

Indiana Department of Transportation

County Jennings

Route SR 250

Des. No. 1701502

FHWA-Indiana Environmental Document
CATEGORICAL EXCLUSION / ENVIRONMENTAL ASSESSMENT FORM
GENERAL PROJECT INFORMATION

Road No./County: SR 250 / Jennings County
Designation Number: 1701502
Project Description/Termini: Bridge Rehabilitation, Slate Creek
Approximately 4.16 Miles West of SR 3

After completing this form, I conclude that this project qualifies for the following type of Categorical Exclusion (FHWA must review/approve if Level 4 CE):

Table with 2 columns: Selection (X) and Description. Row 1: Categorical Exclusion, Level 2 - The proposed action meets the criteria for Categorical Exclusion Manual Level 2 - table 1, CE Level Thresholds. Required Signatories: ESM (Environmental Scoping Manager)

Note: For documents prepared by or for Environmental Services Division, it is not necessary for the ESM of the district in which the project is located to release for public involvement or sign for approval.

Approval ESM Signature Date ES Signature Date

FHWA Signature Date

Release for Public Involvement

DGD 2020.05.27 14:33:34 -04'00'
ESM Initials Date ES Initials Date

Certification of Public Involvement Office of Public Involvement Date

Note: Do not approve until after Section 106 public involvement and all other environmental requirements have been satisfied.

INDOT ES/District Env. Reviewer Signature: Date:

Name and Organization of CE/EA Preparer: Kate Williams, HNTB Indiana

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Part I - PUBLIC INVOLVEMENT

Every Federal action requires some level of public involvement, providing for early and continuous opportunities throughout the project development process. The level of public involvement should be commensurate with the proposed action.

Does the project have a historic bridge processed under the Historic Bridges PA*? If No, then: Opportunity for a Public Hearing Required? Yes No X

*A public hearing is required for all historic bridges processed under the Historic Bridges Programmatic Agreement between INDOT, FHWA, SHPO, and the ACHP.

Discuss what public involvement activities (legal notices, letters to affected property owners and residents (i.e. notice of entry), meetings, special purpose meetings, newspaper articles, etc.) have occurred for this project.

Remarks: Notice of Entry letters were mailed to potentially affected property owners near the project area on August 28, 2018 notifying them about the project and that individuals responsible for land surveying and field activities may be seen in the area. A sample copy of the Notice of Entry letter is included in Appendix G, page 1. The project will meet the minimum requirements described in the current Indiana Department of Transportation (INDOT) Public Involvement Manual which requires the project sponsor to offer the public an opportunity to submit comment and/or request a public hearing. Therefore, a legal notice will appear in a local publication contingent upon the release of this document for public involvement. This document will be revised after the public involvement requirements are fulfilled.

Public Controversy on Environmental Grounds Will the project involve substantial controversy concerning community and/or natural resource impacts? Yes No X

Remarks: At this time, there is no substantial public controversy concerning impacts to the community or to natural resources.

Part II - General Project Identification, Description, and Design Information

Sponsor of the Project: INDOT INDOT District: Seymour Local Name of the Facility: SR 250

Funding Source (mark all that apply): Federal X State X Local Other*

*If other is selected, please identify the funding source:

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PURPOSE AND NEED:

Describe the transportation problem that the project will address. The solution to the traffic problem should NOT be discussed in this section. (Refer to the CE Manual, Section IV.B.2. Purpose and Need)

The need for this project is due to the deteriorated condition of the existing structure (Bridge No. 250-40-05952 B; NBI No. 030600) carrying SR 250 over Slate Creek. The existing structure is single span prestressed concrete box beam bridge measuring 26 feet long and 30.5 feet wide. The existing wearing surface has longitudinal cracks and a large patch in the center of the deck. There is spalling along the north curb and efflorescence between beams 1 and 2 as well as a small spall in beam 9 at the west abutment. Additionally, the breastwalls of the abutments have vertical cracks.

The purpose of this project is to maintain safe vehicular crossing of SR 250 over Slate Creek while maintaining adequate hydraulic function at the crossing.

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Jennings

Municipality: N/A

Limits of Proposed Work: Approximately 139 feet west and 181 feet east from the center of the existing bridge.

Total Work Length: 0.06 Mile(s)

Total Work Area: 0.78 Acre(s)

Is an Interchange Modification Study / Interchange Justification Study (IMS/IJS) required? If yes, when did the FHWA grant a conditional approval for this project?

Yes No
Date: X

1If an IMS or IJS is required; a copy of the approved CE/EA document must be submitted to the FHWA with a request for final approval of the IMS/IJS.

In the remarks box below, describe existing conditions, provide in detail the scope of work for the project, including the preferred alternative. Include a discussion of logical termini. Discuss any major issues for the project and how the project will improve safety or roadway deficiencies if these are issues.

Location:
INDOT and the Federal Highway Administration (FHWA) intend to proceed with a project involving the pre-stressed concrete box beam bridge (Bridge No. 250-40-05952 B) carrying SR 250 over Slate Creek in Jennings County, Indiana. The project is in Section 26, Township 5 North, and Range 7 East in Marion Township, as shown on the United States Geological Survey (USGS) 7.5 Minute Deputy, Indiana Topographic Quadrangle Map (Appendix B, page 3). More specifically, the project is located approximately 4.16 miles west of SR 3. Land use surrounding the project area is primarily agricultural and residential (Appendix B, page 2).

Existing Conditions:
The existing structure, a single-span, pre-stressed concrete box beam bridge constructed in 1968, conveys Slate Creek beneath SR 250. SR 250 is classified as a rural major collector and has a posted speed limit of 55 miles per hour through the project area. The existing roadway consists of two, 11-foot through lanes with 3-foot, 3-inch paved shoulders. The existing structure is not identified in the Indiana Historic Bridge Inventory and is not eligible for listing in the National Register of Historic Places (NRHP). The intersection of SR 250 and South County Road 550 west is located approximately 150 feet west from the center of the existing structure.

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Preferred Alternative:

Rehabilitation activities will include replacement of the bridge superstructure. The replacement structure will be a single-span, continuous reinforced concrete slab bridge with concrete bridge railings. The new bridge span will be 26 feet long with an out-to-out width of 33 feet. The new bridge deck will be 2.5 feet wider. The existing wingwalls will be removed and the top one-inch of the existing abutments will be milled. The existing abutments will be widened to accommodate the superstructure, vertical cracks in the abutments will be sealed, and new wingwalls will be installed. Type FC bridge railing and bridge rail transition will be installed. Full depth pavement replacement as well as surface milling and resurfacing of pavement will be completed approximately 160 feet east and west from the existing structure and 60 feet to the north and south along South County Road 550 West to transition to the existing profile grade. Regrading of the ditches and shoulder widening will be completed on both sides of SR 250 to accommodate a minimum 4-foot shy line offset from the guardrail. W-beam guardrail and guardrail transitions will be installed approximately 105 feet west of the bridge, 115 feet on the south shoulder east of the bridge and 150 feet on the north shoulder east of the bridge. Type OS end treatments will be used at the east corners and curved terminal end treatments will be used at the west corners. Pavement markings and snow-plowable raised pavement markers will be installed on the bridge deck or approach slabs. Pavement resurfacing will occur along South County Road 550 West to transition to the existing profile grade. The project termini are approximately 210 feet east and 135 feet west from the center of the existing bridge. See Appendix B, pages 31-39, for preliminary design plans.

The project will require the closure of SR 250 with a detour. Details of the closure and detour are included in the Maintenance of Traffic (MOT) During Construction section of this CE document.

The preferred alternative meets the purpose and need of the project by providing a structurally sufficient and hydraulically adequate crossing of SR 250 over Slate creek.

OTHER ALTERNATIVES CONSIDERED:

Describe all discarded alternatives, including the Do-Nothing Alternative and an explanation of why each discarded alternative was not selected.

Structure Replacement – In-Kind:

INDOT considered in-kind replacement of the existing structure. This alternative meets the purpose and need; however, it is less cost effective. This alternative was therefore eliminated from further consideration.

Superstructure Replacement – In-Kind:

INDOT considered in-kind replacement of the existing superstructure with adjacent concrete box beams. This alternative meets the purpose and need; however, this alternative would require a change in roadway profile grade which would result in an increase in proposed right-of-way and increased maintenance costs. This alternative was therefore eliminated from further consideration.

No Build Alternative:

The no build alternative proposes continued use of the bridge in the current condition. If selected, this alternative would result in continued deterioration of the bridge, potentially becoming a hazard to the traveling public. This alternative would not meet the purpose and need of the project and was therefore eliminated from further consideration.

The Do Nothing Alternative is not feasible, prudent or practicable because (Mark all that apply):

- It would not correct existing capacity deficiencies;
It would not correct existing safety hazards;

Two empty checkboxes for marking the Do Nothing Alternative as not feasible, prudent or practicable.

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It would not correct the existing roadway geometric deficiencies;
 It would not correct existing deteriorated conditions and maintenance problems; or
 It would result in serious impacts to the motoring public and general welfare of the economy.
 Other (Describe)

X

ROADWAY CHARACTER:

Functional Classification: Rural Major Collector
 Current ADT: 445 VPD (2021) Design Year ADT: 524 VPD (2041)
 Design Hour Volume (DHV): 63 Truck Percentage (%) 21.45
 Designed Speed (mph): 55 Legal Speed (mph): 55

	Existing	Proposed
Number of Lanes:	2	2
Type of Lanes:	11-foot through lanes	11-foot through lanes
Pavement Width:	28.5 ft.	30 ft.
Shoulder Width:	3.25 ft.	4 ft.
Median Width:	N/A ft.	N/A ft.
Sidewalk Width:	N/A ft.	N/A ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

If the proposed action has multiple roadways, this section should be filled out for each roadway.

DESIGN CRITERIA FOR BRIDGES:

Structure/NBI Number(s): 250-40-05952 B / 030600 Sufficiency Rating: 94.8, INDOT Bridge Inspection Report November 15, 2019
 (Rating, Source of Information)

	Existing	Proposed
Bridge Type:	Pre-Stressed Concrete Box Beam	Continuous Reinforced Concrete Slab
Number of Spans:	1	1
Weight Restrictions:	>36 ton	>36 ton
Height Restrictions:	N/A ft.	N/A ft.
Curb to Curb Width:	28.5 ft.	30 ft.
Outside to Outside Width:	30.5 ft.	33 ft.
Shoulder Width:	3.25 ft.	4 ft.
Length of Channel Work:		120 ft.

Describe bridges and structures; provide specific location information for small structures.

Remarks:
 The existing structure (Bridge No. 250-40-05952 B; NBI No. 030600) is a single-span, pre-stressed concrete box beam bridge measuring 26 feet long and 30.5 feet wide. The existing superstructure will be replaced with a single-span, reinforced concrete slab bridge measuring 26 feet long and 33 feet wide.

Will the structure be rehabilitated or replaced as part of the project?

Yes	No	N/A
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If the proposed action has multiple bridges or small structures, this section should be filled out for each structure.

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MAINTENANCE OF TRAFFIC (MOT) DURING CONSTRUCTION:

	Yes	No
Is a temporary bridge proposed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is a temporary roadway proposed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the project involve the use of a detour or require a ramp closure? (describe in remarks)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Provisions will be made for access by local traffic and so posted.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Provisions will be made for through-traffic dependent businesses.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Provisions will be made to accommodate any local special events or festivals.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Will the proposed MOT substantially change the environmental consequences of the action?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is there substantial controversy associated with the proposed method for MOT?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Remarks:

The MOT plan requires the closure of SR 250 for 4 months. A detour utilizing SR 3, SR 256, and Interstate 65 will be in place. The proposed detour will be approximately 33 miles long and will add approximately 13 miles to a trip through the area. A local detour route may be available during construction. Access for local traffic will be provided during construction per INDOT Standard Specification 107.08(e).

The closure will pose a temporary inconvenience to traveling motorists (including school buses and emergency services); however, no significant delays are anticipated and all inconveniences will cease upon project completion. Delays would occur during construction but will cease with project completion.

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: \$ N/A Right-of-Way: \$ 25,000 (2021) Construction: \$ 721,929 (2022)

Anticipated Start Date of Construction: September 2021

Date project incorporated into STIP July 2, 2019

Is the project in an MPO Area? Yes No

If yes,

Name of MPO N/A

Location of Project in TIP N/A

Date of incorporation by reference into the STIP N/A

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RIGHT OF WAY:

Land Use Impacts	Amount (acres)	
	Permanent	Temporary
Residential	0	0
Commercial	0	0
Agricultural	0.27	0
Forest	0.25	0
Wetlands	0	0
Other: Maintained Roadside	0.13	0
TOTAL	0.65	0

Describe both Permanent and Temporary right-of-way and describe their current use. Typical and Maximum right-of-way widths (existing and proposed) should also be discussed. Any advance acquisition or reacquisition, either known or suspected, and there impacts on the environmental analysis should be discussed.

Remarks:

Right-of-way plans and grants for the construction of SR 250 at this location could not be obtained, therefore, existing right-of-way limits are present at the pavement edge of SR 250.

The project requires approximately 0.65 acre of permanent right-of-way. Approximately 0.15 acre of the right-of-way is considered reacquisition and 0.50 acre is considered new right-of-way (Appendix B, page 30). Based on a review of aerial imagery, the land use of additional permanent right-of-way will include 0.27 acre of agricultural property, 0.25 acre of forested land and 0.13 acre of maintained roadside (Appendix B, page 2). Proposed right-of-way limits will extend approximately 50 feet north, 50 feet south, 210 feet east and 135 feet west from the center of the existing structure. Existing maintained roadside will continue to be maintained following construction. The agricultural land and forested land will become maintained roadside property following construction. The project will not require the acquisition of temporary right-of-way.

If the scope of work or permanent or temporary right-of-way amounts change, the INDOT Environmental Services Division (ESD) and the INDOT Seymour District Environmental Section will be contacted immediately.

Part III – Identification and Evaluation of Impacts of the Proposed Action

SECTION A – ECOLOGICAL RESOURCES

	<u>Presence</u>	<u>Impacts</u>	
		<u>Yes</u>	<u>No</u>
Streams, Rivers, Watercourses & Jurisdictional Ditches	X	X	
Federal Wild and Scenic Rivers			
State Natural, Scenic or Recreational Rivers			
Nationwide Rivers Inventory (NRI) listed			
Outstanding Rivers List for Indiana			
Navigable Waterways			

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Remarks:

Based on a desktop review, a site visit on July 17, 2019 by HNTB, the aerial map of the project area (Appendix B, page 2), and the water resources map in the Red Flag Investigation (RFI) report (Appendix E, page 7), there are five streams located within the 0.5-mile search radius. There are two streams present within the project area.

A *Waters of the U.S. Determination / Wetland Delineation Report* was approved by the INDOT Ecology and Waterway Permitting Office (EWPO) on December 17, 2019 (Appendix F, pages 1-19). It was determined that two jurisdictional streams, unnamed tributary (UNT) to Slate Creek and Slate Creek, are present within the investigated area. The USACE makes all final determinations regarding jurisdiction.

UNT to Slate Creek

The stream is not mapped as a blue-line stream on the Deputy, Indiana USGS Topographic Quadrangle Map (Appendix B, page 3). The stream outlets into Slate Creek approximately 70 feet south of SR 250. The stream exhibited a 3.17-foot wide by 0.08-foot deep ordinary high-water mark (OHWM) during the site visit. According to the USGS Streamstats Database, (<https://water.usgs.gov/osw/streamstats/indiana.html>), the stream drains approximately 0.037 square mile upstream of the project area. The stream is not listed as a Federal Wild and Scenic River, a State Natural, Scenic and Recreational River, nor is it on the Indiana Register's listing of Outstanding Rivers and Streams. Construction activities are not anticipated to permanently or temporarily impact the stream.

Slate Creek

The stream is mapped as a blue-line stream on the Deputy, Indiana USGS Topographic Quadrangle Map (Appendix B, page 3). The stream flows south through the project area. The stream exhibited a 13.2-foot wide by 0.83-foot deep OHWM during the site visit. According to the USGS Streamstats Database, (<https://water.usgs.gov/osw/streamstats/indiana.html>), the stream drains approximately 1.38 square miles upstream of the SR 250 bridge. The stream is not listed as a Federal Wild and Scenic River, a State Natural, Scenic and Recreational River, nor is it on the Indiana Register's listing of Outstanding Rivers and Streams. The wider proposed structure will permanently impact approximately three linear feet of the stream due to encapsulation. Temporary cofferdams will be necessary to complete the scope of work and will temporarily impact approximately 120 linear feet of the stream.

