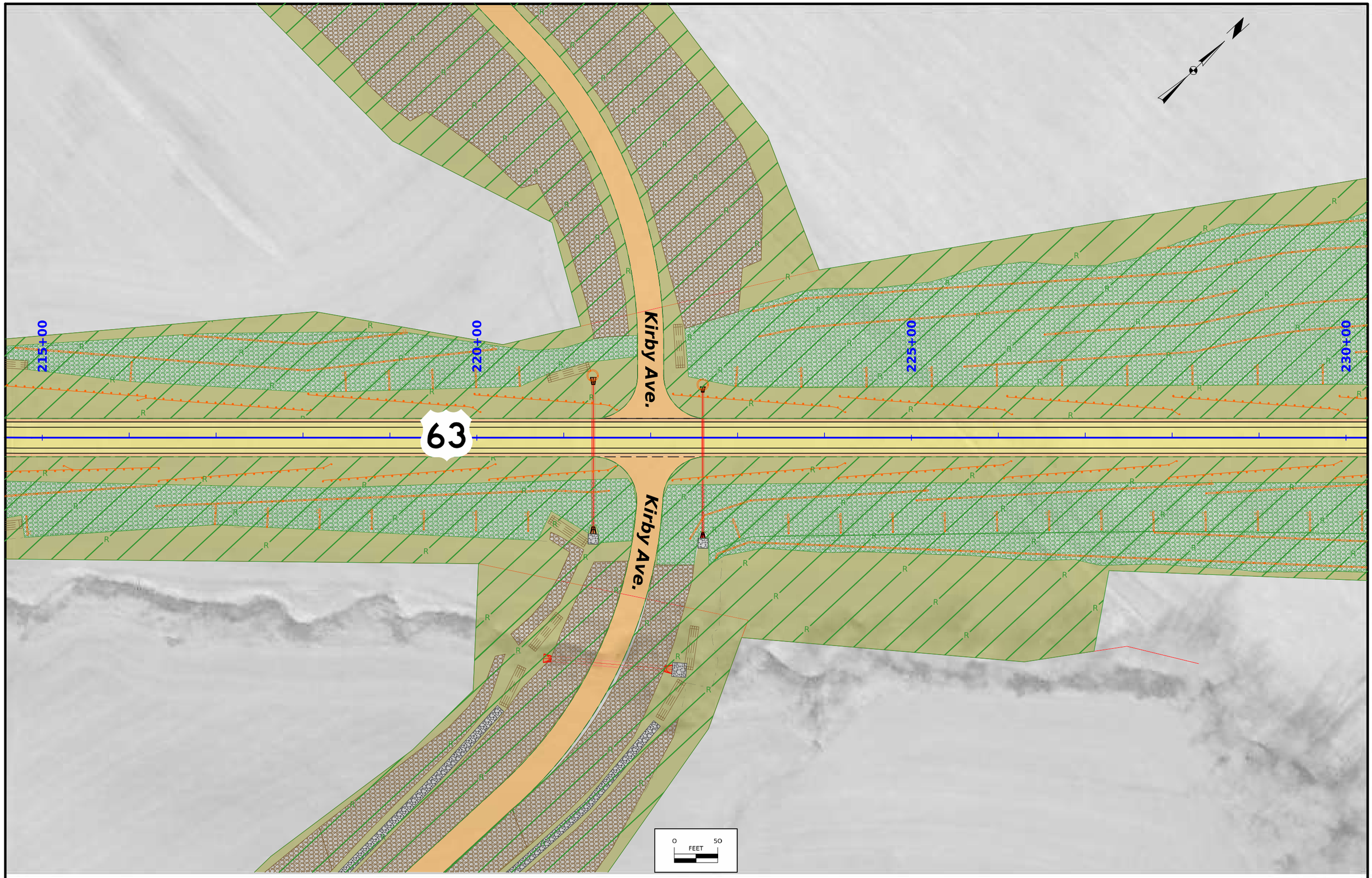

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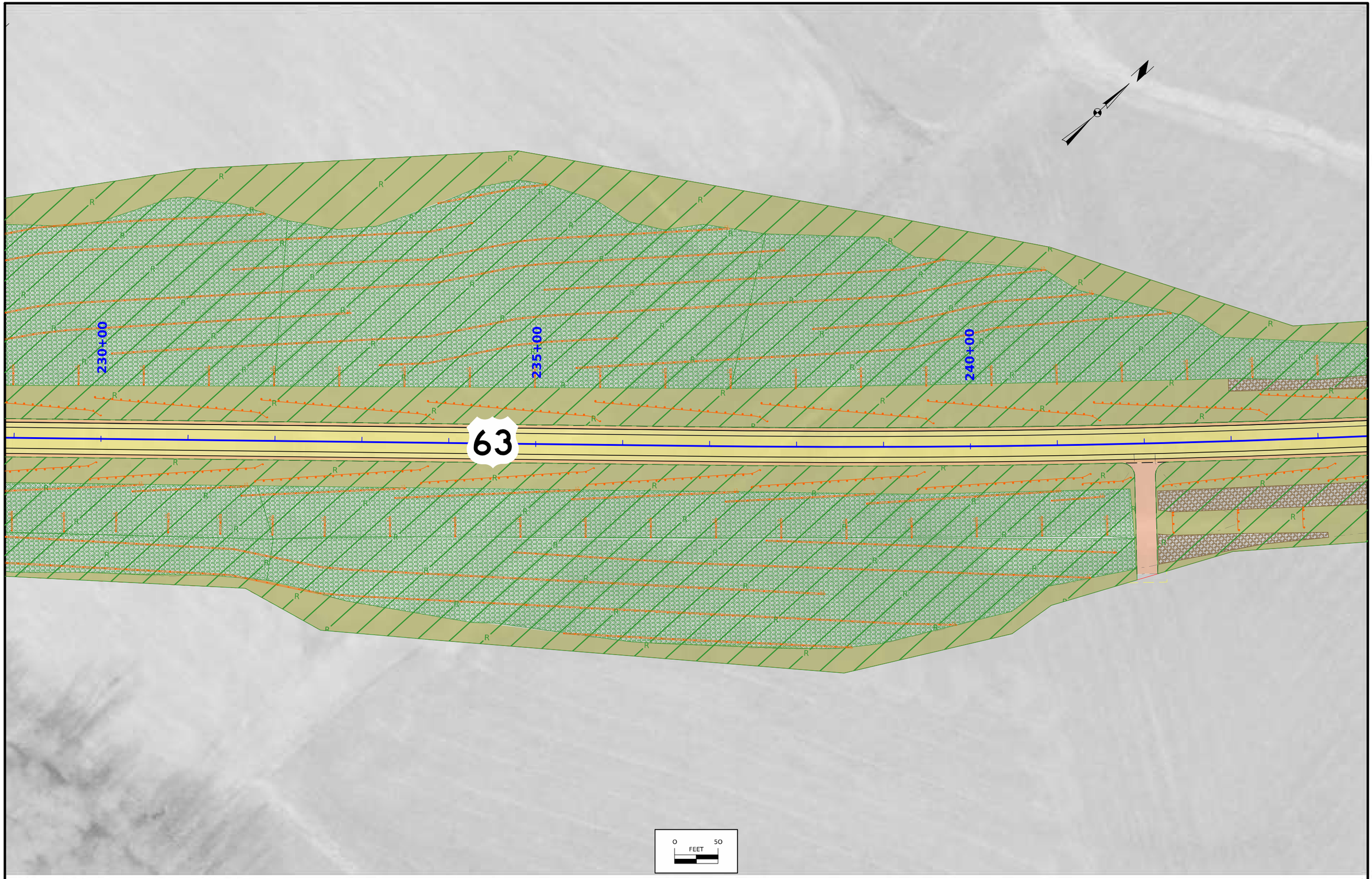

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FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.49	

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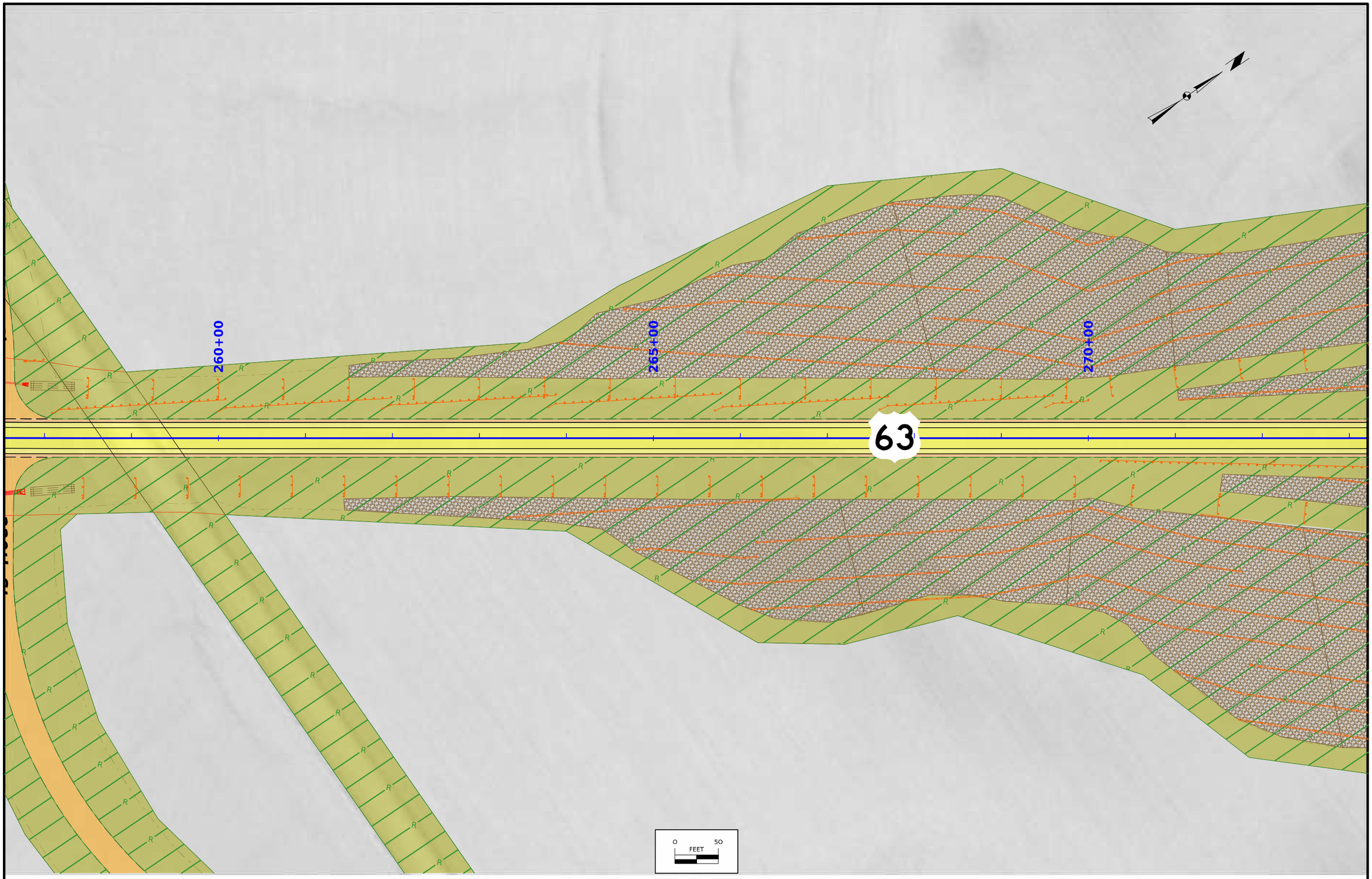

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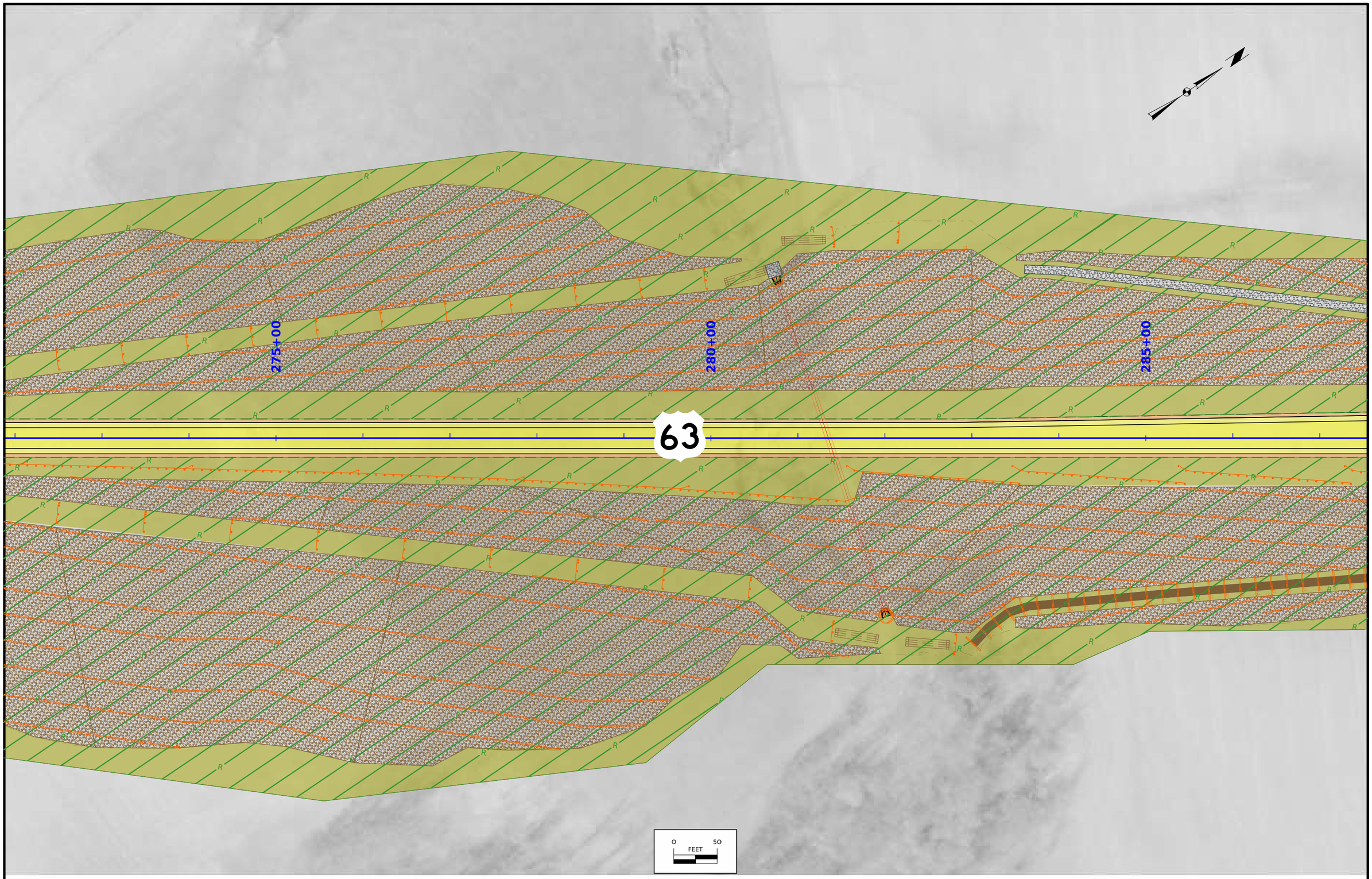

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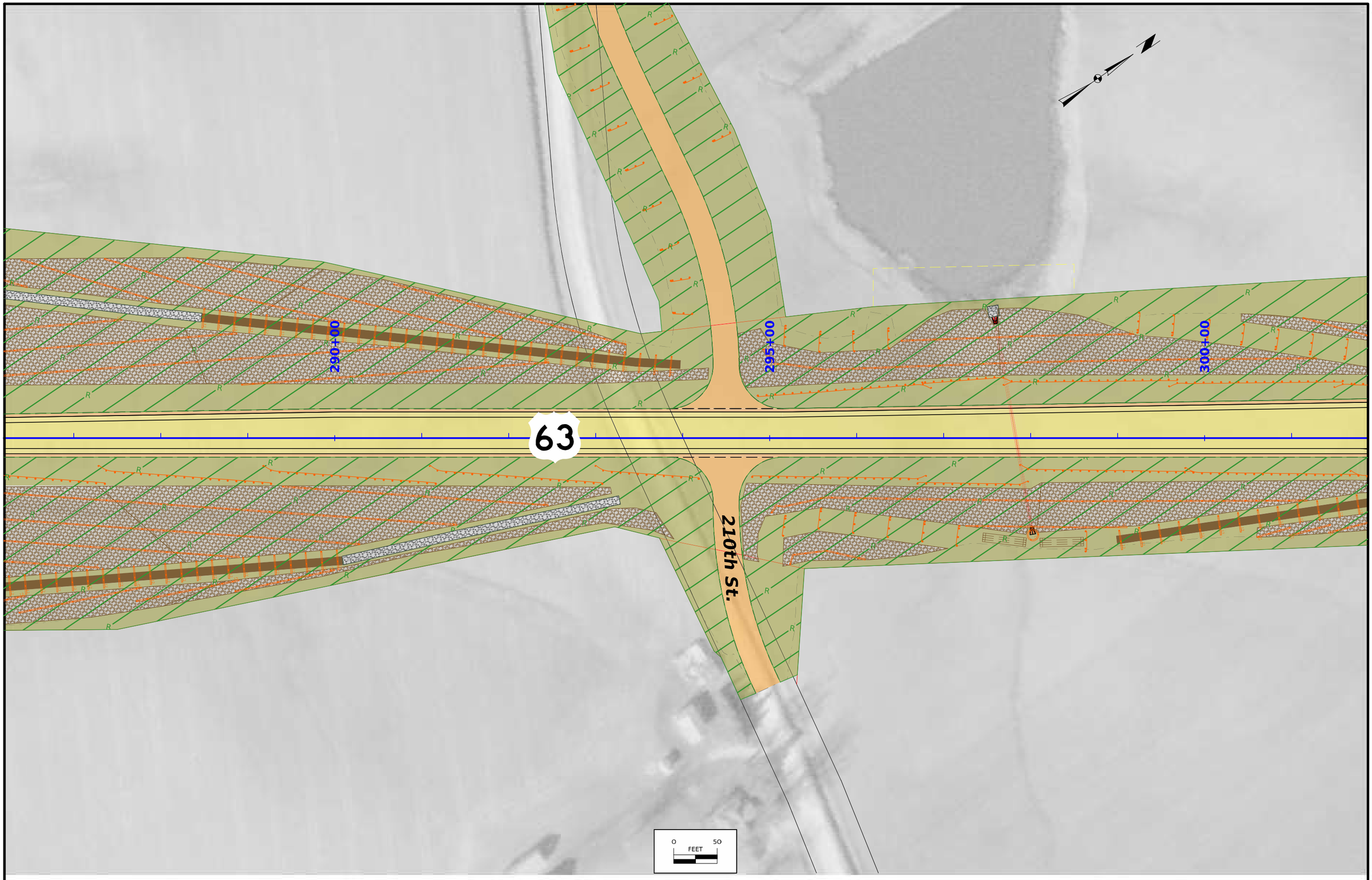

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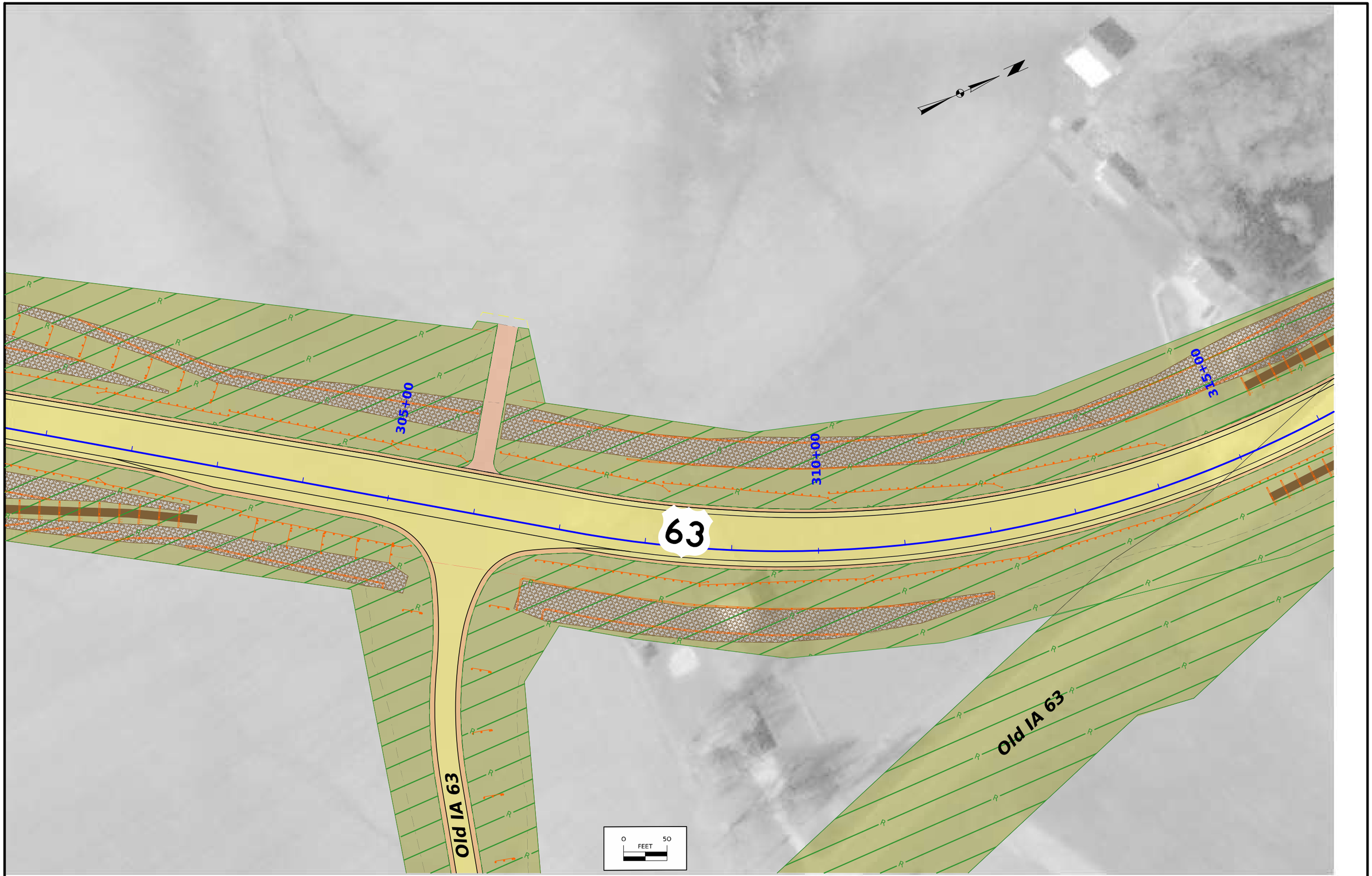

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FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.54	

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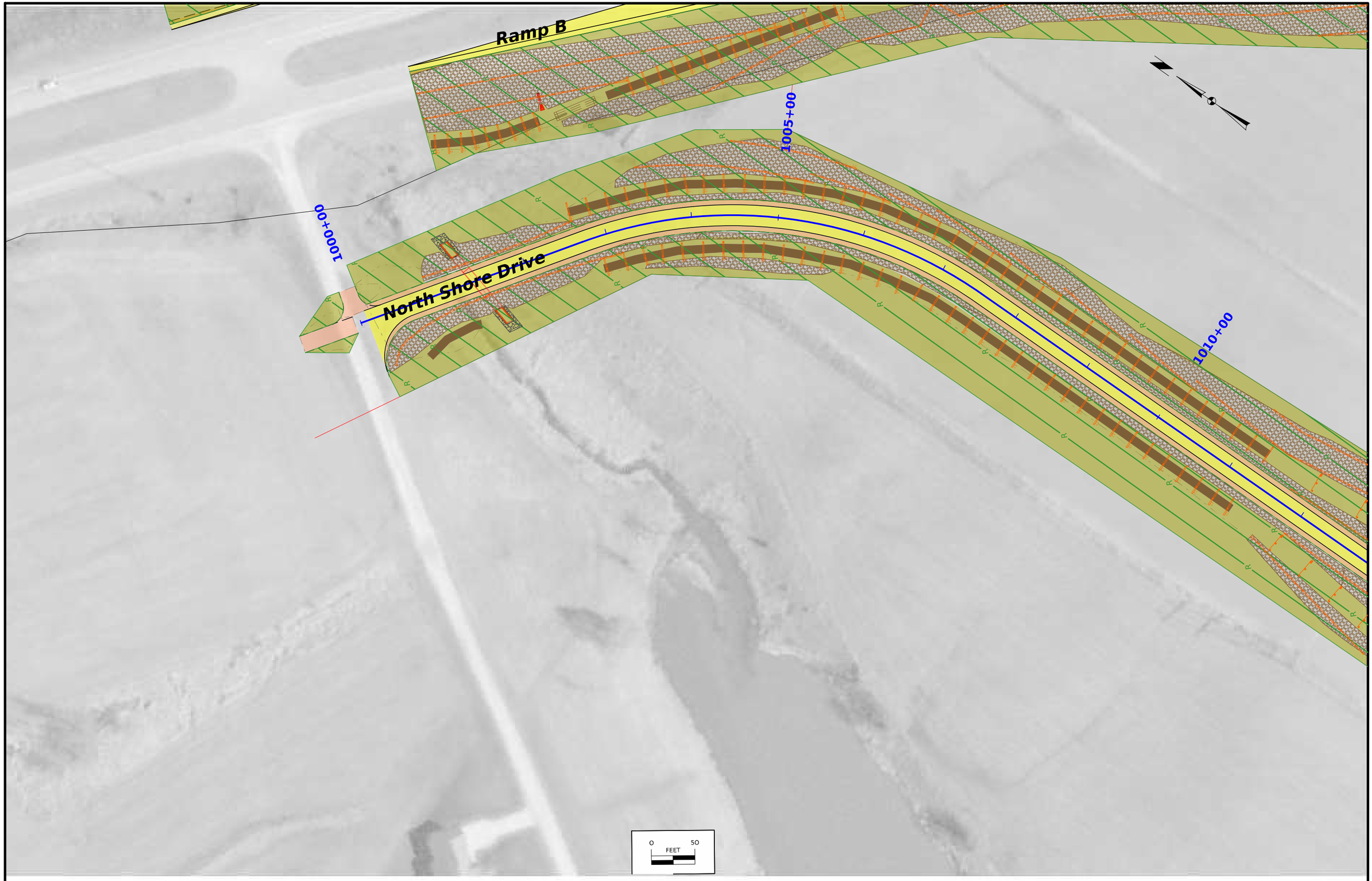

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FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.56	

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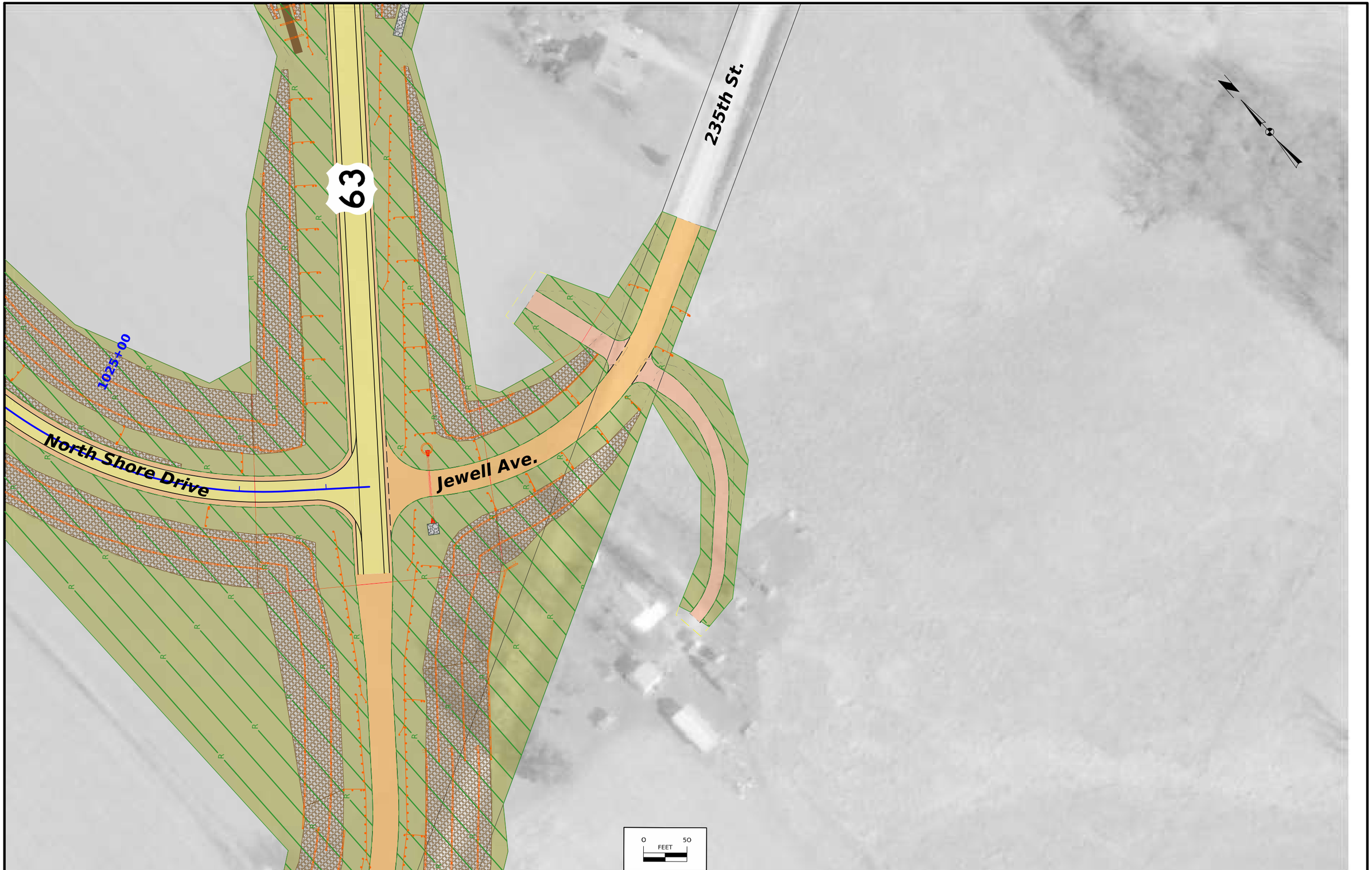

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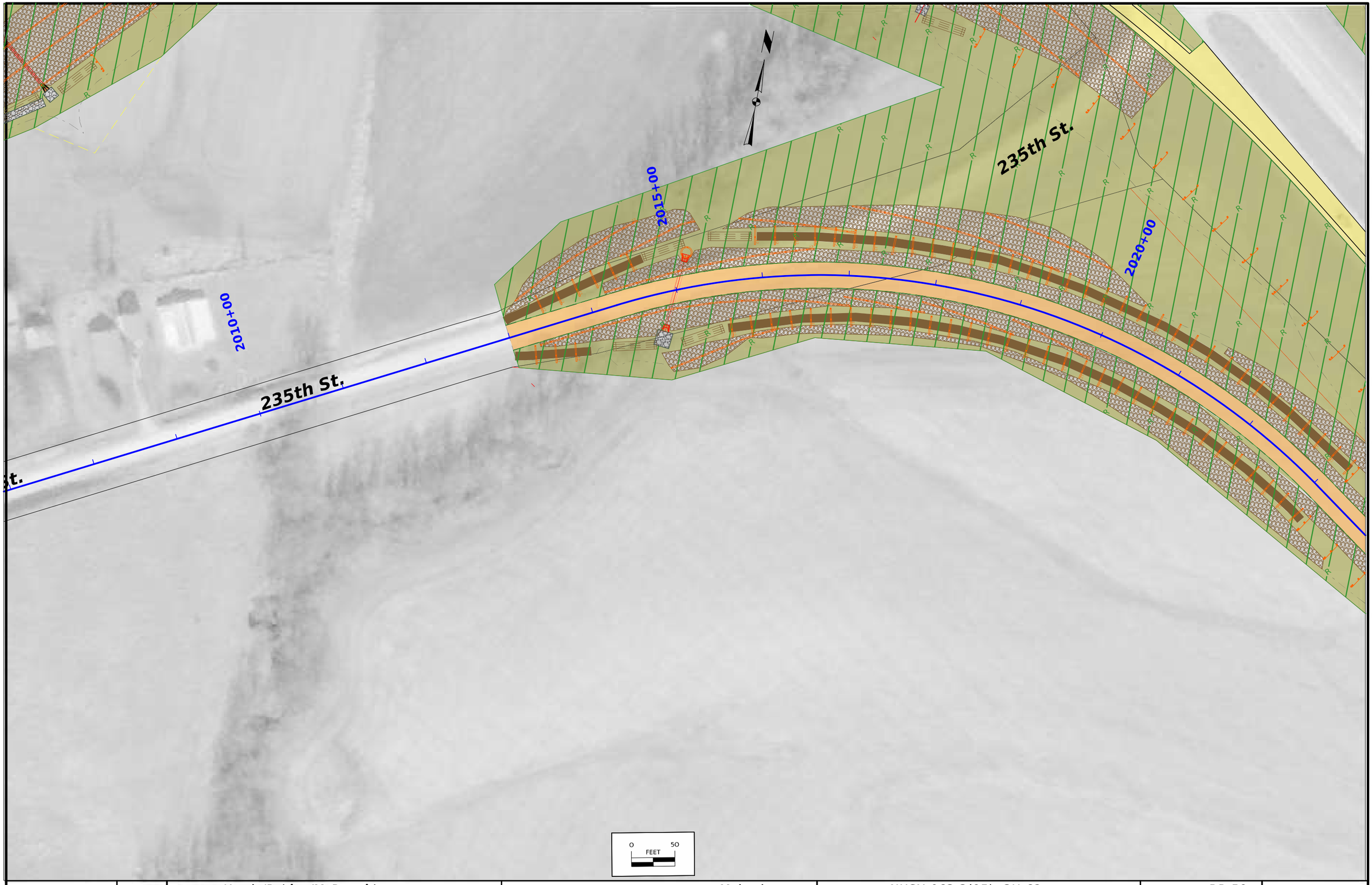

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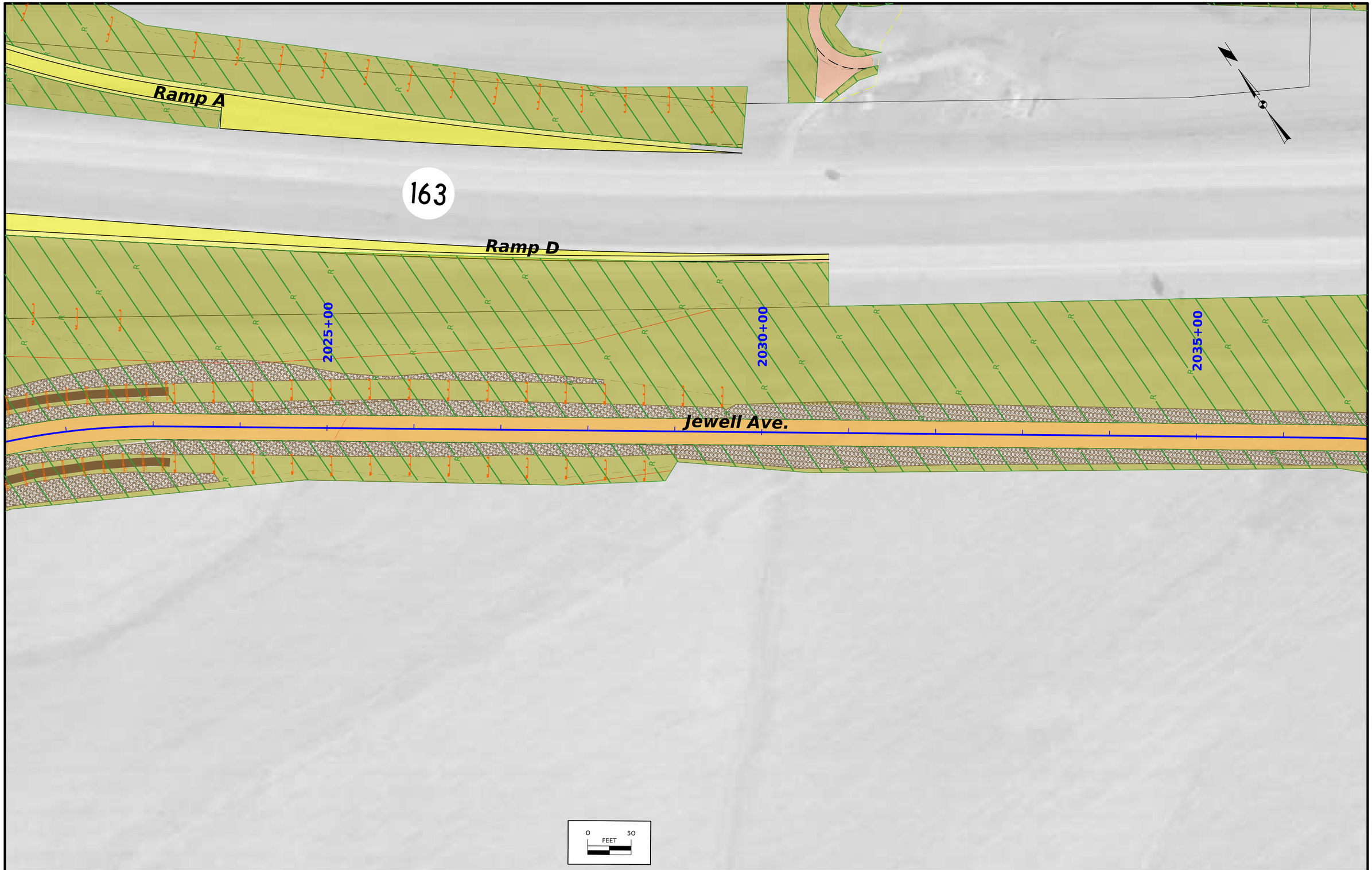

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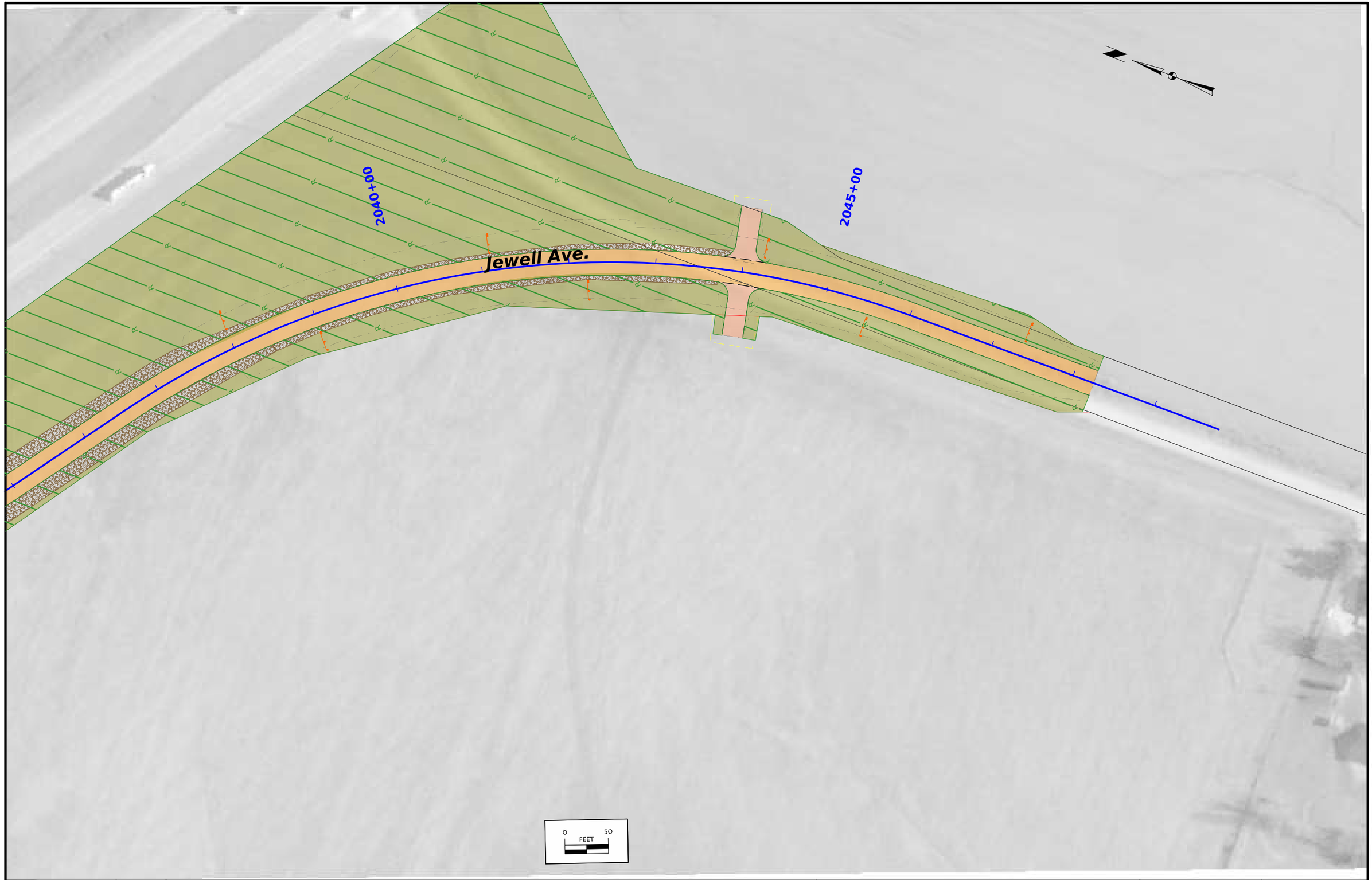

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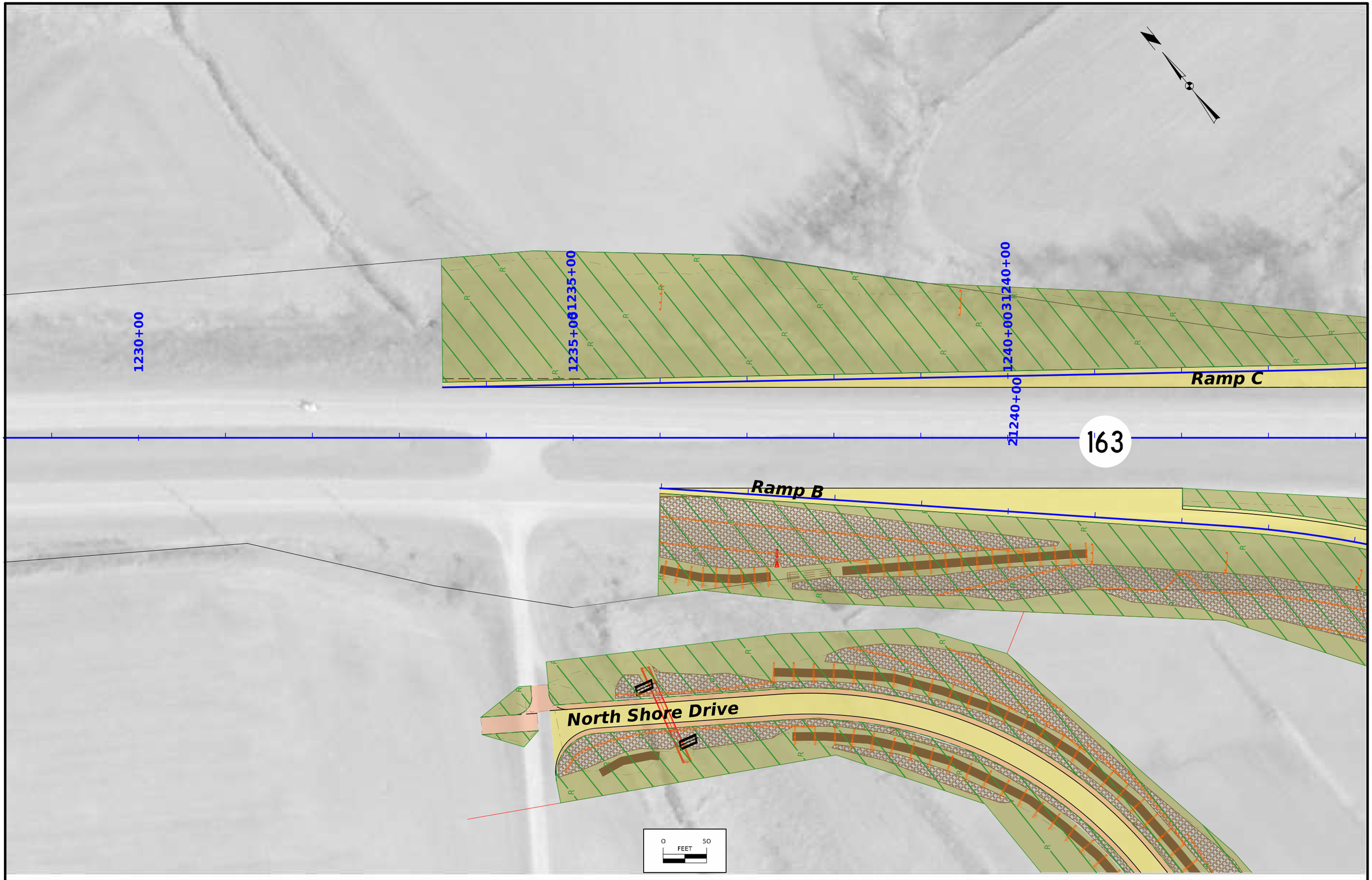

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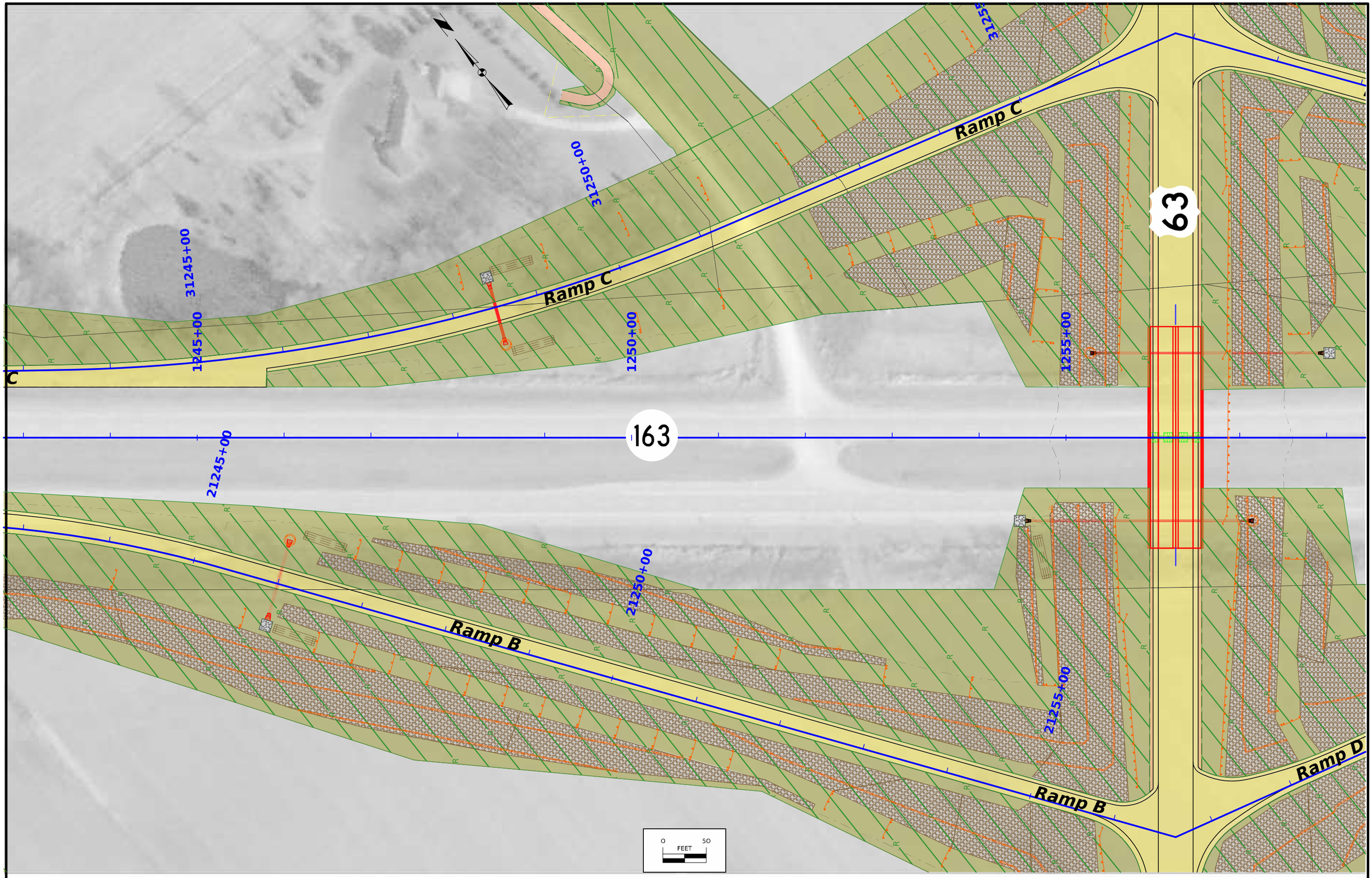

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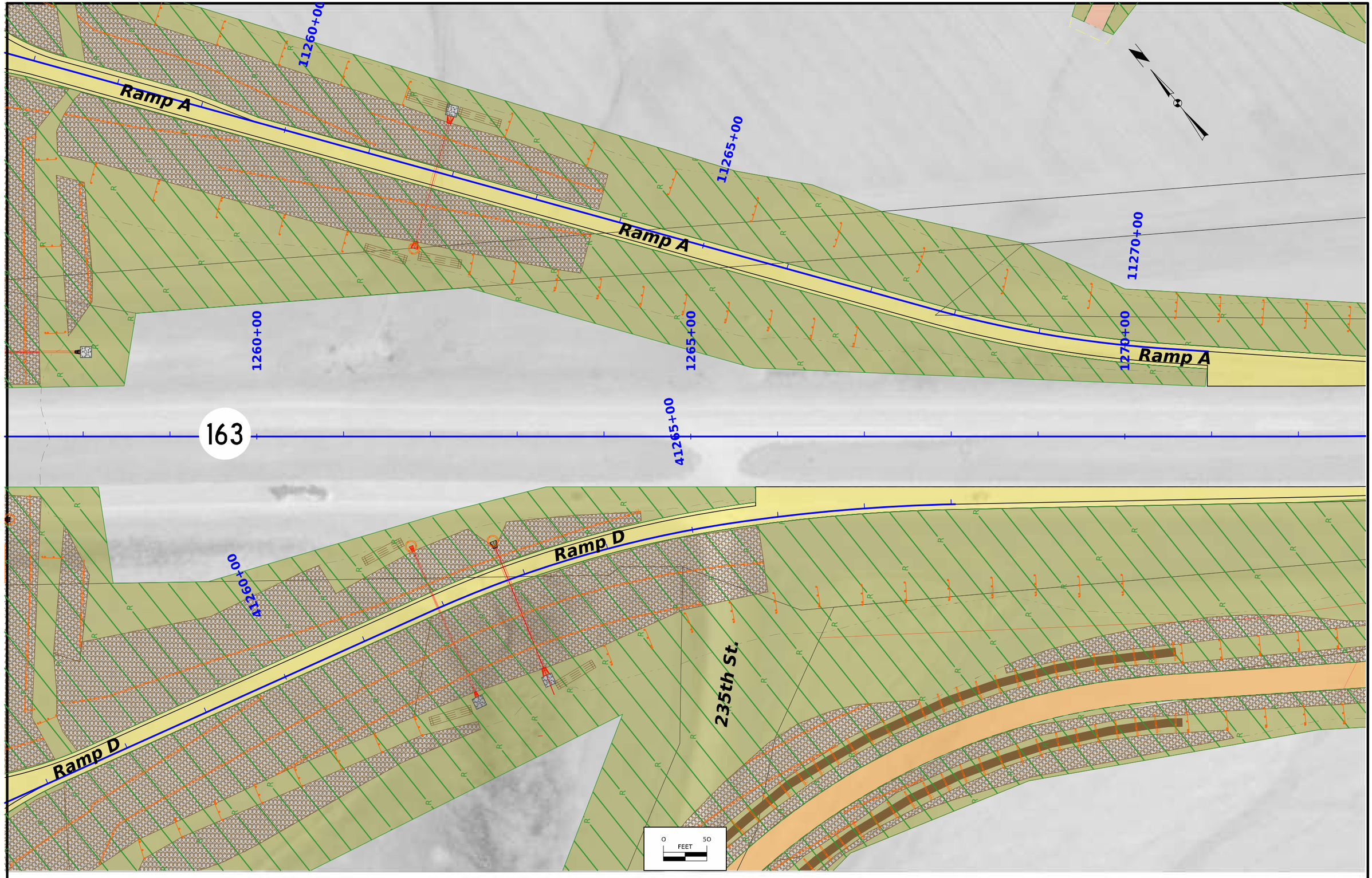

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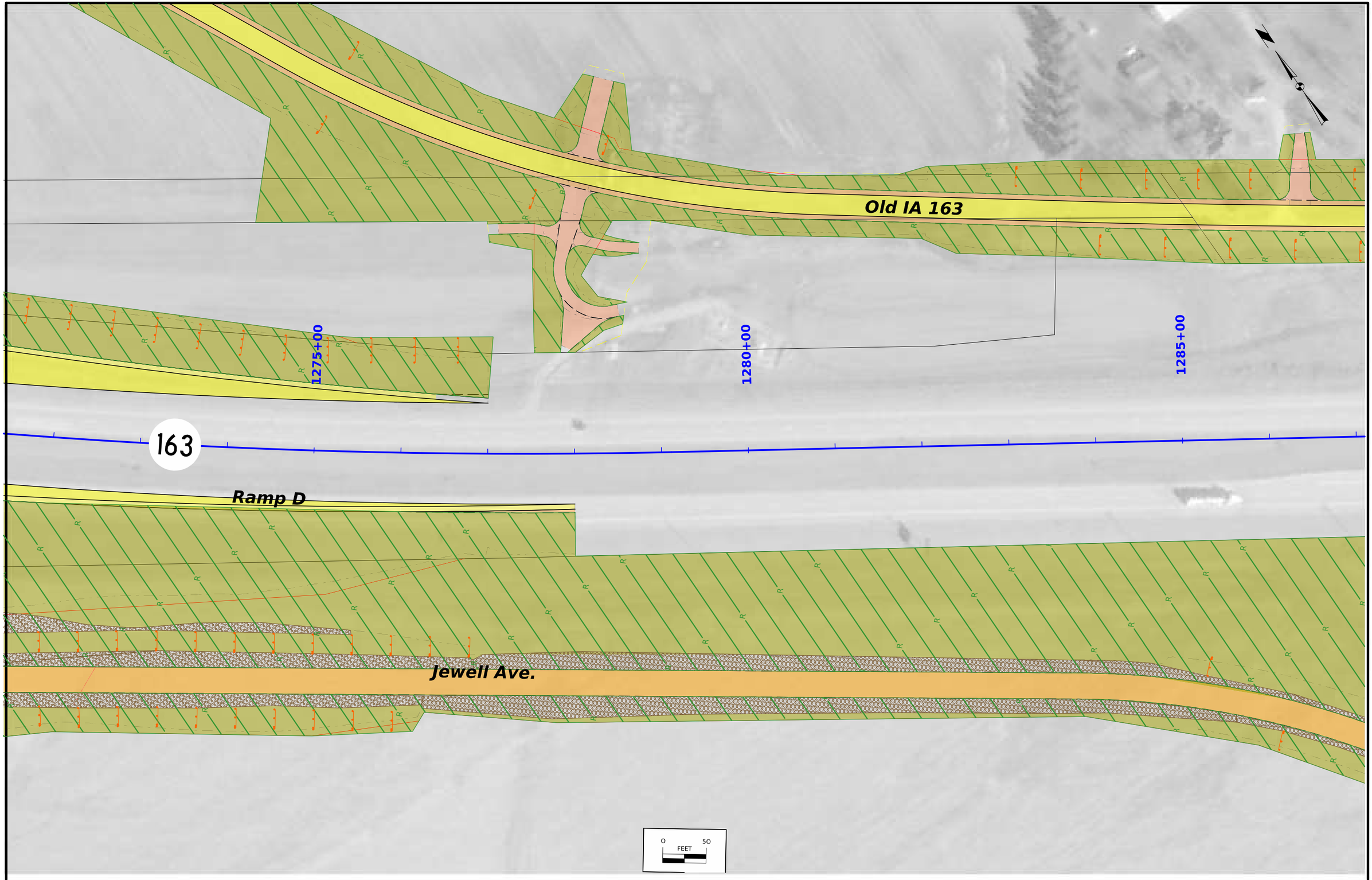

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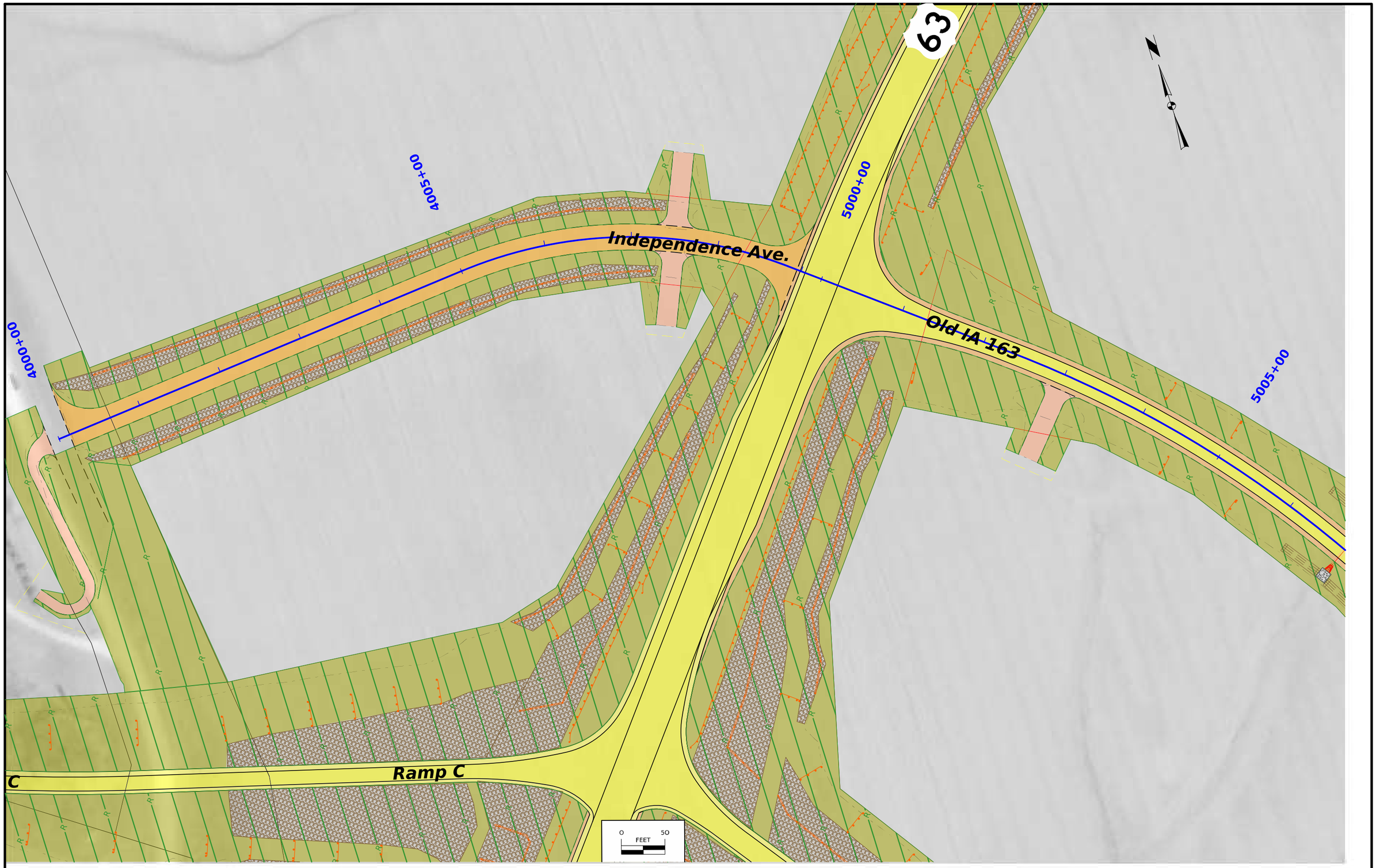

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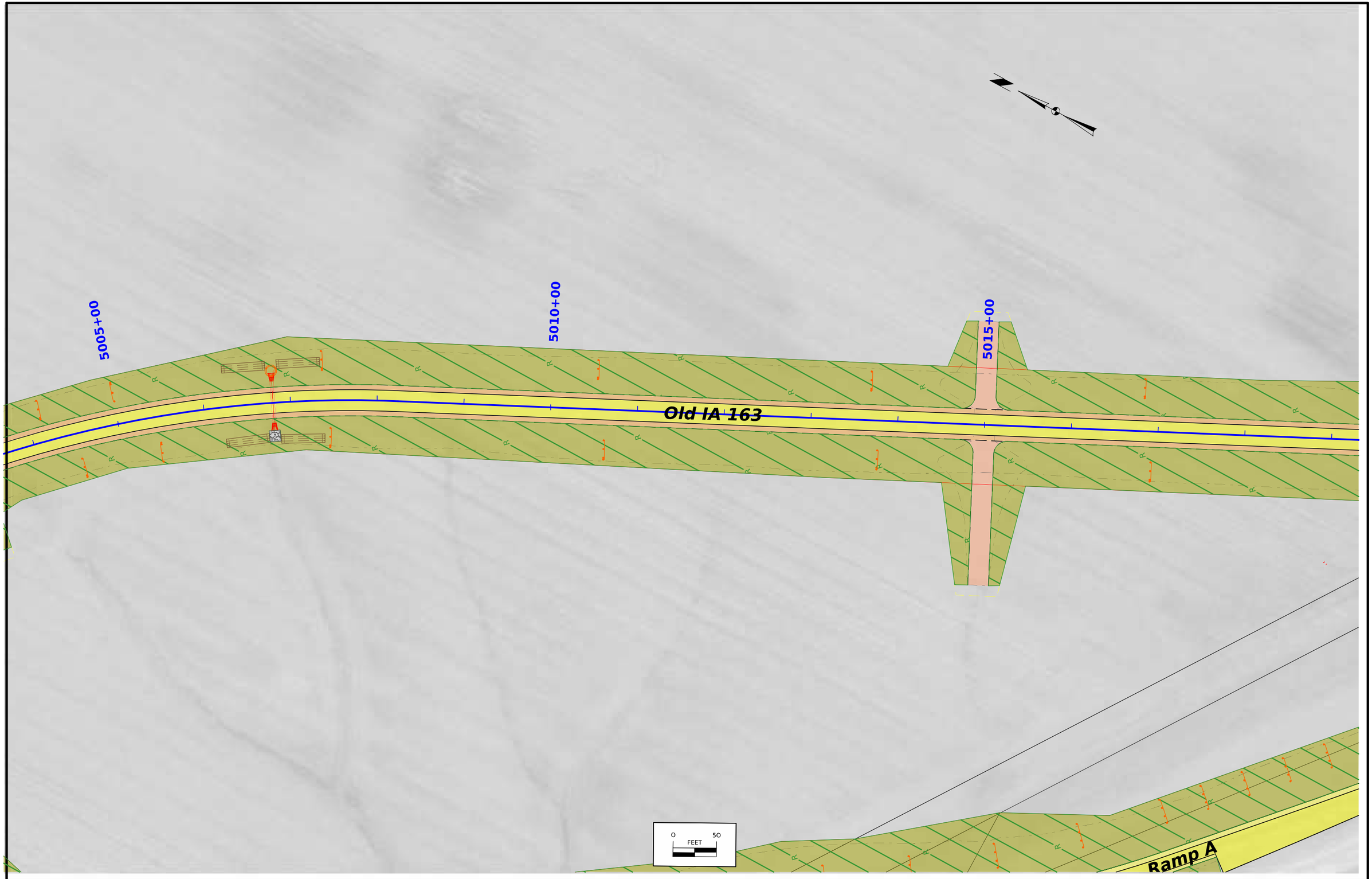

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FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.67	

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FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.68	

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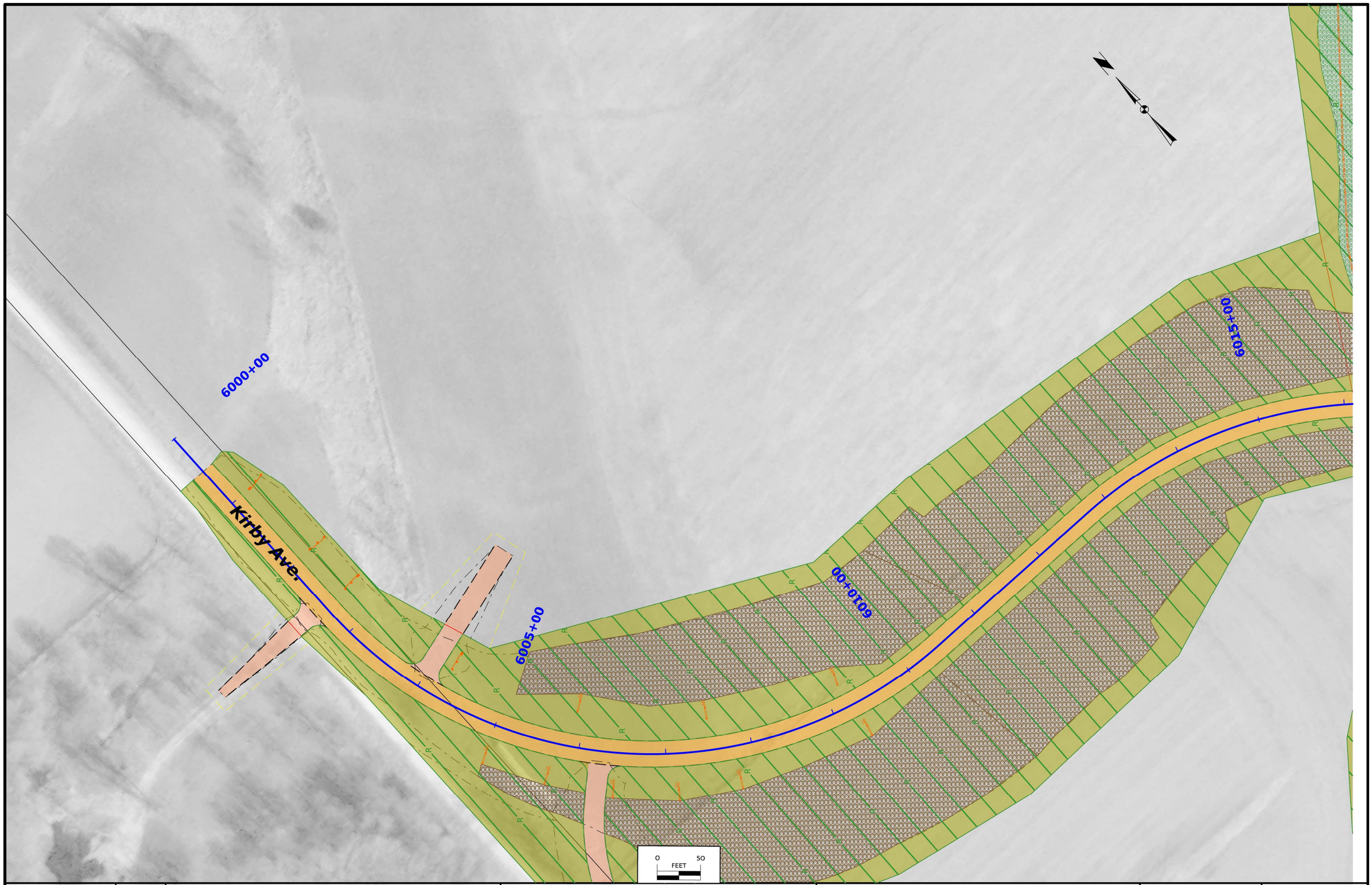

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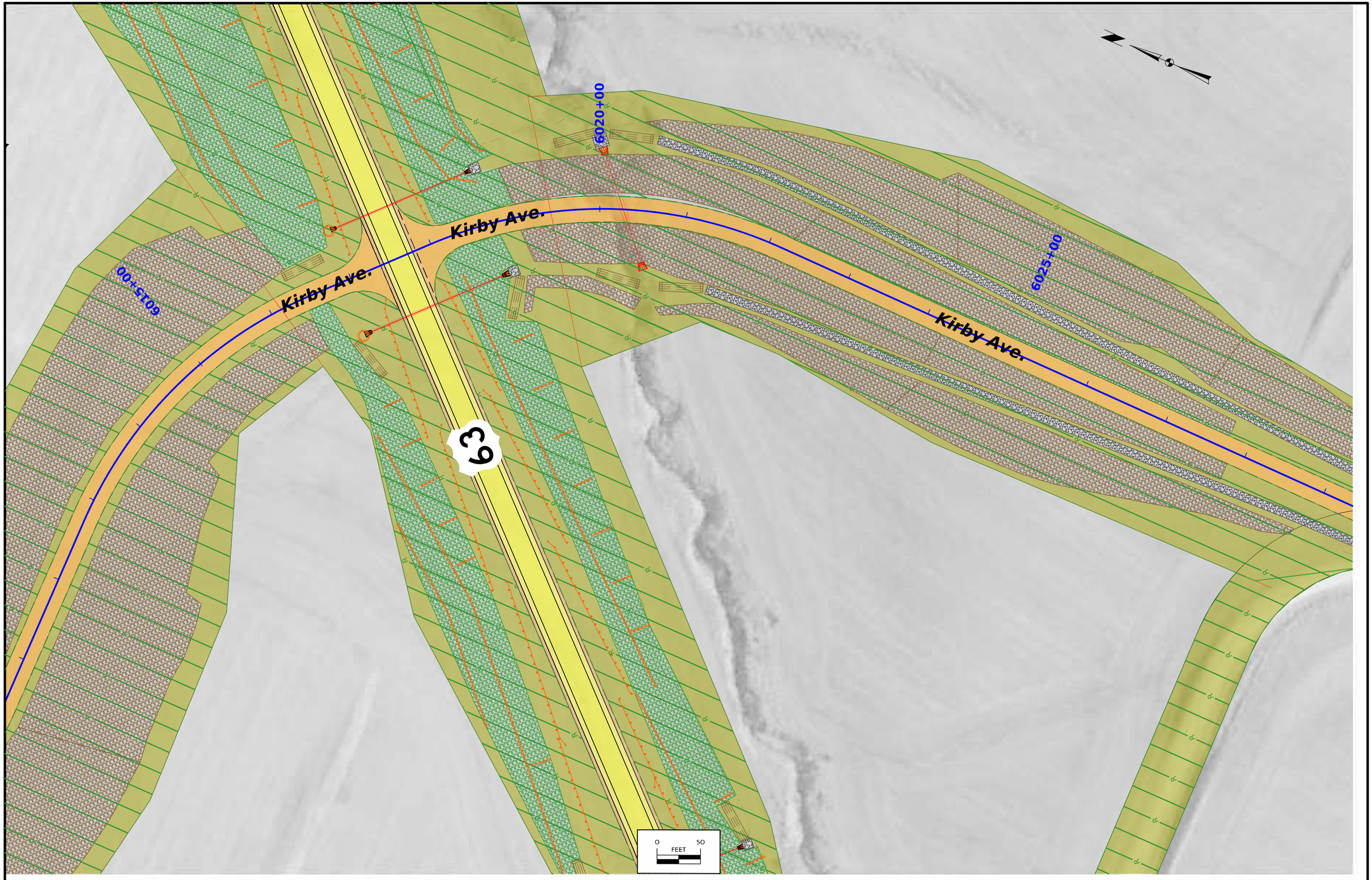

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FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.72	

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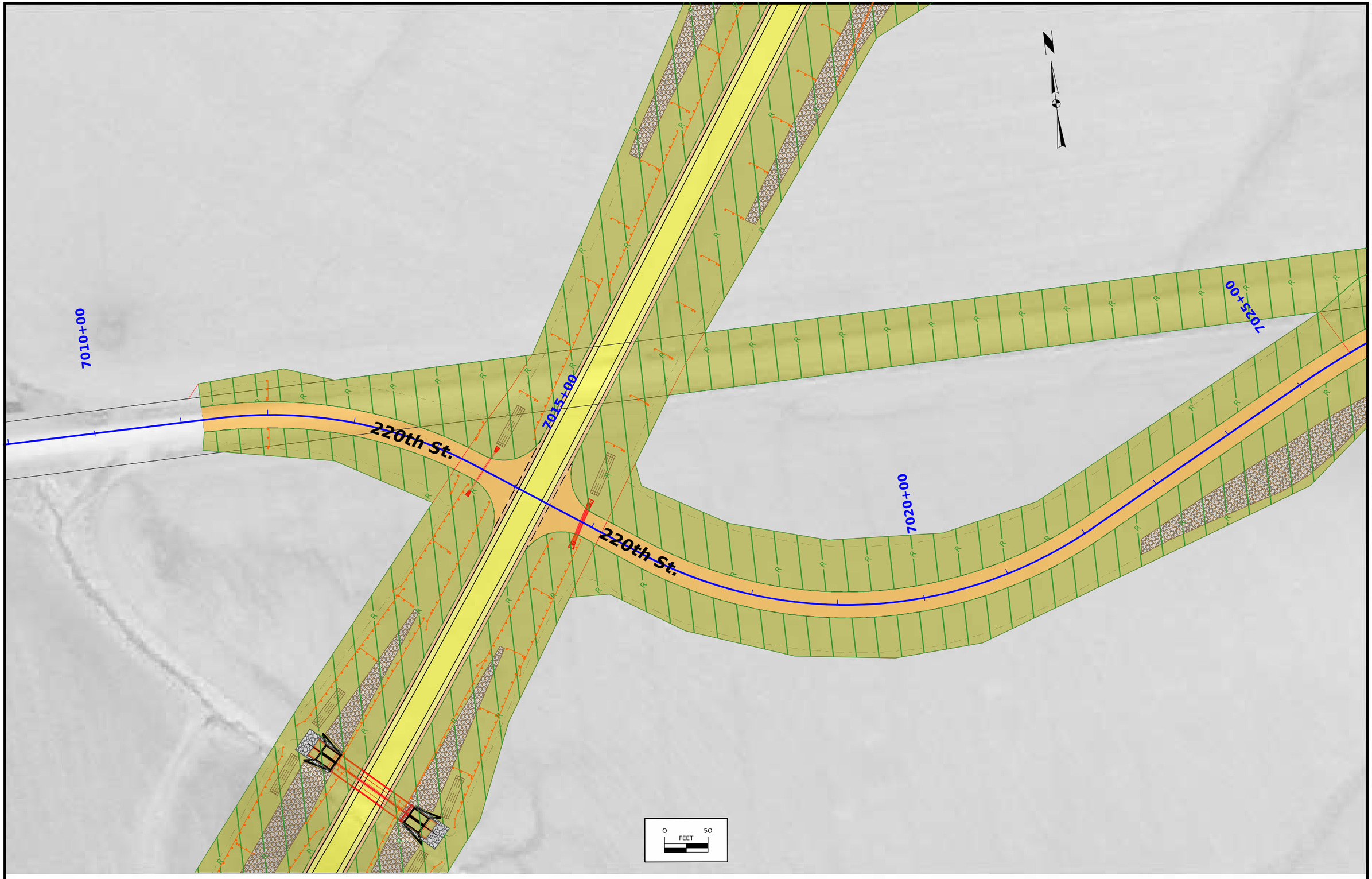

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FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.74	

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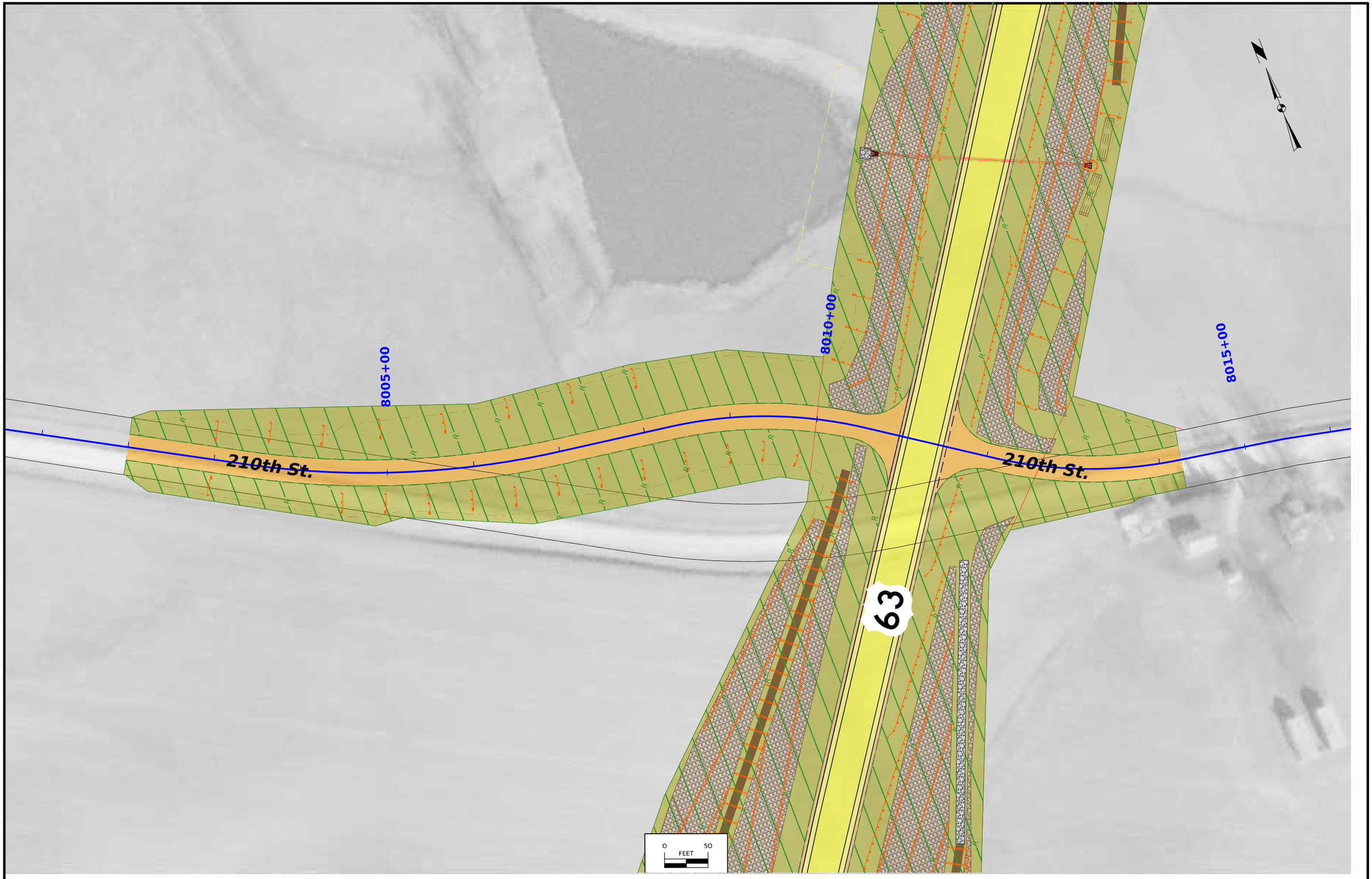

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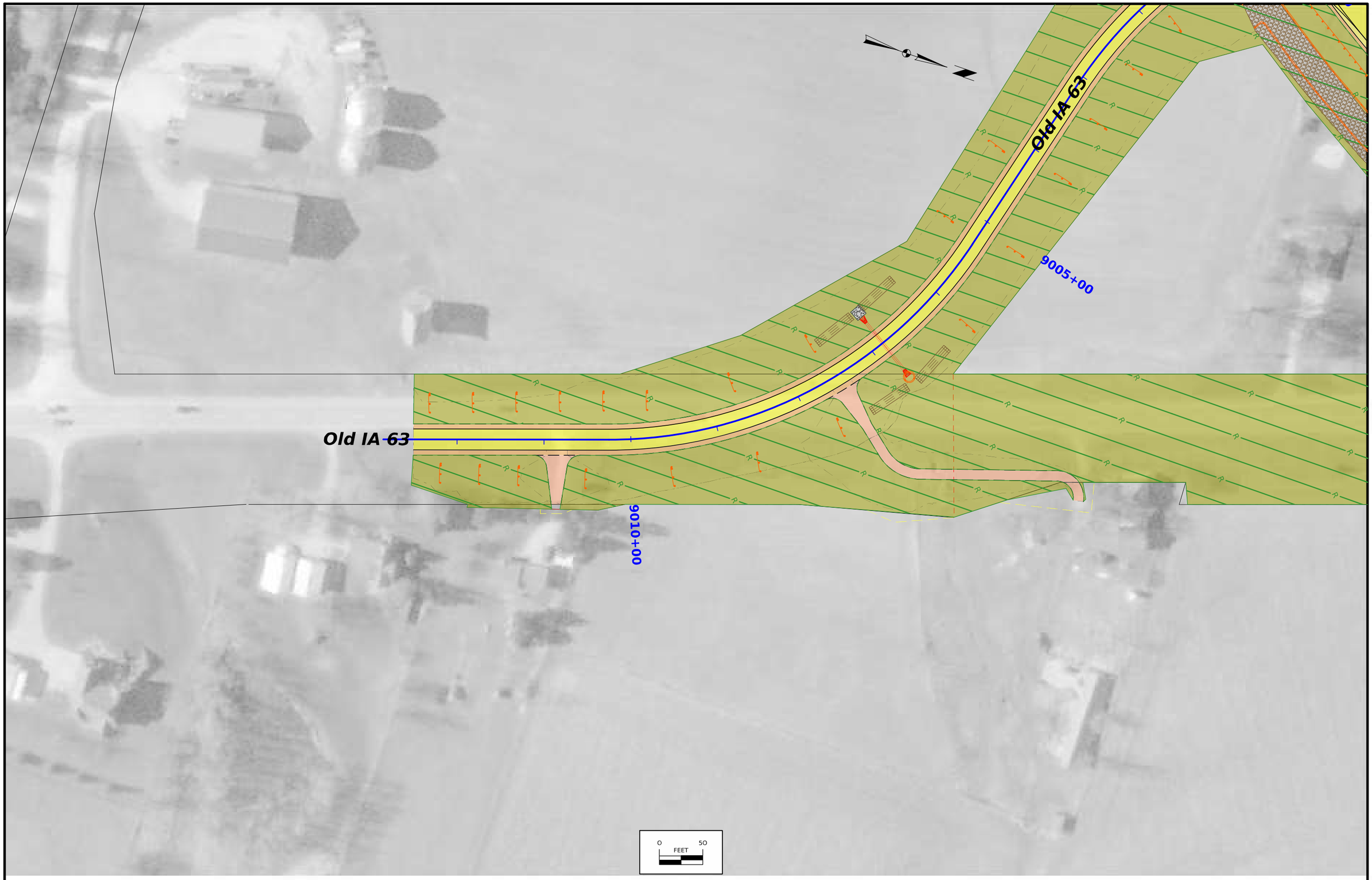

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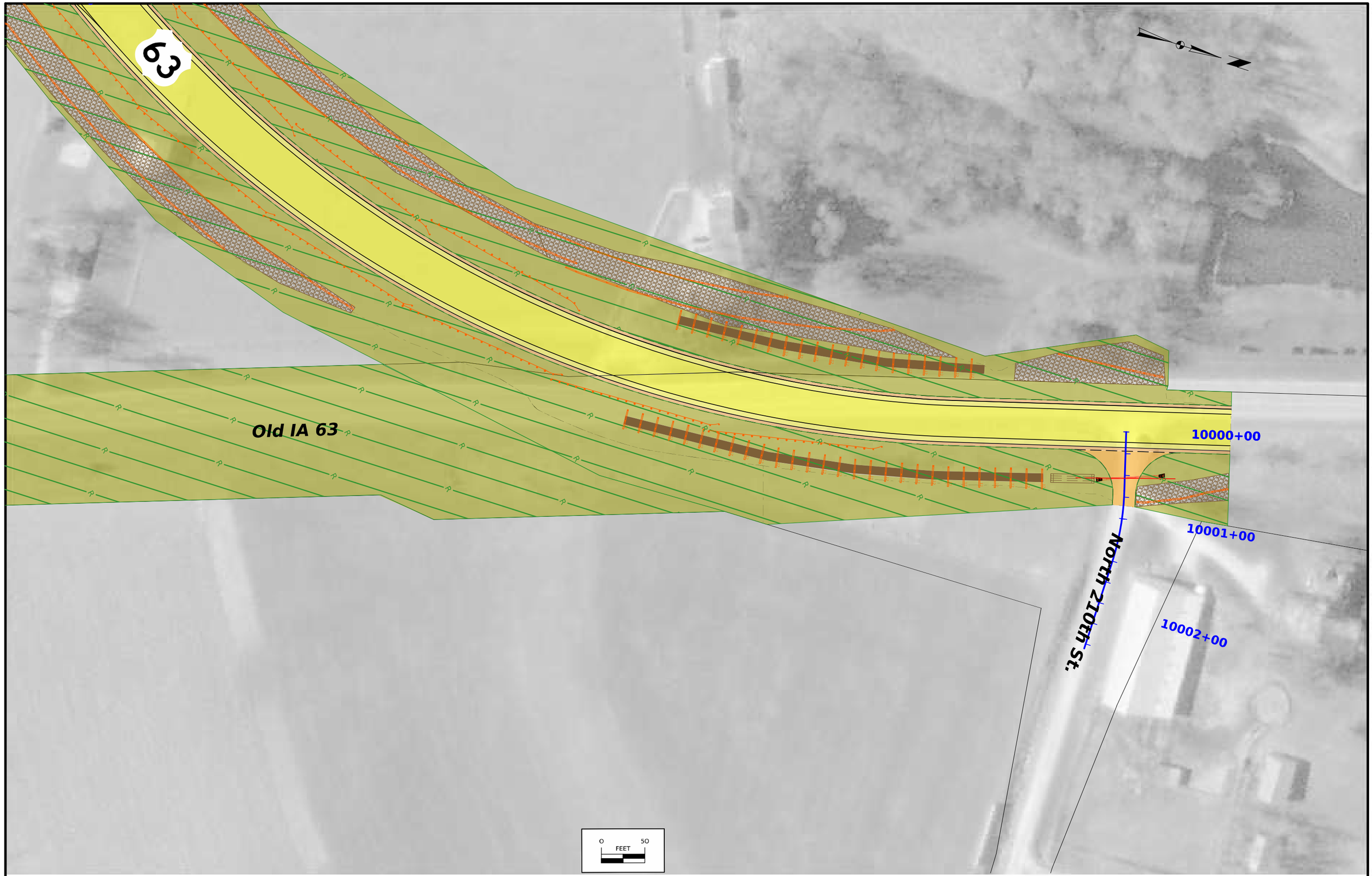

FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.77	

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FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.74	

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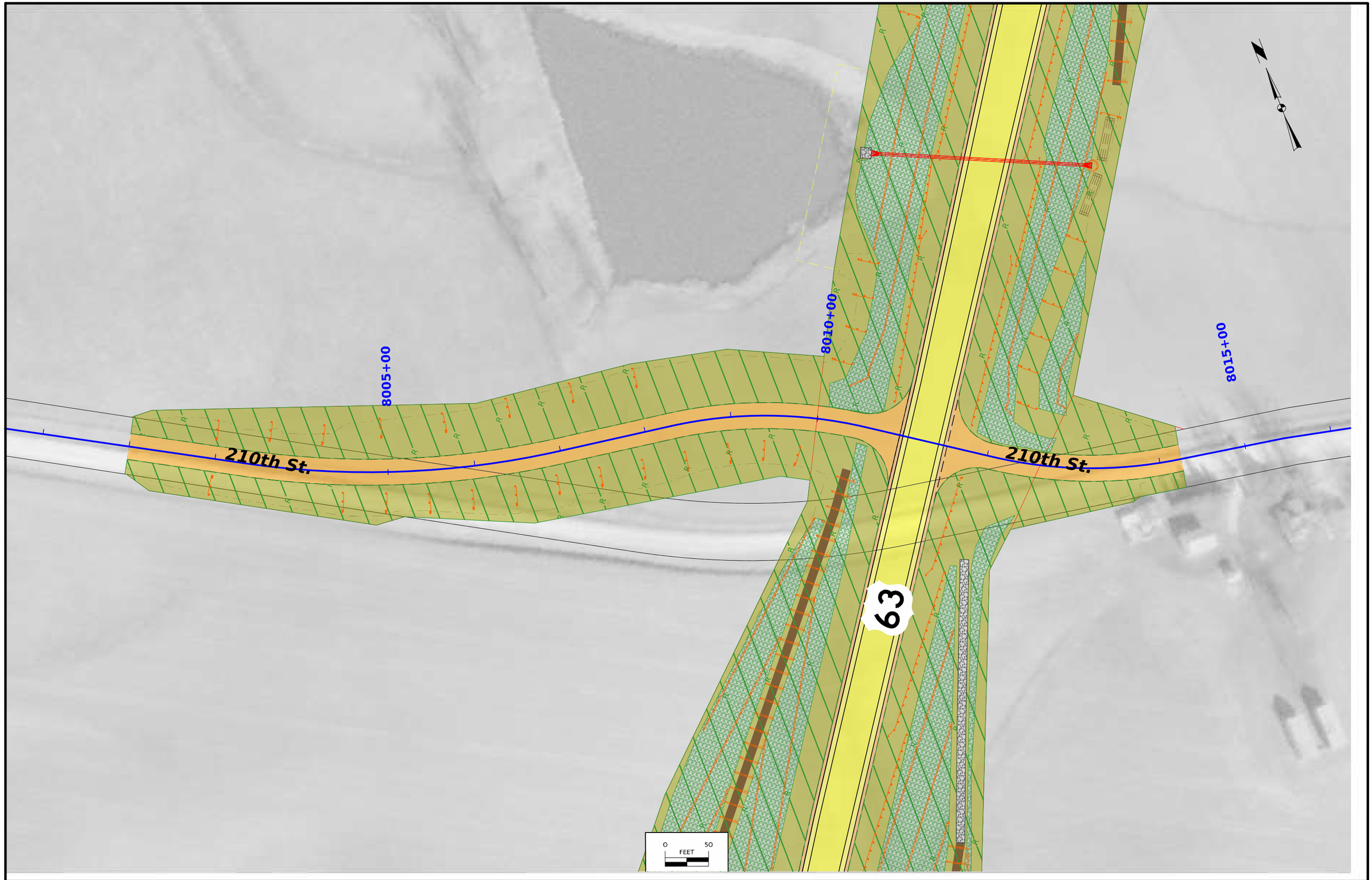

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Old IA 63

9005+00

Old IA 63

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FEET

FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.76	

10:51:13 AM 2/3/2025 bmcdona pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Roadside\(095)\62063095_Siteplan2_SHT.dgn

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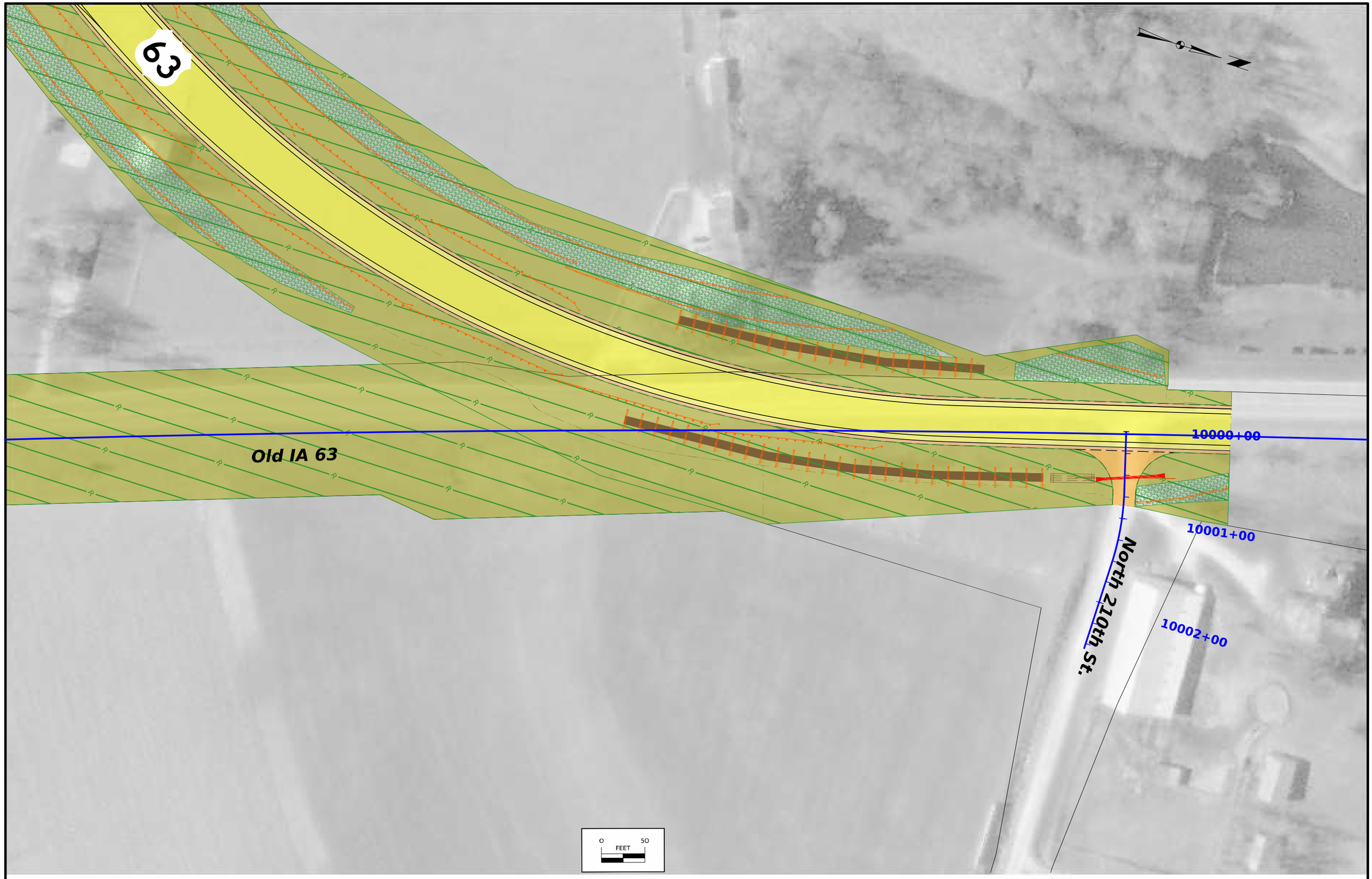

FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Mahaska COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER RR.77	

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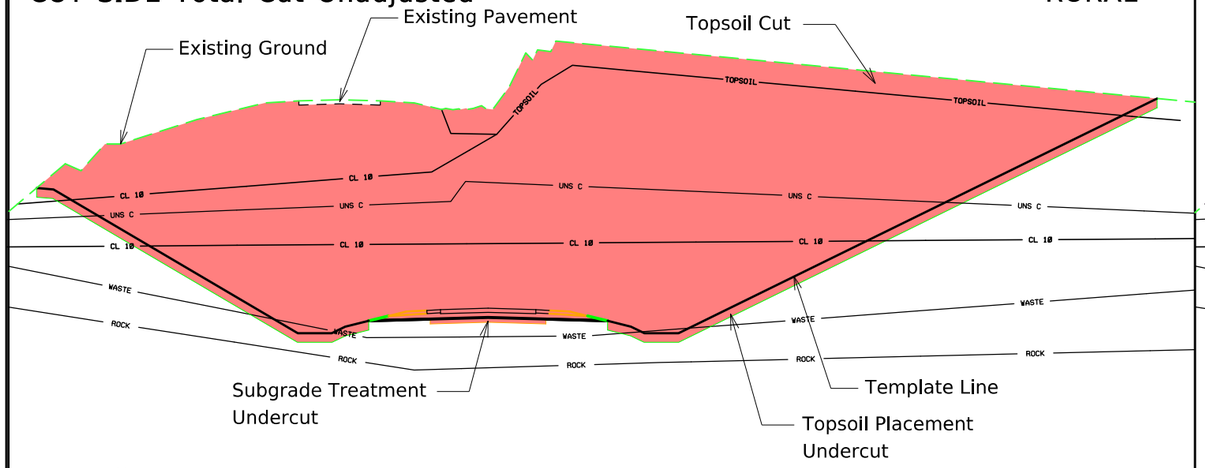
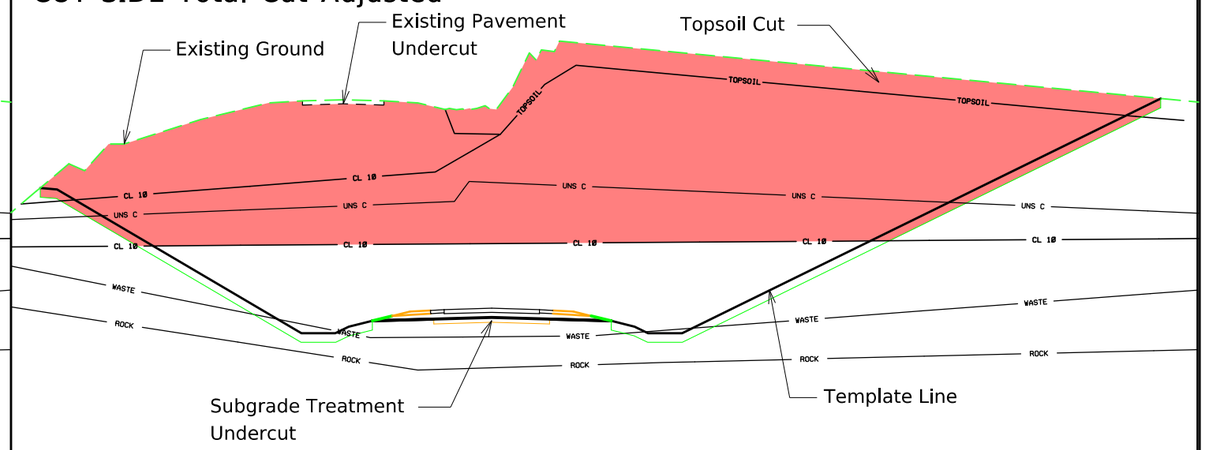
CUT SIDE Total Cut Unadjusted — RURAL



Notes:

1. "Total Cut Unadjusted" Column includes all cut values in the Station Range based on Typical, Topsoil and Subgrade Treatment needs.
2. "Total Cut Unadjusted" does not include and Existing Pavement values inside or outside the cut template as shown on cross sections.
3. Tabulated Plowing and Shaping operations are included in the "Total Cut Unadjusted" values.

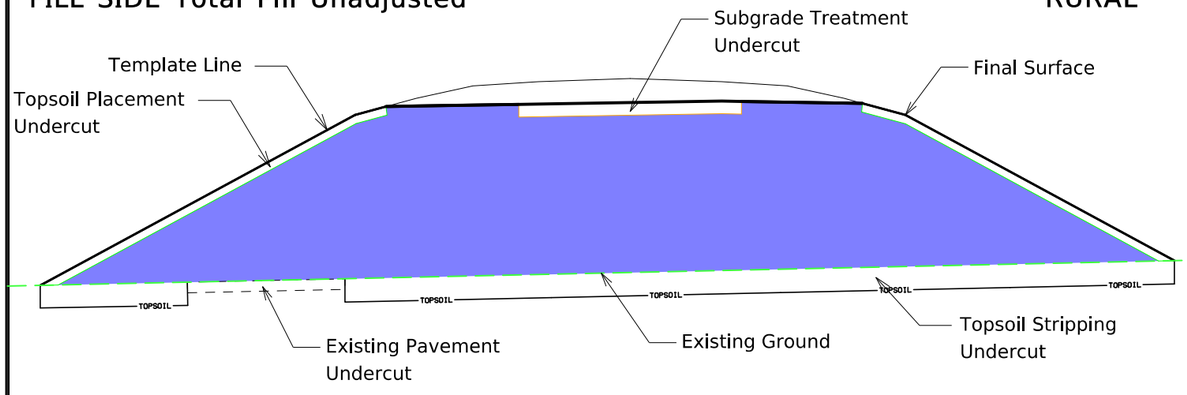
CUT SIDE Total Cut Adjusted



Notes:

1. "Total Cut Adjusted" Column includes all cut values usable as Class 10 material.
2. "Total Cut Adjusted" does not include and Existing Pavement , Existing Topsoil, or material to be wasted.

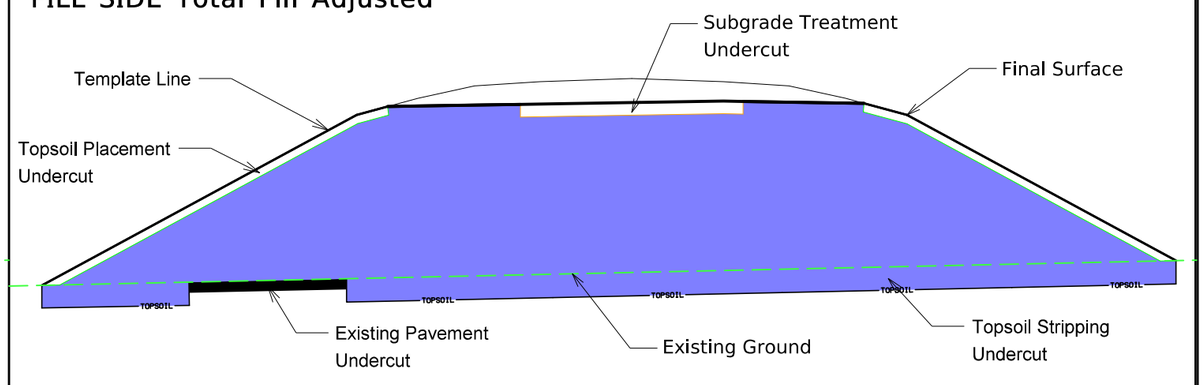
FILL SIDE Total Fill Unadjusted — RURAL



Notes:

1. "Total Fill Unadjusted" Column includes all Class 10, 12, and 13 fill. This excludes the topsoil, subgrade treatment, subbase, new pavement, and shoulder fill needs in that station range.
2. "Total Fill Unadjusted" Column does not include adjustments for additional fill from cuts such as existing pavement removed, plowing and shaping operations, entrances, dikes, or topsoil stripping.

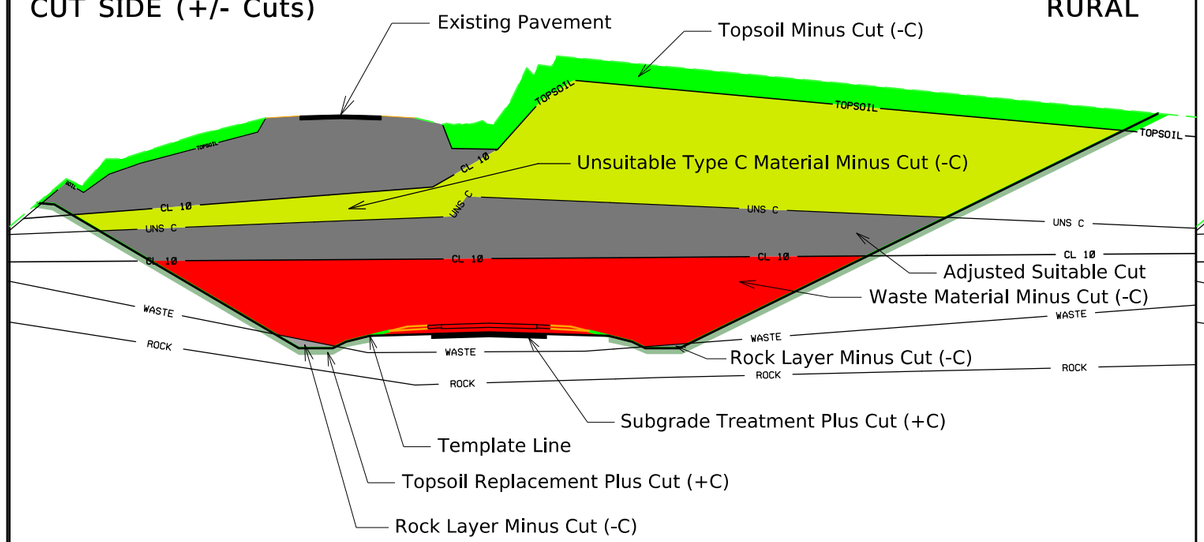
FILL SIDE Total Fill Adjusted



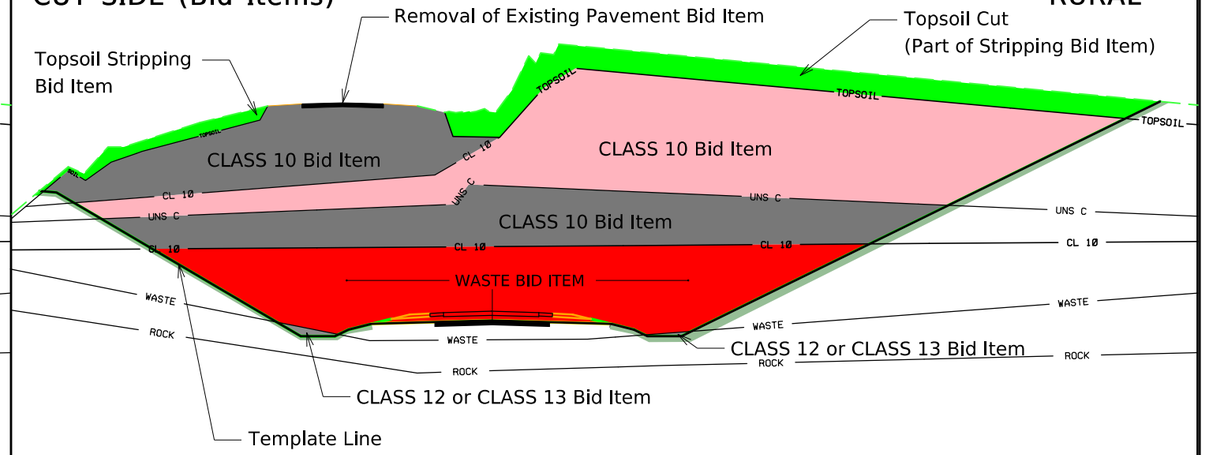
Notes:

1. "Total Fill Adjusted" Column includes all Class 10, 12, and 13 fill and adjustments for additional fill from cuts such as existing pavement, plowing and shaping operations, entrances, dikes, and topsoil stripping.
2. The available area to place unsuitable materials in the T Sheet tabulation does not include the undercut values from the topsoil stripping, existing pavement, or plowing and shaping

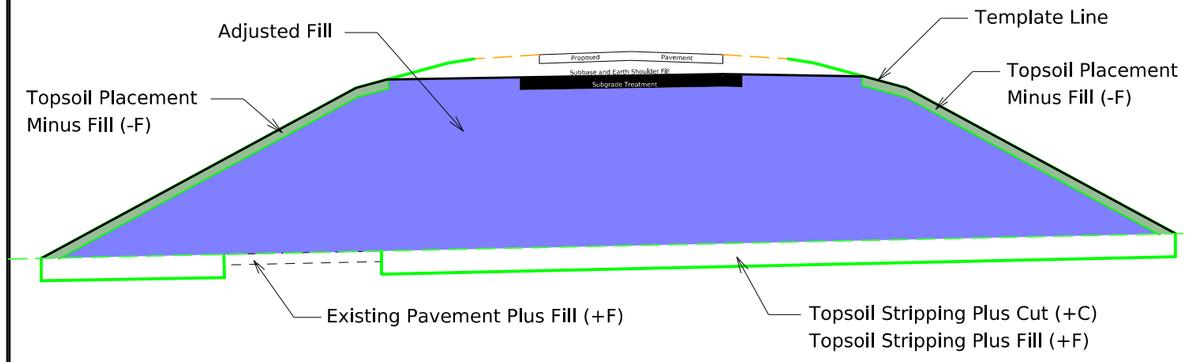
CUT SIDE (+/- Cuts) — RURAL



CUT SIDE (Bid Items) — RURAL



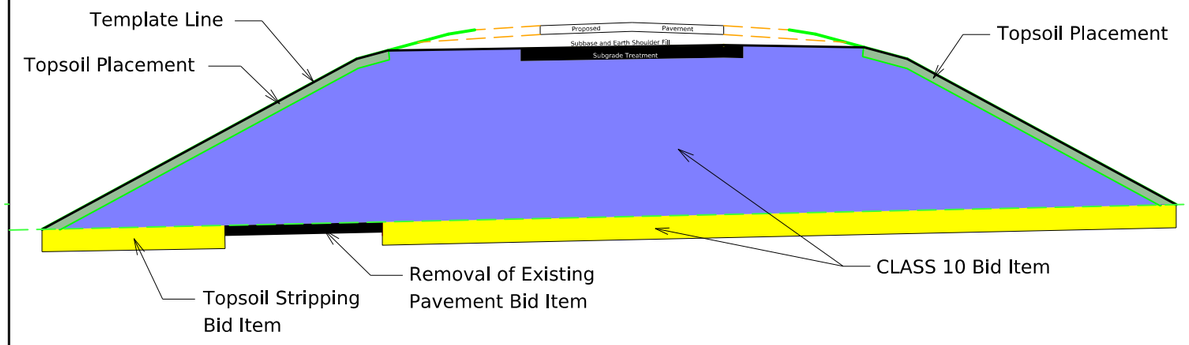
FILL SIDE (+/- Fills) — RURAL



Notes:

1. "Add Quantity +C" columns are additional cut encountered that is not Typical, Topsoil, or Subgrade Treatment Based. (Entrance, Dike, Etc.)
2. "-C" columns are either soil types or Class 10, 12, or 13 designated material that is encountered in the cut station range that is paid for by other bid items.
3. The "(SoilType) Cut" columns are soil types encountered in the cut that are paid by either Class 10, 12, or 13.
4. The "Adjusted Clas (10,12 or 13)" columns are the sum of all various soil types encountered in that station range, that are paid by Class 10, 12, or 13 bid items.
5. Refer to Standard Road Plan EW-102 for placement of unsuitable soil types.

FILL SIDE (Bid Items) — RURAL



Notes:

1. Refer to Standard Road Plan EW-102 for placement of unsuitable soil types.

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER T.2

8:30:06 AM 12/24/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Sheet_Files\LegendSheet_Seed.dgn

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
ML063																						
134+92.21																						
135+00.00	34	11	23	0	0	0	0	0		11	3			3	4	7	0	0	23	6	8	15
135+25.00	152	72	80	0	0	0	0	0		72	114	43		157	204	-132	0	91	80	43	60	20
135+50.00	264	96	168	0	0	0	0	0		96	294	92		386	502	-406	152	389	168	55	77	91
135+75.00	326	141	185	0	0	0	0	0		141	430	103		533	693	-552	343	580	185	67	94	91
136+00.00	374	172	201	0	0	0	0	0		172	549	113		662	861	-689	511	748	201	78	109	92
136+25.00	410	192	218	0	0	0	0	0		192	689	124		813	1,056	-864	707	944	218	88	123	95
136+50.00	479	217	235	27	0	0	0	0		244	845	132		977	1,270	-1,026	920	1,157	235	98	137	97
136+75.00	575	254	251	69	0	0	0	0		324	1,013	139		1,152	1,497	-1,173	1,148	1,385	251	110	154	98
137+00.00	677	305	268	105	0	0	0	0		410	1,193	146		1,339	1,740	-1,330	1,391	1,628	268	121	169	99
137+25.00	755	336	284	135	0	0	0	0		471	1,382	153		1,535	1,995	-1,524	1,646	1,882	284	130	182	103
137+50.00	805	365	311	129	0	0	0	0		494	1,590	161		1,751	2,276	-1,782	1,927	2,163	311	140	196	115
137+75.00	943	467	352	124	0	0	0	0		591	1,797	172		1,969	2,560	-1,969	2,210	2,447	352	164	230	122
138+00.00	1,032	513	371	147	0	0	0	0		661	1,947	179		2,126	2,764	-2,104	2,414	2,651	371	173	242	129
138+25.00	1,019	488	366	165	0	0	0	0		653	2,023	182		2,204	2,866	-2,213	2,516	2,752	366	163	229	138
138+50.00	1,059	513	361	185	0	0	0	0		697	2,039	182		2,220	2,886	-2,189	2,536	2,773	361	164	230	131
138+75.00	1,115	543	356	216	0	0	0	0		759	2,017	182		2,199	2,858	-2,099	2,509	2,746	356	167	234	122
139+00.00	1,150	553	351	246	0	0	0	0		799	2,050	183		2,233	2,904	-2,104	2,553	2,791	351	168	236	115
139+25.00	1,139	535	348	256	0	0	0	0		791	2,214	189		2,404	3,125	-2,334	2,776	3,012	348	169	237	111
139+50.00	1,078	492	348	237	0	0	0	0		729	2,499	199		2,698	3,508	-2,778	3,158	3,394	348	170	237	111
139+75.00	1,006	458	349	200	0	0	0	0		657	2,855	207		3,062	3,980	-3,323	2,909	3,868	349	169	237	112
140+00.00	922	424	349	149	0	0	0	0		573	3,224	215		3,439	4,470	-3,897	2,909	4,358	349	170	238	111
140+25.00	792	352	349	92	0	0	0	0		443	3,540	224		3,764	4,893	-4,450	2,909	4,780	349	168	235	114
140+50.00	679	297	349	33	0	0	0	0		330	3,773	231		4,004	5,206	-4,876	2,909	5,092	349	163	229	120
140+75.00	607	258	349	0	0	0	0	0		258	3,909	233		4,143	5,386	-5,128	2,909	5,273	349	159	222	127
141+00.00	552	203	349	0	0	0	0	0		203	3,965	234		4,199	5,459	-5,256	2,909	5,346	349	154	216	133
141+25.00	501	152	349	0	0	0	0	0		152	3,991	235		4,226	5,494	-5,342	2,909	5,381	349	151	211	138
141+50.00	450	101	349	0	0	0	0	0		101	4,005	237		4,242	5,515	-5,414	2,909	5,402	349	147	205	144
141+75.00	424	74	349	0	0	0	0	0		74	3,999	238		4,237	5,508	-5,434	2,909	5,395	349	143	200	150
142+00.00	427	78	349	0	0	0	0	0		78	3,983	236		4,219	5,485	-5,407	2,909	5,372	349	141	197	153
142+25.00	438	89	350	0	0	0	0	0		89	3,991	234		4,225	5,493	-5,404	2,909	5,379	350	140	197	153
142+50.00	466	109	357	0	0	0	0	0		109	4,093	240		4,332	5,632	-5,523	2,909	5,520	357	147	206	150
142+75.00	556	178	379	0	0	0	0	0		178	4,339	258		4,597	5,977	-5,799	2,909	5,863	379	170	238	140
143+00.00	720	311	409	0	0	0	0	0		311	3,911	250		4,161	5,409	-5,098	2,909	5,296	409	188	263	146
143+25.00	784	345	439	0	0	0	0	0		345	3,250	225		3,475	4,517	-4,172	2,909	4,404	439	178	249	190
143+50.00	649	194	455	0	0	0	0	0		194	2,017	129		2,147	2,791	-2,597	2,441	2,678	455	97	135	320
143+75.00	524	44	480	0	0	0	0	0		44	847	37		884	1,150	-1,106	800	1,036	480	13	18	462
144+00.00	511	0	511	0	0	0	0	0		0	817	37		854	1,110	-1,110	761	997	511	0	0	511
144+25.00	519	0	519	0	0	0	0	0		0	783	37		820	1,066	-1,066	716	953	519	0	0	519
144+50.00	519	0	519	0	0	0	0	0		0	743	37		780	1,014	-1,014	664	901	519	0	0	519
144+75.00	519	0	519	0	0	0	0	0		0	700	37		737	958	-958	608	845	519	0	0	519
145+00.00	519	0	519	0	0	0	0	0		0	1,116	61		1,177	1,530	-1,530	1,180	1,417	519	0	0	519
145+25.00	519	0	519	0	0	0	0	0		0	1,727	106		1,833	2,383	-2,383	2,033	2,270	519	23	32	487
145+50.00	519	0	519	0	0	0	0	0		0	2,083	154		2,237	2,908	-2,908	2,558	2,795	519	57	80	439
145+75.00	534	15	519	0	0	0	0	0		15	2,220	190		2,410	3,133	-3,118	2,783	3,020	519	80	112	406
146+00.00	623	105	519	0	0	0	0	0		105	2,059	191		2,250	2,925	-2,821	2,575	2,812	519	100	140	378
146+25.00	807	288	519	0	0	0	0	0		288	1,799	173		1,972	2,564	-2,276	2,214	2,451	519	111	155	363
146+50.00	1,088	569	519	0	0	0	0	0		569	1,568	155		1,723	2,240	-1,671	1,890	2,127	519	125	175	344
146+75.00	1,311	793	519	0	0	0	0	0		793	1,444	147		1,591	2,068	-1,276	1,719	1,955	519	139	195	323
147+00.00	1,407	888	519	0	0	0	0	0		888	1,444	144		1,589	2,065	-1,177	1,716	1,953	519	144	202	316
147+25.00	1,504	985	519	0	0	0	0	0		985	1,471	143		1,614	2,098	-1,113	1,749	1,985	519	149	209	310
147+43.50	1,089	705	384	0	0	0	0	0		705	1,245	108		1,353	1,759	-1,054	1,500	1,674	384	110	154	230
147+50.00	0	0	0	0	0	0	0	0	609	609	0		5,005	5,005	6,506	-5,897	0	0	0	0	0	0
147+75.00	0	0	0	0	0	0	0	0		0	0			0	0	0	0	0	0	0	0	0
148+00.00	0	0	0	0	0	0	0	0		0	0			0	0	0	0	0	0	0	0	0
148+25.00	0	0	0	0	0	0	0	0		0	0			0	0	0	0	0	0	0	0	0
148+50.00	0	0	0	0	0	0	0	0		0	0			0	0	0	0	0	0	0	0	0
148+75.00	0	0	0	0	0	0	0	0		0	0			0	0	0	0	0	0	0	0	0
149+00.00	0	0	0	0	0	0	0	0		0	0			0	0	0	0	0	0	0	0	0
149+25.00	0	0	0	0	0	0	0	0		0	0			0	0	0	0	0	0	0	0	0
149+50.00	0	0	0	0	0	0	0	0		0	0			0	0	0	0	0	0	0	0	0
149+75.00	0	0	0	0	0	0	0	0		0	0			0	0	0	0	0	0	0	0	0
150+00.00	0	0	0	0	0	0	0	0		0	0			0	0	0	0	0	0	0	0	0
150+25.00	0	0	0	0	0	0	0	0		0	0			0	0	0	0	0	0	0	0	0
150+26.50	0	0	0	0	0	0	0	0		0	0			0	0	0	0	0	0	0	0	0
150+50.00	1,454	966	487	0	0	0	0	0	495	1,462	1,627	135	5,368	7,130	9,269	-7,807	1,962	2,184	487	145	202	285
150+75.00	1,957	1,438	519	0	0	0	0	0		1,438	1,247	128		1,376	1,789	-350	1,439	1,676	519	161	226	293
151+00.00	1,994	1,475	519	0	0	0	0	0		1,475	1,060	127		1,187	1,543	-68	1,193	1,430	519	160	223	295
Subtotals:	41,271	18,160	20,596	2,515	0	0	0	0	1,104	21,779	109,534	8,448	10,372	128,354	166,863	-145,086	105,560	147,416	20,596	6,275	8,787	11,812

FILE NO. | ENGLISH | DESIGN TEAM Flattery\Johnson | MAHASKA COUNTY | PROJECT NUMBER NHSX-063-3(95)--3H-62 | SHEET NUMBER T.3

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
151+00.00	1,946	1,428	519	0	0	0	0	0		1,428	987	128		1,115	1,450	-22	1,100	1,336	519	157	220	298
151+25.00	1,922	1,403	519	0	0	0	0	0		1,403	984	131		1,115	1,449	-46	1,100	1,336	519	156	219	300
151+50.00	1,870	1,352	519	0	0	0	0	0		1,352	1,007	138		1,145	1,488	-136	1,139	1,375	519	153	214	304
151+75.00	1,739	1,220	519	0	0	0	0	0		1,220	1,029	145		1,174	1,527	-307	1,177	1,414	519	147	206	313
152+00.00	1,490	972	519	0	0	0	0	0		972	995	146		1,141	1,483	-511	1,134	1,370	519	133	187	332
152+25.00	1,348	829	519	0	0	0	0	0		829	936	146		1,082	1,406	-577	1,057	1,294	519	124	174	344
152+50.00	1,377	870	507	0	0	0	0	0		870	892	133		1,025	1,332	-462	983	1,219	507	126	176	331
152+75.00	1,382	875	507	0	0	0	0	0		875	702	106		809	1,051	-176	702	939	507	116	162	344
153+00.00	1,353	835	519	0	0	0	0	0		835	539	97		635	826	9	476	714	519	104	146	372
153+25.00	1,313	795	519	0	0	0	0	0		795	522	97		619	805	-10	455	692	519	101	141	378
153+50.00	1,272	753	519	0	0	0	0	0		753	486	95		581	755	-2	406	642	519	97	136	382
153+75.00	1,206	706	499	0	0	0	0	0		706	452	93		545	708	-2	359	595	499	94	132	368
154+00.00	1,110	661	449	0	0	0	0	0		661	425	91		516	671	-10	321	558	449	91	127	322
154+25.00	1,000	606	395	0	0	0	0	0		606	405	90		496	645	-39	295	532	395	86	120	275
154+50.00	874	515	358	0	0	0	0	0		515	387	89		475	618	-103	268	504	358	76	106	252
154+75.00	755	424	331	0	0	0	0	0		424	367	86		454	590	-166	241	477	331	65	92	239
155+00.00	684	373	310	0	0	0	0	0		373	348	85		433	563	-189	213	450	310	60	84	226
155+25.00	829	533	296	0	0	0	0	0		533	408	106		514	669	-136	319	556	296	92	129	167
155+50.00	957	674	283	0	0	0	0	0		674	459	126		585	760	-86	411	647	283	120	168	115
155+75.00	882	613	269	0	0	0	0	0		613	422	123		546	709	-96	360	597	269	110	155	115
156+00.00	832	571	261	0	0	0	0	0		571	389	123		512	665	-95	316	553	261	105	147	114
156+25.00	797	540	257	0	0	0	0	0		540	357	123		479	623	-83	273	511	257	101	141	116
156+50.00	760	506	254	0	0	0	0	0		506	325	121		446	579	-73	229	467	254	97	136	118
156+75.00	720	470	250	0	0	0	0	0		470	289	117		406	528	-59	178	416	250	93	130	120
157+00.00	680	433	247	0	0	0	0	0		433	250	113		363	471	-38	122	359	247	88	124	123
157+25.00	638	395	243	0	0	0	0	0		395	211	110		321	418	-23	68	304	243	84	118	125
157+50.00	608	368	240	0	0	0	0	0		368	173	106		279	363	6	13	250	240	82	115	125
157+75.00	531	237	236	57	0	0	0	0		295	139	96		235	306	-12	0	194	236	83	116	121
158+00.00	429	61	271	96	0	0	0	0		157	103	78		181	235	-77	0	122	271	57	80	191
158+25.00	448	12	364	73	0	0	0	0		85	78	63		141	184	-99	0	72	364	30	42	322
158+50.00	542	14	465	63	0	0	0	0		76	74	59		134	174	-97	0	61	465	29	41	424
158+75.00	578	13	515	50	0	0	0	0		63	69	55		124	161	-98	0	48	515	27	38	476
159+00.00	567	13	519	36	0	0	0	0		49	62	48		110	143	-94	0	30	519	25	34	484
159+25.00	535	10	506	19	0	0	0	0		28	56	40		97	126	-98	0	13	506	12	16	490
159+50.00	503	7	480	15	0	0	0	0		23	48	32		80	104	-82	0	0	480	10	14	466
159+75.00	465	13	429	23	0	0	0	0		36	37	25		62	80	-44	0	0	429	21	29	400
160+00.00	353	18	305	30	0	0	0	0		48	31	21		52	68	-20	0	0	305	21	30	275
160+25.00	265	21	203	41	0	0	0	0		62	27	17		44	57	5	0	0	203	22	31	173
160+50.00	266	28	187	51	0	0	0	0		79	21	14		35	46	33	0	0	187	22	31	156
160+75.00	283	70	184	29	0	0	0	0		99	16	12		28	37	62	0	0	184	23	32	153
161+00.00	305	123	182	0	0	0	0	0		123	12	11		22	29	94	0	0	182	23	33	149
161+25.00	327	148	179	0	0	0	0	0		148	7	7		15	19	129	0	0	179	24	34	146
161+50.00	442	265	177	0	0	0	0	0		265	6	6		12	16	250	0	0	177	38	54	123
161+75.00	554	380	174	0	0	0	0	0		380	5	5		11	14	366	0	0	174	52	72	102
162+00.00	584	409	175	0	0	0	0	0		409	2	2		4	6	403	0	0	175	52	73	102
162+25.00	613	437	176	0	0	0	0	0		437	1	10		11	15	422	0	0	176	39	55	121
162+50.00	646	470	176	0	0	0	0	0		470	1	10		11	15	455	0	0	176	40	56	120
162+75.00	665	328	175	162	0	0	0	0		490	0	0		1	1	489	0	0	175	54	75	100
163+00.00	670	138	174	357	0	0	0	0		496	0	0		1	1	495	0	0	174	54	75	99
163+25.00	696	132	174	390	0	0	0	0		522	0	0		1	1	521	0	0	174	54	76	98
163+50.00	713	146	173	394	0	0	0	0		540	0	0		1	1	539	0	0	173	55	77	96
163+75.00	725	156	172	397	0	0	0	0		553	0	0		1	1	552	0	0	172	55	77	95
164+00.00	728	161	171	396	0	0	0	0		556	0	0		1	1	556	0	0	171	55	77	94
164+25.00	718	152	171	395	0	0	0	0		547	0	0		1	1	546	0	0	171	55	77	94
164+50.00	710	143	170	396	0	0	0	0		540	0	0		1	1	539	0	0	170	56	78	92
164+75.00	701	139	170	392	0	0	0	0		531	0	0		1	1	530	0	0	170	55	78	92
165+00.00	693	137	169	386	0	0	0	0		523	0	0		1	1	523	0	0	169	55	77	93
165+25.00	701	140	170	391	0	0	0	0		531	0	0		1	1	530	0	0	170	55	77	93
165+50.00	722	152	173	397	0	0	0	0		549	0	0		1	1	548	0	0	173	56	78	95
165+75.00	738	166	176	396	0	0	0	0		562	0	0		1	1	561	0	0	176	56	79	97
166+00.00	751	173	179	399	0	0	0	0		573	0	0		1	1	572	0	0	179	56	79	100
166+25.00	769	182	181	406	0	0	0	0		587	0	0		1	1	587	0	0	181	57	80	102
166+50.00	778	185	184	409	0	0	0	0		594	0	0		1	1	593	0	0	184	58	81	104
166+75.00	768	134	185	449	0	0	0	0		583	0	0		1	1	582	0	0	185	59	82	103
167+00.00	771	99	185	488	0	0	0	0		587	0	0		1	1	586	0	0	185	59	82	103
167+25.00	804	125	184	494	0	0	0	0		619	0	0		1	1	618	0	0	184	58	81	103
167+50.00	863	160	184	519	0	0	0	0		679	0	0		1	1	678	0	0	184	59	82	102
167+75.00	953	219	183	551	0	0	0	0		769	0	0		1	1	769	0	0	183	61	85	98
168+00.00																						
Subtotals:	55,212	25,838	20,227	9,146	0	0	0	0	0	34,984	15,549	3,682	0	19,231	25,005	9,980	13,711	20,647	20,227	4,687	6,565	13,665

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
168+00.00	1,062	300	183	579	0	0	0	0		879	0	0		1	1	878	0	0	183	64	89	94
168+25.00	1,179	395	182	602	0	0	0	0		997	0	0		1	1	996	0	0	182	67	93	89
168+50.00	1,296	498	182	617	0	0	0	0		1,114	0	0		1	1	1,113	0	0	182	68	96	87
168+75.00	1,393	584	184	626	0	0	0	0		1,209	0	0		1	1	1,209	0	0	184	70	98	86
169+00.00	1,458	638	186	635	0	0	0	0		1,272	0	0		1	1	1,272	0	0	186	71	100	86
169+25.00	1,492	662	189	641	0	0	0	0		1,303	0	0		1	1	1,302	0	0	189	73	102	87
169+50.00	1,508	671	191	645	0	0	0	0		1,317	0	0		1	1	1,316	0	0	191	73	103	89
169+75.00	1,523	681	194	649	0	0	0	0		1,329	0	0		1	1	1,328	0	0	194	74	104	90
170+00.00	1,538	691	197	651	0	0	0	0		1,342	0	0		1	1	1,341	0	0	197	74	104	93
170+25.00	1,560	695	198	653	0	0	14	0		1,349	0	0		1	1	1,348	0	0	198	75	105	93
170+50.00	1,587	699	197	657	0	0	34	0		1,356	0	0		1	1	1,355	0	0	197	75	105	92
170+75.00	1,619	716	196	661	0	0	47	0		1,377	0	0		1	1	1,376	0	0	196	76	106	90
171+00.00	1,666	746	195	665	0	0	59	0		1,412	0	0		1	1	1,411	0	0	195	77	107	88
171+25.00	1,712	777	194	669	0	0	73	0		1,446	0	0		1	1	1,445	0	0	194	77	108	86
171+50.00	1,746	796	193	673	0	0	84	0		1,469	0	0		1	1	1,469	0	0	193	78	109	84
171+75.00	1,776	810	193	677	0	0	96	0		1,487	0	0		1	1	1,486	0	0	193	79	110	83
172+00.00	1,806	822	194	679	0	0	112	0		1,500	0	0		1	1	1,500	0	0	194	79	110	84
172+25.00	1,830	831	196	680	0	0	123	0		1,511	0	0		1	1	1,510	0	0	196	79	110	85
172+50.00	1,855	838	197	681	0	0	139	0		1,520	0	0		1	1	1,519	0	0	197	79	111	86
172+75.00	1,885	843	198	681	0	0	163	0		1,524	0	0		1	1	1,523	0	0	198	79	111	87
173+00.00	1,930	854	199	685	0	0	193	0		1,538	0	0		1	1	1,538	0	0	199	80	112	87
173+25.00	1,993	870	200	692	0	0	231	0		1,562	0	0		1	1	1,561	0	0	200	81	113	87
173+50.00	2,055	886	200	699	0	0	270	0		1,585	0	0		1	1	1,584	0	0	200	82	114	86
173+75.00	2,106	902	201	706	0	0	297	0		1,608	0	0		1	1	1,607	0	0	201	83	116	85
174+00.00	2,135	911	202	712	0	0	310	0		1,623	0	0		1	1	1,623	0	0	202	84	118	85
174+25.00	2,163	917	205	718	0	0	323	0		1,636	0	0		1	1	1,635	0	0	205	85	119	86
174+50.00	2,203	926	207	726	0	0	344	0		1,652	0	0		1	1	1,651	0	0	207	86	121	86
174+75.00	2,266	938	209	734	0	0	384	0		1,672	0	0		1	1	1,672	0	0	209	88	123	86
175+00.00	2,339	949	211	742	0	0	437	0		1,691	0	0		1	1	1,690	0	0	211	89	125	86
175+25.00	2,396	957	213	748	0	0	478	0		1,705	0	0		1	1	1,704	0	0	213	90	127	86
175+50.00	2,440	965	214	754	0	0	507	0		1,719	0	0		1	1	1,718	0	0	214	91	128	86
175+75.00	2,477	971	216	758	0	0	533	0		1,728	0	0		1	1	1,727	0	0	216	92	129	87
176+00.00	2,511	974	218	760	0	0	560	0		1,733	0	0		1	1	1,732	0	0	218	92	129	89
176+25.00	2,534	977	220	763	0	0	574	0		1,740	0	0		1	1	1,739	0	0	220	93	130	90
176+50.00	2,549	980	220	765	0	0	584	0		1,745	0	0		1	1	1,744	0	0	220	93	131	90
176+75.00	2,588	985	220	768	0	0	615	0		1,753	0	0		1	1	1,752	0	0	220	94	132	89
177+00.00	2,645	994	221	773	0	0	657	0		1,767	0	0		1	1	1,766	0	0	221	95	133	89
177+25.00	2,695	1,002	223	778	0	0	692	0		1,780	0	0		1	1	1,779	0	0	223	95	134	89
177+50.00	2,748	1,010	224	783	0	0	731	0		1,793	0	0		1	1	1,792	0	0	224	96	135	90
177+75.00	2,798	1,016	226	787	0	0	769	0		1,803	0	0		1	1	1,803	0	0	226	97	136	91
178+00.00	2,830	1,021	228	790	0	0	790	0		1,811	0	0		1	1	1,811	0	0	228	97	136	92
178+25.00	2,853	1,025	229	792	0	0	805	0		1,818	0	0		1	1	1,817	0	0	229	98	137	93
178+50.00	2,882	1,030	231	796	0	0	825	0		1,826	0	0		1	1	1,825	0	0	231	98	138	93
178+75.00	2,910	1,034	233	799	0	0	845	0		1,832	0	0		1	1	1,832	0	0	233	99	138	95
179+00.00	2,950	1,039	235	801	0	0	875	0		1,840	0	0		1	1	1,840	0	0	235	99	139	96
179+25.00	3,001	1,046	237	806	0	0	913	0		1,852	0	0		1	1	1,851	0	0	237	100	140	97
179+50.00	3,036	1,051	239	809	0	0	938	0		1,860	0	0		1	1	1,859	0	0	239	100	141	98
179+75.00	3,100	1,053	291	810	0	0	946	0		1,863	0	0		1	1	1,862	0	0	291	100	141	151
180+00.00	3,250	1,080	347	826	0	0	997	0		1,906	0	0		1	1	1,905	0	0	347	103	145	203
180+25.00	3,449	1,351	356	641	0	0	1,102	0		1,992	0	0		1	1	1,991	0	0	356	109	152	204
180+50.00	3,630	1,853	365	220	0	0	1,192	0		2,073	0	0		1	1	2,072	0	0	365	114	160	205
180+75.00	3,770	2,144	374	0	0	0	1,252	0		2,144	0	0		1	1	2,143	0	0	374	119	166	207
181+00.00	3,923	2,225	382	0	0	0	1,315	0		2,225	0	0		1	1	2,224	0	0	382	124	174	208
181+25.00	4,100	2,319	391	0	0	0	1,390	0		2,319	0	0		1	1	2,319	0	0	391	131	183	208
181+50.00	4,263	2,416	399	0	0	0	1,448	0		2,416	0	0		1	1	2,415	0	0	399	136	191	208
181+75.00	4,400	2,512	405	0	0	0	1,483	0		2,512	0	0		1	1	2,511	0	0	405	142	199	206
182+00.00	4,455	2,578	410	0	0	0	1,467	0		2,578	0	0		1	1	2,577	0	0	410	146	204	205
182+25.00	4,436	2,625	415	0	0	0	1,397	0		2,625	0	0		1	1	2,624	0	0	415	149	208	206
182+50.00	4,393	2,668	420	0	0	0	1,305	0		2,668	0	0		1	1	2,667	0	0	420	152	213	207
182+75.00	4,324	2,686	425	0	0	0	1,214	0		2,686	0	0		1	1	2,685	0	0	425	156	218	207
183+00.00	4,240	2,667	430	0	0	0	1,143	0		2,667	0	0		1	1	2,666	0	0	430	161	226	204
183+25.00	4,158	2,611	435	0	0	0	1,112	0		2,611	0	0		1	1	2,610	0	0	435	167	234	202
183+50.00	4,100	2,541	440	0	0	0	1,119	0		2,541	0	0		1	1	2,540	0	0	440	173	242	199
183+75.00	3,955	1,501	445	0	0	0	2,008	0		1,501	1	1		1	2	1,500	0	0	445	178	250	196
184+00.00	3,967	630	450	0	0	0	2,886	0		630	5	5		9	12	618	0	0	450	184	257	193
184+25.00	4,155	795	454	0	0	0	2,907	0		795	13	12		25	32	762	0	0	454	188	264	190
184+50.00	4,245	845	454	0	0	0	2,945	0		845	22	16		37	49	797	0	0	454	192	269	185
184+75.00	4,297	891	454	0	0	0	2,952	0		891	37	21		58	75	816	0	0	454	195	273	182
185+00.00																						
Subtotals:	184,135	79,914	18,259	35,958	0	0	50,004	0	0	115,871	96	72	0	169	223	115,652	0	0	18,259	7,084	9,921	8,342

FILE NO.	ENGLISH	DESIGN TEAM Flattery\Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER T.5

12/19/2024 11:32:59 AM pflatte c:\pw_work\pwmain\pflatte\d2495705\T_Sheets_62063093Z09_Grading.xlsm

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
185+00.00	4,335	942	454	0	0	0	2,939	0		942	51	26		77	100	842	0	0	454	197	275	179
185+25.00	4,354	1,572	454	0	0	0	2,328	0		1,572	57	28		85	111	1,462	0	0	454	198	277	177
185+50.00	4,356	2,187	454	0	0	0	1,715	0		2,187	65	30		95	124	2,063	0	10	454	200	280	174
185+75.00	4,322	2,167	454	0	0	0	1,701	0		2,167	76	33		109	142	2,025	0	29	454	202	283	171
186+00.00	4,219	2,089	454	0	0	0	1,677	0		2,089	90	36		126	164	1,925	0	51	454	204	286	167
186+25.00	4,099	2,154	453	663	0	0	829	0		2,816	115	42		157	204	2,612	0	91	453	203	284	170
186+50.00	3,990	2,213	453	1,323	0	0	0	0		3,537	164	53		216	281	3,255	0	169	453	201	282	172
186+75.00	3,877	2,107	458	1,312	0	0	0	0		3,419	204	62		266	346	3,073	0	233	458	204	285	173
187+00.00	3,739	1,985	468	1,286	0	0	0	0		3,271	236	69		306	397	2,874	48	285	468	205	287	181
187+25.00	3,570	2,459	477	634	0	0	0	0		3,093	335	81		416	540	2,553	191	428	477	206	289	188
187+50.00	3,271	2,792	480	0	0	0	0	0		2,792	506	102		608	791	2,001	441	677	480	206	288	191
187+75.00	2,851	2,371	480	0	0	0	0	0		2,371	711	125		836	1,087	1,285	737	974	480	204	286	194
188+00.00	2,539	2,058	480	0	0	0	0	0		2,058	923	138		1,061	1,379	680	1,030	1,266	480	204	286	195
188+25.00	2,296	1,816	481	0	0	0	0	0		1,816	1,188	153		1,340	1,742	73	1,392	1,629	481	206	289	192
188+50.00	2,090	1,609	481	0	0	0	0	0		1,609	1,620	178		1,797	2,336	-728	1,986	2,223	481	214	300	181
188+75.00	1,908	1,423	486	0	0	0	0	0		1,423	2,227	211		2,438	3,170	-1,747	2,820	3,056	486	225	315	171
189+00.00	1,927	1,433	494	0	0	0	0	0		1,433	2,971	239		3,210	4,173	-2,740	2,909	4,060	494	237	332	162
189+25.00	2,080	1,581	498	0	0	0	0	0		1,581	3,838	243		4,081	5,306	-3,725	2,909	5,194	498	246	345	154
189+50.00	2,060	1,561	499	0	0	0	0	0		1,561	4,431	240		4,671	6,072	-4,511	2,909	5,959	499	246	345	154
189+75.00	1,934	1,435	499	0	0	0	0	0		1,435	4,142	246		4,389	5,705	-4,271	2,909	5,593	499	247	346	153
190+00.00	1,793	1,293	499	0	0	0	0	0		1,293	3,739	258		3,997	5,196	-3,903	2,909	5,083	499	249	348	151
190+25.00	1,691	1,191	500	0	0	0	0	0		1,191	3,803	273		4,075	5,298	-4,107	2,909	5,186	500	251	351	148
190+50.00	1,499	1,006	493	0	0	0	0	0		1,006	3,254	261		3,515	4,570	-3,564	2,909	4,456	493	244	341	152
190+75.00	1,449	966	483	0	0	0	0	0		966	2,492	228		2,720	3,537	-2,571	3,186	3,423	483	234	328	155
191+00.00	1,837	1,358	479	0	0	0	0	0		1,358	2,116	195		2,311	3,004	-1,647	2,655	2,891	479	224	314	166
191+25.00	2,219	1,740	479	0	0	0	0	0		1,740	1,714	167		1,881	2,445	-705	2,096	2,332	479	210	294	185
191+50.00	2,415	1,936	479	0	0	0	0	0		1,936	1,381	150		1,530	1,990	-53	1,639	1,876	479	204	286	193
191+75.00	2,733	2,255	479	0	0	0	0	0		2,255	1,089	136		1,224	1,591	663	1,242	1,478	479	210	293	185
192+00.00	3,228	2,749	479	0	0	0	0	0		2,749	800	119		919	1,194	1,555	844	1,082	479	218	305	174
192+25.00	3,797	2,127	478	0	0	639	553	0		2,766	550	103		653	849	1,917	499	736	478	222	311	168
192+50.00	4,354	1,330	478	0	0	1,396	1,150	0		2,726	358	86		444	578	2,149	228	465	478	228	319	159
192+75.00	5,075	1,597	478	0	0	1,704	1,297	0		3,300	169	56		225	293	3,008	0	179	478	241	338	140
193+00.00	5,970	1,932	483	0	0	2,049	1,506	0		3,981	32	18		50	65	3,917	0	0	483	255	357	126
193+25.00	6,474	2,119	487	0	0	2,217	1,651	0		4,336	0	0		1	1	4,335	0	0	487	259	362	125
193+50.00	6,660	2,162	487	0	0	2,291	1,719	0		4,454	0	0		1	1	4,453	0	0	487	260	364	123
193+75.00	7,009	2,573	487	453	0	1,817	1,679	0		4,843	0	0		1	1	4,842	0	0	487	263	368	120
194+00.00	7,406	3,332	488	1,403	0	639	1,543	0		5,375	0	0		1	1	5,374	0	0	488	264	369	118
194+25.00	7,767	3,799	488	1,975	0	0	1,505	0		5,774	0	0		1	1	5,773	0	0	488	263	368	120
194+50.00	8,125	3,900	488	2,135	0	0	1,602	0		6,035	0	0		1	1	6,035	0	0	488	260	364	124
194+75.00	8,471	3,913	488	2,315	0	0	1,756	0		6,228	0	0		1	1	6,227	0	0	488	256	359	129
195+00.00	8,790	3,892	488	2,552	0	0	1,858	0		6,444	0	0		1	1	6,443	0	0	488	252	352	135
195+25.00	9,041	2,982	488	4,150	0	0	1,420	0		7,133	0	0		1	1	7,132	0	0	488	247	346	142
195+50.00	9,206	1,100	488	7,136	0	0	482	0		8,236	0	0		1	1	8,235	0	0	488	242	338	150
195+75.00	9,268	119	480	8,669	0	0	0	0		8,788	0	0		1	1	8,787	0	0	480	236	330	150
196+00.00	9,197	118	465	8,614	0	0	0	0		8,732	0	0		1	1	8,731	0	0	465	229	320	145
196+25.00	8,972	111	450	8,411	0	0	0	0		8,522	0	0		1	1	8,521	0	0	450	221	309	141
196+50.00	8,519	110	437	7,972	0	0	0	0		8,082	0	0		1	1	8,081	0	0	437	210	294	143
196+75.00	7,806	83	425	7,297	0	0	0	0		7,380	0	0		1	1	7,379	0	0	425	196	275	151
197+00.00	6,984	34	414	6,535	0	0	0	0		6,569	0	0		1	1	6,569	0	0	414	180	252	163
197+25.00	6,207	154	403	5,239	0	0	412	0		5,393	0	0		1	1	5,392	0	0	403	163	228	175
197+50.00	5,559	523	391	3,366	0	0	1,279	0		3,889	0	0		1	1	3,888	0	0	391	149	209	183
197+75.00	5,317	760	380	2,415	0	0	1,762	0		3,175	0	0		1	1	3,174	0	0	380	144	202	178
198+00.00	5,422	791	371	2,442	0	0	1,818	0		3,234	0	0		1	1	3,233	0	0	371	143	201	170
198+25.00	5,590	554	365	2,793	0	0	1,878	0		3,347	0	0		1	1	3,346	0	0	365	143	200	165
198+50.00	5,817	149	362	3,357	0	0	1,949	0		3,506	0	0		1	1	3,505	0	0	362	148	207	155
198+75.00	5,972	5	359	3,600	0	0	2,007	0		3,605	0	0		1	1	3,604	0	0	359	152	212	147
199+00.00	6,032	10	356	3,630	0	0	2,036	0		3,640	0	0		1	1	3,639	0	0	356	153	215	142
199+25.00	6,112	16	354	3,434	420	19	1,870	0		3,888	0	0		1	1	3,888	0	0	354	155	217	137
199+50.00	6,233	10	354	2,826	1,376	170	1,497	0		4,382	0	0		1	1	4,382	0	0	354	157	219	135
199+75.00	6,376	0	357	2,454	1,928	329	1,306	1		4,711	0	0		1	1	4,710	0	0	357	159	222	135
200+00.00	6,478	0	361	2,477	1,953	366	1,317	3		4,796	0	0		1	1	4,795	0	0	361	160	225	137
200+25.00	6,539	0	365	3,247	1,547	335	1,041	5		5,129	0	0		1	1	5,128	0	0	365	162	227	138
200+50.00	6,569	0	368	5,104	566	146	380	5		5,815	0	0		1	1	5,815	0	0	368	163	228	141
200+75.00	6,583	0	371	6,208	0	0	0	4		6,208	0	0		1	1	6,208	0	0	371	164	230	141
201+00.00	6,580	0	372	6,207	0	0	0	2		6,207	0	0		1	1	6,206	0	0	372	167	234	138
201+25.00	6,678	0	372	5,753	0	285	126	141		6,038	0	0		1	1	6,037	0	0	372	171	239	133
201+50.00	6,847	0	372	4,782	0	866	395	431		5,648	0	0		1	1	5,648	0	0	372	173	242	131
201+75.00	6,779	0	371	4,226	0	1,145	526	511		5,371	0	0		1	1	5,370	0	0	371	172	241	130
202+00.00																						
Subtotals:	349,260	92,755	30,296	148,393	7,789	16,414	52,509	1,104	0	265,352	45,457	4,392	0	49,849	64,808	200,546	41,399	61,113	30,296	14,077	19,711	10,588

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
202+00.00	6,419	0	366	4,108	0	1,105	485	355		5,213	0	0		1	1	5,212	0	0	366	170	238	128
202+25.00	5,815	0	361	3,790	0	1,148	331	184		4,939	0	0		1	1	4,938	0	0	361	166	232	129
202+50.00	5,124	0	355	3,510	0	836	103	320		4,346	0	0		1	1	4,345	0	0	355	162	226	129
202+75.00	4,579	0	351	3,418	0	285	0	525		3,703	0	0		1	1	3,702	0	0	351	158	221	131
203+00.00	4,152	0	353	3,328	0	56	0	416		3,383	0	0		1	1	3,382	0	0	353	155	217	136
203+25.00	3,842	0	357	3,226	0	0	0	259		3,226	0	0		1	1	3,226	0	0	357	153	215	142
203+50.00	3,663	1,525	361	1,590	0	0	0	187		3,114	0	0		1	1	3,114	0	0	361	154	215	146
203+75.00	3,476	2,958	366	0	0	0	0	153		2,958	0	0		1	1	2,957	0	0	366	154	215	151
204+00.00	3,267	2,791	370	0	0	0	0	106		2,791	0	0		1	1	2,790	0	0	370	155	217	154
204+25.00	3,091	2,642	372	0	0	0	0	76		2,642	0	0		1	1	2,641	0	0	372	151	211	161
204+50.00	2,995	2,524	366	0	0	0	0	106		2,524	0	0		1	1	2,523	0	0	366	145	203	163
204+75.00	3,038	2,479	355	0	0	0	0	204		2,479	0	0		1	1	2,478	0	0	355	143	200	155
205+00.00	3,010	2,431	343	0	0	0	0	236		2,431	0	0		1	1	2,430	0	0	343	139	195	148
205+25.00	2,847	2,328	332	0	0	0	0	187		2,328	0	0		1	1	2,327	0	0	332	136	190	142
205+50.00	2,759	1,138	321	835	0	0	0	466		1,972	0	0		1	1	1,971	0	0	321	126	176	145
205+75.00	2,724	0	308	1,648	0	0	0	768		1,648	0	0		1	1	1,647	0	0	308	116	163	145
206+00.00	2,661	0	293	1,593	0	0	0	775		1,593	0	0		1	1	1,592	0	0	293	114	160	133
206+25.00	2,487	0	282	1,530	0	0	0	674		1,530	0	0		1	1	1,529	0	0	282	112	157	125
206+50.00	2,397	449	274	751	0	568	0	355		1,768	0	0		1	1	1,767	0	0	274	110	154	121
206+75.00	2,163	854	266	0	0	951	0	93		1,805	0	0		1	1	1,804	0	0	266	108	151	115
207+00.00	1,643	1,043	192	0	0	386	0	22		1,428	8	5		13	17	1,412	0	0	192	103	145	48
207+25.00	1,403	963	139	0	0	3	0	298		966	11	8		19	25	941	0	0	139	99	139	0
207+50.00	1,510	827	183	0	0	0	0	500		827	4	4		8	10	817	0	0	183	98	138	45
207+75.00	1,591	1,073	228	0	0	0	0	290		1,073	2	2		4	5	1,068	0	0	228	98	137	91
208+00.00	1,489	1,115	238	0	0	0	0	136		1,115	2	2		4	5	1,110	0	0	238	89	125	114
208+25.00	1,297	1,011	220	0	0	0	0	66		1,011	0	0		1	1	1,010	0	0	220	80	113	108
208+50.00	1,047	817	209	0	0	0	0	22		817	0	0		1	1	816	0	0	209	78	110	99
208+75.00	782	550	209	0	0	0	0	23		550	18	12		30	39	511	0	0	209	77	107	102
209+00.00	581	342	209	0	0	0	0	30		342	105	50		155	202	140	0	88	209	77	107	102
209+25.00	484	257	209	0	0	0	0	19		257	263	87		350	455	-198	105	342	209	76	106	103
209+50.00	458	233	209	0	0	0	0	16		233	382	98		480	623	-391	274	511	209	74	104	106
209+75.00	479	246	209	0	0	0	0	24		246	390	99		489	636	-390	286	523	209	74	103	106
210+00.00	529	279	209	0	0	0	0	41		279	327	91		418	544	-265	194	432	209	76	106	103
210+25.00	604	329	210	0	0	0	0	65		329	247	74		321	417	-88	68	304	210	76	106	104
210+50.00	671	377	210	0	0	0	0	85		377	180	59		240	312	65	0	199	210	73	102	108
210+75.00	687	394	210	0	0	0	0	83		394	144	55		199	259	135	0	146	210	71	99	111
211+00.00	709	410	210	0	0	0	0	89		410	134	52		186	242	168	0	129	210	72	101	109
211+25.00	734	421	211	0	0	0	0	102		421	155	54		209	272	150	0	159	211	76	107	104
211+50.00	708	398	211	0	0	0	0	100		398	211	66		277	360	37	10	247	211	81	114	97
211+75.00	661	359	211	0	0	0	0	90		359	274	79		353	459	-99	109	346	211	84	118	94
212+00.00	600	314	212	0	0	0	0	74		314	351	93		444	577	-263	228	464	212	85	119	92
212+25.00	530	269	212	0	0	0	0	50		269	465	108		574	746	-478	397	633	212	85	120	92
212+50.00	446	217	205	0	0	0	0	24		217	622	116		738	959	-742	610	846	205	85	119	86
212+75.00	370	160	205	0	0	0	0	5		160	797	128		925	1,203	-1,043	853	1,089	205	85	119	86
213+00.00	317	104	213	0	0	0	0	0		104	938	141		1,079	1,403	-1,299	1,053	1,290	213	84	117	96
213+25.00	276	63	214	0	0	0	0	0		63	1,068	144		1,212	1,576	-1,513	1,226	1,463	214	83	116	97
213+50.00	258	43	215	0	0	0	0	0		43	1,187	150		1,337	1,738	-1,695	1,388	1,625	215	84	118	97
213+75.00	254	34	220	0	0	0	0	0		34	1,283	154		1,437	1,869	-1,834	1,518	1,755	220	86	120	100
214+00.00	267	40	226	0	0	0	0	0		40	1,497	163		1,660	2,158	-2,117	1,808	2,045	226	64	90	136
214+25.00	291	59	232	0	0	0	0	0		59	1,560	161		1,722	2,238	-2,179	1,889	2,126	232	67	94	138
214+50.00	327	91	235	0	0	0	0	0		91	1,340	148		1,488	1,935	-1,843	1,585	1,821	235	92	129	106
214+75.00	360	123	237	0	0	0	0	0		123	1,189	143		1,332	1,732	-1,609	1,382	1,619	237	93	130	108
215+00.00	376	136	240	0	0	0	0	0		136	1,126	139		1,265	1,645	-1,509	1,295	1,533	240	92	128	111
215+25.00	395	153	242	0	0	0	0	0		153	1,055	136		1,191	1,548	-1,395	1,199	1,435	242	90	127	115
215+50.00	420	176	244	0	0	0	0	0		176	981	133		1,114	1,449	-1,272	1,099	1,335	244	89	125	119
215+75.00	449	202	246	0	0	0	0	0		202	908	130		1,038	1,350	-1,147	1,000	1,236	246	88	124	123
216+00.00	489	241	249	0	0	0	0	0		241	830	130		960	1,248	-1,007	898	1,135	249	89	125	124
216+25.00	538	287	251	0	0	0	0	0		287	763	129		892	1,160	-873	810	1,047	251	89	125	126
216+50.00	571	318	253	0	0	0	0	0		318	723	127		850	1,105	-787	755	992	253	90	126	128
216+75.00	580	238	255	0	0	0	0	86		238	701	126		827	1,075	-837	725	962	255	92	129	126
217+00.00	580	149	258	0	0	0	0	173		149	687	124		811	1,054	-905	705	941	258	94	132	126
217+25.00	591	152	260	0	0	0	0	178		152	670	120		790	1,027	-875	677	914	260	93	131	129
217+50.00	593	156	262	0	0	0	0	175		156	613	114		728	946	-790	597	833	262	92	129	134
217+75.00	588	160	264	0	0	0	0	164		160	547	111		657	855	-695	504	742	264	91	128	137
218+00.00	627	172	265	0	0	0	0	189		172	507	108		615	800	-628	450	688	265	93	130	136
218+25.00	681	188	263	0	0	0	0	230		188	475	107		582	757	-569	407	644	263	95	134	130
218+50.00	705	195	259	0	0	0	0	250		195	447	106		553	720	-524	369	607	259	97	135	124
218+75.00	720	336	256	0	0	0	0	129		336	416	104		521	677	-341	328	564	256	98	137	119
219+00.00																						
Subtotals:	101,776	38,339	17,581	29,326	0	5,337	919	10,273	0	73,002	26,614	4,499	0	31,113	40,450	32,552	26,800	35,807	17,581	6,922	9,694	7,890

FILE NO.	ENGLISH	DESIGN TEAM Flattery\Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER T.7

12/19/2024 11:32:59 AM pflatte c:\pw_work\pwmain\pflatte\d2495705\T_Sheets_62063093Z09_Grading.xlsm

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
219+00.00	724	472	252	0	0	0	0	0		472	383	102		485	631	-158	281	517	252	98	137	114
219+25.00	695	447	248	0	0	0	0	0		447	367	101		469	609	-162	260	497	248	97	136	112
219+50.00	638	394	244	0	0	0	0	0		394	366	101		467	608	-214	257	494	244	95	133	111
219+75.00	628	348	281	0	0	0	0	0		348	371	102		473	615	-267	265	502	281	93	130	151
220+00.00	665	325	340	0	0	0	0	0		325	390	103		493	641	-316	291	528	340	91	128	212
220+25.00	681	313	368	0	0	0	0	0		313	414	104		518	673	-360	324	560	368	91	128	240
220+50.00	698	314	384	0	0	0	0	0		314	433	105		538	700	-385	350	586	384	92	128	256
220+75.00	758	337	421	0	0	0	0	0		337	446	107		553	719	-382	369	606	421	96	134	287
221+00.00	833	350	484	0	0	0	0	0		350	479	113		592	769	-419	420	657	484	102	143	341
221+25.00	768	229	519	0	0	0	0	20		229	454	116		570	741	-512	391	628	519	83	117	402
221+50.00	605	67	519	0	0	0	0	20		67	320	100		421	547	-480	196	434	519	44	62	457
221+75.00	566	46	519	0	0	0	0	1		46	190	77		267	347	-301	0	234	519	27	38	481
222+00.00	653	127	519	0	0	0	0	8		127	103	52		155	202	-75	0	88	519	31	43	475
222+25.00	814	271	519	0	0	0	0	24		271	50	30		80	104	167	0	0	519	36	50	469
222+50.00	1,346	737	519	3	0	0	0	87		740	24	19		43	56	684	0	0	519	72	101	417
222+75.00	1,926	1,240	501	39	0	0	0	146		1,278	12	12		24	31	1,248	0	0	501	115	162	340
223+00.00	2,156	1,436	468	35	0	0	0	217		1,471	7	7		14	19	1,453	0	0	468	127	177	291
223+25.00	2,323	1,523	450	0	0	0	0	350		1,523	5	5		9	12	1,511	0	0	450	132	185	265
223+50.00	2,459	1,516	430	0	0	0	0	514		1,516	2	2		4	6	1,510	0	0	430	139	194	235
223+75.00	2,495	1,379	387	0	0	0	0	729		1,379	0	0		1	1	1,379	0	0	387	143	201	186
224+00.00	2,490	1,134	363	0	0	0	0	993		1,134	0	0		1	1	1,133	0	0	363	145	202	161
224+25.00	2,586	950	364	0	0	0	0	1,273		950	0	0		1	1	949	0	0	364	144	202	162
224+50.00	2,822	871	365	0	0	0	0	1,587		871	0	0		1	1	870	0	0	365	145	203	162
224+75.00	3,146	822	365	0	0	0	0	1,959		822	0	0		1	1	821	0	0	365	146	205	161
225+00.00	3,452	765	366	0	0	0	0	2,321		765	0	0		1	1	764	0	0	366	149	209	158
225+25.00	3,650	716	367	0	0	0	0	2,567		716	0	0		1	1	715	0	0	367	153	215	152
225+50.00	3,732	750	367	0	0	0	0	2,615		750	0	0		1	1	749	0	0	367	159	222	145
225+75.00	3,794	821	368	0	0	0	0	2,605		821	0	0		1	1	820	0	0	368	164	229	139
226+00.00	3,893	824	369	0	0	0	0	2,700		824	0	0		1	1	823	0	0	369	168	235	134
226+25.00	3,917	756	370	0	0	0	0	2,791		756	0	0		1	1	755	0	0	370	168	236	134
226+50.00	3,975	679	370	0	0	0	0	2,926		679	0	0		1	1	678	0	0	370	165	232	139
226+75.00	4,228	685	371	0	0	0	0	3,172		685	0	0		1	1	684	0	0	371	165	231	140
227+00.00	4,641	846	372	0	0	0	0	3,423		846	0	0		1	1	845	0	0	372	168	236	136
227+25.00	5,204	1,160	374	0	0	0	0	3,670		1,160	0	0		1	1	1,159	0	0	374	171	239	135
227+50.00	5,794	1,500	379	0	0	0	0	3,915		1,500	0	0		1	1	1,499	0	0	379	175	246	133
227+75.00	6,317	1,769	384	0	0	0	0	4,164		1,769	0	0		1	1	1,769	0	0	384	182	255	129
228+00.00	6,757	2,037	388	0	0	0	0	4,331		2,037	0	0		1	1	2,037	0	0	388	188	264	125
228+25.00	7,168	1,732	393	699	0	0	0	4,344		2,431	0	0		1	1	2,430	0	0	393	195	273	120
228+50.00	7,497	1,313	398	1,412	0	0	0	4,375		2,724	0	0		1	1	2,724	0	0	398	201	282	116
228+75.00	7,602	1,286	403	1,430	0	0	0	4,484		2,715	0	0		1	1	2,715	0	0	403	204	286	117
229+00.00	7,476	1,133	407	1,433	0	0	0	4,504		2,566	0	0		1	1	2,565	0	0	407	205	287	120
229+25.00	7,114	1,569	408	715	0	0	0	4,422		2,284	0	0		1	1	2,283	0	0	408	204	285	123
229+50.00	6,684	2,081	409	0	0	0	0	4,193		2,081	0	0		1	1	2,080	0	0	409	203	285	125
229+75.00	6,489	2,205	410	0	0	0	0	3,874		2,205	0	0		1	1	2,204	0	0	410	205	288	123
230+00.00	6,715	2,472	411	0	0	0	0	3,832		2,472	0	0		1	1	2,471	0	0	411	210	294	117
230+25.00	7,260	2,811	412	0	0	0	0	4,037		2,811	0	0		1	1	2,810	0	0	412	216	303	109
230+50.00	7,865	3,234	413	0	0	0	0	4,218		3,234	0	0		1	1	3,233	0	0	413	223	312	101
230+75.00	8,327	3,607	414	0	0	0	0	4,306		3,607	0	0		1	1	3,606	0	0	414	226	316	98
231+00.00	8,475	3,860	415	0	0	0	0	4,201		3,860	0	0		1	1	3,859	0	0	415	225	315	99
231+25.00	8,260	3,891	416	0	0	0	0	3,954		3,891	0	0		1	1	3,890	0	0	416	223	312	104
231+50.00	7,821	3,687	418	0	0	0	0	3,716		3,687	0	0		1	1	3,686	0	0	418	220	308	110
231+75.00	7,317	3,361	426	0	0	0	0	3,530		3,361	0	0		1	1	3,360	0	0	426	216	303	124
232+00.00	6,853	2,860	439	0	0	0	0	3,555		2,860	0	0		1	1	2,859	0	0	439	213	299	140
232+25.00	6,717	2,468	451	0	0	0	0	3,798		2,468	0	0		1	1	2,467	0	0	451	215	301	151
232+50.00	6,993	2,437	460	0	0	0	0	4,096		2,437	0	0		1	1	2,436	0	0	460	218	305	154
232+75.00	7,620	2,762	462	0	0	0	0	4,396		2,762	0	0		1	1	2,761	0	0	462	221	309	154
233+00.00	8,538	3,695	464	0	0	0	0	4,379		3,695	0	0		1	1	3,694	0	0	464	226	317	148
233+25.00	9,544	4,672	466	0	0	0	0	4,406		4,672	0	0		1	1	4,672	0	0	466	234	327	139
233+50.00	10,565	5,334	468	0	0	0	0	4,764		5,334	0	0		1	1	5,333	0	0	468	242	338	129
233+75.00	11,694	6,069	469	0	0	0	0	5,156		6,069	0	0		0	1	6,069	0	0	469	250	350	119
234+00.00	12,868	6,835	471	0	0	0	0	5,563		6,835	0	0		0	0	6,834	0	0	471	256	358	113
234+25.00	13,929	7,512	472	0	0	0	0	5,944		7,512	0	0		0	0	7,512	0	0	472	257	360	112
234+50.00	14,853	8,072	474	0	0	0	0	6,307		8,072	0	0		0	0	8,072	0	0	474	258	361	113
234+75.00	15,529	8,457	476	0	0	0	0	6,596		8,457	0	0		0	0	8,456	0	0	476	260	363	112
235+00.00	15,918	8,620	477	0	0	0	0	6,821		8,620	0	0		0	0	8,620	0	0	477	262	367	110
235+25.00	16,097	8,583	479	0	0	0	0	7,035		8,583	0	0		0	0	8,583	0	0	479	265	370	109
235+50.00	16,121	8,394	480	0	0	0	0	7,246		8,394	0	0		0	1	8,394	0	0	480	262	366	114
235+75.00	16,042	8,089	482	0	0	0	0	7,471		8,089	0	0		0	1	8,088	0	0	482	256	359	123
236+00.00																						
Subtotals:	394,781	162,053	28,313	5,766	0	0	0	198,649	0	167,819	4,832	1,370	0	6,202	8,066	159,754	3,405	6,331	28,313	11,629	16,284	12,032

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
236+00.00	15,876	7,684	484	0	0	0	0	7,708		7,684	0	0		0	1	7,684	0	0	484	254	356	128
236+25.00	15,664	7,226	485	0	0	0	0	7,953		7,226	0	0		0	1	7,225	0	0	485	252	353	133
236+50.00	15,484	6,788	487	0	0	0	0	8,209		6,788	0	0		1	1	6,787	0	0	487	251	352	135
236+75.00	15,326	6,360	488	0	0	0	0	8,477		6,360	0	0		1	1	6,360	0	0	488	253	355	134
237+00.00	15,015	5,018	490	0	0	1,138	0	8,370		6,155	0	0		0	1	6,155	0	0	490	254	356	135
237+25.00	14,557	3,723	492	0	0	2,258	0	8,084		5,981	0	0		0	1	5,981	0	0	492	252	353	138
237+50.00	14,156	3,429	493	0	0	2,223	0	8,011		5,651	0	0		0	1	5,651	0	0	493	252	352	141
237+75.00	13,842	3,193	495	0	0	2,207	0	7,948		5,400	0	0		0	1	5,399	0	0	495	251	352	143
238+00.00	13,427	2,942	496	0	0	2,195	0	7,793		5,137	0	0		0	1	5,136	0	0	496	251	352	145
238+25.00	12,828	2,755	496	0	0	2,156	0	7,421		4,911	0	0		0	1	4,911	0	0	496	250	350	146
238+50.00	12,105	2,599	491	0	0	2,091	0	6,924		4,690	0	0		1	1	4,690	0	0	491	248	348	143
238+75.00	11,259	2,808	482	0	0	1,026	0	6,943		3,834	0	0		1	1	3,833	0	0	482	242	338	144
239+00.00	10,350	2,927	472	0	0	0	0	6,951		2,927	0	0		1	1	2,926	0	0	472	232	325	147
239+25.00	9,488	2,640	462	0	0	0	0	6,385		2,640	0	0		1	1	2,640	0	0	462	226	317	146
239+50.00	8,666	2,467	453	0	0	0	0	5,746		2,467	0	0		1	1	2,466	0	0	453	221	310	143
239+75.00	7,909	2,383	443	0	0	0	0	5,083		2,383	0	0		1	1	2,383	0	0	443	216	302	141
240+00.00	7,245	2,377	433	0	0	0	0	4,435		2,377	0	0		1	1	2,376	0	0	433	211	295	138
240+25.00	6,551	2,353	422	0	0	0	0	3,776		2,353	0	0		1	1	2,352	0	0	422	200	279	143
240+50.00	5,832	2,303	406	0	0	0	0	3,124		2,303	0	0		1	1	2,302	0	0	406	188	263	143
240+75.00	5,146	2,215	386	0	0	0	0	2,545		2,215	0	0		1	1	2,214	0	0	386	178	249	138
241+00.00	4,481	2,010	370	0	0	0	0	2,101		2,010	0	0		1	1	2,009	0	0	370	167	234	136
241+25.00	3,816	1,689	356	0	0	0	0	1,771		1,689	0	0		1	1	1,688	0	0	356	160	224	132
241+50.00	3,157	1,361	342	0	0	0	0	1,455		1,361	0	0		1	1	1,360	0	0	342	152	213	129
241+75.00	2,554	1,578	327	0	0	0	0	649		1,578	0	0		1	1	1,577	0	0	327	145	203	124
242+00.00	2,007	1,694	313	0	0	0	0	0		1,694	3	3		6	8	1,687	0	0	313	139	195	118
242+25.00	1,536	1,237	299	0	0	0	0	0		1,237	31	23		55	71	1,166	0	0	299	132	185	114
242+50.00	1,208	924	284	0	0	0	0	0		924	112	61		173	225	699	0	112	284	120	168	116
242+75.00	1,004	734	270	0	0	0	0	0		734	223	87		311	404	330	55	291	270	109	153	117
243+00.00	853	595	258	0	0	0	0	0		595	324	97		421	548	47	198	434	258	105	148	111
243+25.00	733	483	249	0	0	0	0	0		483	412	103		515	670	-186	320	556	249	102	143	107
243+50.00	631	391	240	0	0	0	0	0		391	495	108		603	784	-393	434	671	240	99	138	102
243+75.00	560	324	235	0	0	0	0	0		324	581	113		694	902	-578	553	789	235	97	135	100
244+00.00	510	275	235	0	0	0	0	0		275	659	117		777	1,010	-735	660	897	235	95	133	102
244+25.00	466	232	235	0	0	0	0	0		232	727	121		848	1,103	-871	753	989	235	92	130	105
244+50.00	432	197	235	0	0	0	0	0		197	798	124		922	1,199	-1,002	849	1,086	235	91	127	107
244+75.00	401	167	234	0	0	0	0	0		167	866	128		994	1,292	-1,125	943	1,179	234	89	125	109
245+00.00	377	143	234	0	0	0	0	0		143	922	131		1,053	1,369	-1,226	1,019	1,256	234	89	124	110
245+25.00	365	131	234	0	0	0	0	0		131	960	133		1,093	1,420	-1,289	1,071	1,308	234	88	124	110
245+50.00	358	124	234	0	0	0	0	0		124	988	134		1,121	1,458	-1,334	1,108	1,346	234	88	123	111
245+75.00	348	114	234	0	0	0	0	0		114	1,007	135		1,142	1,484	-1,370	1,135	1,372	234	87	122	111
246+00.00	341	108	233	0	0	0	0	0		108	1,018	135		1,153	1,499	-1,391	1,149	1,386	233	86	121	112
246+25.00	339	105	233	0	0	0	0	0		105	1,023	135		1,158	1,506	-1,400	1,156	1,392	233	86	120	113
246+50.00	339	106	233	0	0	0	0	0		106	1,019	135		1,154	1,500	-1,394	1,151	1,387	233	86	120	113
246+75.00	345	112	233	0	0	0	0	0		112	1,002	135		1,137	1,478	-1,366	1,128	1,365	233	86	121	112
247+00.00	347	114	233	0	0	0	0	0		114	984	135		1,119	1,455	-1,340	1,105	1,342	233	87	121	111
247+25.00	337	105	232	0	0	0	0	0		105	980	135		1,115	1,449	-1,345	1,100	1,336	232	86	120	112
247+50.00	327	95	232	0	0	0	0	0		95	992	135		1,127	1,465	-1,370	1,115	1,352	232	85	119	114
247+75.00	315	83	232	0	0	0	0	0		83	1,016	136		1,152	1,498	-1,415	1,148	1,385	232	83	116	116
248+00.00	296	64	232	0	0	0	0	0		64	1,043	138		1,181	1,536	-1,472	1,186	1,422	232	81	114	118
248+25.00	281	49	232	0	0	0	0	0		49	1,065	140		1,206	1,568	-1,518	1,218	1,455	232	81	113	118
248+50.00	278	46	232	0	0	0	0	0		46	1,083	143		1,225	1,593	-1,547	1,243	1,479	232	82	115	117
248+75.00	278	47	231	0	0	0	0	0		47	1,098	144		1,242	1,615	-1,568	1,265	1,502	231	83	116	115
249+00.00	280	49	231	0	0	0	0	0		49	1,110	145		1,255	1,631	-1,582	1,282	1,518	231	83	117	115
249+25.00	285	54	231	0	0	0	0	0		54	1,110	144		1,254	1,630	-1,576	1,281	1,517	231	84	117	114
249+50.00	293	62	231	0	0	0	0	0		62	1,102	142		1,244	1,617	-1,555	1,268	1,504	231	84	118	113
249+75.00	301	71	231	0	0	0	0	0		71	1,090	140		1,230	1,599	-1,529	1,249	1,486	231	85	119	112
250+00.00	309	78	230	0	0	0	0	0		78	1,068	138		1,206	1,568	-1,490	1,218	1,455	230	85	119	111
250+25.00	319	88	230	0	0	0	0	0		88	1,038	137		1,175	1,527	-1,439	1,178	1,414	230	86	120	110
250+50.00	335	105	230	0	0	0	0	0		105	1,009	135		1,144	1,487	-1,383	1,138	1,374	230	86	121	109
250+75.00	357	127	230	0	0	0	0	0		127	971	133		1,104	1,436	-1,309	1,086	1,323	230	88	123	107
251+00.00	376	147	230	0	0	0	0	0		147	933	132		1,064	1,384	-1,237	1,034	1,270	230	90	125	104
251+25.00	391	162	230	0	0	0	0	0		162	903	130		1,033	1,343	-1,182	993	1,230	230	91	127	102
251+50.00	407	178	229	0	0	0	0	0		178	873	129		1,002	1,302	-1,124	953	1,190	229	92	129	101
251+75.00	430	201	229	0	0	0	0	0		201	838	127		965	1,254	-1,053	905	1,141	229	93	130	99
252+00.00	453	224	229	0	0	0	0	0		224	798	126		924	1,201	-977	852	1,088	229	94	132	97
252+25.00	472	243	229	0	0	0	0	0		243	756	124		880	1,144	-901	794	1,031	229	96	134	95
252+50.00	494	265	229	0	0	0	0	0		265	712	122		834	1,084	-819	735	971	229	97	135	93
252+75.00	525	297	229	0	0	0	0	0		297	669	118		787	1,023	-727	673	910	229	98	137	92
253+00.00																						
Subtotals:	266,374	91,977	21,239	0	0	15,294	0	137,864	0	107,271	36,421	5,390	0	41,811	54,358	52,913	39,696	49,511	21,239	9,371	13,123	8,119

FILE NO.	ENGLISH	DESIGN TEAM Flattery\Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER T.9

12/19/2024 11:32:59 AM pflatte c:\pw_work\pwmain\pflatte\d2495705\T_Sheets_62063093Z09_Grading.xlsm

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
253+00.00	560	331	228	0	0	0	0	0		331	642	116		758	986	-654	636	872	228	99	139	90
253+25.00	483	255	228	0	0	0	0	0		255	729	126		854	1,111	-856	761	998	228	94	132	97
253+50.00	366	138	228	0	0	0	0	0		138	848	138		985	1,281	-1,143	931	1,167	228	86	121	107
253+75.00	415	188	228	0	0	0	0	0		188	742	128		870	1,132	-944	781	1,019	228	88	124	104
254+00.00	481	257	224	0	0	0	0	0		257	570	113		684	889	-632	540	776	224	90	126	98
254+25.00	465	248	217	0	0	0	0	0		248	501	109		609	792	-545	442	680	217	86	121	97
254+50.00	450	240	210	0	0	0	0	0		240	439	105		544	707	-467	358	594	210	83	116	94
254+75.00	428	225	203	0	0	0	0	0		225	388	102		490	637	-412	287	524	203	79	111	92
255+00.00	405	208	197	0	0	0	0	0		208	348	100		448	583	-375	233	469	197	76	106	91
255+25.00	382	188	193	0	0	0	0	0		188	311	98		409	531	-343	182	419	193	72	101	93
255+50.00	355	164	190	0	0	0	0	0		164	285	95		381	495	-331	146	382	190	68	95	95
255+75.00	336	149	187	0	0	0	0	0		149	258	93		351	456	-307	105	343	187	65	90	97
256+00.00	325	140	185	0	0	0	0	0		140	210	89		299	389	-249	39	276	185	62	87	98
256+25.00	322	140	182	0	0	0	0	0		140	162	84		246	320	-179	0	207	182	60	85	97
256+50.00	362	153	209	0	0	0	0	0		153	122	74		196	255	-102	0	142	209	61	86	123
256+75.00	517	156	360	0	0	0	0	0		156	86	59		145	189	-33	0	75	360	55	77	284
257+00.00	632	147	484	0	0	0	0	0		147	59	42		101	131	16	0	18	484	45	63	421
257+25.00	636	154	483	0	0	0	0	0		154	36	27		63	82	72	0	0	483	42	59	424
257+50.00	637	175	462	0	0	0	0	0		175	21	18		39	51	124	0	0	462	42	58	404
257+75.00	622	194	429	0	0	0	0	0		194	14	14		28	36	158	0	0	429	41	58	371
258+00.00	554	200	354	0	0	0	0	0		200	13	12		25	32	167	0	0	354	45	63	291
258+25.00	416	183	232	0	0	0	0	0		183	25	18		43	56	127	0	0	232	48	67	165
258+50.00	316	164	151	0	0	0	0	0		164	32	21		54	70	95	0	0	151	46	64	87
258+75.00	266	144	121	0	0	0	0	0		144	29	16		45	59	86	0	0	121	44	61	60
259+00.00	243	134	109	0	0	0	0	0		134	37	18		55	72	63	0	0	109	44	61	48
259+25.00	290	180	110	0	0	0	0	0		180	43	32		75	98	82	0	0	110	46	64	45
259+50.00	403	277	127	0	0	0	0	0		277	22	20		41	54	223	0	0	127	47	66	61
259+75.00	502	351	151	0	0	0	0	0		351	0	0		0	1	350	0	0	151	47	65	86
260+00.00	558	398	160	0	0	0	0	0		398	0	0		1	1	398	0	0	160	48	68	92
260+25.00	618	455	163	0	0	0	0	0		455	0	0		1	1	454	0	0	163	52	72	91
260+50.00	681	516	166	0	0	0	0	0		516	0	0		1	1	515	0	0	166	53	75	91
260+75.00	749	580	169	0	0	0	0	0		580	0	0		1	1	579	0	0	169	55	77	92
261+00.00	813	641	171	0	0	0	0	0		641	0	0		1	1	640	0	0	171	56	79	92
261+25.00	857	682	174	0	0	0	0	0		682	0	0		1	1	682	0	0	174	59	82	92
261+50.00	890	713	177	0	0	0	0	0		713	0	0		1	1	712	0	0	177	61	86	92
261+75.00	925	745	180	0	0	0	0	0		745	0	0		1	1	744	0	0	180	63	88	92
262+00.00	957	775	183	0	0	0	0	0		775	0	0		1	1	774	0	0	183	64	90	93
262+25.00	1,008	822	186	0	0	0	0	0		822	0	0		1	1	822	0	0	186	65	91	94
262+50.00	1,080	892	188	0	0	0	0	0		892	0	0		1	1	891	0	0	188	67	94	95
262+75.00	1,155	964	191	0	0	0	0	0		964	0	0		1	1	963	0	0	191	70	97	94
263+00.00	1,239	1,045	194	0	0	0	0	0		1,045	0	0		1	1	1,044	0	0	194	72	101	93
263+25.00	1,359	1,162	197	0	0	0	0	0		1,162	0	0		1	1	1,161	0	0	197	76	106	91
263+50.00	1,503	1,298	205	0	0	0	0	0		1,298	0	0		1	1	1,297	0	0	205	79	111	94
263+75.00	1,651	1,432	219	0	0	0	0	0		1,432	0	0		1	1	1,431	0	0	219	84	118	101
264+00.00	1,813	1,573	241	0	0	0	0	0		1,573	0	0		1	1	1,572	0	0	241	90	125	115
264+25.00	2,016	1,747	268	0	0	0	0	0		1,747	0	0		1	1	1,746	0	0	268	103	144	125
264+50.00	2,257	1,962	295	0	0	0	0	0		1,962	0	0		1	1	1,961	0	0	295	116	163	133
264+75.00	2,540	2,220	320	0	0	0	0	0		2,220	0	0		1	1	2,219	0	0	320	129	181	140
265+00.00	2,882	2,537	345	0	0	0	0	0		2,537	0	0		1	1	2,536	0	0	345	145	203	142
265+25.00	3,294	2,924	370	0	0	0	0	0		2,924	0	0		1	1	2,923	0	0	370	159	223	147
265+50.00	3,801	3,407	394	0	0	0	0	0		3,407	0	0		1	1	3,406	0	0	394	175	245	149
265+75.00	4,362	3,943	419	0	0	0	0	0		3,943	0	0		1	1	3,942	0	0	419	191	268	151
266+00.00	4,805	4,363	442	0	0	0	0	0		4,363	0	0		1	1	4,362	0	0	442	204	286	157
266+25.00	5,114	4,655	459	0	0	0	0	0		4,655	0	0		1	1	4,654	0	0	459	212	297	162
266+50.00	5,414	4,943	470	0	0	0	0	0		4,943	0	0		1	1	4,942	0	0	470	225	315	155
266+75.00	5,689	4,731	477	0	0	480	0	0		5,212	0	0		1	1	5,211	0	0	477	237	332	145
267+00.00	5,934	4,428	478	0	0	1,028	0	0		5,456	0	0		1	1	5,455	0	0	478	241	337	141
267+25.00	6,243	4,572	475	0	0	1,197	0	0		5,768	0	0		1	1	5,767	0	0	475	242	339	136
267+50.00	6,691	4,779	469	0	0	1,444	0	0		6,223	0	0		1	1	6,222	0	0	469	243	340	129
267+75.00	7,189	5,038	463	0	0	1,688	0	0		6,726	0	0		1	1	6,725	0	0	463	242	338	125
268+00.00	7,719	5,356	457	0	0	1,906	0	0		7,262	0	0		1	1	7,261	0	0	457	240	335	122
268+25.00	8,352	5,756	451	0	0	2,144	0	0		7,901	0	0		1	1	7,900	0	0	451	239	334	117
268+50.00	9,061	6,238	452	0	0	2,371	0	0		8,609	0	0		1	1	8,608	0	0	452	241	337	115
268+75.00	9,153	6,095	459	0	0	2,598	0	0		8,693	0	0		1	1	8,692	0	0	459	243	341	119
269+00.00	9,648	6,523	467	0	0	2,658	0	0		9,181	0	0		1	1	9,180	0	0	467	242	338	128
269+25.00	10,533	7,526	474	0	0	2,534	0	0		10,059	0	0		1	1	10,059	0	0	474	236	331	143
269+50.00	10,710	7,844	481	0	0	2,385	0	0		10,229	0	0		1	1	10,228	0	0	481	230	322	159
269+75.00	10,775	8,233	486	0	0	2,056	0	0		10,289	0	0		1	1	10,288	0	0	486	223	312	175
270+00.00																						
Subtotals:	174,205	129,999	19,717	0	0	24,488	0	0	0	154,488	6,986	1,882	0	8,868	11,532	142,958	5,439	8,962	19,717	7,630	10,686	9,035

FILE NO.	ENGLISH	DESIGN TEAM Flattery\Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER T.10

12/19/2024 11:32:59 AM pflatte c:\pw_work\pwmain\pflatte\d2495705\T_Sheets_62063093Z09_Grading.xlsm

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
270+00.00	11,270	8,838	488	0	0	1,944	0	0		10,782	0	0		1	1	10,781	0	0	488	222	311	177
270+25.00	12,166	9,461	487	0	0	2,219	0	0		11,679	0	0		1	1	11,679	0	0	487	225	315	172
270+50.00	12,941	9,936	488	0	0	2,517	0	0		12,453	1	1		1	1	12,452	0	0	488	234	327	161
270+75.00	13,710	11,110	486	0	0	2,114	0	0		13,224	1	1		1	1	13,223	0	0	486	249	349	137
271+00.00	14,442	12,422	483	0	0	1,537	0	0		13,959	0	0		0	1	13,958	0	0	483	258	362	121
271+25.00	15,186	13,150	486	0	0	1,550	0	0		14,699	0	0		0	0	14,699	0	0	486	260	364	122
271+50.00	16,014	13,897	489	0	0	1,628	0	0		15,525	0	0		0	0	15,525	0	0	489	261	365	124
271+75.00	16,799	14,573	492	0	0	1,733	0	0		16,306	0	0		0	0	16,306	0	0	492	264	369	123
272+00.00	17,505	15,172	496	0	0	1,838	0	0		17,010	0	0		0	0	17,010	0	0	496	266	373	123
272+25.00	18,138	15,707	499	0	0	1,932	0	0		17,640	0	0		0	0	17,639	0	0	499	269	377	122
272+50.00	18,619	16,103	502	0	0	2,014	0	0		18,117	0	0		0	0	18,117	0	0	502	272	380	122
272+75.00	19,723	16,691	505	0	0	2,080	447	0		18,772	0	0		0	0	18,771	0	0	505	274	383	122
273+00.00	20,465	16,925	508	0	0	2,138	894	0		19,063	0	0		0	0	19,063	0	0	508	276	386	122
273+25.00	19,899	16,518	511	0	0	1,976	894	0		18,494	0	0		0	0	18,494	0	0	511	278	389	122
273+50.00	18,097	14,923	514	0	0	1,766	894	0		16,689	0	0		0	0	16,689	0	0	514	278	389	126
273+75.00	16,994	13,897	517	0	0	1,685	894	0		15,583	0	0		0	0	15,582	0	0	517	274	384	133
274+00.00	16,842	13,873	519	0	0	1,557	894	0		15,429	0	0		0	0	15,429	0	0	519	270	379	140
274+25.00	16,146	13,256	519	0	0	1,478	894	0		14,734	0	0		0	0	14,733	0	0	519	269	377	142
274+50.00	15,850	12,959	519	0	0	1,479	894	0		14,438	0	0		0	0	14,438	0	0	519	269	377	142
274+75.00	15,221	12,729	519	0	0	1,527	447	0		14,256	0	0		0	0	14,255	0	0	519	271	379	140
275+00.00	15,298	13,124	519	0	0	1,656	0	0		14,780	0	0		0	0	14,779	0	0	519	275	386	133
275+25.00	16,547	14,192	519	0	0	1,837	0	0		16,029	0	0		0	0	16,029	0	0	519	282	395	124
275+50.00	17,629	15,116	519	0	0	1,994	0	0		17,110	0	0		0	0	17,110	0	0	519	288	404	115
275+75.00	18,421	15,784	519	0	0	2,118	0	0		17,902	0	0		0	0	17,902	0	0	519	294	412	107
276+00.00	18,866	16,112	519	0	0	2,236	0	0		18,348	0	0		0	0	18,348	0	0	519	300	419	99
276+25.00	18,914	16,045	519	0	0	2,351	0	0		18,396	0	0		0	0	18,396	0	0	519	303	424	95
276+50.00	18,487	15,533	519	0	0	2,435	0	0		17,968	0			0	0	17,968	0	0	519	303	424	94
276+75.00	17,571	14,571	519	0	0	2,481	0	0		17,052	0			0	0	17,052	0	0	519	303	424	94
277+00.00	16,209	14,443	519	0	0	1,248	0	0		15,691	0			0	0	15,691	0	0	519	303	424	94
277+25.00	14,558	14,039	519	0	0	0	0	0		14,039	0			0	0	14,039	0	0	519	303	424	94
277+50.00	12,718	12,199	519	0	0	0	0	0		12,199	1	1		2	3	12,196	0	0	519	303	424	94
277+75.00	10,784	10,265	519	0	0	0	0	0		10,265	104	40		144	188	10,077	0	74	519	303	424	94
278+00.00	8,964	8,445	519	0	0	0	0	0		8,445	374	91		465	604	7,841	255	491	519	301	421	98
278+25.00	7,401	6,882	519	0	0	0	0	0		6,882	753	115		868	1,129	5,754	779	1,015	519	295	414	105
278+50.00	6,090	5,571	519	0	0	0	0	0		5,571	1,173	137		1,310	1,703	3,869	1,353	1,590	519	285	399	120
278+75.00	4,976	4,458	519	0	0	0	0	0		4,458	1,601	159		1,760	2,288	2,170	1,938	2,175	519	274	383	136
279+00.00	4,069	3,550	519	0	0	0	0	0		3,550	2,097	182		2,280	2,964	587	2,614	2,851	519	268	375	144
279+25.00	3,348	2,830	519	0	0	0	0	0		2,830	2,669	204		2,873	3,735	-905	2,909	3,622	519	263	368	150
279+50.00	2,789	2,271	519	0	0	0	0	0		2,271	3,286	223		3,508	4,561	-2,290	2,909	4,447	519	260	364	155
279+75.00	2,296	1,777	519	0	0	0	0	0		1,777	3,923	239		4,162	5,411	-3,634	2,909	5,299	519	258	361	157
280+00.00	1,810	1,292	519	0	0	0	0	0		1,292	4,520	253		4,774	6,206	-4,914	2,909	6,093	519	247	345	173
280+25.00	1,384	869	515	0	0	0	0	0		869	5,149	268		5,417	7,042	-6,174	2,909	6,929	515	230	322	193
280+50.00	1,060	554	506	0	0	0	0	0		554	6,469	306		6,775	8,807	-8,253	2,909	8,694	506	230	323	183
280+75.00	880	380	500	0	0	0	0	0		380	8,466	356		8,822	11,469	-11,089	2,909	11,356	500	246	344	156
281+00.00	778	278	500	0	0	0	0	0		278	9,584	383		9,967	12,958	-12,680	2,909	12,844	500	255	357	143
281+25.00	677	180	497	0	0	0	0	0		180	9,734	391		10,125	13,162	-12,982	2,909	13,049	497	259	362	134
281+50.00	603	107	497	0	0	0	0	0		107	9,747	396		10,144	13,187	-13,080	2,909	13,074	497	261	366	131
281+75.00	580	80	500	0	0	0	0	0		80	9,608	403		10,011	13,015	-12,935	2,909	12,901	500	262	367	133
282+00.00	576	76	500	0	0	0	0	0		76	9,417	407		9,824	12,771	-12,695	2,909	12,658	500	265	371	129
282+25.00	567	67	500	0	0	0	0	0		67	9,269	408		9,677	12,581	-12,514	2,909	12,467	500	265	371	129
282+50.00	563	64	499	0	0	0	0	0		64	9,130	407		9,537	12,398	-12,334	2,909	12,285	499	265	371	128
282+75.00	577	81	496	0	0	0	0	0		81	8,923	405		9,328	12,127	-12,046	2,909	12,015	496	266	372	124
283+00.00	630	136	494	0	0	0	0	0		136	8,322	375		8,698	11,307	-11,171	2,909	11,194	494	252	353	141
283+25.00	713	221	491	0	0	0	0	0		221	7,483	329		7,813	10,157	-9,935	2,909	10,044	491	231	323	169
283+50.00	790	302	489	0	0	0	0	0		302	7,002	309		7,312	9,505	-9,204	2,909	9,393	489	223	312	177
283+75.00	839	353	486	0	0	0	0	0		353	6,768	304		7,072	9,194	-8,841	2,909	9,081	486	224	313	173
284+00.00	852	370	482	0	0	0	0	0		370	6,543	299		6,842	8,895	-8,525	2,909	8,782	482	222	311	172
284+25.00	855	382	473	0	0	0	0	0		382	6,306	293		6,598	8,578	-8,196	2,909	8,464	473	219	306	167
284+50.00	880	419	461	0	0	0	0	0		419	6,033	286		6,319	8,214	-7,795	2,909	8,102	461	216	303	158
284+75.00	932	484	448	0	0	0	0	0		484	5,720	277		5,998	7,797	-7,313	2,909	7,684	448	215	302	147
285+00.00	1,006	566	440	0	0	0	0	0		566	5,401	269		5,670	7,371	-6,805	2,909	7,258	440	215	301	139
285+25.00	1,087	650	437	0	0	0	0	0		650	5,081	261		5,342	6,944	-6,294	2,909	6,832	437	215	301	136
285+50.00	1,166	732	434	0	0	0	0	0		732	4,770	253		5,024	6,531	-5,799	2,909	6,418	434	215	301	133
285+75.00	1,236	804	431	0	0	0	0	0		804	4,486	247		4,733	6,153	-5,348	2,909	6,040	431	214	300	131
286+00.00	1,294	865	429	0	0	0	0	0		865	4,225	240		4,465	5,805	-4,940	2,909	5,691	429	214	300	129
286+25.00	1,354	928	426	0	0	0	0	0		928	3,975	234		4,210	5,473	-4,545	2,909	5,360	426	213	298	128
286+50.00	1,419	996	423	0	0	0	0	0		996	3,731	228		3,959	5,147	-4,151	2,909	5,034	423	212	296	127
286+75.00	1,475	1,054	421	0	0	0	0	0		1,054	3,506	222		3,729	4,847	-3,793	2,909	4,735	421	210	294	127
287+00.00																						
Subtotals:	588,544	492,638	33,687	0	0	55,068	7,151	0	0	547,706	205,358	10,204	0	215,562	280,234	267,473	97,131	276,039	33,687	17,561	24,589	9,101

FILE NO.	ENGLISH	DESIGN TEAM Flattery\Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER T.11

12/19/2024 11:32:59 AM pflatte c:\pw_work\pwmain\pflatte\d2495705\T_Sheets_62063093Z09_Grading.xlsm

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
287+00.00	1,530	1,111	418	0	0	0	0	0		1,111	3,307	217		3,524	4,581	-3,470	2,909	4,468	418	208	291	127
287+25.00	1,595	1,179	416	0	0	0	0	0		1,179	3,140	212		3,352	4,358	-3,179	2,909	4,245	416	206	288	128
287+50.00	1,672	1,261	411	0	0	0	0	0		1,261	3,012	207		3,218	4,184	-2,923	2,909	4,072	411	203	285	126
287+75.00	1,760	1,356	404	0	0	0	0	0		1,356	2,922	202		3,124	4,061	-2,705	2,909	3,948	404	201	281	123
288+00.00	1,825	1,429	396	0	0	0	0	0		1,429	2,877	198		3,075	3,998	-2,569	2,909	3,884	396	198	277	119
288+25.00	1,819	1,430	389	0	0	0	0	0		1,430	2,856	197		3,052	3,968	-2,539	2,909	3,856	389	194	272	117
288+50.00	1,753	1,371	382	0	0	0	0	0		1,371	2,818	197		3,014	3,919	-2,548	2,909	3,805	382	190	266	116
288+75.00	1,677	1,302	375	0	0	0	0	0		1,302	2,727	196		2,923	3,801	-2,498	2,909	3,687	375	185	260	115
289+00.00	1,602	1,235	368	0	0	0	0	0		1,235	2,577	195		2,772	3,603	-2,369	2,909	3,491	368	181	253	115
289+25.00	1,525	1,165	360	0	0	0	0	0		1,165	2,413	192		2,605	3,386	-2,222	3,037	3,273	360	176	246	114
289+50.00	1,453	1,100	353	0	0	0	0	0		1,100	2,268	189		2,457	3,194	-2,095	2,844	3,081	353	171	240	114
289+75.00	1,398	1,053	345	0	0	0	0	0		1,053	2,146	185		2,331	3,030	-1,978	2,681	2,917	345	167	233	112
290+00.00	1,350	1,014	336	0	0	0	0	0		1,014	2,073	180		2,253	2,929	-1,914	2,579	2,816	336	160	224	112
290+25.00	1,285	960	326	0	0	0	0	0		960	2,034	175		2,209	2,872	-1,912	2,522	2,759	326	153	214	112
290+50.00	1,186	871	316	0	0	0	0	0		871	1,961	170		2,132	2,771	-1,901	2,422	2,659	316	146	205	111
290+75.00	1,066	761	306	0	0	0	0	0		761	1,834	166		2,000	2,600	-1,840	2,250	2,487	306	140	196	110
291+00.00	962	666	296	0	0	0	0	0		666	1,678	161		1,839	2,391	-1,725	2,041	2,278	296	134	187	109
291+25.00	879	593	286	0	0	0	0	0		593	1,496	155		1,651	2,146	-1,553	1,797	2,033	286	128	179	107
291+50.00	827	551	276	0	0	0	0	0		551	1,283	147		1,430	1,859	-1,308	1,509	1,746	276	121	170	106
291+75.00	815	549	266	0	0	0	0	0		549	1,052	137		1,189	1,546	-997	1,196	1,433	266	115	162	104
292+00.00	801	545	256	0	0	0	0	0		545	804	127		931	1,211	-666	861	1,097	256	109	153	103
292+25.00	785	539	246	0	0	0	0	0		539	541	115		656	853	-314	503	740	246	103	144	102
292+50.00	822	531	291	0	0	0	0	0		531	310	102		412	535	-4	186	423	291	96	135	156
292+75.00	767	472	295	0	0	0	0	0		472	152	81		233	303	169	0	190	295	89	124	171
293+00.00	723	454	269	0	0	0	0	0		454	81	60		141	183	271	0	70	269	81	114	156
293+25.00	795	499	296	0	0	0	0	0		499	52	35		87	113	386	0	0	296	79	110	185
293+50.00	857	546	310	0	0	0	0	0		546	40	25		65	84	462	0	0	310	81	114	197
293+75.00	758	415	343	0	0	0	0	0		415	43	30		73	94	320	0	0	343	63	89	254
294+00.00	642	249	393	0	0	0	0	0		249	25	20		45	59	191	0	0	393	41	58	335
294+25.00	667	230	437	0	0	0	0	0		230	18	14		31	41	189	0	0	437	38	53	384
294+50.00	642	181	462	0	0	0	0	0		181	37	23		60	78	103	0	0	462	36	51	411
294+75.00	617	145	473	0	0	0	0	0		145	87	50		137	178	-34	0	65	473	37	51	422
295+00.00	855	423	431	0	0	0	0	0		423	189	87		277	360	64	10	247	431	73	103	329
295+25.00	1,001	673	328	0	0	0	0	0		673	326	111		436	567	106	217	454	328	108	152	176
295+50.00	877	606	272	0	0	0	0	0		606	465	122		587	763	-157	413	650	272	107	150	122
295+75.00	809	535	273	0	0	0	0	0		535	635	134		769	999	-464	649	887	273	107	150	124
296+00.00	724	450	275	0	0	0	0	0		450	944	160		1,104	1,435	-986	1,086	1,322	275	116	162	112
296+25.00	612	338	274	0	0	0	0	0		338	1,319	178		1,497	1,946	-1,608	1,596	1,833	274	115	161	113
296+50.00	488	218	271	0	0	0	0	0		218	1,829	187		2,017	2,622	-2,404	2,272	2,509	271	110	153	118
296+75.00	379	114	265	0	0	0	0	0		114	2,543	207		2,749	3,574	-3,460	2,909	3,462	265	114	160	106
297+00.00	301	44	257	0	0	0	0	0		44	3,163	215		3,378	4,391	-4,348	2,909	4,278	257	115	161	96
297+25.00	259	10	249	0	0	0	0	0		10	3,528	215		3,743	4,866	-4,856	2,909	4,753	249	114	160	89
297+50.00	248	2	246	0	0	0	0	0		2	3,699	218		3,916	5,091	-5,090	2,909	4,979	246	115	162	84
297+75.00	251	1	250	0	0	0	0	0		1	3,750	226		3,976	5,169	-5,168	2,909	5,056	250	117	163	87
298+00.00	257	1	256	0	0	0	0	0		1	3,729	235		3,963	5,152	-5,151	2,909	5,039	256	116	162	94
298+25.00	268	3	265	0	0	0	0	0		3	3,658	236		3,894	5,062	-5,059	2,909	4,949	265	114	159	107
298+50.00	294	7	287	0	0	0	0	0		7	3,505	231		3,736	4,857	-4,850	2,909	4,744	287	111	156	131
298+75.00	316	10	306	0	0	0	0	0		10	3,255	223		3,478	4,522	-4,512	2,909	4,408	306	107	149	157
299+00.00	326	16	311	0	0	0	0	0		16	2,902	213		3,115	4,050	-4,034	2,909	3,936	311	105	148	163
299+25.00	350	40	310	0	0	0	0	0		40	2,473	203		2,676	3,479	-3,439	3,129	3,366	310	107	150	160
299+50.00	391	81	309	0	0	0	0	0		81	2,014	190		2,204	2,865	-2,784	2,516	2,752	309	107	149	160
299+75.00	451	142	309	0	0	0	0	0		142	1,560	174		1,734	2,255	-2,113	1,905	2,142	309	105	147	161
300+00.00	536	229	308	0	0	0	0	0		229	1,149	158		1,306	1,698	-1,470	1,348	1,585	308	104	146	162
300+25.00	633	326	307	0	0	0	0	0		326	811	142		953	1,239	-913	889	1,126	307	103	145	163
300+50.00	728	422	307	0	0	0	0	0		422	550	129		679	883	-461	533	770	307	102	143	164
300+75.00	816	510	306	0	0	0	0	0		510	348	117		465	605	-95	255	491	306	100	141	165
301+00.00	888	582	305	0	0	0	0	0		582	184	94		278	362	221	12	248	305	98	137	168
301+25.00	969	664	305	0	0	0	0	0		664	63	48		111	145	519	0	31	305	95	133	172
301+50.00	1,082	778	304	0	0	0	0	0		778	10	9		19	24	753	0	0	304	91	128	176
301+75.00	1,204	900	303	0	0	0	0	0		900	0	0		1	1	900	0	0	303	88	123	181
302+00.00	1,317	1,015	303	0	0	0	0	0		1,015	0	0		1	1	1,014	0	0	303	84	117	186
302+25.00	1,416	1,114	302	0	0	0	0	0		1,114	0	0		1	1	1,113	0	0	302	79	110	192
302+50.00	1,484	1,182	301	0	0	0	0	0		1,182	0	0		1	1	1,182	0	0	301	73	102	200
302+75.00	1,415	1,115	300	0	0	0	0	0		1,115	1	1		2	3	1,112	0	0	300	35	49	252
303+00.00	813	513	300	0	0	0	0	0		513	6	6		12	16	497	0	0	300	0	0	300
303+25.00	49	0	49	0	0	0	0	0		0	1	1		2	2	-2	0	0	49	0	0	49
303+29.07																						
ML063																						
Totals:																						

FILE NO.	ENGLISH	DESIGN TEAM Flattery\Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER T.12

12/19/2024 11:32:59 AM pflatte c:\pw_work\pwmain\pflatte\d2495705\T_Sheets_62063093Z09_Grading.xlsm

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
SRNSHORE																						
1000+09.28																						
1000+25.00	252	67	185	0	0	0	0	0		67	11	10		20	27	41	0	0	185	19	27	158
1000+50.00	428	112	316	0	0	0	0	0		112	80	42		123	160	-48	0	0	316	41	57	259
1000+75.00	402	87	316	0	0	0	0	0		87	77	39		116	151	-64	0	0	316	34	47	269
1001+00.00	392	79	313	0	0	0	0	0		79	196	47		243	317	-238	0	151	313	33	46	267
1001+25.00	359	49	310	0	0	0	0	0		49	464	87		550	716	-667	0	550	310	32	45	266
1001+50.00	307	0	307	0	0	0	0	0		0	619	93		712	926	-926	0	759	307	25	35	272
1001+75.00	303	0	303	0	0	0	0	0		0	579	81		661	859	-859	0	693	303	27	37	265
1002+00.00	299	0	299	0	0	0	0	0		0	465	78		543	706	-706	0	540	299	25	35	264
1002+25.00	295	0	295	0	0	0	0	0		0	435	76		511	665	-665	0	498	295	18	26	269
1002+50.00	291	0	291	0	0	0	0	0		0	369	71		440	572	-572	0	406	291	15	21	270
1002+75.00	287	1	286	0	0	0	0	0		1	261	63		325	422	-421	0	256	286	18	26	261
1003+00.00	305	23	283	0	0	0	0	0		23	153	54		207	269	-246	0	103	283	24	34	248
1003+25.00	363	84	279	0	0	0	0	0		84	59	33		93	120	-36	0	0	279	33	46	233
1003+50.00	494	216	278	0	0	0	0	0		216	10	10		19	25	191	0	0	278	40	56	222
1003+75.00	680	397	282	0	0	0	0	0		397	0	0		1	1	396	0	0	282	47	66	216
1004+00.00	863	572	291	0	0	0	0	0		572	0	0		1	1	571	0	0	291	52	73	218
1004+25.00	1,007	706	301	0	0	0	0	0		706	0	0		1	1	706	0	0	301	55	77	223
1004+50.00	1,099	788	310	0	0	0	0	0		788	0	0		1	1	787	0	0	310	59	82	228
1004+75.00	1,157	410	321	0	0	427	0	0		837	0	0		1	1	836	0	0	321	62	86	234
1005+00.00	1,135	0	325	0	0	810	0	0		810	0	0		1	1	809	0	0	325	63	88	237
1005+25.00	980	0	294	0	0	687	0	0		687	0	0		1	1	686	0	0	294	62	87	207
1005+50.00	769	0	247	0	0	521	0	0		522	0	0		1	1	521	0	0	247	58	81	166
1005+75.00	573	0	224	0	0	349	0	0		349	0	0		1	1	348	0	0	224	50	70	154
1006+00.00	416	0	209	0	0	207	0	0		207	16	16		33	43	164	0	0	209	43	60	149
1006+25.00	319	0	191	0	0	128	0	0		128	50	39		89	115	13	0	0	191	39	54	137
1006+50.00	263	0	172	0	0	91	0	0		91	77	46		122	159	-68	0	0	172	36	50	122
1006+75.00	241	0	158	0	0	84	0	0		84	73	45		118	154	-71	0	0	158	35	49	109
1007+00.00	262	0	155	0	0	107	0	0		107	42	34		75	98	10	0	0	155	35	50	105
1007+25.00	328	0	158	0	0	170	0	0		170	12	12		23	30	140	0	0	158	38	54	104
1007+50.00	440	0	162	0	0	278	0	0		278	0	0		1	1	277	0	0	162	43	60	103
1007+75.00	544	0	166	0	0	378	0	0		378	0	0		1	1	377	0	0	166	47	65	101
1008+00.00	580	203	170	0	0	207	0	0		410	0	0		1	1	409	0	0	170	49	69	101
1008+25.00	542	369	173	0	0	0	0	0		369	6	6		12	16	353	0	0	173	49	69	104
1008+50.00	478	305	174	0	0	0	0	0		305	21	18		39	51	254	0	0	174	48	67	107
1008+75.00	428	253	175	0	0	0	0	0		253	31	26		56	73	180	0	0	175	45	64	111
1009+00.00	387	211	175	0	0	0	0	0		211	35	28		64	83	128	0	0	175	43	60	116
1009+25.00	367	191	176	0	0	0	0	0		191	41	31		71	93	98	0	0	176	41	58	119
1009+50.00	373	195	177	0	0	0	0	0		195	37	28		65	85	111	0	0	177	41	58	119
1009+75.00	400	222	178	0	0	0	0	0		222	29	23		52	67	155	0	0	178	43	61	117
1010+00.00	436	257	179	0	0	0	0	0		257	23	19		43	55	202	0	0	179	46	64	115
1010+25.00	465	285	180	0	0	0	0	0		285	20	18		38	50	236	0	0	180	48	67	113
1010+50.00	497	316	181	0	0	0	0	0		316	13	13		26	34	282	0	0	181	49	69	112
1010+75.00	556	374	182	0	0	0	0	0		374	4	4		8	11	363	0	0	182	51	71	110
1011+00.00	643	460	182	0	0	0	0	0		460	0	0		1	1	459	0	0	182	53	74	108
1011+25.00	728	544	183	0	0	0	0	0		544	0	0		1	1	544	0	0	183	55	77	106
1011+50.00	789	605	184	0	0	0	0	0		605	0	0		1	1	604	0	0	184	57	80	104
1011+75.00	882	698	185	0	0	0	0	0		698	0	0		1	1	697	0	0	185	61	86	99
1012+00.00	1,012	747	186	0	0	79	0	0		826	0	0		1	1	825	0	0	186	68	95	91
1012+25.00	1,112	754	187	0	0	171	0	0		925	0	0		1	1	924	0	0	187	73	103	84
1012+50.00	1,171	796	188	0	0	188	0	0		984	0	0		1	1	983	0	0	188	77	108	79
1012+75.00	1,162	793	187	0	0	182	0	0		976	0	0		1	1	975	0	0	187	80	112	74
1013+00.00	1,066	733	183	0	0	150	0	0		883	0	0		1	1	882	0	0	183	81	114	70
1013+25.00	907	628	180	0	0	99	0	0		727	17	16		33	44	683	0	0	180	81	113	67
1013+50.00	732	511	177	0	0	43	0	0		554	83	42		125	162	392	0	0	177	79	111	67
1013+75.00	571	389	174	0	0	8	0	0		397	201	57		259	336	61	0	170	174	76	106	68
1014+00.00	426	255	171	0	0	0	0	0		255	361	70		432	561	-307	0	395	171	72	101	70
1014+25.00	306	138	168	0	0	0	0	0		138	572	84		655	852	-714	0	685	168	68	96	73
1014+50.00	237	72	165	0	0	0	0	0		72	726	93		819	1,065	-993	0	898	165	66	92	73
1014+75.00	203	40	162	0	0	0	0	0		40	809	100		909	1,182	-1,141	0	1,015	162	64	90	72
1015+00.00	175	15	160	0	0	0	0	0		15	910	109		1,019	1,324	-1,309	0	1,158	160	63	88	72
1015+25.00	164	3	160	0	0	0	0	0		3	1,029	121		1,150	1,495	-1,492	0	1,329	160	45	64	97
1015+50.00	164	0	164	0	0	0	0	0		0	1,125	127		1,251	1,627	-1,627	0	1,461	164	29	41	123
1015+75.00	169	2	168	0	0	0	0	0		2	1,118	122		1,240	1,612	-1,610	0	1,446	168	45	63	105
1016+00.00	182	1	171	0	0	0	10	0		1	1,034	116		1,149	1,494	-1,493	0	1,329	171	60	84	87
1016+25.00	214	0	175	0	0	0	39	0		0	932	109		1,041	1,354	-1,354	0	1,187	175	48	68	108
1016+50.00	262	0	179	0	0	0	83	0		0	802	100		902	1,173	-1,173	0	1,006	179	53	74	105
1016+75.00	330	0	182	0	0	0	147	0		0	659	91		751	976	-976	0	810	182	72	101	82
Subtotals:	34,967	14,958	14,369	0	0	5,362	279	0	0	20,320	14,693	2,554	0	17,247	22,424	-2,103	0	16,844	14,369	3,288	4,607	9,765

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
1016+75.00	443	0	186	0	0	3	253	0		3	521	82		604	785	-782	0	619	186	76	106	80
1017+00.00	606	0	190	0	0	23	393	0		24	377	72		449	584	-560	0	417	190	80	113	77
1017+25.00	793	0	194	0	0	59	539	0		60	247	62		309	402	-342	0	235	194	85	119	75
1017+50.00	976	0	197	0	0	98	680	0		98	143	51		195	253	-155	0	87	197	88	123	74
1017+75.00	1,048	414	201	0	0	58	375	0		473	71	39		110	143	330	0	0	201	90	126	75
1018+00.00	1,020	819	201	0	0	0	0	0		819	40	30		70	91	727	0	0	201	89	124	77
1018+25.00	950	755	196	0	0	0	0	0		755	44	32		75	98	657	0	0	196	86	120	75
1018+50.00	812	623	189	0	0	0	0	0		623	75	42		117	152	471	0	0	189	81	114	75
1018+75.00	656	474	182	0	0	0	0	0		474	134	51		186	242	232	0	75	182	75	105	77
1019+00.00	588	360	229	0	0	0	0	0		360	207	58		265	345	15	0	178	229	68	96	133
1019+25.00	585	302	284	0	0	0	0	0		302	262	63		325	422	-120	0	256	284	63	89	195
1019+50.00	579	296	283	0	0	0	0	0		296	255	62		317	412	-116	0	246	283	62	87	196
1019+75.00	552	324	228	0	0	0	0	0		324	199	58		257	334	-11	0	168	228	64	89	139
1020+00.00	540	361	180	0	0	0	0	0		361	144	53		198	257	104	0	91	180	66	93	87
1020+25.00	582	400	182	0	0	0	0	0		400	109	48		157	204	196	0	38	182	68	95	87
1020+50.00	629	445	184	0	0	0	0	0		445	85	43		127	166	279	0	0	184	70	98	86
1020+75.00	695	509	186	0	0	0	0	0		509	44	28		72	94	415	0	0	186	72	101	85
1021+00.00	822	634	188	0	0	0	0	0		634	9	8		17	22	612	0	0	188	74	104	84
1021+25.00	957	767	190	0	0	0	0	0		767	0	0		1	1	767	0	0	190	74	104	85
1021+50.00	1,064	873	191	0	0	0	0	0		873	0	0		1	1	872	0	0	191	75	105	87
1021+75.00	1,187	994	193	0	0	0	0	0		994	0	0		1	1	993	0	0	193	76	106	88
1022+00.00	1,329	1,134	195	0	0	0	0	0		1,134	0	0		1	1	1,133	0	0	195	78	109	87
1022+25.00	1,506	1,309	197	0	0	0	0	0		1,309	0	0		1	1	1,308	0	0	197	80	113	85
1022+50.00	1,721	1,516	199	0	0	6	0	0		1,522	0	0		1	1	1,521	0	0	199	84	118	81
1022+75.00	1,909	1,689	201	0	0	18	0	0		1,708	2	2		3	4	1,703	0	0	201	43	61	141
1023+00.00	1,479	1,264	203	0	0	12	0	0		1,276	3	3		6	8	1,269	0	0	203	0	0	203
1023+25.00	665	461	205	0	0	0	0	0		461	4	4		9	11	449	0	0	205	0	0	205
1023+50.00	281	74	207	0	0	0	0	0		74	6	6		11	15	59	0	0	207	0	0	207
1023+75.00	15	0	15	0	0	0	0	0		0	0	0		0	1	-1	0	0	15	0	0	15
1023+76.79																						
SRNSHORE																						
Totals:	59,955	31,752	20,043	0	0	5,642	2,520	0	0	37,394	17,676	3,454	0	21,130	27,474	9,923	0	19,255	20,043	5,156	7,222	12,825

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
SROLD163																						
5000+20.00	106	5	101	0	0	0	0	0		5	10	6		16	21	-16	0	0	101	0	0	102
5000+25.00	650	101	519	30	0	0	0	0		131	142	107		249	324	-193	0	157	519	0	0	519
5000+50.00	1,003	272	519	213	0	0	0	0		485	127	96		222	289	195	0	124	519	0	0	519
5000+75.00	1,150	286	519	345	0	0	0	0		631	27	27		53	70	562	0	0	519	0	0	519
5001+00.00	812	123	427	262	0	0	0	0		385	11	11		22	29	356	0	0	427	0	0	427
5001+25.00	484	53	251	180	0	0	0	0		233	9	9		17	23	211	0	0	251	0	0	251
5001+50.00	364	43	162	159	0	0	0	0		202	20	20		41	53	149	0	0	162	11	16	146
5001+75.00	337	40	154	143	0	0	0	0		183	42	40		82	106	77	0	0	154	21	30	124
5002+00.00	304	36	146	123	0	0	0	0		159	65	50		115	149	10	0	0	146	34	48	98
5002+25.00	265	28	138	99	0	0	0	0		127	90	50		140	182	-55	0	16	138	45	63	75
5002+50.00	236	14	148	74	0	0	0	0		88	121	50		171	222	-134	0	56	148	39	55	93
5002+75.00	221	5	162	54	0	0	0	0		59	158	53		211	275	-216	0	108	162	36	50	112
5003+00.00	197	4	160	33	0	0	0	0		37	194	57		251	326	-290	0	160	160	34	47	113
5003+25.00	153	3	133	17	0	0	0	0		20	221	60		281	366	-346	0	199	133	32	45	89
5003+50.00	114	2	104	8	0	0	0	0		10	237	61		298	388	-378	0	221	104	30	43	62
5003+75.00	108	3	102	4	0	0	0	0		6	238	62		300	390	-384	0	224	102	30	41	61
5004+00.00	109	5	102	2	0	0	0	0		7	233	61		293	382	-375	0	215	102	29	41	61
5004+25.00	110	7	102	2	0	0	0	0		9	223	60		283	368	-360	0	202	102	29	41	61
5004+50.00	113	9	102	2	0	0	0	0		11	210	59		269	349	-338	0	183	102	29	41	61
5004+75.00	114	11	101	3	0	0	0	0		14	196	58		254	330	-317	0	164	101	29	41	60
5005+00.00	125	17	101	6	0	0	0	0		23	184	56		240	313	-289	0	146	101	31	43	59
5005+25.00	143	26	104	13	0	0	0	0		39	171	55		226	293	-254	0	127	104	33	46	58
5005+50.00	154	24	107	24	0	0	0	0		48	161	54		215	280	-232	0	113	107	35	49	58
5005+75.00	156	16	109	31	0	0	0	0		47	168	56		224	291	-244	0	125	109	36	50	60
5006+00.00	152	11	112	28	0	0	0	0		40	198	58		256	333	-294	0	166	112	35	50	63
5006+25.00	146	7	115	24	0	0	0	0		31	241	61		302	393	-362	0	226	115	35	49	66
5006+50.00	142	2	118	21	0	0	0	0		24	288	69		357	464	-440	0	298	118	28	39	79
5006+75.00	143	3	118	22	0	0	0	0		25	291	67		358	465	-440	0	299	118	29	40	78
5007+00.00	154	9	118	27	0	0	0	0		36	251	60		311	404	-369	0	238	118	37	52	66
5007+25.00	170	16	120	25	0	0	9	0		41	216	60		276	359	-318	0	194	120	39	55	65
5007+50.00	187	13	120	10	0	0	44	0		23	196	58		254	330	-307	0	164	120	41	57	63
5007+75.00	195	5	120	0	0	0	70	0		5	190	58		248	322	-317	0	156	120	42	59	62
5008+00.00	191	4	120	0	0	0	67	0		4	201	58		259	337	-333	0	170	120	42	59	62
5008+25.00	179	2	120	0	0	0	57	0		2	223	60		284	369	-367	0	203	120	41	58	63
5008+50.00	167	1	121	0	0	0	46	0		1	247	62		309	402	-401	0	235	121	40	56	64
5008+75.00	163	1	121	0	0	0	41	0		1	254	63		317	413	-411	0	246	121	40	56	65
5009+00.00	166	1	121	0	0	0	44	0		1	241	62		303	394	-392	0	228	121	40	56	65
5009+25.00	175	3	121	0	0	0	51	0		3	222	60		283	368	-365	0	202	121	41	57	64
5009+50.00	187	7	121	0	0	0	58	0		7	207	59		266	346	-339	0	179	121	42	59	63
5009+75.00	198	11	122	0	0	0	65	0		11	195	57		253	329	-318	0	163	122	43	60	61
5010+00.00	208	17	122	0	0	0	69	0		17	190	57		247	321	-304	0	155	122	44	62	60
5010+25.00	215	25	122	0	0	0	68	0		25	189	56		245	319	-294	0	152	122	45	63	59
5010+50.00	218	31	122	0	0	0	65	0		31	191	56		247	321	-290	0	155	122	45	63	59
5010+75.00	219	35	122	0	0	0	62	0		35	192	57		249	323	-288	0	157	122	46	64	59
5011+00.00	219	38	123	0	0	0	59	0		38	192	57		248	323	-285	0	156	123	46	64	59
5011+25.00	214	35	123	0	0	0	56	0		35	193	57		250	325	-290	0	159	123	45	63	60
5011+50.00	206	30	123	0	0	0	53	0		30	193	58		251	326	-296	0	160	123	45	63	60
5011+75.00	203	30	123	0	0	0	50	0		30	197	58		255	331	-301	0	165	123	44	62	61
5012+00.00	202	36	123	0	0	0	42	0		36	208	58		266	346	-310	0	179	123	44	62	62
5012+25.00	203	52	124	0	0	0	27	0		52	217	59		276	358	-306	0	192	124	44	62	62
5012+50.00	206	72	124	0	0	0	10	0		72	212	59		271	353	-281	0	187	124	45	63	61
5012+75.00	210	85	124	0	0	0	1	0		85	202	59		261	340	-255	0	173	124	45	64	61
5013+00.00	214	90	124	0	0	0	0	0		90	206	58		264	344	-254	0	177	124	46	64	60
5013+25.00	213	89	124	0	0	0	0	0		89	220	59		279	363	-273	0	196	124	46	64	60
5013+50.00	207	83	124	0	0	0	0	0		83	236	60		296	385	-302	0	218	124	45	64	61
5013+75.00	198	74	124	0	0	0	0	0		74	251	61		312	406	-332	0	239	124	45	63	61
5014+00.00	190	66	124	0	0	0	0	0		66	261	63		324	421	-355	0	255	124	45	63	62
5014+25.00	180	56	124	0	0	0	0	0		56	273	64		338	439	-383	0	273	124	44	62	62
5014+50.00	255	46	208	0	0	0	0	0		46	289	66		354	461	-414	0	294	208	43	60	148
5014+75.00	338	40	298	0	0	0	0	0		40	303	67		370	481	-441	0	315	298	42	59	239
5015+00.00	328	36	293	0	0	0	0	0	22	58	317	68	1,130	1,515	1,969	-1,912	0	334	293	42	59	234
5015+25.00	236	32	203	0	0	0	0	0		32	328	69		396	516	-483	0	350	203	42	58	145
5015+50.00	153	29	124	0	0	0	0	0		29	335	69		405	526	-497	0	360	124	42	58	66
5015+75.00	153	29	124	0	0	0	0	0		29	339	69		408	531	-502	0	364	124	42	59	65
5016+00.00	156	32	124	0	0	0	0	0		32	338	69		408	530	-498	0	364	124	42	59	65
5016+25.00	160	36	124	0	0	0	0	0		36	336	69		405	526	-490	0	360	124	43	60	64
5016+50.00	158	34	124	0	0	0	0	0		34	332	68		400	520	-486	0	354	124	43	60	63
5016+75.00																						
Subtotals:	15,906	2,488	10,321	1,984	0	0	1,112	0	22	4,495	13,658	3,860	1,130	18,647	24,245	-19,753	0	12,346	10,321	2,365	3,315	7,008

FILE NO.	ENGLISH	DESIGN TEAM Flattery\Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER T.15

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
5016+75.00	160	32	124	4	0	0	0	0		36	330	68		398	518	-481	0	351	124	43	61	63
5017+00.00	166	35	124	7	0	0	0	0		42	330	69		398	518	-476	0	351	124	44	62	62
5017+25.00	164	35	124	5	0	0	0	0		41	329	69		397	517	-476	0	351	124	44	62	62
5017+50.00	164	36	124	4	0	0	0	0		40	332	69		401	521	-481	0	355	124	44	62	62
5017+75.00	163	37	124	3	0	0	0	0		39	340	69		409	532	-493	0	365	124	44	62	62
5018+00.00	162	36	124	2	0	0	0	0		39	346	70		416	541	-503	0	374	124	44	62	62
5018+25.00	163	37	124	2	0	0	0	0		39	352	70		422	548	-510	0	382	124	44	62	62
5018+50.00	160	29	125	7	0	0	0	0		35	357	71		428	556	-521	0	390	125	44	62	63
5018+75.00	156	18	126	13	0	0	0	0		30	361	72		433	563	-533	0	397	126	44	61	65
5019+00.00	153	12	126	14	0	0	0	0		26	367	72		439	570	-544	0	404	126	43	60	67
5019+25.00	143	6	120	17	0	0	0	0		23	374	65		439	571	-548	0	404	120	42	59	62
5019+50.00	139	1	120	17	0	0	0	0		19	333	66		399	519	-500	0	352	120	41	57	63
5019+75.00	140	0	124	16	0	0	0	0		16	335	73		408	530	-514	0	364	124	40	56	68
5020+00.00	137	0	122	15	0	0	0	0		15	380	73		452	588	-573	0	421	122	39	55	67
5020+25.00	133	0	119	14	0	0	0	0		14	376	72		448	583	-569	0	416	119	39	54	65
5020+50.00	132	0	119	13	0	0	0	0		13	370	72		442	575	-562	0	408	119	38	53	66
5020+75.00	135	0	123	6	0	0	6	0		6	365	71		436	567	-561	0	402	123	37	52	70
5021+00.00	137	0	126	0	0	0	11	0		0	358	70		428	557	-557	0	390	126	37	51	75
5021+25.00	137	0	126	0	0	0	11	0		0	347	69		416	541	-541	0	374	126	36	50	76
5021+50.00	140	0	129	0	0	0	12	0		0	335	68		403	524	-524	0	358	129	35	50	79
5021+75.00	136	0	130	0	0	0	6	0		0	334	71		405	527	-527	0	360	130	18	25	105
5022+00.00	90	0	90	0	0	0	0	0		0	113	25		138	179	-179	0	0	90	0	0	90
5022+16.66																						
SROLD163																						
Totals:	19,115	2,804	13,011	2,144	0	0	1,158	0	22	4,969	21,119	5,355	1,130	27,603	35,888	-30,923	0	20,317	13,011	3,205	4,491	8,523

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
SRKIRBY																						
6000+50.00																						
6000+75.00	51	5	47	0	0	0	0	0		5	106	13		119	155	-150	0	21	47	19	27	20
6001+00.00	81	26	56	0	0	0	0	0		26	70	12		82	107	-81	0	0	56	26	37	19
6001+25.00	120	55	65	0	0	0	0	0		55	36	11		48	62	-7	0	0	65	32	45	20
6001+50.00	151	80	71	0	0	0	0	0		80	19	10		28	37	43	0	0	71	36	50	21
6001+75.00	162	89	73	0	0	0	0	0		89	13	8		21	27	62	0	0	73	37	51	21
6002+00.00	154	81	73	0	0	0	0	0		81	14	8		22	28	53	0	0	73	36	50	23
6002+25.00	184	75	109	0	0	0	0	0		75	17	7		24	31	44	0	0	109	35	49	61
6002+50.00	280	79	201	0	0	0	0	0		79	18	5		23	30	49	0	0	201	34	48	153
6002+75.00	288	73	216	0	0	0	0	0	122	195	30	5	0	34	45	150	0	0	216	34	48	168
6003+00.00	173	49	125	0	0	0	0	0		49	67	11		78	101	-52	0	0	125	33	46	79
6003+25.00	117	40	77	0	0	0	0	0		40	99	17		116	151	-111	0	17	77	34	48	30
6003+50.00	128	46	82	0	0	0	0	0		46	117	21		137	179	-133	0	44	82	38	53	30
6003+75.00	146	58	88	0	0	0	0	0		58	146	26		172	224	-166	0	88	88	41	57	31
6004+00.00	174	79	94	0	0	0	0	0		79	176	30		207	269	-190	0	134	94	44	61	33
6004+25.00	215	112	102	0	0	0	0	0	38	151	167	34	666	867	1,127	-976	0	126	102	48	68	35
6004+50.00	282	172	110	0	0	0	0	0		172	135	37		172	224	-52	0	88	110	53	74	36
6004+75.00	382	255	127	0	0	0	0	0		255	109	38		147	191	64	0	56	127	60	84	43
6005+00.00	530	378	152	0	0	0	0	0		378	74	34		108	141	237	0	5	152	69	97	55
6005+25.00	742	563	179	0	0	0	0	0		563	34	23		57	74	489	0	0	179	80	112	67
6005+50.00	1,008	801	206	0	0	0	0	0		801	8	7		15	20	782	0	0	206	90	126	80
6005+75.00	1,306	1,072	234	0	0	0	0	0		1,072	0	0		1	1	1,071	0	0	234	99	138	96
6006+00.00	1,599	994	263	342	0	0	0	0		1,336	0	0		1	1	1,335	0	0	263	106	148	116
6006+25.00	2,026	958	303	765	0	0	0	0		1,722	0	0		1	1	1,721	0	0	303	113	158	146
6006+50.00	2,565	1,346	346	873	0	0	0	0	4,656	6,875	0	0	13	13	18	6,858	0	0	346	121	169	176
6006+75.00	3,094	1,785	373	935	0	0	0	0		2,721	0	0		1	1	2,720	0	0	373	131	183	190
6007+00.00	3,655	2,265	390	1,000	0	0	0	0		3,265	0	0		1	1	3,264	0	0	390	140	196	195
6007+25.00	4,172	2,742	374	1,056	0	0	0	0		3,798	0	0		1	1	3,797	0	0	374	147	206	168
6007+50.00	4,697	3,202	344	1,136	0	0	0	15		4,338	0	0		1	1	4,337	0	0	344	161	226	119
6007+75.00	5,218	3,598	341	1,222	0	0	0	57		4,820	0	0		1	1	4,819	0	0	341	174	244	97
6008+00.00	5,642	3,905	349	1,267	0	0	0	120		5,172	0	0		1	1	5,172	0	0	349	179	250	99
6008+25.00	5,962	4,138	354	1,289	0	0	0	182		5,426	0	0		1	1	5,426	0	0	354	182	255	99
6008+50.00	6,141	4,264	353	1,295	0	0	0	229		5,559	0	0		1	1	5,558	0	0	353	183	256	97
6008+75.00	6,140	4,262	350	1,285	0	0	0	244		5,546	0	0		1	1	5,545	0	0	350	181	254	97
6009+00.00	5,983	4,152	349	1,264	0	0	0	218		5,416	0	0		1	1	5,416	0	0	349	178	250	99
6009+25.00	5,818	4,034	344	1,250	0	0	0	189		5,285	0	0		1	1	5,284	0	0	344	176	247	98
6009+50.00	5,650	3,914	339	1,240	0	0	0	157		5,154	0	0		1	1	5,153	0	0	339	175	244	95
6009+75.00	5,413	3,742	334	1,223	0	0	0	114		4,965	0	0		1	1	4,964	0	0	334	172	241	93
6010+00.00	5,207	3,581	334	1,216	0	0	0	77		4,797	0	0		1	1	4,796	0	0	334	171	240	94
6010+25.00	5,069	3,460	337	1,220	0	0	0	53		4,680	0	0		1	1	4,679	0	0	337	172	241	96
6010+50.00	4,919	2,405	338	1,625	0	515	0	35		4,546	0	0		1	1	4,545	0	0	338	172	241	97
6010+75.00	4,721	1,358	337	2,018	0	986	0	21		4,363	0	0		1	1	4,362	0	0	337	171	240	97
6011+00.00	4,560	1,297	337	1,984	0	930	0	12		4,211	0	0		1	1	4,210	0	0	337	171	239	97
6011+25.00	4,414	1,258	336	1,914	0	900	0	5		4,073	1	1		1	2	4,072	0	0	336	171	240	97
6011+50.00	4,255	1,205	335	1,848	0	866	0	1		3,919	1	1		1	2	3,917	0	0	335	165	231	104
6011+75.00	4,114	1,156	333	1,833	0	792	0	0		3,781	0	0		1	1	3,780	0	0	333	159	223	110
6012+00.00	3,001	1,123	330	1,181	0	367	0	0		2,671	0	0		1	1	2,670	0	0	330	159	222	108
6012+25.00	2,724	1,633	327	516	0	0	0	248		2,149	0	0		1	1	2,148	0	0	327	156	218	109
6012+50.00	3,346	2,093	323	501	0	0	0	429		2,594	0	0		1	1	2,593	0	0	323	147	206	117
6012+75.00	3,103	1,989	315	491	0	0	0	308		2,480	0	0		1	1	2,479	0	0	315	138	194	121
6013+00.00	2,913	1,896	306	483	0	0	0	228		2,379	0	0		1	1	2,378	0	0	306	136	191	115
6013+25.00	2,752	1,795	298	477	0	0	0	183		2,272	0	0		1	1	2,271	0	0	298	135	189	109
6013+50.00	2,601	1,700	290	460	0	0	0	151		2,160	0	0		1	1	2,159	0	0	290	133	187	104
6013+75.00	2,472	1,627	283	430	0	0	0	132		2,057	0	0		1	1	2,056	0	0	283	131	184	99
6014+00.00	2,374	1,771	276	207	0	0	0	120		1,979	0	0		1	1	1,978	0	0	276	130	182	94
6014+25.00	2,318	1,936	269	0	0	0	0	113		1,936	0	0		1	1	1,935	0	0	269	125	175	95
6014+50.00	2,322	1,942	262	0	0	0	0	118		1,942	0	0		1	1	1,941	0	0	262	121	169	93
6014+75.00	2,362	1,980	254	0	0	0	0	129		1,980	0	0		1	1	1,979	0	0	254	123	172	82
6015+00.00	2,354	1,972	249	0	0	0	0	132		1,972	0	0		1	1	1,971	0	0	249	124	173	76
6015+25.00	2,259	1,883	251	0	0	0	0	125		1,883	0	0		1	1	1,882	0	0	251	122	171	80
6015+50.00	2,120	1,749	254	0	0	0	0	117		1,749	0	0		1	1	1,748	0	0	254	117	164	90
6015+75.00	1,924	1,220	258	203	0	0	0	243		1,423	2	2		4	6	1,417	0	0	258	74	104	155
6016+00.00	1,772	684	299	396	0	0	0	393		1,080	2	2		4	6	1,074	0	0	299	62	87	213
6016+25.00	1,647	544	350	376	0	0	0	378		919	0	0		1	1	918	0	0	350	85	120	230
6016+50.00	1,520	446	432	342	0	0	0	300		788	0	0		0	0	788	0	0	432	72	101	331
6016+75.00	1,326	451	510	159	0	0	0	205		610	0			0	0	610	0	0	510	51	72	439
6017+00.00	989	389	519	0	0	0	0	82		389	0			0	0	389	0	0	519	20	28	491
6017+25.00	519	0	519	0	0	0	0	5		0	0	519		519	674	-674	0	540	519	0	0	519
Subtotals:																						
	166,424	100,030	17,856	37,320	0	5,356	0	5,866	4,817	147,523	1,473	894	679	3,046	3,963	143,563	0	1,119	17,856	7,211	10,098	7,761

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
6017+25.00	519	0	519	0	0	0	0	0		0	0	519		519	674	-674	0	540	519	0	0	519
6017+50.00	519	0	519	0	0	0	0	0		0	0	519		519	674	-674	0	540	519	0	0	519
6017+75.00	519	0	519	0	0	0	0	0		0	111	26		137	178	-178	0	43	519	0	0	519
6018+00.00	519	0	519	0	0	0	0	0		0	306	70		376	489	-488	0	354	519	0	0	519
6018+25.00	531	13	519	0	0	0	0	0		13	398	87		485	630	-618	0	495	519	22	31	487
6018+50.00	564	45	519	0	0	0	0	0		45	419	81		499	649	-604	0	515	519	46	65	454
6018+75.00	654	145	510	0	0	0	0	0		145	455	77		533	692	-548	0	558	510	60	85	425
6019+00.00	734	277	457	0	0	0	0	0		277	507	78		585	761	-485	0	627	457	82	114	343
6019+25.00	735	337	398	0	0	0	0	0		337	543	81		623	811	-474	0	676	398	94	131	267
6019+50.00	800	426	374	0	0	0	0	0		426	564	82		646	840	-414	0	706	374	101	141	233
6019+75.00	761	415	346	0	0	0	0	0		415	720	100		820	1,066	-651	0	932	346	109	153	193
6020+00.00	667	356	311	0	0	0	0	0		356	1,024	108		1,132	1,472	-1,116	0	1,336	311	109	153	158
6020+25.00	675	391	285	0	0	0	0	0		391	1,160	103		1,263	1,642	-1,251	0	1,507	285	109	153	132
6020+50.00	622	354	268	0	0	0	0	0		354	995	105		1,100	1,430	-1,076	0	1,295	268	111	156	113
6020+75.00	712	454	257	0	0	0	0	0		454	784	96		880	1,145	-690	0	1,010	257	114	160	97
6021+00.00	870	623	246	0	0	0	0	0		623	658	86		744	967	-344	0	832	246	120	168	78
6021+25.00	947	712	235	0	0	0	0	0		712	532	77		609	792	-80	0	658	235	121	169	66
6021+50.00	1,102	870	232	0	0	0	0	0		870	394	68		462	601	269	0	465	232	123	172	60
6021+75.00	1,339	1,102	237	0	0	0	0	0		1,102	261	57		318	413	690	0	278	237	126	176	61
6022+00.00	1,640	1,398	242	0	0	0	0	0		1,398	145	44		188	245	1,154	0	111	242	129	180	62
6022+25.00	2,004	1,757	247	0	0	0	0	0		1,757	52	24		76	99	1,658	0	0	247	132	185	62
6022+50.00	2,443	2,191	252	0	0	0	0	0		2,191	6	6		12	15	2,176	0	0	252	135	190	62
6022+75.00	2,907	2,649	258	0	0	0	0	0		2,649	0	0		1	1	2,648	0	0	258	138	193	66
6023+00.00	3,313	3,047	266	0	0	0	0	0		3,047	0	0		0	1	3,046	0	0	266	139	195	70
6023+25.00	3,634	3,005	273	0	0	172	0	184		3,177	0	0		0	1	3,177	0	0	273	141	198	75
6023+50.00	3,908	2,843	280	0	0	366	0	419		3,209	0	0		0	1	3,209	0	0	280	146	205	76
6023+75.00	4,183	2,969	285	0	0	408	0	521		3,377	0	0		0	1	3,376	0	0	285	151	212	74
6024+00.00	4,411	3,072	287	0	0	444	0	607		3,516	0	0		0	1	3,516	0	0	287	151	212	75
6024+25.00	4,572	3,139	288	0	0	472	0	672		3,611	0	0		0	1	3,611	0	0	288	151	212	76
6024+50.00	4,710	3,197	289	0	0	501	0	723		3,698	0	0		0	1	3,698	0	0	289	152	213	76
6024+75.00	4,825	3,244	288	0	0	532	0	760		3,776	0	0		0	1	3,776	0	0	288	153	214	74
6025+00.00	4,893	3,259	287	0	0	560	0	788		3,819	0	0		0	1	3,818	0	0	287	153	214	73
6025+25.00	4,915	3,243	285	664	0	287	0	435		4,194	0	0		0	1	4,194	0	0	285	152	213	73
6025+50.00	4,884	3,212	284	1,319	0	0	0	69		4,531	0	0		0	1	4,531	0	0	284	150	210	73
6025+75.00	4,794	3,149	282	1,303	0	0	0	61		4,451	0	0		0	1	4,451	0	0	282	148	208	75
6026+00.00	4,651	3,042	281	1,281	0	0	0	48		4,323	0	0		0	1	4,322	0	0	281	146	204	77
6026+25.00	4,442	2,878	277	1,245	0	0	0	43		4,123	0	0		0	1	4,122	0	0	277	141	198	79
6026+50.00	4,128	2,630	270	1,196	0	0	0	32		3,826	0	0		1	1	3,826	0	0	270	136	190	80
6026+75.00	3,731	2,320	261	1,141	0	0	0	9		3,461	0	0		0	1	3,460	0	0	261	129	181	80
6027+00.00	3,315	1,981	252	1,083	0	0	0	0		3,064	0	0		0	1	3,063	0	0	252	122	171	81
6027+25.00	2,903	1,542	243	844	0	206	0	69		2,592	0	0		1	1	2,591	0	0	243	115	160	82
6027+50.00	2,562	1,236	236	596	0	370	0	123		2,203	0	0		1	1	2,202	0	0	236	108	152	85
6027+75.00	2,293	1,164	233	513	0	293	0	91		1,970	0	0		1	1	1,969	0	0	233	104	145	88
6028+00.00	2,050	1,104	229	431	0	231	0	54		1,767	0	0		1	1	1,766	0	0	229	100	140	90
6028+25.00	1,820	1,039	226	355	0	180	0	19		1,574	0	0		1	1	1,573	0	0	226	96	134	93
6028+50.00	1,536	924	217	267	0	126	0	2		1,317	0	0		1	1	1,316	0	0	217	89	125	92
6028+75.00	1,225	758	192	198	0	77	0	0		1,033	0	0		0	1	1,033	0	0	192	82	115	76
6029+00.00	1,007	625	171	165	0	46	0	0		836	1	1		1	2	834	0	0	171	76	106	65
6029+25.00	862	547	153	139	0	23	0	0		709	8	7		15	20	690	0	0	153	70	98	55
6029+50.00	711	514	127	63	0	7	0	0		583	13	11		24	32	552	0	0	127	65	91	36
6029+75.00	555	444	111	0	0	0	0	0		444	7	7		14	18	426	0	0	111	59	83	27
6030+00.00	457	319	138	0	0	0	0	0		319	4	3		7	9	310	0	0	138	55	77	61
6030+25.00	393	226	167	0	0	0	0	0		226	4	3		6	8	218	0	0	167	50	70	97
6030+50.00	318	157	161	0	0	0	0	0	7	163	4	4	174	183	238	-75	0	0	161	45	63	98
6030+75.00	213	97	116	0	0	0	0	0		97	8	8		15	20	77	0	0	116	39	55	61
6031+00.00	114	46	69	0	0	0	0	0		46	10	10		20	26	20	0	0	69	30	43	26
6031+25.00	69	14	55	0	0	0	0	0		14	12	12		24	31	-18	0	0	55	19	27	28
6031+50.00																						
SRKIRBY Totals:	281,603	175,532	33,700	50,123	0	10,659	0	11,595	4,824	241,137	11,584	3,458	854	15,894	20,668	220,472	0	14,596	33,700	12,857	18,006	15,701

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
SRKIRBY_Exist																						
13003+36.89																						
13003+50.00	88	73	15	0	0	0	0	0		73	4	4		9	11	62	0	0	15	0	0	15
13003+75.00	155	103	52	0	0	0	0	0		103	14	14		27	36	67	0	0	52	0	0	52
13004+00.00	123	63	60	0	0	0	0	0		63	24	18		42	55	9	0	0	60	0	0	60
13004+25.00	100	32	68	0	0	0	0	0		32	37	24		61	79	-48	0	0	68	0	0	68
13004+50.00	92	20	72	0	0	0	0	0		20	44	25		69	90	-69	0	0	72	0	0	72
13004+75.00	95	22	73	0	0	0	0	0		22	44	25		69	89	-67	0	0	73	0	0	73
13005+00.00	104	31	73	0	0	0	0	0		31	38	23		61	79	-49	0	0	73	0	0	73
13005+25.00	208	45	163	0	0	0	0	0		45	20	14		34	44	1	0	0	163	0	0	163
13005+50.00	310	53	257	0	0	0	0	0		53	4	4		9	11	42	0	0	257	0	0	257
13005+75.00	246	79	167	0	0	0	0	0		79	5	5		11	14	65	0	0	167	0	0	168
13006+00.00	188	112	76	0	0	0	0	0		112	10	10		21	27	85	0	0	76	0	0	77
13006+25.00	201	119	82	0	0	0	0	0		119	13	13		25	33	86	0	0	82	0	0	82
13006+50.00	220	132	88	0	0	0	0	0		132	12	12		24	31	102	0	0	88	0	0	88
13006+75.00	249	154	95	0	0	0	0	0		154	14	13		27	36	119	0	0	95	0	0	95
13007+00.00	261	159	102	0	0	0	0	0		159	14	13		27	36	123	0	0	102	0	0	103
13007+25.00	269	145	123	0	0	0	0	0		145	11	10		20	27	119	0	0	123	0	0	123
13007+50.00	290	127	163	0	0	0	0	0		127	9	9		18	23	104	0	0	163	0	0	163
13007+75.00	318	109	209	0	0	0	0	0		109	9	9		18	23	86	0	0	209	0	0	209
13008+00.00	346	96	250	0	0	0	0	0		96	9	9		19	24	72	0	0	250	0	0	250
13008+25.00	353	85	268	0	0	0	0	0		85	12	12		23	30	55	0	0	268	0	0	268
13008+50.00	341	73	268	0	0	0	0	0		73	17	15		33	42	31	0	0	268	0	0	268
13008+75.00	327	59	268	0	0	0	0	0		59	24	20		43	57	3	0	0	268	0	0	268
13009+00.00	319	51	268	0	0	0	0	0		51	27	21		48	63	-12	0	0	268	0	0	268
13009+25.00	317	49	268	0	0	0	0	0		49	26	21		48	62	-13	0	0	268	0	0	268
13009+50.00	313	45	268	0	0	0	0	0		45	25	22		47	61	-16	0	0	268	0	0	268
13009+75.00	292	24	268	0	0	0	0	0		24	38	27		65	85	-61	0	0	268	0	0	268
13010+00.00	272	4	268	0	0	0	0	0		4	60	34		94	122	-118	0	0	268	0	0	268
13010+25.00	276	1	275	0	0	0	0	0		1	61	35		97	126	-124	0	0	275	0	0	275
13010+50.00	296	14	282	0	0	0	0	0		14	49	33		82	107	-92	0	0	282	0	0	282
13010+75.00	307	25	281	0	0	0	0	0		25	42	30		73	94	-69	0	0	281	0	0	281
13011+00.00	305	25	280	0	0	0	0	0		25	39	30		69	90	-64	0	0	280	0	0	280
13011+25.00	263	27	236	0	0	0	0	0		27	38	29		67	88	-61	0	0	236	0	0	236
13011+50.00	190	30	160	0	0	0	0	0		30	24	15		39	51	-21	0	0	160	0	0	161
13011+75.00	144	29	115	0	0	0	0	0		29	12			12	16	13	0	0	115	0	0	115
13012+00.00	95	21	75	0	0	0	0	0		21	15			15	20	1	0	0	75	0	0	75
13012+25.00	34	11	23	0	0	0	0	0		11	20			20	26	-15	0	0	23	0	0	23
13012+50.00	5	5	0	0	0	0	0	0		5	28			28	36	-31	0	0	0	0	0	0
13012+75.00	3	3	0	0	0	0	0	0		3	40			40	52	-49	0	0	0	0	0	0
13013+00.00	3	3	0	0	0	0	0	0		3	51			51	66	-63	0	0	0	0	0	0
13013+25.00	3	3	0	0	0	0	0	0		3	39			39	51	-48	0	0	0	0	0	0
13013+50.00	5	5	0	0	0	0	0	0		5	22			22	28	-23	0	0	0	0	0	0
13013+75.00	11	11	0	0	0	0	0	0		11	17			17	22	-11	0	0	0	0	0	0
13014+00.00	17	17	0	0	0	0	0	0		17	14			14	19	-2	0	0	0	0	0	0
13014+25.00	16	16	0	0	0	0	0	0		16	27			27	35	-19	0	0	0	0	0	0
13014+50.00	42	42	0	0	0	0	0	0		42	21			21	27	15	0	0	0	0	0	0
13014+75.00	84	84	0	0	0	0	0	0		84	1			1	1	83	0	0	0	0	0	0
13015+00.00	116	116	0	0	0	0	0	0		116	0			0	0	116	0	0	0	0	0	0
13015+25.00	147	147	0	0	0	0	0	0		147	0			0	0	147	0	0	0	0	0	0
13015+50.00	177	177	0	0	0	0	0	0		177	0			0	0	177	0	0	0	0	0	0
13015+75.00	212	212	0	0	0	0	0	0		212	0			0	0	212	0	0	0	0	0	0
13016+00.00	244	244	0	0	0	0	0	0		244	0			0	0	244	0	0	0	0	0	0
13016+25.00	272	272	0	0	0	0	0	0		272	0			0	0	272	0	0	0	0	0	0
13016+50.00	299	299	0	0	0	0	0	0		299	0			0	0	300	0	0	0	0	0	0
13016+75.00	320	320	0	0	0	0	0	0		320	0			0	0	320	0	0	0	0	0	0
13017+00.00	301	301	0	0	0	0	0	0		301	0			0	0	301	0	0	0	0	0	0
13017+25.00	250	250	0	0	0	0	0	0		250	0			0	0	250	0	0	0	0	0	0
13017+50.00	203	203	0	0	0	0	0	0		203	0			0	0	204	0	0	0	0	0	0
13017+75.00	156	156	0	0	0	0	0	0		156	0			0	0	156	0	0	0	0	0	0
13018+00.00	99	99	0	0	0	0	0	0		99	0			0	0	99	0	0	0	0	0	0
13018+25.00	44	44	0	0	0	0	0	0		44	8			8	10	35	0	0	0	0	0	0
13018+50.00	11	11	0	0	0	0	0	0		11	35			35	46	-35	0	0	0	0	0	0
13018+75.00	2	2	0	0	0	0	0	0		2	61			61	80	-78	0	0	0	0	0	0
13019+00.00	2	2	0	0	0	0	0	0		2	53			53	69	-66	0	0	0	0	0	0
13019+25.00	8	8	0	0	0	0	0	0		8	30			30	40	-32	0	0	0	0	0	0
13019+50.00	31	29	2	0	0	0	0	0		29	16			16	21	9	0	0	2	0	0	2
13019+75.00	69	51	18	0	0	0	0	0		51	8			8	10	41	0	0	18	0	0	18
13020+00.00	117	69	48	0	0	0	0	0		69	6			6	7	61	0	0	48	0	0	48
Subtotals:	11,575	5,448	6,127	0	0	0	0	0	0	5,448	1,340	597	0	1,938	2,522	2,927	0	0	6,127	0	0	6,129

FILE NO.	ENGLISH	DESIGN TEAM Flattery\Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER T.19

12/19/2024 11:32:59 AM pflatte c:\pw_work\pwmain\pflatte\d2495705\T_Sheets_62063093Z09_Grading.xlsm

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
13020+00.00	161	81	80	0	0	0	0	0		81	6			6	7	74	0	0	80	0	0	80
13020+25.00	185	73	112	0	0	0	0	0		73	8			8	10	63	0	0	112	0	0	112
13020+50.00	215	50	165	0	0	0	0	0		50	12	1		13	17	33	0	0	165	0	0	165
13020+75.00	278	25	253	0	0	0	0	0		25	30	14		44	58	-33	0	0	253	0	0	253
13021+00.00	385	12	374	0	0	0	0	0		12	50	26		76	99	-88	0	0	374	0	0	374
13021+25.00	473	4	469	0	0	0	0	0		4	62	30		92	120	-116	0	0	469	0	0	469
13021+50.00	496	0	496	0	0	0	0	0		0	73	34		108	140	-140	0	0	496	0	0	496
13021+75.00	502	6	496	0	0	0	0	0		6	57	27		84	109	-103	0	0	496	0	0	495
13022+00.00	502	6	496	0	0	0	0	0		6	44	24		68	88	-82	0	0	496	0	0	495
13022+25.00	496	0	496	0	0	0	0	0		0	62	30		92	120	-120	0	0	496	0	0	496
13022+50.00	504	7	497	0	0	0	0	0		7	53	24		77	100	-93	0	0	497	0	0	497
13022+75.00	446	15	430	0	0	0	0	0		15	33	18		51	66	-51	0	0	430	0	0	430
13023+00.00	354	14	340	0	0	0	0	0		14	28	18		46	60	-47	0	0	340	0	0	340
13023+25.00	305	14	291	0	0	0	0	0		14	22	17		39	50	-36	0	0	291	0	0	291
13023+50.00	280	23	257	0	0	0	0	0		23	17	15		31	41	-18	0	0	257	10	14	242
13023+75.00	278	32	247	0	0	0	0	0		32	11	10		21	27	5	0	0	247	10	14	232
13024+00.00	276	37	239	0	0	0	0	0		37	5	4		9	12	25	0	0	239	0	0	239
13024+25.00	264	40	225	0	0	0	0	0		40	4	0		5	6	34	0	0	225	0	0	225
13024+50.00	245	37	208	0	0	0	0	0		37	6			6	7	29	0	0	208	0	0	208
13024+75.00	222	30	191	0	0	0	0	0		30	8			8	10	20	0	0	191	0	0	191
13025+00.00	203	28	174	0	0	0	0	0		28	12			12	15	13	0	0	174	0	0	174
13025+25.00	197	40	158	0	0	0	0	0		40	8			8	11	29	0	0	158	0	0	158
13025+50.00	198	57	141	0	0	0	0	0		57	2			2	3	54	0	0	141	0	0	141
13025+75.00	196	72	124	0	0	0	0	0		72	0			0	1	71	0	0	124	0	0	124
13026+00.00	193	86	107	0	0	0	0	0		86	1			1	1	85	0	0	107	0	0	107
13026+25.00	188	97	90	0	0	0	0	0		97	2			2	2	95	0	0	90	0	0	90
13026+50.00	196	123	74	0	0	0	0	0		123	2			2	2	121	0	0	74	0	0	74
13026+75.00	201	144	57	0	0	0	0	0		144	3			3	3	141	0	0	57	0	0	57
13027+00.00	207	167	40	0	0	0	0	0		167	3			3	5	163	0	0	40	0	0	40
13027+25.00	262	239	23	0	0	0	0	0		239	1			1	2	237	0	0	23	0	0	23
13027+50.00	294	287	7	0	0	0	0	0		287	1			1	1	286	0	0	7	0	0	7
13027+75.00	273	273	0	0	0	0	0	0		273	1			1	1	272	0	0	0	0	0	0
13028+00.00	208	208	0	0	0	0	0	0		208	0			0	0	208	0	0	0	0	0	0
13028+25.00	151	151	0	0	0	0	0	0		151	0			0	0	151	0	0	0	0	0	0
13028+50.00	147	147	0	0	0	0	0	0		147	0			0	0	147	0	0	0	0	0	0
13028+75.00	146	146	0	0	0	0	0	0		146	0			0	0	146	0	0	0	0	0	0
13029+00.00	140	140	0	0	0	0	0	0		140	0			0	0	141	0	0	0	0	0	0
13029+25.00	137	137	0	0	0	0	0	0		137	0			0	0	138	0	0	0	0	0	0
13029+50.00	131	131	0	0	0	0	0	0		131	0			0	0	132	0	0	0	0	0	0
13029+75.00	116	116	0	0	0	0	0	0		116	0			0	0	116	0	0	0	0	0	0
13030+00.00	89	89	0	0	0	0	0	0		89	0			0	0	89	0	0	0	0	0	0
13030+25.00	65	65	0	0	0	0	0	0		65	0			0	0	65	0	0	0	0	0	0
13030+50.00	47	47	0	0	0	0	0	0		47	3			3	4	43	0	0	0	0	0	0
13030+75.00	33	33	0	0	0	0	0	0		33	5			5	6	27	0	0	0	0	0	0
13031+00.00	21	21	0	0	0	0	0	0		21	11			11	14	7	0	0	0	0	0	0
13031+25.00	9	9	0	0	0	0	0	0		9	19			19	25	-16	0	0	0	0	0	0
13031+50.00	9	9	0	0	0	0	0	0		9	22			22	29	-20	0	0	0	0	0	0
13031+75.00	14	14	0	0	0	0	0	0		14	26			26	34	-20	0	0	0	0	0	0
13032+00.00	33	33	0	0	0	0	0	0		33	25			25	33	0	0	0	0	0	0	0
13032+25.00	78	78	0	0	0	0	0	0		78	15			15	19	60	0	0	0	0	0	0
13032+50.00	129	129	0	0	0	0	0	0		129	6			6	8	122	0	0	0	0	0	0
13032+75.00	146	146	0	0	0	0	0	0		146	6			6	8	138	0	0	0	0	0	0
13033+00.00	164	164	0	0	0	0	0	0		164	3			3	4	160	0	0	0	0	0	0
13033+25.00	176	176	0	0	0	0	0	0		176	0			0	0	176	0	0	0	0	0	0
13033+50.00	215	144	71	0	0	0	0	0		144	0			0	0	144	0	0	71	1	1	70
13033+75.00	289	112	177	0	0	0	0	0		112	1			1	1	111	0	0	177	1	1	176
13034+00.00	316	87	230	0	0	0	0	0		87	3	2		4	6	81	0	0	230	0	0	230
13034+25.00	317	59	258	0	0	0	0	0		59	14	12		26	33	26	0	0	258	0	0	258
13034+50.00	316	48	268	0	0	0	0	0		48	20	19		39	51	-2	0	0	268	0	0	268
13034+75.00	314	46	268	0	0	0	0	0		46	17	17		34	44	2	0	0	268	0	0	268
13035+00.00	272	39	233	0	0	0	0	0		39	17	17		34	45	-6	0	0	233	0	0	233
13035+25.00	241	30	211	0	0	0	0	0		30	21	20		41	54	-24	0	0	211	0	0	211
13035+50.00	204	21	183	0	0	0	0	0		21	30	24		54	71	-50	0	0	183	0	0	184
13035+75.00	181	20	161	0	0	0	0	0		20	29	25		54	70	-50	0	0	161	0	0	162
13036+00.00																						
SRKIRBY_Exist																						
Totals:	25,906	10,363	15,543	0	0	0	0	0	0	10,363	2,258	1,025	0	3,282	4,272	6,092	0	0	15,543	23	33	15,515

FILE NO.	ENGLISH	DESIGN TEAM Flattery\Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER T.20

12/19/2024 11:32:59 AM pflatte c:\pw_work\pwmain\pflatte\d2495705\T_Sheets_62063093Z09_Grading.xlsm

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
SR220																						
7011+25.00																						
7011+50.00	60	6	54	0	0	0	0	0		6	10	10		19	25	-19	0	0	54	17	24	30
7011+75.00	71	9	58	5	0	0	0	0		14	10	10		20	26	-13	0	0	58	22	31	27
7012+00.00	96	15	63	17	0	0	0	0		32	11	9		20	27	6	0	0	63	26	37	27
7012+25.00	110	10	68	33	0	0	0	0		43	32	10		43	56	-13	0	0	68	29	40	28
7012+50.00	120	0	67	53	0	0	0	0		53	54	14		68	89	-36	0	0	67	30	42	26
7012+75.00	135	38	65	33	0	0	0	0		70	57	18		75	98	-28	0	0	65	31	43	21
7013+00.00	155	87	68	0	0	0	0	0		87	59	22		81	106	-19	0	0	68	33	46	22
7013+25.00	185	106	79	0	0	0	0	0		106	62	27		89	116	-10	0	0	79	35	49	30
7013+50.00	207	112	95	0	0	0	0	0		112	56	30		86	112	1	0	0	95	37	52	43
7013+75.00	241	108	133	0	0	0	0	0		108	39	30		68	89	19	0	0	133	38	54	79
7014+00.00	305	105	201	0	0	0	0	0		105	34	30		64	83	21	0	0	201	29	40	160
7014+25.00	419	125	294	0	0	0	0	0		125	36	31		67	87	38	0	0	294	32	44	250
7014+50.00	545	126	419	0	0	0	0	0		126	37	33		70	91	35	0	0	419	38	54	365
7014+75.00	544	54	490	0	0	0	0	0		54	54	46		100	130	-76	0	0	490	16	23	468
7015+00.00	0	0	0	0	0	0	0	0		0	0			0	0	0	0	0	0	0	0	0
7015+25.00	0	0	0	0	0	0	0	0		0	0			0	0	0	0	0	0	0	0	0
7015+50.00	0	0	0	0	0	0	0	0		0	0			0	0	0	0	0	0	0	0	0
7015+75.00	516	26	490	0	0	0	0	0		26	1	1		3	4	23	0	0	490	0	0	490
7016+00.00	669	180	490	0	0	0	0	0		180	2	2		3	4	176	0	0	490	24	33	457
7016+25.00	629	309	320	0	0	0	0	0		309	0	0		1	1	308	0	0	320	48	67	253
7016+50.00	430	303	126	0	0	0	0	0		303	1	1		2	2	301	0	0	126	38	53	73
7016+75.00	428	317	111	0	0	0	0	0		317	1	1		2	2	315	0	0	111	38	54	58
7017+00.00	464	344	121	0	0	0	0	0		344	0	0		1	1	343	0	0	121	50	70	51
7017+25.00	478	356	122	0	0	0	0	0		356	0	0		1	1	355	0	0	122	52	72	50
7017+50.00	498	375	122	0	0	0	0	0		375	0	0		1	1	375	0	0	122	53	74	48
7017+75.00	522	399	123	0	0	0	0	0		399	0	0		1	1	398	0	0	123	54	76	47
7018+00.00	543	420	124	0	0	0	0	0		420	0	0		1	1	419	0	0	124	55	78	46
7018+25.00	555	431	125	0	0	0	0	0		431	0	0		1	1	430	0	0	125	56	79	46
7018+50.00	565	438	127	0	0	0	0	0		438	0	0		1	1	438	0	0	127	56	79	48
7018+75.00	575	448	127	0	0	0	0	0		448	0	0		1	1	447	0	0	127	56	79	48
7019+00.00	582	457	125	0	0	0	0	0		457	0	0		1	1	456	0	0	125	56	79	47
7019+25.00	594	468	126	0	0	0	0	0		468	0	0		1	1	467	0	0	126	57	79	47
7019+50.00	607	479	128	0	0	0	0	0		479	0	0		1	1	478	0	0	128	57	80	48
7019+75.00	614	485	129	0	0	0	0	0		485	0	0		1	1	485	0	0	129	57	80	49
7020+00.00	611	484	127	0	0	0	0	0		484	0	0		1	1	483	0	0	127	57	80	48
7020+25.00	593	468	125	0	0	0	0	0		468	0	0		1	1	467	0	0	125	56	79	46
7020+50.00	566	442	124	0	0	0	0	0		442	0	0		1	1	441	0	0	124	55	77	47
7020+75.00	532	409	123	0	0	0	0	0		409	0	0		1	1	408	0	0	123	53	74	49
7021+00.00	484	364	120	0	0	0	0	0		364	0	0		1	1	363	0	0	120	51	71	49
7021+25.00	433	316	117	0	0	0	0	0		316	0	0		1	1	315	0	0	117	49	69	48
7021+50.00	397	283	114	0	0	0	0	0		283	0	0		1	1	283	0	0	114	49	68	46
7021+75.00	379	267	112	0	0	0	0	0		267	0	0		1	1	266	0	0	112	48	67	45
7022+00.00	371	258	113	0	0	0	0	0		258	0	0		1	1	257	0	0	113	47	66	47
7022+25.00	379	262	117	0	0	0	0	0		262	0	0		1	1	261	0	0	117	48	67	50
7022+50.00	400	280	120	0	0	0	0	0		280	0	0		1	1	279	0	0	120	48	68	53
7022+75.00	429	304	124	0	0	1	0	0		305	0	0		1	1	305	0	0	124	49	69	54
7023+00.00	472	338	127	0	0	7	0	0		345	0	0		1	1	344	0	0	127	51	71	56
7023+25.00	525	377	130	0	0	18	0	0		395	0	0		1	1	395	0	0	130	53	75	55
7023+50.00	591	423	134	0	0	34	0	0		458	0	0		1	1	457	0	0	134	58	81	53
7023+75.00	655	462	137	0	0	56	0	0		518	0	0		1	1	518	0	0	137	61	86	51
7024+00.00	687	472	140	0	0	75	0	0		547	1	1		2	3	544	0	0	140	64	90	51
7024+25.00	681	390	144	0	0	147	0	0		537	6	6		12	16	521	0	0	144	67	94	50
7024+50.00	648	280	146	0	0	222	0	0		502	23	17		40	52	450	0	0	146	69	96	50
7024+75.00	585	212	144	0	0	228	0	0		440	56	30		86	111	329	0	0	144	68	95	49
7025+00.00	495	154	140	0	0	201	0	0		355	104	40		144	187	168	0	52	140	66	92	48
7025+25.00	398	118	135	0	0	144	0	0		263	162	46		208	271	-8	0	137	135	62	87	48
7025+50.00	312	94	130	0	0	88	0	0		182	216	52		268	349	-167	0	215	130	58	82	49
7025+75.00	252	77	126	0	0	49	0	0		127	259	56		315	410	-283	0	276	126	56	78	48
7026+00.00	224	71	121	0	0	32	0	0		103	263	58		321	417	-314	0	282	121	55	78	44
7026+25.00	232	101	116	0	0	15	0	0		116	250	56		306	398	-282	0	263	116	57	80	36
7026+50.00	228	121	107	0	0	0	0	0		121	303	58		361	469	-348	0	334	107	59	82	25
7026+75.00	200	104	96	0	0	0	0	0		104	378	62		439	571	-468	0	437	96	58	81	16
7027+00.00	182	88	93	0	0	0	0	0		88	403	61		464	603	-515	0	468	93	56	79	15
7027+25.00	172	74	98	0	0	0	0	0		74	395	58		453	589	-515	0	454	98	56	79	19
7027+50.00	170	69	102	0	0	0	0	0		69	370	51		420	547	-478	0	412	102	57	80	22
7027+75.00	199	69	129	0	0	0	0	0		69	340	43		383	497	-428	0	363	129	58	81	49
7028+00.00	253	86	167	0	0	0	0	0		86	304	39		342	445	-359	0	311	167	58	82	85
Subtotals:	26,196	15,453	9,285	141	0	1,317	0	0	0	16,911	4,398	1,066	0	5,464	7,107	9,805	0	4,001	9,285	3,076	4,309	4,979

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
7028+00.00	290	120	169	0	0	0	0	0	40	161	255	37	731	1,023	1,330	-1,170	0	244	169	60	84	85
7028+25.00	305	168	136	0	0	0	0	0		168	211	35		246	320	-151	0	185	136	62	87	49
7028+50.00	342	226	116	0	0	0	0	0		226	176	32		209	272	-45	0	137	116	65	91	25
7028+75.00	412	289	123	0	0	0	0	0		289	143	29		173	224	65	0	90	123	68	96	27
7029+00.00	476	348	129	0	0	0	0	0		348	109	26		135	176	172	0	40	129	71	100	29
7029+25.00	526	394	131	0	0	0	0	0		394	78	22		100	130	265	0	0	131	73	103	29
7029+50.00	562	432	130	0	0	0	0	0		432	51	18		69	90	342	0	0	130	75	105	25
7029+75.00	594	464	130	0	0	0	0	0		464	28	14		42	54	410	0	0	130	76	106	24
7030+00.00	627	498	129	0	0	0	0	0		498	13	9		22	29	469	0	0	129	75	106	23
7030+25.00	671	543	128	0	0	0	0	0		543	7	6		13	17	527	0	0	128	75	105	24
7030+50.00	690	563	127	0	0	0	0	0		563	4	4		7	9	554	0	0	127	73	102	25
7030+75.00	650	526	124	0	0	0	0	0		526	2	2		4	5	521	0	0	124	70	98	27
7031+00.00	584	463	120	0	0	0	0	0		463	1	1		2	3	460	0	0	120	66	93	28
7031+25.00	505	394	112	0	0	0	0	0		394	1	1		2	3	391	0	0	112	62	87	25
7031+50.00	401	302	99	0	0	0	0	0		302	2	2		4	5	297	0	0	99	56	78	21
7031+75.00	276	189	86	0	0	0	0	0		189	3	3		6	8	182	0	0	86	48	67	19
7032+00.00	155	82	73	0	0	0	0	0		82	5	5		10	13	70	0	0	73	38	54	19
7032+25.00	77	21	56	0	0	0	0	0		21	7	7		15	20	2	0	0	56	28	39	18
7032+50.00																						
SR220																						
Totals:	34,340	21,478	11,404	141	0	1,318	0	0	41	22,976	5,495	1,320	732	7,546	9,814	13,165	0	4,697	11,404	4,218	5,909	5,500

FILE NO.	ENGLISH	DESIGN TEAM Flattery\Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER T.22

12/19/2024 11:32:59 AM pflatte c:\pw_work\pwmain\pflatte\d2495705\T_Sheets_62063093Z09_Grading.xlsm

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
SR220_Exist																						
14005+33.14																						
14005+50.00	102	15	48	38	0	0	0	0		54	14	13		27	35	18	0	0	48	0	0	48
14005+75.00	157	49	80	28	0	0	0	0		77	22	19		41	54	23	0	0	80	0	0	80
14006+00.00	179	73	105	0	0	0	0	0		73	23	20		42	55	18	0	0	105	0	0	106
14006+25.00	211	69	142	0	0	0	0	0		69	24	20		45	58	11	0	0	142	0	0	142
14006+50.00	248	66	183	0	0	0	0	0		66	25	21		46	60	5	0	0	183	0	0	183
14006+75.00	288	64	224	0	0	0	0	0		64	25	21		46	60	5	0	0	224	0	0	224
14007+00.00	318	65	254	0	0	0	0	0		65	26	21		47	61	4	0	0	254	0	0	254
14007+25.00	330	67	263	0	0	0	0	0		67	26	22		48	62	5	0	0	263	0	0	263
14007+50.00	330	66	264	0	0	0	0	0		66	26	22		48	62	4	0	0	264	0	0	264
14007+75.00	329	65	264	0	0	0	0	0		65	26	22		48	62	3	0	0	264	0	0	264
14008+00.00	329	65	264	0	0	0	0	0		65	25	21		46	60	6	0	0	264	0	0	264
14008+25.00	325	67	258	0	0	0	0	0		67	22	20		41	54	13	0	0	258	0	0	258
14008+50.00	335	67	268	0	0	0	0	0		67	19	18		37	48	19	0	0	268	0	0	269
14008+75.00	368	63	305	0	0	0	0	0		63	20	19		39	51	12	0	0	305	0	0	305
14009+00.00	415	63	352	0	0	0	0	0		63	21	19		39	51	12	0	0	352	0	0	352
14009+25.00	456	60	396	0	0	0	0	0		60	23	20		43	56	4	0	0	396	0	0	396
14009+50.00	445	42	402	0	0	0	0	0		42	33	24		58	75	-33	0	0	402	0	0	403
14009+75.00	413	31	382	0	0	0	0	0		31	30	23		53	68	-37	0	0	382	0	0	382
14010+00.00	415	58	357	0	0	0	0	0		58	15	13		28	37	21	0	0	357	0	0	357
14010+25.00	407	81	325	0	0	0	0	0		81	6	4		10	13	68	0	0	325	0	0	325
14010+50.00	372	83	289	0	0	0	0	0		83	2			2	3	80	0	0	289	0	0	289
14010+75.00	341	89	252	0	0	0	0	0		89	1			1	1	88	0	0	252	0	0	252
14011+00.00	291	76	215	0	0	0	0	0		76	7			7	10	66	0	0	215	0	0	215
14011+25.00	231	53	178	0	0	0	0	0		53	17			17	23	30	0	0	178	0	0	178
14011+50.00	190	47	143	0	0	0	0	0		47	20			20	26	21	0	0	143	0	0	143
14011+75.00	159	49	110	0	0	0	0	0		49	18			18	24	25	0	0	110	0	0	110
14012+00.00	128	49	79	0	0	0	0	0		49	16			16	21	29	0	0	79	0	0	79
14012+25.00	92	37	55	0	0	0	0	0		37	21			21	28	9	0	0	55	0	0	55
14012+50.00	72	25	46	0	0	0	0	0		25	27			27	35	-9	0	0	46	0	0	47
14012+75.00	69	23	46	0	0	0	0	0		23	27			27	35	-12	0	0	46	0	0	46
14013+00.00	67	18	49	0	0	0	0	0		18	30			30	40	-22	0	0	49	0	0	49
14013+25.00	69	16	54	0	0	0	0	0		16	32			32	41	-26	0	0	54	0	0	54
14013+50.00	75	16	58	0	0	0	0	0		16	30			30	39	-23	0	0	58	0	0	59
14013+75.00	79	16	63	0	0	0	0	0		16	30			30	39	-24	0	0	63	0	0	63
14014+00.00	86	15	71	0	0	0	0	0		15	30			30	39	-24	0	0	71	0	0	71
14014+25.00	102	19	83	0	0	0	0	0		19	27			27	35	-16	0	0	83	0	0	83
14014+50.00	118	24	94	0	0	0	0	0		24	25			25	33	-9	0	0	94	0	0	94
14014+75.00	134	28	106	0	0	0	0	0		28	24			24	31	-3	0	0	106	0	0	106
14015+00.00	149	31	117	0	0	0	0	0		31	23			23	30	1	0	0	117	0	0	117
14015+25.00	157	29	129	0	0	0	0	0		29	26			26	34	-5	0	0	129	0	0	129
14015+50.00	163	24	139	0	0	0	0	0		24	29			29	38	-14	0	0	139	0	0	139
14015+75.00	173	27	146	0	0	0	0	0		27	26			26	34	-8	0	0	146	0	0	146
14016+00.00	184	34	150	0	0	0	0	0		34	18			18	24	10	0	0	150	0	0	150
14016+25.00	195	41	154	0	0	0	0	0		41	11			11	14	27	0	0	154	0	0	154
14016+50.00	199	41	158	0	0	0	0	0		41	9			9	11	30	0	0	158	0	0	158
14016+75.00	199	38	162	0	0	0	0	0		38	11			11	14	23	0	0	162	0	0	162
14017+00.00	203	38	165	0	0	0	0	0		38	12			12	15	23	0	0	165	0	0	165
14017+25.00	201	40	161	0	0	0	0	0		40	12			12	16	25	0	0	161	0	0	161
14017+50.00	190	39	151	0	0	0	0	0		39	14	3		18	23	16	0	0	151	0	0	151
14017+75.00	180	37	142	0	0	0	0	0		37	14	4		18	24	14	0	0	142	0	0	142
14018+00.00	151	22	129	0	0	0	0	0		22	18	5		23	30	-8	0	0	129	0	0	129
14018+25.00	141	27	114	0	0	0	0	0		27	23	10		33	42	-15	0	0	114	0	0	114
14018+50.00	151	46	105	0	0	0	0	0		46	22	13		35	45	1	0	0	105	0	0	105
14018+75.00	147	46	102	0	0	0	0	0		46	28	19		48	62	-17	0	0	102	0	0	102
14019+00.00	145	42	103	0	0	0	0	0		42	37	26		62	81	-39	0	0	103	0	0	103
14019+25.00	143	37	106	0	0	0	0	0		37	41	27		68	89	-52	0	0	106	0	0	106
14019+50.00	152	35	117	0	0	0	0	0		35	44	28		71	93	-58	0	0	117	0	0	117
14019+75.00	183	31	151	0	0	0	0	0		31	48	29		77	101	-69	0	0	151	0	0	152
14019+79.30	36	5	31	0	0	0	0	0		5	9	5		14	18	-14	0	0	31	0	0	31
SR220_Exist																						
Totals:	12,517	2,591	9,860	67	0	0	0	0	0	2,658	1,312	552	0	1,863	2,425	234	0	0	9,860	0	0	9,863

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
SR210																						
8002+00.00	61	10	51	0	0	0	0	0		10	16	16		33	42	-33	0	0	51	15	21	30
8002+25.00	87	22	65	0	0	0	0	0		22	23	20		43	56	-34	0	0	65	28	39	26
8002+50.00	97	27	70	0	0	0	0	0		27	34	26		60	78	-51	0	0	70	33	46	24
8002+75.00	92	18	74	0	0	0	0	0		18	47	29		76	99	-81	0	0	74	34	48	27
8003+00.00	88	10	78	0	0	0	0	0		10	61	33		94	123	-113	0	0	78	32	45	33
8003+25.00	90	9	82	0	0	0	0	0		9	78	36		114	148	-139	0	13	82	32	45	37
8003+50.00	95	10	85	0	0	0	0	0		10	91	37		128	167	-157	0	31	85	33	46	40
8003+75.00	100	12	89	0	0	0	0	0		12	101	37		137	178	-167	0	44	89	34	47	41
8004+00.00	107	15	92	0	0	0	0	0		15	120	35		154	201	-186	0	66	92	36	50	42
8004+25.00	116	20	96	0	0	0	0	0		20	217	34		251	326	-306	0	191	96	42	59	37
8004+50.00	125	25	100	0	0	0	0	0		25	293	35		328	426	-401	0	291	100	48	67	33
8004+75.00	132	31	101	0	0	0	0	0		31	281	38		319	415	-384	0	280	101	49	69	32
8005+00.00	143	44	98	0	0	0	0	0		44	272	43		316	411	-366	0	276	98	51	71	27
8005+25.00	159	60	99	0	0	0	0	0		60	274	49		323	420	-360	0	285	99	52	73	26
8005+50.00	175	72	103	0	0	0	0	0		72	285	53		338	440	-368	0	304	103	53	74	30
8005+75.00	194	85	108	0	0	0	0	0		85	299	57		356	462	-377	0	328	108	54	76	32
8006+00.00	216	101	114	0	0	0	0	0		101	314	61		375	488	-386	0	352	114	56	79	36
8006+25.00	235	112	123	0	0	0	0	0		112	320	64		385	500	-388	0	365	123	59	83	41
8006+50.00	248	115	133	0	0	0	0	0		115	316	63		379	493	-378	0	358	133	62	86	47
8006+75.00	253	110	143	0	0	0	0	0		110	317	62		378	492	-382	0	358	143	63	89	55
8007+00.00	259	105	154	0	0	0	0	0		105	344	68		412	535	-430	0	400	154	64	90	64
8007+25.00	264	101	164	0	0	0	0	0		101	383	73		456	593	-493	0	459	164	64	90	73
8007+50.00	262	89	173	0	0	0	0	0		89	408	72		480	625	-536	0	490	173	64	90	83
8007+75.00	269	86	183	0	0	0	0	0		86	438	73		511	664	-578	0	529	183	65	91	92
8008+00.00	265	75	191	0	0	0	0	0		75	500	76		575	748	-673	0	614	191	64	90	100
8008+25.00	247	50	197	0	0	0	0	0		50	562	78		639	831	-780	0	696	197	62	86	111
8008+50.00	258	49	209	0	0	0	0	0		49	548	76		624	811	-763	0	676	209	60	84	125
8008+75.00	295	65	230	0	0	0	0	0		65	471	71		542	705	-639	0	569	230	60	84	146
8009+00.00	336	85	251	0	0	0	0	0		85	386	65		451	587	-502	0	452	251	60	84	168
8009+25.00	377	102	275	0	0	0	0	0		102	309	60		369	480	-378	0	345	275	58	82	193
8009+50.00	415	118	297	0	0	0	0	0		118	247	55		302	393	-275	0	257	297	57	80	217
8009+75.00	490	135	355	0	0	0	0	0		135	199	51		250	325	-190	0	190	355	56	79	277
8010+00.00	579	128	452	0	0	0	0	0		128	170	52		222	289	-161	0	155	452	53	75	377
8010+25.00	575	79	497	0	0	0	0	0		79	169	64		233	302	-224	0	168	497	25	35	462
8010+50.00	519	22	496	0	0	0	0	0		22	160	70		230	299	-276	0	164	496	0	0	496
8010+75.00	0	0	0	0	0	0	0	0		0	0			0	0	0	0	0	0	0	0	0
8011+00.00	0	0	0	0	0	0	0	0		0	0			0	0	0	0	0	0	0	0	0
8011+25.00	0	0	0	0	0	0	0	0		0	0			0	0	0	0	0	0	0	0	0
8011+50.00	537	42	495	0	0	0	0	0		42	0			0	0	42	0	0	495	0	0	495
8011+75.00	708	213	495	0	0	0	0	0		213	0	0		1	1	212	0	0	495	0	0	495
8012+00.00	958	462	495	0	0	0	0	0		462	2	2		4	5	458	0	0	495	28	39	456
8012+25.00	989	589	400	0	0	0	0	0		589	10	7		17	22	567	0	0	400	58	81	320
8012+50.00	879	578	301	0	0	0	0	0		578	20	11		31	41	537	0	0	301	61	85	216
8012+75.00	778	496	281	0	0	0	0	0		496	22	12		34	44	453	0	0	281	60	85	197
8013+00.00	580	366	214	0	0	0	0	0		366	21	12		33	42	324	0	0	214	54	76	137
8013+25.00	370	243	128	0	0	0	0	0		243	19	11		30	39	204	0	0	128	46	65	63
8013+50.00	206	125	81	0	0	0	0	0		125	15	10		26	33	92	0	0	81	34	48	33
8013+75.00	105	44	61	0	0	0	0	0		44	12	10		22	29	15	0	0	61	21	30	32
8014+00.00	63	13	50	0	0	0	0	0		13	10	10		20	26	-13	0	0	50	12	16	34
8014+25.00																						
SR210																						
Totals:	14,398	5,369	9,029	0	0	0	0	0	0	5,369	9,182	1,918	0	11,100	14,431	-9,063	0	9,705	9,029	2,052	2,875	6,156

FILE NO.	ENGLISH	DESIGN TEAM Flattery\Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER T.24

12/19/2024 11:32:59 AM pflatte c:\pw_work\pwmain\pflatte\d2495705\T_Sheets_62063093Z09_Grading.xlsm

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
SR210_Exist																						
15006+07.41																						
15006+25.00	196	126	70	0	0	0	0	0		126	8	8		16	21	105	0	0	70	0	0	70
15006+50.00	263	161	103	0	0	0	0	0		161	15	14		29	38	123	0	0	103	0	0	103
15006+75.00	241	138	103	0	0	0	0	0		138	20	18		38	49	89	0	0	103	0	0	103
15007+00.00	220	120	100	0	0	0	0	0		120	26	20		46	60	60	0	0	100	0	0	100
15007+25.00	207	105	101	0	0	0	0	0		105	32	22		53	69	36	0	0	101	0	0	101
15007+50.00	200	94	106	0	0	0	0	0		94	35	23		59	76	18	0	0	106	0	0	106
15007+75.00	193	79	113	0	0	0	0	0		79	43	25		68	89	-9	0	0	113	0	0	113
15008+00.00	186	63	123	0	0	0	0	0		63	55	27		82	106	-44	0	0	123	0	0	123
15008+25.00	180	47	133	0	0	0	0	0		47	67	29		97	126	-79	0	0	133	0	0	133
15008+50.00	173	30	143	0	0	0	0	0		30	83	32		114	149	-118	0	0	143	0	0	143
15008+75.00	172	19	153	0	0	0	0	0		19	94	34		128	166	-147	0	0	153	0	0	153
15009+00.00	174	11	163	0	0	0	0	0		11	103	36		138	180	-169	0	0	163	0	0	163
15009+25.00	175	3	173	0	0	0	0	0		3	115	37		152	198	-195	0	0	173	0	0	173
15009+50.00	181	0	181	0	0	0	0	0		0	117	37		154	200	-200	0	0	181	0	0	181
15009+75.00	188	0	188	0	0	0	0	0		0	114	37		151	197	-197	0	0	188	0	0	188
15010+00.00	193	0	193	0	0	0	0	0		0	108	37		146	189	-189	0	0	193	0	0	193
15010+25.00	207	1	206	0	0	0	0	0		1	90	36		126	164	-163	0	0	206	0	0	206
15010+50.00	256	4	252	0	0	0	0	0		4	74	35		109	142	-138	0	0	252	0	0	252
15010+75.00	328	10	318	0	0	0	0	0		10	64	33		97	126	-116	0	0	318	0	0	318
15011+00.00	396	22	374	0	0	0	0	0		22	50	28		78	102	-79	0	0	374	0	0	374
15011+25.00	448	34	414	0	0	0	0	0		34	37	24		61	80	-46	0	0	414	0	0	414
15011+50.00	466	39	427	0	0	0	0	0		39	35	23		58	76	-37	0	0	427	0	0	428
15011+72.72	424	38	386	0	0	0	0	0		38	33	21		54	70	-33	0	0	386	0	0	386
SR210_Exist																						
Totals:	5,667	1,145	4,523	0	0	0	0	0	0	1,145	1,418	637	0	2,054	2,672	-1,528	0	0	4,523	0	0	4,524

FILE NO.	ENGLISH	DESIGN TEAM Flattery\Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER T.25

12/19/2024 11:32:59 AM pflatte c:\pw_work\pwmain\pflatte\d2495705\T_Sheets_62063093Z09_Grading.xlsm

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
RPA063																						
11255+78.45																						
11256+00.00	447	0	447	0	0	0	0	0		0	678	124		802	1,042	-1,042	0	871	447	0	0	447
11256+25.00	557	42	515	0	0	0	0	0		42	959	174		1,134	1,474	-1,432	0	1,275	515	0	0	515
11256+50.00	727	214	513	0	0	0	0	0		214	845	149		993	1,291	-1,078	0	1,093	513	0	0	513
11256+75.00	959	458	501	0	0	0	0	0		458	698	131		829	1,077	-620	0	880	501	0	0	501
11257+00.00	919	446	473	0	0	0	0	0		446	647	130		778	1,011	-565	0	814	473	18	25	448
11257+25.00	779	334	446	0	0	0	0	0		334	606	128		734	955	-621	0	757	446	40	56	390
11257+50.00	852	434	418	0	0	0	0	0		434	580	120		701	911	-477	0	712	418	77	108	310
11257+75.00	981	588	394	0	0	0	0	0		588	581	114		695	904	-317	0	706	394	111	155	239
11258+00.00	1,055	677	378	0	0	0	0	0		677	621	114		736	956	-279	0	758	378	117	163	215
11258+25.00	1,057	689	368	0	0	0	0	0		689	689	117		806	1,048	-359	0	850	368	121	170	198
11258+50.00	1,028	665	362	0	0	0	0	0		665	778	121		899	1,168	-503	0	971	362	121	169	193
11258+75.00	992	630	361	0	0	0	0	0		630	885	125		1,010	1,313	-683	0	1,115	361	120	168	193
11259+00.00	944	583	361	0	0	0	0	0		583	999	127		1,126	1,464	-881	0	1,266	361	119	167	194
11259+25.00	885	525	360	0	0	0	0	0		525	1,104	128		1,233	1,603	-1,078	0	1,405	360	117	164	196
11259+50.00	805	445	359	0	0	0	0	0		445	1,206	130		1,336	1,737	-1,291	0	1,539	359	116	162	198
11259+75.00	705	346	359	0	0	0	0	0		346	1,306	132		1,439	1,870	-1,524	0	1,672	359	113	159	200
11260+00.00	614	256	358	0	0	0	0	0		256	1,400	136		1,536	1,997	-1,741	0	1,799	358	111	155	203
11260+25.00	555	198	358	0	0	0	0	0		198	1,462	138		1,600	2,080	-1,883	0	1,882	358	108	152	206
11260+50.00	524	167	357	0	0	0	0	0		167	1,482	139		1,621	2,107	-1,941	0	1,910	357	106	149	208
11260+75.00	498	144	354	0	0	0	0	0		144	1,483	139		1,622	2,109	-1,964	0	1,911	354	104	146	208
11261+00.00	467	120	347	0	0	0	0	0		120	1,487	141		1,628	2,117	-1,997	0	1,919	347	102	143	204
11261+25.00	430	90	340	0	0	0	0	0		90	1,496	144		1,640	2,132	-2,042	0	1,934	340	99	139	202
11261+50.00	391	58	333	0	0	0	0	0		58	1,505	147		1,652	2,148	-2,089	0	1,950	333	95	133	200
11261+75.00	361	35	326	0	0	0	0	0		35	1,509	151		1,660	2,158	-2,123	0	1,960	326	89	125	201
11262+00.00	345	26	319	0	0	0	0	0		26	1,480	150		1,630	2,119	-2,093	0	1,921	319	87	122	197
11262+25.00	344	32	312	0	0	0	0	0		32	1,394	143		1,537	1,999	-1,967	0	1,801	312	87	123	190
11262+50.00	352	47	305	0	0	0	0	0		47	1,271	136		1,407	1,829	-1,783	0	1,632	305	86	121	185
11262+75.00	369	70	298	0	0	0	0	0		70	1,143	129		1,272	1,653	-1,583	0	1,456	298	86	120	178
11263+00.00	382	90	291	0	0	0	0	0		90	1,024	122		1,145	1,489	-1,399	0	1,291	291	85	118	173
11263+25.00	380	96	284	0	0	0	0	0		96	924	116		1,040	1,353	-1,257	0	1,154	284	81	114	170
11263+50.00	366	89	277	0	0	0	0	0		89	844	112		956	1,243	-1,154	0	1,045	277	77	108	169
11263+75.00	349	78	270	0	0	0	0	0		78	764	108		872	1,134	-1,056	0	936	270	73	102	168
11264+00.00	340	77	264	0	0	0	0	0		77	679	104		783	1,018	-941	0	820	264	70	98	166
11264+25.00	352	96	257	0	0	0	0	0		96	583	98		681	885	-789	0	688	257	69	96	161
11264+50.00	387	138	249	0	0	0	0	0		138	454	90		544	708	-570	0	510	249	69	97	153
11264+75.00	440	197	242	0	0	0	0	0		197	295	79		374	486	-289	0	289	242	71	100	143
11265+00.00	478	243	235	0	0	0	0	0		243	126	56		182	237	6	0	39	235	36	51	185
11265+25.00	356	127	229	0	0	0	0	0		127	25	25		49	64	63	0	0	229	0	0	229
11265+26.27	10	0	10	0	0	0	0	0		0	0	0		0	1	-1	0	0	10	0	0	10
RPA063																						
Totals:	22,784	9,549	13,236	0	0	0	0	0	0	9,549	36,014	4,667	0	40,680	52,886	-43,339	0	45,533	13,236	2,983	4,178	9,060

FILE NO.	ENGLISH	DESIGN TEAM Flattery\Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER T.26

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
RPB063																						
21242+00.00																						
21242+25.00	767	498	215	0	0	53	0	0		552	51	28		78	102	450	0	0	215	69	97	119
21242+50.00	873	574	214	0	0	85	0	0		659	52	27		79	103	556	0	0	214	47	66	148
21242+75.00	943	681	214	0	0	48	0	0		729	53	27		80	105	625	0	0	214	49	69	145
21243+00.00	987	770	217	0	0	0	0	0		770	55	27		82	107	663	0	0	217	49	69	148
21243+25.00	1,038	817	221	0	0	0	0	0		817	58	27		85	111	706	0	0	221	48	67	155
21243+50.00	1,123	897	225	0	0	0	0	0		897	60	27		87	113	784	0	0	225	48	67	159
21243+75.00	1,222	610	230	343	0	0	40	0		953	62	26		88	115	838	0	0	230	49	68	161
21244+00.00	1,331	283	234	704	0	0	110	0		987	63	25		88	115	873	0	0	234	51	72	163
21244+25.00	1,461	298	239	744	0	0	179	0		1,042	61	24		85	110	932	0	0	239	54	75	164
21244+50.00	1,590	309	247	784	0	0	250	0		1,093	57	23		80	104	989	0	0	247	56	79	168
21244+75.00	1,709	727	256	402	0	0	324	0		1,129	49	22		71	93	1,036	0	0	256	60	84	173
21245+00.00	1,828	1,160	261	0	0	0	406	0		1,160	35	20		55	72	1,089	0	0	261	64	90	172
21245+25.00	1,940	1,202	262	0	0	0	475	0		1,202	16	12		28	37	1,165	0	0	262	69	96	166
21245+50.00	2,111	1,290	263	305	0	0	253	0		1,595	3	3		6	8	1,587	0	0	263	75	105	158
21245+75.00	2,329	1,416	264	649	0	0	0	0		2,065	0	0		1	1	2,064	0	0	264	83	117	148
21246+00.00	2,541	1,558	265	719	0	0	0	0		2,276	0	0		1	1	2,276	0	0	265	90	126	139
21246+25.00	2,712	1,688	265	759	0	0	0	0		2,447	0	0		1	1	2,447	0	0	265	94	131	134
21246+50.00	2,829	1,788	265	775	0	0	0	0		2,563	0	0		0	1	2,563	0	0	265	96	134	132
21246+75.00	2,946	1,226	267	391	0	0	1,063	0		1,617	0	0		0	1	1,616	0	0	267	97	137	130
21247+00.00	3,071	662	268	0	0	0	2,141	0		662	0	0		0	1	662	0	0	268	99	139	129
21247+25.00	3,165	815	269	0	0	0	2,082	0		815	0	0		0	1	814	0	0	269	101	142	127
21247+50.00	3,222	1,074	273	0	0	0	1,875	0		1,074	0	0		0	1	1,074	0	0	273	102	144	129
21247+75.00	3,263	1,401	280	0	0	0	1,582	0		1,401	0	0		0	1	1,401	0	0	280	103	145	135
21248+00.00	3,271	1,740	287	0	0	0	1,243	0		1,740	0	0		0	1	1,740	0	0	287	104	146	141
21248+25.00	3,231	1,964	293	0	0	0	974	0		1,964	0	0		0	1	1,964	0	0	293	105	147	146
21248+50.00	3,155	2,032	296	0	0	0	827	0		2,032	0	0		0	1	2,031	0	0	296	105	148	148
21248+75.00	3,074	2,062	297	208	0	0	506	0		2,270	0	0		0	1	2,270	0	0	297	106	148	149
21249+00.00	2,985	2,083	299	379	0	0	224	0		2,462	0	0		0	1	2,461	0	0	299	107	149	150
21249+25.00	2,865	2,066	301	307	0	0	191	0		2,372	0	0		0	1	2,371	0	0	301	107	150	151
21249+50.00	2,712	2,084	304	236	0	0	89	0		2,320	0	0		1	1	2,319	0	0	304	106	149	155
21249+75.00	2,543	2,066	306	172	0	0	0	0		2,237	0	0		1	1	2,237	0	0	306	105	146	159
21250+00.00	2,365	1,945	308	113	0	0	0	0		2,058	0	0		0	1	2,057	0	0	308	104	145	163
21250+25.00	2,170	1,800	310	60	0	0	0	0		1,860	0	0		1	1	1,859	0	0	310	102	143	167
21250+50.00	1,959	1,626	312	21	0	0	0	0		1,647	0	0		1	1	1,646	0	0	312	101	141	171
21250+75.00	1,735	1,418	314	3	0	0	0	0		1,421	0	0		1	1	1,420	0	0	314	98	138	177
21251+00.00	1,502	1,185	317	0	0	0	0	0		1,185	0	0		1	1	1,184	0	0	317	95	132	184
21251+25.00	1,261	943	319	0	0	0	0	0		943	0	0		1	1	942	0	0	319	90	126	193
21251+50.00	1,016	695	321	0	0	0	0	0		695	1	1		2	2	692	0	0	321	85	119	202
21251+75.00	802	479	323	0	0	0	0	0		479	39	27		66	86	393	0	0	323	80	112	211
21252+00.00	643	318	325	0	0	0	0	0		318	130	61		191	248	70	0	51	325	75	105	220
21252+25.00	567	236	331	0	0	0	0	0		236	254	77		332	431	-195	27	234	331	75	105	227
21252+50.00	553	215	338	0	0	0	0	0		215	405	90		495	644	-428	239	446	338	79	111	227
21252+75.00	539	197	342	0	0	0	0	0		197	572	100		672	874	-677	469	676	342	84	117	225
21253+00.00	520	174	346	0	0	0	0	0		174	752	109		861	1,120	-946	716	922	346	87	122	224
21253+25.00	494	143	350	0	0	0	0	0		143	942	119		1,062	1,380	-1,237	976	1,183	350	90	127	224
21253+50.00	461	107	355	0	0	0	0	0		107	1,150	130		1,281	1,665	-1,559	1,261	1,468	355	93	130	224
21253+75.00	438	79	359	0	0	0	0	0		79	1,381	141		1,522	1,979	-1,900	1,576	1,781	359	96	135	224
21254+00.00	435	72	363	0	0	0	0	0		72	1,609	150		1,759	2,287	-2,215	1,882	2,089	363	100	140	222
21254+25.00	443	77	367	0	0	0	0	0		77	1,811	157		1,968	2,558	-2,482	2,154	2,361	367	105	147	220
21254+50.00	458	87	371	0	0	0	0	0		87	1,995	162		2,157	2,804	-2,717	2,401	2,607	371	110	154	217
21254+75.00	479	103	375	0	0	0	0	0		103	2,169	166		2,335	3,035	-2,932	2,631	2,837	375	115	161	214
21255+00.00	484	91	393	0	0	0	0	0		91	2,333	170		2,503	3,254	-3,163	2,851	3,056	393	111	156	237
21255+25.00	488	44	444	0	0	0	0	0		44	2,546	178		2,724	3,541	-3,496	2,642	3,342	444	100	141	303
21255+50.00	508	10	498	0	0	0	0	0		10	2,889	192		3,081	4,005	-3,996	2,642	3,808	498	63	88	410
21255+75.00	519	0	519	0	0	0	0	0		0	3,127	187		3,315	4,309	-4,309	2,642	4,112	519	15	22	497
21256+00.00	519	0	519	0	0	0	0	0		0	3,142	163		3,305	4,297	-4,297	2,642	4,099	519	0	0	519
21256+25.00	519	0	519	0	0	0	0	0		0	3,265	151		3,416	4,441	-4,441	2,642	4,243	519	0	0	519
21256+50.00	519	0	519	0	0	0	0	0		0	3,568	153		3,722	4,838	-4,838	2,642	4,640	519	0	0	519
21256+73.97	497	0	497	0	0	0	0	0		0	2,673	109		2,782	3,617	-3,617	0	0	497	0	0	497
RPB063																						
Totals:	91,727	49,885	18,749	8,072	0	187	14,835	0	0	58,144	37,437	3,118	0	40,555	52,723	5,422	33,035	43,953	18,749	4,654	6,518	12,234

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
RPD063																						
41255+54.08																						
41255+75.00	434	0	434	0	0	0	0	0		0	1,275	60		1,335	1,735	-1,735	1,398	1,570	434	0	0	434
41256+00.00	519	0	519	0	0	0	0	0		0	2,298	129		2,427	3,155	-3,155	2,752	2,958	519	0	0	519
41256+25.00	509	0	509	0	0	0	0	0		0	2,586	180		2,766	3,596	-3,596	2,642	3,398	509	0	0	509
41256+50.00	488	0	488	0	0	0	0	0		0	2,117	188		2,304	2,996	-2,996	2,592	2,798	488	0	0	488
41256+75.00	528	54	474	0	0	0	0	0		54	1,553	169		1,723	2,240	-2,186	1,836	2,042	474	0	0	474
41257+00.00	755	286	468	0	0	0	0	0		286	1,309	164		1,473	1,915	-1,629	1,512	1,717	468	51	72	396
41257+25.00	1,062	599	462	0	0	0	0	0		599	1,057	156		1,213	1,577	-978	1,174	1,379	462	107	150	312
41257+50.00	1,360	903	456	0	0	0	0	0		903	813	133		947	1,231	-328	827	1,032	456	136	190	266
41257+75.00	1,588	1,138	451	0	0	0	0	0		1,138	626	112		737	959	179	555	761	451	156	218	232
41258+00.00	1,662	1,217	445	0	0	0	0	0		1,217	528	100		628	816	401	412	619	445	151	211	233
41258+25.00	1,686	1,247	439	0	0	0	0	0		1,247	467	95		563	731	516	328	533	439	148	207	232
41258+50.00	1,695	1,262	433	0	0	0	0	0		1,262	426	92		518	674	588	270	476	433	145	204	229
41258+75.00	1,657	1,230	427	0	0	0	0	0		1,230	412	91		503	654	576	250	456	427	143	200	227
41259+00.00	1,552	1,135	418	0	0	0	0	0		1,135	432	93		525	682	453	278	485	418	138	194	224
41259+25.00	1,407	1,003	404	0	0	0	0	0		1,003	483	96		579	753	250	348	555	404	133	186	217
41259+50.00	1,260	872	388	0	0	0	0	0		872	554	100		654	850	23	446	653	388	128	179	209
41259+75.00	1,151	778	373	0	0	0	0	0		778	639	105		743	966	-188	563	768	373	125	174	198
41260+00.00	1,063	704	359	0	0	0	0	0		704	729	109		838	1,089	-385	685	892	359	124	173	186
41260+25.00	987	640	347	0	0	0	0	0		640	804	112		916	1,191	-551	788	993	347	123	172	175
41260+50.00	938	603	335	0	0	0	0	0		603	843	115		957	1,245	-642	841	1,047	335	122	171	164
41260+75.00	879	557	322	0	0	0	0	0		557	854	116		970	1,262	-705	858	1,063	322	121	169	153
41261+00.00	804	493	310	0	0	0	0	0		493	880	119		999	1,299	-806	896	1,101	310	119	167	144
41261+25.00	726	427	300	0	0	0	0	0		427	973	126		1,099	1,429	-1,002	1,024	1,231	300	117	163	137
41261+50.00	661	371	290	0	0	0	0	0		371	1,122	132		1,255	1,631	-1,260	1,227	1,434	290	115	161	129
41261+75.00	607	327	280	0	0	0	0	0		327	1,291	138		1,429	1,858	-1,532	1,455	1,660	280	113	158	122
41262+00.00	552	281	270	0	0	0	0	0		281	1,486	146		1,632	2,122	-1,840	1,719	1,924	270	109	152	118
41262+25.00	531	269	263	0	0	0	0	0		269	1,683	150		1,833	2,382	-2,114	1,979	2,184	263	104	146	117
41262+50.00	486	231	256	0	0	0	0	0		231	1,823	149		1,971	2,563	-2,333	2,159	2,365	256	98	137	118
41262+75.00	362	113	250	0	0	0	0	0		113	1,995	153		2,148	2,793	-2,681	2,389	2,595	250	57	80	170
41263+00.00	284	33	250	0	0	0	0	0		33	2,002	158		2,160	2,809	-2,776	2,405	2,610	250	54	76	175
41263+25.00	375	116	259	0	0	0	0	0		116	1,723	147		1,870	2,430	-2,314	2,027	2,232	259	90	126	133
41263+50.00	511	245	266	0	0	0	0	0		245	1,405	128		1,533	1,993	-1,748	1,589	1,795	266	91	127	139
41263+75.00	573	306	266	0	0	0	0	0		306	1,123	118		1,241	1,613	-1,307	1,209	1,414	266	87	122	145
41264+00.00	610	343	266	0	0	0	0	0		343	918	111		1,028	1,337	-994	933	1,139	266	83	116	150
41264+25.00	651	385	267	0	0	0	0	0		385	772	102		875	1,137	-753	733	939	267	79	111	156
41264+50.00	680	413	267	0	0	0	0	0		413	659	95		753	979	-567	576	781	267	39	54	213
41264+75.00	475	209	266	0	0	0	0	0		209	306	48		354	460	-251	56	263	266	0	0	266
41264+79.38	47	1	46	0	0	0	0	0		1	0	0		1	1	0	0	0	46	0	0	46
RPD063																						
Totals:	32,113	18,793	13,321	0	0	0	0	0	0	18,793	40,965	4,536	0	45,500	59,152	-40,361	43,730	51,863	13,321	3,405	4,768	8,554

FILE NO.	ENGLISH	DESIGN TEAM Flattery\Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER T.28

12/19/2024 11:32:59 AM pflatte c:\pw_work\pwmain\pflatte\d2495705\T_Sheets_62063093Z09_Grading.xlsm

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
SUR_163																						
1236+00.00																						
1236+25.00	356	26	330	0	0	0	0	0		26	50	43		93	120	-95	0	0	330	51	71	259
1236+50.00	356	27	329	0	0	0	0	0		27	107	66		173	225	-199	0	0	329	53	74	255
1236+75.00	359	30	329	0	0	0	0	0		30	159	72		231	301	-271	0	0	329	54	75	254
1237+00.00	358	30	328	0	0	0	0	0		30	191	71		262	340	-310	0	0	328	53	74	255
1237+25.00	353	27	326	0	0	0	0	0		27	199	69		268	349	-322	0	0	326	51	71	255
1237+50.00	365	43	322	0	0	0	0	0		43	189	65		254	331	-288	0	0	322	51	71	251
1237+75.00	393	74	319	0	0	0	0	0		74	163	60		223	290	-217	0	0	319	52	73	246
1238+00.00	418	102	316	0	0	0	0	0		102	141	57		198	258	-156	0	0	316	53	74	242
1238+25.00	442	130	312	0	0	0	0	0		130	143	55		199	259	-129	0	0	312	53	74	238
1238+50.00	472	163	309	0	0	0	0	0		163	142	53		195	254	-90	0	0	309	54	75	234
1238+75.00	504	199	305	0	0	0	0	0		199	122	50		172	224	-25	0	0	305	53	75	231
1239+00.00	535	233	302	0	0	0	0	0		233	107	48		154	200	33	0	0	302	52	72	229
1239+25.00	577	278	299	0	0	0	0	0		278	103	45		148	193	85	0	0	299	51	71	229
1239+50.00	624	326	298	0	0	0	0	0		326	95	40		135	176	150	0	0	298	50	70	229
1239+75.00	670	373	297	0	0	0	0	0		373	85	36		122	158	215	0	0	297	50	69	227
1240+00.00	691	392	299	0	0	0	0	0		392	78	34		112	145	247	0	0	299	50	70	229
1240+25.00	635	369	266	0	0	0	0	0		369	70	31		102	132	237	0	0	266	49	69	196
1240+50.00	564	339	225	0	0	0	0	0		339	65	30		95	124	215	0	0	225	47	66	159
1240+75.00	524	303	221	0	0	0	0	0		303	58	29		87	113	190	0	0	221	44	61	160
1241+00.00	462	241	221	0	0	0	0	0		241	48	29		77	100	141	0	0	221	39	55	167
1241+25.00	490	269	221	0	0	0	0	0		269	45	29		74	97	173	0	0	221	39	54	167
1241+50.00	609	383	221	0	0	5	0	0		388	46	28		75	97	291	0	0	221	43	61	160
1241+75.00	679	443	220	0	0	16	0	0		459	49	29		78	102	358	0	0	220	46	64	156
1242+00.00	720	473	218	0	0	28	0	0		502	53	30		83	107	394	0	0	218	46	64	154
1242+01.06	32	21	9	0	0	1	0	0		23	2	1		3	4	18	0	0	9	2	3	7
SUR_163																						
Totals:	12,187	5,295	6,842	0	0	51	0	0	0	5,345	2,512	1,102	0	3,614	4,699	647	0	0	6,842	1,183	1,657	5,187

FILE NO.	ENGLISH	DESIGN TEAM Flattery\Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER T.29

12/19/2024 11:32:59 AM pflatte c:\pw_work\pwmain\pflatte\d2495705\T_Sheets_62063093Z09_Grading.xlsm

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut										Fill						Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
										[2]+[4]+[5]+[6]+[9]				[11]+[12]+[13]	[14] x 1.3	[10] - [15]				8' thickness	[20] x 1.4	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Unsuitable Type C Volume	Template Select Loam Volume	Template Waste Volume	Template Shale Volume	Manually Calculated Cut Adjustments (+/- Cut)	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Manually Calculated Fill Adjustments (+/- Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
Summary:																						
ML063	2,215,220	1,170,497	230,754	231,104	7,789	116,603	110,583	347,891	1,105	1,527,096	548,116	48,771	10,373	607,259	789,470	737,632	431,676	737,363	230,754	92,702	129,814	100,970
SRNSHORE	59,955	31,752	20,043	0	0	5,642	2,520	0	0	37,394	17,676	3,454	0	21,130	27,474	9,923	0	19,255	20,043	5,156	7,222	12,825
SROLD163	19,115	2,804	13,011	2,144	0	0	1,158	0	22	4,969	21,119	5,355	1,130	27,603	35,888	-30,923	0	20,317	13,011	3,205	4,491	8,523
SRKIRBY	281,603	175,532	33,700	50,123	0	10,659	0	11,595	4,824	241,137	11,584	3,458	854	15,894	20,668	220,472	0	14,596	33,700	12,857	18,006	15,701
SRKIRBY_Exist	25,906	10,363	15,543	0	0	0	0	0	0	10,363	2,258	1,025	0	3,282	4,272	6,092	0	0	15,543	23	33	15,515
SR220	34,340	21,478	11,404	141	0	1,318	0	0	41	22,976	5,495	1,320	732	7,546	9,814	13,165	0	4,697	11,404	4,218	5,909	5,500
SR220_Exist	12,517	2,591	9,860	67	0	0	0	0	0	2,658	1,312	552	0	1,863	2,425	234	0	0	9,860	0	0	9,863
SR210	14,398	5,369	9,029	0	0	0	0	0	0	5,369	9,182	1,918	0	11,100	14,431	-9,063	0	9,705	9,029	2,052	2,875	6,156
SR210_Exist	5,667	1,145	4,523	0	0	0	0	0	0	1,145	1,418	637	0	2,054	2,672	-1,528	0	0	4,523	0	0	4,524
RPA063	22,784	9,549	13,236	0	0	0	0	0	0	9,549	36,014	4,667	0	40,680	52,886	-43,339	0	45,533	13,236	2,983	4,178	9,060
RPB063	91,727	49,885	18,749	8,072	0	187	14,835	0	0	58,144	37,437	3,118	0	40,555	52,723	5,422	33,035	43,953	18,749	4,654	6,518	12,234
RPD063	32,113	18,793	13,321	0	0	0	0	0	0	18,793	40,965	4,536	0	45,500	59,152	-40,361	43,730	51,863	13,321	3,405	4,768	8,554
SUR_163	12,187	5,295	6,842	0	0	51	0	0	0	5,345	2,512	1,102	0	3,614	4,699	647	0	0	6,842	1,183	1,657	5,187
Project Totals:	2,827,532	1,505,053	400,015	291,651	7,789	134,460	**129,096**	**359,486**	5,992	1,944,938	735,088	79,913	13,089	**828,080**	**1,076,574**	**868,373**	508,441	947,282	400,015	132,438	**185,471**	**214,612**

EXCAVATION, CLASS 10, ROADWAY AND BORROW
[15] = 1,076,574 CY

EXCAVATION, CLASS 10, WASTE
[16] = 868,373 CY

EXCAVATION, CLASS 13, WASTE
[7] = 129,096 CY

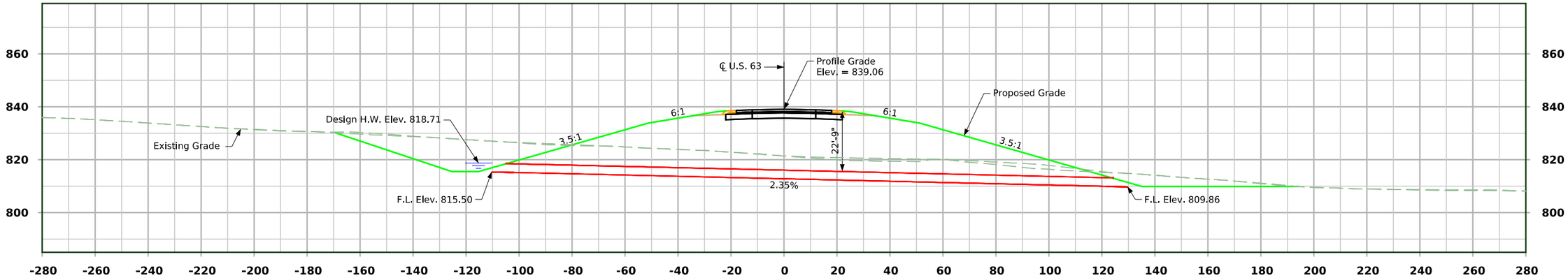
EXCAVATION, CLASS 12, ROADWAY AND BORROW
[8] = 359,486 CY

COMPACTION WITH MOISTURE CONTROL
[14] = 828,080 CY

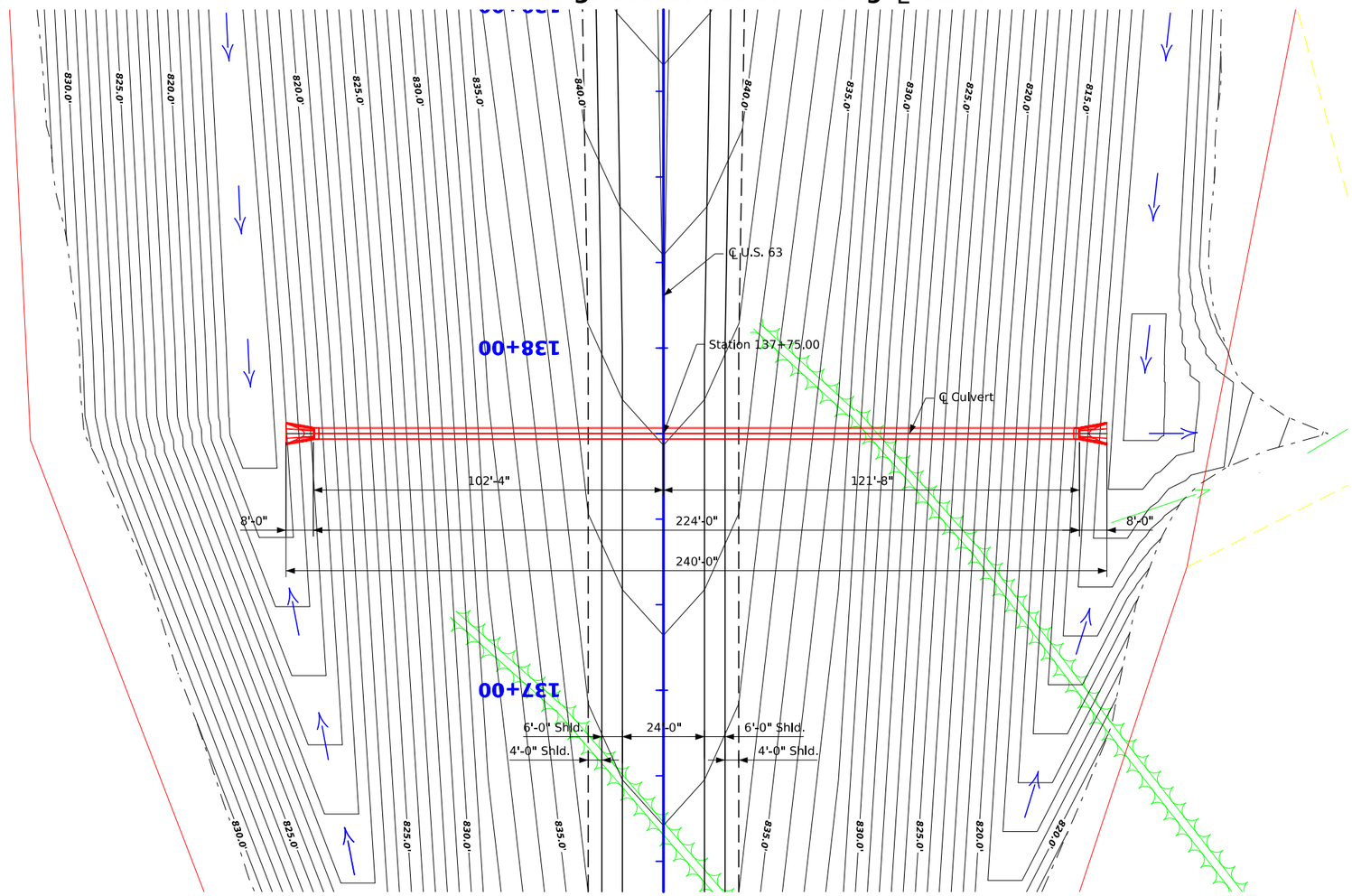
TOPSOIL, STRIP, SALVAGE AND SPREAD
[21] = 185,471 CY

TOPSOIL, STRIP AND STOCKPILE
[22] = 214,612 CY

FENO MONUMENT NO. 100: N 7587601.591, E 19535103.070, S. OF HWY 163 AND W. OF JEWELL AVE, ±156' S.E. OF FIRST POWERPOLE S. OF HWY 163, ±110' E.-S.E. OF SECOND POWERPOLE S. OF HWY 163, ELEV. 842.52



Longitudinal Section Along ℄ Culvert



Plat Plan

Notes:

Pipe dimensions shown in Plan View are based on laying lengths.

