Indiana Department of Transportation

County Newton County Route State Road 16 Des. No. 1700077

FHWA-Indiana Environmental Document

CATEGORICAL EXCLUSION / ENVIRONMENTAL ASSESSMENT FORM

GENERAL PROJECT INFORMATION

Road No./County:	**State Road (SR) 16/Newton County**
Designation Number:	**1700077**
Project Description/Termini:	**Bridge Replacement Project along SR 16 over Mosquito Creek in Newton County. The project begins 1.25 miles east of SR 55 and ends 1.35 miles east of SR 55 along SR 16**

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):

X	**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)
	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

N/A _____ REB 06/09/2020
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: Ruth Hook/Lochmueller Group

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 Entry letters were mailed to potentially affected property owners near the project area on August 20, 2018 notifying them about the project and that individuals responsible for land surveying and field activities may be seen in the area. A sample copy of the Notice of Entry letter is included in Appendix *G*, pages G1 to G3.

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: Indiana Department of Transportation (INDOT) INDOT District: LaPorte

Local Name of the Facility: SR 16

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

*If other is selected, please identify 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)

Need

The need for the project stems from the deteriorated condition of the existing bridge (Bridge No. 016-56-01238 A). According to the INDOT Bridge Inspection Report dated January 13, 2020 (Appendix J, J2 to J14), the superstructure exhibited minor spalling and efflorescence and had a longitudinal crack mid-span. The substructure was noted to have longitudinal cracks with efflorescence's. The condition ratings of the superstructure, substructure, and channel/channel protection are a 6, which is considered "satisfactory" condition. Condition ratings range from 0, which indicates a failed structure component, to 9, which indicates a new structure component with no deficiencies. The channel was noted to have erosion on the southeast bank and the northwest corner is undermined. The condition rating of the channel is a 6, which indicates "bank slump, widespread minor damage." The structure ratings included in the 2020 Bridge Inspection Report were not changed from the previous inspection as the structure was inaccessible during the inspection.

Purpose

The purpose of the project is to provide an improved crossing at this location where the superstructure, substructure, and channel have condition ratings of at least an 8, which is considered to be in "very good" condition. Meeting the purpose of the project will address the identified structural deficiencies, correct issues along the bank, and provide a sufficient crossing for continued vehicular operations.

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Newton Municipality: N/A

Limits of Proposed Work: 1.25 miles east of SR 55 for 500 feet along SR 16 to 1.35 miles east of SR 55

Total Work Length: 0.10 Mile(s) Total Work Area: 1.50 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.

Location

This project is located along SR 16 in eastern Newton County, to the east of the town of Brook, and approximately 1.31 miles east of SR 55. Specifically, the project is located in Sections 13 & 24, Township 28 North, Range 8 East of Iroquois Township as depicted on the Goodland USGS Quadrangle Topographic Map (Appendix B, page B2).

Existing Conditions

Within the project area, SR 16 is classified as a state collector. The roadway typical cross-section consists of two 12-foot wide paved travel lanes (one in each direction) with 4-foot wide shoulders (1-foot paved, 3-foot aggregate) on each side. The posted speed limit is 55 miles per hour (mph). Guardrail is present along the north side and south side of SR 16 east and west of the structure.

The existing structure, Bridge No. 016-56-01238 A, is a 39-foot long single span reinforced concreted filled arch bridge with a 36-foot span and a 32-foot wide clear roadway width originally built in 1931. On structure, the typical cross-section of SR 16 consists of two 12-foot wide paved travel lanes with 4-foot wide paved shoulders, and concrete railings on either side of the structure. The structure is not documented in the Indiana Historic Sites and Structures Inventory (IHSSI) and is documented as "Non-Historic" in the Indiana Historic Bridge Inventory. According to INDOT's *Bridge Inspection Report* from January 2020, the superstructure exhibited minor spalling and efflorescence as well as a

longitudinal crack mid-span and had a condition rating of 6 which indicates a "satisfactory" condition. The substructure was also noted to have longitudinal cracks with efflorescence's with a condition rating of 6. Erosion was noted along the bank in the southeast corner and it was noted that the northwest corner was undermined, and maintenance was needed. The channel had a condition rating of 6 (Appendix J, pages J2 to J14).

Preferred Alternative

The preferred alternative involves the replacement of the existing concrete filled arch bridge with a single span, composite prestressed concrete box beam structure. The bridge number for the new structure will be Bridge No. 016-56-10320. The new structure will be 67 feet long and will have an out-to-out deck width of 41 feet wide. On the structure, SR 16 will have a typical cross-section of two 12-foot travel lanes (one in each direction) with 7-foot paved shoulders on either side and 1-foot 6-inch wide concrete bridge railings. Riprap drainage turnouts will be constructed in each corner of the structure and new riprap will be placed along Mosquito Creek under the new structure.

Full depth pavement replacement will occur for approximately 235 feet west of the structure and 150 feet east of the structure. Approximately 195 feet of incidental construction will occur and will involve milling and resurfacing SR 16 to meet the new profile of the full depth pavement replacement section. The incidental construction will also include shoulder taper.

Including the length of incidental construction, the total length of the project is 500 feet (0.10 mile) along SR 16. Please refer to Appendix B for maps depicting the project area (pages B1 to B4), photographs of the project area (pages B5 to B13), and the Preliminary Design Plans (pages B14 to B23).

The termini of the project provide the logical beginning and end point necessary to complete the bridge replacement and to transition the roadway project back to the existing approaches. The project is independent of any other action and able to be constructed without relying on the completion of any other project.

Every effort to avoid, minimize, and/or mitigate project impacts will be made.

The project will meet the purpose and need of the project by constructing the new structure with structure components meeting condition ratings of at least 8. The condition rating of the new structure components will be 9, which indicates a new structure with no deficiencies.

The proposed maintenance of traffic plan includes the closure of SR 16 to thru traffic. A detour will be established and will utilize SR 55, US 24, and US 231 (Appendix B, page B19). Please refer to the *Maintenance of Traffic* section of this document for full details. The MOT will be implemented per the *Indiana Design Manual* guidelines.

The proposed project will require the acquisition of 1.77 acres of permanent right-of-way (ROW) (Appendix B, page B18). The project involved 0.3 acre of tree clearing. No temporary right-of-way will be required. No relocations are required.

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: This alternative would involve repairing the existing bridge structure along SR 16 over Mosquito Creek. Rehabilitation is not feasible due to the condition of both the substructure and superstructure. Rehabilitation of the existing structure would likely not meet the purpose and need of the project by failing to bring the structure condition to at least an 8. Therefore, this alternative was discarded from further consideration.

No Build Alternative: This alternative would involve no improvements to the existing bridge carrying SR 16 over Mosquito Creek. While this alternative eliminates any project costs and environmental impacts, it would not meet the objectives of the purpose and need of the project. Therefore, this alternative was discarded from further consideration.

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

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

State Road 16:

Functional Classification: State Collector
Current ADT: 1,166 VPD (2022) Design Year ADT: 1,220 VPD (2042)
Design Hour Volume (DHV): 107 Truck Percentage (%) 14
Designed Speed (mph): 55 Legal Speed (mph): 55

	Existing		Proposed	
Number of Lanes:	2		2	
Type of Lanes:	Travel		Travel	
Pavement Width:	12	ft.	12	ft.
Shoulder Width:	4	ft.	2 to 7	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): 016-56-10320 (New Str. #); 016-56-01238 A (Old Str. #); NBI: 004200

Sufficiency Rating: 98.6 (January 2020 INDOT Bridge Inspection)* (Rating, Source of Information)

* The structure ratings included in the 2020 Bridge Inspection Report were not changed from the previous inspection as the structure was inaccessible during the inspection

	Existing		Proposed	
Bridge Type:	Concrete Filled Arch Bridge		Composite Prestressed Concrete Box Beam	
Number of Spans:	1		1	
Weight Restrictions:	N/A	ton	N/A	ton
Height Restrictions:	N/A	ft.	N/A	ft.
Curb to Curb Width:	32	ft.	38	ft.
Outside to Outside Width:	35	ft.	41	ft.
Shoulder Width:	4	ft.	7	ft.
Length of Channel Work:			128.2	ft.

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

Remarks: The project will involve the replacement of Bridge No. 016-56-01238 A which carries SR 16 over Mosquito Creek. The project will impact a total of 128.2 feet of Mosquito Creek (Appendix B, page B20 to B23). The bridge number for the new structure will be Bridge No. 016-056-10320.

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No other structures will be improved as part of this project.

	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

Remarks:

The MOT for the project will require the closure of SR 16 at the structure and an establishment of a detour. The detour will utilize SR 55, US 24, and US 231 (Appendix B, page B19). This detour is approximately 22.80 miles and will involve 30.64 miles in added travel distance. Access to all drives and businesses will be maintained during construction. The detour is expected to last approximately 4 months. The MOT will be implemented per the *Indiana Design Manual* guidelines.

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

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: $ 184,255.00 (2019/2021) Right-of-Way: $ 100,000.00 (2021) Construction: $ 13,185.029* (2021/2022)

*Construction dollars for all structures under contract B-40608

Anticipated Start Date of Construction: Spring 2022

Date project incorporated into STIP July 2, 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:

Land Use Impacts	Amount (acres) Permanent	Temporary
Residential	0.21	0.00
Commercial	0.00	0.00
Agricultural	1.15	0.00
Forest	0.30	0.00
Wetlands	0.00	0.00
Other: Stream	0.07	0.00
Other: Existing Local Roadway	0.04	0.00
TOTAL	1.77	0.00

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:

Within the project area, the existing ROW is assumed to be located along the edge of the pavement of SR 16. The typical width along SR 16 is 12 feet north and south of the centerline. However, records in Newton County do not exist as to where the existing ROW is located.

The project requires approximately 1.77 acres of permanent ROW from residential (0.21 acre), agricultural (1.15 acres), forest (0.30 acre), stream (0.07 acre), and existing local roadway (0.04 acre). The project does not require temporary ROW. The new typical ROW width along SR 16 will be between 40 and 70 feet north of the centerline and between 55 and 75 feet south of the centerline of SR 16. The total maximum ROW width along SR will be 145 feet.

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	Impacts 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 October 12, 2018 by Lochmueller Group, the aerial map of the project area (Appendix B, page B3), the USGS topographic map (Appendix B, page B2) and the water resources map in the Red Flag Investigation (RFI) report (Appendix E, page E7), there are three rivers and streams within the 0.5 mile search radius. There is one river and stream present within or adjacent to the project area.

A *Waters of the U.S. Determination / Wetland Delineation Report* was approved by INDOT Ecology and Waterway Permitting Office on November 30, 2018. Please refer to Appendix F, pages F1 to F10 for the *Waters of the U.S. Determination / Wetland Delineation Report*. It was determined that four jurisdictional

streams are within the project area. The stream features are Mosquito Creek, UNT 1 to Mosquito Creek, UNT 2 to Mosquito Creek, and UNT 3 to Mosquito Creek. Mosquito Creek is mapped as a solid blue line feature on the Goodland USGS (1:24,000) topographic map. UNTs 1, 2, and 3 are not mapped as stream features on the topographic map. None of the identified streams are listed as a Federal Wild and Scenic River, a State Natural, Scenic, and Recreation River, or as an IDNR Outstanding River. The U.S. Army Corps of Engineers (USACE) makes all final determinations regarding jurisdiction.

Mosquito Creek is a perennial stream feature with an ordinary high water mark (OHWM) of 16 feet and 6 inches wide by 8 inches deep. Approximately 128.2 linear feet (0.05 acre below OHWM) will be impacted by the project. Impacts to Mosquito Creek are due to construction activities for the removal and replacement of the structure as well as the placement of Class 1 riprap on both banks.

UNT 1 is an ephemeral stream completely confined to the roadside on the north side of SR 16 near the intersection with S. Iroquois River Road and has an OHWM of 1-foot 1-inch wide by 2.5-inches deep. No impacts to UNT 1 will occur as part of the project. UNT 2 is located on the south side of SR 16 to the east of Mosquito Creek. UNT 2 is an ephemeral stream completely confined to the roadside and has an OHWM of 1-foot 5-inches wide by 2-inches deep. Approximately 363 linear feet (0.01 acre below OHWM) of UNT 2 will be impacted by the project. Impacts to UNT 2 are due to anticipated construction activities related to the removal and replacement of the structure as well as the placement of Class 1 riprap on the right bank of Mosquito Creek. UNT 3 an ephemeral stream completely confined to the roadside on the northside of SR 16, east of Mosquito Creek. UNT 3 has an OHWM of 1-foot 9-inches wide by 6-inches deep and approximately 227 linear feet (0.01 acre below OHWM) will be impacted as part of the project. Impacts to UNT 3 will result from construction activities related to the removal and replacement of the structure as well as the placement of Class 1 riprap on the right bank of Mosquito Creek.

Due to the impacts to a Water of the U.S., an IDEM 401 Water Quality Certification (WQC) and a USACE 404 Regional General Permit (RGP) will be required. Mitigation is required when cumulative impacts are greater than 300 linear feet or 0.1 acre below OHWM. Impacts to Mosquito Creek, UNT 2, and UNT 3 will result in 718.2 linear feet of impacts, and therefore mitigation is anticipated to be required.

Early coordination information was sent to the USACE and the Indiana Department of Natural Resources – Division of Fish and Wildlife (IDNR DFW) on December 16, 2020 (Appendix C, pages C1 to C5).

The USACE responded on January 13, 2020 indicating that the project may require a Department of the Army Permit under Section 404 of the Clean Water Act and indicated that the project is mapped within a federally mapped floodway. They recommended coordination with local officials and the Indiana Department of Natural Resources regarding the applicability of a floodplain permit (Appendix C, pages C24 to C25).

The IDNR DFW responded on January 14, 2020 with recommendations to limit impacts to streams within the project (Appendix C, pages C26 to C28). These recommendations included maintaining fish and wildlife passage, minimizing the use of riprap for bank stabilization, utilizing time of year restrictions for stream work, minimizing the movement of resuspended bottom sediment, and preventing any disturbed sediment from entering the waterway. All applicable IDNR DFW recommendations are included in the *Environmental Commitments* section of this CE document.

An automated later was generated from the Indiana Department of Environmental Management (IDEM) website on December 16, 2019 (Appendix C, page C6 to C15). Applicable recommendations from the Proposed Roadway Letter include coordinating with the appropriate agencies with regards to stream impacts and limiting stream disturbance.

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

Remarks:

Based on a desktop review, a site visit on October 12, 2018 by Lochmueller Group, the aerial map of the project area (Appendix B, page B3), and the water resource map in the RFI report (Appendix E, page E7) there are no other surface waters within the 0.5 mile search radius. No other surface waters are present within the project area; therefore, no impacts are expected.

The IDNR DFW responded on January 14, 2020 with no recommendations in regards to other surface waters (Appendix C, pages C26 to C28). The USACE responded on January 13, 2020 with recommendations the coordination with proper agencies to obtain the proper permits when impacting water resources (Appendix C, pages C24 to C25).

An automated letter was generated from the IDEM website on December 16, 2019 (Appendix C, page C6 to C15). No recommendations related to open water features apply as there are no open water feature impacts associated with this project.

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

Total wetland area: 0.41 acre(s) Total wetland area impacted: 0.01 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
Wetland 1	PEM1A	0.14	0.00	Wetland 1 is located at the base of the roadside embankment, extends into adjacent pasture, and formed due to frequent flooding by Mosquito Creek.
Wetland 2	PEM1A	0.25	0.00	Wetland 2 is located at the intersection of SR 16 and Iroquois River Road, extends into adjacent pasture, and formed due to frequent flooding by Mosquito Creek
Wetland 3	PEM1A	0.02	0.01	Wetland 3 is completely confined to the roadside ROW north of SR 16.

Wetlands (*Mark all that apply*)	**Documentation**	**ES Approval Dates**
Wetland Determination	X	**November 30, 2018**
Wetland Delineation	X	**November 30, 2018**
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.	X

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) on-line mapper (https://www.fws.gov/wetlands/data/mapper.html) (Appendix F, page F13), a site visit on October 12, 2018 by Lochmueller Group, the USGS topographic map (Appendix B, page B2), and the water resources map of the RFI report (Appendix E, page E7), there are six wetlands location within the 0.5 mile search radius. There are three wetlands within the project area.

A *Waters of the U.S. Determination / Wetland Delineation Report* was approved for the project on November 30, 2018 by INDOT Ecology and Waterway Permitting office. Please refer to Appendix F, pages F1 to F45 for the *Waters of the U.S. Determination Report*. It was determined that three wetlands, Wetland 1 through Wetland 3, are within the project area. These can be seen on the Water Resources Map in Appendix F, page F12. All three wetlands are likely to be considered Waters of the U.S. The USACE makes all final determinations regarding jurisdiction.

Wetland 1 is a palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland according to the classifications defined by *Cowardin et. al* (1979). Wetland 1 is 0.14 acre in size and begins at the base of the roadway embankment for S. Iroquois River Road and extends into the adjacent pasture. Wetland 1 is located within the floodplain for Mosquito Creek and has formed due to frequent flooding of Mosquito Creek and disturbance of the topsoil by hoof shear. No impacts will occur to Wetland 1 as part of the project as it is outside the construction limits of the project. Wetland 1 will be identified on the plans and marked as do not disturb, this is included as a firm commitment in the *Environmental Commitments* of this section.

Wetland 2 is a palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland according to the classifications defined by *Cowardin et. al* (1979). Wetland 2 is 0.25 acre in size and begins at the base of the roadway embankment at the intersection of SR 16 and Iroquois River Road and extends into the adjacent pasture. Wetland 2 has formed due to frequent flooding of Mosquito Creek and disturbance of the topsoil by hoof shear. No impacts will occur to Wetland 2 as part of the project as it is outside the construction limits of the project. Wetland 2 will be identified on the plans and marked as do not disturb, this is included as a firm commitment in the *Environmental Commitments* of this section.

Wetland 3 palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland according to the classifications defined by *Cowardin et. al* (1979). Wetland 3 is 0.02 acre in size and is completely confined to the roadside ditch on the northside of SR 16 and has formed due to runoff from the adjacent agricultural field and roadside. Wetland 3 connects to UNT 3 which outlets into Mosquito Creek. Approximately 0.01 acre of Wetland 3 will likely be impacted as part of the project.

Due to the impacts to a Water of the U.S., an IDEM 401 WQC and a USACE 404 RGP will be required. Mitigation is required when cumulative impacts are greater than 300 linear feet or 0.1 acre below OHWM. Impacts to wetlands will be less than the 0.1 acre threshold, however impacts to stream features will result in greater than 300 linear feet of impacts, and therefore mitigation is anticipated to be required.

The IDNR DFW responded on January 14, 2020 with standard recommendations relating to wetland habitat including coordination with IDEM and USACE in regard to potential permits and mitigation, as well as efforts to avoid, minimize, or compensate for potential impacts (Appendix C, pages C26 to C28). All applicable IDNR DFW recommendations are included in the *Environmental Commitments* section of this CE document.

The USACE responded on January 13, 2020 with recommendations including the coordination with proper agencies to obtain the proper permits when impacting water resources (Appendix C, pages C24 to C25).

An automated letter was generated from the IDEM website on December 16, 2019 (Appendix C, pages C6 to C15). Applicable recommendations from the Proposed Roadway Letter include coordinating with the appropriate agencies with regards to wetland impacts.

	Presence	Impacts Yes	Impacts 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 October 12, 2018 by Lochmueller Group, the aerial map of the project area (Appendix B, page B3), and design plans, there is forested, riparian, agricultural, pasture, and maintained roadside habitat surrounding the project area. The dominant species include reed canary grass (*Phalaris arundinacea*), tall fescue (*Schedonorus arundinaceus*), Poa species, yellow fox tail (*Setaria pumila*), and silver maple (*Acer saccharinum*). The project involves approximately 1.07 acres of ground disturbance. This will involve the 0.3 acre of tree clearing along the northside of SR 16, to the west of Mosquito Creek. In addition, approximately 0.42 acre of the habitat to be impacted is maintained roadside and 0.35 acre is agricultural land use. The avoidance of terrestrial habitat is not feasibly as the proposed footprint is required to replace the bridge, which, as stated in the *Purpose and Need* section of this document, is the preferred alternative to meet the purpose and need of this project. Since the project will involve more than 1.0 acre of ground disturbance, an IDEM Rule 5 Notice of Intent will be required.

The IDNR DFW responding on January 14, 2020 with recommendations pertaining to terrestrial habitat impacts (Appendix C, pages C26 to C28). These recommendations include keeping wildlife crossing under the structure, revegetating all bare and disturbed areas, and minimizing the clearing of trees and brush to be within project limits. All applicable agency recommendations are included in the *Environmental Commitments* section of this CE document.

An automated letter was generated from the IDEM website on December 16, 2019 (Appendix C, pages C6 to C15). Applicable recommendations from the Proposed Roadway Letter include coordinating with the appropriate agencies in regard to impacts to terrestrial habitat.

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?		X
Are karst features located within or adjacent to the footprint of the proposed project?		X
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, the project is located outside the designated karst region of Indiana as outlined in the October 13, 1993 Memorandum of Understanding (MOU). According to the topo map of the project area (Appendix B, page B2), and the RFI report (Appendix E, pages E1 to E11), there are no karst features identified within or adjacent to 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, pages C16 to C18). They did indicate that there was a moderate liquefaction potential and a high potential for encountering bedrock resources. No active or abandoned mineral resources extraction sites were identified in the project area. The response from IGS was communicated to the designer on March 18, 2020. No impacts are expected.

County Newton County Route State Road 16 Des. No. 1700077

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 report (Appendix E, pages E1 to E11), completed by Lochmueller Group on October 24, 2019, the IDNR Newton County Endangered, Threatened and Rare (ETR) Species List has been checked and is included in Appendix E, pages E8 to E11. The highlighted species on the list reflect the federal and state identified ETR species located within the county. According to the IDNR-DFW early coordination response letter dated January 14, 2020, the Natural Heritage Database has been checked and to date no plant or animal listed ass state or federally threatened, endangered, or rare have been reported to occur in the project vicinity.

Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal, and an official species list was generated (Appendix C, pages C47 to C52). The project is within range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*). No other species were found within or adjacent to the project area other than the Indiana Bat and NLEB.

The project qualifies for the *Range-wide Programmatic Information Consultation for the Indiana bat and northern long-eared bat (NLEB),* dated May 2016 (revised February 2018), between FHWA, Federal Railroad Administration (FRA), Federal Transit Administration (FTA), and USFWS. An effect determination key was completed on April 6, 2020, and based on the response provided, the project was found to May Effect – Not Likely to Adversely Affect the Indiana bat and/or the NLEB. INDOT reviewed and verified the effect finding on April 6, 2020 and requested USFWS's review of the finding. No response was received from the USFWS within the 14-day review period; therefore, it was concluded they concur with the finding. Avoidance and Mitigation Measures (AMMs) are included as firm commitments in the *Environmental Commitments* section of this document.

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 change, 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 project is located in Newton 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. Therefore, a detailed ground water assessment is not needed and no impacts are expected.

The Indiana Department of Environmental Management's Wellhead Proximity Determinator Website (https://www.in.gov/idem/cleanwater/pages/wellhead/) was accessed on March 18, 2020 by Lochmueller Group The project is not located within a Wellhead Protect Area or Source Water Area. No impacts are expected.

The IDNR Water Well Record Database website (https://www.in.gov/dnr/water/3595.htm) was accessed on March 18, 2020 by Lochmueller Group. Two (2) unconsolidated wells are located near the project area. The features will not be affected based on the scope of work of the project. Therefore, no impacts are expected. Should it be determined during the right-of-way phase that these wells are affected, as cost to cure will likely 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 Lochmueller Group on March 18, 2020, and the RFI report; this project is not located in an Urban Area Boundary Location. No impacts are expected.

Based on a desktop review, a site visit on October 12, 2018, the aerial map of the project area (Appendix B, page B3), and the most current design plans (Appendix B, pages B14 to B23), no public water systems were identified. Therefore, no impacts are expected.

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

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

Remarks:

Based on a desktop review of the Indiana Department of Natural Resources Indiana Floodway Information Portal website (https://dnrmaps.dnr.in.gov/appsphp/fdms/) by Lochmueller Group on April 14, 2020, and the RFI report, this project is located in a regulatory floodplain as determined from approved IDNR floodplain maps (Appendix F, page F13). An early coordination letter was sent on April 14, 2020 to the local Floodplain Administrator. No response has been received to date. This project qualifies as a Category 4 per the current 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 structure 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.

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

Total Points (from Section VII of CPA-106/AD-1006* **91**

**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 October 12, 2018, and the aerial map of the project area (Appendix B, page B3) the project will convert 1.15 acres of farmland as defined by the Farmland Projection Policy Act. An early coordination letter was sent on December 16, 2019 to the Natural Resources Conservation Service (NRCS). Coordination with the NRCS resulted in a score of 91 on the NRCS-CPA-106 for (Appendix C, pages C22 to C23). NRCS's threshold score for significant impacts to farmland that result in the consideration of alternatives in 160. Since this project's score is less than the threshold, no significant loss of prime, unique, statewide, or local important farmland will result from this project. No other alternatives other than those previously discussed in this document will be investigated without reevaluating impacts to prime farmland.

SECTION C – CULTURAL RESOURCES

	Category	Type	INDOT Approval Dates	N/A
Minor Projects PA Clearance	B	12	January 14, 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 ☐

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	X	January 14, 2020	N/A
Archaeological Phase Ia Survey Report	X	January 14, 2020	N/A
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 January 14, 2020 the INDOT Cultural Resources Office (CRO) determined this project falls within the guidelines of Category B, Type 12 under the Minor Projects Programmatic Agreement (MPPA) (Appendix

D, pages D1 to D4). The projects that fall under the aforementioned MPPA Category is as follows:

B-12: Bridge replacement projects in undisturbed soils where an archaeological investigation found no NRHP eligible or listed sites are found and no NRHP eligible or NRHP listed district or above-ground individual resource exists within or adjacent to the project area.

A Phase 1a Archaeological Survey Report was completed on January 9, 2020 by 106 Consulting LLC. The report included an archaeological records check and an onsite the investigation of the project survey area for NRHP eligible archaeological sites. 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	
Parks & Other Recreational Land		Yes	No
Publicly owned park	☐	☐	☐
Publicly owned recreation area	☐	☐	☐
Other (school, state/national forest, bikeway, etc.)	☐	☐	☐

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

	Presence	Use	
Wildlife & Waterfowl Refuges		Yes	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)	☐	☐

	Presence	Use	
Historic Properties		Yes	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 projects 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 October 12, 2018, the aerial map of the project area (Appendix B, page B3), and the RFI report (Appendix E, page E1 to E11) there are no 4(f) resources located within the 0.5 mile search radius. There are no Section 4(f) resources within or adjacent to the project area. Therefore, no use is expected.

Section 6(f) Involvement	**Presence**	**Use**	
		Yes	**No**
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 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 the 6(f) properties list on the INDOT ESD Environmental Policy website at https://www.in.gov/indot/2523.htm identified a total of one property in Newton County (Appendix J, page J1). 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 FY 2020-2024 Statewide Transportation Improvement Program (STIP) is listed based on the lead Des. No. in the contract. The lead Des. No. for this contract is 1700076. The FY 2020-2024 STIP includes Des. No. 1700077 by reference with the contract number B-40608.

This project is located in Newton County, which is currently in attainment for all criteria pollutants according to the IDEM website (https://www.in.gov/idem/airquality/2339.htm) accessed by Lochmueller Group on April 9, 2020. Therefore, the conformity procedures of 40 CFR Part 93 do not apply.

The 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: The 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?		X
Does the project comply with the transition plan? (explain in the remarks box)		X

Remarks: The project will ultimately be beneficial to local business and properties due to the improved conditions of the roadway along this stretch of SR 16. Overall, the negative impacts to property owners and local businesses within the project area will consist primarily of short-term construction impacts. No relocations are expected. Property owners will be provided access throughout the duration of the project to reduce impacts as much as possible. The project is not anticipated to result in substantial impacts to community cohesion, because it will no change access to properties in the area. The project is not expected to impact the surrounding community or cause economic impacts to the surrounding area. Therefore, this project will have minimal or no negative impacts to the community or local economy

According to the Indiana Festivals website (www.indianafestivals.org) accessed on April 13, 2020 by Lochmueller Group there are no fairs and festivals scheduled within 10 miles of the project.

The MOT may pose delays and temporary inconveniences to traveling motorists (including school buses and emergency services); however, all inconveniences will cease upon project completion. The MOT for the project is not anticipated to impact access to community events.

The project sponsor will be responsible for contacting school districts and emergency services at least two weeks prior to any construction activities that would limit access, this is included as a commitment in the *Environmental Commitments* section of this CE document.

Coordination with Newton County did not identify an approved transition plan and the status of the plan is unknown; however, no existing pedestrian facilities will be modified or removed, and no new pedestrian facilities are proposed as part of this project. Therefore, this project will not create any additional barriers to access.

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 alter 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 environmental which result from the incremental impacts of the action when added to other past, present and reasonably foreseeable actions regardless of what agency or person undertakes such actions.

This project will not add substantial capacity to the existing roadway network or provide additional access to any currently undeveloped areas. Therefore, the project is not expected to increase development in the area o result in substantial indirect or cumulative impacts.

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?		X

Remarks:

Based on a desktop review, a site visit on October 12, 2018 by Lochmueller Group, the 2018 aerial map of the project area (Appendix B, page B3), and the RFI report (Appendix E, E1 to E11) there are no public facilities within the 0.5-mile search radius. Access to all properties will be maintained during construction. Therefore, no impacts are expected.

Early coordination information was sent to South Newton School Corporation, Newton County Commissioners, Newton County Council, Newton County Highway Department, Newton County Surveyor's Office, Newton County Ambulance Service, Newton County Sheriff's Department, and Brooke-Iroquois Volunteer Fire Department on December 16, 2019. Brooke-Iroquois Volunteer Fire Department responded on December 19, 2019 indicating that they would appreciate having lead time in being notified before the project starts.

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

Environmental Justice (EJ) (Presidential EO 12898)

	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

Remarks:

Under FHWA Order 664.23A, FHWA and the project sponsor, 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 Exclusions Manual, an Environmental Justice (EJ) Analysis is required for any project that has two or more relocations or 0.5 acre of additional permanent right-of-way. The project will require 1.77 acre of additional right-of-way. Therefore, an EJ Analysis is required.

Potential EJ impacts are detected by locating minority and low-income populations relative to reference population to determine if populations of EJ concern exist 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 Newton County. The community that overlaps the project area is called the affected community (AC). In this project, the AC is Census Tract 1006. 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 American Community Survey five-year estimates data (2013-2017) was obtained from the US Census Bureau Website (https://factfinder.census.gov/) on January 29, 2020 by Lochmueller Group. The data collected for minority and low-income populations within the AC are summarized in the below table.

Minority and Low-Income Data (ACS 5-Year 2013 to 2017)		
	COC – Newton County, Indiana	AC-1 – Census Tract 1006
Percent Minority	8.47%	13.70%
125% of COC	10.59%	AC > 125% COC
EJ Population of Concern		Yes
Percent Low-Income	13.99%	22.37%
125% of COC	17.49%	AC > 125% COC
EJ Population of Concern		Yes

AC-1, Census Tract 1006, has a percent minority of 13.70% which is below 50% but above the 125% COC threshold. Therefore, AC-1 is a minority population of concern.

AC-1, Census Tract 1006, has a percent low-income of 22.37% which is below 50% but above the 125% COC threshold. Therefore, AC-1 is a low-income population of concern

The project will require 1.77 acre of new permanent ROW which primarily consists of agricultural, forest, and maintained roadside. No relocations will occur as part of the project. An EJ analysis was prepared for the project by Lochmueller Group and was approved by INDOT ESD on March 30, 2020 (Appendix I, page I10 to I11). According to the approval email, INDOT ESD would not consider the impacts associated with this project as causing a disproportionately high and adverse effect on minority and/or low-income populations of EJ concern relative to non-EJ populations in accordance with the provisions of Executive Order 12898 and FHWA order 6640.23a. No further EJ analysis is required.

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.

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		October 24, 2019

Include a summary of findings for each investigation.

Remarks: Based on a review of GIS and available public records, a RFI was approved on October 24, 2019 by Lochmueller Group (Appendix E, pages E1 to E11). No sites with hazardous material concerns (hazmat sites) or sites involved with regulated substances were identified in or within 0.5 mile of the project area. Further investigation for hazardous material concerns or regulated substances is not required at this time.

SECTION I – PERMITS CHECKLIST

Permits (mark all that apply)	**Likely Required**
Army Corps of Engineers (404/Section10 Permit)	
Individual Permit (IP)	
Nationwide Permit (NWP)	
Regional General Permit (RGP)	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	X
IDNR	
Construction in a Floodway	X
Navigable Waterway Permit	
Lake Preservation Permit	
Other	
Mitigation Required	
US Coast Guard Section 9 Bridge Permit	
Others (Please discuss in the remarks box below)	

Remarks: A total of 718.2 linear feet (0.07 acre below OHWM) of Mosquito Creek, as well as UNT 2 and UNT 3 to Mosquito Creek will be impacted by the project. Impacts will be limited to the portion of the creeks within the construction limits. Approximately 0.01 acre of Wetland 3 will likely be impacted as part of the project. Impacts to Wetland 3 will be limited to the portion within the construction limits. A USACE Section 404 RGP and IDEM 401 WQC will be required. A formal jurisdictional determination has not yet been made by the USACE, which will be required during the permitting phase.

Mitigation is required when cumulative stream and/or wetland impacts meet or exceed 300 linear feet or 0.1 acre below OHWM. Due to the cumulative impacts of 718.2 linear feet (0.07 acre below OHWM) to stream features, it is anticipated that stream mitigation may be required for the IDEM Section 401 WQC.

Applicable recommendations provided by permitting agencies are included in the *Environmental Commitments* section of this document. If permits are found to be necessary, the conditions of the permits will be requirements of the project and supersede these recommendations.

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

SECTION J- ENVIRONMENTAL COMMITMENTS

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

Remarks:

Firm:

1. If the scope of work or permanent or temporary right-of-way amounts change, the INDOT Environmental Services Division (ESD) and the INDOT District Environmental Section will be contacted immediately. (INDOT ESD and INDOT District)
2. It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access. (INDOT ESD)
3. Any work within a wetland area within right-of-way or in borrow/waste areas is prohibited unless specifically allowed in the USACE 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 October 12, 2020, 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 (INDOT ESD).
5. General AMM 1: Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs (USFWS).
6. Lighting AMM 1: Direct temporary lighting away from suitable habitat during the active season (USFWS).
7. Tree Removal AMM 1: Modify all phases/aspects of the project to avoid tree removals (USFWS).
8. Tree Removal AMM 2: Apply time of year restrictions for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any of time of year within 100 feet of existing road/rail surface and outside of documented roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed (USFWS).
9. 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 (USFWS).
10. Tree Removal AMM 4: Do not remove documented Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roots, or documented foraging habitat any time of year (USFWS).
11. Wetlands 1 and 2 will be marked on plans and called out as “Do Not Disturb”. (INDOT ESD)

For Further Consideration:

1. 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. (IDNR DFW)
2. The new, replacement, or rehabbed structure, and any bank stabilization under the structure, should not create conditions that are less favorable for wildlife passage under the structure compared to current conditions. (IDNR DFW)
3. Minimize the use of riprap and use alternative erosion protection materials whenever possible. Riprap must not be placed in the active thalweg channel or placed in the streambed in a manner that precludes fish or aquatic organism passage (riprap must not be placed above the existing streambed

elevation). (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 with the regulatory agencies was completed on December 16, 2019 (Appendix C, C1 to C5). If no response was received, it was assumed the agency did not feel the project will result in substantial impacts. The following agencies/individuals were contacted during the coordination phase.