Early coordination letters were sent to the United States Fish and Wildlife Service (USFWS), Indiana Department of Natural Resources Division of Fish and Wildlife (IDNR-DFW), and the United States Army Corps of Engineers (USACE) on November 1, 2019 (Appendix C, pages 1-3). No response was received from USACE.

In their early coordination response dated November 6, 2019, USFWS provided standard recommendations pertaining to erosion and sediment control measures, bank stabilization, minimization of in-stream channel work, and evaluation of wildlife crossings (Appendix C, pages 4-5).

In their early coordination response dated November 27, 2019, IDNR-DFW indicated that formal approval by the agency under regulatory programs administered by the Division of Water will be required for this project. The IDNR-DFW provided recommendations pertaining to in-stream impacts due to the bridge rehabilitation, bank stabilization, and minimizing impacts to streams (Appendix C, pages 8-10).

An automated letter was generated from the Indiana Department of Environmental Management's (IDEM) website on February 13, 2020 recommending appropriate storm water quality measures to be implemented during construction and after project completion (Appendix C, pages 11-18).

All applicable IDNR-DFW, USFWS, and IDEM recommendations are included in the Environmental Commitments section of this CE document.

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Other Surface Waters

- Reservoirs
- Lakes
- Farm Ponds
- Detention Basins
- Storm Water Management Facilities
- Other: _____

Presence

Impacts

Yes No

Remarks:

Based on a desktop review, a site visit on July 17, 2019 by HNTB, the aerial map of the project area (Appendix B, page 2), and the water resources map in the RFI report (Appendix E, page 7), there are ten lakes within the 0.5-mile search radius. No lakes or other surface waters are located within or adjacent to the project area. Therefore, no impacts are expected.

No early coordination response letters expressed concerns regarding lakes, ponds, or other surface waters.

Wetlands

Presence

Impacts

Yes No

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Total wetland area: 0 acre(s)

Total wetland area impacted: 0 acre(s)

(If a determination has not been made for non-isolated/isolated wetlands, fill in the total wetland area impacted above.)

Wetland No.	Classification	Total Size (Acres)	Impacted Acres	Comments

Wetlands (Mark all that apply)

Documentation

ES Approval Dates

- Wetland Determination
- Wetland Delineation
- USACE Isolated Waters Determination
- Mitigation Plan

X

December 17, 2019

Improvements that will not result in any wetland impacts are not practicable because such avoidance would result in (Mark all that apply and explain):

- Substantial adverse impacts to adjacent homes, business or other improved properties;
- Substantially increased project costs;
- Unique engineering, traffic, maintenance, or safety problems;
- Substantial adverse social, economic, or environmental impacts, or
- The project not meeting the identified needs.

Measures to avoid, minimize, and mitigate wetland impacts need to be discussed in the remarks box.

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Remarks:

Based on a review of the National Wetlands Inventory (NWI) online mapper (<https://www.fws.gov/wetlands/data/Mapper.html>), a site visit on July 17, 2019 by HNTB, the USGS topographic map (Appendix B, page 3), and the RFI report (Appendix E, page 7), there are thirteen wetlands mapped within the 0.5-mile search radius. No wetlands are present within or adjacent to the project area; therefore, no impacts are expected.

In their early coordination response dated November 6, 2019, USFWS did not provide recommendations pertaining to wetlands (Appendix C, pages 4-5).

In their early coordination response dated November 27, 2019, IDNR-DFW did not provide recommendation pertaining to wetlands (Appendix C, pages 8-10).

	Presence	Impacts	
		Yes	No
Terrestrial Habitat	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Unique or High Quality Habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Use the remarks box to identify each type of habitat and the acres impacted (i.e. forested, grassland, farmland, lawn, etc).

Remarks:

Based on a desktop review, a site visit on July 17, 2019 by HNTB, and the aerial map of the project area (Appendix B, page 2), there are primarily maintained state highway right-of-way and successional riparian habitat within the project area. Vegetation within the project area consists primarily of *Schedonorus arundinaceus* (tall fescue), *Trifolium repens* (white clover), *Ambrosia artemisiifolia* (annual ragweed), *Symphotrichum pilosum* (hairy white aster), *Eutorochium maculatum* (joe pye weed), *Rosa multiflora* (multiflora rose), and *Microstegium vimineum* (Japanese stilt grass). Approximately 0.25 acre of tree clearing will be necessary for construction access. Avoidance alternatives for terrestrial habitat removal are not practicable due to the need for construction access to complete the bridge rehabilitation. Terrestrial habitat removal will not require mitigation.

In their early coordination response dated November 6, 2019, USFWS provided standard recommendations pertaining to erosion and sediment control measures, tree and understory vegetation clearing, and evaluation of wildlife crossings (Appendix C, pages 4-5).

In their early coordination response dated November 27, 2019, IDNR-DFW provided recommendations to minimize potential effects to terrestrial habitat and wildlife passage within the project area (Appendix C, pages 8-10). These recommendations include post-construction revegetation measures including riparian habitat mitigation, placement of riprap and use of geotextiles, and erosion and sediment control measures.

An automated letter was generated from the IDEM website on February 13, 2020 recommending appropriate storm water quality measures to be implemented during construction and after project completion (Appendix C, pages 11-18).

If there are high incidences of animal movements observed in the project area, or if bridges and other areas appear to be the sole corridor for animal movement, consideration of utilizing wildlife crossings should be taken.

Karst

Is the proposed project located within or adjacent to the potential Karst Area of Indiana?
 Are karst features located within or adjacent to the footprint of the proposed project?
 If yes, will the project impact any of these karst features?

	Yes	No
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>

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Use the remarks box to identify any karst features within the project area. (Karst investigation must comply with the Karst MOU, dated October 13, 1993)

Remarks:

Based on a desktop review, the project is located outside the designated karst region of Indiana as outlined in the October 13, 1993 Memorandum of Understanding (MOU). According to the USGS topographic map of the project area (Appendix B, page 3), and the RFI report (Appendix E, page 7), and a site visit on July 17, 2019 by HNTB, there are no karst features within or adjacent to the project area. In the early coordination response dated February 3, 2020, the Indiana Geological Survey (IGS) did not indicate that karst features may exist in the project area (Appendix C, page 19). The IGS response indicated that there is a moderate liquefaction potential, presence of a floodway, moderate potential for bedrock resources, no potential for sand and gravel resources, and no documented active or abandoned mineral resources extraction sites in the project area. Response from IGS was communicated with the designer on February 3, 2020. No impacts are expected.

No early coordination response letters expressed concerns regarding karst resources.

Threatened or Endangered Species

- Within the known range of any federal species
- Any critical habitat identified within project area
- Federal species found in project area (based upon informal consultation)
- State species found in project area (based upon consultation with IDNR)

Presence

Impacts

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

<input checked="" type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

Is Section 7 formal consultation required for this action?

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Remarks:

Based on a desktop review and the RFI report (Appendix E, pages 1-10), completed by HNTB on July 22, 2019, the IDNR Jennings County Endangered, Threatened and Rare (ETR) Species List has been checked and is included in (Appendix E, pages 8-10). The highlighted species on the list reflect the federal and state identified ETR species located within the county. According to the IDNR-DFW early coordination response letter dated November 27, 2019, the Natural Heritage Program's Database has been checked and it was noted that to date, no plant or animal species listed as state or federally threatened, endangered or rare have been reported to occur in the project vicinity (Appendix C, pages 8-10).

Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal, and an official species list was generated (Appendix C, pages 26-31). The project is within range of the federally-endangered Indiana bat (*Myotis sodalis*) and the federally-threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*). No additional species were found within or adjacent to the project area other than the Indiana bat and NLEB.

The project qualifies for the *Range-wide Programmatic Informal Consultation for the Indiana bat and Northern Long-eared Bat (NLEB)*, dated May 2016 (revised February 2018), between FHWA, Federal Railroad Administration (FRA), and USFWS. An effect determination key was completed on February 27, 2020, and based on the responses provided, the project was found to "May Affect - Not Likely to Adversely Affect" the Indiana bat and the NLEB. INDOT reviewed and verified the effect finding on February 27, 2020, and requested USFWS's review of the finding (Appendix C, pages 32-46). No response was received from USFWS within the 14-day review period; therefore, it was concluded they concur with the finding. Avoidance and Mitigation Measures (AMMs) are included as firm commitments in the Environmental Commitments section of this CE document.

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This precludes the need for further consultation on this project as required under Section 7 of the Endangered Species Act, as amended. If new information on endangered species at the site becomes available, or if project plans are changed, USFWS will be contacted for consultation.

SECTION B – OTHER RESOURCES

Drinking Water Resources	<u>Presence</u>	<u>Impacts</u>	
		Yes	No
Wellhead Protection Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public Water System(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Residential Well(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Source Water Protection Area(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sole Source Aquifer (SSA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If a SSA is present, answer the following:

	Yes	No
Is the Project in the St. Joseph Aquifer System?	<input type="checkbox"/>	<input type="checkbox"/>
Is the FHWA/EPA SSA MOU Applicable?	<input type="checkbox"/>	<input type="checkbox"/>
Initial Groundwater Assessment Required?	<input type="checkbox"/>	<input type="checkbox"/>
Detailed Groundwater Assessment Required?	<input type="checkbox"/>	<input type="checkbox"/>

Remarks:

Sole Source Aquifer
 The project is located in Jennings County, which is not located within the area of the St. Joseph Sole Source Aquifer, the only legally designated sole source aquifer in the state of Indiana. Therefore, the FHWA/ Environmental Protection Agency (EPA) Sole Source Aquifer MOU is not applicable to this project. No impacts are expected.

Wellhead Protection Area and Source Water
 HNTB sent a Wellhead Protection Area Proximity Determination to IDEM Groundwater Section on September 19, 2019. In their response dated October 23, 2019, IDEM Groundwater Section indicated the project is not located within a Wellhead Protection Area but the project is located within a Source Water Assessment Area for a Public Water Supply System (PWSS) surface water intake (Appendix C, pages 20-21). IDEM indicated the PWSS that could be impacted by the project is the Stucker Fork Water Utility. This project will follow INDOT standard specifications and best management practices regarding spill protection in order to comply with the IDEM Source Water Assessment Program guidelines (<https://www.in.gov/idem/cleanwater/2451.htm>). No impacts are expected.

Water Wells
 The IDNR Water Well Record Database website (<https://www.in.gov/dnr/water/3595.htm>) was accessed on February 26, 2020 by HNTB. One residential water well is located approximately 1000 feet north of the project area. The identified well will not be affected because no ground disturbing activities will occur at the location of the well. Therefore, no impacts are expected. Should it be determined during the right-of-way phase that this well is affected, a cost to cure will likely be included in the appraisal to restore the well.

Urban Area Boundary
 Based on a desktop review of the INDOT MS4 website (<https://entapps.indot.in.gov/MS4/>) by HNTB on February 26, 2020 and the RFI report (Appendix E, page 2); this project is not located in an Urban Area Boundary location. No impacts are expected.

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Public Water System

Based on a desktop review, a site visit on July 17, 2019 BY HNTB, the aerial map of the project area (Appendix B, page 2), and information provided by the IDEM Groundwater Section, this project is located where there is a public water system. An early coordination letter was sent to Stucker Fork Water Utility on February 3, 2020. In their response dated February 5, 2020, Midwest Engineers Inc, on behalf of Stucker Fork Water Utility, indicated a 6-inch water main is located along the north side of SR 250 that was installed in the early 1990's (Appendix C, Page 22). The 6-inch water main appears to be approximately 25 feet north of the existing bridge. Utility coordination will be completed prior to initiation of construction. No impact is expected.

Flood Plains

Longitudinal Encroachment
 Transverse Encroachment
 Project located within a regulated floodplain
 Homes located in floodplain within 1000' up/downstream from project

	Presence	Impacts	
		Yes	No
Longitudinal Encroachment			
Transverse Encroachment	X	X	
Project located within a regulated floodplain	X	X	
Homes located in floodplain within 1000' up/downstream from project	X		X

Discuss impacts according to classification system described in the "Procedural Manual for Preparing Environmental Studies".

Remarks:

Based on a desktop review of the Indiana Department of Natural Resources Indiana Floodway Information Portal website (<http://dnrmmaps.dnr.in.gov/appsphp/fdms/>) by HNTB on February 18, 2020, and the RFI report (Appendix E, page 7); this project is located in a regulatory floodplain as determined from approved IDNR floodplain maps (Appendix F, page 14). An early coordination letter was sent on November 1, 2019, to the local Floodplain Administrator. The Floodplain Administrator did not respond within the 30-day time frame. This project qualifies as a Category 3 per the current INDOT CE Manual, which states:

"The modifications to drainage structures included in this project will result in an insubstantial change in their capacity to carry flood water. This change could cause a minimal increase in flood heights and flood limits. These minimal increases will not result in any substantial adverse impacts on the natural and beneficial floodplain values; they will not result in substantial change in flood risks or damage; and they do not have substantial potential for interruption or termination of emergency service or emergency routes; therefore, it has been determined that this encroachment is not substantial."

Farmland

Agricultural Lands
 Prime Farmland (per NRCS)

	Presence	Impacts	
		Yes	No
Agricultural Lands	X	X	
Prime Farmland (per NRCS)	X	X	

Total Points (from Section VII of CPA-106/AD-1006* 120

*If 160 or greater, see CE Manual for guidance.

See CE Manual for guidance to determine which NRCS form is appropriate for your project.

Remarks:

Based on a desktop review, a site visit on July 17, 2019 by HNTB, the aerial map of the project area (Appendix B, page 2), the project will convert <0.001 acre of farmland as defined by the Farmland Protection Policy Act.

An early coordination letter was sent on November 1, 2019, to Natural Resources Conservation Services (NRCS). Coordination with NRCS resulted in a score of 120 on the NRCS-AD-1006 form (Appendix C, page 7). NRCS's threshold score for significant impacts to farmland that result in the consideration of alternatives is 160. Since this project score is less than the threshold, no significant loss of prime, unique, statewide, or local important farmland will result from this project. No alternatives other than those previously discussed in this document will be investigated without reevaluating impacts to prime farmland.

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SECTION C – CULTURAL RESOURCES

	Category	Type	INDOT Approval Dates	N/A
Minor Projects PA Clearance	B	12	February 10, 2020	<input type="checkbox"/>

Results of Research

Eligible and/or Listed
Resource Present

Archaeology	<input checked="" type="checkbox"/>
NRHP Buildings/Site(s)	<input type="checkbox"/>
NRHP District(s)	<input type="checkbox"/>
NRHP Bridge(s)	<input type="checkbox"/>

Project Effect

No Historic Properties Affected No Adverse Effect Adverse Effect

Documentation
Prepared

Documentation (mark all that apply)

		ES/FHWA Approval Date(s)	SHPO Approval Date(s)
Historic Properties Short Report	<input type="checkbox"/>		
Historic Property Report	<input type="checkbox"/>		
Archaeological Records Check/ Review	<input type="checkbox"/>		
Archaeological Phase Ia Survey Report	<input type="checkbox"/>		
Archaeological Phase Ic Survey Report	<input checked="" type="checkbox"/>	December 16, 2019	N/A
Archaeological Phase II Investigation Report	<input type="checkbox"/>		
Archaeological Phase III Data Recovery	<input type="checkbox"/>		
APE, Eligibility and Effect Determination	<input type="checkbox"/>		
800.11 Documentation	<input type="checkbox"/>		

Memorandum of Agreement (MOA) **MOA Signature Dates** (List all signatories)

Describe all efforts to document cultural resources, including a detailed summary of the Section 106 process, using the categories outlined in the remarks box. The completion of the Section 106 process requires that a Legal Notice be published in local newspapers. Please indicate the publication date, name of paper(s) and the comment period deadline. Likewise include any further Section 106 work which must be completed at a later date, such as mitigation or deep trenching.