Hydraulic Data

Drainage Area = 14.2 Acres
Design Discharge, Q_{50} = 39 cfs

Location

U.S. 63
T-75N R-16W
Section 09
Lincoln Township
Mahaska County

0 ENGLISH 40
SCALE IN FEET

Preliminary

Design for 0° Skew

36" x 224' Reinforced Concrete Pipe

Plat Plan

Sta. 137+75.00 (ML063) February 2023

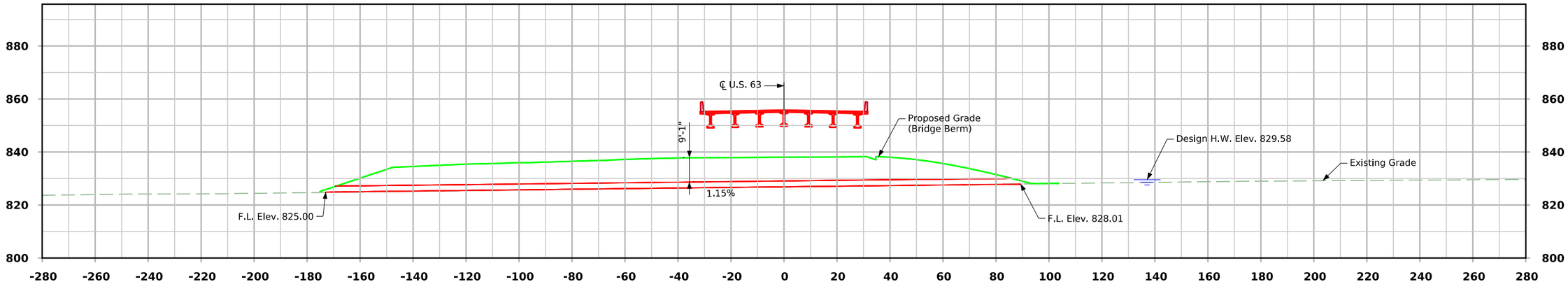
Mahaska County

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

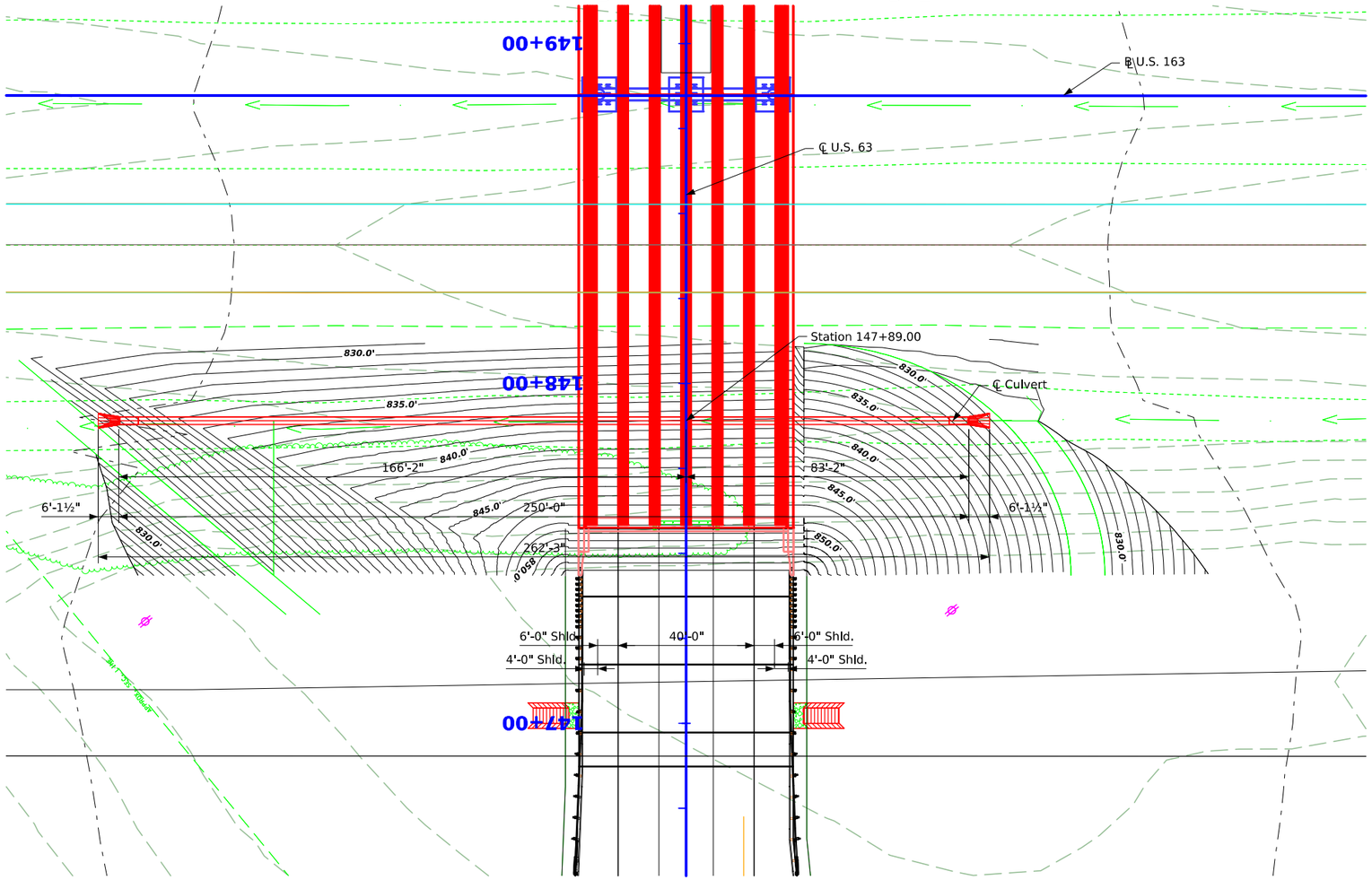
FILE NO. 32164	ENGLISH	DESIGN TEAM JEO CONSULTING GROUP	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(095)--3H-62	SHEET NUMBER V.01

2:32:36 PM 11/26/2024 twallen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\6206302013\Bridge\ORD_62063096_JEO_PIPE_CULVERTS_ML_Z09.dgn

FENO MONUMENT NO. 100: N 7587601.591, E 19535103.070, S. OF HWY 163 AND W. OF JEWELL AVE, ±156' S.E. OF FIRST POWERPOLE S. OF HWY 163, ±110' E.-S.E. OF SECOND POWERPOLE S. OF HWY 163, ELEV. 842.52



Longitudinal Section Along ℄ Culvert



Plat Plan

Notes:

Pipe dimensions shown in Plan View are based on laying lengths.

Hydraulic Data

Drainage Area = 2.2 Acres
Design Discharge, Q_{50} = 9 cfs

Location

U.S. 63
T-75N R-16W
Section 10
Lincoln Township
Mahaska County

0 ENGLISH 40
SCALE IN FEET

Preliminary

Design for 0° Skew

24" x 250' Reinforced Concrete Pipe

Plat Plan

Sta. 147+89.00 (ML063) February 2023

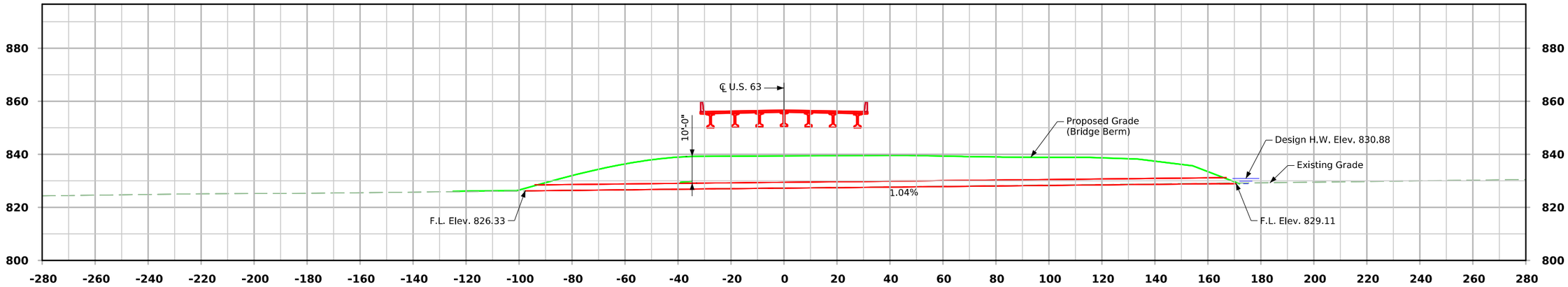
Mahaska County

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

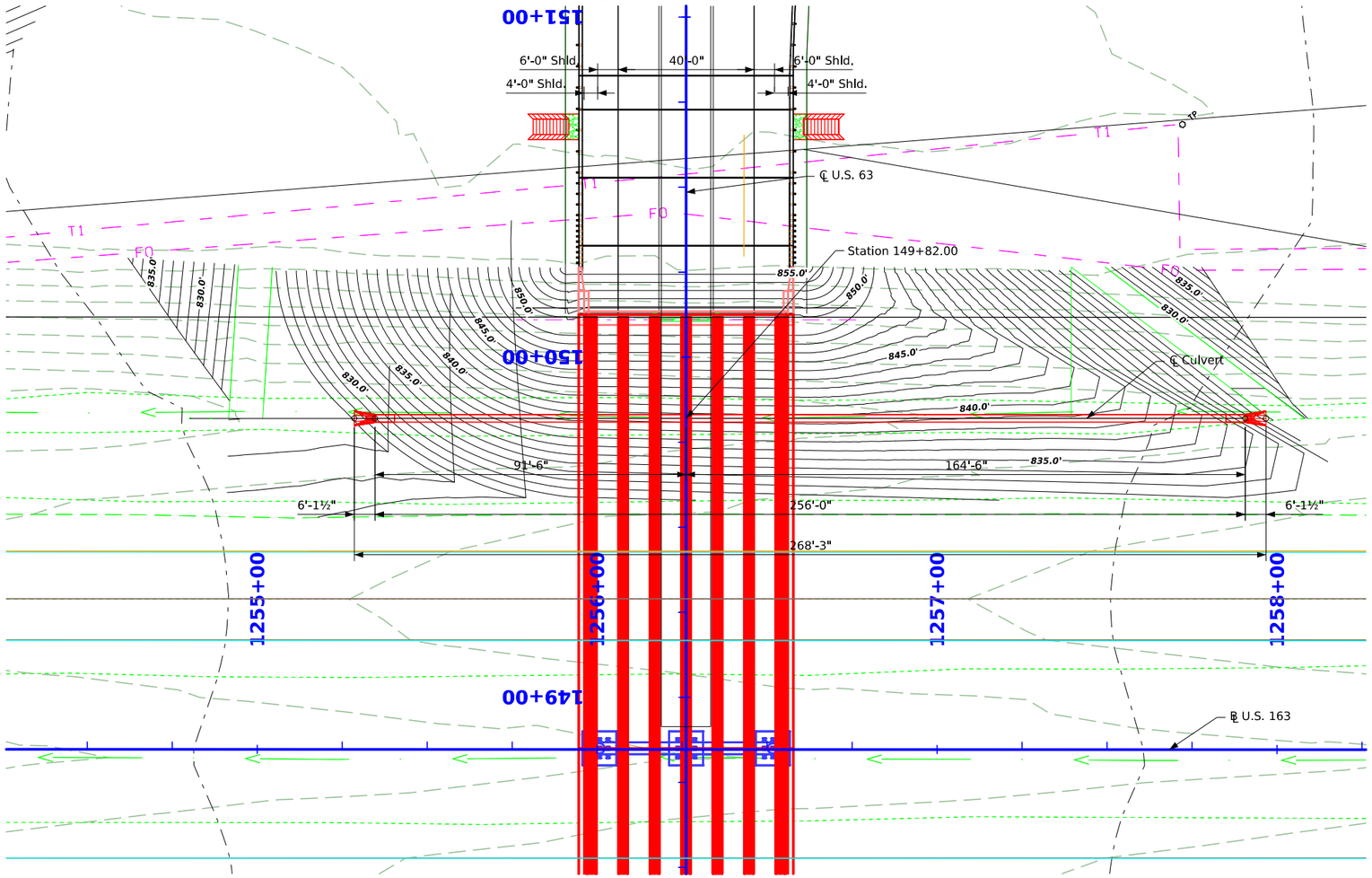
FILE NO. 32164	ENGLISH	DESIGN TEAM JEO CONSULTING GROUP	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(095)--3H-62	SHEET NUMBER V.02

3:30:52 PM 10/17/2024 twallen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\6206302013\Bridge\ORD_62063096_JEO_PIPE_CULVERTS_ML_Z09.dgn

FENO MONUMENT NO. 100: N 7587601.591, E 19535103.070, S. OF HWY 163 AND W. OF JEWELL AVE, ±156' S.E. OF FIRST POWERPOLE S. OF HWY 163, ±110' E.-S.E. OF SECOND POWERPOLE S. OF HWY 163, ELEV. 842.52



Longitudinal Section Along ℄ Culvert



Plat Plan

Notes:

Pipe dimensions shown in Plan View are based on laying lengths.

Hydraulic Data

Drainage Area = 1.8 Acres
Design Discharge, Q_{50} = 7 cfs

Location

U.S. 63
T-75N R-16W
Section 10
Lincoln Township
Mahaska County

0 ENGLISH 40
SCALE IN FEET

Preliminary

Design for 0° Skew

24" x 256' Reinforced Concrete Pipe

Plat Plan

Sta. 149+82.00 (ML063) February 2023

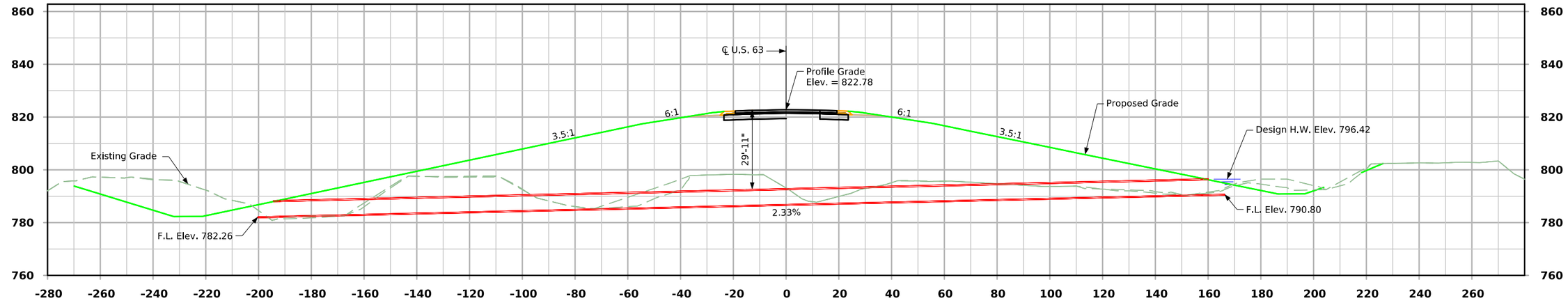
Mahaska County

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

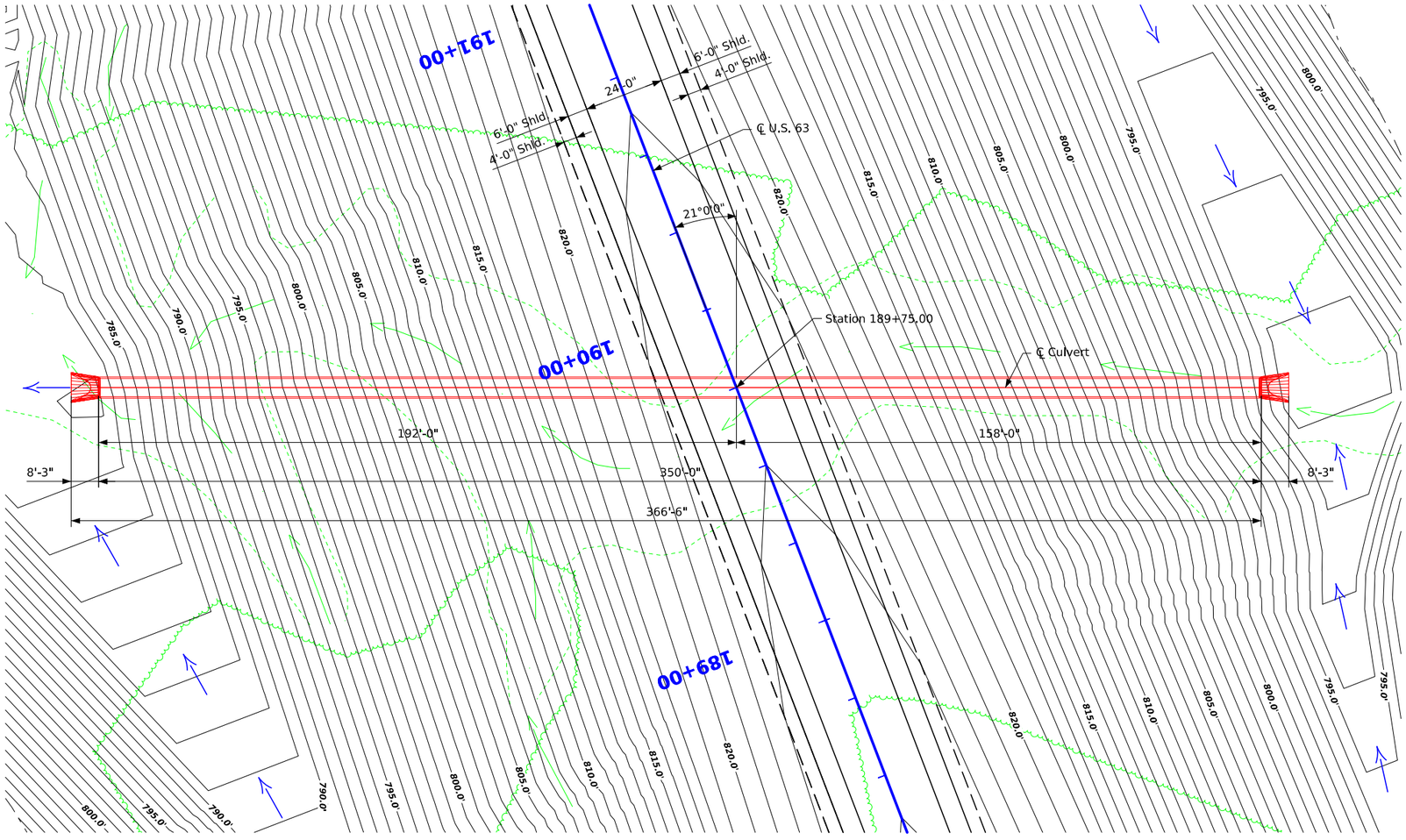
FILE NO. 32164	ENGLISH	DESIGN TEAM JEO CONSULTING GROUP	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(095)--3H-62	SHEET NUMBER V.03

3:26:03 PM 10/17/2024 twallen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\6206302013\Bridge\ORD_62063096_JEO_PIPE_CULVERTS_ML_Z09.dgn

FENO MONUMENT NO. 100: N 7587601.591, E 19535103.070, S. OF HWY 163 AND W. OF JEWELL AVE, ±156' S.E. OF FIRST POWERPOLE S. OF HWY 163, ±110' E.-S.E. OF SECOND POWERPOLE S. OF HWY 163, ELEV. 842.52



Longitudinal Section Along ℄ Culvert



Plat Plan

Notes:

Pipe dimensions shown in Plan View are based on laying lengths.

N

Hydraulic Data

Drainage Area = 95.7 Acres
Design Discharge, Q_{50} = 167 cfs

Location

U.S. 63
T-75N R-16W
Section 03
Lincoln Township
Mahaska County

0 ENGLISH 40
SCALE IN FEET

Preliminary

Design for 21° Skew (L.A.)

66" x 350' Reinforced Concrete Pipe

Plat Plan

Sta. 189+75.00 (ML063) February 2023

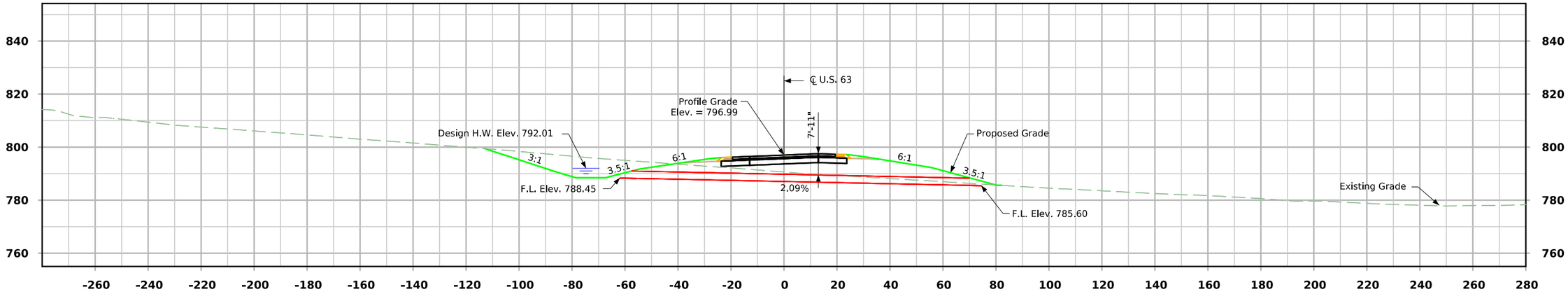
Mahaska County

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

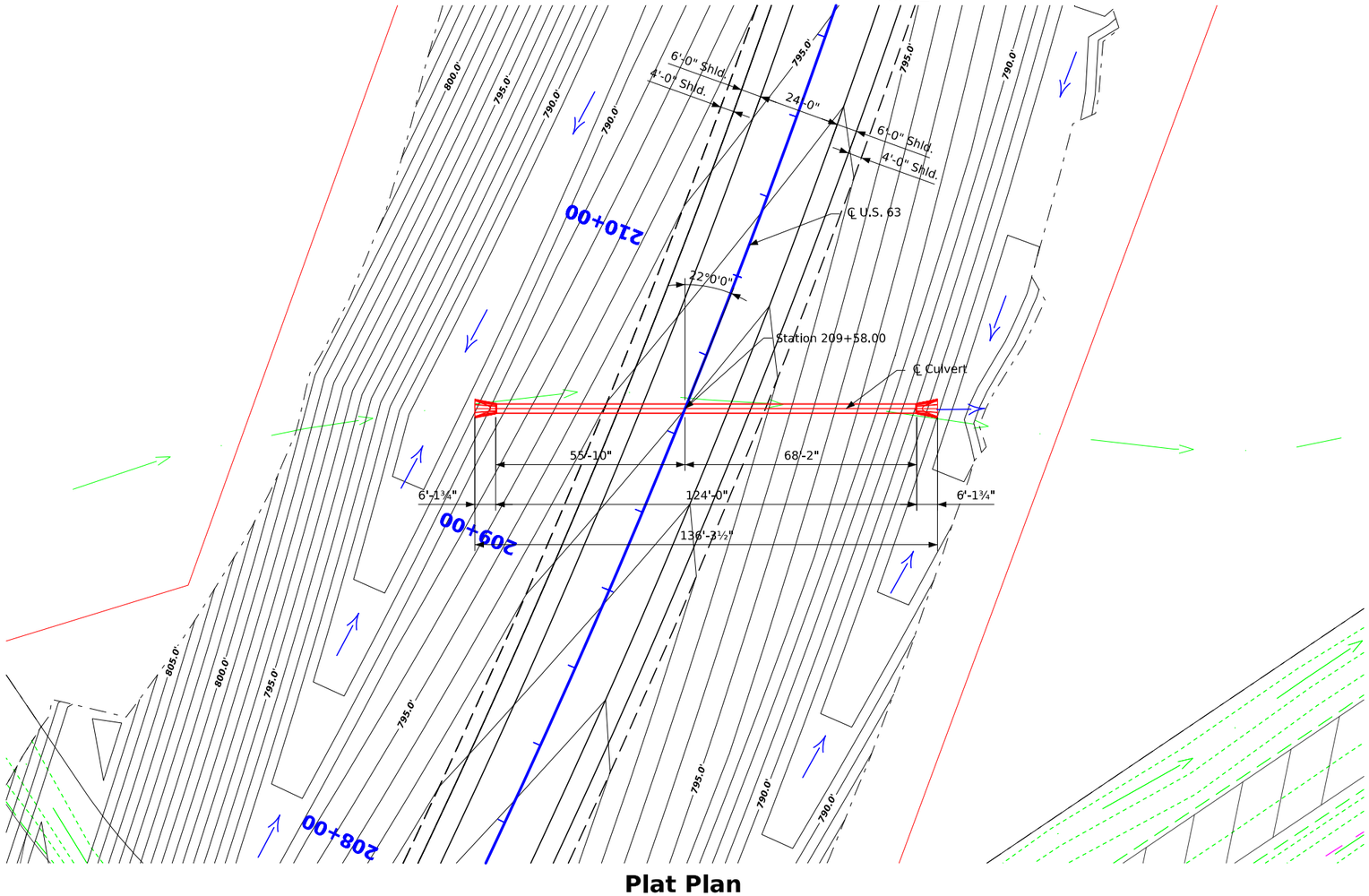
FILE NO. 32164	ENGLISH	DESIGN TEAM JEO CONSULTING GROUP	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(095)--3H-62	SHEET NUMBER V.04

2:32:59 PM 11/26/2024 twallen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\6206302013\Bridge\ORD_62063096_JEO_PIPE_CULVERTS_ML_Z09.dgn

FENO MONUMENT NO. 100: N 7587601.591, E 19535103.070, S. OF HWY 163 AND W. OF JEWELL AVE, ±156' S.E. OF FIRST POWERPOLE S. OF HWY 163, ±110' E.-S.E. OF SECOND POWERPOLE S. OF HWY 163, ELEV. 842.52



Longitudinal Section Along ℄ Culvert



Plat Plan

Notes:

Pipe dimensions shown in Plan View are based on laying lengths.

Hydraulic Data

Drainage Area = 11.8 Acres
Design Discharge, Q_{50} = 34 cfs

Location

U.S. 63
T-75N R-16W
Section 02
Lincoln Township
Mahaska County

0 ENGLISH 40
SCALE IN FEET

Preliminary

Design for 22° Skew (R.A.)

30" x 124' Reinforced Concrete Pipe

Plat Plan

Sta. 209+58.00 (ML063) February 2023

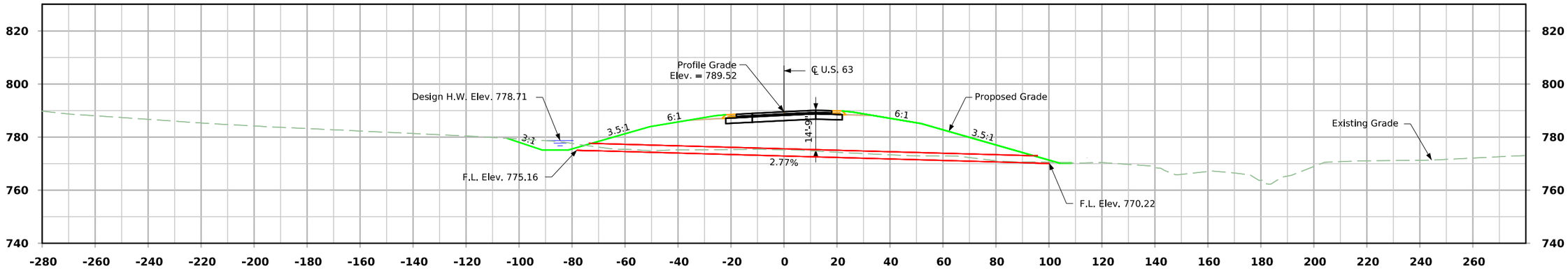
Mahaska County

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

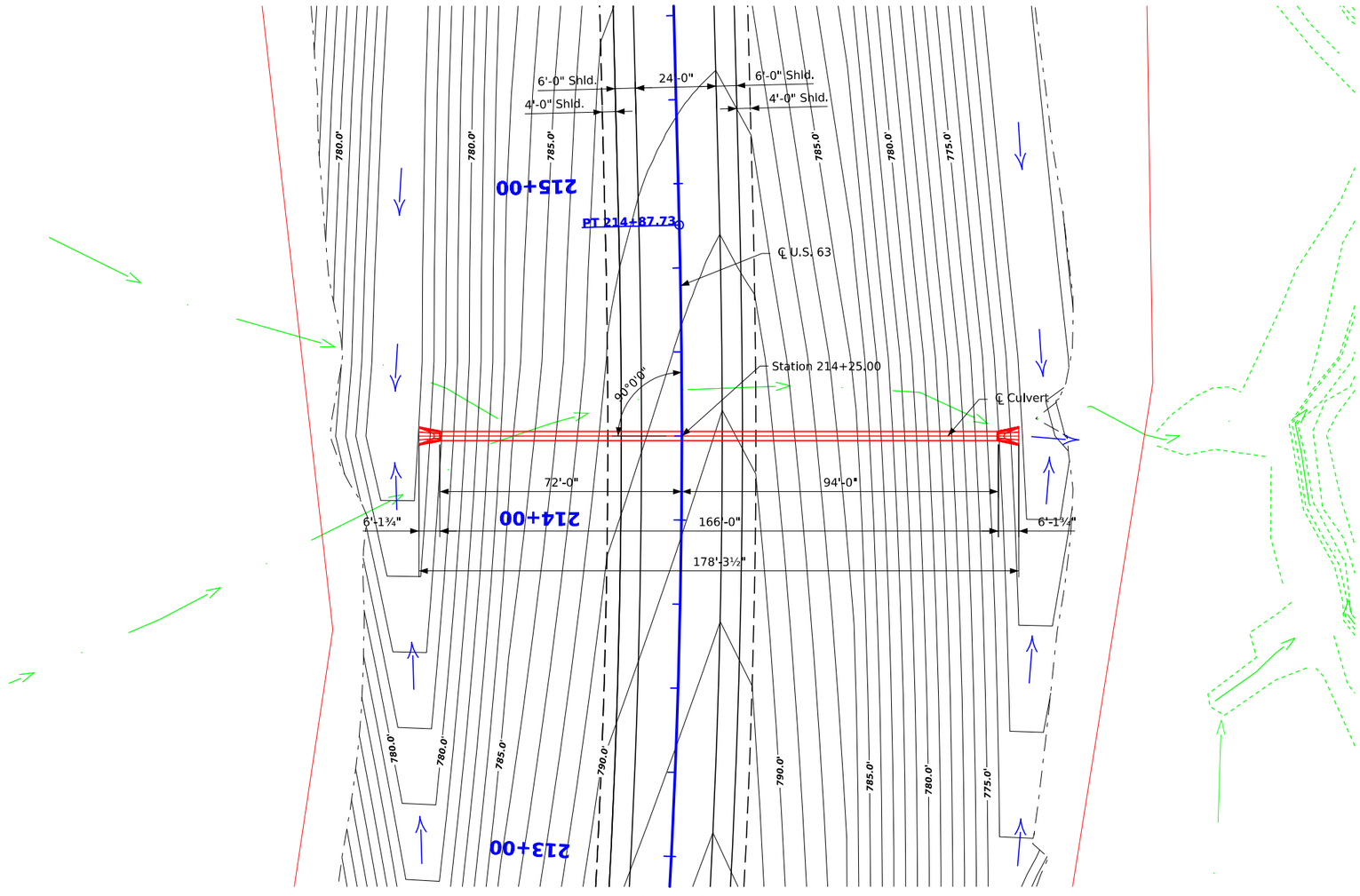
FILE NO. 32164	ENGLISH	DESIGN TEAM JEO CONSULTING GROUP	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(095)--3H-62	SHEET NUMBER V.05

2:33:04 PM 11/26/2024 twallen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\6206302013\Bridge\ORD_62063096_JEO_PIPE_CULVERTS_ML_Z09.dgn

FENO MONUMENT NO. 100: N 7587601.591, E 19535103.070, S. OF HWY 163 AND W. OF JEWELL AVE, ±156' S.E. OF FIRST POWERPOLE S. OF HWY 163, ±110' E.-S.E. OF SECOND POWERPOLE S. OF HWY 163, ELEV. 842.52



Longitudinal Section Along ℄ Culvert



Plat Plan

Notes:

Pipe dimensions shown in Plan View are based on laying lengths.

Hydraulic Data

Drainage Area = 11.7 Acres
Design Discharge, Q_{50} = 34 cfs

Location

U.S. 63
T-75N R-16W
Section 02
Lincoln Township
Mahaska County

0 ENGLISH 40
SCALE IN FEET

Preliminary

Design for 0° Skew

30" x 166' Reinforced Concrete Pipe

Plat Plan

Sta. 214+25.00 (ML063) February 2023

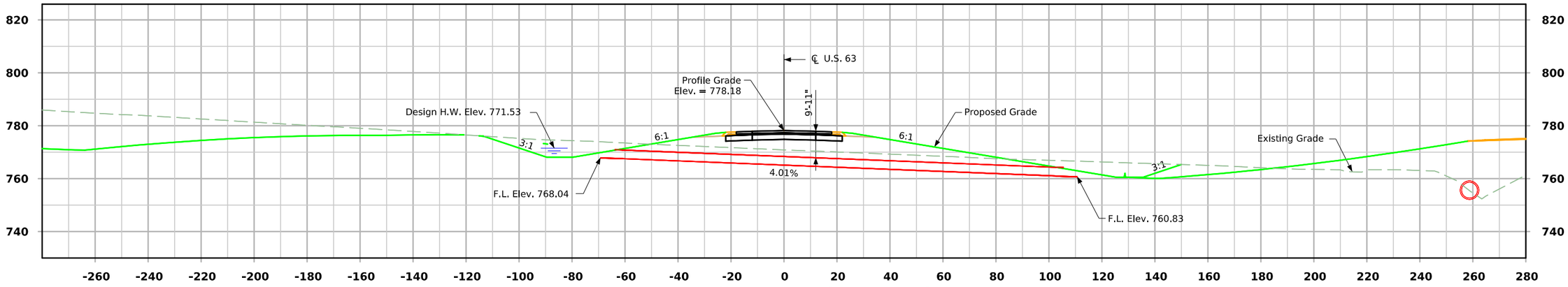
Mahaska County

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

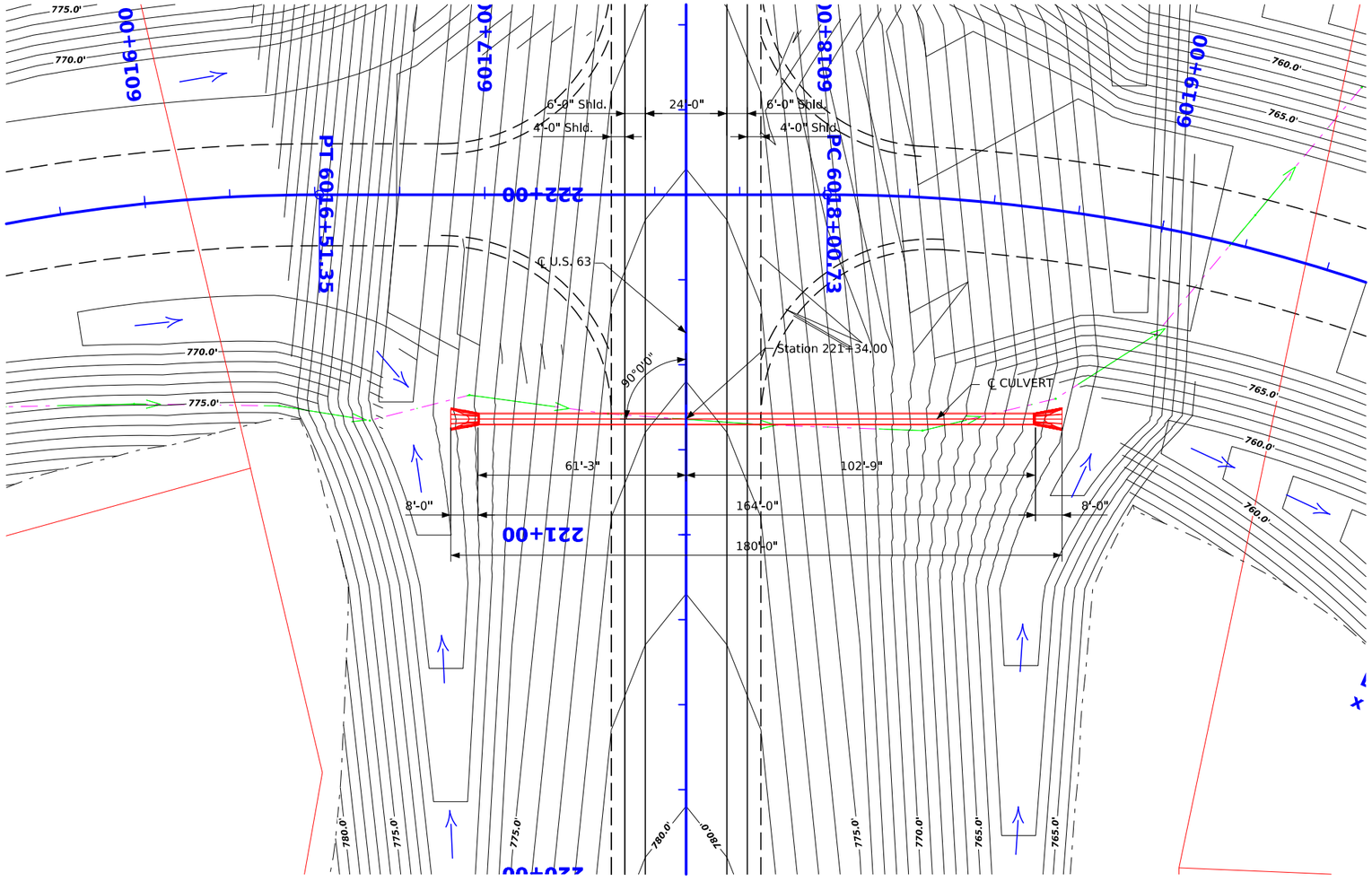
FILE NO. 32164	ENGLISH	DESIGN TEAM JEO CONSULTING GROUP	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(095)--3H-62	SHEET NUMBER V.06

2:33:09 PM 11/26/2024 twallen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\6206302013\Bridge\ORD_62063096_JEO_PIPE_CULVERTS_ML_Z09.dgn

FENO MONUMENT NO. 100: N 7587601.591, E 19535103.070, S. OF HWY 163 AND W. OF JEWELL AVE, ±156' S.E. OF FIRST POWERPOLE S. OF HWY 163, ±110' E.-S.E. OF SECOND POWERPOLE S. OF HWY 163, ELEV. 842.52



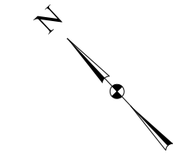
Longitudinal Section Along ℄ Culvert



Plat Plan

Notes:

Pipe dimensions shown in Plan View are based on laying lengths.



Hydraulic Data

Drainage Area = 16.4 Acres
Design Discharge, Q_{50} = 44 cfs

Location

U.S. 63
T-75N R-16W
Section 02
Lincoln Township
Mahaska County

0 ENGLISH 40
SCALE IN FEET

Preliminary

Design for 0° Skew

36" x 164' Reinforced Concrete Pipe

Plat Plan

Sta. 221+34.00 (ML063) February 2023

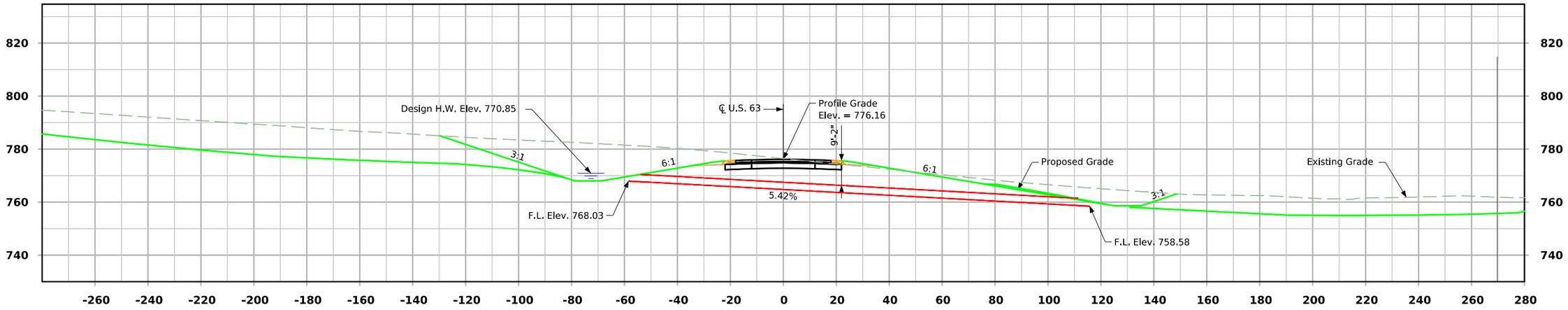
Mahaska County

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

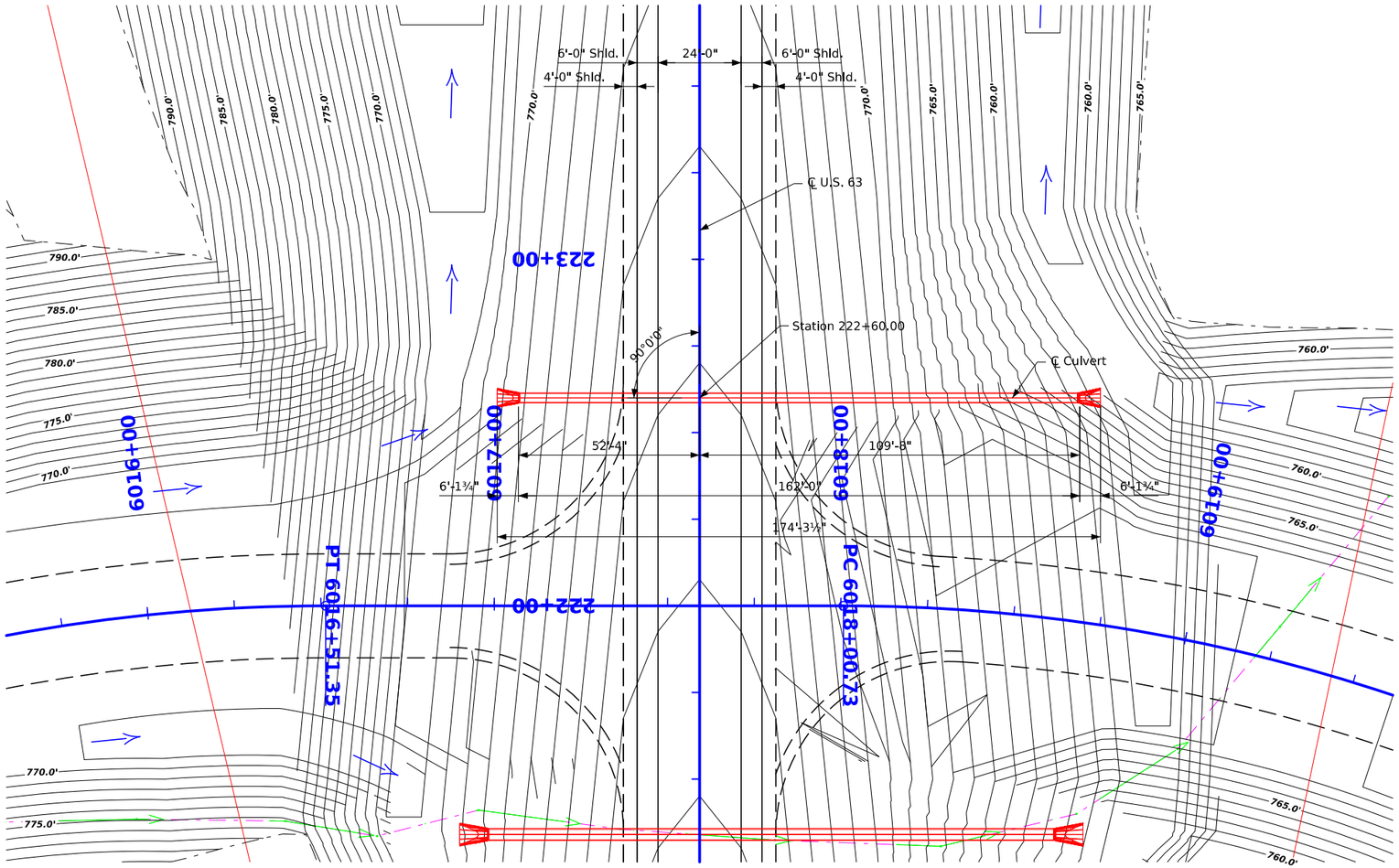
FILE NO. 32164	ENGLISH	DESIGN TEAM JEO CONSULTING GROUP	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(095)--3H-62	SHEET NUMBER V.07

2:33:15 PM 11/26/2024 twallen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\6206302013\Bridge\ORD_62063096_JEO_PIPE_CULVERTS_ML_Z09.dgn

FENO MONUMENT NO. 100: N 7587601.591, E 19535103.070, S. OF HWY 163 AND W. OF JEWELL AVE, ±156' S.E. OF FIRST POWERPOLE S. OF HWY 163, ±110' E.-S.E. OF SECOND POWERPOLE S. OF HWY 163, ELEV. 842.52



Longitudinal Section Along ℄ Culvert



Plat Plan

Notes:

Pipe dimensions shown in Plan View are based on laying lengths.

Hydraulic Data

Drainage Area = 8.6 Acres
Design Discharge, Q_{50} = 27 cfs

Location

U.S. 63
T-75N R-16W
Section 02
Lincoln Township
Mahaska County

0 ENGLISH 40
SCALE IN FEET

Preliminary

Design for 0° Skew

30" x 162' Reinforced Concrete Pipe

Plat Plan

Sta. 222+60.00 (ML063) February 2023

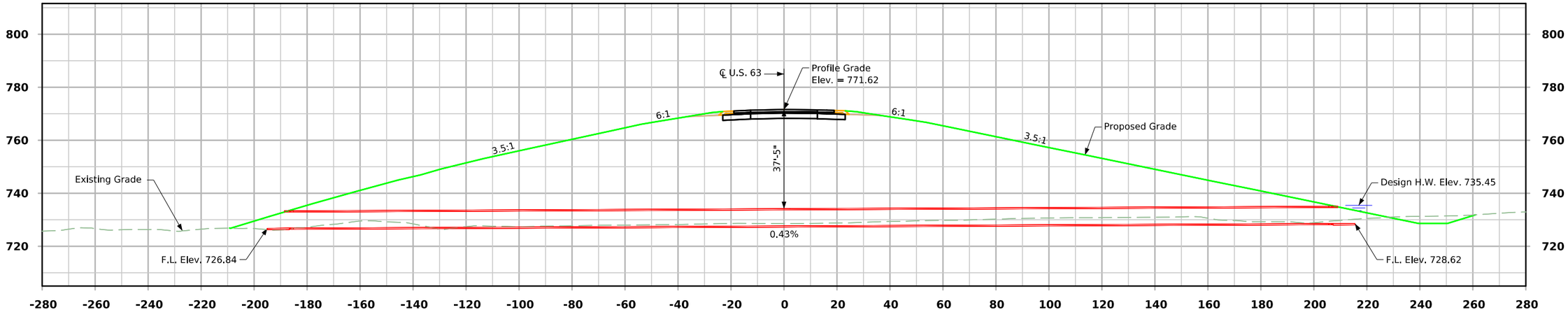
Mahaska County

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

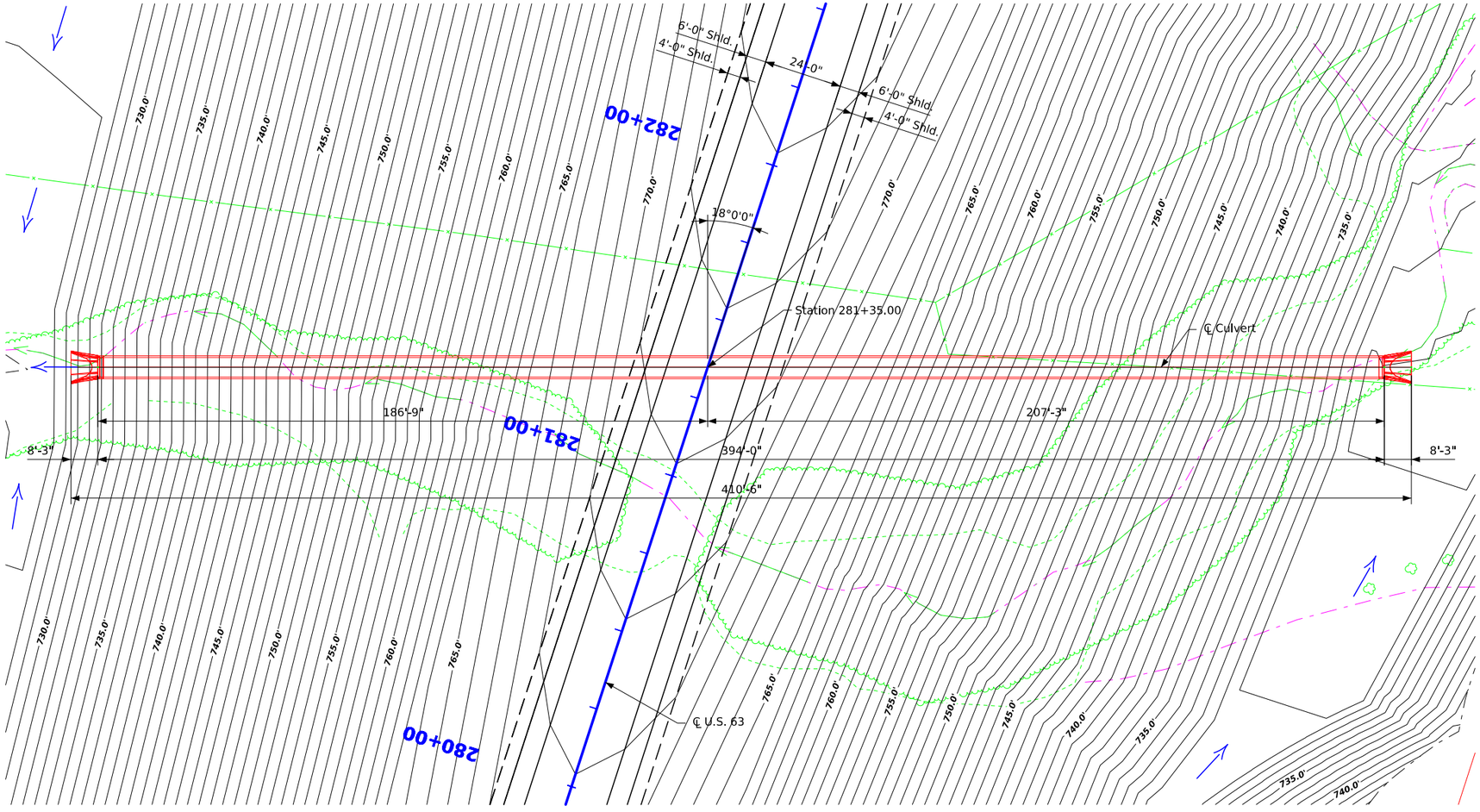
FILE NO. 32164	ENGLISH	DESIGN TEAM JEO CONSULTING GROUP	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(095)--3H-62	SHEET NUMBER V.08

2:33:21 PM 11/26/2024 twallen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\6206302013\Bridge\ORD_62063096_JEO_PIPE_CULVERTS_ML_Z09.dgn

FENO MONUMENT NO. 100: N 7587601.591, E 19535103.070, S. OF HWY 163 AND W. OF JEWELL AVE, ±156' S.E. OF FIRST POWERPOLE S. OF HWY 163, ±110' E.-S.E. OF SECOND POWERPOLE S. OF HWY 163, ELEV. 842.52



Longitudinal Section Along ℄ Culvert



Plat Plan

Notes:

Pipe dimensions shown in Plan View are based on laying lengths.

High strength pipe is required due to the fill height.

N

Hydraulic Data

Drainage Area = 156.7 Acres
Design Discharge, Q_{50} = 237 cfs

Location

U.S. 63
T-76N R-16W
Section 35
Madison Township
Mahaska County

0 ENGLISH 40
SCALE IN FEET

Preliminary

Design for 18° Skew (R.A.)

72" x 394' Reinforced Concrete Pipe

Plat Plan

Sta. 281+35.00 (ML063) February 2023

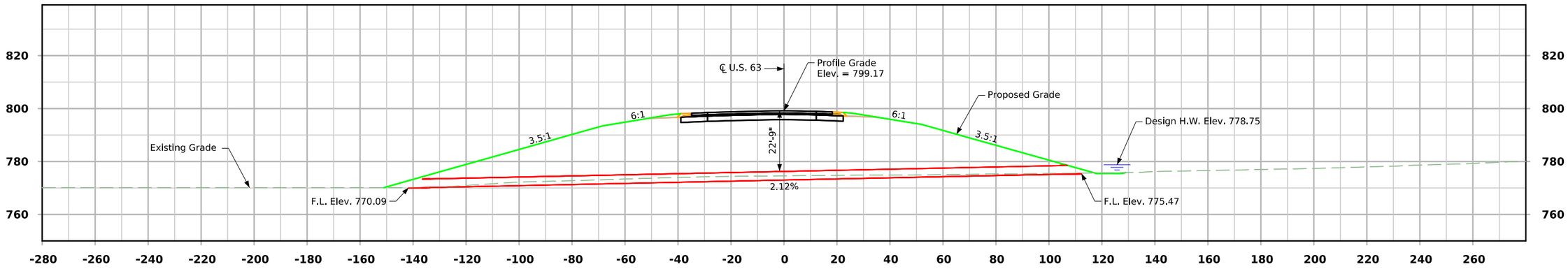
Mahaska County

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

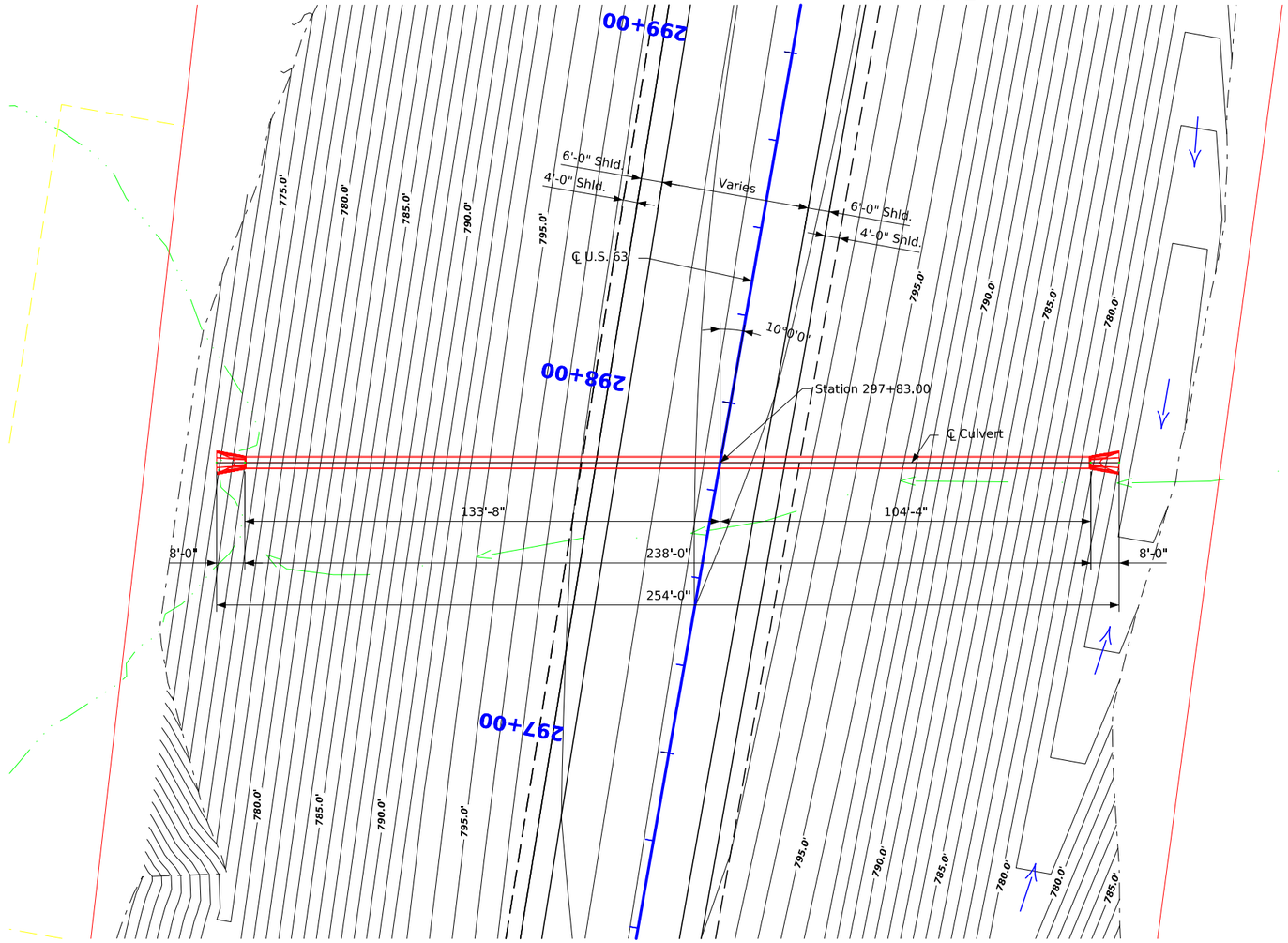
FILE NO. 32164	ENGLISH	DESIGN TEAM JEO CONSULTING GROUP	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(095)--3H-62	SHEET NUMBER V.09

2:33:26 PM 11/26/2024 twallen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\6206302013\Bridge\ORD_62063096_JEO_PIPE_CULVERTS_ML_Z09.dgn

FENO MONUMENT NO. 100: N 7587601.591, E 19535103.070, S. OF HWY 163 AND W. OF JEWELL AVE, ±156' S.E. OF FIRST POWERPOLE S. OF HWY 163, ±110' E.-S.E. OF SECOND POWERPOLE S. OF HWY 163, ELEV. 842.52



Longitudinal Section Along ℄ Culvert



Plat Plan

Notes:

Pipe dimensions shown in Plan View are based on laying lengths.

Hydraulic Data

Drainage Area = 14.8 Acres
Design Discharge, Q_{50} = 40 cfs

Location

U.S. 63
T-76N R-16W
Section 36
Madison Township
Mahaska County

0 ENGLISH 40
SCALE IN FEET

Preliminary

Design for 10° Skew (R.A.)

36" x 238' Reinforced Concrete Pipe

Plat Plan

Sta. 297+83.00 (ML063) February 2023

Mahaska County

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

FILE NO. 32164	ENGLISH	DESIGN TEAM JEO CONSULTING GROUP	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(095)--3H-62	SHEET NUMBER V.10

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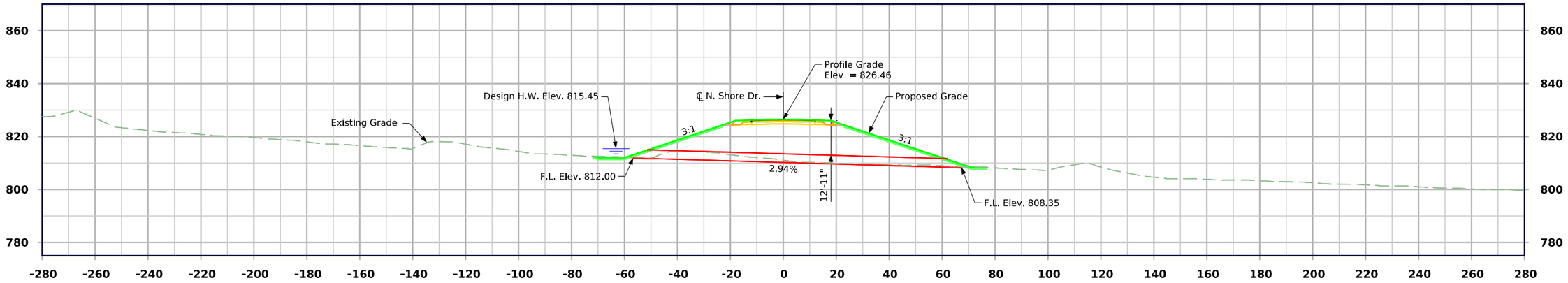
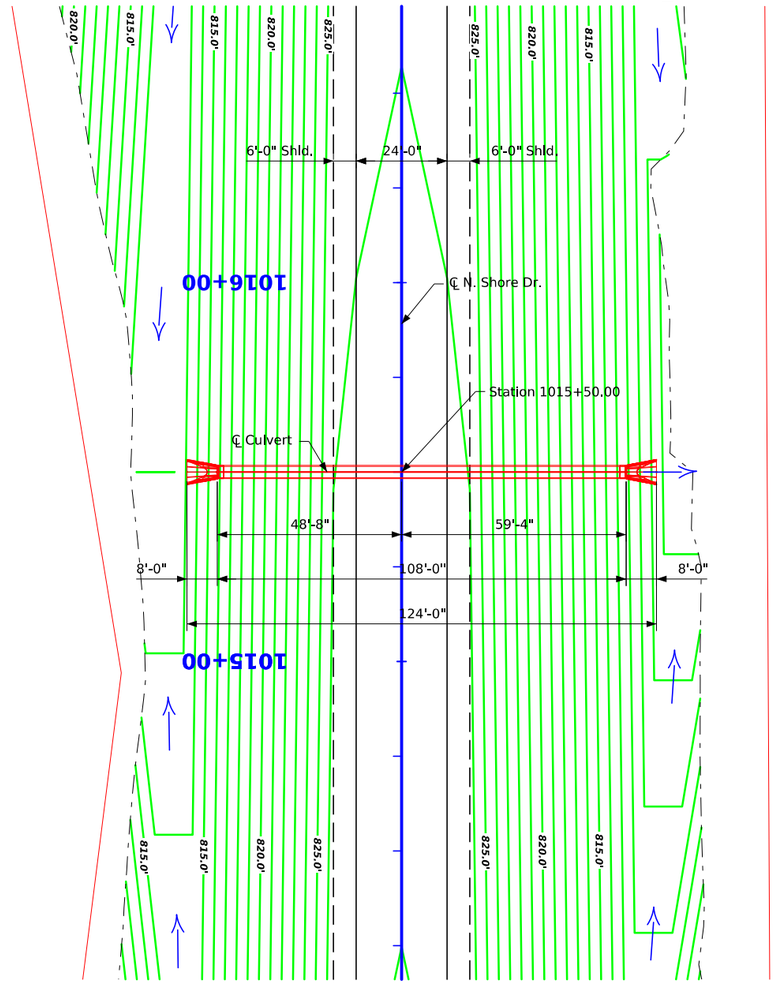
FENO MONUMENT NO. 100: N 7587601.591, E 19535103.070, S. OF HWY 163 AND W. OF JEWELL AVE, ±156' S.E. OF FIRST POWERPOLE S. OF HWY 163, ±110' E.-S.E. OF SECOND POWERPOLE S. OF HWY 163, ELEV. 842.52



Longitudinal Section Along ℄ Culvert



Plat Plan

Notes:

Pipe dimensions shown in Plan View are based on laying lengths.

N

Hydraulic Data

Drainage Area = 15.9 Acres
Design Discharge, Q_{50} = 43 cfs

Location

N. Shore Drive
T-75N R-16W
Section 09
Lincoln Township
Mahaska County

0 ENGLISH 40
SCALE IN FEET

Preliminary

Design for 0° Skew

36" x 108' Reinforced Concrete Pipe

Plat Plan

Sta. 1015+50.00 (SRNSHORE) February 2023

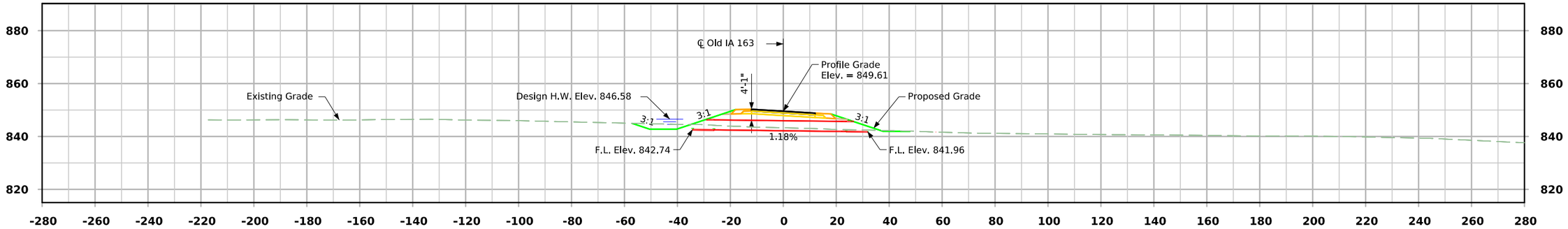
Mahaska County

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

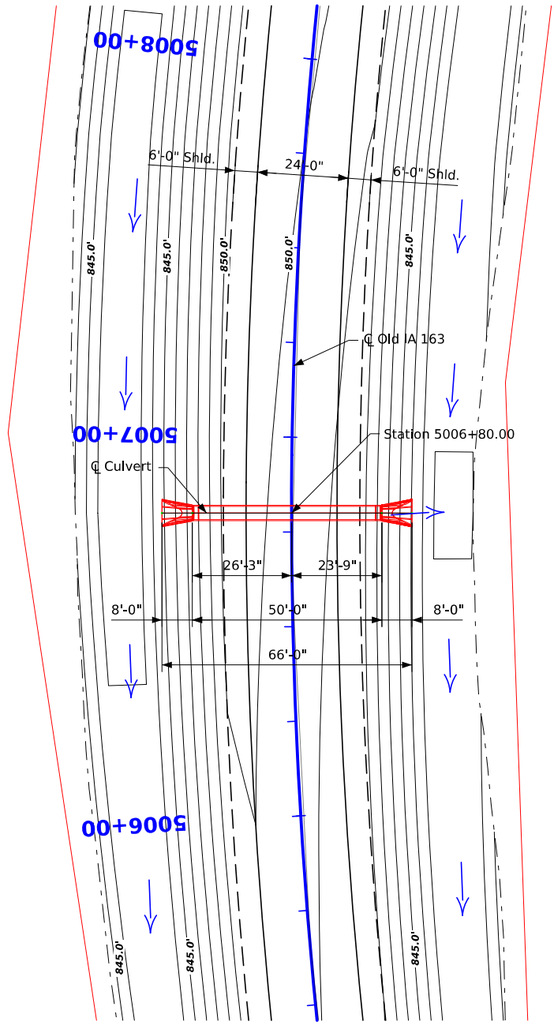
FILE NO. 32164	ENGLISH	DESIGN TEAM JEO CONSULTING GROUP	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(095)--3H-62	SHEET NUMBER V.11	

2:33:48 PM 11/26/2024 twallen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\6206302013\Bridge\ORD_62063096_JEO_PIPE_CULVERTS_SR_Z09.dgn

FENO MONUMENT NO. 100: N 7587601.591, E 19535103.070, S. OF HWY 163 AND W. OF JEWELL AVE, ±156' S.E. OF FIRST POWERPOLE S. OF HWY 163, ±110' E.-S.E. OF SECOND POWERPOLE S. OF HWY 163, ELEV. 842.52



Longitudinal Section Along ℄ Culvert



Plat Plan

Notes:

Pipe dimensions shown in Plan View are based on laying lengths.

Hydraulic Data

Drainage Area = 24.4 Acres
Design Discharge, Q_{50} = 59 cfs

Location

Old IA 163
T-75N R-16W
Section 10
Lincoln Township
Mahaska County

0 ENGLISH 40
SCALE IN FEET

Preliminary

Design for 0° Skew

42" x 50' Reinforced Concrete Pipe

Plat Plan

Sta. 5006+80.00 (SROLD163) February 2023

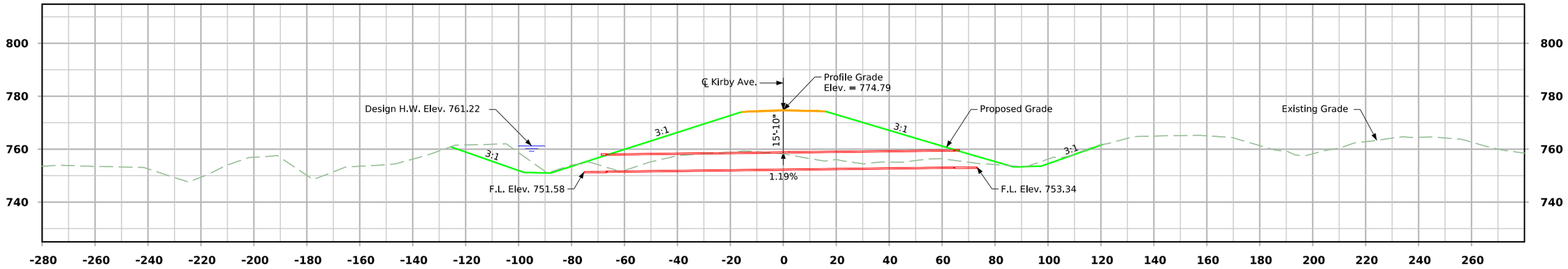
Mahaska County

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

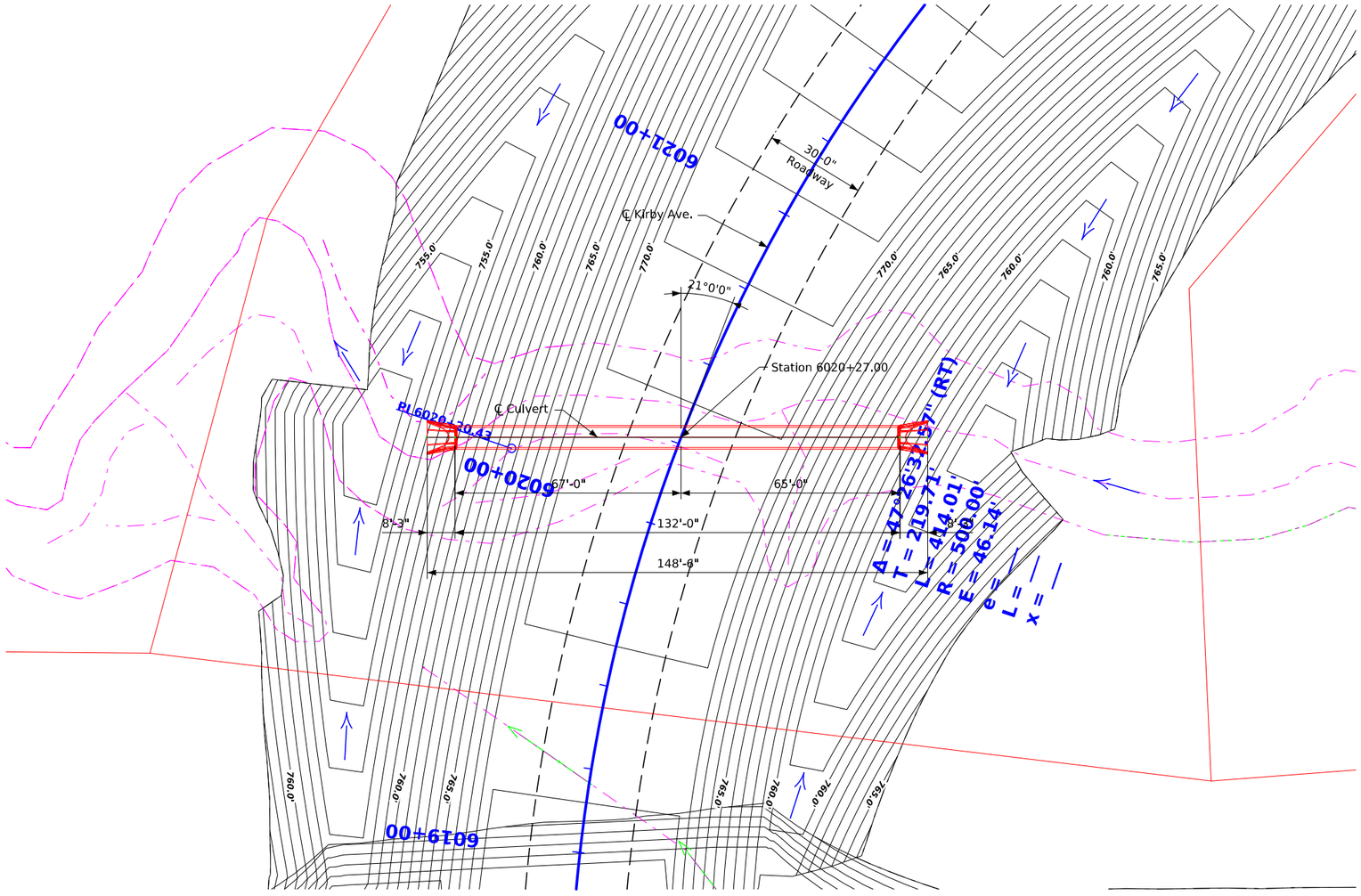
FILE NO. 32164	ENGLISH	DESIGN TEAM JEO CONSULTING GROUP	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(095)--3H-62	SHEET NUMBER V.12	

2:34:08 PM 11/26/2024 twallen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\6206302013\Bridge\ORD_62063096_JEO_PIPE_CULVERTS_SR_Z09.dgn

FENO MONUMENT NO. 100: N 7587601.591, E 19535103.070, S. OF HWY 163 AND W. OF JEWELL AVE, ±156' S.E. OF FIRST POWERPOLE S. OF HWY 163, ±110' E.-S.E. OF SECOND POWERPOLE S. OF HWY 163, ELEV. 842.52



Longitudinal Section Along ℄ Culvert



Plat Plan

Notes:

Pipe dimensions shown in Plan View are based on laying lengths.

Hydraulic Data

Drainage Area = 198.4 Acres
Design Discharge, Q_{50} = 268 cfs

Location

Kirby Ave.
T-75N R-16W
Section 02
Lincoln Township
Mahaska County

0 ENGLISH 40
SCALE IN FEET

Preliminary

Design for 21° Skew (R.A.)

72" x 132' Reinforced Concrete Pipe

Plat Plan

Sta. 6020+27.00 (SRKIRBY) February 2023

Mahaska County

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

FILE NO. 32164	ENGLISH	DESIGN TEAM JEO CONSULTING GROUP	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(095)--3H-62	SHEET NUMBER V.13

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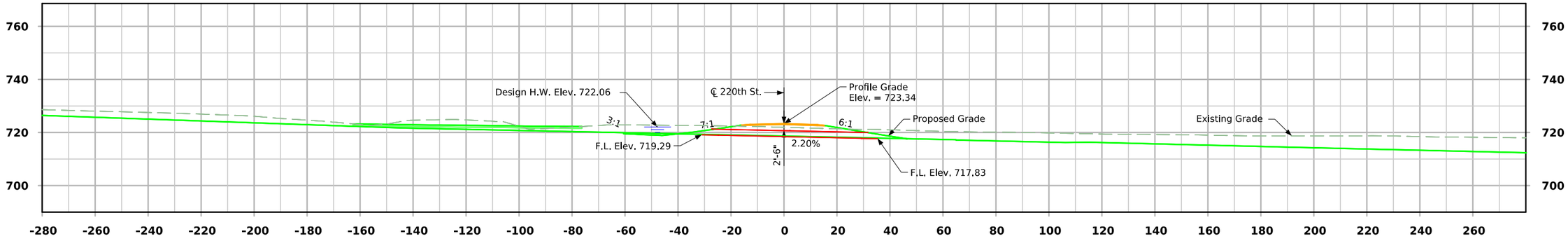
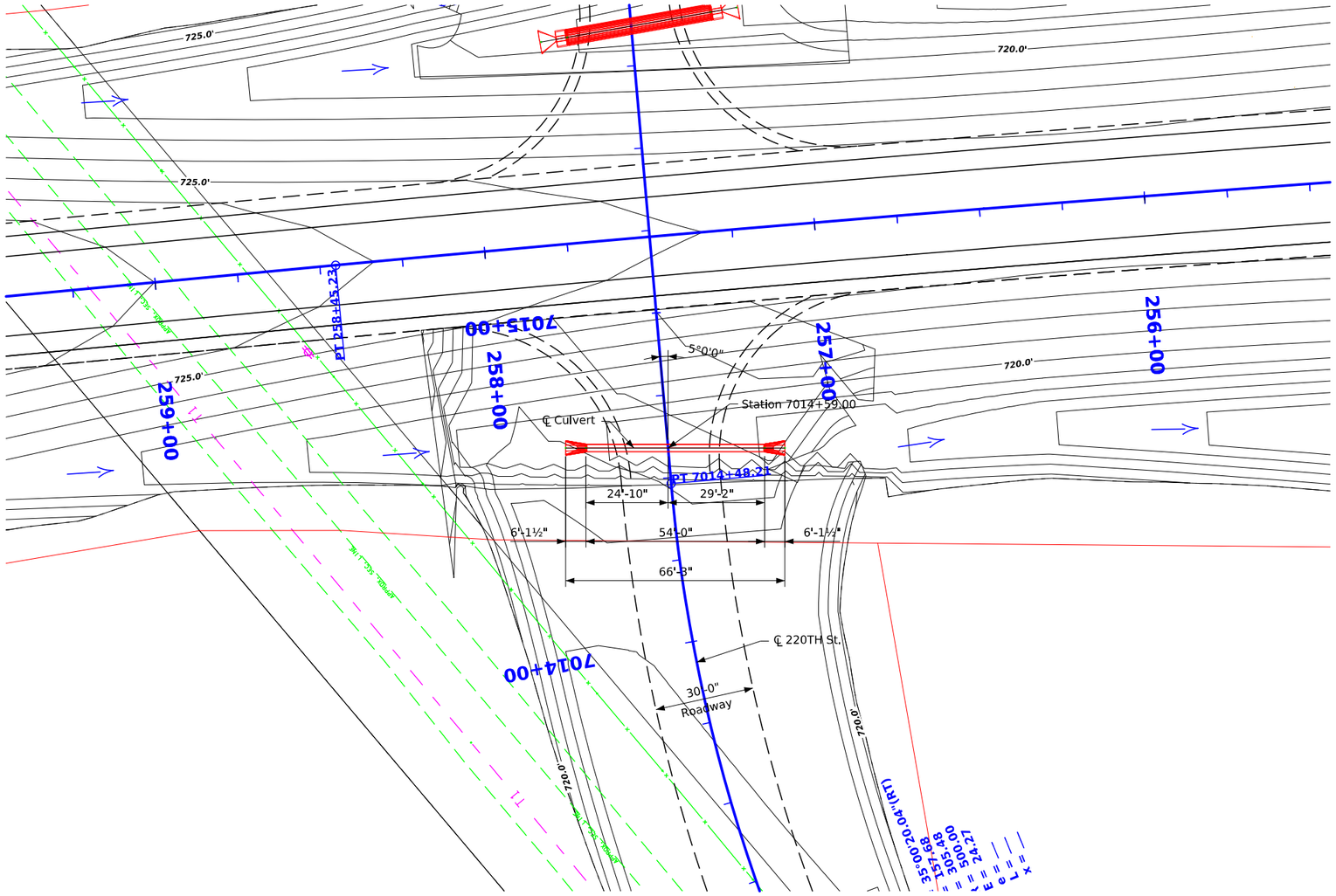
FENO MONUMENT NO. 100: N 7587601.591, E 19535103.070, S. OF HWY 163 AND W. OF JEWELL AVE, ±156' S.E. OF FIRST POWERPOLE S. OF HWY 163, ±110' E.-S.E. OF SECOND POWERPOLE S. OF HWY 163, ELEV. 842.52



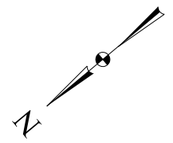
Longitudinal Section Along ℄ Culvert



Plat Plan

Notes:

Pipe dimensions shown in Plan View are based on laying lengths.



Hydraulic Data

Drainage Area = 5.7 Acres
Design Discharge, Q_{50} = 19 cfs

Location

220th Street
T-75N R-16W
Section 02
Lincoln Township
Mahaska County

0 ENGLISH 40
SCALE IN FEET

Preliminary

Design for 5° Skew (L.A.)

24" x 54' Reinforced Concrete Pipe

Plat Plan

Sta. 7014+59.00 (SR220) February 2023

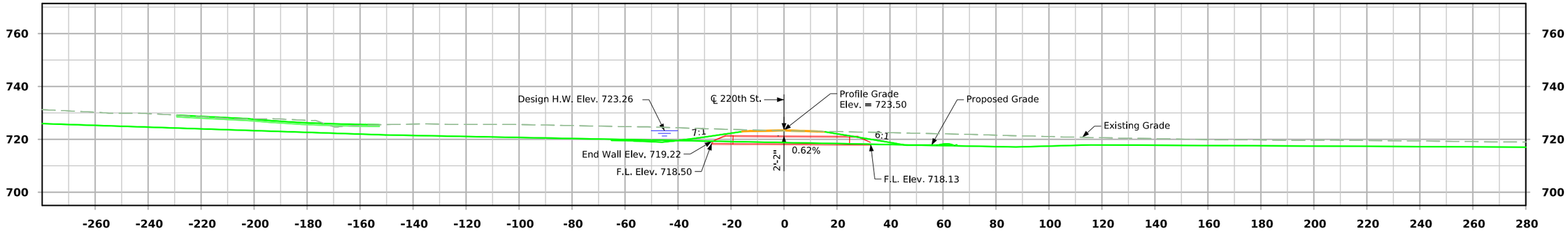
Mahaska County

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

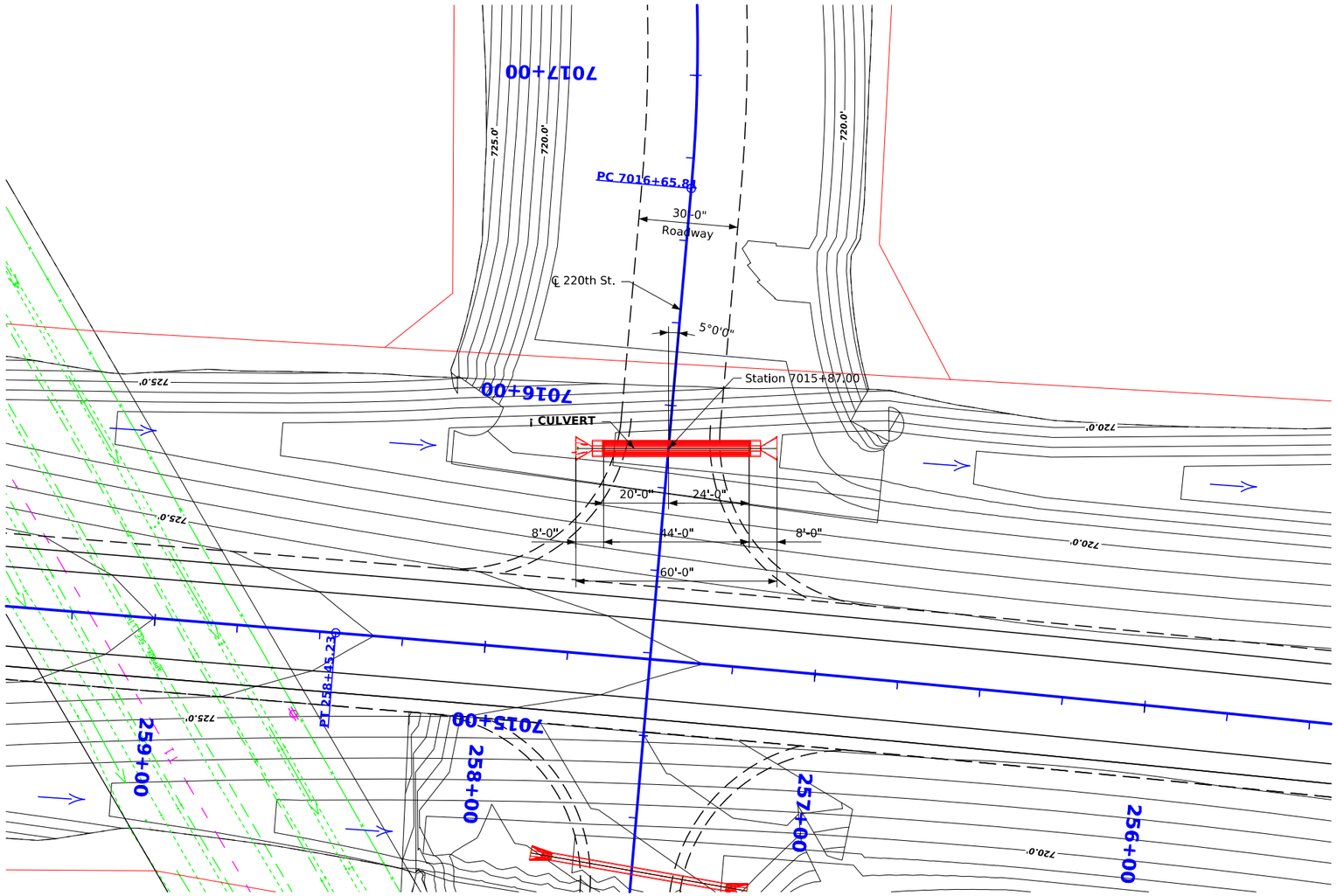
FILE NO. 32164	ENGLISH	DESIGN TEAM JEO CONSULTING GROUP	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(095)--3H-62	SHEET NUMBER V.14

2:34:18 PM 11/26/2024 twallen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\6206302013\Bridge\ORD_62063096_JEO_PIPE_CULVERTS_SR_Z09.dgn

FENO MONUMENT NO. 100: N 7587601.591, E 19535103.070, S. OF HWY 163 AND W. OF JEWELL AVE, ±156' S.E. OF FIRST POWERPOLE S. OF HWY 163, ±110' E.-S.E. OF SECOND POWERPOLE S. OF HWY 163, ELEV. 842.52



Longitudinal Section Along ℄ Culvert



Plat Plan

Notes:

Pipe dimensions shown in Plan View are based on laying lengths.

DR-206 low clearance concrete pipe with end wall.

Hydraulic Data

Drainage Area = 27.7 Acres
Design Discharge, Q_{50} = 65 cfs

Location

220th Street
T-75N R-16W
Section 02
Lincoln Township
Mahaska County

0 ENGLISH 40
SCALE IN FEET

Preliminary

Design for 5° Skew (R.A.)

42" Eq. x 44' Low Clearance Concrete Arch Pipe w/ End Wall

Plat Plan

Sta. 7015+87.00 (SR220) February 2023

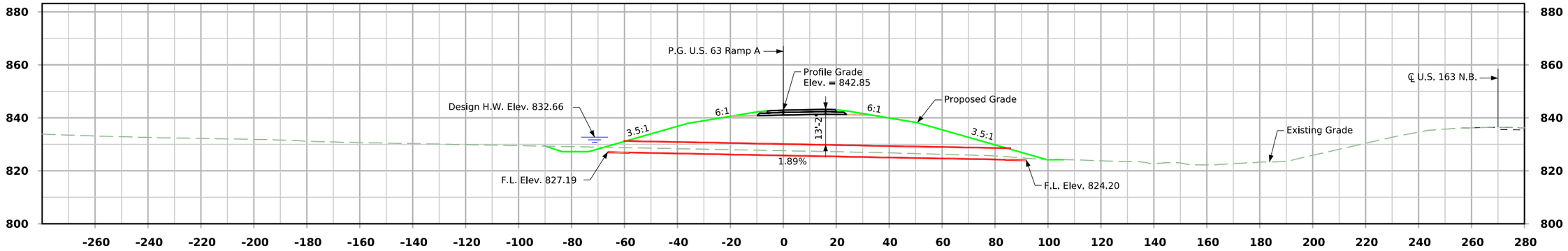
Mahaska County

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

FILE NO. 32164	ENGLISH	DESIGN TEAM JEO CONSULTING GROUP	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(095)--3H-62	SHEET NUMBER V.15

2:34:22 PM 11/26/2024 twallen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\6206302013\Bridge\ORD_62063096_JEO_PIPE_CULVERTS_SR_Z09.dgn

FENO MONUMENT NO. 100: N 7587601.591, E 19535103.070, S. OF HWY 163 AND W. OF JEWELL AVE, ±156' S.E. OF FIRST POWERPOLE S. OF HWY 163, ±110' E.-S.E. OF SECOND POWERPOLE S. OF HWY 163, ELEV. 842.52



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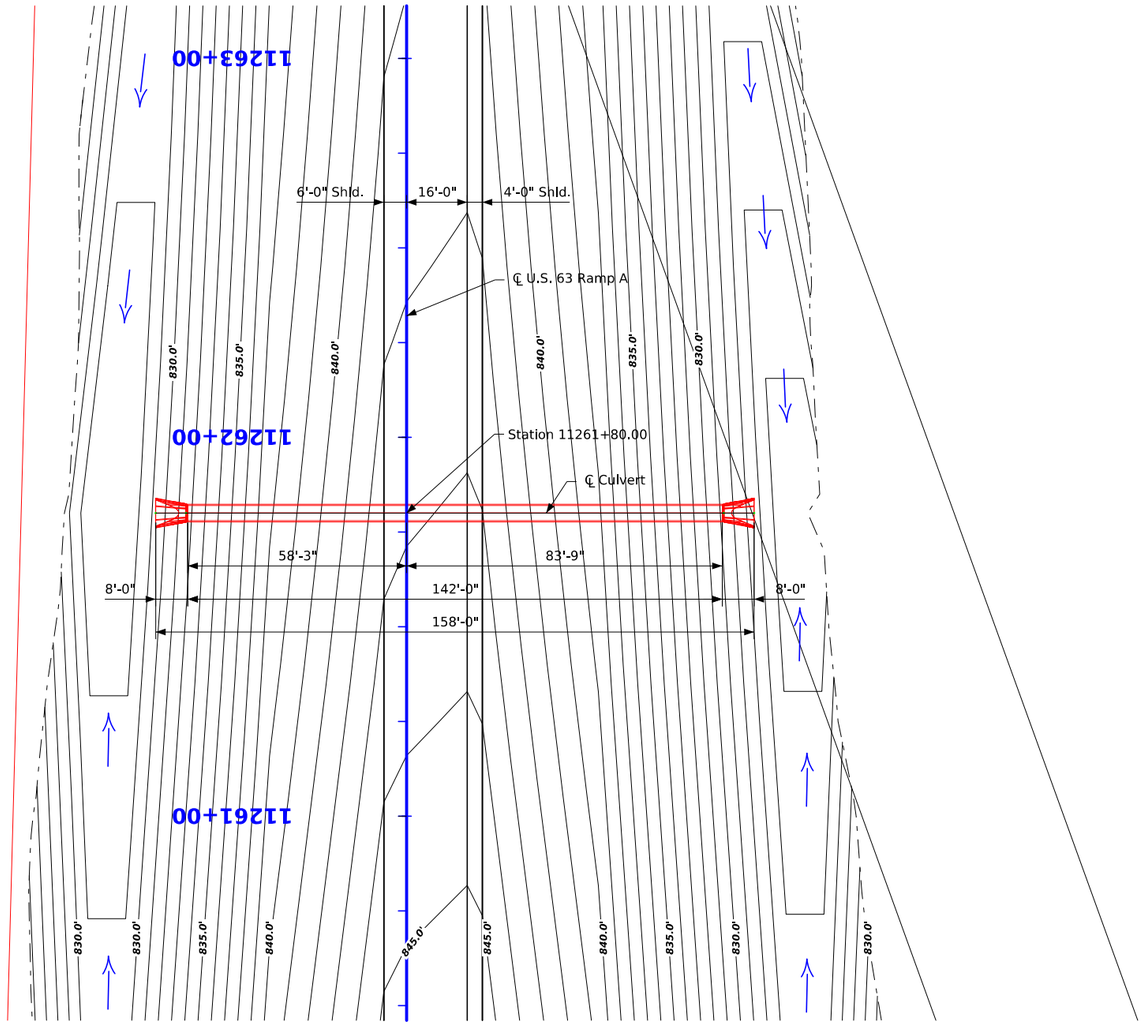
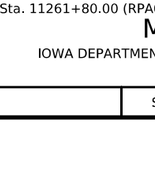


Plat Plan

Notes:

Pipe dimensions shown in Plan View are based on laying lengths.



Hydraulic Data

Drainage Area = 52.1 Acres
Design Discharge, Q_{50} = 106 cfs

Location

U.S. 63 Ramp A
T-75N R-16W
Section 10
Lincoln Township
Mahaska County

0 ENGLISH 40
SCALE IN FEET

Preliminary

Design for 0° Skew

48" x 142' Reinforced Concrete Pipe

Plat Plan

Sta. 11261+80.00 (RPA063) February 2023

Mahaska County

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

FILE NO. 32164	ENGLISH	DESIGN TEAM JEO CONSULTING GROUP	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(095)--3H-62	SHEET NUMBER V.16

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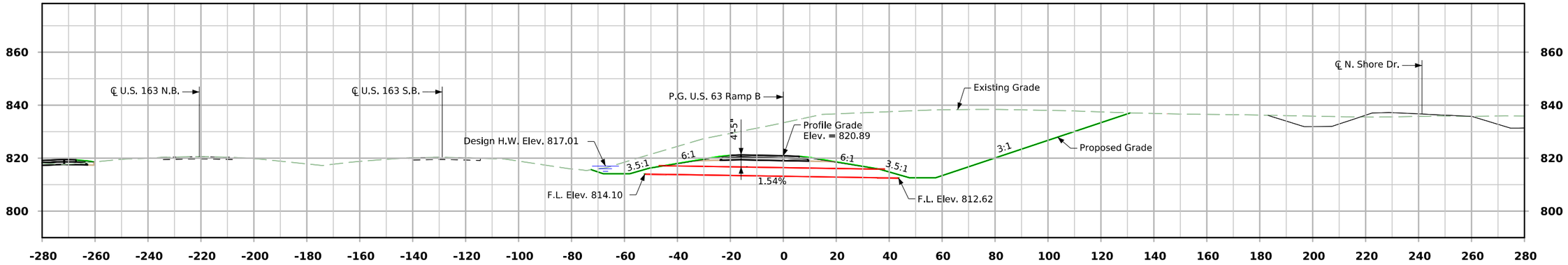
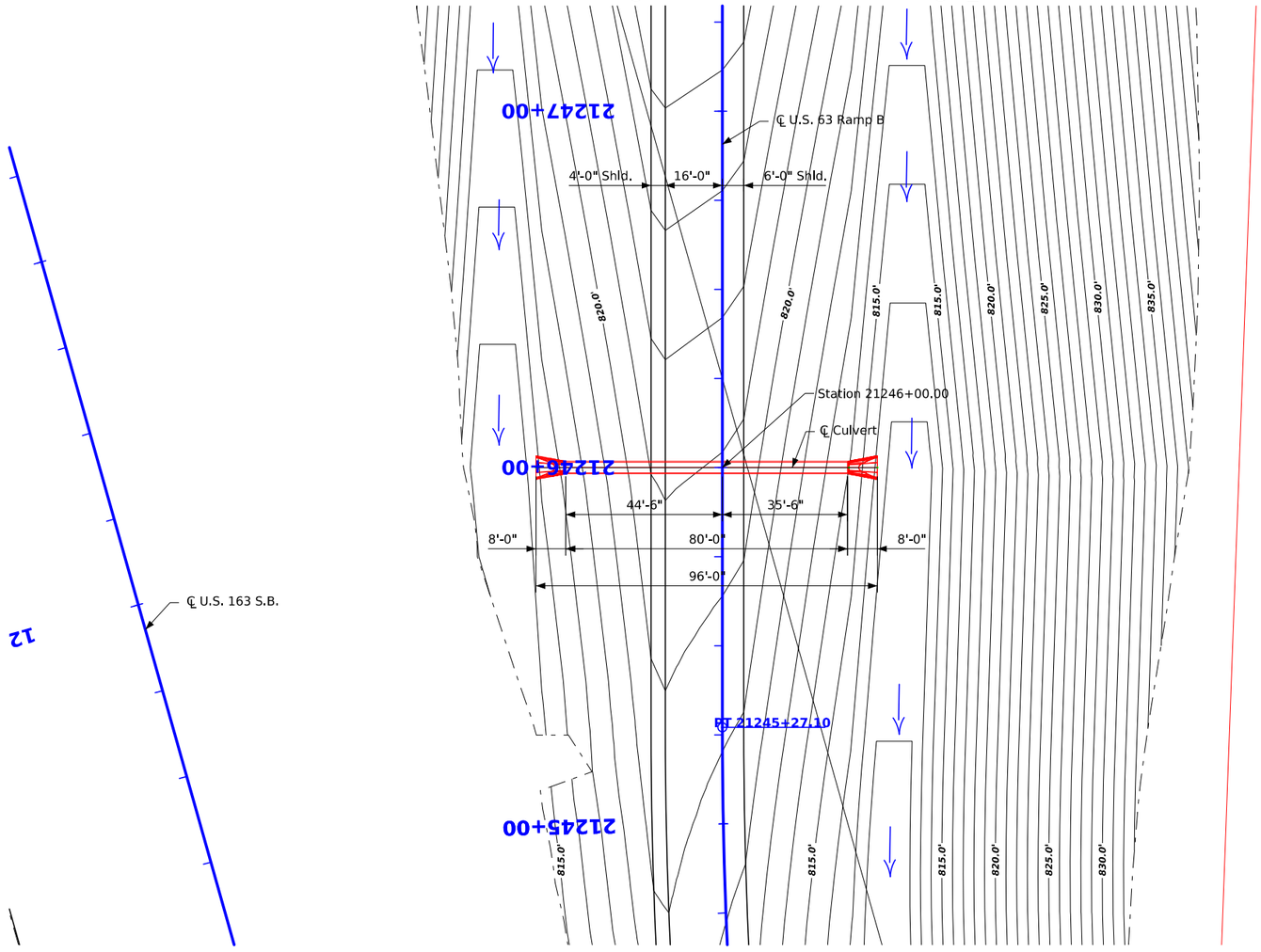
FENO MONUMENT NO. 100: N 7587601.591, E 19535103.070, S. OF HWY 163 AND W. OF JEWELL AVE, ±156' S.E. OF FIRST POWERPOLE S. OF HWY 163, ±110' E.-S.E. OF SECOND POWERPOLE S. OF HWY 163, ELEV. 842.52



Longitudinal Section Along ℄ Culvert



Plat Plan

Notes:

Pipe dimensions shown in Plan View are based on laying lengths.

Hydraulic Data

Drainage Area = 11.7 Acres
Design Discharge, Q_{50} = 34 cfs

Location

U.S. 63 Ramp B
T-75N R-16W
Section 09
Lincoln Township
Mahaska County

0 ENGLISH 40
SCALE IN FEET

Preliminary

Design for 0° Skew

36" x 80' Reinforced Concrete Pipe

Plat Plan

Sta. 21246+00.00 (RPB063) February 2023

Mahaska County

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

FILE NO. 32164	ENGLISH	DESIGN TEAM JEO CONSULTING GROUP	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(095)--3H-62	SHEET NUMBER V.17

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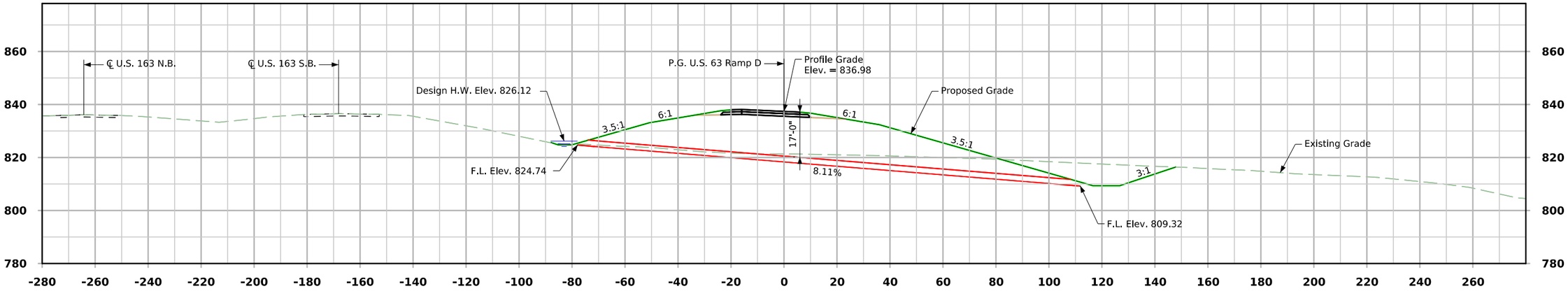
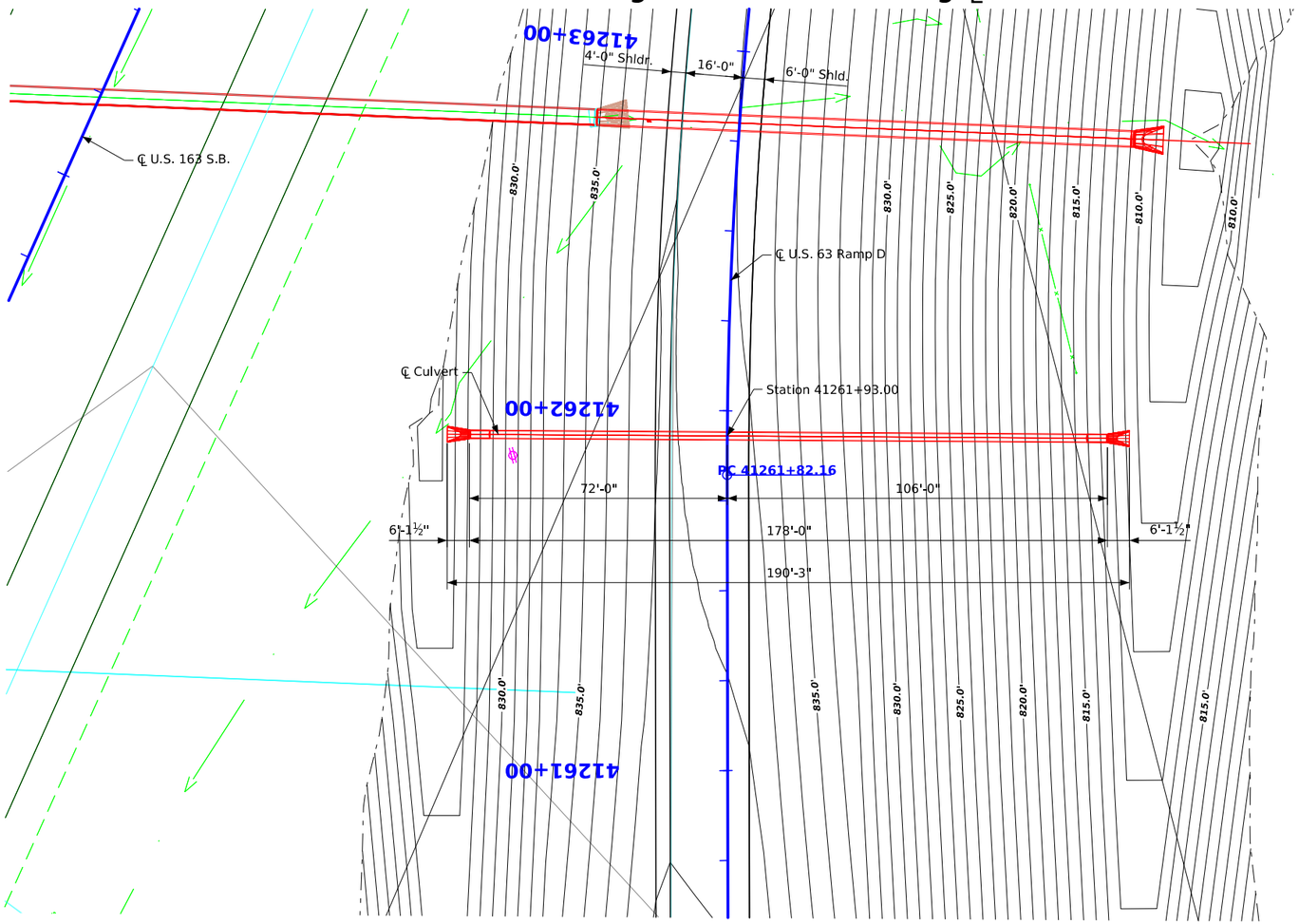
FENO MONUMENT NO. 100: N 7587601.591, E 19535103.070, S. OF HWY 163 AND W. OF JEWELL AVE, ±156' S.E. OF FIRST POWERPOLE S. OF HWY 163, ±110' E.-S.E. OF SECOND POWERPOLE S. OF HWY 163, ELEV. 842.52



Longitudinal Section Along ℄ Culvert



Plat Plan

Notes:

Pipe dimensions shown in Plan View are based on laying lengths.

N

Hydraulic Data

Drainage Area = 2.0 Acres
Design Discharge, Q_{50} = 8 cfs

Location

U.S. 63 Ramp D
T-75N R-16W
Section 10
Lincoln Township
Mahaska County

0 ENGLISH 40
SCALE IN FEET

Preliminary

Design for 0° Skew

24" x 178' Reinforced Concrete Pipe

Plat Plan

Sta. 41261+93.00 (RPD063) February 2023

Mahaska County

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

FILE NO. 32164	ENGLISH	DESIGN TEAM JEO CONSULTING GROUP	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(095)—3H-62	SHEET NUMBER V.18

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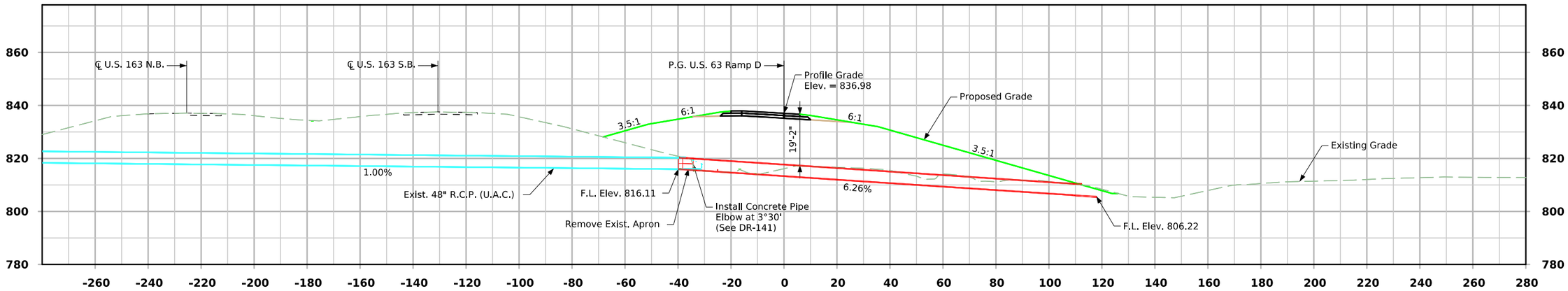
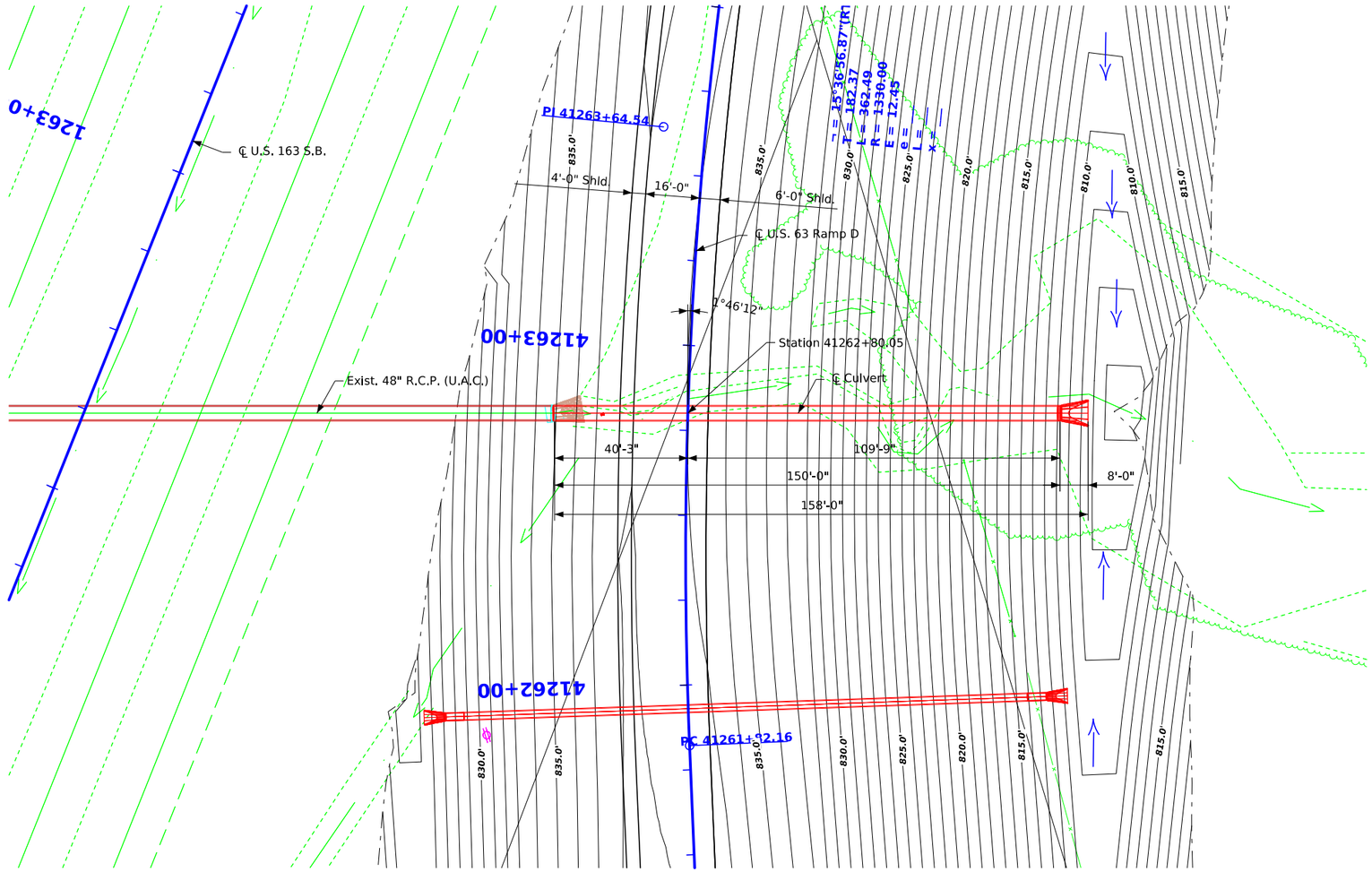
FENO MONUMENT NO. 100: N 7587601.591, E 19535103.070, S. OF HWY 163 AND W. OF JEWELL AVE, ±156' S.E. OF FIRST POWERPOLE S. OF HWY 163, ±110' E.-S.E. OF SECOND POWERPOLE S. OF HWY 163, ELEV. 842.52



Longitudinal Section Along ℄ Culvert



Plat Plan

Notes:

Pipe dimensions shown in Plan View are based on laying lengths.

Hydraulic Data

Drainage Area = 60.6 Acres
Design Discharge, Q_{50} = 119 cfs

Location

U.S. 63 Ramp D
T-75N R-16W
Section 10
Lincoln Township
Mahaska County

0 ENGLISH 40
SCALE IN FEET

Preliminary

Design for 1°46'12" Skew (R.A.)

48" x 150' Reinforced Concrete Pipe Extension

Plat Plan

Sta. 41262+80.05 (RPD063) February 2023

Mahaska County

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

FILE NO. 32164	ENGLISH	DESIGN TEAM JEO CONSULTING GROUP	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(095)--3H-62	SHEET NUMBER V.19

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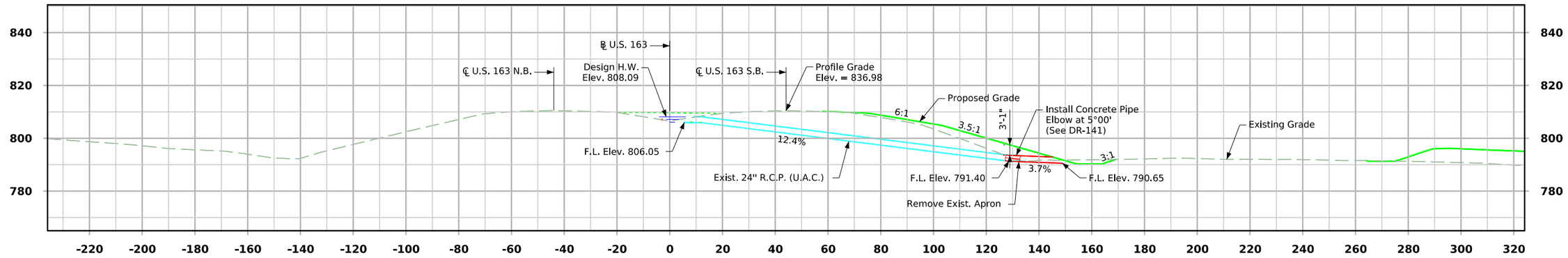
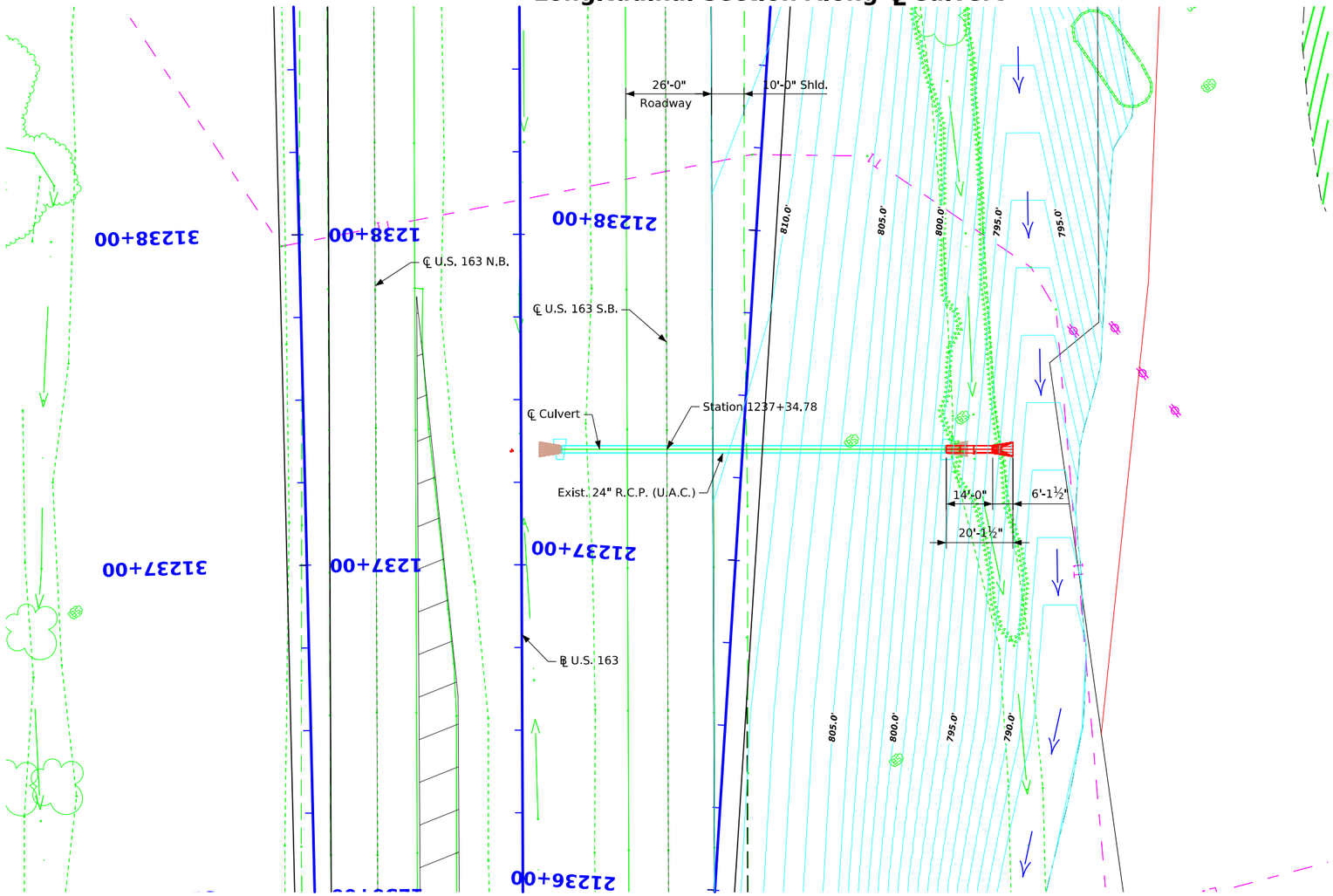
FENO MONUMENT NO. 100: N 7587601.591, E 19535103.070, S. OF HWY 163 AND W. OF JEWELL AVE, ±156' S.E. OF FIRST POWERPOLE S. OF HWY 163, ±110' E.-S.E. OF SECOND POWERPOLE S. OF HWY 163, ELEV. 842.52



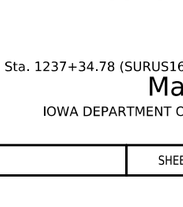
Longitudinal Section Along ℄ Culvert



Plat Plan

Notes:

Pipe dimensions shown in Plan View are based on laying lengths.



Hydraulic Data

Drainage Area = 4.1 Acres
Design Discharge, Q_{50} = 14 cfs

Location

U.S. 163 S.B.
T-75N R-16W
Section 10
Lincoln Township
Mahaska County

0 ENGLISH 40
SCALE IN FEET

Preliminary

Design for 0° Skew

24" x 14' Reinforced Concrete Pipe Extension

Plat Plan

Sta. 1237+34.78 (SURUS163) February 2023

Mahaska County

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

FILE NO. 32164	ENGLISH	DESIGN TEAM JEO CONSULTING GROUP	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(095)–3H-62	SHEET NUMBER V.20

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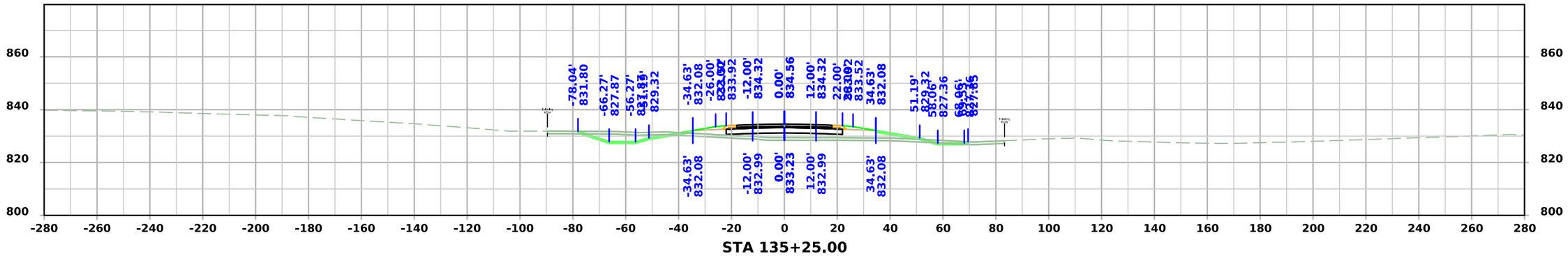
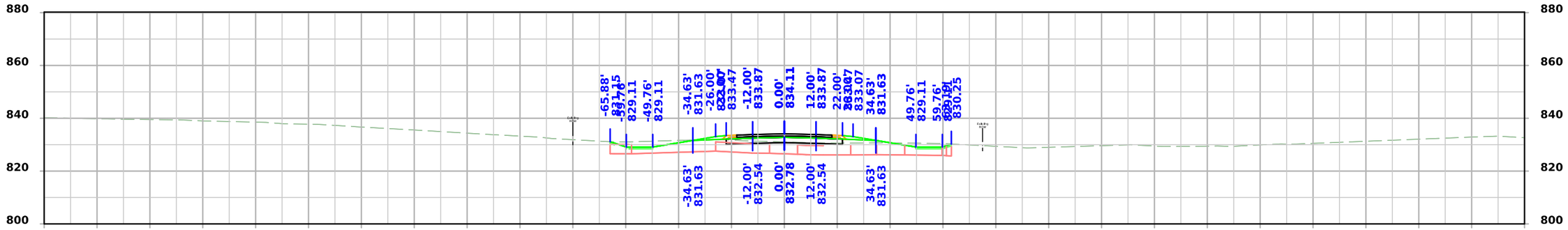
US 63



STA 135+25.00



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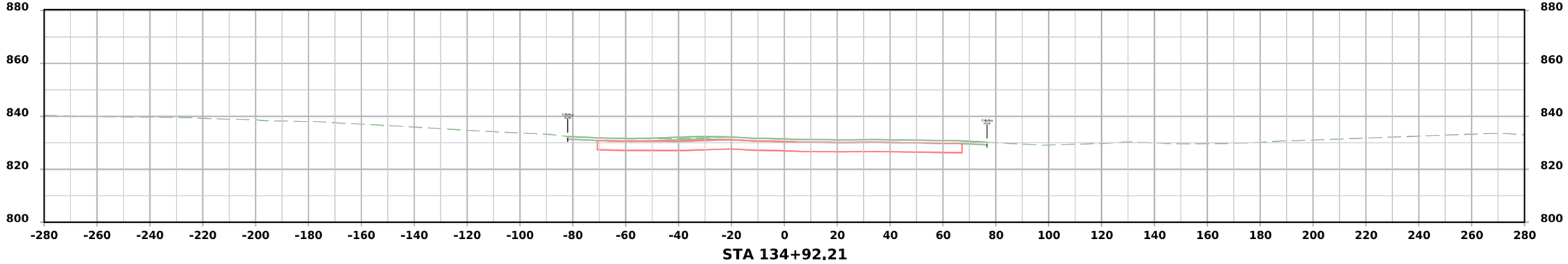

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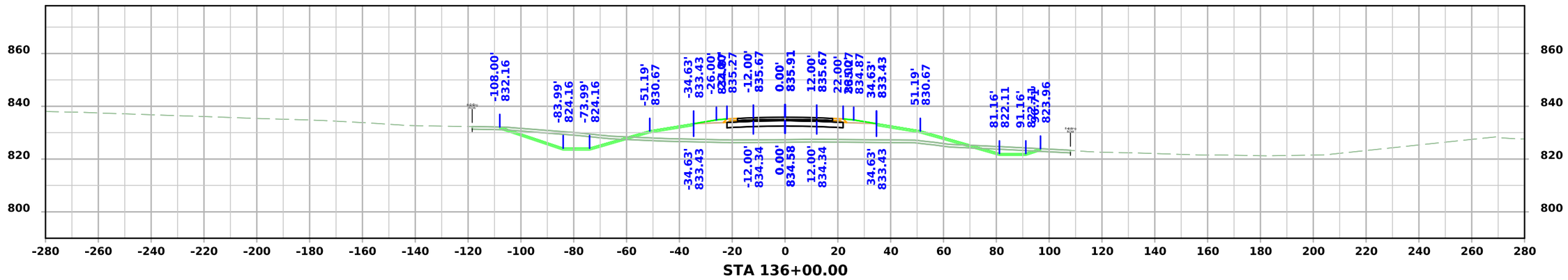
US 63



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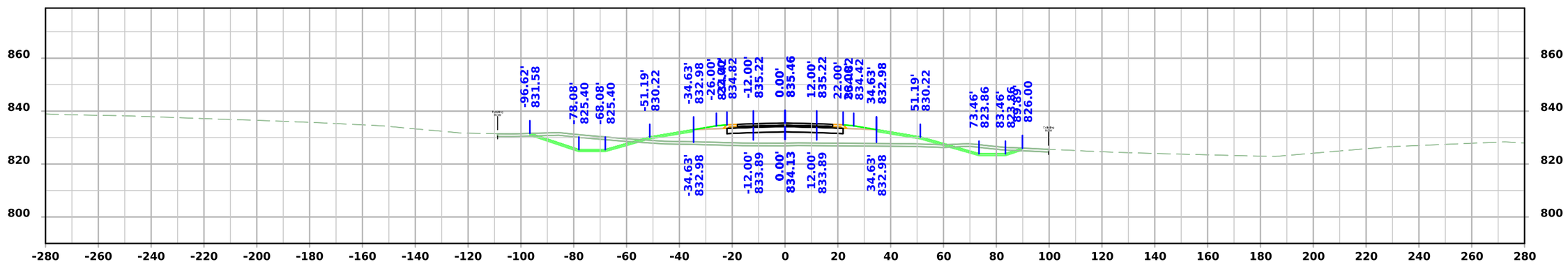

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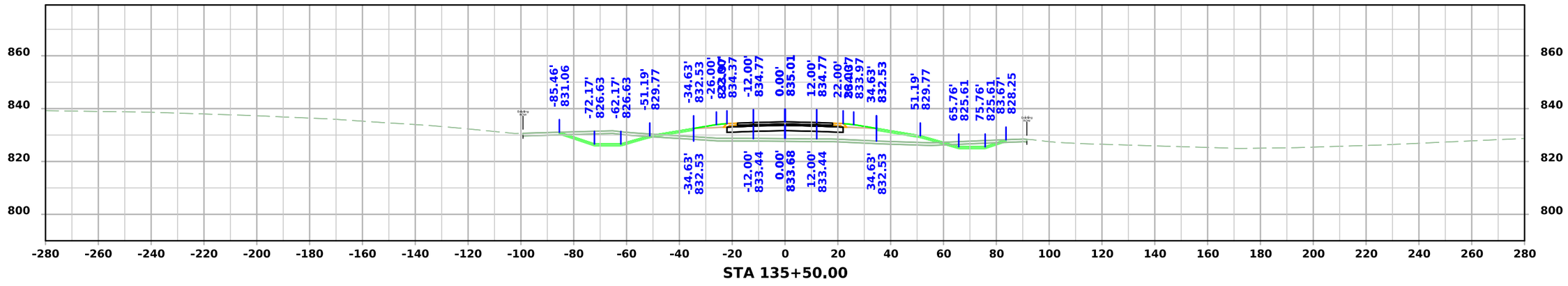

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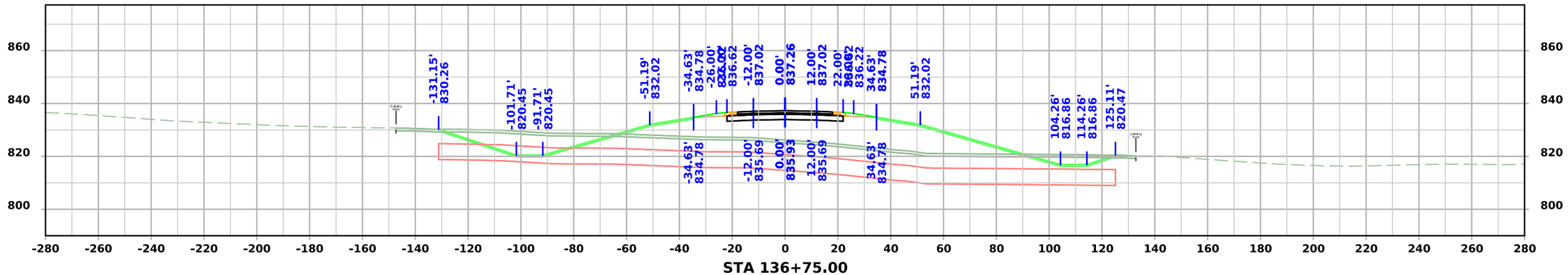
US 63



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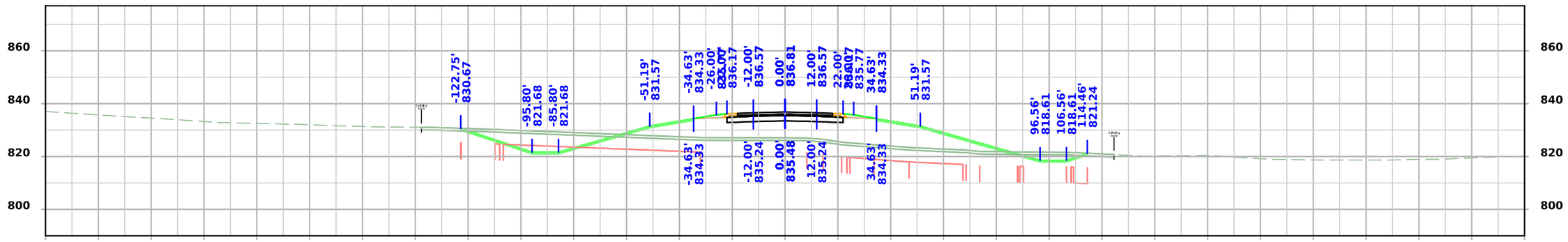

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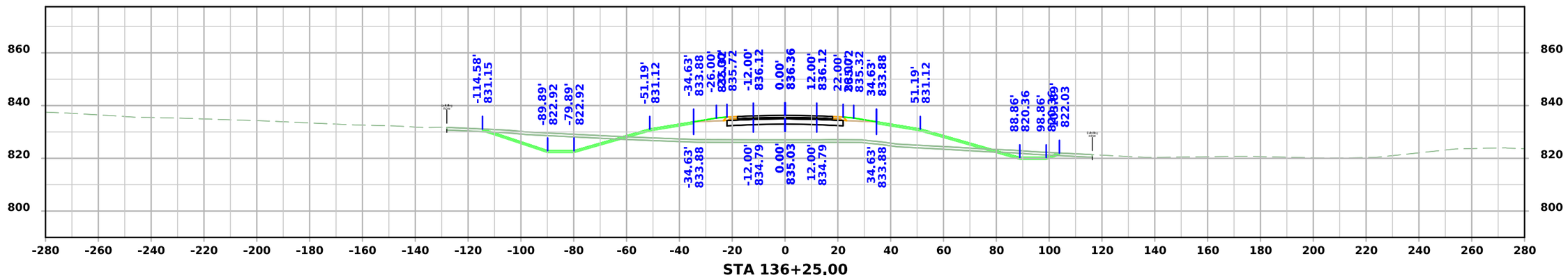

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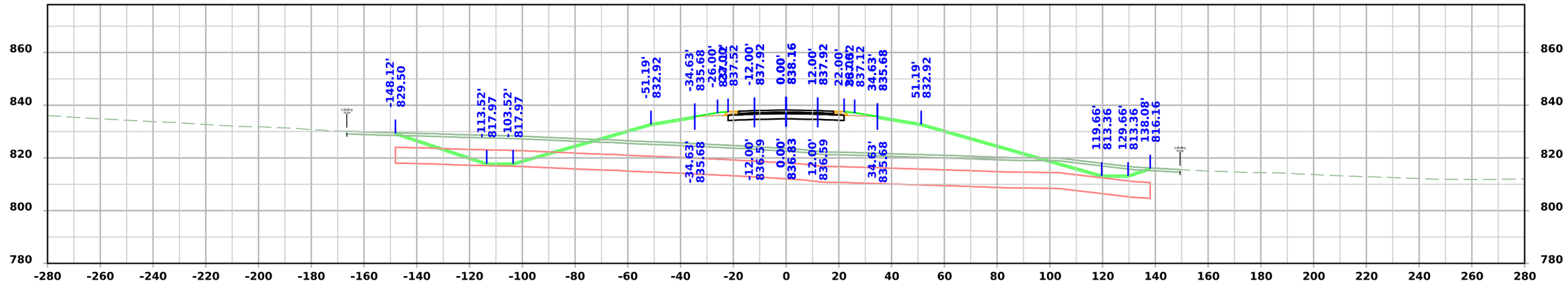
US 63



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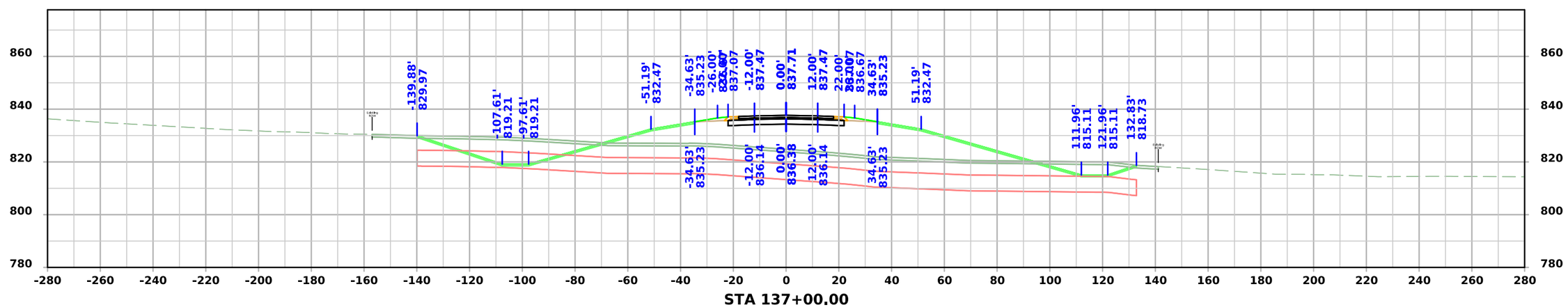

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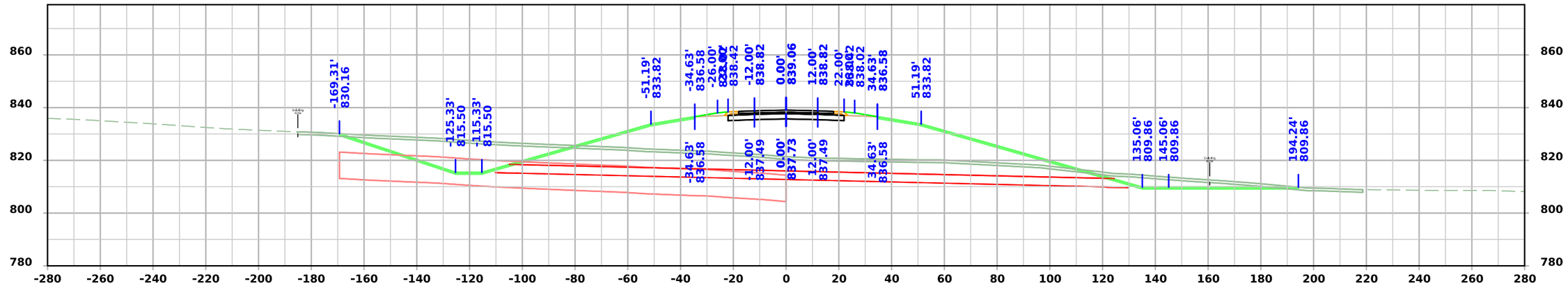
US 63



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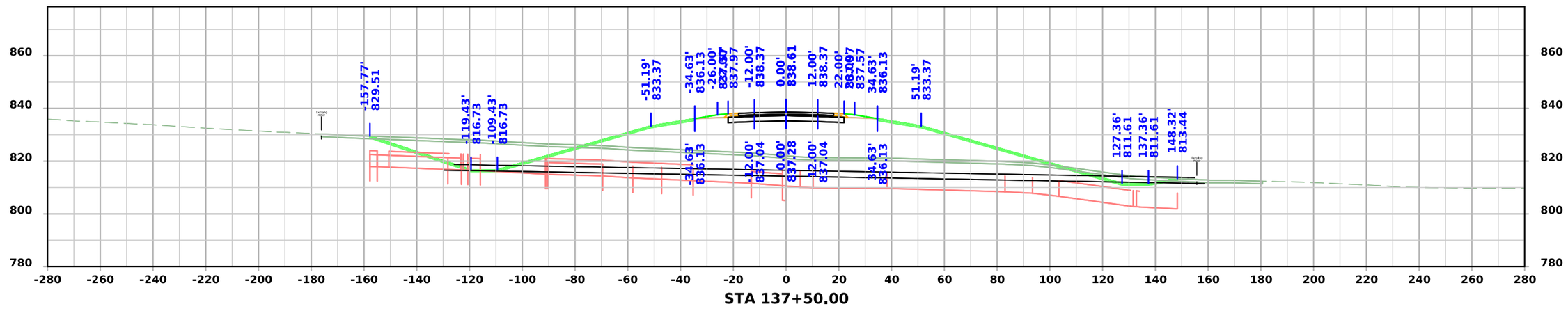

STA 137+50.00

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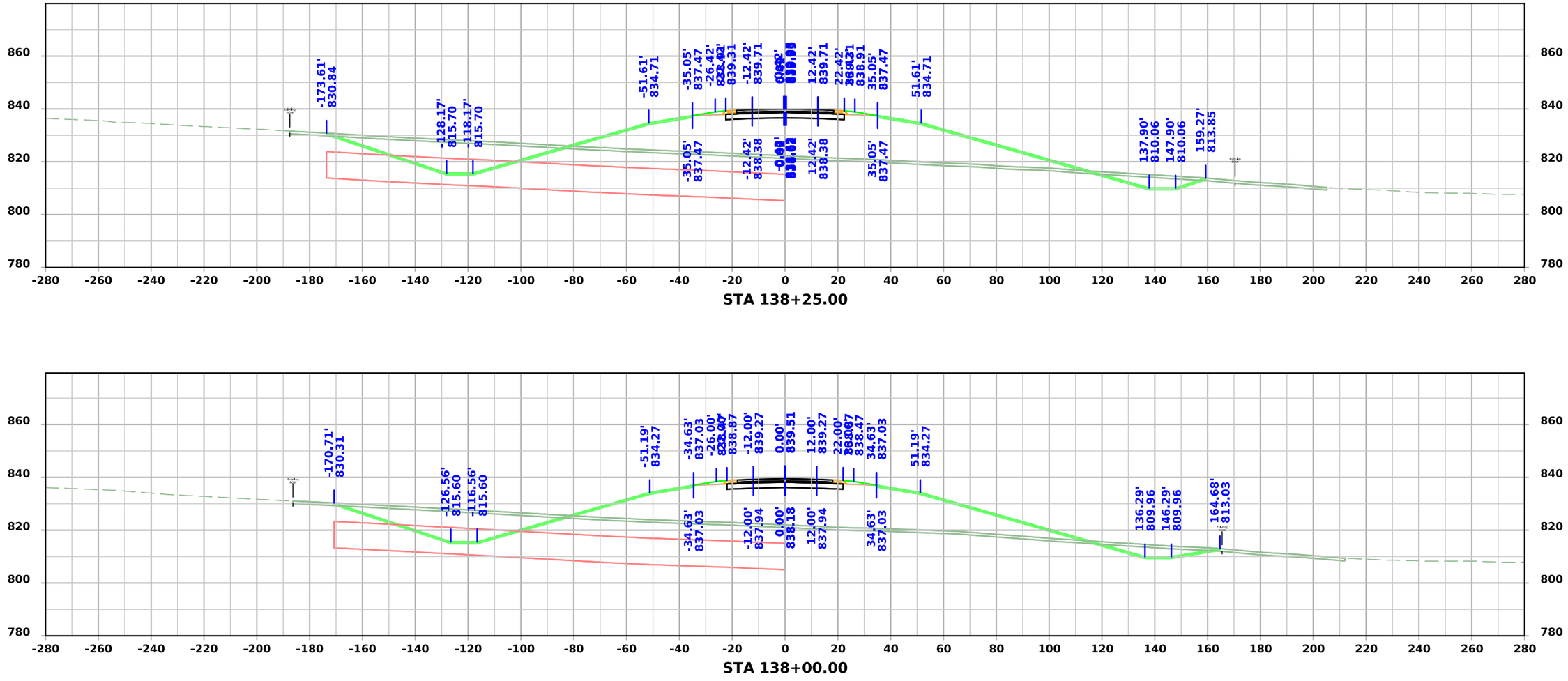
US 63



STA 138+25.00

STA 138+00.00

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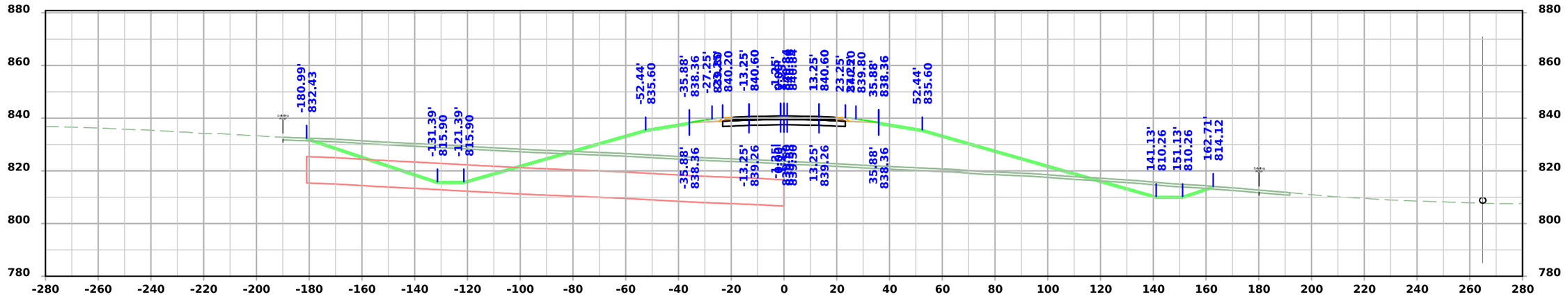
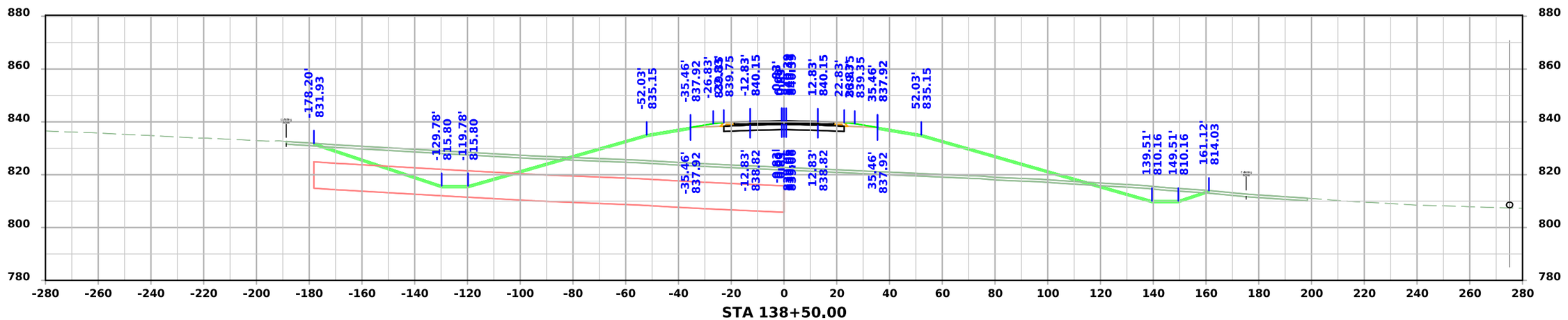
US 63



STA 138+75.00



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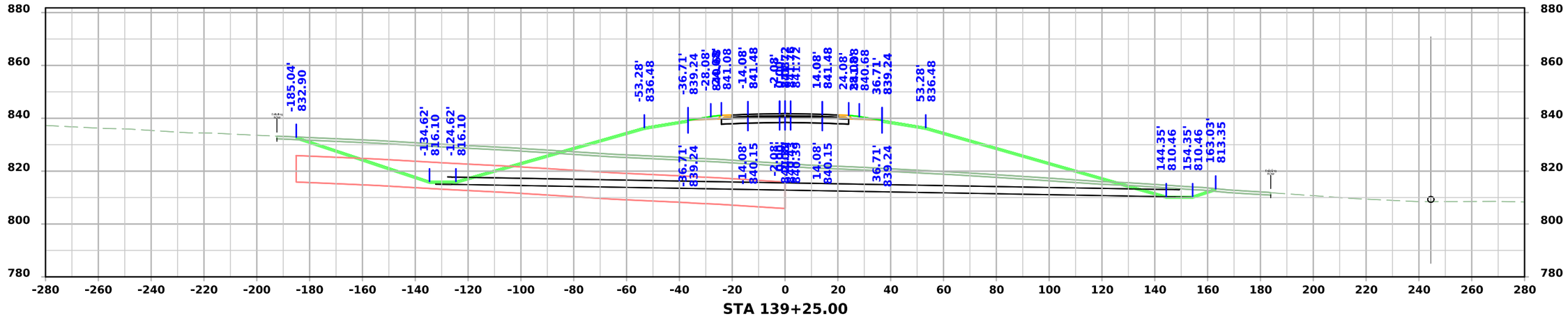
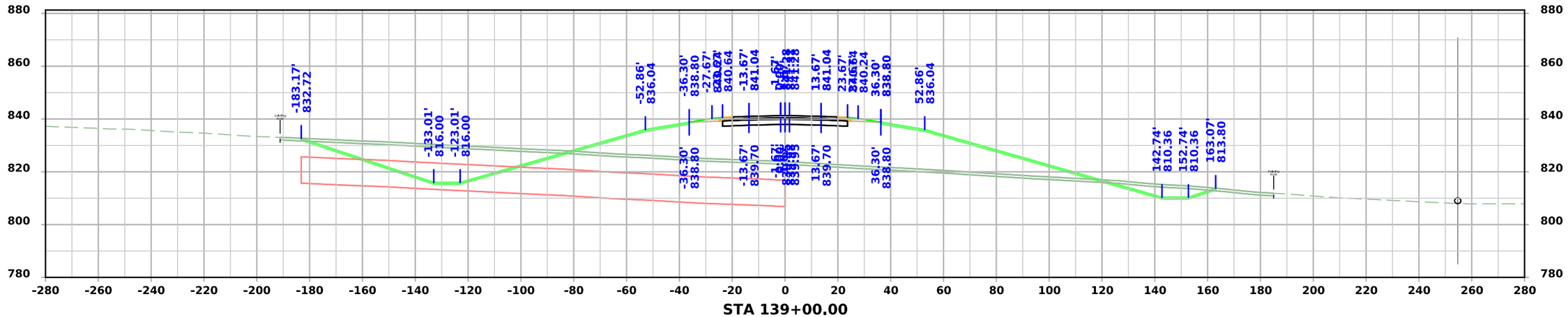
US 63



STA 139+25.00

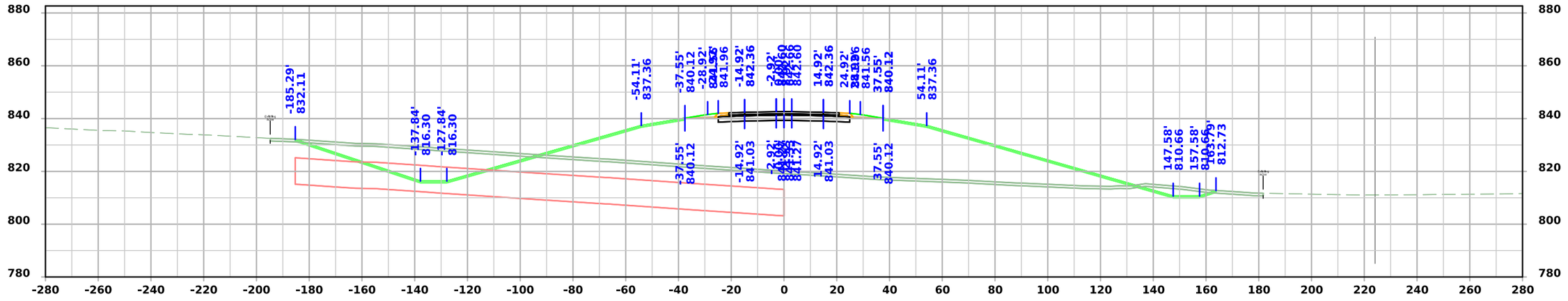


STA 139+00.00

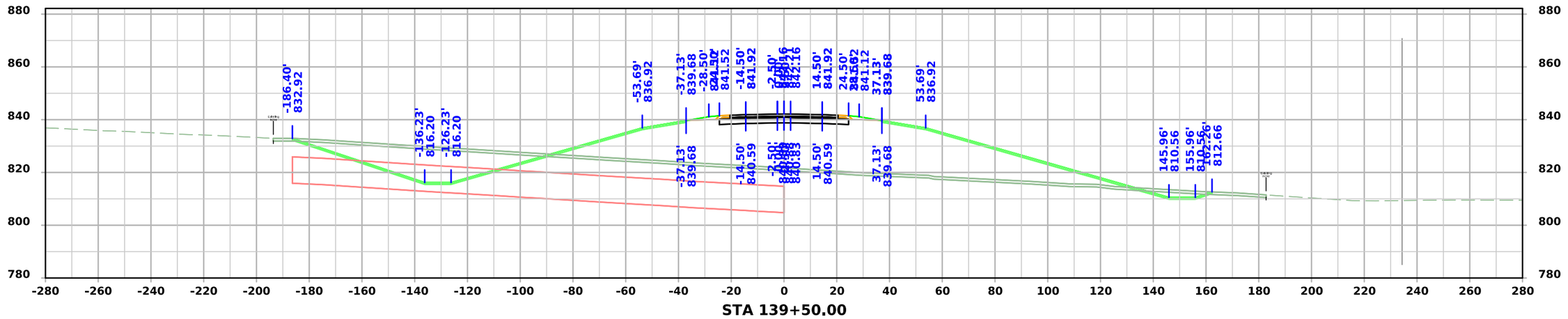
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.8

4:43:07 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 139+75.00

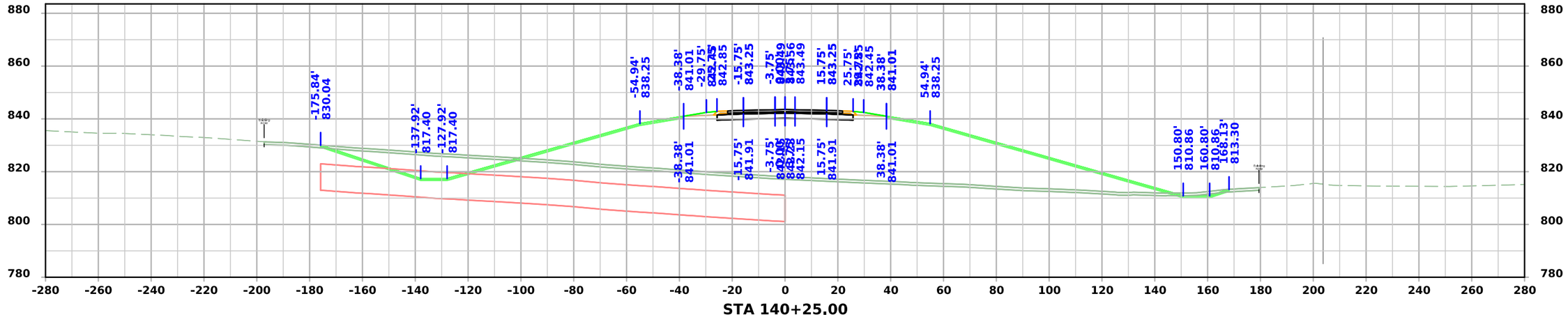


STA 139+50.00

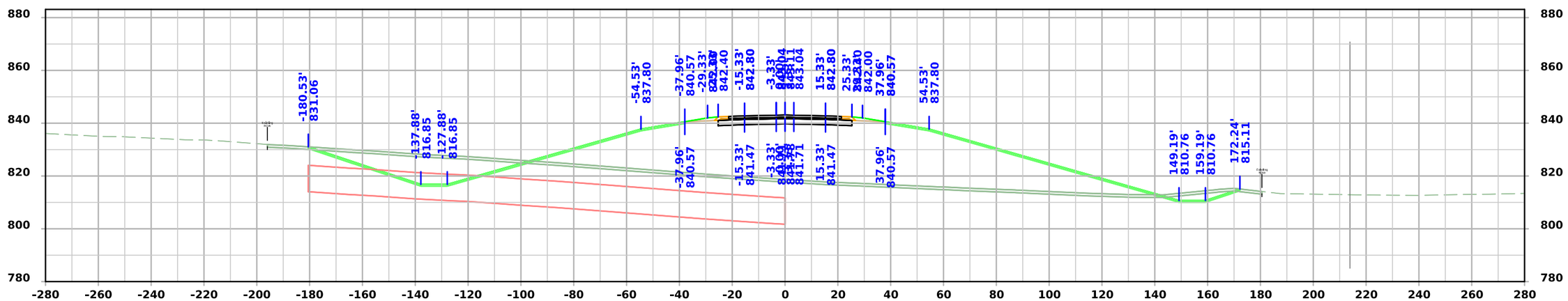
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.9

4:43:09 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 140+25.00

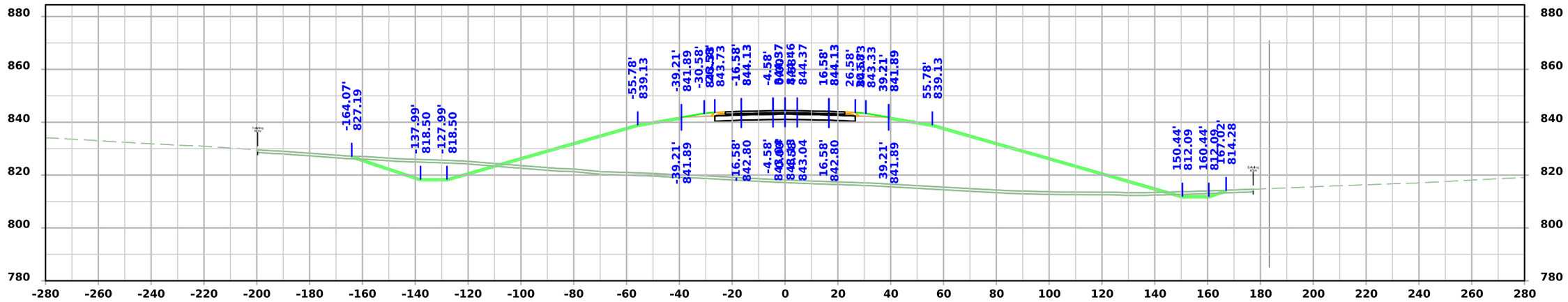


STA 140+00.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.10

4:43:11 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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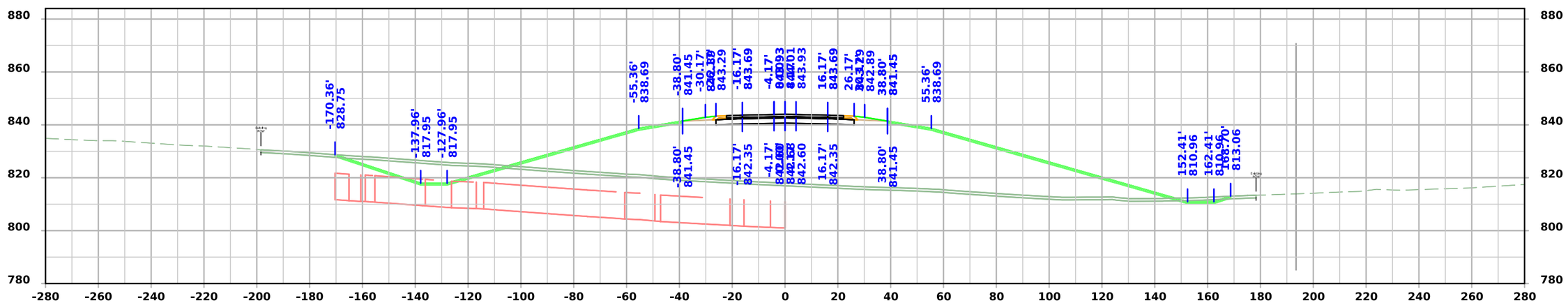
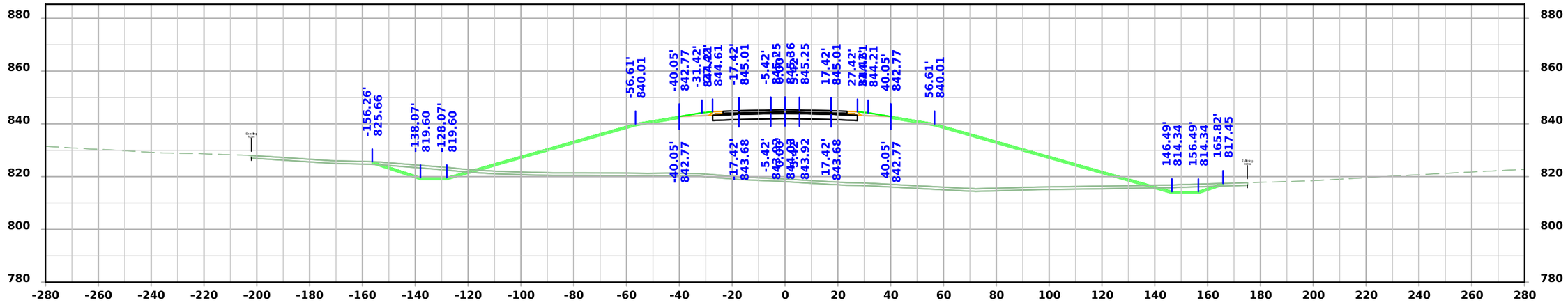


STA 140+50.00

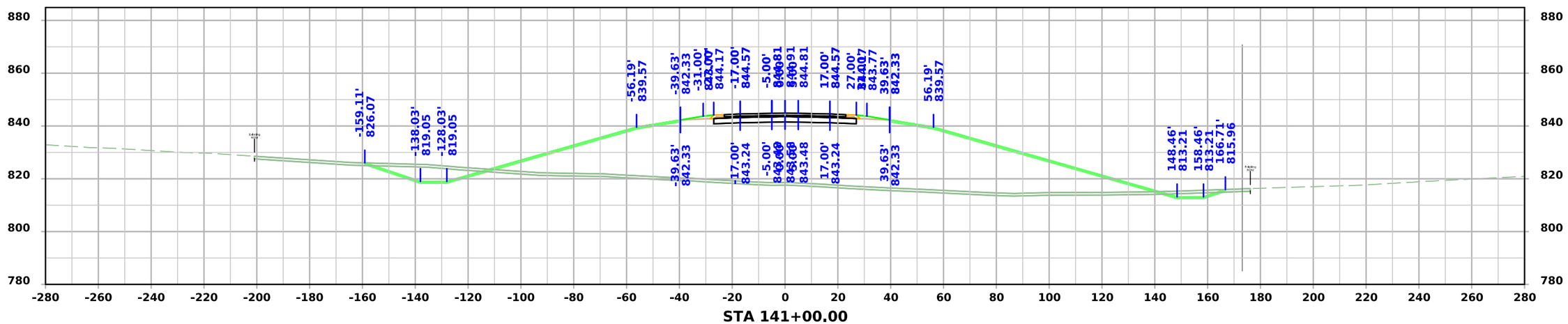
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.11

4:43:13 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 141+25.00

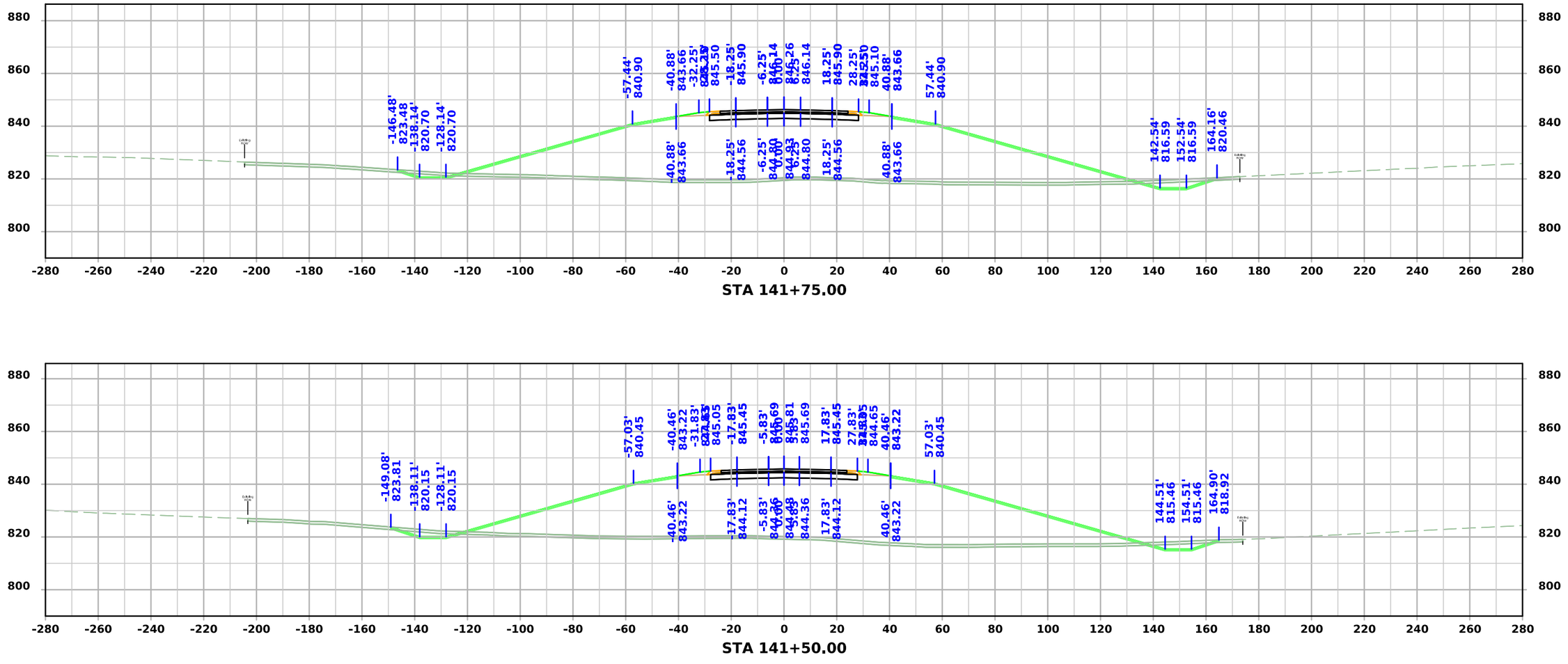


STA 141+00.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.12

4:43:15 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

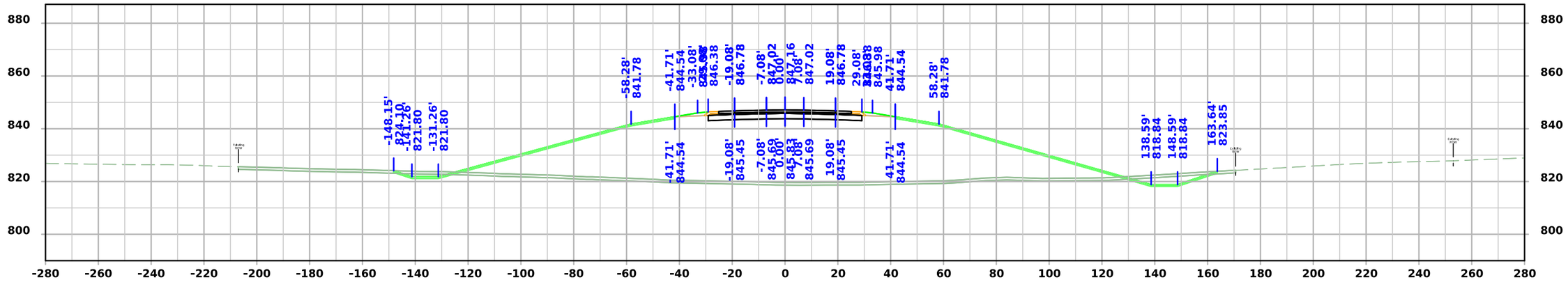
US 63



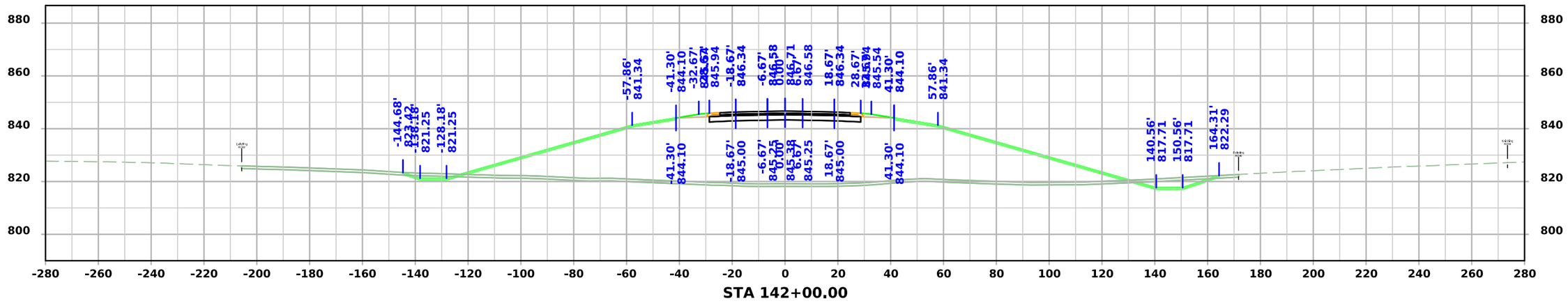
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.13

4:43:16 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 142+25.00

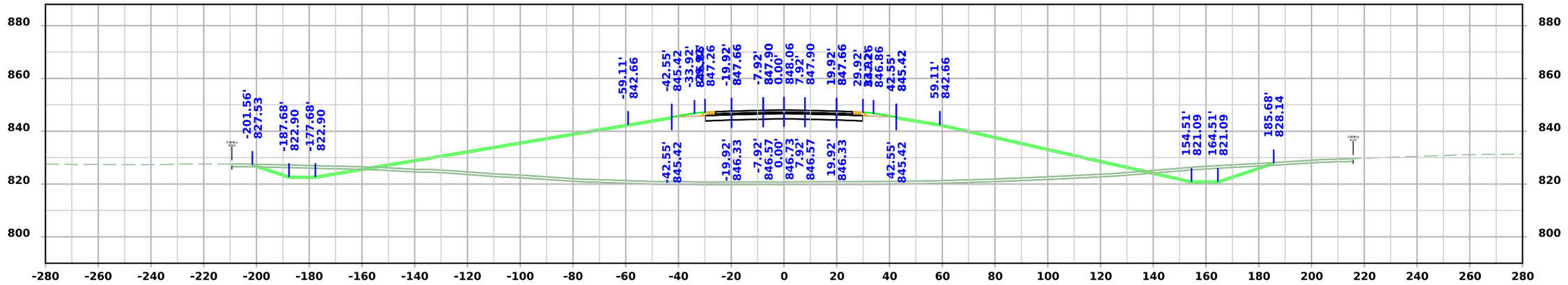


STA 142+00.00

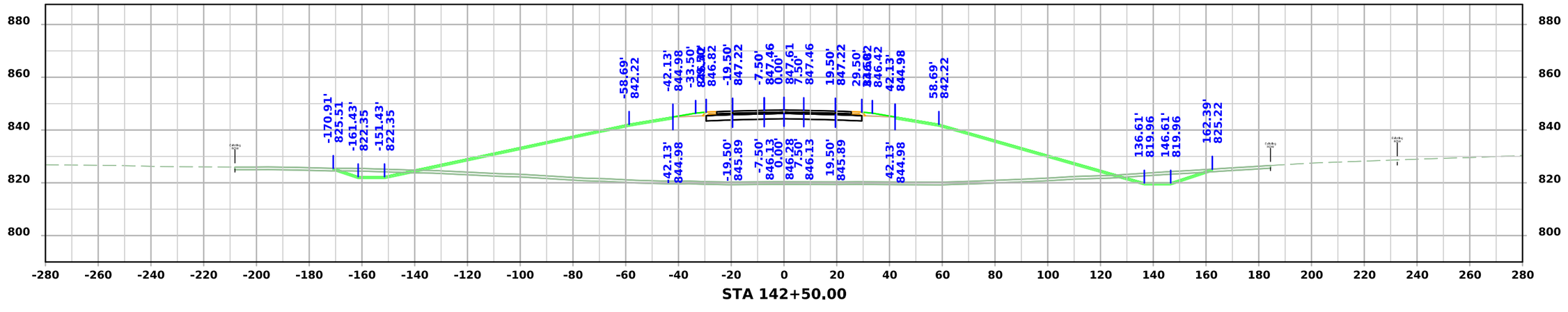
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.14

4:43:18 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 142+75.00

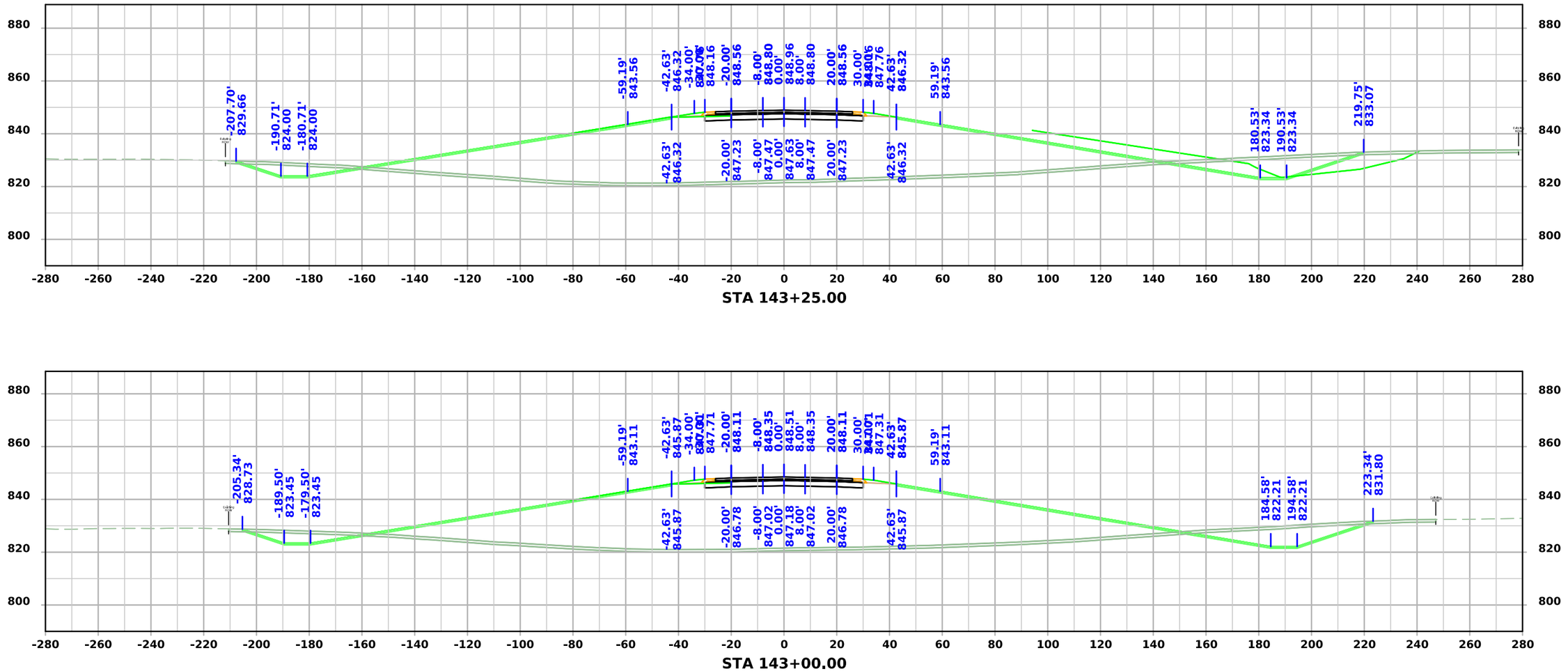


STA 142+50.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.15	

4:43:20 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

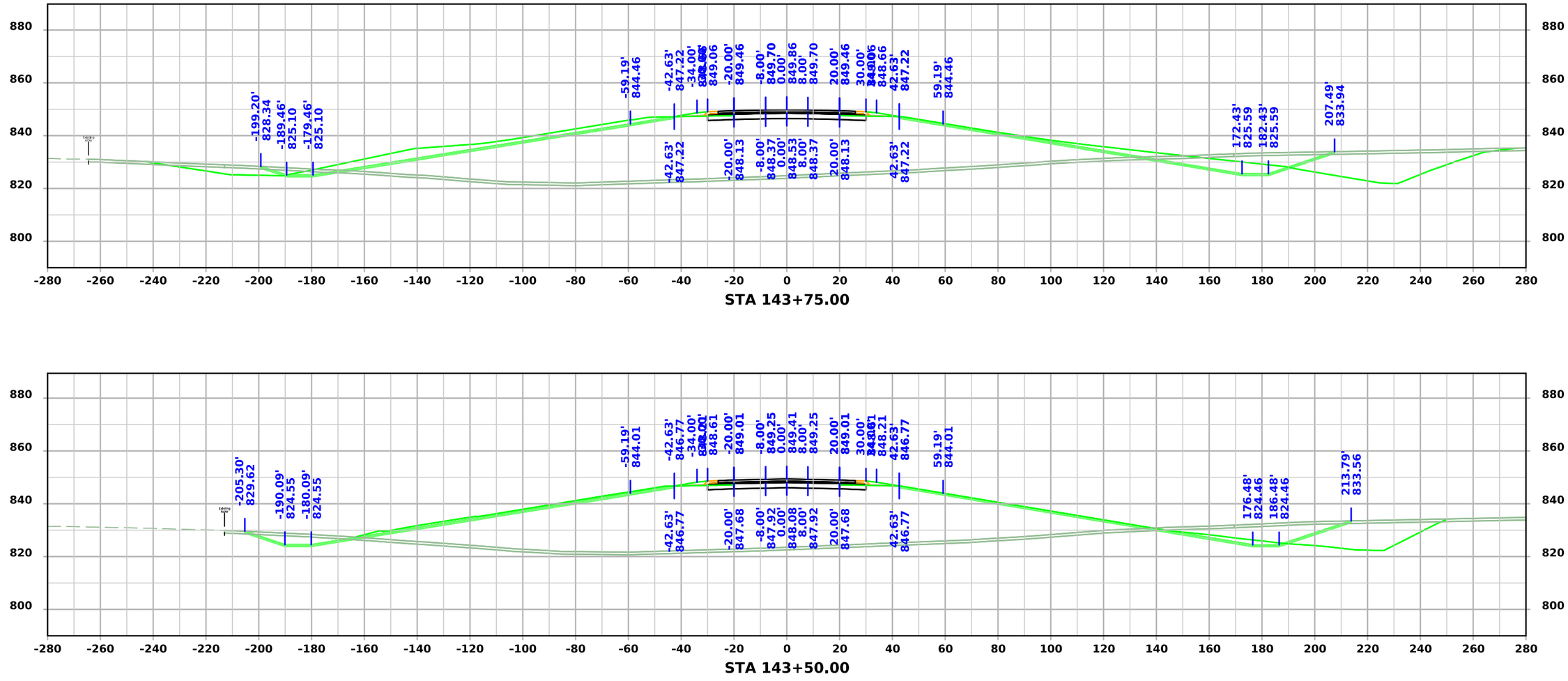
US 63



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.16

4:43:22 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.17

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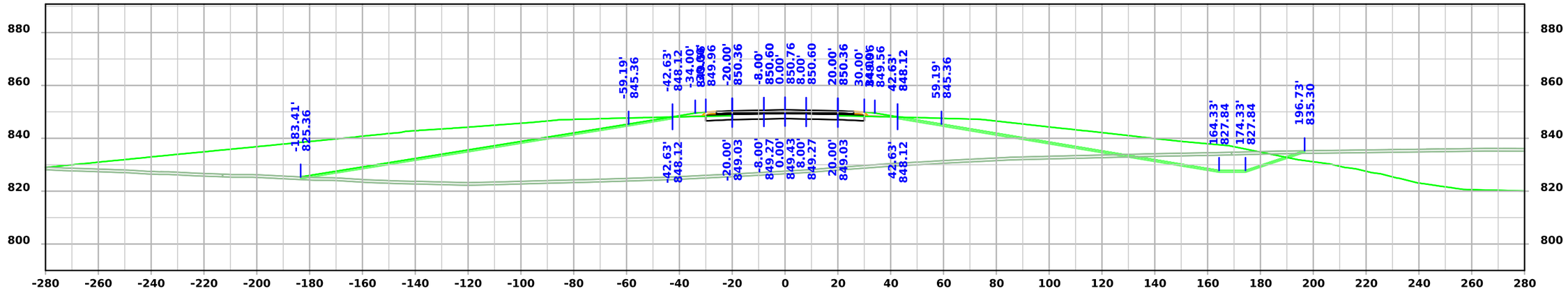
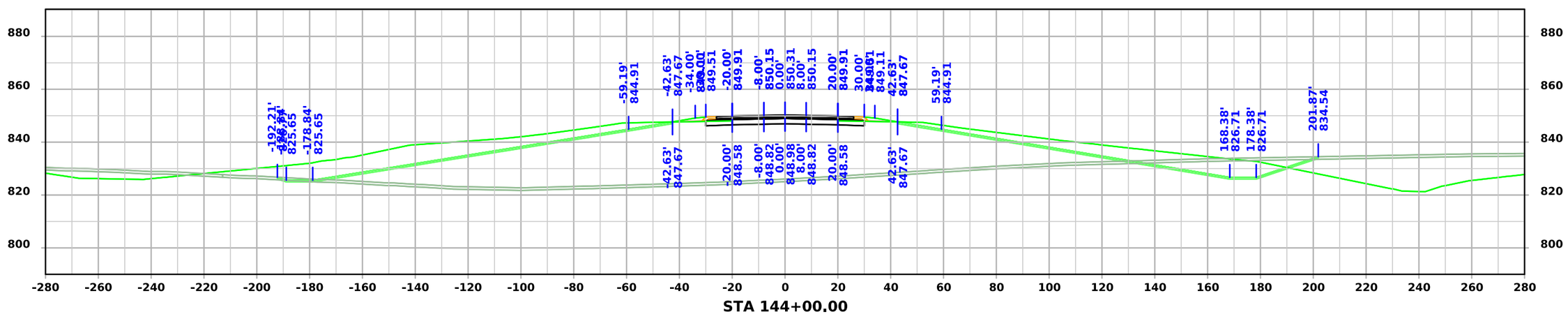
US 63



STA 144+25.00



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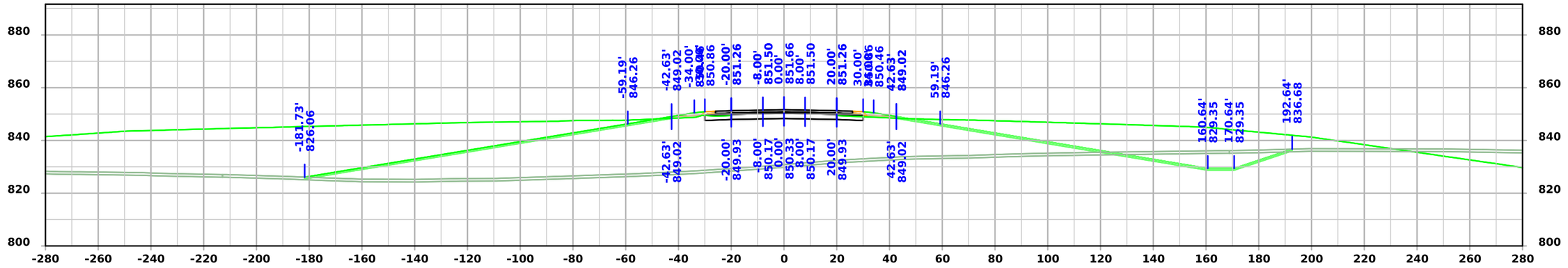
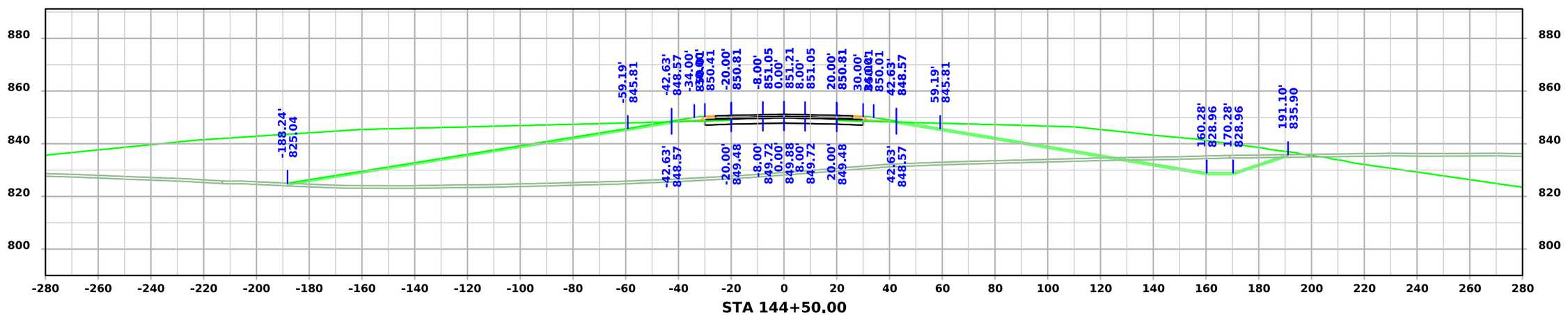
US 63



STA 144+75.00



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FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.19

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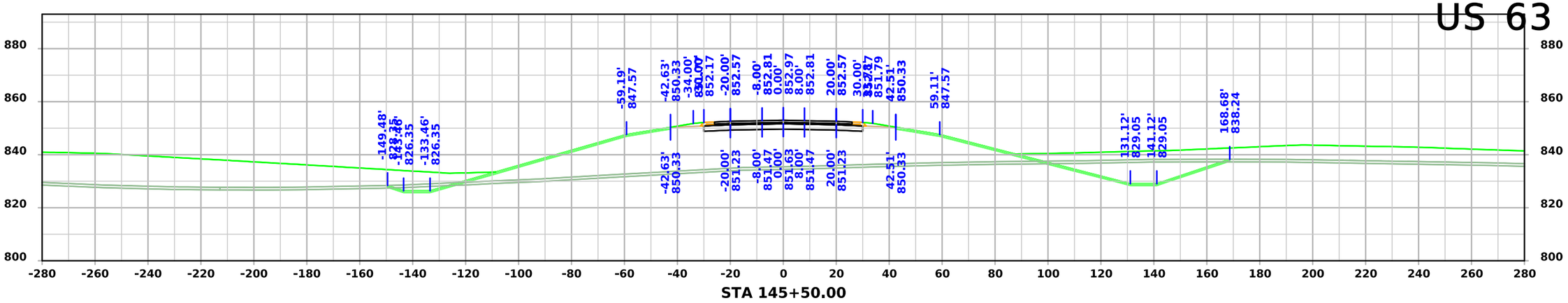
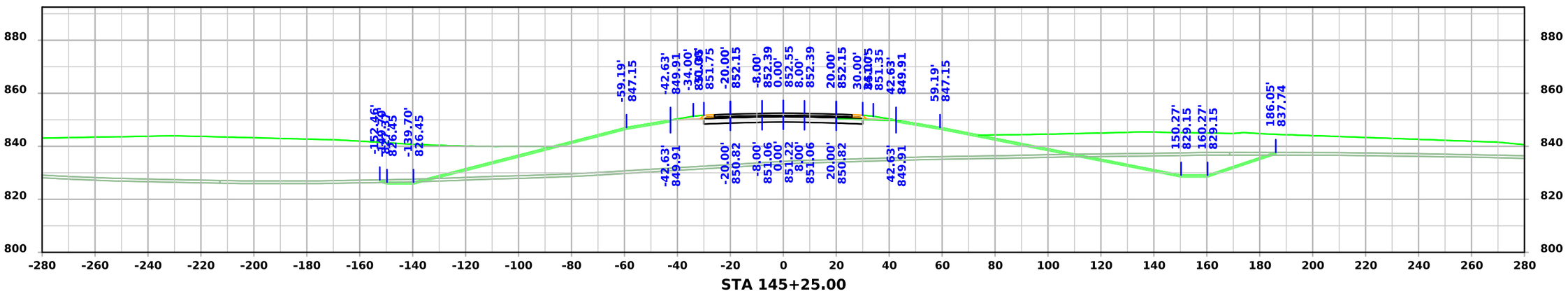
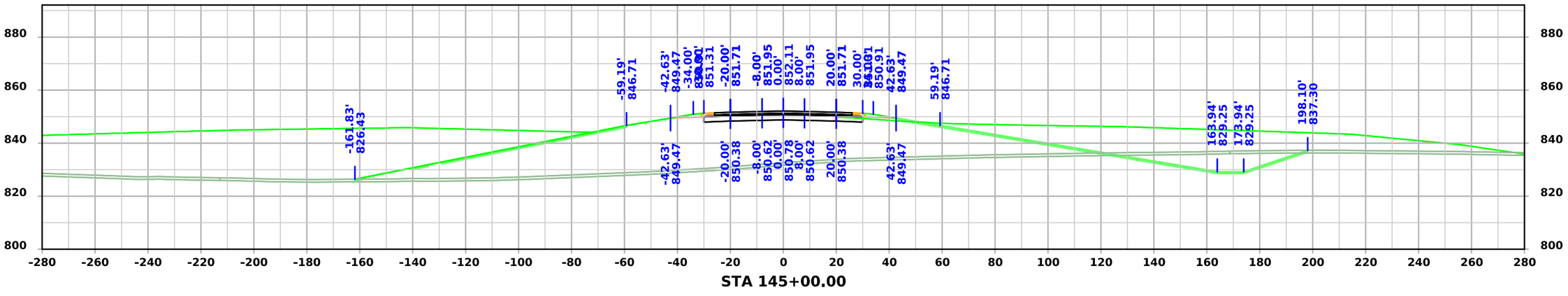
US 63







FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.20

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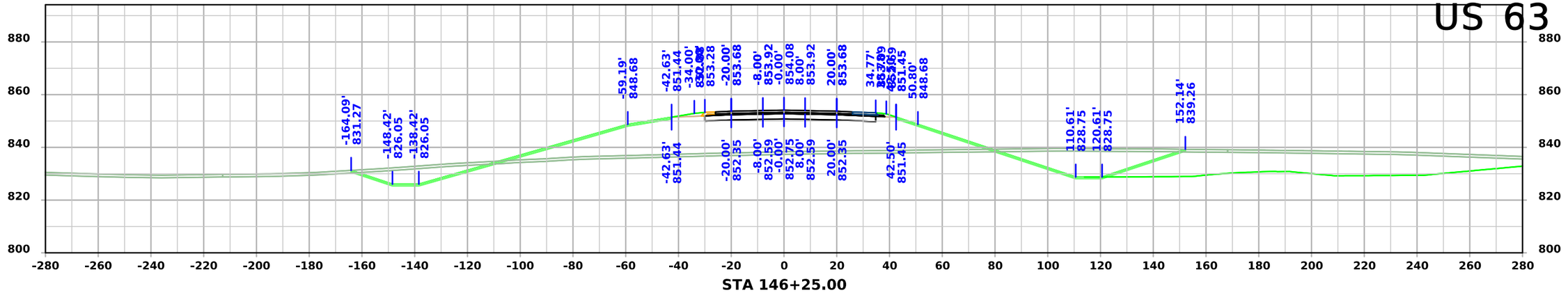
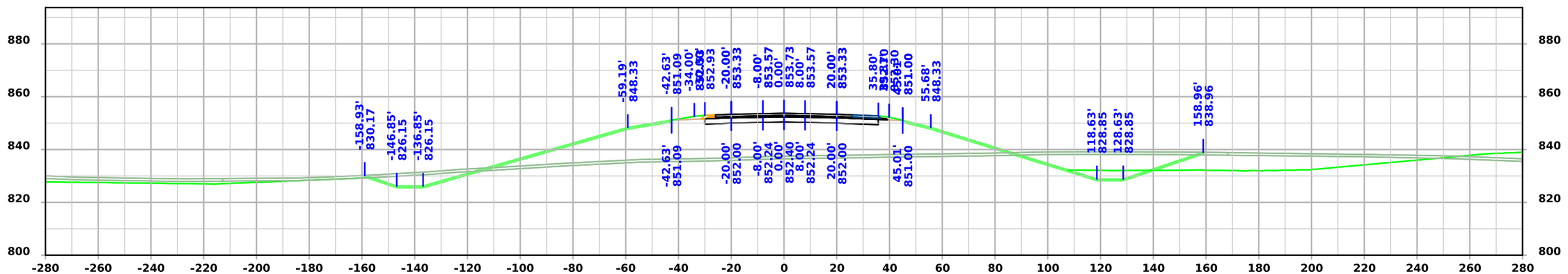
US 63



STA 146+25.00



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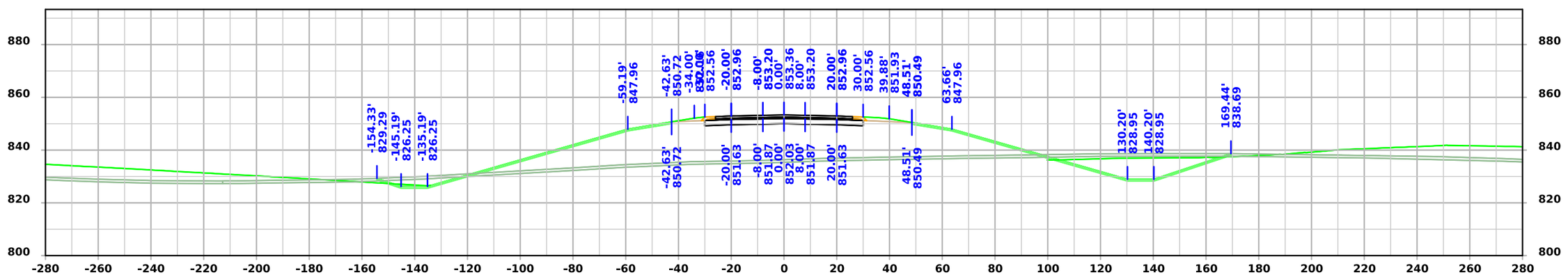

STA 145+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.21

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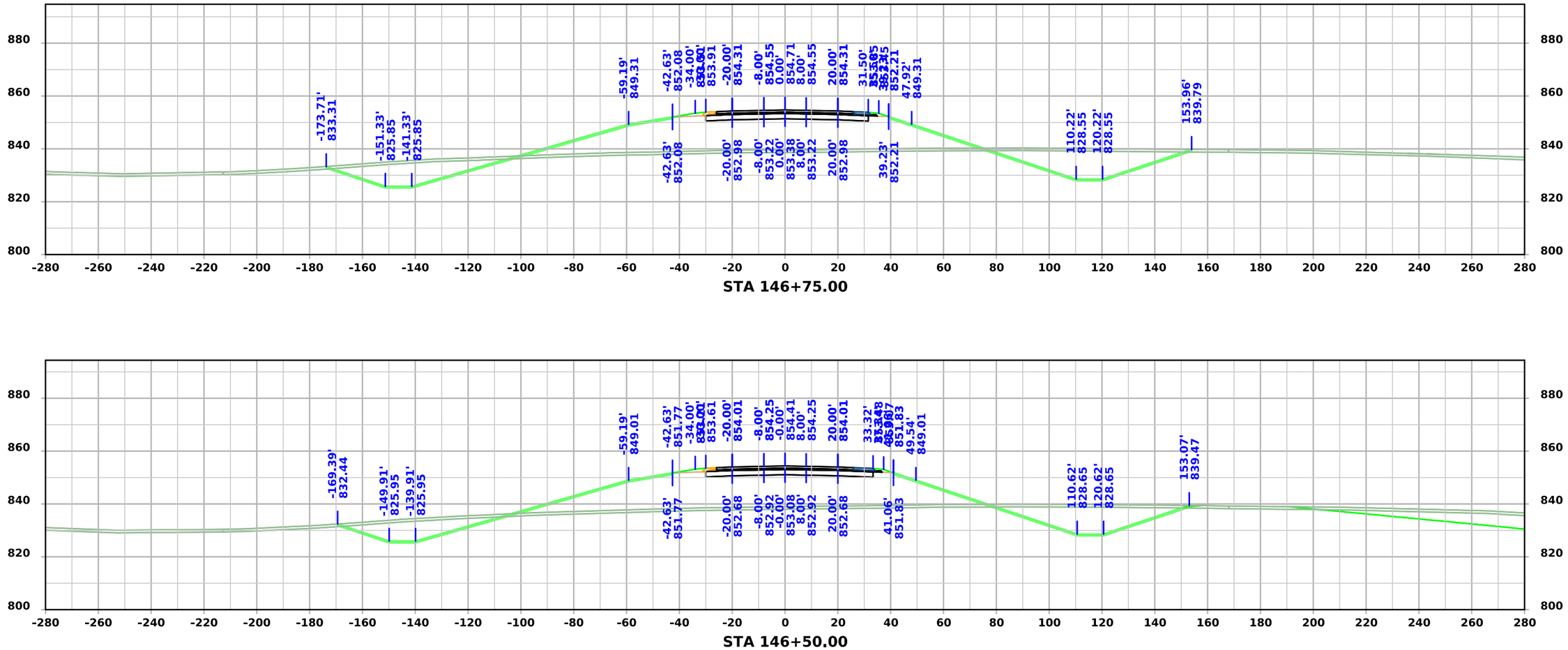
US 63



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.22	

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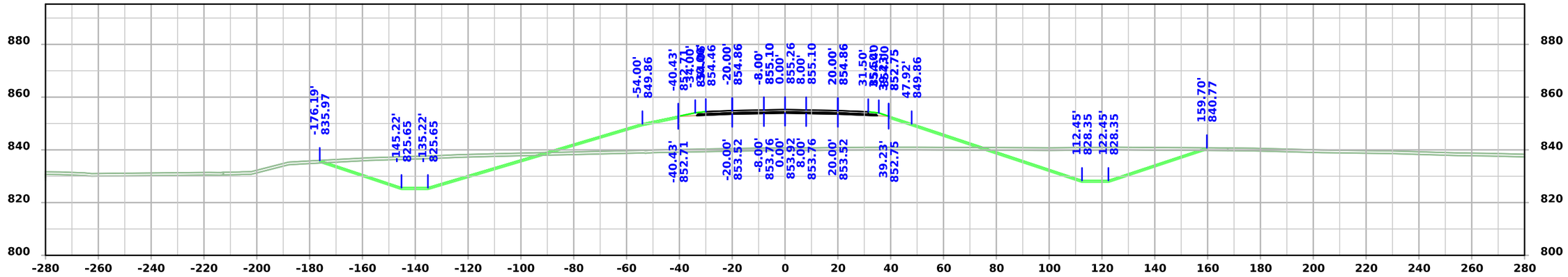
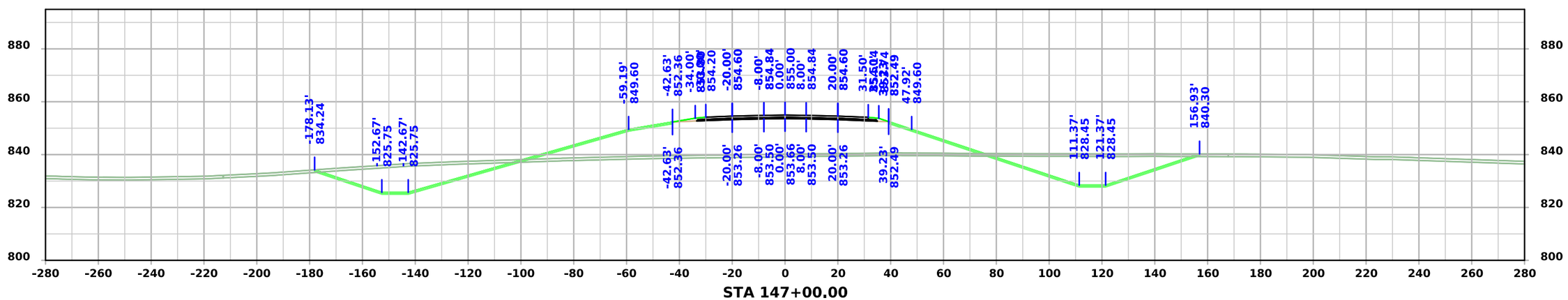
US 63



STA 147+25.00

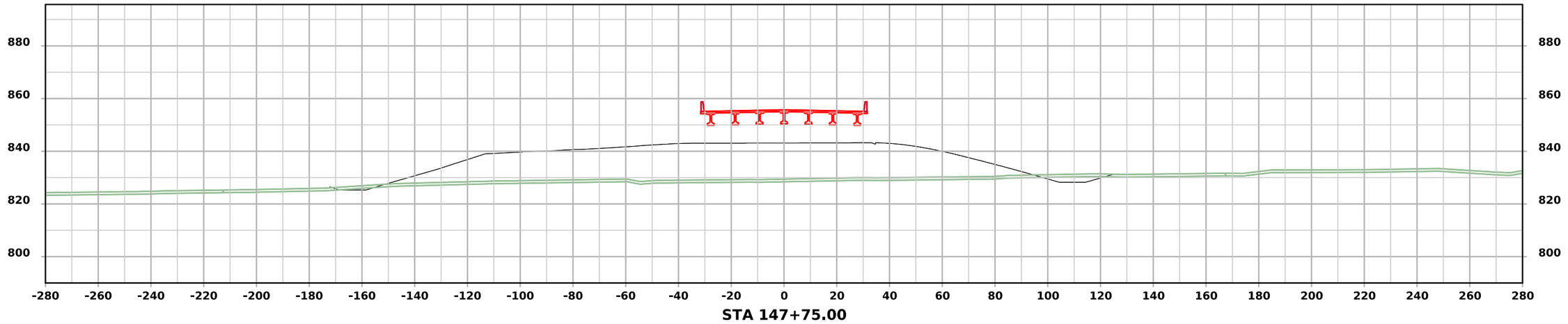


STA 147+00.00

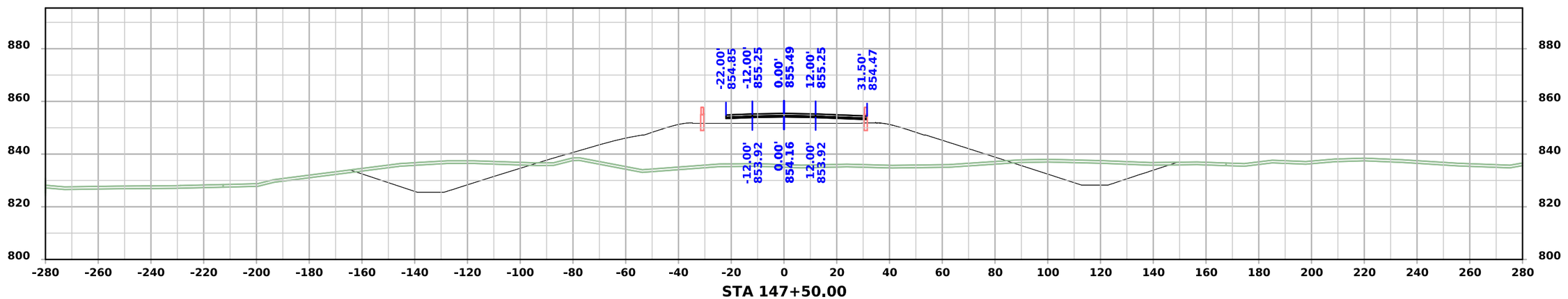
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.23

6:38:32 PM 1/27/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 147+75.00

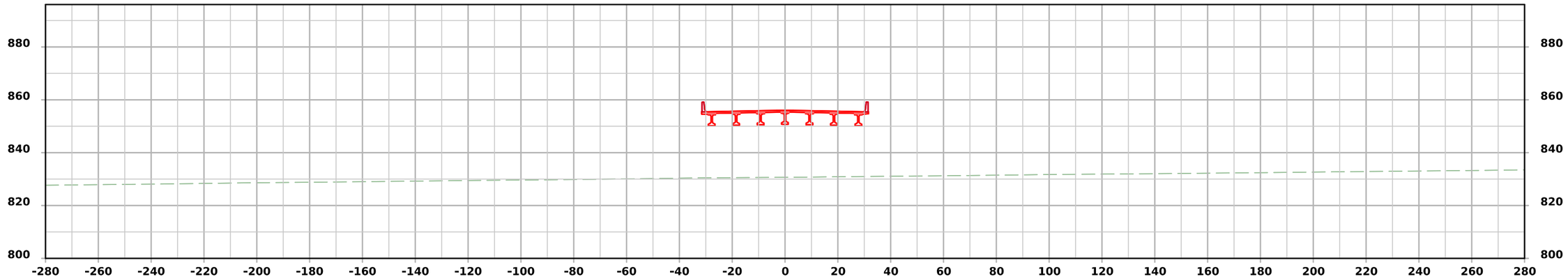


STA 147+50.00

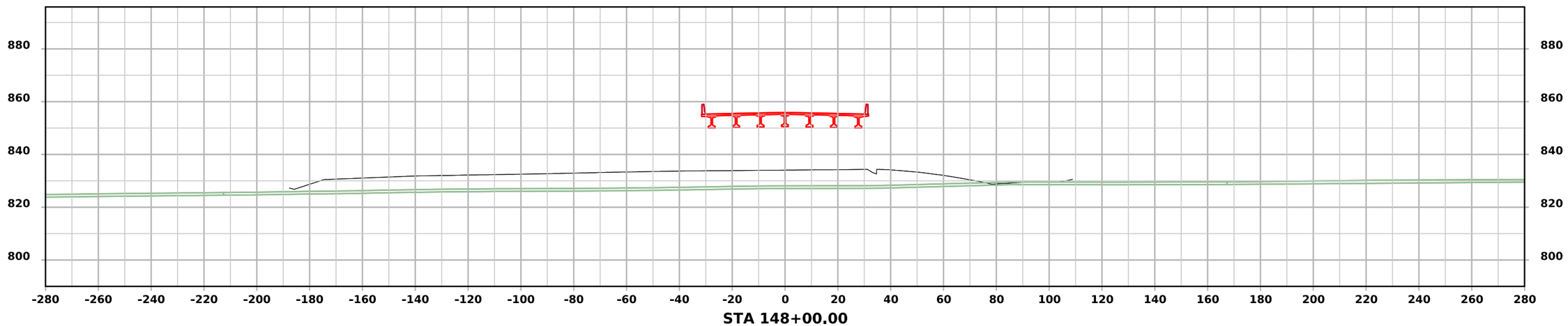
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.24

6:38:34 PM 1/27/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 148+25.00

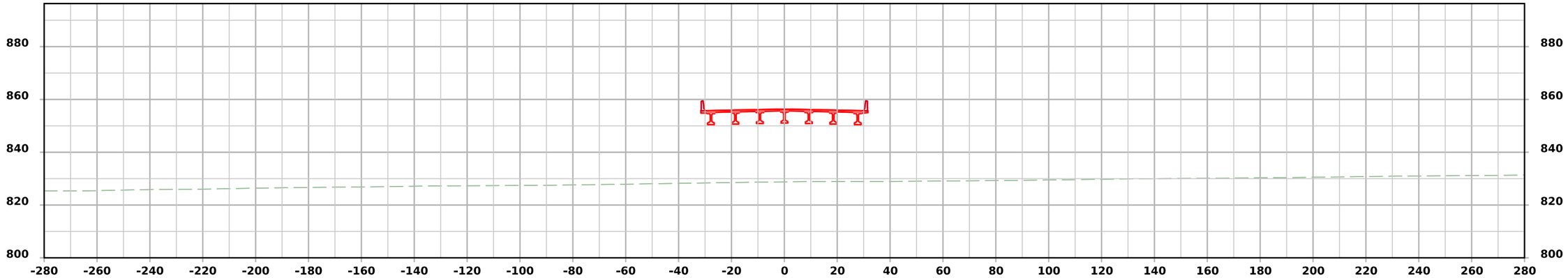


STA 148+00.00

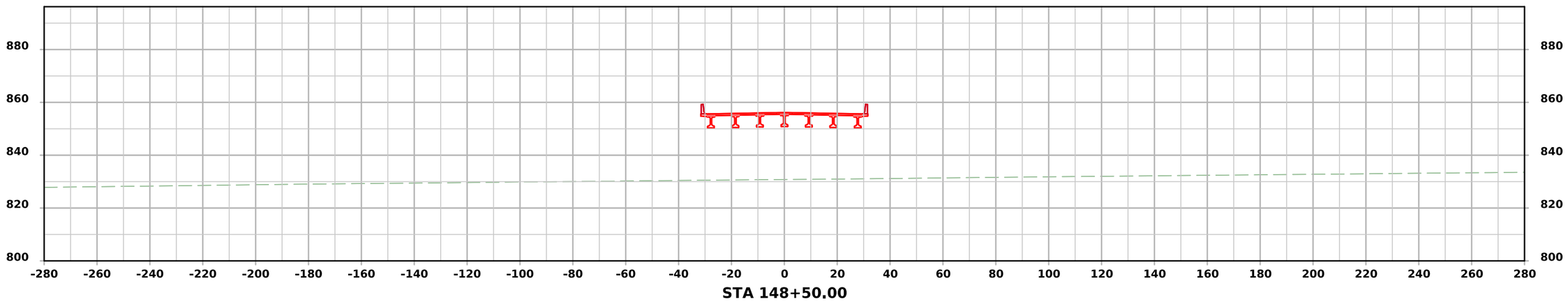
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.25

6:38:36 PM 1/27/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 148+75.00

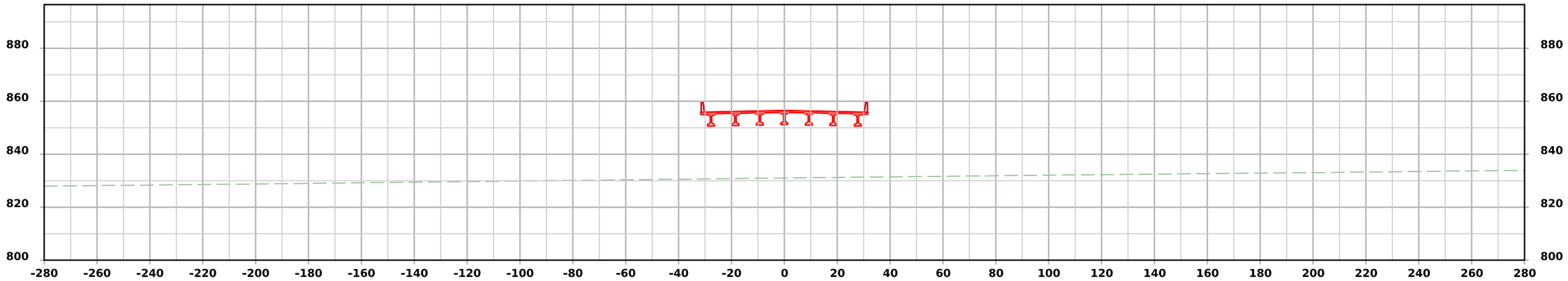


STA 148+50.00

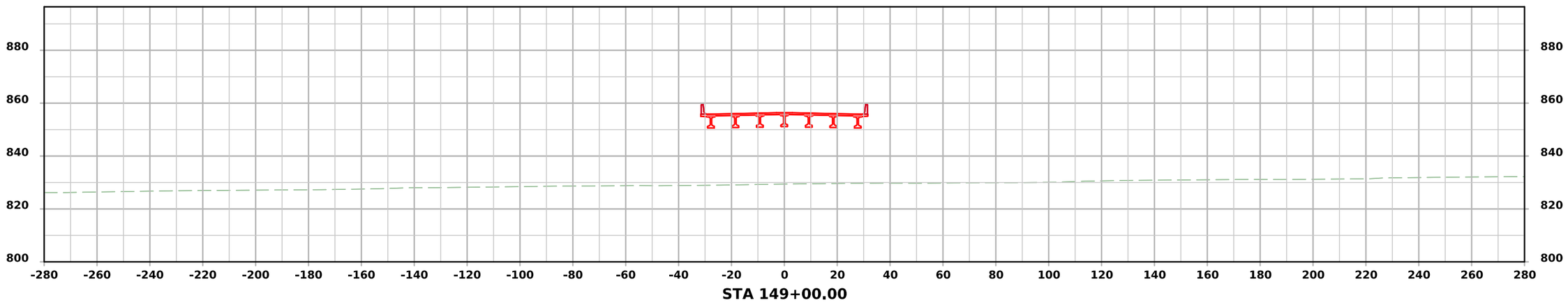
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.26

6:38:38 PM 1/27/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 149+25.00

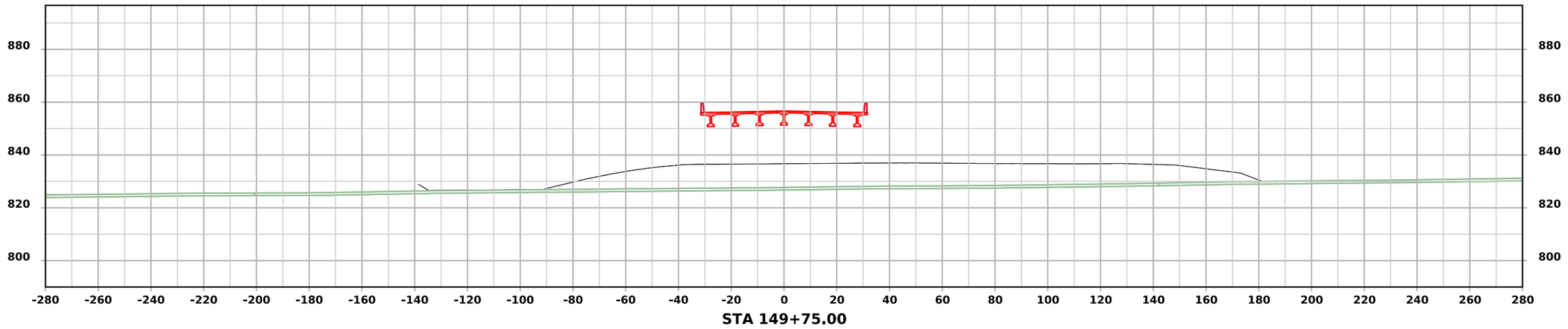


STA 149+00.00

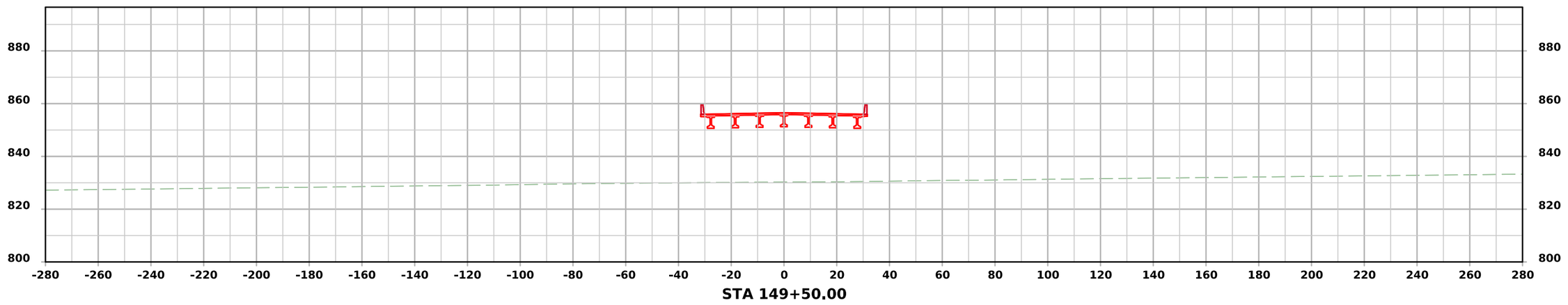
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.27

6:38:40 PM 1/27/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 149+75.00

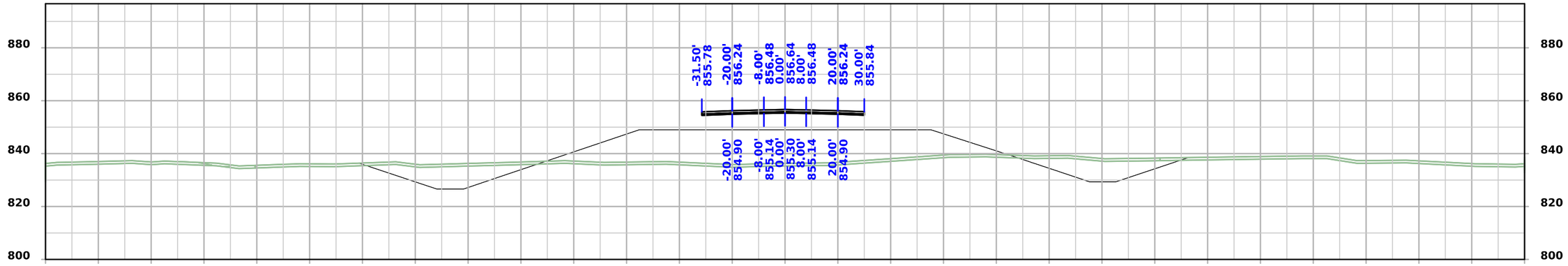


STA 149+50.00

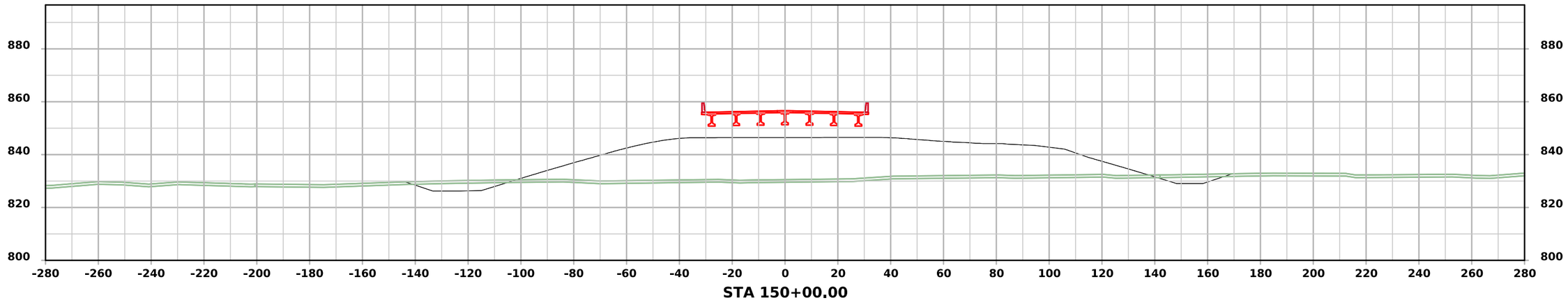
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.28

6:38:43 PM 1/27/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 150+25.00

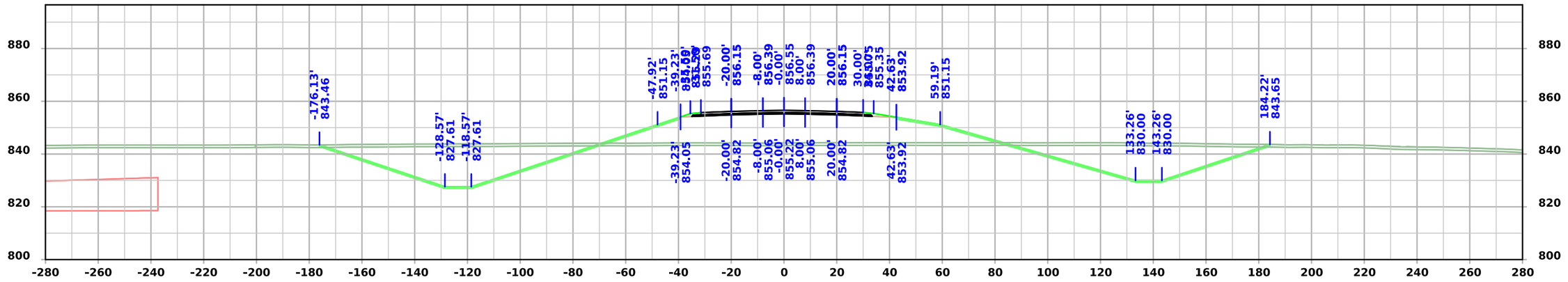


STA 150+00.00

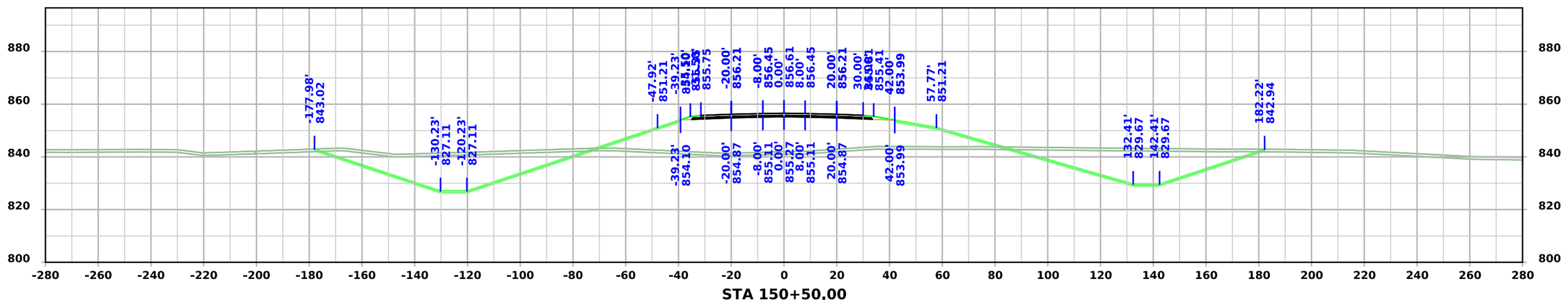
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.29

6:38:45 PM 1/27/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 150+75.00

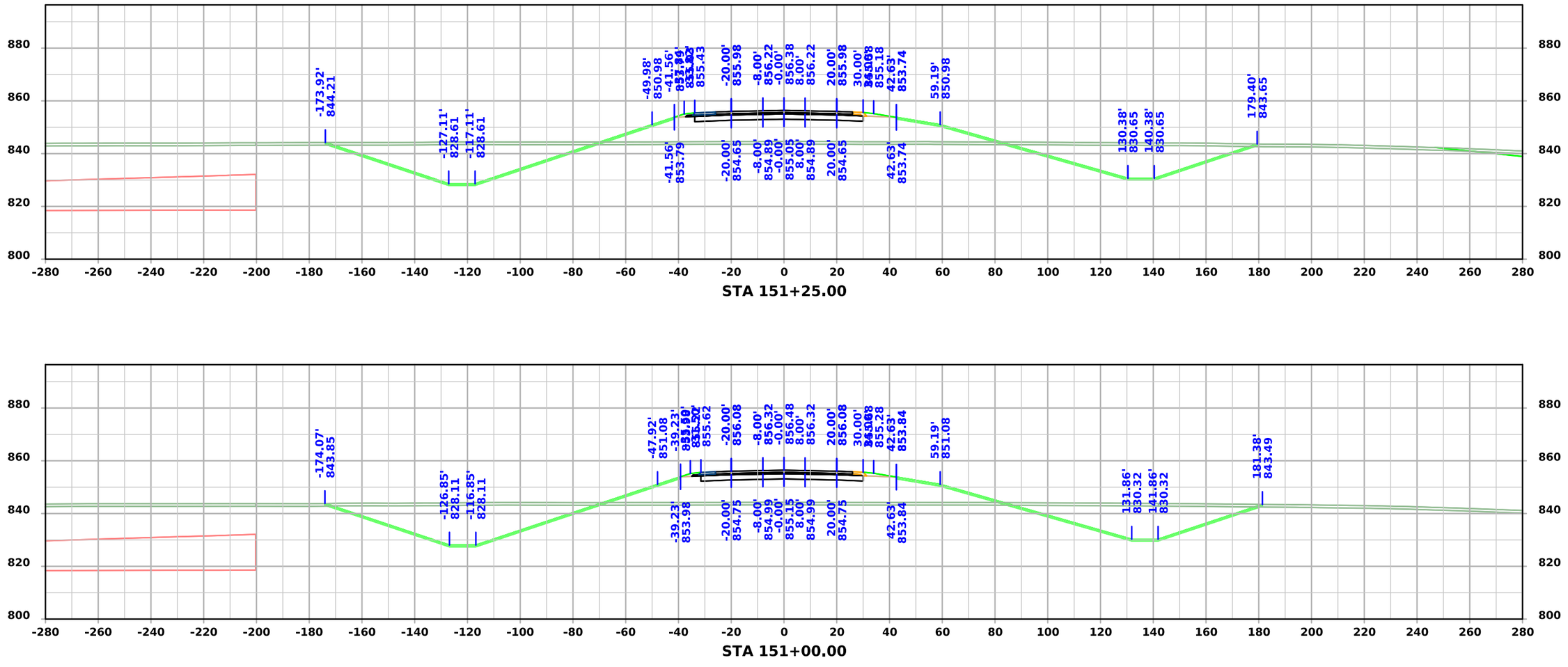


STA 150+50.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.30

6:38:48 PM 1/27/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

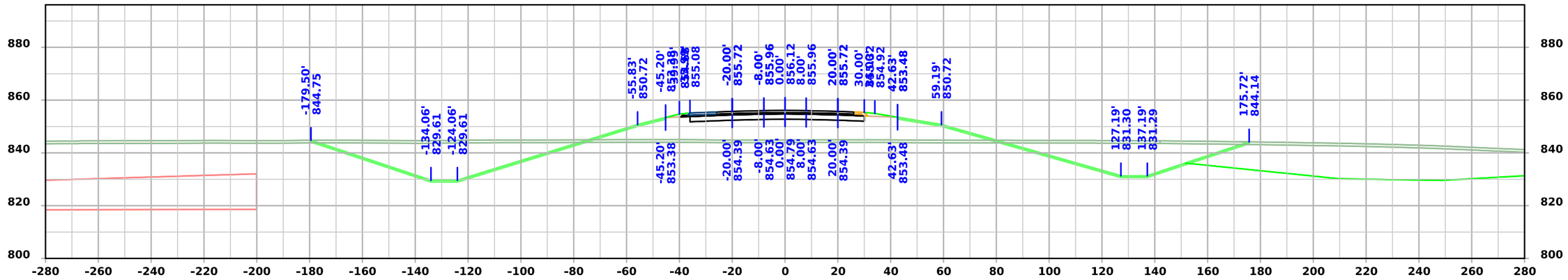
US 63



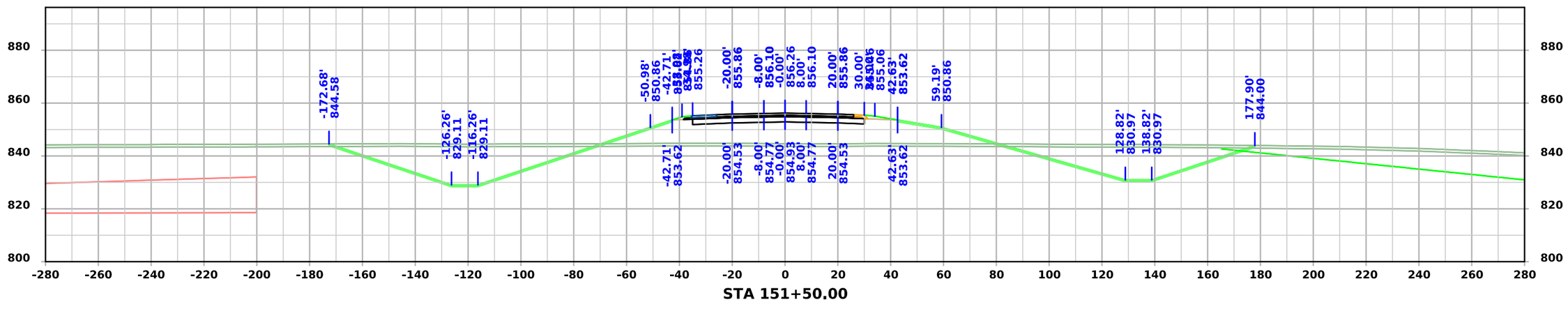
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.31

6:38:51 PM 1/27/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 151+75.00

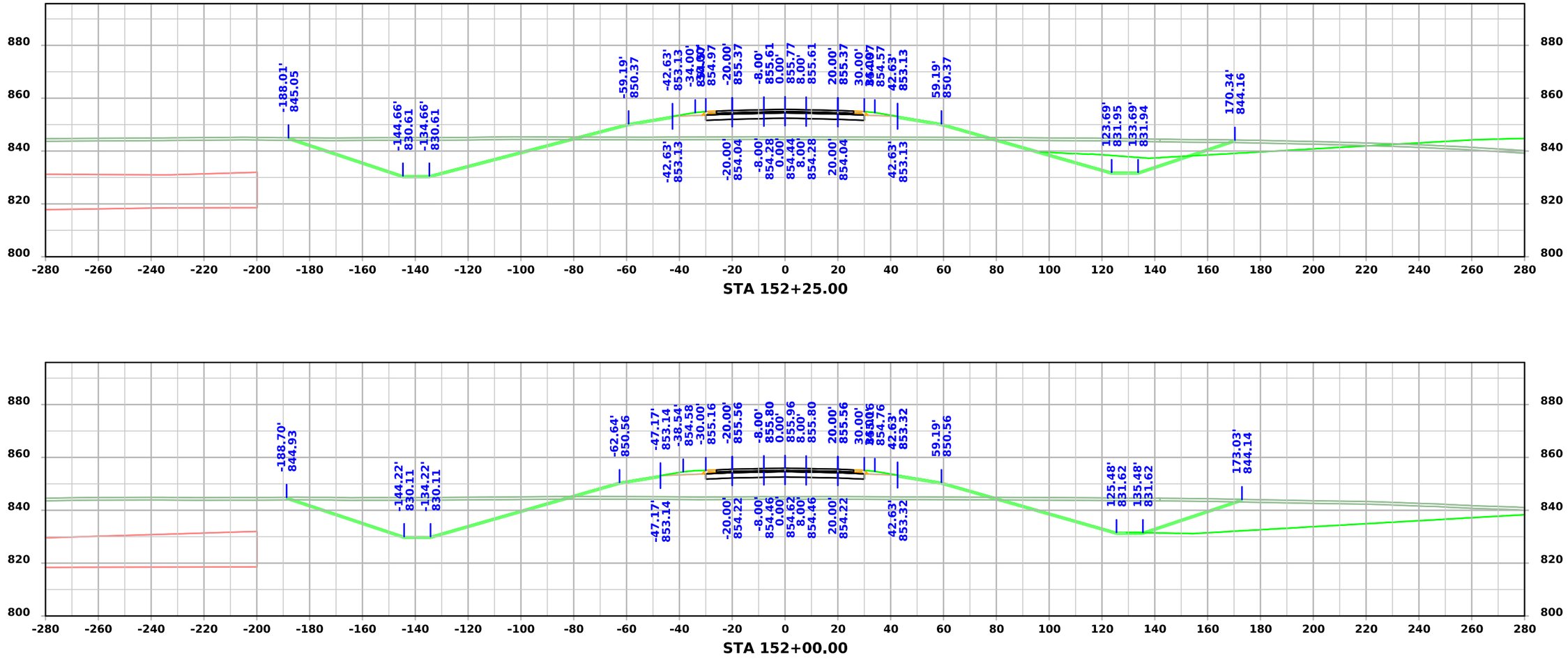


STA 151+50.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.32

6:38:54 PM 1/27/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



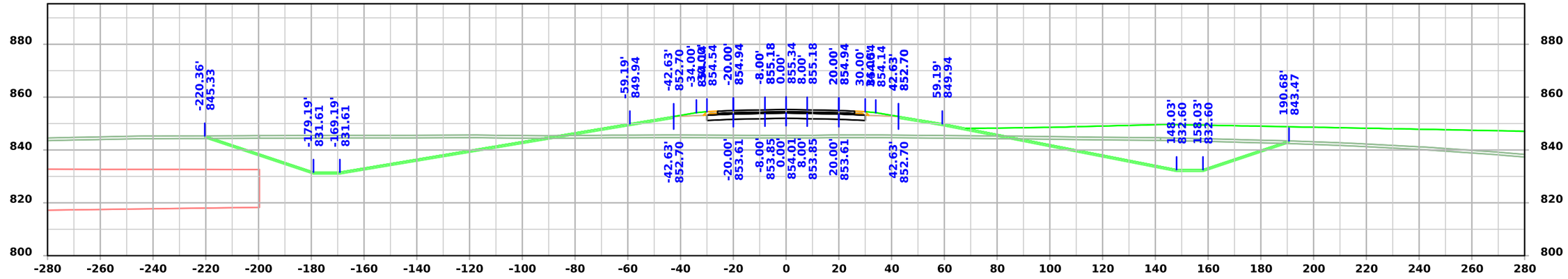
STA 152+25.00

STA 152+00.00

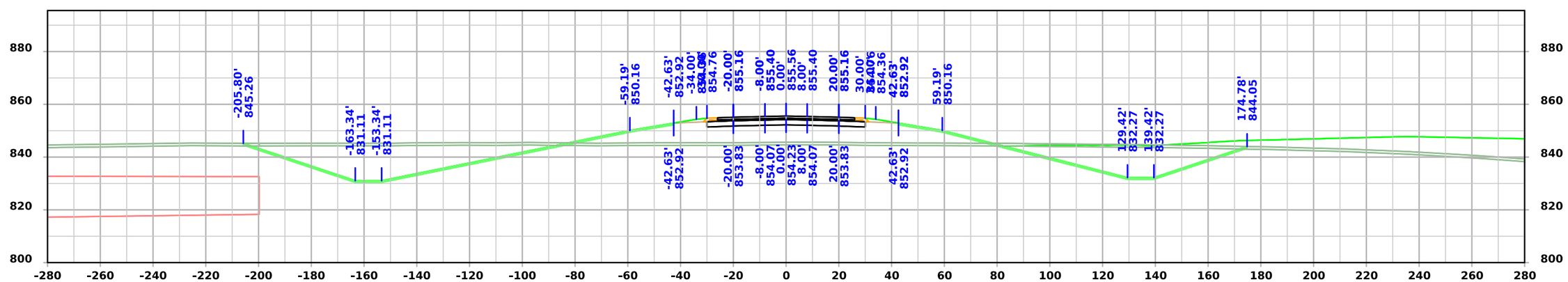
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.33

6:38:57 PM 1/27/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 152+75.00

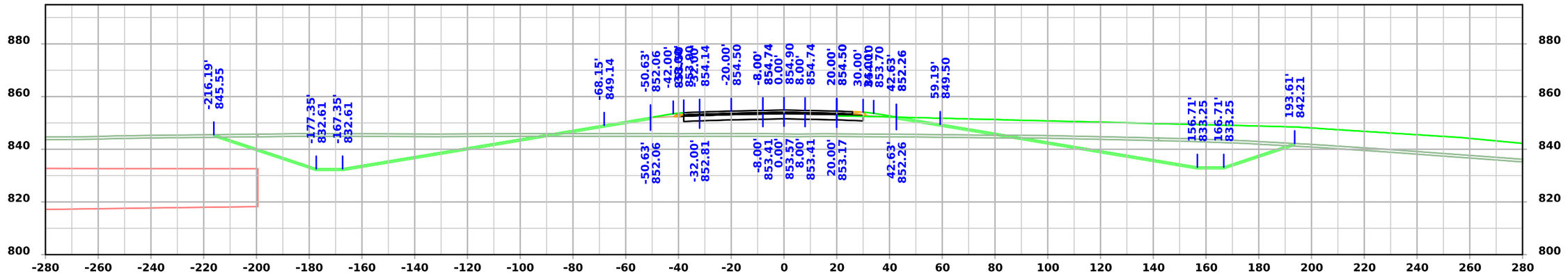


STA 152+50.00

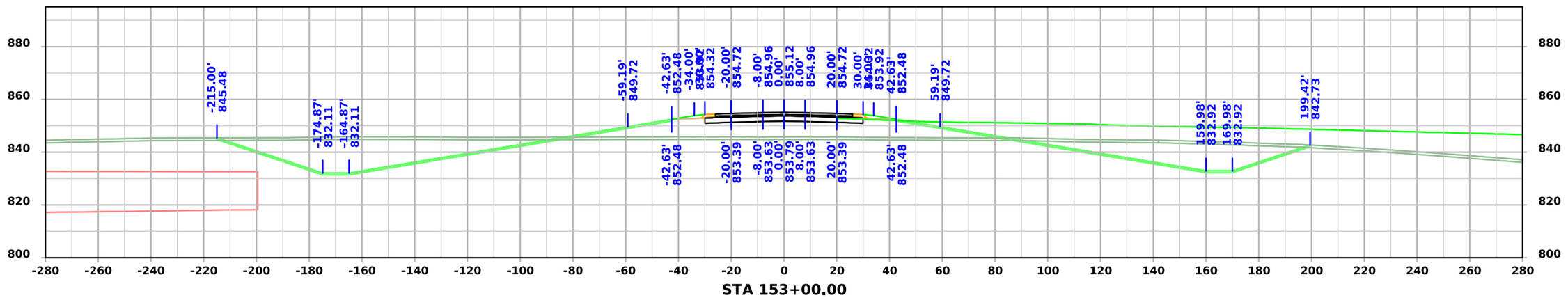
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.34

4:44:03 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 153+25.00

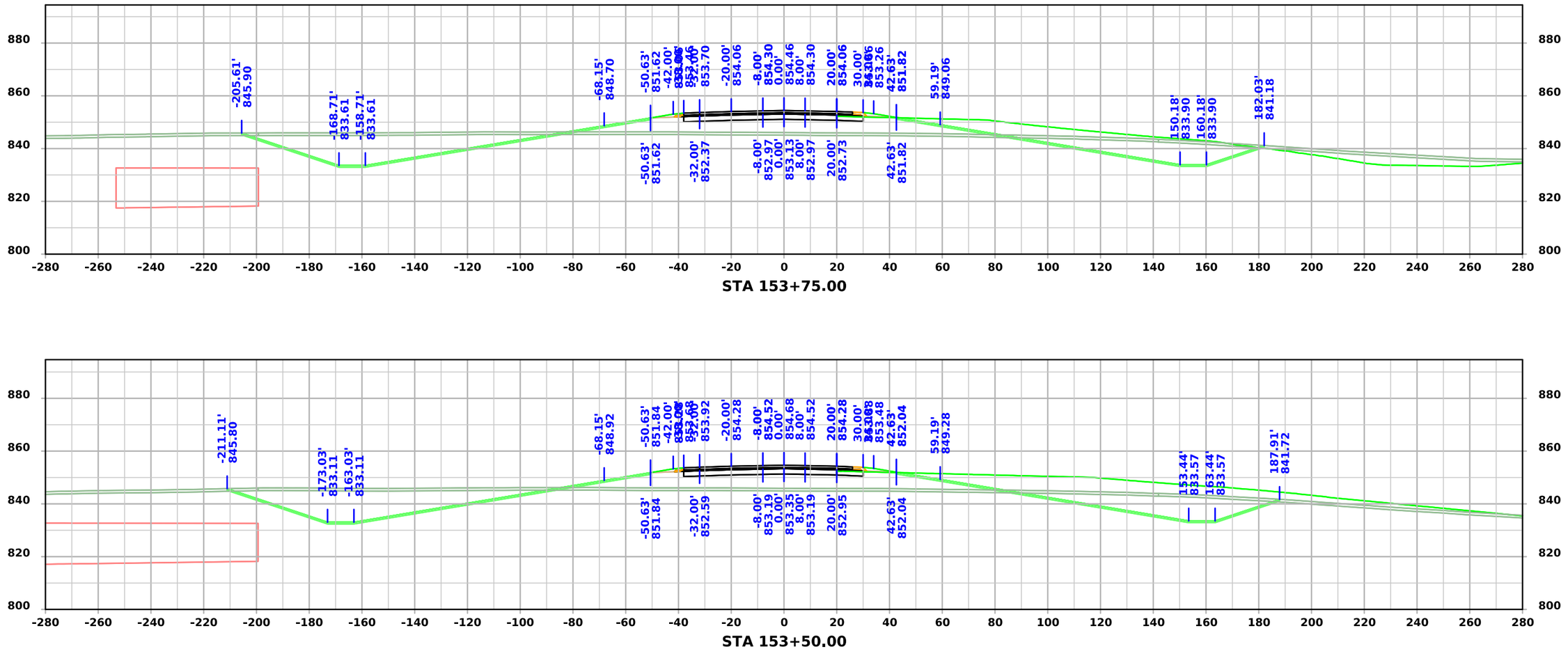


STA 153+00.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.35

4:44:06 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

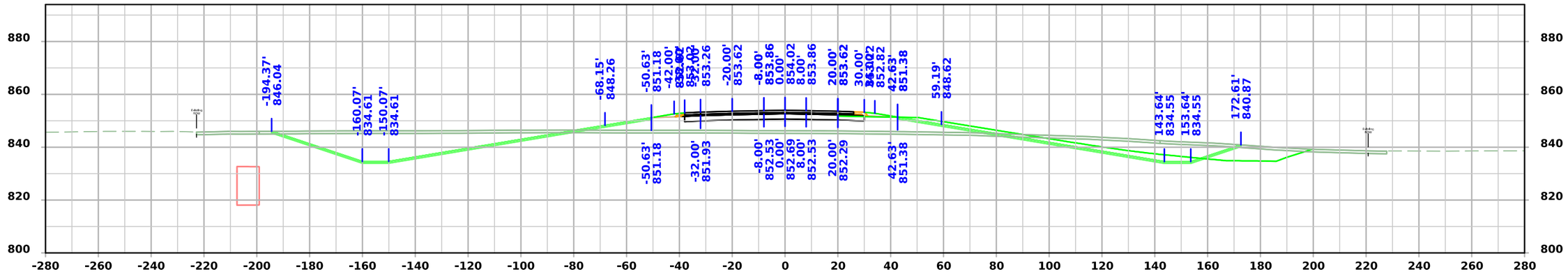
US 63



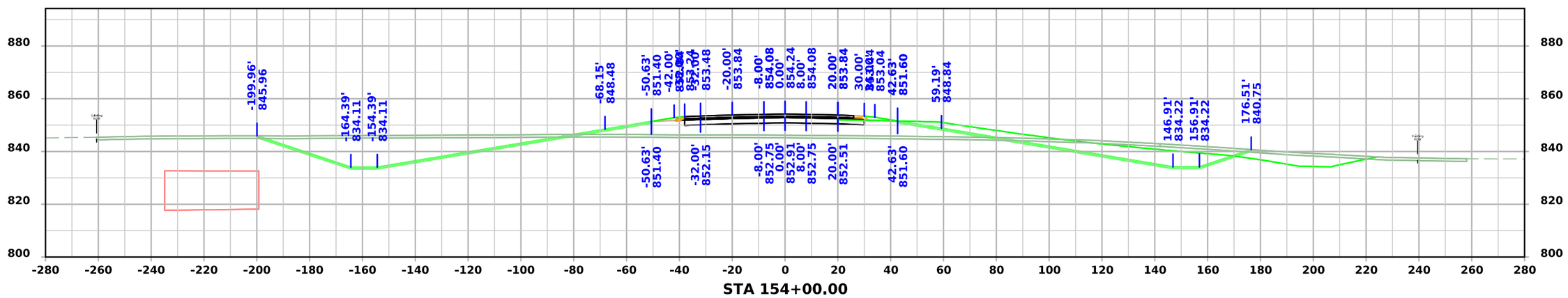
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.36	

4:44:09 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 154+25.00

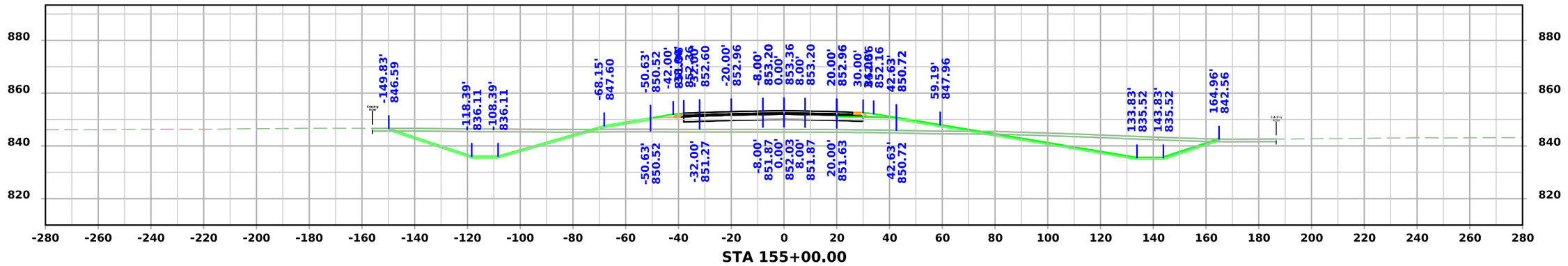


STA 154+00.00

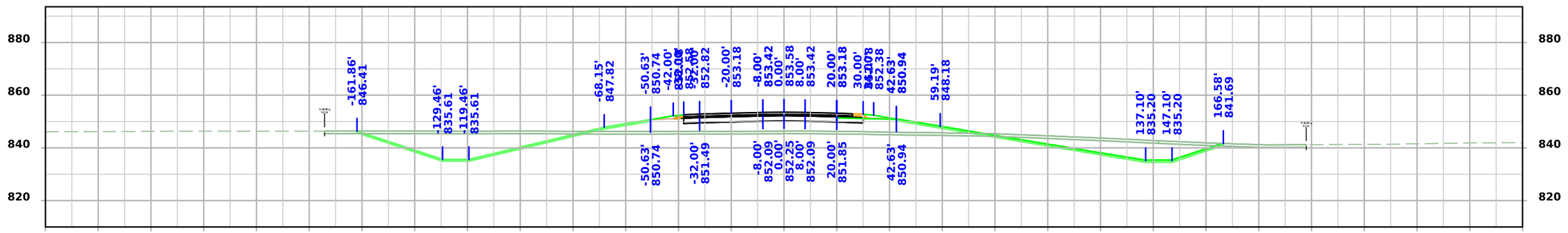
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.37

4:44:12 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

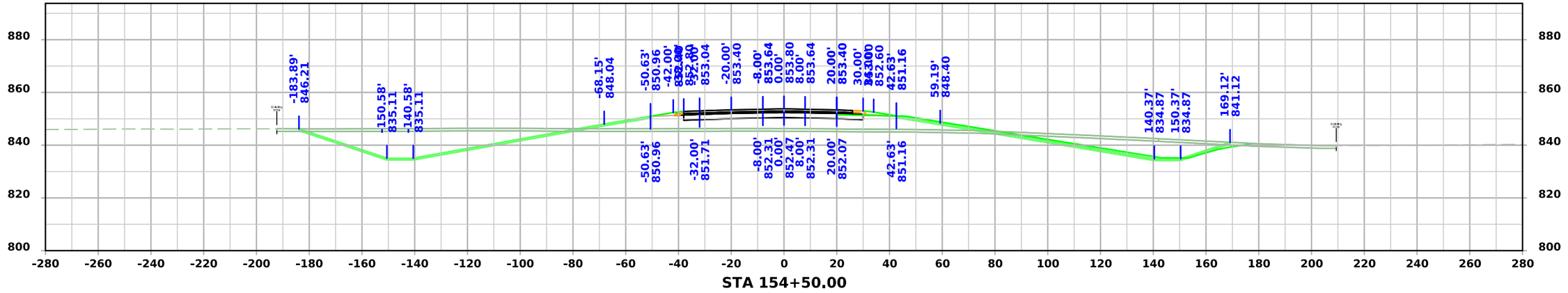
US 63



STA 155+00.00



STA 154+75.00

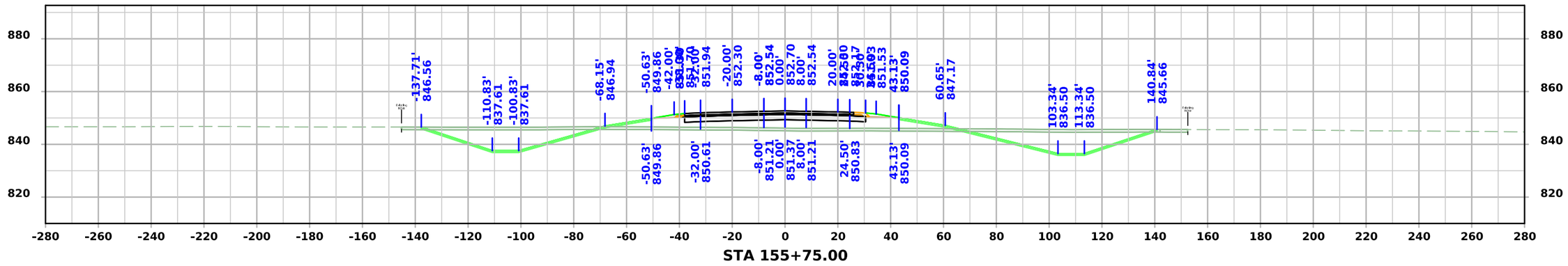


STA 154+50.00

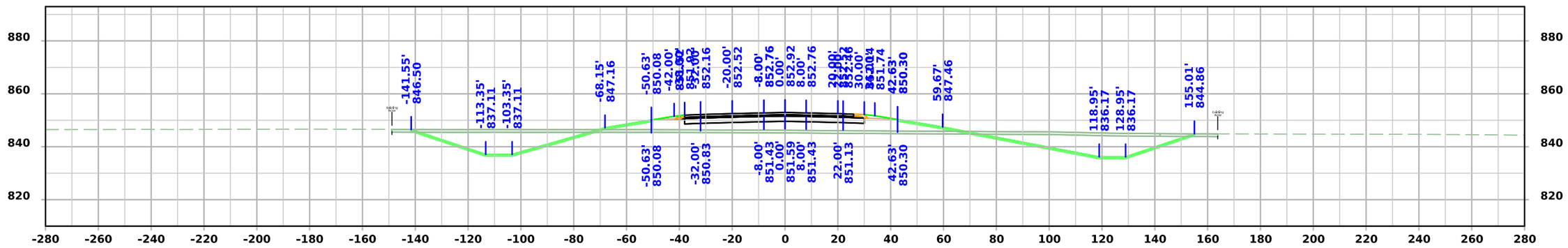
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.38

4:44:16 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

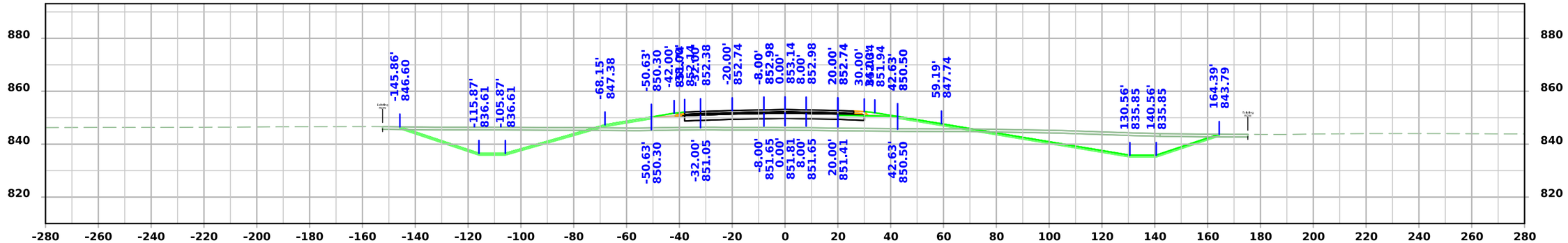
US 63



STA 155+75.00



STA 155+50.00

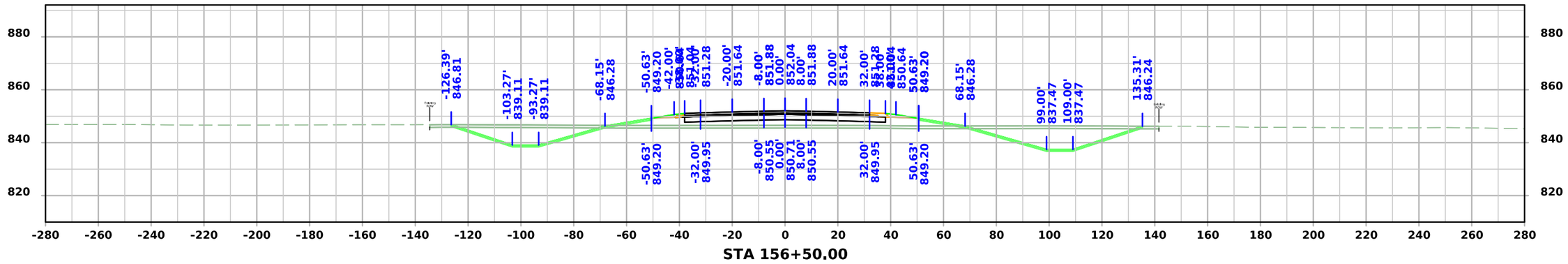


STA 155+25.00

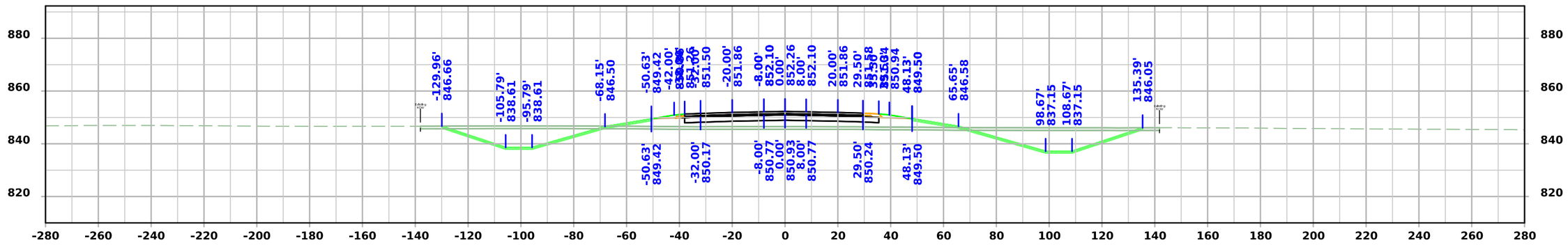
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.39

4:44:20 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

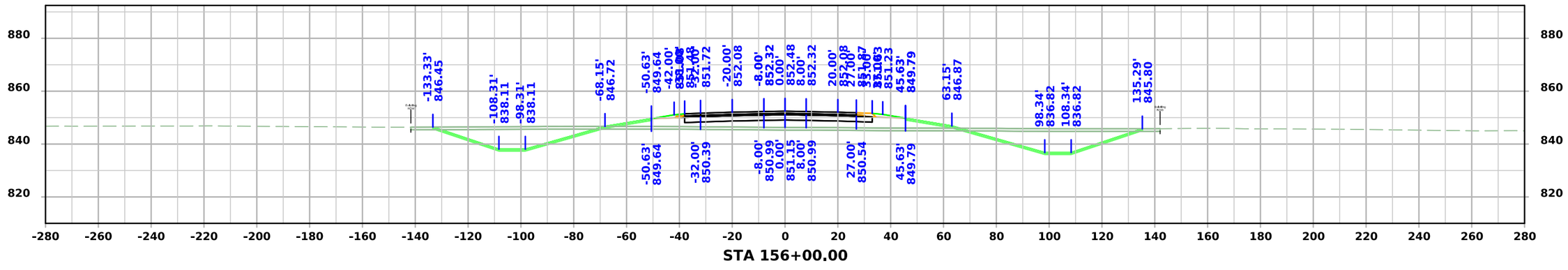
US 63



STA 156+50.00



STA 156+25.00

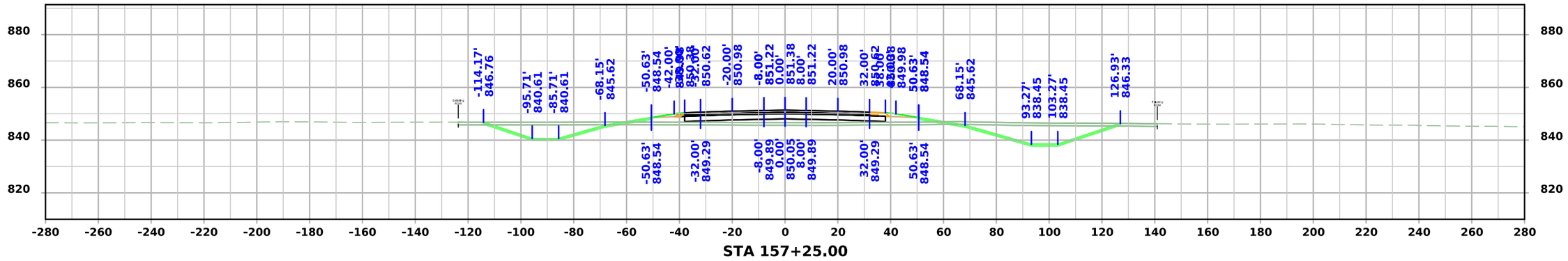


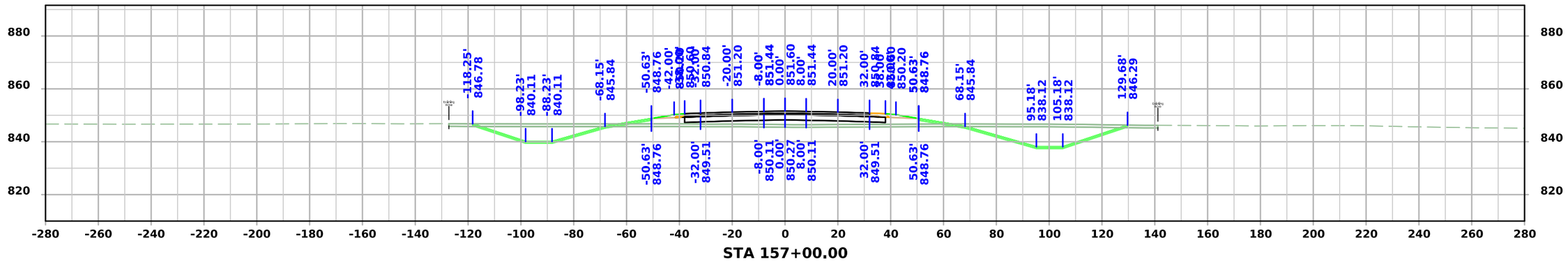
STA 156+00.00

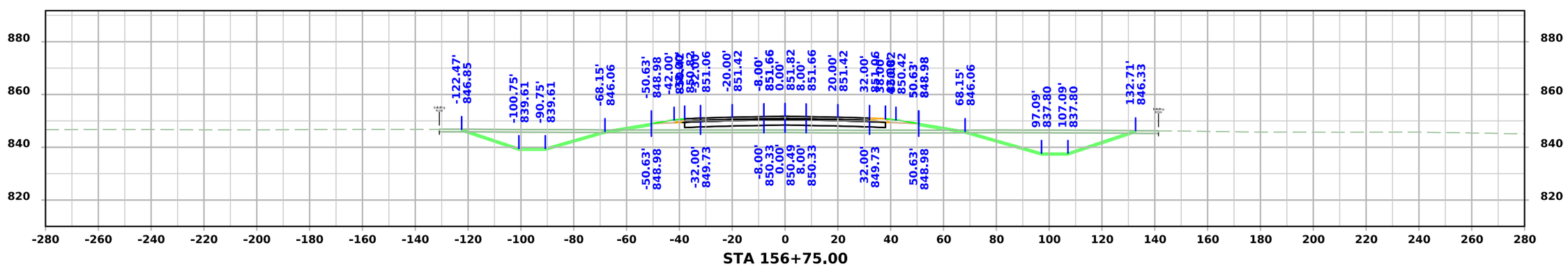
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.40

4:44:23 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



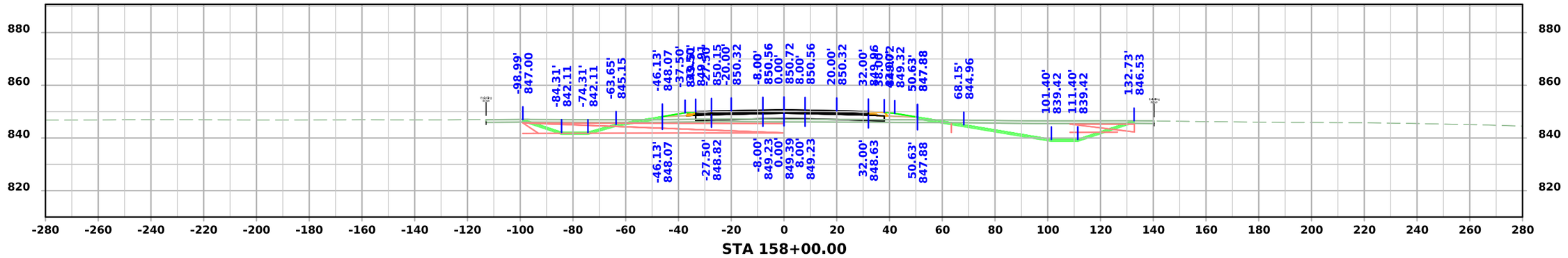


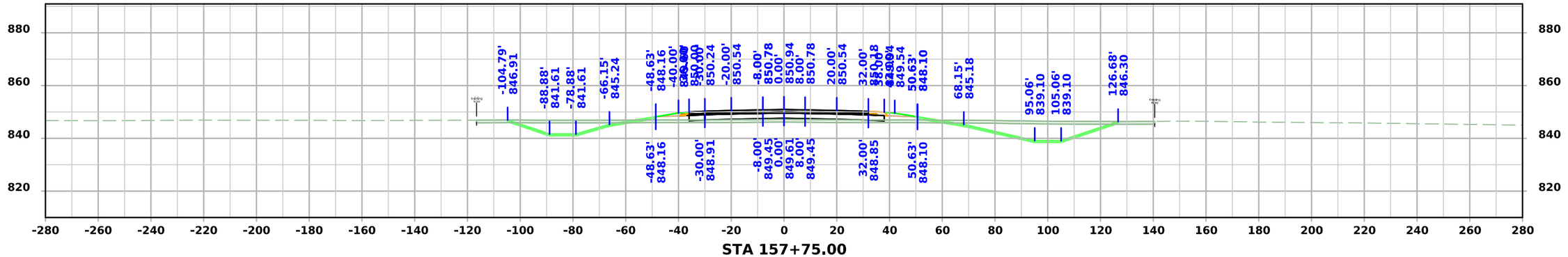


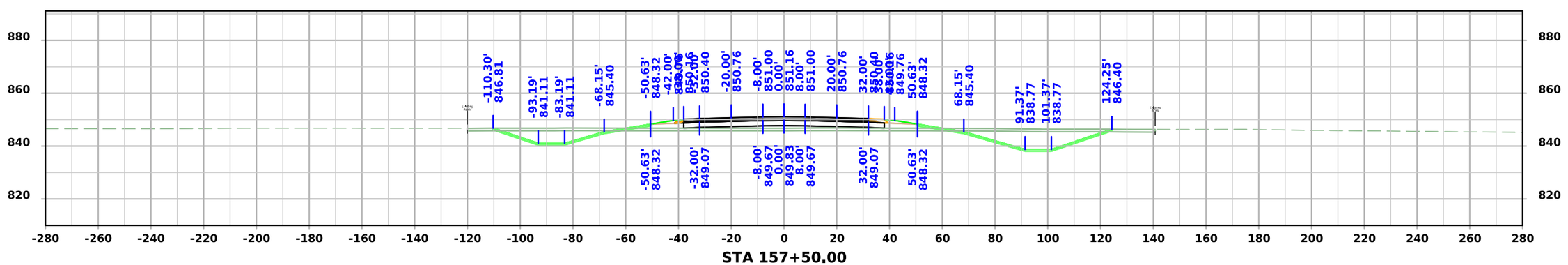
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.41

4:44:27 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



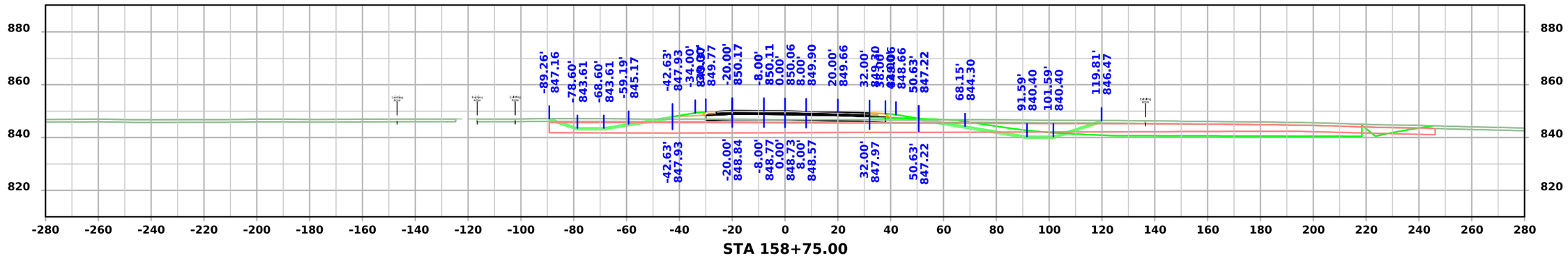




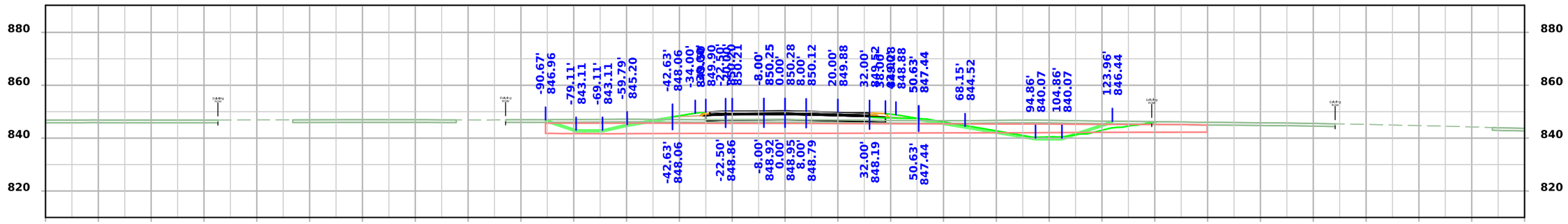
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.42

4:44:31 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

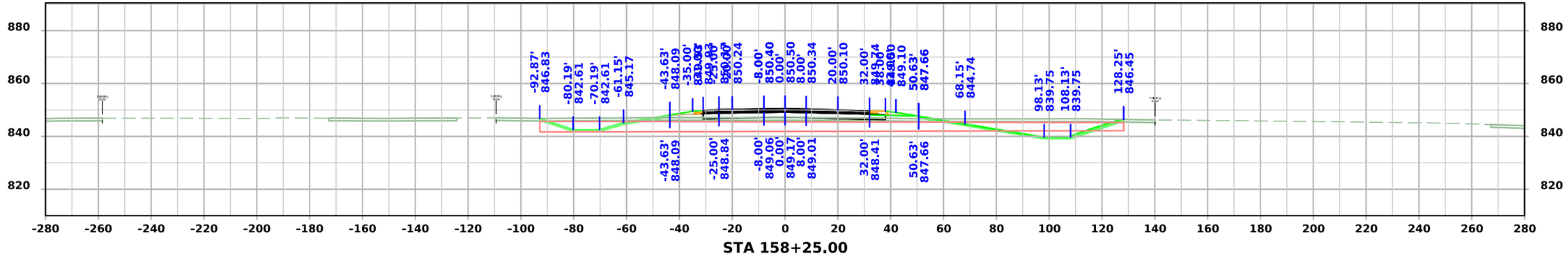
US 63



STA 158+75.00



STA 158+50.00

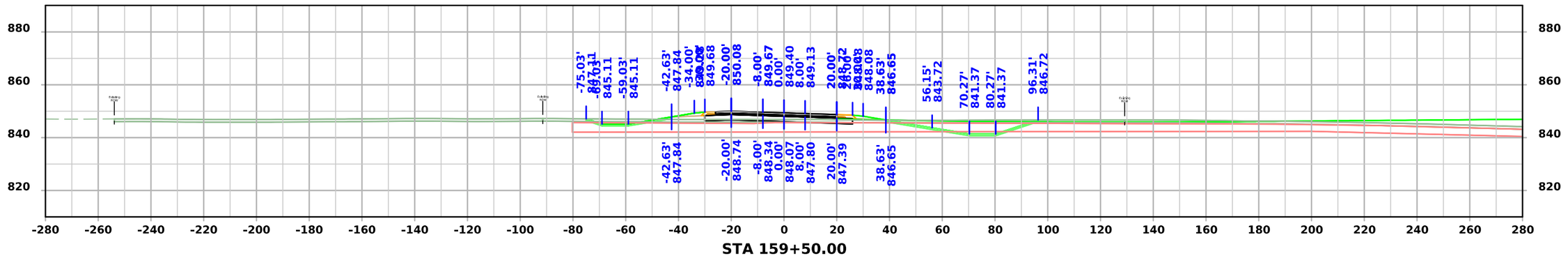


STA 158+25.00

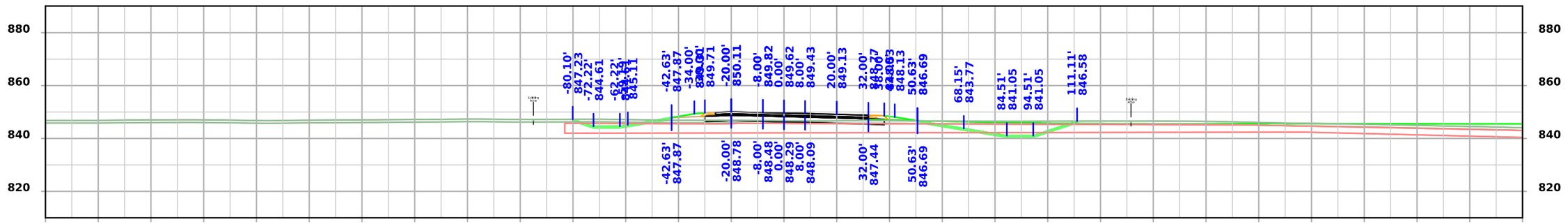
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.43

4:44:35 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

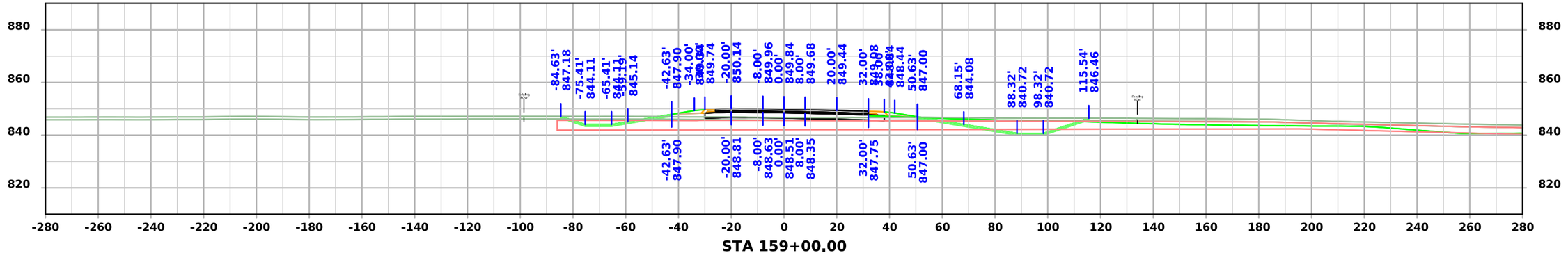
US 63



STA 159+50.00



STA 159+25.00



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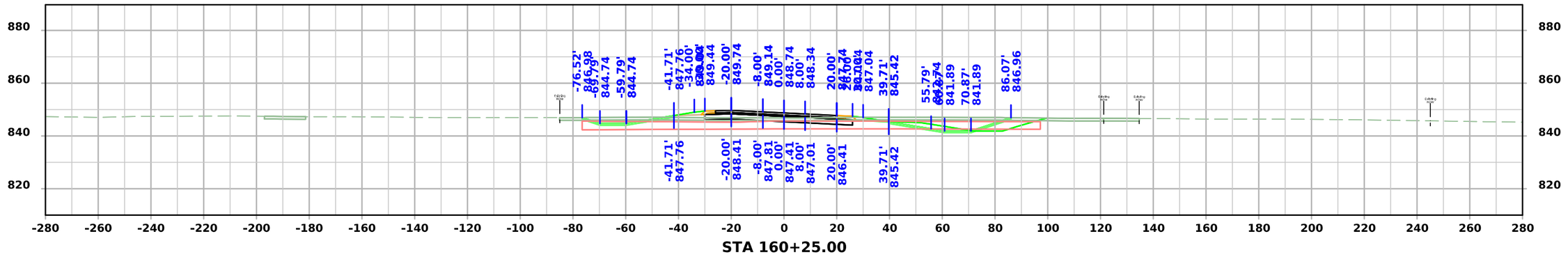
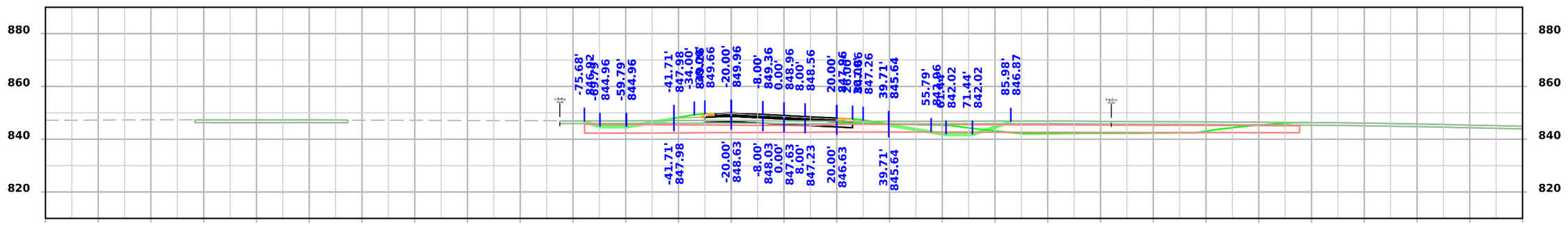
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.44

4:44:39 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 160+25.00



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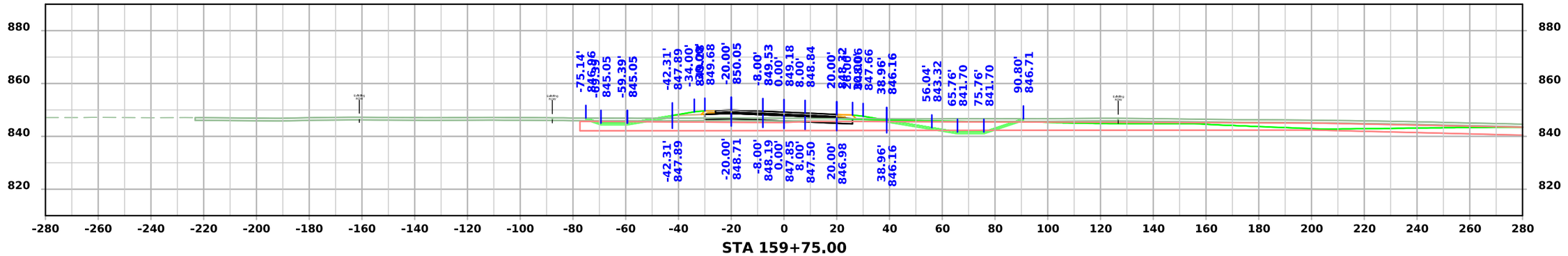
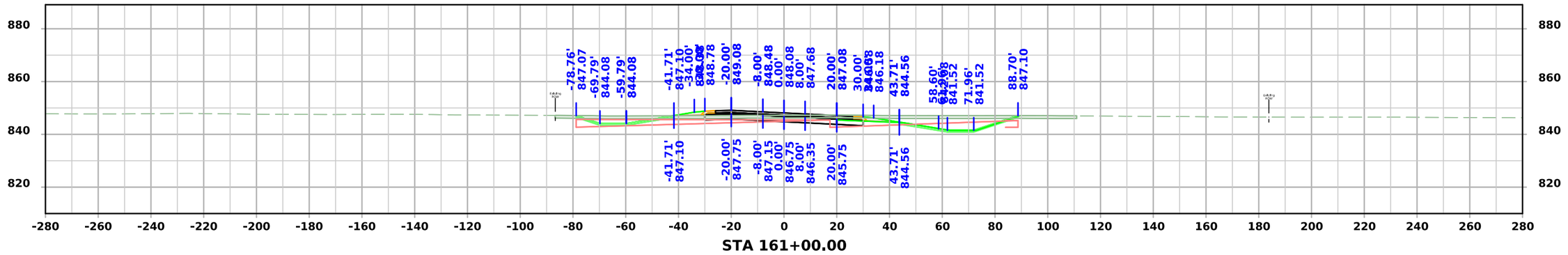


STA 159+75.00

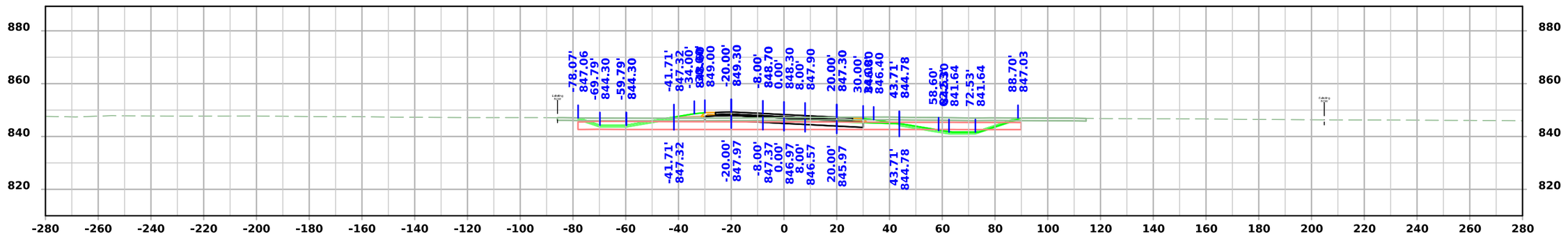
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.45

4:44:43 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

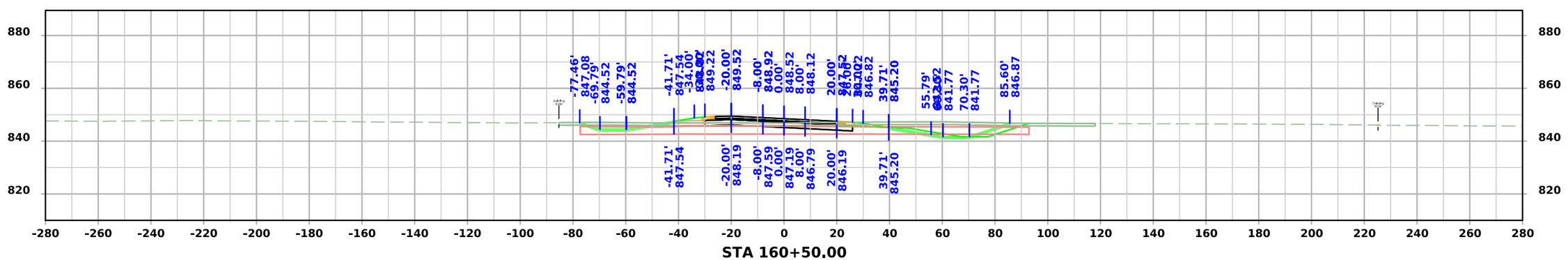
US 63



STA 161+00.00



STA 160+75.00

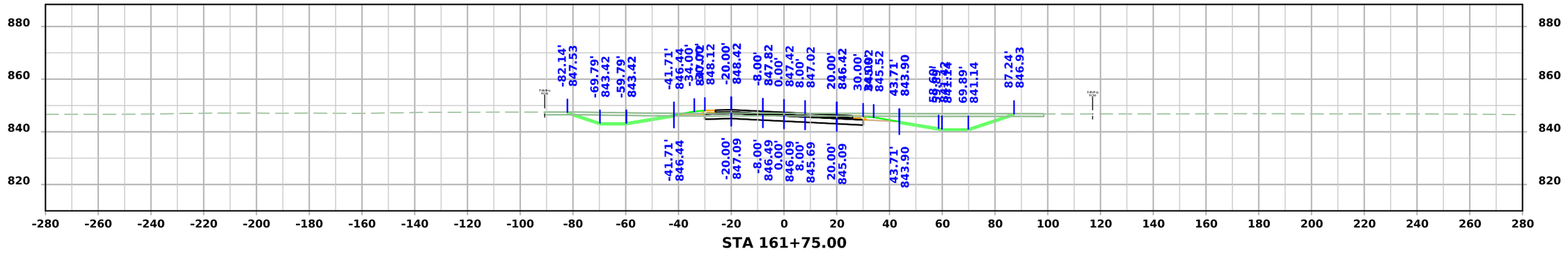


STA 160+50.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.46

4:44:47 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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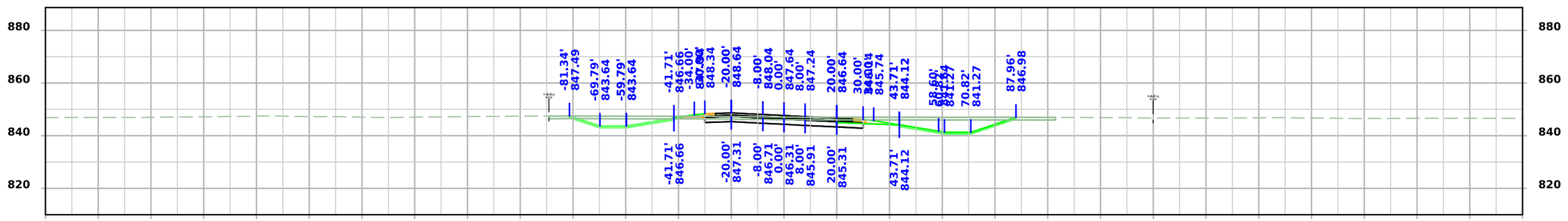
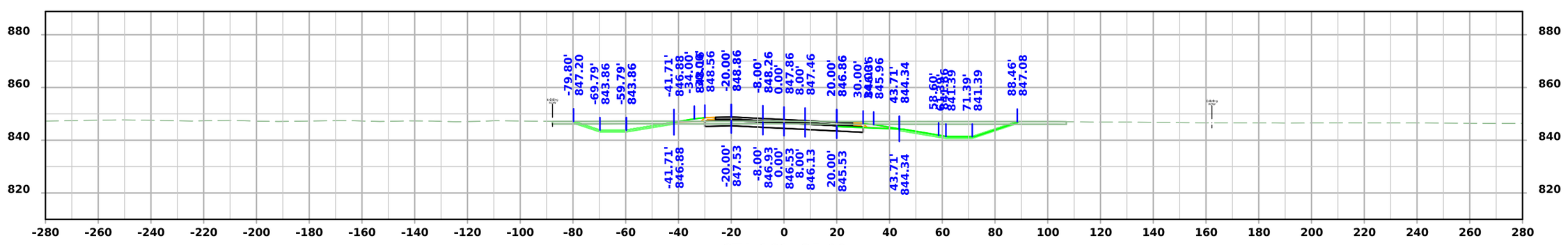


STA 161+50.00

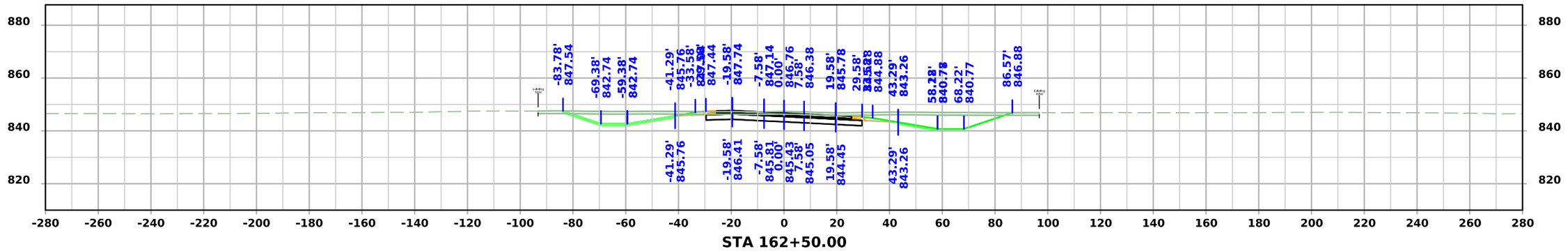


STA 161+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.47

4:44:52 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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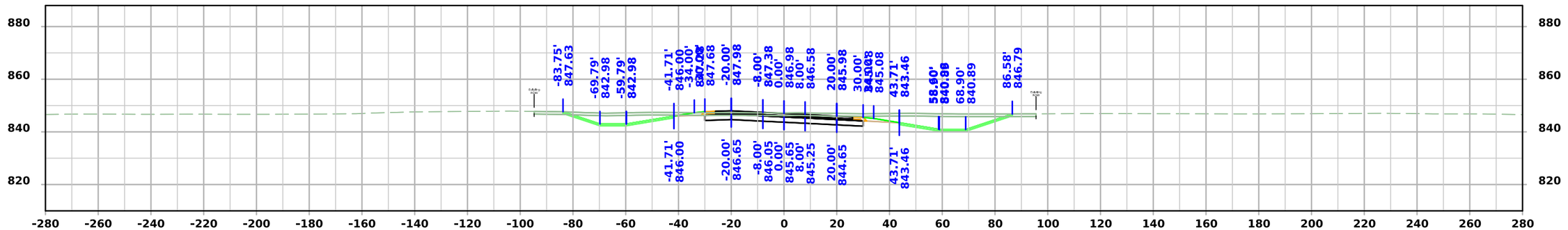

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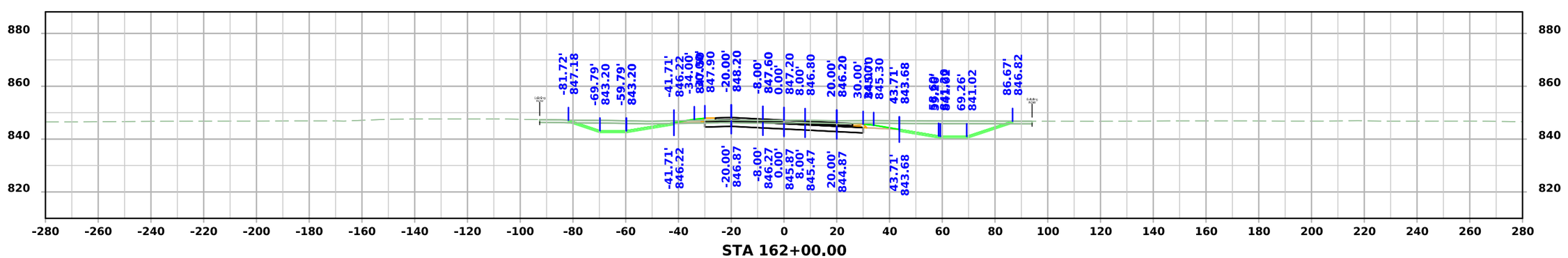
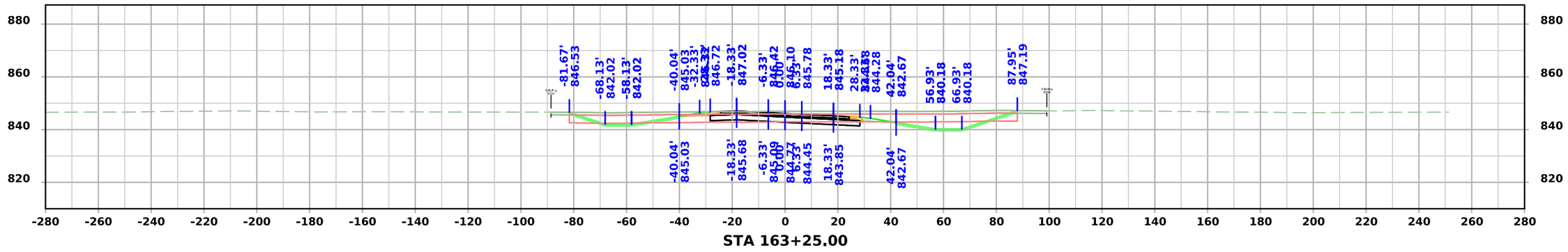


STA 162+00.00

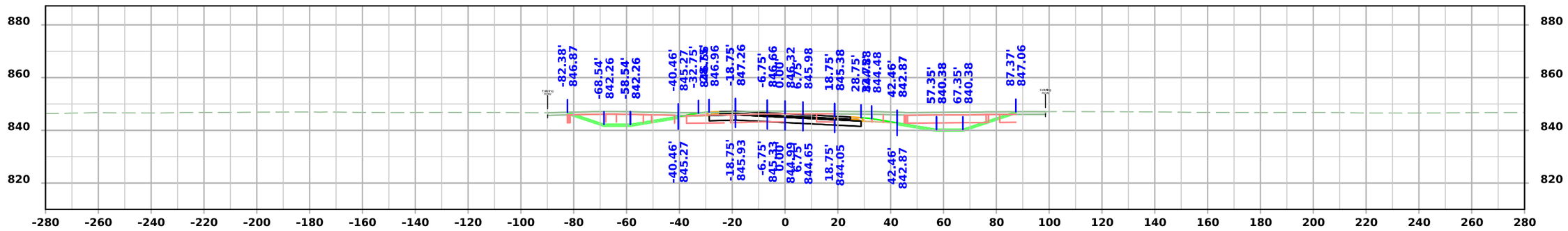
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.48

4:44:56 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 163+25.00



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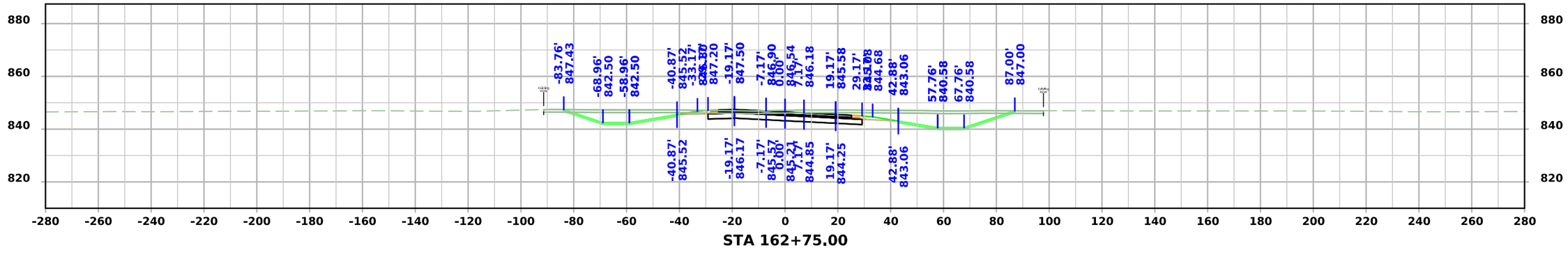
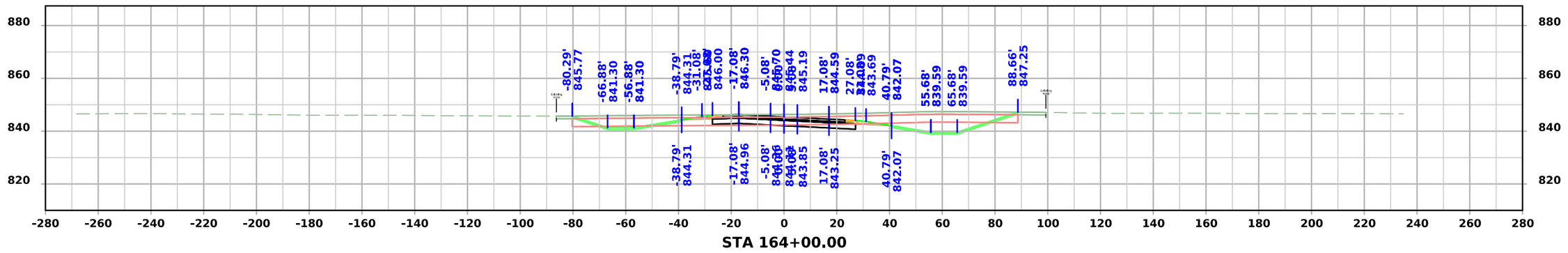


STA 162+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.49

4:45:00 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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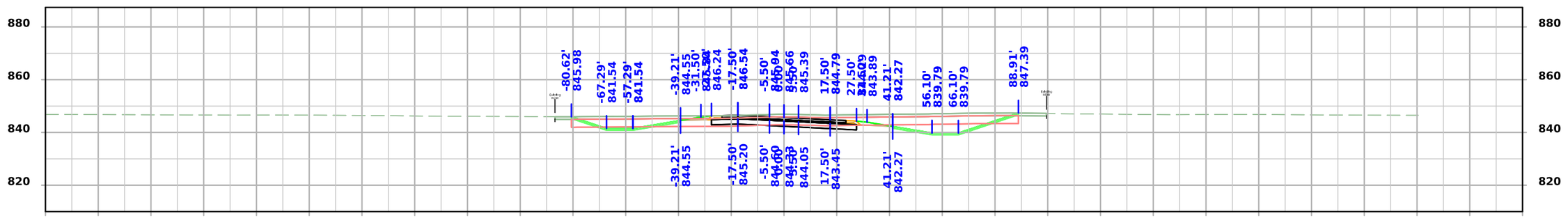

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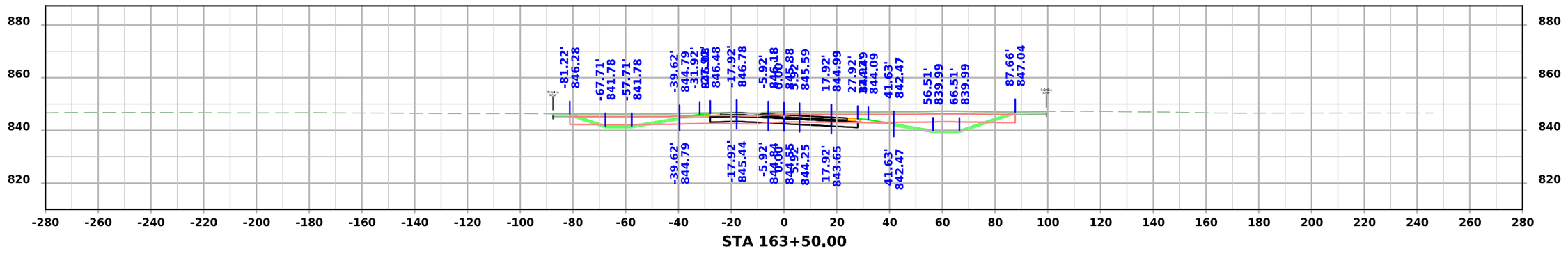
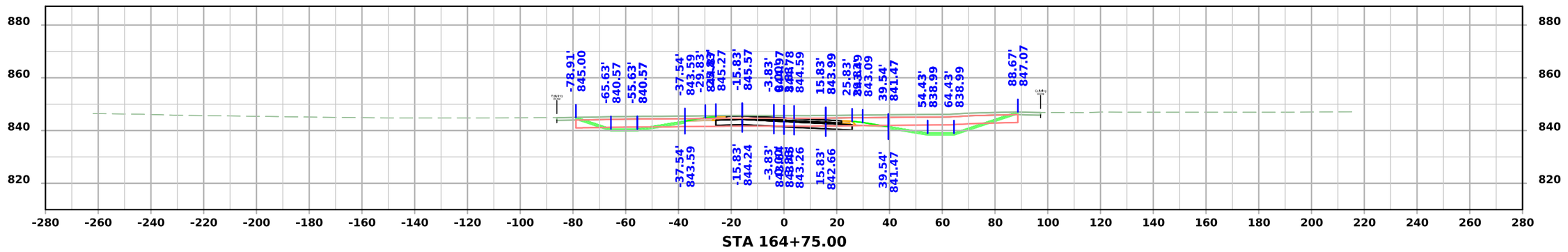


STA 163+50.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.50

4:45:05 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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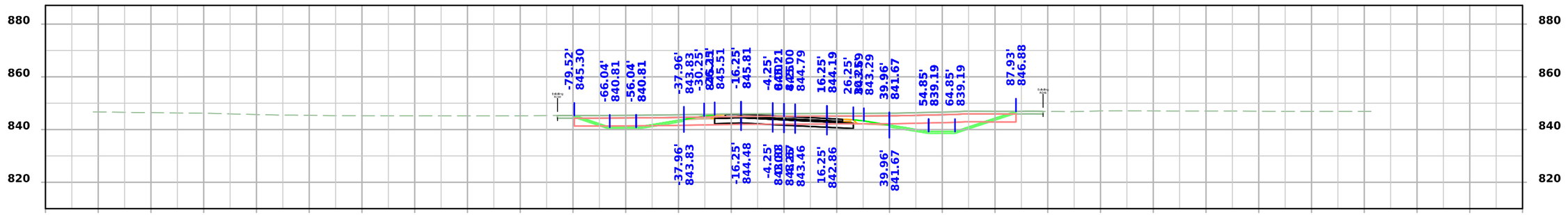