Agency		Date of Response(s)
1.	NRCS, Indianapolis Office	December 30, 2019
2.	USACE, Detroit District	January 13, 2020
3.	U.S. Housing and Urban Development	No Response
4.	FHWA, Indiana Division	No Response
5.	National Park Service	No Response
6.	IDNR DFW	January 14, 2020
7.	IDEM (Roadway Letter)	December 16, 2019
8.	INDOT, Office of Public Involvement	December 18, 2019
9.	INDOT, Environmental Services	No Response
10.	INDOT, LaPorte District	No Response
11.	INDOT, Project Manager	No Response
12.	IGS	December 16, 2019
13.	Newton County Highway Department	No Response
14.	Newton County Commissioners	No Response
15.	Newton County Council	No Response
16.	Newton County, Iroquois Township Trustee	No Response
17.	Newton County Surveyor's Office	No Response
18.	Newton County Emergency Management Agency	No Response
19.	Newton County Ambulance Service	No Response
20.	Newton County Sheriff's Department	No Response
21.	Newton County Economic Development Commission	No Response
22.	South Newton School Corporation	No Response
23.	Brook-Iroquois Volunteer Fire Department	December 19, 2019
24.	Newton County Floodplain Administrator	No Response
25.	INDOT, Office of Aviation	December 16, 2019

Categorical Exclusion

Appendix A

INDOT Supporting Documentation

Categorical Exclusion Level Thresholds

	PCE	Level 1	Level 2	Level 3	Level 4[1]
Section 106	Falls within guidelines of Minor Projects PA	"No Historic Properties Affected"	"No Adverse Effect"	-	"Adverse Effect" Or Historic Bridge involvement[2]
Stream Impacts	No construction in waterways or water bodies	< 300 linear feet of stream impacts	≥ 300 linear feet of stream impacts	-	Individual 404 Permit
Wetland Impacts	No adverse impacts to wetlands	< 0.1 acre	-	< 1 acre	≥ 1 acre
Right-of-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.

Categorical Exclusion

Appendix B

Graphics

LOCHMUELLER GROUP
3502 Woodview Trace, Suite 150
Indianapolis, IN 46268
Phone: (317) 222-3880
Fax: (317) 222-3881

General Location Map

Des. No. 1700077

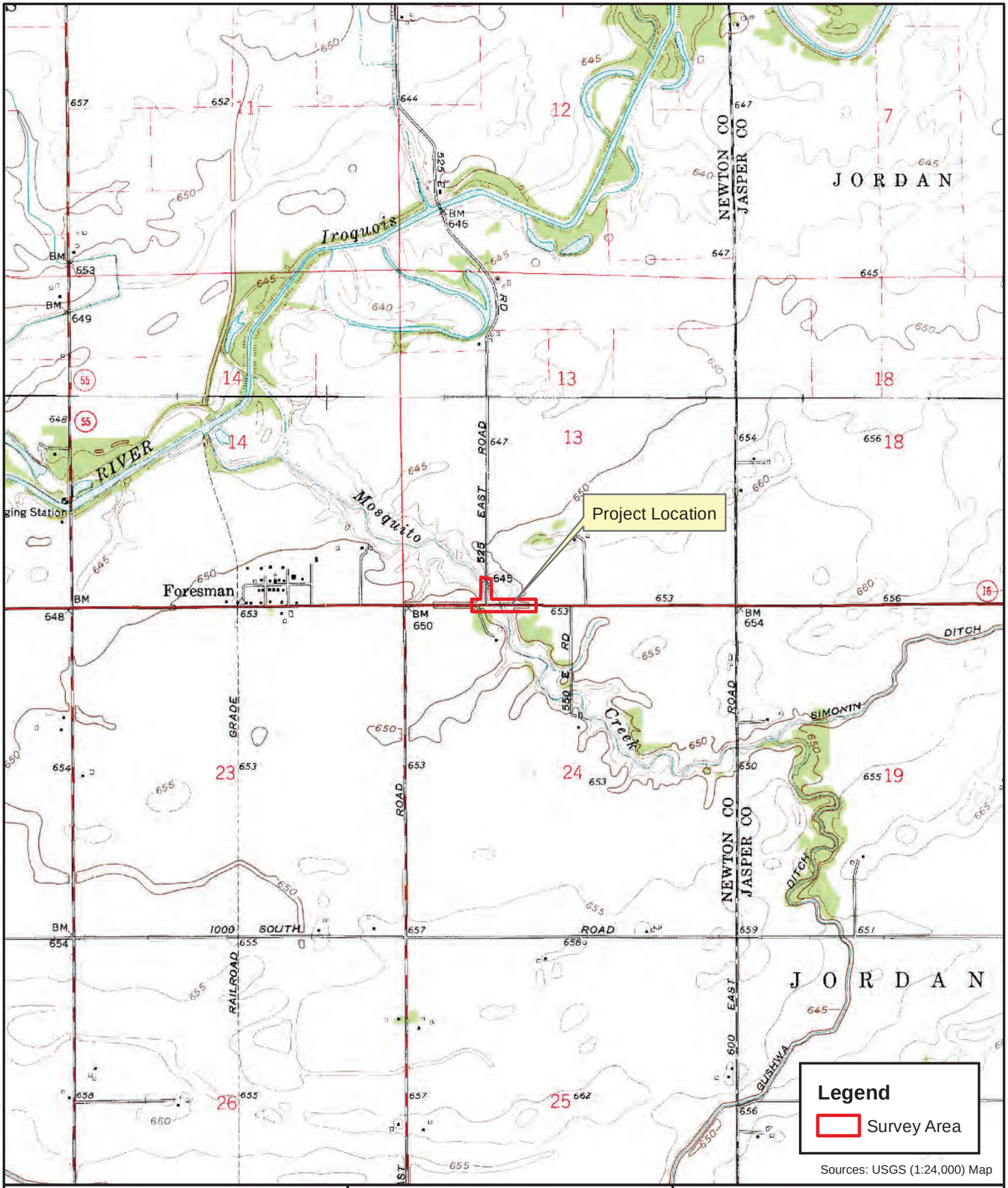
County: Newton
Township: Iroquois
State: Indiana

0 0.25 0.5 Miles

N

SR 16 over Mosquito Creek
Bridge Replacement
Created:4/21/2020, RHook

S:\ 2017\217-0372\EBD\Enviro\Maps\MXDs\GeneralLocation_EBD.mxd



LOCHMUELLER GROUP
3502 Woodview Trace, Suite 150
Indianapolis, IN 46268
Phone: (317) 222-3880
Fax: (317) 222-3881

USGS Topo Map

Des. No. 1700077

County: Newton Quad: Goodland
Township: Iroquois
State: Indiana

0 1,000 2,000 Feet

N

SR 16 over Mosquito Creek
Bridge Replacement
Created:4/21/2020, RHook

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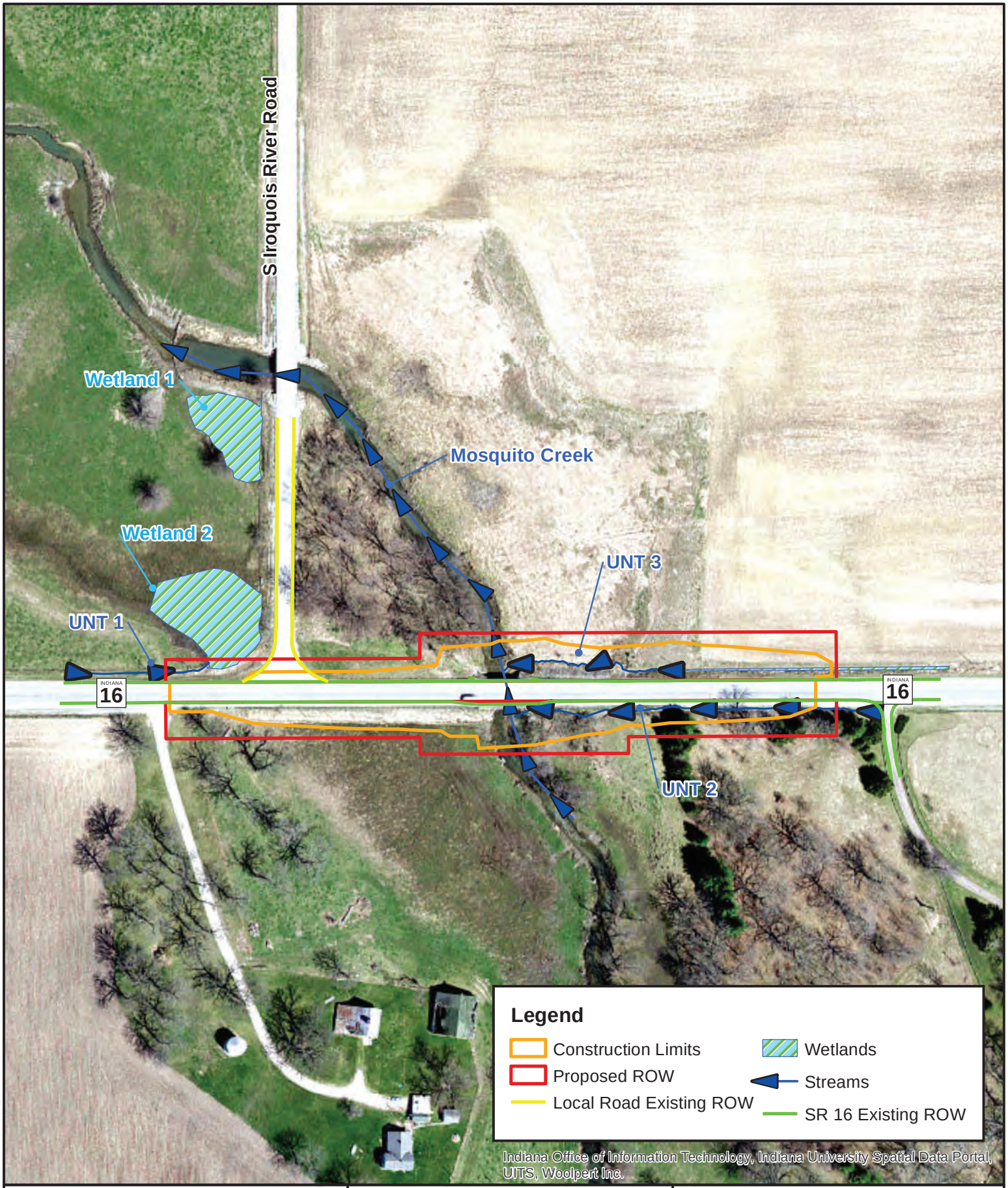


LOCHMUELLER GROUP
3502 Woodview Trace, Suite 150
Indianapolis, IN 46268
Phone: (317) 222-3880
Fax: (317) 222-3881

Aerial Map (2018)

Des. No. 1700077

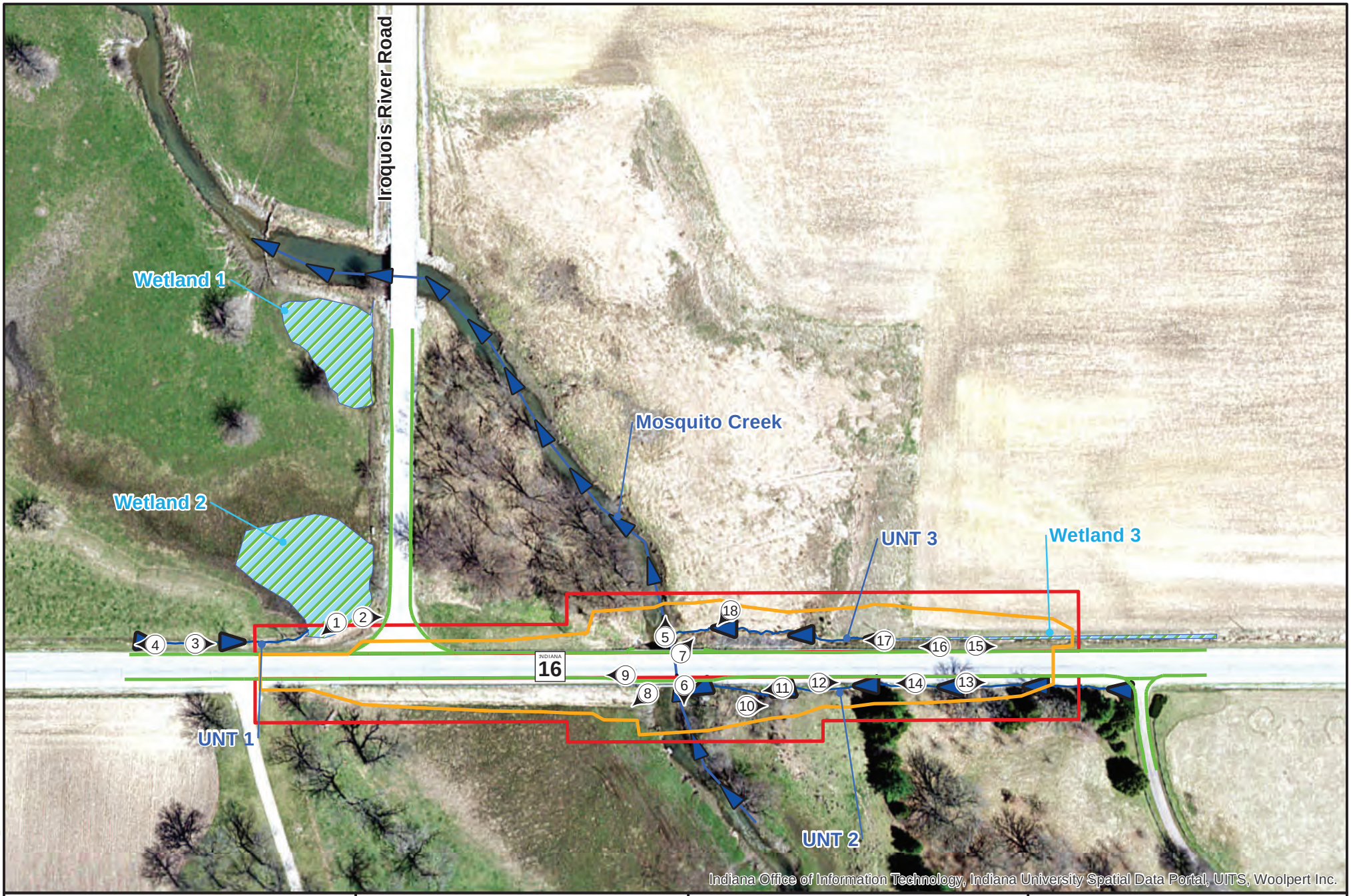
0 75 150 Feet

N

County: Newton
Township: Iroquois
State: Indiana

SR 16 over Mosquito Creek
Bridge Replacement
Created:4/23/2020, BReust

S:\ 2017\217-0372\EBD\Enviro\Maps\MXDs\Aerial Map_EBD.mxd



LOCHMUELLER GROUP
3502 Woodview Trace, Suite 150
Indianapolis, IN 46268
Phone: (317) 222-3880
Fax: (317) 222-3881

Photo Location Map

Des. No. 1700077

County: Newton
Township: Iroquois
State: Indiana

0 75 150 Feet

N

State Road 16 over Mosquito Creek
Bridge Replacement
Created:3/18/2020, R. Hook

Legend

- Photo Locations
- Proposed ROW
- Construction Limits
- Wetlands
- Existing ROW
- Streams

S:_2017\217-0372\EBD\EnviroMaps\MXDs\EBD_PhotoLocation.mxd

1. Looking southwest within Wetland 2

2. Looking east within Wetland 2

3. Looking east from north side of SR 16

4. Looking west from north side of SR 16

5. Looking north downstream Mosquito Creek from structure

6. Looking southeast upstream Mosquito Creek from bridge

7. Looking northeast from structure

8. Looking southwest from structure

9. Looking west along SR 16

10. Looking east along SR 16

11. Looking west downstream UNT 2

12. Looking east upstream UNT 2

13. Looking east along south side of SR 16

14. Looking west along south side of SR 16

15. Looking east along Wetland 3

16. Looking west along Wetland 3 toward UNT 3 on the north side of SR 16

17. Looking west from Wetland 3 at the start of UNT 3

18. Looking southwest at structure

PROJECT	DESIGNATION
1700077	1700077
CONTRACT	BRIDGE FILE
B-40608	016-56-10320

INDIANA DEPARTMENT OF TRANSPORTATION

BRIDGE PLANS

FOR SPANS OVER 20 FEET

ROUTE: SR 16 AT: RP 8+10

PROJECT NO. 1700077 P.E.
1700077 R/W
1700077 CONST.

STRUCTURE INFORMATION

STRUCTURE	TYPE	SPAN AND SKEW	OVER	STATION
016-56-10320	Composite Prestressed Concrete Box Beam	1 Span: 67'-0", Skew: 7° Lt.	Mosquito Creek	436+92.05 Line "A"

KIN PROJECT INFORMATION

DESIGNATION	PROJECT DESCRIPTION				
	Work Type	Route	Location	Feature Crossed	County
1700075	Bridge Replacement, Concrete	SR 10	2.31 mi E of US 41	Knight Ditch	Newton County
1700076 (LEAD)	Bridge Replacement, Concrete	SR 14	2.27 mi E of US 41	Gaff Ditch	Newton County
1700077	Bridge Replacement, Concrete	SR 16	1.31 mi E of SR 55	Mosquito Creek	Newton County
1700083	Bridge Replacement, Concrete	US 41 NB	1.63 mi N of SR 16	Chizum Ditch	Newton County
1700085	Bridge Replacement, Concrete	US 41 SB	1.63 mi N of SR 16	Chizum Ditch	Newton County
1700124	Small Structure - New	SR 114	1.75 mi W of SR 55	Turner Ditch	Newton County
1701324	Small Structure Replacement	US 41	0.28 mi S of SR 16	Hambridge Ditch	Newton County
1701478	Small Structure Replacement	SR 16	2.9 mi E of SR 55	Simonin Ditch	Jasper County
1701492	Small Structure Replacement	SR 114	0.43 mi W of Jct of SR 55	Haynes Tile	Newton County
1701505	Small Structure Replacement	US 24	1.6 mi W of SR 55	Kent Tile	Newton County
1701541	Small Structure Pipe Lining	SR 114	0.03 mi E of Jct of I-65	UNT to Yeoman Ditch	Jasper County

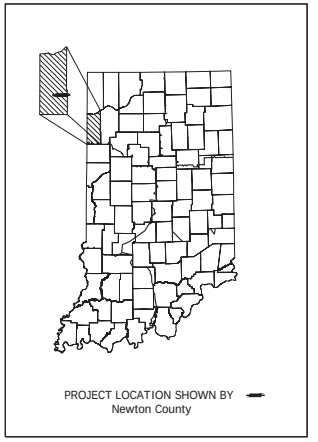
PFC Plans
November 11, 2019

TRAFFIC DATA

	SR 16
A.A.D.T. (2022)	1,166 V.P.D.
A.A.D.T. (2042)	1,220 V.P.D.
D.H.V. (2042)	107 V.P.H.
DIRECTIONAL DISTRIBUTION	52% EB / 48% WB
TRUCKS	14% A.A.D.T.
	22% D.H.V.

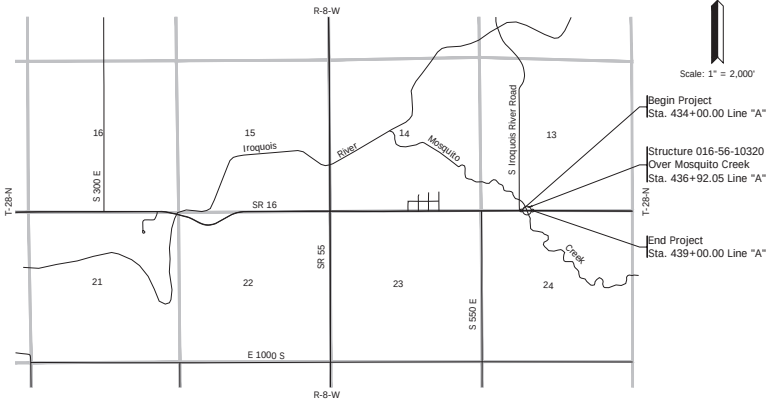
DESIGN DATA

DESIGN SPEED	55 M.P.H.
PROJECT DESIGN CRITERIA	3R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	STATE COLLECTOR
RURAL/URBAN	RURAL
TERRAIN	LEVEL
ACCESS CONTROL	NONE



PROJECT LOCATION SHOWN BY
Newton County

Bridge Replacement, Concrete on SR 16 over Mosquito Creek
Located 1.31 Miles East of SR 55
Section 13 & 24, T-28-N, R-8-W, Iroquois Township, Newton County



Location Map
Newton County

LATITUDE: 40° 51' 57" LONGITUDE: -87° 16' 53"

BRIDGE LENGTH:	0.013	MI.
ROADWAY LENGTH:	0.082	MI.
TOTAL LENGTH:	0.095	MI.
MAX. GRADE:	0.69	%

HUC 12:	071200020405
HUC 14:	07120002040060

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

LOCHMUELLER GROUP
112 West Jefferson Blvd, Suite 500
South Bend, Indiana 46601
574.334.5460

PLANS PREPARED BY: Lochmueller Group, Inc. (574) 334-5460 PHONE NUMBER

CERTIFIED BY: _____ DATE

APPROVED FOR LETTING: _____ INDIANA DEPARTMENT OF TRANSPORTATION DATE

BRIDGE FILE
016-56-10320
DESIGNATION
1700077

SURVEY BOOK	SHEET
ELECTRONIC	1 of 17
CONTRACT	PROJECT
B-40608	1700077

Date: Nov 11, 2019, 3:16pm User Name: EGever
File: S:_2017\217-0372_EB\Bridge\CAD\MiscDwgs\Title Sheet.dwg

UTILITIES

COMMUNICATIONS: CENTURYLINK
JOHN UNVERFERTH
419-226-6342
JOHN.C.UNVERFERTH@CENTURYLINK.COM

ELECTRIC: NEWTON COUNTY R.E.M.C.
JIM EVERS
207 EAST GOSS ST, PO BOX 125
KENTLAND, IN 47951
219-474-6224
JIM.EVERS@NEWTONCOUNTYREMC.COM

811 Know what's below. Call before you dig.

REVISIONS

SHEET NO.	DATE	REVISED

GENERAL NOTES

INDEX

SHEET NO.	SUBJECT
1	TITLE SHEET
2	INDEX
3 - 4	TYPICAL CROSS SECTIONS
5	PLAT NO. 1
6	MAINTENANCE OF TRAFFIC
7	PLAN AND PROFILE
8	LAYOUT
9 - 10	GENERAL PLAN
11 - 17	CROSS SECTIONS

COORDINATE LISTING: CONTROL POINTS

PT.#	NORTHING	EASTING	DESCRIPTION
501	178581.878	820570.709	SET MAG AND WASHER IN ASPHALT
500	178574.930	819701.149	SET MAG AND WASHER IN ASPHALT
2000	178565.055	820672.643	SET MAG AND WASHER IN ASPHALT
2001	178632.044	819927.740	SET MAG AND WASHER IN ASPHALT
2002	178989.233	819952.612	SET SCRIBED X ON RETAINING WALL

RECOMMENDED FOR APPROVAL _____ --/--/-- DESIGN ENGINEER DATE

DESIGNED: EJG DRAWN: DJG/ NG

CHECKED: BSS CHECKED: EJG

INDIANA DEPARTMENT OF TRANSPORTATION

INDEX

HORIZONTAL SCALE	BRIDGE FILE
N/A	016-56-10320
VERTICAL SCALE	DESIGNATION
N/A	1700077
SURVEY BOOK	SHEET
ELECTRONIC	2 of 17
CONTRACT	PROJECT
B-40608	1700077

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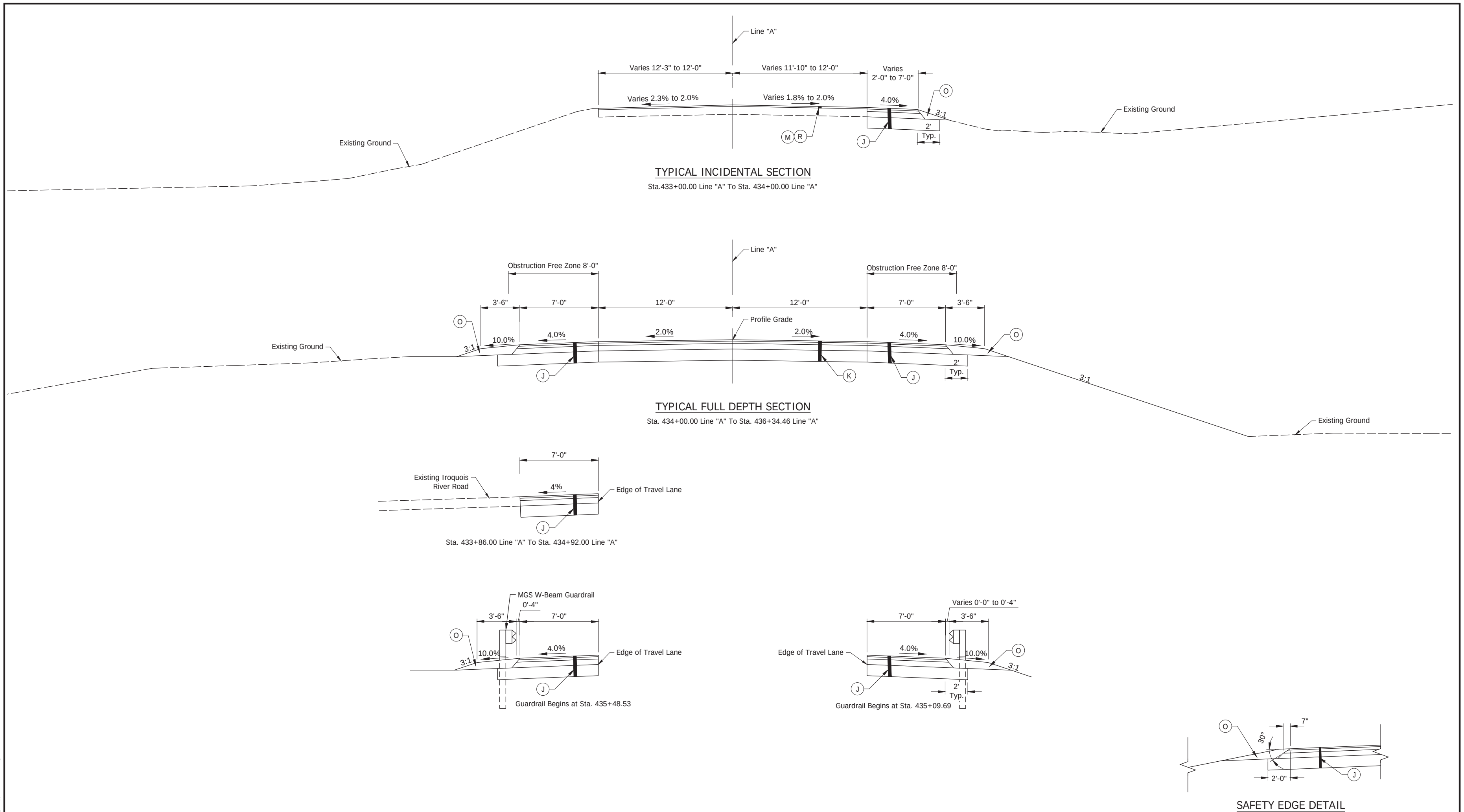

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File: S:_2017\217-0372_ENG\Bridge\CAD\MiscDwgs\Typical Sheet.dwg

(J) Pavement Design Will Be Determined After Completion Of Geotechnical Report

(K) Pavement Design Will Be Determined After Completion Of Geotechnical Report

(M) Milling, Asphalt, 1 ½"

(O) Compacted Aggregate, No. 53

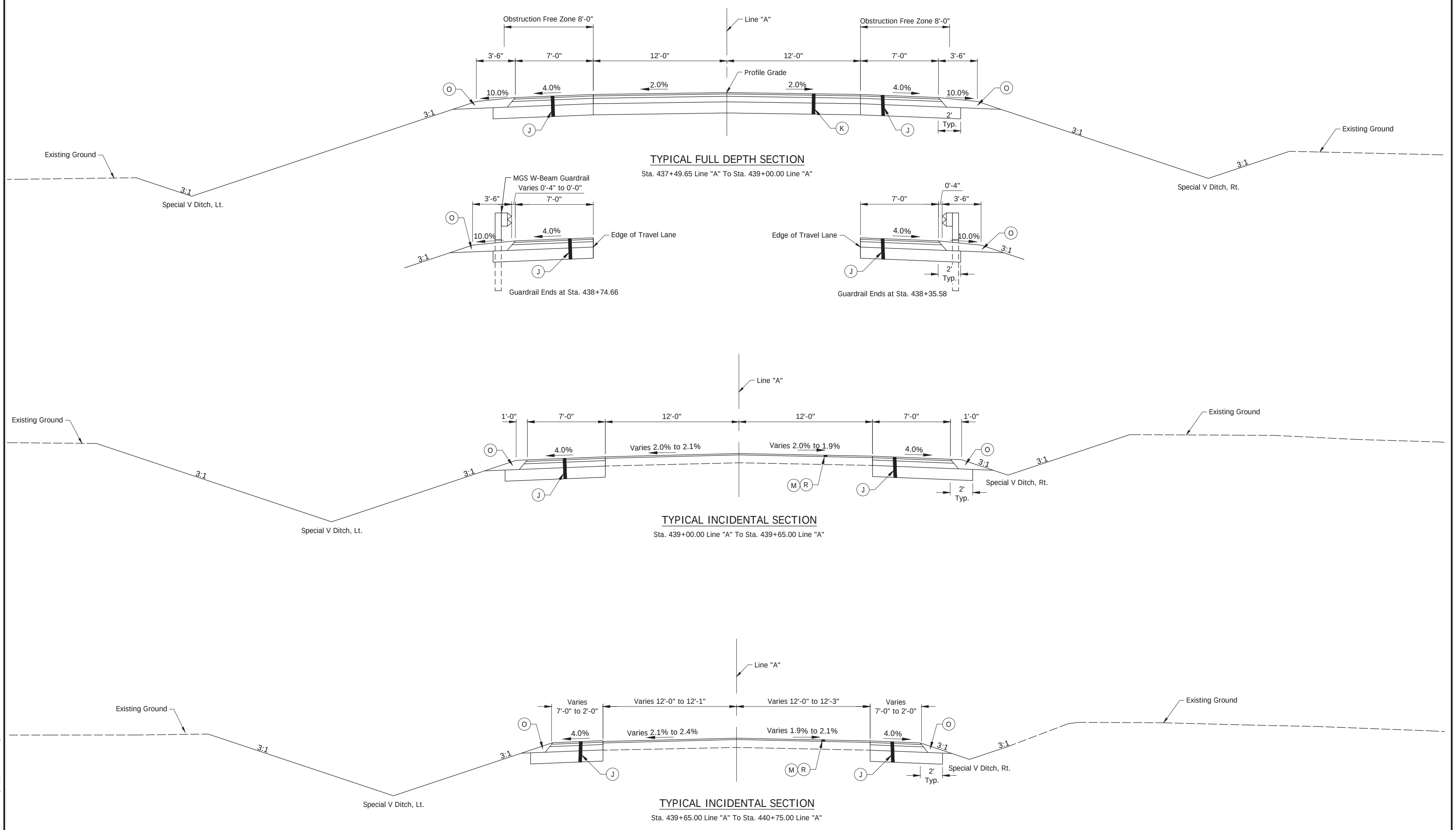
(R) 165#/SYS QC/QA-HMA, 3, 64, Surface, 9.5mm

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER --/--/-- DATE
DESIGNED: BSS	DRAWN: BSS
CHECKED: BKA	CHECKED: BKA

INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS

HORIZONTAL SCALE	BRIDGE FILE
1/4" = 1'-0"	016-56-10320
VERTICAL SCALE	DESIGNATION
1/4" = 1'-0"	1700077
SURVEY BOOK	SHEET
ELECTRONIC	3 of 17
CONTRACT	PROJECT
B-40608	1700077



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File: S:_2017\217-0372_EBD\Bridge\CAD\MiscDwgs\Typical Sheet.dwg

(J) Pavement Design Will Be Determined After Completion Of Geotechnical Report

(K) Pavement Design Will Be Determined After Completion Of Geotechnical Report

(M) Milling, Asphalt, 1 ½"

(O) Compacted Aggregate, No. 53

(R) 165#/SYS QC/QA-HMA, 3, 64, Surface, 9.5mm

RECOMMENDED FOR APPROVAL ____ DESIGN ENGINEER --/--/-- DATE

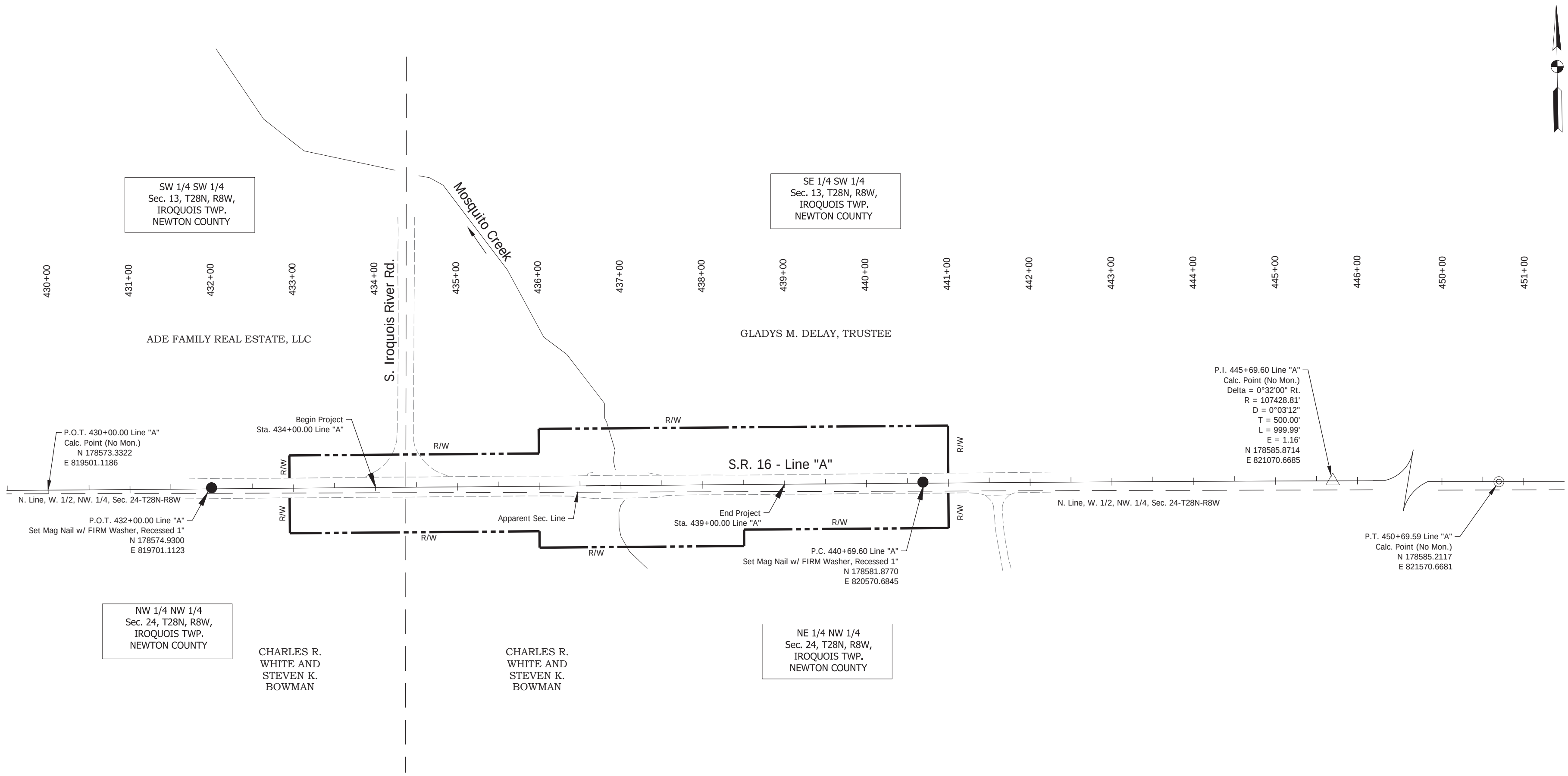
DESIGNED: BSS DRAWN: BSS

CHECKED: BKA CHECKED: BKA

INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS

HORIZONTAL SCALE	BRIDGE FILE
1/4" = 1'-0"	016-56-10320
VERTICAL SCALE	DESIGNATION
1/4" = 1'-0"	1700077
SURVEY BOOK	SHEET
ELECTRONIC	4 of 17
CONTRACT	PROJECT
B-40608	1700077



