

IOWA DEPARTMENT OF TRANSPORTATION

TO OFFICE:	District 1	DATE:	June 18, 2026
ATTENTION:	Allison Smyth	PROJECT:	Jasper County BRF-006-4(206)--38-50
FROM:	John E. Bartholomew		25-50-006-020
BUREAU:	Design		
SUBJECT:	Project Concept Statement; (Final, D0)		

This project involves the replacement of the U.S. 6 bridge (Maint No. 5077.9S006) over IAIS RR 1.5 miles east of IA 224.

A concept review was held on February 3, 2026. Those present included Sean Passick, Ben Adey, Ray Ringgenberg and Bob Ellis from the District 1 Office; Patricia Schwarz, Linda Narigon, Steven Schroder and Jimmy Ellis from the Bridges and Structures Bureau; Brandy Beavers and Jim Gallart from the Location and Environment Bureau; Amanda Woods and David Phillips from Rail; Edward Sowder and Gina Horner from HNTB and John Bartholomew, Jason Holst, Yan Jia, Mark Dell and Hollie Richey from the Design Bureau.

The four alternatives considered were:

1. Replace the existing bridge with a three span, 279 ft. x 44 ft. BTB pretensioned prestressed concrete beam (PPCB) bridge to clear a 25 ft. RR clear zone. Estimated Cost **\$4,111,000.**
2. Replace the existing bridge with a simple span, 156 ft. x 44 ft. welded plate girder bridge to clear RR zone. Alternative dismissed due to impacts to the North Skunk River bridge.
3. Replace the existing bridge with a single span, 110 ft. x 44 ft. BTC PPCB bridge to clear a 25 ft. RR clear zone. Alternative dismissed due to impacts to the North Skunk River bridge.
4. Replace the existing bridge with a three span, 324 ft. x 44 ft. BTE PPCB bridge to clear RR ROW. Alternative dismissed due to impacts to the North Skunk River bridge.

Alternative 1 is the preferred alternative due to this option having lowest proposed grade raise and not interfering with the grade of the bridge to the west over North Skunk River. The estimated cost of alternative 1 is **\$4,111,000.** Additional right of way will be required. Traffic will be maintained by an off-site detour.

The Draft Project Concept Statement was sent out for review and comment with concerns to be resolved by Tuesday, June 16, 2026. Comments received during the review period have been considered and resolved.

This project is recommended for construction in FY 2030. The Bridges and Structures Bureau will coordinate plan preparation with assistance from District 1.

JEB:hsr

Attach.

cc:

C. Purcell

M. Dell

M. A. Swenson

M. Chambers

D. L. Newell

W. A. Sorenson

A. Swisher

B. Hofer

C. Pelton

J. Holst

T. Lovan

B. Hobson

P. Schwarz

L. Narigon

M. E. Khoda

J. Ellis

J. Vortherms

J. Garton

S. Ebel

D. Tamrakar

G. Horner

K. Berg

K. D. Nicholson

C. Carter

D. E. Sprengeler

A. Poole

D. Breitbach

E. C. Wright

J. Harris

G. Karssen

T. Gustafson

R. Harris

M. Solberg

L. Armstrong

S. Schroder

J. Hauber

M. Gordy

D. Phillips

S. Nixon

S. Passick

B. Walter

B. Adey

R. Ringgenberg

FHWA

Y. Jia

M. Nop

C. C. Poole

K. Brink

J. W. Laaser-Webb

M. E. Ross

M. Van Dyke

D. Johnson

D. Stokes

B. Dolan

B. Smith

A. Knight

B. Beavers

S. Sersland

M. Todsen

A. Woods

J. Becker

R. Ellis

F. Leong

E. Sowder

J. Gallart

FINAL PROJECT CONCEPT STATEMENT

U.S. 6 Bridge over IAIS RR, 1.5 mi E of IA 224.

Jasper County
BRF-006-4(206)--38-50
PIN: 25-50-006-020
Maint. No. 5077.9S006
FHWA No. 30500

Highway Division
Design Bureau

John Bartholomew, P.E.
515-239-1540

June 18, 2026

I. STUDY AREA

A. Project Description

This project involves the replacement of the U.S. 6 bridge (Maint. No. 5077.9S006) over IAIS RR.

The four alternatives considered were:

1. Replace the existing bridge with a three span, 279 ft. x 44 ft. BTB pretensioned prestressed concrete beam (PPCB) bridge to clear a 25 ft. RR clear zone. Estimated Cost **\$4,111,000.**
2. Replace the existing bridge with a simple span, 156 ft. x 44 ft. welded plate girder bridge to clear RR zone. Alternative dismissed due to impacts to the North Skunk River bridge.
3. Replace the existing bridge with a single span, 110 ft. x 44 ft. BTC PPCB bridge to clear a 25 ft. RR clear zone. Alternative dismissed due to impacts to the North Skunk River bridge.
4. Replace the existing bridge with a three span, 324 ft. x 44 ft. BTE PPCB bridge to clear RR ROW. Alternative dismissed due to impacts to the North Skunk River bridge.

