

## Indiana Department of Transportation

County     Martin     Route     SR 450     Des. No.     1700155    

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

<b>Road No./County:</b>	State Route (SR) 450 / Martin County
<b>Designation Number:</b>	1700155
<b>Project Description/Termini:</b>	Bridge replacement project on SR 450 over Flat Creek (also known as [aka] Opossum Creek). The project limits along SR 450 extend approximately 1,160 feet northeast of the center of the bridge and approximately 1,110 feet southeast of the center of the bridge, for a total length of approximately 2,270 feet (0.43 mile).

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):

	<b>Categorical Exclusion, Level 2</b> – The proposed action meets the criteria for Categorical Exclusion Manual Level 2 - table 1, CE Level Thresholds. Required Signatories: ESM (Environmental Scoping Manager)
✓	<b>Categorical Exclusion, Level 3</b> – The proposed action meets the criteria for Categorical Exclusion Manual Level 3 - table 1, CE Level Thresholds. Required Signatories: ESM, ES (Environmental Services Division)
	<b>Categorical Exclusion, Level 4</b> – The proposed action meets the criteria for Categorical Exclusion Manual Level 4 - table 1, CE Level Thresholds. Required Signatories: ESM, ES, FHWA
	<b>Environmental Assessment (EA)</b> – 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                                      \_\_\_\_\_          BDM              10/15/2020      
 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 ESD/District  
 Env. Reviewer Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name and Organization of CE/EA Preparer:     Jaime Byerly / RQAW Corporation    

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Part I - PUBLIC INVOLVEMENT

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

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

\*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 7, 2019 and November 5, 2019 notifying them about the project and that individuals responsible for land surveying and field activities may be seen in the area (Appendix G, pages G-1 to G-4). Because the project qualifies for the Minor Projects Programmatic Agreement (MPPA), a legal notice was not required to be published for Section 106. The project will meet the minimum requirements described in the current Indiana Department of Transportation (INDOT) Public Involvement Manual which requires the project sponsor to offer the public an opportunity to submit comment and/or request a public hearing. Therefore, a legal notice will appear in a local publication contingent upon the release of this document for public involvement. This document will be revised after the public involvement requirements are fulfilled.

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

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

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

Sponsor of the Project: INDOT INDOT District: Vincennes Local Name of the Facility: SR 450

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

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

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**PURPOSE AND NEED:**

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

The need of the project is due to the poor condition of the existing structure, identified as Structure Number 450-51-06447 B, frequent flooding at this location, and poor roadway geometric deficiencies. Per the INDOT Bridge Inspection Report, dated August 5, 2020, the substructure was given a condition rating of 5 out of a possible 9 ("fair condition") due to heavy scaling at the corners of both abutments causing minor loss of bearing area. Both abutments have longitudinal and vertical cracking with minor to moderate efflorescence. The superstructure was given a condition rating of 6 out of a possible 9 ("satisfactory condition") due to spalling with exposed reinforcing on Beam 3 over the west abutment, small diameter spalls with exposed reinforcing on Beams 7 and 8 near the east abutment, and minor spalls on the outside of fascia beams due to previous guardrail attachments. The presence of a small beaver dam on the north side of the bridge has restricted channel flow and is causing minor lateral drifting of the channel towards the east abutment, which is further impacting the condition of the substructure (Appendix I, pages I-2 to I-8). Per the INDOT Hydraulics Memo, dated May 16, 2019, there is frequent flooding at this location because the existing structure is hydraulically inadequate (Appendix I, pages I-17 to I-19).

The bridge is on the tangent of a horizontal curve. South of the bridge, the roadway transitions to another horizontal curve, and two vertical curves are along both ends of the bridge. These curves cause sight distance issues. The bridge and roadway are prone to flooding from Opossum Creek which receives backwater from Indian Creek and the East Fork White River which substantially affects the public traveling through the project area (Appendix I, pages I-9 to I-16).

The purpose of the project is to increase all condition ratings of the bridge to a 7 ("good condition") or higher, alleviate flooding within the project area, and improve roadway geometric deficiencies.

**PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):**

County:     Martin     Municipality:     Not applicable (N/A)    

Limits of Proposed Work:     The project limits along SR 450 extend approximately 1,160 feet northeast of the center of the bridge and approximately 1,110 feet southeast of the center of the bridge, for a total length of approximately 2,270 feet (0.43 mile).    

Total Work Length:     0.43     Mile(s) Total Work Area:     3.90     Acre(s)

	Yes <sup>1</sup>	No
Is an Interchange Modification Study / Interchange Justification Study (IMS/IJS) required?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If yes, when did the FHWA grant a conditional approval for this project?	Date: <input style="width: 100%;" type="text"/>	

<sup>1</sup>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.*

The Federal Highway Administration (FHWA) and the INDOT Vincennes District propose to proceed with a bridge replacement project on SR 450 over its crossing of Flat Creek (aka Opossum Creek), approximately 6.3 miles east of United States Highway (US) 50 in Martin County, Indiana. Specifically, the project is within Mitcheltree Township, Indian Springs and Shoals U.S. Geological Survey (USGS) Quadrangles, Township 4 North, Range 3 West, and Sections 29 and 30. The

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project limits along SR 450 extend approximately 1,160 feet northeast of the center of the bridge and approximately 1,110 feet southeast of the center of the bridge, for a total length of approximately 2,270 feet (0.43 mile) (Appendix B, pages B-1 and B-2). The total length is needed to correct sight distance issues. The project termini are logical because the northern terminus terminates at the north approach work for the bridge and roadway and the southern terminus terminates at the south approach work for the bridge and roadway. The project also has independent utility because construction of this project is not dependent on any other projects in the area.

**Existing Conditions:** Within the project area, SR 450 is functionally classified as a Rural Major Collector and consists of two 10-foot wide travel lanes (one northbound and one southbound) without paved shoulders. The apparent existing right-of-way width is edge of pavement. The existing structure, identified as Structure Number 450-51-06447 B, is a 30-foot long prestressed box beam bridge with a curb-to-curb width of 28.3 feet and an outside-to-outside width of 30.3 feet. The structure carries SR 450 over Flat Creek. The existing structure is experiencing deterioration; the substructure has heavy scaling at corners of both abutments causing minor loss of bearing area, both abutments have longitudinal and vertical cracking with minor to moderate efflorescence, and the superstructure has exposed reinforcing on Beam 3 over the west abutment, small diameter spalls with exposed reinforcing on Beams 7 and 8 near the east abutment, and minor spalls on the outside of fascia beams. The bridge is on the tangent of a horizontal curve. South of the bridge, the roadway transitions to another horizontal curve, and two vertical curves are along both ends of the bridge. The geometrics of the bridge and roadway create sight distance issues. SR 450 intersects with County Road (CR) 108 (also known as Fred Sims Road) approximately 0.2 mile north of the bridge. The bridge and roadway are prone to flooding from Opossum Creek which receives backwater from Indian Creek and the East Fork White River which substantially affects the public traveling through the project area. Guardrail is present; however, it does not meet current INDOT design standards. Adjacent land use is primarily agricultural and wooded (Appendix B, pages B-3 to B-15).