RECOMMENDED FOR APPROVAL ______ DESIGN ENGINEER --/--/-- DATE

DESIGNED: EJG DRAWN: NG
CHECKED: BSS CHECKED: EJG

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAT NO. 1

HORIZONTAL SCALE	BRIDGE FILE
1" = 60'	016-56-10320
VERTICAL SCALE	DESIGNATION
N/A	1700077
SURVEY BOOK	SHEET
ELECTRONIC	5 of 17
CONTRACT	PROJECT
B-40608	1700077

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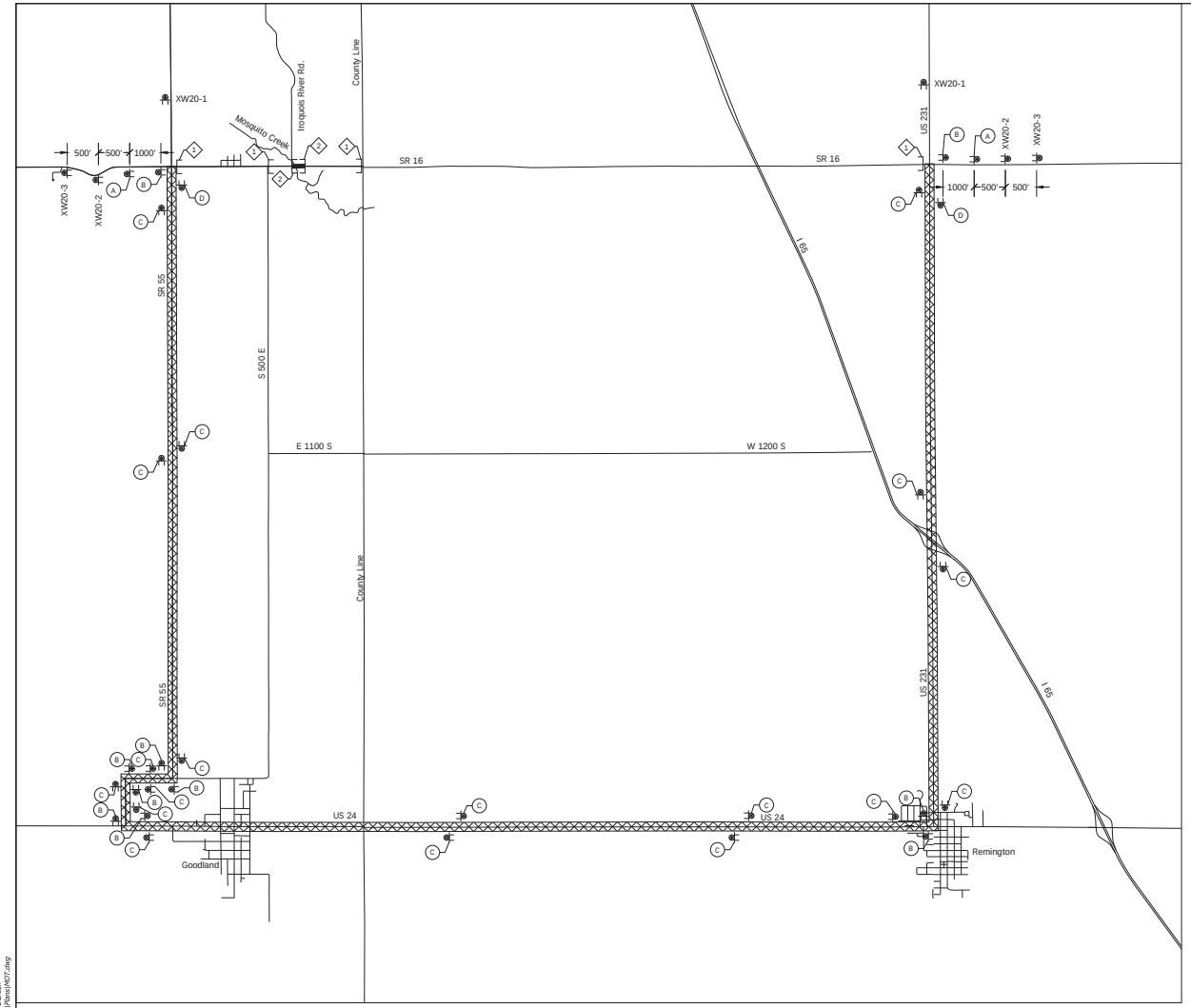


CONSTRUCTION SIGN SCHEDULE				
SIGN NO.	DESCRIPTION	SIZE (IN)	TYPE	QUANTITY
R11-2	"ROAD CLOSED" SIGN	48 x 30	(1)	2
R11-3A	"ROAD CLOSED XX MILES AHEAD" SIGN	60 x 30	(1)	4
XM4-10 (L or R)	"DETOUR" SIGN	48 x 18	(1)	2
XW20-1	"ROAD CONSTRUCTION AHEAD" SIGN	48 x 48	A	2
XW20-2	"DETOUR AHEAD" SIGN	48 x 48	A	2
XW20-3	"ROAD CLOSED AHEAD" SIGN	48 x 48	A	2
			TOTAL TYPE "A" SIGNS	6

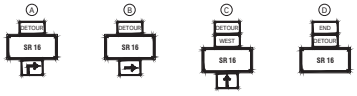
Detour Route Marker Assemblies: 32 Req'd
Road Closure Sign Assemblies: 6 Req'd
Type III-A Barricades: 48 Lft.
Type III-B Barricades: 48 Lft.

(1) Included with road closure sign assembly.

LEGEND

XW20-1 XW20-2 XW20-3

R11-2 R11-3A



XM4-8 M1-4 OR M1-6 M5-1(R OR L) | XM4-8 M1-4 OR M1-6 M6-1 | XM4-8 M3-2 TO M3-3 M1-4 OR M1-6 M6-3 | XM4-8a M1-4 OR M1-6

1 ROAD CLOSURE SIGN ASSEMBLY W/ TYPE III-B BARRICADE (12 LFT.) AND R11-3A AND XM4-10 (L OR R)

2 ROAD CLOSURE SIGN ASSEMBLY W/ TYPE III-A BARRICADE (24 LFT.) AND R11-2

CONSTRUCTION ZONE
DETOUR ROUTE

GENERAL NOTES

1. All maintenance of traffic devices, signs and pavement markings shall conform to the latest edition of the Indiana MUTCD.
2. See INDOT Std. Dwg. 801-TCDT-01 for sign spacing requirements and additional notes.
3. See INDOT Std. Dwg. 801-TCLG-01 for standard notes.
4. The cost of R11-2, R11-4 and XM4-10 (R or L) shall be included in the cost of the road closure sign assembly.
5. Type B construction warning lights shall be used with all signs located on barricades. Type A construction warning lights shall be used on all other construction signs.

RECOMMENDED FOR APPROVAL _____ --/--/-- DESIGN ENGINEER DATE

DESIGNED: MDV DRAWN: MDV

CHECKED: BSS CHECKED: BKA

INDIANA DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC

HORIZONTAL SCALE	BRIDGE FILE
1" = 3000'	010-56-10318
VERTICAL SCALE	DESIGNATION
N/A	1700075
SURVEY BOOK	SHEET
ELECTRONIC	# of 16
CONTRACT	PROJECT
B-40608	1700075

Date: Nov 11, 2019, 12:55pm User Name: DGreen
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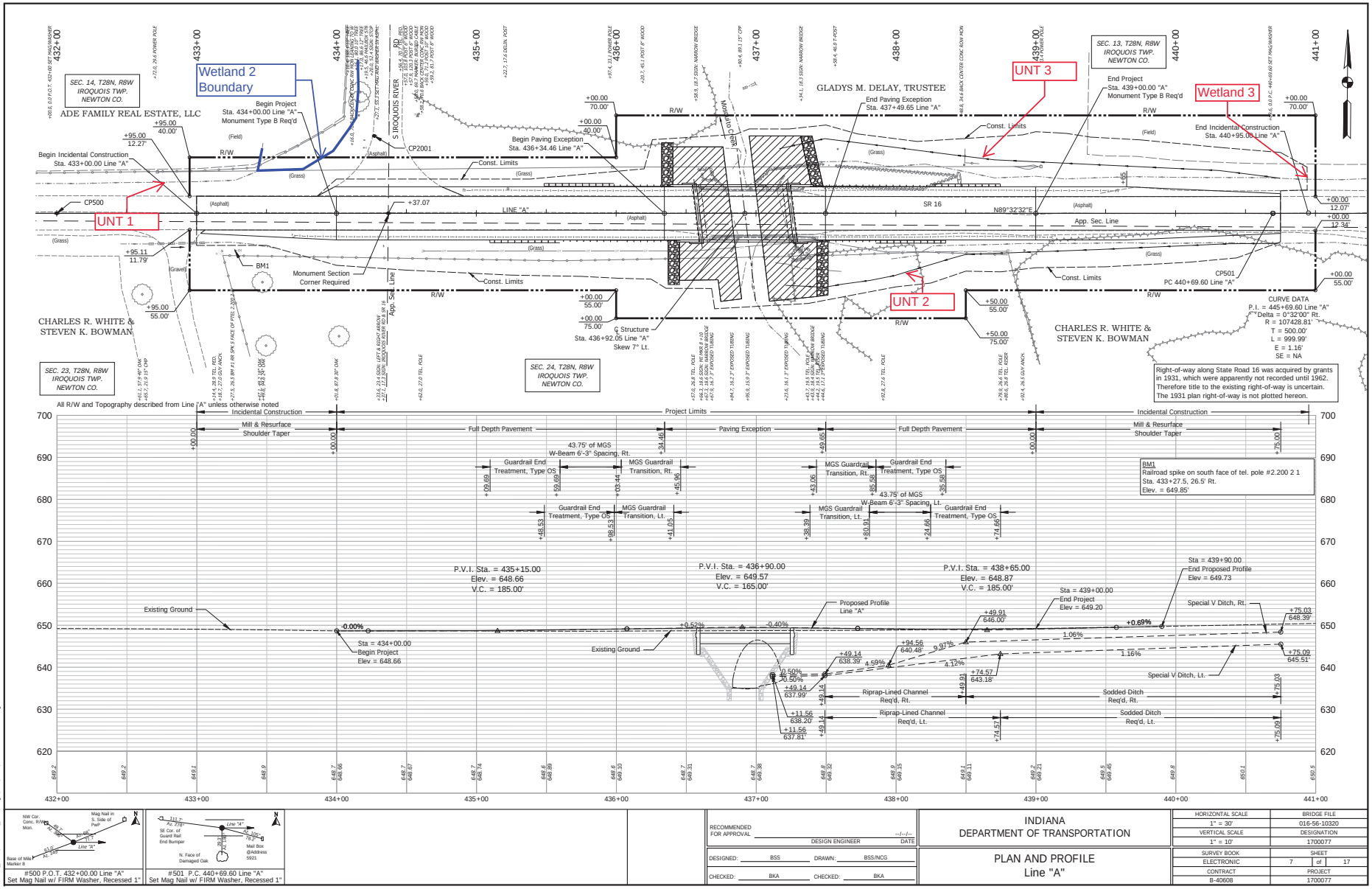

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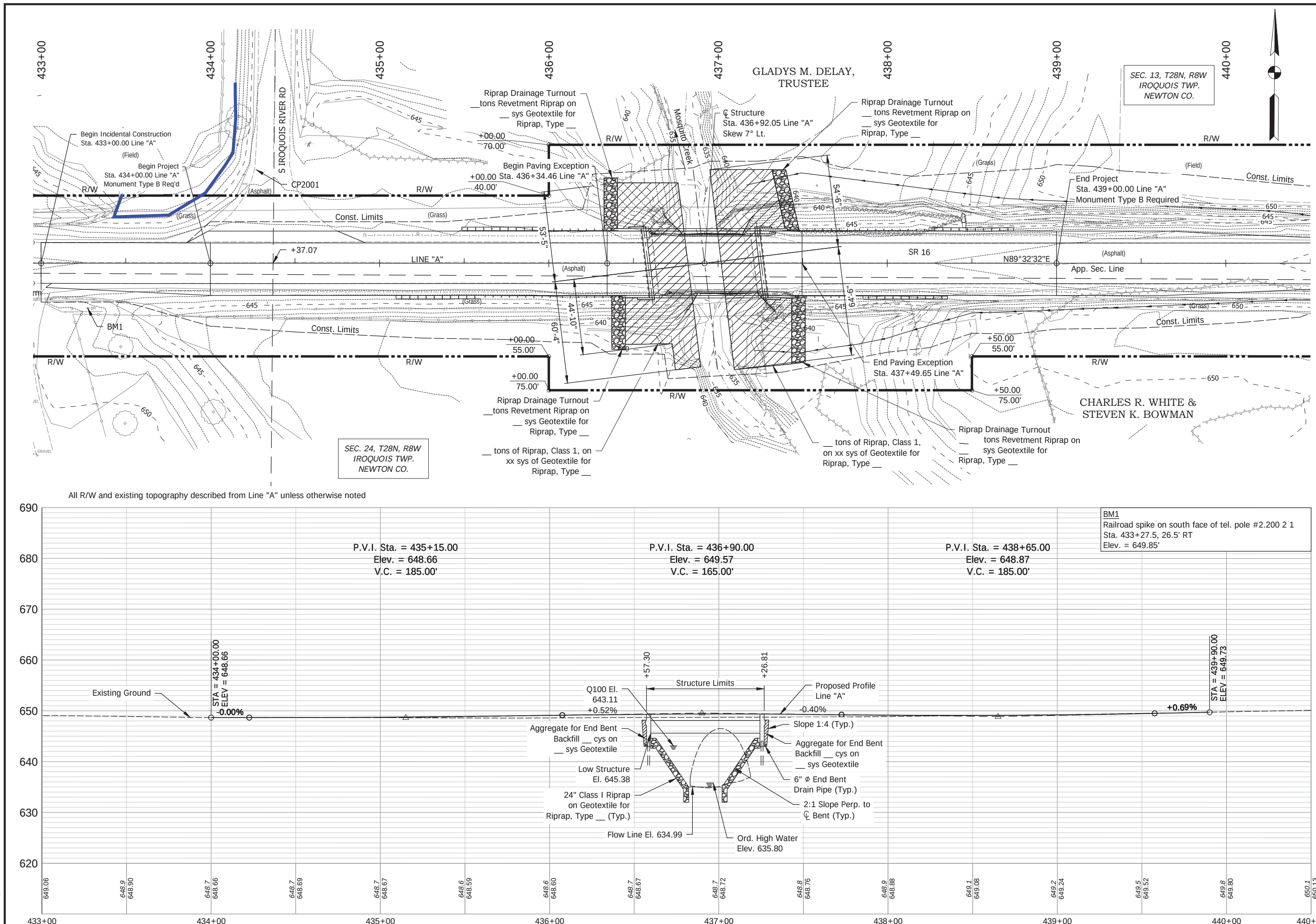


EXISTING STRUCTURE

The existing structure, 016-56-01238 A, is a single span reinforced concrete filled arch bridge built in 1931 with a 36' span and 32' clear roadway. Existing structure to be removed.

HYDRAULIC DATA

Drainage Area	23.80 SQ. MI.
Q100 Discharge	2,000.00 CFT./SEC.
Q100 Elevation	643.11 M.S.L.
Q100 Backwater	0.77 FT.
Q100 Velocity	7.75 FT./SEC.
Proposed Waterway Opening, Below Q100	278.48 SFT.
Low Structure Elevation	645.38 M.S.L.
Skew	7°00'00"
Existing Waterway Opening	210.69 SFT.
Existing Low Structure Elevation	646.50 M.S.L.
Existing Backwater	1.56 FT.

HYDRAULIC SCOUR DATA

Q100 Discharge	2,000.00 CFT./SEC.
Q100 Elevation	643.11 M.S.L.
Q100 Scour Velocity	9.16 FT./SEC.
Q100 Contraction Scour Depth	5.74 FT.
Q100 Total Scour Depth	5.74 FT.
Q100 Low Scour Elevation	629.25 M.S.L.
Q500 Discharge	2,600.00 CFT./SEC.
Q500 Elevation	643.69 M.S.L.
Q500 Scour Velocity	10.89 FT./SEC.
Q500 Contraction Scour Depth	8.02 FT.
Q500 Total Scour Depth	8.02 FT.
Q500 Low Scour Elevation	626.97 M.S.L.

EARTHWORK TABULATION

FILL	__ cys
FILL + 15%	__ cys
COMMON EXCAVATION	__ cys
USABLE WATERWAY EXCAVATION	__ cys
BORROW	__ cys
TOTAL WATERWAY EXCAVATION	__ cys
EXCAVATION FOUNDATION UNCLASSIFIED	__ cys
BENCHING (ESTIMATED)	__ cys

No direct payment for Benching. Benching will not be paid for as Common Excavation.

NOTES

1. See Plan and Profile Sheet for survey reference ties, approach work, incidental construction and additional details.
2. M.S.L. = Mean Sea Level
3. See Sheet 2 for utility owners

COMPOSITE PRESTRESSED CONCRETE
BOX BEAM BRIDGE
1 SPAN: 67'-0"
38'-0" CLEAR ROADWAY; 7° SKEW LT.
SR 16 OVER MOSQUITO CREEK
NEWTON COUNTY

Date: Nov 11, 2019, 12:56pm User Name: DGreen
File: S:_2017\217-0372_EBD\Bridge\CAD\Plans\Layout.dwg

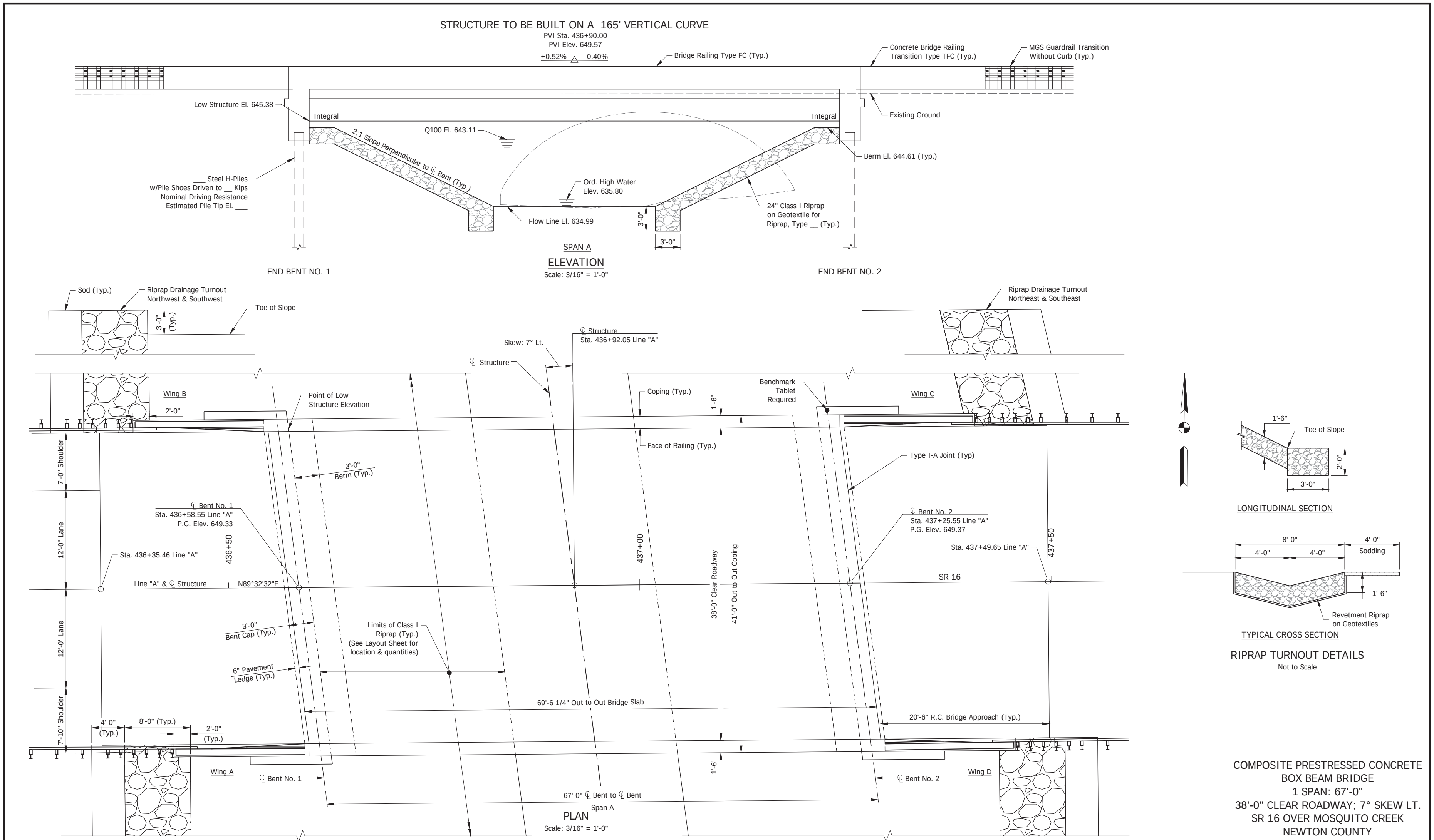
RECOMMENDED FOR APPROVAL ____ DESIGN ENGINEER --/--/-- DATE

DESIGNED: EJG DRAWN: DJG/ NG
CHECKED: ACS CHECKED: EJG

INDIANA
DEPARTMENT OF TRANSPORTATION

LAYOUT

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	016-56-10320
VERTICAL SCALE	DESIGNATION
1" = 10'	1700077
SURVEY BOOK	SHEET
ELECTRONIC	8 of 17
CONTRACT	PROJECT
B-40608	1700077



COMPOSITE PRESTRESSED CONCRETE BOX BEAM BRIDGE
1 SPAN: 67'-0"
38'-0" CLEAR ROADWAY; 7° SKEW LT.
SR 16 OVER MOSQUITO CREEK
NEWTON COUNTY

Date: Nov 11, 2019, 12:57pm User Name: DGreen
File: S:_2017\217-0372_BRD\Bridge\CAD\Plans\General Plan - General Plan (2).dwg

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	--/--/-- DATE
DESIGNED: EJG	DRAWN: DJG/ NG	
CHECKED: ACS	CHECKED: EJG	

INDIANA
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN

HORIZONTAL SCALE	BRIDGE FILE
3/16" = 1'-0"	016-56-10320
VERTICAL SCALE	DESIGNATION
3/16" = 1'-0"	1700077
SURVEY BOOK	SHEET
ELECTRONIC	9 of 17
CONTRACT	PROJECT
B-40608	1700077

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

Designed for HL-93 loading, in accordance with AASHTO LRFD Bridge Design Specifications, Eighth Edition, 2017, and subsequent interims.

DEAD LOAD

Actual weight plus 35 lb/ft² for future wearing surface and 15 lb/ft² 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. The 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/ft² for permanent metal stay-in-place deck forms, removable deck forms, and 2-ft exterior walkway.

CONSTRUCTION LIVE LOAD

Designed for 20 lb/ft² 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

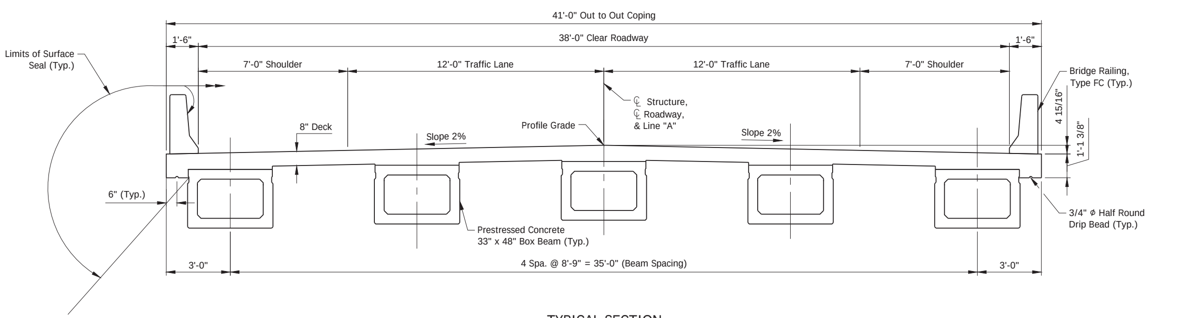
4500 lb distributed over 10 ft along the coping.

WIND LOAD

Designed for 70 mph horizontal wind loading in accordance with LRFD 3.8.1.

SEISMIC DESIGN LOAD

Seismic Design Category	x
Acceleration Coefficient	xx
Seismic Soil Profile Type	Class x



TYPICAL SECTION
Scale: 3/8" = 1'-0"

COMPOSITE PRESTRESSED CONCRETE
BOX BEAM BRIDGE
1 SPAN: 67'-0"
38'-0" CLEAR ROADWAY; 7° SKEW LT.
SR 16 OVER MOSQUITO CREEK
NEWTON COUNTY

RECOMMENDED FOR APPROVAL ______ DESIGN ENGINEER --/--/-- DATE

DESIGNED: EJG DRAWN: DJG/ NG

CHECKED: ACS CHECKED: EJG

INDIANA
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN

HORIZONTAL SCALE	BRIDGE FILE
3/8" = 1'-0"	016-56-10320
VERTICAL SCALE	DESIGNATION
3/8" = 1'-0"	1700077
SURVEY BOOK	SHEET
ELECTRONIC	10 of 17
CONTRACT	PROJECT
B-40608	1700077

Categorical Exclusion

Appendix C

Early Coordination

December 16, 2019

Sample Early Coordination

<AgencyCompany>
<Name>,<Title>
<Address>
<City>, <State>,<Zip>

Re: Des. No. 1700077

Bridge No. 016-56-01238 A, State Road (SR) 16 over Mosquito Creek
1.31 miles east of SR 55
Newton County, Indiana

Dear <Salu>:

The Indiana Department of Transportation (INDOT), LaPorte District and the Federal Highway Administration (FHWA) propose to proceed with a bridge replacement project (Des. No. 1700077) involving Bridge No. 016-56-10320, carrying SR 16 (CR 900 South) over Mosquito Creek. 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 Des. No. and project description in your reply**. We will incorporate your comments into the formal environmental study. Your cooperation in this endeavor is appreciated.

Project Location and Existing Conditions
The proposed project is located in Newton County, 1.31 miles east of SR 55. Specifically, the project is located in Sections 13 & 24, Township 28 North, and Range 8 West in Iroquois Creek Township as depicted on the Goodland U.S. Geological Survey (USGS) Quadrangle.

The existing structure (Bridge No. 016-56-01238 A) is a single span reinforced concrete filled arch bridge built in 1931. The length of the bridge is 39 feet, with a single 36-foot span, and the out-out deck width is 35 feet wide. On structure, the clear roadway width is 32 feet wide, consisting of two 12-foot travel lanes with 4-foot paved shoulders on either side. Concrete barrier railings extend the length of either side of the bridge and then transitions to guardrail.

SR 16 is functionally classified as a rural major collector. The typical section of the approach roadway consists of two 12-foot wide travel lanes (one in each direction) with 4-foot shoulders (1-foot paved, 3-foot aggregate) on each side. Drainage is conveyed via shallow side ditches along both sides of SR 16. The posted speed limit along SR 16 is 55 miles per hour (mph).

South Iroquois River Road intersects SR 16 approximately 255 feet west of the bridge. South Iroquois River Road is functionally classified as local road. The typical section of the roadway

3502 Woodview Trace, Suite 150
Indianapolis, Indiana 46268
PHONE: 317.222.3878 • TOLL FREE: 800.423.7422

consists of two 10-foot wide travel lanes with aggregate shoulders varying in width from 1-3 feet wide. There is no posted speed limit for this road in the project limits.

Adjacent land use consists of agricultural fields, pasture land, and forested riparian zones. Mosquito Creek is a perennial stream feature that flows from southeast to northwest within the project area. Approximately 806 feet of this feature was evaluated as part of the field investigation. The ordinary high water mark (OHWM) for Mosquito Creek is 16 feet wide by 8 inches deep. Please see attachments for maps and photographs of the proposed project area.

Purpose and Need

The need for this project stems from the deteriorated condition of the existing structure. During routine inspections in November 2017, the structure was in fair condition and exhibited minor spalling and efflorescence at seams and ends with a longitudinal crack mid-span. The southeast channel bank has minor erosion. The purpose of the project is to restore the structural integrity to an improved condition.

Proposed Project

The proposed project would involve the replacement of the existing bridge (Bridge No. 016-56-01238 A) with a new composite spread prestressed concrete box beam bridge. The new bridge would be 69.5 feet long, with a single 67-foot span, and have an out-to-out deck width of 41-feet wide. The clear roadway width on structure would be 38 feet wide and consist of two 12-foot travel lanes (one in each direction) with 7-foot paved shoulders on each side. Concrete lined drainage turnouts will be installed at the end of each quadrant of the bridge. Additionally, Class I riprap will be placed beneath the new bridge and both banks of Mosquito Creek for scour protection. The existing guardrail along SR 16 will be removed and replaced with a total of 652 feet of new guardrail. A total of 124 feet of channel work, 57 feet downstream (north) and 67 feet upstream (south) of the bridge, is anticipated to occur. Channel work would likely include vegetation removal and grading for the placement of riprap.

The approach roadway will be reconstructed to a typical section consisting of two 12-foot travel lanes (one in each direction) with 7-foot paved shoulders on each side. The reconstruction of the approaches would extend approximately 208 feet to the east and 292 feet west of the proposed bridge. In addition, incidental construction, extending 100 feet from the western terminus and 195 feet from the eastern terminus, is required to transition the reconstructed roadway back to the existing profile. This will include milling the existing pavement to a depth of approximately 1.5 inches and applying a hot mix asphalt overlay atop the milled roadway surface. No work is proposed to South Iroquois River Road. Including incidental construction, the total length of the project is 795 feet.

The maintenance of traffic (MOT) will require closure of SR 16. A detour utilizing SR 55 to US 24 to US 231 will be established. Signs and barrels will be placed along SR 16 notifying travelers of the road closure and detour.

Right-of-Way (ROW)
The project is anticipated to require approximately 2.21 acres of new permanent ROW. The ROW along this section of SR 16 was acquired by grants in 1931, which were not recorded until 1962. Therefore, title to the existing right-of-way is uncertain making the edge of pavement the presumed apparent right-of-way. No temporary ROW is anticipated. Approximately 1.06 acres of tree clearing is anticipated to occur.

Environmental Resources
A Red Flag Investigation (RFI) was performed for a 0.5-mile radius for the project area. Several "Red Flags" were identified within the 0.5-mile search radius; however, not all will be impacted. One stream, Mosquito Creek, runs through the project area. Three wetlands were field delineated within the project area. The project is located within the 100-year floodplain of Mosquito River. Due to the identification and proximity of water resources to the project area, a *Waters of the U.S. Determination Report* will be prepared and coordination with INDOT Environmental Services Ecology and Waterway Permitting will occur. No additional "Red Flags" are mapped within the immediate vicinity of the project.

Lochmueller Group conducted a field investigation of the project area on October 12, 2018. The field investigation identified Mosquito Creek, 3 unnamed tributaries (UNT), and 3 wetlands within the project area. Due to the presence of these water resources within the project area, a *Waters of the U.S. Determination Report* will be completed.

Section 106
The National Register of Historic Places (National Register) and the Indiana Register of Historic Sites and Structures (State Register) were reviewed using the State Historic Architectural and Archaeological Research Database (SHAARD) and SHAARD Geographic Information System (GIS) data published online. No above-ground historical resources on either list are within the project area. The 2007 *Newton County Interim Report: Indiana Historic Sites and Structures Inventory* (IHSSI) data was also examined; no surveyed resources from this inventory were located near the project area. The *Indiana Historic Bridge Inventory Volume 2: Listing of Historic and Non-Historic Bridges* by Mead & Hunt (2009) was reviewed. No bridges eligible for listing in the National Register are within the project area. No cemeteries were noted within the vicinity of the project area. It is anticipated that this project will qualify for the Minor Projects Programmatic Agreement (MPPA).

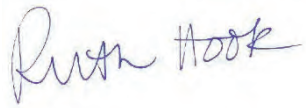
Range-wide Informal Programmatic Consultation
Newton County is within the range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (*Myotis septentrionalis*). Land use in the vicinity of the project is rural with agricultural fields, pasture lands, and forested riparian areas. The project appears to fall under the Range-wide Programmatic Informal Consultation process. Completion of the appropriate determination key through the U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) portal will occur. If a determination of "Not Likely to Adversely Affect," or "Likely to Adversely Affect" is reached then additional consultation with the USFWS will occur through INDOT.

Early Coordination
This letter is part of the early coordination review process. You are asked to review this information and provide any comments you may have relative to anticipated impacts of the project on areas in which you have jurisdiction or special expertise. We will incorporate your comments into a study of the project's environmental impacts. To facilitate the development of this project, you are asked to reply within **30 calendar days** of receipt of this letter. If no response is received by that date, 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 project, please feel free to contact me at 317-222-3880 or at RHook@lochgroup.com. Additionally, should you want to contact the sponsor of this project, INDOT LaPorte District, please contact the Project Manager, Mr. Bradon Downing, at (219) 325-7582 or at bdowning1@indot.in.

Thank you in advance for your input.

Sincerely,



Ruth Hook, CPESC, CESSWI
Environmental Biologist
Lochmueller Group, Inc.

