LETTING DATE
OCT 15, 2024

BRIDGE REPLACEMENT
BRFN-071-4(55)--39-05

AUDUBON COUNTY

IOWA DOT

REVISIONS

TOTAL
22

PROJECT IDENTIFICATION NUMBER
20-05-071-010

PROJECT NUMBER
BRFN-071-4(55)--39-05

R.O.W. PROJECT NUMBER

INDEX OF SHEETS

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

AUDUBON COUNTY

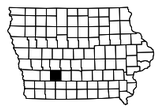
BRIDGE REPLACEMENT

Sifford Creek 1.1 mi N of Co Rd F65

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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



DESIGN DATA RURAL		
2025 AADT	2,500	V.P.D.
2045 AADT	2,600	V.P.D.
2045 DHV	270	V.P.H.
TRUCKS	18	%
Total Design ESALs	--	

INDEX OF SEALS

SHEET NO.	NAME	TYPE
A.1	Michael J. Janechek	Primary Signature Block
V.1	Phillip M. Harpole	Hydraulic Design

D4 PLAN – JUNE 14, 2024
D5 PLAN – OCT 14, 2022

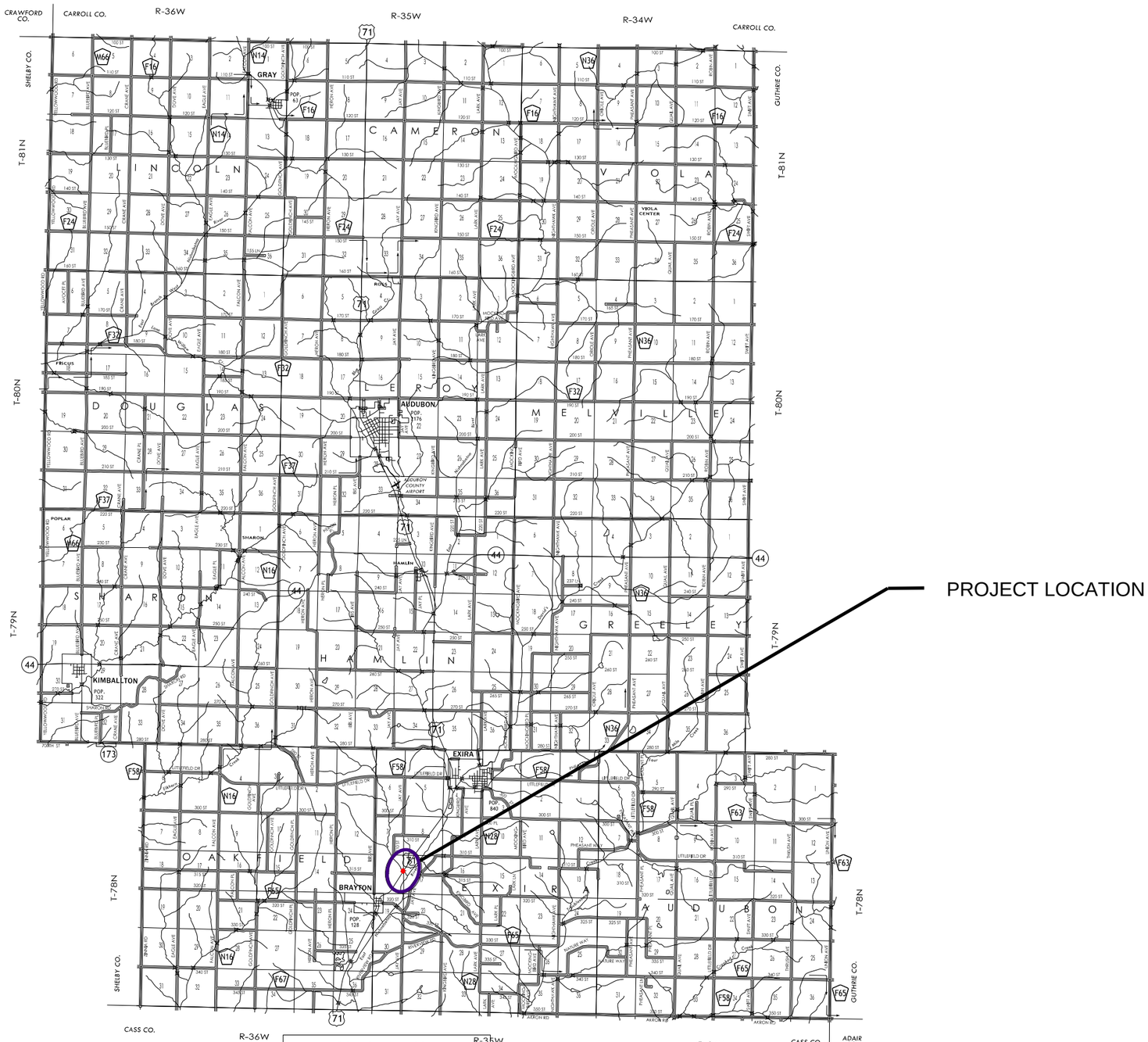
PRELIMINARY PLANS

Subject to change by final design.

D3 PLAN – JULY 1, 2022

FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT / Shive-Hattery	AUDUBON COUNTY	PROJECT NUMBER BRFN-071-4(55)--39-05	SHEET NUMBER A.1

10:06:55 AM 7/1/2022 mjanechek pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0507101020\Design\CADD_Files\Sheet_Files\SHT_05071055_A1.dgn



FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT / Shive-Hattery	AUDUBON COUNTY	PROJECT NUMBER BRFN-071-4(55)--39-05	SHEET NUMBER A.2

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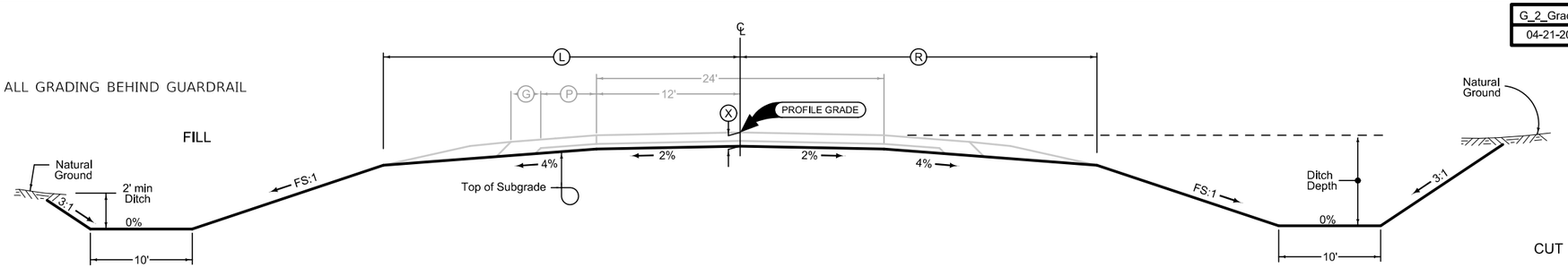
LOCATION			DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	FS
US 71	209+73.02	212+23.02			16	3:1

ALL GRADING BEHIND GUARDRAIL



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

G_2_Grade
04-21-20

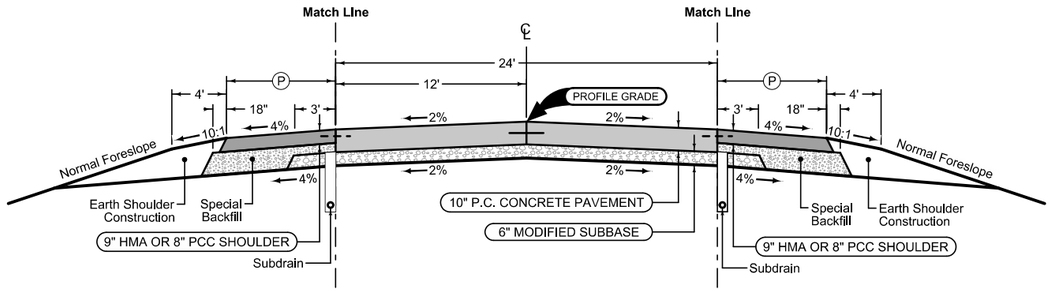
FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT / Shive-Hattery	AUDUBON COUNTY	PROJECT NUMBER BRFN-071-4(55)--39-05	SHEET NUMBER B.1	

10:07:11 AM 7/1/2022 mjanechek pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0507101020\Design\CADD_Files\Sheet_Files\SHT_05071055_B1.dgn

Paved Shoulder at Guardrail

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

2_P_Guard_ 04-21-20		
STATION TO STATION		(P) Feet
209+17.49	209+73.02	VAR.
212+23.02	213+05.42	VAR.



