Indiana Department of Transportation

County Marshall Route Upas Road Des. No. 1702838

FHWA-Indiana Environmental Document

CATEGORICAL EXCLUSION / ENVIRONMENTAL ASSESSMENT FORM

GENERAL PROJECT INFORMATION

Road No./County:	**Upas Road/ Marshall County**
Designation Number:	**1702838**
Project Description/Termini:	**The project involves the replacement of Marshall County Bridge No. 120 (Bridge No. 50-00120) along Upas Road over the Yellow River from 1.12 miles south of State Road (SR) 8 to 0.94 mile south of SR 8.**

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 _____ _____ 9/17/2020
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: Chris Kunkel/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 November 5, 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, G1.

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: Marshall County INDOT District: LaPorte

Local Name of the Facility: Upas Road

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

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

PURPOSE AND NEED:

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

The need for the project stems from the deteriorated condition of the existing bridge, Bridge No. 50-00120. The October 24, 2019 *Bridge Inspection Report* (excerpts from the report are included in Appendix J, J2 to J15) identified deficiencies in the existing structure. There is seepage and leaching between the beams and cracking along the wearing surface. The bent caps have heavy, flaking rust on the piles. The steel shell piles have section loss. The beams are cracked and spalled with exposed rusted strands. Vegetation is beginning to grow along the end bent caps. The approach roadway is beginning to settle. The bridge deck and superstructure have ratings of 4 which indicates a "poor" condition. The wearing surface and substructure have condition ratings of 5, which indicates "fair" condition. The overall rating of the structure is 4, which is considered to

be in "poor" condition. Condition ratings range from 0 to 9, with 0 indicated a failed structure and 9 indicating a new structure with no deficiencies.

The purpose of the project is to have a bridge that has ratings of all structure components of the bridge to be at least a 7 out of 9, which would be considered "good" condition. This will provide adequate crossing for travelling motorists at this crossing of the Yellow River.

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Marshall Municipality: N/A

Limits of Proposed Work: From 1.12 miles south of State Road (SR) 8 to 0.94 mile south of SR 8

Total Work Length: 0.18 Mile(s) Total Work Area: 1.75 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.

The Marshall County Board of Commissioners and the Federal Highway Administration (FHWA) intend to proceed with a bridge replacement project involving Marshall County Bridge No. 120 (National Bridge Inventory (NBI) No. 5000075), which carries Upas Road over the Yellow River.

Location:

The project is located along Upas Road in western Marshall County, Indiana. Specifically, the project is located in Sections 30 and 31, Township 33 North, and Range 1 East in Union and West Townships as depicted on the Donaldson U.S. Geological Survey (USGS) Quadrangle (Appendix B, B2).

Existing Conditions:

Within the project area, Upas Road is functionally classified as a local road. The typical cross-section consists of two 8-foot wide travel lanes (one in each direction) with no defined shoulder. The speed limit within the project area is 55 miles per hour (mph).

Marshall County Bridge No. 120 (Bridge No. 50-00120) is a side by side prestressed concrete box beam built in 1971 with a single 168.5-foot clear span and a 24.3-foot out-to-out roadway width. The typical cross-section of Upas Road on the structure consists of two 12.15-foot wide travel lanes (one in each direction) and no defined shoulder. There is steel bridge railing along both sides of Upas Road within the limits of the bridge but does not extend to the approaches. Within the project area there are two field entrance drives in the northwest quadrant, one residential driveway and one field entrance drive in the northeast quadrant, and one field entrance drive in the southeast, and southwest quadrants.

A 12-inch diameter corrugated metal pipe (CMP) conveys drainage under Upas Road approximately 248 feet north of the bridge. Additionally, a legal drain is conveyed via a 15-inch diameter corrugated polyethylene pipe (CPP) in the southeast quadrant and drains into the Yellow River.

Several components of Bridge No. 120 were noted to have deficiencies. There is seepage and leaching between the beams and cracking along the wearing surface. The bent caps have heavy, flaking rust on the piles. The steel shell piles

have section loss. The beams are cracked and spalled with exposed rusted strands. Vegetation is beginning to grow along the end bent caps. The approach roadway is beginning to settle. Please refer to the INDOT Bridge Inspection Report in Appendix J, pages J2 to J15.

Adjacent land use consists of agricultural fields, isolated residences and forested stream corridor (Appendix B, B3).

Preferred Alternative:

This proposed project will replace the existing bridge with a new three span, continuous composite prestressed concrete box beam bridge. The northern and southern span will each be 65 feet long and the middle span will be 70 feet long. The new bridge will have a length of 202 feet and an out-to-out width of 30.3 feet. The widening of the roadway on the structure will allow for the addition of a paved shoulder. The typical cross-section on the structure will be two 10-foot wide paved travel lanes (one in each direction) with a 3.7-foot wide paved shoulder on each side. Concrete bridge railing will be installed along both sides of the new structure. South of the bridge, 88 feet of guardrail will be installed along the west side and 149 feet of guardrail will be installed along the east side of Upas Road. North of the bridge, 62 feet of guardrail will be installed on the west side and 60 feet will be installed on the east side.

All residential drives will be reconstructed to existing conditions with the exception of the residential drive in the northeast quadrant. This gravel driveway will be widened to increase the turn radius. The project will also involve installing new pipe culverts under the two drives in the northwest quadrant, two entrance drives in the northeast quadrant, and one entrance drive in the southeast quadrant. The existing 12-inch diameter CMP that conveys drainage under Upas Road north of the existing structure will be replaced with a 40-foot long, 15-inch diameter pipe. The existing 15-inch diameter CPP along the east side of Upas Road south of the bridge will be removed and an open cut drainage ditch will be constructed. A new drainage ditch, approximately 250 feet in length, will be constructed along the west side of Upas Road north of the bridge. A new drainage ditch, approximately 160 feet in length, will be constructed along the west side of Upas Road south of the bridge. Additionally, a new 8-foot wide riprap drainage turnout will be constructed in the northeast quadrant from the guardrail down the sideslope.

Approximately 0.09 acre of new riprap will be placed around the north end bent and approximately 0.09 acre will be placed around the south end bent along the Yellow River.

The approaches along Upas Road will be replaced to full depth for approximately 311 feet north and 350 feet south of the bridge. The roadway will be raised a maximum of 1.5 feet south of the structure and 1 foot north of the structure to better transition the approach roadway to the new structure. The roadway elevation on the structure will remain unchanged. The new typical cross-section of Upas Road along the approaches of the bridge will consist of two 10-foot wide paved travel lanes (one in each direction) with 4-foot paved shoulders on each side. Incidental construction, for 100 feet north and 100 feet south from the project terminus will also occur. This will involve transitioning the approach pavement along Upas Road to its existing profile.

During construction, a temporary causeway will be constructed in the northwest and southwest quadrants. This will allow for flow of the Yellow River to continue throughout construction. Once construction is complete, the causeways will be removed.

Including incidental construction, the total project length will be approximately 940 feet along Upas Road. Please refer to Appendix B for maps depicting the project area (pages B1 to B4), photographs of the project area (pages B5 to B12), and the Preliminary Design Plans (pages B13 to B22).

The preferred alternative will meet the identified purpose and need by improving the structure at this crossing to at least a condition rating of 7. Replacement of the existing bridge with a new bridge will provide a new structure that is no longer considered deficient and all components will likely have a rating of 9.

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

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

Right-of-Way:
The proposed project will require the acquisition of 1.71 acres of permanent right-of-way (ROW) from five parcels and the acquisition of 0.03 acre of temporary ROW from two parcels (Appendix B, B3 and B19).

Maintenance of Traffic (MOT):
The proposed MOT will require the closure of Upas Road. A detour utilizing 14B Road, W County Line Road, and SR 8 will be established (Appendix B, B16). The total distance of the detour is 2.9 miles and is expected to last 9 months. The MOT will be implemented per the *Indiana Design Manual* guidelines.

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 replacing the deck and superstructure and repairing the end bents. This alternative would have likely involved less environmental impacts, impacts to surrounding property owners, and reduced costs compared to the preferred alternative. However, this alternative does not address the advanced deterioration present in the substructure and would require additional repairs in a shorter time frame than the preferred alternative. Although the deck and superstructure would likely achieve a condition rating of at least a 7, the substructure components would likely retain condition ratings below 7. Therefore, this alternative was dismissed from further consideration.

No Build Alternative: This alternative would not involve any improvements to the existing bridge. This alternative would not involve any immediate cost or result in any environmental impacts. If no improvements are made to the existing bridge, the bridge would continue to deteriorate and eventually fail, resulting in potential safety hazards for the public and higher costs for replacement or repair. This alternative was dismissed from further consideration because it would not address the purpose and need of the project.

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

ROADWAY CHARACTER:

Upas Road

Functional Classification:	Local Road				
Current ADT:	270	VPD (2023)	Design Year ADT:	332	VPD (2048)
Design Hour Volume (DHV):	33	Truck Percentage (%)	10		
Designed Speed (mph):	55	Legal Speed (mph):	55 (all unposted county roads)		

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	Existing		Proposed	
Number of Lanes:	2		2	
Type of Lanes:	Through lanes		Through lanes	
Pavement Width:	8	ft.	10	ft.
Shoulder Width:	0	ft.	4	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): Local: 50-00120 NBI: 5000075 Sufficiency Rating: 57.1 (2019 Inspection Report)
(Rating, Source of Information)

	Existing		Proposed	
Bridge Type:	Prestressed concrete box beam		Prestressed composite box beam	
Number of Spans:	3		3	
Weight Restrictions:	N/A	ton	N/A	ton
Height Restrictions:	N/A	ft.	N/A	ft.
Curb to Curb Width:	24.3	ft.	27.25	ft.
Outside to Outside Width:	24.3	ft.	30.25	ft.
Shoulder Width:	0	ft.	3.7	ft.
Length of Channel Work:			183.5	ft.

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

Remarks: The project involves the replacement of Marshall County Bridge No. 120, which carries Upas Road over Yellow River. Marshall County Bridge No. 120 is a three-span, prestressed concrete box beam bridge (Appendix B, B19). The bridge work will impact a total of 152.5 linear feet of Yellow River and 31 linear feet of an UNT 1 to Yellow River.

The project will also involve the construction and installation of seven additional structures to convey drainage within the project area. Information about these structures can be found in the table below.