Attachments:

• General Location Map • USGS Topographical, Goodland Quadrangle Map • Aerial Map	Removed to avoid duplication, see Appendix B
• Red Flag Investigation Maps	Removed to avoid duplication; see Appendix E
• Photo Location Map and Photographs	Removed to avoid duplication; see Appendix B

Distribution List:

- Natural Resources Conservation Service, Indianapolis Office (electronic submission)
- U.S. Army Corps of Engineers, Detroit District (electronic submission)
- U.S. Housing and Urban Development (electronic submission)
- Federal Highway Administration, Indiana Division (electronic submission)
- National Park Service
- Indiana Department of Natural Resources (IDNR), Division of Fish and Wildlife (electronic submission)
- Indiana Department of Environmental Management (IDEM) (electronic submission)
- INDOT, Office of Public Involvement (electronic submission)

- INDOT, Environmental Services (electronic submission)
- INDOT, LaPorte District (electronic submission)
- INDOT, Project Manager (electronic submission)
- Indiana Geological Survey (electronic submission)
- Newton County Highway Department (electronic submission)
- Newton County Commissioners Office (electronic submission)
- Newton County Council (electronic submission)
- Newton County, Iroquois Township Trustee
- Newton County Surveyor's Office (electronic submission)
- Newton County Emergency Management Agency
- Newton County Ambulance Service
- Newton County Sheriff's Department
- Newton County Economic Development Commission
- South Newton School Corporation
- Brook-Iroquois Volunteer Fire Department

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

INDOT LaPorte District
Bradon Downing
315 E Boyd Blvd
LaPorte , IN 46350

Lochmueller Group
Ruth Hook
3502 Woodview Trace #150
Indianapolis , IN 46268

Date

To Engineers and Consultants Proposing Roadway Construction Projects:

RE: The Indiana Department of Transportation (INDOT), LaPorte District and the Federal Highway Administration (FHWA) propose to proceed with a bridge replacement project (Des. No. 1700077) involving Bridge No. 016-56-10320, carrying SR 16 (CR 900 South) over Mosquito Creek. The proposed project is located in Newton County, 1.31 miles east of SR 55. Specifically, the project is located in Sections 13 & 24, Township 28 North, and Range 8 West in Iroquois Creek Township as depicted on the Goodland U.S. Geological Survey (USGS) Quadrangle. The proposed project would involve the replacement of the existing bridge (Bridge No. 016-56-01238 A) with a new composite spread prestressed concrete box beam bridge. The new bridge would be 69.5 feet long, with a single 67-foot span, and have an out-to-out deck width of 41-feet wide. The clear roadway width on structure would be 38 feet wide and consist of two 12-foot travel lanes (one in each direction) with 7-foot paved shoulders on each side. Concrete lined drainage turnouts will be installed at the end of each quadrant of the bridge. Additionally, Class I riprap will be placed beneath the new bridge and both banks of Mosquito Creek for scour protection. The existing guardrail along SR 16 will be removed and replaced with a total of 652 feet of new guardrail. A total of 124 feet of channel work, 57 feet downstream (north) and 67 feet upstream (south) of the bridge, is anticipated to occur. Channel work would likely include vegetation removal and grading for the placement of riprap. The approach roadway will be reconstructed to a typical section consisting of two 12-foot travel lanes (one in each direction) with 7-foot paved shoulders on each side. The reconstruction of the approaches would extend approximately 208 feet to the east and 292 feet west of the proposed bridge. In addition, incidental construction, extending 100 feet from the western terminus and 195 feet from the eastern terminus, is required to transition the reconstructed roadway back to the existing profile. This will include milling the existing pavement to a depth of approximately 1.5 inches and applying a hot mix asphalt overlay atop the milled roadway surface. No work is proposed to South Iroquois River Road. Including incidental construction, the total length of the project is 795 feet. The maintenance of traffic (MOT) will require closure of SR 16. A detour utilizing SR 55 to US 24 to US 231 will be established. Signs and barrels will be placed along SR 16 notifying travelers of the road closure and detour.The project is anticipated to require approximately 2.21 acres of new permanent ROW. The ROW along this section of SR 16 was acquired by grants in 1931, which were not recorded until 1962. Therefore, title to the existing right-of-way is uncertain making the edge of pavement the presumed apparent right-of-way. No temporary ROW is anticipated. Approximately 1.06 acres of tree clearing is anticipated to occur.A Red Flag Investigation (RFI) was performed for a 0.5-mile radius for the project area. Several “Red Flags” were identified within the 0.5-mile search radius; however, not all will be impacted. One stream, Mosquito Creek, runs through the project area. Three wetlands were field delineated within the project area. The project is located within the 100-year floodplain of Mosquito River. Due to the identification and proximity of water resources to the project area, a Waters of the U.S. Determination Report will be prepared and coordination with INDOT Environmental Services Ecology and Waterway Permitting will occur. No additional “Red Flags” are mapped within the immediate vicinity of the project. Lochmueller Group conducted a field investigation of the project area on October 12, 2018. The field investigation identified Mosquito Creek, 3 unnamed tributaries (UNT), and 3 wetlands within the project area. Due to the presence of these water resources within the project area, a Waters of the U.S. Determination Report will be completed.

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, Kosciosko, 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 Indiana Department of Transportation (INDOT), LaPorte District and the Federal Highway Administration (FHWA) propose to proceed with a bridge replacement project (Des. No. 1700077) involving Bridge No. 016-56-10320, carrying SR 16 (CR 900 South) over Mosquito Creek. The proposed project is located in Newton County, 1.31 miles east of SR 55. Specifically, the project is located in Sections 13 & 24, Township 28 North, and Range 8 West in Iroquois Creek Township as depicted on the Goodland U.S. Geological Survey (USGS) Quadrangle. The proposed project would involve the replacement of the existing bridge (Bridge No. 016-56-01238 A) with a new composite spread prestressed concrete box beam bridge. The new bridge would be 69.5 feet long, with a single 67-foot span, and have an out-to-out deck width of 41-feet wide. The clear roadway width on structure would be 38 feet wide and consist of two 12-foot travel lanes (one in each direction) with 7-foot paved shoulders on each side. Concrete lined drainage turnouts will be installed at the end of each quadrant of the bridge. Additionally, Class I riprap will be placed beneath the new bridge and both banks of Mosquito Creek for scour protection. The existing guardrail along SR 16 will be removed and replaced with a total of 652 feet of new guardrail. A total of 124 feet of channel work, 57 feet downstream (north) and 67 feet upstream (south) of the bridge, is anticipated to occur. Channel work would likely include

vegetation removal and grading for the placement of riprap. The approach roadway will be reconstructed to a typical section consisting of two 12-foot travel lanes (one in each direction) with 7-foot paved shoulders on each side. The reconstruction of the approaches would extend approximately 208 feet to the east and 292 feet west of the proposed bridge. In addition, incidental construction, extending 100 feet from the western terminus and 195 feet from the eastern terminus, is required to transition the reconstructed roadway back to the existing profile. This will include milling the existing pavement to a depth of approximately 1.5 inches and applying a hot mix asphalt overlay atop the milled roadway surface. No work is proposed to South Iroquois River Road. Including incidental construction, the total length of the project is 795 feet. The maintenance of traffic (MOT) will require closure of SR 16. A detour utilizing SR 55 to US 24 to US 231 will be established. Signs and barrels will be placed along SR 16 notifying travelers of the road closure and detour.The project is anticipated to require approximately 2.21 acres of new permanent ROW. The ROW along this section of SR 16 was acquired by grants in 1931, which were not recorded until 1962. Therefore, title to the existing right-of-way is uncertain making the edge of pavement the presumed apparent right-of-way. No temporary ROW is anticipated. Approximately 1.06 acres of tree clearing is anticipated to occur.A Red Flag Investigation (RFI) was performed for a 0.5-mile radius for the project area. Several “Red Flags” were identified within the 0.5-mile search radius; however, not all will be impacted. One stream, Mosquito Creek, runs through the project area. Three wetlands were field delineated within the project area. The project is located within the 100-year floodplain of Mosquito River. Due to the identification and proximity of water resources to the project area, a Waters of the U.S. Determination Report will be prepared and coordination with INDOT Environmental Services Ecology and Waterway Permitting will occur. No additional “Red Flags” are mapped within the immediate vicinity of the project. Lochmueller Group conducted a field investigation of the project area on October 12, 2018. The field investigation identified Mosquito Creek, 3 unnamed tributaries (UNT), and 3 wetlands within the project area. Due to the presence of these water resources within the project area, a Waters of the U.S. Determination Report will be completed.

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: _____

Signature of the INDOT
Project Engineer or Other Responsible Agent Bradon Downing
_____

Digitally signed by Bradon Downing
Date: 2020.03.19 05:09:39 -05'00'

Bradon Downing

Date: 04/09/2020

Signature of the
For Hire Consultant Ruth Hook
_____

Ruth Hook

Organization and Project Information

Project ID:
Des. ID: 1700077
Project Title: SR 16 over Mosquito Creek Bridge Replacement Project
Name of Organization: Lochmueller Group, Inc.
Requested by: Brenten Reust

Environmental Assessment Report

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

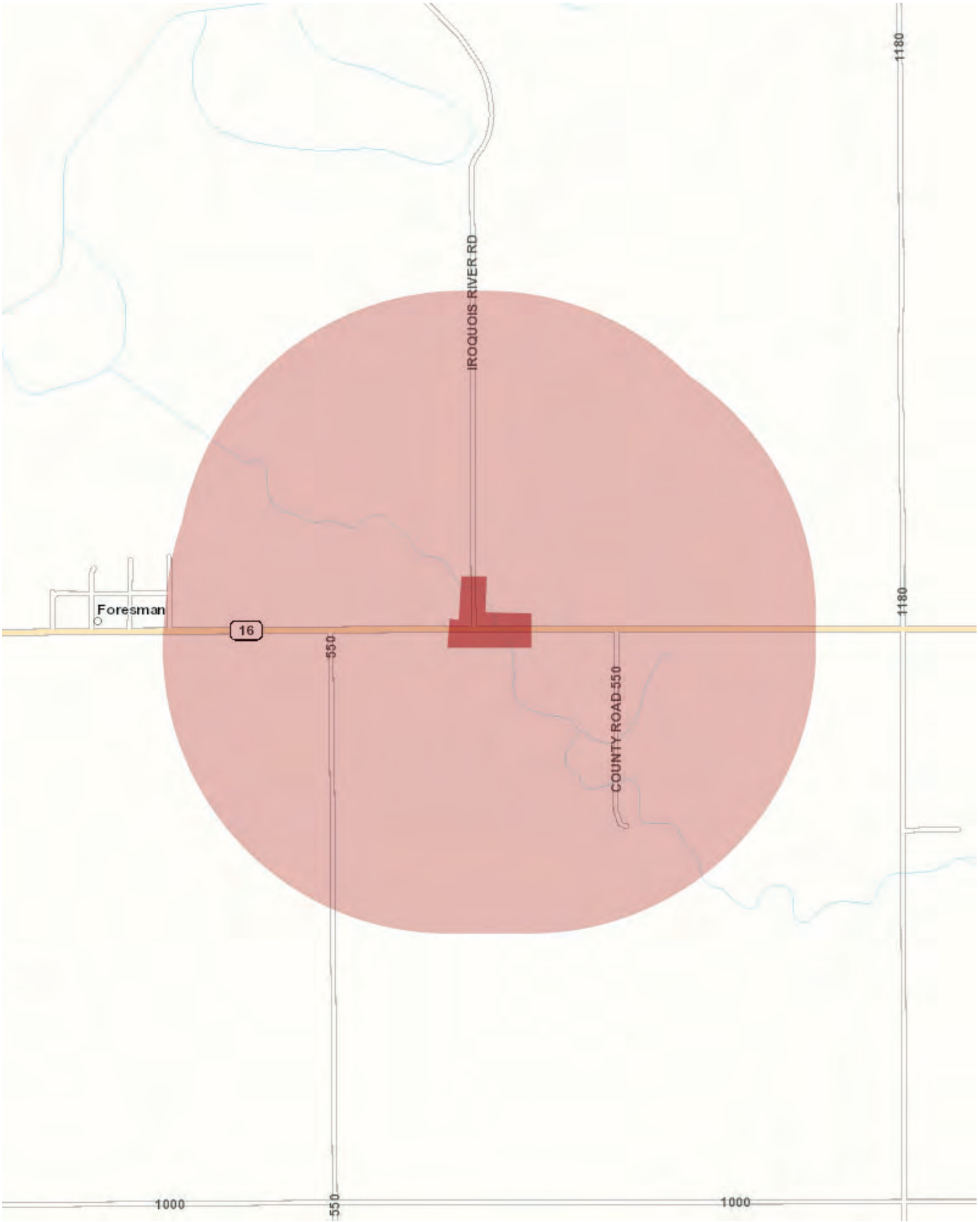
*All map layers from Indiana Map (maps.indiana.edu)

DISCLAIMER:

This document was compiled by Indiana University, Indiana Geological Survey, using data believed to be accurate; however, a degree of error is inherent in all data. This product is distributed "AS-IS" without warranties of any kind, either expressed or implied, including but not limited to warranties of suitability to a particular purpose or use. No attempt has been made in either the design or production of these data and document to define the limits or jurisdiction of any federal, state, or local government. The data used to assemble this document are intended for use only at the published scale of the source data or smaller (see the metadata links below) and are for reference purposes only. They are not to be construed as a legal document or survey instrument. A detailed on-the-ground survey and historical analysis of a single site may differ from these data and this document.

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: December 16, 2019



Metadata:

- https://maps.indiana.edu/metadata/Geology/Seismic_Earthquake_Liquefaction_Potential.html
- https://maps.indiana.edu/metadata/Geology/Industrial_Minerals_Sand_Gravel_Resources.html
- https://maps.indiana.edu/metadata/Hydrology/Floodplains_FIRM.html
- https://maps.indiana.edu/metadata/Geology/Bedrock_Geology.html

From: Courtade, Julian
To: Reust, Brenten
Subject: RE: ECL SR 16 Bridge Project Des. No. 1700077
Date: Monday, December 16, 2019 3:03:40 PM
Attachments: image001.png
image002.png
image003.png
image004.png
image005.png
image006.png

Hello –

I reviewed the ECL and found no issues with surrounding airspace or airports. This is due to the project meeting the required 100:1 glideslope to the nearest airport within 5 nautical miles. Please let me know if you have any questions!

Thanks,

Julian L. Courtade
Chief Airport Inspector
INDOT, Office of Aviation
IGCN Room N955
100 North Senate Avenue
Indianapolis, IN 46204
Office: (317) 232-1477
Email: jcourtade@indot.in.gov

From: Reust, Brenten [mailto:BReust@lochgroup.com]
Sent: Monday, December 16, 2019 1:47 PM
To: Courtade, Julian <JCourtade@indot.IN.gov>
Subject: ECL SR 16 Bridge Project Des. No. 1700077

Good afternoon,

Please see the attached early coordination letter and associated attachments for the bridge replacement project in Newton County, Indiana.

Please contact myself or Ruth Hook (rhook@lochgroup.com) should you have any questions or comments regarding this project.

From: Wright, Mary
To: Reust, Brenten
Subject: RE: ECL SR 16 Bridge Project Des. No. 1700077
Date: Wednesday, December 18, 2019 12:01:51 PM

Early Coordination and Creating a Public Involvement Plan (PIP)

We have received your early coordination notification packet for the above referenced project(s). Our office prefers to be notified at the early coordination stage in order to encourage early and ongoing public involvement aside from the specific legal requirements as outlined in our Public Involvement Manual http://www.in.gov/indot/2366.htm . Seeking the public's understanding of transportation improvement projects early in the project development stage can allow the opportunity for the public to express their concerns, comments, and to seek buy-in. Early coordination is the perfect opportunity to examine the proposed project and its impacts to the community along with the many ways and or tools to inform the public of the improvements and seek engagement. A good public involvement plan, or PIP, should consider the type, scope, impacts, and the level of public awareness that should, or could, be implemented. In other words, although there are cases where no public involvement is legally required, sometimes it is simply the right thing to do in order to keep the public informed.
The public involvement office is always available to provide support and resources to bolster any public involvement activities you may wish to implement or discuss. Please feel free to contact our office anytime should you have any questions or concerns. Thank you for notifying our office about your proposed project. We trust you will not only analyze the appropriate public involvement required, but also consider the opportunity to do go above and beyond those requirements in creating a good PIP.

Rickie Clark, Manager
100 North Senate Avenue, Room N642
Indianapolis, IN 46204
Phone: 317-232-6601
Email: rclark@indot.in.gov

From: Reust, Brenten [mailto:BReust@lochgroup.com]
Sent: Monday, December 16, 2019 1:24 PM
To: Clark, Rickie <RCLARK@indot.IN.gov>; Wright, Mary <MWRIGHT@indot.IN.gov>
Subject: ECL SR 16 Bridge Project Des. No. 1700077

Good afternoon,

Please see the attached early coordination letter and associated attachments for the bridge replacement project in Newton County, Indiana.

Please contact myself or Ruth Hook (rhook@lochgroup.com) should you have any questions or comments regarding this project.

Thank you for your time and have a great day,

Brenten Reust, PWS
Environmental Biologist
Lochmueller Group
3502 Woodview Trace
Suite 150, Indianapolis, IN 46268
317.334.6810 (direct) | 260.388.2875 (mobile)
BReust@lochgroup.com
http://lochgroup.com

From: KYLE CONRAD
To: Reust, Brenten; Hook, Ruth
Subject: Re: ECL SR 16 Bridge Project Des. No. 1700077
Date: Thursday, December 19, 2019 5:14:32 PM

I don't believe the Brook-Iroquois Twp VFD has any comments to offer. We would appreciate having some lead time in being notified before the project starts so as to advise our mutual aid departments.

Thank you
Kyle D. Conrad, Fire Chief
Brook-Iroquois Twp VFD

-----Original Message-----
From: Reust, Brenten <BReust@lochgroup.com>
To: kidclerk@aol.com <kidclerk@aol.com>
Sent: Mon, Dec 16, 2019 2:33 pm
Subject: ECL SR 16 Bridge Project Des. No. 1700077

Good afternoon,

Please see the attached early coordination letter and associated attachments for the bridge replacement project in Newton County, Indiana.

Please contact myself or Ruth Hook (rhook@lochgroup.com) should you have any questions or comments regarding this project.

Thank you for your time and have a great day,

Brenten Reust, PWS
Environmental Biologist
Lochmueller Group
3502 Woodview Trace
Suite 150, Indianapolis, IN 46268
317.334.6810 (direct) | 260.388.2875 (mobile)
BReust@lochgroup.com
https://protect-us.mimecast.com/s/taQbCW6zrKID68yi6yvl_

USDA
United States Department of Agriculture

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

December 30, 2019

Ruth Hook
Lochmueller Group, Inc.
3502 Woodview Trace, Suite 150
Indianapolis, Indiana 46268

Dear Ms. Hook:

The proposed project to address the deteriorating condition of the existing structure along State Road 16 over Mosquito Creek in Newton County, Indiana, (Des No 1700077), as referred to in your letter received December 16, 2019, will cause a conversion of prime farmland.

The attached packet of information is for your use competing Parts VI and VII of the AD-1006. 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 Digitally signed by JERRY RAYNOR
Date: 2020.01.06 13:00:42 -05'00'

JERRY RAYNOR
State Conservationist

Enclosures

U.S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

NRCS-CPA-106
(Rev. 1-91)

FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I *(To be completed by Federal Agency)*	3. Date of Land Evaluation Request **12/13/19**	4. Sheet 1 of **1**
1. Name of Project **SR 16 over Mosquito Creek Des. No. 1700077**	5. Federal Agency Involved **FHWA**	
2. Type of Project **Bridge Replacement**	6. County and State **Newton County, IN**	

PART II *(To be completed by NRCS)*	1. Date Request Received by NRCS **12/16/19**	2. Person Completing Form **JRA**
3. Does the corridor 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 ☐		4. Acres Irrigated | Average Farm Size **506**
5. Major Crop(s) **Corn**	6. Farmable Land in Government Jurisdiction **Acres: 243,024** **% 94**	7. Amount of Farmland As Defined in FPPA **Acres: 190,260** **% 74**
8. Name Of Land Evaluation System Used **LESA**	9. Name of Local Site Assessment System	10. Date Land Evaluation Returned by NRCS **12/30/19**

PART III *(To be completed by Federal Agency)*	Alternative Corridor For Segment ____ Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly	**2.21**			
B. Total Acres To Be Converted Indirectly, Or To Receive Services	**0**			
C. Total Acres In Corridor	**2.21**			
PART IV *(To be completed by NRCS) Land Evaluation Information*				
A. Total Acres Prime And Unique Farmland	**0.62**			
B. Total Acres Statewide And 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	**100**			
PART V *(To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)*	45			

PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))*	Maximum Points	Corridor A	Corridor B	Corridor C	Corridor D
1. Area in Nonurban Use	15	**15**			
2. Perimeter in Nonurban Use	10	**10**			
3. Percent Of Corridor Being Farmed	20	**0**			
4. Protection Provided By State And Local Government	20	**0**			
5. Size of Present Farm Unit Compared To Average	10	**0**			
6. Creation Of Nonfarmable Farmland	25	**0**			
7. Availablility Of Farm Support Services	5	**5**			
8. On-Farm Investments	20	**15**			
9. Effects Of Conversion On Farm Support Services	25	**0**			
10. Compatibility With Existing Agricultural Use	10	**1**			
TOTAL CORRIDOR ASSESSMENT POINTS	**160**	**46**	**0**	**0**	**0**
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland (From Part V)	**100**	**45**	**0**	**0**	**0**
Total Corridor Assessment (From Part VI above or a local site assessment)	**160**	**46**	**0**	**0**	**0**
TOTAL POINTS *(Total of above 2 lines)*	**260**	**91**	**0**	**0**	**0**

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used?
A	**0.62**	**1/8/20**	YES ☑ NO ☐

5. Reason For Selection:

Site was selected because it converts the least amount of farmland compared to other alternatives.

Signature of Person Completing this Part: Brenton Reust

DATE **1/8/20**

NOTE: Complete a form for each segment with more than one Alternate Corridor

DEPARTMENT OF THE ARMY
U. S. ARMY CORPS OF ENGINEERS, DETROIT DISTRICT
477 MICHIGAN AVE.
DETROIT, MICHIGAN 48226-2550

January 13, 2020

Ruth Hook
Lochmueller Group, Inc.
3502 Woodview Trace, Ste. 150
Indianapolis, IN 46268

Dear Ms. Hook:

This is in response to your December 16, 2019, letter requesting comments on a proposed bridge replacement project for State Road (SR) 16 over Mosquito Creek, located approximately 1.31 miles east of SR 55 in Newton County, Indiana (Des. No. 1700077). The project is summarized below, followed by information provided in accordance with our responsibilities under our Regulatory and Civil Works Programs.

The project involves replacement of the existing single-span reinforced-concrete filled-arch bridge with a longer and wider composite-spread prestressed-concrete box-beam bridge. The existing bridge is 35 feet wide and 39 feet long with a single 36-foot span. The proposed new bridge would be 41 feet wide and 69.5 feet long with a single 67-foot span. Additinally, Class I riprap will be placed below the new bridge and both banks of Mosquito Creek for scour protection. A total of 124 feet of channel work in Mosquito Creek would be completed (57 feet upstream and 67 feet downstream), including vegetation removal and grading for riprap placement. Existing guardrail will be removed and replaced.

Your project may require a Department of the Army Permit, pursuant to Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act of 1899. Any of the proposed work that occurs within a water of the United States or adjacent wetlands, will likely require prior authorization through our regulatory permit process. For further information on permit requirements and the application process, please contact the Michiana Branch, Regulatory Office, South Bend, Indiana, at 574-232-1952.

There are no current plans under our Civil Works Program to develop waterways in the vicinity of your project; nor do we have any current or proposed flood risk management studies for the area described in your letter.

According to the National Flood Insurance Program database, and as indicated in the early coordination materials, the project site is in a Federally mapped floodplain. The road resurfacing part of the project transects the floodplain of Mosquito Creek. The HMA overlay should not impact the floodplain, provided the road surface elevation does

not change. However, changes to the roadway cross section or addition of fill material in the floodplain could impact flood elevations. The proposed bridge replacement includes a larger span bridge, riprap on the creek banks, and vegetative removal. Alterations to flow capacity under the bridge and effects on the floodplain should be evaluated as part of the project design.

We recommend that you coordinate with local officials and with the Indiana Department of Natural Resources regarding the applicability of a floodplain permit prior to construction. This coordination would help ensure compliance with local and state floodplain management regulations and acts, such as the Indiana Flood Control Act (IC 13-2-22). If you obtain information that any part of your project would impact the floodplain, you should consider other alternatives that, to the extent possible, avoid or minimize adverse impacts associated with use of the floodplain.

We appreciate the opportunity to comment on the proposed bridge replacement project for SR 16 over Mosquito Creek in Newton County, Indiana. Questions regarding our regulatory program should be directed to Mr. Don Reinke, Regulatory Office, at 313-226-6812. Any other questions may be directed to Mr. Paul Allerding of my staff at 313-226-7590 or me at 313-226-2476.

Sincerely,

Original signed

Charles A. Uhlarik
Chief, Environmental Analysis Branch

Copies furnished:

Don Reinke, Corps, Regulatory Office, Detroit
Mary Weidel, Corps, Floodplain Management Services, Detroit

THIS IS NOT A PERMIT

State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife

Early Coordination/Environmental Assessment

DNR #: ER-22069 **Request Received:** December 16, 2019

Requestor:
Lochmueller Group Inc
Ruth Hook
3502 Woodview Trace, Suite 150
Indianapolis, IN 46268

Project: SR 16 bridge (#016-56-01238 A) replacement over Mosquito Creek, and channel bank clearing, 1.31 miles east of SR 55; Des #1700077

County/Site info: Newton

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 of our agency for construction in a floodway pursuant to the Flood Control Act (IC 14-28-1), unless it qualifies for a bridge exemption (see enclosure). Please include a copy of this letter with the permit application if the project does not meet the bridge exemption criteria.

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.

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.

Attachments: A - Bridge Exemption Criteria

2) Bank Stabilization & Wildlife Passage:
The new, replacement, or rehabbed structure, and any bank stabilization under the structure, should not create conditions that are less favorable for wildlife passage under the structure compared to current conditions. A level area of natural ground under the structure is ideal for wildlife passage. If channel clearing will result in a flat bench area above the normal water level under the structure, this area should allow wildlife passage and should remain free of riprap and other similar materials that can impair wildlife passage.

Minimize the use of riprap and use alternative erosion protection materials whenever possible. Riprap must not be placed in the active thalweg channel or placed in the streambed in a manner that precludes fish or aquatic organism passage (riprap must not be placed above the existing streambed elevation). Where riprap must be used, we recommend placing only enough riprap to provide stream bank toe protection, such as from the toe of the bank up to the ordinary high water mark (OHWM). The banks above the OHWM must be restored, stabilized, and revegetated using geotextiles and a mixture of grasses, sedges, wildflowers, shrubs, and trees native to the area and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion.

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. 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. If hard armoring is needed, wildlife passage can be facilitated by using a smooth-surfaced armoring material instead of riprap, such as articulated concrete block mats, fabric-formed concrete mats, or other similar smooth-surfaced material.

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.

3) Riparian Habitat:
We recommend a mitigation plan be developed (and submitted with the permit application, if required) 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.

Attachments: A - Bridge Exemption Criteria

THIS IS NOT A PERMIT

State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife

Early Coordination/Environmental Assessment

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 within the project area using a mixture of grasses (excluding all varieties of tall fescue), sedges, and wildflowers native to Northern Indiana and specifically for stream bank/floodway stabilization purposes 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. Operate equipment used to replace the bridge from the existing roadway.
6. Use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids.
7. Do not use broken concrete as riprap.
8. Underlay the riprap with a bedding layer of well graded aggregate or a geotextile to prevent piping of soil underneath the riprap.
9. Minimize the movement of resuspended bottom sediment from the immediate project area.
10. Do not deposit or allow demolition/construction materials or debris to fall or otherwise enter the waterway.
11. 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.
12. 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.
13. 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.

Christie L. Stanifer **Date:** January 14, 2020

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

Attachments: A - Bridge Exemption Criteria

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)
Des. No. 1700077	Mosquito Creek	10/12/2018	(Yes) No

Route	County	Federal Structure ID
SR 16	Newton County	Bridge No. 016-56-01238 A

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	X	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	X	Spaces between walls, ceiling joists		Possible corridors for netting	None/poor	(Marginal)	Excellent
All guardrails	X						
All expansion joints	X						
Spaces between concrete end walls and the bridge deck	X						

Last Revised May 31, 2017

Vertical surfaces on concrete I-beams	X						

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: Samantha Beaupre **Signature(s):** Samantha Beaupre

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

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: April 06, 2020
Consultation Code: 03E12000-2020-I-1091
Event Code: 03E12000-2020-E-05464
Project Name: SR 16 over Mosquito Creek Bridge Replacement (Des. No. 1700077)

Subject: Concurrence verification letter for the 'SR 16 over Mosquito Creek Bridge Replacement (Des. No. 1700077)' project 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 **SR 16 over Mosquito Creek Bridge Replacement (Des. No. 1700077)** (Proposed Action) may rely on the concurrence provided in the 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, but is not likely to adversely affect (NLAA) the endangered Indiana bat (*Myotis sodalis*) and/or the threatened Northern long-eared bat (*Myotis septentrionalis*).

The Service has 14 calendar days to notify the lead Federal action agency or designated non-federal representative if we determine that the Proposed Action does not meet the criteria for a NLAA determination under the PBO. If we do not notify the lead Federal action agency or designated non-federal representative within that timeframe, you may proceed with the Proposed Action under the terms of the NLAA concurrence provided in the PBO. This verification period allows Service Field Offices to apply local knowledge to implementation of the PBO, as we may identify a small subset of actions having impacts that were unanticipated. In such instances, Service Field Offices may request additional information that is necessary to verify inclusion of the proposed action under the PBO.

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 is modified, or new information reveals that it may affect the Indiana bat and/or Northern long-eared bat in a manner or to an extent not considered in the PBO, further review to conclude the requirements of ESA Section 7(a)(2) may be required. If the Proposed Action may affect any other federally-listed or proposed species, and/or any 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 contact this Service Office.

Project Description

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

Name

SR 16 over Mosquito Creek Bridge Replacement (Des. No. 1700077)

Description

The Indiana Department of Transportation (INDOT), LaPorte District and the Federal Highway Administration (FHWA) propose to proceed with a bridge replacement project (Des. No. 1700077) involving Bridge No. 016-56-10320, carrying SR 16 (CR 900 South) over Mosquito Creek. The proposed project is located in Newton County, 1.31 miles east of SR 55. Specifically, the project is located in Sections 13 & 24, Township 28 North, and Range 8 West in Iroquois Creek Township as depicted on the Goodland U.S. Geological Survey (USGS) Quadrangle. The proposed project would involve the replacement of the existing bridge (Bridge No. 016-56-01238 A) with a new composite spread prestressed concrete box beam bridge. The new bridge would be 69.5 feet long, with a single 67-foot span, and have an out-to-out deck width of 41-feet wide. The clear roadway width on structure would be 38 feet wide and consist of two 12-foot travel lanes (one in each direction) with 7-foot paved shoulders on each side. Concrete lined drainage turnouts will be installed at the end of each quadrant of the bridge. Additionally, Class I riprap will be placed beneath the new bridge and both banks of Mosquito Creek for scour protection. The existing guardrail along SR 16 will be removed and replaced with a total of 652 feet of new guardrail. The approach roadway will be reconstructed to a typical section consisting of two 12-foot travel lanes (one in each direction) with 7-foot paved shoulders on each side. The reconstruction of the approaches would extend approximately 208 feet to the east and 292 feet west of the proposed bridge. In addition, incidental construction, extending 100 feet from the western terminus and 195 feet from the eastern terminus, is required to transition the reconstructed roadway back to the existing profile. This will include milling the existing pavement to a depth of approximately 1.5 inches and applying a hot mix asphalt overlay atop the milled roadway surface. No work is proposed to South Iroquois River Road. The maintenance of traffic (MOT) will require closure of SR 16. A detour utilizing SR 55 to US 24 to US 231 will be established. Signs and barrels will be placed along SR 16 notifying travelers of the road closure and detour. Including incidental construction, the total length of the project is 795 feet. Permanent lighting will not be installed. Temporary lighting may be used during construction. Suitable summer habitat is located north and south of SR 16. The project will begin in the Spring of 2022. Approximately 0.3 acre of tree clearing is anticipated to occur within 100 feet from the existing roadway. The dominant tree species is Silver Maple (Acer saccharinum). The tree clearing will occur in the Spring of 2022. A review of the USFWS database by INDOT LaPorte District on December 10, 2018 did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. Lochmueller Group inspected the structure on October 12, 2018 and no evidence of bats was identified.

Determination Key Result

Based on your answers provided, this project(s) may affect, but is not 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 concurrence 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.

    No

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

    Yes

17. What time of year will the removal or trimming of habitat or trees **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors occur?

    B) During the inactive season

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

    Yes

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

    No

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

    No

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

    Yes

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

    No

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

    No

24. Does the project include slash pile burning?

    No

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

    Yes

26. 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

27. 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

    - *Bridge Structure Assessment.pdf https://ecos.fws.gov/ipac/project/VINQGK2A2ZGV7HTXSPEJSAN3NQ/projectDocuments/21017521*

28. 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

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

    No

30. 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

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

    Yes

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

    Yes

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

    No

34. 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

35. 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

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

    No

37. 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

38. 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.

39. 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 NLEB'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.

40. 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

41. **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

42. **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

43. **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

44. **Tree Removal AMM 4**
Can the project avoid cutting down/removal of *all* (1) **documented**[1] Indiana bat or NLEB roosts[2] (that are still suitable for roosting), (2) trees **within** 0.25 miles of roosts, and (3) documented foraging habitat any time of year?

[1] The word documented means habitat where bats have actually been captured and/or tracked.

[2] 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.)

Yes

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

Yes

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.

   0.3

4. Please describe the proposed bridge work:

   The proposed project would involve the replacement of the existing bridge (Bridge No. 016-56-01238 A) with a new composite spread prestressed concrete box beam bridge. The new bridge would be 69.5 feet long, with a single 67-foot span, and have an out-to-out deck width of 41-feet wide. The clear roadway width on structure would be 38 feet wide and consist of two 12-foot travel lanes (one in each direction) with 7-foot paved shoulders on each side. Concrete lined drainage turnouts will be installed at the end of each quadrant of the bridge. Additionally, Class I riprap will be placed beneath the new bridge and both banks of Mosquito Creek for scour protection. The existing guardrail along SR 16 will be removed and replaced with a total of 652 feet of new guardrail. A total of 124 feet of channel work, 57 feet downstream (north) and 67 feet upstream (south) of the bridge, is anticipated to occur. Channel work would likely include vegetation removal and grading for the placement of riprap.

   The approach roadway will be reconstructed to a typical section consisting of two 12-foot travel lanes (one in each direction) with 7-foot paved shoulders on each side. The reconstruction of the approaches would extend approximately 208 feet to the east and 292 feet west of the proposed bridge. In addition, incidental construction, extending 100 feet from the western terminus and 195 feet from the eastern terminus, is required to transition the reconstructed roadway back to the existing profile. This will include milling the existing pavement to a depth of approximately 1.5 inches and applying a hot mix asphalt

overlay atop the milled roadway surface. No work is proposed to South Iroquois River Road. Including incidental construction, the total length of the project is 795 feet.

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

6. Please enter the date of the bridge assessment:
   October 12, 2018

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 2

Apply time of year restrictions for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/rail surface and **outside of documented** roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed.

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).

TREE REMOVAL AMM 4

Do not remove **documented** Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or
documented foraging habitat any time of year.

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.