**Preferred Alternative:** The project will replace the existing bridge. The proposed bridge, identified as 450-51-10337, will be a 126-foot long 3-span continuous composite prestressed concrete I-beam bridge with a curb-to-curb width of 30 feet and an outside-to-outside width of 33 feet. The proposed structure and roadway profile will be raised to an elevation just above the 25-year storm event. In order to be above the 25-year storm event level, the new structure and roadway profile will be raised approximately seven feet (to an approximate elevation of 481 feet). Shoulders and embankments will require minimal widening to transition into the new, wider bridge. Road work will include improving by reducing the existing vertical curves immediately north and south of the bridge. The improved roadway alignment will tie into the existing SR 450 near CR 108. The project will not involve any work on CR 108. The elevation difference at this intersection is approximately 0.25 feet. The increased clear roadway width will meet minimum INDOT standards and include two 11-foot wide travel lanes with two 4.33-foot wide shoulders. The project will also replace the existing substandard guardrail. Riprap drainage turnouts will be constructed on the northeast and northwest sides of the bridge. Class 1 riprap will be placed on the spill slopes underneath the bridge at both end bents. Riprap will also be placed along the east side of the roadway on the fill slopes approximately 820 feet south of the stream. The project will require approximately 5.50 acres of permanent right-of-way and 0.02 acre of temporary right-of-way. Proposed right-of-way width will be approximately 75 to 80 feet from the roadway centerline.

The maximum depth of excavation is approximately up to 5 feet below ground surface (Appendix B, pages B-16 to B-23). Please note the approved Red Flag Investigation stated that no excavation would be needed; however, per subsequent coordination with the project designer, minor excavation will be needed for waterway work and regrading ditches. There are no hazardous material concerns within or near the project area.

No residences or businesses will be relocated as part of the project. The maintenance of traffic (MOT) will involve a full closure of SR 450 to through traffic and use US 50 for an official state detour. Refer to the *Maintenance of Traffic (MOT) During Construction* section of this document for further details on the proposed MOT. The estimated project cost is \$1,923,871 (fiscal year [FY] 2022) with construction anticipated to take place during Spring of 2022.

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The preferred alternative satisfies the purpose and need of the project via increasing all condition ratings of the bridge to a 7 ("good condition") or higher, alleviating flooding within the project area, and improving roadway geometric deficiencies.

### OTHER ALTERNATIVES CONSIDERED:

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

**Do Nothing Alternative:** This alternative would not involve any improvements to the existing structure. This alternative would not involve any immediate cost or result in any environmental impacts. If no improvements are made to the existing structure, the structure would continue to deteriorate resulting in potential closure of the bridge. This alternative was dismissed because it would not address the purpose and need of the project via increasing all condition ratings of the bridge to a 7 ("good condition") or higher, alleviating flooding within the project area, and improving roadway geometric deficiencies.

**Rehabilitation:** This alternative would involve rehabilitating the existing structure. This alternative would likely result in less environmental impacts (e.g. wetlands, wooded). However, the most significant damage is to the substructure and is beyond the point where patching would improve the structural condition. If the superstructure was replaced, the subpar substructure would not have enough service life to justify the rehabilitation. If the roadway was also raised, the cost of the rehabilitation would be significantly closer to the cost of replacement. This alternative was dismissed from further consideration since it would not be prudent.

No other alternatives were considered.

**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
- It would result in serious impacts to the motoring public and general welfare of the economy.
- Other (Describe)

✓
✓

### ROADWAY CHARACTER:

**SR 450**

Functional Classification:	<u>        Major Collector        </u>		
Current ADT:	<u>        665        </u>	VPD (2022)	Design Year ADT: <u>        803        </u>
Design Hour Volume (DHV):	<u>        30.77        </u>	Truck Percentage (%)	<u>        20.03        </u>
Designed Speed (mph):	<u>        50        </u>	Legal Speed (mph):	<u>        50        </u>

	Existing	Proposed
Number of Lanes:	2	2
Type of Lanes:	10-foot wide travel lanes	11-foot wide travel lanes
Pavement Width:	20	22
Shoulder Width:	0	8.66
Median Width:	0	0
Sidewalk Width:	0	0

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Setting:  Urban  Suburban  Rural  
 Topography:  Level  Rolling  Hilly

**DESIGN CRITERIA FOR BRIDGES:**

Structure/NBI Number(s):     450-51-06447 B     Sufficiency Rating:     85.7 (INDOT Bridge Inspection Report, dated August 5, 2020) (Appendix I, pages I-2 to I-8)      
(Rating, Source of Information)

	Existing		Proposed
Bridge Type:	Prestressed box beam bridge		Continuous composite prestressed concrete I-beam bridge
Number of Spans:	1		3
Weight Restrictions:	N/A	ton	N/A
Height Restrictions:	N/A	ft.	N/A
Curb to Curb Width:	28.3	ft.	30
Outside to Outside Width:	30.3	ft.	33
Shoulder Width:	0	ft.	0
Length of Channel Work:	N/A		135

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

Remarks: The existing bridge, identified as Structure Number 450-51-06447 B, is a 30-foot long prestressed box beam bridge with a curb-to-curb width of 28.3 feet and an outside-to-outside width of 30.3 feet. The structure carries SR 450 over Flat Creek. The project will replace the existing bridge. The proposed bridge, identified as 450-51-10337, will be a 126-foot long 3-span continuous composite prestressed concrete I-beam bridge with a curb-to-curb width of 30 feet and an outside-to-outside width of 33 feet. The proposed structure and roadway profile will be raised to an elevation just above the 25-year storm event. Riprap drainage turnouts will be constructed on the northeast and northwest sides of the bridge. Class 1 riprap will be placed on the spill slopes underneath the bridge at both end bents. Riprap will also be placed along the east side of the roadway on the fill slopes approximately 820 feet south of the stream (Appendix B, pages B-16 to B-23).

Replacing the structure, installing riprap drainage turnouts, and placing riprap will permanently impact up to approximately 135 linear feet (0.02 acre) of Flat Creek below the ordinary high water mark (OHWM).

No other bridges or culverts are located within the project area. Two corrugated metal pipes (CMPs), located in the northern project area and ranging in size from 15 inches to 24 inches diameter, will remain in place.

