Indiana Department of Transportation

County Wayne Route US 40 Des. No. 1701344

FHWA-Indiana Environmental Document

CATEGORICAL EXCLUSION / ENVIRONMENTAL ASSESSMENT FORM

GENERAL PROJECT INFORMATION

Road No./County:	**U.S. Route (US) 40/Wayne County**
Designation Number:	**1701344**
Project Description/Termini:	The project is a bridge replacement (National Bridge Inventory number 014140; INDOT Bridge Number 040-89-00217 C) on US 40 and work extends 500 feet east and 500 feet west of the bridge center on US 40, over Nolands Fork, 6.84 miles west of US 27.

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):

	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)
X	**Categorical Exclusion, Level 3** – The proposed action meets the criteria for Categorical Exclusion Manual Level 3 - table 1, CE Level Thresholds. Required Signatories: ESM, ES (Environmental Services Division)
	Categorical Exclusion, Level 4 – The proposed action meets the criteria for Categorical Exclusion Manual Level 4 - table 1, CE Level Thresholds. Required Signatories: ESM, ES, FHWA
	Environmental Assessment (EA) – EAs require a separate FONSI. Additional research and documentation is necessary to determine the effects on the environment. Required Signatories: ES, FHWA

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

TD	12/7/2020	RES	12-7-2020
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: Kirk Roth, Rachel Pluckebaum, and Erin King; Corradino, LLC

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.**

	Yes	No
Does the project have a historic bridge processed under the Historic Bridges PA*?		X
If No, then:		
Opportunity for a Public Hearing Required?	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 survey letters were mailed to potentially affected property owners near the project area on April 10, 2019 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 survey letter is included in Appendix G-2.

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	Yes	No
Will the project involve substantial controversy concerning community and/or natural resource impacts?		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: Greenfield
Local Name of the Facility: US 40

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

*If other is selected, please indentify the funding source: _____

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 bridge (040-89-00217 C). The bridge's arch rings have cracking with efflorescence and spalling with exposed rebar. Pilasters in the spandrel walls have heavy spalling with exposed rebar and heavy section loss. The structural evaluation rating from the bridge inspection report is a 5 (fair) on a scale from 0 (failed condition) to 9 (excellent condition). See the bridge inspection report dated 11/14/18 for more detail (Appendix I-4 to I-18).

The purpose of this project is to have a structure with a condition rating of good (7 or above).

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Wayne Municipality: Centerville

Limits of Proposed Work: At US 40, over Nolands Fork, 6.84 miles west of US 27, the limits are 500 feet west and 500 feet east of the bridge center. See plan sheets for details (Appendix B-16 to B-26).

Total Work Length: 0.10 Mile(s) Total Work Area: 2.0 Acre(s)

	Yes[1]	No
Is an Interchange Modification Study / Interchange Justification Study (IMS/IJS) required?		X
If yes, when did the FHWA grant a conditional approval for this project?	Date:	

[1] *If 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.

Project Location

The project is located in Center Township, Wayne County, Indiana, on US 40, 6.84 miles west of US 27, at INDOT Structure Number 040-89-00217 C. Please refer to Appendices B-2 to B-4 for project location.

Existing Condition

The existing structure (040-89-00217 C) is a three span earth filled reinforced concrete arch bridge built in 1925 and rehabilitated in 1935, 1955, and 1982. The bridge's arch rings have cracking with efflorescence and spalling with exposed rebar. Pilasters in the spandrel walls have heavy spalling with exposed rebar and heavy section loss. The INDOT Historic Bridge Inventory does not find it eligible for listing in the National Register according to the Minor Projects Programmatic Agreement (MPPA) Assessment (Appendix D-2). As documented in the Waters of the U.S. Determination Report approved on May 29, 2020, Nolands Fork flows north to south through the structure (Appendix F-2 to F-19). The structure is in agricultural and residential area. There is a nearby church and a forested area surrounding Nolands Fork. Photographs of the bridge from the INDOT Bridge Inspection Report, dated November 14, 2018, are in Appendix I-12 to I-15. The existing typical section for US 40 at this location is comprised of two 12 foot travel lanes in each direction for a total of four travel lanes and a 5.5 foot shoulder in each direction. The Functional Class of US 40 is a Rural Major Collector.

Preferred Alternative Description

INDOT and the Federal Highway Administration (FHWA) intend to proceed with the following project. The preferred alternative was determined to be a complete bridge replacement with a 214 foot long, three span (65 foot, 84 foot, 65 foot) concrete beam bridge. The new structure will be supported on wall piers on a double row of piles. Channel clearing (excavation within the floodway underneath the structure) will be performed to provide additional flow area underneath the structure. A minor stream realignment will be required to better align Noland's Fork on the north and south sides of US 40. Scour protection (riprap on geotextiles) will be placed on the slope walls of the new structure. Approximately 600 feet of guardrail will be removed and replaced on both sides of US 40 that meet current Federal Highway Administration (FHWA) crash standards. The project will not change the horizontal alignment of US 40. Dewatering will take place during construction and will be completed with temporary cofferdams.

This alternative meets the project purpose and need by providing a structure with a condition rating of good (7 or above). The project demonstrates independent utility because it will improve the function of the bridge as an independent project and does not depend on other projects. The logical termini of the bridge replacement extend past the existing bridge structure onto the approaches and guardrail runs. This project extends 500 feet east and 500 feet west of the bridge center on US 40, Nolands Fork, 6.84 miles west of US 27. Stage 1 design plans provide more detail regarding the proposed project improvements (Appendix B-16 to B-26).

Environmental impacts have been reduced to the best extent possible during design development. These measures include minimizing the full depth pavement replacement to the minimum required to meet design criteria, limiting excavation limits to bridge replacement and channel clearing/realignment, and minimizing fill slope impacts by maintaining the existing horizontal alignment.

Maintenance of Traffic

US 40 will be closed to traffic during construction, and a signed detour route will be used for up to 18 weeks. The official INDOT detour route will include State Route (SR) 1, I-70, and US 27 which is 20.3 miles total and adds approximately 6.9 miles to the original route for travelling motorists. A detour map is included in Appendix B-19 to B-20. See Maintenance of Traffic (MOT) During Construction section for specific detour information.

OTHER ALTERNATIVES CONSIDERED:

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

Bridge Rehabilitation: Rehabilitation of the bridge was considered but deemed not feasible due to severity of deterioration of existing structure. This alternate is unable to raise the structural evaluation rating to a condition of good (7 or above), therefore, this alternative did not meet the Purpose and Need and was dismissed from consideration.

No Build: The no-build alternative was considered. The no-build alternative does not address the identified need and purpose of the project because it does not address the structural deterioration of the existing reinforced concrete arch. Therefore, this alternative was dismissed.

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

ROADWAY CHARACTER:

Functional Classification of US 40: Rural Major Collector

Current ADT: 5,454 VPD (2022) Design Year ADT: 5,758 VPD (2042)

Design Hour Volume (DHV): 569 VPH Truck Percentage (%) 4.36% DHV

Designed Speed (mph): 55 mph Legal Speed (mph): 55 mph

	Existing		Proposed	
Number of Lanes:	4		4	
Type of Lanes:	Vehicular – 2EB, 2WB		Vehicular – 2EB, 2WB	
Pavement Width:	59	ft.	59	ft.
Shoulder Width:	5.5	ft.	5.5	ft.
Median Width:	N/A	ft.	N/A	ft.
Sidewalk Width:	N/A	ft.	N/A	ft.

Setting:		Urban		Suburban	X Rural
Topography:	X	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): Structure number: 040-89-00217 C NBI: 14140 Sufficiency Rating: 80.8 (2018 Bridge Inspection Report)
(Rating, Source of Information)

	Existing		Proposed	
Bridge Type:	Three span Earth Filled Reinforced Concrete Arch		Three-span composite prestressed concrete AASHTO III beam	
Number of Spans:	3		3	
Weight Restrictions:	N/A	ton	N/A	ton
Height Restrictions:	N/A	ft.	N/A	ft.
Curb to Curb Width:	60	ft.	60	ft.
Outside to Outside Width:	63	ft.	63	ft.
Shoulder Width:	5.5	ft.	6.0	ft.
Length of Channel Work:			275	ft.

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

Remarks: The existing bridge (040-89-00217 C) consists of 145 foot long by 63 foot wide, three span earth filled reinforced concrete arch bridge built in 1925, widened in 1935 and 1955, rehabilitated in 1982, and chip sealed in 2016. The latest Historic Bridge Inventory identified the bridge as not historic (see https://www.in.gov/indot/2531.htm). The project will include the complete removal and replacement of the existing bridge. The proposed bridge will be a 214-foot long, three-span (65 foot, 84 foot, 65 foot), composite prestressed concrete beam bridge. Work within the channel will be limited to work required to replace the bridge.

No additional structures are located within the project area.

	Yes	No	N/A
Will the structure be rehabilitated or replaced as part of the project?	X		

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

MAINTENANCE OF TRAFFIC (MOT) DURING CONSTRUCTION:

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

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Remarks: The MOT for the project will require the closing of US 40 during construction. The official detour route will be signed (Appendix B-19 to B-20). The detour is expected to be in place no more than 18 weeks. The detour route will use SR 1, I-70, and US 27 which is 20.3 miles total and will add approximately 6.9 miles to the original route for traveling motorists. MOT will be implemented per current INDOT Standard Specifications.

The closure will pose as 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.

Access will be maintained for the property owners within the project area.

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: $ 325,000 (2020) Right-of-Way: $ 50,000* (2021) Construction: $ 3,025,000 (2022)

*The ROW funding is utilizing state funds and are not required to be listed in the STIP.

Anticipated Start Date of Construction: Spring, 2022

Date project incorporated into STIP Amendment 01 - July 25, 2019

	Yes	No
Is the project in an MPO Area?		X

If yes,

Name of MPO N/A

Location of Project in TIP N/A

Date of incorporation by reference into the STIP N/A

RIGHT OF WAY:

	Amount (acres)	
Land Use Impacts	Permanent	Temporary
Residential	N/A	N/A
Commercial	N/A	N/A
Agricultural*	0.01	N/A
Forest	0.29	N/A
Stream	0.10	0.10
Other (Grassy Roadside)	0.85	0.15
TOTAL	**1.25**	**0.25**

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: The existing right-of-way is typically 90 feet wide (maximum width of 120 feet) at the project area, which extends 500 feet west and 500 feet east of the bridge center. The project requires approximately 1.25 acres of permanent right-of-way, which consists of stream, grassy and wooded roadside areas on the north and south sides of the bridge. The proposed right-of-way will extend the total width to 130 feet (170 feet maximum). The project requires 0.25 acre of temporary right-of-way in the channel area south of the structure. *Note that although the right-of-way occurs on agricultural parcels, only a small segment of the land use in the project area is used for cropland or other agricultural purposes. The remainder of construction is restricted to the existing bridge and roadway within the existing right-of-way. Right-of-way is needed to accommodate the proposed guardrail and associated side slopes. Temporary right-of-way is required to perform channel clearing and realignment.

All right-of-way will be acquired in accordance with the applicable federal and state procedures. The land acquisition will be conducted in accordance with 49 CFR 24 as amended.

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

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

SECTION A – ECOLOGICAL RESOURCES

	Presence	Impacts	
		Yes	No
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			

Remarks: Based on a desktop review, a site visit on August 16, 2019, the aerial map of the project area (Appendix B-3) and the water resources map (Appendix E-9) in the Red Flag Investigation (RFI) report (Appendix E-2 to E-13), there are nine (9) streams located within the 0.5 mile search radius of the project area and one (1) stream, Nolands Fork, within the project area. A *Waters of the U.S. Determination* was completed for the project on May 28, 2020 and approved by INDOT Ecology and Waterway Permitting Office on May 28, 2020. Please refer to Appendix F-2 to F-19 for the *Waters of the U.S. Determination* report. It was confirmed that a stream, Nolands Fork, within the project area, is a likely jurisdictional Water of the U.S. The U.S. Army Corps of Engineers (USACE) makes all final determinations regarding jurisdiction.

Nolands Fork is a perennial channel that drains to the north through the project structure and has an OHWM of 70 feet in width and 4.0 foot in depth. The upstream drainage area is 61.6 square miles at the bridge location. Up to 275 linear feet and 0.45 acre of Nolands Fork may be directly impacted by this project. Nolands Fork is a mapped United States Geological Survey blue line stream. One (1) roadside ditch was located, but it is not likely a Water of the U.S because it lacked an OHWM or wetland characteristics. Impacts to the stream have been reduced to the extent practicable through design measures. No mitigation is expected but will be determined during permitting. For stream impacts to Nolands Fork a Section 404 Regional General Permit from the U.S. Army Corps of Engineers and a Section 401 Water Quality Certification from the Indiana Department of Environmental Management (IDEM) will be required.

Early coordination letters were sent to the U.S. Fish and Wildlife Service (USFWS), Indiana Department of Natural Resources Division of Fish and Wildlife (IDNR-DFW) and USACE on January 17, 2020 (Appendix C-2 to C-4). USACE did not respond to the early coordination letter. USFWS responded on September 2, 2020

with recommendations to avoid or minimize impacts to Nolands Fork (Appendix C-5 to C-6). IDNR-DFW responded on February 14, 2020 (Appendix C-7 to C-9). IDNR-DFW recommended to avoid or minimize impacts to Nolands Fork, utilization of natural substrate if possible, evaluation of wildlife crossing, minimization of the extent of riprap, minimization of channel work and excavation in low-flow situations, avoidance of temporary runarounds or causeways if possible, sediment control at streams, operation of equipment from the existing roadway, use of 6 inch graded riprap stone below the normal water level, avoidance of broken concrete used as riprap, avoidance of depositing construction materials or debris in the waterway and avoidance of all work within the inundated part of the stream channel during the fish spawning season (April 1 through June 30). Cofferdams are necessary for this project in order to remove the existing piers and place the proposed piers. All applicable USFWS and IDNR-DFW recommendations are included in the Environmental Commitments section of this CE document.

Other Surface Waters	**Presence**	**Impacts** Yes	No
Reservoirs			
Lakes			
Farm Ponds			
Detention Basins			
Storm Water Management Facilities			
Other:			

Remarks: Based on a desktop review, a site visit on August 16, 2019, the aerial map of the project area (Appendix B-3) and the water resources map in the RFI report (Appendix E-9), there are four (4) lakes located within the 0.5 mile search radius. The nearest lake is 0.2 mile southwest of the project area. A *Waters of the U.S. Determination* report (Appendix F-2 to F-19) completed by Corradino, LLC on May 28, 2020 and approved by INDOT Ecology and Waterway Permitting Office on May 28, 2020 found no other surface waters within or adjacent to the project area. Therefore, no impacts are expected.

Early coordination letters were sent to USFWS, IDNR-DFW, and USACE on January 17, 2020. USACE did not respond to the early coordination letter. USFWS responded on September 2, 2020 and IDNR-DFW responded on February 14, 2020; however, the letters provided no comments regarding other surface waters.

Wetlands	**Presence**	**Impacts** Yes	No

Total wetland area: 0.0 acre(s) Total wetland area impacted: 0.0 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
N/A	N/A	0.0	0.0	N/A

Wetlands (*Mark all that apply*)	**Documentation**	**ES Approval Dates**
Wetland Determination		
Wetland Delineation		
USACE Isolated Waters Determination		
Mitigation Plan		

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.

Remarks: Based on a review of the National Wetlands Inventory (NWI) online mapper (https://www.fws.gov/wetlands/20/data/Mapper.html), the USGS topographic map (Appendix B-4), and the water resources map in the RFI report (Appendix E-9), there are twelve (12) National Wetland Inventory (NWI) Wetlands and fourteen (14) NWI lines within a 0.5 mile search radius of the project area, including one (1) NWI line within the project area and one (1) wetland adjacent to the project area. A site visit was conducted by Corradino, LLC on August 16, 2019 and no wetlands were identified during the site visit. A *Waters of the U.S. Determination* report, produced by Corradino, LLC, was approved by INDOT Ecology and Waterway Permitting Office on May 28, 2020 (Appendix F-2 to F-19). Therefore, no impacts are expected. The USACE makes all final determinations regarding jurisdiction.

Early coordination letters were sent to the USFWS, IDNR-DFW and USACE on January 17, 2020 (Appendix C-2 to C-4). USACE did not respond to the early coordination letter. USFWS responded on September 2, 2020 (Appendix C-5 to C-6) and IDNR-DFW responded on February 14, 2020 (Appendix C-7 to C-9). IDNR-DFW recommended coordination with IDEM and USACE for any wetland impacts. USFWS did not have recommendations regarding wetlands. All applicable USFWS and IDNR-DFW recommendations are included in the Environmental Commitments section of this CE document.

	Presence	Impacts	
		Yes	No
Terrestrial Habitat	X	X	
Unique or High Quality Habitat			

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 August 16, 2019, and the aerial map of the project area (Appendix B-3), there is grassy habitat and forested area within the project area. The grassy habitat is located along the roadsides in all quadrants and on the residential properties at the east end of the project. Dominant plant species include Japanese foxtailgrass (*Setaria faberi*), tall fescue (*Schedonorus arundinaceus*), Canada goldenrod (*Solidago canadensis*), and Queen Anne's Lace (*Dauca carota*). Approximately 0.8 acre of impacts are expected to this habitat. The forested habitat is located in the floodplain and riparian zone of Nolands Fork. Dominant plant species include northern hackberry (*Celtis occidentalis*), boxelder (*Acer negundo*), giant ragweed (*Ambrosia trifida*) and stinging nettle (*Urtica dioica*). Approximately 0.29 acre of impacts are expected to this habitat. Approximately 0.29 acre of trees are expected to be cleared. Note that tree clearing totals were finalized after IPaC completion on March 30, 2020, so they are less than the 2.5 acre maximum expected at that time (Appendix C-32). Environmental impacts have been reduced to the extent possible during design development. These measures include minimizing the full depth shoulder pavement replacement to the width of the approach roadway, minimizing slope impacts by providing minimum slopes outside the required design clear zone, and maintaining the existing horizontal alignment.

Early coordination letters were sent to USFWS and IDNR-DFW on January 17, 2020 (Appendix C-2 to C-4). USFWS responded on September 2, 2020 and IDNR-DFW responded on February 14, 2020.

IDNR-DFW had recommendations regarding revegetation using native species, erosion control, the use of erosion control heavy-duty blankets, and avoidance of clearing trees suitable for Indiana bat or Northern Long-eared bat roosting (greater than 5 inches diameter at breast height, living or dead, with loose hanging bark, or with cracks, crevices or cavities) from April 1 through September 30 (Appendix C-7 to C-9).

USFWS recommends avoidance of clearing trees or understory vegetation outside the construction zone boundaries. This restriction is not related to the "tree clearing" restriction for potential Indiana Bat habitat.

USFWS also recommends implementation of temporary erosion and sediment control methods within areas of disturbed soil. All disturbed soil areas upon project completion will be vegetated following INDOT's standard specifications (Appendix C-5 to C-6).

Online coordination with the Indiana Department of Environmental Management (IDEM) occurred on January 17, 2020. In the early coordination response, IDEM recommends that appropriate structures and techniques be utilized both during the construction phase, minimization of the impacts associated with storm water runoff after completion of the project. The use of appropriate planning and site development and appropriate storm water quality measures are recommended to prevent soil from leaving the construction site during active land disturbance and for post construction water quality concerns (Appendix C-14 to C-21). Total disturbed area will be 2 acres, which is more than the 1 acre threshold for an IDEM Rule 5 Storm Water Runoff Permit.

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

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

	Yes	No
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?		

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, a site visit on August 16, 2019 by Corradino, LLC, the topographic map of the project area (Appendix B-4), and the RFI report (Appendix E-2 to E-13), the proposed project is located outside the designated karst region of Indiana as outlined in the October 13, 1993 Memorandum of Understanding (MOU). There are no karst features identified within the project area. In the early coordination response, the Indiana Geological Survey (IGS) did not indicate that karst features exist in the project area (Appendix C-10 to C-11). Therefore, no impacts are expected.

Project information was uploaded to the IGS website (https://igws.indiana.edu/eAssessment/) on January 17, 2020 and identified the project area as having high liquefaction potential, floodway hazard, low potential as a bedrock resource, and low potential as a sand and gravel resource (Appendix C-10 to C-11). No impacts are expected. The IGS information was communicated to the designer on January 17, 2020.

Threatened or Endangered Species

	Presence	Impacts Yes	Impacts No
Within the known range of any federal species	X	X	
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)			

	Yes	No
Is Section 7 formal consultation required for this action?		X

Remarks: Based on a desktop review and the RFI (Appendix E-2 to E-13), completed by Corradino, LLC on October 7, 2019, the IDNR-DFW Wayne County Endangered, Threatened and Rare (ETR) Species List has been checked and is included in Appendix E-11 to E-12. The highlighted species on the list reflect the federal and state identified ETR species located within the county. According to the correspondence from INDOT on August 15, 2019, there was one documented capture site within a half mile of the project area. According to the IDNR-DFW early coordination response letter dated February 14, 2020 (Appendix C-7 to C-9), the Natural Heritage Program's Database has been checked and no ETR species or High Quality natural areas were

found within 0.5 mile of the project area. According to the USFWS early coordination response letter dated April 8, 2020, the project is within the range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*) (Appendix C-5 to C-6). On August 15, 2019, Greenfield District responded with a Bat check stating that one (1) documented capture site was within 0.5 mile of the project area.
Bridge inspections on November 11, 2018 by INDOT and August 16, 2019 by Corradino, LLC did not find evidence of bat use.

Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal by Corradino, LLC on March 30, 2020, and an official species list was generated (Appendix C-25 to C-29). Wayne County is within range of the federally endangered Indiana bat and the federally threatened northern long-eared bat. No additional species were found within the project area other than the Indiana Bat and NLEB.

The project qualifies for the *Limited Formal Programmatic Consultation* for the Indiana bat and NLEB. An effect determination key was completed on March 30, 2020*,* and based on the responses provided, the project was found to "likely adversely affect" the NLEB and "may affect – not likely to adversely affect" the Indiana bat (Appendix C-30 to C-44). Proposed impacts cannot be avoided due to the need for tree clearing in order to replace the bridge.

INDOT verified the effect finding and submitted to USFWS on March 30, 2020 (Appendix C-30). USFWS concurred with the "likely to adversely affect" the NLEB and "may affect – not likely to adversely affect" the Indiana bat finding (Appendix C-22 to C-24) on April 8, 2020 and stated that the project was consistent with the February 5, 2018, *Programmatic Biological Opinion (BO) for federally funded or approved transportation projects that may affect the federally listed endangered Indiana bat (Myotis sodalis) and/or federally listed threatened northern long-eared bat (NLEB) (Myotis septentrionalis)* and provided instruction for reporting dead or injured bats. Additionally, a "Reinitiation Notice" is required if: more than 2.5 acres of suitable habitat is to be cleared; new information about listed species is encountered; the project is modified in a manner that causes an effect to the listed species; or a new species or critical habitat is listed that the project may affect (Appendix C-22 to C-24). Note that tree clearing totals were finalized after IPaC completion on March 30, 2020, so they are less than the 2.5 acre maximum expected at that time (Appendix C-32). These commitments, and the Avoidance and Minimizations Measures (AMMs) from the IPaC determination key, are included as firm commitments for this project.

Structure 040-89-00217 C at Nolands Fork did not show evidence of use by any bird species protected under the Migratory Bird Treaty Act (MBTA) during the August 16, 2019 inspection. USFWS Bridge/Structure Assessment shall take place no earlier than two (2) years prior to the start of construction. If construction will begin after 8/16/21, an inspection of the structure by a qualified individual, must be performed. Because construction will not occur until 2022, an additional bird and bat inspection will need to occur before construction activities begin. This is included as a firm commitment for this project.

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	Presence	Impacts Yes	Impacts No
Wellhead Protection Area			
Public Water System(s)			
Residential Well(s)			
Source Water Protection Area(s)			
Sole Source Aquifer (SSA)			

If a SSA is present, answer the following:

	Yes	No
Is the Project in the St. Joseph Aquifer System?		
Is the FHWA/EPA SSA MOU Applicable?		
Initial Groundwater Assessment Required?		
Detailed Groundwater Assessment Required?		

Remarks:

The proposed project is located in Wayne 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/EPA Sole Source Aquifer Memorandum of Understanding (MOU) is not applicable to this project. No impacts are expected and a detailed groundwater assessment is not needed.

The IDEM Wellhead Proximity Determinator website (http://www.in.gov/idem/cleanwater/pages/wellhead/) was accessed on January 17, 2020 by Corradino, LLC. This project is not located within a Wellhead Protection Area or Source Water Area. No impacts are expected.

The Indiana Department of Natural Resources Water Well Record Database Website (https://www.dnr.in.gov/dnr/water/3595.htm) was accessed on July 22, 2020 by Corradino, LLC. The nearest well is 0.05 mile from the project area. The features will not be affected because the well is not located within the project area. Therefore, no impacts are expected. Should it be determined during the right-of-way phase that these wells are affected, a cost to cure will be included in the appraisal to restore the wells.

Based on a desktop review of the INDOT MS4 website (https://entapps.indot.in.gov/MS4/) by Corradino, LLC on July 22, 2020 and the RFI report completed on October 7, 2019; this project is not located in an Urban Area Boundary location. No impacts are expected.

Based on a desktop review, a site visit August 16, 2019 by Corradino, LLC, the aerial map of the project area (Appendix B-3), no public water systems were identified. Therefore, no impacts are expected.

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

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

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Remarks: Based on a desktop review of The Indiana Department of Natural Resources Indiana Floodway Information Portal website (http://dnrmaps.dnr.in.gov/appsphp/fdms/) by Corradino, LLC on October 7, 2019, and the RFI report; this project is located in a regulatory floodplain as determined from approved FEMA/FIRM maps (Appendix F-12). An early coordination letter was sent on January 17, 2020 to Wayne County Engineer, the local Floodplain Administrator (Appendix C-2 to C-4). The floodplain administrator did not respond within the 30 day timeframe. The project qualifies as a Category 4 per the INDOT CE Manual which states "No homes are located within the base floodplain within 1,000 feet upstream and no homes are located within the base floodplain within 1,000 feet downstream. The proposed bridge will have an effective capacity such that backwater surface elevations are not expected to substantially increase. As a result, there will be no substantial adverse impacts on natural and beneficial floodplain values; there will be no substantial change in flood risks; and there will be no substantial increase in potential for interruption or termination of emergency service or emergency evacuation routes; therefore, it has been determined that this encroachment is not substantial. A hydraulic design study that addresses various structure size alternates has been completed during the preliminary design phase. A summary of this study will be included with the Field Check Plans."

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

Total Points (from Section VII of CPA-106/AD-1006* **100**

**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 August 16, 2019 by Corradino, LLC, and the aerial map of the project area (Appendix B-3), there is 1.25 acres of farmland within the project limits as defined by the Farmland Protection Policy Act. An early coordination letter was sent on January 17, 2020, to Natural Resources Conservation Services (NRCS) (Appendix C-2). Note that at the time of coordination, final right-of-way numbers were not refined and 1.35 acre of impact was assumed. Also note that in the final design, right-of-way impacts occur to agricultural property, but only a small segment of the agricultural property is used for cropland or other agricultural purposes. Coordination with NRCS on January 22, 2020 resulted in a score of 100 on the NRCS-AD-1006 (Appendix C-13). 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 re-evaluating impacts to prime farmland.

SECTION C – CULTURAL RESOURCES

	Category	Type	INDOT Approval Dates	N/A
Minor Projects PA Clearance	A	4	April 3, 2020	
	A	6	April 3, 2020	
	B	12	April 3, 2020	

Results of Research	Eligible and/or Listed Resource Present
Archaeology	
NRHP Buildings/Site(s)	
NRHP District(s)	
NRHP Bridge(s)	

Project Effect

No Historic Properties Affected ☐ No Adverse Effect ☐ Adverse Effect ☐

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Documentation (mark all that apply)	**Documentation Prepared**	**ES/FHWA Approval Date(s)**	**SHPO Approval Date(s)**
Historic Properties Short Report			
Historic Property Report			
Archaeological Records Check/ Review			
Archaeological Phase Ia Survey Report			
Archaeological Phase Ic Survey Report			
Archaeological Phase II Investigation Report			
Archaeological Phase III Data Recovery			
APE, Eligibility and Effect Determination			
800.11 Documentation			

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

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 April 3, 2020, the INDOT Cultural Resources Office (CRO) determined that this project falls within the guidelines of Category A, Types 4 and 6, and also Category B, Type 12 under the Minor Projects Programmatic Agreement (Appendix D-2 to D-4). Category A-4 covers Roadway work associated with surface replacement, reconstruction, rehabilitation, or resurfacing projects, including overlays, shoulder treatments, pavement repair, seal coating, pavement grinding, and pavement marking within previously disturbed soils where replacement, repair, or installation of curbs, curb ramps or sidewalks will not be required. Category A-6 covers Repair, replacement, or upgrade of existing safety appurtenances such as guardrails, barriers, glare screens, and crash attenuators in previously disturbed soils. Category B-12 covers 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 all of the following conditions:

Condition B i: work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource;

Condition B iia: The latest Historic Bridge Inventory identified the bridge as non-historic (see https://www.in.gov/indot/2531.htm).

The proposed project is limited to replacing the existing bridge within previously disturbed soils. If any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, construction in the immediate area of the find will be stopped, and the INDOT Cultural Resources Office and the Division of Historic Preservation and Archaeology will be notified immediately. No further consultation is required. This completes the Section 106 process 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)

	Presence	**Use**	
		Yes	**No**
Parks & Other Recreational Land			
Publicly owned park			
Publicly owned recreation area			
Other (school, state/national forest, bikeway, etc.)			

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	Evaluations Prepared	FHWA Approval date
Programmatic Section 4(f)*		
"De minimis" Impact*		
Individual Section 4(f)		

Wildlife & Waterfowl Refuges	Presence	Use Yes	Use No
National Wildlife Refuge			
National Natural Landmark			
State Wildlife Area			
State Nature Preserve			

	Evaluations Prepared	FHWA Approval date
Programmatic Section 4(f)*		
"De minimis" Impact*		
Individual Section 4(f)		

Historic Properties	Presence	Use Yes	Use No
Sites eligible and/or listed on the NRHP			

	Evaluations Prepared	FHWA Approval Date
Programmatic Section 4(f)*		
"De minimis" Impact*		
Individual Section 4(f)		

**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 August 16, 2019 by Corradino, LLC, the aerial map of the project area (Appendix B-3), and the RFI report (Appendix E-2 to E-13) there are no Section 4(f) resources within or adjacent to the project area. Therefore, no impacts are expected.

	Presence	Use Yes	Use No
Section 6(f) Involvement			
Section 6(f) Property			

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) property list dated December 2019 revealed a total of three (3) properties in Wayne County (Appendix I-20). None of these properties are 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	**Yes**	**No**
Is the project in an air quality non-attainment or maintenance area?		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)?		
Is a hot spot analysis required (CO/PM)?		

Level of MSAT Analysis required?

Level 1a [X] Level 1b [ ] Level 2 [ ] Level 3 [ ] Level 4 [ ] Level 5 [ ]

Remarks: The Fiscal Year (FY) 2020-2024 Statewide Transportation Improvement Program (STIP) is listed based on the lead DES number in the contract. The lead DES number for this contract is 1701338. DES #1701344 is incorporated by reference with the contract number B-39294 (Appendix H-2).

This project is located in Wayne County in Center Township, which is currently in attainment for all criteria pollutants according to IDEM (https://www.in.gov/idem/airquality/files/nonattainment_areas_map.pdf). 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?		X

	No	**Yes/ Date**
ES Review of Noise Analysis		

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?	X	
Will the proposed action result in substantial impacts to community cohesion?		X
Will the proposed action result in substantial impacts to local tax base or property values?		X
Will construction activities impact community events (festivals, fairs, etc.)?		X
Does the community have an approved transition plan?	X	
If No, are steps being made to advance the community's transition plan?		
Does the project comply with the transition plan? (explain in the remarks box)	X	

Remarks: The road closure will cause temporary impacts for approximately eighteen weeks. US 40 will be subject to a signed detour and commuters may be affected by temporary impacts such as added travel time. The route will include SR 1, I-70 and US 27 which is 20.3 miles total and adds approximately 6.9 miles to the original route. Disruptions to public facilities and services such as school transport and emergency services may occur due to this project. Emergency services and school corporations will be notified of any construction that will block or limit access. Several events or festivals are listed within ten miles of the project area on the event websites for Wayne County (https://visitrichmond.org/visitors/events-festivals) which should be taken into account during construction.

The proposed action is not expected to conflict with development patterns or have substantial impacts to property values. The project is not expected to affect American Disabilities Act (ADA) facilities in any way and complies with INDOT's ADA Transition Plan.

Indirect and Cumulative Impacts	**Yes**	**No**
Will the proposed action result in substantial indirect or cumulative impacts?		X

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. The nature of this project is to replace an existing bridge, which is not expected to cause substantial changes to the cultural or environmental land use in the surrounding area. No indirect or cumulative impacts are expected. Positive impact include improved stability of the bridge is expected.

Public Facilities & Services	**Yes**	**No**
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.*		X

Remarks: Based on a desktop review, a site visit on August 16, 2019, the aerial map of the project area (Appendix B-3) and the water resources map in the RFI report (Appendix E-9), there is one religious facility and one railroad located within the 0.5 mile of the project. There is no public facility within or adjacent to the project area. Access to all properties will be maintained during construction. Therefore, no impacts are expected.

Environmental Justice (EJ) (Presidential EO 12898)	**Yes**	**No**
During the development of the project were EJ issues identified?		X
Does the project require an EJ analysis?	X	
If YES, then:		
Are any EJ populations located within the project area?		X
Will the project result in adversely high or disproportionate impacts to EJ populations?		X

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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. This project will require 1.25 acres 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 Wayne County, Indiana. The community that overlaps the project limits is called the affected community (AC). In this project, the AC is Census Tracts 108.00, 107.00 and 105.00 in Wayne County, Indiana. 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 U.S. Census Bureau 2012-2017 American Community Survey was obtained from the US Census Bureau Website https://data.census.gov/cedsci on July 24, 2020 by Corradino, LLC. The data collected for minority and low-income populations within the AC are summarized in the below table.

	COC – Wayne County, IN	AC-1 –Census Tract 105	AC-2 –Census Tract 107	AC-2 –Census Tract 108
Percent Minority	11.50%	1.05%	2.70%	8.42%
125% of COC	14.38%	AC < 125% COC	AC < 125% COC	AC < 125% COC
EJ Population of Concern		No	No	No
Percent Low-Income	18.24%	17.10%	7.44%	21.71%
125% of COC	22.80%	AC < 125% COC	AC < 125% COC	AC < 125% COC
EJ Population of Concern		No	No	No

AC-1, Census Tract 105 has a percent minority of 1.05% which is below 50% and is below the 125% COC threshold. AC-2, Census Tract 107 has a percent minority of 2.70% which is below 50% and is below the 125% COC threshold. AC-3, Census Tract 108 has a percent minority of 8.42% which is below 50% and is below the 125% COC threshold. Therefore, the AC does not contain minority populations of EJ concern.

AC-1, Census Tract 105 has a percent low-income of 17.10% which is below 50% and is below the 125% COC threshold. AC-2, Census Tract 107 has a percent low-income of 7.44% which is below 50% and is below the 125% COC threshold. AC-1, Census Tract 108 has a percent low-income of 21.71% 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-2 to I-3. No further environmental justice analysis is warranted.

Relocation of People, Businesses or Farms

	Yes	No
Will the proposed action result in the relocation of people, businesses or farms?		X
Is a Business Information Survey (BIS) required?		X
Is a Conceptual Stage Relocation Study (CSRS) required?		X
Has utility relocation coordination been initiated for this project?	X	

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. It is anticipated that utilities in the area may need to be relocated for this project. Utility relocation coordination has been initiated and will continue throughout design.

SECTION H – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

Hazardous Materials & Regulated Substances (Mark all that apply)	**Documentation**
Red Flag Investigation	X
Phase I Environmental Site Assessment (Phase I ESA)	
Phase II Environmental Site Assessment (Phase II ESA)	
Design/Specifications for Remediation required?	

	No	**Yes/ Date**
ES Review of Investigations		December 17, 2019

Include a summary of findings for each investigation.

Remarks: Based on a review of GIS, available public records, an RFI was completed on October 7, 2019 by Corradino, LLC (Appendix E-1 to E-13) and concurred by INDOT Site Assessment and Management on December 17, 2019. One NPDES facility and three NPDES pipe locations are located within 0.5 mile of the project area and no hazmat sites are located within the project area. No impacts are expected. Further investigation for hazardous material concerns 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)	X
Pre-Construction Notification (PCN)	
Other	
Wetland Mitigation required	
Stream Mitigation required	
IDEM	
Section 401 WQC	X
Isolated Wetlands determination	
Rule 5	X
Other	
Wetland Mitigation required	
Stream Mitigation required	
IDNR	
Construction in a Floodway	X
Navigable Waterway Permit	
Lake Preservation Permit	
Other	
Mitigation Required	X
US Coast Guard Section 9 Bridge Permit	
Others (Please discuss in the remarks box below)	

Remarks: Nolands Fork was identified as a likely jurisdictional waterway in the *Waters of the U.S. Determination* report. For stream impacts to Nolands Fork a Section 404 Regional General Permit No. 1 from the U.S. Army Corps. of Engineers and a Section 401 Water Quality Certification from IDEM will be required. Total disturbed area will be 2.0 acre, which is more than the 1 acre threshold for an IDEM Rule 5 Storm Water Runoff Permit, therefore this permit will be required. The upstream drainage area is 61.6 square miles, which does not meet the rural bridge exemption for IDNR Construction in a Floodway permits. It will be the responsibility of the designer to submit plans to the INDOT Ecology and Waterway Permitting Office (EWPO) for an official permit determination. The project will likely require a IDNR Habitat Restoration Plan to mitigate tree removal within the floodplain.