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: March 18, 2020
Consultation Code: 03E12000-2020-SLI-1091
Event Code: 03E12000-2020-E-04912
Project Name: SR 16 over Mosquito Creek Bridge Replacement (Des. No. 1700077)

Subject: 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-1091

Event Code: 03E12000-2020-E-04912

Project Name: SR 16 over Mosquito Creek Bridge Replacement (Des. No. 1700077)

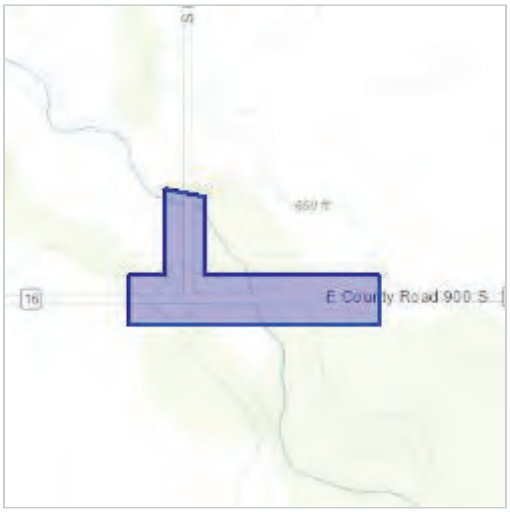
Project Type: TRANSPORTATION

Project Description: The Indiana Department of Transportation (INDOT), LaPorte District and the Federal Highway Administration (FHWA) propose to proceed with a bridge replacement project (Des. No. 1700077) involving Bridge No. 016-56-10320, carrying SR 16 (CR 900 South) over Mosquito Creek. The proposed project is located in Newton County, 1.31 miles east of SR 55. Specifically, the project is located in Sections 13 & 24, Township 28 North, and Range 8 West in Iroquois Creek Township as depicted on the Goodland U.S. Geological Survey (USGS) Quadrangle. The proposed project would involve the replacement of the existing bridge (Bridge No. 016-56-01238 A) with a new composite spread prestressed concrete box beam bridge. The new bridge would be 69.5 feet long, with a single 67-foot span, and have an out-to-out deck width of 41-feet wide. The clear roadway width on structure would be 38 feet wide and consist of two 12-foot travel lanes (one in each direction) with 7-foot paved shoulders on each side. Concrete lined drainage turnouts will be installed at the end of each quadrant of the bridge. Additionally, Class I riprap will be placed beneath the new bridge and both banks of Mosquito Creek for scour protection. The existing guardrail along SR 16 will be removed and replaced with a total of 652 feet of new guardrail. The approach roadway will be reconstructed to a typical section consisting of two 12-foot travel lanes (one in each direction) with 7-foot paved shoulders on each side. The reconstruction of the approaches would extend approximately 208 feet to the east and 292 feet west of the proposed bridge. In addition, incidental construction, extending 100 feet from the western terminus and 195 feet from the eastern terminus, is required to transition the reconstructed roadway back to the existing profile. This will include milling the existing pavement to a depth of approximately 1.5 inches and applying a hot mix asphalt overlay atop the milled roadway surface. No work is proposed to South Iroquois River Road. The maintenance of traffic (MOT) will require closure of SR 16. A detour utilizing SR 55 to US 24 to US 231 will be established. Signs and barrels will be placed along SR 16 notifying travelers of the road closure and detour. Including incidental construction, the total length of the project is 795 feet. Permanent lighting will not be installed. Temporary lighting may be used during construction. Suitable summer habitat is located north and south of

SR 16. The project will begin in the Spring of 2022. Approximately 0.3 acre of tree clearing is anticipated to occur within 100 feet from the existing roadway. The dominant tree species is Silver Maple (Acer saccharinum). The tree clearing will occur in the Spring of 2022. A review of the USFWS database by INDOT LaPorte District on December 10, 2018 did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. Lochmueller Group inspected the structure on October 12, 2018 and no evidence of bats was identified.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/40.86637330256058N87.28243400964382W



Counties: Newton, 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.

Categorical Exclusion

Appendix D

Section 106 of the National Historic Preservation Act (NHPA)

Minor Projects PA Project Assessment Form – Category B Projects with Archaeology Work

Date: 1/14/2020

Project Designation Number: 1700077

Route Number: State Road (SR) 16

Project Description: Bridge Replacement Over Mosquito Creek, 1.31 mi E of SR 55

The proposed project would involve the replacement of the existing bridge (Bridge No. 016-56-01238 A) with a single-span, composite-spread, prestressed concrete box beam bridge. The bridge will be assigned a new bridge number: No. 016-56-10320. Proposed Bridge No. 016-56-10320 would be 69.5 feet long, with a single 67-foot span, and have an out-to-out deck width of 41-feet wide. The clear roadway width on structure would be 38 feet wide and would consist of two (2) 12-foot travel lanes (one in each direction) with seven (7)-foot paved shoulders on each side. Concrete lined drainage turnouts will be installed at the end of each quadrant of the bridge. Additionally, Class I riprap will be placed beneath the new bridge and both banks of Mosquito Creek for scour protection. The existing guardrail along SR 16 will be removed and replaced with a total of 652 feet of new guardrail. A total of 124 feet of channel work, 57 feet downstream (north) and 67 feet upstream (south) of the bridge, is anticipated to occur. Channel work would likely include vegetation removal and grading for the placement of riprap.

The approach roadway would be reconstructed to a typical section consisting of two 12-foot travel lanes (one in each direction) with 7-foot paved shoulders on each side. The reconstruction of the approaches would extend approximately 208 feet to the east and 292 feet west of the proposed bridge. In addition, incidental construction, extending 100 feet from the western terminus and 195 feet from the eastern terminus, is required to transition the reconstructed roadway back to the existing profile. This will include milling the existing pavement to a depth of approximately 1.5 inches and applying a hot mix asphalt overlay atop the milled roadway surface. No work is proposed to South Iroquois River Road. Including incidental construction, the project extends 392 feet west and 403 feet east of the bridge center for a total project length of 795 feet.

The maintenance of traffic will require closure of SR 16. A detour utilizing SR 55 to US 24 to US 231 will be established.

The project is anticipated to require approximately 2.21 acres of permanent ROW. The ROW along this section of SR 16 was acquired by grants in 1931, which were not recorded until 1962. Therefore, title to the existing right-of-way is uncertain making the edge of pavement the presumed apparent right-of-way. No temporary ROW is anticipated.

Feature crossed (if applicable): Mosquito Creek

Township: Iroquois Township

City/County: Brook/Newton 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 ☑ Bridge Inspection Information

☐ Previously completed archaeology reports

Other (please specify): Bridge Inspection Application System (BIAS); Indiana Historic Bridge Inventory; Indiana State Historic Architectural and Archaeological Research Database (SHAARD); Indiana Buildings, Bridges, and Cemeteries Map website; Indiana Historic Bridge Inventory; *Newton County Interim Report*; online street-view imagery; ArcMap GIS, Newton County GIS website, MPPA application (including maps and photographs) sent by Lochmueller Group dated December 11th, 2019 and on file at INDOT CRO.

Bubb, Louis
2020 Phase Ia Field Reconnaissance for the Replacement of the Bridge Carrying S.R. 16 over Mosquito Creek (Des. 1700077), 1.31 Miles East of S.R. 55 in Iroquois Township, Newton County, Indiana. Project #106C-0342.03, 106 Consulting, Deer Park, Ohio.

Results of the Records Review for Above-Ground Resources:

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 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 Newton County. No listed resources are located within 0.25 mile of the project area, a distance that serves as an adequate area of potential effects.

The Indiana Historic Sites and Structures Inventory (IHSSI) and National Register information for Newton County are available in the Indiana State Historic Architectural and Archaeological Research Database (SHAARD) and the Indiana Historic Buildings, Bridges, and Cemeteries Map (IHBBCM). The *Newton County Interim Report* (2009; Iroquois Township) of the Indiana Historic Sites and Structures Inventory (IHSSI) was also consulted. No IHSSI documented resources are located within 0.25 mile of the project area.

According to the IHSSI rating system, generally properties rated "contributing" do not possess the level of historical or architectural significance necessary to be considered individually National Register-eligible, although they would contribute to a historic district. If they retain material integrity, properties rated "notable" might possess the necessary level of significance after further research. Properties rated "outstanding" usually possess the necessary level of significance to be considered National Register eligible, if they retain material integrity.

The INDOT CRO historian reviewed structures adjacent to the project area utilizing online aerial, street-view photography, and the Newton County GIS website (accessed via https://beacon.schneidercorp.com). The project area is located in a rural, agricultural setting; the adjacent building stock consists of late-nineteenth century farmsteads. None of the structures appear to possess the historic significance or material integrity required to be considered NRHP-eligible.

The most-recent inspection report (C. Burlage; 11/7/2019), referenced via the Bridge Inspection Application System (BIAS), f was referenced to review the bridge. The subject structure (Bridge No. 016-56-01238 A/NBI No. 004200) carries SR 16 over Mosquito Creek and is a single- span reinforced concrete arch bridge. The bridge was built in 1931. The Indiana Historic Bridge Inventory (M & H Architecture, Inc., 2009) lists the bridge as "Non Historic" (Vol. 2; Section 2, pg.795); therefore, the bridge is not eligible for inclusion in the National Register of Historic Places.

Based on the available information, as summarized above, no above-ground concerns exist.

Archaeology Report Author/Date:

Louis Bubb/January 9, 2020

Summary of Archaeology Investigation Results:

An archaeological records check and Phase Ia reconnaissance survey of the project area were conducted by 106 Consulting (Bubb 2020). The records check found that no archaeological investigations had been conducted and no archaeological sites recorded within one mile of the project area. A 6 acre survey area was examined through the excavation of 49 shovel probes and visual inspection of disturbed and inundated areas. No evidence for archaeological deposits was identified, and no additional investigation was recommended. The report was reviewed by INDOT Cultural Resources personnel who meet the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61. It is our opinion that the report is acceptable, and we concur with the evaluations and recommendations made by CRA 106 Consulting (Bubb 2020). Therefore, there are no archaeological concerns.

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

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

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.

Additional comments:

INDOT Cultural Resources staff reviewer(s): Clint Kelly and Matt Coon

****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.*

Categorical Exclusion

Appendix E

Red Flag Investigation & Hazardous Materials

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 24, 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: Angela R. Kattmann, LPG
3502 Woodview Trace
Indianapolis, IN
akattmann@lochgroup.com

Re: RED FLAG INVESTIGATION
Des. No. 1700077, State Project
Bridge Project
State Road 16 over Mosquito Creek (Bridge # 016-56-01238 A)
Newton County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: The Indiana Department of Transportation (INDOT), LaPorte District proposed to proceed with a project 1.31 miles east of State Road (SR) 55 which involves replacing an existing bridge carrying SR 16 over Mosquito Creek, 1.31 miles east of SR 55. The proposed project will remove the existing structure and replace it with a new structure. In addition to the new structure, riprap will be placed for scour protection and guardrail will be installed on the north and south side of the road.

Bridge and/or Culvert Project: Yes ☒ No ☐ Structure # 016-56-01238 A
If this is a bridge project, is the bridge Historical? Yes ☐ No ☒ , Select ☐ Non-Select ☐
(Note: If the project involves a historical bridge, please include the bridge information in the Recommendations Section of the report).

Proposed right of way: Temporary ☐ # Acres _____ Permanent ☒ # Acres 2.21 , Not Applicable ☐

Type of excavation: The depth of excavation from the roadway surface is approximately 11 feet.

Maintenance of traffic: The maintenance of traffic (MOT) will require closure of SR 16. A detour utilizing SR55 to SR114 to I65 will be established. Signs and barrels will be placed along SR 16 notifying travelers of the road closure and 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	**N/A**	Recreational Facilities	**N/A**
Airports[1]	**N/A**	Pipelines	**N/A**
Cemeteries	**N/A**	Railroads	**N/A**
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: No infrastructure resources were located within the 0.5 mile search radius.

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	**N/A**	Canal Routes - Historic	**N/A**
Karst Springs	**N/A**	NWI - Wetlands	**6**
Canal Structures – Historic	**N/A**	Lakes	**N/A**
NPS NRI Listed	**N/A**	Floodplain - DFIRM	**1**
NWI-Lines	**8**	Cave Entrance Density	**N/A**
IDEM 303d Listed Streams and Lakes (Impaired)	**2**	Sinkhole Areas	**N/A**
Rivers and Streams	**3**	Sinking-Stream Basins	**N/A**

Explanation:
NWI – Lines: Eight (8) NWI – Line segments are located within the 0.5 mile search radius. Four (4) NWI – Lines are located within the project area. A Waters of the US report will be prepared and coordination with INDOT ES Ecology and Waterway Permitting Office will occur.

IDEM 303d Listed Streams and Lakes (Impaired): Two (2) 303d Listed Stream segments are located within the 0.5 mile search radius. Mosquito Creek is located within the project area. Mosquito Creek is listed as impaired for *E. coli*. Workers who are working in or near water with *E. coli* should take care to wear appropriated PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure.

Rivers and Streams: Three (3) river and stream segments are located within the 0.5 mile search radius. One (1) stream, Mosquito Creek, is located within the project area. A Waters of the US report will be prepared and coordination with INDOT ES Ecology and Waterway Permitting Office will occur.

NWI – Wetlands: Six (6) NWI – Wetland polygons are located within the 0.5 mile search radius. Three (3) wetlands are located within the project area. A Waters of the US report will be prepared and coordination with INDOT ES Ecology and Waterway Permitting Office will occur.

Floodplain – DFIRM: One (1) floodplain polygon is located within the 0.5 mile search radius. The project area is located within this floodplain polygon. Coordination with INDOT Ecology and Waterway Permitting Office will occur.

URBANIZED AREA BOUNDARY SUMMARY

Explanation: This project is not located within an Urbanized Area Boundary.

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: No mining or mineral exploration resources were located within the 0.5 mile search radius.

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	**N/A**
Infectious/Medical Waste Sites	**N/A**	NPDES Pipe Locations	**N/A**
Leaking Underground Storage (LUST) Sites	**N/A**	Notice of Contamination Sites	**N/A**

Explanation: No hazardous material concerns were located within the 0.5 mile search radius.

ECOLOGICAL INFORMATION SUMMARY

The Newton 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 endangered species.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The project area is located in a rural area surrounded by cow pastures and agricultural fields. The November 17, 2019 inspection report for Bridge #016-56-01238 states that no evidence of bats was seen or heard under the bridge. 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.

An inquiry using the USFWS Information for Planning and Consultation (IPaC) website did not indicate the presence of the federally endangered species, Rusty Patch 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 resources will require the preparation of a Waters of the U.S Report and coordination with INDOT ES Ecology and Waterway Permitting Office:

- One (1) mapped stream segment, Mosquito Creek, flows through the project area.
- The project area is located within the floodplain polygon (coordination only).

Lastly, Mosquito Creek is listed as impaired with E. coli. Workers who are working in or near water with E. coli should take care to wear appropriated PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure.

URBANIZED AREA BOUNDARY: N/A

MINING/MINERAL EXPLORATION: N/A

HAZARDOUS MATERIAL CONCERNS: N/A

ECOLOGICAL INFORMATION: Coordination with USFWS and IDNR will occur. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the "Using the USFW's IPaC System for Listed Bat Consultation for INDOT Project."

INDOT Environmental Services concurrence: Nicole Fohey-Breting Digitally signed by Nicole Fohey-Breting Date: 2019.12.30 12:13:49 -05'00' (Signature)

Prepared by:

Angie Kattmann, LPG
Environmental Geologist
Lochmueller Group, Inc.

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: N/A

WATER RESOURCES: YES

URBANIZED AREA BOUNDARY: N/A

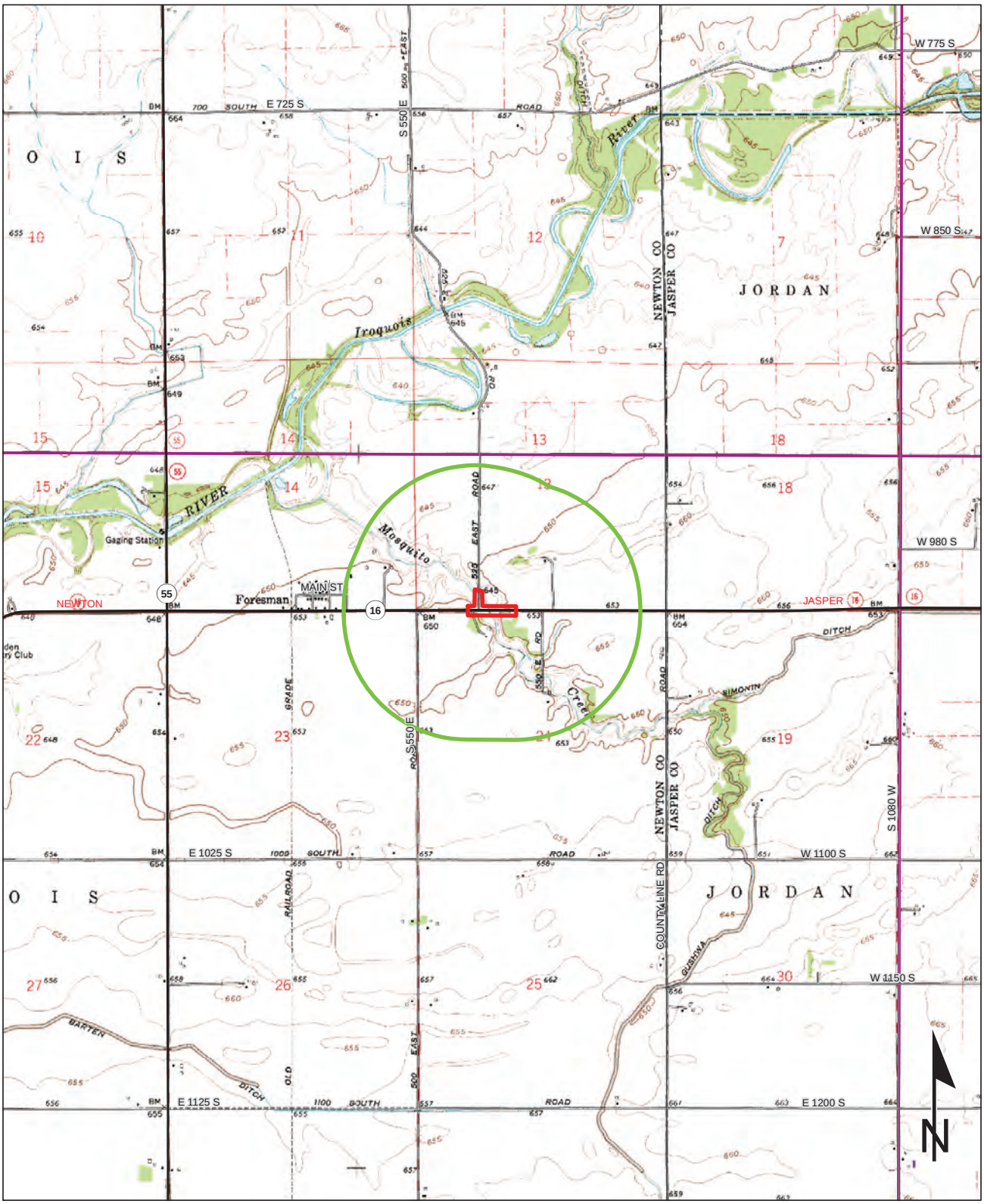
MINING/MINERAL EXPLORATION: N/A

HAZARDOUS MATERIAL CONCERNS: N/A

Additional Attachments:

NEWTON COUNTY ETR LIST

Red Flag Investigation - Site Location
State Road 16 over Mosquito Creek
Des. No. 1700077, Bridge Replacement
Newton County, Indiana



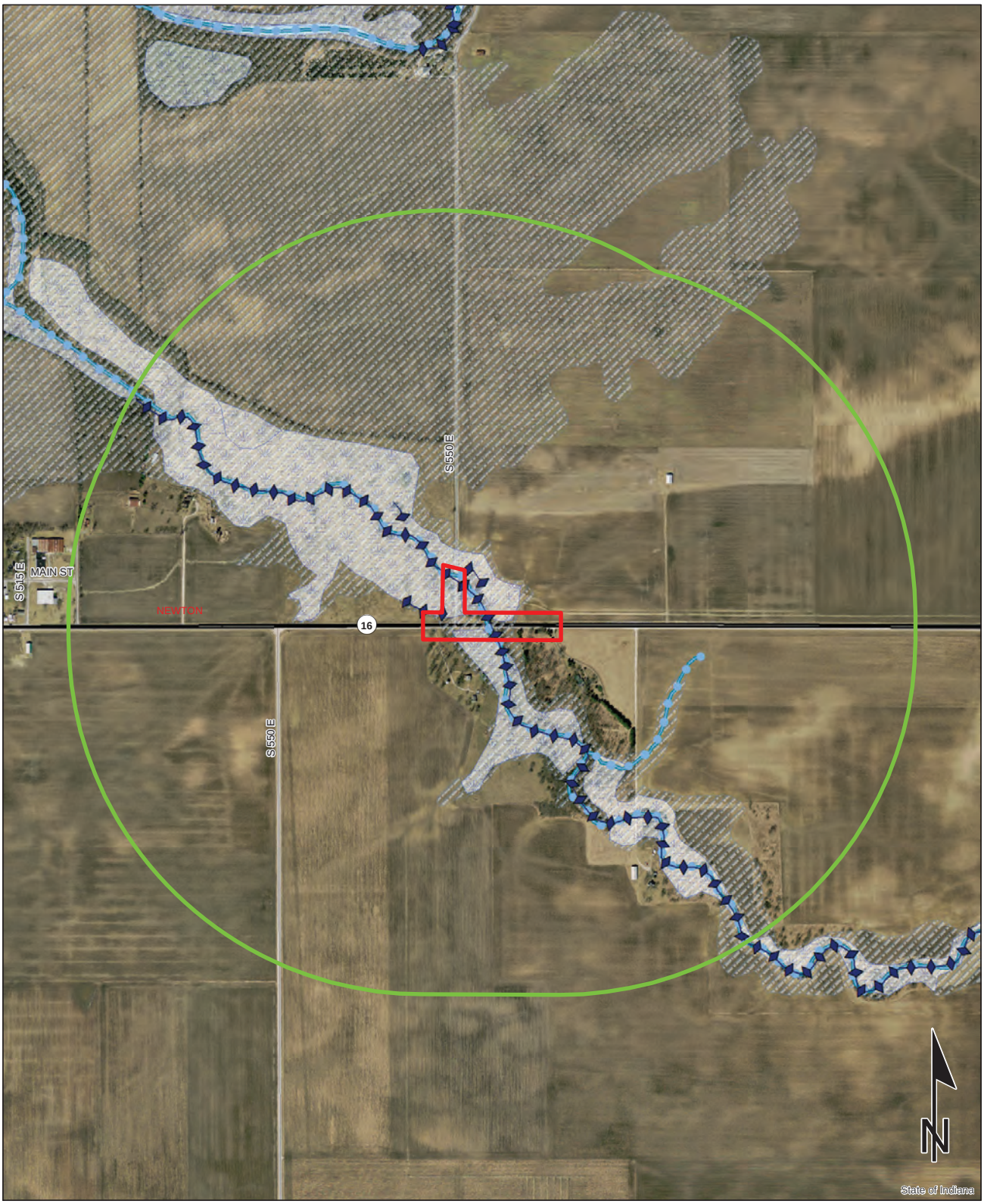
0.5 0.25 0 0.5 Miles

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.

GOODLAND QUADRANGLE
INDIANA
7.5 MINUTE SERIES
(TOPOGRAPHIC)

Red Flag Investigation - Water Resources
State Road 16 over Mosquito Creek
Des. No. 1700077, Bridge Replacement
Newton County, Indiana



0.15 0.075 0 0.15 Miles

Sources:
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Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
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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

Indiana County Endangered, Threatened and Rare Species List

County: Newton

Species Name	Common Name	FED	STATE	GRANK	SRANK
Mollusk: Bivalvia (Mussels)					
Plethobasus cyphyus	Sheepnose	LE	SE	G3	S1
Insect: Homoptera					
Lepyronia gibbosa	Hill-prairie Spittlebug		SE	G3G4	S1
Mesamia stramineus	Helianthus Leafhopper		SE	GNR	S1
Prairiana kansana	The Kansas Prairie Leafhopper		SE	GNR	S1S2
Insect: Hymenoptera					
Bombus affinis	Rusty-patched Bumble Bee	LE	SE	G1	S1
Insect: Lepidoptera (Butterflies & Moths)					
Atrytonopsis hianna	Dusted Skipper		SR	G4G5	S2S3
Boloria selene myrina	Silver-bordered Fritillary		SR	G5T5	S2S3
Boloria selene nebraskensis	The Nebraska Silver Bordered Fritillary		SE	G5T3T4	S2S3
Capis curvata	Curved Halter Moth		ST	G5	S2S3
Catocala amestris	The Leadplant Underwing Moth		SE	G4	S1
Cochylis ringsi	Rings' Cochylid Moth		SE	G3G4	S1
Dargida rubripennis	The Pink Streak		ST	G3G4	S1
Erynnis martialis	Mottled Duskywing		WL	G3	S3
Euchloe olympia	Olympia Marble		SR	G5	S2S3
Euphyes bimacula	Two-spotted Skipper		ST	G4	S1S2
Hadena ectypa	The Starry Campion Moth		ST	G3G4	S1S3
Hesperia metea	Cobweb Skipper		SR	G4	S2S3
Hesperia sassacus	Indian Skipper		SR	G5	S2S3
Macrochilo absorptalis	Slant-lined Owlet		SR	G4G5	S2S3
Macrochilo hypocritalis	Twin-dotted Macrochilo		SR	G4	S2
Macrochilo louisiana	Louisiana Macrochilo		ST	G4	S1S2
Pagara simplex	Mouse-colored Lichen Moth		SR	G5	S2S3
Papaipema beeriana	Beer's Blazing Star Borer Moth		ST	G2G3	S1S3
Papaipema speciosissima	The Royal Fern Borer Moth		ST	G4	S2S3
Poanes viator viator	Big Broad-winged Skipper		ST	G5T4	S2
Ponometia binocula	Prairie Tarachidia			GNR	S1S2
Problema byssus	Bunchgrass Skipper		ST	G3G4	S1S2
Schinia sanguinea	Bleeding Flower Moth			G4	S2S3
Speyeria idalia	Regal Fritillary	C	SE	G3	S1S2
Fish					
Ichthyomyzon fossor	Northern Brook Lamprey		SE	G4	S1
Amphibian					
Acris blanchardi	Blanchard's Cricket Frog		SSC	G5	S4
Lithobates blairi	Plains Leopard Frog		SE	G5	S1
Necturus maculosus	Common mudpuppy		SSC	G5	S2

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Indiana Department of Natural Resources
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Indiana County Endangered, Threatened and Rare Species List

County: Newton

Species Name	Common Name	FED	STATE	GRANK	SRANK
Reptile					
Emydoidea blandingii	Blanding's Turtle	C	SE	G4	S2
Kinosternon subrubrum subrubrum	Eastern Mud Turtle		SE	G5T5	S2
Opheodrys vernalis	Smooth Green Snake		SE	G5	S2
Terrapene ornata ornata	Ornate Box Turtle		SE	G5T5	S1
Thamnophis proximus proximus	Western Ribbon Snake		SSC	G5T5	S3
Bird					
Ammodramus henslowii	Henslow's Sparrow		SE	G4	S3B
Anas clypeata	Northern Shoveler			G5	SHB
Ardea alba	Great Egret		SSC	G5	S1B
Asio otus	Long-eared Owl			G5	S2
Bartramia longicauda	Upland Sandpiper		SE	G5	S3B
Botaurus lentiginosus	American Bittern		SE	G5	S2B
Certhia americana	Brown Creeper			G5	S2B
Chlidonias niger	Black Tern		SE	G4G5	S1B
Circus hudsonius	Northern Harrier		SE	G5	S2
Cistothorus palustris	Marsh Wren		SE	G5	S3B
Cistothorus platensis	Sedge Wren		SE	G5	S3B
Grus canadensis	Sandhill Crane		SSC	G5	S2B,S1N
Haliaeetus leucocephalus	Bald Eagle		SSC	G5	S2
Ixobrychus exilis	Least Bittern		SE	G5	S3B
Lanius ludovicianus	Loggerhead Shrike		SE	G4	S3B
Laterallus jamaicensis	Black Rail		SE	G3G4	SHB
Mniotilta varia	Black-and-white Warbler		SSC	G5	S1S2B
Nycticorax nycticorax	Black-crowned Night-heron		SE	G5	S1B
Pandion haliaetus	Osprey		SSC	G5	S1B
Phalaropus tricolor	Wilson's Phalarope		SSC	G5	SHB
Rallus elegans	King Rail		SE	G4	S1B
Rallus limicola	Virginia Rail		SE	G5	S3B
Setophaga cerulea	Cerulean Warbler		SE	G4	S3B
Sturnella neglecta	Western Meadowlark		SSC	G5	S2B
Vermivora chrysoptera	Golden-winged Warbler	C	SE	G4	S1B
Wilsonia canadensis	Canada Warbler			G5	S2B
Xanthocephalus xanthocephalus	Yellow-headed Blackbird		SE	G5	S1B
Mammal					
Geomys bursarius	Plains Pocket Gopher		SSC	G5	S2
Mustela nivalis	Least Weasel		SSC	G5	S2?
Myotis septentrionalis	Northern Long Eared Bat	LT	SE	G1G2	S2S3
Myotis sodalis	Indiana Bat	LE	SE	G2	S1
Perimyotis subflavus	Tricolored Bat		SE	G2G3	S2S3

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Indiana County Endangered, Threatened and Rare Species List

County: Newton

Species Name	Common Name	FED	STATE	GRANK	SRANK
Reithrodontomys megalotis	Western Harvest Mouse			G5	S2
Spermophilus franklinii	Franklin's Ground Squirrel		SE	G5	S2
Taxidea taxus	American Badger		SSC	G5	S2
Vascular Plant					
Androsace occidentalis	Western Rockjasmine		ST	G5	S2
Aristida intermedia	Slim-spike Three-awn Grass		WL	GNR	S3
Aristida tuberculosa	Seabeach Needlegrass		SR	G5	S3
Azolla caroliniana	Carolina Mosquito-fern		SR	G5	S3
Baptisia bracteata var. leucophaea	Cream Wild-indigo		WL	G4G5T4T5	S3
Carex aurea	Golden-fruited Sedge		SR	G5	S3
Carex crawei	Crawe Sedge		ST	G5	S2
Carex cumulata	Clustered Sedge		SE	G4G5	S1
Carex garberi	Elk Sedge		SE	G5	S1
Carex straminea	Straw Sedge		ST	G5	S2
Cirsium hillii	Hill's Thistle		SE	G3	S1
Comptonia peregrina	Sweet Fern		WL	G5	S3
Corydalis sempervirens	Pale Corydalis		SE	G5	S1
Cyperus houghtonii	Houghton's Nutsedge		SE	G4?	S2
Dichanthelium leibergii	Leiberg's Witchgrass		ST	G4	S2
Echinodorus parvulus	Little Bur-head		SX	G3Q	SX
Gentiana puberulenta	Downy Gentian		SE	G4G5	S1
Hymenopappus scabiosaeus	Carolina Woollywhite		SE	G4G5	S1
Hypericum gymnanthum	Clasping-leaved St. John's-wort		SE	G4	S1
Lactuca ludoviciana	Western Lettuce		SX	G4G5	SX
Liatris pycnostachya	Cattail Gay-feather		SE	G5	S1
Liparis loeselii	Loesel's Twayblade		WL	G5	S3
Lipocarpha drummondii	Drummond Hemicarpha		SE	G4G5	S1
Ludwigia sphaerocarpa	Globe-fruited False-loosestrife		SE	G5	S1
Lycopus amplectens	Sessile-leaved Bugleweed		SE	G5	S1
Mikania scandens	Climbing Hempweed		SE	G5	S1
Panicum verrucosum	Warty Panic-grass		ST	G4	S2
Penstemon tubaeflorus	Tube Penstemon		SE	G5	S1
Perideridia americana	Eastern Eulophus		SE	G4	S1
Persicaria careyi	Carey's Smartweed		ST	G4	S2
Persicaria opelousana	Northeastern Smartweed		ST	G5TNRQ	S2
Phemeranthus rugospermus	Prairie Fame-flower		SE	G3G4	S1
Platanthera ciliaris	Yellow-fringe Orchis		SE	G5	S1
Poa wolfii	Wolf Bluegrass		SR	G4	S3
Polygonella articulata	Eastern Jointweed		SR	G5	S3
Prenanthes aspera	Rough Rattlesnake-root		SR	G4?	S3

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Indiana County Endangered, Threatened and Rare Species List

County: Newton

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Rorippa aquatica	Lake Cress		SE	G4?	S1
Rubus setosus	Small Bristleberry		SE	G5	S1
Scleria muehlenbergii	Muehlenberg's Nutrush		SE	G5	S1
Scleria reticularis	Reticulated Nutrush		ST	G4	S2
Spiranthes magnicamporum	Great Plains Ladies'-tresses		SE	G3G4	S1
Stenanthium gramineum	Eastern Featherbells		ST	G4G5	S1
Styrax americanus	American Snowbell		SR	G5	S3
Symphyotrichum sericeum	Western Silvery Aster		ST	G5	S2
Viola pedatifida	Prairie Violet		ST	G5	S2
Viola primulifolia	Primrose-leaf Violet		SR	G5	S3
High Quality Natural Community					
Forest - flatwoods sand	Sand Flatwoods		SG	G2?	S1
Prairie - dry-mesic	Dry-mesic Prairie		SG	G3	S2
Prairie - mesic	Mesic Prairie		SG	G2	S2
Prairie - sand dry	Dry Sand Prairie		SG	G3	S2
Prairie - sand dry-mesic	Dry-mesic Sand Prairie		SG	G3	S3
Prairie - sand mesic	Mesic Sand Prairie		SG	GNR	SNR
Prairie - sand wet	Wet Sand Prairie		SG	G3	S3
Prairie - sand wet-mesic	Wet-mesic Sand Prairie		SG	G1?	S2
Savanna - sand dry	Dry Sand Savanna		SG	G2?	S2
Savanna - sand dry-mesic	Dry-mesic Sand Savanna		SG	G2?	S2S3
Wetland - meadow sedge	Sedge Meadow		SG	G3?	S1

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Categorical Exclusion

Appendix F

Water Resources

Waters of the U.S. Determination Report
State Road 16 over Mosquito Creek Bridge Replacement
1.31 mi. E of SR 55
Newton County, Indiana
Des. No. 1700077

November 20, 2018

Prepared By:

LOCHMUELLER GROUP

3502 Woodview Trace, Suite 150
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Prepared For:

INDOT – LaPorte District
5925 Lakeside Blvd.
Indianapolis, Indiana 46278

Waters of the U.S. Determination Report
State Road 16 over Mosquito Creek – Bridge Replacement
1.31 mi. E of SR 55
Newton County, Indiana
Des. No. 1700077

Table of Contents

Tables

Attachments

Waters of the U.S. Determination Report
State Road 16 over Mosquito Creek – Bridge Replacement
1.31 mi. E of SR 55
Newton County, Indiana
Des. No. 1700077

Date of Waters Investigation
October 12, 2018

Location
The project is located in southeastern Newton County, 1.31 miles east of State Road (SR) 55 in Newton County, Indiana (Attachment A1).

- Newton County, Iroquois Creek Township, Indiana
- Sections 13 & 24, Township 28 North, Range 8 West
- Goodland 1:24,000 United States Geological Survey (USGS) Quadrangle (Attachment A2 and A3)

Project Description
The Indiana Department of Transportation – LaPorte District proposes to proceed with a bridge replacement project in southeastern Newton County, Indiana. The proposed project will involve the replacement of the existing structure (# 016-56-01238 A) that carries State Road (SR) 16 over Mosquito Creek, 1.31 miles east of SR 55. The proposed project will remove the existing structure and replace it with a new structure. In addition to the new structure, scour protection is anticipated to be installed. The maintenance of traffic will require a full closure of SR 16 and utilization of a detour.

National Wetlands Inventory (NWI)
Based on the U.S. Fish and Wildlife National Wetlands Inventory (NWI) data (www.fws.gov/wetlands/Data/State-Downloads.html) there seven wetland polygons mapped within the project area (Attachment A6). There are four palustrine, emergent, persistent, temporary flooded (PEM1A) wetlands; one palustrine, forested, broad-leaved deciduous/emergent, persistent, seasonally flooded, partially drained/ditched (PFO1/EM1Cd) wetland; one palustrine, broad-leaved deciduous, temporary flooded (PFO1A) wetland; and one riverine, lower perennial, unconsolidated bottom, semi-permanently flooded, excavated (R2UbFx) wetland representing Mosquito Creek. In addition to these within the project area there are also four additional wetlands within a half-mile radius and they are listed below:

- One palustrine, broad-leaved deciduous, seasonally flooded (PFO1C) wetland
- Three palustrine, emergent, persistent, temporary flooded, partially drained/ditched (PEM1Ad) wetlands

Streams
HYDROGRAPHY_HIGHRES_FLOWLINE_NHD_USGS: Streams, Rivers, Canals, Ditches, Artificial Paths, Coastlines, Connectors, and Pipelines in Watersheds of Indiana (U. S. Geological Survey, 1:24,000, Line Shapefile) and the Goodland 1:24,000 scale USGS topographic map indicate that Mosquito Creek is a perennial blueline stream feature within the project area (Attachments A2 and A3).