Alternative 1 is the preferred alternative due to this option having lowest proposed grade raise and not interfering with the grade of the bridge to the west over North Skunk River. Traffic will be maintained by an off-site detour. The estimated cost of alternative 1 is **\$4,111,000.**

B. Need for Project

This is a 184 ft. x 28 ft. steel girder bridge that was built in 1952. It was overlaid in 1984, re-overlaid in 2018, and the top of the deck has several cracks. The bottom of the deck has several heavy leaching cracks, hollow areas, and spalled areas. The steel girders have severe rust and section loss. The substructure also has several cracks, PC patches, spalled areas, and heavy leaching. The bridge was designed for live loads below the current standards. Due to the overall condition of the bridge, a replacement is recommended.

Photos from SIIMS



2012

Profile Right Near to Far



2024



2014

Roadway Against Route



2014

Roadway with Route

C. Present Facility

The existing structure is a 184 ft. x 28 ft., steel girder bridge constructed in 1952. The bridge was overlaid in 1984, re-overlaid in 2018.

U.S. 6 in the project area is 18 ft. wide PC7 (10"-7"-10" PCC concrete slab) with 6 ft. wide shoulders, with aggregate of crushed limestone from LeGrand, constructed in 1928. Realignment of bridge project area with PCC of 10"-9"-10" section was placed in 1950 and roadway was 24 ft. with 10 ft. granular shoulders and 3:1 foreslopes, with aggregate gravel from Eddyville. AAC resurfacing of 1.5 in. and BAC of 1.5 in. was accomplished in 1975. Milling of 3 in. and HMA resurfacing of 3 in. was accomplished in 2008 with combination shoulders 4 ft. paved 6 ft. granular. Posted speed limit is 55 mph.

D. Traffic Estimates

The 2030 construction year and 2050 design year average daily traffic estimates are 2,200 ADT with 7% trucks and 2,400 ADT with 7% trucks, respectively.

E. Sufficiency Ratings

U.S. 6 is classified as an "Access" route and is a maintenance service level "C" roadway. The Bridge Condition Index is 59.9 and the Bridge Condition Rating is "Fair".

F. Access Control

Access rights will not be acquired for this project.

G. Crash History

During the five-year study period from January 1, 2021 through December 31, 2025, there were zero crashes.

The PCR Level for the Intersection of Illinois Ave. and U.S. 6:
Intersection ID:SI_37204 (41.703923, -92.876031)
PCR Level All Crashes (KABCO): Negligible
PCR Level Severe Crashes (KAB): Negligible
PCR Value All Crashes (KABCO): -0.004857 crash/year for all crashes
PCR Value Severe Crashes (KAB): -0.000628 crash/year for severe crashes

The PCR Level for the Segment of U.S. 6 within the project area:
Segment ID: 220709
Road Name: U.S. 6 E
RouteID: S001920006E (From: 182.346446 - To: 186.874304)
PCR Level All Crashes (KABCO): Medium
PCR Level Severe Crashes (KAB): Negligible
PCR Value All Crashes (KABCO): 0.498157 crash/mile/year
PCR Value Severe Crashes (KAB): 0.046409 crash/mile/year

II. PROJECT CONCEPT

A. Feasible Alternatives

Alternative #1 - Replace the existing U.S. 6 bridge with a 279 ft. x 44 ft. pretensioned prestressed concrete beam (PPCB) bridge utilizing an off-site detour.

The existing 184 ft. x 28 ft., continuous rolled steel beam (RSB) bridge will be replaced with a three span, 279 ft. x 44 ft., PPCB bridge.

The typical cross section adjacent to the bridge approach will consist of a 24 ft. roadway (32 ft. wide pavement) with 10 ft. combination shoulders (4 ft. paved and 6 ft. granular) and 3:1 foreslopes.

The existing grade will need to be raised a minimum of 0.5 ft. which will require approximately 235 ft. of roadway reconstruction consisting of 12 in. PCC pavement over 12 in. modified subbase. Pavement between the railroad bridge approach and the North Skunk River bridge replacement project will be removed and replaced (an additional approx. 202 ft.) New bridge approaches will be constructed. The existing guardrail will be replaced with new guardrail and the shoulders will be paved 20 ft. beyond the ends of the guardrail. Class 10 will be necessary to flatten the existing foreslopes and to construct the new guardrail blisters. Class E revetment will be placed under the bridge for slope protection. New bridge end drains will be constructed on both ends of the bridge.

Illinois Ave. will be realigned, and the intersection of U.S. 6 and Illinois Ave. will be relocated to the east due to the proposed grade raise for the bridge replacement. The property entrance located off Illinois Ave. will also need to be relocated.

Contractor will need to maintain access to entrances at all times.

Apply erosion control and rural seeding and fertilizing to all disturbed areas.

It appears that right of way will be required for this project.

Traffic will be maintained by an off-site detour.