Applicable recommendations provided by INDOT, IDNR-DFW, and USFWS are included in the Environmental Commitments section of this document. If other permits are found to be necessary, then conditions of the permit will be requirements for 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, INDOT ESD and the INDOT District Environmental Section will be contacted immediately. (INDOT ESD and INDOT Greenfield District)
2. It is the responsibility of the project sponsor to notify school corporations and emergency services at least two (2) weeks prior to any construction activity that would block or limit access. (INDOT ESD).
3. Any work in a wetland area within right-of-way or in borrow/waste areas is prohibited unless specifically allowed in the U.S. Army Corps of Engineers permit. (INDOT ESD)
4. USFWS Bridge/Structure Assessment shall take place no earlier than two (2) years prior to the start of construction. If construction will begin after 8/16/21, 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 results of the inspection must indicate no signs of bats or birds. If signs of bats or birds are documented during this inspection, the INDOT District Environmental Manager must be contacted immediately (USFWS).
5. General AMM1 – Ensure all 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)
6. Lighting AMM1 – Direct temporary lighting away from suitable habitat during the active season. (USFWS)
7. Tree Removal AMM1 – Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal. (USFWS)
8. Tree Removal AMM3 - 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)
9. Contractors must take care when handling dead or injured bats (regardless of species), and any other federally listed species that are found at the Project site in order to preserve biological material in the best possible condition and protect the handler from exposure to diseases, such as rabies. Project personnel are responsible for ensuring that any evidence about determining the cause of death or injury is not unnecessarily disturbed. Reporting the discovery of dead or injured listed species is required in all cases to enable the Service to determine whether the level of incidental take exempted by the BO is exceeded, and to ensure that the terms and conditions are appropriate and effective. Parties finding a dead, injured, or sick specimen of any bat (regardless of species), or other endangered or threatened species, must promptly notify the USFWS Bloomington Field Office at (812) 334-4261.
10. A “Reinitiation Notice” is required if: more than 2.5 acres of trees are to be cleared; the amount or

extent of incidental take of Indiana bat and/or northern long-eared bat is exceeded; new information about listed species is encountered; new species is listed or critical habitat designated that the project may affect; the project is modified in a manner that causes an effect to the listed species; or, new information reveals that the project may affect listed species or critical habitat in a manner not considered in the BO or the project information.

11. Structure 040-89-00217 C at Nolands Fork has shown no evidence of use (ie nests) by a bird species protected under the Migratory Bird Treaty Act (MBTA) during the August 19, 2019 inspection. However, the structure is located over or near water which is preferred habitat for migratory birds. Avoidance and minimization measures must be implemented prior to the start of and during the nesting season. Nests without eggs or young should be removed prior to construction during the non-nesting season (September 8 – April 30) and during the nesting season if no eggs or young are present. Nests with eggs or young cannot be removed or disturbed during the nesting season (May 1 – September 7). Nests with eggs or young should be screened or buffered from active construction. Details of the required procedures are outlined in the "Potential Migratory Bird on Structure Unique Special Provision." (INDOT EWPO)

For Further Consideration:

1. Restrict below low-water work in streams to placement of culverts, piers, pilings and/or footings, shaping of the spill slopes around the bridge abutments, and placement of riprap (USFWS).
2. 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-bottomed 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)
3. 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-water elevation to provide aquatic habitat. (USFWS).
4. Avoid all work within the inundated part of the stream channel (in perennial streams and larger 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 the Ordinary High Water Mark during this time unless the machinery is within the caissons or on the cofferdams. (USFWS)
5. 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)
6. If box or pipe culverts are used, the bottoms should be buried to a minimum of 6" (or 20% of the culvert height/pipe diameter, whichever is greater up to a maximum of 2') below the stream bed elevation to allow a natural streambed to form within or under the crossing structure. Crossings should: span the entire channel width (a minimum of 1.2 times the bankful width); maintain the natural stream substrate within the structure; have a minimum openness ratio (height x width/length) of 0.25; and have stream depth and water velocities during low-flow conditions that are approximate to those in the natural stream channel. The new, replacement, or rehabbed structure should not create conditions that are less favorable for wildlife passage under the structure compared to the current conditions (IDNR-DFW).
7. 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). Riprap may be used only at the toe of the sideslopes up to the ordinary high water mark (OHWM). 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 [site indicated] and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion. (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 any temporary runarounds or causeways. (IDNR-DFW).
10. Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting from April 1 through September 30. (IDNR-DFW).
11. 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 inches dbh or greater (5:1 mitigation based on the number of large trees). (IDNR-DFW).

12. Operate equipment used to replace the bridge from the existing roadway (IDNR-DFW).
13. 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).

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 with accompanying graphics were sent in January 2020. A date in the table below means a response was received. All early coordination is contained within Appendix C. No coordinating agencies reported concern with the nature of the project or the preferred alternative.

Agency	Date Contacted	Comment Received
US Fish and Wildlife Service	January 17, 2020	April 8, 2020; September 2, 2020
US Dept. of Housing and Urban Develop.	January 17, 2020	No Response
Federal Highway Administration	January 17, 2020	No Response
US Army Corps. of Engineers	January 17, 2020	No Response
National Park Service	January 17, 2020	No Response
IDNR – Department of Fish and Wildlife	January 17, 2020	February 14, 2020
IDEM – Electronic Submittal	January 17, 2020	January 17, 2020
IDEM – Groundwater – Electronic Submittal	January 17, 2020	January 17, 2020
Indiana Geological Survey	January 17, 2020	January 17, 2020
Natural Resources Conservation Service	January 21, 2020	January 23, 2020
INDOT –Greenfield District	January 17, 2020	No Response
INDOT – Public Hearings	January 17, 2020	No Response
INDOT – Ecology and Waterway Permitting	January 17, 2020	No Response
Wayne County SWCD	January 17, 2020	No Response
Wayne County Engineer	January 17, 2020	No Response
Wayne County Board of Commissioners	January 17, 2020	No Response

Table of Contents for Appendix Items

APPENDIX A

INDOT Supporting Documentation

DES 1701344

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-way[3]	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 • **District Env. Supervisor** • **Env. Services Division** • **FHWA**	Concurrence by INDOT District Environmental or Environmental Services	Yes	Yes	Yes Yes	Yes Yes Yes

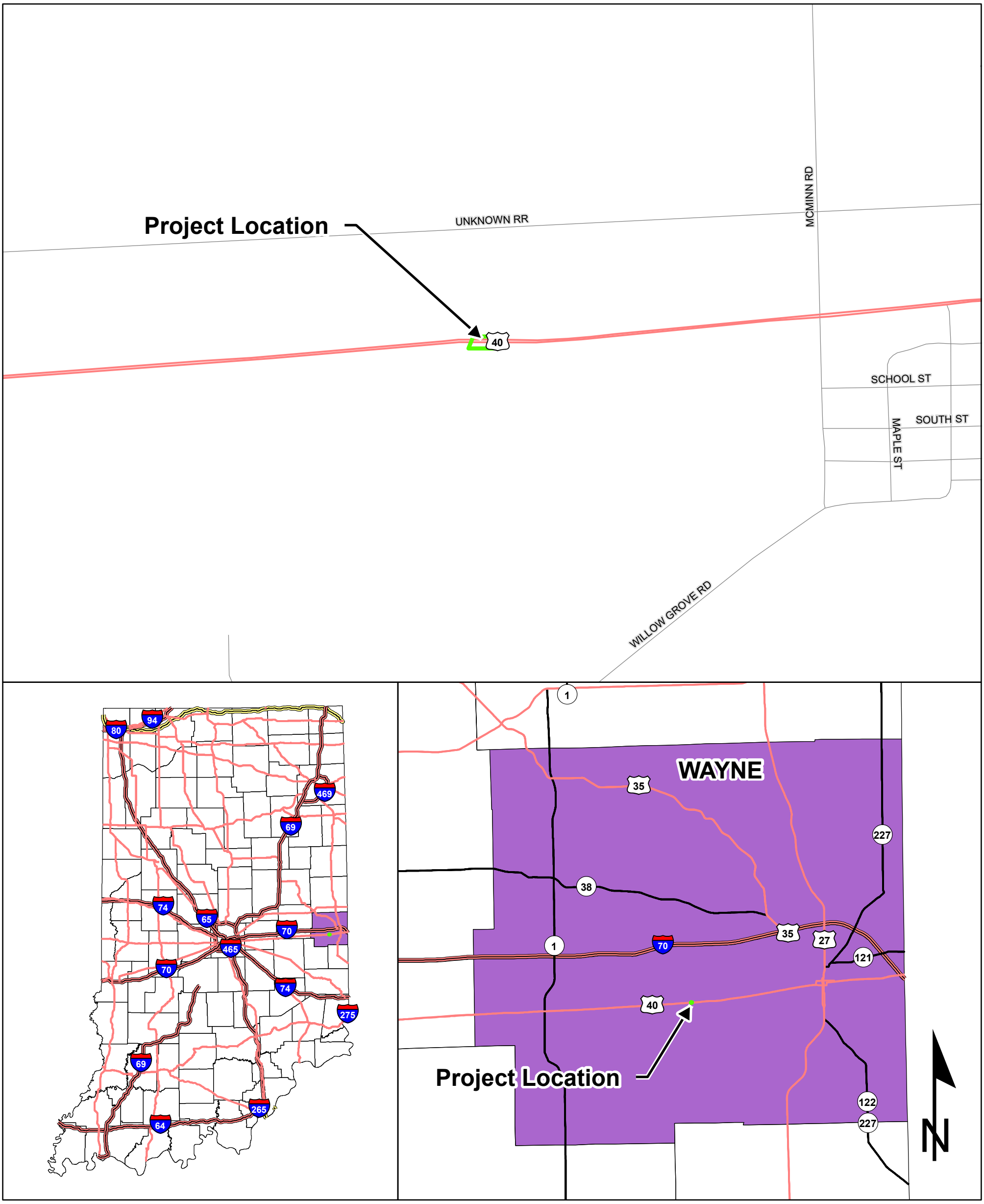
[1]Coordinate with INDOT Environmental Services. INDOT will then coordinate with the appropriate FHWA Environmental Specialist.
[2]Any involvement with a bridge processed under the Historic Bridge Programmatic Agreement.
[3]Permanent and/or temporary right-of-way.
[4]AMMs = Avoidance and Mitigation Measures.
[5]AMMs 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".
[6]Potential for causing a disproportionately high and adverse impact.
[7]Hot Spot Analysis and/or MSAT Quantitative Emission Analysis.
*Substantial public or agency controversy may require a higher-level NEPA document.

APPENDIX B

Graphics

Des. No. 1701344

Project Location Map
Des. No. 1701344, Bridge Deck Replacement
US 40 at Nolands Fork, 6.84 miles W of US 27
Wayne County, Indiana



0.2 0.1 0 0.2 Miles

Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

INDIANA
STATEWIDE
GIS DATA

Aerial Location Map
Des. No. 1701344, Bridge Deck Replacement
US 40 at Nolands Fork, 6.84 miles W of US 27
Wayne County, Indiana

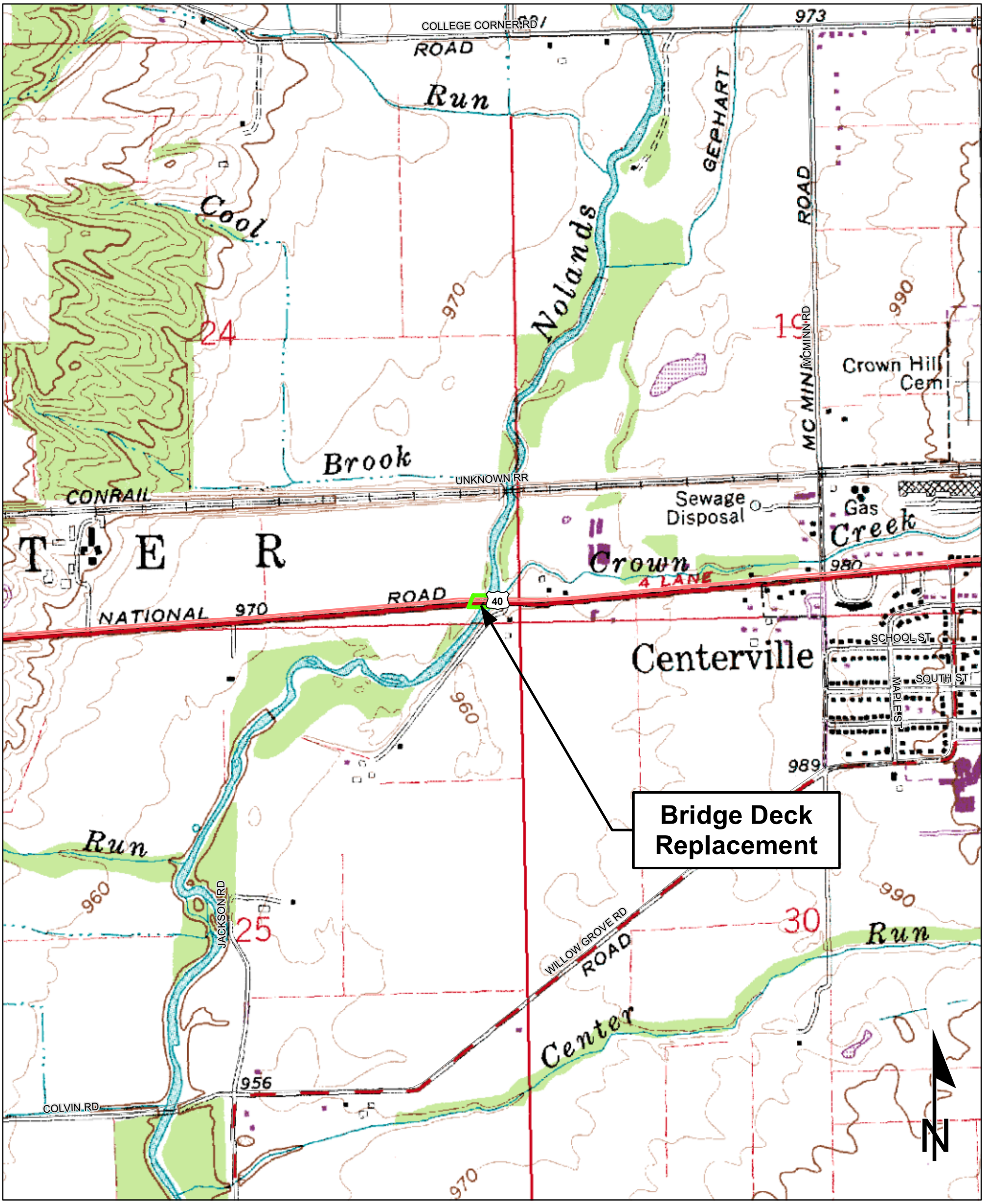
1,000 500 0 1,000 Feet

Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

INDIANA STATEWIDE AERIAL IMAGERY FLOWN IN 2016

USGS Topographic Map
Des. No. 1701344, Bridge Deck Replacement
US 40 at Nolands Fork, 6.84 miles W of US 27
Wayne County, Indiana



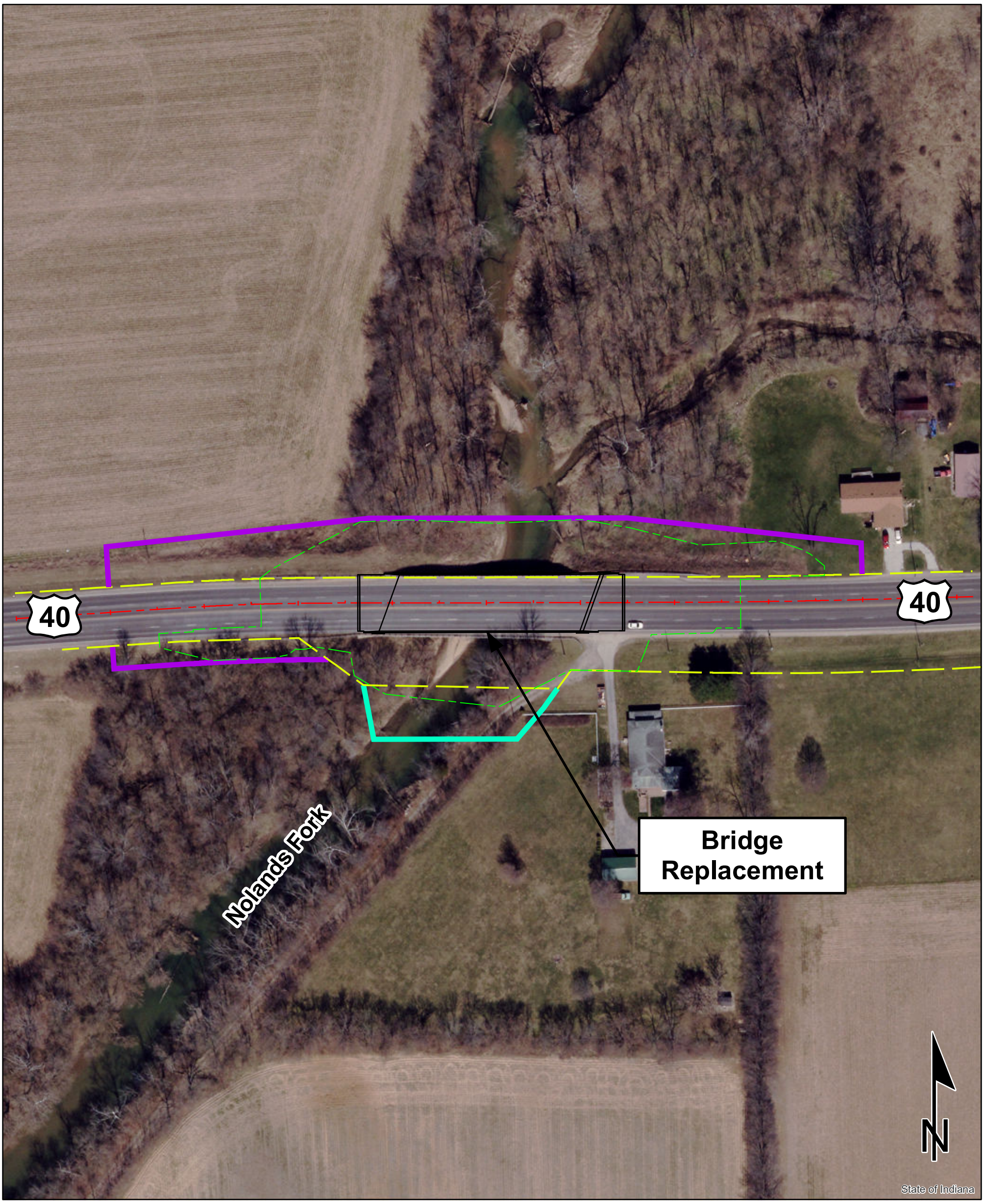
1,000 500 0 1,000 Feet

Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

JACKSONBURG QUADRANGLE
INDIANA
7.5 MINUTE SERIES
(TOPOGRAPHIC)

Proposed Right-of-Way
Des. No. 1701344, Bridge Replacement
US 40 at Nolands Fork, 6.84 miles W of US 27
Wayne County, Indiana



150 75 0 150 Feet

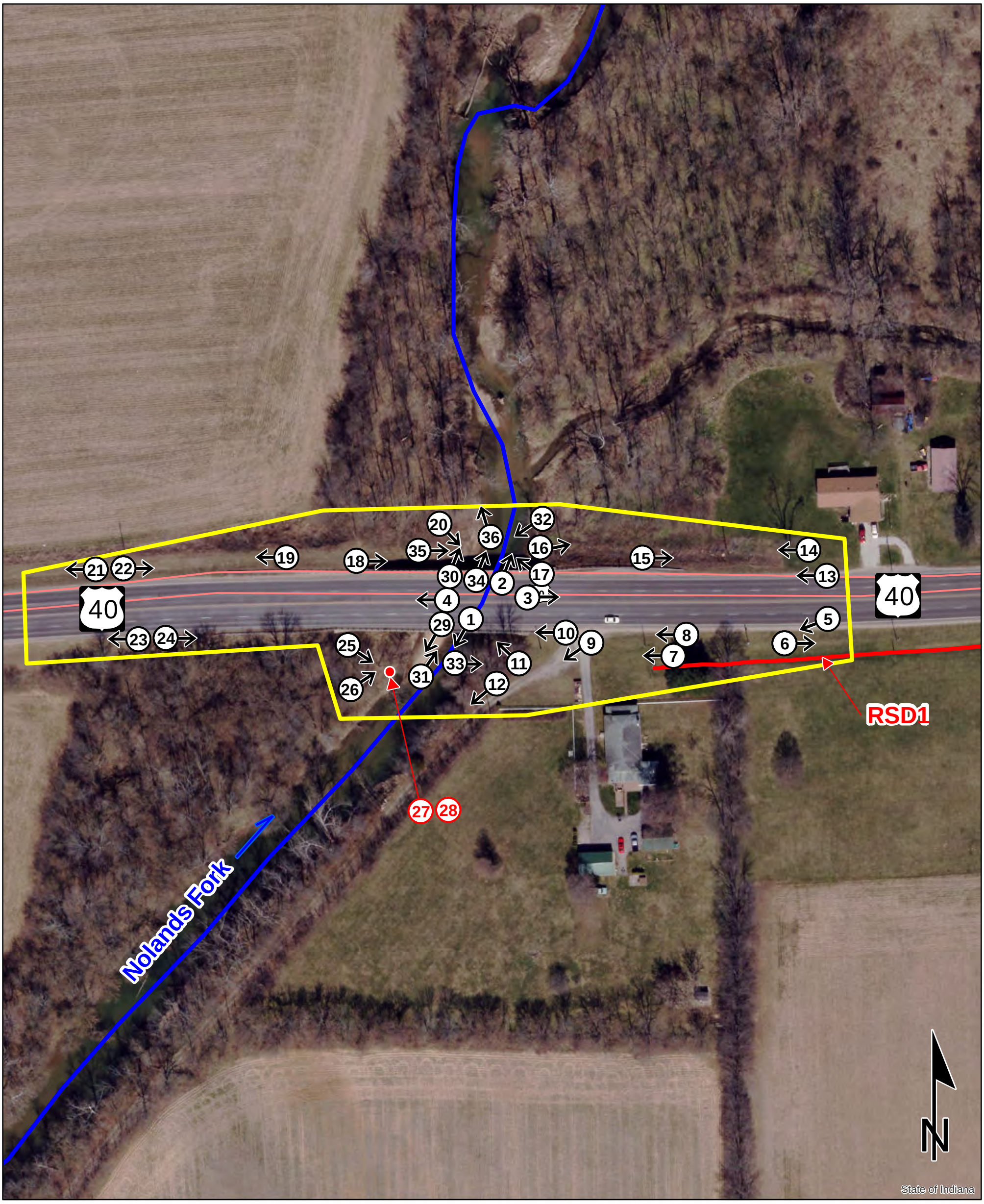
Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

Legend

- Proposed Structure
- Proposed Construction Limits
- Proposed Right-of-Way
- Temporary Right-of-Way
- Existing Right-of-Way

Photo Key Map
Des. No. 1701344, Bridge Deck Replacement
US 40 at Nolands Fork, 6.84 miles W of US 27
Wayne County, Indiana



150 75 0 150 Feet

Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

INDIANA STATEWIDE AERIAL IMAGERY FLOWN 2016

Legend

- Flow Direction
- Tributary
- Roadside Ditch
- Investigative Area

DES 1701344 Waters of the U.S. Determination Report—Photo Log

Picture 1—Nolands Fork, southwest view; 16 AUG 2019.

Picture 2— Nolands Fork; north view; 16 AUG 2019.

Picture 3—US 40; east view; 16 AUG 2019.

Picture 4—US 40; west view; 16 AUG 2019.

Picture 5—RSD1; southwest view; 16 AUG 2019.

Picture 6—RSD1; east view; 16 AUG 2019.

Picture 7—RSD1 pipe; west view; 16 AUG 2019.

Picture 8—Southeast quadrant; west view; 16 AUG 2019

Picture 9—Southeast quadrant and gravel drive; southwest view; 16 AUG 2019.

Picture 10—Southeast quadrant; west view; 16 AUG 2019.

Picture 11—Southeast quadrant, Nolands Fork and structure; northwest view; 16 AUG 2019.

Picture 12—Nolands Fork and southeast bank ; southwest view; 16 AUG 2019.

Picture 13—Northeast quadrant; west view; 16 AUG 2019. Note *Schedonorus arundinaceus* (FACU), *Setaria faberi* (FACU), *Ambrosia trifida* (FAC), *Setaria pumila* (FAC), *Leucanthemum vulgara* (UPL)

Picture 14—Northeast quadrant; west view; 16 AUG 2019. Note *Schedonorus arundinaceus* (FACU), *Ambrosia trifida* (FAC), *Muhlenbergia schreberi* (FACU), *Setaria faberi* (FACU)

Picture 15—Northeast quadrant ; east view; 16AUG 2019. Note *Setaria faberi* (FACU), *Ambrosia artemisifolia* (FACU), *Cirsium vulgare* (FACU), *Bromus inermis* (FACU)

Picture 16—Northeast quadrant; east view; 16 AUG 2019.

Picture 17—Nolands Fork and northwest quadrant; northwest view; 16 AUG 2019.

Picture 18—Northwest quadrant; east view; 16 AUG 2019.

Picture 19—Northwest quadrant; west view; 16 AUG 2019. Note *Schedonorus arundinaceus* (FACU), *Solidago canadensis* (FACU), *Setaria faberi* (FACU), *Ambrosia trifida* (FAC)

Picture 20—Northwest quadrant; southeast view; 16 AUG 2019.

Picture 21—Northwest quadrant; west view; 16 AUG 2019.

Picture 22—Northwest quadrant; east view; 16 AUG 2019. Note *Schedonorus arundinaceus* (FACU), *Muhlenbergia schreberi* (FAC), *Solidago canadensis* (FACU), *Setaria faberi* (FACU)

Picture 23—Southwest quadrant; west view; 16 AUG 2019.

Picture 24— Southwest quadrant; east view; 16 AUG 2019.

Picture 25—Southwest quadrant; southeast view; 16 AUG 2019.

Picture 26—Southwest quadrant and Delineation Data Point location, north view; 16 AUG 2019.

Picture 27—Delineation Data Point , west view; 16 JUL 2019.

Picture 28— Delineation Soil Sample, 16 AUG 2019.

Picture 29—Nolands Fork and sandbar; southwest view; 16 AUG 2019.

Picture 30—Nolands Fork; northeast view; 16 AUG 2019.

Picture 31—Nolands Fork and structure, northeast view; 16 AUG, 2019.

Picture 32—Nolands Fork and structure , southwest view; 16 AUG 2019.

Picture 33—Pipe outlet to RSD1; east view; 16 AUG 2019.

Picture 34—Nolands Fork; northwest view; 16 AUG 2019.

Picture 35—Nolands Fork east view; 16 AUG, 2019.

Picture 36—Nolands Fork , north view; 16 AUG 2019.

PROJECT	DESIGNATION
1701344	1701344
CONTRACT	BRIDGE FILE
B-39294	040-89-10254

INDIANA DEPARTMENT OF TRANSPORTATION

BRIDGE PLANS

FOR SPANS OVER 20 FEET

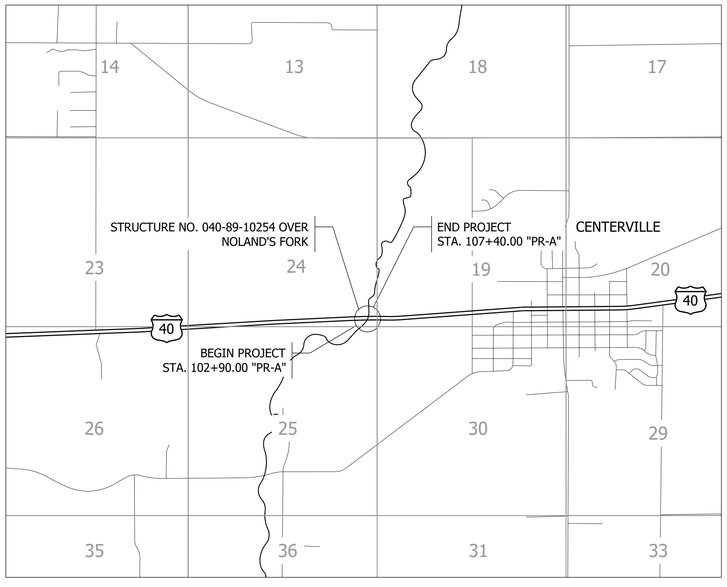
ROUTE: U.S. 40 AT: RP 138+71

PROJECT NO. 1701344 P.E.
1701344 R/W
1701344 CONST.

BRIDGE REPLACEMENT ON U.S. 40 OVER NOLAND'S FORK APPROXIMATELY 6.84 MILES WEST OF U.S. 27 LOCATED IN SECTION 24, T-16-N, R-13-E, CENTER TOWNSHIP, WAYNE COUNTY, INDIANA.

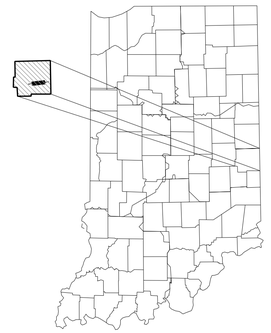
STRUCTURE INFORMATION				
STRUCTURE	TYPE	SPAN AND SKEW	OVER	STATION
040-89-10254	CONTINUOUS COMPOSITE PRESTRESSED CONCRETE AASHTO I-BEAM	3 SPANS: 65'-0", 84'-0", & 65'-0" SKEW: 20°0'0" RT.	NOLAND'S FORK	105+05.00 LINE "PR-A"

KIN PROJECT INFORMATION	
DESIGNATION	PROJECT DESCRIPTION
1701342	US 40 OVER FLATROCK RIVER, BRIDGE REPLACEMENT
1701340	US 40 OVER BUCK CREEK, BRIDGE REPLACEMENT
1701344	US 40 OVER NOLAND'S FORK, BRIDGE REPLACEMENT
1701338 (LEAD)	US 40 OVER BIG BLUE RIVER, BRIDGE REPLACEMENT
1593232	US 40 HMA OVERLAY, MINOR STRUCTURAL, KNIGHTSTOWN, IN



SCALE:
1" = 2000'

TRAFFIC DATA	U.S. 40
A.A.D.T. (2022)	5454 V.P.D.
A.A.D.T. (2042)	5758 V.P.D.
D.H.V. (2042)	569 V.P.H.
DIRECTIONAL DISTRIBUTION	49.03% (EAST)
TRUCKS	4.50% D.H.V.
	4.36% A.A.D.T.
DESIGN DATA	
DESIGN SPEED	55 M.P.H.
PROJECT DESIGN CRITERIA	3R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	MAJOR COLLECTOR
RURAL/URBAN	RURAL
TERRAIN	LEVEL
ACCESS CONTROL	NONE



PROJECT LOCATION SHOWN BY
WAYNE COUNTY

LATITUDE: 39°49'01" N LONGITUDE: 85°00'56" W

BRIDGE LENGTH: 0.041 MI.
ROADWAY LENGTH: 0.044 MI.
TOTAL LENGTH: 0.085 MI.
MAX. GRADE: 0.67 %

H.U.C. 14: 05080003030030

CORRADINO
ENGINEERS ♦ PLANNERS ♦ CONSTRUCTORS

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

PERMIT REVIEW PLANS
SEPTEMBER 2020

PRELIMINARY

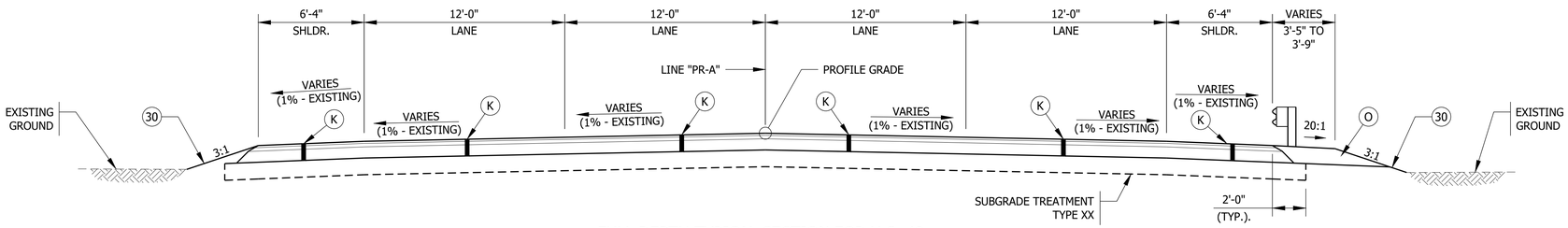
PLANS
PREPARED BY: CORRADINO, LLC 317-488-2363
PHONE NUMBER

CERTIFIED BY: ../../....
DATE

APPROVED
FOR LETTING:
INDIANA DEPARTMENT OF TRANSPORTATION DATE

BRIDGE FILE
040-89-10254
DESIGNATION
1701344

SURVEY BOOK	SHEETS		
.	1	of	20
CONTRACT	PROJECT		
B-39294	1701344		



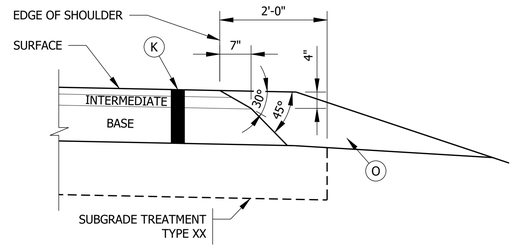
FULL DEPTH TYPICAL SECTION FOR U.S. 40

HALF SECTION WITHOUT GUARDRAIL

STA. 102+90.00 "PR-A" TO STA. 103+63.18 "PR-A"
STA. 106+46.82 "PR-A" TO STA. 107+40.00 "PR-A"
SCALE: 1/4" = 1'-0"

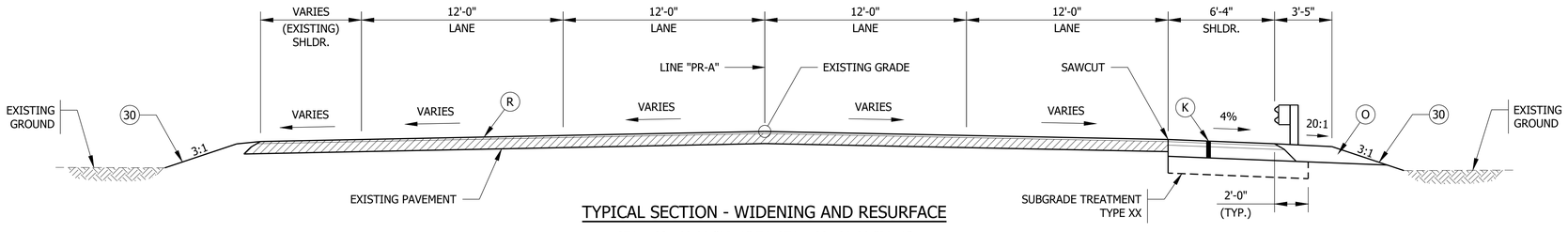
HALF SECTION WITH GUARDRAIL

PAVING EXCEPTION
STA. 103+63.18 "PR-A" TO STA. 106+46.82 "PR-A"



SAFETY EDGE ON HMA PAVEMENT

NOTE: NOT REQUIRED WHERE GUARDRAIL IS PRESENT
SCALE: 3/4" = 1'-0"



TYPICAL SECTION - WIDENING AND RESURFACE

HALF SECTION WITHOUT GUARDRAIL

STA. 102+60.00 "PR-A" TO STA. 102+90.00 "PR-A"
STA. 107+40.00 "PR-A" TO STA. 107+70.00 "PR-A"
SCALE: 1/4" = 1'-0"

HALF SECTION WITH GRADING

LEGEND

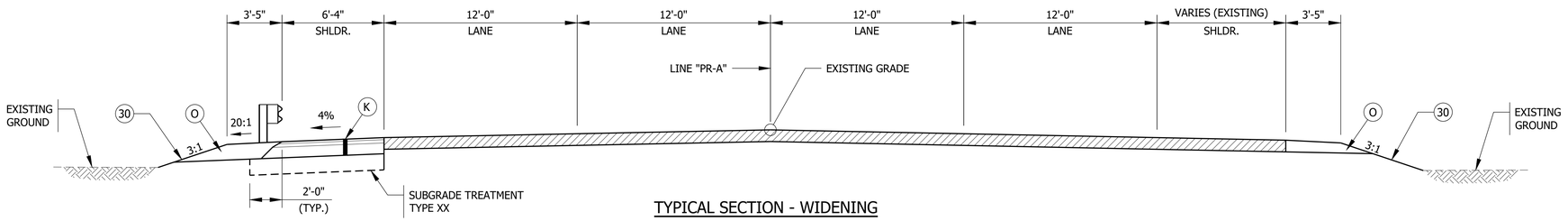
(K) XXX/SYD QC/QA HMA, 3, 70, SURFACE, 9.5MM ON XXX/SYD QC/QA HMA, 3, 70, INTERMEDIATE, 19.0MM ON XXX/SYD QC/QA HMA, 3, 64, BASE, 25.0MM

TACK COAT TO BE PLACED BETWEEN HMA LAYERS. JOINT ADHESIVE TO BE INSTALLED AT ALL LONGITUDINAL JOINTS IN THE SURFACE AND INTERMEDIATE LAYER. LIQUID ASPHALT SEALANT TO BE PLACED CENTERED ON THE LONGITUDINAL JOINTS THAT HAVE JOINT ADHESIVE INSTALLED.