Remarks:

On February 10, 2020, INDOT Cultural Resources Office (CRO) determined that this project falls within the guidelines of Category B, Type 12 under the Minor Projects Programmatic Agreement (MPPA) (Appendix D, pages 1-5). MPPA Category B, Type 12 projects include the replacement, widening, or raising the elevation of the superstructure on existing bridges, and bridge replacement projects (when both the superstructure and substructure are removed), under certain conditions.

Archaeology: On October 28, 2019, archaeological field reconnaissance was conducted by a qualified professional. The field reconnaissance identified one previously unrecorded archaeological site (12Jn671). Because the site boundary was not fully defined south of the survey area, and because artifacts were found

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below the plow zone, the portion of the site within the survey area is potentially eligible for inclusion in the NRHP. However, the site is located outside proposed construction activities, archaeological clearance is recommended for the proposed project as long as the site can be avoided (Appendix D, page 8). Avoidance of this archaeological site is included as a commitment in the Environmental Commitments section of this CE document.

No further consultation is required. The Section 106 process has been completed and the responsibilities of the FHWA under Section 106 have been fulfilled.

SECTION D – SECTION 4(f) RESOURCES/ SECTION 6(f) RESOURCES

Section 4(f) Involvement (mark all that apply)

Parks & Other Recreational Land

- Publicly owned park
- Publicly owned recreation area
- Other (school, state/national forest, bikeway, etc.)

Presence

Use

Yes	No

Evaluations

Prepared

- Programmatic Section 4(f)*
- “De minimis” Impact*
- Individual Section 4(f)

FHWA
Approval date

--

Wildlife & Waterfowl Refuges

- National Wildlife Refuge
- National Natural Landmark
- State Wildlife Area
- State Nature Preserve

Presence

Use

Yes	No

Evaluations

Prepared

- Programmatic Section 4(f)*
- “De minimis” Impact*
- Individual Section 4(f)

FHWA
Approval date

--

Historic Properties

- Sites eligible and/or listed on the NRHP

Presence

--

Use

Yes	No

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**Evaluations
Prepared**

Programmatic Section 4(f)*
"De minimis" Impact*
Individual Section 4(f)

**FHWA
Approval date**

**FHWA approval of the environmental document also serves as approval of any Section 4f Programmatic and/or De minimis evaluation(s) discussed below.*

Discuss Programmatic Section 4(f) and "de minimis" Section 4(f) impacts in the remarks box below. Individual Section 4(f) documentation must be separate Draft and Final documents. For further discussions on Programmatic, "de minimis" and Individual Section 4(f) evaluations please refer to the "Procedural Manual for the Preparation of Environmental Studies". Discuss proposed alternatives that satisfy the requirements of Section 4(f).

Remarks:

Section 4(f) of the U.S. Department of Transportation Act of 1966 prohibits the use of certain public and historic lands for federally funded transportation facilities unless there is no feasible and prudent alternative. The law applies to significant publicly owned parks, recreation areas, wildlife/waterfowl refuges, and NRHP eligible or listed historic properties regardless of ownership. Lands subject to this law are considered Section 4(f) resources.

Based on a desktop review, a site visit on July 17, 2019 by HNTB, the aerial map of the project area (Appendix B, page 2), and the RFI report (Appendix E, page 2) there are no Section 4(f) resources within the 0.5 mile search radius. There are no Section 4(f) resources within or adjacent to the project area. Therefore, no use is expected.

Section 6(f) Involvement

Presence

Use

Section 6(f) Property

Yes

No

Discuss proposed alternatives that satisfy the requirements of Section 6(f). Discuss any Section 6(f) involvement.

Remarks:

The U.S. Land and Water Conservation Fund Act of 1965 established the Land and Water Conservation Fund (LWCF), which was created to preserve, develop, and assure accessibility to outdoor recreation resources. Section 6(f) of this Act prohibits conversion of lands purchased with LWCF monies to a non-recreation use.

A review of 6(f) properties on the Land and Water Conservation Fund (LWCF) list maintained by the IDNR Division of Outdoor Recreation for the identification of LWCF properties and provided by INDOT ESD revealed a total of one property in Jennings County (Appendix I, page 6). This property is not located within or adjacent to the project area. Therefore, there will be no impacts to 6(f) resources as a result of this project.

SECTION E – Air Quality

Air Quality

Conformity Status of the Project

Is the project in an air quality non-attainment or maintenance area?

Yes

No

X

If YES, then:

Is the project in the most current MPO TIP?

Is the project exempt from conformity?

If the project is NOT exempt from conformity, then:

Is the project in the Transportation Plan (TP)?

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Is a hot spot analysis required (CO/PM)?

Level of MSAT Analysis required?

Level 1a Level 1b Level 2 Level 3 Level 4 Level 5

Remarks:

This project is included in the INDOT FY 2020-2024 STIP under Des. No. 1701502 (Appendix H, page 1).

This project is located in Jennings County, which is currently in attainment for all criteria pollutants according to the IDEM Office of Air Quality. Therefore, the conformity procedures of 40 CFR Part 93 do not apply.

This project is of a type qualifying as a categorical exclusion (Group 1) under 23 CFR 771.117(c), or exempt under the Clean Air Act conformity rule under 40 CFR 93.126, and as such, a Mobile Source Air Toxics analysis is not required.

SECTION F - NOISE

Noise **Yes** **No**
 Is a noise analysis required in accordance with FHWA regulations and INDOT's traffic noise policy?

	No	Yes/ Date
ES Review of Noise Analysis	<input type="checkbox"/>	<input type="checkbox"/>

Remarks:

This project is a Type III project. In accordance with 23 CFR 772 and the current *Indiana Department of Transportation Traffic Noise Analysis Procedure*, this action does not require a formal noise analysis.

SECTION G – COMMUNITY IMPACTS

Regional, Community & Neighborhood Factors	Yes	No
Will the proposed action comply with the local/regional development patterns for the area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Will the proposed action result in substantial impacts to community cohesion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the proposed action result in substantial impacts to local tax base or property values?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will construction activities impact community events (festivals, fairs, etc.)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Does the community have an approved transition plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If No, are steps being made to advance the community's transition plan?	<input type="checkbox"/>	<input type="checkbox"/>
Does the project comply with the transition plan? (explain in the remarks box)	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Remarks:

The project is in a rural portion of Jennings County, Indiana and will require the acquisition of 0.65 acre of permanent right-of-way. The right-of-way acquisition is not anticipated to have a significant impact on tax base or property values.

The MOT plan requires the closure of SR 250 for 4 months. A detour utilizing SR 3, SR 256, and Interstate 65 will be in place. The proposed detour will be approximately 33 miles long and will add approximately 13 miles

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to a trip through the area. A local detour route may be available during construction. Access for local traffic will be provided during construction per INDOT Standard Specification 107.08(e).

According to the Indiana Festivals website (indianafestivals.org/search/?search=&city+&county=Jennings®ion=) accessed on February 26, 2020, there are two scheduled festivals in Jennings County. Two festivals, the Sassafras Tea Festival & Civil War Living History and the Vernon Labor Day Festivals of the Arts, are located in Vernon, Indiana. The MOT plan may cause minor delays or inconveniences to those traveling to both festivals. The selected contractor will implement the MOT in accordance with the current IDM and INDOT Standard Specifications.

The American with Disabilities Act – ADA Transition Plan for Public Rights-of-Way” for Jennings county dated January 12, 2017 is available on Jennings County’s website (<http://www.jenningscounty.in.gov/ADA/index.php>). This project is located in a rural portion of Jennings County that does not have any sidewalks or trails within or adjacent to the project area. Therefore, there are no facilities in the project area that require ADA compliance.

Early coordination letters were sent to the Jennings County Surveyor, Jennings County Sheriff, Jennings County Highway Department, Jennings County Commissioner’s Office, and the Jennings County Emergency Management Director on November 1, 2019 (Appendix C, pages 1-3). An early coordination letter was sent to the Stucker Fork Water Utility on February 3, 2020. No responses were received regarding MOT or community impacts.

Indirect and Cumulative Impacts

Will the proposed action result in substantial indirect or cumulative impacts?

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Remarks:

Indirect impacts are effects which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate. Cumulative impacts affect the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such actions.

This project is not of a type that is likely to cause substantial indirect or cumulative effects. This project is not expected to affect growth, changes in land use, or population density. The project will not add capacity to the existing roadway network or provide additional access to any currently undeveloped area. Therefore, the project is not expected to increase development in the area or result in substantial indirect or cumulative impacts.

Public Facilities & Services

Will the proposed action result in substantial impacts on health and educational facilities, public and private utilities, emergency services, religious institutions, airports, public transportation or pedestrian and bicycle facilities? *Discuss how the maintenance of traffic will affect public facilities and services.*

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Remarks:

Based on a desktop review, a site visit on July 17, 2019 by HNTB, the aerial map of the project area (Appendix B, page 2), and the RFI report (Appendix E, page 2) there are no public facilities within or adjacent to the project area. Access to all properties will be maintained during construction. Therefore, no impacts are expected.

It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access.

Environmental Justice (EJ) (Presidential EO 12898)

During the development of the project were EJ issues identified?

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>

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Does the project require an EJ analysis?

If YES, then:

Are any EJ populations located within the project area?

Will the project result in adversely high or disproportionate impacts to EJ populations?

Remarks:

Under FHWA Order 6640.23A, FHWA and INDOT, as a recipient of funding from FHWA, are responsible to ensure that their programs, policies, and activities do not have a disproportionately high and adverse effect on minority or low-income populations. Per the current INDOT Categorical Exclusion Manual, an Environmental Justice (EJ) Analysis is required for any project that has two or more relocations or 0.5 acre of additional permanent right-of-way. The project will require 0.65 acre of additional permanent right-of-way. Therefore, an EJ Analysis is required.

Potential EJ impacts are detected by locating minority and low-income populations relative to a reference population to determine if populations of EJ concern exists and whether there could be disproportionately high and adverse impacts to them. The reference population may be a county, city, or town and is called the community of comparison (COC). In this project, the COC is Jennings County. The community that overlaps the project limits is called the affected community (AC). In this project, the AC is Census Tract 9606. An AC has a population of concern for EJ if the population is more than 50% minority or low-income or if the low-income or minority population is 125% of the COC. Data from the 2013-2017 American Community Survey was obtained from the US Census Bureau Website <https://factfinder.census.gov/> on February 4, 2020 by HNTB (Appendix I, pages 1-5). The data collected for minority and low-income populations within the AC are summarized in the below table.

	COC: Jennings County	AC: Census Tract 9606
LOW-INCOME		
Total population for whom poverty status is determined (estimated)	27,411	4,991
Total population below poverty level (estimated)	3,815	425
Percent low-income	14%	9%
125 percent of COC	18%	
Potential low-income EJ impact?		No
MINORITY		
Total population (all races)	27,840	5,016
White alone or in combination	26,550	4,883
Number non-white/minority	1,290	133
Percent non-white/Minority	5%	3%
125 percent of COC	7%	
Potential minority EJ impact?		No

Census Tract 9606 has a percent minority of 3% which is below 50% and is below the 125% COC threshold. Therefore, the AC does not contain minority populations of EJ concern.

Census Tract 9606 has a percent low-income of 9% which is below 50% and is below the 125% COC threshold. Therefore, the AC does not contain low-income populations of EJ concern.

The census data sheets, map, and calculations can be found in Appendix I, pages 1-5. No further environmental justice analysis is warranted.

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Relocation of People, Businesses or Farms

Will the proposed action result in the relocation of people, businesses, or farms?

Is a Business Information Survey (BIS) required?

Is a Conceptual Stage Relocation Study (CSRS) required?

Has utility relocation coordination been initiated for this project?

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Number of relocations: Residences: 0 Businesses: 0 Farms: 0 Other: 0

If a BIS or CSRS is required, discuss the results in the remarks box.

Remarks:

No relocations of people, businesses, or farms will take place as a result of this project.

SECTION H – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

Hazardous Materials & Regulated Substances (Mark all that apply)

Red Flag Investigation

Phase I Environmental Site Assessment (Phase I ESA)

Phase II Environmental Site Assessment (Phase II ESA)

Design/Specifications for Remediation required?

Documentation

<input checked="" type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

No Yes/ Date

ES Review of Investigations	No	Yes/ Date
	<input type="checkbox"/>	September 15, 2019

Include a summary of findings for each investigation.

Remarks:

Based on a review of GIS data and available public records, a RFI was approved on September 15, 2019 by the INDOT Site Assessment and Management (SAM) Unit (Appendix E, pages 1-10). No sites with hazardous material concerns (hazmat sites) or sites involved with regulated substances were identified in or within 0.5 mile of the project area. Further investigation for hazardous material concerns or regulated substances is not required at this time.

SECTION I – PERMITS CHECKLIST

Permits (mark all that apply)

Likely Required

Army Corps of Engineers (404/Section10 Permit)

Individual Permit (IP)

Nationwide Permit (NWP)

Regional General Permit (RGP)

Pre-Construction Notification (PCN)

Other

Wetland Mitigation required

Stream Mitigation required

<input type="checkbox"/>
<input checked="" type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

IDEM

Section 401 WQC

Isolated Wetlands determination

Rule 5

Other

Wetland Mitigation required

Stream Mitigation required

<input checked="" type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

This is page 20 of 24 Project name: SR 250 over Slate Creek Date: May 27, 2020

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IDNR

- Construction in a Floodway
- Navigable Waterway Permit
- Lake Preservation Permit
- Other
- Mitigation Required

US Coast Guard Section 9 Bridge Permit

Others (Please discuss in the remarks box below)

Remarks:

A USACE Section 404 permit and IDEM Section 401 Water Quality Certification (WQC) will likely be required for this project. This project meets the requirements of the rural bridge exemption; therefore, an IDNR Construction in a Floodway permit will not be required.

Applicable recommendations provided by IDEM and IDNR-DFW are included in the Environmental Commitments section of this document. If permits are found to be necessary, the conditions of the permit will be requirements of the project and will supersede these recommendations.

It is the responsibility of the project sponsor to identify and obtain all required permits.

SECTION J- ENVIRONMENTAL COMMITMENTS

The following information should be provided below: List all commitments, name of agency/organization requesting the commitment(s), and indicating which are firm and which are for further consideration. The commitments should be numbered.