**MAINTENANCE OF TRAFFIC (MOT) DURING CONSTRUCTION:**

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

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Will the proposed MOT substantially change the environmental consequences of the action?    
Is there substantial controversy associated with the proposed method for MOT

Remarks: The MOT will involve a full closure of SR 450 to through traffic and use US 50 for an official state detour and result in an additional approximately 25.1 miles of travel. Closure of SR 450 will last approximately five months. Access to properties will be maintained during construction (Appendix B, page B-18).  
  
There are no businesses within the project area. Per the Fairs and Festivals website ([www.fairsandfestivals.net](http://www.fairsandfestivals.net)), accessed on November 21, 2019 by RQAW, no fair or festival is currently scheduled within a 10 mile radius of zip code 47581 (project area). Any future fairs/festivals that may be planned are unlikely to be impacted by the project since fair or festival goers can use US 50 for an official state detour.  
  
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.

**ESTIMATED PROJECT COST AND SCHEDULE:**

Engineering: \$ 167,000 (2018) Right-of-Way: \$ 22,000 (2020) Construction: \$ 1,734,871 (2022)

Anticipated Start Date of Construction: Spring of 2022

Date project incorporated into STIP July 2, 2019 (Appendix H, page H-2)

Is the project in an MPO Area?  **Yes**  **No**  
If yes,

Name of MPO N/A

Location of Project in TIP The project area is not located within a Metropolitan Planning Organization (MPO); as such, it is not listed in the MPO Transportation Improvement Program (TIP).

Date of incorporation by reference into the STIP N/A

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<b>RIGHT OF WAY:</b>
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Amount (acres)		
Land Use Impacts	Permanent	Temporary
<b>Residential</b>	0.30	0
<b>Commercial</b>	0	0
<b>Agricultural</b>	3.45	0.015
<b>Forest</b>	1.45	0.005
<b>Wetlands</b>	0.30	0
<b>Other</b>	0	0
<b>TOTAL</b>	<b>5.50</b>	<b>0.02</b>

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

Remarks: The current existing right-of-way width along SR 450 is edge of pavement. The project will require approximately 5.50 acres of permanent right-of-way along both sides of SR 450. Of this, approximately 0.30 acre consists of residential land, 3.45 acres consists of agricultural land, 1.45 acres consists of forested land, and 0.30 acre consists of wetlands (Wetlands 1 and 2). Proposed right-of-way width will be approximately 75 to 80 feet from the roadway centerline (Appendix B, pages B-3 and B-16 to B-23). The project will also require approximately 0.02 acre of temporary right-of-way for drive construction. The temporary right-of-way will consist of 0.015 acre of agricultural land and 0.005 acre of forested land (Appendix B, page B-3 and B-16 to B-23).

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

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

<b>SECTION A – ECOLOGICAL RESOURCES</b>
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	<u>Presence</u>	<u>Impacts</u>	
		<u>Yes</u>	<u>No</u>
<b>Streams, Rivers, Watercourses &amp; Jurisdictional Ditches</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Federal Wild and Scenic Rivers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State Natural, Scenic or Recreational Rivers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nationwide Rivers Inventory (NRI) listed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outstanding Rivers List for Indiana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Navigable Waterways	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Remarks: Per a desktop review, field visits conducted on August 28, 2019 and September 3, 2019 by INDOT, an aerial photograph of the project area (Appendix B, page B-3), USGS topographic map (Appendix B, page B-2), and the water resources map in the Red Flag Investigation (RFI) report (Appendix E, page E-7), 11 river/stream segments are located within 0.5 mile of the project area. The nearest stream segment, Flat Creek (aka Opossum Creek), is within the project area.





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Remarks: Per a desktop review, field visits conducted on August 28, 2019 and September 3, 2019 by INDOT, an aerial photograph of the project area (Appendix B, page B-3), USGS topographic map (Appendix B, page B-2), and the water resources map in the RFI report (Appendix E, page E-7), one lake is mapped approximately 0.42 mile southeast of the project area. Due to the distance, impacts are not expected.

A *Waters of the U.S. Report* was completed by INDOT and was approved by the INDOT Ecology and Waterway Permitting Office on September 19, 2019 (Appendix F, pages F-1 to F-31). It was determined that other surface waters are not located within the project area. The USACE makes all determinations regarding jurisdiction.

Early coordination letters were sent to the USACE, IDNR Division of Fish and Wildlife, USFWS, and IDEM on November 12, 2019 (Appendix C, pages C-1 to C-4). The USACE did not respond to the early coordination letter. An automated response was received from IDEM on November 12, 2019; however, the response did not contain project specific comments (Appendix C, pages C-5 to C-12).

The USFWS responded to the early coordination letter on November 18, 2019 and stated the USFWS has no objections to the project as currently proposed (Appendix C, pages C-24 and C-25). The IDNR Division of Fish and Wildlife responded to the early coordination letter on December 12, 2019; however, the letter did not contain any recommendations regarding other surface waters (Appendix C, pages C-20 to C-23).

**Presence** **Impacts**

**Yes**  **No**

**Wetlands**

Total wetland area:     > 0.90     acre(s) Total wetland area impacted:     0.30     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
1	PEM	0.12	Up to 0.12	This wetland is in the southeast quadrant of the project area and is likely to be considered jurisdictional (i.e. a Waters of the United States) due to its connectivity to Flat Creek, a tributary to the East Fork of White River, a TNW.
2	PFO	> 0.78	Up to 0.18	This wetland is in the southeast quadrant of the project area and is likely to be considered jurisdictional (i.e. a Waters of the United States) due to its connectivity to Flat Creek, a tributary to the East Fork of White River, a TNW.

<b>Wetlands (Mark all that apply)</b>	<b>Documentation</b>	<b>ES Approval Dates</b>
Wetland Determination	<input checked="" type="checkbox"/>	September 19, 2019
Wetland Delineation	<input checked="" type="checkbox"/>	September 19, 2019
USACE Isolated Waters Determination	<input type="checkbox"/>	
Mitigation Plan	<input type="checkbox"/>	

**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;

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- Substantially increased project costs;
- Unique engineering, traffic, maintenance, or safety problems;
- Substantial adverse social, economic, or environmental impacts, or
- The project not meeting the identified needs.

✓

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

Remarks: Per a review of the National Wetlands Inventory (NWI) online mapper (<https://www.fws.gov/wetlands/data/mapper.html>) on November 14, 2019 by RQAW, USGS topographic map (Appendix B, page B-2), and the water resources map in the RFI report (Appendix E, page E-7), seven wetlands are located within 0.5 mile of the project area. The nearest wetland is mapped within the project area. Field visits were conducted on August 28, 2019 and September 3, 2019 by INDOT and it was determined that two wetlands are located within the project area.