Bridge Items	<u>Estimated Costs</u>
New Bridge	\$ 2,004,000
Construction over RR (10%)	208,000
Bridge Removal	129,000
Mobilization - 10%	242,000
M & C - 20%	<u>533,000</u>
Bridge Costs	\$ 3,116,000
 Right of Way	 \$ 5,000
 Roadway Items	
Bridge Approaches	\$163,000
Removal of Pavement	32,200
PCC Pavement	161,300
Modified Subbase	17,500
Longitudinal Subdrains (Includes Outlets)	13,300
Granular Shoulder	15,700
Embankment in place, contractor furnished	52,300
Excavation Class 10 Roadway Borrow	34,900
Excavation Class 13 Waste	12,000
Obliterate Old Roadbed	6,400
Granular Surface on Road	9,000
Guardrail (Includes Removal)	19,000
Paved Shoulders for Guardrail	53,500
Class 10 for Guardrail Blisters	18,900
Bridge End Drains	13,900
Pavement Markings, Multicomponent	3,400
Milled Shoulder Rumble Strip	1,300
Seeding and Fertilizing	7,400
Clearing and Grubbing	8,000
Erosion Control	50,000
Traffic Control - 5%	49,500
Mobilization - 5%	49,500
M & C - 20%	<u>198,000</u>
Roadway costs	\$ 990,000
 Project Total	 \$4,111,000

B. Detour Analysis

U.S. 6 will be closed and an off-site detour will be utilized. It is anticipated the detour will be in place for approximately 180 days. The detour would follow IA 224 south to the junction of IA 224 and I-80, then east on I-80 to the junction of I-80 and County Road T-38, then north to the junction of U.S. 6 and County Road T-38. Out of distance travel is 4.2 miles. The total distance user cost is anticipated to be \$355,500. The cost for county road maintenance will be \$5,550 as calculated by the Gas Tax Method. Detour signing costs will be \$10,000.

C. Recommendations

It is recommended that the present structure be replaced, as described in Alternative No. 1.

D. Construction Sequence

It is anticipated that all work on this project will be awarded to one prime contractor. The Bridges and Structures Bureau will coordinate the plan preparation with assistance from the Design Bureau.

E. ADA Accommodations

There are no bike paths or sidewalks adjacent to U.S. 6; therefore, no ADA accommodations are planned in conjunction with this project.

F. Special Considerations

This will not be a traffic critical project.

No bike path or sidewalk will be required as part of this project.

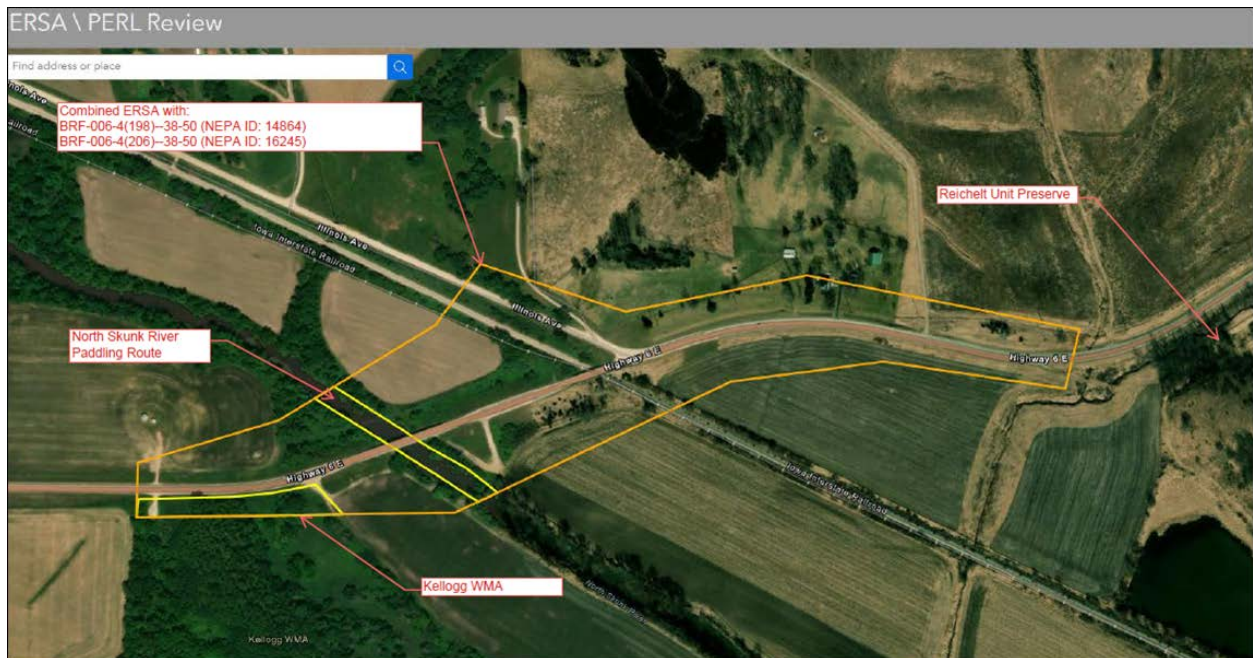
No special concerns were noted for Water Resources and Protective Species.

An Environmental Research Study Area (ERSA) has been developed for this project and can be viewed in the concept attachments.