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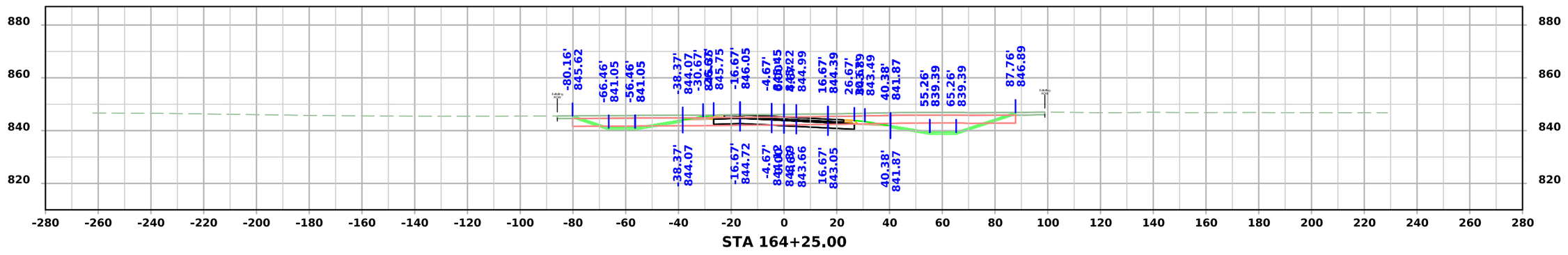
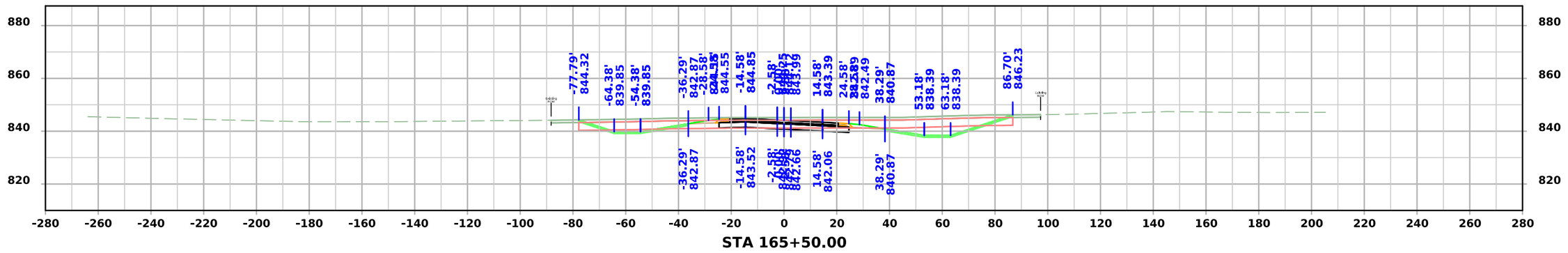


STA 164+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.51

4:45:10 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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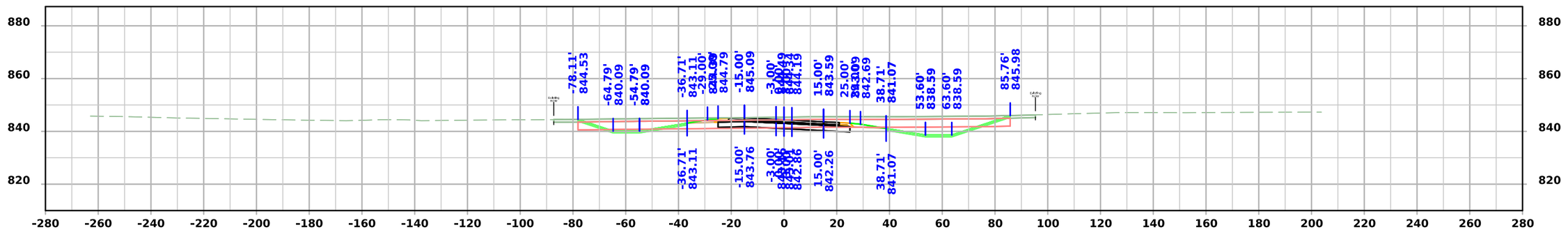

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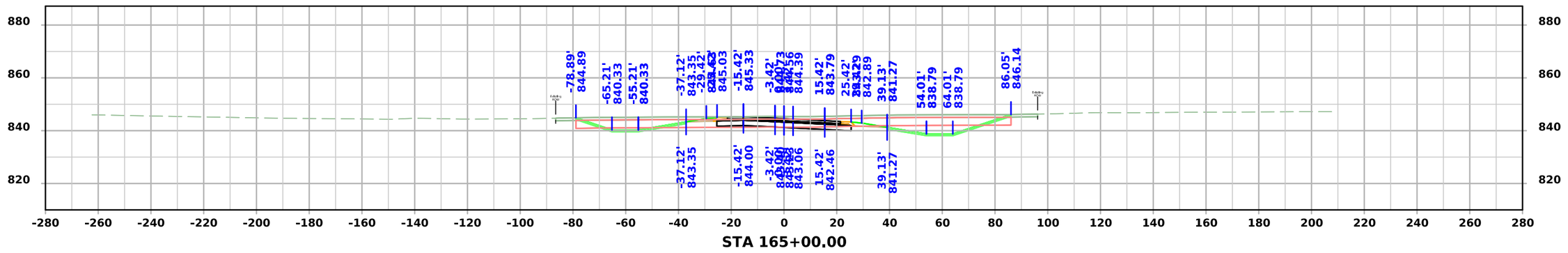
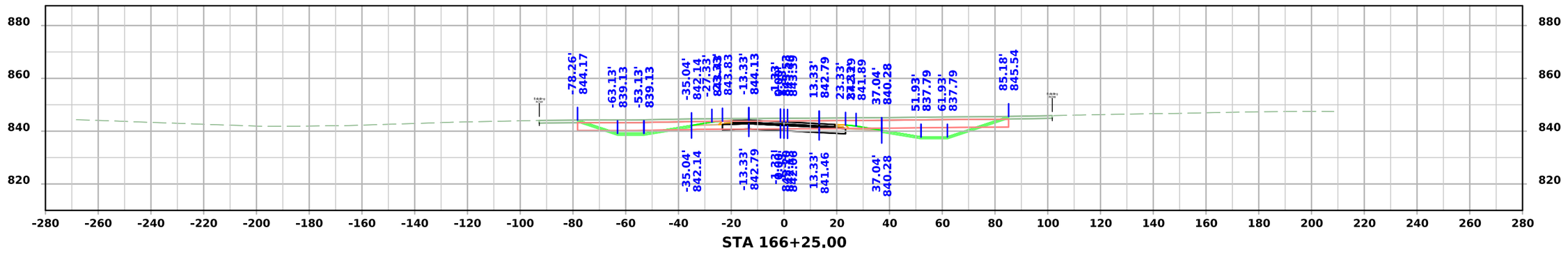


STA 165+00.00

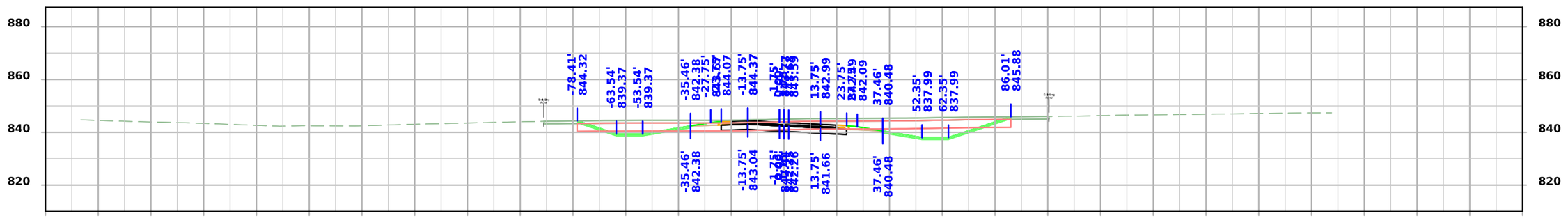
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.52

4:45:15 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

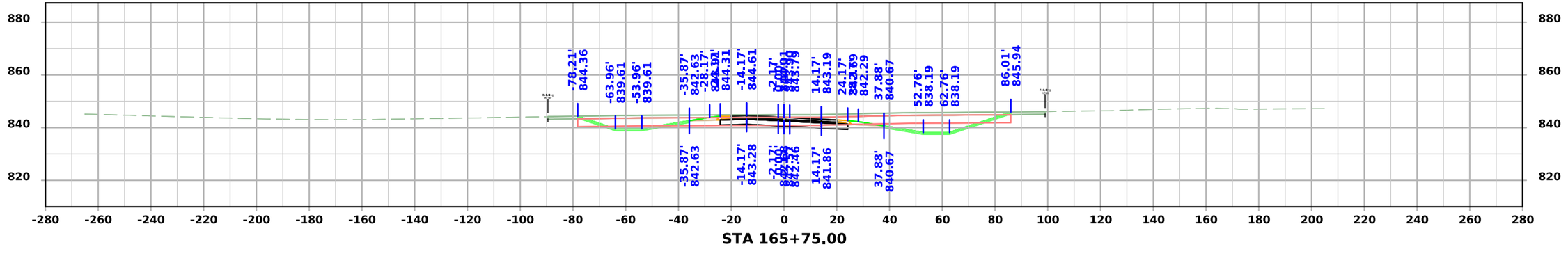
US 63



STA 166+25.00



STA 166+00.00

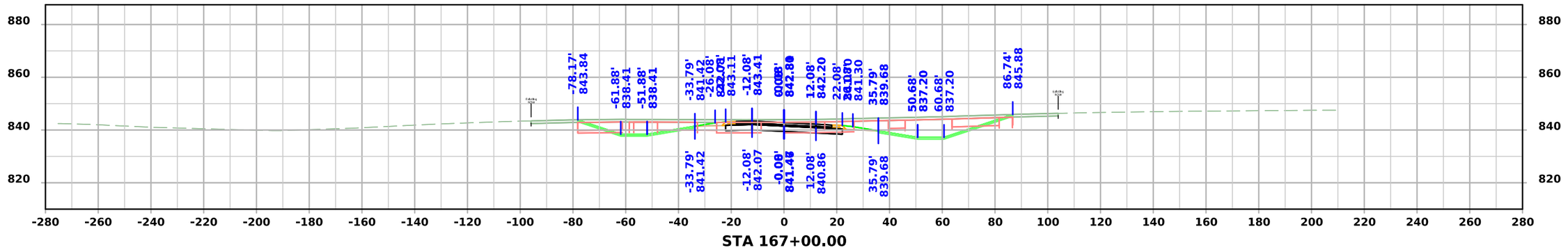


STA 165+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.53

4:45:20 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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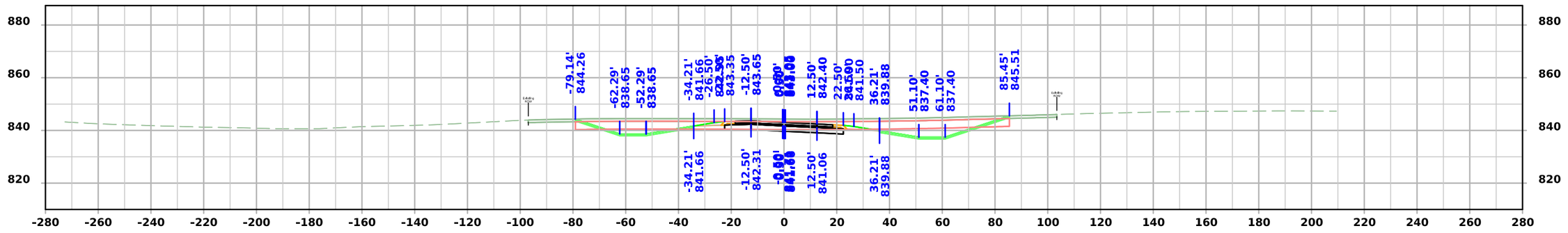
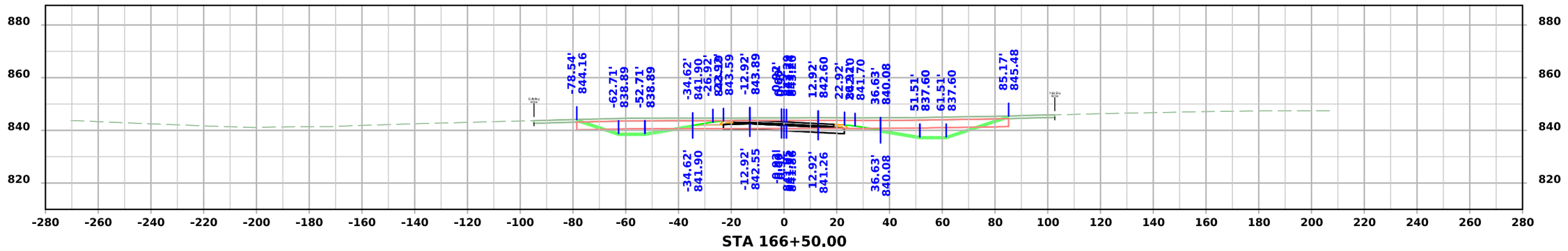


STA 166+75.00

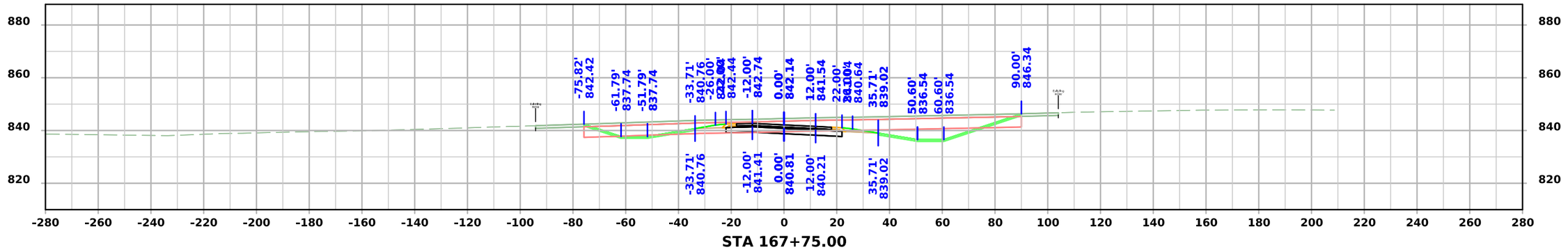


STA 166+50.00

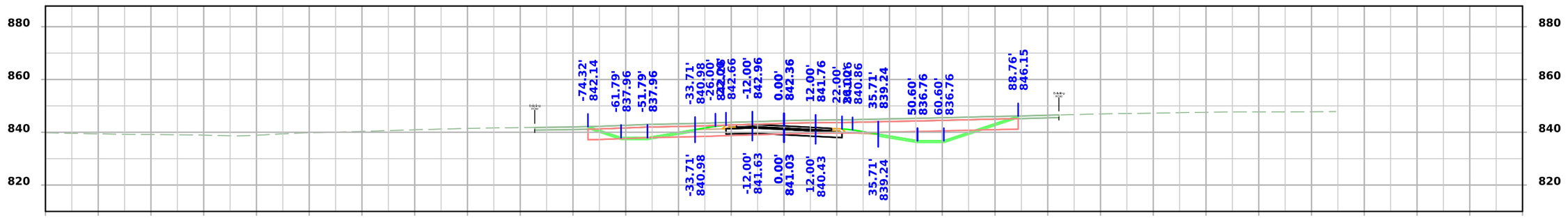
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.54

4:45:24 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

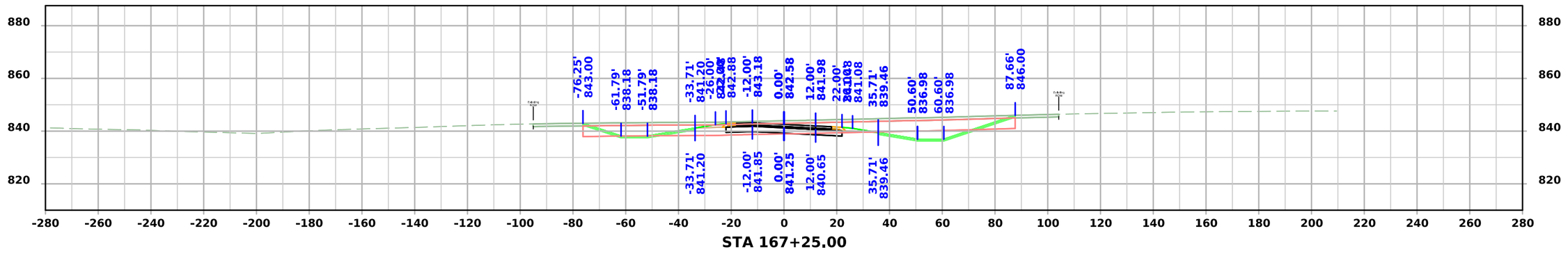
US 63



STA 167+75.00



STA 167+50.00

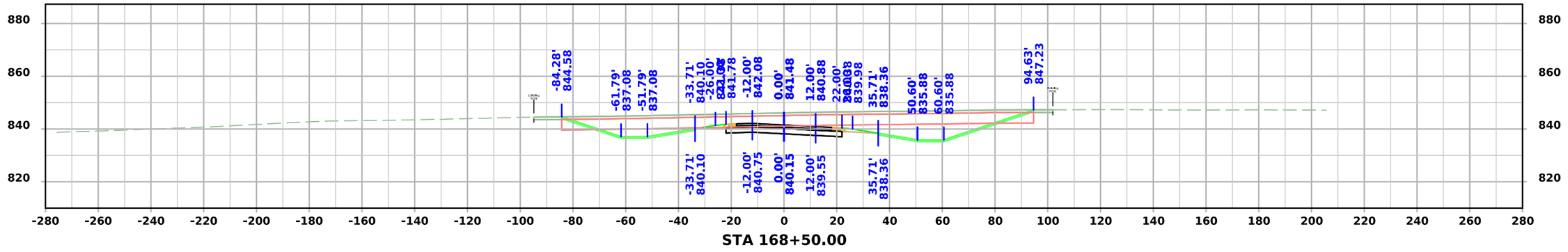


STA 167+25.00

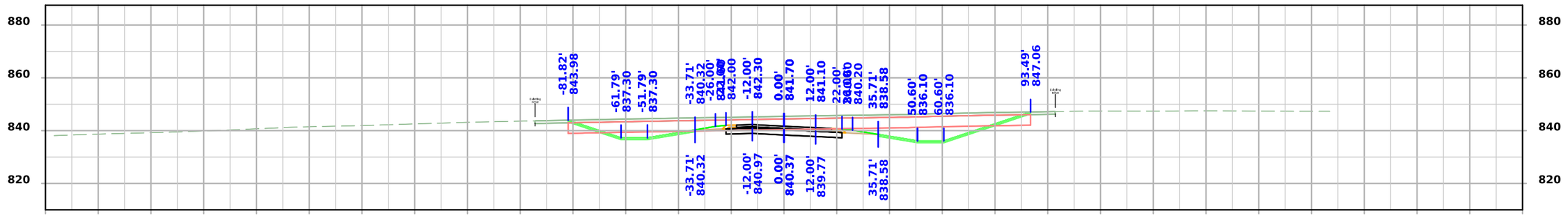
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.55

4:45:28 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

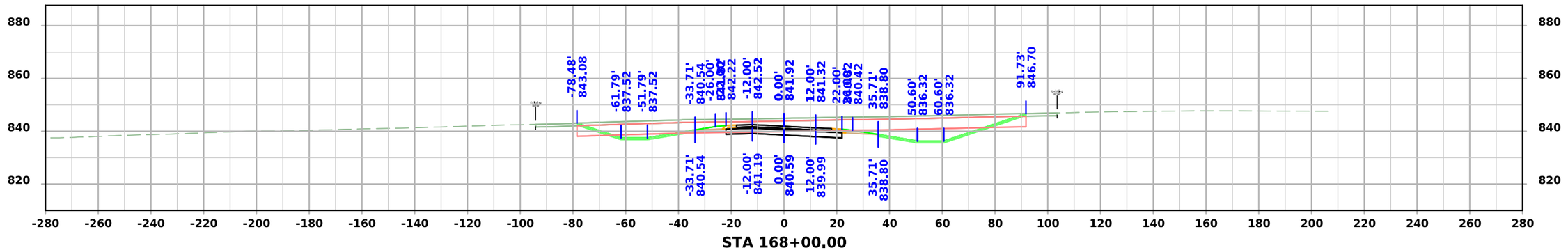
US 63



STA 168+50.00



STA 168+25.00

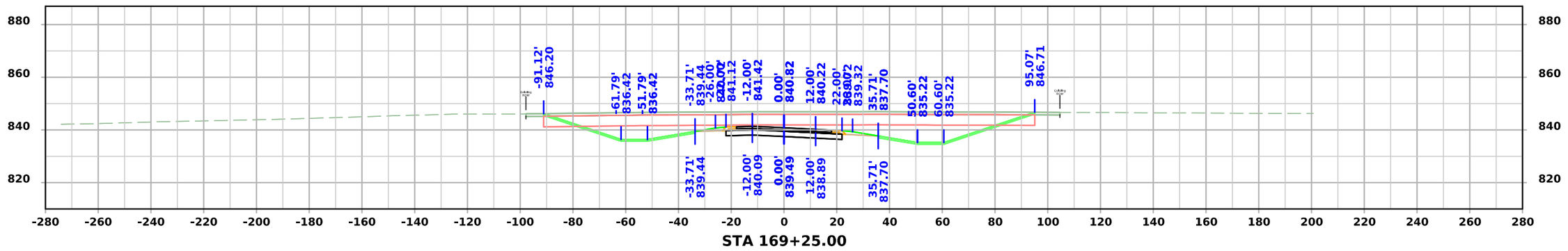


STA 168+00.00

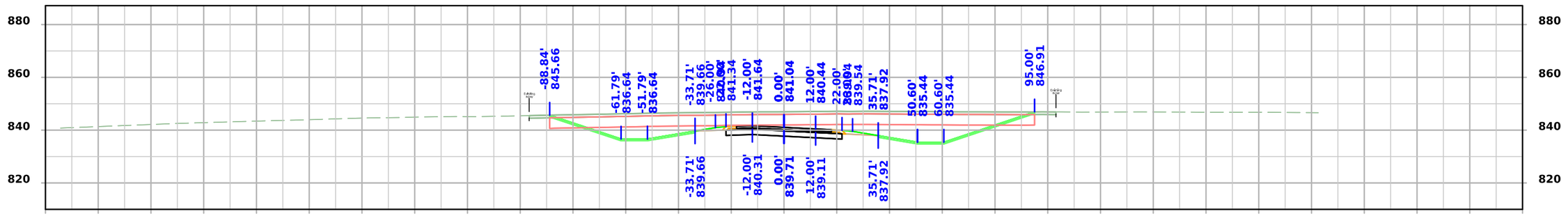
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.56

4:45:33 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 169+25.00



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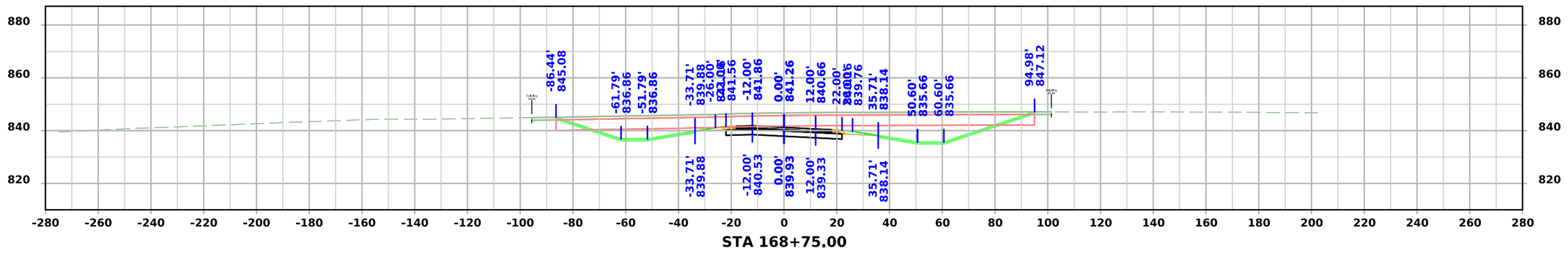
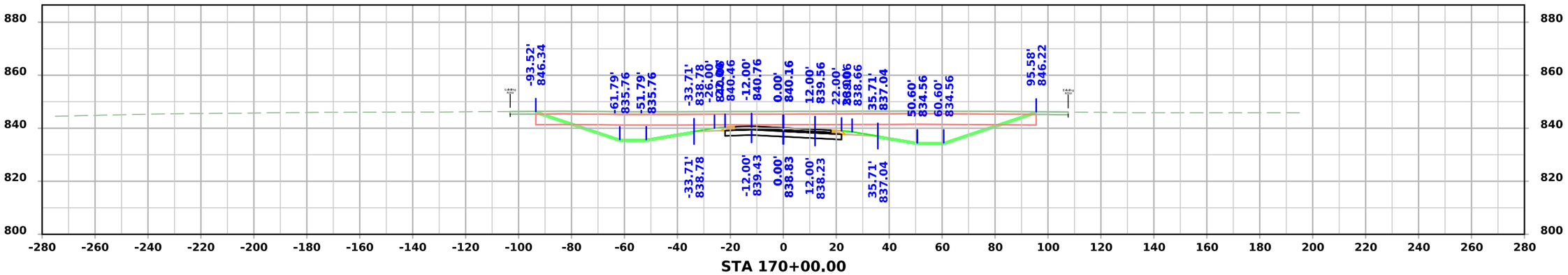


STA 168+75.00

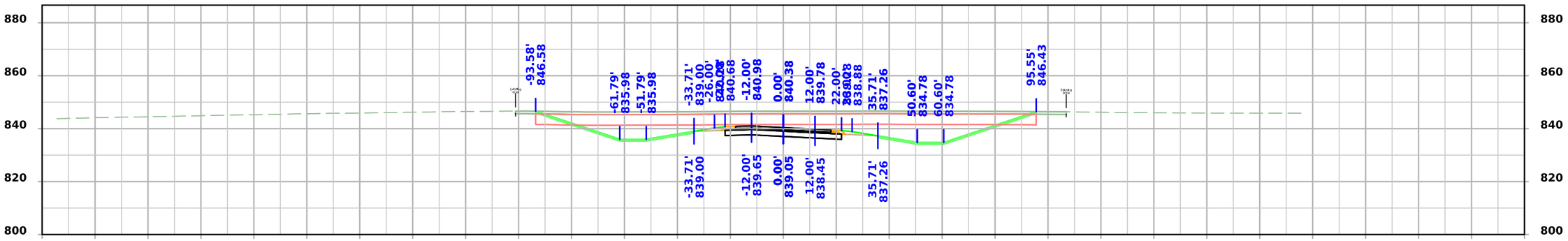
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.57

4:45:37 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

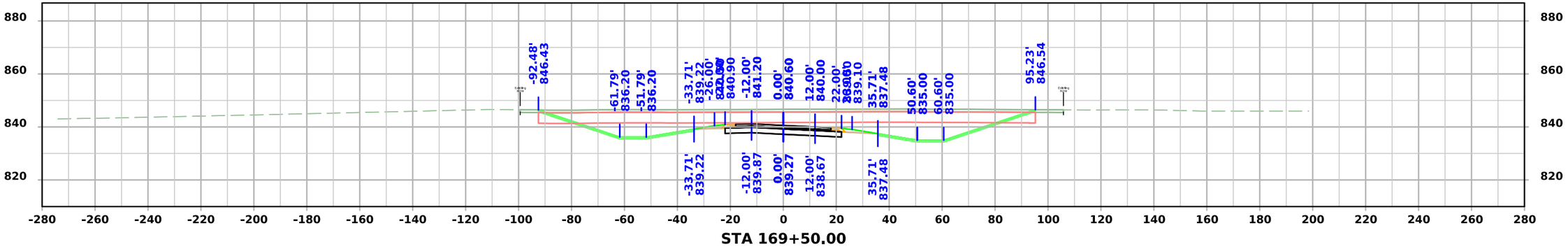
US 63



STA 170+00.00



STA 169+75.00

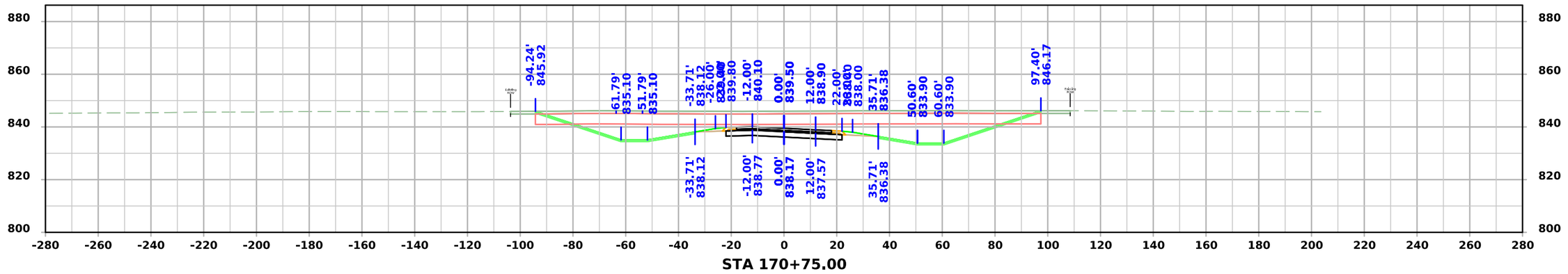


STA 169+50.00

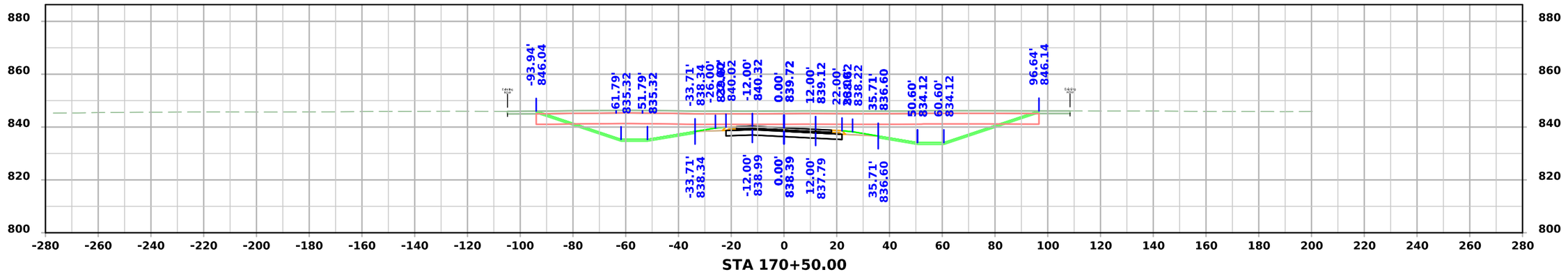
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.58

4:45:41 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

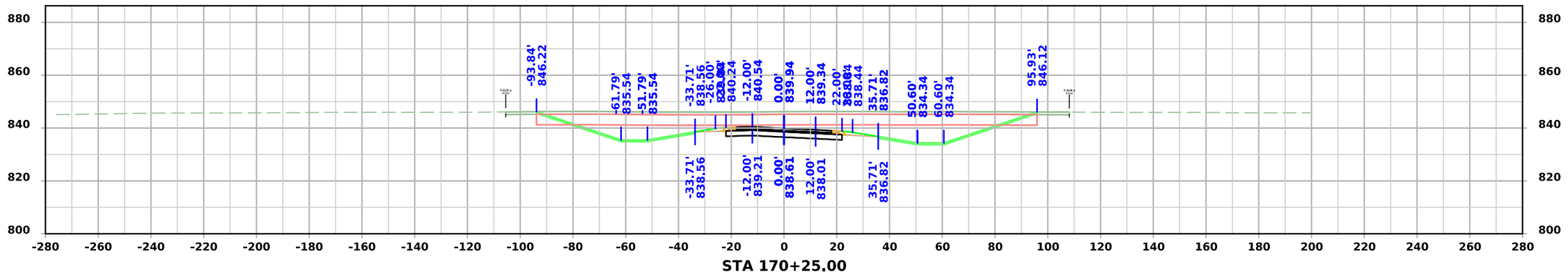
US 63



STA 170+75.00



STA 170+50.00

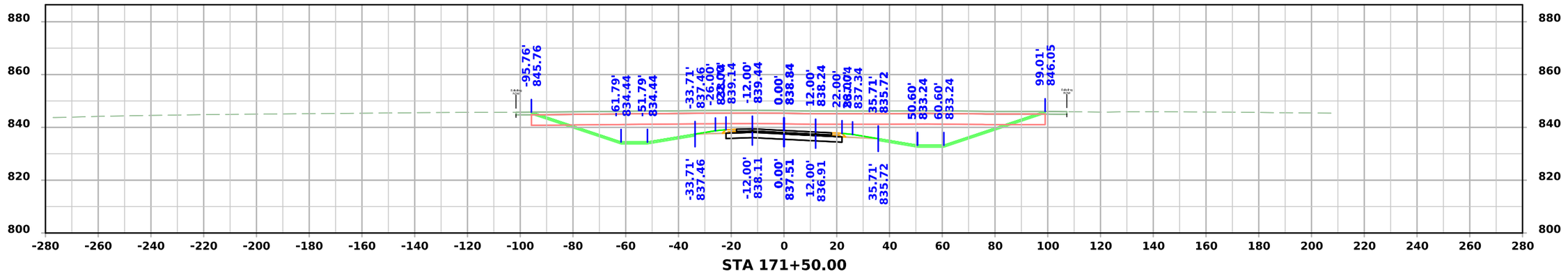


STA 170+25.00

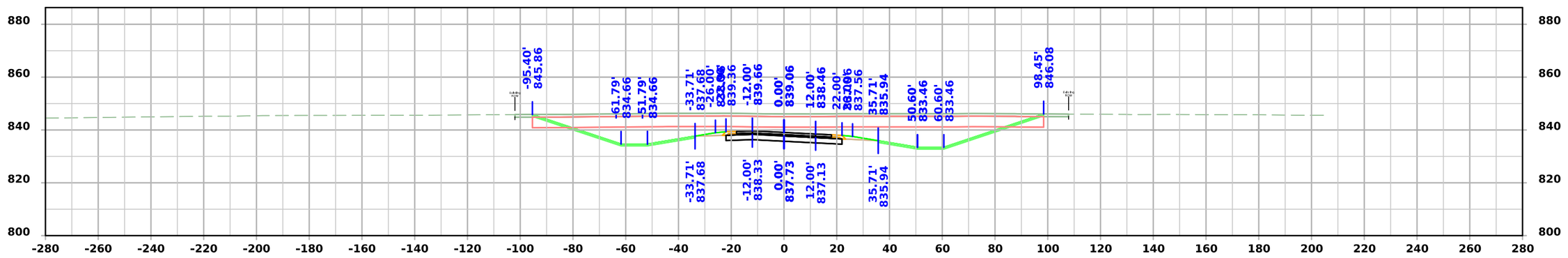
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.59

4:45:45 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

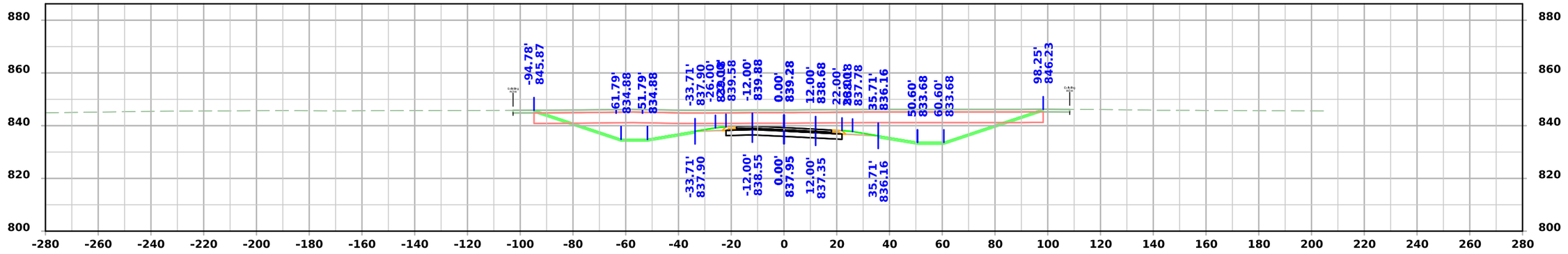
US 63



STA 171+50.00



STA 171+25.00

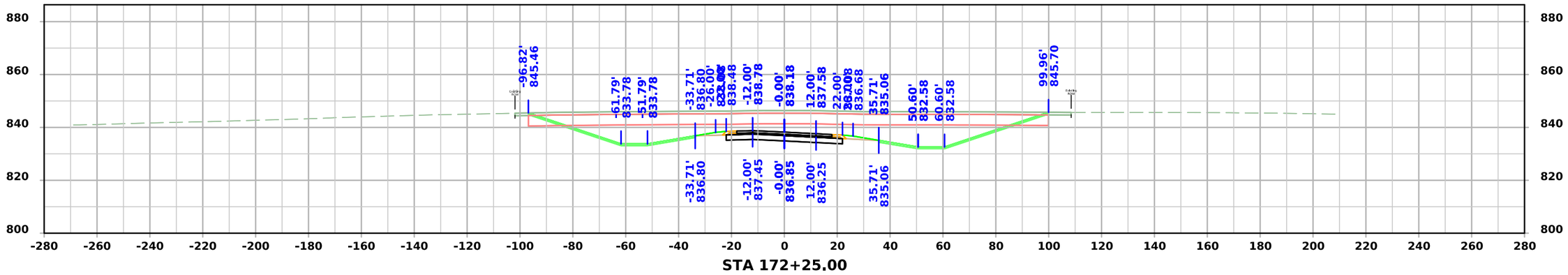


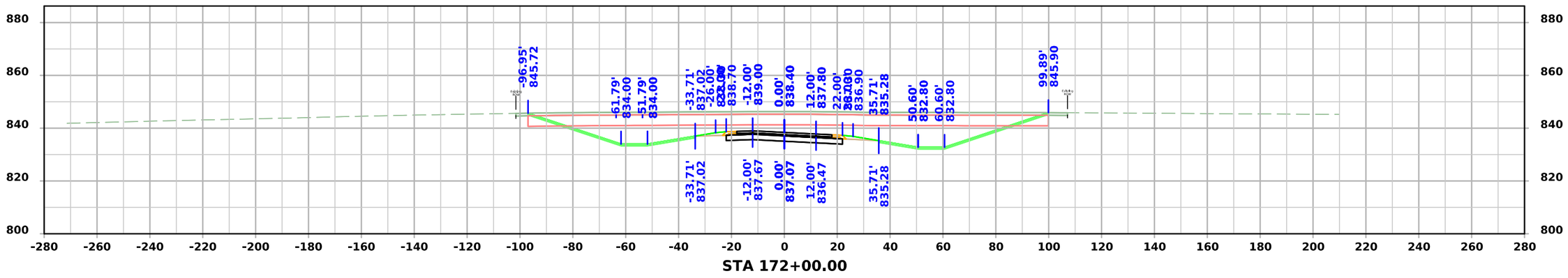
STA 171+00.00

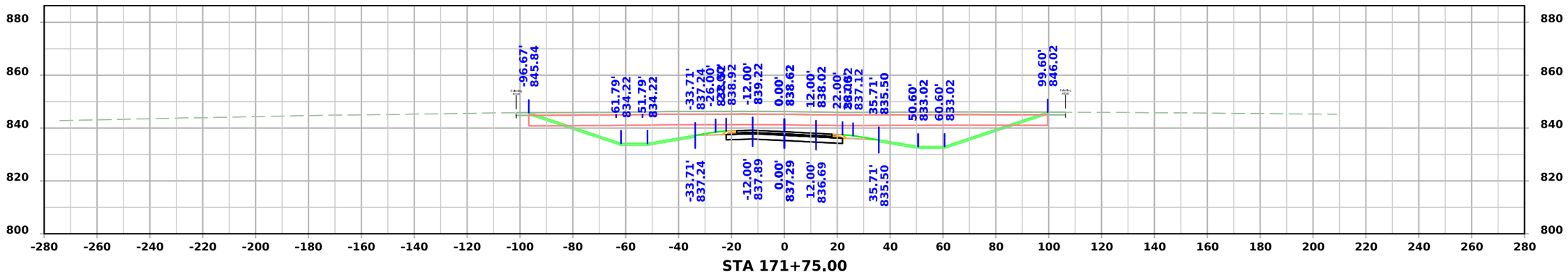
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.60

4:45:49 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



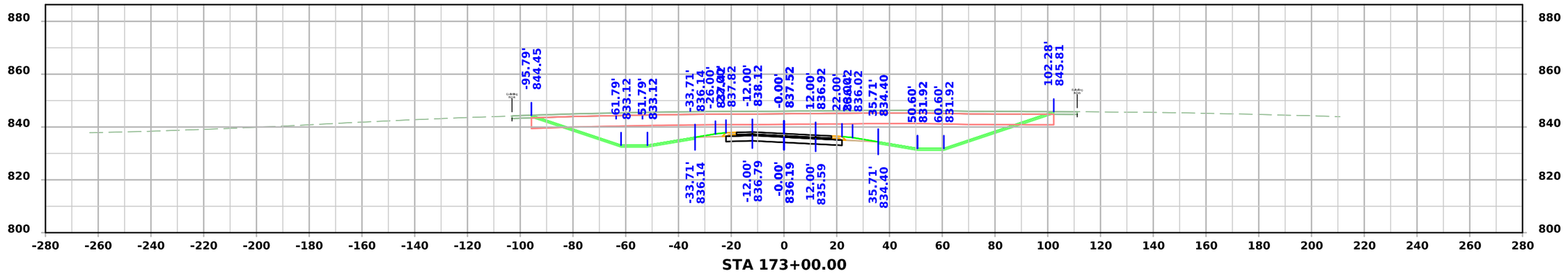




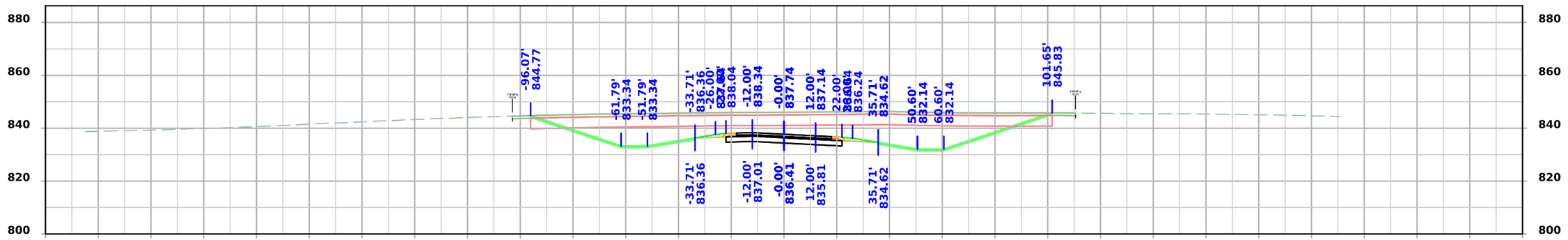
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.61

4:45:54 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

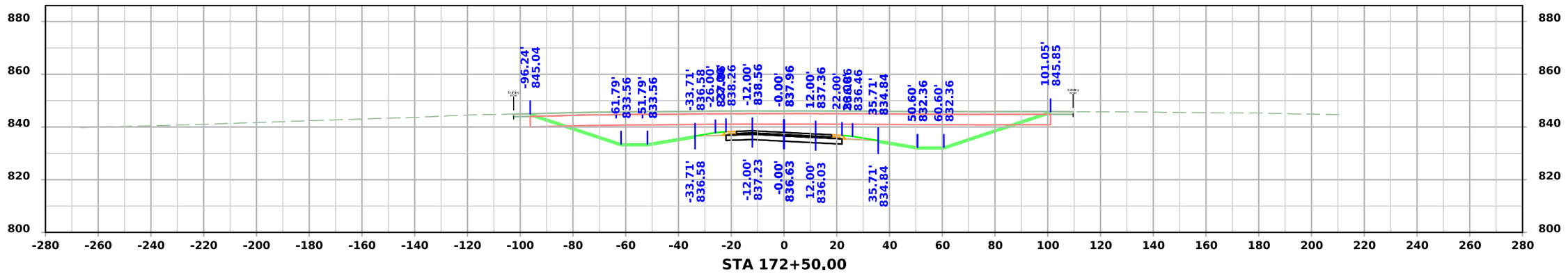
US 63



STA 173+00.00



STA 172+75.00

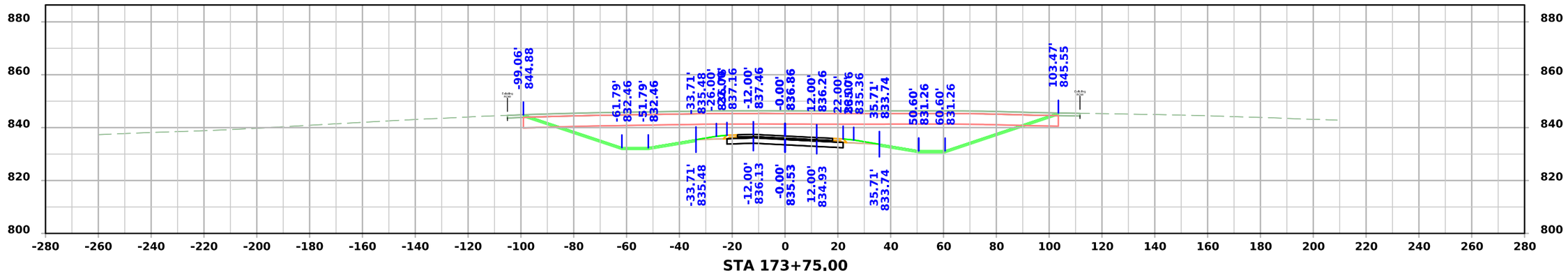


STA 172+50.00

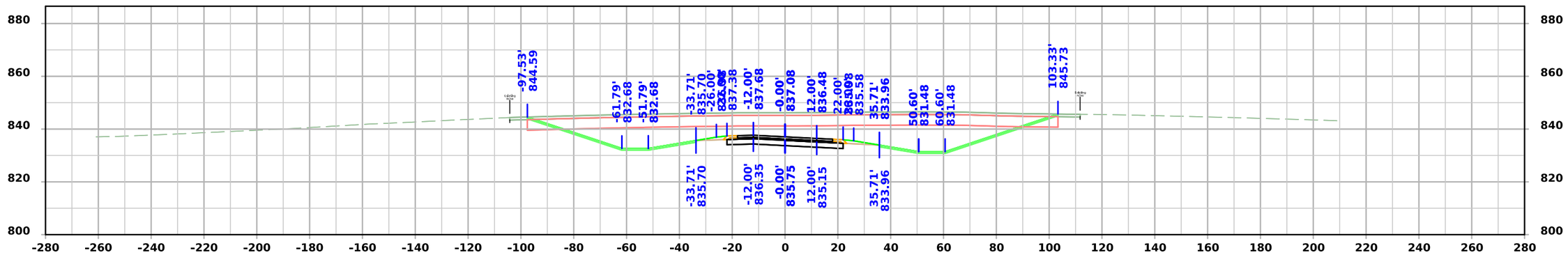
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.62

4:45:58 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

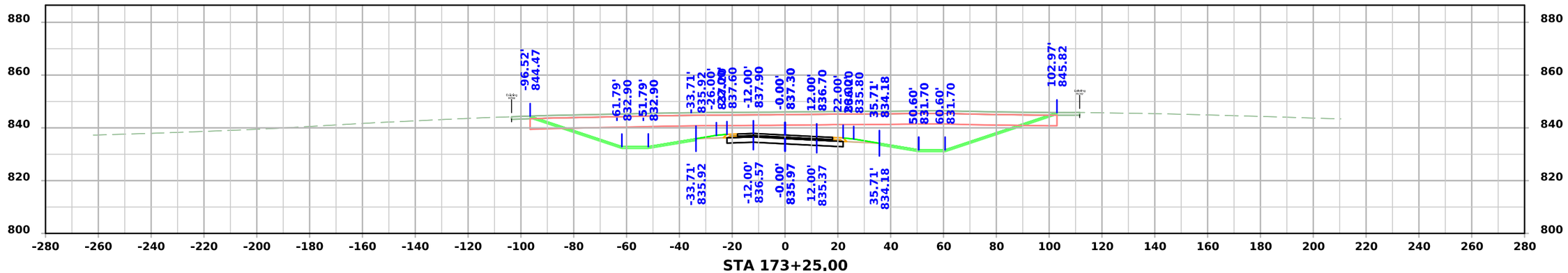
US 63



STA 173+75.00



STA 173+50.00

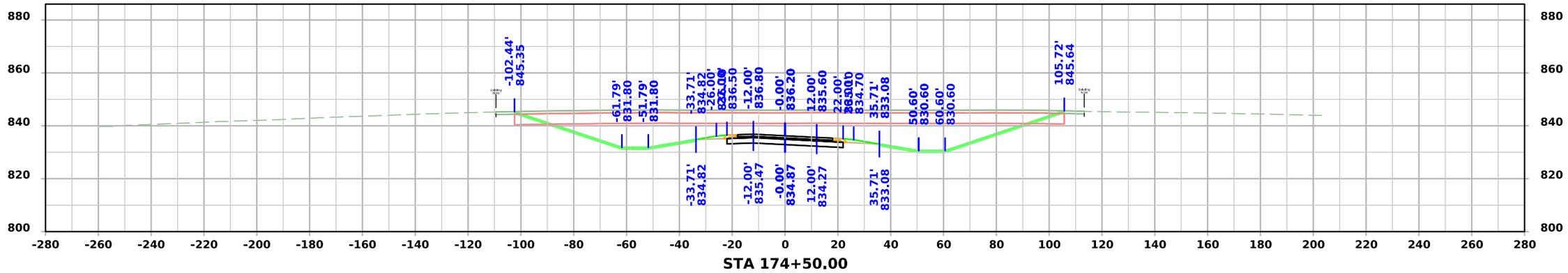


STA 173+25.00

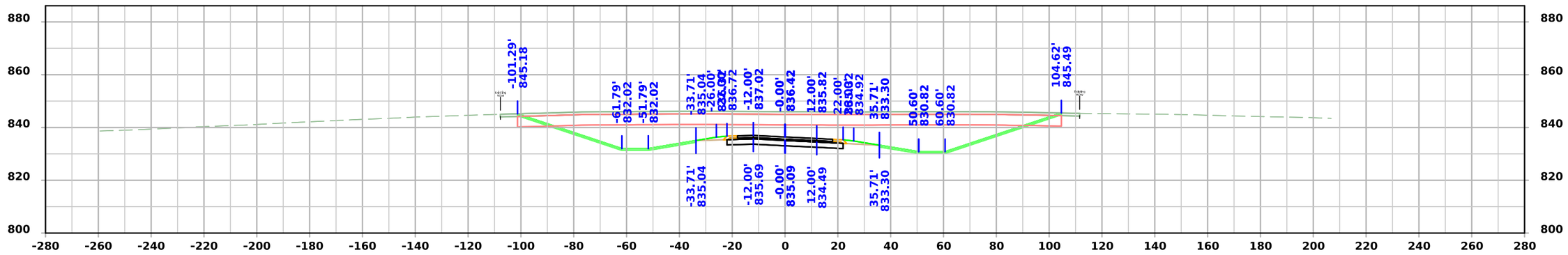
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.63

4:46:02 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

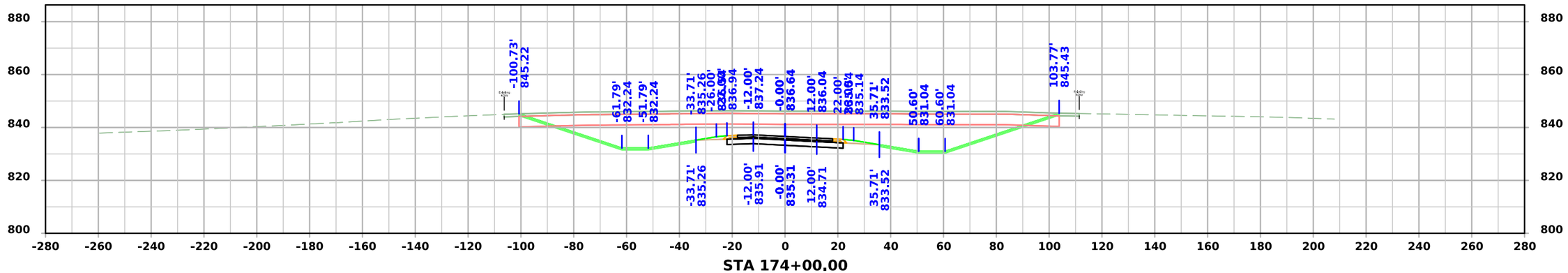
US 63



STA 174+50.00



STA 174+25.00

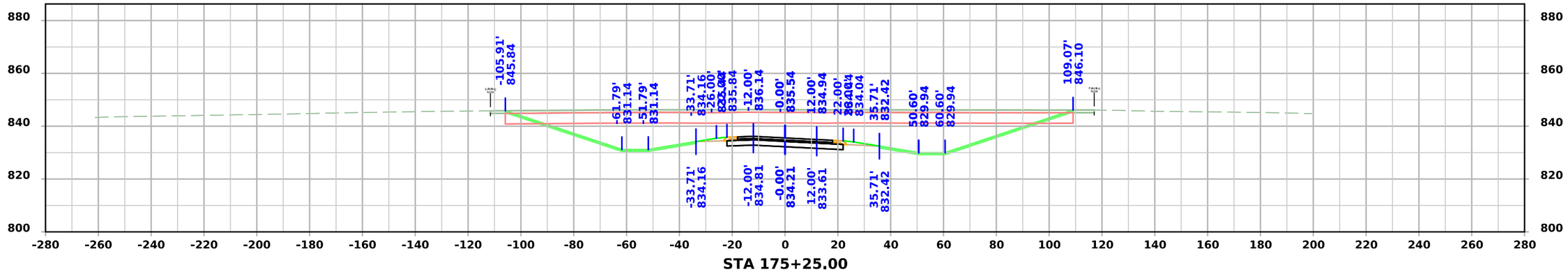


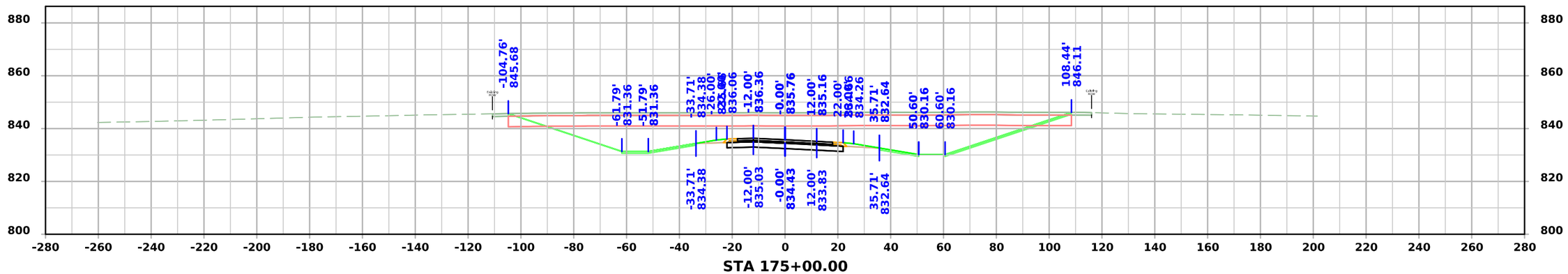
STA 174+00.00

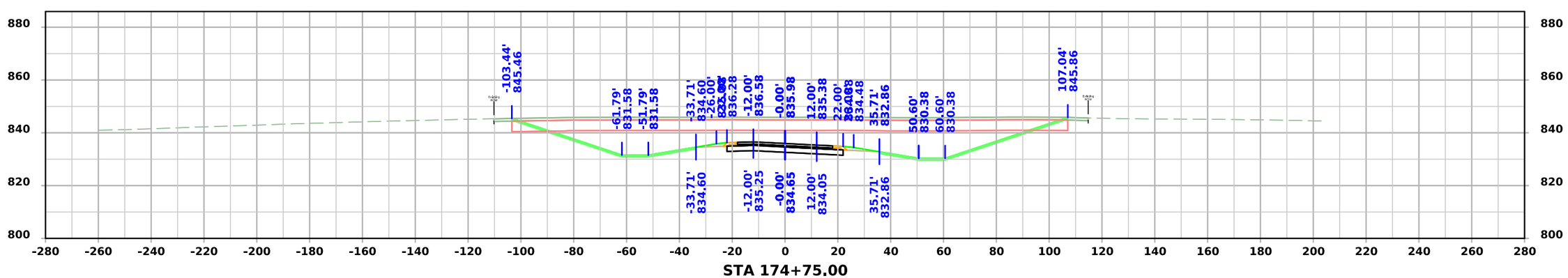
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.64

4:46:06 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



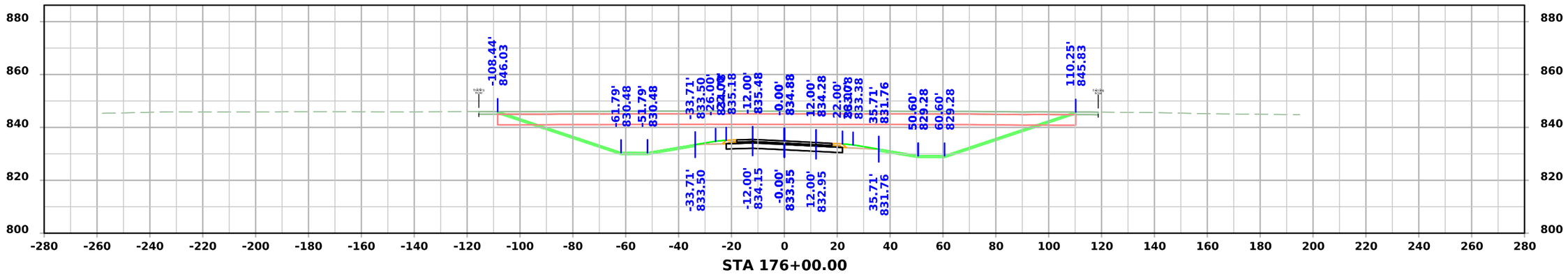




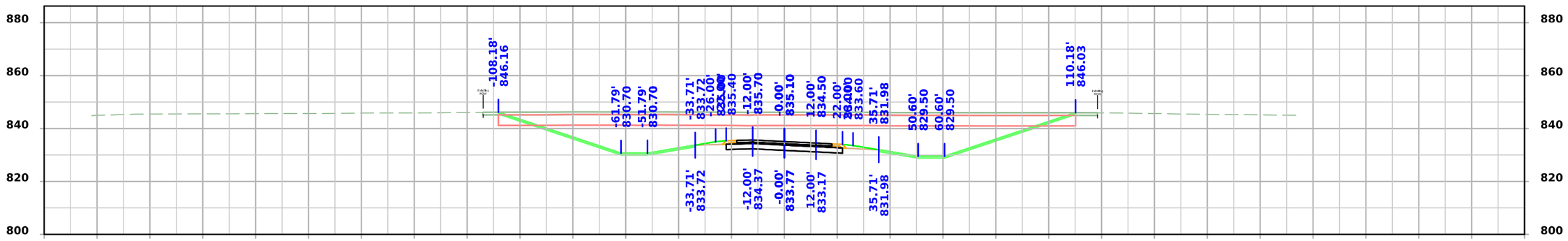
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.65

4:46:10 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

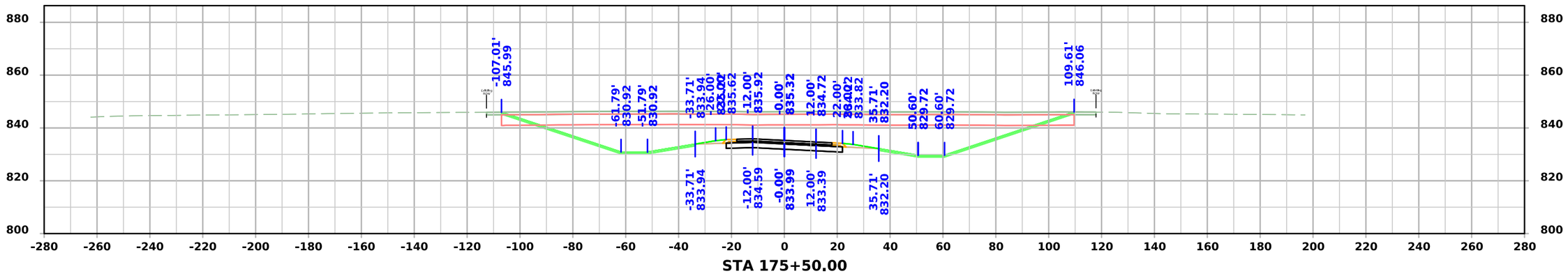
US 63



STA 176+00.00



STA 175+75.00

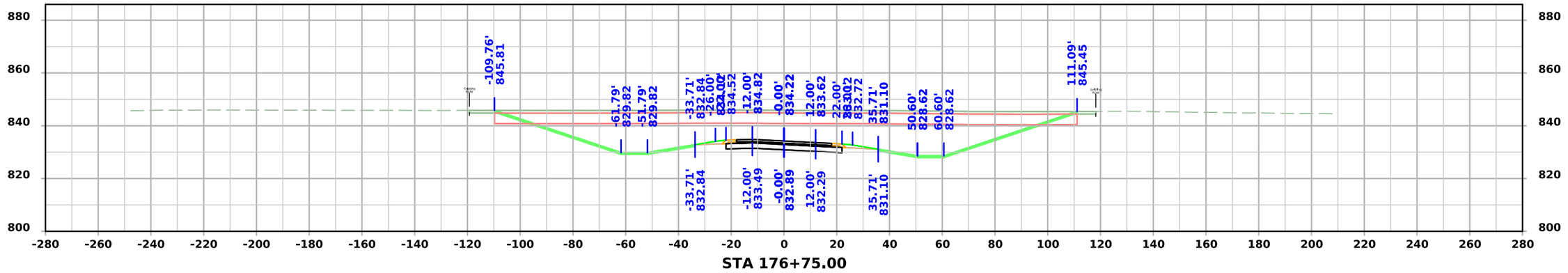


STA 175+50.00

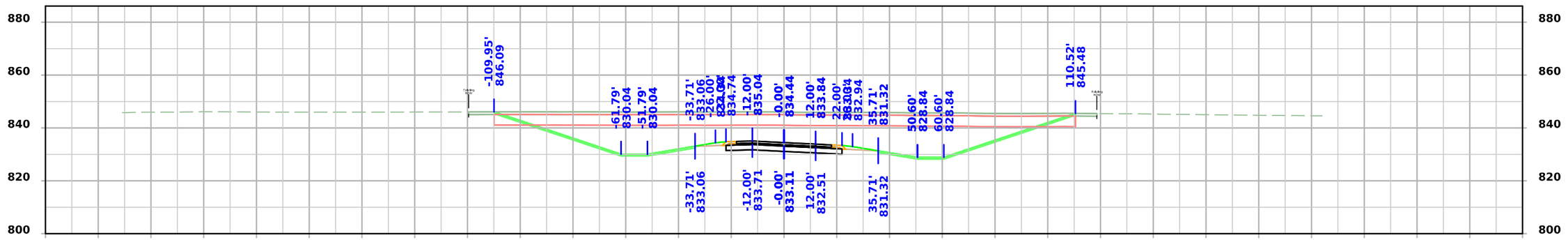
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.66

4:46:14 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

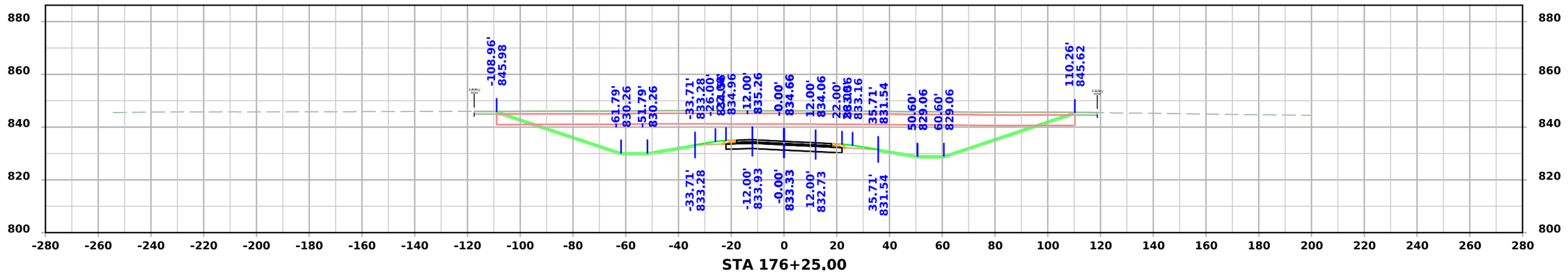
US 63



STA 176+75.00



STA 176+50.00

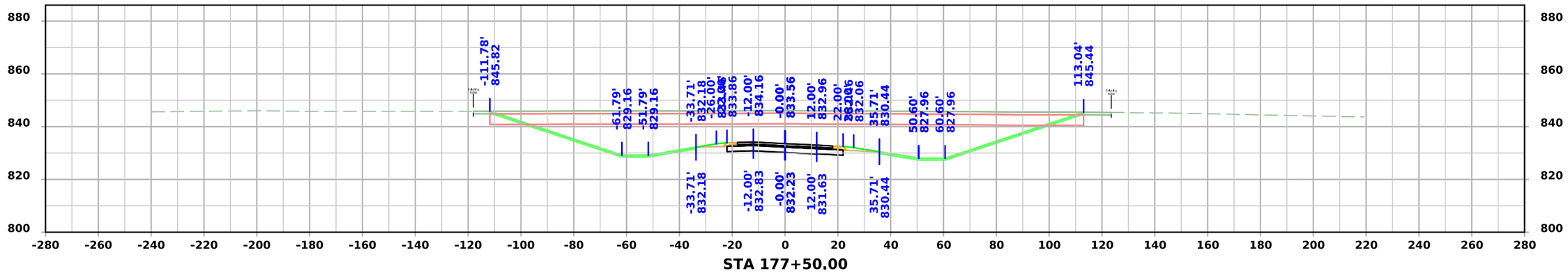


STA 176+25.00

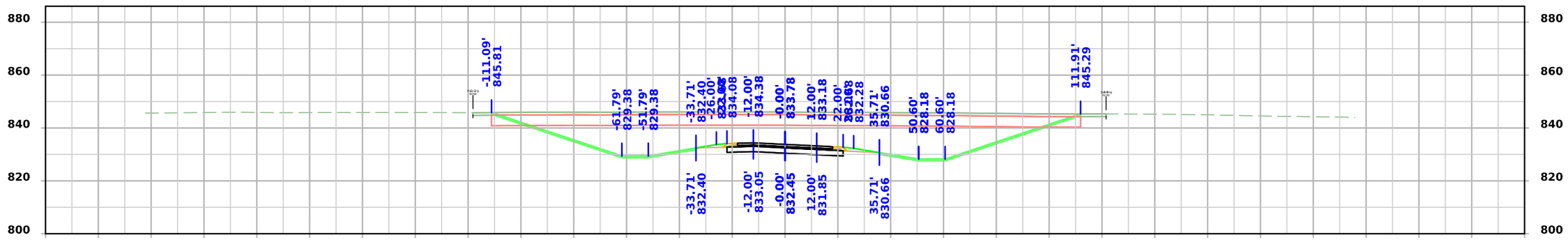
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.67

4:46:18 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

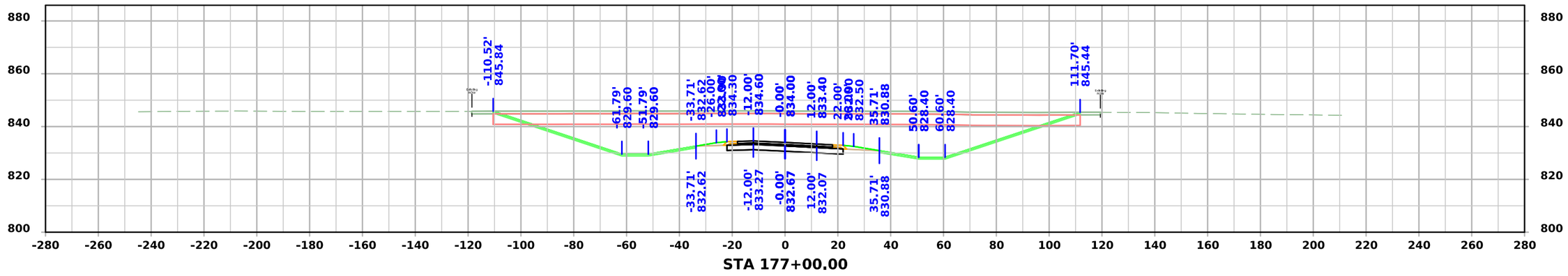
US 63



STA 177+50.00



STA 177+25.00

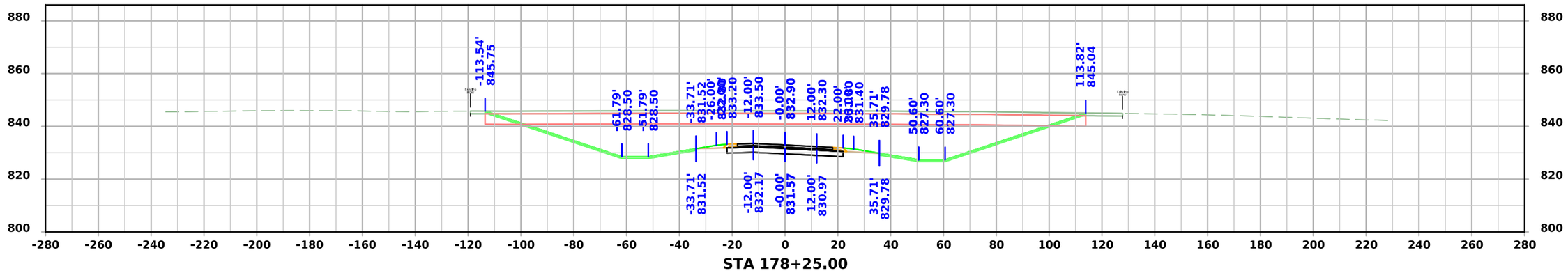


STA 177+00.00

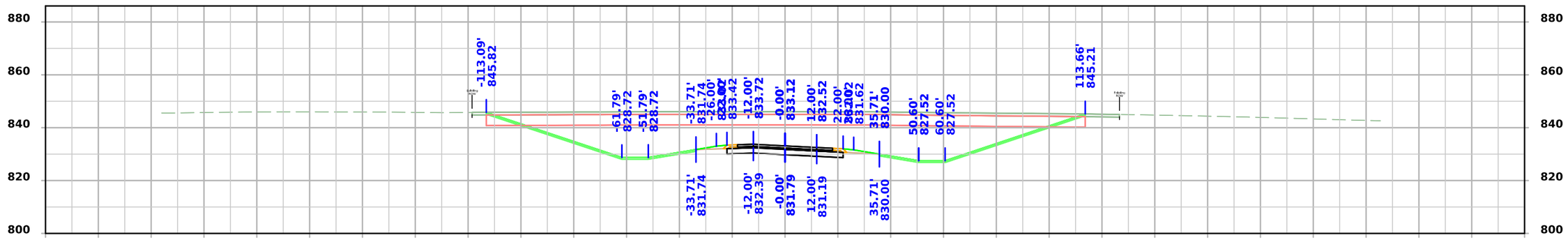
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.68

4:46:23 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

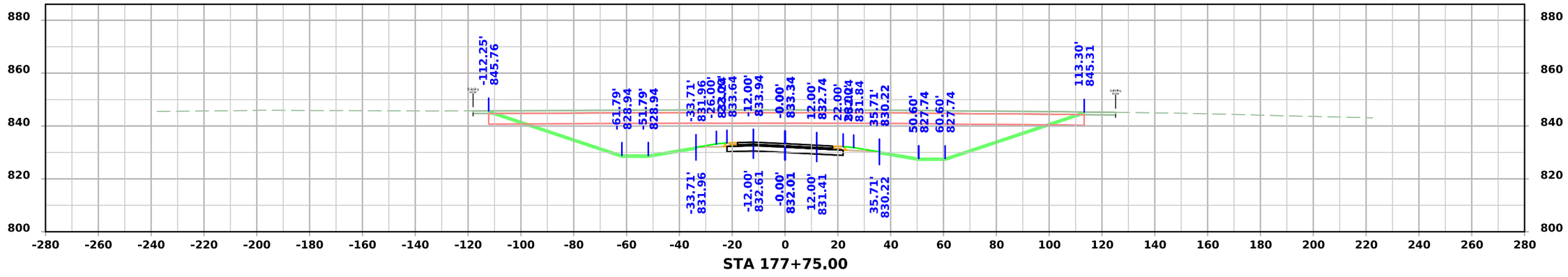
US 63



STA 178+25.00



STA 178+00.00

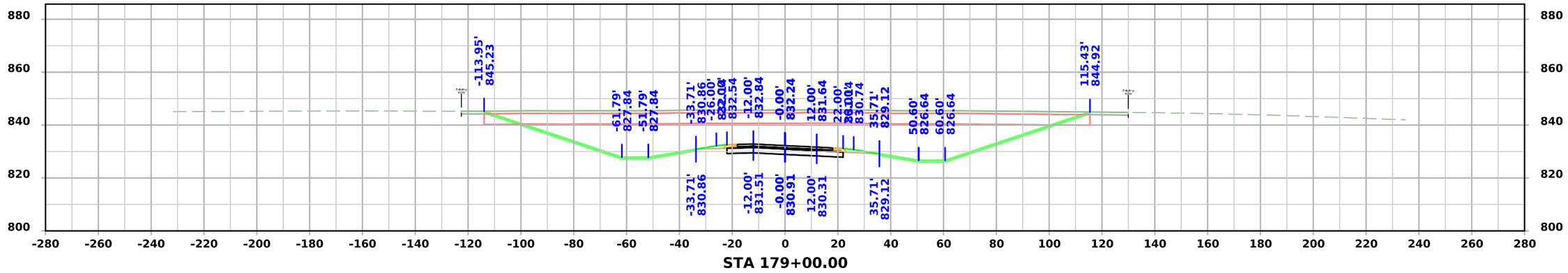


STA 177+75.00

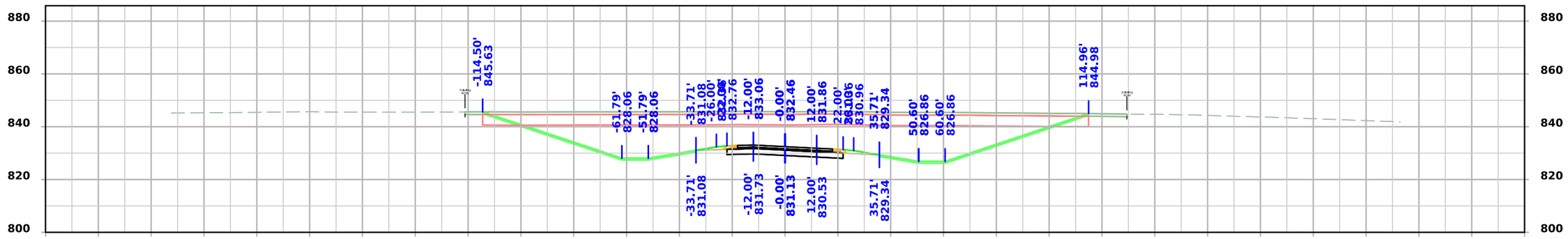
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.69

4:46:27 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

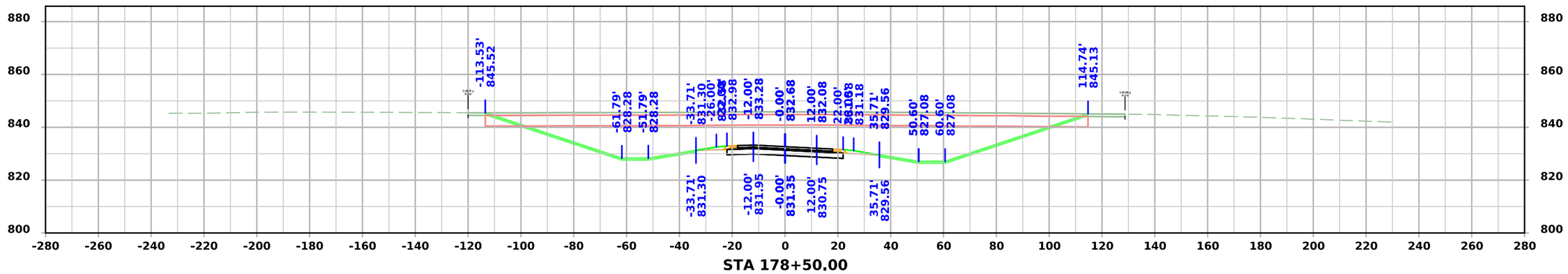
US 63



STA 179+00.00



STA 178+75.00

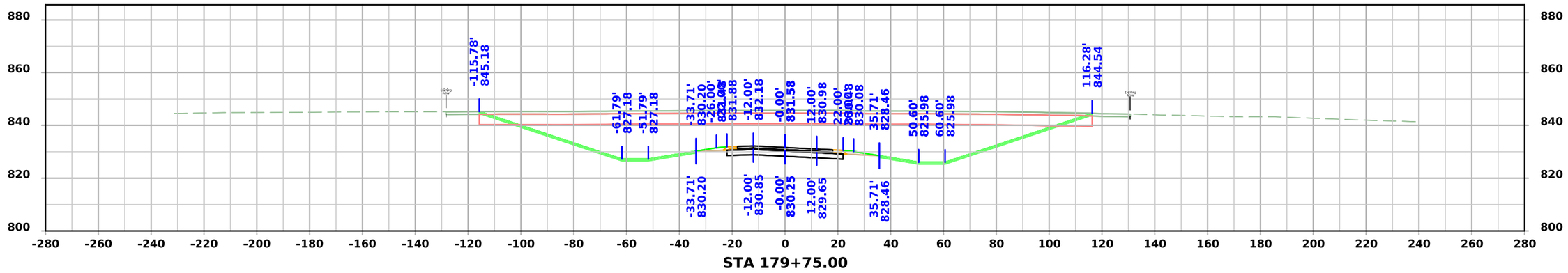


STA 178+50.00

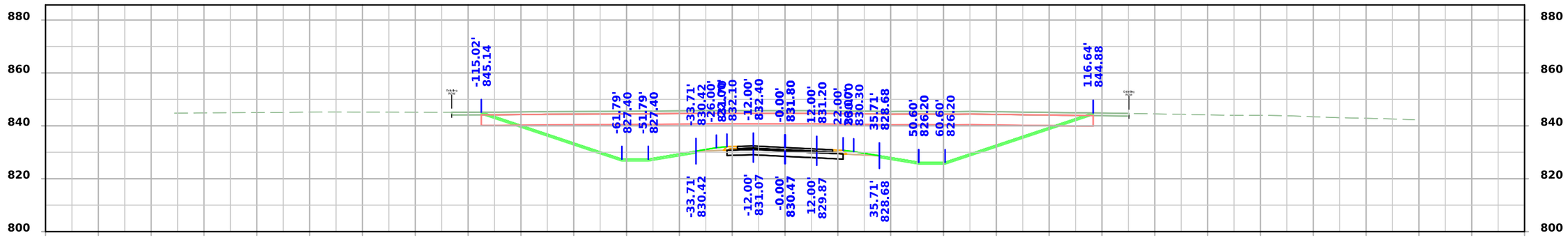
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.70

4:46:31 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

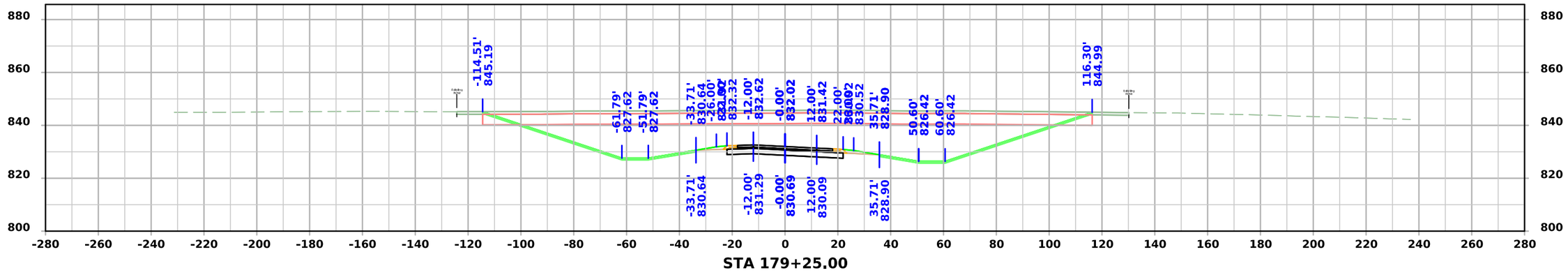
US 63



STA 179+75.00



STA 179+50.00

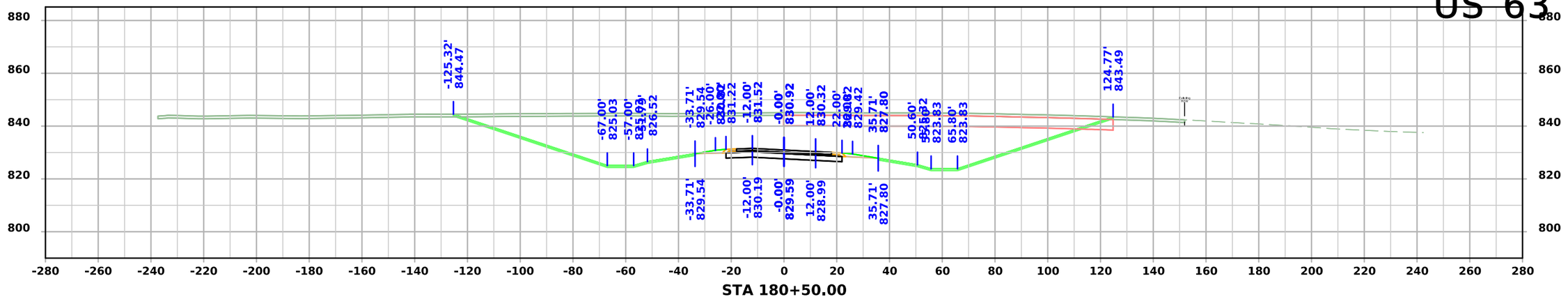


STA 179+25.00

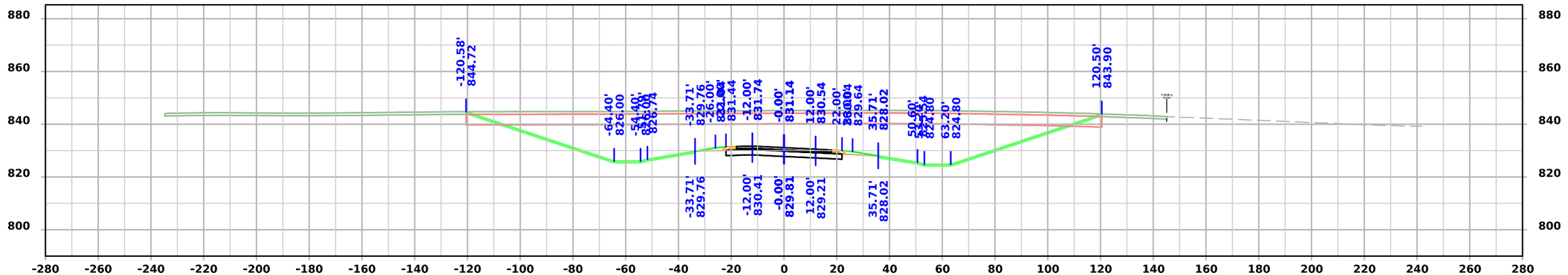
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.71

4:46:35 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

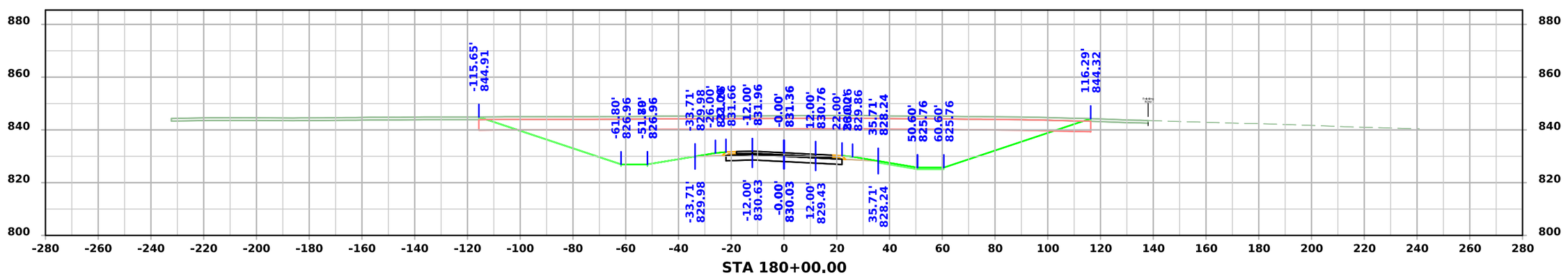
US 63



STA 180+50.00



STA 180+25.00

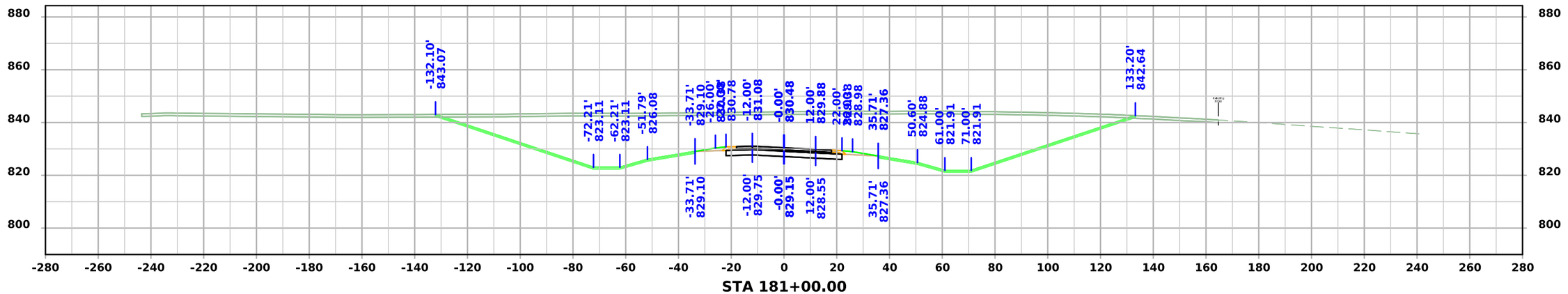


STA 180+00.00

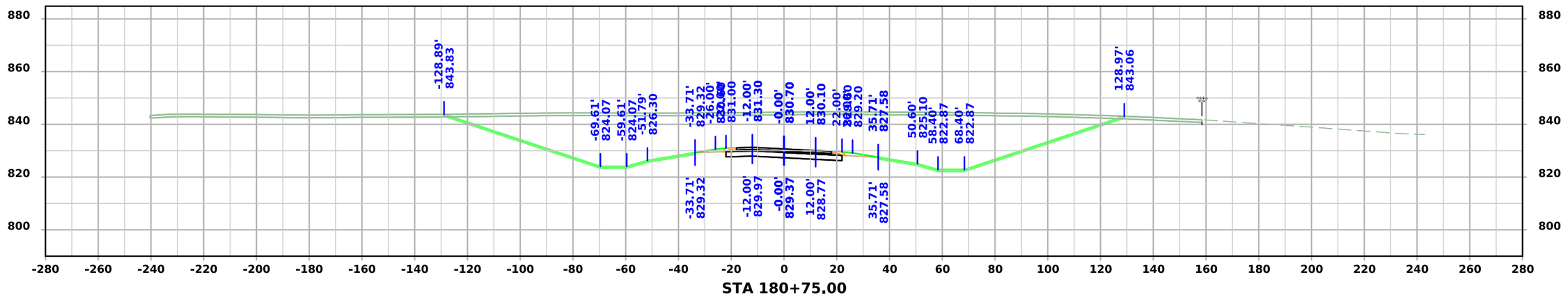
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.72

4:46:39 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



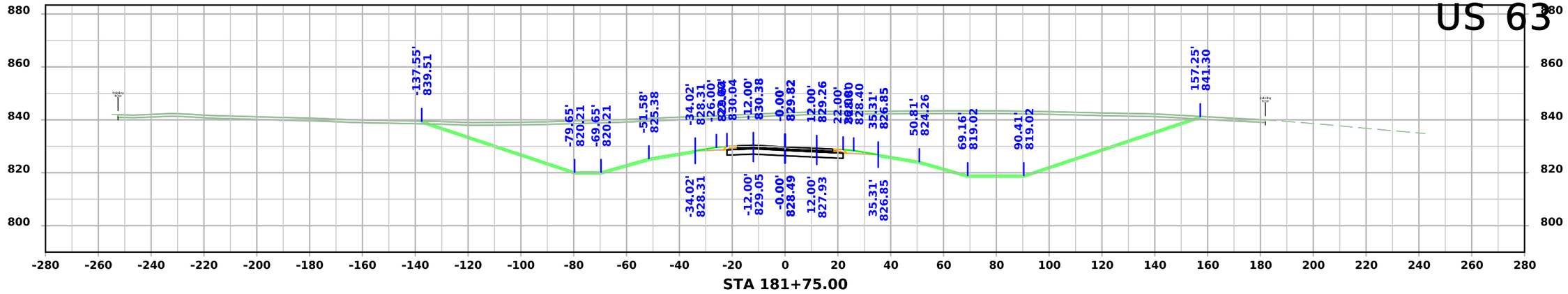
STA 181+00.00



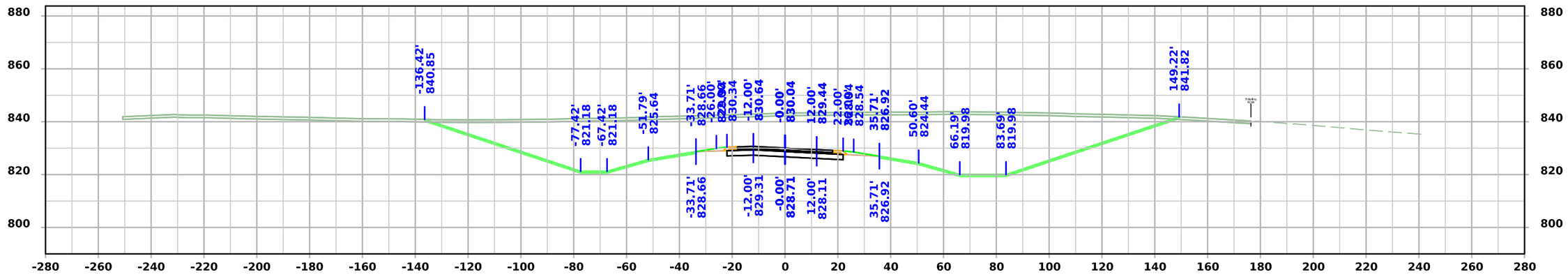
STA 180+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.73

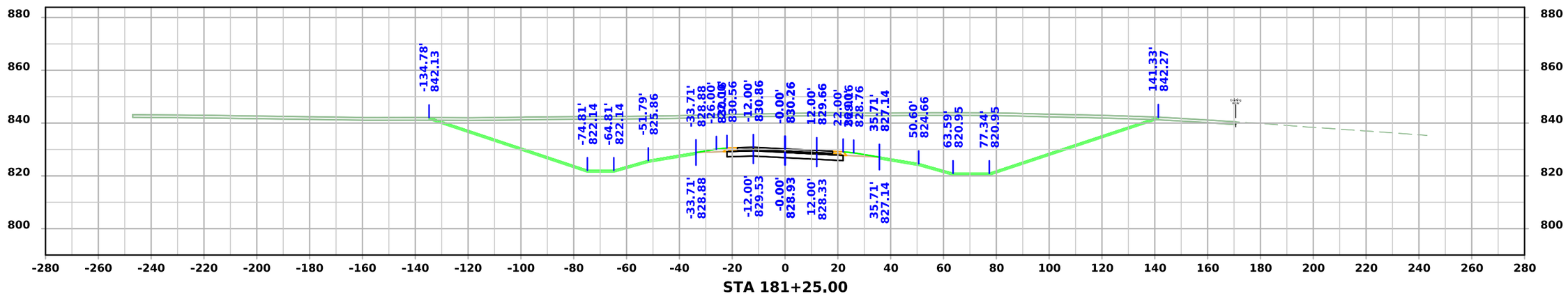
4:46:42 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn



STA 181+75.00



STA 181+50.00

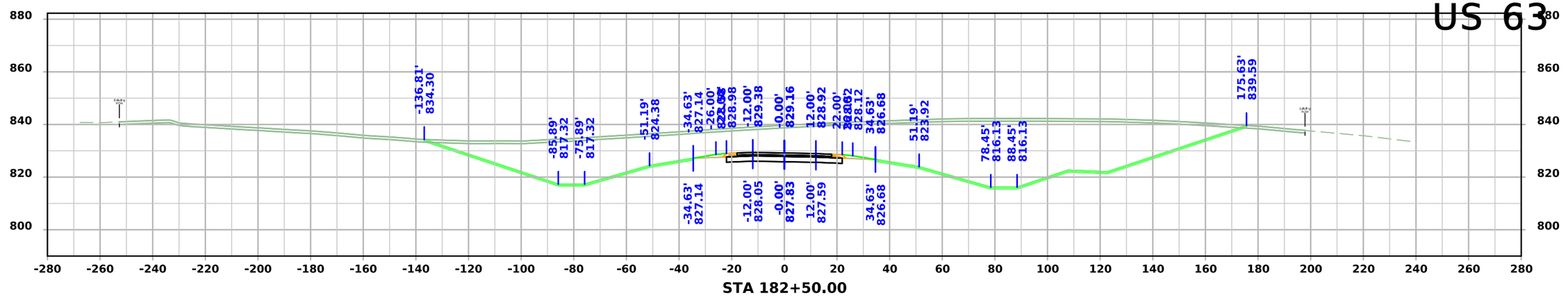


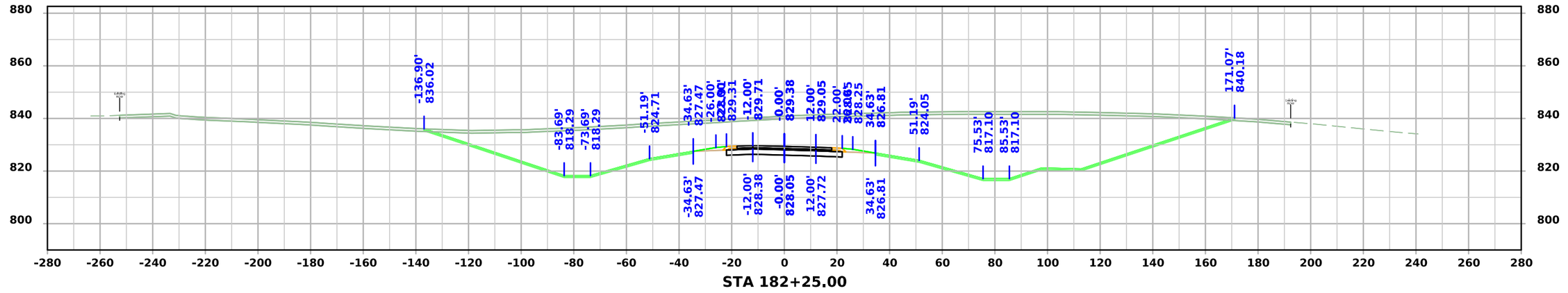
STA 181+25.00

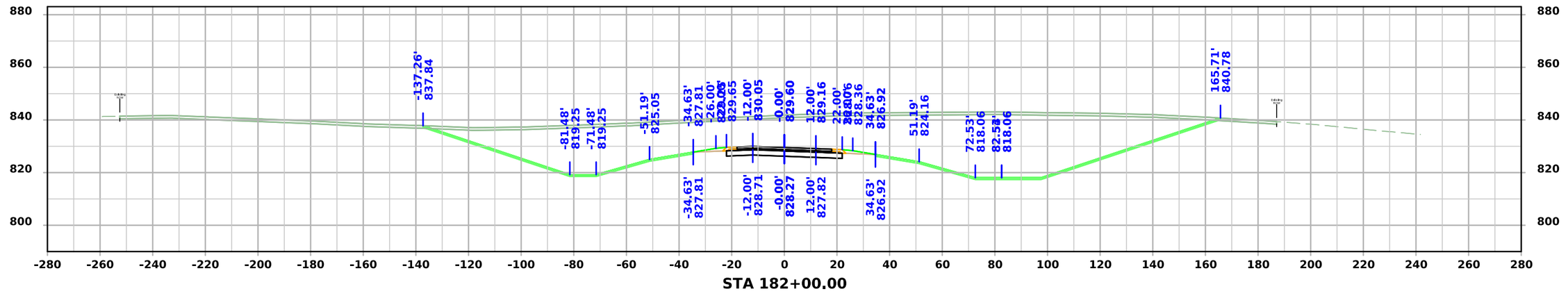
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.74

4:46:46 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



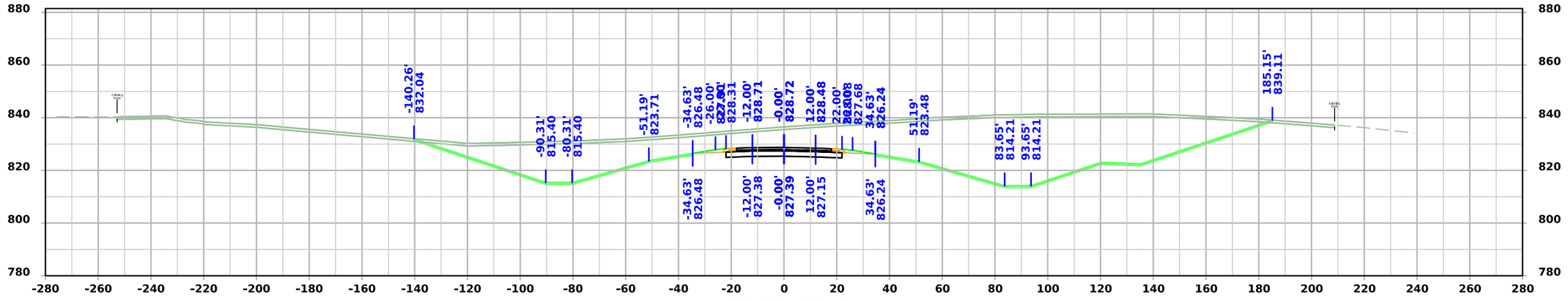




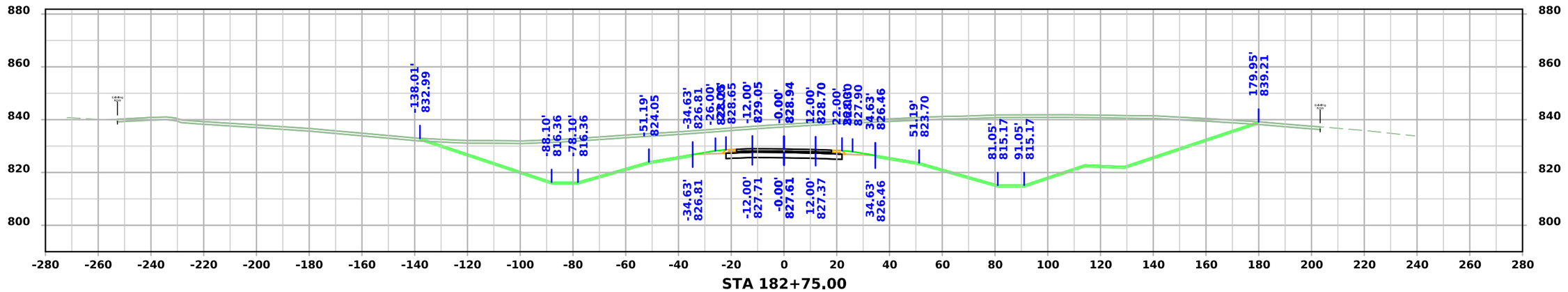
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.75

4:46:50 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 183+00.00

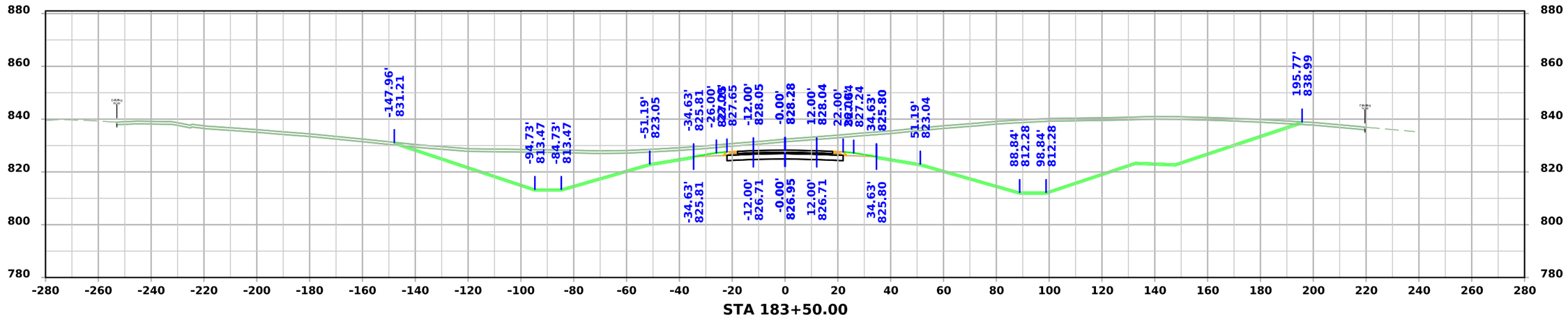


STA 182+75.00

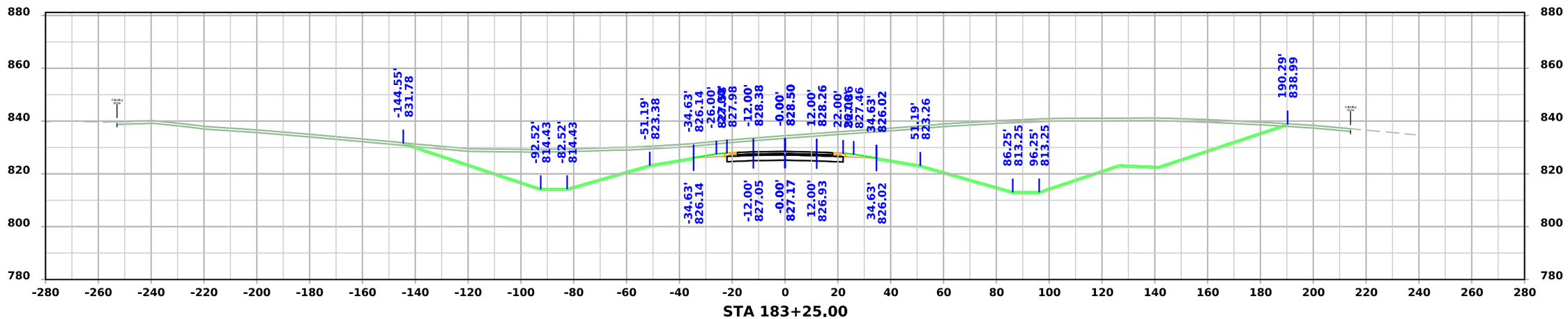
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.76

4:46:53 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 183+50.00

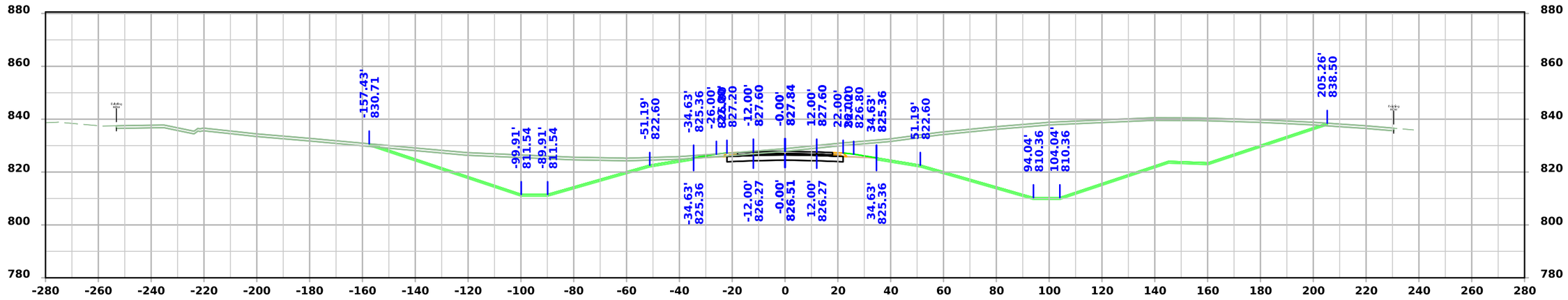


STA 183+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.77

4:46:56 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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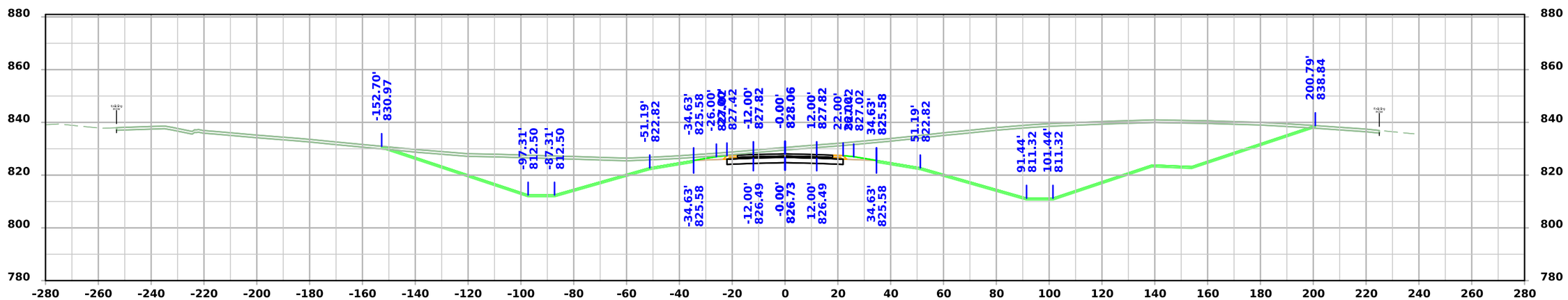

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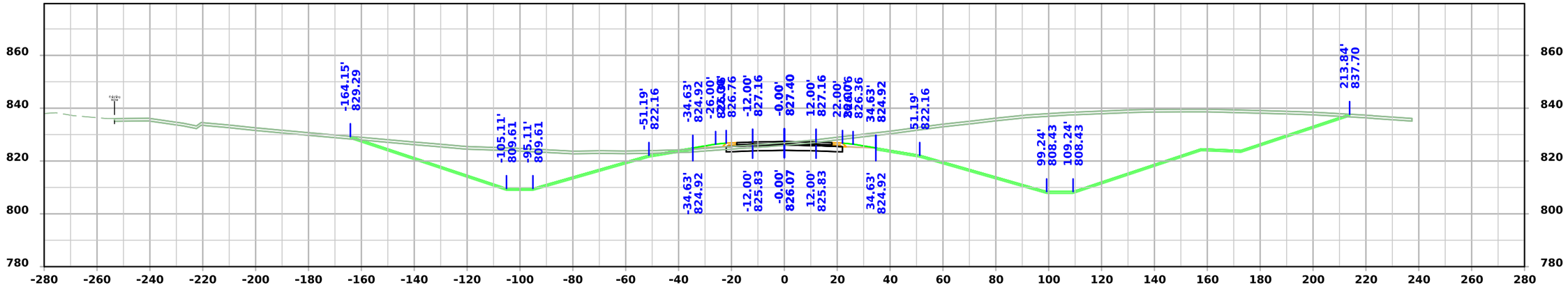
4:46:58 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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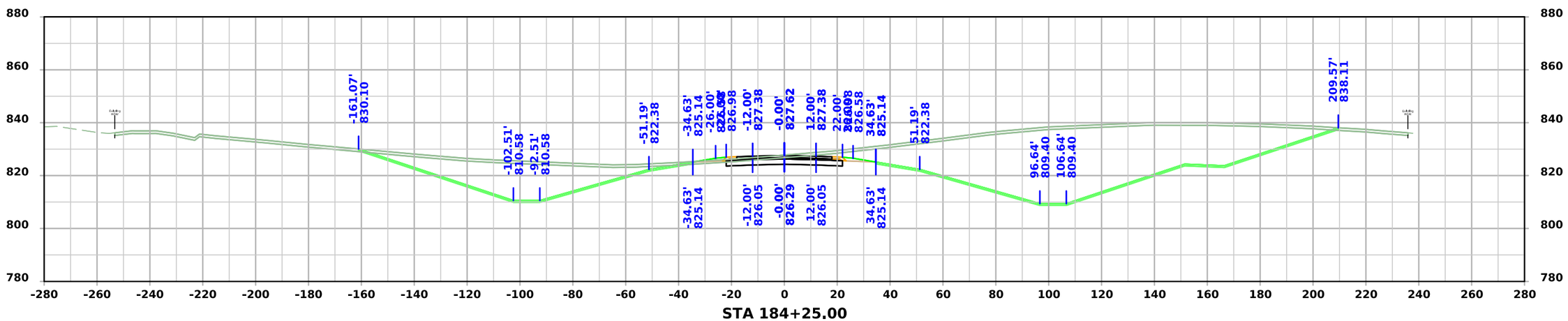

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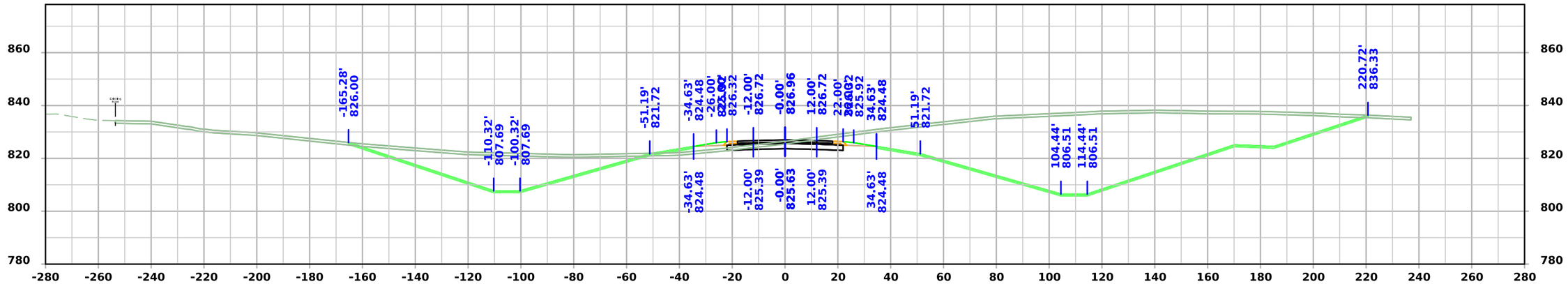
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.79

4:47:01 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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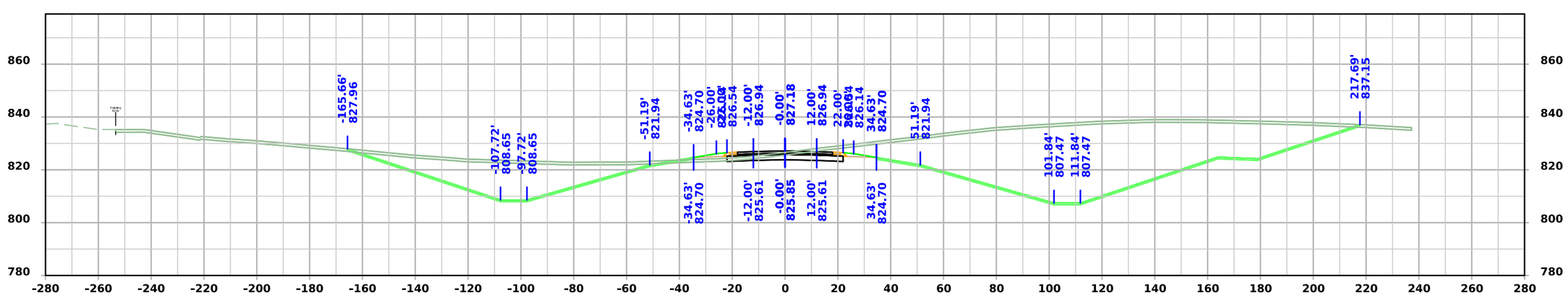

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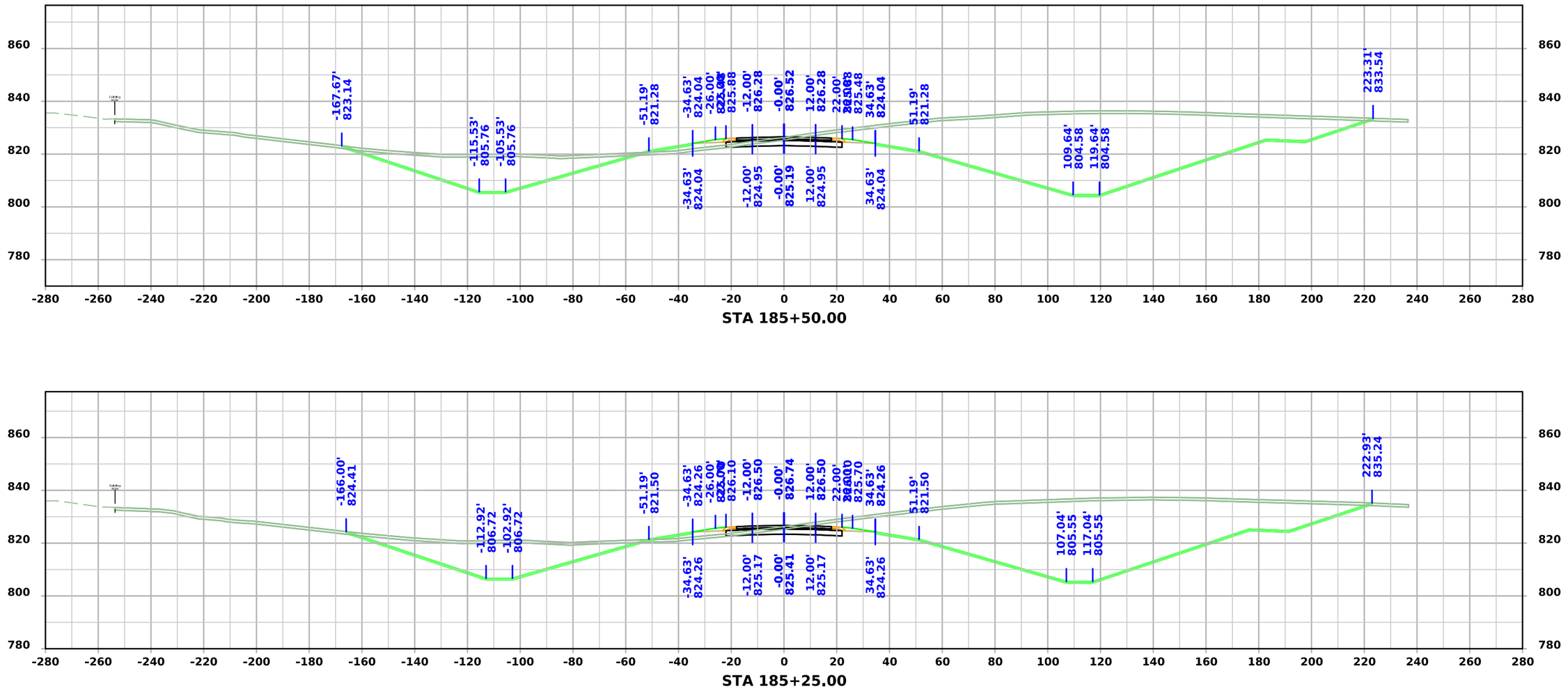
4:47:04 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 185+50.00

STA 185+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.81

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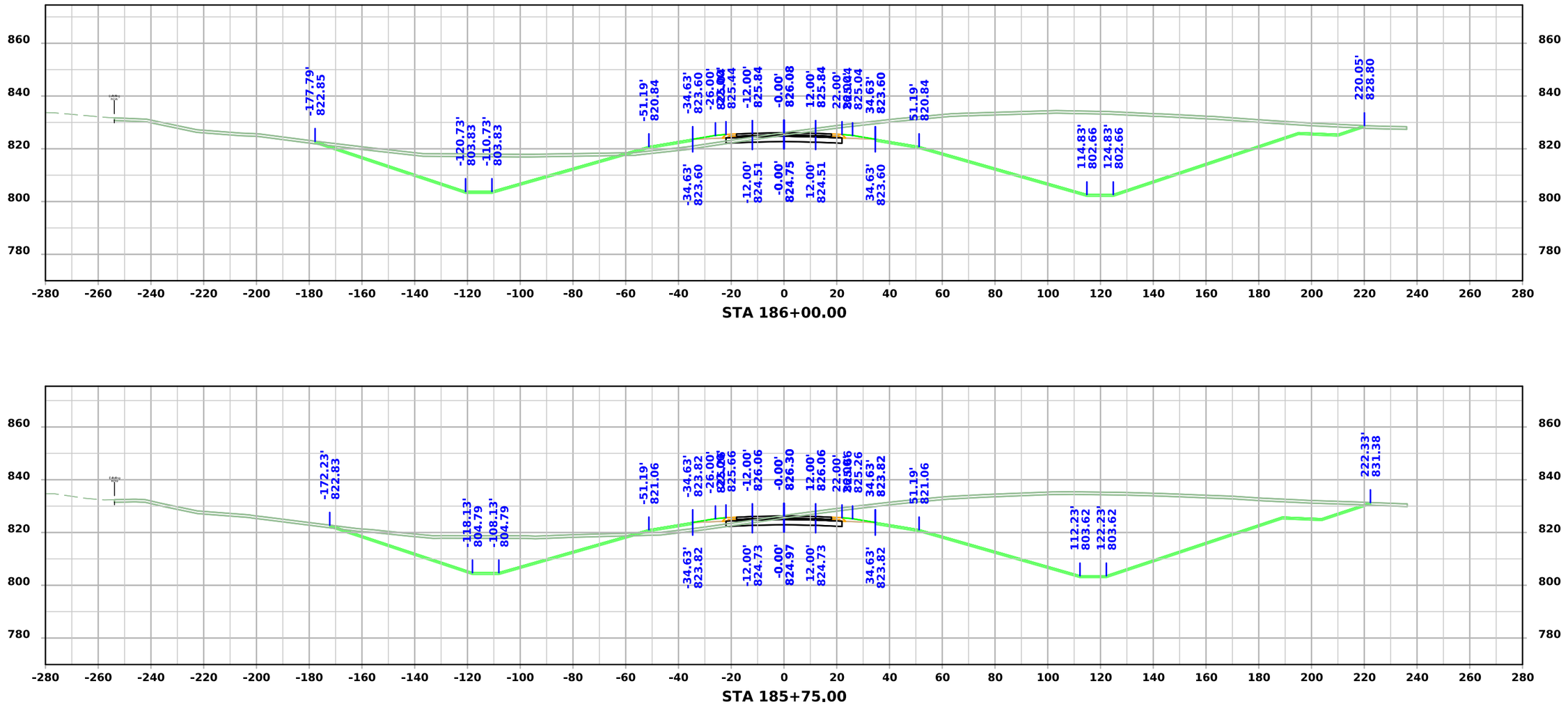
US 63



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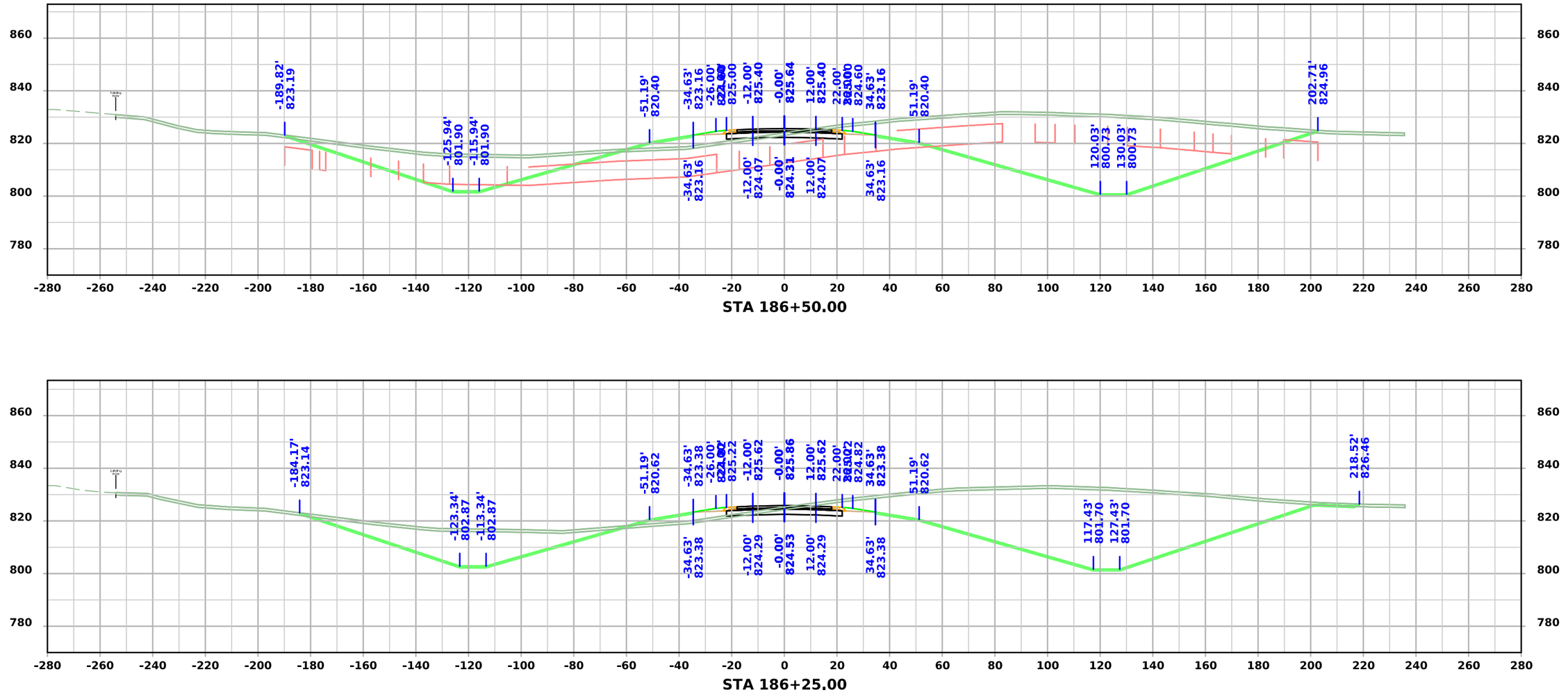
STA 185+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.82

4:47:10 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



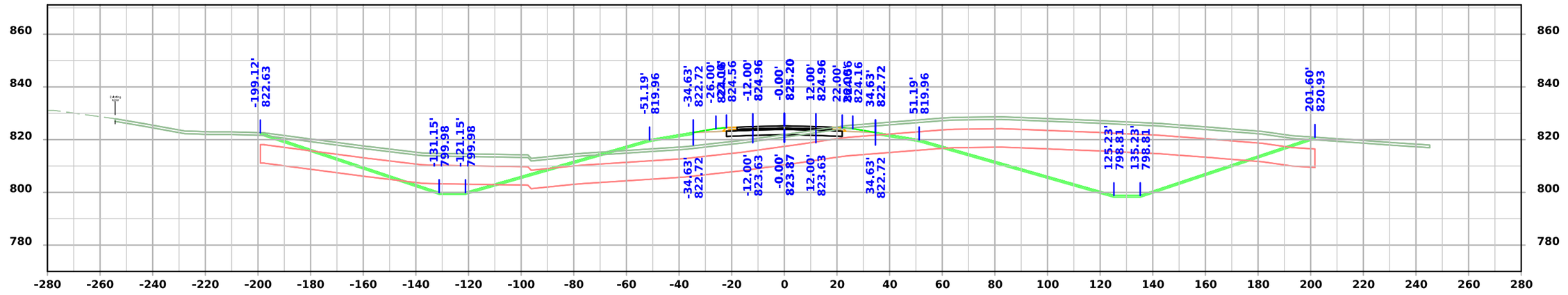
STA 186+50.00

STA 186+25.00

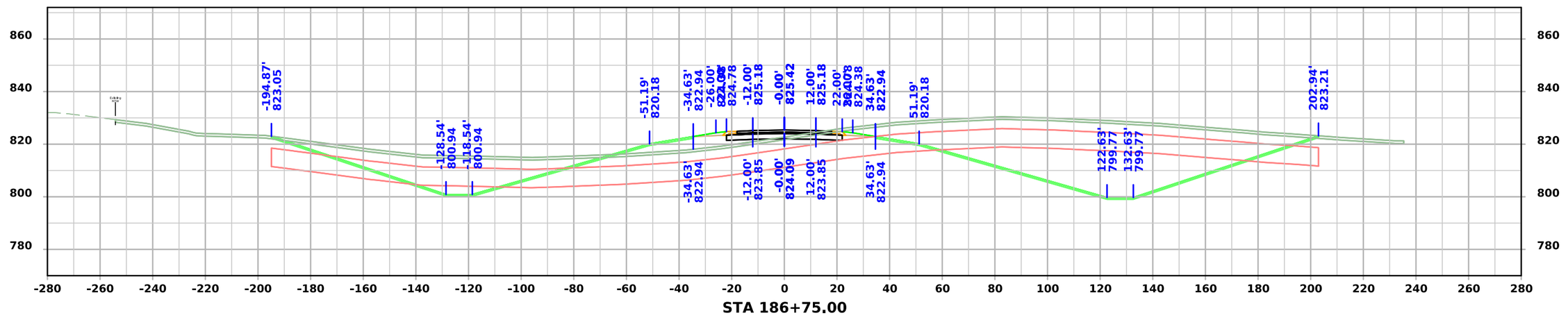
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.83

4:47:13 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 187+00.00

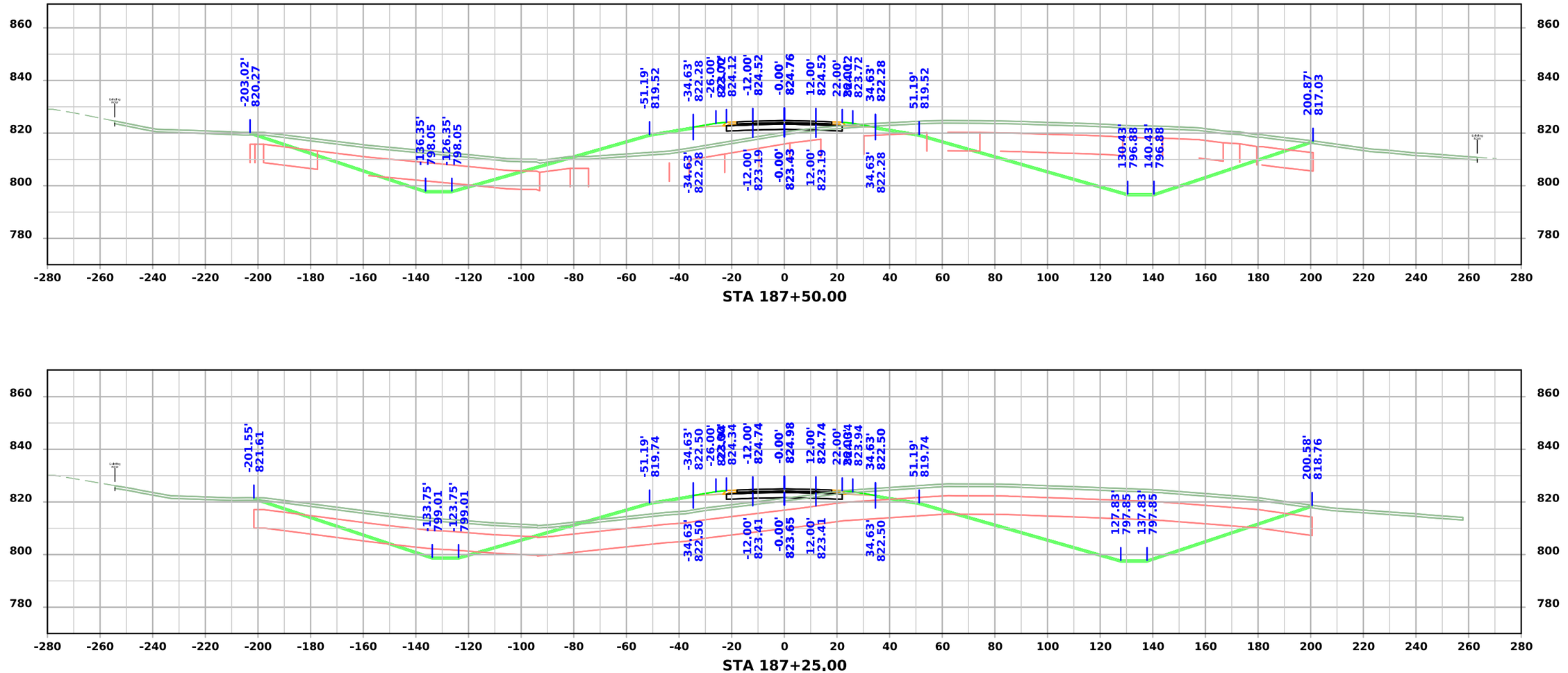


STA 186+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.84

4:47:16 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 187+50.00

STA 187+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.85

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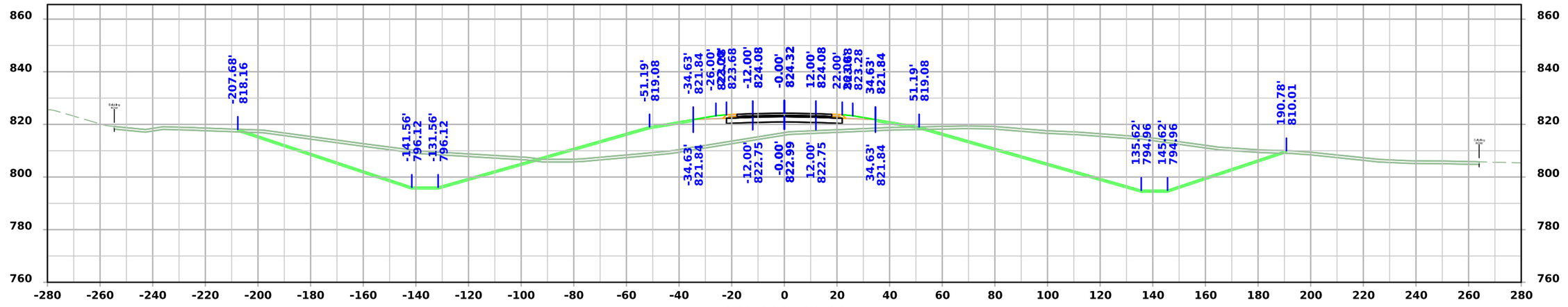
US 63



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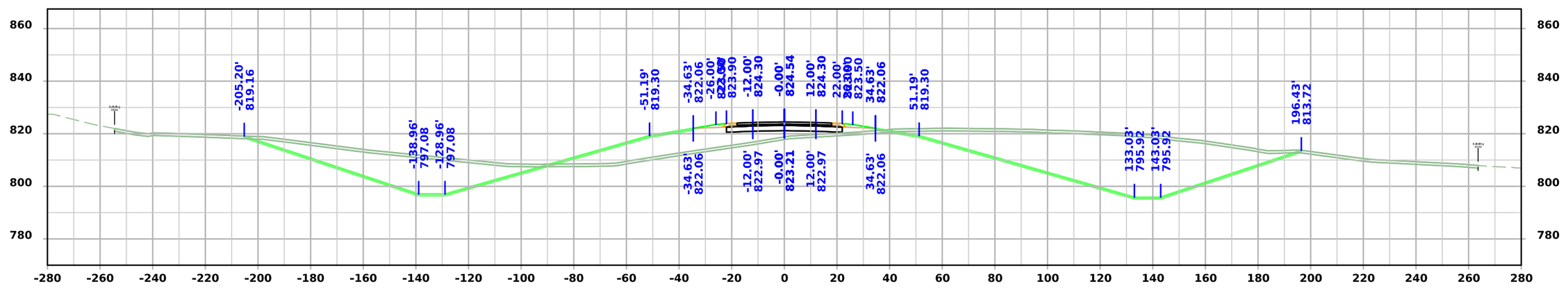

STA 187+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.86

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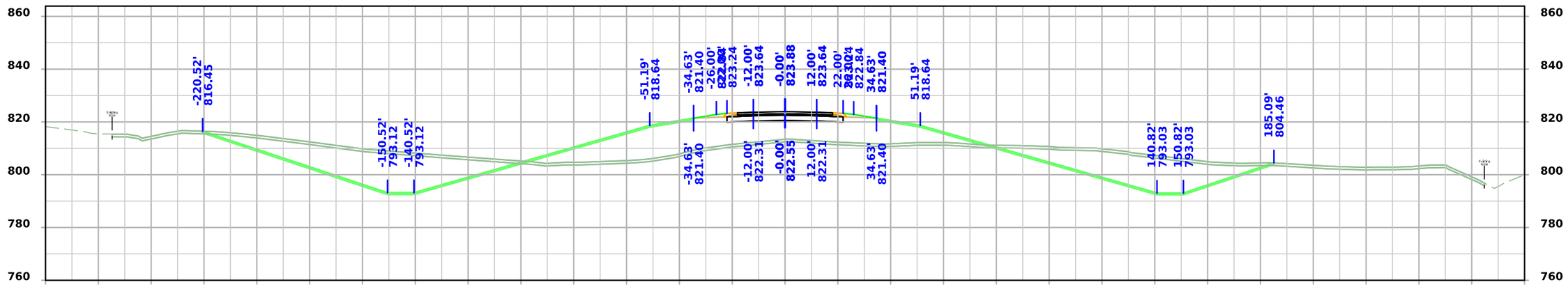
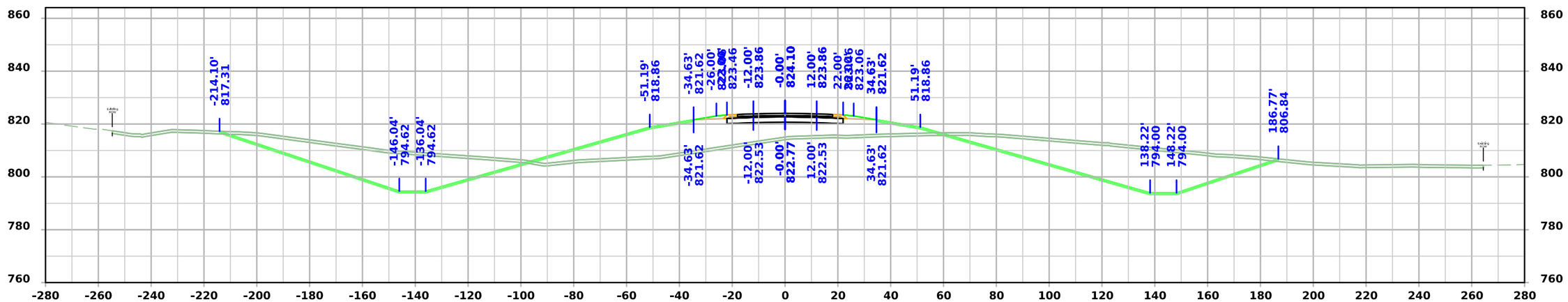
US 63



STA 188+50.00

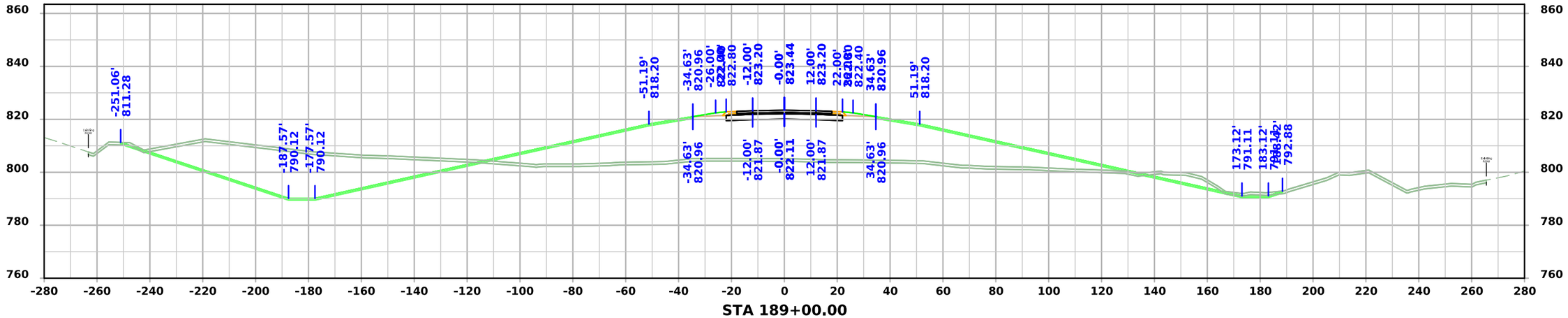


STA 188+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.87

4:47:25 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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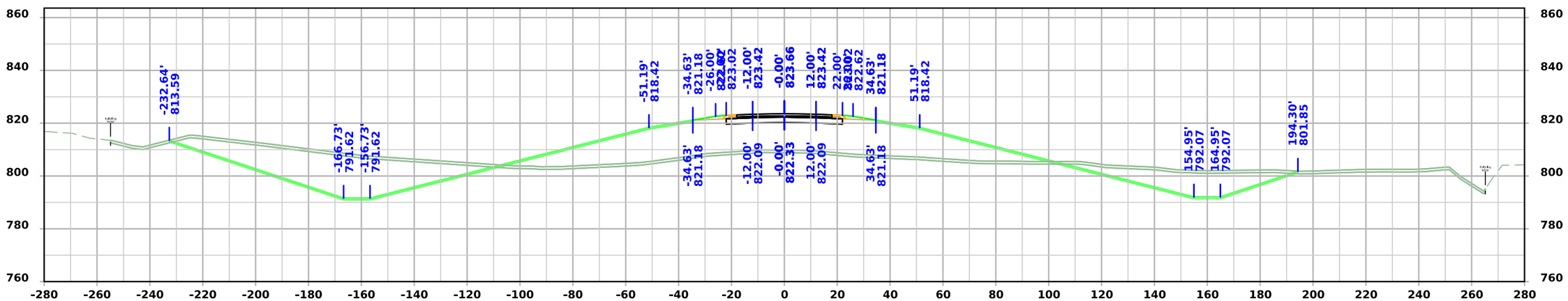

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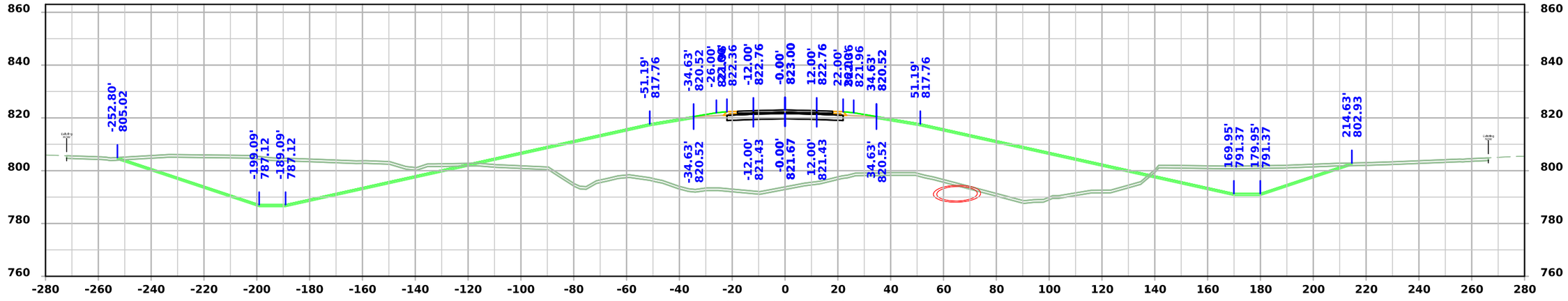
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.88

4:47:28 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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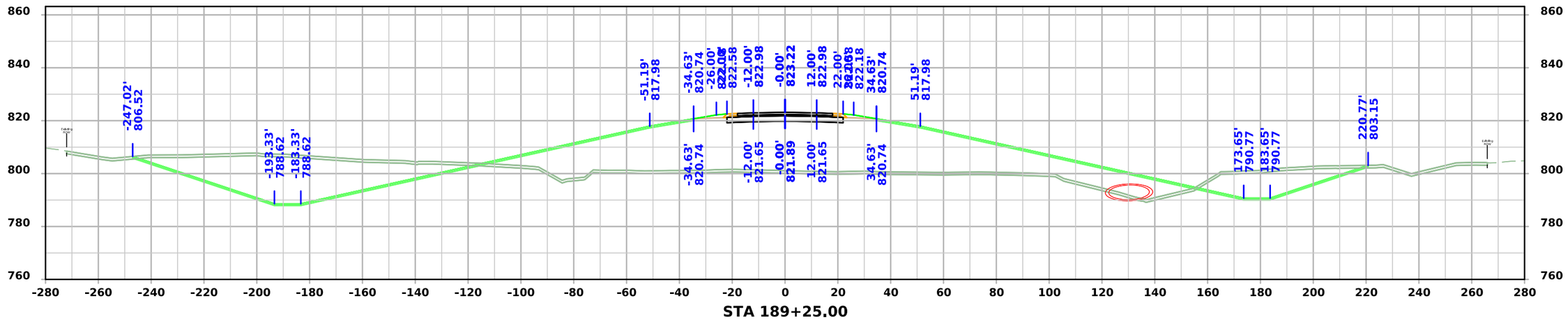
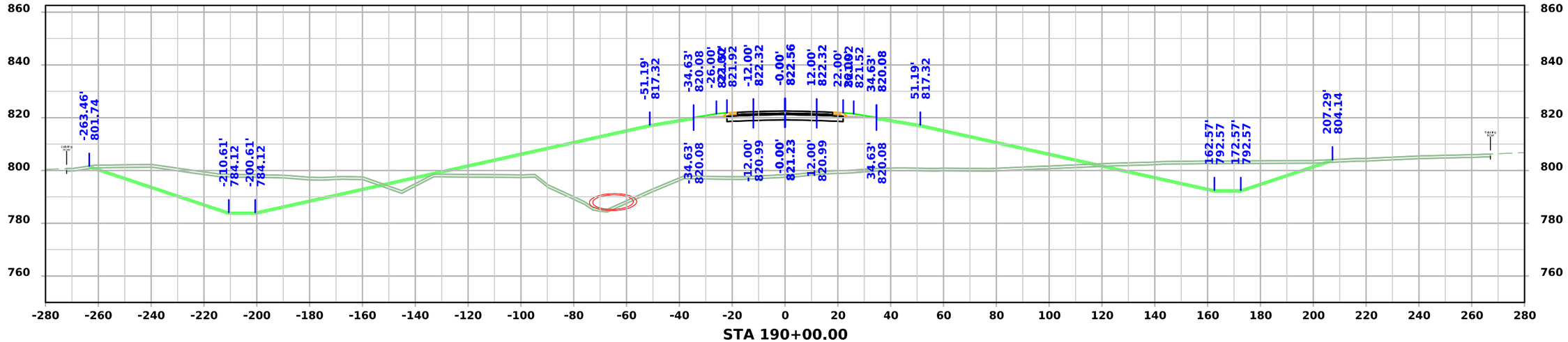


STA 189+25.00

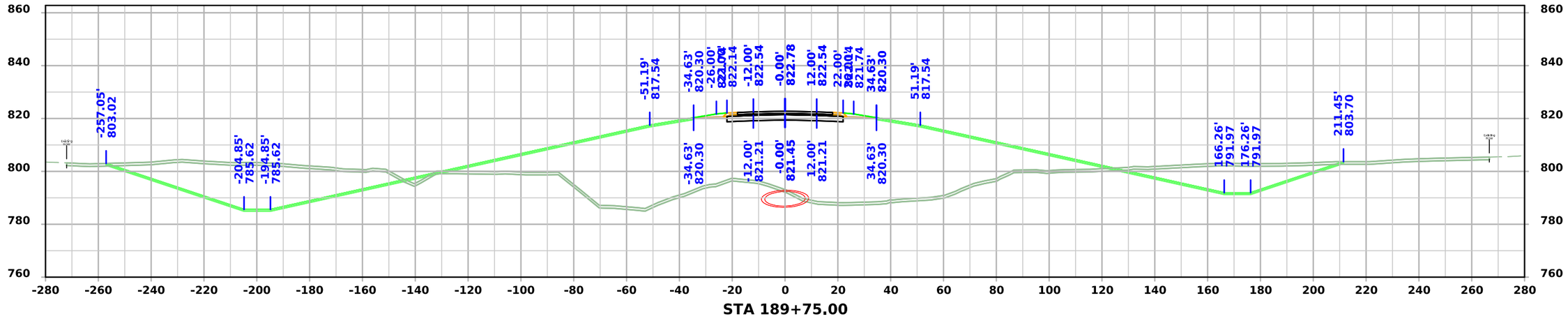
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.89

4:47:31 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 190+00.00

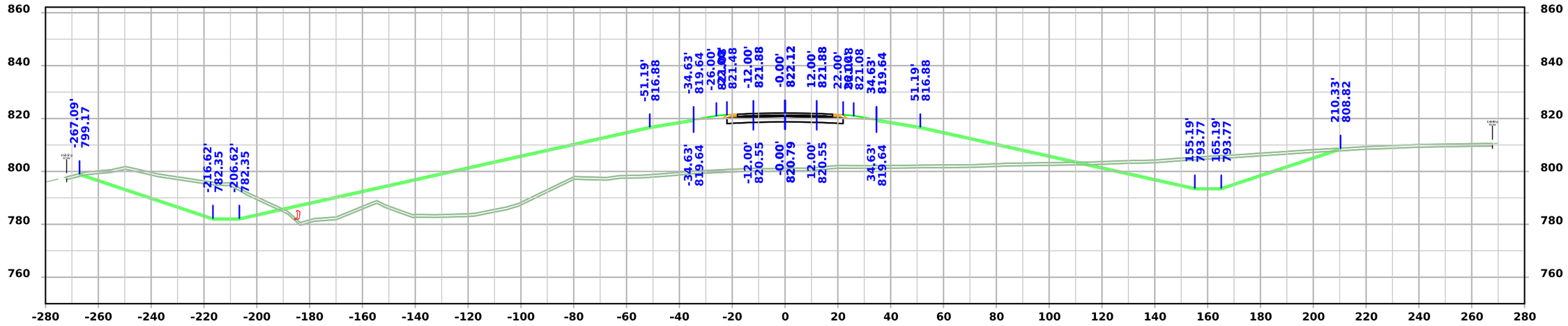


STA 189+75.00

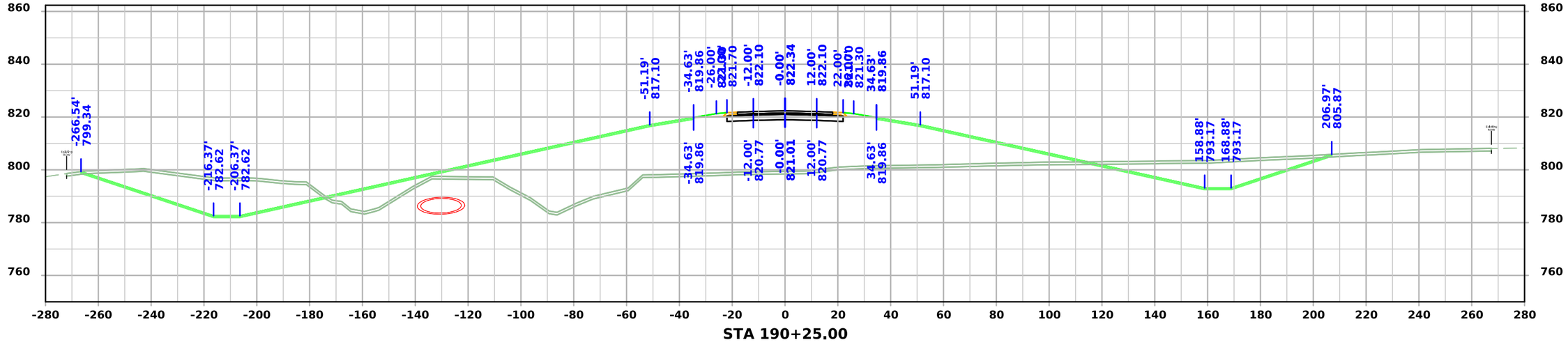
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.90

4:47:34 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 190+50.00

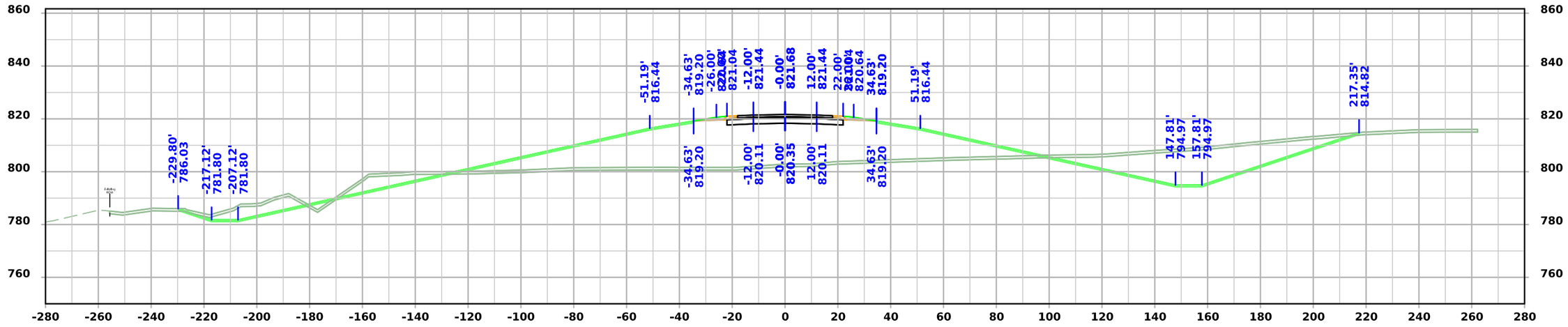


STA 190+25.00

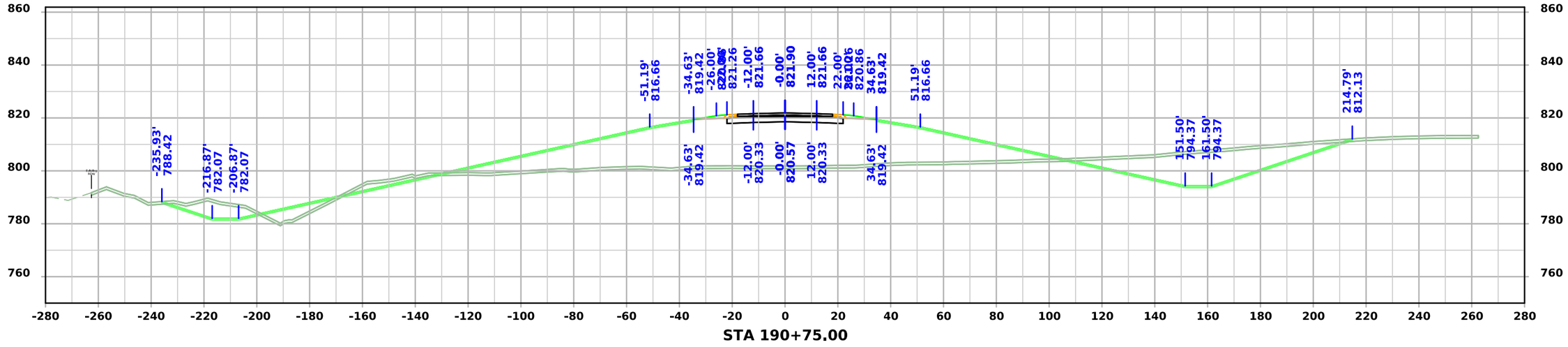
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.91

4:47:37 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 191+00.00

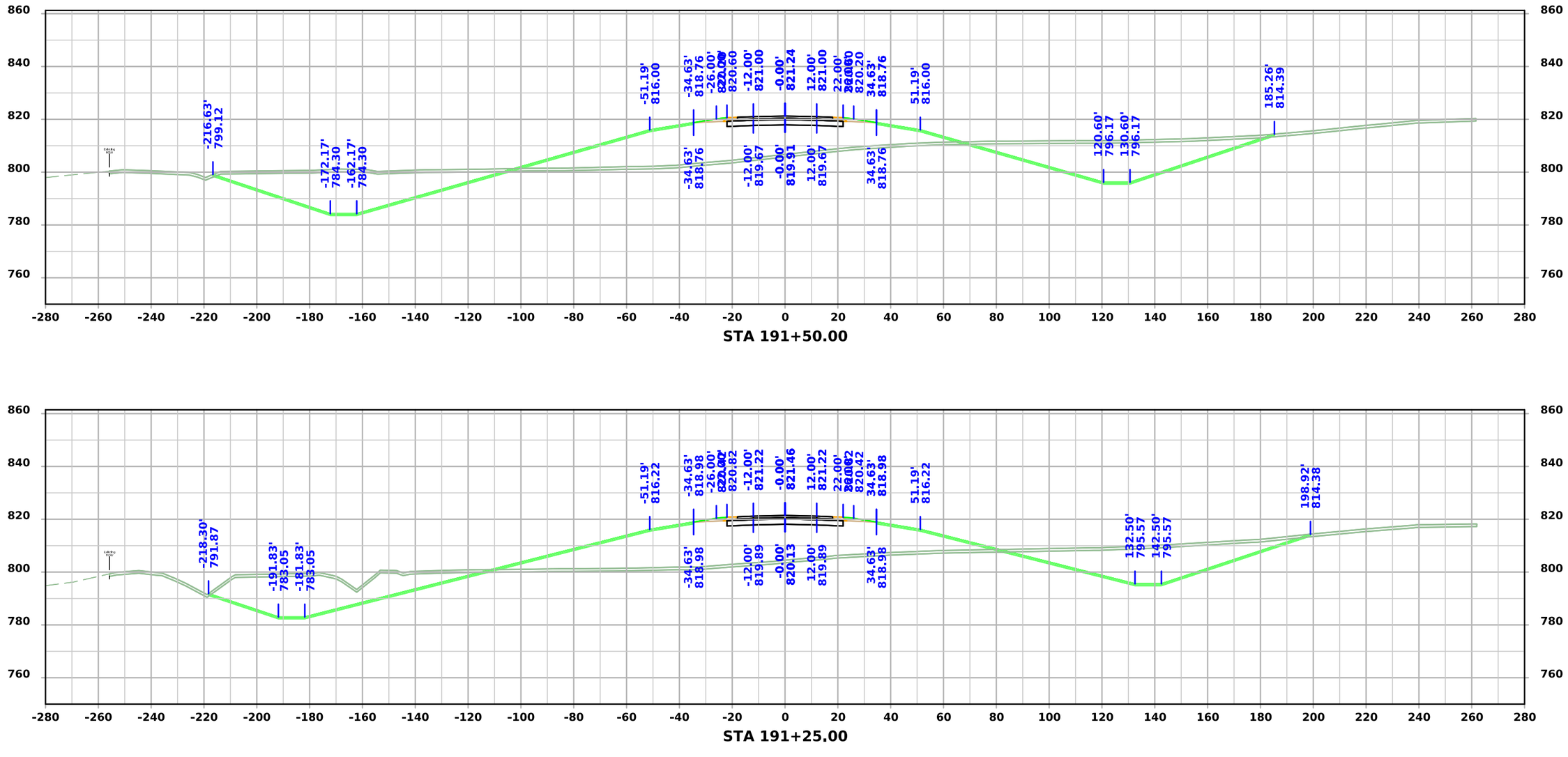


STA 190+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.92

4:47:40 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

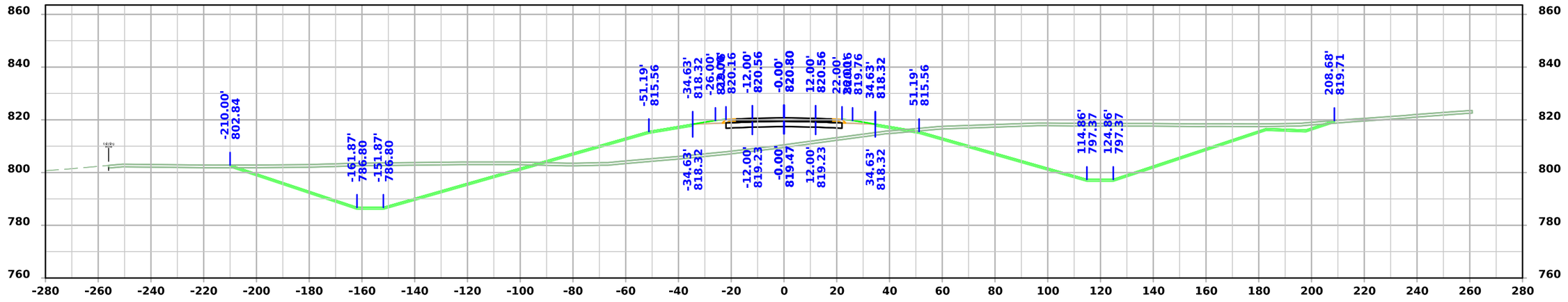
US 63



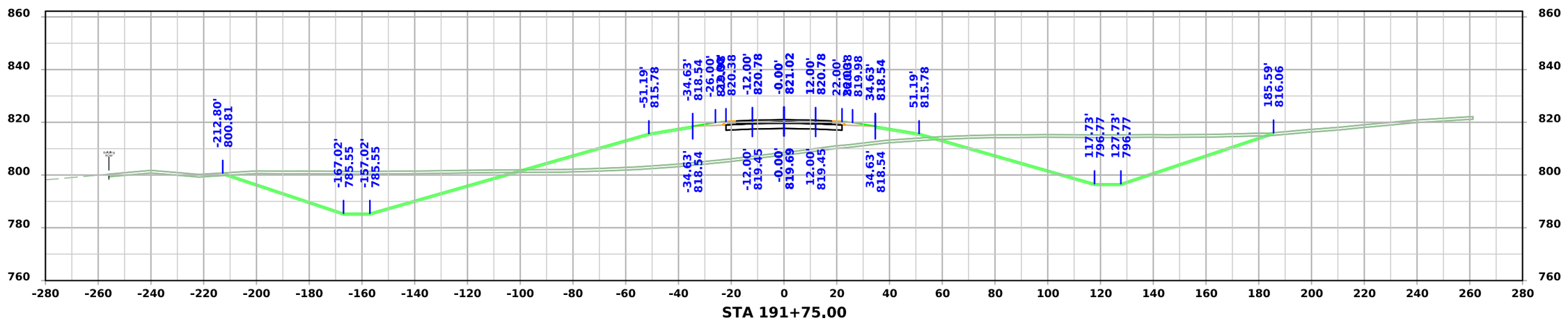
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.93

4:47:43 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 192+00.00

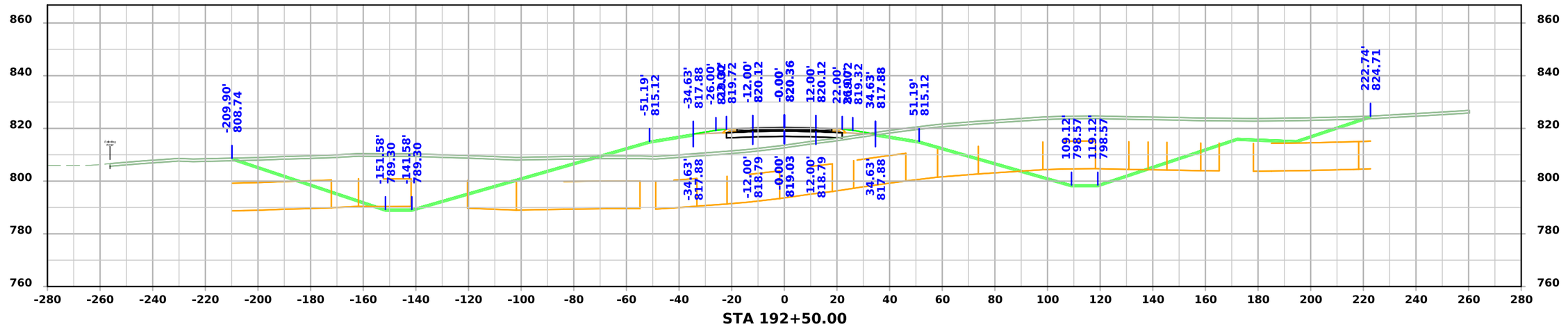


STA 191+75.00

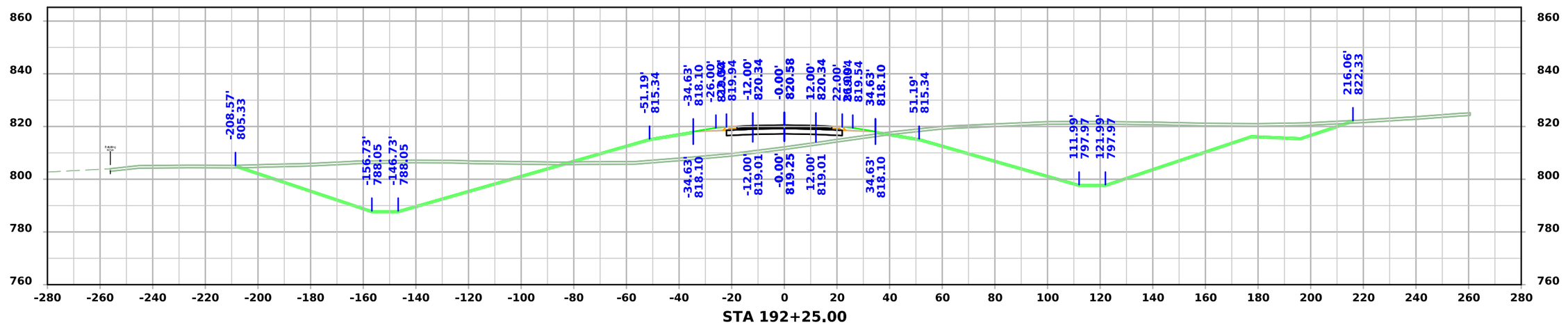
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.94

4:47:46 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 192+50.00

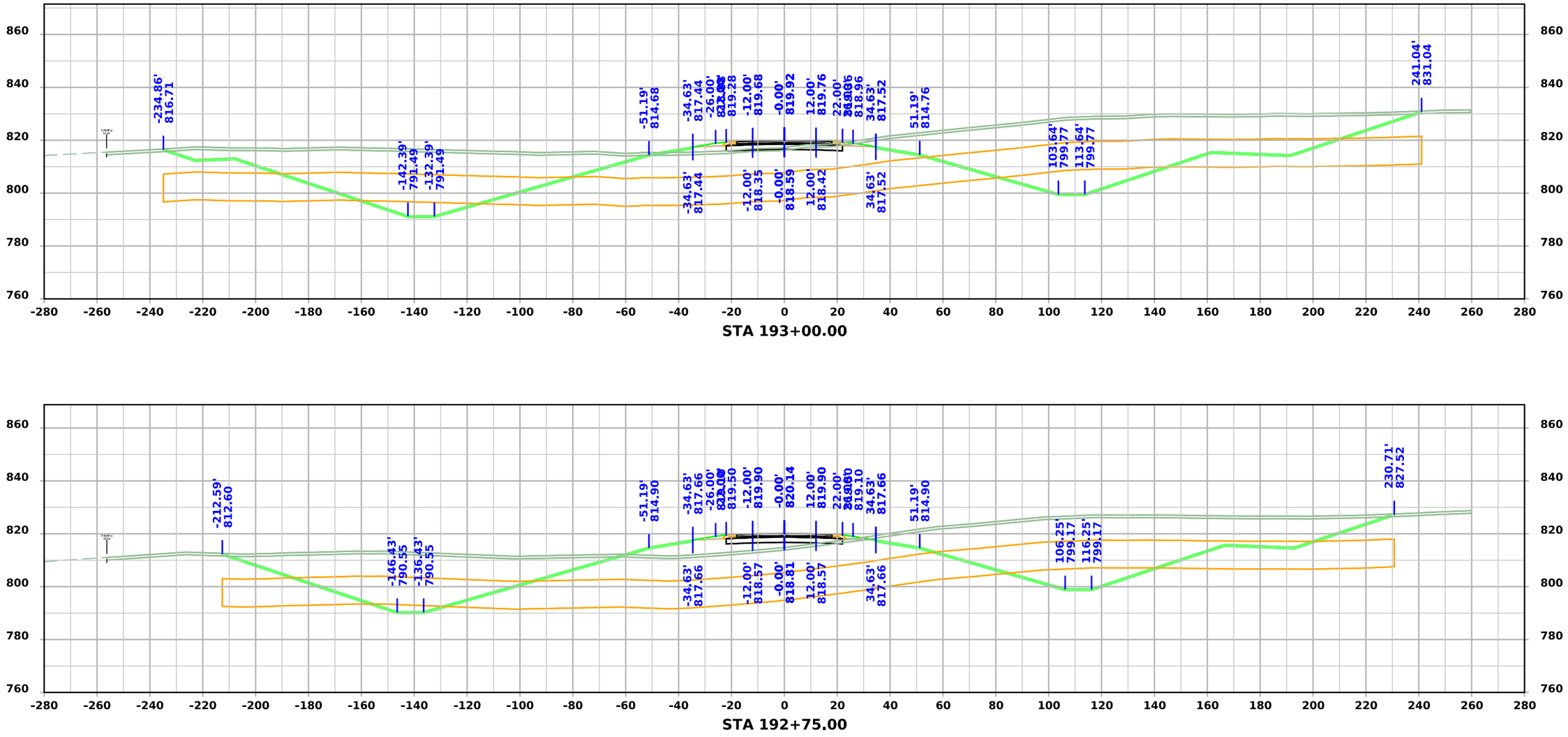


STA 192+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.95

4:47:49 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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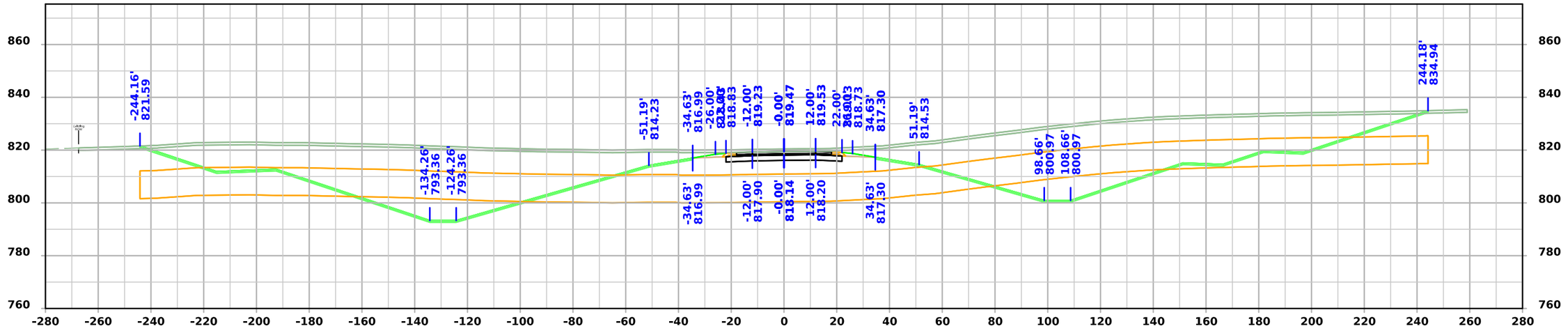
US 63



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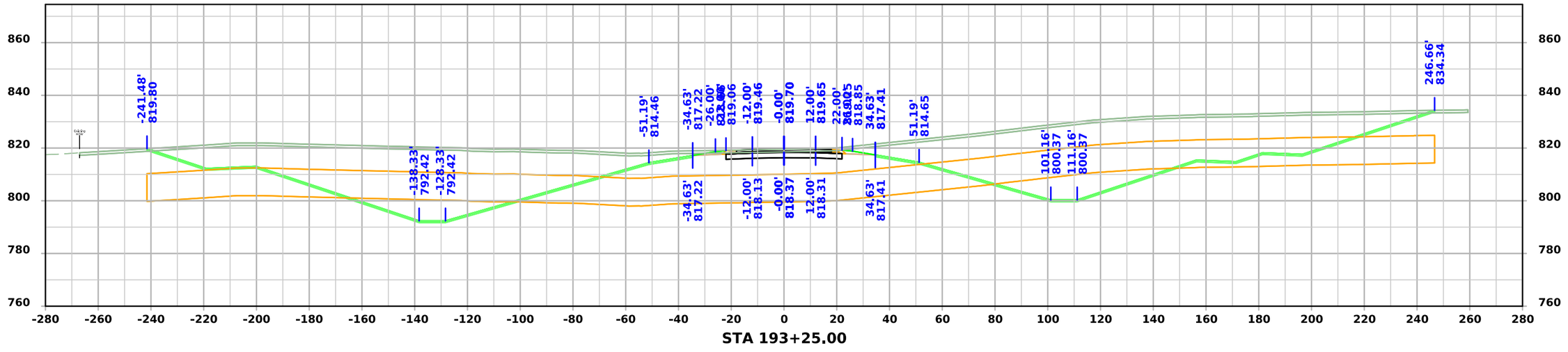
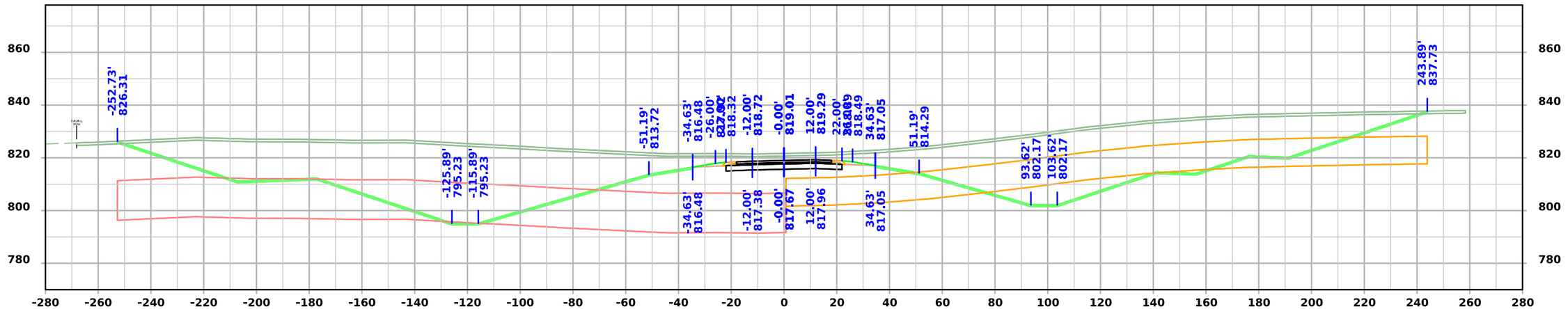


STA 193+25.00

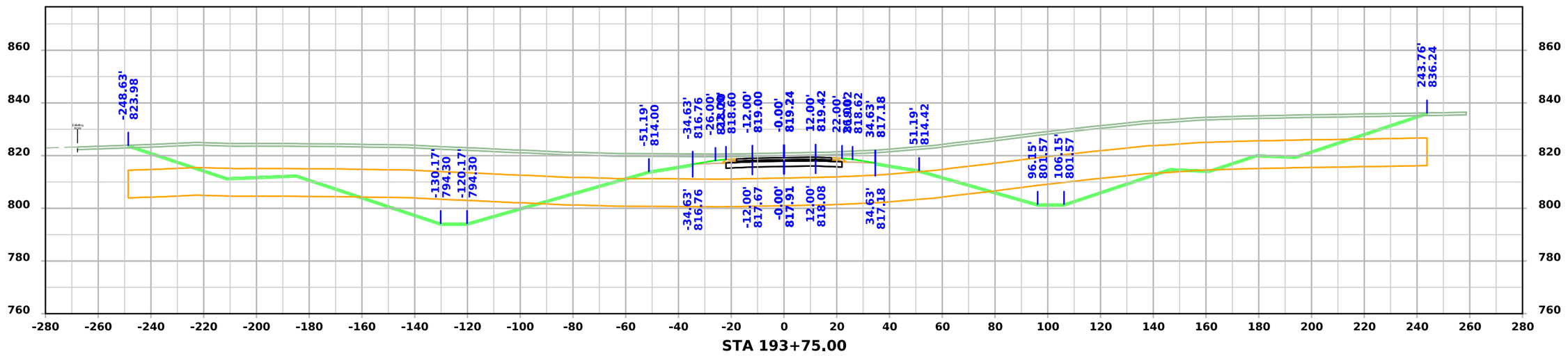
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.97

4:47:55 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 194+00.00

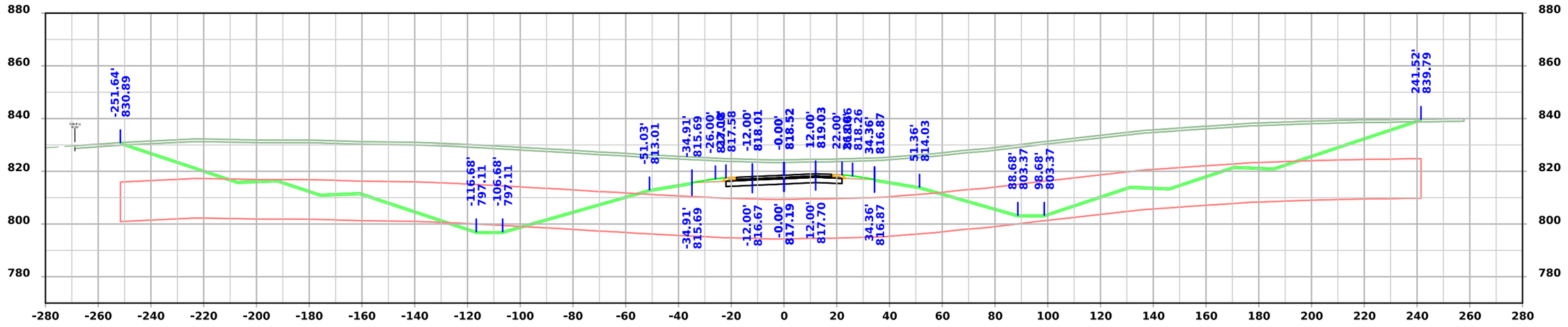


STA 193+75.00

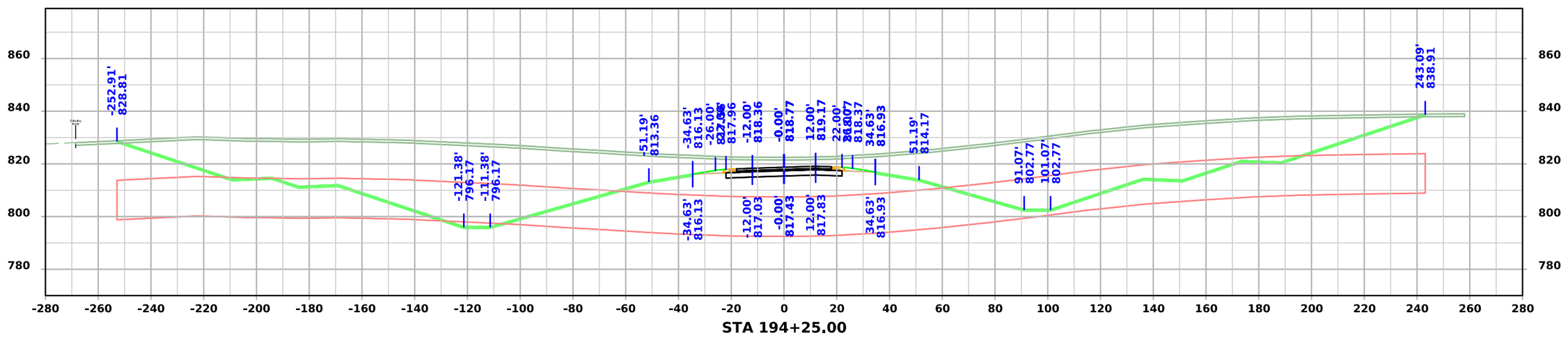
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.98

4:47:58 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 194+50.00



STA 194+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.99

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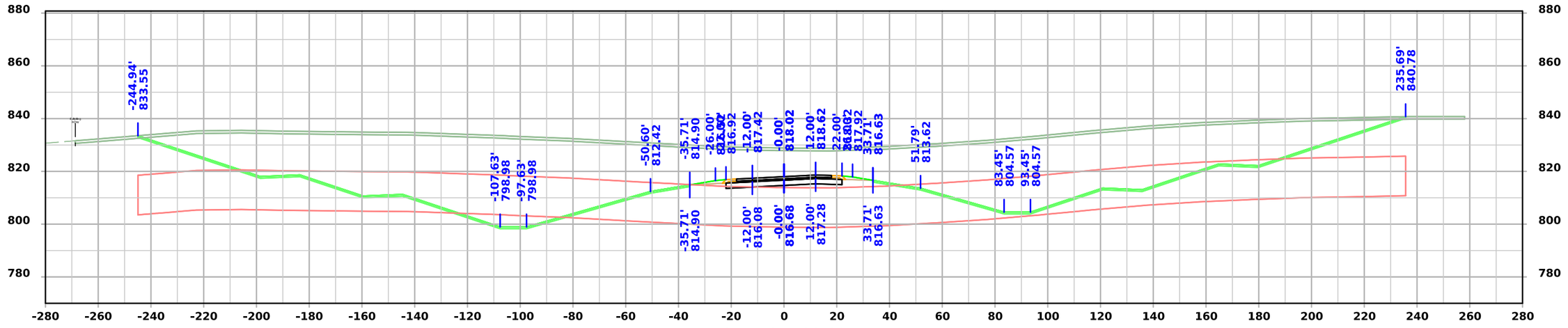
US 63



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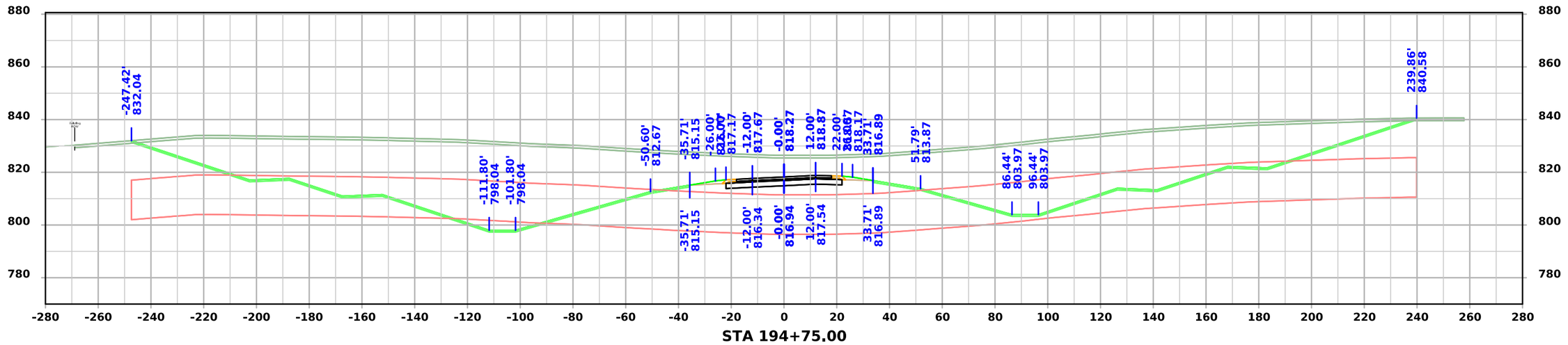

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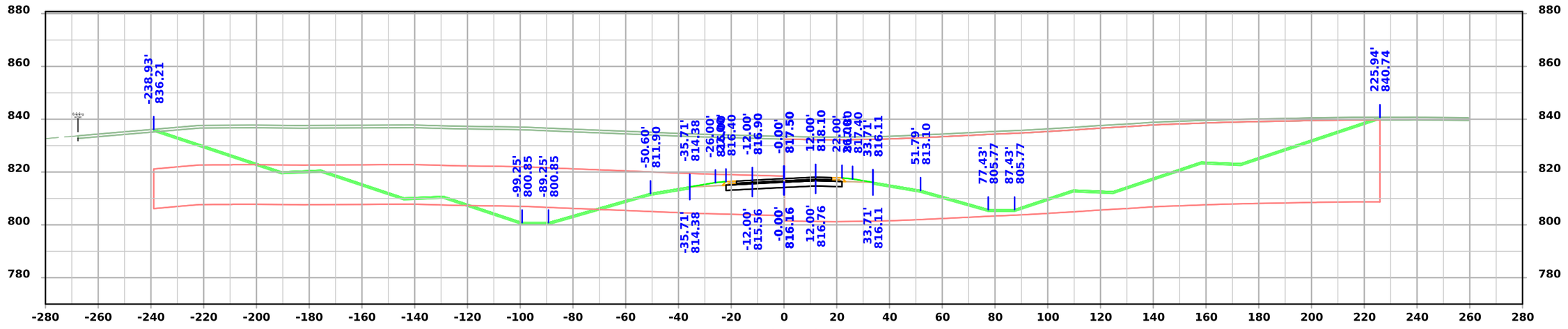
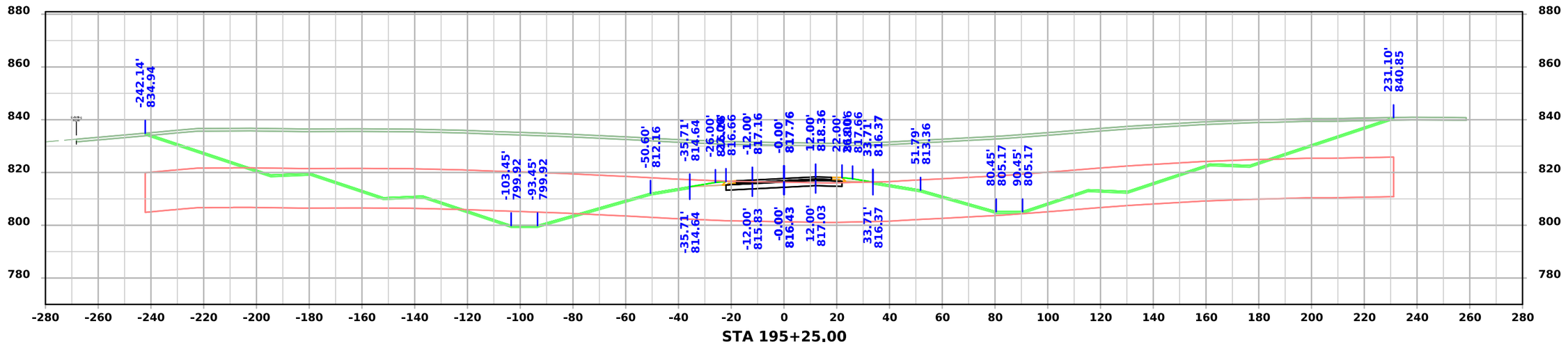
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.100

4:48:04 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 195+50.00

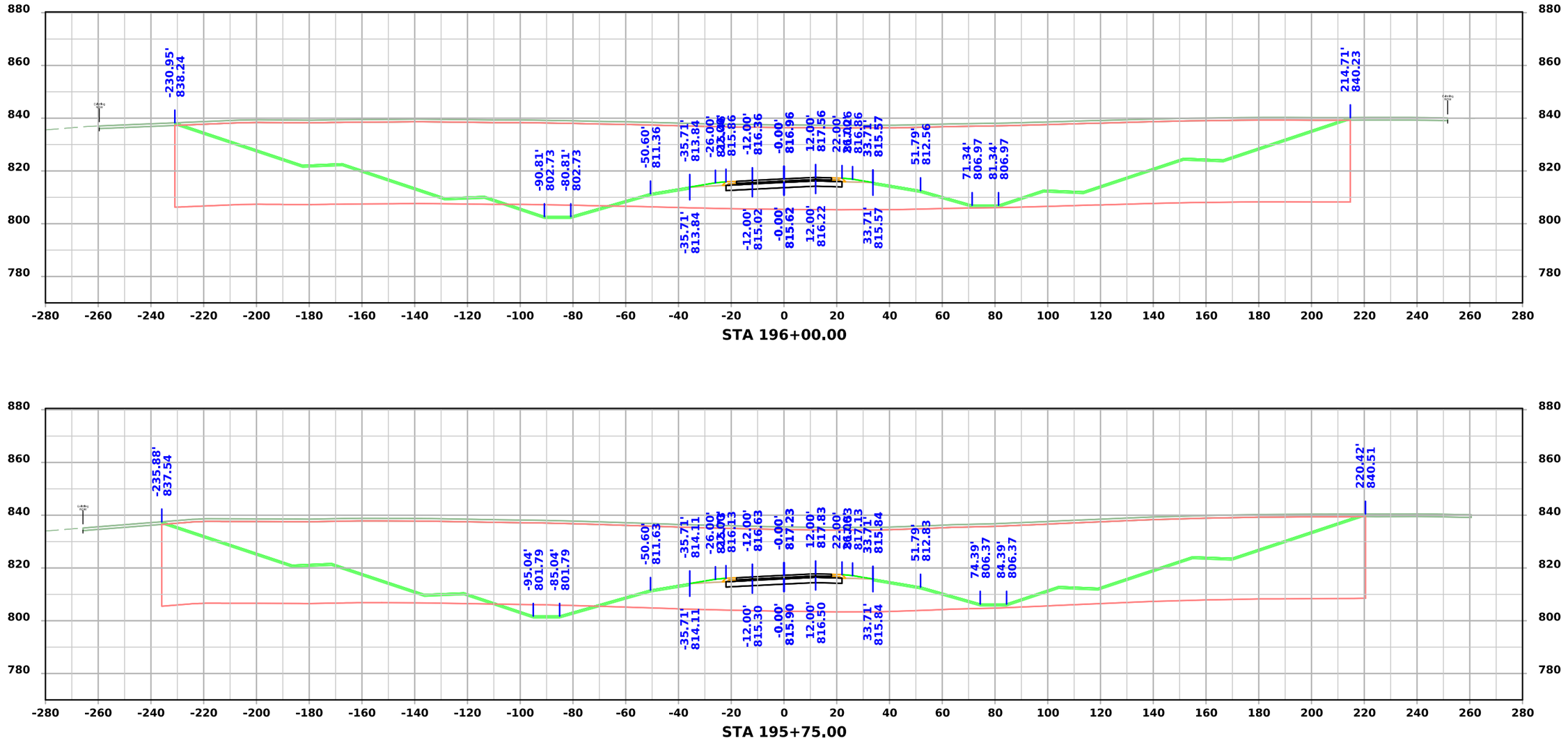


STA 195+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.101

4:48:07 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.102

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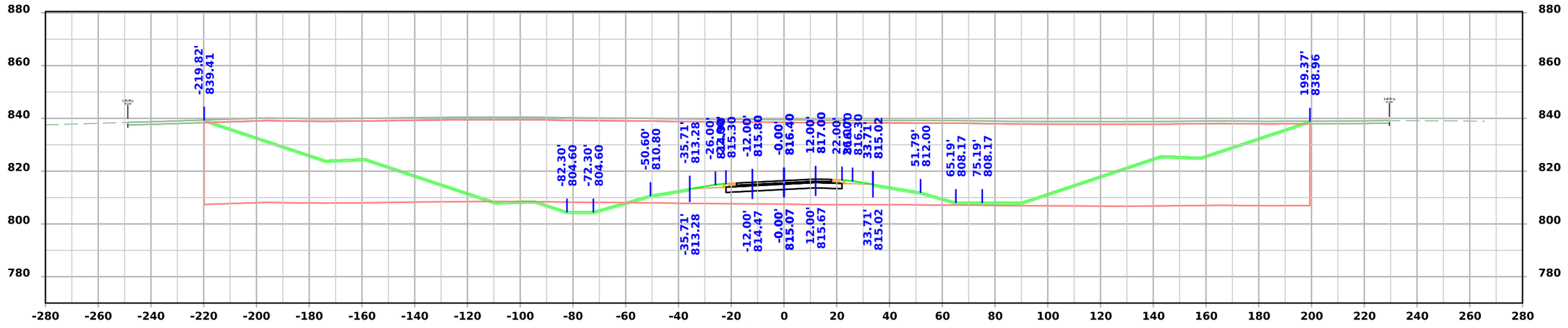
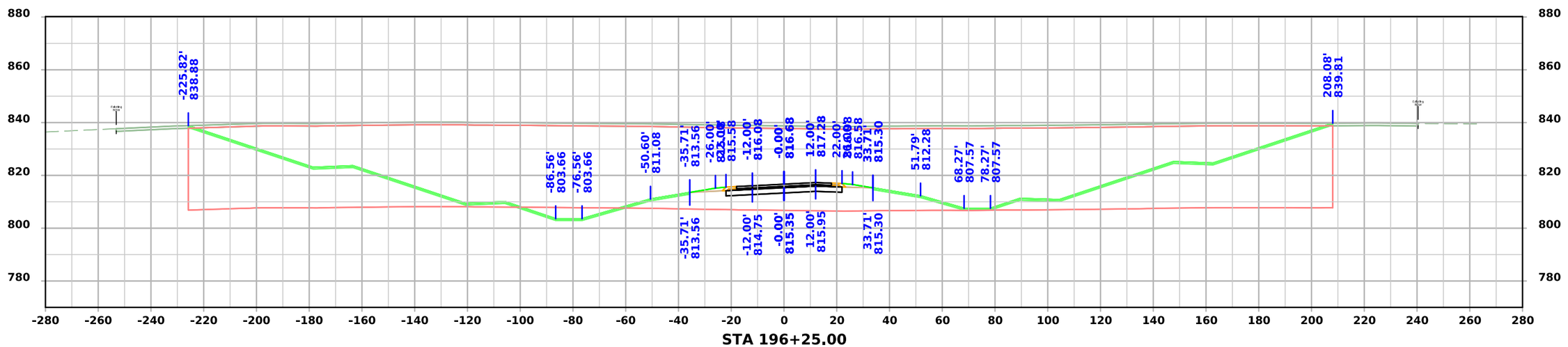
US 63



STA 196+50.00



STA 196+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.103

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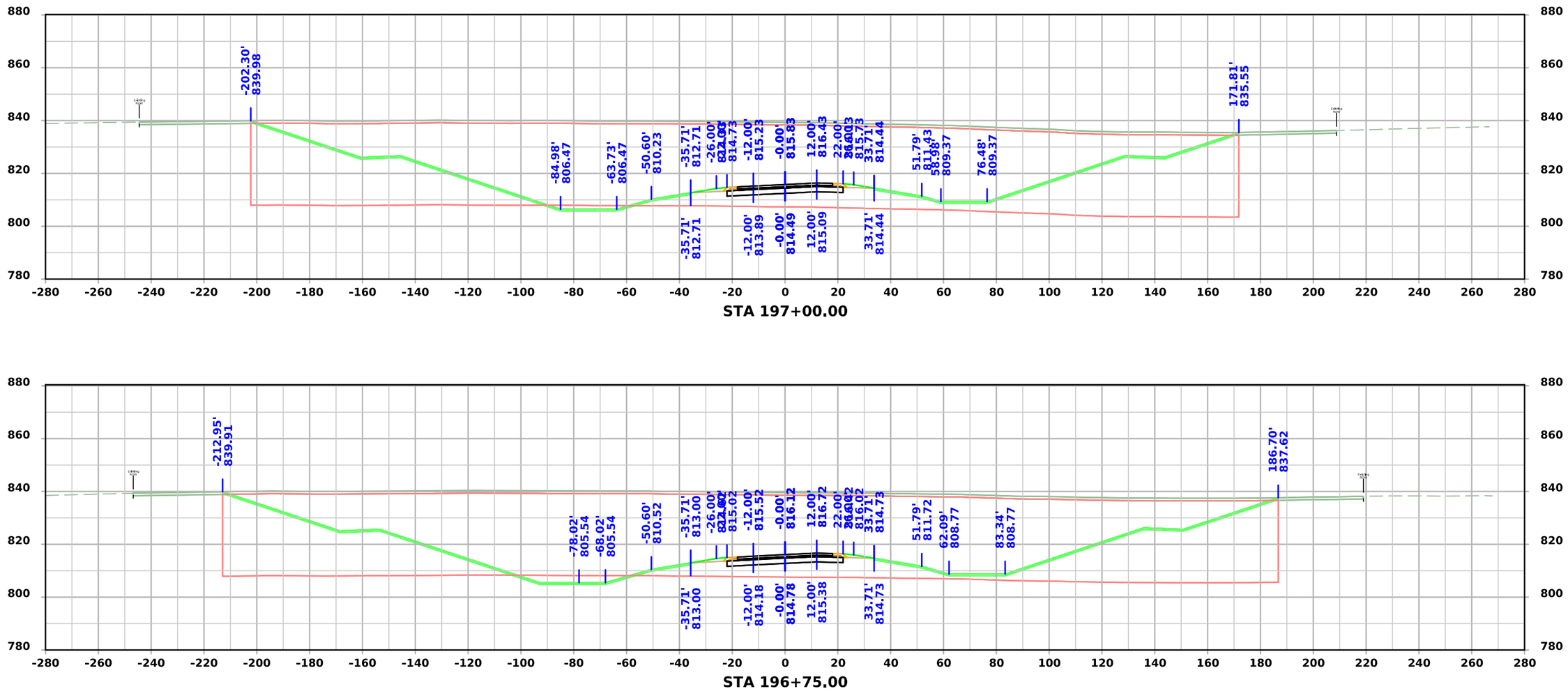
US 63



STA 197+00.00

STA 196+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.104

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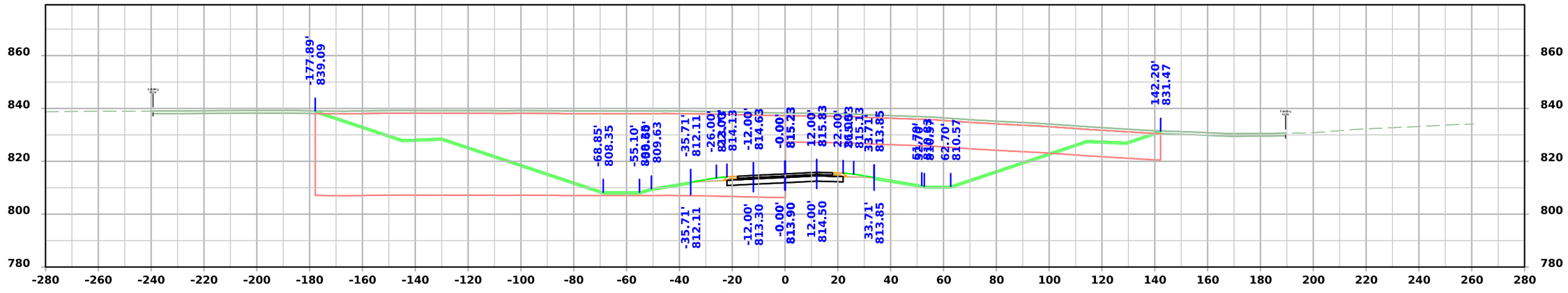
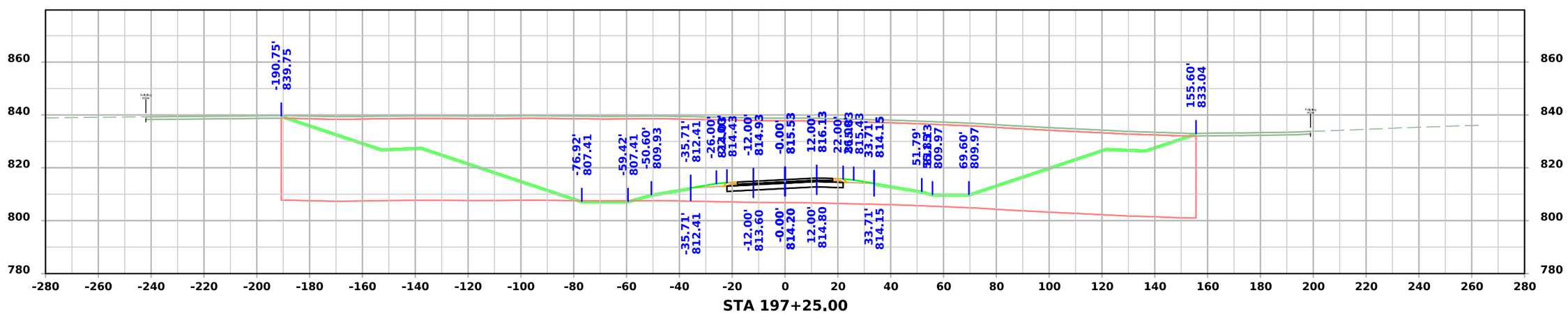
US 63



STA 197+50.00

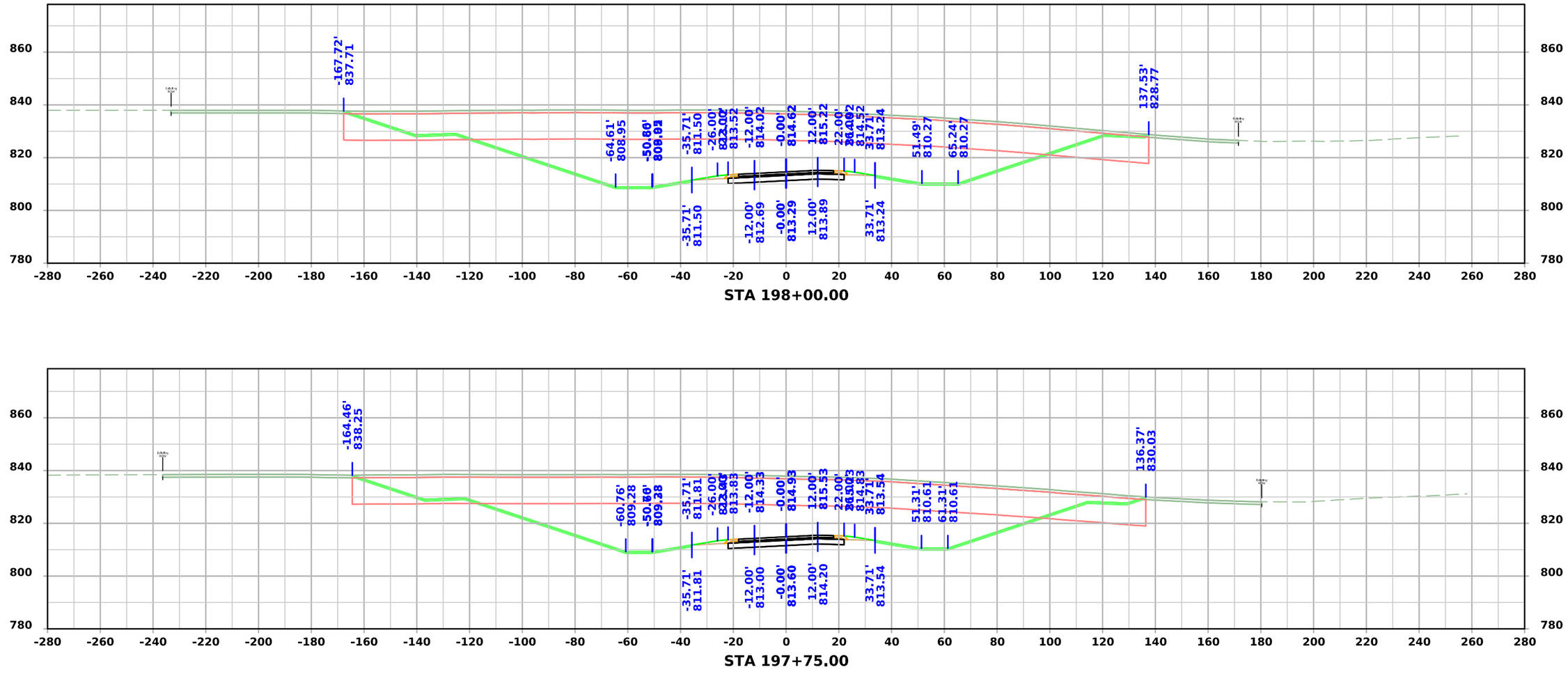


STA 197+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.105

4:48:19 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

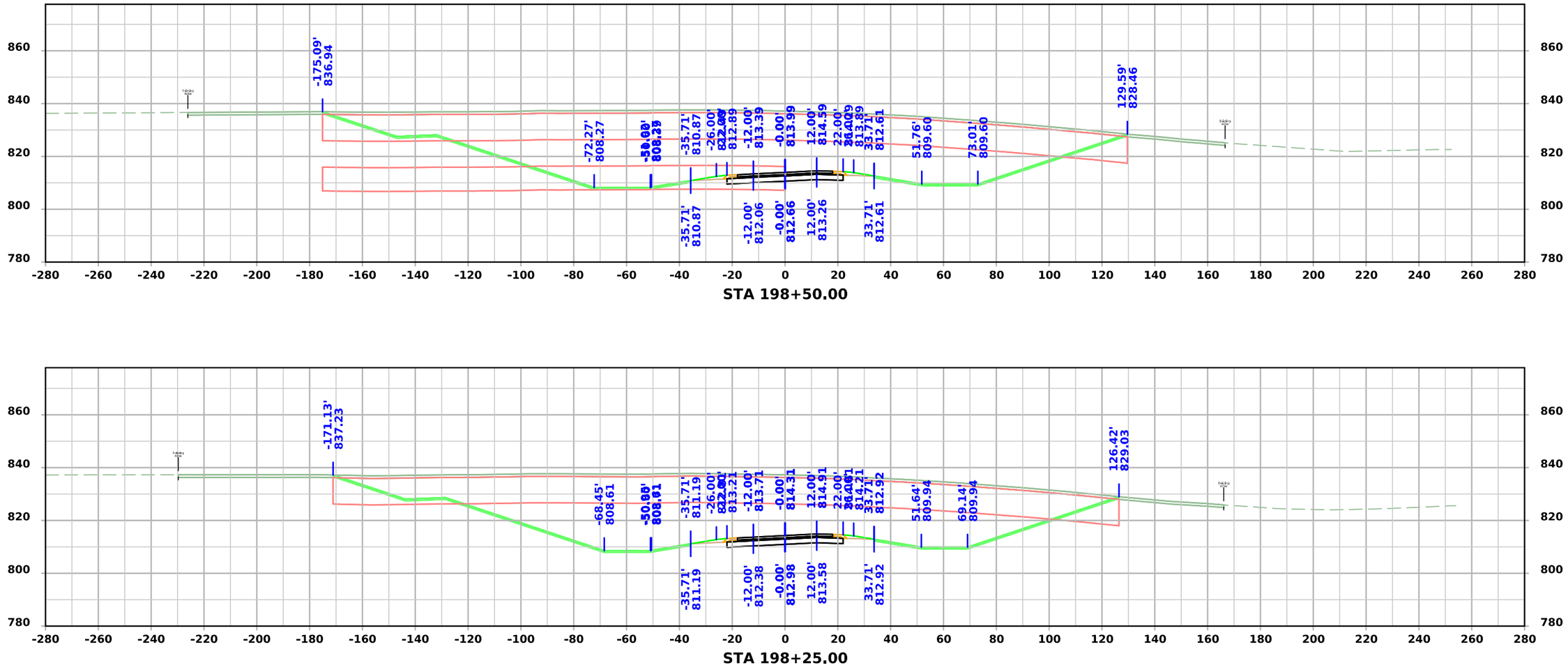
US 63



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.106

4:48:23 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



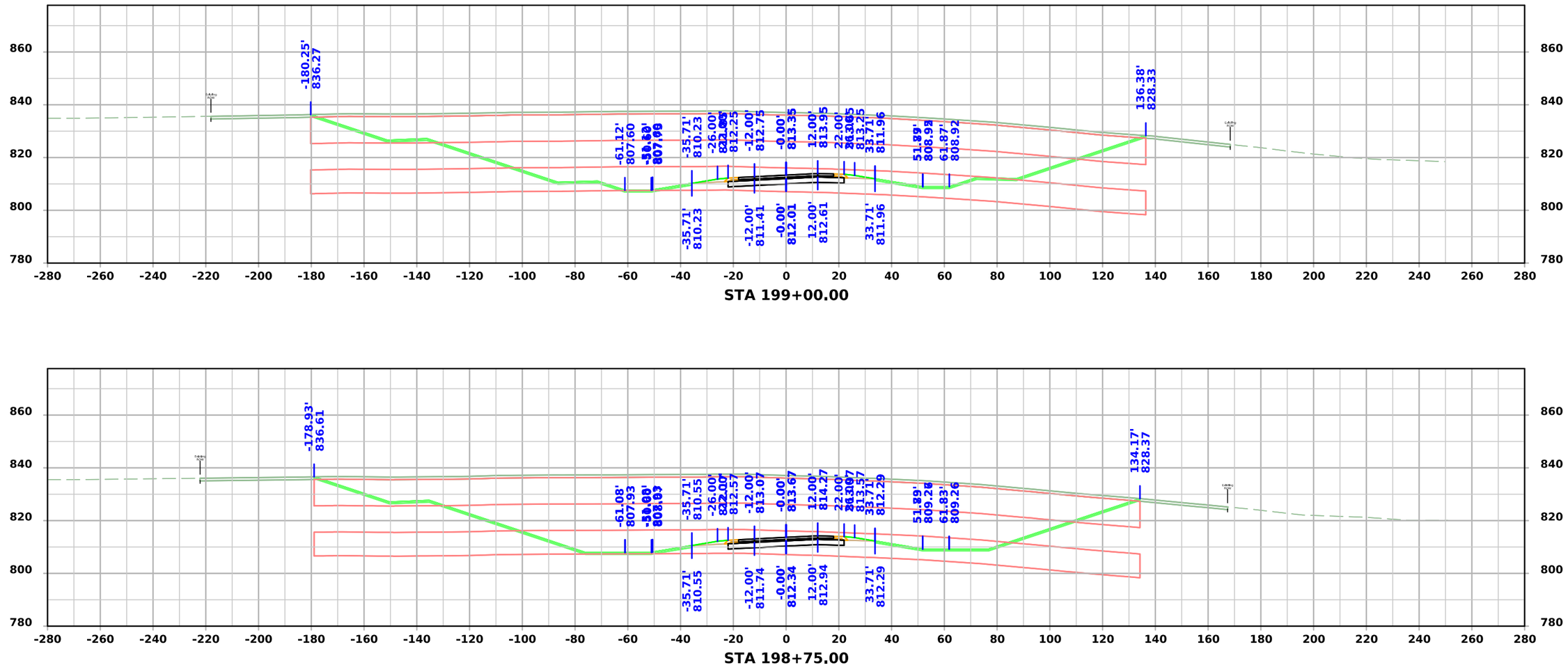
STA 198+50.00

STA 198+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.107

4:48:26 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.108

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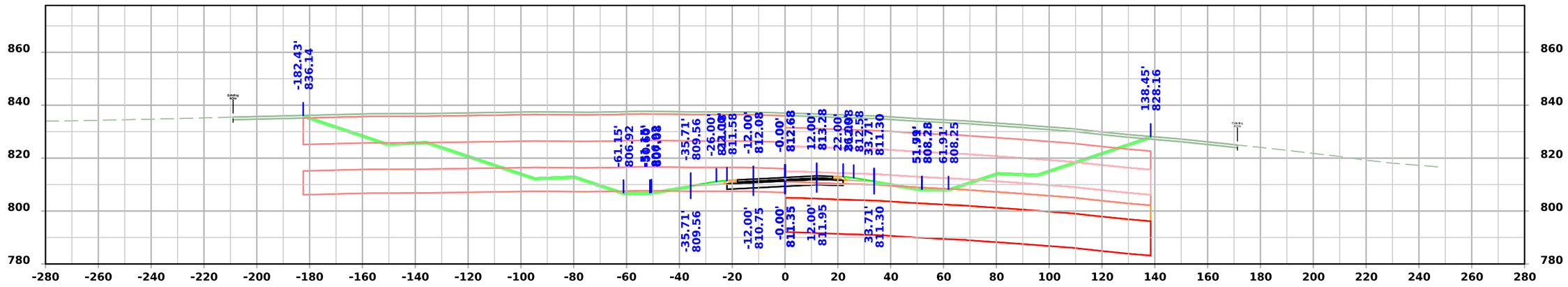
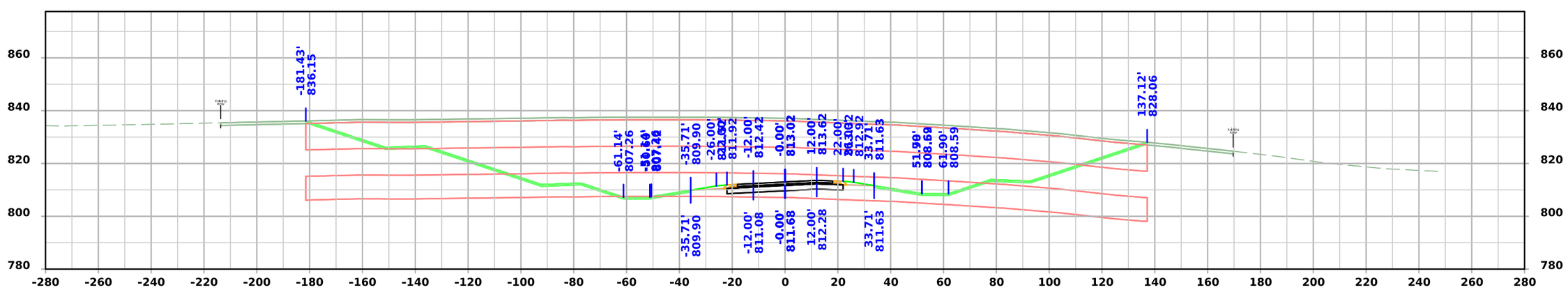
US 63



STA 199+50.00

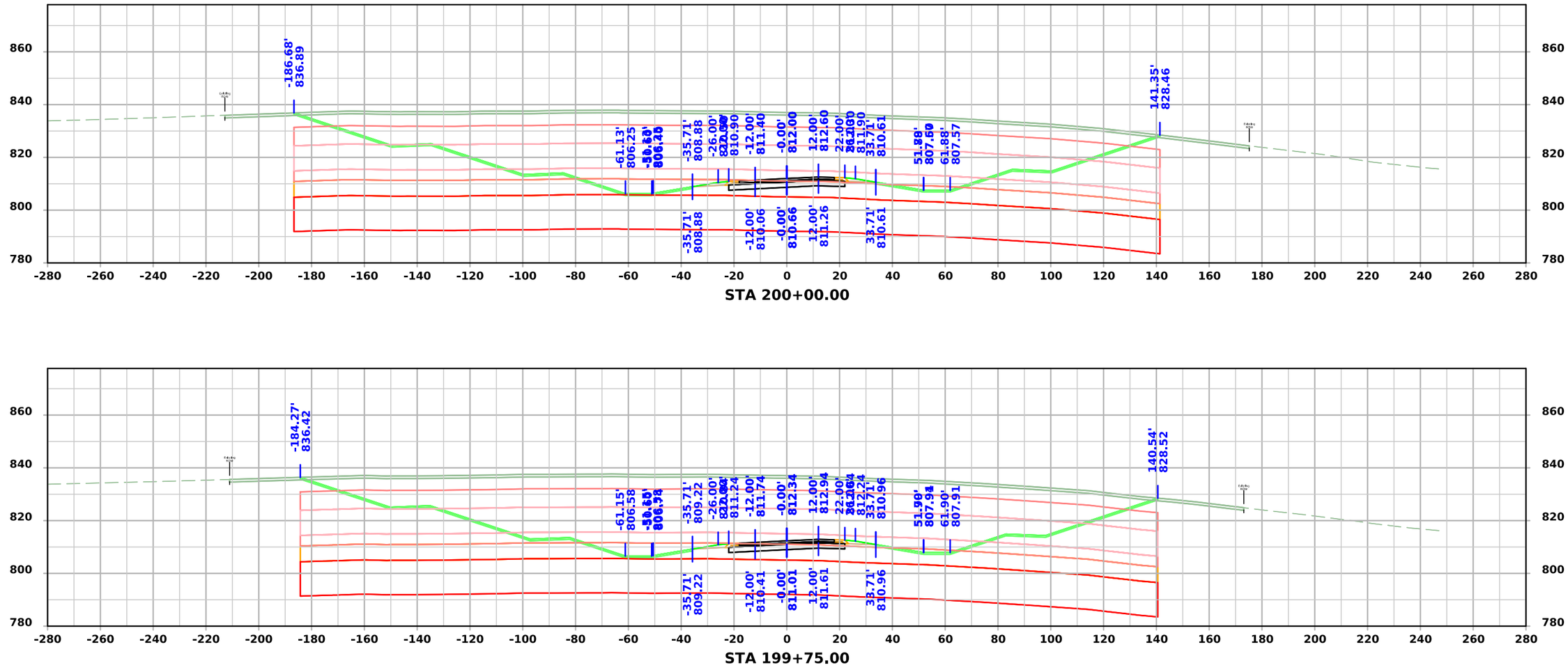


STA 199+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.109

4:48:32 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.110

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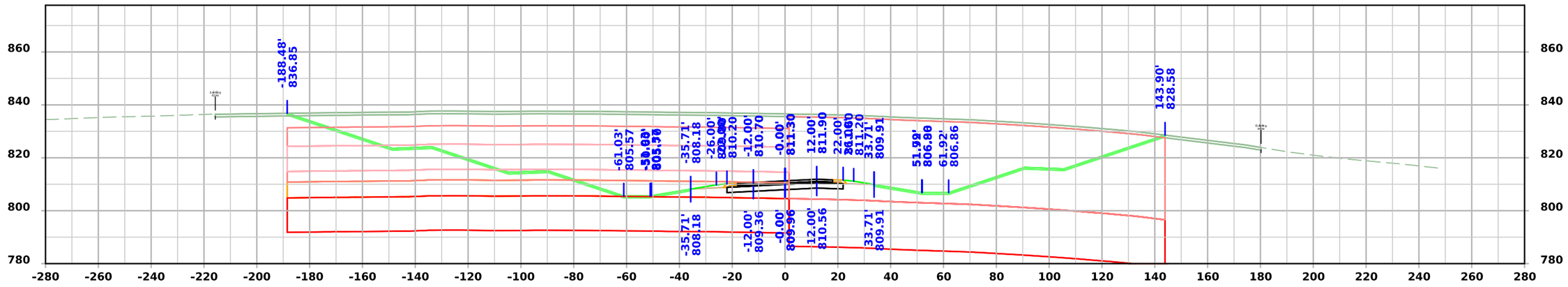
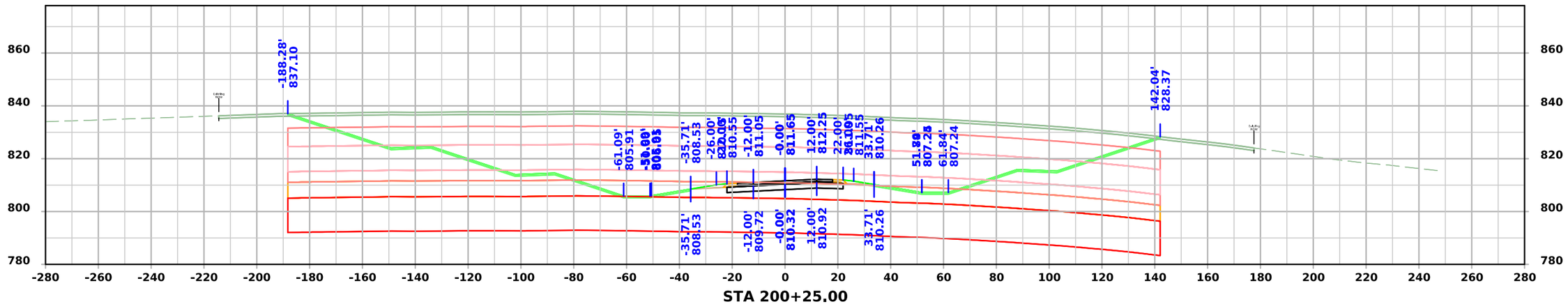
US 63



STA 200+50.00



STA 200+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.111

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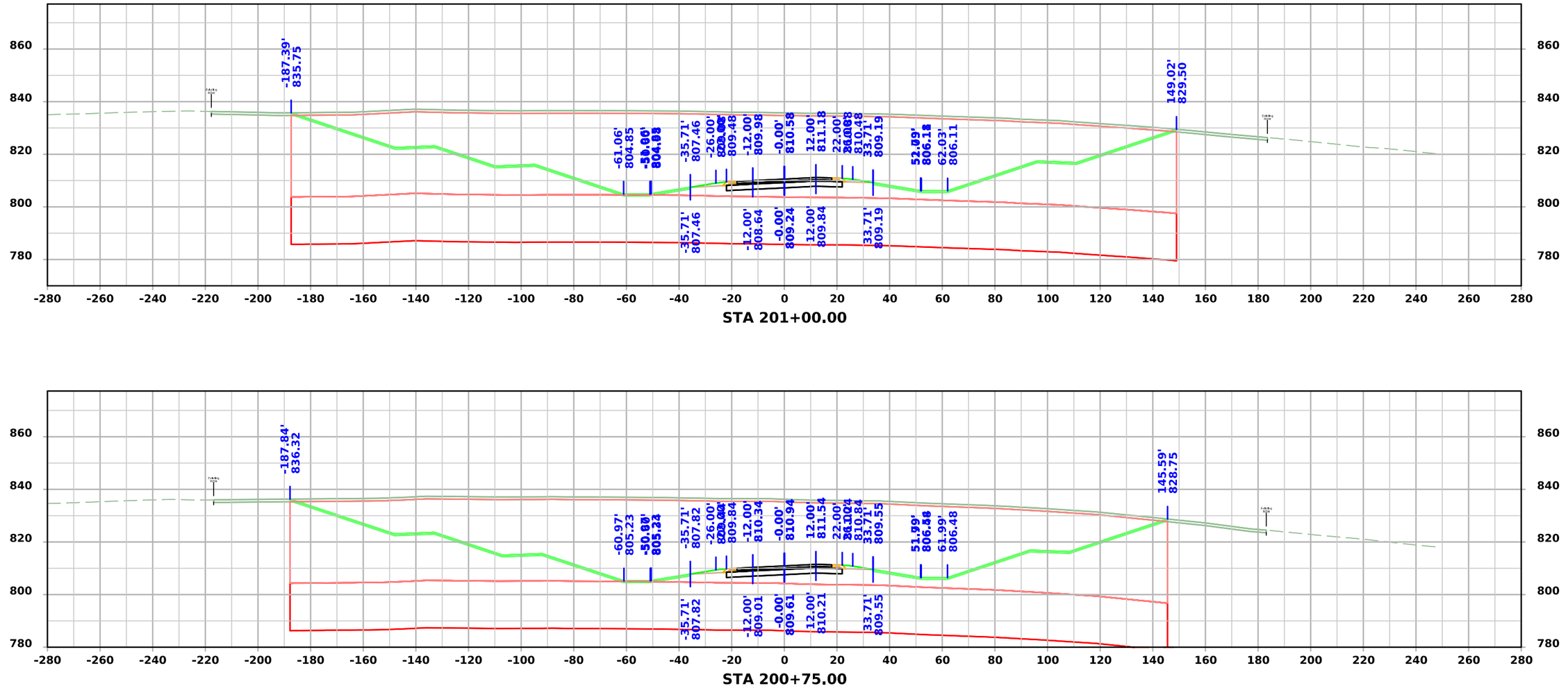
US 63



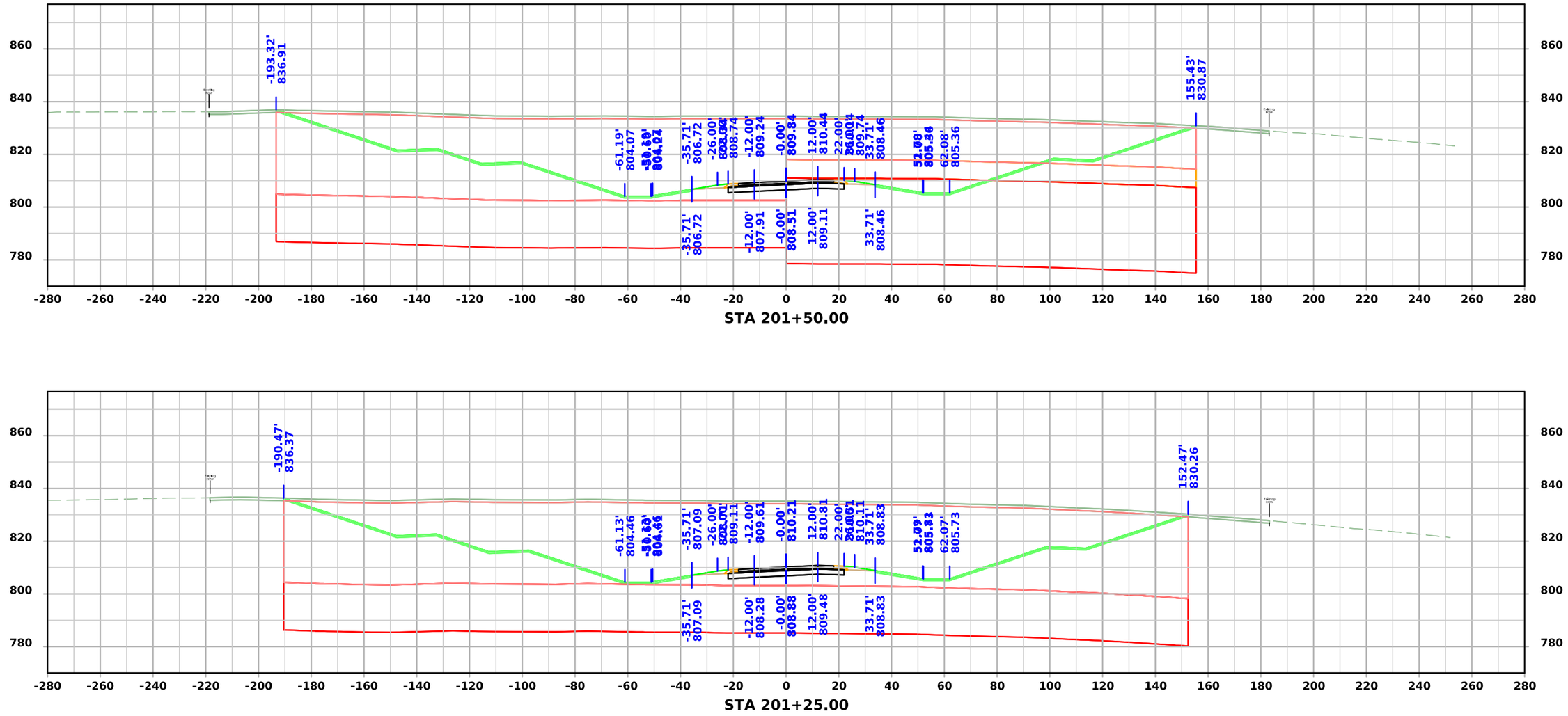
STA 201+00.00

STA 200+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.112

4:48:42 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



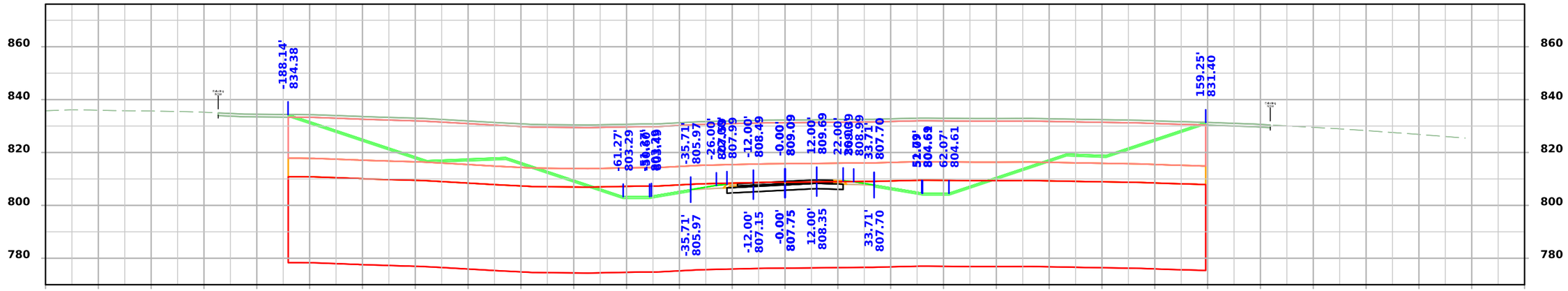
STA 201+50.00

STA 201+25.00

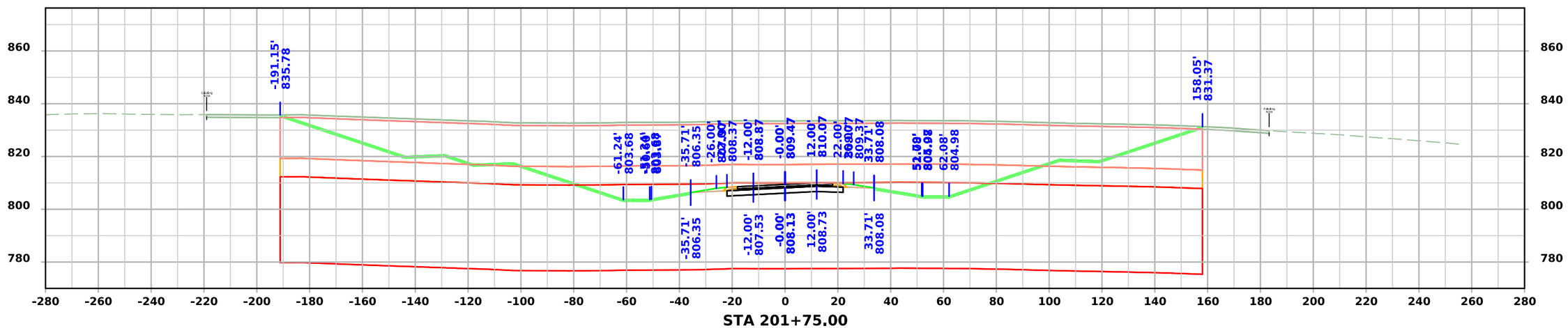
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.113

4:48:45 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 202+00.00

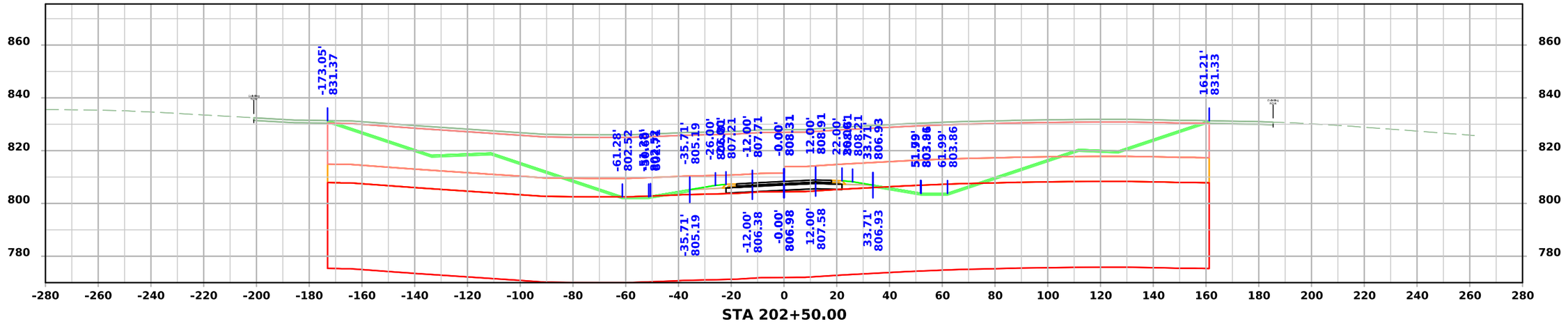


STA 201+75.00

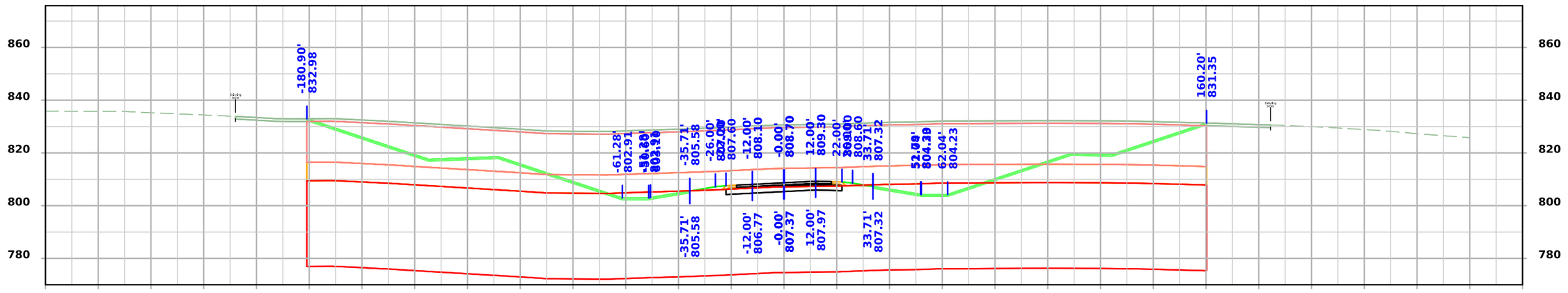
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.114

4:48:48 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 202+50.00

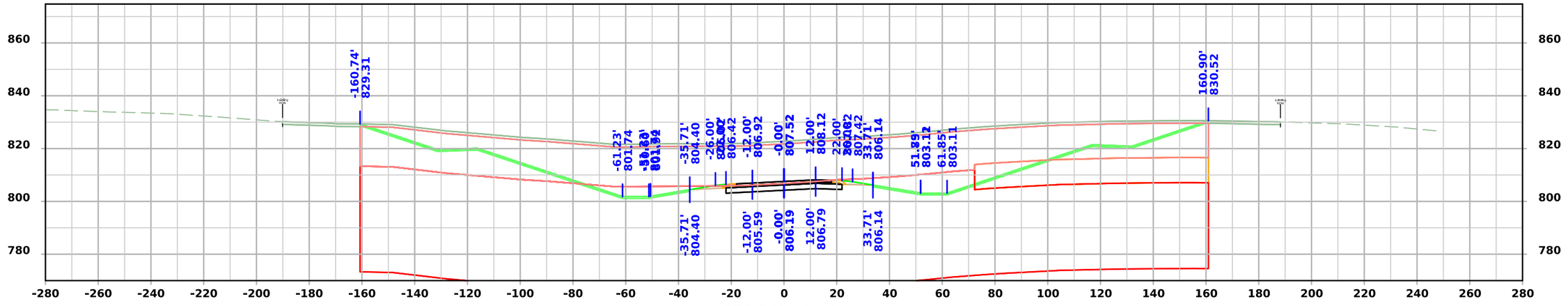


STA 202+25.00

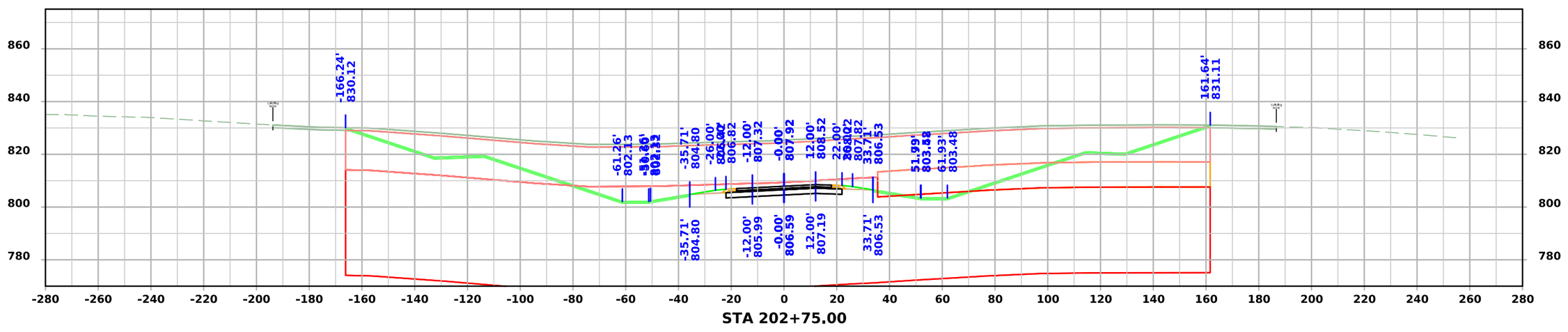
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.115

4:48:51 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 203+00.00



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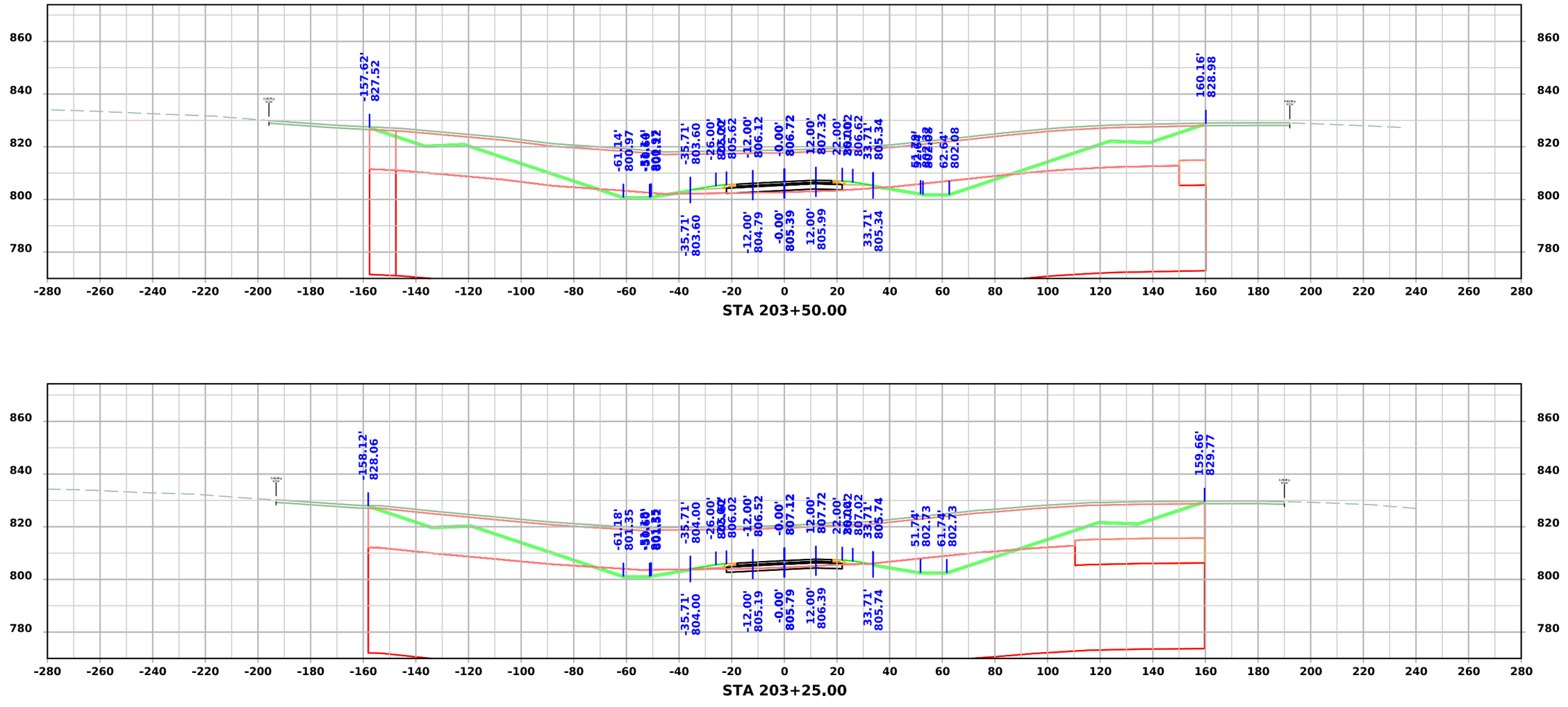
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.116

4:48:54 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

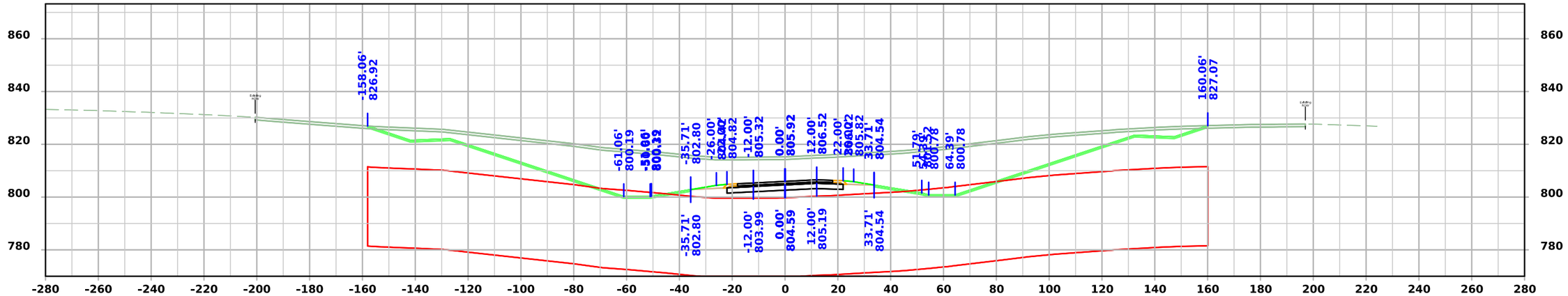
US 63



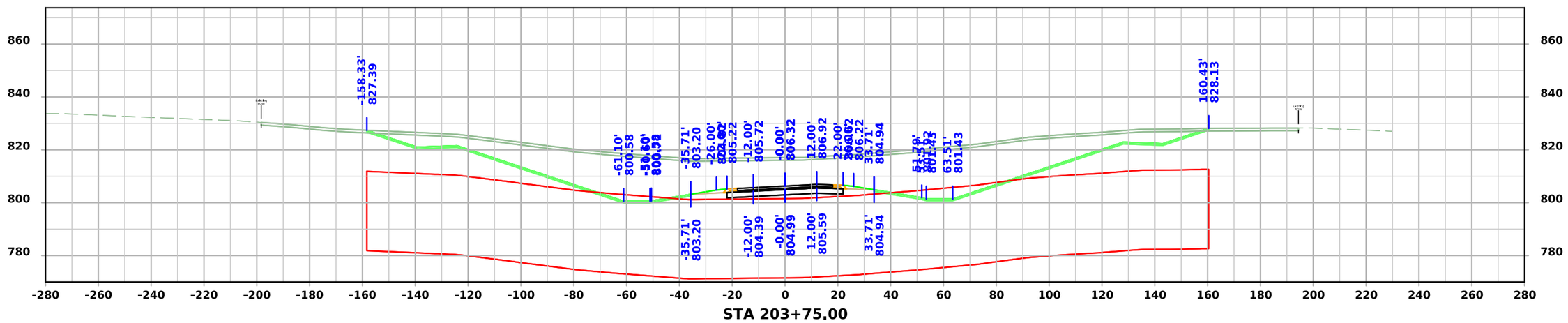
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.117

4:48:57 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 204+00.00

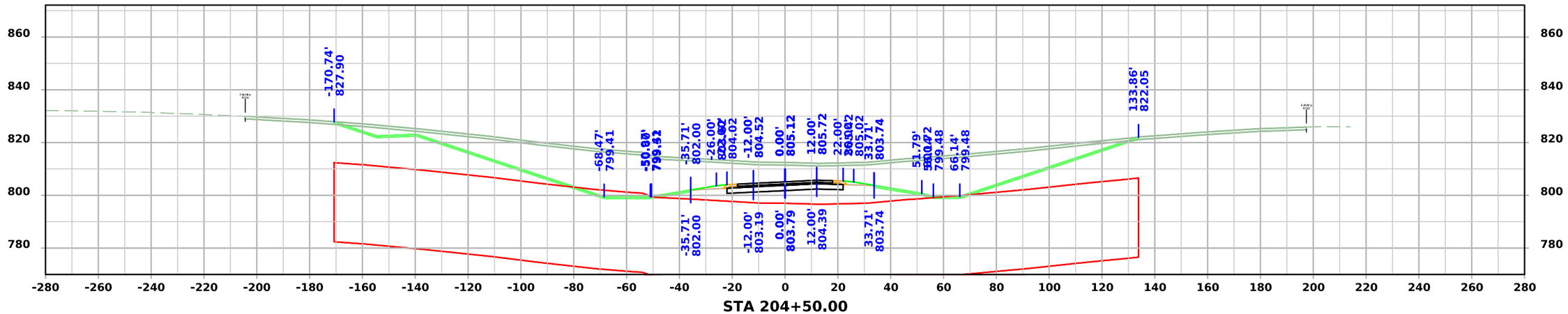


STA 203+75.00

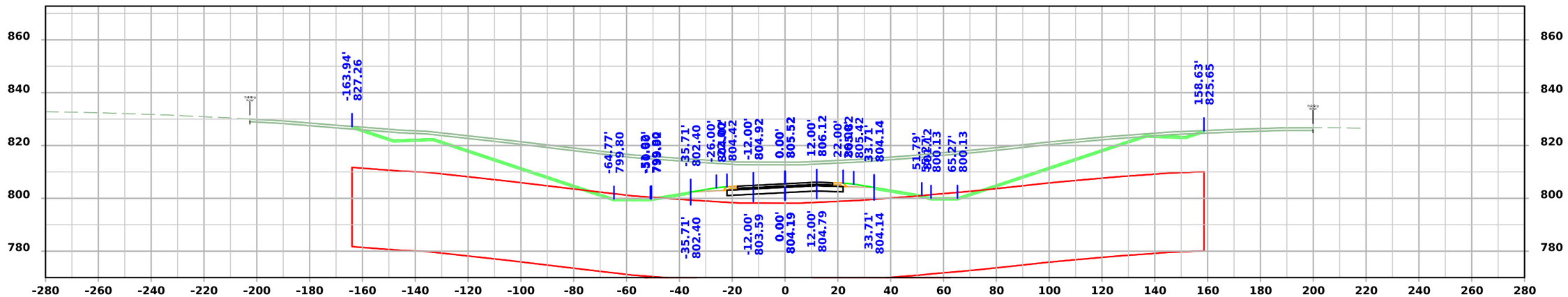
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.118

4:49:00 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 204+50.00

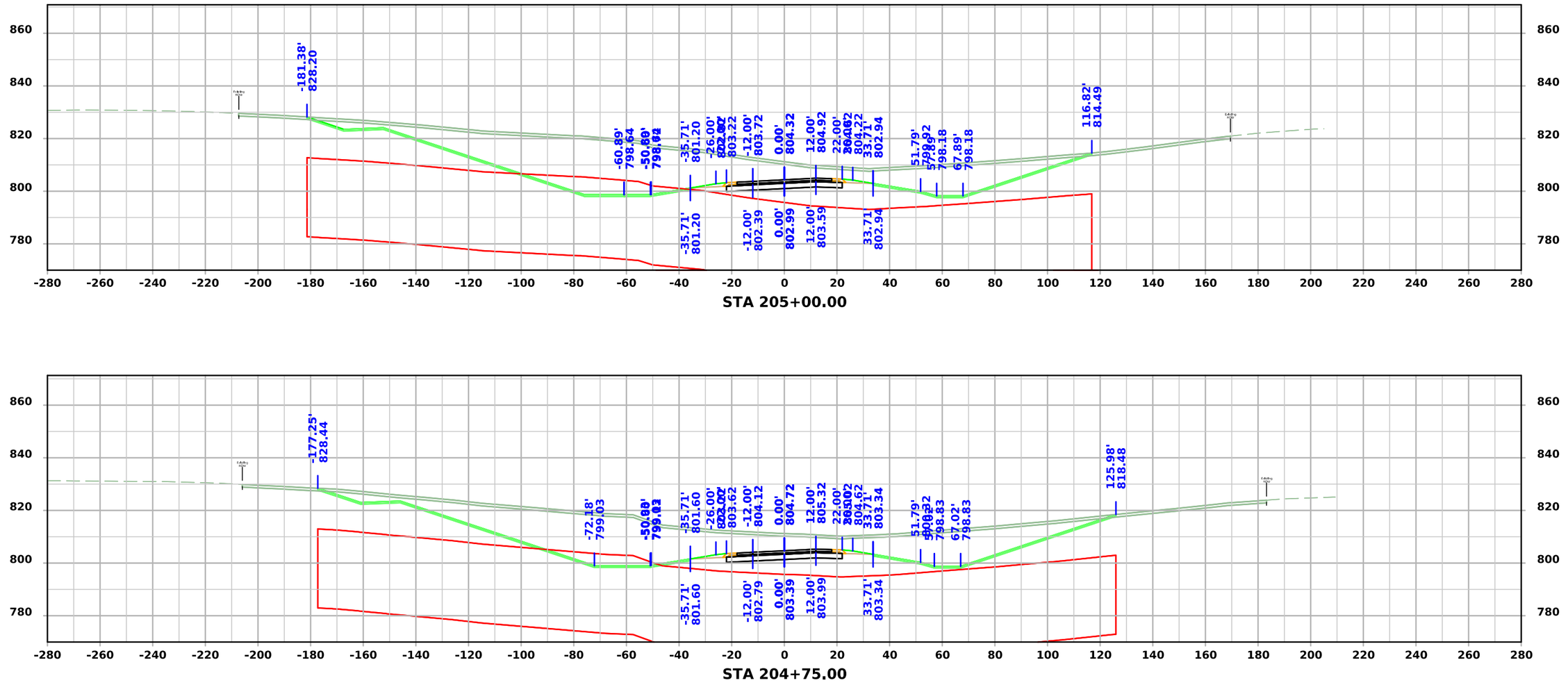


STA 204+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.119

4:49:04 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.120

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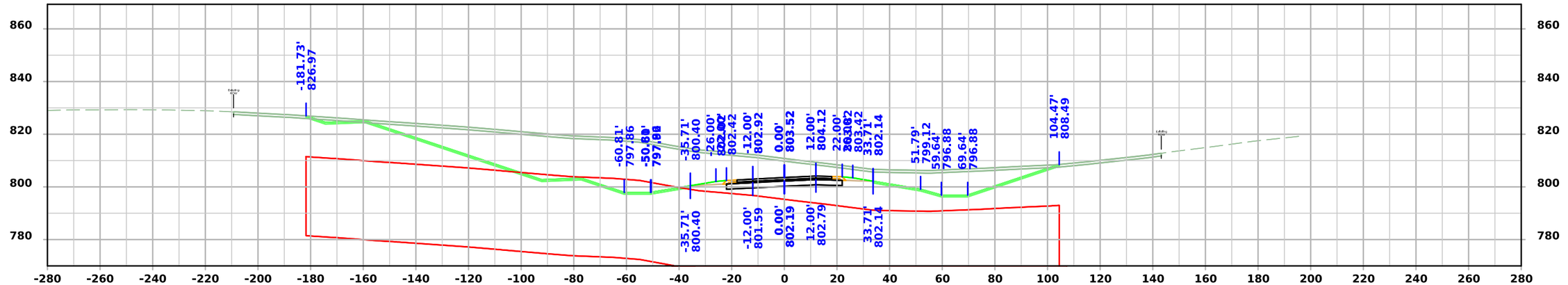
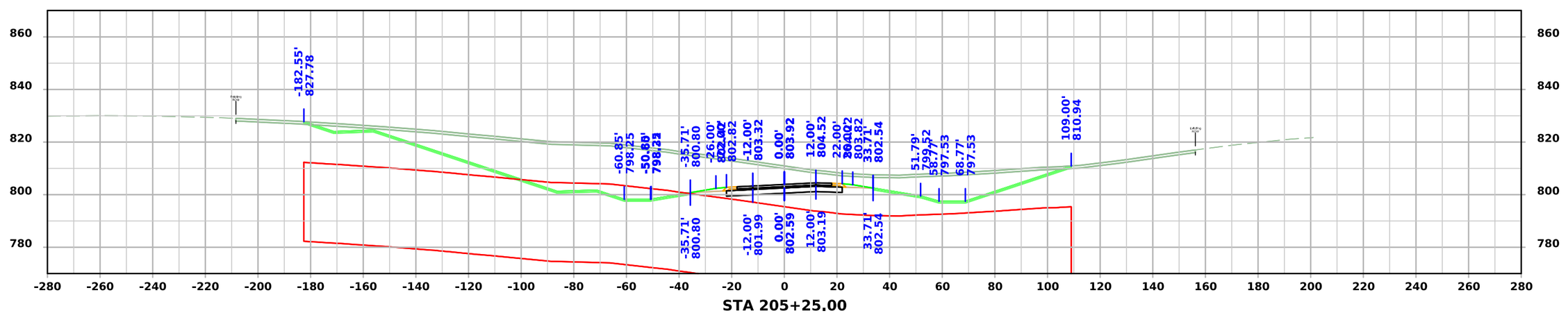
US 63



STA 205+50.00

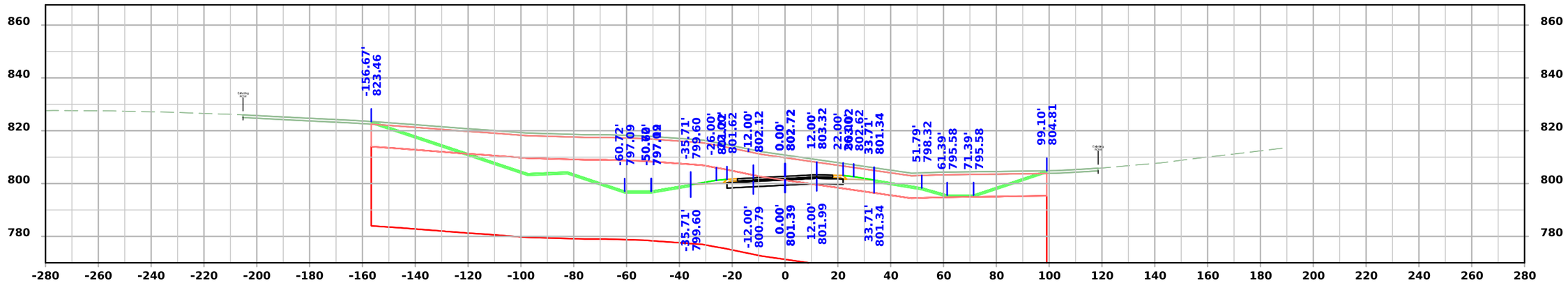


STA 205+25.00

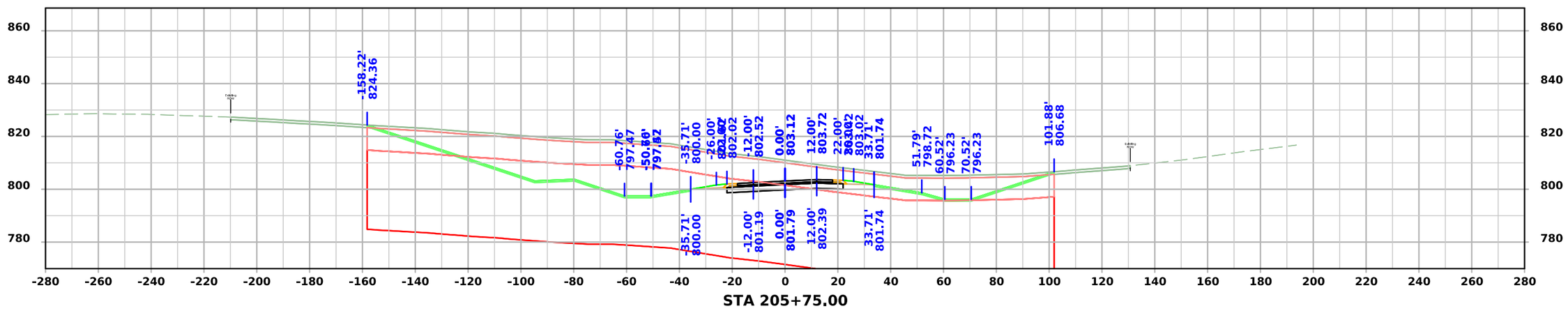
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.121

4:49:10 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 206+00.00

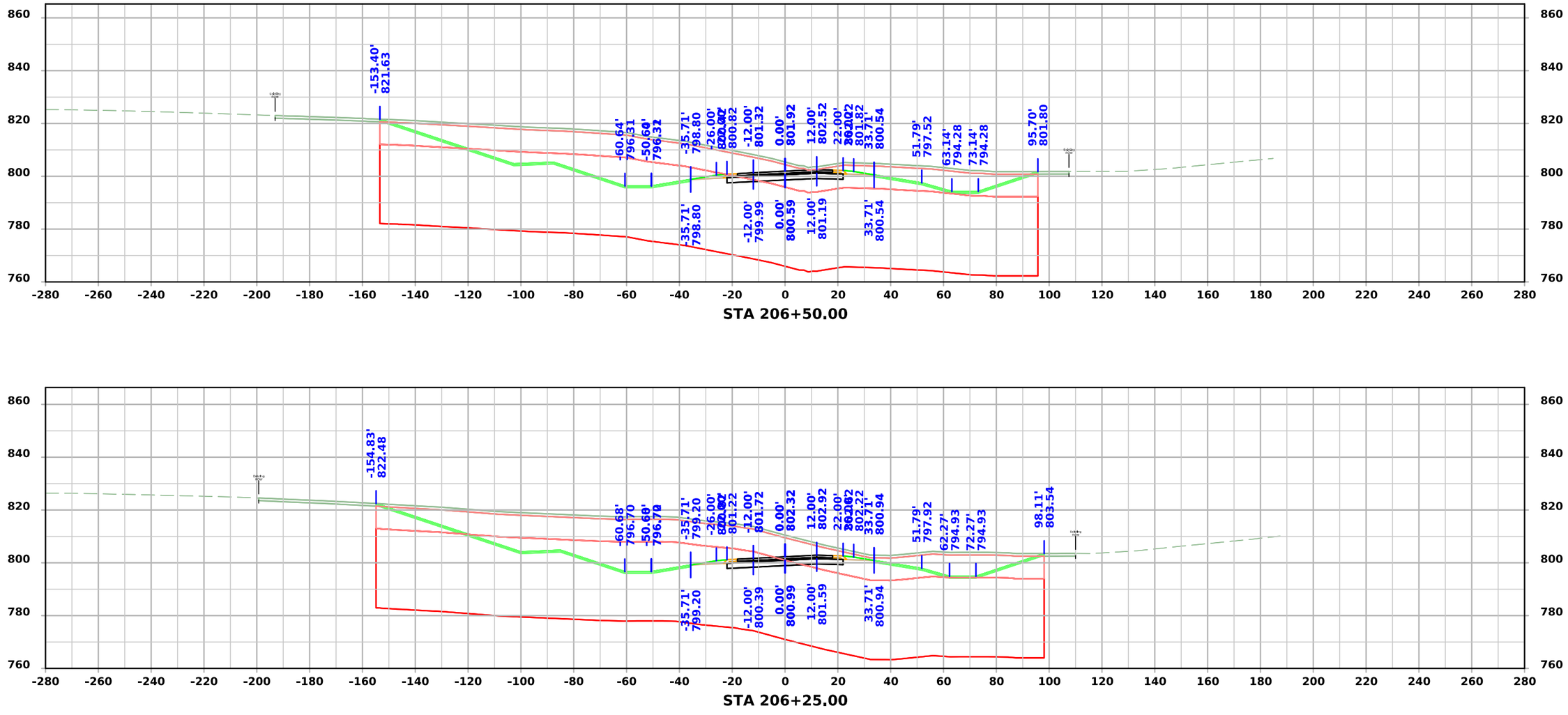


STA 205+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.122

4:49:13 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



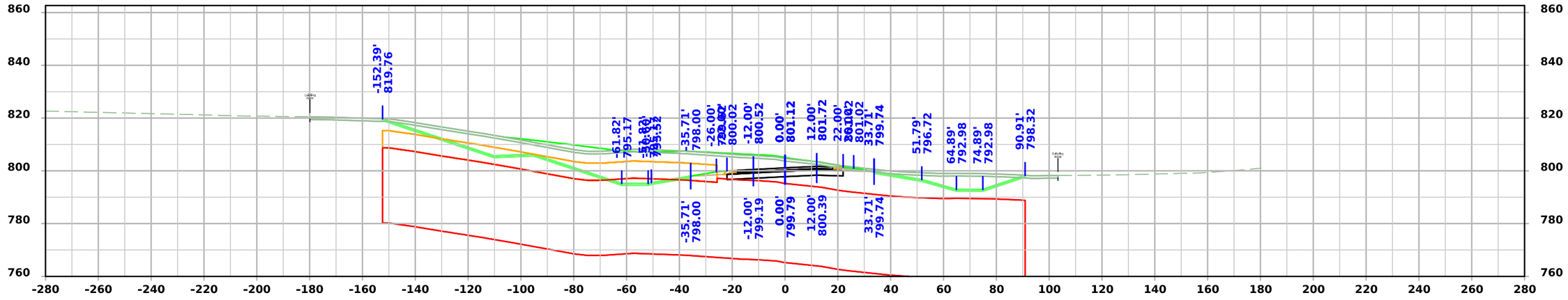
STA 206+50.00

STA 206+25.00

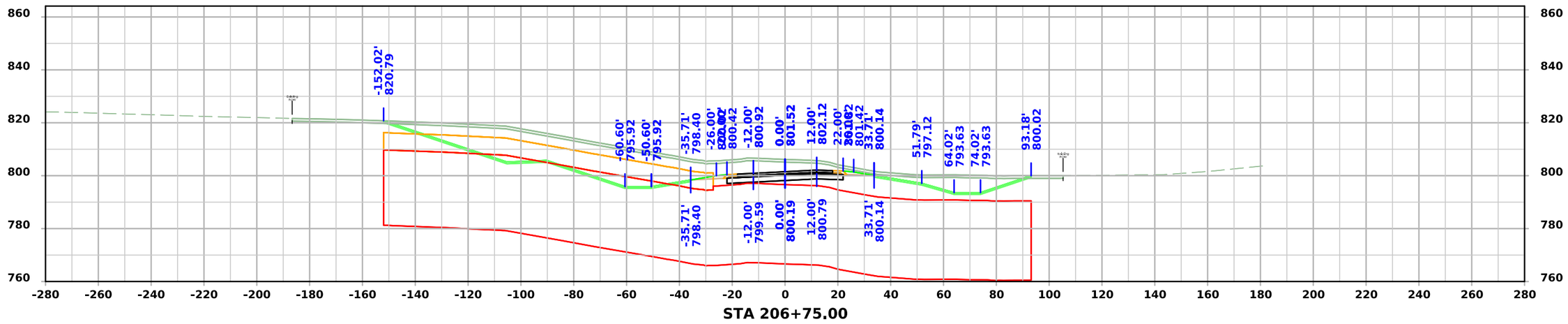
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.123

4:49:16 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 207+00.00

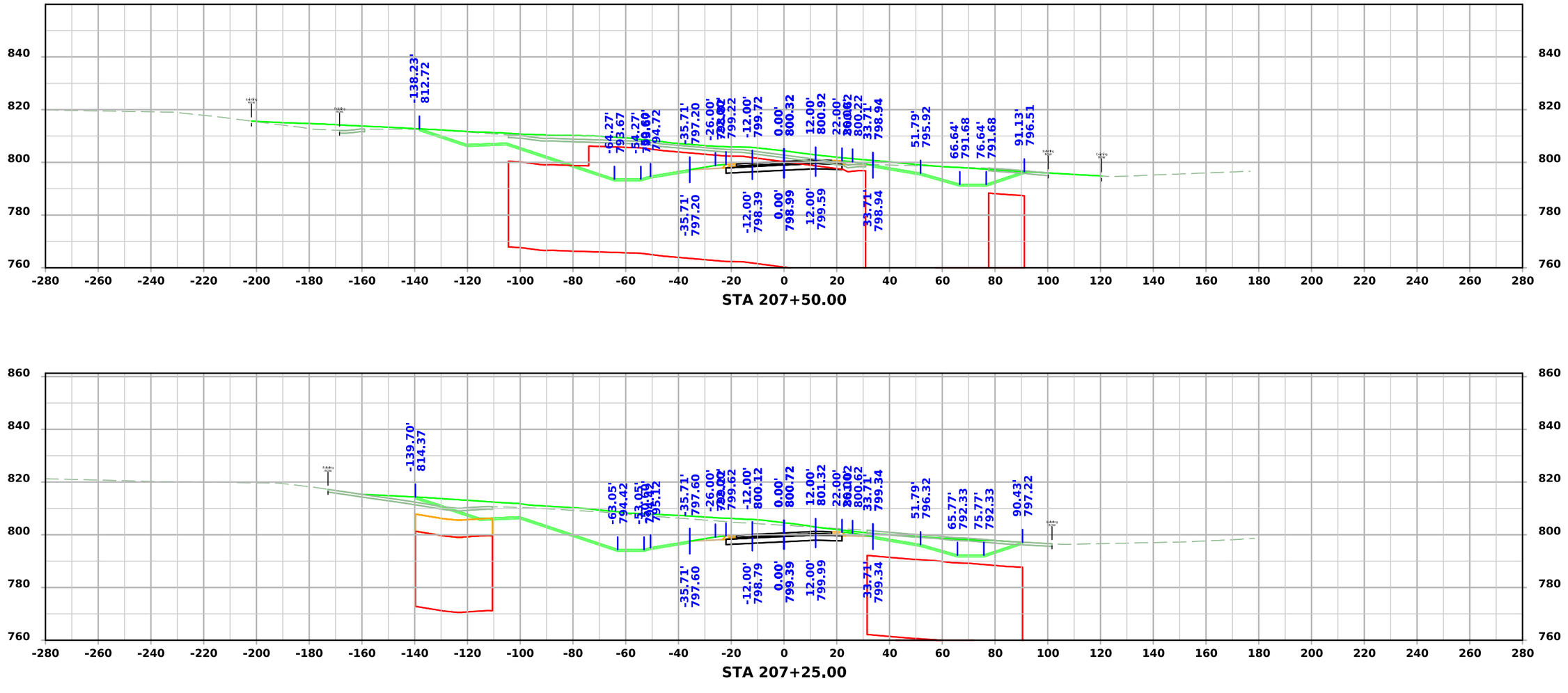


STA 206+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.124

4:49:20 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

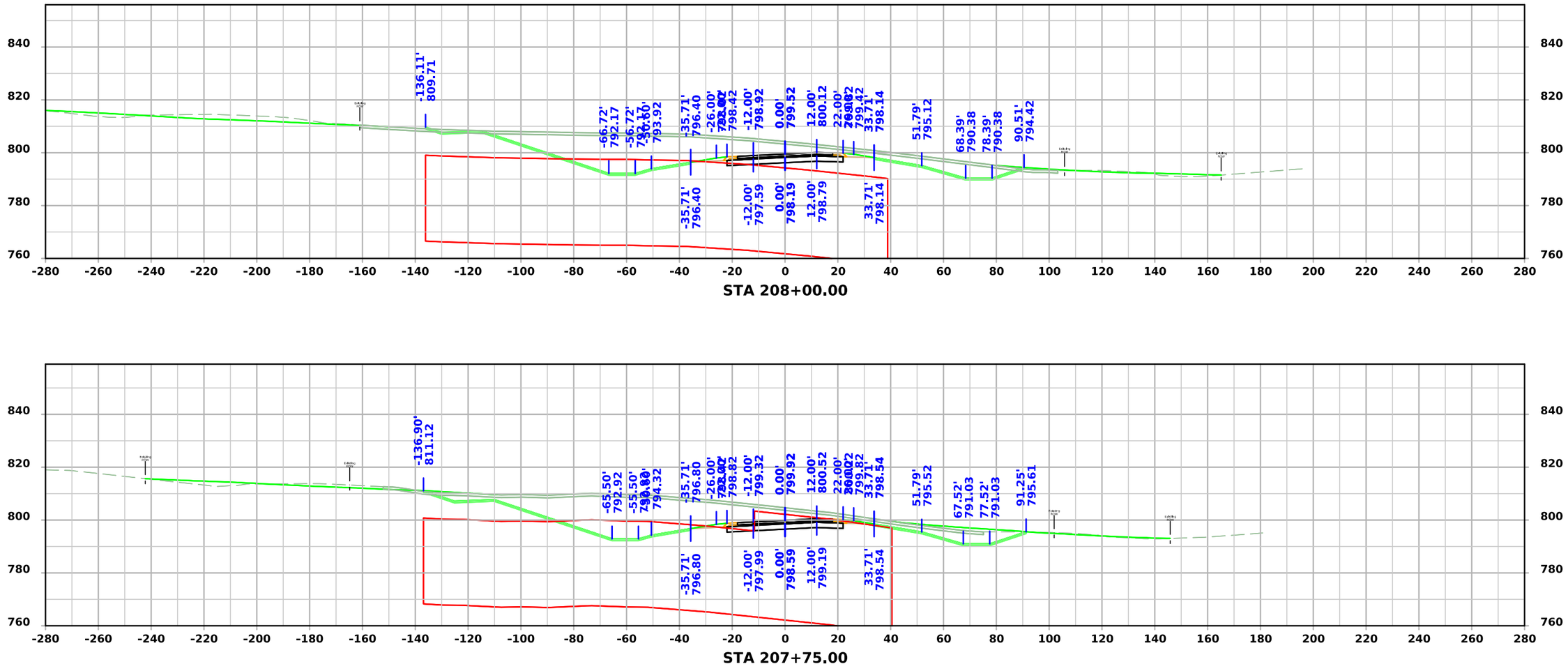
US 63



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.125

4:49:23 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

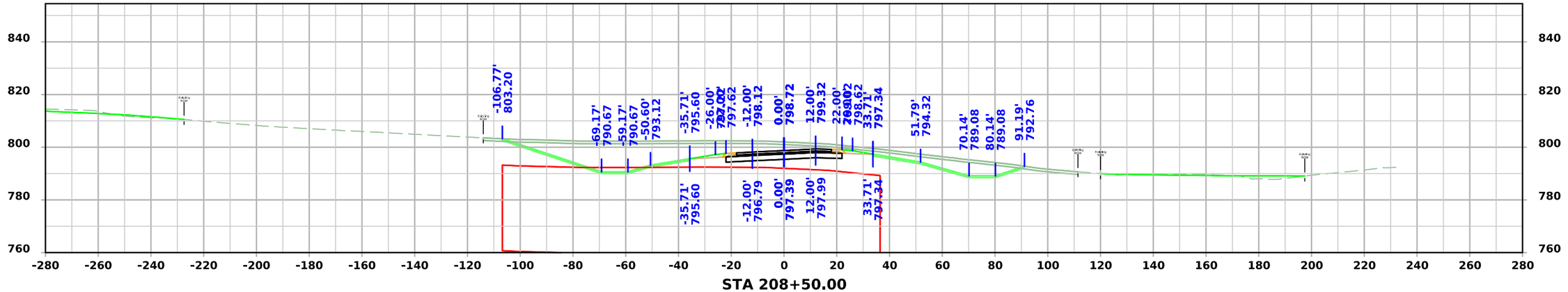
US 63



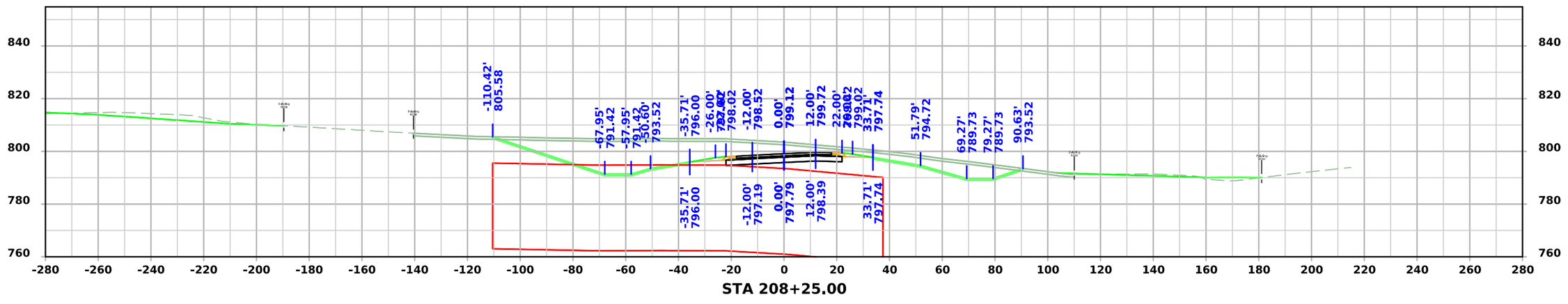
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.126

4:49:26 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 208+50.00

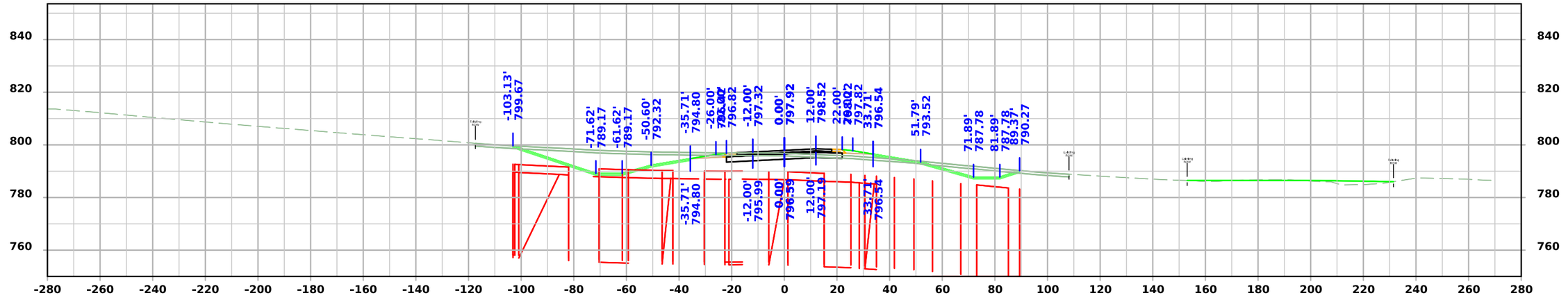


STA 208+25.00

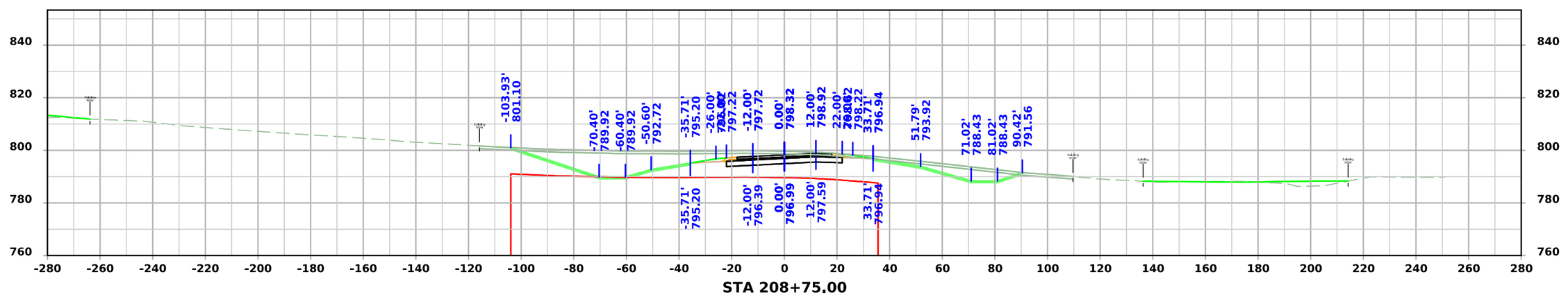
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.127

4:49:29 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 209+00.00

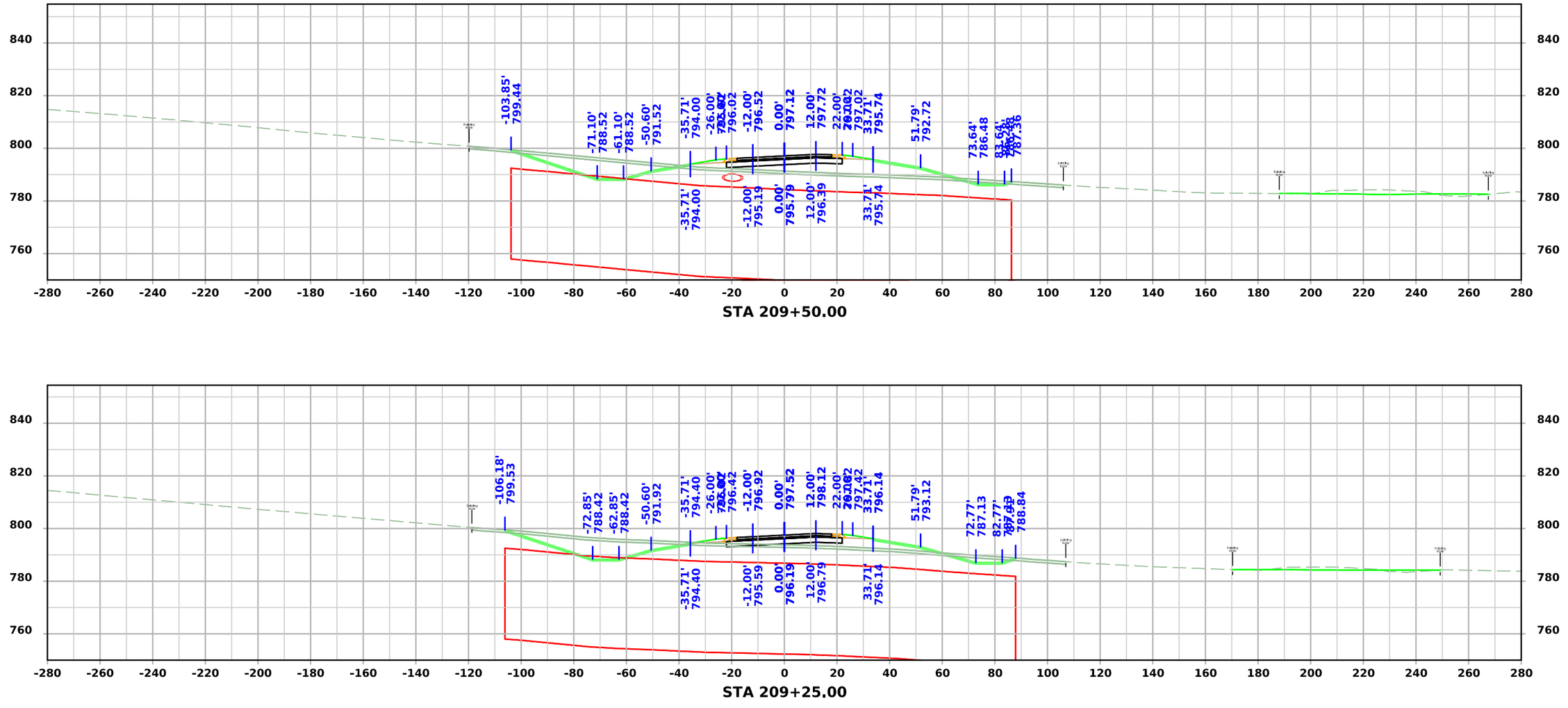


STA 208+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.128

4:49:33 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

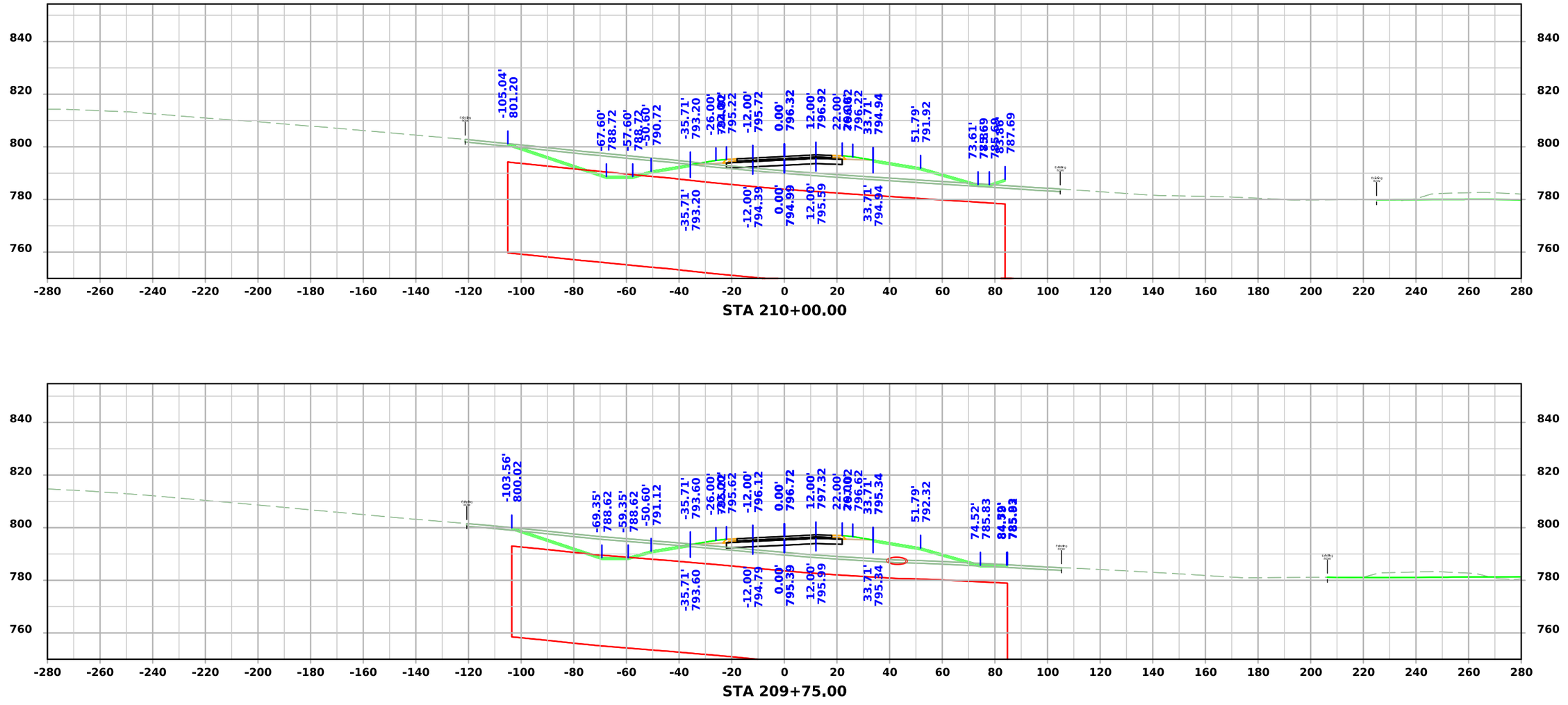
US 63



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.129

4:49:36 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

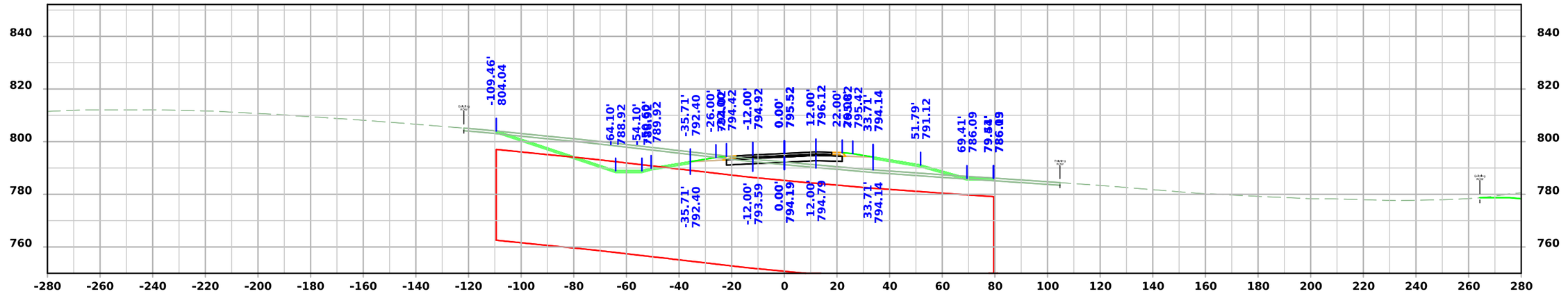
US 63



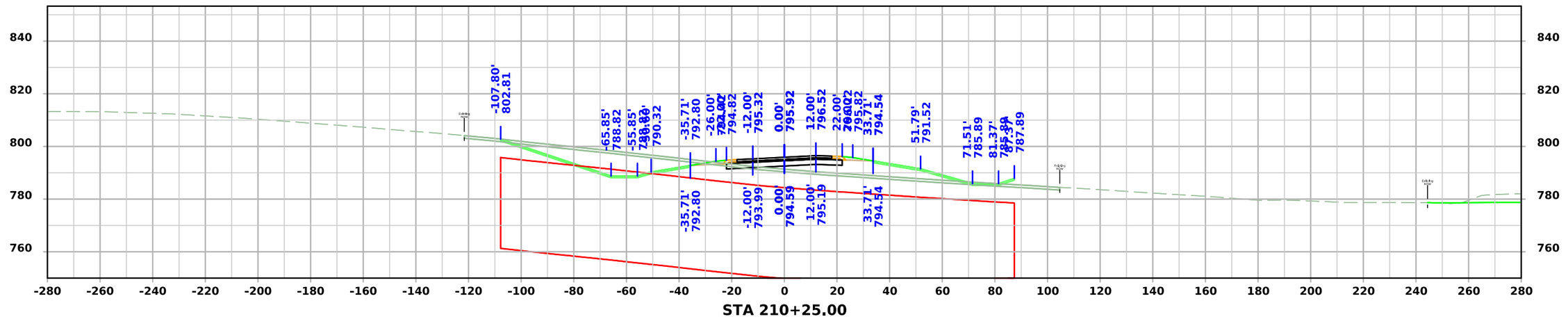
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.130

4:49:39 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 210+50.00

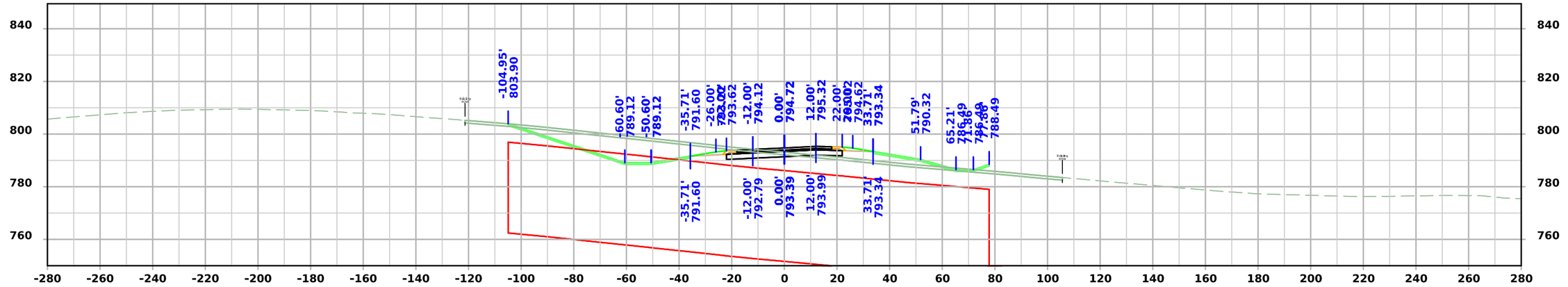


STA 210+25.00

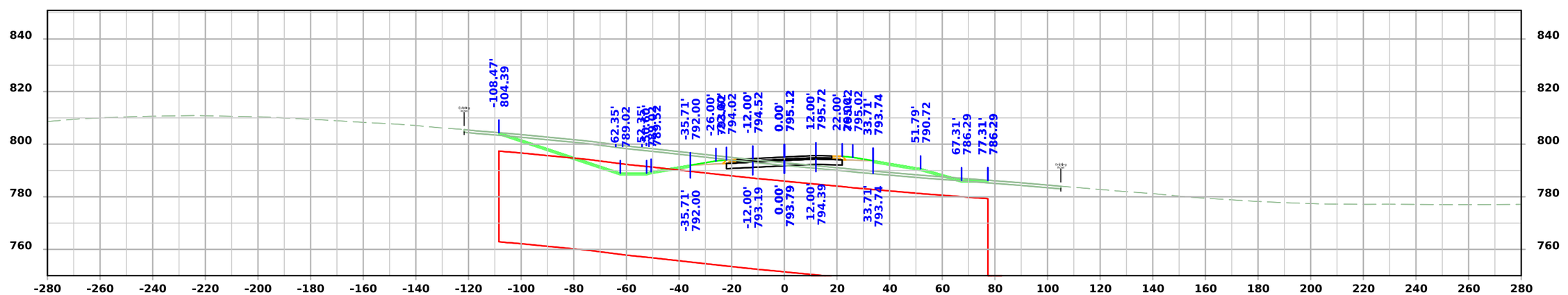
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.131

4:49:43 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 211+00.00

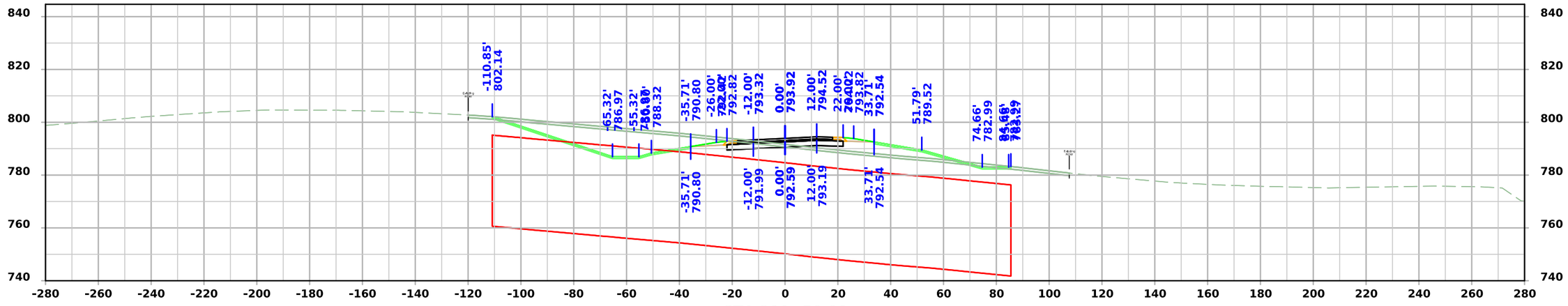


STA 210+75.00

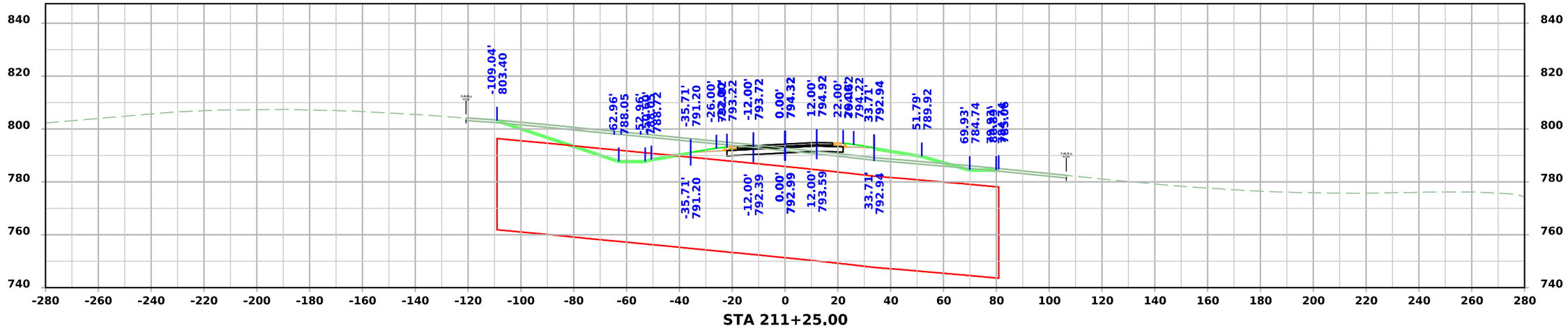
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.132

4:49:46 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 211+50.00

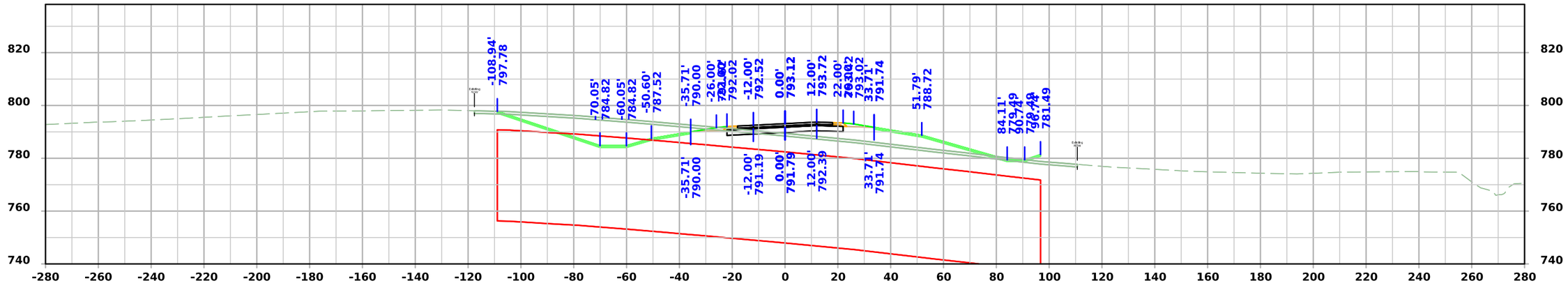


STA 211+25.00

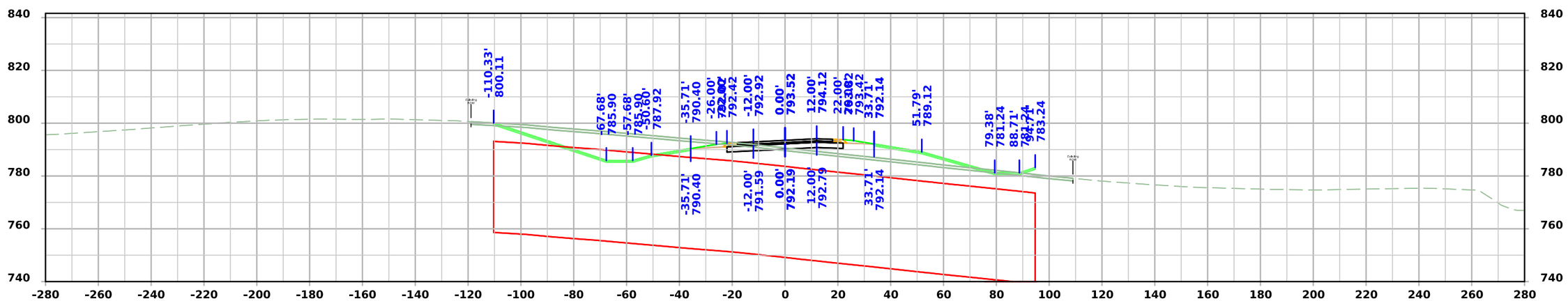
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.133

4:49:50 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 212+00.00

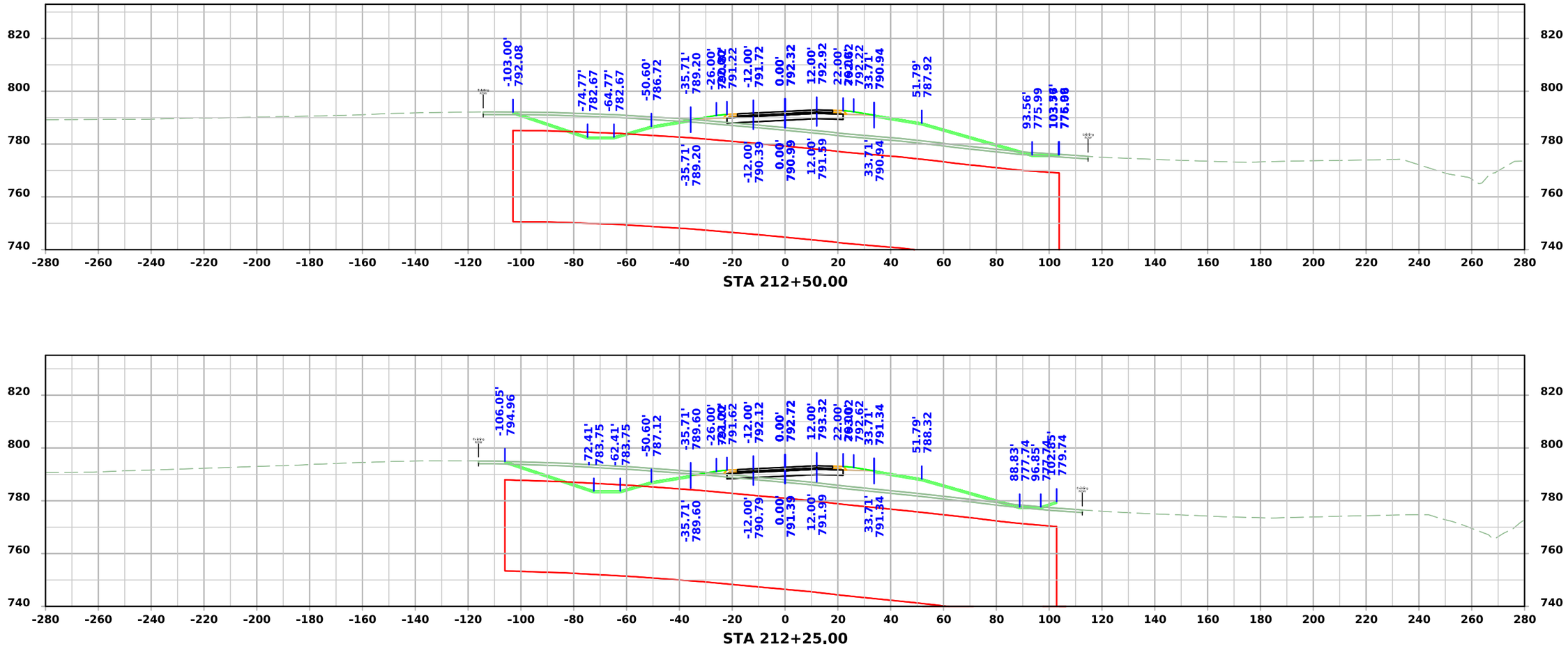


STA 211+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.134

4:49:53 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 212+50.00

STA 212+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.135

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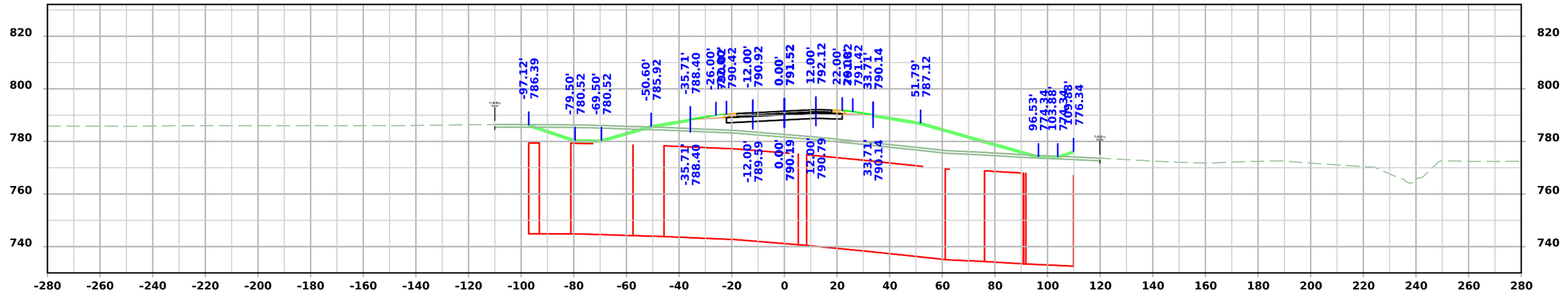
US 63



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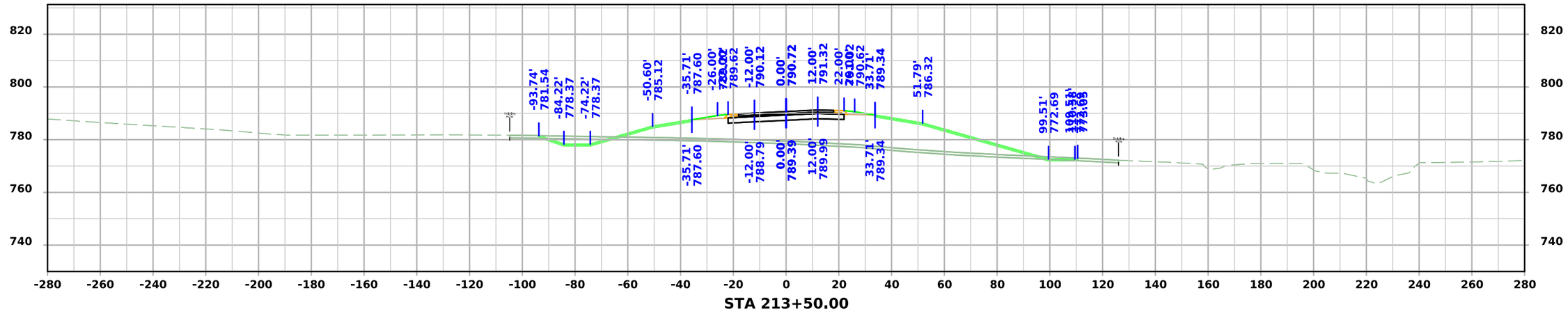
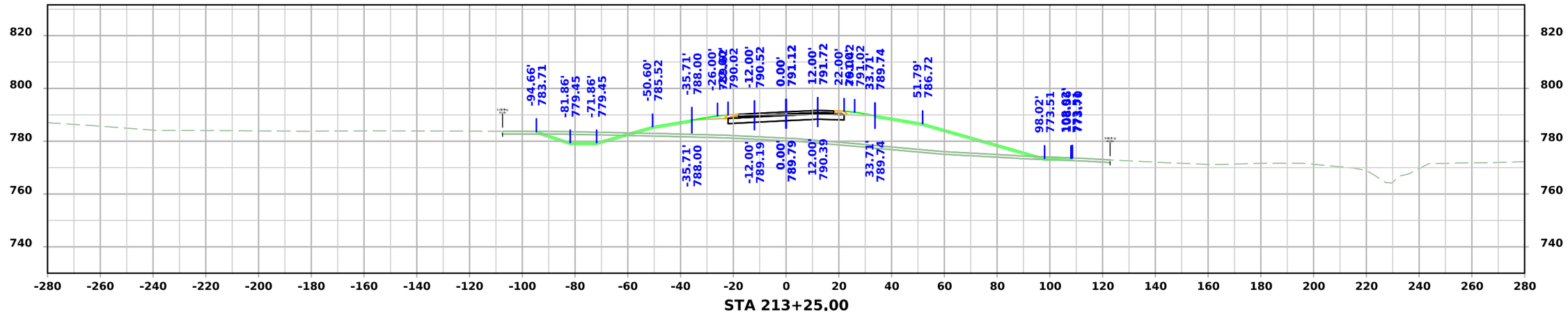
4:50:00 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 213+50.00



STA 213+25.00

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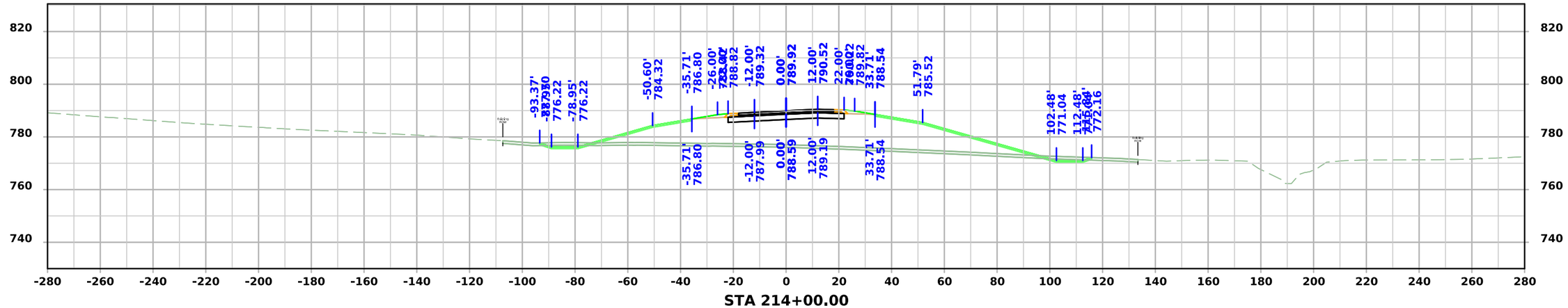
US 63



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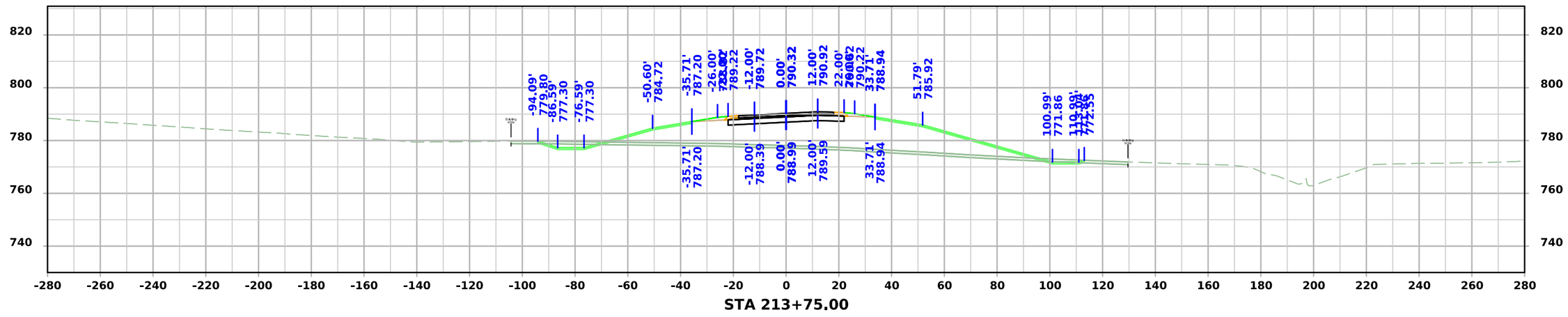
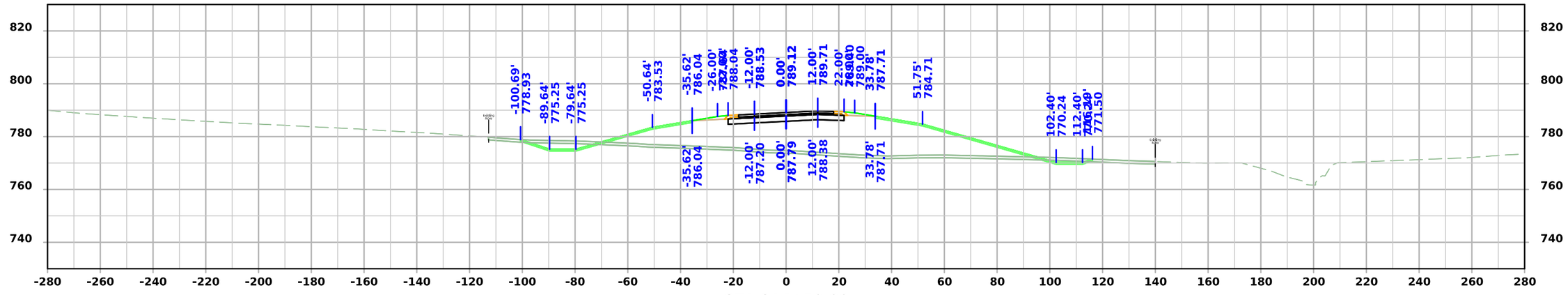