Remarks:

FIRM:

1. If the scope of work or permanent or temporary right-of-way amounts change, the INDOT Environmental Services Division (ESD) and the INDOT Seymour District Environmental Section will be contacted immediately. (INDOT ESD and INDOT Seymour District)
2. It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access. (INDOT ESD)
3. General AMM 1: Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs. (USFWS)
4. Lighting AMM 1: Direct temporary lighting away from suitable habitat during the active season. (USFWS)
5. Tree Removal AMM 1: Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal. (USFWS)
6. Tree Removal AMM 2: Apply time of year restrictions (April 1 through September 30) for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/ rail surface and outside of documented roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed. (USFWS)

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7. Tree Removal AMM 3: Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits). (USFWS)
8. Tree Removal AMM 4: Do not remove documented Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or documented foraging habitat any time of year. (USFWS)
9. Archaeological site (12Jn671) is located outside proposed construction activities and should be avoided. (INDOT CRO)
10. USFWS Bridge/Structure Assessment shall take place no earlier than two (2) years prior to the start of construction. If construction will begin after July 17, 2021, an inspection of the structure by a qualified individual, must be performed. Inspection of the structure should check for presence of bats/bat indicators and/or presence of birds. The result of the inspection must indicate no signs of bats or birds. If sings of bats or birds are documented during this inspection, the INDOT Seymour District Environmental Manager must be contacted Immediately. (INDOT ESD and INDOT Seymour District)

FOR CONSIDERATION:

1. The new, replacement, or rehabbed structure, and any bank stabilization under the structure, should not create conditions that are less favorable for wildlife passage under the structure compared to current conditions. A level area of natural ground under the structure is ideal for wildlife passage. If channel clearing will result in a flat bench area above the normal water level under the structure, this area should allow wildlife passage and should remain free of riprap and other similar materials that can impair wildlife passage. (IDNR-DFW)
2. Minimize the use of riprap and use alternative erosion protection materials whenever possible. Riprap must not be placed in the active thalweg channel or placed in the streambed in a manner that precludes fish or aquatic organism passage (riprap must not be placed above the existing streambed elevation). Where riprap must be used, we recommended placing only enough riprap to provide stream bank toe protection, such as from the toe of the bank up to the ordinary high water mark (OHWM). (IDNR-DFW)
3. The banks above the OHWM must be restored, stabilized and revegetated using geotextiles and a mixture of grasses, sedges, wildflowers, shrubs, and trees native to the area and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion. (IDNR-DFW)
4. Combine vegetation with bank stabilization methods to provide additional bank protection and help reduce impacts upon fish and wildlife. If hard armoring is needed, wildlife passage can be facilitated by using a smooth-surfaced armoring material instead of riprap, such as articulated concrete block mats, fabric-formed concrete mats, or other similar smooth-surfaced material. (IDNR-DFW)
5. Impacts to non-wetland forest of one (1) acre or more should be mitigated at a minimum 2:1 ratio. If less than one acre of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ratio based on area. Impacts to non-wetland forest under one (1) acre in an urban setting should be mitigated by planting five trees, at least 2 inches in diameter-at-breast height (DBH), for each tree which is removed that is 10" dbh or greater (5:1 mitigation based on the number of large trees). (IDNR-DFW)

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6. IDNR recommends the mitigation site be located in the floodway, downstream of the one (1) square mile drainage area of the stream (or another stream within the 8-digit HUC, preferably as close to the impact site as possible) and adjacent to existing forested riparian habitat. (IDNR-DFW)
7. Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting (greater than 5 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30. (IDNR-DFW)
8. Do not excavate in the low flow area except for the placement of piers, foundations, and riprap, or removal of the old structure. (IDNR-DFW)
9. Do not construct temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds. (IDNR-DFW)
10. Use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids. (IDNR-DFW)
11. Plant native hardwood trees along the top of the bank and right-of-way to replace the vegetation destroyed during construction. (IDNR-DFW)
12. Post "Do Not Spray" signs along the right-of-way. (IDNR-DFW)
13. Restrict below low-water work in streams to placement of culvert, piers, pilings and/or footings, shaping of the spill slopes around the bridge abutments, and placement or riprap. (USFWS)
14. Culverts should span the active stream channel, should be either embedded or a 3-sided or open-arch culvert, and be installed where practicable on an essentially flat slope. When an open-bottom culvert or arch is used in a stream, which has a good natural bottom substrate, such as gravel, cobbles and boulders, the existing substrate should be left undisturbed beneath the culvert to provide natural habitat for the aquatic community. (USFWS)
15. Minimize the extent of hard armor (riprap) in bank stabilization by using bioengineering techniques whenever possible. If rip rap is utilized for bank stabilization, extend it below low-level water elevation to provide aquatic habitat. (USFWS)
16. Avoid all work within the inundated part of the stream channel (in perennial streams and large intermittent streams) during the fish spawning season (April 1 through June 30), except for work within sealed structures such as caissons or cofferdams that were installed prior to the spawning season. No equipment shall be operated below Ordinary High Water Mark during this time unless the machinery is within the caissons or on the cofferdam. (USFWS)
17. Evaluate wildlife crossings under bridge/culverts projects in appropriate situations. Suitable crossings include flat areas below bridge abutments with suitable ground cover, high water shelves in culverts, amphibian tunnels and diversion fencing. (USFWS)

Indiana Department of Transportation

County Jennings

Route SR 250

Des. No. 1701502

SECTION K- EARLY COORDINATION

Please list the date coordination was sent and all agencies that were contacted as a part of the development of this Environmental Study. Also, include the date of their response or indicate that no response was received. INDOT and FHWA are automatically considered early coordination participants and should only be listed if a response is received.

Remarks:

Early coordination letters were sent on November 1, 2019 and February 3, 2020 to federal, state, and local resource agencies (Appendix C, pages 1-3).

Agency	Response Received
Jennings County Surveyor	November 1, 2019
U.S. Fish and Wildlife Service	November 6, 2019
USDA – Natural Resources Conservation Service	November 20, 2019
Indiana Department of Natural Resources, Division of Fish and Wildlife	November 27, 2019
Indiana Geological Survey	February 3, 2020
Stucker Fork Water Utility	February 5, 2020
Indiana Department of Environmental Management	February 13, 2020
Jennings County School Corporation	-
Indiana Department of Natural Resources, Division of Oil and Gas	-
U.S. Army Corps of Engineers – Louisville District	-
National Parks Service	-
Jennings County Sheriff's Department	-
Jennings County Highway Department	-
Jennings County Commissioners Office	-
Jennings County Emergency Management	-
Jennings County Floodplain Administrator	-

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SR 250 over Slate Creek – Superstructure Replacement
Jennings County, Indiana
Des. No. 1701502

Appendix A: INDOT Supporting Documentation

Categorical Exclusion Level Thresholds

	PCE	Level 1	Level 2	Level 3	Level 4 ¹
Section 106	Falls within guidelines of Minor Projects PA	“No Historic Properties Affected”	“No Adverse Effect”	-	“Adverse Effect” Or Historic Bridge involvement ²
Stream Impacts	No construction in waterways or water bodies	< 300 linear feet of stream impacts	≥ 300 linear feet of stream impacts	-	Individual 404 Permit
Wetland Impacts	No adverse impacts to wetlands	< 0.1 acre	-	< 1 acre	≥ 1 acre
Right-of-way³	Property acquisition for preservation only or none	< 0.5 acre	≥ 0.5 acre	-	-
Relocations	None	-	-	< 5	≥ 5
Threatened/Endangered Species (Species Specific Programmatic for Indiana bat & northern long eared bat)	“No Effect”, “Not likely to Adversely Affect” (Without AMMs ⁴ or with AMMs required for all projects ⁵)	“Not likely to Adversely Affect” (With any other AMMs)	-	“Likely to Adversely Affect”	Project does not fall under Species Specific Programmatic
Threatened/Endangered Species (Any other species)	Falls within guidelines of USFWS 2013 Interim Policy	“No Effect”, “Not likely to Adversely Affect”	-	-	“Likely to Adversely Affect”
Environmental Justice	No disproportionately high and adverse impacts	-	-	-	Potential ⁶
Sole Source Aquifer	Detailed Assessment Not Required	-	-	-	Detailed Assessment
Floodplain	No Substantial Impacts	-	-	-	Substantial Impacts
Coastal Zone Consistency	Consistent	-	-	-	Not Consistent
National Wild and Scenic River	Not Present	-	-	-	Present
New Alignment	None	-	-	-	Any
Section 4(f) Impacts	None	-	-	-	Any
Section 6(f) Impacts	None	-	-	-	Any
Added Through Lane	None	-	-	-	Any
Permanent Traffic Alteration	None	-	-	-	Any
Coast Guard Permit	None	-	-	-	Any
Noise Analysis Required	No	-	-	-	Yes
Air Quality Analysis Required	No	-	-	-	Yes ⁷
Approval Level	Concurrence by INDOT District Environmental or Environmental Services	Yes	Yes	Yes	Yes
<ul style="list-style-type: none"> • District Env. Supervisor • Env. Services Division • FHWA 				Yes	Yes

¹Coordinate with INDOT Environmental Services. INDOT will then coordinate with the appropriate FHWA Environmental Specialist.

²Any involvement with a bridge processed under the Historic Bridge Programmatic Agreement.

³Permanent and/or temporary right-of-way.

⁴AMMs = Avoidance and Mitigation Measures.

⁵AMMs determined by the IPAC decision key to be needed that are listed in the USFWS *User’s Guide for the Range-wide Programmatic Consultation for Indiana bat and Northern long-eared bat* as “required for all projects”.

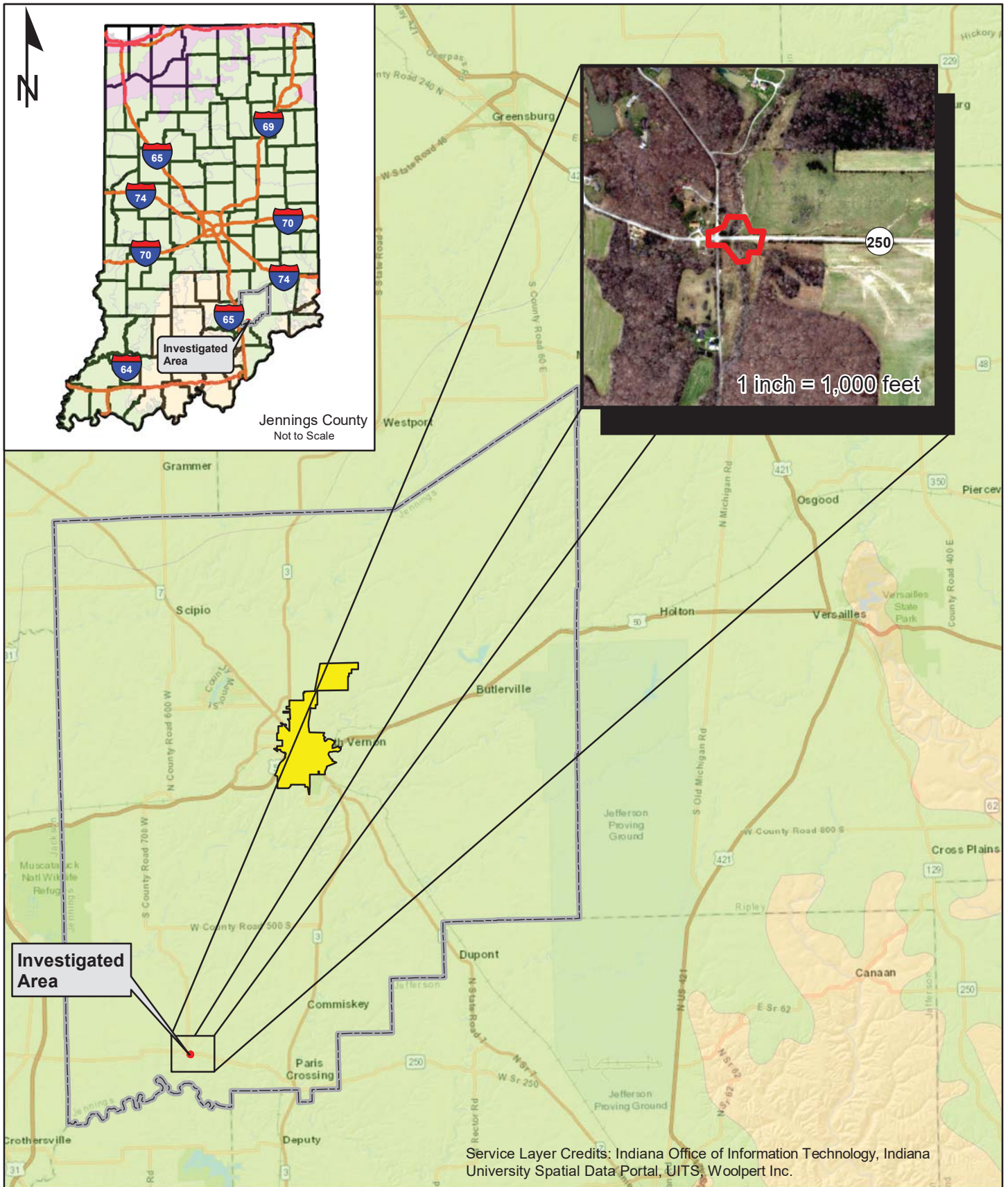
⁶Potential for causing a disproportionately high and adverse impact.

⁷Hot Spot Analysis and/or MSAT Quantitative Emission Analysis.

*Substantial public or agency controversy may require a higher-level NEPA document.

SR 250 over Slate Creek – Superstructure Replacement
Jennings County, Indiana
Des. No. 1701502

Appendix B: Graphics



- North Vernon, IN
- Jennings County
- Investigated Area
- NRCS Land Resource Regions**
- Northeast and Northcentral
- Midwest
- Eastern Mountains and Piedmont

0 2.5 5 Miles

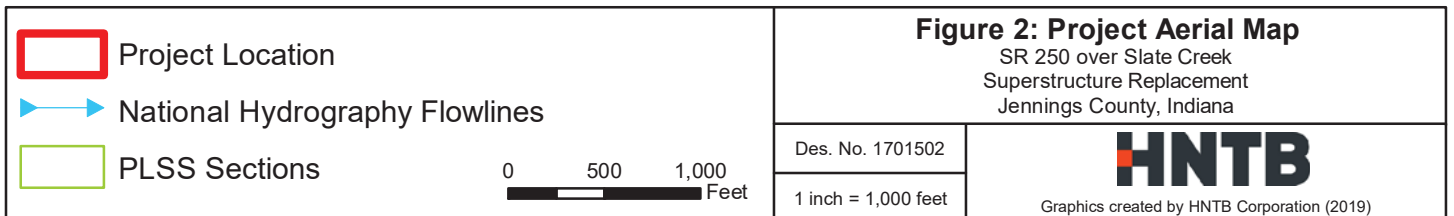
Figure 1: Project Location Map
 SR 250 over Slate Creek
 Superstructure Replacement
 Jennings County, Indiana