Structure No.	Type	Size (length by diameter)	Location
10	Pipe under field entrance drive	45 feet by 15 inches	SE quadrant (outlets into drainage ditch)
11	End bent drain pipe	43 feet by 6 inches	South end bent
12	End bent drain pipe	43 feet by 6 inches	North end bent
13	Pipe under field entrance drive	25 feet by 15 inches	NW quadrant
14	Pipe under field entrance drive	38 feet by 15 inches	NW quadrant
15	Pipe under residential and field entrance drives	268 feet by 15 inches	NE quadrant
16	Drainage pipe (under Upas Road)	57 feet by 15 inches	248 feet north of bridge

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	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 will require the closure of Upas Road within the project area. A signed detour that utilizes 14B Road, County Line Road, and SR 8 will be established (Appendix B, B16). Access to all drives will be maintained during construction. The detour will be approximately 2.9 miles and is expected to last for approximately 9 months. The MOT will be implemented per the *Indiana Design Manual* guidelines.

The closure will likely 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. The project sponsor will be responsible for contacting school districts and emergency services in accordance with current INDOT Design Manual and Standard Specifications.

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: $ 141,051 (2020) Right-of-Way: $ 60,000 (2021) Construction: $ 2,355,100 (2023)

Anticipated Start Date of Construction: Winter 2023

Date project incorporated into STIP July 2, 2019

	Yes	No
Is the project in an MPO Area?	X	

If yes,

Name of MPO Michiana Area Council of Governments (MACOG)

Location of Project in TIP Pages 51 and 52

Date of incorporation by reference into the STIP July 2, 2019

RIGHT OF WAY:

Land Use Impacts	Amount (acres) Permanent	Temporary
Residential	0.55	0.02
Commercial	0.00	0.00
Agricultural	0.06	0.01
Forest	0.43	0.00
Wetland/Waterway	0.53	0.00
Other: Maintained Roadside	0.14	0.00
Other:	0.00	0.00
TOTAL	1.71	0.03

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

Remarks: The existing ROW along Upas Road extends to the edge of the roadway which is approximately 8 feet wide from the roadway centerline (total width of 16 feet wide). The existing ROW is all transportation land use.

The project requires approximately 1.71 acres of permanent ROW. The land use of the ROW acquired will consist of residential (0.55 acre), agricultural (0.06 acre), forested (0.43 acre), wetland/waterway (0.53 acre), and maintained roadside (0.14 acre) land use. The new ROW will be a minimum of 45 feet wide (20 feet west and 25 feet east of the centerline to 155 feet wide (70 feet west and 85 feet east of the centerline) along Upas Road. The project also requires approximately 0.03 acre of temporary ROW in the southwest and southeast quadrant for the reconstruction of the driveways. The land use of the temporary ROW consists of 0.02 acre of residential land use in the southwest quadrant and 0.01 acre of agricultural land use in the southeast quadrant.

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	X	X	

Remarks: Based on a desktop review, a site visit on July 16, 2019, by Lochmueller Group, the aerial map of the project area (Appendix B, B3), the USGS topographic map (Appendix B, B2), and the water resources map of the Red Flag Investigation (RFI) (Appendix E, E7) there are 12 rivers and streams located within the 0.5 mile search radius. The closest river, Yellow River, is located within the project area.

A *Waters of the U.S. Determination Report* was completed for the project on September 25, 2019. Please refer to Appendix F, pages F1 to F56 for the *Waters of the U.S. Determination Report*. It was determined that two likely jurisdictional streams, Yellow River and an unnamed tributary (UNT), are located within the survey

area. The Yellow River would be considered jurisdictional due to its designation as a traditionally navigable waterway (TNW) and UNT 1 would be considered jurisdictional due to connectivity to the Yellow River, a TNW. The U.S. Army Corps of Engineers (USACE) makes all final determinations regarding jurisdiction.

The Yellow River is a perennial stream feature that flows from southeast to northwest within the investigation area. The Yellow River has a wide channel with a wide forested riparian area. The ordinary high water mark (OHWM) of the Yellow River is 143 feet wide by 2 feet deep. This resource is a good quality, perennial resource based on the riffle/pool complex, substrate, and channel morphology.

UNT 1 is an intermittent stream feature that flows northeast in the southeast quadrant of the project area and outlets into the Yellow River. The OHWM of UNT 1 is 2 feet, 2 inches wide by 2 inches deep. This resource is a poor quality feature due to its lack of riffle/pool complex and poor substrate (Appendix B, B3).

Yellow River and the drainage pipe in the southeast quadrant of the project area are legal drains within Marshall County. Coordination with the Marshall County Surveyor occurred on May 12, 2020 and no response was received (Appendix C, C1 to C4).

It is expected that 152.5 feet (0.5 acre below the OHWM) of the Yellow River and 31 feet (0.002 acre below the OHWM) of UNT 1 to Yellow River will be impacted by the bridge work associated with this project. Impacts to the Yellow River will consist of excavation to insert the new piers and excavation to install the riprap along the north and sound end bents. Impacts to UNT 1 will consist of grading, vegetation clearing, and construction access activities.

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.

Due to the anticipated impacts to likely Waters of the U.S., Yellow River and UNT 1 to Yellow River, a USACE Section 404 Regional General Permit (RGP) and an IDEM Section 401 Water Quality Certification (WQC) will likely be required.

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 183.5 linear feet (0.502 acre below OHWM) to stream features, it is anticipated that stream mitigation may be required.

Early coordination letters were sent to the US Fish and Wildlife Service (USFWS), the Indiana Department of Natural Resources Division of Fish and Wildlife (IDNR DFW), and the USACE on May 12, 2020 (Appendix C, C1 to C4). The USACE responded on May 19, 2020 stating that the project will not have adverse environmental impacts to a resource within their area of expertise (Appendix C, C16). The USFWS responded in a letter on June 9, 2020 and recommended maintaining this high quality reach of the Yellow River for mussel habitat by preserving the existing riparian corridor, enhancing/restoring the corridor, and utilizing erosion control (Appendix C, C19 to C20). Recommendations included The IDNR DFW responded on June 10, 2020 and had recommendations relating to stream impacts (Appendix C, C43 to C46). These included recommendations for types of crossing, bank stabilization recommendations, and minimizing stream disturbance to be within the project construction limits.

Applicable agency recommendations are included in *Section J: Environmental Commitments.*

An automated letter was generated from the IDEM website on May 12, 2020 (Appendix C, C5 to C10). Applicable recommendations from the Proposed Roadway Letter include coordinating with 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 July 16, 2019 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 USACE responded on May 19, 2020 (Appendix C, C16), the USFWS responded on June 9, 2020 (Appendix C, C19 to C20) and the IDNR DFW responded on June 10, 2020 (Appendix C, C43 to C46). None of the agencies had recommendations relating to other surface waters.

An automated letter was generated from the IDEM website on December 16, 2019 (Appendix C, page C5 to C10). No recommendations related to open water features apply as there are no open water feature impacts associated with this project.

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

Total wetland area: 0.2 acre(s) Total wetland area impacted: 0.03 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 A	PFO1F	0.11	0.03	Fair quality, likely water of the U.S.
Wetland B	PFO1A	0.03	0.00	Fair quality, likely water of the U.S.
Wetland C	PEM1A	0.06	0.00	Fair quality, likely water of the U.S.

Wetlands (*Mark all that apply*)	**Documentation**	**ES Approval Dates**
Wetland Determination	X	N/A
Wetland Delineation	X	N/A
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) online mapper (https://www.fws.gov/wetlands/data/Mapper.html) (Appendix F, F13), the USGS topographic map (Appendix B, B2), and the water resource map of the RFI report (Appendix E, E7), there are 14 mapped wetlands located within the 0.5 mile search radius. Two mapped wetlands are located within the project area.

A *Waters of the U.S. Determination Report* was completed by Lochmueller Group on September 25, 2019 (Appendix F, F20). Three wetlands were delineated within the investigation area, Wetlands A, B, and C (Appendix B, B5 to B12). It was determined that Wetlands A through Wetland C would likely be considered jurisdictional due to the significant nexus to the Yellow River, a TNW. The USACE makes all final determinations regarding jurisdiction.

Wetland A is a palustrine, forested, broad-leaved deciduous, semi-permanently flooded (PFO1F) wetland according to the classifications defined by *Cowardin et al.* (1979). Wetland A is 0.11 acre in size. This wetland developed as a result of drainage from UNT 1 and flooding from the Yellow River. Based on a qualitative analysis of Wetland A, this wetland is of fair quality due to its position within a floodplain and the presence of quality wetland species. Approximately 0.03 acre of Wetland A will be impacted by the project. Impacts will occur from grading, vegetation clearing, construction access, and riprap placement. Avoidance of Wetland A is not feasible because grading is required to raise the profile of the approach roadway to meet current design standards and to meet the purpose and need of the project. Although UNT 1 will be impacted and UNT 1 drains into Wetland A, it is not likely that the impacts to UNT 1 will reduce the amount of drainage to the portion of Wetland A that will not be impacted by the project.

Wetland B is a palustrine, forested, broad-leaved deciduous, temporarily flooded (PFO1A) wetland according to the classifications defined by *Cowardin et al.* (1979). Wetland B is 0.03 acre in size. This wetland developed as a result of flooding from the Yellow River and its position within a topographic depression. Based on a qualitative analysis of Wetland B, this wetland is of fair quality due to its position within a floodplain and presence of quality wetland species. Wetland B is outside of the construction limits and is not anticipated to impacted by this project.

Wetland C is a palustrine, scrub-shrub, broad-leaved deciduous, temporarily flooded (PEM1A) wetland according to the classifications defined by *Cowardin et al.* (1979). Wetland C is 0.06 acre in size. This wetland developed due to flooding from the Yellow River and its position within a topographic depression. Based on a qualitative analysis of Wetland C, this wetland is of fair quality due to its position within a floodplain and lack of vegetation. Wetland C is outside of the construction limits and is not anticipated to impacted by this project.

Due to 0.03 acre of anticipated impacts to Wetland A an USACE Section 404 RGP and an IDEM Section 401 WQC will likely be required. Wetland impacts are below the threshold to require mitigation, 0.1 acre; however, since stream impacts are above the threshold to require mitigation, mitigation may be required. Impacts to Wetland A will be limited to the portion within the construction limits. The portion of Wetland A will be marked as “Do Not Disturb” on the plans and signs and/or fencing marking the extent of the wetland will be placed onsite during construction.

The USACE responded on May 19, 2020 stating that the project will not have adverse environmental impacts to a resource within their area of expertise (Appendix C, C16). The USFWS responded in a letter on June 9, 2020 and had no recommendations relating to wetland resources (Appendix C, C19 to C20). The IDNR DFW responded on June 10, 2020 and had recommendations relating to wetland impacts (Appendix C, C43 to C46). These recommendations included contacting the appropriate agencies with regards to permits and mitigating for wetland impacts.