STA 213+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.138

4:50:07 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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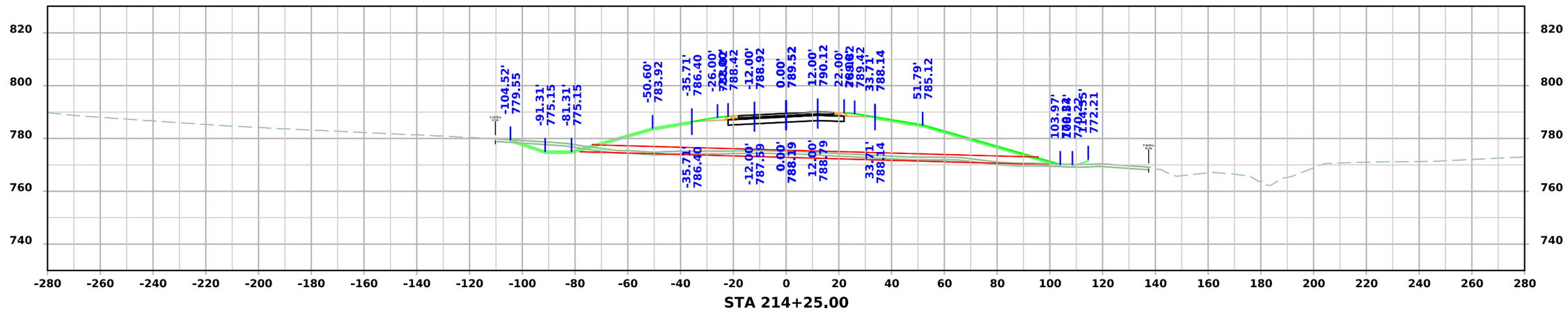
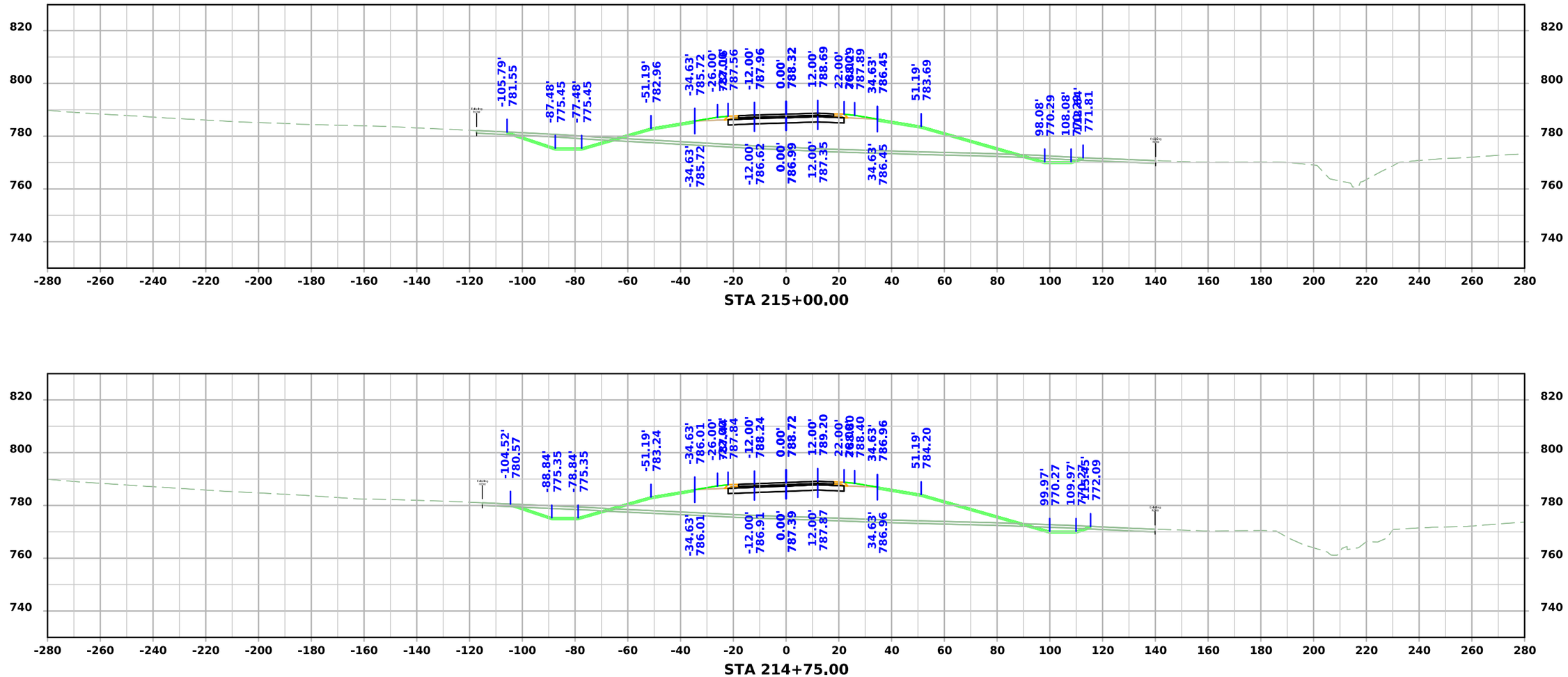


STA 214+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.139

4:50:11 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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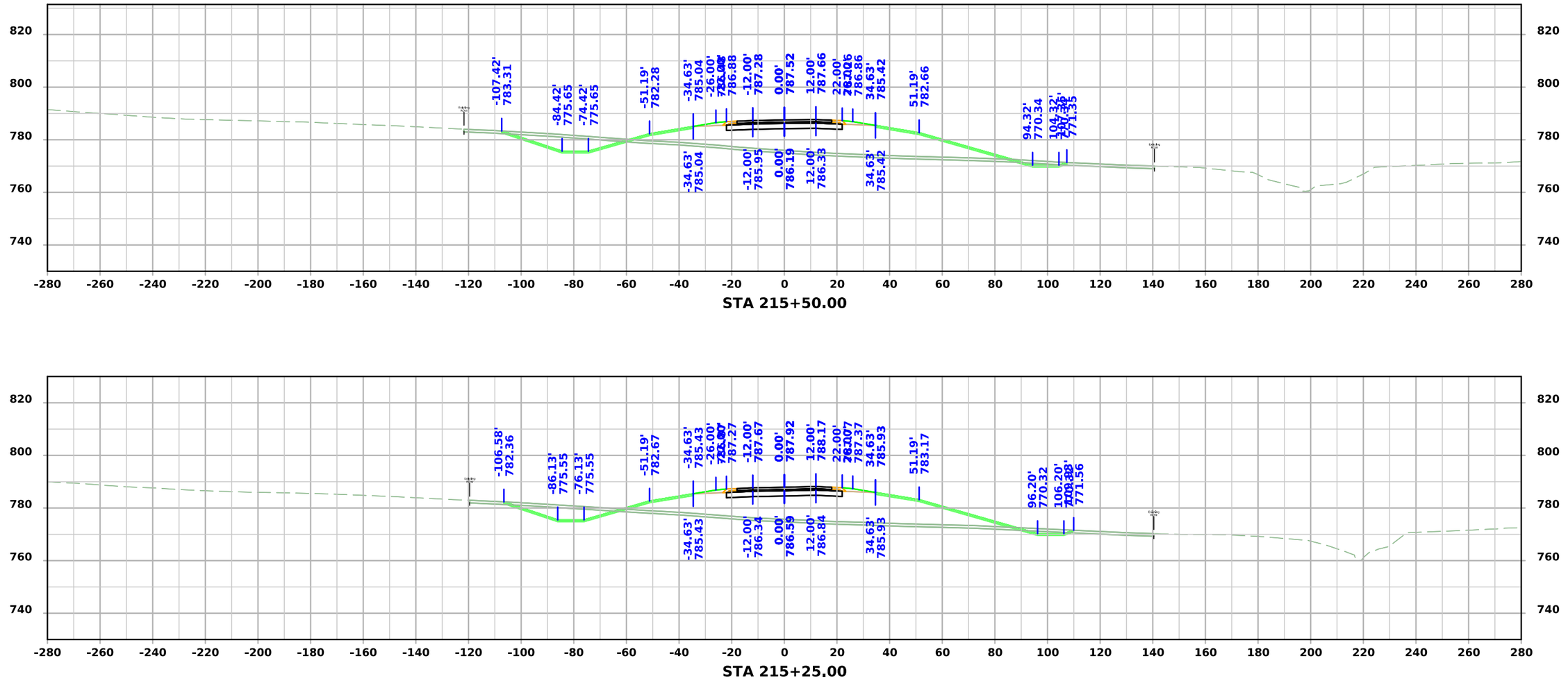
4:50:14 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



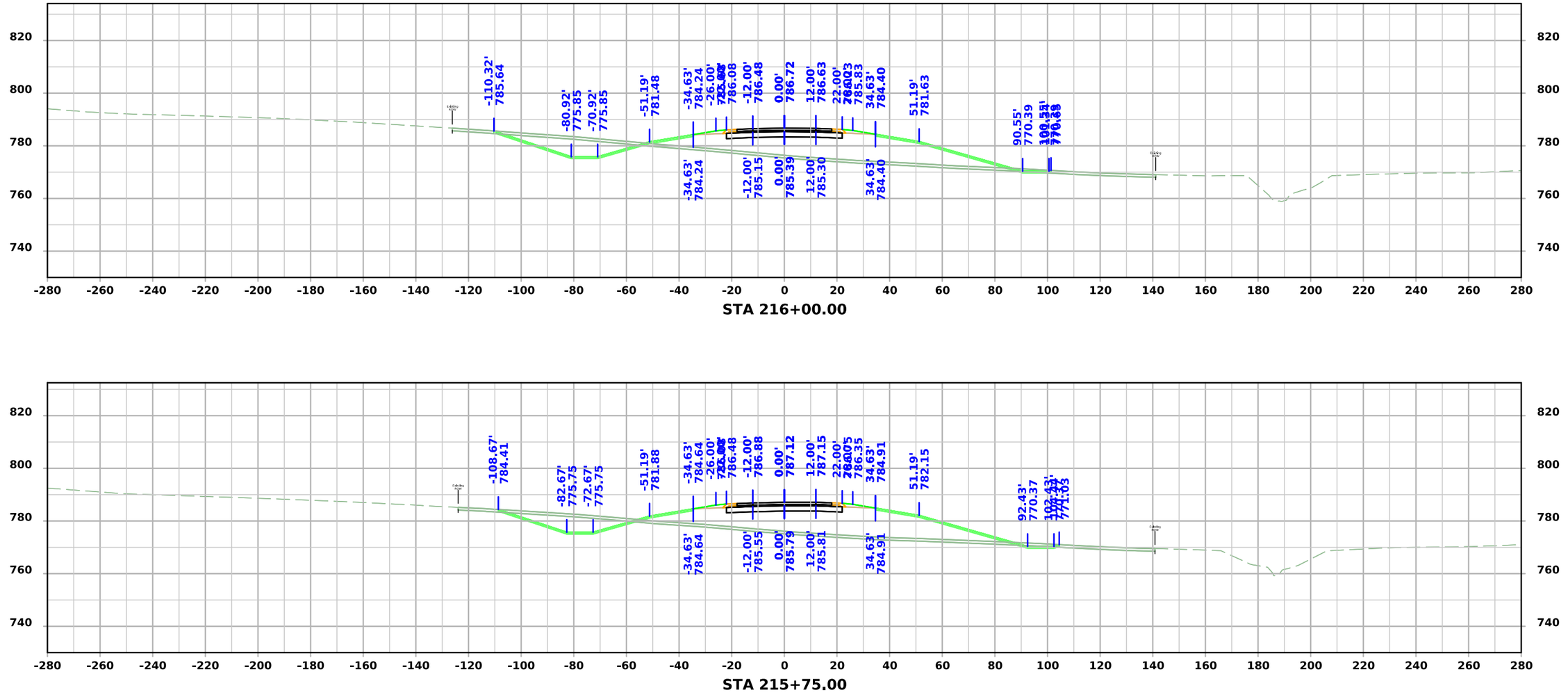
STA 215+50.00

STA 215+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.141

4:50:18 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

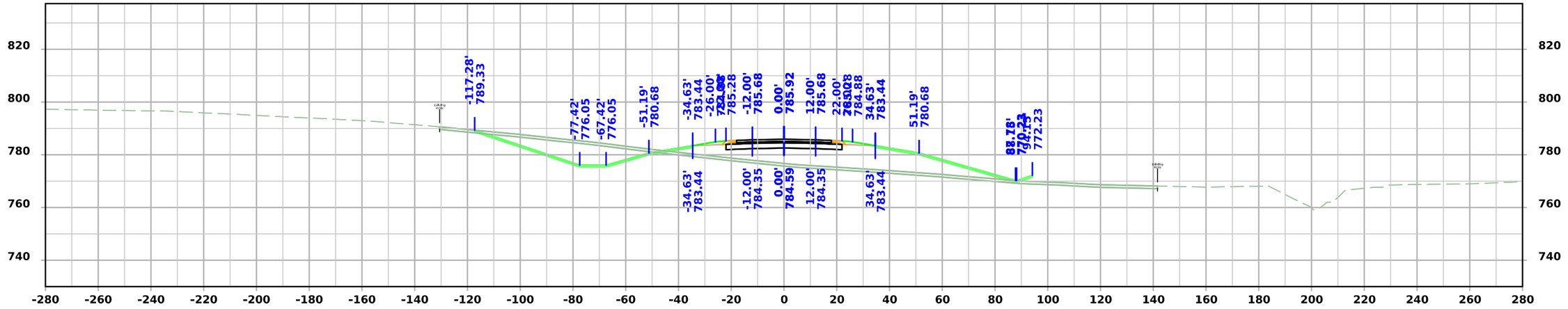
US 63



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.142

4:50:21 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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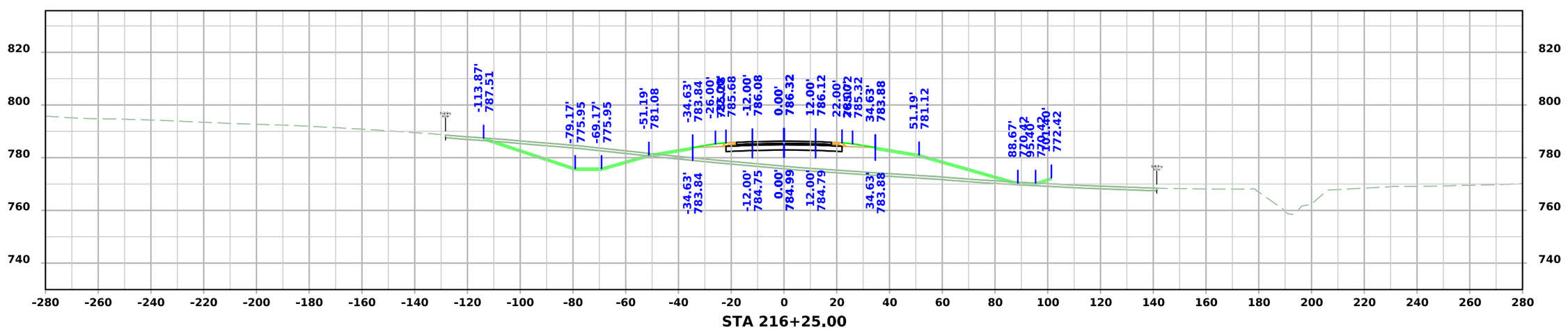

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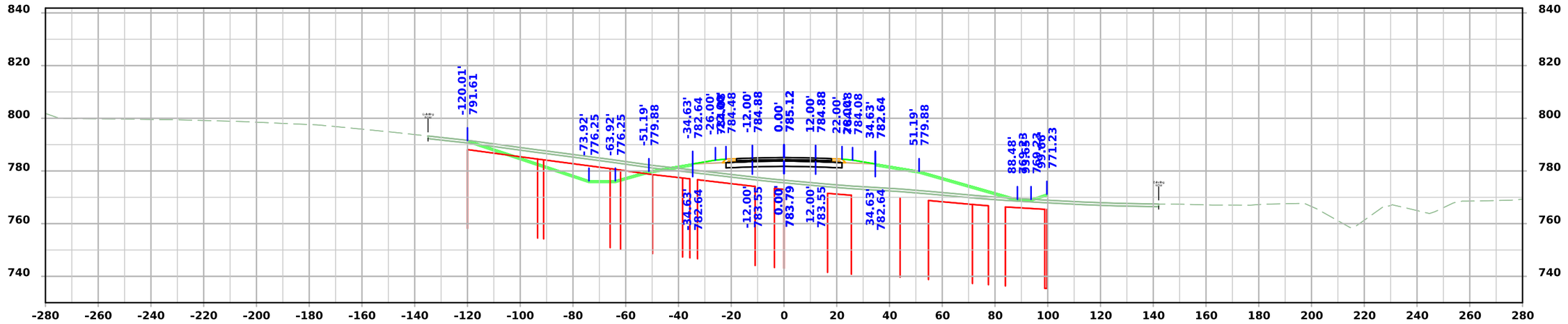
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.143

4:50:24 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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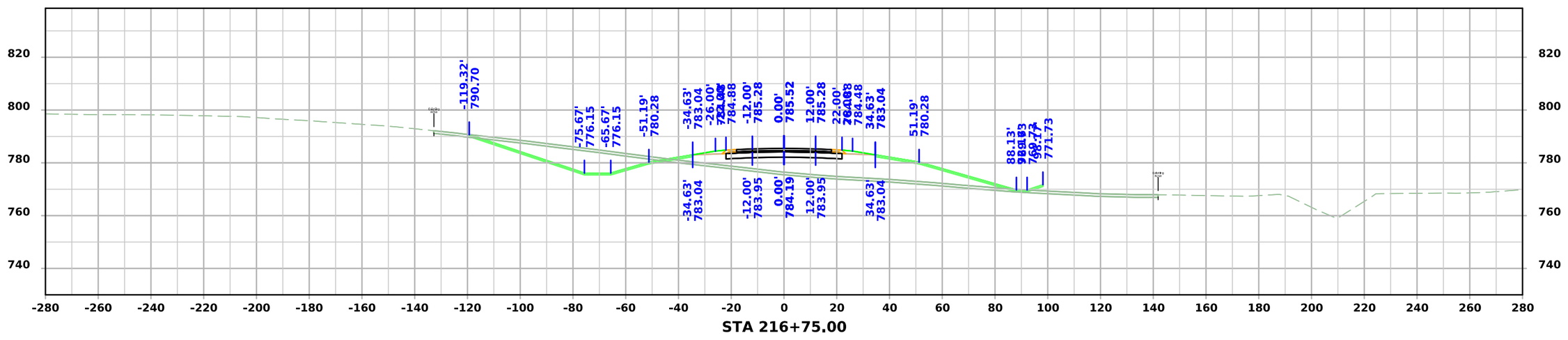

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FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.144

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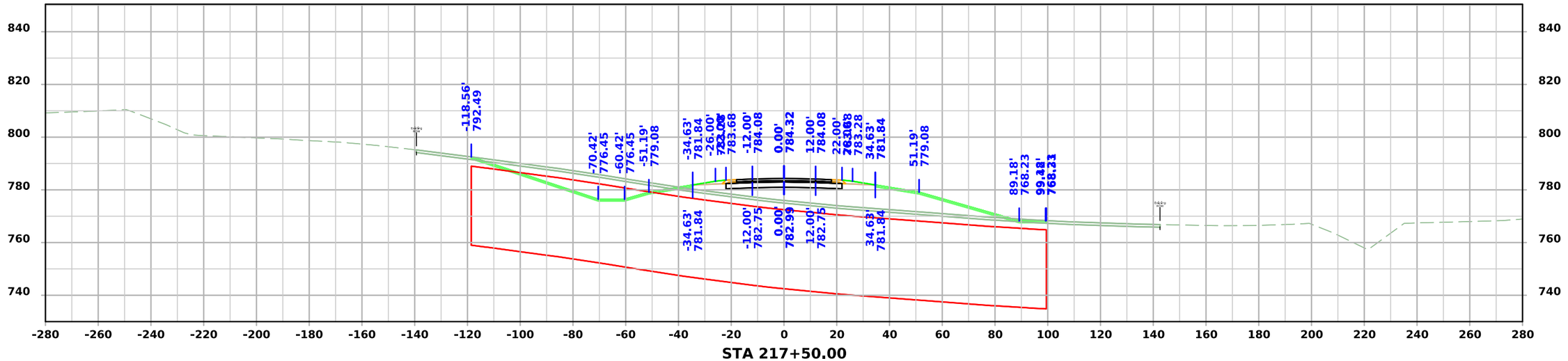
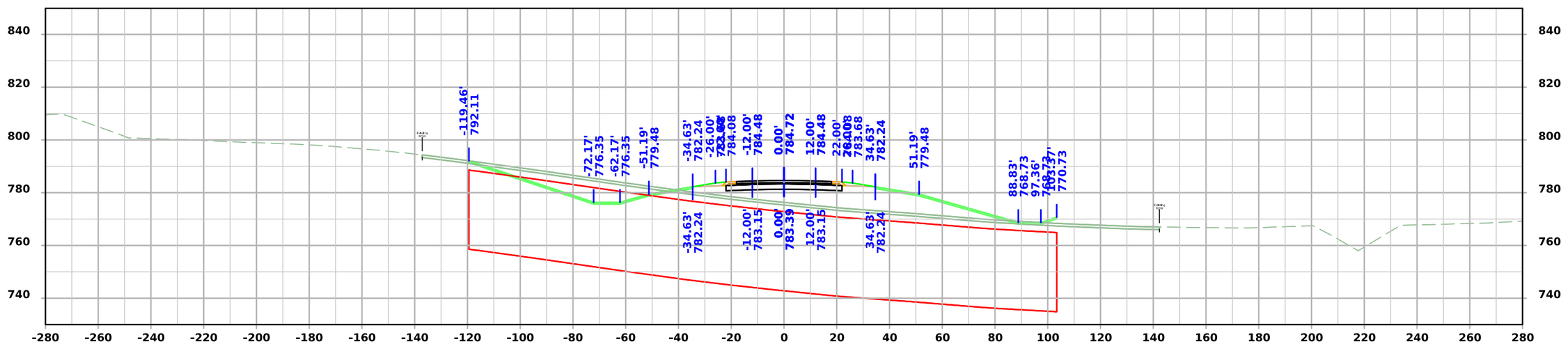
US 63



STA 217+50.00



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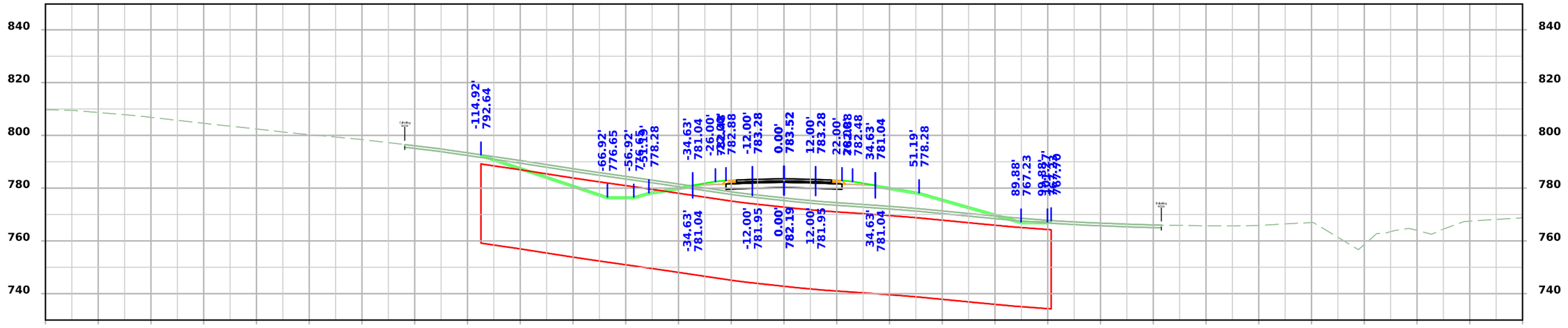
4:50:31 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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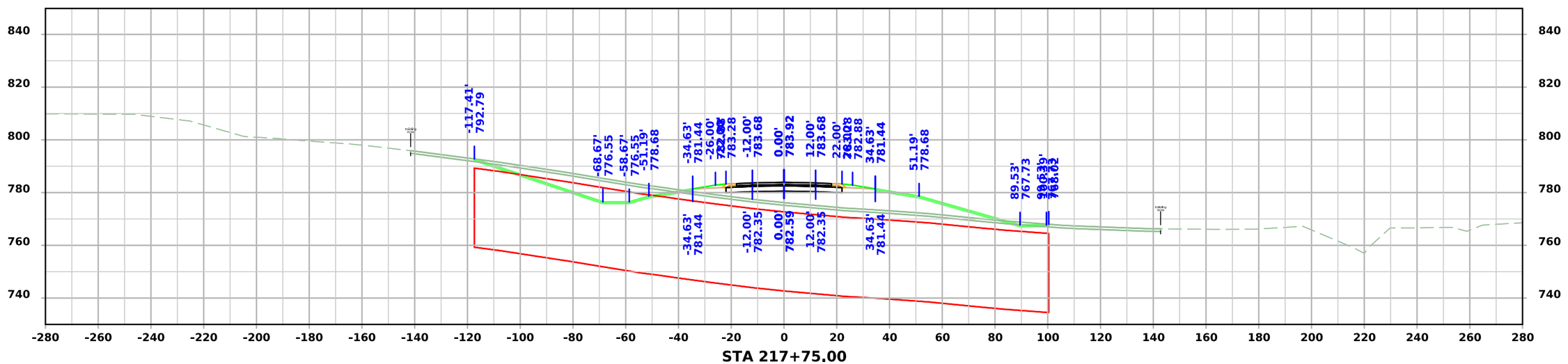
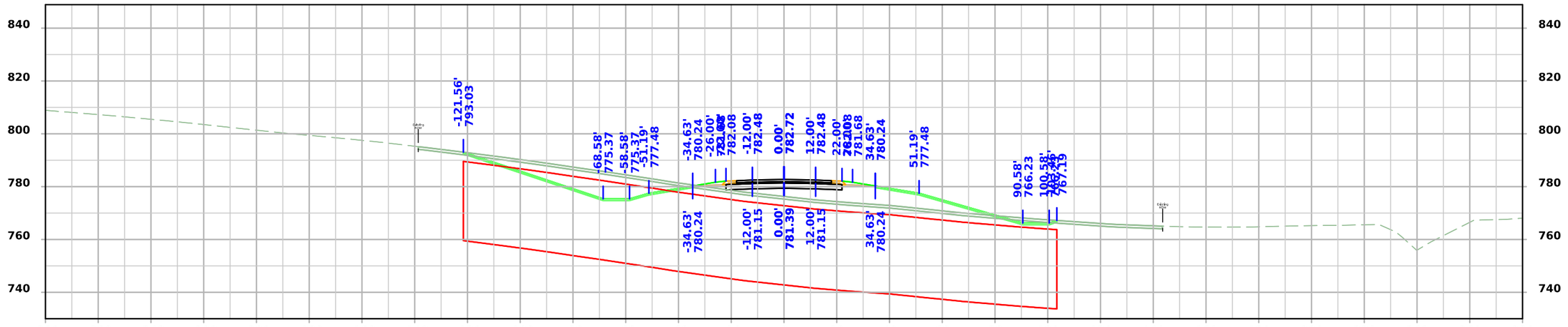


STA 217+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.146

4:50:35 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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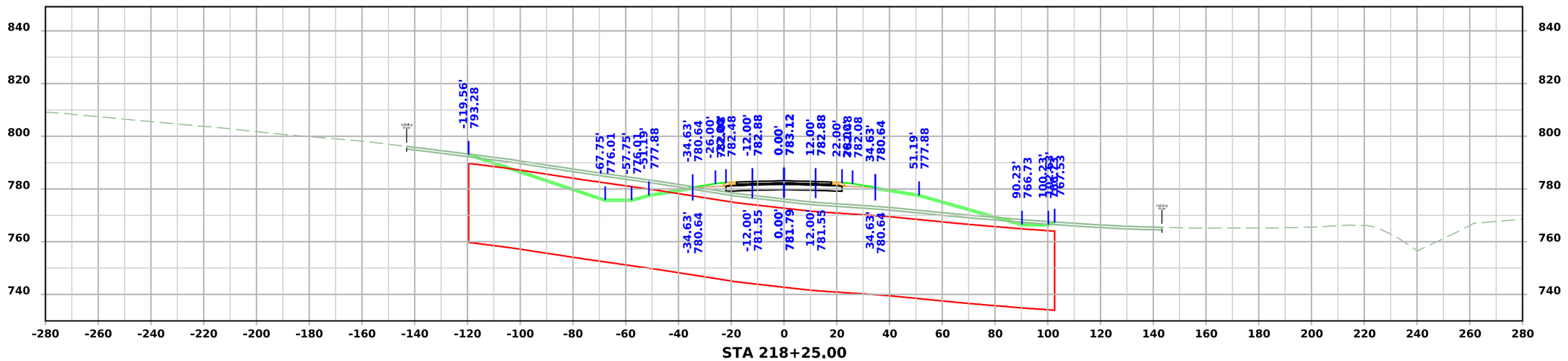

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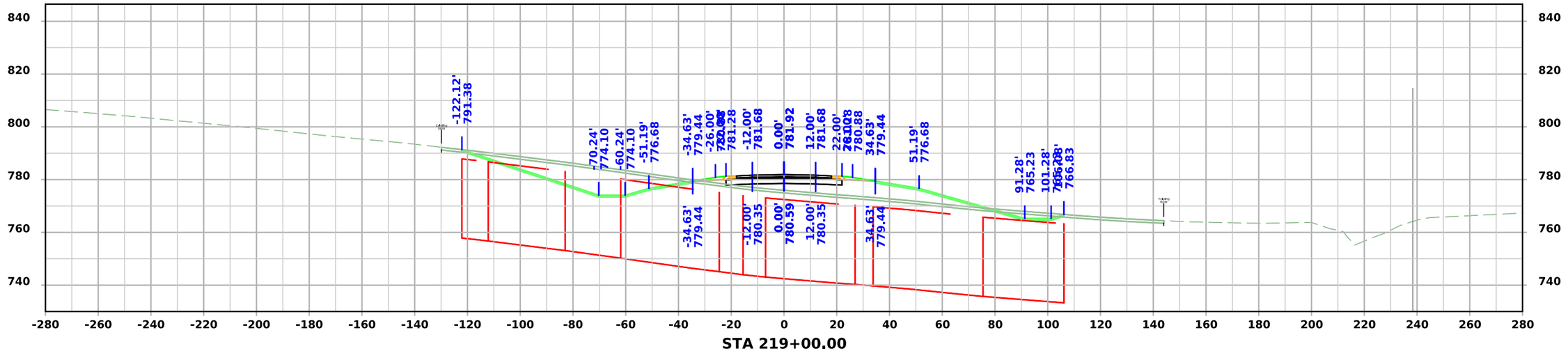
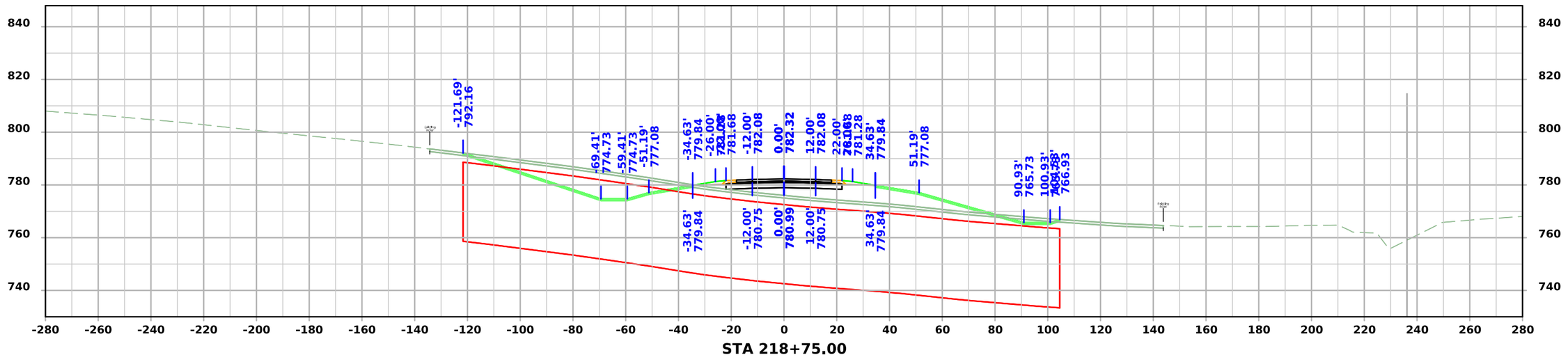
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.147

4:50:38 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 219+00.00

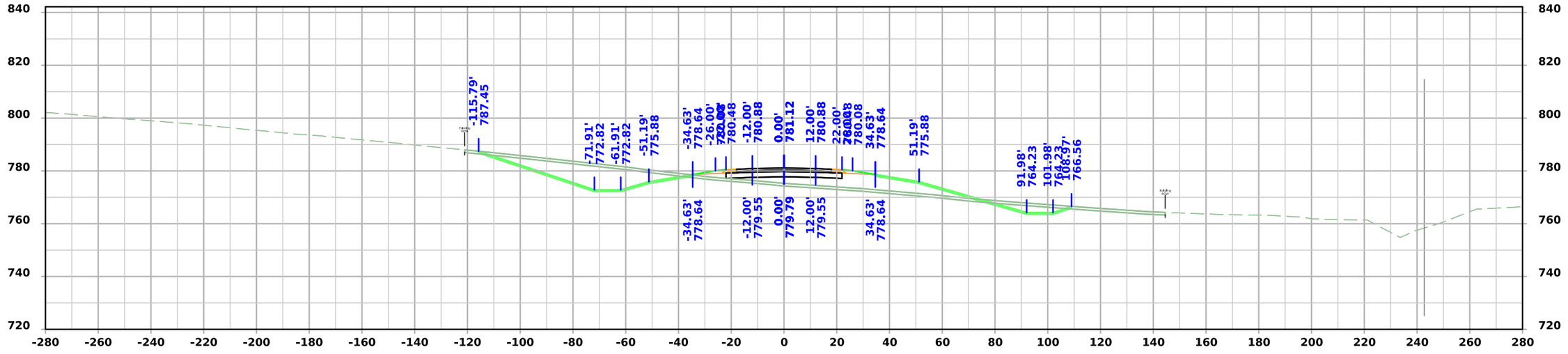


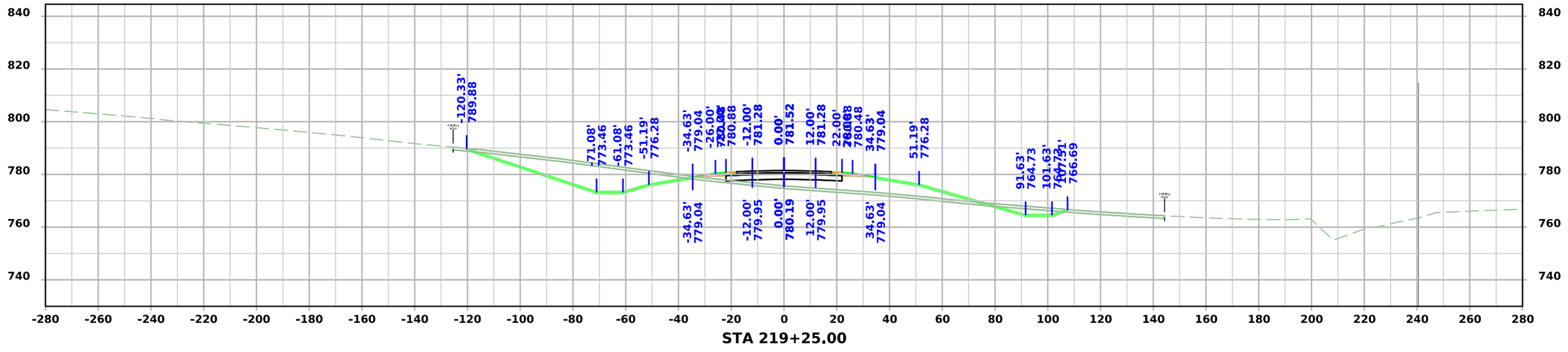
STA 218+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.148

4:50:42 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63

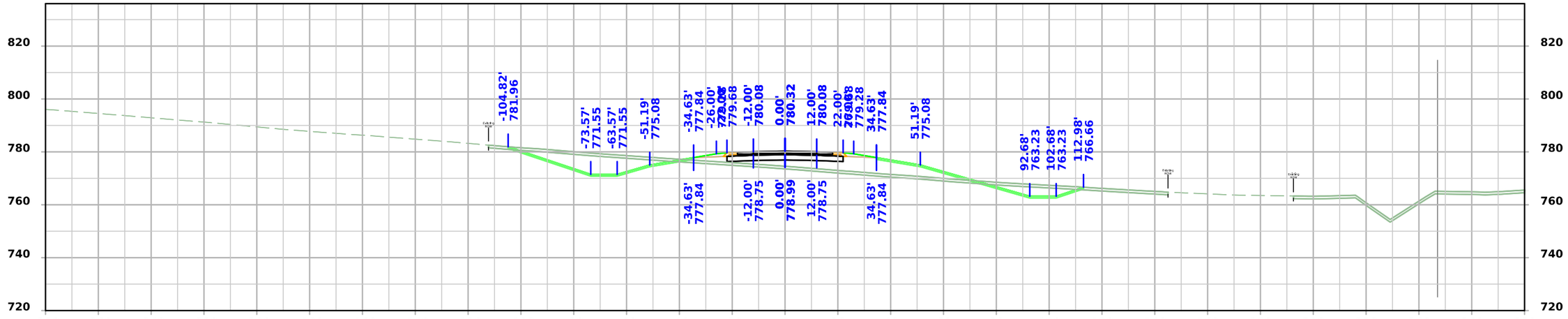




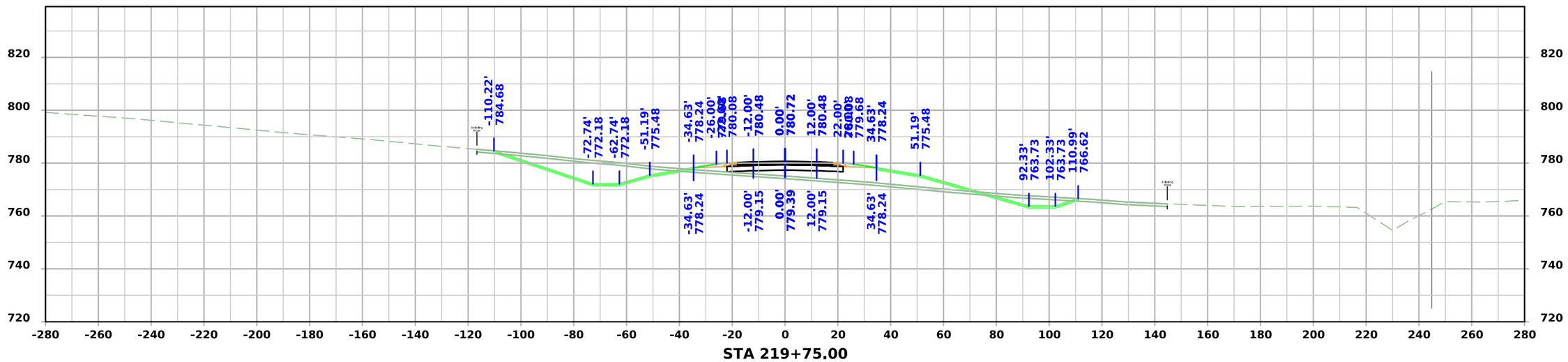
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.149

4:50:45 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 220+00.00

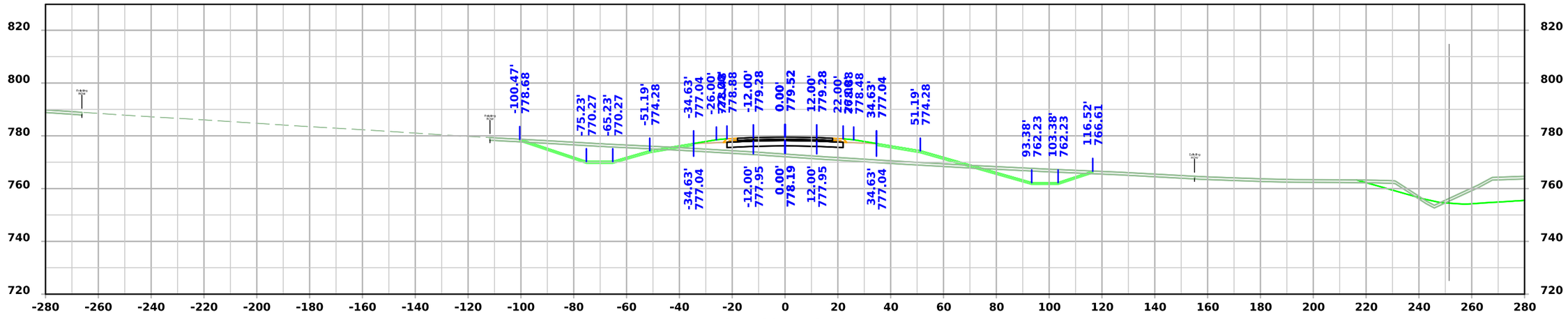


STA 219+75.00

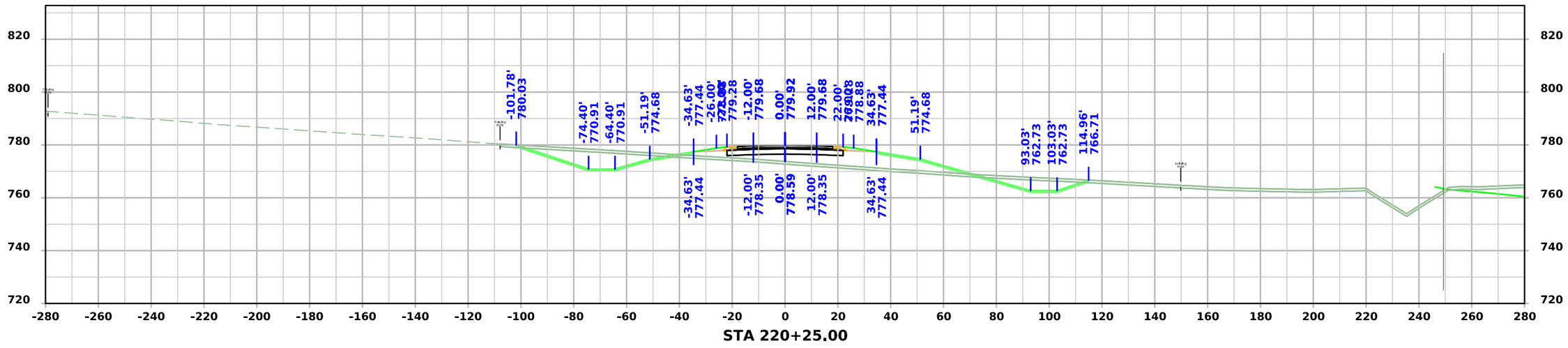
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.150

4:50:48 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 220+50.00

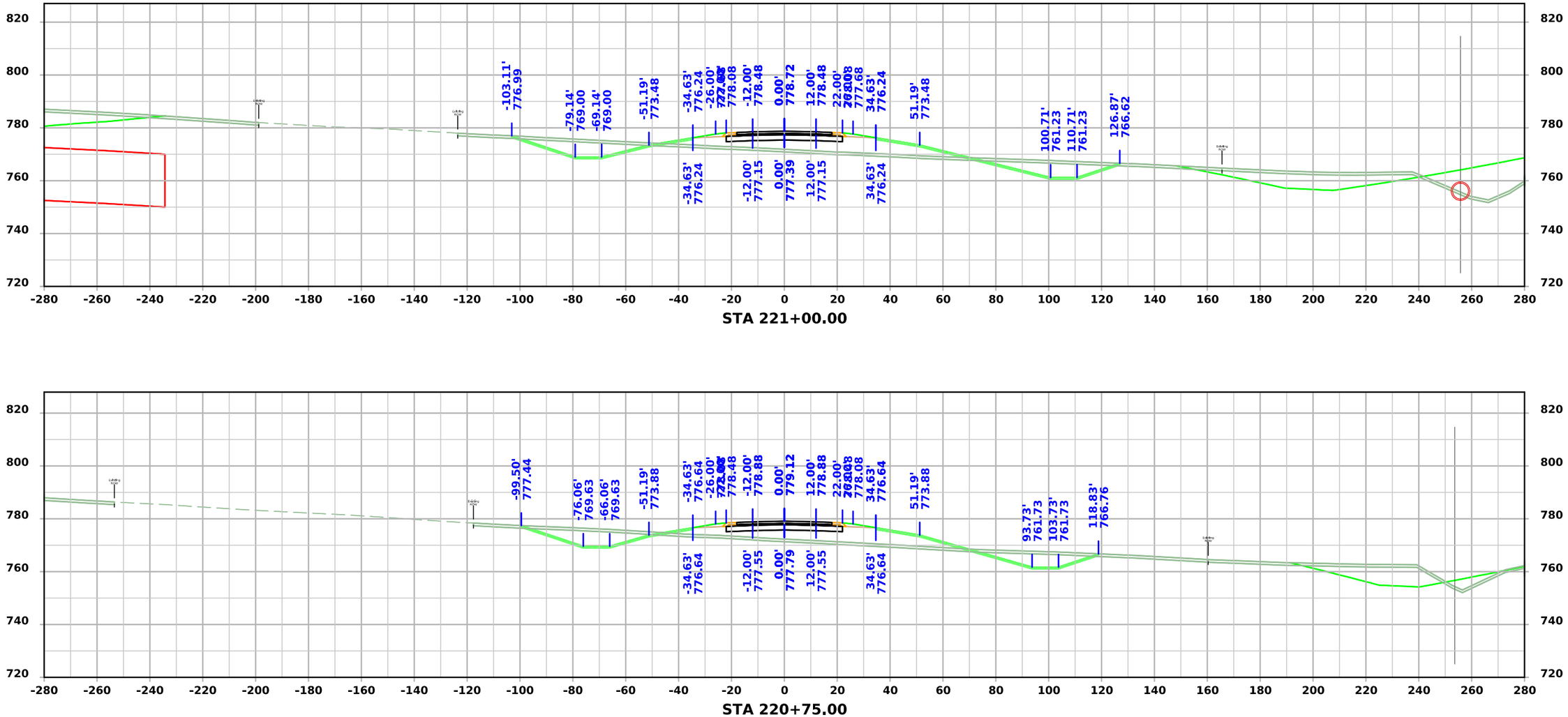


STA 220+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.151

8:24:30 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



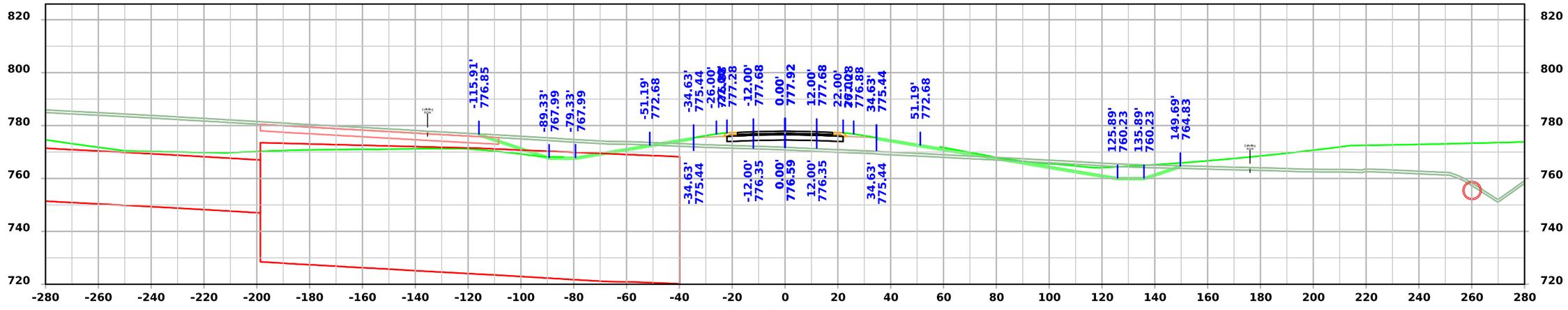
STA 221+00.00

STA 220+75.00

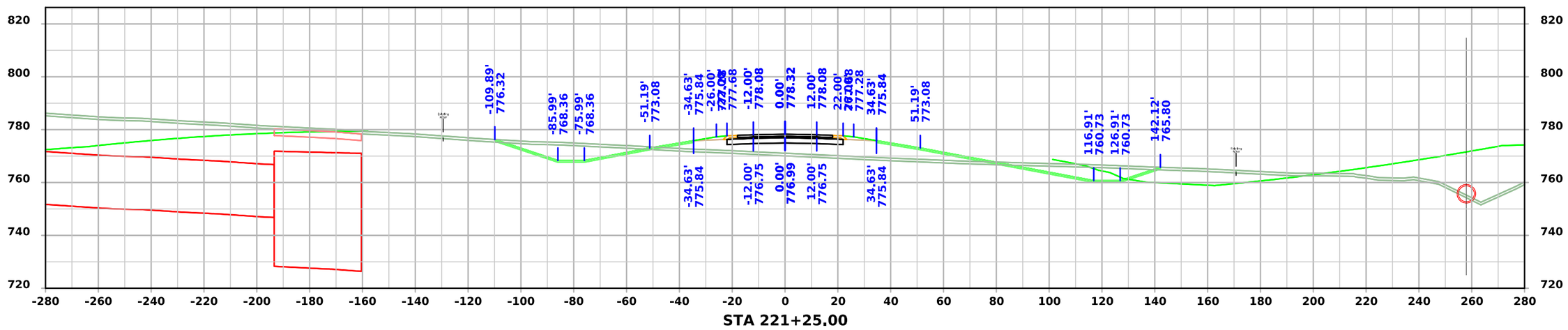
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.152

8:24:34 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 221+50.00

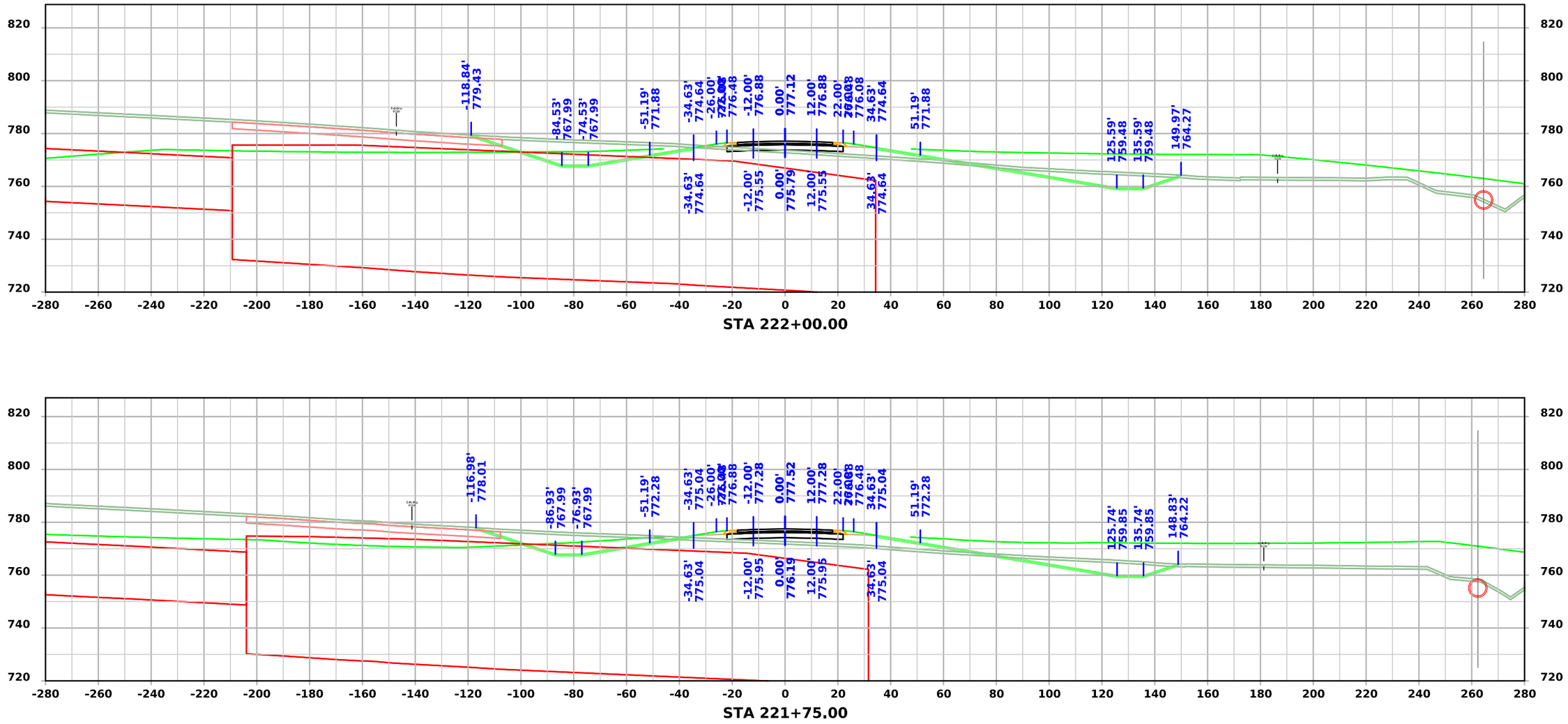


STA 221+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.153

8:24:37 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

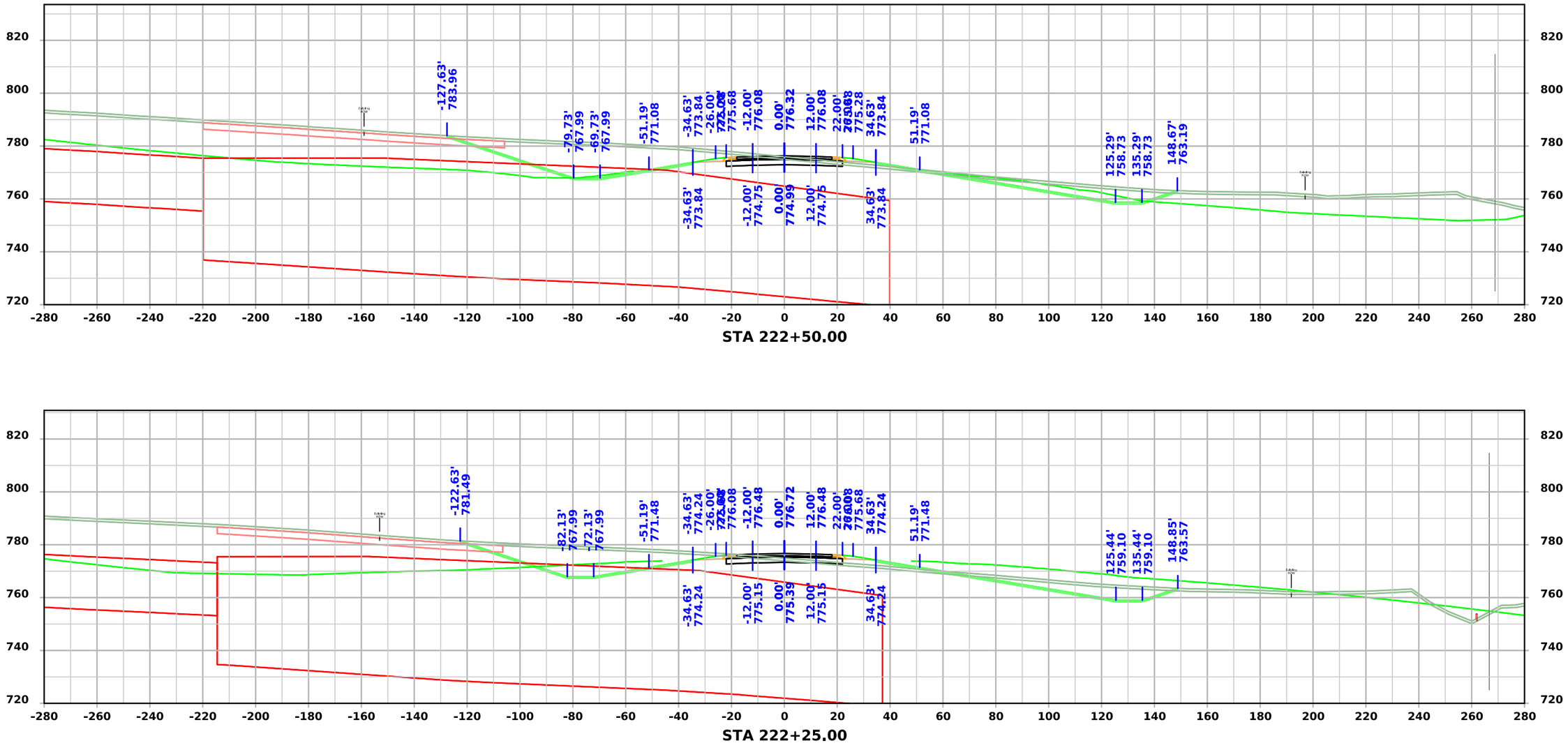
US 63



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.154

8:24:40 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



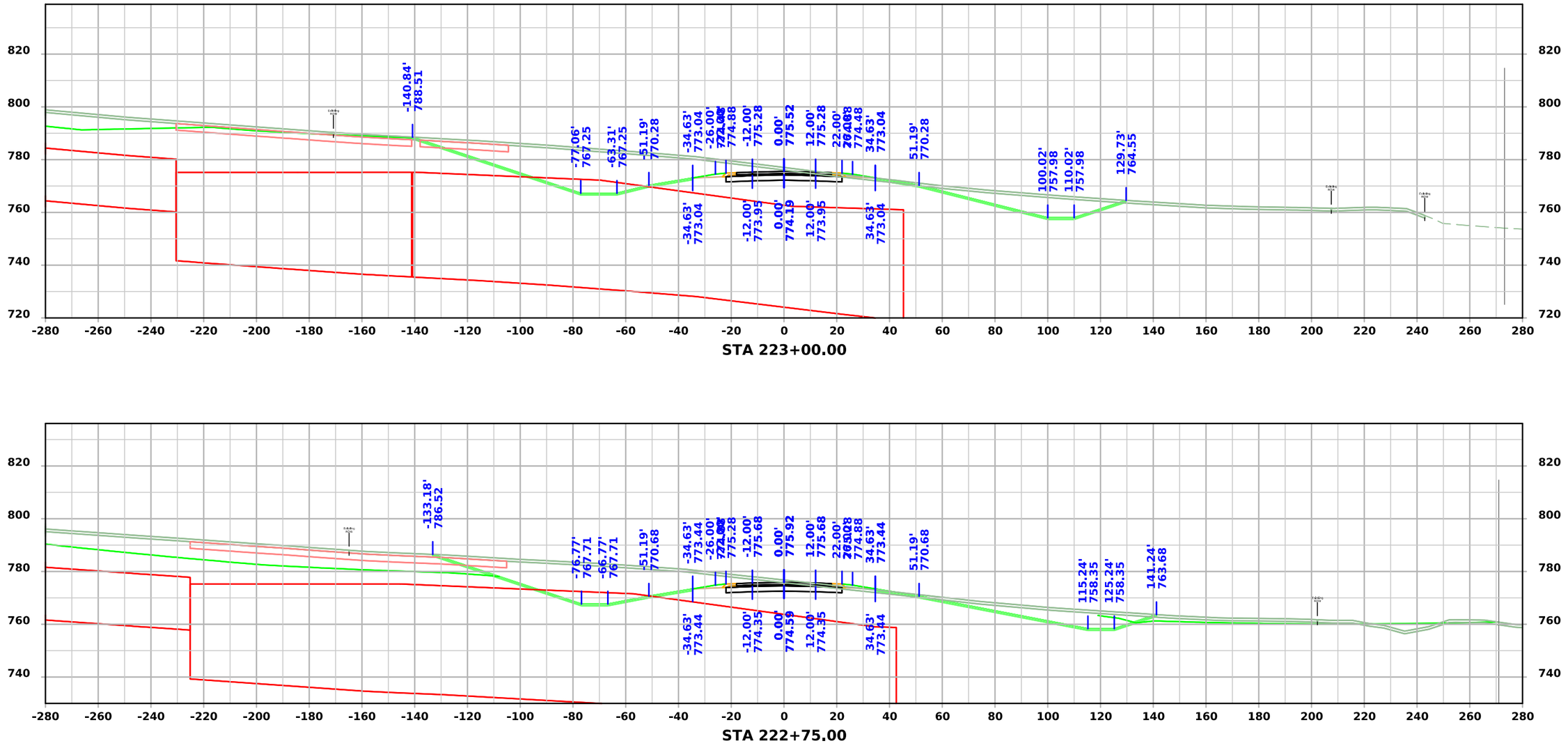
STA 222+50.00

STA 222+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.155

8:24:44 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



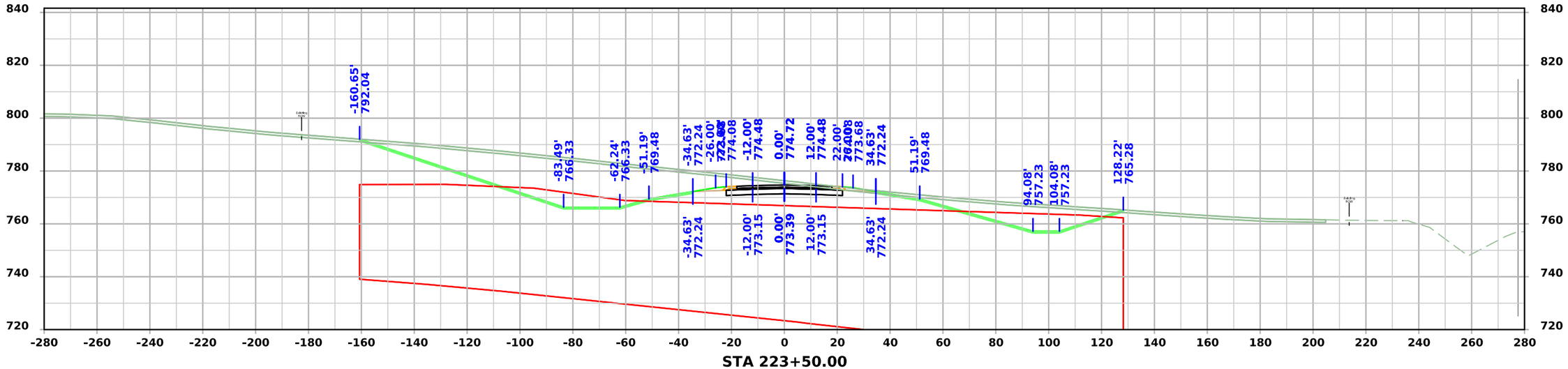
STA 223+00.00

STA 222+75.00

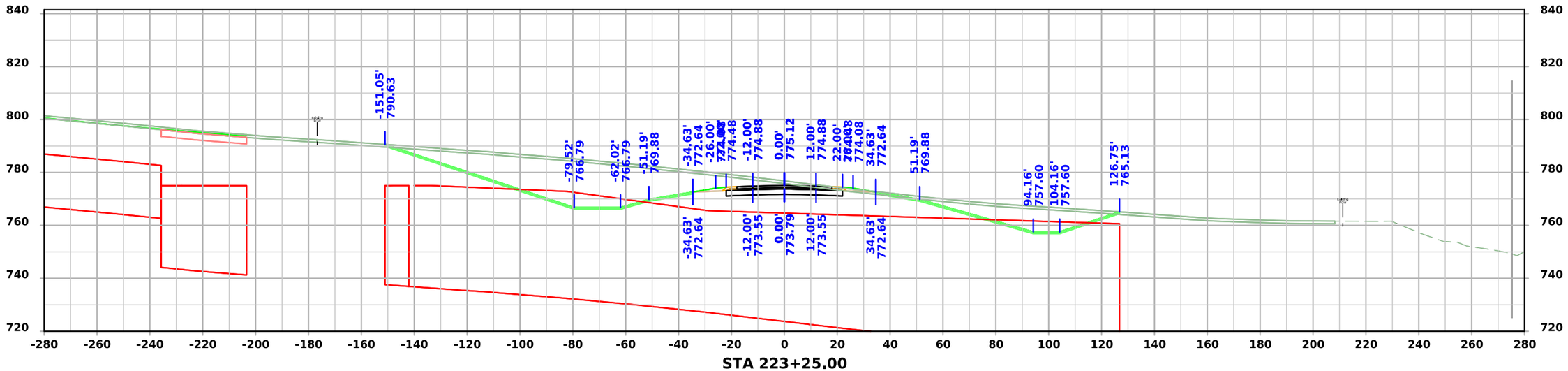
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.156

8:24:47 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 223+50.00

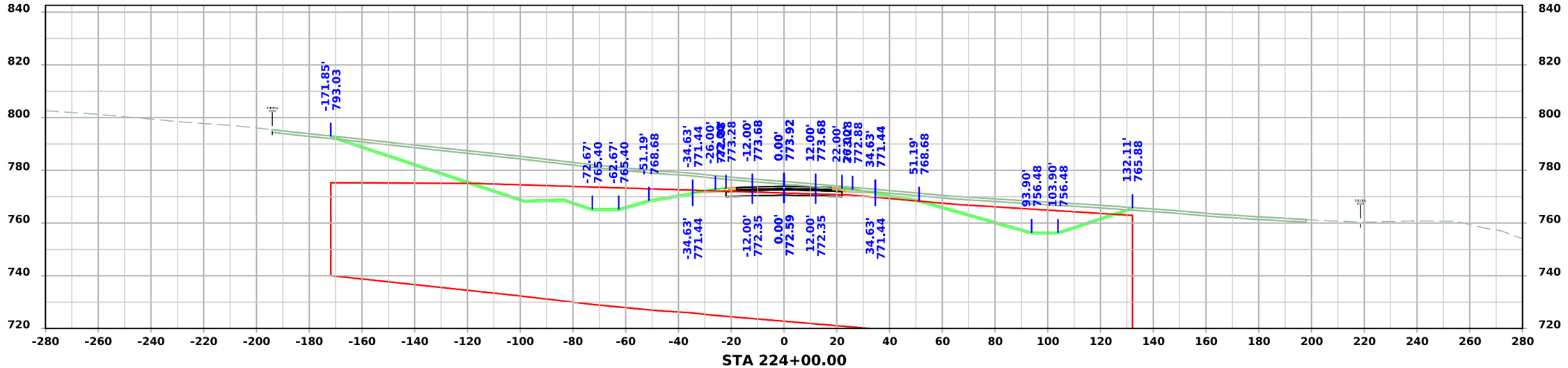


STA 223+25.00

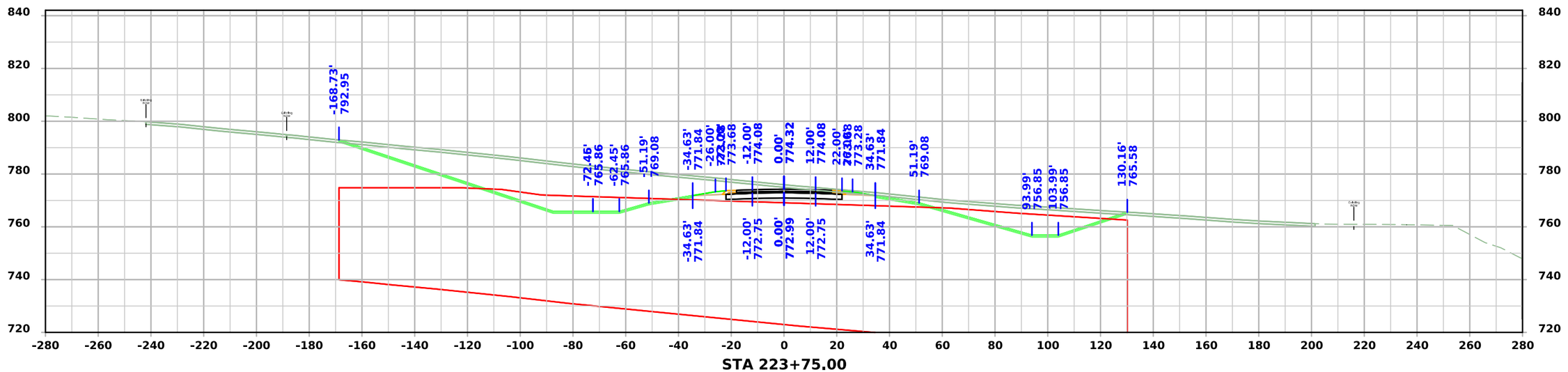
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.157

8:24:50 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 224+00.00

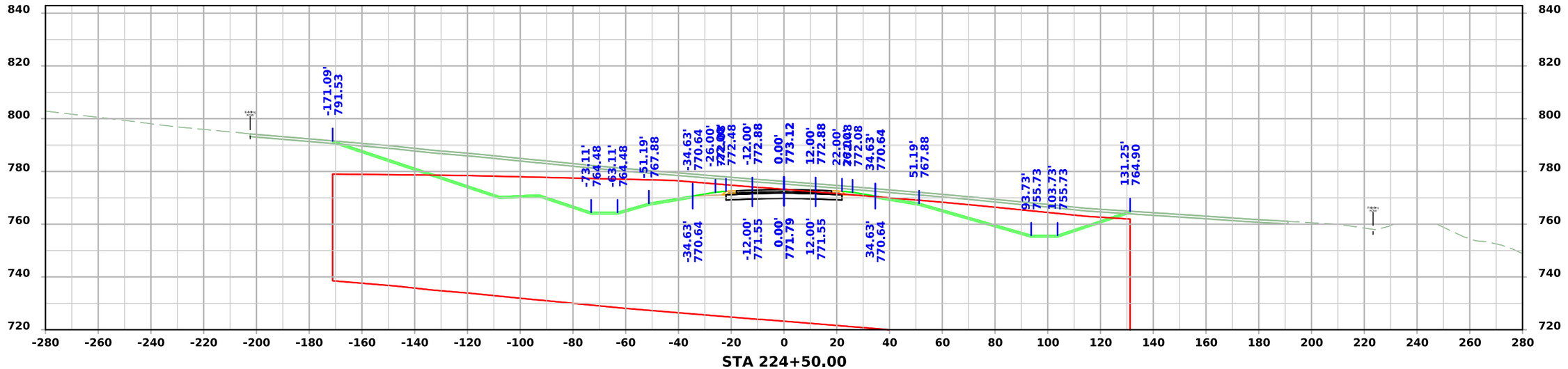


STA 223+75.00

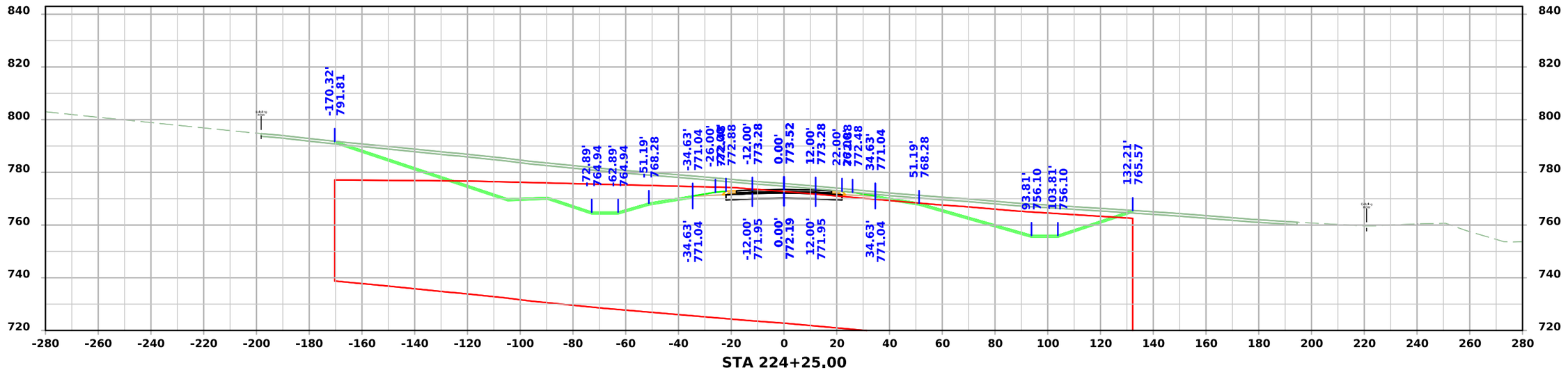
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.158

8:24:54 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 224+50.00

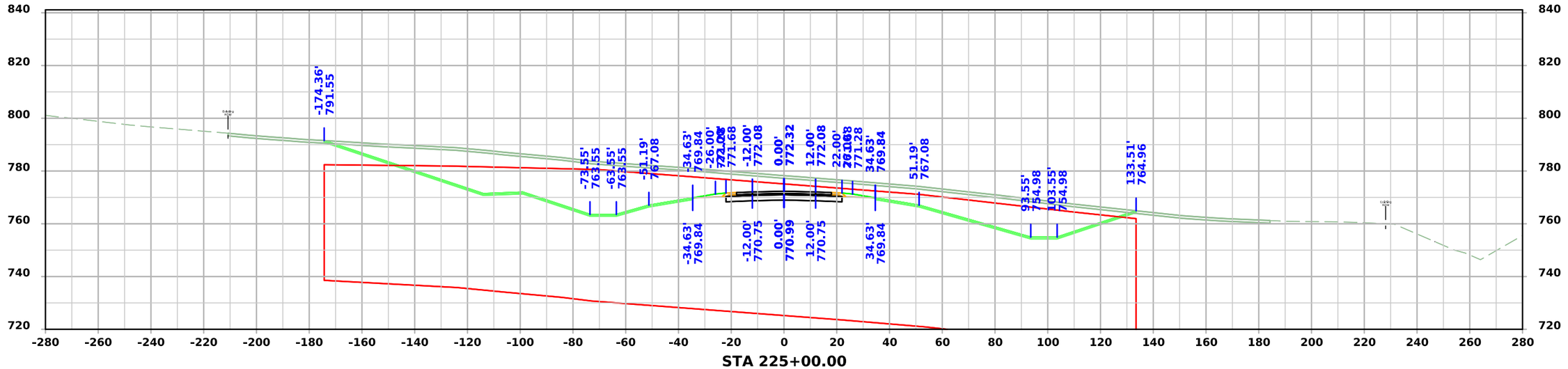


STA 224+25.00

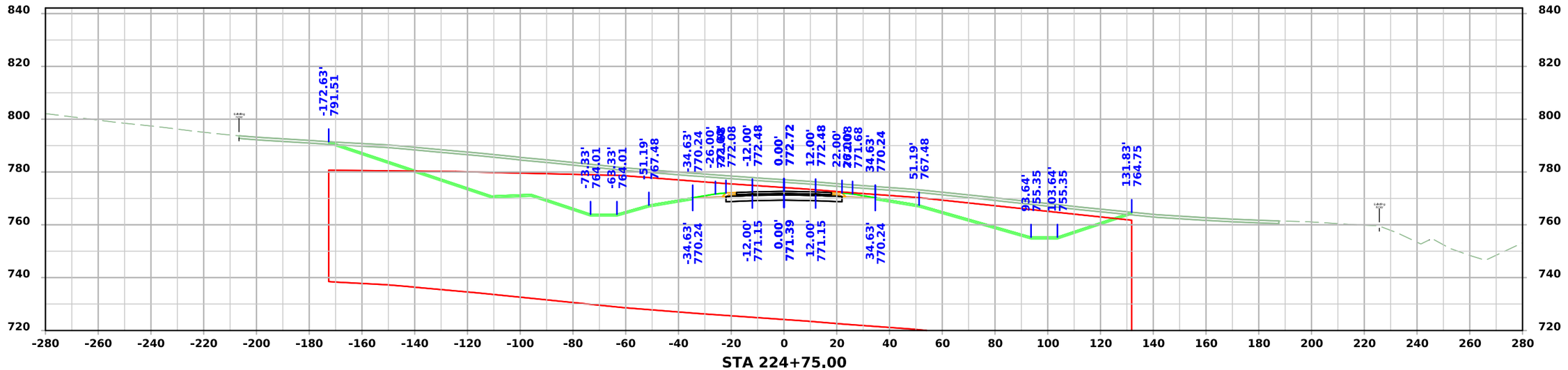
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.159

8:24:57 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 225+00.00

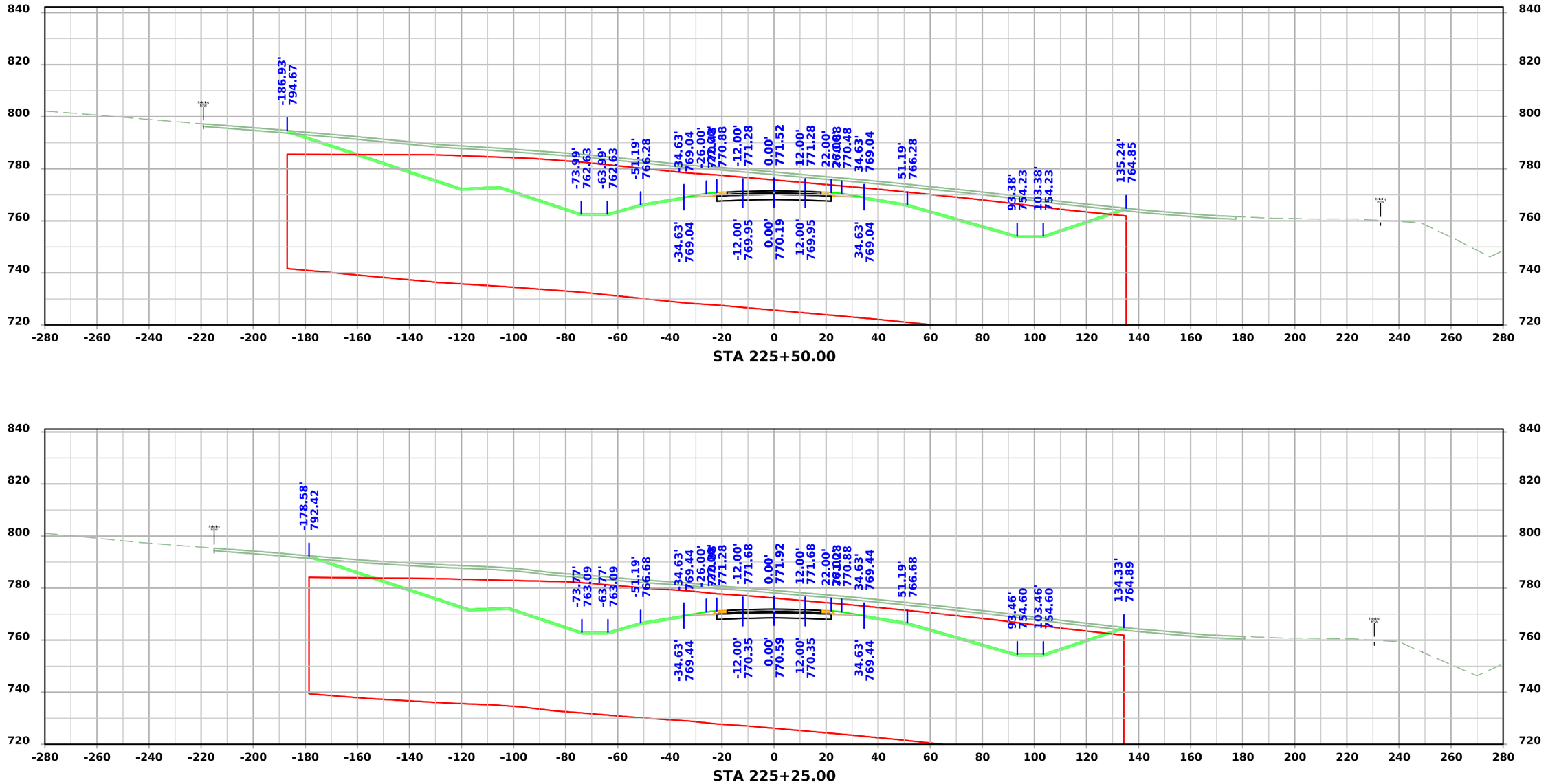


STA 224+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.160

8:25:00 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

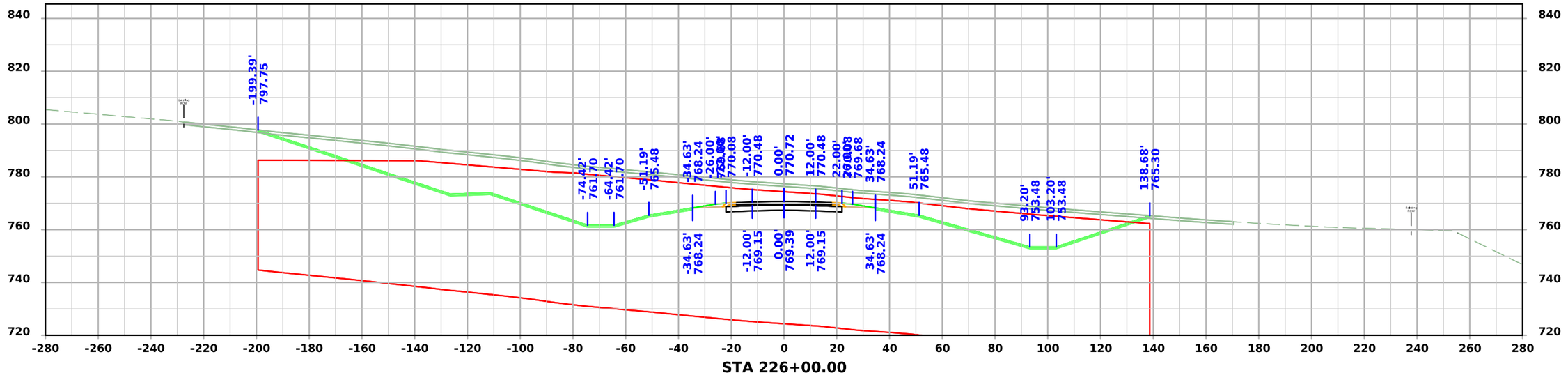
US 63



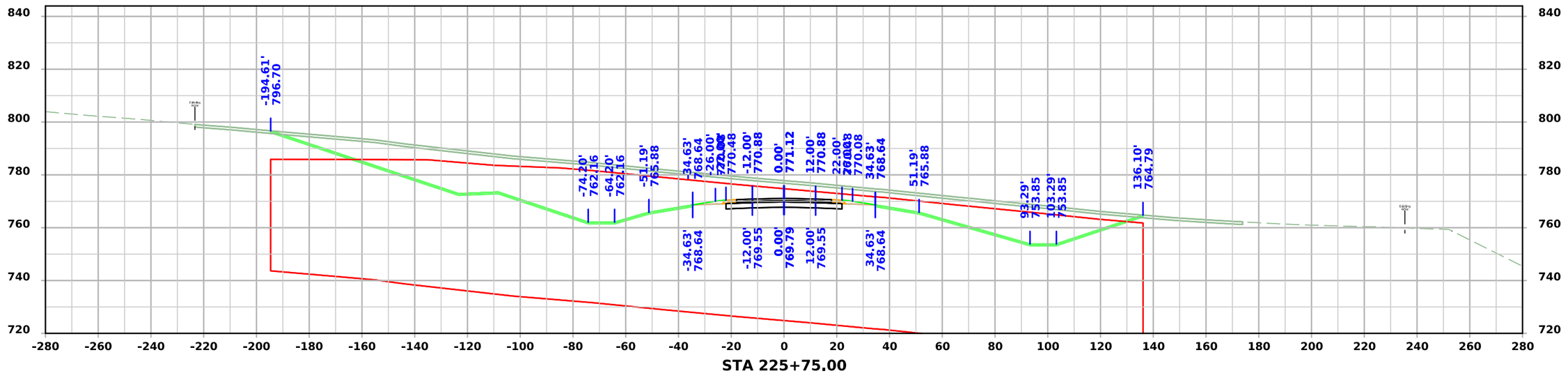
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.161

8:25:03 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 226+00.00

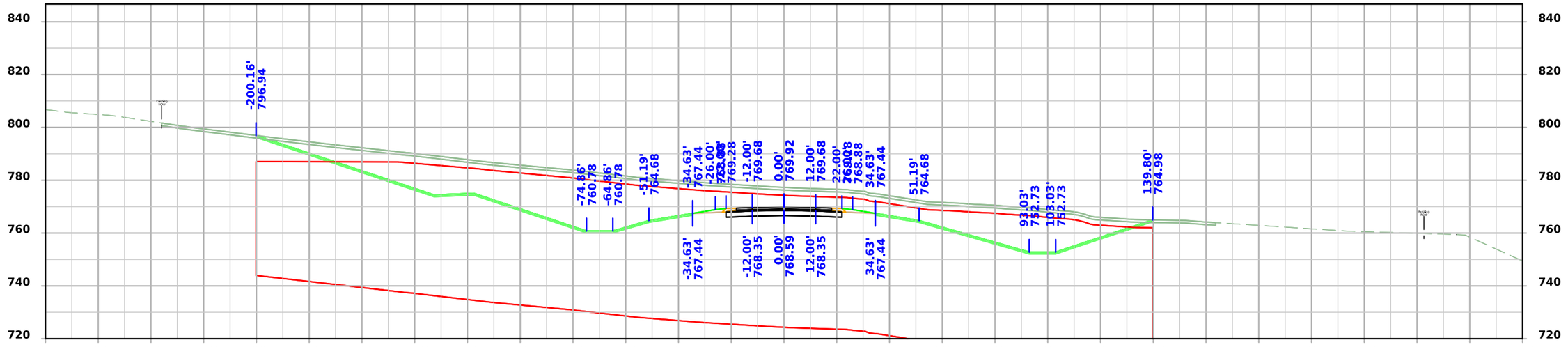


STA 225+75.00

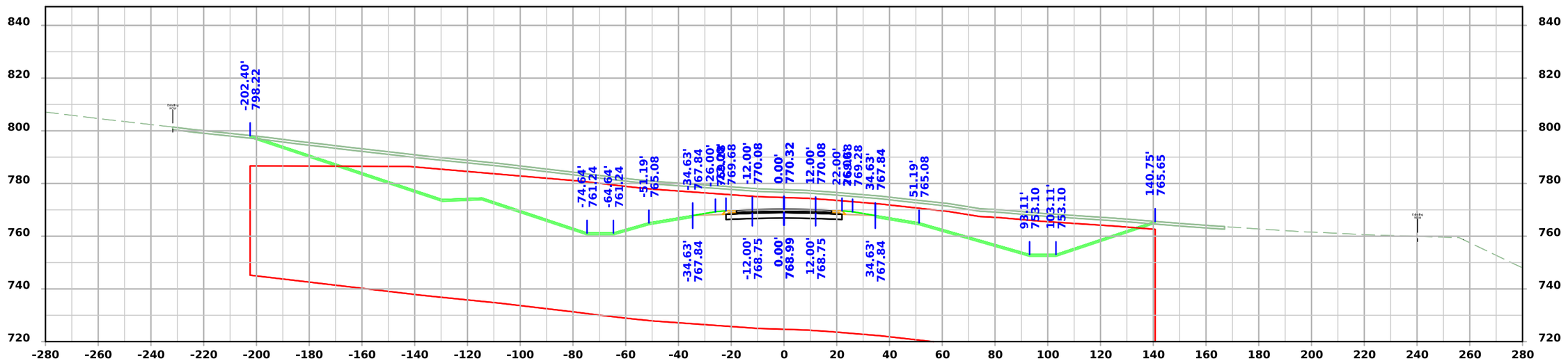
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.162

8:25:06 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 226+50.00

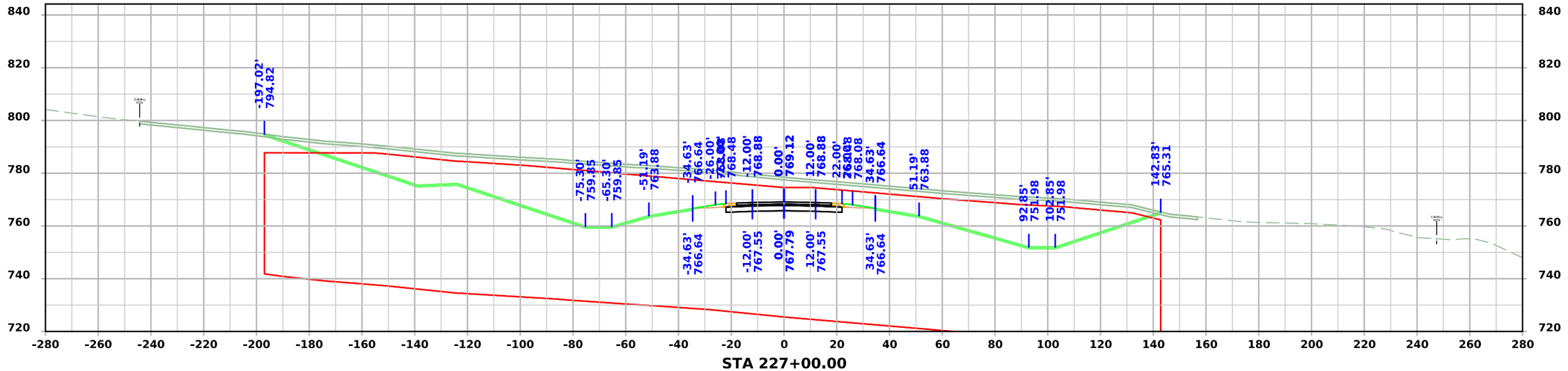


STA 226+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.163

8:25:09 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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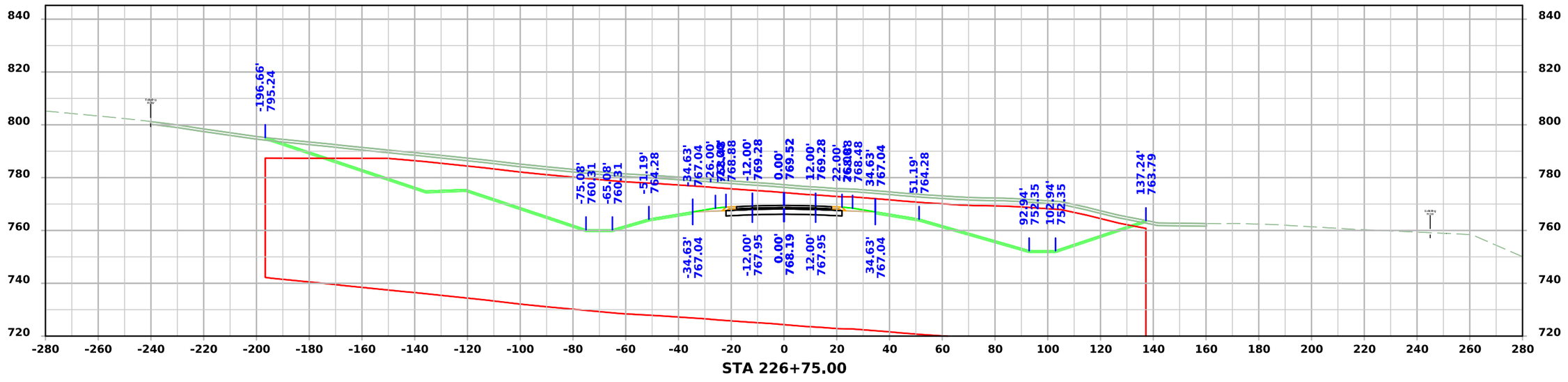
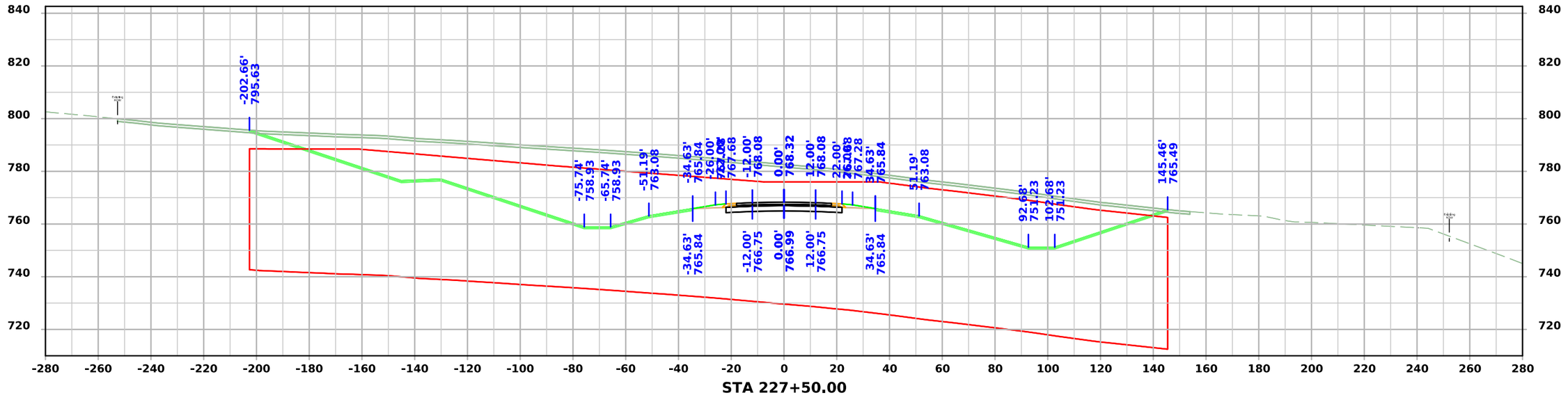


STA 226+75.00

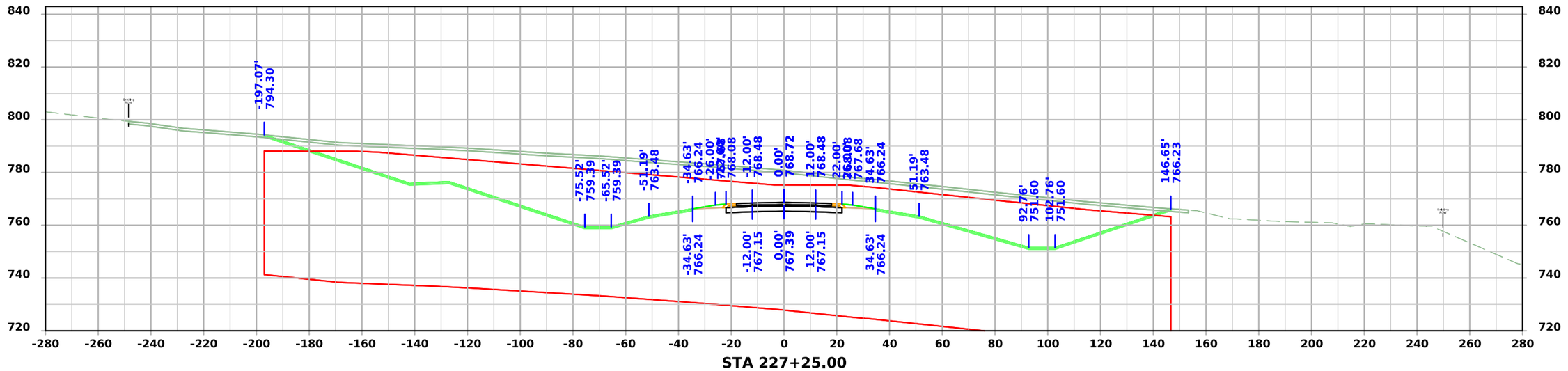
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.164

8:25:12 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 227+50.00

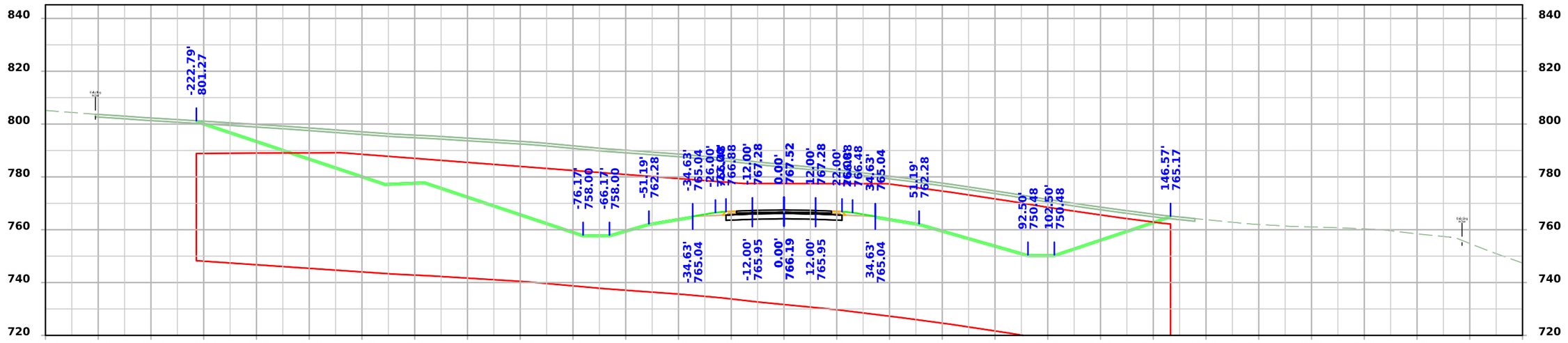


STA 227+25.00

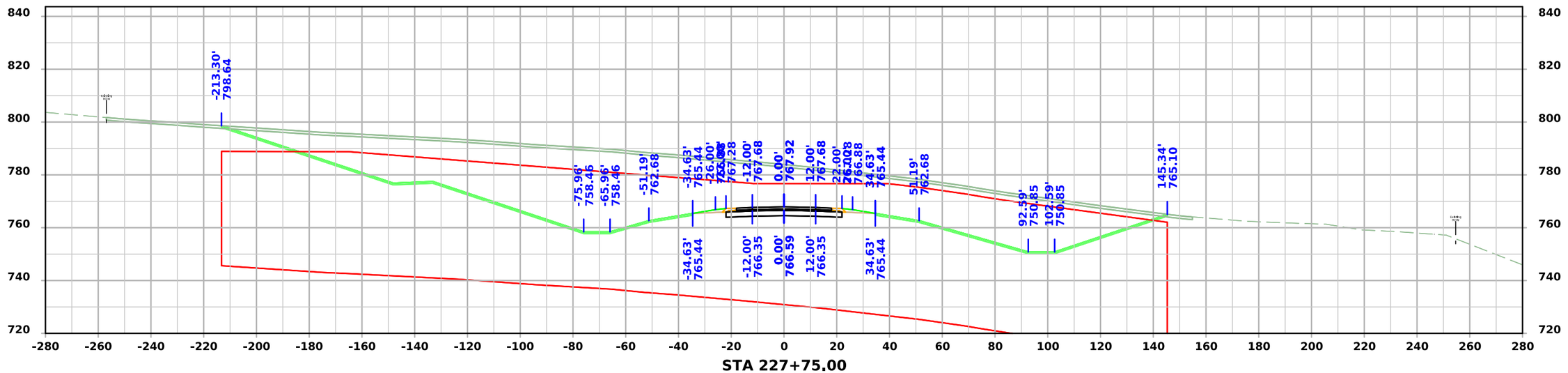
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.165

8:25:15 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 228+00.00

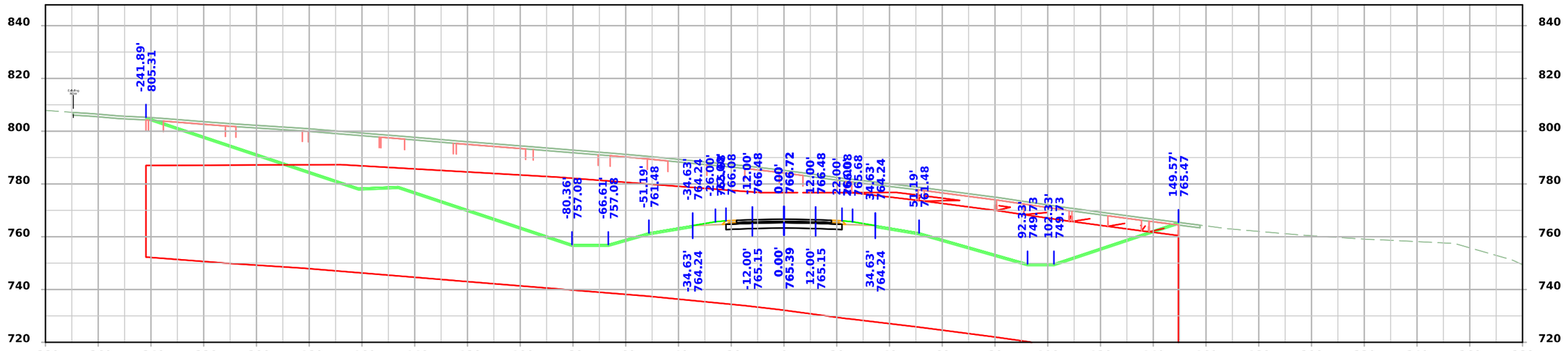


STA 227+75.00

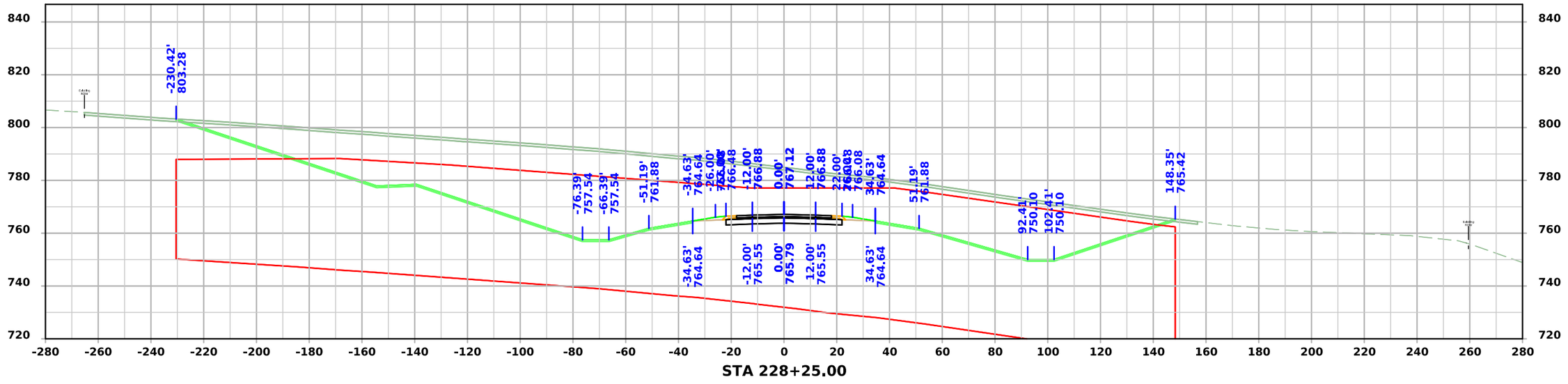
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.166

8:25:18 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 228+50.00

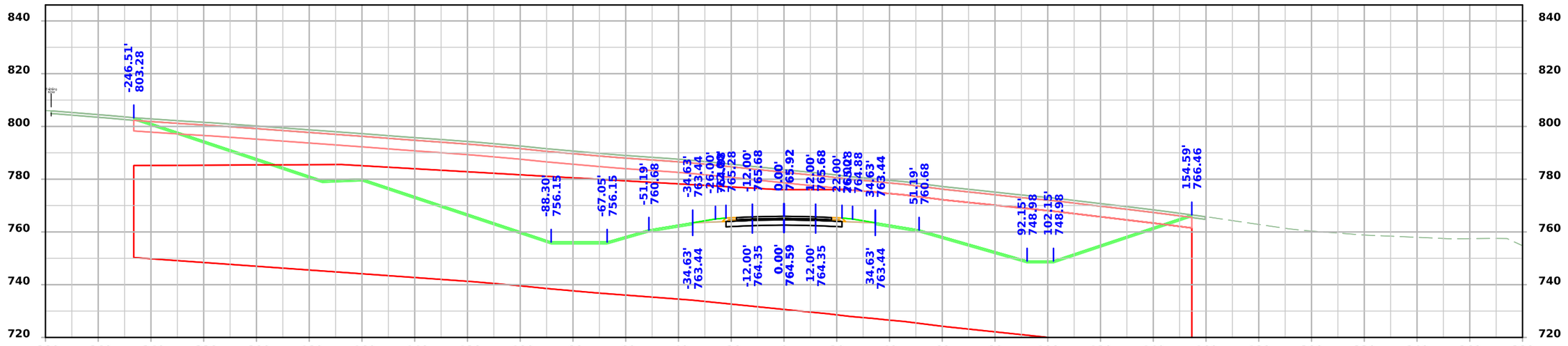


STA 228+25.00

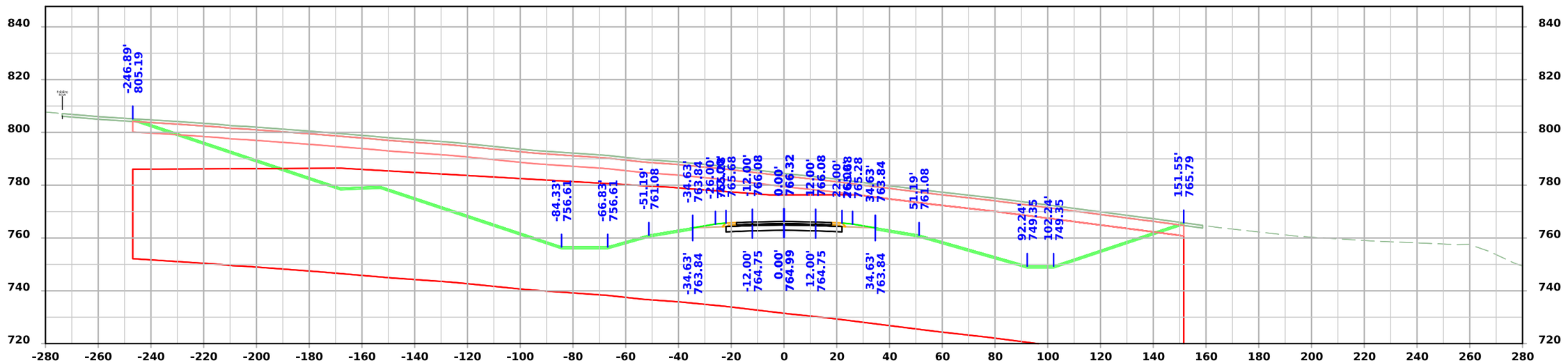
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.167

8:25:22 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 229+00.00

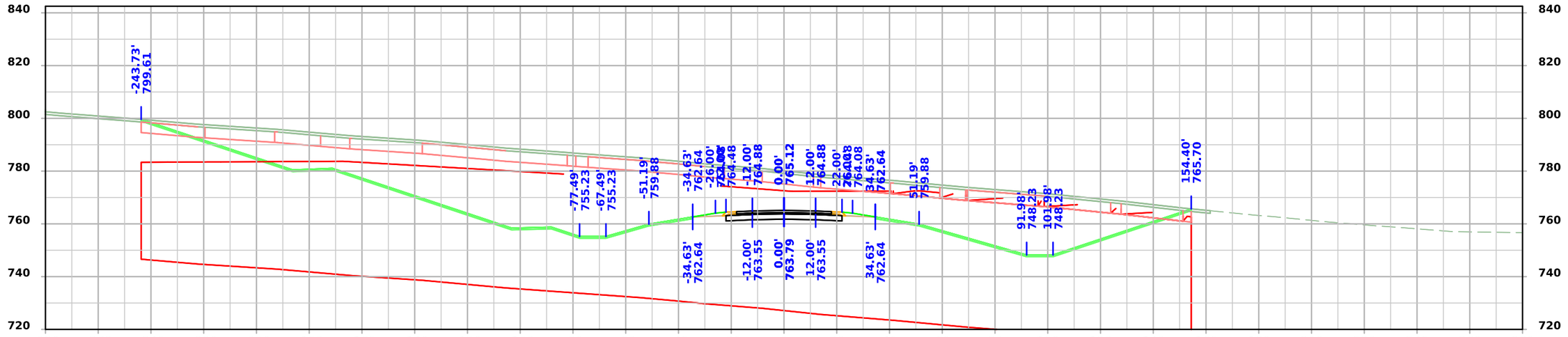


STA 228+75.00

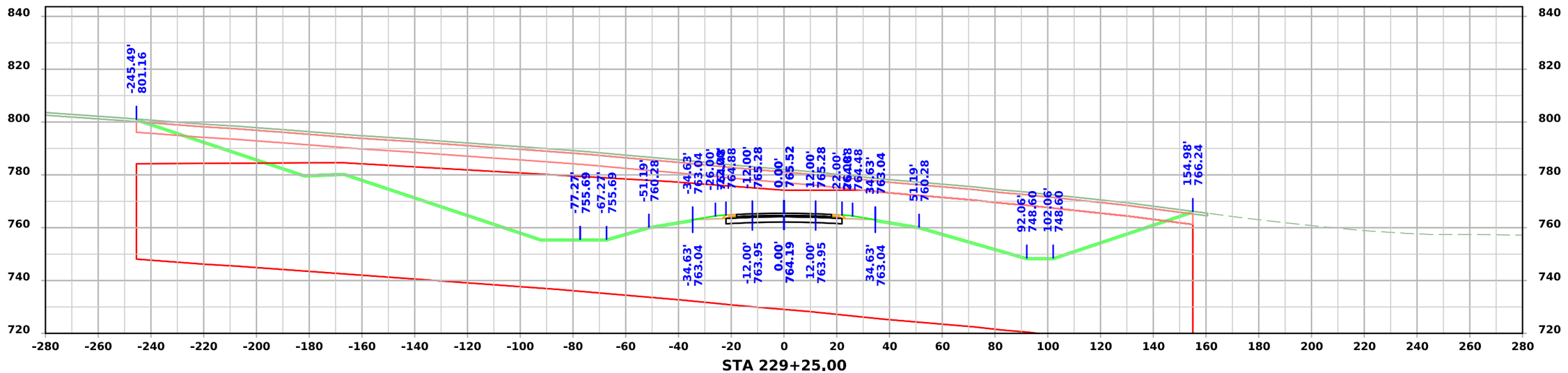
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.168

8:25:25 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 229+50.00

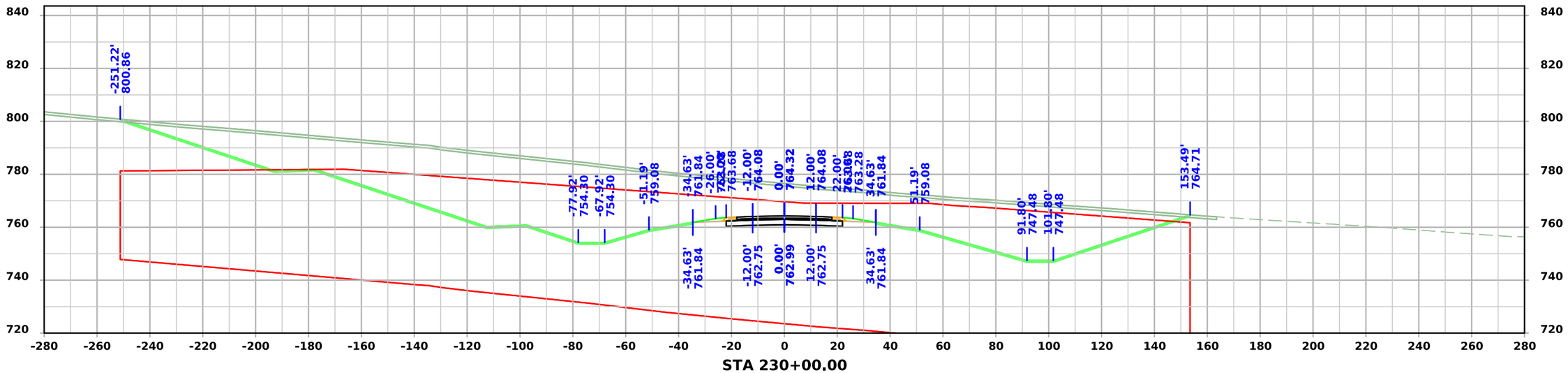


STA 229+25.00

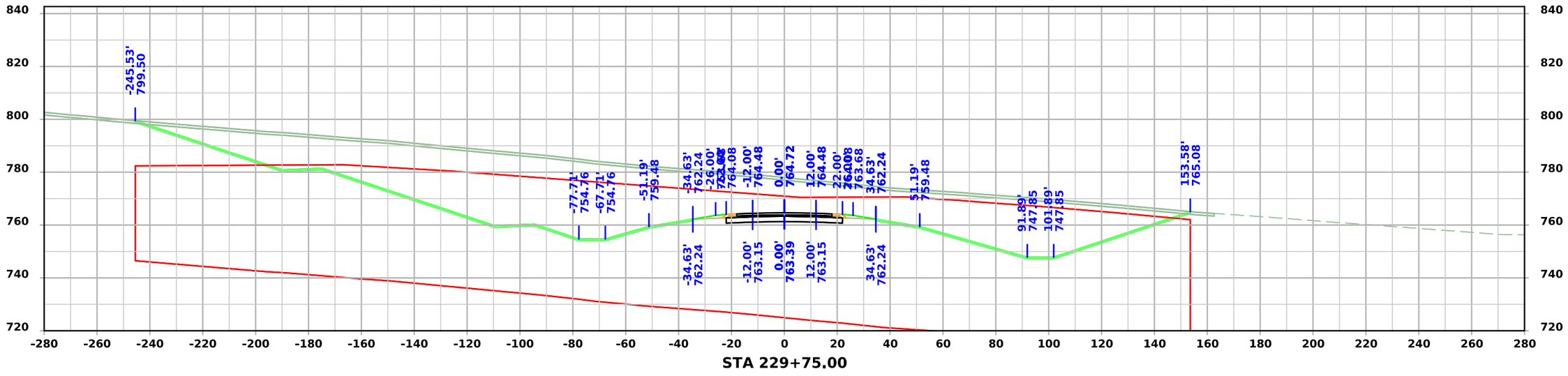
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.169

8:25:28 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 230+00.00

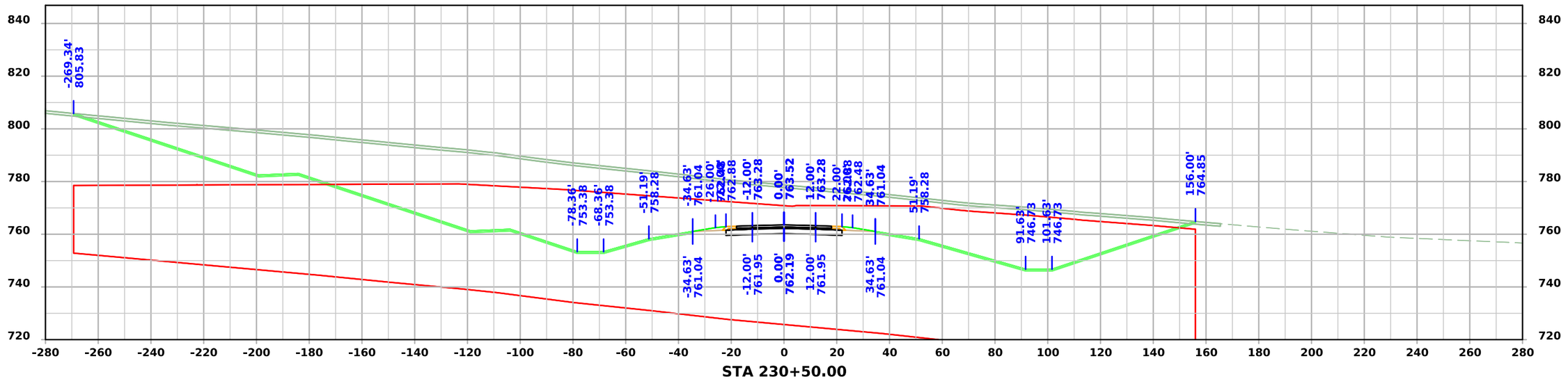


STA 229+75.00

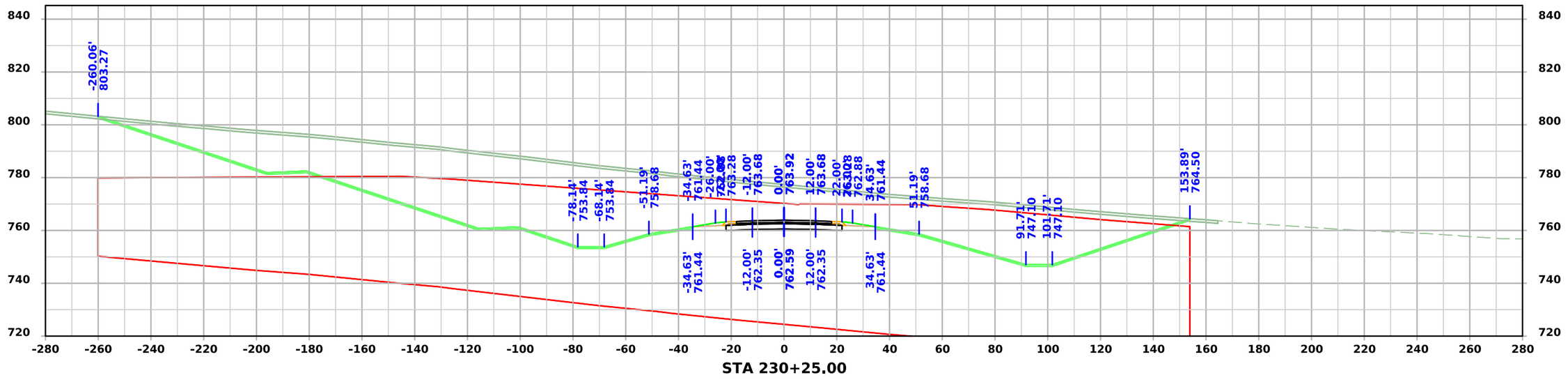
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.170

8:25:31 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 230+50.00

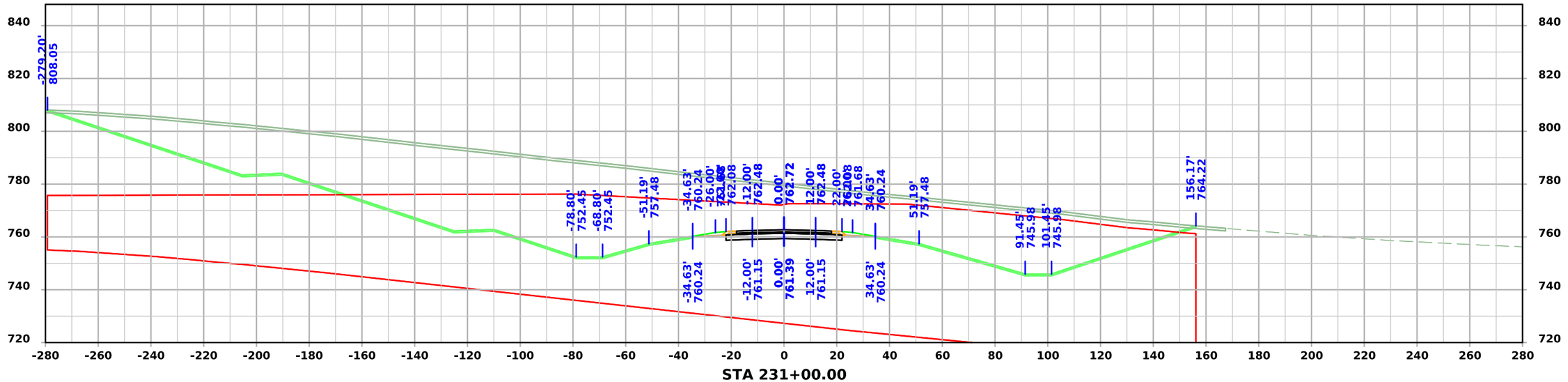


STA 230+25.00

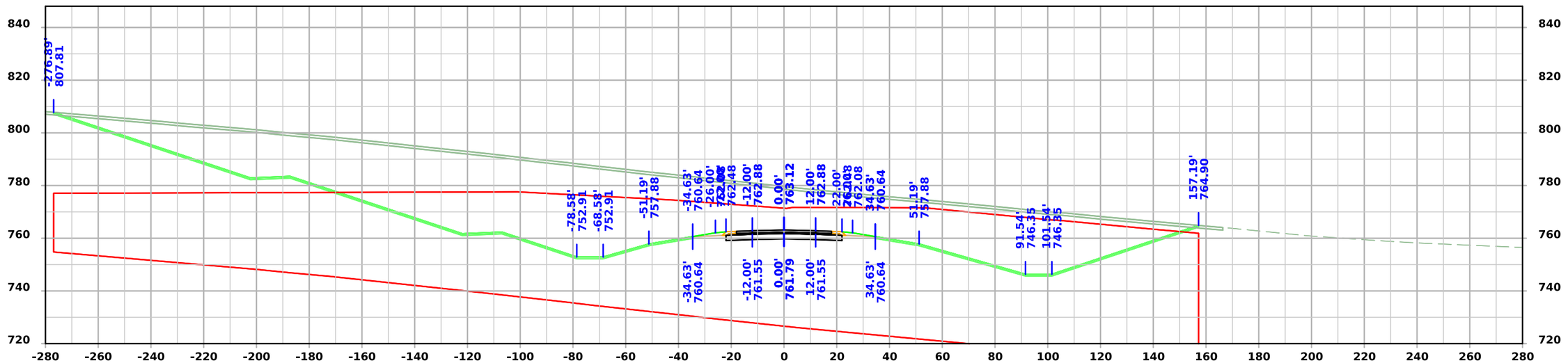
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.171

8:25:34 AM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 231+00.00

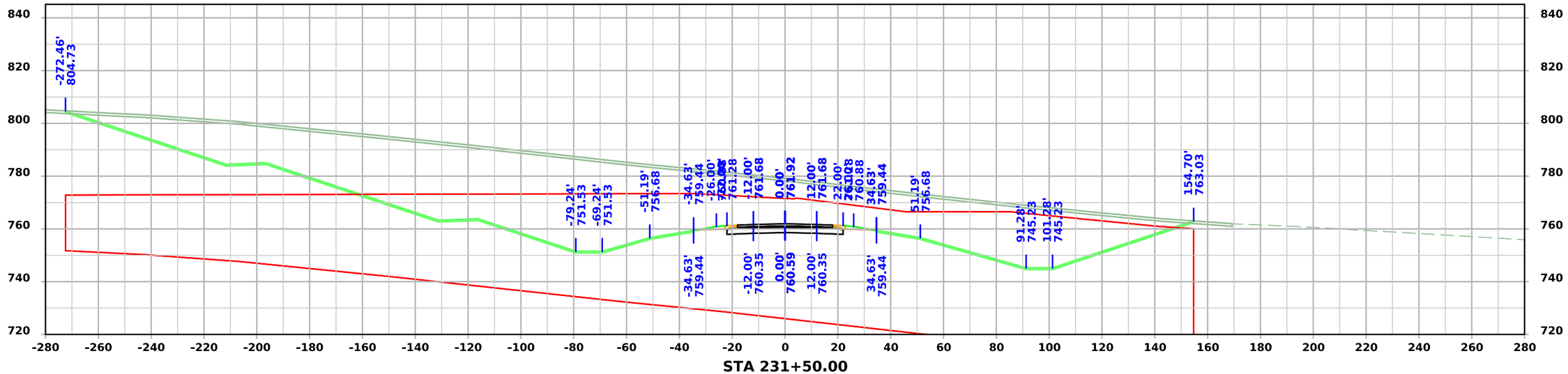


STA 230+75.00

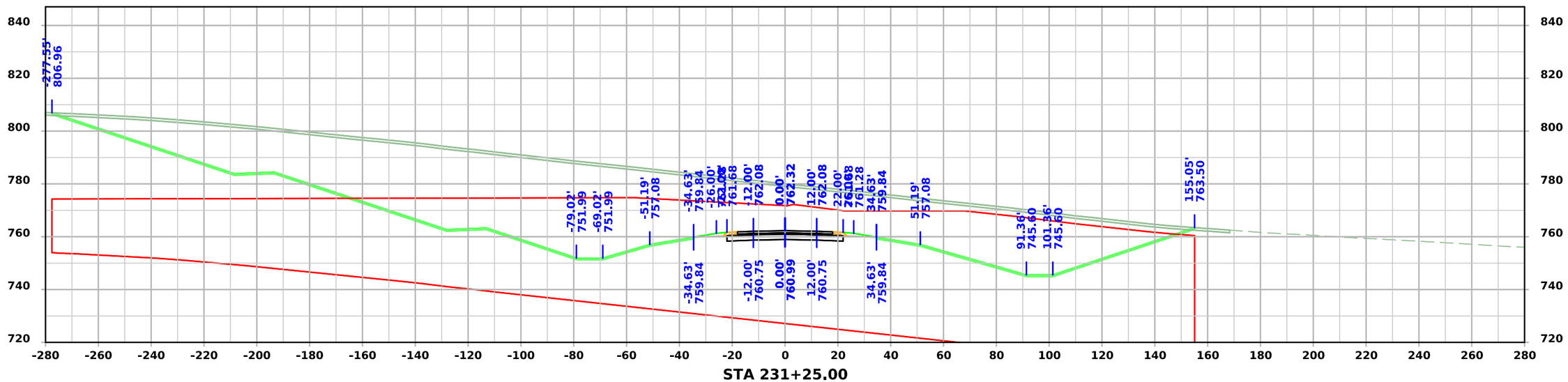
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.172

4:52:03 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 231+50.00

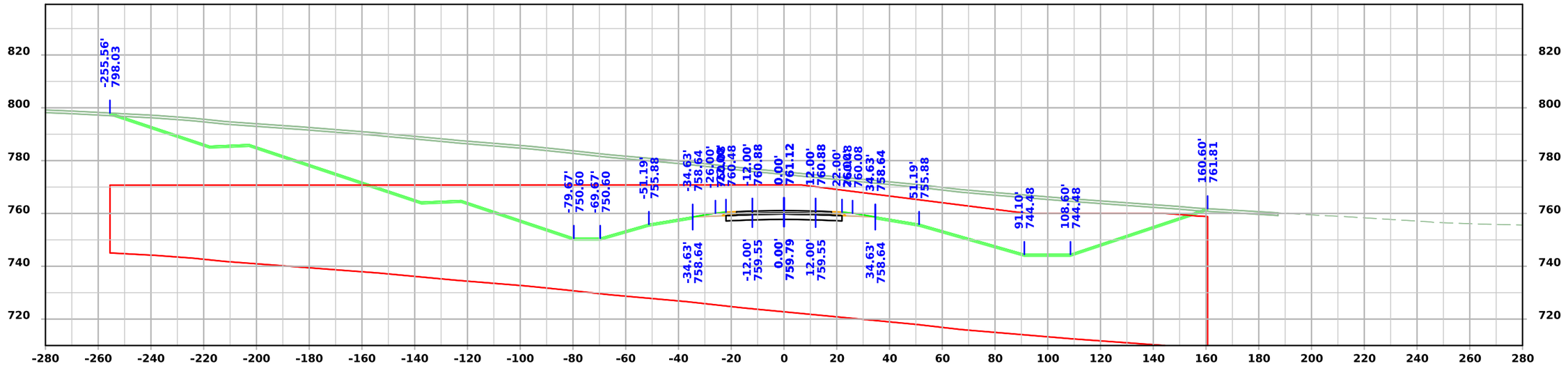


STA 231+25.00

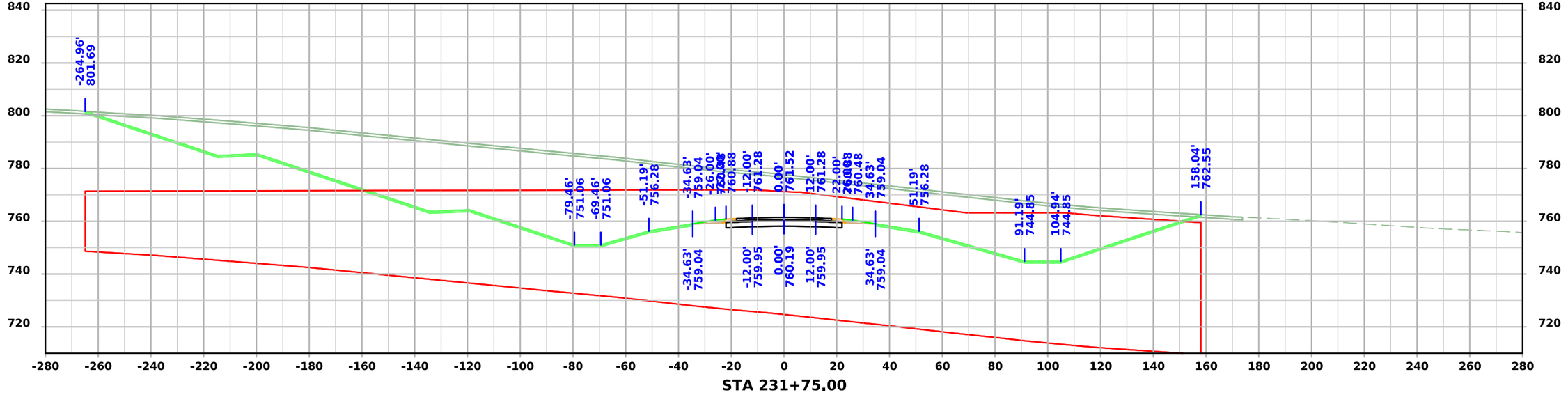
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.173

4:52:06 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 232+00.00

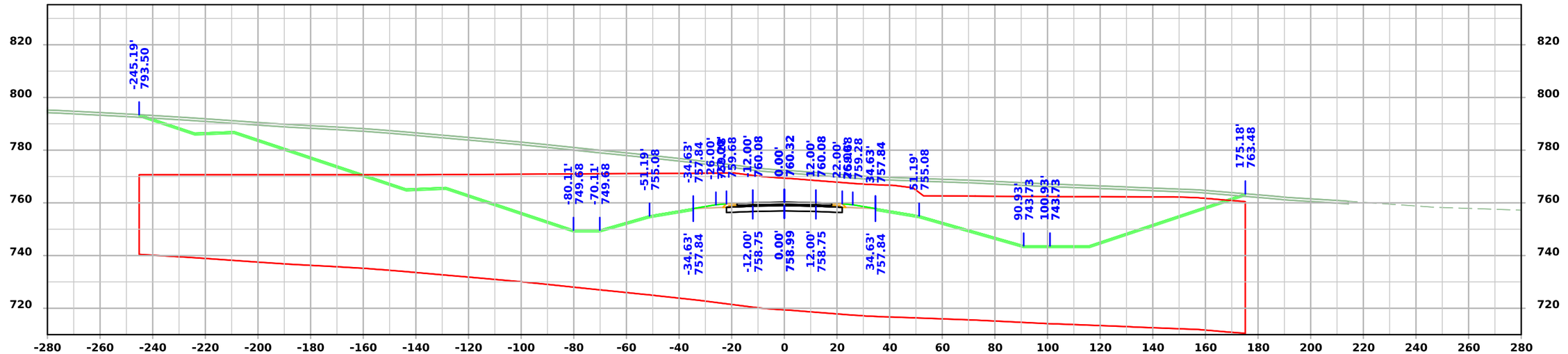


STA 231+75.00

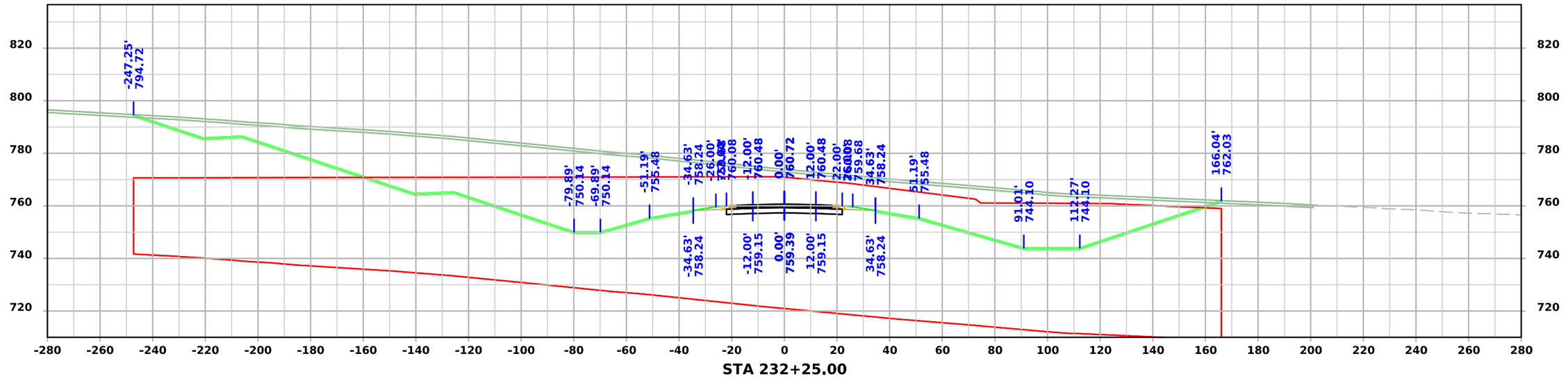
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.174

4:52:09 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 232+50.00

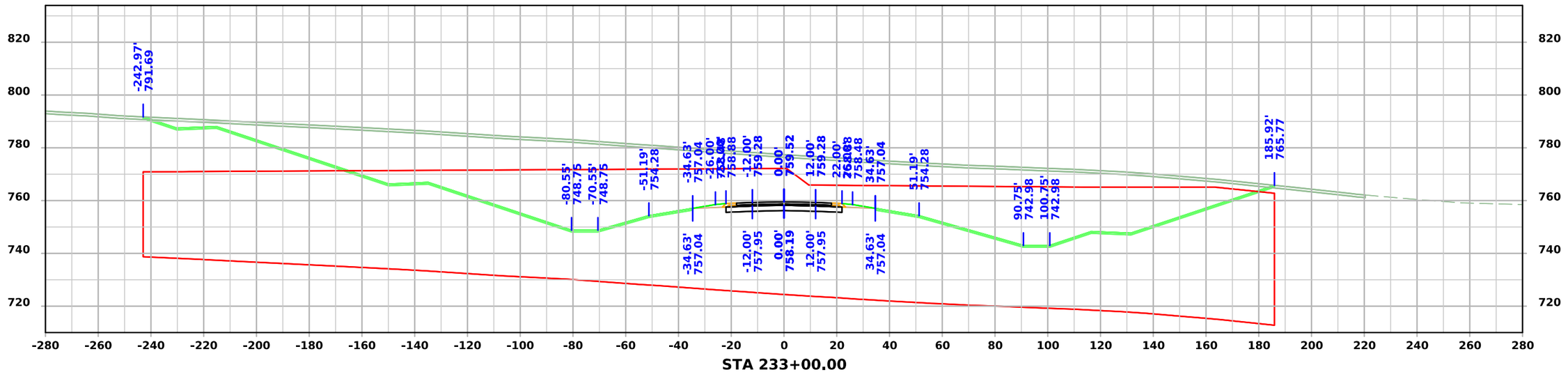


STA 232+25.00

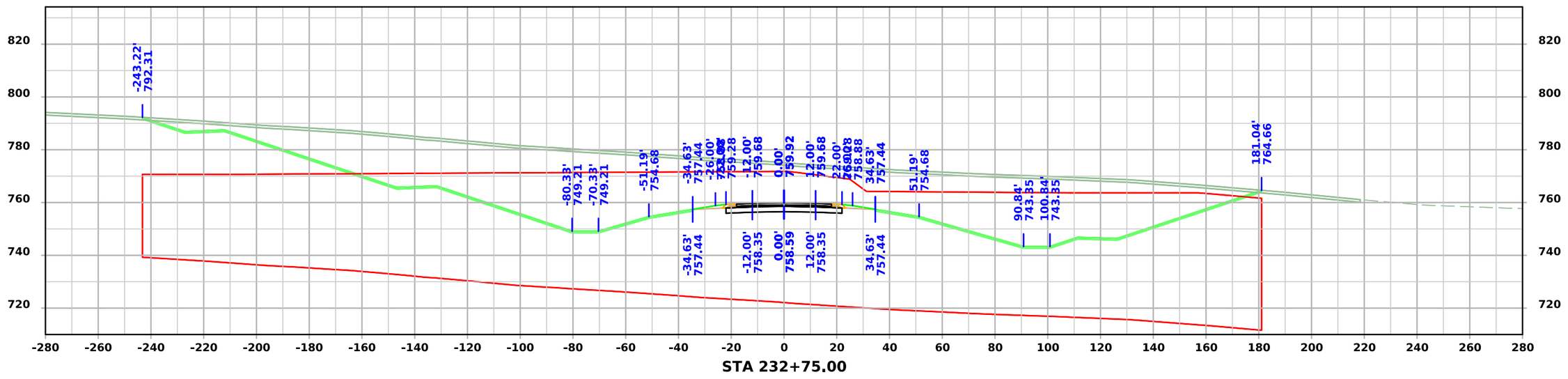
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.175

4:52:13 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 233+00.00

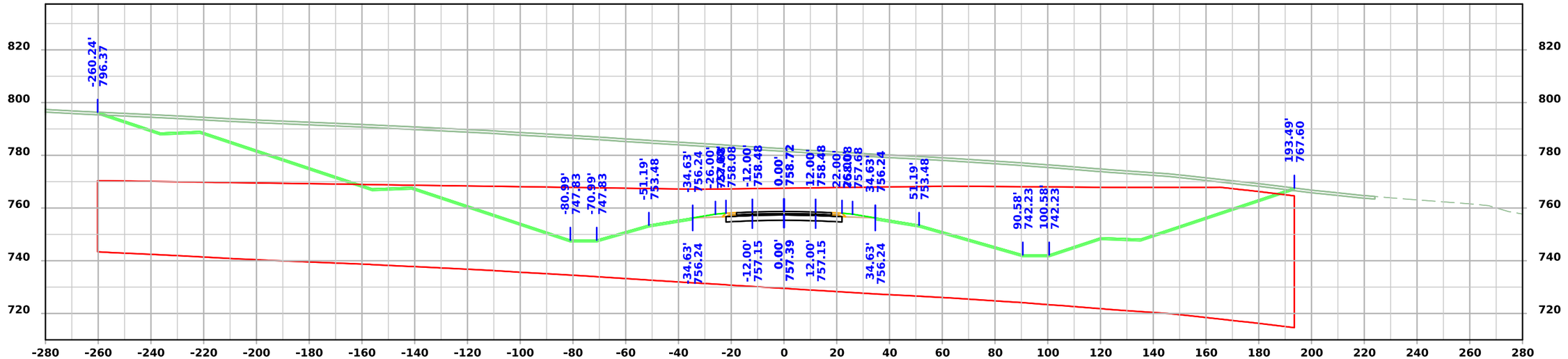


STA 232+75.00

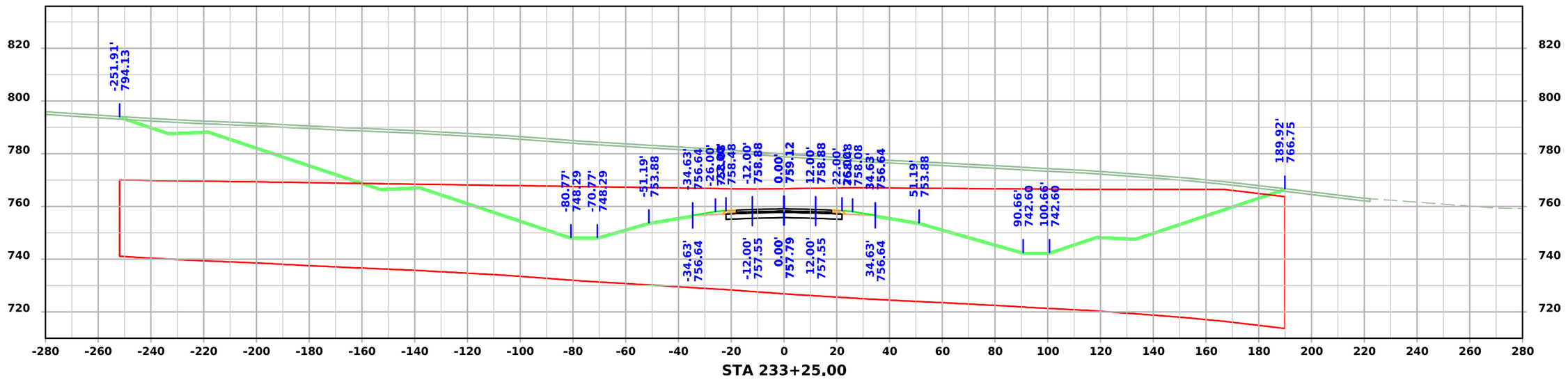
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.176

4:52:16 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 233+50.00

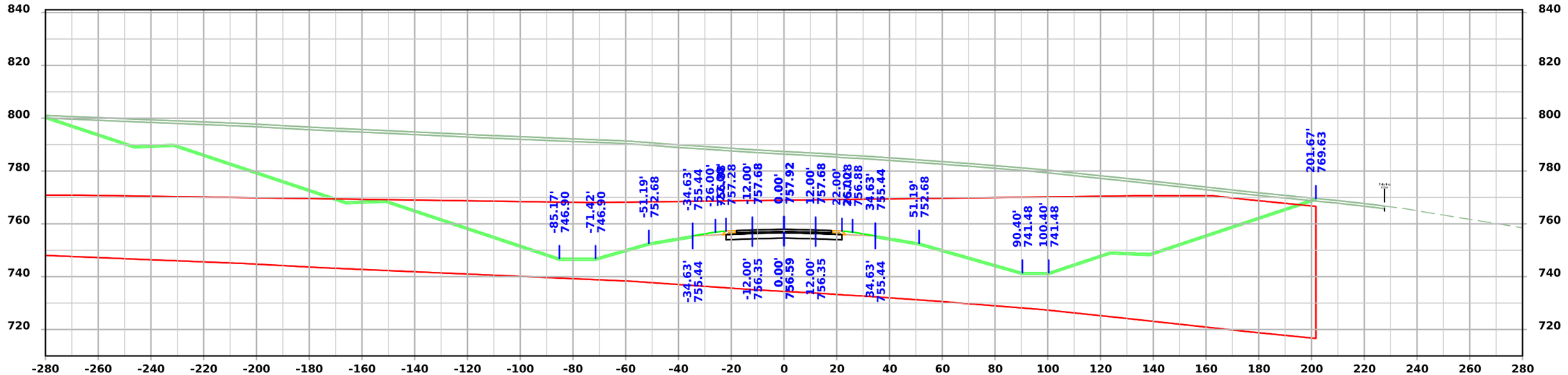


STA 233+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.177

4:52:19 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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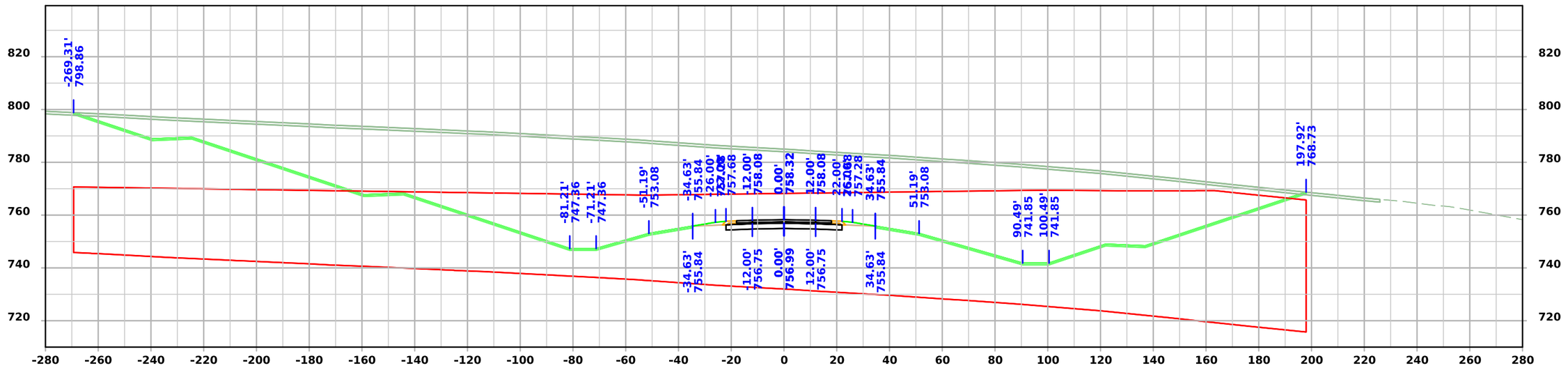
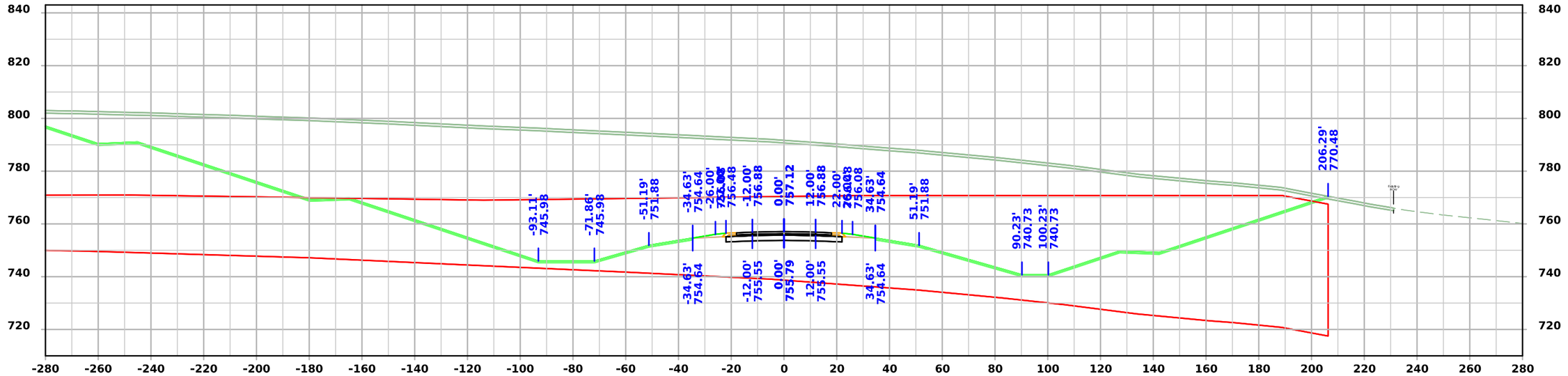


STA 233+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.178

4:52:23 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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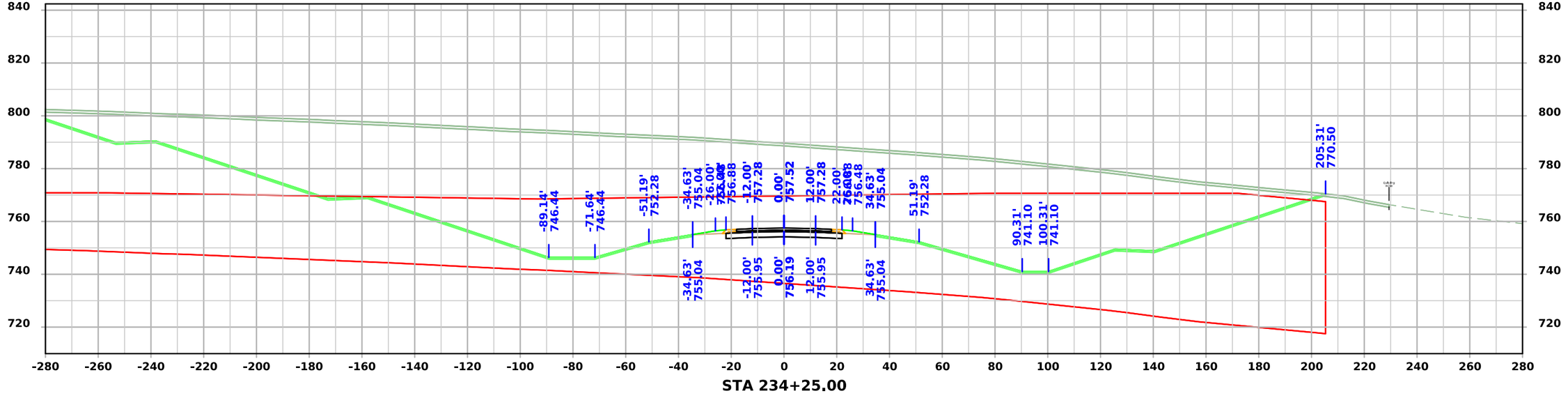
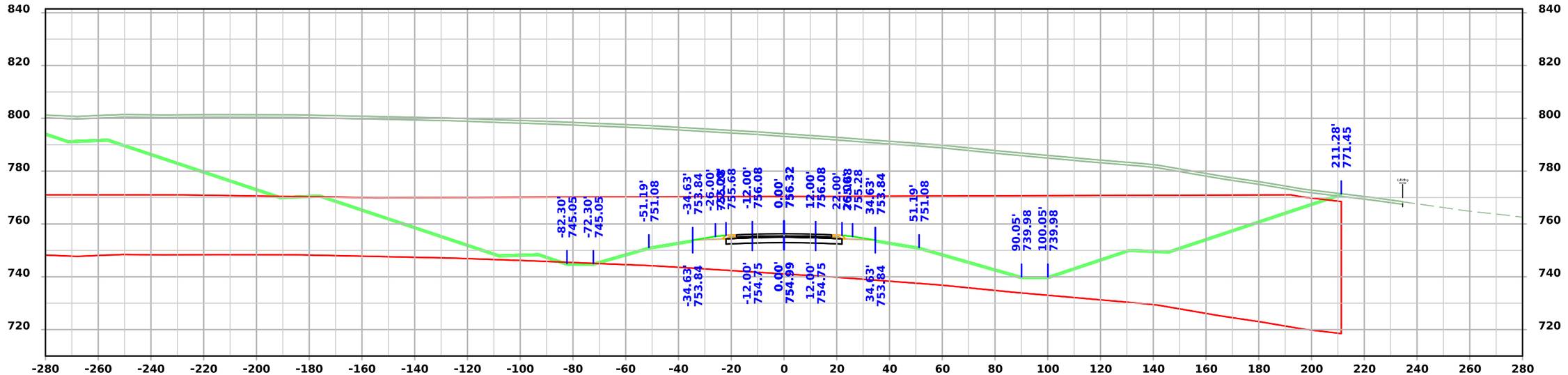


STA 234+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.179

4:52:27 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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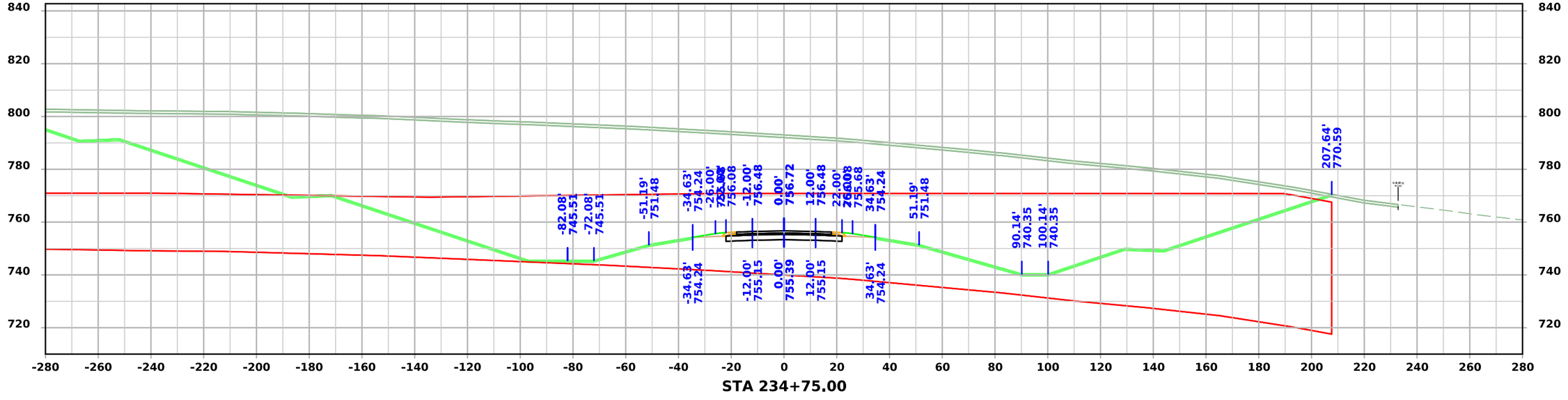

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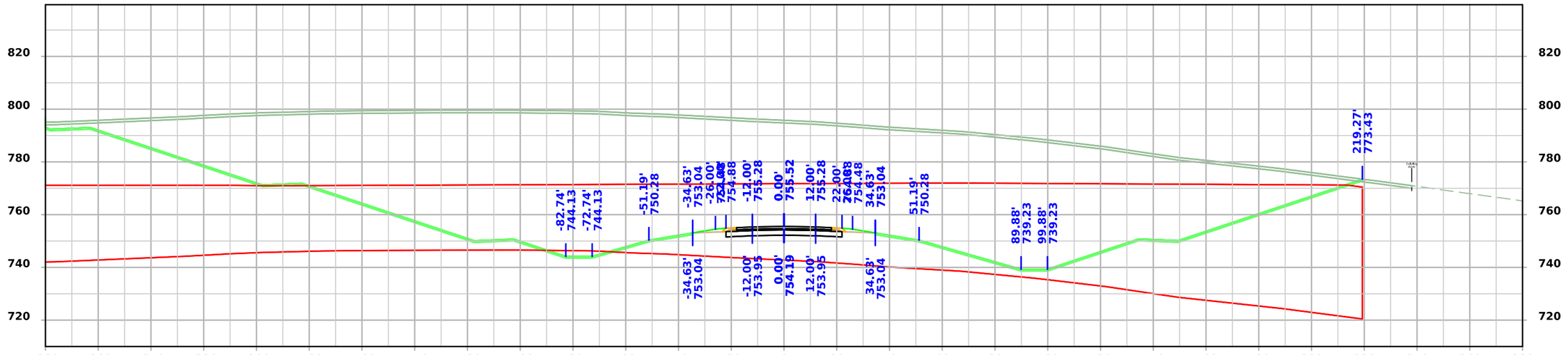
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.180

4:52:30 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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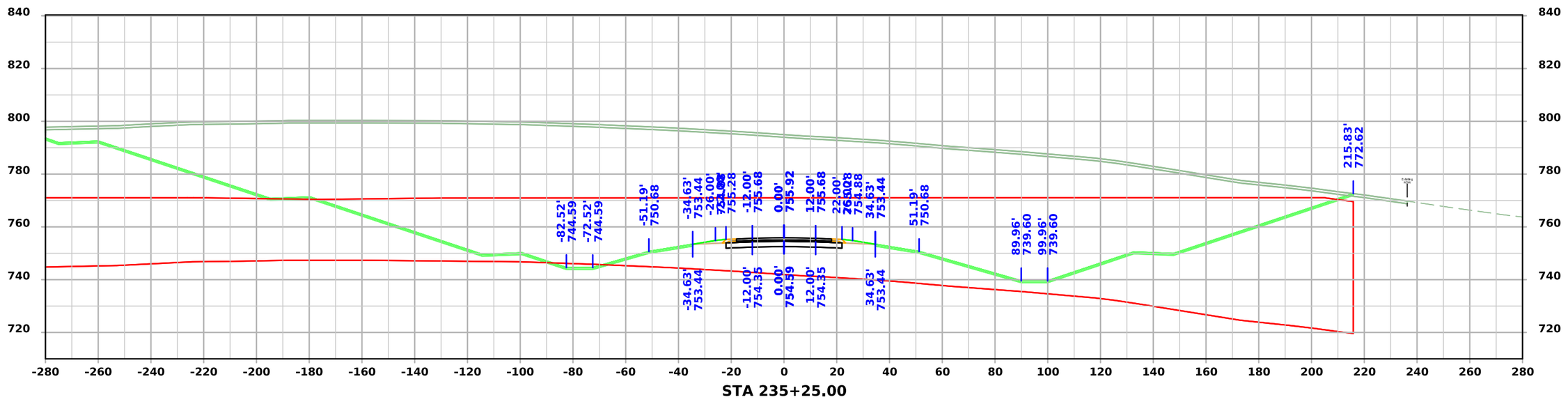

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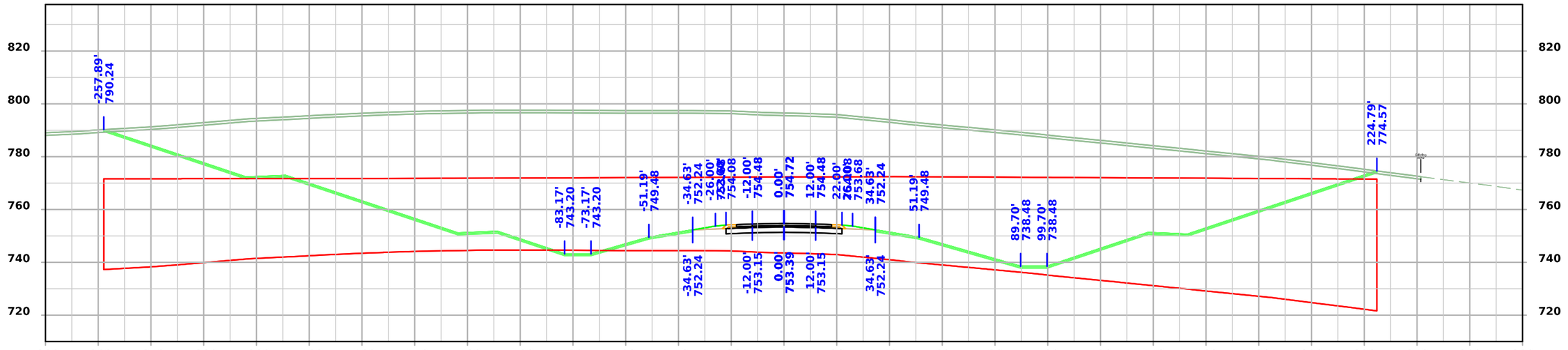
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.181

4:52:34 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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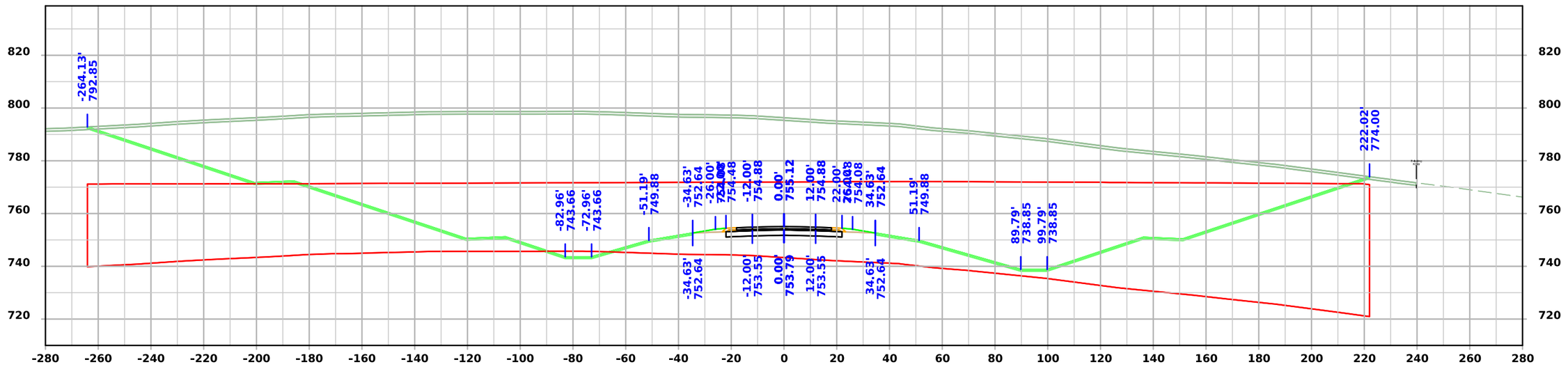
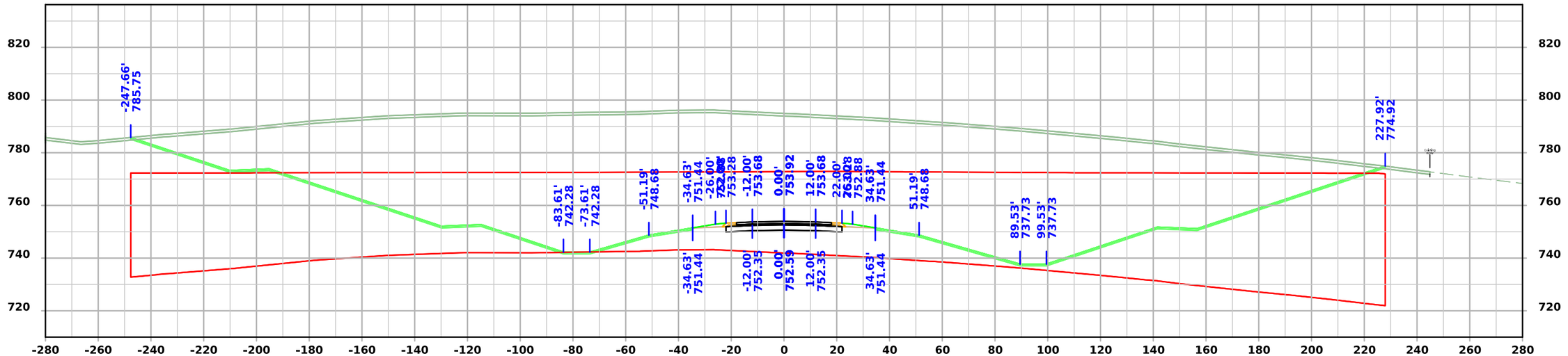


STA 235+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.182

4:52:37 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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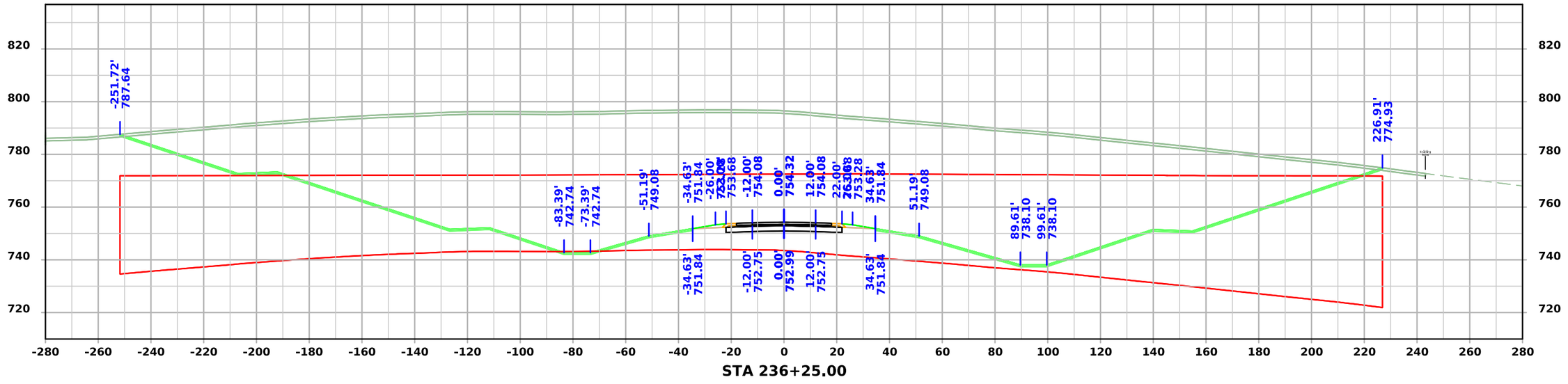
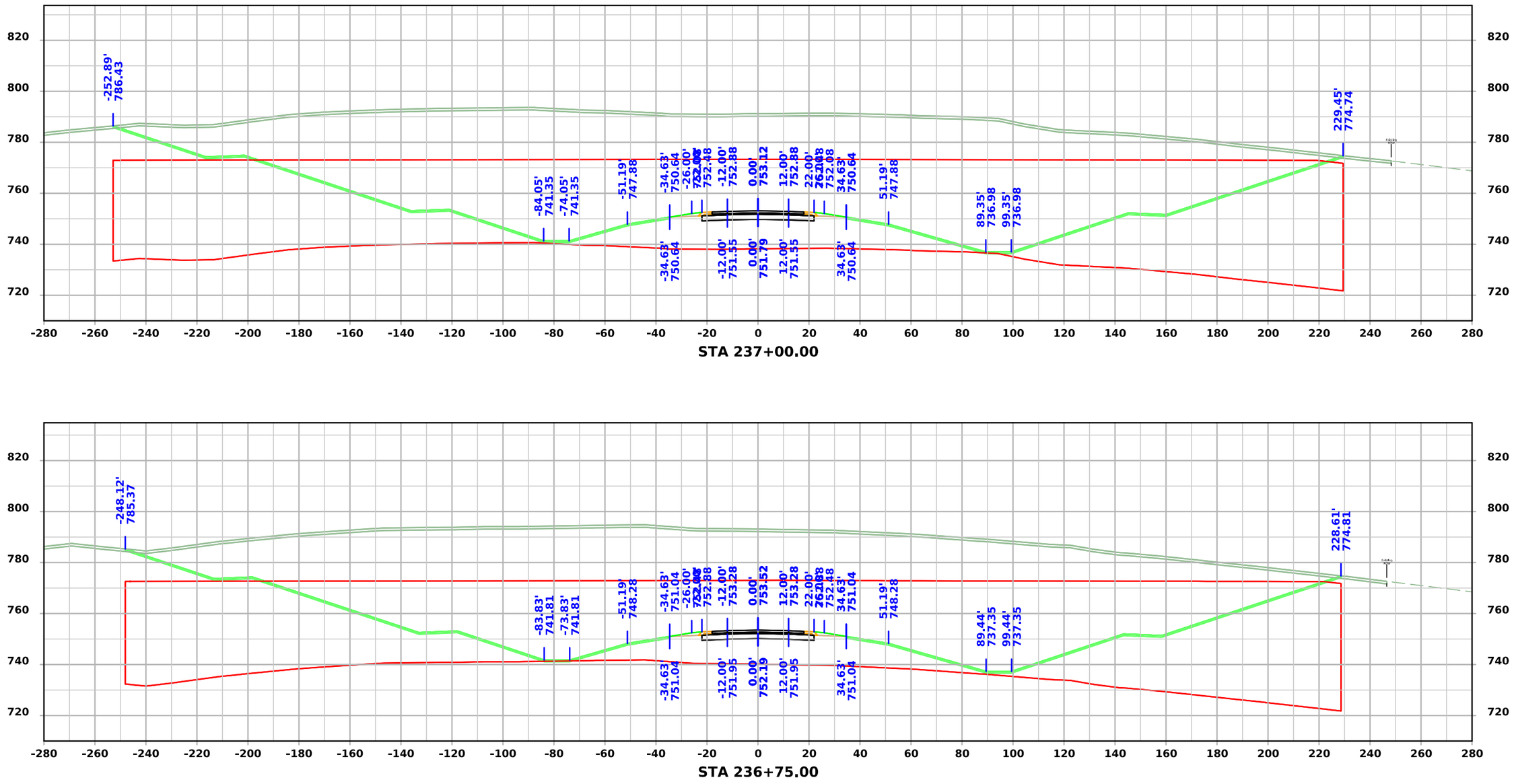


STA 236+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.183

4:52:41 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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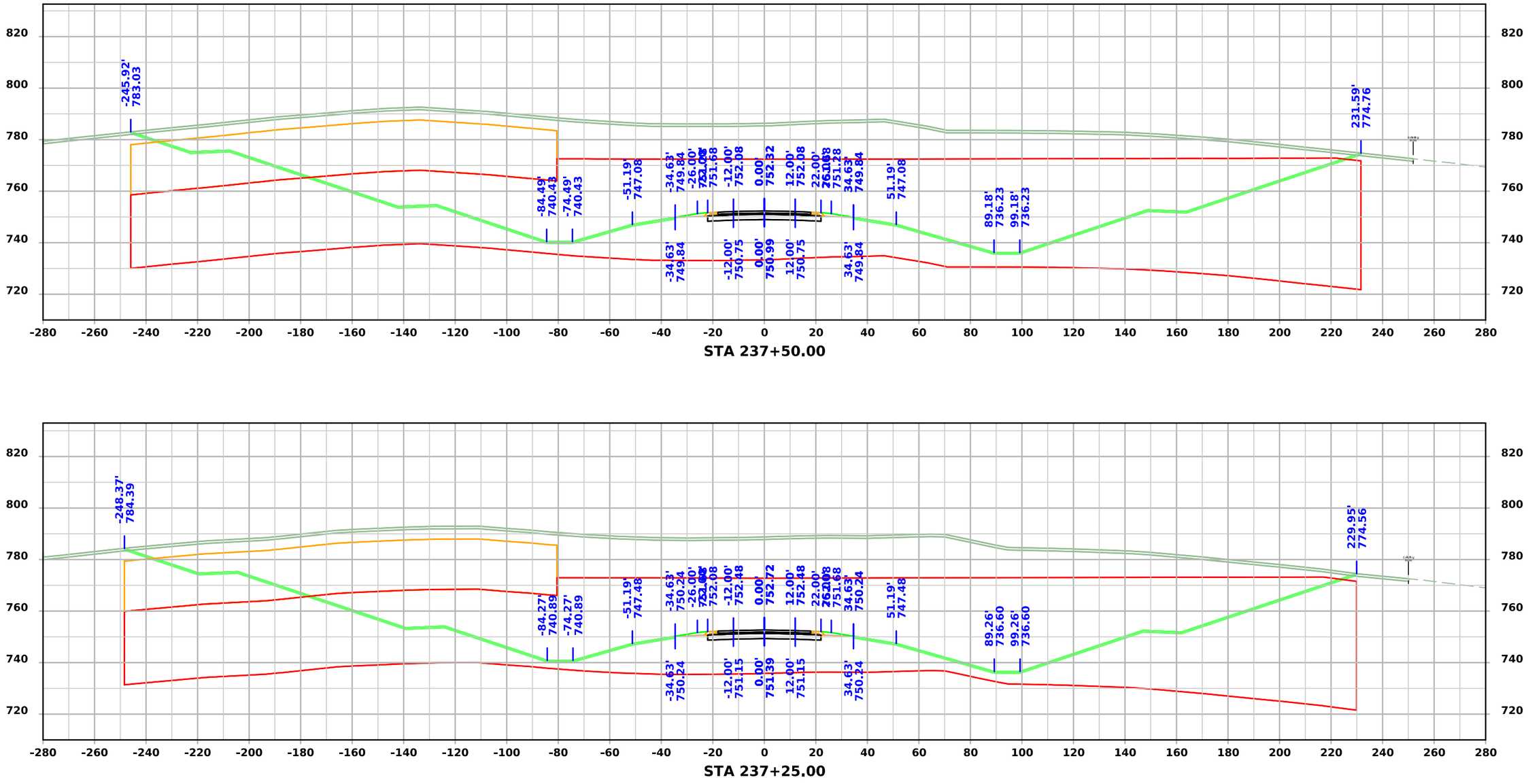
STA 236+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.184

4:52:45 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



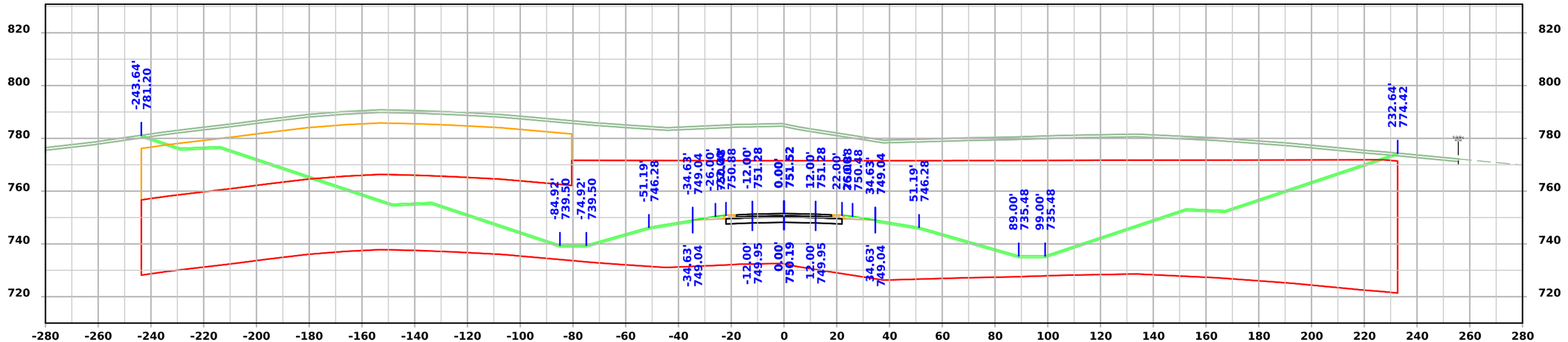
STA 237+50.00

STA 237+25.00

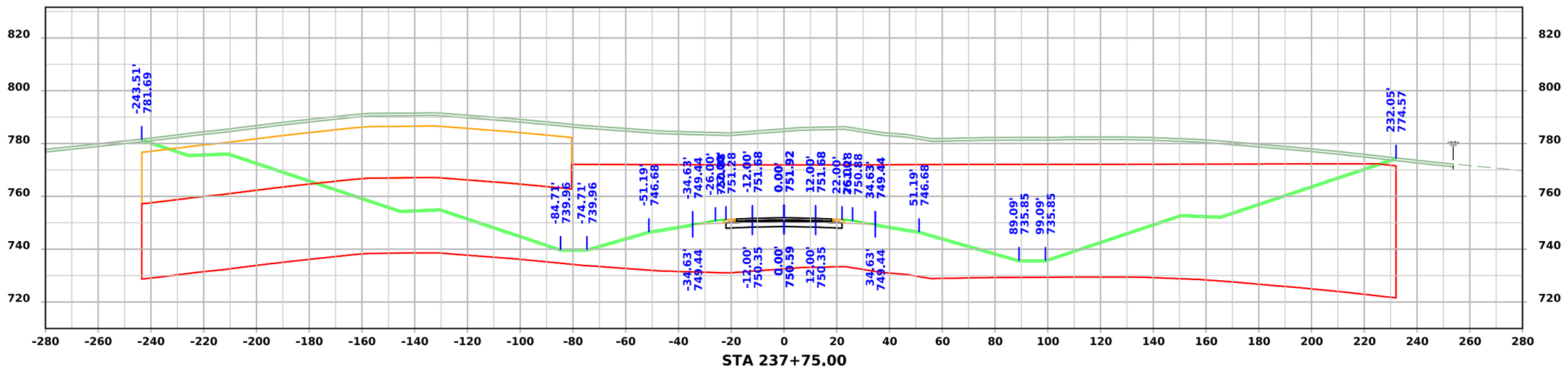
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.185

4:52:49 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 238+00.00

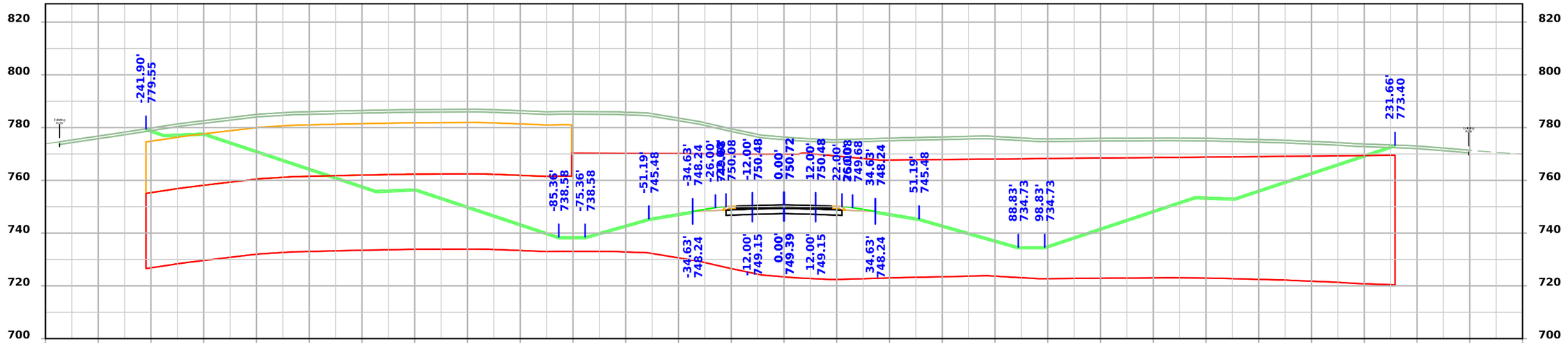


STA 237+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.186

4:52:52 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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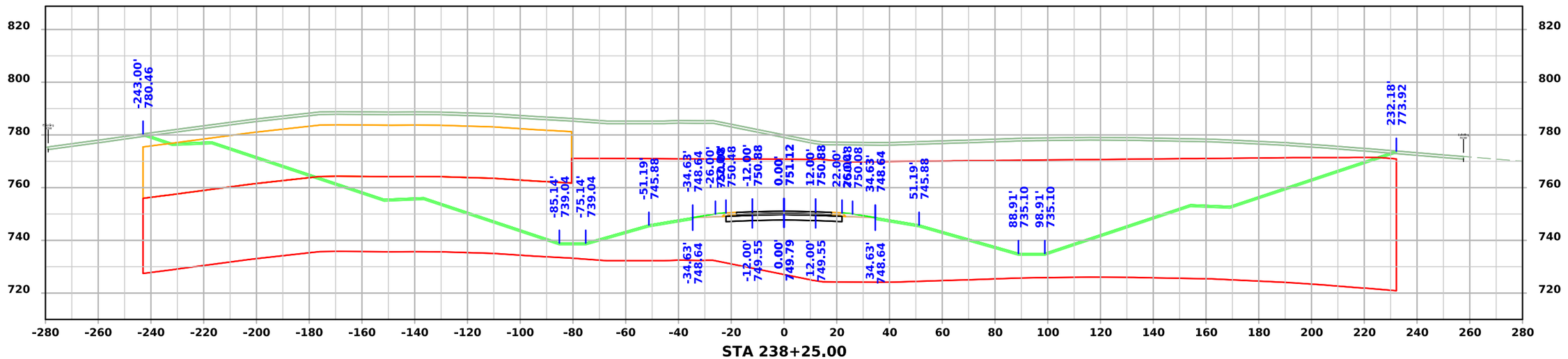
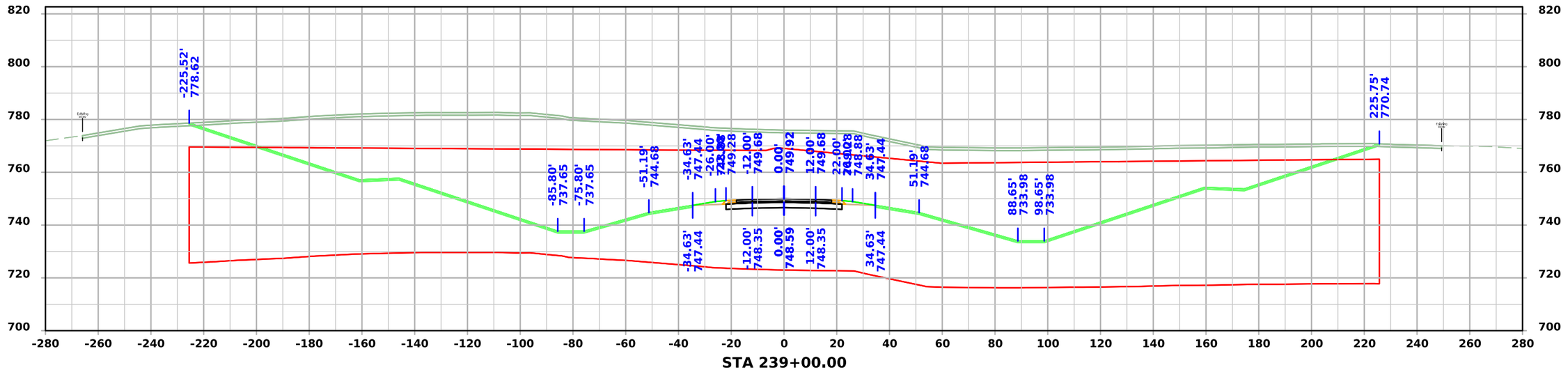


STA 238+25.00

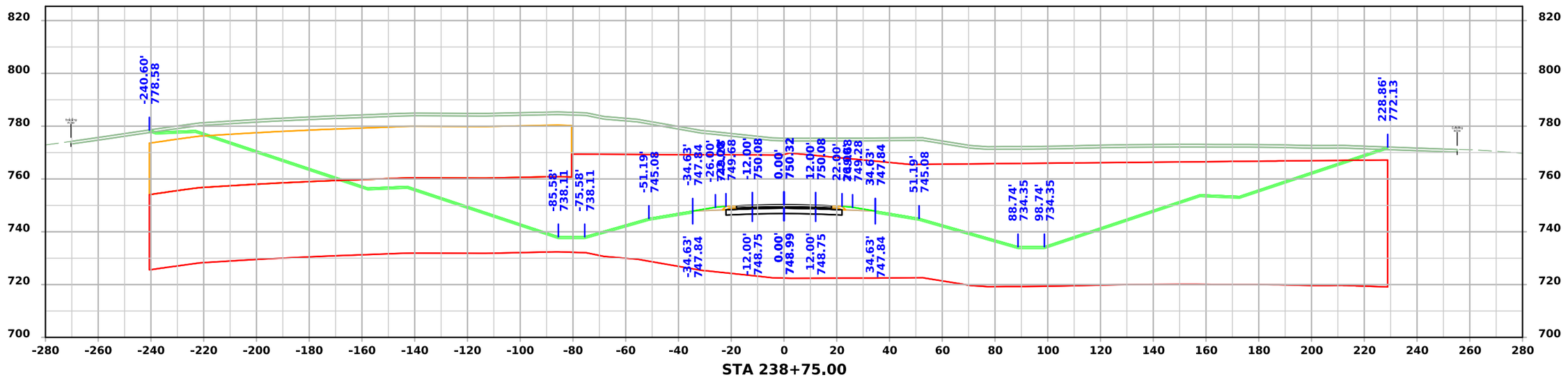
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.187

4:52:56 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 239+00.00

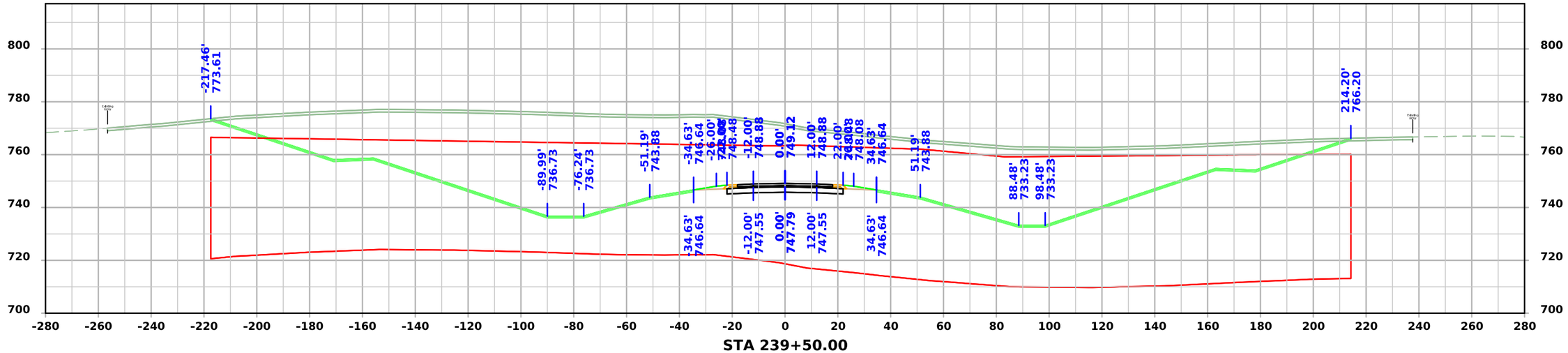


STA 238+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.188

4:53:00 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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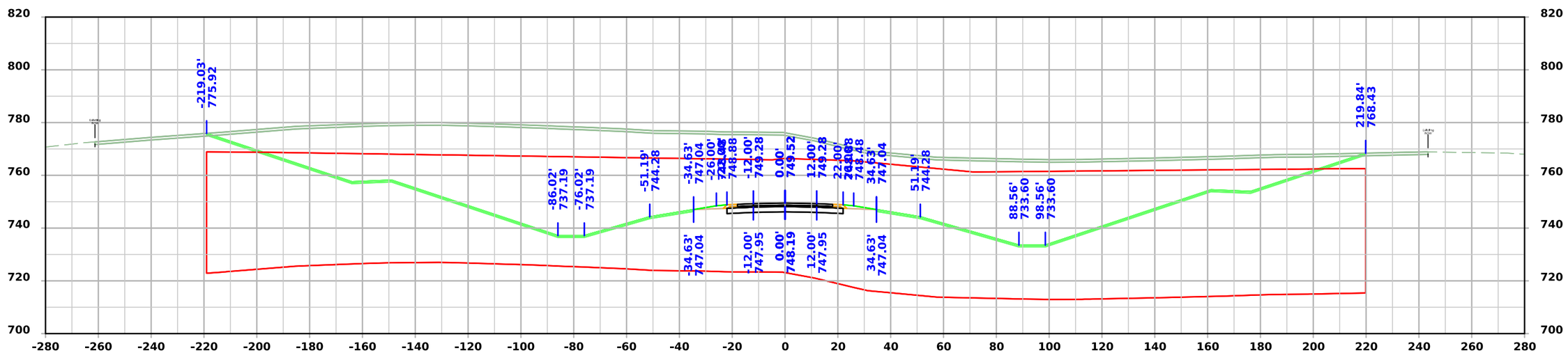
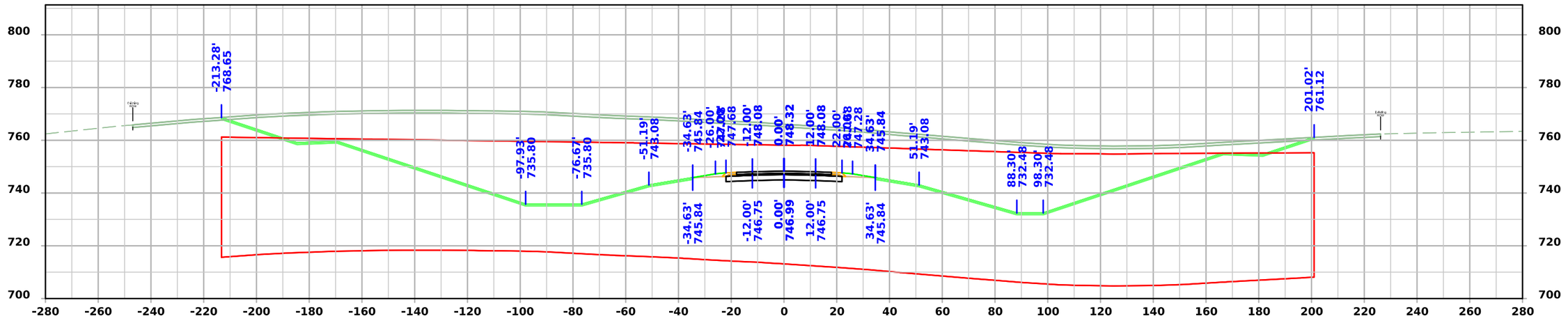


STA 239+25.00

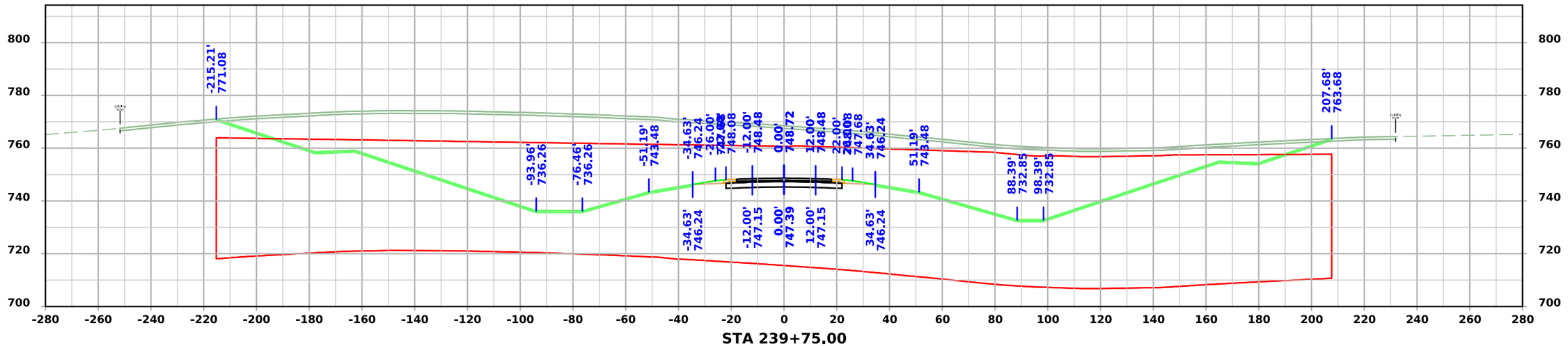
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.189

4:53:03 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 240+00.00

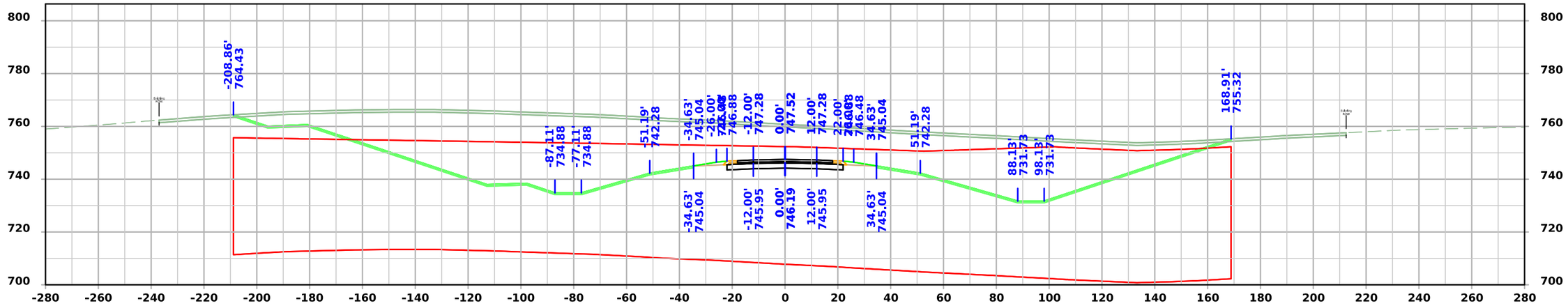


STA 239+75.00

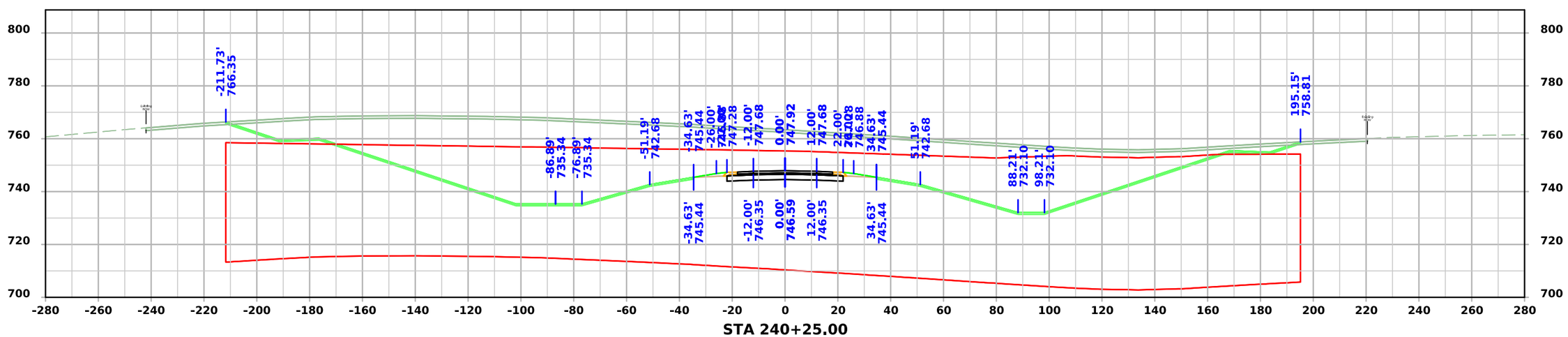
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.190

4:53:07 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 240+50.00

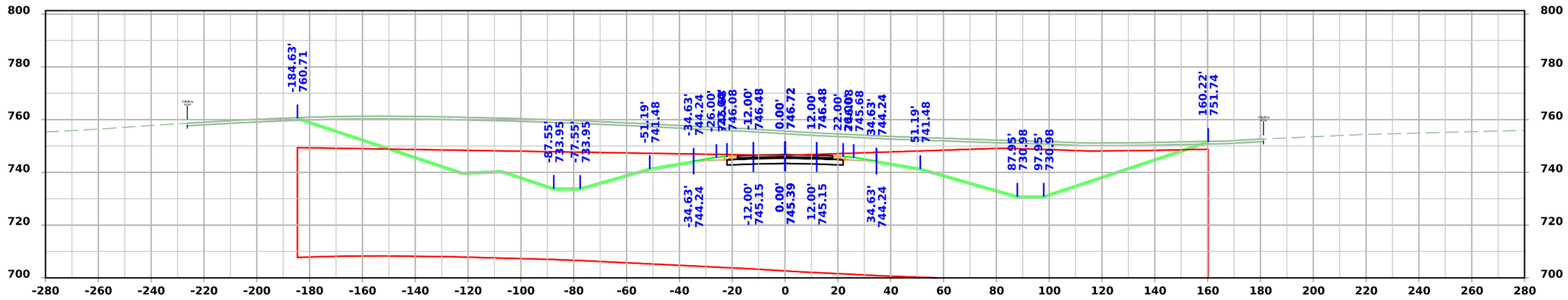


STA 240+25.00

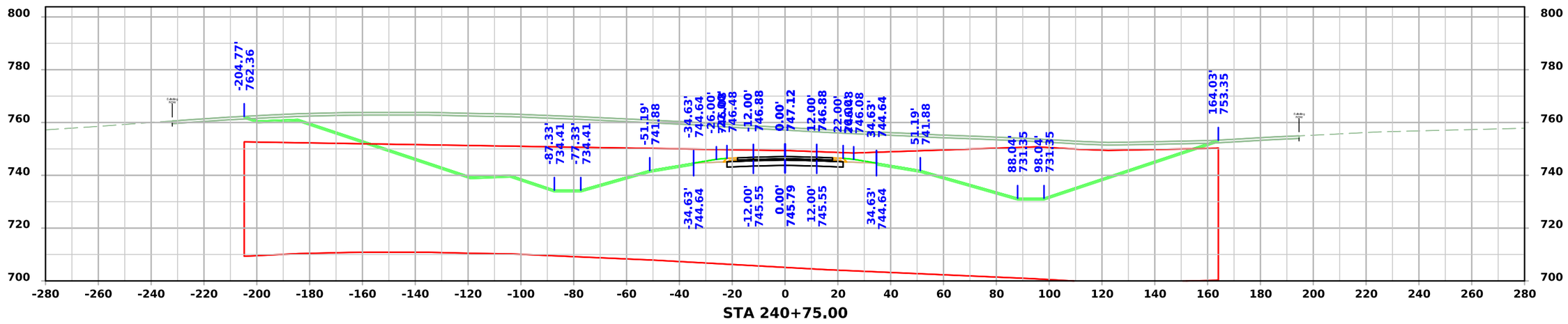
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.191

4:53:10 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 241+00.00

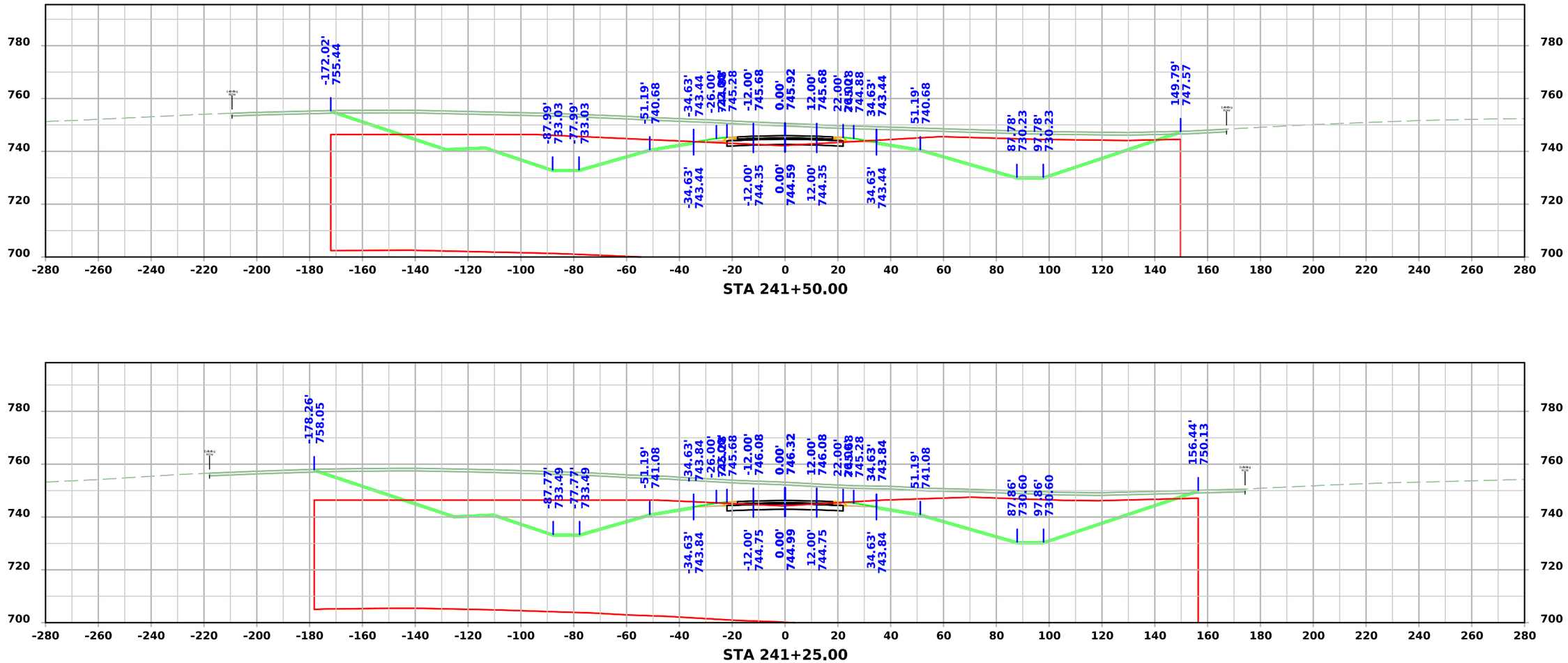


STA 240+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.192

4:53:14 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



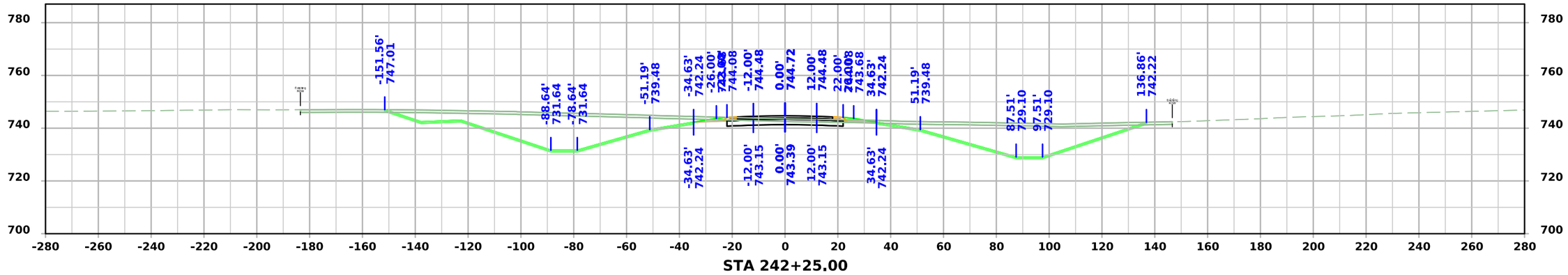
STA 241+50.00

STA 241+25.00

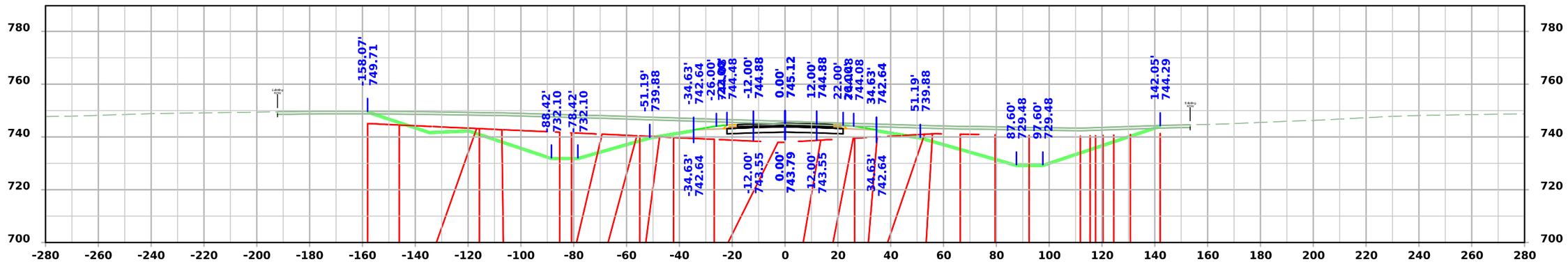
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.193

4:53:17 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

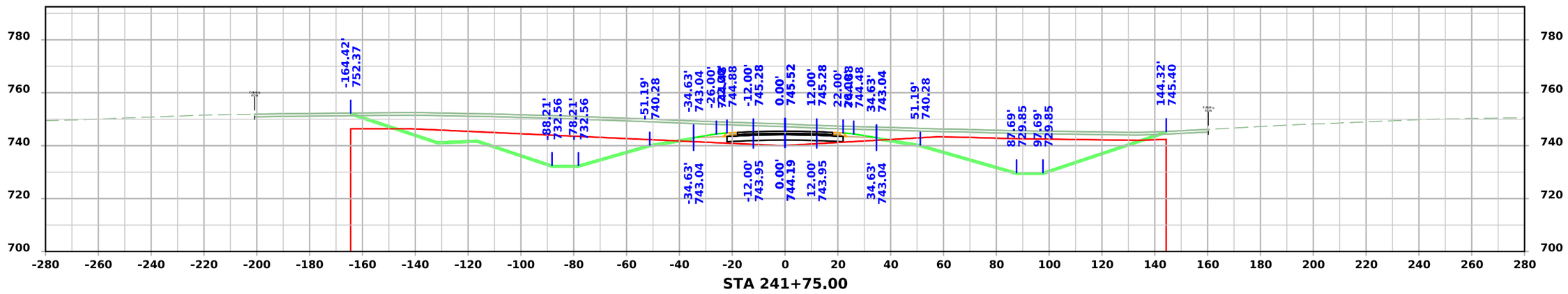
US 63



STA 242+25.00



STA 242+00.00

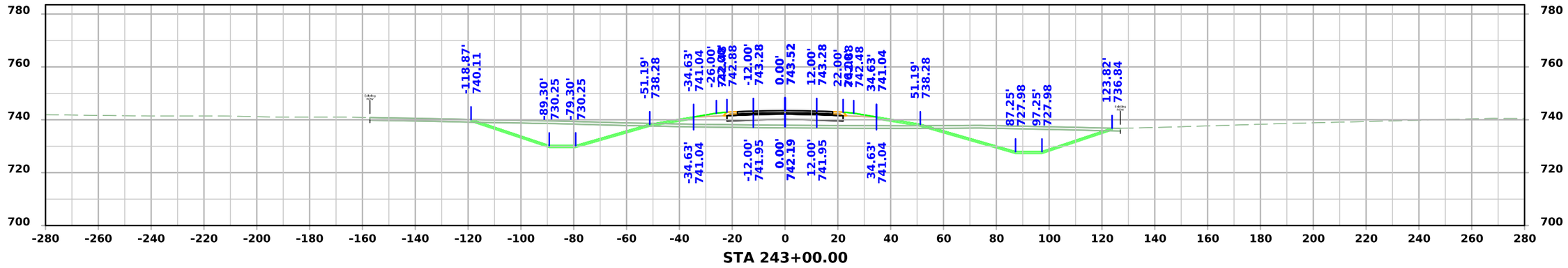


STA 241+75.00

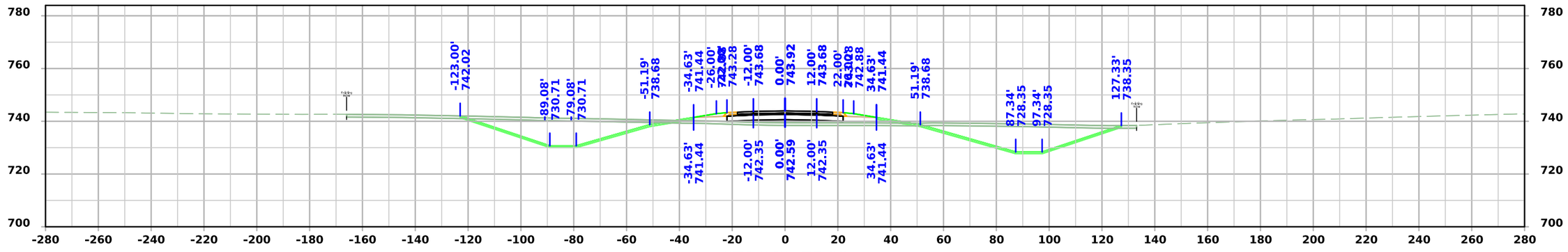
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.194

4:53:21 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

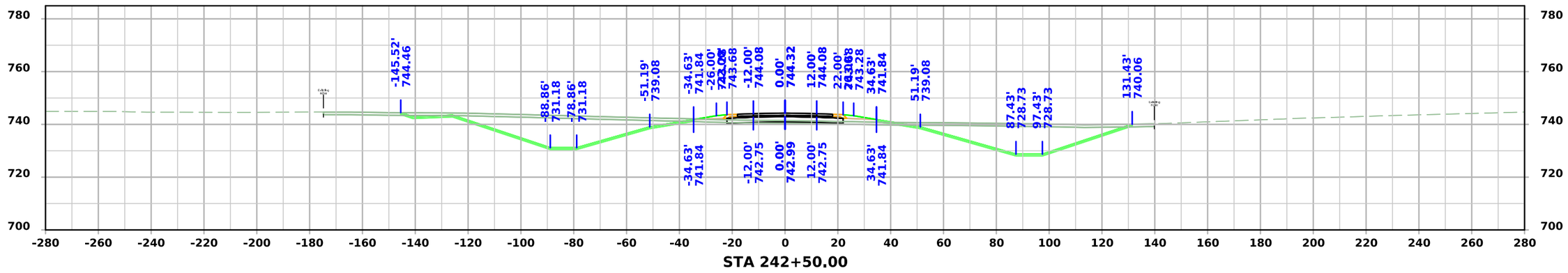
US 63



STA 243+00.00



STA 242+75.00

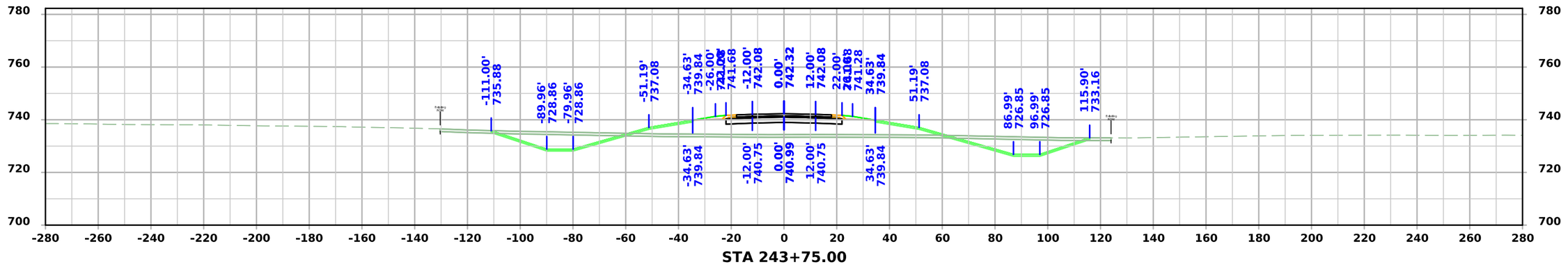


STA 242+50.00

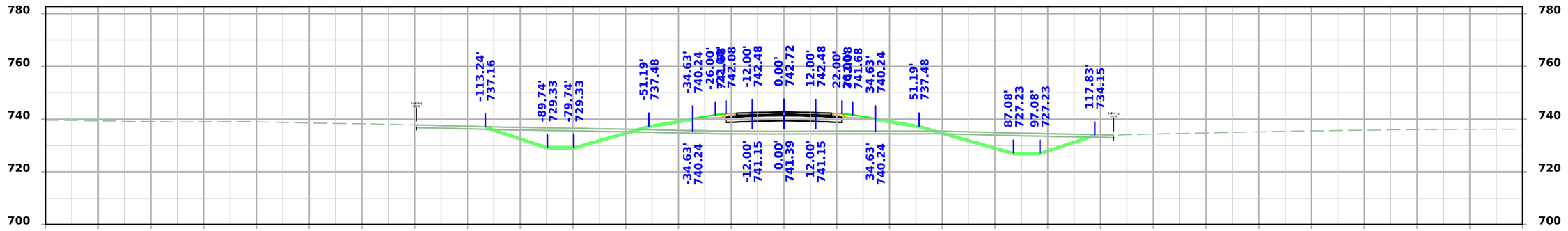
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.195

4:53:26 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

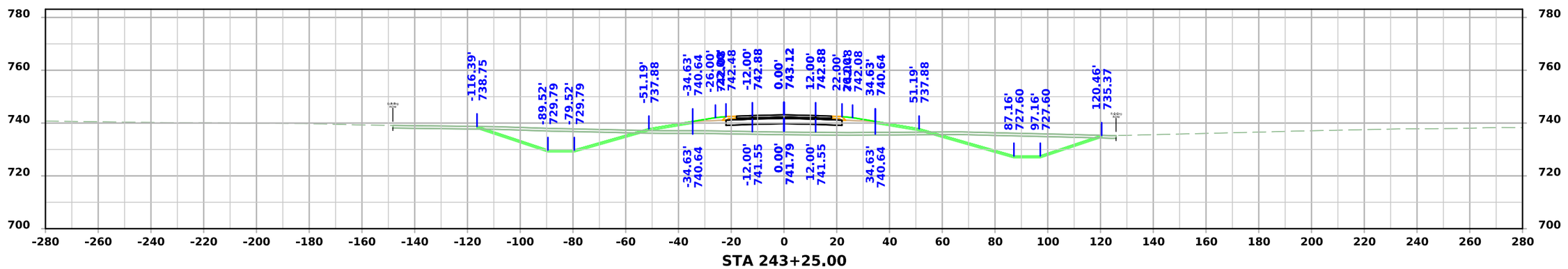
US 63



STA 243+75.00



STA 243+50.00

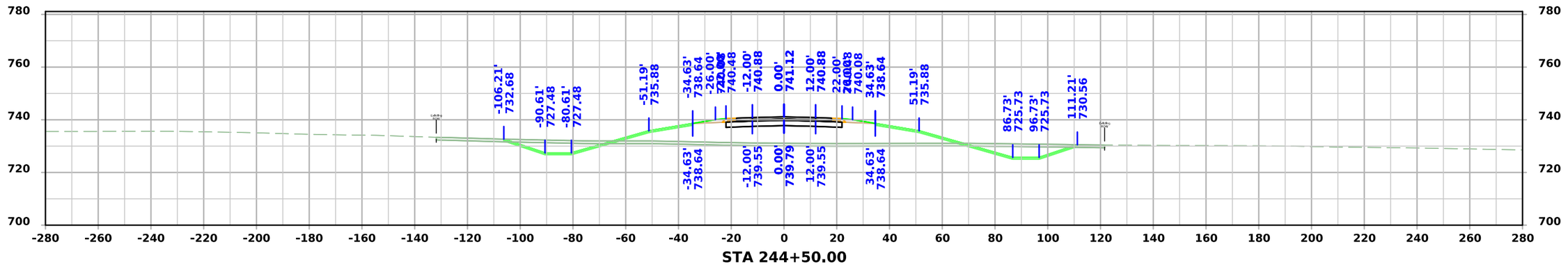


STA 243+25.00

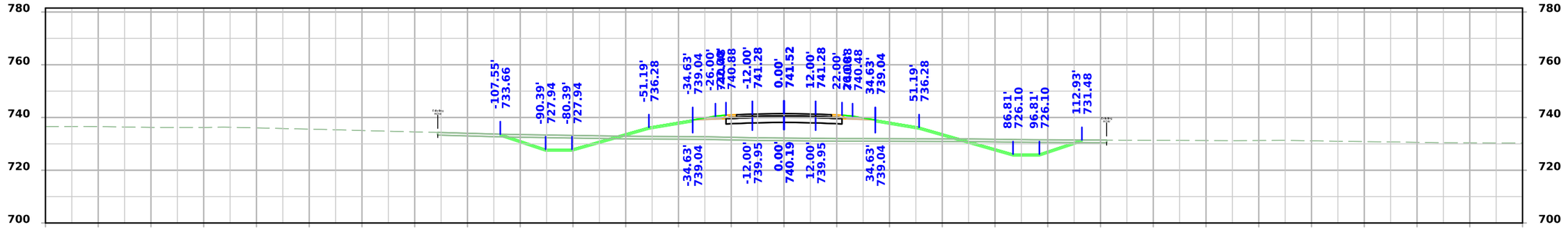
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.196

4:53:31 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

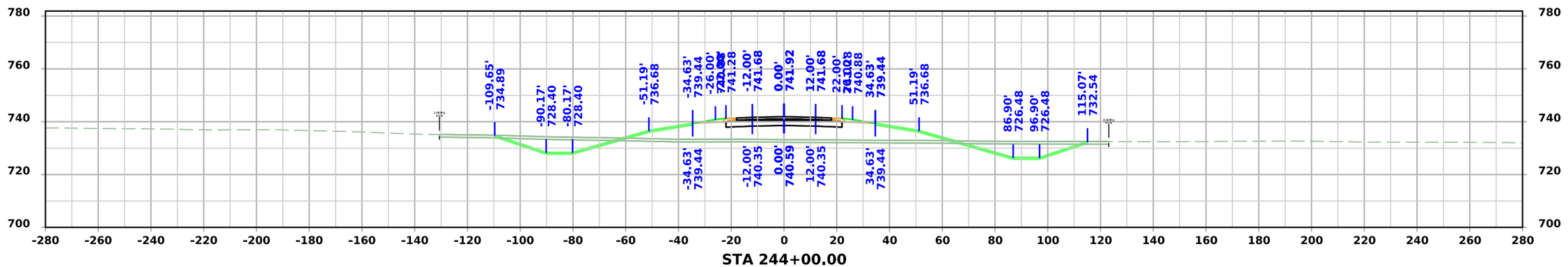
US 63



STA 244+50.00



STA 244+25.00

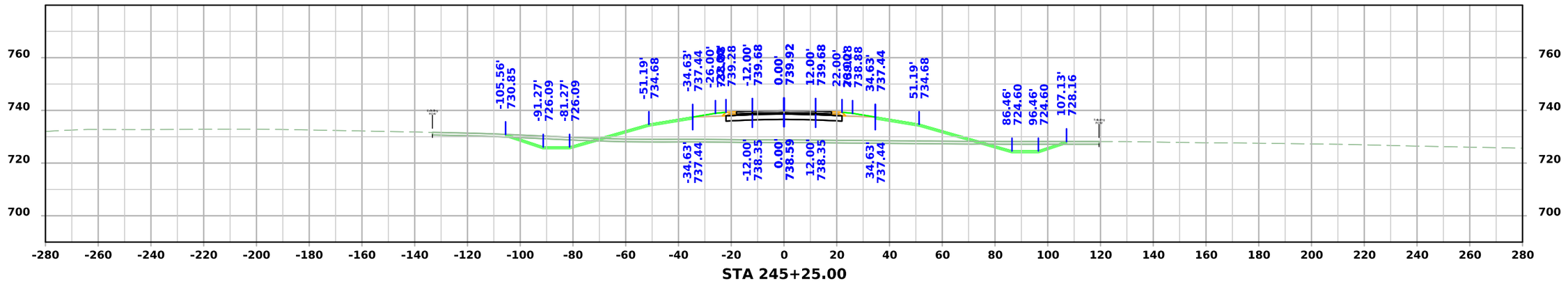


STA 244+00.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.197

4:53:35 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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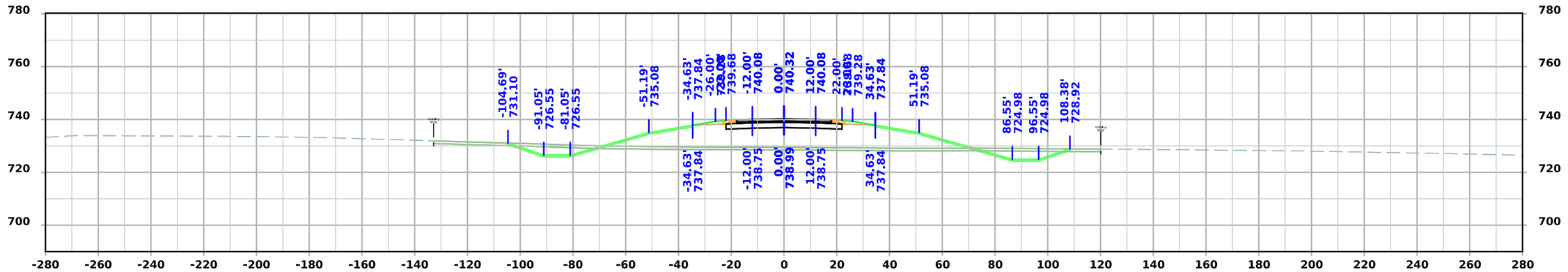
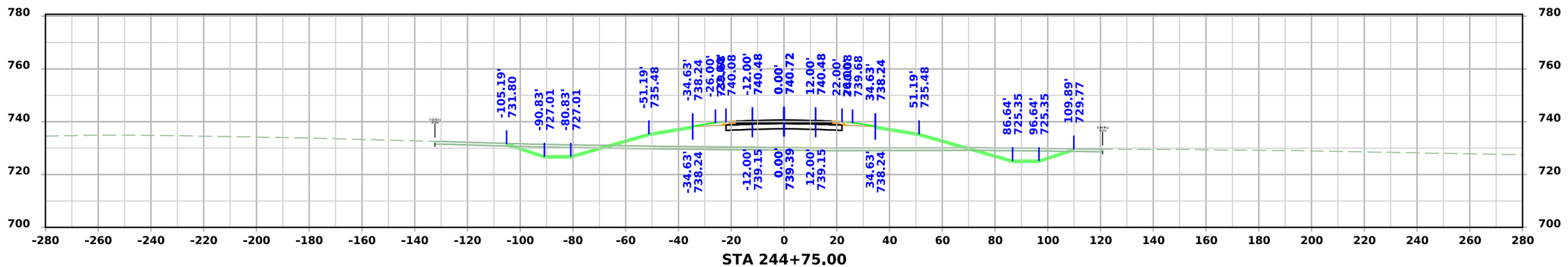


STA 245+00.00

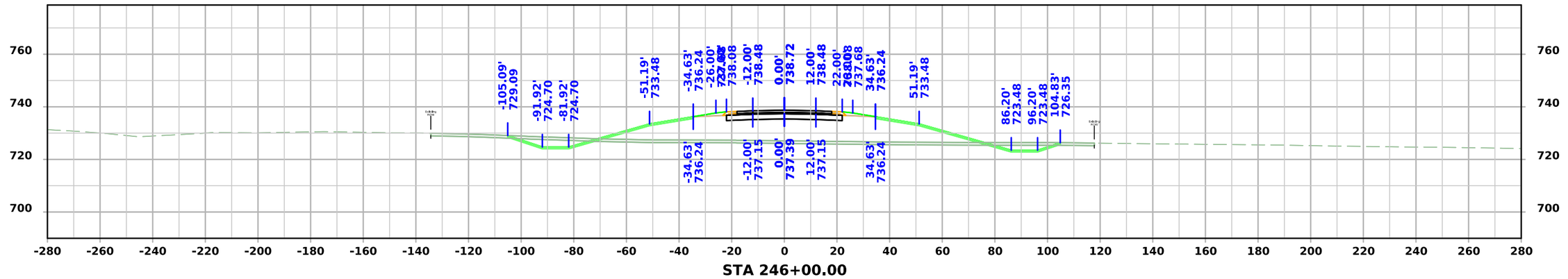


STA 244+75.00

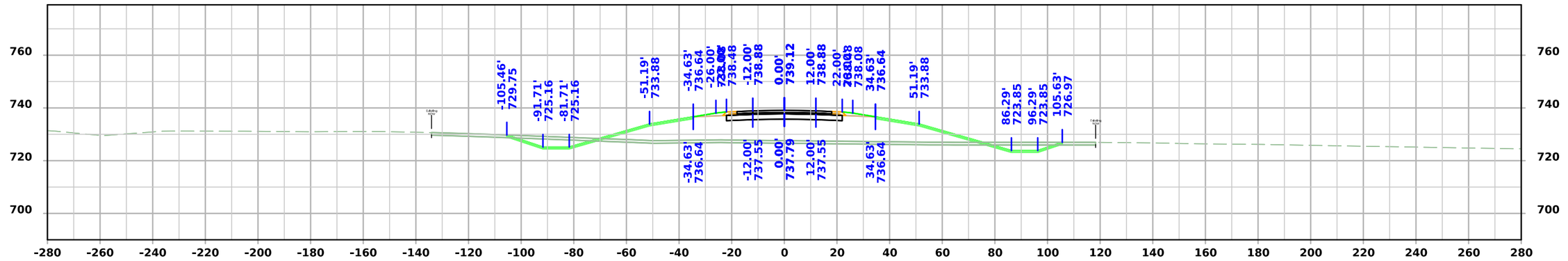
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.198

4:53:40 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 246+00.00



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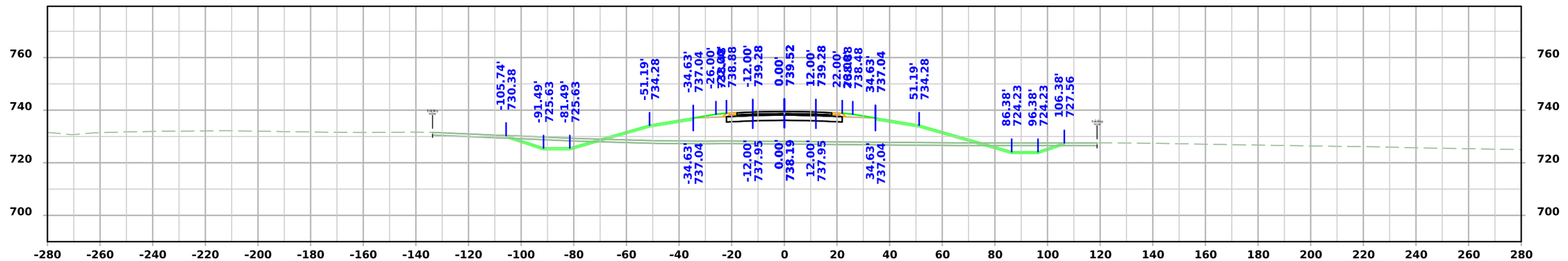
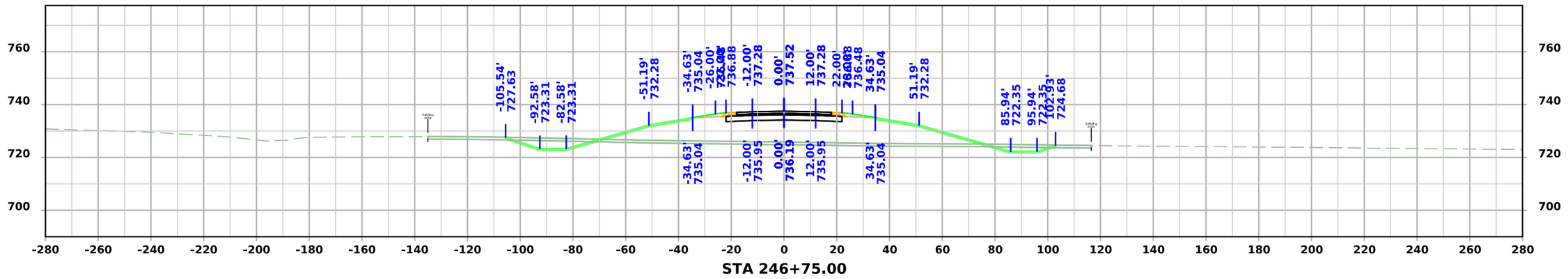


STA 245+50.00

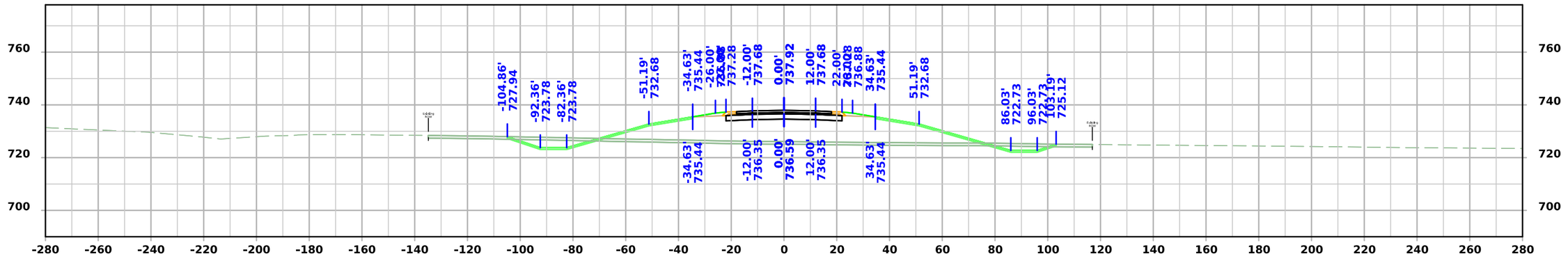
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.199

4:53:44 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

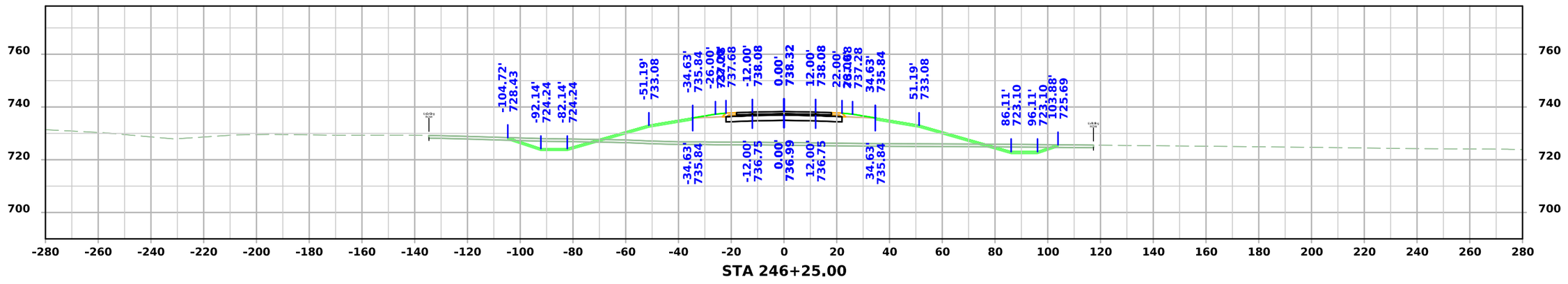
US 63



STA 246+75.00



STA 246+50.00

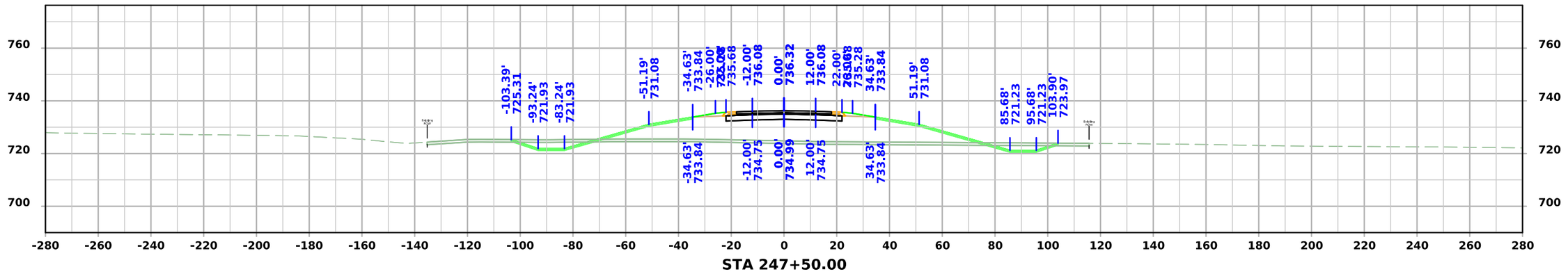


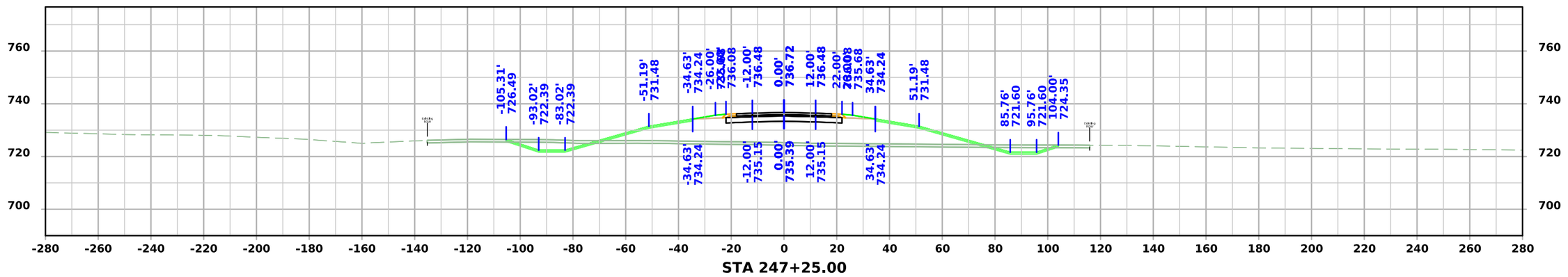
STA 246+25.00

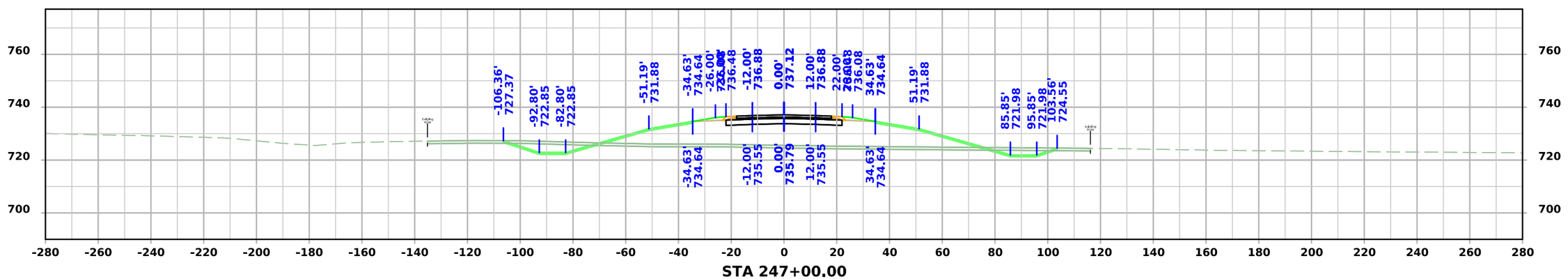
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.200

4:53:48 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



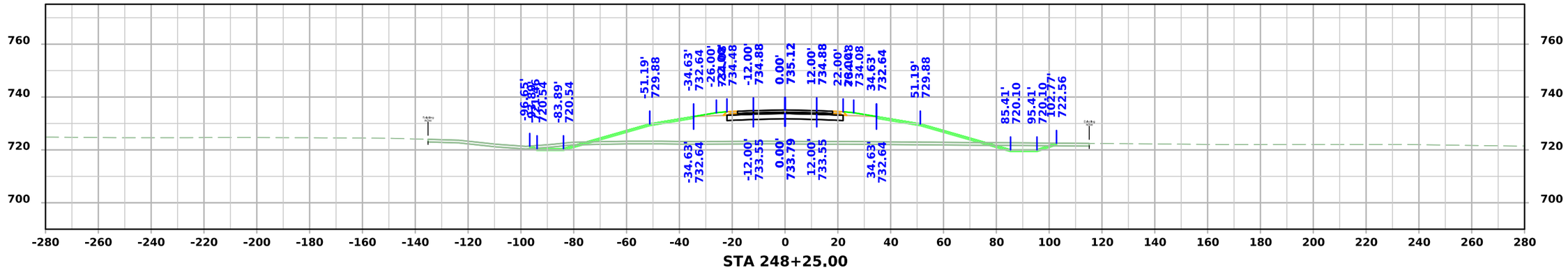




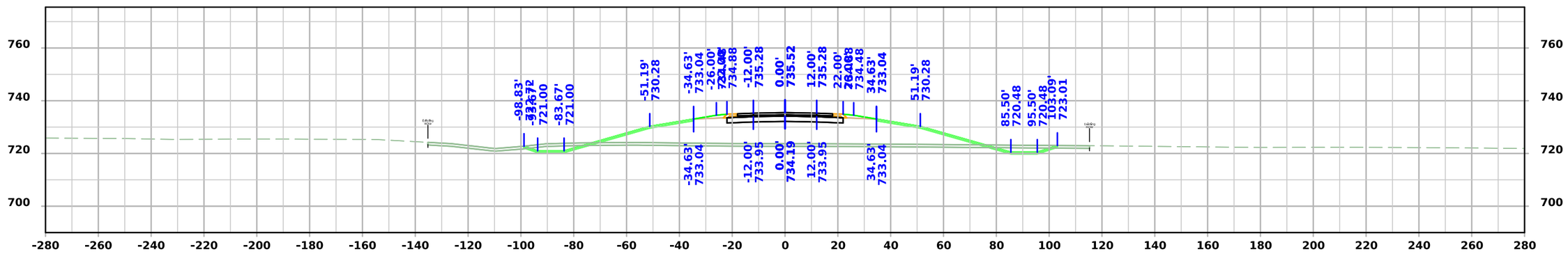
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.201

4:53:53 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

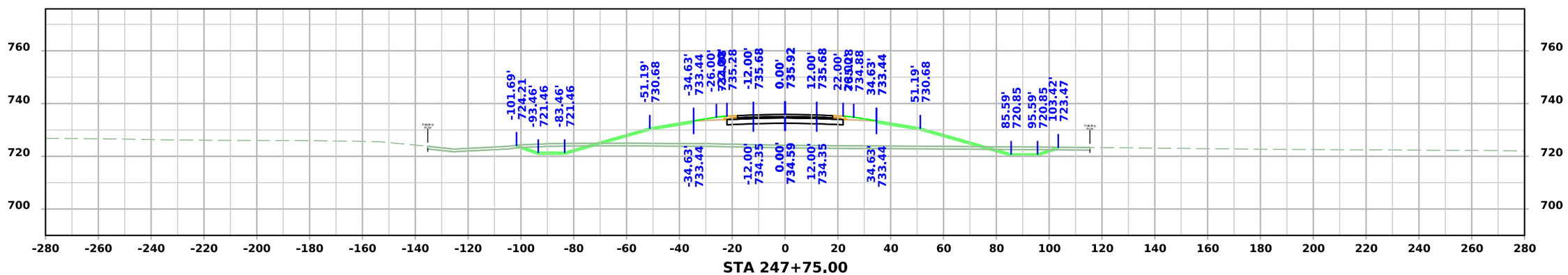
US 63



STA 248+25.00



STA 248+00.00

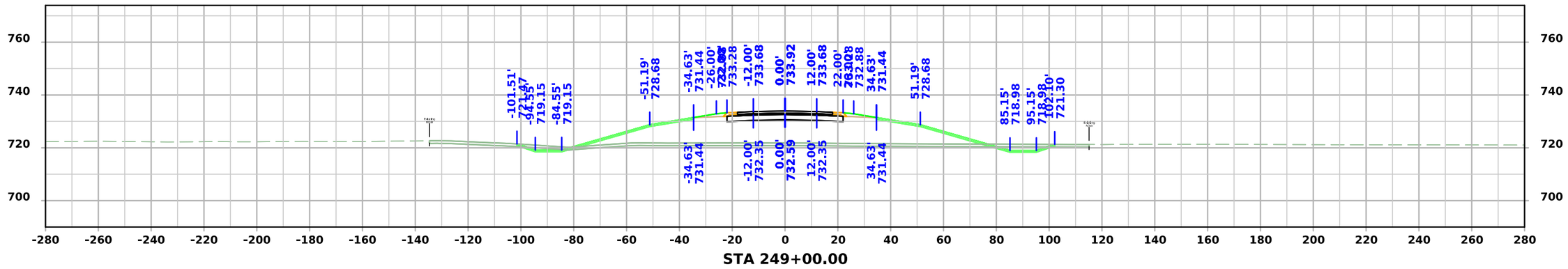


STA 247+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.202

4:53:57 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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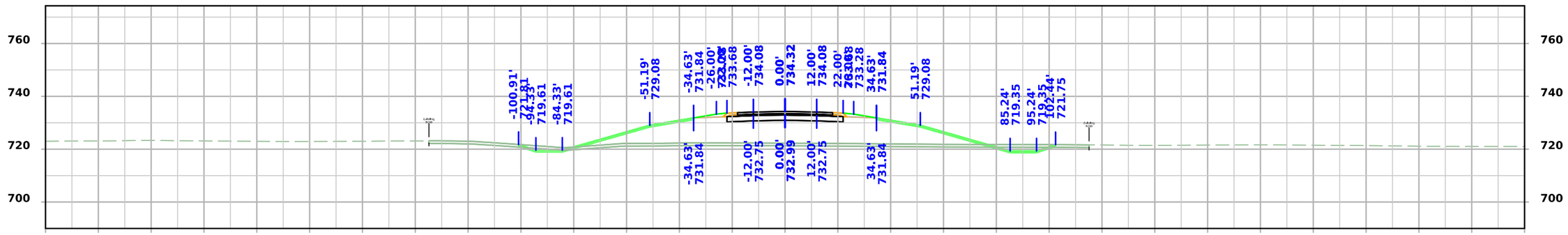
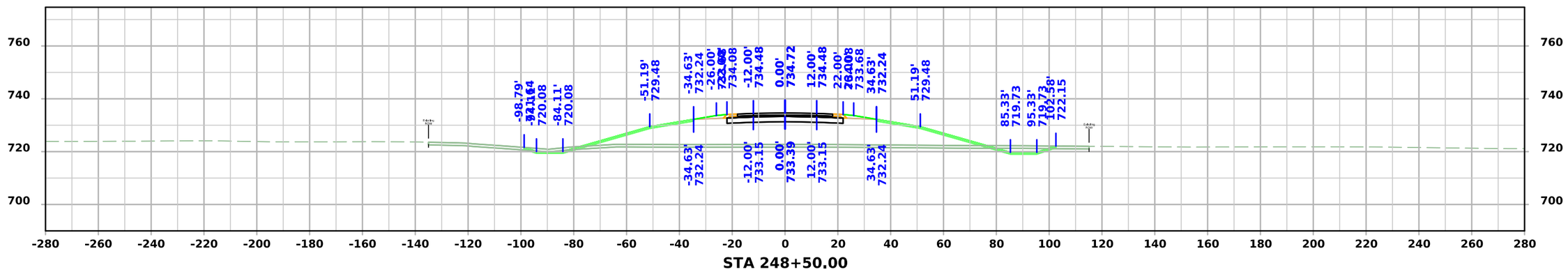


STA 248+75.00

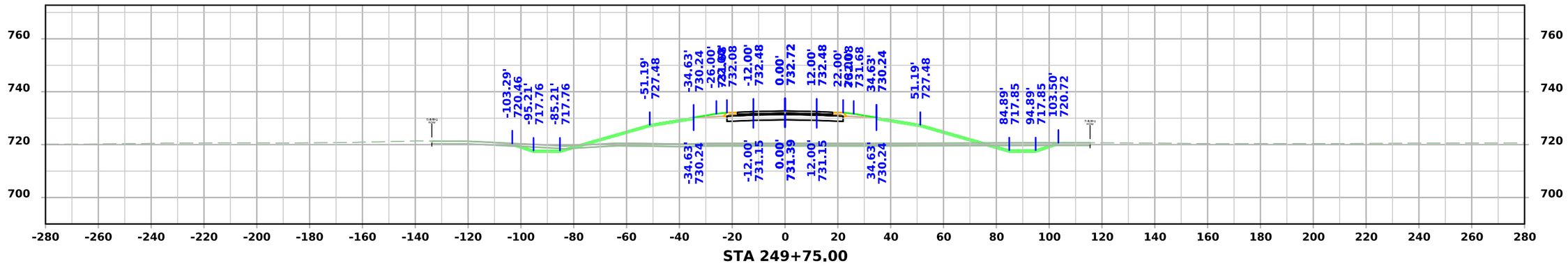


STA 248+50.00

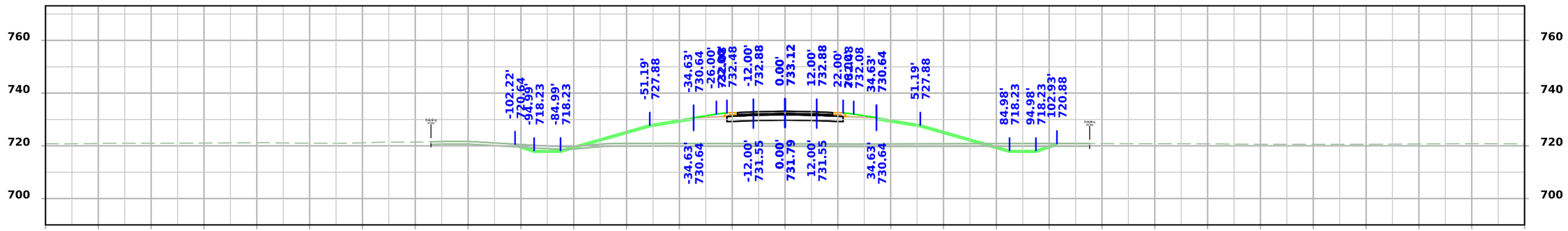
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.203

4:54:02 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

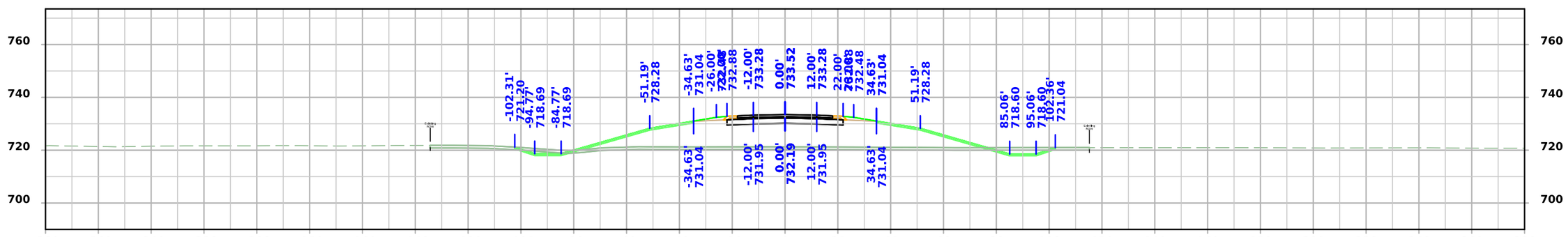
US 63



STA 249+75.00



STA 249+50.00

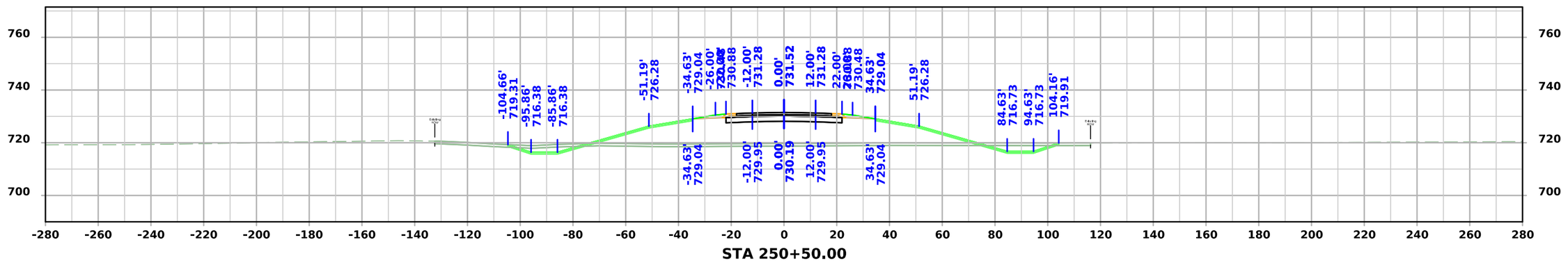


STA 249+25.00

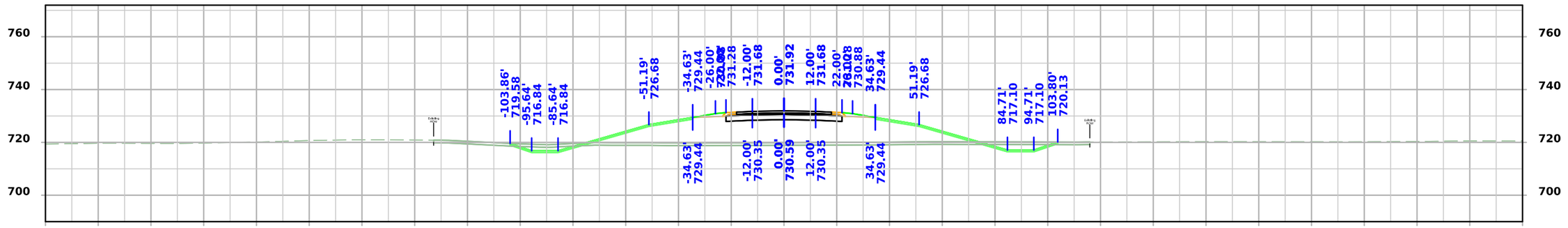
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.204

4:54:07 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

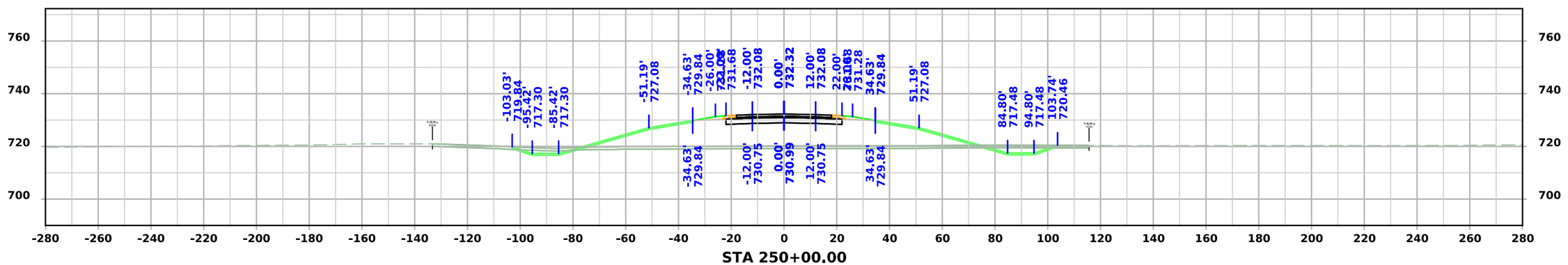
US 63



STA 250+50.00



STA 250+25.00

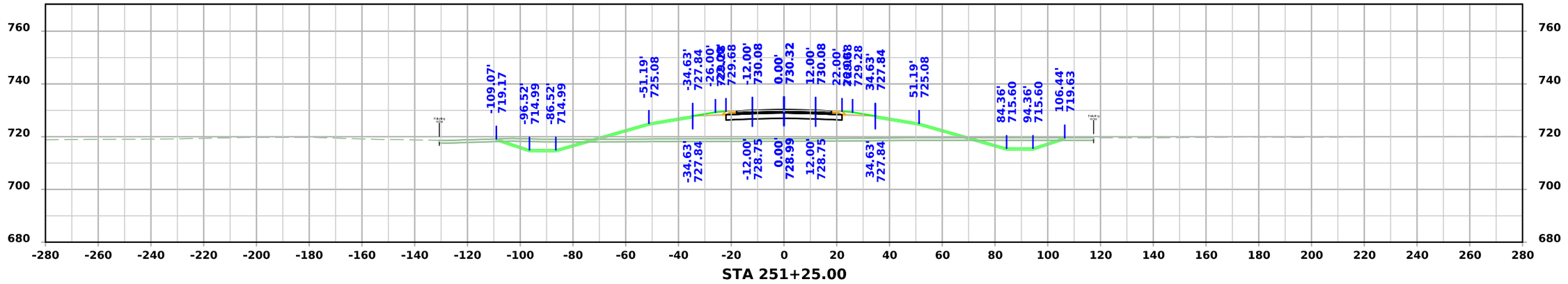


STA 250+00.00

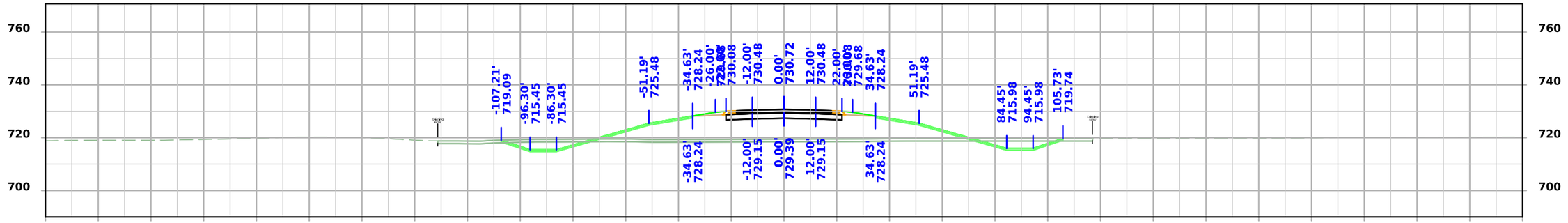
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.205

4:54:11 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 251+25.00



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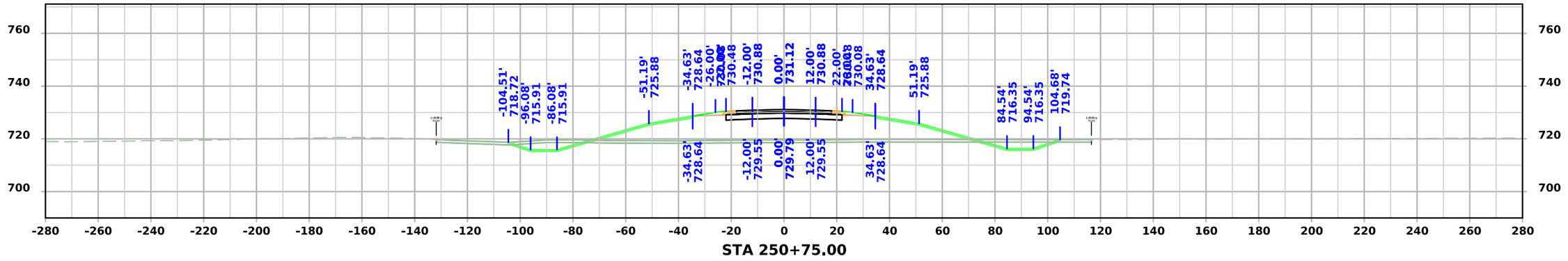
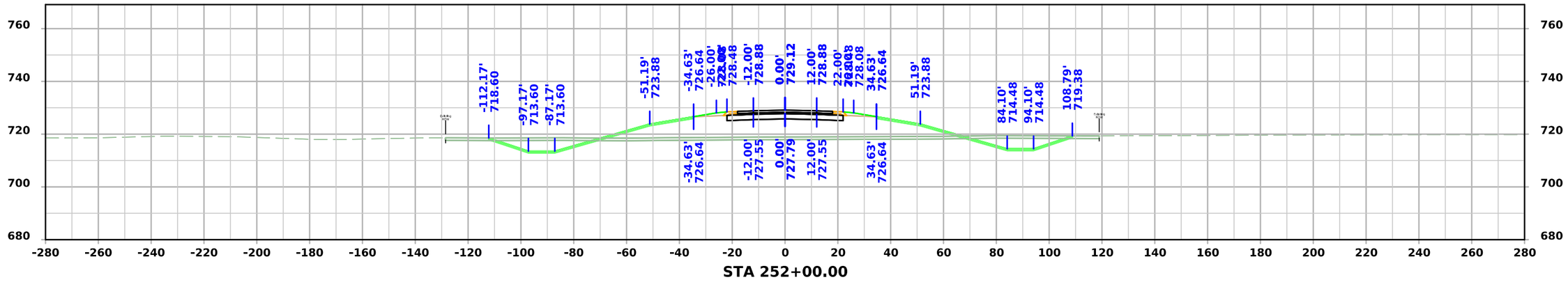


STA 250+75.00

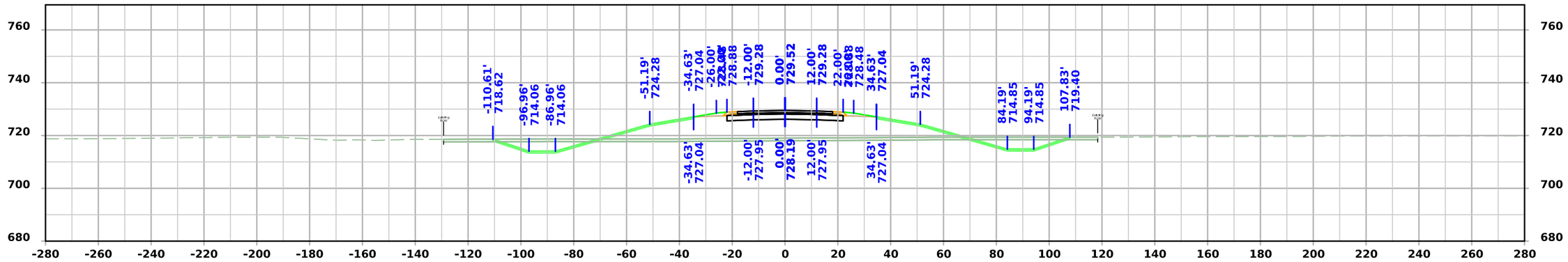
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.206

4:54:16 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

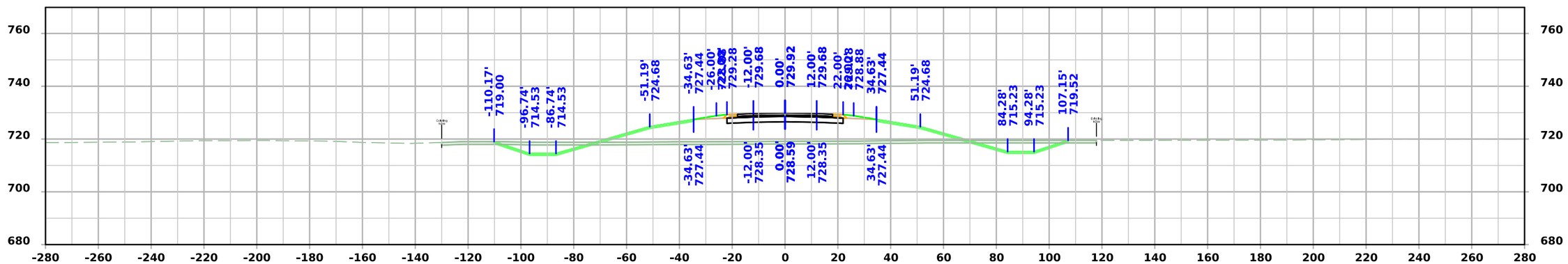
US 63



STA 252+00.00



STA 251+75.00

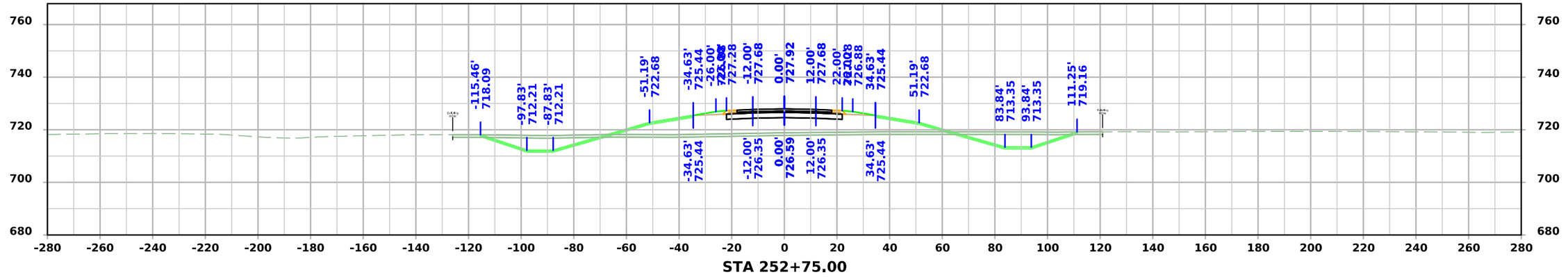


STA 251+50.00

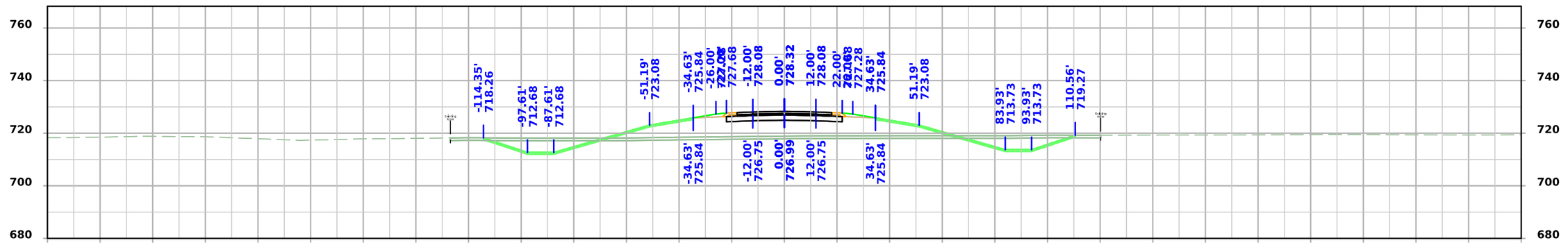
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.207

4:54:20 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

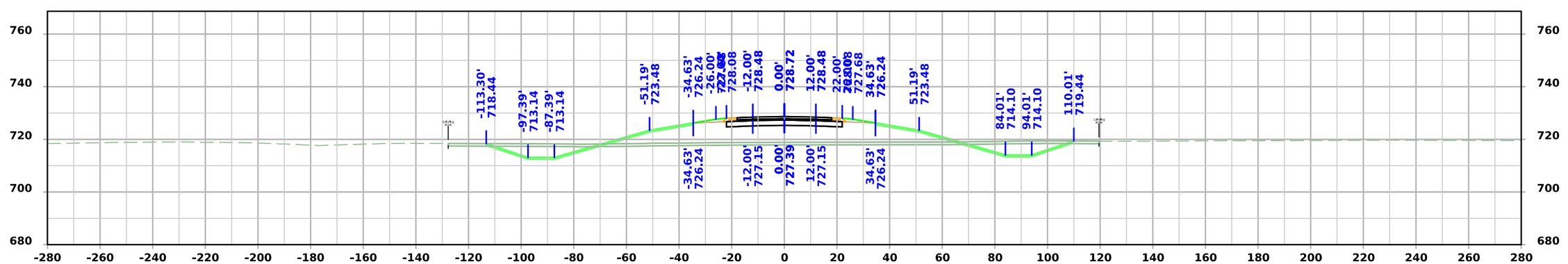
US 63



STA 252+75.00



STA 252+50.00

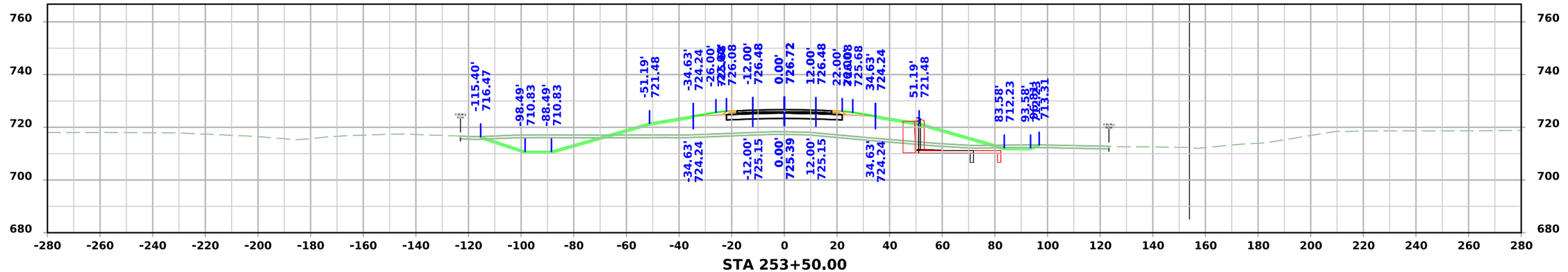


STA 252+25.00

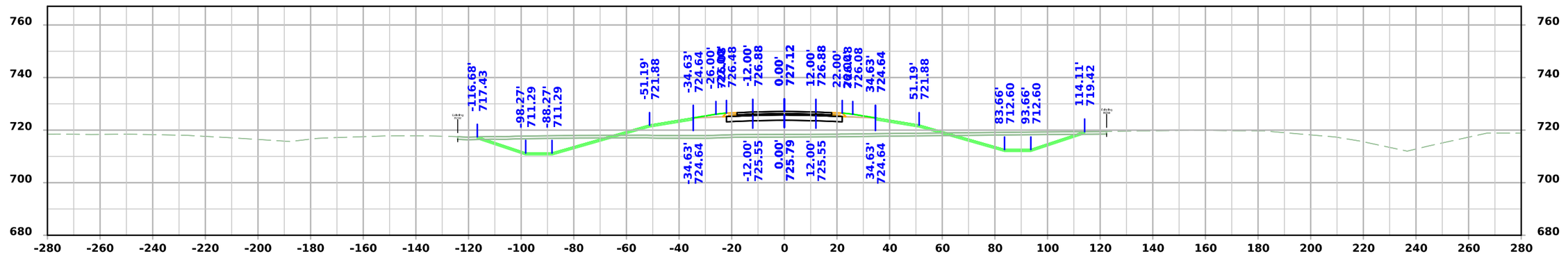
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.208

4:54:25 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

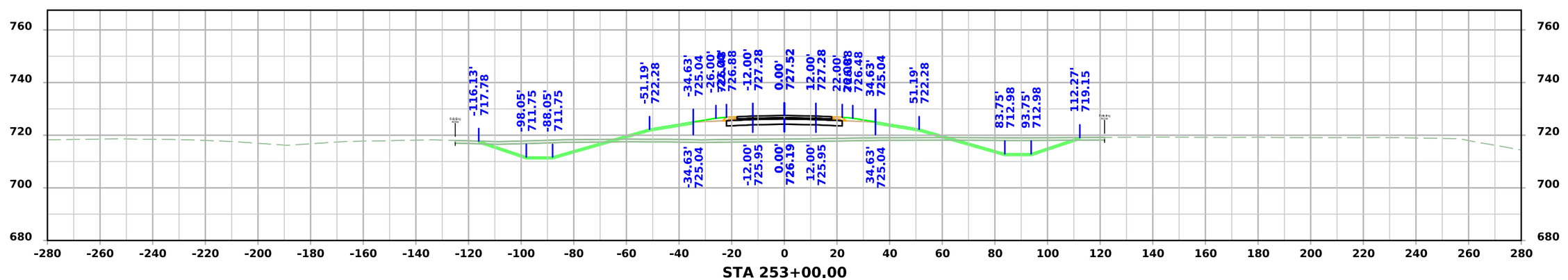
US 63



STA 253+50.00



STA 253+25.00

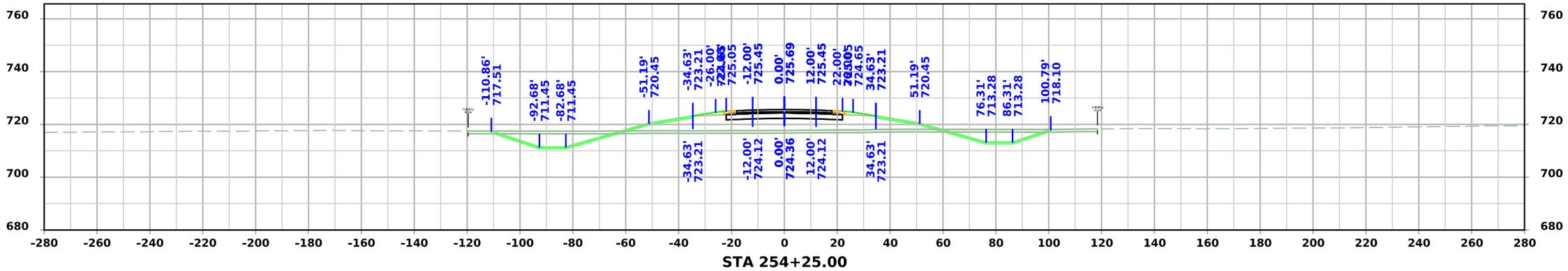


STA 253+00.00

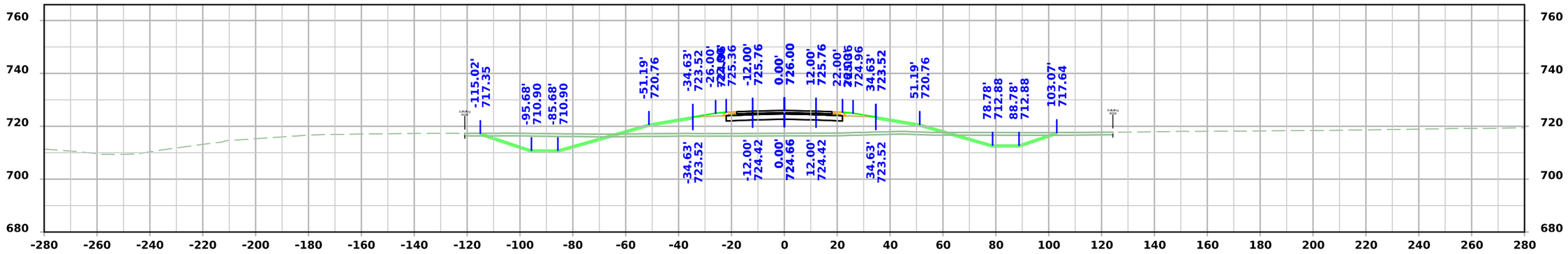
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.209

4:54:29 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

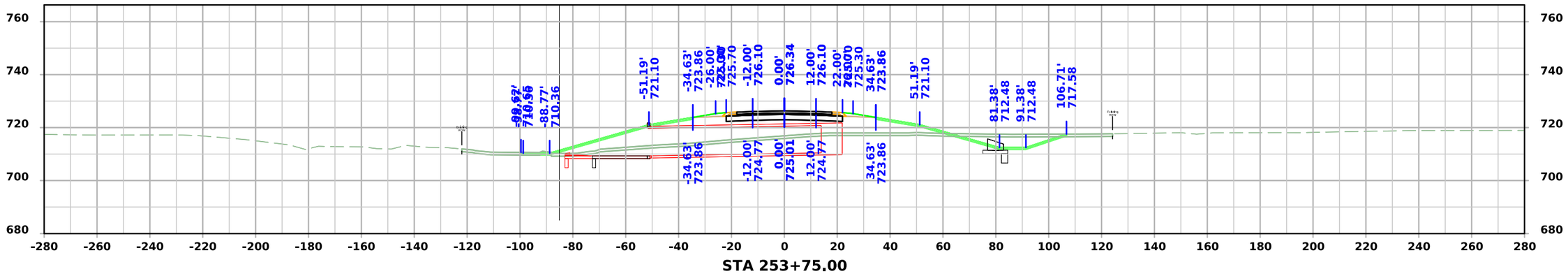
US 63



STA 254+25.00



STA 254+00.00

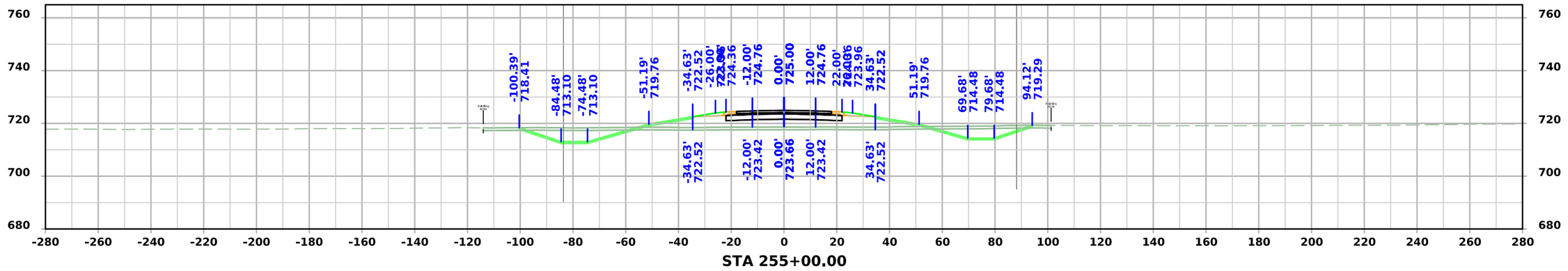


STA 253+75.00

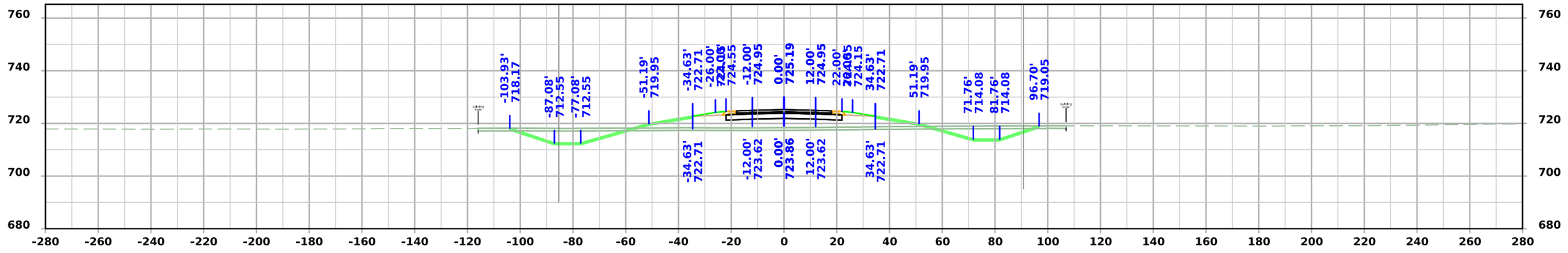
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.210

4:54:34 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

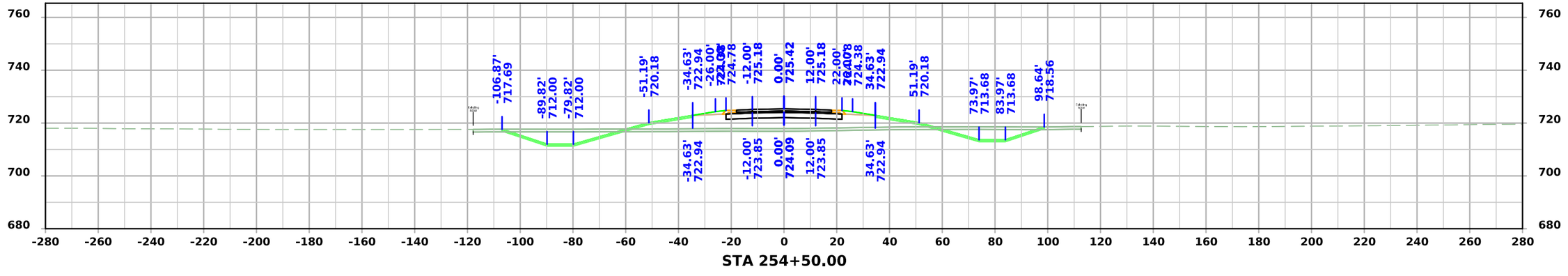
US 63



STA 255+00.00



STA 254+75.00

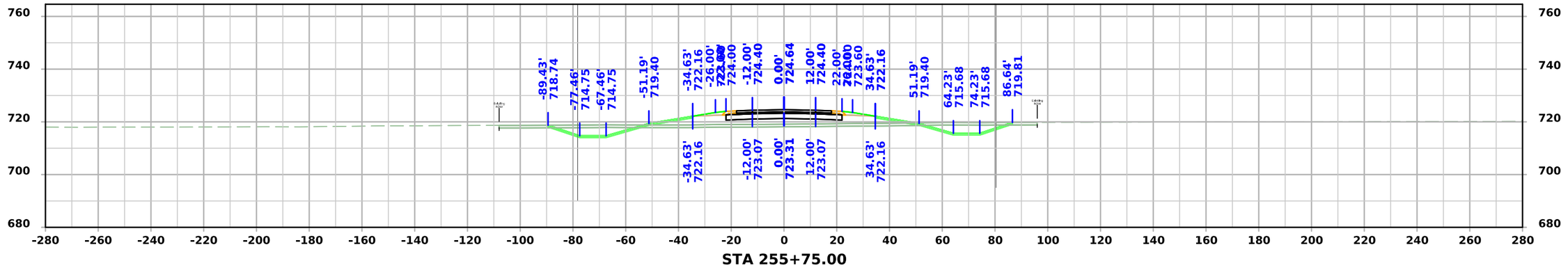


STA 254+50.00

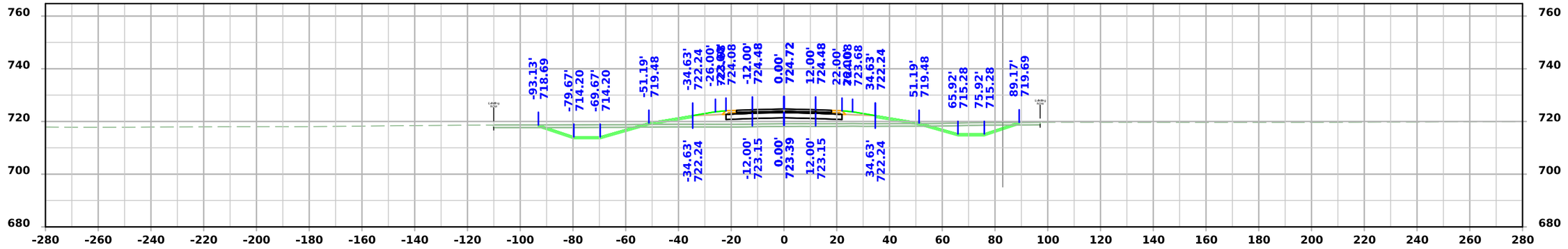
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.211

4:54:38 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

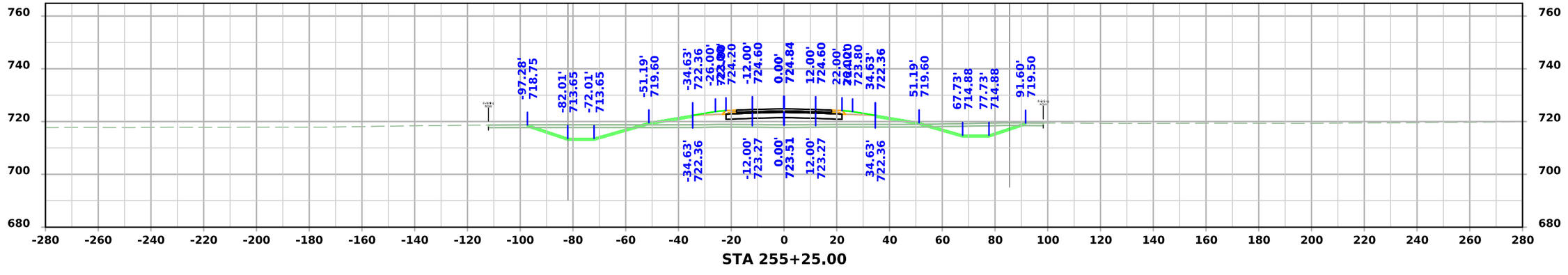
US 63



STA 255+75.00



STA 255+50.00

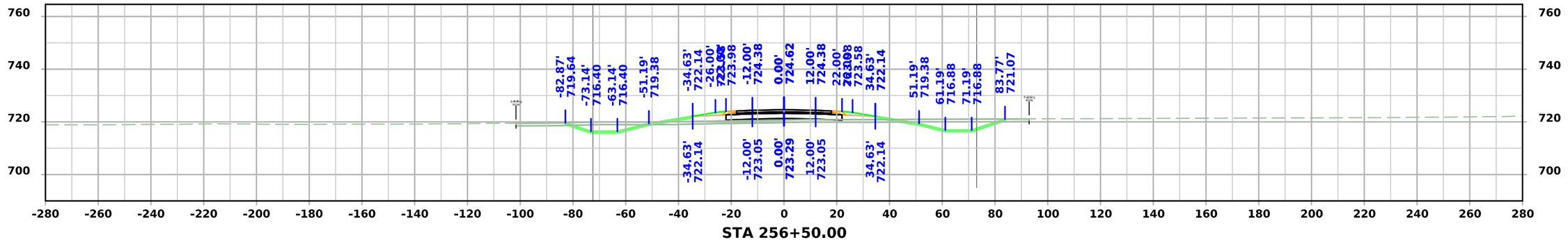


STA 255+25.00

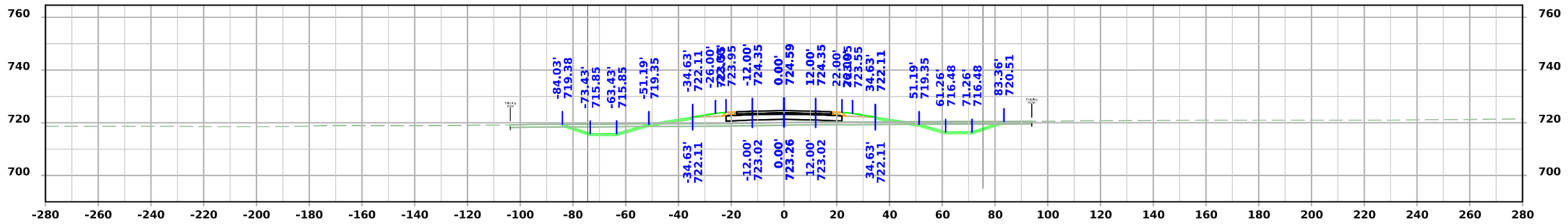
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.212

4:54:43 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

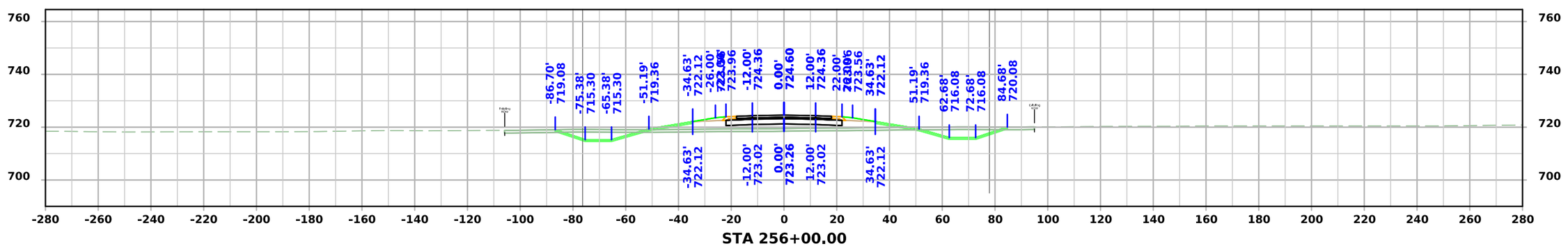
US 63



STA 256+50.00



STA 256+25.00

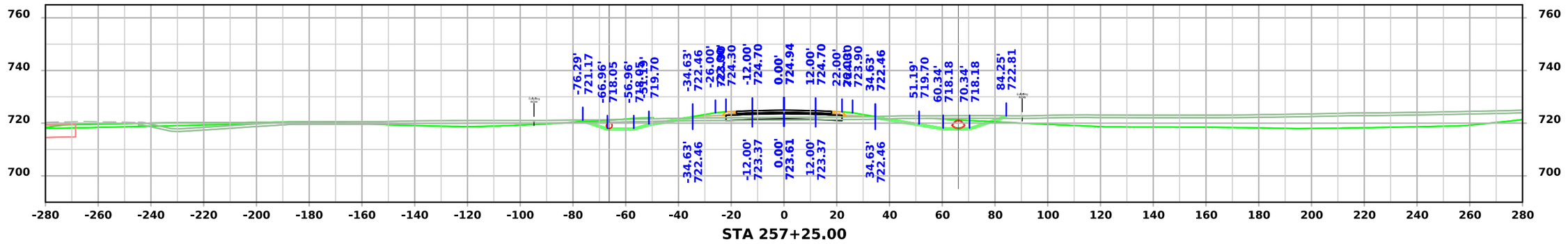


STA 256+00.00

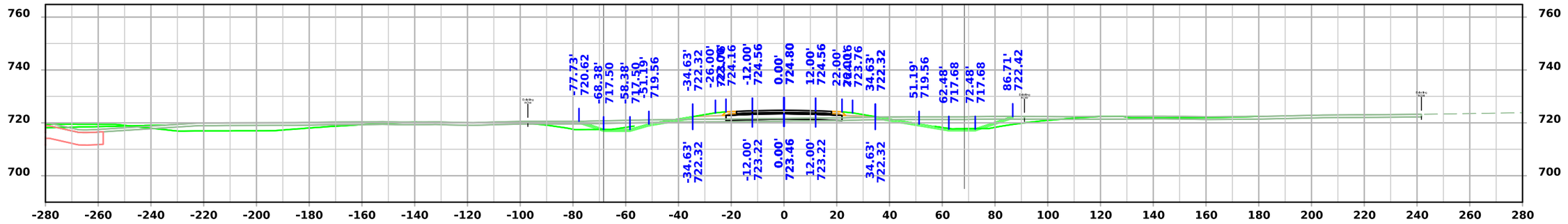
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.213

4:54:48 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

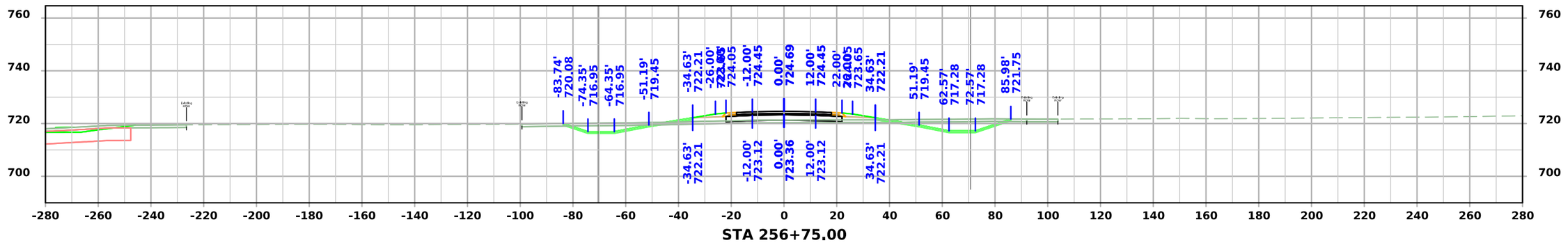
US 63



STA 257+25.00



STA 257+00.00

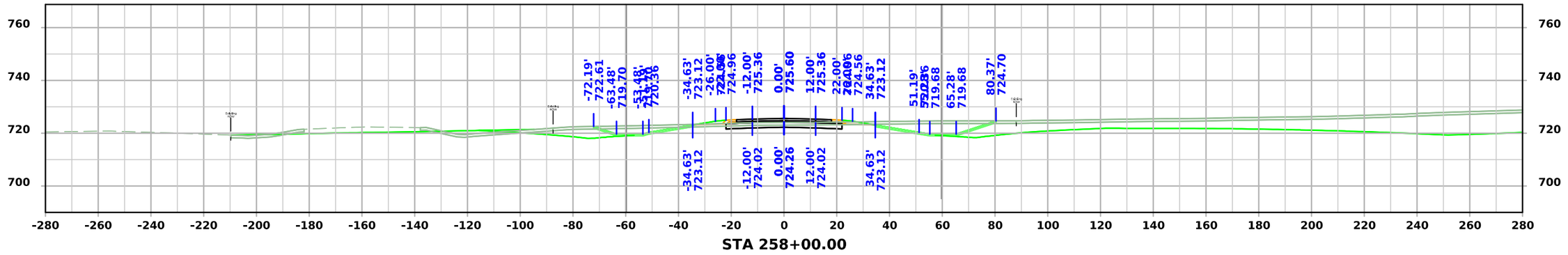


STA 256+75.00

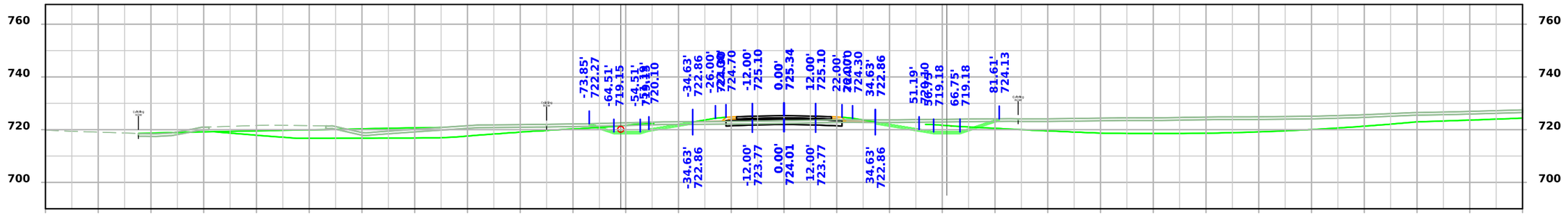
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.214

4:54:52 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

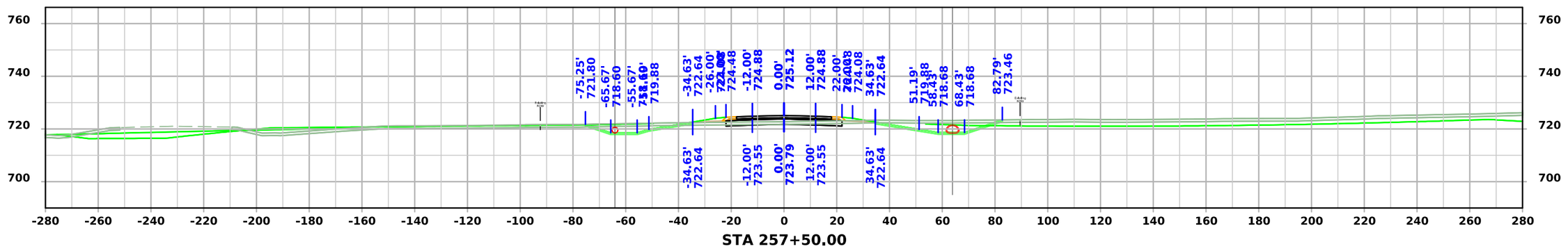
US 63



STA 258+00.00



STA 257+75.00

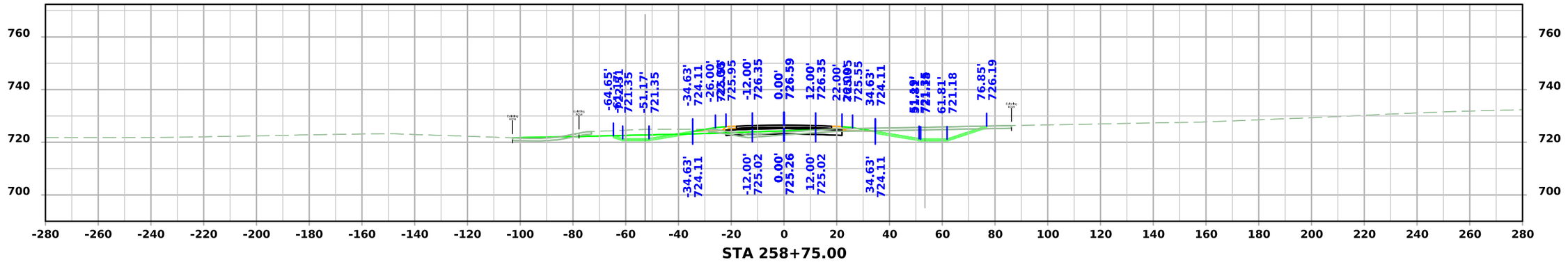


STA 257+50.00

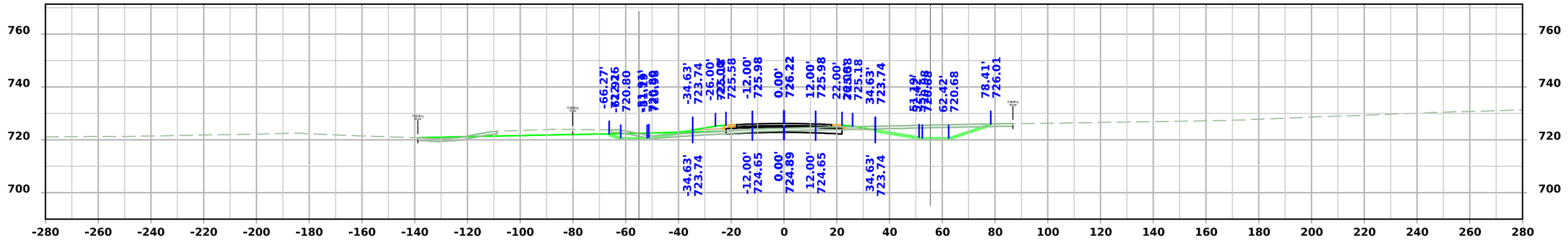
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.215

4:54:57 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

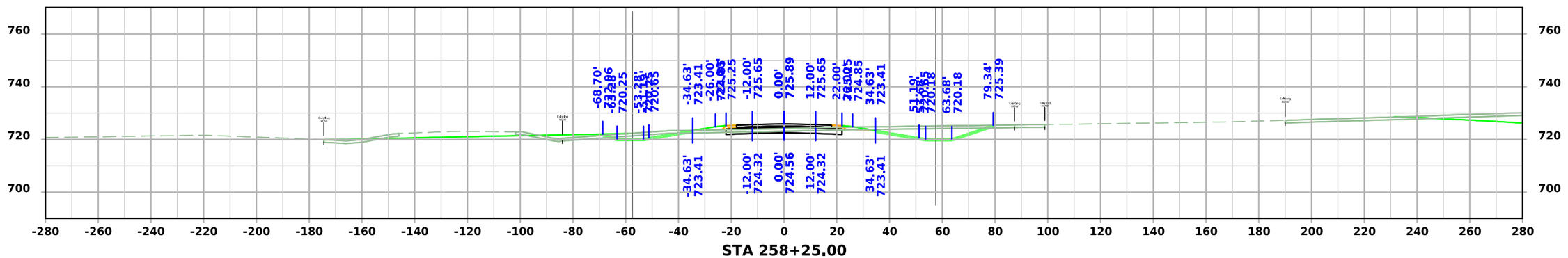
US 63



STA 258+75.00



STA 258+50.00

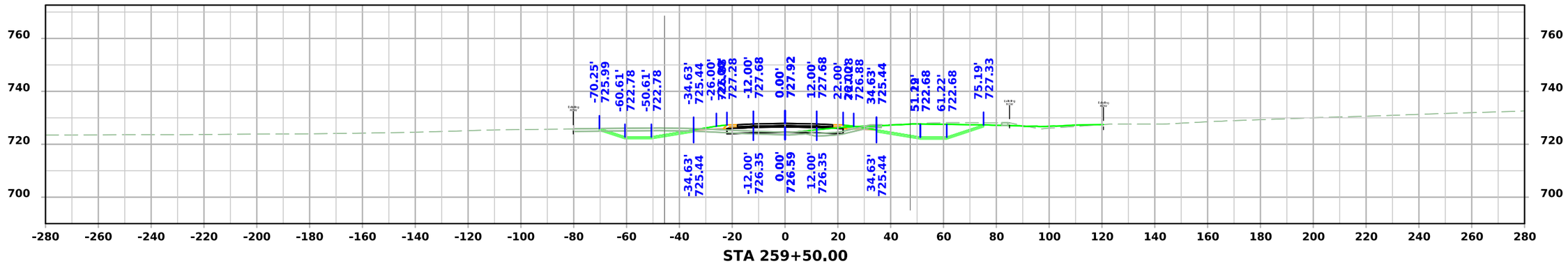


STA 258+25.00

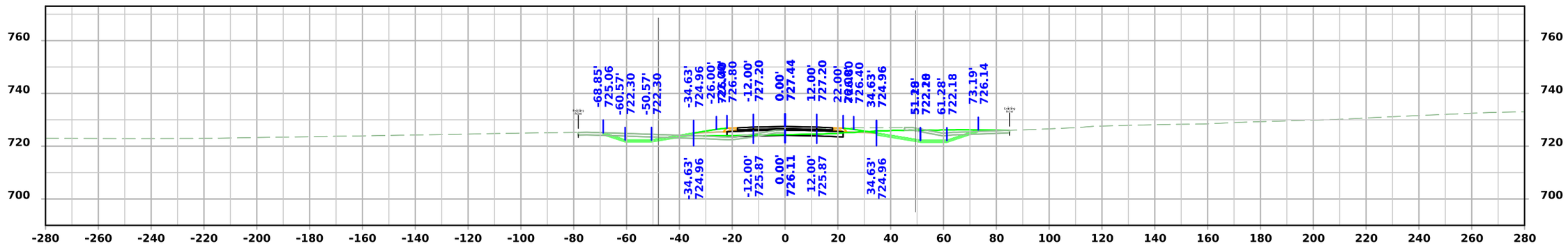
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.216

4:55:02 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

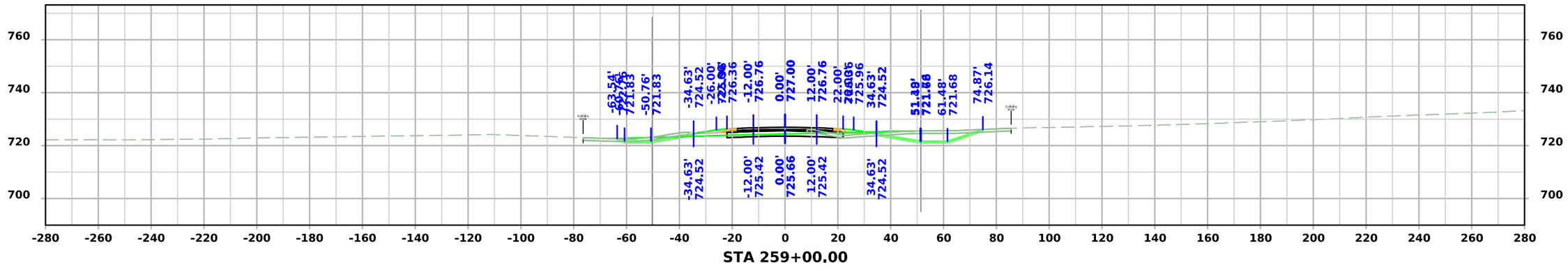
US 63



STA 259+50.00



STA 259+25.00

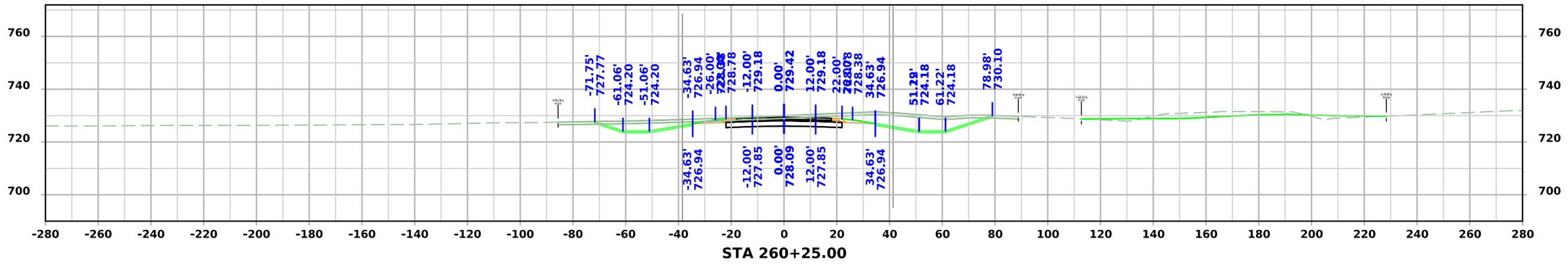


STA 259+00.00

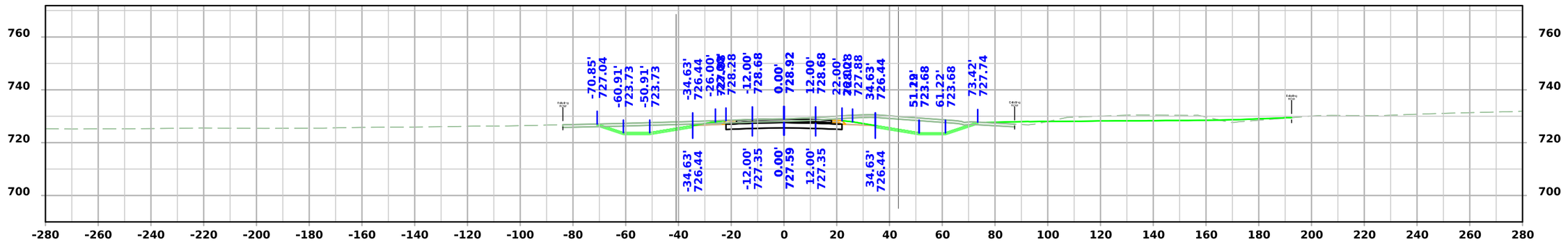
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.217

4:55:06 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

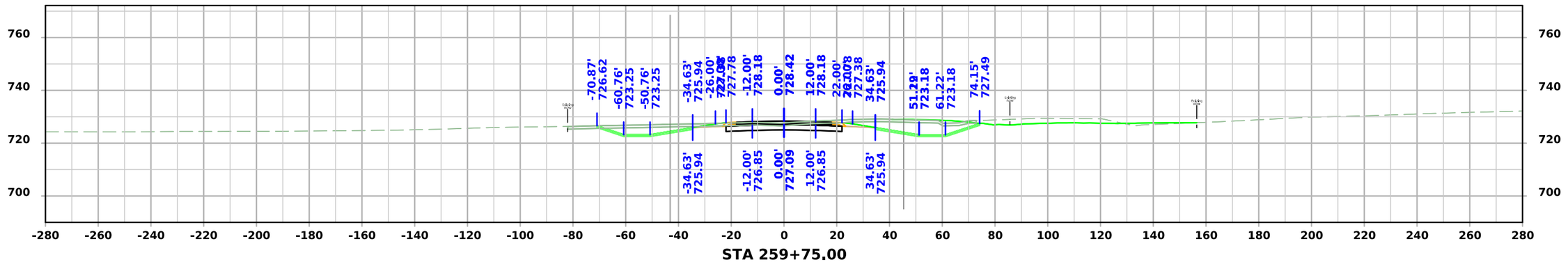
US 63



STA 260+25.00



STA 260+00.00

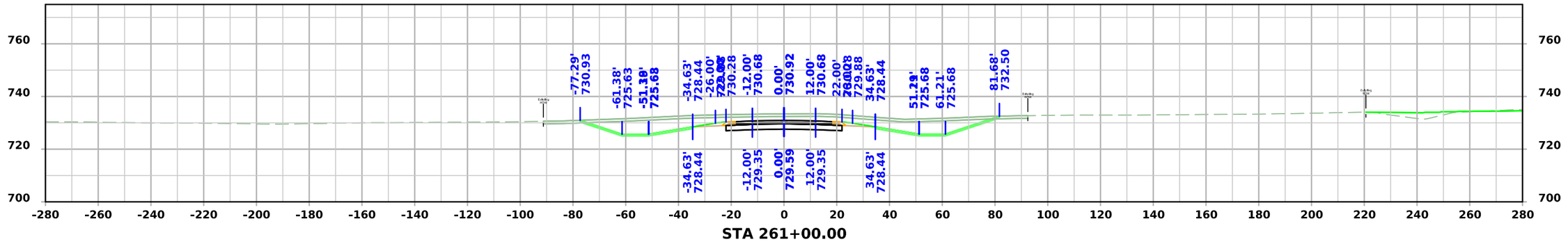


STA 259+75.00

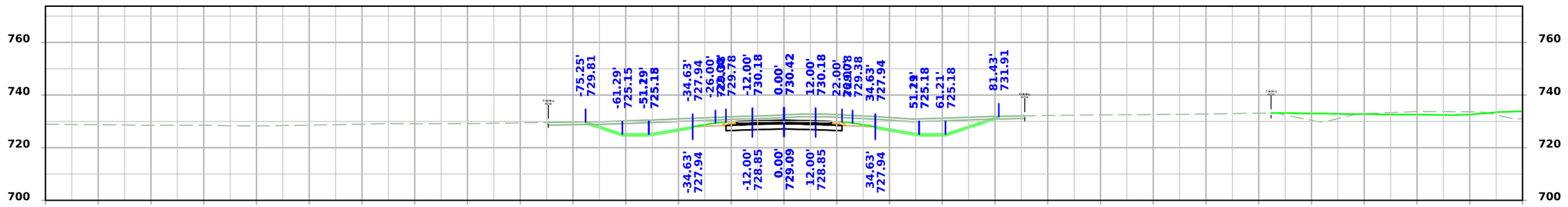
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.218