A *Waters of the U.S. Report* was completed by INDOT and was approved by the INDOT Ecology and Waterway Permitting Office on September 19, 2019 (Appendix F, pages F-1 to F-31). It was determined that two wetlands are located within the project area (Appendix B, page B-3). The USACE makes all determinations regarding jurisdiction.

**Wetland 1** is approximately 0.12 acre in size, is a palustrine emergent (PEM) wetland, and located in the southeast quadrant of the project area (Appendix B, page B-3). Two data points (W1 and W1-W2U) were taken to determine the boundary of Wetland 1 (Appendix F, pages F-10 to F-12 and F-16 to F-18). Data point W1 was taken within Wetland 1 and exhibited hydrophytic vegetation, hydric soils, and wetland hydrology; thus, meeting the three criteria to be classified as a wetland. Data point W1-W2U was taken outside Wetland 1 and did not meet all three of the criteria to be considered within a wetland. This wetland is likely to be considered jurisdictional (i.e. a Waters of the United States) due to its connectivity to Flat Creek, a tributary to the East Fork of White River, a TNW. The project will impact up to approximately 0.12 acre of Wetland 1 within the construction limits.

**Wetland 2** is greater than 0.78 acre in size, is a palustrine forested emergent (PFO) wetland, and located in the southeast quadrant of the project area (Appendix B, page B-3). Two data points (W2 and W1-W2U) were taken to determine the boundary of Wetland 2 (Appendix F, pages F-13 to F-15 and F-16 to F-18). Data point W2 was taken within Wetland 2 and exhibited hydrophytic vegetation, hydric soils, and wetland hydrology; thus, meeting the three criteria to be classified as a wetland. Data point W1-W2U was taken outside Wetland 2 and did not meet all three of the criteria to be considered within a wetland. This wetland is likely to be considered jurisdictional (i.e. a Waters of the United States) due to its connectivity to Flat Creek, a tributary to the East Fork of White River, a TNW. The dividing boundary of Wetland 1 and Wetland 2 is a tree line. Although the wetlands are abutting, the difference in classification, PEM versus PFO, is the reason for separating both wetlands. The project will impact up to approximately 0.18 acre of Wetland 2 within the construction limits.

Per the *Waters of the U.S. Report*, three other data points (DP 1 to DP3) were taken in areas that appeared to be potential wetlands. DP1 to DP3 determined those areas were not wetlands (Appendix F, pages F-19 to F-27).

Please note that coordination has been ongoing with the project designer to ensure wetland impacts are avoided and minimized as much as possible. Avoidance of the wetlands is not practicable because the wetlands are adjacent to the roadway and in the way of construction activities for the roadway and bridge. If the construction activities avoid the wetlands, the project would not be able to be properly constructed to improve sight distance issues. Wetland boundaries will be identified as "Wetland—Do Not Disturb Outside

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Construction Limits” on the final design plans. Wetland boundaries will be identified in the field prior to construction to avoid indirect impacts. INDOT recommends orange fencing and signs to separate construction activities from all wetlands.

The project will impact approximately 0.30 acre of wetlands. Because wetland impacts will exceed the 0.10 acre mitigation threshold, wetland mitigation will be required. If possible, the IDNR In-Lieu Fee Program will be utilized for wetland mitigation. A USACE Section 404 Permit and IDEM Section 401 Water Quality Certification will be required due to these wetland impacts.

Early coordination letters were sent to the USACE, IDNR Division of Fish and Wildlife, USFWS, and IDEM on November 12, 2019 (Appendix C, pages C-1 to C-4). The USACE did not respond to the early coordination letter. An automated response was received from IDEM on November 12, 2019; however, the response did not contain project specific comments (Appendix C, pages C-5 to C-12).

The USFWS responded to the early coordination letter on November 18, 2019 and stated the USFWS has no objections to the project as currently proposed (Appendix C, pages C-24 and C-25). The IDNR Division of Fish and Wildlife responded to the early coordination letter on December 12, 2019 with recommendations to avoid or minimize impacts to wetlands (Appendix C, pages C-20 to C-23). Recommendations generally include mitigating wetland impacts at the appropriate ratio per the 1991 INDOT/IDNR/USFWS Memorandum of Understanding. All applicable agency recommendations are included in the *Environmental Commitments* section of this CE document.

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

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

Remarks: Per a desktop review, field visits conducted on August 28, 2010 and September 3, 2019 by INDOT, and an aerial photograph of the project area (Appendix B, page B-3), adjacent land use is primarily agricultural and wooded. Dominant tree species included green ash (*Fraxinus pennsylvanica*), American sycamore (*Platanus occidentalis*), and red maple (*Acer rubrum*). Dominant herbaceous vegetation included reed canary grass (*Phalaris arundinacea*), tall fescue (*Schedonorus arundinaceus*), Japanese bristlegrass (*Setaria faberi*), eastern poison ivy (*Toxicodendron radicans*), and bush honeysuckle (*Diervilla lonicera*). Although no animals were observed, it is assumed that certain common animals are likely present within the project area (e.g. squirrels, raccoons, birds, etc.).

The total area of land disturbance is approximately 3.90 acres. Of the required permanent right-of-way, approximately 0.30 acre consists of residential land, 3.45 acres consists of agricultural land, and 1.45 acres consists of forested land (Appendix B, page B-3). Trees greater than three inches in diameter-at-breast-height (dbh) are within the construction limits. Approximately 0.11 acre of tree clearing will be needed and will be done within the bat inactive season (October through March). However, because an IDNR Construction in a Floodway Permit will not be needed, mitigation is not anticipated. Avoidance of the trees is not practicable because the trees are in the way of construction activities for the roadway and bridge. If the trees are not removed, the project would not be able to be properly constructed.

Early coordination letters were sent to the USACE, IDNR Division of Fish and Wildlife, USFWS, IDEM, and Hoosier National Forest on November 12, 2019 (Appendix C, pages C-1 to C-4). The USACE did not respond to the early coordination letter. An automated response was received from IDEM on November 12, 2019;

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however, the response did not contain project specific comments (Appendix C, pages C-5 to C-12). The Hoosier National Forest responded to the early coordination letter on November 12, 2019 and stated the project should not affect the Hoosier National Forest as the project is approximately 5 miles west of the nearest National Forest System land. The Hoosier National Forest did not have any concerns regarding the project (Appendix C, page C-16).

The USFWS responded to the early coordination letter on November 18, 2019 and stated the USFWS has no objections to the project as currently proposed (Appendix C, pages C-24 and C-25). The IDNR Division of Fish and Wildlife responded to the early coordination letter on December 12, 2019 with recommendations to avoid or minimize impacts to terrestrial and riparian habitat (Appendix C, pages C-20 to C-23). Recommendations generally include revegetating disturbed areas, minimizing tree and brush clearing, and mitigating impacts to non-wetland forest at appropriate ratios. All applicable agency recommendations are included in the *Environmental Commitments* section of this CE document.