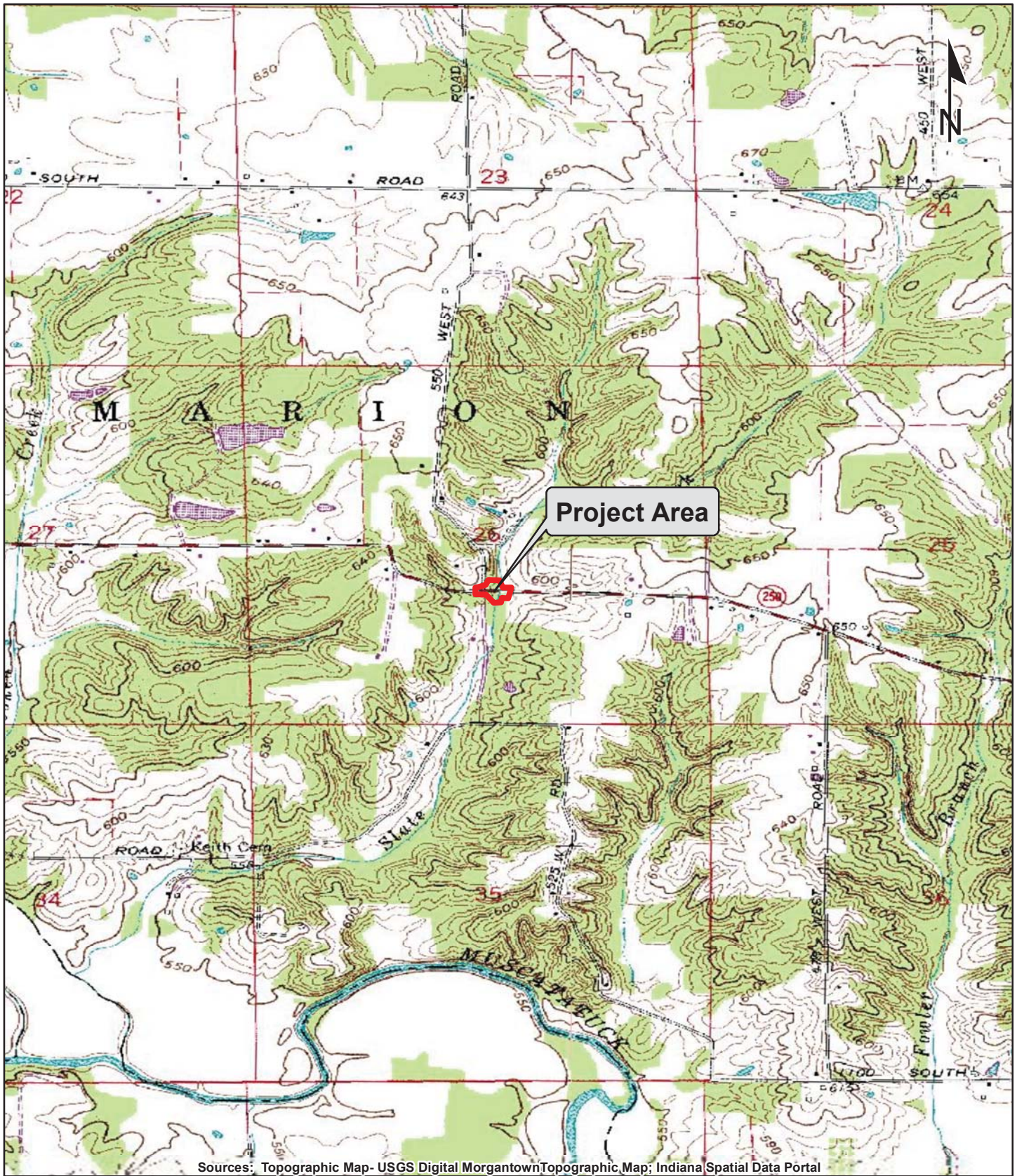
Des. No. 1701502




1 inch = 5 miles

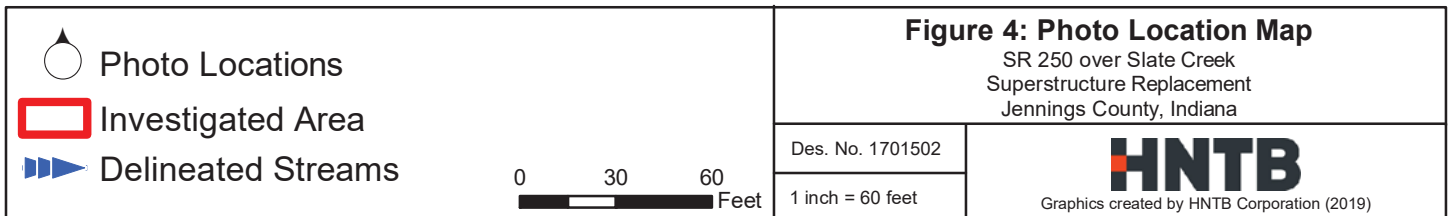
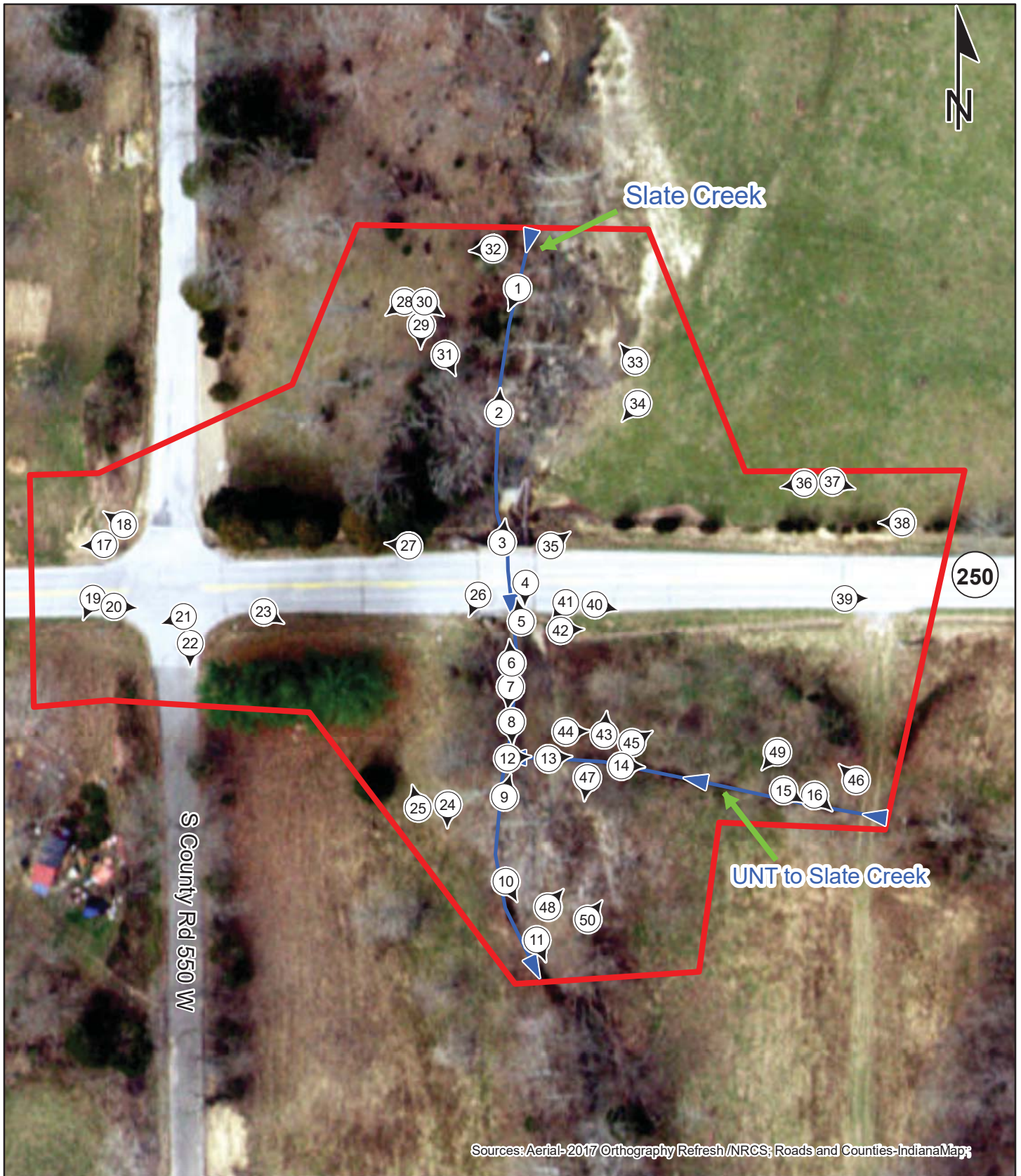
HNTB

Graphics created by HNTB Corporation (2019)





 Project Area	Figure 3: USGS (1:24,000 scale) Topographic Map SR 250 over Slate Creek Superstructure Replacement Jennings County, Indiana	
	Des. No. 1701502 0 1,000 2,000  Feet 1 inch = 2,000 feet	 Graphics created by HNTB Corporation (2019)





1. View of Slate Creek and investigated area looking south



2. View of Slate Creek and investigated area looking north



3. View of Slate Creek and investigated area looking north



4. View of Slate Creek and investigated area looking south



5. View of Slate Creek and investigated area looking north



6. View of Slate Creek, the SR 250 structure and investigated area looking north



7. View of Slate Creek and investigated area looking south



8. View of Slate Creek and investigated area looking south



9. View of Slate Creek, the SR 250 structure and investigated area looking north



10. View of Slate Creek and investigated area looking southeast



11. View of Slate Creek and investigated area looking southeast



12. View of UNT to Slate Creek and investigated area looking east



13. View of UNT to Slate Creek and investigated area looking east



14. View of UNT to Slate Creek and investigated area looking east



15. View of UNT to Slate Creek and investigated area looking east



16. View of UNT to Slate Creek and investigated area looking east



17. View of investigated area and SR 250 looking west



18. View of investigated area looking northwest



19. View of investigated area looking southwest



20. View of investigated area and the SR 250/South County Road 550 West intersection looking east



21. View of investigated area looking southwest



22. View of investigated area and South County Road 550 West looking south



23. View of investigated area and SR 250 looking southeast



24. View of investigated area looking south



25. View of investigated area looking northwest



26. View of investigated area looking southwest



27. View of investigated area and SR 250/South County Road 550 West intersection looking west



28. View of investigated area looking southwest



29. View of investigated area looking south



30. View of investigated area looking southeast



31. View of investigated area and Slate Creek looking southeast



32. View of investigated area looking west



33. View of investigated area looking northwest



34. View of the investigated area looking southwest



35. View of the investigated area looking northeast



36. View of the investigated area looking west



37. View of the investigated area looking east



38. View of the investigated area and SR 250 looking west



39. View of the investigated area and SR 250 looking east



40. View of the investigated area and SR 250 looking east



41. View of investigated area looking southwest



42. View of investigated area looking east



43. View of investigated area looking north



44. View of investigated area looking east



45. View of investigated area looking northeast



46. View of investigated area looking northwest



47. View of investigated area looking south



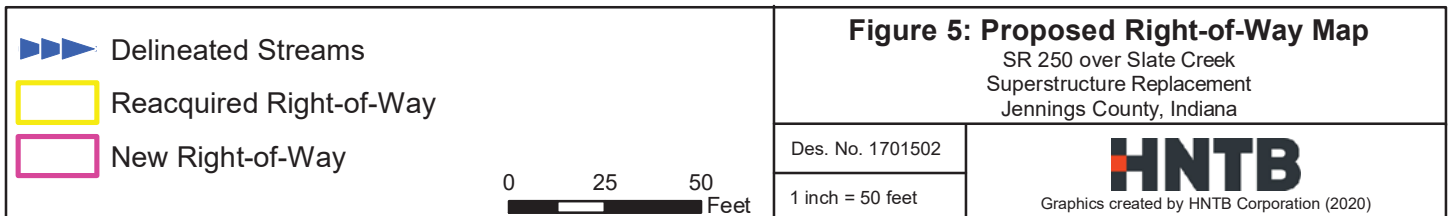
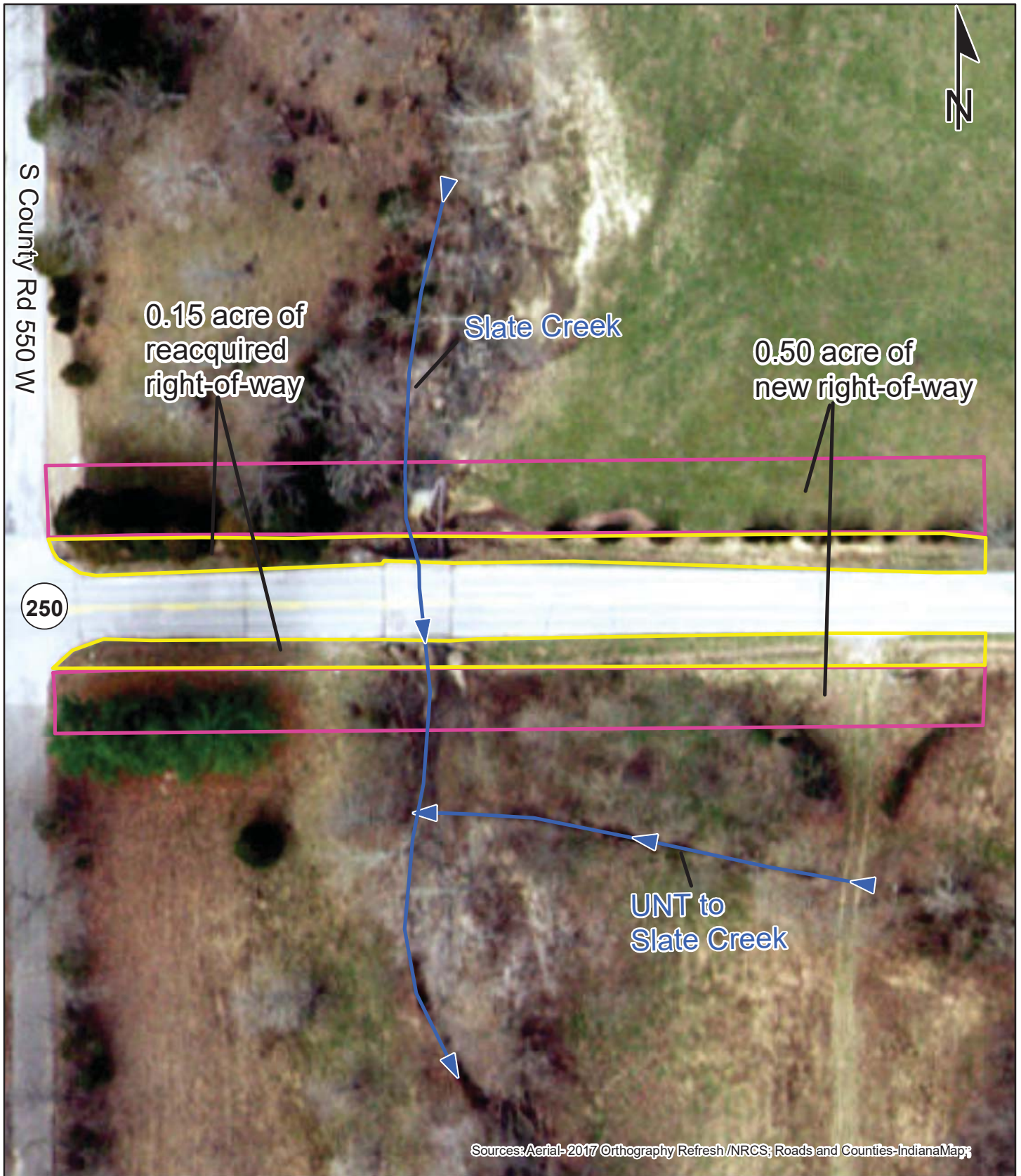
48. View of investigated area looking northeast



49. View of investigated area looking southwest



50. View of investigated area looking northeast



PROJECT	DESIGNATION
1701502	1701502
CONTRACT	BRIDGE FILE
B-40437	250-40-05952 C

INDIANA DEPARTMENT OF TRANSPORTATION



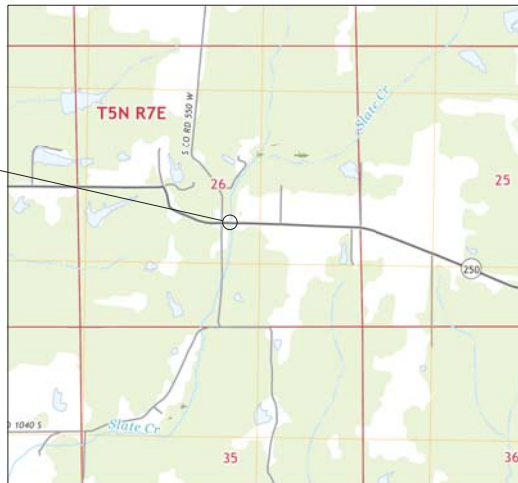
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KIN PROJECT INFORMATION	
DESIGNATION	DESCRIPTION
1700118	SR 250 SMALL STRUCTURE REPLACEMENT
1701502	SR 250 OVER SLATE CREEK LEAD DES

BRIDGE REHABILITATION PLANS

FOR SPANS OVER 20 FEET
 ROUTE: SR 250 AT: RP 19+49
 PROJECT NO. 1701502 (P.E, R/W, CONST.)

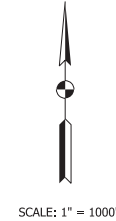
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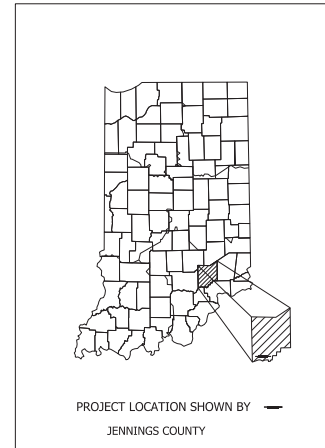
BRIDGE FILE NO. 250-40-05952 C
 SR 250 OVER SLATE CREEK
 STA. 85+74.05 LINE "A"
 BEGIN PROJECT STA. 84+35.00 LINE "A"
 END PROJECT STA. 87+55.01 LINE "A"

NOTE TO REVIEWER
 PLEASE SEE
 CORRESPONDENCE FILE
 FOR DOCUMENTATION OF
 DESIGN DECISIONS

PRELIMINARY PLANS
 NOVEMBER 27, 2019



TRAFFIC DATA		
A.A.D.T. (2011)	445	V.P.D.
A.A.D.T. (2041)	524	V.P.D.
D.H.V. (2041)	63	V.P.H.
DIRECTIONAL DISTRIBUTION	52.91	%
TRUCKS	21.45	% A.A.D.T.
	30.77	% D.H.V.
DESIGN DATA		
DESIGN SPEED	55	M.P.H.
PROJECT DESIGN CRITERIA	3R (NOW-FREEWAY)	
FUNCTIONAL CLASSIFICATION	MAJOR COLLECTOR	
RURAL/URBAN	RURAL	
TERRAIN	LEVEL	
ACCESS CONTROL	NONE	



LATITUDE: 38° 50' 38" LONGITUDE: 85° 42' 41"

BRIDGE LENGTH: 0.005 MI.
 ROADWAY LENGTH: 0.056 MI.
 TOTAL LENGTH: 0.061 MI.
 MAX. GRADE: -9.46 %

HYDROLOGIC UNIT CODE: 051202070605

INDIANA DEPARTMENT OF TRANSPORTATION
 STANDARD SPECIFICATIONS DATED 2020
 TO BE USED WITH THESE PLANS.