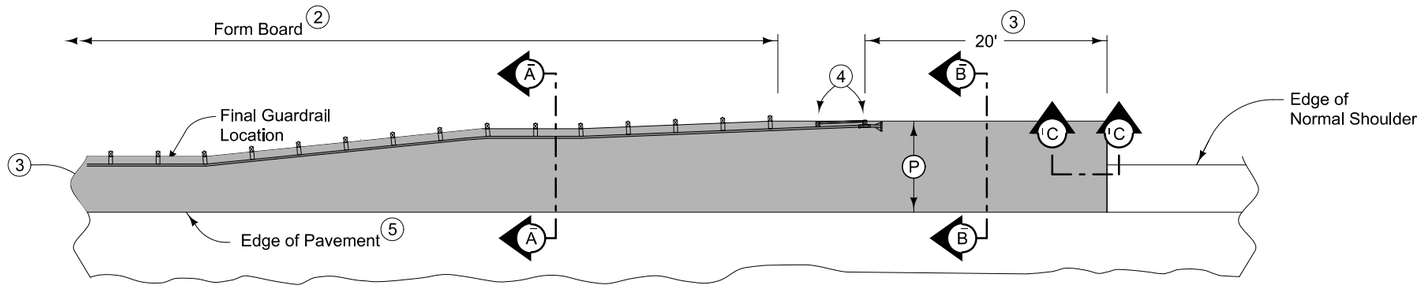
Mainline Jointing:
Transverse joints: CD at 17' spacing
Longitudinal joint: L-2

2P_ 04-21-20	
STATION TO STATION	
209+73.02	736+71.25
738+24.25	212+23.02

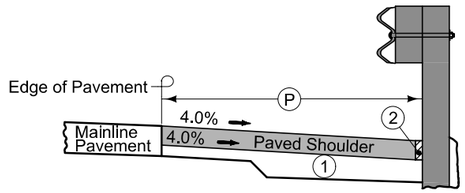
Paved Shoulder at Guardrail

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

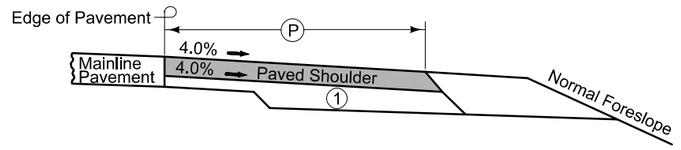
2_P_Guard_ 04-21-20		
STATION TO STATION		(P) Feet
208+92.54	209+73.02	VAR.
212+23.02	212+78.49	VAR.



PLAN VIEW

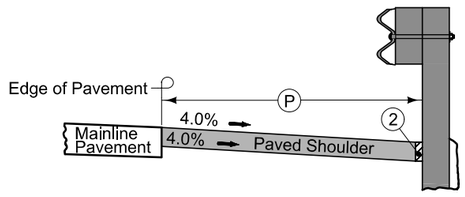


Section A-A

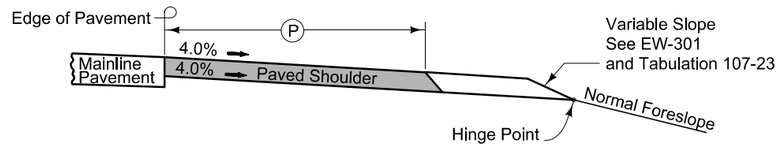


Section B-B

NEW CONSTRUCTION



Section A-A



Section B-B

EXISTING SHOULDER

DESIGNER INFO

7156
04-18-17

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

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

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

Refer to Tabulation 112-9 for shoulder quantities.

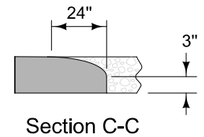
(1) For subgrade treatment, refer to other details in the plan.

(2) PCC option only: When guardrail posts are installed prior to construction of PCC paved shoulder, fasten form board to the face of guardrail posts for the length shown. Refer to note 4 for final 2 posts.

(3) Continue paved shoulder to existing paved shoulder or 20 feet beyond the center of the first post.

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

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



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

PAVED SHOULDER AT GUARDRAIL

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

UTILITY LEGEND

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

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

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Topographic Features and Labels
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)	Existing Utilities
SHADING	**Design Color No.**	
Lavender	(9)	Temporary Pavement Shading
Yellow	(4)	Proposed Pavement Shading
Orange	(6)	Proposed Granular Shading
Orange	(70)	Proposed Shoulder Granular Shading
Yellow	(68)	Proposed Shoulder Paved Full Depth Shading
Yellow	(70)	Proposed Shoulder Paved Partial Depth Shading
Gray, Dark	(112)	Proposed Grade and Pave Shading "In conjunction with a paving project"
Brown, Light	(236)	Grading Shading
Orange, Light	(134)	Proposed Granular Entrance Shading
Yellow	(220)	Proposed Paved Entrance Shading
Tan	(8)	Proposed Sidewalk Shading
Blue, Light	(230)	Proposed Sidewalk Landing Shading
Pink	(11)	Proposed Sidewalk Ramp Shading
Green, Light	(225)	Existing Pavement Shading
Red	(3)	Proposed Structure Shading

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

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

- Reference Point / 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

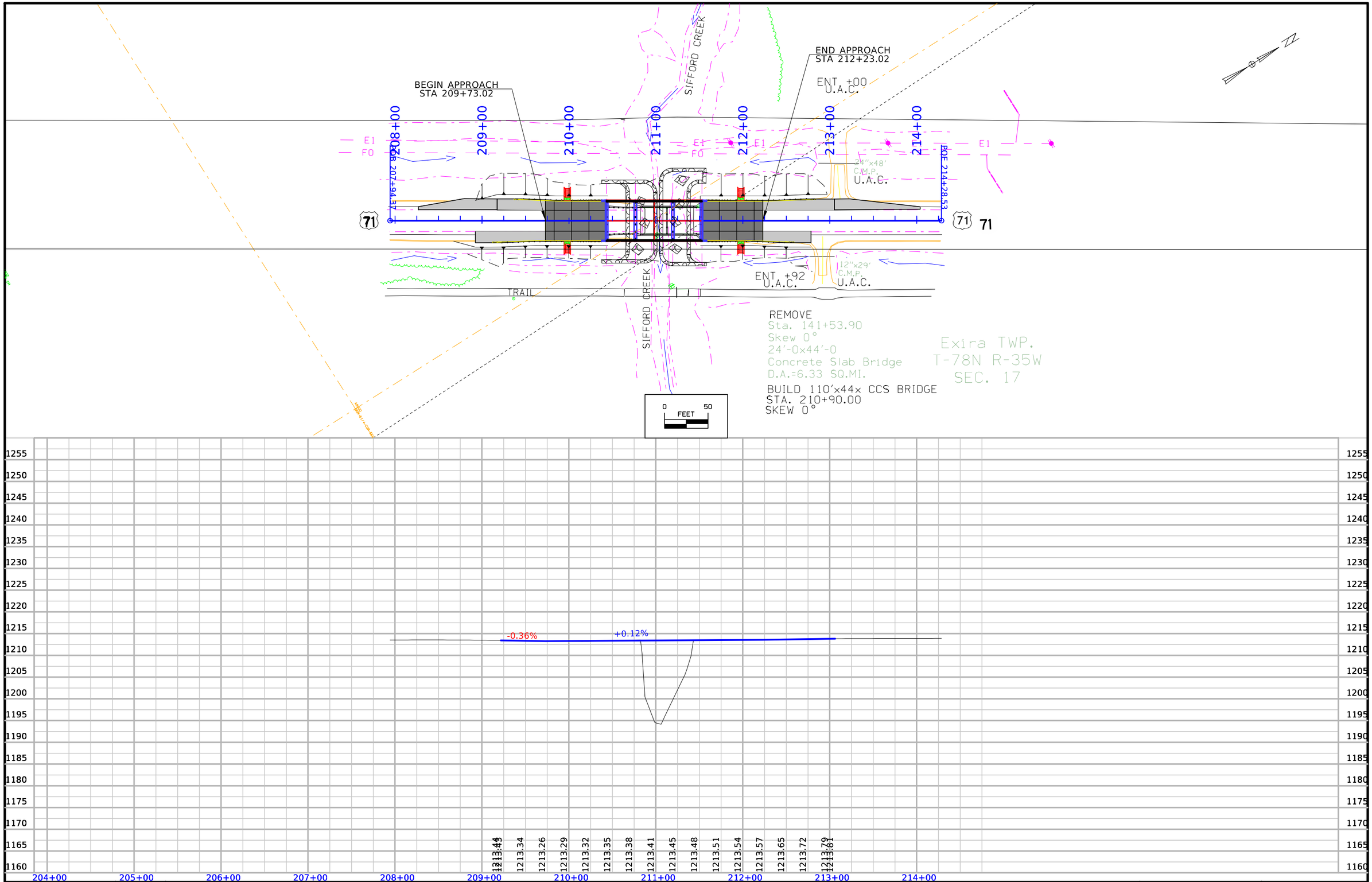
- Proposed Right-of-Way
- Existing Right of Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Easement (Temporary)
- Easement
- C/A Access Control
- Property Line

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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

FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT / Shive-Hattery	AUDUBON COUNTY	PROJECT NUMBER BRFN-071-4(55)--39-05	SHEET NUMBER D.1

12:43:46 PM 5/10/2022 cmatthews pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0507101020\Design\CADD_Files\Sheet_Files\SHT_05071055_LGD.dgn



FILE NO.	ENGLISH	DESIGN TEAM IOWA DOT / SHIVE-HATTERY	AUDUBON COUNTY	PROJECT NUMBER BRFN-071-4(55)--39-05	SHEET NUMBER D.2

9:57:45 AM 7/1/2022 mjanechek pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0507101020\Design\CADD_Files\Sheet_Files\SHT_05071055_D2.dgn

Survey Information

Audubon County
BRFN-071-4(55)—39-05
US 71 over Sifford Creek
PIN 20-05-071-010
Sap-294.1

Party Personnel

Murray Berting – Survey Party Chief
Gavin Gear – Assistant Survey Party Chief

Date(s) of Survey

Begin Date	08/23/2021
End Date	10/22/2021

General Information

Measurement units for this survey are US survey feet. This survey is for proposed Bridge reconstruction and reconstruction of US 71 over Sifford Creek. Project datum and control information is provided by Shive-Hattery, Inc. This project is a Preliminary DTM Field Survey. This survey request was for the Sifford Creek and US 71 corridor only.