The Draft D00 has been reviewed by the NEPA Section for potential impacts. The resources below have been identified within 500 ft of the project and it is recommended to avoid or minimize impacts to these resources. This information is based on a desktop review and is provided to aid in concept development (see images below). The NEPA review process and clearance will be based on further developments in design and the results of additional Location and Environment Bureau (LEB) desktop and field reviews. Contact the NEPA Section for additional information.

The following sites have been identified within the project area and PERLs will be added to the ERSA:

- Kellogg WMA
- North Skunk River Paddling Route
- Reichelt Unit Preserve (outside the ERSA)



Special Survey Requested:

- Top of rail elevations are to be taken for 1,000 ft. in each direction of the bridge.
- Survey of 500 ft. of Illinois Ave. including any hydraulic structures and waterways in the vicinity of the roadway.
- 300 ft of survey of the private drive near the intersection of Illinois Ave. and U.S. 6.

Right of Way will be required for this project. It is programmed for \$5,000.

Utilities may need to be relocated with the realignment of Illinois Ave.

Solar panel located on the existing bridge, remove and replace.

G. Program Status

Site data has been developed by the Design Bureau. This project is listed in the 2027-2031 Iowa Transportation Improvement Program, with \$5,000 programmed for right of way in FY 2030, and \$4,298,000 for replacement in FY 2030. Costs for this project may be eligible for bridge replacement funds. A schedule of events will be developed following approval of the Project Concept.

JEB:hsr

Utilities

Alliant Energy Company
ASW
Alliant Energy Field Engineer
800-255-4268
[Locate IPL@alliantenergy.com](mailto:Locate_IPL@alliantenergy.com)

Windstream Communications
WINIA
Locate Desk
800-289-1901
LOCATE.DESK@WINDSTREAM.COM

Iowa Regional Utilities Association
CIW
Kimberlin Annis
641-792-7011
locates@irua.net

Aureon Network Services
INS
Jeff Klocko
515-830-0445
jeff.klocko@aureon.com

Kellogg, City of
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469-886-4090
INVESTIGATIONS@VERIZON.COM

Partner Communications
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plant@pcctel.net

Unite Private Networks, LLC
UPN
Michael Steinkamp
816-490-0894
fibermanagement@segrafiber.com