4:55:11 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

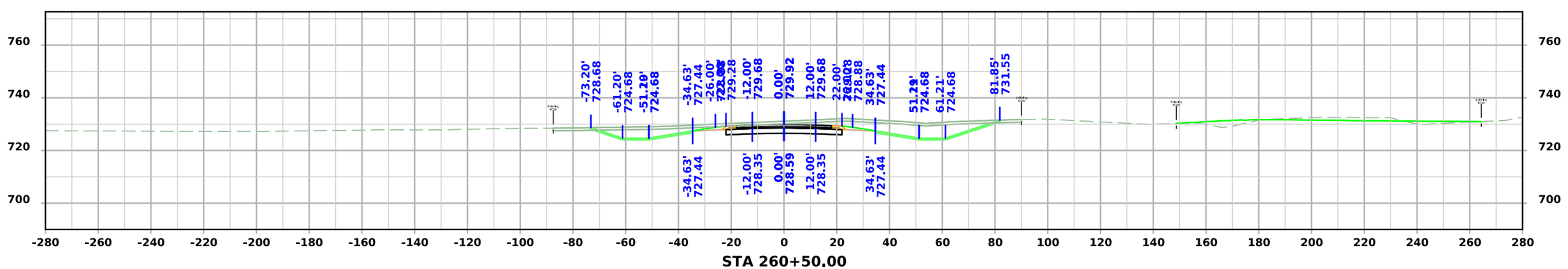
US 63



STA 261+00.00



STA 260+75.00

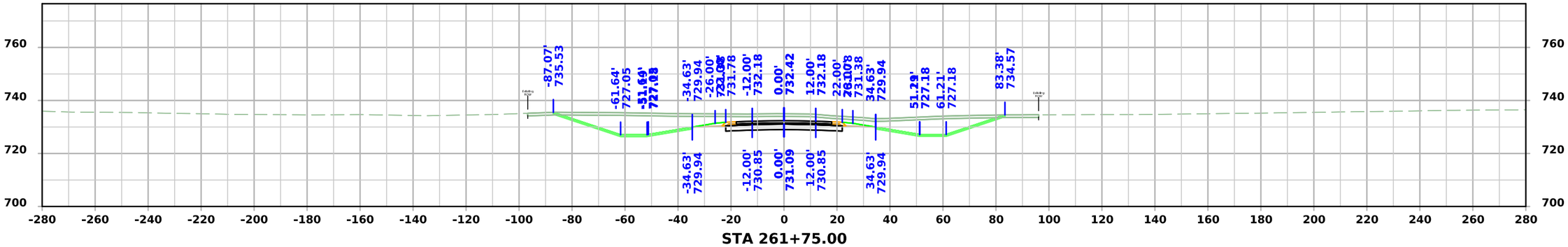


STA 260+50.00

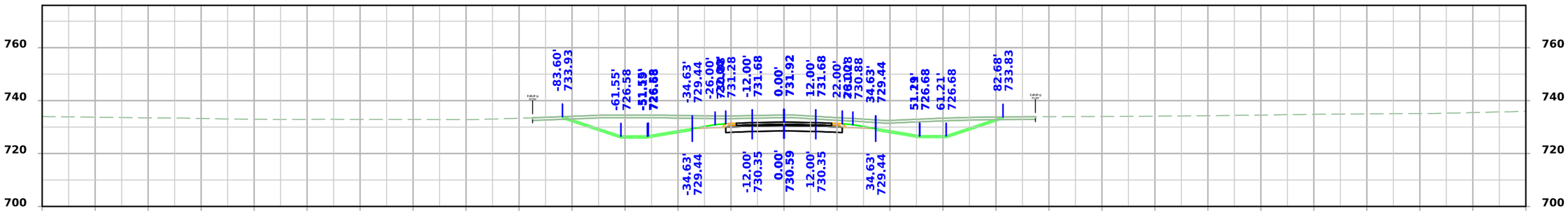
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.219

4:55:15 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

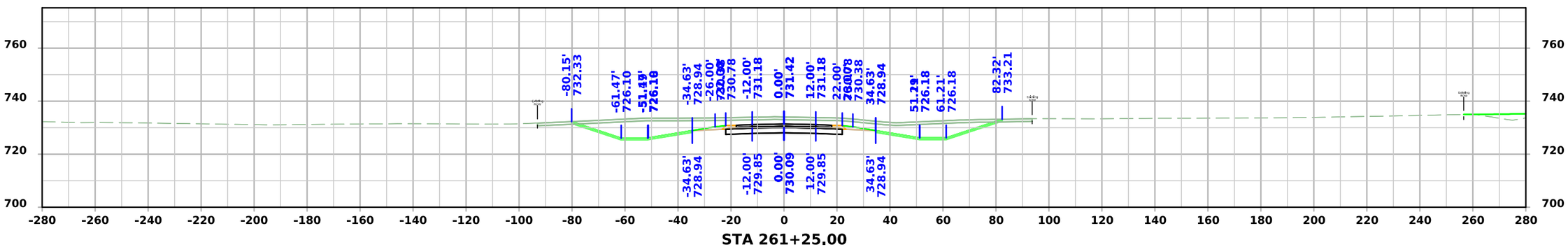
US 63



STA 261+75.00



STA 261+50.00

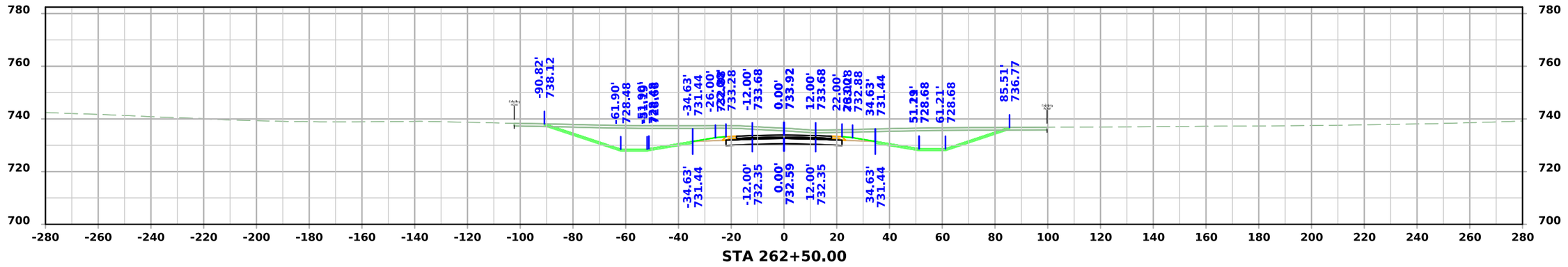


STA 261+25.00

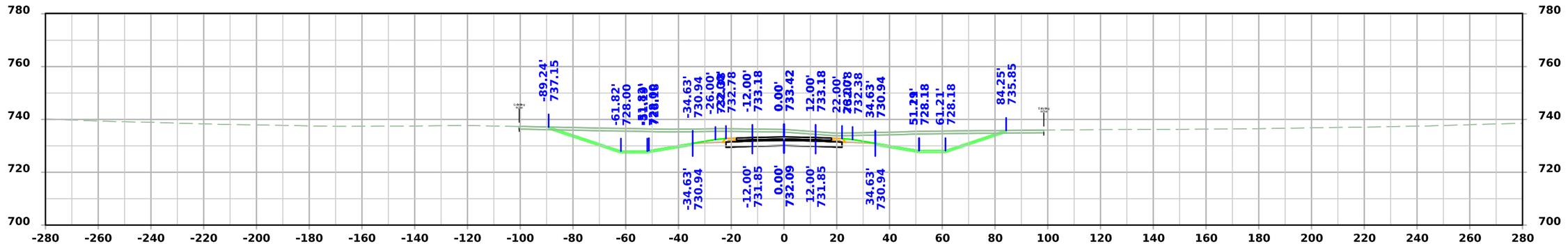
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.220

4:55:20 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

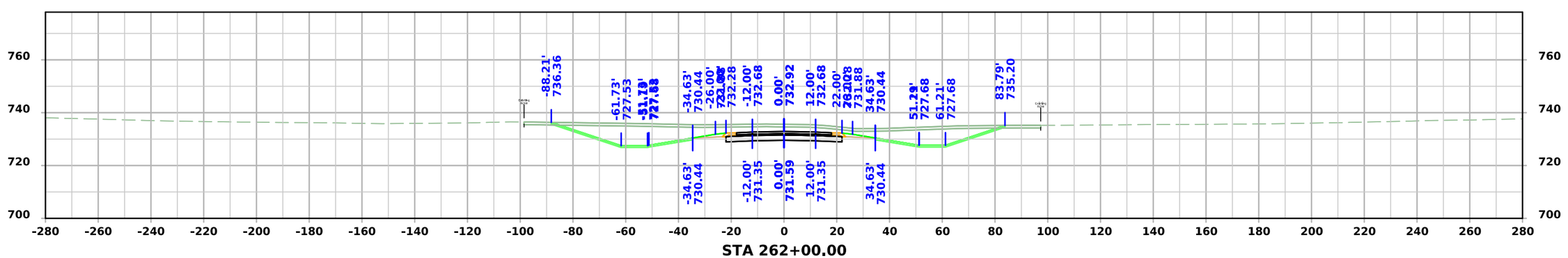
US 63



STA 262+50.00



STA 262+25.00

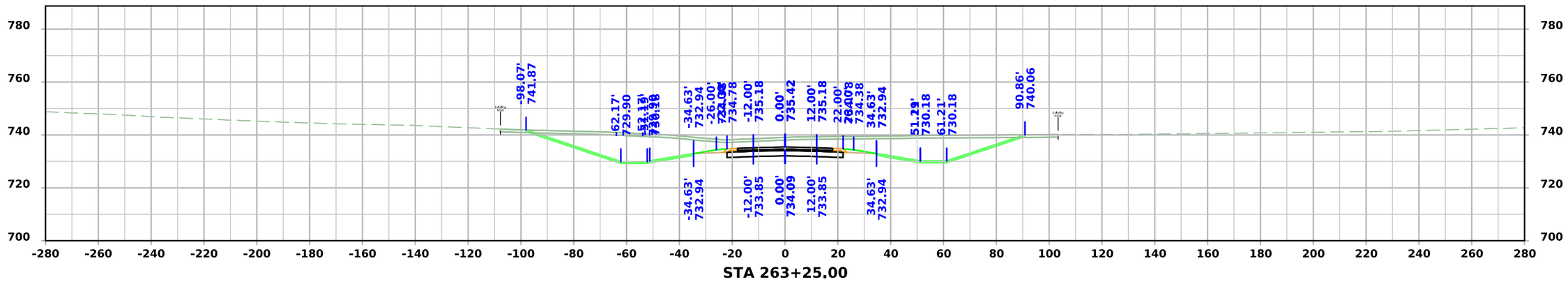


STA 262+00.00

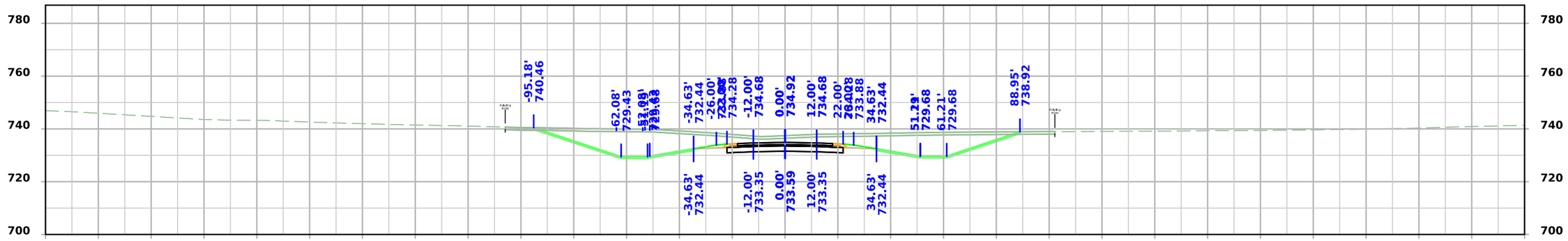
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.221

4:55:24 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

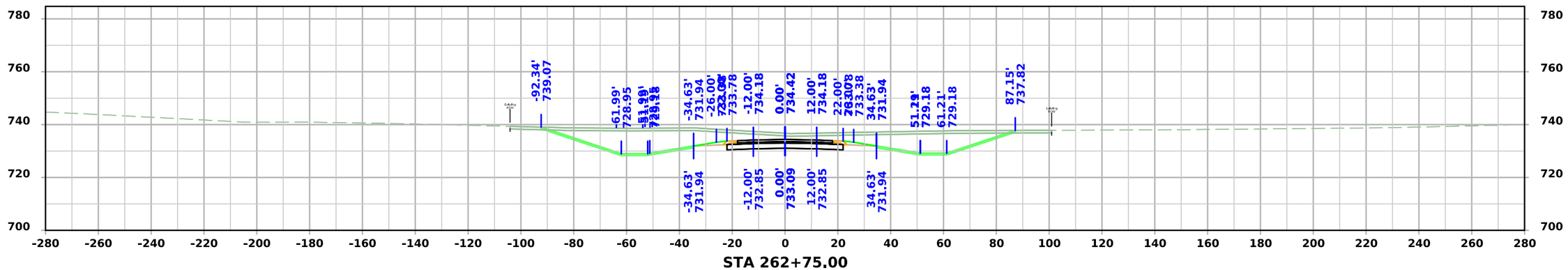
US 63



STA 263+25.00



STA 263+00.00

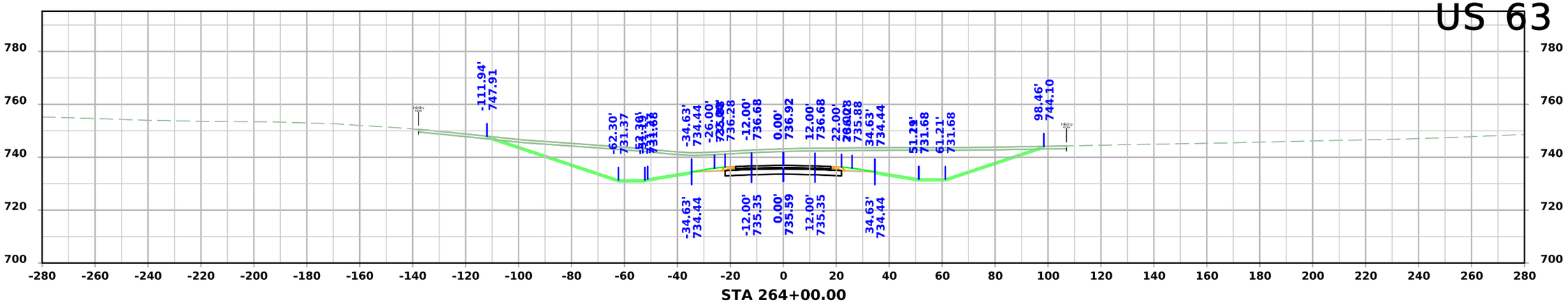


STA 262+75.00

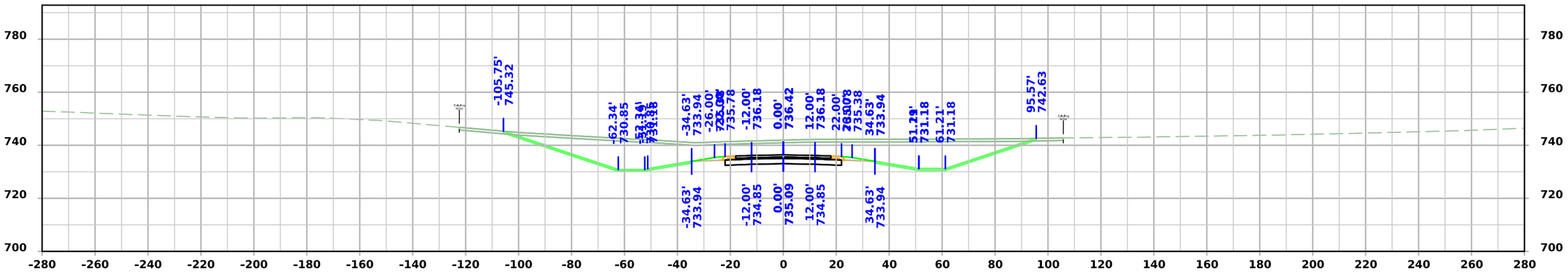
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.222

4:55:28 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

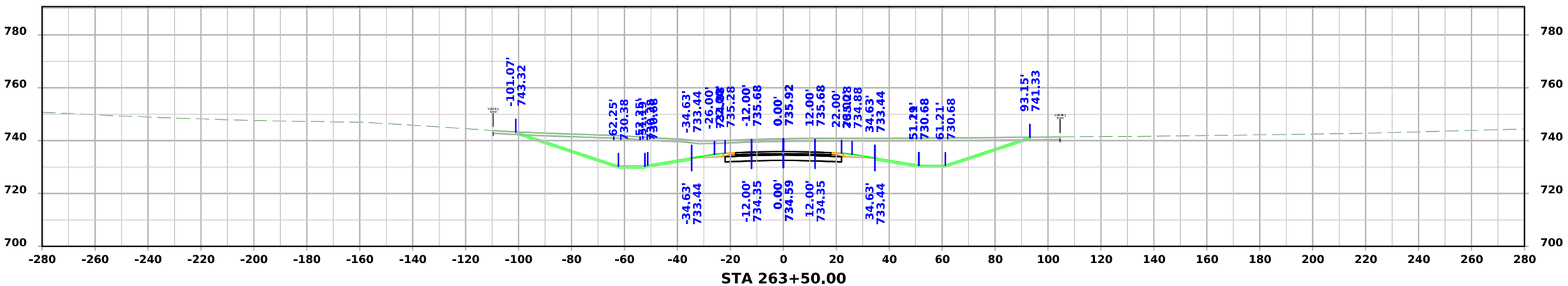
US 63



STA 264+00.00



STA 263+75.00

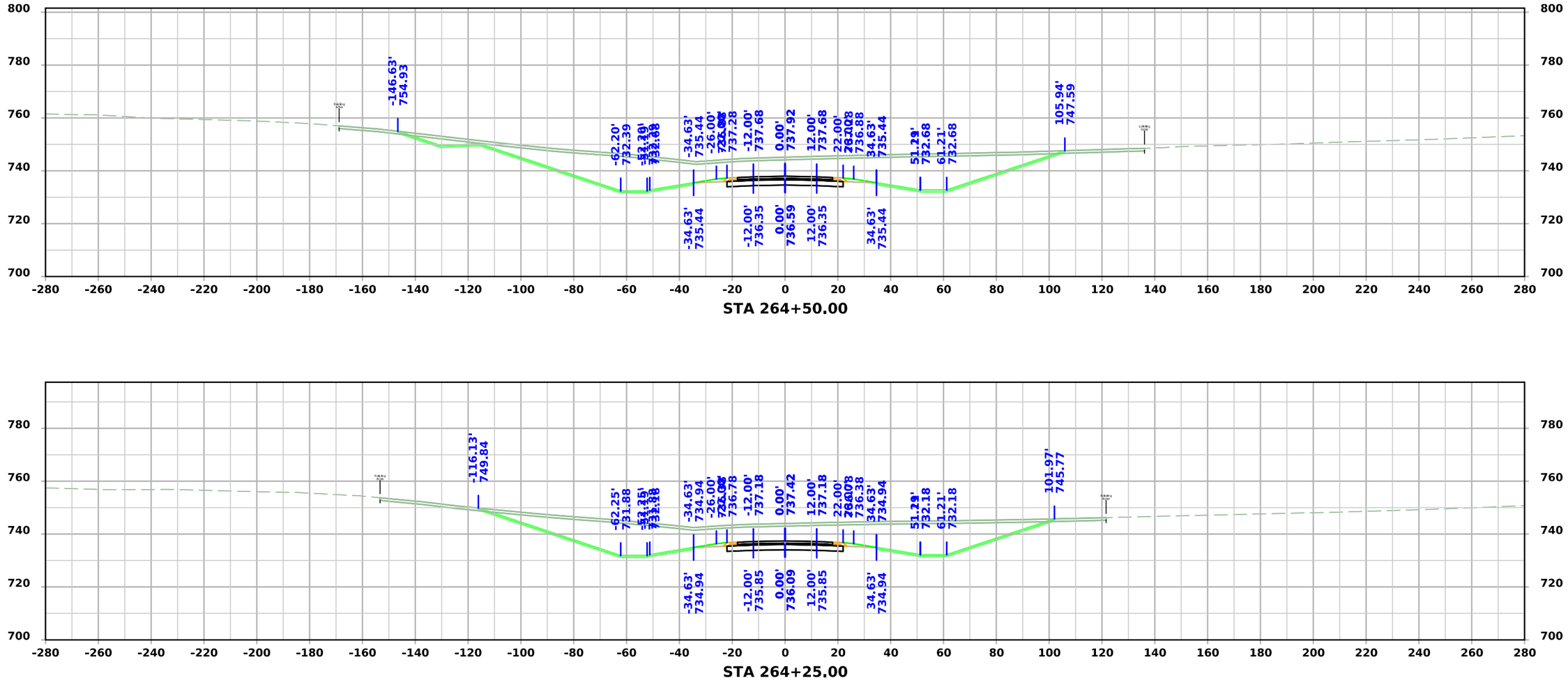


STA 263+50.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.223

4:55:33 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

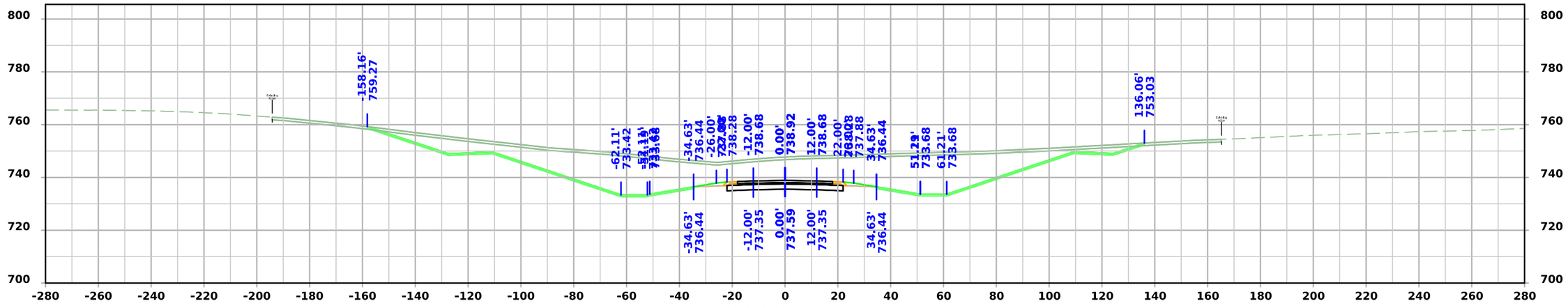
US 63



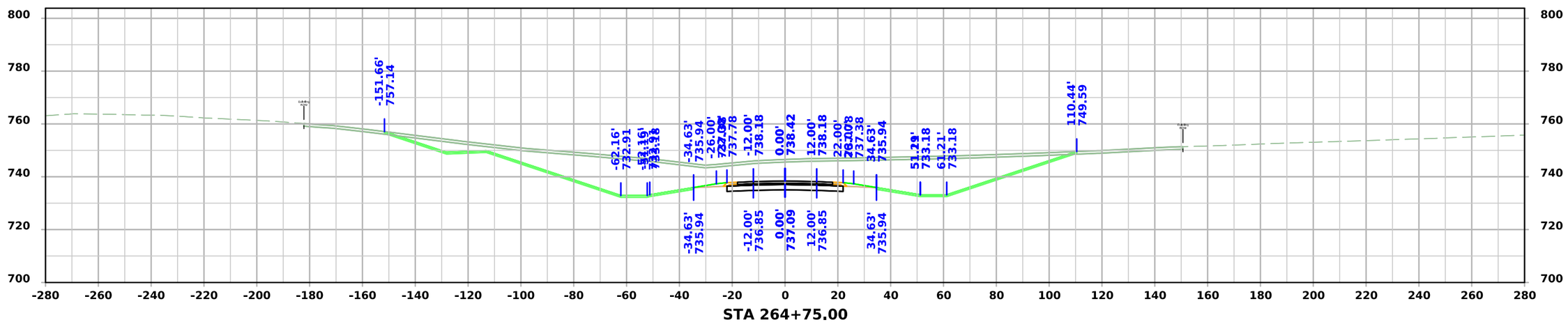
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.224

4:55:36 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 265+00.00

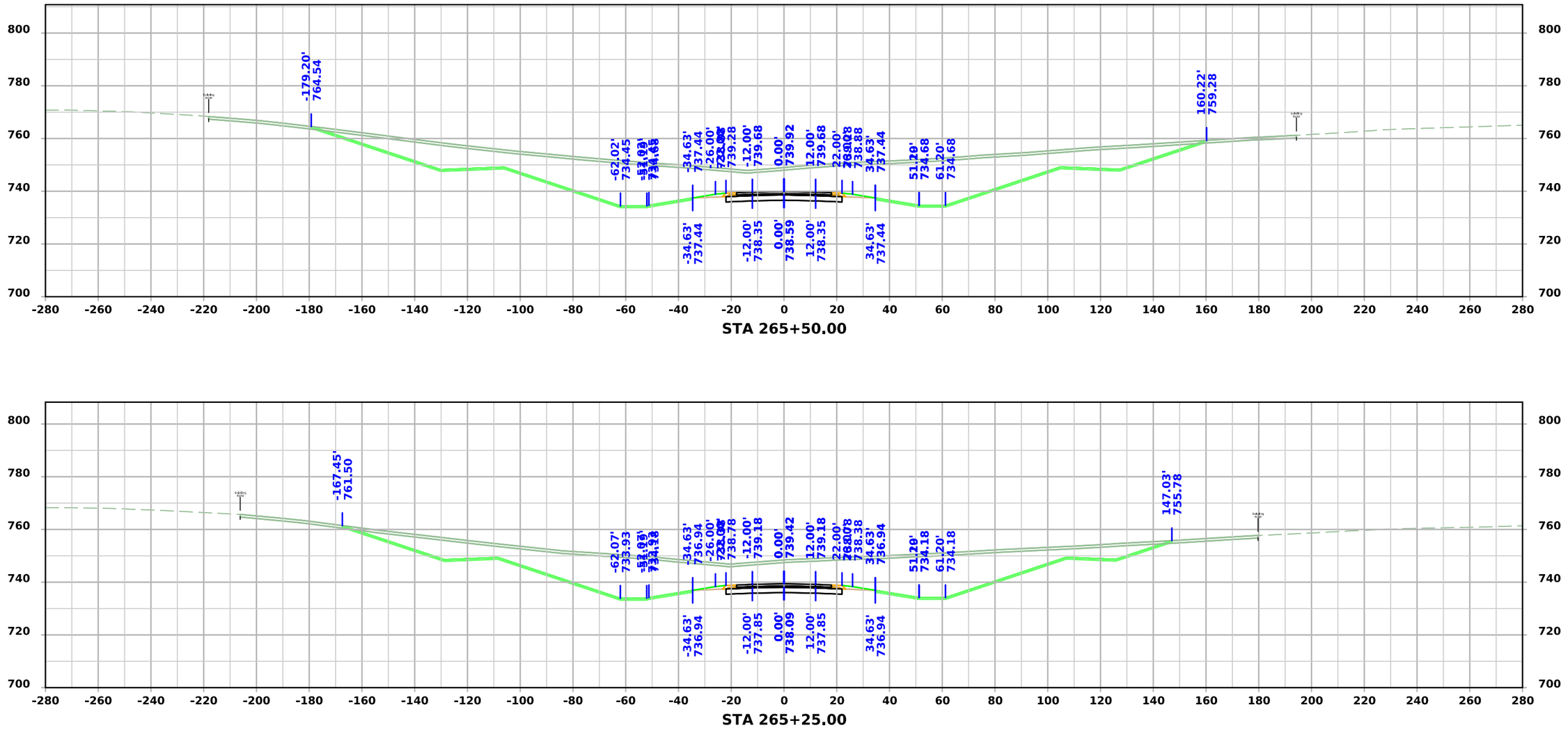


STA 264+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.225

4:55:40 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



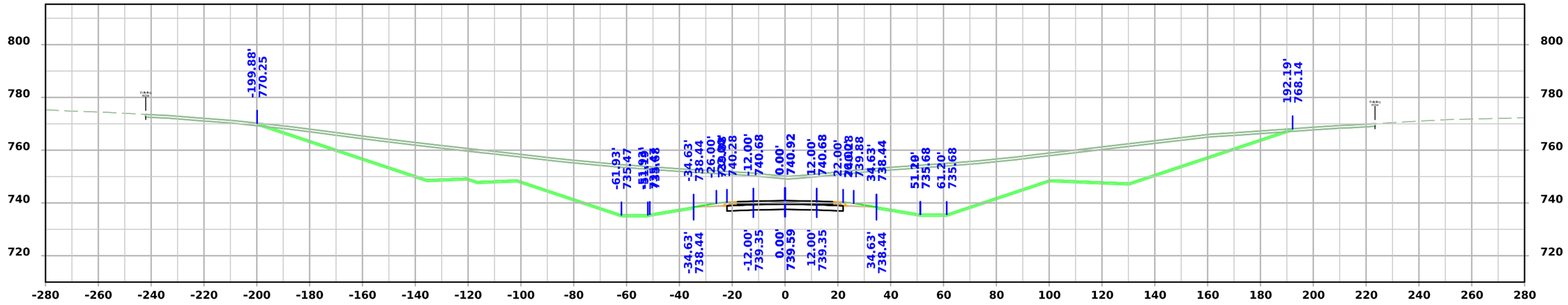
STA 265+50.00

STA 265+25.00

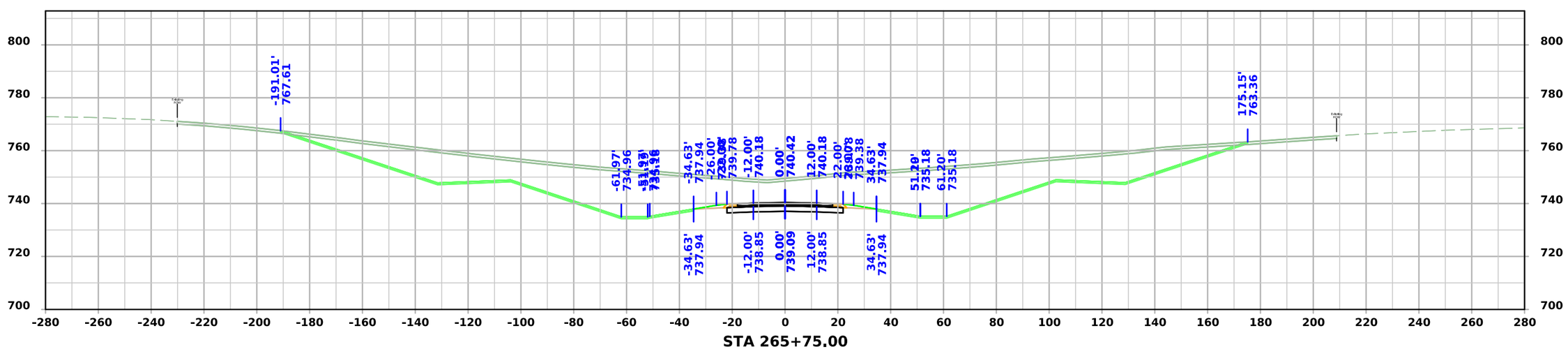
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.226

4:55:43 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 266+00.00

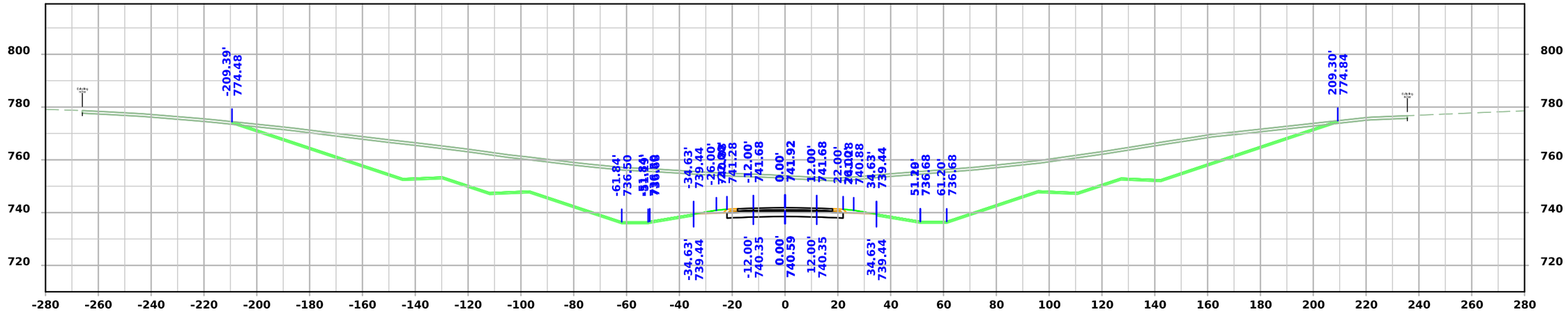


STA 265+75.00

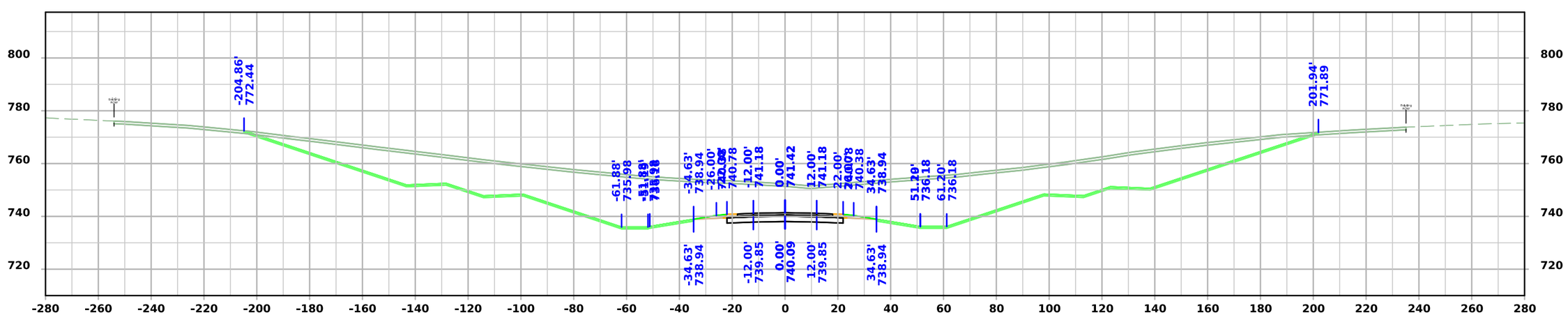
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.227

4:55:47 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 266+50.00

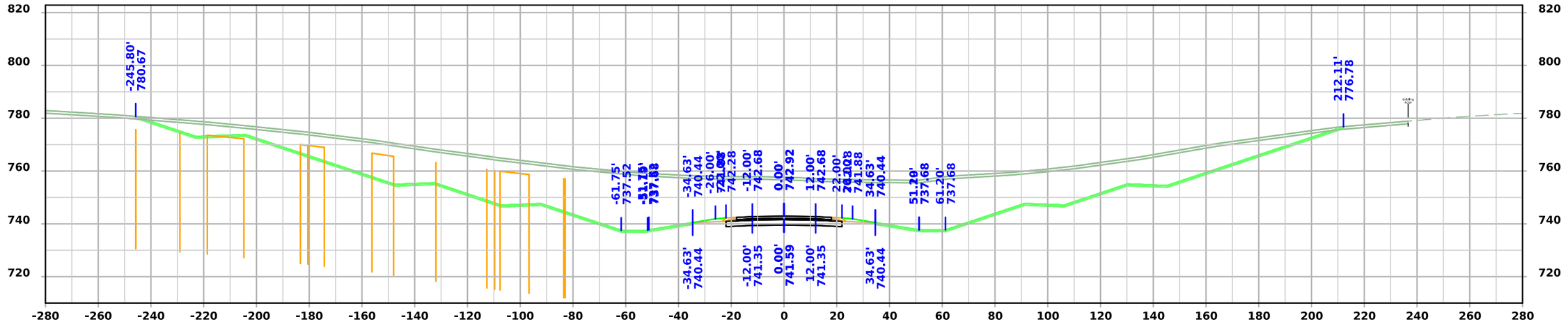


STA 266+25.00

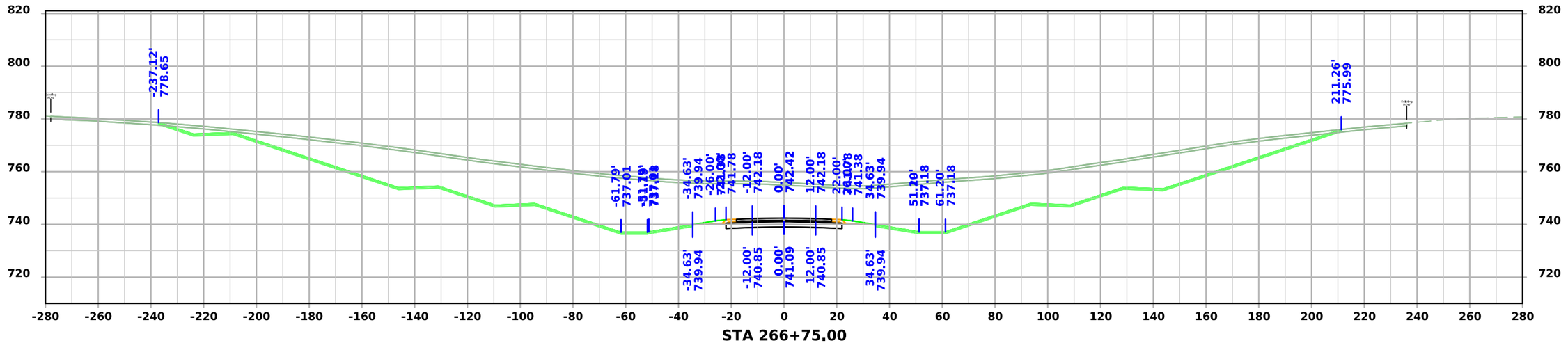
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.228

4:55:50 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 267+00.00

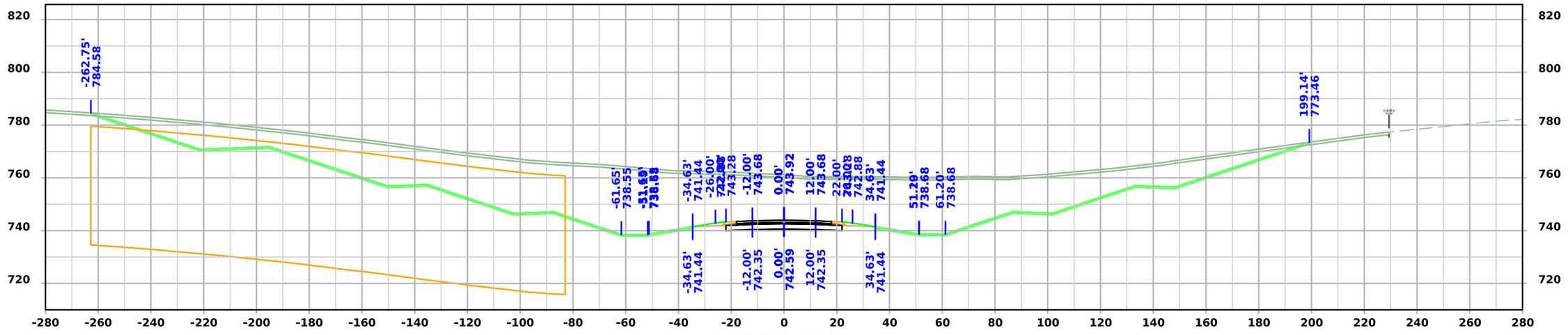


STA 266+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.229

4:55:54 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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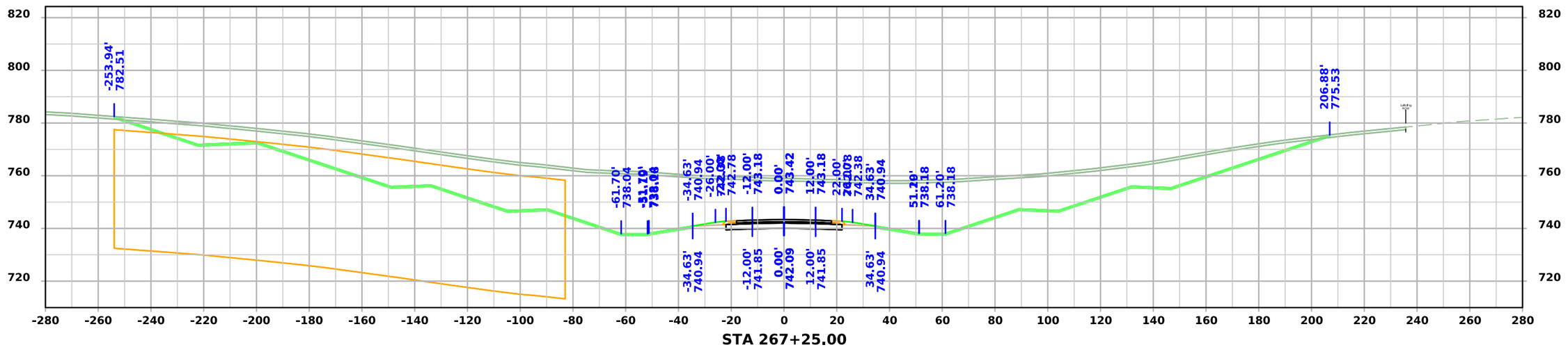
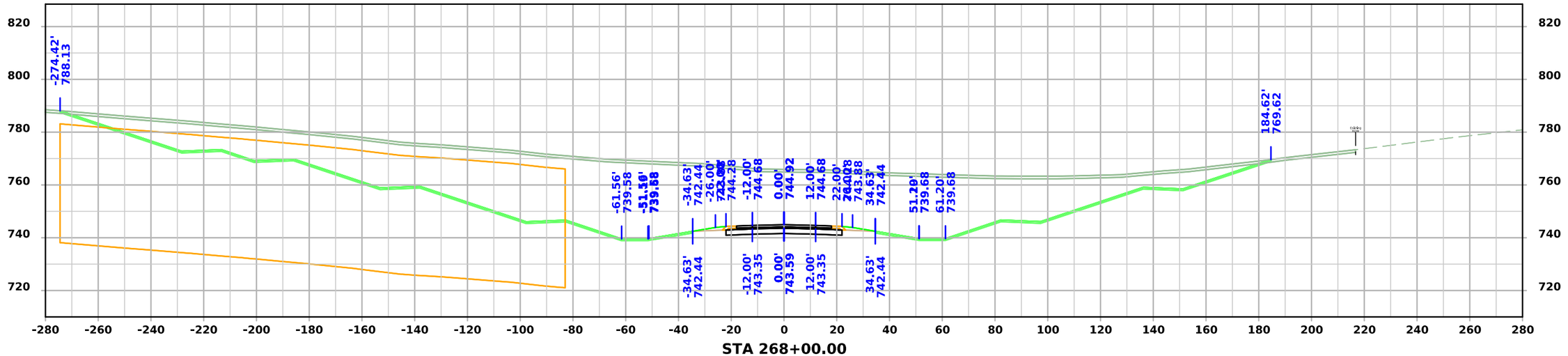


STA 267+25.00

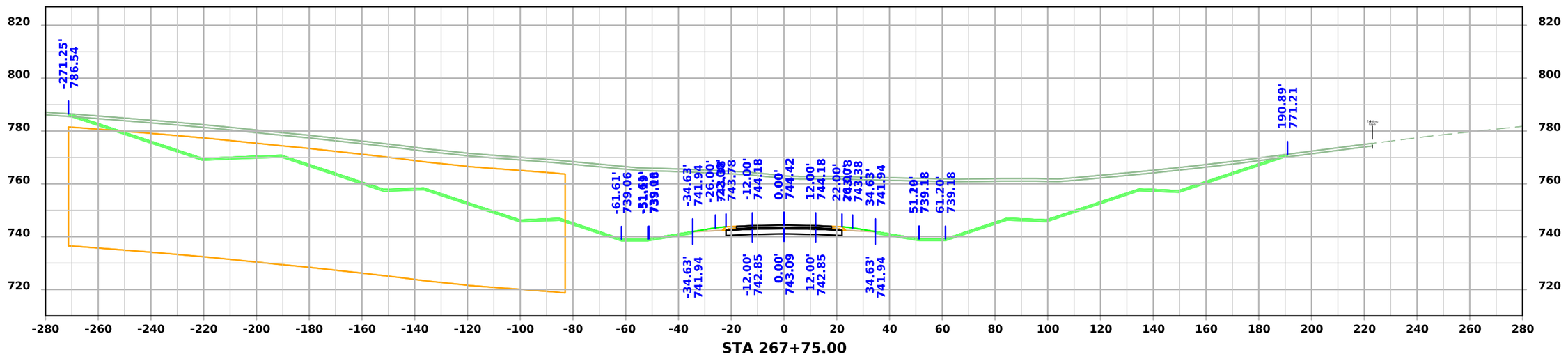
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.230

4:55:57 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 268+00.00

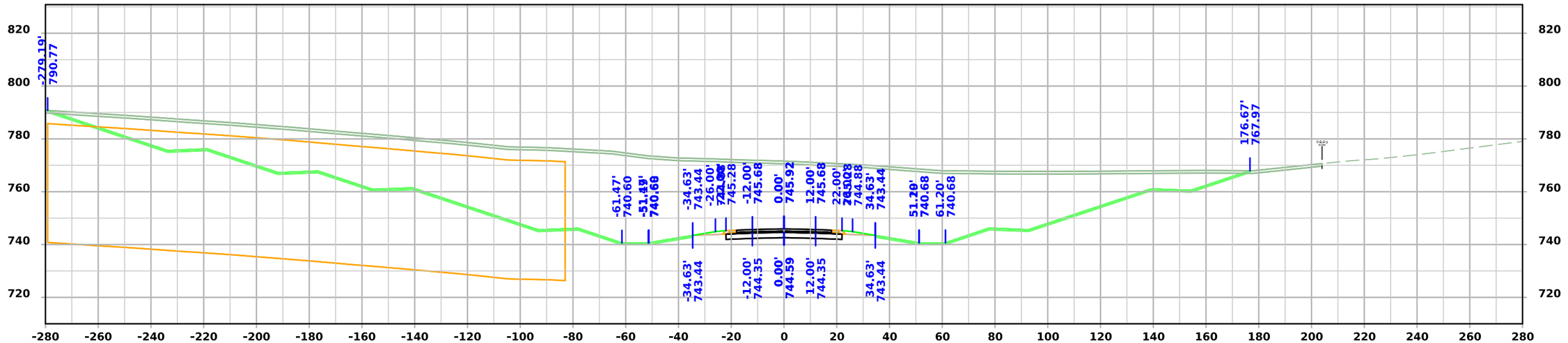


STA 267+75.00

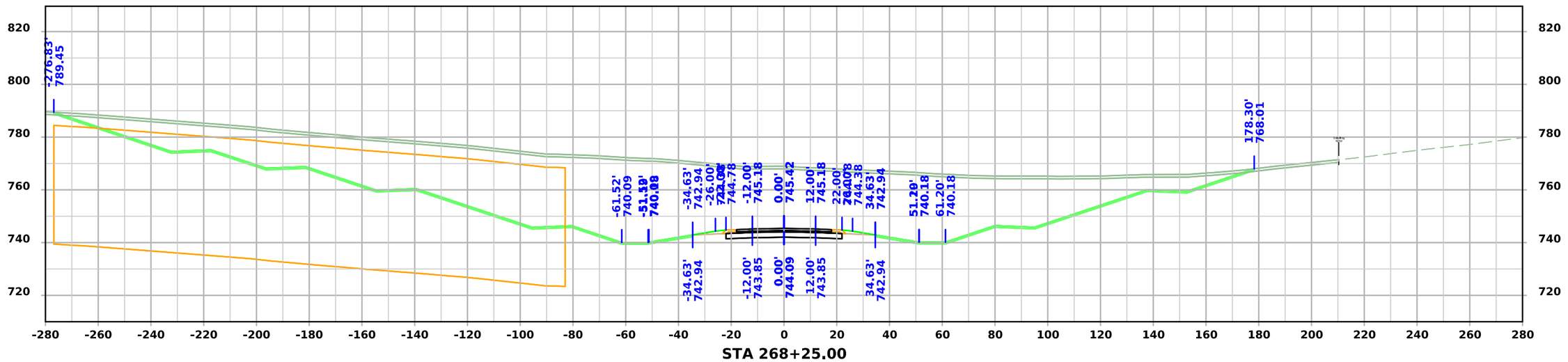
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.231

4:56:01 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 268+50.00

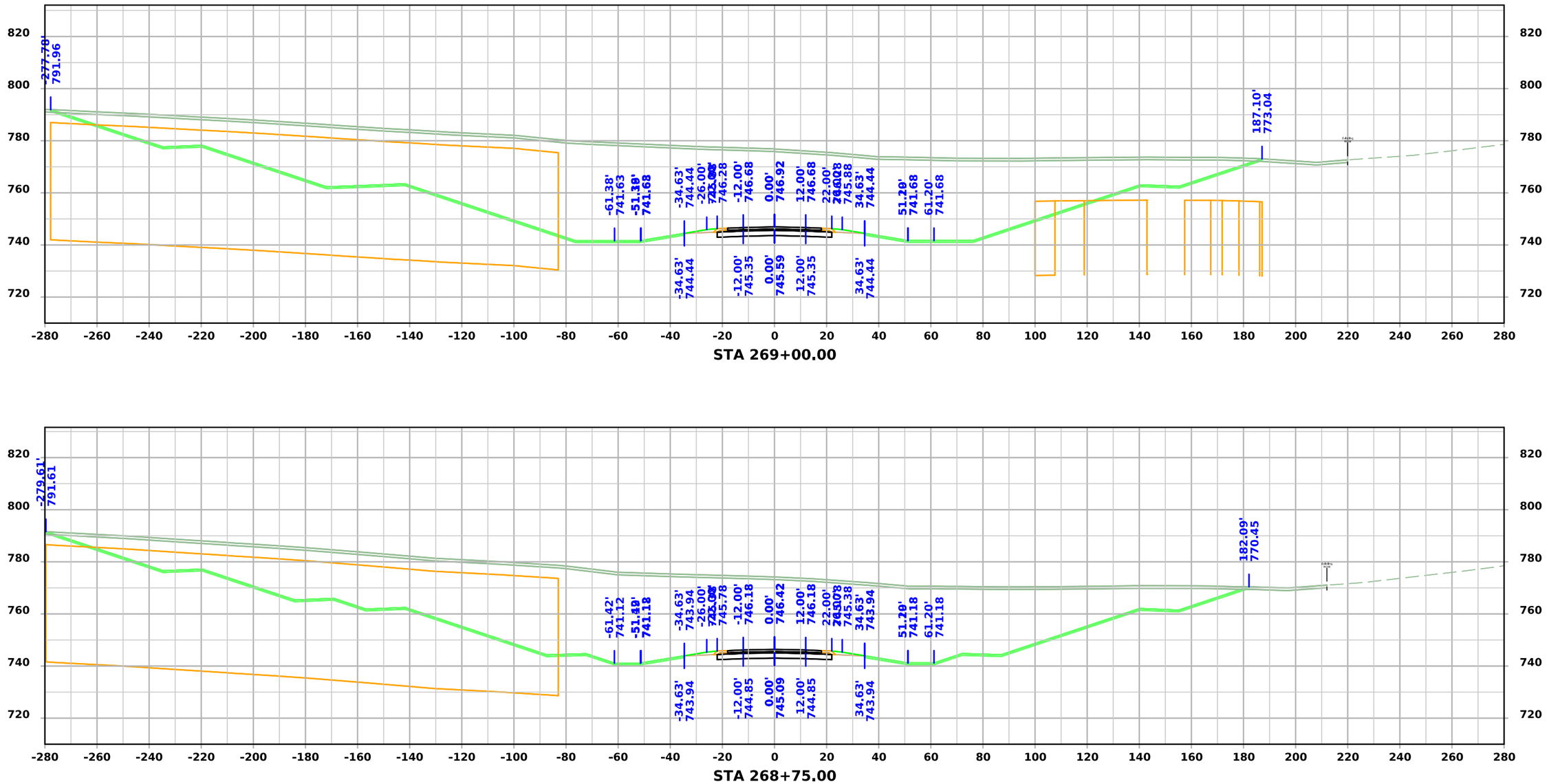


STA 268+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.232

4:56:04 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

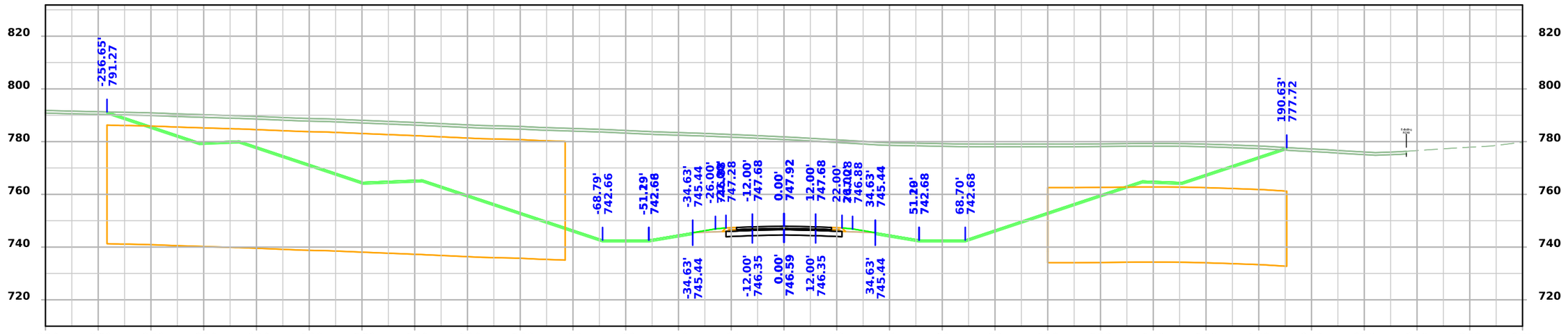
US 63



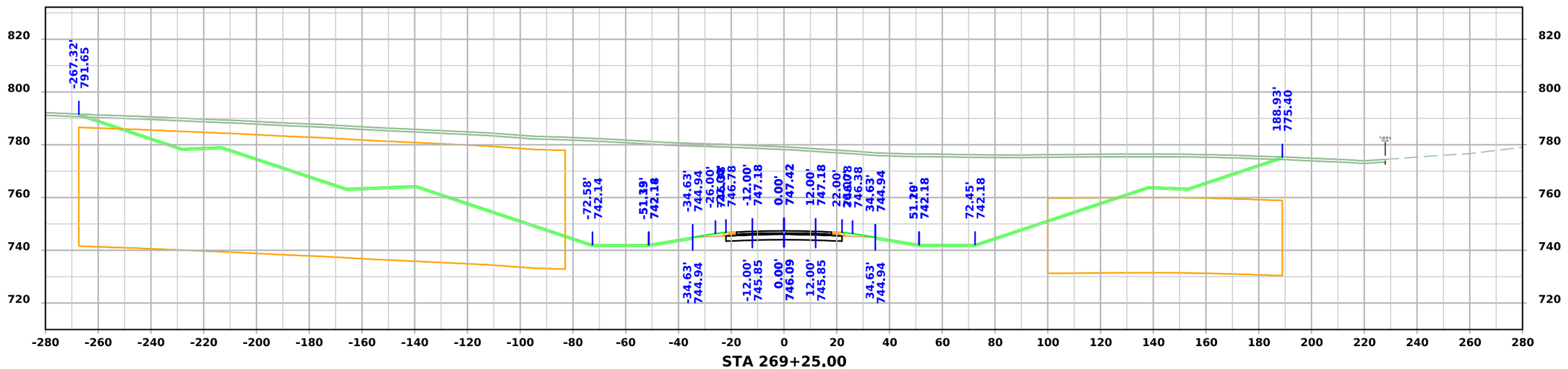
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.233

4:56:08 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 269+50.00

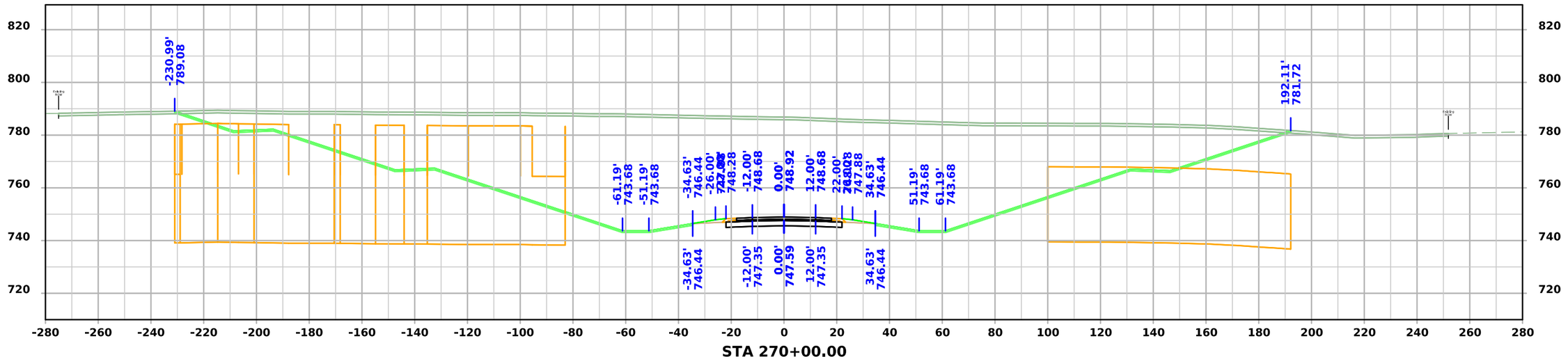


STA 269+25.00

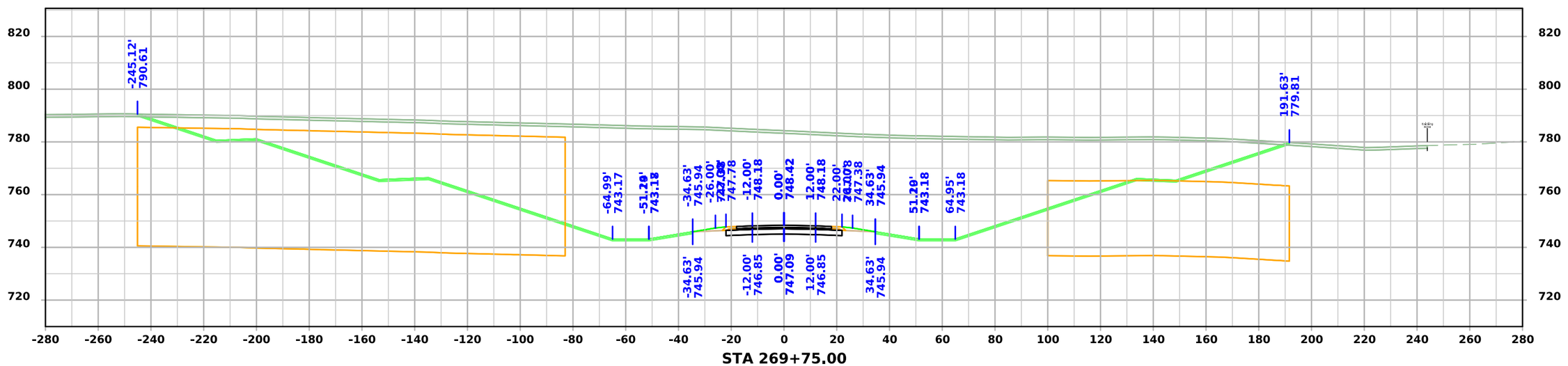
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.234

4:56:11 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 270+00.00

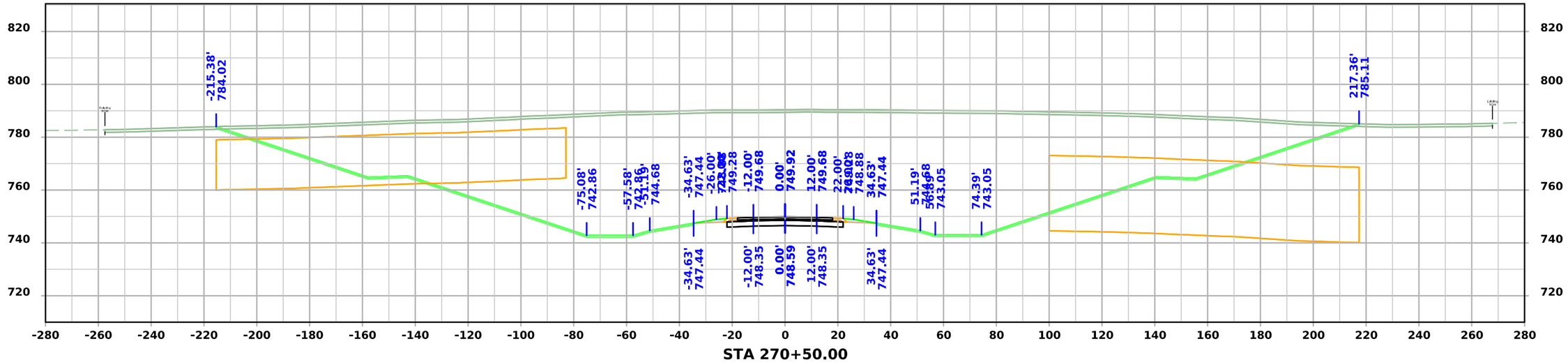


STA 269+75.00

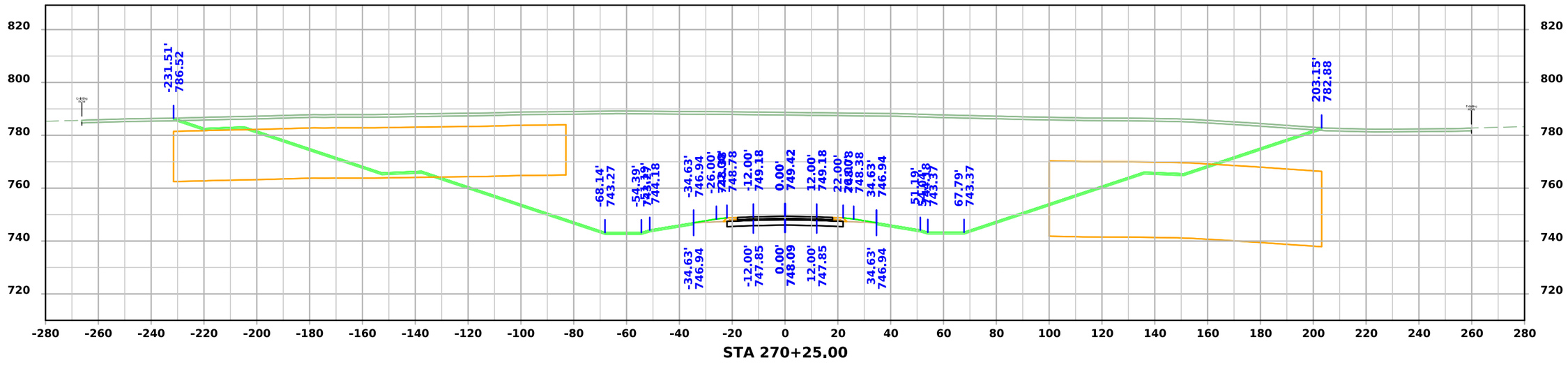
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.235

4:56:15 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 270+50.00

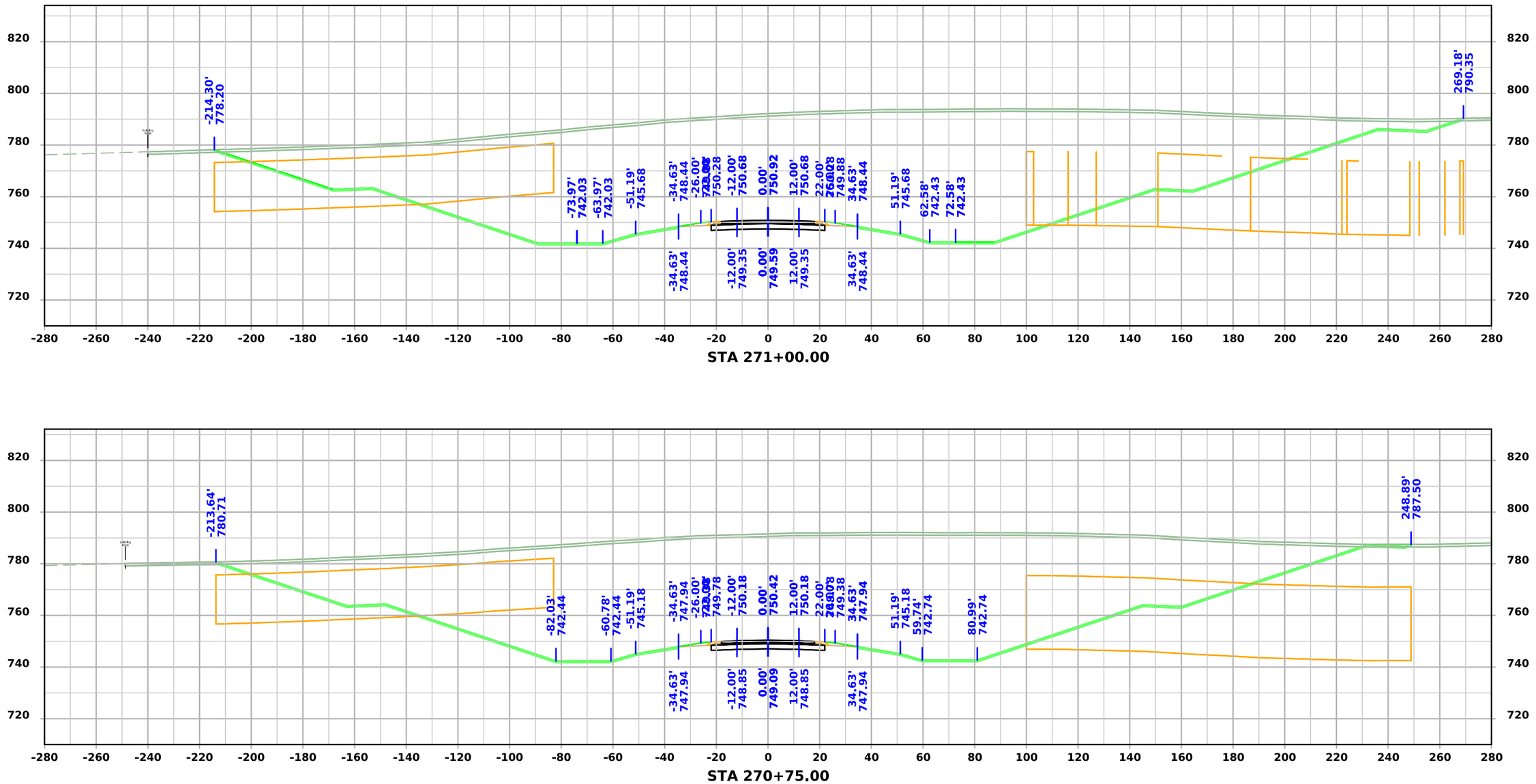


STA 270+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.236

4:56:18 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



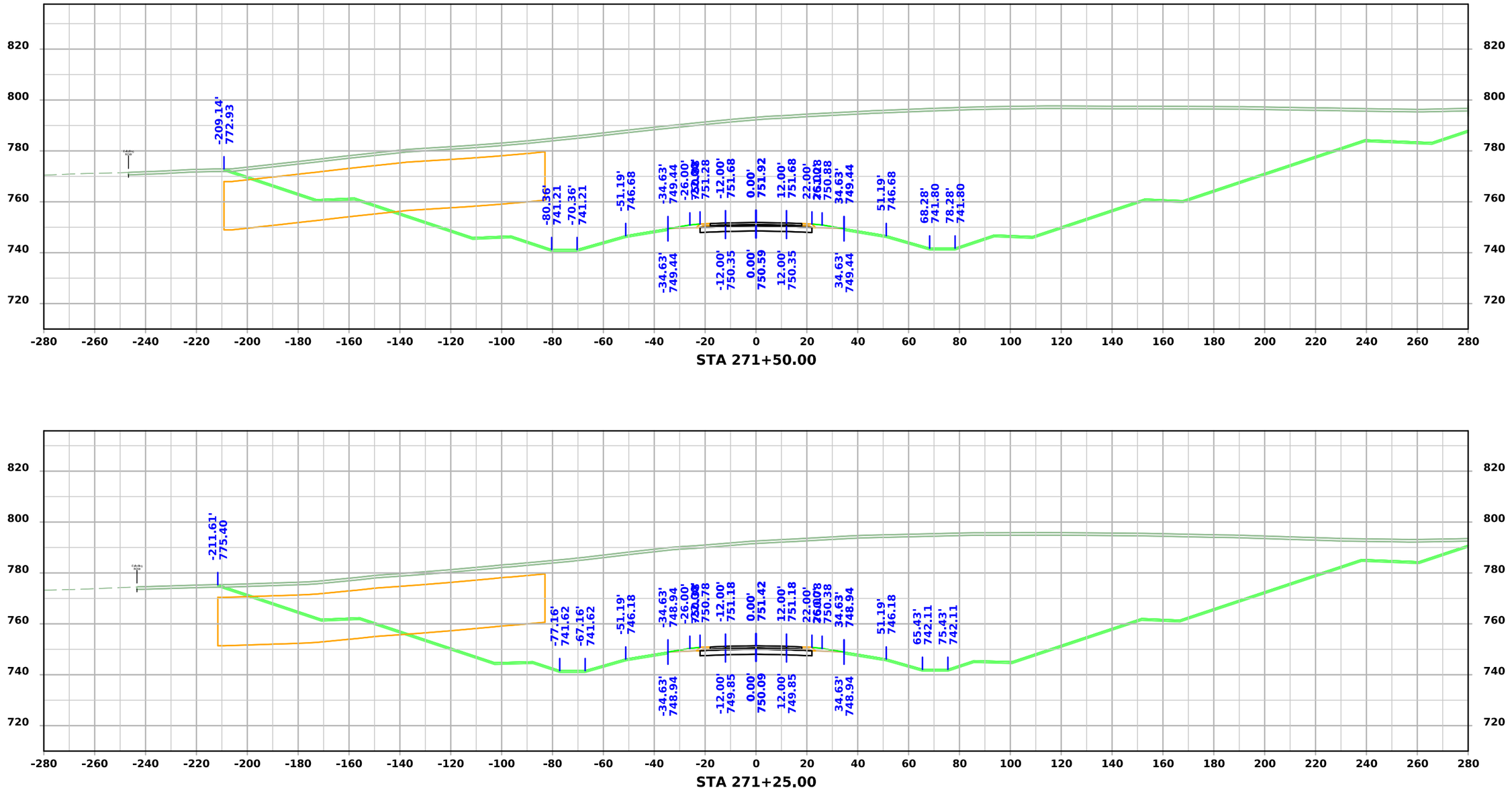
STA 271+00.00

STA 270+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.237

4:56:21 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



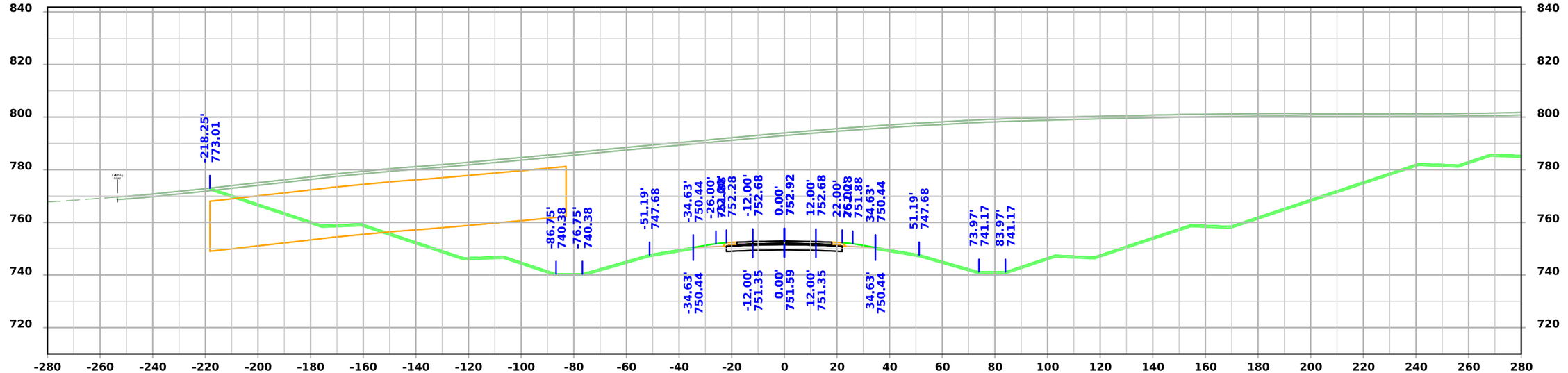
STA 271+50.00

STA 271+25.00

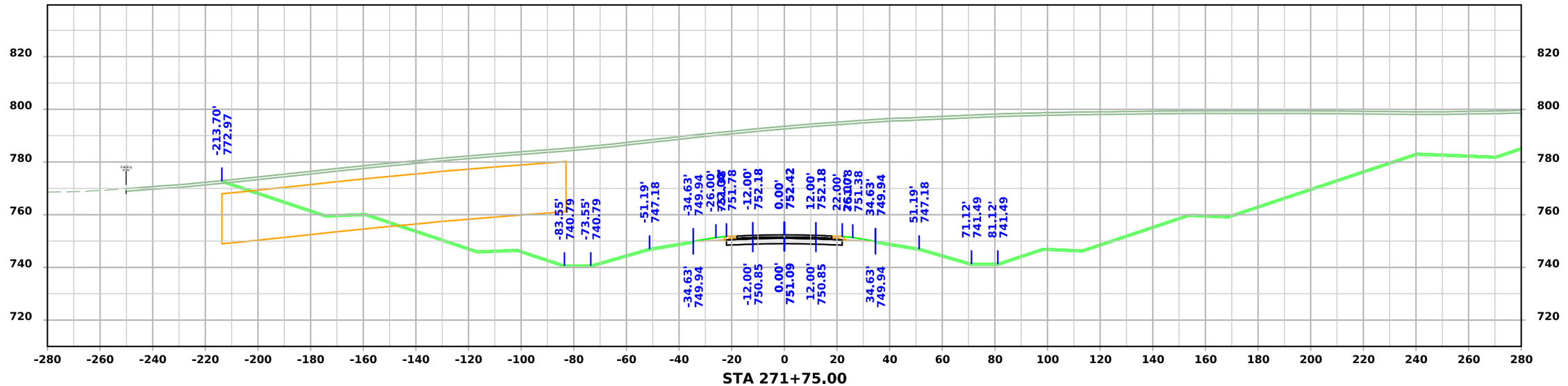
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.238

4:56:25 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 272+00.00

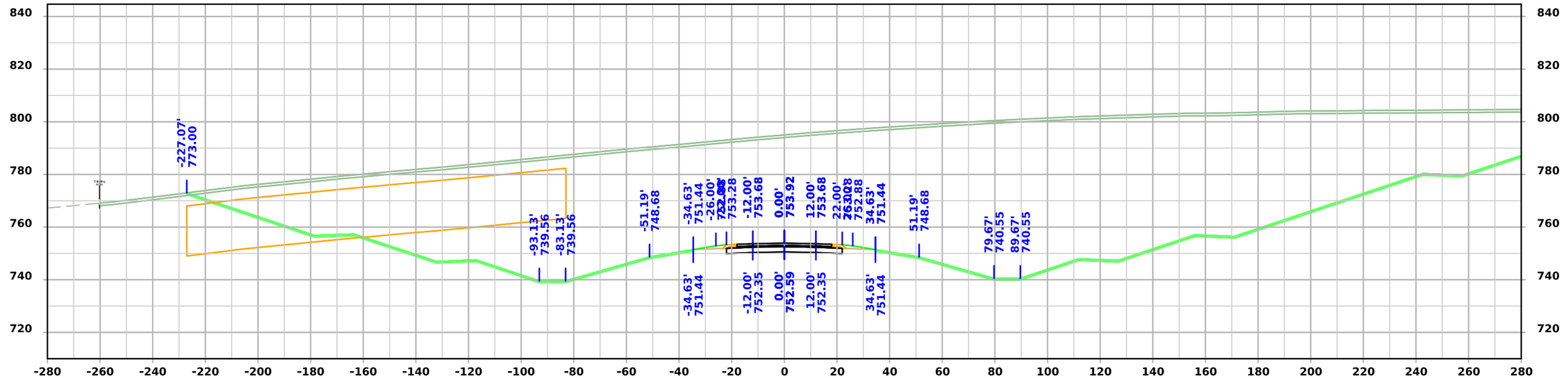


STA 271+75.00

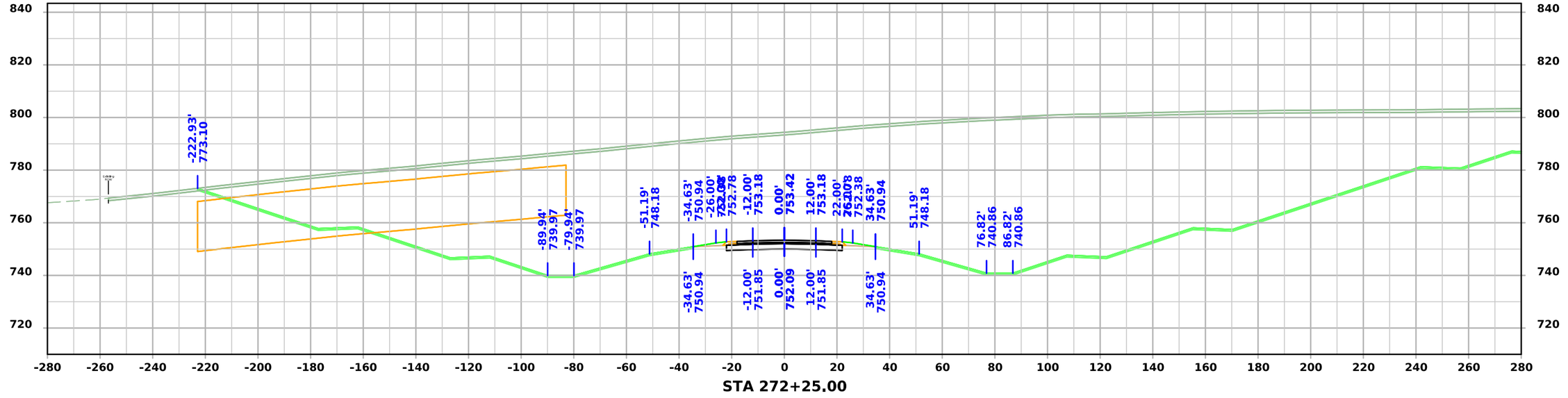
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.239

4:56:28 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 272+50.00

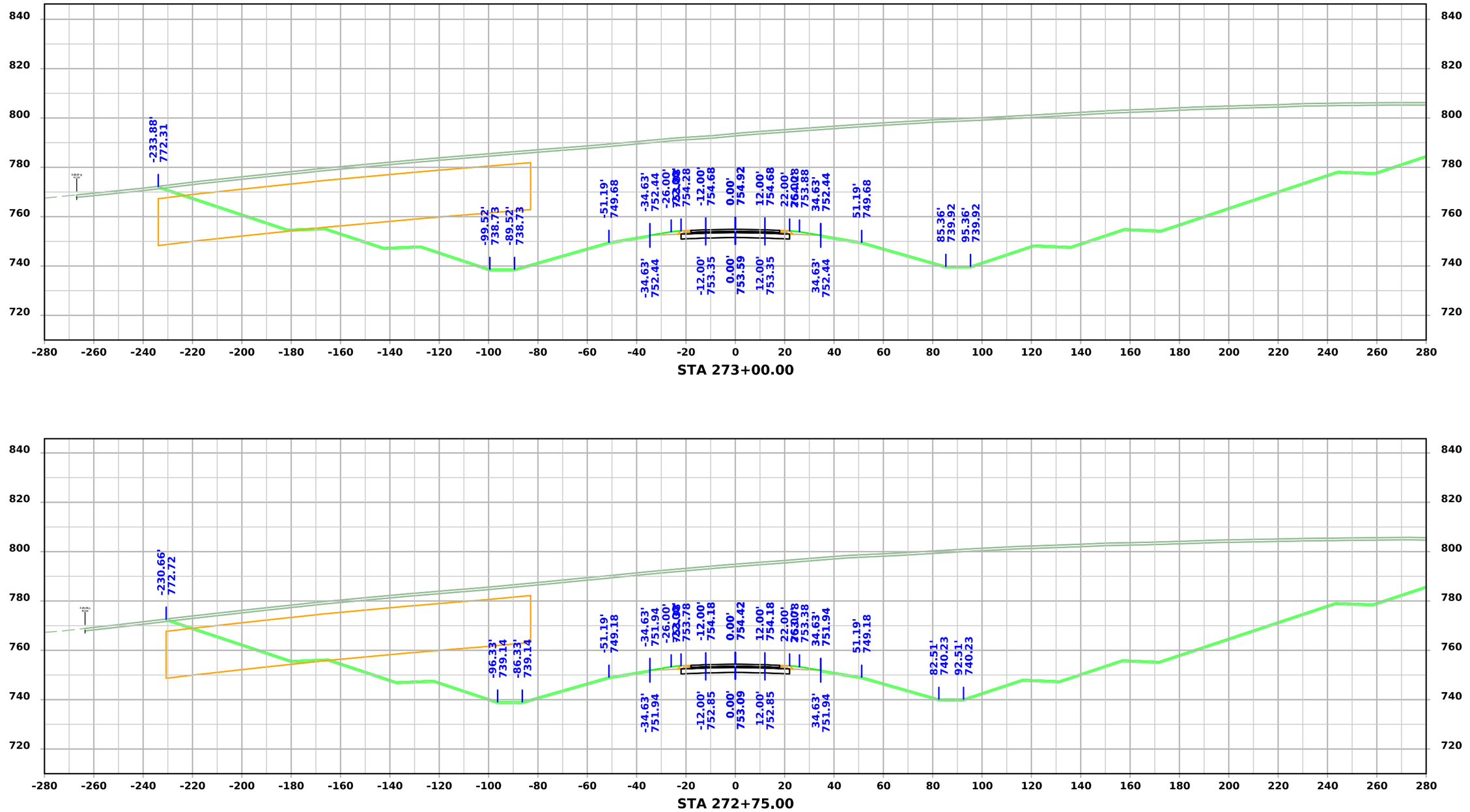


STA 272+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.240

4:56:32 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

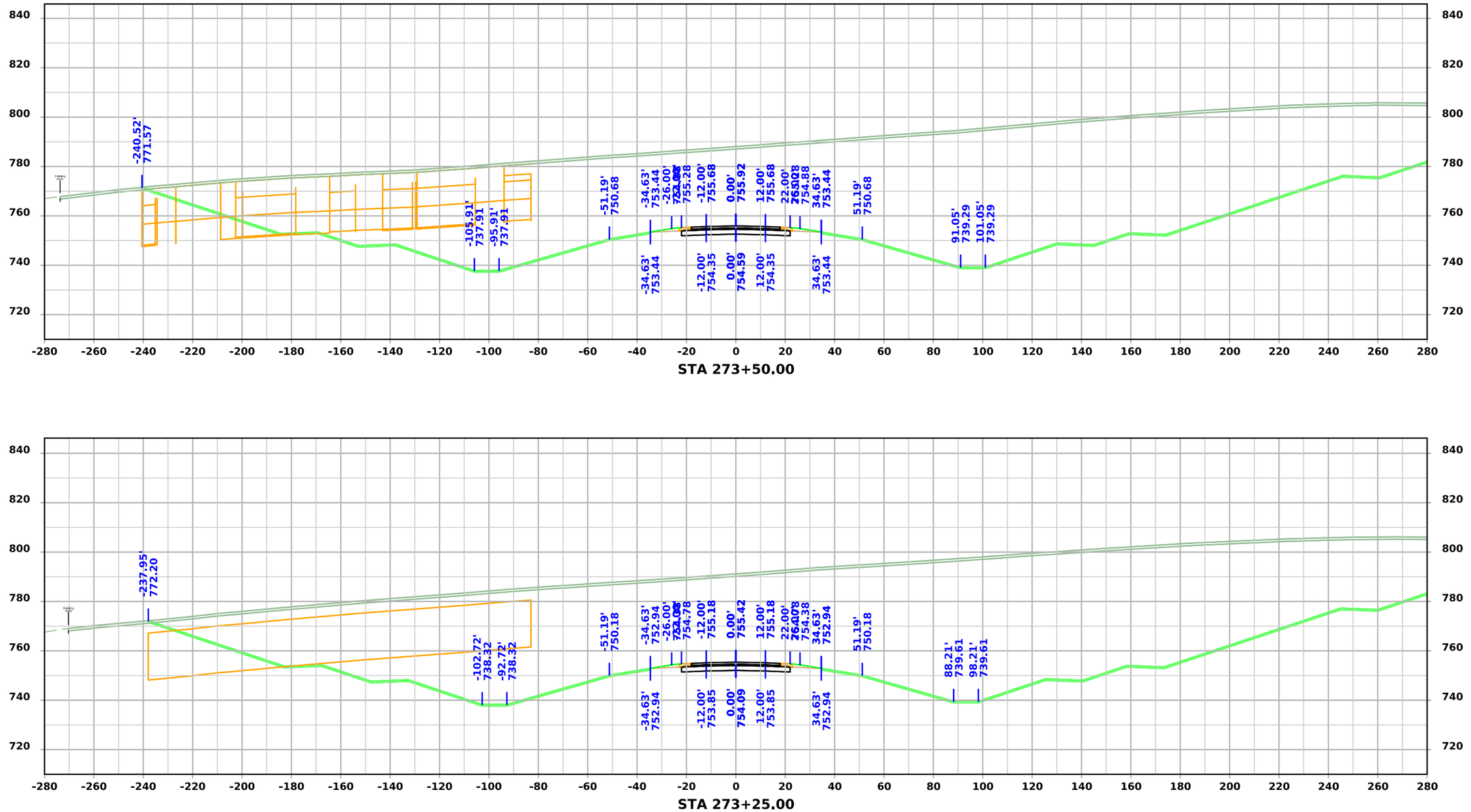
US 63



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.241

4:56:35 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

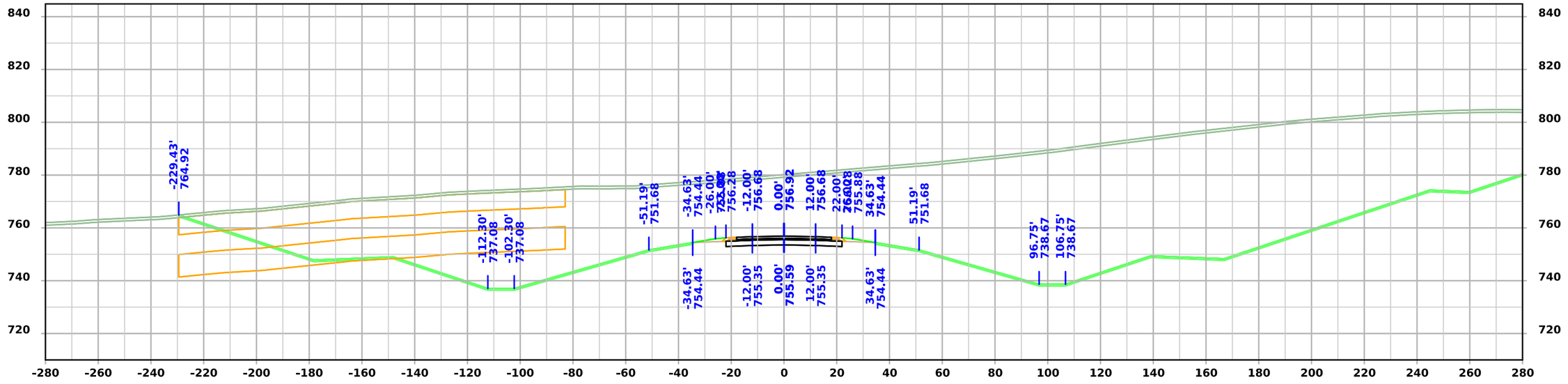
US 63



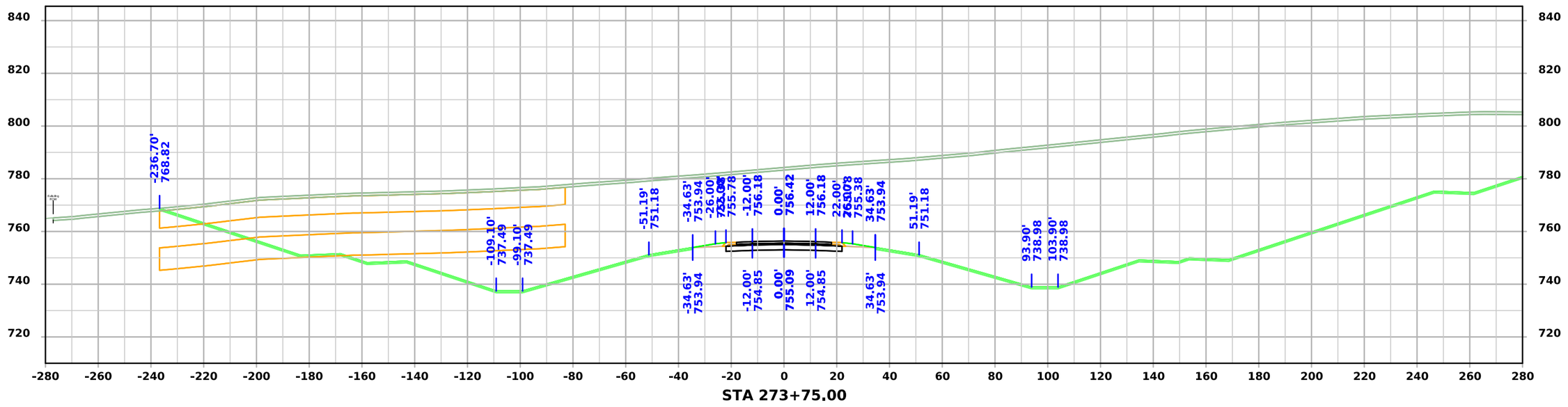
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.242

4:56:39 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 274+00.00

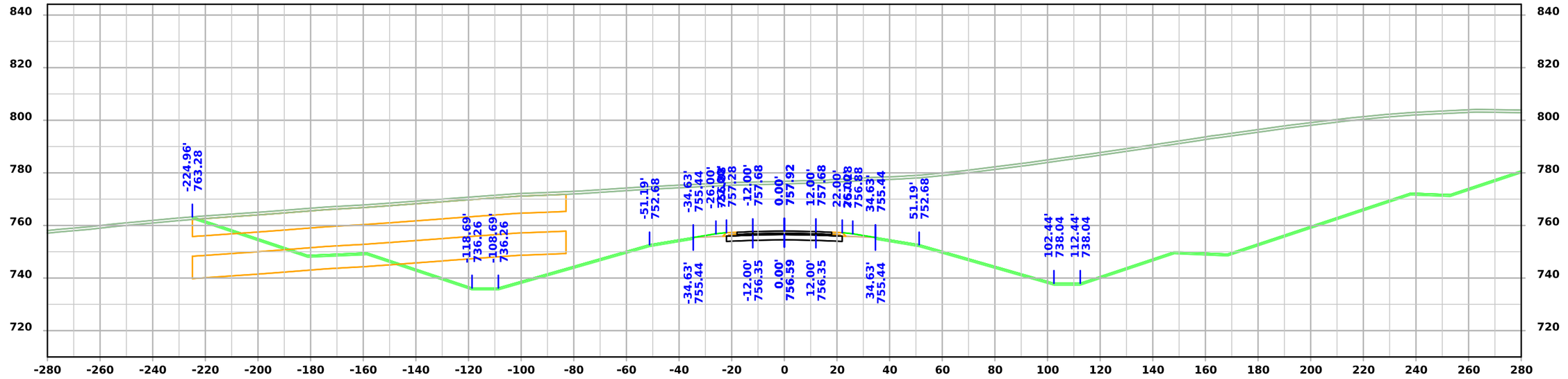


STA 273+75.00

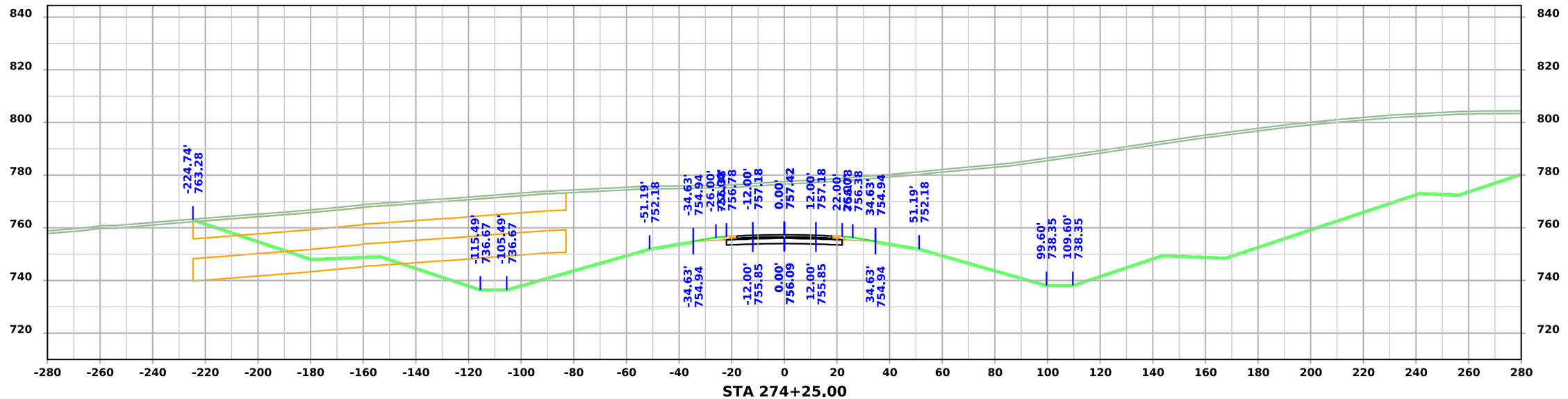
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.243

4:56:42 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 274+50.00

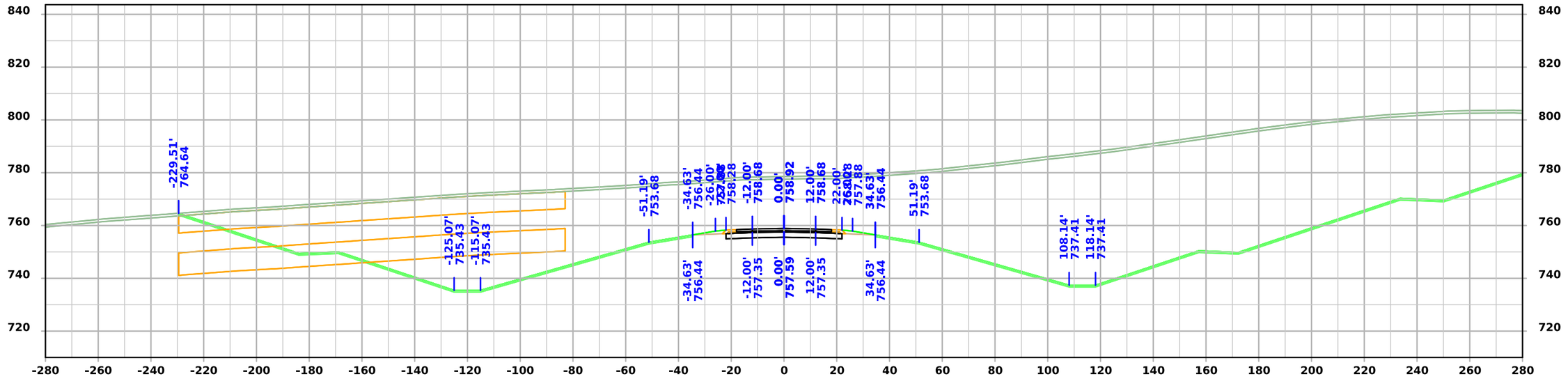


STA 274+25.00

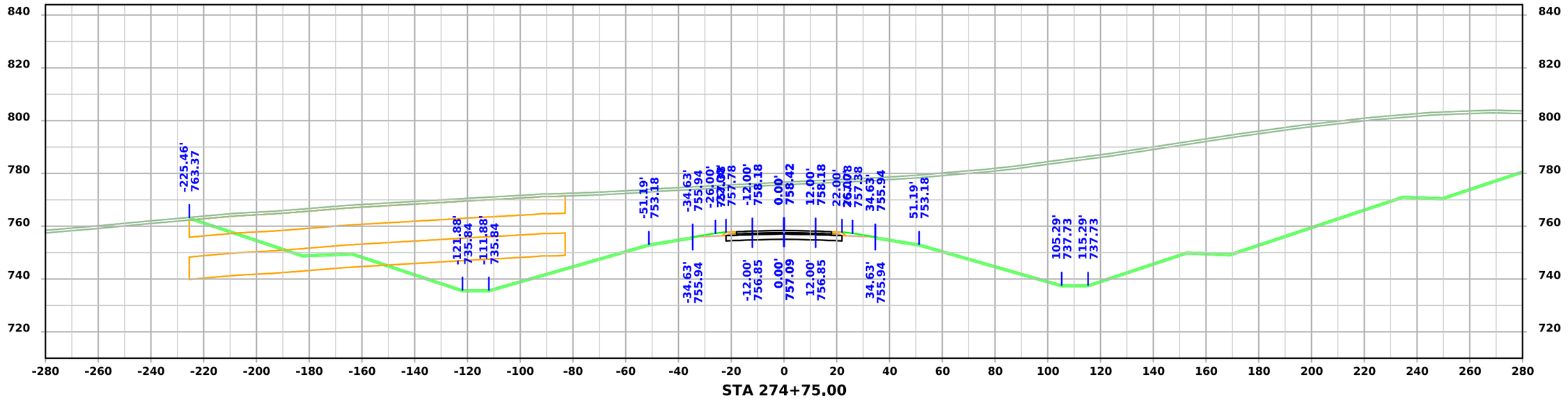
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.244

4:56:46 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 275+00.00



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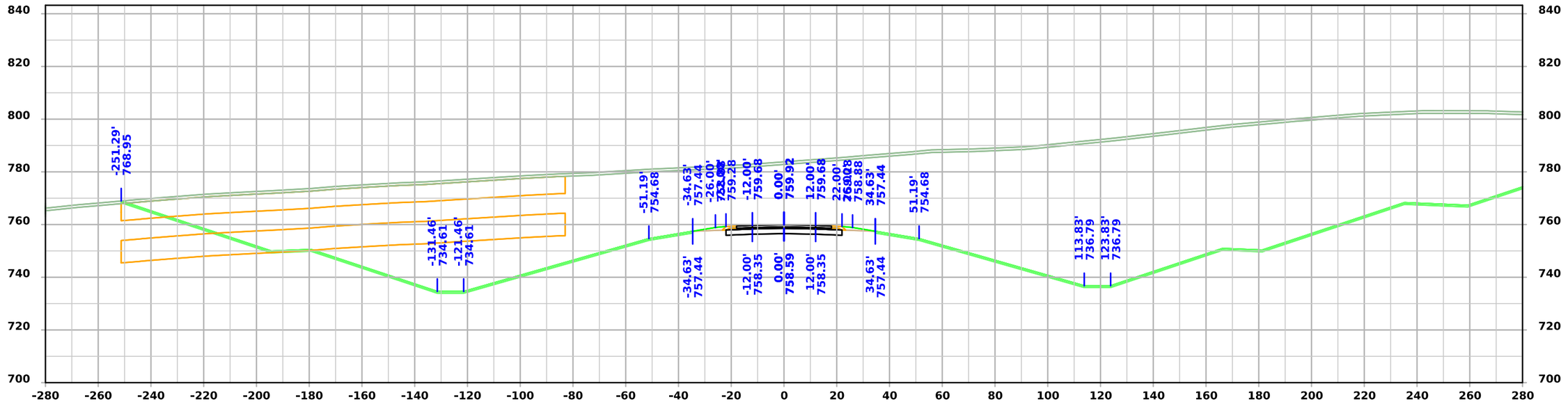
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.245

4:56:49 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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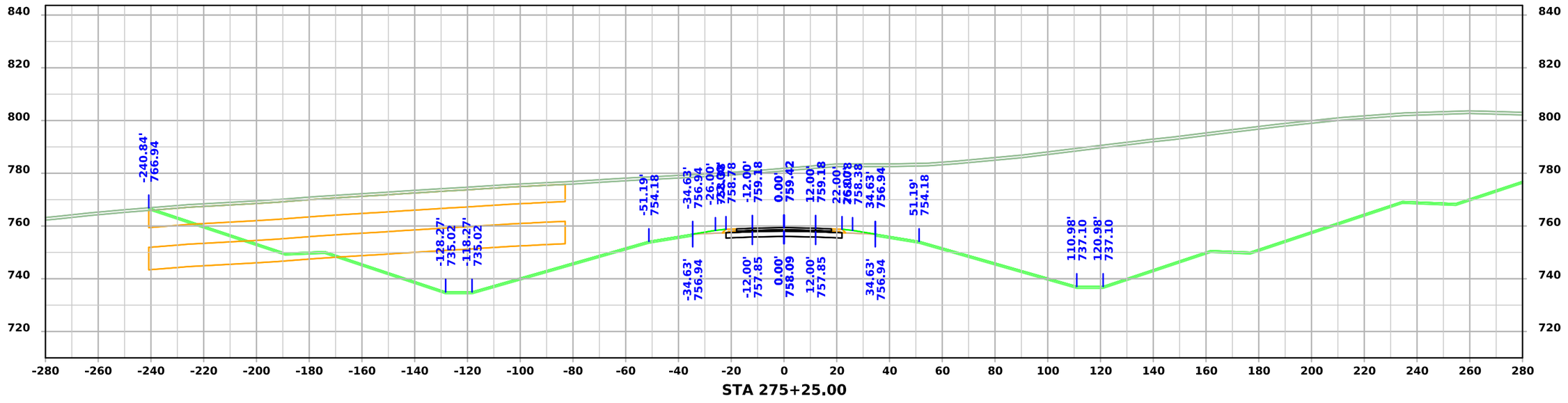
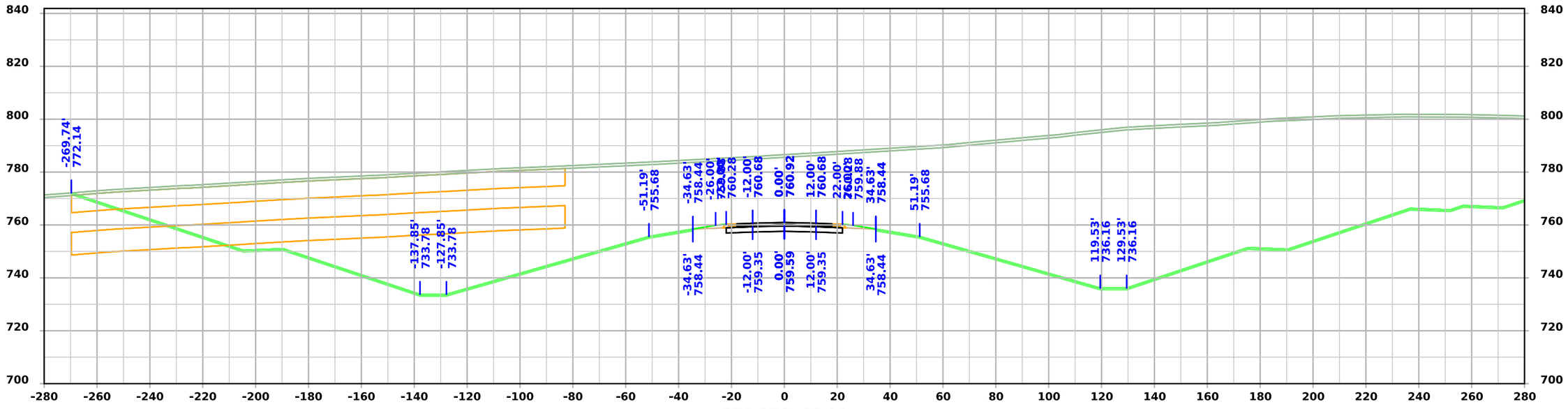


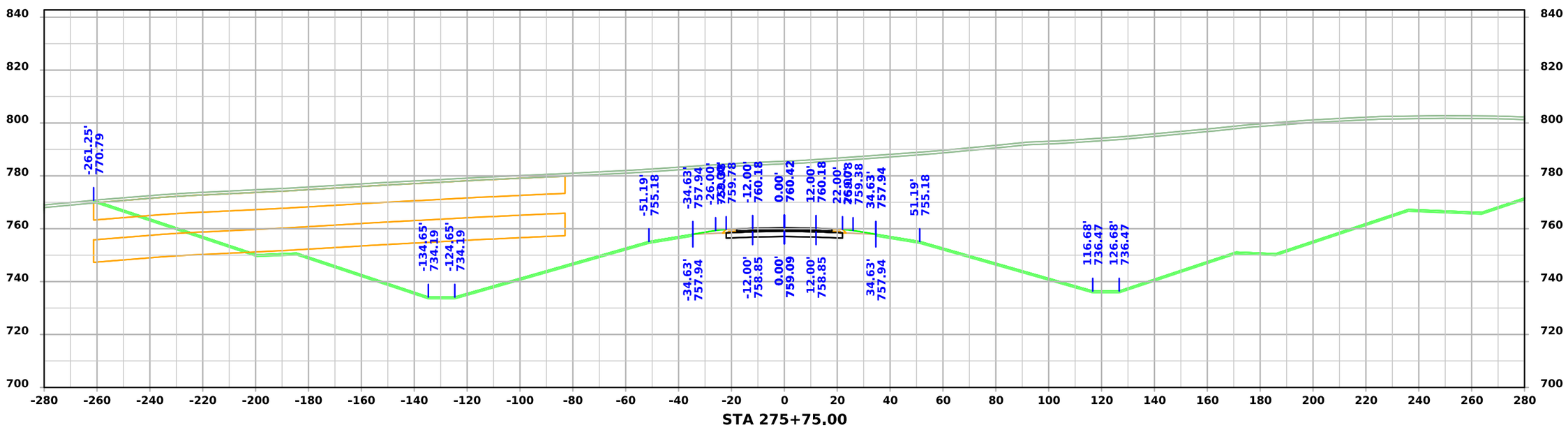
STA 275+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.246

4:56:52 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63

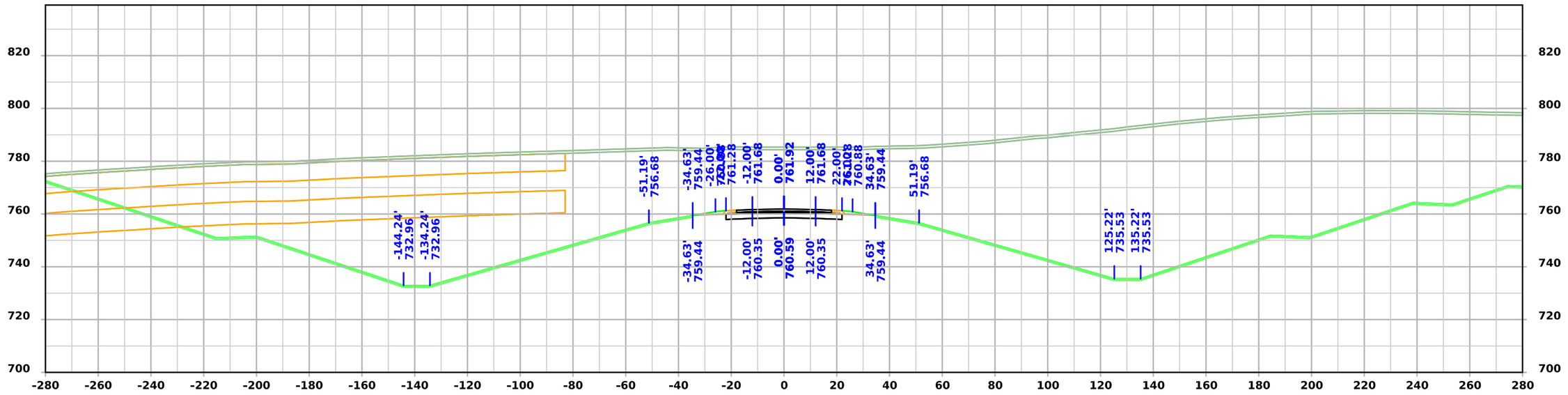




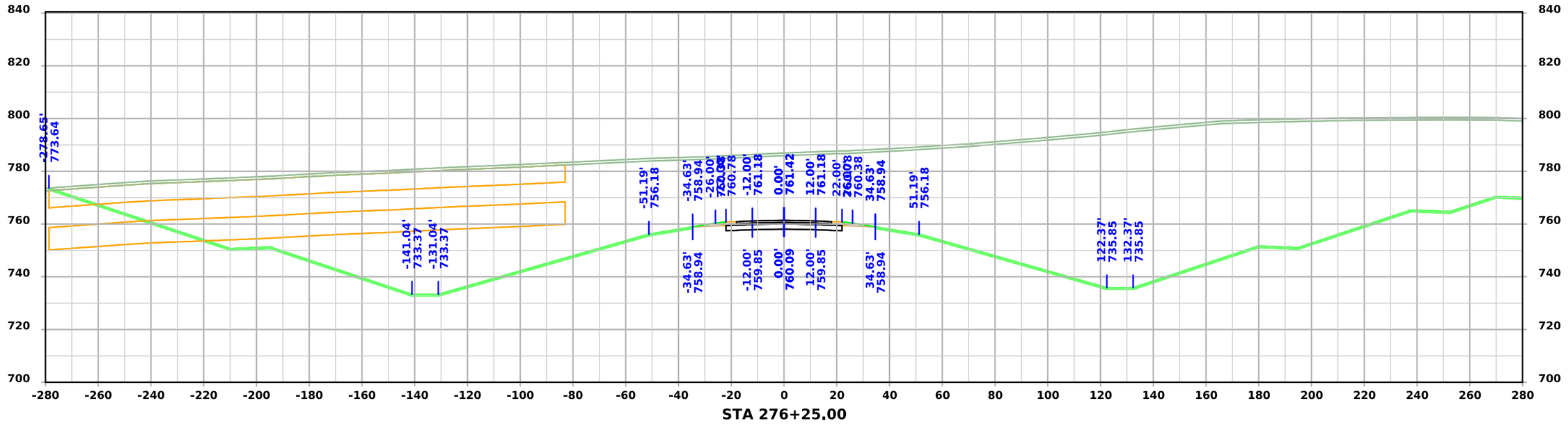
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.247

4:56:56 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 276+50.00

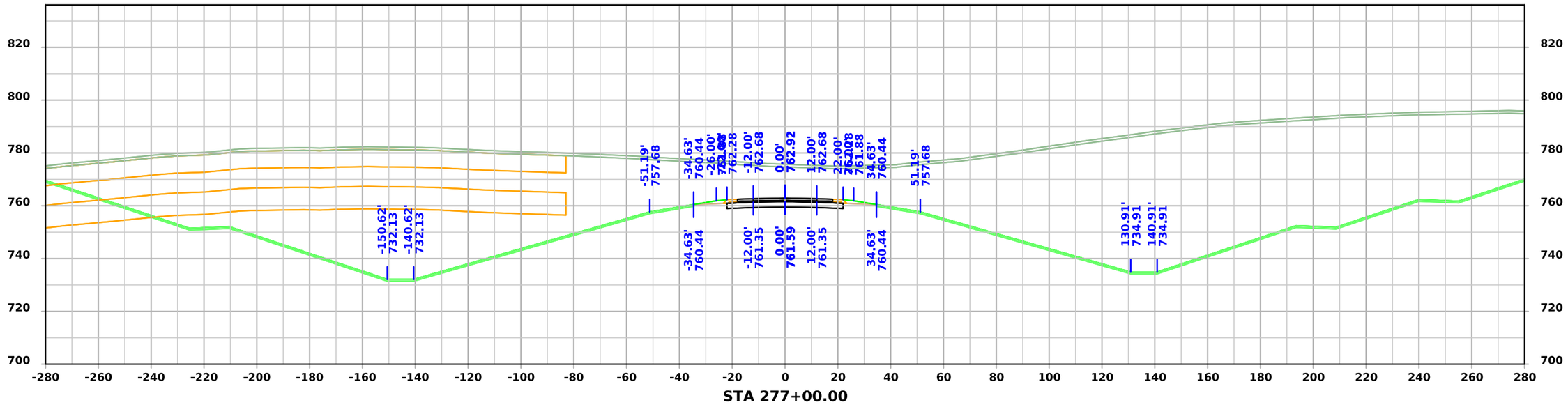


STA 276+25.00

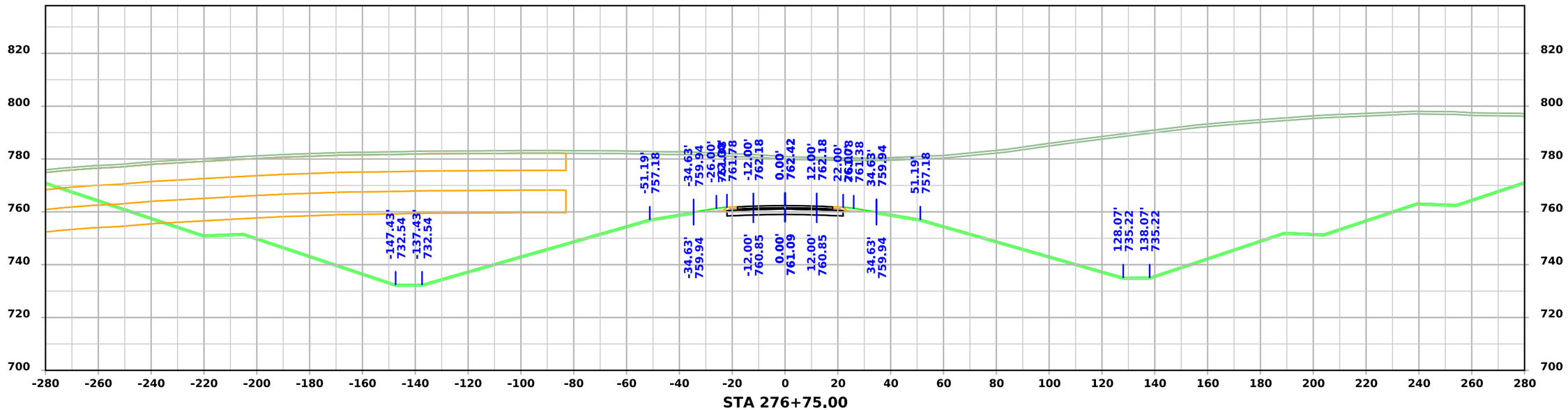
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.248

4:56:59 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 277+00.00

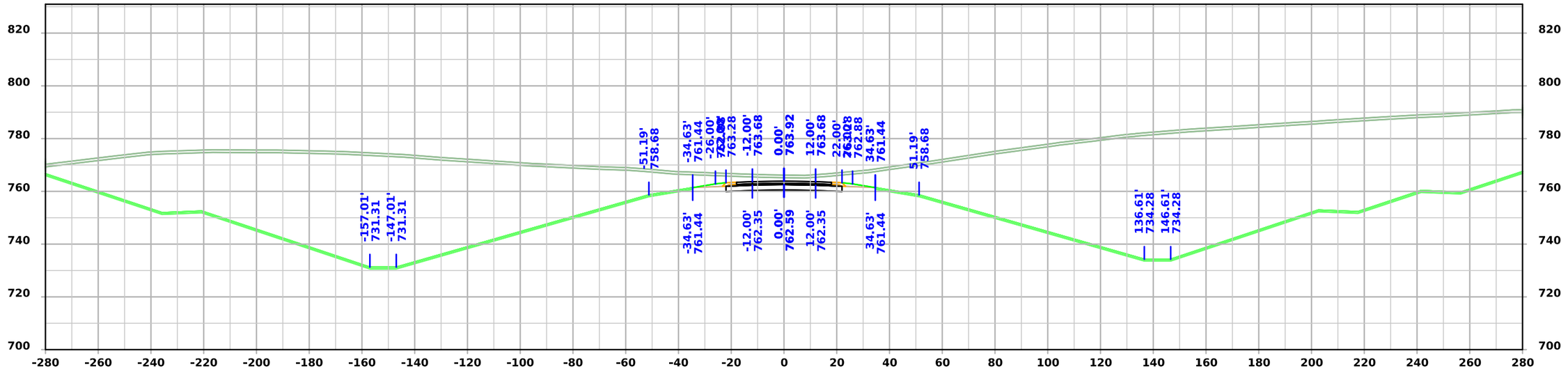


STA 276+75.00

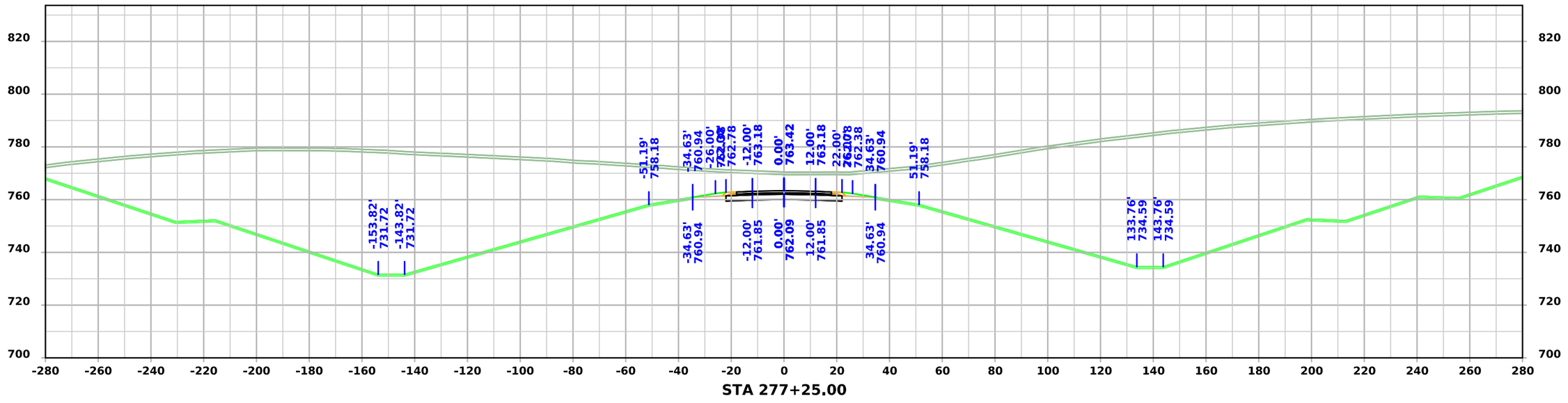
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.249

4:57:02 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 277+50.00



STA 277+25.00

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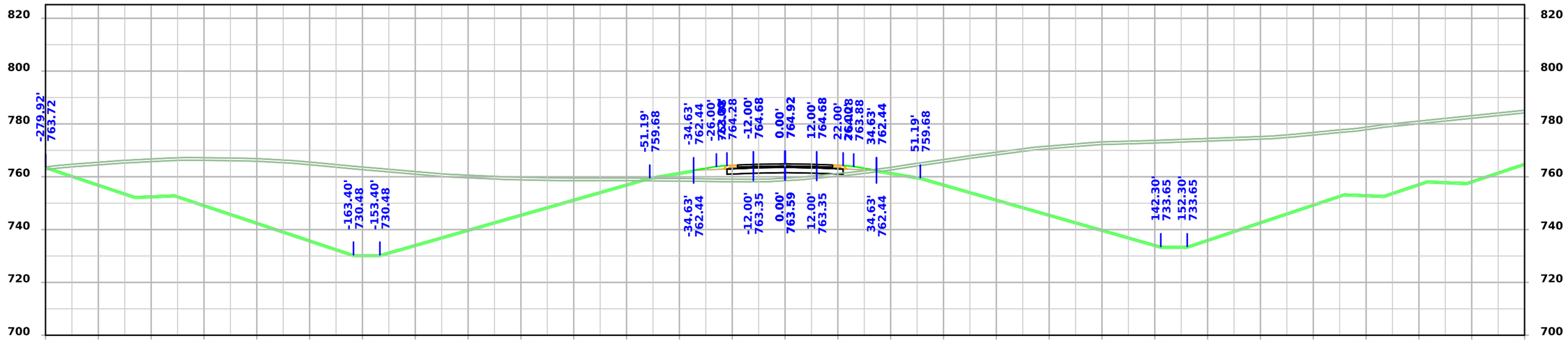
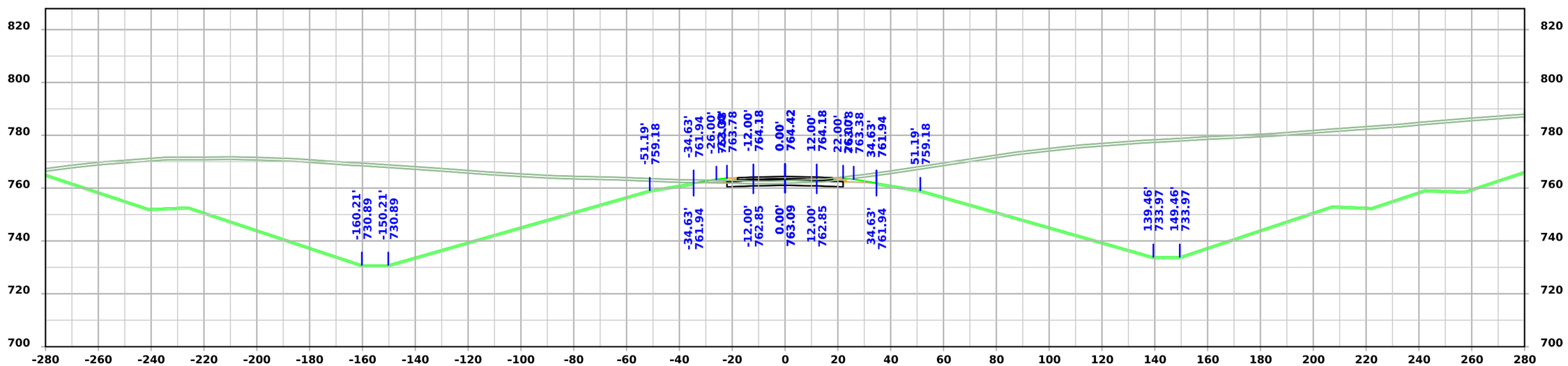
4:57:06 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 278+00.00



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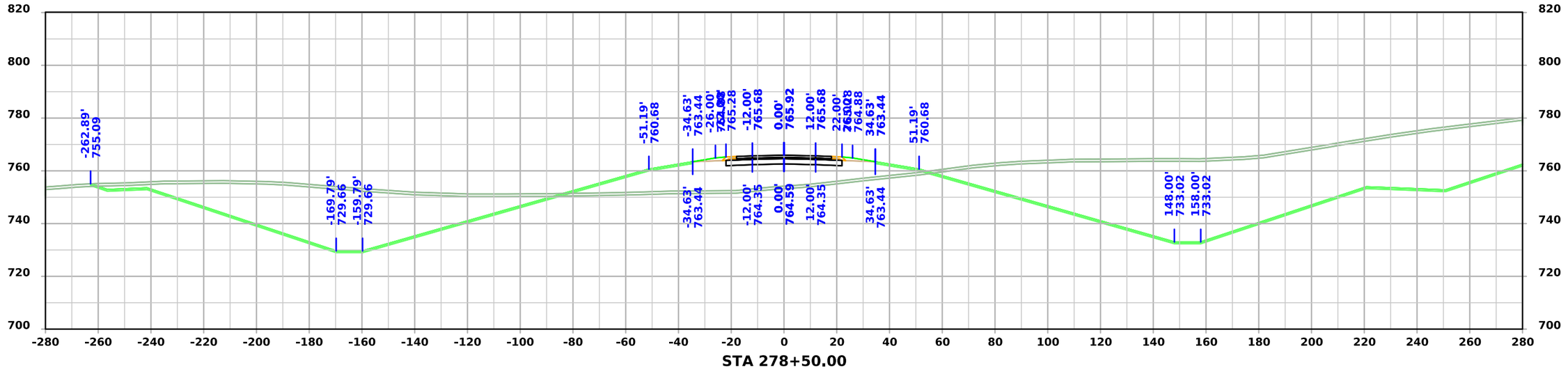
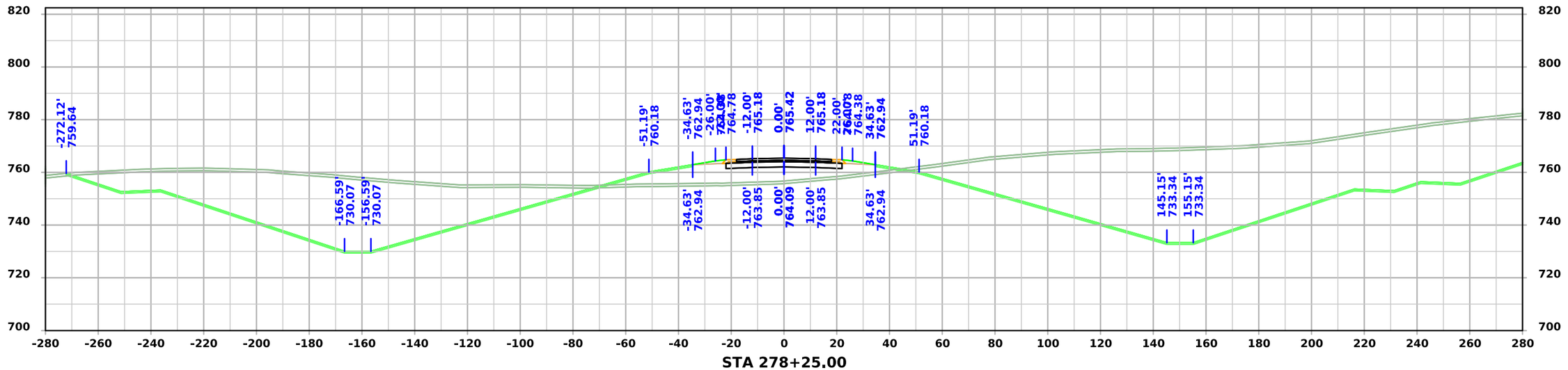
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.251

4:57:09 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 278+50.00

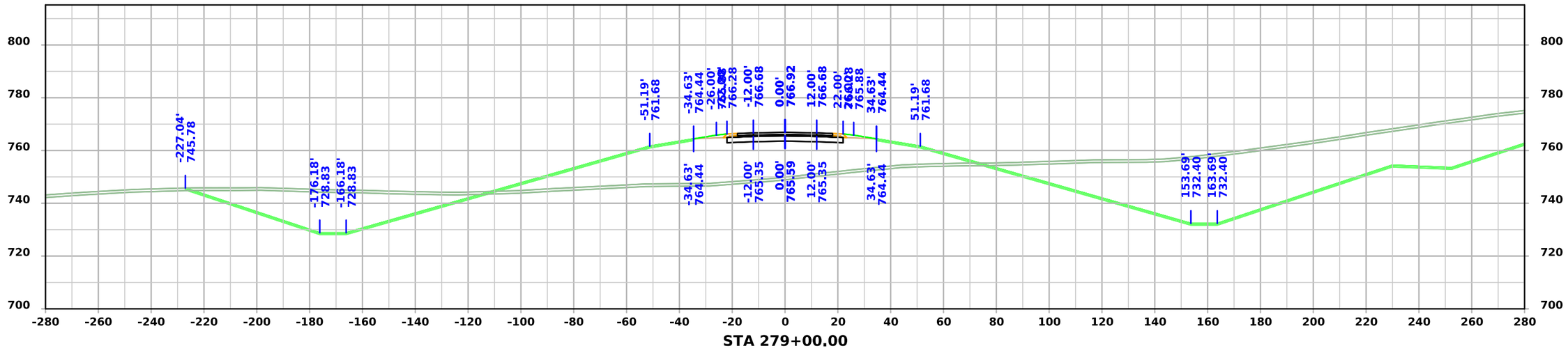


STA 278+25.00

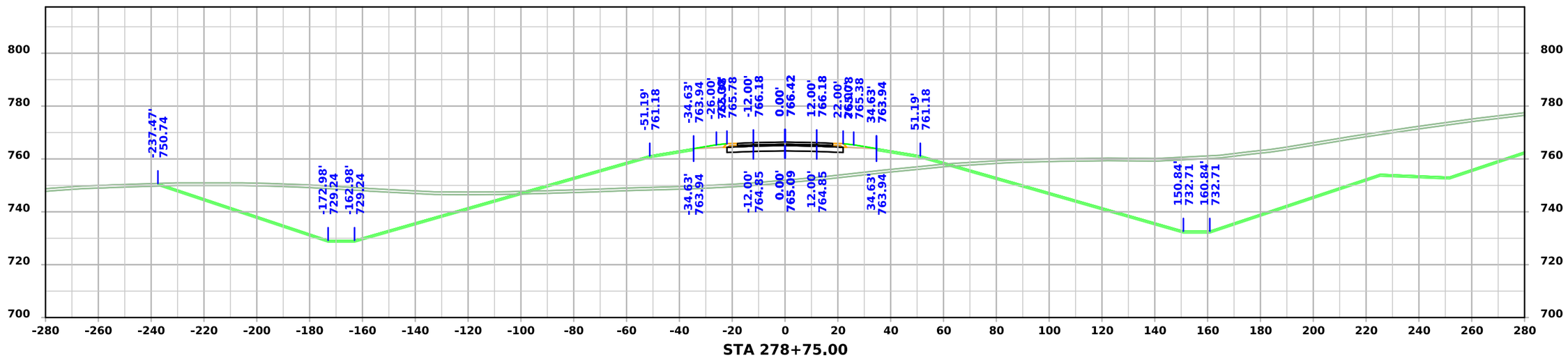
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.252

4:57:13 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 279+00.00

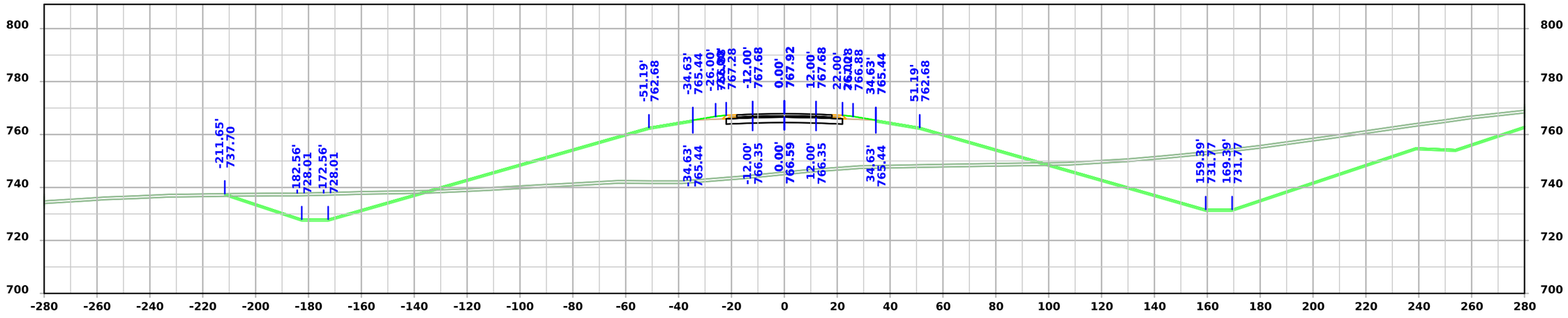


STA 278+75.00

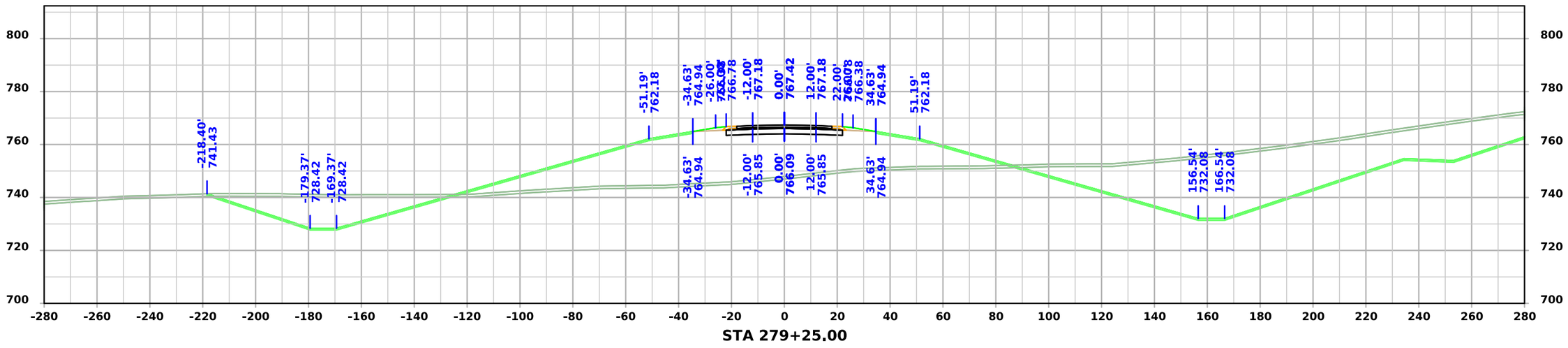
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.253

4:57:16 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 279+50.00

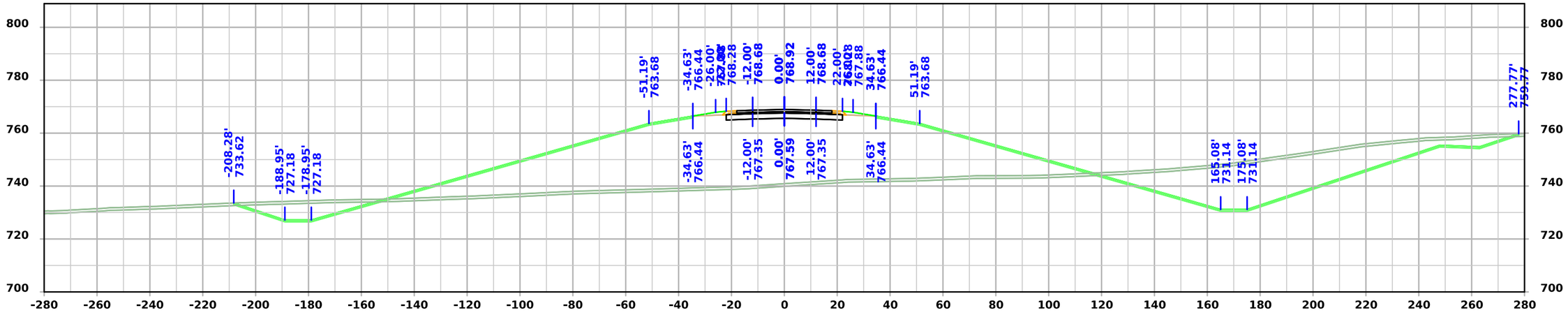


STA 279+25.00

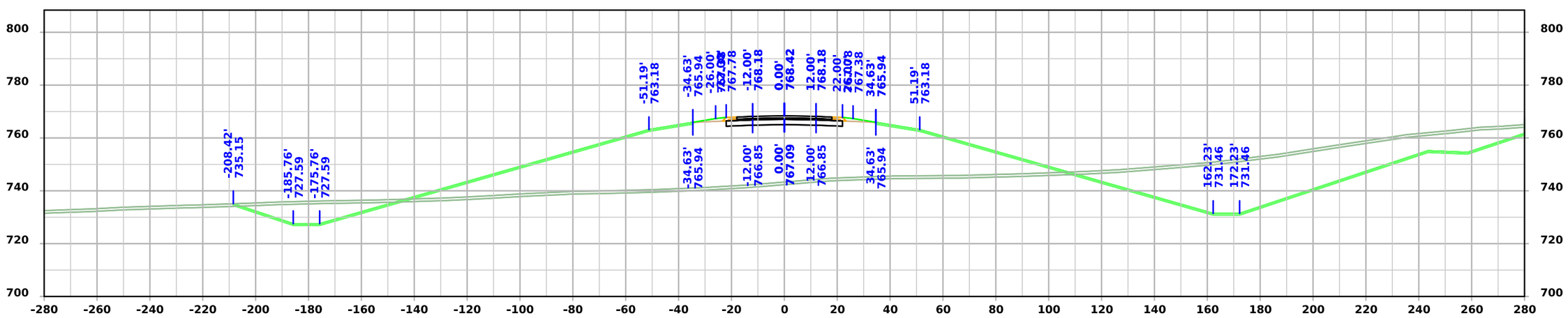
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.254

4:57:19 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 280+00.00



STA 279+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.255

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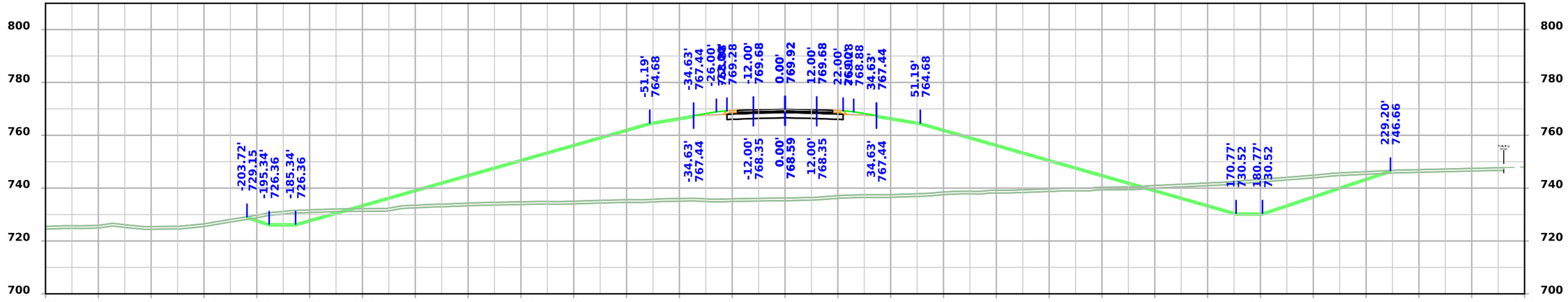
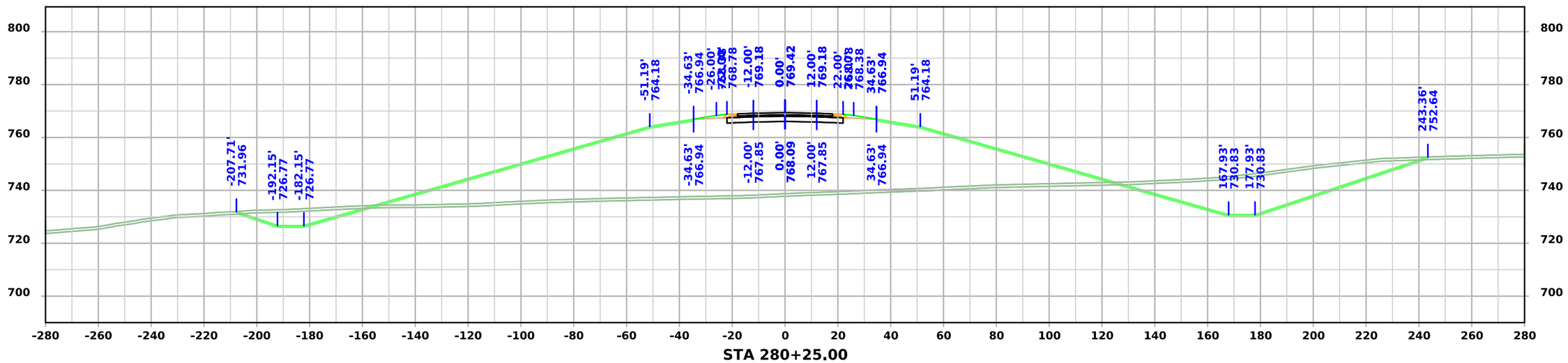
US 63



STA 280+50.00

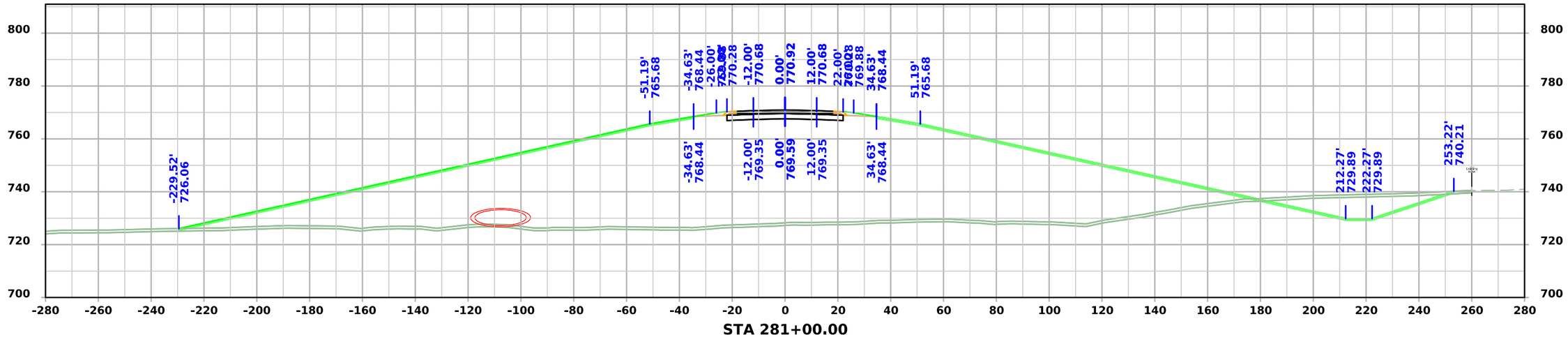


STA 280+25.00

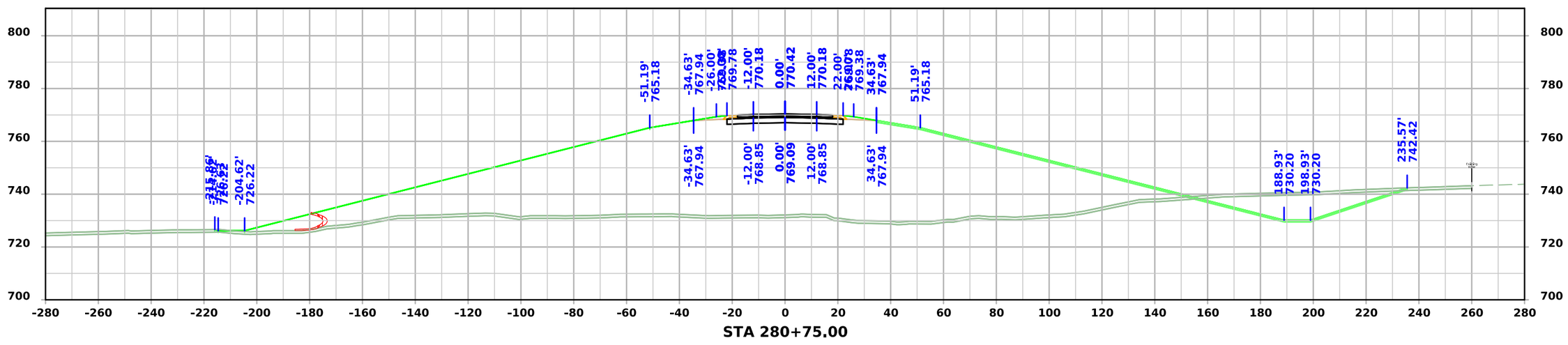
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.256

4:57:26 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 281+00.00

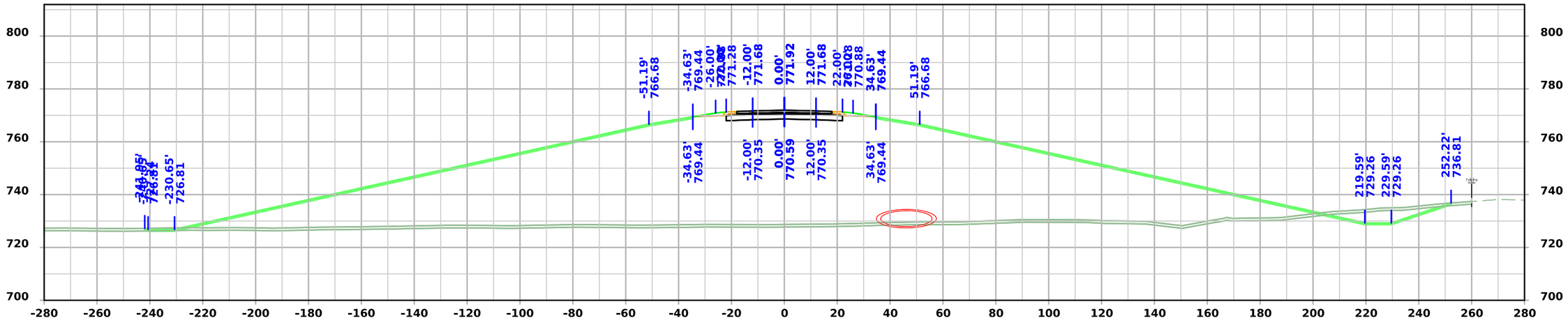


STA 280+75.00

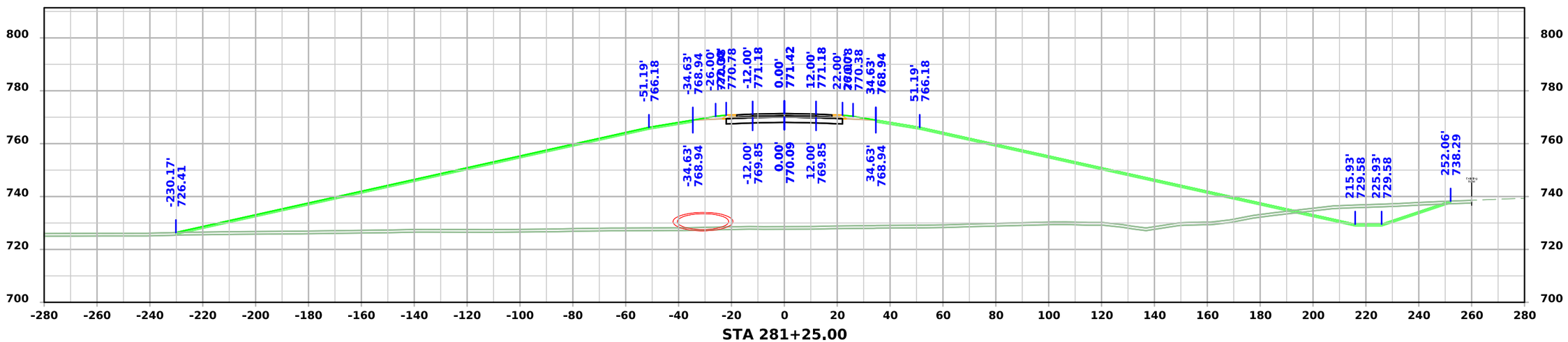
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.257

4:57:29 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 281+50.00

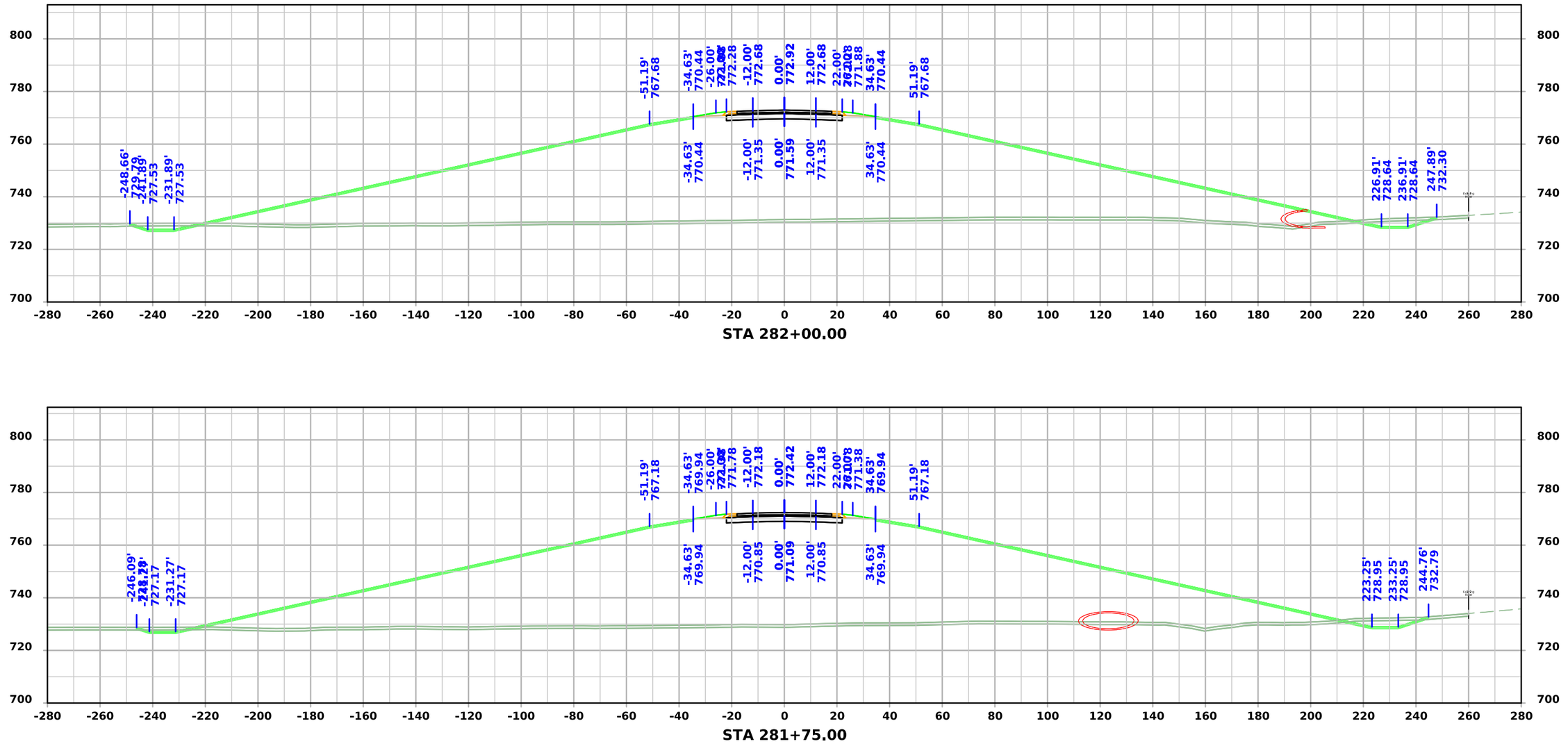


STA 281+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.258

4:57:32 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



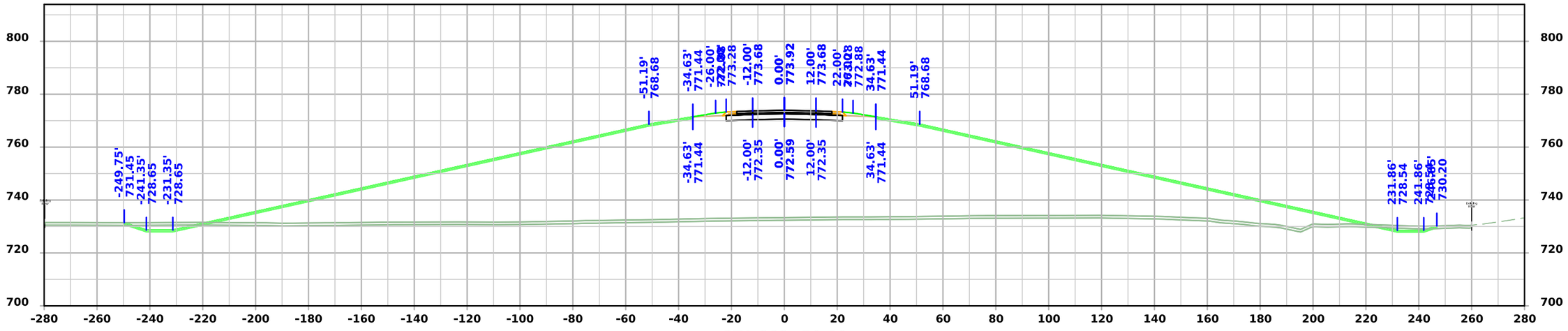
STA 282+00.00

STA 281+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.259

4:57:36 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



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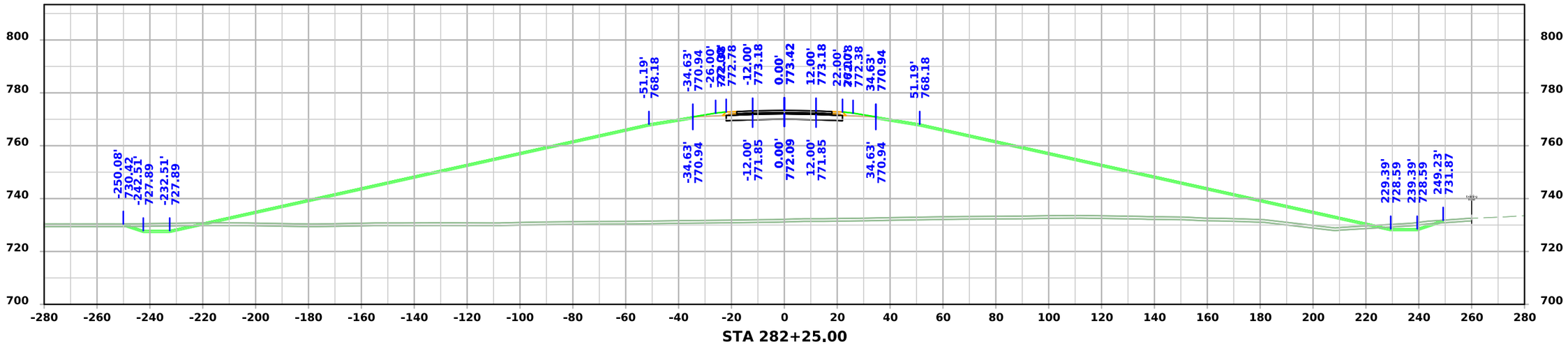
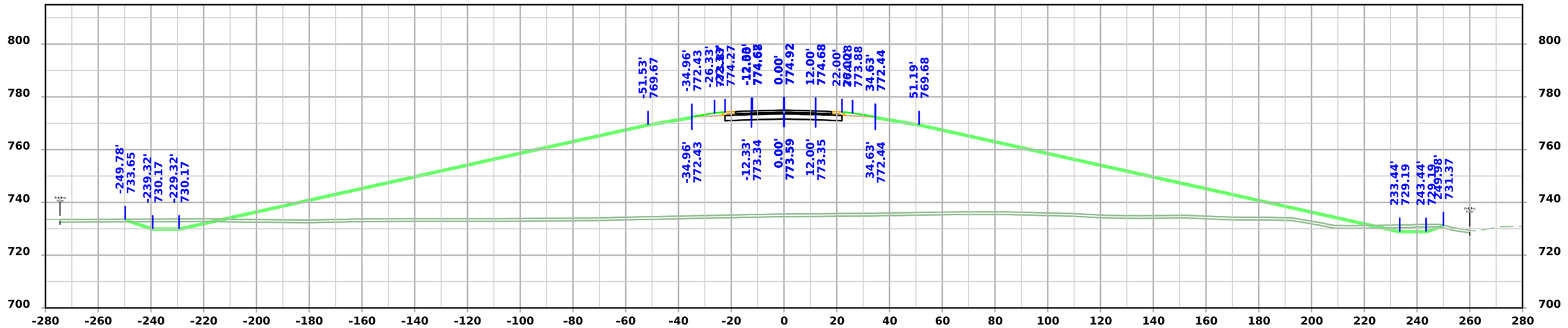


STA 282+25.00

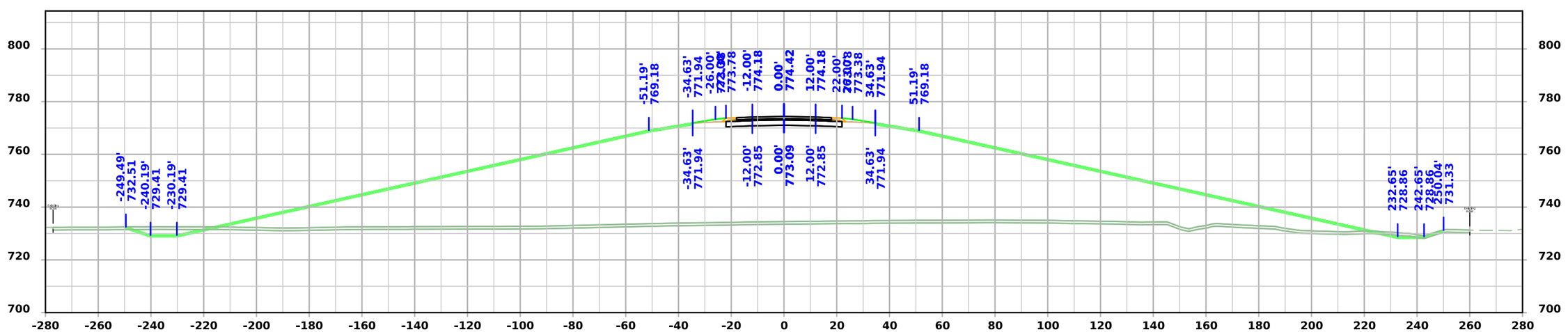
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.260

4:57:39 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 283+00.00

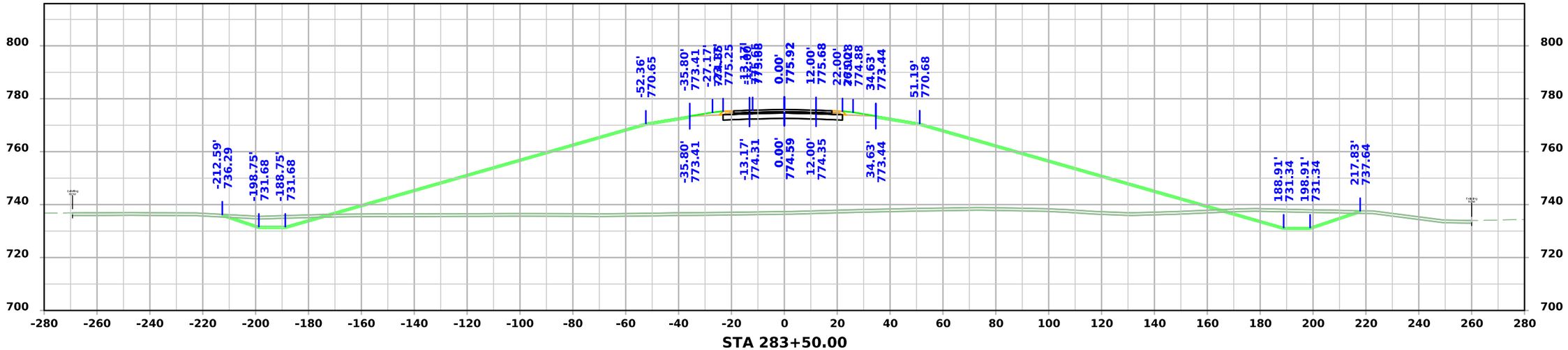


STA 282+75.00

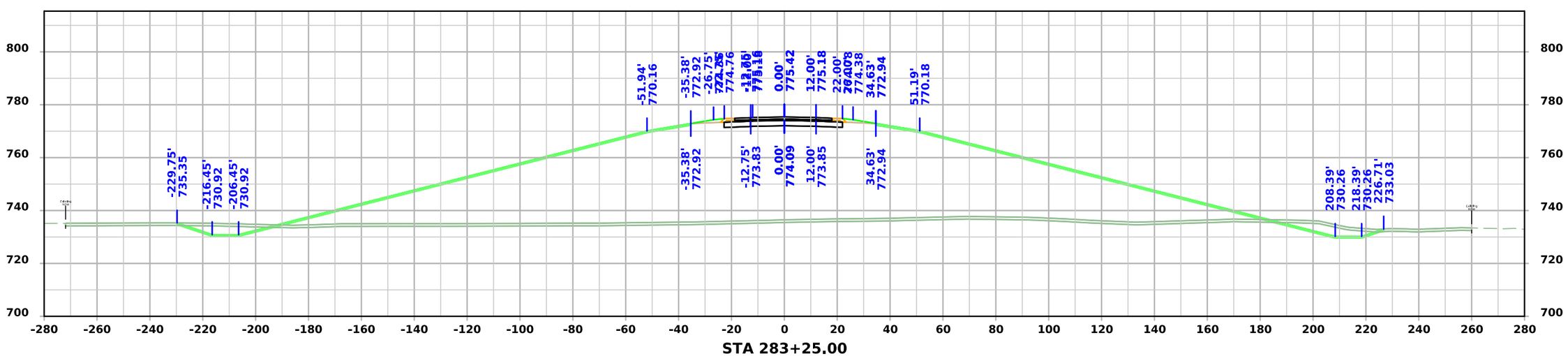
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.261

4:57:42 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 283+50.00

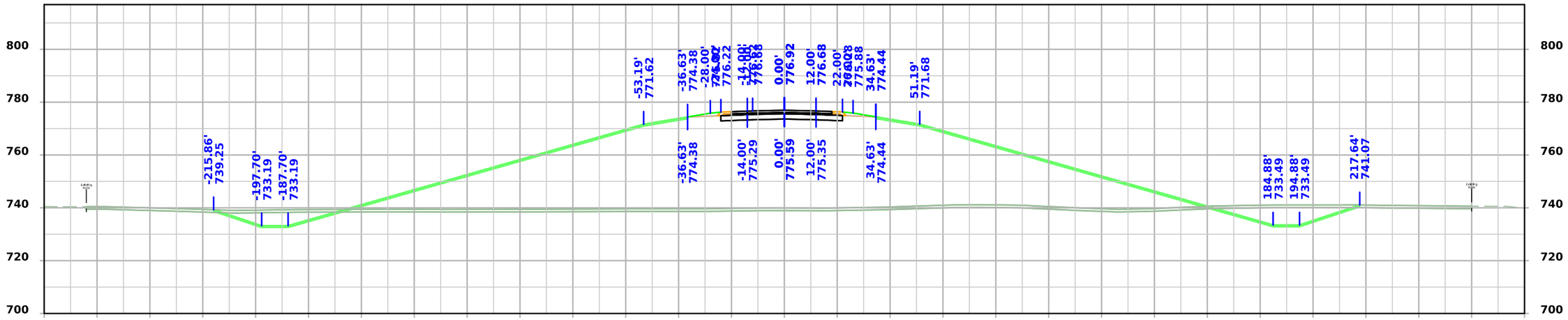


STA 283+25.00

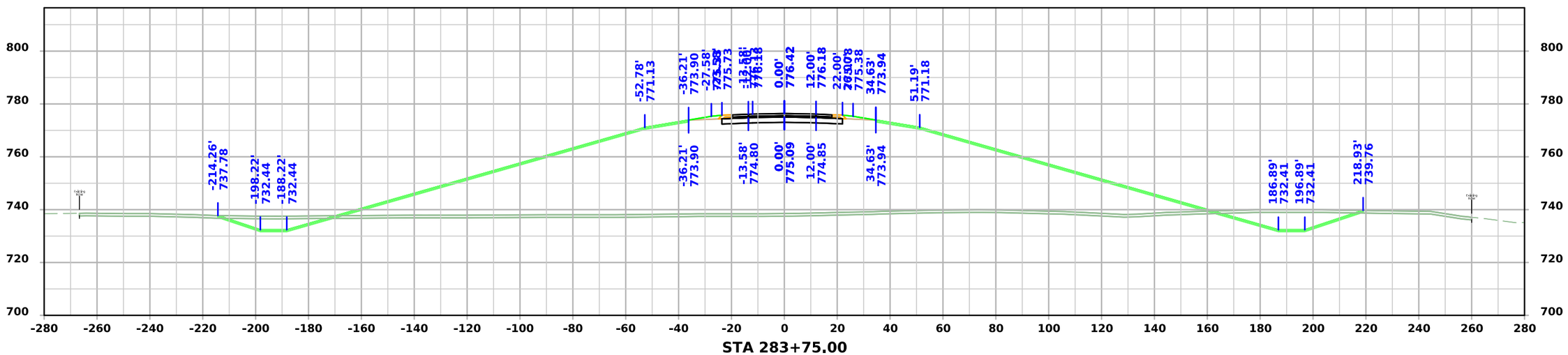
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.262

4:57:45 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 284+00.00

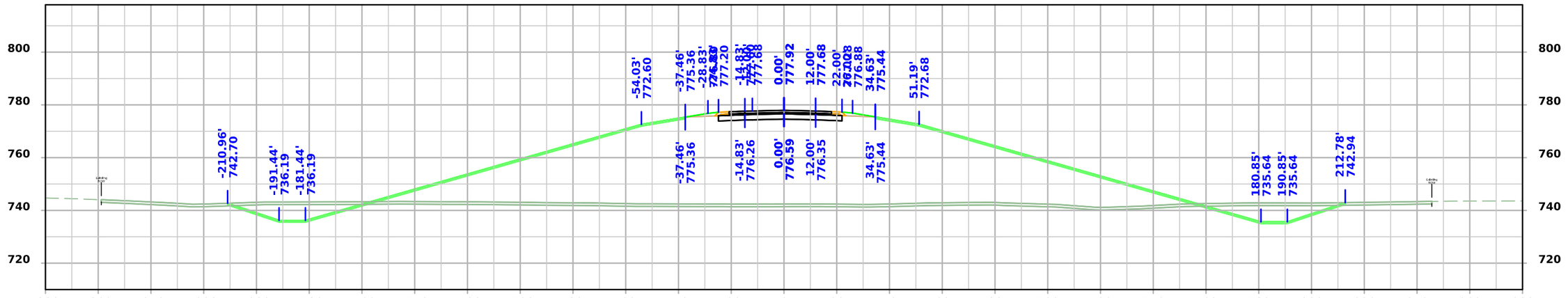


STA 283+75.00

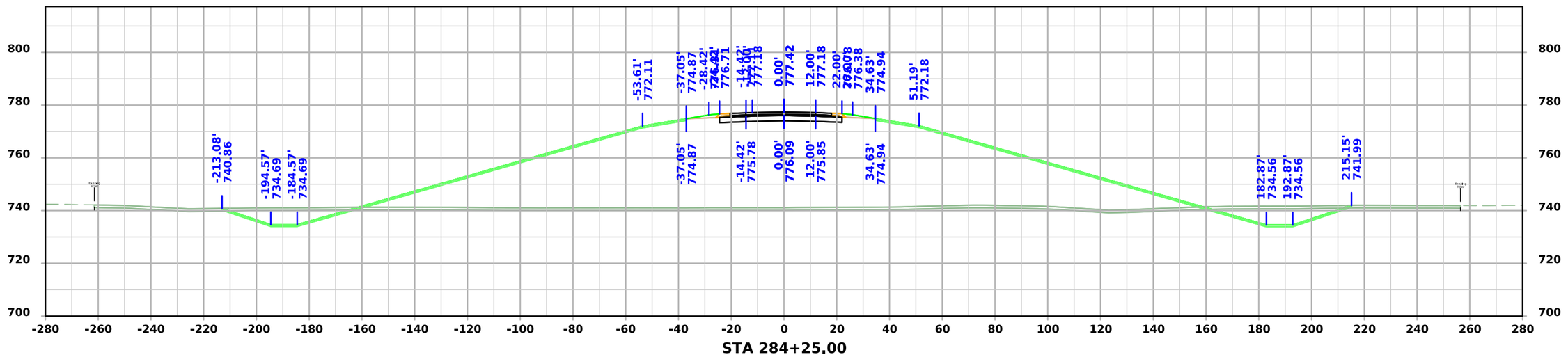
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.263

4:57:49 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 284+50.00

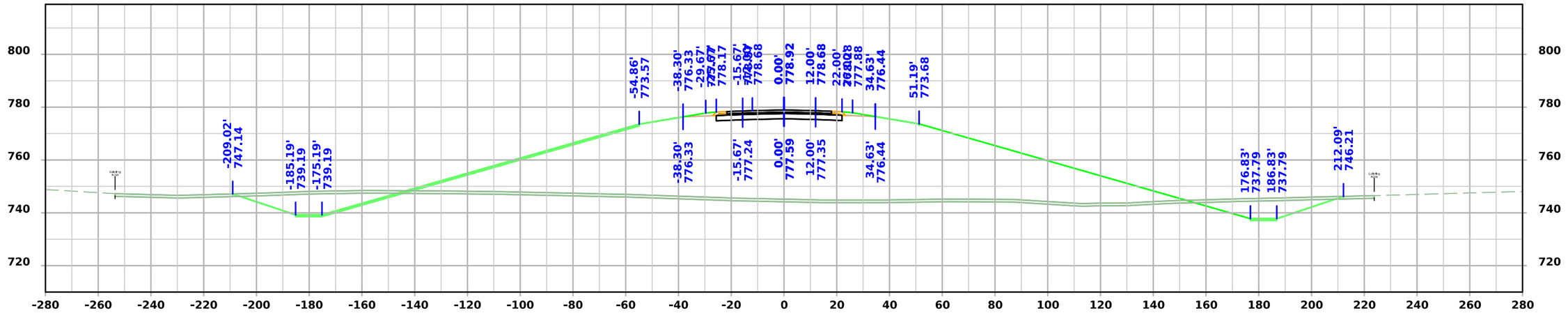


STA 284+25.00

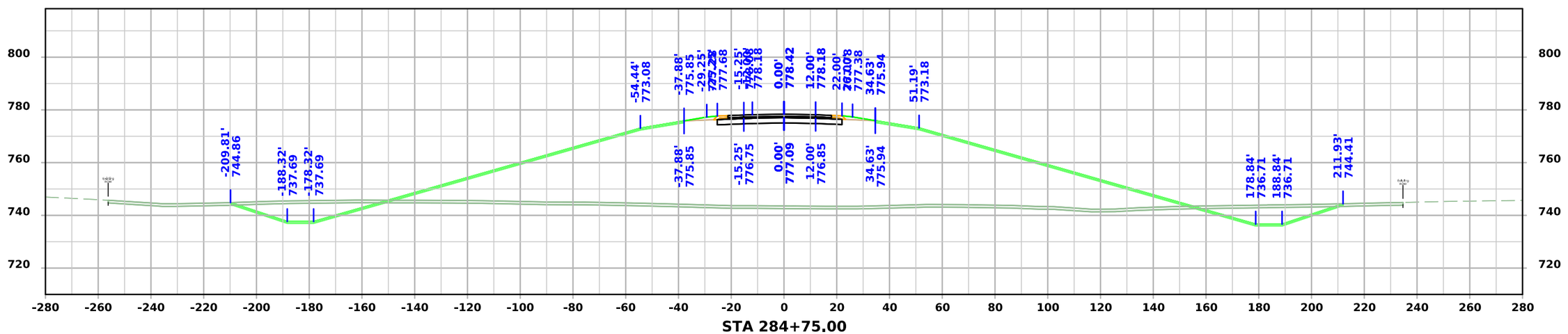
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.264

4:57:52 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 285+00.00

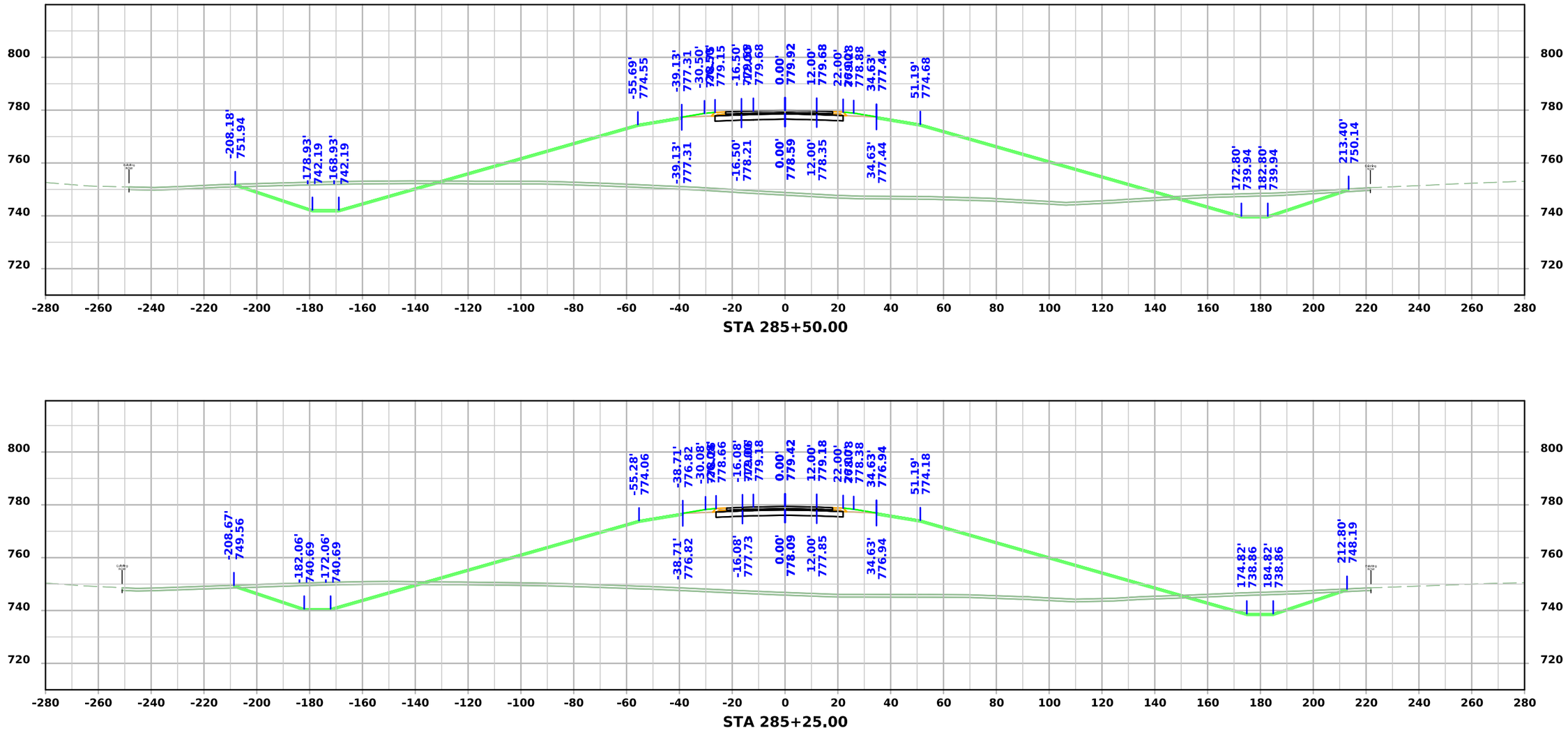


STA 284+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.265

4:57:55 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



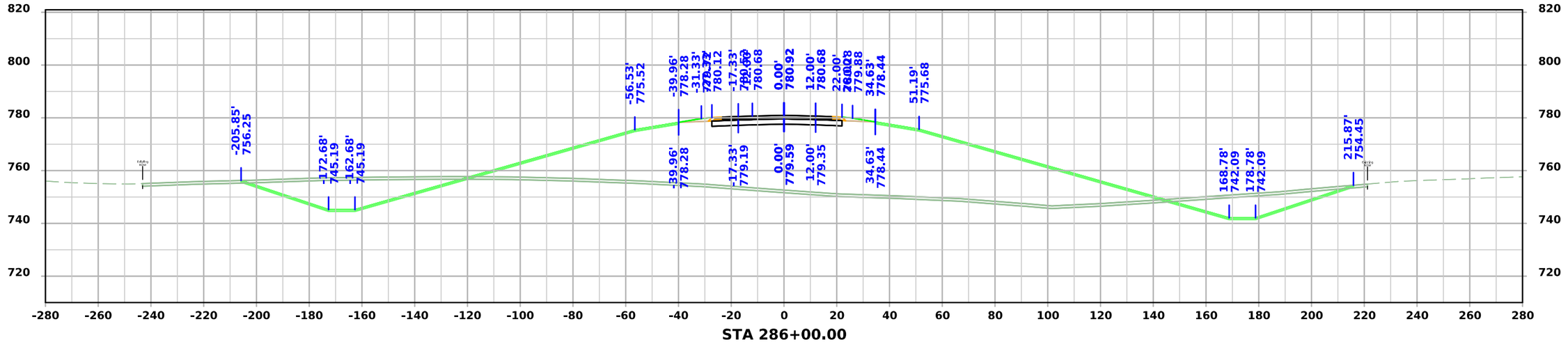
STA 285+50.00

STA 285+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.266

4:57:58 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

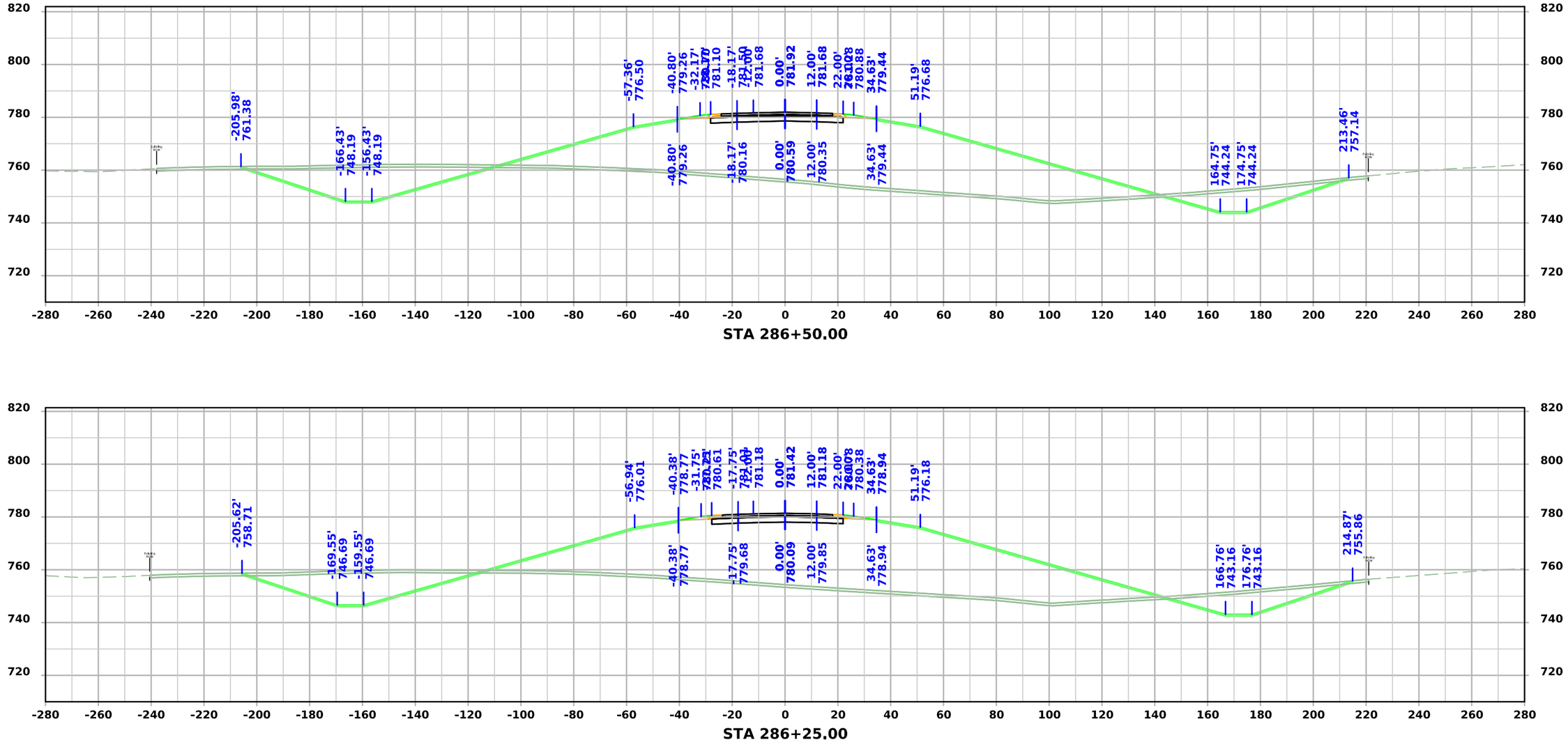
US 63



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.267

4:58:01 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

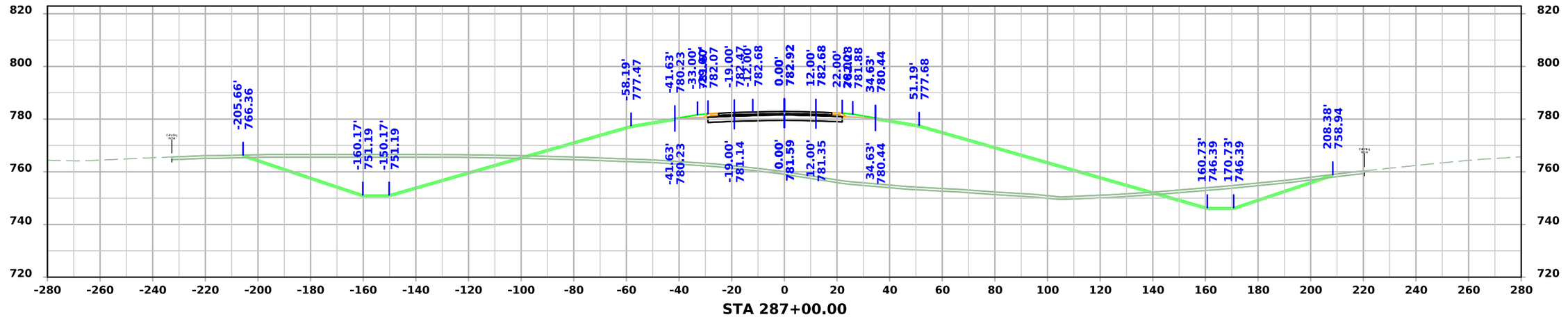
US 63

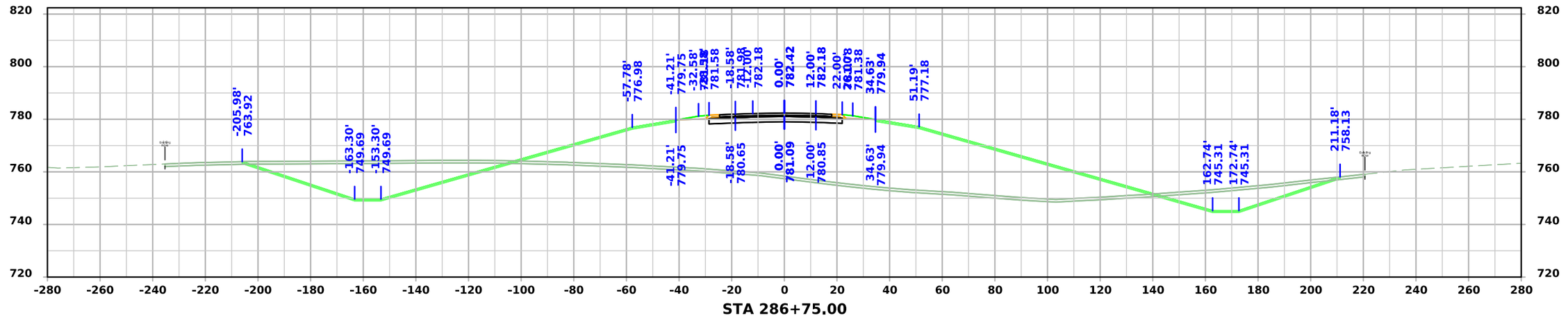


FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.268

4:58:04 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63

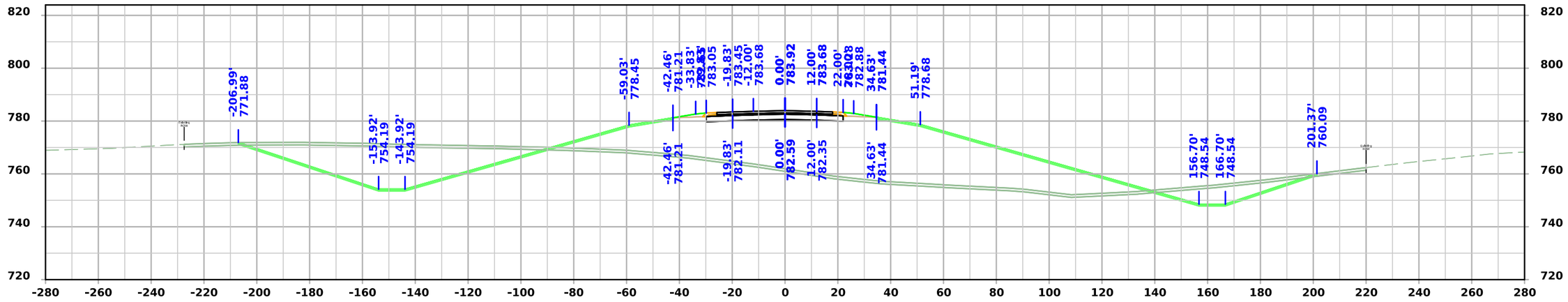




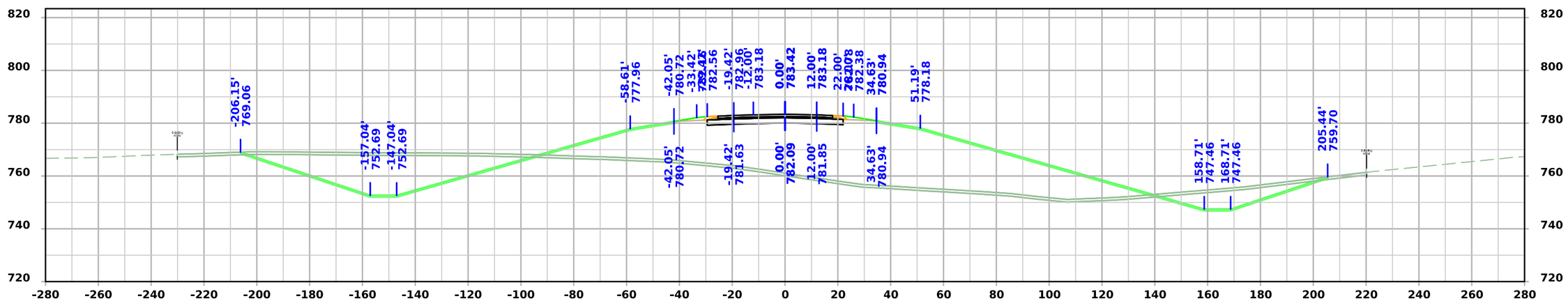
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.269

4:58:08 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 287+50.00

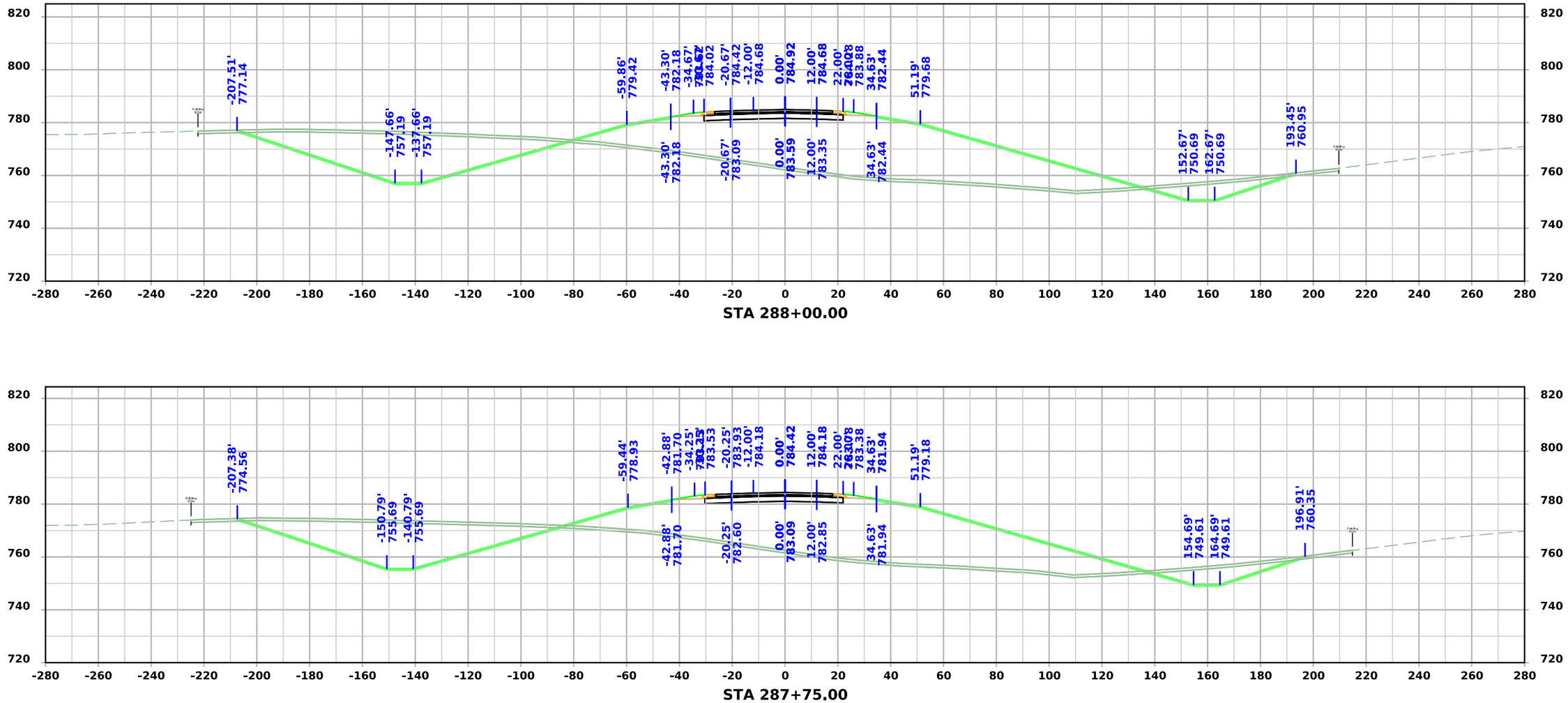


STA 287+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.270

4:58:11 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

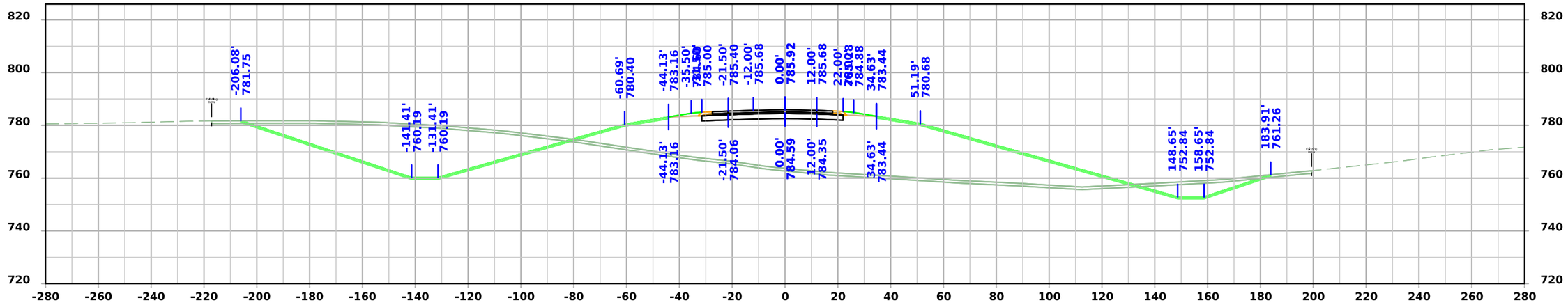
US 63



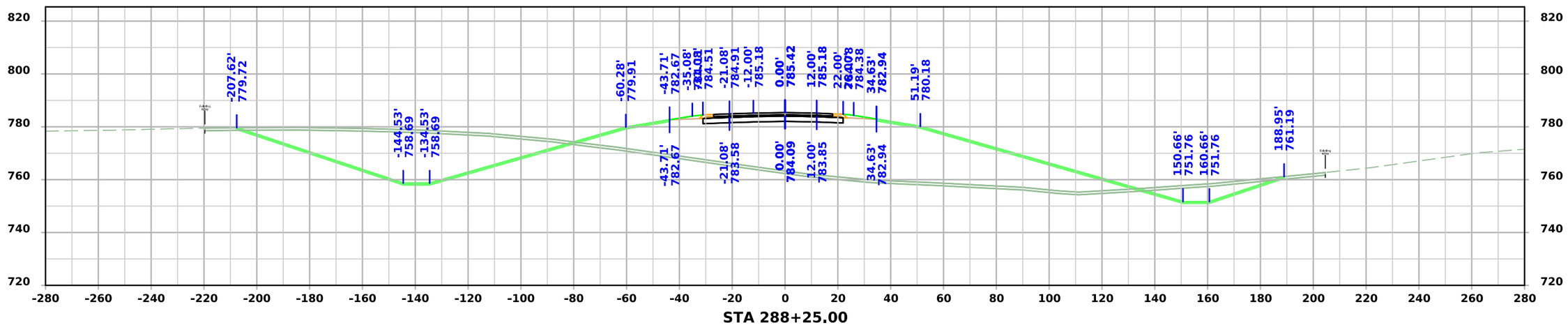
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.271

4:58:14 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 288+50.00

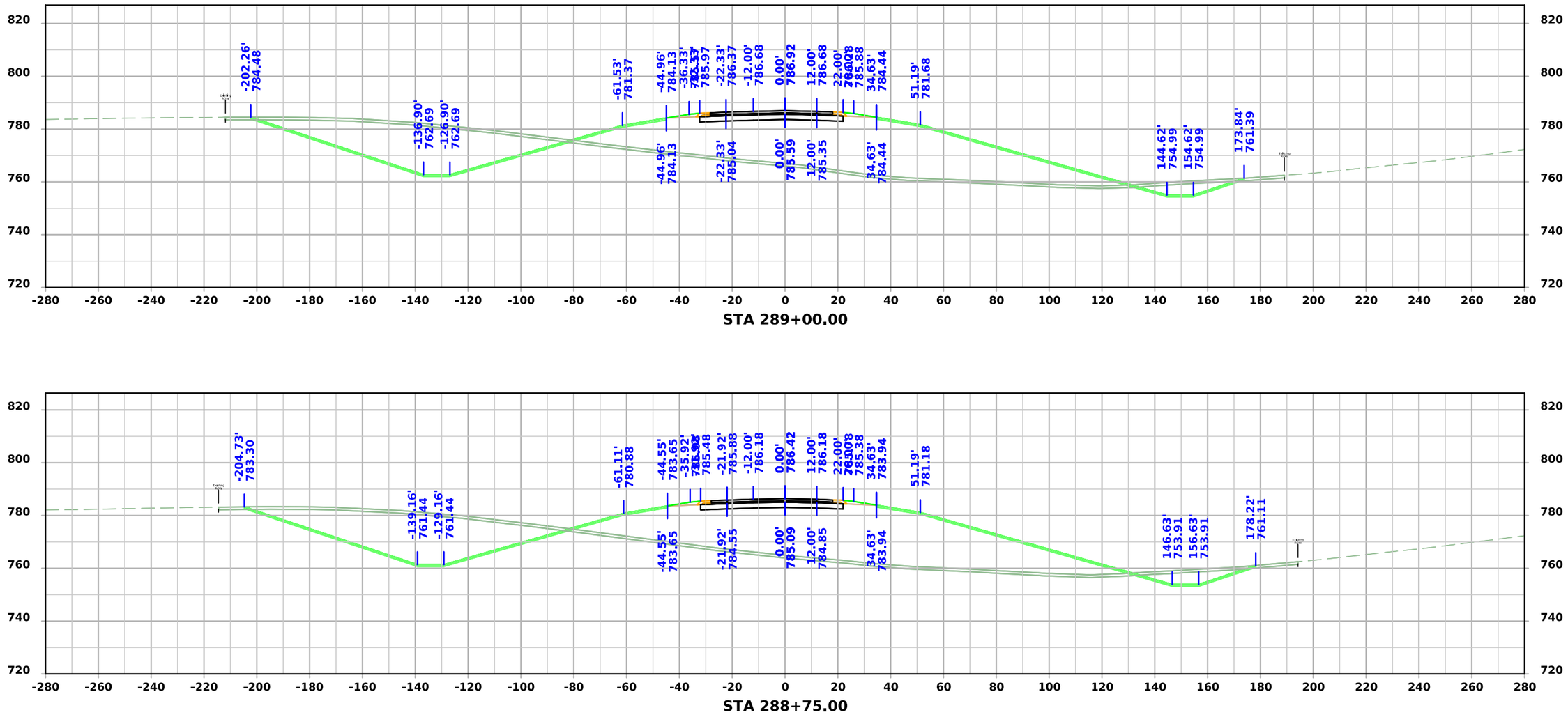


STA 288+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.272

4:58:17 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

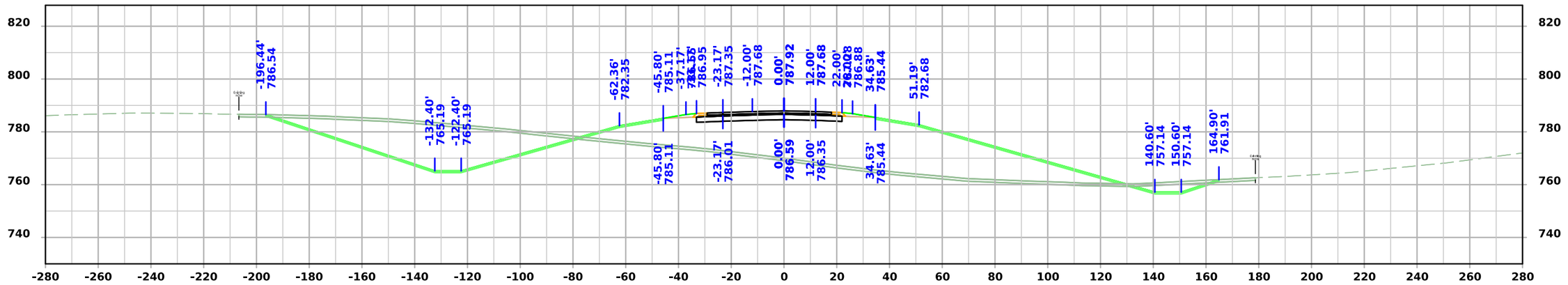
US 63



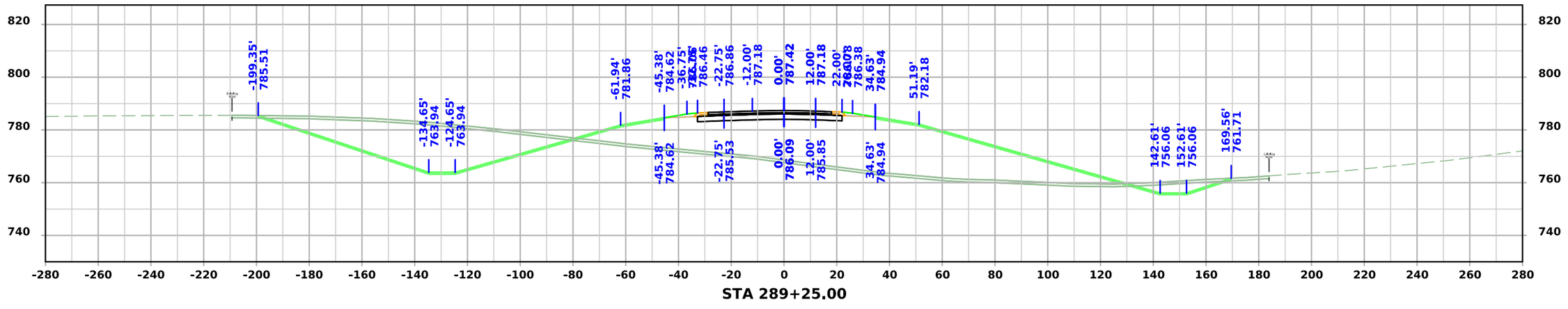
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.273

4:58:21 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 289+50.00

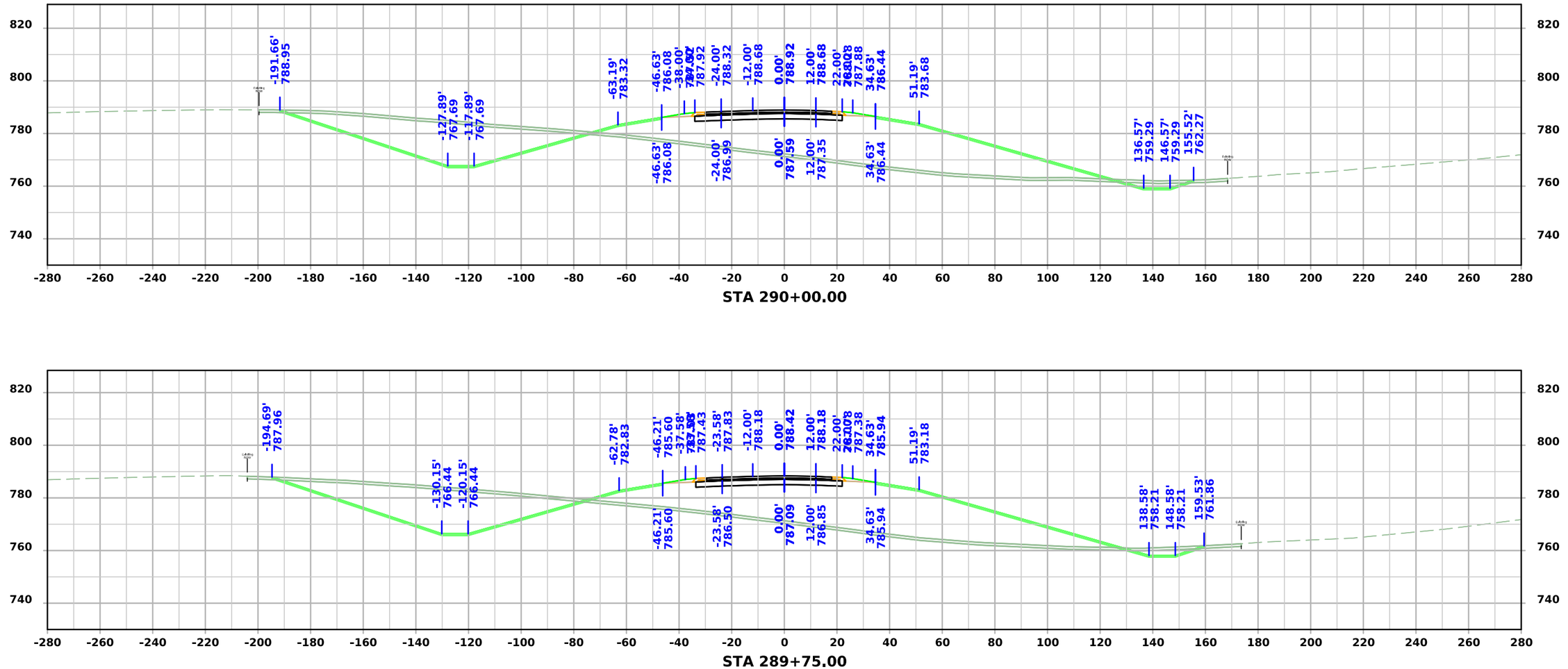


STA 289+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.274

4:58:24 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



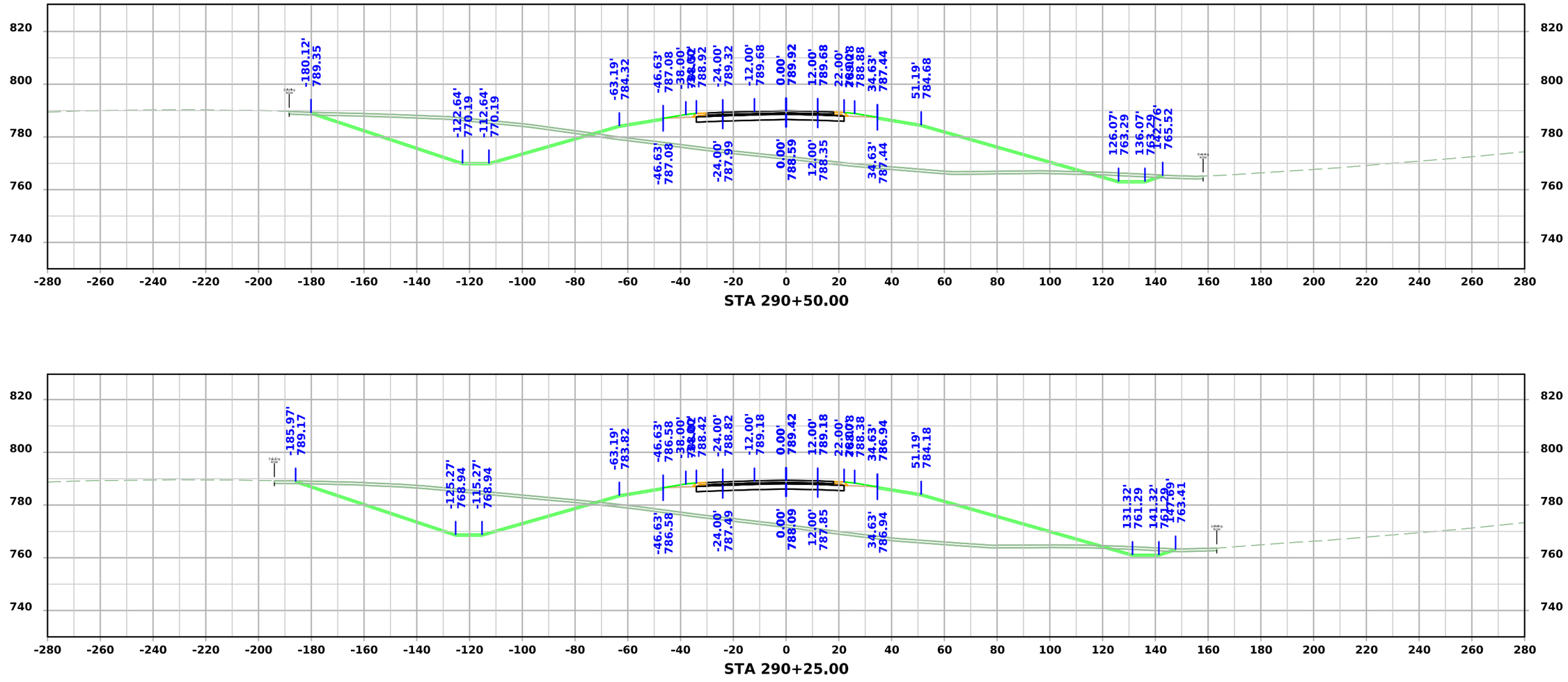
STA 290+00.00

STA 289+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.275

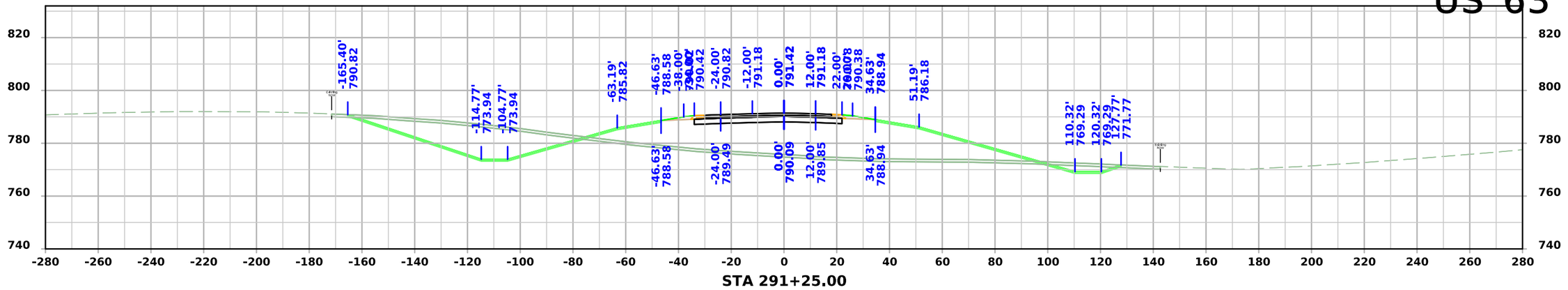
4:58:27 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63

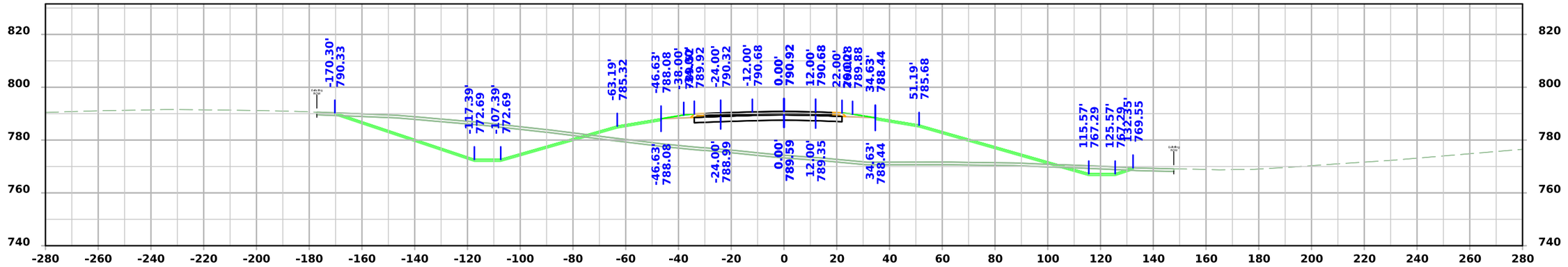


FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.276

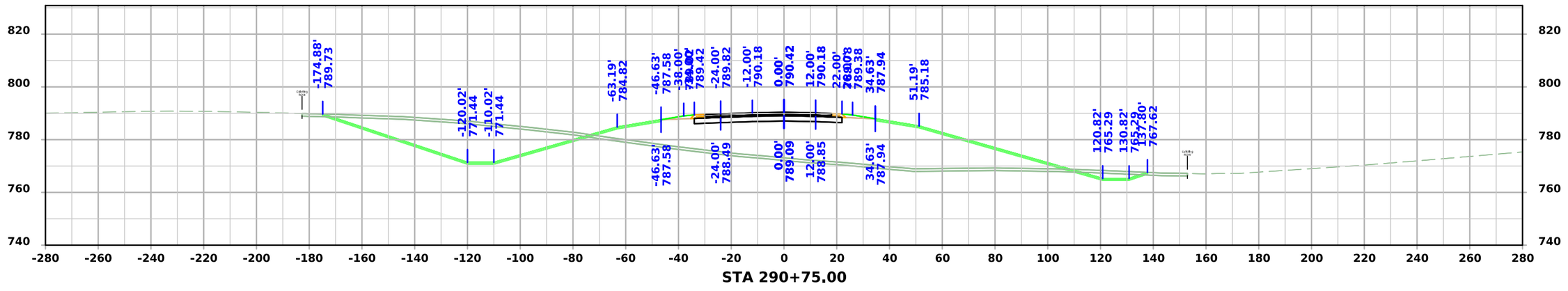
4:58:31 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn



STA 291+25.00



STA 291+00.00

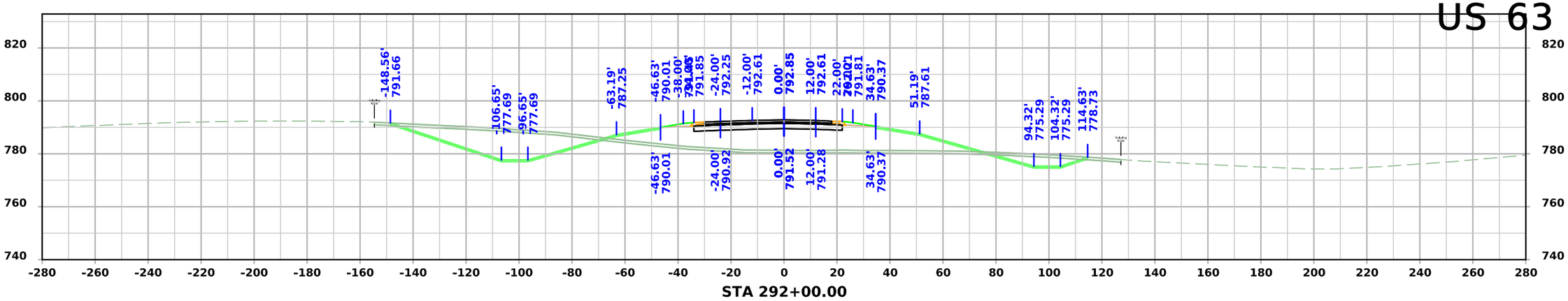


STA 290+75.00

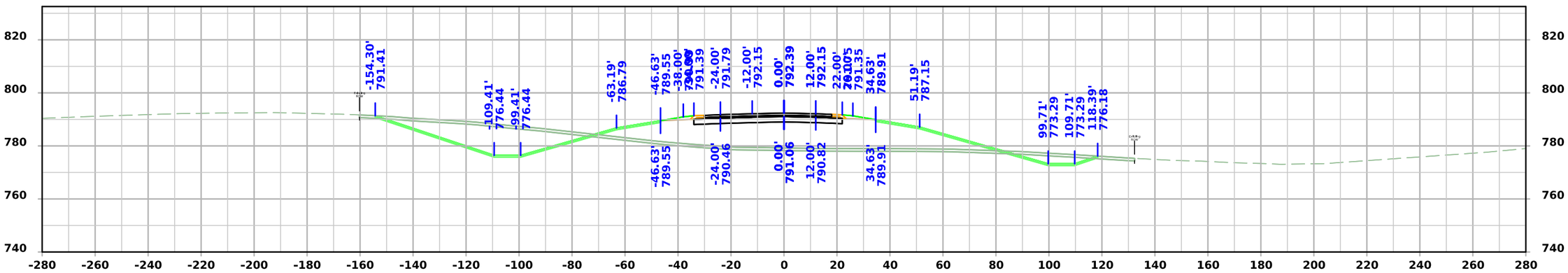
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.277

4:58:36 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

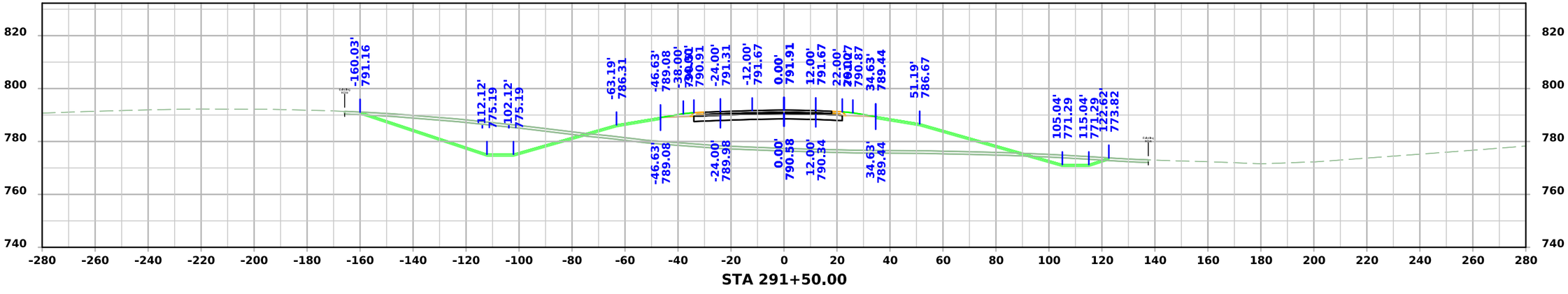
US 63



STA 292+00.00



STA 291+75.00

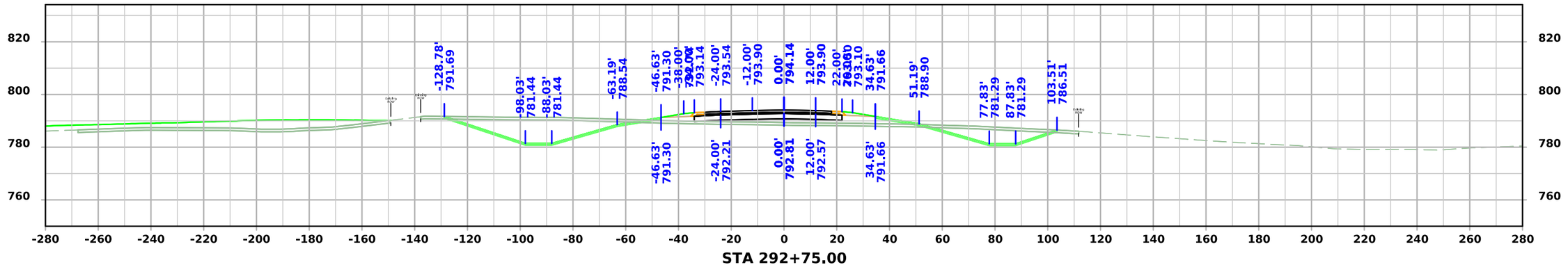


STA 291+50.00

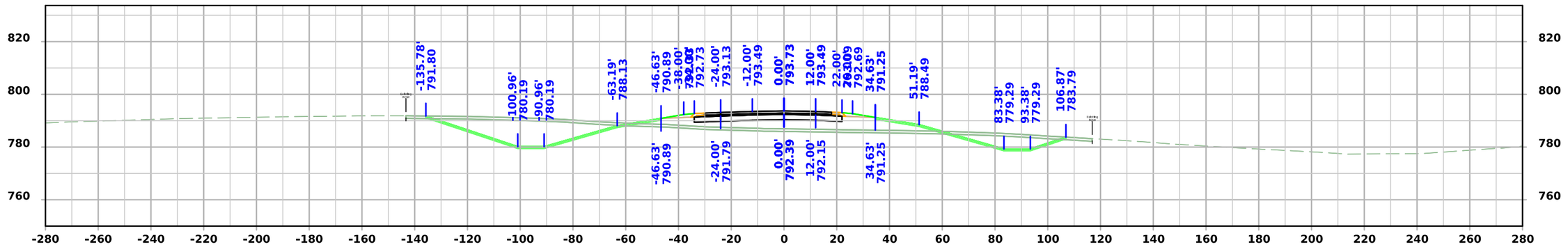
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.278

4:58:40 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

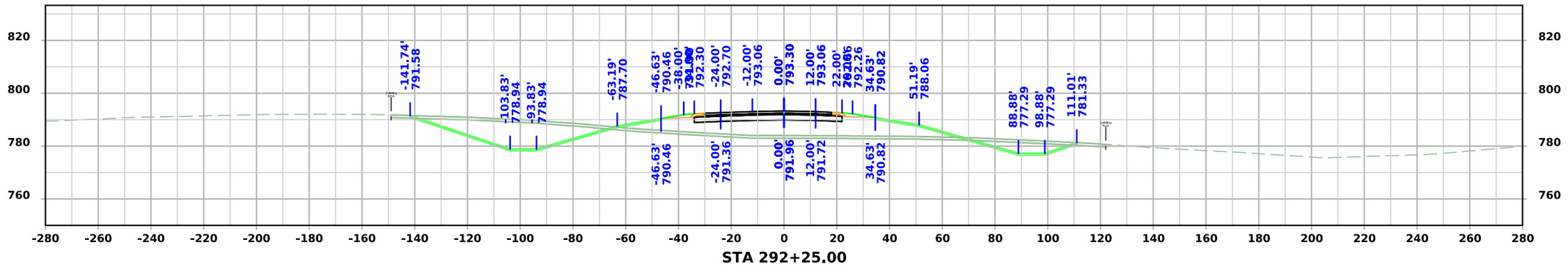
US 63



STA 292+75.00



STA 292+50.00

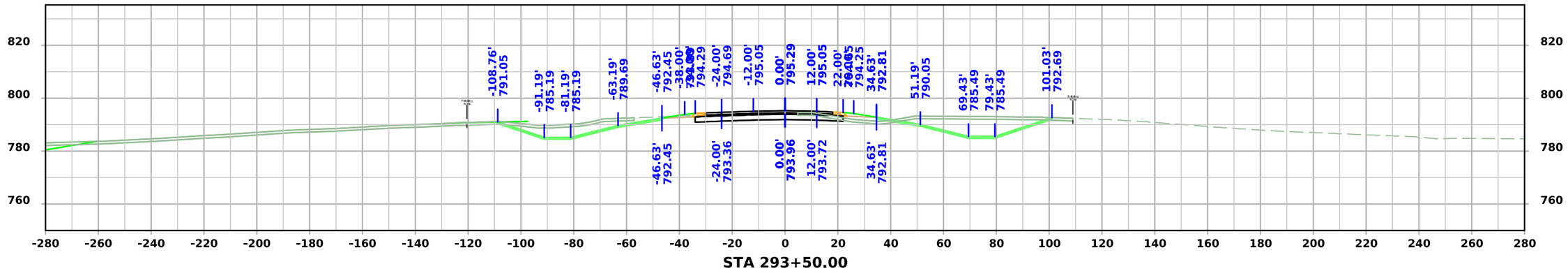


STA 292+25.00

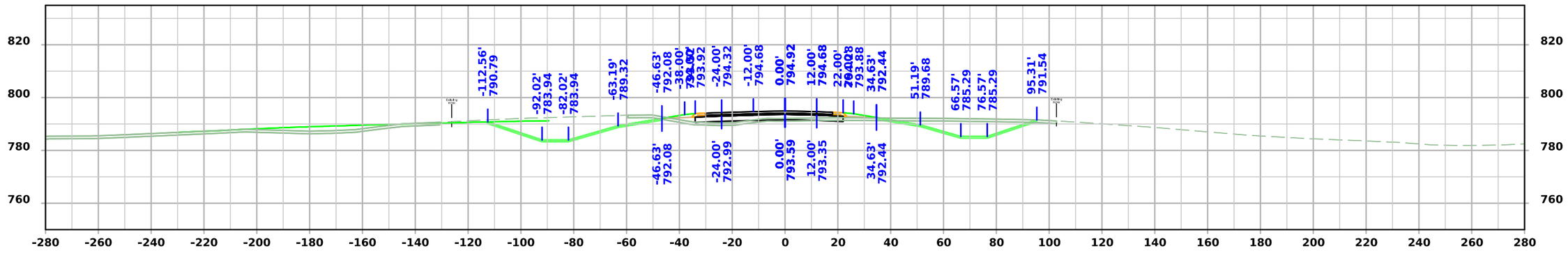
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.279

4:58:45 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

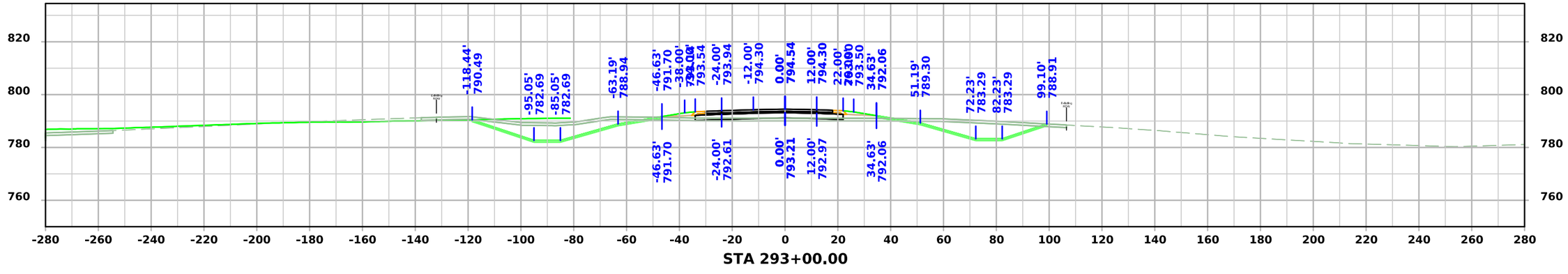
US 63



STA 293+50.00



STA 293+25.00

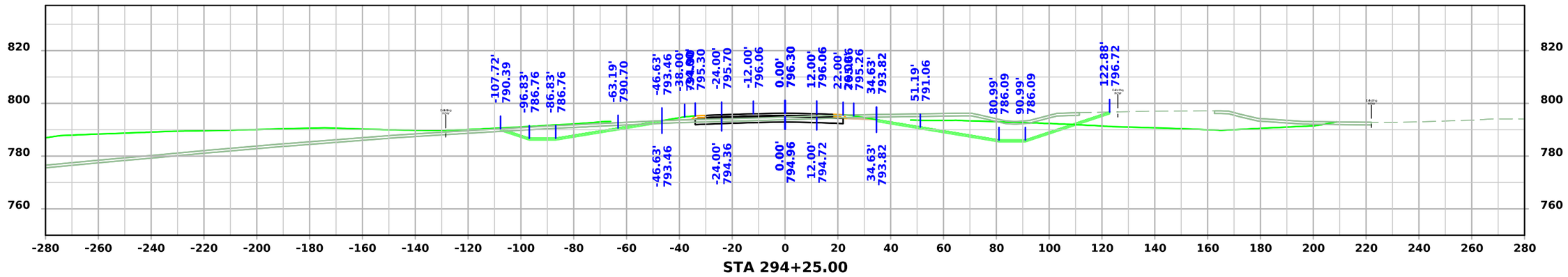


STA 293+00.00

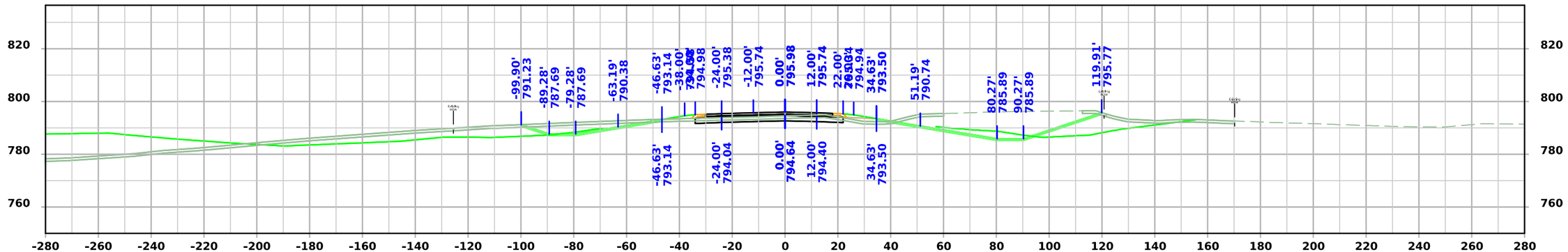
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.280

4:58:49 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

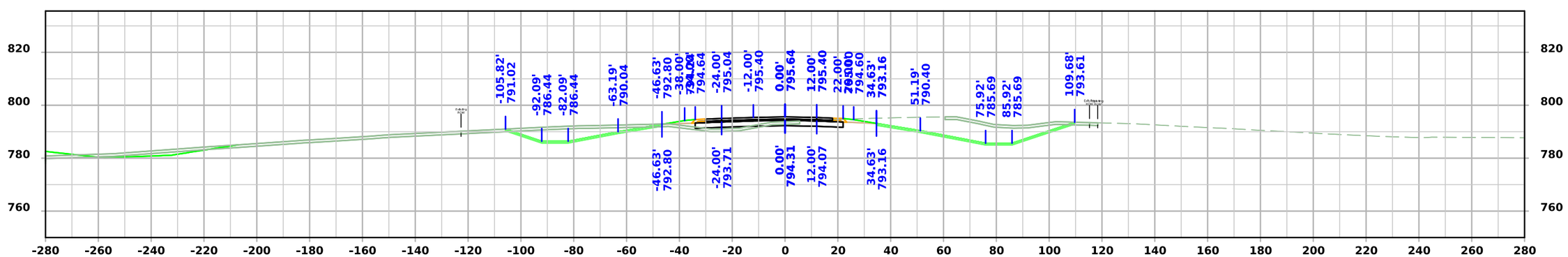
US 63



STA 294+25.00



STA 294+00.00

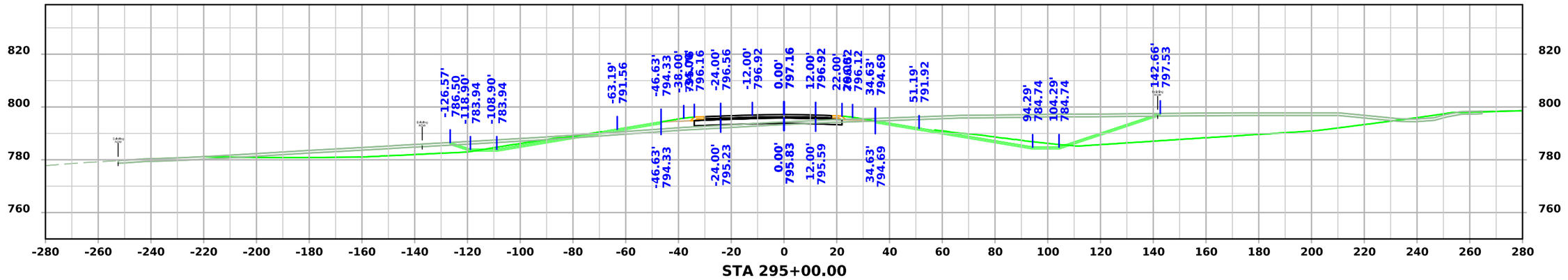


STA 293+75.00

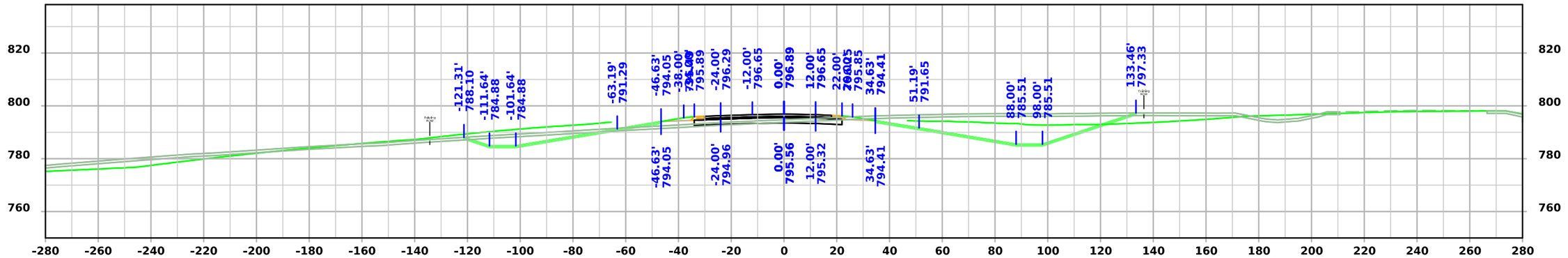
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.281

4:58:54 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

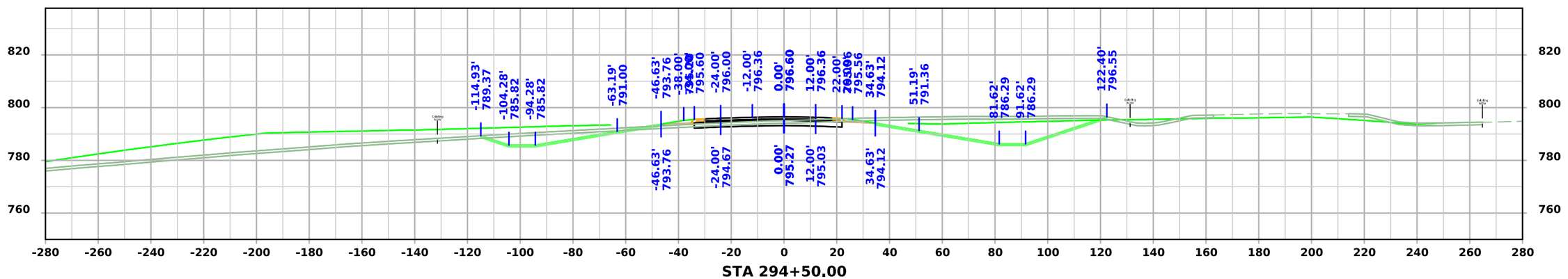
US 63



STA 295+00.00



STA 294+75.00

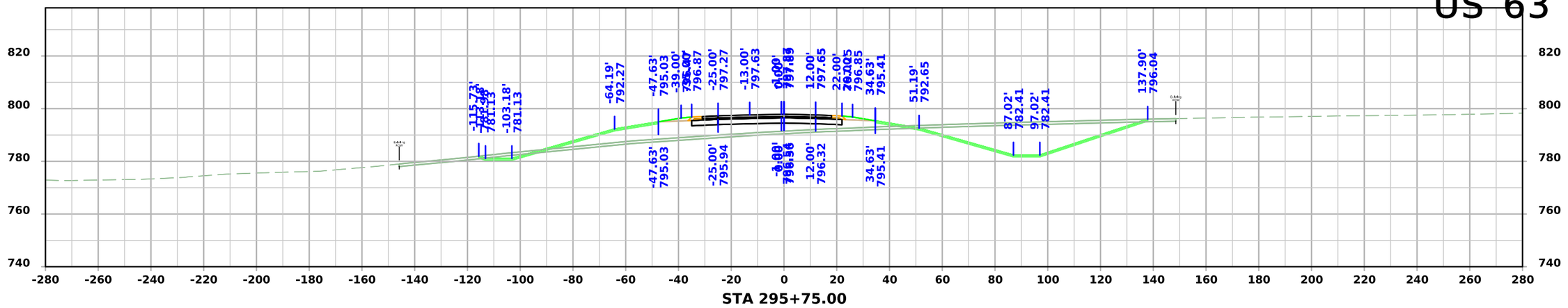


STA 294+50.00

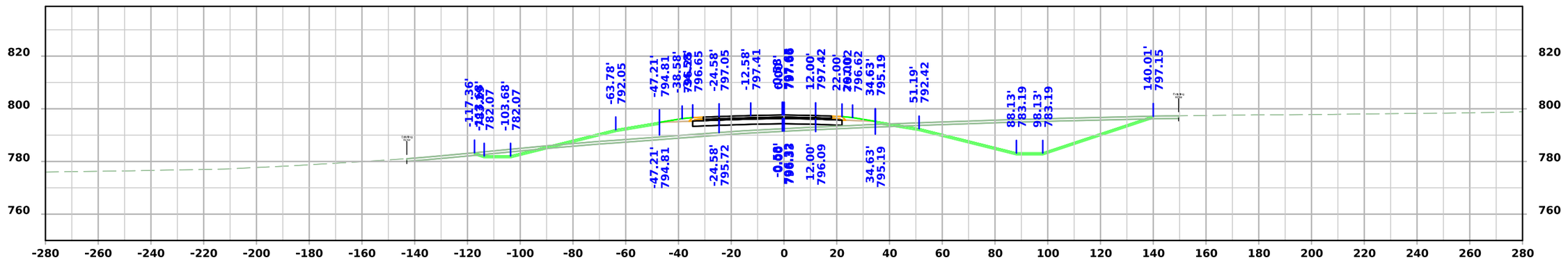
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.282

4:58:58 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

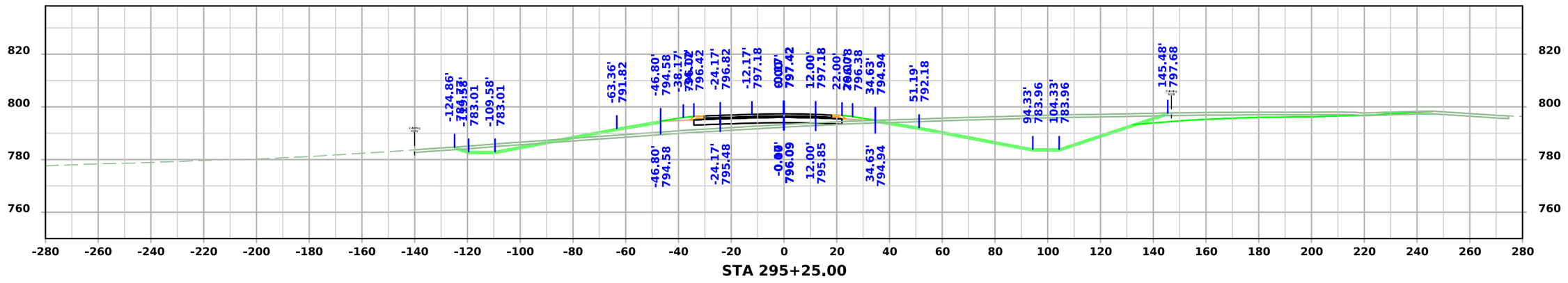
US 63



STA 295+75.00



STA 295+50.00

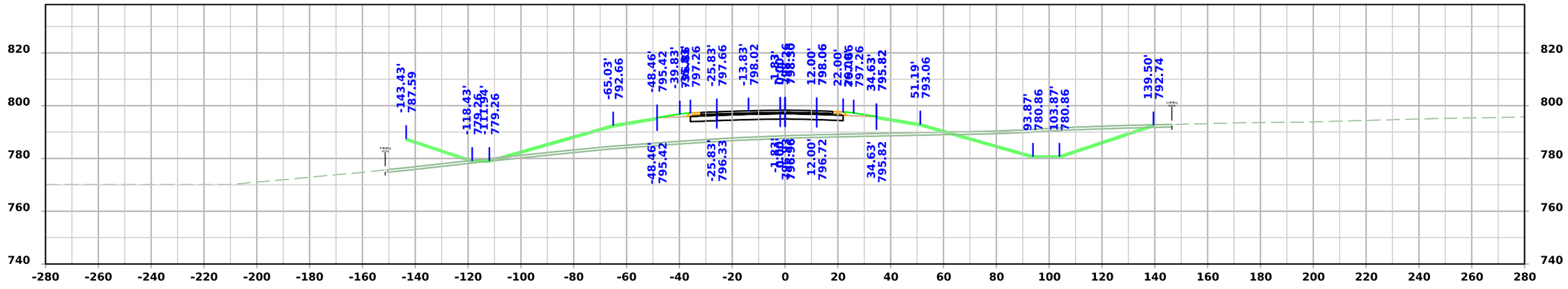


STA 295+25.00

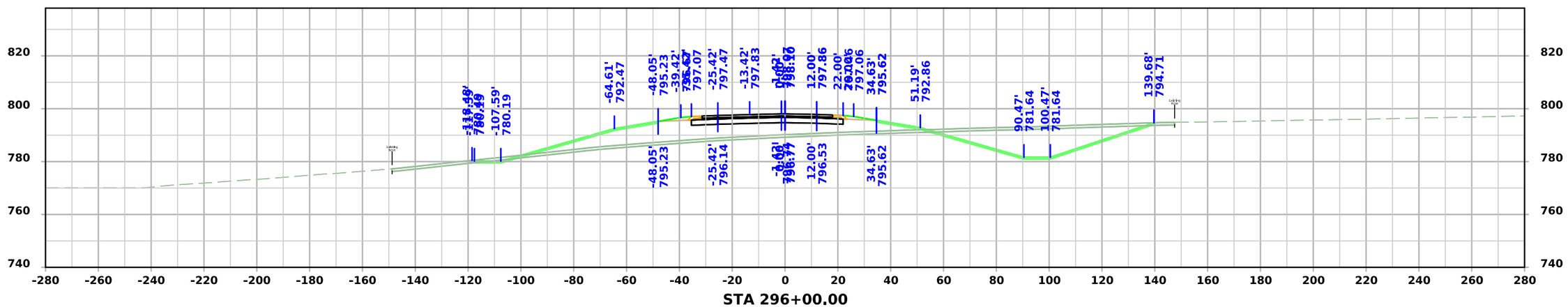
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.283

4:59:03 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 296+25.00

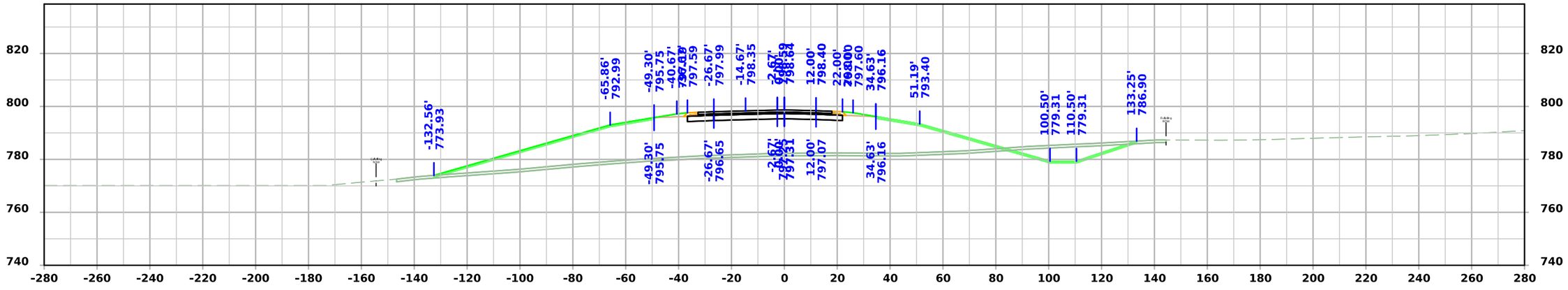


STA 296+00.00

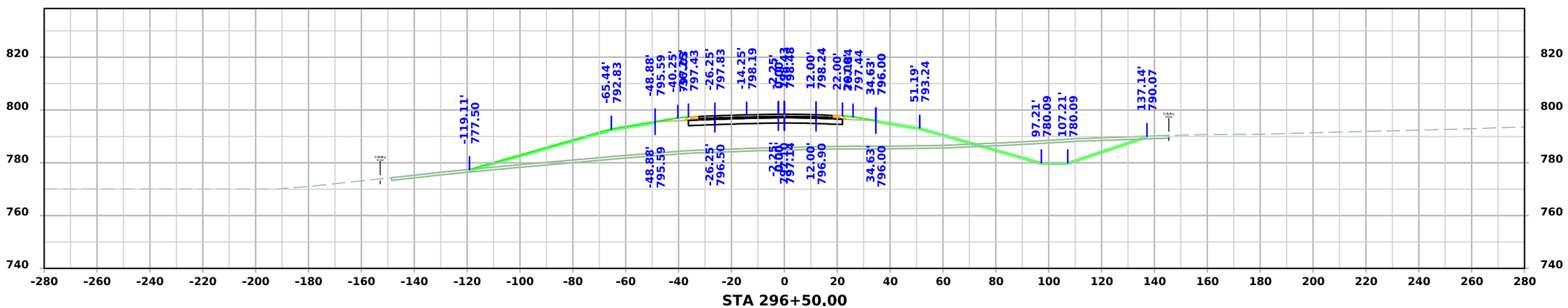
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.284

4:59:06 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 296+75.00

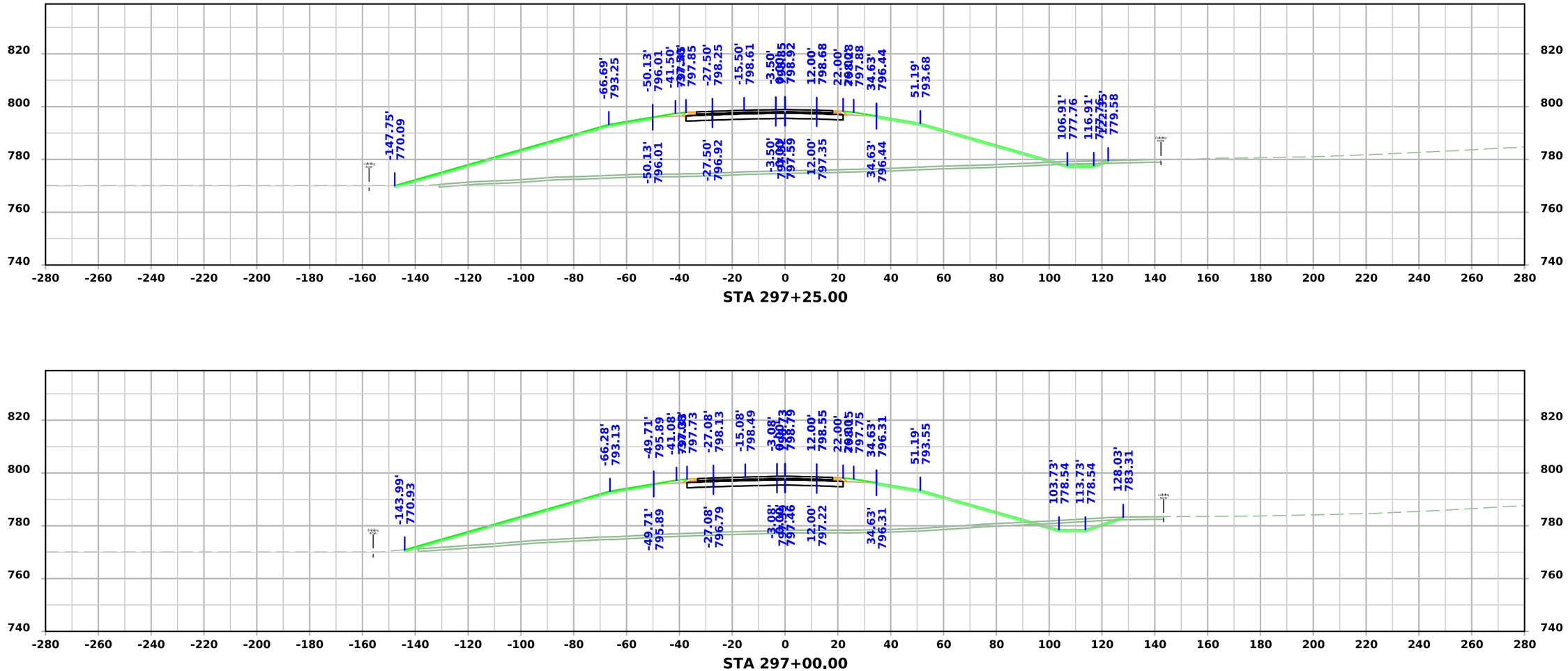


STA 296+50.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.285

4:59:10 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



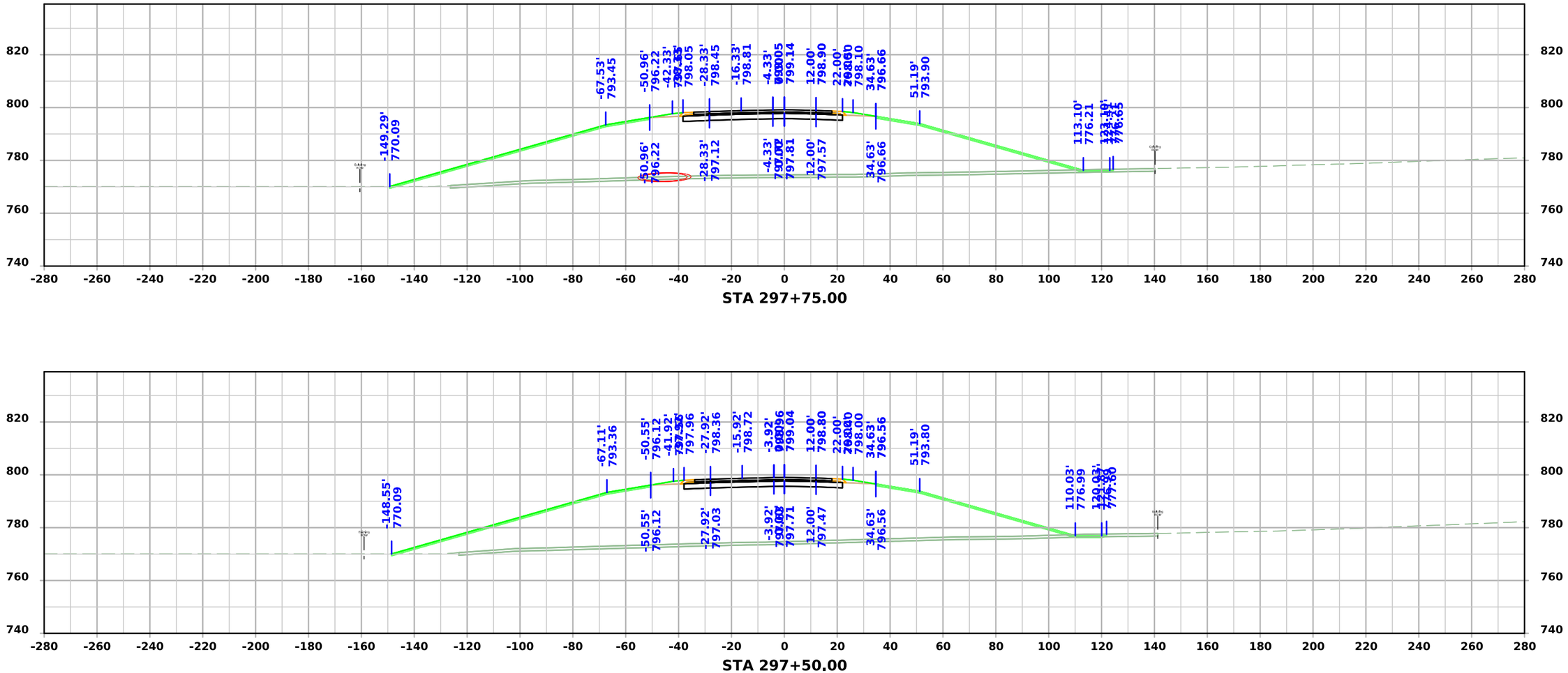
STA 297+25.00

STA 297+00.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.286

4:59:13 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

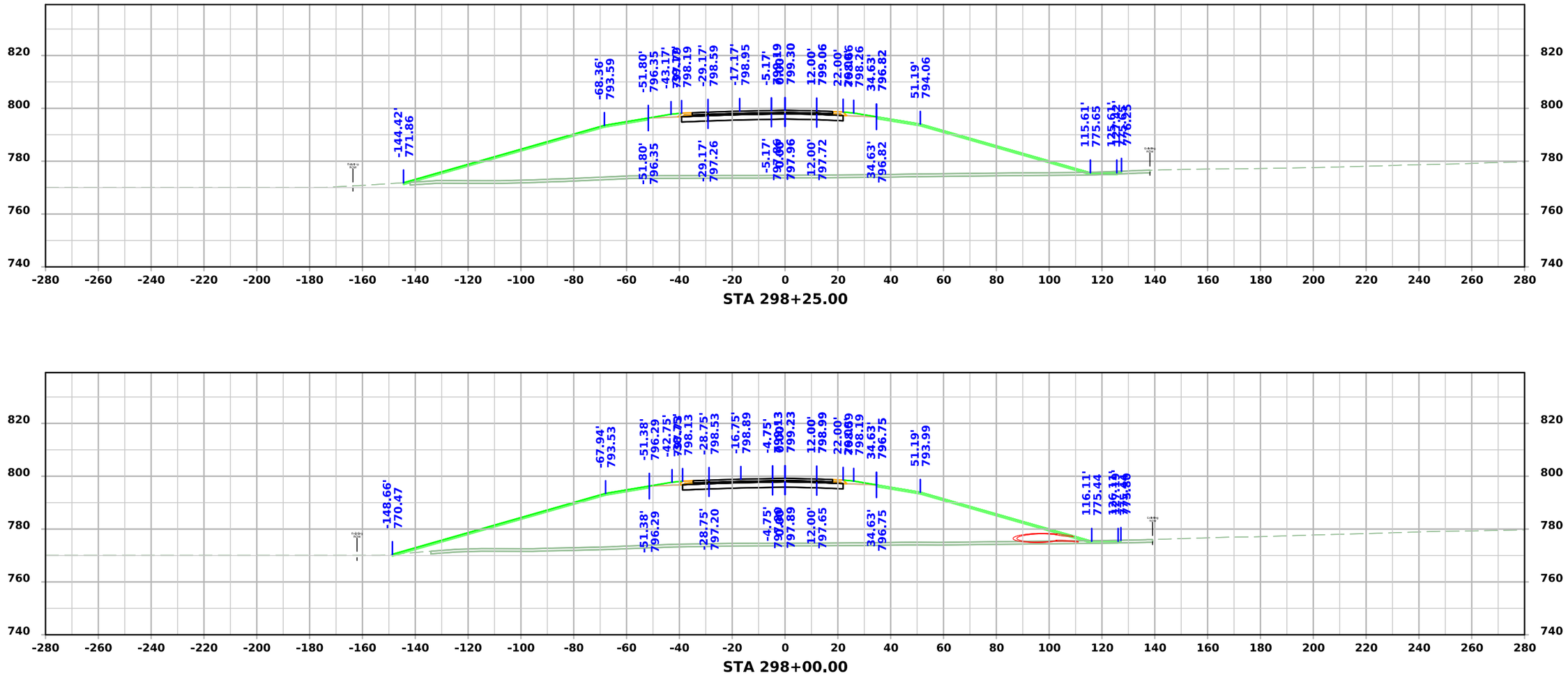
US 63



FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.287

4:59:17 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

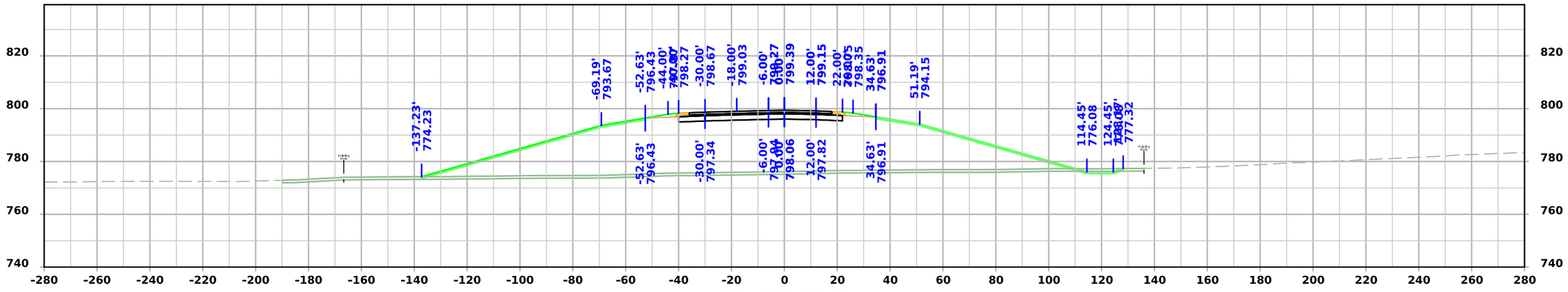
US 63



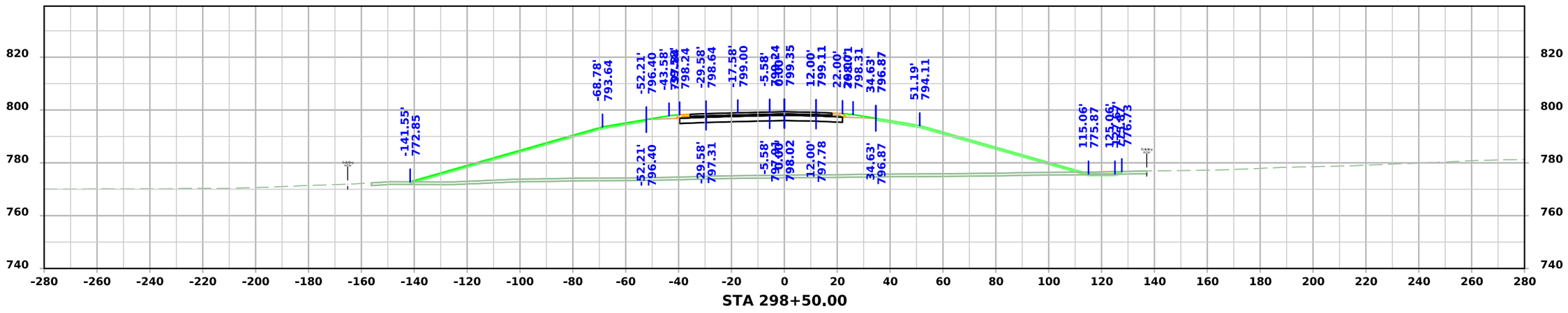
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.288

4:59:20 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 298+75.00

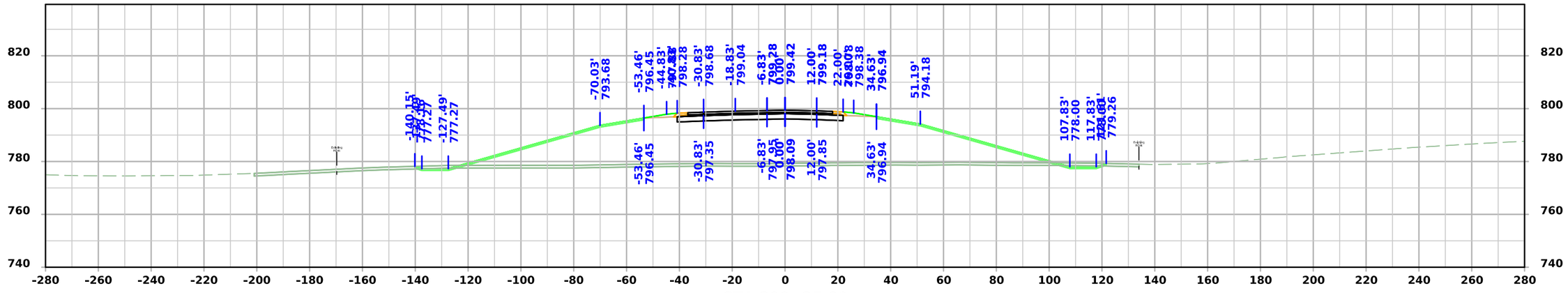


STA 298+50.00

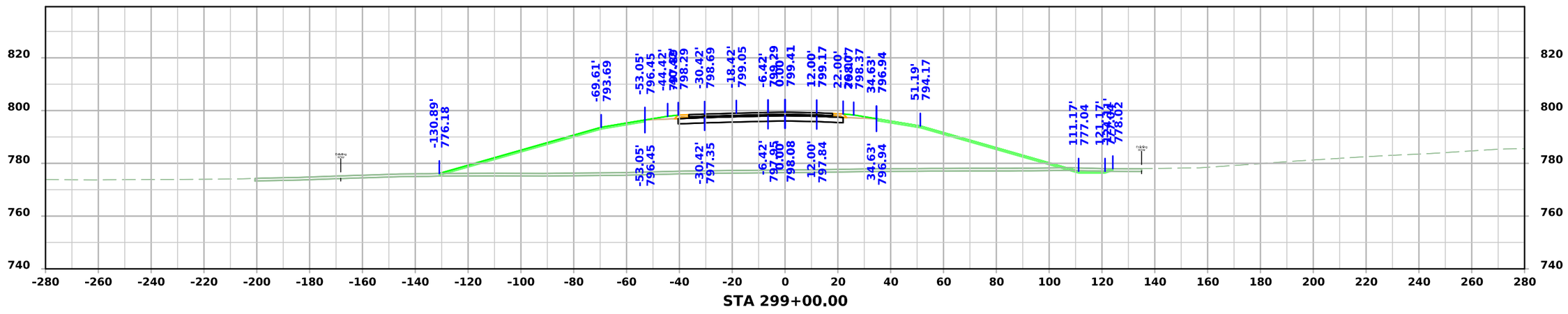
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.289

4:59:24 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 299+25.00

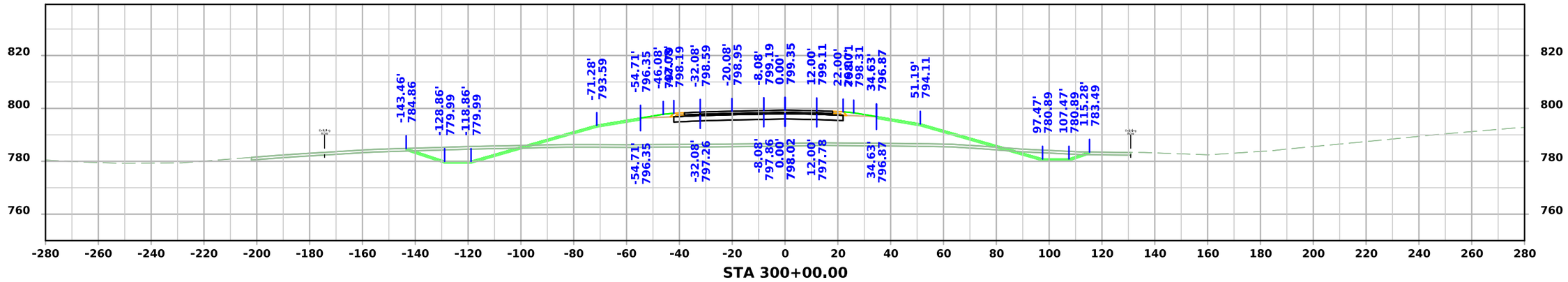


STA 299+00.00

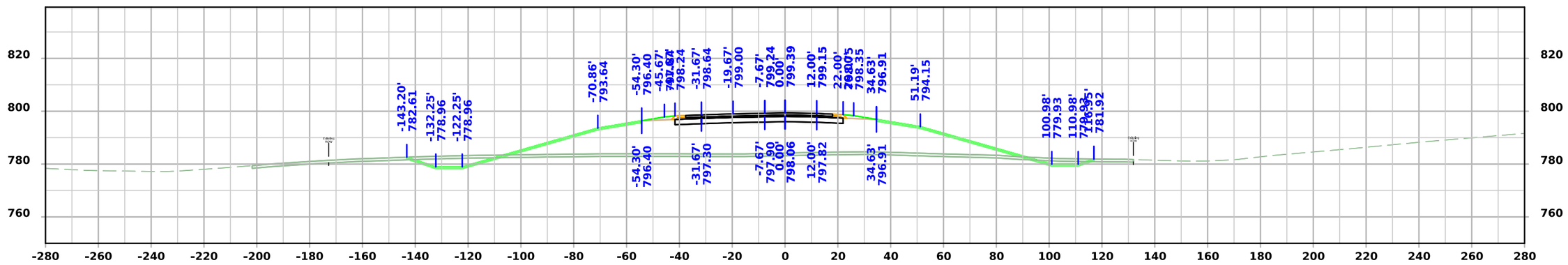
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.290

4:59:27 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

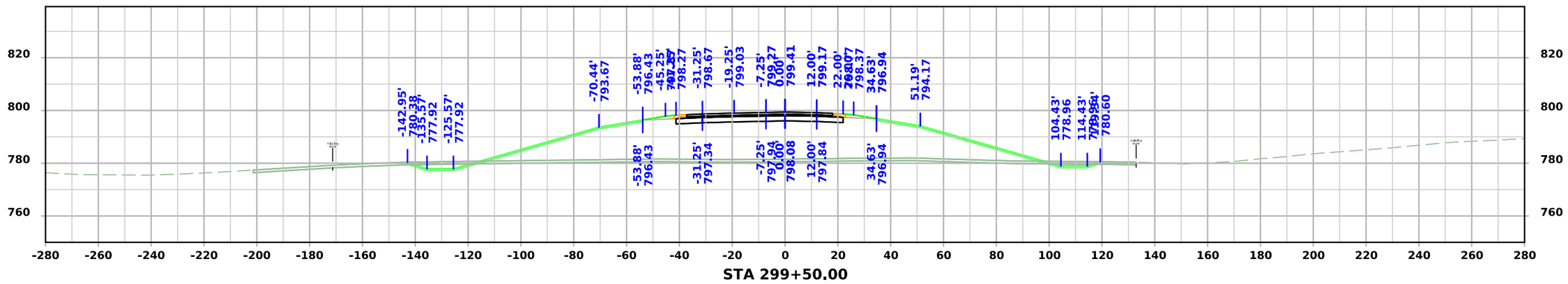
US 63



STA 300+00.00



STA 299+75.00

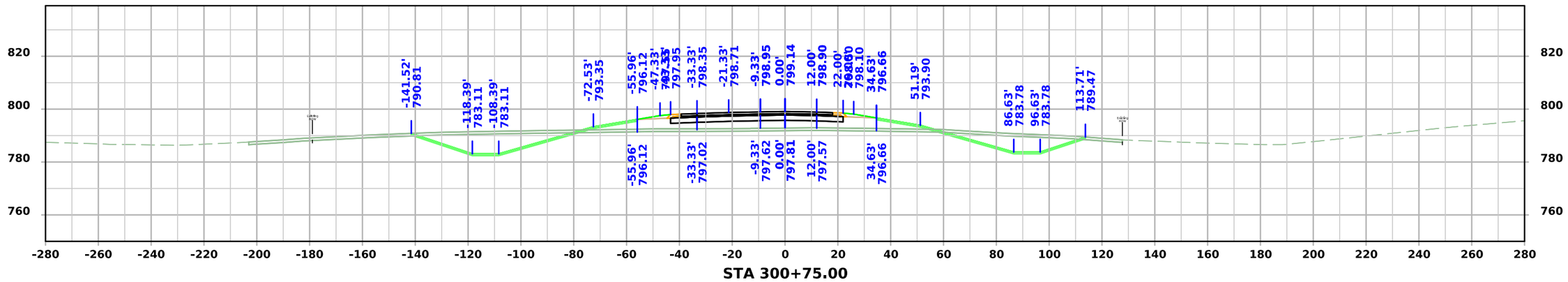


STA 299+50.00

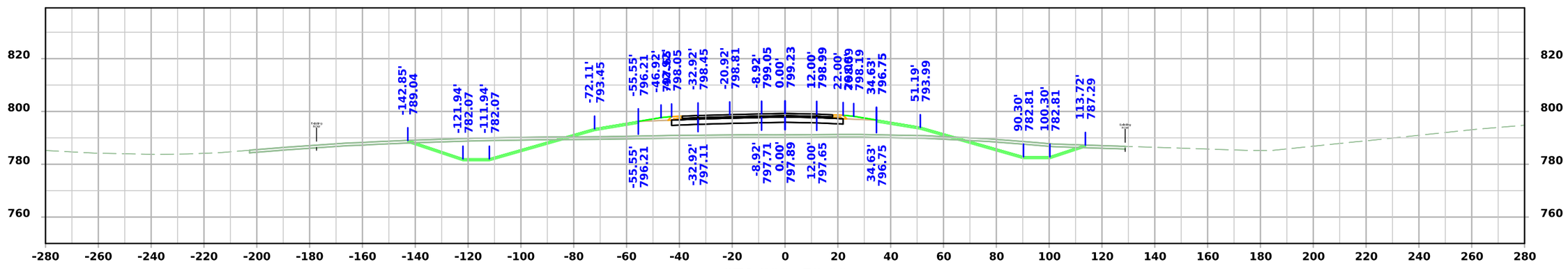
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.291

4:59:31 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

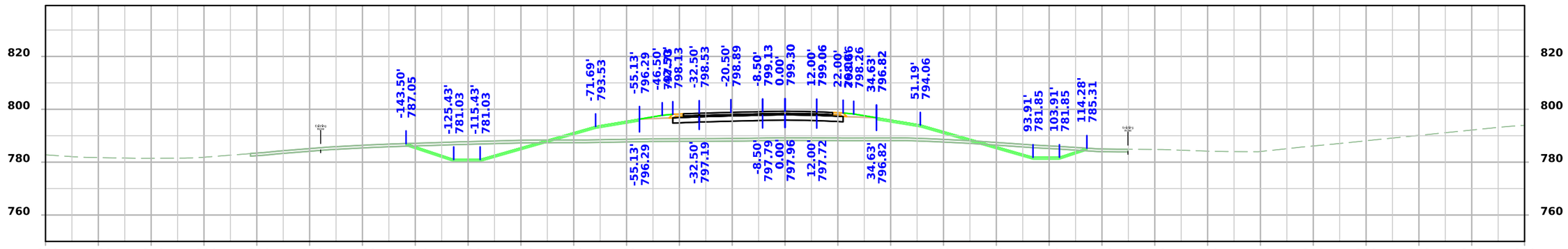
US 63



STA 300+75.00



STA 300+50.00

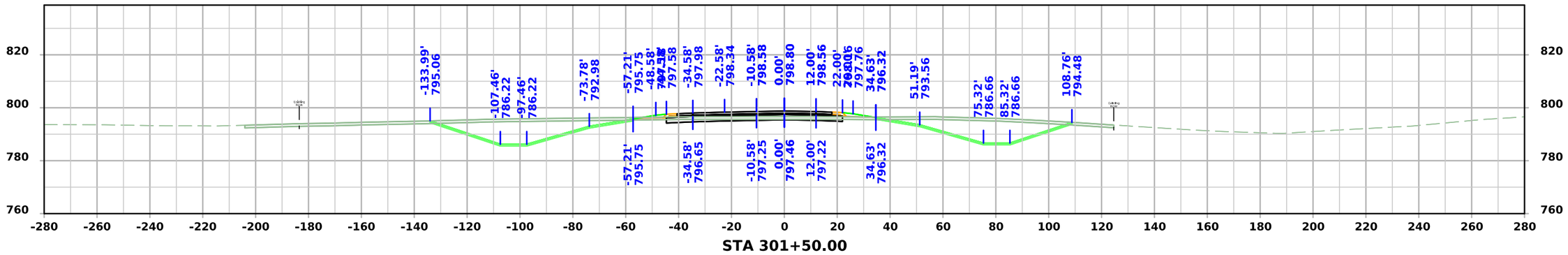


STA 300+25.00

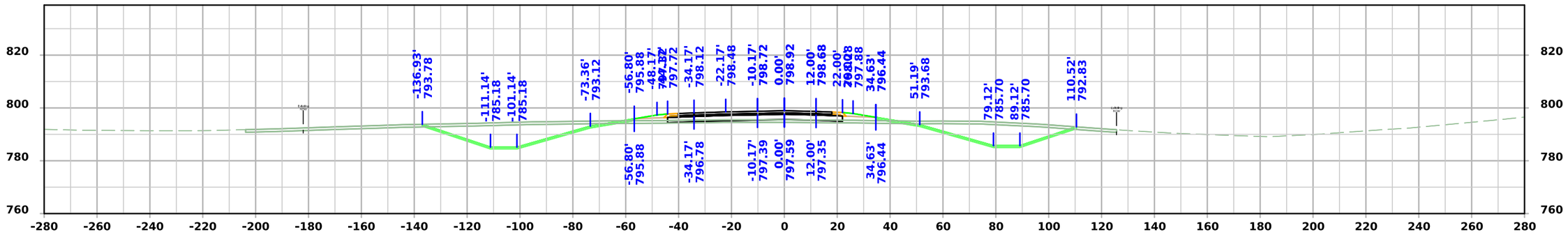
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.292

4:59:36 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

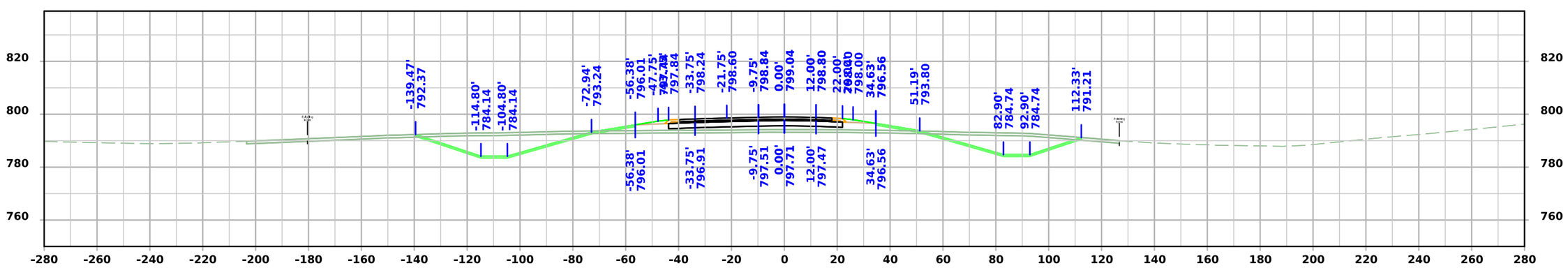
US 63



STA 301+50.00



STA 301+25.00

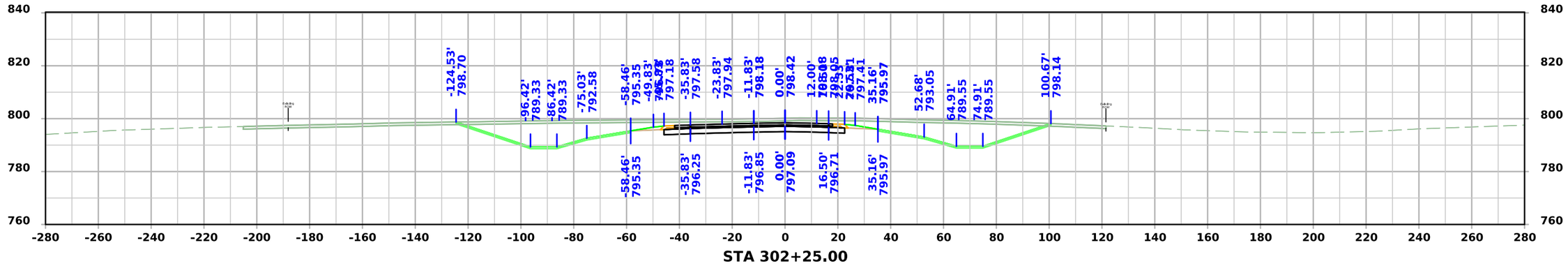


STA 301+00.00

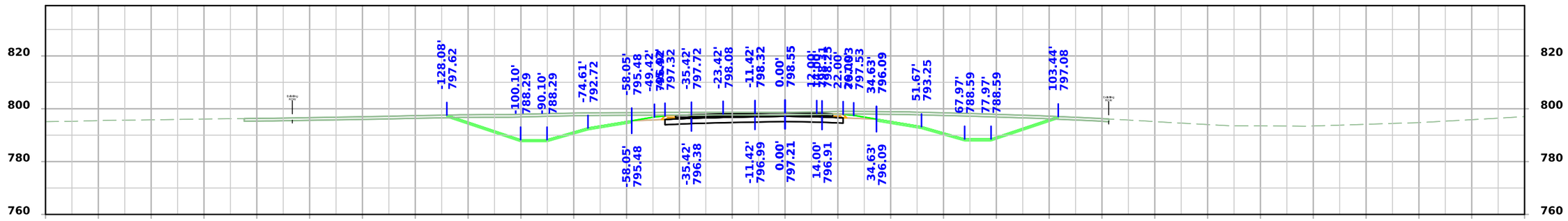
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.293

4:59:40 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

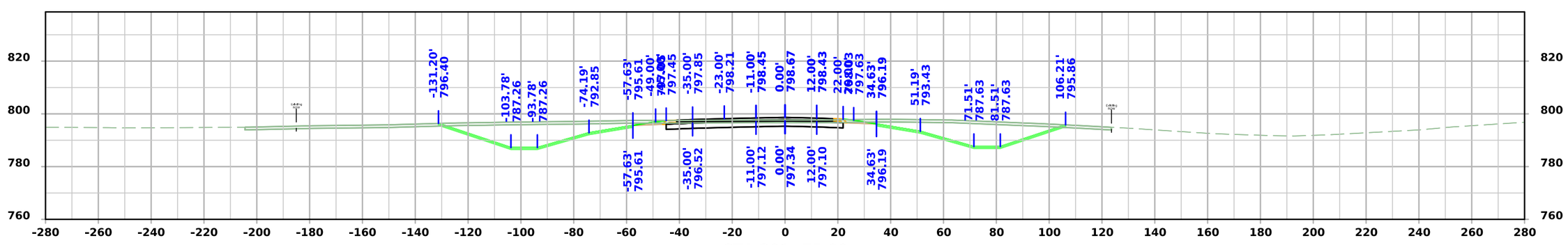
US 63



STA 302+25.00



STA 302+00.00

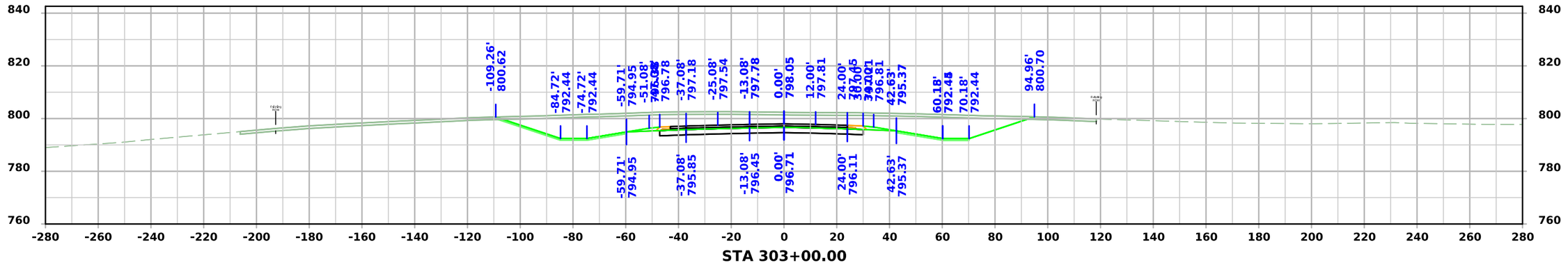


STA 301+75.00

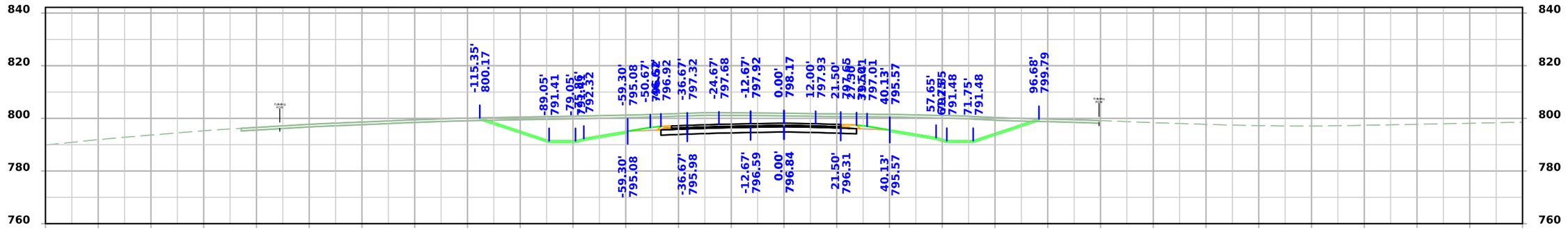
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.294

4:59:45 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

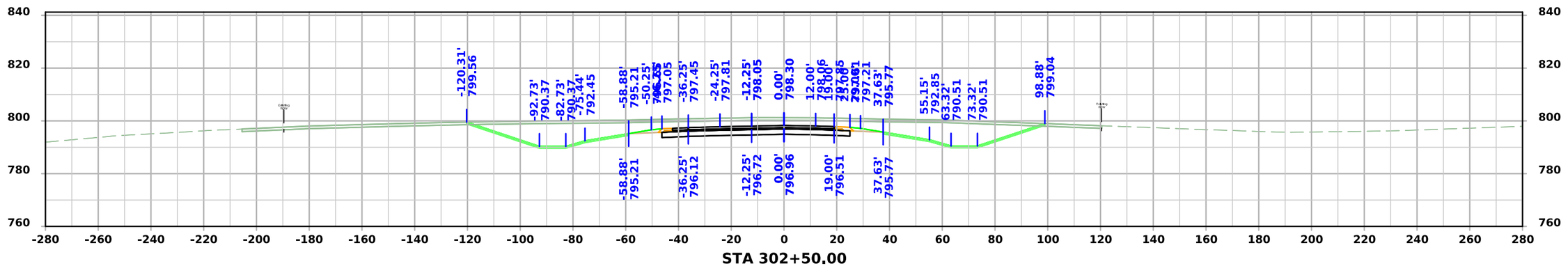
US 63



STA 303+00.00



STA 302+75.00

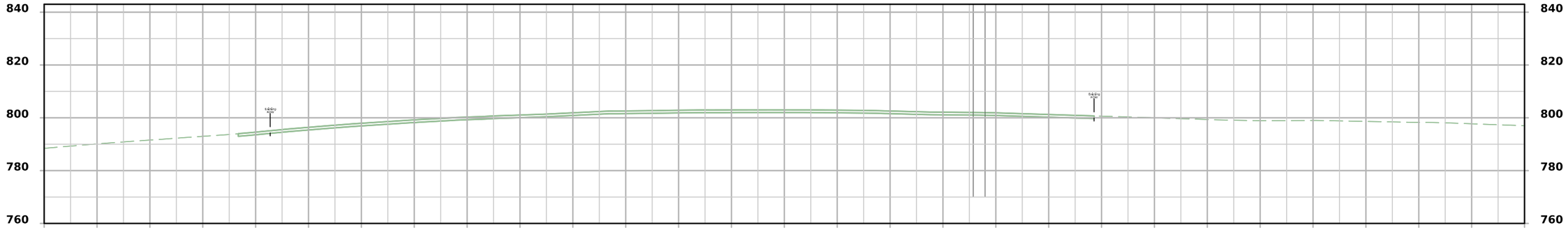


STA 302+50.00

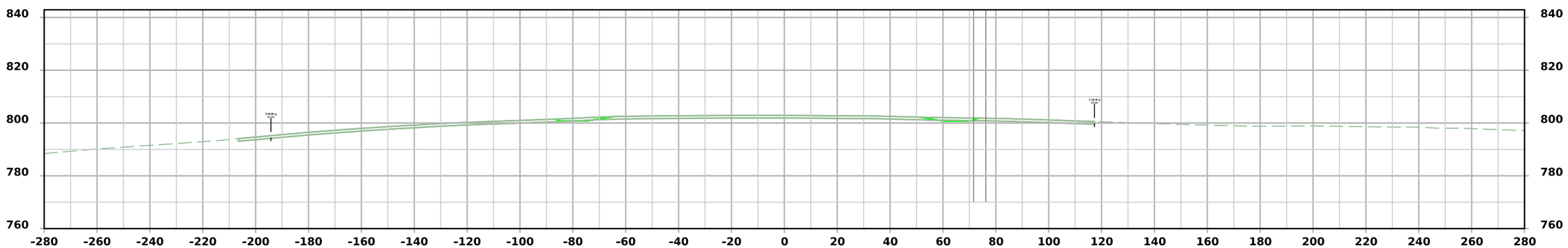
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.295

4:59:49 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

US 63



STA 303+29.07

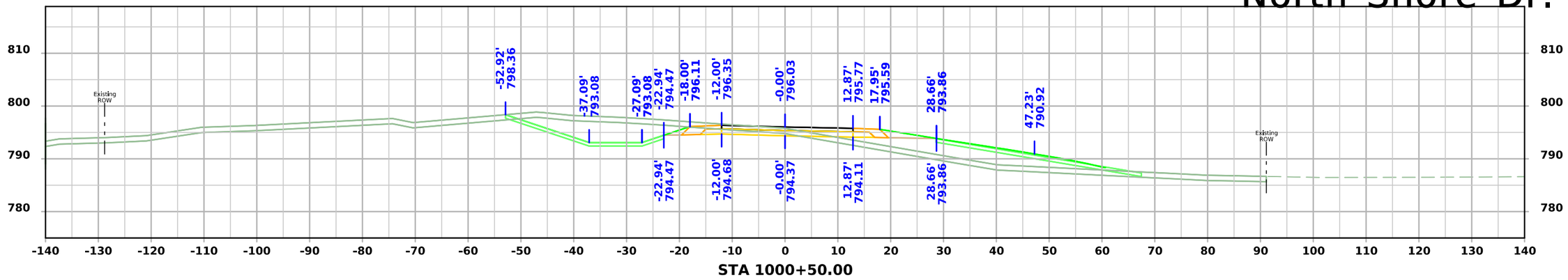


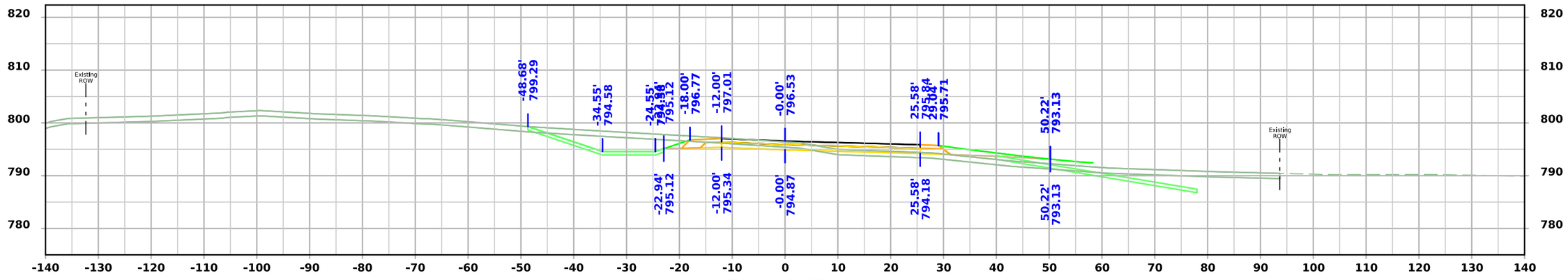
STA 303+25.00

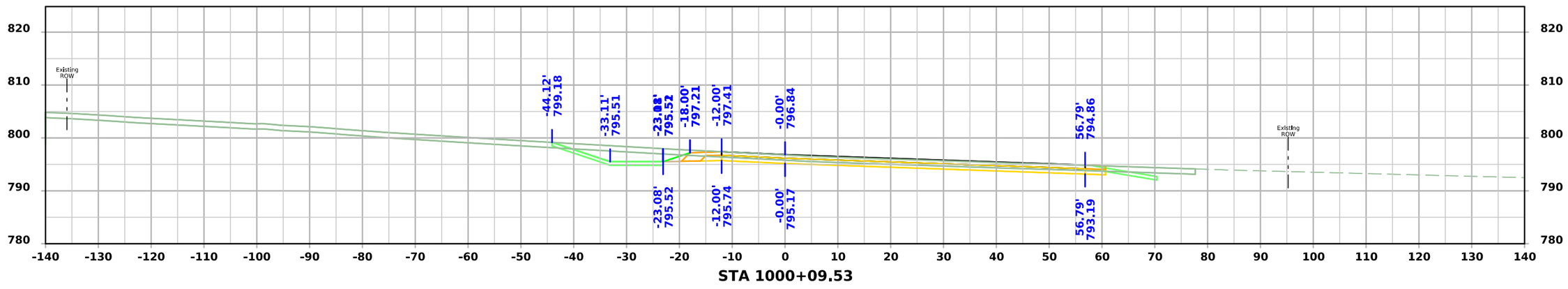
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER W.296

4:59:51 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ML063_62063095Z09_ORD_W01_Grading.dgn

North Shore Dr.







FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.100

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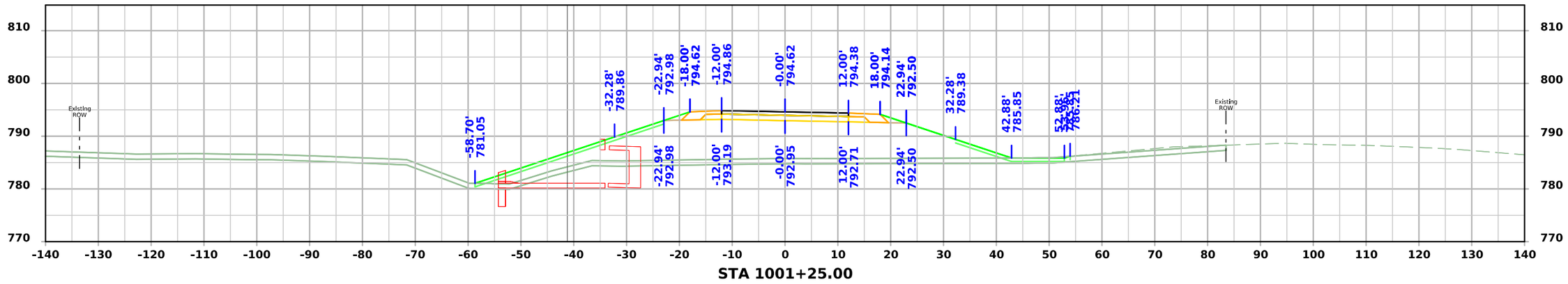
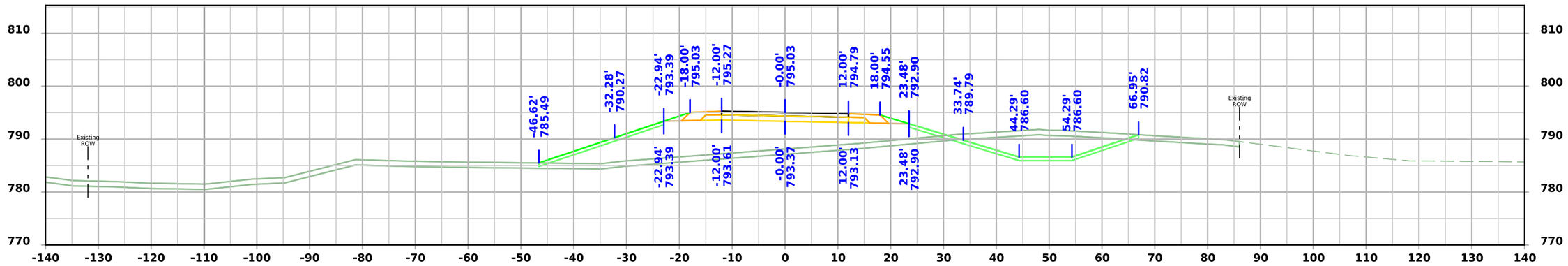
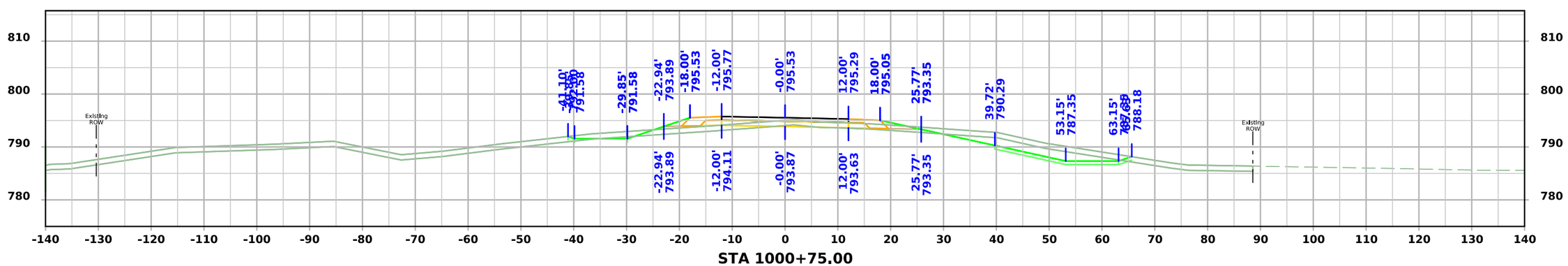
North Shore Dr.



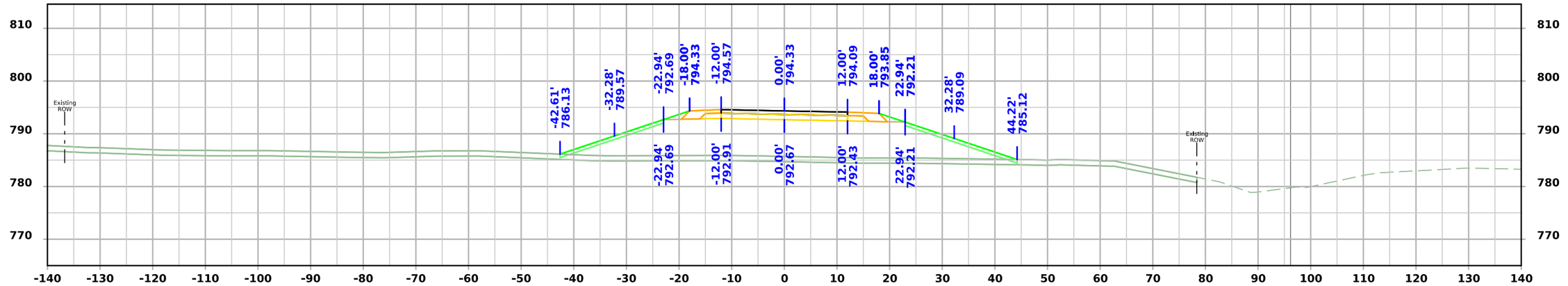




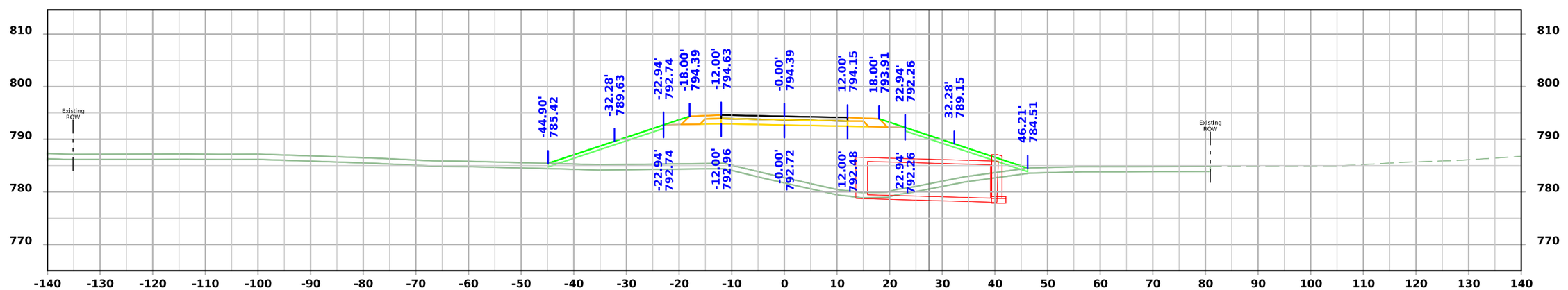
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.101

5:00:18 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1001+75.00

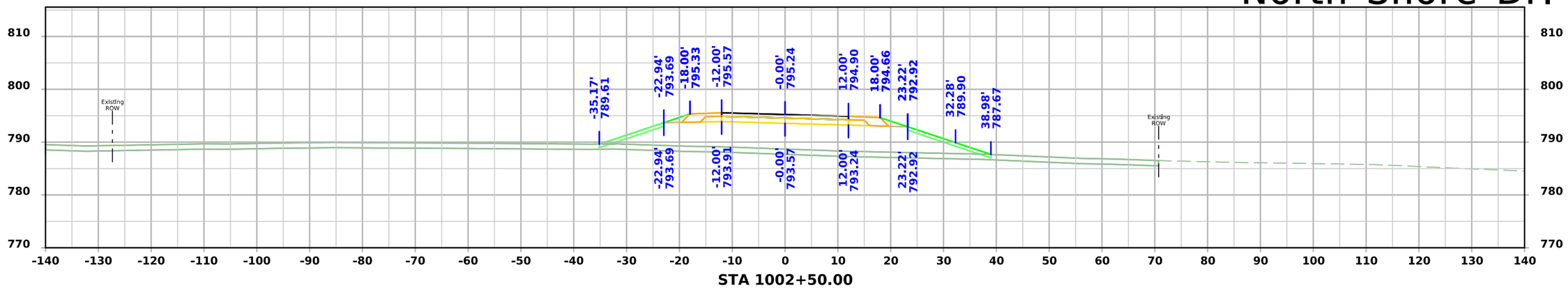


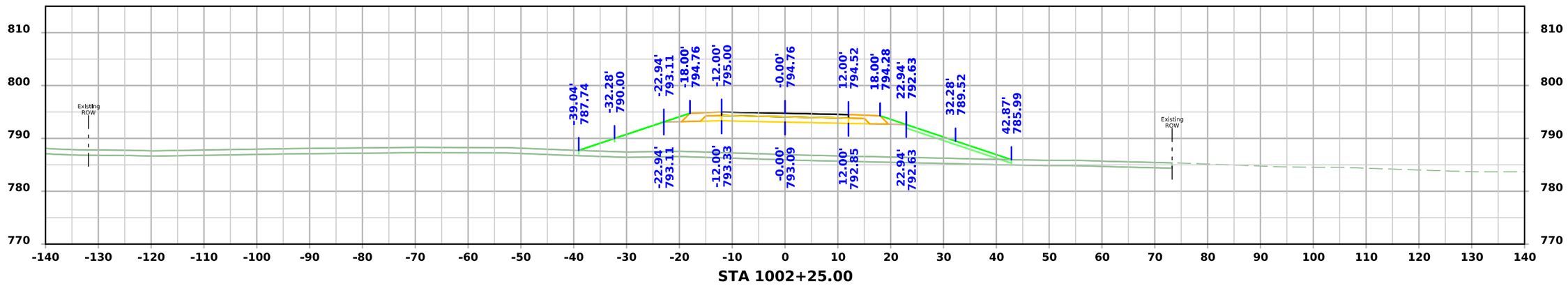
STA 1001+50.00

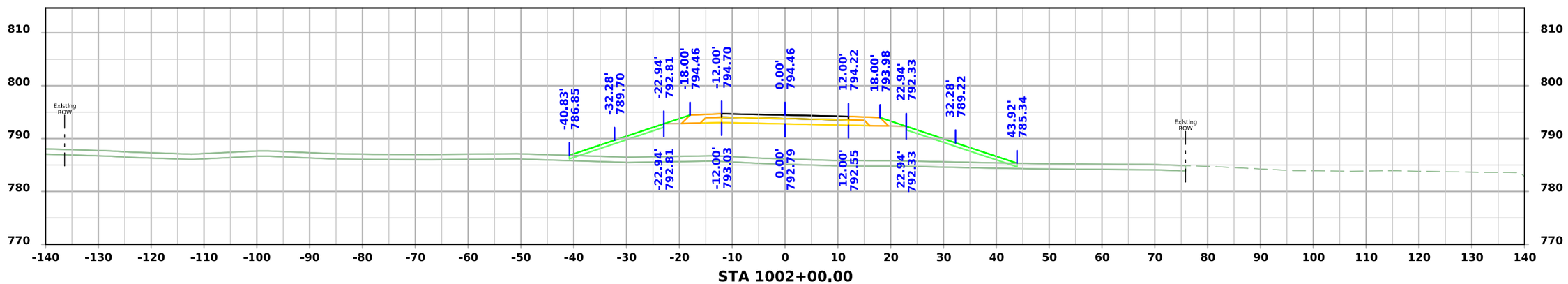
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.102

5:00:20 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.







FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.103

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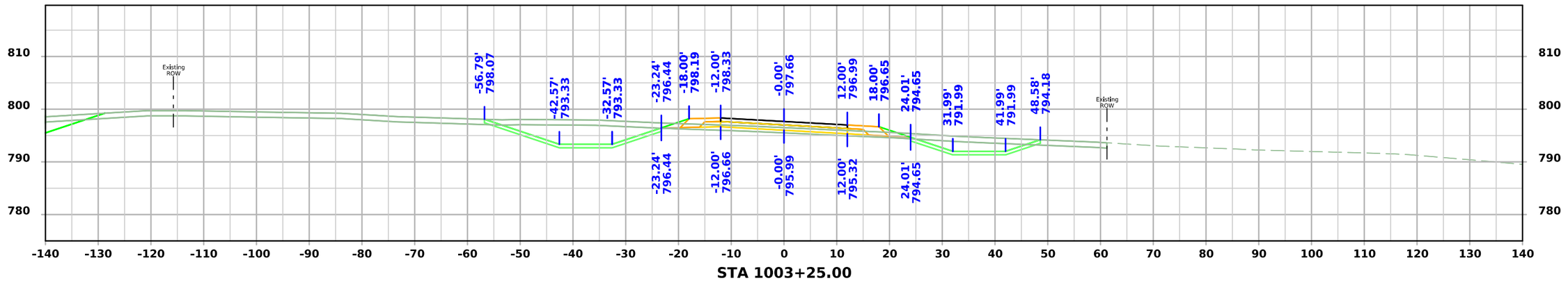
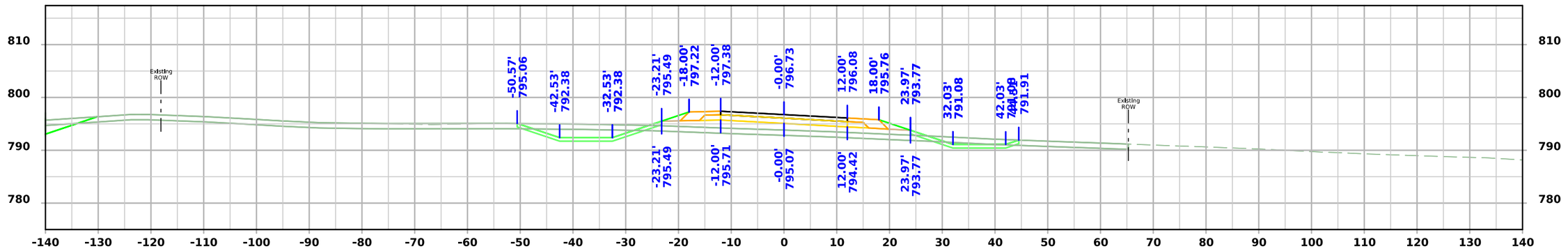
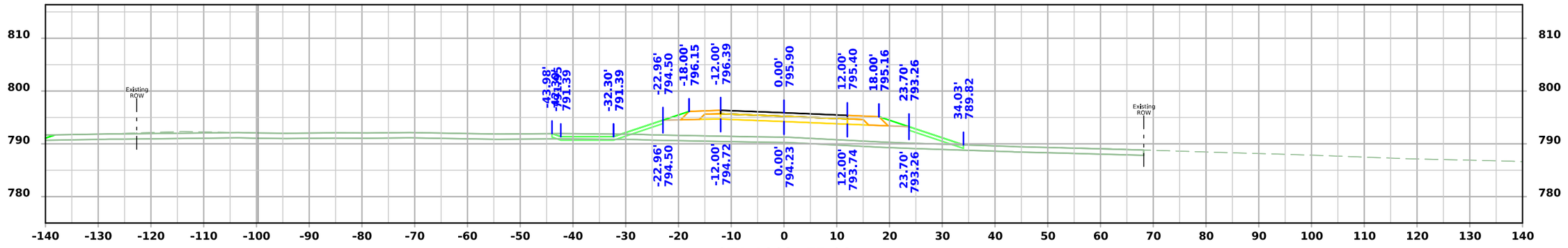
North Shore Dr.