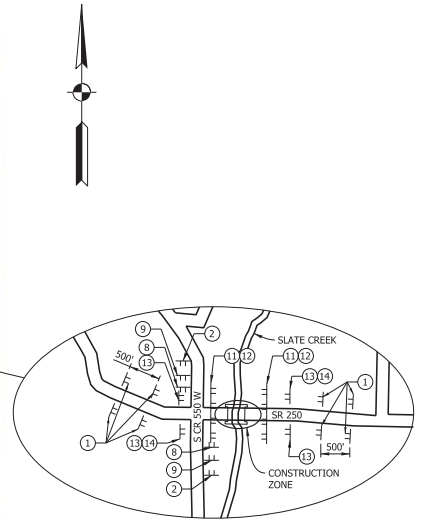
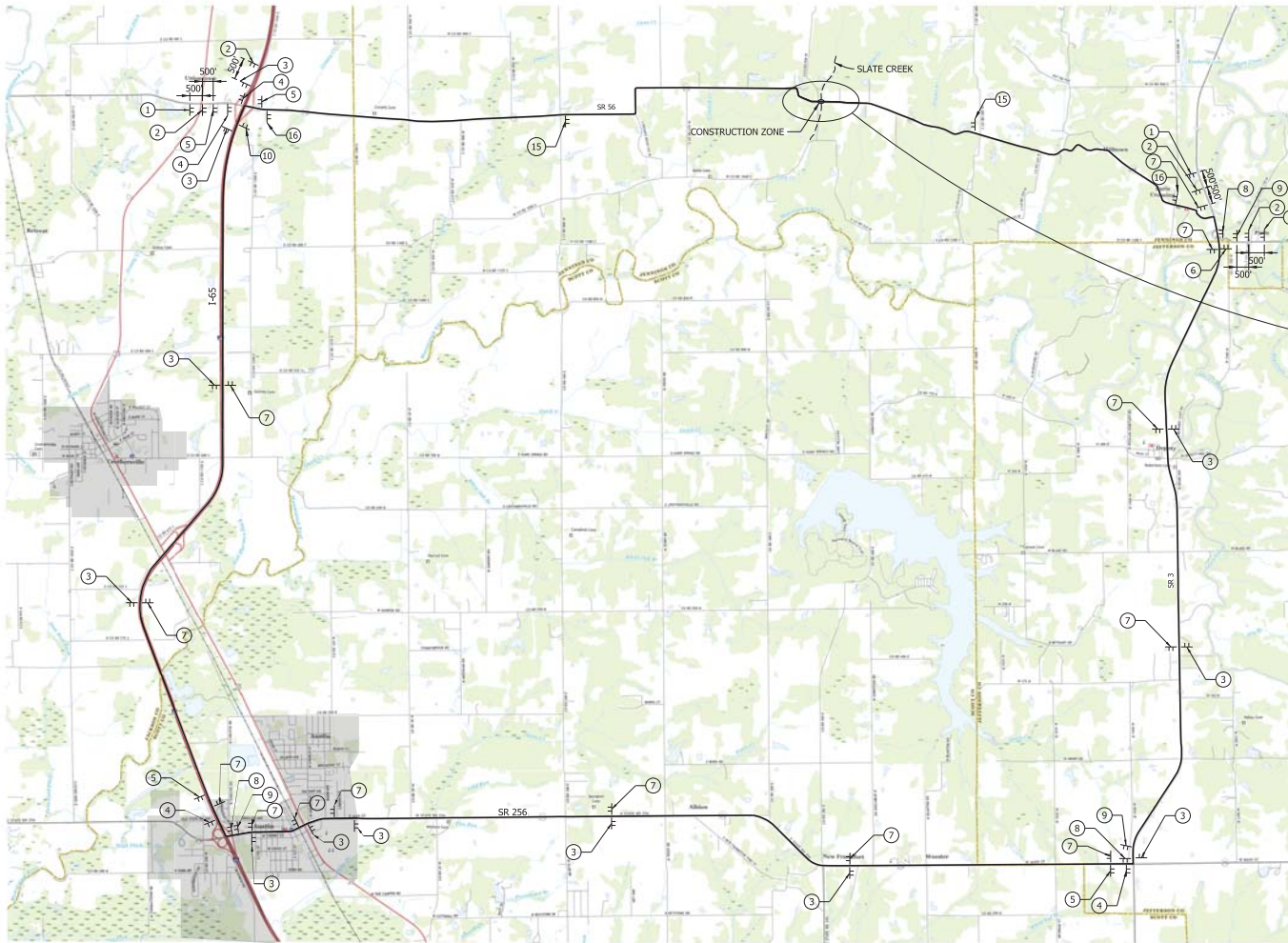
HNTB
 HNTB Indiana, Inc.
 The HNTB Companies
 Infrastructure Solutions
 111 Monument Circle
 Suite 1200
 Indianapolis, IN 46204

DRAFT
 NOT FOR CONSTRUCTION

PLANS PREPARED BY: HNTB Indiana, Inc. (317) 636-4682 PHONE NUMBER
 CERTIFIED BY: _____ DATE
 APPROVED FOR LETTING: _____ DATE
 INDIANA DEPARTMENT OF TRANSPORTATION

BRIDGE FILE	
250-40-05952 C	
DESIGNATION	
1701502	
SURVEY BOOK	SHEETS T1-01
ELECTRONIC 1	of 10
CONTRACT	PROJECT
B-40437	1701502

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LEGEND:

- URBAN AREA BOUNDARY
- CONSTRUCTION SIGN

NOTES:

1. ACCESS TO ALL PRIVATE DRIVES SHALL BE MAINTAINED DURING CONSTRUCTION. DRIVES ARE LOCATED AT VARIOUS LOCATIONS ALONG SR 250 WITHIN 0.5 MILES OF THE STRUCTURE.
2. FOR ADDITIONAL INFORMATION ON DETOUR SIGN PLACEMENT, SEE STD DWG. E 801-TCDD-01 THRU E 801-TCDD-04.
3. FOR DETOUR ROUTE MARKER ASSEMBLIES AND SIGN DETAILS (1) THRU (15), SEE DWG. NO. MOT-02.
4. EMERGENCY SERVICES SHALL BE CONTACTED A MINIMUM OF TWO WEEKS PRIOR TO CONSTRUCTION.

DETOUR ROUTE

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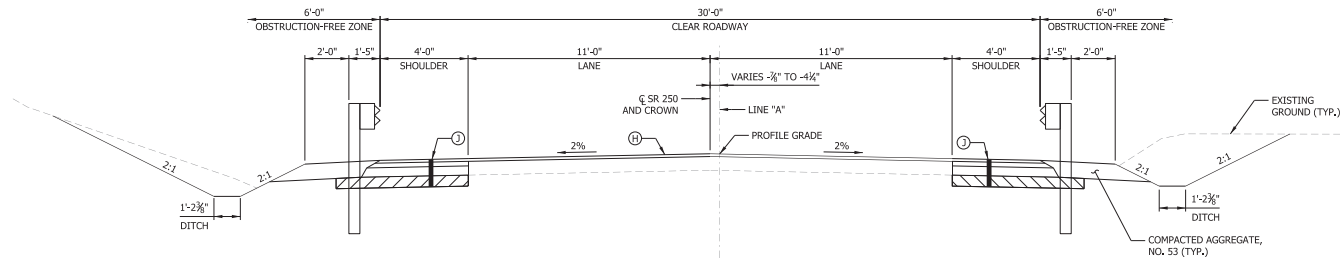
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DESIGNED: MES	DRAWN: MES	
CHECKED: JWC/III	CHECKED: JWC/III	

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC DETAILS

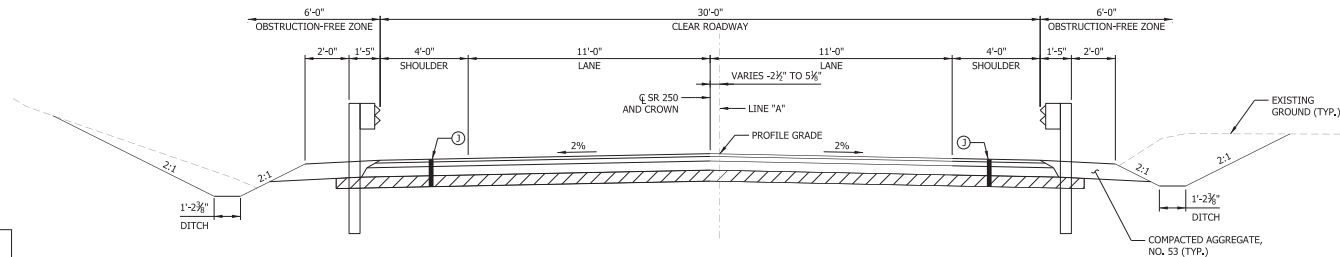
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NTS	250-40-09952 C
VERTICAL SCALE	DESIGNATION
NTS	1701502
SURVEY BOOK	SHEETS MOT-01
ELECTRONIC	3 of 10
CONTRACT	PROJECT
B-40437	1701502

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TYPICAL SECTION SR 250

SCALE: 3/8" = 1'-0"
 STA. 84+35.00 TO 84+65.00
 STA. 87+25.01 TO 87+55.01



TYPICAL SECTION SR 250

SCALE: 3/8" = 1'-0"
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 STA. 86+07.55 TO 87+25.01

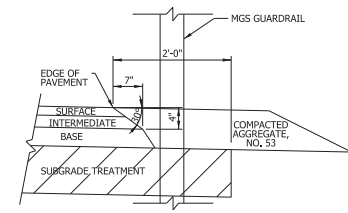
NOTE TO REVIEWER

GEOMETRIC LAYOUT OF PROFILE GRADE LINE "A" AND ROADWAY CENTERLINE WILL BE DETAILED FOR FUTURE SUBMISSIONS.

NOTE TO REVIEWER

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- LEGEND**
- ⊕ 165 LBS/SYS, QC/QA-HMA, 2, 64, SURFACE, 9.5 MM
 - ⊙ 165 LB/SYS, QC/QA-HMA, 2, 64, SURFACE, 9.5 MM ON 275 LB/SYS, QC/QA-HMA, 2, 64, INTERMEDIATE, 19.0 MM ON 660 LB/SYS, QC/QA-HMA, 2, 64, BASE, 25.0 MM ON SUBGRADE TREATMENT, TYPE IC



SAFETY EDGE ON HMA PAVEMENT
 N.T.S.

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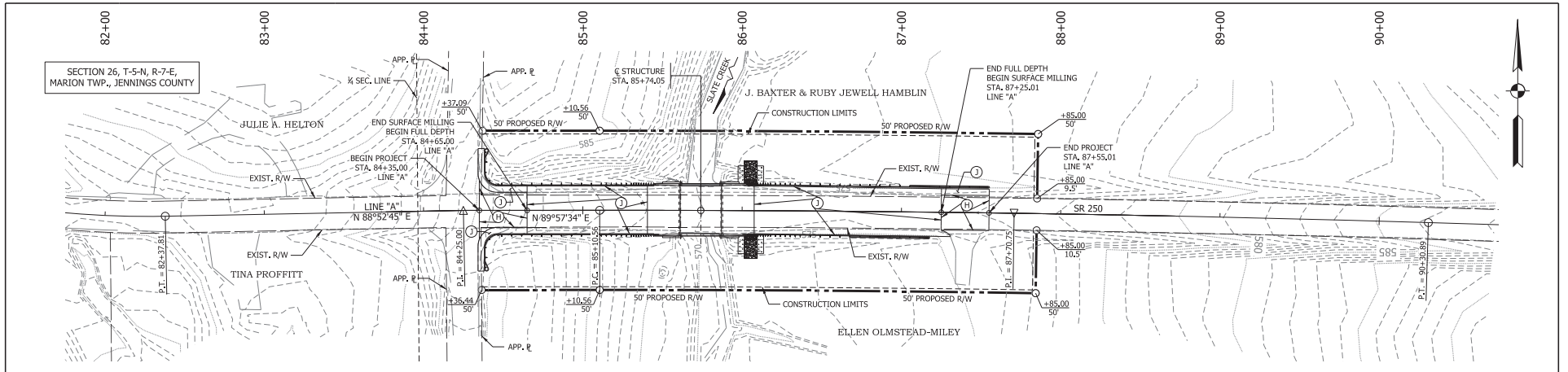
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RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED BY: ALR	DRAWN BY: ALR	
CHECKED BY: ENH	CHECKED BY: ENH	

INDIANA
 DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

SCALE	BRIDGE FILE
AS SHOWN	250-40-05952 C
VERTICAL SCALE	DESIGNATION
AS SHOWN	1701502
SURVEY BOOK	SHEETS TS-01
ELECTRONIC	5 of 10
CONTRACT	PROJECT
B-40437	1701502



LEGEND

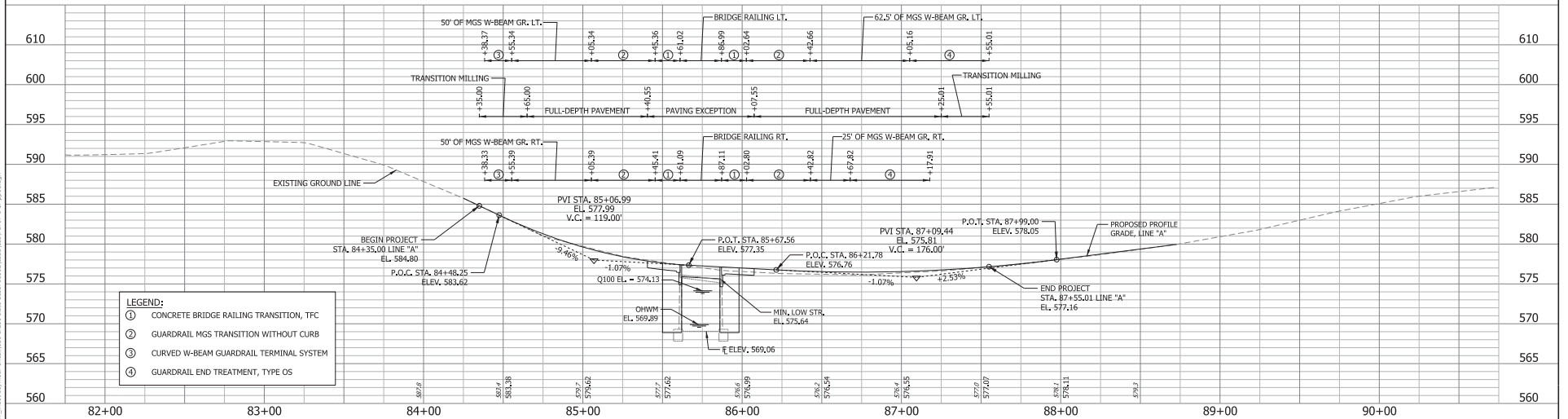
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- ② 165 LBS/SYS, QC/QA-HMA, 2, 64, SURFACE, 9.5 MM ON 275 LBS/SYS, QC/QA-HMA, 2, 64, INTERMEDIATE, 19.0 MM ON 660 LBS/SYS, QC/QA-HMA, 2, 64, BASE, 25.0 MM ON SUBGRADE TREATMENT, TYPE IC

NOTE:

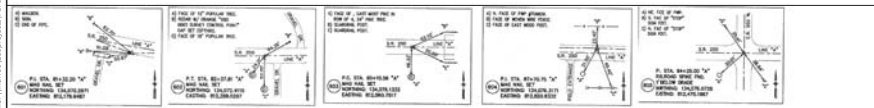
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NOTE TO REVIEWER
DRAINAGE DESIGN INCLUDING DITCH PROFILES WILL BE FINALIZED FOR THE FINAL PLANS SUBMITTAL.