Vertical Control

IARTN
Vertical datum for this survey is NAVD88 (Computed using Geoid12B). Additional benchmarks were placed throughout the project using a Total Station setup relative to Point 1 and Point 2. Vertical control was verified between control points with check shots by Total Station through multiple setup from various occupation points with a vertical error of less than 0.05 feet.

This survey found a local control benchmark monument (benchmark disc on bridge abutment in NW corner bridge). No vertical information was available at the time field work was completed.

Horizontal Control

(Project Coordinates from Redundant IaRTN Observations)
The project coordinate system is modified Iowa Regional Coordinate System Zone 7 (U.S. Survey Feet This survey control is relative to the IaRTN reference stations. IaRTN Reference Station coordinates are relative to the National Reference Station network datum: NAD83 (2011) for Epoch 2010.00. Coordinates were determined by IaRTN observations with appropriate occupation times. Additional control points were placed throughout the project using a Total Station setup relative to Point 1 and Point 2.

Utility Information

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

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

A One-call utility locate request (Ticket# 552105378) was made August 02, 2021. The following Companies were listed:

Company (Quality)	Symbol	Remark
Iowa D.O.T	- - -	Not Affected
MidAmerican	PPA	Power Poles North of US 71
MidAmerican (M20E	- - -	Overhead Electrical Line
MidAmerican (M20G)	GLA	Underground Gas Line (QLD)
Mediacom	PPA	Power Poles North of IA 22
Iowa Communications Network (ICN)	FOB	Buried Telephone Fiber Optic Line
Centurylink (CTLIA01)	FOA	Buried Telephone Fiber Optic Line

Following are the list of contacts made in the order they were received:

(CTLIA01) CENTURYLINK
Contact Name : SADIE HULL
Contact Phone: 9185470147
Contact Email: sadie.hull@lumen.com

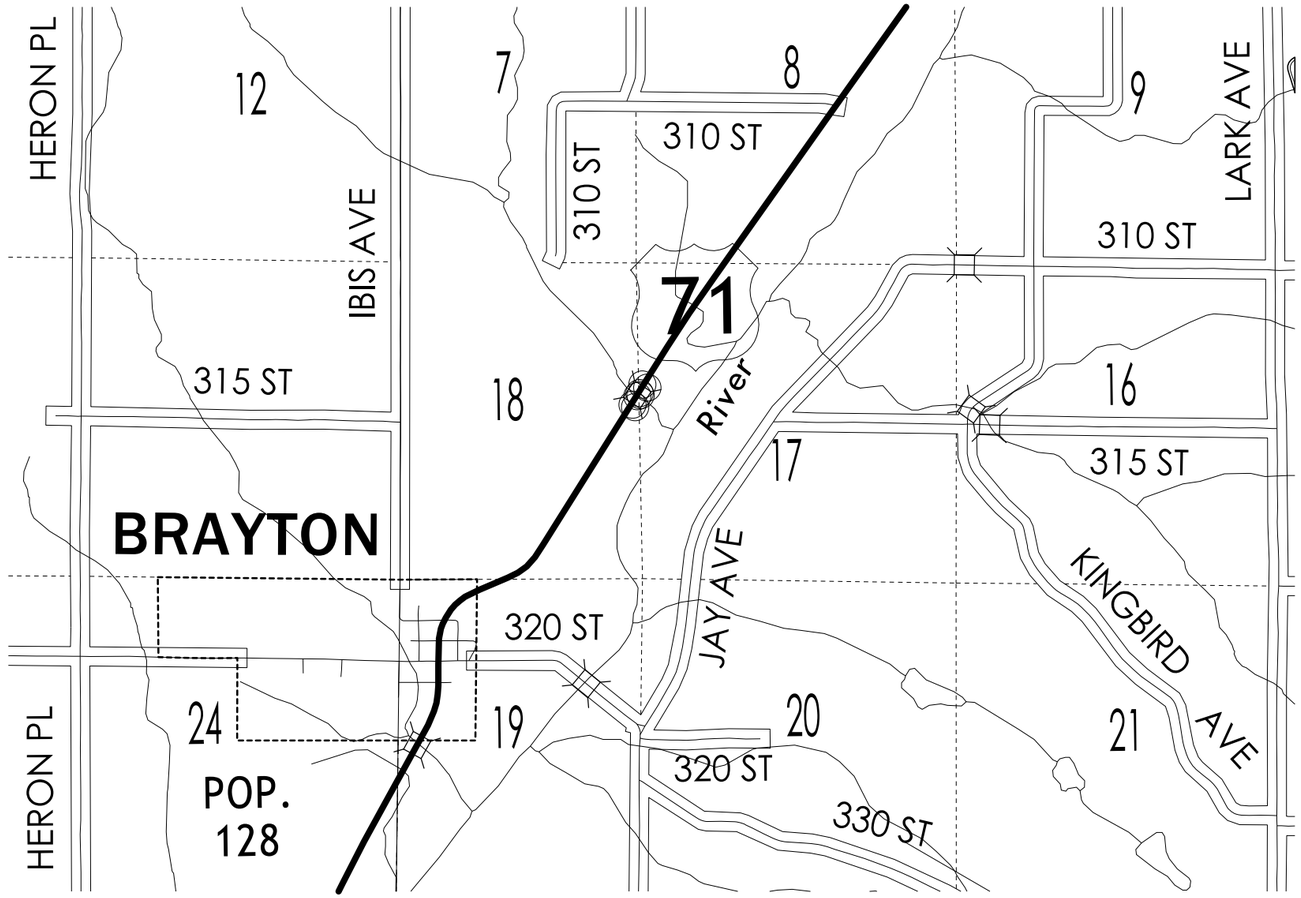
(ICN) IOWA COMMUNICATIONS NETWORK
Contact Name : Shannon Marlow
Contact Phone: 8005723940
Contact Email: icnoutsideplantiowaonecall@iowa.gov

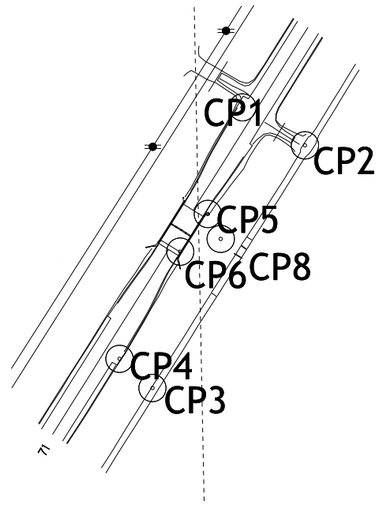
(M20E) MIDAMER-ELEC
Contact Name : Glen Nobiling
Contact Phone: 7127927045
Contact Email: ggnobiling@midamerican.com

(M20G) MIDAMER-GAS
Contact Name : Glen Nobiling
Contact Phone: 7127927045
Contact Email: ggnobiling@midamerican.com

CONTROL POINT VICINITY MAP

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





HORIZ. DATUM: NAD83(2011) EPOCH 2010.00
VERT. DATUM: NAVD88
Ia. Regional Coordinate System Zone 7

Coordinate listing from next sheet will be used with IaRTN for monument recovery. No other reference ties are given.

HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING

HORIZ. DATUM: NAD83(2011) EPOCH 2010.00

VERT. DATUM: NAVD88

Ia. Regional Coordinate System Zone 7
Project Control Marks are Bench Marks

POINT NAME	Y	X	Z	FEATURE DEFINITION - DESCRIPTION
1	7276289.053	17423782.11	1213.424	CP1 PK
2	7276238.895	17423864.52	1212.000	CP2 PK
3	7275918.653	17423663.3	1212.697	CP3 PK
4	7275957.147	17423619.82	1213.039	CP4 PK
6	7276098.556	17423699.94	1213.255	CP6 CX
5	7276148.298	17423736.33	1213.838	CP5 CX
8	7276115.446	17423753.38	1204.066	CP8 NAIL

NOTE:
The first two digits in the control point name refer to the county number.
The next 3 digits refer to the highway number.
The next 3 digits refer to the highway milepost.
The last digit refers to the distance from the referenced milepost to the nearest tenth of a mile.

108-23A
08-01-08

TRAFFIC CONTROL PLAN

1) While bridge and approaches are being removed and replaced, traffic shall be maintained on US 71 at all times by staged construction with temporary signals allowing one lane of traffic.

2) Signage and devices shall be furnished, installed, maintained, and removed by Contractor.

108-26A
08-01-08

STAGING NOTES

Stage 1:
Remove and replace east portion of US 71 roadway, approaches and bridge with traffic shifted to SB lane using temporary signals.

Stage 2:
Remove and replace west half of roadway, approaches and complete bridge structure with traffic shifted to NB temporary pavement lane using temporary signals.

Stage 3:
Remove temporary paving on east half of roadway and complete approach and roadway to re-establish centerline with US 71 traffic shifted to SB lane using temporary signals.