Soils

The Soil Survey Geographic (SSURGO) database for Newton County includes the following mapped soil series within the SR 16 over Mosquito Creek Bridge Replacement Project (Attachments A8-A12).

- **Sawabash silty clay loam (Sd):** This very deep, nearly level, very poorly drained soil is in broad depressional areas and in old stream channels on bottom lands. It is frequently flooded for long periods and is also frequently ponded for long periods by runoff from adjacent soils. Sawabash silty clay loam is considered hydric with a hydric rating of 100.
- **Simonin loamy sand (SmB):** This is a very deep, nearly level, moderately well drained soil is on slightly convex rises. The slopes are 1 to 3 percent. Simonin loamy sand is not considered hydric and has a hydric rating of 6.
- **Strole silty clay loam (SwA):** This very deep, nearly level, somewhat poorly drained soil is on slightly convex rises. The slopes are 0 to 1 percent. Strole silty clay loam is not considered hydric and has a hydric rating of 6.
- **Swygert variant-Simonin complex (SzB2):** This map unit consists of very deep, moderately well drained soils on convex ridges or knolls. The Swygert variant soil is typically on summits and the upper side slopes. The Simonin soil is typically on the lower lying side slopes and foot slopes on the leeward side of the mapped areas. The slopes are 2 to 6 percent and the soil unit is considered eroded. Swygert variant-Simonin complex is not considered hydric and has a hydric rating of 3.
- **Swygert variant-Simonin complex (SzC2):** This map unit consists of very deep, moderately sloping or strongly sloping, moderately well drained soils on convex ridges or knolls. The Swygert variant soil is typically on summits or the upper side slopes. The Simonin soil is typically on the lower lying side slopes and foot slopes on the leeward side of the mapped areas. The slopes are 6 to 15 percent and the soil unit is considered eroded. Swygert variant-Simonin complex is not considered hydric and has a hydric rating of 3.

Hydrology

According to the Indiana Floodplain Information Portal, the project is within the 100-year floodplain (http://dnrmaps.dnr.in.gov/appsphp/fdms/) of Mosquito Creek. The base floodplain elevation (BFE) is 648.8 feet. According to the USGS StreamStats Website (https://water.usgs.gov/osw/streamstats/indiana.html) unnamed tributary (UNT) 1 to UNT 3 are included in the Mosquito Creek drainage area with an upstream drainage area of 23.77 square miles. The entirety of the project lies within the Curtis Creek-Iroquois River 12 digit hydrologic unit code (HUC) (071200020405). The FEMA FIRMETTE can be found in the Attachments on page A5.

Field Reconnaissance

Lochmueller Group conducted a field review for streams and wetlands within the project area for the SR 16 over Mosquito Creek Bridge Replacement Project on October 12, 2018. Three UNTs to Mosquito Creek, Mosquito Creek, and three wetlands were identified within the project area. Identified features from the field reconnaissance can be seen in photos in the Attachments, pages A14 to A41. No roadside ditches exhibiting features of ordinary high water mark (OHWM) were observed during the field investigation.

Wetland Analysis

The October 2018 field investigation for the SR 16 over Mosquito Creek Bridge Replacement Project resulted in the evaluation of three jurisdictional wetlands within the project area. Two additional data points were taken within and adjacent to a mapped NWI wetland along the bank of Mosquito Creek. Both data points did not meet all three wetland criteria and are discussed in further detail below.

Wetland 1

Wetland 1 is a palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland according to the classifications defined by Cowardin *et. al.* (1979). Wetland 1 is 0.14 acre in size, is located adjacent to the roadside embankment for Iroquois River Road, and extends into the adjacent pasture within the floodplain for Mosquito Creek. The wetland is bounded by a topographic rise to the west and extends north towards the banks of Mosquito Creek, where there is a topographic break. The wetland has likely formed due to frequent flooding from Mosquito Creek and disturbance due to hoof shear. Based on a qualitative analysis of Wetland 1, this wetland is of poor quality due to minimal vegetation and disturbed nature. Wetland 1 would be considered a jurisdictional resource due to its position within the floodplain for Mosquito Creek.

Data Point 1

This data point was taken at the base of the roadway embankment for Iroquois River Road, adjacent to the fence for the pasture. The area was relatively homogeneous with little variation in topography and vegetative cover and therefore can be considered to be representative of the entirety of Wetland 1. There was 50 percent bare ground with dominant vegetation being reed canary grass (*Phalaris arundinacea*, FACW) and butterweed (*Packera glabella*, FACW). This data point passed the rapid test for hydrophytic vegetation, one hundred percent of the dominant species within this data point were FAC or wetter, and the prevalence index was less than 3. Therefore, the hydrophytic vegetation criteria was met. A soil pit excavated to a depth of 19 inches consisted of 0 to 4 inches loamy/clayey soils with a matrix of 2.5Y 2.5/1 (56%), 2.5Y 4/1 (40%), and 4% 7.5YR 5/6 concentrations located on the matrix and pore linings. From 4 to 19 inches it was loamy/clayey with a matrix of 2.5Y 2.5/1 (100%). This data point met the Redox Dark Surface (F6) hydric soil indicator. Hydrology indicators included Inundation Visible on Aerial (B7) as seen on the 2016 NAIP aerial for Newton County, Surface Soil Cracks (B6), Geomorphic Position (D2), and FAC-Neutral (D5). There was saturation present at 15 inches with the water table present at 18 inches. This data point met all three wetland criteria and therefore can be considered to be within a wetland. The data form for this point is included in the Attachments, A39 to A40.

Data Point 2

This data point was taken at the base of the roadway embankment for Iroquois River Road, upslope from and outside the boundary for Wetland 1. Dominant vegetation included osage orange (*Maclura pomifera,* FACU), yellow foxtail (*Sertaria pumila*, FAC), Carolina horsenettle (*Solanum carolinense*, FACU), roughfruit amaranth (*Amaranthus tuberculatus*, OBL), butterweed (*Packera glabella*, FACW), and three-seeded mercury (*Acalypha rhomboidea*, FACU). This data point did not meet any of the hydrophytic vegetation indicators. A soil pit excavated to a depth of 20 inches consisted of 0 to 5 inches loamy/clayey soils with a matrix of 10YR 3/1 (100%) and from 5 to 20 inches loamy/clayey soils with a matrix of 2.5Y 3/1 (70%) and 10YR 5/2 (30%). This data point did not meet any hydric soil indicators. Only one secondary indicator of wetland hydrology, Geomorphic Position (D2), was seen. Data point 2 failed to meet any of the three

wetland criteria and therefore can be considered to be in an upland area. Due to its proximity between Wetland 1 and Wetland 2, this data point serves as the upland data point for both wetlands. The data form for this point can be found in the Attachments, on pages A42 to A43.

Wetland 2

Wetland 2 is a palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland according to the classifications defined by Cowardin *et. al.* (1979). Wetland 2 is 0.25 acre in size and is located within the right-of-way at the intersection of SR 16 and Iroquois River Road. Wetland 2 extends from the right-of-way north and west into the adjacent pasture. The wetland is bounded by a topographic rise to the southwest and north. The wetland has likely formed due to frequent flooding from Mosquito Creek and disturbance due to hoof shear. UNT 1 discharges into this wetland on the southwest side. Based on a qualitative analysis of Wetland 2, this wetland is of poor quality due to minimal vegetation and disturbed nature. Wetland 2 would be considered a jurisdictional feature due to its location within the floodplain for Mosquito Creek.

Data Point 3

This data point was taken at the base of the roadside embankment at the intersection of SR 16 and Iroquois River Road, where the topography levels out and extends into the adjacent pasture. This data point was dominated by reed canary grass (*Phalaris arundinacea*, FACW) which passes the rapid test for hydrophytic vegetation and the dominance test. The prevalence index was less than 3 for the site. This data point meets the criterion for hydrophytic vegetation. A soil pit excavated to a depth of 18 inches had loamy/clayey soils with a matrix of 2.5Y 2.5/1 (93%) and concentrations of 5YR 4/6 (7%) on the matrix and pore linings. Two secondary indicators of wetland hydrology, Geomorphic Position (D2) and FAC-Neutral (D5), were observed. This data point met all three wetland criteria and therefore is considered to be within a wetland. The data form for this point can be found in the Attachments, on pages A45 to A46.

Wetland 3

Wetland 3 is a palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland according to the classifications defined by Cowardin *et. al.* (1979). Wetland 3 is 0.02 acre in size and is located within the right-of-way on the north side of SR 16. Wetland 3 is completely confined to the roadside ditch for SR 16. It is likely to be considered a jurisdictional feature due to its connectivity to UNT 3, which outlets into Mosquito Creek which flows into the Iroquois River, a traditionally navigable waterway (TNW). Based on a qualitative analysis of Wetland 3, this wetland is of poor quality due to invasive species, minimal vegetation, and disturbed nature.

Data Point 6

This data point was taken within the roadside ditch on the north side of SR 16, west of a stand of cattails. The dominant vegetation was reed canary grass (*Phalaris arundinacea*, FACW). Vegetation at this data point passes the rapid test for hydrophytic vegetation, the dominance test, and the prevalence index was less than 3 for the site. This data point meets the criterion for hydrophytic vegetation. A soil pit was excavated to a depth of 14 inches with loamy/clayey soils. From 0 to 4.5 inches, the matrix was 10YR 4/1 (98%) with concentrations of 10YR 4/6 (3%) on the matrix. From 4.5 to 10 inches, the matrix consisted of 10YR 6/1 (97%) with concentrations of 10YR 4/6 (3%). From 10 to 14 inches, the matrix consisted of 10YR 5/8 (60%) and 2.5Y 6/1 (40%). Soils at this data point met the Depleted Matrix (F3) indicator. Excavation

was only able to occur to 14 inches due to saturation and surface water filling the soil pit. Two primary and two secondary indicators of wetland hydrology were present at the data point. Saturation (A3) occurred starting at the surface (0 inches) and there was 2 inches of standing surface water (A1). The data point met Geomorphic Position (D2) and passed the FAC-Neutral Test (D5). This data point met all three wetland criteria and therefore is considered to be within a wetland. The data form for this point can be found in the Attachments, on pages A54 to A55.

Data Point 7:

This data point was taken to the outside of the right-of-way, on top of a terrace, next to the adjacent agricultural field. This data point was elevated above the roadway embankment in between the edge of the terrace and the soybeans in a maintained area. The dominant species was Kentucky bluegrass (*Poa pratensis*, FAC). This data point passed the dominance test and therefore meets hydrophytic vegetation. A soil pit excavated to a depth of 17 inches consisted of loamy/clayey soil with a matrix of: 0 to 8 inches 10YR 3/1 (100%) and 8 to 17 inches 10YR 5/1 (95%) with 10YR 5/6 (5%) concentrations on the matrix and pore linings. Soils at this data point met Depleted Below Dark Surface (A11) and Depleted Matrix (F3) hydric soil indicators. There were no primary or secondary indicators of hydrology present. This data point failed to meet all three wetland criteria and can be considered to be an upland area. The data form for this point can be found in the Attachments, on pages A57 to A58.

Table 1: Wetland Summary

Wetland	Photos	Lat/Long	Type	Total Area (Acres)	Quality	Water of the U.S.?
Wetland 1	4, 5	40.86662° -87.2825°	PEM1A	0.14	Poor	Yes
Wetland 2	8, 9, 10, 50	40.8660° -87.2826°	PEM1A	0.25	Poor	Yes
Wetland 3	40, 41, 42, 43, 44,	40.8660° -87.2797°	PEM1A	0.02	Poor	Yes

Negative Data Points: Two data points were taken in the northwest quadrant of the structure to be replaced. They were taken to capture a potential wetland within a mapped NWI wetland area. Both failed to meet all three wetland criterion.

Data Point 4

Data point 4 was taken adjacent to the mapped NWI wetland, south of a topographic break point, on the edge of the change point between maintained right-of-way and the forested area. This data point is within the floodplain for Mosquito Creek. The dominant vegetation was yellow foxtail (*Sertaria pumila*, FAC) and a *Poa* species. This data point did not meet hydrophytic vegetation. A soil pit excavated to a depth of 18 inches consisted of: 0 to 8 inches sandy soils with a matrix of 10YR 2/1 (100%), 8 to 13 inches loamy/clayey soils with a matrix of 10YR 2/1 (90%) and concentrations of 10YR 5/8 (10%) located on the matrix and pore linings, and 13 to 18 inches loamy/clayey soils with a matrix of 10YR 2/1 (97%) and concentrations of 10YR 5/8 (3%) located on the matrix. This data point met the Redox Dark Surface (F6) hydric soil indicator. There were no primary or secondary indicators of wetland hydrology present.

This data point failed to meet all three wetland criteria and therefore can be considered upland. The data form for this point can be found in the Attachments, on pages A48 to A49.

Data Point 5

This data point was taken within the mapped NWI wetland along the banks of Mosquito Creek in the northwest quadrant of the bridge to be replaced. It was taken in a topographic low spot that extends from the roadway embankment for Iroquois River Road to the structure carrying SR 16 over Mosquito Creek. There is a topographic rise to the south side, along the tree line. This data point is within the floodplain for Mosquito Creek. The dominant species present include silver maple (*Acer saccharinum*, FACW) and reed canary grass (*Phalaris arundinacea*, FACW). This data point passed the rapid test for hydrophytic vegetation and the dominance test. A soil pit was excavated to a depth of 19 inches and consisted of loamy/clayey soils from 0 to 19 inches with a matrix of 2.5Y 2.5/1 (100%). There were no hydric soil indicators present. Two secondary hydrology indicators, Geomorphic Position (D2) and FAC-Neutral Test (D5), were present. This data point failed to meet all three wetland criteria and therefore can be considered upland. The data form for this point can be found in the Attachments, on pages A51 to A52.

Table 2: Wetland Data Point Summary

Data Point	Hydrophytic vegetation?	Hydric Soils?	Hydrology Indicators?
DP1	Yes	Yes	Yes
DP2	No	No	No
DP3	Yes	Yes	Yes
DP4	No	Yes	No
DP5	Yes	No	Yes
DP6	Yes	Yes	Yes
DP7	Yes	Yes	No

Stream Analysis

The October 2018 field investigation for the SR 16 over Mosquito Creek Bridge Replacement Project resulted in the evaluation of four jurisdictional streams.

UNT 1

UNT 1 is a roadside stream feature that flows from west to east on the north side of SR 16 within the project area. UNT 1 flows along the roadside and discharges into Wetland 2 at the fence line for the adjacent pasture. Approximately 164 feet of this feature was evaluated as part of this field investigation. This feature appears to be an incidental feature, conveying drainage from the upstream vegetated road side and the surrounding area. UNT 1 was 100 percent open with the surrounding vegetation being dominated by grass (*Poa sp.)*. UNT 1 is an ephemeral feature characterized by a narrow and shallow channel with intermittent occurrences of vegetation within the channel. UNT 1 has a hardpan/clay substrate with no riffle or pools present. The OHWM was 1’ 1” wide by 2.5” deep at the time of the field investigation. This resource is a very poor quality, ephemeral resource based on the substrate and flow regime. UNT 1 would likely be considered jurisdictional due to its connectivity to Wetland 2, which lies

within the floodplain of Mosquito Creek, which is a jurisdictional resource due to its connectivity to Iroquois River (a TNW).

UNT 2

UNT 2 is a roadside stream feature that flows from east to west along the south side of SR 16 within the project area. UNT 1 flows along the roadside, turns into the adjacent pasture, and discharges into Mosquito Creek. Approximately 437 feet of this feature was evaluated as part of this field investigation. UNT 2 appears to be an incidental feature, conveying drainage from the upstream vegetated road side and surrounding residential and agricultural areas. This feature was 100 percent open with the surrounding vegetation being dominated by grass (*Poa sp.)*. UNT 2 is an ephemeral feature characterized by a narrow and shallow channel. UNT 2 has a hardpan/clay substrate with no pools or riffles present. The OHWM was 1' 5" wide by 2" deep at the time of the field investigation. This resource is a very poor quality, ephemeral resource based on the substrate and flow regime. UNT 2 would likely be considered jurisdictional due to its connectivity to Mosquito Creek, which is a jurisdictional resource due to its connectivity to Iroquois River (a TNW).

UNT 3

UNT 3 is a roadside stream feature that flows east to west along the north side of SR 16 within the project area. UNT 3 begins at the end of Wetland 3, where the topography of the roadside begins to increase in slope towards Mosquito Creek. Approximately 227 feet of this feature was evaluated as part of this field investigation. UNT 3 was 100 percent open with the surrounding vegetation being dominated by grass (*Poa sp.)*. UNT 3 appears to be an incidental roadside feature within a constructed ditch, conveying drainage from the surrounding roadside, upstream wetland, and adjacent agricultural areas. UNT 3 is an ephemeral feature characterized by a narrow, dry channel that has intermittent occurrences of vegetation. UNT 3 has a hardpan/clay substrate with no pools or riffles. The OHWM was 1' 9" wide by 6" deep at the time of the field investigation. This resource is a very poor quality, ephemeral resource based on the flow regime and substrate. UNT 3 would likely be considered jurisdictional due to its connectivity to Mosquito Creek, which is a jurisdictional resource due to its connectivity to Iroquois River (a TNW).

Mosquito Creek

Mosquito Creek is a perennial stream feature that flows from southeast to northwest within the project area. Approximately 806 feet of this feature was evaluated as part of this field investigation. Mosquito Creek appears to be a natural feature, conveying drainage from upstream and from the surrounding pastures. In addition, during the field investigation, two field tile outlets were overserved discharging into the stream downstream from the structure to be replaced. Mosquito Creek has a wide, shallow channel with moderately sloped banks that are mostly vegetated. The channel was 100 percent open around the areas of investigation. There was minimal instream vegetation present. The banks upstream of the structure to be replaced showed evidence of hoof shear where cattle in the adjacent pasture cross the stream. An OHWM measurement was taken upstream and downstream of the structure to be replaced. The widest OHWM was downstream, 16' 6" wide by 8" deep with a max pool depth of 13". The downstream reach has a sand, gravel, boulder, and cobble substrate with pools and riffles. This resource is a fair quality, perennial resource based on the flow regime and the presence of pools and riffles. Mosquito Creek would be considered a jurisdictional resource due to its connectivity to the Iroquois River, a traditionally navigable waterway (TNW) in Newton County.

Table 3: Stream Summary

Stream	Photos	Lat/Long	OHWM	USGS Blueline?	Substrate	Quality	Water of the U.S.?
UNT 1	11, 12, 13, 14	40.8660° -87.2830°	1' 1" x 2.5"	No	Hardpan / Clay	Poor	Yes
UNT 2	31, 32, 33, 34, 35, 36, 39	40.8659° -87.2810°	1' 5" x 2"	No	Hardpan / Clay	Poor	Yes
UNT 3	44, 45, 46, 47, 48, 49	40.8660° -87.2813°	1' 9" x 6"	No	Hardpan / Clay	Poor	Yes
Mosquito Creek	1, 2, 21, 22, 25, 26, 27, 28	40.8660° -87.2814°	16' 6" x 8"	Yes	Cobble, Gravel, Sand, Boulders	Fair	Yes

Conclusions

The October 2018 field review for the SR 16 over Mosquito Creek Bridge Replacement Project identified four stream features, UNT 1 to UNT 3 and Mosquito Creek, within the project area. All identified stream features would be considered jurisdictional features due to their connectivity to the Iroquois River, a TNW in Newton County. Three wetland features were identified within the project area. Wetlands 1 and 2 would likely be considered jurisdictional due to their presence within the floodplain for Mosquito Creek. Wetland 3 is completely confined to the roadside ditch but would likely be considered jurisdictional due to its connectivity to UNT 3, which is likely considered a jurisdictional feature.

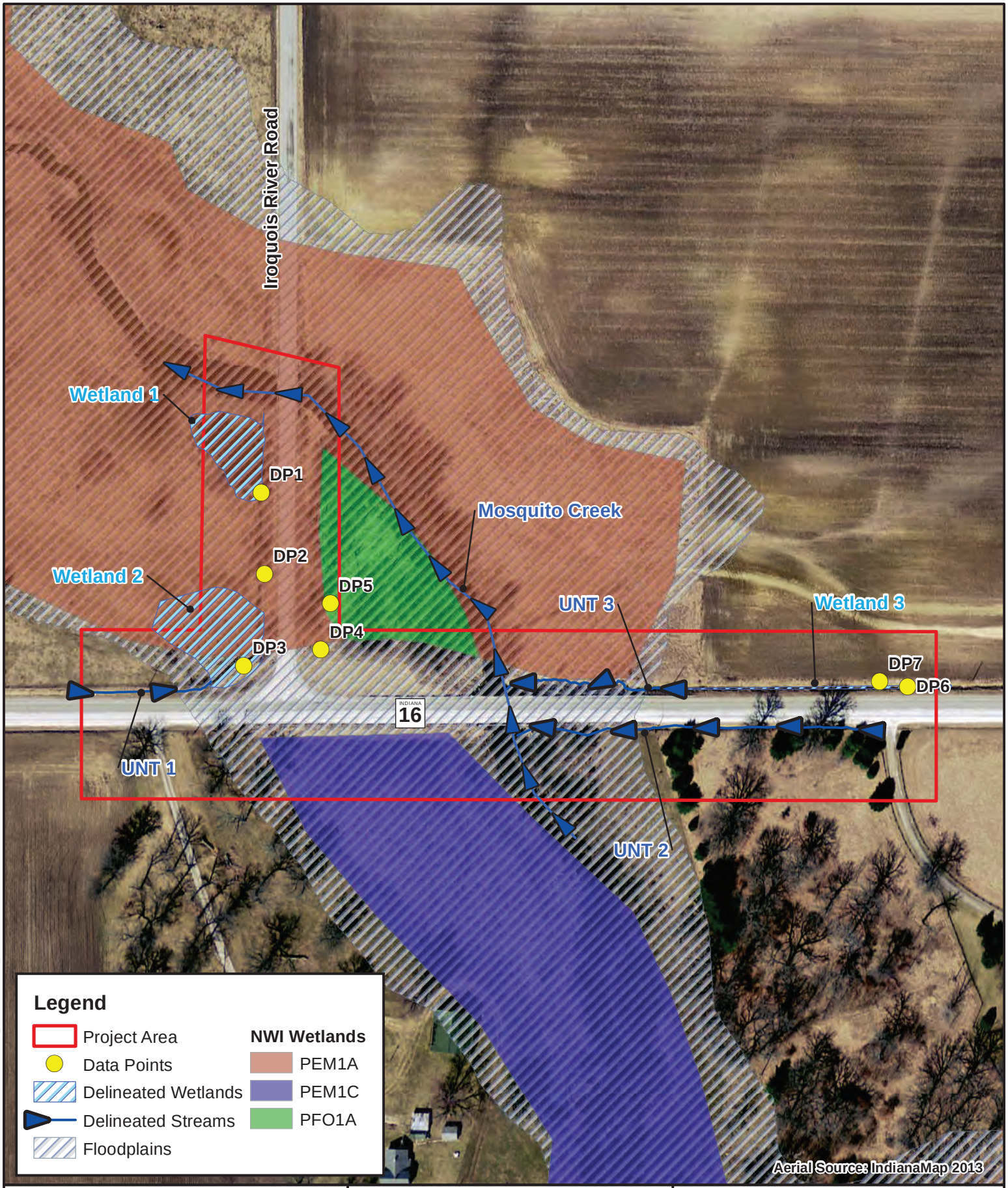
Every effort should be taken to avoid and minimize the impacts to the water resources listed above. Disturbance of a wetland or stream could result in a mitigation requirement to secure the required permits for the bridge replacement project. If construction exceeds the limits of the survey review area illustrated in this document, further field investigation will be needed. This report is this office's best judgment of water resources that are likely to be under federal jurisdiction, based on the guidelines set forth by the USACE. The final determination of jurisdictional waters is ultimately the responsibility of the USACE.

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.

Preparers

Lochmueller Group, Inc. Staff	Position	Contributing Effort
Ruth Hook, CPESC, CESSWI	Environmental Biologist	Field Data Collection Report Preparation
Chris Kunkel	Environmental Biologist	Field Data Collection

ATTACHMENTS



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Water Resources Map

Des. No. 1700077
Waters of the U.S. Report

0 75 150 Feet

N

County: Newton
Township: Iroquois
State: Indiana

State Road 16 over Mosquito Creek
Bridge Replacement
Created:11/13/2018, R. Hook

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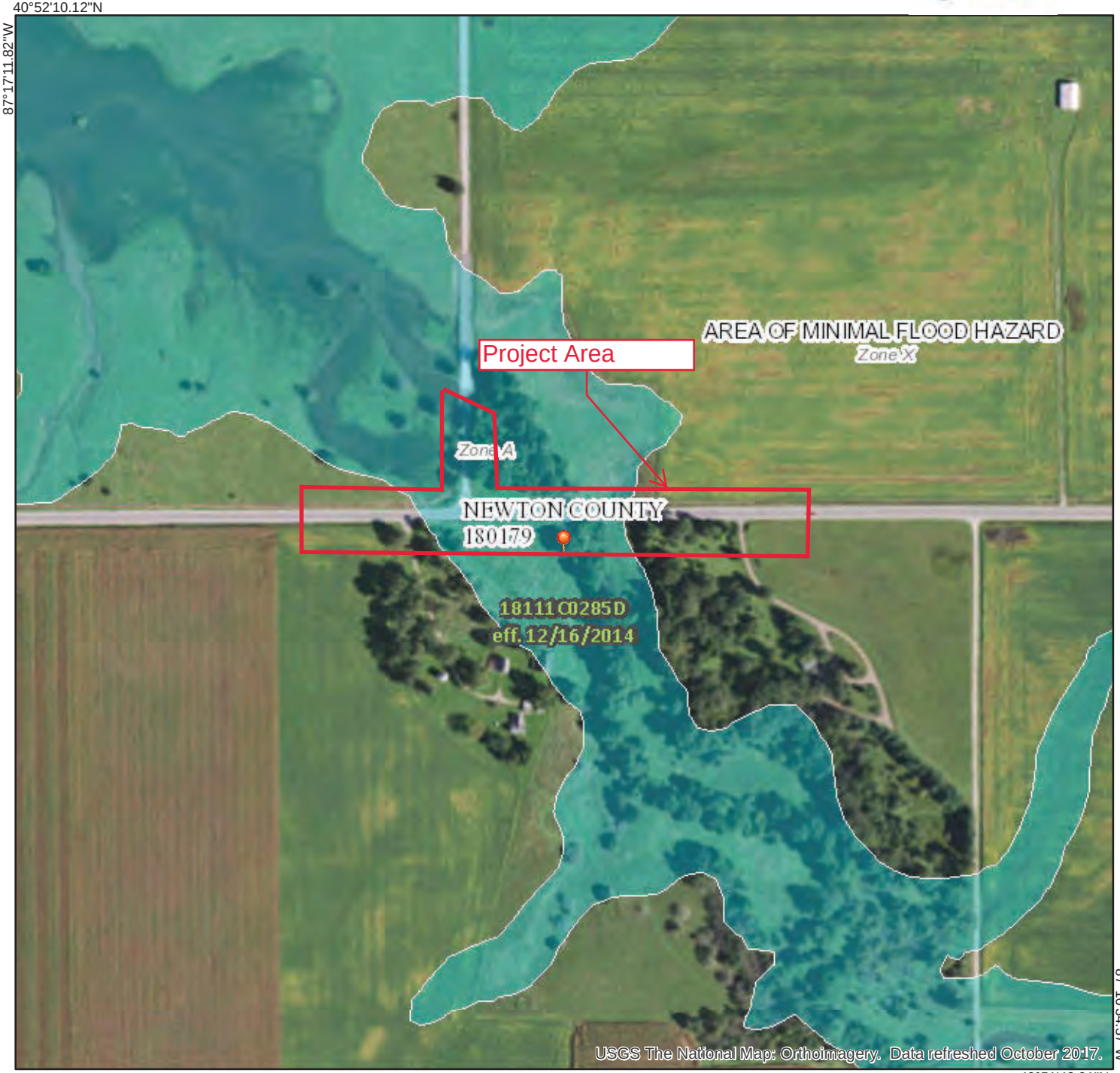
National Flood Hazard Layer FIRMette



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

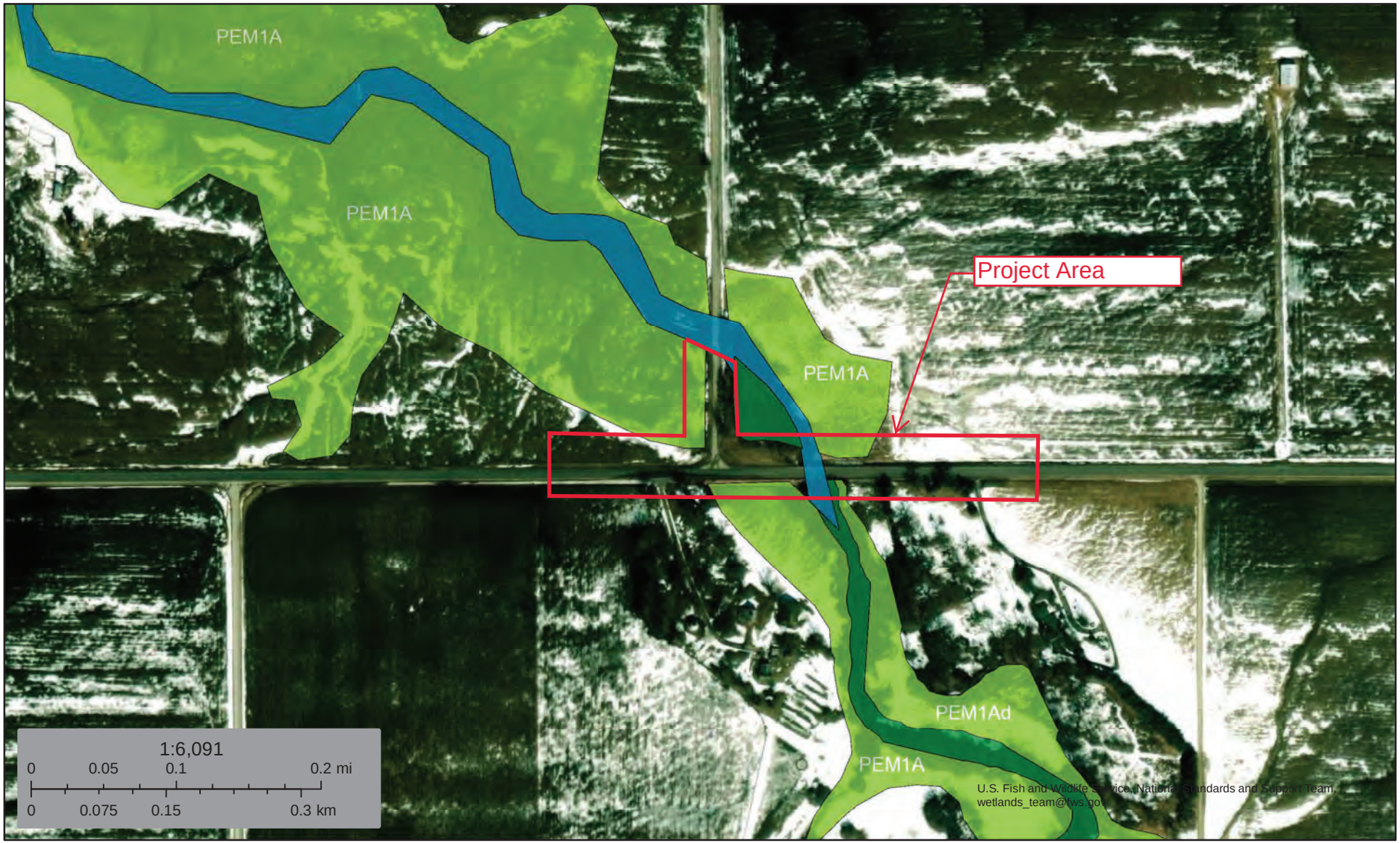
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/15/2018 at 6:29:03 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

U.S. Fish and Wildlife Service
National Wetlands Inventory

Des. No. 1700077 - SR 16 over Mosquito Creek



October 16, 2018

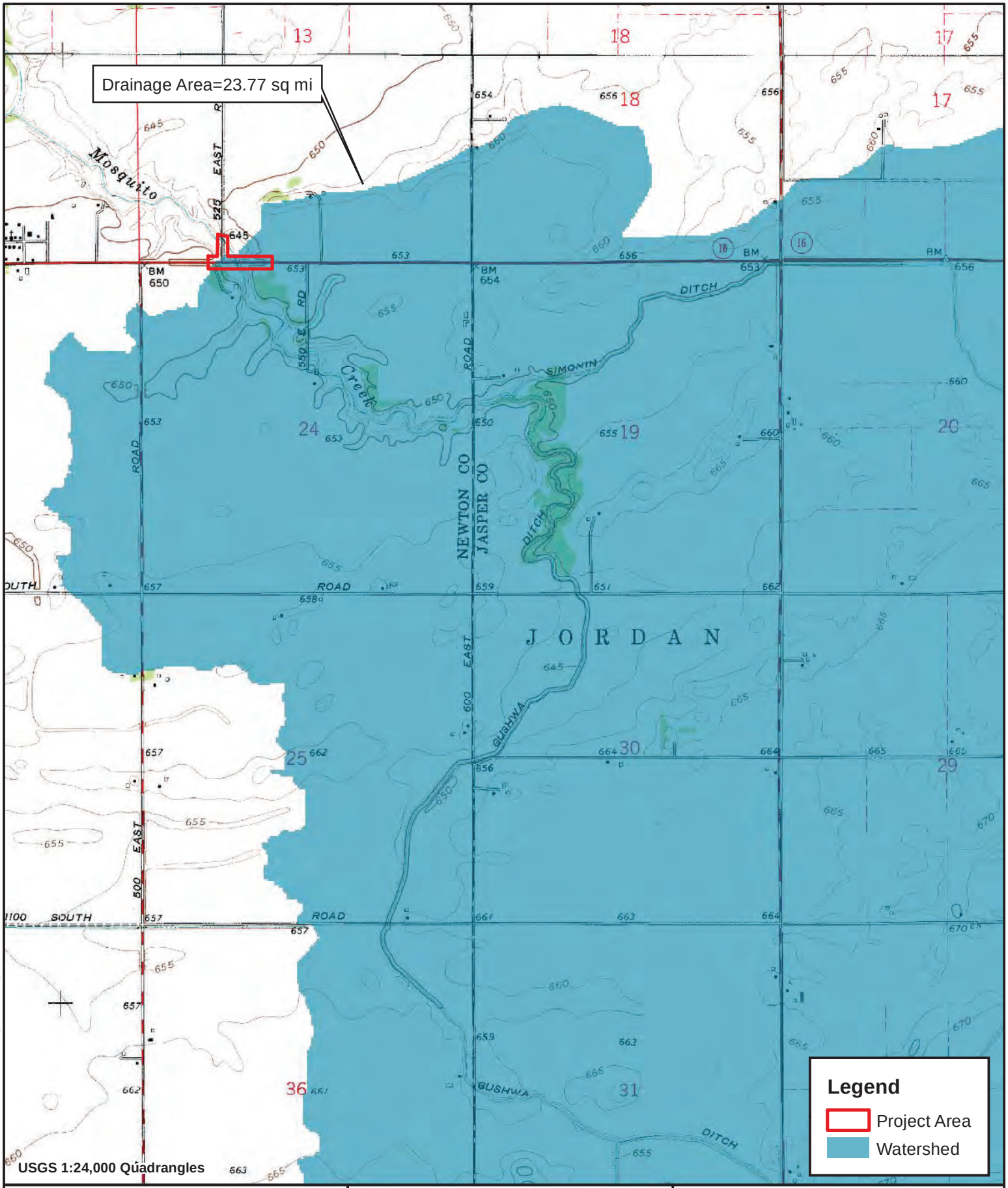
Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