(O) XX" COMPACTED AGGREGATE, NO. 53

(30) MULCHED SEEDING, R

(R) XXX/SYD QC/QA HMA, 3, 70, SURFACE, 9.5MM ON ASPHALT MILLING, XX"



TYPICAL SECTION - WIDENING

HALF SECTION WITH GUARDRAIL

STA. 101+50.00 "PR-A" TO STA. 102+60.00 "PR-A"
STA. 107+70.00 "PR-A" TO STA. 108+60.00 "PR-A"
SCALE: 1/4" = 1'-0"

HALF SECTION WITHOUT GUARDRAIL

PRELIMINARY

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

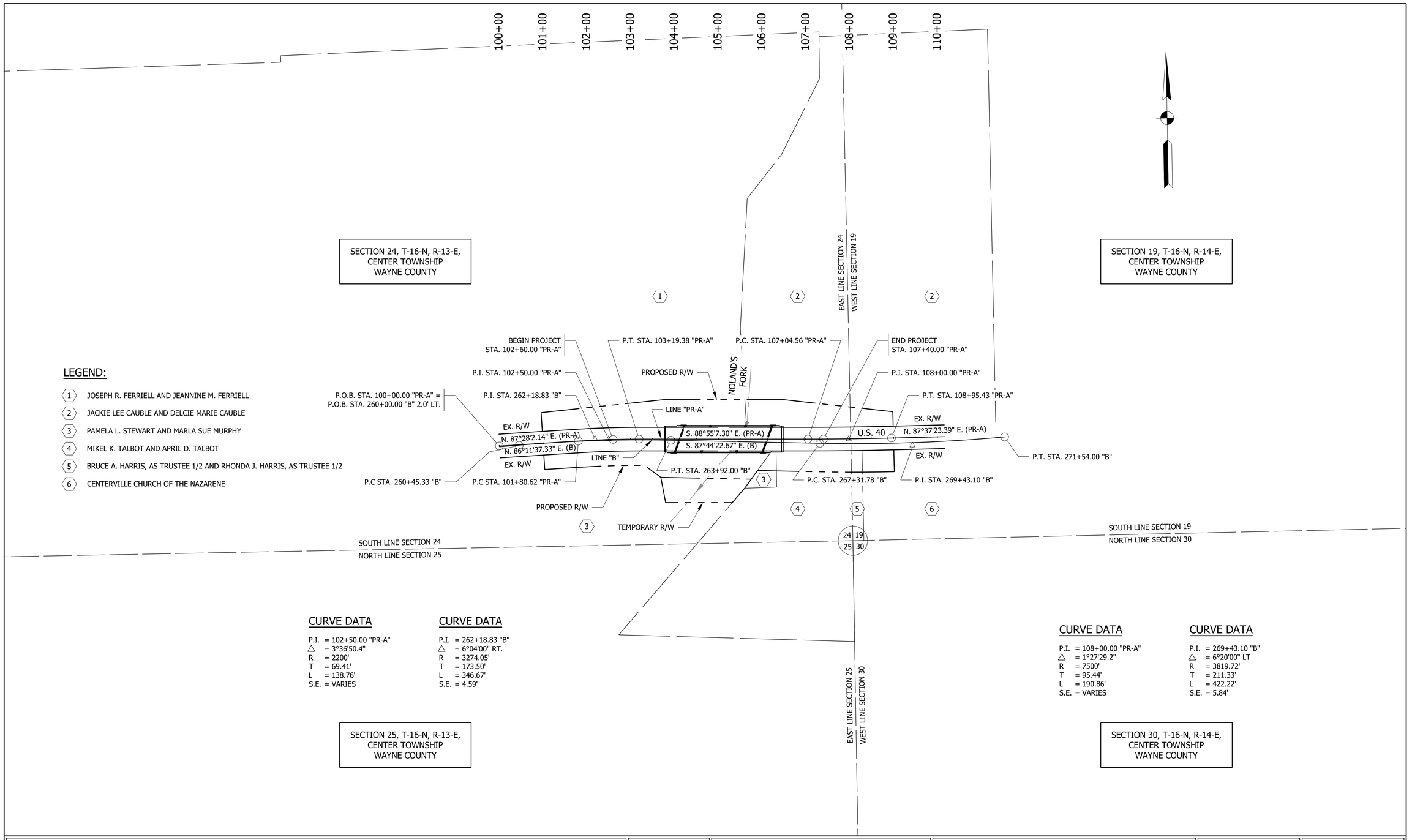
DESIGNED: BJM DRAWN: SEJ
CHECKED: ZZH CHECKED: BJM

INDIANA DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

HORIZONTAL SCALE	BRIDGE FILE
1/4" = 1'-0" UNLESS NOTED	040-89-10254
VERTICAL SCALE	DESIGNATION
	1701344
	SHEET 3 of 20
CONTRACT	PROJECT
B-39294	1701344

File Name: F:\4510-US40\Projects\Henry County\IC-1701344\NolandsFork\50 Plans\30 Sheet Drawings\10 Bridge Sheets\S-TYP-SEC-01.dwg - Layout1
Modified / By: September 10, 2020 2:14:24 PM \ sjohnson
Plotted / By: September 14, 2020 11:13:19 AM \ Zed Holt



LEGEND:

1. JOSEPH R. FERRIELL AND JEANNINE M. FERRIELL
2. JACKIE LEE CAUBLE AND DELCIE MARIE CAUBLE
3. PAMELA L. STEWART AND MARLA SUE MURPHY
4. MIKEL K. TALBOT AND APRIL D. TALBOT
5. BRUCE A. HARRIS, AS TRUSTEE 1/2 AND RHONDA J. HARRIS, AS TRUSTEE 1/2
6. CENTERVILLE CHURCH OF THE NAZARENE

CURVE DATA

P.I. = 102+50.00 "PR-A"
△ = 3°36'50.4"
R = 2200'
T = 69.41'
L = 138.76'
S.E. = VARIES

CURVE DATA

P.I. = 262+18.83 "B"
△ = 6°04'00" RT.
R = 3274.05'
T = 173.50'
L = 346.67'
S.E. = 4.59'

CURVE DATA

P.I. = 108+00.00 "PR-A"
△ = 1°27'29.2"
R = 7500'
T = 95.44'
L = 190.86'
S.E. = VARIES

CURVE DATA

P.I. = 269+43.10 "B"
△ = 6°20'00" LT
R = 3819.72'
T = 211.33'
L = 422.22'
S.E. = 5.84'

SECTION 25, T-16-N, R-13-E,
CENTER TOWNSHIP
WAYNE COUNTY

SECTION 30, T-16-N, R-14-E,
CENTER TOWNSHIP
WAYNE COUNTY

File Name: F:\4510-US40\Projects\HenryCounty\C-1701344NolandsFork\50 Plans\30 Sheet Drawings\10 Bridge Sheets\S-PLAT-01.dwg - Layout1
Modified / By: April 16, 2020 2:52:02 PM / sjohnson
Plotted / By: July 24, 2020 2:06:50 PM / Stacey Johnson

PRELIMINARY

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

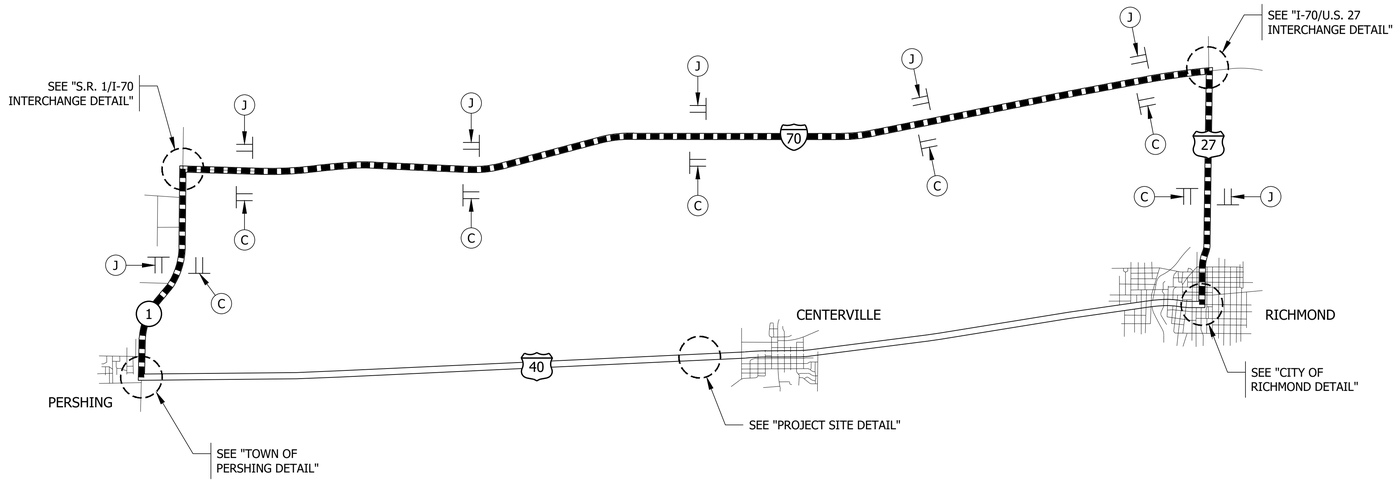
DESIGNED: BJM | DRAWN: SEJ

CHECKED: ZZH | CHECKED: BJM

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAT NO. 1

HORIZONTAL SCALE	BRIDGE FILE
1" = 100' UNLESS NOTED	040-89-10254
VERTICAL SCALE	DESIGNATION
	1701344
	SHEET
	4 of 20
CONTRACT	PROJECT
B-39294	1701344

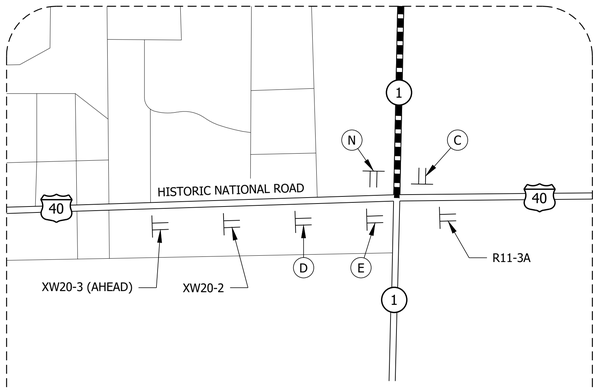


LEGEND

1. 60 LFT. OF TYPE III-B BARRICADES, STAGGERED WITH ROAD CLOSURE SIGN ASSEMBLY R11-4.
2. 60 LFT. OF TYPE III-A BARRICADES WITH ROAD CLOSURE SIGN ASSEMBLY R11-2.

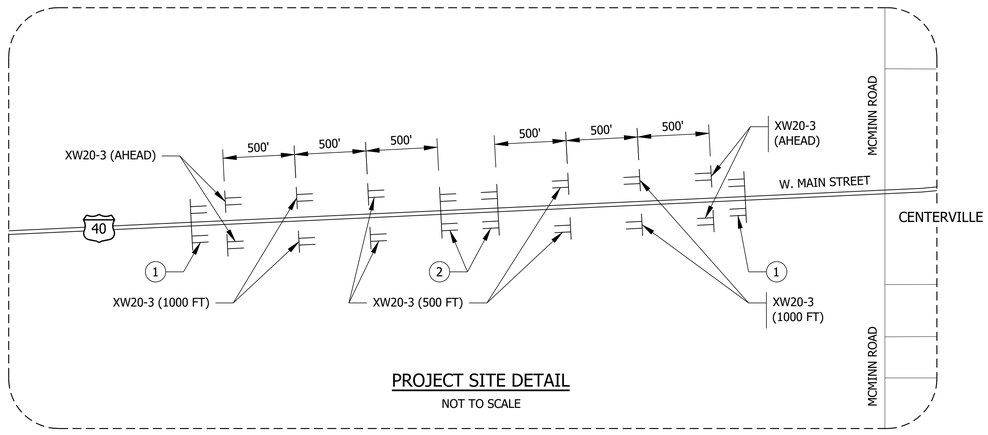
DETOUR ROUTE

SIGN ASSEMBLY



TOWN OF PERSHING DETAIL

NOT TO SCALE



PROJECT SITE DETAIL

NOT TO SCALE

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Modified / By: July 24, 2020 2:12:23 PM / sjohnson
Plotted / By: July 24, 2020 2:12:30 PM / Stacey Johnson

PRELIMINARY

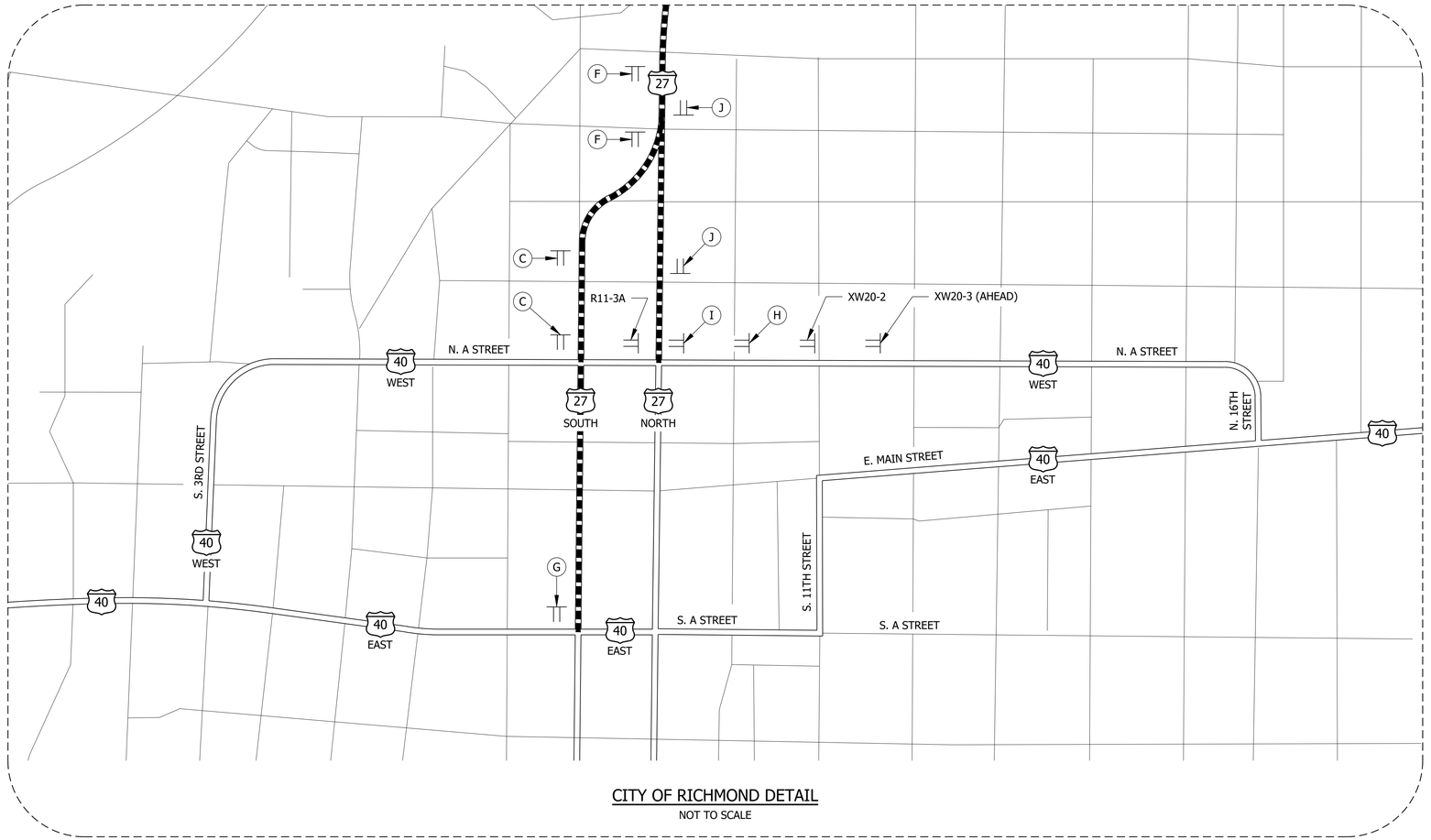
RECOMMENDED FOR APPROVAL _____ . DESIGN ENGINEER DATE

DESIGNED: BJM | DRAWN: SEJ | CHECKED: ZZH | CHECKED: BJM

INDIANA DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC

HORIZONTAL SCALE	BRIDGE FILE
1" = 5000' UNLESS NOTED	040-89-10254
VERTICAL SCALE	DESIGNATION
	1701344
	SHEET
	5 of 20
CONTRACT	PROJECT
B-39294	1701344



CITY OF RICHMOND DETAIL

NOT TO SCALE

LEGEND

(1) 60 LFT. OF TYPE III-B BARRICADES, STAGGERED WITH ROAD CLOSURE SIGN ASSEMBLY R11-4.

(2) 60 LFT. OF TYPE III-A BARRICADES WITH ROAD CLOSURE SIGN ASSEMBLY R11-2.

DETOUR ROUTE

SIGN ASSEMBLY

File Name: F:\4510-US40ProjectsHenryCounty\C-1701344NolandsFork\50 Plans\30 Sheet Drawings\10 Bridge Sheets\IS-MOT-DETOUR-01.dwg - Layout2
Modified / By: April 7, 2020 11:54:28 AM / sjohnson
Plotted / By: July 24, 2020 2:06:59 PM / Stacey Johnson

PRELIMINARY

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

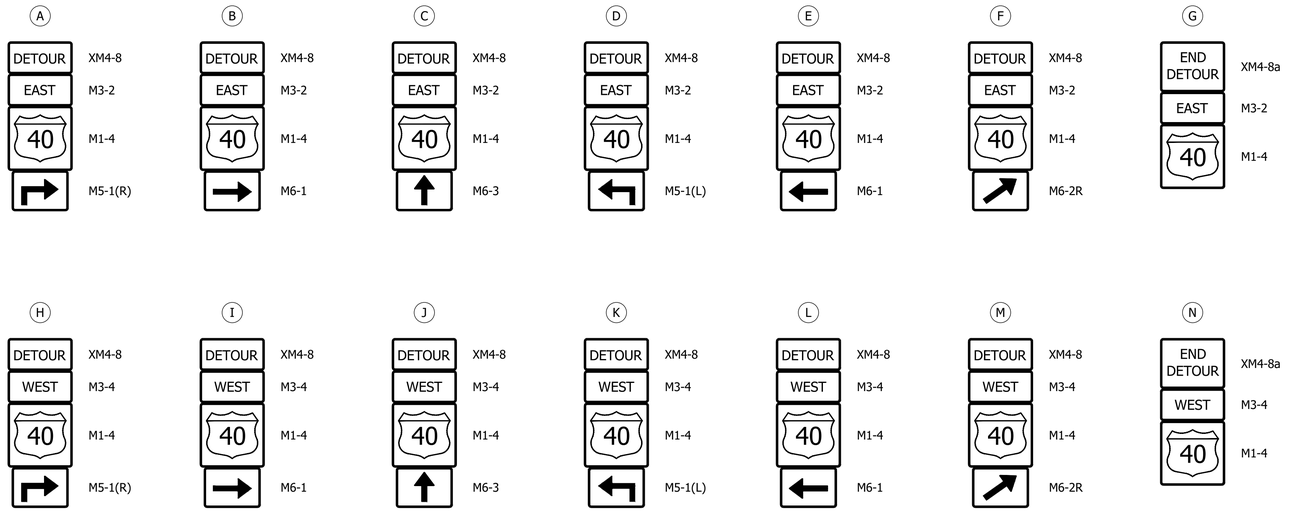
DESIGNED: BJM DRAWN: SEJ

CHECKED: ZZH CHECKED: BJM

INDIANA DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC

HORIZONTAL SCALE	BRIDGE FILE
1" = 5000' UNLESS NOTED	040-89-10254
VERTICAL SCALE	DESIGNATION
	1701344
	SHEET
	6 of 20
CONTRACT	PROJECT
B-39294	1701344



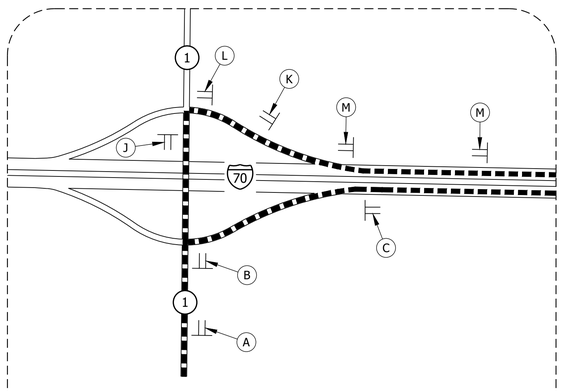
CONSTRUCTION SIGN SCHEDULE				
SIGN NO.	DESCRIPTION	SIZE (FT.)	TYPE	EST. QTY.
XG20-5	U.S. 40 CLOSED ON OR AFTER XX	5 X 3	A	2
XW20-2	DETOUR AHEAD	4 X 4	A	2
XW20-3	ROAD CLOSED XXXX	4 X 4	A	14
R11-2	ROAD CLOSED	4 X 2.5	-	2
R11-3A	ROAD CLOSED XX MILES	5 X 2.5	-	2
R11-4	ROAD CLOSED TO THRU TRAFFIC	5 X 2.5	-	2
			TOTAL TYPE "A" SIGNS	18
			ROAD CLOSURE SIGN ASSEMBLIES	6

DETOUR ROUTE MARKER ASSEMBLIES: 43 REQ'D
TYPE III-A BARRICADES: 120 LFT.
TYPE III-B BARRICADES: 120 LFT.

* DETOUR ROUTE MARKER ASSEMBLIES SHALL BE IN ACCORDANCE WITH STD. DWG. 801-TCDT-04.

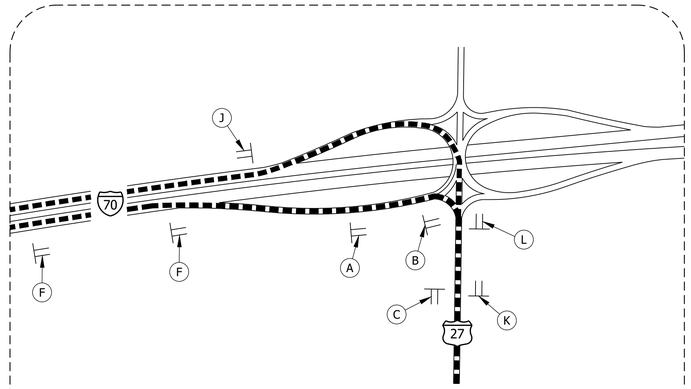
* TYPE B CONSTRUCTION WARNING LIGHTS SHALL BE USED WITH ALL SIGNS LOCATED ON BARRICADES AND AS SHOWN. TYPE A CONSTRUCTION WARNING LIGHTS SHALL BE USED ON ALL OTHER CONSTRUCTION SIGNS. (NOT PAY ITEMS.)

* TWO XG20-5 SIGNS TO BE PLACED AS DIRECTED BY THE ENGINEER.



I-70/S.R. 1 INTERCHANGE DETAIL

NOT TO SCALE



I-70/U.S. 27 INTERCHANGE DETAIL

NOT TO SCALE

LEGEND

(1) 60 LFT. OF TYPE III-B BARRICADES, STAGGERED WITH ROAD CLOSURE SIGN ASSEMBLY R11-4.

(2) 60 LFT. OF TYPE III-A BARRICADES WITH ROAD CLOSURE SIGN ASSEMBLY R11-2.

DETOUR ROUTE

SIGN ASSEMBLY

File Name: F:\4510-US40Projects\HenryCounty\C-1701344NolandsFork\50 Plans\30 Sheet Drawings\10 Bridge Sheets\S-MOT-DETOUR-01.dwg - Layout3
Modified / By: April 7, 2020 11:54:28 AM / sjohnson
Plotted / By: July 24, 2020 2:07:04 PM / Stacey Johnson

PRELIMINARY

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

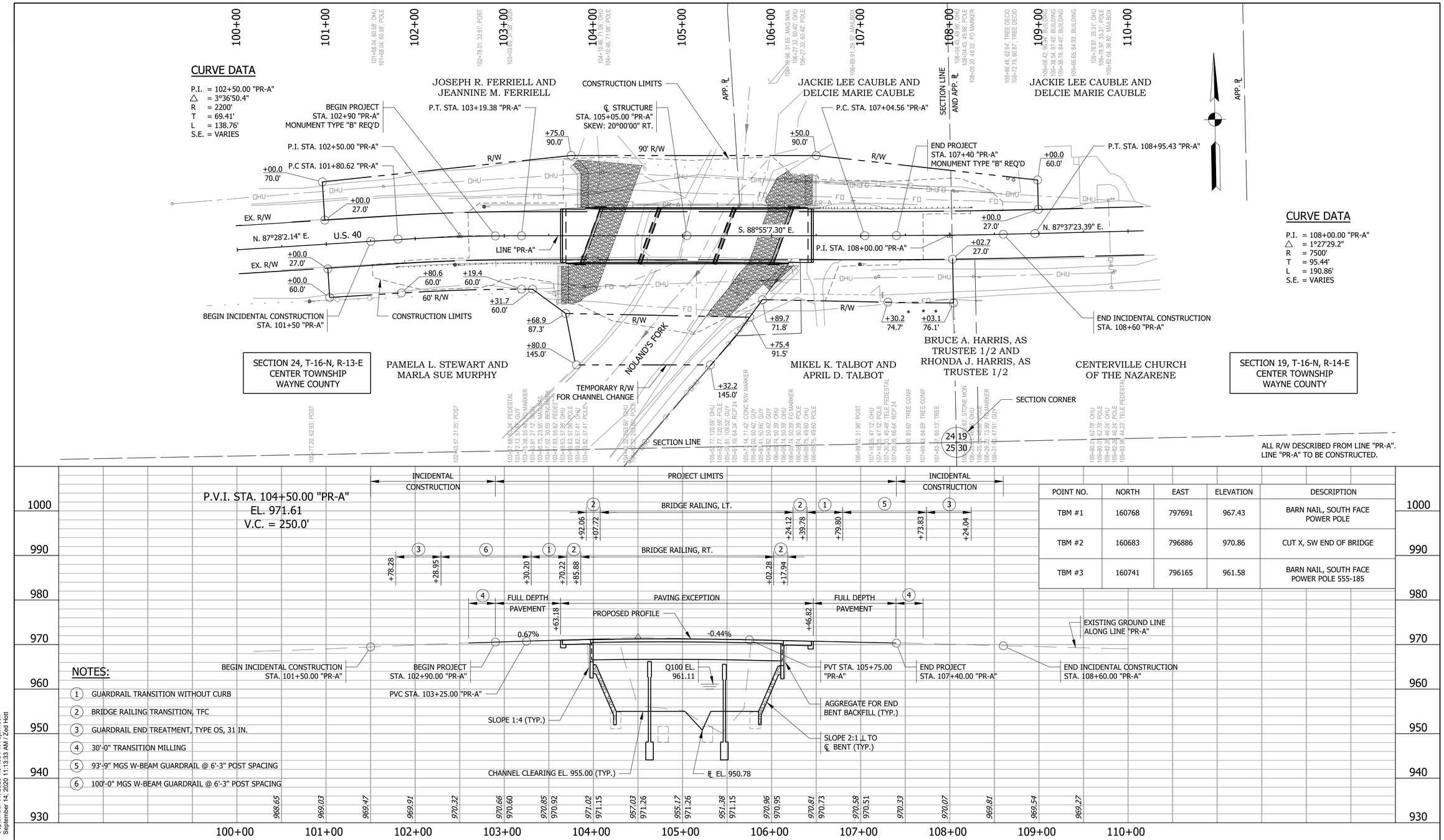
DESIGNED: BJM DRAWN: SEJ

CHECKED: ZZH CHECKED: BJM

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC

HORIZONTAL SCALE	BRIDGE FILE
1" = 5000' UNLESS NOTED	040-89-10254
VERTICAL SCALE	DESIGNATION
	1701344
	SHEET 7 of 20
CONTRACT	PROJECT
B-39294	1701344



POINT NO.	NORTH	EAST	ELEVATION	DESCRIPTION
TBM #1	160768	797691	967.43	BARN NAIL, SOUTH FACE POWER POLE
TBM #2	160683	796886	970.86	CUT X, SW END OF BRIDGE
TBM #3	160741	796165	961.58	BARN NAIL, SOUTH FACE POWER POLE 555-185

NOTES:

1. GUARDRAIL TRANSITION WITHOUT CURB
2. BRIDGE RAILING TRANSITION, TFC
3. GUARDRAIL END TREATMENT, TYPE OS, 31 IN.
4. 30'-0" TRANSITION MILLING
5. 93'-9" MGS W-BEAM GUARDRAIL @ 6'-3" POST SPACING
6. 100'-0" MGS W-BEAM GUARDRAIL @ 6'-3" POST SPACING

PRELIMINARY

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: BJM DRAWN: SEJ

CHECKED: ZZH CHECKED: BJM

INDIANA DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE

HORIZONTAL SCALE	BRIDGE FILE
1" = 50'-0" UNLESS NOTED	040-89-10254
VERTICAL SCALE	DESIGNATION
1" = 10'-0" UNLESS NOTED	1701344
	SHEET
	9 of 20
CONTRACT	PROJECT
B-39294	1701344

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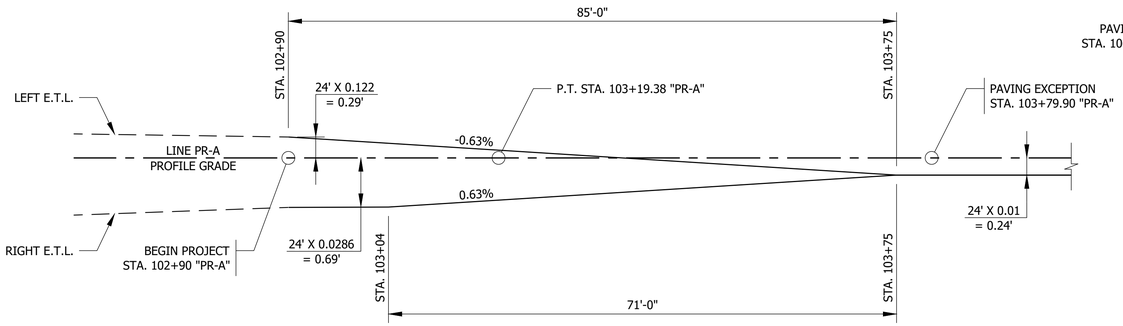

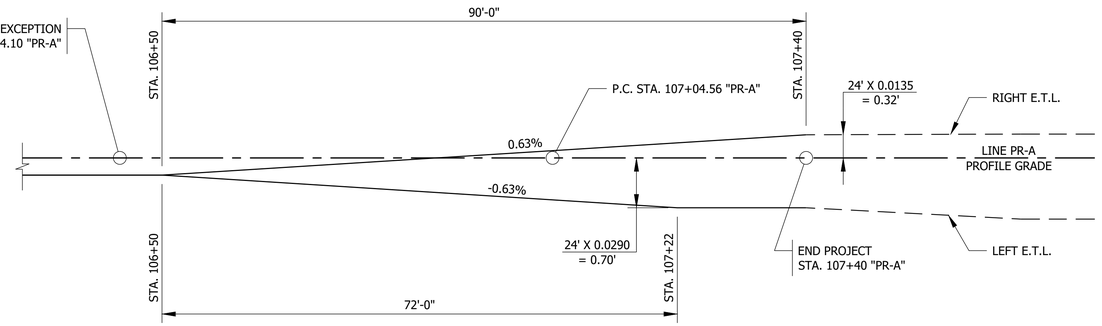

SUPERELEVATION DIAGRAM

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Plotted / By: July 24, 2020 2:07:37 PM / Stacey Johnson

PRELIMINARY

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

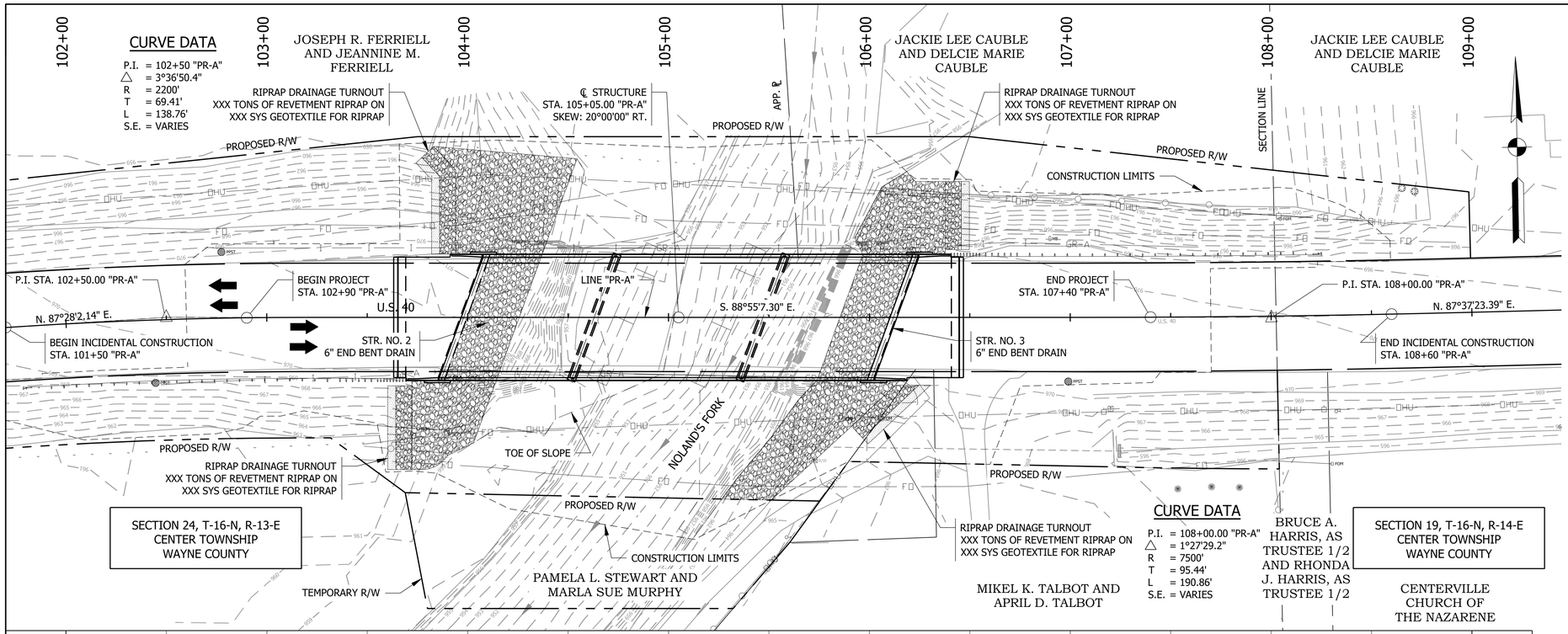
DESIGNED: BJM DRAWN: SEJ

CHECKED: ZZH CHECKED: BJM

INDIANA
DEPARTMENT OF TRANSPORTATION

SUPERELEVATION DIAGRAM

HORIZONTAL SCALE	BRIDGE FILE
	040-89-10254
VERTICAL SCALE	DESIGNATION
	1701344
	SHEET 10 of 20
CONTRACT	PROJECT
B-39294	1701344



EXISTING STRUCTURE

THE EXISTING STRUCTURE (040-89-00217) IS A THREE SPAN REINFORCED CONCRETE ARCH BRIDGE BUILT IN 1925. EXISTING STRUCTURE TO BE REMOVED.