108-25
10-21-14

511 TRAVEL RESTRICTIONS

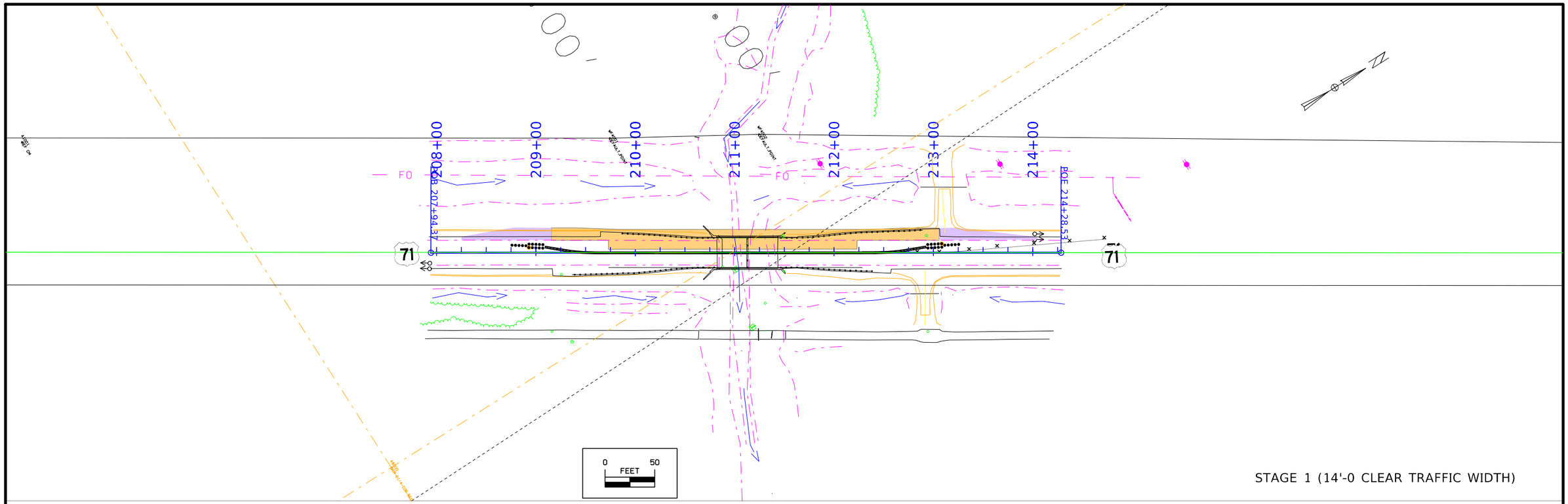
Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No., Structure ID, or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
US 71	Both	AUDUBON	Bridge over Sifford Creek	SIFFORD CREEK	Bridge		Width		12			

111-01
04-17-12

COORDINATED OPERATIONS

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

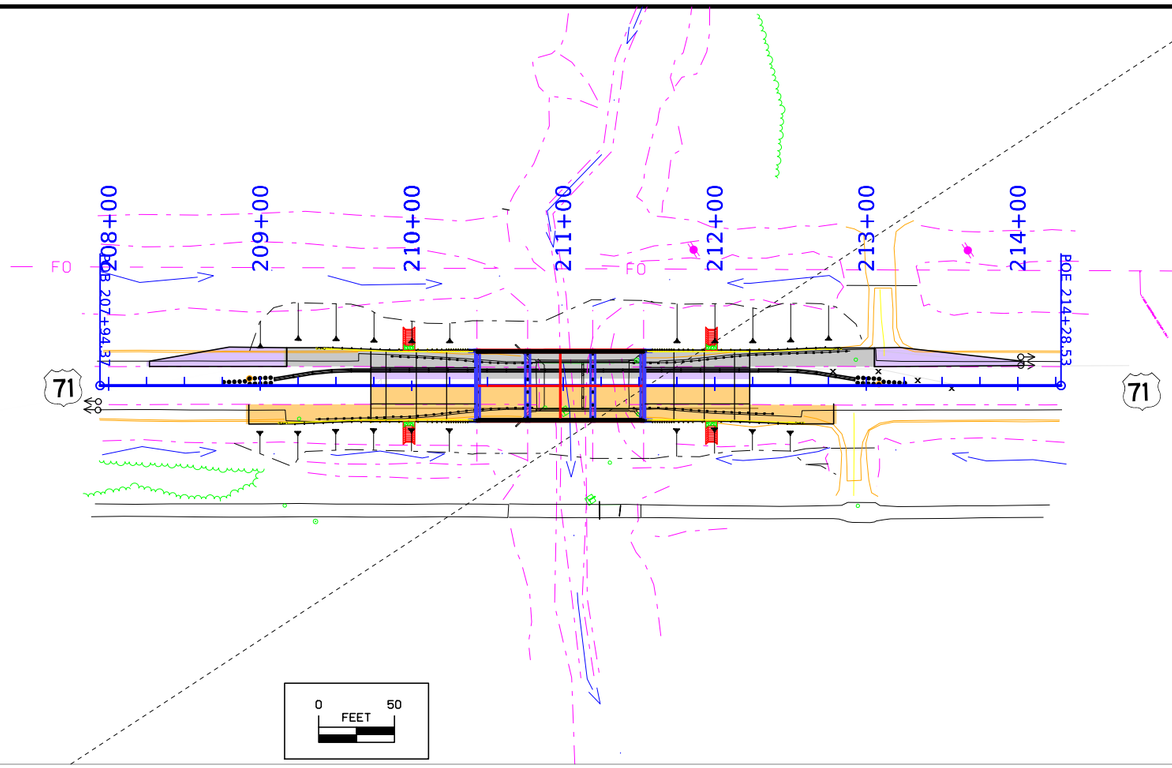
Project	Type of Work
None Provided	



STAGE 1 (14'-0 CLEAR TRAFFIC WIDTH)

FILE NO.	ENGLISH	DESIGN TEAM IOWA DOT/SHIVE-HATTERY	AUDUBON COUNTY	PROJECT NUMBER BRFN-071-4(55)--39-05	SHEET NUMBER J.2	

10:37:57 AM 7/1/2022 mjanechek pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0507101020\Design\CADD_Files\STG_05071055_Z07.dgn



STAGE 2 (11'-0 CLEAR TRAFFIC WIDTH)

FILE NO.	ENGLISH	DESIGN TEAM IOWA DOT/SHIVE-HATTERY	AUDUBON COUNTY	PROJECT NUMBER BRFN-071-4(55)--39-05	SHEET NUMBER J.3	

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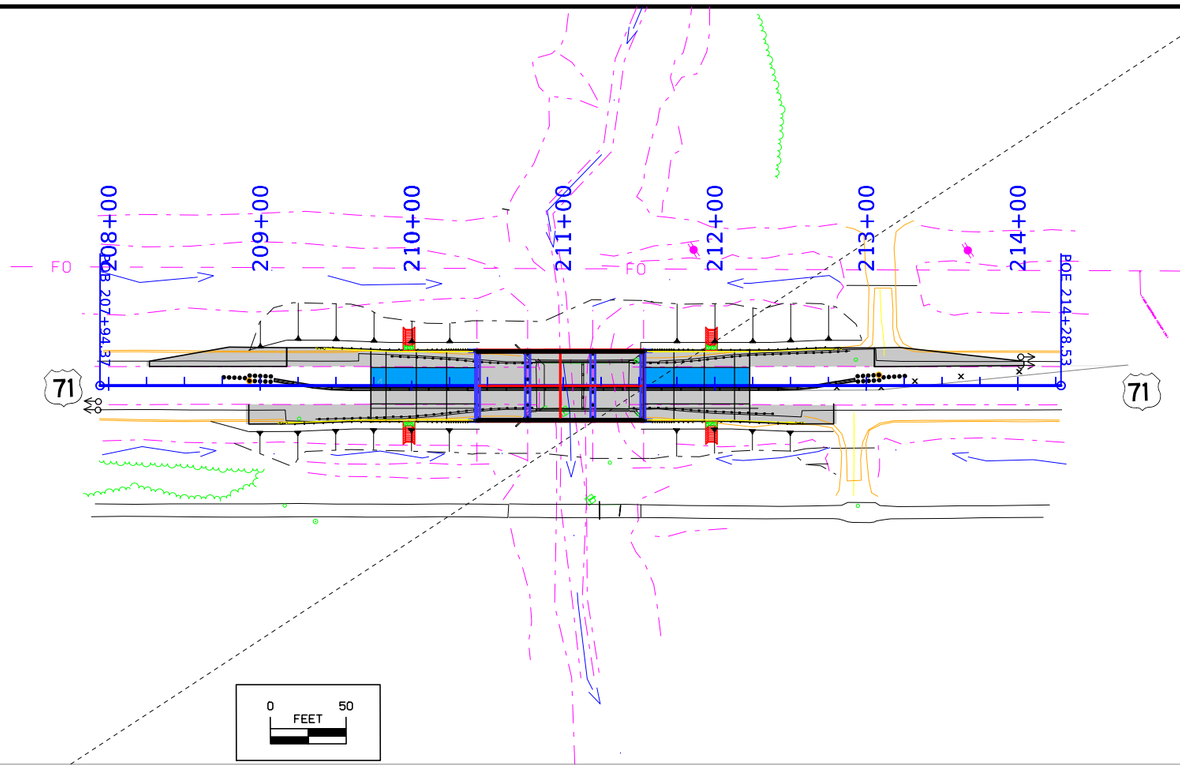
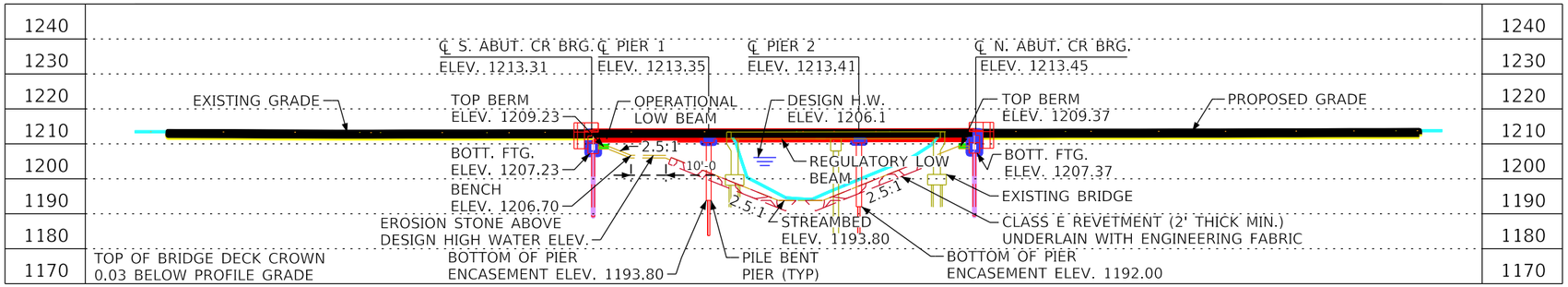