Applicable agency recommendations are included in *Section J: Environmental Commitments.*

An automated letter was generated from the IDEM website on May 12, 2020 (Appendix C, C5 to C10). Applicable recommendations from the Proposed Roadway Letter include coordinating with appropriate agencies with regards to wetland impacts.

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

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

Remarks:

Based on a desktop review, a site visit on July 16, 2018, by Lochmueller Group, and the aerial map of the project area (Appendix B, B3), there is forested, agricultural, wetland, maintained vegetated roadside, and riparian habitat in the area. Dominant vegetation within the project area included honey locust (*Gleditsia triacanthos*), black walnut (*Juglans nigra*), common hackberry (*Celtis occidentalis*), sugar maple (*Acer saccharum*), buttonbush (*Cephalanthus occidentalis*), jewelweed (*Impatiens capensis*), Gray's sedge (*Carex grayi*), Canadian clearweed (*Pilea pumila*), rice cutgrass (*Leersia oryzoids*), and riverbank grape (*Vitus riparia*). The total amount of habitat disturbance will be 1.47 acres. Habitat impacts will occur for construction access to remove the existing bridge and construct the new bridge, installation of new riprap, reconstruction of the driveways within the project area, and removal and installation of the drainage culverts. It is anticipated that 0.17 acre of trees within 100 feet of the roadway will be removed during construction. The species removed largely consist of those listed above, honey locust, black walnut, common hackberry, and sugar maple. The avoidance of terrestrial habitat is not feasible 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.

There were no migratory birds' nests observed beneath the bridge during the site visit; however, due to the presence of Yellow River, the bridge provides suitable nesting habitat. Migratory birds are protected under the federal Migratory Bird Treaty Act. An avoidance and minimization plan shall be developed by the contractor and approved by the Area Engineer and implemented prior to the start of and during the nesting season. At a minimum the plan shall include provisions stating nests shall be removed prior to construction during the non-nesting season (September 8 - April 30). Nests cannot be disturbed during the nesting season (May 1 - September 7) without prior coordination with INDOT EWPO. If there are nests with eggs or young on the structure during the nesting season, the contractor shall make every effort to avoid impacts to the nests and notify the Project Engineer or Project Supervisor who will contact the assigned INDOT EWPO Specialist for assistance.

The USFWS responded in a letter on June 9, 2020 with recommendations related to riparian woodland and forested wetland mitigation (Appendix C, C19 to C20). The IDNR DFW responded on June 10, 2020 and had recommendations relating to terrestrial habitat impacts (Appendix C, C43 to C46). These recommendations included contacting the appropriate agencies with regards to wildlife passage through the structure, reseeding all disturbed areas, time of year restrictions on tree clearing, and limiting habitat impacts within construction limits.

Applicable agency recommendations are included in *Section J: Environmental Commitments.*

An automated letter was generated from the IDEM website on May 12, 2020 (Appendix C, C5 to C10). 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.

Indiana Department of Transportation

County Marshall Route Upas Road Des. No. 1702838

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 MOU. According to the topographic map of the project area (Appendix B, B2) and the water resources map of the RFI report (Appendix E, E7) there are no karst features identified within or adjacent to the project area. In the early coordination response, the Indiana Geological Survey did not indicate that karst features exist in the project area (Appendix C, C11 to C13). They did indicate that high potential for liquefaction, 1% annual flood hazard, low potential for encountering bedrock resources, high potential for impacting sand and gravel resources, and the presence of petroleum exploration wells with 0.5 mile of the project area. The response from IGS was communicated with the designer on June 23, 2020. No impacts are expected.

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)	X		X

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

Remarks: Based on a desktop review and the RFI report (Appendix E, E1 to E10) completed by Lochmueller Group on September 17, 2019, the IDNR Marshall County ETR Species List has been checked and is included in Appendix E, E9 to E10. 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 dated June 10, 2020 (Appendix C, C43 to C46), the Natural Heritage Program's Database has been checked. The state endangered Northern Brook Lamprey (*Ichthyomyzon fossor*) has been documented in the Yellow River within 0.5 mile of the project area. The concern for this species is maintaining the existing riffle complex, limiting the impacts to the stream bottom, and maintaining normal flow as much as possible during and after construction. For this project, the footprint has been minimized to the maximum extent possible in order to limit impacts to the stream channel. All equipment required will be operated from the existing roadway, and flow along the Yellow River will continue through the project area throughout construction.

Project information was submitted through the USFWS's IPaC portal, and an official species list was generated (Appendix C, C21 to C26). The project is within the range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*). No additional species were found within or adjacent to the project area, other than the Indiana bat and NLEB.

The project qualifies for the *Range-wide Programmatic Informal Consultation* for the Indiana bat and 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 June 22, 2020, and based on the responses provided, the project was found to "not likely adversely affect" the Indiana bat and/or the NLEB. INDOT reviewed and verified the effect finding on June 22, 2020 and requested USFWS's review of the finding (Appendix C, C27 to C40). No response was received from USFWS within the 14-day review

period; therefore, it was concluded that they concur with the finding. Avoidance and Mitigation Measures (AMMs) are included as firm commitments in *Section J: Environmental Commitments* of this CE document.

According to their response to early coordination on June 9, 2020, the USFWS stated that the project is within the known range of the federally endangered clubshell mussel (*Pleurobema clava*), rayed bean mussel (*Villosa fabalis*), sheepnose mussel (*Plethobasus cyphyus*), and rusty patched bumblebee (*Bombus affinis*), and the federally threatened eastern massasauga rattlesnake (*Sistrurus catenatus*). The endangered mussels are not found in the Yellow River and there is no known habitat for the eastern massasauga within the proposed project area. However, preservation of the existing riparian corridor, enhancement/restoration of the corridor, erosion control, and other activities to maintain this high quality reach of the Yellow River are important and need to be recognized during any construction projects affecting this portion of the river. Currently, the project is utilizing erosion control, all equipment will be operated from the existing roadway, and the flow of the Yellow River will continue throughout construction to allow for the natural channel within this reach of the Yellow River to be maintained. The project area is within the uncertainty zone for the rusty patched bumblebee. Uncertainty Zones do not require Section 7 consultation. Therefore, they agree that the proposed project is not likely to adversely affect these endangered and threatened species (Appendix C, C19 to C20).

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

SECTION B – OTHER RESOURCES

	Presence	Impacts	
Drinking Water Resources		Yes	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 Marshall 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 groundwater assessment is not needed, and no impacts are expected.

The IDEM Wellhead Proximity Determinator website (https://www.in.gov/idem/cleanwater/pages/wellhead/) was accessed by Lochmueller Group on February 11, 2020. The required project location data was provided, and it was determined that this project is not located within a Wellhead Protection Area or Source Water Area. No impacts are expected.

The IDNR Water Well Web Record Database website (http://www.in.gov/dnr/water/6604.htm) was reviewed by Lochmueller Group on February 11, 2020. No water wells were identified within the project area. No impacts to water wells are anticipated as a result of this project.

Based on a desktop review of the INDOT MS4 website (https://entapps.indot.in.gov/MS4/) by Lochmueller Group on September 17, 2019, 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 July 16, 2020, by Lochmueller Group and the aerial map of the project area (Appendix B, B3) this project is not located where there will be public water system impacts. 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 in floodplain within 1000' up/downstream from project	X		X

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

Remarks: The IDNR Indiana Floodway Information Portal website (http://dnrmaps.dnr.in.gov/appsphp/fdms/) and the RFI Report (Appendix E, E7) were reviewed on October 8, 2018, by Lochmueller Group. This project is located within a regulatory floodplain as determined from approved Federal Emergency Management Agency (FEMA) floodplain maps (Appendix F, F14). An early coordination letter was sent on May 12, 2020 to the local floodplain administrator. They responded on June 4, 2020, stating that they see no issue or concern with the proposed project (Appendix C, C18). This project qualifies as a Category 4, which is for projects that replace an existing structure, per the current *INDOT CE Manual*, which states:

One home is 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.

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* **112**

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

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

Remarks: Based on a desktop review, a site visit on July 16, 2019 and the aerial map of the project area (Appendix B, B3), the project will convert 0.06 acre of farmland as defined by the Farmland Protection Policy Act. An early coordination letter was sent on May 12, 2020, to Natural Resources Conservation Service (NRCS). Coordination with NRCS resulted in a score of 112 on the NRCS-CPA-106 Form (Appendix C, C14). NRCS's threshold score for significant impacts to farmland that result in the consideration of alternatives is 160. Since this project score is less than the threshold, no significant loss of prime, unique, statewide, or local important farmland will result from this project. No alternatives other than those previously discussed in this document will be investigated without reevaluating impacts to prime farmland.

SECTION C – CULTURAL RESOURCES

	Category	Type	INDOT Approval Dates	N/A
Minor Projects PA Clearance	B	12	May 22, 2019	

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	May 22, 2019	N/A
Archaeological Phase Ia Survey Report	X	May 22, 2019	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 May 22, 2019 the INDOT Cultural Resources Office (CRO) determined that this project falls within the guidelines of Category B, Type 12 under the Minor Projects Programmatic Agreement (Appendix D, D1 to D4).

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) in undisturbed soils.

A Phase 1a Archaeological Survey Report was completed on April 22, 2019 by Cultural Resources Analytics, Inc. the report included an archaeological records check and an onsite investigation of the project survey area for National Register-eligible archaeological sites. No archaeological sites had been recorded within the project survey area. During the field reconnaissance, five previously unrecorded sites were found within the survey area. However, it was found that these sites were not considered to possess information that would substantially increase our understanding of the region's history or prehistory. Therefore, 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 facilities unless there is no feasible and prudent alternative. The law applies to significant publicly owned parks, recreation areas, wildlife / waterfowl refuges, and NRHP eligible or listed historic properties regardless of ownership. Lands subject to this law are considered Section 4(f) resources.

Based on a desktop review, a site visit on July 16, 2019 by Lochmueller Group, the aerial map of the project area (Appendix B, B3), and the RFI report (Appendix E, E1 to E10) 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.

The West Township Trustee responded to early coordination on June 4, 2020 (Appendix C, C17). In his response, he stated that the location of the bridge is a popular kayak and canoe launch location and he was wondering if adding a kayak/canoe launch to the project would be possible. His comment was passed on to the designer on June 4, 2020. At this time, adding a launch point for personal watercraft is not within the scope of the project. It should also be noted that since this area is privately owned and is not designated as a public recreation resource, it would not be considered a Section 4f resource.

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.