STA 1003+25.00



STA 1003+00.00



STA 1002+75.00

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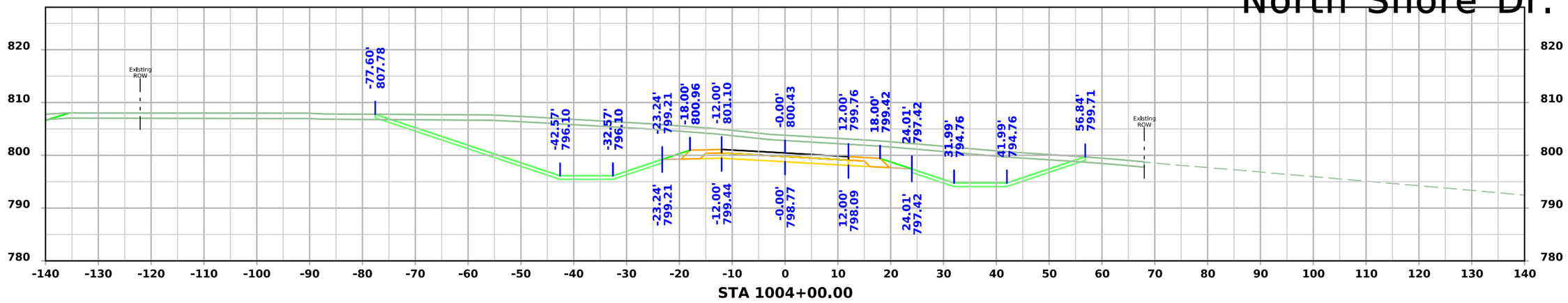
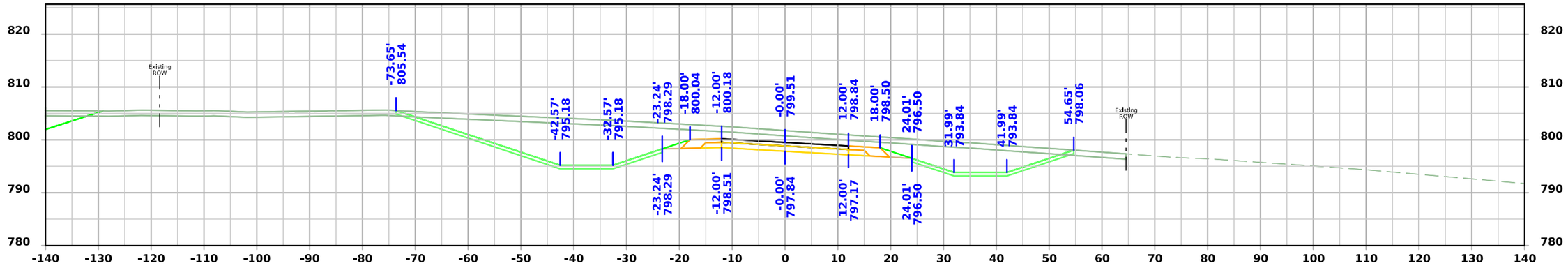
5:00:24 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

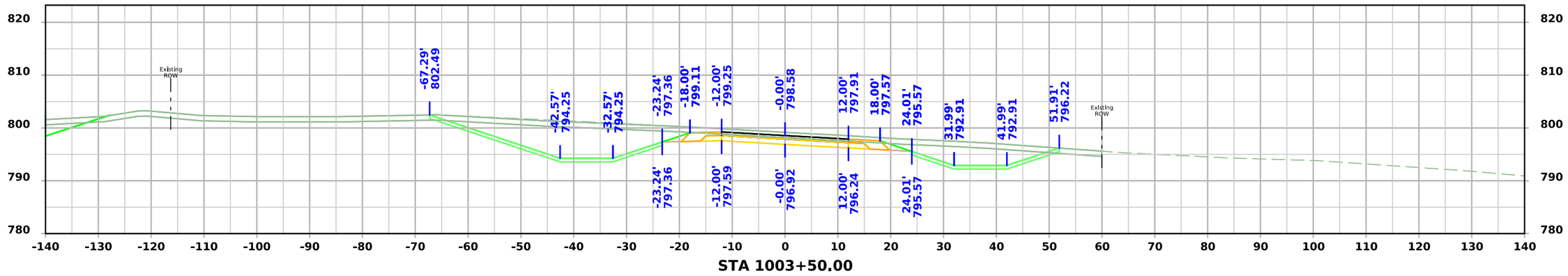
North Shore Dr.



STA 1004+00.00



STA 1003+75.00

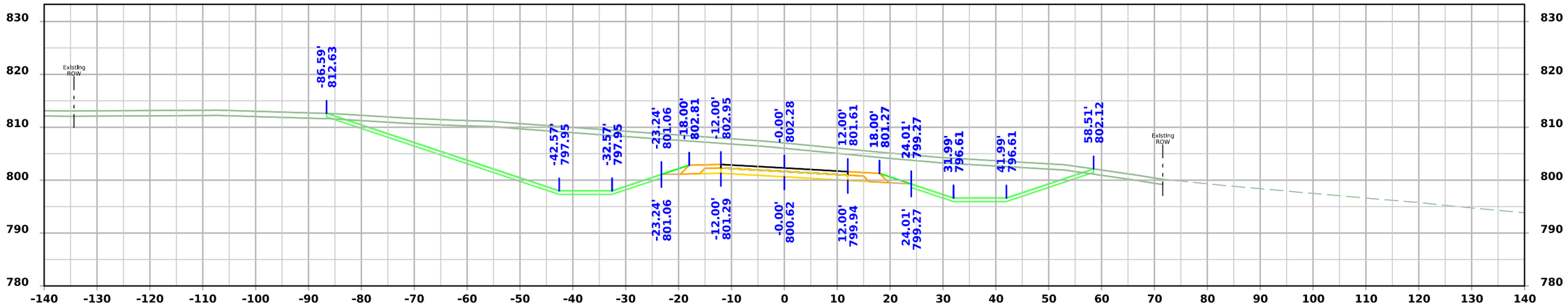


STA 1003+50.00

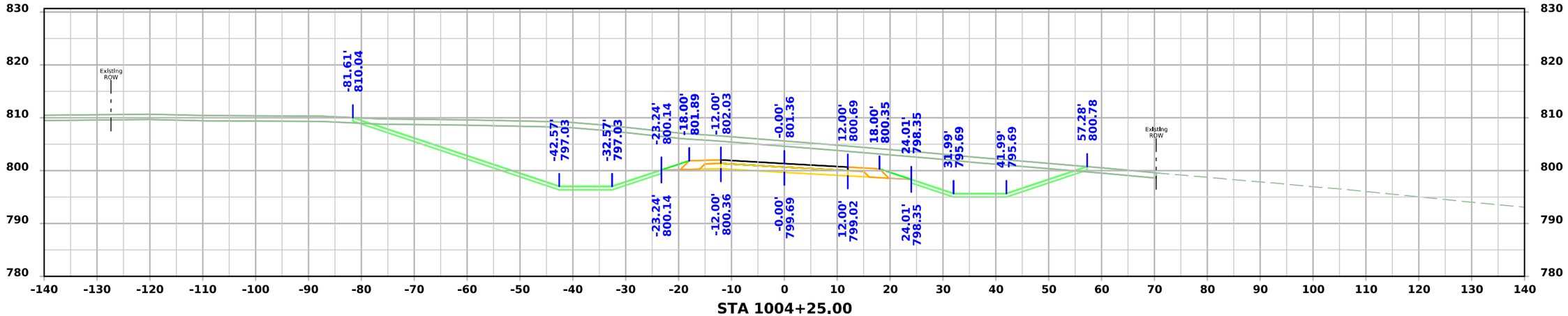
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.105

5:00:26 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1004+50.00

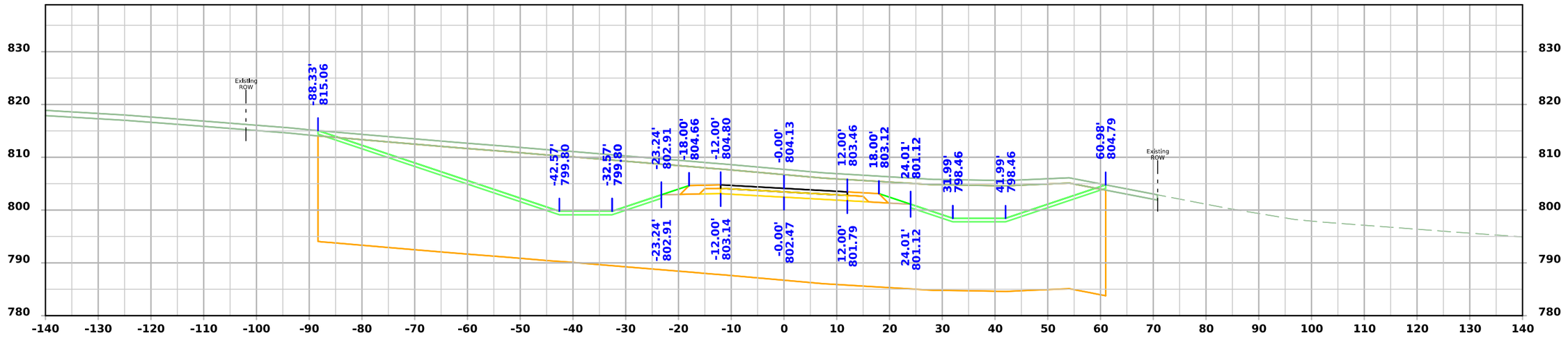


STA 1004+25.00

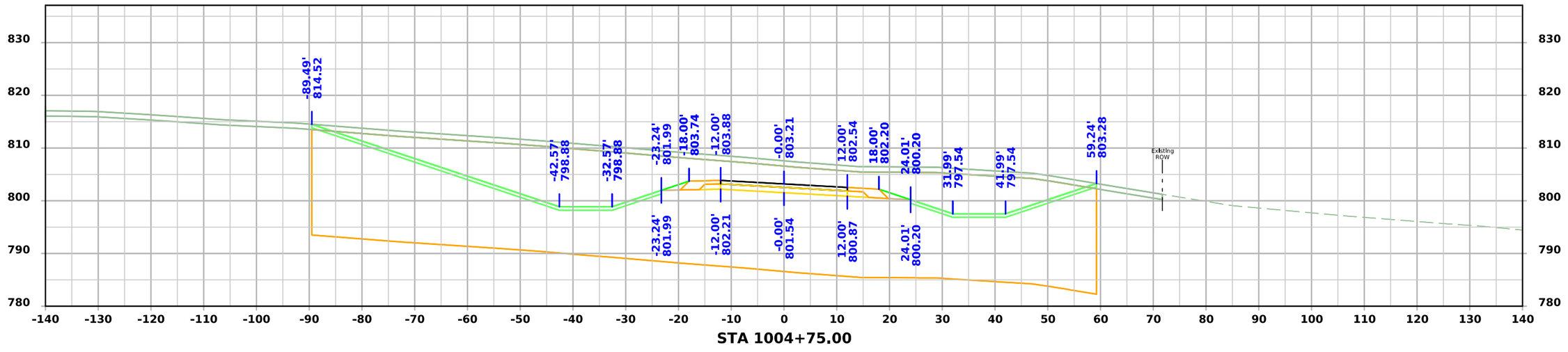
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.106

5:00:27 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1005+00.00



STA 1004+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.107

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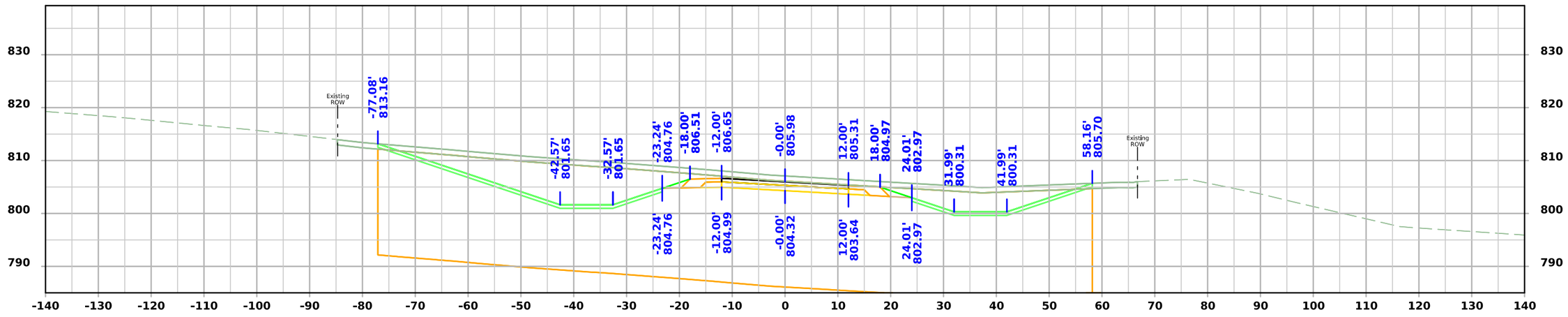
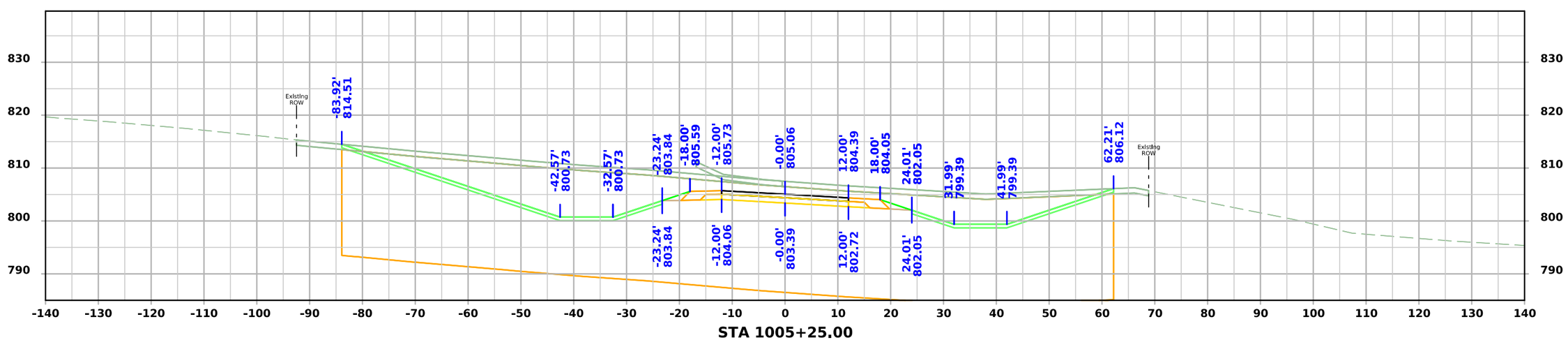
North Shore Dr.



STA 1005+50.00

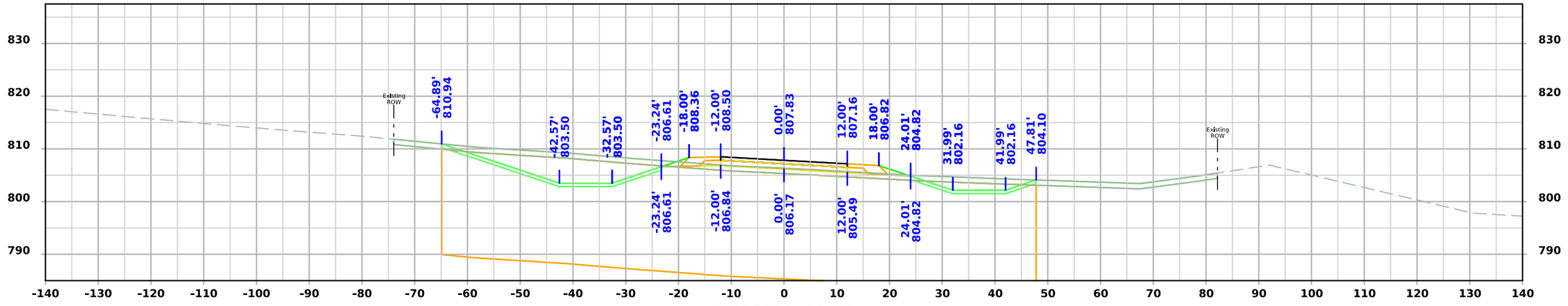


STA 1005+25.00

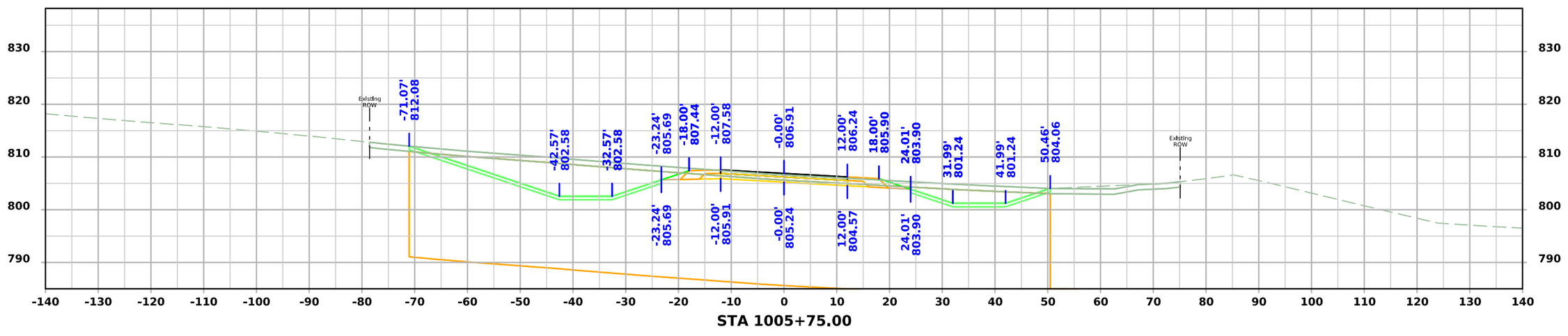
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.108

5:00:30 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1006+00.00

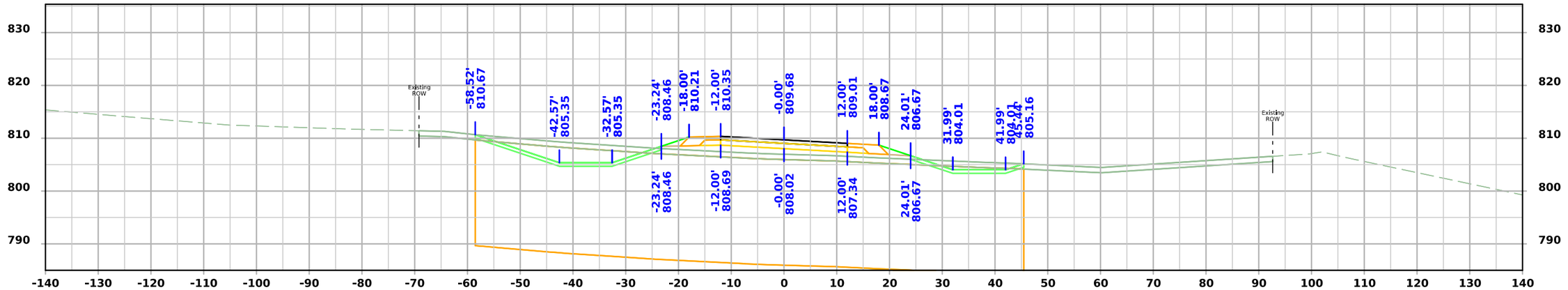


STA 1005+75.00

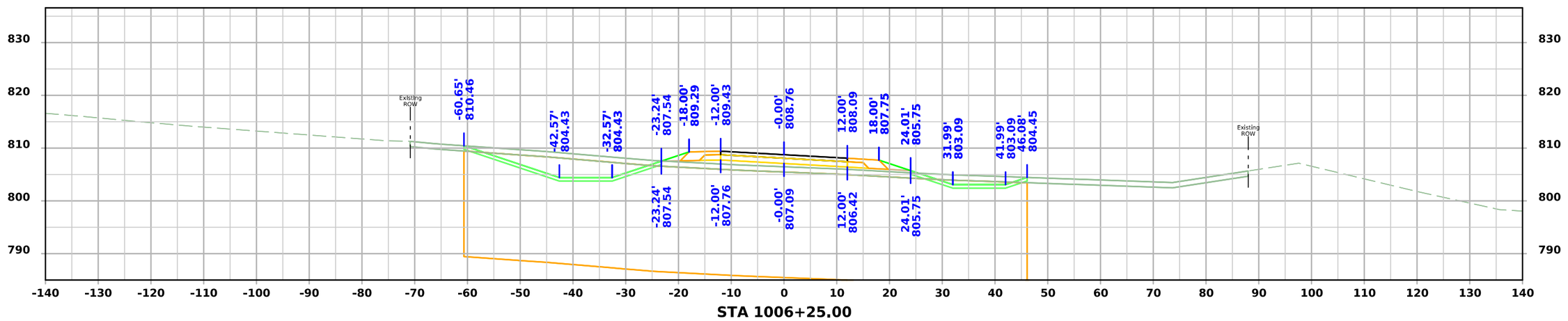
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.109

5:00:32 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1006+50.00



STA 1006+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.110

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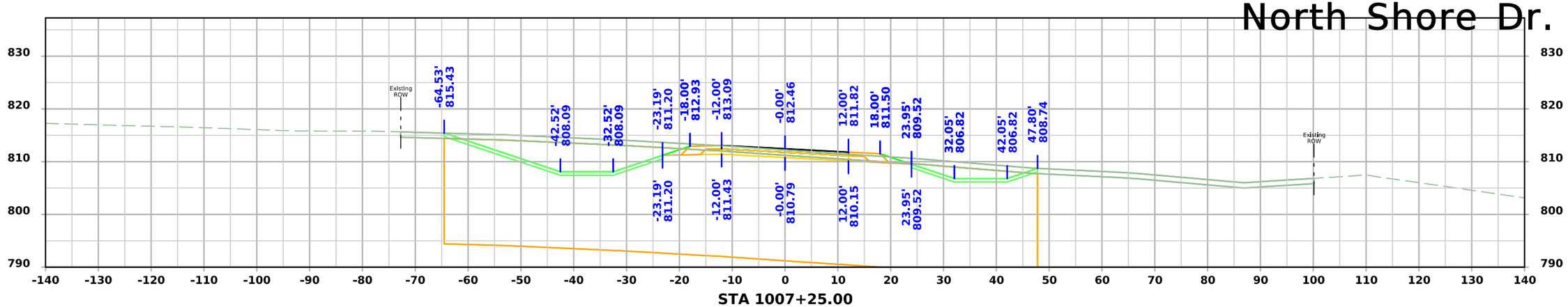
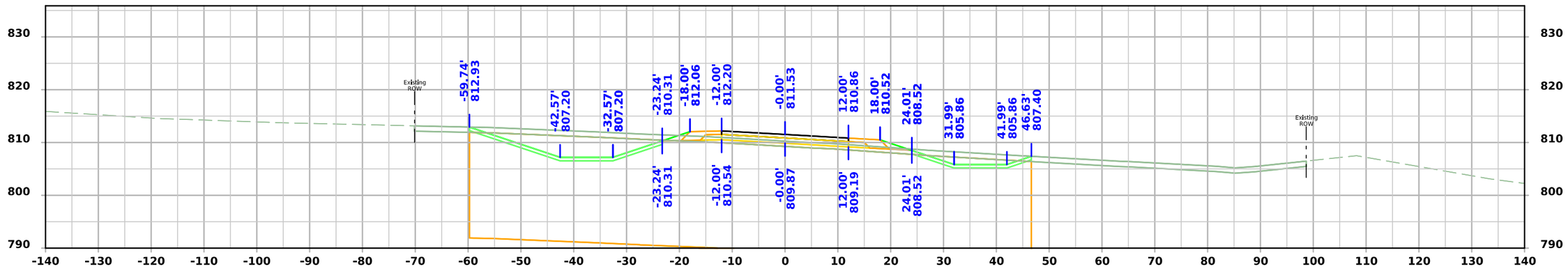
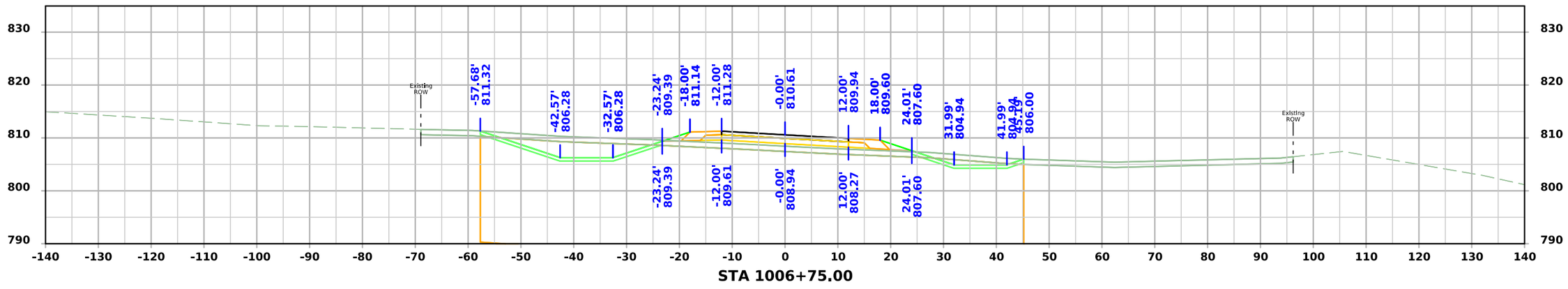
North Shore Dr.



STA 1007+25.00



STA 1007+00.00



STA 1006+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.111

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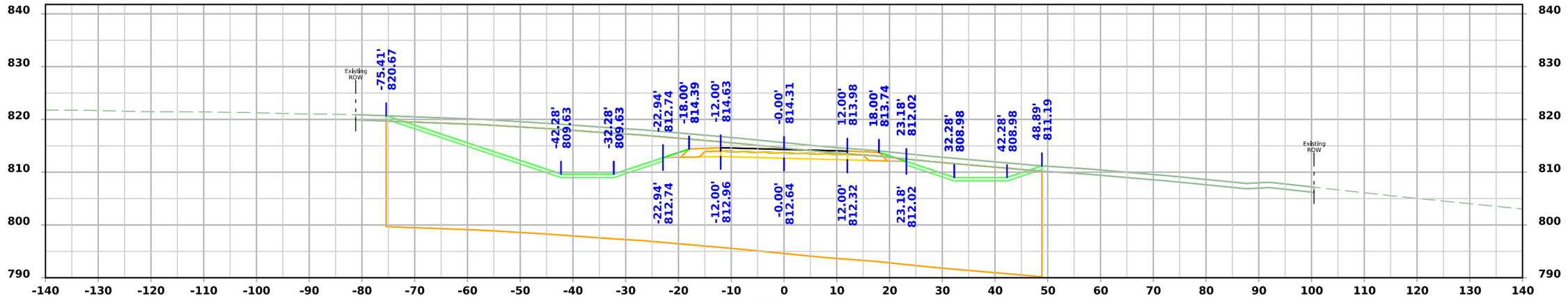
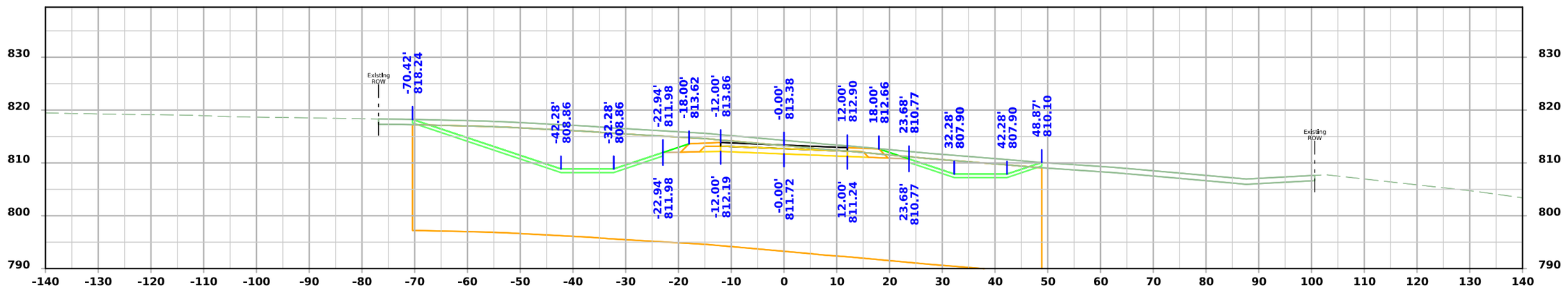
North Shore Dr.



STA 1007+75.00

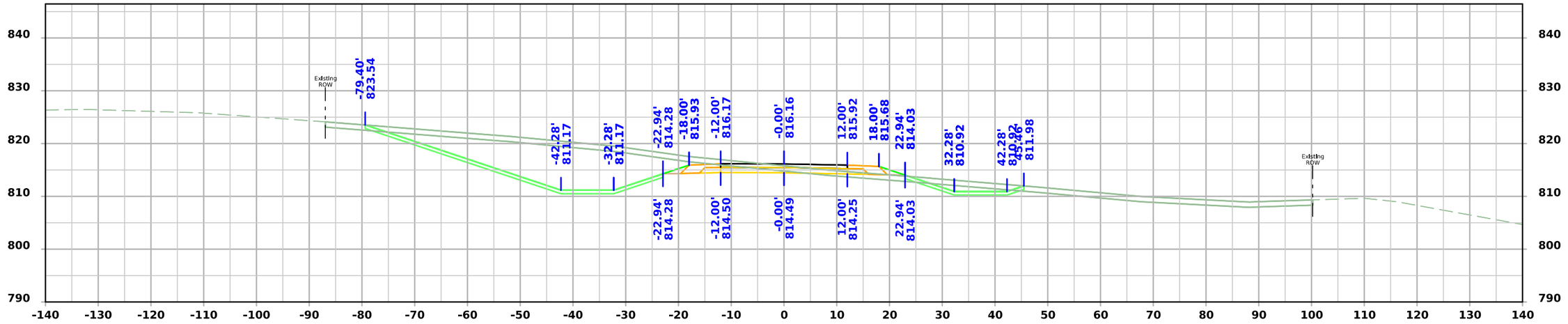


STA 1007+50.00

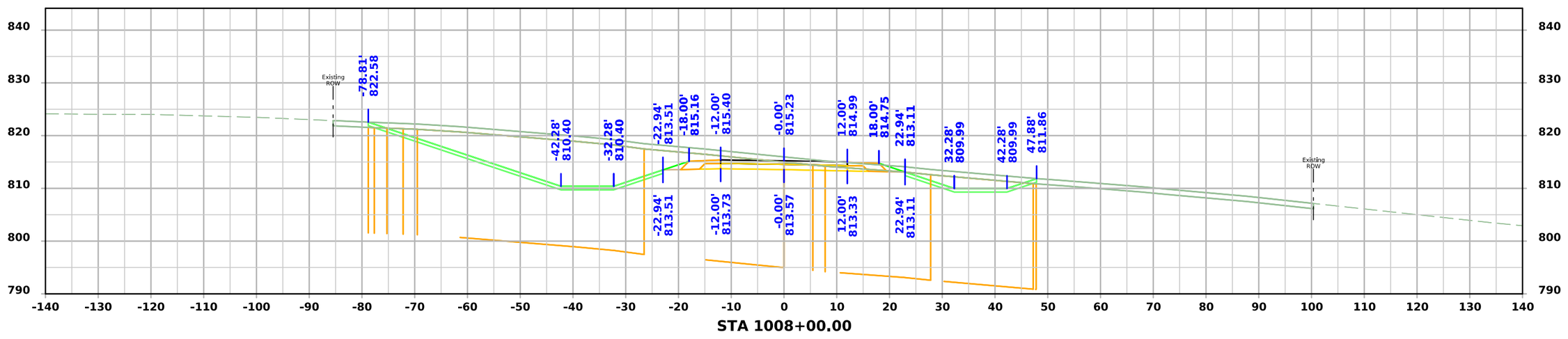
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.112

5:00:37 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1008+25.00

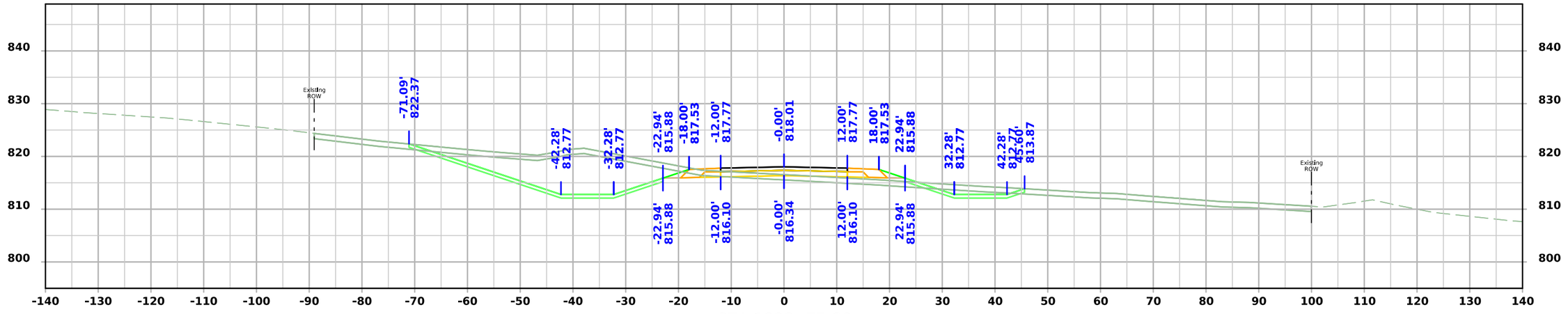


STA 1008+00.00

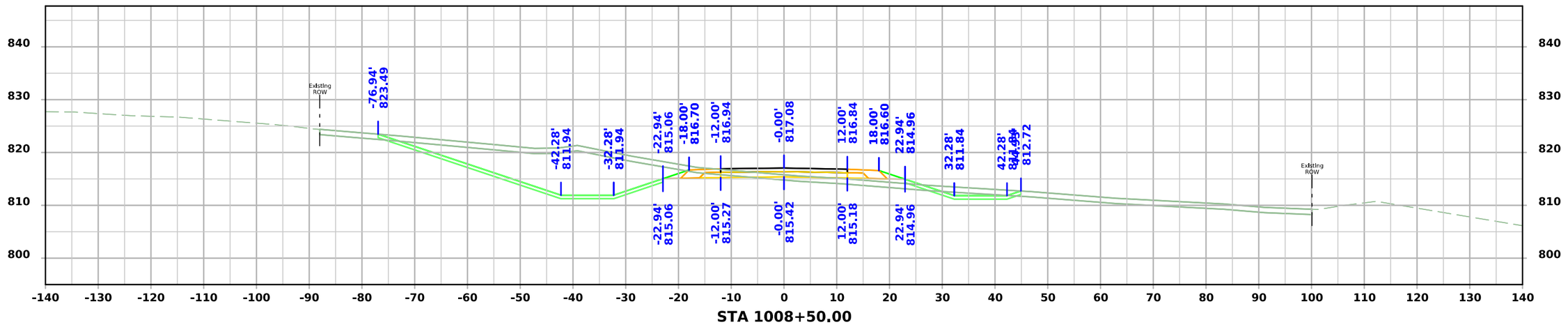
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.113

5:00:38 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1008+75.00

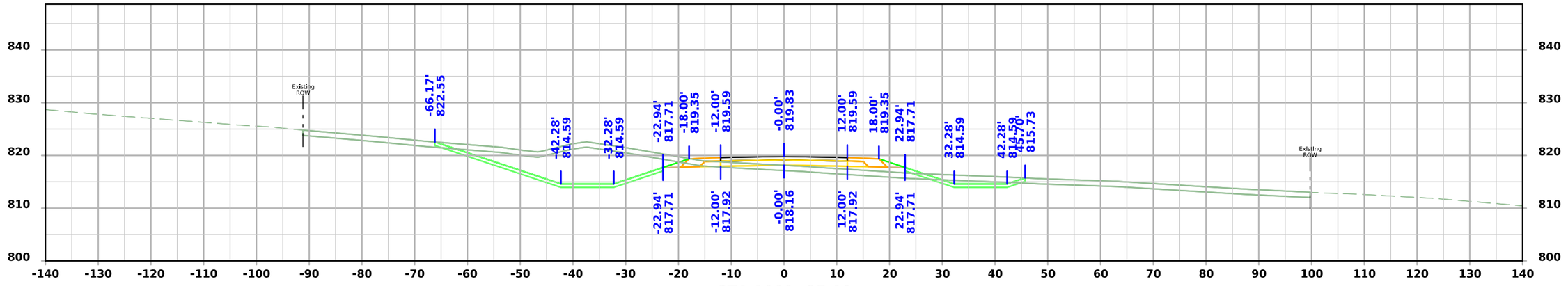


STA 1008+50.00

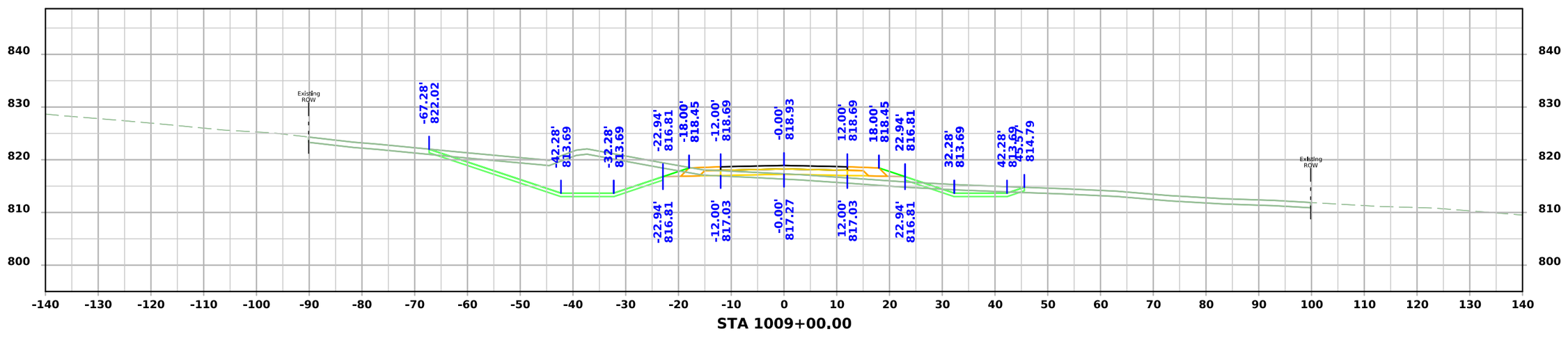
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.114

5:00:39 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1009+25.00

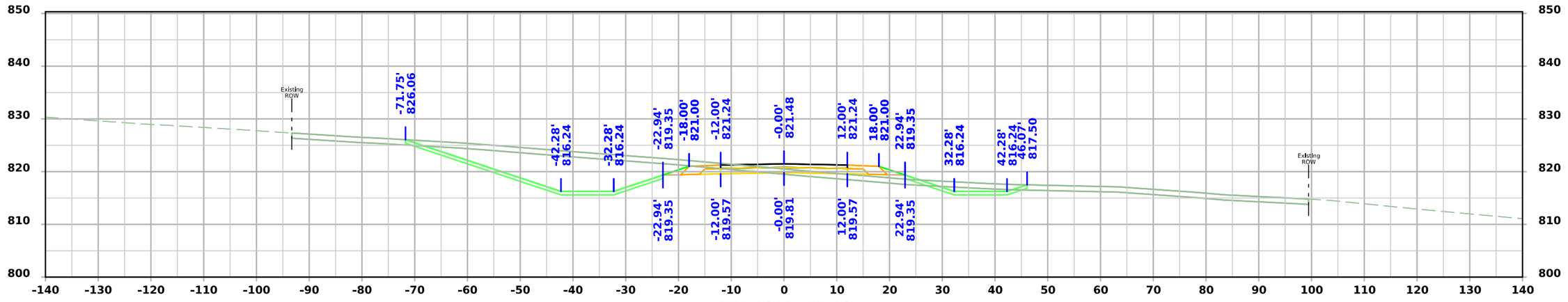


STA 1009+00.00

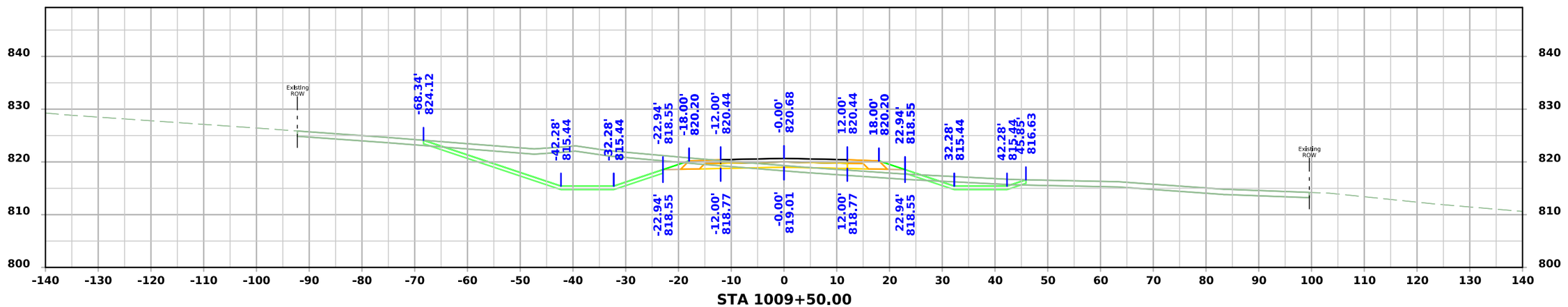
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.115

5:00:40 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1009+75.00

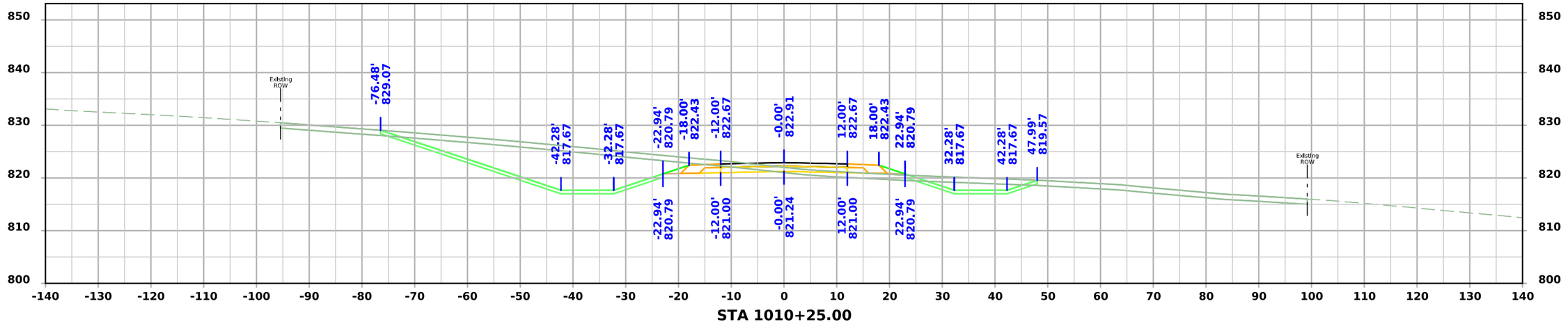


STA 1009+50.00

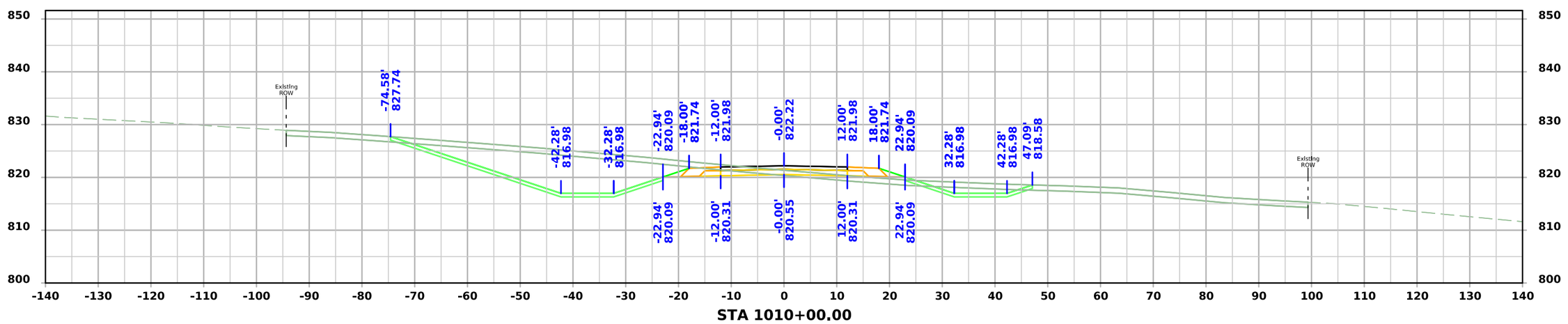
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.116

5:00:42 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1010+25.00

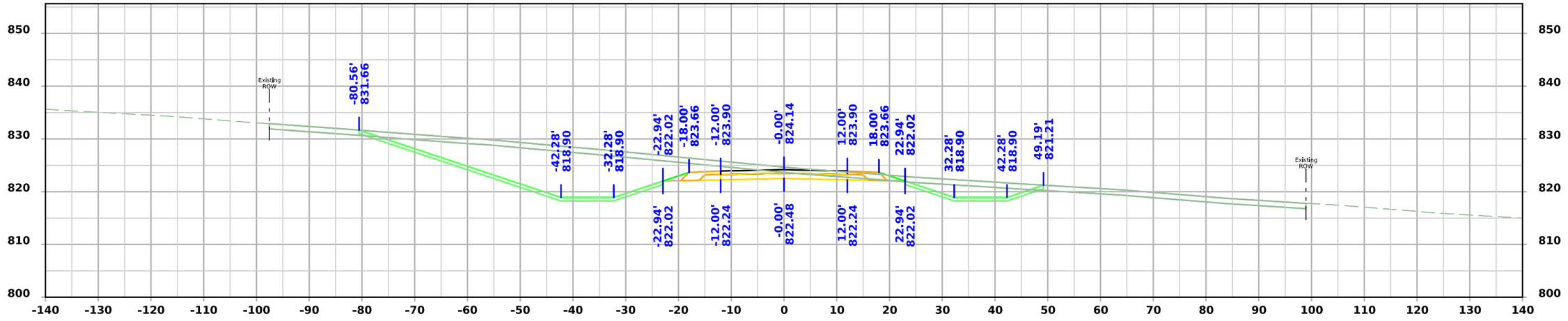


STA 1010+00.00

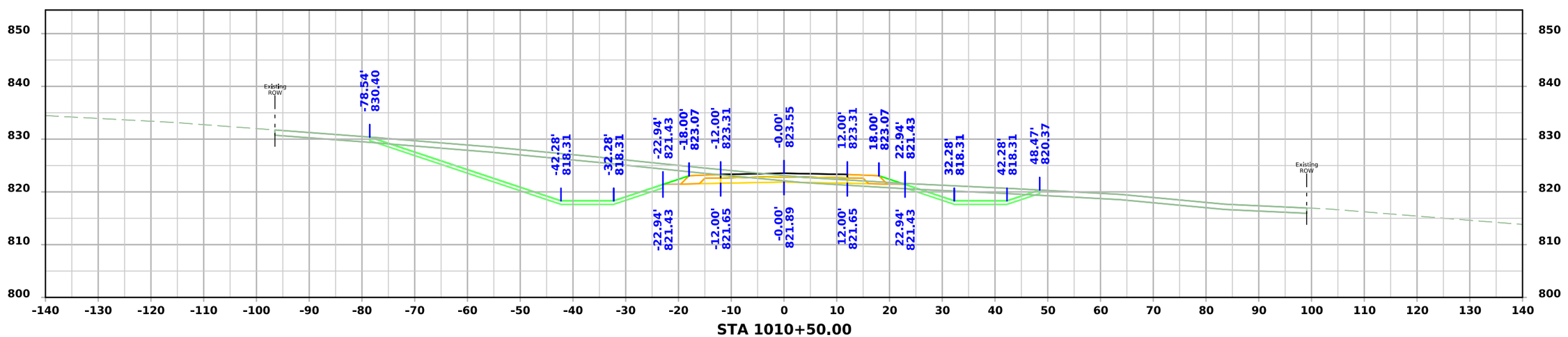
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.117

5:00:43 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1010+75.00

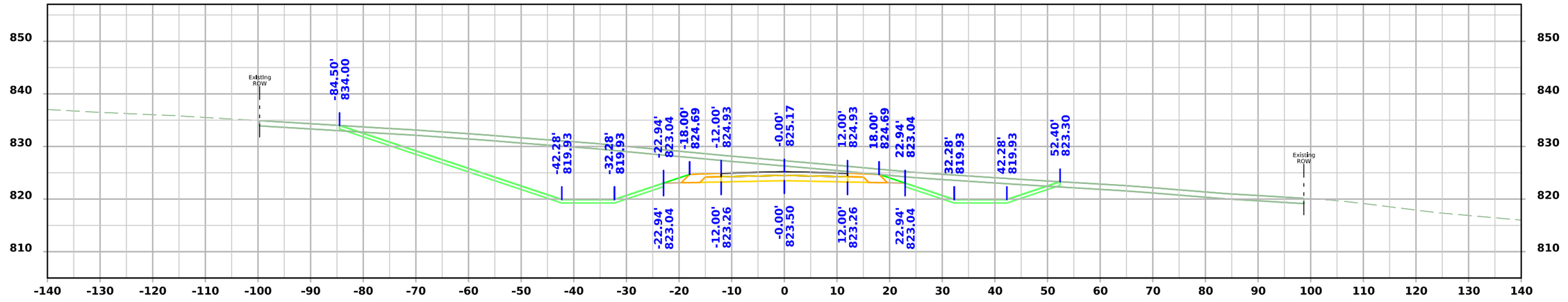


STA 1010+50.00

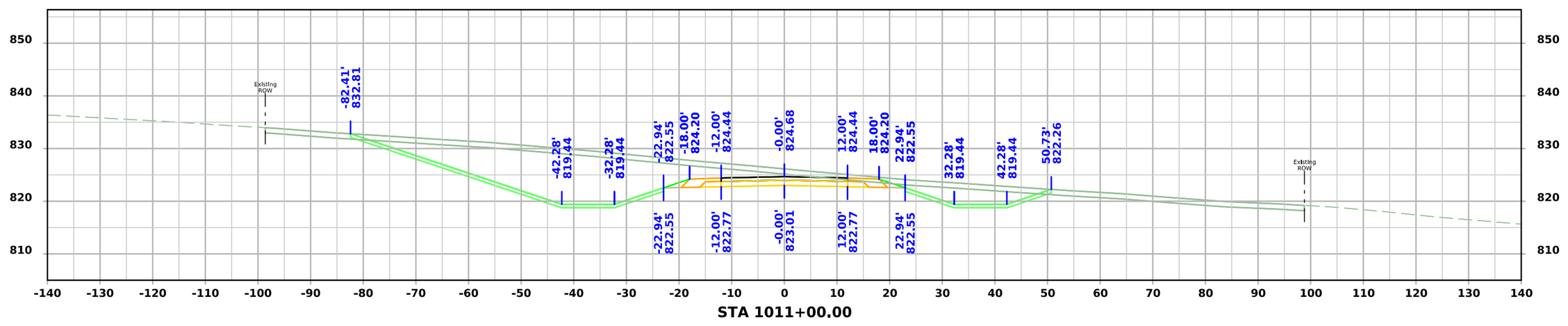
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.118

5:00:44 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1011+25.00

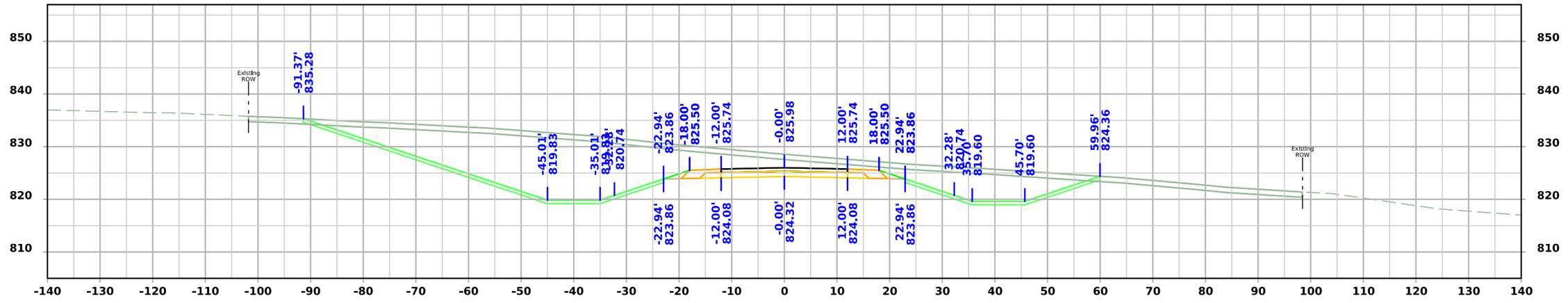


STA 1011+00.00

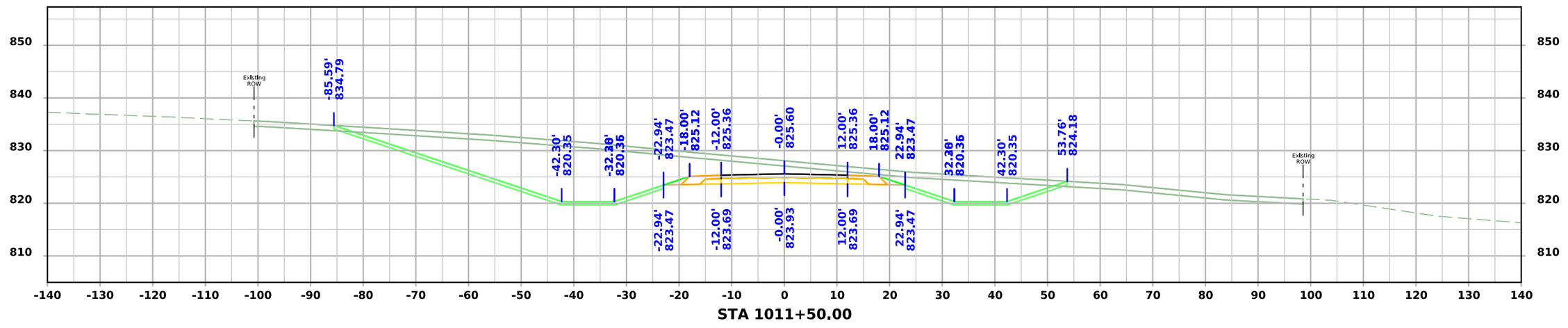
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.119

5:00:46 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1011+75.00

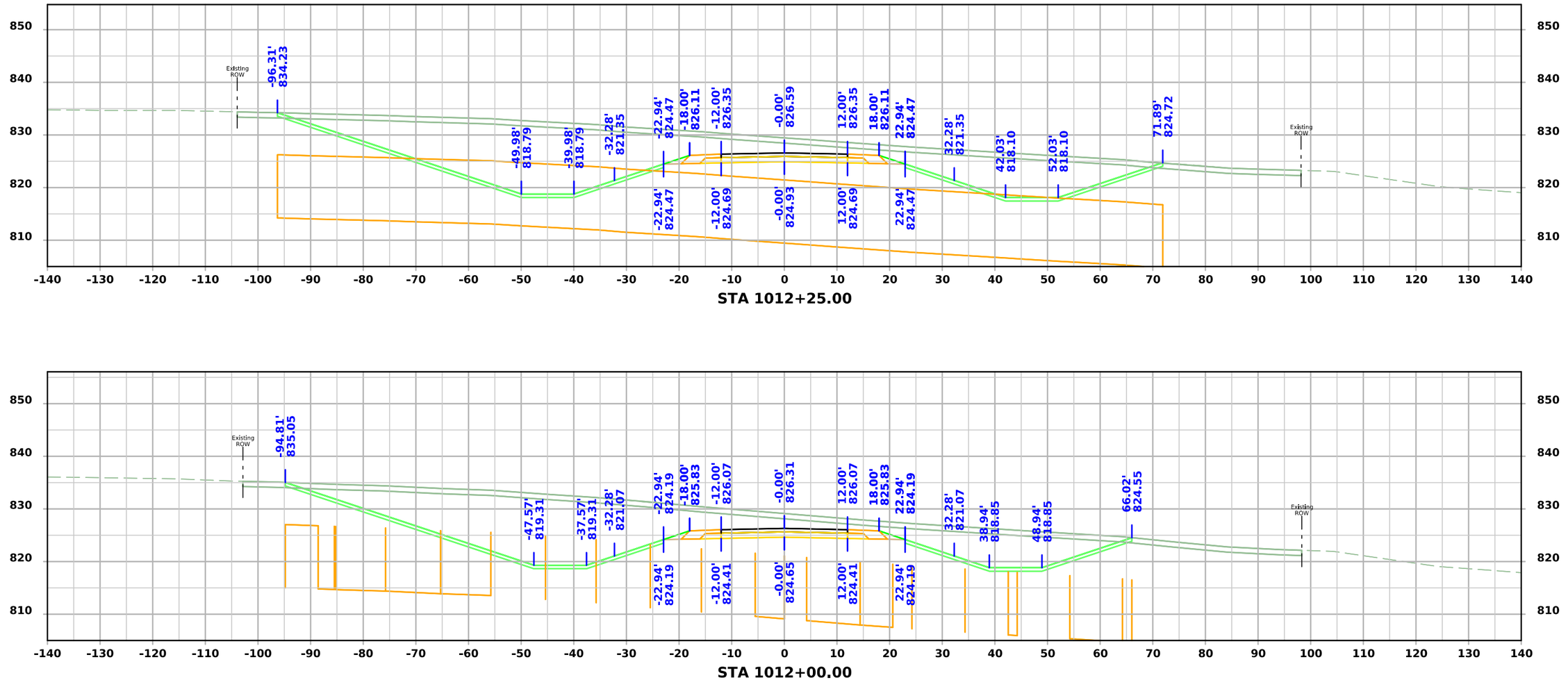


STA 1011+50.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.120

5:00:47 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



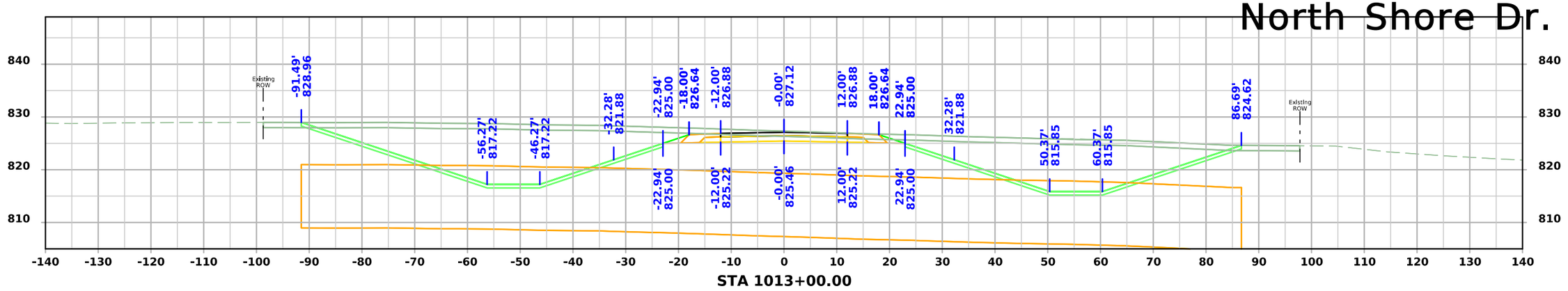
STA 1012+25.00

STA 1012+00.00

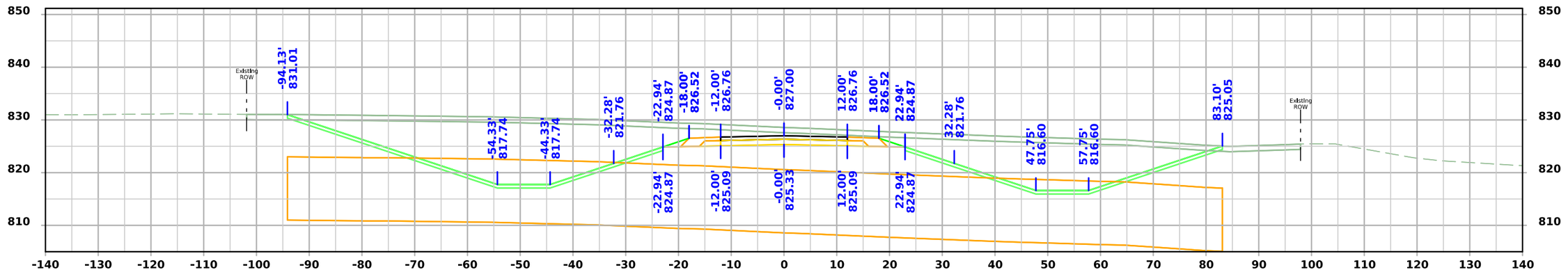
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.121

5:00:48 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

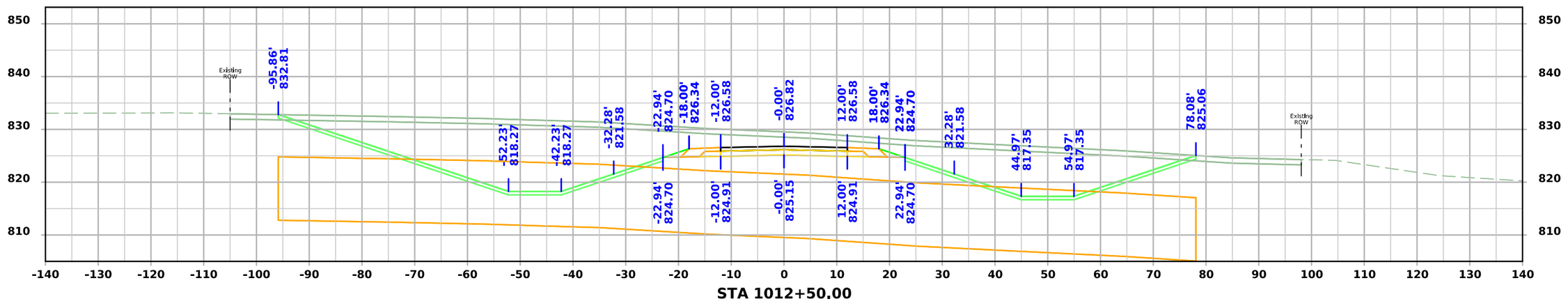
North Shore Dr.



STA 1013+00.00



STA 1012+75.00

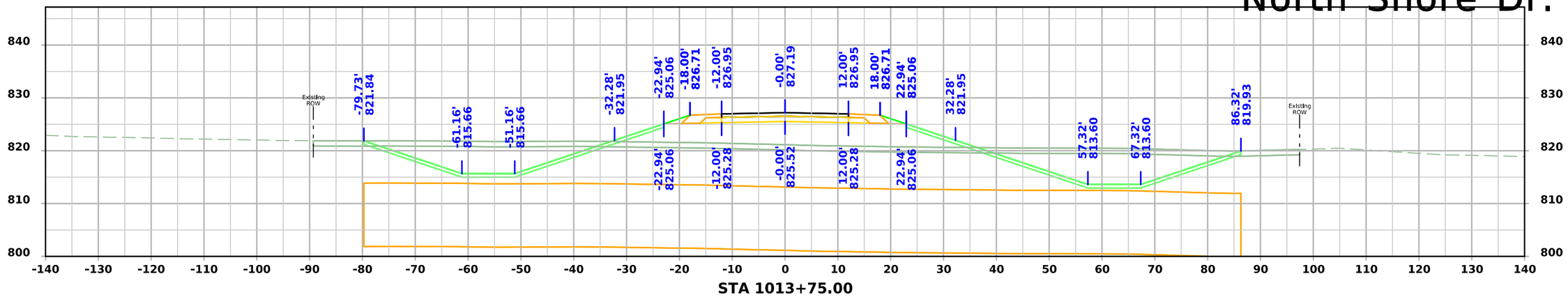


STA 1012+50.00

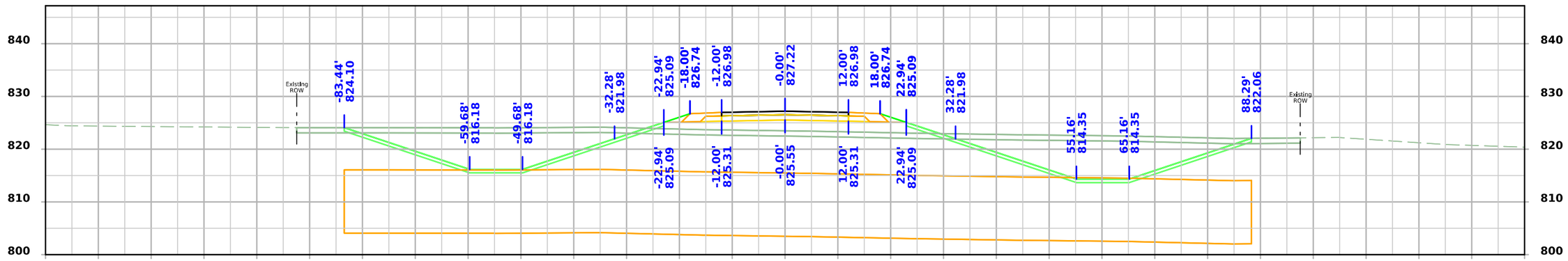
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.122

5:00:50 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

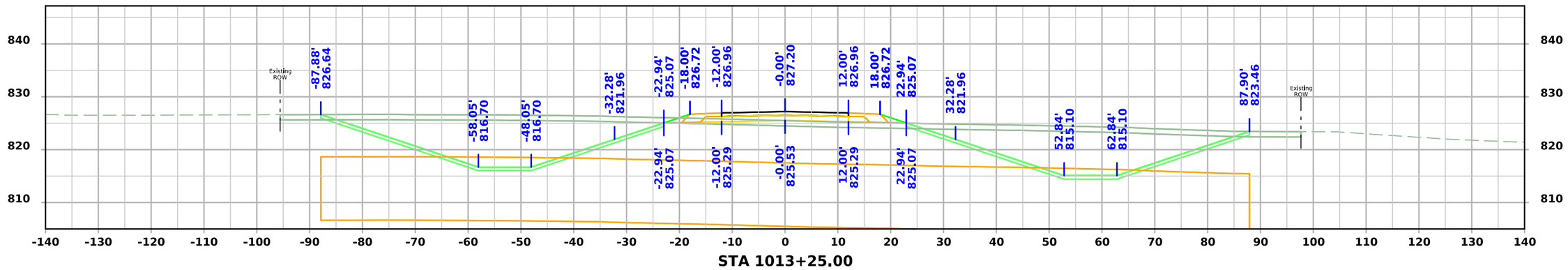
North Shore Dr.



STA 1013+75.00



STA 1013+50.00

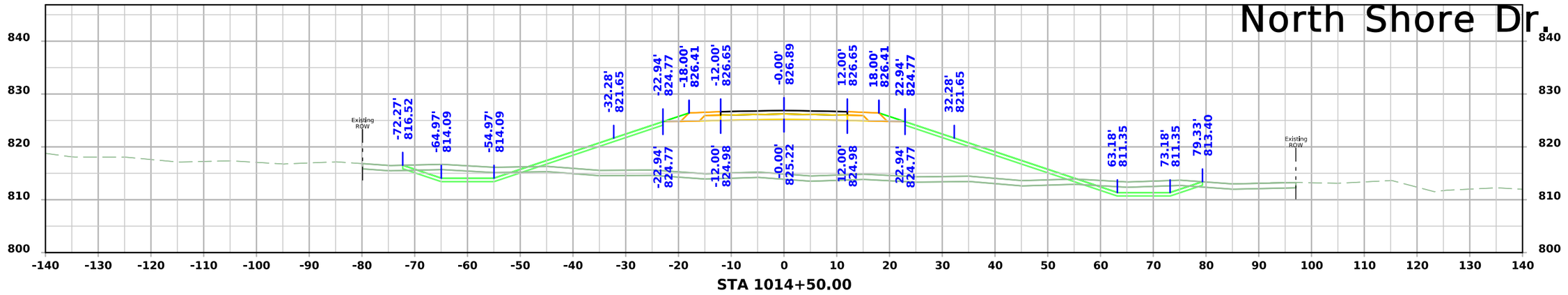


STA 1013+25.00

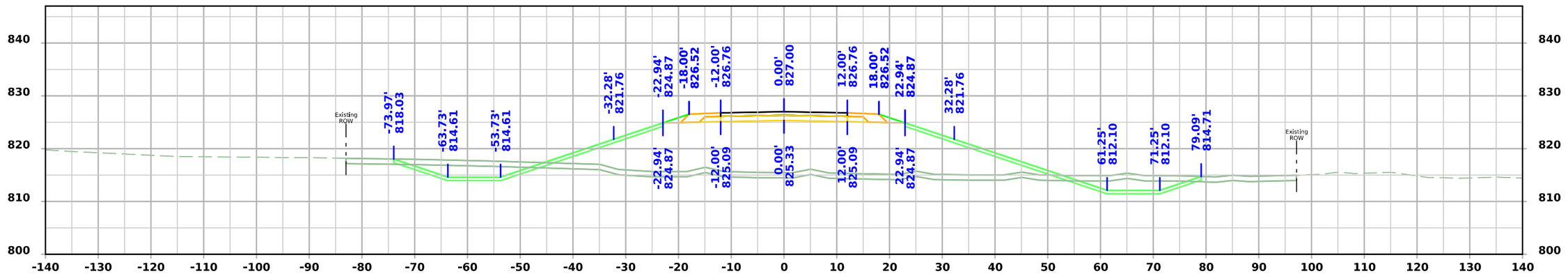
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.123

5:00:52 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

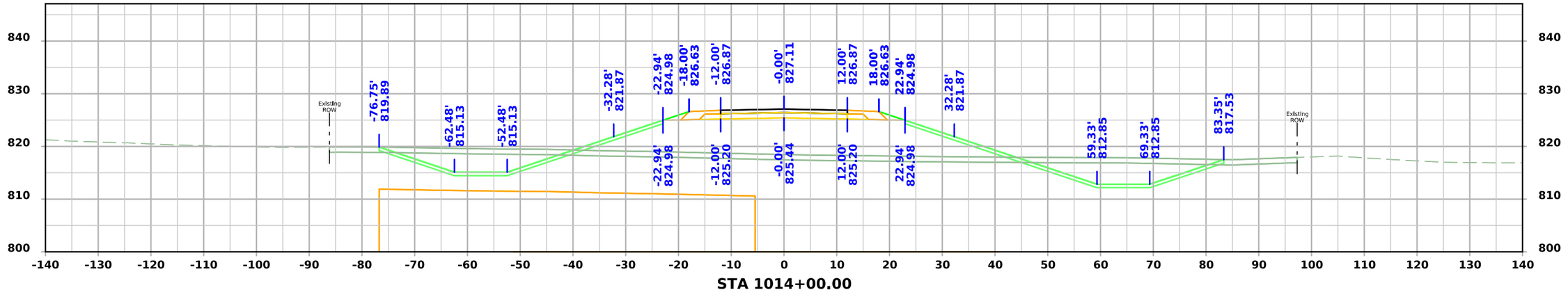
North Shore Dr.



STA 1014+50.00



STA 1014+25.00

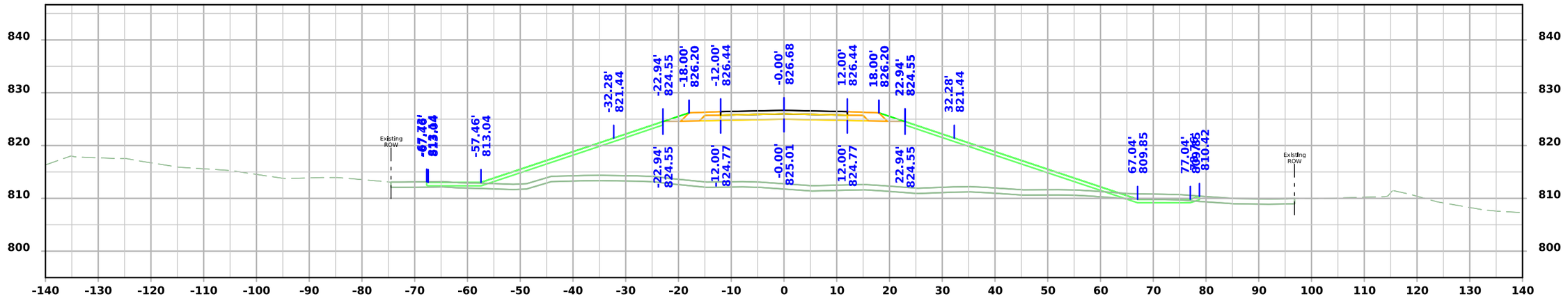


STA 1014+00.00

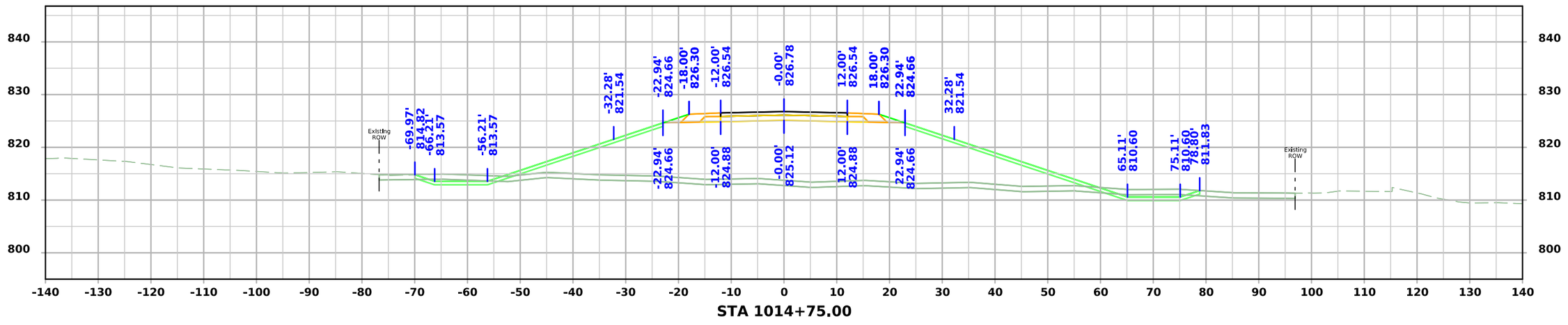
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.124

5:00:53 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1015+00.00

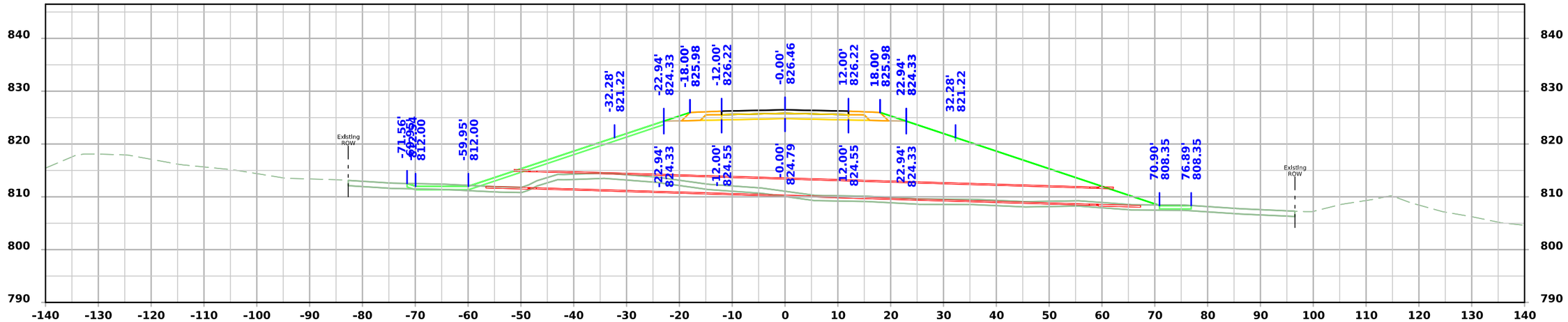


STA 1014+75.00

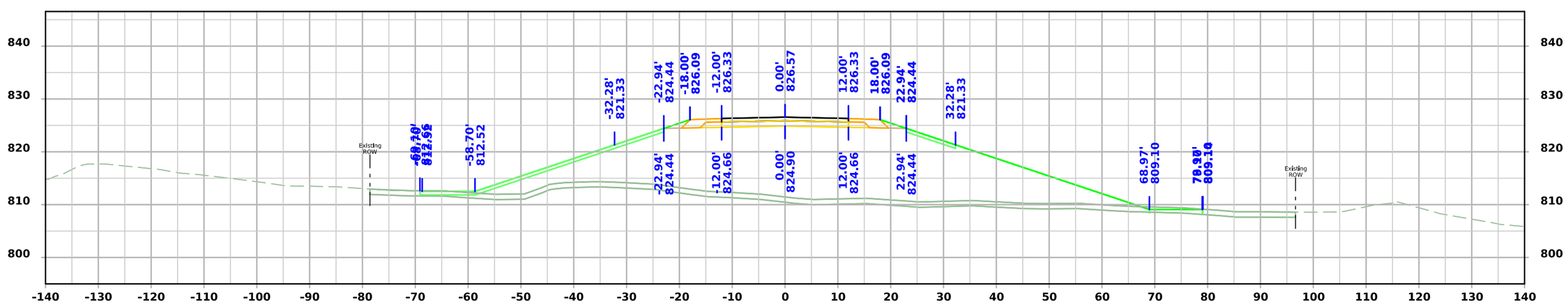
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.125

5:00:55 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1015+50.00

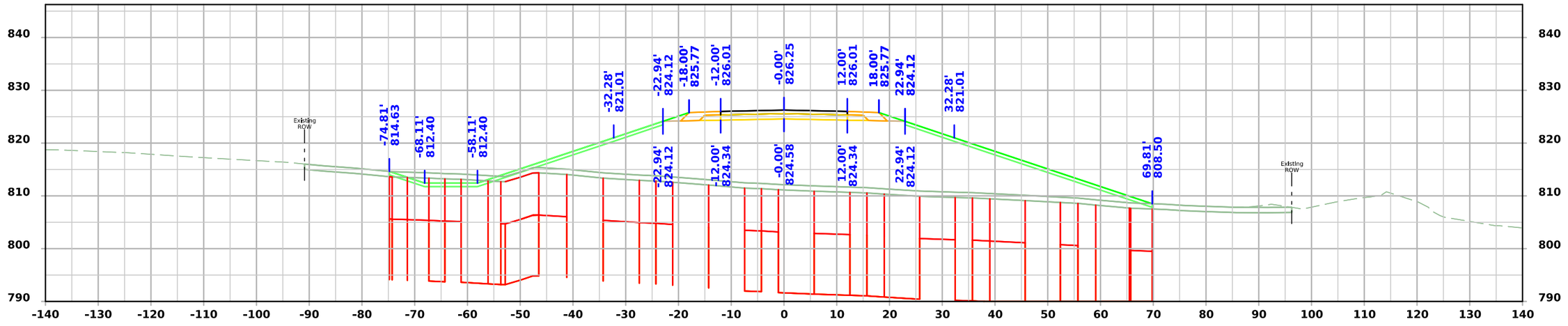


STA 1015+25.00

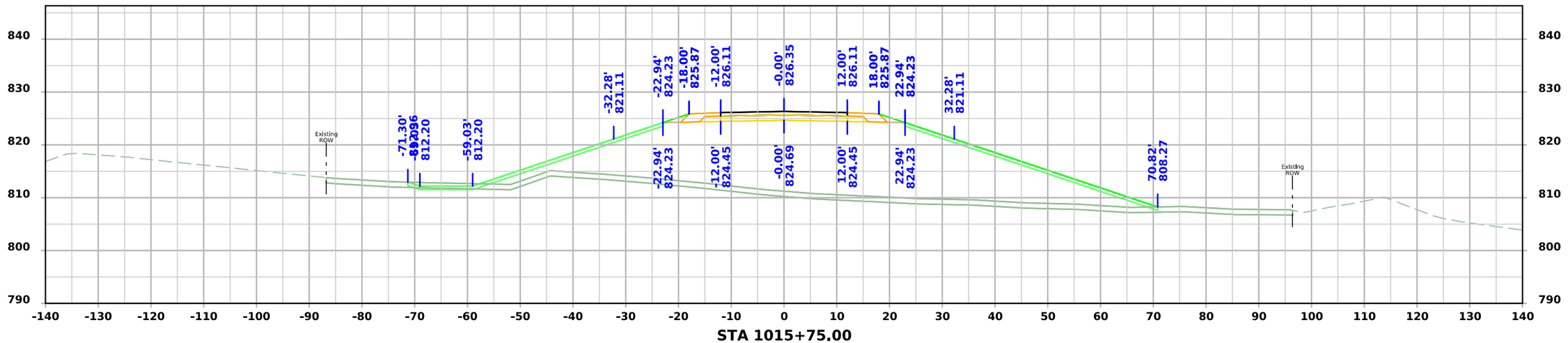
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.126

5:00:56 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1016+00.00

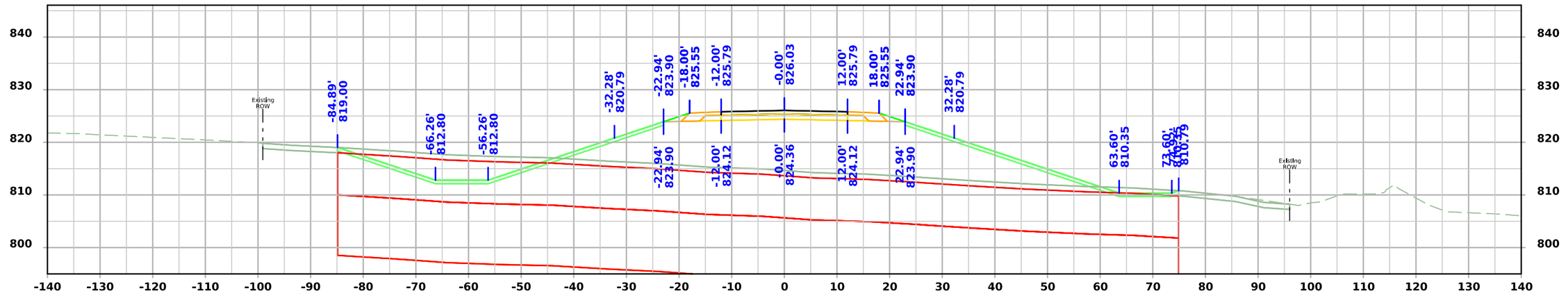


STA 1015+75.00

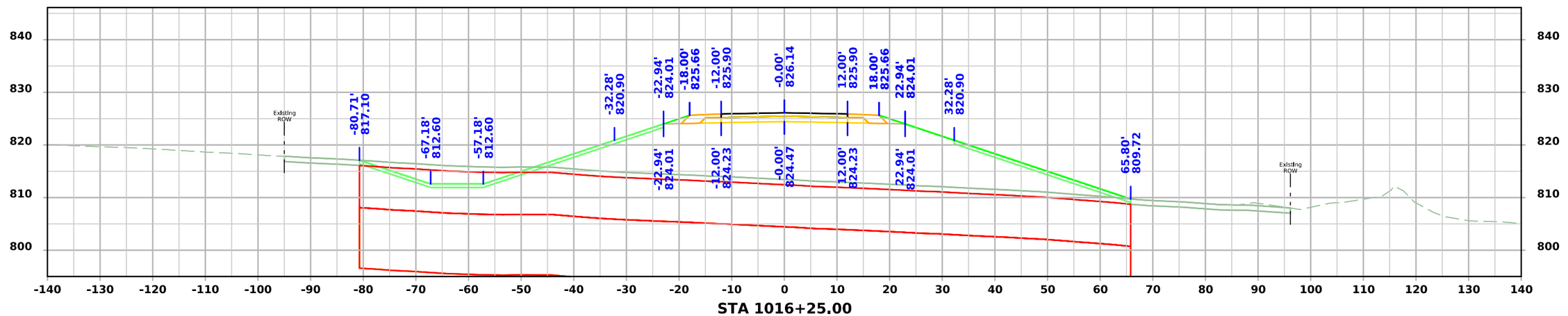
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.127

5:00:58 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1016+50.00

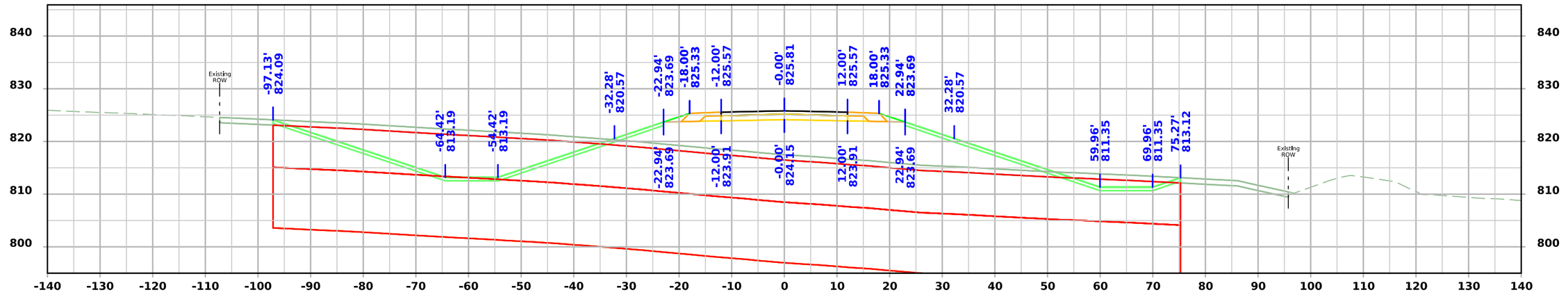


STA 1016+25.00

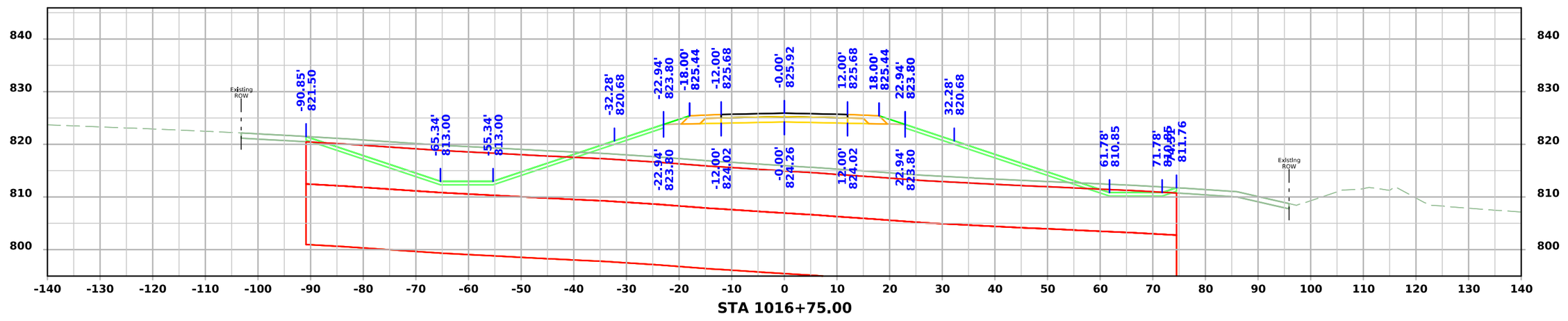
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.128

5:00:59 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1017+00.00

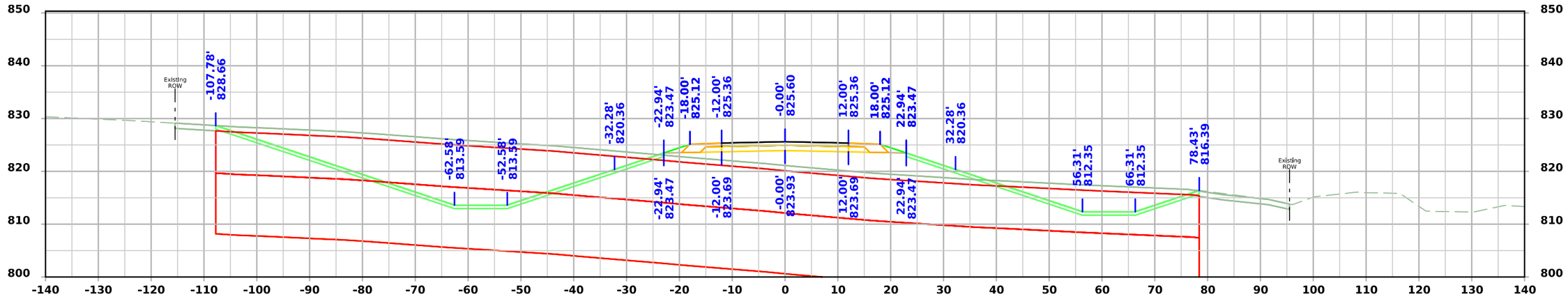


STA 1016+75.00

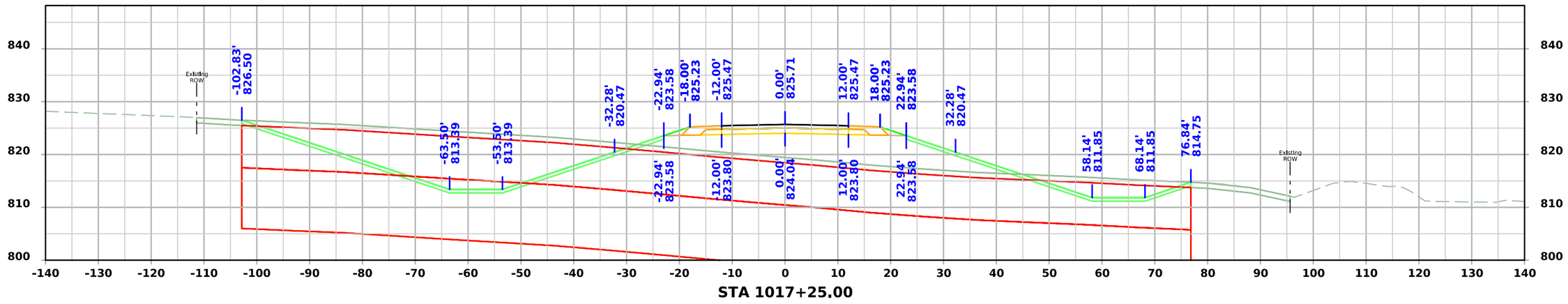
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.129

5:01:00 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1017+50.00

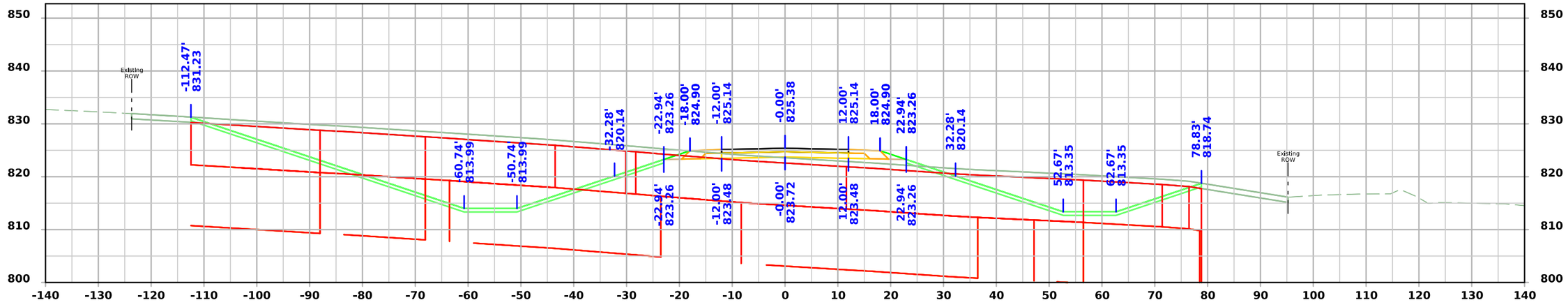


STA 1017+25.00

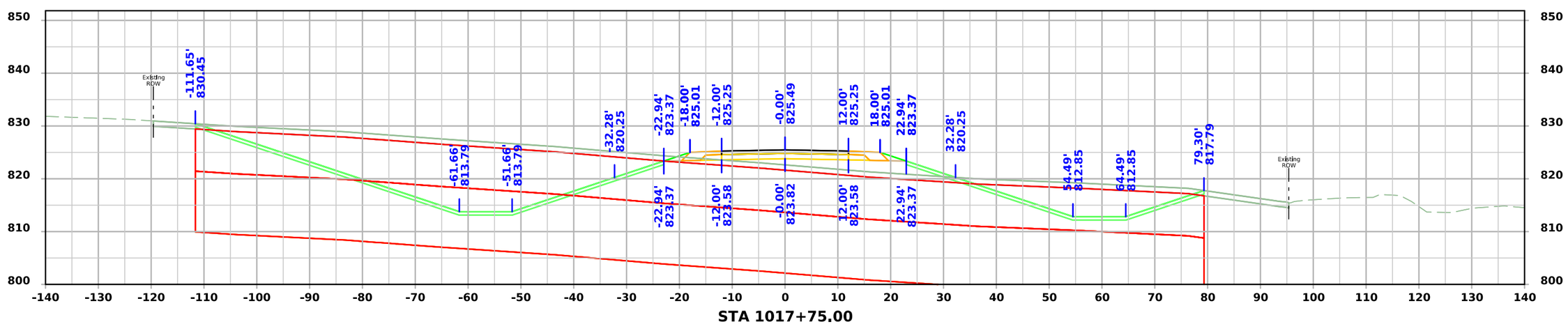
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.130

5:01:01 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1018+00.00

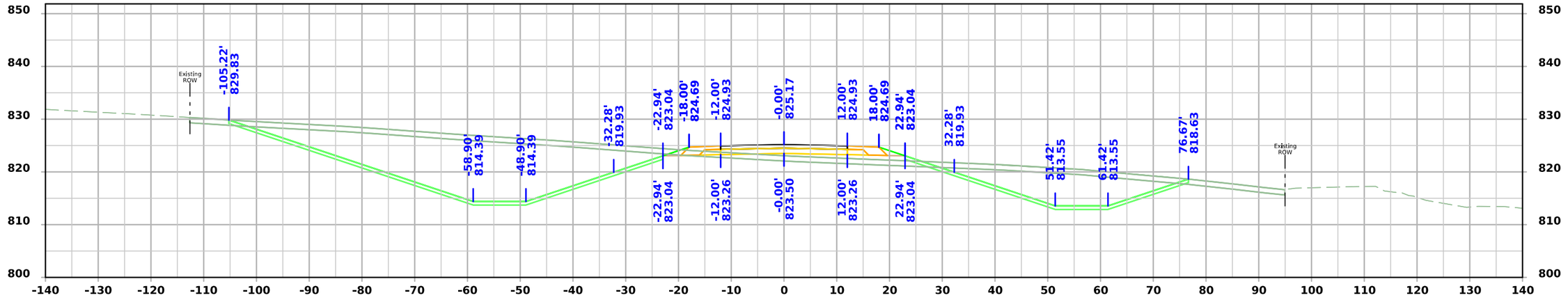


STA 1017+75.00

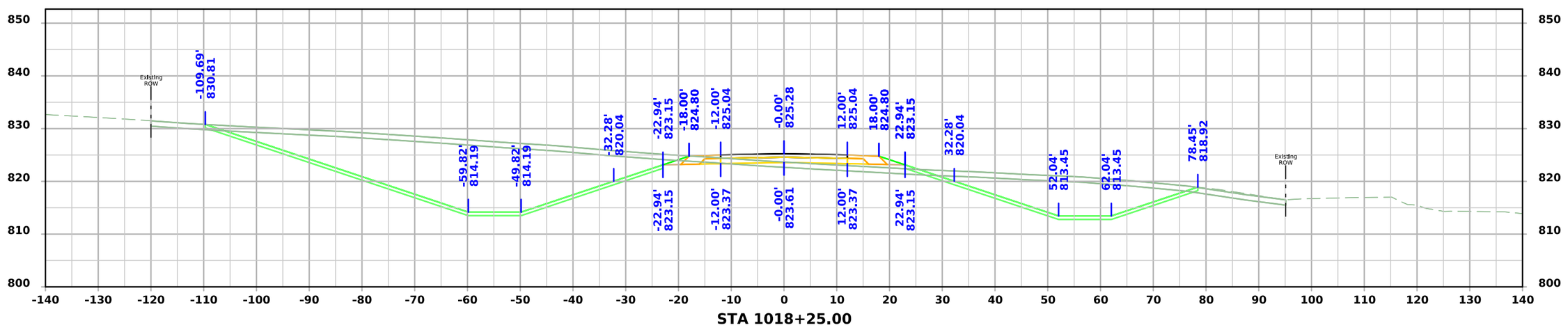
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.131

5:01:03 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1018+50.00

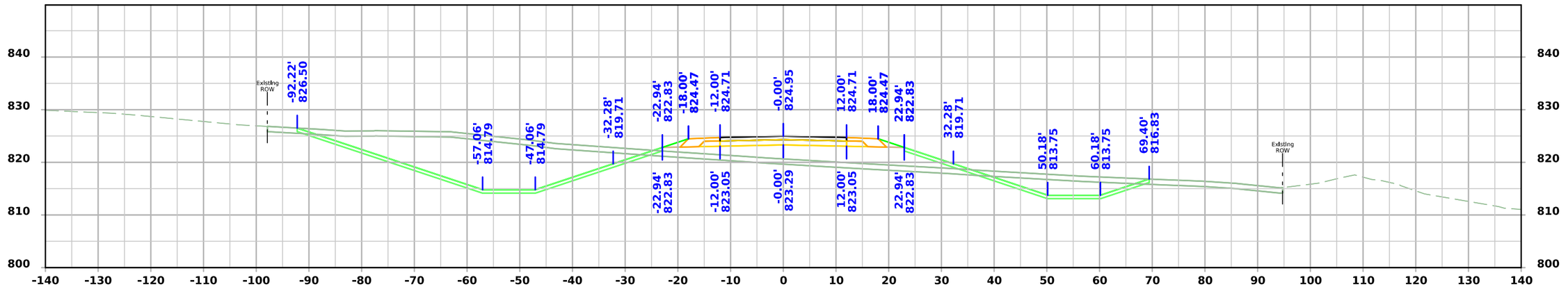


STA 1018+25.00

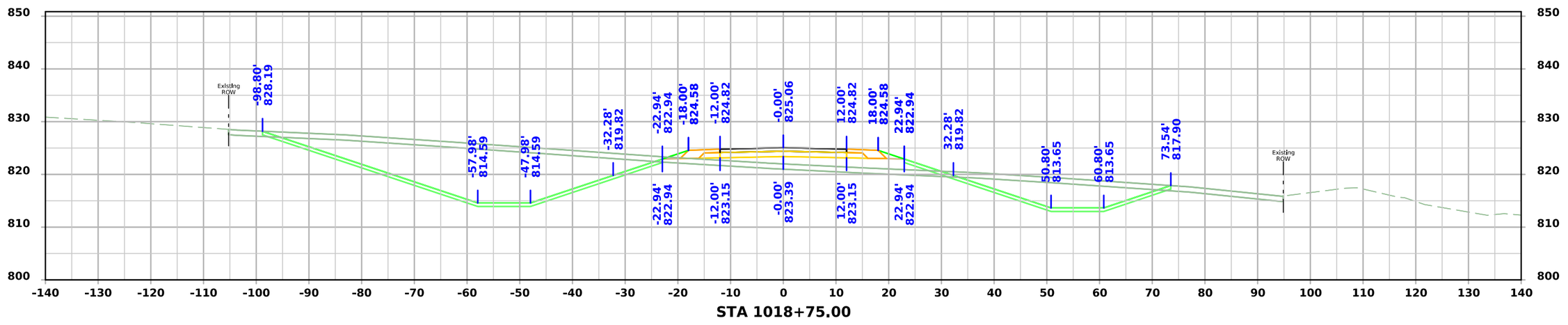
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.132

5:01:04 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1019+00.00

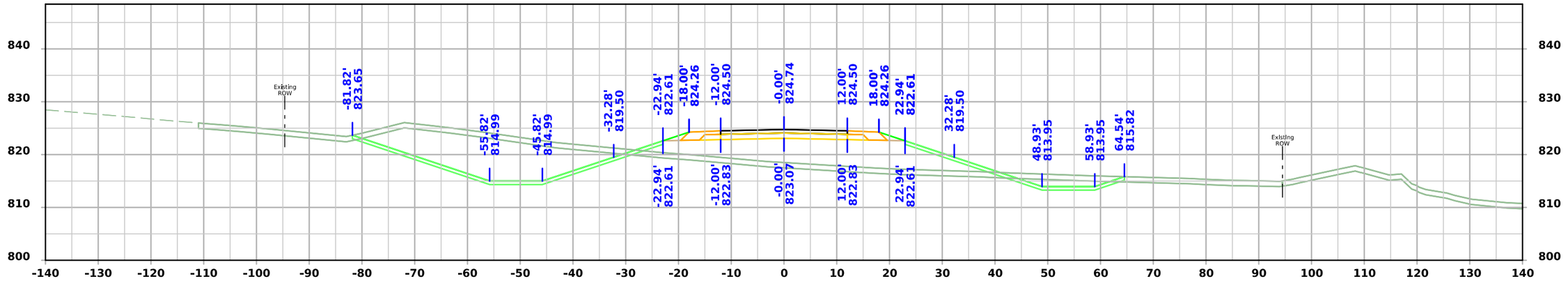


STA 1018+75.00

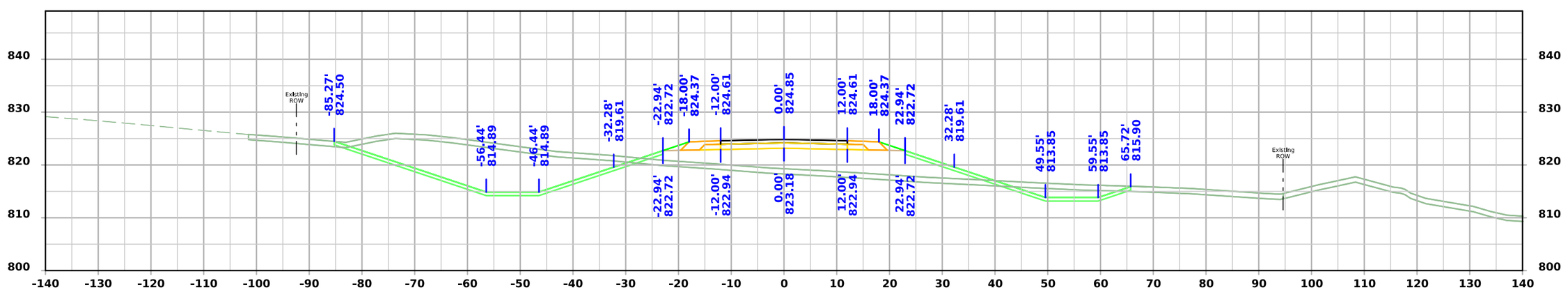
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.133

5:01:05 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1019+50.00

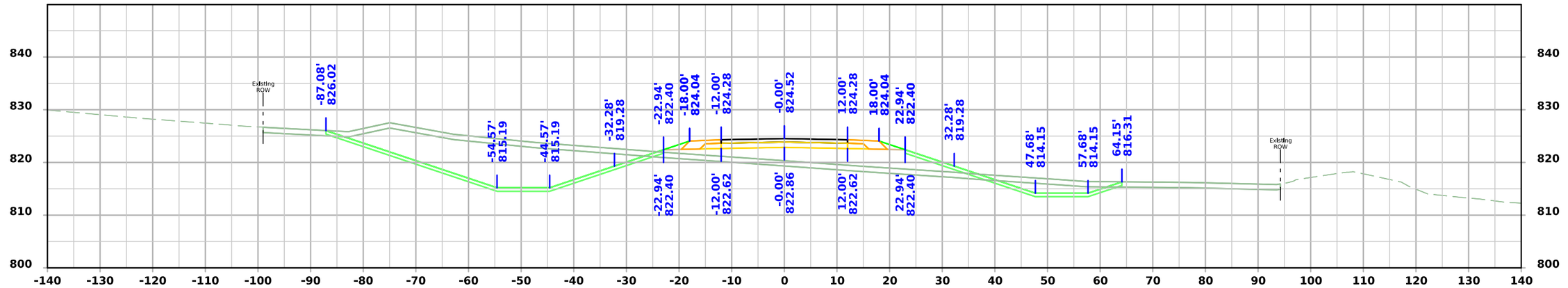


STA 1019+25.00

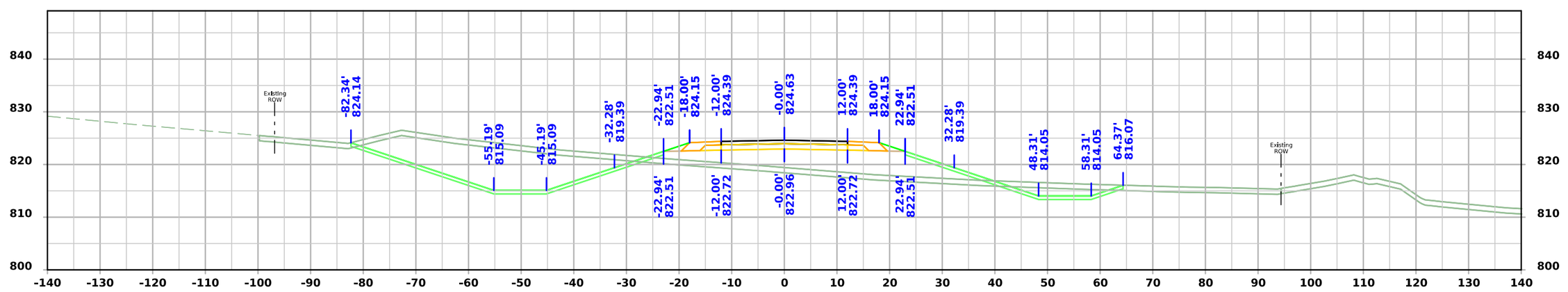
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.134

5:01:06 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1020+00.00

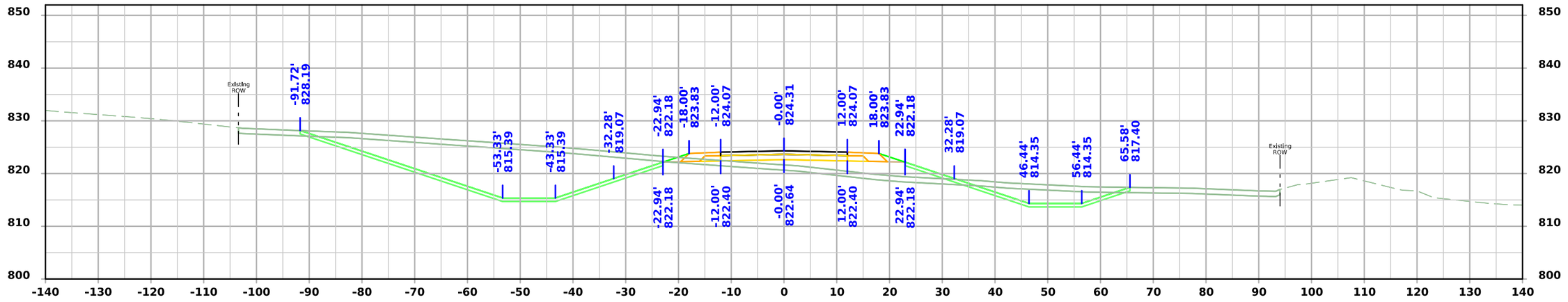


STA 1019+75.00

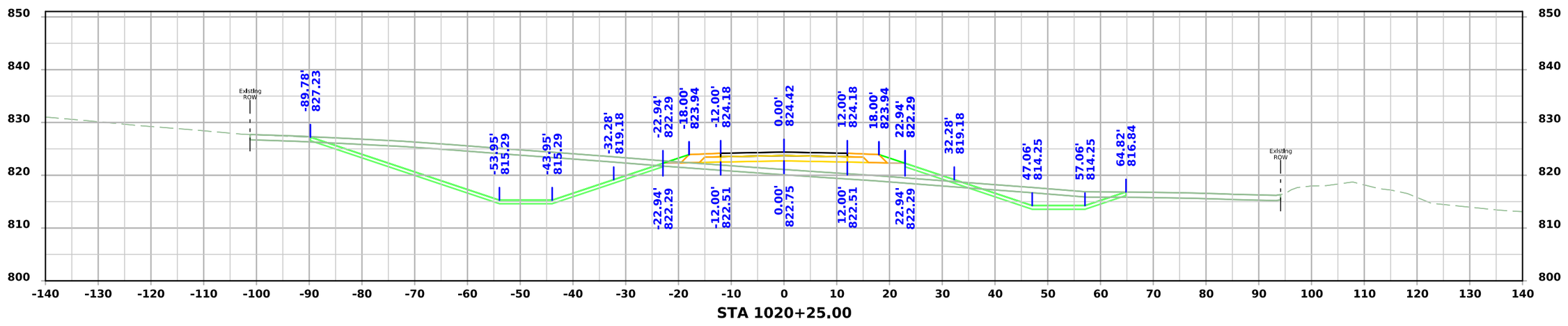
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.135

5:01:08 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1020+50.00

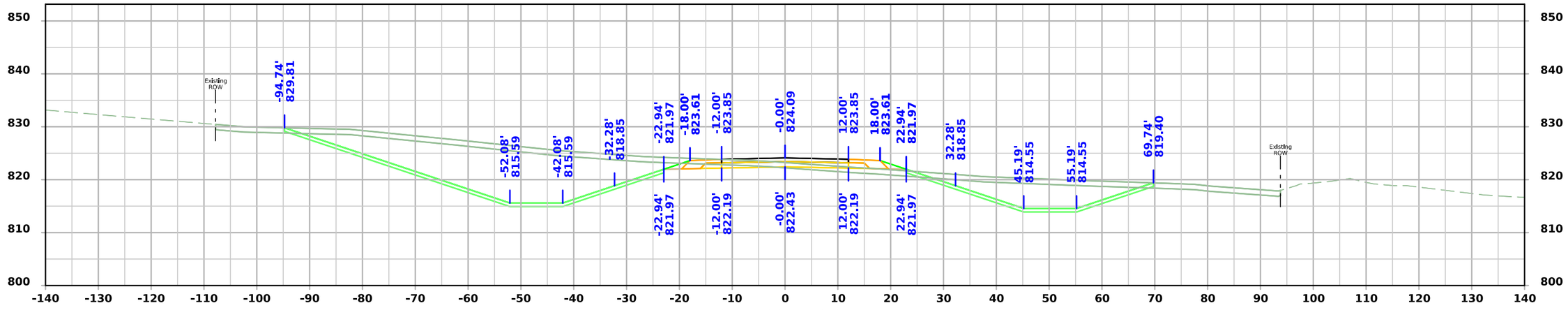


STA 1020+25.00

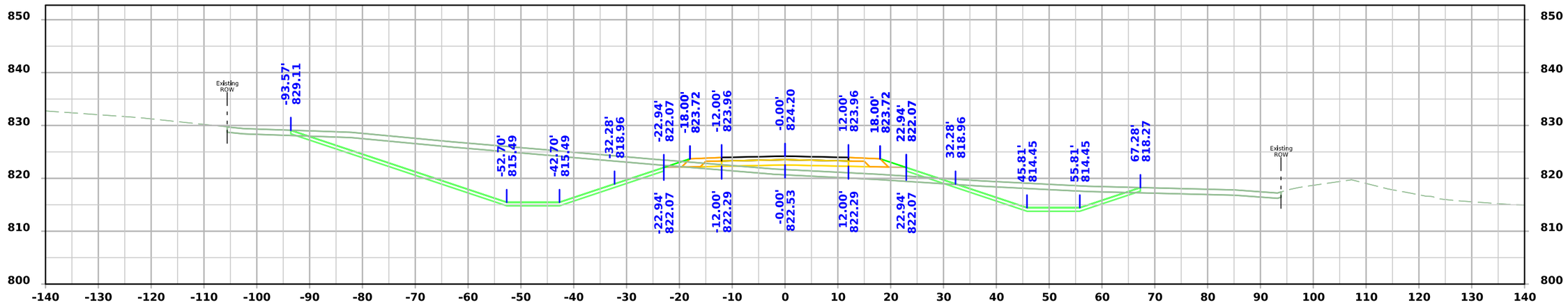
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.136

5:01:09 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1021+00.00

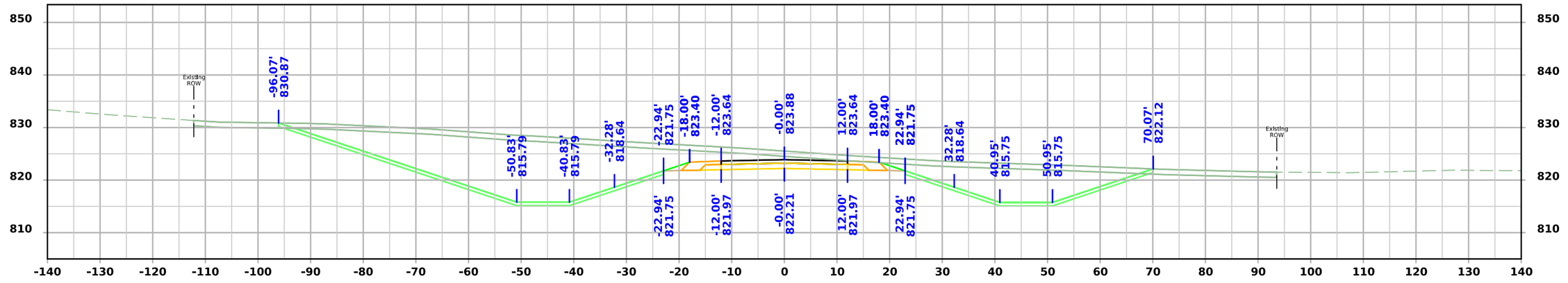


STA 1020+75.00

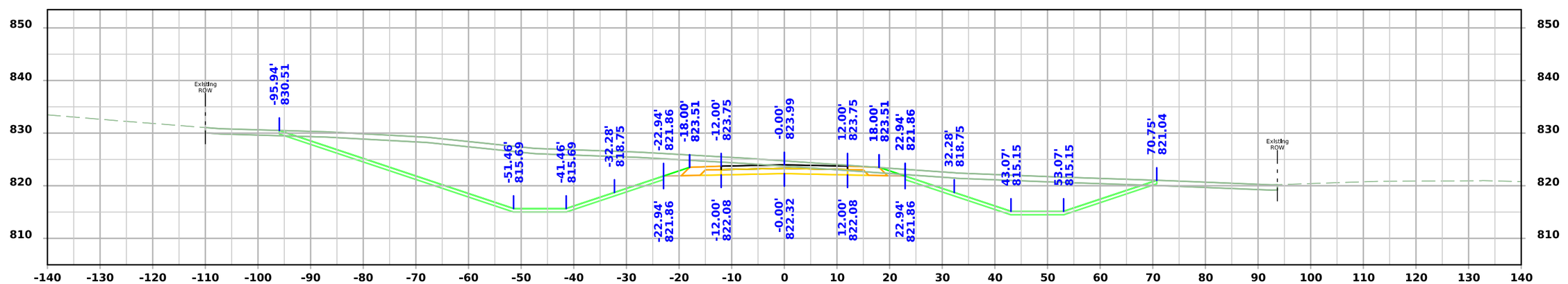
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.137

5:01:10 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1021+50.00

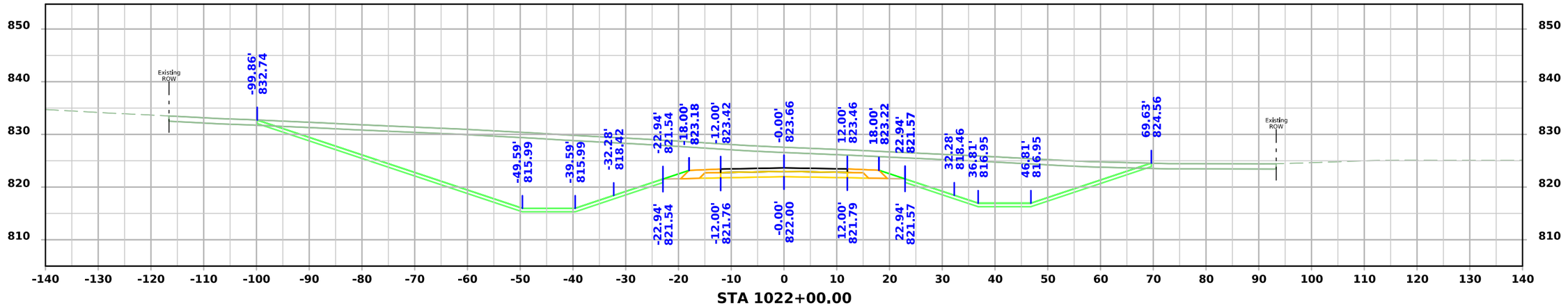


STA 1021+25.00

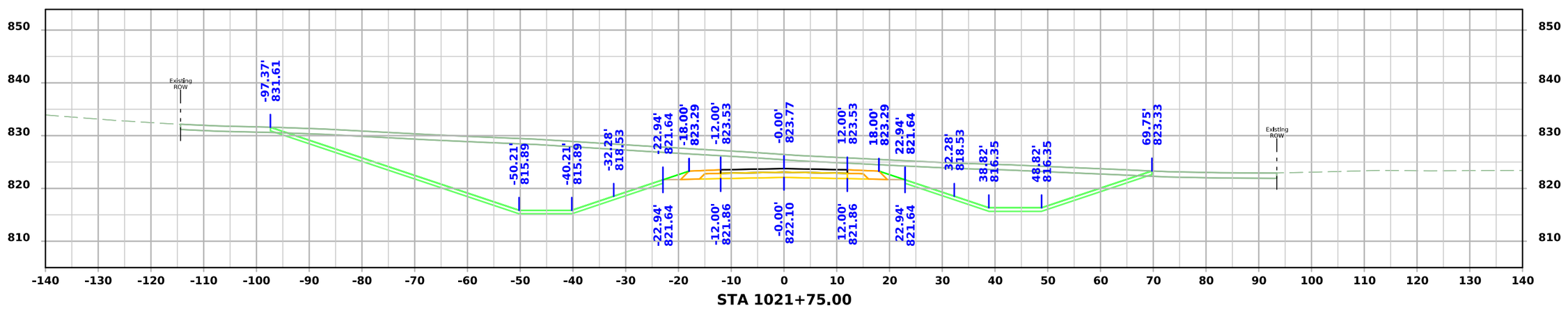
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.138

5:01:11 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1022+00.00

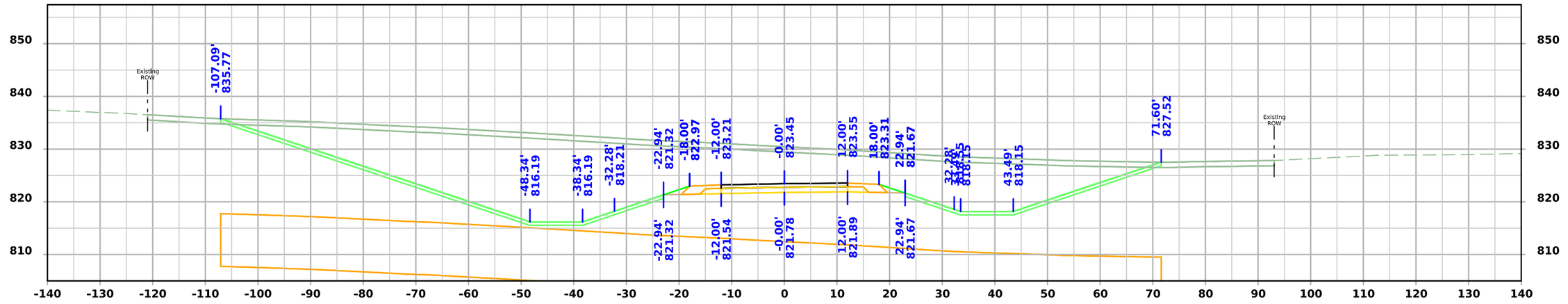


STA 1021+75.00

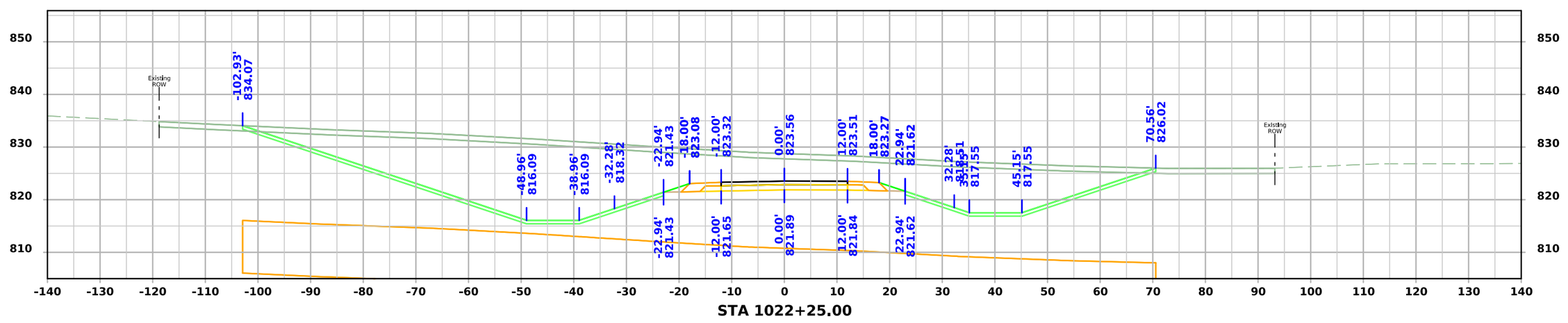
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.139

5:01:12 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1022+50.00

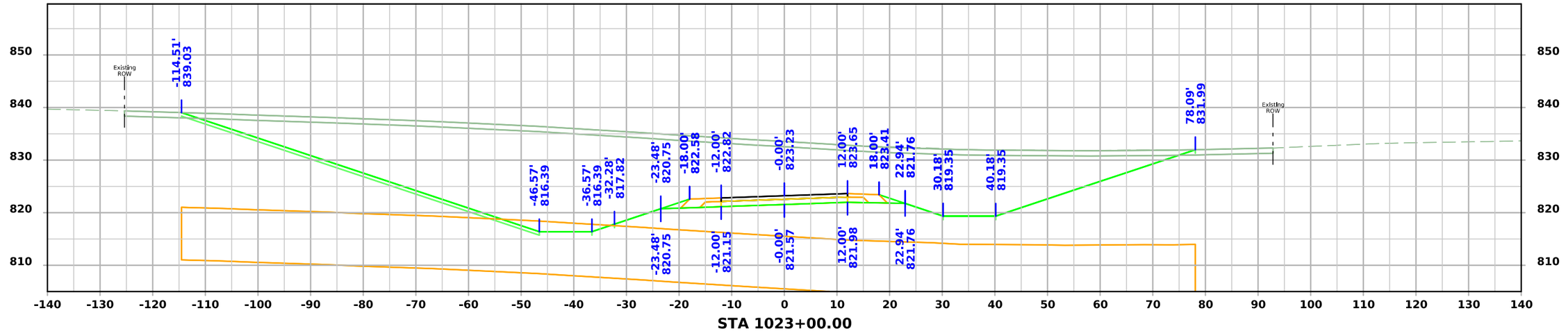


STA 1022+25.00

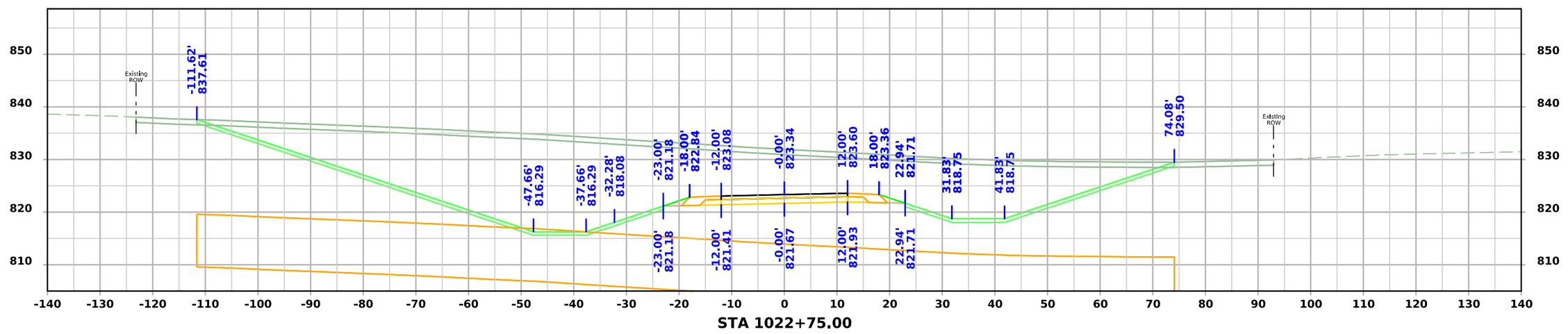
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.140

5:01:14 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1023+00.00

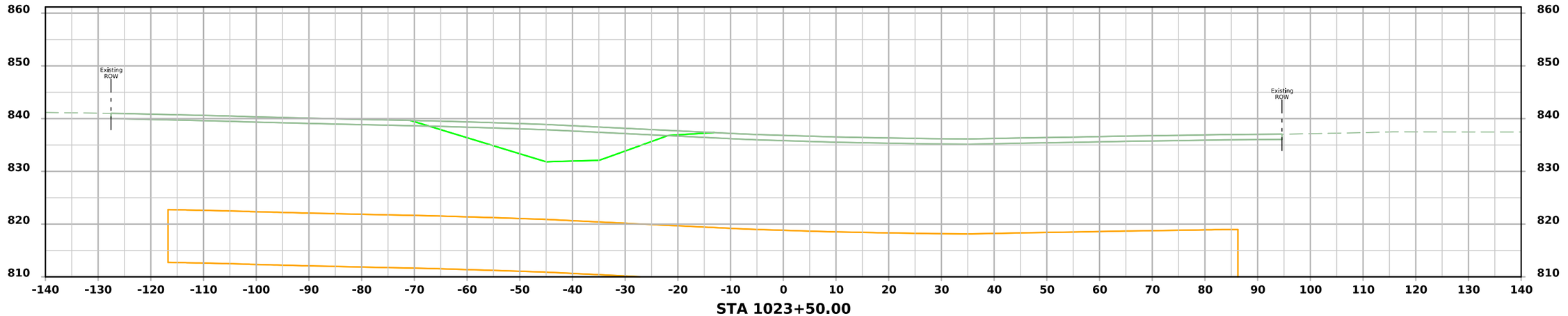


STA 1022+75.00

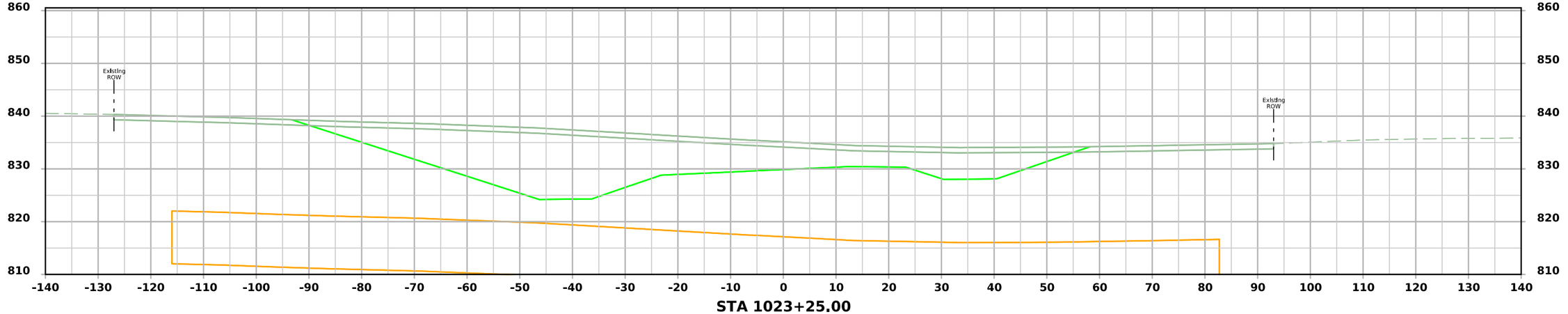
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.141

5:01:15 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1023+50.00

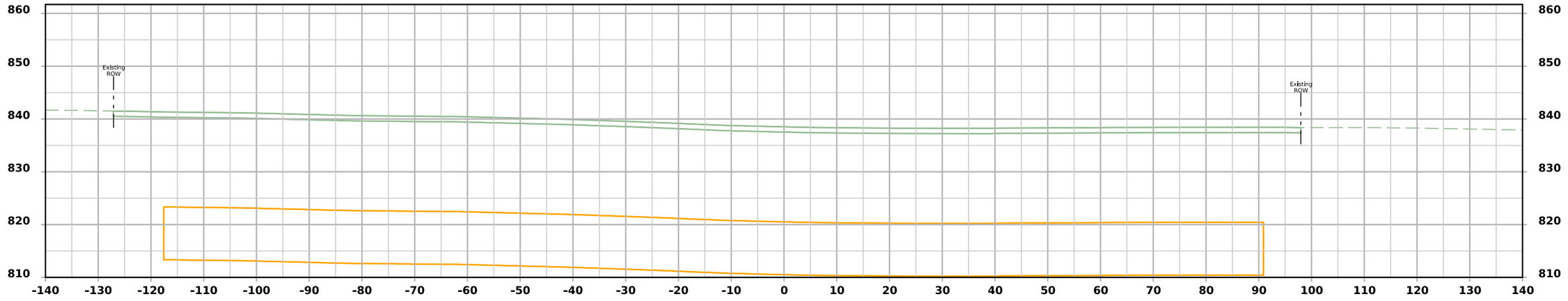


STA 1023+25.00

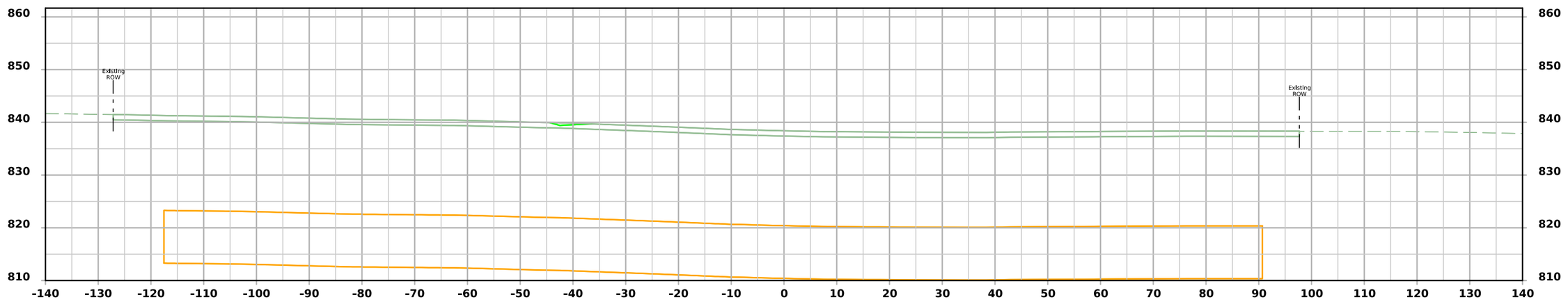
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.142

5:01:16 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

North Shore Dr.



STA 1023+76.79

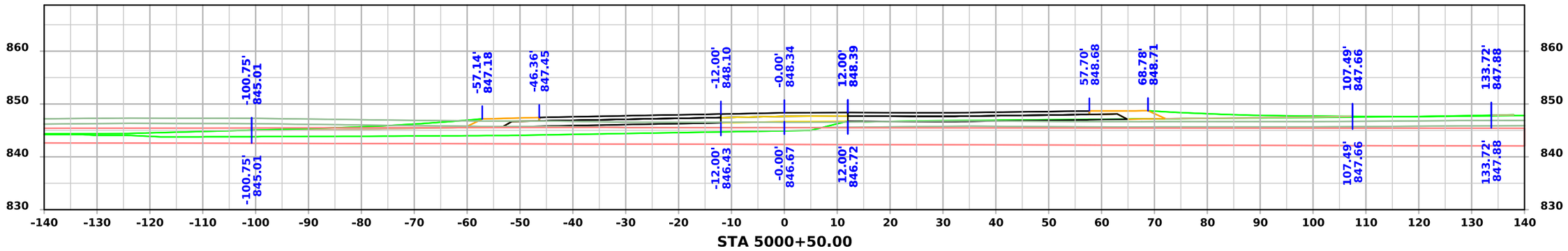


STA 1023+75.00

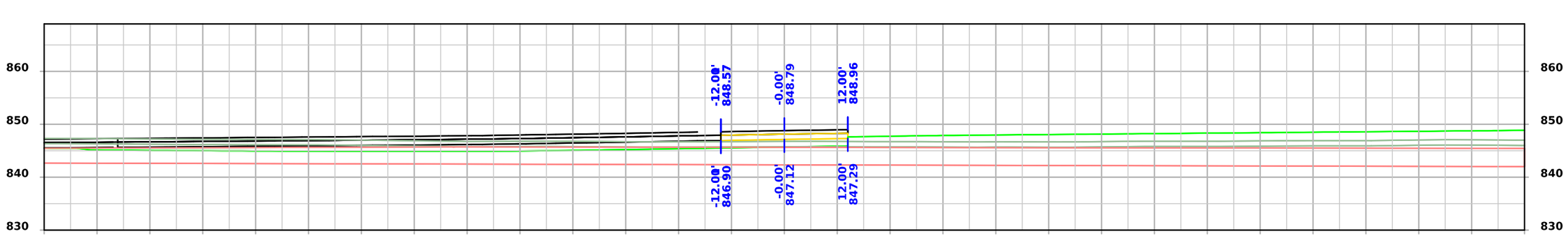
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.143

5:01:17 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRNSHORE_62063095Z09_ORD_X100_Grading.dgn

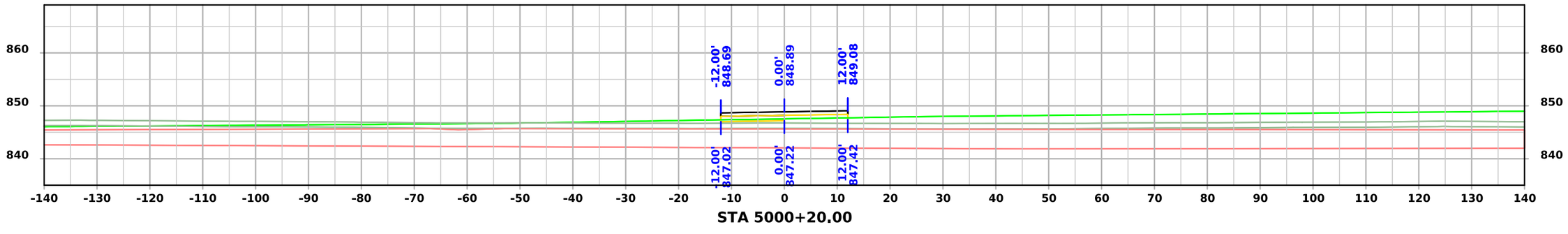
Old IA 163



STA 5000+50.00



STA 5000+25.00

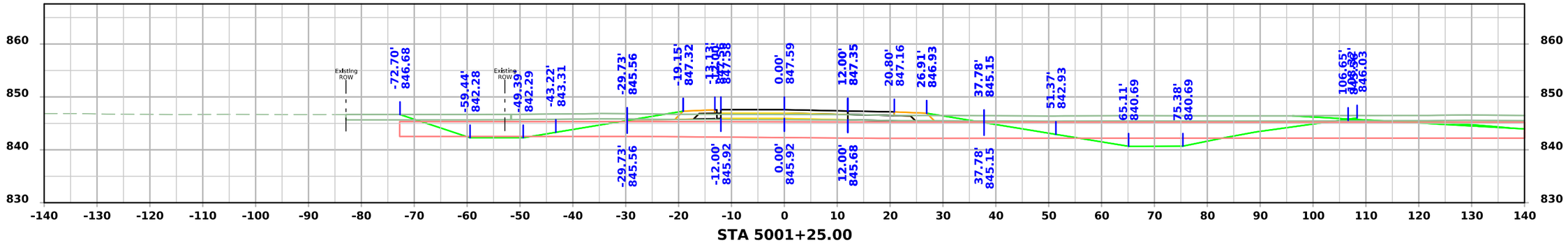


STA 5000+20.00

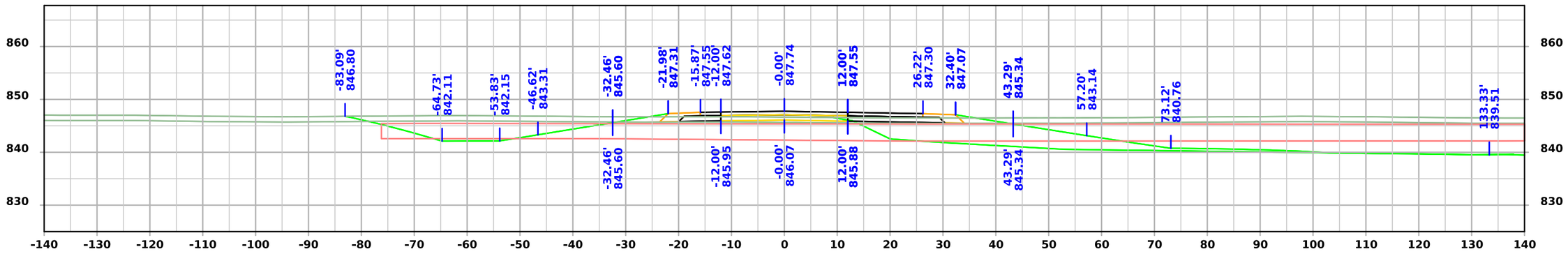
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.200

1:33:02 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

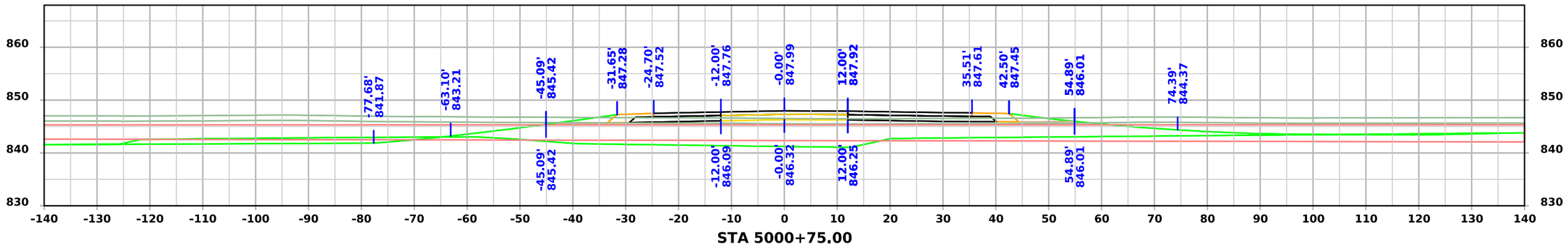
Old IA 163



STA 5001+25.00



STA 5001+00.00

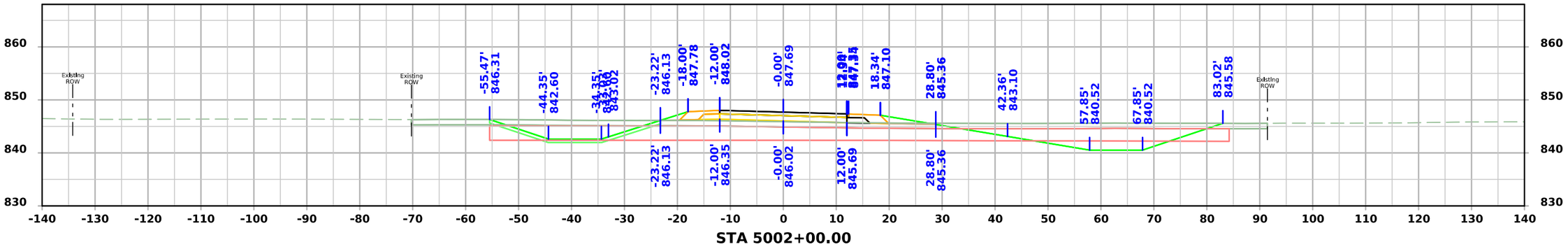


STA 5000+75.00

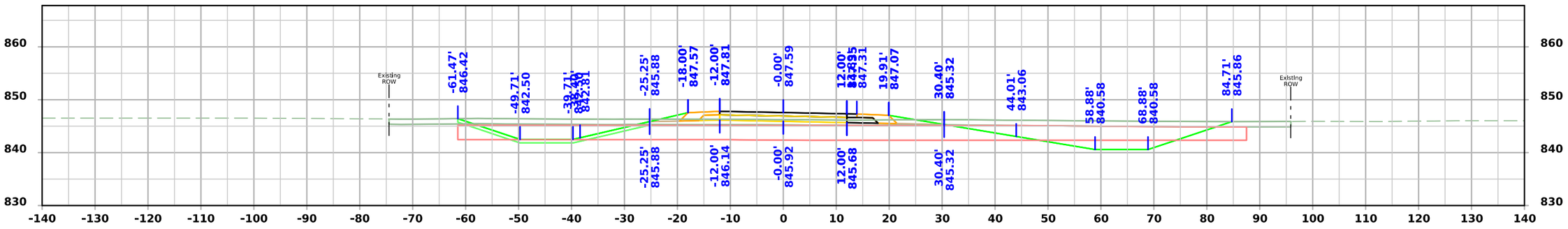
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.201

1:33:04 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

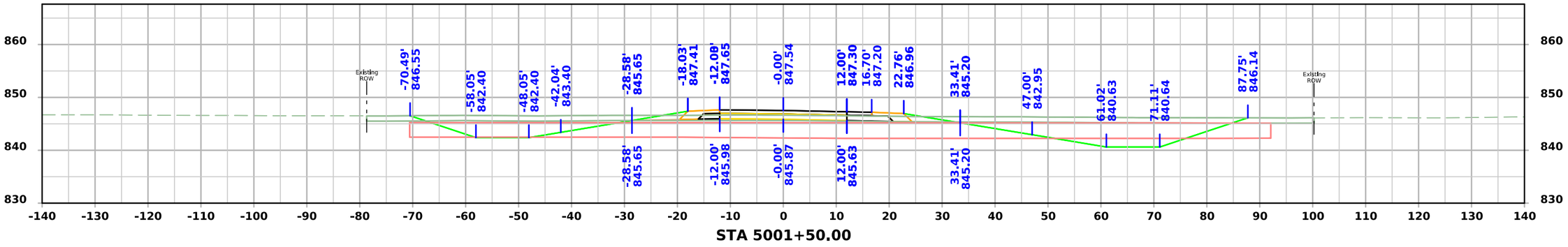
Old IA 163



STA 5002+00.00



STA 5001+75.00

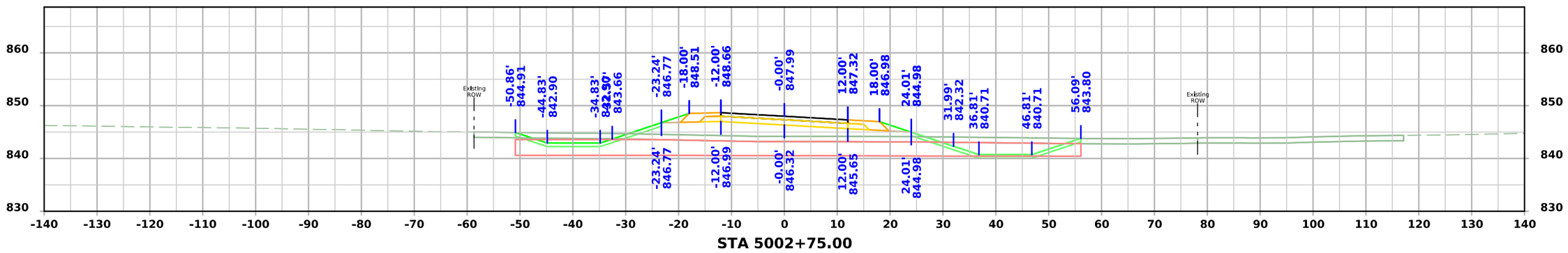


STA 5001+50.00

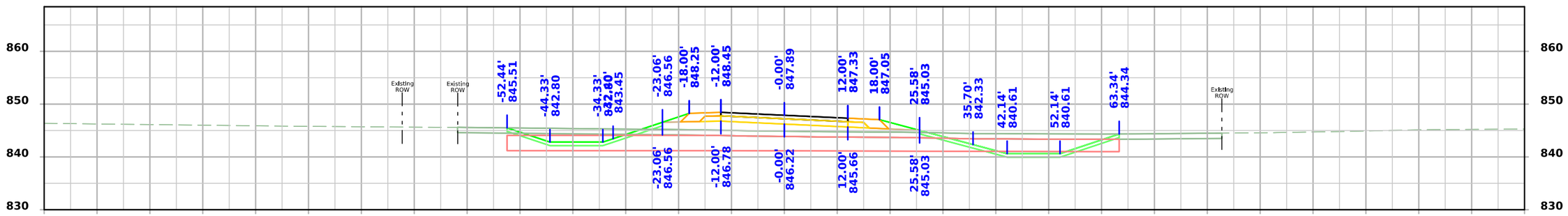
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.202

1:33:05 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

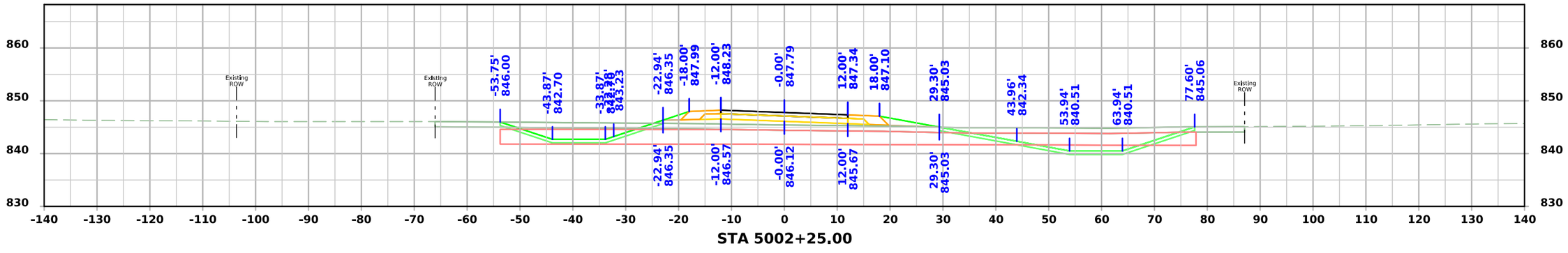
Old IA 163



STA 5002+75.00



STA 5002+50.00

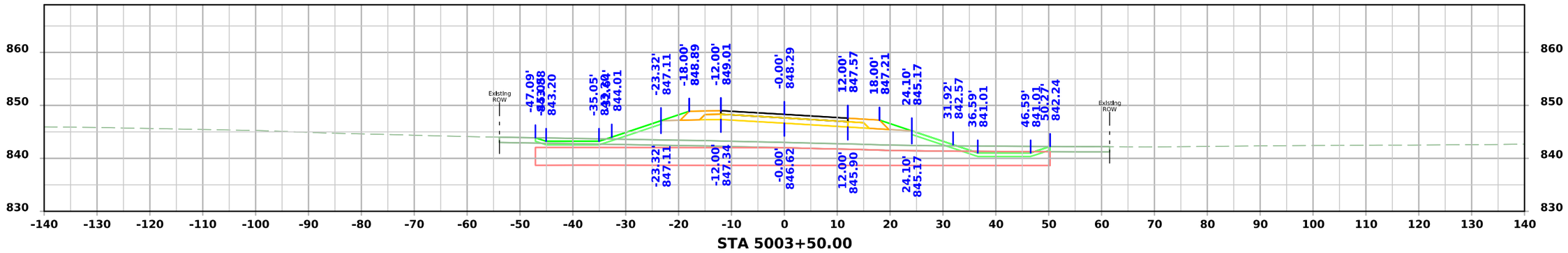


STA 5002+25.00

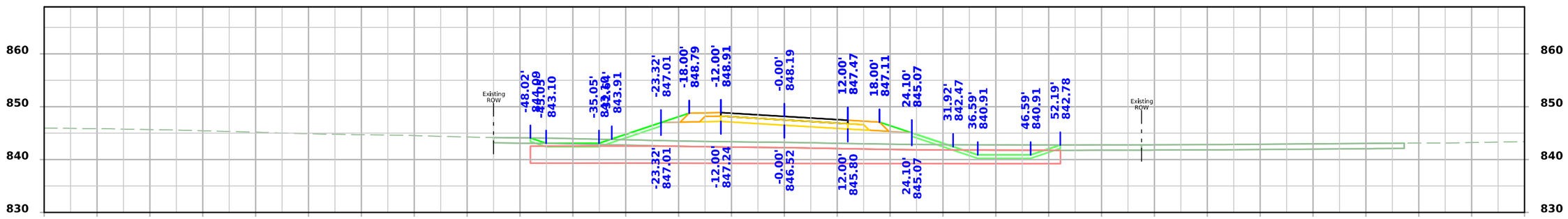
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.203

1:33:08 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

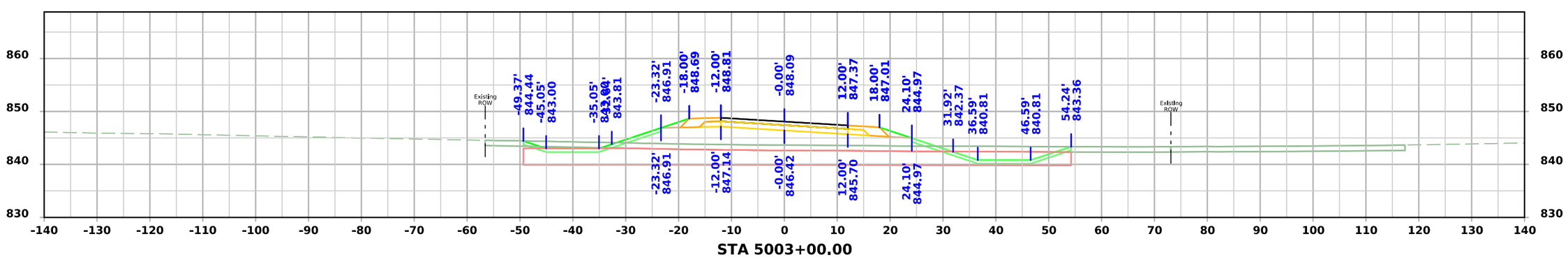
Old IA 163



STA 5003+50.00



STA 5003+25.00

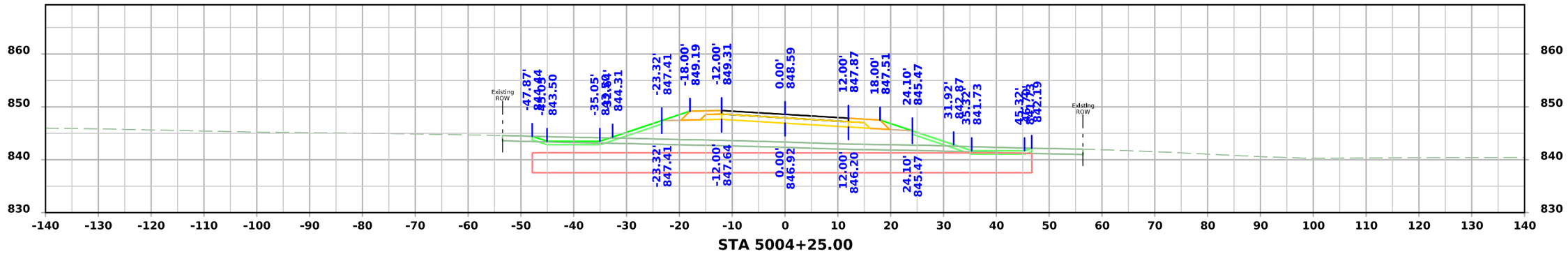


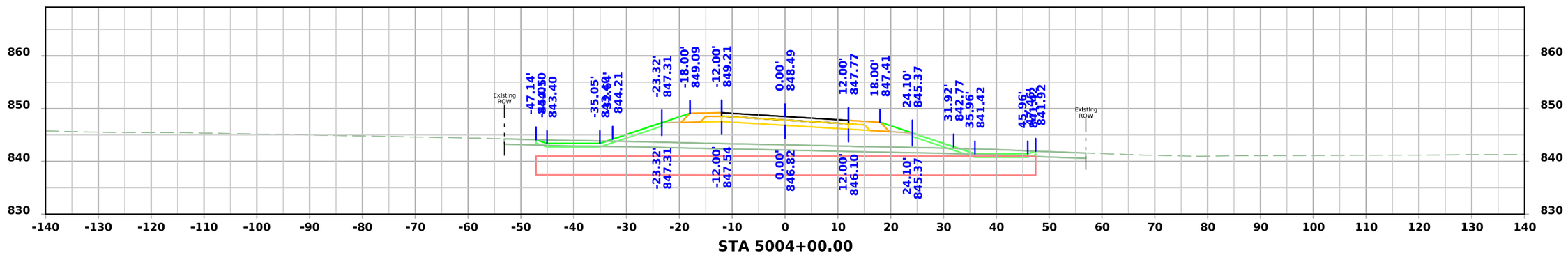
STA 5003+00.00

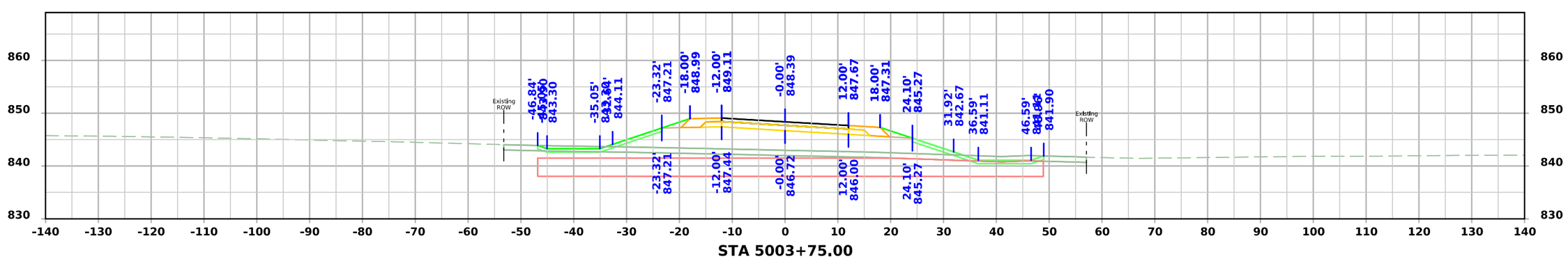
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.204

1:33:09 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

Old IA 163



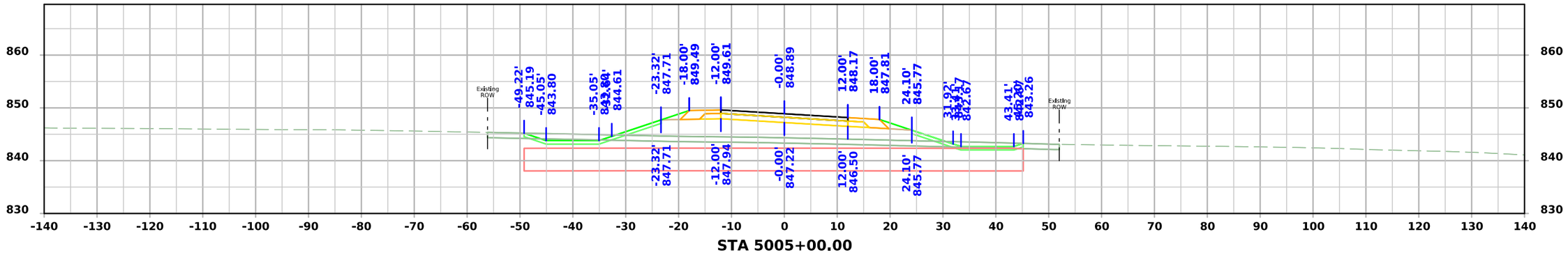




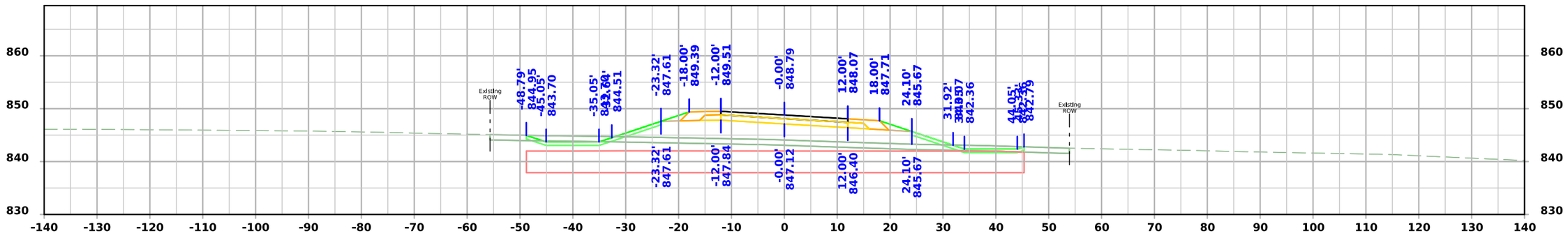
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.205

1:33:12 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

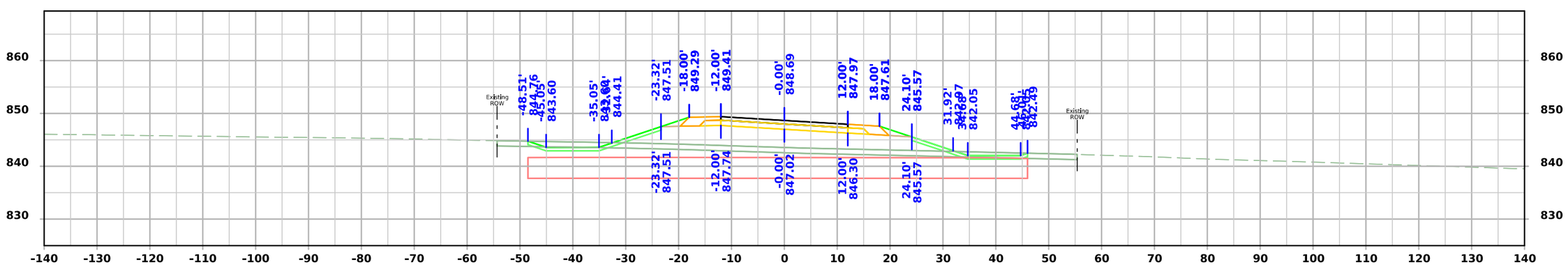
Old IA 163



STA 5005+00.00



STA 5004+75.00

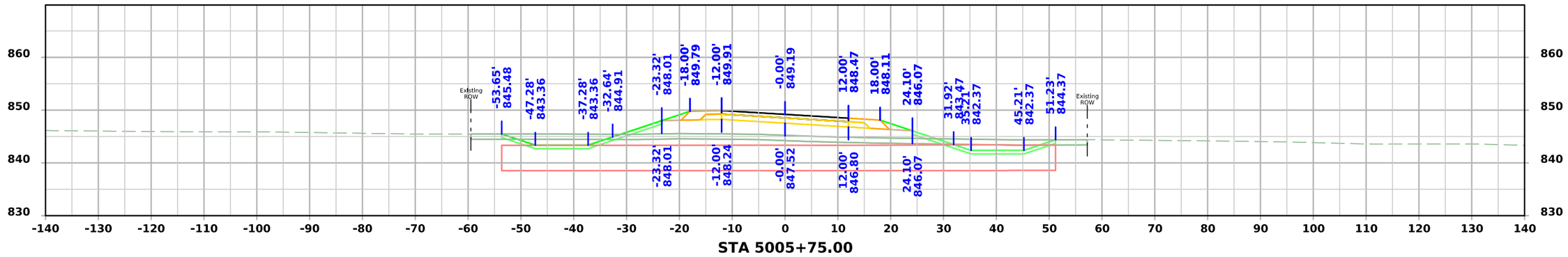


STA 5004+50.00

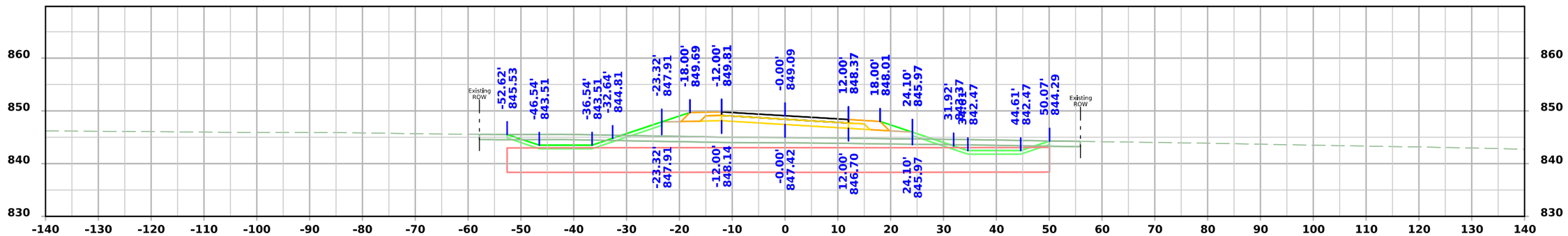
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.206

1:33:14 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

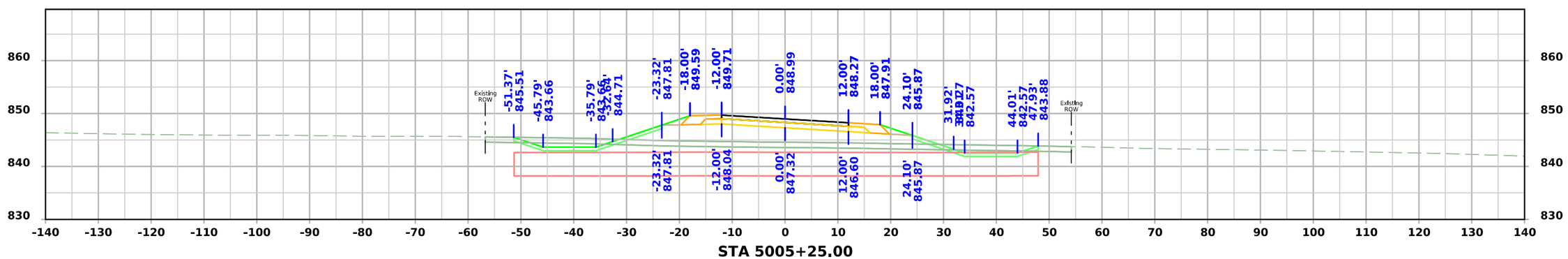
Old IA 163



STA 5005+75.00



STA 5005+50.00

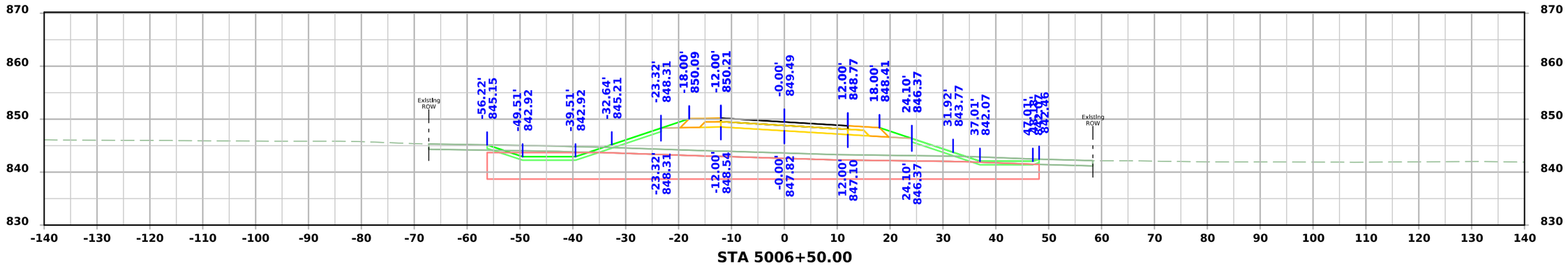


STA 5005+25.00

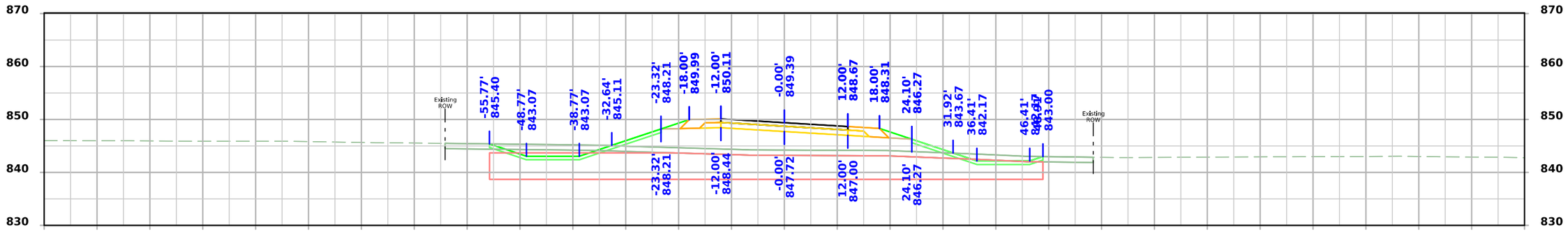
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.207

1:33:17 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

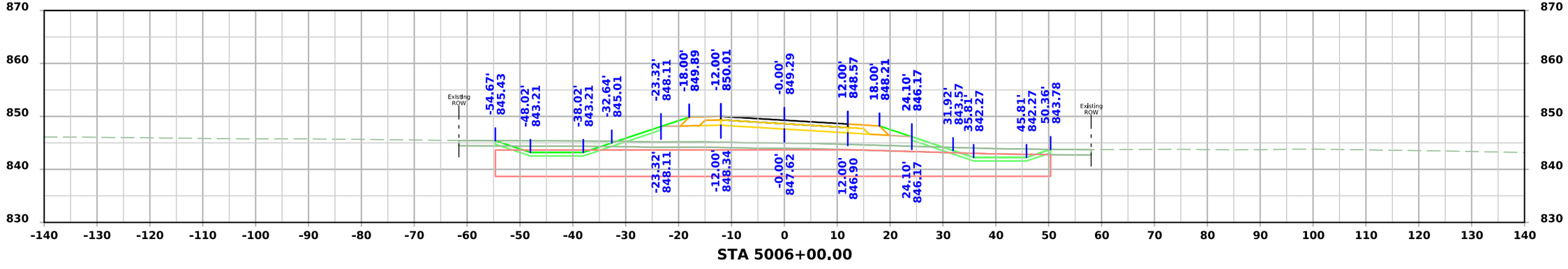
Old IA 163



STA 5006+50.00



STA 5006+25.00

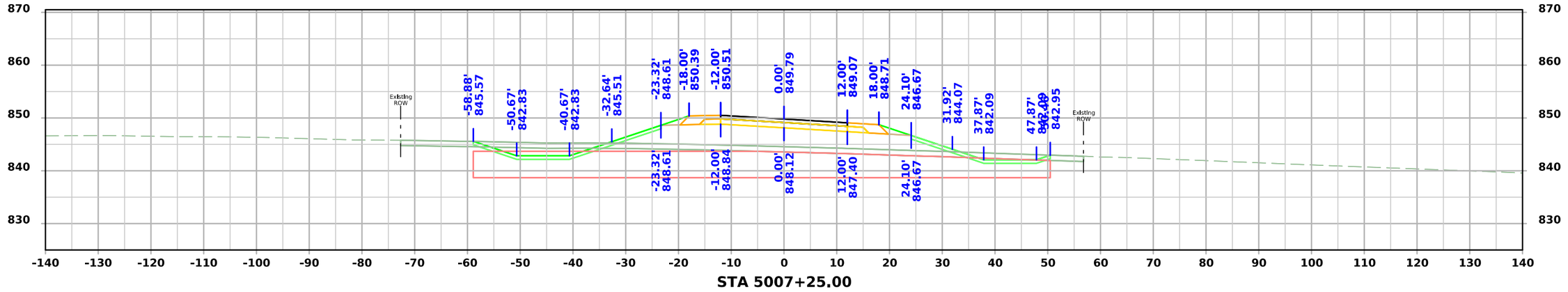


STA 5006+00.00

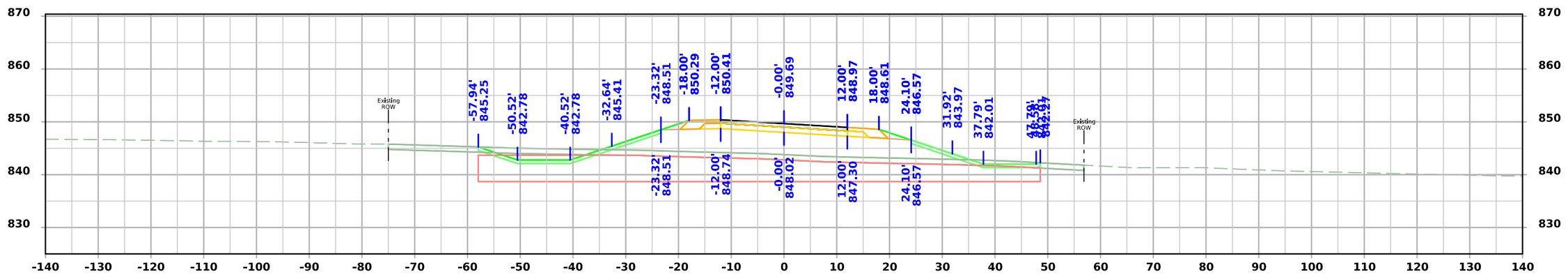
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.208

1:33:19 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

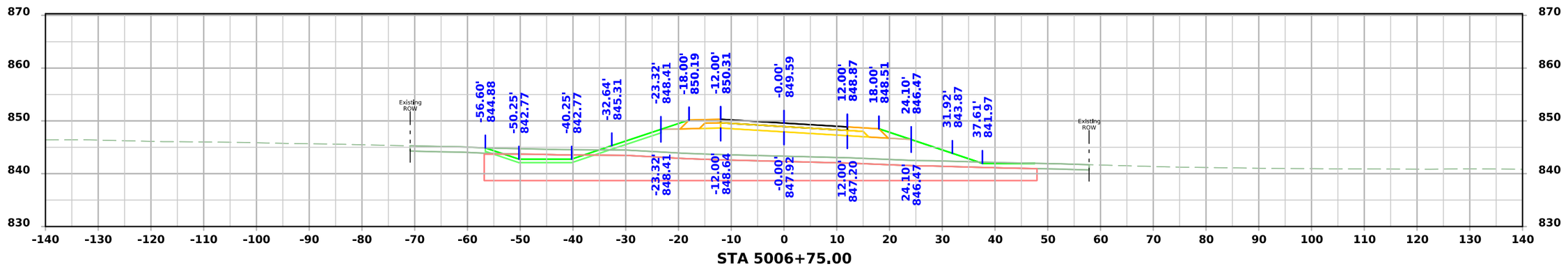
Old IA 163



STA 5007+25.00



STA 5007+00.00

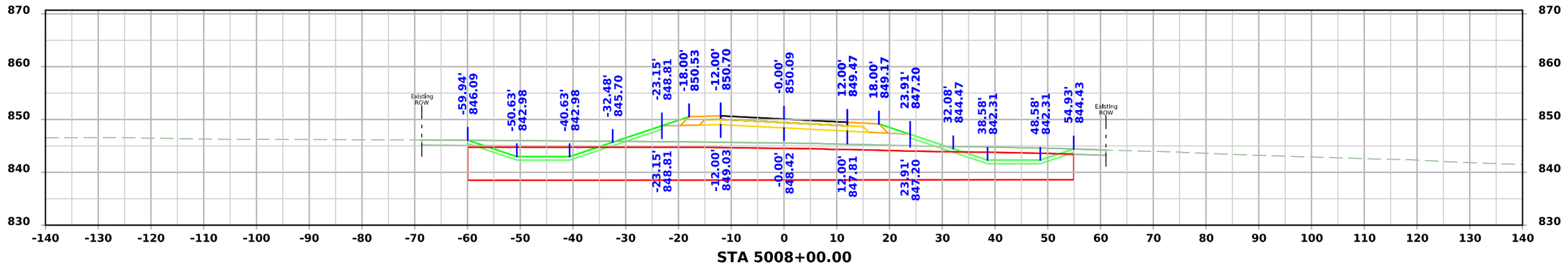


STA 5006+75.00

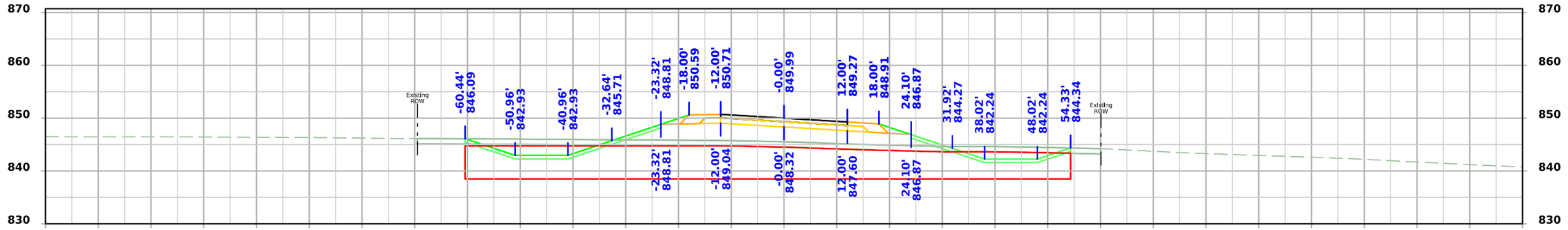
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.209

1:33:21 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

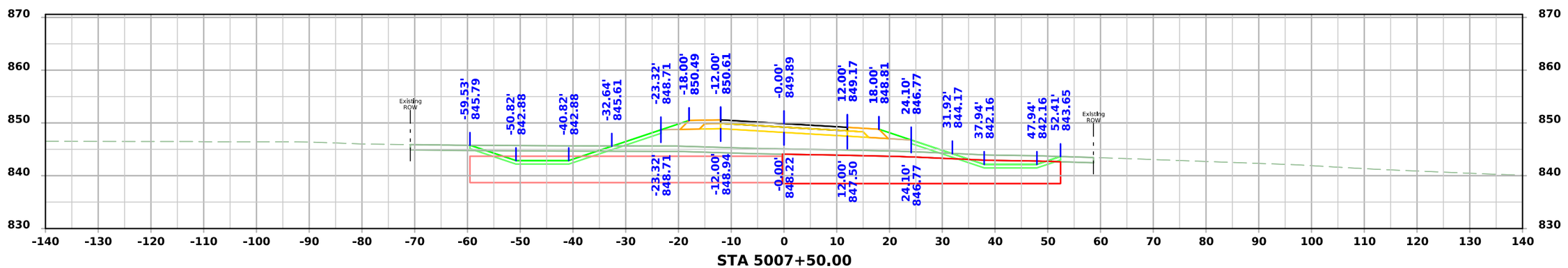
Old IA 163



STA 5008+00.00



STA 5007+75.00

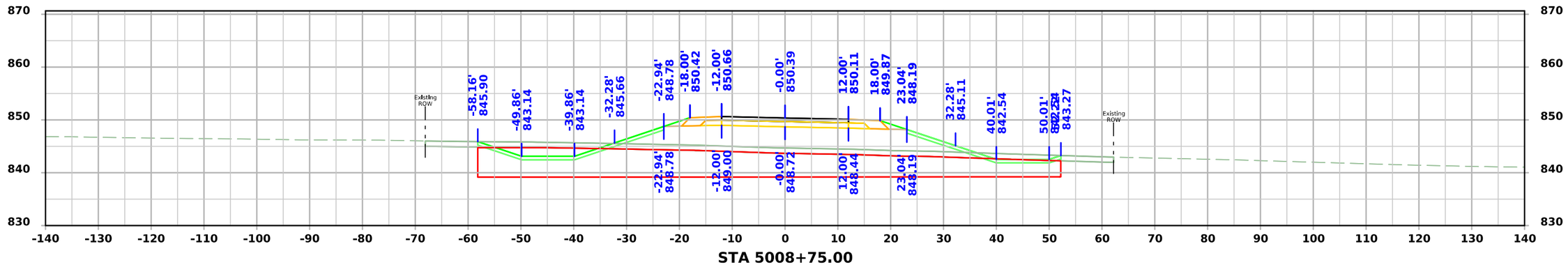


STA 5007+50.00

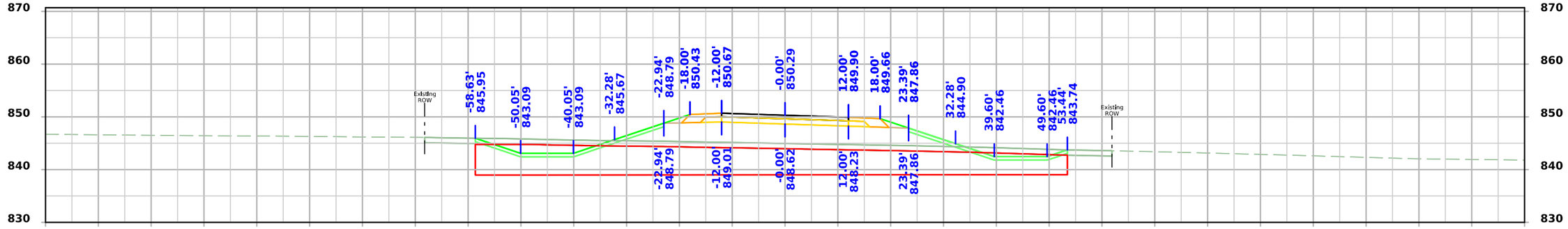
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.210

1:33:23 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

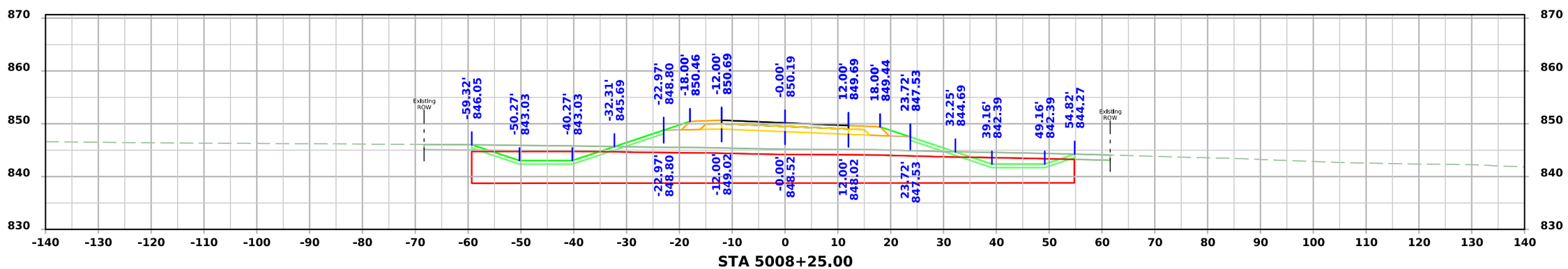
Old IA 163



STA 5008+75.00



STA 5008+50.00

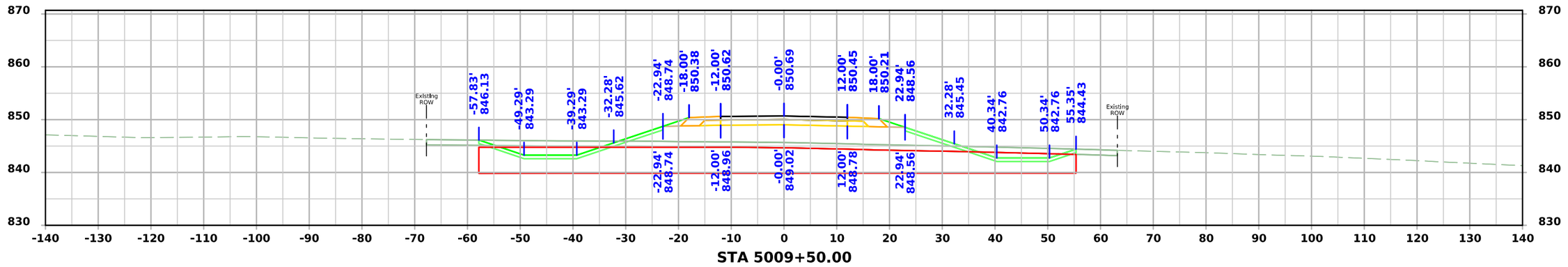


STA 5008+25.00

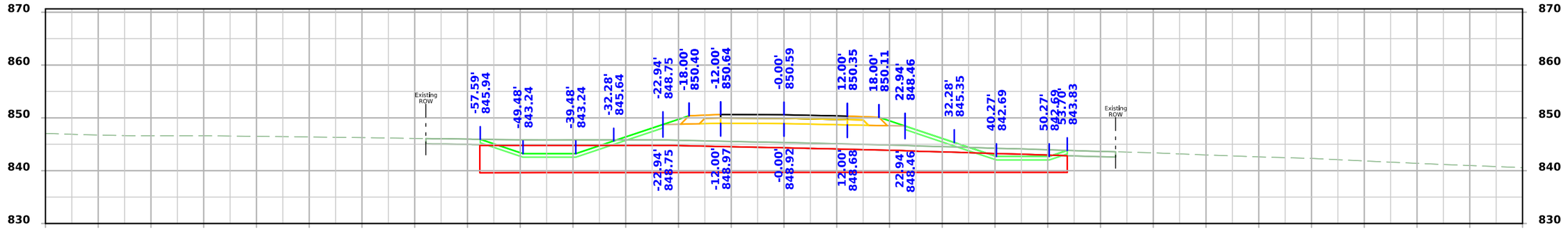
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.211

1:33:25 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

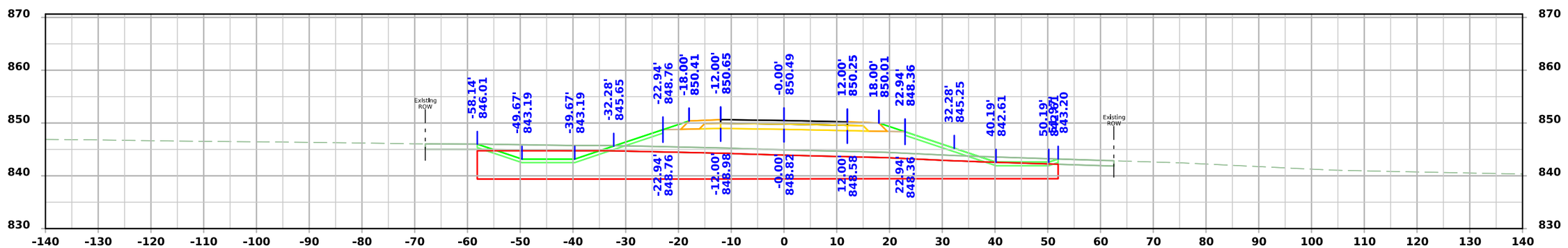
Old IA 163



STA 5009+50.00



STA 5009+25.00

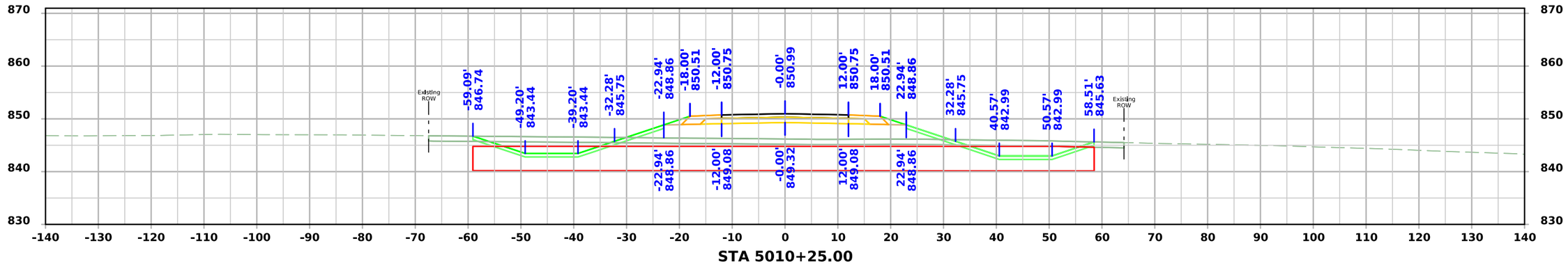


STA 5009+00.00

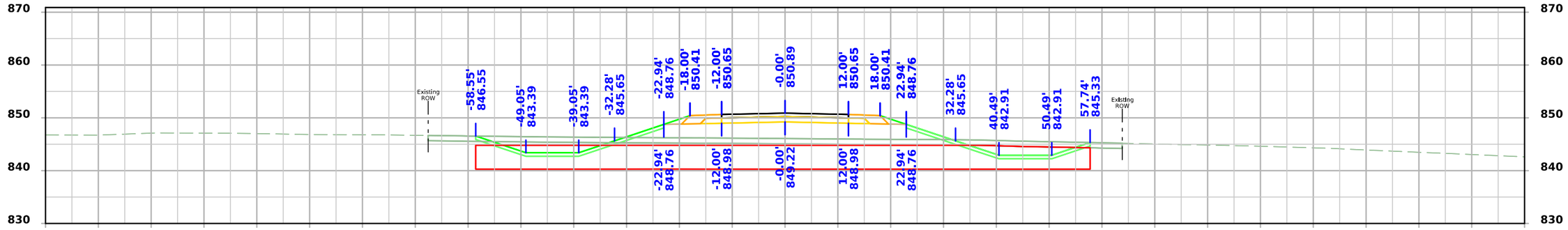
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.212

1:33:26 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

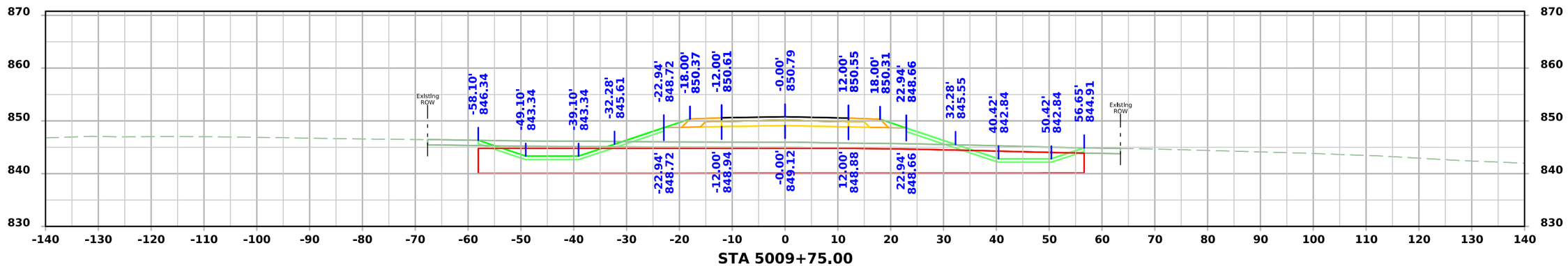
Old IA 163



STA 5010+25.00



STA 5010+00.00

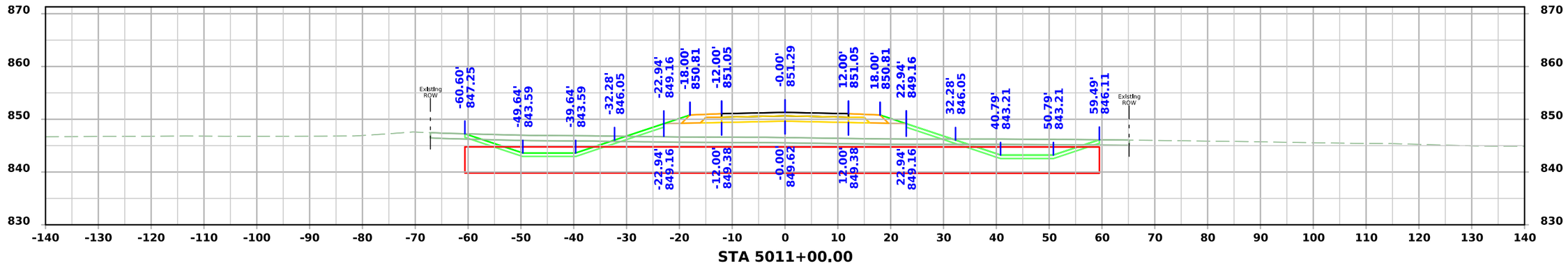


STA 5009+75.00

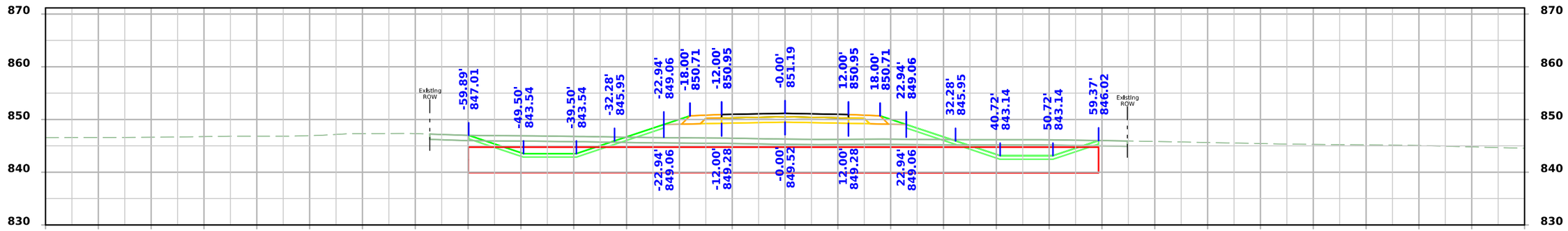
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.213

1:33:28 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

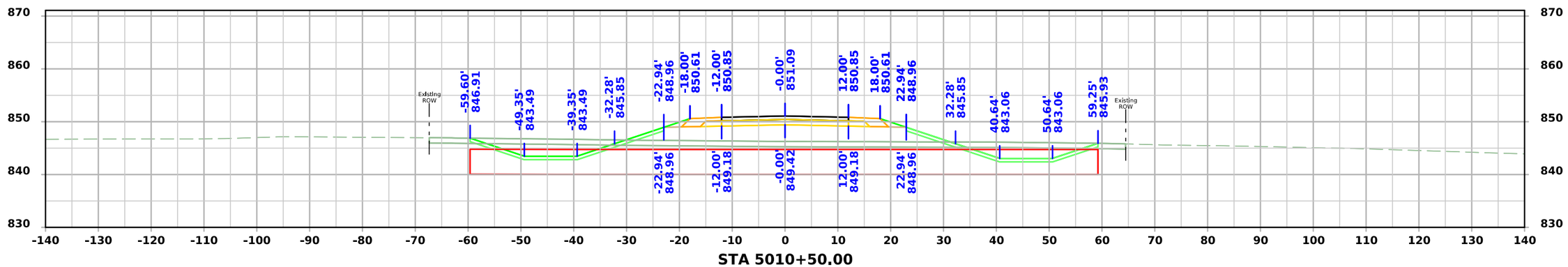
Old IA 163



STA 5011+00.00



STA 5010+75.00

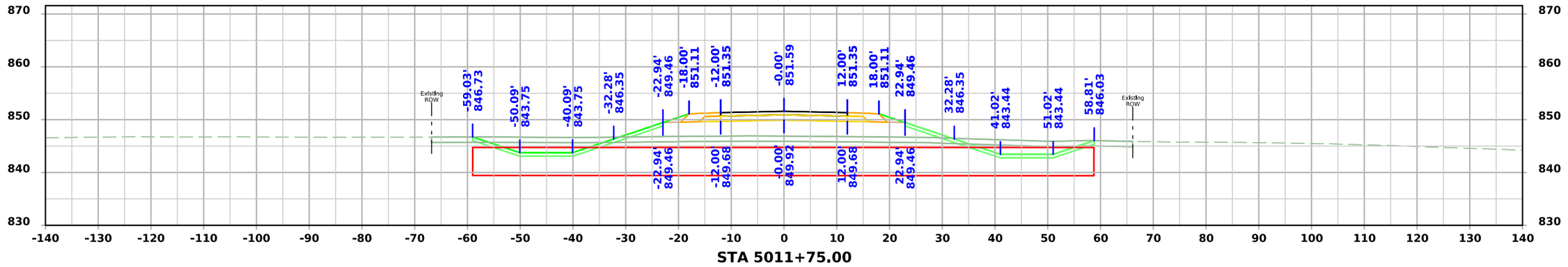


STA 5010+50.00

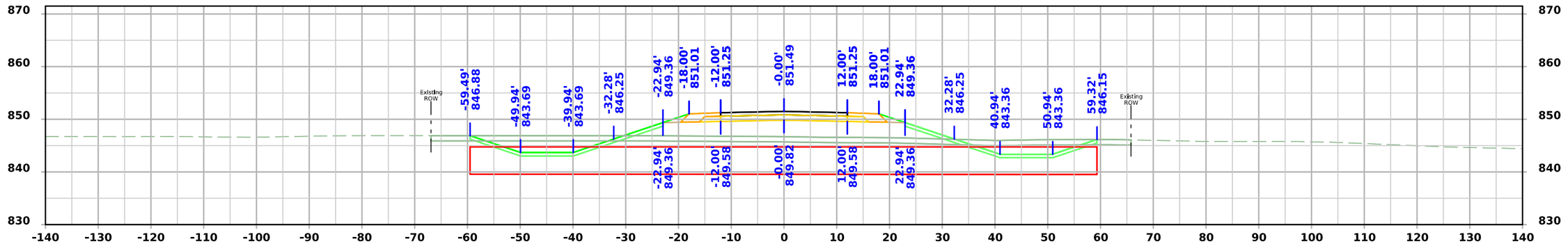
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.214

1:33:30 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

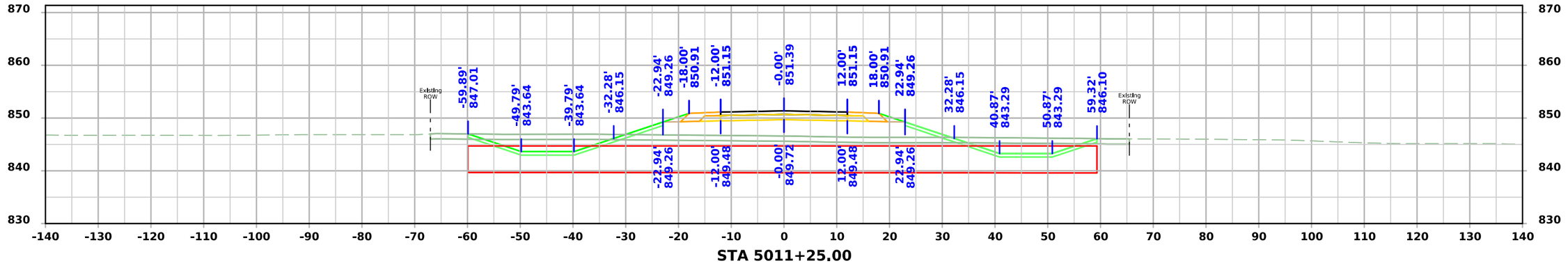
Old IA 163



STA 5011+75.00



STA 5011+50.00

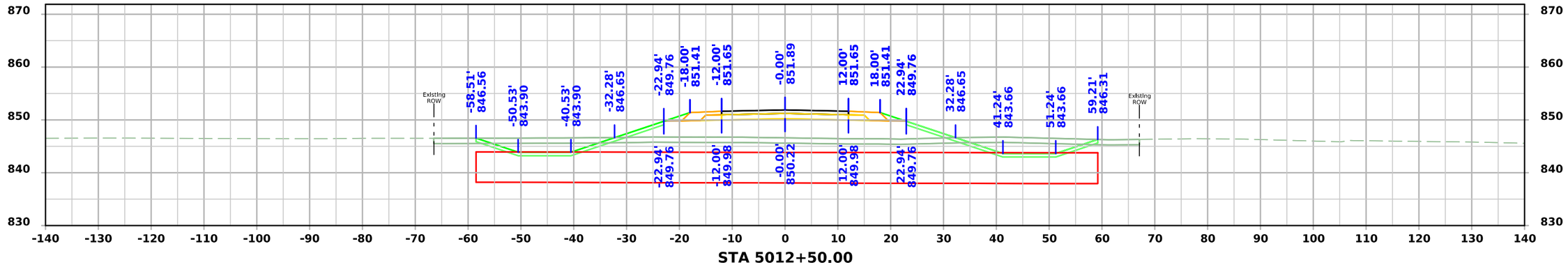


STA 5011+25.00

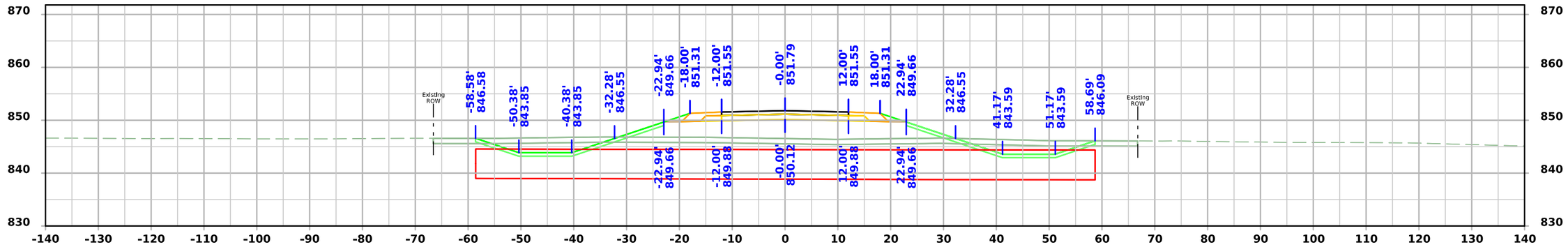
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.215

1:33:32 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

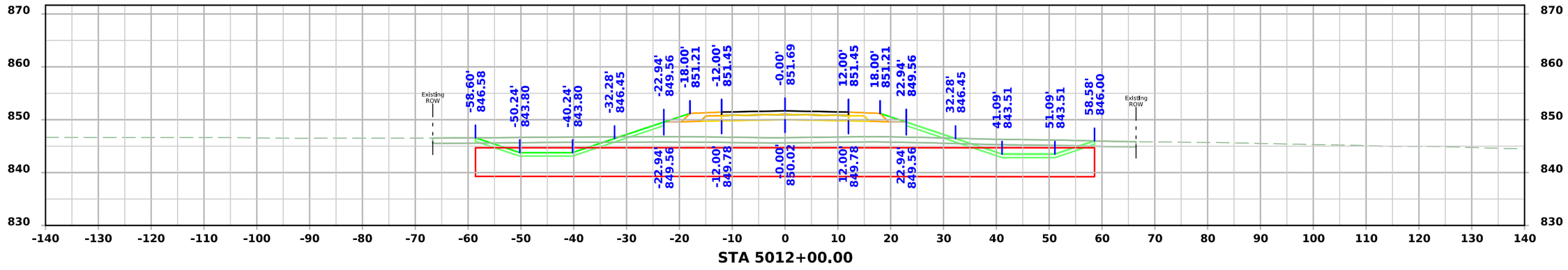
Old IA 163



STA 5012+50.00



STA 5012+25.00

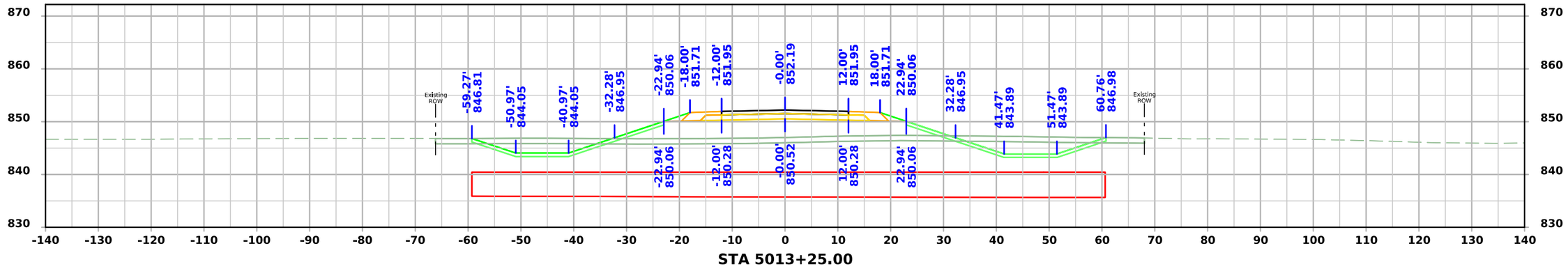


STA 5012+00.00

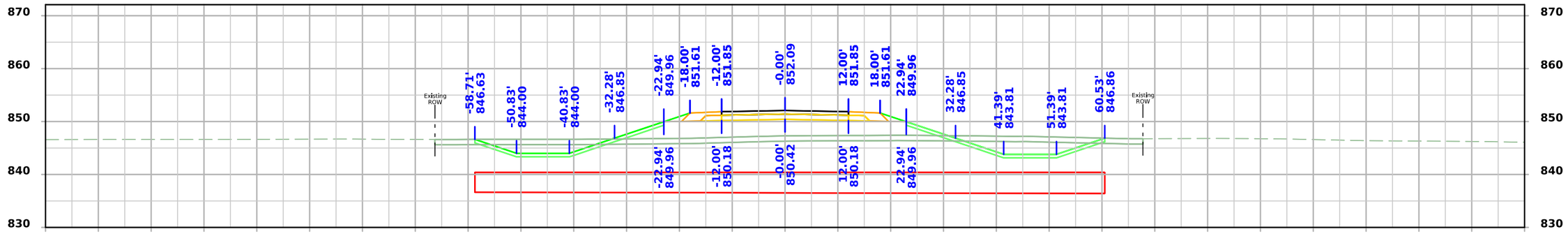
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.216

1:33:34 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

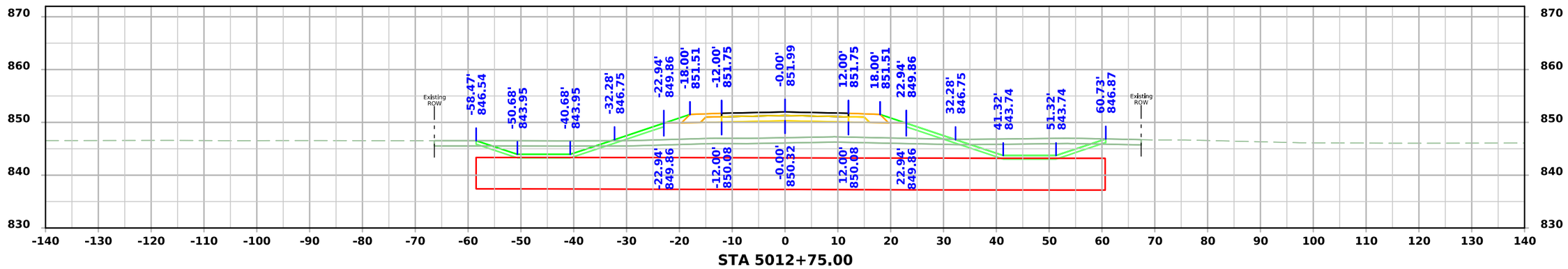
Old IA 163



STA 5013+25.00



STA 5013+00.00

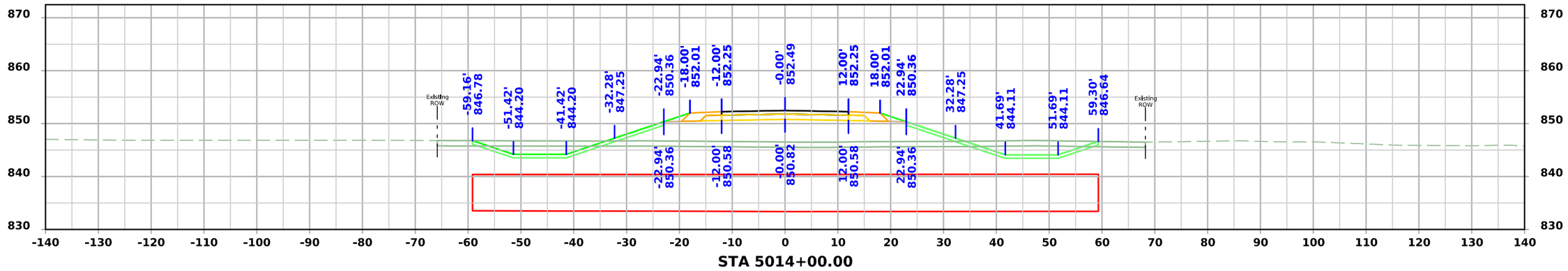


STA 5012+75.00

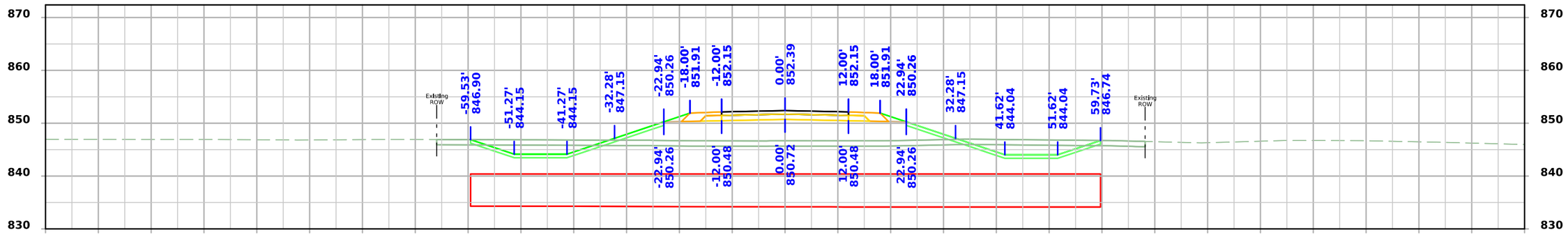
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.217

1:33:36 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

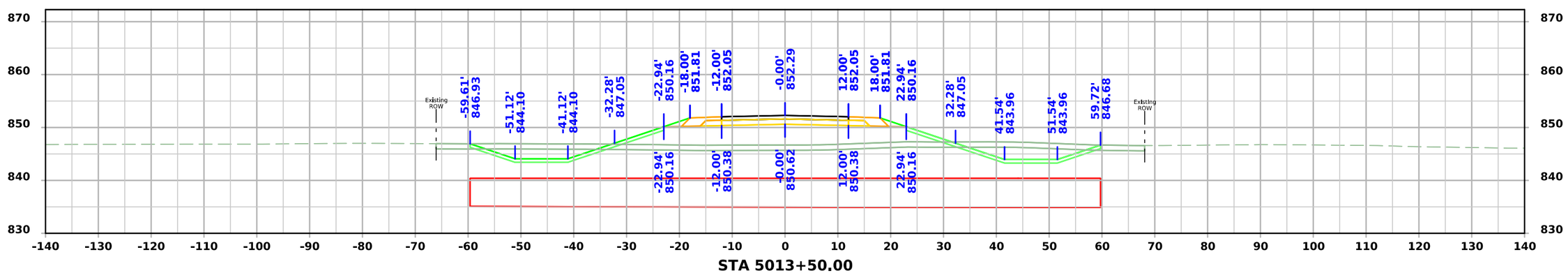
Old IA 163



STA 5014+00.00



STA 5013+75.00

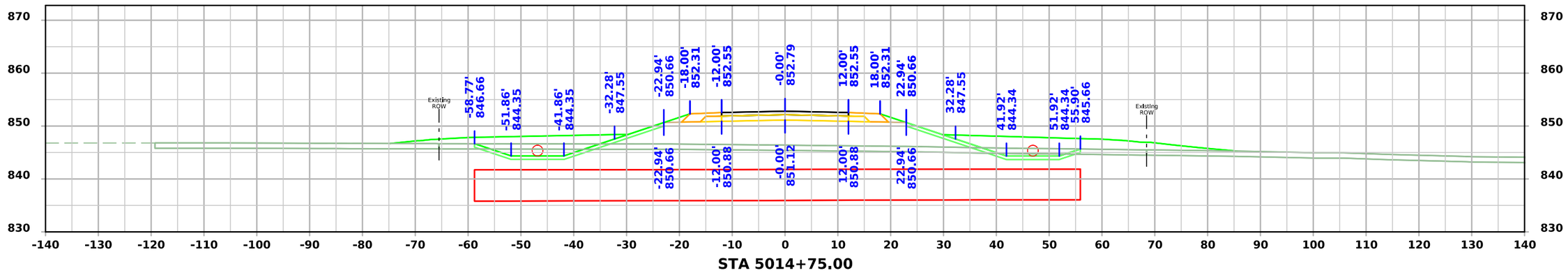


STA 5013+50.00

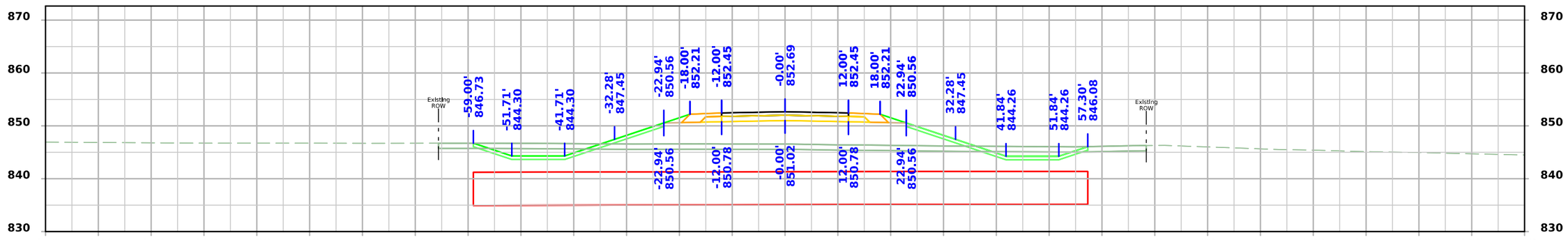
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.218

1:33:38 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

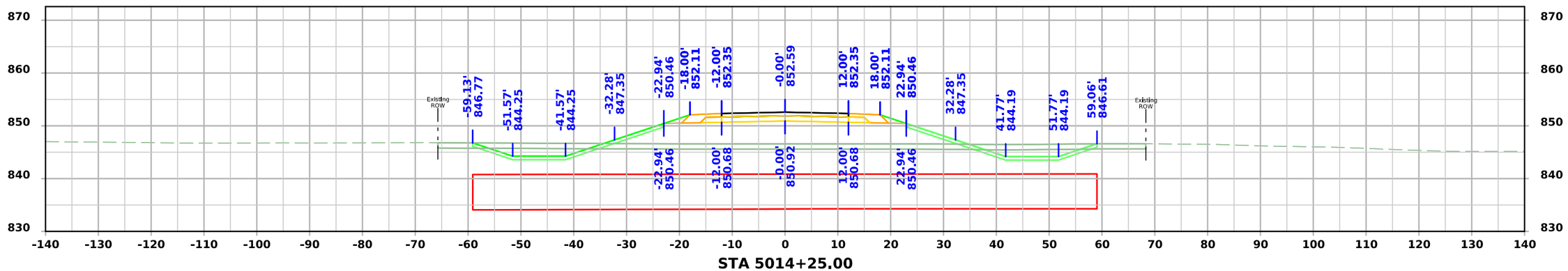
Old IA 163



STA 5014+75.00



STA 5014+50.00

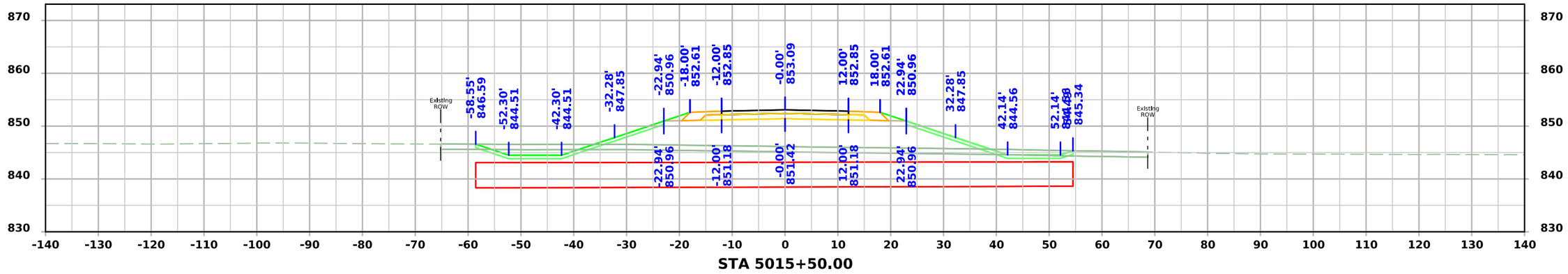


STA 5014+25.00

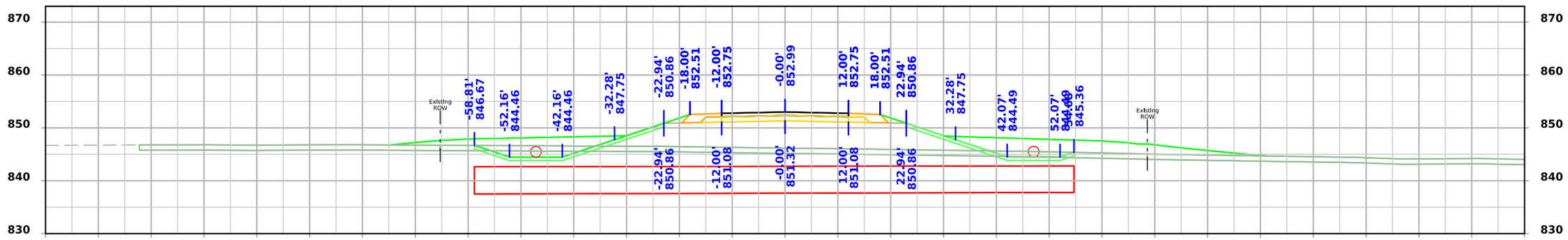
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.219

1:33:40 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

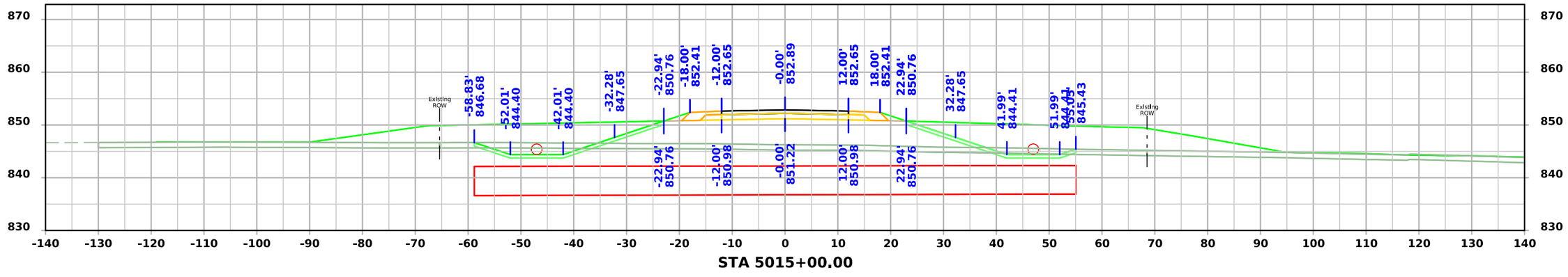
Old IA 163



STA 5015+50.00



STA 5015+25.00

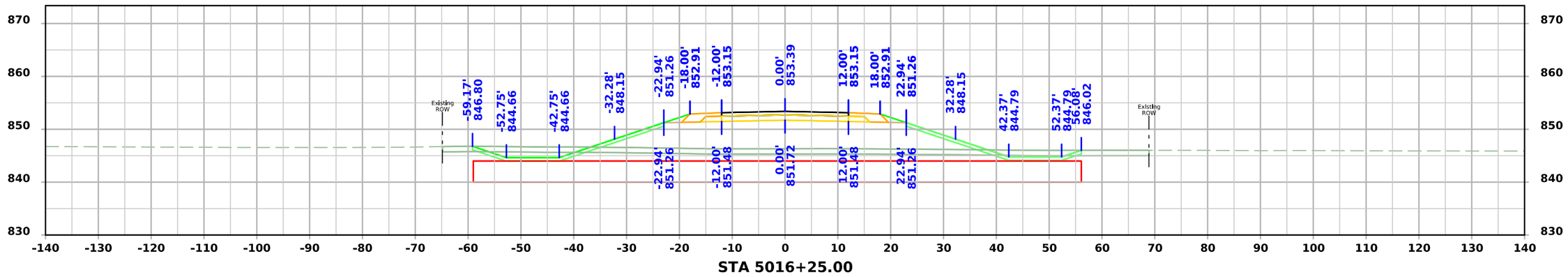


STA 5015+00.00

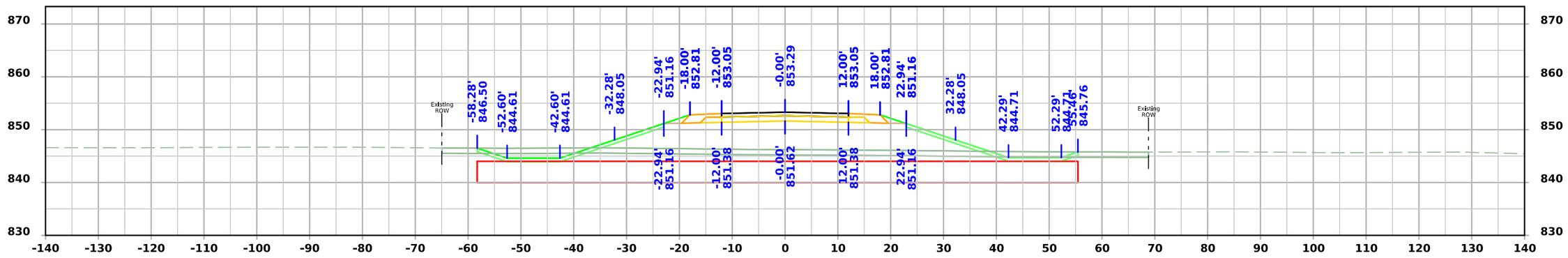
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.220

1:33:42 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

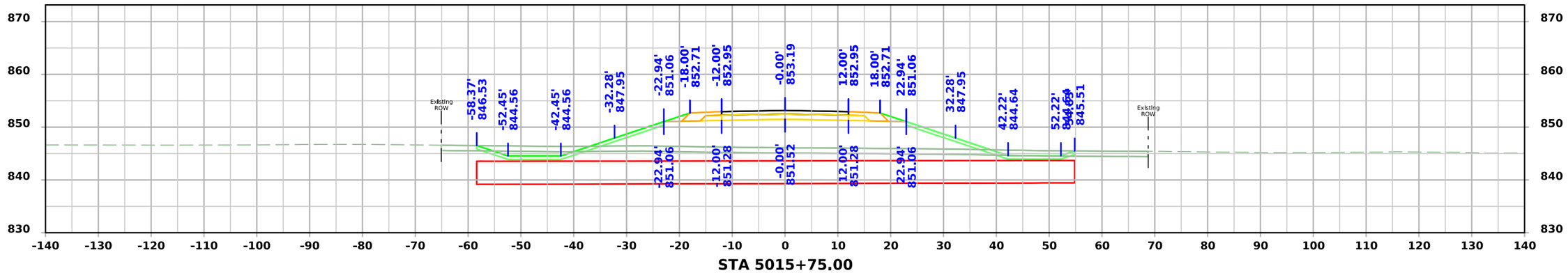
Old IA 163



STA 5016+25.00



STA 5016+00.00

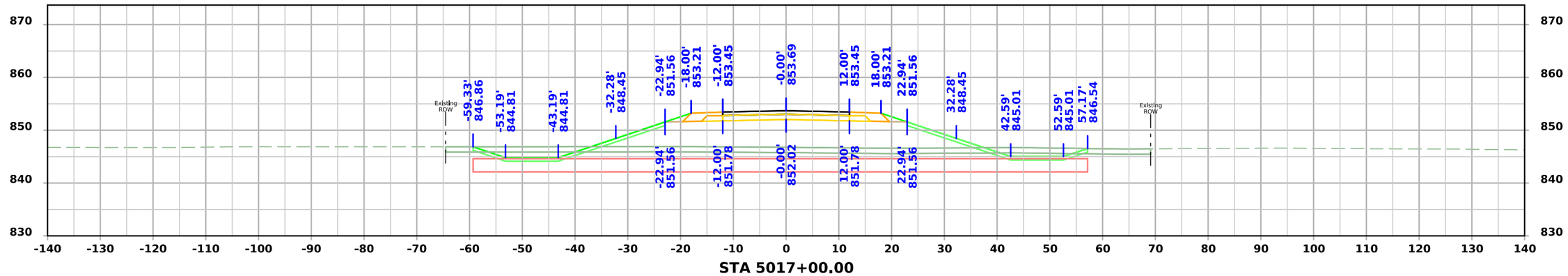


STA 5015+75.00

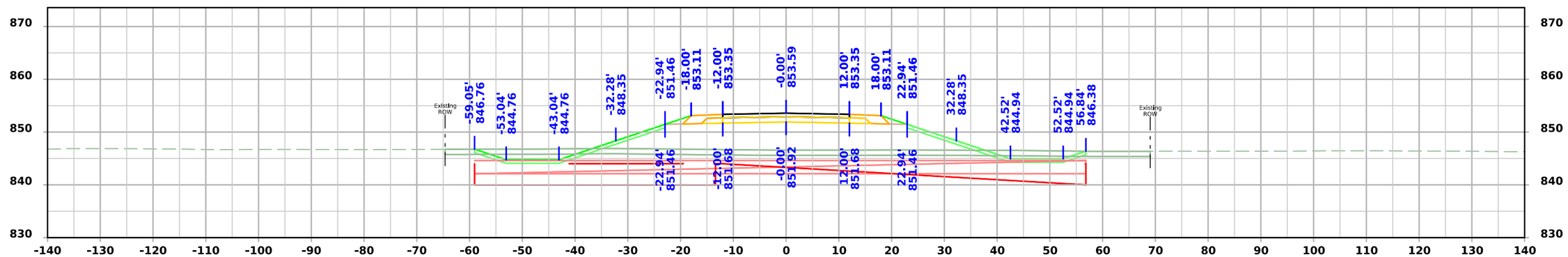
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.221

1:33:44 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

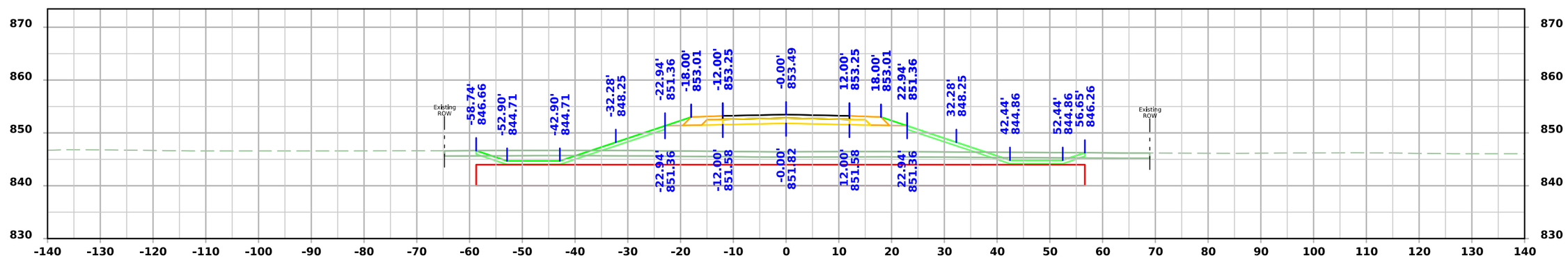
Old IA 163



STA 5017+00.00



STA 5016+75.00

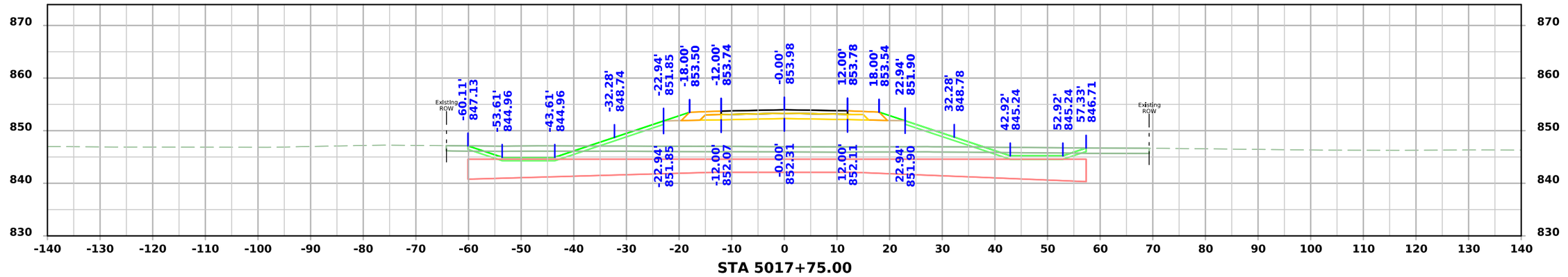


STA 5016+50.00

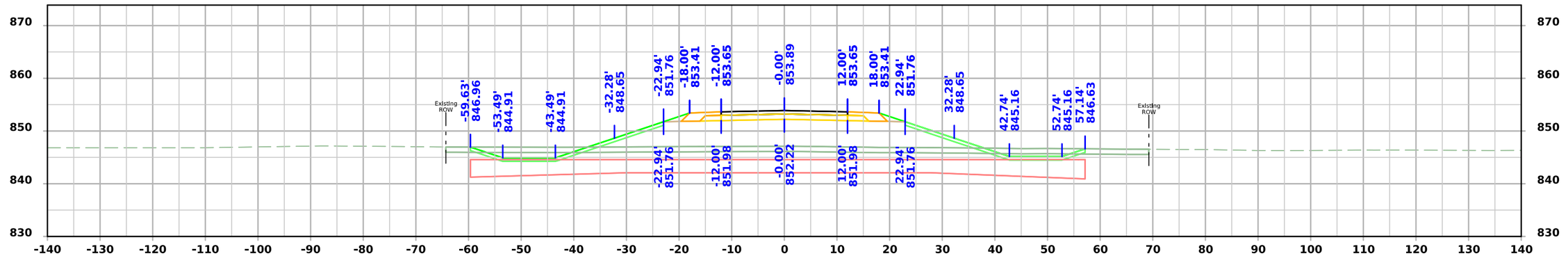
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.222

1:33:46 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

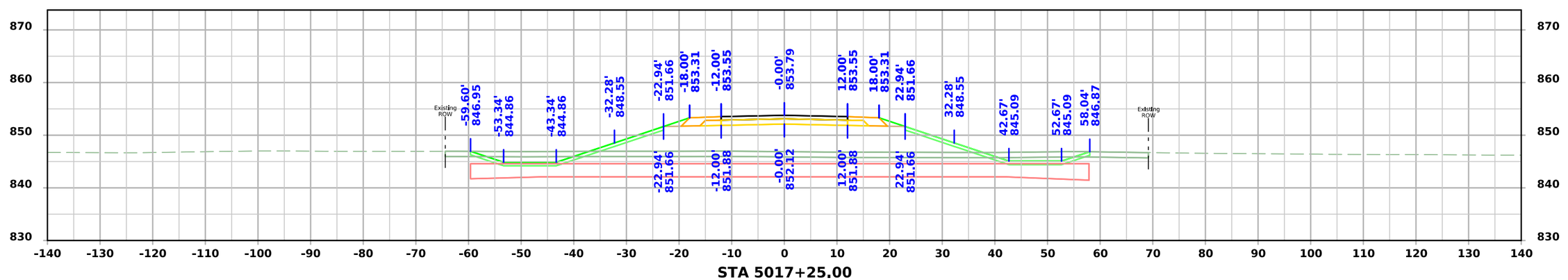
Old IA 163



STA 5017+75.00



STA 5017+50.00

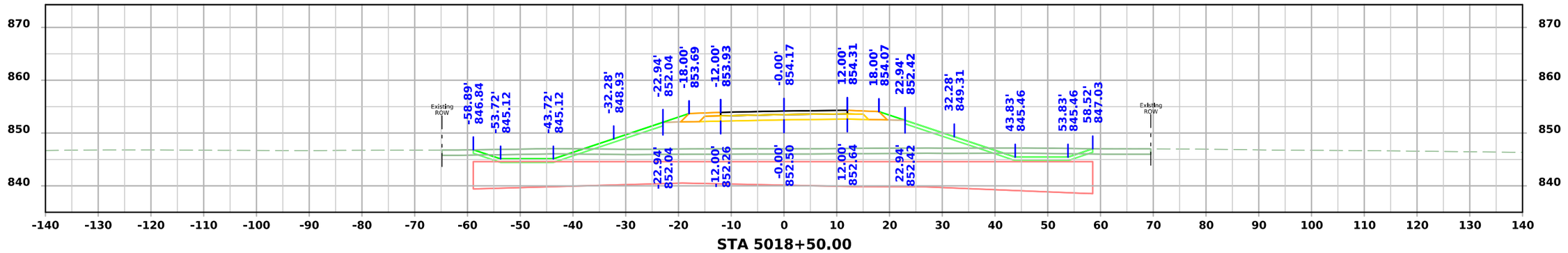


STA 5017+25.00

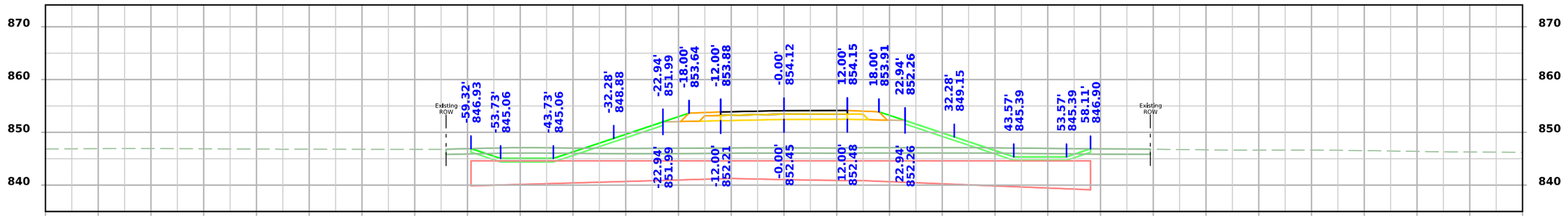
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.223

1:33:48 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

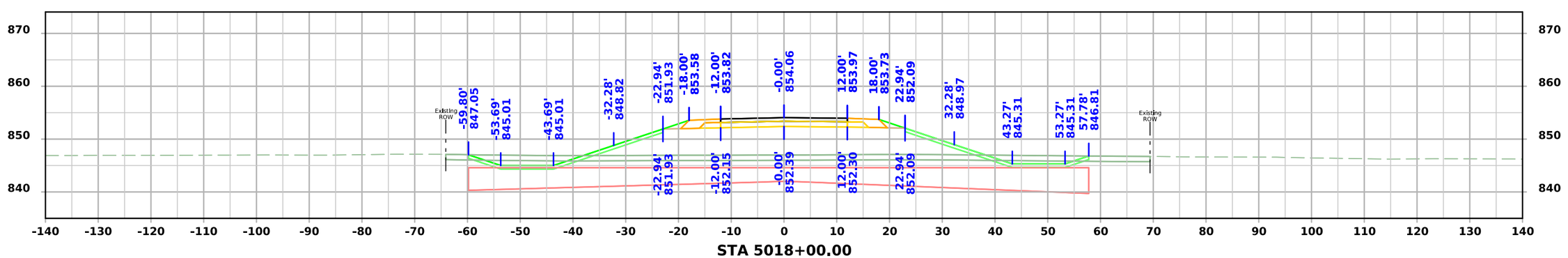
Old IA 163



STA 5018+50.00



STA 5018+25.00

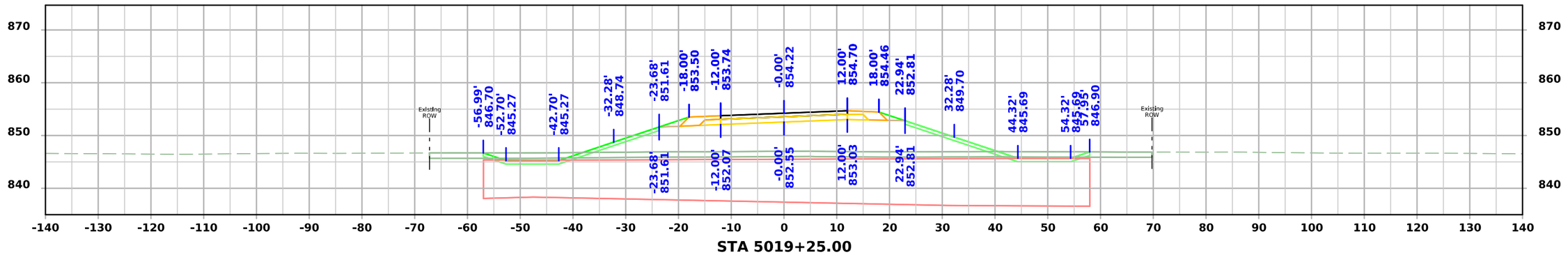


STA 5018+00.00

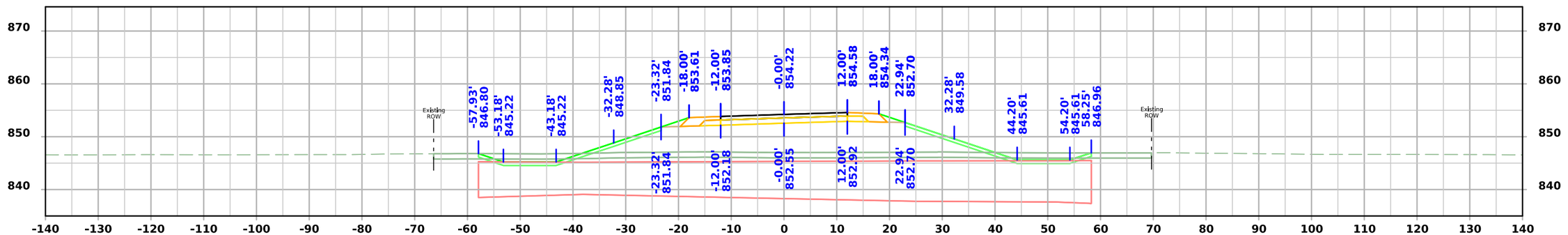
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.224

1:33:50 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

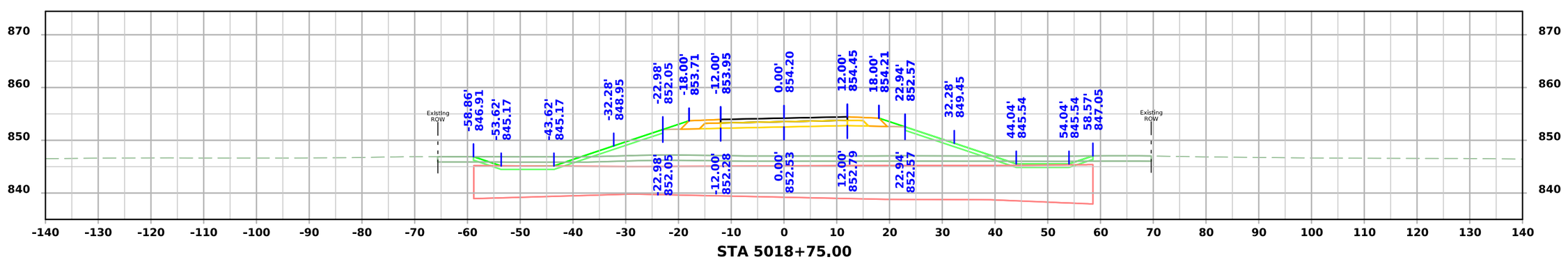
Old IA 163



STA 5019+25.00



STA 5019+00.00

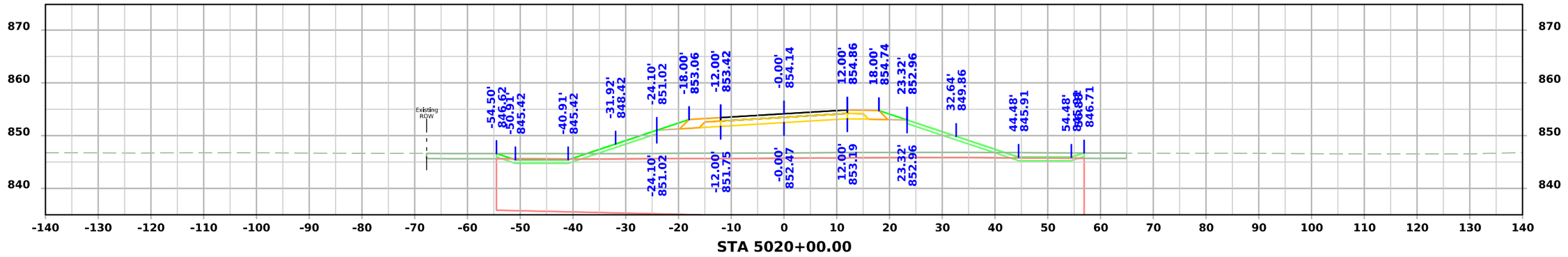


STA 5018+75.00

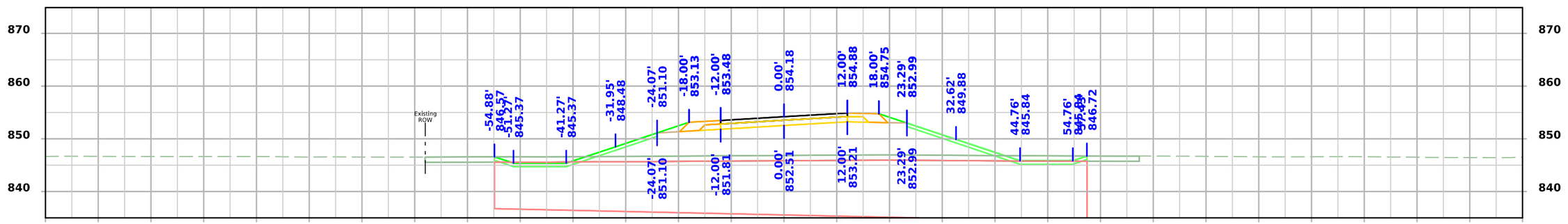
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.225

1:33:52 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

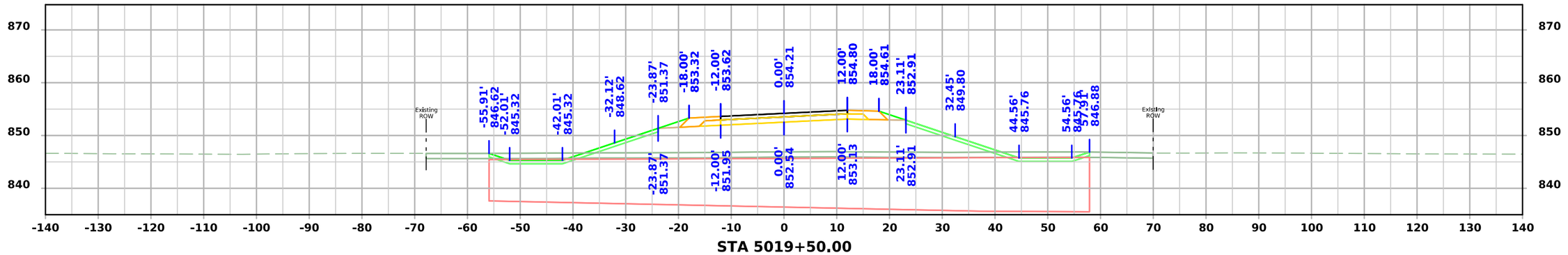
Old IA 163



STA 5020+00.00



STA 5019+75.00

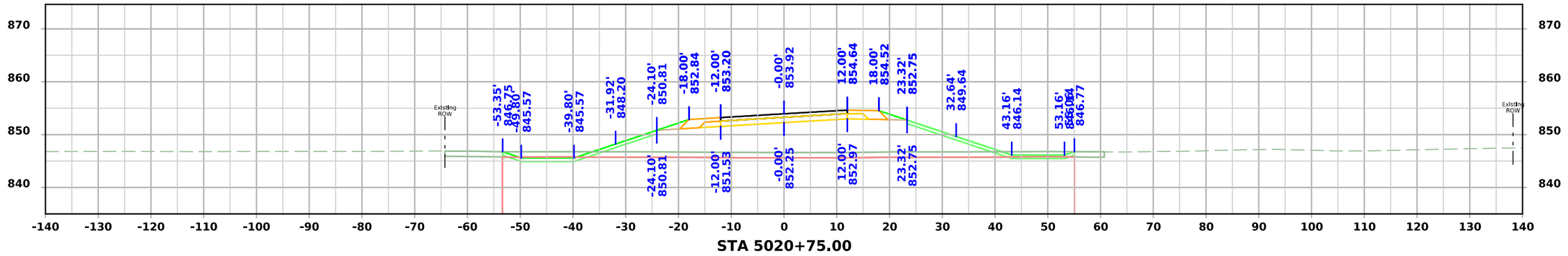


STA 5019+50.00

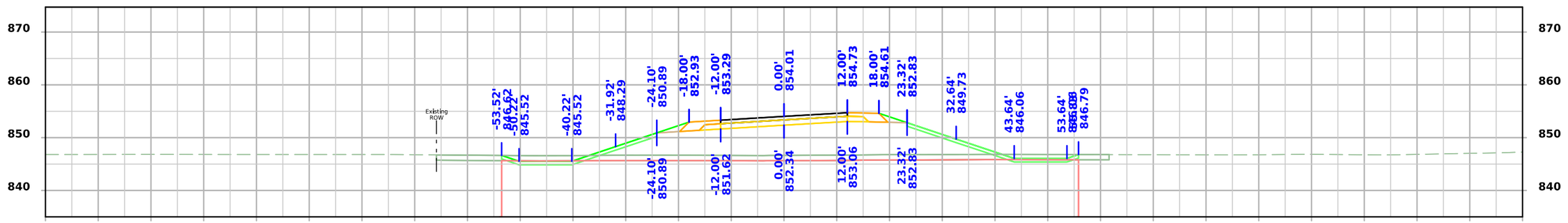
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.226

1:33:54 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

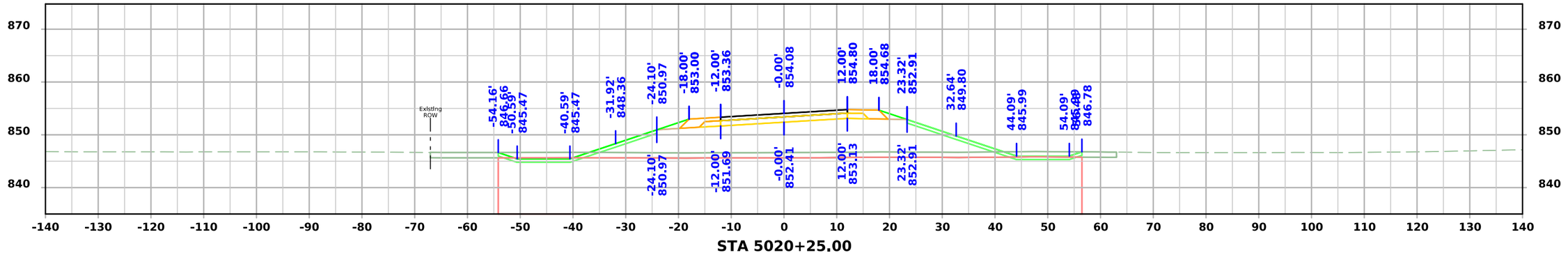
Old IA 163



STA 5020+75.00



STA 5020+50.00

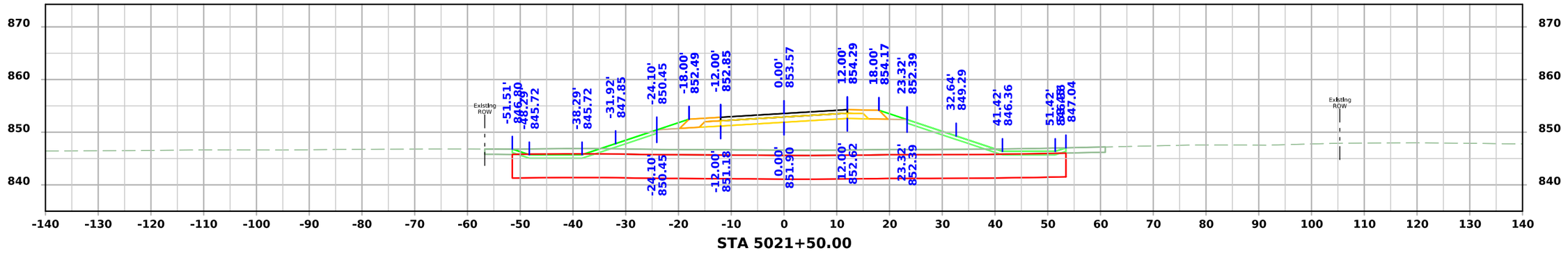


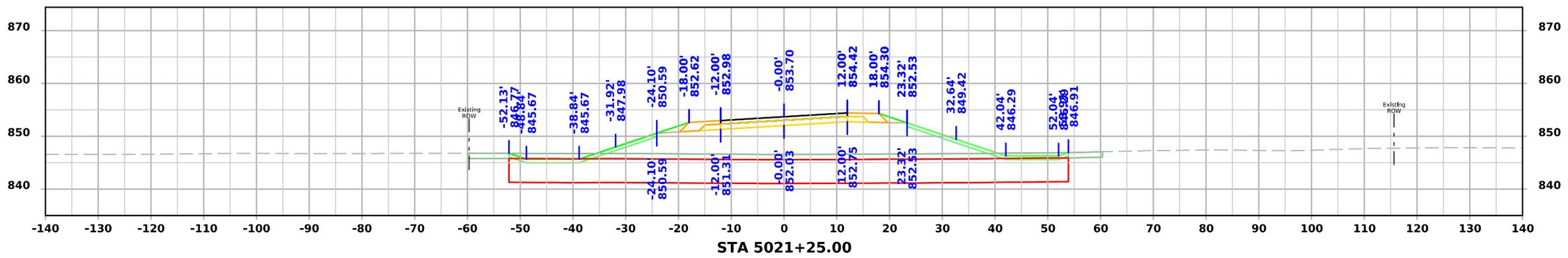
STA 5020+25.00

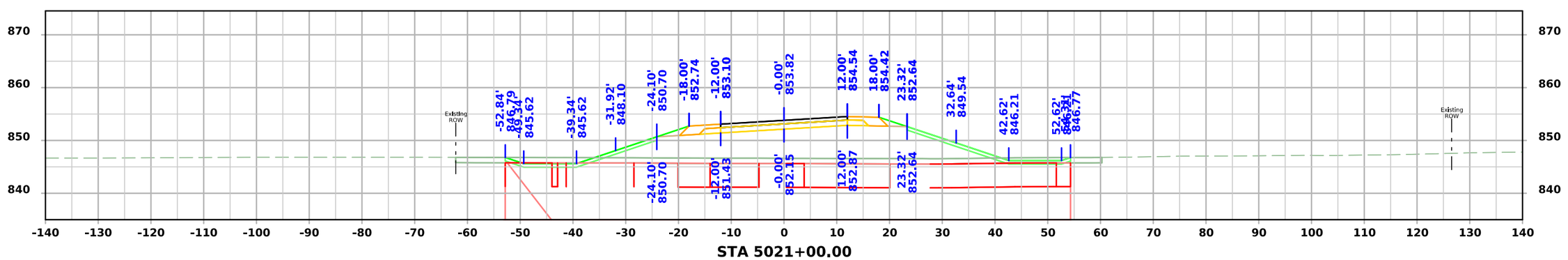
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.227

1:33:55 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

Old IA 163



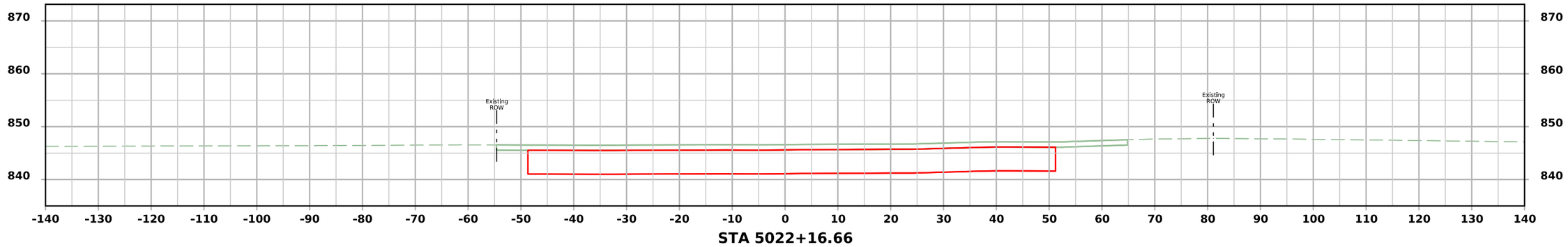




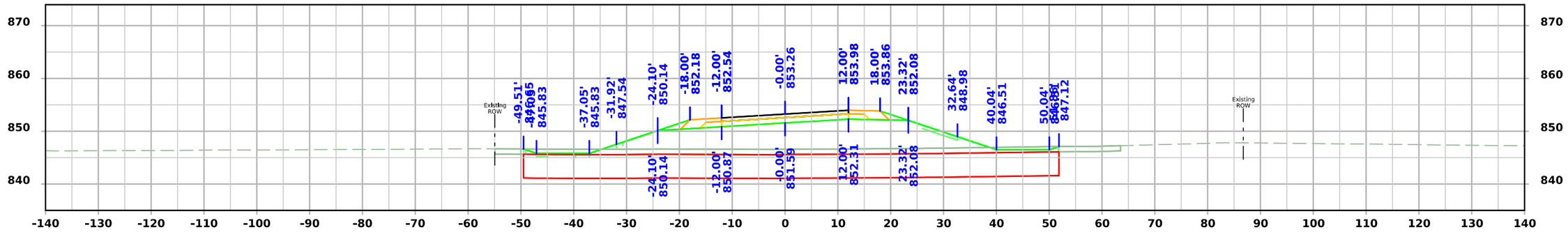
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.228

1:33:57 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

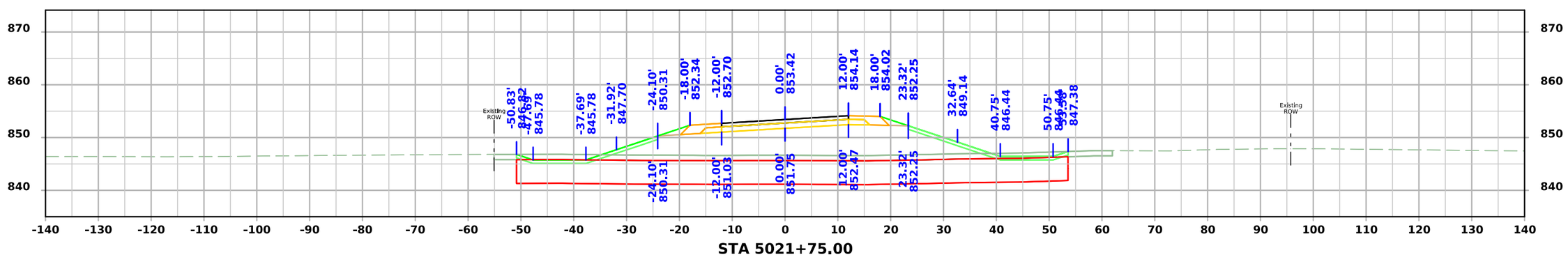
Old IA 163



STA 5022+16.66



STA 5022+00.00

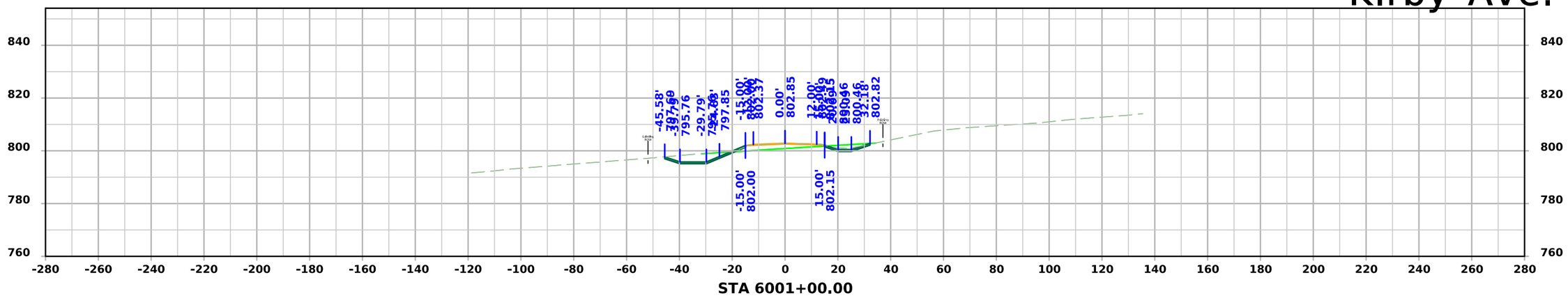


STA 5021+75.00

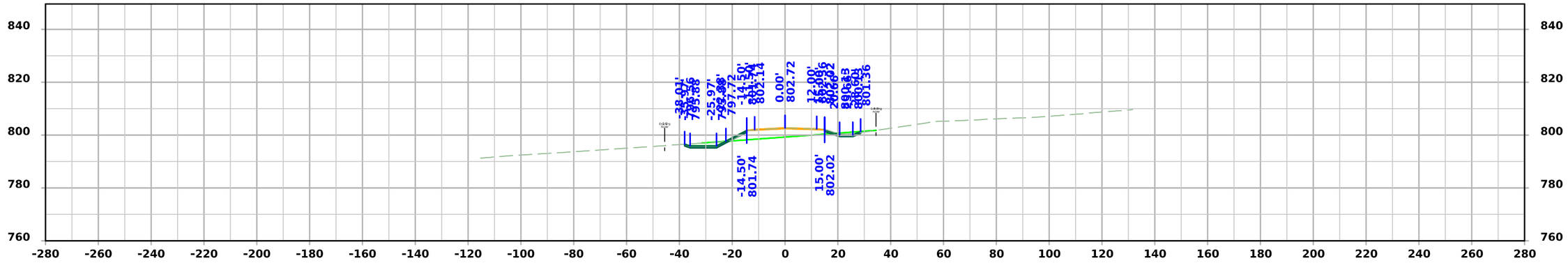
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.229

1:34:00 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SROLD163_62063095Z09_ORD_X200_Grading.dgn

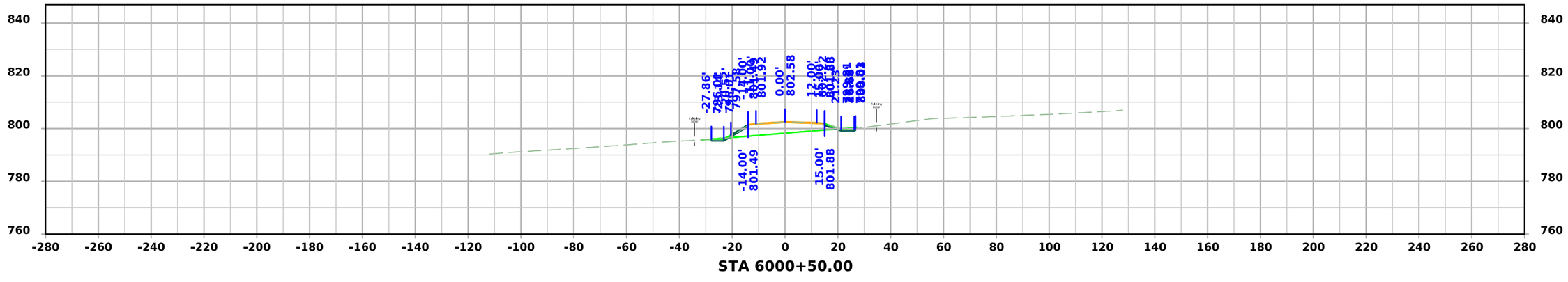
Kirby Ave.



STA 6001+00.00



STA 6000+75.00

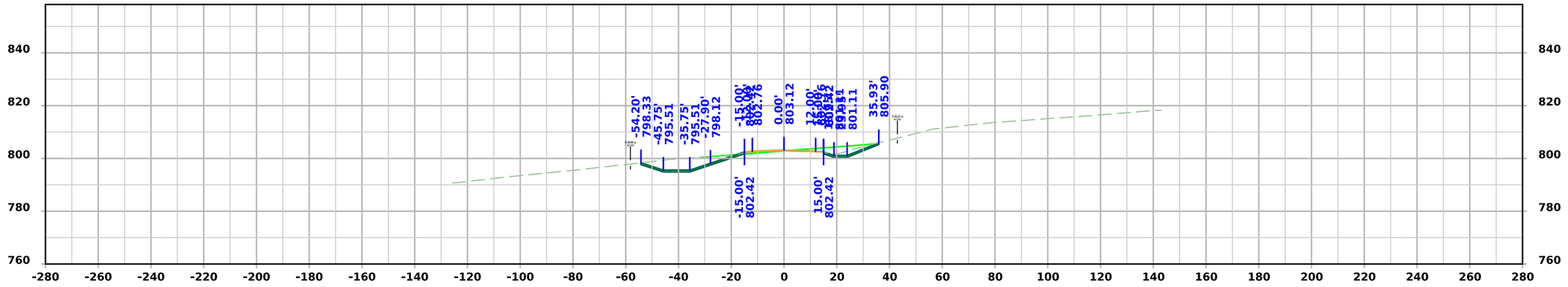


STA 6000+50.00

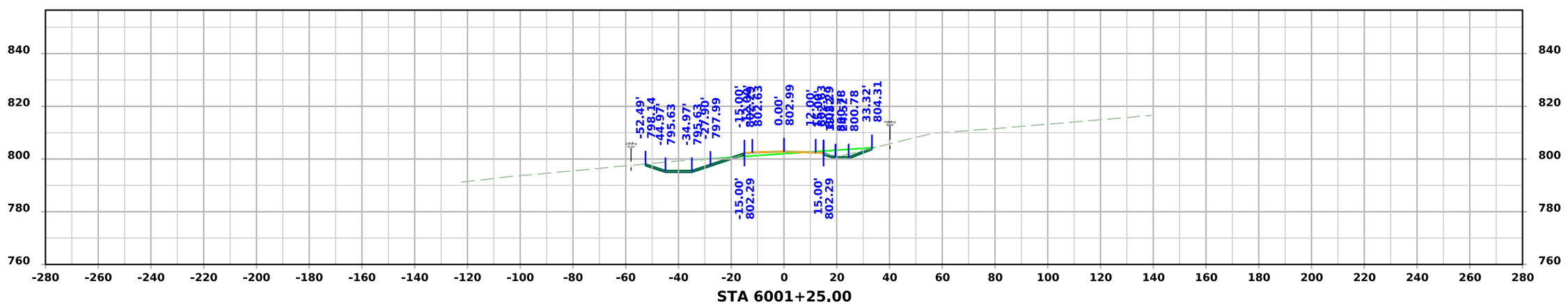
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.300	

5:02:47 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6001+50.00

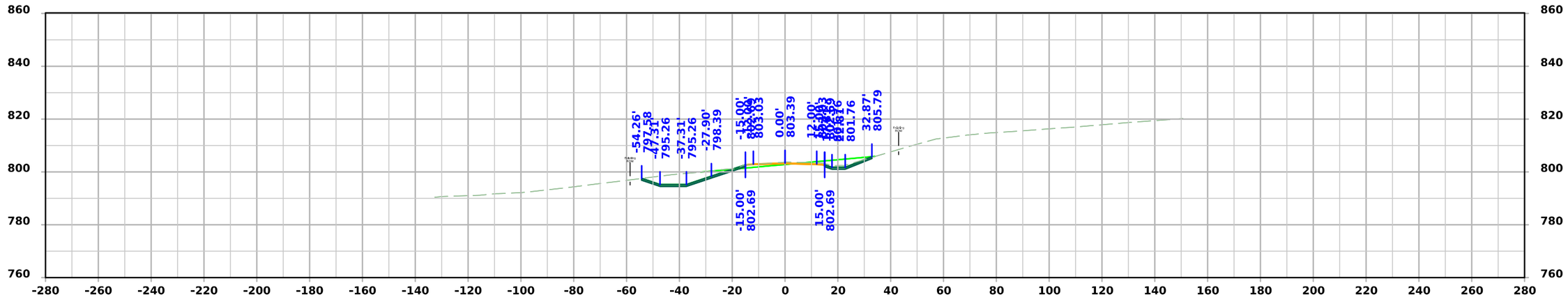


STA 6001+25.00

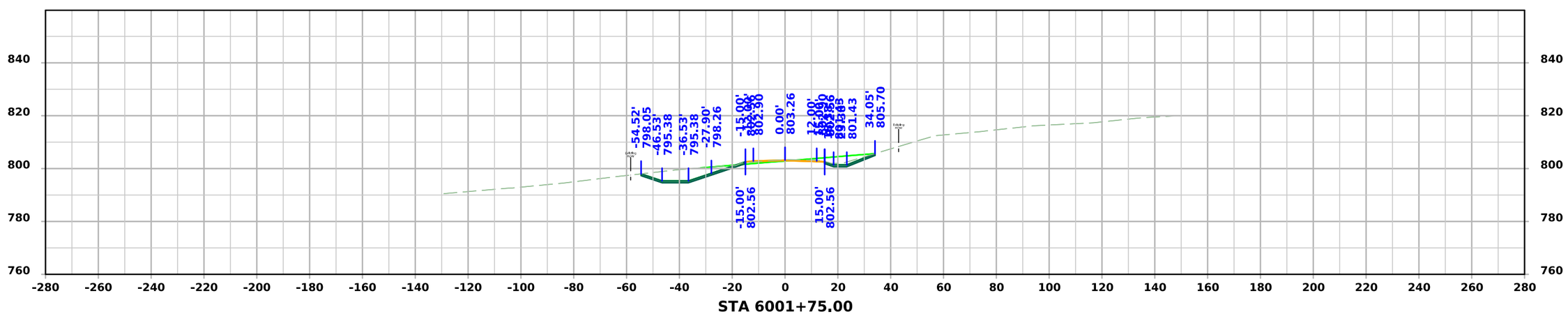
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.301

5:02:48 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6002+00.00

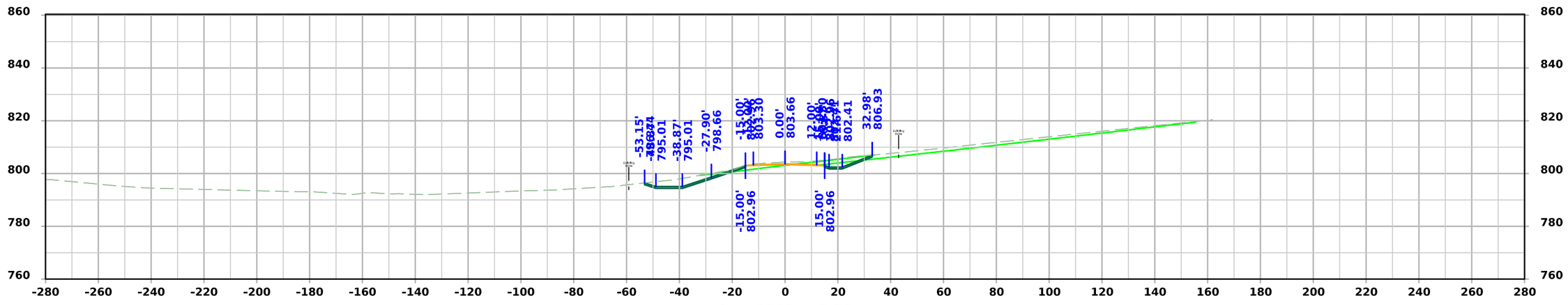


STA 6001+75.00

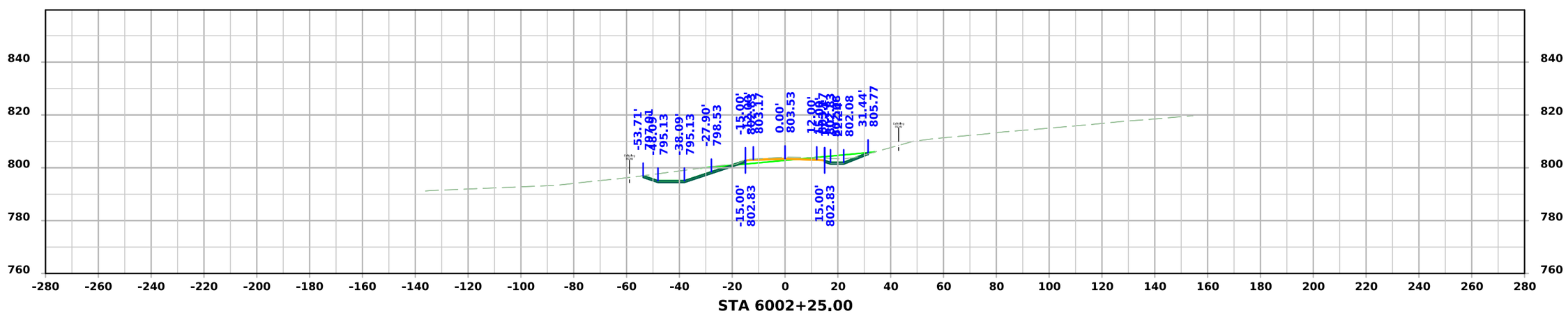
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.302

5:02:48 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6002+50.00

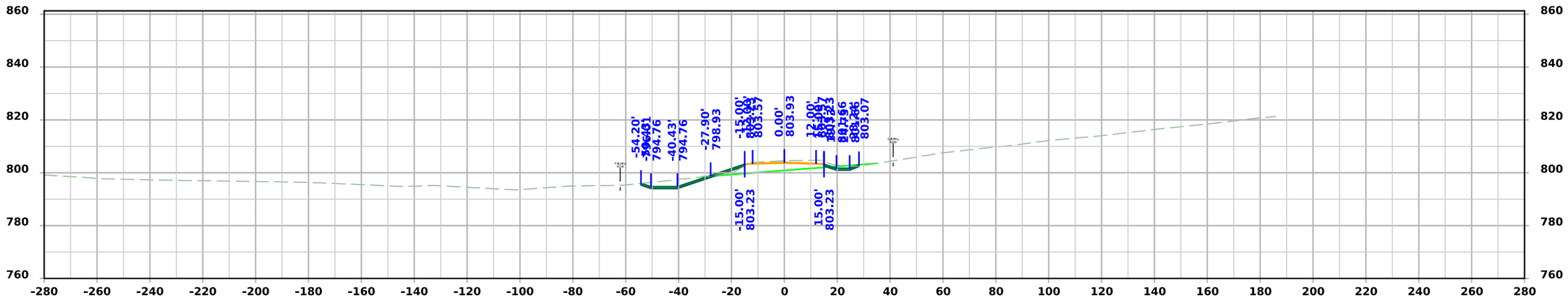


STA 6002+25.00

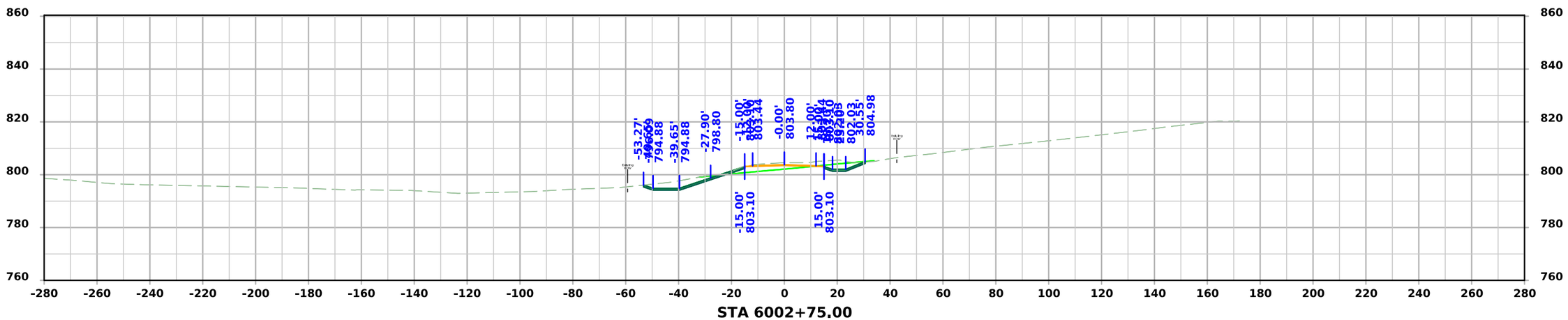
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.303

5:02:49 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6003+00.00

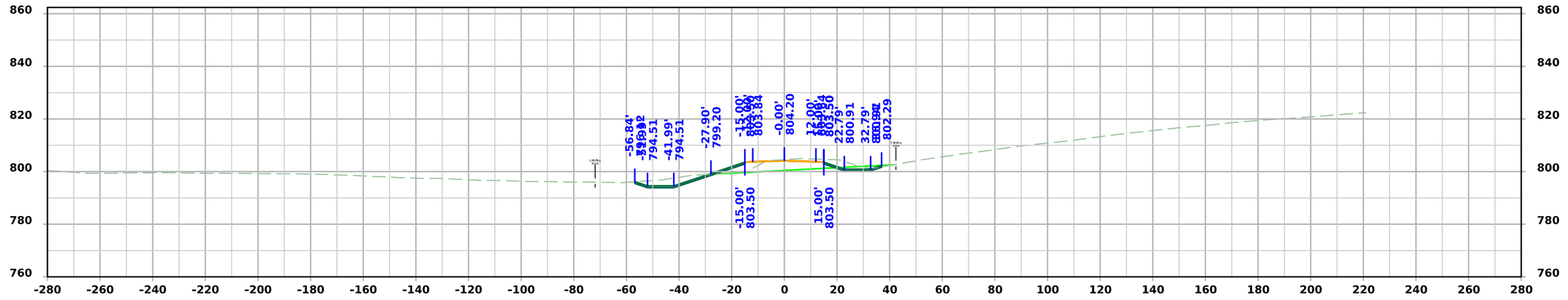


STA 6002+75.00

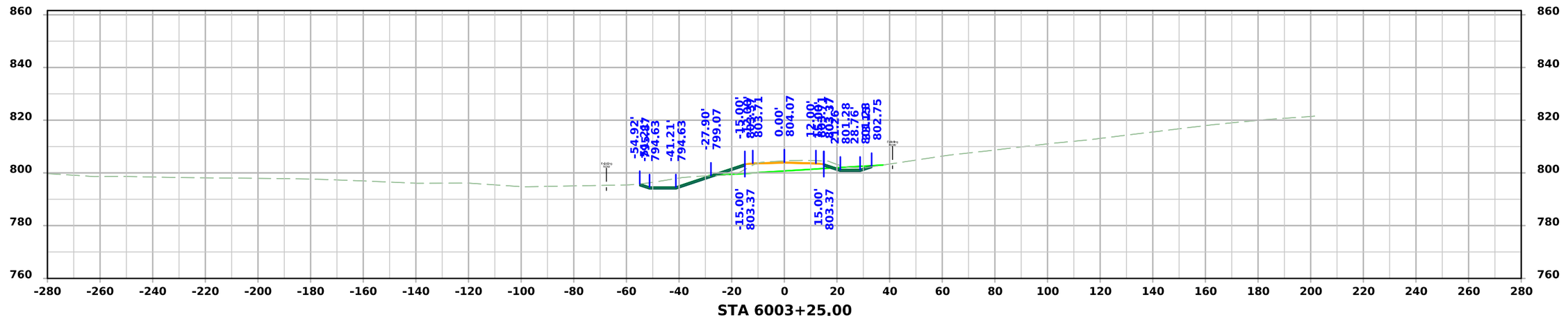
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.304

5:02:50 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6003+50.00

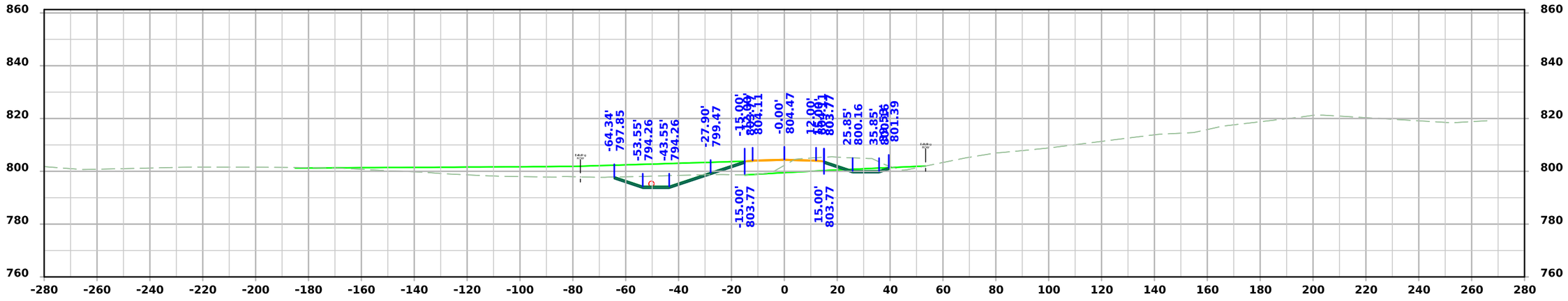


STA 6003+25.00

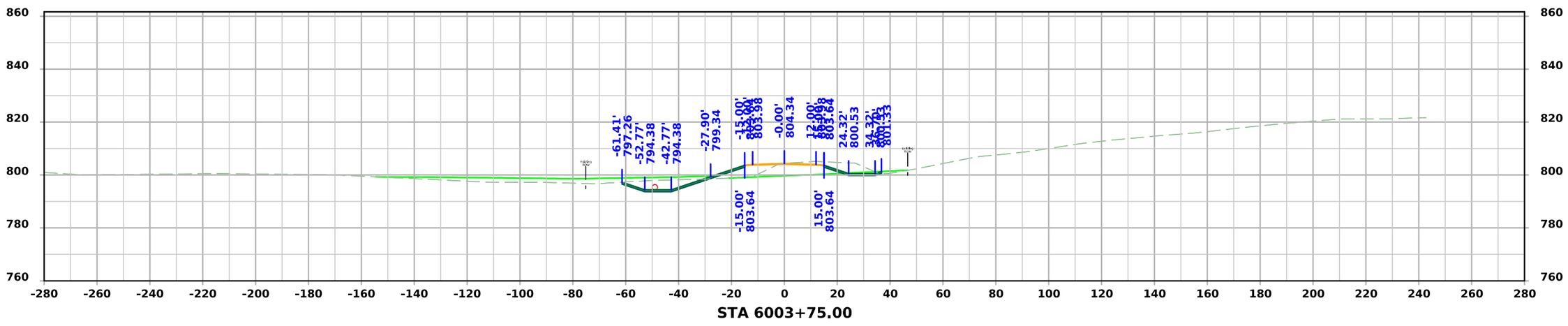
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.305

5:02:51 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6004+00.00

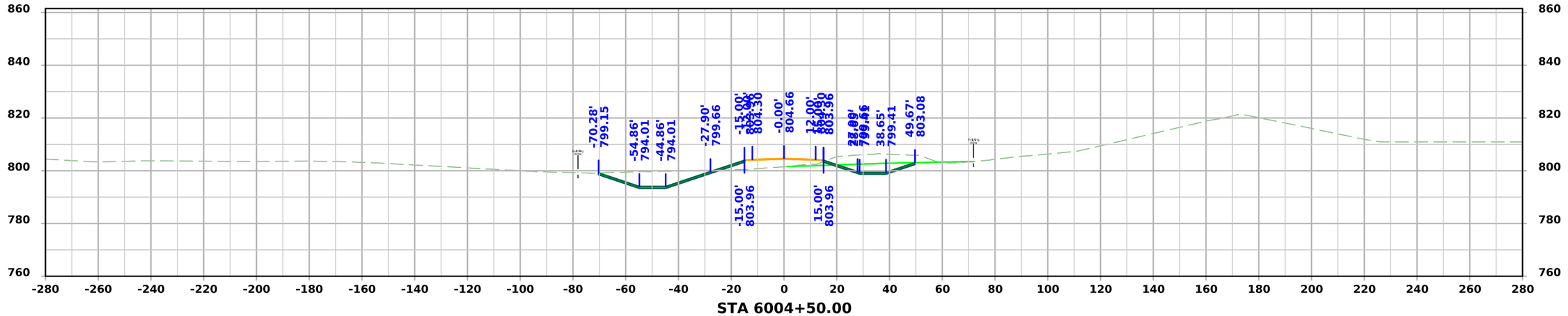


STA 6003+75.00

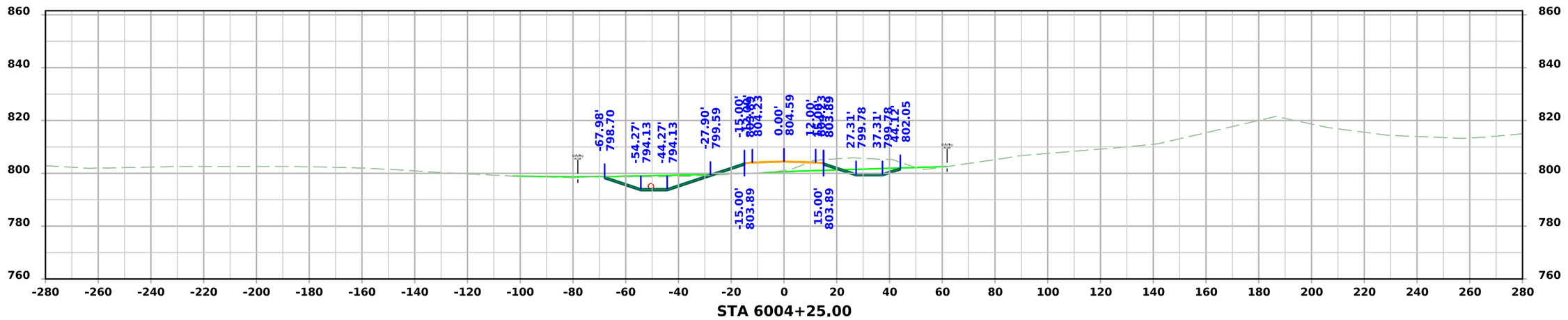
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.306

5:02:51 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6004+50.00

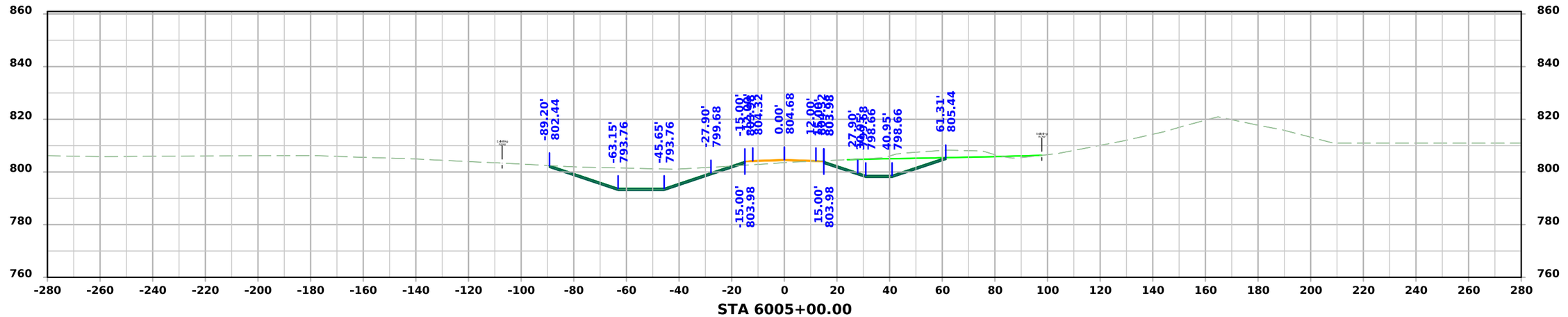


STA 6004+25.00

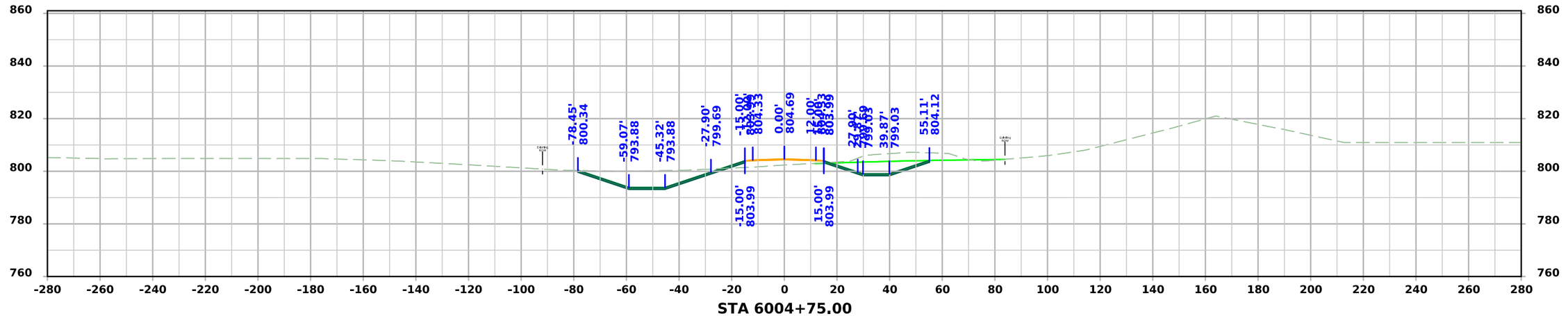
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.307

5:02:52 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6005+00.00

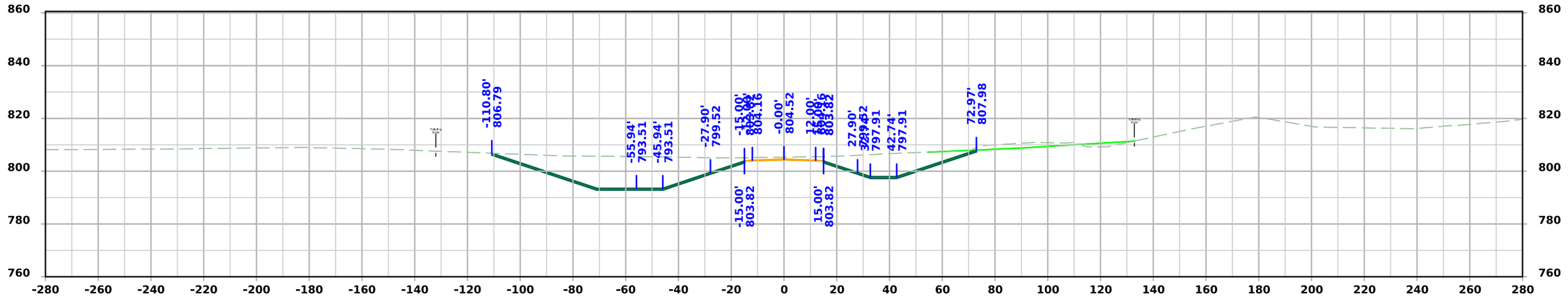


STA 6004+75.00

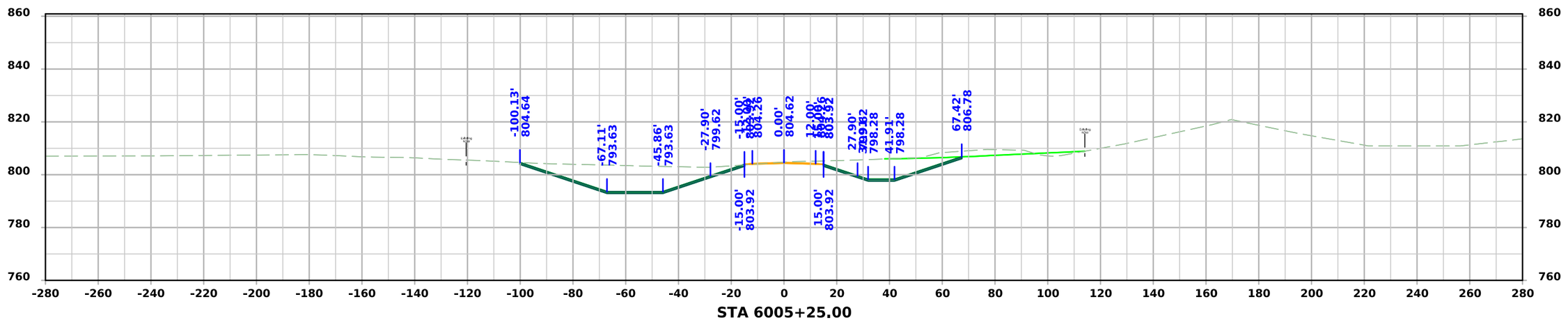
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.308

5:02:53 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6005+50.00

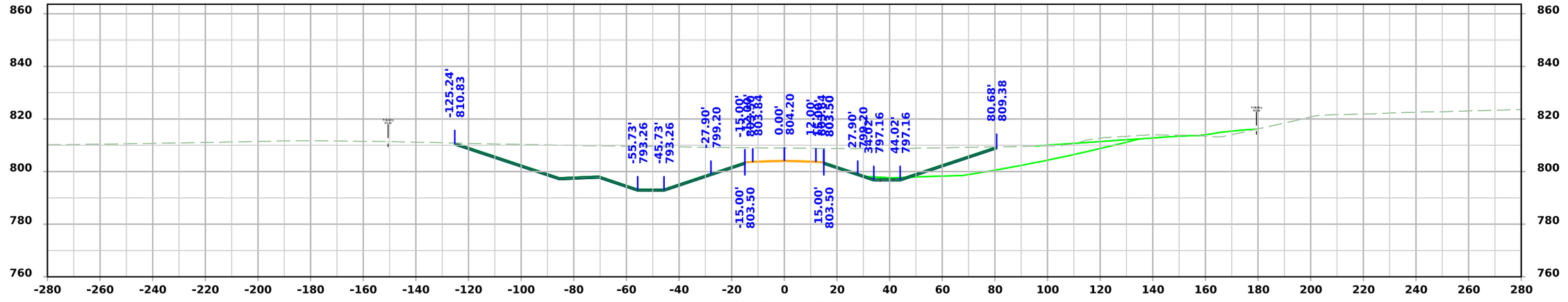


STA 6005+25.00

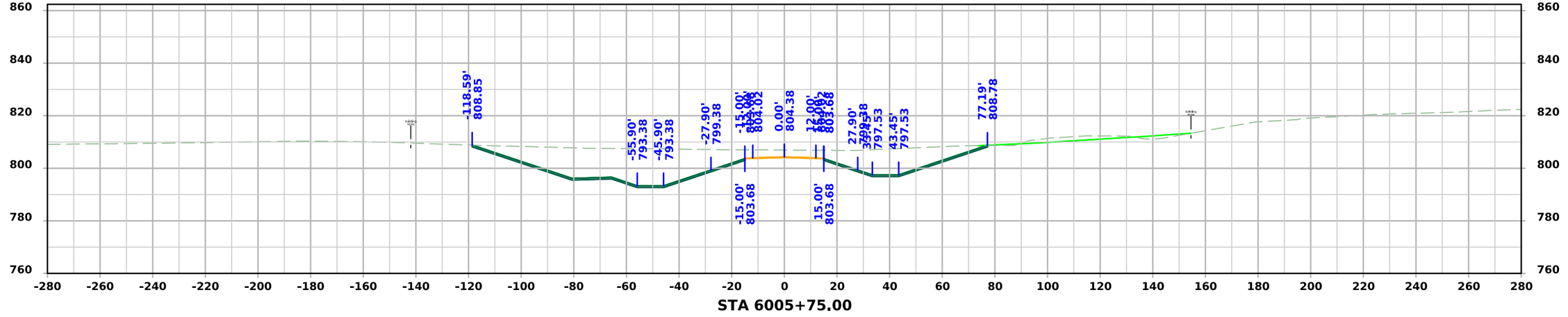
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.309

5:02:54 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6006+00.00

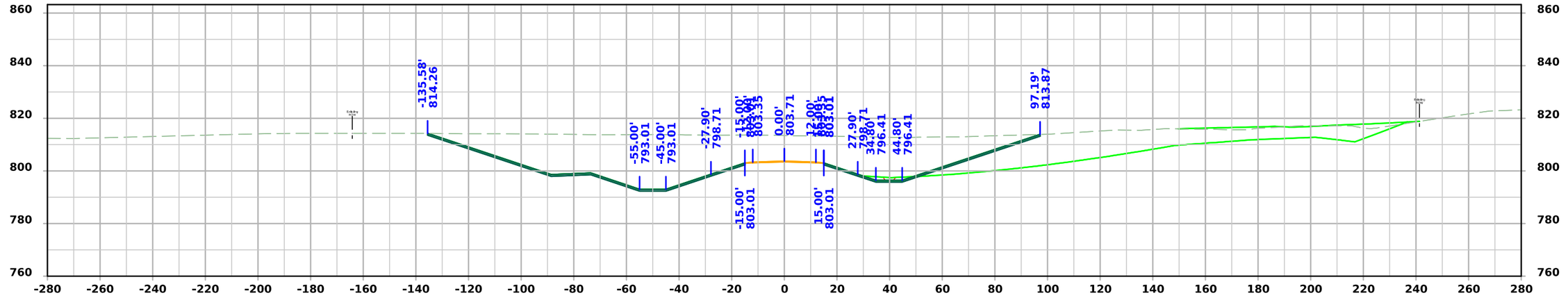


STA 6005+75.00

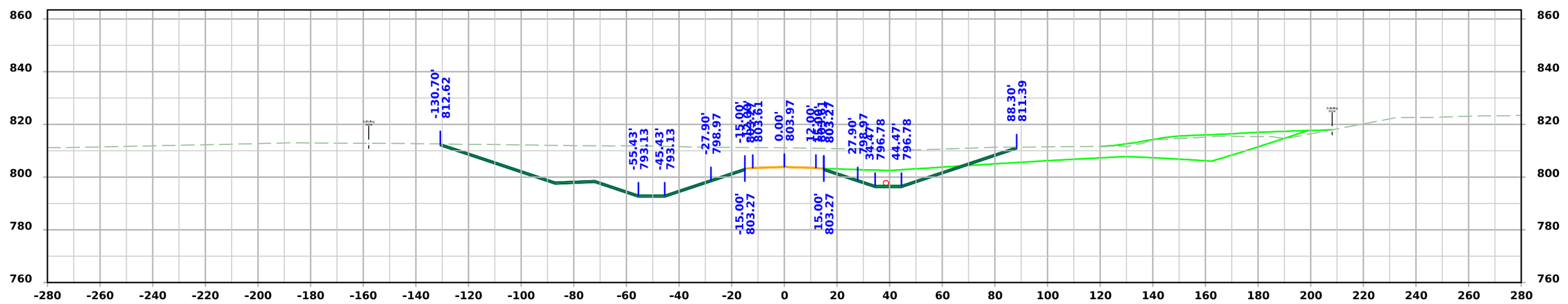
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.310

5:02:55 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6006+50.00

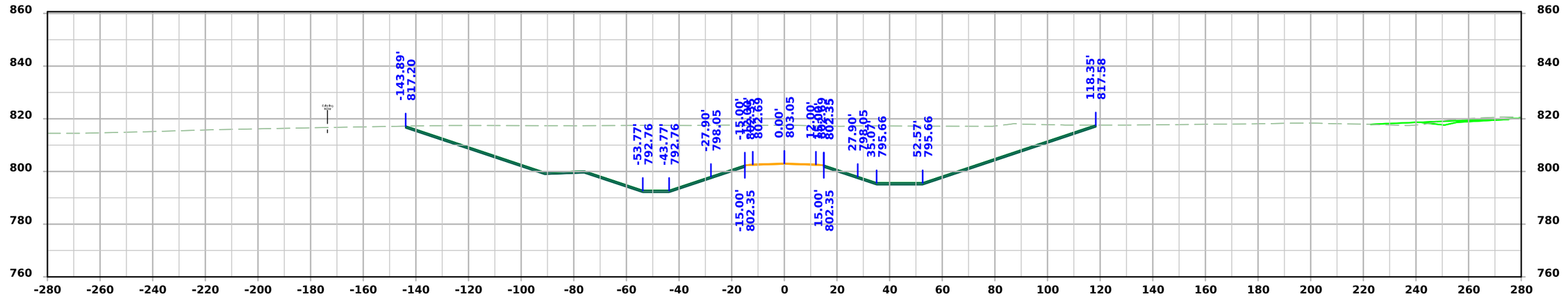


STA 6006+25.00

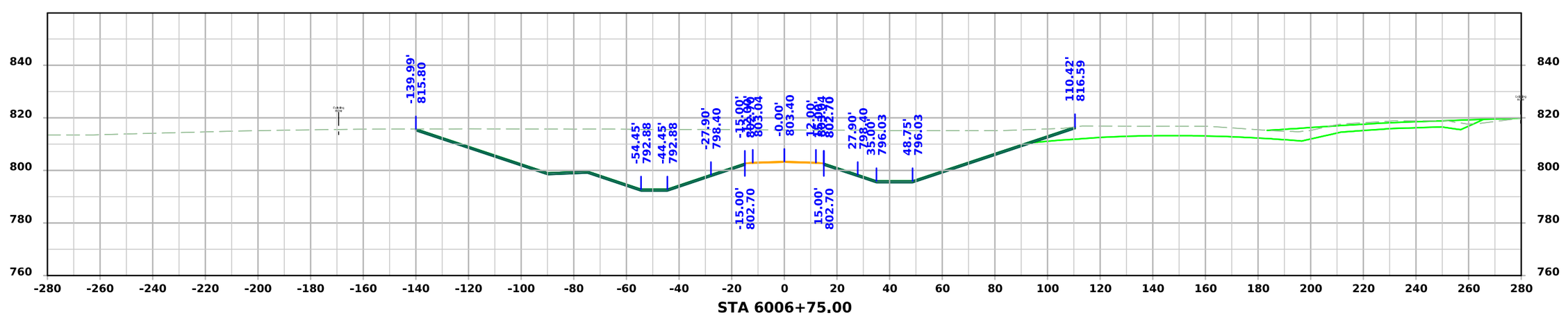
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.311

5:02:56 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6007+00.00

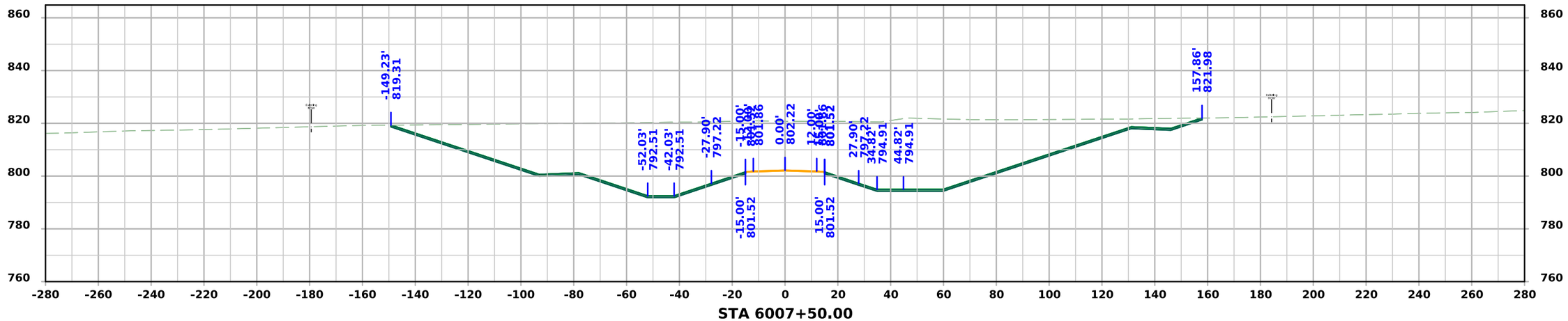


STA 6006+75.00

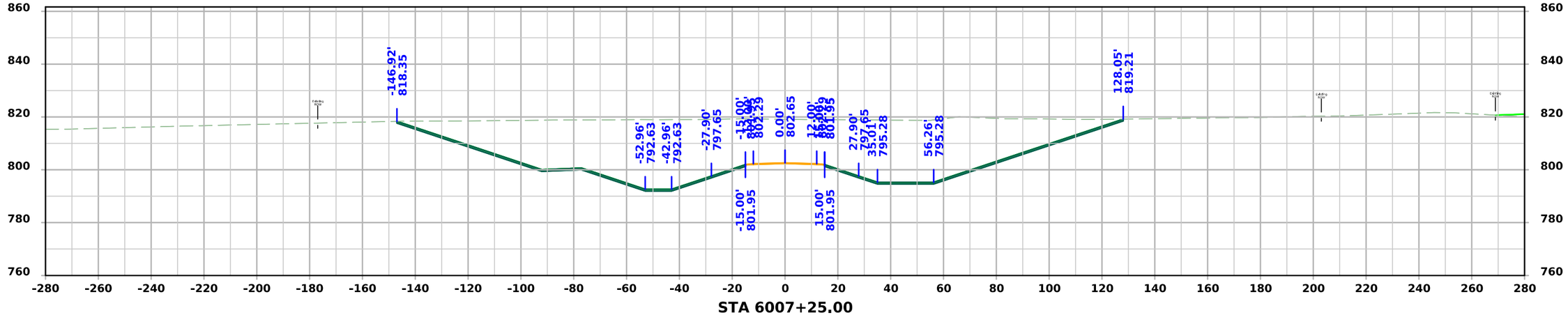
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.312

5:02:56 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6007+50.00

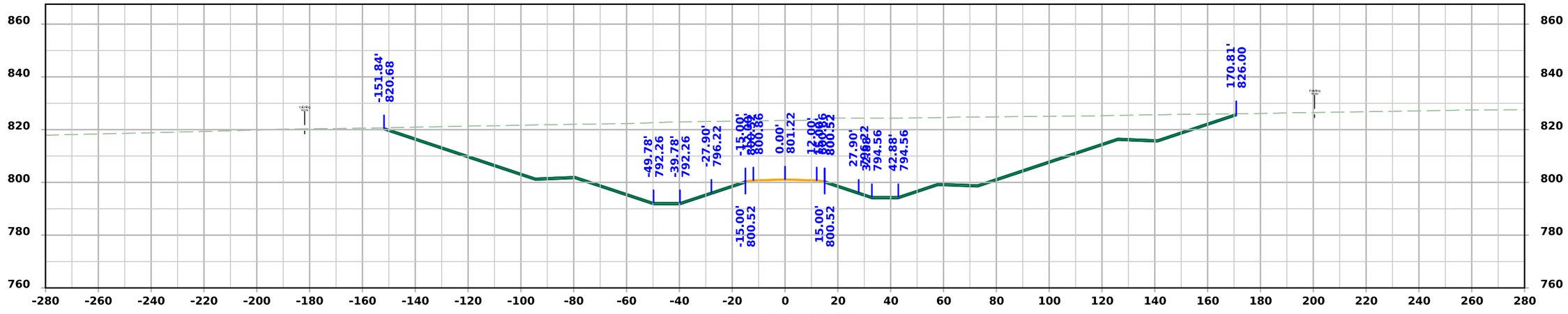


STA 6007+25.00

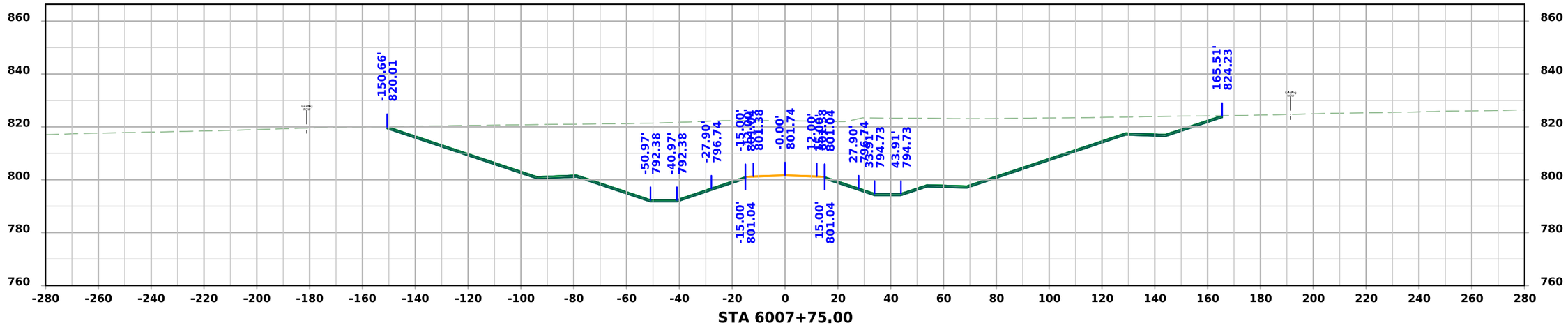
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.313

5:02:57 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6008+00.00

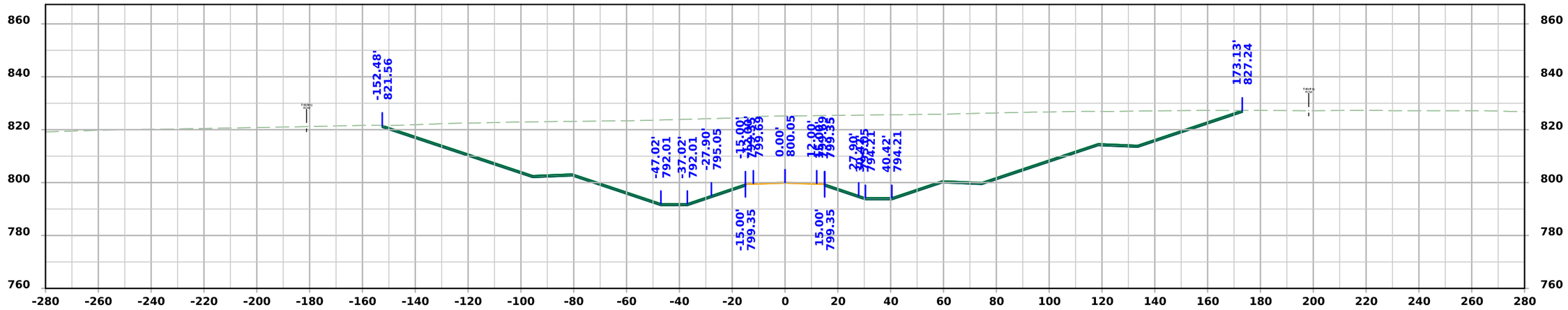


STA 6007+75.00

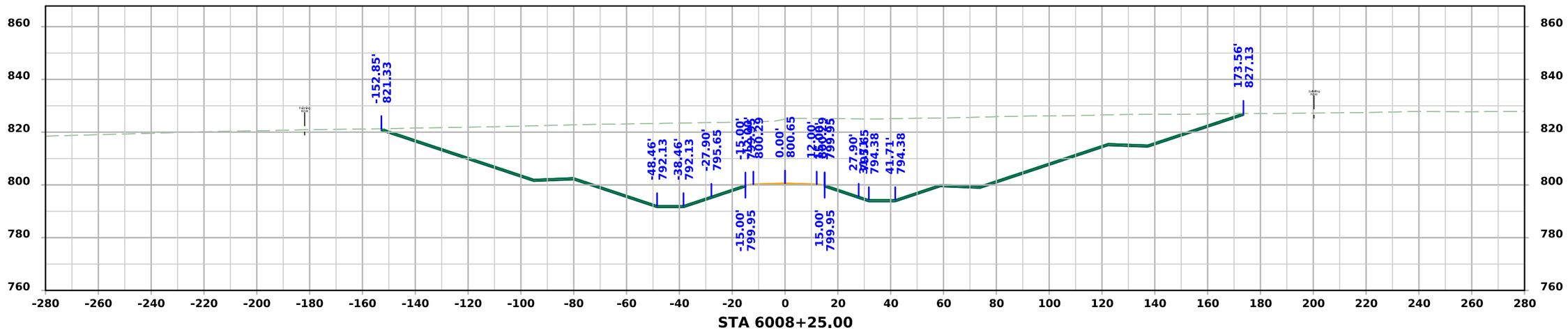
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.314