STAGE 3 (14'-0 CLEAR TRAFFIC WIDTH)

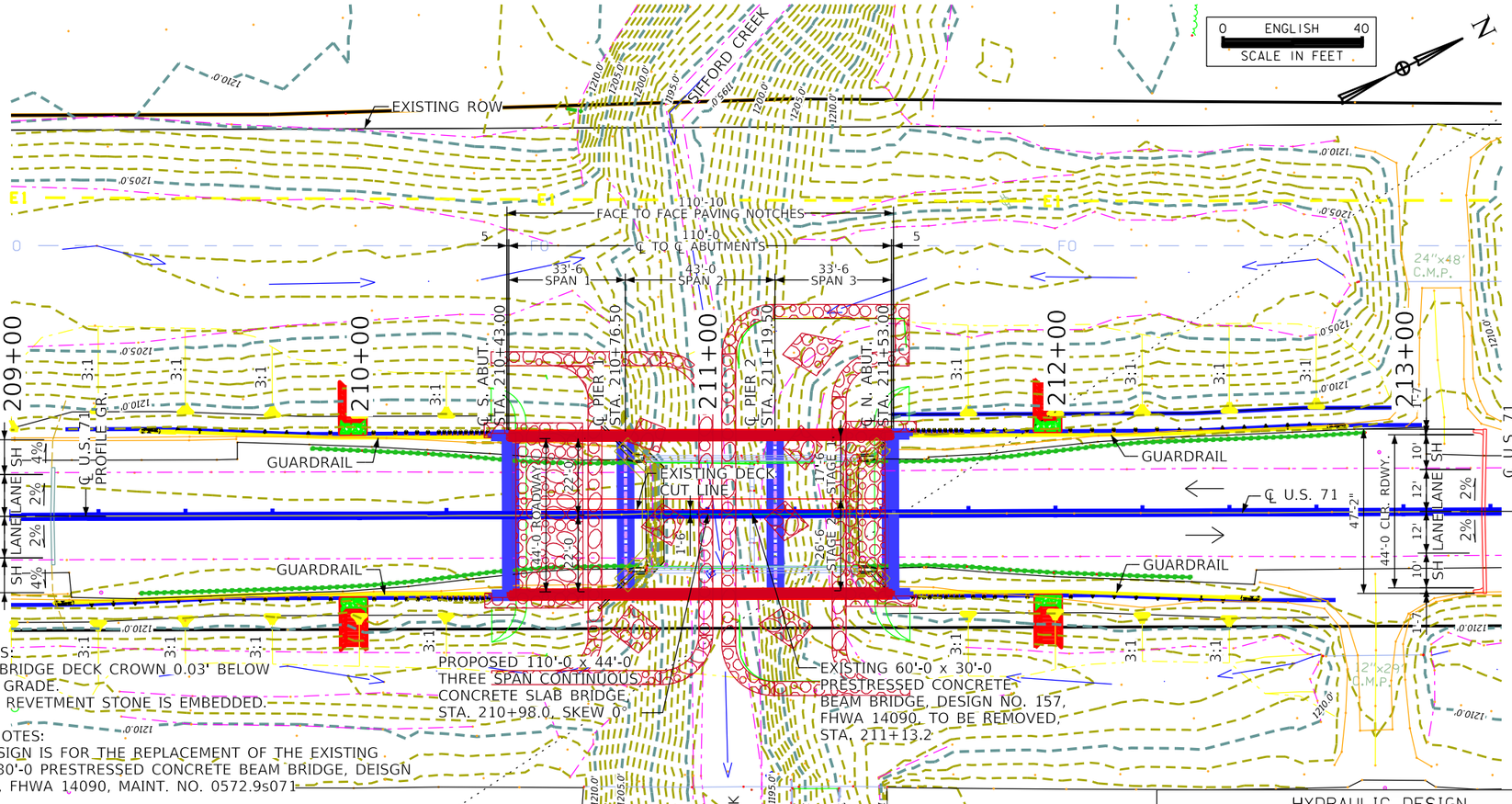
FILE NO.	ENGLISH	DESIGN TEAM IOWA DOT/SHIVE-HATTERY	AUDUBON COUNTY	PROJECT NUMBER BRFN-071-4(55)--39-05	SHEET NUMBER J.4	

10:37:56 AM 7/1/2022 mjanechek pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0507101020\Design\CADD_Files\STG_05071055_Z07.dgn

Control Point: Y=7276148.298, X=17423736.33, Z=1213.838, CP5 CX



LONGITUDINAL SECTION ALONG ℄ APPROACH ROADWAY



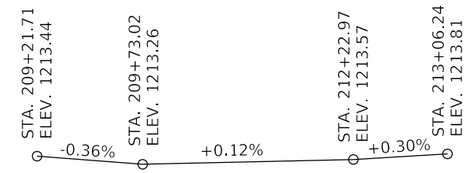
TYPICAL APPROACH SECTION

TYPICAL BRIDGE SECTION

PLAN NOTES:
1. TOP OF BRIDGE DECK CROWN 0.03' BELOW PROFILE GRADE.
2. CLASS E REVETMENT STONE IS EMBEDDED.

GENERAL NOTES:
1. THIS DESIGN IS FOR THE REPLACEMENT OF THE EXISTING 60'-0 x 30'-0 PRESTRESSED CONCRETE BEAM BRIDGE, DEISGN NO. 157, FHWA 14090, MAINT. NO. 0572.9s071.

DESIGN NOTES:
1. TL-4 BRIDGE RAILING PROPOSED.
2. J44-14 CONTINUOUS CONCRETE SLAB BRIDGE (STAINLESS STEEL).
3. FINAL DESIGNER MAY CONSIDER FULL ENCASEMENT OF PILE BENTS TO REDUCE THE DESIGN UNBRACED LENGTH.
4. USE STAINLESS STEEL REINFORCING BARS IN THE DECK WITH THE 3'-0" GAP BETWEEN REMOVAL LINE AND STAGE 1 CONSTRUCTED DECK.
5. STAGE 1 SLAB CONSTRUCTION SHALL REMAIN SHORED DURING STAGE 2 CONSTRUCTION.



Proposed Profile
Grade U.S. 71

Hydraulic Data

Drainage Area = 6.33 Sq. Mi.
Stream Slope = 27.7 Ft./Mi.
Avg. Low Water Stage = 1194.3

Q_{25} = 2,970 CFS
Stage = 1204.3

Q_{50} = 3,730 CFS
Stage = 1206.1
Regulatory Low Beam = 1211.4
Backwater = 1.0 Ft.
Avg. Bridge Velocity = 8.1 FPS

Q_{100} = 4,550 CFS
Stage = 1207.7
Operational Low Beam = 1211.33
Backwater = 1.1 Ft.
Avg. Bridge Velocity = 7.7 FPS

Q_{200} = 5,430 CFS
Stage = 1209.0
Calculated Design Scour = ???.?

Q_{500} = 6,490 CFS
Stage = 1210.5
Avg. Bridge Velocity = 7.5 FPS
Calculated Check Scour = ???.?

Roadway Overtop 1213.19
Sta. 210+20.0

Utilities Legend

Symbol - Type

— — F0 — Fiber Optic Line

— — E1 — Electrical Line

Utilities shown on this sheet are for information only, see road design sheets for final utility information.

Location

U.S. 71 over Sifford Creek
T-78N R-35W
Section 18
Exira Township
Audubon County
FHWA No. ??
Bridge Maint. No. 0572.9s071
Latitude 41.556417°
Longitude -94.912097°

Traffic Estimate

2025 AADT	2,500	V.P.D.
2045 AADT	2,600	V.P.D.
2045 DHV	270	V.P.H.
Trucks	18	%
Total		
Design ESALs	??,???	

HYDRAULIC DESIGN

LICENSED PROFESSIONAL ENGINEER — Philip M. Harpole 12910 — 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
Philip M. Harpole
Printed or Typed Name

My license renewal date is December 31, 2023

Pages or sheets covered by this seal: Sheets V.1, V.2, V.3

Design For 0° Skew

110'-0 x 44'-0 CONTINUOUS CONCRETE SLAB BRIDGE

33'-6 End Spans — 43'-0 Interior Span

SITUATION PLAN

STA. 210+98.0 (U.S. 71) — July 2022

Audubon County

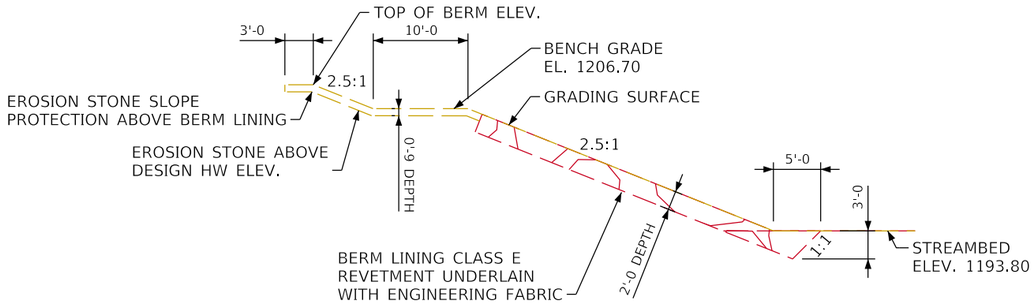
IOWA DEPARTMENT OF TRANSPORTATION

Design No. XXX — Design Sheet No. 001 of 003 — FHWA No. XXXXXX

FILE NO. XXXXX	ENGLISH	DESIGN TEAM SHIVE-HATTERY, INC.	AUDUBON COUNTY	PROJECT NUMBER BRFN-071-4(55)--39-05	SHEET NUMBER V.1	REVISED