A review of 6(f) properties on the INDOT Environmental Policy website at www.in.gov/indot/2523.htm revealed a total of ten properties in Marshall County (Appendix J, 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:

This project is included in the Fiscal Year (FY) 2020-2024 Statewide Transportation Improvement Program (STIP) and the Michiana Area Council of Governments (MACOG) FY 2020-2023 Transportation Improvement Program (TIP) (Appendix H, H1 to H2).

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

This project is of a type qualifying as a CE (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 (MSAT) analysis is not required.

SECTION F - NOISE

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

	No	Yes/ Date
ES Review of Noise Analysis		

Remarks:

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

SECTION G – COMMUNITY IMPACTS

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

Remarks:

The project will ultimately be beneficial to local business and properties due to improvements of deteriorating bridge conditions and will not change access to properties within the area. Overall, the negative impacts to property owners and local businesses within the project area will be minimal and 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 not change access to properties within 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 February 10, 2020, by Lochmueller Group, there is one festival, Marshall County Blueberry Festival, scheduled within 10 miles of the project, in the City of Plymouth. With the establishment of the detour, festival attendees will have other routes available. Therefore, no impacts are expected.

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 *Section J: Environmental Commitments*.

The ADA Transition Plan for Marshall County was approved and implemented on May 20, 2013. The project will comply with the published ADA Transition Plan. There are no existing pedestrian facilities to 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

Will the proposed action result in substantial indirect or cumulative impacts?	Yes	No
		X

Remarks:

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

This project will not add 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 or result in substantial indirect or cumulative impacts.

Public Facilities & Services

Will the proposed action result in substantial impacts on health and educational facilities, public and private utilities, emergency services, religious institutions, airports, public transportation or pedestrian and bicycle facilities? *Discuss how the maintenance of traffic will affect public facilities and services.*	Yes	No
		X

Remarks:

Based on a desktop review, a site visit on July 16, 2019 by Lochmueller Group, the aerial map of the project area (Appendix B, B3), and the RFI report (Appendix E, E1 to E10) there are no public facilities within the 0.5 mile search radius. There are no public facilities within or adjacent to the project area. Therefore, no impacts are expected.

Early coordination information was sent to Marshall County Highway Department, Marshall County Emergency Management Agency, Marshall County Surveyor, Marshall County Sheriff's Department, Culver Police Department, Culver Fire Department, and Culver School Corporation on April 3, 2018 (Appendix C, C1 to C4). None of these agencies responded to early coordination.

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 6640.23A, 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 Exclusion Manual, an Environmental Justice (EJ) Analysis is required for any project that has two or more relocations or 0.5 acre of additional permanent ROW. The project will require 1.71 acres of permanent ROW and 0.03 acre of temporary ROW. Therefore, an EJ Analysis is required.

Potential EJ impacts are detected by locating minority and low-income populations relative to a reference population to determine if populations of EJ concern exists and whether there could be disproportionately high and adverse impacts to them. The reference population may be a county, city or town and is called the community of comparison (COC). In this project, the COC is Marshall County, Indiana. The community that overlaps the project area is called the affected community (AC). In this project, there are two AC's; AC1 is Census Tract 203.01 and AC2 is Census Tract 203.02, Marshall County, Indiana. An AC has a population of concern for EJ if the population is more than 50% minority or low-income or if the low-income or minority population is 125% of the COC. Data from the American Community Survey five-year estimates data (2014-2018) was obtained from the US Census Bureau Website (https://data.census.gov/) on June 10, 2020 by Lochmueller Group. The data collected for minority and low-income populations within the AC are summarized in the below table.

	COC Marshall County, Indiana	**AC 1** Census Tract 203.01	**AC 2** Census Tract 203.02
LOW-INCOME POPULATION			
Total Population for Whom Poverty Status is Determined	45,817	3,878	2,990
Total Population Below Poverty Level	5,232	260	251
Percent Low-Income	11.4%	6.7%	8.4%
125 Percent of COC	14.3%		
AC Percent Low-Income Greater Than 125 Percent of COC?		No	No
AC Percent Low-Income Greater Than 50 Percent?		No	No
Population of EJ Concern?		No	No
MINORITY POPULATION			
Total Population	46,595	3,973	3,115
Minority Population	5,779	205	104
Percent Minority	12.4%	5.2%	3.3%
125 Percent of COC	15.5%		
AC Percent Minority Greater Than 125 Percent of COC?		No	No
AC Percent Minority Greater Than 50 Percent?		No	No
Population of EJ Concern?		No	No

AC1, Census Tract 203.01, has a percent low-income of 6.7% which is below 50% and is below the 125% COC threshold. AC2, Census Tract 203.02, has a percent low-income of 8.4% which is below 50% and is below the 125% COC threshold. Therefore, both AC's do not contain low-income populations of EJ concern.

AC1, Census Tract 203.01, has a percent minority of 5.2% which is below 50% and is below the 125% COC threshold. AC2, Census Tract 203.02, has a percent minority of 3.3% which is below 50% and is below the 125% COC threshold. Therefore, both AC's do not contain minority populations of EJ concern.

The census data sheets, map, and calculations can be found in Appendix I (I1 to I6). No further environmental justice analysis is warranted.

Relocation of People, Businesses or Farms

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

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

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

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

There is an overhead telephone line along the west side and an overhead electrical line along the east side of Upas Road within the project area that could be affected by the project. Utility coordination has begun and will continue throughout the project to ensure impacts to utilities are minimal.

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		September 17, 2019

Include a summary of findings for each investigation.

Remarks: Based on a review of GIS and available public records, an RFI was approved by INDOT Site Assessment & Management on September 17, 2019 (Appendix E, E1 to E10). No sites with hazardous material concerns or sites involved with regulated substances were identified in or within 0.5 mile of the project area. Further investigation for hazardous materials or regulated substances is not required at this time.

The Yellow River is impaired for *E. coli* and polychlorinated biphenyls (PCBs) in fish tissue. Workers who are working in or near water with *E. coli* should take care to wear appropriate PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure. Exposure to PCBs in fish tissue is considered low, assuming workers are not eating biota surrounding or associated with the water body. If there will be sediment and/or soils disturbed by construction additional investigation may be necessary. Coordination with INDOT ESD will occur.

County Marshall Route Upas Road Des. No. 1702838

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 152.5 feet (0.5 acre below the OHWM) of the Yellow River and 31 feet (0.002 acre below the OHWM) will be impacted by the project. Impacts will be limited to the portion of the streams within the construction limits. Approximately 0.03 acre of Wetland A will likely be impacted as part of the project. Impacts to Wetland A 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 183.5 linear feet (0.502 acre below OHWM) to stream features, it is anticipated that stream mitigation may be required.

Due to ground disturbance exceeding 1.0 acre, a Rule 5 Notice of Intent will be required from the IDEM.

This proposal will require the formal approval of the IDNR for construction in a floodway under the Flood Control Act, IC 14-28-1.

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 permit will be requirements of the project and will supersede these recommendations.

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

SECTION J- ENVIRONMENTAL COMMITMENTS

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

Remarks:

Firm:

1. If the scope of work or permanent or temporary right-of-way amounts change, the INDOT Environmental Services Division (ESD) and the INDOT 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. A USFWS Bridge/Structure Assessment shall take place no earlier than two (2) years prior to the start of construction. If construction will begin after July 16, 2021, an inspection of the structure by a qualified individual must be performed. Inspection of the structure should check for presence of bats/bat indicators and/or presence of birds. The results of the inspection must indicate no signs of bats or birds. If signs of bats or birds are documented during the inspection, the INDOT District Environmental Manger must be contacted immediately. (INDOT ESD)
4. Impacts to Wetland A will be limited to the portion within the construction limits. The portion of Wetland A outside of the construction limits will be marked as "Do Not Disturb" on the plans and signs and/or fencing marking the extent of the wetland will be placed onsite during construction. (INDOT ESD)
5. Workers who are working in or near water with *E. coli* should take care to wear appropriate PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure. (INDOT SAM)
6. Exposure to PCBs in fish tissue is considered low, assuming workers are not eating biota surrounding or associated with the water body. If there will be sediment and/or soils disturbed by construction additional investigation may be necessary. Coordination with INDOT ESD will occur. (INDOT SAM)
7. **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. (UFSWS)
8. **Lighting AMM 1:** Direct temporary lighting away from suitable habitat during the active season. (USFWS)
9. **Tree Removal AMM 1:** Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal. (USFWS)
10. **Tree Removal AMM 2:** Apply time of year restrictions (April 1 to September 30) for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/ rail surface and **outside of documented** roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed. (USFWS and IDNR DFW)
11. **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)
12. **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)
13. The state endangered Northern Brook Lamprey (*Ichthyomyzon fossor*) has been documented in the Yellow River within 0.5 mile of the project area. The biggest concern for this species is maintaining the existing riffle habitat as much as possible. Impacts to this species can be minimized by keeping the footprint of the project as small/narrow as possible and impacting the stream bottom as little as possible. If a causeway will be used, maintain normal flow as much as possible to prevent downstream scour. If multiple causeways are needed, only one should be in-stream at a time, and it should be removed before the next one is installed. If multiple causeways are required at one time, then they should not cover more than half of the stream width at one time. If a causeway happens to get blown

out during a high water event, heavy equipment should not be driven in the stream channel to recover materials. (IDNR DFW)

14. All migratory bird species are protected under the Migratory Bird Treaty Act (MBTA) of 1918. Species such as swallows and flycatchers often build nests on the undersides of bridges. To ensure compliance with the MBTA, we recommend that either work not take place between May 7 and September 7 (which is the nesting season), or that the bridge be surveyed for nests during those dates prior to construction. If nests are found with eggs, chicks, or parents actively tending to the nest (building the nest and visiting often), then repairs should be put on hold until the nesting cycle is completed (to fledging) or fails (by natural causes). After inspection and confirmation that no active nests with eggs or young are present, the Contractor shall remove existing nests and other nesting debris from the bridge girders or other surfaces that will be impacted by the project. Monitoring to ensure no new nests are established will continue until the existing bridge is demolished (IDNR DFW)

For Further Consideration:

15. 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. (IDNR DFW)
16. The new, replacement, or rehabbed structure, and any bank stabilization under the structure, should not create conditions that are less favorable for wildlife passage under the structure compared to the current conditions. When determining an appropriate bridge or culvert size, consider whether or not wildlife/vehicle collisions are a concern at the crossing site. If feasible, a larger bridge or culvert opening can allow for the movement of wildlife under the roadway in order to minimize wildlife/vehicle collisions. (IDNR DFW)
17. 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 should be restored, stabilized, and revegetated using geotextiles and a mixture of grasses, sedges, wildflowers, shrubs, and trees native to the area and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion. (IDNR DFW)
18. 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) or by using the 1:1 replacement ratio based on area depending on the type of habitat impacted (individual canopy tree removal in an urban streetscape or park-like environment versus removal of habitat supporting a tree canopy, woody understory, and herbaceous layer). Impacts under 0.10 acre in and urban area may still involve the replacement of large diameter trees but typically do not require any additional mitigation or additional plantings beyond seeding and stabilizing disturbed areas. There are exceptions for high quality habitat sites however. (IDNR DFW)
19. Do not excavate in the low flow area except for the placement of piers, foundations, and riprap, or removal of the old structure. (IDNR DFW)
20. Operate equipment used to replace the bridge from the existing roadway. (IDNR DFW)
21. Use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids. (IDNR DFW)
22. 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 Ordinary High Water Mark during this time unless the machinery is within the caissons or on the cofferdams. (USFWS)

23. 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)
24. 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)
25. 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)

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 May 12, 2020 (Appendix C, C1 to C4). 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.	USACE, Chicago District	May 19, 2020
2.	USFWS, Northern Indiana Suboffice	June 9, 2020
3.	USDA, NRCS	May 19, 2020
4.	National Park Service, Midwest Regional Office	No Response
5.	U.S. Department of Housing and Urban Development	No Response
6.	FHWA, Indiana Division	No Response
7.	IDNR, Division of Fish and Wildlife	June 10, 2020
8.	Indiana Geological Survey (electronic submission)	May 12, 2020
9.	INDOT, Office of Public Involvement	No Response
10.	INDOT, Office of Aviation	No Response
11.	INDOT, Environmental Services Division	No Response
12.	INDOT, LaPorte District Environmental Scoping Manager	No Response
13.	IDEM (electronic submission)	May 12, 2020
14.	Marshall County Board of Commissioners	No Response
15.	Marshall County Council	No Response
16.	Marshall County Emergency Management Agency	No response
17.	Marshall County Highway Department	No Response
18.	Marshall County Surveyor's Office	No Response
19.	Marshall County Drainage Board	No Response
20.	Marshall County Planning (Floodplain Administrator)	June 4, 2020
21.	Marshall County Sheriff's Department	No Response
22.	West Township Trustee	June 4, 2020
23.	Union Township Trustee	No Response
24.	Michiana Area Council of Governors	No Response
25.	Culver Police Department	No Response
26.	Culver Ambulance Service	No Response
27.	Culver Fire Department	No Response
28.	Culver Community School Corporation	No Response

Appendix A: INDOT Supporting Documentation
Threshold Chart....A1

Appendix B: Graphics
General Location Map....B1
USGS Donaldson, Indiana Quadrangle Topographic Map....B2
Aerial Map (2016)....B3
Photo Location Map (2016)....B4
Site Photographs....B5-B12
Preliminary Plan Sheets....B13-B22

Appendix C: Early Coordination
Sample Early Coordination Letter (May 12, 2020)....C1-C4
Indiana Department of Environmental Management
Electronic Response (May 12, 2020)....C5-C10
Indiana Geological Survey
Electronic Response (May 12, 2020)....C11-C13
Natural Resources Conservation Service
Response Letter (May 18, 2020)....C14
Completed NRCS-CPA-106 Form....C15
U.S. Army Corps of Engineers
Response Letter (May 19, 2020)....C16
West Township Trustee
Telephone Record (June 4, 2020)....C17
Marshall County Plan Commission
Floodplain Administrator Response (June 4, 2020)....C18
United States Fish and Wildlife Service
Response Letter (June 9, 2020)....C19-C20
IPaC Official Species List (June 19, 2020)....C21-C26
IPaC Concurrence Verification Letter (June 22, 2020)....C27-C40
Bridge/Structure Assessment Form (July 16, 2019)....C41-C42
Indiana Department of Natural Resources (IDNR), Division of Fish and Wildlife
Response Letter (June 10, 2020)....C43-C46

Appendix D: Section 106 of the National Historic Preservation Act (NHPA)
MPPA Determination Form....D1-D4
INDOT Cultural Resources Office concurrence email....D5

Appendix E: Red Flag Investigation
Red Flag Investigation....E1-E10

Appendix F: Water Resources
Waters of the U.S. Determination Report....F1-F11
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NWI Wetlands Map....F13
FEMA Floodplain Map....F14
Soil Survey....F15-F19
USGS StreamStats Map....F20
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Stream Data Sheets....F49-F52
Preliminary Jurisdictional Determination....F53-F56

Appendix G: Public Involvement
Notice of Survey....G1

Appendix H: Air Quality
MACOG 2020-2024 TIP H1
Relevant pages from the INDOT 2020-2024 STIP H2
Relevant pages from the INDOT 2018-2021 STIP H3

Appendix I: Environmental Justice (EJ) Analysis
Data Calculation Table I1
EJ Analysis Map I2
Population Data I3-I6

Appendix J: Other Information
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INDOT Bridge Inspection Report J2-J15

Categorical Exclusion

Appendix A

INDOT Supporting Documentation

Categorical Exclusion Level Thresholds

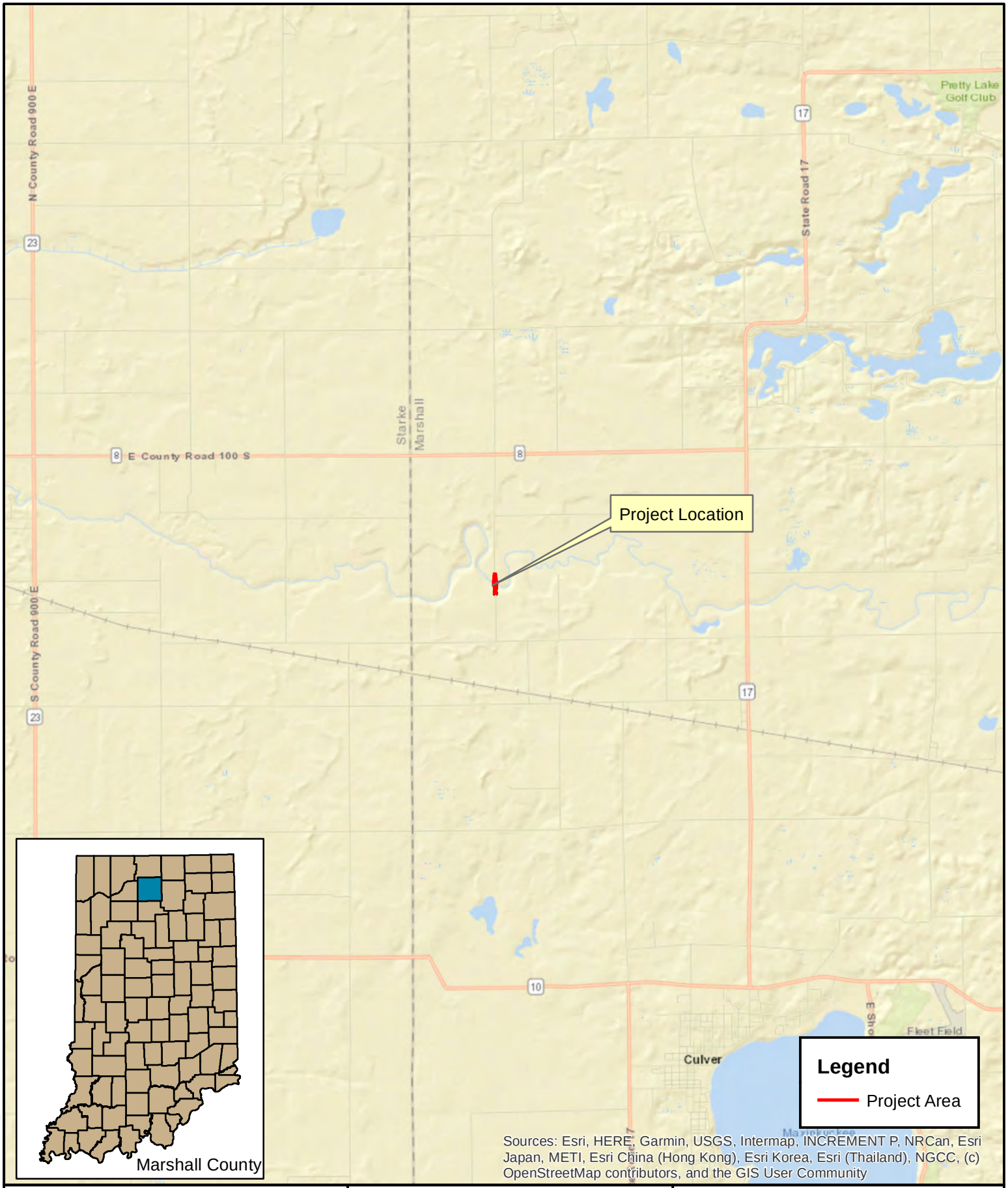
	PCE	Level 1	Level 2	Level 3	Level 4[1]
Section 106	Falls within guidelines of Minor Projects PA	"No Historic Properties Affected"	"No Adverse Effect"	-	"Adverse Effect" Or Historic Bridge involvement[2]
Stream Impacts	No construction in waterways or water bodies	< 300 linear feet of stream impacts	≥ 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. 1702838