North

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper



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StreamStats Map

Des. No. 1700077

Waters of the U.S. Report

0 1,000 2,000 Feet

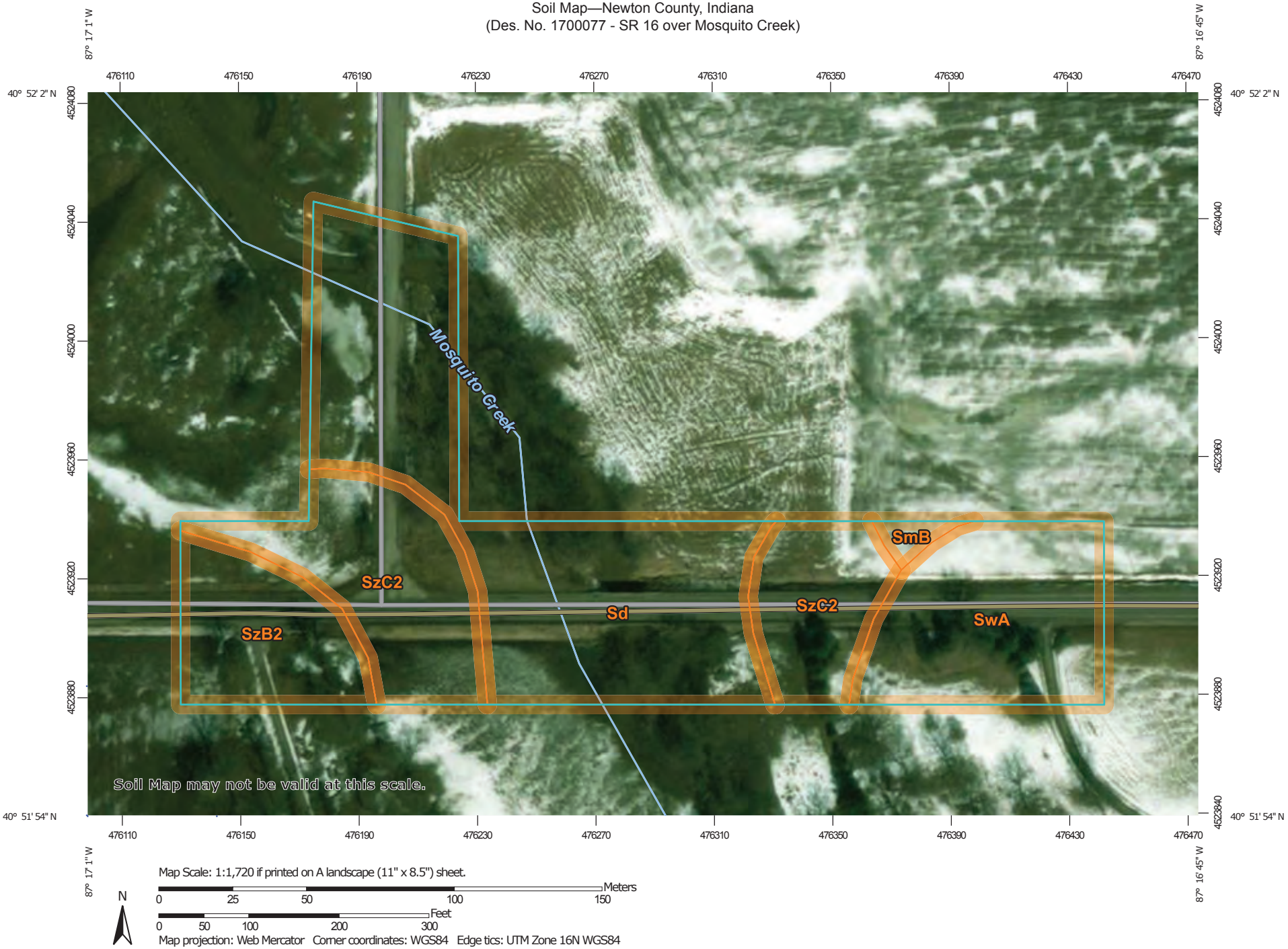
N

County: Newton Quadrangle: Goodland
Township: Iroquois
State: Indiana

State Road 16 over Mosquito Creek
Bridge Replacement
Created:11/13/2018, R. Hook

\\FS21\Share_2017\2017-0372\EBD\Enviro\Waters\Attachments\mxds\EBD_streamStats_10.1.mxd

Soil Map—Newton County, Indiana
(Des. No. 1700077 - SR 16 over Mosquito Creek)



Map Scale: 1:1,720 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 25 50 100 150

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

USDA **Natural Resources Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

10/16/2018

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Newton County, Indiana
Survey Area Data: Version 23, Sep 7, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 7, 2010—Mar 6, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Sd	Sawabash silty clay loam, frequently flooded, undrained	2.6	42.5%
SmB	Simonin loamy sand, 1 to 3 percent slopes	0.1	1.0%
SwA	Strole silty clay loam, 0 to 1 percent slopes	1.1	18.7%
SzB2	Swygert variant-Simonin complex, 2 to 6 percent slopes, eroded	0.7	11.8%
SzC2	Swygert variant-Simonin complex, 6 to 15 percent slopes, eroded	1.6	26.0%
Totals for Area of Interest		**6.0**	**100.0%**

Report—Hydric Soil List - All Components

Hydric Soil List - All Components–IN111-Newton County, Indiana					
Map symbol and map unit name	**Component/Local Phase**	**Comp. pct.**	**Landform**	**Hydric status**	**Hydric criteria met (code)**
Sd: Sawabash silty clay loam, frequently flooded, undrained	Sawabash-Undrained	100	Flood plains	Yes	2,3
SmB: Simonin loamy sand, 1 to 3 percent slopes	Simonin	90	Lake plains	No	—
	Iroquois	3	Depressions	Yes	2,3
	Montgomery	3	Depressions	Yes	2,3
SwA: Strole silty clay loam, 0 to 1 percent slopes	Strole	90	Lake plains	No	—
	Montgomery	3	Depressions	Yes	2,3
	Iroquois	3	Depressions	Yes	2,3
SzB2: Swygert variant-Simonin complex, 2 to 6 percent slopes, eroded	Swygert	50	Moraines	No	—
	Simonin	40	Moraines	No	—
	Bryce	3	Depressions	Yes	2,3
SzC2: Swygert variant-Simonin complex, 6 to 15 percent slopes, eroded	Swygert	60	Moraines	No	—
	Simonin	30	Moraines	No	—
	Bryce	3	Depressions	Yes	2,3

Data Source Information

Soil Survey Area: Newton County, Indiana
Survey Area Data: Version 23, Sep 7, 2018

Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Sd	Sawabash silty clay loam, frequently flooded, undrained	100	2.6	42.5%
SmB	Simonin loamy sand, 1 to 3 percent slopes	6	0.1	1.0%
SwA	Strole silty clay loam, 0 to 1 percent slopes	6	1.1	18.7%
SzB2	Swygert variant-Simonin complex, 2 to 6 percent slopes, eroded	3	0.7	11.8%
SzC2	Swygert variant-Simonin complex, 6 to 15 percent slopes, eroded	3	1.6	26.0%
Totals for Area of Interest			**6.0**	**100.0%**

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: State Road 16 over Mosquito Creek Bridge Replacement City/County: Newton Sampling Date: 10/12/2018

Applicant/Owner: Indiana Department of Transportation - LaPorte District State: IN Sampling Point: DP 1

Investigator(s): R. Hook/C. Kunkel Section, Township, Range: S 13, T 28N, R 8W

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

Slope (%): 0-1 Lat: 40.866619 Long: -87.282473 Datum: NAD 83

Soil Map Unit Name: Sd - Sawabash silty clay loam, frequently flooded, undrained NWI classification: PEM1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X 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** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
This data point was taken at the base of the roadway embankment adjacent to the cow pasture on the west side of Iroquois River Road.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: ____)			
1. *Phalaris arundinacea*	30	Yes	FACW
2. *Packera glabella*	20	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	50 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	50	x 2 =	100
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	50 (A)		100 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

X 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.)
bare ground = 50%

SOIL

Sampling Point: DP 1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	2.5Y 2.5/1	56	7.5YR 5/6	4	C	PL/M	Loamy/Clayey	Prominent redox concentrations
	2.5Y 4/1	40						
4-19	2.5Y 2.5/1	100					Loamy/Clayey	

[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)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ 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** X **No** ___

Remarks:

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)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- X 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)

- X 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)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___
Water Table Present?	Yes X	No ___	Depth (inches): 18
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 15

Wetland Hydrology Present? **Yes** X **No** ___

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

Remarks:

Saturation and water table were present at the data point. Data point is located within the floodplain of the Mosquito Creek.

Data Point 1 Soil Pit

Data Point 1 Soil Profile

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: State Road 16 over Mosquito Creek Bridge Replacement City/County: Newton Sampling Date: 10/12/2018

Applicant/Owner: Indiana Department of Transportation - LaPorte District State: IN Sampling Point: DP 2

Investigator(s): R. Hook/C. Kunkel Section, Township, Range: S 13, T 28N, R 8W

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-1 Lat: 40.866351 Long: -87.282458 Datum: NAD 83

Soil Map Unit Name: Sd - Sawabash silty clay loam, frequently flooded, undrained NWI classification: PEM1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X 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 ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
This data point was taken at the base of the roadway embankmenton the west side of Iroquois River Road. It is up slope from DP 1. Due to its location, it serves at the upland data point for wetland 1 and wetland 2.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Maclura pomifera*	5	Yes	FACU
2.			
3.			
4.			
5.			
	5	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
Herb Stratum (Plot size: ____)			
1. *Setaria pumila*	15	Yes	FAC
2. *Solanum carolinense*	15	Yes	FACU
3. *Amaranthus tuberculatus*	15	Yes	OBL
4. *Packera glabella*	15	Yes	FACW
5. *Acalypha rhomboidea*	15	Yes	FACU
6.			
7.			
8.			
9.			
10.			
	75	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15
FACW species	15	x 2 =	30
FAC species	15	x 3 =	45
FACU species	35	x 4 =	140
UPL species	0	x 5 =	0
Column Totals:	80 (A)		230 (B)

Prevalence Index = B/A = 2.88

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 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** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
bare ground = 25%

SOIL

Sampling Point: DP 2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/1	100					Loamy/Clayey	
5-20	2.5Y 3/1	70					Loamy/Clayey	
	10YR 5/2	30						

[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)
- ___ Dark Surface (S7)
- ___ 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)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ 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:

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)
- ___ 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)
- X Geomorphic Position (D2)
- ___ 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** ___ **No** X

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

Remarks:

Data Point 2 Soil Pit

Data Point 2 Soil Profile

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: State Road 16 over Mosquito Creek Bridge Replacement City/County: Newton Sampling Date: 10/12/2018

Applicant/Owner: Indiana Department of Transportation - LaPorte District State: IN Sampling Point: DP 3

Investigator(s): R. Hook/C. Kunkel Section, Township, Range: S 13, T 28N, R 8W

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-1 Lat: 40.866048 Long: -87.282547 Datum: NAD 83

Soil Map Unit Name: SzC2 - Swygert variant-Simonin complex, 6 to 15 percent slopes, eroded NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X 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** X	**No** ____
Hydric Soil Present?	Yes X	No ____			
Wetland Hydrology Present?	Yes X	No ____			

Remarks:
This data point was taken at the base of the roadway embankment, where UNT 1 flows into the adjacent cow pasture.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	____	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____	=Total Cover	
Herb Stratum (Plot size: ____)			
1. *Phalaris arundinacea*	99	Yes	FACW
2. *Packera glabella*	1	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	100	x 2 =	200
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		200 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

X 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.)

SOIL

Sampling Point: DP 3

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	2.5Y 2.5/1	93	5YR 4/6	7	C	PL/M	Loamy/Clayey	Prominent redox concentrations

[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)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ 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** X **No** ___

Remarks:

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)
- ___ 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)
- X 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:

Data Point 3 Soil Pit

Data Point 3 Profile

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: State Road 16 over Mosquito Creek Bridge Replacement City/County: Newton Sampling Date: 10/12/2018

Applicant/Owner: Indiana Department of Transportation - LaPorte District State: IN Sampling Point: DP 4

Investigator(s): R. Hook/C. Kunkel Section, Township, Range: S 13, T 28N, R 8W

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): None

Slope (%): 0-1 Lat: 40.866102 Long: -87.282213 Datum: NAD 83

Soil Map Unit Name: SzC2 - Swygert variant-Simonin complex, 6 to 15 percent slopes, eroded NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X 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 ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
This data point was taken in the maintained ROW, adjacent to the wooded area that is mapped as an NWI.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: ____)			
1. *Setaria pumila*	60	Yes	FAC
2. *Poa sp*	30	Yes	
3. *Setaria par iflora*	10	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	70	x 3 =	210
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	70 (A)		210 (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 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** ____ **No** X

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

SOIL

Sampling Point: DP 4

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 2/1	100					Sandy	
8-13	10YR 2/1	90	10YR 5/8	10	C	PL/M	Loamy/Clayey	Prominent redox concentrations
13-18	10YR 2/1	97	10YR 5/8	3	C	M	Loamy/Clayey	Prominent redox concentrations

[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)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ 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** X **No** ___

Remarks:

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)
- ___ 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)
- ___ 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** ___ **No** X

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

Remarks:

Data Point 4 Soil Pit

Data Point 4 Soil Profile

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: State Road 16 over Mosquito Creek Bridge Replacement City/County: Newton Sampling Date: 10/12/2018

Applicant/Owner: Indiana Department of Transportation - LaPorte District State: IN Sampling Point: DP 5

Investigator(s): R. Hook/C. Kunkel Section, Township, Range: S 13, T 28N, R 8W

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-1 Lat: 40.866253 Long: -87.282172 Datum: NAD 83

Soil Map Unit Name: Sd - Sawabash silty clay loam, frequently flooded, undrained NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X 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:
This data point was taken in the mapped NWI on the north side of SR 16, adjacent to the Iroquois River.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	30	Yes	FACW
2. *Sali sp*	5	No	
3.			
4.			
5.			
	35	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
Herb Stratum (Plot size: ____)			
1. *Phalaris arundinacea*	100	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	130	x 2 =	260
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	130 (A)		260 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

____ 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.)

SOIL

Sampling Point: DP 5

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-19	2.5Y 2.5/1	100					Loamy/Clayey	

[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)
- ___ Dark Surface (S7)
- ___ 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)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ 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:

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)
- ___ 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)
- X 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:

Data Point 5 Soil Pit

Data Point 5 Soil Profile

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: State Road 16 over Mosquito Creek Bridge Replacement City/County: Newton Sampling Date: 10/12/2018

Applicant/Owner: Indiana Department of Transportation - LaPorte District State: IN Sampling Point: DP 6

Investigator(s): R. Hook/C. Kunkel Section, Township, Range: S 13, T 28N, R 8W

Landform (hillside, terrace, etc.): Roadside Local relief (concave, convex, none): Concave

Slope (%): 0-1 Lat: 40.865985 Long: -87.279668 Datum: NAD 83

Soil Map Unit Name: SwA - Strole silty clay loam, 0 to 1 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X 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** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
This data point was taken within the roadside ditch. Due to the lack of slope, water ponds within the ditch. As you move west towards Iroquois River, slope increases and the feature turns into a stream.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: ____)			
1. *Phalaris arundinacea*	99	Yes	FACW
2. *ypha glauca*	1	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	1	x 1 =	1
FACW species	99	x 2 =	198
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		199 (B)

Prevalence Index = B/A = 1.99

Hydrophytic Vegetation Indicators:

X 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.)

SOIL

Sampling Point: DP 6

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4.5	10YR 4/1	98	10YR 4/6	2	C	M	Loamy/Clayey	Prominent redox concentrations
4.5-10	10YR 6/1	97	10YR 4/6	3	C	M	Loamy/Clayey	Prominent redox concentrations
10-14	10YR 5/8	60					Loamy/Clayey	
	2.5Y 6/1	40						

[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)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ 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** X **No** ___

Remarks:

Due to surface water filling the hole and saturation of the soils, only 14 inches could be removed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ 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)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ___	Depth (inches): 2		
Water Table Present?	Yes ___	No X	Depth (inches): ___		
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 0	**Wetland Hydrology Present?**	**Yes** X **No** ___

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

Remarks:

Soils were saturated starting just below the surface.

Data Point 6 Soil Pit

Data Point 6 Soil Profile

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: State Road 16 over Iroquois River Bridge Replacement City/County: Newton Sampling Date: 10/12/2018

Applicant/Owner: Indiana Department of Transportation - LaPorte District State: IN Sampling Point: DP 7

Investigator(s): R. Hook/C. Kunkel Section, Township, Range: S 13, T 28N, R 8W

Landform (hillside, terrace, etc.): Terrace - ag field Local relief (concave, convex, none): None

Slope (%): 0-1 Lat: 40.866001 Long: -87.279788 Datum: NAD 83

Soil Map Unit Name: SwA - Strole silty clay loam, 0 to 1 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X 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 X	No ____	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
This data point was taken a top of the embankment to the north of the roadside ditch, between the edge and the adjacent agricultural field. The field was still planted with soy beans.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: ____)			
1. *Poa pratensis*	80	Yes	FAC
2. *lycine ma*	15	No	UPL
3. *Phalaris arundinacea*	5	No	FACW
4. *Setaria pumila*	5	No	FAC
5. *Solidago canadensis*	2	No	FACU
6.			
7.			
8.			
9.			
10.			
	107 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	85	x 3 =	255
FACU species	2	x 4 =	8
UPL species	15	x 5 =	75
Column Totals:	107 (A)		348 (B)

Prevalence Index = B/A = 3.25

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

____ 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.)

SOIL

Sampling Point: DP 7

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/1	100					Loamy/Clayey	
8-17	10YR 5/1	95	10YR 5/6	5	C	PL/M	Loamy/Clayey	Prominent redox concentrations

[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)
- X 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)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ 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** X **No** ___

Remarks:

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)
- ___ 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)
- ___ 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** ___ **No** X

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

Remarks:

Data Point 7 Soil Pit

Data Point 7 Soil Profile

Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: 11/8/2018

B. NAME AND ADDRESS OF PERSON REQUESTING PJD: Ruth Hook, 3502 Woodview Trace, Suite 150, Indianapolis, IN 46268

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:

The Indiana Department of Transportation – LaPorte District proposes to proceed with a bridge replacement project in southeastern Newton County, Indiana (Des. No. 1700077). The proposed project will involve the replacement of the structure that carries State Road (SR) 16 over Mosquito Creek, 1.31 miles east of SR 55. The proposed project will remove the existing structure and replace it with a new structure. In addition to the new structure, scour protection is anticipated to be installed. The maintenance of traffic will require a full closure of SR 16 and utilization of a detour.

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

State: IN County/parish/borough: Newton City: N/A

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

Lat.: 40.865896° Long.: -87.281406°

Universal Transverse Mercator: 609356.12 E 4412822.08 N Z 16S

Name of nearest waterbody: Mosquito Creek

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)
Wetland 1	40.86662°	-87.2825°	0.14ac	Wetland	Section 404
Wetland 2	40.8660°	-87.2826	0.25ac	Wetland	Section 404
Wetland 3	40.8660°	-87.2797°	0.02ac	Wetland	Section 404
UNT 1	40.8660°	-87.2830°	164ft (0.004ac)	Non-Wetland	Section 404
UNT 2	40.8659°	-87.2810°	437ft (0.01 ac)	Non-Wetland	Section 404
UNT 3	40.8660°	-87.2813°	227ft (0.01 ac)	Non-Wetland	Section 404
Mosquito Creek	40.8660°	-87.2814°	806ft (0.31ac)	Non-Wetland	Section 404

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:

- ☒ Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
  Map: Aerial, water resources, NWI, Topographic, StreamStats, Soils.
- ☒ 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: Hydrography_HighRes_FlowLine_NHD_USGS.shp.
  - ☒ USGS NHD data.
  - ☐ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite scale & quad name: Goodland 1:24,000 Quadrangle.
- ☒ Natural Resources Conservation Service Soil Survey. Citation: NRCS WebSoil survey.
- ☒ National wetlands inventory map(s). Cite name: UFWS NWI Web Viewer.
- ☐ State/local wetland inventory map(s): _____.
- ☒ FEMA/FIRM maps: Panel 18111C0285D.
- ☒ 100-year Floodplain Elevation is: 648.8 .(National Geodetic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date): Newton County 2016.
  or ☒ Other (Name & Date): Field photos from 10/12/2018.
- ☐ 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.

_____	Ruth Hook Digitally signed by Ruth Hook Date: 2018.11.08 12:07:55 -05'00'
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.

Categorical Exclusion

Appendix G

Public Involvement

«Name»
«Mailing_Address»
«Mailing_City», «Mailing_State» «Mailing_zip»

Sample Notice of Survey Letter

RE: INDOT Designation (DES) Number: 1700077
Lochmueller Group Project Number: 217-0372-EBD
State Road 16 over Mosquito Creek – Bridge Replacement
Newton County, Indiana

Notice of Entry for Survey or Investigation
August 20, 2018

Dear Property Owner,

Our information indicates that you own property near the above proposed transportation project. Lochmueller Group has been hired by the Indiana Department of Transportation – LaPorte District and will be performing a survey of the project area in the near future. It may be necessary for representatives from Lochmueller Group or sub-consultants for Lochmueller Group to come on your property to complete this work. This is permitted by law under Indiana Code (IC) § 8-23-7-26. Anyone performing this type of work has been instructed to identify him or herself to you, if you are available, before they enter your property. If you no longer own this property, or if it is currently occupied by someone else, please let us know the name of the new owner or occupant so we can contact them about the survey.

Please read the attached notice to inform you of what the "Notice of Entry for Survey or Investigation" means. The survey work may include the identification and mapping of wetlands, archaeological investigations (which may involve the survey, testing, or excavation of identified archaeological sites), and various other environmental studies. The information we obtain for such studies is necessary for the proper planning and design of this highway project. It is our sincere desire to cause you as little inconvenience as possible during this survey.

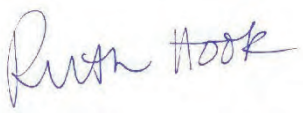
Lochmueller Group and its subcontractors will be conducting the field surveys for this project. If any problems do occur, please contact Kate Lucier via phone at 317.222.3880, e-mail at klucier@lochgroup.com, or by mail at: 3502 Woodview Trace, Suite 150, Indianapolis, Indiana 46268. You may also contact Tim Hoffa at INDOT - LaPorte via phone at 219.325.7582, e-mail at thoffa@indot.in.gov, or by mail at: INDOT – LaPorte District, 215 E Boyd Blvd, La Porte, Indiana 46350.

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

It is our sincere desire to cause you as little inconvenience as possible during our work and we thank you in advance for your cooperation.

3502 Woodview Trace, Suite 150
Indianapolis, Indiana 46268
PHONE: 317.222.3880 • TOLL FREE: 888.830.6977

Sincerely,



Ruth Hook
Environmental Biologist
LOCHMUELLER GROUP

Attachment: *INDOT's Notice of Entry for Survey or Investigation*

INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204-2216

Michael R. Pence, Governor
Brandye Hendrickson, Commissioner

Indiana Department of Transportation
Notice of Entry for Survey or Investigation
Indiana Department of Transportation

If you have received a "Notice of Entry for Survey or Investigation" from INDOT or an INDOT representative, you may be wondering what it means. In the early stages of a project's development, INDOT must collect as much information as possible to ensure that sound decisions are made in designing the proposed project. Before entering onto private property to collect that data, INDOT is required to notify landowners that personnel will be in the area and may need to enter onto their property. Indiana Code, Title 8, Article 23, Chapter 7, Section 26 deals with the department's authority to enter onto any property within Indiana.

Receipt of a Notice of Entry for Survey or Investigation does not necessarily mean that INDOT will be buying property from you. It doesn't even necessarily mean that the project will involve your property at all. Since the Notice of Entry for Survey or Investigation is sent out in the very early stages and since we want to collect data within AND surrounding the project's limits more landowners are contacted than will actually fall within the eventual project limits. It may also be that your property falls within the project limits but we will not need to purchase property from you to make improvements to the roadway. Another thing to keep in mind is that when you receive a Notice of Entry for Survey or Investigation, very few specifics have been worked out and actual construction of the project may be several years in the future.

Before INDOT begins a project that requires them to purchase property from landowners, they must first offer the opportunity for a public hearing. If you were on the list of people who received a Notice of Entry for Survey or Investigation, you should also receive a notice informing you of your opportunity to request a public hearing. These notices will also be published in your local newspaper so interested individuals who are not adjacent to the project will also have the opportunity to request a public hearing. If a public hearing is to be held, INDOT will publicize the date, location, and time. INDOT will present detailed project information at the public hearing, comments will be taken from the public in spoken and written form, and question and answer sessions will be offered. Based on the feedback INDOT receives from the public, a project can be modified and improved to better serve the public.

So, if you have received a "Notice of Entry for Survey or Investigation", remember:

1. You do not need to take any action at this time. It is merely letting you know that people in orange/lime vests are going to be in your neighborhood.
2. The project is still in its very early planning stages.
3. You will be notified of your opportunity to comment on the project at a later date.

Categorical Exclusion

Appendix H

Air Quality

Indiana Department of Transportation (INDOT)

State Preservation and Local Initiated Projects FY 2018 - 2021

SPONSOR	CONTRACT # / LEAD DES	STIP NAME	ROUTE	WORK TYPE	LOCATION	DISTRICT	MILES	FEDERAL CATEGORY	Estimated Cost left to Complete Project*	PROGRAM	PHASE	FEDERAL	MATCH	2018	2019	2020	2021
Indiana Department of Transportation	40115 / 1700305	Init.	I 65	Bridge Painting	SB over Conrail RR, 3.67mi N of SR 10	LaPorte	0	NHPP		Bridge Construction	CN	$431,300.70	$47,922.30			$479,223.00	
Indiana Department of Transportation	40115 / 1700306	Init.	I 65	Bridge Painting	NB over Conrail RR, 3.67mi N of SR 10	LaPorte	0	NHPP		Bridge Construction	CN	$431,300.70	$47,922.30			$479,223.00	
										Bridge Consulting	PE	$35,437.50	$3,937.50	$39,375.00			
Indiana Department of Transportation	40598 / 1700056	A 04	I 65	Small Structure Pipe Lining	4.84mi N of SR 10	LaPorte	0	NHPP	$815,780.00	Bridge Consulting	PE	$142,200.00	$15,800.00		$158,000.00		
										Bridge ROW	RW	$45,000.00	$5,000.00				$50,000.00
										Bridge Construction	PE	$13,500.00	$1,500.00				$15,000.00
Comments:Amend FY19 PE, FY21 UT/PE and FY21 ROW phases into the current STIP. No MPO.																	
Indiana Department of Transportation	40608 / 1700075	A 04	SR 10	Bridge Replacement, Concrete	Over Kinght Ditch, 2.31 mi E of US 41	LaPorte	0	STP	$530,455.00	Bridge Construction	PE	$40,000.00	$10,000.00				$50,000.00
										Bridge Consulting	PE	$96,073.60	$24,018.40		$120,092.00		
										Bridge ROW	RW	$80,000.00	$20,000.00				$100,000.00
Comments:Amend FY19 PE, FY21 UT/PE and FY21 ROW phases into the current STIP. No MPO.																	
Indiana Department of Transportation	40608 / 1700076	A 04	SR 14	Bridge Replacement, Concrete	Over Gaff Ditch, 2.27 mi E of US 41	LaPorte	0	STP	$906,968.00	Bridge Consulting	PE	$135,874.40	$33,968.60		$169,843.00		
										Bridge ROW	RW	$80,000.00	$20,000.00				$100,000.00
										Bridge Construction	PE	$40,000.00	$10,000.00				$50,000.00
Comments:Amend FY19 PE, FY21 UT/PE and FY21 ROW phases into the current STIP. No MPO.																	
Indiana Department of Transportation	40608 / 1700077	A 04	SR 16	Bridge Replacement, Concrete	Over Mosquito Creek, 1.31 mi E of SR 55	LaPorte	0	STP	$637,642.00	Bridge Construction	PE	$40,000.00	$10,000.00				$50,000.00
Project listed under lead Des. No. 1700077										Bridge Consulting	PE	$107,404.00	$26,851.00		$134,255.00		
										Bridge ROW	RW	$80,000.00	$20,000.00				$100,000.00
Comments:Amend FY19 PE, FY21 UT/PE and FY21 ROW phases into the current STIP. No MPO.																	
Indiana Department of Transportation	40608 / 1700083	A 04	US 41	Bridge Replacement, Concrete	NB over Chizum Ditch, 1.63 mi N of SR 16	LaPorte	0	NHPP	$802,706.00	Bridge Consulting	PE	$108,852.80	$27,213.20		$136,066.00		
										Bridge Construction	PE	$40,000.00	$10,000.00				$50,000.00

*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.

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
Newton County																		
Newton County	1592162	Init.	VA VARI	Bridge Inspections	Countywide Bridge Inspection and Inventory Program for Cycle Years 2018-2021	LaPorte	0	STPBG		Local Bridge Program	PE	$75,610.37	$0.00		$75,610.37			
										Local Funds	PE	$0.00	$18,902.59		$18,902.59			
Indiana Department of Transportation	39805 / 1500078	Init.	US 24	Bridge Replacement, Pipe Arch Or Culvert	Over Sheldon Ditch, 1.49 mi W of SR 71	LaPorte	0	NHPP		Bridge Construction	CN	$1,459,140.00	$364,785.00	$1,823,925.00				
Indiana Department of Transportation	40115 / 1700305	Init.	I 65	Bridge Painting	SB over Conrail RR, 3.67 mi N of SR 10	LaPorte	0	NHPP		Bridge Consulting	PE	$278,100.00	$30,900.00	$309,000.00				
										Bridge Construction	CN	$2,385,848.70	$265,094.30	$2,650,943.00				
Indiana Department of Transportation	40115 / 1700305	M 06	I 65	Bridge Painting	SB over Conrail RR, 3.67 mi N of SR 10	LaPorte	0	NHPP	$499,885.00	Bridge Consulting	PE	$0.00	$0.00	($309,000.00)	$309,000.00			
										Bridge Construction	CN	$351,333.90	$39,037.10	($2,650,943.00)	$3,041,314.00			
Comments:No MPO. Modify CN from FY20 to FY21 and PE/CE from FY20 to FY21.																		
Indiana Department of Transportation	40608 / 1700076	Init.	SR 14	Bridge Replacement, Concrete	Over Gaff Ditch, 2.27 mi E of US 41	LaPorte	0	STPBG		Bridge ROW	RW	$480,000.00	$120,000.00		$600,000.00			
										Bridge Construction	CN	$10,548,023.20	$2,637,005.80		$560,000.00	$12,625,029.00		
Indiana Department of Transportation	41434 / 1800065	Init.	SR 114	HMA Overlay Minor Structural	US 41 to I-65	LaPorte	11.018	STPBG		Road Consulting	PE	$379,520.00	$94,880.00	$474,400.00				
										Road Construction	CN	$5,461,913.60	$1,365,478.40			$20,000.00	$6,807,392.00	
Indiana Department of Transportation	41840 / 1802846	Init.	SP PARK	Surface Treatment, Chip Seal	Willow Slough Fish & Wildlife, Main Entrance Road to Boat Dock & CR100N from State Line	LaPorte	0	STPBG		DNR/INST Construction	CN	$332,800.00	$83,200.00	$416,000.00				
Indiana Department of Transportation	42132 / 1500682	Init.	US 41	HMA Overlay, Preventive Maintenance	From SR 14 to SR 10	LaPorte	10.406	NHPP		Road Construction	CN	$3,516,000.00	$879,000.00	$4,395,000.00				
Indiana Department of Transportation	42221 / 1500682	M 02	US 41	HMA Overlay, Preventive Maintenance	From SR 14 to SR 10	LaPorte	10.406	NHPP	$4,830,052.00	Road Construction	CN	$1,670,476.80	$417,619.20	($4,395,000.00)		$6,483,096.00		
										Bridge Construction	CN	$35,740.80	$8,935.20	($264,000.00)		$308,676.00		
Comments:Please modify the CN year from FY20 to FY22. No MPO																		
Indiana Department of Transportation	42221 / 1901363	A 01	US 41	HMA Overlay, Preventive Maintenance	SR 14 to SR 10	LaPorte	9.14	NHPP	$7,934,196.00	Road Consulting	PE	$1,072,880.00	$268,220.00	$991,100.00		$350,000.00		
										Bridge Construction	CN	$246,940.80	$61,735.20			$308,676.00		
										Road Construction	CN	$5,274,476.80	$1,318,619.20		$75,000.00	$6,518,096.00		

*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.

Categorical Exclusion

Appendix I

Environmental Justice

Des. No. 1700077: SR 16 over Mosquito Creek
Bridge Replacement Project
EJ Analysis

March 18, 2020

The Federal Highway Administration (FHWA) and the Indiana Department of Transportation (INDOT), Seymour District propose to proceed with a bridge replacement project in Newton County, Indiana.

Project Location

The proposed project is located in Newton County, 1.31 miles east of SR 55. Specifically, the project is located in Sections 13 & 24, Township 28 North, and Range 8 West in Iroquois Creek Township as depicted on the Goodland U.S. Geological Survey (USGS) Quadrangle.

Purpose and Need

The need for this project stems from the deteriorated condition of the existing structure. During routine inspections in November 2017, the structure was in fair condition and exhibited minor spalling and efflorescence at seams and ends with a longitudinal crack mid-span. The southeast channel bank has minor erosion. The purpose of the project is to restore the structural integrity to an improved condition.

Project Description (Preferred Alternative)

The proposed project would involve the replacement of the existing bridge (Bridge No. 016-56-01238 A) with a new composite spread prestressed concrete box beam bridge. The new bridge would be 69.5 feet long, with a single 67-foot span, and have an out-to-out deck width of 41-feet wide. The clear roadway width on structure would be 38 feet wide and consist of two 12-foot travel lanes (one in each direction) with 7-foot paved shoulders on each side. Concrete lined drainage turnouts will be installed at the end of each quadrant of the bridge. Additionally, Class I riprap will be placed beneath the new bridge and both banks of Mosquito Creek for scour protection. The existing guardrail along SR 16 will be removed and replaced with a total of 652 feet of new guardrail. A total of 124 feet of channel work, 57 feet downstream (north) and 67 feet upstream (south) of the bridge, is anticipated to occur. Channel work would likely include vegetation removal and grading for the placement of riprap.

The approach roadway will be reconstructed to a typical section consisting of two 12-foot travel lanes (one in each direction) with 7-foot paved shoulders on each side. The reconstruction of the approaches would extend approximately 208 feet to the east and 292 feet west of the proposed bridge. In addition, incidental construction, extending 100 feet from the western terminus and 195 feet from the eastern terminus, is required to transition the reconstructed roadway back to the existing profile. This will include milling the existing pavement to a depth of approximately 1.5 inches and applying a hot mix asphalt overlay atop the milled roadway surface. No work is proposed to South Iroquois River Road. Including incidental construction, the total length of the project is 795 feet.

The maintenance of traffic (MOT) will require closure of SR 16. A detour utilizing SR 55 to US 24 to US 231 will be established. Signs and barrels will be placed along SR 16 notifying travelers of the road closure and detour.