SYSTEMTIME SYSTEMDATE USERNAME DGNSPEC

Changed by Addenda



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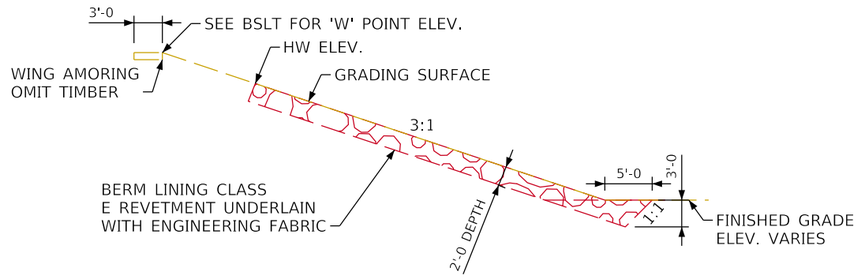
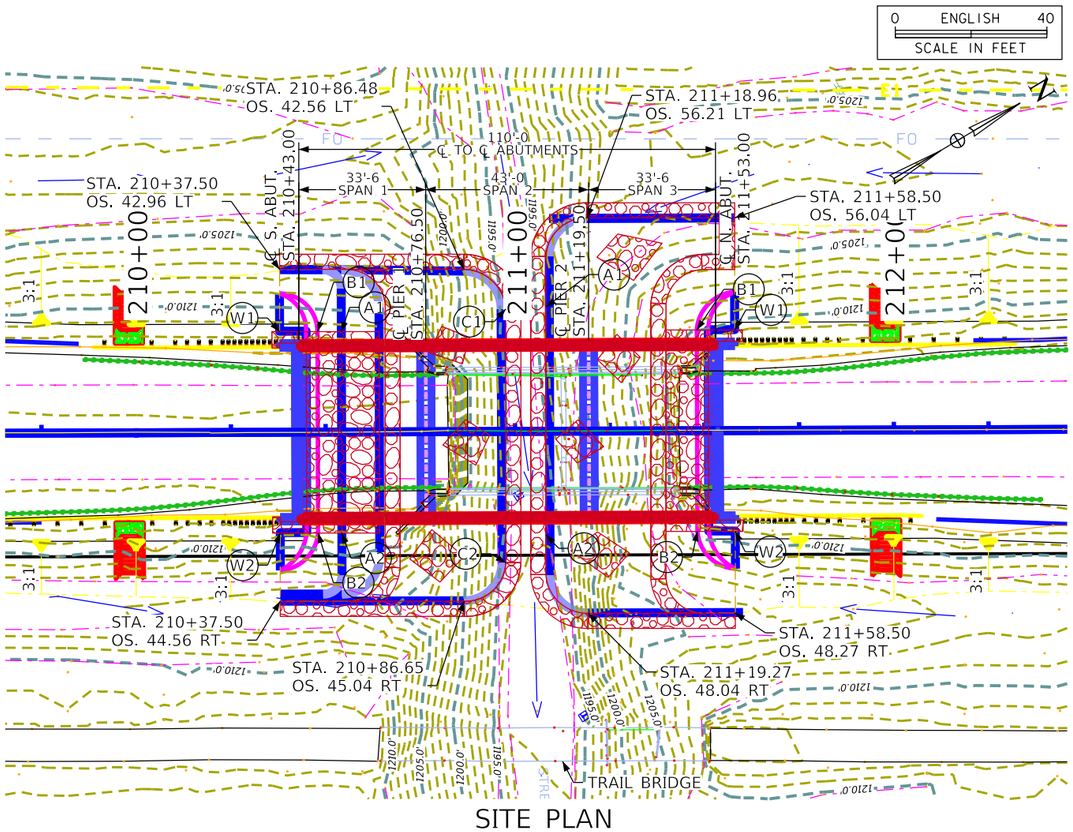


SECTION THRU EMBEDDED REVETMENT BERM
NORMAL TO BRIDGE WING AT 'W' POINT



SITE PLAN

Berm Slope Location Table

Points	South Abutment			North Abutment		
	Station	Offset	Elev.	Station	Offset	Elev.
A1	210+54.19	26.58' LT	1206.70	211+08.29	26.58' LT	1193.80
A2	210+54.19	26.58' RT	1206.70	211+08.29	26.58' RT	1193.80
B1	210+47.50	26.58' LT	1209.23	211+48.50	26.58' LT	1209.37
B2	210+47.50	26.58' RT	1209.23	211+48.50	26.58' RT	1209.37
C1	210+97.50	32.19' LT	1193.80	-	-	-
C2	210+97.44	34.77' RT	1193.80	-	-	-
W1	210+37.50	26.58' LT	1212.55	211+58.50	26.58' LT	1212.69
W2	210+37.50	26.58' RT	1212.55	211+58.50	26.58' RT	1212.69

Berm slope elevations reflect the grading surface.

Estimated Berm Armoring Quantities

Location	Revetment CL. E (Ton)	Erosion Stone (Ton)	Enginering Fabric (SY)	Excavation (CY)
Berm Lining - South Abutment	539.0	47.4	660.7	366.1
Berm Lining - North Abutment	632.6	28.4	700.5	412.9
Totals	1171.6	75.8	1361.2	779.0

Excavation quantity calculated from grading surface.

Design For 0° Skew

110'-0 x 44'-0 CONTINUOUS CONCRETE SLAB BRIDGE

33'-6 End Spans 43'-0 Interior Span

SITUATION PLAN - SITE

STA. 210+98.0 (U.S. 71) July 2022

Audubon County

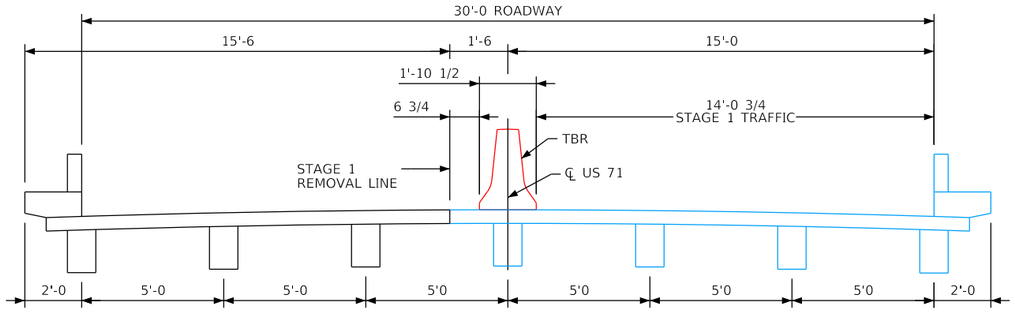
IOWA DEPARTMENT OF TRANSPORTATION

Design No. XXX Design Sheet No. 002 of 003 FHWA No. XXXXXX

FILE NO. XXXXX	ENGLISH	DESIGN TEAM SHIVE-HATTERY, INC.	AUDUBON COUNTY	PROJECT NUMBER BRFN-071-4(55)--39-05	SHEET NUMBER V.2	REVISED

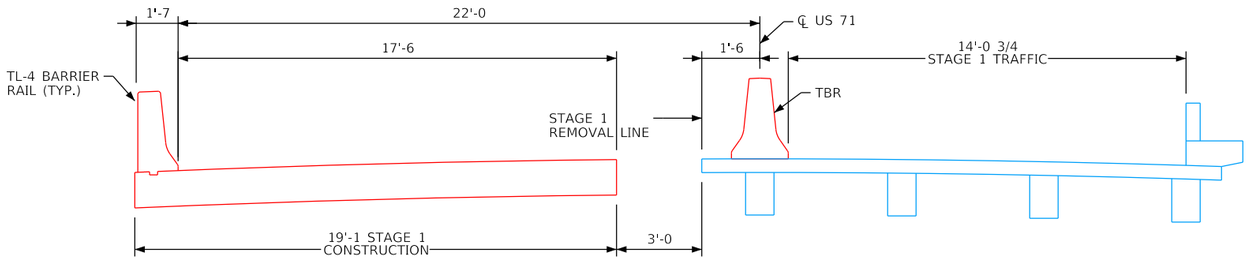
SYSTEMTIME SYSTEMDATE USERNAME DGNSPEC

Changed by Addenda

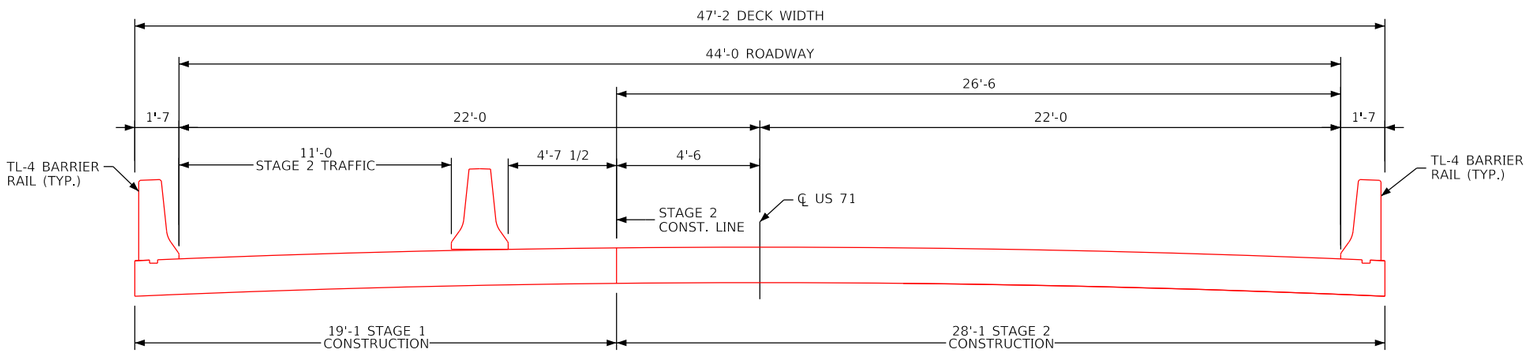


TBR - TEMPORARY BARRIER RAIL

STAGE 1 REMOVAL



STAGE 1 CONSTRUCTION



STAGE 2 CONSTRUCTION

Design For 0° Skew

110'-0 x 44'-0 CONTINUOUS CONCRETE SLAB BRIDGE

33'-6 End Spans 43'-0 Interior Span

STAGE PLAN

STA. 210+98.0 (U.S. 71) July 2022

Audubon County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. XXX Design Sheet No. 003 of 003 FHWA No. XXXXXX