5:02:58 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6008+50.00

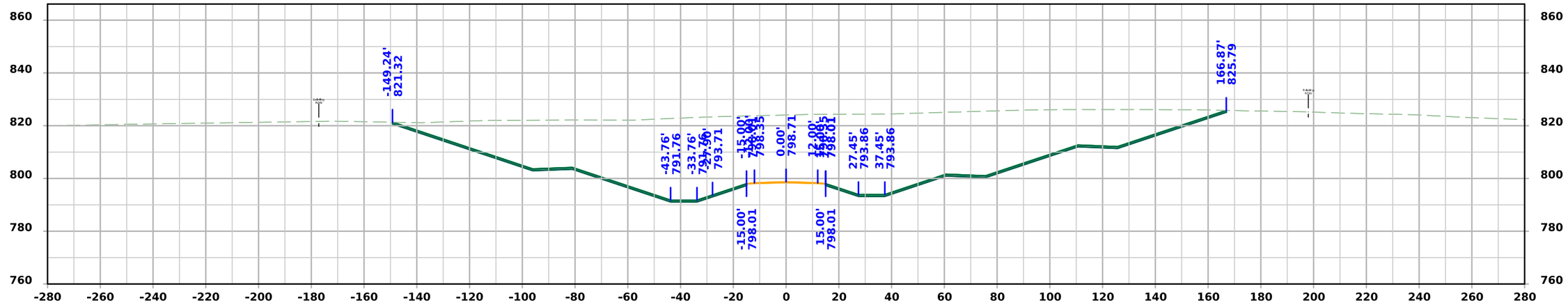


STA 6008+25.00

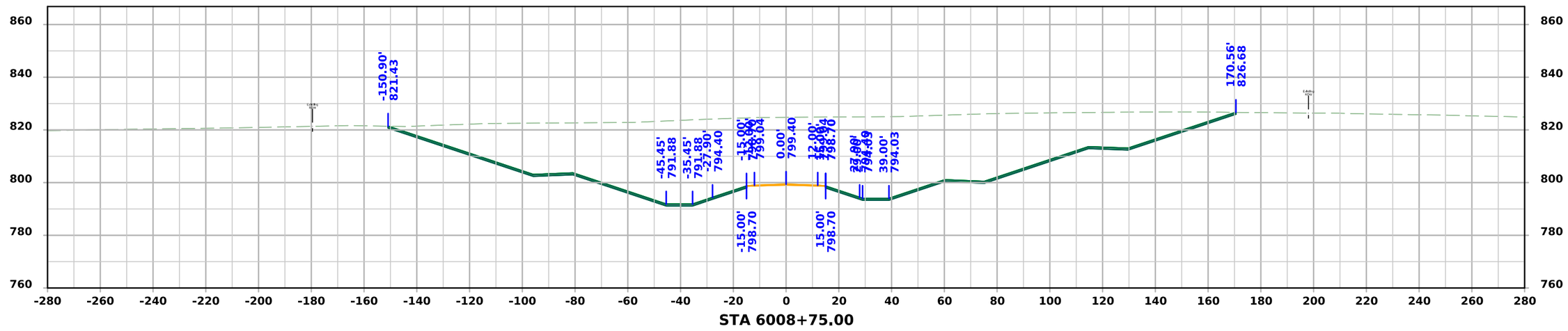
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.315

5:02:59 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6009+00.00

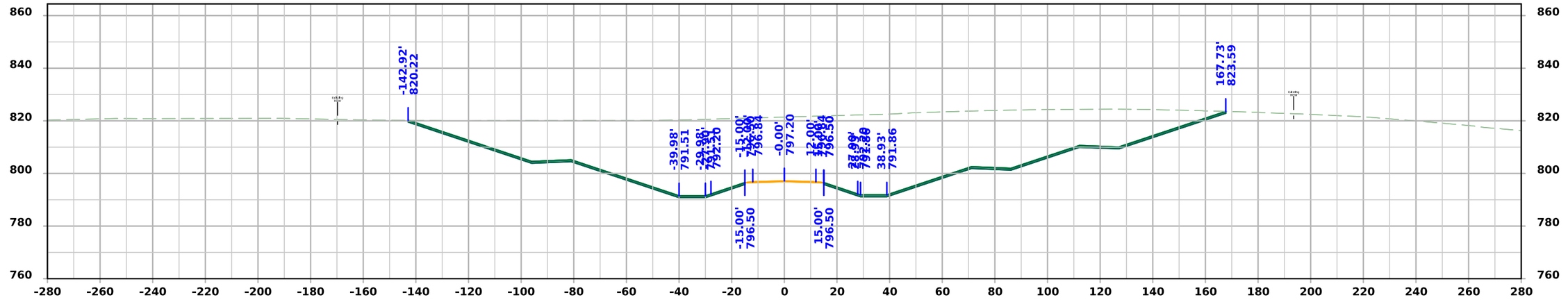


STA 6008+75.00

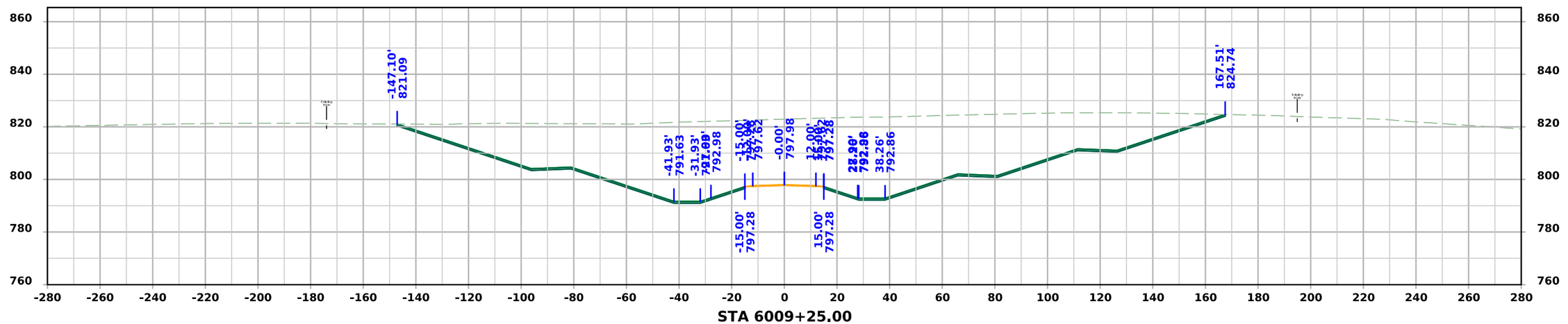
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.316

5:03:00 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6009+50.00

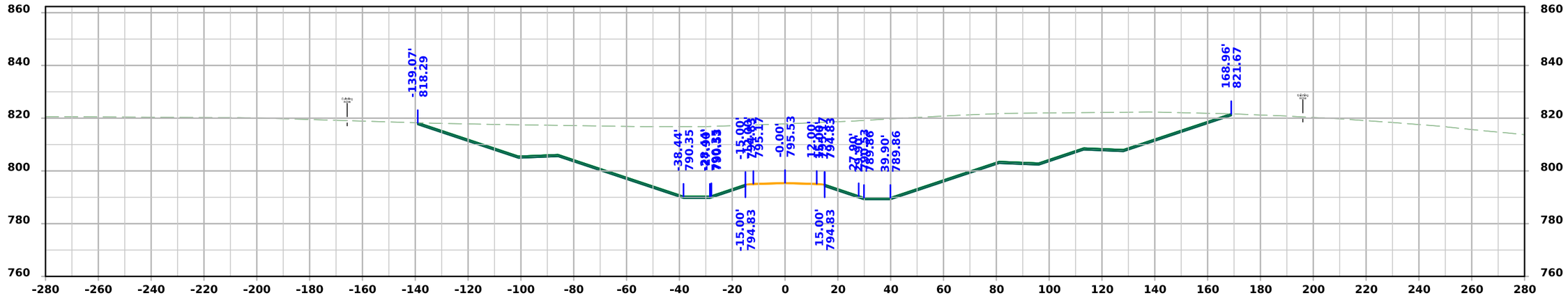


STA 6009+25.00

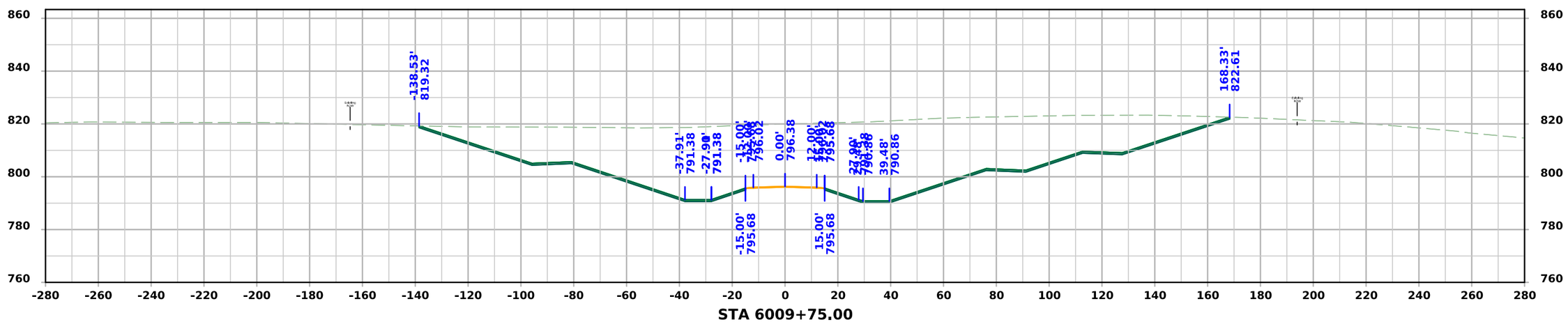
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.317

5:03:00 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6010+00.00

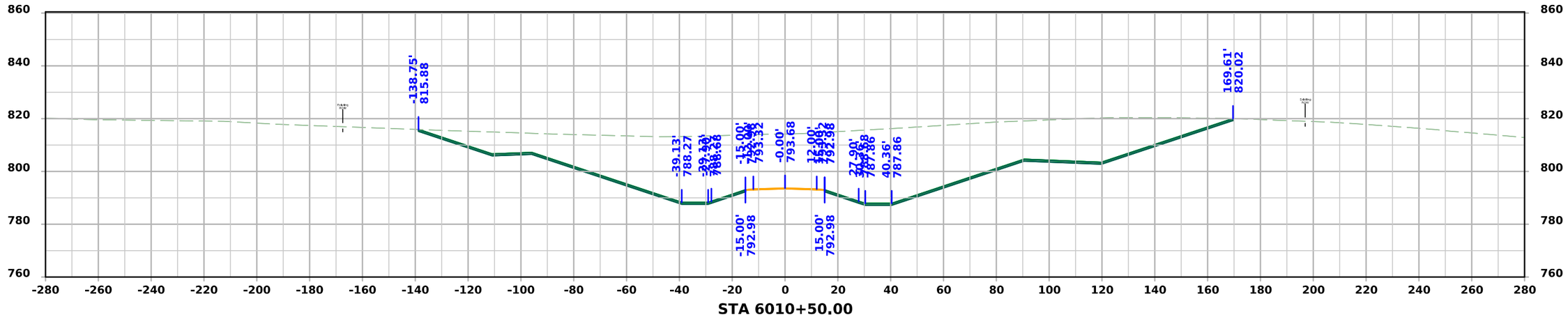


STA 6009+75.00

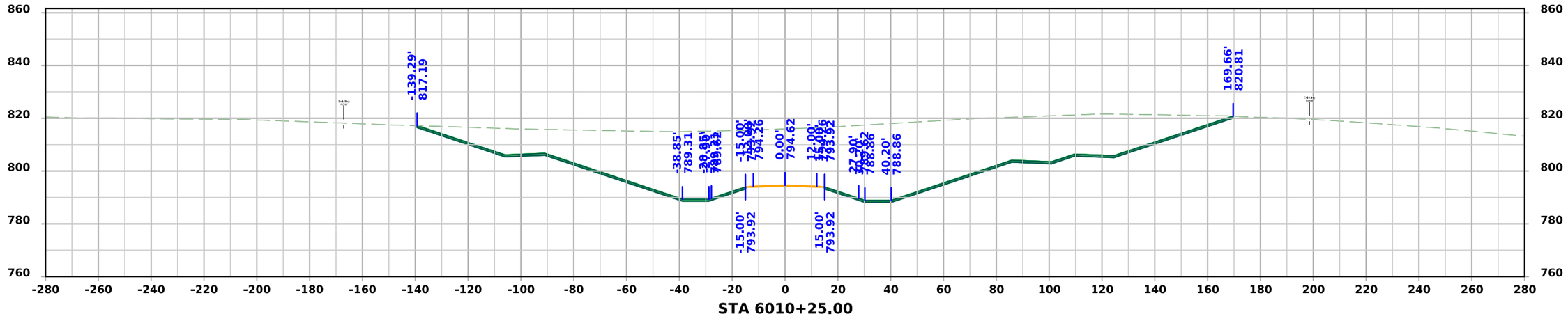
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.318

5:03:01 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6010+50.00

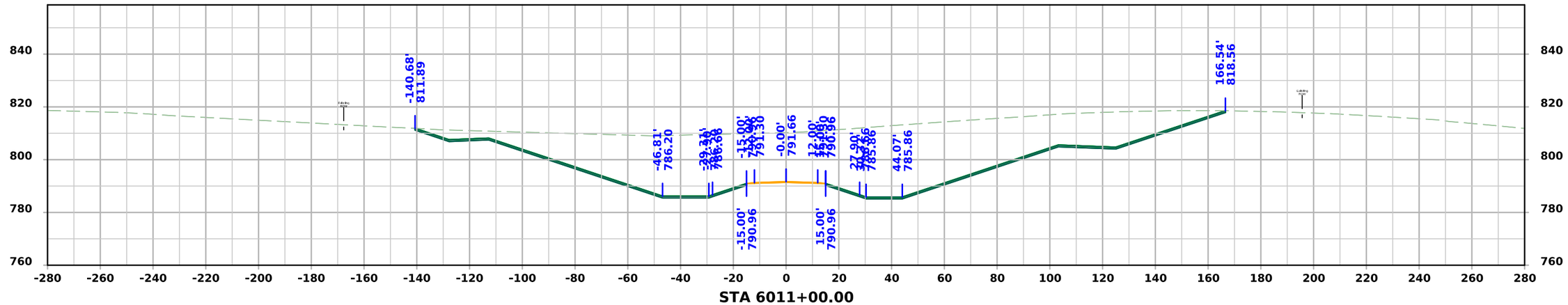


STA 6010+25.00

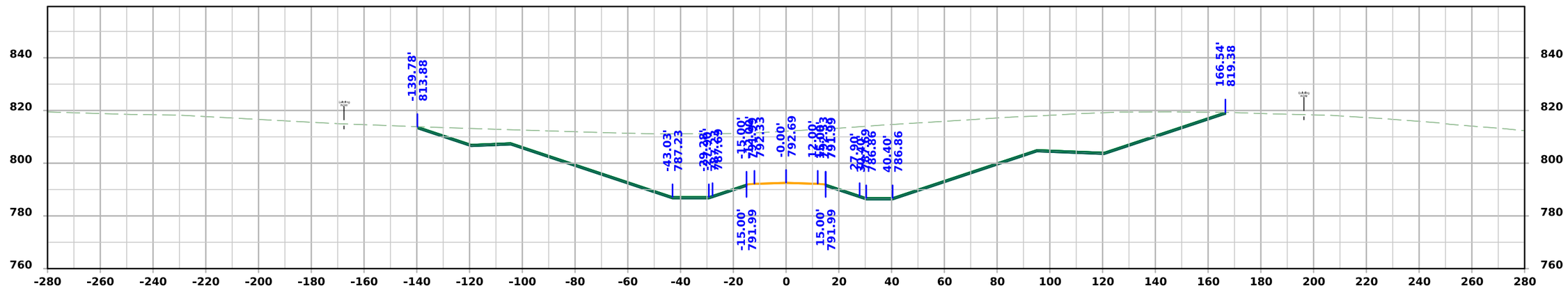
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.319

5:03:02 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6011+00.00

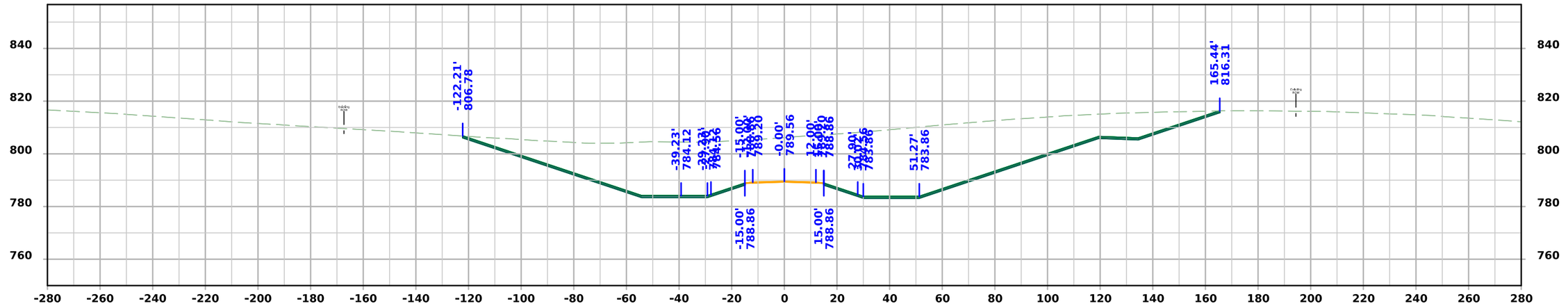


STA 6010+75.00

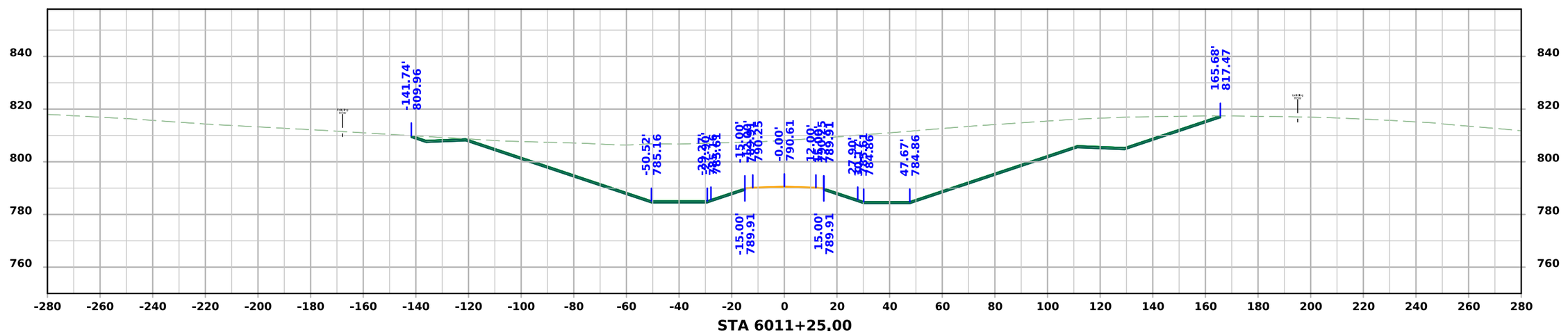
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.320

5:03:03 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6011+50.00

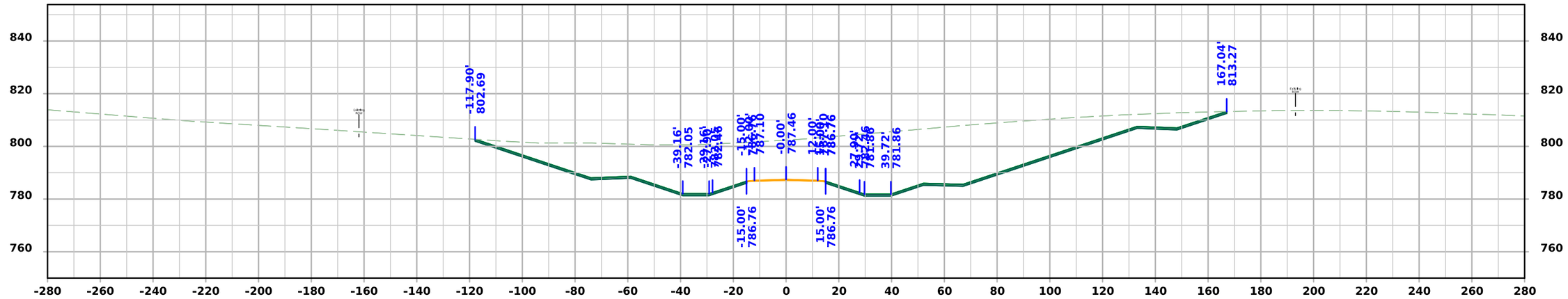


STA 6011+25.00

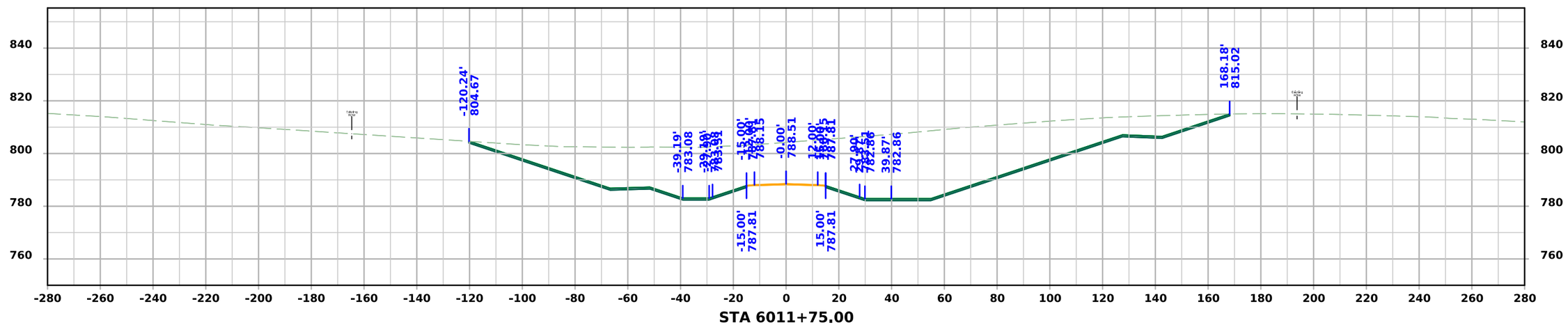
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.321

5:03:03 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6012+00.00

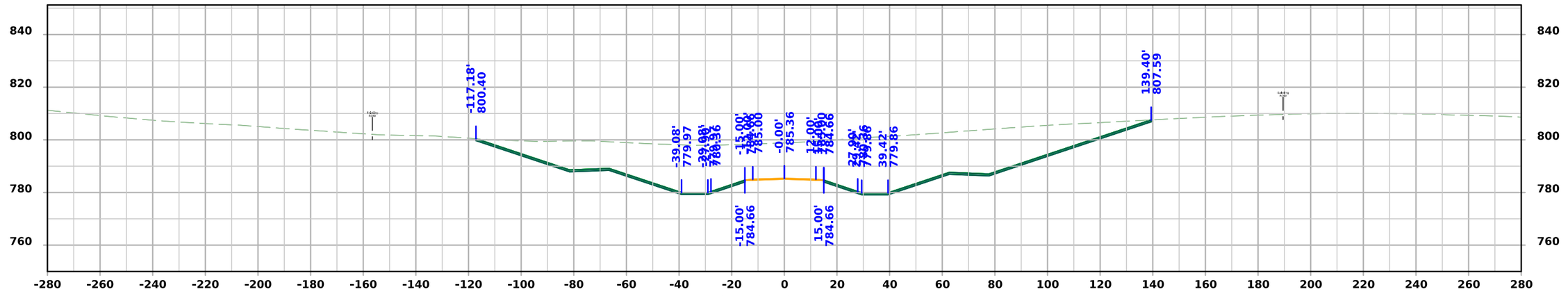


STA 6011+75.00

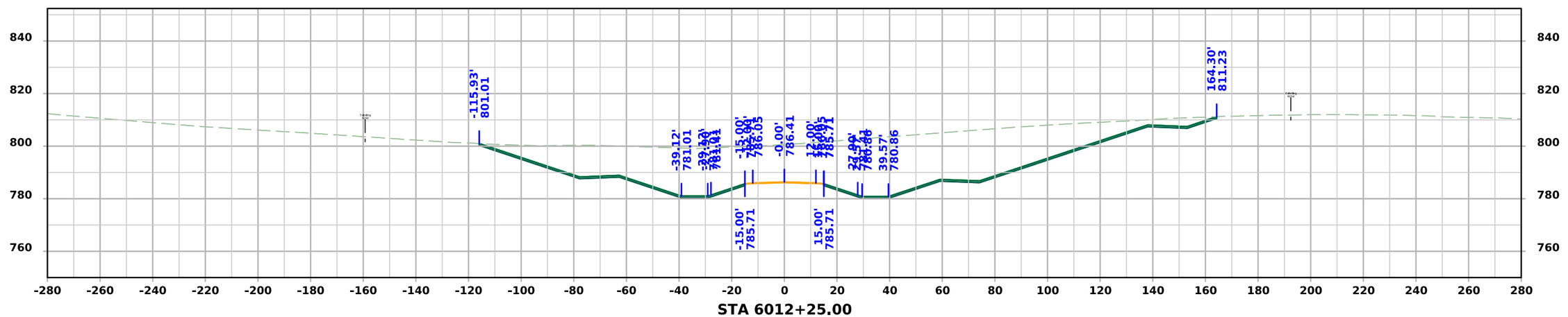
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.322

5:03:04 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6012+50.00

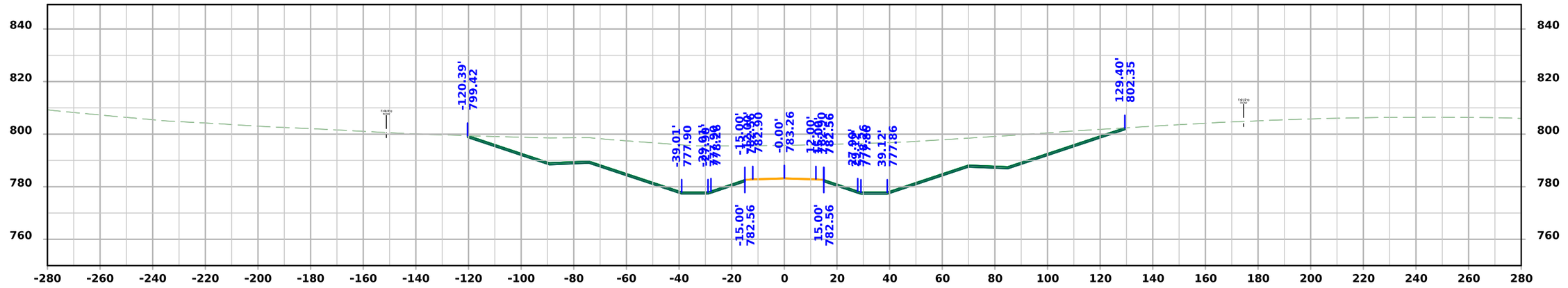


STA 6012+25.00

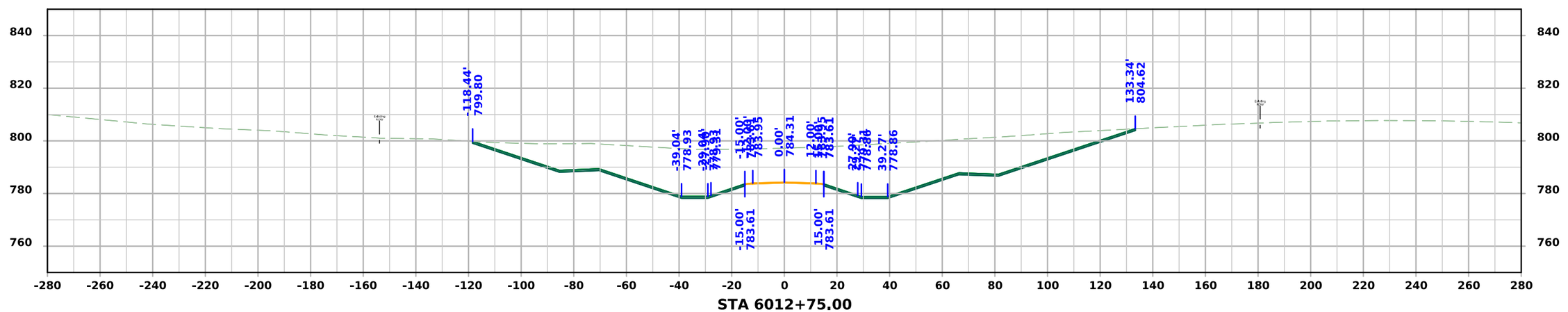
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.323

5:03:05 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6013+00.00

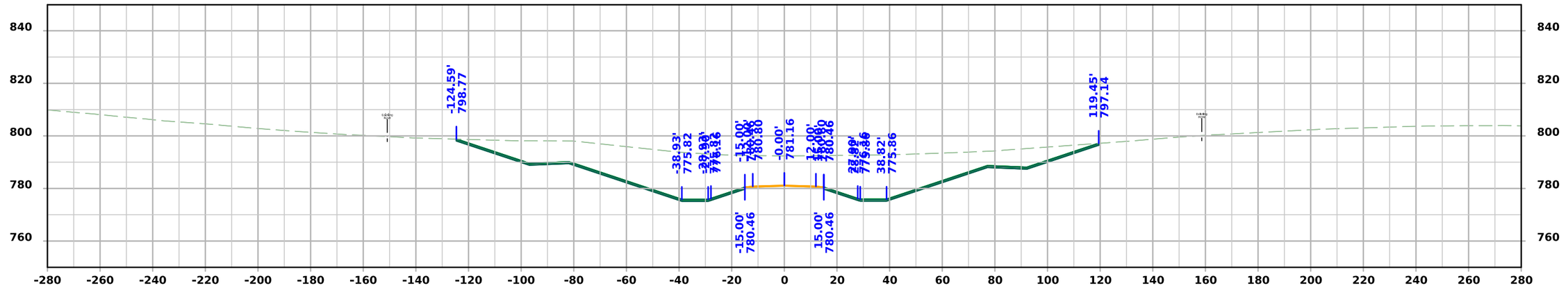


STA 6012+75.00

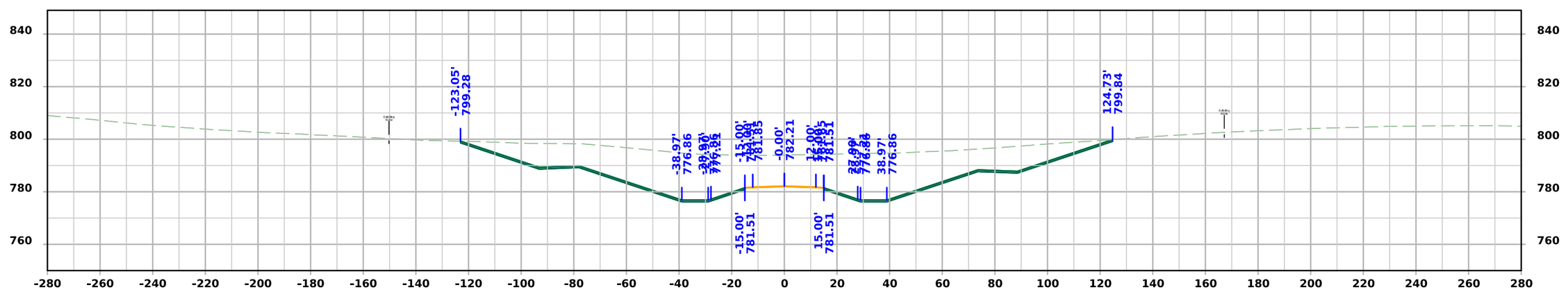
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.324

5:03:05 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6013+50.00

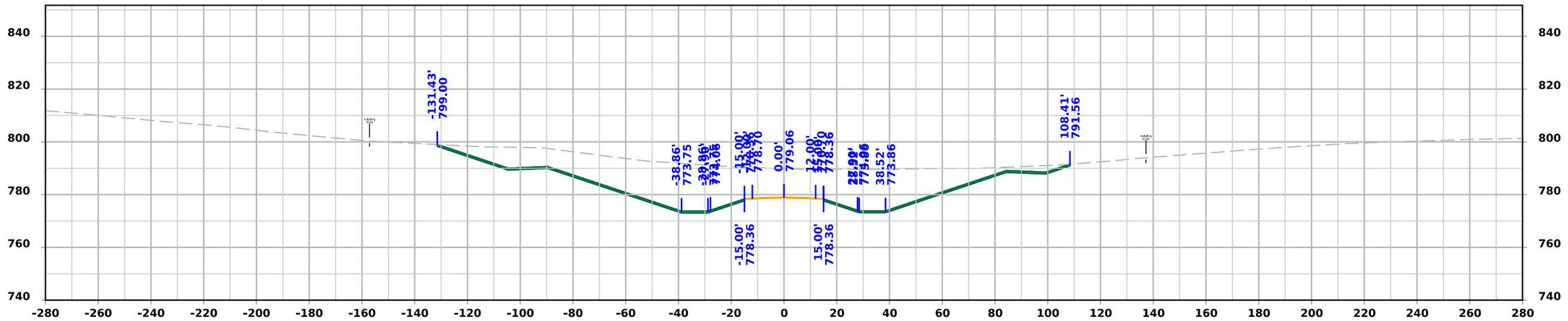


STA 6013+25.00

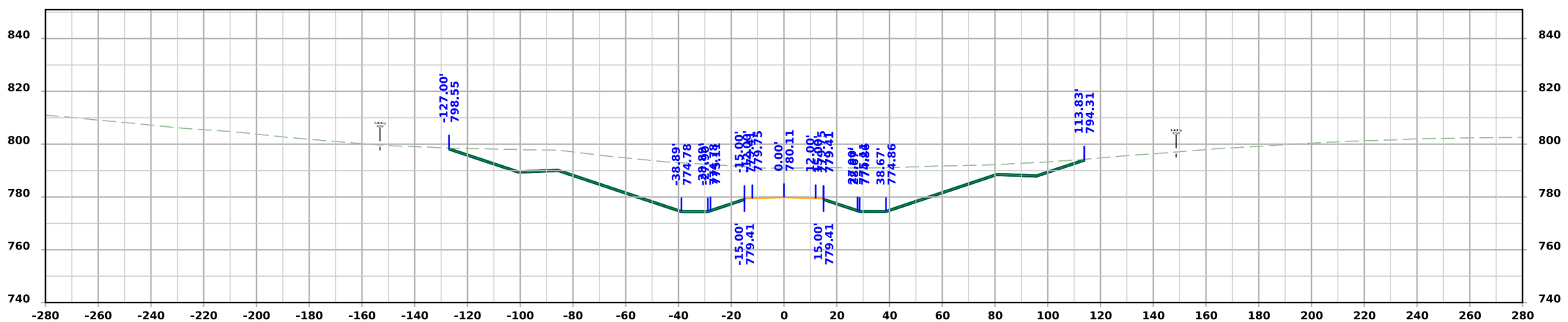
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.325

5:03:06 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6014+00.00

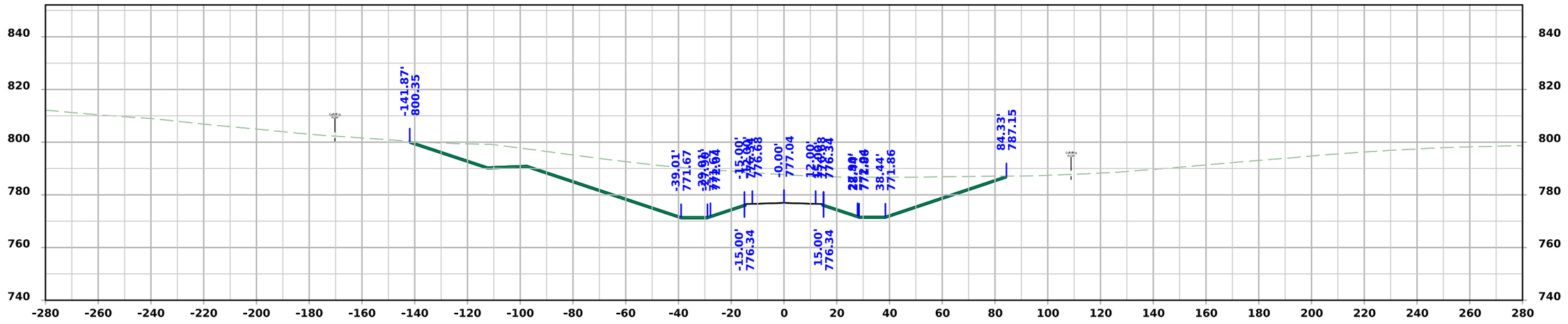


STA 6013+75.00

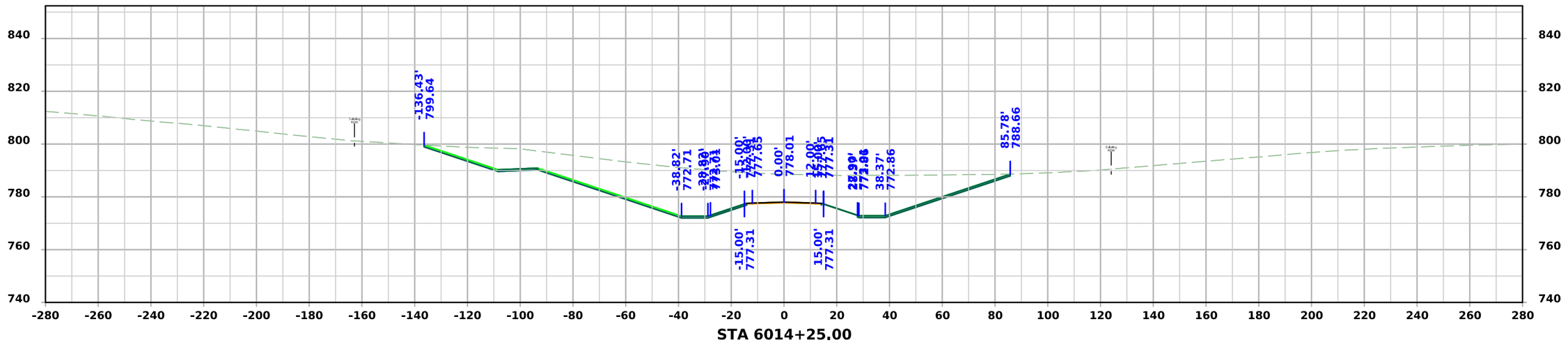
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.326

5:03:07 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6014+50.00

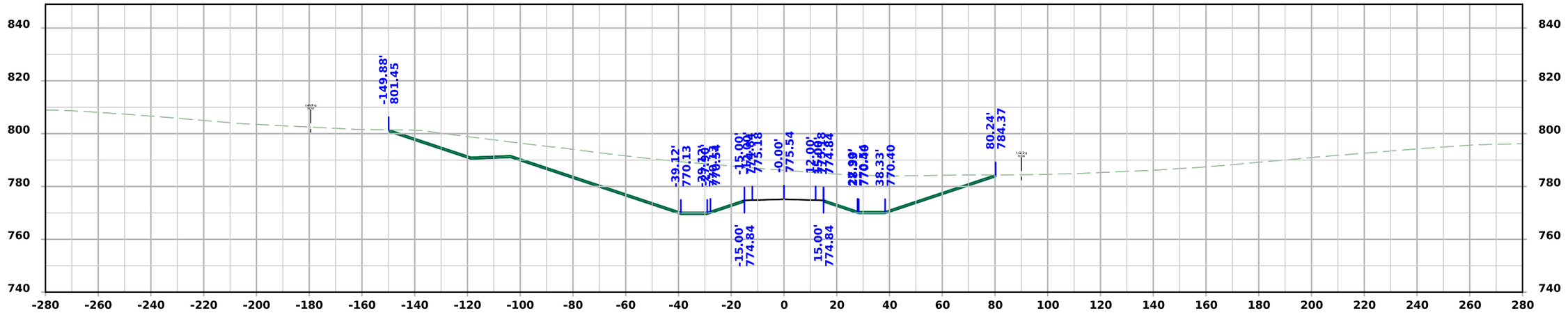


STA 6014+25.00

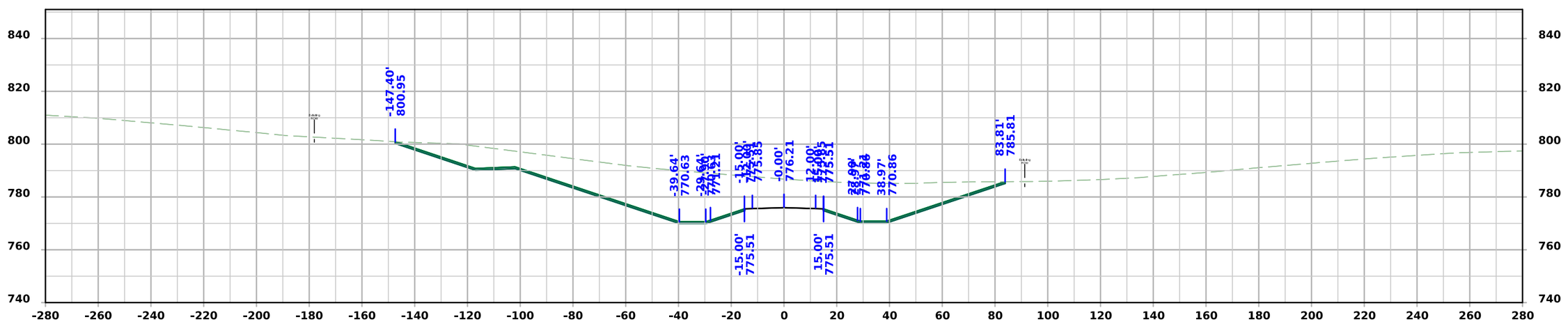
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.327

5:03:08 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6015+00.00

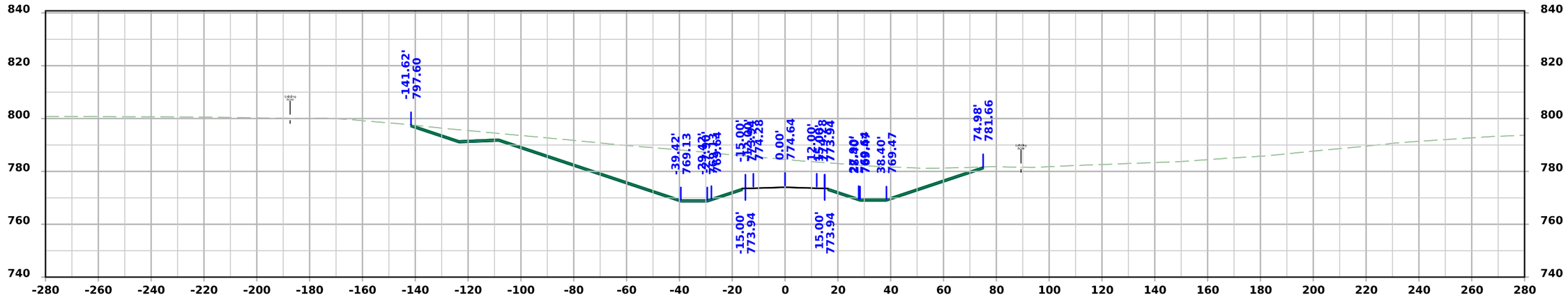


STA 6014+75.00

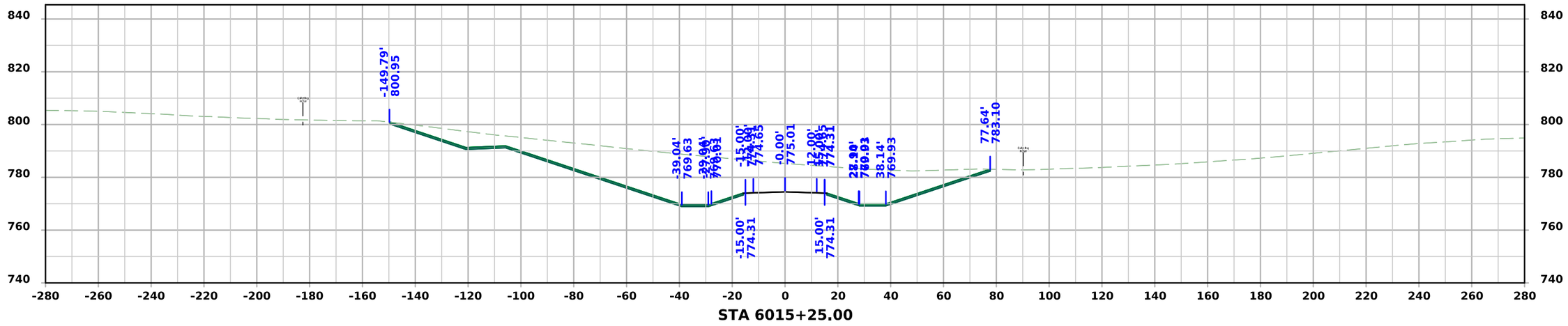
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.328

5:03:09 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6015+50.00



STA 6015+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.329

5:03:09 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

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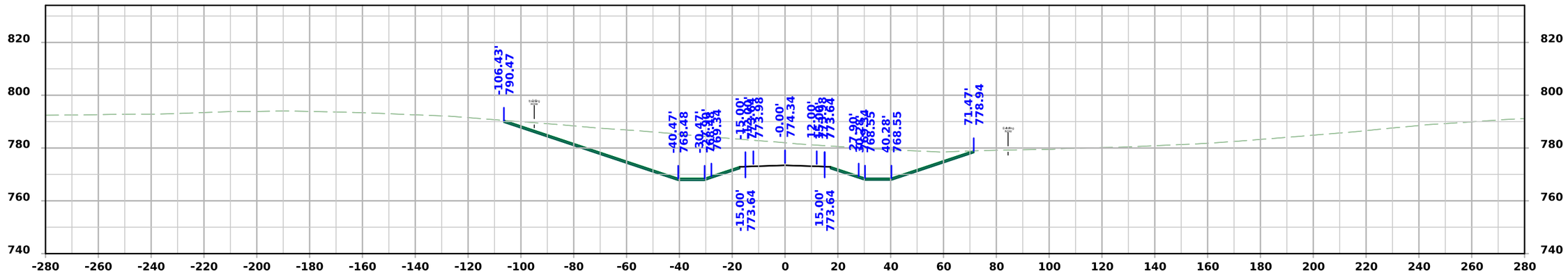
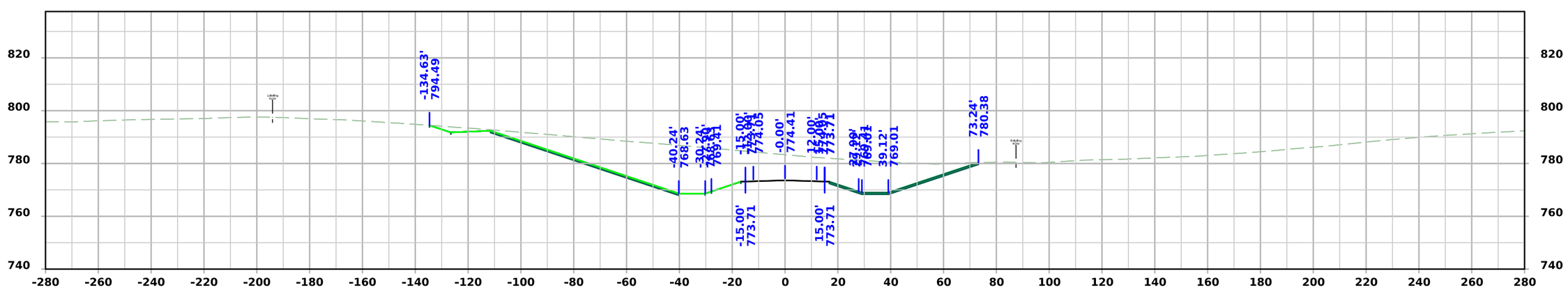


STA 6016+00.00



STA 6015+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.330

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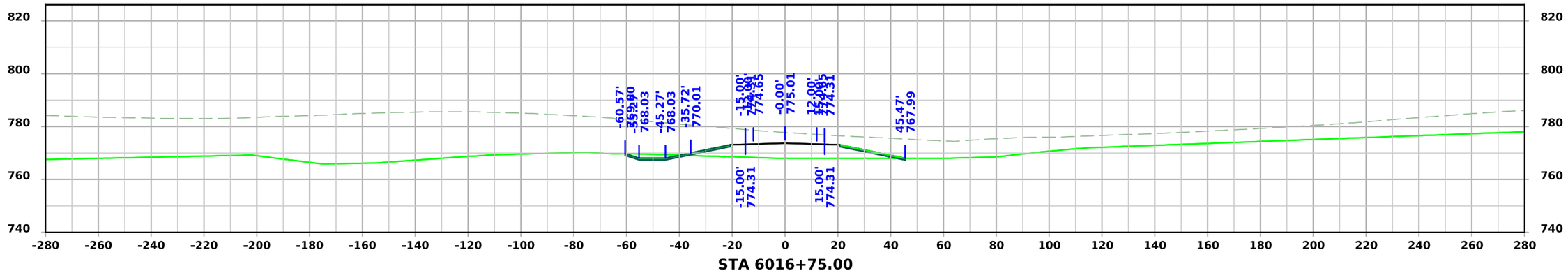
Kirby Ave.



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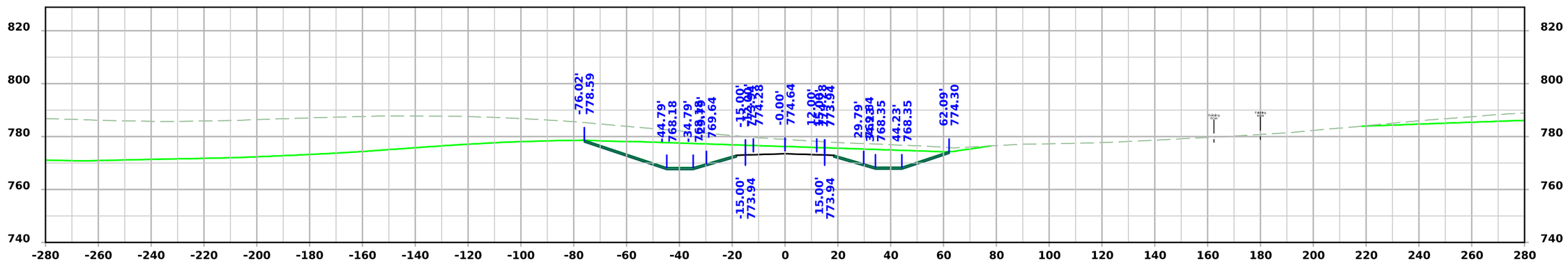
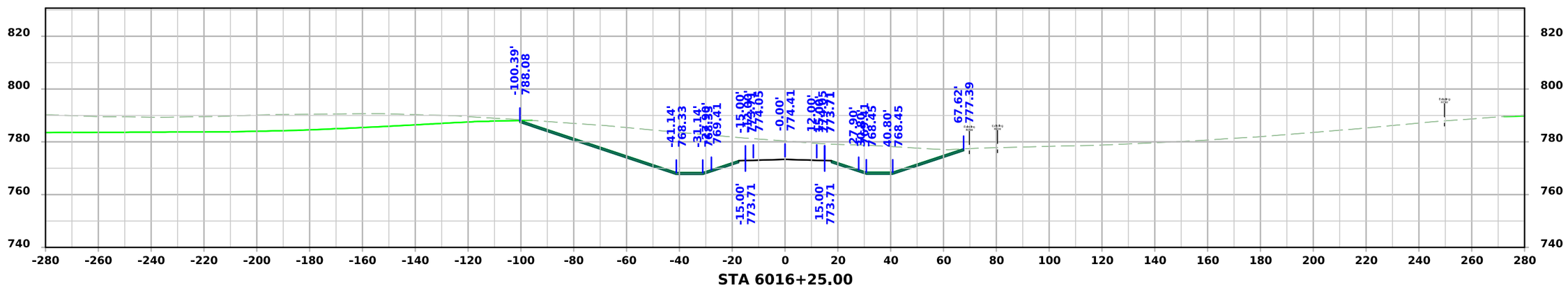


STA 6016+50.00



STA 6016+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.331

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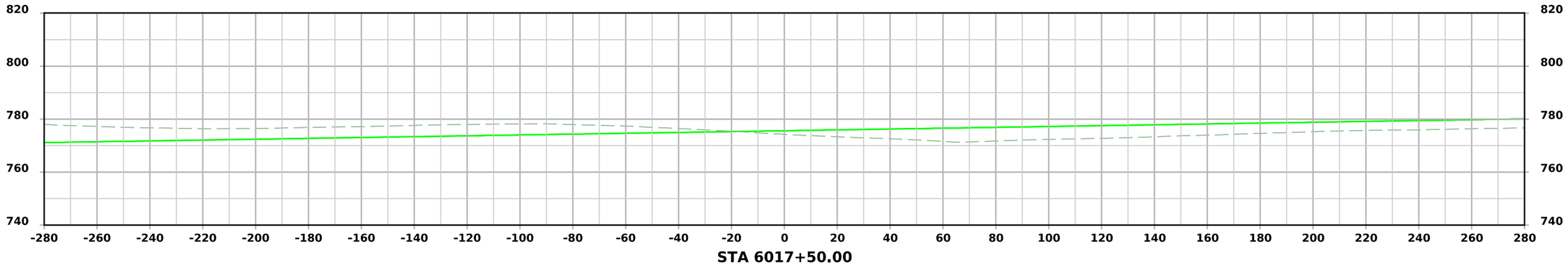
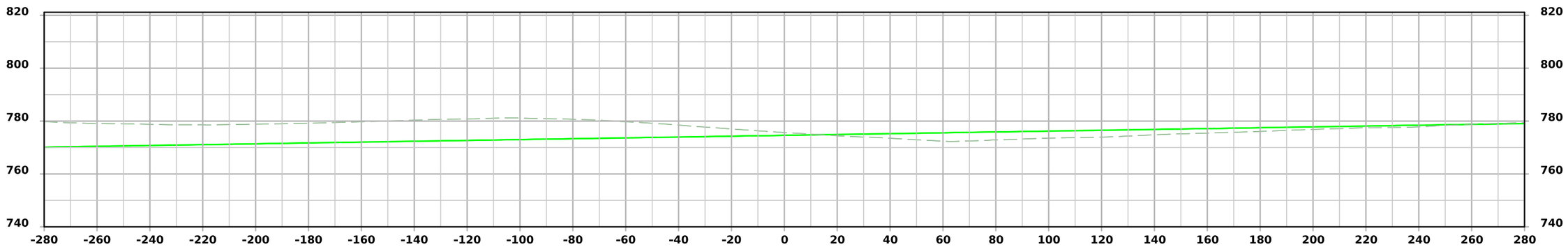
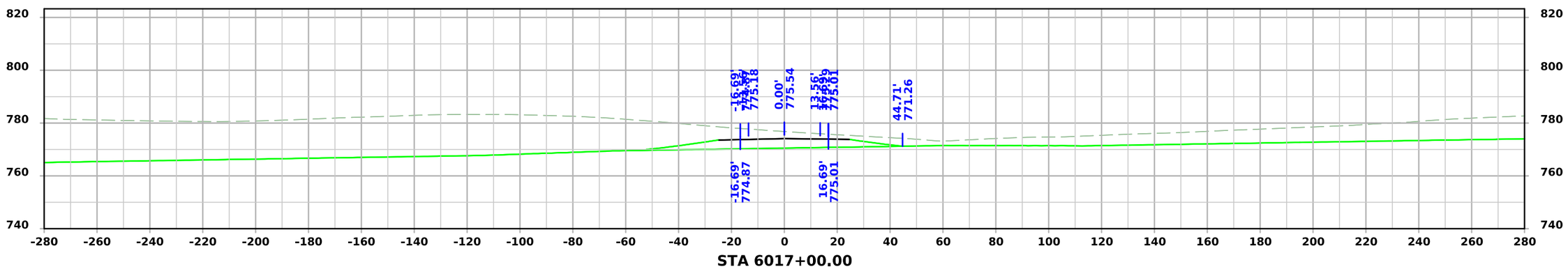
Kirby Ave.



STA 6017+50.00



STA 6017+25.00

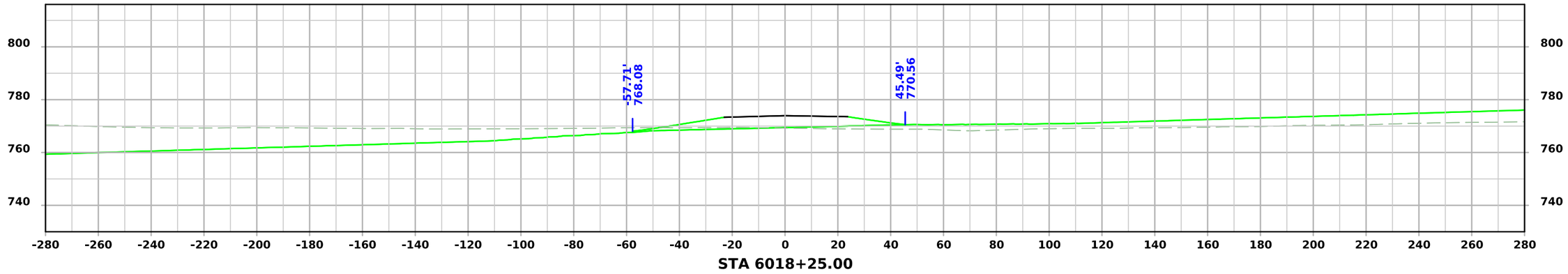


STA 6017+00.00

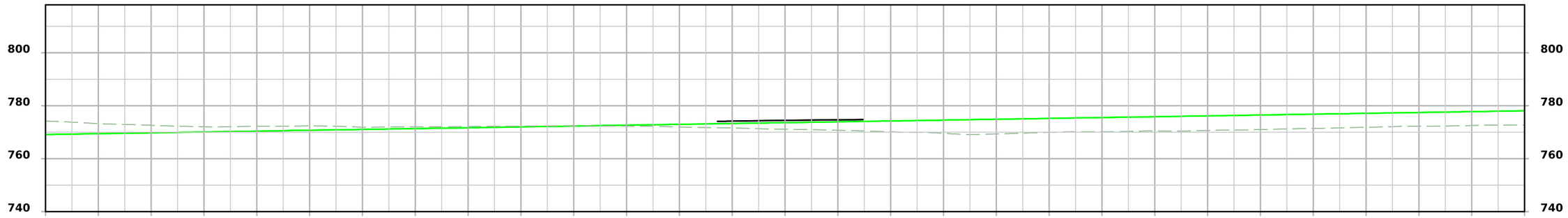
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.332

5:03:12 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

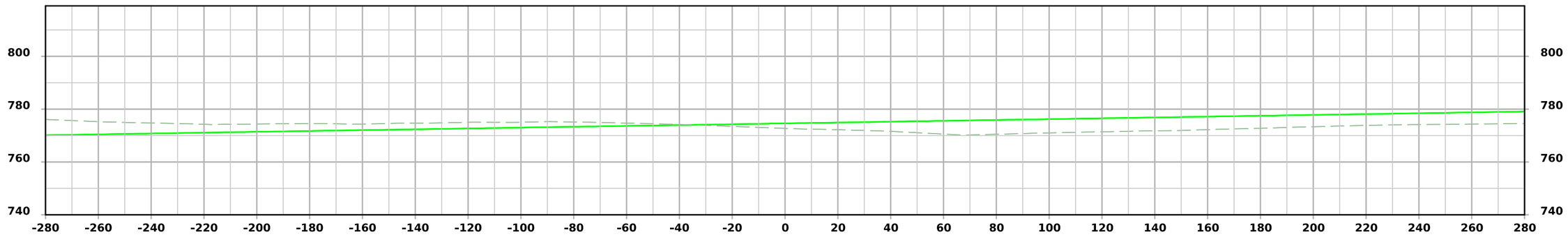
Kirby Ave.



STA 6018+25.00



STA 6018+00.00

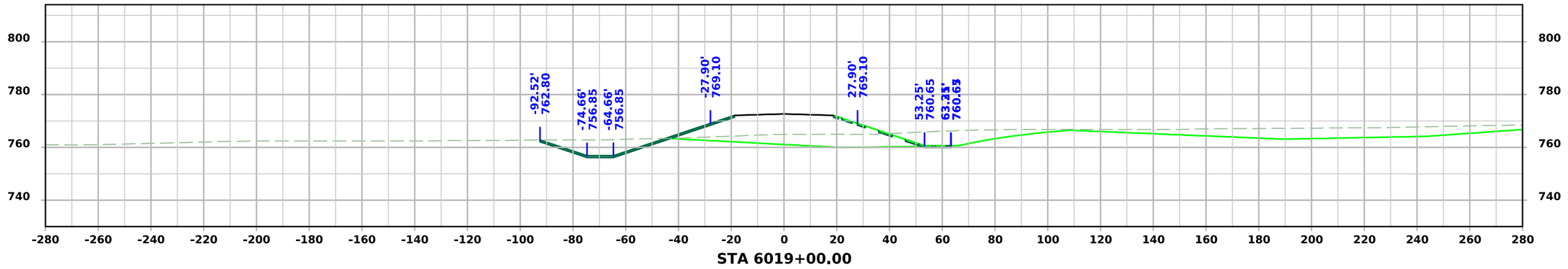


STA 6017+75.00

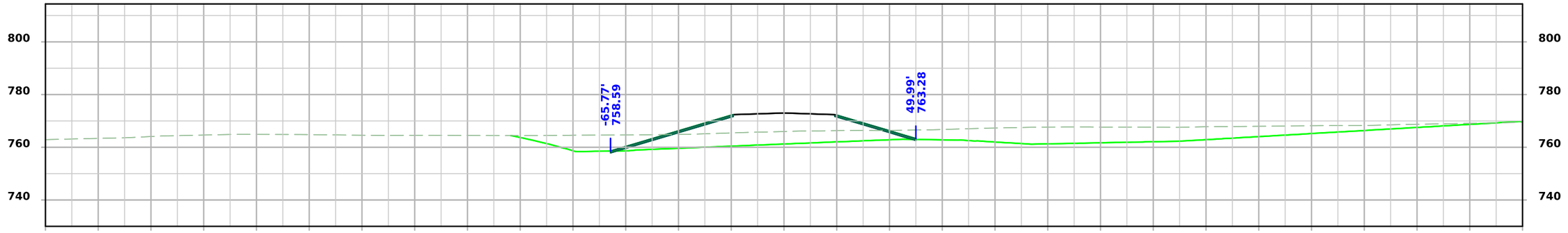
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.333

5:03:12 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

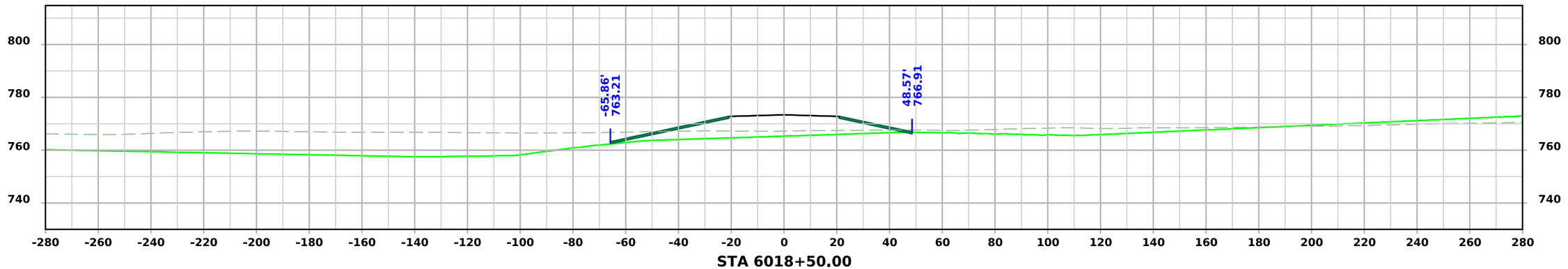
Kirby Ave.



STA 6019+00.00



STA 6018+75.00

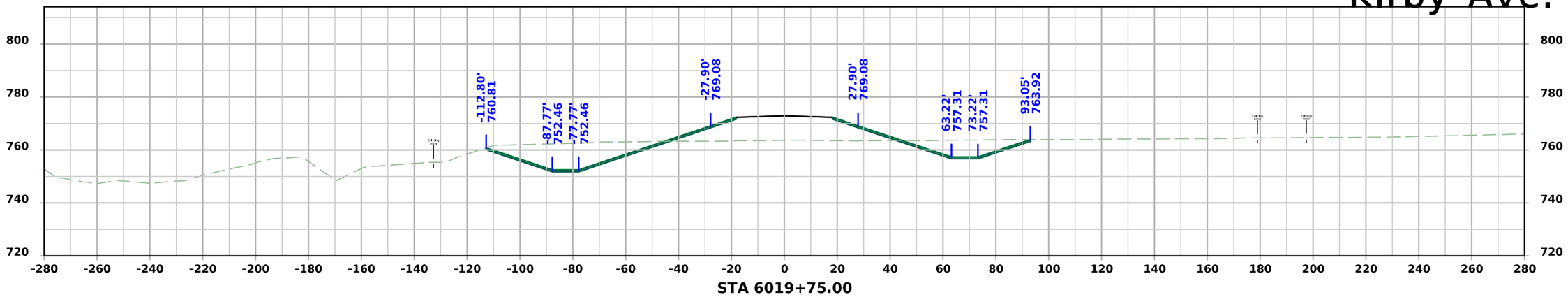


STA 6018+50.00

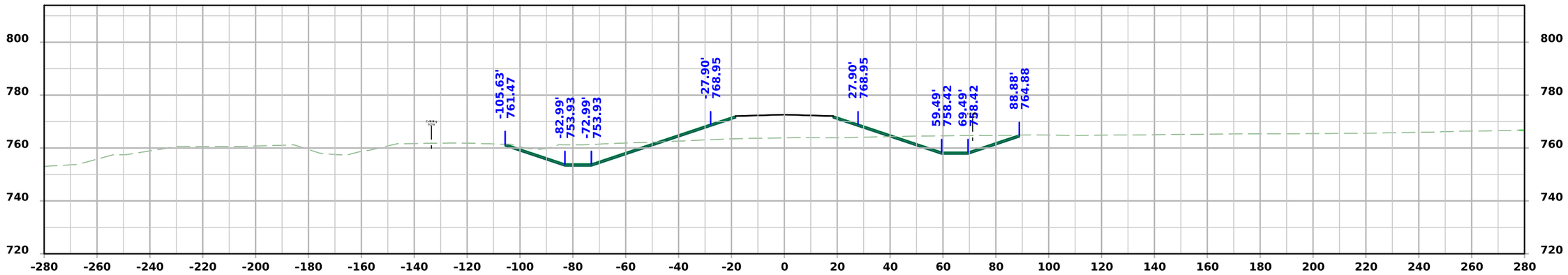
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.334

5:03:13 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

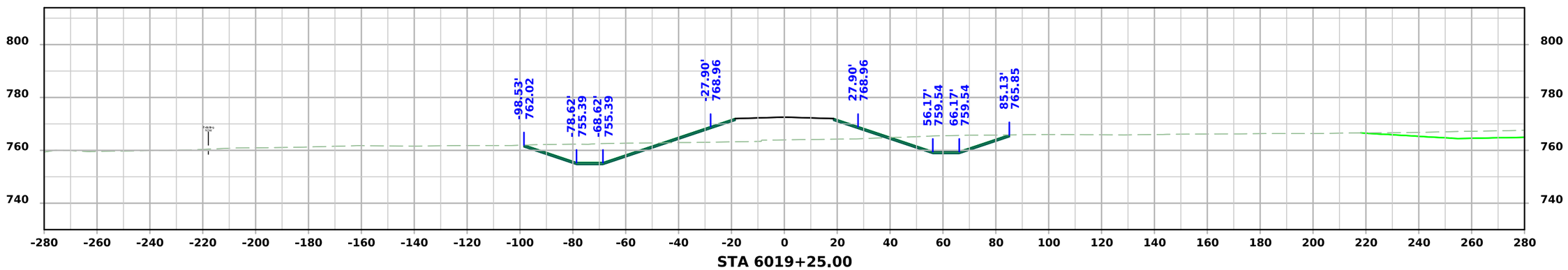
Kirby Ave.



STA 6019+75.00



STA 6019+50.00

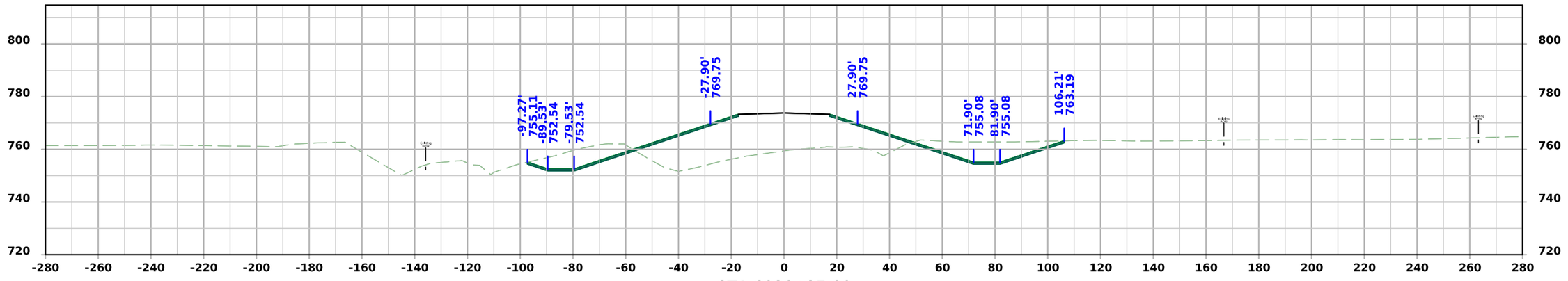


STA 6019+25.00

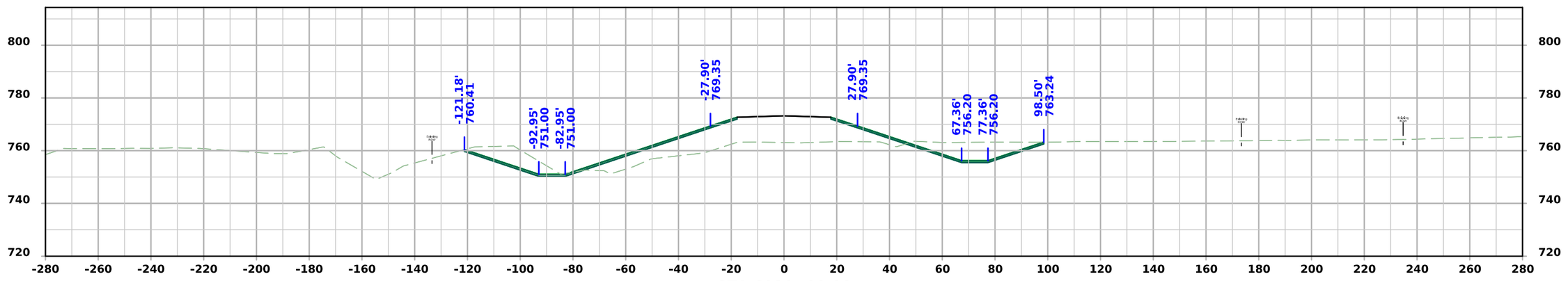
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.335

5:03:14 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6020+25.00

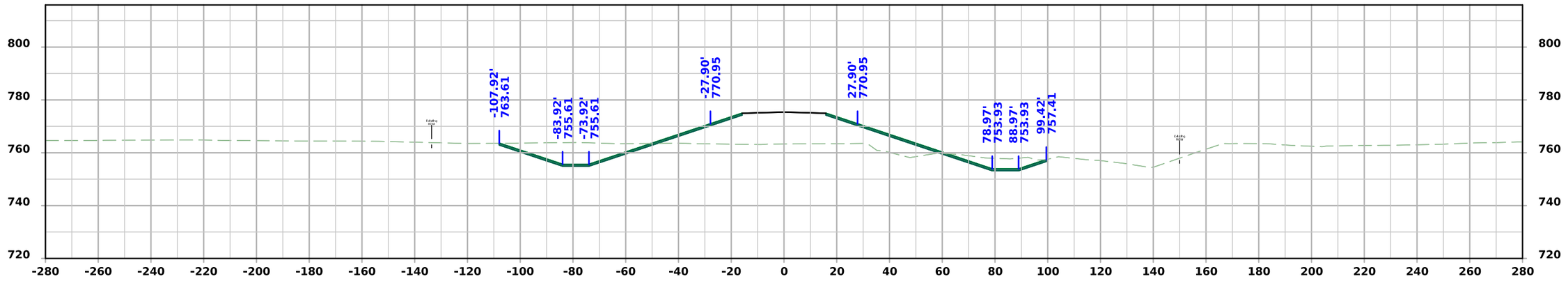


STA 6020+00.00

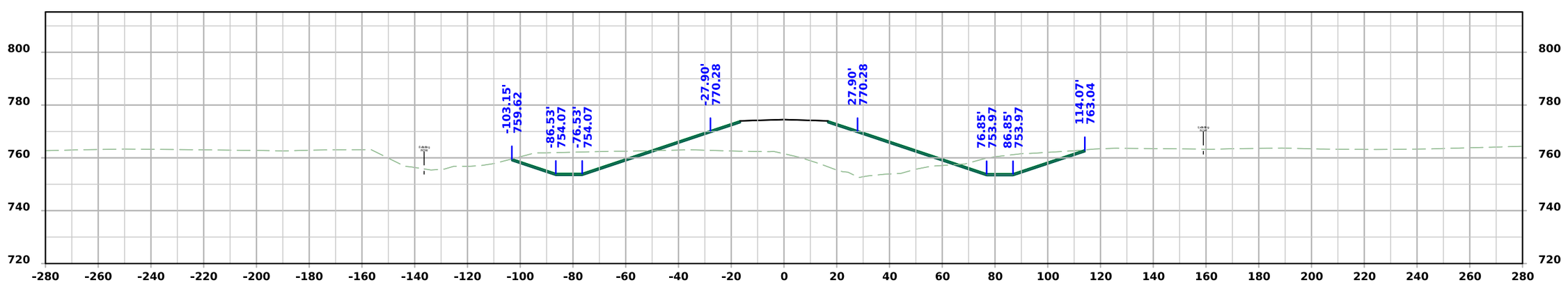
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.336

5:03:15 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6020+75.00

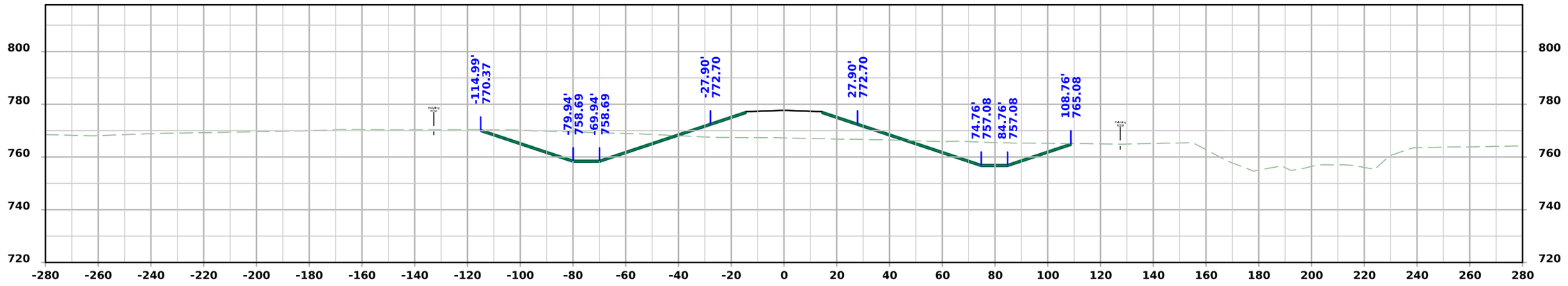


STA 6020+50.00

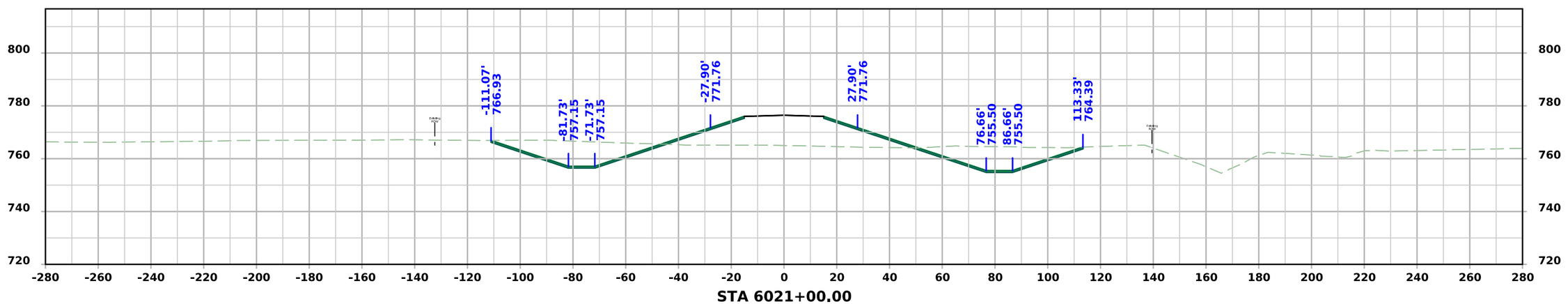
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.337

5:03:15 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6021+25.00

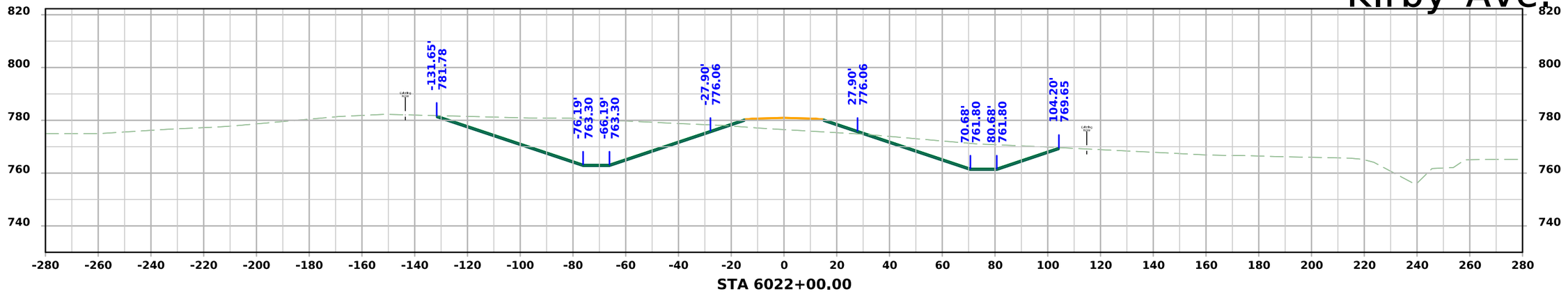


STA 6021+00.00

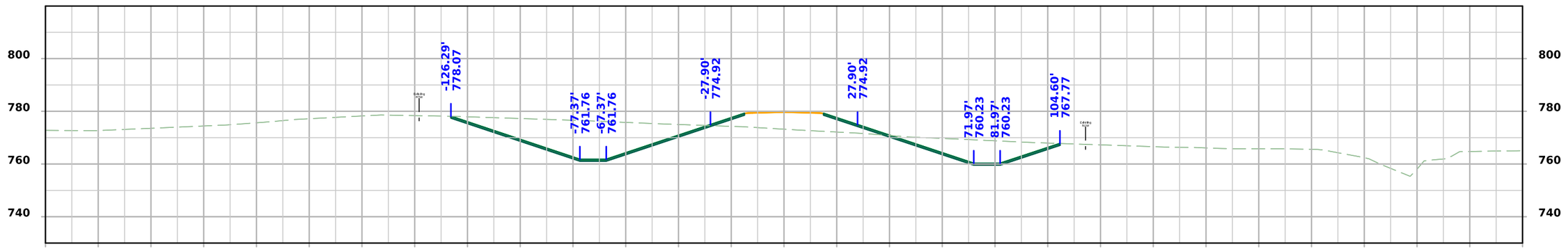
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.338

5:03:16 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

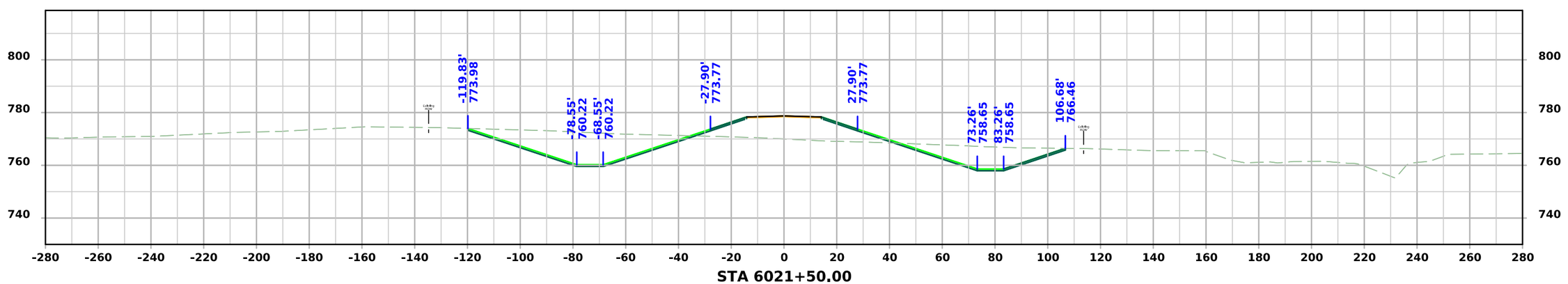
Kirby Ave.



STA 6022+00.00



STA 6021+75.00

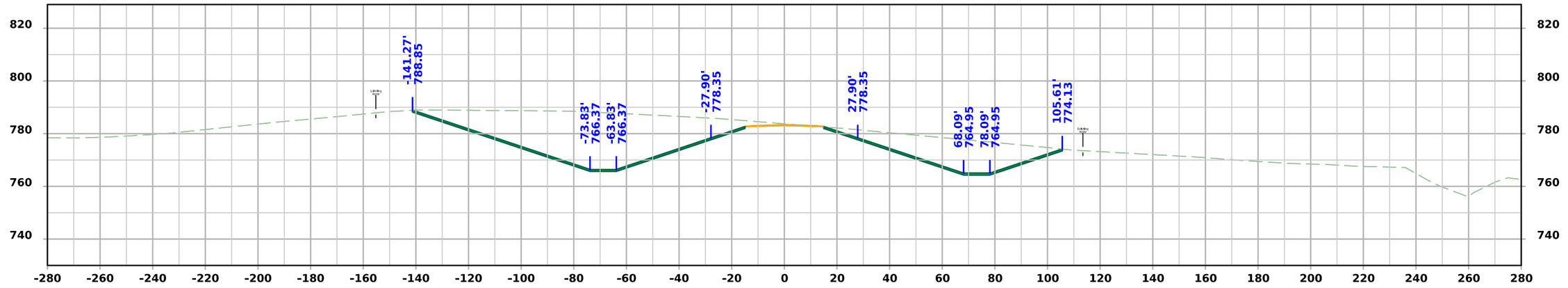


STA 6021+50.00

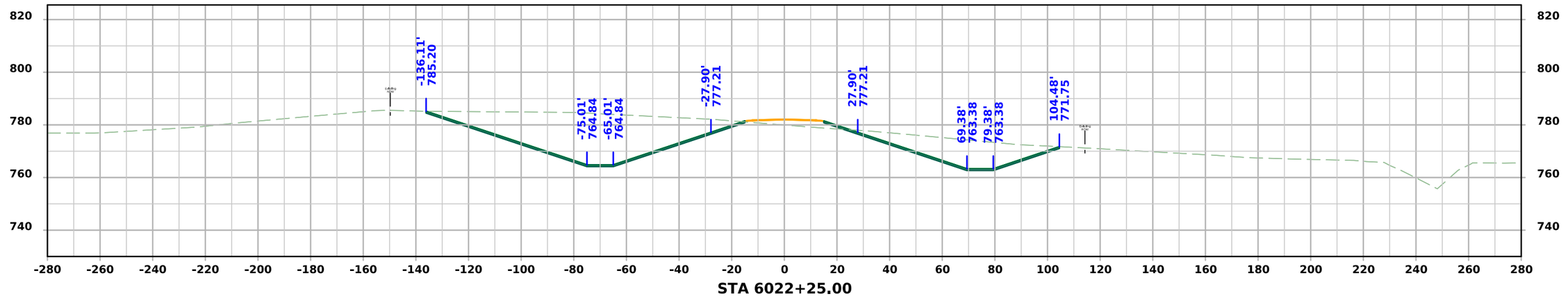
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.339

5:03:17 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6022+50.00

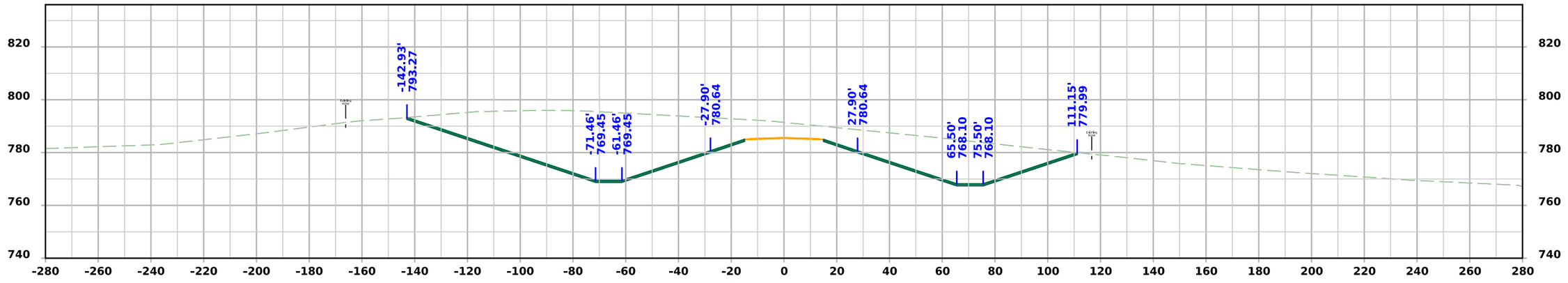


STA 6022+25.00

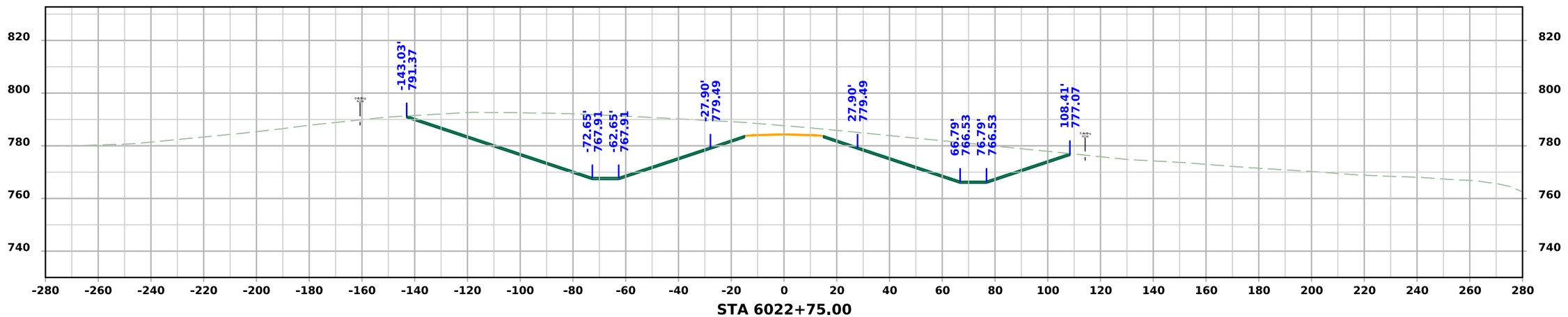
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.340

5:03:18 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6023+00.00

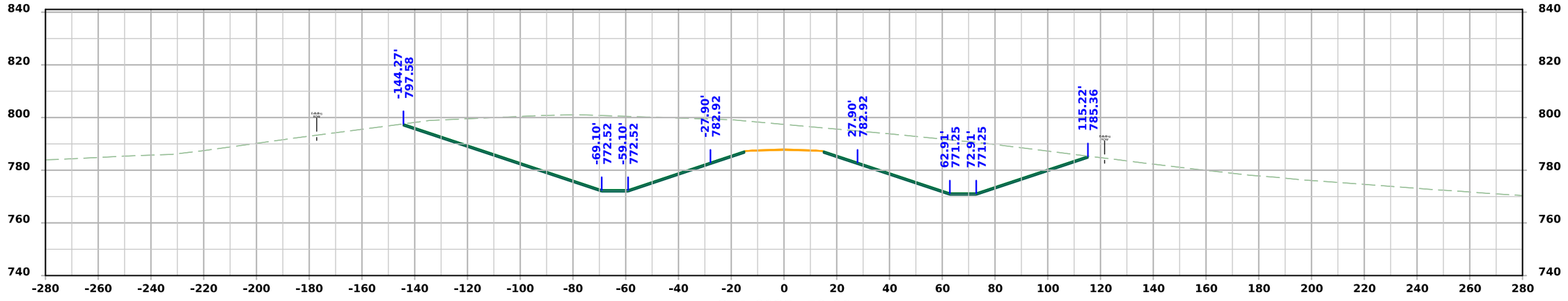


STA 6022+75.00

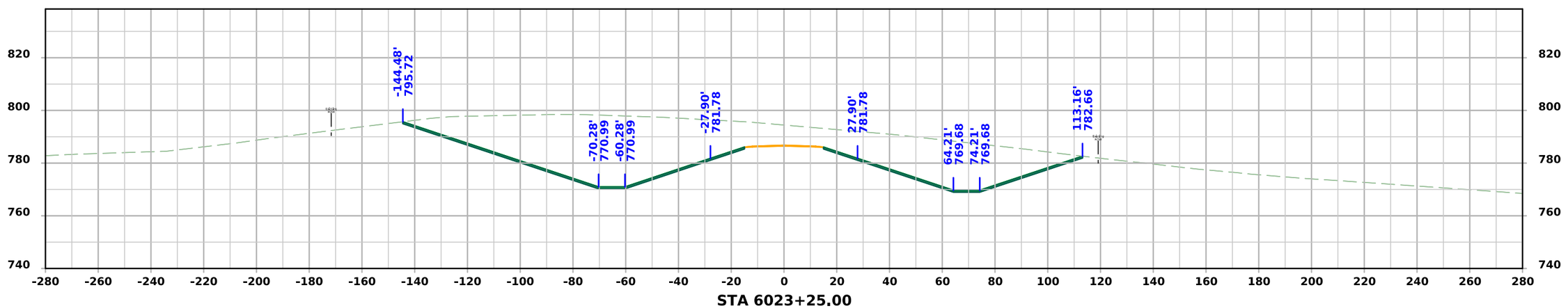
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.341

5:03:18 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6023+50.00

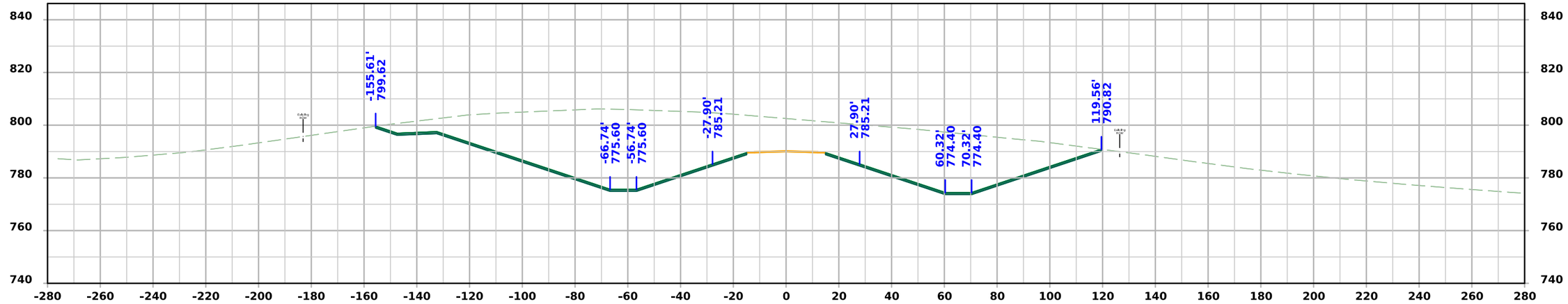


STA 6023+25.00

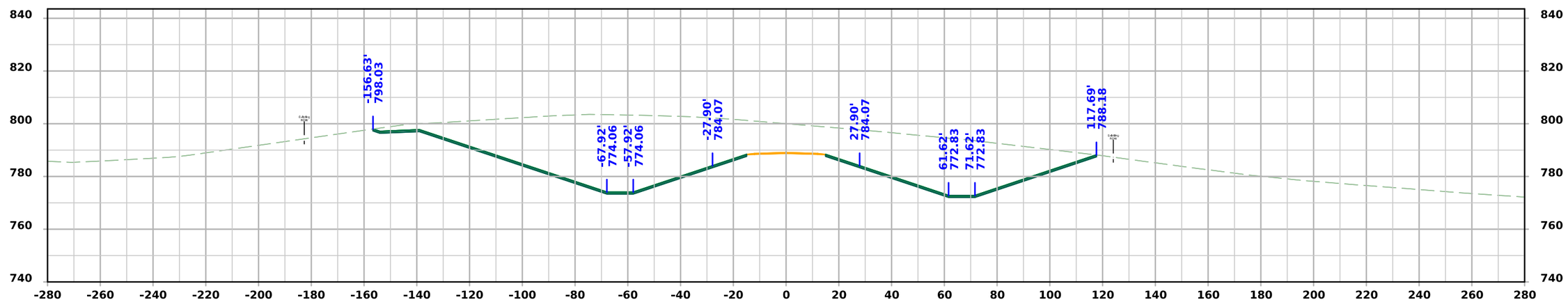
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.342

5:03:19 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6024+00.00

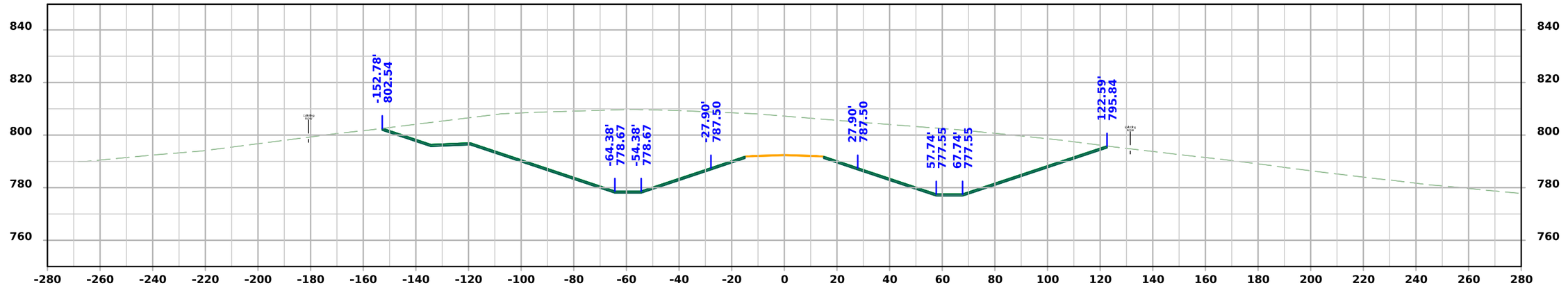


STA 6023+75.00

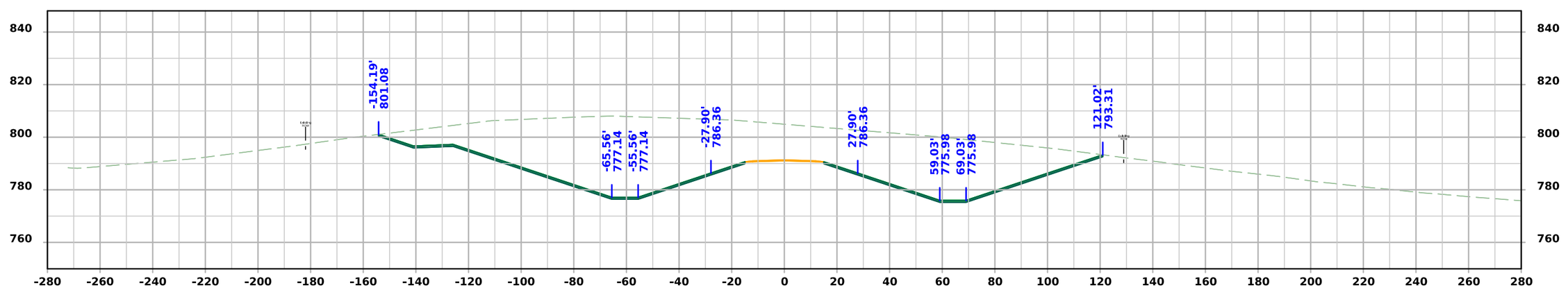
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.343

5:03:20 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6024+50.00

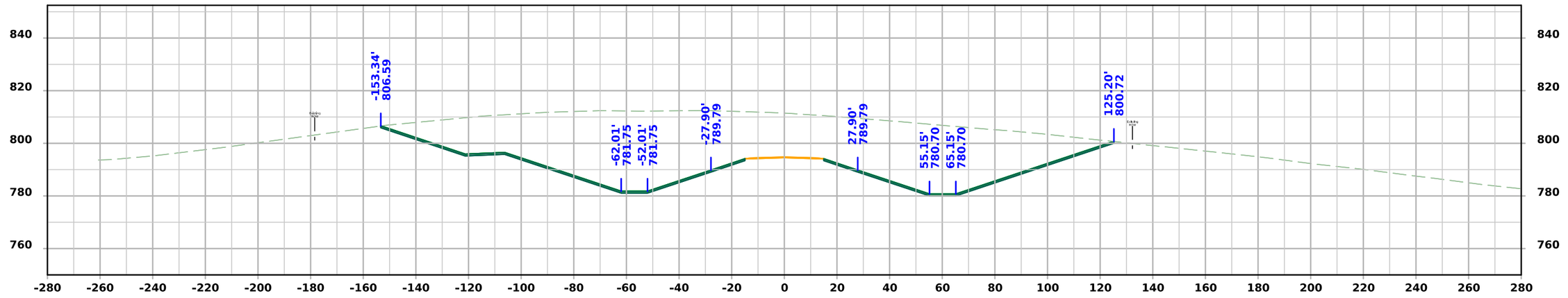


STA 6024+25.00

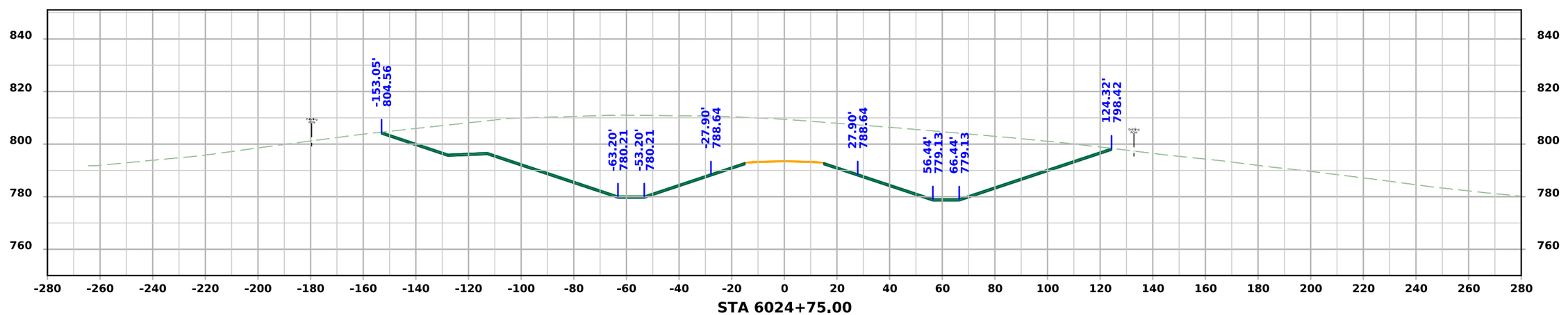
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.344

5:03:20 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6025+00.00

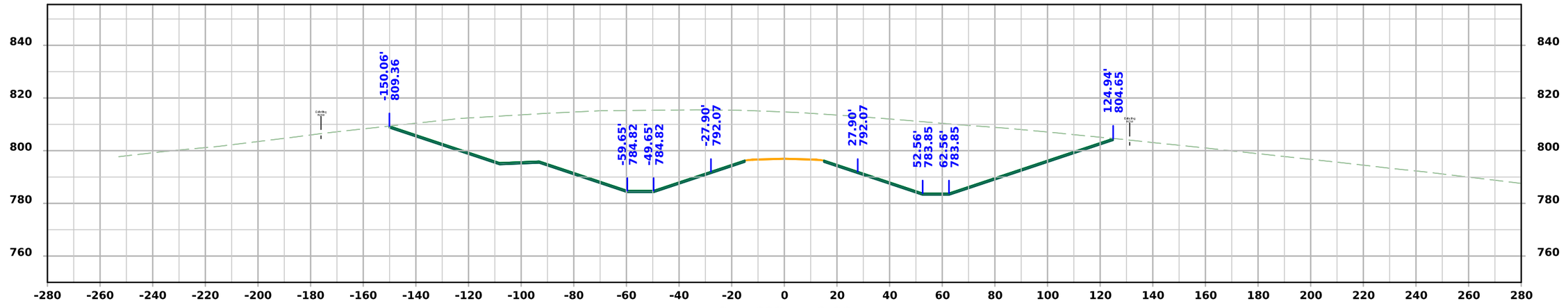


STA 6024+75.00

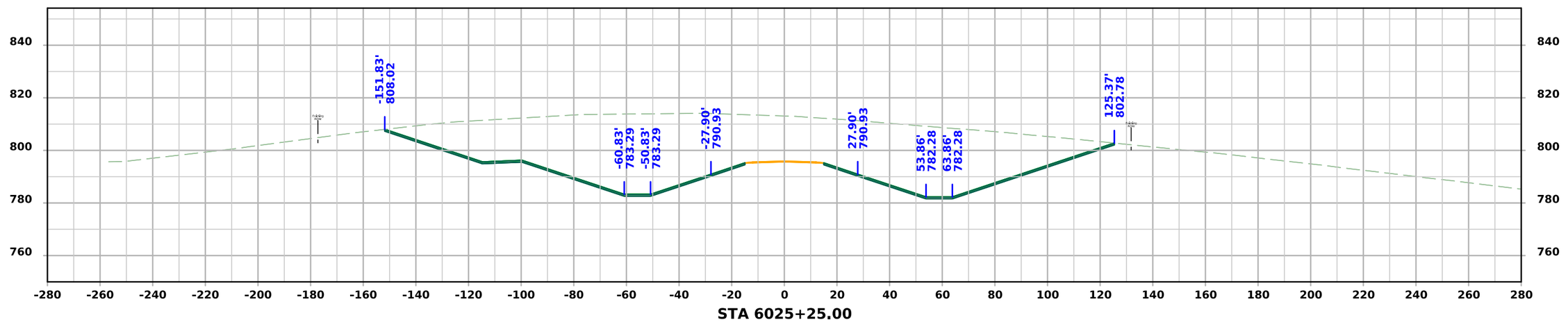
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.345

5:03:21 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6025+50.00

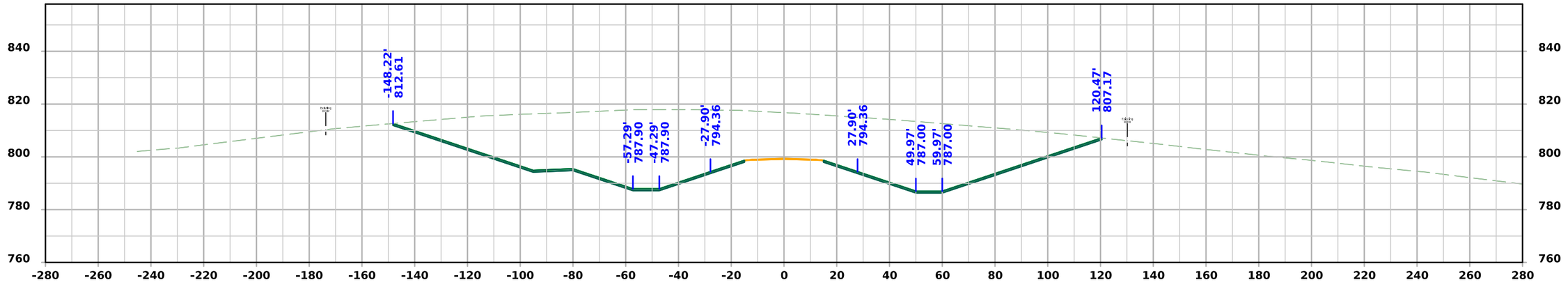


STA 6025+25.00

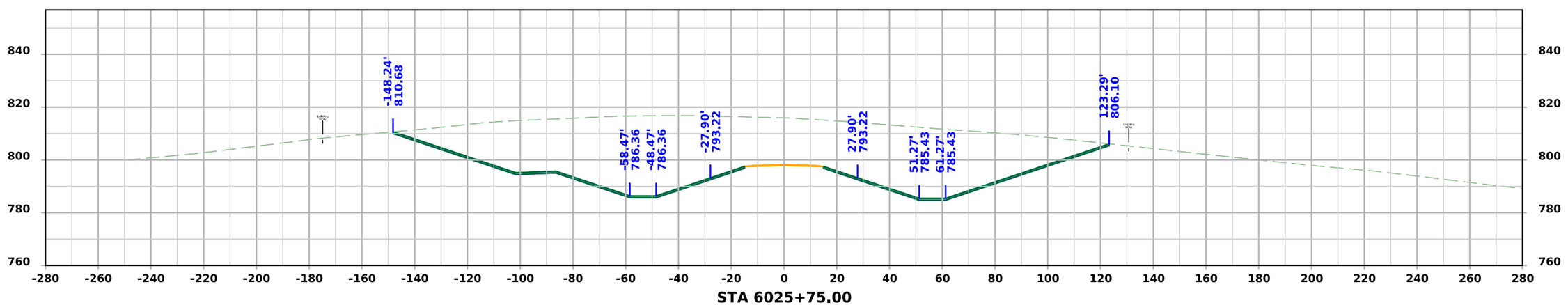
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.346

5:03:22 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6026+00.00

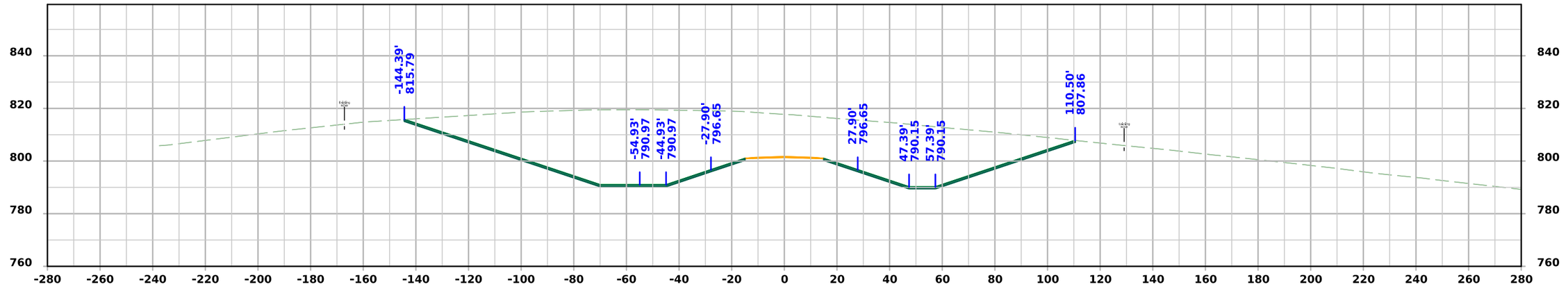


STA 6025+75.00

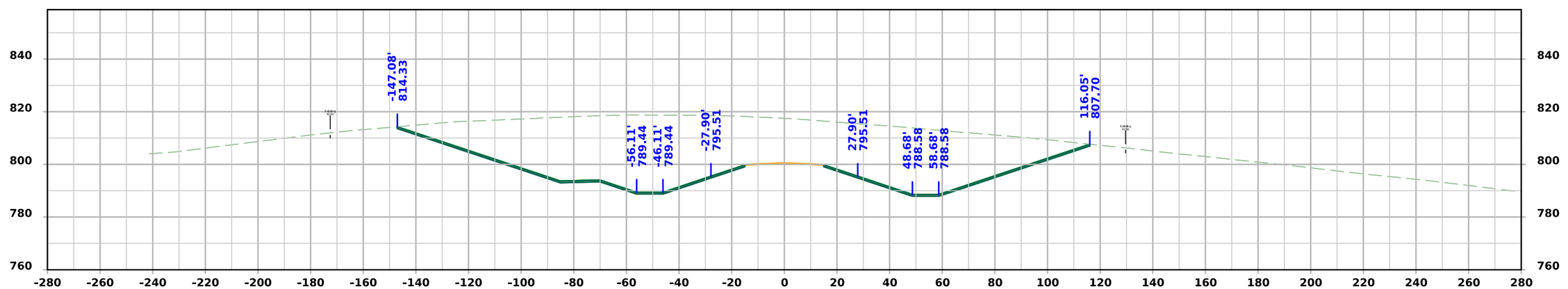
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.347

5:03:22 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6026+50.00

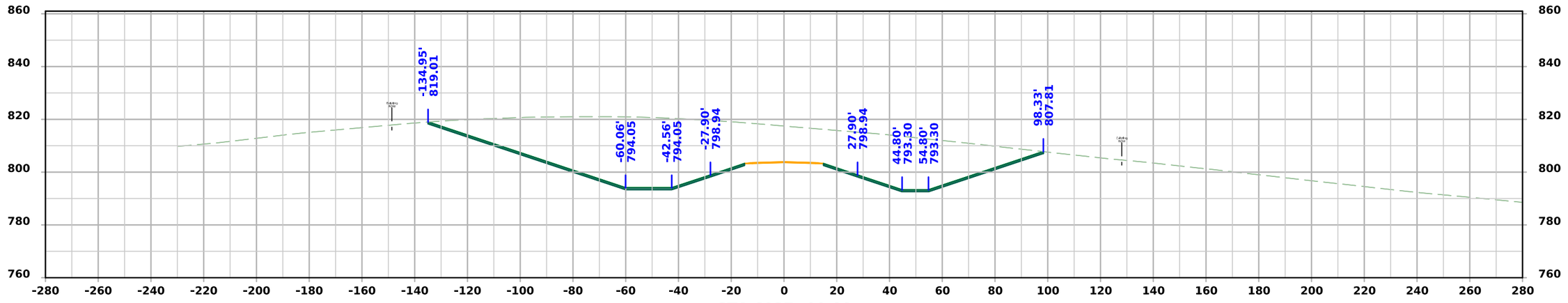


STA 6026+25.00

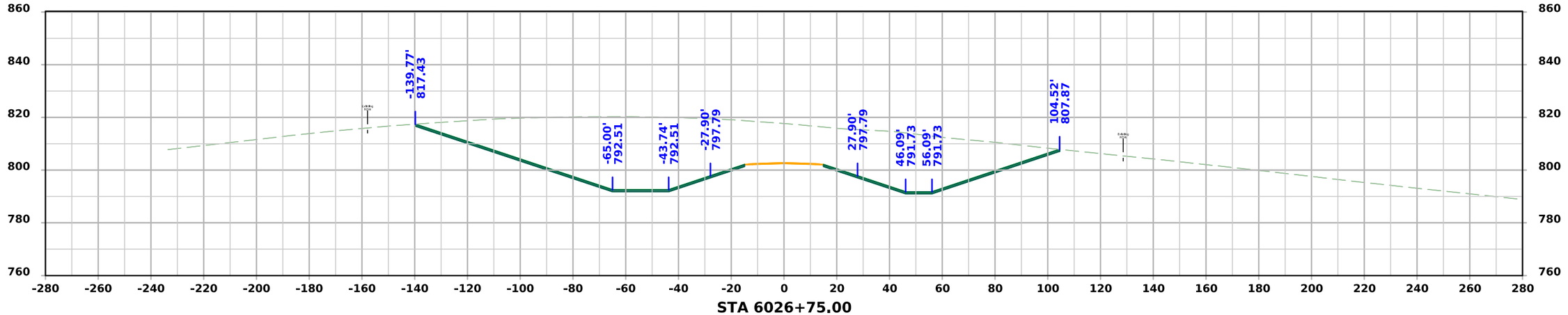
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.348

5:03:23 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6027+00.00

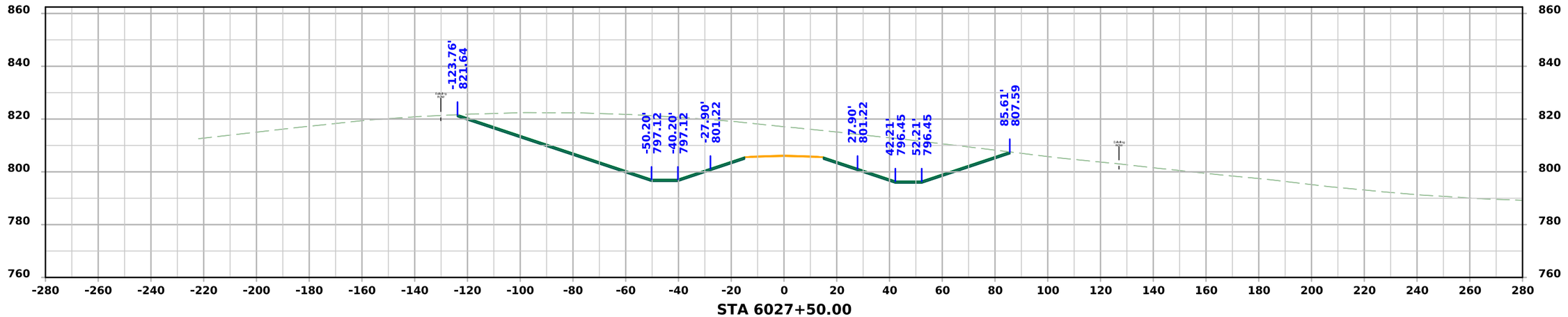


STA 6026+75.00

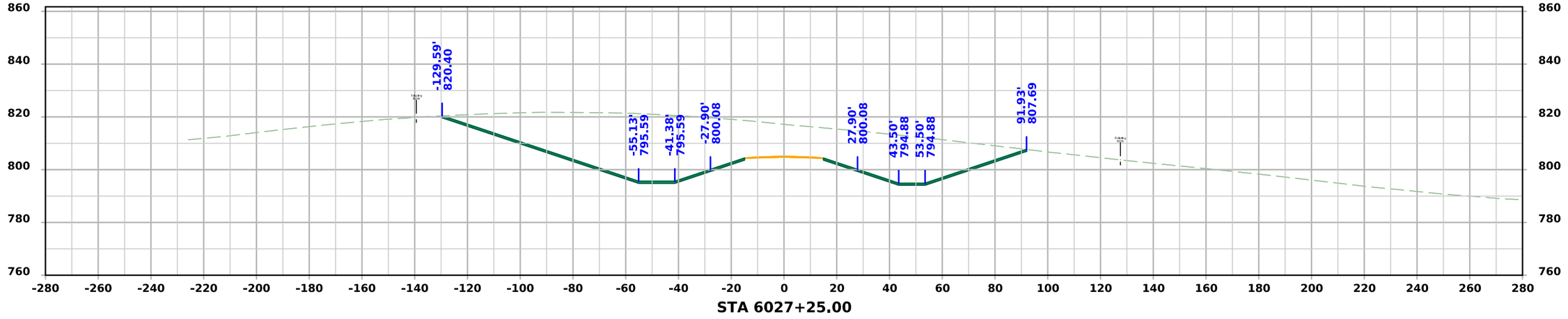
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.349

5:03:24 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6027+50.00

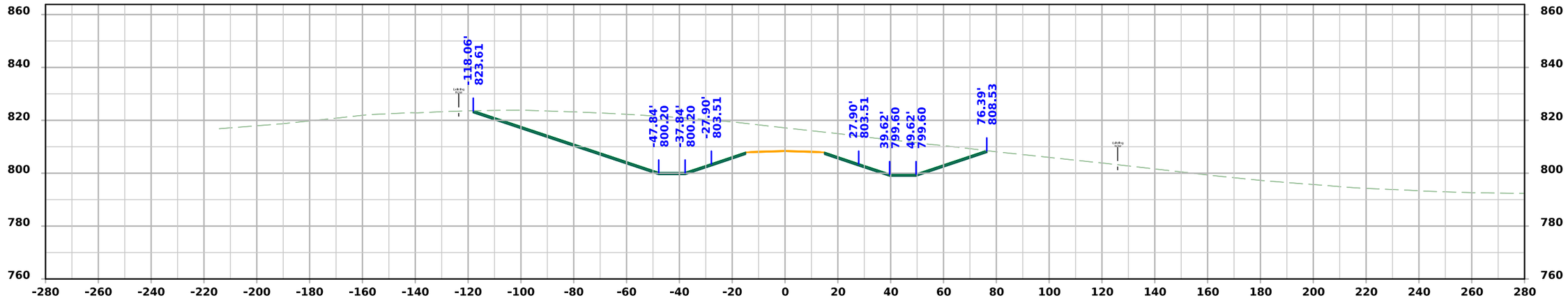


STA 6027+25.00

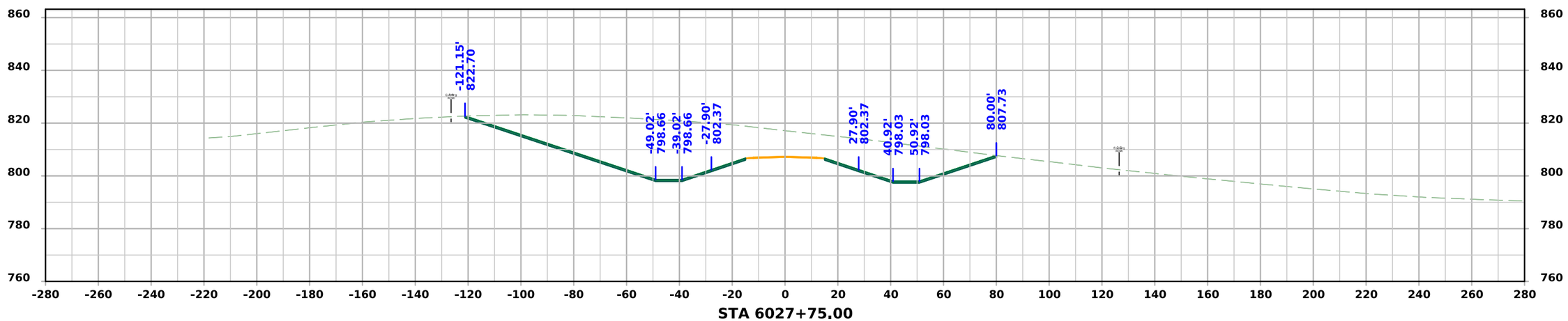
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.350

5:03:25 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6028+00.00

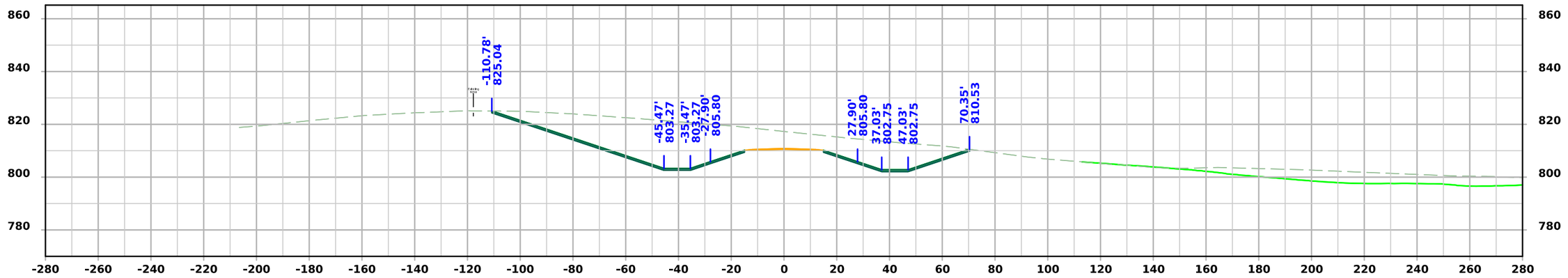


STA 6027+75.00

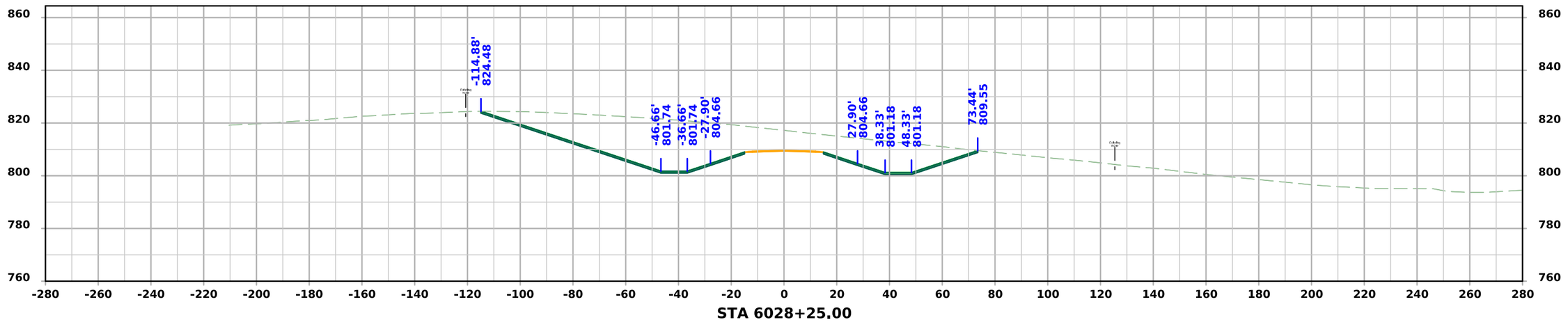
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.351

5:03:25 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

Kirby Ave.



STA 6028+50.00

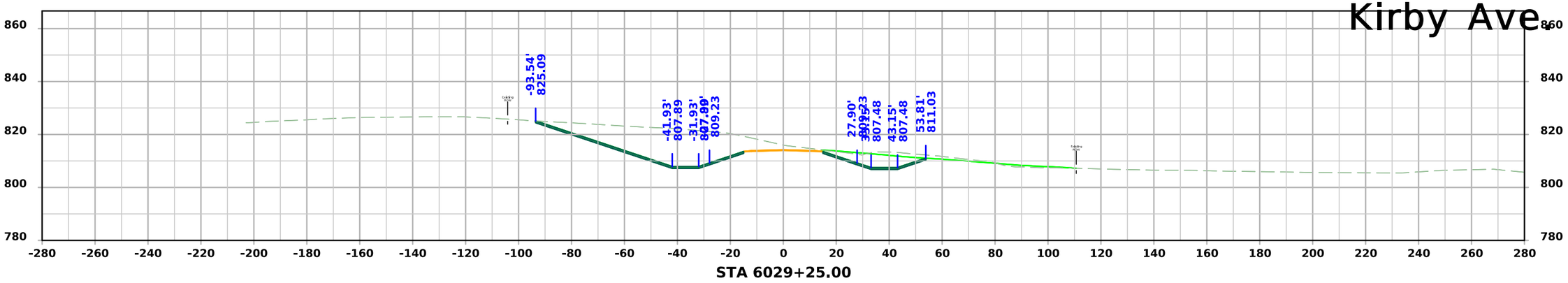


STA 6028+25.00

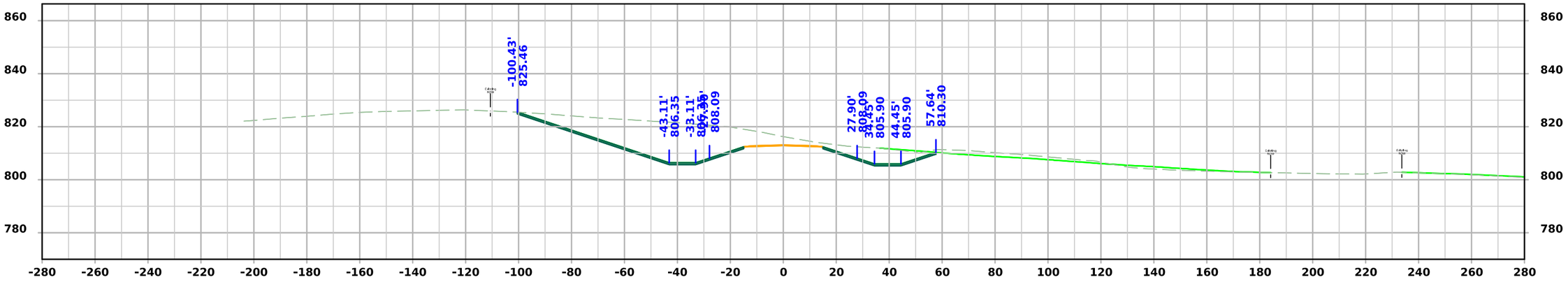
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.352

5:03:26 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

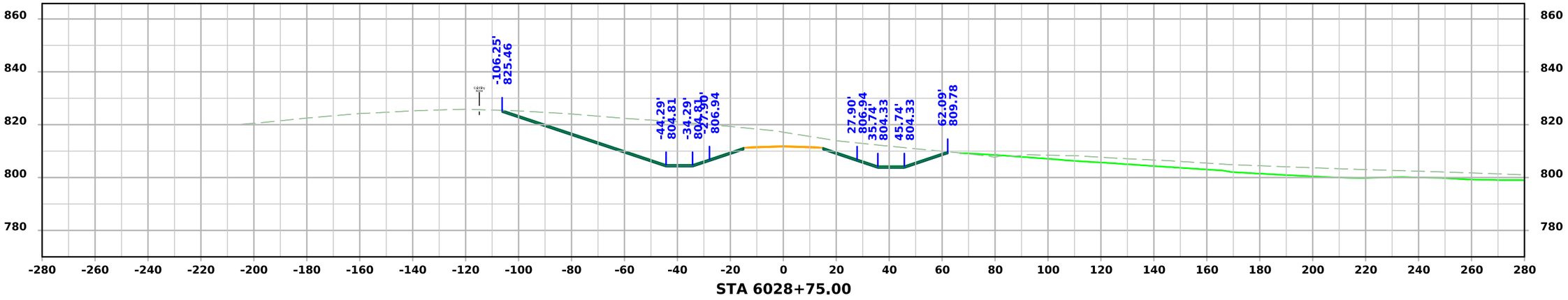
Kirby Ave



STA 6029+25.00



STA 6029+00.00

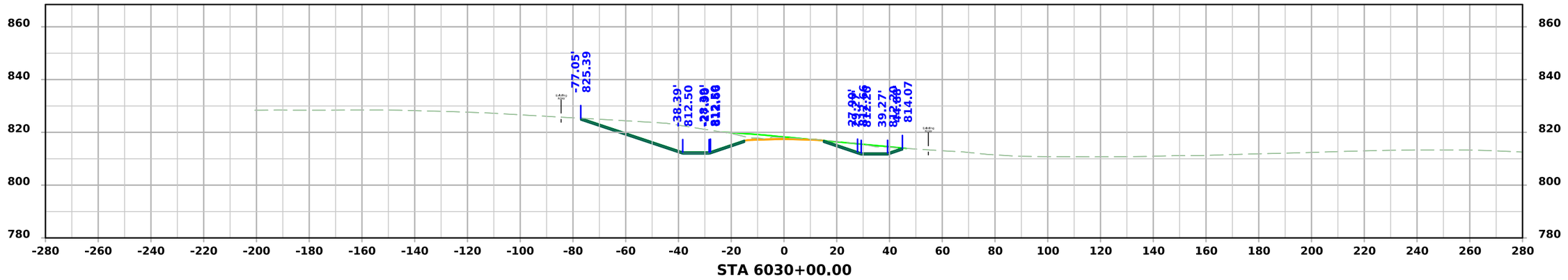


STA 6028+75.00

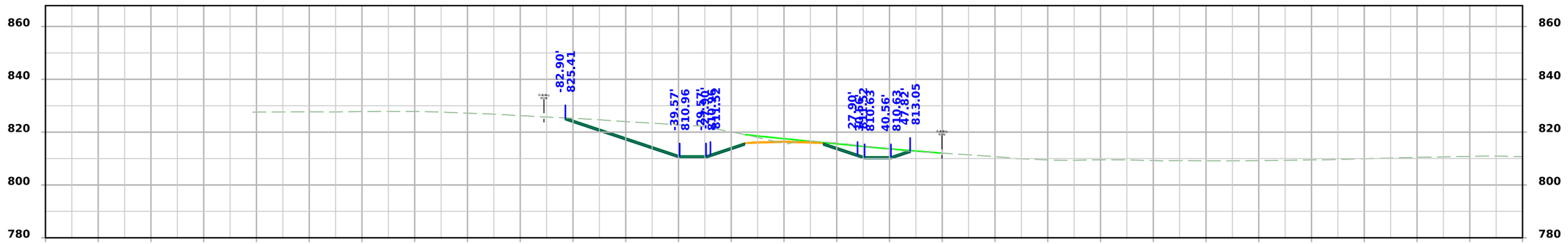
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.353

5:03:27 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

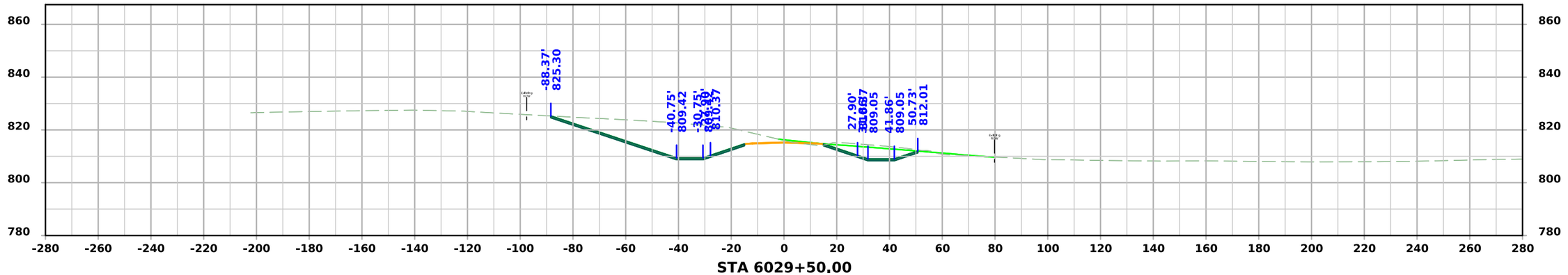
Kirby Ave.



STA 6030+00.00



STA 6029+75.00

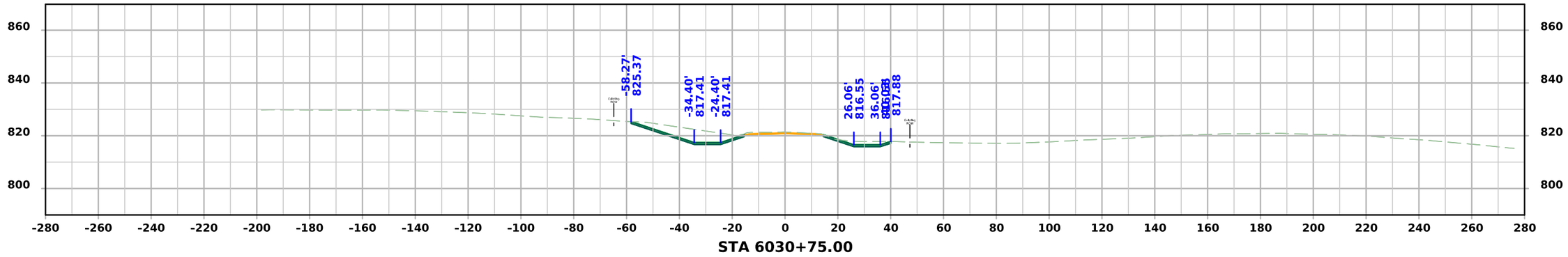


STA 6029+50.00

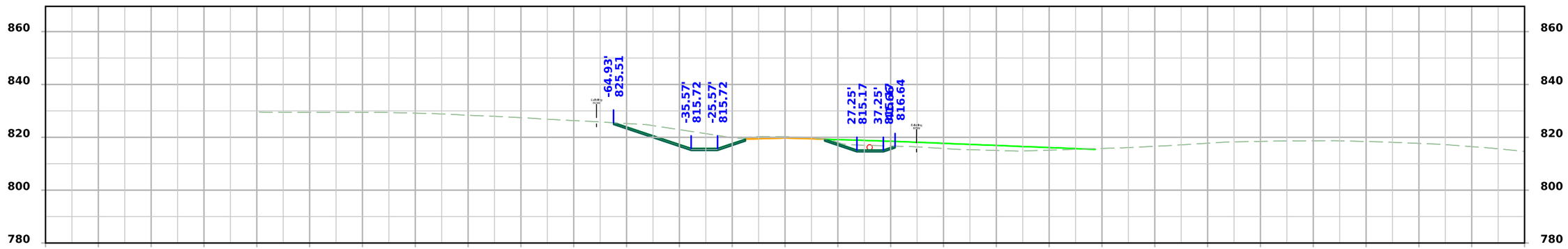
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.354

5:03:28 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

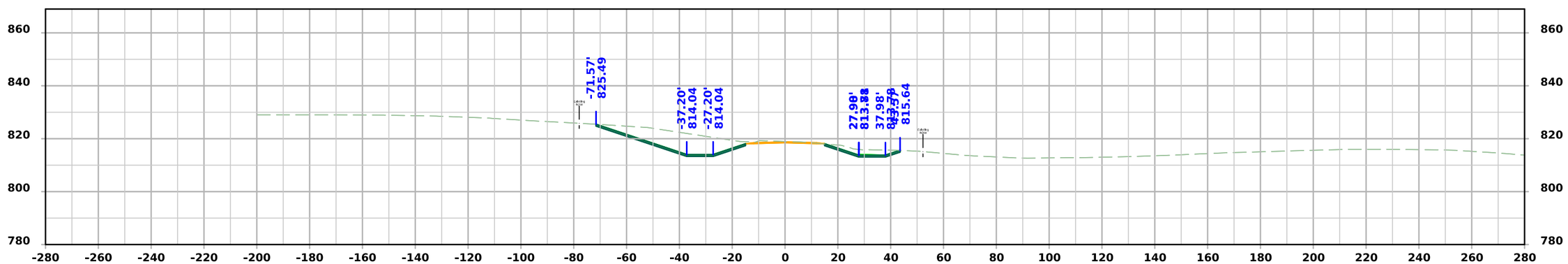
Kirby Ave.



STA 6030+75.00



STA 6030+50.00

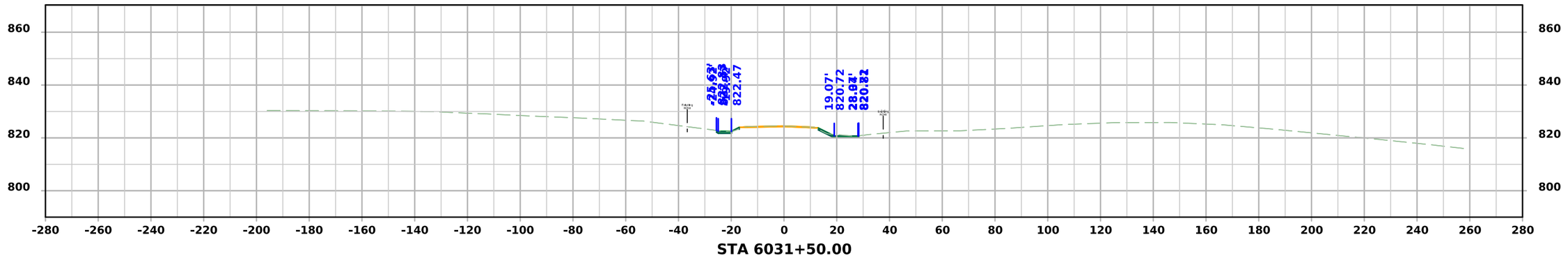


STA 6030+25.00

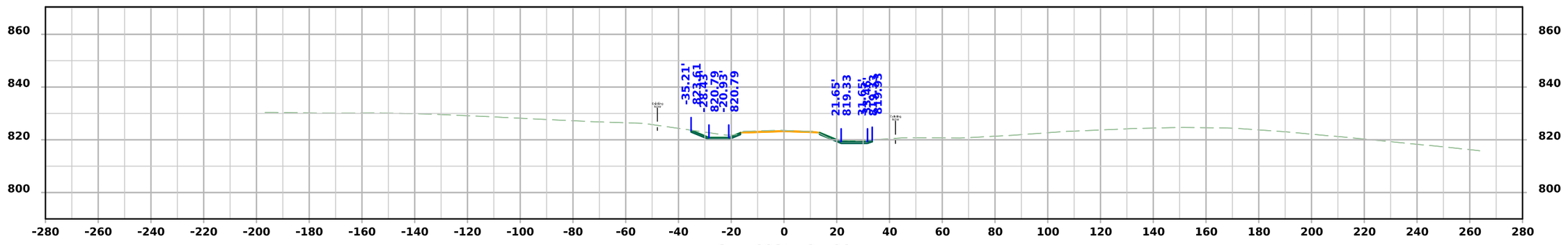
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.355

5:03:28 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

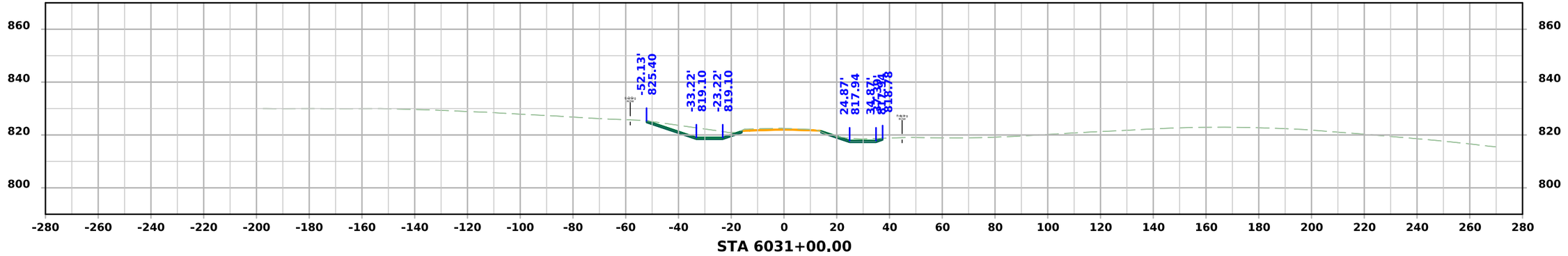
Kirby Ave.



STA 6031+50.00



STA 6031+25.00

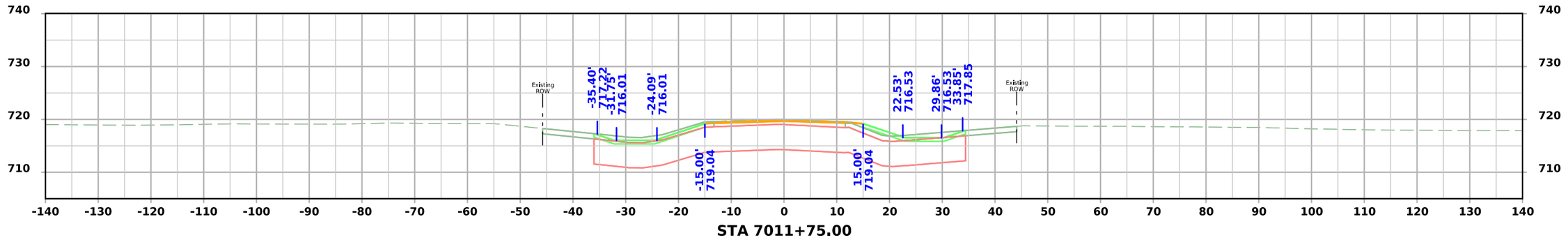


STA 6031+00.00

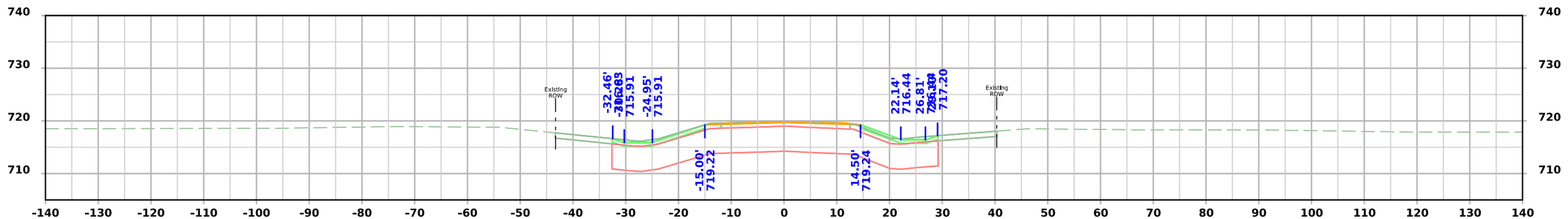
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.356

5:03:29 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SRKIRBY_62063095Z09_ORD_X300_Grading.dgn

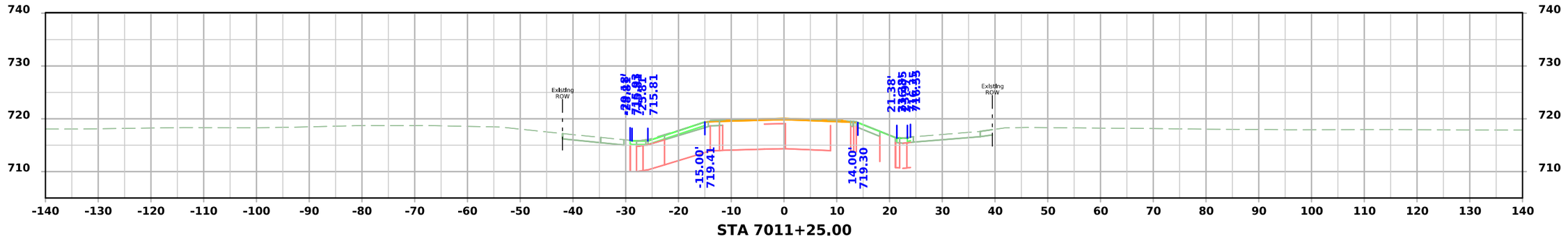
220th St.



STA 7011+75.00



STA 7011+50.00

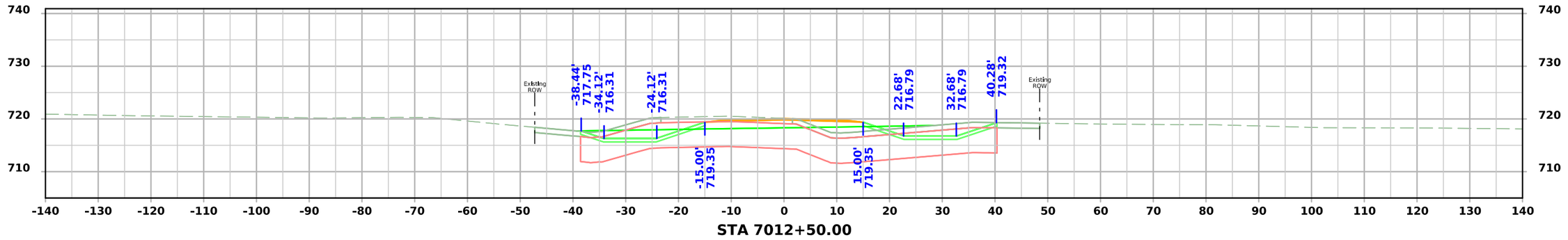


STA 7011+25.00

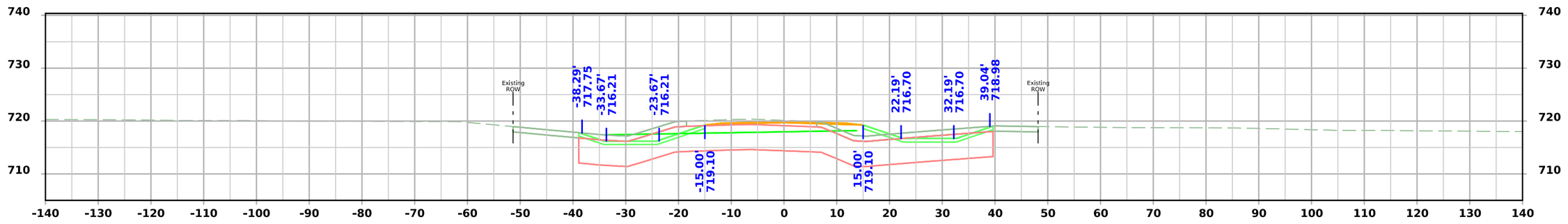
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.400

5:06:35 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

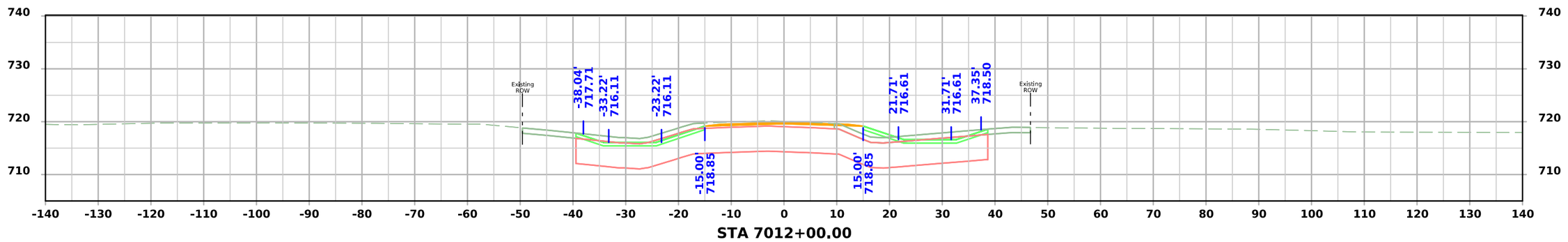
220th St.



STA 7012+50.00



STA 7012+25.00

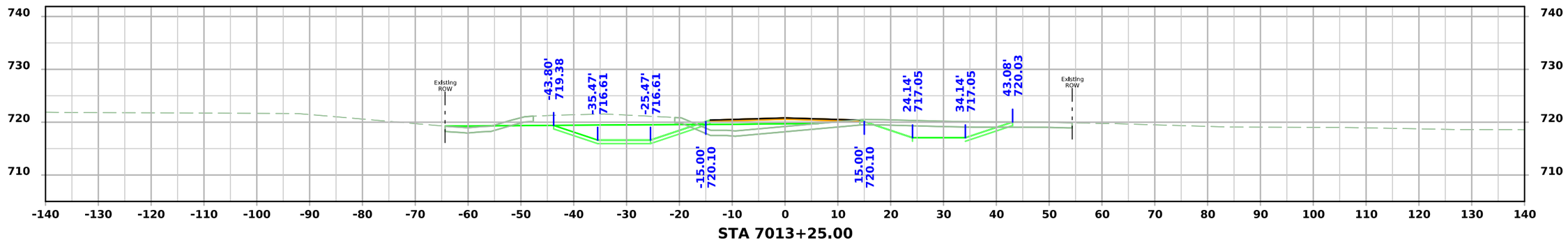


STA 7012+00.00

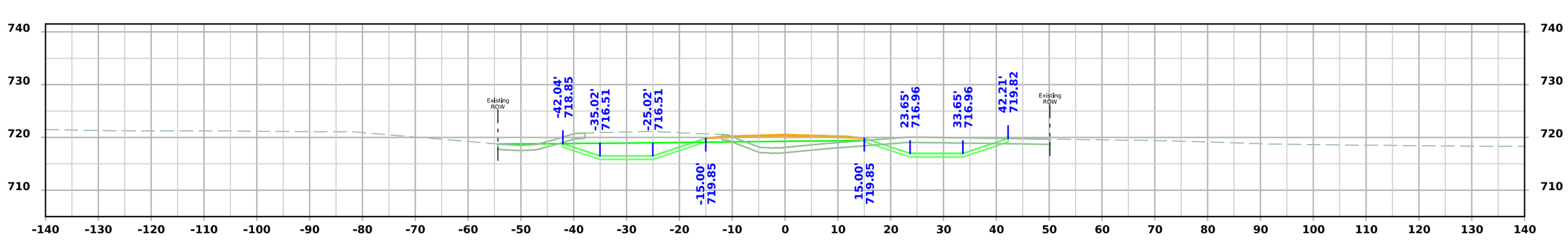
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.401

5:06:36 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

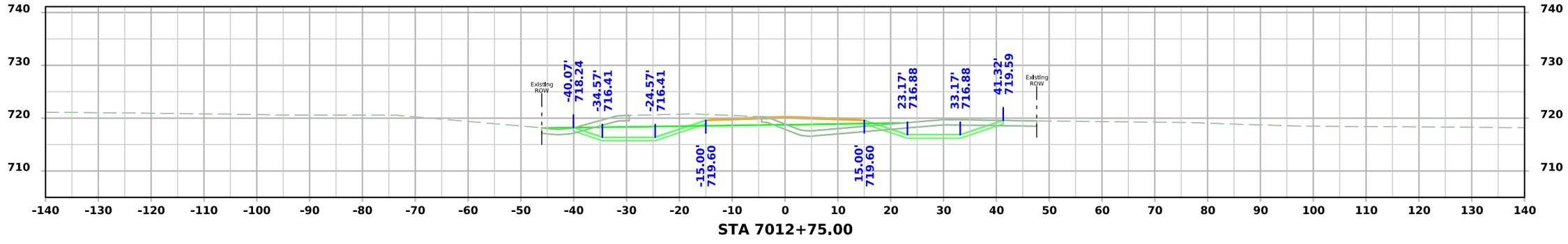
220th St.



STA 7013+25.00



STA 7013+00.00

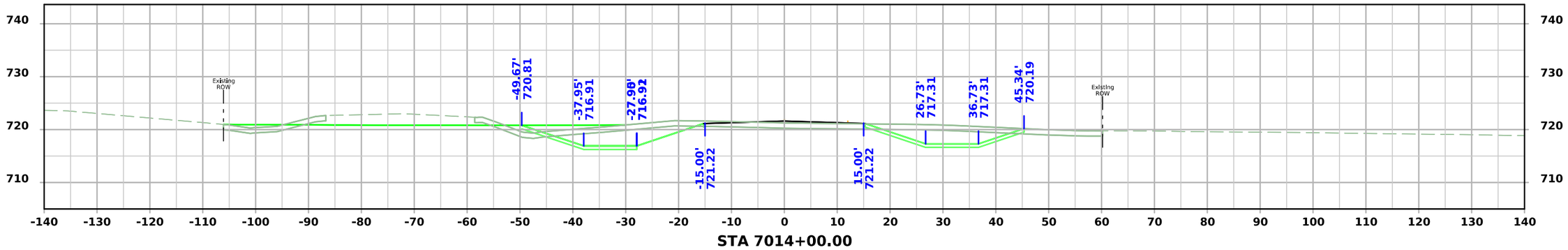


STA 7012+75.00

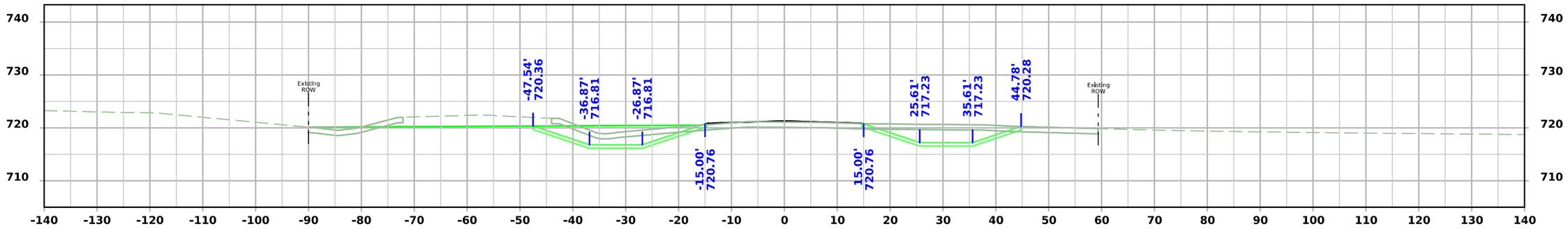
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.402

5:06:37 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

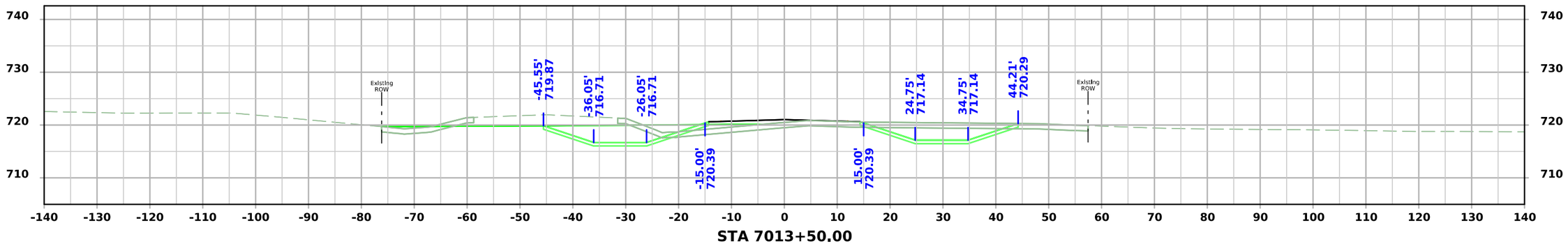
220th St.



STA 7014+00.00



STA 7013+75.00

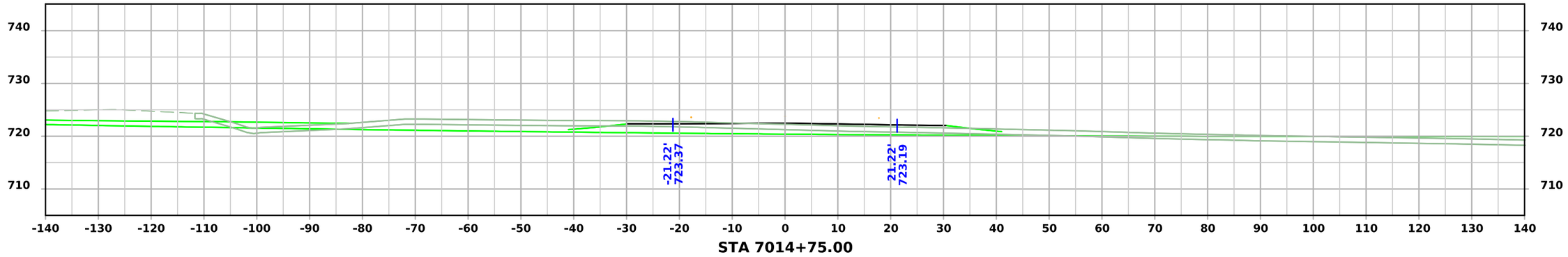


STA 7013+50.00

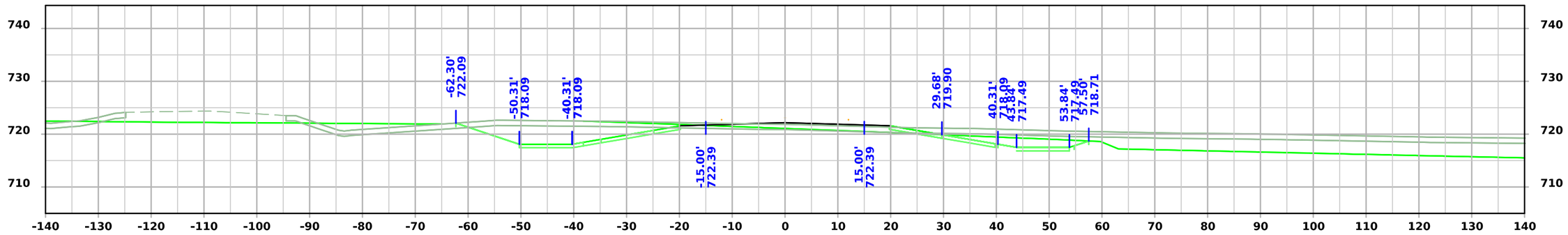
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.403

5:06:38 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

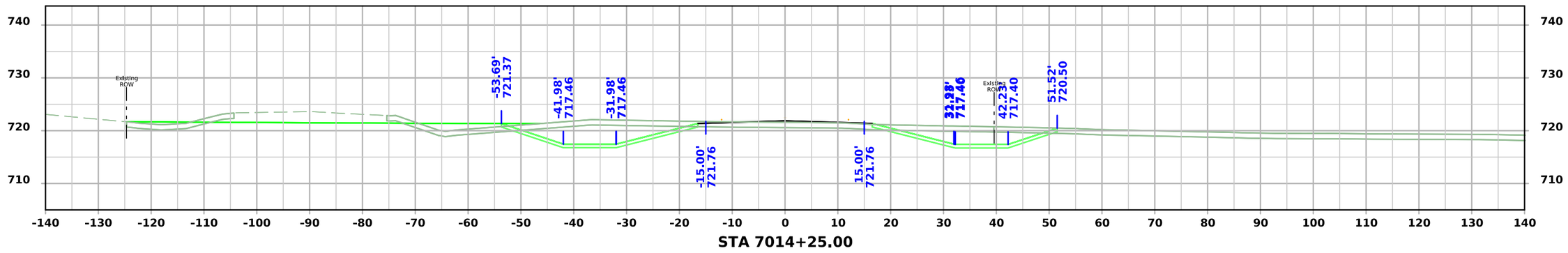
220th St.



STA 7014+75.00



STA 7014+50.00

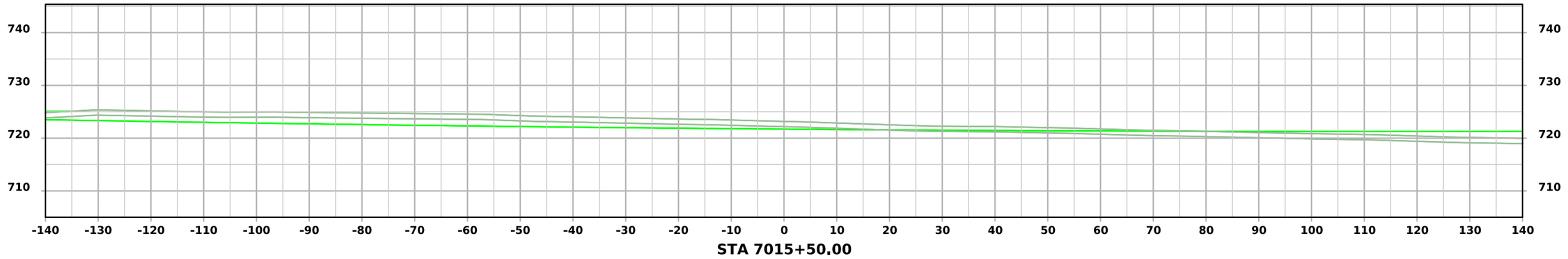


STA 7014+25.00

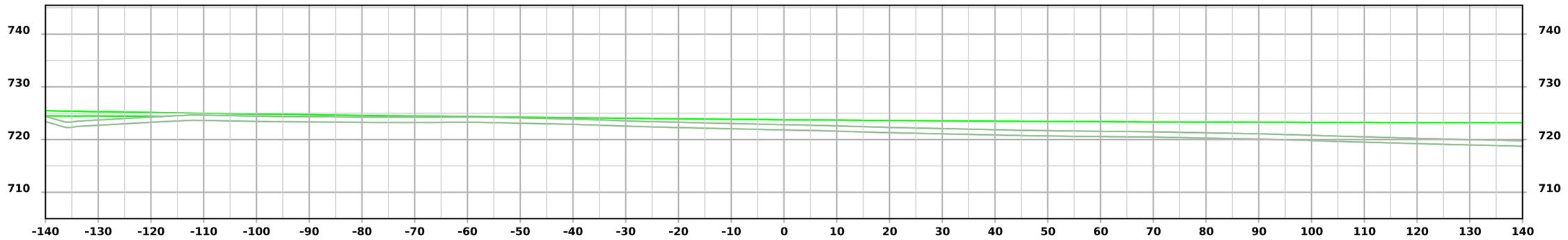
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.404

5:06:39 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

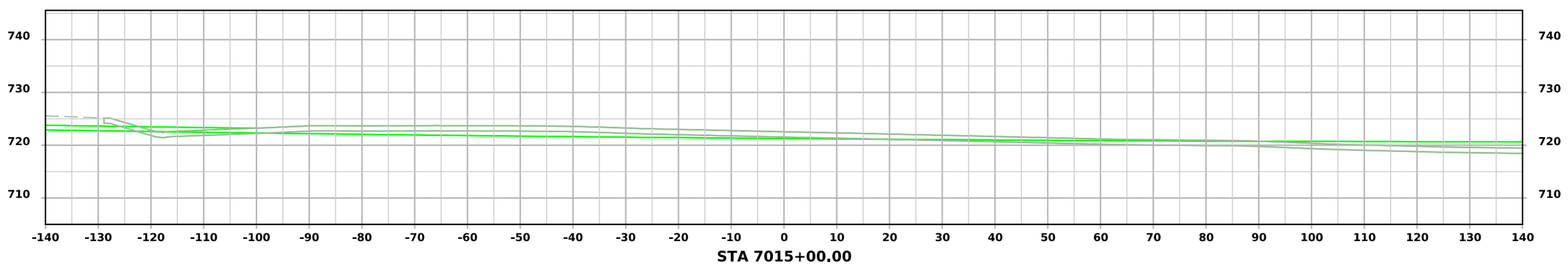
220th St.



STA 7015+50.00



STA 7015+25.00

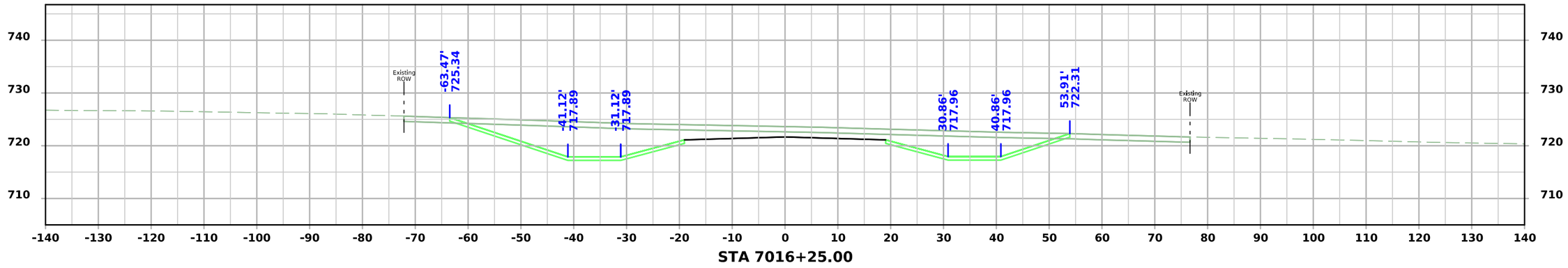


STA 7015+00.00

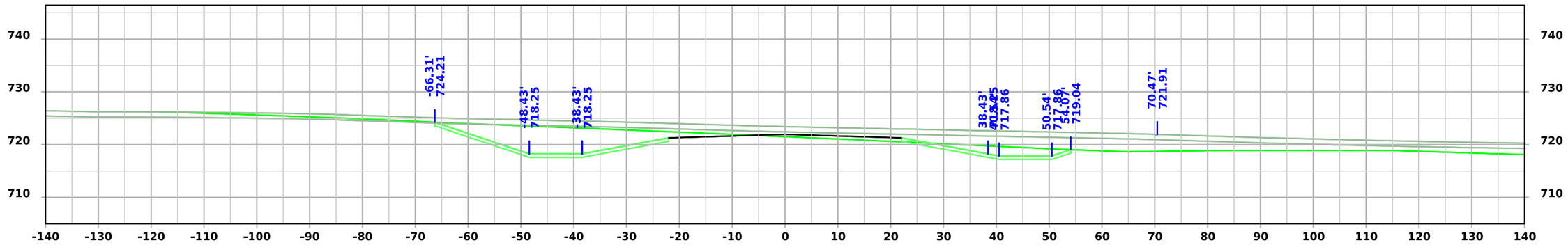
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.405

5:06:41 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

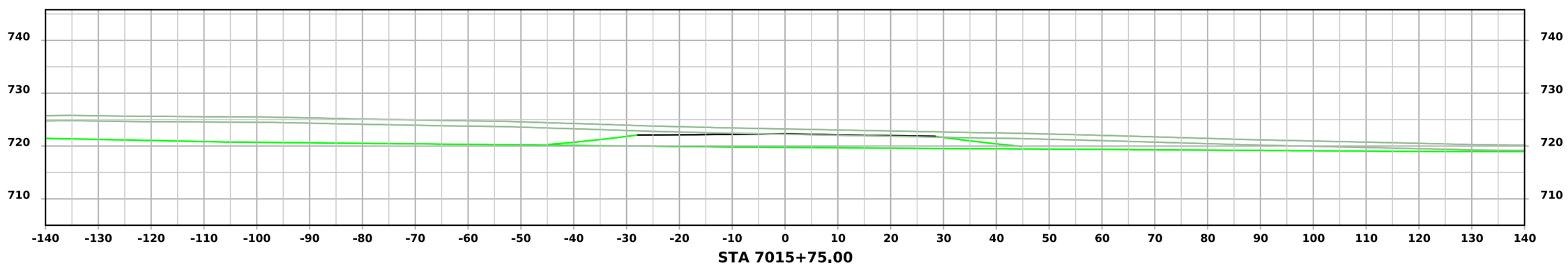
220th St.



STA 7016+25.00



STA 7016+00.00

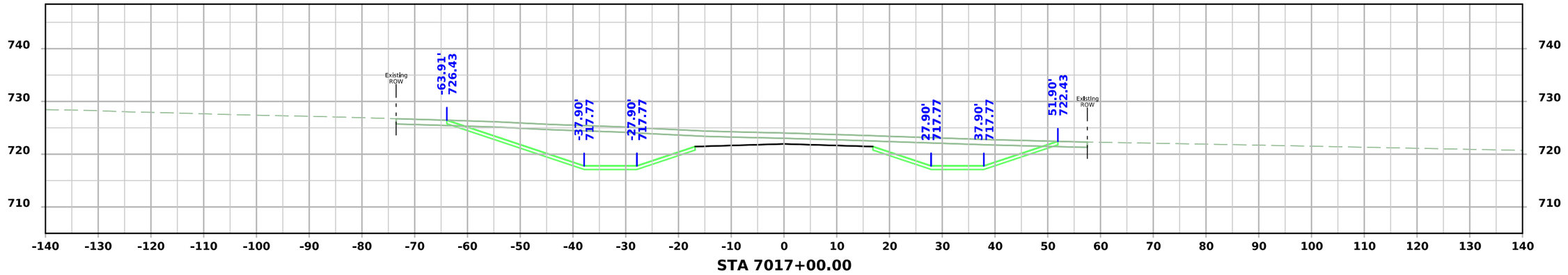


STA 7015+75.00

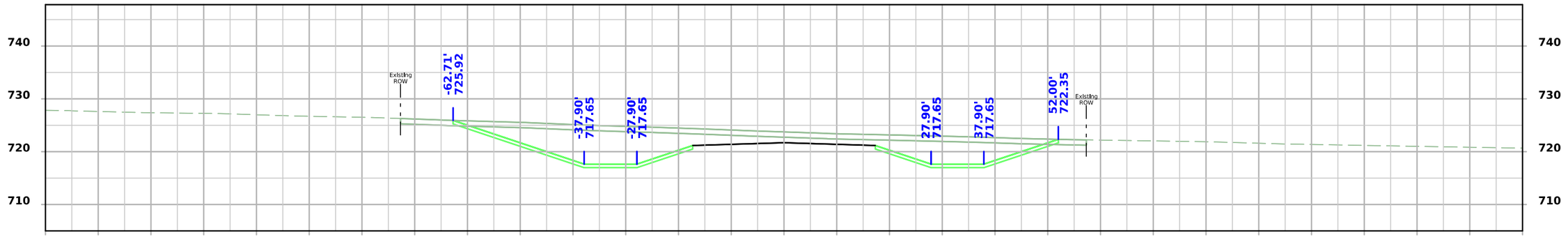
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.406

5:06:42 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

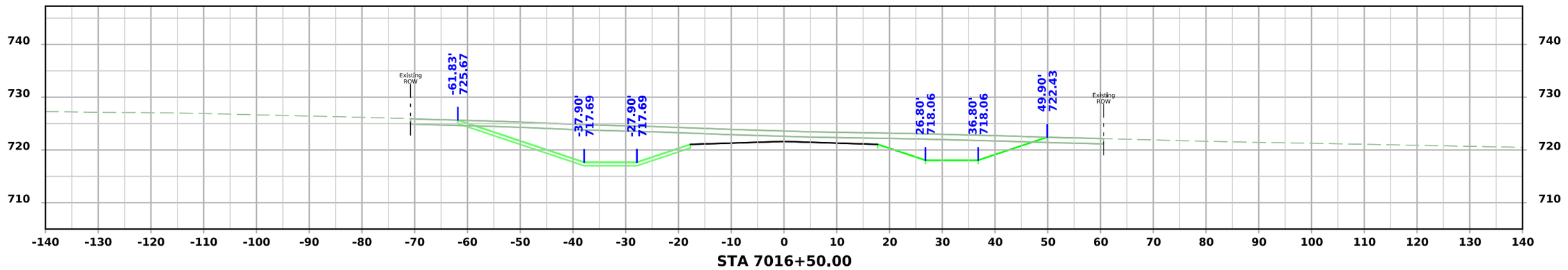
220th St.



STA 7017+00.00



STA 7016+75.00

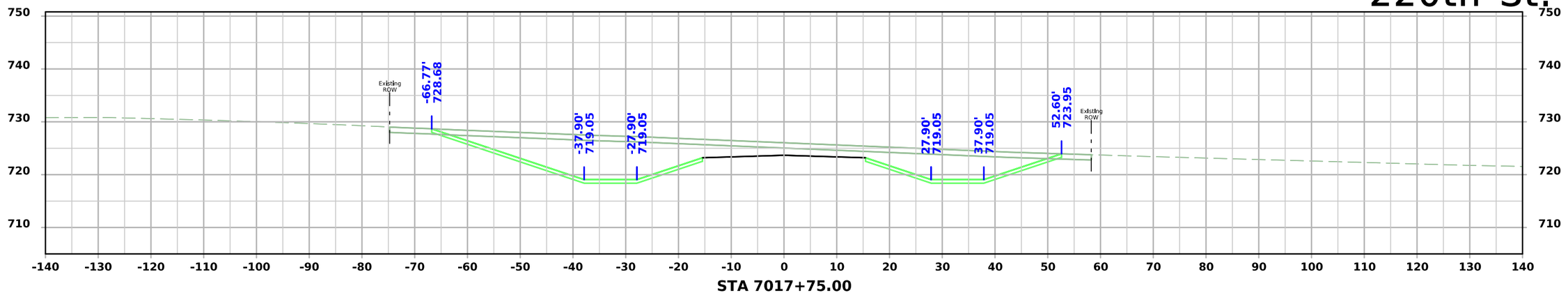


STA 7016+50.00

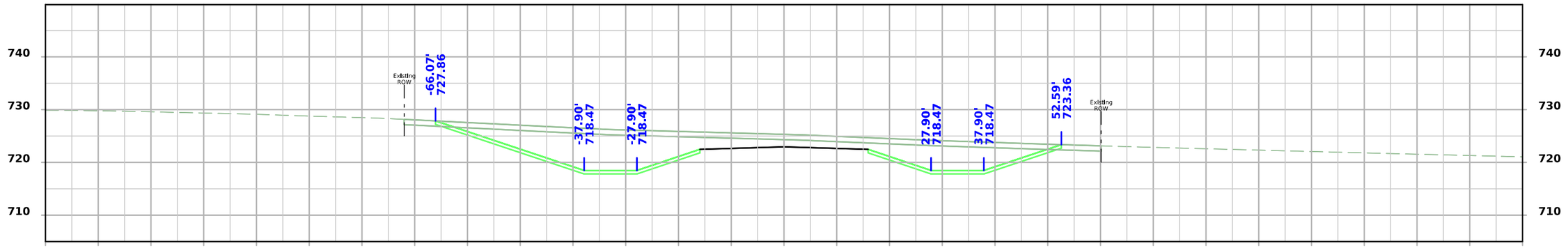
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.407

5:06:43 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

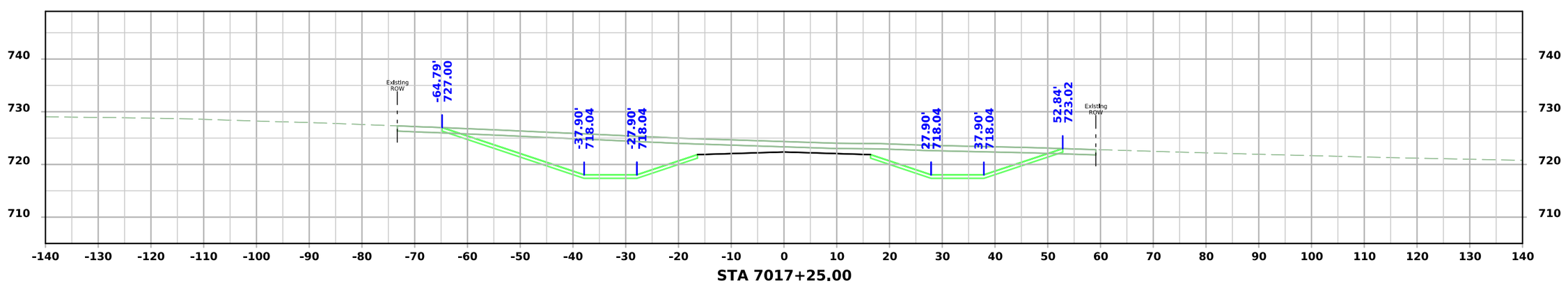
220th St.



STA 7017+75.00



STA 7017+50.00

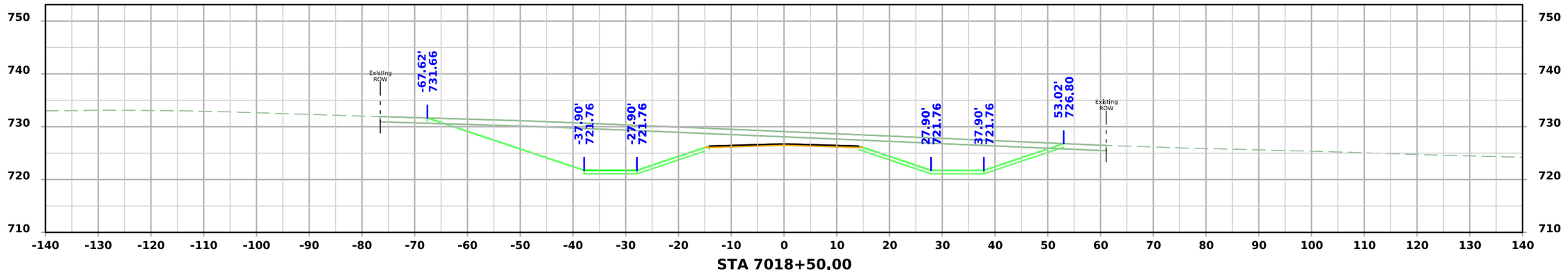


STA 7017+25.00

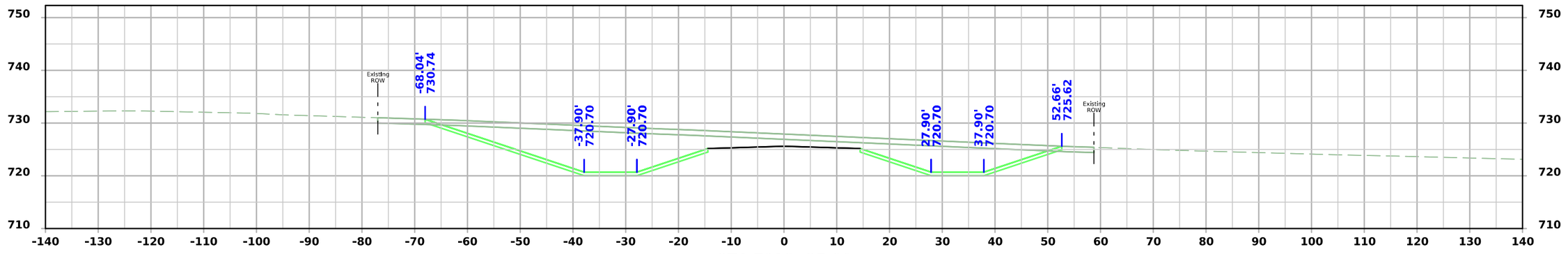
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.408

5:06:44 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

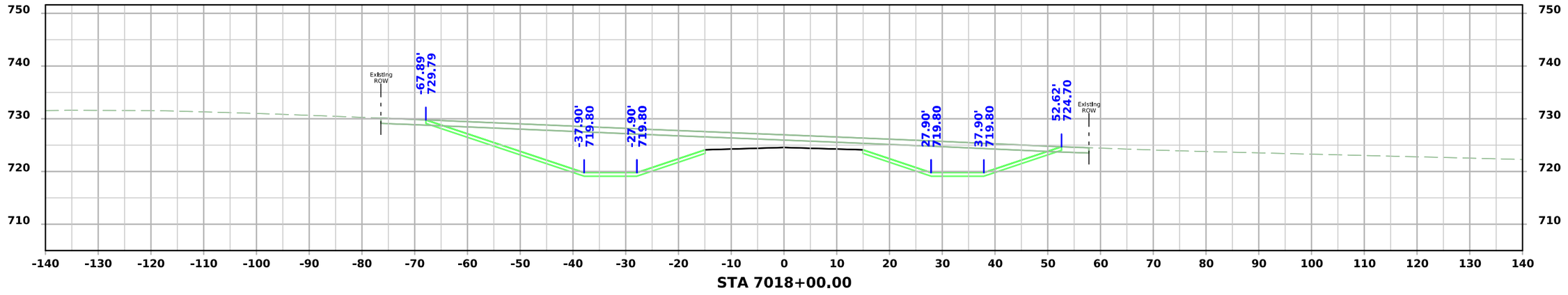
220th St.



STA 7018+50.00



STA 7018+25.00

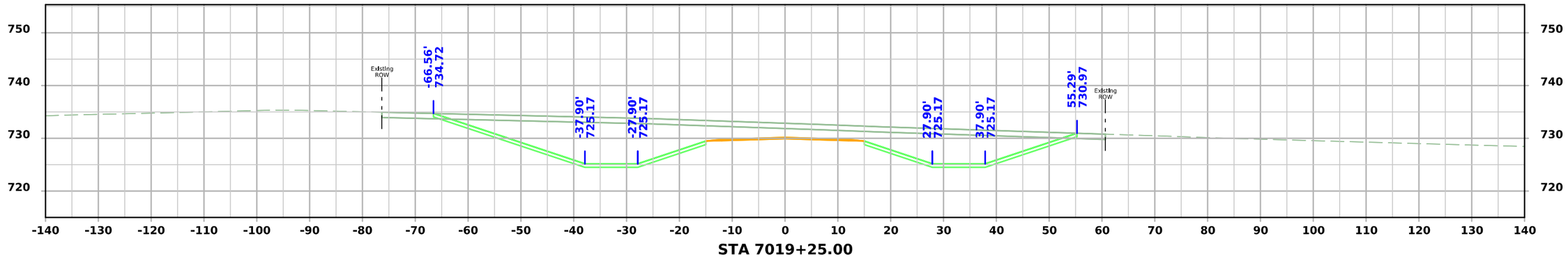


STA 7018+00.00

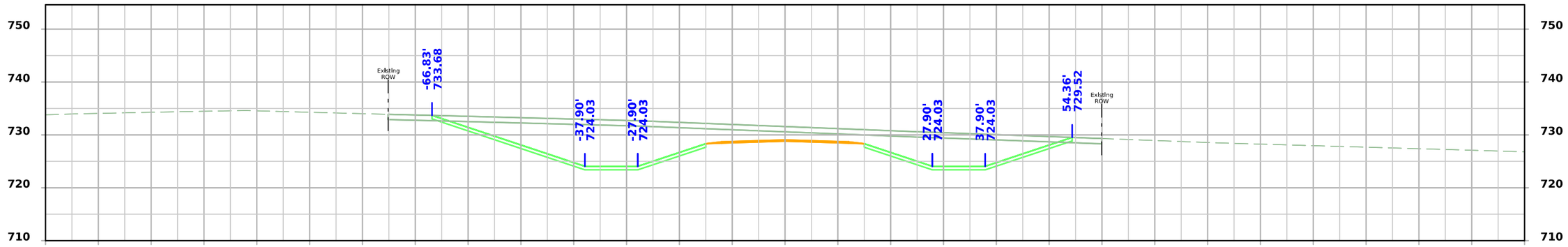
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.409

5:06:45 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

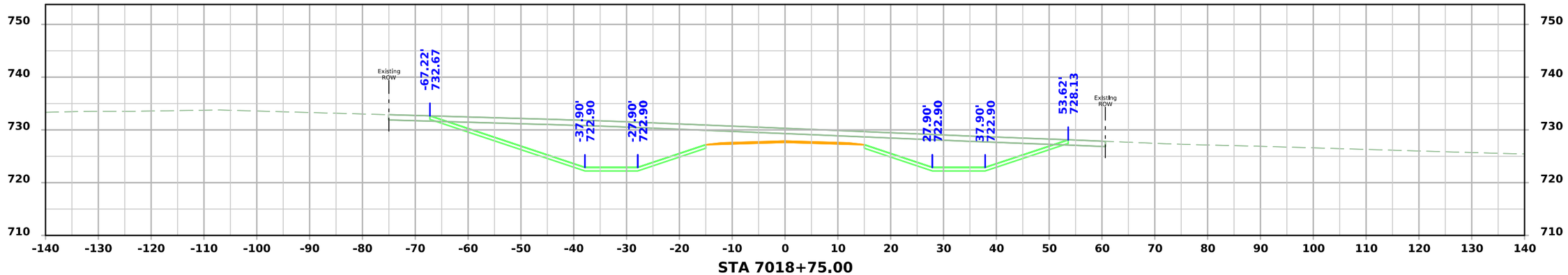
220th St.



STA 7019+25.00



STA 7019+00.00

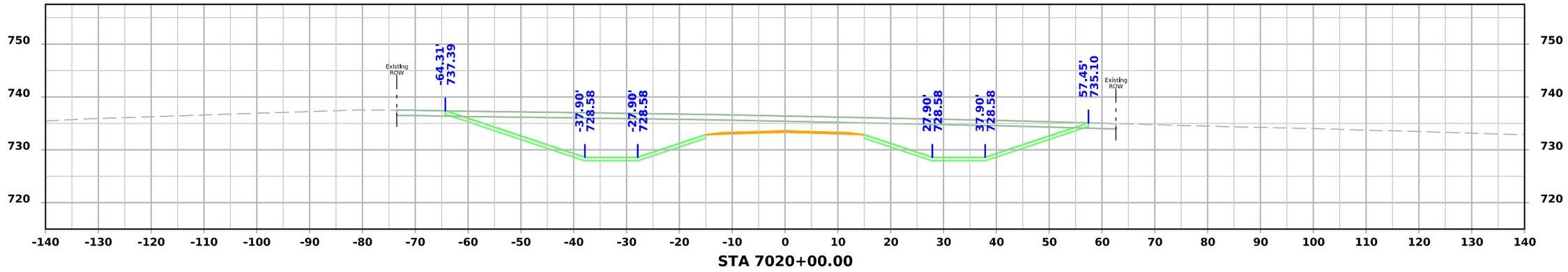


STA 7018+75.00

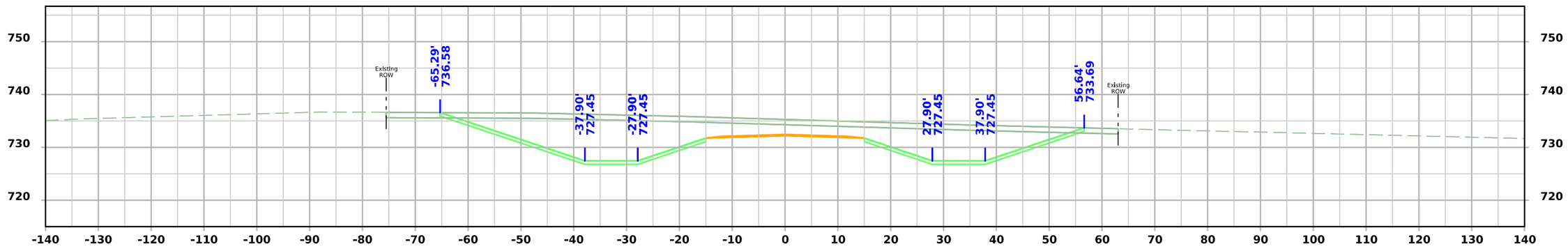
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.410	

5:06:46 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

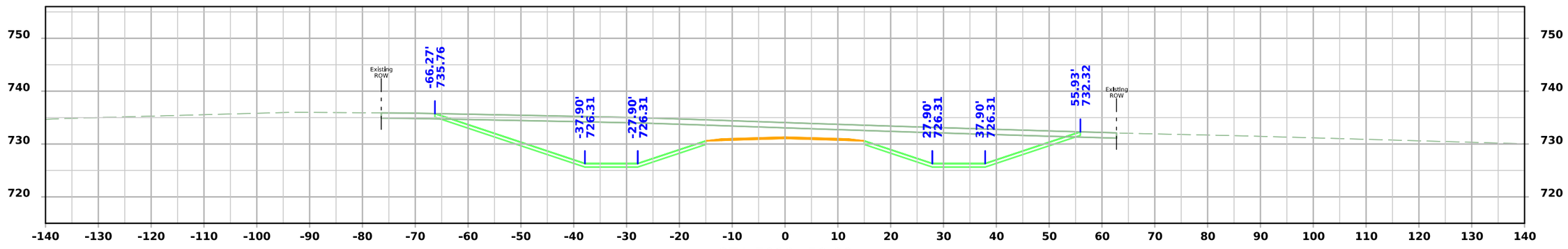
220th St.



STA 7020+00.00



STA 7019+75.00

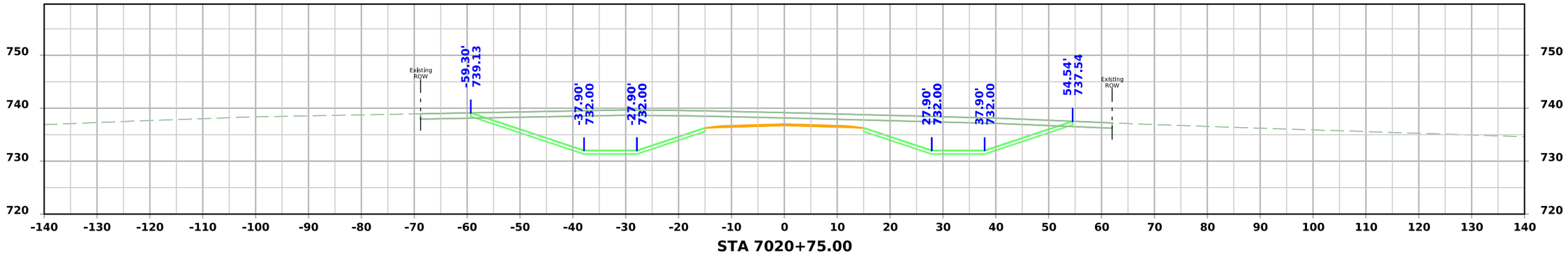


STA 7019+50.00

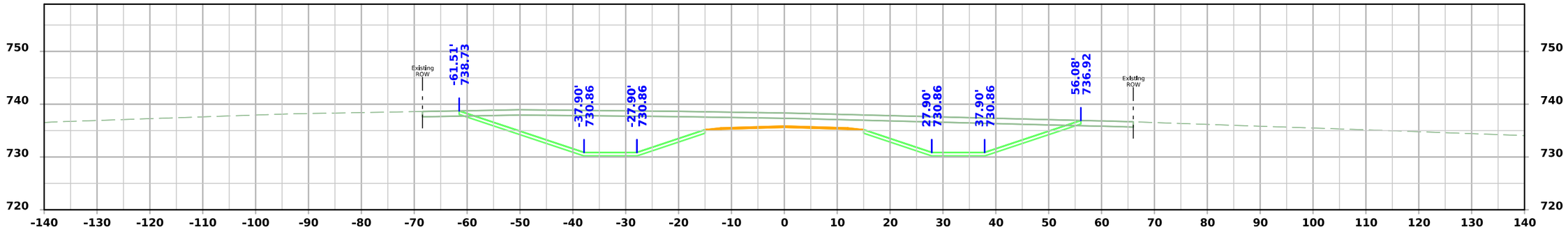
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.411

5:06:47 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

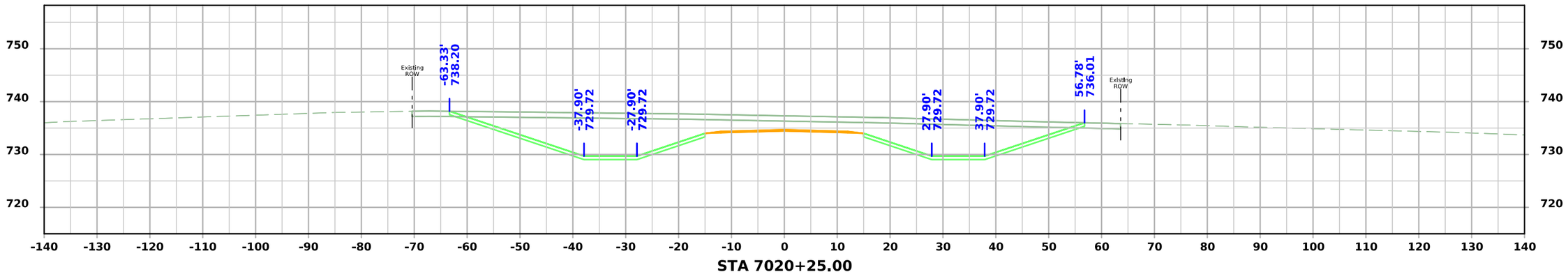
220th St.



STA 7020+75.00



STA 7020+50.00

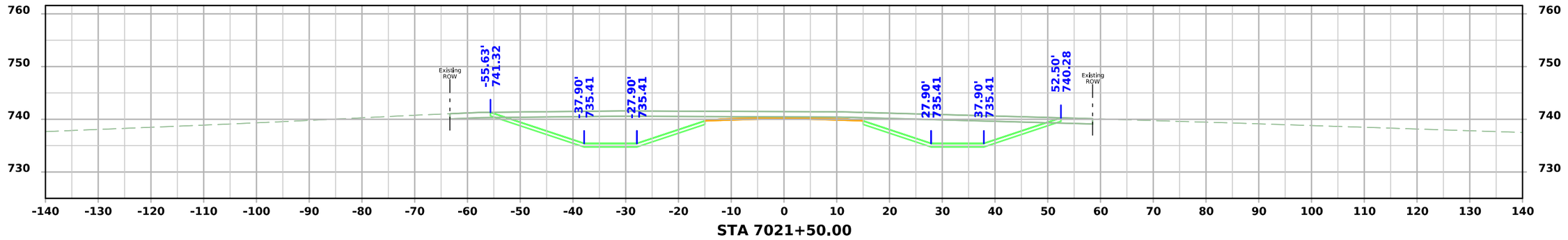


STA 7020+25.00

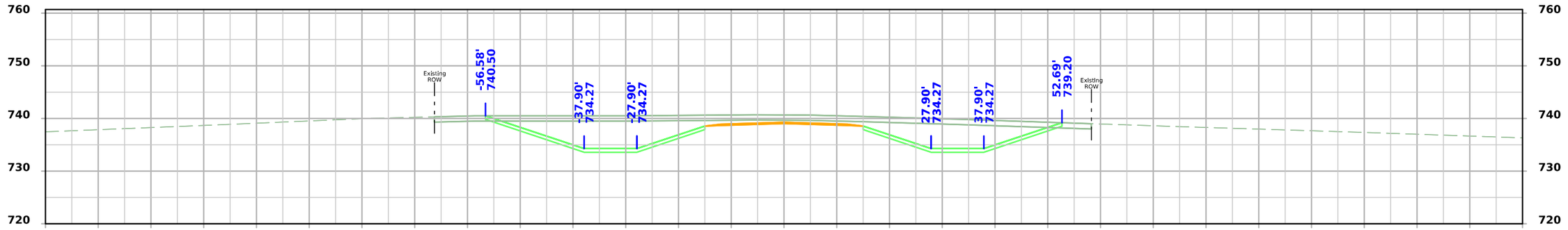
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.412

5:06:48 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

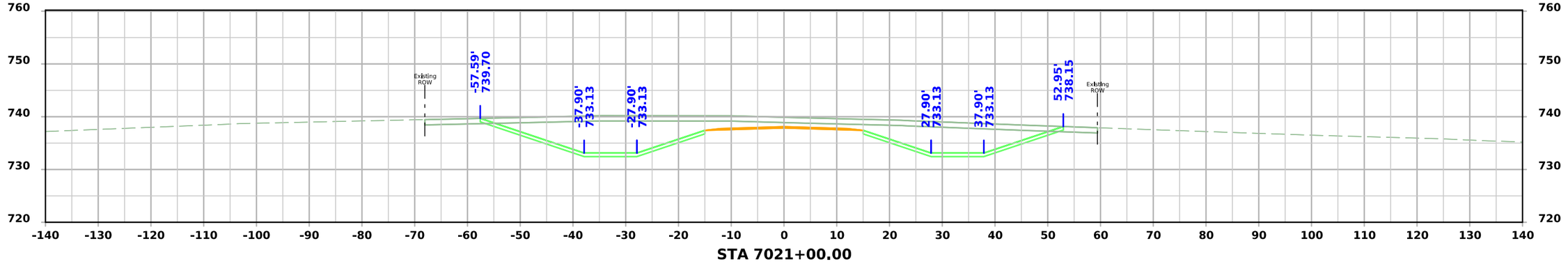
220th St.



STA 7021+50.00



STA 7021+25.00

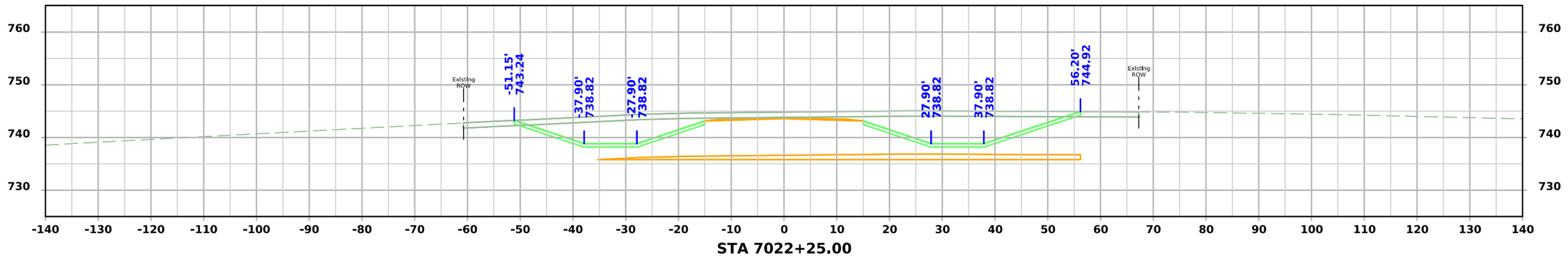


STA 7021+00.00

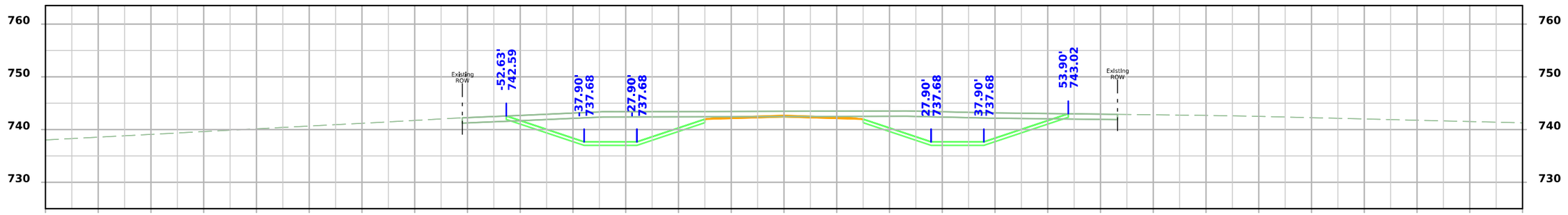
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.413

5:06:50 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

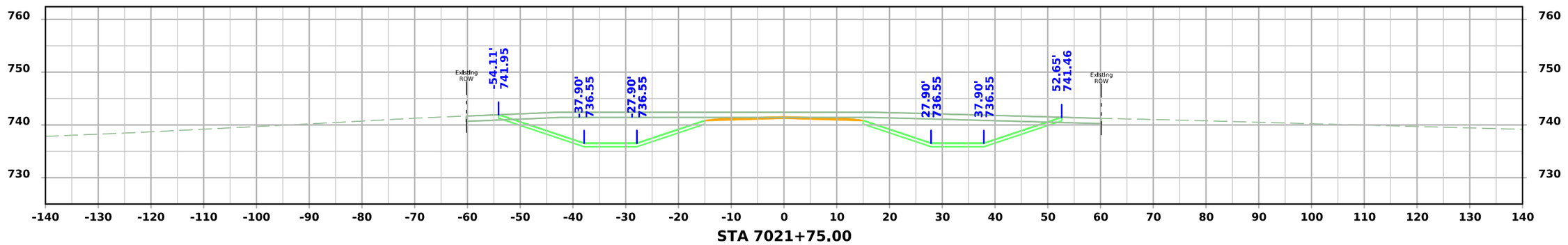
220th St.



STA 7022+25.00



STA 7022+00.00

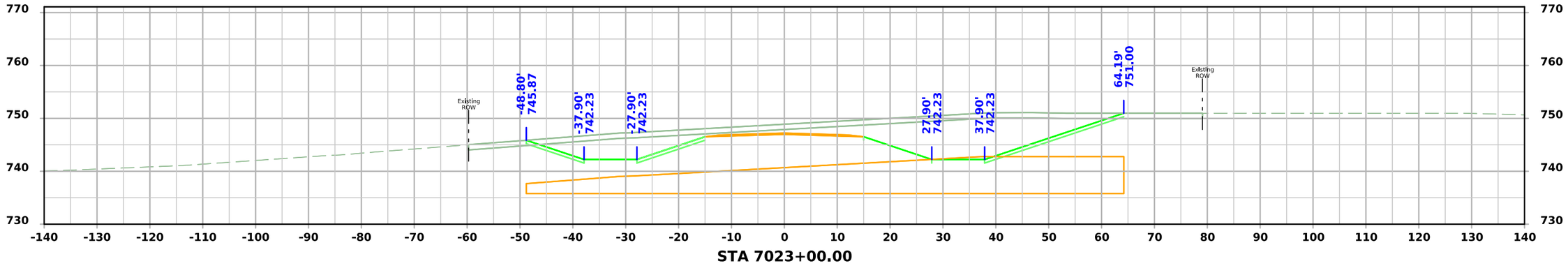


STA 7021+75.00

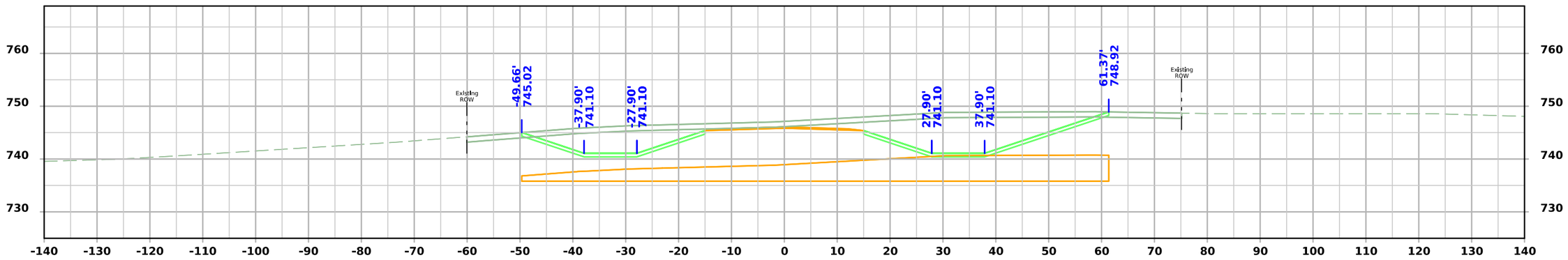
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.414

5:06:51 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

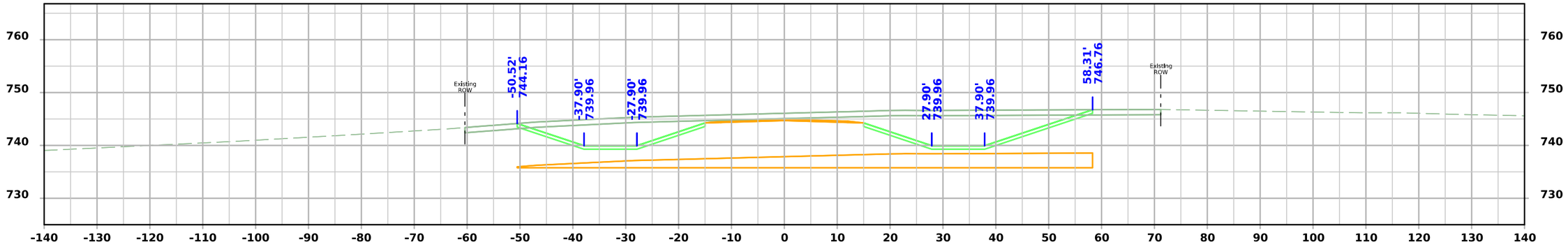
220th St.



STA 7023+00.00



STA 7022+75.00

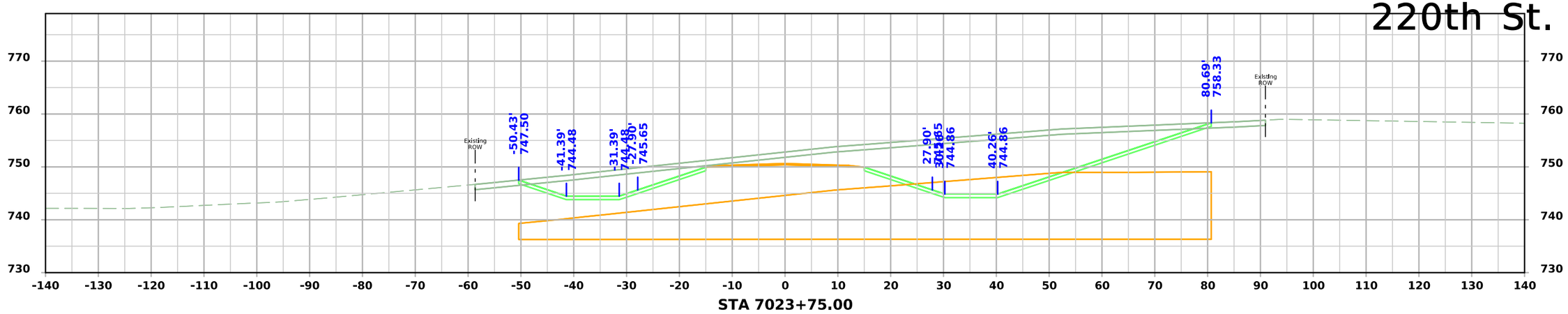


STA 7022+50.00

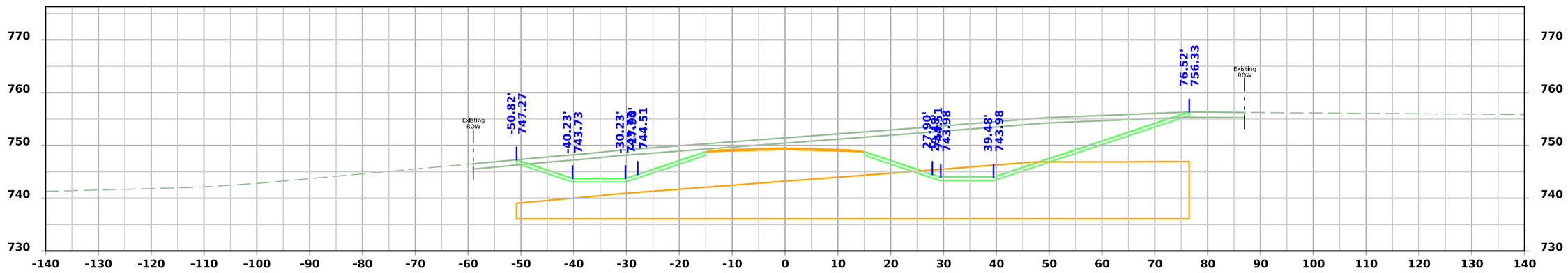
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.415

5:06:52 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

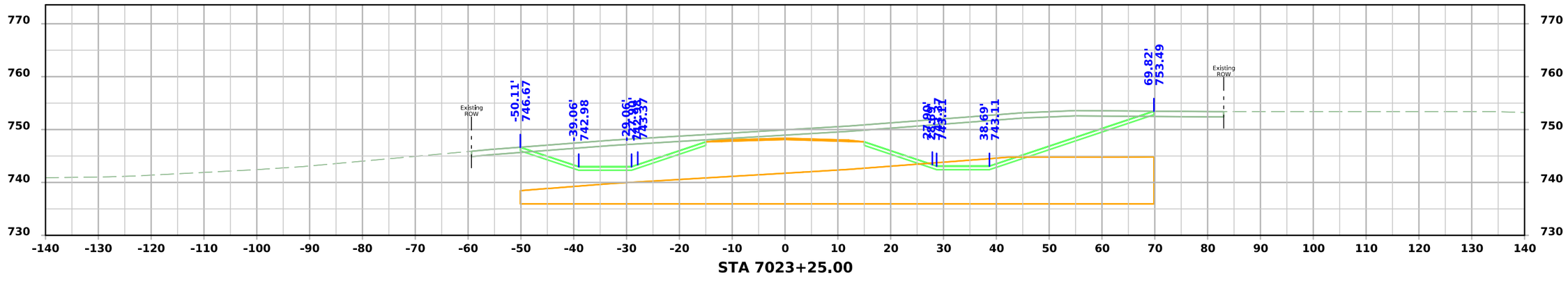
220th St.



STA 7023+75.00



STA 7023+50.00

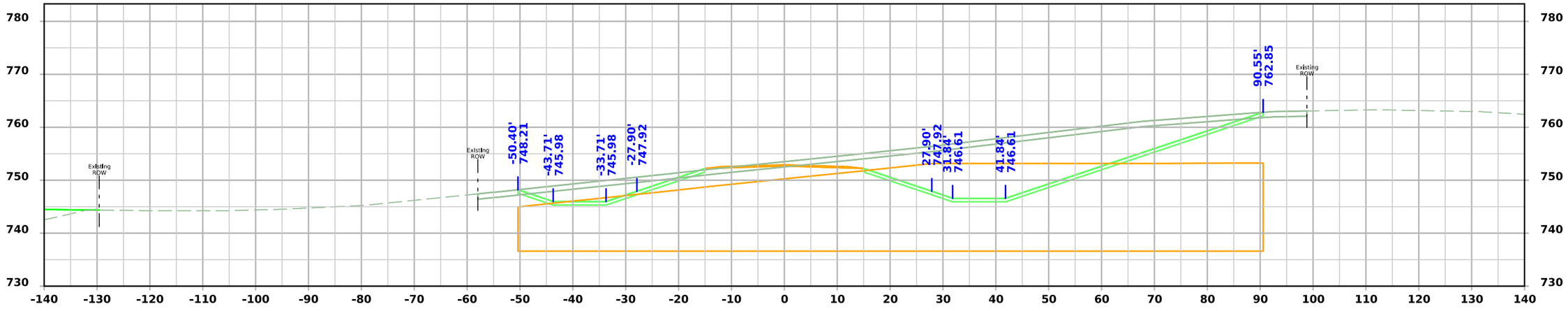


STA 7023+25.00

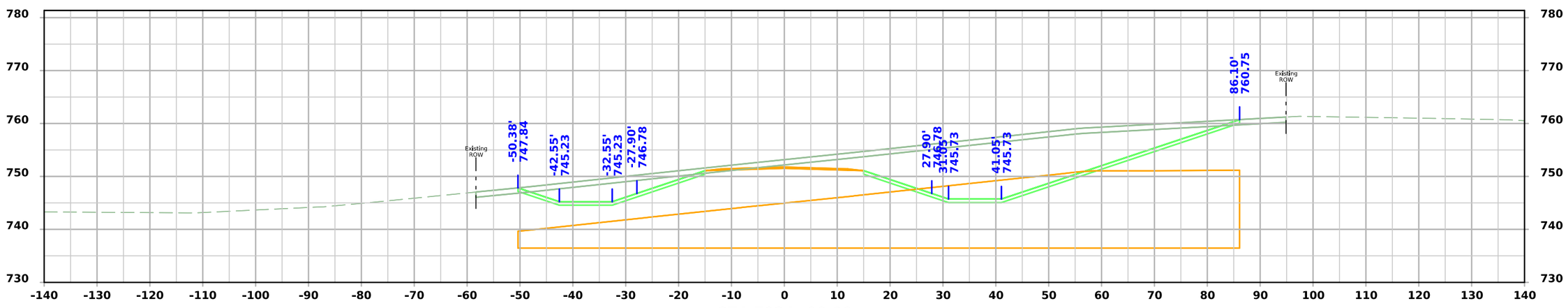
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.416

5:06:53 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

220th St.



STA 7024+25.00

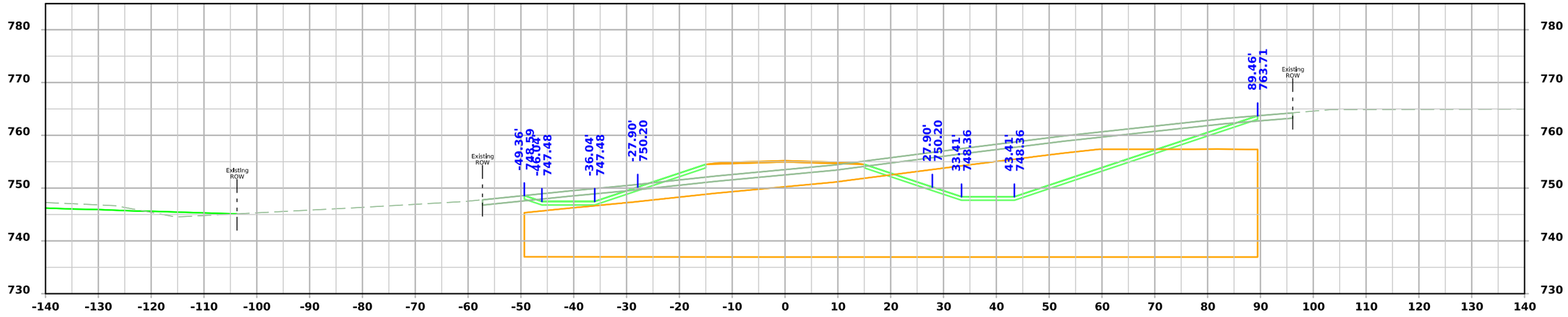


STA 7024+00.00

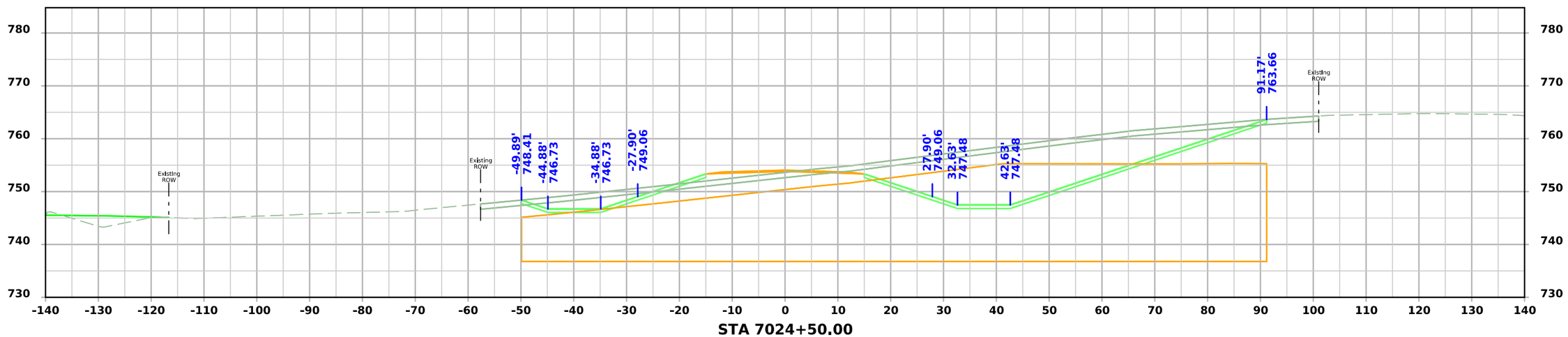
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.417

5:06:54 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

220th St.



STA 7024+75.00

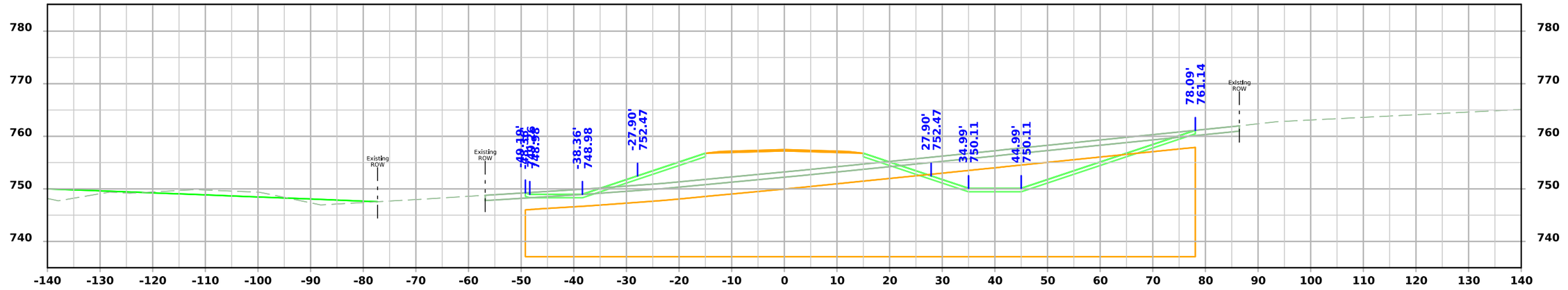


STA 7024+50.00

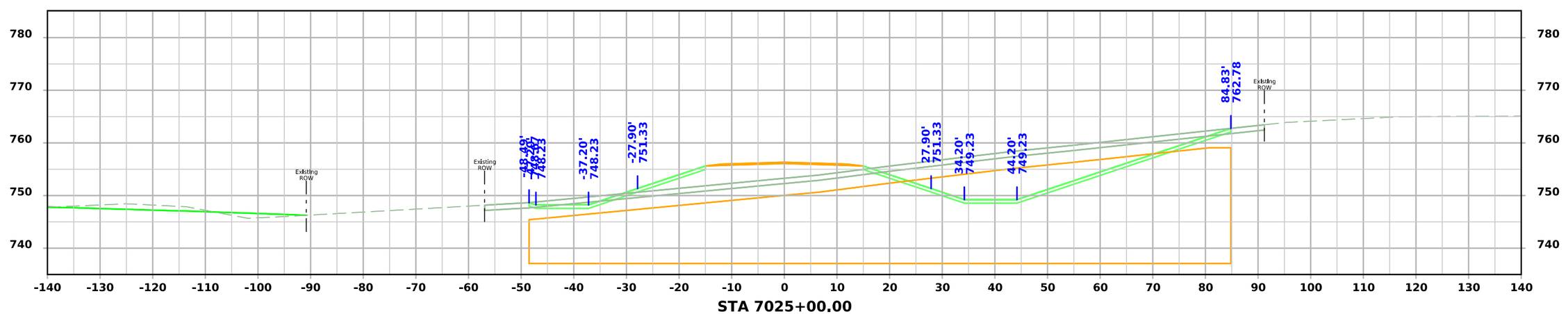
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.418

5:06:55 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

220th St.



STA 7025+25.00

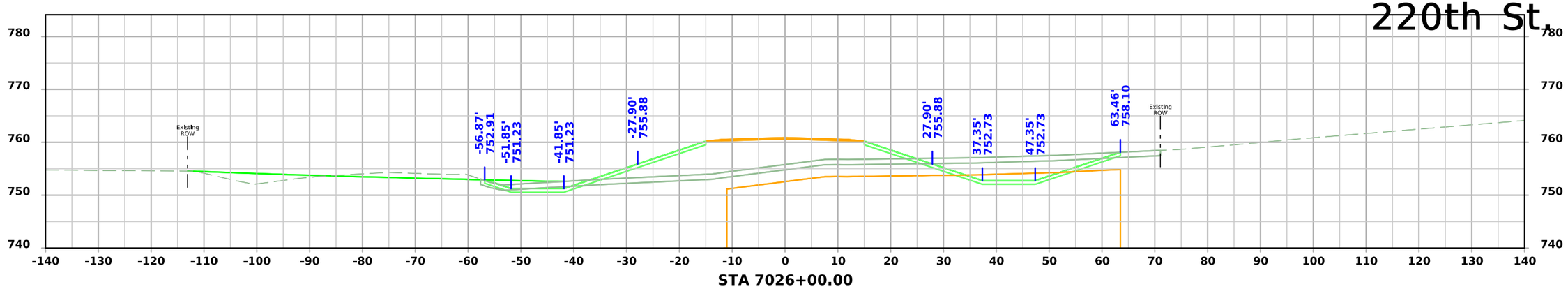


STA 7025+00.00

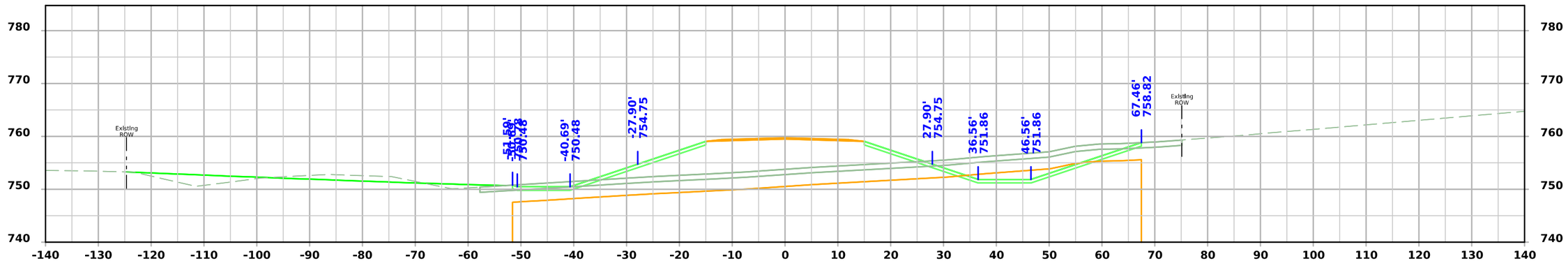
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.419

5:06:56 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

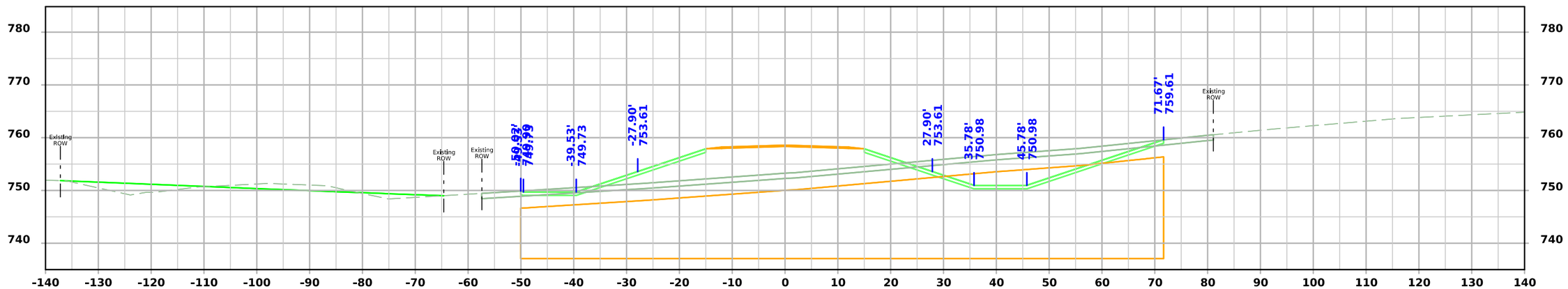
220th St.



STA 7026+00.00



STA 7025+75.00



STA 7025+50.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.420

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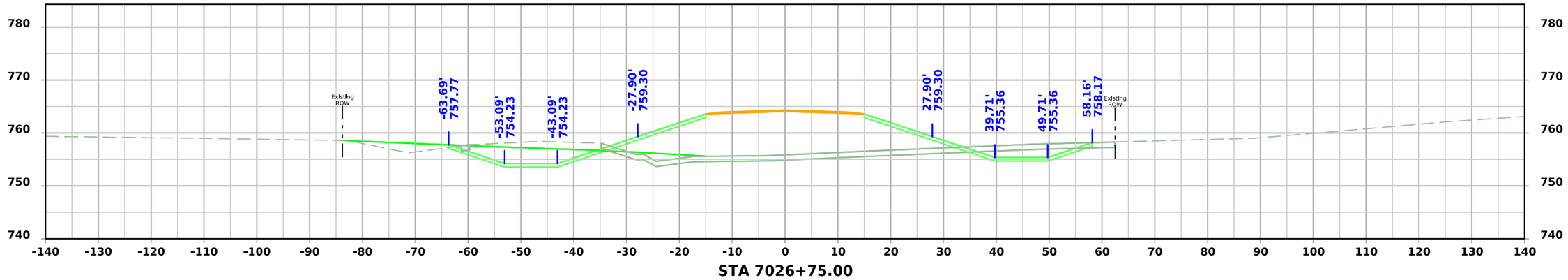
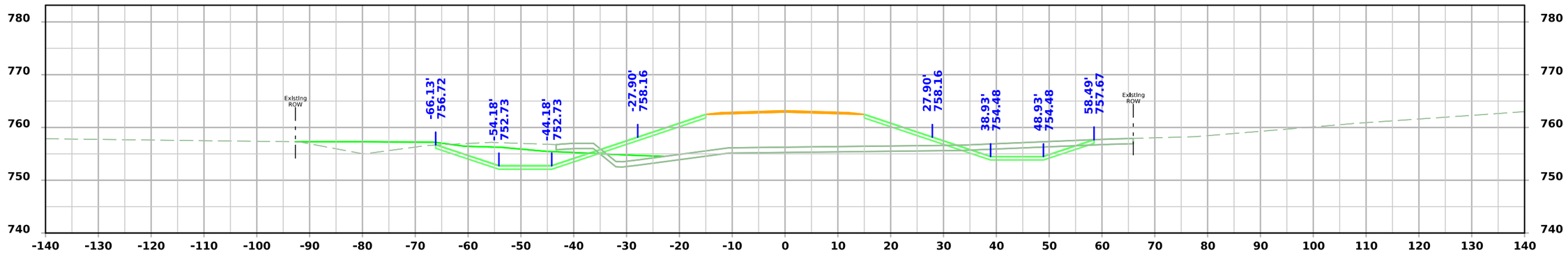
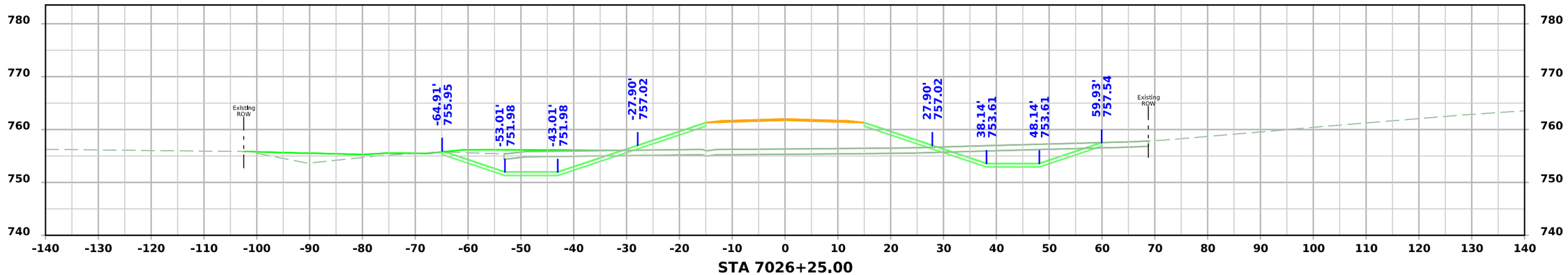
220th St.



STA 7026+75.00



STA 7026+50.00

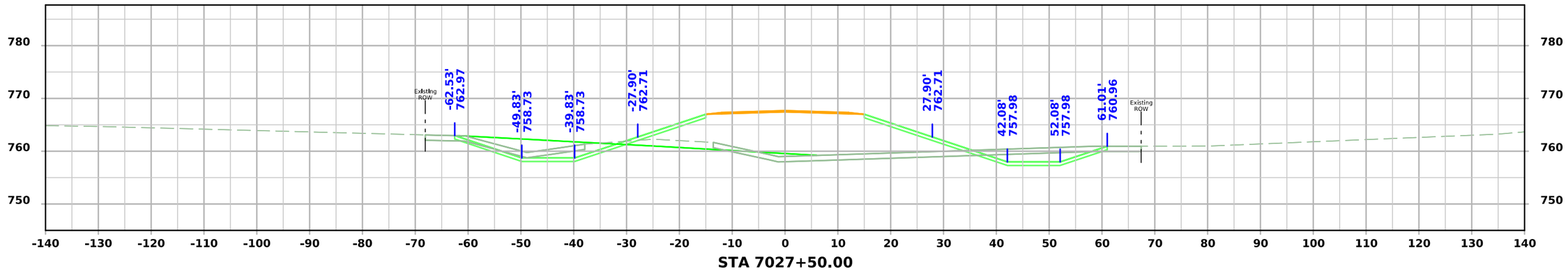


STA 7026+25.00

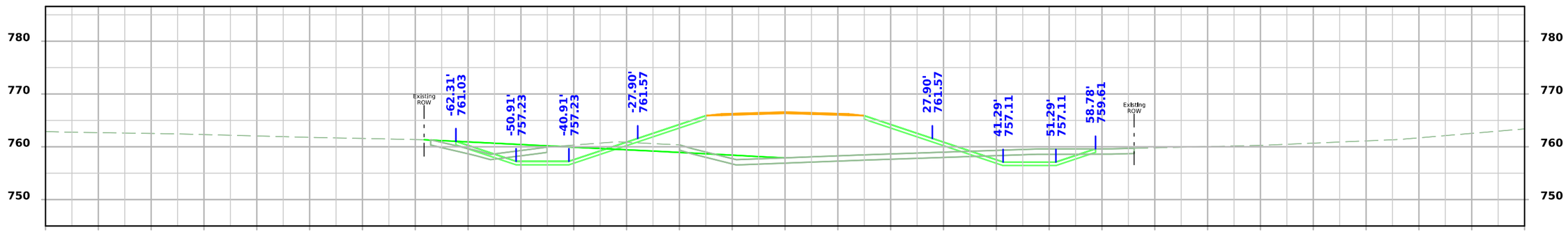
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.421

5:06:59 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

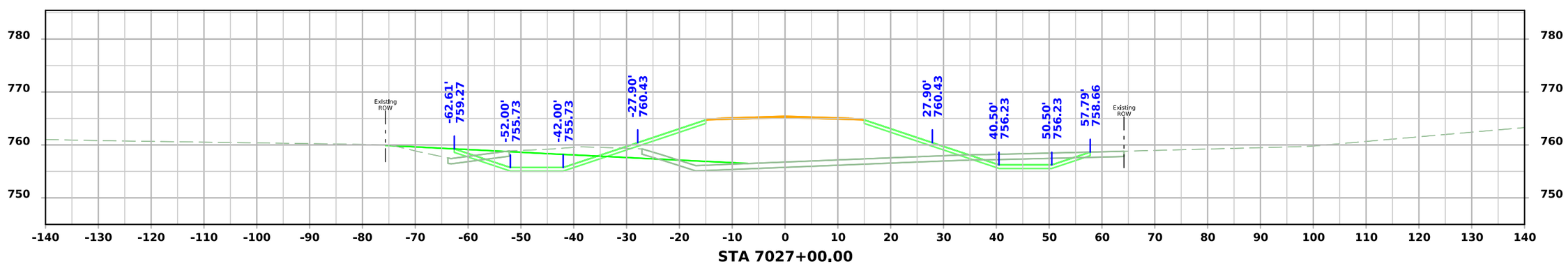
220th St.



STA 7027+50.00



STA 7027+25.00

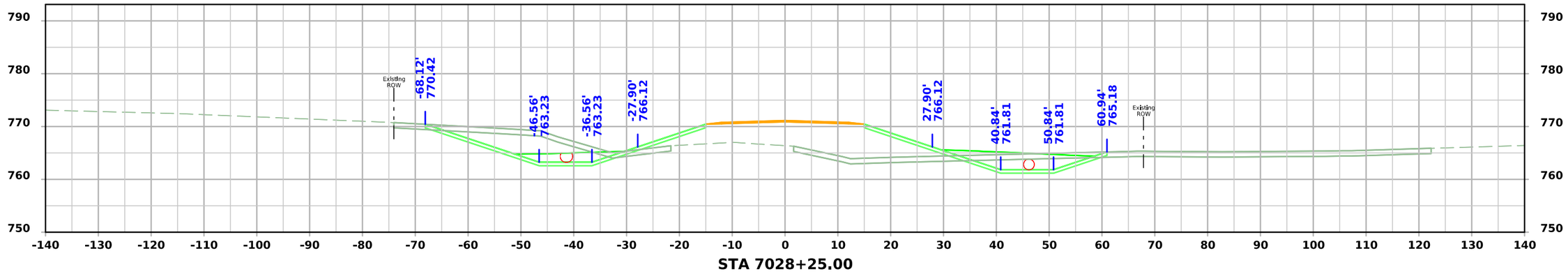


STA 7027+00.00

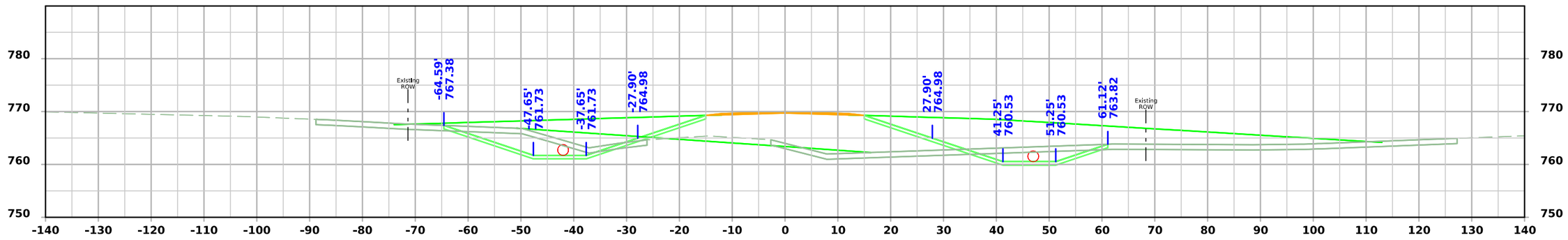
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.422

5:07:00 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

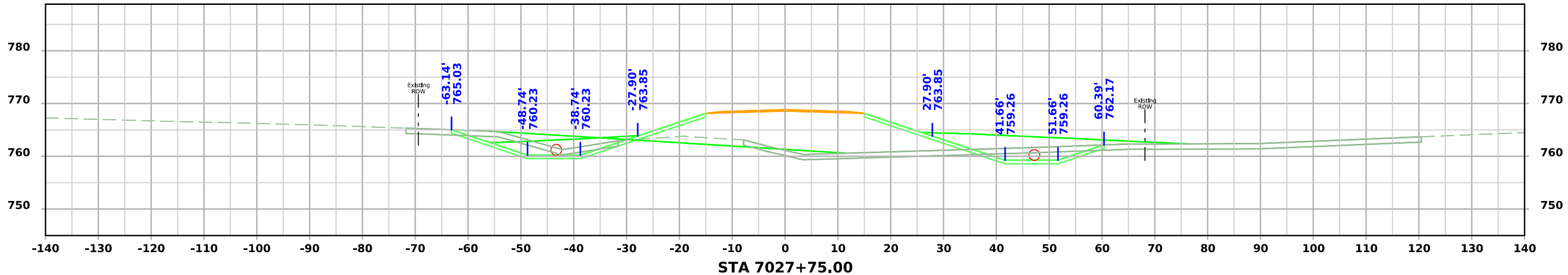
220th St.



STA 7028+25.00



STA 7028+00.00



STA 7027+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.423	

5:07:02 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

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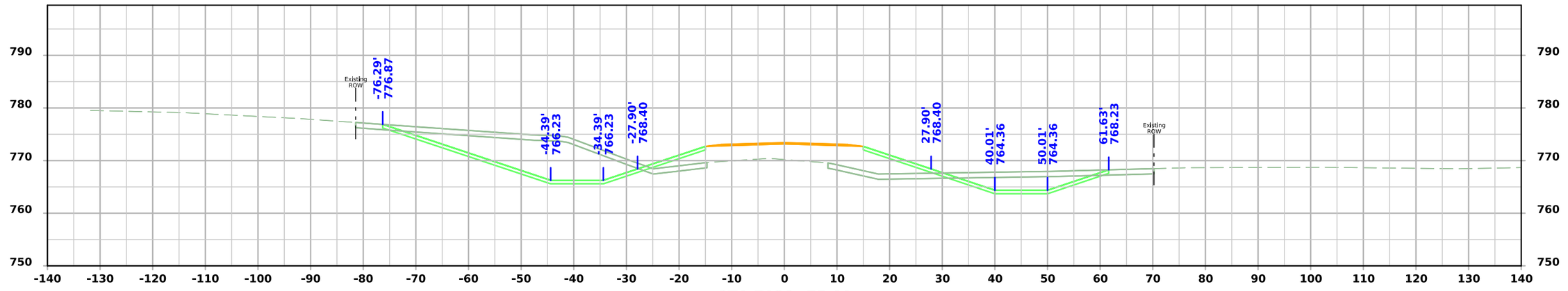
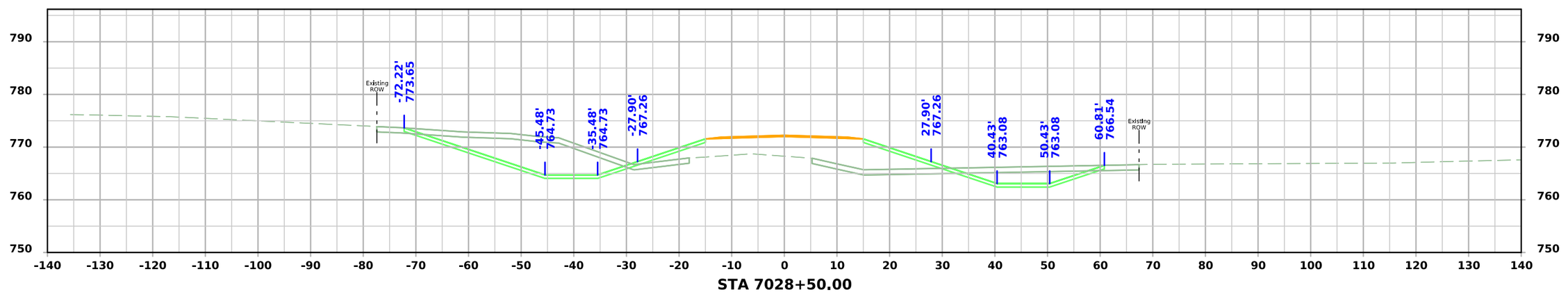


STA 7028+75.00

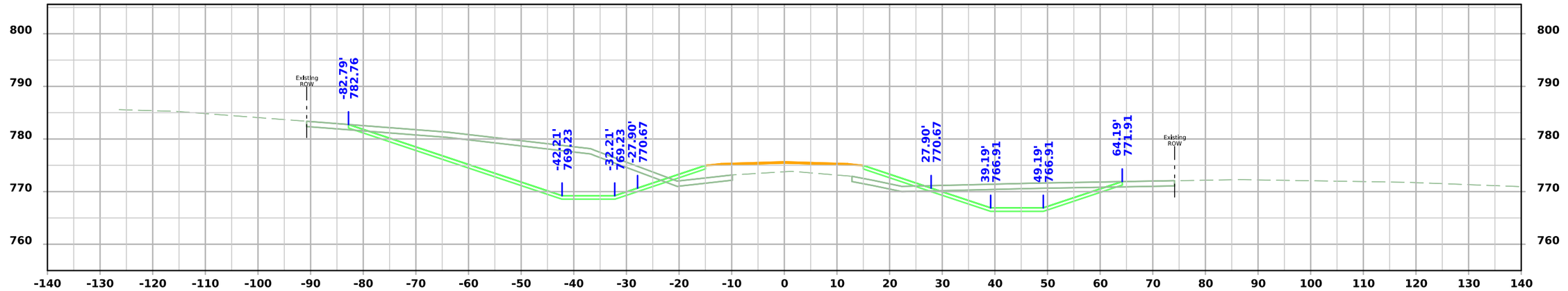


STA 7028+50.00

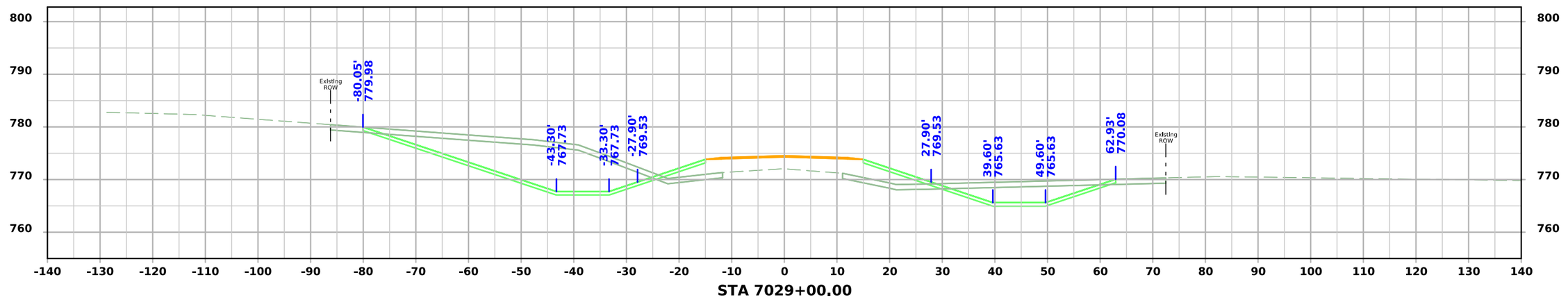
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.424

5:07:03 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

220th St.



STA 7029+25.00

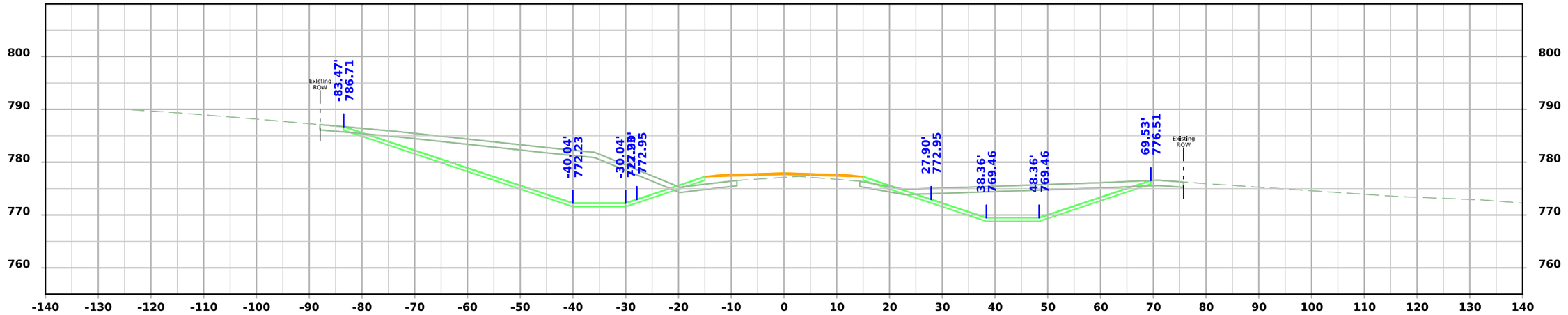


STA 7029+00.00

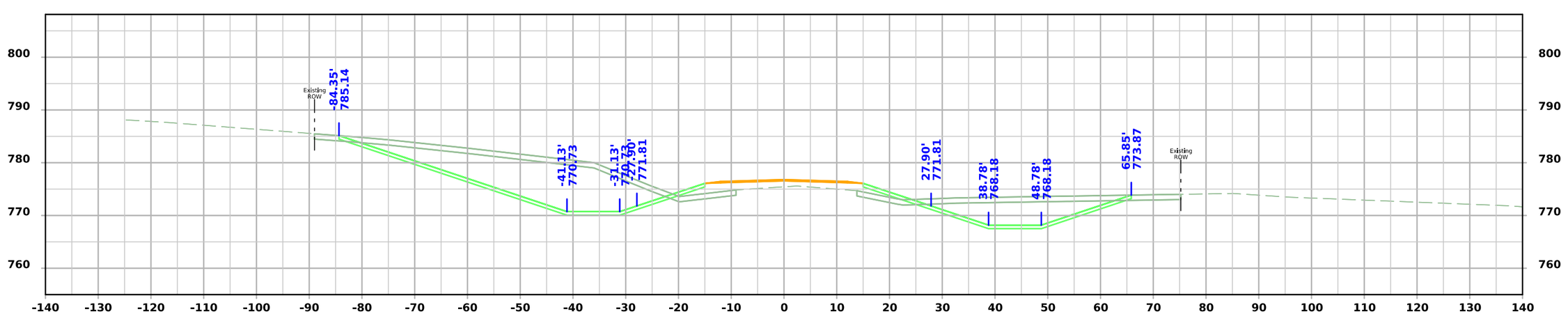
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.425

5:07:04 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

220th St.



STA 7029+75.00

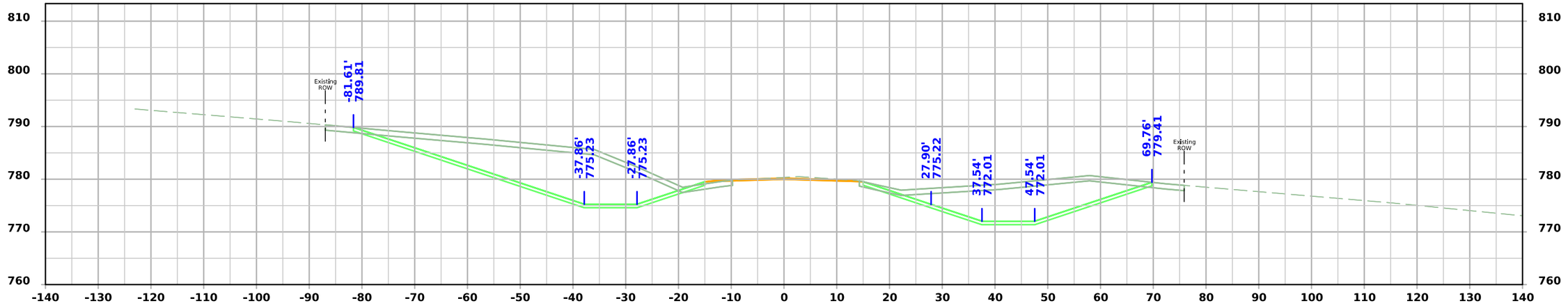


STA 7029+50.00

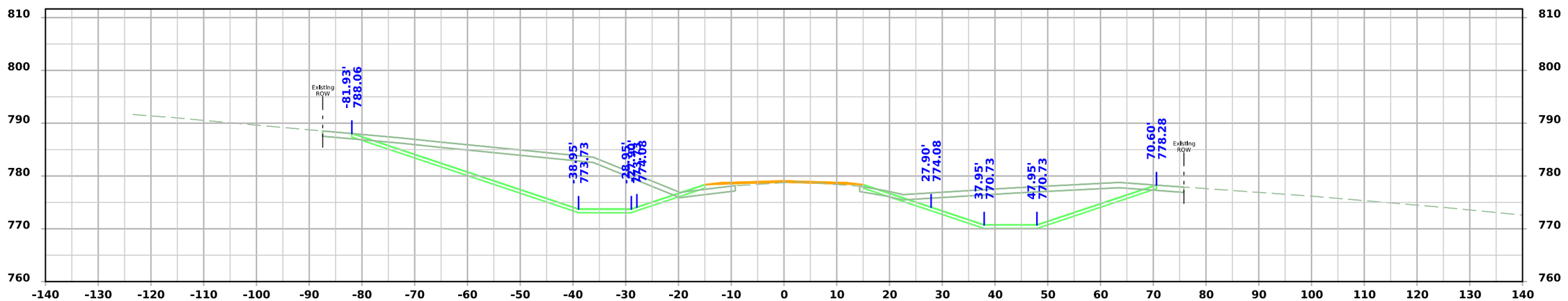
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.426

5:07:04 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

220th St.



STA 7030+25.00

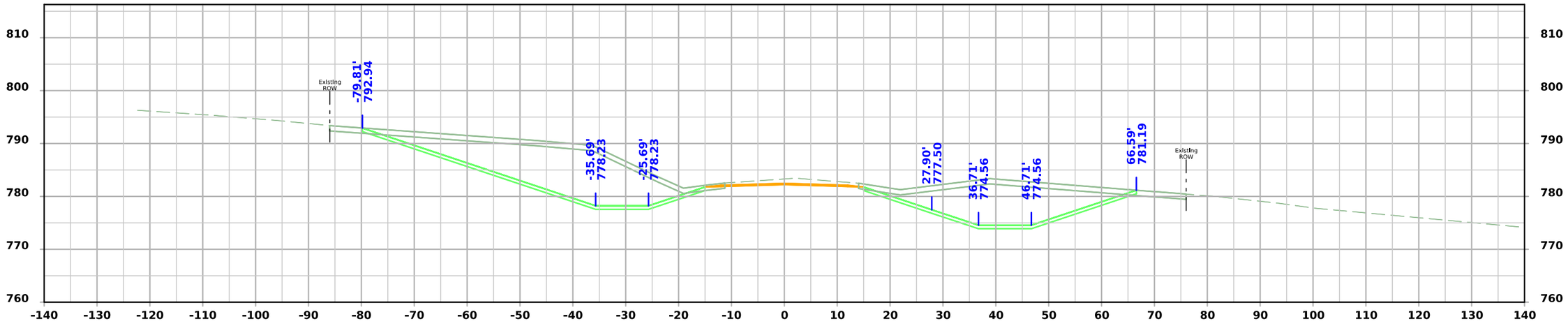


STA 7030+00.00

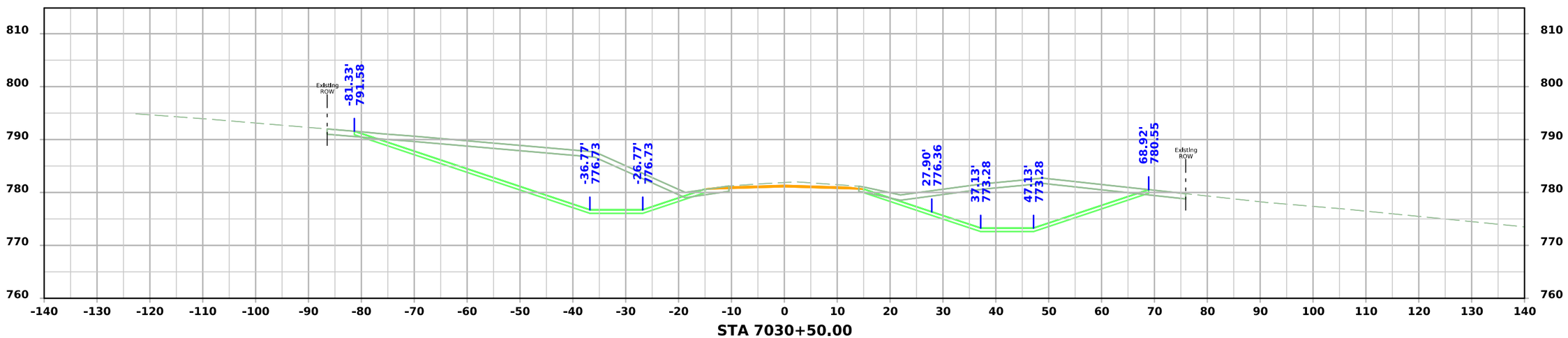
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.427

5:07:05 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

220th St.



STA 7030+75.00

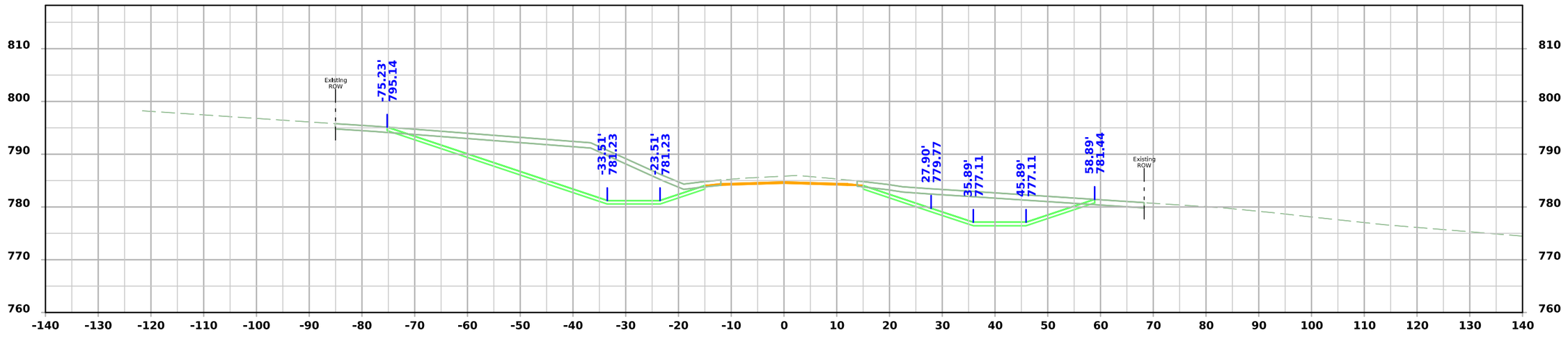


STA 7030+50.00

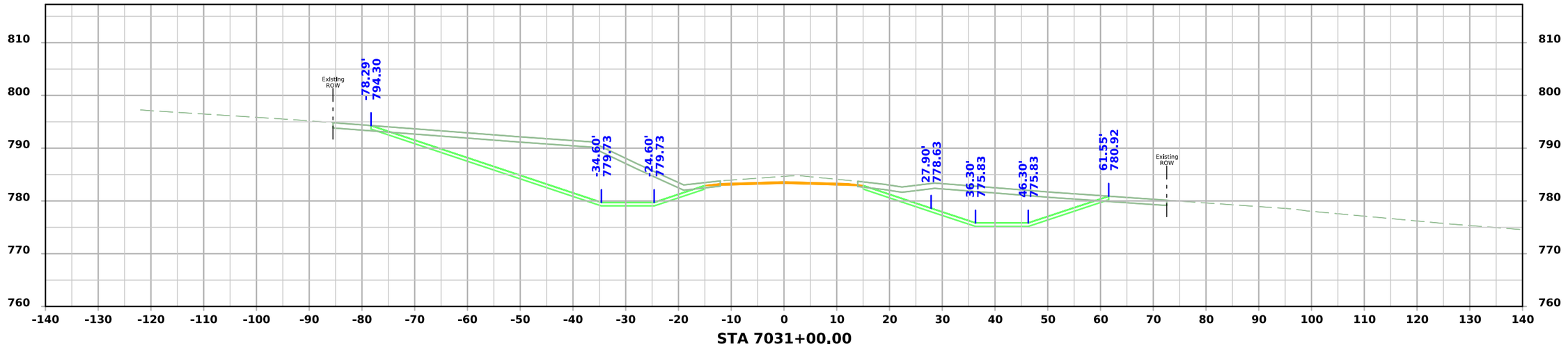
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.428

5:07:06 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

220th St.



STA 7031+25.00



STA 7031+00.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.429

5:07:07 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

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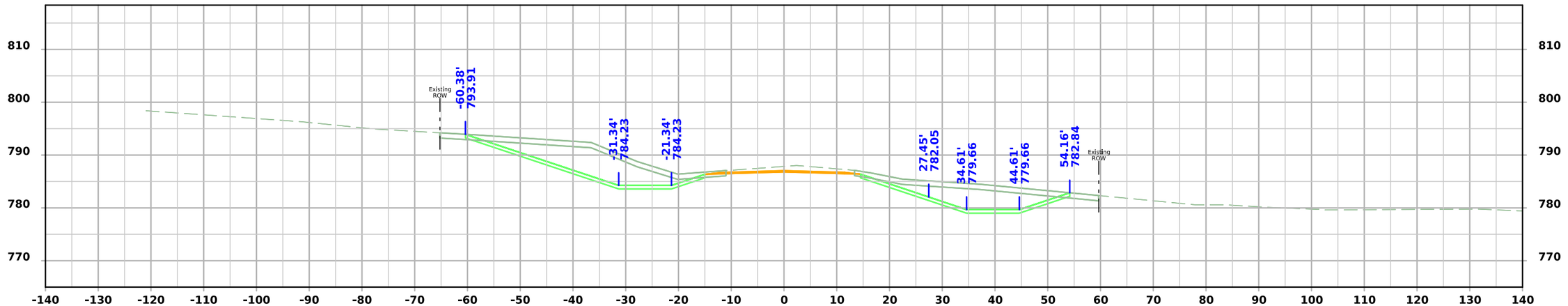
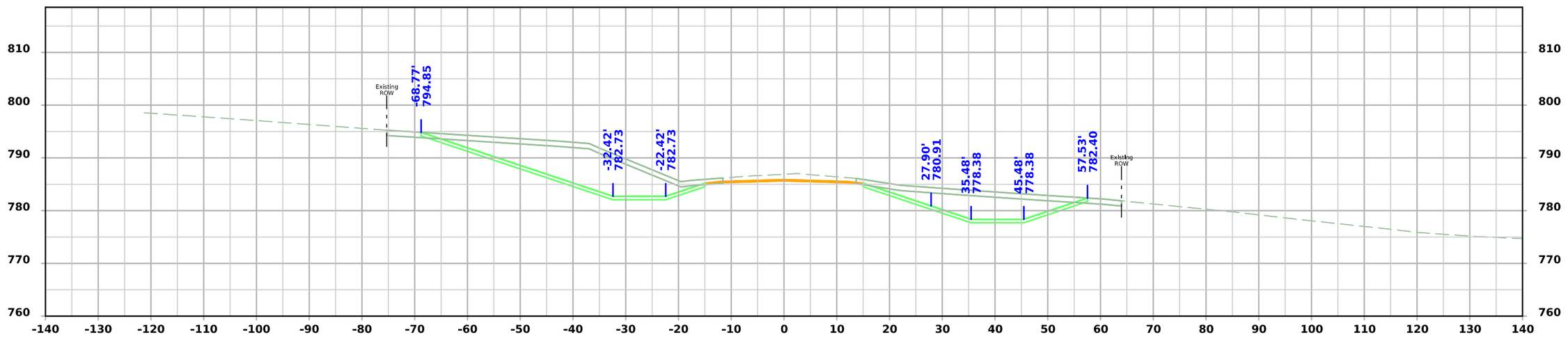


STA 7031+75.00

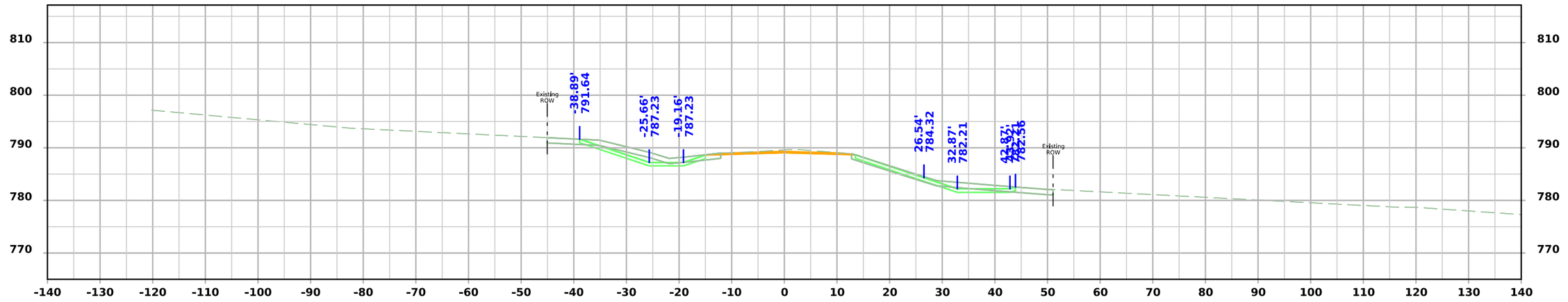


STA 7031+50.00

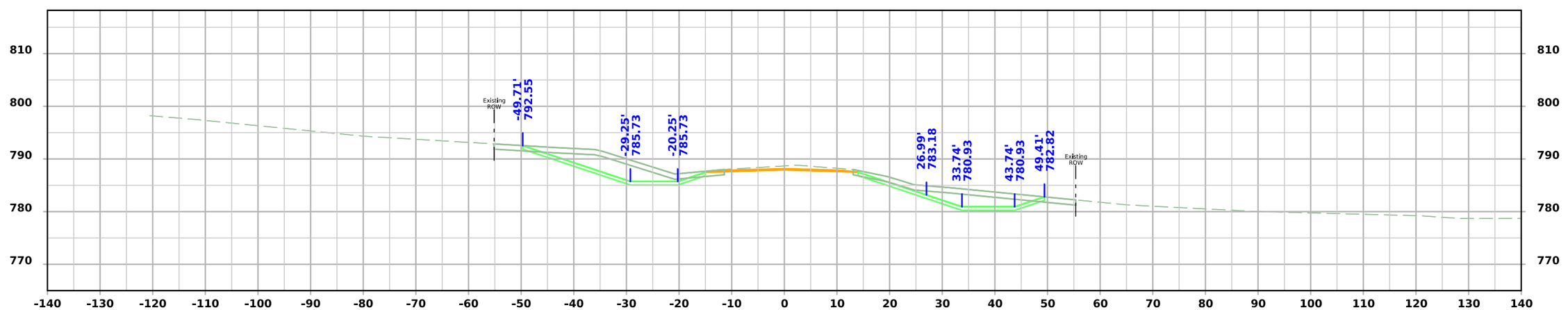
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.430

5:07:08 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

220th St.



STA 7032+25.00

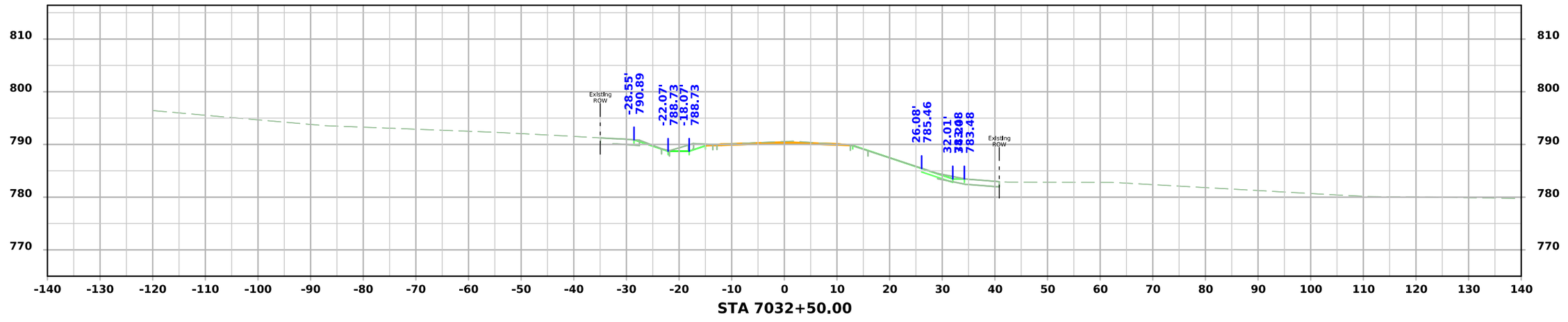


STA 7032+00.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.431

5:07:09 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

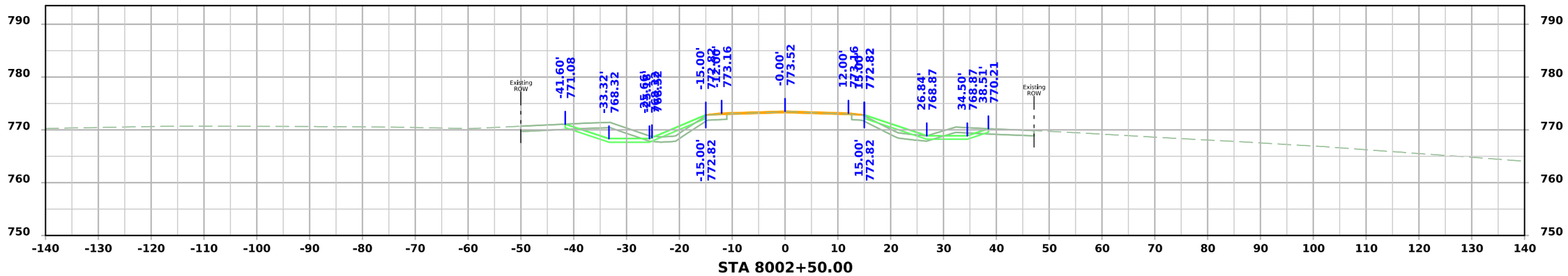
220th St.



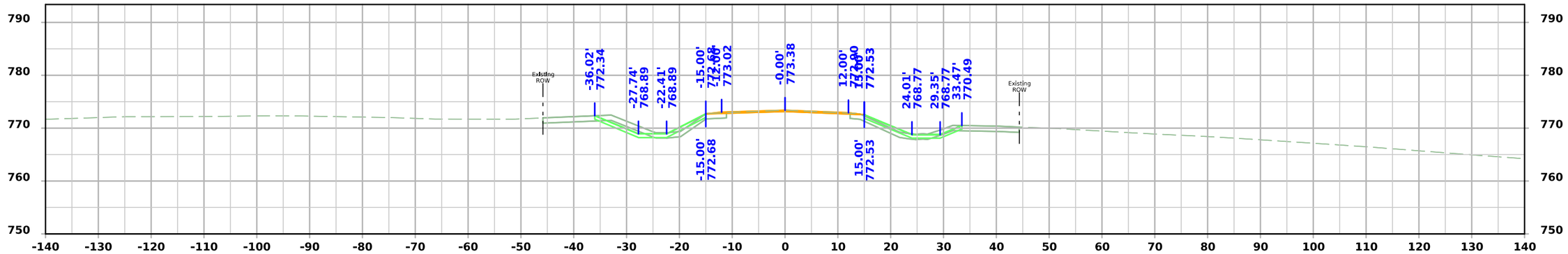
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.432

5:07:10 PM 1/30/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR220_62063095Z09_ORD_X400_Grading.dgn

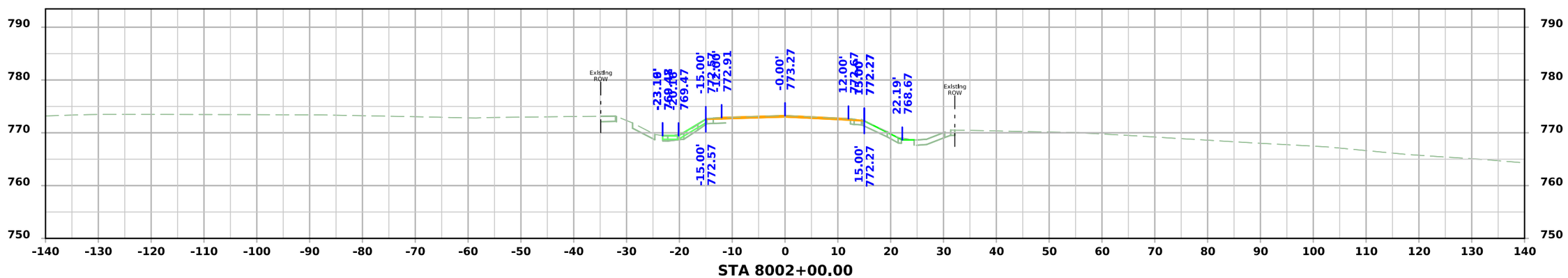
210th St.



STA 8002+50.00



STA 8002+25.00

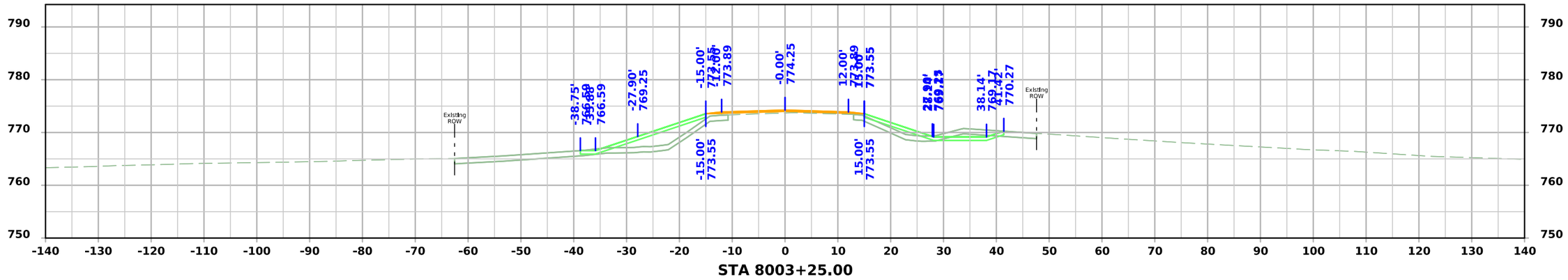


STA 8002+00.00

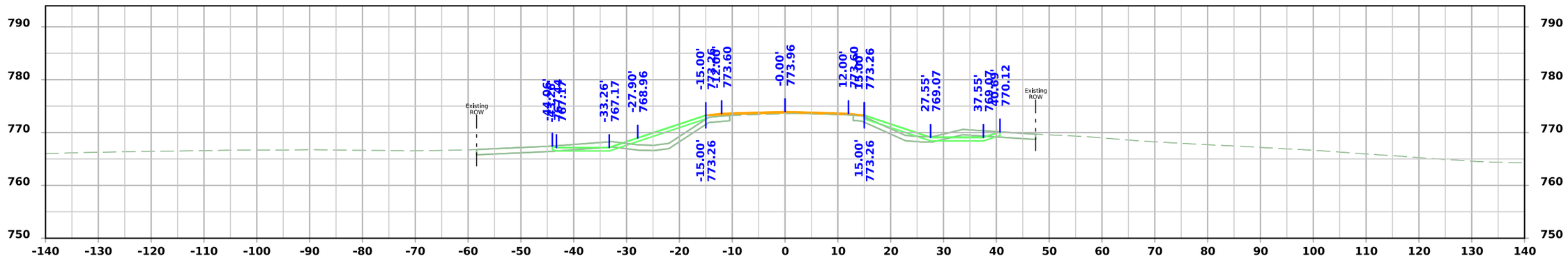
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.500

5:04:54 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR210_62063095Z09_ORD_X500_Grading.dgn

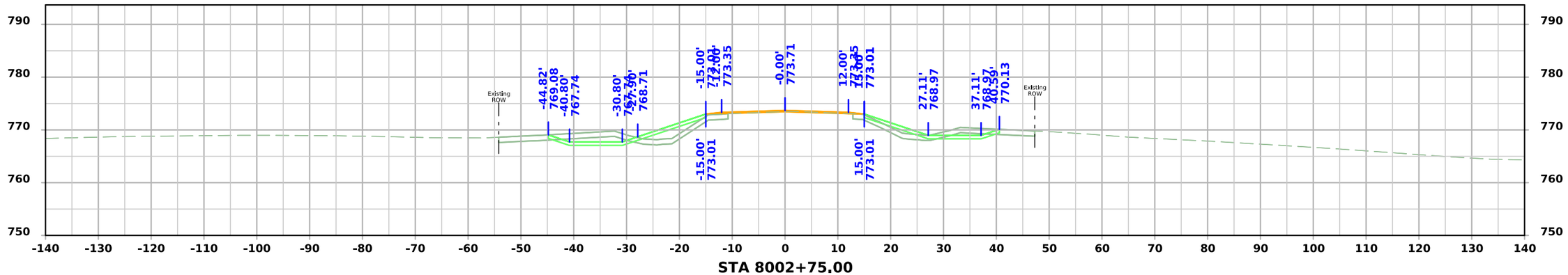
210th St.



STA 8003+25.00



STA 8003+00.00

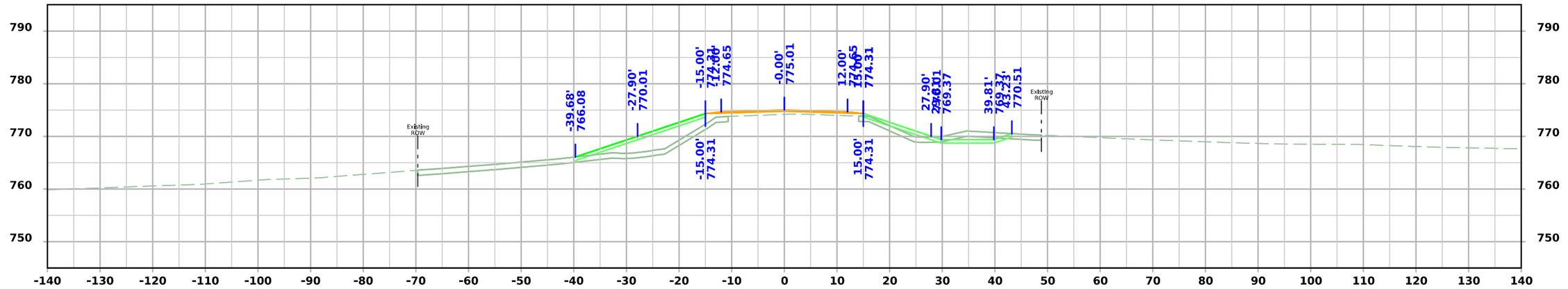


STA 8002+75.00

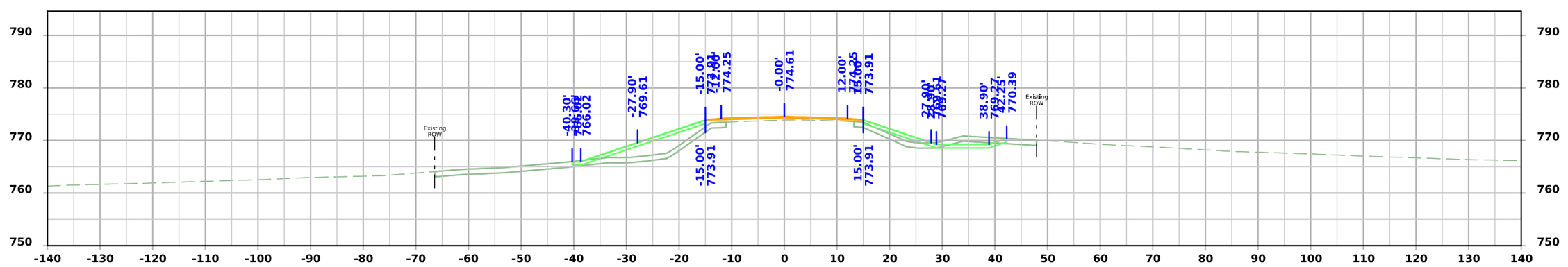
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.501

5:04:56 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR210_62063095Z09_ORD_X500_Grading.dgn

210th St.



STA 8003+75.00



STA 8003+50.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.502

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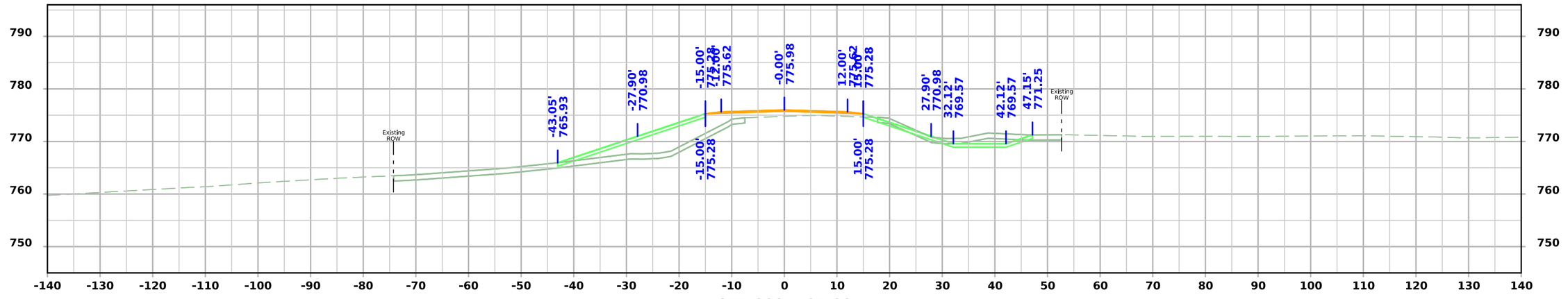
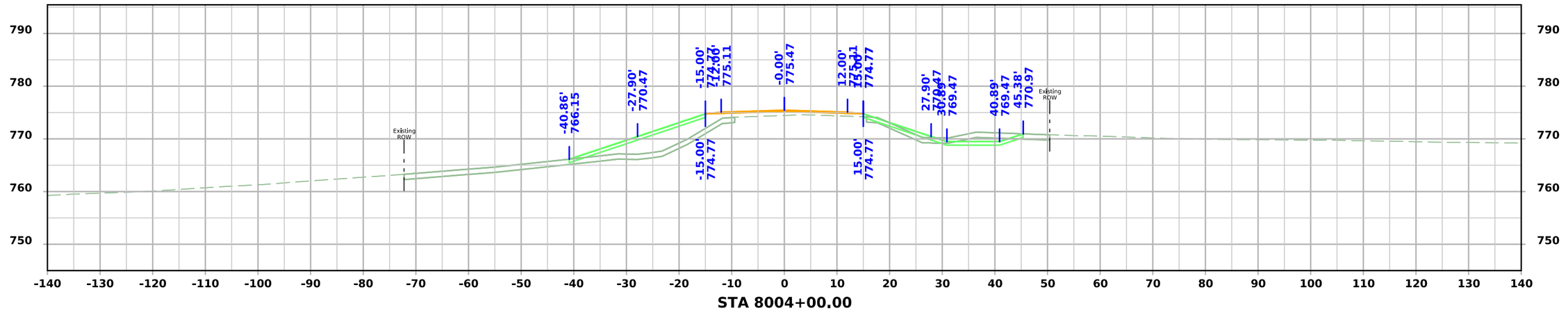
210th St.



STA 8004+25.00



STA 8004+00.00

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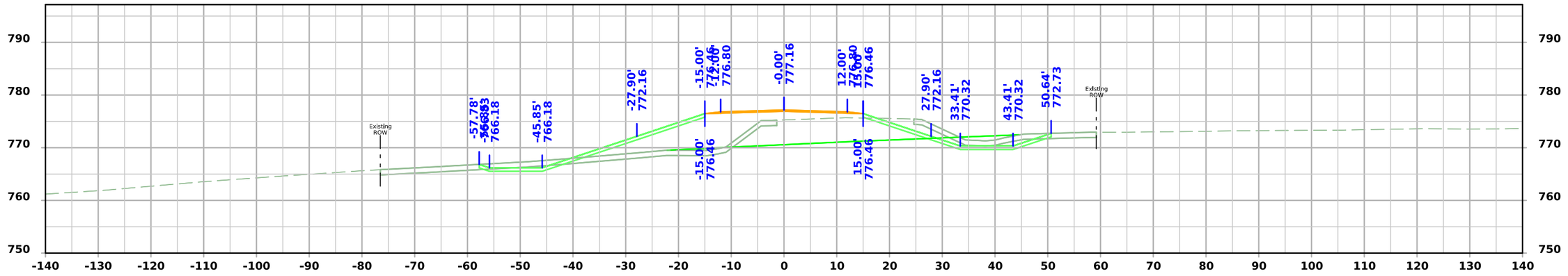
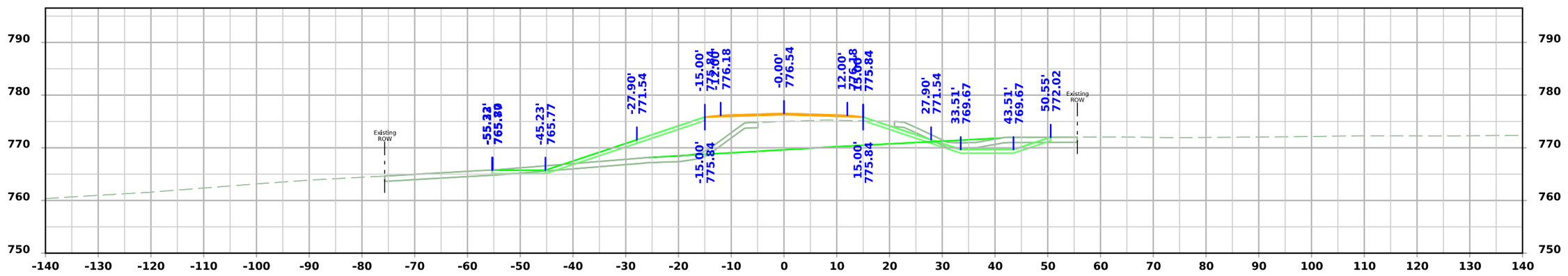
5:04:59 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR210_62063095Z09_ORD_X500_Grading.dgn

210th St.



STA 8004+75.00

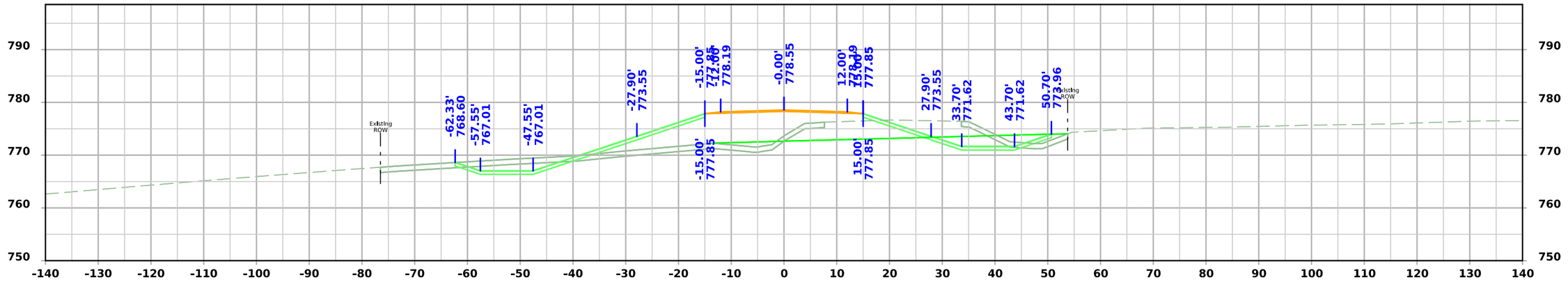


STA 8004+50.00

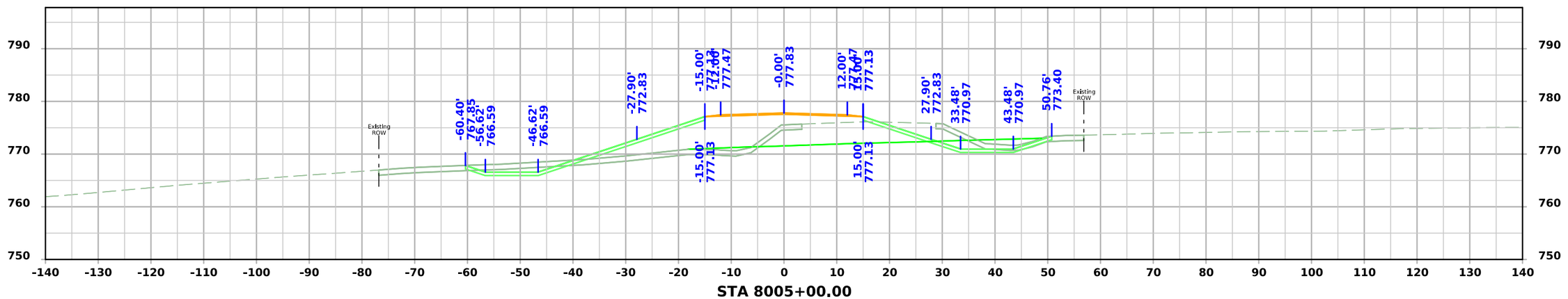
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.504

5:05:00 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR210_62063095Z09_ORD_X500_Grading.dgn

210th St.



STA 8005+25.00



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FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.505

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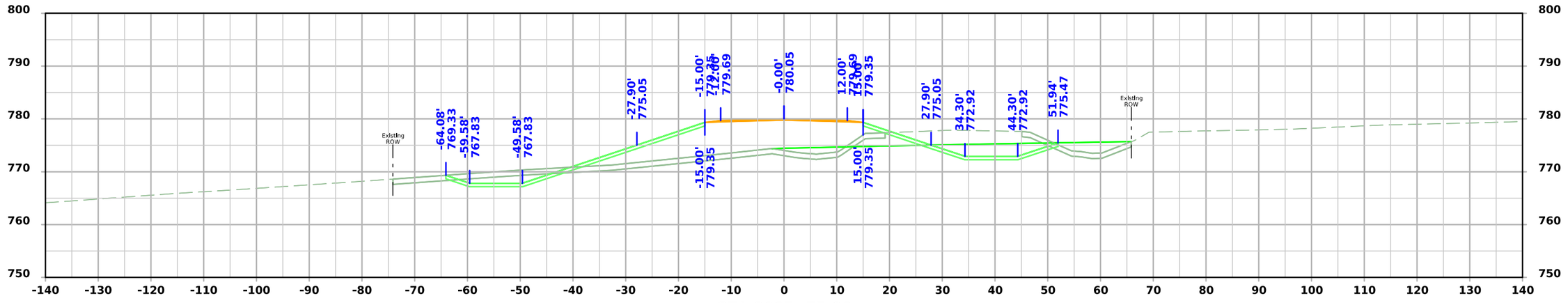
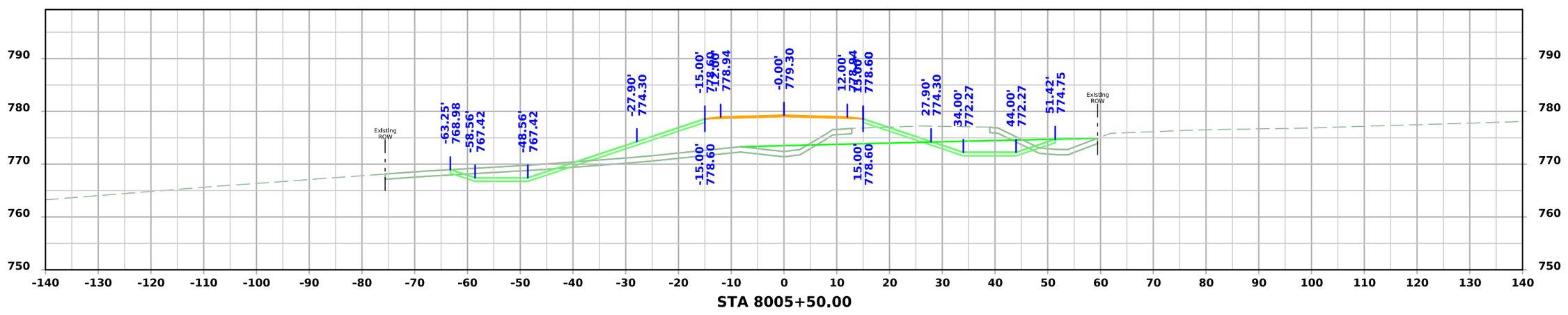
210th St.



STA 8005+75.00



STA 8005+50.00

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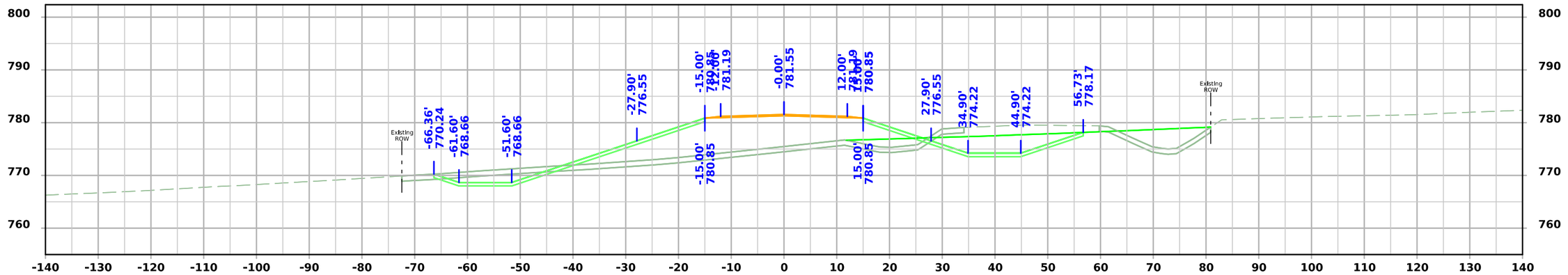
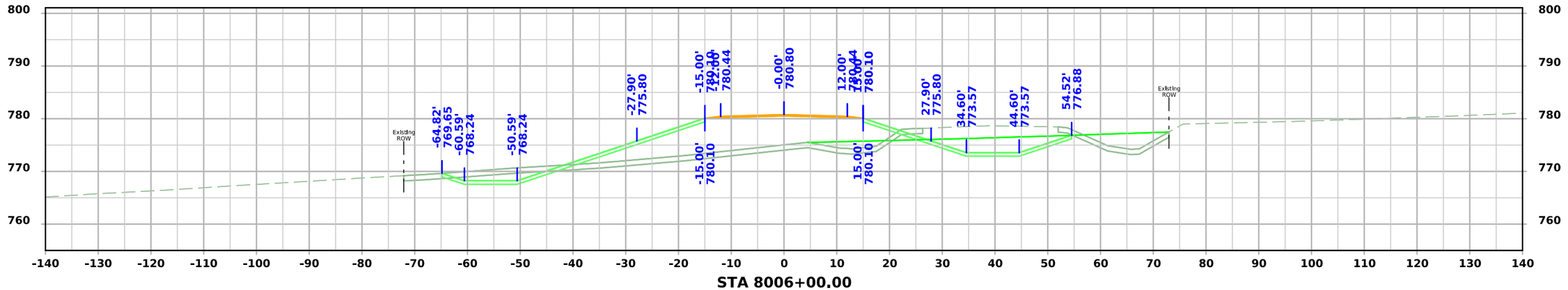
5:05:02 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR210_62063095Z09_ORD_X500_Grading.dgn

210th St.



STA 8006+25.00

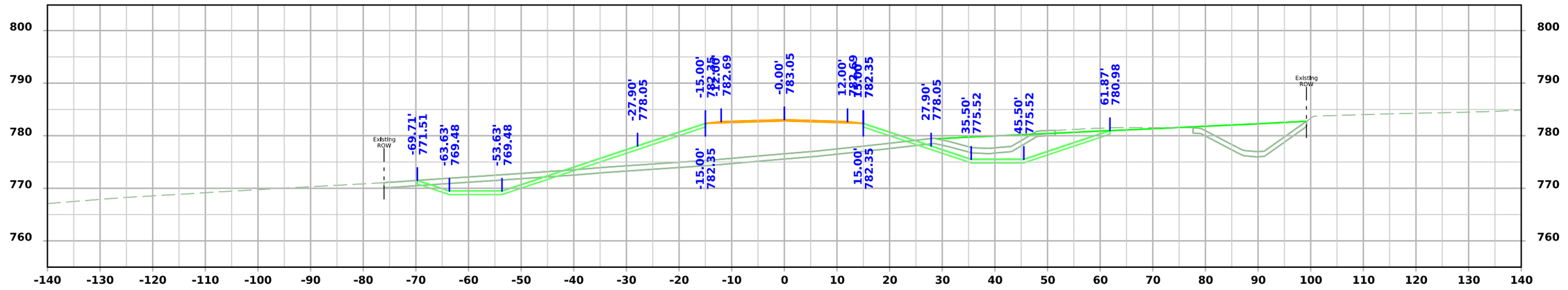


STA 8006+00.00

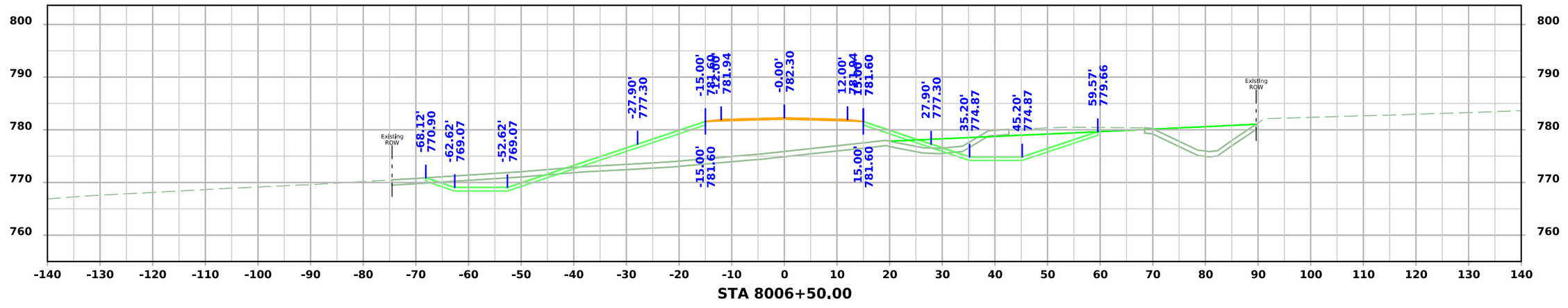
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.507

5:05:04 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR210_62063095Z09_ORD_X500_Grading.dgn

210th St.



STA 8006+75.00

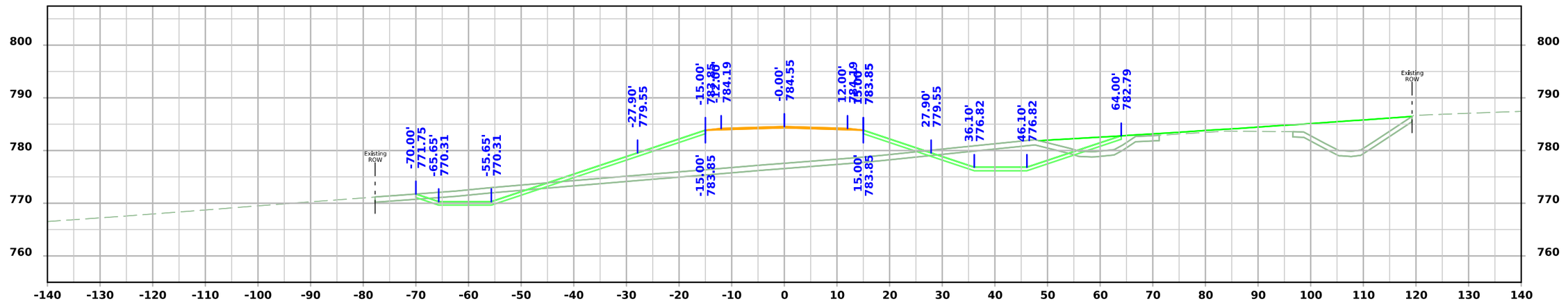


STA 8006+50.00

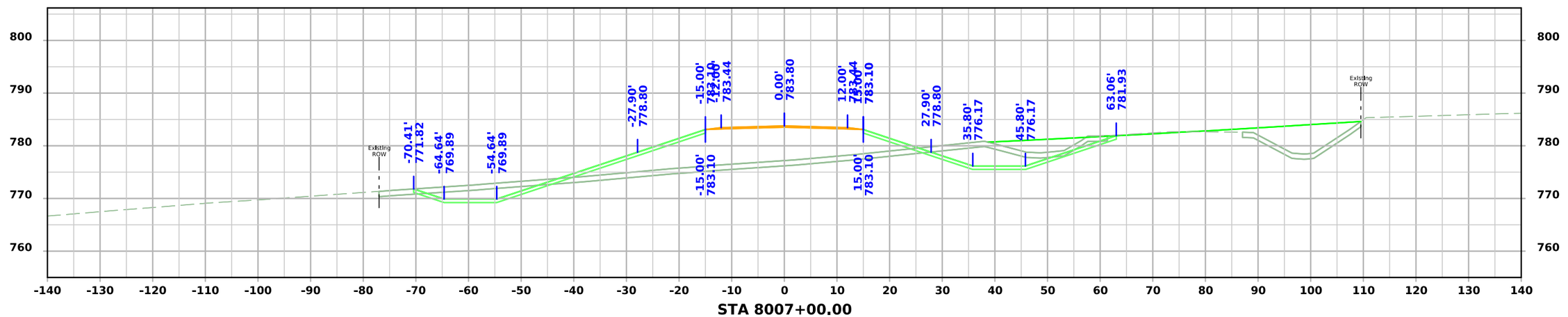
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.508

5:05:05 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR210_62063095Z09_ORD_X500_Grading.dgn

210th St.



STA 8007+25.00

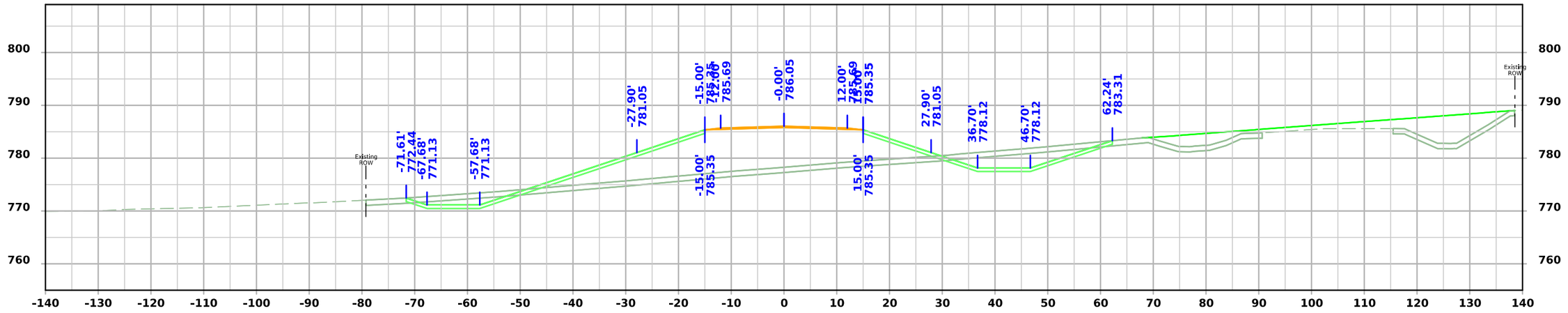


STA 8007+00.00

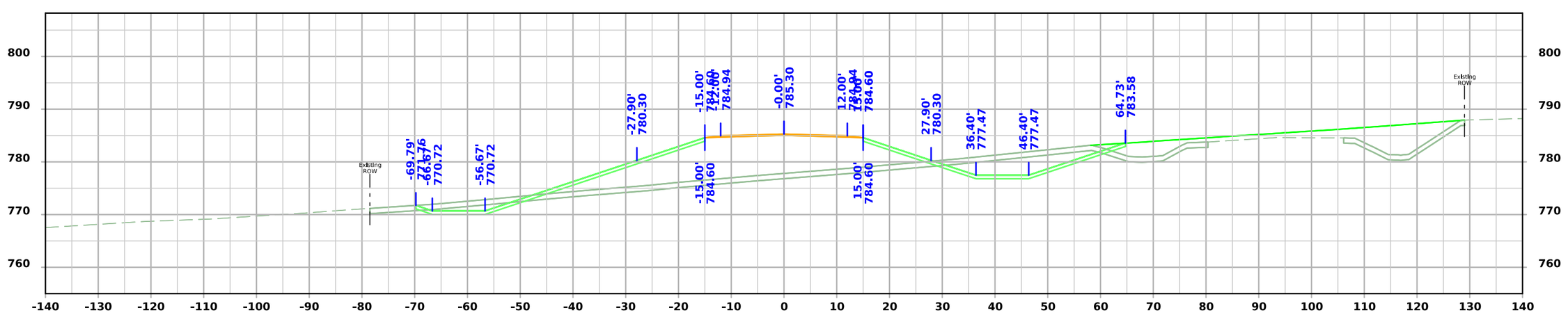
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.509

5:05:06 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR210_62063095Z09_ORD_X500_Grading.dgn

210th St.



STA 8007+75.00

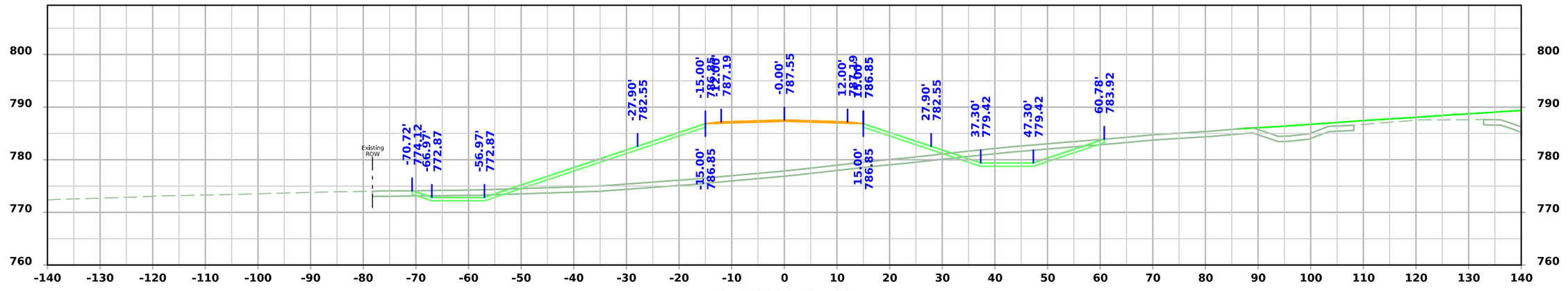


STA 8007+50.00

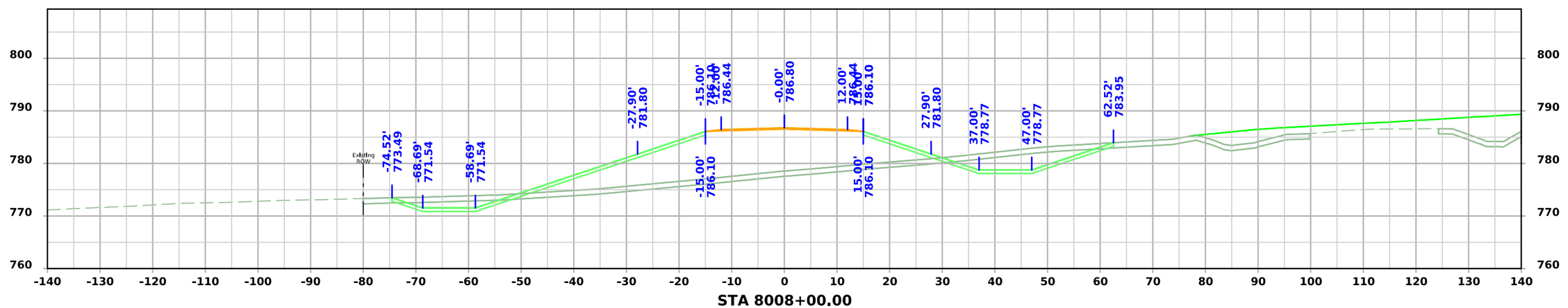
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.510

5:05:07 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR210_62063095Z09_ORD_X500_Grading.dgn

210th St.



STA 8008+25.00

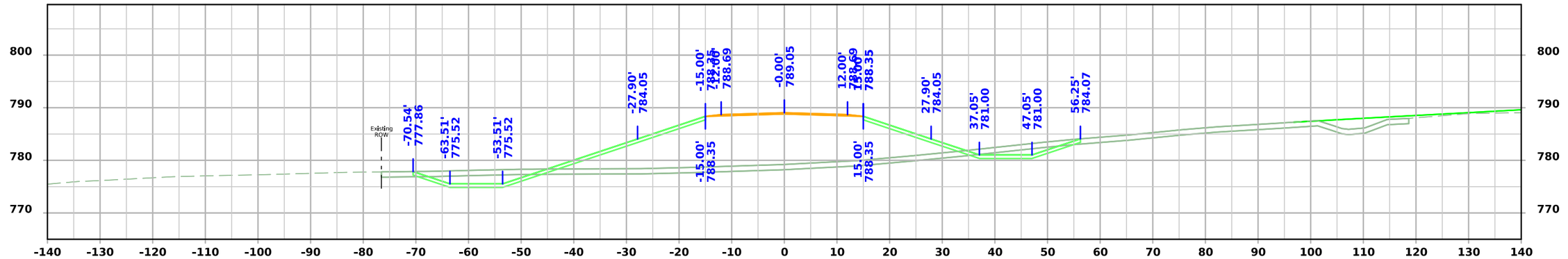


STA 8008+00.00

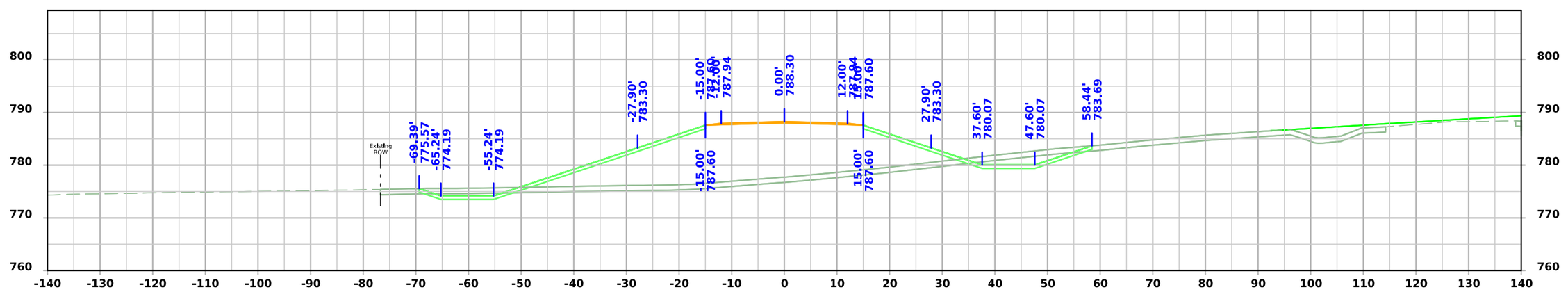
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.511

5:05:08 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR210_62063095Z09_ORD_X500_Grading.dgn

210th St.