EARTHWORK TABULATION

FILL +20%	XXX CYS
COMMON EXCAVATION	XXX CYS
USABLE WATERWAY EXCAVATION	XXX CYS
SURPLUS FOUNDATION EXCAVATION	XXX CYS
BORROW	XXX CYS

HYDRAULIC & SCOUR DATA

DRAINAGE AREA	= 59.71 SQ. MI.
Q100 DISCHARGE	= 8000 CFS
Q100 HIGH WATER EL.	= 961.11 FT
BACK WATER @ Q100	= 2.91 FT
VELOCITY	= 7.64 FT/SEC
WATERWAY OPENING REQ'D (BELOW EL. 961.11)	= 725.1 SFT
WATERWAY OPENING PROVIDED (BELOW EL. 961.11)	= 954.6 SFT
FREEBOARD PROVIDED (ABOVE EL. 961.11)	= 4.85 FT
SCOUR VELOCITY @ Q100	= 9.02 FT/SEC
CONTRACTION SCOUR DEPTH	= 9.72 FT
TOTAL SCOUR DEPTH	= 14.29 FT
LOW SCOUR ELEVAITON	= 941.22 FT
Q500 DISCHARGE	= 10800 CFS
Q500 HIGH WATER EL.	= 961.68 FT
SCOUR VELOCITY @ Q500	= 10.82 FT/SEC
CONTRACTION SCOUR DEPTH	= 14.35 FT
TOTAL SCOUR DEPTH	= 19.21 FT
LOW SCOUR ELEVATION	= 936.30 FT

NOTES:

INDICATES LIMITS OF 24" CLASS 1 RIPRAP OVER GEOTEXTILES FOR RIPRAP TYPE XX. (EST. QTY. = _____ TONS OF 24" RIPRAP OVER _____ SYS OF GEOTEXTILES)

INDICATES LIMITS OF 4' WIDE SODDING STRIP (EST. QTY. = _____ SYS)

PRESTRESSED CONCRETE I-BEAM BRIDGE
3 SPANS: 65'-0", 84'-0", 65'-0"
60'-0" CLEAR ROADWAY
SKEW: 20°0'0" RT
U.S. 40 OVER NOLAND'S FORK
WAYNE COUNTY

PRELIMINARY

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: BJM DRAWN: SEJ

CHECKED: ZZH CHECKED: BJM

INDIANA DEPARTMENT OF TRANSPORTATION

LAYOUT

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'-0" UNLESS NOTED	040-89-10254
VERTICAL SCALE	DESIGNATION
1" = 10'-0" UNLESS NOTED	1701344
	SHEET
	11 of 20
CONTRACT	PROJECT
B-39294	1701344

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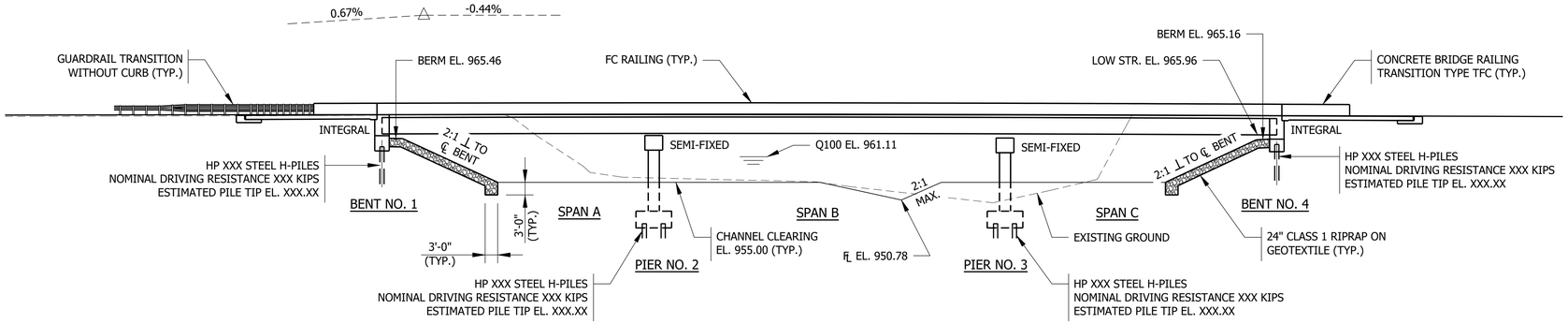
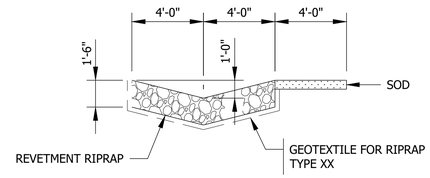
Modified / By: September 11, 2020 2:10:10 PM / sjohnson
Plotted / By: September 14, 2020 11:13:48 AM / ZJed Holt

STRUCTURE BUILT TO A 250' VERTICAL CURVE

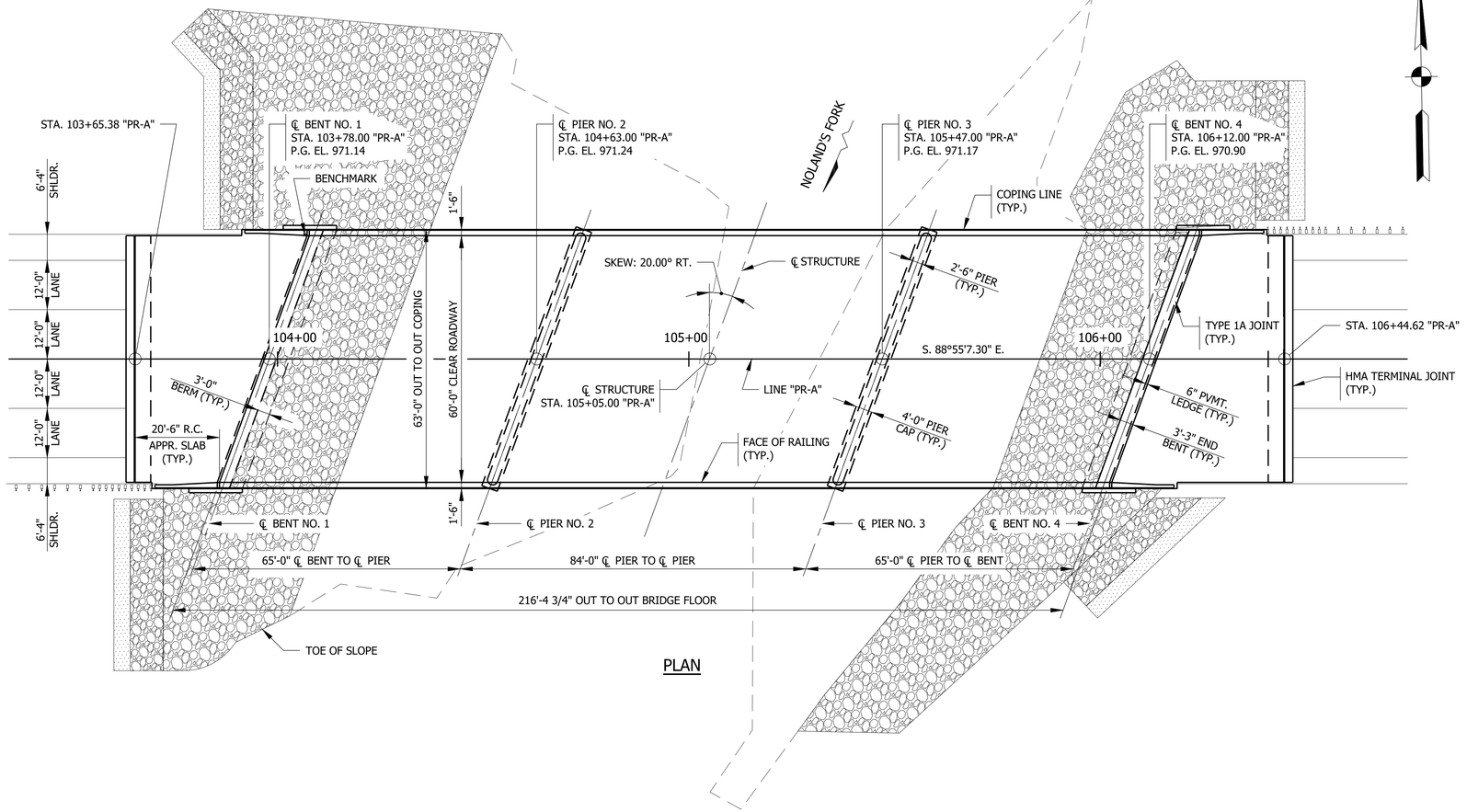


ELEVATION



RIPRAP DRAINAGE TURNOUT

NOT TO SCALE



PLAN

PRESTRESSED CONCRETE I-BEAM BRIDGE
3 SPANS: 65'-0", 84'-0", 65'-0"
60'-0" CLEAR ROADWAY
SKEW: 20°0'0" RT
U.S. 40 OVER NOLAND'S FORK
WAYNE COUNTY

File Name: F:\4510-US40ProjectsHenryCounty\C-1701344NolandsFork\50 Plans\30 Sheet Drawings\10 Bridge Sheets\S-GENPLAN-01.dwg - Layout1
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Plotted / By: September 14, 2020 11:13:57 AM / Zeel Hott

PRELIMINARY

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

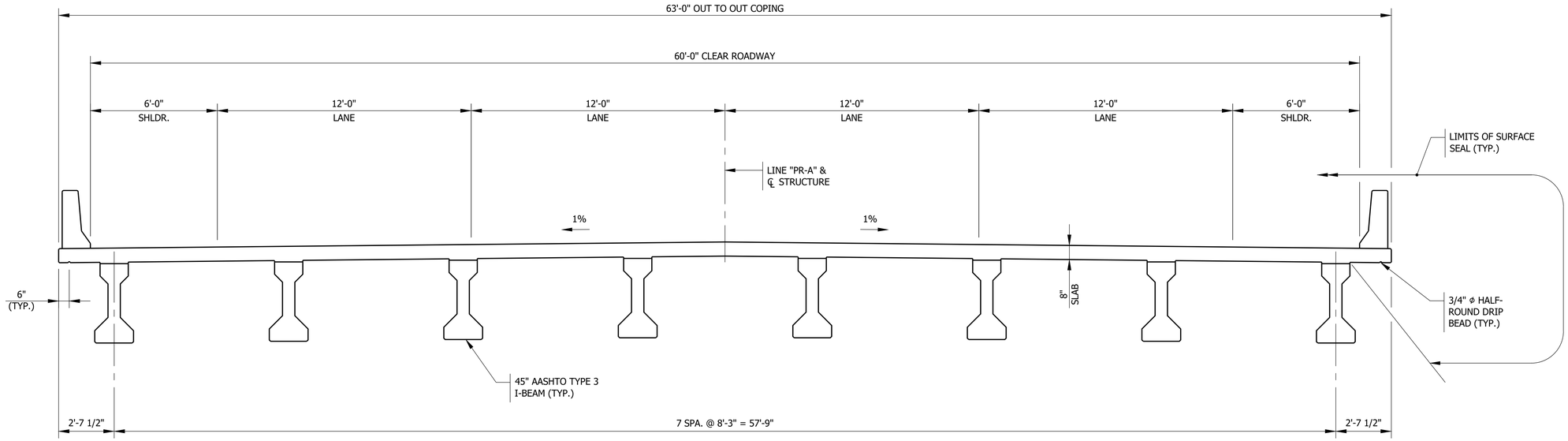
DESIGNED: MY | DRAWN: SEJ

CHECKED: BJM | CHECKED: BJM

INDIANA DEPARTMENT OF TRANSPORTATION

GENERAL PLAN

HORIZONTAL SCALE	BRIDGE FILE
1/16" = 1'-0" UNLESS NOTED	040-89-10254
VERTICAL SCALE	DESIGNATION
	1701344
	SHEET 12 of 20
CONTRACT	PROJECT
B-39294	1701344



TYPICAL SECTION

SCALE: 3/8" = 1'-0"

GENERAL NOTES

REINFORCING STEEL COVER SHALL BE 2 1/2" IN TOP AND 1" MINIMUM IN BOTTOM OF FLOOR SLAB, 3" IN FOOTINGS, EXCEPT BOTTOM STEEL WHICH SHALL BE 4", AND 2" IN ALL OTHER PARTS, UNLESS NOTED.

DESIGN DATA

LIVE LOAD

DESIGNED FOR HL-93 LOADING, IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, EIGHTH EDITION, AND SUBSEQUENT INTERIM SPECIFICATIONS.

DEAD LOAD

ACTUAL WEIGHT PLUS 35 LBS/SFT FOR FUTURE WEARING SURFACE AND 15 LBS/SFT FOR PERMANENT METAL DECK FORMS.

FLOOR SLAB

DESIGNED WITH A 7 1/2" STRUCTURAL DEPTH PLUS 1/2" SACRIFICIAL WEARING SURFACE.

DESIGN STRESSES

CONCRETE

CLASS C	F'C = 4000 PSI
CLASS B	F'C = 3000 PSI
CLASS A	F'C = 3500 PSI

REINFORCING STEEL

GRADE 60 F'Y = 60,000 PSI

CONSTRUCTION LOADING

THE EXTERIOR GIRDER HAS BEEN CHECKED FOR STRENGTH, DEFLECTION, AND OVERTURNING USING THE CONSTRUCTION LOADS SHOWN BELOW. CANTILEVER OVERHANG BRACKETS WERE ASSUMED FOR SUPPORT OF THE DECK OVERHANG PAST THE EDGE OF THE EXTERIOR GIRDER. FINISHING MACHINE WAS ASSUMED TO BE SUPPORTED 6 IN. OUTSIDE THE VERTICAL COPING FORM. THE TOP OVERHANG BRACKETS WERE ASSUMED TO BE LOCATED 6 IN. PAST THE EDGE OF THE VERTICAL COPING FORM. THE BOTTOM OVERHANG BRACKETS WERE ASSUMED TO BE BRACED AGAINST THE INTERSECTION OF THE GIRDER BOTTOM FLANGE AND WEB.

DECK FALSEWORK LOADS

DESIGNED FOR 15 LB/SFT FOR PERMANENT METAL STAY-IN-PLACE DECK FORMS, REMOVABLE DECK FORMS, AND 2-FT EXTERIOR WALKWAY.

CONSTRUCTION LIVE LOAD

DESIGNED FOR 20 LB/SFT EXTENDING 2 FT PAST THE EDGE OF COPING AND 75 LB/FT VERTICAL FORCE APPLIED AT A DISTANCE OF 6 IN. OUTSIDE THE FACE OF COPING OVER A 30-FT LENGTH OF THE DECK CENTERED WITH THE FINISHING MACHINE.

FINISHING MACHINE LOAD

4500 LB DISTRIBUTED OVER 10 FT ALONG THE COPING.

WIND LOAD

DESIGNED FOR 70 MPH HORIZONTAL WIND LOADING IN ACCORDANCE WITH LRFD 3.8.1.

SEISMIC DESIGN DATA

SEISMIC PERFORMANCE ZONE	ZONE 1
ACCELERATION COEFFICIENT	0.0121
SEISMIC SOIL PROFILE TYPE	CLASS D

PRESTRESSED CONCRETE I-BEAM BRIDGE
3 SPANS: 65'-0", 84'-0", 65'-0"
60'-0" CLEAR ROADWAY
SKEW: 20°0'0" RT
U.S. 40 OVER NOLAND'S FORK
WAYNE COUNTY

File Name: F:\4510-US40ProjectsHennyCounty\C-1701344NolandsFork\50 Plans\30 Sheet Drawings\10 Bridge Sheets\S-GENPLAN-02.dwg - Layout1
Modified / By: September 11, 2020 2:07:34 PM / sjohnson
Plotted / By: September 14, 2020 11:14:04 AM / Zed Holt

PRELIMINARY

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: MY DRAWN: SEJ

CHECKED: BJM CHECKED: BJM

INDIANA DEPARTMENT OF TRANSPORTATION

GENERAL PLAN

HORIZONTAL SCALE	BRIDGE FILE
3/8" = 1'-0" UNLESS NOTED	040-89-10254
VERTICAL SCALE	DESIGNATION
	1701344
	SHEET
	13 of 20
CONTRACT	PROJECT
B-39294	1701344

APPENDIX C

Early Coordination

DES 1701344

Sample Early
Coordination Letter

CORRADINO

January 17, 2020

Federal Highway Administration
Federal Office Building, Room 254
575 N. Pennsylvania St.
Indianapolis, IN 46204

Re: Designation Number.: 1701344, US 40, Bridge Replacement Over Nolands Fork, Wayne County, Indiana
Environmental Early Coordination

Dear Environmental Coordinator:

The Indiana Department of Transportation (INDOT) intends to proceed with the aforementioned bridge replacement in Wayne County, Indiana. This letter is part of the early coordination phase of the environmental review process. We are requesting comments from your area of expertise regarding any possible environmental effects associated with this project. **Please use the above designation number and description in your reply.** We will incorporate your comments into a study of the project's environmental impacts.

This project is being developed by the Indiana Department of Transportation (INDOT) with federal aid. The structure carries US 40 over Nolands Fork in Wayne County, Indiana See Attachment A for project location maps. The posted speed limit is 55 mph. The existing roadway has a bridge width of 62'-0" and a usable shoulder width of 5'-6". The INDOT Traffic Count Database System (TCDB) estimates 5,393 vehicles per day in 2018.

The need for this project is based on the deteriorating condition of the crossing. The bridge's arch rings have cracking with efflorescence and spalling with exposed rebar. Pilasters in the spandrel walls have heavy spalling with exposed rebar and heavy section loss. The structural evaluation rating from the bridge inspection report is a 5 (fair).

The purpose of this project is to improve the structural condition of the crossing as defined in the Bridge Inspection Report. Other goals of the project that are not central to the purpose and need include addressing safety concerns identified during project development and improving the hydraulic performance of the crossing.

The project will not change the vertical or horizontal alignment or the existing lanes and widths. There will be 0.1 acres of temporary right-of-way and 1.25 acres of permanent right-of-way that is expected to be required. This project is currently scheduled for November 2021 letting.

Nolands Fork runs beneath the bridge and is listed as impaired for Impaired Biotic Communities (IBC). The floodplain for Nolands Fork is located within the project area. A wetland is located just southwest of the project limits. An NWI-Line runs through the project area. Waters and wetlands determinations will be conducted by Corradino, LLC to identify ecological resources within the project area. There have been sightings of endangered species in the 0.5 mile search radius. This project qualifies for the application of the USFWS range-wide programmatic informal consultation for the Indiana bat and Northern long-eared bat and project information will be submitted through USFWS's Information for Planning and Consultation (IPaC) separately. The INDOT Cultural Resources Office (CRO) will investigate the areas of additional right-of-way for archaeological and historic resources for Section 106 compliance. The current land use in the project area is primarily farmland with a wooded tree line along the road.

Should we not receive your response **within thirty (30) calendar days** from the date of this letter, it will be assumed that your agency feels that there will be no adverse effects incurred as a result of the proposed project. However, should you find that an extension to the response time is necessary, a reasonable amount may be granted upon request. If you have any questions regarding this matter, please feel free to contact Bruce Mahlie of Corradino LLC, at 317-488-2363 or bmahlie@corradino.com. Thank you in advance for your input.

Sincerely,

Bruce Mahlie

Bruce Mahlie
Corradino LLC
200 South Meridian Street, Suite 330
Indianapolis, IN 46225

Attachments:
A. Project Location Maps
B. Site Photos

The following agencies received Early Coordination Letters:

U.S. Fish and Wildlife Service
Bloomington Indiana Field Office
620 South Walker Street
Bloomington, IN 47403-2121

Federal Highway Administration
Federal Office Building, Room 254
575 North Pennsylvania Street
Indianapolis, Indiana 46204

State Conservationist
Natural Resource Conservation Service
6013 Lakeside Boulevard
Indianapolis, IN 46278

Indiana Geological Survey
611 North Walnut Grove
Bloomington, IN 47405

Environmental Coordinator
Indiana Department of Natural Resources
Division of Fish and Wildlife
402 West Washington Street, Rm. W273
Indianapolis, IN 46204

IDEM
Automatic coordination website

IDEM – Groundwater Section
Electronic Submittal

Manager, Public Hearings
Indiana Department of Transportation
100 N. Senate Avenue, Rm. 642
Indianapolis, IN 46204

Field Environmental Officer
Chicago Regional Office
US Department of Housing & Urban Development
Metcalf Fed. Bldg.
77 W. Jackson Blvd. Room 2401
Chicago, IL 60604

Regional Environmental Coordinator
Midwest Regional Office
National Park Service
601 Riverfront Drive
Omaha, Nebraska 68102

U.S. Army Corps of Engineers
Louisville District
ATTN: CELRL-RDN
P.O. Box 59
Louisville, KY 40201-0059

INDOT – Ecology and Waterway Permitting
IGCN 642
100 North Senate Avenue
Indianapolis, IN 46204

Indiana Department of Transportation
Greenfield District
32 S. Broadway St.
Greenfield, IN 46140

Wayne County Engineer
Robert Warner
32 S. Broadway St.
Greenfield, IN 46140

Wayne County Board of Commissioners
401 East Main Street
Richmond, IN 47374

Wayne County SWCD
Vince Pitstick
823 S. Round Barn Rd. Suite 1
Richmond, IN 47374

Re: Early Coordination Packet Des. No. 1701344

McWilliams, Robin <robin_mcwilliams@fws.gov>

Wed 9/2/2020 12:32 PM

To: Rachel Pluckebaum <rpluckebaum@CORRADINO.com>; Kirk Roth <kroth@CORRADINO.com>

Dear Rachel,

This responds to your recent letter requesting our comments on the aforementioned project.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of 1969, the Endangered Species Act of 1973, and the U. S. Fish and Wildlife Service's Mitigation Policy.

The project is within the range of the Indiana bat (Myotis sodalis) and northern long-eared bat (Myotis septentrionalis) and should follow the new Indiana bat/northern long-eared bat programmatic consultation process, if applicable (i.e. a federal transportation nexus is established). The Service has 14 days after a "Not Likely to Adversely Affect" determination letter is generated to review the project and provide additional comments or request additional information; if you do not receive a response from us within 14 days, we have no additional comments.

Based on a review of the information you provided, the U.S. Fish and Wildlife Service has no other comments on the project as currently proposed. However, should new information arise pertaining to project plans or a revised species list be published, it will be necessary for the Federal agency to reinitiate consultation. Standard recommendations are provided below.

We appreciate the opportunity to comment at this early stage of project planning. If you have any questions about our recommendations, please call (812) 334-4261 x. 207.

Sincerely,
Robin McWilliams Munson

Standard Recommendations:

1. Do not clear trees or understory vegetation outside the construction zone boundaries. (**This restriction is not related to the "tree clearing" restriction for potential Indiana Bat habitat.)**
2. Restrict below low-water work in streams to placement of culverts, piers, pilings and/or footings, shaping of the spill slopes around the bridge abutments, and placement of riprap.
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.
3. Restrict channel work and vegetation clearing to the minimum necessary for installation of the stream crossing structure.
4. Minimize the extent of hard armor (riprap) in bank stabilization by using bioengineering techniques whenever possible. If riprap is utilized for bank stabilization, extend it below low-water elevation to provide aquatic habitat.
5. Implement temporary erosion and sediment control methods within areas of disturbed soil. All disturbed soil areas upon project completion will be vegetated following INDOT's standard specifications.
6. Avoid all work within the inundated part of the stream channel (in perennial streams and larger 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 cofferdams.

7. 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

Robin McWilliams Munson
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
620 South Walker Street
Bloomington, IN 46142
812-334-4261

Mon-Tues 8-3:30p
Wed-Thurs 8:30-3p Telework

From: Rachel Pluckebaum <rpluckebaum@CORRADINO.com>
Sent: Friday, January 17, 2020 3:40 PM
To: McWilliams, Robin <robin_mcwilliams@fws.gov>
Cc: Bruce Mahlie <bmahlie@CORRADINO.com>; mblake@indot.in.gov <mblake@indot.in.gov>
Subject: [EXTERNAL] Early Coordination Packet Des. No. 1701344

Hello,
Attached for your review is the Early Coordination Letter for DES 1701344, US 40 over Nolands Fork, 6.84 miles West of US 27, Bridge Replacement, Wayne County, Indiana. If you have comments or commitments for the project, please respond within 30 days. Thank you in advance.
Sincerely,

Rachel Pluckebaum
Corradino LLC
200 S. Meridian Street, Suite 330
Indianapolis, IN 46225
P. 317.956.5047
F. 317.488.2373
rpluckebaum@corradino.com

THIS IS NOT A PERMIT

State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife
Early Coordination/Environmental Assessment

DNR #: ER-22151 **Request Received:** January 17, 2020

Requestor: Corradino LLC
Bruce Mahlie
200 South Meridian Street, Suite 330
Indianapolis, IN 46225-1076

Project: US 40 bridge replacement over Nolands Fork; Des #1701344

County/Site info: Wayne

The Indiana Department of Natural Resources has reviewed the above referenced project per your request. Our agency offers the following comments for your information and in accordance with the National Environmental Policy Act of 1969.

If our agency has regulatory jurisdiction over the project, the recommendations contained in this letter may become requirements of any permit issued. If we do not have permitting authority, all recommendations are voluntary.

Regulatory Assessment: This proposal will require the formal approval for construction in a floodway under the Flood Control Act, IC 14-28-1. Please submit a copy of this letter with the permit application.

Natural Heritage Database: The Natural Heritage Program's data have been checked.
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.

Fish & Wildlife Comments: Avoid and minimize impacts to fish, wildlife, and botanical resources to the greatest extent possible, and compensate for impacts. The following are recommendations that address potential impacts identified in the proposed project area:

1) Crossing Structure:
For purposes of maintaining fish and wildlife passage through a crossing structure, the Environmental Unit recommends bridges rather than culverts and bottomless culverts rather than box or pipe culverts. Wide culverts are better than narrow culverts, and culverts with shorter through lengths are better than culverts with longer through lengths. If box or pipe culverts are used, the bottoms should be buried a minimum of 6" (or 20% of the culvert height/pipe diameter, whichever is greater up to a maximum of 2') below the stream bed elevation to allow a natural streambed to form within or under the crossing structure. Crossings should: span the entire channel width (a minimum of 1.2 times the OHWM width); maintain the natural stream substrate within the structure; have a minimum openness ratio (height x width / length) of 0.25; and have stream depth, channel width, and water velocities during low-flow conditions that are approximate to those in the natural stream channel. Banklines should be restored within box and pipe structures to allow for wildlife passage above the ordinary highwater mark.

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 the current conditions. When determining an appropriate bridge or culvert size, consider whether or not wildlife/vehicle collisions are a concern at the crossing site. If feasible, a larger bridge or culvert opening can allow for the movement of wildlife under the roadway in order to minimize wildlife/vehicle collisions.

2) Bank Stabilization:
Establishing vegetation along the banks is critical for stabilization and erosion control. In addition to vegetation, some other form of bank stabilization may be needed. While hard armoring alone (e.g. riprap or glacial stone) may be needed in certain instances, soft armoring and bioengineering techniques should be considered first, especially at this location as there is no riprap present. In many instances, one or more methods are necessary to increase the likelihood of vegetation establishment. Combining vegetation with most bank stabilization methods can provide additional bank protection and help reduce impacts upon fish and wildlife. Information about bioengineering techniques can be found at http://www.in.gov/legislative/iac/20120404-IR-312120154NRA.xml.pdf. Also, the following is a USDA/NRCS document that outlines many different bioengineering techniques for streambank stabilization: http://directives.sc.egov.usda.gov/17553.wba.

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). Riprap may be used only at the toe of the sideslopes up to the ordinary high water mark (OHWM). 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 Central Indiana and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion.

3) Riparian Habitat:
We recommend a mitigation plan be developed (and submitted with the permit application) for any unavoidable habitat impacts that will occur. The DNR's Floodway Habitat Mitigation guidelines (and plant lists) can be found online at: http://www.in.gov/legislative/iac/20190130-IR-312190041NRA.xml.pdf.

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).

4) Wetland Habitat:
Due to the presence or potential presence of wetland habitat on site, we recommend contacting and coordinating with the Indiana Department of Environmental Management (IDEM) 401 program and also the US Army Corps of Engineers (USACE) 404 program. Impacts to wetland habitat should be mitigated at the appropriate ratio according to the 1991 INDOT/IDNR/USFWS Memorandum of Understanding.

The additional measures listed below should be implemented to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources:
1. Revegetate all bare and disturbed areas with a mixture of grasses (excluding all varieties of tall fescue), legumes, and native shrub and hardwood tree species as soon as possible upon completion.
2. Minimize and contain within the project limits inchannel disturbance and the clearing of trees and brush.
3. Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife.
4. 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.
5. Do not excavate in the low flow area except for the placement of piers, foundations,

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State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife
Early Coordination/Environmental Assessment

and riprap, or removal of the old structure.
6. Do not construct any temporary runarounds or causeways.
7. Operate equipment used to replace the bridge from the existing roadway.
8. Use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids.
9. Do not use broken concrete as riprap.
10. Underlay the riprap with a bedding layer of well graded aggregate or a geotextile to prevent piping of soil underneath the riprap.
11. Minimize the movement of resuspended bottom sediment from the immediate project area.
12. Do not deposit or allow demolition/construction materials or debris to fall or otherwise enter the waterway.
13. Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the stream or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.
14. Seed and protect all disturbed streambanks and slopes not protected by other methods that are 3:1 or steeper with erosion control blankets that are heavy-duty, biodegradable, and net free or that use loose-woven / Leno-woven netting to minimize the entrapment and snaring of small-bodied wildlife such as snakes and turtles (follow manufacturer's recommendations for selection and installation); seed and apply mulch on all other disturbed areas.
15. Do not excavate or place fill in any riparian wetland.

Contact Staff: Christie L. Stanifer, Environ. Coordinator, Fish & Wildlife
Our agency appreciates this opportunity to be of service. Please contact the above staff member at (317) 232-4080 if we can be of further assistance.

Date: February 14, 2020

Christie L. Stanifer
Environ. Coordinator
Division of Fish and Wildlife

INDIANA
GEOLOGICAL SURVEY

Organization and Project Information

Project ID:	US 40 over Nolands Fork, 6.84 miles West of US 27
Des. ID:	1701344
Project Title:	US 40 over Nolands Fork, 6.84 miles West of US 27
Name of Organization:	Corradino, LLC
Requested by:	Rachel Pluckebaum

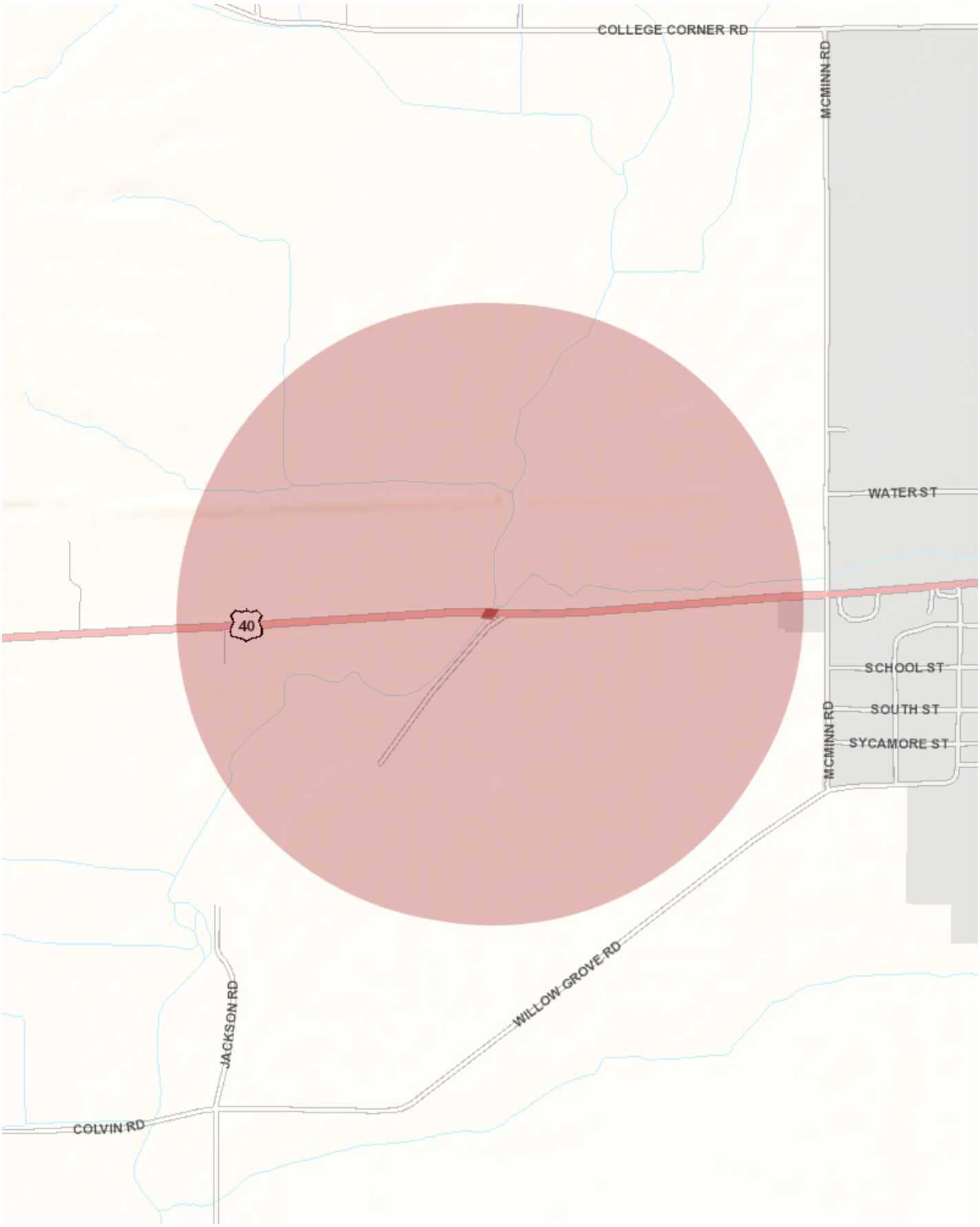
Environmental Assessment Report

1. Geological Hazards:
   - High liquefaction potential
   - Floodway
2. Mineral Resources:
   - Bedrock Resource: Low Potential
   - Sand and Gravel Resource: Low Potential
3. Active or abandoned mineral resources extraction sites:
   - None documented in the area

*All map layers from Indiana Map (maps.indiana.edu)

This information was furnished by Indiana Geological Survey
Address: 420 N. Walnut St., Bloomington, IN 47404
Email: IGSEnvir@indiana.edu
Phone: 812 855-7428

Date: January 17, 2020



USDA
United States Department of Agriculture

Natural Resources Conservation Service
Indiana State Office
6013 Lakeside Boulevard
Indianapolis, IN 46278
317-290-3200

January 22, 2020

Bruce Mahlie
Corradino, LLC
200 South Meridian Street, Suite 330
Indianapolis, Indiana 46225

Dear Mr. Mahlie:

The proposed project to replace the bridge along US 40 over Nolands Fork in Wayne County, Indiana (Des No. 1701344), as referred to in your letter received January 21, 2020, will cause a conversion of prime farmland.

The attached packet of information is for your use completing Parts VI and VII of the AD-1106. After Completion, the federal funding agency needs to forward one copy to NRCS for our records.

If you need additional information, please contact John Allen at 317-295-5859.

Sincerely,

JERRY RAYNOR
State Conservationist

Enclosures

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*		Date Of Land Evaluation Request January 21, 2020	
Name of Project Des #1701344 US 40 over Nolands Fork		Federal Agency Involved FHWA	
Proposed Land Use US 40 over Nolands Fork		County and State Wayne County, Indiana	
PART II *(To be completed by NRCS)*		Date Request Received By NRCS 1/21/2020	Person Completing Form: JRA
Does the site contain Prime, Unique, Statewide or Local Important Farmland? *(If no, the FPPA does not apply - do not complete additional parts of this form)*	YES ☑ NO ☐	Acres Irrigated	Average Farm Size 213 ac
Major Crop(s) Corn	Farmable Land In Govt. Jurisdiction Acres: 236629 % 91	Amount of Farmland As Defined in FPPA Acres: 18474 % 71	
Name of Land Evaluation System Used LESA	Name of State or Local Site Assessment System	Date Land Evaluation Returned by NRCS 1/22/2020	

PART III *(To be completed by Federal Agency)*	Alternative Site Rating			
	Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	1.25			
B. Total Acres To Be Converted Indirectly	0.1			
C. Total Acres In Site	1.35			
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	1.25			
B. Total Acres Statewide Important or Local Important Farmland	0.00			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	<0.001			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	66			
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)	65			

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)*	Maximum Points	Site A	Site B	Site C	Site D
1. Area In Non-urban Use	(15)	15			
2. Perimeter In Non-urban Use	(10)	10			
3. Percent Of Site Being Farmed	(20)	0			
4. Protection Provided By State and Local Government	(20)	0			
5. Distance From Urban Built-up Area	(15)	0			
6. Distance To Urban Support Services	(15)	10			
7. Size Of Present Farm Unit Compared To Average	(10)	0			
8. Creation Of Non-farmable Farmland	(10)	0			
9. Availability Of Farm Support Services	(5)	0			
10. On-Farm Investments	(20)	0			
11. Effects Of Conversion On Farm Support Services	(10)	0			
12. Compatibility With Existing Agricultural Use	(10)	0			
TOTAL SITE ASSESSMENT POINTS	160	35	0	0	0
PART VII ***(To be completed by Federal Agency)***					
Relative Value Of Farmland *(From Part V)*	100	65	0	0	0
Total Site Assessment *(From Part VI above or local site assessment)*	160	35	0	0	0
TOTAL POINTS ***(Total of above 2 lines)***	260	100	0	0	0

Site Selected: Site A	Date Of Selection January 21, 2020	Was A Local Site Assessment Used? YES ☐ NO ☐

Reason For Selection:

Missing farm land is unavoidable.

Name of Federal agency representative completing this form:	Date:

(See Instructions on reverse side) **Form AD-1006 (03-02)**

Indiana Department of Environmental Management

We Protect Hoosiers and Our Environment.

100 North Senate Avenue - Indianapolis, IN 46204
(800) 451-6027 - (317) 232-8603 - www.idem.IN.gov

Corradino, LLC
Rachel Pluckebaum
200 S. Meridain St.
Indianapolis , IN 46225

32 S. Broadway St.
Greenfield , IN 46140
Date

To Engineers and Consultants Proposing Roadway Construction Projects:

RE: The project is located in Wayne County, Indiana on US 40, 6.84 Miles West of US 27. The bridge carries US 40 over Nolands Fork. This three-span earth filled arch is showing significant signs of deterioration. The arch rings have a number of cracks with efflorescence. The spandrel walls have heavy spalling with exposed rebar. Due to the severity of the deterioration of the bridge, the proposed scope for this project is a full structure replacement.

This letter from the Indiana Department of Environmental Management (IDEM) serves as a standardized response to enquiries inviting IDEM comments on roadway construction, reconstruction, or other improvement projects within existing roadway corridors when the proposed scope of the project is beneath the threshold requiring a formal National Environmental Policy Act-mandated Environmental Assessment or Environmental Impact Statement. As the letter attempts to address all roadway-related environmental topics of potential concern, it is possible that not every topic addressed in the letter will be applicable to your particular roadway project.

For additional information on specific roadway-related topics of interest, please visit the appropriate Web pages cited below, many of which provide contact information for persons within the various program areas who can answer questions not fully addressed in this letter. Also please be mindful that some environmental requirements may be subject to change and so each person intending to include a copy of this letter in their project documentation packet is advised to download the most recently revised version of the letter; found at: http://www.in.gov/idem/5283.htm (http://www.in.gov/idem/5283.htm).

To ensure that all environmentally-related issues are adequately addressed, IDEM recommends that you read this letter in its entirety, and consider each of the following issues as you move forward with the planning of your proposed roadway construction, reconstruction, or improvement project:

WATER AND BIOTIC QUALITY

1. Section 404 of the Clean Water Act requires that you obtain a permit from the U.S. Army Corps of Engineers (USACE) before discharging dredged or fill materials into any wetlands or other

waters, such as rivers, lakes, streams, and ditches. Other activities regulated include the relocation, channelization, widening, or other such alteration of a stream, and the mechanical clearing (use of heavy construction equipment) of wetlands. Thus, as a project owner or sponsor, it is your responsibility to ensure that no wetlands are disturbed without the proper permit. Although you may initially refer to the U.S. Fish and Wildlife Service National Wetland Inventory maps as a means of identifying potential areas of concern, please be mindful that those maps do not depict jurisdictional wetlands regulated by the USACE or the Department of Environmental Management. A valid jurisdictional wetlands determination can only be made by the USACE, using the 1987 Wetland Delineation Manual.

USACE recommends that you have a consultant check to determine whether your project will abut, or lie within, a wetland area. To view a list of consultants that have requested to be included on a list posted by the USACE on their Web site, see USACE Permits and Public Notices (http://www.lrl.usace.army.mil/orf/default.asp) (http://www.lrl.usace.army.mil/orf /default.asp (http://www.lrl.usace.army.mil/orf/default.asp)) and then click on "Information" from the menu on the right-hand side of that page. Their "Consultant List" is the fourth entry down on the "Information" page. Please note that the USACE posts all consultants that request to appear on the list, and that inclusion of any particular consultant on the list does not represent an endorsement of that consultant by the USACE, or by IDEM.

Much of northern Indiana (Newton, Lake, Porter, LaPorte, St. Joseph, Elkhart, LaGrange, Steuben, and Dekalb counties; large portions of Jasper, Starke, Marshall, Noble, Allen, and Adams counties; and lesser portions of Benton, White, Pulaski, Kosciusko, and Wells counties) is served by the USACE District Office in Detroit (313-226-6812). The central and southern portions of the state (large portions of Benton, White, Pulaski, Koscíosko, and Wells counties; smaller portions of Jasper, Starke, Marshall , Noble, Allen, and Adams counties; and all other Indiana counties located in north-central, central, and southern Indiana) are served by the USACE Louisville District Office (502-315-6733).

Additional information on contacting these U.S. Army Corps of Engineers (USACE) District Offices, government agencies with jurisdiction over wetlands, and other water quality issues, can be found at http://www.in.gov/idem/4396.htm (http://www.in.gov/idem/4396.htm). IDEM recommends that impacts to wetlands and other water resources be avoided to the fullest extent.

2. In the event a Section 404 wetlands permit is required from the USACE, you also must obtain a Section 401 Water Quality Certification from the IDEM Office of Water Quality Wetlands Program. To learn more about the Wetlands Program, visit: http://www.in.gov/idem/4384.htm (http://www.in.gov/idem/4384.htm).

3. If the USACE determines that a wetland or other water body is isolated and not subject to Clean Water Act regulation, it is still regulated by the state of Indiana . A State Isolated Wetland permit from IDEM's Office of Water Quality (OWQ) is required for any activity that results in the discharge of dredged or fill materials into isolated wetlands. To learn more about isolated wetlands, contact the OWQ Wetlands Program at 317-233-8488.

4. If your project will involve over a 0.5 acre of wetland impact, stream relocation, or other large-scale alterations to water bodies such as the creation of a dam or a water diversion, you should

seek additional input from the OWQ Wetlands Program staff. Consult the Web at: http://www.in.gov/idem/4384.htm (http://www.in.gov/idem/4384.htm) for the appropriate staff contact to further discuss your project.

5. Work within the one-hundred year floodway of a given water body is regulated by the Department of Natural Resources, Division of Water. The Division issues permits for activities regulated under the follow statutes:
    - IC 14-26-2 Lakes Preservation Act 312 IAC 11
    - IC 14-26-5 Lowering of Ten Acre Lakes Act No related code
    - IC 14-28-1 Flood Control Act 310 IAC 6-1
    - IC 14-29-1 Navigable Waterways Act 312 IAC 6
    - IC 14-29-3 Sand and Gravel Permits Act 312 IAC 6
    - IC 14-29-4 Construction of Channels Act No related code

    For information on these Indiana (statutory) Code and Indiana Administrative Code citations, see the DNR Web site at: http://www.in.gov/dnr/water/9451.htm (http://www.in.gov/dnr/water/9451.htm) . Contact the DNR Division of Water at 317-232-4160 for further information.