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

**Karst**

Is the proposed project located within or adjacent to the potential Karst Area of Indiana? Yes   
 Are karst features located within or adjacent to the footprint of the proposed project? No

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:

Per a desktop review, the project is located inside the designated karst region of Indiana, as outlined in the October 13, 1993 Memorandum of Understanding (MOU). Per the USGS topographic map (Appendix B, page B-2) and the water resources map in the RFI report (Appendix E, page E-7), there are no karst features identified within or adjacent to the project area.

In their early coordination response, the IGS did not indicate that karst features may exist in the project area (Appendix C, pages C-13 to C-15). Impacts are not expected. The IGS stated the 0.5 mile search radius is located within an area with high liquefaction potential, 1% annual chance flood hazard, high potential for bedrock resources, low potential for sand and gravel resources, and no documented abandoned mineral resources extraction sites. This information was conveyed to the project designer on December 16, 2019.

Early coordination was also sent to the USFWS on November 12, 2019 (Appendix C, pages C-1 to C-4). In their early coordination response, the USFWS stated if any karst features are encountered, a karst survey should be conducted, with mitigation measures as necessary, in accordance with the USFWS 1993 Memorandum of Understanding (Appendix C, pages C-24 and C-25).

**Threatened or Endangered Species**

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

**Presence**

**Impacts**

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

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

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

Remarks:

Per a desktop review and the RFI report approved by INDOT Site Assessment and Management on October 15, 2019 (Appendix E, pages E-1 to E-10), the IDNR Martin County Endangered, Threatened and Rare (ETR)

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Species List has been checked (Appendix E, pages E-8 to E-10). The highlighted species on the list reflect the federal and state identified ETR species located within Martin County. Per the IDNR Division of Fish and Wildlife early coordination response letter dated December 12, 2019, the Natural Heritage Program’s database has been checked, and to date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity (Appendix C, pages C-20 to C-23).

Project information was submitted through the USFWS Information for Planning and Consultation (IPaC) website (<https://ecos.fws.gov/ipac/>) on May 26, 2020 by INDOT and an official species list was generated (Appendix C, pages C-27 to C-32). Per the official species list, the project area is within the range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (*Myotis septentrionalis*). Per the official species list, no additional species were found within the project area.

The project is located inside the designated karst region of Indiana. Karst areas may include additional habitat for bats; as such, an Avoidance and Minimization Measure (AMM) is included as a firm commitment in the *Environmental Commitments* section of this document. Hibernacula AMM 1: For projects located within karst areas, on-site personnel will use best management practices, secondary containment measures, or other standard spill prevention and countermeasures to avoid impacts to possible hibernacula. Where practicable, a 300 foot buffer will be employed to separate fueling areas and other major containment risk activities from caves, sinkholes, losing streams, and springs in karst topography.

The project qualifies for the *Range-wide Programmatic Informal Consultation for the Indiana bat and northern long-eared bat*, dated May 2016 (revised February 2018), between FHWA, Federal Railroad Administration (FRA), Federal Transit Administration (FTA), and the USFWS. An effect determination key was completed on September 3, 2019 by INDOT; based on the responses provided, it was determined the project *May Affect, Not Likely to Adversely Affect* the Indiana bat and northern long-eared bat (Appendix C, pages C-33 to C-48). INDOT Vincennes District requested USFWS review of the effect finding on September 3, 2019. No response was received from the USFWS within the 14-day review period; therefore, it was concluded the USFWS concurs with the finding. Avoidance and Minimization Measures (AMMs) are included as firm commitments in the *Environmental Commitments* section of this document.

Per the INDOT Bridge Inspection Report, dated August 5, 2020, Structure Number 450-51-06447 B has shown evidence of use (i.e. nests) by a bird species protected under the Migratory Bird Treaty Act (MBTA). AMMs must be implemented prior to the start of and during the nesting season. Nests without eggs or young should be removed prior to construction during the non-nesting season (September 8 – April 30) and during the nesting season if no eggs or young are present. Nests with eggs or young cannot be removed or disturbed during the nesting season (May 1 – September 7). Nests with eggs or young should be screened or buffered from active construction. Details of the required procedures are outlined in the “Potential Migratory Bird on Structure Unique Special Provision (USP)”. This firm commitment is included in the *Environmental Commitments* section of this CE document.

This precludes the need for further consultation on the project under Section 7 of the Endangered Species Act of 1973, as amended. If new information on endangered species at the site becomes available, or if project plans are changed, the USFWS will be contacted for consultation.

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### SECTION B – OTHER RESOURCES

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

If a SSA is present, answer the following:

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

Remarks: The project is located within Martin County which is not located within the St. Joseph Sole Source Aquifer, the only legally designated sole source aquifer in Indiana. Therefore, the FHWA/Environmental Protection Agency (EPA) Sole Source Aquifer Memorandum of Understanding (MOU) is not applicable and a detailed groundwater assessment is not needed. Impacts are not expected.

Per the IDEM Wellhead Proximity Determinator website (<http://www.in.gov/idem/cleanwater/pages/wellhead/>), accessed on November 12, 2109 by RQAW, the project area is not located within a Wellhead Protection Area or Source Water Area. Impacts are not expected.

Per review of the IDNR Water Well Record Database website (<https://www.in.gov/dnr/water/3595.htm>), accessed on November 20, 2019 by RQAW, one water well is located within 0.5 mile of the project area. The unconsolidated water well is located over 2,000 feet west of the project area. Per the IDNR Enhanced Water Well Viewer, the location of the water well is estimated, and the static water level is 110 feet. The maximum depth of excavation is approximately up to 5 feet below ground surface. Per the project designer, the project area does not contain any residential water wells. Impacts are not expected.

Per a desktop review of the INDOT Municipal Separate Storm Sewer Systems (MS4) website (<https://entapps.indot.in.gov/MS4/>), accessed on November 20, 2019 by RQAW, and the UAB discussion in the RFI report (Appendix E, page E-3), the project area is not within an Urbanized Area Boundary. Impacts are not expected.

Per a desktop review, field visits conducted on August 28, 2019 and September 3, 2019 by INDOT, an aerial photograph of the project area (Appendix B, page B-3), and coordination with the project designer, the project area contains a public water line. Utility coordination is ongoing. Any impacts to the water line would be temporary and cease upon project completion.