NOTE TO REVIEWER
FINAL PAVEMENT SECTION WILL BE DETERMINED FOLLOWING APPROVED PAVEMENT DESIGN



- LEGEND:**
- ① CONCRETE BRIDGE RAILING TRANSITION, TFC
 - ② GUARDRAIL MGS TRANSITION WITHOUT CURB
 - ③ CURVED W-BEAM GUARDRAIL TERMINAL SYSTEM
 - ④ GUARDRAIL END TREATMENT, TYPE OS



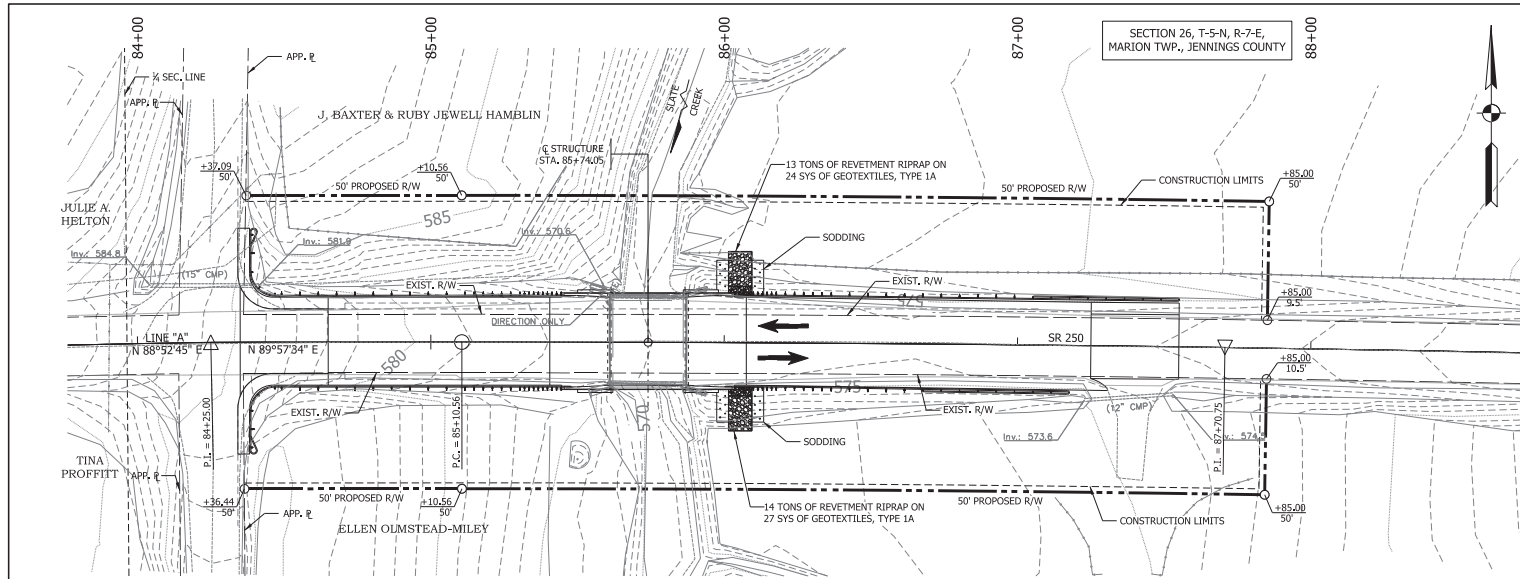
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RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: NIK	DRAWING: MES	
CHECKED: JWCIII	CHECKED: JWCIII	

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE "LINE A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'-0"	25040-05952 C
VERTICAL SCALE	DESIGNATION
1" = 6'-0"	1701902
SURVEY BOOK	SHEETS
ELECTRONIC	PP-01
CONTRACT	8 of 14
8-40437	PROJECT
	1701902



EXISTING STRUCTURE

THE EXISTING STRUCTURE WAS BUILT IN 1968, A CONCRETE OVERLAY WAS ADDED IN 1980. THE STRUCTURE IS A SINGLE SPAN PRESTRESSED CONCRETE BOX BEAM BRIDGE WITH A CLEAR ROADWAY WIDTH OF 28'-6" AND A TOTAL LENGTH OF 26'-0". THE EXISTING SUPERSTRUCTURE IS TO BE REMOVED, REMOVE TOP 1' OF EXISTING ABUTMENTS AND WIDEN TO MATCH NEW OUT-TO-OUT WIDTH OF 33'-0".

HORIZONTAL CURVE DATA

LINE: "A"
 P.I. STA. = 87+70.75
 P.C. STA. = 85+10.56
 P.T. STA. = 90+30.89
 R = 16,750.00'
 L = 503.32'
 Δ = 01°46'47" RT.
 Dc = 0°20'31"
 T = 260.18'

HYDRAULIC SCOUR DATA

Q100 DISCHARGE 920 CFS
 Q100 ELEV. 574.13 FT
 VELOCITY AT Q100 (MAX.) 11.71 FT/S
 SCOUR DEPTH (CONTRACTION) 5.26 FT
 SCOUR DEPTH (TOTAL) 5.26 FT
 LOW SCOUR ELEV. 563.80 FT

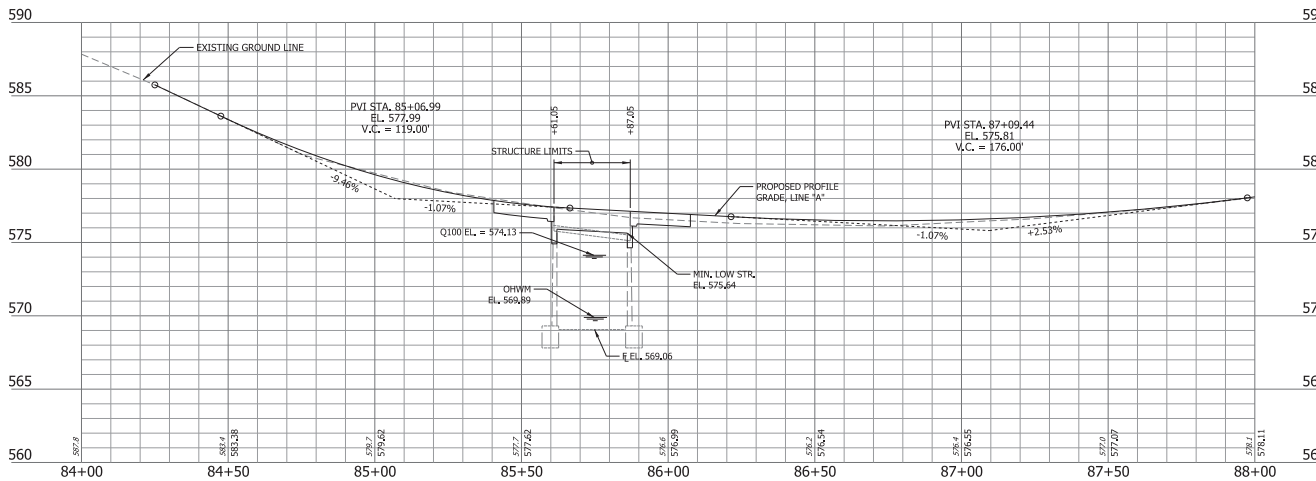
EARTHWORK TABULATION

FILL +20% X,XXX CYS
 COMMON EXCAVATION X,XXX CYS
 EXCAVATION, FOUNDATION, UNCLASSIFIED (70%) 0 CYS
 WASTE X,XXX CYS

NOTE TO REVIEWER

EARTHWORK TABULATION TO BE COMPLETED FOR FUTURE SUBMISSIONS.

REINFORCED CONCRETE
 SLAB BRIDGE
 1 SPAN; 25'-3"
 SKEW: NONE
 CLEAR ROADWAY: 30'-0"
 SR 250 OVER SLATE CREEK
 JENNINGS COUNTY



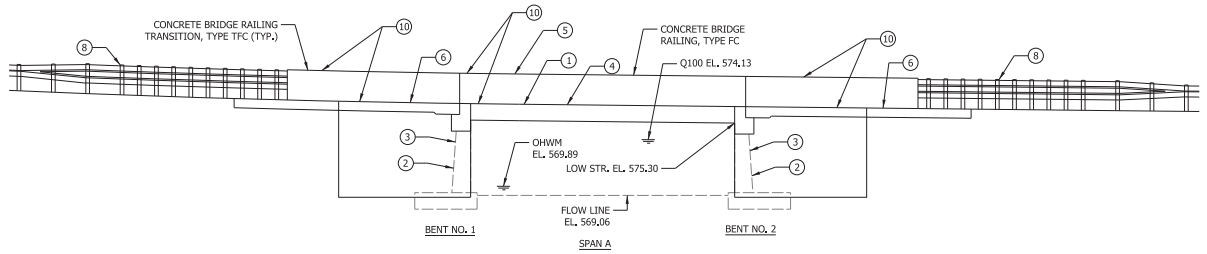
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RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: NIK	DRAWN: MES	
CHECKED: JWCIII	CHECKED: JWCIII	

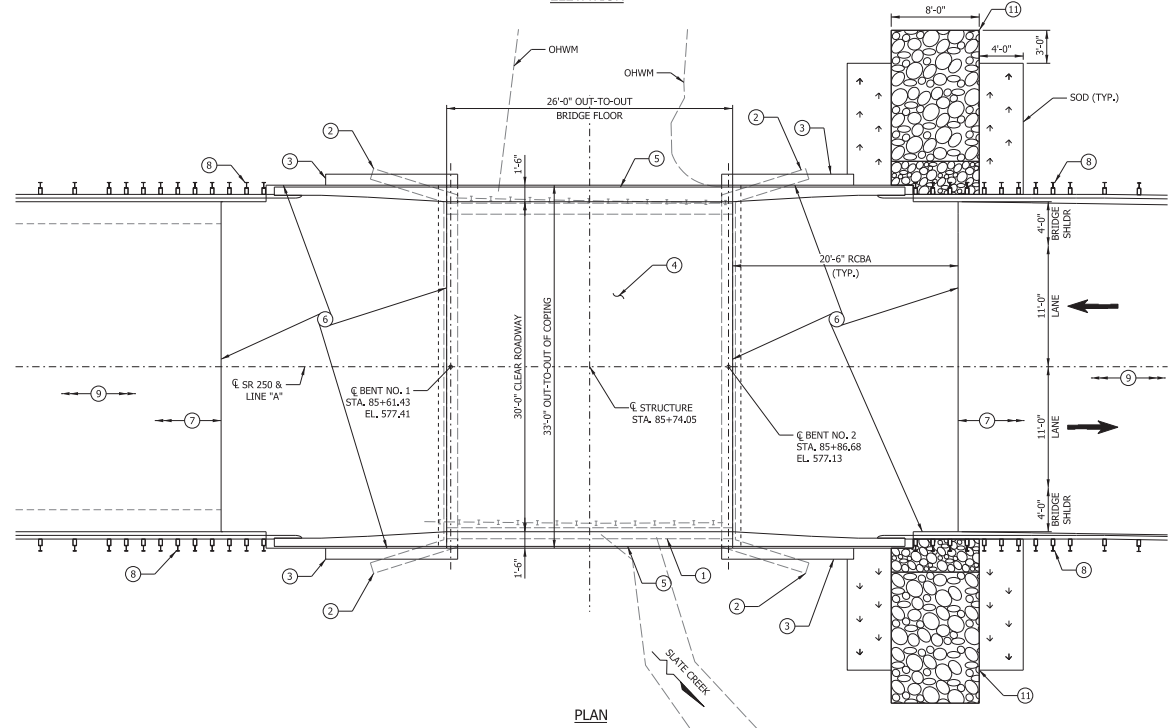
INDIANA
 DEPARTMENT OF TRANSPORTATION
 LAYOUT

SCALE	BRIDGE FILE
1" = 20'-0"	250-40-09952 C
VERTICAL SCALE	DESIGNATION
1" = 4'-0"	1701502
SURVEY BOOK	SHEETS LY-01
ELECTRONIC	9 of 14
CONTRACT	PROJECT
8-40437	1701502

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ELEVATION



PLAN

LEGEND

- 1 REMOVE EXISTING BRIDGE SUPERSTRUCTURE.
- 2 REMOVE WINGWALLS AND MILL TOP ONE-INCH PORTION OF EXISTING ABUTMENTS.
- 3 WIDEN EXISTING ABUTMENTS, SEAL EXISTING VERTICAL CRACKS AND INSTALL NEW WINGWALLS.
- 4 CONSTRUCT NEW REINFORCED CONCRETE SLAB SUPERSTRUCTURE.
- 5 CONSTRUCT NEW TYPE FC BRIDGE RAILING.
- 6 CONSTRUCT NEW FULL-WIDTH CONCRETE BRIDGE APPROACH SLABS AND CONSTRUCT TYPE TFC CONCRETE BRIDGE RAIL TRANSITIONS ON THE APPROACH SLAB EXTENSIONS.
- 7 CONSTRUCT FULL DEPTH HMA PAVEMENT WITHIN THE PROJECT LIMITS. TRANSITION MILL AND RESURFACE 30 FEET OF EXISTING APPROACH PAVEMENT TO PROVIDE A SMOOTH RIDING SURFACE.
- 8 INSTALL MSG W-BEAM GUARDRAIL AND GUARDRAIL TRANSITIONS. INSTALL TYPE OS END TREATMENTS AT THE EAST CORNERS AND CURVED TERMINAL END TREATMENTS AT THE WEST CORNERS.
- 9 INSTALL PAVEMENT MARKINGS AND SNOWPLOWABLE PAVEMENT MARKERS WITHIN PROJECT LIMITS. DO NOT PLACE SNOWPLOWABLE RAISED PAVEMENT MARKERS ON THE BRIDGE DECK OR APPROACH SLABS.
- 10 SURFACE SEAL THE CONCRETE BRIDGE RAIL, BRIDGE RAIL TRANSITIONS, REINFORCED CONCRETE BRIDGE APPROACH SLABS, TOP OF BRIDGE SLAB, AND COPINGS TO DRIP BEADS.
- 11 INSTALL RIPRAP TURNOUTS AT EAST END OF BRIDGE.