Jasper County

Project Code : 25-50-006-020

Phase Number : BRF-006-4(206)--38-50

Location : IAIS RR 1.5 mi E of IA 224

Work Code : 2001-Bridge-Unspecified

Project Directory : 5000602025

Maint. No.: 5077.9S006

FHWA No.: 30500

Project Manager : Jeremy Vortherms





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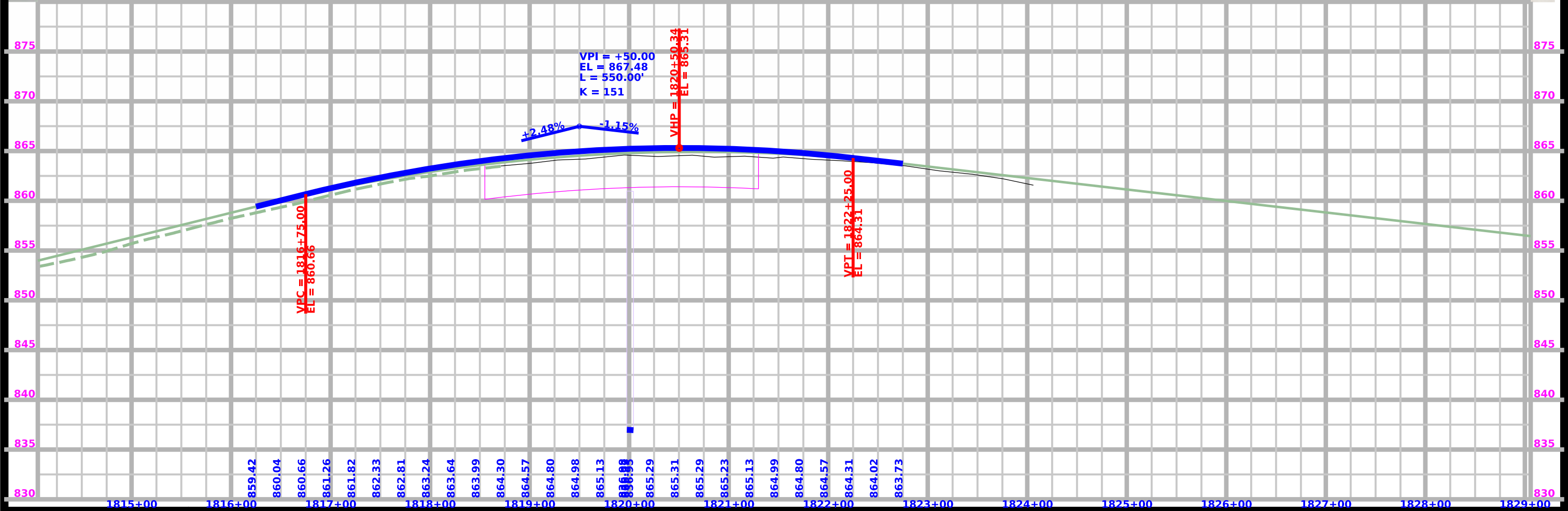
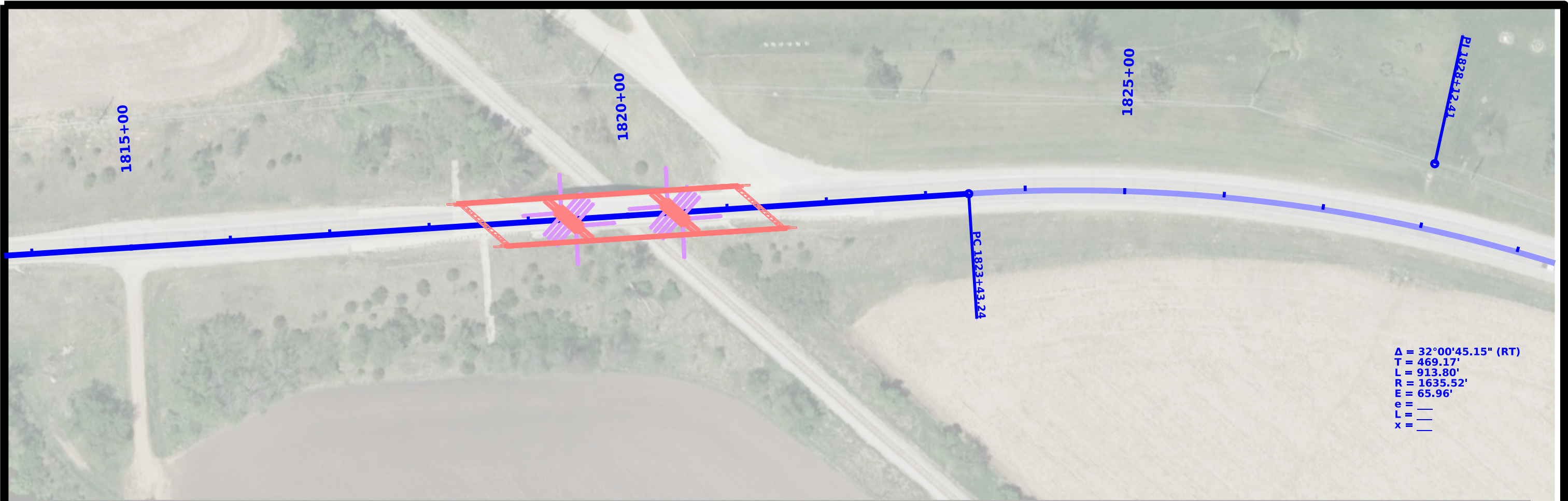
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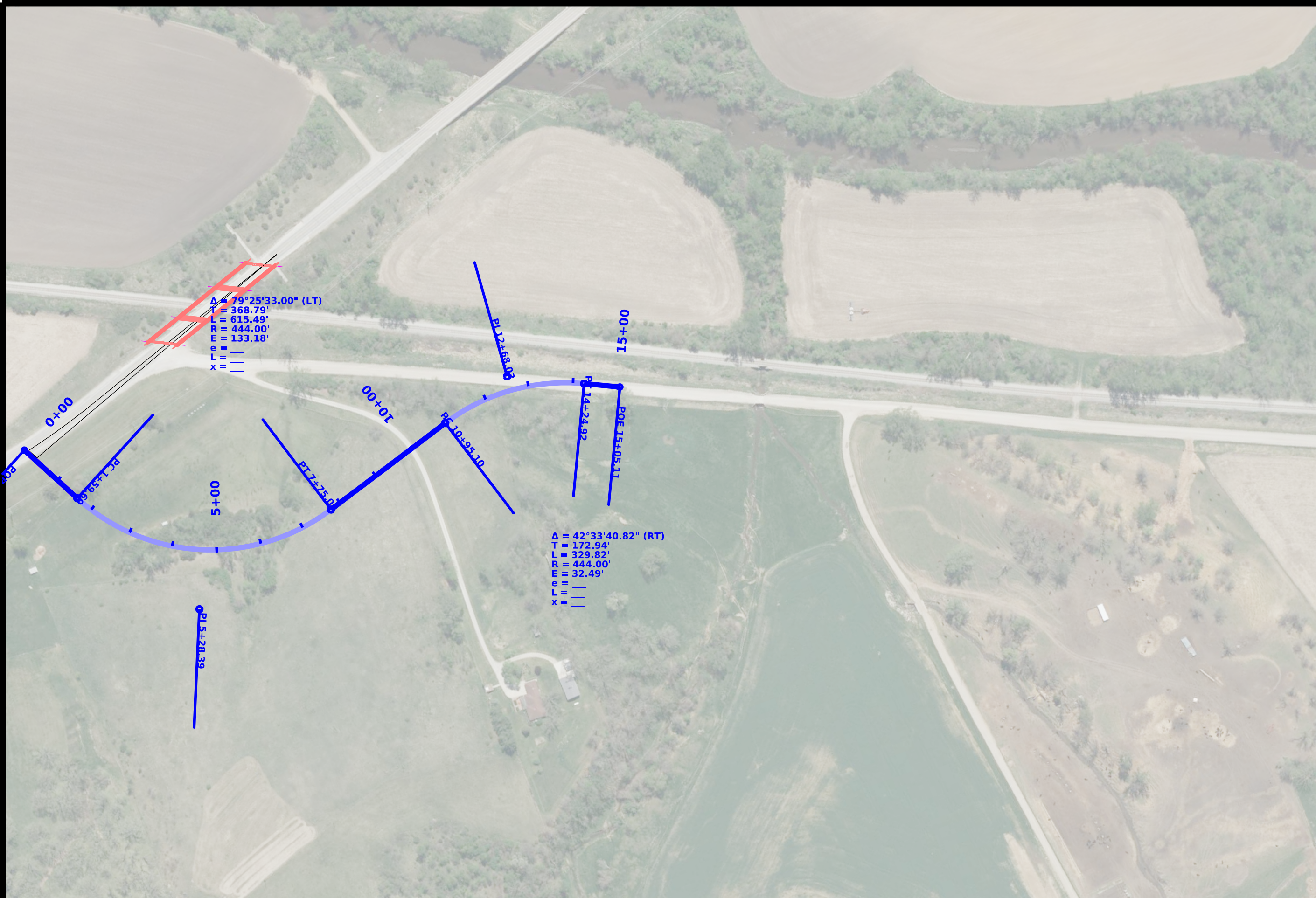
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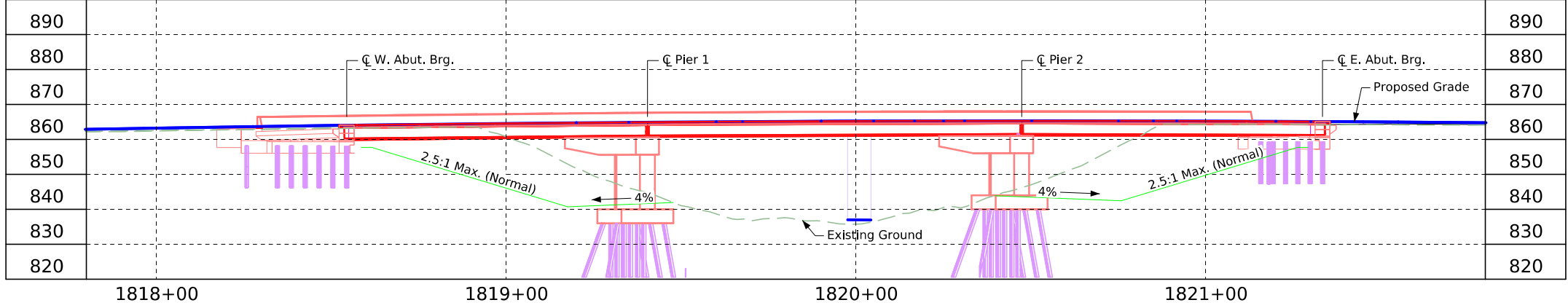
FHWA No.: 30500