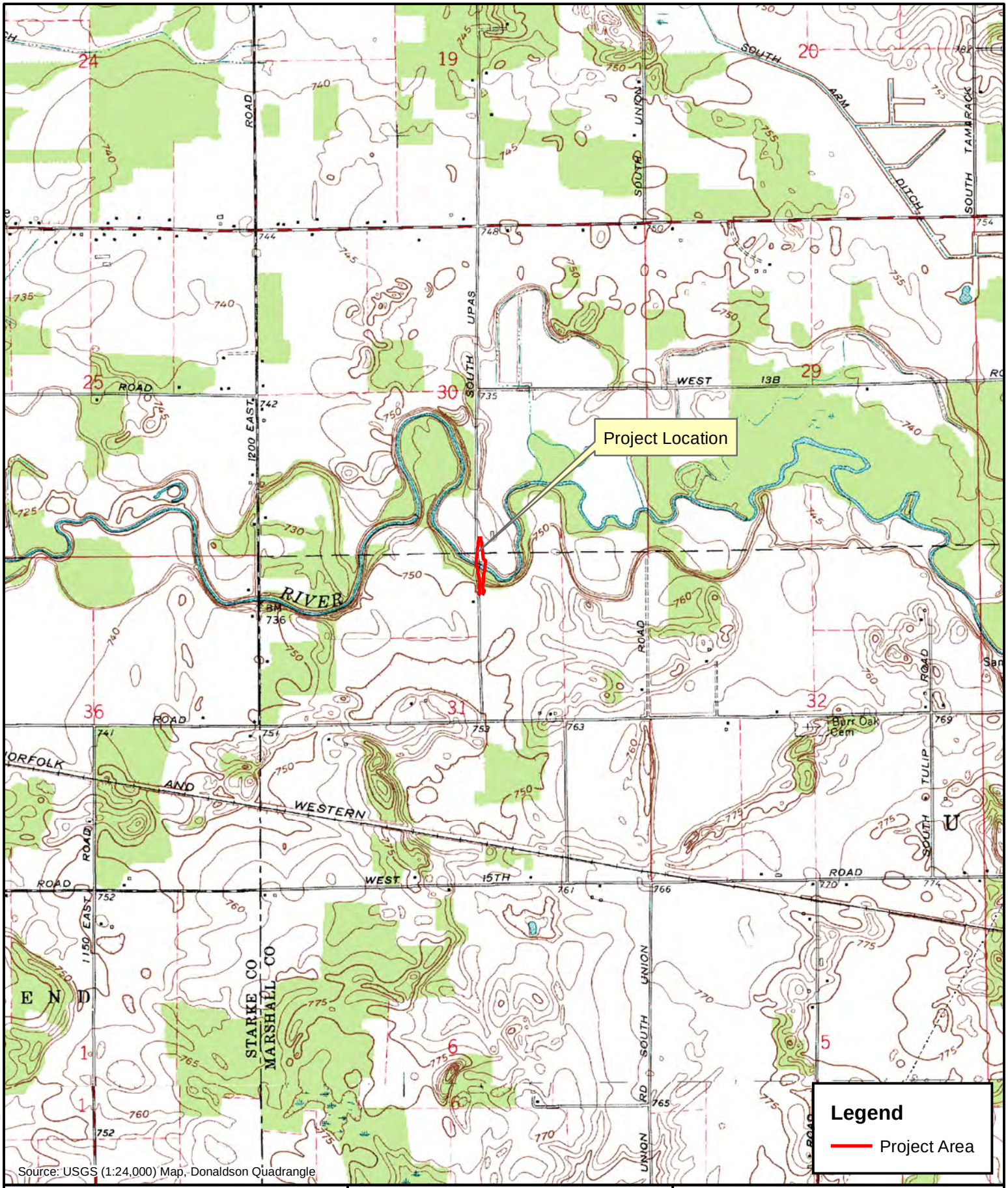
0 0.7 1.4 Miles

N

County: Marshall
Township: West & Union
State: Indiana

Bridge Replacement Project
Marshall County Bridge No. 120
Created:8/5/2020, SBeaupre

S:_2018\218-0328\Enviro\Maps\MXDs\Marshall120_GeneralLocationMap.mxd



LOCHMUELLER GROUP

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

USGS Topographic Map

Donaldson Quadrangle
Des. No. 1702838

0 1,000 2,000 Feet

N

County: Marshall
Township: West & Union
State: Indiana

Bridge Replacement Project
Marshall County Bridge No. 120
Created:8/5/2020, SBeaupre

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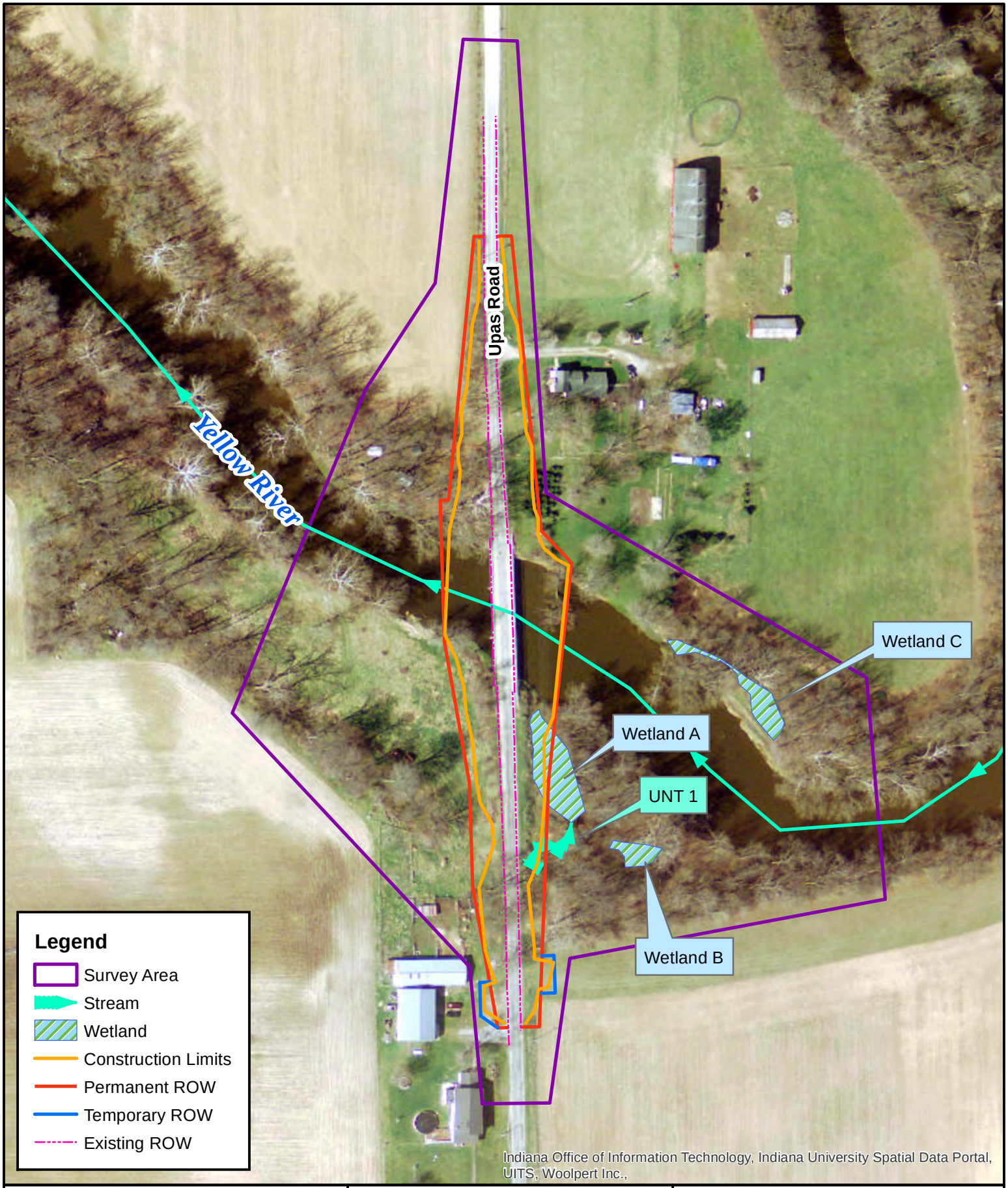


LOCHMUELLER GROUP
3502 Woodview Trace, Suite 150
Indianapolis, IN 46268
Phone: (317) 222-3880
Fax: (317) 222-3881

Aerial Map (2016)

Des. No. 1702838

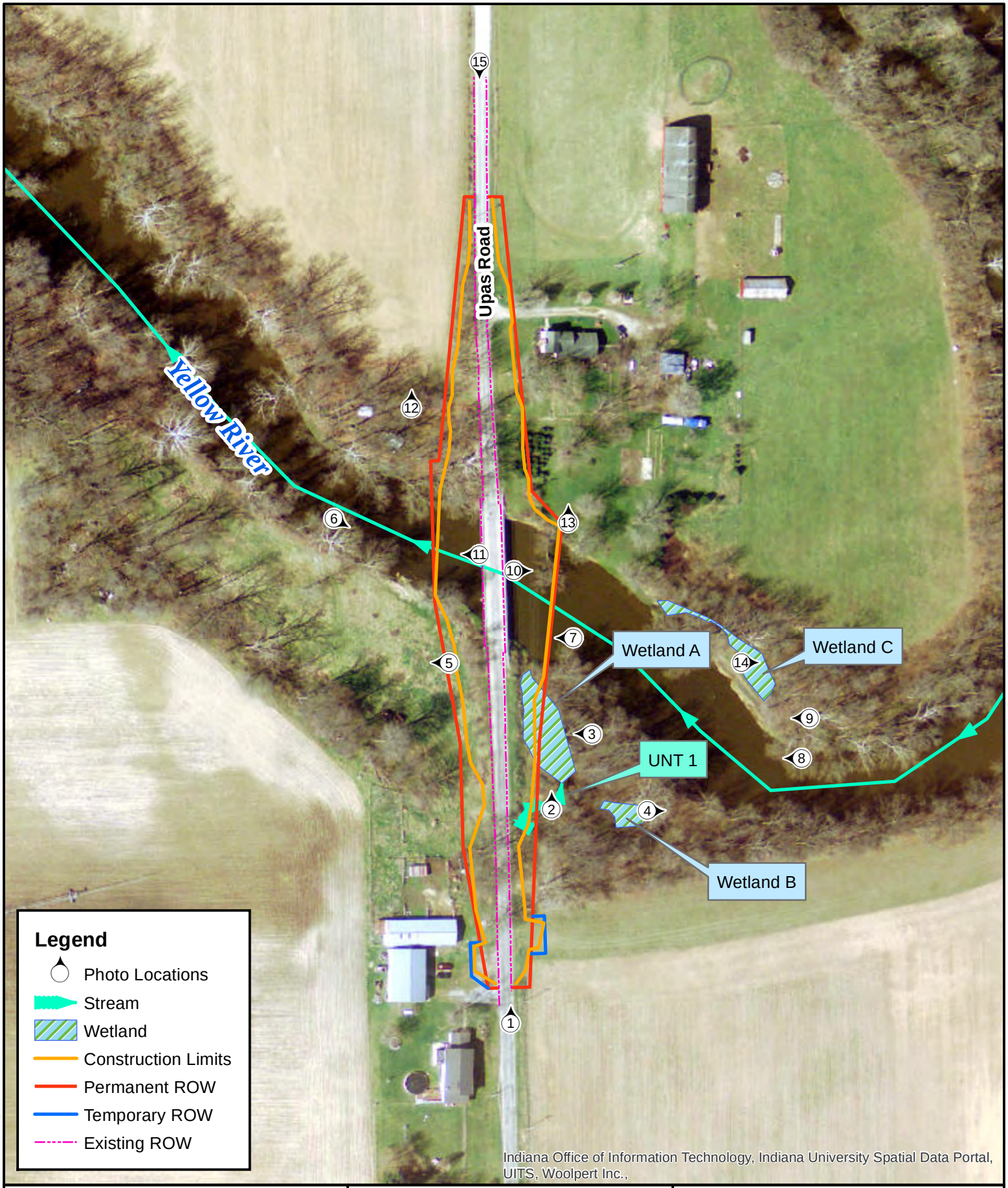
0 75 150 Feet

N

County: Marshall
Township: West and Union
State: Indiana

Upas Road over Yellow River
Marshall Co. Bridge 120 Replacement
Created:8/7/2020, C. Kunkel