RCBA REINFORCED CONCRETE BRIDGE APPROACH

REINFORCED CONCRETE
SLAB BRIDGE
1 SPAN: 25'-3"
SKEW: NONE
CLEAR ROADWAY: 30'-0"
SR 250 OVER SLATE CREEK
JENNINGS COUNTY

DRAFT
NOT FOR CONSTRUCTION

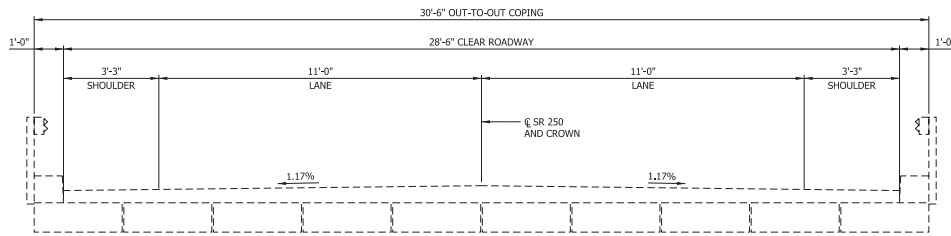
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: NIK	DRAWN: MES	
CHECKED: JWCIII	CHECKED: JWCIII	

INDIANA
DEPARTMENT OF TRANSPORTATION

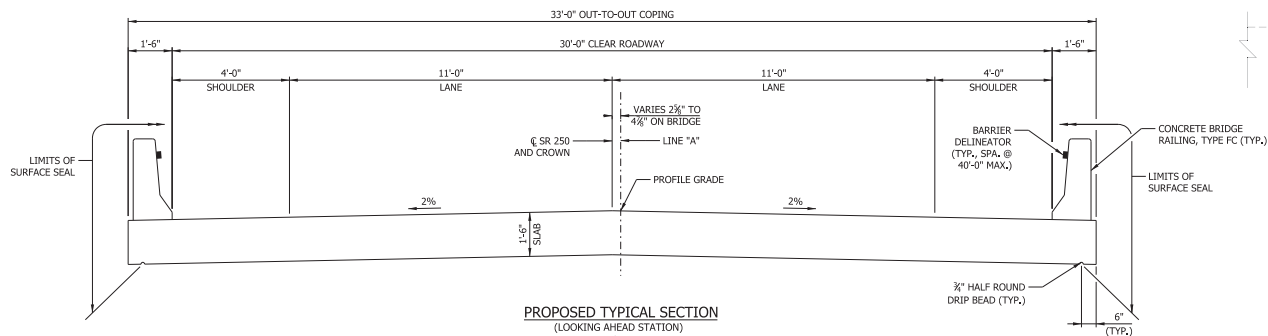
GENERAL PLAN

SCALE	BRIDGE FILE
1/4" = 1'-0"	250-40-09952 C
VERTICAL SCALE	DESIGNATION
3/8" = 1'-0"	1701502
SURVEY BOOK	SHEETS
ELECTRONIC	GP-01
CONTRACT	8 OF 10
8-40437	PROJECT
	1701502

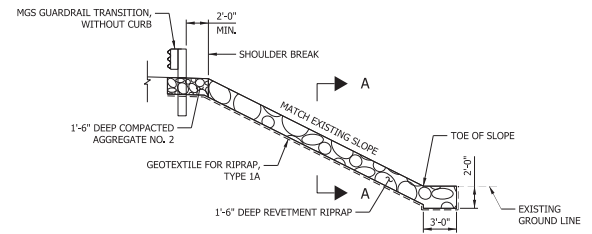
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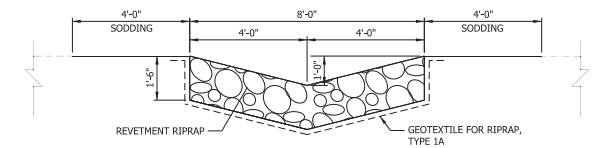
EXISTING TYPICAL SECTION
(LOOKING AHEAD STATION)
SCALE: 1/2" = 1'-0"



PROPOSED TYPICAL SECTION
(LOOKING AHEAD STATION)
SCALE: 1/2" = 1'-0"



ELEVATION
SCALE: 3/16" = 1'-0"



SECTION A-A
SCALE: 1/2" = 1'-0"

TURNOUT DETAILS

GENERAL NOTES

PLANS FOR THE EXISTING BRIDGE ARE ON FILE AT THE INDIANA DEPARTMENT OF TRANSPORTATION AS BRIDGE FILE 250-40-05952 AND 250-40-05952 B.

STATIONS AND ELEVATIONS SHOWN ARE BASED ON SURVEY REFERENCED TO 1988 NAVD.

WHERE NEW WORK IS TO BE FITTED TO OLD WORK, THE CONTRACTOR SHALL CHECK ALL DIMENSIONS AND CONDITIONS IN THE FIELD AND REPORT ALL ERRORS OR DISCREPANCIES TO THE ENGINEER AND ASSUME RESPONSIBILITY FOR THEIR CORRECTNESS AND FIT OF THE NEW PART TO THE OLD.

REINFORCING BAR COVER SHALL BE 2 1/2" MIN. IN TOP AND 1" MIN. IN BOTTOM AND 2" EVERYWHERE ELSE UNLESS OTHERWISE NOTED.

ALL PAVEMENT MARKINGS AND SNOWPLOWABLE RAISED PAVEMENT MARKERS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED IN KIND. DO NOT PLACE SNOWPLOWABLE RAISED PAVEMENT MARKERS ON THE BRIDGE OR APPROACH SLABS.

CLEAN AND SURFACE SEAL ALL EXPOSED FACES OF THE BARRIER RAILING, TRANSITIONS, SLAB, COPINGS, AND REINFORCED CONCRETE BRIDGE APPROACH SLABS.

EPOXY RESIN ADHESIVE SHALL BE USED WHERE NEW CONCRETE ABUTS EXISTING CONCRETE.

DESIGN DATA

DESIGN STRENGTHS
CLASS "C" CONCRETE $f'_c=4,000$ psi
REINFORCING BARS $f_y=60,000$ psi

LIVE LOAD
EXISTING BRIDGE ORIGINALLY DESIGNED FOR HS20-44 LOADING WITH IMPACT AND DISTRIBUTION IN ACCORDANCE WITH 1995 AASHTO SPECIFICATIONS. SUPERSTRUCTURE REPLACEMENT DESIGNED FOR HL-93 LOADING, IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION, 2017.

DEAD LOAD
SLAB DESIGNED WITH 17.5 INCH STRUCTURAL DEPTH AND 0.5 INCH INTEGRAL WEARING SURFACE.

NOTE TO REVIEWER
GEOMETRIC LAYOUT OF PROFILE GRADE LINE "A" AND BRIDGE CENTERLINE WILL BE DETAILED FOR FUTURE SUBMISSIONS.

REINFORCED CONCRETE SLAB BRIDGE
1 SPAN: 25'-3"
SKEW: NONE
CLEAR ROADWAY: 30'-0"
SR 250 OVER SLATE CREEK
JENNINGS COUNTY

DRAFT
NOT FOR CONSTRUCTION

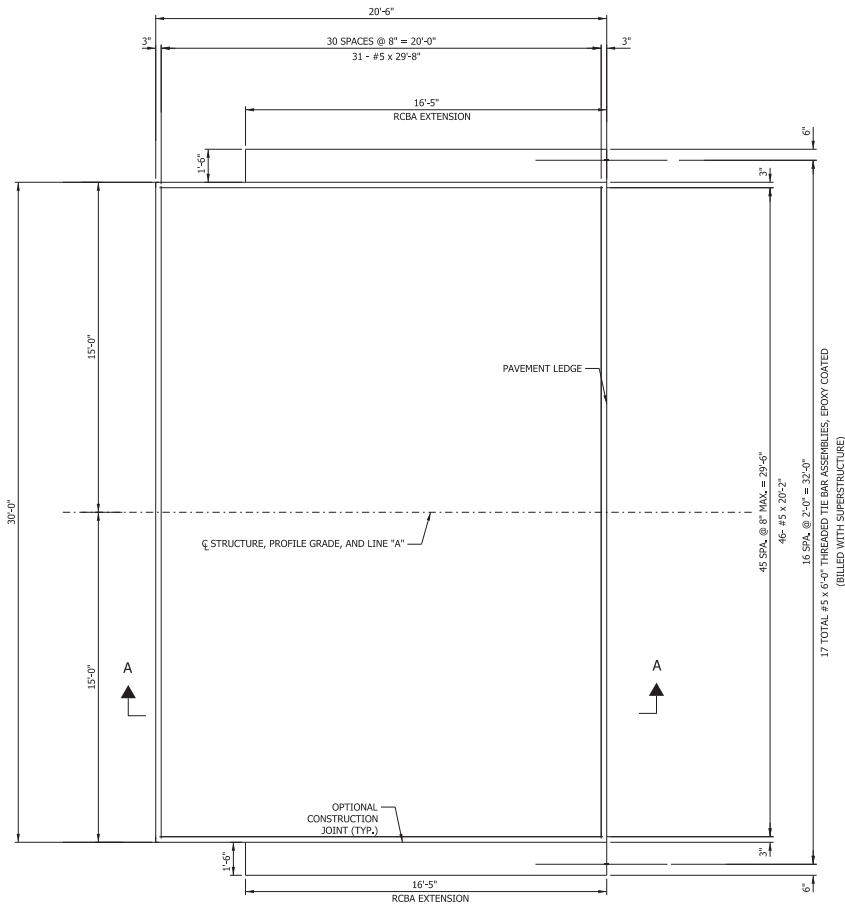
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: NIK	DRAWN: MES	
CHECKED: JWCIII	CHECKED: JWCIII	

INDIANA DEPARTMENT OF TRANSPORTATION
GENERAL PLAN

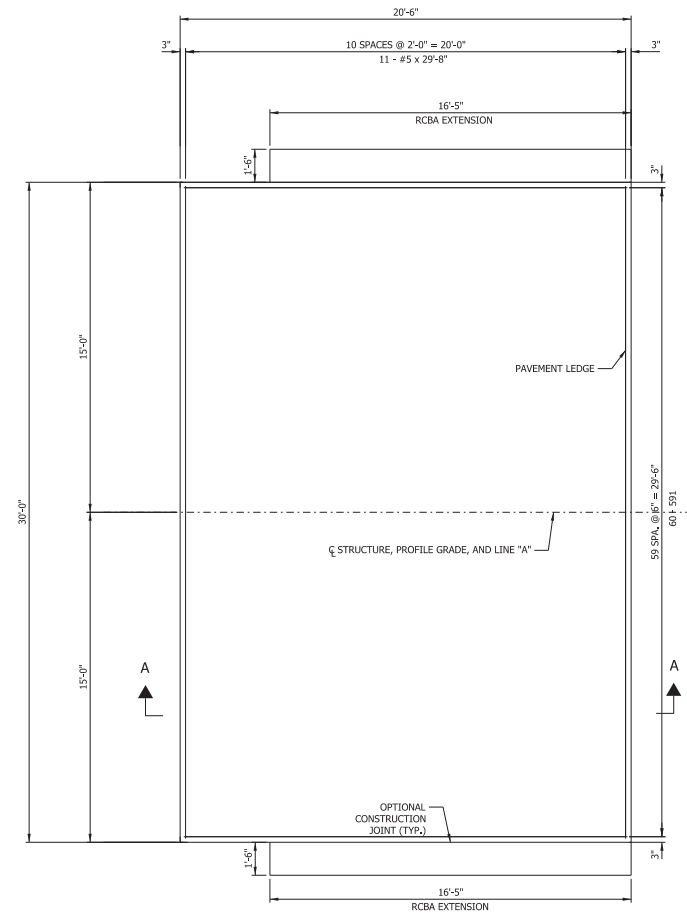
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AS SHOWN	250-40-05952 C
VERTICAL SCALE	DESIGNATION
AS SHOWN	1701502
SURVEY BOOK	SHEETS GP-02
ELECTRONIC	9 of 10
CONTRACT	PROJECT
8-40437	1701502

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TOP REINFORCING - WEST APPROACH SLAB SHOWN
 (EAST APPROACH SLAB SAME BY 180° ROTATION)



BOTTOM REINFORCING - WEST APPROACH SLAB SHOWN
 (EAST APPROACH SLAB SAME BY 180° ROTATION)

- NOTES:**
- FOR SECTION A-A, SEE SHEET NO. XX.
 - FOR ADDITIONAL RCBA EXTENSION DETAILS AND GENERAL NOTES, SEE STD. DWG. E 609-TBAE-01 AND -04.
 - FOR CONCRETE BRIDGE RAILING TRANSITION, TYPE T1T DETAILS AND NOTES, SEE STD. DWG. E 706-TTTC-01 THROUGH -03.

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 NOT FOR CONSTRUCTION

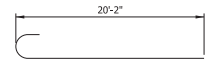
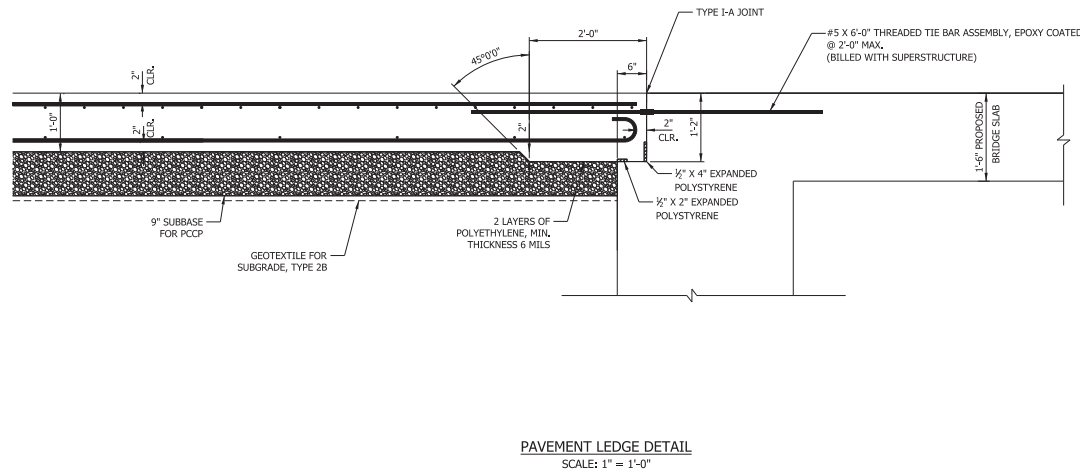
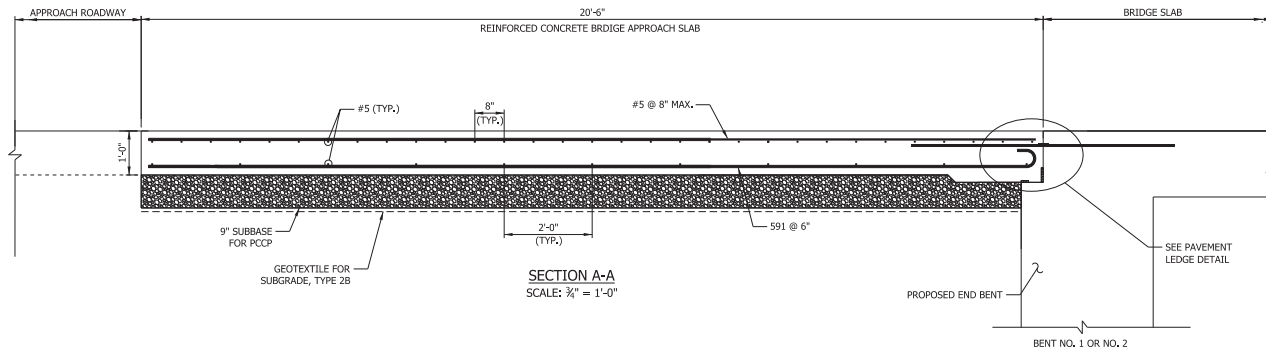
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: CEU	DRAWN: CEU	
CHECKED: TMB	CHECKED: TMB	

INDIANA
 DEPARTMENT OF TRANSPORTATION

APPROACH SLAB DETAILS

SCALE	BRIDGE FILE
1" = 1'-0"	200-405592 C
VERTICAL SCALE	DESIGNATION
1" = 1'-0"	1701502
SURVEY BOOK	SHEETS
ELECTRONIC	of 1
CONTRACT	PROJECT
B-40437	1701502

BILL OF MATERIALS			
QUANTITIES FOR WEST APPROACH SLAB (QUANTITIES FOR EAST APPROACH SLAB SAME)			
EPOXY COATED REINFORCING BARS			
MARK OR SIZE	NO. OF BARS	LENGTH (FT.-IN.)	WEIGHT (LBS.)
#5	60	20'-9"	
#5	42	29'-8"	
#5	46	20'-2"	
TOTAL #5			3566
TOTAL FROM RCBA EXTENSION (269 LBS X 2)			538
TOTAL EPOXY COATED REINFORCING BARS			4104
CONCRETE			
REINF. CONCRETE BRIDGE APPROACH, 12"			74 SYS
MISCELLANEOUS			
SUBBASE FOR PCCP			19 CYS
SURFACE SEAL (665 SFT)			1 LS
GEOTEXTILE FOR SUBGRADE, TYPE 2B			74 SYS



- NOTES:**
- FOR ADDITIONAL REINFORCING BAR NOTES AND BAR BENDING DETAILS, SEE STANDARD DRAWING E703-BRST-01.
 - FOR ADDITIONAL RCBA EXTENSION DETAILS AND GENERAL NOTES, SEE STD. DWG. E 609-TBAE-01 AND -04.
 - ALL REINFORCING SHALL BE EPOXY COATED.
 - FOR DETAILS OF TYPE I-A JOINT, SEE STANDARD DRAWING E609-BRUT-01.
 - FOR LOCATION OF SECTION A-A, SEE SHEET XX.

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 NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: CEU	DRAWN: CEU	
CHECKED: TMB	CHECKED: TMB	

INDIANA
 DEPARTMENT OF TRANSPORTATION

APPROACH SLAB DETAILS

SCALE	BRIDGE FILE
AS SHOWN	294-IND-0593-Z
VERTICAL SCALE	DESIGNATION
AS SHOWN	1701502
SURVEY BOOK	SHEETS
ELECTRONIC	of 1
CONTRACT	PROJECT
B-40437	1701502