Project Manager : Jeremy Vortherms

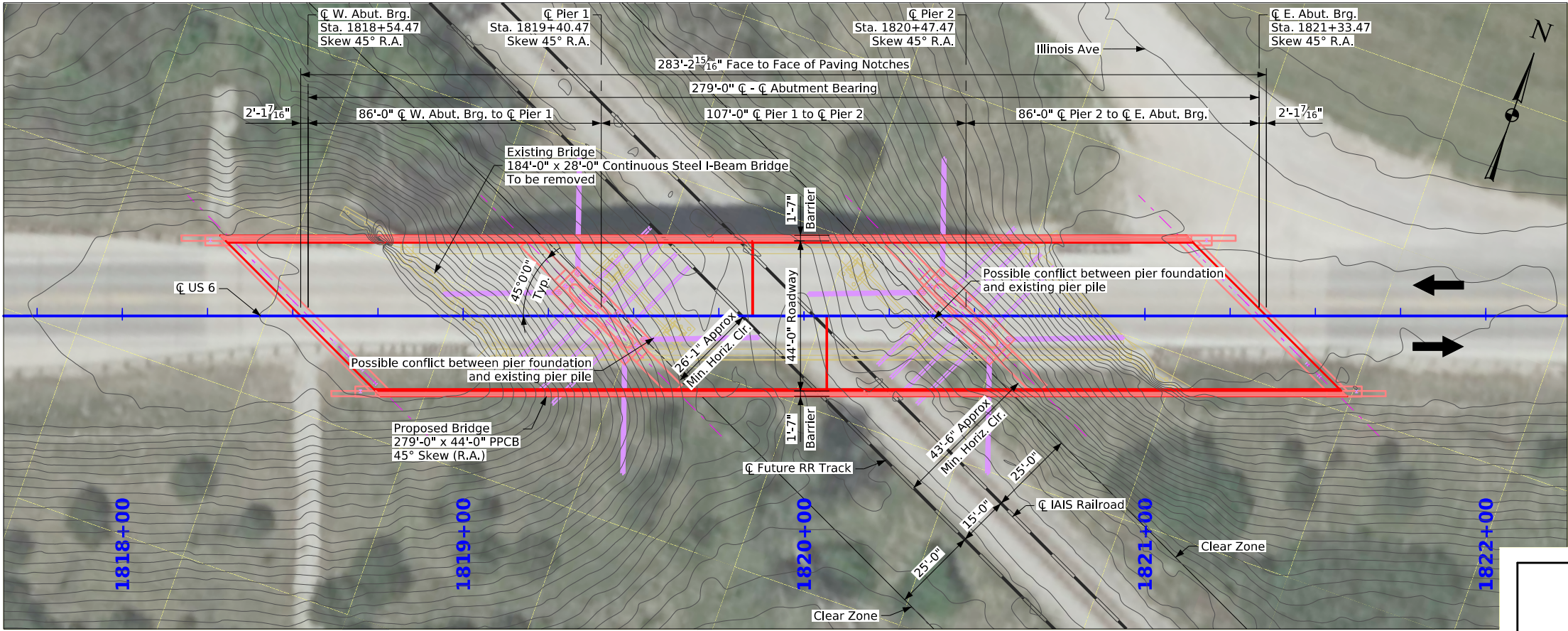
Project Location







Longitudinal Section Along Roadway

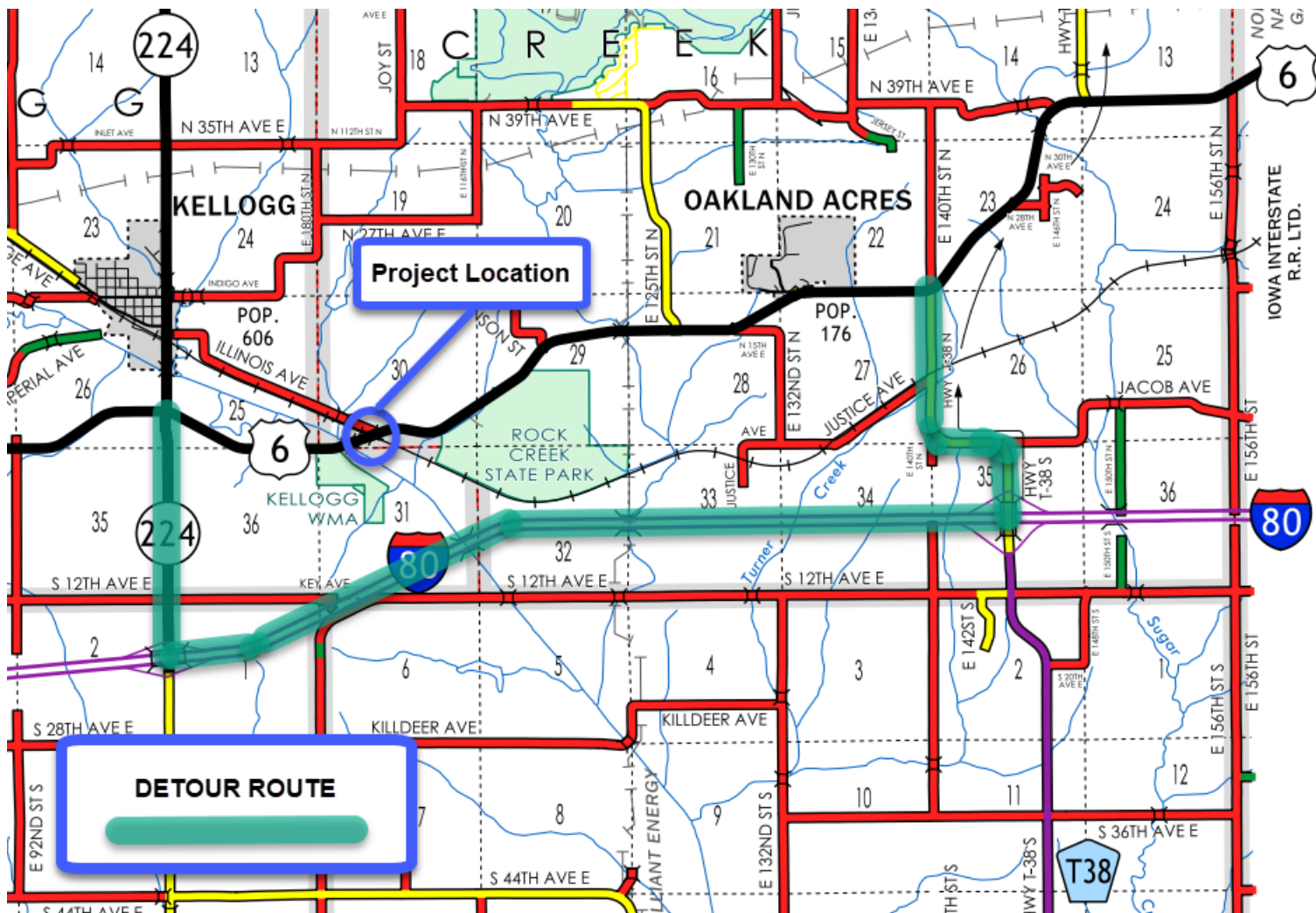


Situation Plan

Note: Skewed conditions may necessitate wider pier caps and nonstandard substructure widths. Add a note to the B01 TS&L plans to notify the final designer of the potential need for increased widths.