    The physical disturbance of the stream and riparian vegetation, especially large trees overhanging any affected water bodies should be limited to only that which is absolutely necessary to complete the project. The shade provided by the large overhanging trees helps maintain proper stream temperatures and dissolved oxygen for aquatic life.

6. For projects involving construction activity (which includes clearing, grading, excavation and other land disturbing activities) that result in the disturbance of one (1), or more, acres of total land area, contact the Office of Water Quality – Watershed Planning Branch (317/233-1864) regarding the need for of a Rule 5 Storm Water Runoff Permit. Visit the following Web page
    - http://www.in.gov/idem/4902.htm (http://www.in.gov/idem/4902.htm)

    To obtain, and operate under, a Rule 5 permit you will first need to develop a Construction Plan (http://www.in.gov/idem/4917.htm#constreq (http://www.in.gov/idem/4917.htm#constreq)), and as described in 327 IAC 15-5-6.5 (http://www.in.gov/legislative/iac/T03270/A00150 [PDF] (http://www.in.gov/legislative/iac/T03270/A00150.PDF), pages 16 through 19). Before you may apply for a Rule 5 Permit, or begin construction, you must submit your Construction Plan to your county Soil and Water Conservation District (SWCD) (http://www.in.gov/isda/soil/contacts/map.html (http://www.in.gov/isda/soil/contacts/map.html)).

    Upon receipt of the construction plan, personnel of the SWCD or the Indiana Department of Environmental Management will review the plan to determine if it meets the requirements of 327 IAC 15-5. Plans that are deemed deficient will require re-submittal. If the plan is sufficient you will be notified and instructed to submit the verification to IDEM as part of the Rule 5 Notice of Intent (NOI) submittal. Once construction begins, staff of the SWCD or Indiana Department of Environmental Management will perform inspections of activities at the site for compliance with the regulation.

Please be mindful that approximately 149 Municipal Separate Storm Sewer System (MS4) areas are now being established by various local governmental entities throughout the state as part of the implementation of Phase II federal storm water requirements. All of these MS4 areas will eventually take responsibility for Construction Plan review, inspection, and enforcement. As these MS4 areas obtain program approval from IDEM, they will be added to a list of MS4 areas posted on the IDEM Website at: http://www.in.gov/idem/4900.htm (http://www.in.gov/idem/4900.htm).

If your project is located in an IDEM-approved MS4 area, please contact the local MS4 program about meeting their storm water requirements. Once the MS4 approves the plan, the NOI can be submitted to IDEM.

Regardless of the size of your project, or which agency you work with to meet storm water requirements, IDEM recommends that appropriate structures and techniques be utilized both during the construction phase, and after completion of the project, to minimize the impacts associated with storm water runoff. The use of appropriate planning and site development and appropriate storm water quality measures are recommended to prevent soil from leaving the construction site during active land disturbance and for post construction water quality concerns. Information and assistance regarding storm water related to construction activities are available from the Soil and Water Conservation District (SWCD) offices in each county or from IDEM.

7. For projects involving impacts to fish and botanical resources, contact the Department of Natural Resources - Division of Fish and Wildlife (317/232-4080) for addition project input.

8. For projects involving water main construction, water main extensions, and new public water supplies, contact the Office of Water Quality - Drinking Water Branch (317-308-3299) regarding the need for permits.

9. For projects involving effluent discharges to waters of the State of Indiana , contact the Office of Water Quality - Permits Branch (317-233-0468) regarding the need for a National Pollutant Discharge Elimination System (NPDES) permit.

10. For projects involving the construction of wastewater facilities and sewer lines, contact the Office of Water Quality - Permits Branch (317-232-8675) regarding the need for permits.

AIR QUALITY

The above-noted project should be designed to minimize any impact on ambient air quality in, or near, the project area. The project must comply with all federal and state air pollution regulations. Consideration should be given to the following:

1. Regarding open burning, and disposing of organic debris generated by land clearing activities; some types of open burning are allowed (http://www.in.gov/idem/4148.htm (http://www.in.gov/idem/4148.htm)) under specific conditions. You also can seek an open burning variance from IDEM.

   However, IDEM generally recommends that you take vegetative wastes to a registered yard waste composting facility or that the waste be chipped or shredded with composting on site (you

must register with IDEM if more than 2,000 pounds is to be composted; contact 317/232-0066). The finished compost can then be used as a mulch or soil amendment. You also may bury any vegetative wastes (such as leaves, twigs, branches, limbs, tree trunks and stumps) onsite, although burying large quantities of such material can lead to subsidence problems, later on.

Reasonable precautions must be taken to minimize fugitive dust emissions from construction and demolition activities. For example, wetting the area with water, constructing wind barriers, or treating dusty areas with chemical stabilizers (such as calcium chloride or several other commercial products). Dirt tracked onto paved roads from unpaved areas should be minimized.

Additionally, if construction or demolition is conducted in a wooded area where blackbirds have roosted or abandoned buildings or building sections in which pigeons or bats have roosted for 3-5 years precautionary measures should be taken to avoid an outbreak of histoplasmosis. This disease is caused by the fungus Histoplasma capsulatum, which stems from bird or bat droppings that have accumulated in one area for 3-5 years. The spores from this fungus become airborne when the area is disturbed and can cause infections over an entire community downwind of the site. The area should be wetted down prior to cleanup or demolition of the project site. For more detailed information on histoplasmosis prevention and control, please contact the Acute Disease Control Division of the Indiana State Department of Health at (317) 233-7272.

2. The U.S. EPA and the Surgeon General recommend that people not have long-term exposure to radon at levels above 4 pCi/L. (For a county-by-county map of predicted radon levels in Indiana, visit: http://www.in.gov/idem/4145.htm (http://www.in.gov/idem/4145.htm).)

   The U.S. EPA further recommends that all homes (and apartments within three stories of ground level) be tested for radon. If in-home radon levels are determined to be 4 pCi/L, or higher, EPA recommends a follow-up test. If the second test confirms that radon levels are 4 pCi/L, or higher, EPA recommends the installation of radon-reduction measures. (For a list of qualified radon testers and radon mitigation (or reduction) specialists visit: http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf (http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf).) It also is recommended that radon reduction measures be built into all new homes, particularly in areas like Indiana that have moderate to high predicted radon levels.

   To learn more about radon, radon risks, and ways to reduce exposure visit: http://www.in.gov/isdh/regsvcs/radhealth/radon.htm (http://www.in.gov/isdh/regsvcs/radhealth/radon.htm), http://www.in.gov/idem/4145.htm (http://www.in.gov/idem/4145.htm), or http://www.epa.gov/radon/index.html (http://www.epa.gov/radon/index.html).

3. With respect to asbestos removal: all facilities slated for renovation or demolition (except residential buildings that have (4) four or fewer dwelling units and which will not be used for commercial purposes) must be inspected by an Indiana-licensed asbestos inspector prior to the commencement of any renovation or demolition activities. If regulated asbestos-containing material (RACM) that may become airborne is found, any subsequent demolition, renovation, or

asbestos removal activities must be performed in accordance with the proper notification and emission control requirements.

If no asbestos is found where a renovation activity will occur, or if the renovation involves removal of less than 260 linear feet of RACM off of pipes, less than 160 square feet of RACM off of other facility components, or less than 35 cubic feet of RACM off of all facility components, the owner or operator of the project does not need to notify IDEM before beginning the renovation activity.

For questions on asbestos demolition and renovation activities, you can also call IDEM's Lead/Asbestos section at 1-888-574-8150.

However, in all cases where a demolition activity will occur (even if no asbestos is found), the owner or operator must still notify IDEM 10 working days prior to the demolition, using the form found at http://www.in.gov/icpr/webfile/formsdiv/44593.pdf (http://www.in.gov/icpr/webfile/formsdiv/44593.pdf).

Anyone submitting a renovation/demolition notification form will be billed a notification fee based upon the amount of friable asbestos containing material to be removed or demolished. Projects that involve the removal of more than 2,600 linear feet of friable asbestos containing materials on pipes, or 1,600 square feet or 400 cubic feet of friable asbestos containing material on other facility components, will be billed a fee of $150 per project; projects below these amounts will be billed a fee of $50 per project. All notification remitters will be billed on a quarterly basis.

For more information about IDEM policy regarding asbestos removal and disposal, visit: http://www.in.gov/idem/4983.htm (http://www.in.gov/idem/4983.htm).

4. With respect to lead-based paint removal: IDEM encourages all efforts to minimize human exposure to lead-based paint chips and dust. IDEM is particularly concerned that young children exposed to lead can suffer from learning disabilities. Although lead-based paint abatement efforts are not mandatory, any abatement that is conducted within housing built before January 1, 1978 , or a child-occupied facility is required to comply with all lead-based paint work practice standards, licensing and notification requirements. For more information about lead-based paint removal visit: http://www.in.gov/isdh/19131.htm (http://www.in.gov/isdh/19131.htm).

5. Ensure that asphalt paving plants are permitted and operate properly. The use of cutback asphalt, or asphalt emulsion containing more than seven percent (7%) oil distillate, is prohibited during the months April through October. See 326 IAC 8-5-2 , Asphalt Paving Rule (http://www.ai.org/legislative/iac/T03260/A00080.PDF (http://www.ai.org/legislative/iac/T03260/A00080.PDF)).

6. If your project involves the construction of a new source of air emissions or the modification of an existing source of air emissions or air pollution control equipment, it will need to be reviewed by the IDEM Office of Air Quality (OAQ). A registration or permit may be required under 326 IAC 2 (View at: www.ai.org/legislative/iac/t03260/a00020.pdf (http://www.ai.org/legislative/iac/t03260/a00020.pdf).) New sources that use or emit hazardous air pollutants may be subject to Section 112 of the Clean Air Act and corresponding state air regulations governing hazardous air pollutants.

7. For more information on air permits visit: http://www.in.gov/idem/4223.htm (http://www.in.gov/idem/4223.htm), or to initiate the IDEM air permitting process, please contact the Office of Air Quality Permit Reviewer of the Day at (317) 233-0178 or OAMPROD atdem.state.in.us.

LAND QUALITY

In order to maintain compliance with all applicable laws regarding contamination and/or proper waste disposal, IDEM recommends that:

1. If the site is found to contain any areas used to dispose of solid or hazardous waste, you need to contact the Office of Land Quality (OLQ)at 317-308-3103.

2. All solid wastes generated by the project, or removed from the project site, need to be taken to a properly permitted solid waste processing or disposal facility. For more information, visit http://www.in.gov/idem/4998.htm (http://www.in.gov/idem/4998.htm).

3. If any contaminated soils are discovered during this project, they may be subject to disposal as hazardous waste. Please contact the OLQ at 317-308-3103 to obtain information on proper disposal procedures.

4. If PCBs are found at this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding management of any PCB wastes from this site.

5. If there are any asbestos disposal issues related to this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding the management of asbestos wastes (Asbestos removal is addressed above, under Air Quality).

6. If the project involves the installation or removal of an underground storage tank, or involves contamination from an underground storage tank, you must contact the IDEM Underground Storage Tank program at 317/308-3039. See: http://www.in.gov/idem/4999.htm (http://www.in.gov/idem/4999.htm).

FINAL REMARKS

Should you need to obtain any environmental permits in association with this proposed project, please be mindful that IC 13-15-8 requires that you notify all adjoining property owners and/or occupants within ten days your submittal of each permit application. However, if you are seeking multiple permits, you can still meet the notification requirement with a single notice if all required permit applications are submitted with the same ten day period.

Should the scope of the proposed project be expanded to the extent that a National Environmental Policy Act Environmental Assessment (EA) or Environmental Impact Statement (EIS) is required, IDEM will actively participate in any early interagency coordination review of the project.

Meanwhile, please note that this letter does not constitute a permit, license, endorsement or any other form of approval on the part of the Indiana Department of Environmental Management regarding any project for which a copy of this letter is used. Also note that is it the responsibility of the project engineer or consultant using this letter to ensure that the most current draft of this document, which is located at http://www.in.gov/idem/5284.htm (http://www.in.gov/idem/5284.htm), is used.

Signature(s) of the Applicant

I acknowledge that the following proposed roadway project will be financed in part, or in whole, by public monies.

Project Description

The project is located in Wayne County, Indiana on US 40, 6.84 Miles West of US 27. The bridge carries US 40 over Nolands Fork. This three-span earth filled arch is showing significant signs of deterioration. The arch rings have a number of cracks with efflorescence. The spandrel walls have heavy spalling with exposed rebar. Due to the severity of the deterioration of the bridge, the proposed scope for this project is a full structure replacement.

With my signature, I do hereby affirm that I have read the letter from the Indiana Department of Environment that appears directly above. In addition, I understand that in order to complete that project in which I am interested, with a minimum of impact to the environment, I must consider all the issues addressed in the aforementioned letter, and further, that I must obtain any required permits.

Date: 03/12/2020

Signature of the INDOT
Project Engineer or Other Responsible Agent
Mark Blake

Date: 2/25/20

Signature of the
For Hire Consultant Rachel Pluckebaum

Rachel Pluckebaum

United States Department of the Interior
Fish and Wildlife Service

Indiana Field Office (ES)
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273

April 8, 2020

Karstin Carmany-George
Federal Highway Administration
575 N. Pennsylvania St. Room 254
Indianapolis, Indiana 46204
(sent via email)

TAILS: 03E12000-2018-SLI-0823

RE: US 40 over Noland's Fork, Wayne County, IN (Des. 1701344)

Dear Ms. Allen:

The U.S. Fish and Wildlife Service (Service) is responding to your request dated March 30, 2020 to verify that the proposed US 40 over Noland's Fork bridge replacement (the Project) may rely on the February 5, 2018, Programmatic Biological Opinion (BO) for federally funded or approved transportation projects that may affect the federally listed endangered Indiana bat (*Myotis sodalis*) and/or federally listed threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*). We received your request and the associated LAA Consistency Letter on March 31, 2020.

This letter provides the Service's response as to whether the Federal Highway Administration may rely on the BO to comply with Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) for the Project's effects to the Indiana bat and/or NLEB.

The Federal Highway Administration has determined that the Project is *likely to adversely affect* the NLEB because tree removal will occur within documented NLEB roosting/foraging habitat or travel corridors outside the active season and will be done ≤100 feet from the existing road/ rail surface.

The Federal Highway Administration has also determined that the Project is *not likely to adversely affect* the Indiana bat because the tree removal/trimming will occur outside of the Indiana bat's active season, be greater than 0.5 miles from the nearest hibernaculum, is less than 100 feet from the existing road/rail surface, includes clear demarcation of the trees that are to be

removed, and does not alter documented roosts and/or surrounding summer habitat within 0.25 miles of a documented roost.

Conclusion

The Service has reviewed the effects of the proposed Project, which includes the Federal Highway Administration's commitment to implement any applicable mitigation measures as indicated on the LAA Consistency Letter. We confirm that the proposed Project's effects are consistent with those analyzed in the BO. The Service has determined that projects consistent with the conservation measures and scope of the program analyzed in the BO are not likely to jeopardize the continued existence of the Indiana bat and/or the NLEB. In coordination with your agency and the other sponsoring Federal Transportation Agencies, the Service will reevaluate this conclusion annually in light of any new pertinent information under the adaptive management provisions of the BO.7

Incidental Take

Northern Long-eared Bat

The Service anticipates that tree removal associated with the Project will cause incidental take of NLEBs (up to 2.5 acres of trees cleared in the non-active season, less than 100 feet from the edge of pavement in documented habitat). However, the Project is consistent with the BO, and such projects will not cause take of NLEB that is prohibited under the ESA section 4(d) rule for this species (50 CFR §17.40(o)). Therefore, the incidental take of NLEBs resulting from the Project does not require exemption from the Service.

Reporting Dead or Injured Bats

The Federal Highway Administration, its State/Local cooperators, and any contractors must take care when handling dead or injured Indiana bats and/or NLEBs, or any other federally listed species that are found at the Project site to preserve biological material in the best possible condition and to protect the handler from exposure to diseases, such as rabies. Project personnel are responsible for ensuring that any evidence about determining the cause of death or injury is not unnecessarily disturbed. Reporting the discovery of dead or injured listed species is required in all cases to enable the Service to determine whether the level of incidental take exempted by this BO is exceeded, and to ensure that the terms and conditions are appropriate and effective. Parties finding a dead, injured, or sick specimen of any endangered or threatened species must promptly notify this Service Office.

Reinitiation Notice

This letter concludes consultation for the Project, which qualifies for inclusion in the BO issued to the Federal Transportation Agencies. To maintain this inclusion, a reinitiation of this Project-level consultation is required where the Federal Highway Administration discretionary involvement or control over the Project has been retained (or is authorized by law) and if:

1. the amount or extent of incidental take of the northern long-eared bat increases;

2. new information reveals that the Project may affect listed species or critical habitat in a manner or to an extent not considered in the BO or in the Project information that supported Service concurrence with NLAA determinations;
3. the Project is subsequently modified in a manner that causes an effect to listed species or designated critical habitat not considered in the BO or in the Project information that supported Service concurrence with NLAA determinations; or
4. a new species is listed or critical habitat designated that the Project may affect.

In instances where the amount or extent of incidental take is increased the Federal Highway Administration is required to immediately request a reinitiation of this Project-level consultation.

We appreciate your continued efforts to ensure that this Project is fully consistent with all applicable provisions of the BO. If you have any questions regarding our response or if you need additional information, please contact Robin McWilliams Munson at 812-334-4261 or Robin_Mcwilliams@fws.gov.

Sincerely,

Scott Pruitt
Field Supervisor

Cc: (via email)
Laura Hilden, INDOT, Indianapolis, IN
Meghan Hinkle, INDOT, Indianapolis, IN
Kirk Roth, Corradino LLC, Indianapolis, IN
Ibat ILF coordinator – to be sent by INDOT at later date

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273
http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html

In Reply Refer To: July 24, 2020
Consultation Code: 03E12000-2020-SLI-0823
Event Code: 03E12000-2020-E-09057
Project Name: DES 1701344 US 40 over Nolands Fork, 6.84 miles West of US 27

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The attached species list identifies any federally threatened, endangered, proposed and candidate species that may occur within the boundary of your proposed project or may be affected by your proposed project. The list also includes designated critical habitat if present within your proposed project area or affected by your project. This list is provided to you as the initial step of the consultation process required under section 7(c) of the Endangered Species Act, also referred to as Section 7 Consultation.

Section 7 of the Endangered Species Act of 1973 requires that actions authorized, funded, or carried out by Federal agencies not jeopardize federally threatened or endangered species or adversely modify designated critical habitat. To fulfill this mandate, Federal agencies (or their designated non-federal representative) must consult with the Service if they determine their project “may affect” listed species or critical habitat.

Under 50 CFR 402.12(e) (the regulations that implement Section 7 of the Endangered Species Act) the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally. You may verify the list by visiting the ECOS-IPaC website http://ecos.fws.gov/ipac/ at regular intervals during project planning and implementation and completing the same process you used to receive the attached list. As an alternative, you may contact this Ecological Services Field Office for updates.

Please use the species list provided and visit the U.S. Fish and Wildlife Service's Region 3 Section 7 Technical Assistance website at - http://www.fws.gov/midwest/endangered/section7/s7process/index.html. This website contains step-by-step instructions which will help you

determine if your project will have an adverse effect on listed species and will help lead you through the Section 7 process.

For all **wind energy projects** and **projects that include installing towers that use guy wires or are over 200 feet in height**, please contact this field office directly for assistance, even if no federally listed plants, animals or critical habitat are present within your proposed project or may be affected by your proposed project.

Although no longer protected under the Endangered Species Act, be aware that bald eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*) and Migratory Bird Treaty Act *(*16 U.S.C. 703 *et seq*), as are golden eagles. Projects affecting these species may require measures to avoid harming eagles or may require a permit. If your project is near an eagle nest or winter roost area, see our Eagle Permits website at http://www.fws.gov/midwest/midwestbird/EaglePermits/index.html to help you determine if you can avoid impacting eagles or if a permit may be necessary.

We appreciate your concern for threatened and endangered species. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121
(812) 334-4261

Project Summary

Consultation Code: 03E12000-2020-SLI-0823

Event Code: 03E12000-2020-E-09057

Project Name: DES 1701344 US 40 over Nolands Fork, 6.84 miles West of US 27

Project Type: TRANSPORTATION

Project Description: The project is located in Wayne County, Indiana on US 40, 6.84 Miles West of US 27 at structure #040-89-00217 C and NBI# 014140. The bridge carries US 40 over Nolands Fork. The proposed scope for this project is to replace the existing structure with a three-span concrete beam bridge. At this time, tree clearing amounts are unknown but expected to be less than 2.5 acres. Construction is expected during the spring of 2022. Coordination with USFWS on March 10, 2020 indicated the presence of a Northern Long-eared Bat roost site within 0.25 mile of the project area. The most recent bridge inspection did not find evidence of bat use. No permanent lighting will be installed and it is unknown whether temporary lighting will be needed, thus temporary lighting will be assumed.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/39.81695036808398N85.01577149618332W

Counties: Wayne, IN

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/1/office/31440.pdf	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ Incidental take of the NLEB is not prohibited here. Federal agencies may consult using the 4(d) rule streamlined process. Transportation projects may consult using the programmatic process. See www.fws.gov/midwest/endangered/mammals/nleb/index.html Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273
http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html

IPaC Record Locator: 184-21007111 March 30, 2020

Subject: Consistency letter for the 'DES 1701344 US 40 over Nolands Fork, 6.84 miles West of US 27' project (TAILS 03E12000-2020-R-0823) under the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request to verify that the **DES 1701344 US 40 over Nolands Fork, 6.84 miles West of US 27** (Proposed Action) may rely on the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 *et seq.*).

Based on the information you provided (Project Description shown below), you have determined that the Proposed Action is within the scope and adheres to the criteria of the PBO, including the adoption of applicable avoidance and minimization measures, and may affect, and is likely to adversely affect the endangered Indiana bat (*Myotis sodalis*) and/or the threatened Northern long-eared bat (*Myotis septentrionalis*). Consultation with the Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) is required.

This "may affect - likely to adversely affect" determination becomes effective when the lead Federal action agency or designated non-federal representative requests the Service rely on the PBO to satisfy the agency's consultation requirements for this project. Please provide this consistency letter to the lead Federal action agency or its designated non-federal representative for review, and as the agency deems appropriate, transmit to this Service Office for verification that the project is consistent with the PBO.

This Service Office will respond by letter to the requesting Federal action agency or designated non-federal representative within 30 calendar days to:

- verify that the Proposed Action is consistent with the scope of actions covered under the PBO;
- verify that all applicable avoidance, minimization, and compensation measures are included in the action proposal;
- identify any action-specific monitoring and reporting requirements, consistent with the monitoring and reporting requirements of the PBO, and
- identify anticipated incidental take.

ESA Section 7 compliance for this Proposed Action is not complete until the Federal action agency or its designated non-federal representative receives a verification letter from the Service.

For Proposed Actions that include bridge/structure removal, replacement, and/or maintenance activities: If your initial bridge/structure assessments failed to detect Indiana bats, but you later detect bats during construction, please submit the Post Assessment Discovery of Bats at Bridge/Structure Form (User Guide Appendix E) to this Service Office. In these instances, potential incidental take of Indiana bats may be exempted provided that the take is reported to the Service.

If the Proposed Action may affect any other federally-listed or proposed species and/or designated critical habitat, additional consultation between the lead Federal action agency and this Service Office is required. If the proposed action has the potential to take bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act may also be required. In either of these circumstances, please advise the lead Federal action agency accordingly.

Project Description

The following project name and description was collected in IPaC as part of the endangered species review process.

Name

DES 1701344 US 40 over Nolands Fork, 6.84 miles West of US 27

Description

The project is located in Wayne County, Indiana on US 40, 6.84 Miles West of US 27 at structure #040-89-00217 C and NBI# 014140. The bridge carries US 40 over Nolands Fork. The proposed scope for this project is to replace the existing structure with a three-span concrete beam bridge. At this time, tree clearing amounts are unknown but expected to be less than 2.5 acres. Construction is expected during the spring of 2022. Coordination with USFWS on March 10, 2020 indicated the presence of a Northern Long-eared Bat roost site within 0.25 mile of the project area. The most recent bridge inspection did not find evidence of bat use. No permanent lighting will be installed and it is unknown whether temporary lighting will be needed, thus temporary lighting will be assumed.

Determination Key Result

Based on your answers provided, this project is likely to adversely affect the endangered Indiana bat and/or the threatened Northern long-eared bat. Therefore, consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required. However, also based on your answers provided, this project may rely on the conclusion and Incidental Take Statement provided in the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

Qualification Interview

1. Is the project within the range of the Indiana bat[1]?

   [1] See Indiana bat species profile

   Automatically answered
   Yes

2. Is the project within the range of the Northern long-eared bat[1]?

   [1] See Northern long-eared bat species profile

   Automatically answered
   Yes

3. Which Federal Agency is the lead for the action?
   A) Federal Highway Administration (FHWA)

4. Are *all* project activities limited to non-construction[1] activities only? (examples of non-construction activities include: bridge/abandoned structure assessments, surveys, planning and technical studies, property inspections, and property sales)

   [1] Construction refers to activities involving ground disturbance, percussive noise, and/or lighting.

   No

5. Does the project include *any* activities that are **greater than** 300 feet from existing road/rail surfaces[1]?

   [1] Road surface is defined as the actively used [e.g. motorized vehicles] driving surface and shoulders [may be pavement, gravel, etc.] and rail surface is defined as the edge of the actively used rail ballast.

   No

6. Does the project include *any* activities **within** 0.5 miles of a known Indiana bat and/or NLEB hibernaculum[1]?

   [1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

   No

7. Is the project located **within** a karst area?

   No

8. Is there *any* suitable[1] summer habitat for Indiana Bat or NLEB **within** the project action area[2]? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

   [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

   [2] The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR Section 402.02). Further clarification is provided by the national consultation FAQs.

   Yes

9. Will the project remove *any* suitable summer habitat[1] and/or remove/trim any existing trees **within** suitable summer habitat?

   [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

   Yes

10. Will the project clear more than 20 acres of suitable habitat per 5-mile section of road/rail?

    No

11. Have presence/probable absence (P/A) summer surveys[1][2] been conducted[3][4] **within** the suitable habitat located within your project action area?

    [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

    [2] Presence/probable absence summer surveys conducted within the fall swarming/spring emergence home range of a documented Indiana bat hibernaculum (contact local Service Field Office for appropriate distance from hibernacula) that result in a negative finding requires additional consultation with the local Service Field Office to determine if clearing of forested habitat is appropriate and/or if seasonal clearing restrictions are needed to avoid and minimize potential adverse effects on fall swarming and spring emerging Indiana bats.

    [3] For projects within the range of either the Indiana bat or NLEB in which suitable habitat is present, and no bat surveys have been conducted, the transportation agency will assume presence of the appropriate species. This assumption of presence should be based upon the presence of suitable habitat and the capability of bats to occupy it because of their mobility.

    [4] Negative presence/probable absence survey results obtained using the summer survey guidance are valid for a minimum of two years from the completion of the survey unless new information (e.g., other nearby surveys) suggest otherwise.

    No

12. Does the project include activities **within documented Indiana bat habitat**[1][2]?

    [1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

    [2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

    No

13. Will the removal or trimming of habitat or trees occur **within** suitable but **undocumented Indiana bat** roosting/foraging habitat or travel corridors?

    Yes

14. What time of year will the removal or trimming of habitat or trees **within** suitable but **undocumented Indiana bat** roosting/foraging habitat or travel corridors occur[1]?

    [1] Coordinate with the local Service Field Office for appropriate dates.

    B) During the inactive season

15. Does the project include activities **within documented NLEB habitat**[1][2]?

    [1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

    [2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

    Yes

16. Will the removal or trimming of habitat or trees occur **within documented NLEB** roosting/foraging habitat[1] or travel corridors[2]?

    [1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

    [2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

    Yes

17. What time of year will the removal or trimming of habitat or trees **within documented NLEB** roosting/foraging habitat or travel corridors occur[1]?

    [1] Coordinate with the local Service Field Office for appropriate dates.

    B) During the inactive season

18. Will the removal or trimming of habitat or trees occur **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors?

    No

19. Will *any* tree trimming or removal occur **within** 100 feet of existing road/rail surfaces?

    Yes

20. Will the tree removal alter *any* **documented** NLEB roosts and/or alter any surrounding summer habitat **within** 0.25 mile of a documented roost?

    Yes

21. Will *any* tree trimming or removal occur **between** 100-300 feet of existing road/rail surfaces?

    No

22. Are *all* trees that are being removed clearly demarcated?

    Yes

23. Will the removal of habitat or the removal/trimming of trees include installing new or replacing existing **permanent** lighting?

    No

24. Does the project include wetland or stream protection activities associated with compensatory wetland mitigation?

    No

25. Does the project include slash pile burning?

    No

26. Does the project include *any* bridge removal, replacement, and/or maintenance activities (e.g., any bridge repair, retrofit, maintenance, and/or rehabilitation work)?

    Yes

27. Is there *any* suitable habitat[1] for Indiana bat or NLEB **within** 1,000 feet of the bridge? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

    [1] See the Service's current summer survey guidance for our current definitions of suitable habitat.

    Yes

28. Has a bridge assessment[1] been conducted **within** the last 24 months[2] to determine if the bridge is being used by bats?

    [1] See User Guide Appendix D for bridge/structure assessment guidance

    [2] Assessments must be completed no more than 2 years prior to conducting any work below the deck surface on all bridges that meet the physical characteristics described in the Programmatic Consultation, regardless of whether assessments have been conducted in the past. Due to the transitory nature of bat use, a negative result in one year does not guarantee that bats will not use that bridge/structure in subsequent years.

    Yes

    SUBMITTED DOCUMENTS

    - *1701344 2019 Inspection report.pdf https://ecos.fws.gov/ipac/project/UW6F6MATBVBGPCOVIYTX7CRVUA/projectDocuments/20298053*

29. Did the bridge assessment detect *any* signs of Indiana bats and/or NLEBs roosting in/under the bridge (bats, guano, etc.)[1]?

    [1] If bridge assessment detects signs of *any* species of bats, coordination with the local FWS office is needed to identify potential threatened or endangered bat species. Additional studies may be undertaken to try to identify which bat species may be utilizing the bridge prior to allowing *any* work to proceed.

    Note: There is a small chance bridge assessments for bat occupancy do not detect bats. Should a small number of bats be observed roosting on a bridge just prior to or during construction, such that take is likely to occur or does occur in the form of harassment, injury or death, the PBO requires the action agency to report the take. Report all unanticipated take within 2 working days of the incident to the USFWS. Construction activities may continue without delay provided the take is reported to the USFWS and is limited to 5 bats per project.

    No

30. Will the bridge removal, replacement, and/or maintenance activities include installing new or replacing existing **permanent** lighting?

    No

31. Does the project include the removal, replacement, and/or maintenance of *any* structure other than a bridge? (e.g., rest areas, offices, sheds, outbuildings, barns, parking garages, etc.)

    No

32. Will the project involve the use of **temporary** lighting *during* the active season?

    Yes

33. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **temporary** lighting will be used?

    Yes

34. Will the project install new or replace existing **permanent** lighting?

    No

35. Does the project include percussives or other activities (**not including tree removal/ trimming or bridge/structure work**) that will increase noise levels above existing traffic/ background levels?

    No

36. Are *all* project activities that are **not associated with** habitat removal, tree removal/ trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives, limited to actions that DO NOT cause any additional stressors to the bat species?

    Examples: lining roadways, unlighted signage , rail road crossing signals, signal lighting, and minor road repair such as asphalt fill of potholes, etc.

    Yes

37. Will the project raise the road profile **above the tree canopy**?

    No

38. Are the project activities that are not associated with habitat removal, tree removal/ trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives consistent with a No Effect determination in this key?

    Automatically answered
    Yes, other project activities are limited to actions that DO NOT cause any additional stressors to the bat species as described in the BA/BO

39. Is the habitat removal portion of this project consistent with a Likely to Adversely Affect determination in this key?

    Automatically answered
    Yes, because tree removal that occurs within documented NLEB roosting/foraging habitat or travel corridors outside the active season will be done ≤300 feet from the existing road/ rail surface

40. Is the habitat removal portion of this project consistent with a Not Likely to Adversely Affect determination in this key?

    Automatically answered
    Yes, because the tree removal/trimming that occurs outside of the Indiana bat's active season occurs greater than 0.5 miles from the nearest hibernaculum, is less than 100 feet from the existing road/rail surface, includes clear demarcation of the trees that are to be removed, and does not alter documented roosts and/or surrounding summer habitat within 0.25 miles of a documented roost.

41. Is the bridge removal, replacement, or maintenance activities portion of this project consistent with a No Effect determination in this key?

    Automatically answered
    Yes, because the bridge has been assessed using the criteria documented in the BA and no signs of bats were detected

42. **General AMM 1**
    Will the project 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 Avoidance and Minimization Measures?

    Yes

43. **Tree Removal AMM 1**
    Can *all* phases/aspects of the project (e.g., temporary work areas, alignments) be modified, to the extent practicable, to avoid tree removal[1] in excess of what is required to implement the project safely?

    Note: Tree Removal AMM 1 is a minimization measure, the full implementation of which may not always be practicable. Projects may still be NLAA as long as Tree Removal AMMs 2, 3, and 4 are implemented and LAA as long as Tree Removal AMMs 3, 5, 6, and 7 are implemented.

    [1] The word “trees” as used in the AMMs refers to trees that are suitable habitat for each species within their range. See the USFWS’ current summer survey guidance for our latest definitions of suitable habitat.

    Yes

44. **Tree Removal AMM 3**
    Can tree removal be 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)?

    Yes

45. **Lighting AMM 1**
    Will *all* **temporary** lighting be directed away from suitable habitat during the active season?

    Yes

46. For Indiana bat, if applicable, compensatory mitigation measures are required to offset adverse effects on the species (see Section 2.10 of the BA). Please select the mechanism in which compensatory mitigation will be implemented:

    6. Not Applicable

Project Questionnaire

1. Have you made a No Effect determination for *all* other species indicated on the FWS IPaC generated species list?

   N/A

2. Have you made a May Affect determination for *any* other species on the FWS IPaC generated species list?

   N/A

3. How many acres[1] of trees are proposed for removal between 0-100 feet of the existing road/rail surface?

   [1] If described as number of trees, multiply by 0.09 to convert to acreage and enter that number.

   2.5

4. **Please verify:**
   All tree removal will occur greater than 0.5 mile from any hibernaculum.

   Yes, I verify that all tree removal will occur greater than 0.5 miles from any hibernaculum.

5. Is the project location 0-100 feet from the edge of existing road/rail surface?

   Yes

6. Is the project location 100-300 feet from the edge of existing road/rail surface?

   No

7. **Please verify:**
   No documented Indiana bat roosts or surrounding summer habitat within 0.25 mile of documented roosts will be impacted between May 1 and July 31.

Yes, I verify that no documented Indiana bat roosts or surrounding summer habitat within 0.25 mile of documented roosts will be impacted during this period.

8. **Please verify:**
   No documented NLEB roosts or surrounding summer habitat within 150 feet of documented roosts will be impacted between June 1 and July 31.

   Yes, I verify that no documented NLEB roosts or surrounding summer habitat within 150 feet of documented roosts will be impacted during this period.

9. Please describe the proposed bridge work:
   The project is located in Wayne County, US Route 40, 6.84 miles west of US 27. The bridge crosses Noland's Fork. The proposed scope for this project is to replace the existing structure with a three-span concrete beam bridge. At this time, tree clearing amounts are unknown but expected to be less than 2.5 acres.

10. Please state the timing of all proposed bridge work:
    Spring 2022.

11. Please enter the date of the bridge assessment:
    11/14/18

12. You have indicated that the following Avoidance and Minimization Measures (AMMs) will be implemented as part of the proposed project:
    - *General AMM 1*
    - *Lighting AMM 1*
    - *Tree Removal AMM 1*
    - *Tree Removal AMM 3*

Avoidance And Minimization Measures (AMMs)

This determination key result includes the committment to implement the following Avoidance and Minimization Measures (AMMs):

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.

LIGHTING AMM 1

Direct temporary lighting away from suitable habitat during the active season.

TREE REMOVAL AMM 1

Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal.

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).

Determination Key Description: FHWA, FRA, FTA Programmatic Consultation For Transportation Projects Affecting NLEB Or Indiana Bat

This key was last updated in IPaC on December 02, 2019. Keys are subject to periodic revision.

This decision key is intended for projects/activities funded or authorized by the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and/or Federal Transit Administration (FTA), which may require consultation with the U.S. Fish and Wildlife Service (Service) under Section 7 of the Endangered Species Act (ESA) for the endangered **Indiana bat** (*Myotis sodalis*) and the threatened **Northern long-eared bat** (NLEB) (*Myotis septentrionalis*).

This decision key should only be used to verify project applicability with the Service's February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects. The programmatic biological opinion covers limited transportation activities that may affect either bat species, and addresses situations that are both likely and not likely to adversely affect either bat species. This decision key will assist in identifying the effect of a specific project/activity and applicability of the programmatic consultation. The programmatic biological opinion is not intended to cover all types of transportation actions. Activities outside the scope of the programmatic biological opinion, or that may affect ESA-listed species other than the Indiana bat or NLEB, or any designated critical habitat, may require additional ESA Section 7 consultation.

APPENDIX D

Section 106 of the NHPA

DES 1701344

Minor Projects PA Project Assessment Form

Date: 4/3/2020

Project Designation Number: 1701344

Route Number: US 40

Project Description: Bridge Project, 6.84 miles west of US 27

The project is located in Wayne County, Indiana on US 40, 6.84 miles west of US 27. The bridge carries US 40 over Nolands Fork. This three-span earth filled arch is showing significant signs of deterioration. The arch rings have a number of cracks with efflorescence. The spandrel walls have heavy spalling with exposed rebar.

The proposed project is a bridge replacement. The existing reinforced concrete arch will be removed and replaced with a new three span, precast, prestressed, concrete bulb tee beam bridge. As part of the work, new spill slopes will be constructed up to the new abutment berm. Approximately 200 feet of new full depth pavement will be placed at either end of the new bridge ends. Incidental work will include updating the guardrail runs and milling to tie the new pavement into the existing. Right-of-way (ROW) will be required for this project: 0.3 acre of temporary ROW and 1.25 acres of permanent ROW.