	<u>Presence</u>	<u>Impacts</u>	
		Yes	No
<b>Flood Plains</b>			
Longitudinal Encroachment	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Transverse Encroachment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Project located within a regulated floodplain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Homes located in floodplain within 1000' up/downstream from project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

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Remarks: Per a review of the IDNR Indiana Floodway Information Portal website (<https://dnrmmaps.dnr.in.gov/appsphp/fdms/>), accessed on November 20, 2019 by RQAW, and the RFI report, the project area is located within a regulatory floodplain (Appendix E, page E-7 and Appendix F, page F-9). Early coordination was sent to the Indiana Local Floodplain Administrator (Martin County Surveyor) on November 12, 2019 (Appendix C, pages C-1 to C-4). The Local Floodplain Administrator did not respond to the early coordination letter. The project qualifies as a Category 4 per the current INDOT *Categorical Exclusion Manual*. Category 4 projects involve replacement of existing drainage structures on essentially the same alignment.

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. A hydraulic design study that addresses various structure size alternatives will be completed during the preliminary design phase. A summary of this study will be included with the Field Check Plans.

<b>Farmland</b>	<u>Presence</u>	<u>Impacts</u>	
		Yes	No
Agricultural Lands	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Prime Farmland (per NRCS)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Total Points (from Section VII of CPA-106/AD-1006\*     129      
*\*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: Per a desktop review, field visits conducted on August 28, 2019 and September 3, 2019 by INDOT, an aerial photograph of the project area (Appendix B, page B-3), and early coordination with the Natural Resources Conservation Service (NRCS), the project will convert approximately 3.45 acres of farmland as defined by the Farmland Protection Policy Act.

An early coordination letter was sent to the NRCS on November 12, 2019 (Appendix C, pages C-1 to C-4). Coordination with NRCS resulted in a score of 129 on the NRCS-CPA-106 Form (Appendix C, pages C-18 and C-19). The NRCS threshold score for significant impacts to farmland that result in the consideration of alternatives is 160. Because the project score is less than the threshold, no significant loss of prime, unique, statewide, or local important farmland will result from the project. No alternatives other than those previously discussed in this document will be investigated without reevaluating impacts to prime farmland.

### SECTION C – CULTURAL RESOURCES

	<u>Category</u>	<u>Type</u>	<u>INDOT Approval Dates</u>	<u>N/A</u>
Minor Projects PA Clearance	B	B-12	N/A	<input type="checkbox"/>

Eligible and/or Listed  
Resource Present

<b>Results of Research</b>	
Archaeology	<input type="checkbox"/>
NRHP Buildings/Site(s)	<input type="checkbox"/>

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NRHP District(s) 

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 NRHP Bridge(s) 

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**Project Effect**

No Historic Properties Affected       No Adverse Effect       Adverse Effect

**Documentation Prepared**

**Documentation** (mark all that apply)

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

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

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

Remarks: On January 14, 2020 the INDOT Cultural Resources Office (CRO) determined the project falls within the guidelines of Category B, Type B-12 under the Minor Projects Programmatic Agreement (Appendix D, pages D-1 to D-4).

Category B, Type B-12 projects involve replacement, widening, or raising the elevation of the superstructure on existing bridges, and bridge replacement projects (when both the superstructure and substructure are removed), where work occurs in undisturbed soils and an archaeological investigation conducted by the applicant and reviewed by INDOT CRO determines that no National Register-listed or potentially National Register-eligible archaeological resources are present within the project area (Condition A ii), work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource (Condition B i), and the bridge was built after 1945 [the existing 30-foot long prestressed box beam bridge was reconstructed in 1980], 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 (Condition B ii b).

A *Phase Ia Archaeological Survey* was completed by qualified professionals from Cultural Resource Analysts (CRA) (Martin, January 2020) (Appendix D, pages D-5 and D-6). The report noted two documented archeological sites near the project area (Sites 12Mn121 and 12Mn122). The boundaries of the sites extend beyond the survey area and the sites were not fully investigated to determine if they are eligible for listing in the National Register of Historic Places (NRHP). However, the portions of the sites within the project area are

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not recommended for listing in the NRHP and no further archeological work was recommended within the project area.

After the archaeological short report was completed, minor changes to the permanent right-of-way limits were made. Because the permanent right-of-way limits extend beyond the archaeology survey boundary, coordination with INDOT CRO was conducted. In e-mail dated June 1, 2020, INDOT CRO stated that no additional archaeology or above-ground survey is necessary (Appendix D, pages D-7 and D-8).

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)

**Parks & Other Recreational Land**

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

Presence


Use

Yes	No

Evaluations

Prepared

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


**FHWA**  
**Approval date**

--

**Wildlife & Waterfowl Refuges**

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

Presence


Use

Yes	No

Evaluations

Prepared

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


**FHWA**  
**Approval date**

--

**Historic Properties**

- Sites eligible and/or listed on the NRHP

Presence

--

Use

Yes	No

Evaluations

Prepared

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


**FHWA**  
**Approval date**

--

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\*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).

Section 4(f) of the Department of Transportation Act of 1966, 49 USC 303(c) prohibits the use of certain public and historic lands for federally funded transportation facilities unless there is not a feasible and prudent alternative. The law applies to significant publicly owned parks, recreation areas, wildlife and waterfowl refuges, and National Register of Historic Places (NRHP) eligible or listed historic properties regardless of ownership. Lands subject to this law are considered Section 4(f) resources.

Per a desktop review, site visits on August 28, 2019 and September 3, 2019 by INDOT, an aerial map of the project area (Appendix B, page B-3), the infrastructure map in the RFI report (Appendix E, page E-6), and the MPPA Projects Assessment Form (Appendix D, pages D-1 to D-4), there are no Section 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 Water Conservation Fund Act of 1965 established the Land and Water Conservation Fund (LWCF), which was created to preserve, develop, and assure accessibility to outdoor recreation resources. Section 6(f) of this Act prohibits conversion of lands purchased with LWCF monies to a non-recreation use.

Per a review of the LWCF property list provided by the IDNR Division of Outdoor Recreation, dated December 2019, there are five LWCF properties within Martin County (Appendix I, page I-1). None of the LWCF properties are within or adjacent to the project area. Impacts are not expected.

**SECTION E – Air Quality**

Air Quality

**Conformity Status of the Project**

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

Yes

No



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  Level 1b  Level 2  Level 3  Level 4  Level 5

Remarks:

The project is included in the FY 2020 to 2024 INDOT STIP (Appendix H, page H-2). The project area is not located within an MPO; as such, it is not listed in the MPO TIP.



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### Indirect and Cumulative Impacts

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

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

Remarks:

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

Due to the scope of the project (replacing the existing structure, raising the new structure and roadway profile, improving the vertical curves immediately north and south of the structure, and placing riprap) and impacts limited to streams and wetlands, the project is not expected to result in any substantial indirect or cumulative impacts. The project will increase all condition ratings of the bridge to a 7 ("good condition") or higher, alleviate flooding within the project area, and improve roadway geometric deficiencies. However, the project is not expected to increase development in the area beyond what may already be planned. The project will not add capacity to the existing roadway network or provide additional access to any currently undeveloped area.