Design For 45° Skew R.A.
**279'-0" x 44'-0" Pretensioned
Prestressed Conc. Beam Bridge**
85'-0" End Spans 105'-0" Interior Span
Situation Plan
STA. 1819+93.97 (US 6) Turn-in Date: mmm yyyy
Jasper County
IOWA DEPARTMENT OF TRANSPORTATION
Design No. XXXX Design Sheet No. 1 of 1 FHWA No. XXXXXX

PROPOSED DETOUR



Jasper County

Project Code : 25-50-006-020

Phase Number : BRF-006-4(206)--38-50

Location : IAIS RR 1.5 mi E of IA 224

Work Code : 2001-Bridge-Unspecified

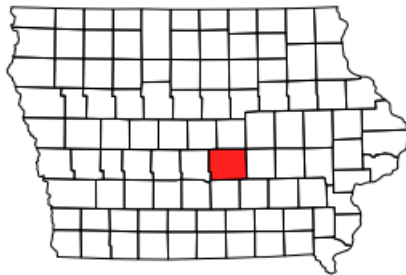
Project Directory : 5000602025

Maint. No.: 5077.9S006

FHWA No.: 30500

Project Manager : Jeremey Vortherms

ERSA Layout



Jasper County

Project Code : 25-50-006-020

Phase Number : BRF-006-4(206)--38-50

Location : IAIS RR 1.5 mi E of IA 224

Work Code : 2001-Bridge-Unspecified

Project Directory : 5000602025

Maint. No.: 5077.9S006

FHWA No.: 30500

Project Manager : Jeremey Vortherms

ERSA Phase Unique ID : 68403

Bridge Bureau Attachment for Concept Statement

Date: June 2026
By: Gina Horner, P.E.
Location: IAIS RR 1.5 MI E of IA 224

County: Jasper County
Phase No.: BRF-006-4(206)--38-50
Project Code: 25-50-006-020

1. Regulatory/Coordination
 - a. Iowa DNR Flood Plain permit = No
 - b. Iowa DNR Sovereign Lands permit = No
 - c. Local Record of Coordination = No (Jasper County)
 - d. Flood Insurance Study = No
 - e. Drainage District = No
 - f. Corps of Engineers Section 408 = No
 - g. State Water Trail or Paddling Route = No
 - h. Historic Structure = No
 - i. Federally owned land in vicinity = No
 - j. USGS or Iowa Flood Center (IFC) gage or sensor impacted? No
 - k. Obstruction Evaluation/Airport Airspace Analysis per FAA website = No
2. Hydrologic/Hydraulic Analysis/RIDB Dataset
 - a. Design discharge methodology = N/A
 - b. Hydraulic analysis done = No.
 - c. If DA > 10 sq. mi. Riverine Infrastructure Database (RIDB) dataset is required with B1 submittal = No
3. Structure/Roadway Layout Considerations
 - a. Roadway profile grade raise is anticipated.
 - b. There is another bridge, ~500' to the south, over the North Skunk River that may be impacted by the grade raise of this bridge.
 - c. Roadway width on new bridge will be 44' to match approach roadway.
 - d. Piers and abutments will be skewed 45-degrees R.A. Skewed conditions may necessitate wider pier caps and nonstandard substructure widths. Add a note to the B01 TS&L plans to notify the final designer of the potential need for increased widths. (Ref. email from Mike Nop dated 5/22/2026.)
 - e. Piers/Abutments to be outside of a 25' clear zone on either side of the existing and future tracks.
 - f. The intersection of Illinois Avenue and US 6 to the north of the existing bridge may be impacted.
 - g. The Model Transportation Bureau (MTB) indicated IAIS RR approved the concept horizontal clearances (Alternative 1). (Ref. email from Amanda Woods dated 5/18/2026.)
4. Special construction issues

Concept Statement - Bridge Bureau Attachment

- a. It is desirable for new structure foundations to avoid existing foundations when possible.
- 5. Special survey = Yes, see below.
- 6. Aesthetic enhancements = No
- 7. Other
 - a. Maintenance of Traffic - Off-site detour.
 - b. The concept for Alternative 1 is a three span BTB PPCB bridge to clear a 25' RR clear zone.
 - c. Alternative 1 will impact the intersection of Illinois Avenue and US 6 at the north end of the bridge.

Special Survey:

- 1. Top of rail elevations are to be taken for 1,000' in each direction of the bridge.
- 2. Survey of 500' of Illinois Ave. including any hydraulic structures and waterways in the vicinity of the roadway.
- 3. 300' of survey of the private drive near the intersection of Illinois Ave. and US 6.