Feature crossed (if applicable): Nolands Fork

Township: Center Township

City/County: Wayne County

Information reviewed (please check all that apply):

☑ General project location map ☑ USGS map ☑ Aerial photograph ☑ Interim Report

☐ Written description of project area ☐ General project area photos ☑ Soil survey data

☐ Previously completed historic property reports ☐ Previously completed archaeology reports

☑ Bridge Inspection Information ☑ SHAARD ☑ SHAARD GIS ☑ Streetview Imagery

Other (please specify): Indiana Historic Building, Bridges, and Cemeteries Map (IHBBCM); County GIS data (accessed via https://beacon.schneidercorp.com/); Bridge Inspection Application System (BIAS); 2010 INDOT-sponsored *Historic Bridge Inventory* (HBI); project information provided by Corradino, LLC dated 3/18/2020 and on file at INDOT-CRO.

Does the project appear to fall under the Minor Projects PA? yes ☒ no ☐

If yes, please specify category and number (applicable conditions are highlighted):

A-4. Roadway work associated with surface replacement, reconstruction, rehabilitation, or resurfacing projects, including overlays, shoulder treatments, pavement repair, seal coating, pavement grinding, and pavement marking within previously disturbed soils where replacement, repair, or installation of curbs, curb ramps or sidewalks will not be required.

A-6. Repair, replacement, or upgrade of existing safety appurtenances such as guardrails, barriers, glare screens, and crash attenuators in previously disturbed soils.

B-12. 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 the following conditions ***[BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied]***:

Condition A (Archaeological Resources)

One of the two conditions listed below must be met *(EITHER Condition i or Condition ii must be satisfied)*:

i. Work occurs in previously disturbed soils; *OR*

ii. Work occurs in undisturbed soils and an archaeological investigation conducted by the applicant and reviewed by INDOT Cultural Resources Office determines that no National Register-listed or potentially National Register-eligible archaeological resources are present within the project area. If the archaeological investigation locates National Register-listed or potentially National Register-eligible archaeological resources, then full Section 106 review will be required. Copies of any archaeological reports prepared for the project will be provided to the DHPA and any archaeological site form information will be entered directly into the SHAARD by the applicant. The archaeological reports will also be available for viewing (by Tribes only) on INSCOPE**.**

Condition B (Above-Ground Resources)

The conditions listed below must be met ***(BOTH Condition i and Condition ii must be satisfied)***

i. Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource; *AND*

ii. With regard to the subject bridge, at least one of the conditions listed below is satisfied *(AT LEAST one of the conditions a, b or c, must be fulfilled)*:

   a. The latest Historic Bridge Inventory identified the bridge as non-historic (see http://www.in.gov/indot/2531.htm);

   b. The bridge was built after 1945, and is a common type as defined in Section V. of the *Program Comment Issued for Streamlining Section 106 Review for Actions Affecting Post-1945 Concrete and Steel Bridges* issued by the Advisory Council on Historic Preservation on November 2, 2012 for so long as that Program Comment remains in effect AND the considerations listed in Section IV of the Program Comment do not apply;

   c. The bridge is part of the Interstate system and was determined not eligible for the National Register under the Section 106 Exemption Regarding Effects to the Interstate Highway System adopted by the Advisory Council on Historic Preservation on March 10, 2005, for so long as that Exemption remains in effect.

If no, please explain:

Additional comments:

With regard to above-ground resources, an INDOT-Cultural Resources Office (CRO) historian, who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61, first performed a desktop review, checking the Indiana Register of Historic Sites and Structures (State Register) and National Register of Historic Places (National Register) lists for Wayne County. No listed resources are present within 0.25 mile of the project area, a distance that would serve as an adequate area of potential effects (APE) given the scope of the project and the surrounding terrain.

The *Wayne County Interim Report* (2001; Center Township) of the Indiana Historic Sites and Structures Inventory (IHSSI) was also consulted. The National Register & IHSSI information is available in the Indiana State Historic Architectural and Archaeological Research Database (SHAARD) and the Indiana

Historic Buildings, Bridges, and Cemeteries Map (IHBBCM). The SHAARD information was checked against the Interim Report hard copy maps. No IHSSI sites are recorded within 0.25 mile of the project.

The project takes place outside a suburban area. Agricultural fields and scattered residential and commercial buildings are present along the roadway. Within 0.25 mile of the project, only six (6) above-ground properties are present. Two (2) buildings on the north side of US 40, one (1) residential and one (1) commercial, and one (1) residential house south of the roadway will not be 50 years old or older by the time of project letting in 2021. The other three (3) properties, one (1) on the north side of US 40 and two (2) on the south side, date to the mid-twentieth century. The properties consist of a commercial building (north side), a church (south side), and a residential house (south side). There is no evidence that any of these resources possess the cultural significance to be considered eligible to the National Register.

The subject bridge (#040-89-00217 C; NBI #14140) is a reinforced concrete arch bridge built in 1925. The bridge was widened in 1935 and 1955 before being reconstructed in 1982. The bridge length is 144.5 feet and the deck width, out-to-out, is 63 feet. The INDOT-sponsored *Historic Bridge Inventory* determined that this bridge is not eligible for listing in the National Register (Volume 2, Section 2, page 1074).

Based on the available information, as summarized above, no above-ground concerns exist as long as the project scope does not change.

With regard to archaeological resources, the proposed project is limited to replacing the existing bridge within disturbed soils. All work will occur in the existing and reacquired ROW of 4-lane US 40 which consists of four traffic lanes, the elevated road berm, roadside ditches, and underground utilities. According to SHAARD GIS, there are no archaeological sites recorded in or adjacent to the proposed project area. Since work is limited to replacing an existing structure in previously disturbed soils, there are no archaeological concerns.

If any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, construction in the immediate area of the find will be stopped and the INDOT Cultural Resources Office and the Division of Historic Preservation and Archaeology will be notified immediately.

INDOT Cultural Resources staff reviewer(s): Kelyn Alexander and Shaun Miller

****Be sure to attach this form to the National Environmental Policy Act documentation for this project. Also, the NEPA documentation shall reference and include the description of the specific stipulation in the PA that qualifies the project as exempt from further Section 106 review.*

APPENDIX E

Red Flag and Hazardous Materials

DES 1701344

INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204

PHONE: (317) 232-5113
FAX: (317) 233-4929

Eric Holcomb, Governor
Joe McGuinness, Commissioner

Date: October 7, 2019

To: Site Assessment & Management
Environmental Policy Office - Environmental Services Division
Indiana Department of Transportation
100 N Senate Avenue, Room N642
Indianapolis, IN 46204

From: Rachel Pluckebaum
Corradino, LLC
200 S. Meridian St., Suite #330
Indianapolis, IN 46225
rpluckebaum@corradino.com

Re: RED FLAG INVESTIGATION
DES #1701344, State Project
Project description: Bridge Replacement
US 40 over Nolands Fork, 6.84 miles West of US 27
Wayne County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: The project is located in Wayne County, Indiana on US 40, 6.84 Miles West of US 27. The bridge carries US 40 over Nolands Fork. This three-span earth filled arch is showing significant signs of deterioration. The arch rings have a number of cracks with efflorescence. The spandrel walls have heavy spalling with exposed rebar. Due to the severity of the deterioration of the bridge, the proposed scope for this project is a full structure replacement.

Bridge and/or Culvert Project: Yes ☒ No ☐ Structure # 040-89-00217 C
If this is a bridge project, is the bridge Historical? Yes ☐ No ☒ , Select ☐ Non-Select ☐
Proposed right of way: Temporary ☒ # Acres: 0.1 Permanent ☒ # Acres: 1.25, Not Applicable ☐
Type of excavation: 15 feet maximum at the site of the existing bridge.
Maintenance of traffic: Detour
Work in waterway: Yes ☒ No ☐ Below ordinary high water mark: Yes ☒ No ☐
State Project: ☒ LPA: ☐
Any other factors influencing recommendations: N/A

INFRASTRUCTURE TABLE AND SUMMARY

Infrastructure Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Religious Facilities	**1***	Recreational Facilities	**N/A**
Airports[1]	**N/A**	Pipelines	**N/A**
Cemeteries	**N/A**	Railroads	**1**
Hospitals	**N/A**	Trails	**N/A**
Schools	**N/A**	Managed Lands	**N/A**

[1]In order to complete the required airport review, a review of public airports within 3.8 miles (20,000 feet) is required.

Explanation:
***Religious Facilities:** One (1) unmapped religious facility is located within the 0.5 mile search radius. The religious facility, Centerville Church-Nazarene, is located 0.13 mile southeast of the project area. No impact is expected.

Railroads: One (1) railroad is located within the 0.5 mile search radius. The inactive railroad, associated with Conrail Railroad, is located 0.19 mile north of the project area. No impact is expected.

WATER RESOURCES TABLE AND SUMMARY

Water Resources Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
NWI - Points	**1**	Canal Routes - Historic	**N/A**
Karst Springs	**N/A**	NWI - Wetlands	**12**
Canal Structures – Historic	**N/A**	Lakes	**4**
NPS NRI Listed	**N/A**	Floodplain - DFIRM	**20**
NWI-Lines	**14**	Cave Entrance Density	**N/A**
IDEM 303d Listed Streams and Lakes (Impaired)	**6**	Sinkhole Areas	**N/A**
Rivers and Streams	**9**	Sinking-Stream Basins	**N/A**

Explanation:
NWI – Points: One (1) NWI – Point is located within the 0.5 mile search radius. The NWI – Point is located 0.13 mile northeast of the project area. No impact is expected.

NWI – Lines: Fourteen (14) NWI – lines are located within the 0.5 mile search radius. The nearest NWI – line is within the project area. A Waters of the US Report will be prepared and coordination with INDOT ES Ecology and Waterway Permitting will occur.

IDEM 303d Listed Streams and Lakes (Impaired): Six (6) IDEM 303d listed stream segments and lakes are located within the 0.5 mile search radius. Nolands Fork is located within the project area. Nolands Fork is listed as impaired for Impaired Biotic Communities (IBC) and E. coli. Workers who are working in or near water with E. coli should take care to wear appropriate PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure. Concerning IBC, Best Management Practices (BMPs) will be used to avoid further degradation to the stream.

Rivers and Streams: Nine (9) river and stream segments are located within the 0.5 mile search radius. The nearest river and stream segment, Nolands Fork, is located within the project area. A Waters of the US Report will be prepared and coordination with INDOT ES Ecology and Water Permitting will occur.

NWI – Wetlands: Twelve (12) wetlands are located within the 0.5 mile search radius. The nearest wetland is adjacent to the project area. A Waters of the US Report will be prepared and coordination with INDOT ES Ecology and Water Permitting will occur.

Lakes: Four (4) lakes are located within the 0.5 mile search radius. The nearest lake is located 0.2 mile southwest of the project area. No impact is expected.

Floodplain – DFIRM: Twenty (20) floodplain polygons are located within the 0.5 mile search radius. The project area is located within one of the floodplain polygons. Coordination with INDOT Ecology and Waterway Permitting will occur.

URBANIZED AREA BOUNDARY SUMMARY

Explanation: One (1) UAB boundary is mapped within the 0.5 mile search radius. The Richmond UAB boundary is located approximately 0.45 mile east of the project area. No further coordination is required at this time.

MINING AND MINERAL EXPLORATION TABLE AND SUMMARY

Mining/Mineral Exploration Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Petroleum Wells	**N/A**	Mineral Resources	**N/A**
Mines – Surface	**N/A**	Mines – Underground	**N/A**

Explanation: N/A

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

Hazardous Material Concerns Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Superfund	**N/A**	Manufactured Gas Plant Sites	**N/A**
RCRA Generator/ TSD	**N/A**	Open Dump Waste Sites	**N/A**
RCRA Corrective Action Sites	**N/A**	Restricted Waste Sites	**N/A**
State Cleanup Sites	**N/A**	Waste Transfer Stations	**N/A**
Septage Waste Sites	**N/A**	Tire Waste Sites	**N/A**
Underground Storage Tank (UST) Sites	**N/A**	Confined Feeding Operations (CFO)	**N/A**
Voluntary Remediation Program	**N/A**	Brownfields	**N/A**
Construction Demolition Waste	**N/A**	Institutional Controls	**N/A**
Solid Waste Landfill	**N/A**	NPDES Facilities	**1**
Infectious/Medical Waste Sites	**N/A**	NPDES Pipe Locations	**3**
Leaking Underground Storage (LUST) Sites	**N/A**	Notice of Contamination Sites	**N/A**

Explanation:
NPDES Facilities: One (1) NPDES facility is located within the 0.5 mile search radius. The NPDES facility, Centerville Municipal Garage and Waste Treatment Plant, is 0.42 mile northeast of the project area. No impact is expected.

NPDES Pipe Locations: Three (3) NPDES pipe locations are located within the 0.5 mile search radius. The nearest NPDES pipe location, associated with Centerville Municipal Garage and Waste Treatment Plant, is 0.18 mile north of the project area. No impact is expected.

ECOLOGICAL INFORMATION SUMMARY

The Wayne County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities is attached with ETR species highlighted. A preliminary review of the Indiana Natural Heritage Database by INDOT Environmental Services did indicate the presence of ETR species within the 0.5 mile search radius. Coordination with USFWS and IDNR will occur.

A review of the USFWS database indicated the presence of endangered bat species in or within 0.5 mile of the project area. Additional coordination with INDOT ES will be necessary, and the range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects." Lastly, the November 14, 2018, inspection report for Bridge #040-89-00217C states that no evidence of bats was seen or heard under the bridge.

An inquiry using the USFWS Information for Planning and Consultation (IPaC) website did not indicate the presence of the federally endangered species, the Rusty Patched Bumble Bee, in or within 0.5 mile of the project area. No impact is expected.

RECOMMENDATIONS SECTION

INFRASTRUCTURE: N/A

WATER RESOURCES: The presence of the following water resource will require the preparation of a Waters of the US Report and coordination with INDOT ES Ecology and Waterway Permitting:

One (1) NWI – line is located within the project area.
One (1) river/stream segment is located within the project area.
One (1) wetland is adjacent to the project area.
The project area is located within a floodplain. (Coordination only)
Nolands Fork is listed for Impaired Biotic Communities (IBC) and E. coli. Workers who are working in or near water with E. coli should take care to wear appropriate PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure. Concerning IBC, BMPs will be used to avoid further degradation to the stream.

URBANIZED AREA BOUNDARY: N/A

MINING/MINERAL EXPLORATION: N/A

HAZARDOUS MATERIAL CONCERNS: N/A

ECOLOGICAL INFORMATION: Coordination with USFWS and IDNR will occur. A review of the USFWS database indicated the presence of endangered bat species in or within 0.5 mile of the project area. Additional coordination with INDOT ES will be necessary. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects."

INDOT Environmental Services concurrence: Nicole Fohey-Breting Digitally signed by Nicole Fohey-Breting Date: 2019.12.17 21:33:03 -05'00' (Signature)

Prepared by:
Rachel Pluckebaum
Environmental Specialist
Corradino, LLC

Graphics:

A map for each report section with a 0.5 mile search radius buffer around all project area(s) showing all items identified as possible items of concern is attached. If there is not a section map included, please change the YES to N/A:

SITE LOCATION: YES

INFRASTRUCTURE: YES

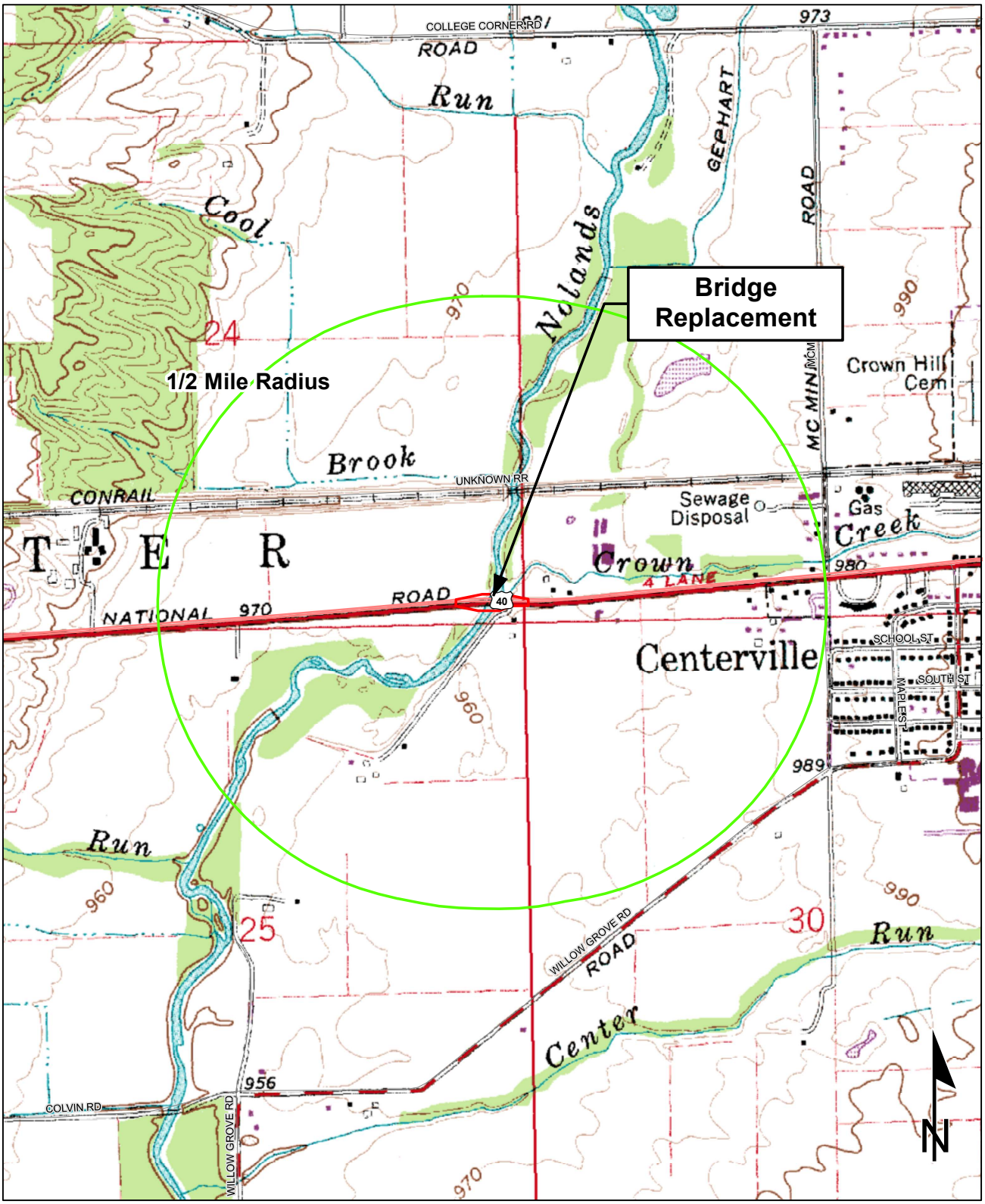
WATER RESOURCES: YES

URBANIZED AREA BOUNDARY: YES

MINING/MINERAL EXPLORATION: N/A

HAZARDOUS MATERIAL CONCERNS: YES

Red Flag Investigation - Site Location
Des. No. 1701344, Bridge Replacement
US 40 at Nolands Fork, 6.84 miles West of US 27
Wayne County, Indiana



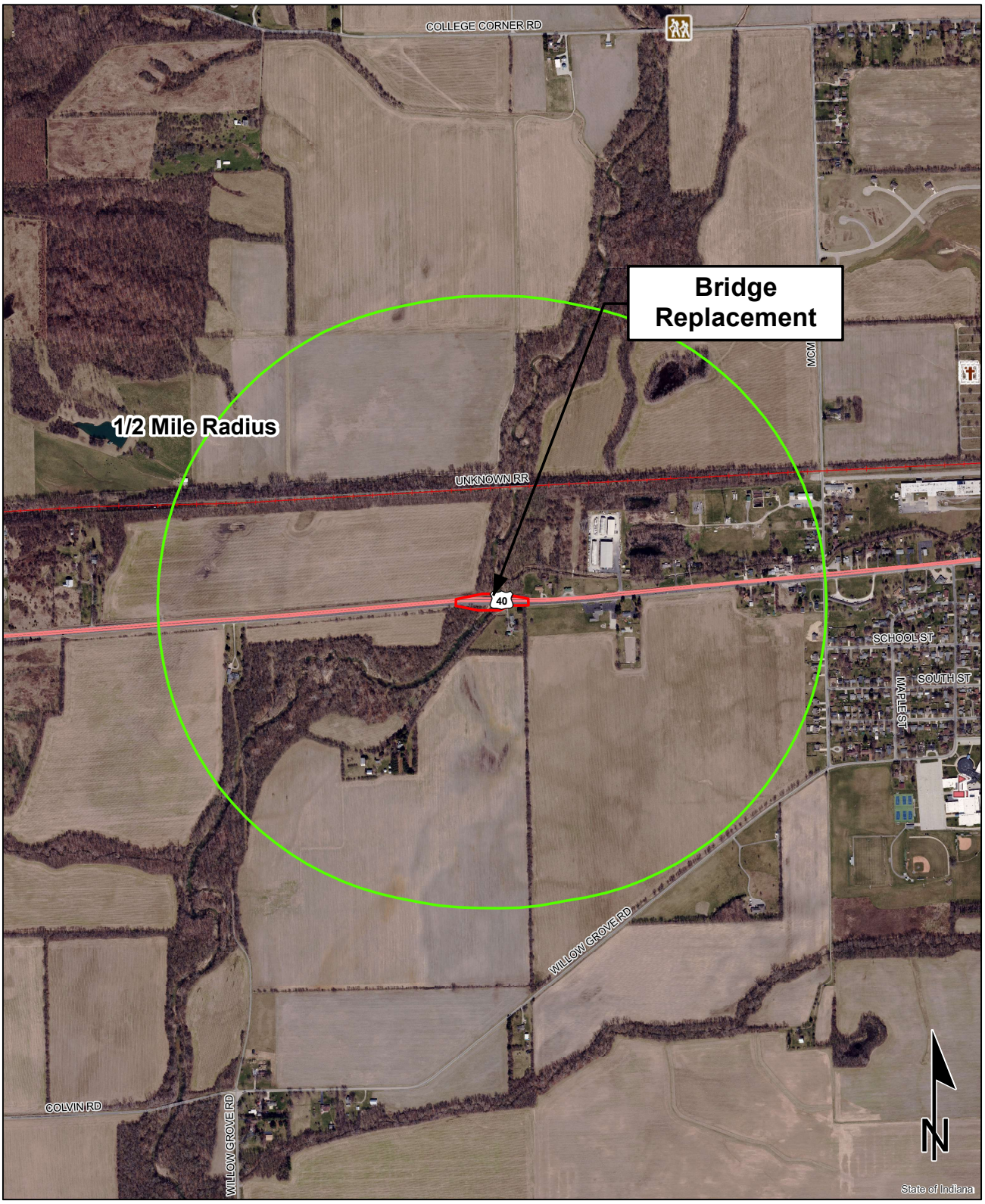
0.2 0.1 0 0.2 Miles

Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

ALAMO QUADRANGLE
INDIANA
7.5 MINUTE SERIES
(TOPOGRAPHIC)

Red Flag Investigation - Infrastructure
Des. No. 1701344, Bridge Replacement
US 40 at Nolands Fork, 6.84 miles West of US 27
Wayne County, Indiana



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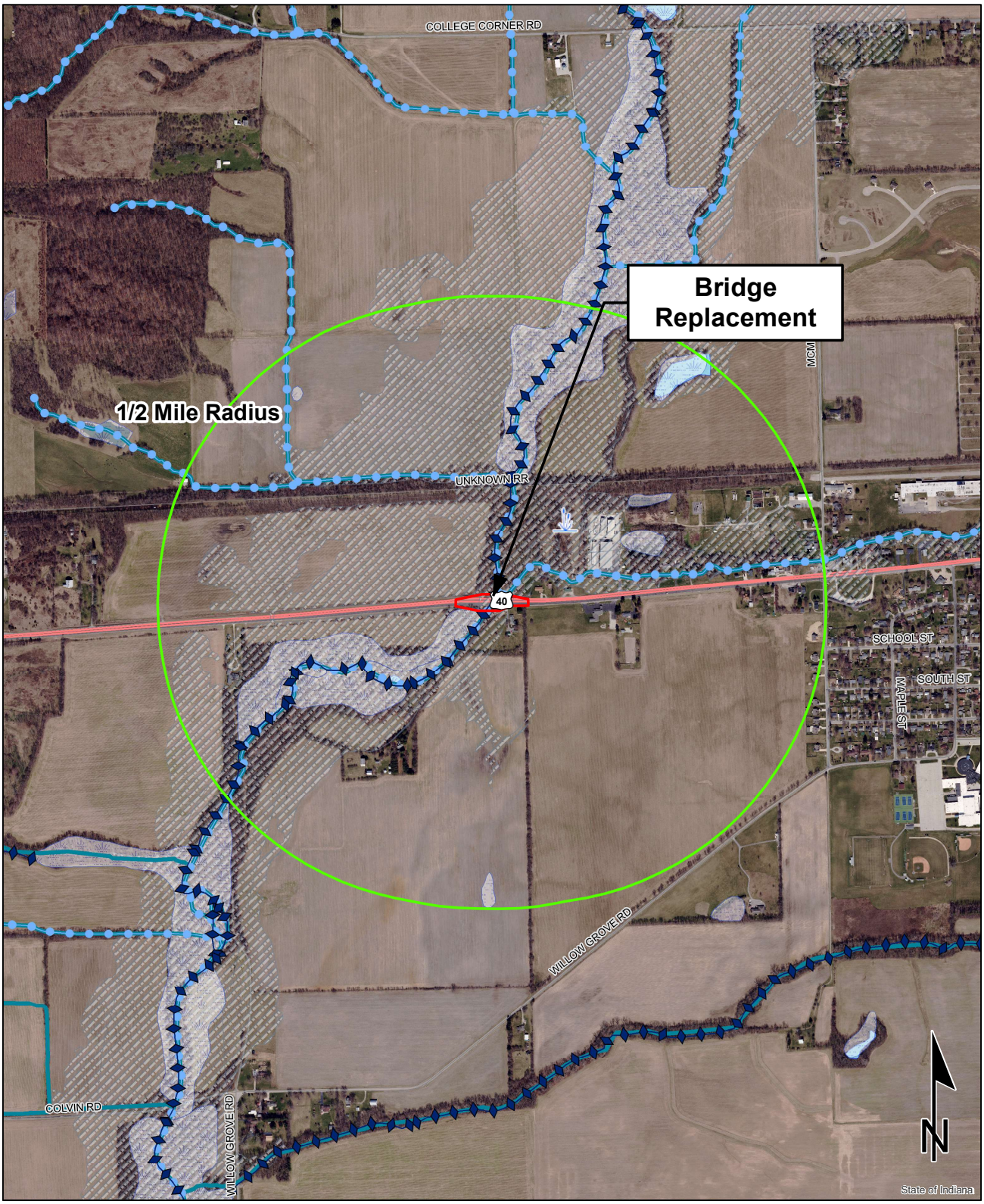
- Religious Facility
- Airport
- Cemeteries
- Hospital
- School
- Recreation Facility
- Pipeline
- Railroad
- Trails
- Managed Lands
- County Boundary
- Project Area
- Half Mile Radius
- Toll
- Interstate
- State Route
- US Route
- Local Road

Red Flag Investigation - Water Resources
Des. No. 1701344, Bridge Replacement
US 40 at Nolands Fork, 6.84 miles West of US 27
Wayne County, Indiana



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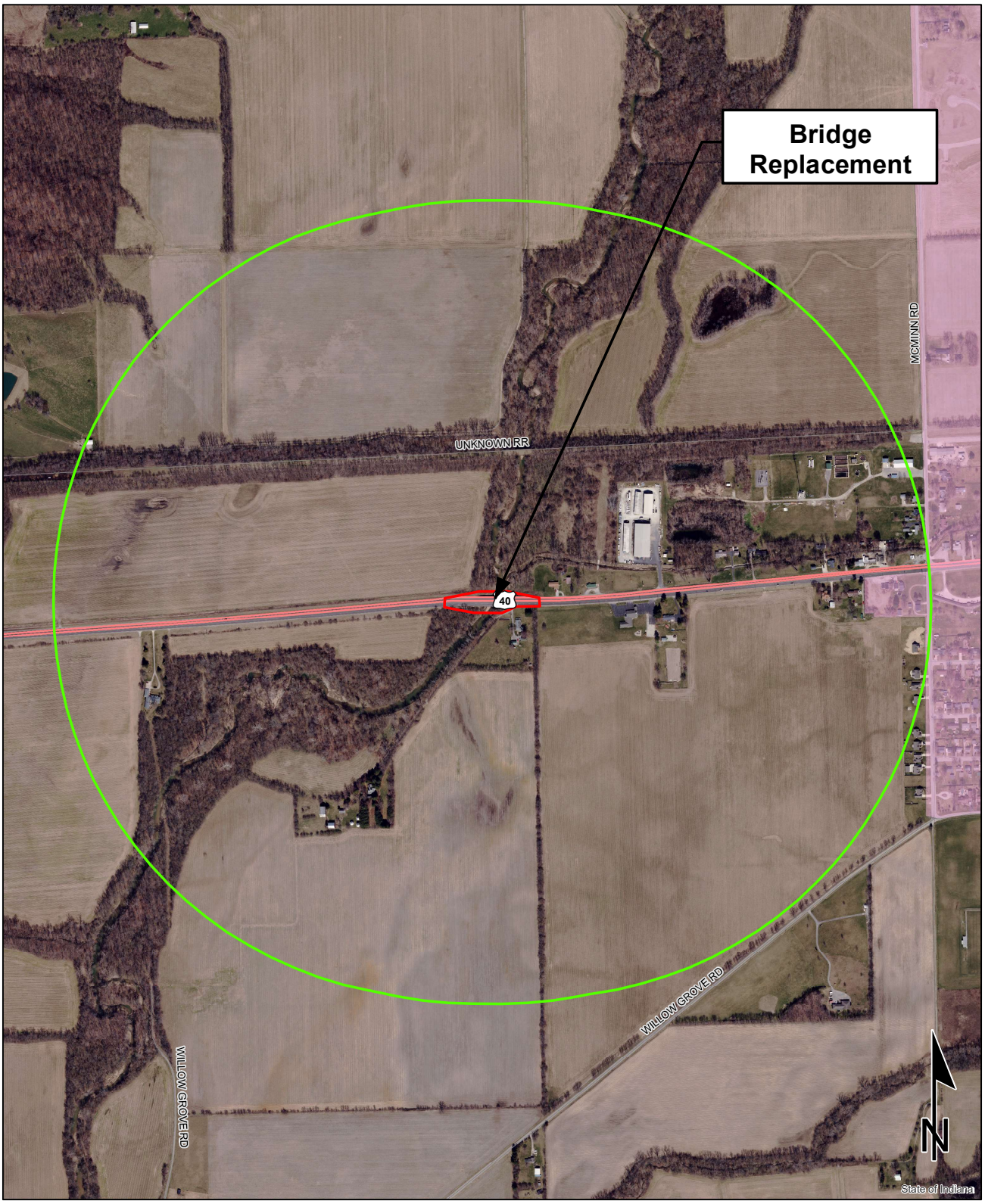
- NWI - Point
- Karst Spring
- NWI- Line
- Impaired_Stream_Lake
- NPS NRI listed
- River
- Canal Structure - Historic
- Canal Route - Historic
- Wetlands
- Lake
- Floodplain - DFIRM
- Cave Entrance Density
- Sinkhole Area
- Sinking-Stream Basin
- County Boundary
- Project Area
- Half Mile Radius
- Toll
- Interstate
- State Route
- US Route
- Local Road

Red Flag Investigation - Urbanized Area Boundary
Des. No. 1701344, Bridge Replacement
US 40 at Nolands Fork, 6.84 miles West of US 27
Wayne County, Indiana



0.15 0.075 0 0.15 Miles

UAB
County Boundary
Project Area
Half Mile Radius
Toll
Interstate
State Route
US Route
Local Road

Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
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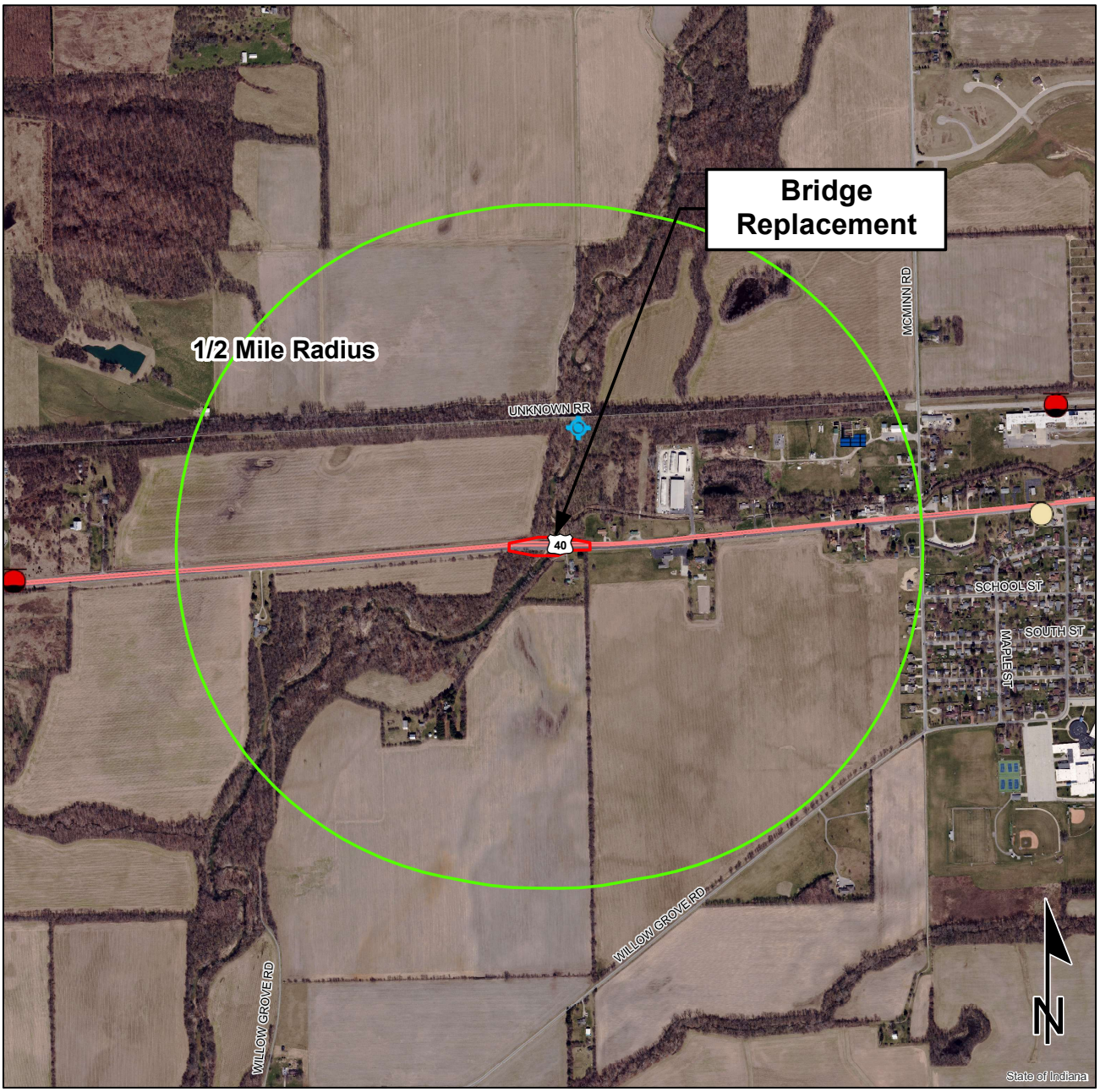
Red Flag Investigation - Hazardous Material Concerns
Des. No. 1701344, Bridge Replacement
US 40 at Nolands Fork, 6.84 miles West of US 27
Wayne County, Indiana



- Brownfield
- RCRA Corrective Action Sites
- Confined Feeding Operation
- Notice_Of_Contamination
- Construction/Demolition Site
- Infectious/Medical Waste Site
- Leaking Underground Storage Tank
- Manufactured Gas Plant
- NPDES Facilites
- NPDES Pipe Locations
- Open Dump Waste Site
- RCRA Generator/TSD
- Restricted Waste Site
- Septage Waste Site
- Solid Waste Landfill
- State Cleanup Site
- Superfund
- Tire Waste Site
- Underground Storage Tank
- Voluntary Remediation Program
- Waste Transfer Station
- Institutional Controls
- County Boundary
- Project Area
- Half Mile Radius
- Toll
- Interstate
- State Route
- US Route
- Local Road

0.2 0.1 0 0.2 Miles

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Map Projection: UTM Zone 16 N **Map Datum:** NAD83

Indiana County Endangered, Threatened and Rare Species List

County: Wayne

Species Name	Common Name	FED	STATE	GRANK	SRANK
Mollusk: Bivalvia (Mussels)					
Ptychobranchus fasciolaris	Kidneyshell		SSC	G4G5	S2
Insect: Coleoptera (Beetles)					
Cicindela marginipennis	Cobblestone Tiger Beetle	C	SE	G2	S1
Insect: Lepidoptera (Butterflies & Moths)					
Euphydryas phaeton	Baltimore			G5	S3S4
Insect: Odonata (Dragonflies & Damselflies)					
Cordulegaster bilineata	Brown Spiketail		SE	G5	S3
Macromia wabashensis	Wabash River Cruiser		SE	G1G3Q	S1
Somatochlora tenebrosa	Clamp-tipped Emerald		SR	G5	S2S3
Tachopteryx thoreyi	Gray Petaltail		WL	G4	S3
Insect: Tricoptera (Caddisflies)					
Pycnopsyche rossi	A Northern Casemaker Caddisfly		SE	G3	S1
Fish					
Ichthyomyzon bdellium	Ohio Lamprey			G3G4	S2
Notropis ariommus	Popeye Shiner			G3	SX
Reptile					
Clonophis kirtlandii	Kirtland's Snake		SE	G2	S2
Emydoidea blandingii	Blanding's Turtle	C	SE	G4	S2
Thamnophis butleri	Butler's Garter Snake		SE	G4	S1
Bird					
Bartramia longicauda	Upland Sandpiper		SE	G5	S3B
Haliaeetus leucocephalus	Bald Eagle		SSC	G5	S2
Ixobrychus exilis	Least Bittern		SE	G5	S3B
Nycticorax nycticorax	Black-crowned Night-heron		SE	G5	S1B
Pandion haliaetus	Osprey		SSC	G5	S1B
Rallus elegans	King Rail		SE	G4	S1B
Setophaga cerulea	Cerulean Warbler		SE	G4	S3B
Setophaga citrina	Hooded Warbler		SSC	G5	S3B
Tyto alba	Barn Owl		SE	G5	S2
Mammal					
Myotis sodalis	Indiana Bat	LE	SE	G2	S1
Taxidea taxus	American Badger		SSC	G5	S2
Vascular Plant					
Clinopodium arkansanum	Calamint		ST	G5	S2
Juglans cinerea	Butternut		ST	G4	S2
Juniperus communis var. depressa	Ground Juniper		SR	G5T5	S3
Panax quinquefolius	American Ginseng		WL	G3G4	S3
Plantago cordata	Heart-leaved Plantain		SE	G4	S1

Indiana Natural Heritage Data Center
Division of Nature Preserves
Indiana Department of Natural Resources
This data is not the result of comprehensive county surveys.