FILE NO. XXXXX	ENGLISH	DESIGN TEAM SHIVE-HATTERY, INC.	AUDUBON COUNTY	PROJECT NUMBER BRFN-071-4(55)--39-05	SHEET NUMBER V.3	REVISED

SYSTEMTIME SYSTEMDATE USERNAME DGNSPEC

Changed by Addenda

CROSS SECTION VIEW COLOR LEGEND

Design Color No.	Feature
Aggregate	
(64)	Choke Stone
(42)	Engineering Fabric
(8)	Flooded Backfill
(92)	Macadam Stone
(20)	Modified
(12)	Plowing Shaping
(14)	Porous Backfill
(8)	Revetment Class A
(6)	Revetment Class B
(62)	Revetment Class C
(188)	Revetment Class D
(28)	Revetment Class E
(12)	Shoulder Special Backfill
(12)	Special Backfill
(20)	Subbase
(20)	Subbase Lower
(20)	Subbase Upper
(118)	Subgrade Treatment
Asphalt	
(207)	HMA Base Course
(207)	HMA Interim Course
(207)	HMA Surface Course
Concrete	
(0)	Barrier Concrete
(0)	Barrier Concrete Footing
(0)	Curb Gutter
(48)	Flowable Mortar
(0)	Median Concrete
(0)	PCC Pavement
(0)	Sidewalk
Shoulder	
(209)	Shoulder HMA
(0)	Shoulder PCC
(6)	Shoulder Granular
Existing	
(0)	Existing Pavement
Structural	
(0)	Bridge
(21)	Guardrail
(112)	Noise Wall
(112)	Noise Wall Footing
(112)	Retaining Wall Back
(112)	Retaining Wall Back Excavate
(112)	Retaining Wall Face
(112)	Retaining Wall Front Excavate
(112)	Retaining Wall Front Footing
(112)	Retaining Wall MSE Gutter
(112)	Retaining Wall Reinforced Earth
Grading	
(8)	Behind Curb Cut
(6)	Granular
(13)	Granular Back Fill
(48)	Rock Undercut
(8)	Shoulder Earth Fill
(2)	Side Slopes
(226)	Side Slopes Dressing
Substrata	
(128)	Boulder Substrata
(209)	Boulder Removed Substrata
(48)	Broken Weathered Substrata
(210)	Broken Weathered Removed Substrata
(3)	Core Out Substrata
(195)	Core Out Remove and Replace Substrata
(115)	Core Out Remove Only Substrata
(203)	Existing Pavement Substrata
(200)	Existing Pavement Remove and Replace Substrata
(184)	Existing Pavement Remove Only Substrata
(6)	Loam Substrata
(211)	Loam Removed Substrata
(80)	Rock Substrata
(212)	Rock Removed Substrata
(4)	Select Sand Substrata
(214)	Select Sand Removed Substrata
(3)	Shale Substrata
(215)	Shale Removed Substrata
(10)	Topsoil Substrata
(4)	Topsoil Remove and Replace Substrata
(2)	Topsoil Remove Only Substrata
Unsuitable / Waste	
(3)	Unsuitable Type A
(216)	Unsuitable Type A Removed
(13)	Unsuitable Type B
(217)	Unsuitable Type B Removed
(11)	Unsuitable Type C
(218)	Unsuitable Type C Removed
(3)	Waste
(219)	Waste Removed
Trigger Switches	
(27)	Do Not Construct

NOTES:

Text

NOTES:

Text

CROSS SECTIONS
LEGEND AND INFORMATION SHEET

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

FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT / Shive-Hattery	AUDUBON COUNTY	PROJECT NUMBER BRFN-071-4(55)--39-05	SHEET NUMBER W.1

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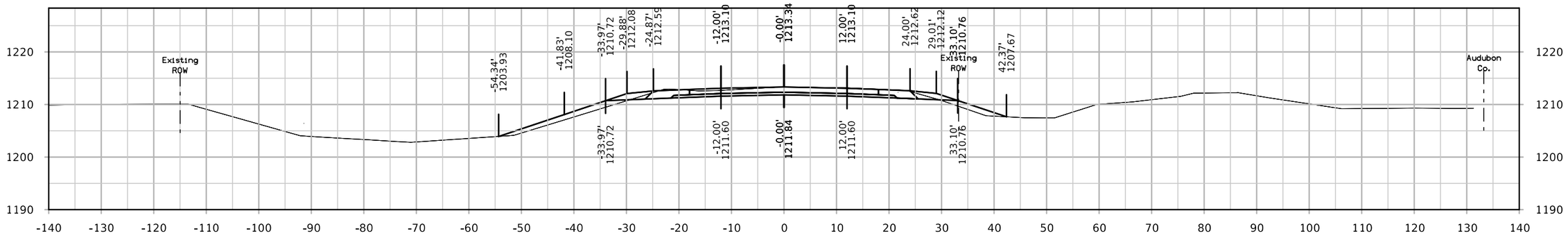

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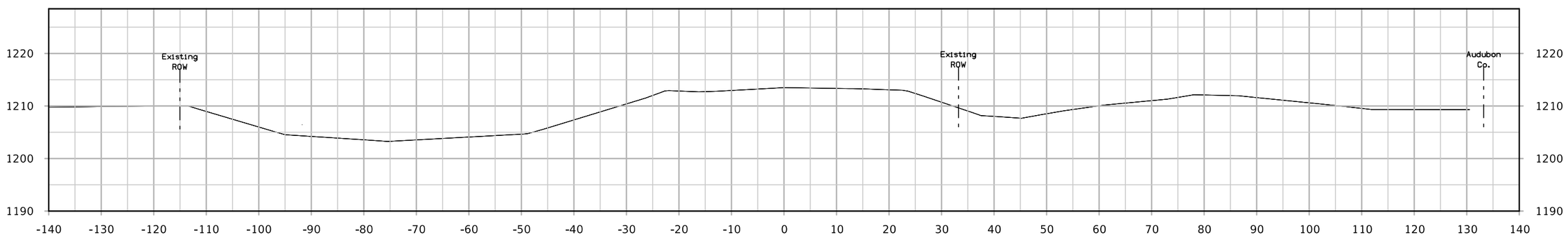

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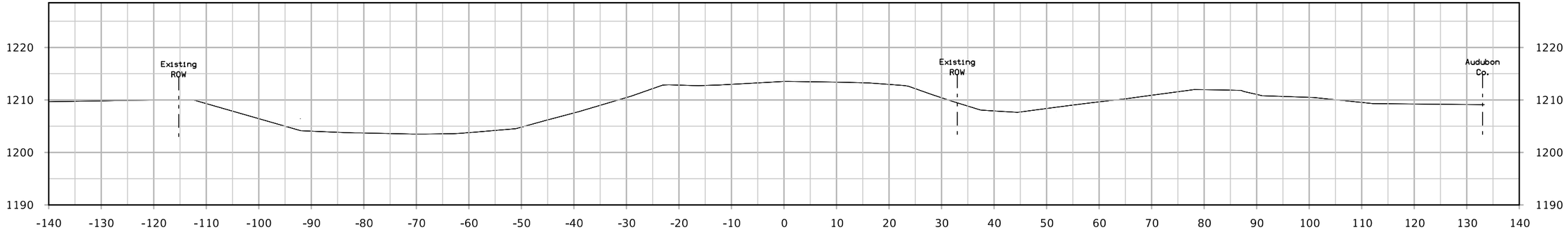

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FILE NO.	ENGLISH	DESIGN TEAM IOWA DOT/SHIVE-HATTERY	AUDUBON COUNTY	PROJECT NUMBER BRFN-071-4(55)--39-05	SHEET NUMBER W.2