3502 Woodview Trace, Suite 150
Indianapolis, Indiana 46268
PHONE: 317.222.3880 • TOLL FREE: 888.830.6977

Environmental Justice Analysis

According to the *INDOT Categorical Exclusion Preparation Manual* (May 2017), an Environmental Justice (EJ) analysis is required for any project requiring two or more relocations or more than 0.5 acre of new permanent right-of-way. Because the project is expected to require more than 0.5 acre of new permanent right-of-way (approximately 1.77 acres), an EJ analysis was conducted.

Potential EJ impacts are detected by locating minority populations and low-income populations in and near the project area, calculating their percentage in the area relative to a reference population to determine if, in fact, populations of EJ concern do exist, and determining whether there will be disproportionate adverse impacts to them. The reference population may be a county, city, or town that houses the project area and is called the community of comparison (COC). For this project the COC is Newton County, Indiana. The community that overlaps the project limits is called the affected community (AC). For this project there is one AC. The AC is Census Tract 1006.

An AC has a population of concern for EJ if the population is more than 50% low-income or minority or if the low-income population or minority population is greater than 125% of the population in the COC.

COC: Newton County, Indiana		
	Low-Income	**Minority**
COC %	13.99%	8.47%
125% of COC	**17.49%**	**10.59%**
AC: Census Tract 1006	22.37%	13.70%
Population of EJ Concern	**Yes**	**Yes**

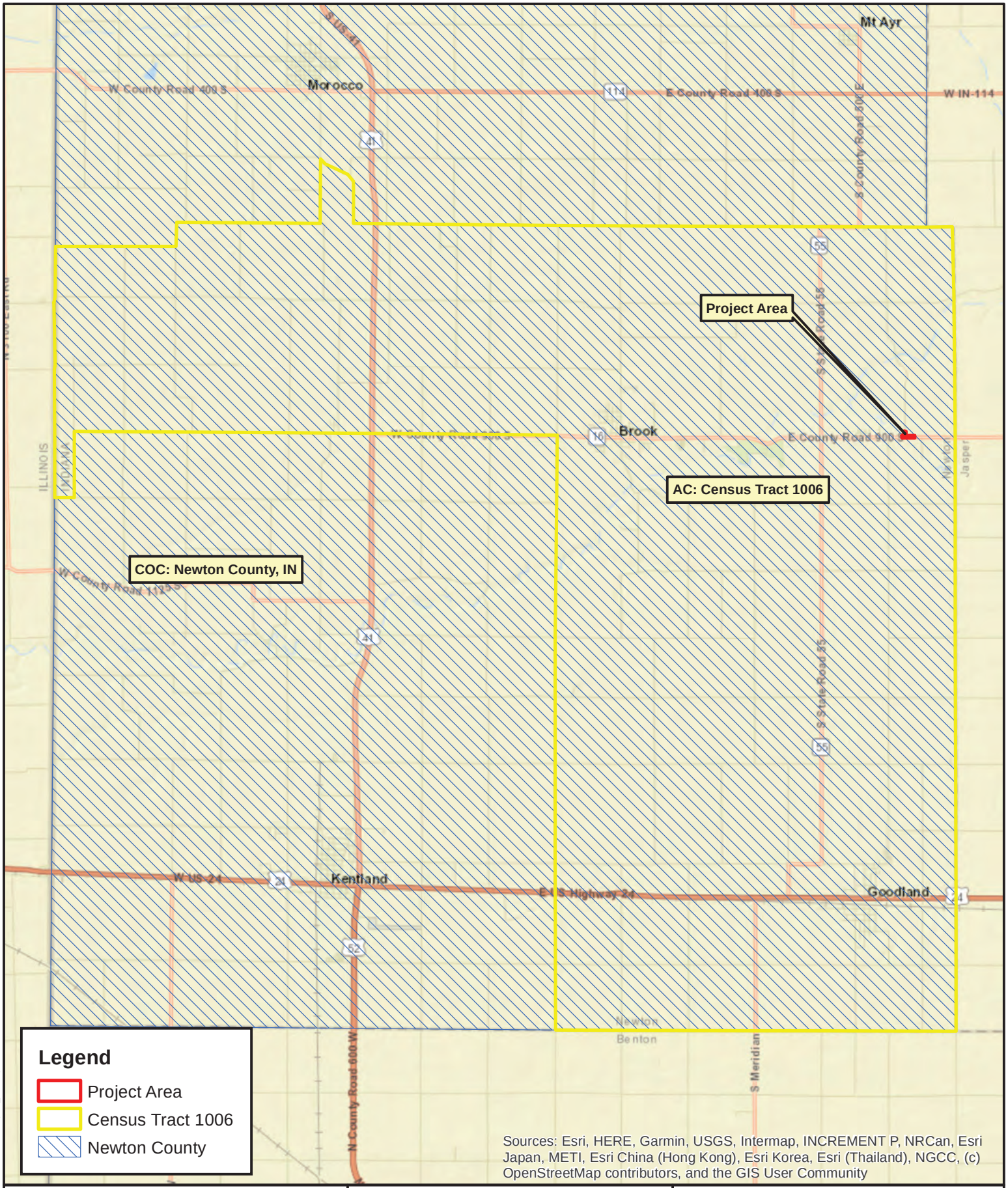
A review of American Community Survey five-year estimates data (2013-2017) was completed on February 7, 2020. The data was obtained from the U.S. Census Bureau's American FactFinder webpage (https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml).

A review of the data revealed that the AC contained a minority population greater than 125% of the COC (13.70%). Therefore, minority populations of EJ concern are present within the project area. The data for low-income populations determined to be greater than 125% of the COC (22.37%). Therefore, low-income populations of EJ concern are present within the project area.

The proposed project is expected to require the acquisition of approximately 1.77 acres of permanent ROW and no temporary ROW. Land use within the proposed permanent ROW consists of agricultural. Overall, the negative impacts to property owners within the project area will be minimal and consist primarily of short-term construction impacts and the loss of strip ROW. No relocations are anticipated. The ROW to be acquired will not substantially diminish the existing use by the affected property owners. The maintenance of traffic (MOT) during construction will require the closure of SR 16 and the establishment of a detour. The detour will utilize SR 55, US 24, and US 231. The MOT will follow the *Indiana Design Manual*. Property owners will be provided access throughout the duration of the project to reduce impacts as much as possible. No permanent impacts to community cohesion are anticipated.

Based upon the scope of the project, it is expected the project will not have a disproportionately high and adverse environmental or health impact to low-income or minority populations of EJ concern when compared to non-EJ populations.

3502 Woodview Trace, Suite 150
Indianapolis, Indiana 46268
PHONE: 317.222.3880 • TOLL FREE: 888.830.6977



LOCHMUELLER GROUP
3502 Woodview Trace, Suite 150
Indianapolis, IN 46268
Phone: (317) 222-3880
Fax: (317) 222-3881

EJ Analysis Map

Des. No. 1700077

0 1 2 Miles

N

County: Newton
Township: Iroquois
State: Indiana

SR 16 over Mosquito Creek
Bridge Replacement Project
Created:2/7/2020, SBeaupre

S:_2017\217-0372\IEBD\Enviro\EJ\SR 16 over Mosquito_EJ Map.mxd

	COC Newton County, Indiana	AC Census Tract 1006, Newton County, Indiana
LOW-INCOME POPULATION		
Total Population for Whom Poverty Status is Determined	13,805	2,548
Total Population Below Poverty Level	1,932	570
Percent Low-Income	13.99%	22.37%
125 Percent of COC	17.49%	AC > 125% COC
AC Percent Low-Income Greater Than 125 Percent of COC?		Yes
AC Percent Low-Income Greater Than 50 Percent?		No
Population of EJ Concern?		Yes
MINORITY POPULATION		
Total Population	14,056	2,627
Minority Population	1,191	360
Percent Minority	8.47%	13.70%
125 Percent of COC	10.59%	AC >125% COC
AC Percent Minority Greater Than 125 Percent of COC?		Yes
AC Percent Minority Greater Than 50 Percent?		No
Population of EJ Concern?		Yes

SR 16 over Mosquito Creek Bridge Replacement- EJ Analysis (Des. No. 1700077)

2013-2017 American Community Survey 5-Year Estimates

		COC	AC
		Newton County, Indiana	Census Tract 1006, Newton County, Indiana
	LOW INCOME		
B17001001	Population for whom poverty status is determined: Total	13,805	2,548
B17001002	Population for whom poverty status is determined: Income in past 12 months below poverty level	1,932	570
	Percent Low-Income	**14.0%**	**22.4%**
	125% Reference Increment (Applied to COC Only and Compared Against the AC)	**17.5%**	**AC > 125% COC**
	AC Percent Low-Income > 125% of COC?		**Yes**
	AC Percent Low-Income > 50%?		**No**
	Elevated Low-Income Population Present?		**Yes**

	MINORITY		
B03002001	Total Population: Total	14,056	2,627
B03002002	Total Population: Not Hispanic or Latino	13,197	2,328
B03002003	Total Population: Not Hispanic or Latino; White Alone	12,865	2,267
B03002004	Total Population: Not Hispanic or Latino; Black or African American Alone	18	5
B03002005	Total Population: Not Hispanic or Latino; American Indian or Alaska Native Alone	21	11
B03002006	Total Population: Not Hispanic or Latino; Asian Alone	84	0
B03002007	Total Population: Not Hispanic or Latino; Native Hawaiian and Other Pacific Islander Alone	0	0
B03002008	Total Population: Not Hispanic or Latino; Some Other Race Alone	0	0
B03002009	Total Population: Not Hispanic or Latino; Two or More Races	209	45
B03002010	Total Population: Hispanic or Latino	859	299
B03002011	Total Population: Hispanic or Latino; White Alone	572	211
B03002012	Total Population: Hispanic or Latino; Black or African American Alone	0	0
B03002013	Total Population: Hispanic or Latino; American Indian or Alaska Native Alone	0	0
B03002014	Total Population: Hispanic or Latino; Asian Alone	0	0
B03002015	Total Population: Hispanic or Latino; Native Hawaiian and Other Pacific Islander Alone	0	0
B03002016	Total Population: Hispanic or Latino; Some Other Race Alone	245	46
B03002017	Total Population: Hispanic or Latino; Two or More Races	42	42
	Number Non-White / Minority (Sum B03002004 thru B03002010)	**1,191**	**360**
	Percent Non-White / Minority	**8.5%**	**13.7%**
	125% Reference Increment (Applied to COC Only and Compared Against the AC)	**10.6%**	**AC >125% COC**
	AC Percent Minority > 125% of COC?		**Yes**
	AC Percent Minority > 50%?		**No**
	Elevated Minority Population Present?		**YES**

B03002

HISPANIC OR LATINO ORIGIN BY RACE

Universe: Total population

2013-2017 American Community Survey 5-Year Estimates

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

	Newton County, Indiana		Census Tract 1006, Newton County, Indiana	
	Estimate	Margin of Error	Estimate	Margin of Error
Total:	14,056	*****	2,627	+/-281
Not Hispanic or Latino:	13,197	*****	2,328	+/-253
White alone	12,865	+/-18	2,267	+/-247
Black or African American alone	18	+/-14	5	+/-8
American Indian and Alaska Native alone	21	+/-26	11	+/-16
Asian alone	84	+/-55	0	+/-11
Native Hawaiian and Other Pacific Islander alone	0	+/-18	0	+/-11
Some other race alone	0	+/-18	0	+/-11
Two or more races:	209	+/-56	45	+/-34
Two races including Some other race	0	+/-18	0	+/-11
Two races excluding Some other race, and three or more races	209	+/-56	45	+/-34
Hispanic or Latino:	859	*****	299	+/-121
White alone	572	+/-147	211	+/-119
Black or African American alone	0	+/-18	0	+/-11
American Indian and Alaska Native alone	0	+/-18	0	+/-11
Asian alone	0	+/-18	0	+/-11
Native Hawaiian and Other Pacific Islander alone	0	+/-18	0	+/-11
Some other race alone	245	+/-136	46	+/-48
Two or more races:	42	+/-47	42	+/-47
Two races including Some other race	42	+/-47	42	+/-47
Two races excluding Some other race, and three or more races	0	+/-18	0	+/-11

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

While the 2013-2017 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

Explanation of Symbols:

1. An '**' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
2. An '-' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
3. An '-' following a median estimate means the median falls in the lowest interval of an open-ended distribution.
4. An '+' following a median estimate means the median falls in the upper interval of an open-ended distribution.
5. An '***' entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
6. An '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
8. An '(X)' means that the estimate is not applicable or not available.

B17001

POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE

Universe: Population for whom poverty status is determined
2013-2017 American Community Survey 5-Year Estimates

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

	Newton County, Indiana		Census Tract 1006, Newton County, Indiana	
	Estimate	Margin of Error	Estimate	Margin of Error
Total:	13,805	+/-107	2,548	+/-252
Income in the past 12 months below poverty level:	1,932	+/-479	570	+/-215
Male:	735	+/-250	204	+/-98
Under 5 years	74	+/-46	27	+/-29
5 years	4	+/-8	3	+/-6
6 to 11 years	84	+/-44	40	+/-29
12 to 14 years	95	+/-105	21	+/-21
15 years	7	+/-7	4	+/-5
16 and 17 years	50	+/-54	14	+/-14
18 to 24 years	95	+/-79	13	+/-10
25 to 34 years	83	+/-51	10	+/-12
35 to 44 years	80	+/-64	22	+/-17
45 to 54 years	58	+/-37	13	+/-8
55 to 64 years	69	+/-35	28	+/-23
65 to 74 years	23	+/-25	6	+/-7
75 years and over	13	+/-12	3	+/-5
Female:	1,197	+/-271	366	+/-131
Under 5 years	62	+/-29	25	+/-17
5 years	32	+/-31	23	+/-29
6 to 11 years	178	+/-91	54	+/-44
12 to 14 years	31	+/-22	17	+/-16
15 years	7	+/-10	0	+/-11
16 and 17 years	79	+/-53	23	+/-22
18 to 24 years	197	+/-84	39	+/-26
25 to 34 years	99	+/-50	42	+/-36
35 to 44 years	135	+/-43	67	+/-33
45 to 54 years	145	+/-85	26	+/-20
55 to 64 years	129	+/-51	29	+/-21
65 to 74 years	44	+/-26	8	+/-6
75 years and over	59	+/-25	13	+/-9
Income in the past 12 months at or above poverty level:	11,873	+/-477	1,978	+/-213
Male:	6,198	+/-265	1,024	+/-106
Under 5 years	268	+/-49	54	+/-30

	Newton County, Indiana		Census Tract 1006, Newton County, Indiana	
	Estimate	Margin of Error	Estimate	Margin of Error
5 years	39	+/-25	3	+/-5
6 to 11 years	451	+/-108	40	+/-21
12 to 14 years	175	+/-76	22	+/-18
15 years	129	+/-52	11	+/-8
16 and 17 years	152	+/-49	26	+/-18
18 to 24 years	405	+/-82	77	+/-34
25 to 34 years	768	+/-60	124	+/-66
35 to 44 years	798	+/-78	132	+/-58
45 to 54 years	914	+/-41	202	+/-52
55 to 64 years	1,033	+/-35	157	+/-42
65 to 74 years	654	+/-28	72	+/-26
75 years and over	412	+/-16	104	+/-40
Female:	5,675	+/-265	954	+/-149
Under 5 years	313	+/-40	32	+/-19
5 years	34	+/-62	2	+/-5
6 to 11 years	388	+/-107	91	+/-45
12 to 14 years	219	+/-86	23	+/-16
15 years	14	+/-12	9	+/-9
16 and 17 years	162	+/-52	16	+/-14
18 to 24 years	402	+/-81	91	+/-42
25 to 34 years	669	+/-67	129	+/-48
35 to 44 years	634	+/-61	121	+/-53
45 to 54 years	808	+/-88	120	+/-25
55 to 64 years	903	+/-55	144	+/-42
65 to 74 years	672	+/-31	100	+/-34
75 years and over	457	+/-59	76	+/-34

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

While the 2013-2017 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

Explanation of Symbols:

1. An '**' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
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7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
8. An '(X)' means that the estimate is not applicable or not available.

From: Fair, Terri
To: Hook, Ruth
Subject: FW: Des. NO. 1700077 - SR 16 over Mosquito Creek EJ Analysis
Date: Monday, March 30, 2020 2:34:37 PM
Attachments: image001.png
image002.png
image003.png
image004.png
image006.png
DesNo1700077_SR16overMosquitoCreek_EJAnalysis.pdf

Hello Ruth,

INDOT-Environmental Services Division (ESD) has reviewed the project information along with the Environmental Justice (EJ) Analysis for the above referenced project. With the information provided, the project may require right-of-way, require no relocations, and would not disrupt community cohesion or create a physical barrier. With the information provided, INDOT-ESD would not consider the impacts associated with this project as causing a disproportionately high and adverse effect on minority and/or low income populations of EJ concern relative to non EJ populations in accordance with the provisions of Executive Order 12898 and FHWA Order 6640.23a. No further EJ Analysis is required.

PS – I made a small edit. I changed "itt" to "it." The attached reflects this update.

Best,
Terri Fair
NEPA Specialist
100 North Senate Ave., Room N642-ES
Indianapolis, IN 46204
Office: (317) 232-0680
Email: tfair@indot.in.gov

To ensure that all NEPA documents are submitted appropriately in ERMS to the NEPA Document Review Unit, please be sure to include the following:

1. The document type (CE/EA/EIS/PCE for ITS/Noise Analysis/ECF/AI/NTF/Bat Language) within the subject line and the body of the text.
2. State in the body of the email who the document is intended for based on the CE Manual
    a. PCE and State projects that are a CE-2 or lower to the appropriate district environmental supervisor/team lead
    b. LPA and State projects that are a CE-3 and above or EA/EIS to the INDOT ESD Document Team Lead at Central Office.
    c. Specify the name and email address of the recipient who should get the final document (e.g. Brandon Miller, NEPA Document Team Lead at Central Office; email: bramiller1@indot.in.gov)

From: Hook, Ruth <RHook@lochgroup.com>

Sent: Wednesday, March 18, 2020 2:41 PM
To: Bales, Ronald <rbales@indot.IN.gov>
Subject: Des. NO. 1700077 - SR 16 over Mosquito Creek EJ Analysis

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ****

Good Afternoon Ron –
Please find attached the EJ analysis for the above mentioned project in Newton County. While the EJ analysis indicates that there are minority and low-income populations of concern, the scope of project is a bridge replacement and ROW acquisition is limited to that needed for the construction and future maintenance of the structure. There will be no relocations associated with this project.

Please let me know if you have questions or concerns about the attached analysis.

Thanks and I hope all is going well for you in this hectic time.

Ruth Hook, CPESC, CESSWI
Environmental Lead
Lochmueller Group
112 W Jefferson Blvd, Suite 500, South Bend, IN 46601
317.334.6816 (direct) | 206.999.9348 (mobile)
RHook@lochgroup.com
http://lochgroup.com

Categorical Exclusion

Appendix J

Other Information

2019 Indiana Land and Water Conservation Funds - Project Listing

1800211	1800211	Montgomery	Lake Waveland Park
1800308	1800308	Montgomery	Shades State Park
1800312	1800312N	Montgomery	Shades State Park
1800327	1800327I	Montgomery	Shades State Park
1800363	1800363BB	Montgomery	Shades State Park
1800405	1800405A	Montgomery	Calvert and Porter Woods
1800413	1800413R	Montgomery	Shades State Park
1800456	1800456	Montgomery	Shades State Park
1800480	1800480	Montgomery	Darlington Old School Park
1800110	1800110	Morgan	Pioneer Park
1800327	1800327G	Morgan	Morgan-Monroe
1800491	1800491	Morgan	Pioneer Park
1800576	1800576	Morgan	White River Greenway
1800405	1800405Y	Newton	Willow Slough Fish and Wildlife Area
1800002	1800002	Noble	Chain O'Lakes State Park
1800118	1800118A	Noble	Chain O' Lakes
1800135	1800135	Noble	Noble Co. Fairgrounds, Kendallville Fair Grounds
1800161	1800161G	Noble	Chain O' Lakes State Park
1800171	1800171B	Noble	Chain O' Lakes State Park
1800305	1800305H	Noble	Chain O' Lakes State Park
1800312	1800312B	Noble	Chain O' Lakes State Park
1800319	1800319	Noble	G. Martin Kenney Memorial Park
1800327	1800327C	Noble	Chain O' Lakes State Park
1800353	1800353	Noble	Kelly St. Park
1800358	1800358	Noble	Avilla Park
1800363	1800363D	Noble	Chain O' Lakes State Park
1800369	1800369E	Noble	Gaff Park, Mainland Park
1800378	1800378A	Noble	Chain O' Lakes State Park
1800391	1800391	Noble	Cromwell Community Park
1800405	1800405B	Noble	Big Lake Public Access Site
1800405	1800405AA	Noble	Crane Lake Public Access Site
1800405	1800405J	Noble	Eagle Lake Wetland Conservation Area
1800405	1800405T	Noble	Rome City Wetlands Fish and Wildlife Area
1800405	1800405U	Noble	Smalley Lake Public Access Site
1800413	1800413J	Noble	Chain O' Lakes State Park
1800492	1800492	Noble	Hidden Diamonds Community Park
1800513	1800513	Noble	Hidden Diamonds Community Park
1800007	1800007	Owen	McCormick's Creek State Park
1800022	1800022	Owen	McCormick's Creek State Park
1800049	1800049	Owen	McCormick's Creek State Park
1800161	1800161I	Owen	McCormick's Creek State Park
1800171	1800171G	Owen	McCormick's Creek State Park
1800312	1800312H	Owen	McCormick's Creek State Park
1800363	1800363R	Owen	McCormick's Creek State Park

Bridge Inspection Report

016-56-01238 A
SR 16
over
MOSQUITO CREEK

Inspection Date:

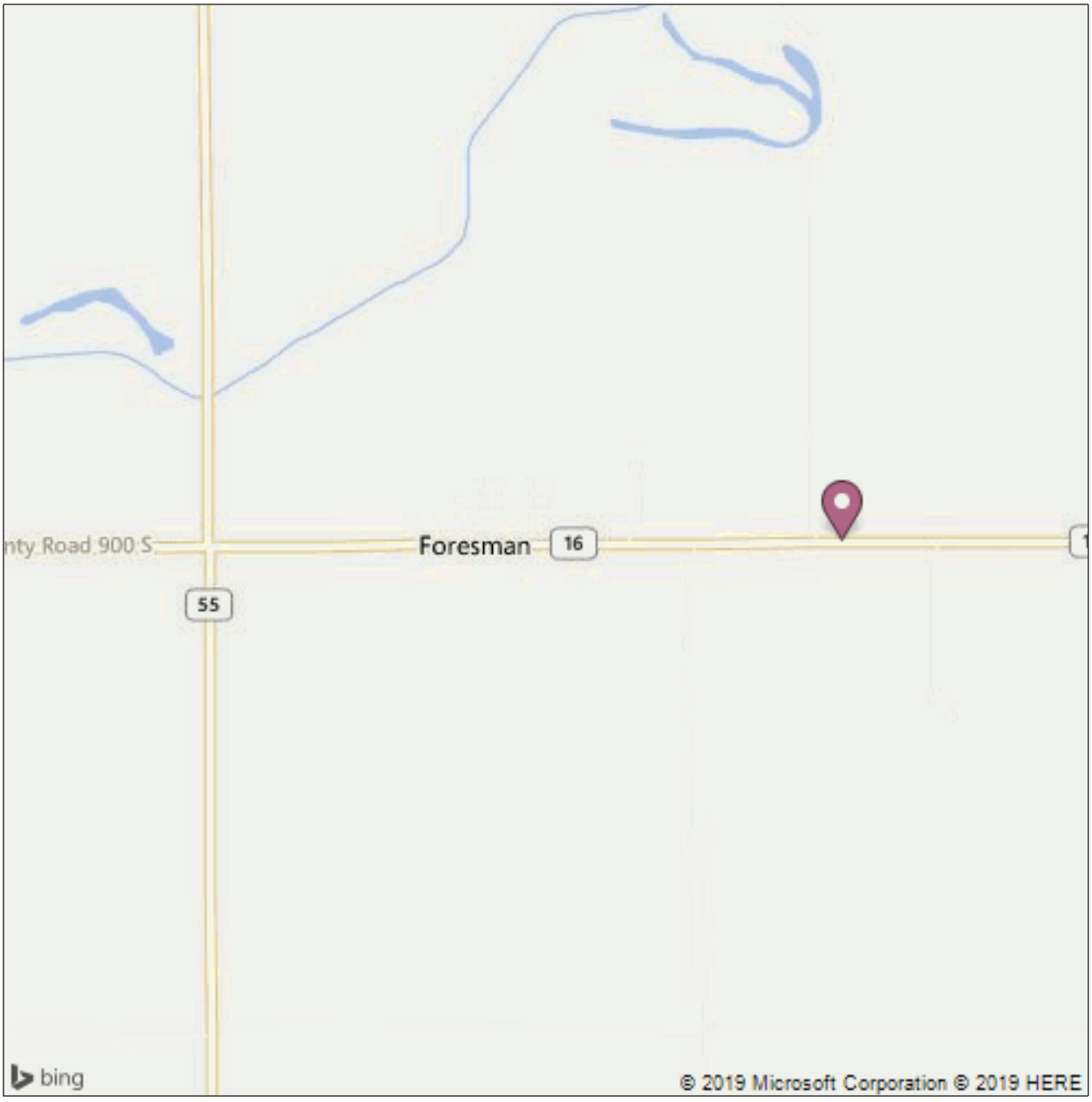
Inspected By:

Inspection Type(s):

TABLE OF CONTENTS

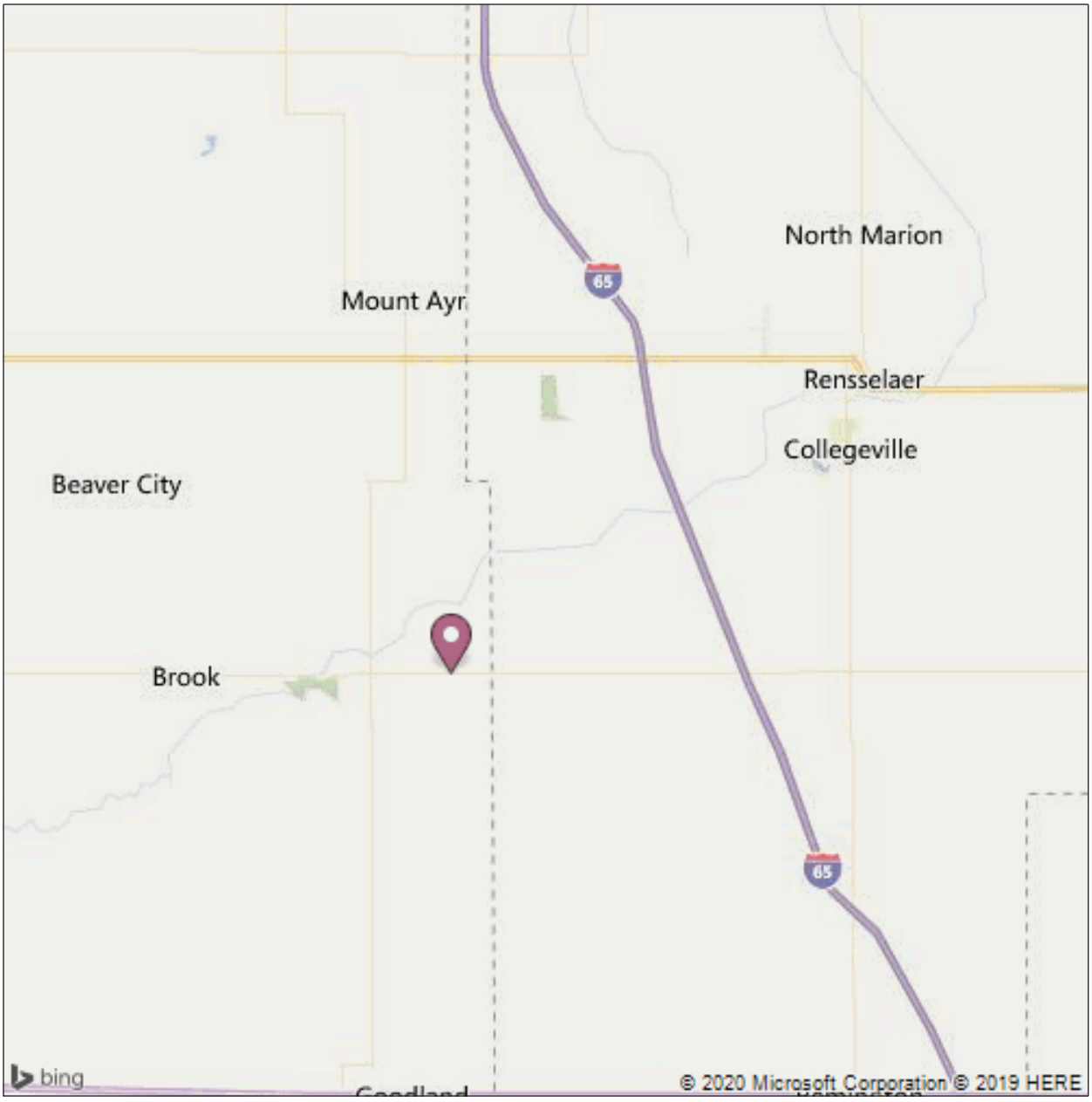
Latitude: 40.86592

Longitude: -87.28143



Latitude: 40.86592

Longitude: -87.28143



Latitude: 40.86592

Longitude: -87.28143

This inspection was made by Amy Wines and Cristy Burlage on 1/13/2020. Entry was not possible at the time of this inspection due to high water. No ratings were changed.

IDENTIFICATION

(1) STATE CODE:	185 - Indiana
(8) STRUCTURE:	004200
(5 A-B-C-D-E) INV. ROUTE:	1 - 3 - 1 - 00016 - 0
(2) HIGHWAY AGENCY DISTRICT:	04 - La Porte
(3) COUNTY CODE:	056 - NEWTON
(4) PLACE CODE:	00000 - N/A
(6) FEATURES INTERSECTED:	MOSQUITO CREEK
(7) FACILITY CARRIED:	SR 16
(9) LOCATION:	01.31 E SR 55
(11) MILEPOINT:	0008.100

(12) BASE HIGHWAY NETWORK:	0
(13A) INVENTORY ROUTE:	
(13B) SUBROUTE NUMBER:	
(16) LATITUDE:	40.86592
(17) LONGITUDE:	-87.28143
(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:	001
(46) NUMBER OF APPROACH SPANS:	0000
(107) DECK STRUCTURE TYPE:	N - Not Applicable
(108) WEARING SURFACE/PROT SYS:	
A) WEARING SURFACE:	N - NA
B) DECK MEMBRANE:	N - NA
C) DECK PROTECTION:	N - NA

AGE OF SERVICE

(27) YEAR BUILT:	1931
(106) YEAR RECONSTRUCTED:	0000
(42) TYPE OF SERVICE:	
A) ON BRIDGE:	1 - Highway
B) UNDER BRIDGE:	5 - Waterway

(28) LANES:	
A) ON BRIDGE:	02
B) UNDER BRIDGE:	00
(29) AVERAGE DAILY TRAFFIC:	001496
(30) YEAR OF AVERAGE DAILY TRAFFIC:	2004
(109) AVERAGE DAILY TRUCK TRAFFIC:	10 %
(19) BYPASS DETOUR LENGTH:	004 MI

GEOMETRIC DATA

(48) LENGTH OF MAX SPAN:	0036.0	FT
(49) STRUCTURE LENGTH:	00039.0	FT
(50) CURB/SIDEWALK WIDTHS:		
A) LEFT	00.4	FT
B) RIGHT:	00.4	FT
(51) BRDG RDWY WIDTH CURB-TO-CURB:	032.0	FT
(52) DECK WIDTH, OUT-TO-OUT:	035.0	FT
(32) APPROACH ROADWAY	032.0	FT
(33) BRIDGE MEDIAN:	0 - No median	
(34) SKEW:	15	DEG

(35) STRUCTURE FLARED:	0 - No flare	
(10) INV RTE, MIN VERT CLEARANCE:	99.99	FT
(47) TOT HORIZ CLEARANCE:	032.0	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:	01/13/2020
(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:	08/27/2009
C) OTHER SPECIAL INSP DATE:	

CONDITION

(58) DECK:	N - Not Applicable
(58.01) WEARING SURFACE:	N - Not Applicable
(59) SUPERSTRUCTURE:	6 - Satisfactory Condition (minor deterioration)

(60) SUBSTRUCTURE:	6 - Satisfactory Condition (minor deterioration)
(61) CHANNEL/CHANNEL PROTECTION:	6 - Bank slump. widespread minor damage
(62) CULVERTS:	N - Not Applicable

CONDITION COMMENTS

(58) DECK: N - Not Applicable

Comments:

.

(58.01) WEARING SURFACE: N - Not Applicable

Comments:

(59) SUPERSTRUCTURE: 6 - Satisfactory Condition (minor deterioration)

Comments:

Minor spalling and efflorescence at seams and ends. Longitudinal crack mid-span.

(60) SUBSTRUCTURE: 6 - Satisfactory Condition (minor deterioration)

Comments:
There are longitudinal cracks with efflorescence's.

(61) CHANNEL/CHANNEL PROTECTION: 6 - Bank slump. widespread minor damage

Comments:
There is large rip rap places along side the structure. The SE bank has minor erosion. Northwest corner undermined, maintenance need submitted.

Previous Inspection Notes:
Scour Critical Bridge.
- Underwater inspection no longer needed. Can wade channel with probe. Rip Rap has been placed for scour control/remediation. Q100 marked at NW wingwall. Channel profile attached and on file. JDW 11/15/13
Scour Critical Bridge.
- Underwater inspection no longer needed. Can wade channel with probe. Rip Rap has been placed for scour control/remediation. Q100 marked at NW wingwall. Channel profile attached and on file. JDW 11/15/13

(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):	27
(41) STRUCTURE OPEN/POSTED/CLOSED:	A - Open	(66C) TONS POSTED :	
		(66D) DATE POSTED/CLOSED:	
(64) OPERATING RATING:	92		
(63) OPERATING RATING METHOD:	1 - Load Factor (LF)		

APPRAISAL

SUFFICIENCY RATING:	98.6	(36) TRAFFIC SAFETY FEATURE:	
STATUS:	0	36A) BRIDGE RAILINGS:	0
(67) STRUCTURAL EVALUATION:	6	36B) TRANSITIONS:	1
(68) DECK GEOMETRY:	5	36C) APPROACH GUARDRAIL:	1
(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL:	N	36D) APPROACH GUARDRAIL ENDS:	1

(71) WATERWAY ADEQUACY: 7 - Slight Chance of Overtopping Bridge
Comments:

(72) APPROACH ROADWAY ALIGNMENT: 8 - Equal to present desirable criteria
Comments:
There is no need for a speed reduction for traffic to pass over the structure safely.

(113) SCOUR CRITICAL BRIDGES: 5 - Scour within limits of footing or piles

Comments:
2/14/2012 BDH - Stable Within Limits Scour Countermeasures in place (Rip-Rap) See Photos Also Q100 Line For monitoring.
8/27/09 U-W Insp.- No scour-related deficiencies observed.
SCOUR CRITICAL BRIDGE - RATED "3" - CHECK CLOSELY FOR SCOUR WHEN INSPECTING.[JDW, 08/29/2008]
Changed the coding from a '5' to a '3'. This bridge is considered as High Risk for Vulnerability for Scour, and it is considered as "Scour Critical". This is because both Abutments are set on Spread Footings.

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:	002484
		(115) YR OF FUTURE ADT:	2030

- No items available

Description

Inspector:

Inspection Date:

Asset Name: 016-56-01238 A

Facility Carried: SR 16

Bridge Inspection Report

Date Reported: 11/07/2019

Priority: Green - 3

Work Code: Erosion Control / Rip Rap

Deficiency Description:
Northwest corner undermined.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Open

PHOTO 1 Description Northwest corner undermining