Fed: LE = Endangered; LT = Threatened; C = candidate; PDL = proposed for delisting

State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SX = state extirpated; SG = state significant; WL = watch list

GRANK: Global Heritage Rank: G1 = critically imperiled globally; G2 = imperiled globally; G3 = rare or uncommon globally; G4 = widespread and abundant globally but with long term concerns; G5 = widespread and abundant globally; G? = unranked; GX = extinct; Q = uncertain rank; T = taxonomic subunit rank

SRANK: State Heritage Rank: S1 = critically imperiled in state; S2 = imperiled in state; S3 = rare or uncommon in state; G4 = widespread and abundant in state but with long term concern; SG = state significant; SH = historical in state; SX = state extirpated; B = breeding status; S? = unranked; SNR = unranked; SNA = nonbreeding status unranked

Indiana County Endangered, Threatened and Rare Species List

County: Wayne

Species Name	Common Name	FED	STATE	GRANK	SRANK
Spiranthes lucida	Shining Ladies'-tresses		SR	G4	S3
Viburnum molle	Softleaf Arrow-wood		SR	G5	S3
Waldsteinia fragarioides	Barren Strawberry		SR	G5	S3
High Quality Natural Community					
Forest - floodplain mesic	Mesic Floodplain Forest		SG	G3?	S1
Forest - upland dry Central Till Plain	Central Till Plain Dry Upland Forest		SG	GNR	S1
Forest - upland dry-mesic Central Till Plain	Central Till Plain Dry-mesic Upland Forest		SG	GNR	S2
Forest - upland mesic Bluegrass	Bluegrass Mesic Upland Forest		SG	GNR	S3
Forest - upland mesic Central Till Plain	Central Till Plain Mesic Upland Forest		SG	GNR	S3
Primary - cliff limestone	Limestone Cliff		SG	GU	S1
Wetland - fen	Fen		SG	G3	S3
Wetland - swamp shrub	Shrub Swamp		SG	GU	S2
Other Significant Feature					
Geomorphic - Nonglacial Erosional Feature - Water Fall and Cascade	Water Fall and Cascade			GNR	SNR

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APPENDIX F

Water Resources

DES 1701344

Juliana Clayton
Approved 5.29.2020

See Appendix B for Photo Key and Photo Log

Waters of the U.S. Determination

US 40 in Wayne County, Indiana
Bridge Replacement, 6.84 miles W of US 27
Designation Number 1701344
Asset Name: 040-89-00217 C

Prepared by:

Kirk Roth
kroth@corradino.com
317-488-2363
Corradino, LLC

May 28, 2020

1. Project Information

Dates of Field Reconnaissance:

Field work for this report was conducted on August 16, 2019 by Corradino, LLC.

Project Location:

Jacksonburg Quadrangle
Section 24, Township 16 North, Range 13 East
Wayne County, Indiana
Coordinates: 39.816954, -85.015747

Project Description:

This project is located on US 40, 6.84 miles W of US 27, at structure 040-89-00217 C. US 40 crosses Nolands Fork in the project area, which is surrounded by moderate-sloped wooded terrain. The project will be a bridge replacement with a new 200 foot long three span composite prestressed concrete AASHTO III beam bridge. The new structure will be supported on wall piers on a double row of piles. The new abutments will be integral. Channel clearing will be required underneath the structure. Nolands Fork will undergo a minor channel change in order to avoid the proposed structure's pier and better align Nolands Fork on either side of US 40. Scour protection (Class 1 riprap on geotextiles) will be placed on the slopewalls of the structure, per the INDOT Standard Drawings. The current guardrail will be removed and replaced with new guardrail which meets current crash standards. The space required to conduct this work was used to identify the investigative area for this Waters of the U.S. Report.

2. Desktop Reconnaissance

Soils

According to the Soil Survey Geographic (SSURGO) Database for Wayne County, Indiana, the project area does contain soil areas with nationally listed hydric soils. The soil within the project area is Sleeth Silt Loam (Sk), Genesee Loam (Ge) and Ockley Silt Loam (OcA). Sleeth is 0.6% hydric, Genesee is 1.0% hydric and Ockley is 5.0% hydric.

National Wetland Inventory Information

Wetland/Water Feature Name	Location
FPO1A (Nolands Fork)	Project Area
PEM1A	0.45 mile south

PEM1A	0.47 mile northwest
PEM1C	0.44 mile northeast
PFO1A	0.55 mile southwest
PFO1A	0.21 mile north
PSS1A	0.68 mile southwest
PSS1A	0.63 mile southeast
PSS1A	0.36 mile southwest
PSS1A	0.30 mile southwest
PSS1A	0.12 mile southwest
PUBG	0.18 mile northeast
PUBGx	0.24 mile northeast
PUBGx	0.28 mile northeast

12-digit Hydrologic Unit – 050800030303 (North) & 050800030304 (South)

Attached Documents:

- Project Location
- Topographic Map
- Aerial Photograph
- Water Resources
- FEMA/FIRM Map
- Soils Map
- Photo Key and Photo Log
- Wetland Datasheets
- Preliminary Jurisdictional Determination

3. Field Reconnaissance

Site reconnaissance was conducted on August 16, 2019 by Corradino, LLC.

Stream Analysis

The project structure is associated with the perennial Nolands Fork, which eventually encounters the Whitewater River. Within the project area, Nolands Fork drains the surrounding mostly agricultural area

with a riparian zone. During the site inspection, shallow flowing water was present, as well as an Ordinary High Water Mark (OHWM). The stream quality is considered excellent due to natural substrate, low turbidity, the presence of shelter for aquatic animals, and or run/riffle complexes. The Whitewater River is considered navigable when it reaches Dearborn County, and because Nolands Fork shows connectivity to this navigable waterway, it is likely that Nolands Fork is a Waters of the U.S. and a Water of the State. The OHWM was approximately 70 feet wide and 4 feet deep just south of the bridge. The U.S. Geologic Survey StreamStats website (https://streamstats.usgs.gov/ss/) shows the upstream drainage area at the project site to be 61.6 square miles. Approximately 275 linear feet of Nolands Fork are within the investigated area.

The area within the site boundaries was investigated for potential wetland characteristics. All banks were steep. Above the OHWM there were no wetland hydrology characteristics and dominant upland-type plants such as *Schedonorus arundinaceus*, *Dauca carota, Solidago canadensis*, and *Setaria faberi*. A delineation data point was taken at a floodplain southwest of the structure. This area was dominated by facultative species such as *Acer negundo, Celtis occidentalis*, and *Ambrosia trifida*, as well as the facultative wetland *Urtica diocia*. Drift deposits were the only primary wetland hydrology indicator found at the site. However, soil characteristics did not support hydric soil status and no redox features or iron-manganese masses were found. The soil characteristics do not indicate wetland status for this floodplain area.

Wetland characteristics did not extend beyond the OHWM of Nolands Fork. For the purposes of this report, these wetland characteristics are considered a feature of Nolands Fork and not a separate feature.

Table 1 – Stream Summary, US 40, Wayne County, Indiana, Designation Number 1701344

Stream Name	Photos	Lat/Long	OHW Width (feet)	OHW Depth (feet)	USGS Blue-line?	Riffles? Pools?	Substrate	Quality	Likely Water of U.S.?
Nolands Fork	1-2; 11-12; 17; 29-36	39.816954, -85.015747	70.0	4.0	Yes; perennial	Yes	Silt, Sand, Pebbles, Cobbles	Excellent	Yes

Roadside Ditch Analysis

A roadside ditch occurs in the southeast quadrant of the project area and is referred to as RSD1 in this document. RSD1 does not exhibit an OHWM. RSD1 is dominated by facultative upland plants such as *Schedonorus arundinacea* and *Trifolium alba*. The vegetation present does not support wetland status. RSD1 ends to the west where it encounters a pipe that empties into Nolands Fork.

Due to the lack of an OHWM, RSD1 does not exhibit characteristics of a tributary. Because RSD1 is not a wetland or tributary, it is not likely a Water of the U.S.

4. Summary and Conclusions

As a running waterway directly traceable to the Whitewater River, Nolands Fork within the project area is an apparent jurisdictional Water of the U.S. Any Water of the U.S. is also considered a "Water of the State" in accordance with Indiana Code 13-11-2-265.

The jurisdictional area in the project area would extend to the limits of the OHWM of the channel on all banks.

RSD1 is a non-jurisdictional features within the study area.

There were no areas with wetland characteristics within the study area.

No bat or bird use of the bridge was detected during the August 16, 2019 survey.

This waterway is a likely Water of the U.S. Every effort should be taken to avoid and minimize impacts to the waterway. If impacts are necessary, then mitigation may be required. The INDOT Environmental Services Division should be contacted immediately if impacts will occur. The final determination of jurisdictional waters is ultimately made by the U.S. Army Corps of Engineers. This report is our best judgment based on the guidelines set forth by the Corps.

Acknowledgement:

This waters determination has been prepared based on the best available information, interpreted in the light of the investigator's training, experience and professional judgement in conformance with the 1987 Corps of Engineers Wetlands Delineation Manual, the appropriate regional supplement, the USACE Jurisdictional Determination Form Instructional Guidebook, and other appropriate agency guidelines.

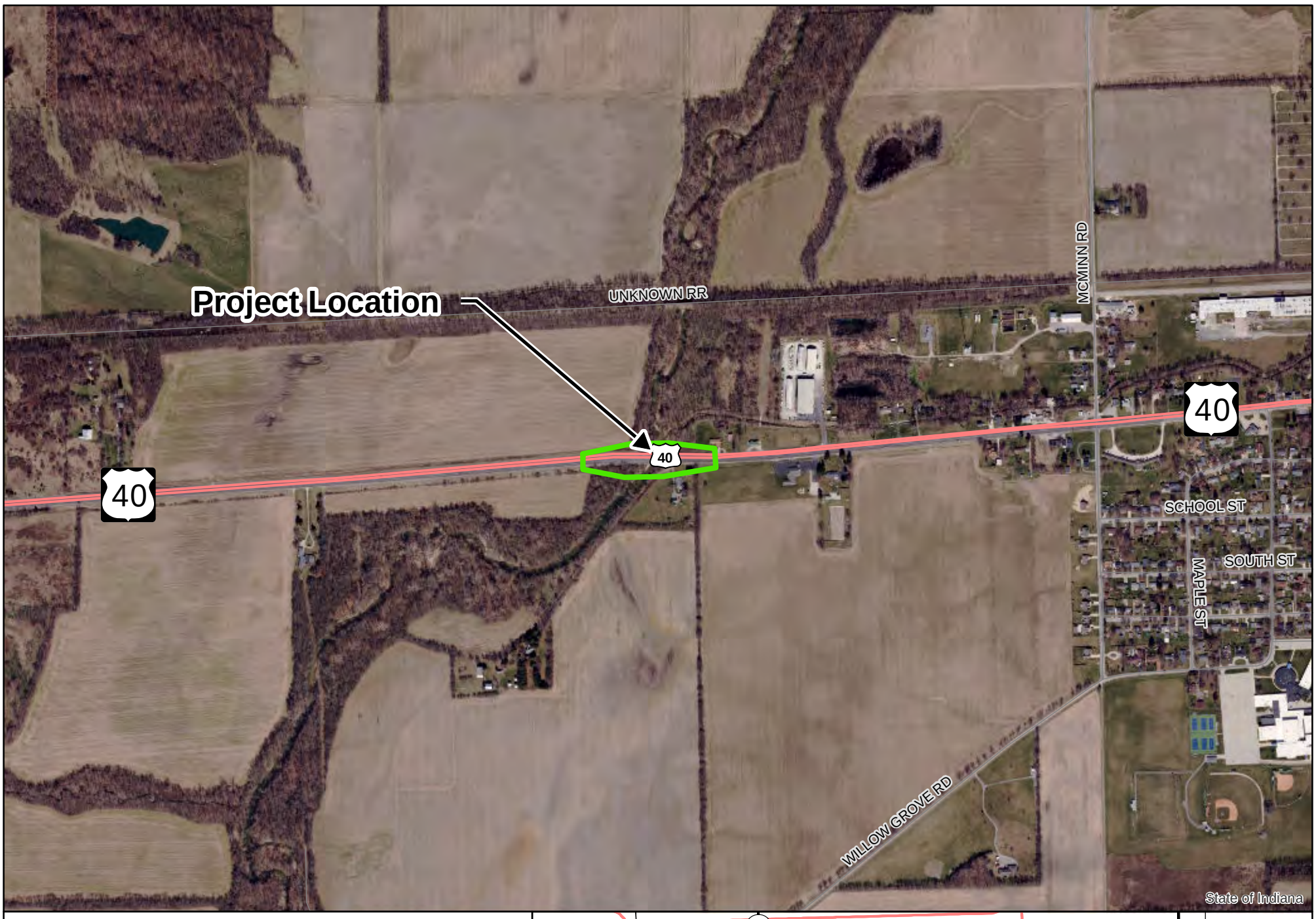
Kirk Roth

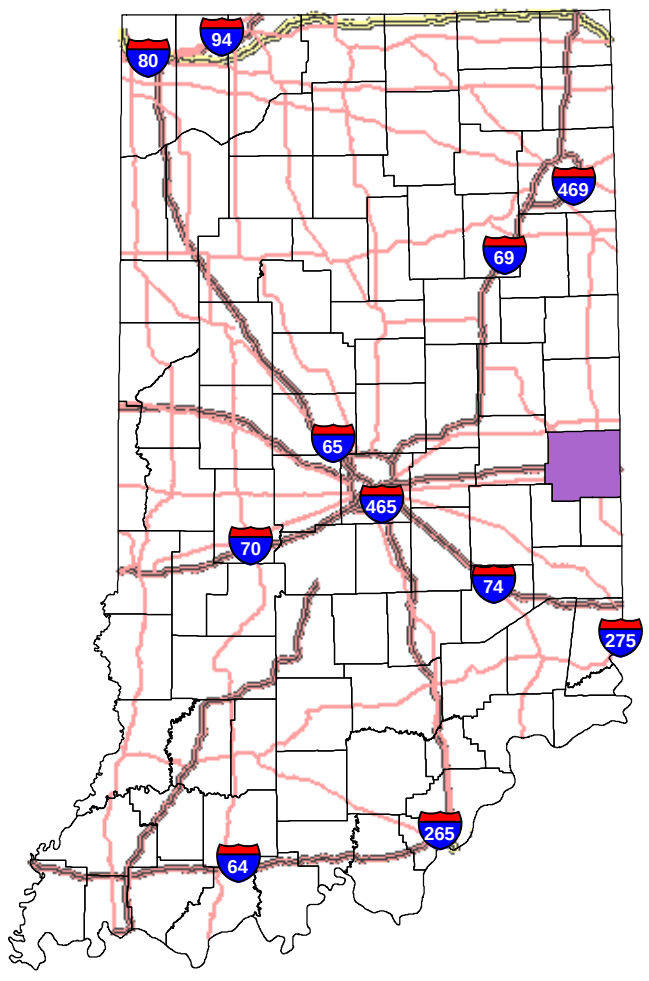
Environmental Scientist

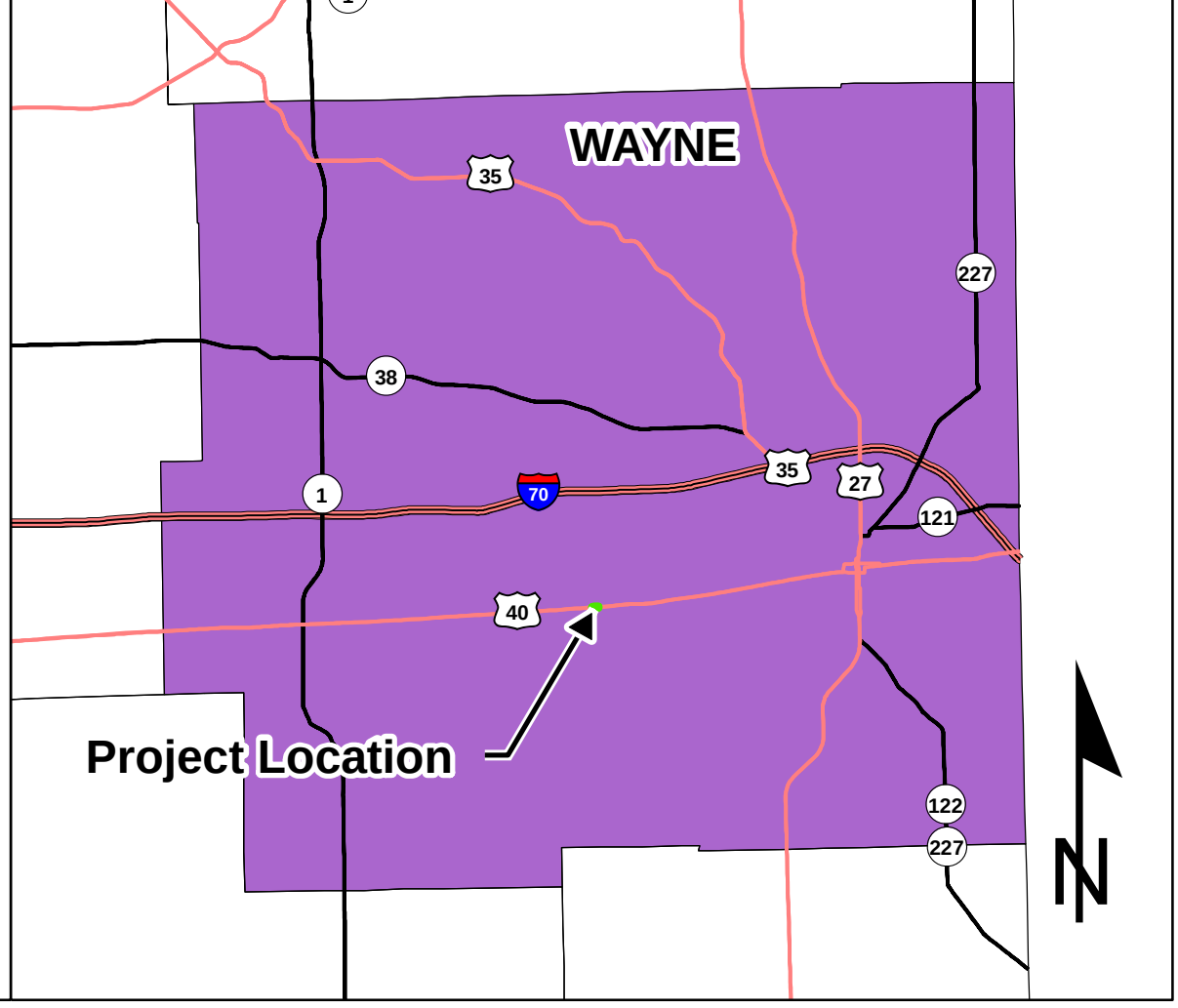
Corradino, LLC

May 28, 2020

Project Location
Des. No. 1701344, Bridge Replacement
US 40 at Nolands Fork, 6.84 miles W of US 27
Wayne County, Indiana







0.2 0.1 0 0.2 Miles

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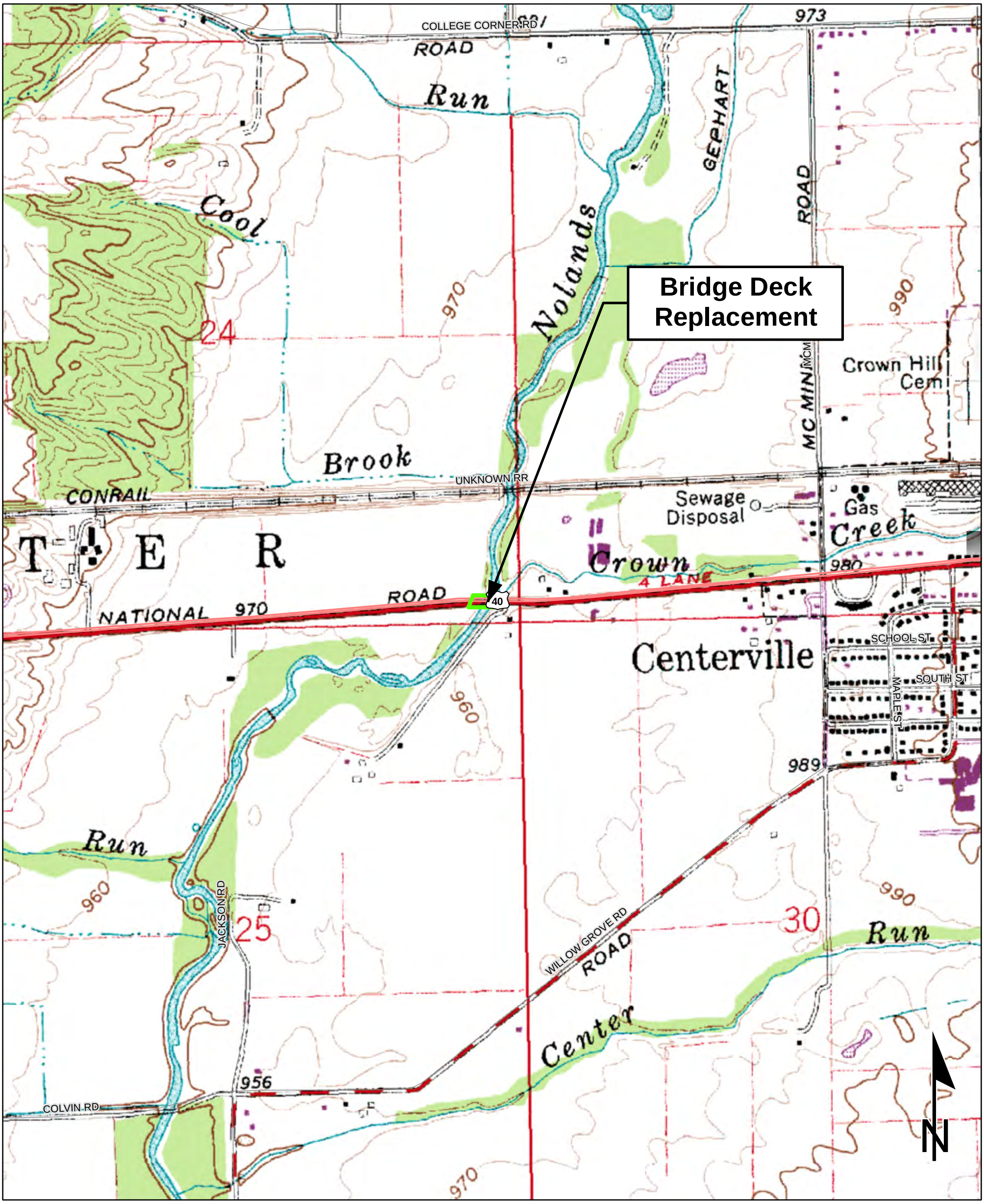
INDIANA
STATEWIDE
GIS DATA

USGS Topographic Map
Des. No. 1701344, Bridge Deck Replacement
US 40 at Nolands Fork, 06.84 miles W of US 27
Wayne County, Indiana



950 475 0 950 Feet

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JACKSONBURG QUADRANGLE
INDIANA
7.5 MINUTE SERIES
(TOPOGRAPHIC)

USGS Topographic Map
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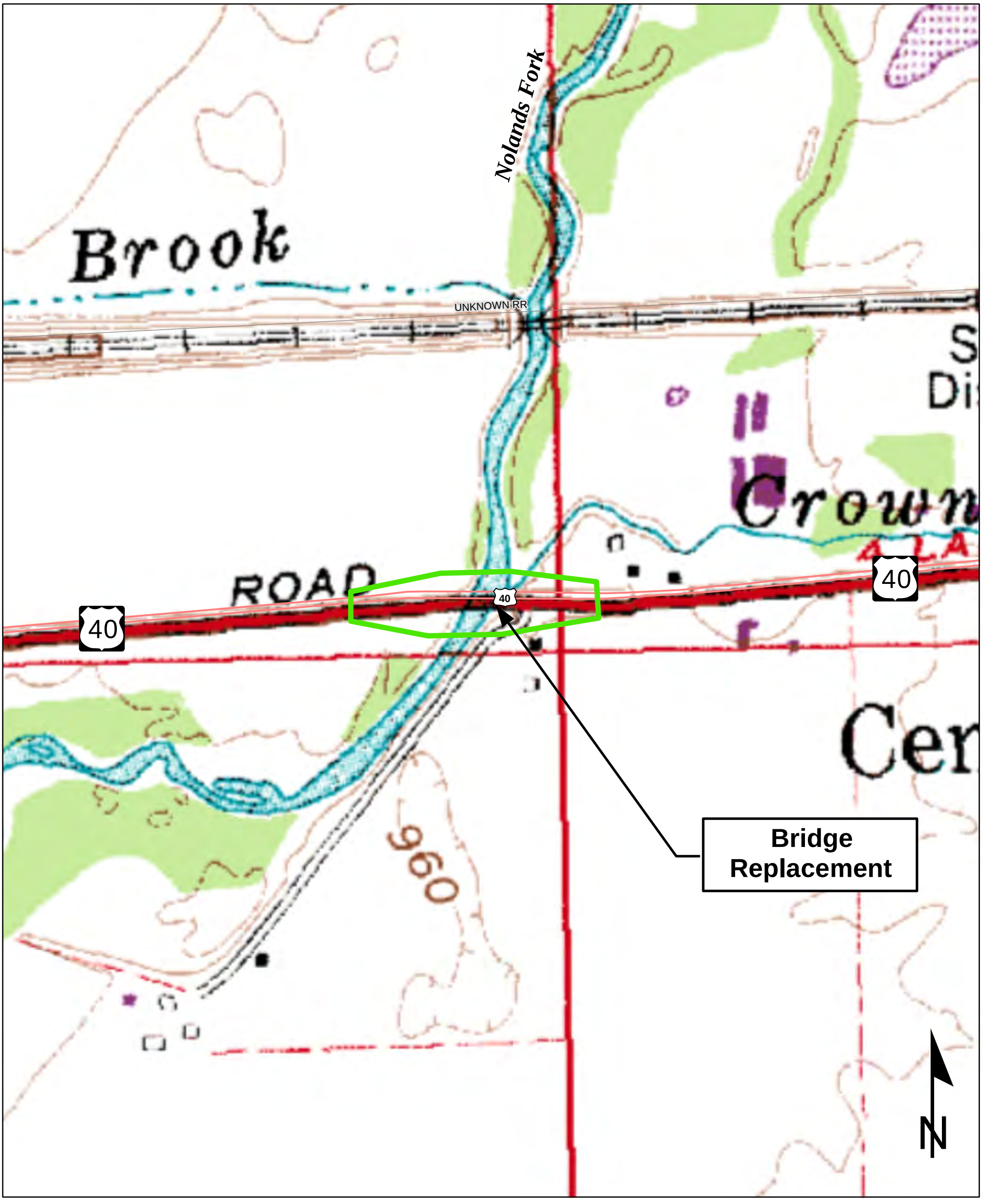

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JACKSONBURG QUADRANGLE
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7.5 MINUTE SERIES
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Aerial Map
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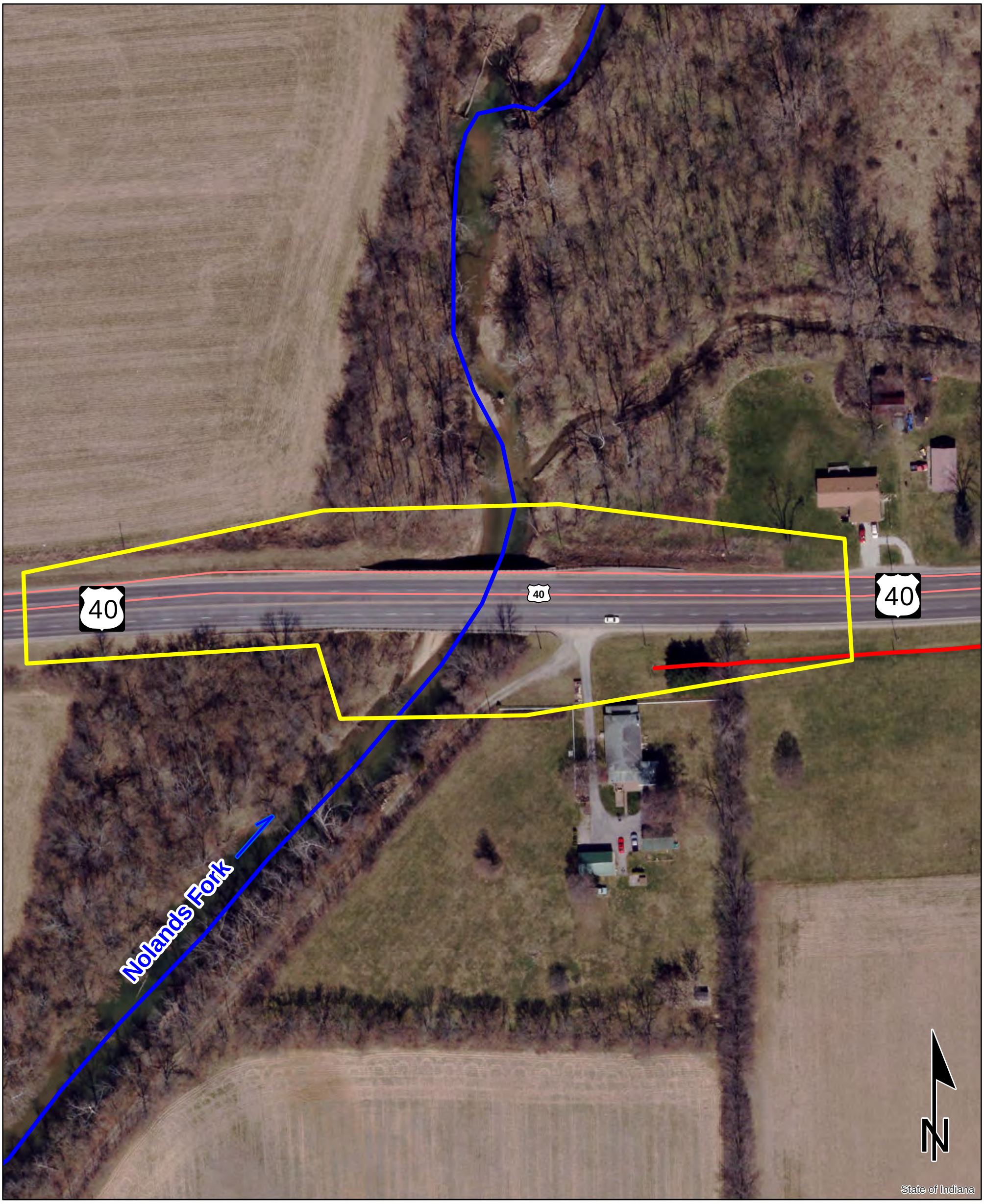

150 75 0 150 Feet

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INDIANA STATEWIDE AERIAL IMAGERY FLOWN 2016

Legend

- Flow Direction
- Tributary
- Roadside Ditch
- Investigative Area

Water Resources
Des. No. 1701344, Bridge Replacement
US 40 at Nolands Fork, 6.84 miles W of US 27
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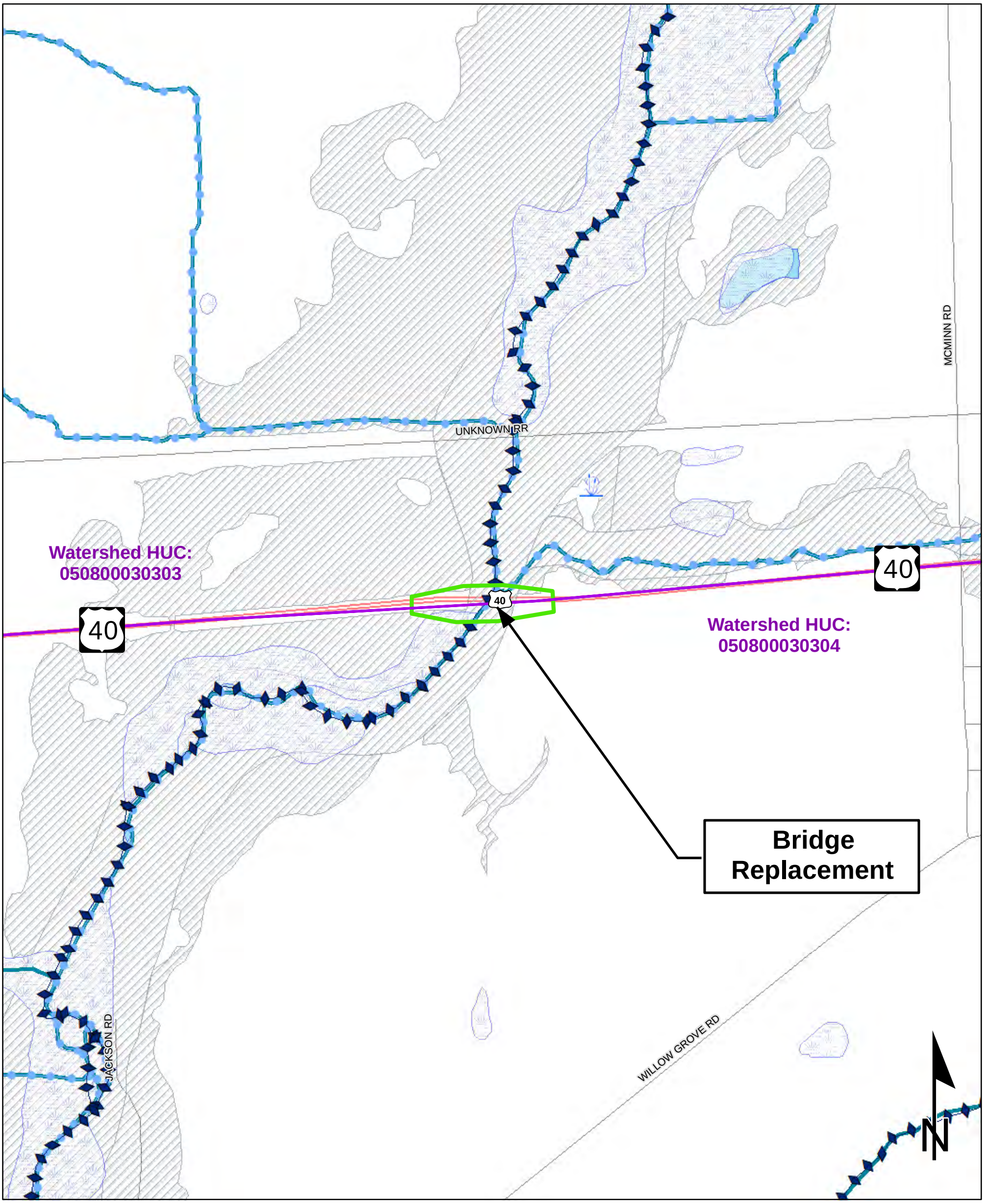

800 400 0 800 Feet

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FEMA / FIRM Map
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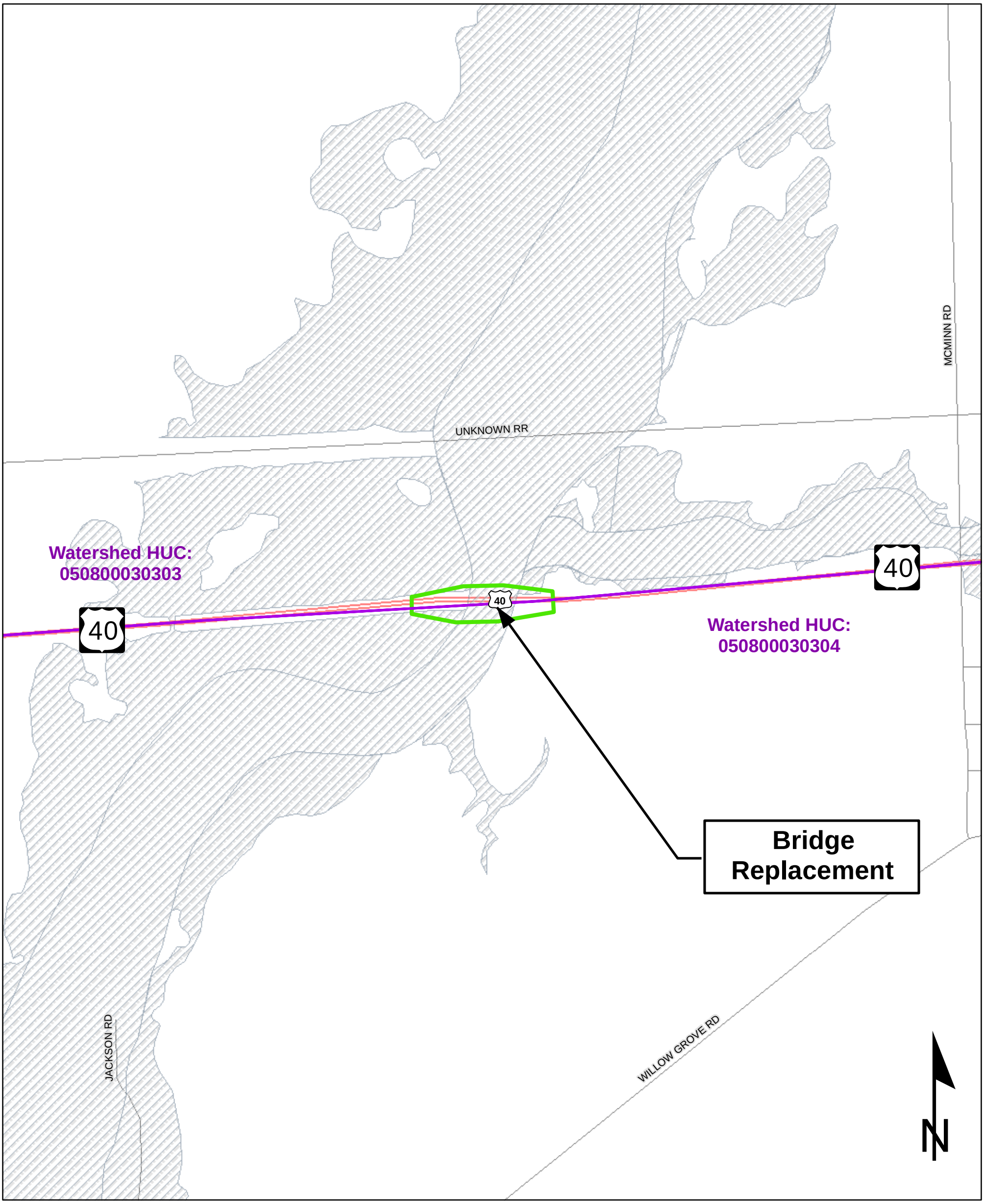