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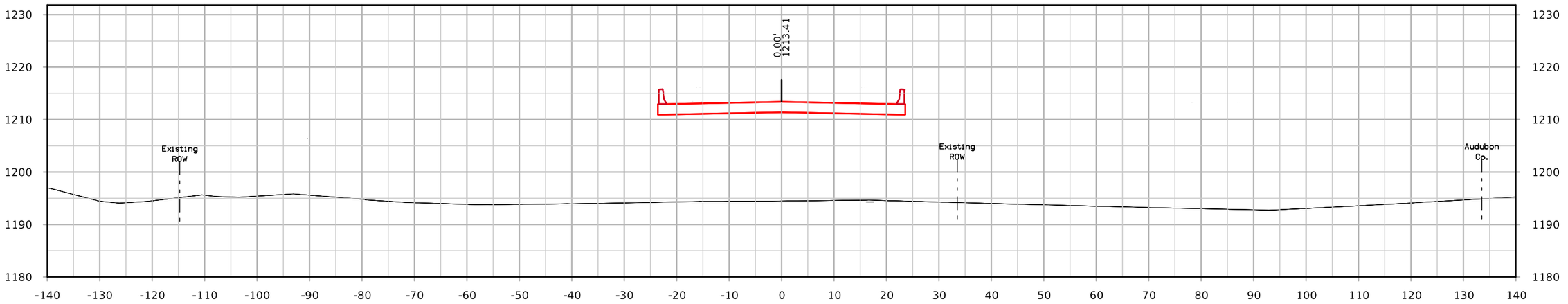

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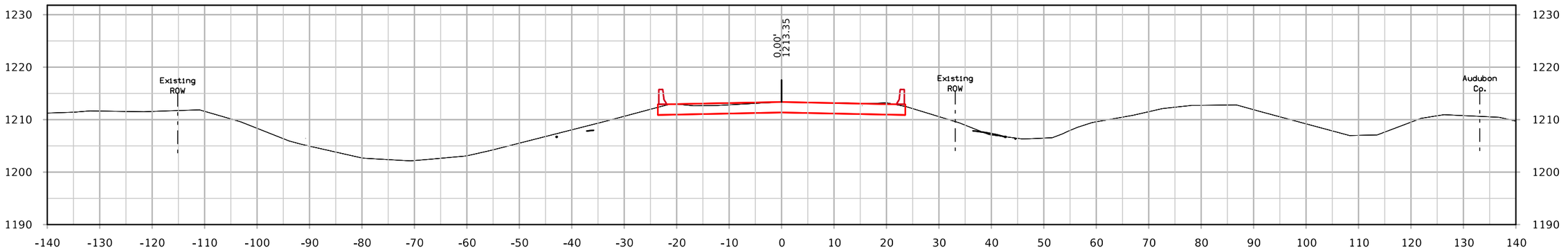

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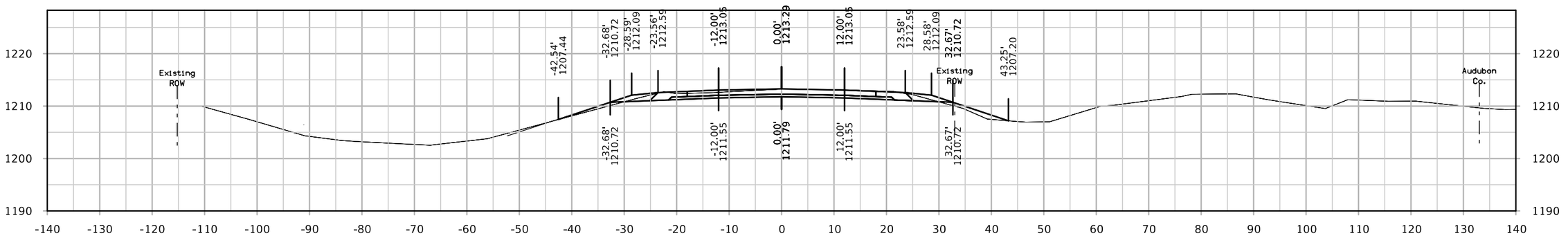

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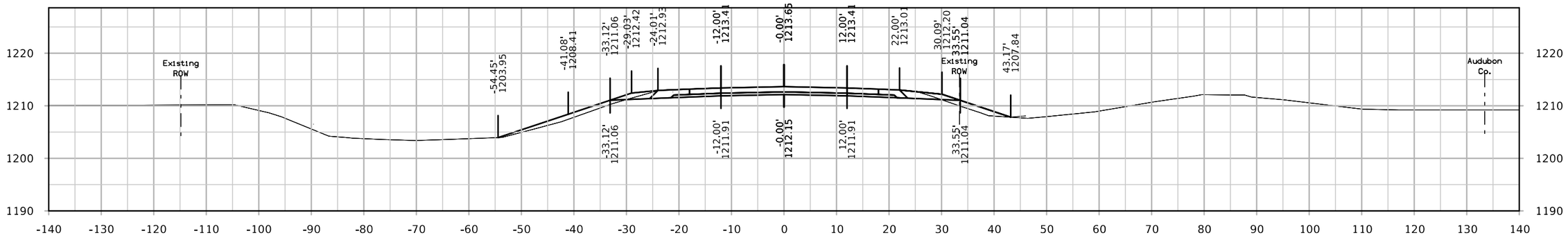

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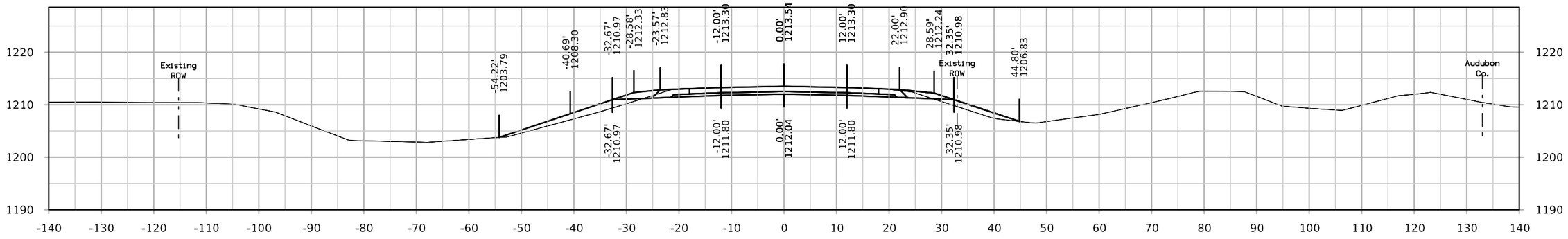

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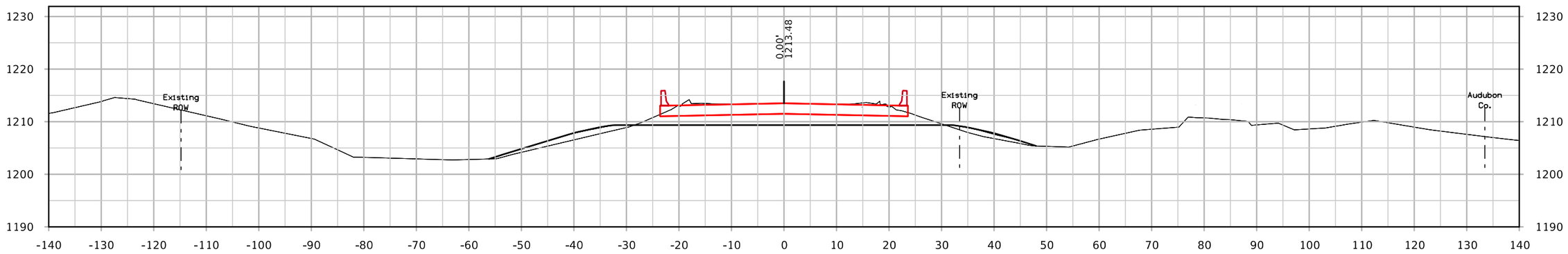

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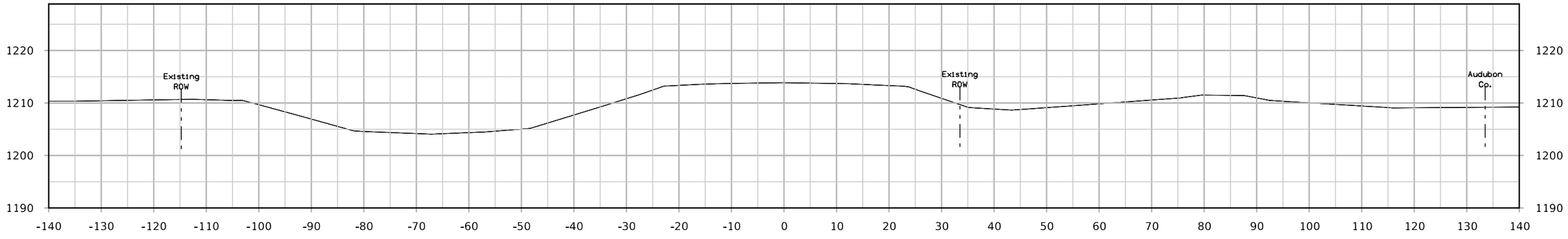

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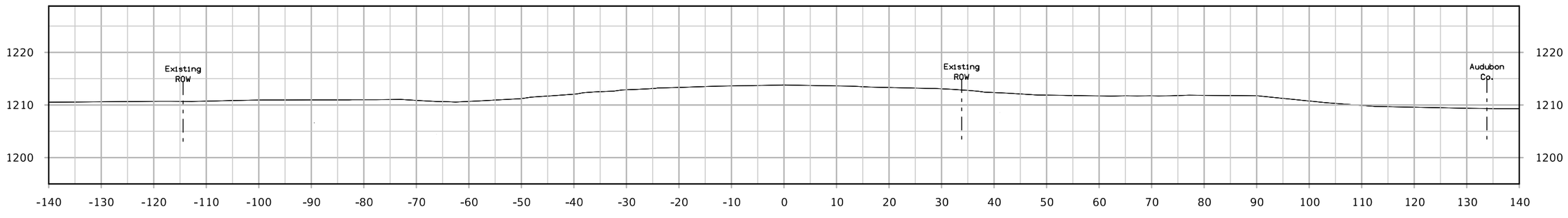

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