S:_2018\218-0328\Enviro\Maps\MXDs\Marshall120_Aerial Map.mxd



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

Photo Location Map

Des. No. 1702838

0 75 150 Feet

N

County: Marshall
Township: West and Union
State: Indiana

Upas Road over Yellow River
Marshall Co. Bridge 120 Replacement
Created:7/20/2020, C. Kunkel

S:_2018\218-0328\Enviro\Maps\MXDs\Marshall120_CE Photo.mxd

1. Looking north along Upas Road toward bridge from project limits

2. Looking north downstream along UNT 1 toward Wetland A

3. Looking west at Wetland A

4. Looking east within Wetland B

5. Looking west

6. Looking east upstream Yellow River

7. Looking west downstream Yellow River at bridge

8. Looking west downstream Yellow River

9. Looking west along floodplain of Yellow River

10. Looking east upstream Yellow River from bridge

11. Looking west downstream Yellow River

12. Looking north toward agricultural field

13. Looking north

14. Looking east within Wetland C

15. Looking south from project limits toward bridge

PROJECT	DESIGNATION NO.
1702838	1702838
CONTRACT	
B-41182	

INDIANA
DEPARTMENT OF TRANSPORTATION

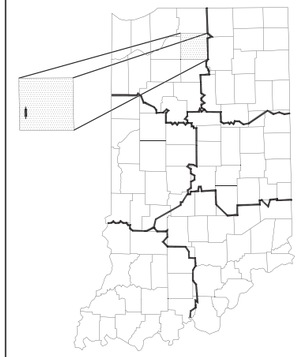
TRAFFIC DATA	SOUTH UPAS ROAD
A.A.D.T. (2023)	270 V.P.D.
A.A.D.T. (2048)	332 V.P.D.
D.H.V. (2048)	33 V.P.H.
DIRECTIONAL DISTRIBUTION	50 %
TRUCKS	10.00 % D.H.V.
	9.60 % A.A.D.T.
DESIGN DATA	**SOUTH UPAS ROAD**
DESIGN SPEED	55 MPH
PROJECT DESIGN CRITERIA	3R (Non-Freeway)
FUNCTIONAL CLASSIFICATION	Local
RURAL/URBAN	Rural
TERRAIN	Level
ACCESS CONTROL	None

STRUCTURE INFORMATION				
STRUCTURE	TYPE	SPAN AND SKEW	OVER	STATION
Marshall County Bridge No. 120	Continuous Composite Prestressed Concrete Box Beam	Three Span @ 65'-0", 70'-0", 65'-0", Skew: 30° Rt.	Yellow River	16+00.00 "A"

BRIDGE PLANS
FOR SPANS OVER 20 FEET
ON
SOUTH UPAS ROAD
OVER YELLOW RIVER

PROJECT NO. 1702838 P.E.
1702838 R/W
1702838 CONST.

REPLACEMENT OF MARSHALL COUNTY BRIDGE NO. 120, CARRYING SOUTH UPAS ROAD OVER YELLOW RIVER, LOCATED IN SECTION 30, T-33-N, R-1-E, WEST TOWNSHIP AND SECTION 31, T-33-N, R-1-E UNION TOWNSHIP, MARSHALL COUNTY, INDIANA



PROJECT LOCATION SHOWN BY ➡

APPROVED BY: DATE: _____

_____
- MARSHALL COUNTY HIGHWAY SUPERVISOR &
EMPLOYEE IN RESPONSIBLE CHARGE (ERC)

APPROVED BY
MARSHALL COUNTY BOARD OF COMMISSIONERS

_____

_____

_____

ATTEST DATE _____

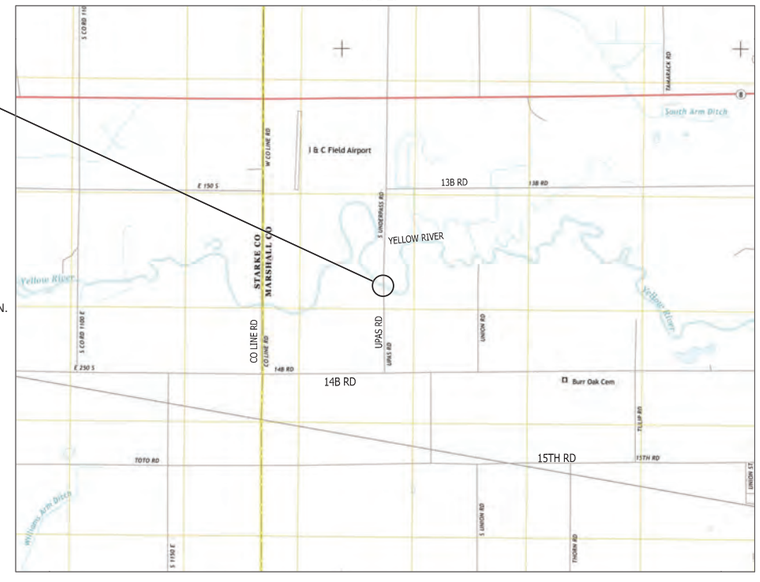
_____

RECOMMENDED FOR APPROVAL

DATE _____

_____

PROJECT LOCATION
MARSHALL COUNTY BRIDGE NO. 120
SOUTH UPAS ROAD OVER YELLOW RIVER
3 SPANS @ 65'-0", 70'-0", 65'-0",
SKEW: 30° RT. , 27'-4" CLEAR ROADWAY



LOCATION MAP

SCALE 1" = 2000'

LATITUDE: 41°16'22.30" LONGITUDE: 86°27'13.34"

BRIDGE LENGTH = 0.038 mi.
ROAD LENGTH = 0.102 mi.
TOTAL LENGTH = 0.140 mi.
MAX. GRADE = -3.50%

HUC: 07120001060060

STAGE 2 PLANS 4-20-2020

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

consultants
8415 East 56th Street
Indianapolis, Indiana 46216

PLANS PREPARED BY: USI Consultants, Inc. 317-544-4996
PHONE NUMBER

CERTIFIED BY: _____ DATE

APPROVED FOR LETTING: _____
INDIANA DEPARTMENT OF TRANSPORTATION DATE

BRIDGE FILE
MARSHALL CO. BR. 120
DESIGNATION NO.
1702838
SHEETS
1 of 29
CONTRACT / PROJECT NO.
B-41182 / 1702838

S:\2018Proj\2018-126 MARSHALL BR120 - S UPAS RD\Plans\Bridge Plans\2018-126 Title Sheet.dwg, Title Sheet, 4/14/2020 7:58:51 AM, DWG To PDF.(300 dpi).pc3

UTILITIES

AT&T- Communications
307 S Main St
South Bend IN 46601-2205
Contact: Dennis Bunch
Email: db2741@att.com
Pn: (574) 237-8380

Marshall County REMC- Electric
11299 12th Rd
Plymouth IN 46563
Contact: Tod Brems
Email: tbrems@marshallremc.com
Pn: (574) 936-3161

1-800-382-5544
CALL BEFORE YOU DIG

CAUTION !!

THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED UPON ABOVE GROUND EVIDENCE (including, but not limited to, manholes, inlets, valves, and marks made upon the ground by others) AND ARE SPECULATIVE IN NATURE. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH THERE IS NO ABOVE GROUND EVIDENCE OR FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF SAID EXISTING UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY AND ALL CONSTRUCTION.

INDEX

SHEET NO.	SUBJECT
1	TITLE SHEET
2	INDEX SHEET
3	TYPICAL CROSS SECTION
4	DETOUR ROUTE
5-6	LOCATION CONTROL ROUTE SURVEY
7	PLAN PROFILE LINE "A"
8-9	SOIL BORINGS
10	LAYOUT
11	GENERAL PLAN
12	ROAD AND BRIDGE SUMMARY
13-29	CROSS SECTIONS

REVISIONS

SHEET NO.	DATE	REVISED

NOT FOR CONSTRUCTION

DESIGNED: FM | DRAWN: DWB
CHECKED: BMA | CHECKED: FM

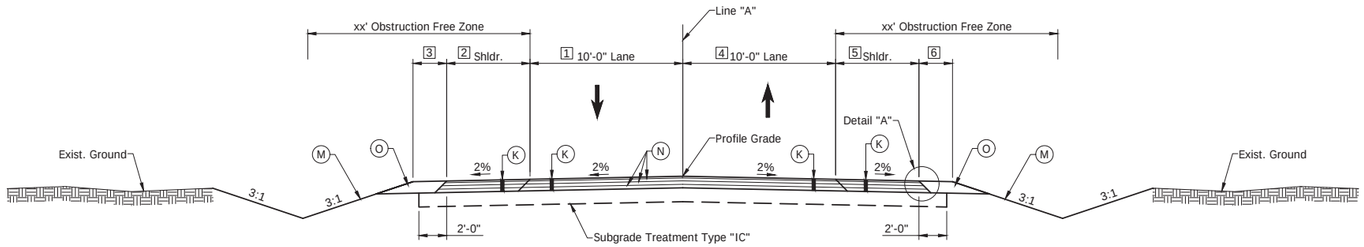
INDIANA
DEPARTMENT OF TRANSPORTATION

INDEX SHEET

HORIZONTAL SCALE	BRIDGE FILE
NONE	MARSHALL CO. BR. 120
VERTICAL SCALE	DESIGNATION
NONE	1702838

SURVEY BOOK	SHEETS
----	2 of 29
CONTRACT	PROJECT
B-41182	1702838

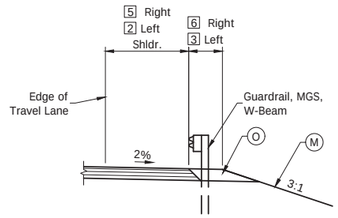
S:\2018\myl\0018-126 MARSHALL BR120 - S I/P/AS RDS\Plans\Bridge Plans\2018-126 Index Sheet.dwg, Index Sheet, 4/14/2020 8:02:55 AM



TYPICAL SECTION

Scale: 1" = 5'

Sta. xx+xx to Sta. xx+xx "A"
Sta. xx+xx to Sta. xx+xx "A"



TYPICAL SECTION WITH GUARDRAIL

Scale: 1" = 5'

Sta. xx+xx to Sta. xx+xx "A", xx.
Sta. xx+xx to Sta. xx+xx "A", xx.