STA 8008+75.00

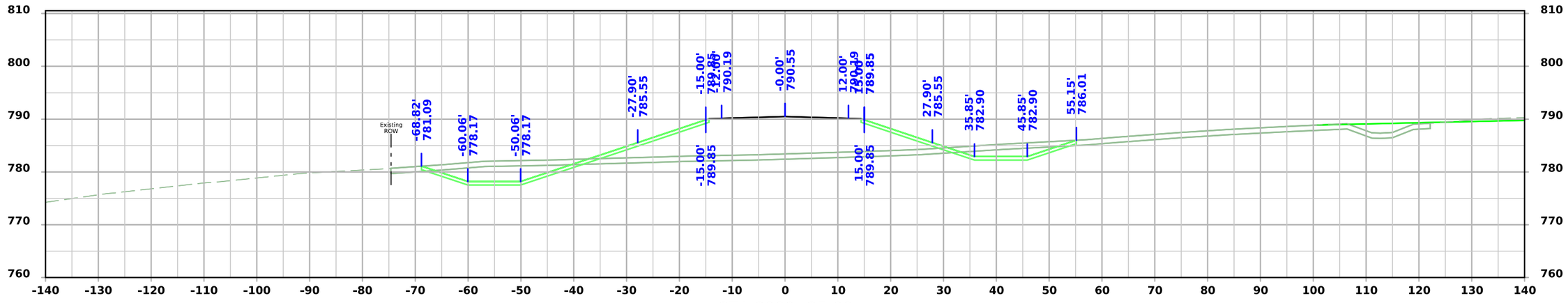


STA 8008+50.00

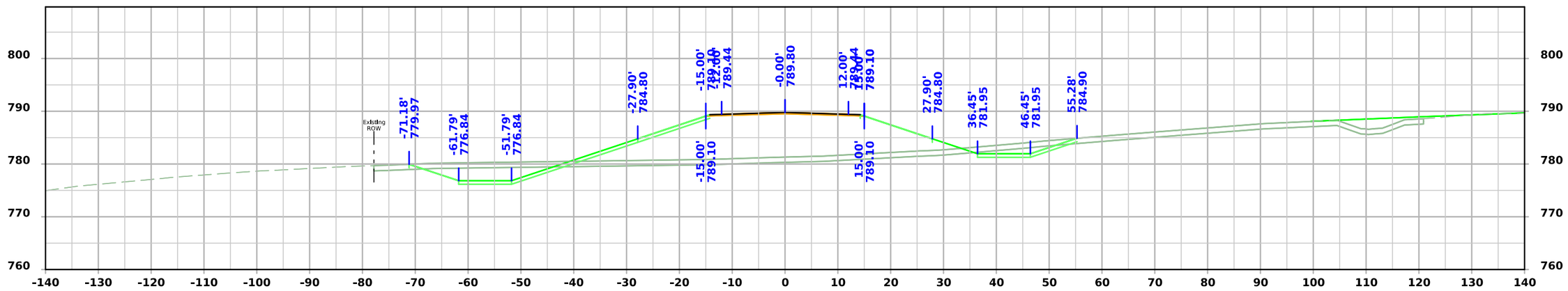
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.512

5:05:09 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR210_62063095Z09_ORD_X500_Grading.dgn

210th St.



STA 8009+25.00

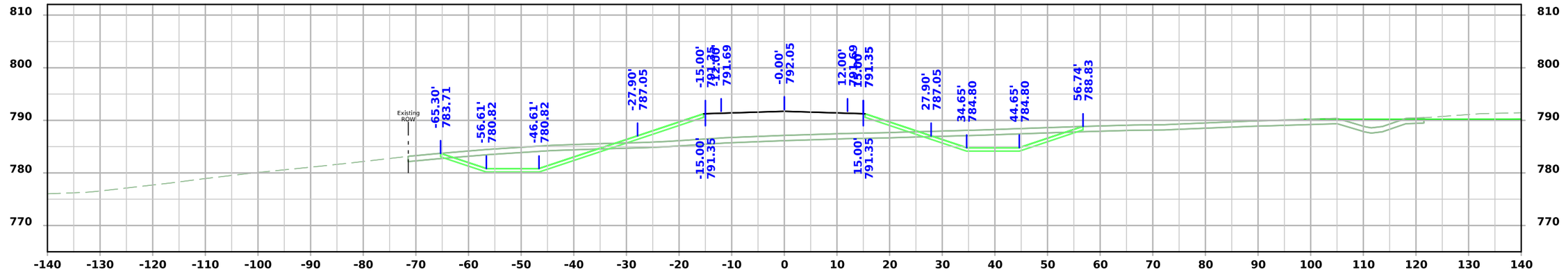


STA 8009+00.00

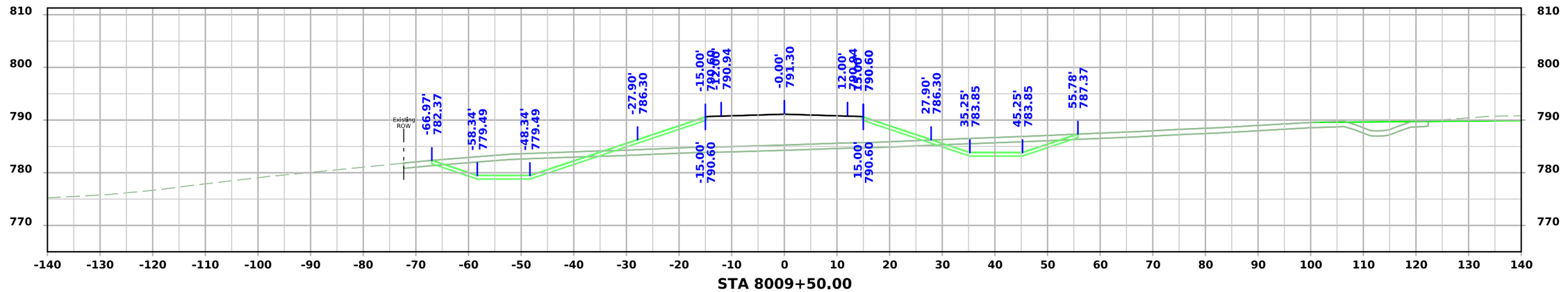
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.513

5:05:10 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR210_62063095Z09_ORD_X500_Grading.dgn

210th St.



STA 8009+75.00

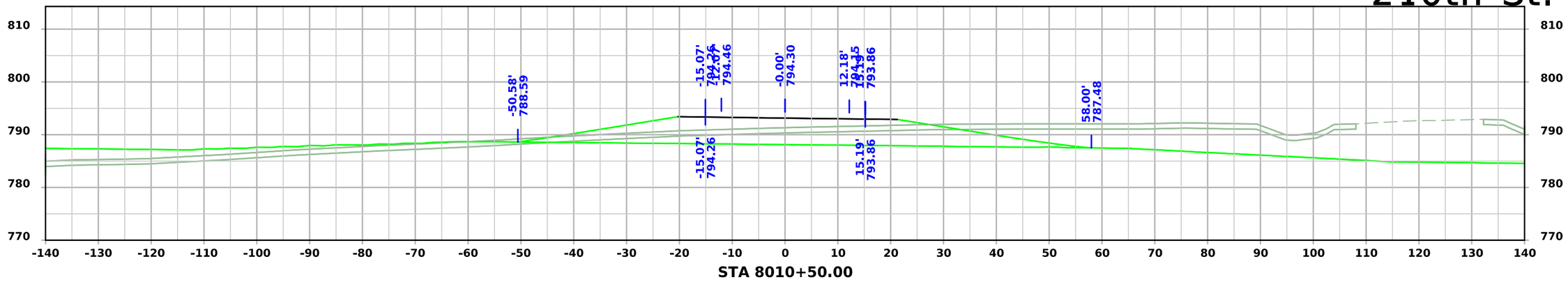


STA 8009+50.00

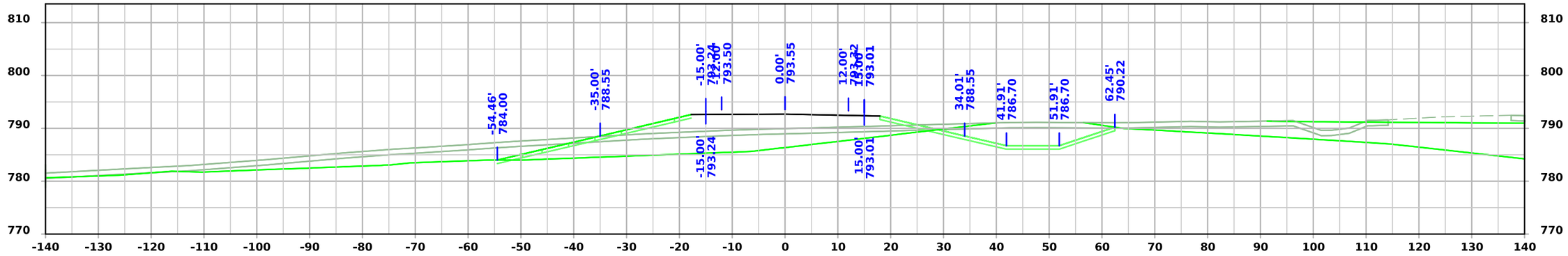
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.514

5:05:12 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR210_62063095Z09_ORD_X500_Grading.dgn

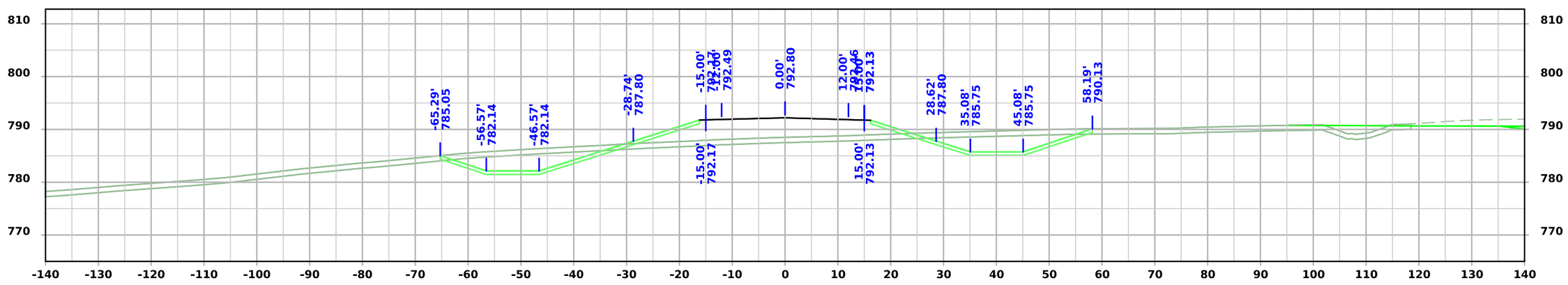
210th St.



STA 8010+50.00



STA 8010+25.00

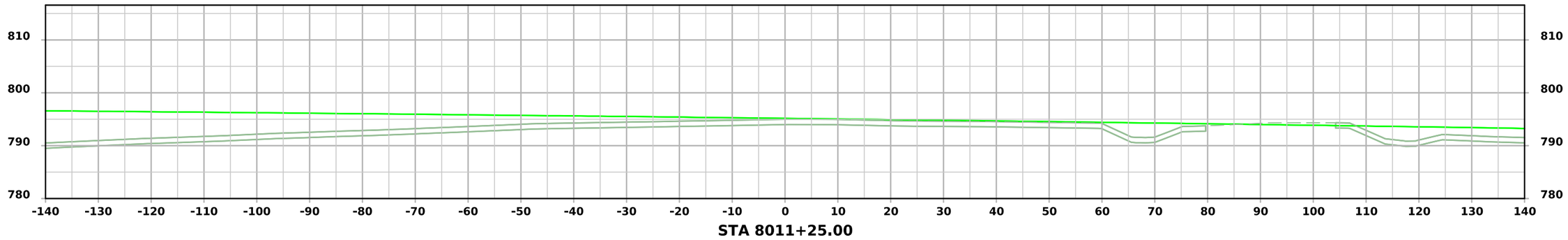


STA 8010+00.00

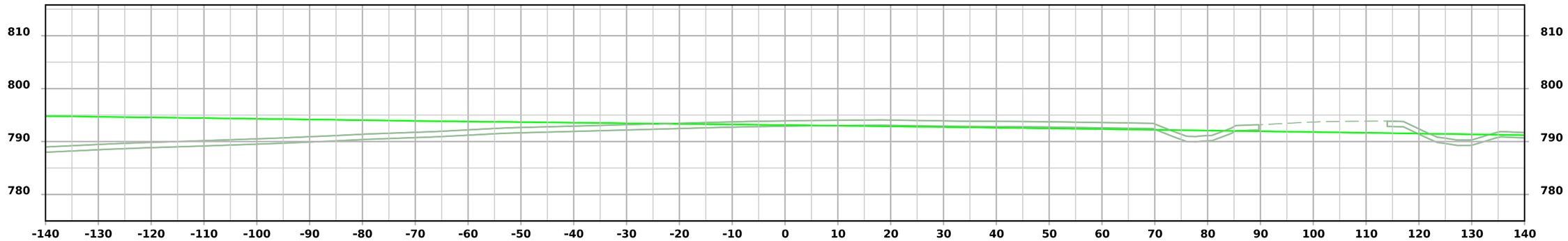
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.515

5:05:13 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR210_62063095Z09_ORD_X500_Grading.dgn

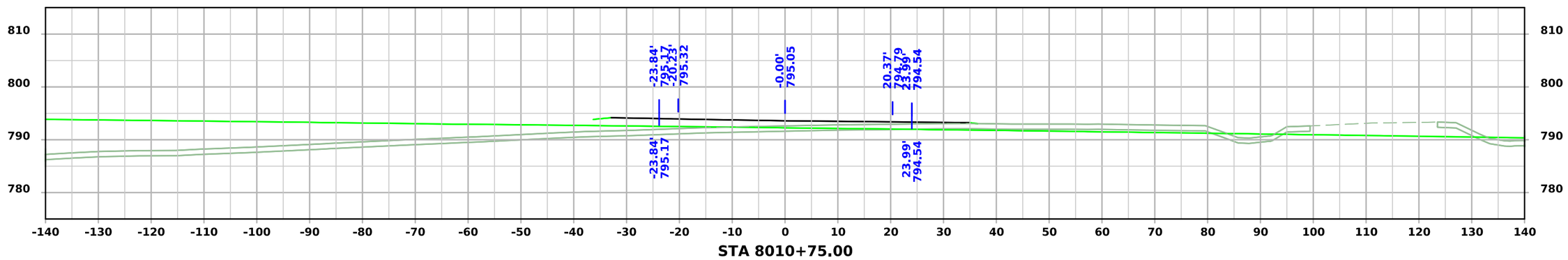
210th St.



STA 8011+25.00



STA 8011+00.00

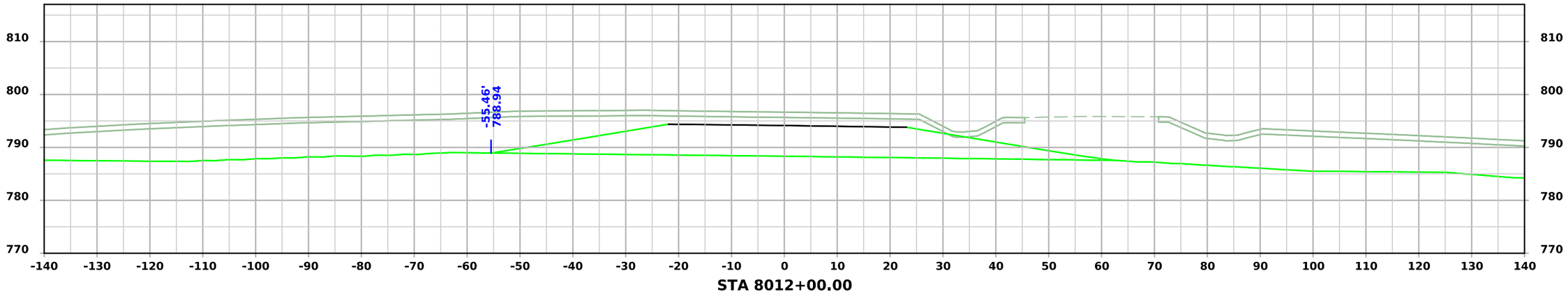


STA 8010+75.00

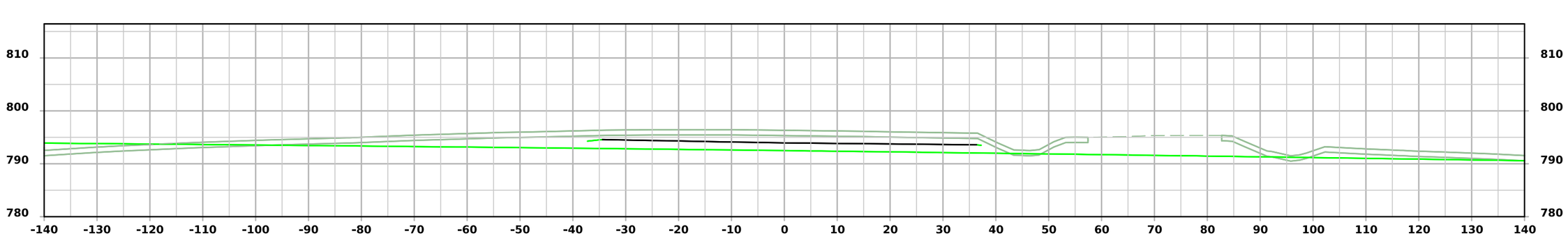
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.516

5:05:14 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR210_62063095Z09_ORD_X500_Grading.dgn

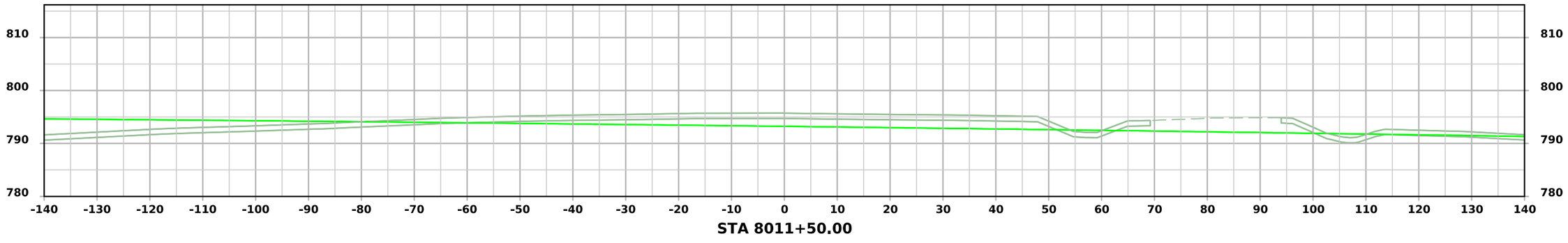
210th St.



STA 8012+00.00



STA 8011+75.00

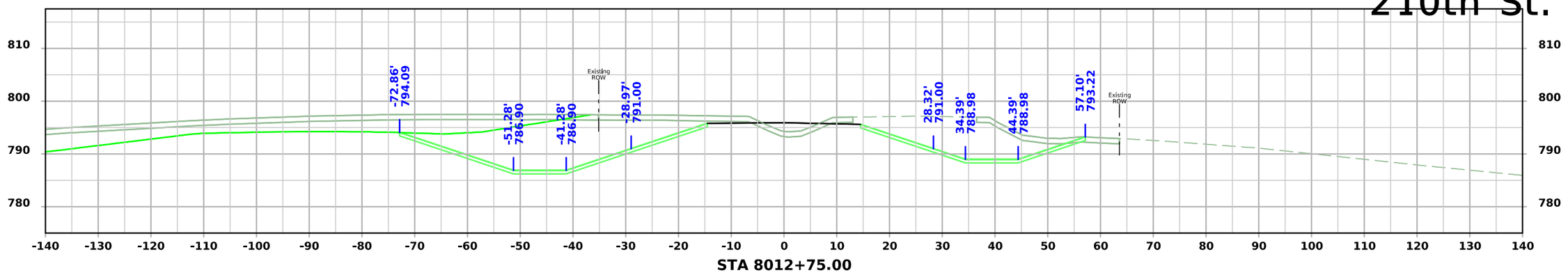


STA 8011+50.00

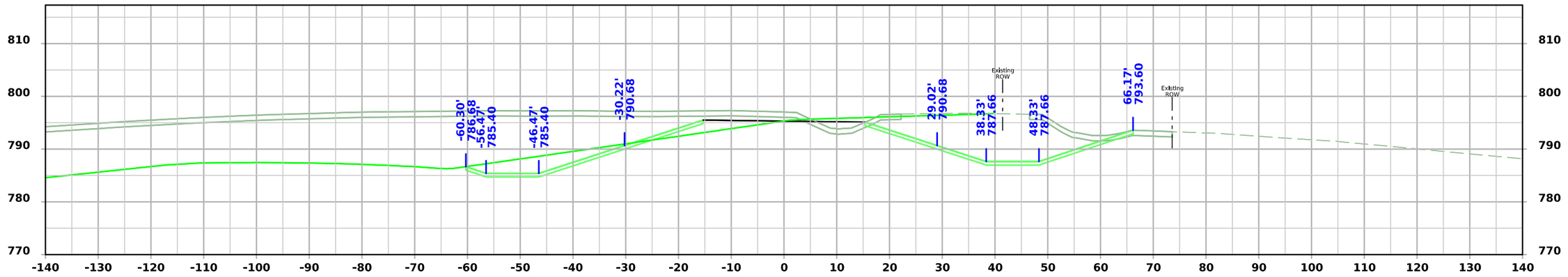
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.517

5:05:15 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR210_62063095Z09_ORD_X500_Grading.dgn

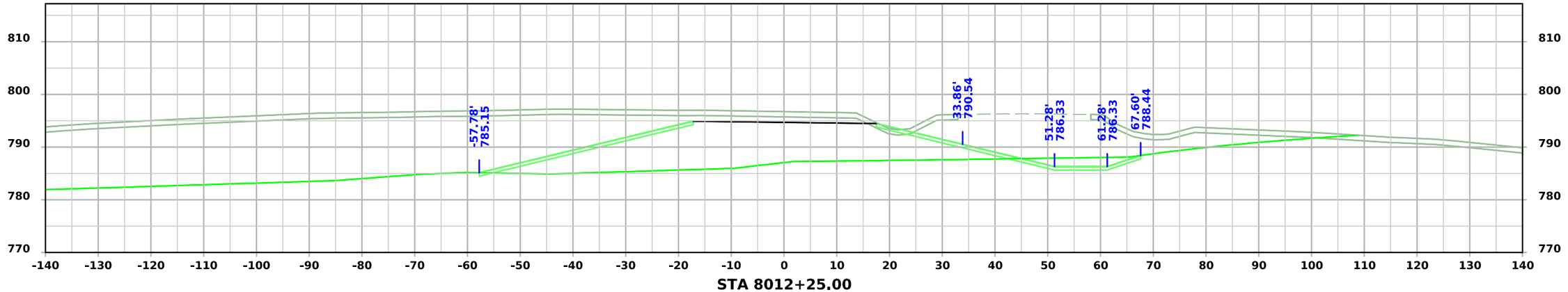
210th St.



STA 8012+75.00



STA 8012+50.00

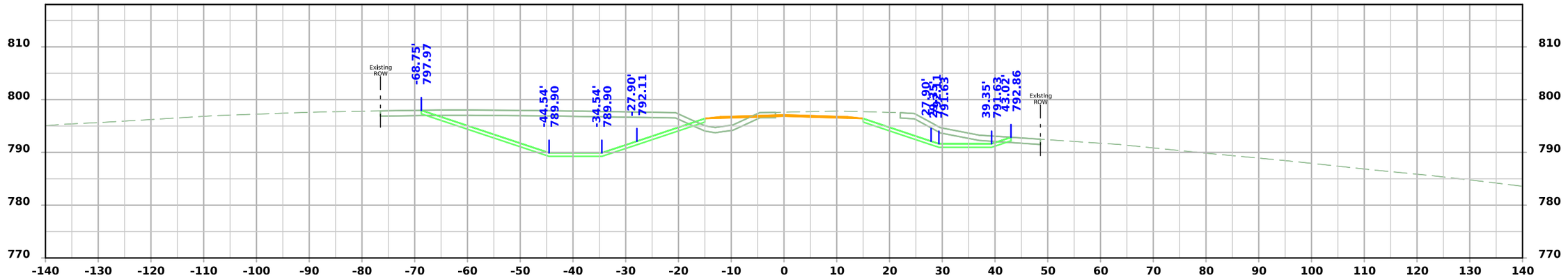


STA 8012+25.00

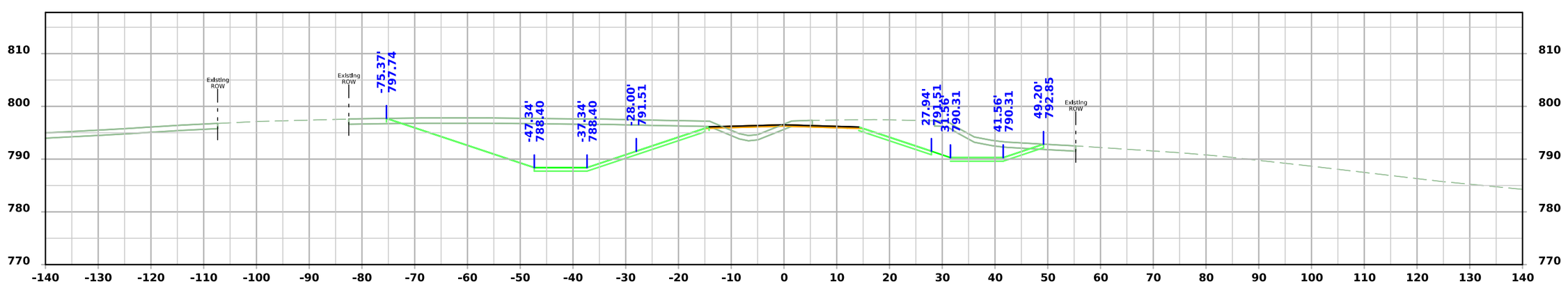
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.518

5:05:17 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR210_62063095Z09_ORD_X500_Grading.dgn

210th St.



STA 8013+25.00

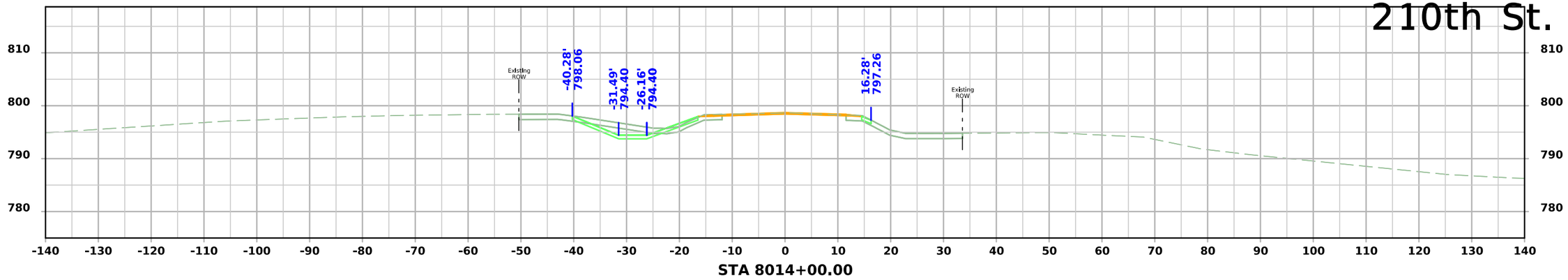


STA 8013+00.00

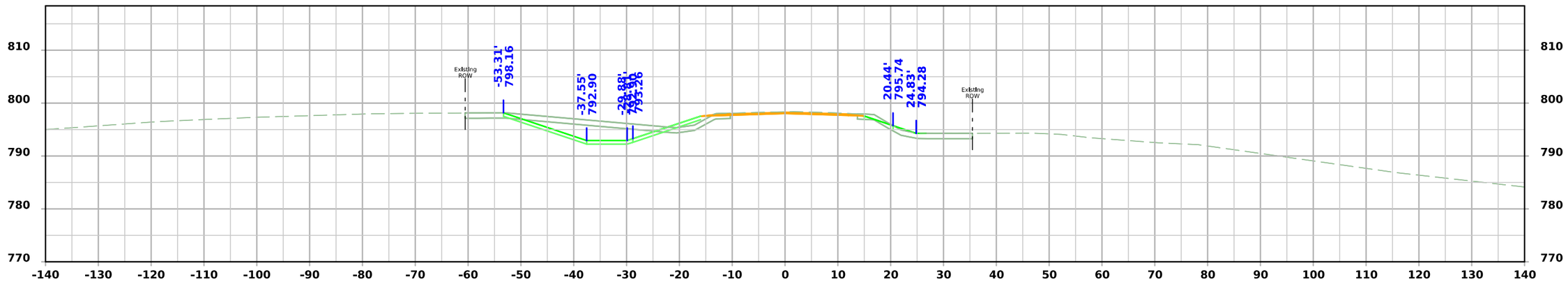
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.519

5:05:18 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR210_62063095Z09_ORD_X500_Grading.dgn

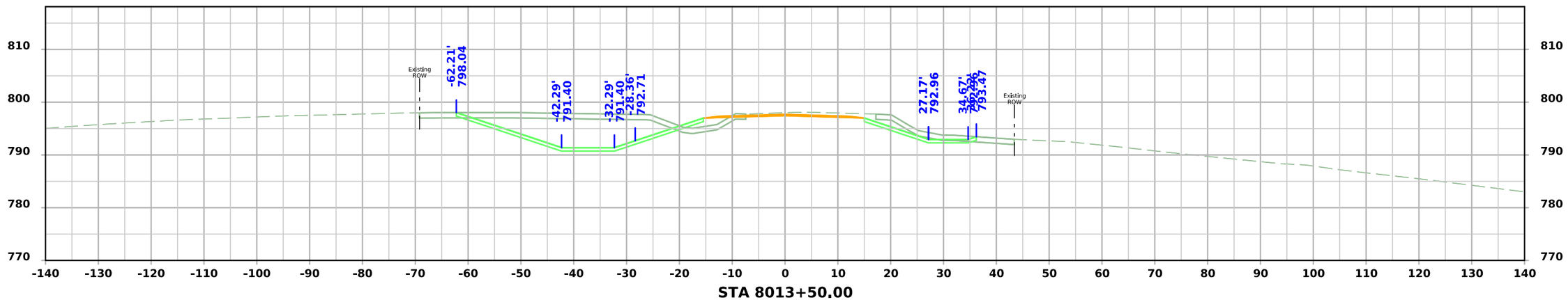
210th St.



STA 8014+00.00



STA 8013+75.00

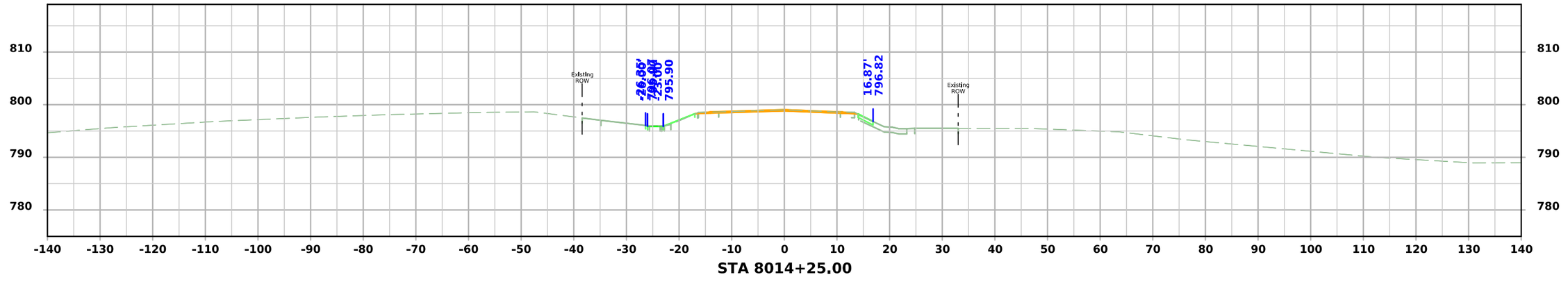


STA 8013+50.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.520

5:05:19 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR210_62063095Z09_ORD_X500_Grading.dgn

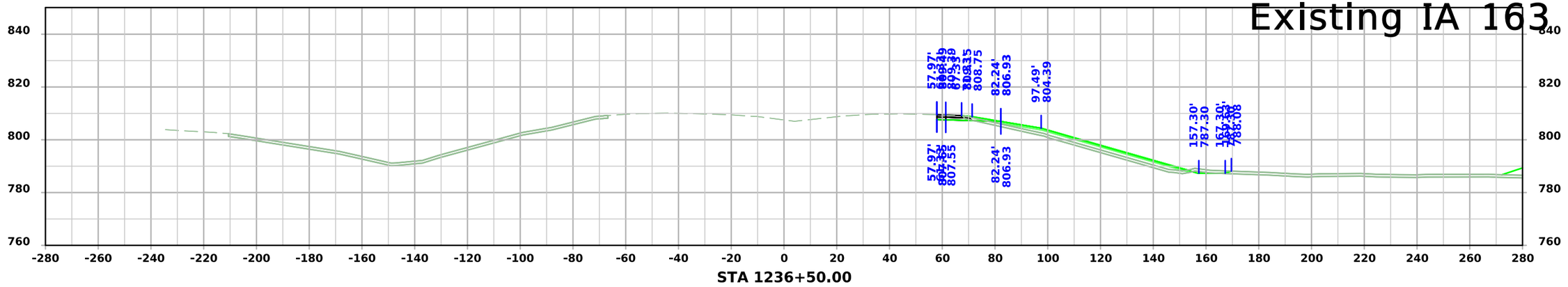
210th St.



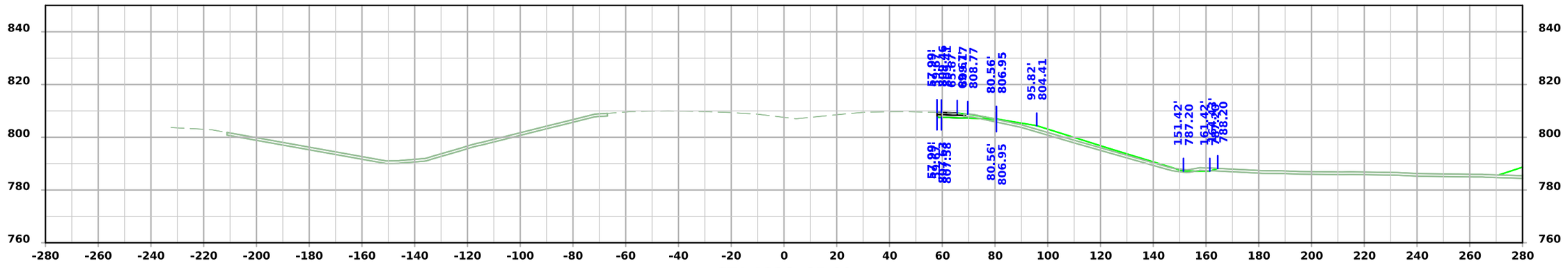
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.521

5:05:20 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_SR210_62063095Z09_ORD_X500_Grading.dgn

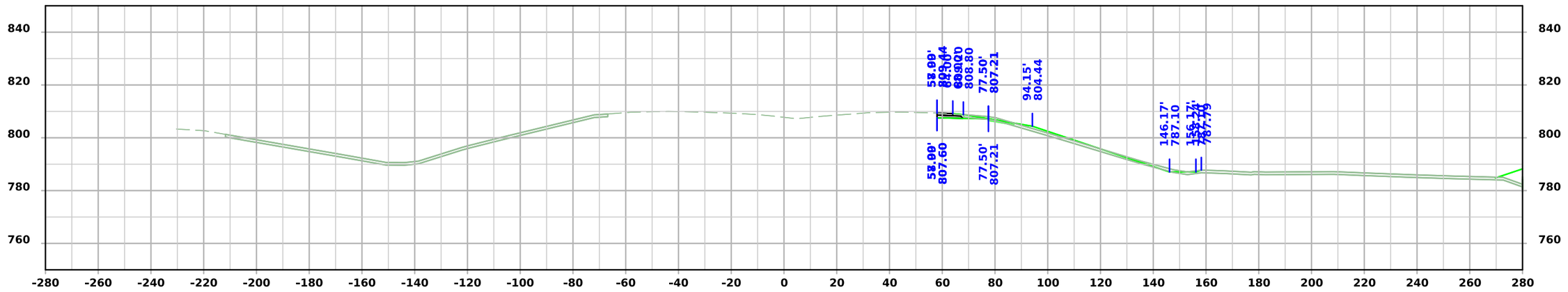
Existing IA 163



STA 1236+50.00



STA 1236+25.00

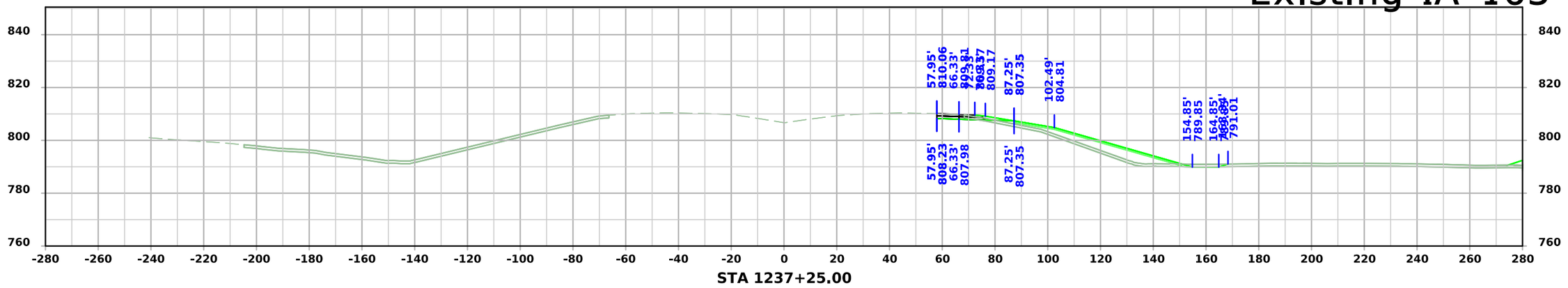


STA 1236+00.00

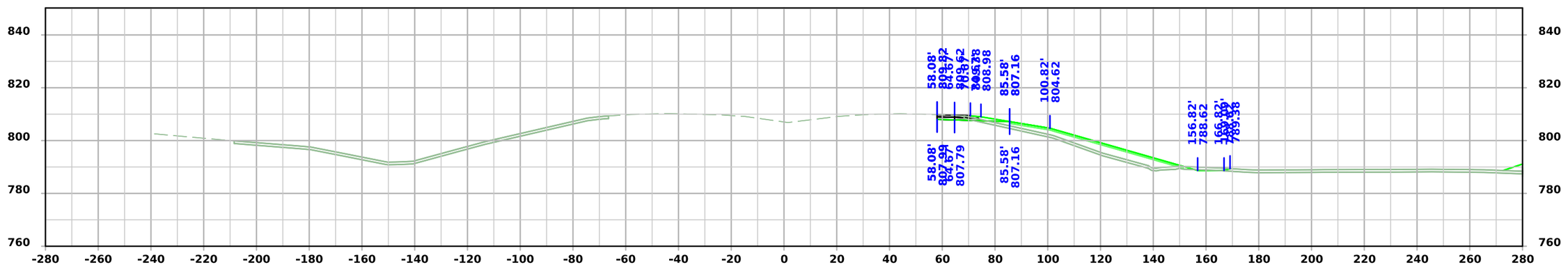
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.600

4:31:52 PM 2/26/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(095)_Grading\CADD_Files\Cross_Sections\XS_SUR163_62063095Z09_ORD_X600_Grading.dgn

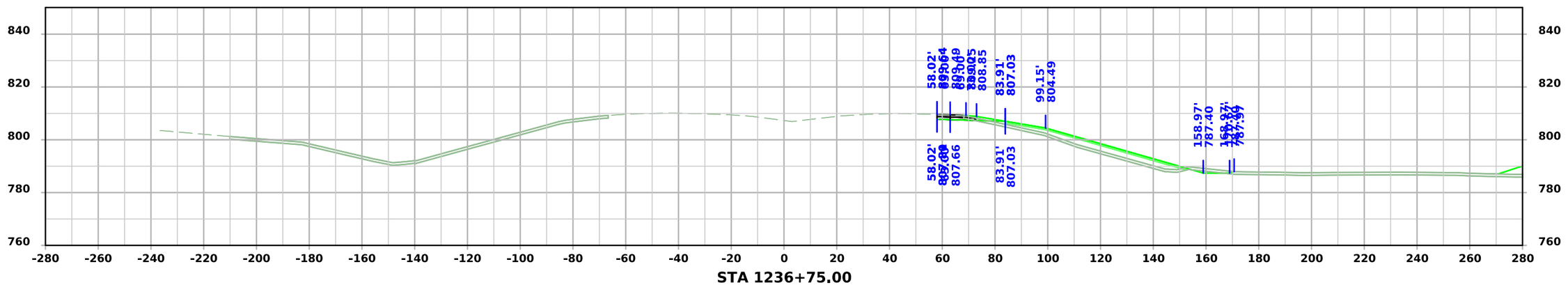
Existing IA 163



STA 1237+25.00



STA 1237+00.00

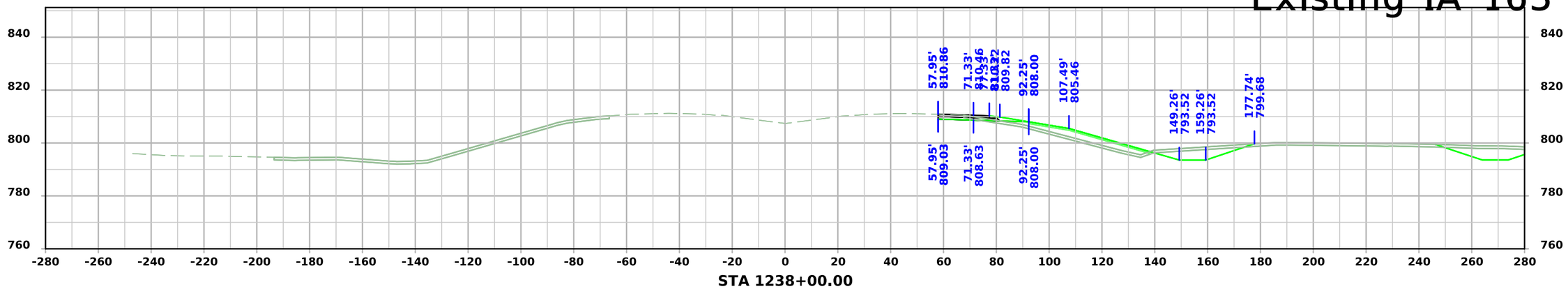


STA 1236+75.00

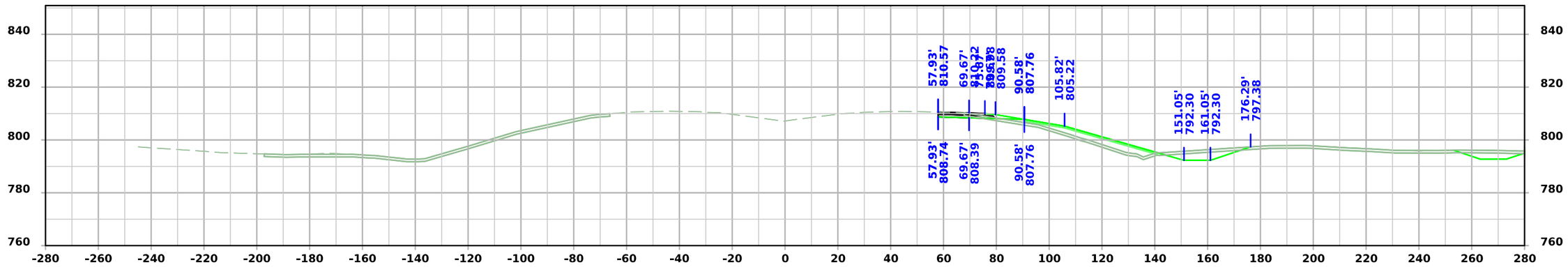
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.601

4:31:53 PM 2/26/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(095)_Grading\CADD_Files\Cross_Sections\XS_SUR163_62063095Z09_ORD_X600_Grading.dgn

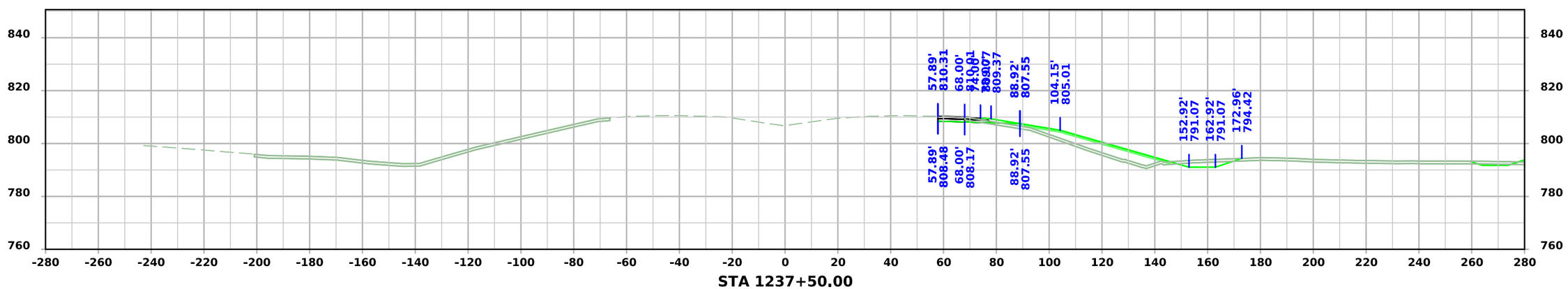
Existing IA 163



STA 1238+00.00



STA 1237+75.00

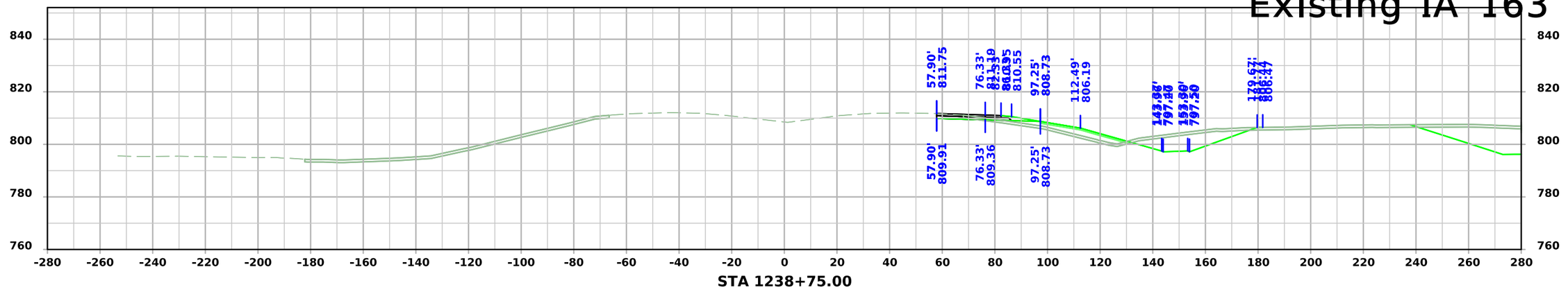


STA 1237+50.00

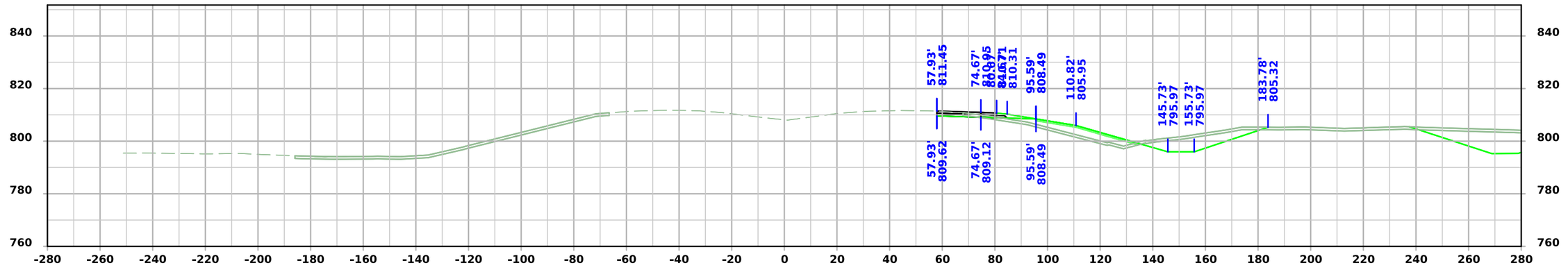
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.602

4:31:54 PM 2/26/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(095)_Grading\CADD_Files\Cross_Sections\XS_SUR163_62063095Z09_ORD_X600_Grading.dgn

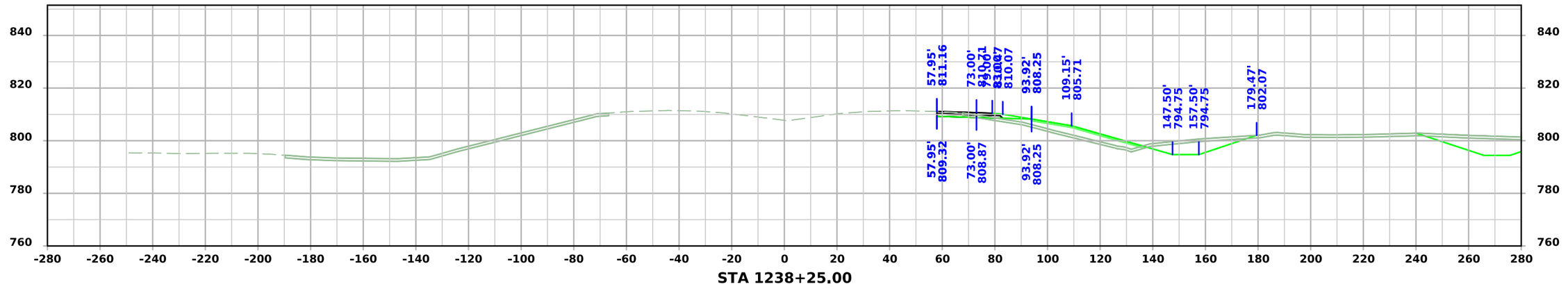
Existing IA 163



STA 1238+75.00



STA 1238+50.00

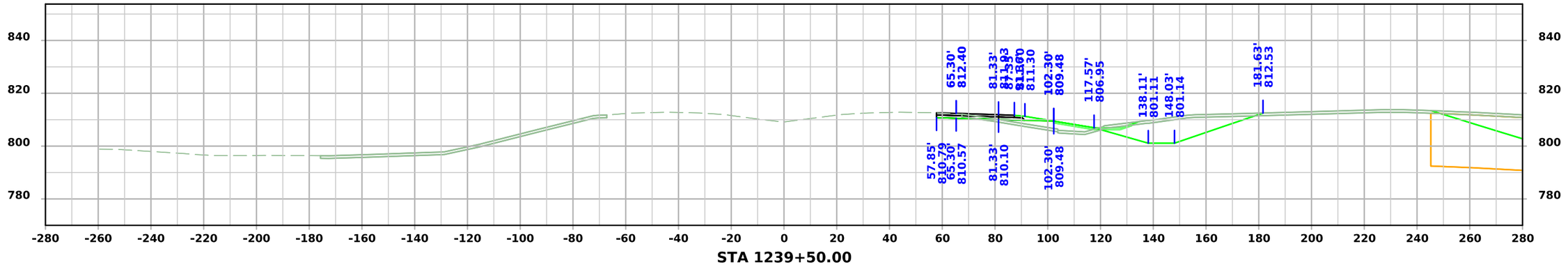


STA 1238+25.00

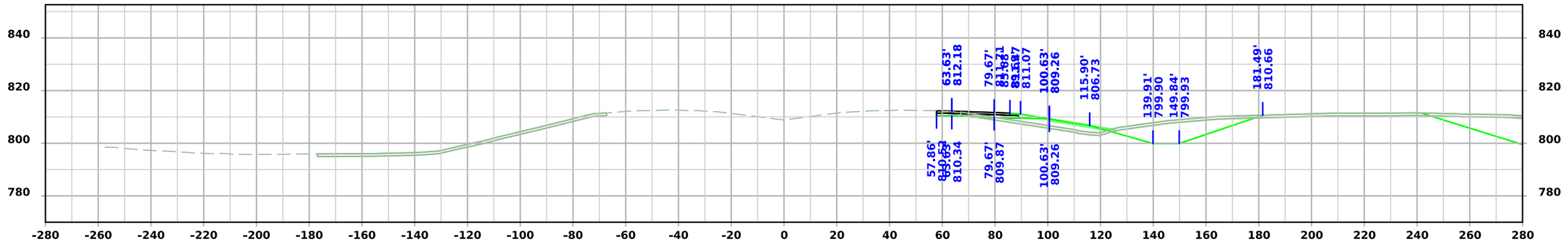
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.603

4:31:55 PM 2/26/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(095)_Grading\CADD_Files\Cross_Sections\XS_SUR163_62063095Z09_ORD_X600_Grading.dgn

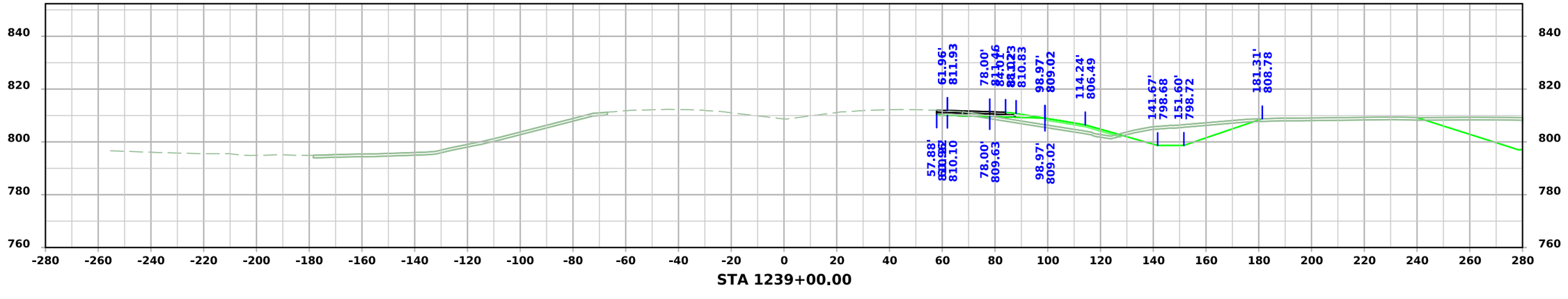
Existing IA 163



STA 1239+50.00



STA 1239+25.00

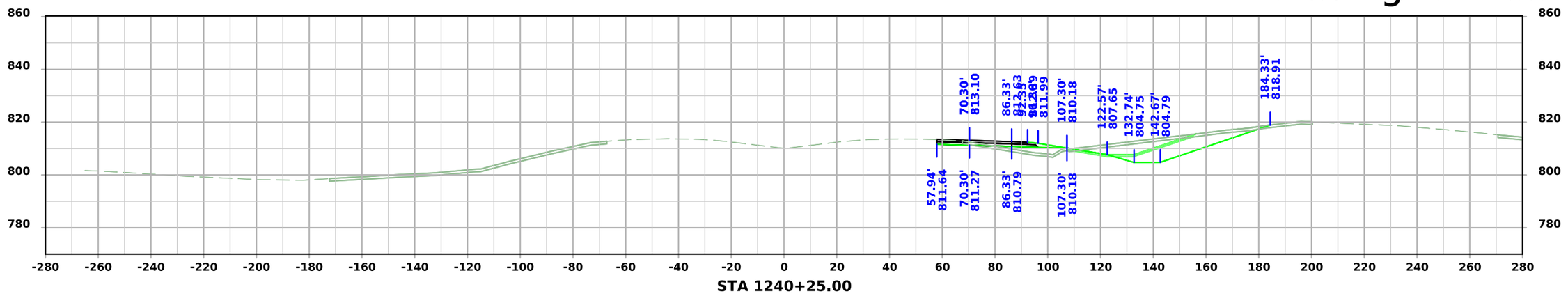


STA 1239+00.00

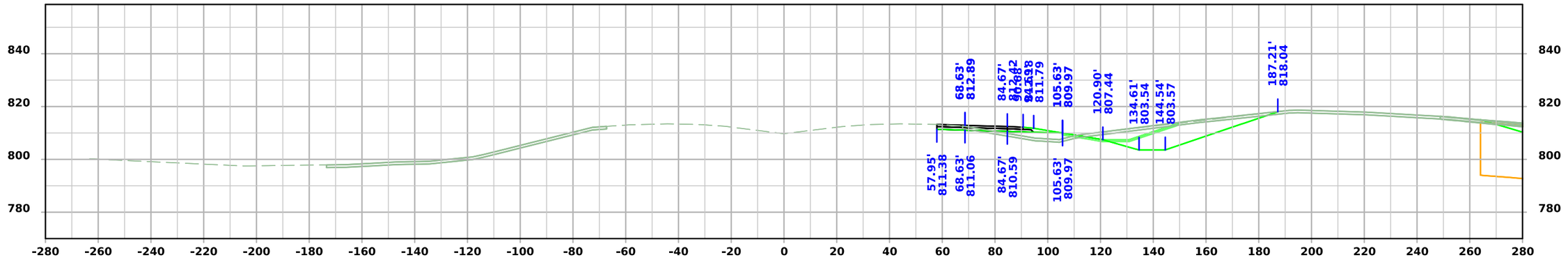
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.604

4:31:57 PM 2/26/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(095)_Grading\CADD_Files\Cross_Sections\XS_SUR163_62063095Z09_ORD_X600_Grading.dgn

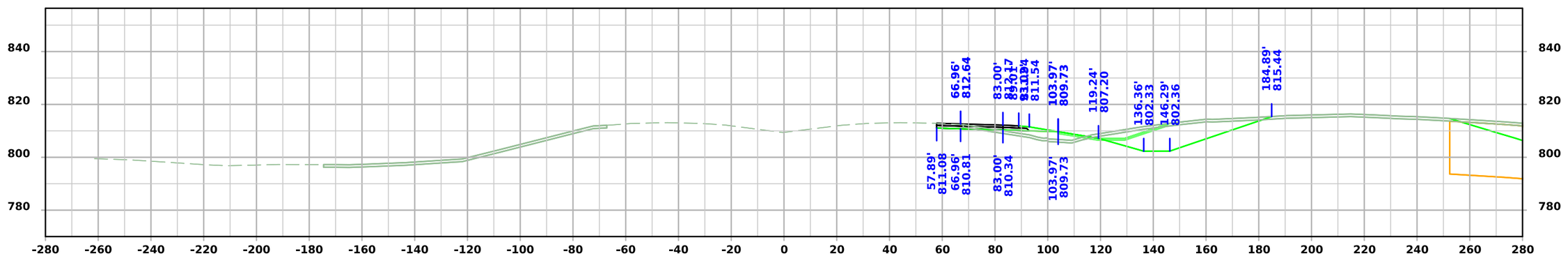
Existing IA 163



STA 1240+25.00



STA 1240+00.00

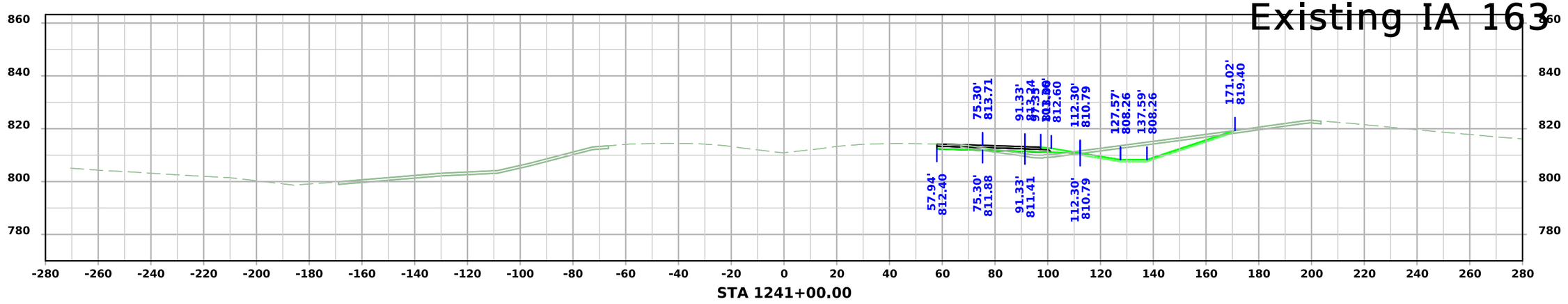


STA 1239+75.00

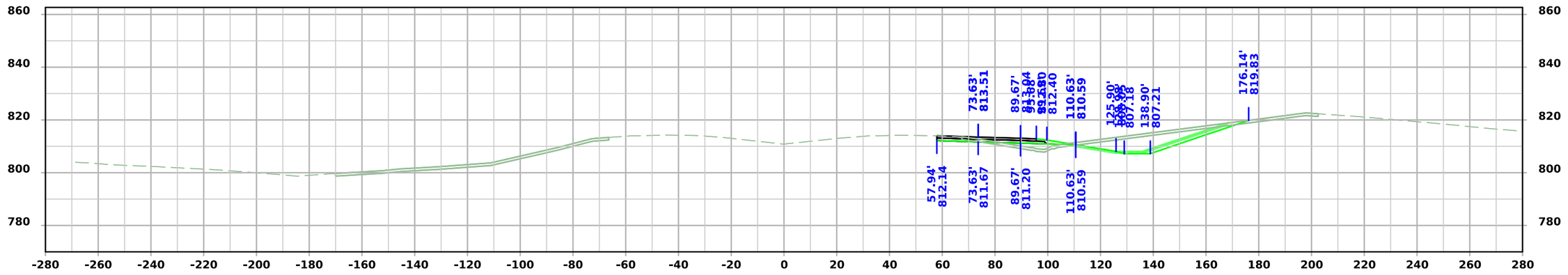
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.605

4:31:58 PM 2/26/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(095)_Grading\CADD_Files\Cross_Sections\XS_SUR163_62063095Z09_ORD_X600_Grading.dgn

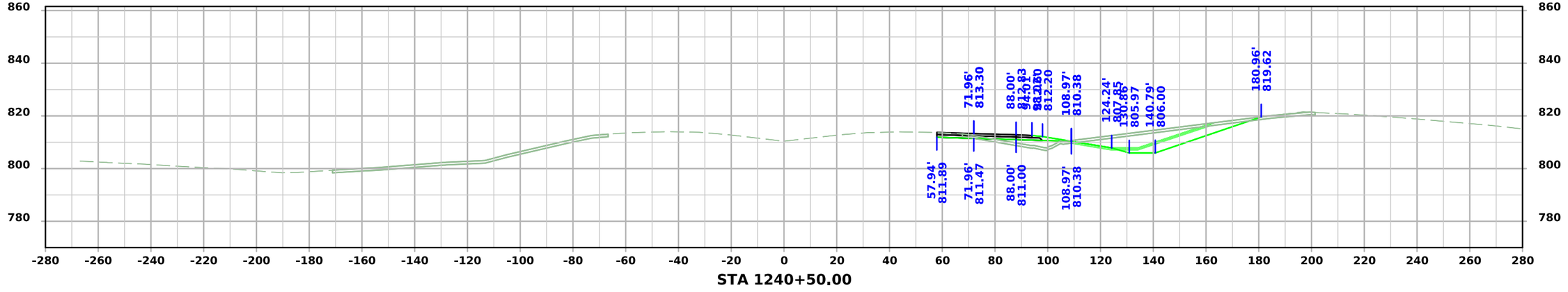
Existing IA 163



STA 1241+00.00



STA 1240+75.00

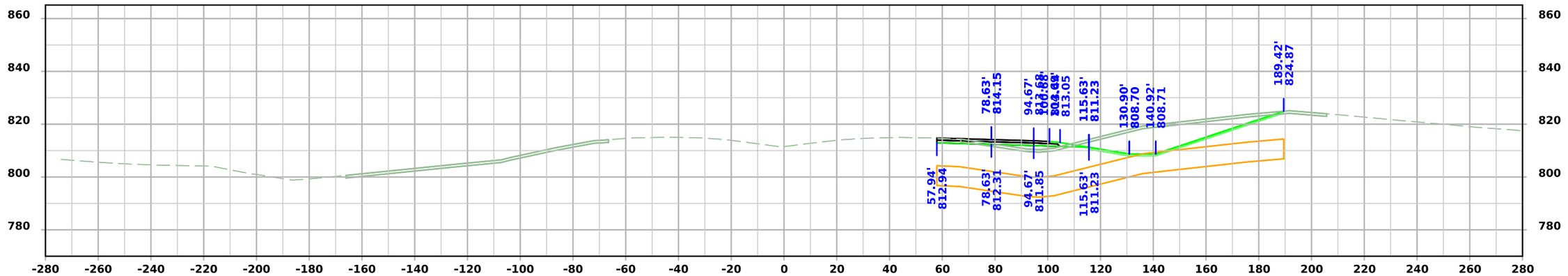


STA 1240+50.00

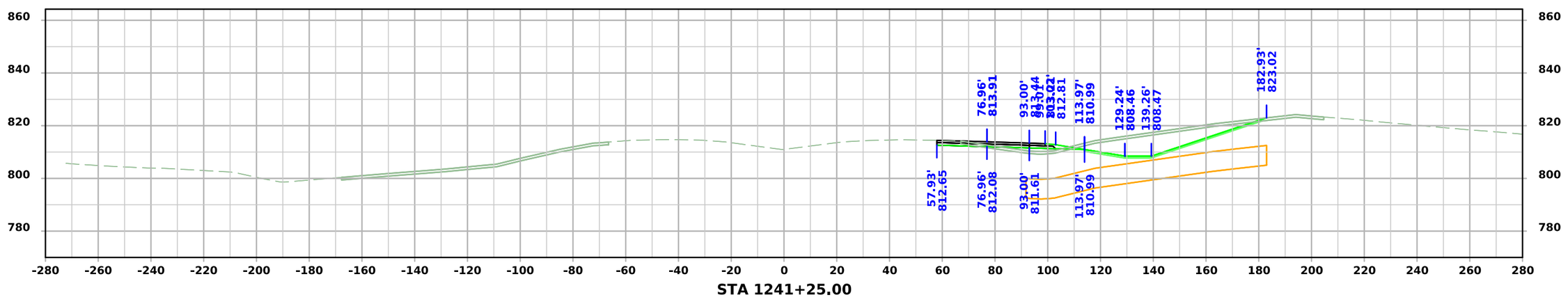
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.606

4:31:59 PM 2/26/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(095)_Grading\CADD_Files\Cross_Sections\XS_SUR163_62063095Z09_ORD_X600_Grading.dgn

Existing IA 163



STA 1241+50.00

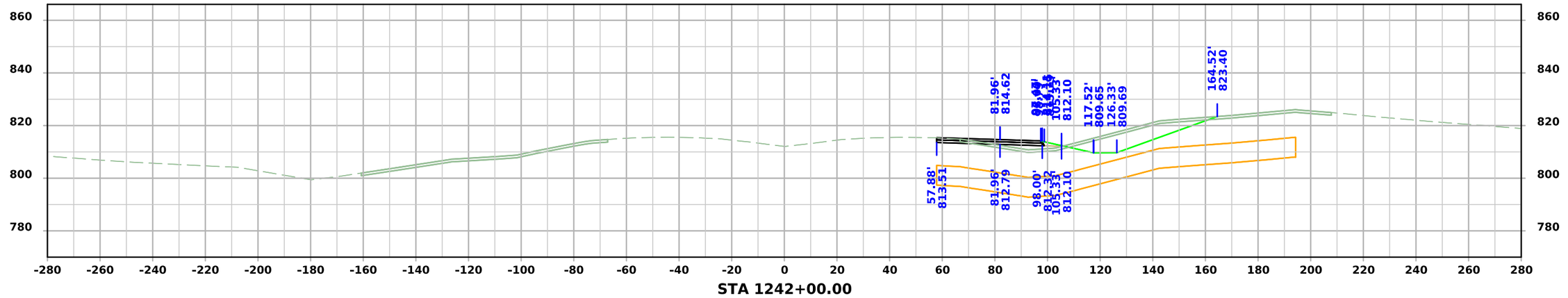


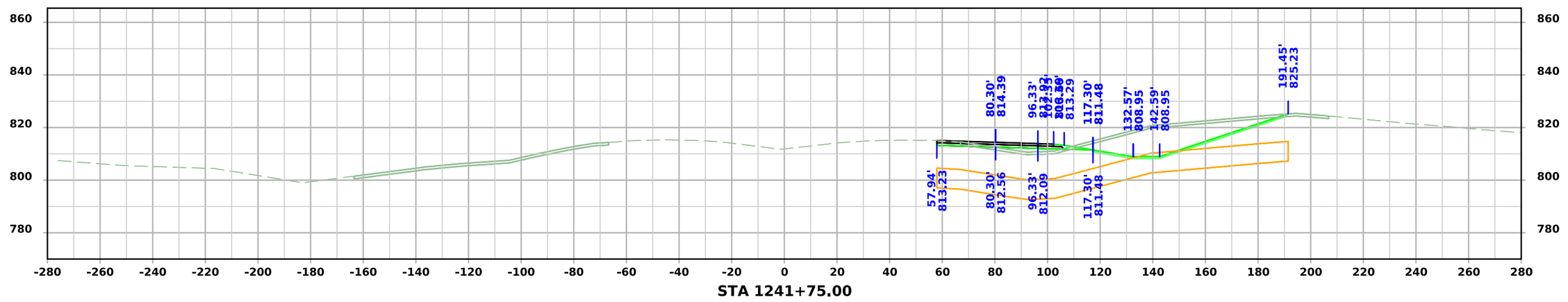
STA 1241+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.607

4:32:00 PM 2/26/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(095)_Grading\CADD_Files\Cross_Sections\XS_SUR163_62063095Z09_ORD_X600_Grading.dgn

Existing IA 163

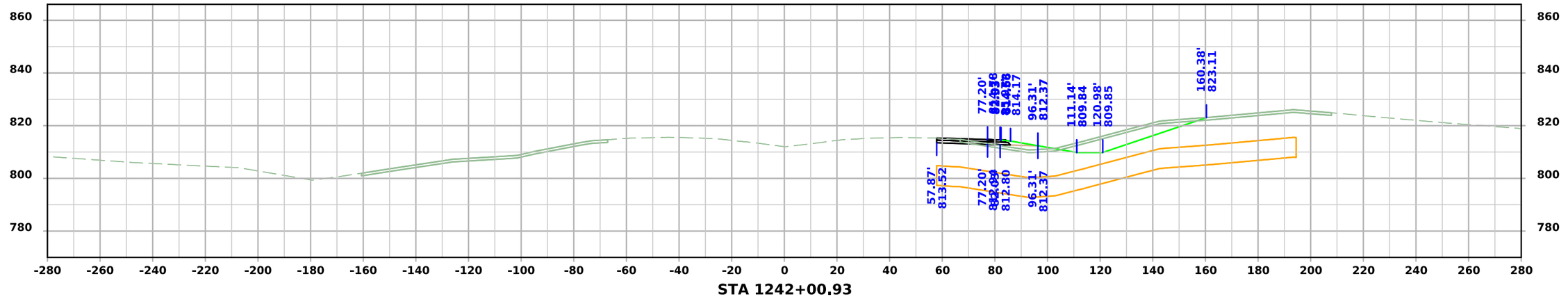




FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.608

4:32:01 PM 2/26/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(095)_Grading\CADD_Files\Cross_Sections\XS_SUR163_62063095Z09_ORD_X600_Grading.dgn

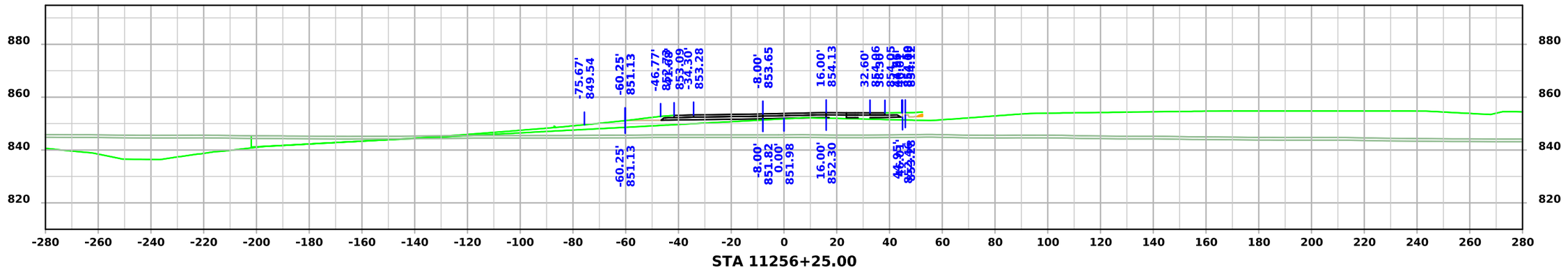
Existing IA 163



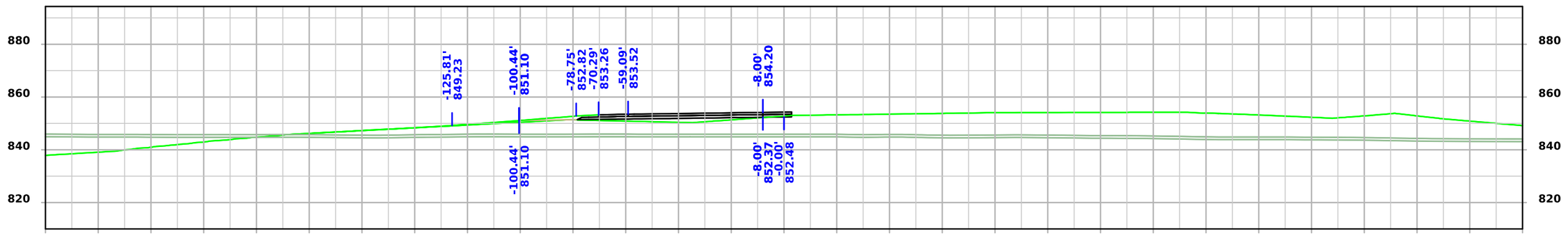
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER X.609

4:32:01 PM 2/26/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(095)_Grading\CADD_Files\Cross_Sections\XS_SUR163_62063095Z09_ORD_X600_Grading.dgn

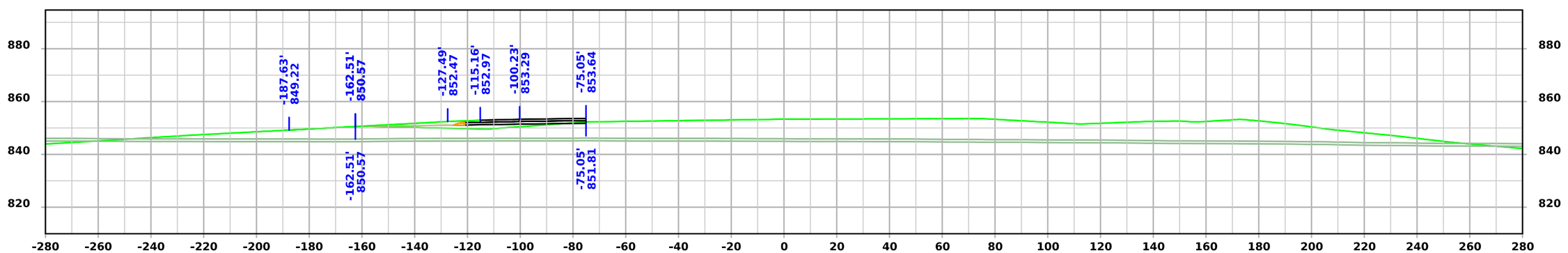
Ramp A



STA 11256+25.00



STA 11256+00.00

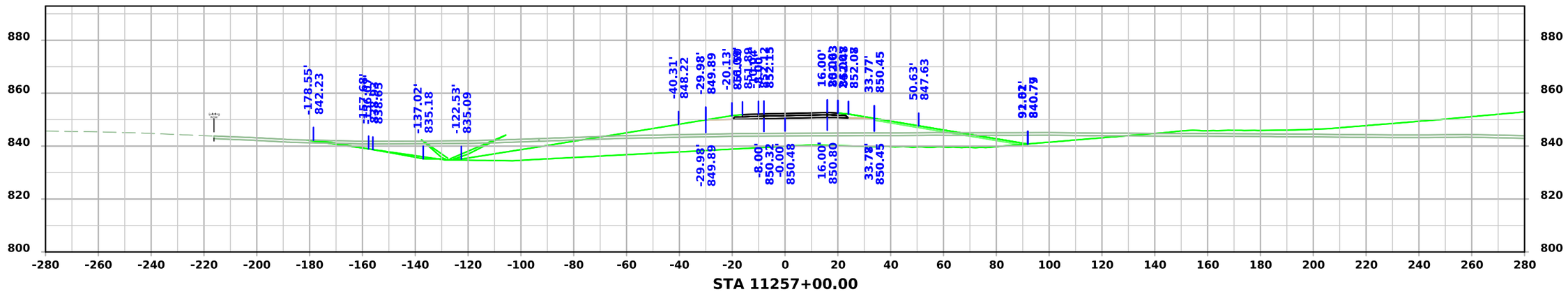


STA 11255+78.45

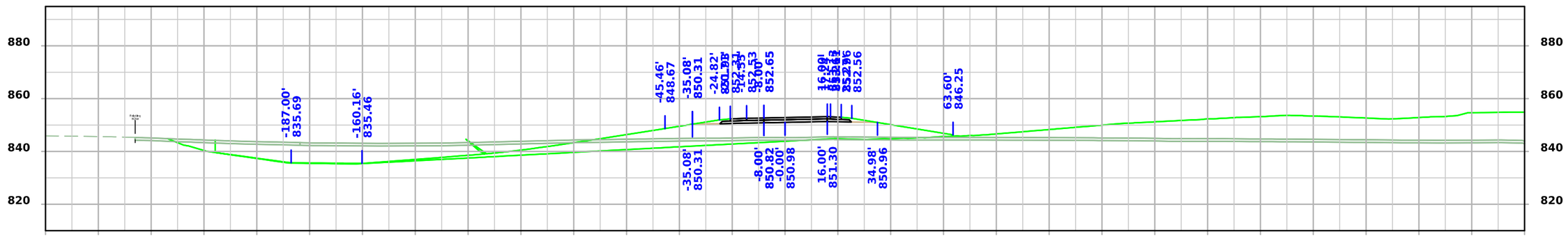
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.100

5:05:46 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPA063_62063095Z09_ORD_Y100_Grading.dgn

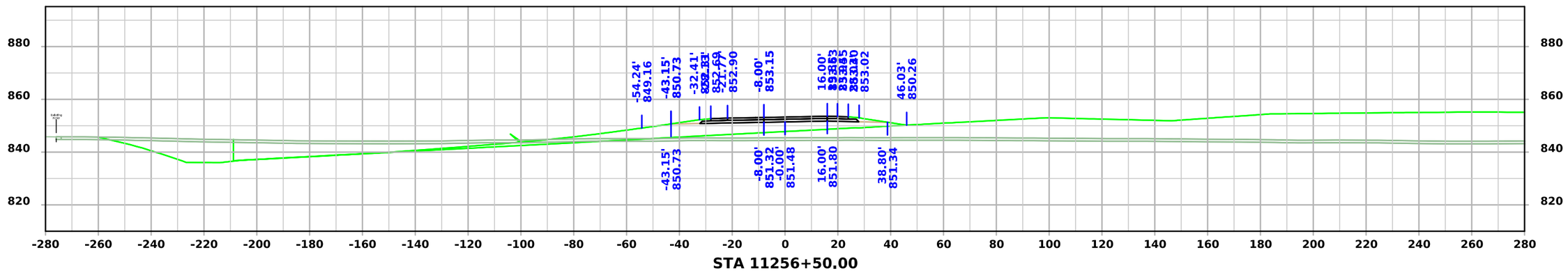
Ramp A



STA 11257+00.00



STA 11256+75.00

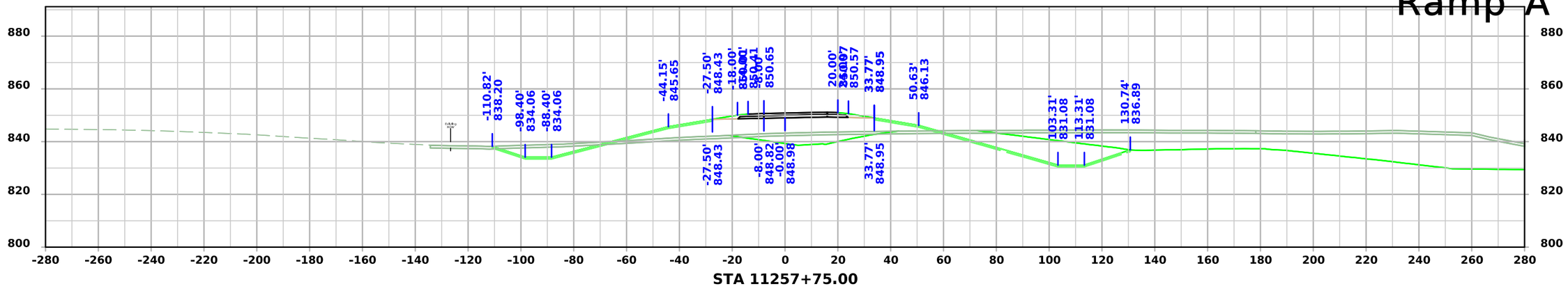


STA 11256+50.00

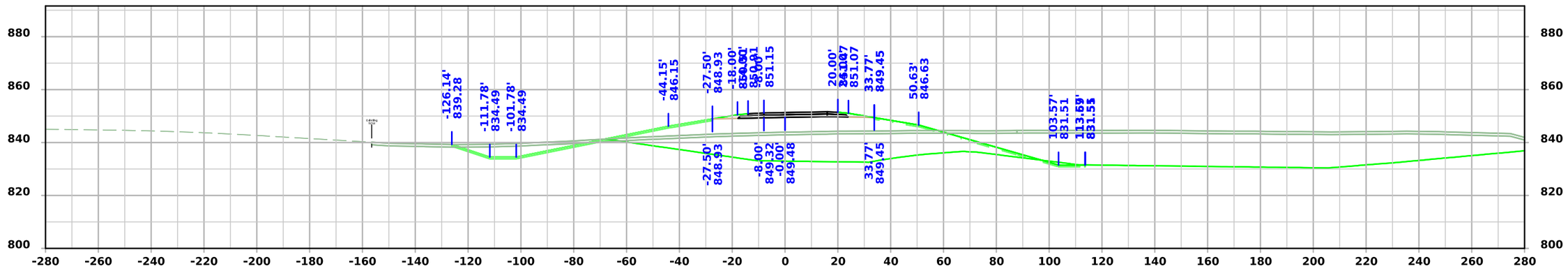
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.101

5:05:48 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPA063_62063095Z09_ORD_Y100_Grading.dgn

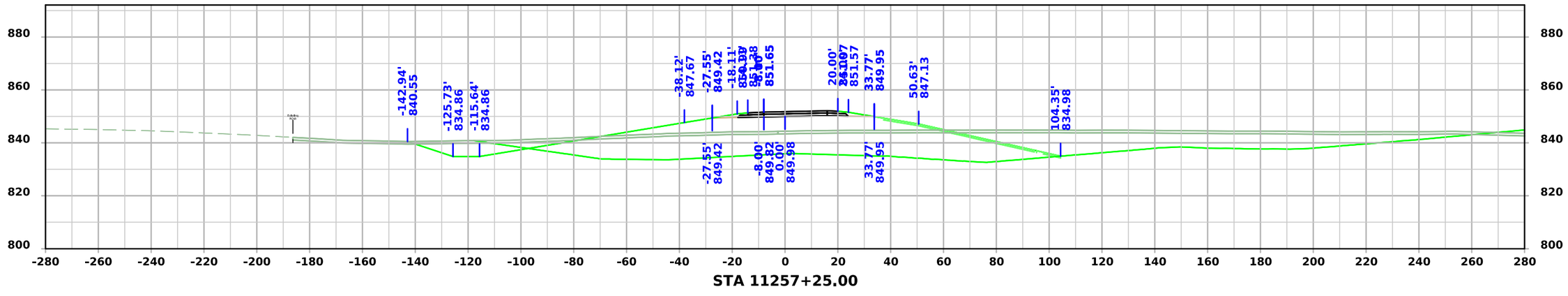
Ramp A



STA 11257+75.00



STA 11257+50.00

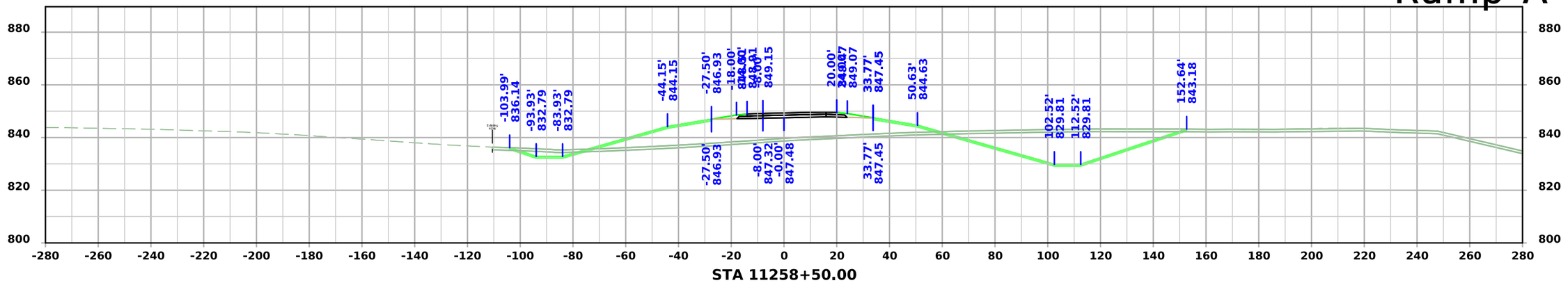


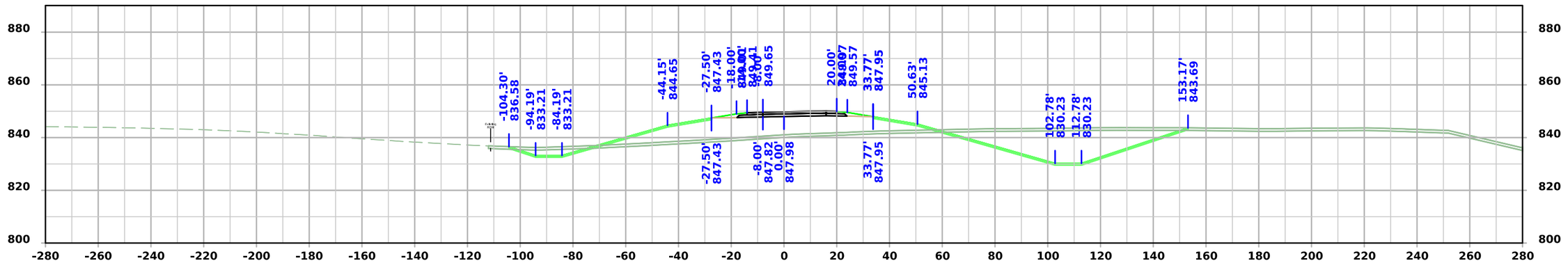
STA 11257+25.00

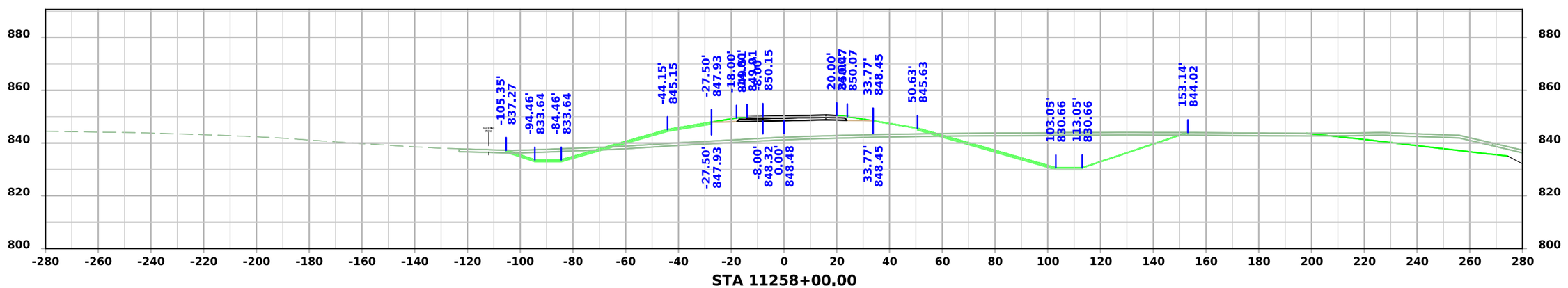
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.102

5:05:50 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPA063_62063095Z09_ORD_Y100_Grading.dgn

Ramp A



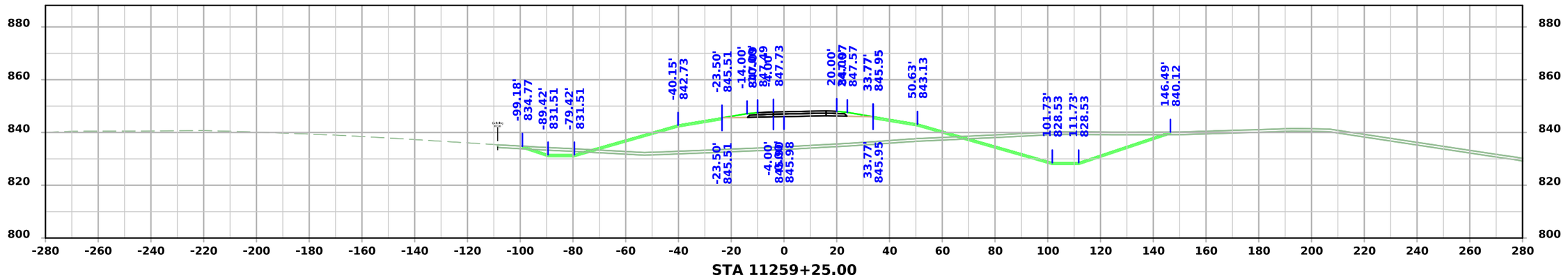




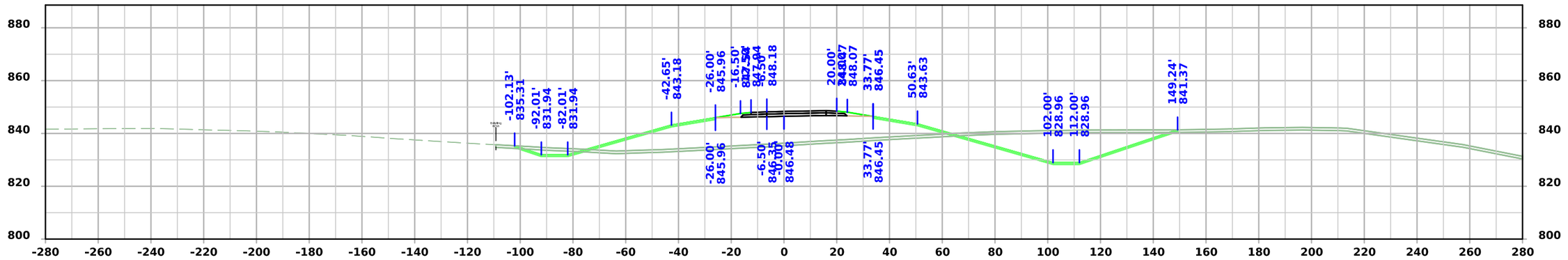
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.103

5:05:51 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPA063_62063095Z09_ORD_Y100_Grading.dgn

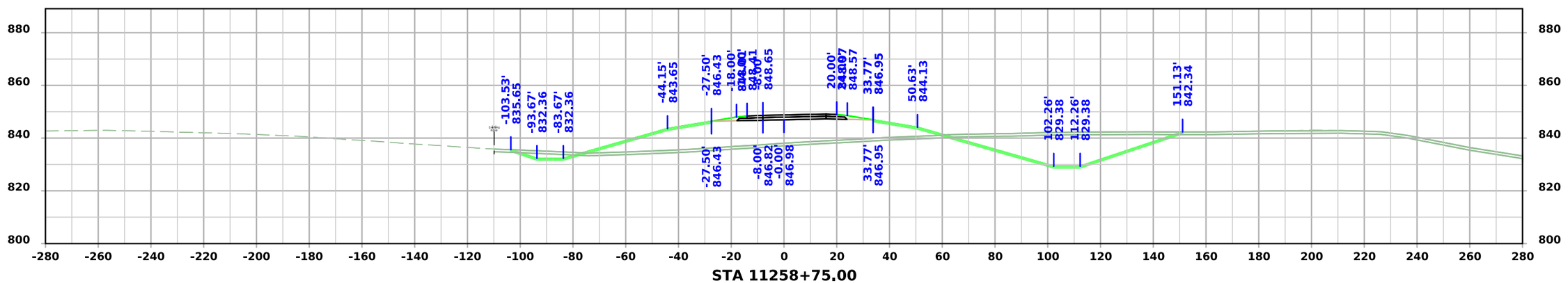
Ramp A



STA 11259+25.00



STA 11259+00.00

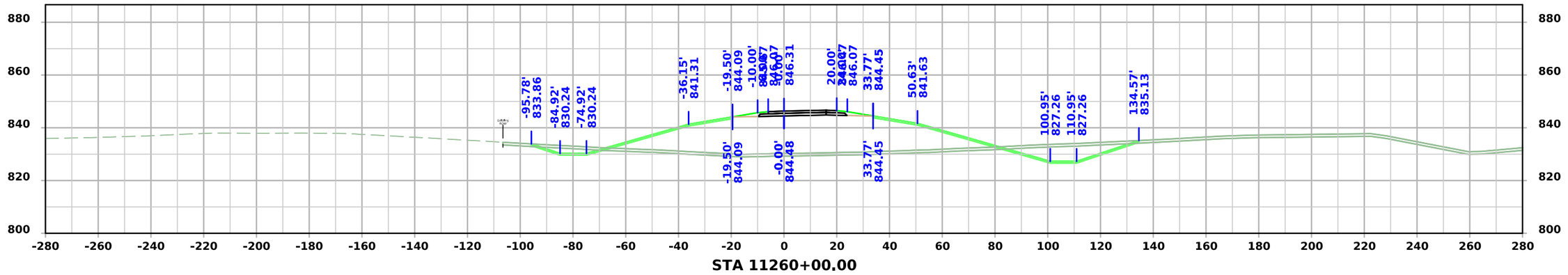


STA 11258+75.00

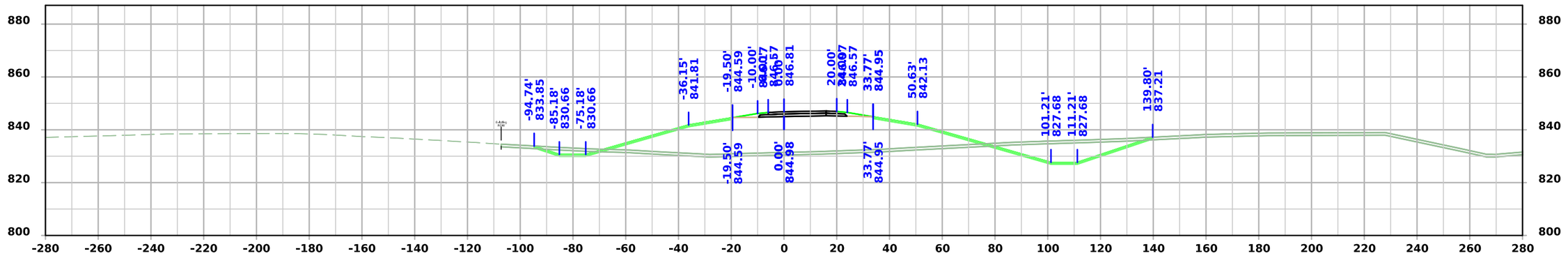
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.104

5:05:53 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPA063_62063095Z09_ORD_Y100_Grading.dgn

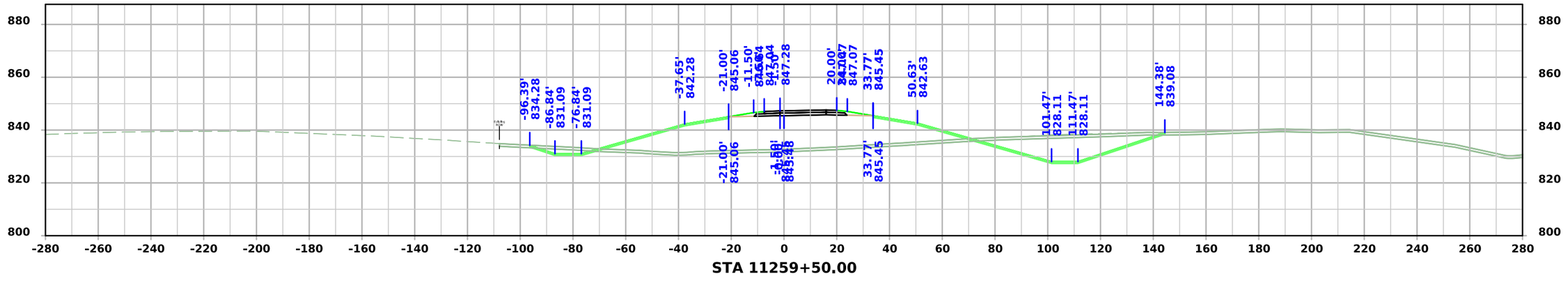
Ramp A



STA 11260+00.00



STA 11259+75.00

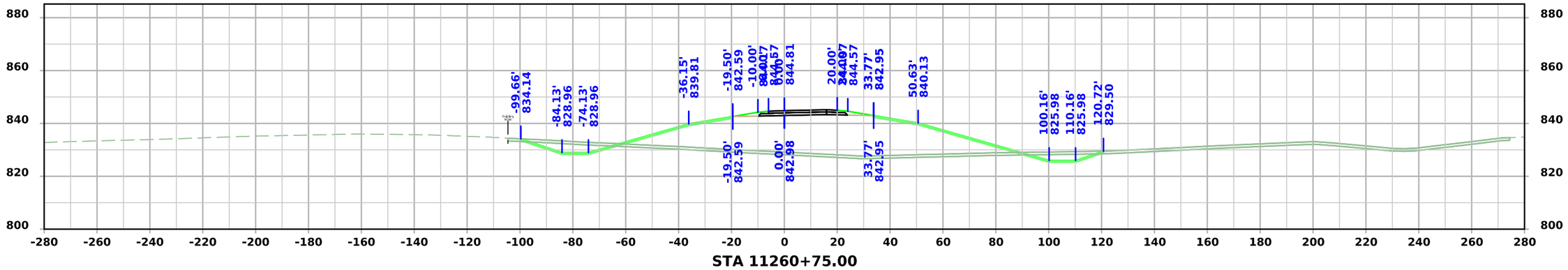


STA 11259+50.00

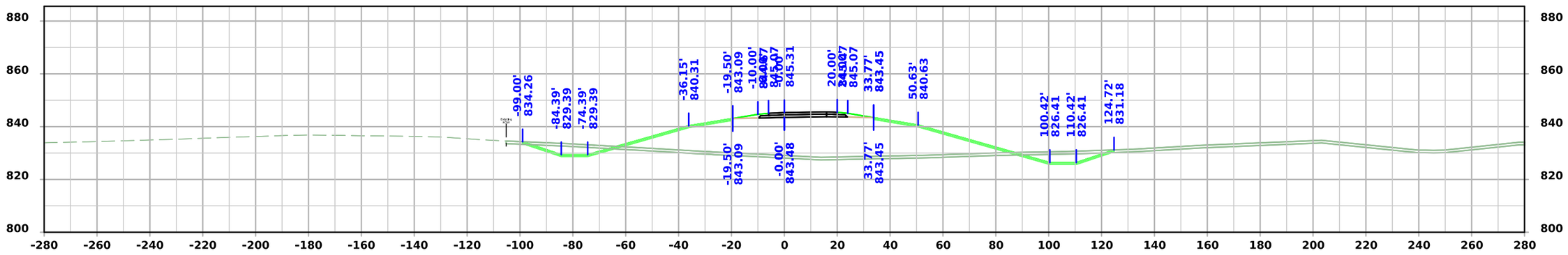
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.105

5:05:55 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPA063_62063095Z09_ORD_Y100_Grading.dgn

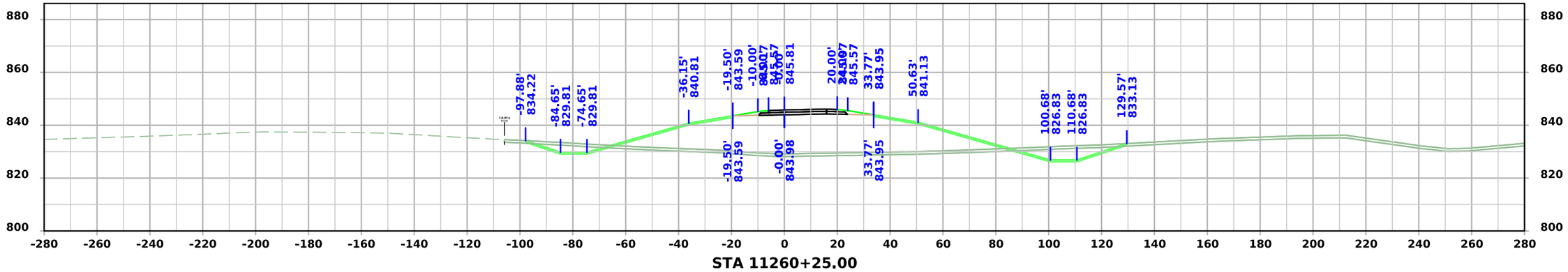
Ramp A



STA 11260+75.00



STA 11260+50.00

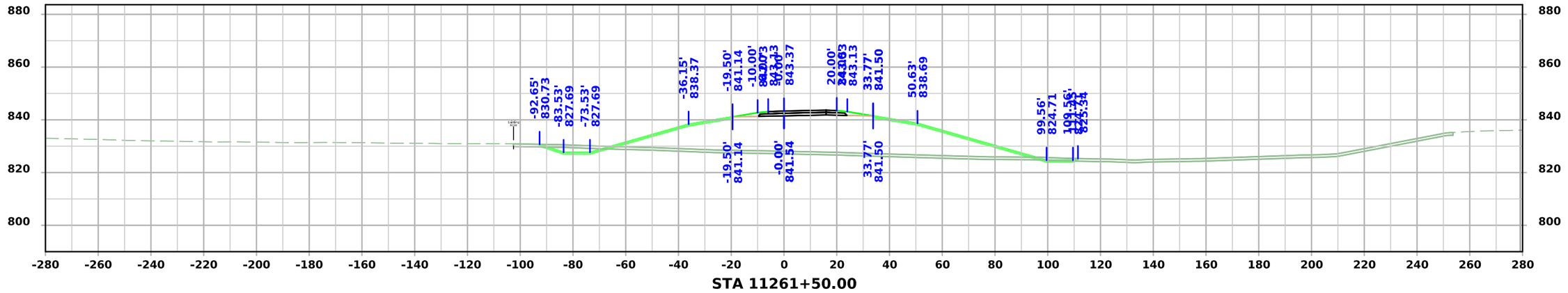


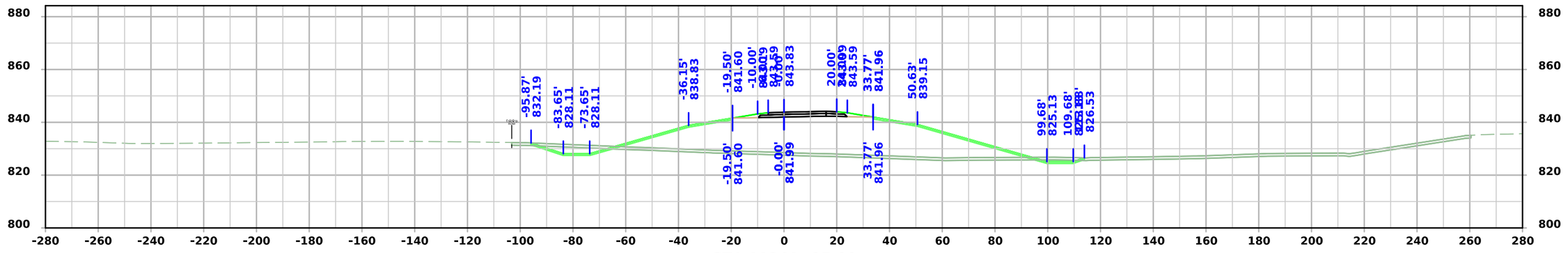
STA 11260+25.00

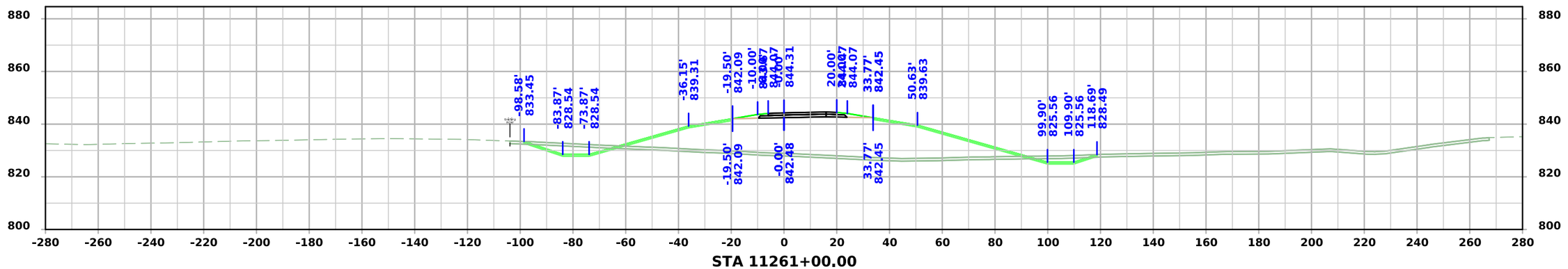
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.106

5:05:56 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPA063_62063095Z09_ORD_Y100_Grading.dgn

Ramp A



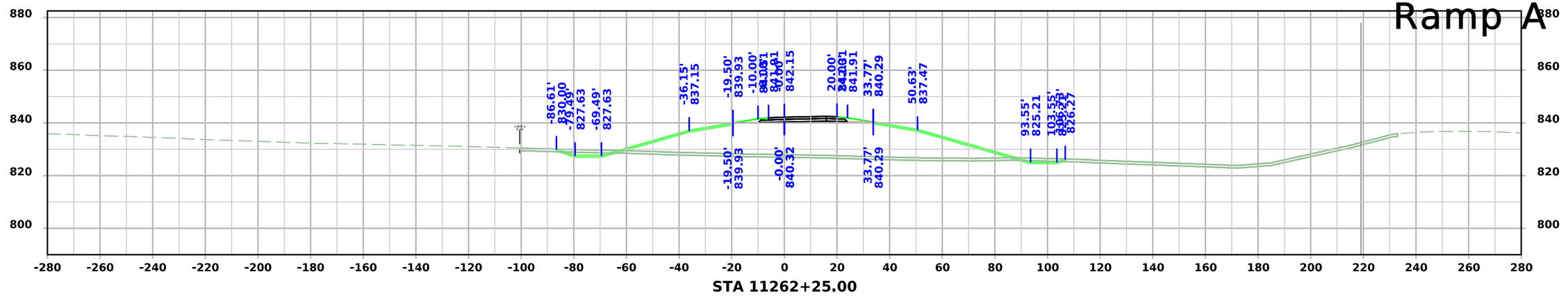


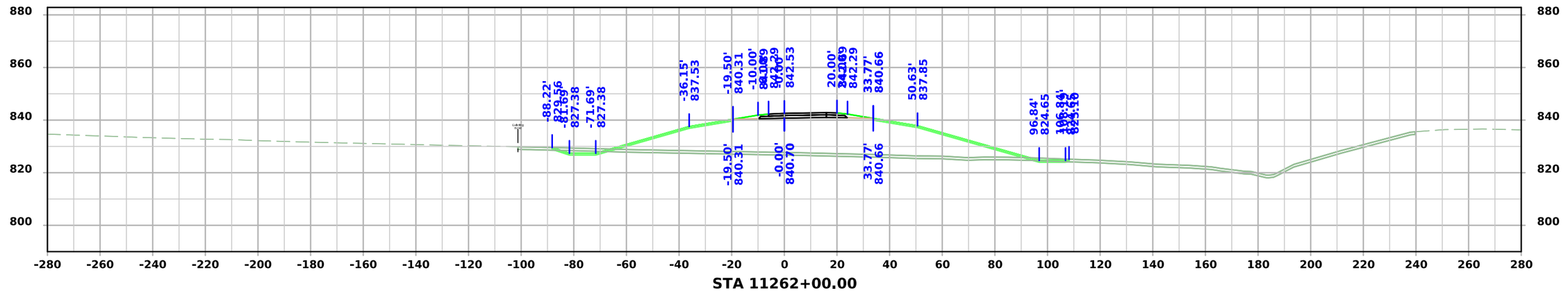


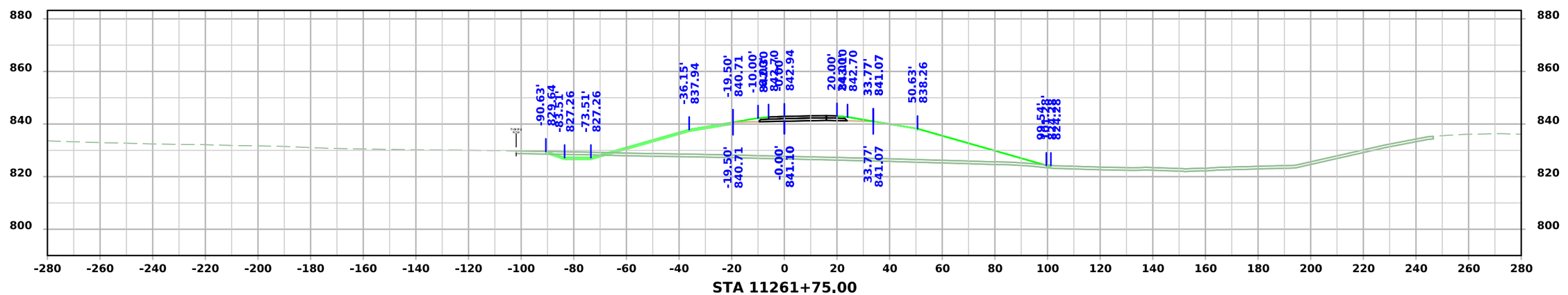
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.107

5:05:58 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPA063_62063095Z09_ORD_Y100_Grading.dgn

Ramp A



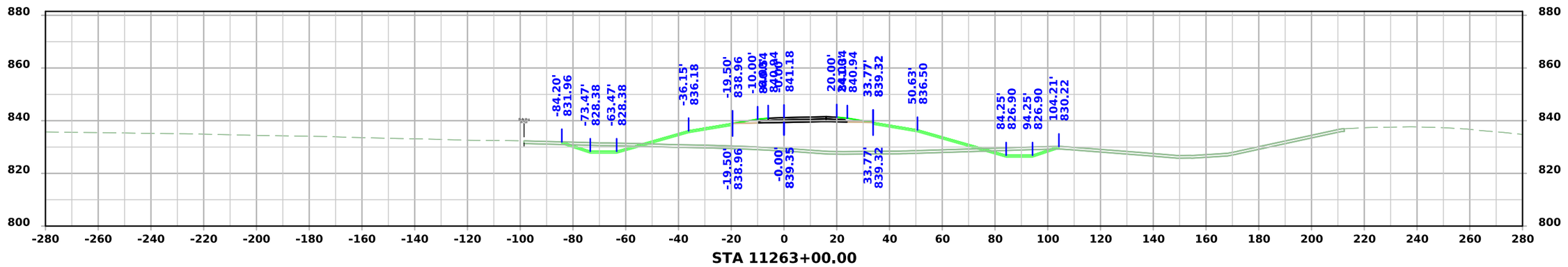




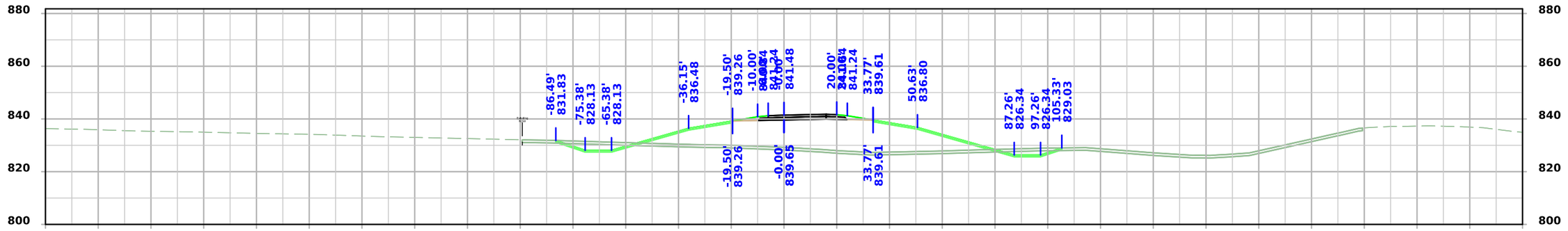
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.108

5:06:00 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPA063_62063095Z09_ORD_Y100_Grading.dgn

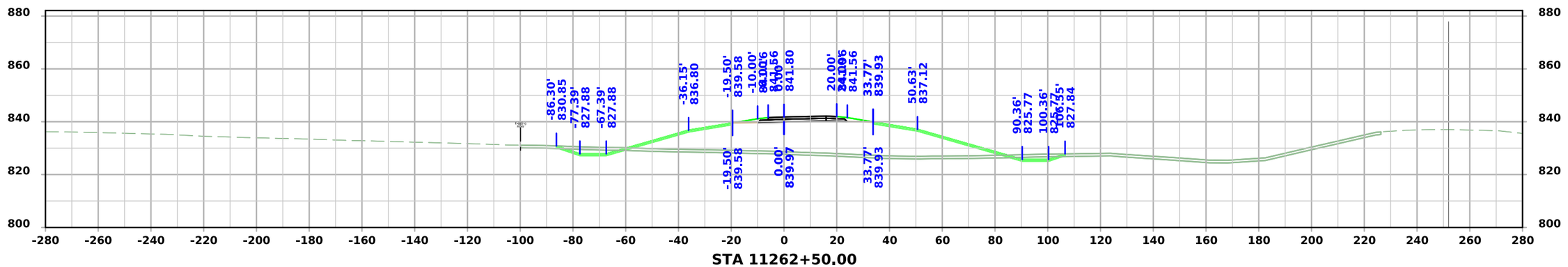
Ramp A



STA 11263+00.00



STA 11262+75.00

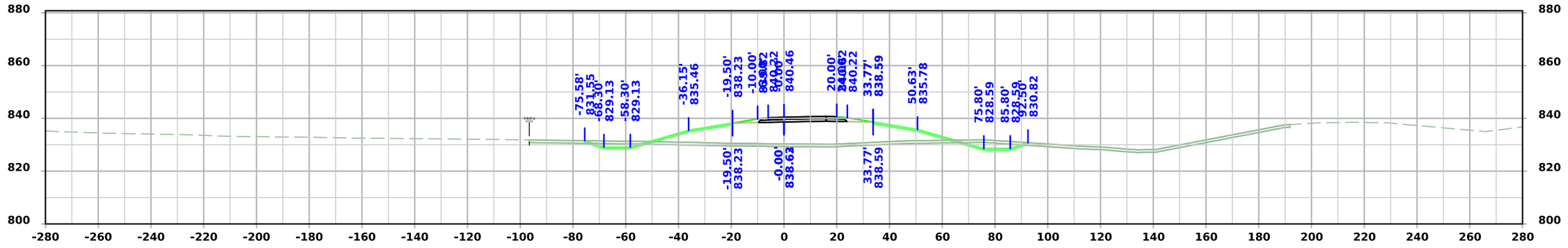


STA 11262+50.00

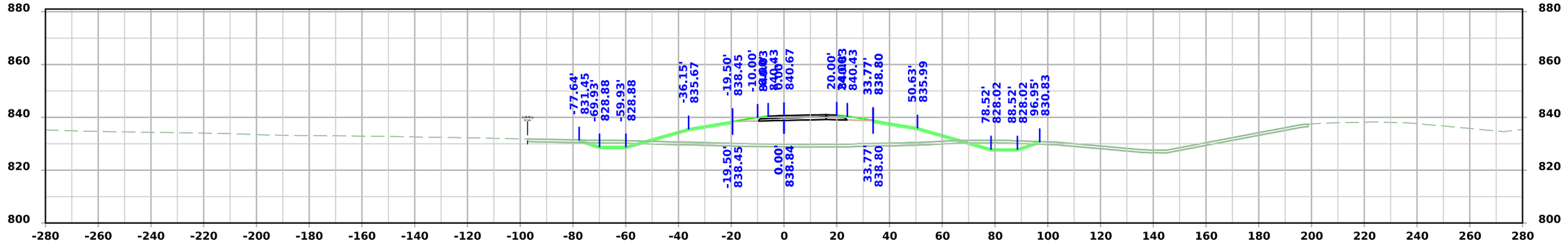
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.109

5:06:02 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPA063_62063095Z09_ORD_Y100_Grading.dgn

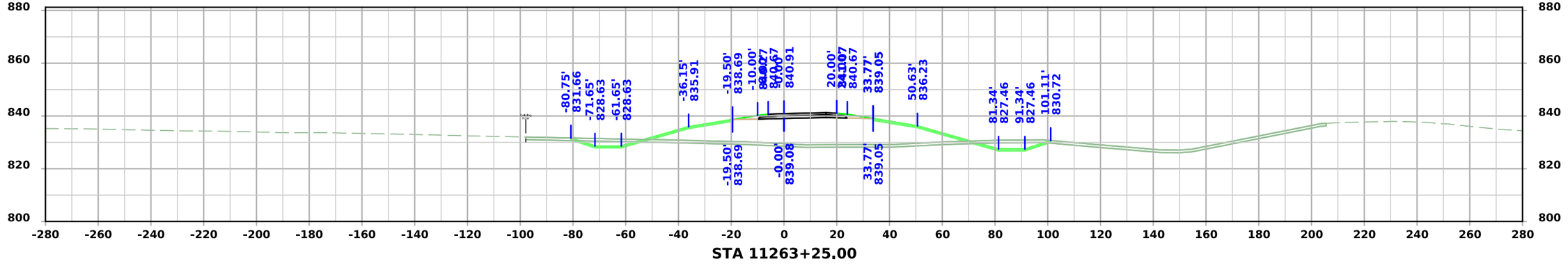
Ramp A



STA 11263+75.00



STA 11263+50.00

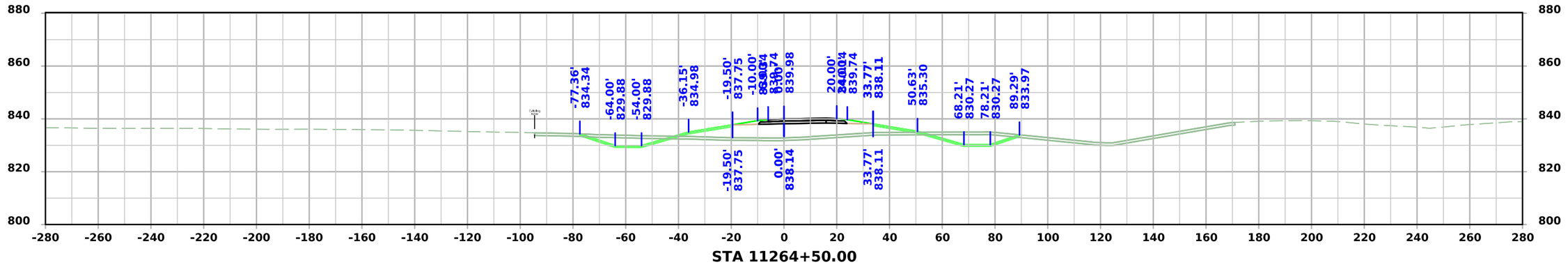


STA 11263+25.00

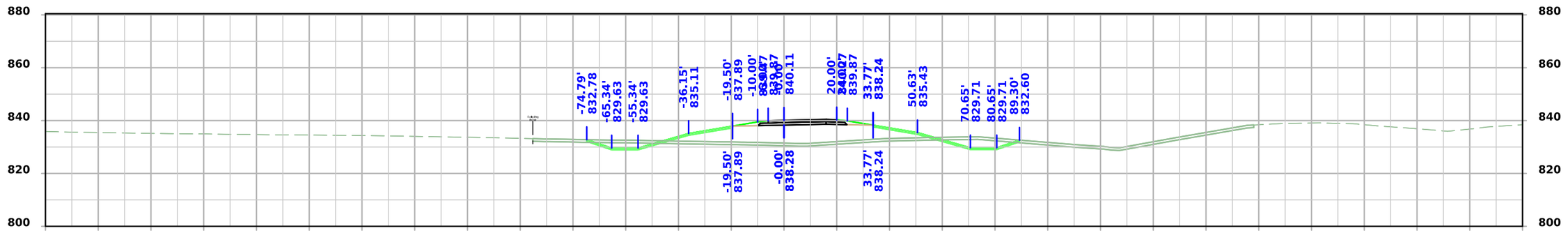
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.110

5:06:04 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPA063_62063095Z09_ORD_Y100_Grading.dgn

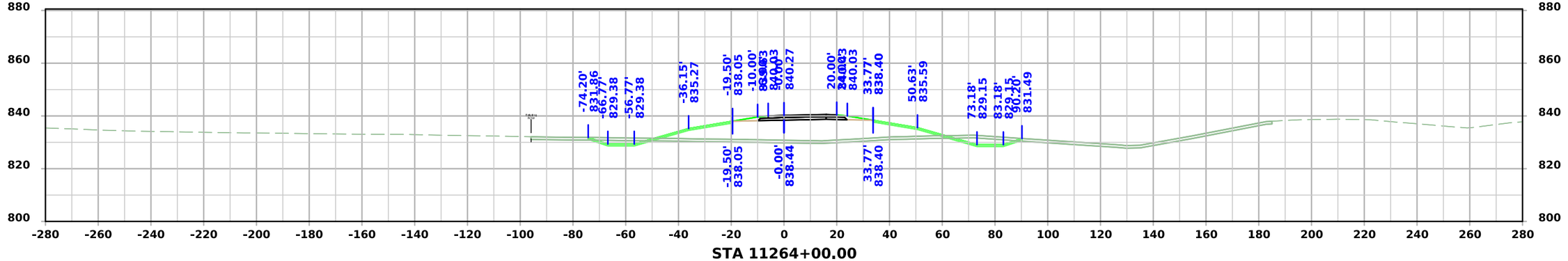
Ramp A



STA 11264+50.00



STA 11264+25.00

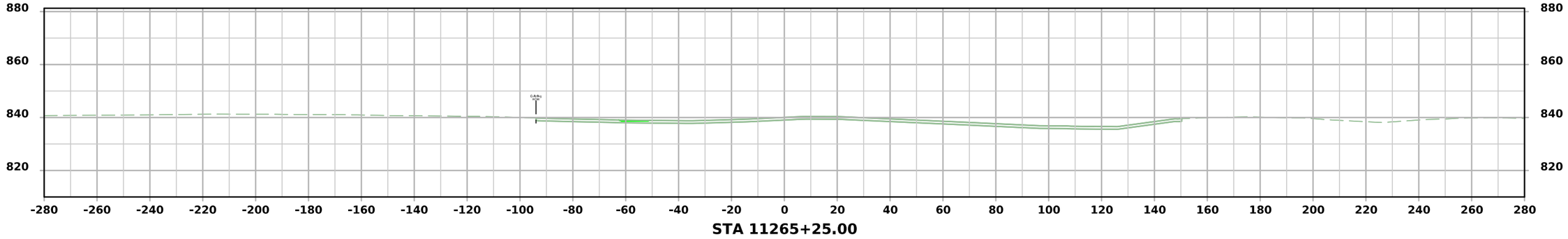


STA 11264+00.00

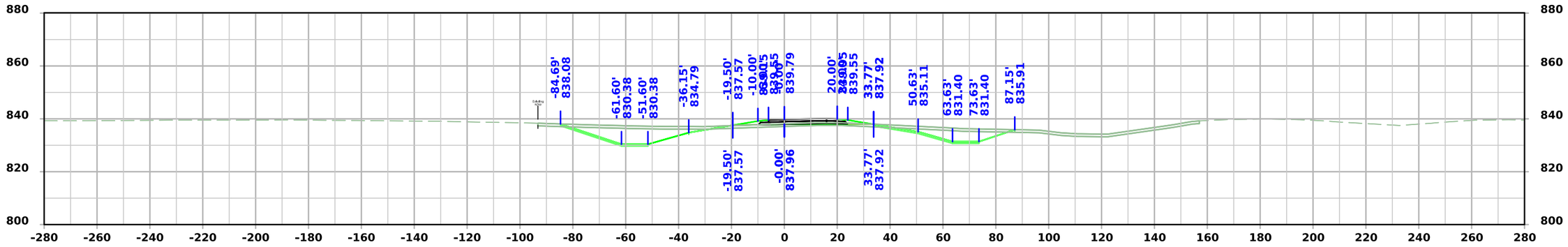
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.111

5:06:05 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPA063_62063095Z09_ORD_Y100_Grading.dgn

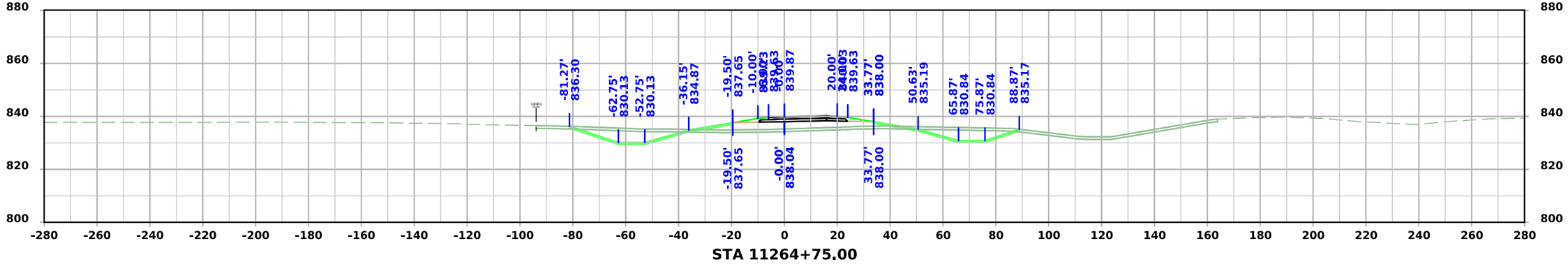
Ramp A



STA 11265+25.00



STA 11265+00.00

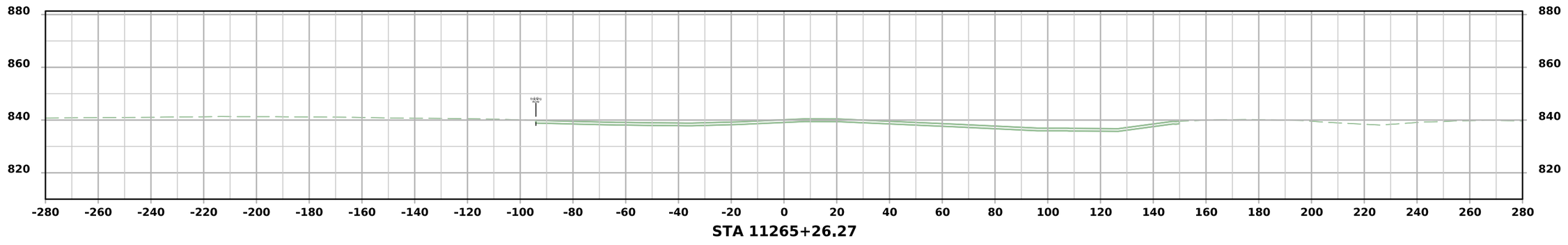


STA 11264+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.112

5:06:07 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPA063_62063095Z09_ORD_Y100_Grading.dgn

Ramp A

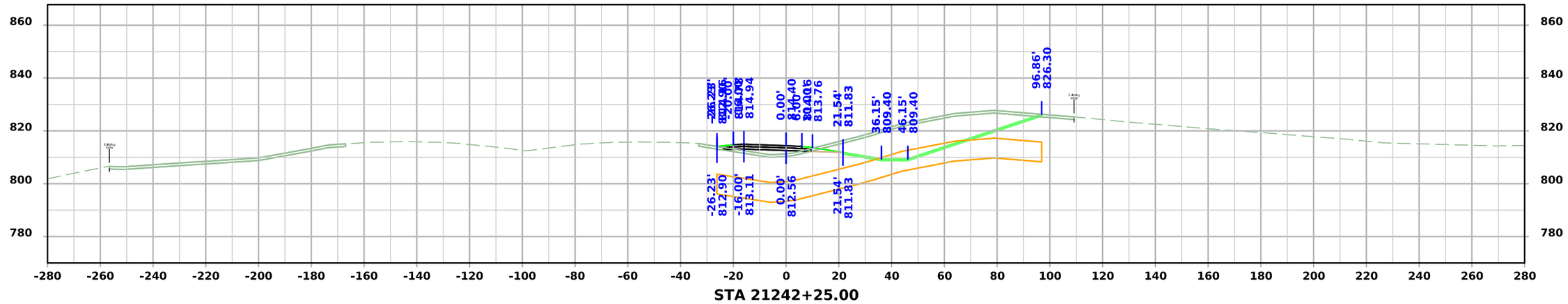


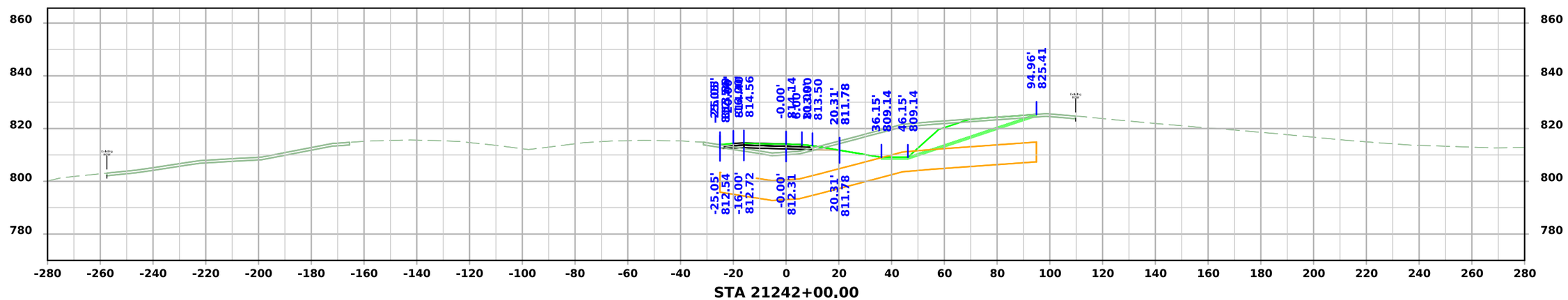
STA 11265+26.27

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.113	

5:06:08 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPA063_62063095Z09_ORD_Y100_Grading.dgn

Ramp B

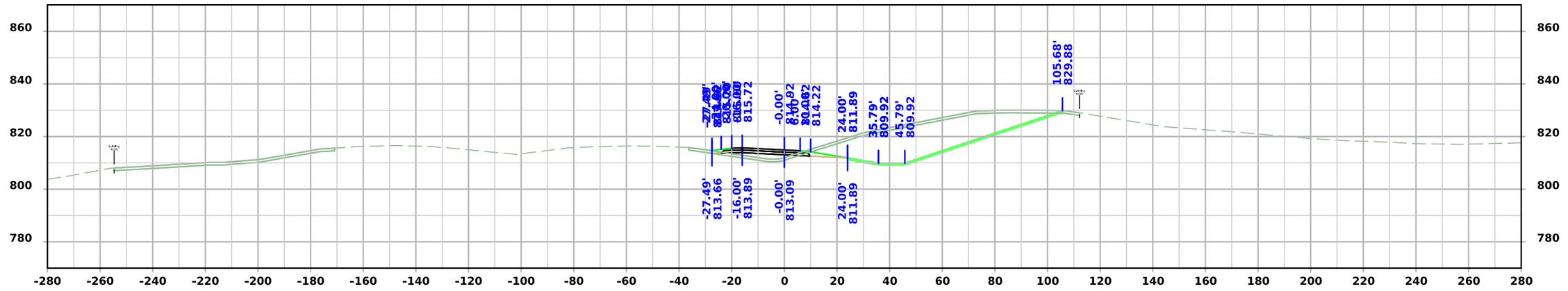




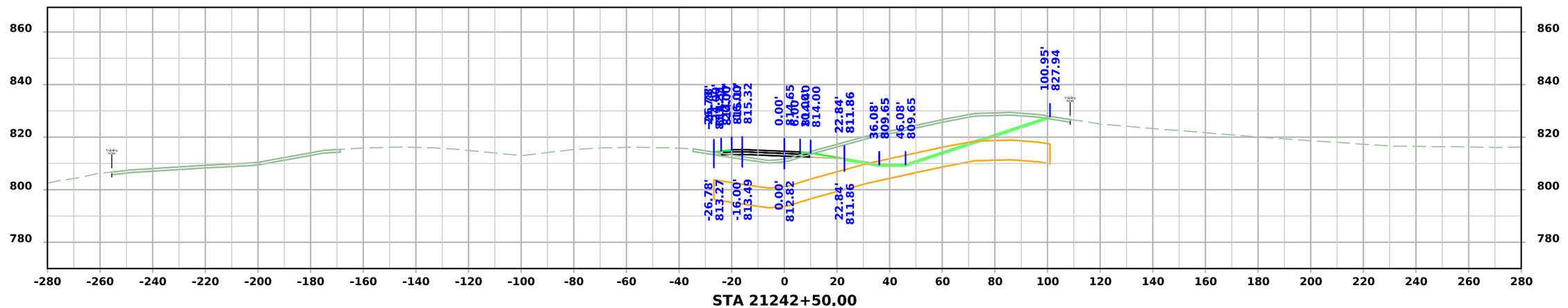
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.200

5:06:22 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPB063_62063095Z09_ORD_Y200_Grading.dgn

Ramp B



STA 21242+75.00

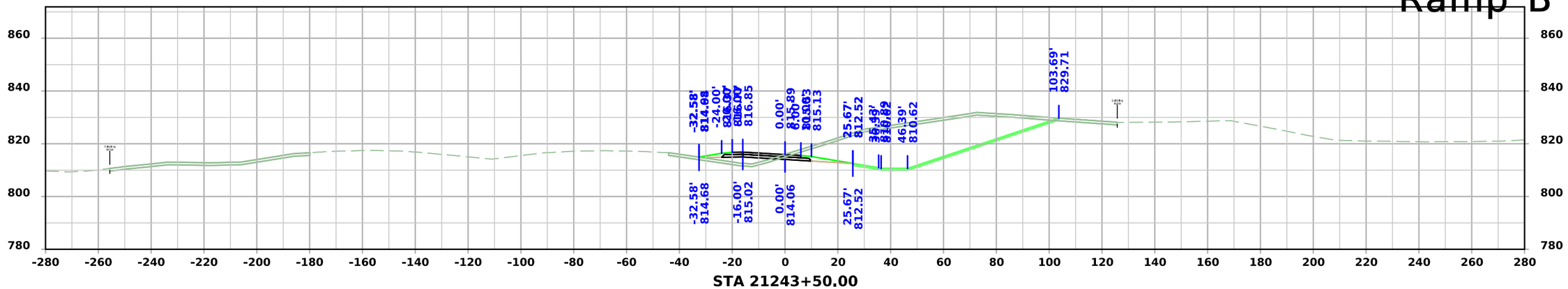


STA 21242+50.00

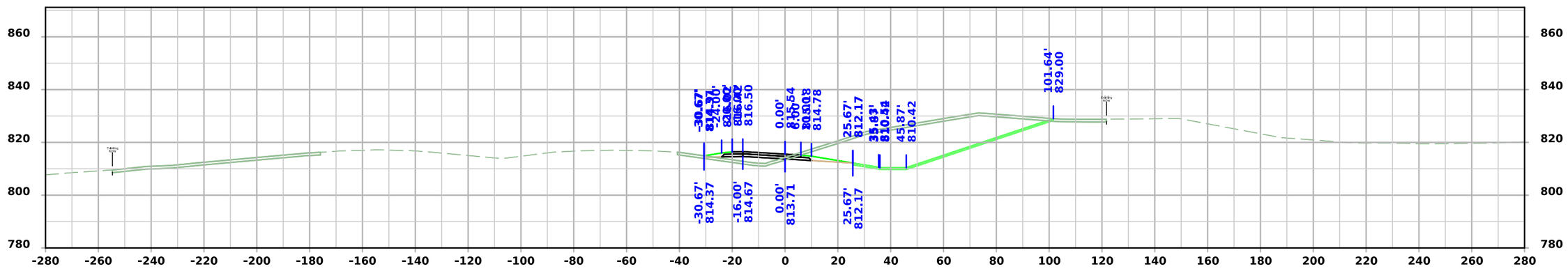
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.201

5:06:24 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPB063_62063095Z09_ORD_Y200_Grading.dgn

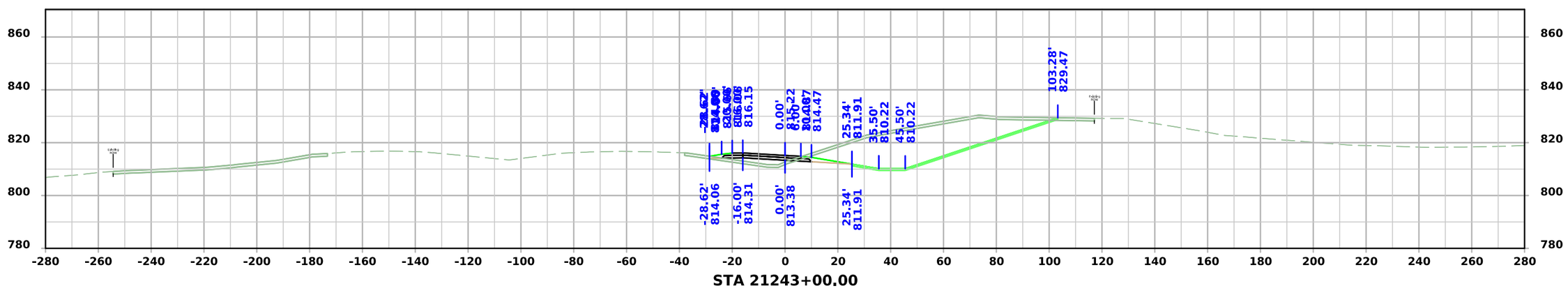
Ramp B



STA 21243+50.00



STA 21243+25.00

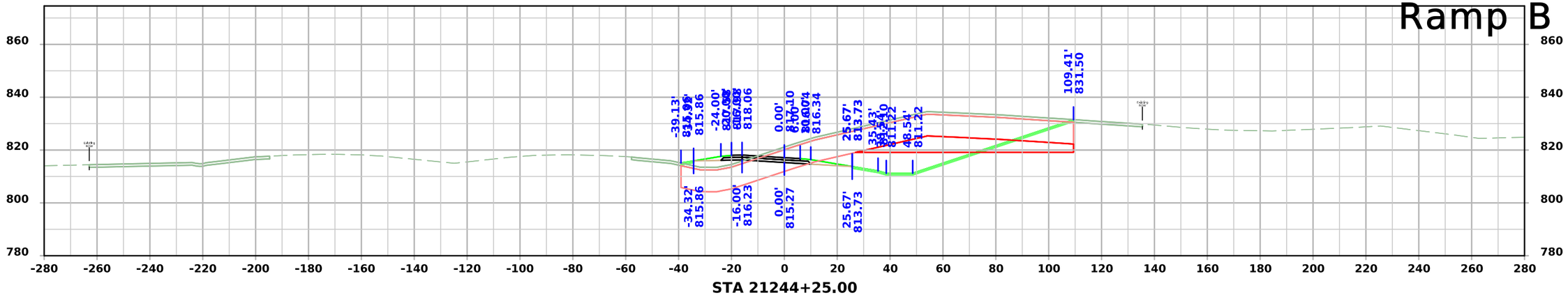


STA 21243+00.00

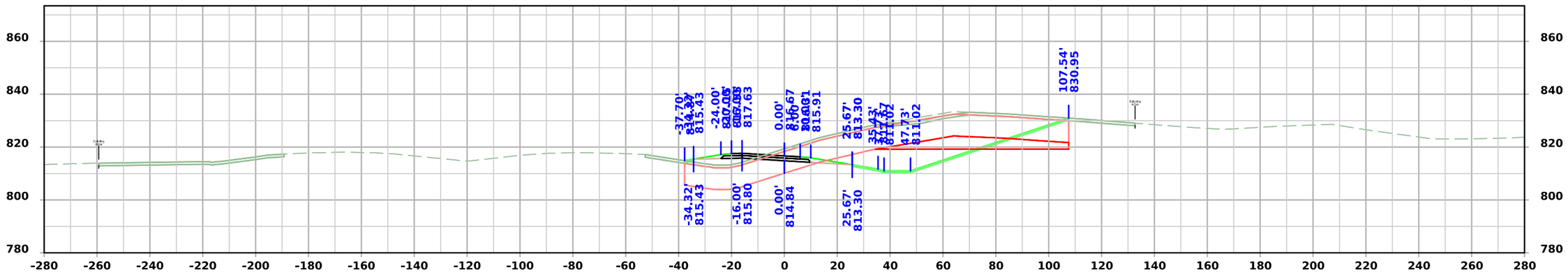
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.202

5:06:26 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPB063_62063095Z09_ORD_Y200_Grading.dgn

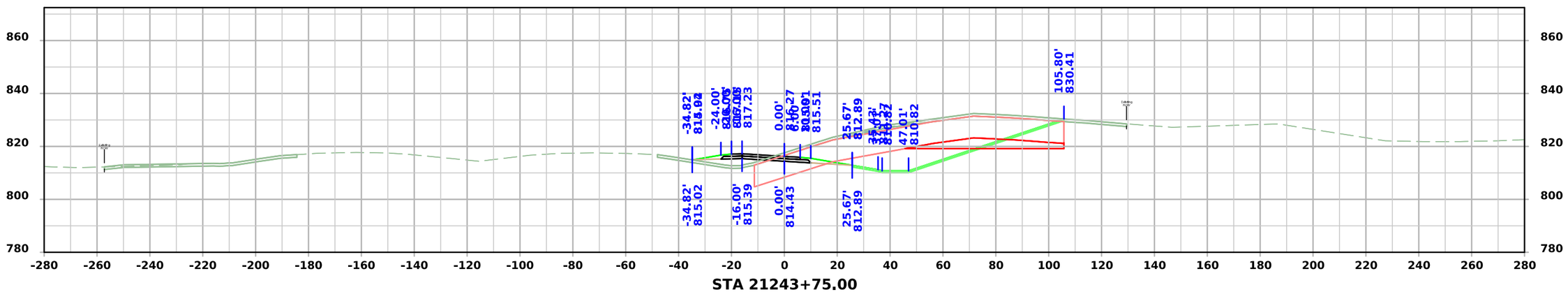
Ramp B



STA 21244+25.00



STA 21244+00.00

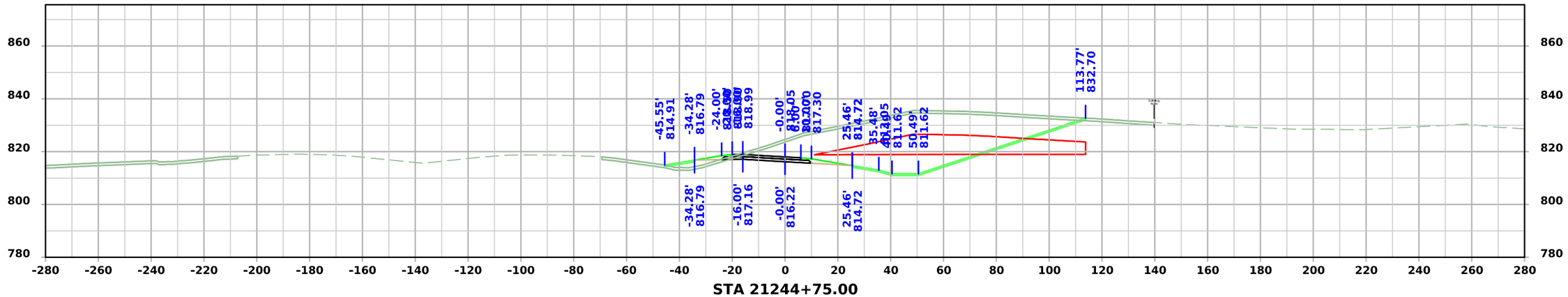


STA 21243+75.00

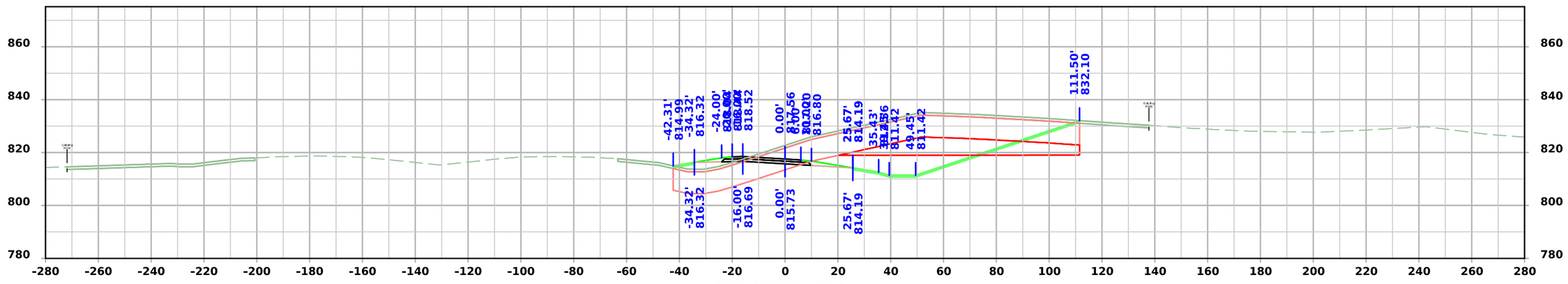
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.203

5:06:27 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPB063_62063095Z09_ORD_Y200_Grading.dgn

Ramp B



STA 21244+75.00

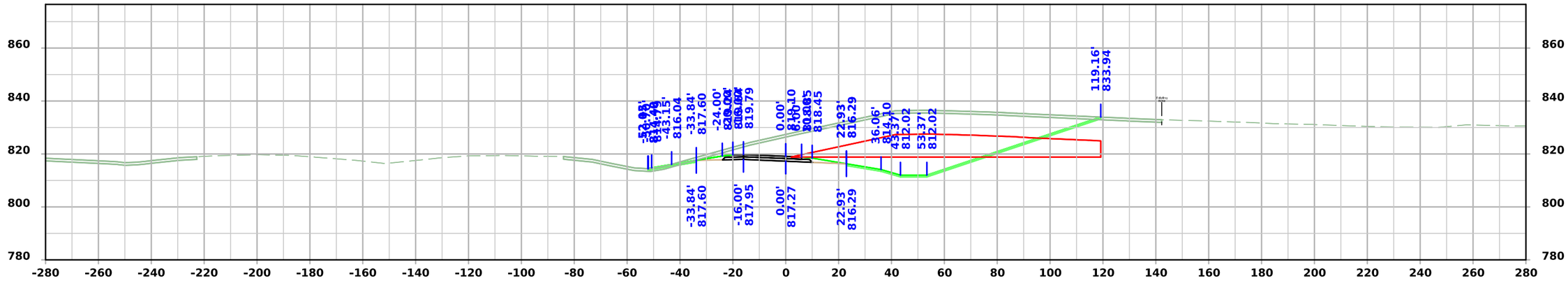


STA 21244+50.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.204

5:06:29 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPB063_62063095Z09_ORD_Y200_Grading.dgn

Ramp B



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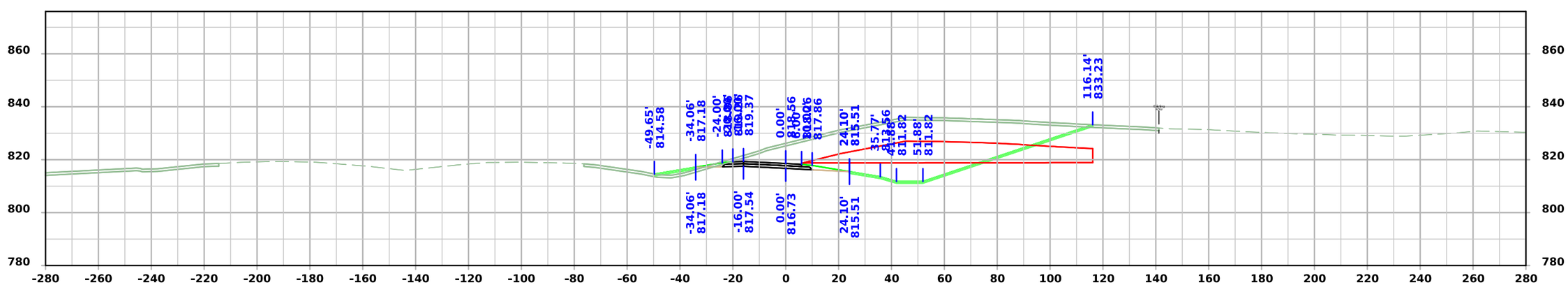
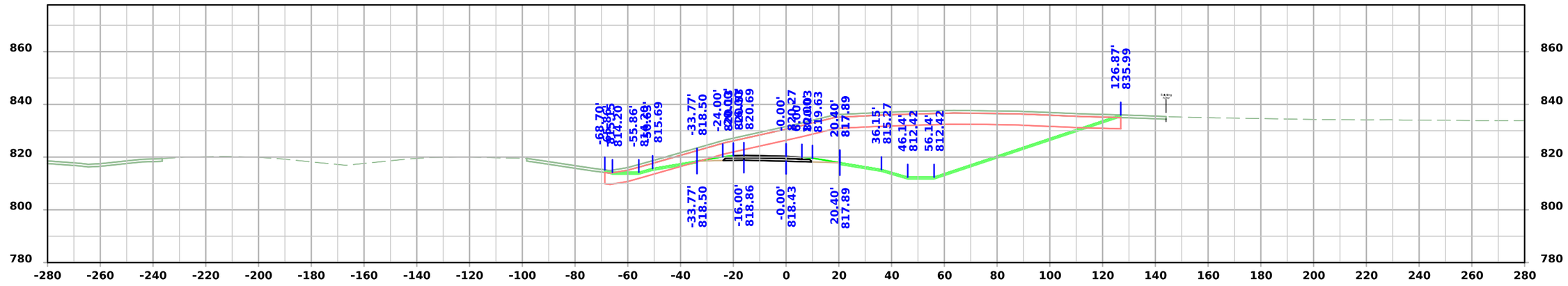


STA 21245+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.205

5:06:30 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPB063_62063095Z09_ORD_Y200_Grading.dgn

Ramp B



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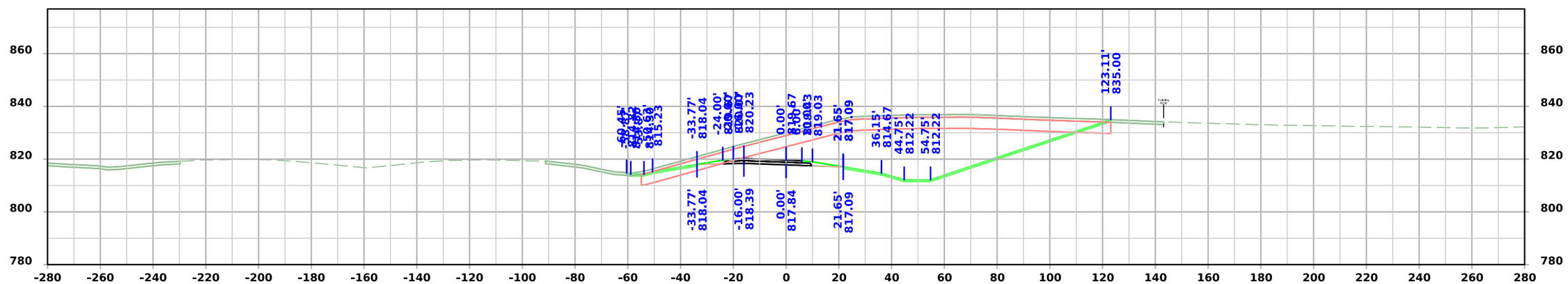
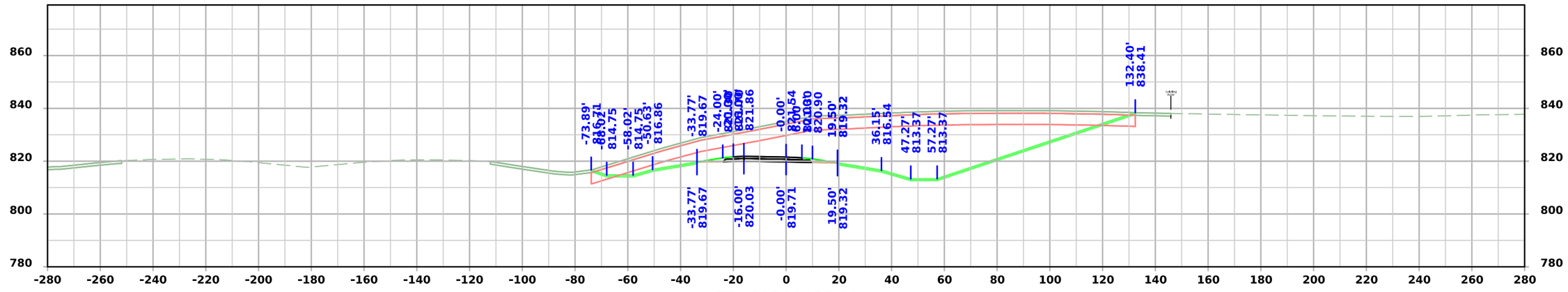


STA 21245+50.00

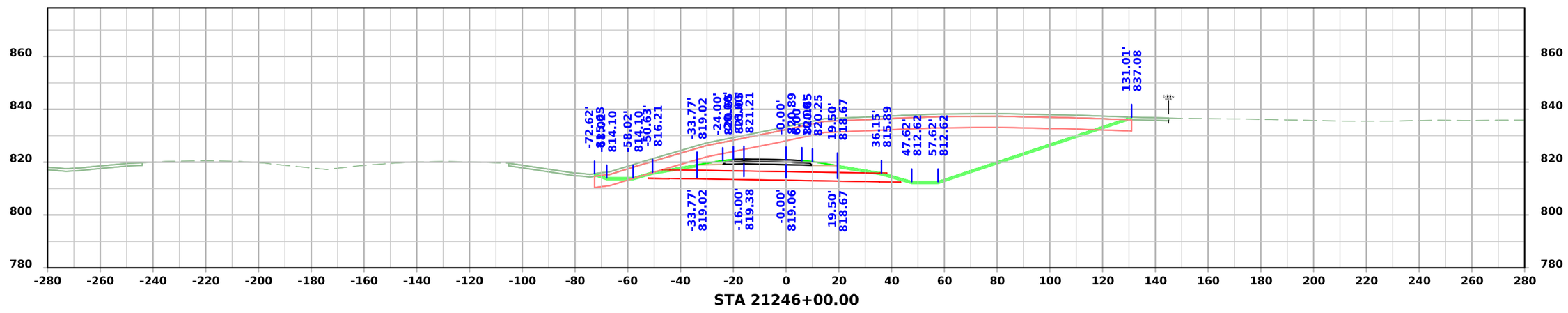
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.206

5:06:31 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPB063_62063095Z09_ORD_Y200_Grading.dgn

Ramp B



STA 21246+25.00



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FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.207

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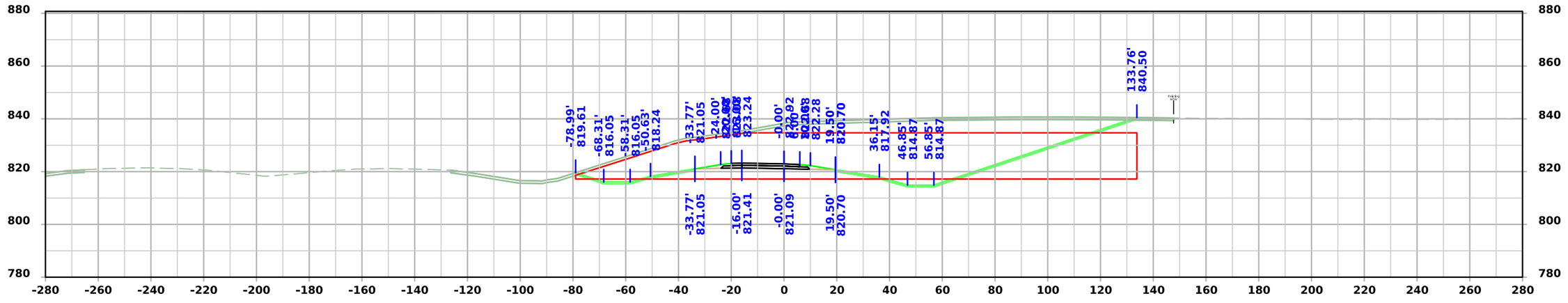
Ramp B



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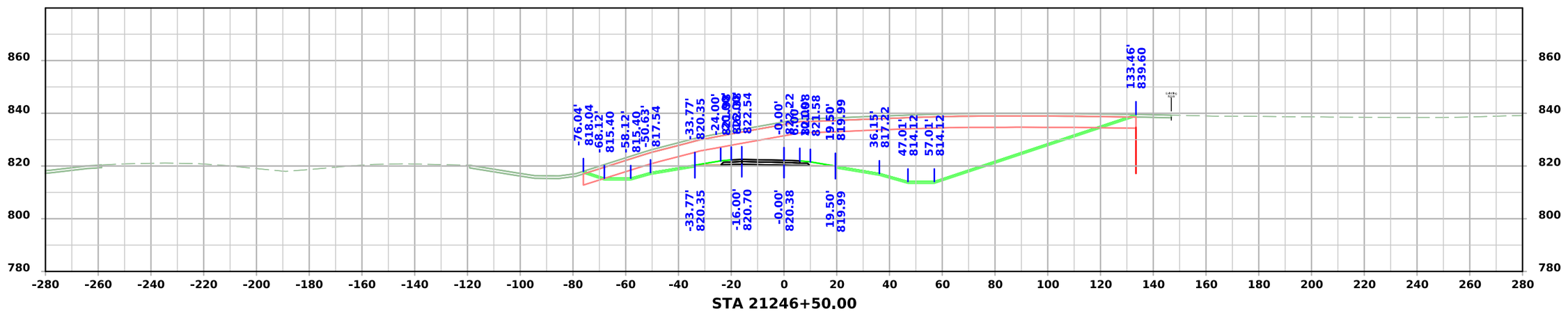

STA 21246+50.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.208

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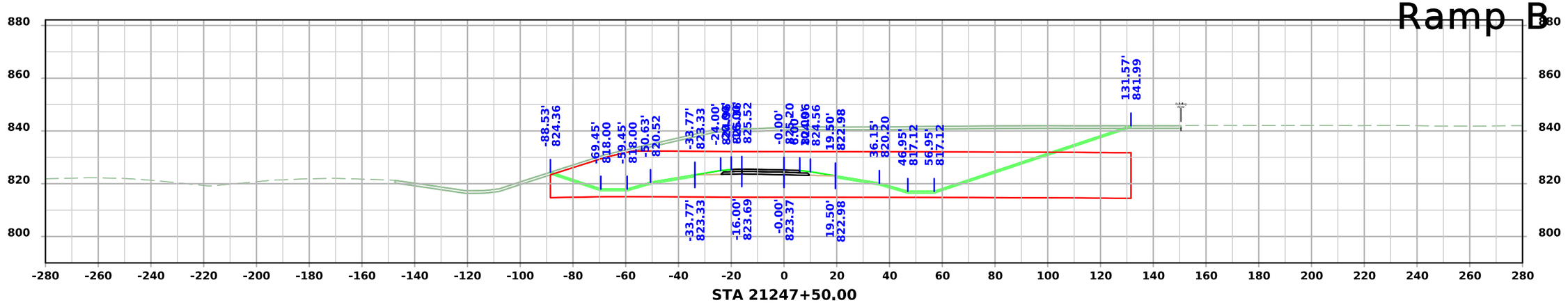
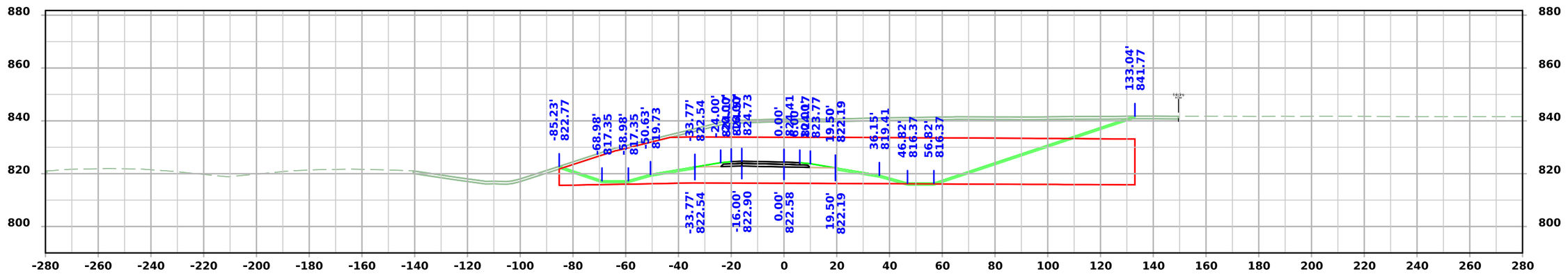
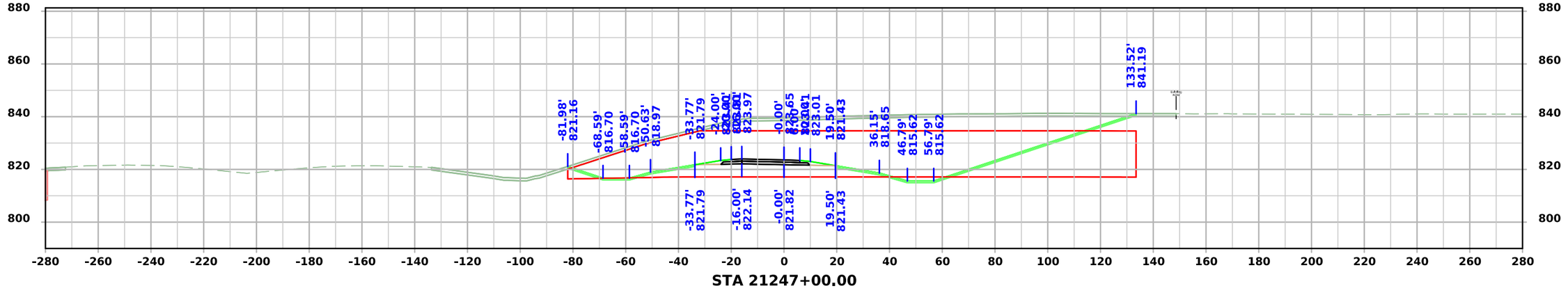
Ramp B



STA 21247+50.00



STA 21247+25.00

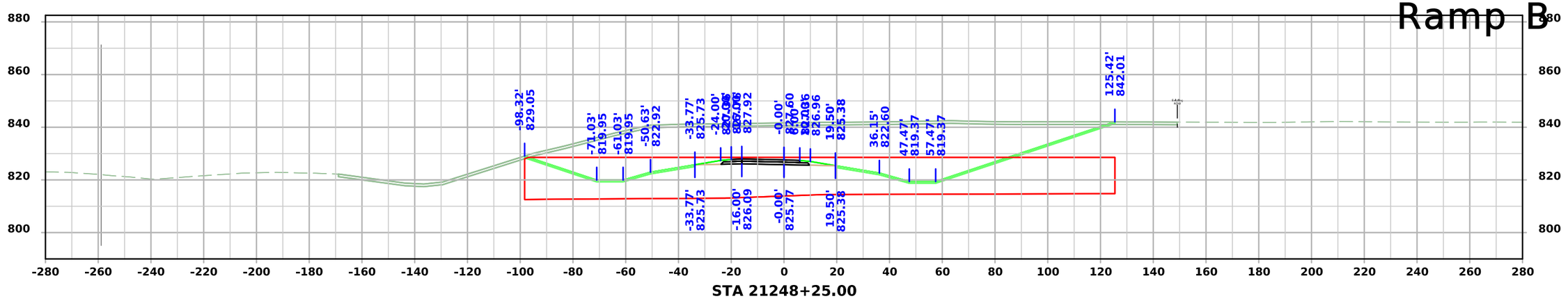


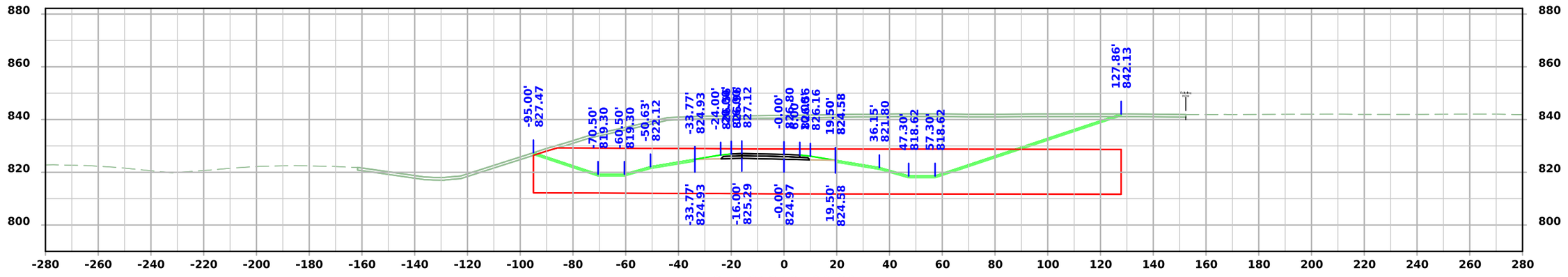
STA 21247+00.00

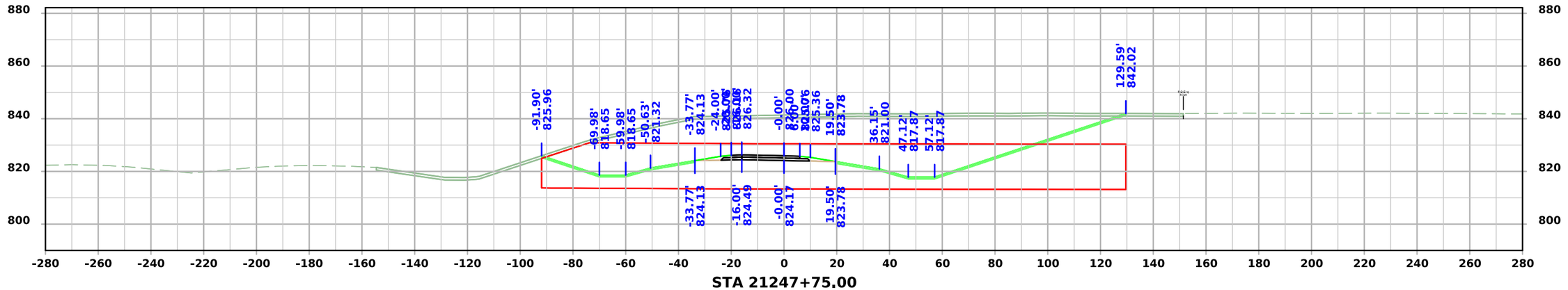
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.209

5:06:35 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPB063_62063095Z09_ORD_Y200_Grading.dgn

Ramp B







FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.210

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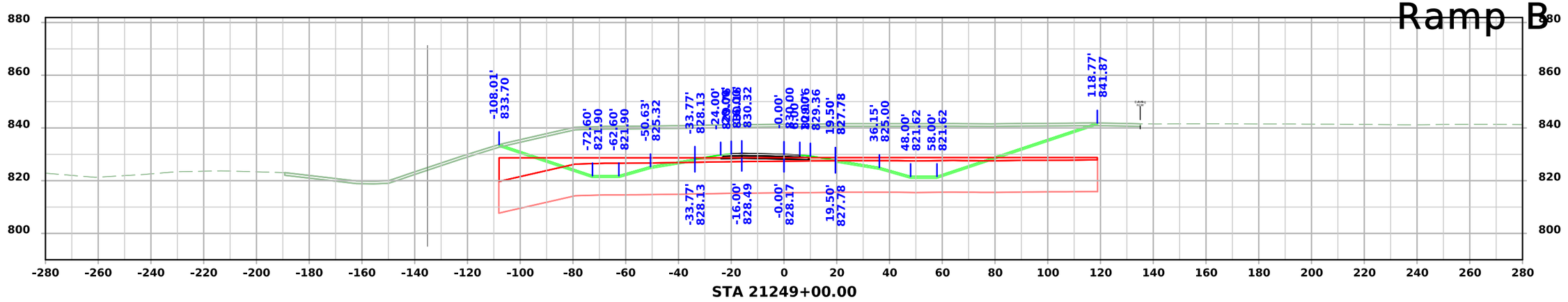
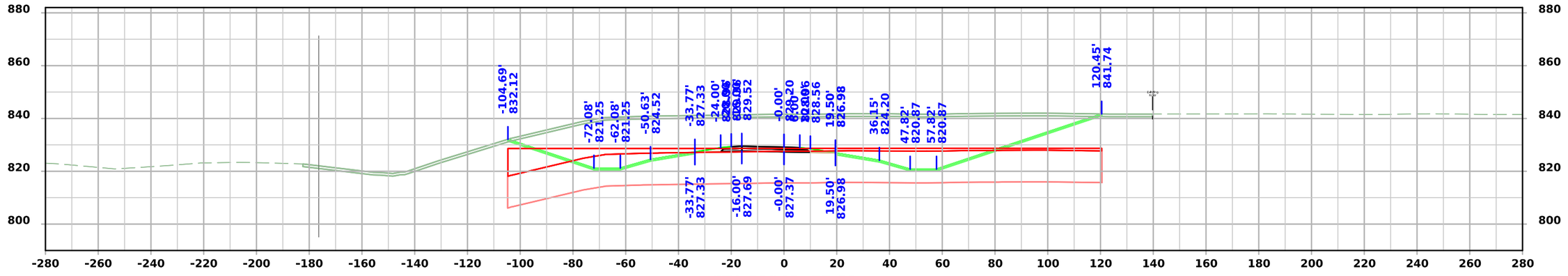
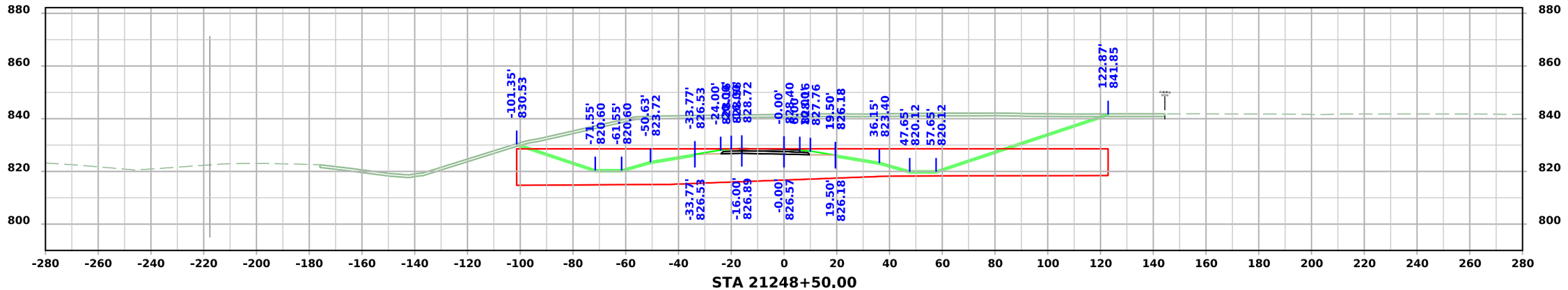
Ramp B



STA 21249+00.00



STA 21248+75.00

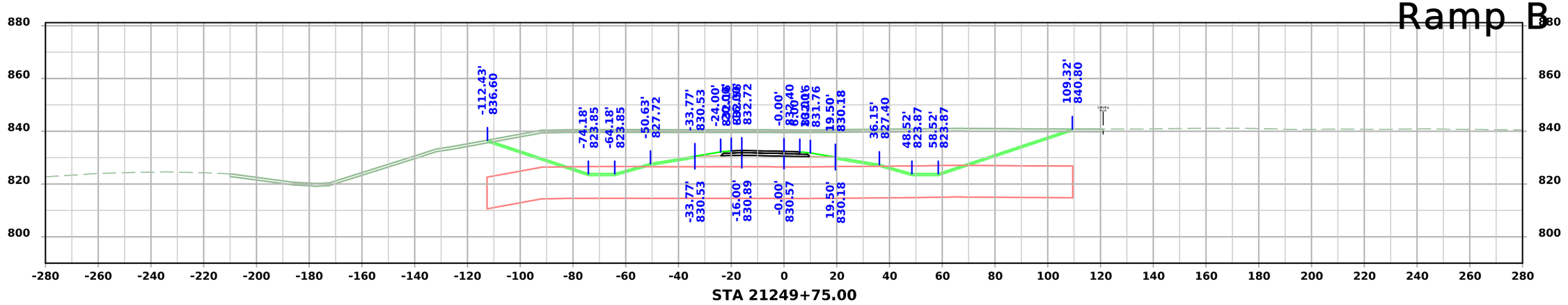


STA 21248+50.00

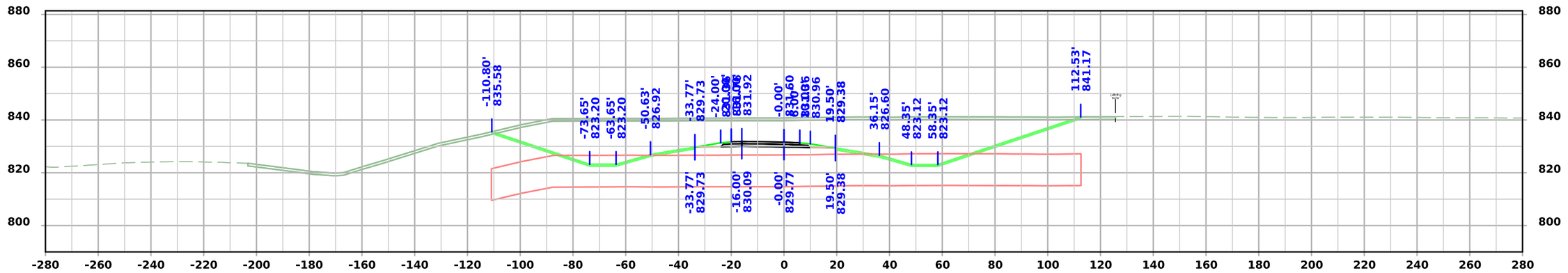
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.211

5:06:39 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPB063_62063095Z09_ORD_Y200_Grading.dgn

Ramp B



STA 21249+75.00



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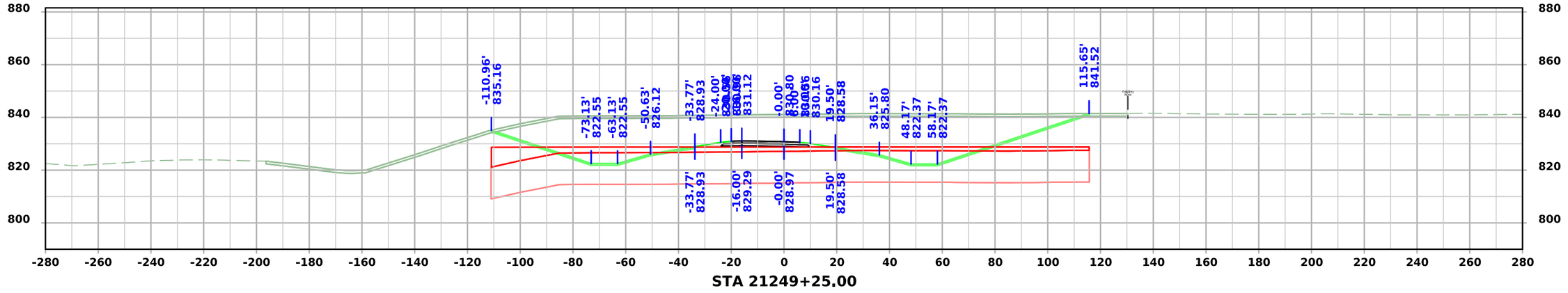
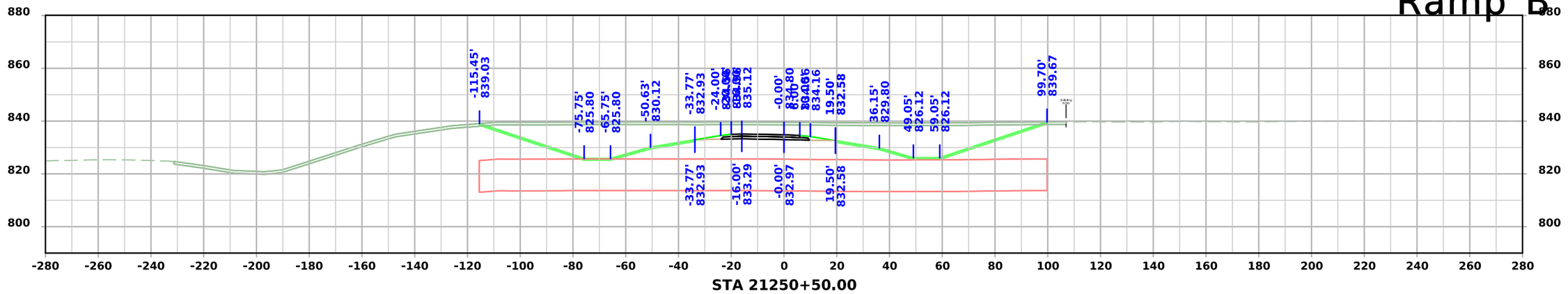


STA 21249+25.00

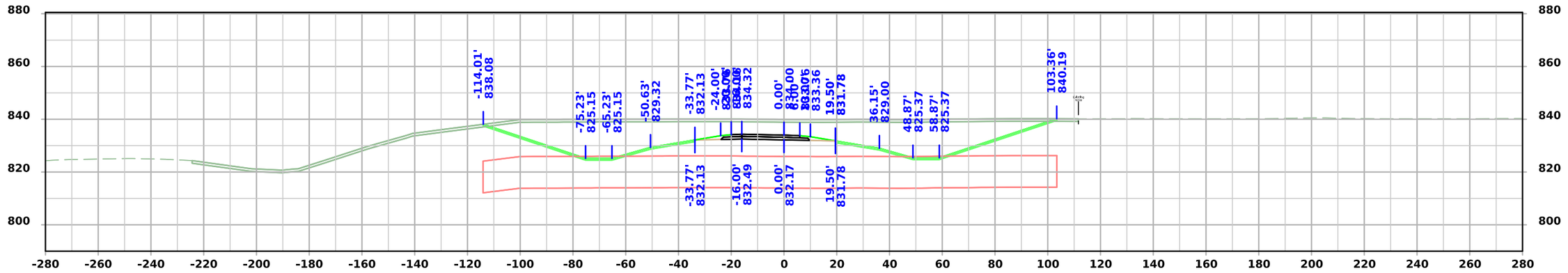
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.212

5:06:40 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPB063_62063095Z09_ORD_Y200_Grading.dgn

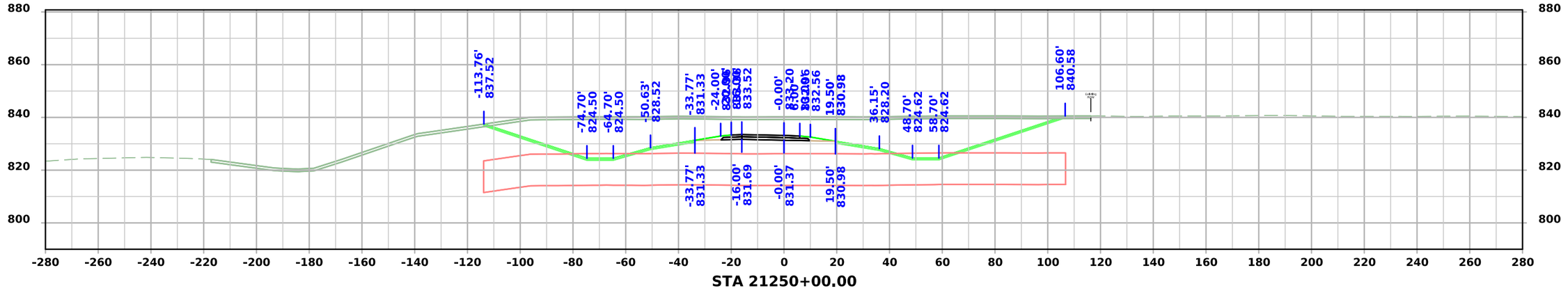
Ramp B



STA 21250+50.00



STA 21250+25.00

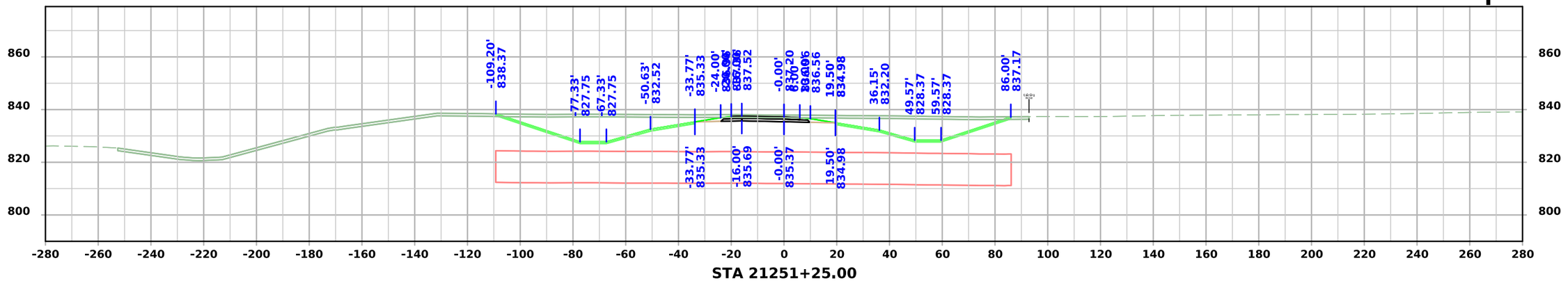


STA 21250+00.00

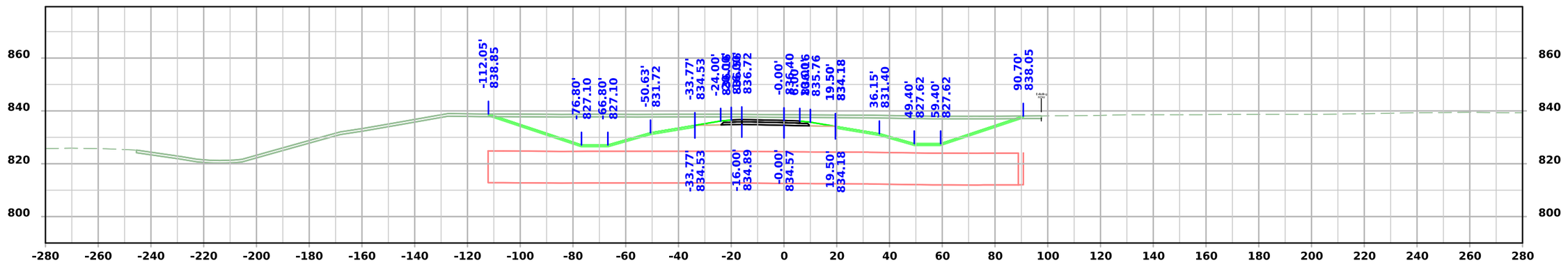
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.213

5:06:42 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPB063_62063095Z09_ORD_Y200_Grading.dgn

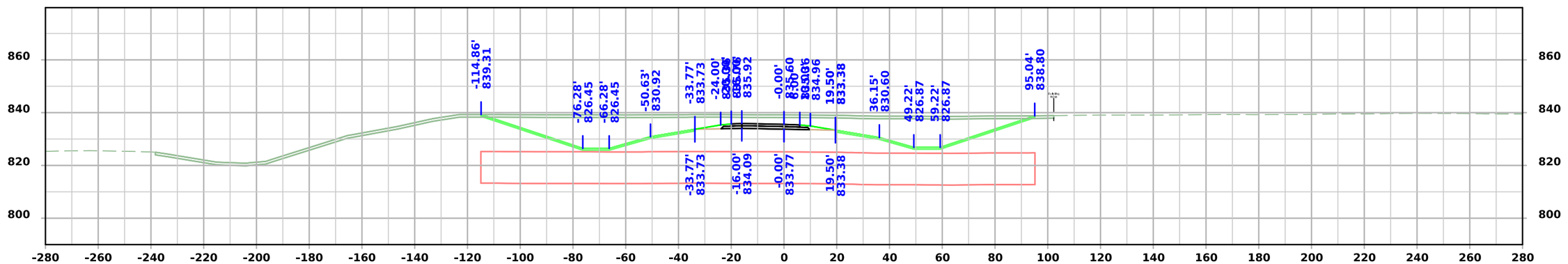
Ramp B



STA 21251+25.00



STA 21251+00.00

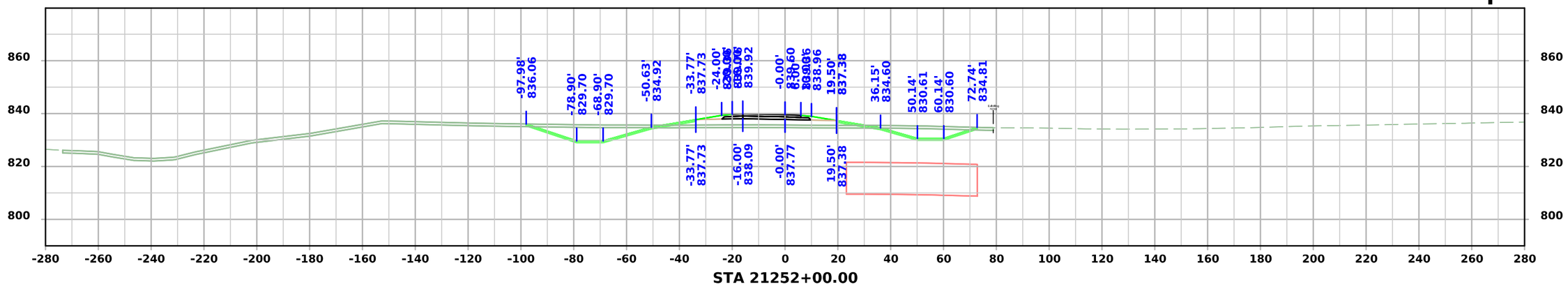


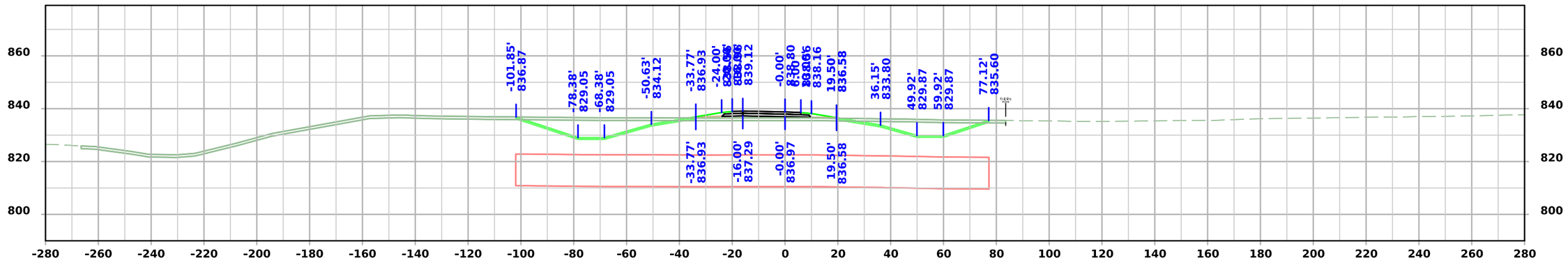
STA 21250+75.00

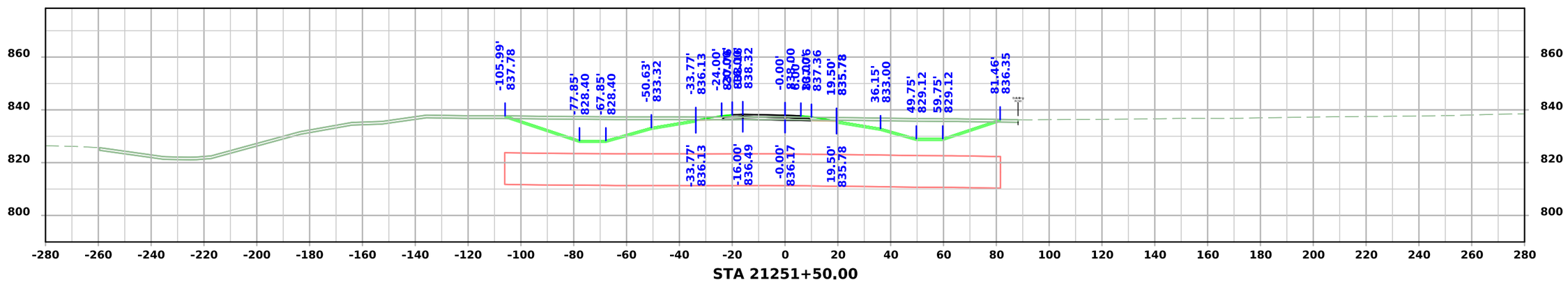
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.214

5:06:43 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPB063_62063095Z09_ORD_Y200_Grading.dgn

Ramp B



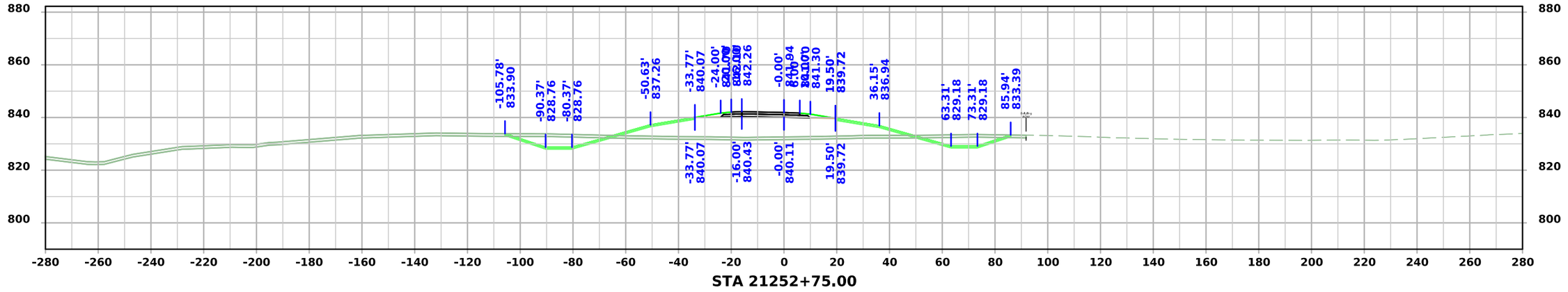


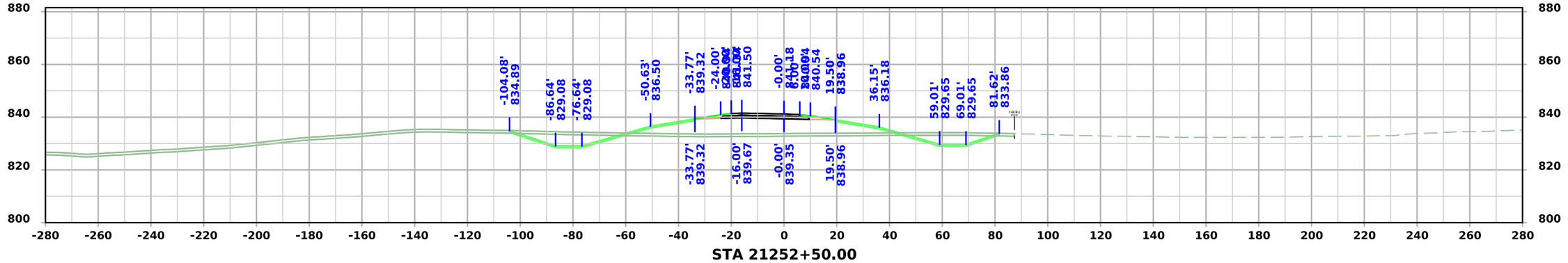


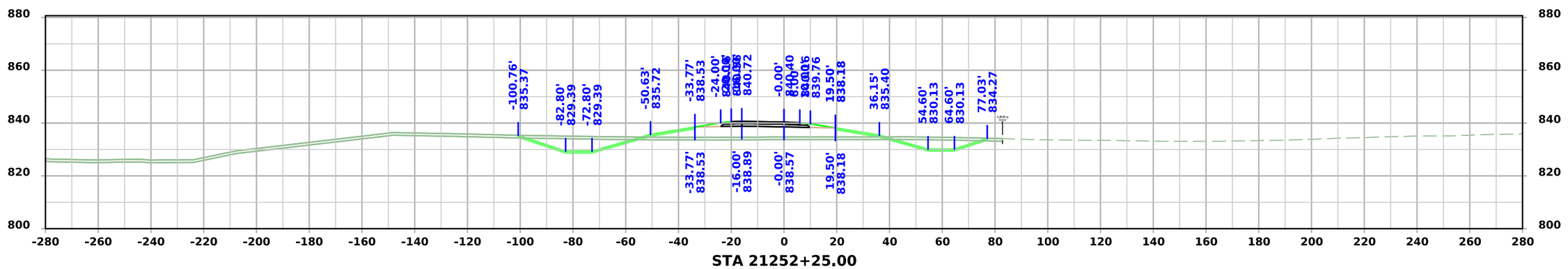
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.215

5:06:45 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPB063_62063095Z09_ORD_Y200_Grading.dgn

Ramp B



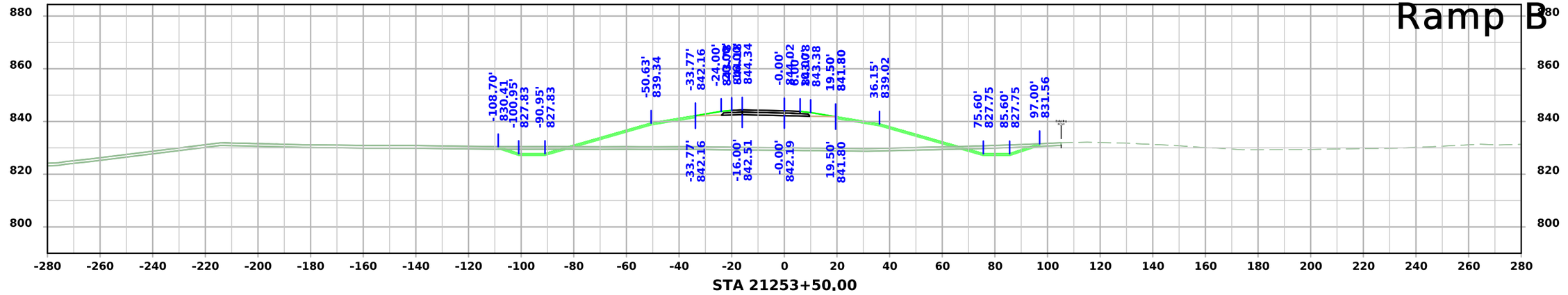




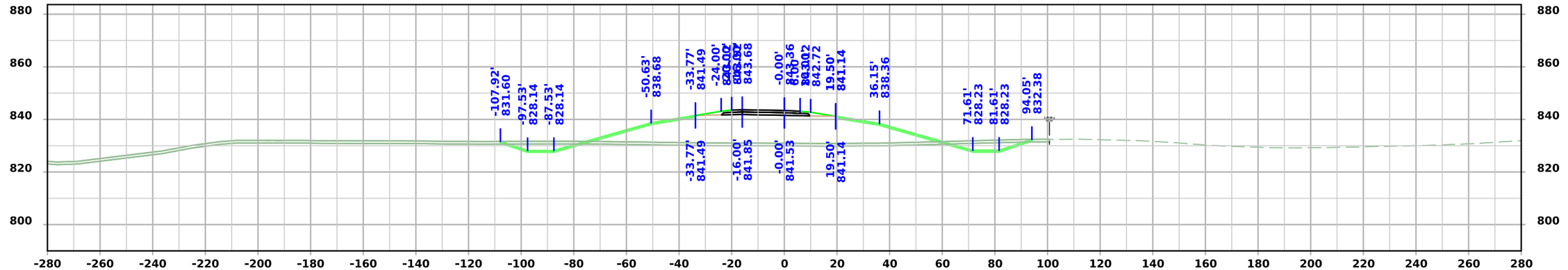
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.216

5:06:47 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPB063_62063095Z09_ORD_Y200_Grading.dgn

Ramp B



STA 21253+50.00



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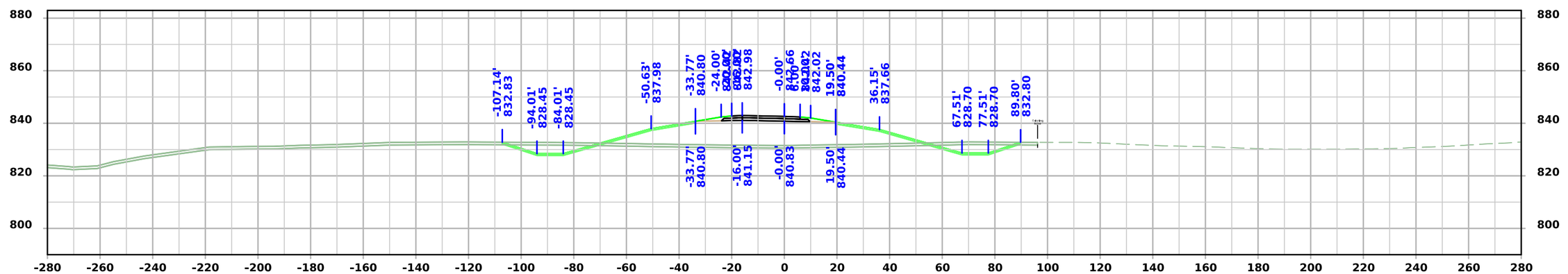
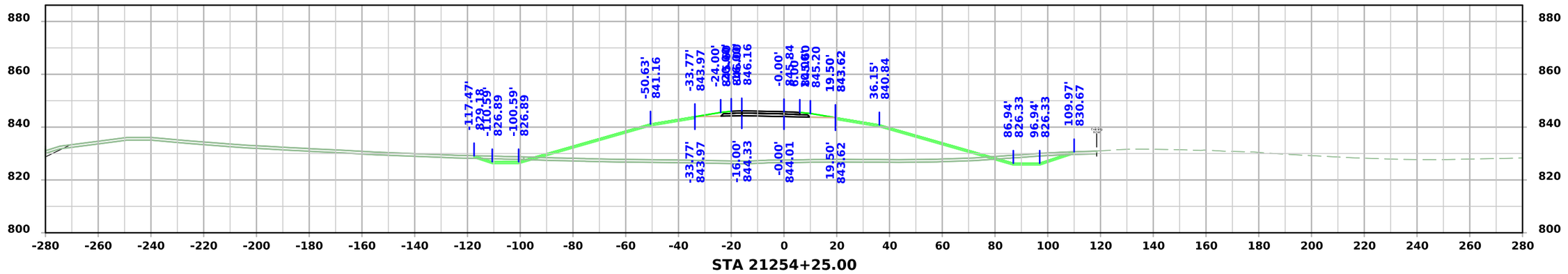


STA 21253+00.00

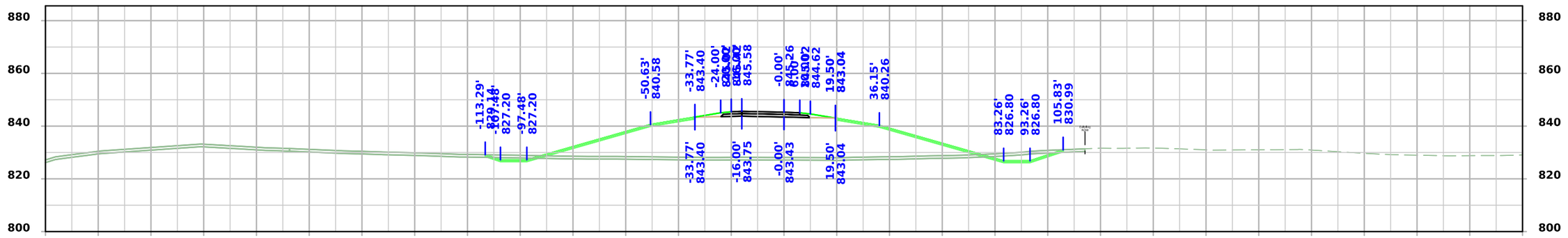
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.217

5:06:48 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPB063_62063095Z09_ORD_Y200_Grading.dgn

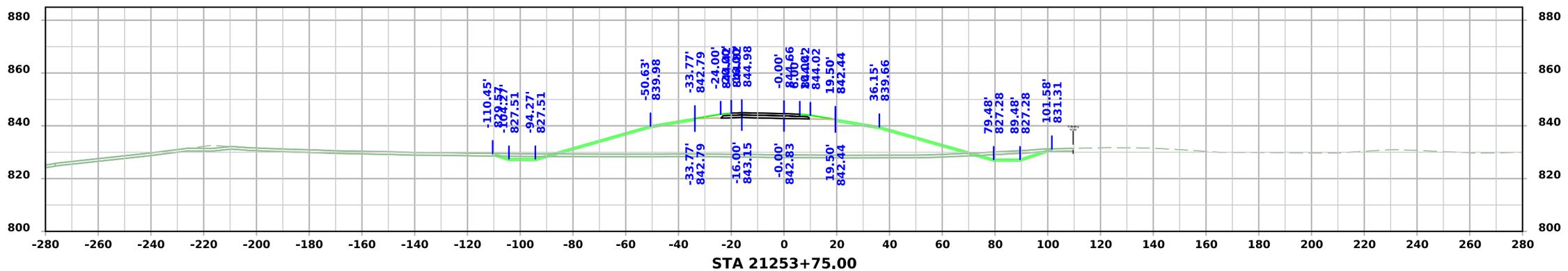
Ramp B



STA 21254+25.00



STA 21254+00.00

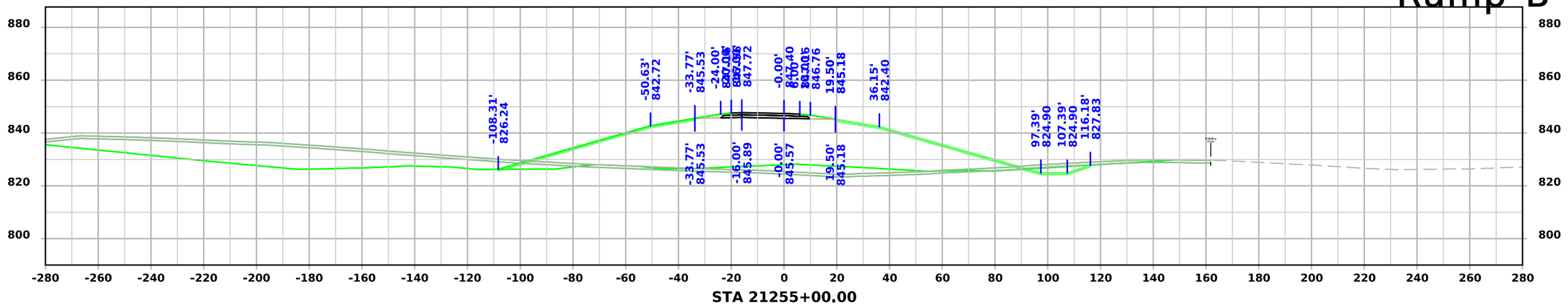


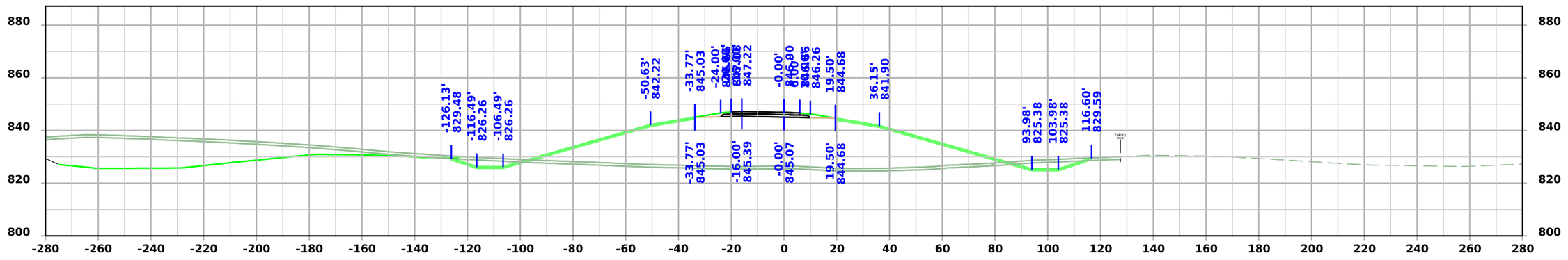
STA 21253+75.00

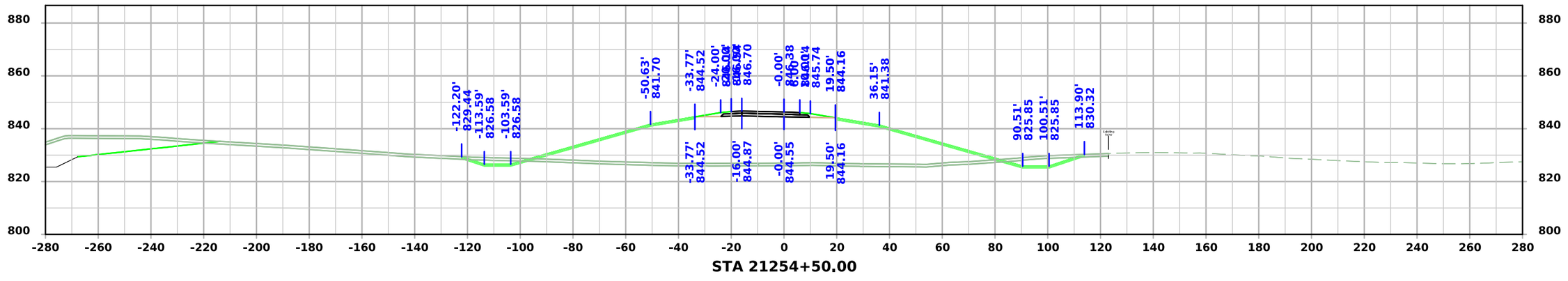
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.218

5:06:50 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPB063_62063095Z09_ORD_Y200_Grading.dgn

Ramp B







FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.219

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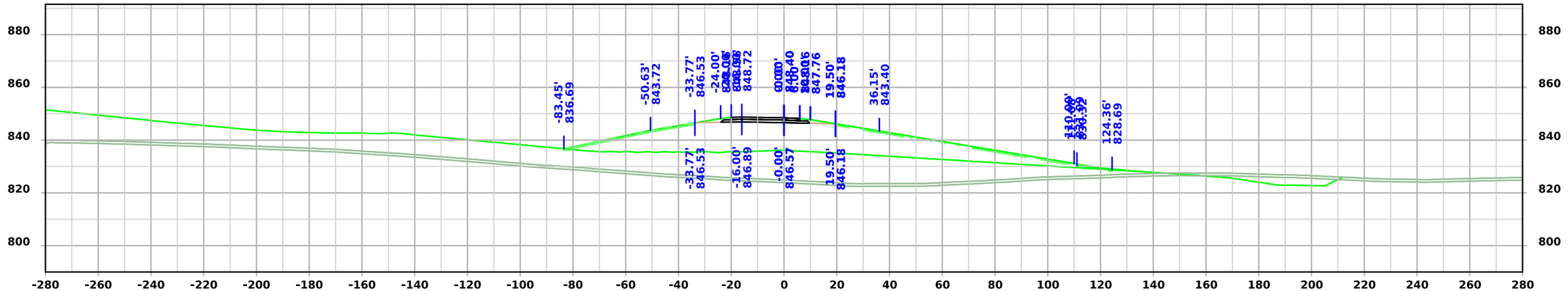
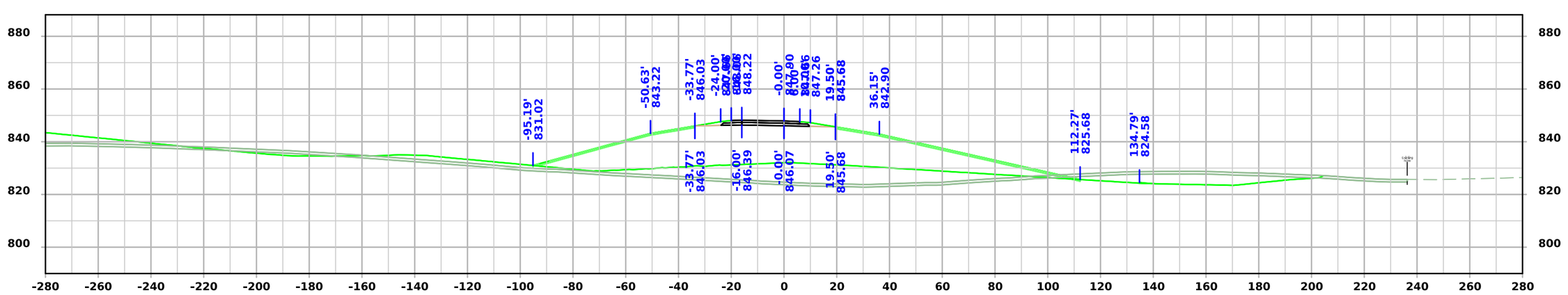
Ramp B



STA 21255+50.00

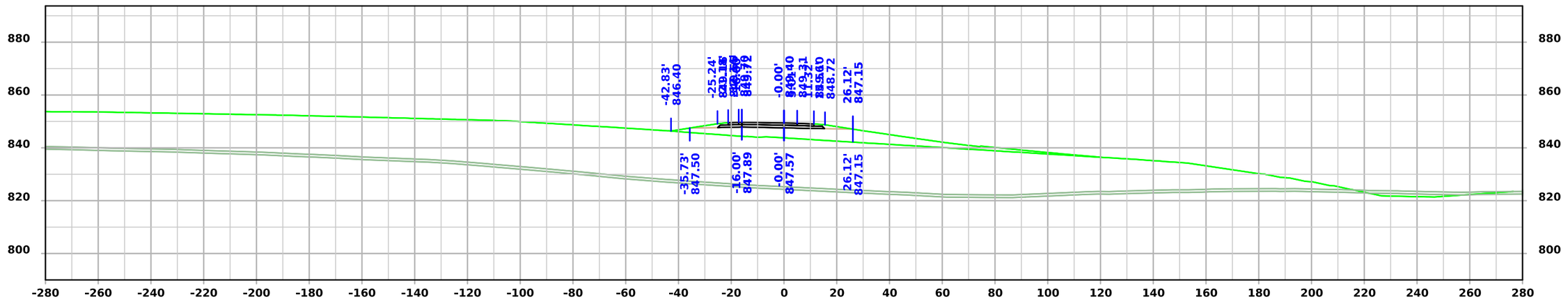


STA 21255+25.00

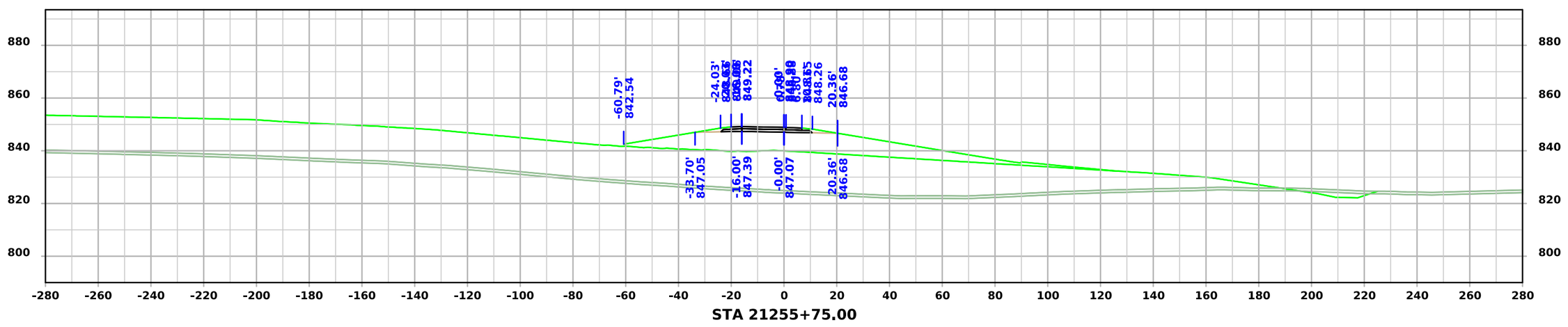
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.220	

5:06:54 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPB063_62063095Z09_ORD_Y200_Grading.dgn

Ramp B



STA 21256+00.00

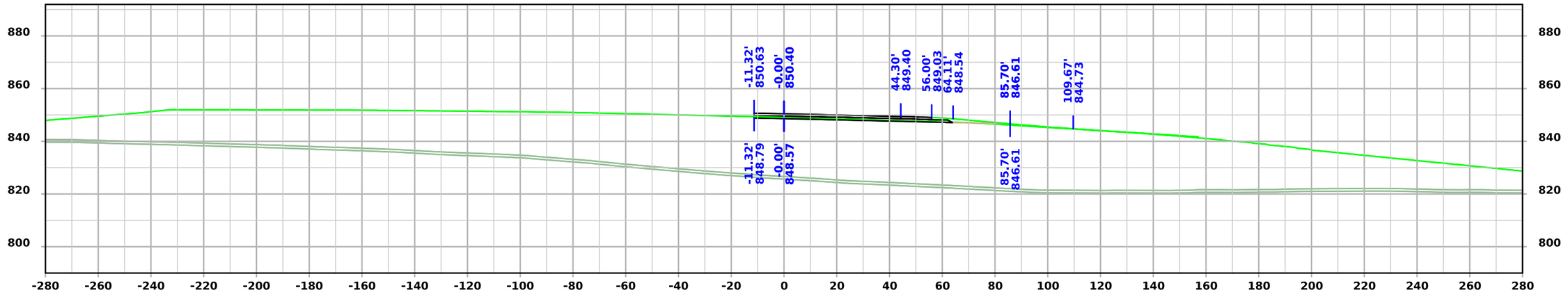


STA 21255+75.00

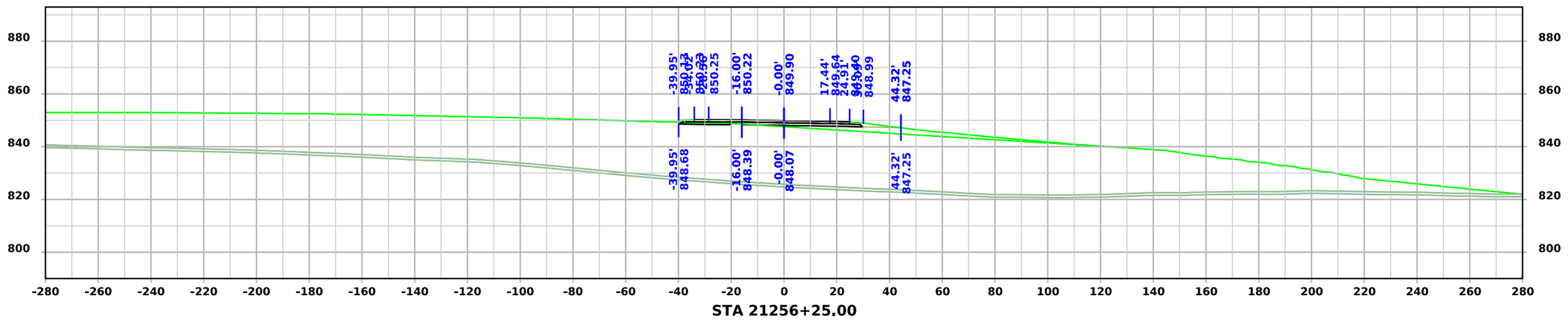
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.221

5:06:55 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPB063_62063095Z09_ORD_Y200_Grading.dgn

Ramp B



STA 21256+50.00

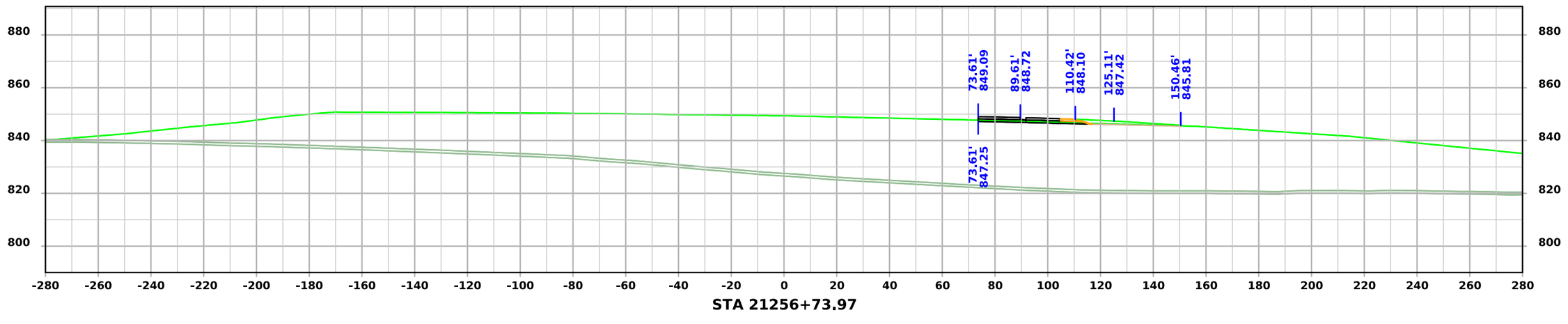


STA 21256+25.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.222

5:06:56 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPB063_62063095Z09_ORD_Y200_Grading.dgn

Ramp B

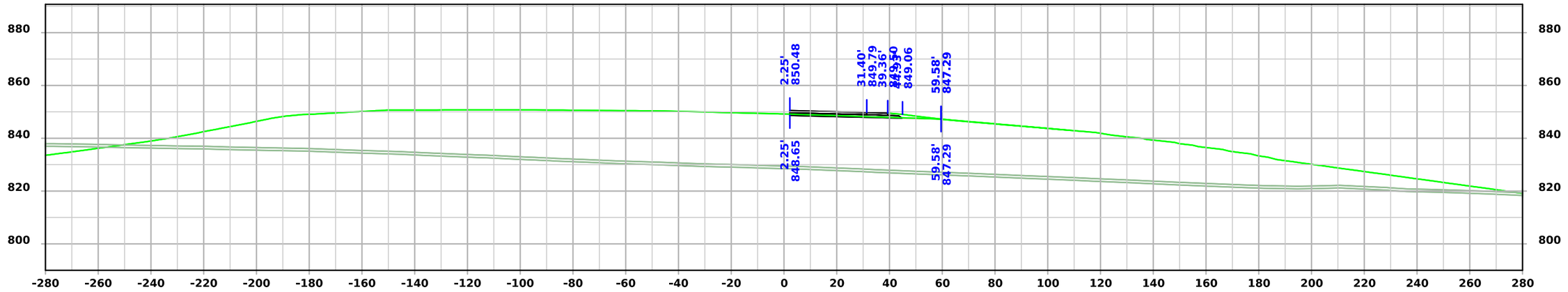


STA 21256+73.97

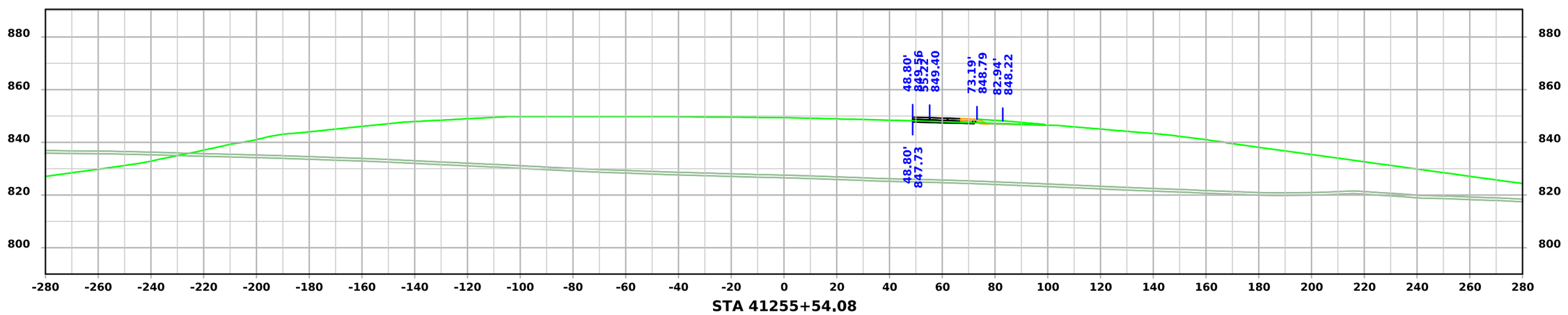
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.223

5:06:57 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPB063_62063095Z09_ORD_Y200_Grading.dgn

Ramp D



STA 41255+75.00

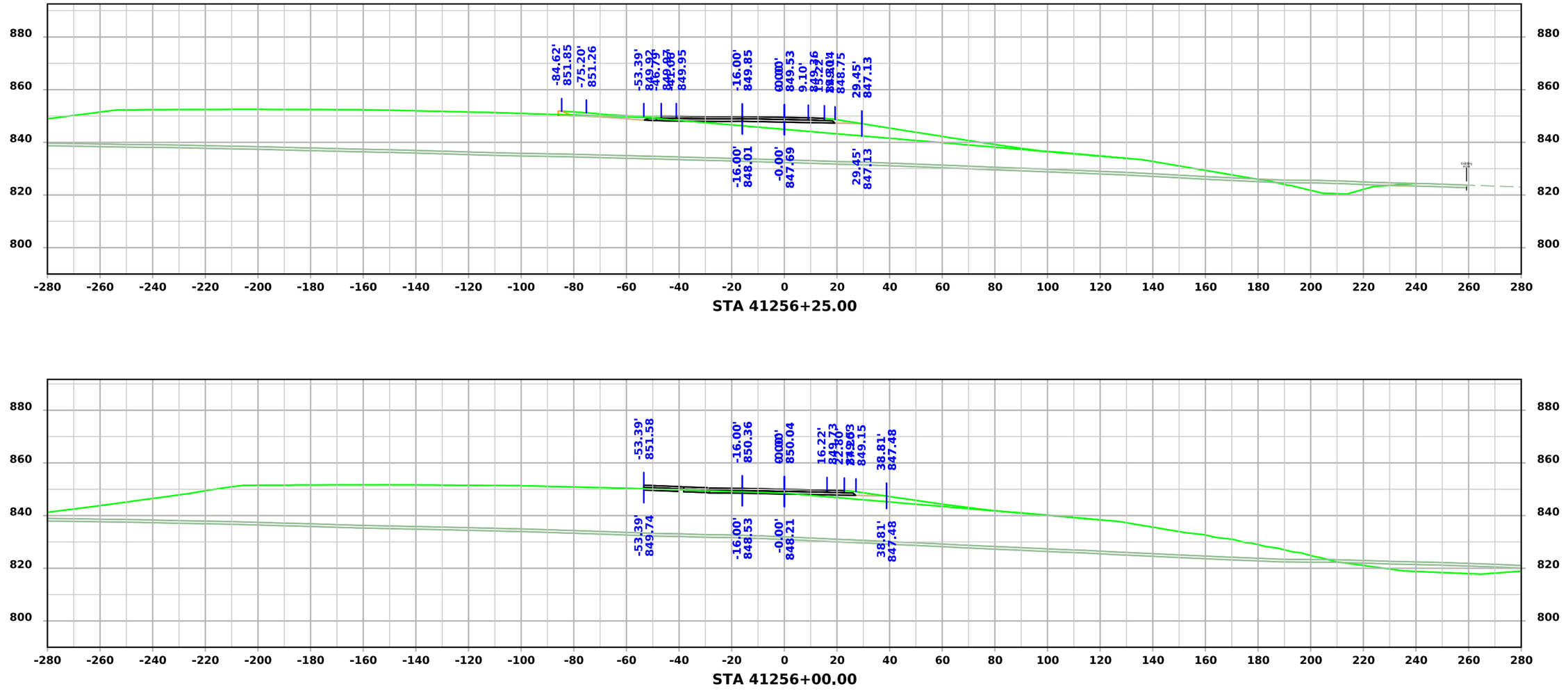


STA 41255+54.08

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.300

5:07:12 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPD063_62063095Z09_ORD_Y300_Grading.dgn

Ramp D



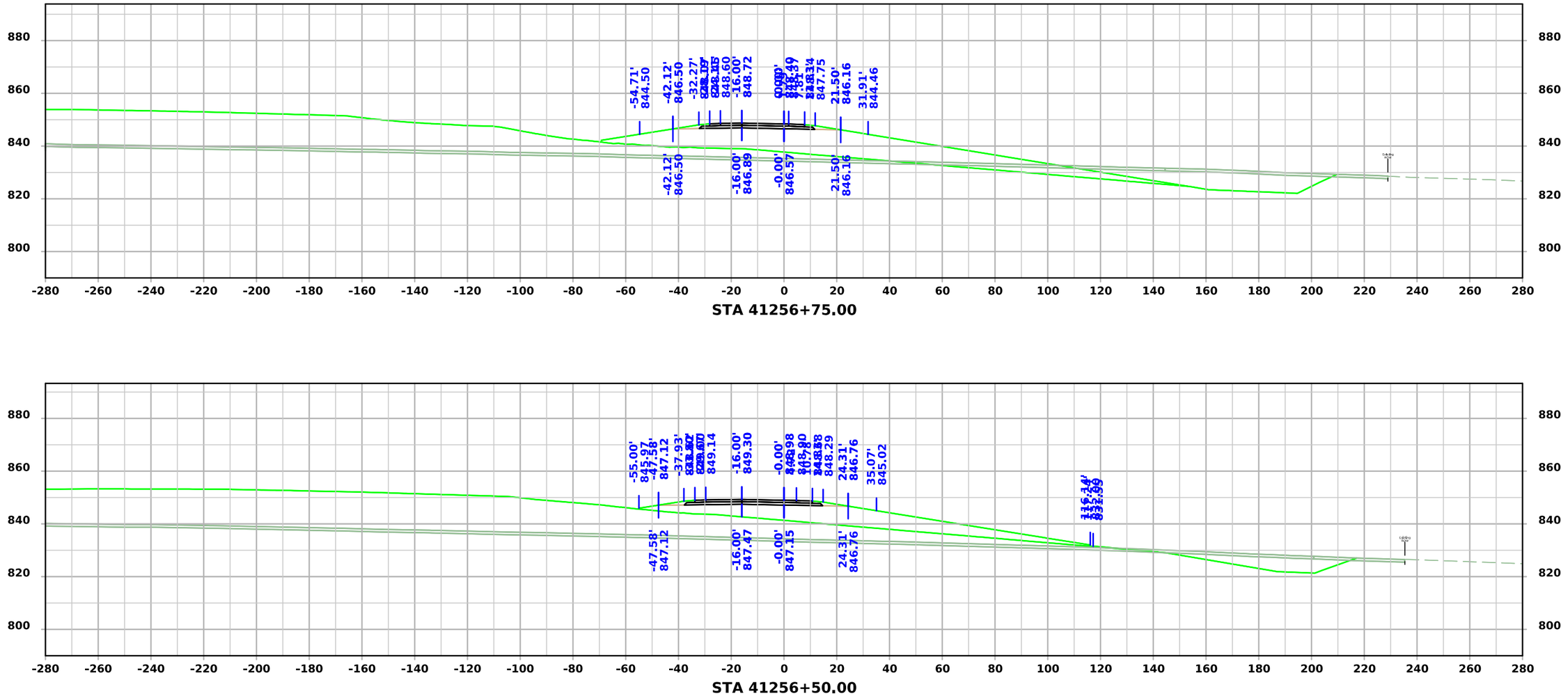
STA 41256+25.00

STA 41256+00.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.301

5:07:14 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPD063_62063095Z09_ORD_Y300_Grading.dgn

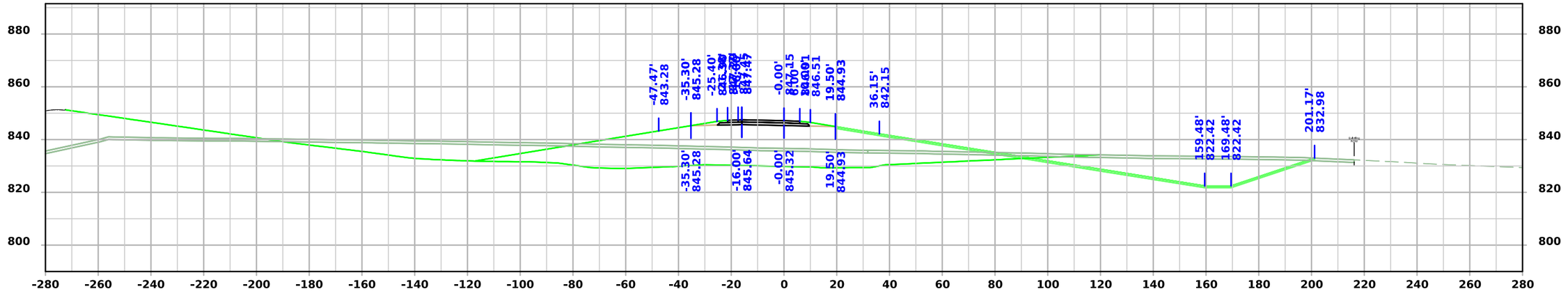
Ramp D



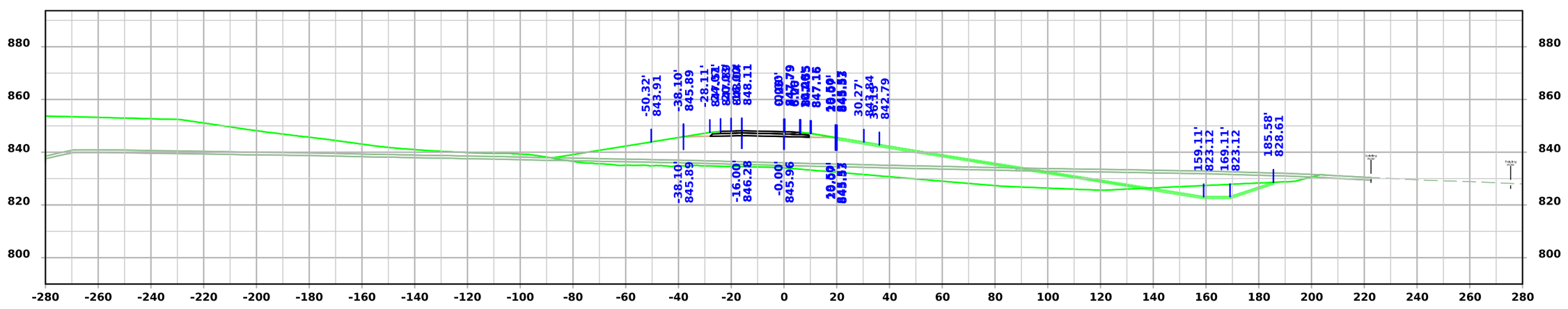
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.302

5:07:15 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPD063_62063095Z09_ORD_Y300_Grading.dgn

Ramp D



STA 41257+25.00

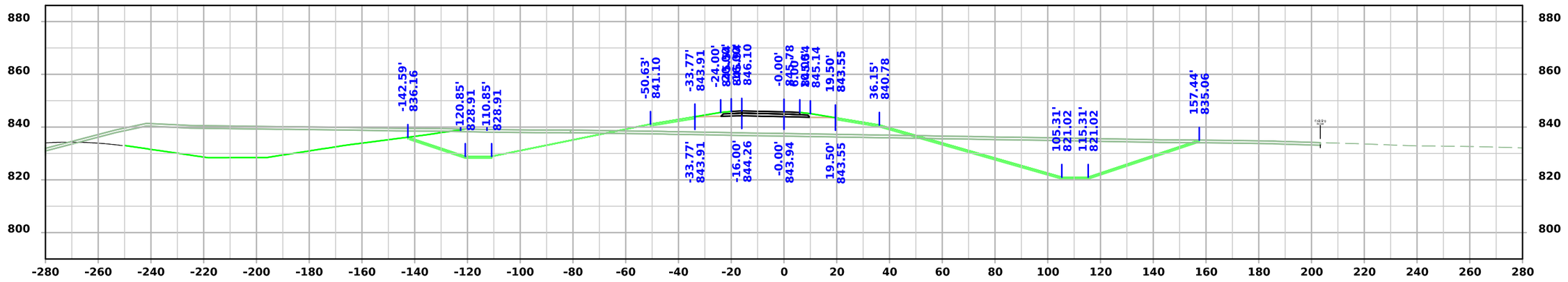


STA 41257+00.00

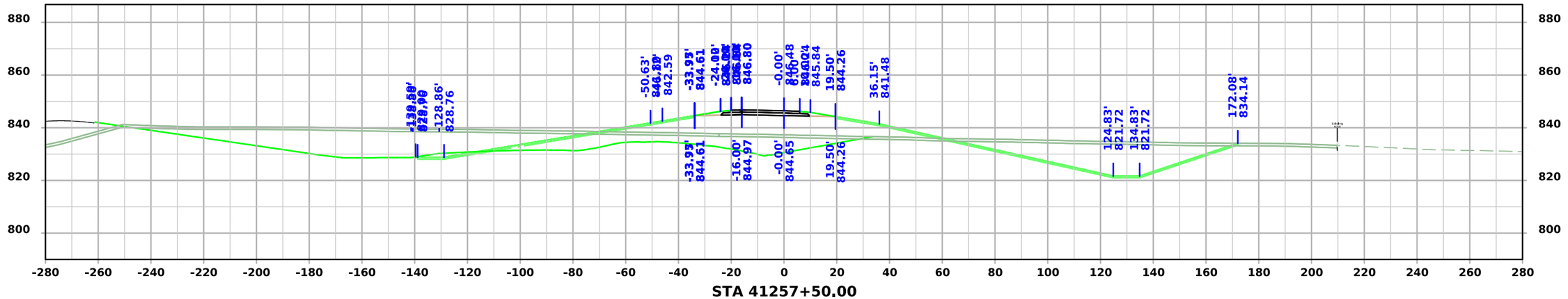
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.303

5:07:16 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPD063_62063095Z09_ORD_Y300_Grading.dgn

Ramp D



STA 41257+75.00

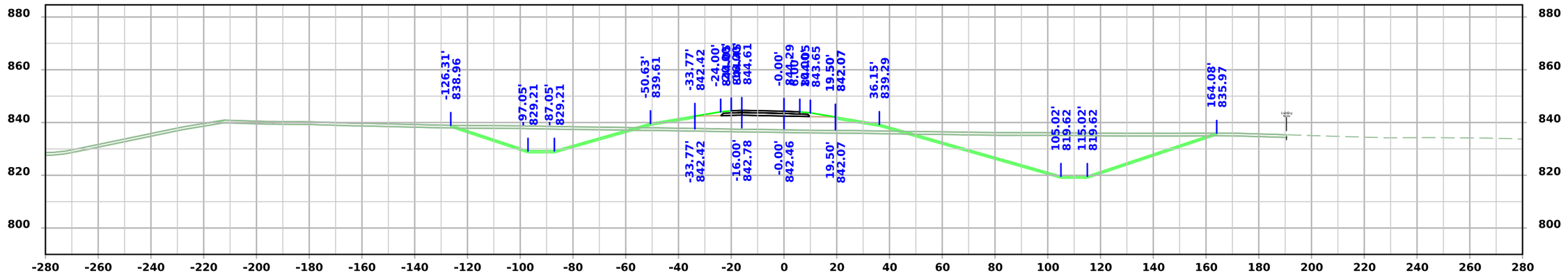


STA 41257+50.00

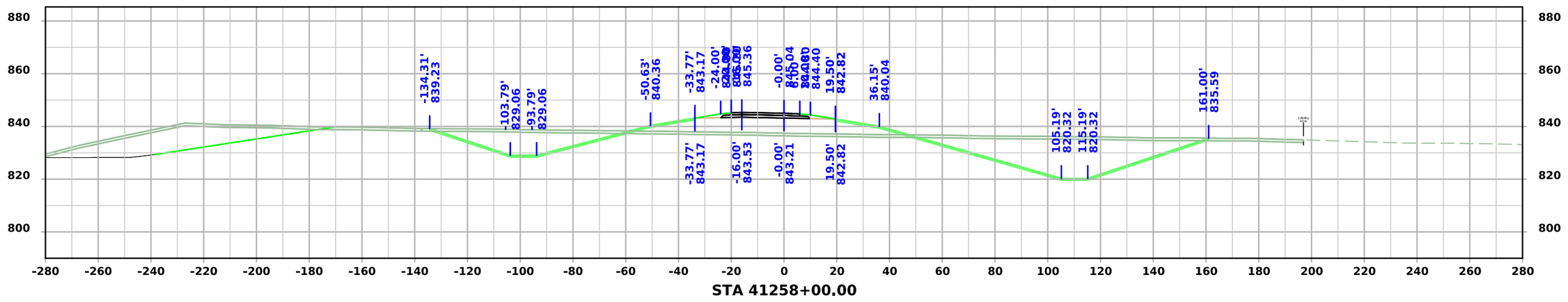
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.304

5:07:17 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPD063_62063095Z09_ORD_Y300_Grading.dgn

Ramp D



STA 41258+25.00

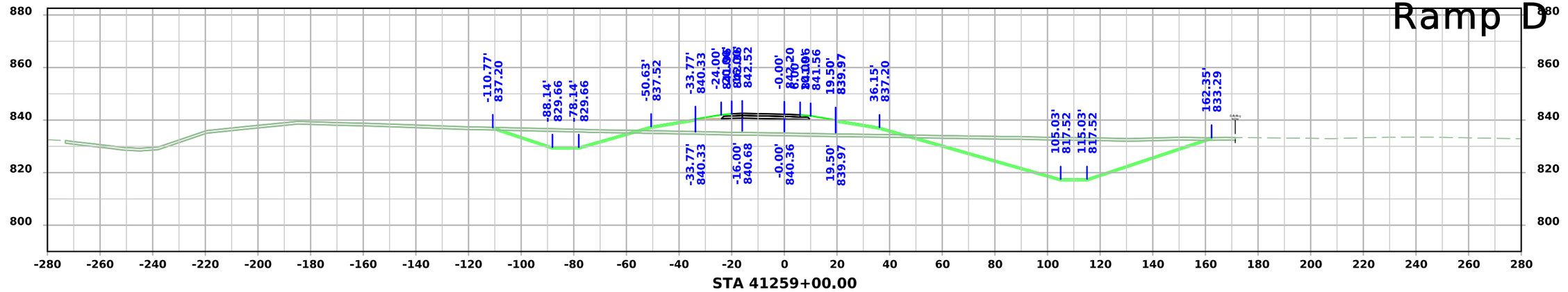


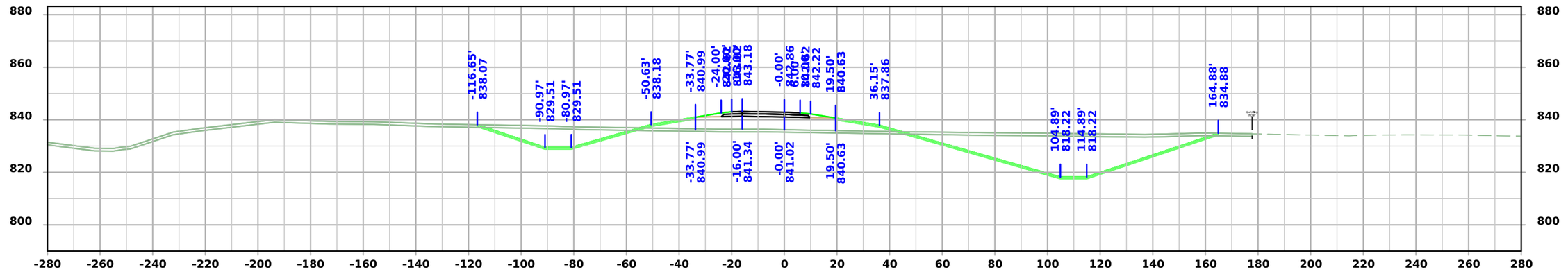
STA 41258+00.00

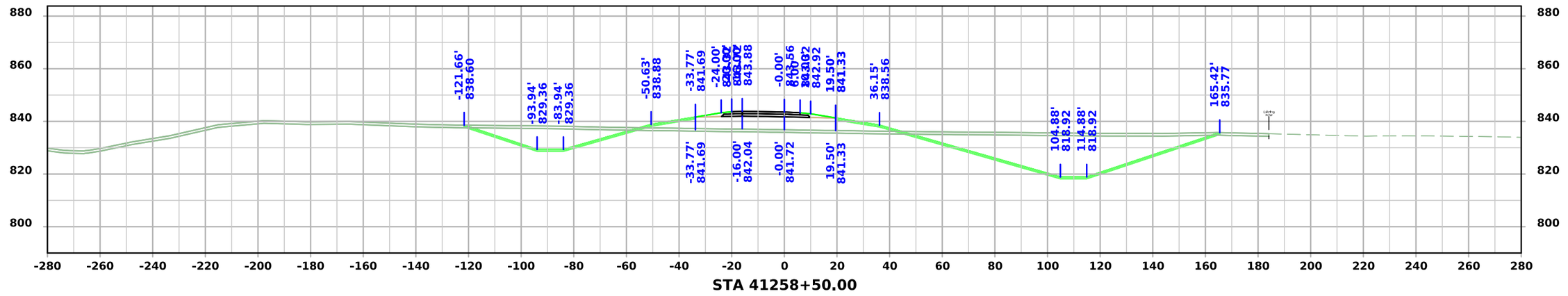
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.305

5:07:19 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPD063_62063095Z09_ORD_Y300_Grading.dgn

Ramp D



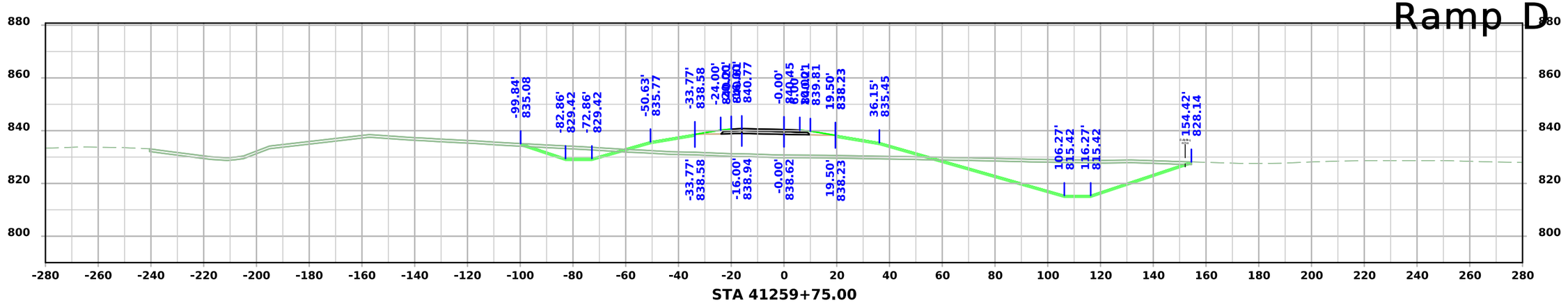




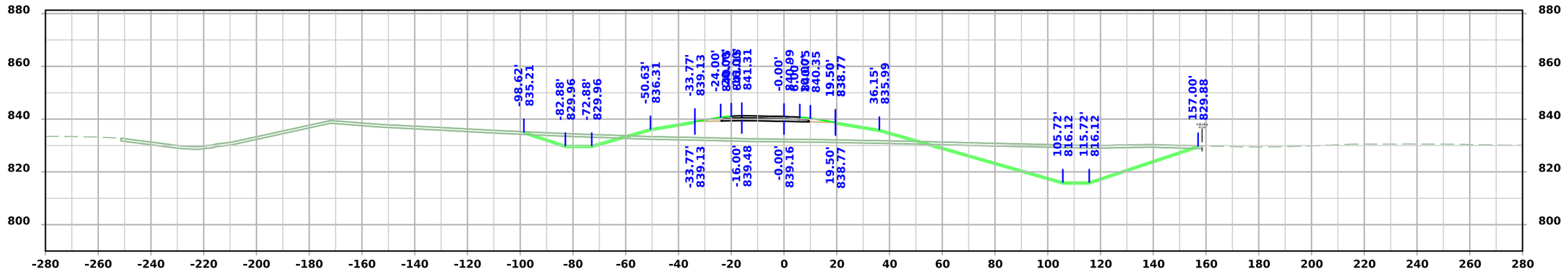
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.306	

5:07:20 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPD063_62063095Z09_ORD_Y300_Grading.dgn

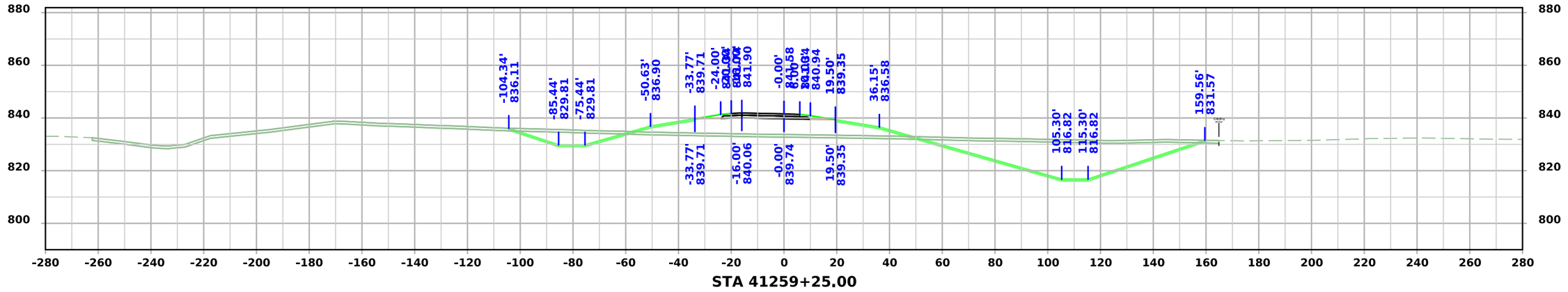
Ramp D



STA 41259+75.00



STA 41259+50.00

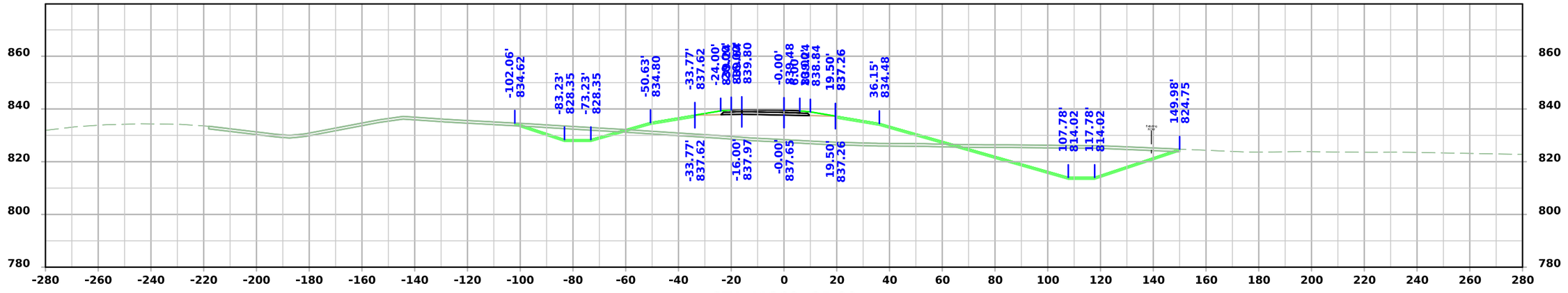


STA 41259+25.00

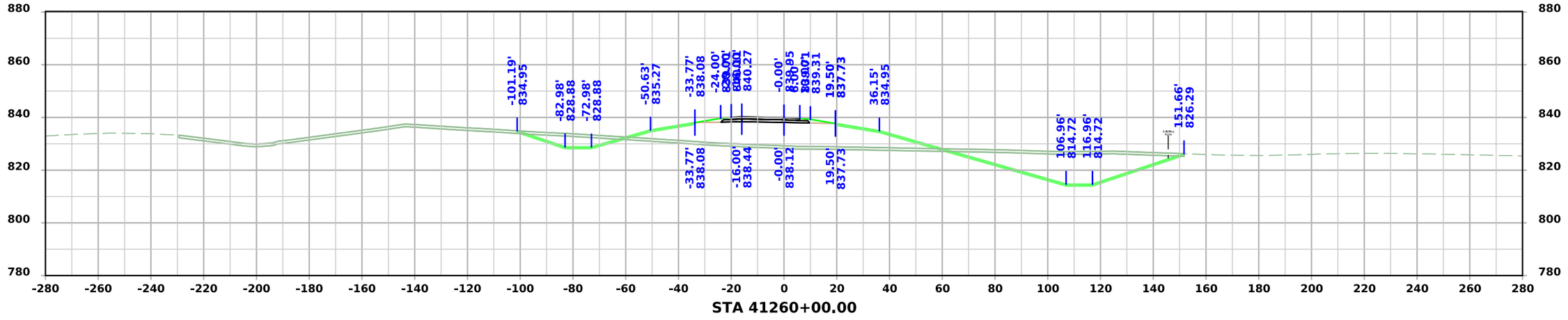
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.307

5:07:21 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPD063_62063095Z09_ORD_Y300_Grading.dgn

Ramp D



STA 41260+25.00

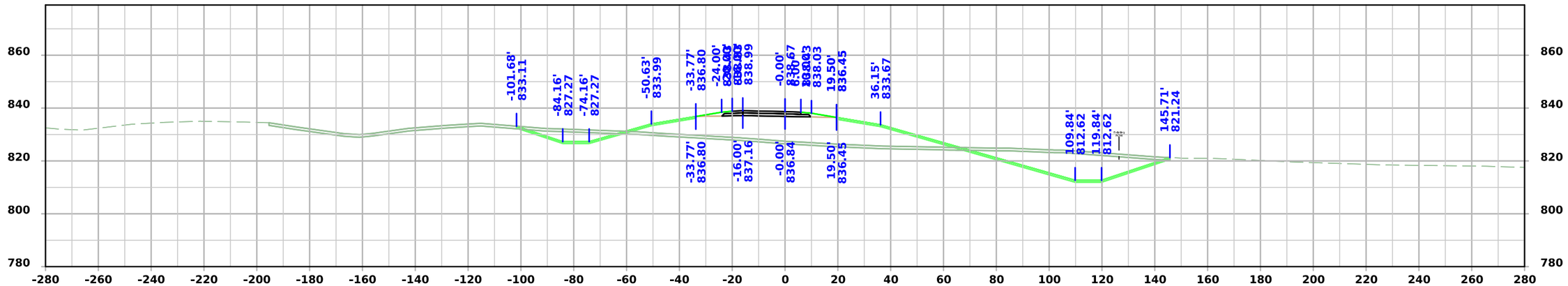


STA 41260+00.00

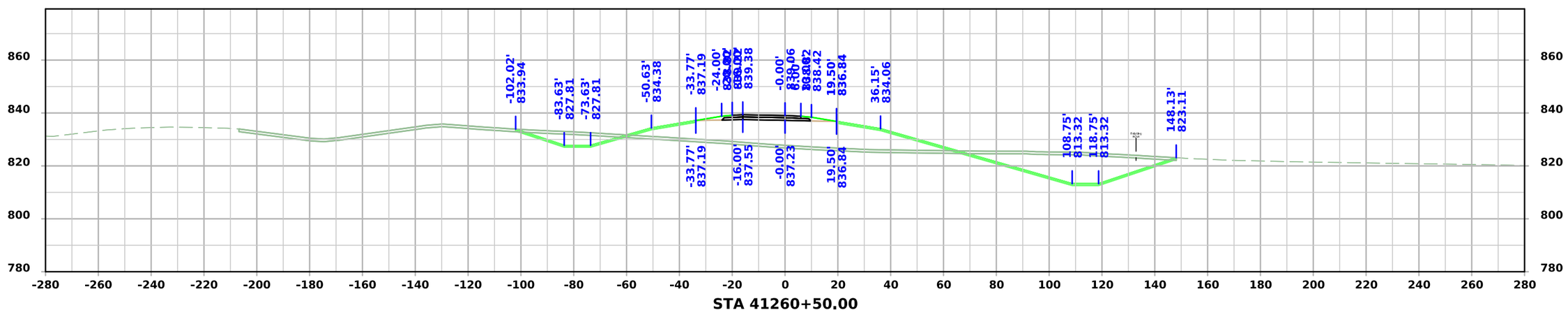
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.308

5:07:23 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPD063_62063095Z09_ORD_Y300_Grading.dgn

Ramp D



STA 41260+75.00

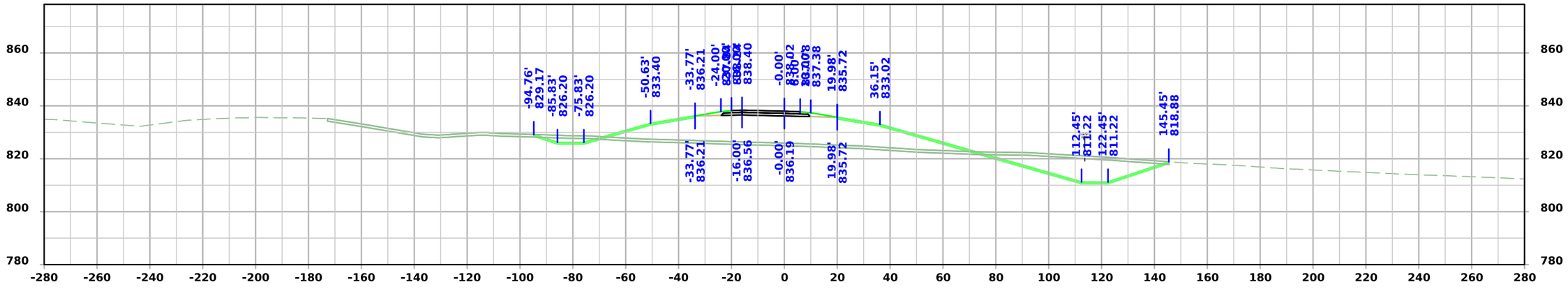


STA 41260+50.00

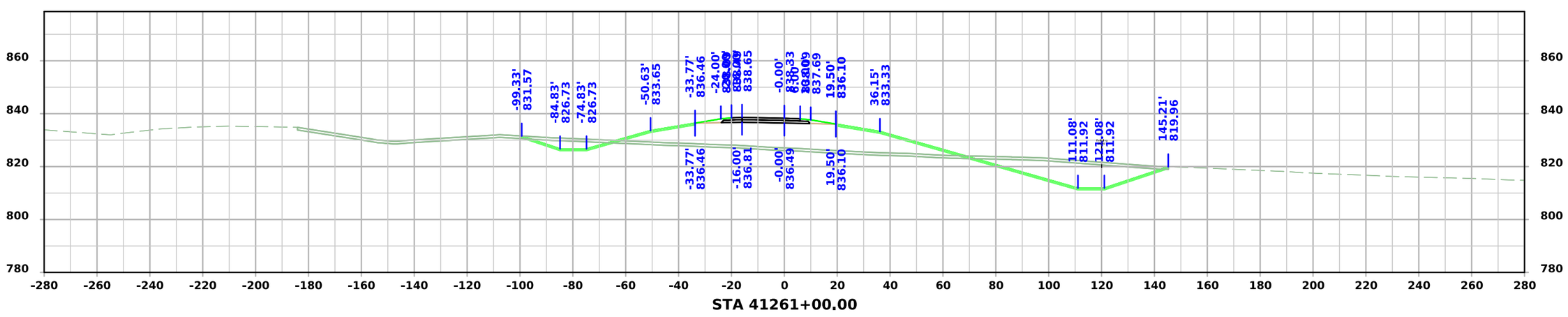
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.309

5:07:24 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPD063_62063095Z09_ORD_Y300_Grading.dgn

Ramp D



STA 41261+25.00

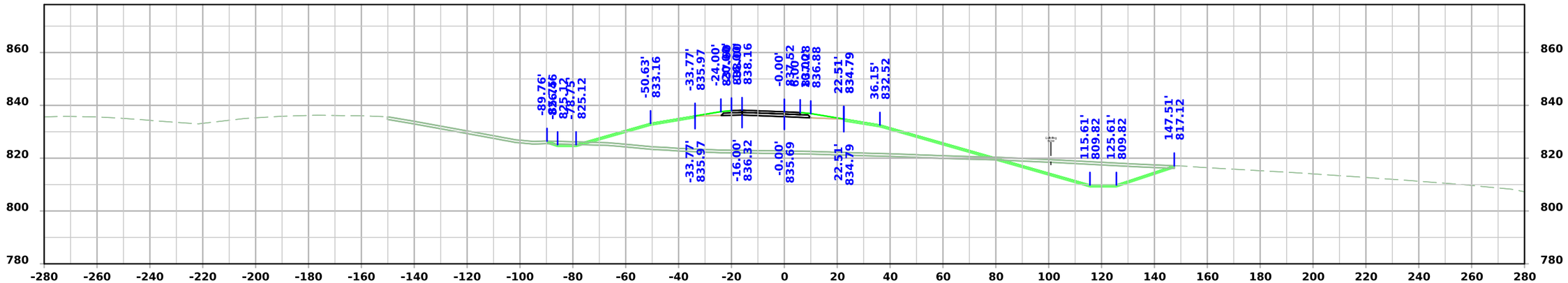


STA 41261+00.00

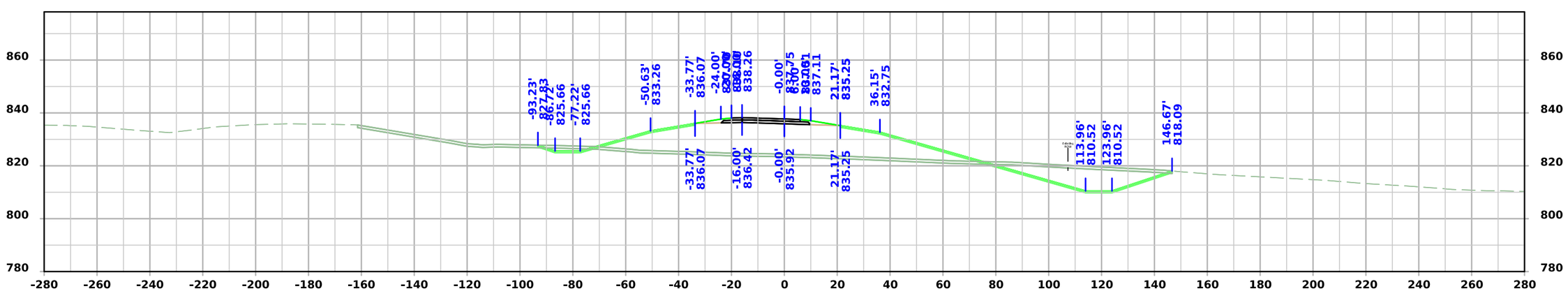
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.310

5:07:25 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPD063_62063095Z09_ORD_Y300_Grading.dgn

Ramp D



STA 41261+75.00

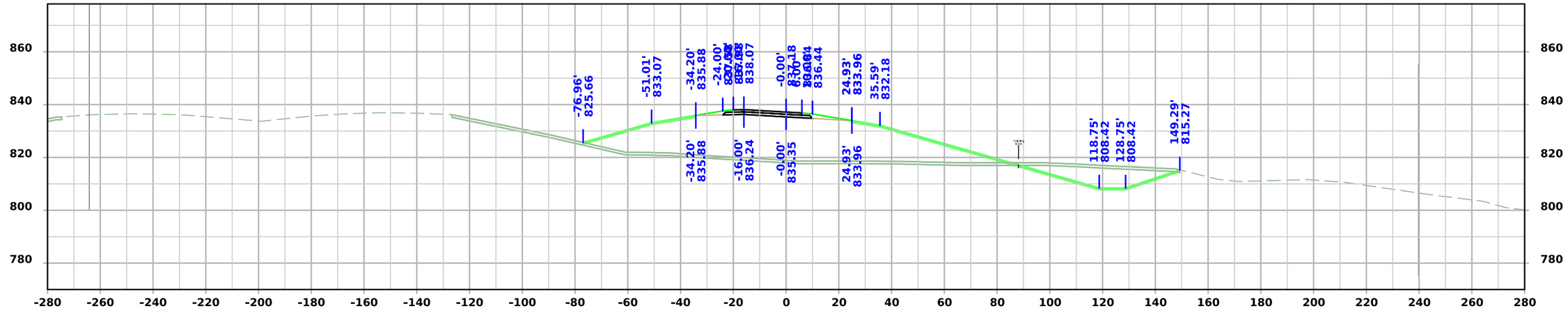


STA 41261+50.00

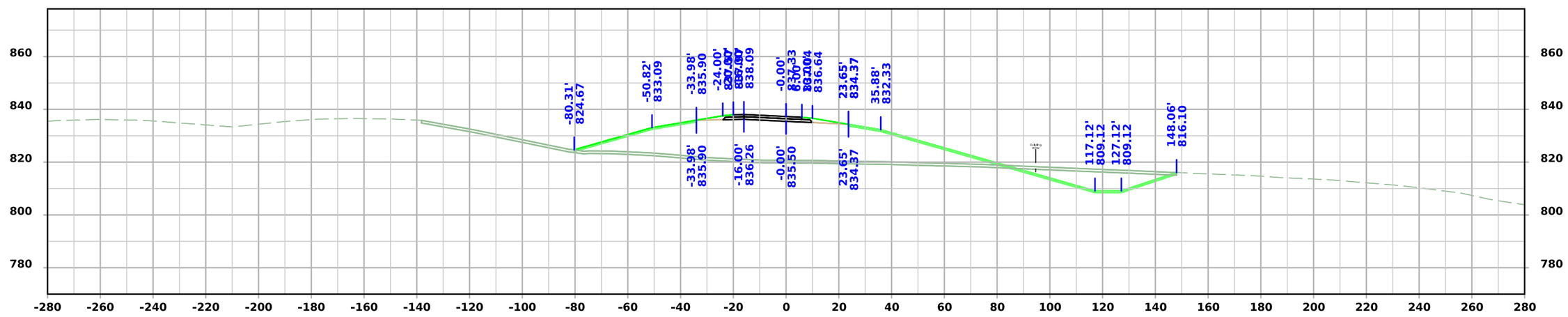
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.311	

5:07:26 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPD063_62063095Z09_ORD_Y300_Grading.dgn

Ramp D



STA 41262+25.00

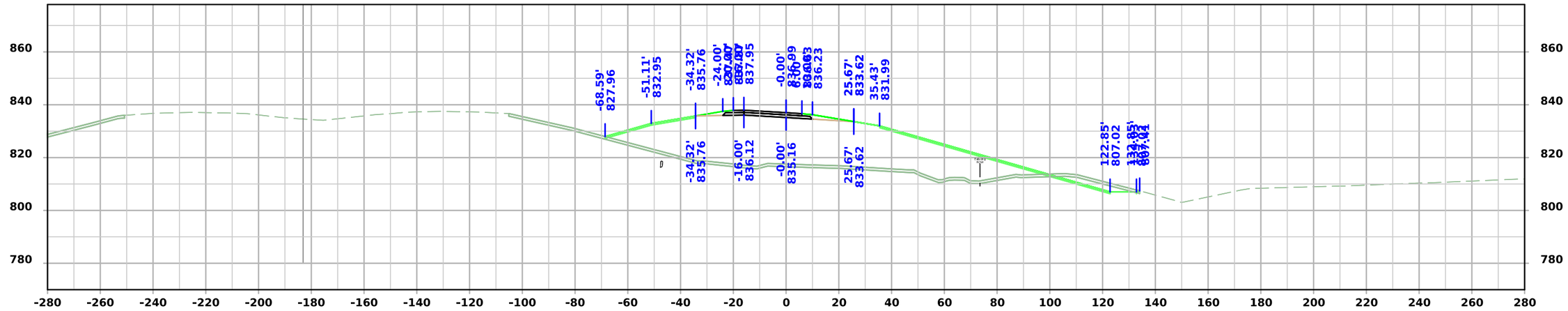


STA 41262+00.00

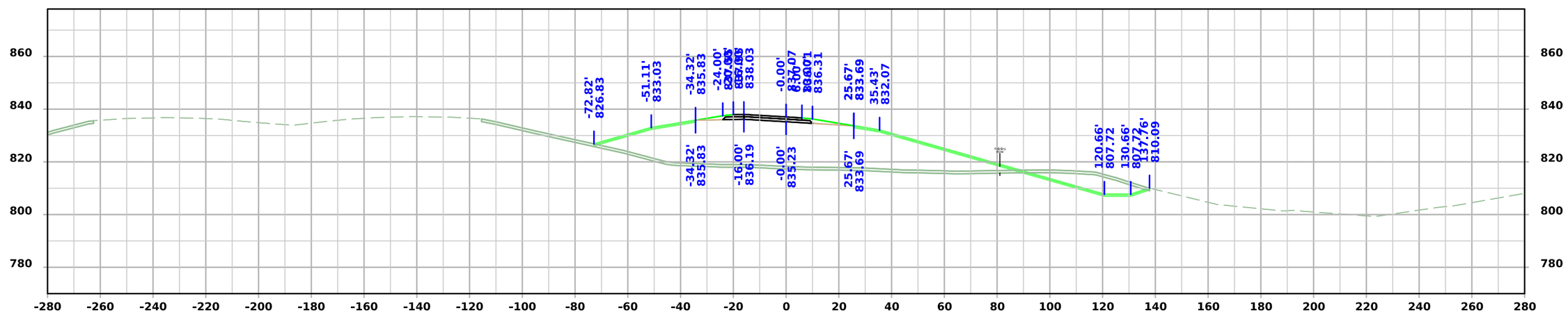
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.312

5:07:27 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPD063_62063095Z09_ORD_Y300_Grading.dgn

Ramp D



STA 41262+75.00

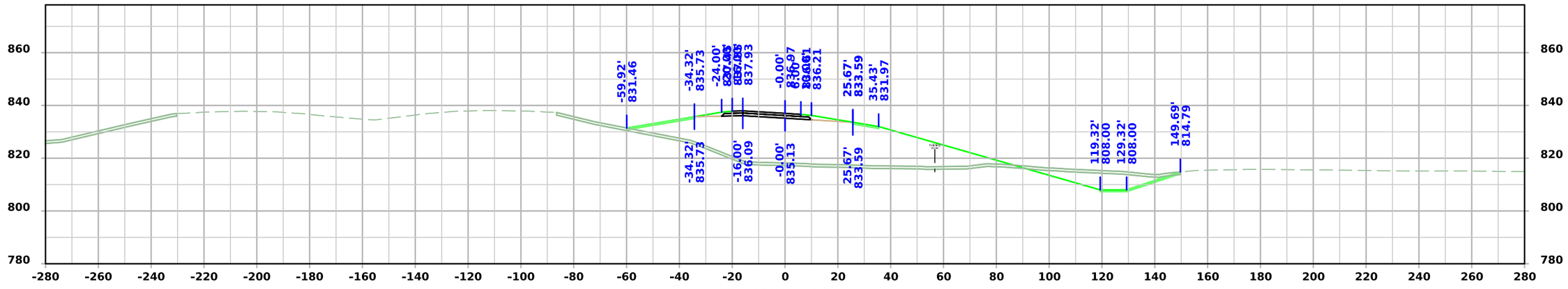


STA 41262+50.00

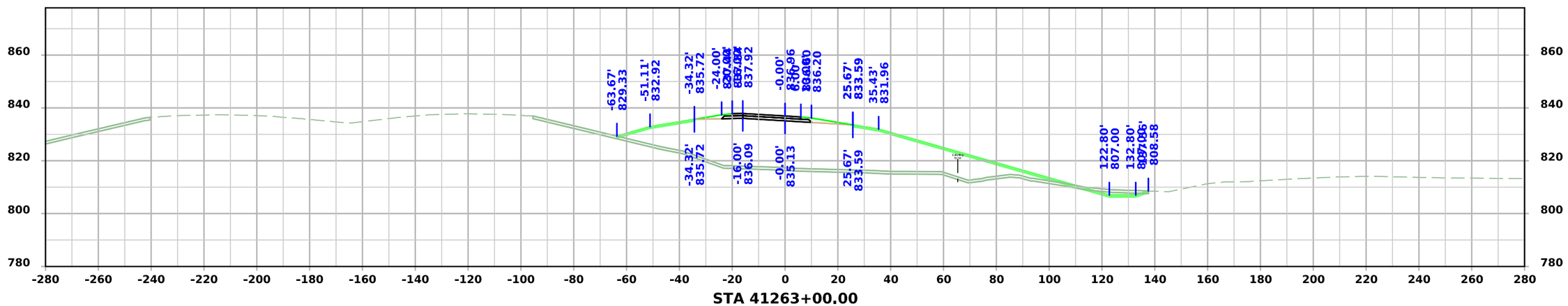
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.313

5:07:29 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPD063_62063095Z09_ORD_Y300_Grading.dgn

Ramp D



STA 41263+25.00

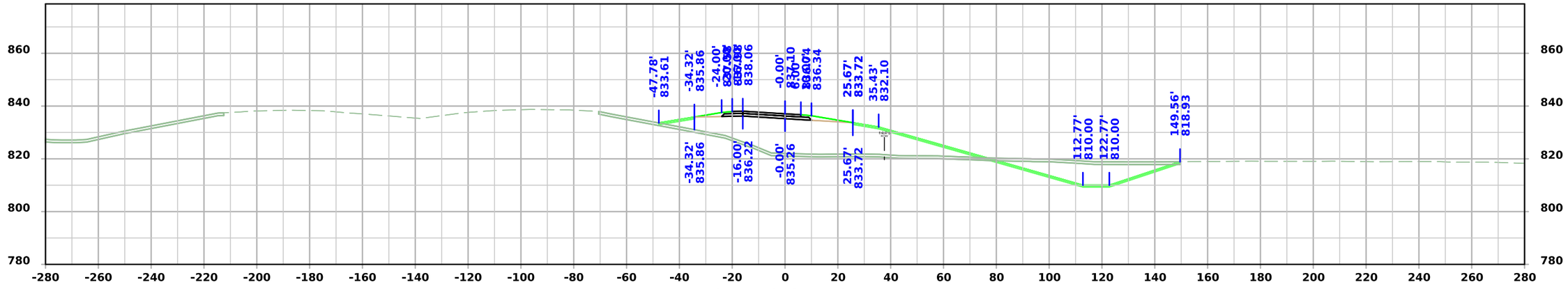


STA 41263+00.00

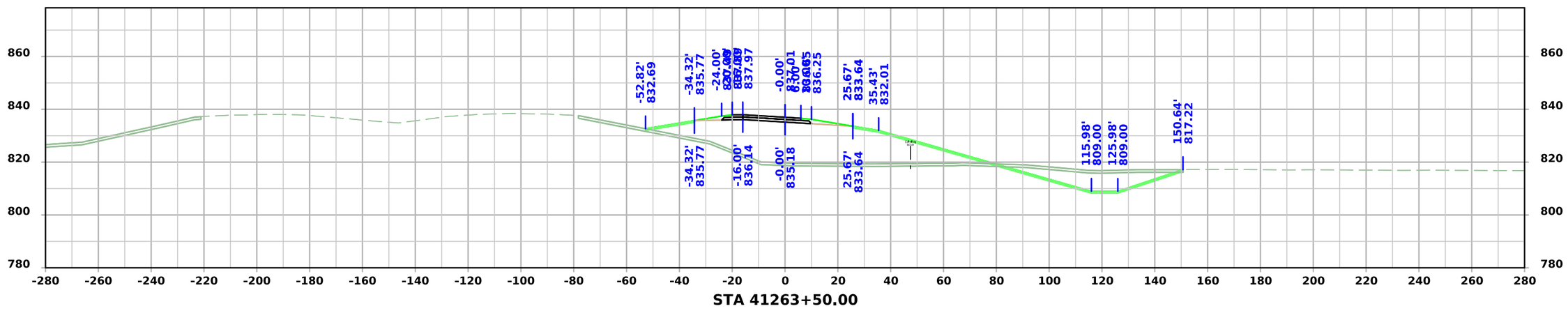
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.314

5:07:30 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPD063_62063095Z09_ORD_Y300_Grading.dgn

Ramp D



STA 41263+75.00

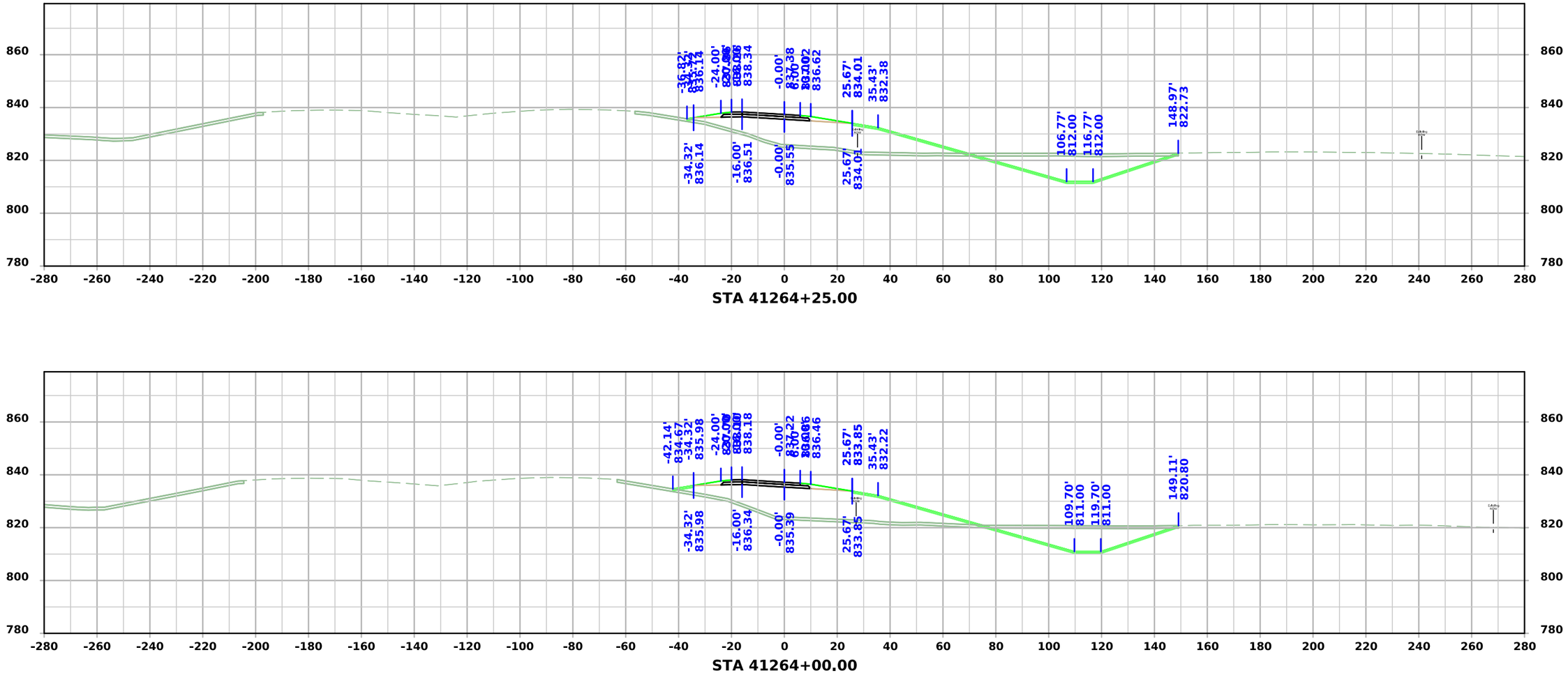


STA 41263+50.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.315

5:07:31 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPD063_62063095Z09_ORD_Y300_Grading.dgn

Ramp D



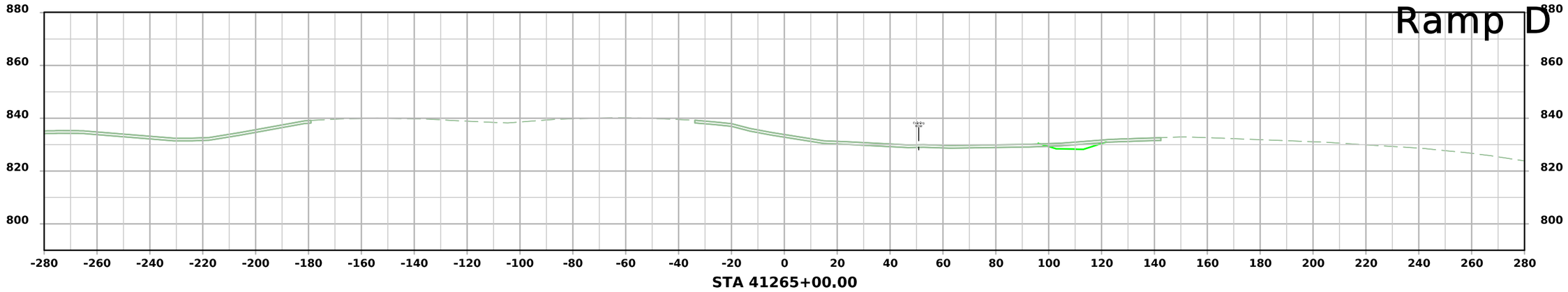
STA 41264+00.00

STA 41264+25.00

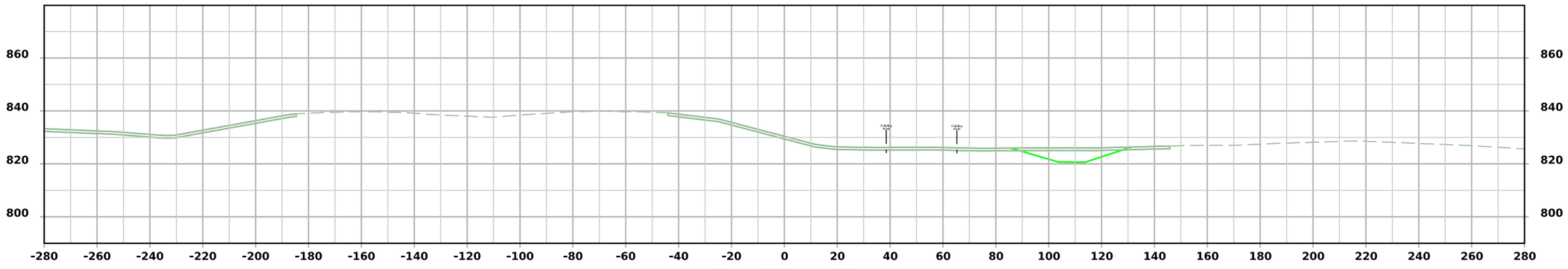
FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.316

5:07:33 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPD063_62063095Z09_ORD_Y300_Grading.dgn

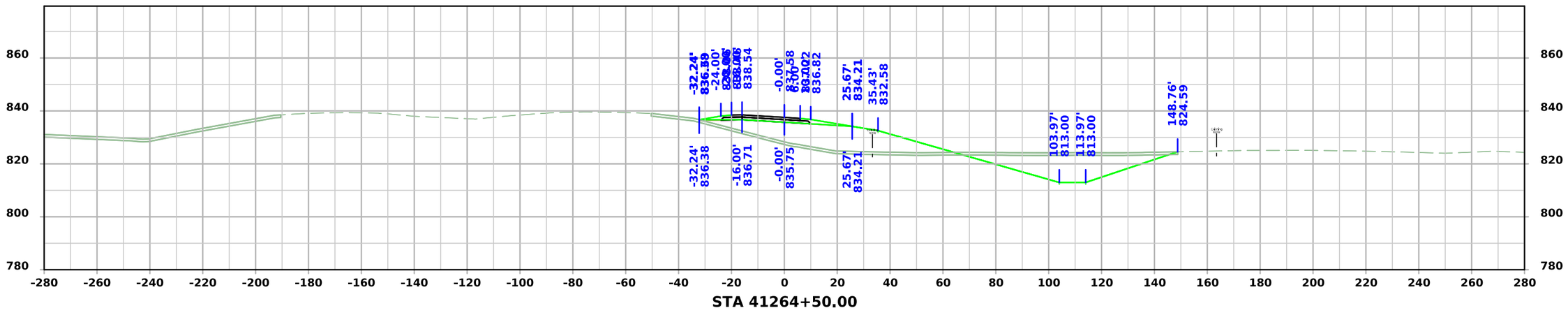
Ramp D



STA 41265+00.00



STA 41264+75.00

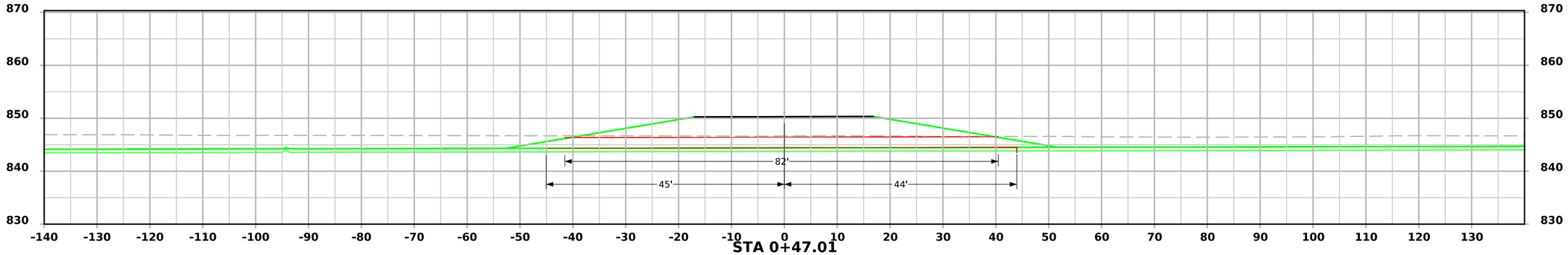


STA 41264+50.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Y.317

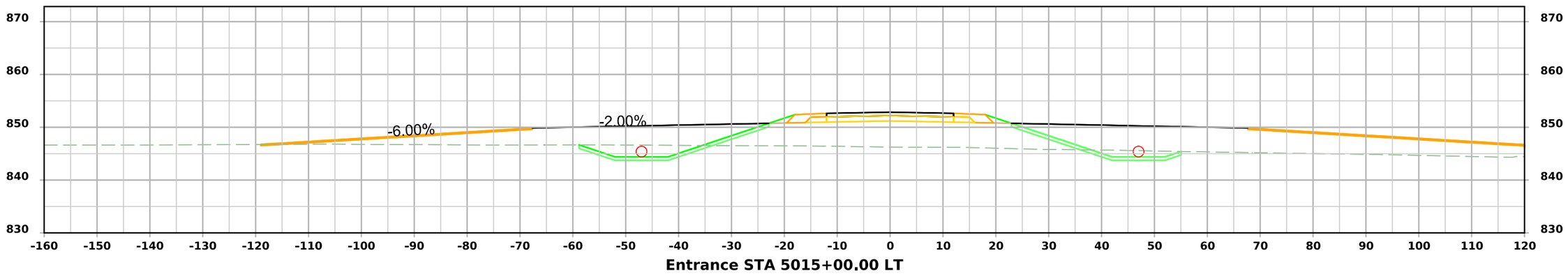
5:07:34 PM 12/4/2024 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_RPD063_62063095Z09_ORD_Y300_Grading.dgn

Entrances - Old IA 163



STA 0+47.01

Pipe for Entrance at STA 5015+00.00 LT

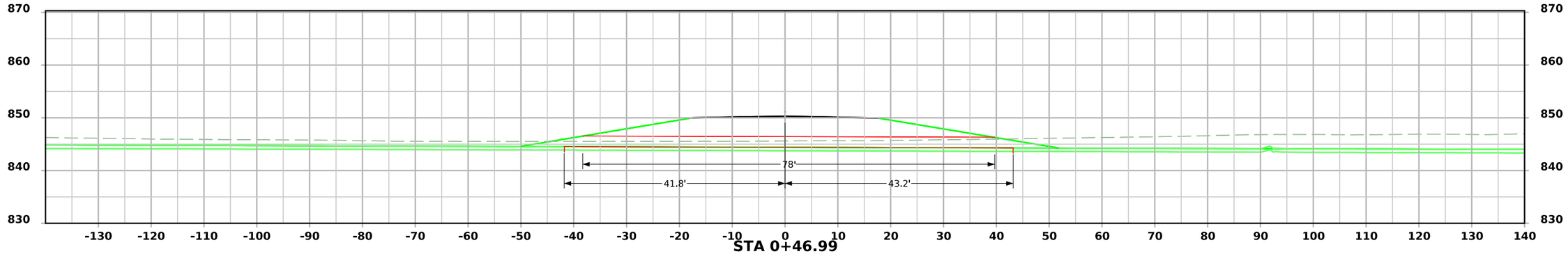


Entrance STA 5015+00.00 LT

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Z.1

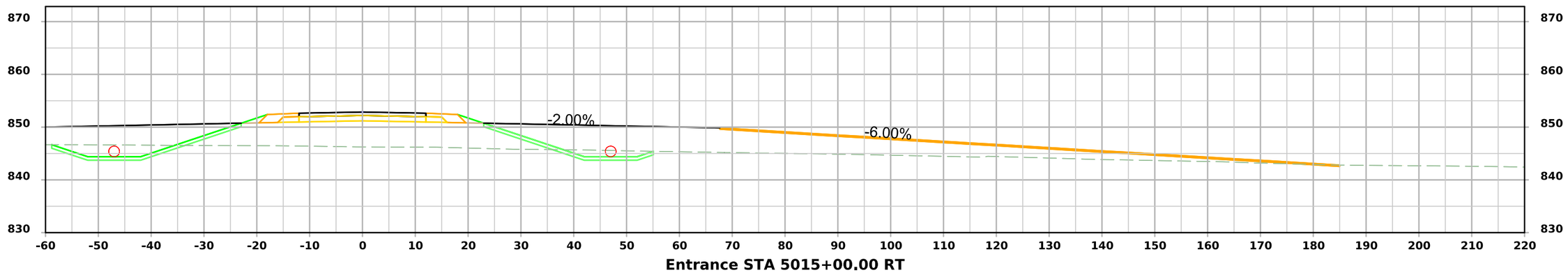
3:41:52 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ENT_62063095Z09_ORD_Z01_Grading.dgn

Entrances - Old IA 163



STA 0+46.99

Pipe for Entrance at STA 5015+00.00 RT

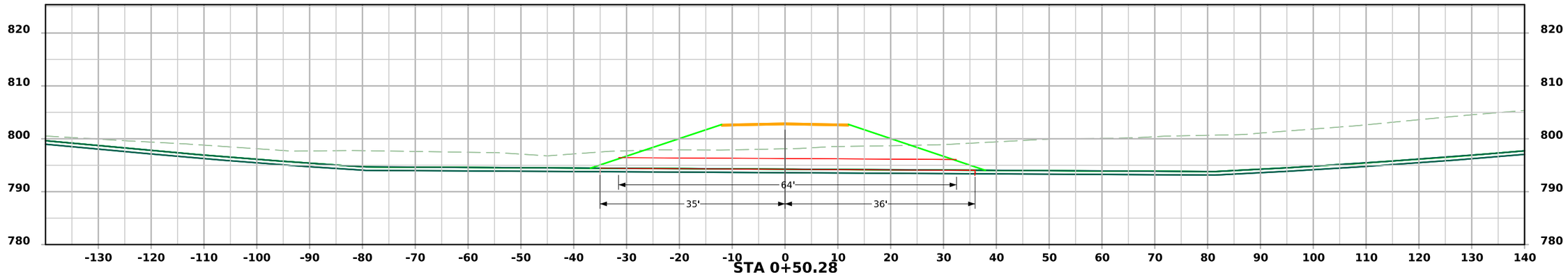


Entrance STA 5015+00.00 RT

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Z.2

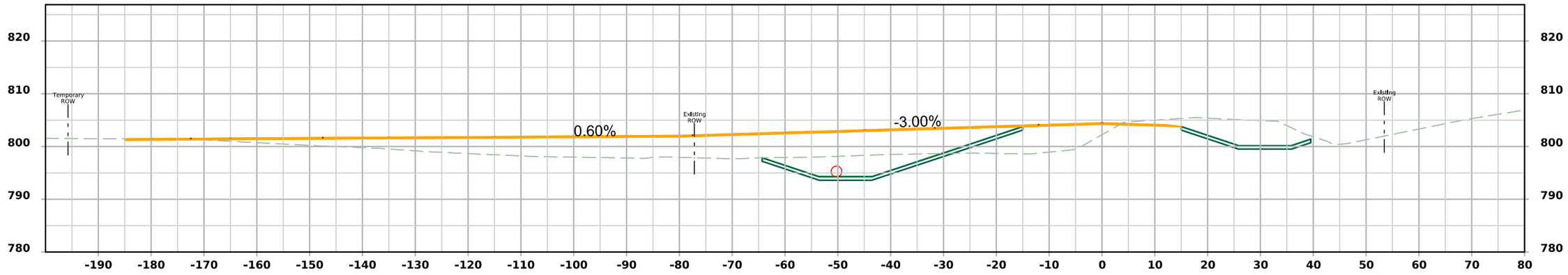
3:41:53 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ENT_62063095Z09_ORD_Z01_Grading.dgn

Entrances - Kirby Ave.

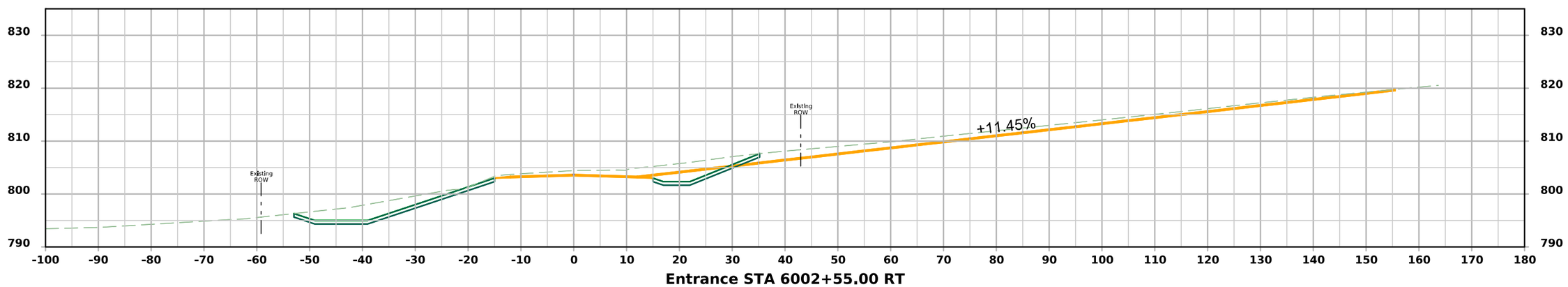


STA 0+50.28

Pipe for Entrance at STA 6004+00.00 LT



Entrance STA 6004+00.00 LT

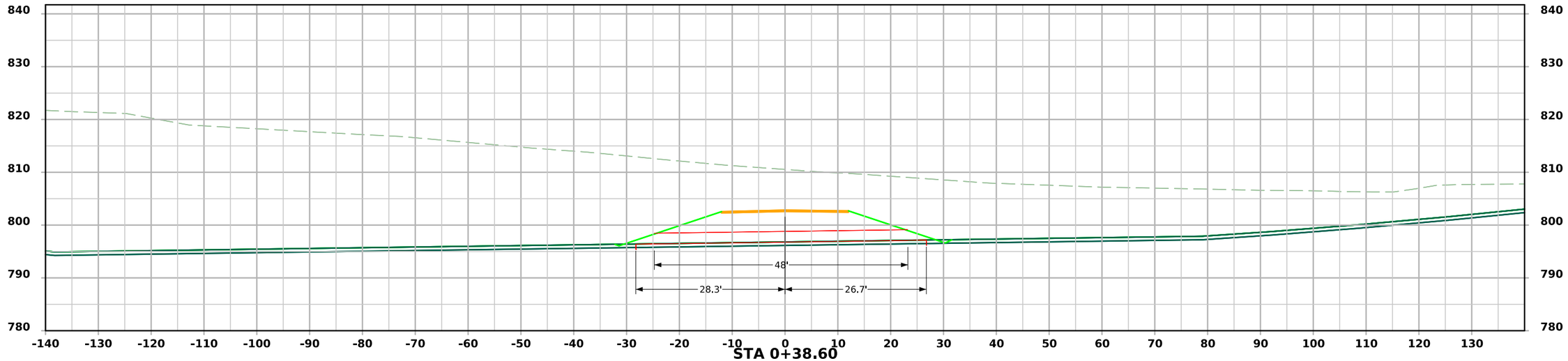


Entrance STA 6002+55.00 RT

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Z.3

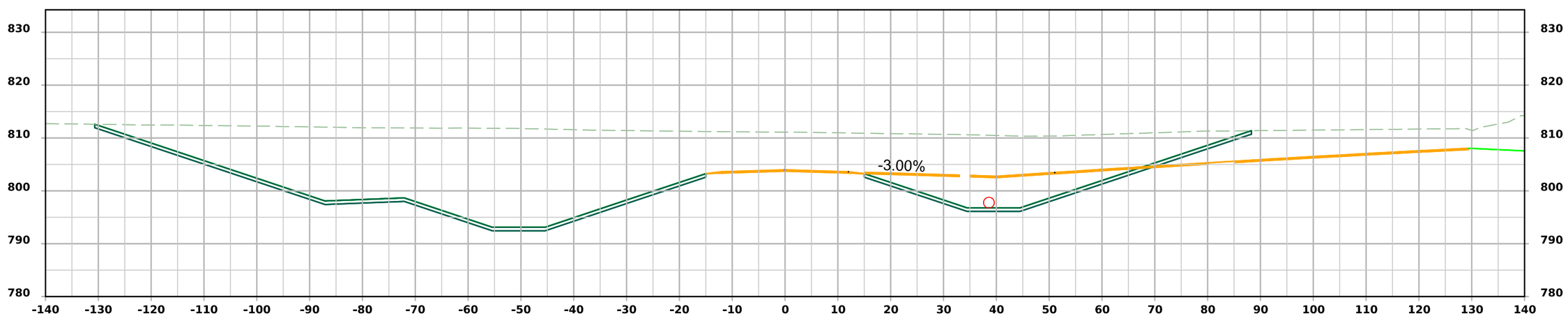
3:41:55 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ENT_62063095Z09_ORD_Z01_Grading.dgn

Entrances - Kirby Ave.



STA 0+38.60

Pipe for Entrance at STA 6006+25.00 RT

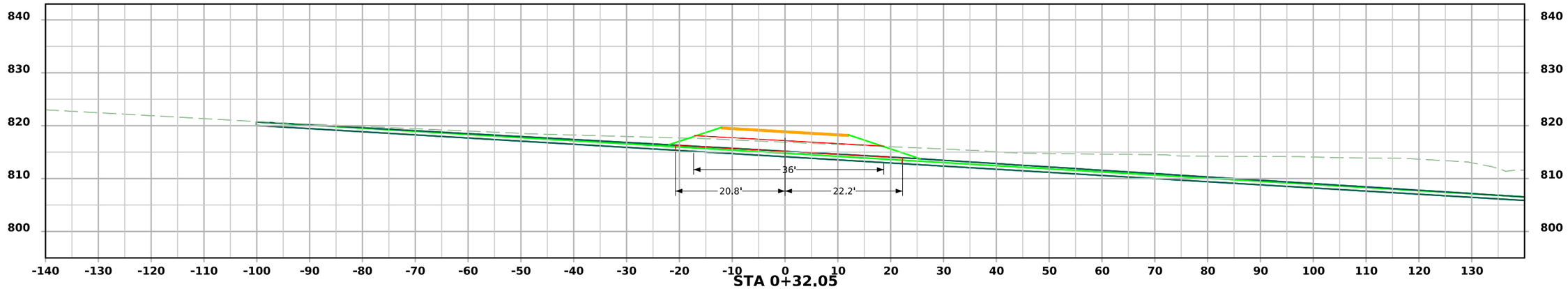


Entrance STA 6006+25.00 RT

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Z.4

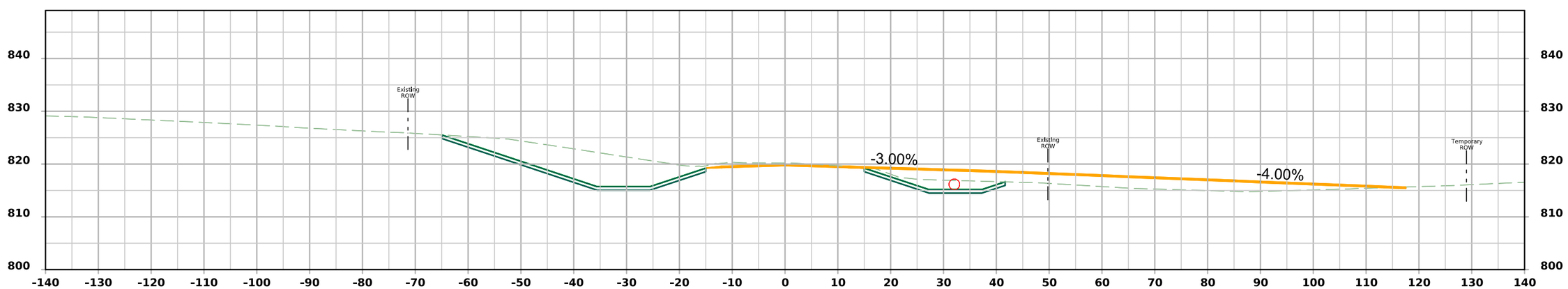
3:41:56 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ENT_62063095Z09_ORD_Z01_Grading.dgn

Entrances - Kirby Ave.



STA 0+32.05

Pipe for Entrance at STA 6030+50.00 RT

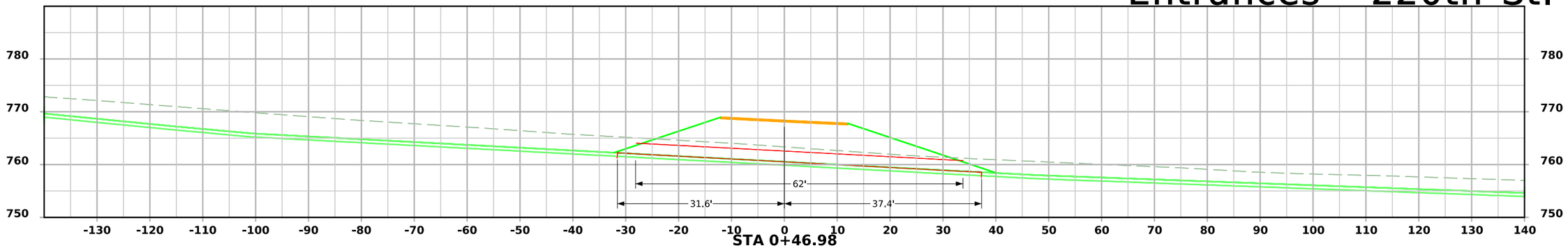


Entrance STA 6030+50.00 RT

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Z.5

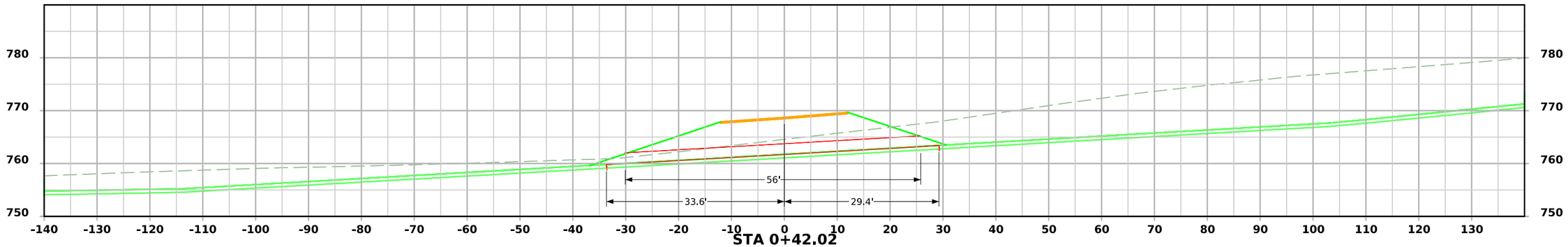
3:41:57 PM 1/31/2025 ajohns1 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6206302013\Design\(093)_Preliminary Engineering\CADD_Files\Cross_Sections\XS_ENT_62063095Z09_ORD_Z01_Grading.dgn

Entrances - 220th St.



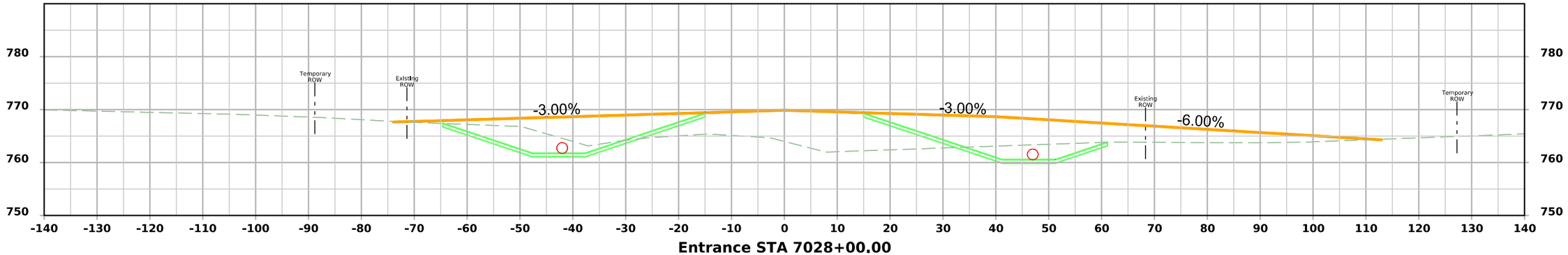
STA 0+46.98

Pipe for Entrance at STA 7028+00.00 RT



STA 0+42.02

Pipe for Entrance at STA 7028+00.00 LT



Entrance STA 7028+00.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery \ Johnson	MAHASKA COUNTY	PROJECT NUMBER NHSX-063-3(95)--3H-62	SHEET NUMBER Z.6

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