### Public Facilities & Services

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

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

Remarks:

Per a desktop review, field visits conducted on August 28, 2019 and September 3, 2019 by INDOT, an aerial photograph of the project area (Appendix B, page B-3), and the infrastructure map in the RFI report (Appendix E, page E-6), one religious facility, Trinity Springs Church of Christ Cemetery, is located within the 0.5 mile search radius. The cemetery is approximately 1,650 feet northeast of the right-of-way limits. Impacts are not expected due to distance. Per review of Google Maps, there does not appear to be any emergency services or public transportation stations located within the 0.5 mile search radius. Per the Red Flag Investigation, there are no public airports located within 3.8 miles (20,000 feet) of the project area (Appendix E, pages E-1 to E-10).

Per the project designer, the project area contains a public water line. Utility coordination is ongoing. Any impacts to the water line would be temporary and cease upon project completion. Also, per the project designer, telephone, electric, and water utilities are within the project area. Temporary impacts are expected to relocate the utilities.

Early coordination letters were sent to the Martin County Council, Martin County Board of Commissioners, Martin County Surveyor's Office, and the Martin County Highway Department on November 12, 2019 (Appendix C, pages C-1 to C-4). These organizations did not respond to the early coordination letter.

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 limits access.

### Environmental Justice (EJ) (Presidential EO 12898)

During the development of the project were EJ issues identified?

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

Does the project require an EJ analysis?

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

If YES, then:

Are any EJ populations located within the project area?

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

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

<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Remarks: Under FHWA Order 6640.23A, FHWA and INDOT, as a recipient of funding from FHWA, are responsible to ensure that their programs, policies, and activities do not have a disproportionately high and adverse effect on minority or low-income populations. Per the current INDOT CE Manual, an Environmental Justice (EJ) analysis is required for any project that has two or more relocations or 0.50 acre of additional permanent right-of-way. The project will require approximately 5.50 acres of permanent right-of-way and no relocations. Therefore, an EJ analysis is required.

Potential EJ impacts are detected by locating minority populations and low-income populations relative to a reference population to determine if populations of EJ concern exists and whether there could be disproportionately high and adverse impacts to them. The reference population may be a county, city, or town and is called the community of comparison (COC). In this project, the COC is Martin County. The community that overlaps the project limits is called the affected community (AC). In this project, the AC is Census Tract 9501.

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 or minority population is 125% of the COC. American Community Survey 5-year estimates data (2013 through 2017) was obtained from the U.S. Census Bureau website (<https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>) on November 13, 2019 by RQAW. The data collected for low-income and minority populations within the AC are summarized in the table below.

Table: Low-income and Minority Data (American Community Survey, 2013 through 2017)		
	COC: Martin County	AC 1 (Census Tract 9501)
Percent Low-income	13.3%	13.2%
125% of COC	16.7%	AC < 125% of COC
EJ Population of Concern		No
Percent Minority	2.8%	5.5%
125% of COC	3.5%	AC > 125% of COC
EJ Population of Concern		Yes

AC 1 has a percent low-income of 13.2% which is below 50% and is below the 125% COC threshold (16.7%). Therefore, there are no low-income populations of EJ concern. AC 1 has a percent minority of 5.5% which is below 50% and above the 125% COC threshold (3.5%). Therefore, there are minority populations of EJ concern.

The project will not disrupt community cohesion or create a physical barrier. The main impacts to adjacent properties will likely be the temporary inconvenience of construction activities, acquisition of strip right-of-way consisting of agricultural land and trees. Per coordination with INDOT Environmental Services Division, INDOT concurred with the findings on December 5, 2019 (Appendix I, pages I-24 and I-25). INDOT Environmental Services Division does not consider the impacts associated with this project as causing a disproportionately high and adverse effect on minority and/or low incomes 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 (Appendix I, pages I-24 and I-25). The census data sheets, map, and calculations can be found in Appendix I, pages I-20 to I-23.

Lastly, early coordination was sent to the U.S. Department of Housing and Urban Development (USHUD) on November 12, 2019 (Appendix C, pages C-1 to C-4). The USHUD did not respond to the early coordination letter.







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4. 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 limits access. (INDOT Vincennes District Environmental Section)
5. General AMM 1: Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs. (USFWS)
6. Hibernacula AMM 1: For projects located within karst areas, on-site personnel will use best management practices, secondary containment measures, or other standard spill prevention and countermeasures to avoid impacts to possible hibernacula. Where practicable, a 300 foot buffer will be employed to separate fueling areas and other major containment risk activities from caves, sinkholes, losing streams, and springs in karst topography. (USFWS)
7. Lighting AMM 1: Direct temporary lighting away from suitable habitat during the active season. (USFWS)
8. Tree Removal AMM 1: Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal. (USFWS)
9. 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. (USFWS and IDNR)
10. Tree Removal AMM 3: Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits). (USFWS)
11. Tree Removal AMM 4: Do not remove documented Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or documented foraging habitat any time of year. (USFWS)
12. If any karst features are encountered, a karst survey should be conducted, with mitigation measures as necessary, in accordance with the USFWS 1993 Memorandum of Understanding. (USFWS)
13. The project area contains a public water line. Coordination with the Superintendent of East Fork Water, Inc. will be needed prior to construction. Please contact Ray Hopkins at 812-444-9336. (INDOT Vincennes District Utilities)
14. Structure Number 450-51-06447 B has shown evidence of use (i.e. nests) by a bird species protected under the Migratory Bird Treaty Act (MBTA) during the August 5, 2020 inspection. Avoidance and minimization measures must be implemented prior to the start of and during the nesting season. Nests without eggs or young should be removed prior to construction during the non-nesting season (September 8 – April 30) and during the nesting season if no eggs or young are present. Nests with eggs or young cannot be removed or disturbed during the nesting season (May 1 – September 7). Nests with eggs or young should be screened or buffered from active construction. Details of the required procedures are outlined in the “Potential Migratory Bird on Structure USP.” (INDOT Vincennes District Environmental Section)

**For Further Consideration:**

1. Do not excavate in the low flow area except for the placement of piers, foundations, and riprap, or removal of the old structure. (IDNR Division of Fish and Wildlife)
2. Do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds. (IDNR Division of Fish and Wildlife)