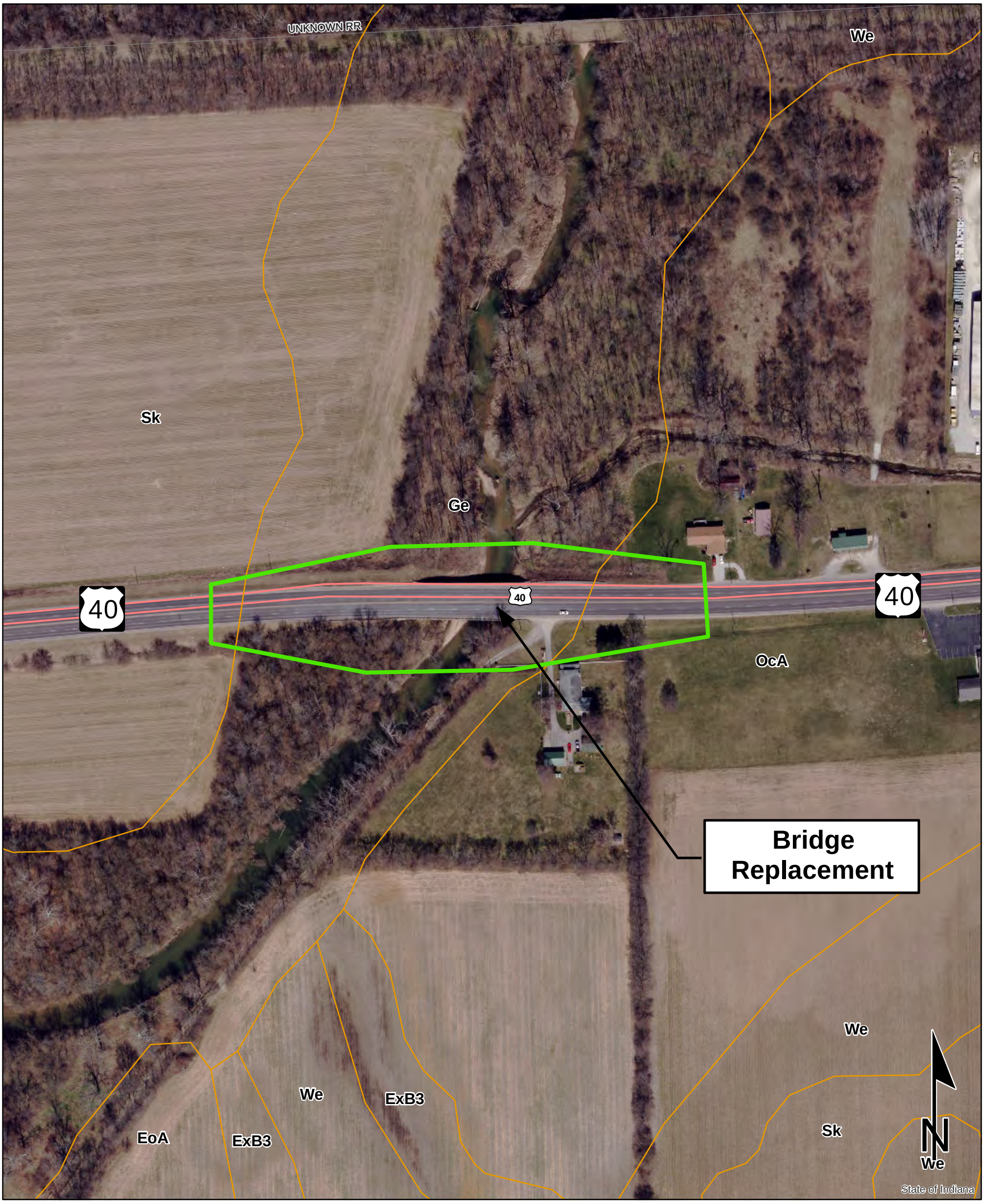
800 400 0 800 Feet

Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

Legend
- Toll
- Interstate
- State Route
- US Route
- Local Road
- Floodplain - DFIRM
- Watershed Boundary

Soils Map
Des. No. 1701344, Bridge Replacement
US 40 at Nolands Fork, 6.84 miles W of US 27
Wayne County, Indiana



250 125 0 250 Feet

Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

NRCS SOILS DATA

Legend

Sk - Sleeth Silt Loam (0.6% Hydric)
Ge - Genesee Loam (1.0% Hydric)
OcA - Ockley Silt Loam (5.0% Hydric)

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: DES 1701344 City/County: Wayne Sampling Date: 16AUG19

Applicant/Owner: INDOT State: IN Sampling Point: 1A

Investigator(s): Kirk Roth Section, Township, Range: Sec 24 T 16N, R 13E

Landform (hillslope, terrace, etc.): floodplain terrace Local relief (concave, convex, none): concave

Slope (%): 3 Lat: 39.816825 Long: -85.016026 Datum: NAD 83

Soil Map Unit Name: Genesee silt loam NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes * No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes X	No _____	

Remarks: Soil characteristics do not indicate wetland status.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	60	Yes	FAC
2. Celtis occidentalis	15	Yes	FAC
3.			
4.			
5.			
	75	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 feet)			
1.			
2.			
3.			
4.			
5.			
	_____	= Total Cover	
Herb Stratum (Plot size: 5 feet)			
1. Ratibida pinnata	30	Yes	NI
2. Ambrosia trifida	15	Yes	FAC
3. Urtica dioica	15	Yes	FACW
4. Pilea pumila	5	No	FACW
5. Polygonum pensylvanicum	2	No	FACW
6.			
7.			
8.			
9.			
10.			
	67	= Total Cover	
Woody Vine Stratum (Plot size: 30 feet)			
1. Toxicodendron radicans	5	Yes	FAC
2.			
	5	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species 22	x 2 = 44
FAC species 95	x 3 = 285
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: 117 (A)	329 (B)

Prevalence Index = B/A = 2.81

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)

Dominance Test and Prevalence Index support hydrophytic vegetation status.

SOIL

Sampling Point: 1A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 4/3	100					Loam	No iron-manganese masses.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Soil characteristics do not support hydric soil status. No redox features were found.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Indicator B3 supports wetland hydrology status. Drift deposits (sticks and twigs) were observed.

Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: 5/7/20

B. NAME AND ADDRESS OF PERSON REQUESTING PJD: Kirk Roth

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:

The project (DES 1701344) is on US 40, 6.84 miles W of US 27 at structure 040-89-00217 C and is a bridge replacement with a three-span composite prestressed concrete bridge. Channel clearing under the structure is required. Scour protection (Class 1 riprap on geotextiles) will be placed on the slopewalls of the structure and a minor channel change will occur. Incidental construction will include guardrail replacement. Construction is expected to begin in spring of 2022 and last approximately 4 months. Water that passes through the structure will be maintained during construction with appropriate erosion and sediment control techniques.

(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)

State: Indiana County/parish/borough: Wayne City: Centerville

Center coordinates of site (lat/long in degree decimal format):

Lat.: 39.816954 Long.: -85.015747

Universal Transverse Mercator: 16S 669832.81 m E 4409324.74 m N

Name of nearest waterbody: Nolands Fork

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☐ Office (Desk) Determination. Date:

☐ Field Determination. Date(s):

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
Nolands Fork	39.816954	-85.015747	275 l.f.	non-wetland waters	Section 404, non-wetland

1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.

2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there *"may be"* waters of the U.S. and/or that there *"may be"* navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

- [x] Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
  Map: Corradino, LLC.
- [x] Data sheets prepared/submitted by or on behalf of the PJD requestor.
  - [ ] Office concurs with data sheets/delineation report.
  - [ ] Office does not concur with data sheets/delineation report. Rationale: _____.
- [ ] Data sheets prepared by the Corps: _____.
- [ ] Corps navigable waters' study: _____.
- [ ] U.S. Geological Survey Hydrologic Atlas: _____.
  - [ ] USGS NHD data.
  - [ ] USGS 8 and 12 digit HUC maps.
- [x] U.S. Geological Survey map(s). Cite scale & quad name: 1:20,000 Jacksonburg.
- [x] Natural Resources Conservation Service Soil Survey. Citation: NRCS Soil Survey - Wayne County.
- [x] National wetlands inventory map(s). Cite name: USFWS-NWI V2 Wetland Mapping for US 40, 6.84 miles west of US 27.
- [ ] State/local wetland inventory map(s): _____.
- [x] FEMA/FIRM maps: Wayne County, Indiana.
- [ ] 100-year Floodplain Elevation is: _____.(National Geodetic Vertical Datum of 1929)
- [x] Photographs: [x] Aerial (Name & Date): Indiana Statewide Aerial Imagery, 2011.
  or [x] Other (Name & Date): Corradino, LLC - August 16, 2019.
- [ ] Previous determination(s). File no. and date of response letter: _____.
- [ ] Other information (please specify): _____.

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

_____	Kirk Roth Digitally signed by Kirk Roth Date: 2020.05.07 12:02:35 -04'00'
Signature and date of Regulatory staff member completing PJD	Signature and date of person requesting PJD (REQUIRED, unless obtaining the signature is impracticable)[1]

[1] Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

APPENDIX G

Public Involvement

DES 1701344

Job #19SU006

NOTICE OF SURVEY

April 10, 2019

RE: PROJECT: U.S. 40
Bridge Improvement
Centerville, Indiana

Dear Property Owner:

Our information indicates that you own or occupy property near this proposed Bridge Improvement Project. Our employees will be doing a survey of the project area in the near future. It may be necessary for them to come onto your property to complete this work. This is allowed by Indiana Code IC 8-23-7-26. They will show you their identification, if you are available, before coming onto your property. If you have sold this property, or someone else occupies it, please let us know the name and address of the new owner or current occupant so we can contact them about the survey.

At this stage we generally do not know what effect, if any, our project may eventually have on your property. If we determine later your property is involved, we will contact you with additional information.

The survey work will include mapping the location of features such as buildings, trees, fences, and drives, and obtaining ground elevations. This work is necessary for the proper planning and design of the Bridge Improvement project. Please be assured of our sincere desire to cause you as little inconvenience as possible during the survey. If any problems do occur, please contact our field crew or contact me at the phone number or address shown below.

We do appreciate your input regarding any issues that this project may encounter during the design phase. Included with this notice is a short questionnaire that you can fill out and return to us in the enclosed self-addressed stamped envelope. Thank you, in advance, for your participation in this process.

Sincerely,

SJCA P.C.

Christopher H. Phillips

Christopher H. Phillips, PLS

APPENDIX H

Air Quality

DES 1701344

Indiana Department of Transportation (INDOT)

State Preservation and Local Initiated Projects FY 2020 - 2024

SPONSOR	CONTRACT # / LEAD DES	STIP NAME	ROUTE	WORK TYPE	LOCATION	DISTRICT	MILES	FEDERAL CATEGORY	Estimated Cost left to Complete Project*	PROGRAM	PHASE	FEDERAL	MATCH	2020	2021	2022	2023	2024
Indiana Department of Transportation	39294 / 1701338	Init.	US 40	Bridge Replacement, Other Construction	Over Big Blue River, 0.36 mi E of SR 140	Greenfield	0	STPBG		Bridge Construction	CN	$12,322,461.60	$3,080,615.40			$15,403,077.00		
										Road Construction	CN	$1,714,344.00	$428,586.00			$2,142,930.00		
Indiana Department of Transportation	39294 / 1701338	A 01	US 40	Bridge Replacement, Other Construction	Over Big Blue River, 0.36 mi E of SR 140	Greenfield	0	STBG	$18,824,728.00	Bridge Consulting	PE	$286,634.40	$71,658.60	$358,293.00				
										Road Consulting	PE	$372,342.40	$93,085.60	$465,428.00				
Comments:Added PE Phase																		
Indiana Department of Transportation	39784 / 1592546	Init.	I 70	HMA Overlay, Preventive Maintenance	From 0.5 mi W of SR 3 to 0.47 mi W of SR 1	Greenfield	14.307	NHPP		Bridge Construction	CN	$9,735,561.90	$1,081,729.10	$10,817,291.00				
										Road Construction	CN	$13,028,669.10	$1,447,629.90	$14,476,299.00				
Henry County	40326 / 1600958	Init.	IR 1001	Signing	Sign replacement - various roads in Henry County	Greenfield	237.5	STPBG		Group IV Program	CN	$495,000.00	$0.00			$495,000.00		
										Local Funds	CN	$0.00	$115,000.00			$115,000.00		
New Castle	40328 / 1600976	Init.	ST 1001	Bike/Pedestrian Facilities	North side Washington Street and west side Hillsboro Road	Greenfield	1.238	STPBG		Group III Program	CN	$428,000.00	$0.00		$428,000.00			
										Local Funds	RW	$0.00	$10,000.00	$10,000.00				
										Local Funds	CN	$0.00	$117,000.00		$117,000.00			
Indiana Department of Transportation	40502 / 1593238	Init.	SR 38	Bridge Replacement, Concrete	Over Big Blue River, .16 miles W. of SR 3	Greenfield	.01	STPBG		Bridge Construction	CN	$1,218,539.20	$304,634.80			$1,523,174.00		
Indiana Department of Transportation	40502 / 1593238	A 01	SR 38	Bridge Replacement, Concrete	Over Big Blue River, .16 miles W. of SR 3	Greenfield	.01	STBG	$1,909,874.00	Bridge Consulting	PE	$309,360.00	$77,340.00	$386,700.00				
Comments:Added PE Phase																		
Indiana Department of Transportation	40503 / 1600912	Init.	I 70	Small Structure Pipe Lining	3.551 mi E of SR 103	Greenfield	0	NHPP		Bridge Construction	CN	$214,956.00	$23,884.00		$238,840.00			
										Bridge ROW	RW	$9,000.00	$1,000.00	$10,000.00				
Indiana Department of Transportation	40503 / 1601952	Init.	I 70	Small Structure Pipe Lining	5.403 miles E. of SR 109	Greenfield	0	NHPP		Bridge Construction	CN	$1,862,673.30	$206,963.70			$2,069,637.00		
										Bridge ROW	RW	$36,000.00	$4,000.00		$40,000.00			
Indiana Department of Transportation	40507 / 1600789	Init.	SR 103	HMA Overlay Minor Structural	SR 103, From SR 38 to 2.09 miles N of SR 38(Little Blue River)	Greenfield	.001	NHPP		Road Construction	CN	$2,866,580.80	$716,645.20			$3,583,226.00		

*Estimated Costs left to Complete Project column is for costs that may extend beyond the four years of a STIP. This column is not fiscally constrained and is for information purposes.

APPENDIX I

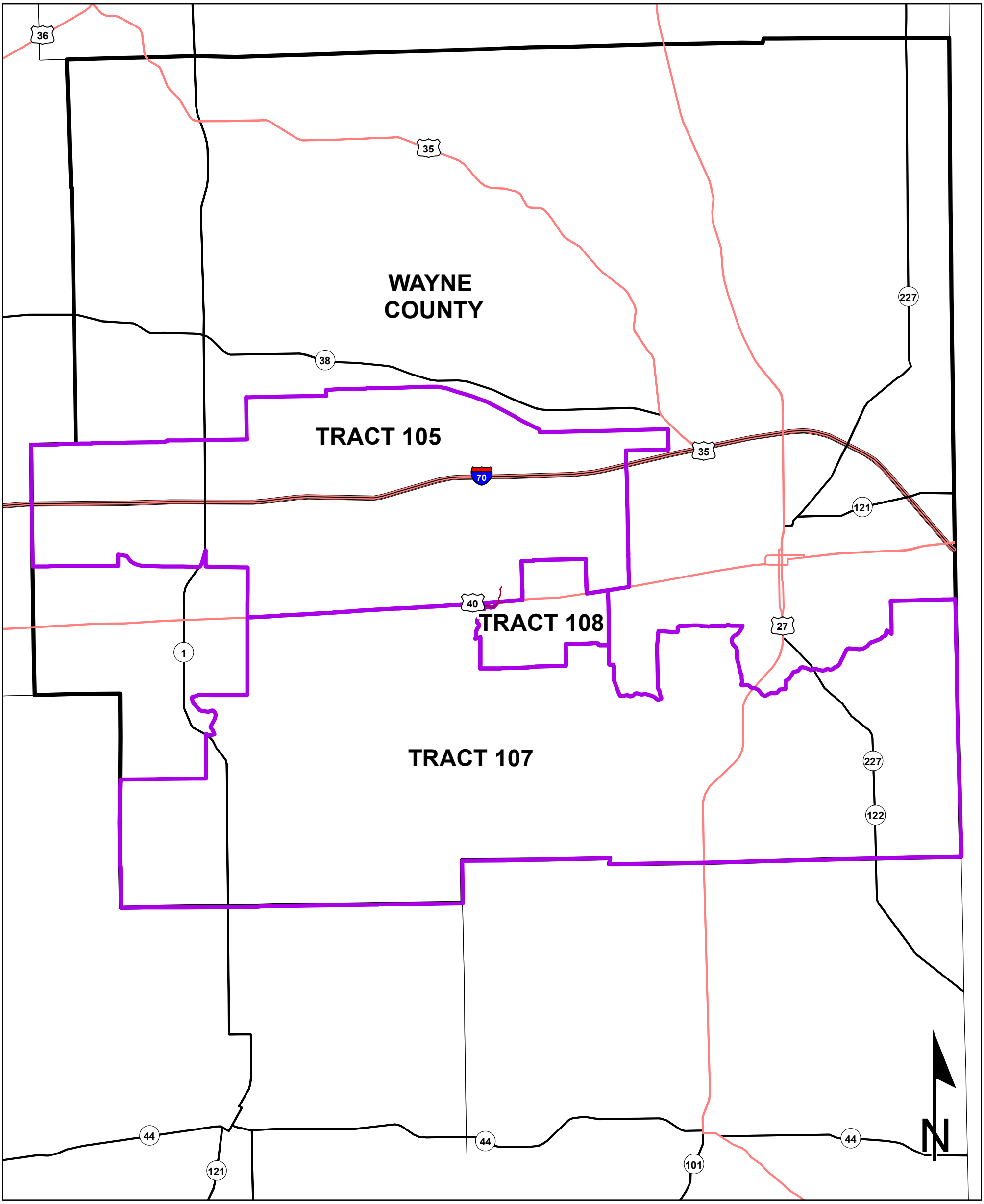
Additional Studies

DES 1701344

Table 1: Environmental Justice Data - U.S. Census Bureau - 2012-2017 American Community Survey

Geography	Wayne County, Indiana	Census Tract 105, Wayne County, IN	Census Tract 107, Wayne County, IN	Census Tract 108, Wayne County, IN
Estimate; Total Poverty Level Data:	64308	2286	4142	2819
Estimate; Income in the past 12 months below poverty level	11727	391	308	612
Percent below poverty level	18.24	17.1	7.44	21.71
125% of Community of Comparison Threshold	22.8	AC<125%COC	AC<125%COC	AC<125%COC
Total Population; Racial Data:	66972	2291	4142	2875
Estimate; White alone, not Hispanic or Latino	59273	2267	4030	2633
Number Minority	7699	24	112	242
Percent Minority	11.5	1.05	2.7	8.42
125% Community of Comparison Threshold	14.38	AC<125%COC	AC<125%COC	AC<125%COC

Census Tract Map
Des. No. 1701344, US 40 at Nolands Fork, 6.84 miles W of US 27
Bridge Deck Replacement
Wayne County, Indiana



2.5 1.25 0 2.5 Miles

Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

Census Tracts 105, 107, 108 In Wayne County

Bridge Inspection Report

040-89-00217 C
US 40
over
NOLANDS FORK

Inspection Date: 11/14/2018

Inspected By: James Yapp

Inspection Type(s): Routine

Inspector: James Yapp

Inspection Date: 11/14/2018

Asset Name: 040-89-00217 C

Facility Carried: US 40

Bridge Inspection Report

Latitude: 39.81695

Longitude: -85.01571

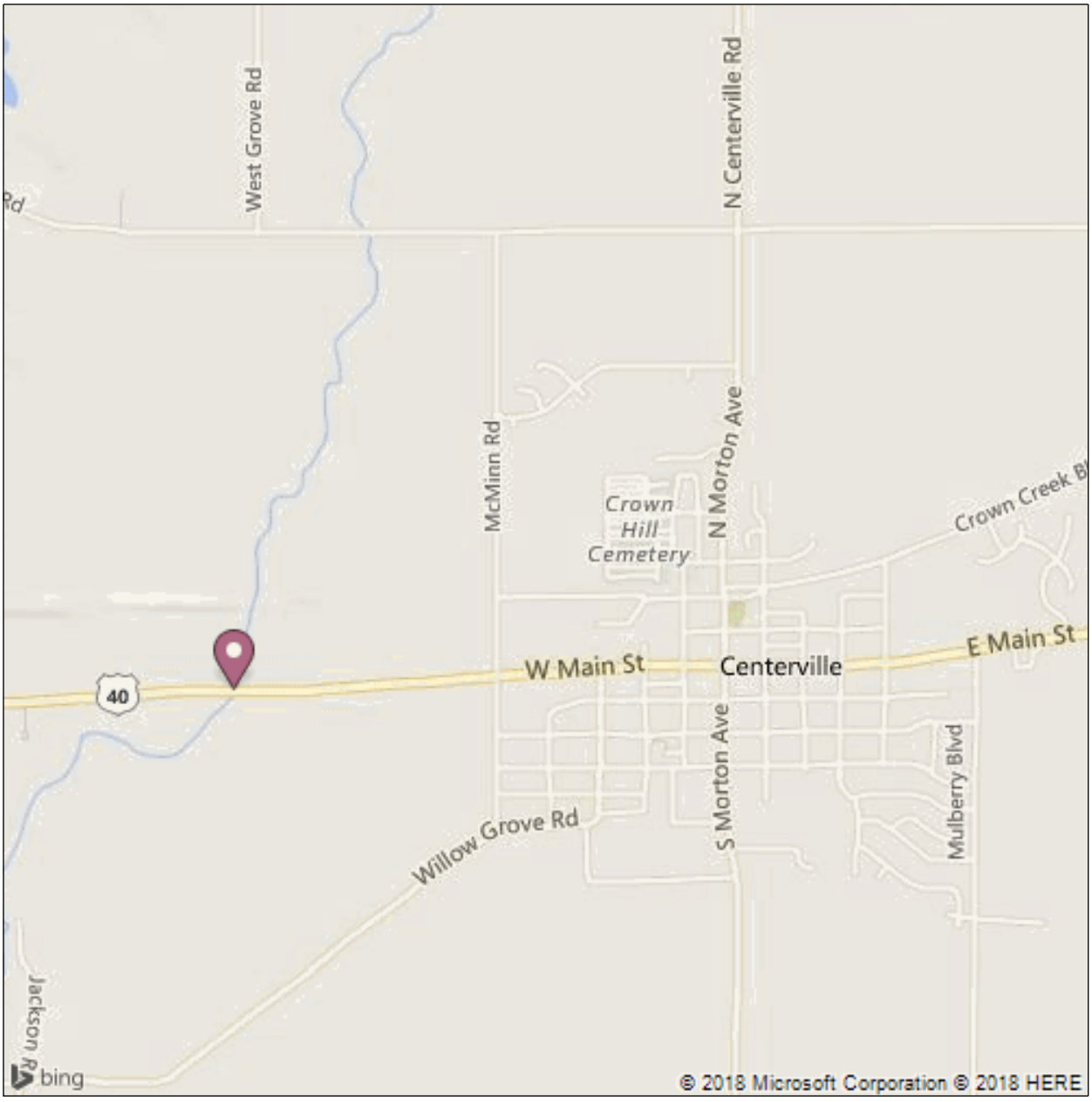
Inspector: James Yapp

Inspection Date: 11/14/2018

Asset Name: 040-89-00217 C

Facility Carried: US 40

Bridge Inspection Report



Latitude: 39.81695

Longitude: -85.01571

GENERAL NOTES:

Abutment #1 is EAST.

The Bridge was Built in 1925.
'A' Rehab (Widened South) in 1935, contract B-1059.
'B' Rehab (Widened North) in 1955, B-3935.
'C' Rehab (Reconstructed arch rings at 1st interior joint) in 1982, B-13451.

DES. #1701344 - programmed for replacement in 2022, contract B-39294.

Inspector: James Yapp
Asset Name: 040-89-00217 C
Inspection Date: 11/14/2018
Facility Carried: US 40

Bridge Inspection Report

IDENTIFICATION

(1) STATE CODE:	185 - Indiana
(8) STRUCTURE:	014140
(5 A-B-C-D-E) INV. ROUTE:	1 - 2 - 1 - 00040 - 0
(2) HIGHWAY AGENCY DISTRICT:	03 - Greenfield
(3) COUNTY CODE:	089 - WAYNE
(4) PLACE CODE:	00000 - N/A
(6) FEATURES INTERSECTED:	NOLANDS FORK
(7) FACILITY CARRIED:	US 40
(9) LOCATION:	06.84 W US 27
(11) MILEPOINT:	0011.010

(12) BASE HIGHWAY NETWORK:	0
(13A) INVENTORY ROUTE:	
(13B) SUBROUTE NUMBER:	
(16) LATITUDE:	39.81695
(17) LONGITUDE:	-85.01571
(98) BORDER	
A) STATE NAME:	
B) PERCENT	%
(99) BORDER BRIDGE STRUCT. NO:	

STRUCTURE TYPE AND MATERIAL

(43) STRUCTURE TYPE, MAIN:	
A) KIND OF MATERIAL/DESIGN:	1 - Concrete
B) TYPE OF DESIGN/CONSTR:	11 - Arch - Deck
(44) STRUCTURE TYPE, APPROACH SPANS:	
A) KIND OF MATERIAL/DESIGN:	0 - Other
B) TYPE OF DESIGN/CONSTR:	00 - Other

(45) NUMBER OF SPANS IN MAIN UNIT:	003
(46) NUMBER OF APPROACH SPANS:	0000
(107) DECK STRUCTURE TYPE:	N - Not Applicable
(108) WEARING SURFACE/PROT SYS:	
A) WEARING SURFACE:	6 - Bituminous
B) DECK MEMBRANE:	0 - None
C) DECK PROTECTION:	0 - None

AGE OF SERVICE

(27) YEAR BUILT:	1925
(106) YEAR RECONSTRUCTED:	1982
(42) TYPE OF SERVICE:	
A) ON BRIDGE:	1 - Highway
B) UNDER BRIDGE:	5 - Waterway

(28) LANES:	
A) ON BRIDGE:	04
B) UNDER BRIDGE:	00
(29) AVERAGE DAILY TRAFFIC:	009609
(30) YEAR OF AVERAGE DAILY TRAFFIC:	2004
(109) AVERAGE DAILY TRUCK TRAFFIC:	10 %
(19) BYPASS DETOUR LENGTH:	006 MI

Bridge Inspection Report

GEOMETRIC DATA

(48) LENGTH OF MAX SPAN:	0045.8	FT
(49) STRUCTURE LENGTH:	00144.5	FT
(50) CURB/SIDEWALK WIDTHS:		
A) LEFT	00.2	FT
B) RIGHT:	00.2	FT
(51) BRDG RDWY WIDTH CURB-TO-CURB:	060.0	FT
(52) DECK WIDTH, OUT-TO-OUT:	063.0	FT
(32) APPROACH ROADWAY	054.0	FT
(33) BRIDGE MEDIAN:	0 - No median	
(34) SKEW:	24	DEG

(35) STRUCTURE FLARED:	0 - No flare	
(10) INV RTE, MIN VERT CLEARANCE:	99.99	FT
(47) TOT HORIZ CLEARANCE:	060.0	FT
(53) VERT CLEAR OVER BR RDWY:	99.99	FT
(54) MIN VERTICAL UNDERCLEARANCE:		
A) REFERENCE FEATURE:	N	
B) MIN VERT UNDERCLEAR:	0	FT
(55) LATERAL UNDERCLEARANCE RIGHT:		
A) REFERENCE FEATURE:	N	
B) MIN LATERAL UNDERCLEAR:	000.0	FT
(56) MIN LATERAL UNDERCLEAR ON LEFT:	00.0	FT

INSPECTIONS

(90) INSPECTION DATE:	11/14/2018
(92) CRITICAL FEATURE INSPECTION:	
A) FRACTURE CRITICAL REQUIRED/FREQUENCY:	N
B) UNDERWATER INSPECTION REQUIRED/FREQUENCY:	N
C) OTHER SPECIAL INSPECTION REQUIRED/FREQUENCY:	N

(91) DESIGNATED INSPECTION FREQUENCY:	24 MONTHS
(93) CRITICAL FEATURE INSPECTION DATE:	
A) FRACTURE CRITICAL DATE:	
B) UNDERWATER INSP DATE:	
C) OTHER SPECIAL INSP DATE:	

CONDITION

(58) DECK:	N - Not Applicable
(58.01) WEARING SURFACE:	7 - Good Condition
(59) SUPERSTRUCTURE:	5 - Fair Condition (minor section loss)

(60) SUBSTRUCTURE:	5 - Fair Condition (minor section loss)
(61) CHANNEL/CHANNEL PROTECTION:	5 - Bank eroded.. major damage
(62) CULVERTS:	N - Not Applicable

CONDITION COMMENTS

(58) DECK: N - Not Applicable

Comments:

(58.01) WEARING SURFACE: 7 - Good Condition

Comments:
Bituminous over fill.
Chip and Seal Summer of 2016.

(59) SUPERSTRUCTURE: 5 - Fair Condition (minor section loss)

Comments:
Arch rings: numerous longitudinal cracks - some full span; heavy cracking & efflorescence, esp. at construction joints; heavy scaling with rebar exposure to North coping.

(60) SUBSTRUCTURE: 5 - Fair Condition (minor section loss)

Comments:
Pilasters in the Spandrel walls have heavy spalling with rebar exposure and heavy section loss.

(61) CHANNEL/CHANNEL PROTECTION: 5 - Bank eroded.. major damage

Comments:
Upstream is North. Both directions have erosion with leaning trees. Some bank undercutting. Minor footing exposure Pier #3 North. Large drift pile caught against Pier #3 North, notified maintenance on 11-19-2018 to remove.

(62) CULVERTS: N - Not Applicable

Comments:

LOAD RATING AND POSTING

(31) DESIGN LOAD:	4 - H 20	(66) INVENTORY RATING:	55
(70) BRIDGE POSTING	5 - Equal to or above legal loads	(65) INVENTORY RATING METHOD:	1 - Load Factor (LF)
		(66B) INVENTORY RATING (H):	30
(41) STRUCTURE OPEN/POSTED/CLOSED:	A - Open	(66C) TONS POSTED :	
		(66D) DATE POSTED/CLOSED:	
(64) OPERATING RATING:	87		
(63) OPERATING RATING METHOD:	1 - Load Factor (LF)		

APPRAISAL

SUFFICIENCY RATING:	80.8	(36) TRAFFIC SAFETY FEATURE:	
STATUS:	0	36A) BRIDGE RAILINGS:	0
(67) STRUCTURAL EVALUATION:	5	36B) TRANSITIONS:	0
(68) DECK GEOMETRY:	5	36C) APPROACH GUARDRAIL:	1
(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL:	N	36D) APPROACH GUARDRAIL ENDS:	0

(71) WATERWAY ADEQUACY: 9 - Bridge Above Flood Water Elevations
Comments:

(72) APPROACH ROADWAY ALIGNMENT: 8 - Equal to present desirable criteria
Comments:

(113) SCOUR CRITICAL BRIDGES: 8 - Stable for scour conditions
Comments:
Channel has migrated East.
Piles, widened with same, scour hole @ pier #2

Inspector: James Yapp
Asset Name: 040-89-00217 C
Inspection Date: 11/14/2018
Facility Carried: US 40

Bridge Inspection Report

CLASSIFICATION

(20) TOLL:	3 - On Free Road	(21) MAINT. RESPONSIBILITY:	01 - State Highway Agency
(22) OWNER:	01 - State Highway Agency	(26) FUNCTIONAL CLASS OF INVENTORY RTE:	07 - Rural - Major Collector
(37) HISTORICAL SIGNIFICANCE:	5 - Not eligible	(100) STRAHNET HIGHWAY:	Not a STRAHNET route
(101) PARALLEL STRUCTURE:	N - No parallel structure	(102) DIRECTION OF TRAFFIC:	2-way traffic
(103) TEMPORARY STRUCTURE:		(104) HIGHWAY SYSTEM OF INVENTORY ROUTE:	0 - Structure/Route is NOT on NHS
(105) FEDERAL LANDS HIGHWAYS:	0-Not Applicable	(110) DESIGNATED NATIONAL NETWORK:	Inventory route not on network
(112) NBIS BRIDGE LENGTH:	Yes		

NAVIGATION DATA

(38) NAVIGATION CONTROL:	0 - No navigation control on waterway (bridge permit not required)	(39) NAVIGATION VERTICAL CLEAR:	000.0 FT
(111) PIER OR ABUTMENT PROTECTION:		(116) MINIMUM NAVIGATION VERT. CLEARANCE, VERT. LIFT BRIDGE:	FT
		(40) NAV HORIZONTAL CLEARANCE:	0000.0 FT

PROPOSED IMPROVEMENTS

(75A) TYPE OF WORK:		(95) ROADWAY IMPROVEMENT COST:	$ 000000
(75B) WORK DONE BY:		(96) TOTAL PROJECT COST:	$ 000000
(76) LENGTH OF IMPROVEMENT:	00000.0 FT	(97) YR OF IMPROVEMENT COST EST:	
(94) BRIDGE IMPROVEMENT COST:	$ 000000	(114) FUTURE AVG DAILY TRAFFIC:	015952
		(115) YR OF FUTURE ADT:	2030

PHOTO 2

Description E. Approach

PHOTO 4

Description Span A under

PHOTO 5

Description Span B under

PHOTO 6

Description Span C under

PHOTO 7

Description Pier 2 South

PHOTO 8

Description Pier 3 South

PHOTO 9

Description Pier 3 North

PHOTO 10

Description Drift Pier 3 North

Miscellaneous Asset Data

014140

Asset Management

Load Rating 2:

Has the dead load or the structural condition of the primary load carrying members changed since the last inspection? No

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Extended Frequency: Submittal Date:

Inspector:

INDOT Reviewer:

This bridge has been accepted into the Extended Frequency Program. Approval Date:

Joints: ** Indicate location, type, and rating of lowest rated joint.*

No Joints Present

Comments:

Terminal Joints: **Rating of lowest rated terminal joint.* N

Comments:

Concrete Slopewall: **Rating of lowest rated slopewall.* N

Comments:

Bearings: ** Indicate type, and rating of lowest rated bearing.*

N - No Bearing(s)

Comments:

Approach Slabs: ** Indicate if present & condition rating.*

N - No Approach Slabs

Comments:

Paint: ** Indicate if paint present , year painted & condition rating.*

N - No Paint Not Rated

Comments:

Scour Analysis: **Scour Critical:** **Scour POA?**

NBI 113 Scour Comment:

Channel has migrated East.
Piles, widened with same, scour hole @ pier #2

Endangered Species: ** If yes, add one photo to the dropdown field*

Bats: seen or heard under structure? * N - No evidence of bats

Birds/swallows/nests seen? Empty nests present? * N - No Birds and/or Nests Visi

BRIDGE Culvert Geometry:

Barrel Length:

Height:

Width:

APPENDIX D: Bridge/Structure Assessment Form

This form will be completed and submitted to the District Environmental Manager by the Contractor prior to conducting any work below the deck surface either from the underside; from activities above that bore down to the underside; from activities that could impact expansion joints; from deck removal on bridges; or from structure demolition for bridges/structures within 1000 feet of suitable bat habitat.

DOT Project #	Water Body	Date/Time of Inspection	Within 1,000ft of suitable bat habitat (circle one)
1701344	Nolan's Fork	16 Aug '19 9:10 AM	(Yes) / No

Route	County	Federal Structure ID
US 40	Wayne	

If the bridge/structure is 1,000 feet or more from suitable bat habitat (e.g., an urban or agricultural area without suitable foraging habitat or corridors linking the bridge to suitable foraging habitat), check box and STOP HERE. No assessment required. ☐
Please submit to the U.S. Fish and Wildlife Service.

Areas Inspected (Check all that apply)

Bridges		Culverts/Other Structures		Summary Info (circle all that apply)			
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	N/A	Crevices, rough surfaces or imperfections in concrete	✓	Human disturbance or traffic under bridge/in culvert or at the structure	High	(Low)	None
All crevices >12" deep & not sealed	N/A	Spaces between walls, ceiling joists	N/A	Possible corridors for netting	None/poor	Marginal	(Excellent)
All guardrails	✓						
All expansion joints	✓						
Spaces between concrete end walls and the bridge deck	✓						

Last Revised May 31, 2017

Vertical surfaces on concrete I-beams	N/A						

Evidence of Bats (Circle all that apply) Presence of one or more indicators is sufficient evidence that bats may be using the structure.

None

Visual (e.g. survey, thermal, emergent etc.)
- Live __number seen
- Dead __number seen

Photo documentation Y/N

Guano
Odor Y/N
Photo documentation Y/N

Staining definitively from bats
Photo documentation Y/N

Audible

Assessment Conducted By: Kirk Roth **Signature(s):** [signature]

District Environmental Use Only: Date Received by District Environmental Manager: _____

DOT Bat Assessment Form Instructions

1. Assessments must be completed no more than 2 years prior to conducting any work below the deck surface on all bridges, regardless of whether assessments have been conducted in the past.
2. Any bridge/structure suspected of providing habitat for any species of bat will be removed from work schedules until such time that the DOT has coordinated with the USFWS. Additional studies may be undertaken by the DOT to determine what species may be utilizing each structure identified as supporting bats prior to allowing any work to proceed.
3. Any questions should be directed to the District Environmental Manager.

Last Revised June 2017

Land and Water Conservation Fund (LWCF) County Property List for Indiana (Last Updated December 2019)

ProjectNumber	SubProjectCode	County	Property
1800325	1800325	Wayne	Whitewater Valley Gorge Park & Trail,WEIR DAM
1800356	1800356	Wayne	Glen Miller Park & Golf Course
1800462	1800462	Wayne	Springwood Lake Park

Please note, some of the property names are cut off on the ends due to character limits
Also, park names may have changed and is not reflected on the list.
*Various - this may include multiple sites in multiple counties and should always be included in your sear