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3. Use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids. (IDNR Division of Fish and Wildlife)
4. Plant native hardwood trees along the top of the bank and right-of-way to replace the vegetation destroyed during construction. (IDNR Division of Fish and Wildlife)
5. The new, replacement, or rehabbed structure, and any bank stabilization under the structure, should not create conditions that are less favorable for wildlife passage under the structure compared to the current conditions. A level area of natural ground under the structure is ideal for wildlife passage. If channel clearing will result in a flat bench area above the normal water level under the structure, this area should allow wildlife passage and should remain free of riprap and other similar materials that can impair wildlife passage. (IDNR Division of Fish and Wildlife)
6. 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). If riprap is used, it is recommended to only place enough riprap to provide streambank toe protection, such as from the toe of the bank up to the 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. (IDNR Division of Fish and Wildlife)
7. Impacts to non-wetland forest of one 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. The mitigation site should be in the floodway, downstream of the one square mile drainage area of that stream (or another stream within the 8-digit HUC, preferably as close to the impact site as possible) and adjacent to the existing forested riparian habitat. (IDNR Division of Fish and Wildlife)
8. Impacts to wetland habitat should be mitigated at the appropriate ratio per the 1991 INDOT/IDNR/USFWS Memorandum of Understanding. (IDNR Division of Fish and Wildlife)
9. Restrict below low-water work in streams to placement of culverts, piers, pilings and/or footings, shaping of the spill slopes around the bridge abutments, and placement of riprap. (USFWS)
10. Minimize the extent of hard armor (riprap) in bank stabilization by using bioengineering techniques whenever possible. If riprap is utilized for bank stabilization, extend it below low-water elevation to provide aquatic habitat. (USFWS)
11. Avoid all work within the inundated part of the stream channel during the fish spawning season (April 1 through June 30), except for work within sealed structures such as caissons or cofferdams that were installed prior to the spawning season. No equipment shall be operated below the ordinary high water mark during this time unless the machinery is within the caissons or on the cofferdams. (USFWS)
12. Evaluate wildlife crossings under bridge/culverts projects in appropriate situations. Suitable crossings include flat areas below bridge abutments with suitable ground cover, high water shelves in culverts, amphibian tunnels and diversion fencing. (USFWS)

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### SECTION K- EARLY COORDINATION

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

Remarks: Early coordination letters were sent to agencies on November 12, 2019 (Appendix C, pages C-1 to C-4). If a response was not received, it was assumed the agency did not feel the project would result in substantial impacts. Refer to the responding agency correspondences in Appendix C, pages C-5 to C-50. The following agencies/individuals were contacted during early coordination:

Agency	Date of Response(s)
1. NRCS (electronic coordination)	November 21, 2019
2. Indiana Geological Survey (electronic submission)	November 12, 2019
3. IDNR Division of Fish and Wildlife (electronic coordination)	December 12, 2019
4. IDEM (electronic query)	November 12, 2019
5. IDEM Groundwater Section (electronic query)	November 12, 2019
6. INDOT Office of Public Involvement (electronic coordination)	November 15, 2019
7. U.S. Department of Housing and Urban Development (electronic coordination)	No response received
8. USACE Louisville District (electronic coordination)	No response received
9. National Park Service, Midwest Regional Office	No response received
10. U.S. Forest Service	November 12, 2019
11. Martin County Council	No response received
12. Martin County Board of Commissioners	No response received
13. Martin County Surveyor's Office (Local Floodplain Administrator)	No response received
14. Martin County Highway Department	No response received
	September 3, 2019
	November 18, 2019
15. USFWS (standard and IPaC electronic coordination)	May 26, 2020

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### Appendix A: INDOT Supporting Documentation

Categorical Exclusion Level Thresholds.....	A-1
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### Appendix B: Graphics

General Location Map .....	B-1
Topographic Map .....	B-2
Photograph Location Key Map .....	B-3
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Preliminary Design Plan Sheets.....	B-16

### Appendix C: Early Coordination

Example Early Coordination Letter ( <i>appendices omitted</i> ).....	C-1
Indiana Department of Environmental Management (IDEM)	
Standard Electronic Response Letter .....	C-5
Indiana Geological Survey	
Electronic Response .....	C-13
U.S. Forest Service	
Response E-mail .....	C-16
Indiana Department of Transportation (INDOT)	
Office of Public Involvement Standard Response E-mail .....	C-17
Natural Resources Conservation Service (NRCS)	
Response Letter and Completed NRCS-CPA-106 Form.....	C-18
Indiana Department of Natural Resources (IDNR)	
Division of Fish and Wildlife Response Letter .....	C-20
U.S. Fish and Wildlife Service (USFWS)	
Early Coordination Response E-mail .....	C-24
INDOT District Bat Database Check E-mail.....	C-26
Information for Planning and Consultation (IPaC) Species List Letter .....	C-27
IPaC Concurrence Verification Letter.....	C-33
Bridge/Structure Assessment Form .....	C-49

### Appendix D: Section 106 of the National Historic Preservation Act (NHPA)

Minor Projects Programmatic Agreement (MPPA) Assessment Form.....	D-1
Indiana Archaeological Short Report ( <i>abstract only</i> ) .....	D-5
INDOT Archaeological Coordination E-mail.....	D-7

### Appendix E: Red Flag Investigation and Hazardous Materials

Red Flag Investigation ( <i>some graphics omitted</i> ) .....	E-1
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### Appendix F: Water Resources

Waters of the U.S. Report ( <i>some graphics omitted</i> ) .....	F-1
Waters of the U.S. Report INDOT Approval E-mail .....	F-31
StreamStats Report .....	F-32

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### Appendix G: Public Involvement

Example Notice of Entry for Survey or Investigation Letter (August 7, 2019).....	G-1
Example Notice of Entry for Survey or Investigation Letter (November 5, 2019).....	G-2

### Appendix H: Air Quality

Statewide Transportation Improvement Program ( <i>relevant pages only</i> ) .....	H-1
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### Appendix I: Other Information

National Park Service Land and Water Conservation Fund List .....	I-1
INDOT Bridge Inspection Report ( <i>relevant pages only</i> ).....	I-2
INDOT Abbreviated Engineer’s Assessment ( <i>appendices omitted</i> ).....	I-9
INDOT Hydraulics Memo .....	I-17
Environmental Justice (EJ) Analysis.....	I-20
INDOT EJ Analysis Concurrence E-mail.....	I-24

**Categorical Exclusion**

**Appendix A**

**INDOT Supporting Documentation**

**Des. Number 1700155**  
**Categorical Exclusion Level Thresholds**

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

<sup>1</sup>Coordinate with INDOT Environmental Services. INDOT will then coordinate with the appropriate FHWA Environmental Specialist.

<sup>2</sup>Any involvement with a bridge processed under the Historic Bridge Programmatic Agreement.

<sup>3</sup>Permanent and/or temporary right-of-way.

<sup>4</sup>AMMs = Avoidance and Mitigation Measures.

<sup>5</sup>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”.

<sup>6</sup>Potential for causing a disproportionately high and adverse impact.

<sup>7</sup>Hot Spot Analysis and/or MSAT Quantitative Emission Analysis.

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