LEGEND

(K) 165#/Syd. QC/QA-HMA, 3, 64, Surface, 9.5mm on
275#/Syd. QC/QA-HMA, 2, 64, Intermediate, 19.0mm on
330#/Syd. QC/QA-HMA, 2, 64, Base, 19.0mm on
330#/Syd. QC/QA-HMA, 2, 64, Base, 19.0mm on
Subgrade Treatment, Type IC (12" inches of subgrade excavated and replaced with Compacted Aggregate, No. 53)

(M) Mulched Seeding "R"

(N) Tack Coat

(O) 10" Compacted Aggregate Base, No. 53

[1] Varies 7'-3" at Sta. 11+10 to 10'-0" at Sta. 12+10 "A"
10'-0" from Sta. 12+10 to Sta. 14+70.17 "A"
10'-0" from Sta. 17+29.83 to Sta. 19+50 "A"
Varies 10'-0" at Sta. 19+50 to 7'-10" at Sta. 20+50 "A"

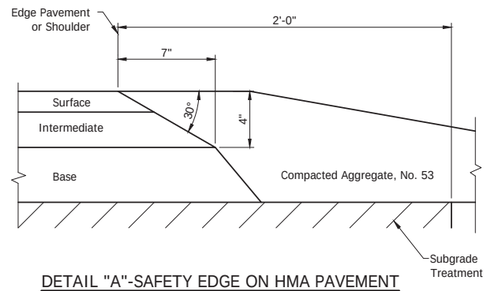
[2] Varies 2'-0" at Sta. 11+10 to 4'-0" at Sta. 12+10 "A"
4'-0" from Sta. 12+10 to Sta. 14+70.17 "A"
4'-0" from Sta. 17+29.83 to Sta. 19+50 "A"
Varies 4'-0" at Sta. 19+50 to 2'-0" at Sta. 20+50 "A"

[3] 1'-0" from Sta. 11+10 to Sta. 13+60.76 "A"
Varies 1'-0" at Sta. 13+60.76 to 4'-0" at Sta. 13+90.76 "A"
4'-0" from Sta. 13+90.76 to Sta. 14+50.79 "A"
Varies 4'-0" at Sta. 14+50.79 to 2'-0" at Sta. 14+60.76 "A"
2'-0" from Sta. 14+60.76 to Sta. 14+70.14 "A"
2'-0" from Sta. 17+29.83 to Sta. 17+85 "A"
Varies 2'-0" at Sta. 17+85 to 1'-0" at Sta. 18+54 "A"
1'-0" from Sta. 18+54 to Sta. 20+50 "A"

[4] Varies 7'-6" at Sta. 11+10 to 10'-0" at Sta. 12+10 "A"
10'-0" from Sta. 12+10 to Sta. 14+70.17 "A"
10'-0" from Sta. 17+29.83 to Sta. 19+50 "A"
Varies 10'-0" at Sta. 19+50 to 7'-2" at Sta. 20+50 "A"

[5] Varies 2'-0" at Sta. 11+10 to 4'-0" at Sta. 12+10 "A"
4'-0" from Sta. 12+10 to Sta. 14+70.17 "A"
4'-0" from Sta. 17+29.83 to Sta. 19+50 "A"
Varies 4'-0" at Sta. 19+50 to 2'-0" at Sta. 20+50 "A"

[6] 1'-0" from Sta. 11+10 to Sta. 12+82.48"A"
Varies 1'-0" at Sta. 12+82.48 to 4'-0" at Sta. 13+12.48 "A"
4'-0" from Sta. 13+12.48 to Sta. 13+72.48 "A"
Varies 4'-0" at Sta. 13+72.48 to 2'-0" at Sta. 13+82.48 "A"
2'-0" from Sta. 13+82.48 to Sta. 14+70.14 "A"
2'-0" from Sta. 17+29.83 to Sta. 17+67.89 "A"
Varies 2'-0" at Sta. 17+67.89 to 1'-0" at Sta. 18+05.64 "A"
1'-0" from Sta. 18+05.64 to Sta. 20+50 "A"



DETAIL "A"-SAFETY EDGE ON HMA PAVEMENT

No Scale

NOT FOR CONSTRUCTION

DESIGNED: FM
DRAWN: DWB
CHECKED: BMA
CHECKED: FM

INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTION

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	MARSHALL CO. BR. 120
VERTICAL SCALE	DESIGNATION
AS NOTED	1702838

SURVEY BOOK	SHEETS
----	3 of 29
CONTRACT	PROJECT
B-41182	1702838

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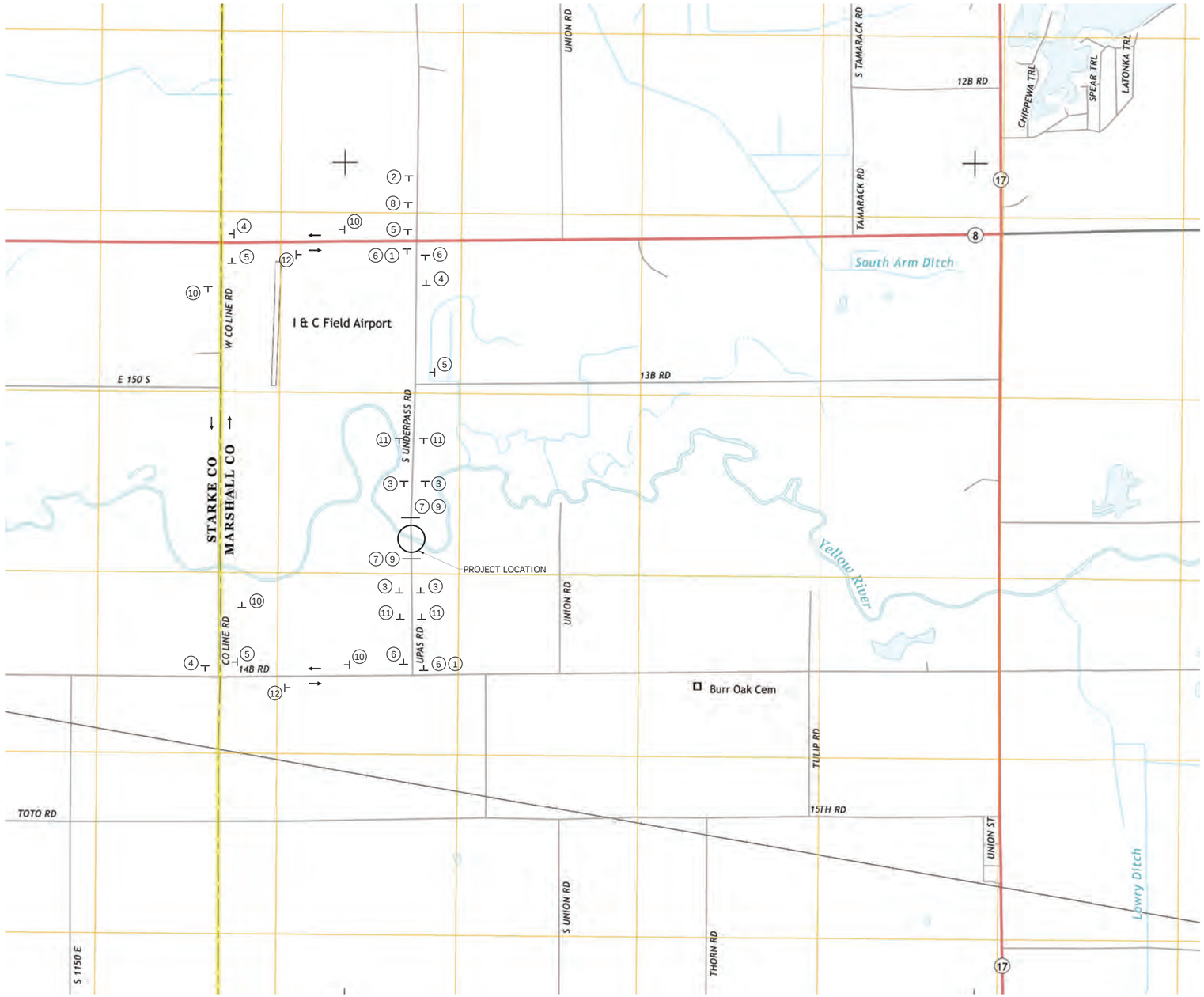

DETOUR ROUTE MAP

SIGN LEGEND

SYMBOL	MESSAGE	NUMBER	TYPE	REQ'D.
1	UPAS ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY	R11-3	A	*2
	DETOUR(R or L)	XM4-10	B	*2
2	ROAD CONSTRUCTION AHEAD	XW20-1	A	1
3	ROAD CLOSED 500 FT.	XW20-3	A	4
4	DETOUR ROUTE MARKER ASSEMBLY (LEFT)			3
5	DETOUR ROUTE MARKER ASSEMBLY (RIGHT)			4
6	STANDARD BARRICADE TYPE III-B			48 Lft.
	ROAD CLOSURE SIGN ASSEMBLY			2
7	STANDARD BARRICADE TYPE III-A			48 Lft.
	ROAD CLOSURE SIGN ASSEMBLY			2
8	DETOUR AHEAD	XW20-2	A	1
9	ROAD CLOSED	R11-2	A	*2
10	DETOUR ROUTE MARKER ASSEMBLY (CONFIRMING)			4
11	ROAD CLOSED 1000 FT.	XW20-3	A	4
12	END DETOUR	X-MA-8A	A	2

2-XG20-5 Signs to be placed at site a minimum of 10 business days prior to Road Closure.
(2-Type "A" Signs req'd.)

* Cost of Sign to be included in the cost of "Road Closure Sign Assembly"

NOT FOR CONSTRUCTION

DESIGNED: FM | DRAWN: DWB | CHECKED: BMA | CHECKED: FM

INDIANA
DEPARTMENT OF TRANSPORTATION

DETOUR ROUTE

HORIZONTAL SCALE	BRIDGE FILE
1" = 1000'	MARSHALL CO. BR. 120
VERTICAL SCALE	DESIGNATION
1" = 1000'	1702838
SURVEY BOOK	SHEETS
----	4 of 29
CONTRACT	PROJECT
B-41182	1702838

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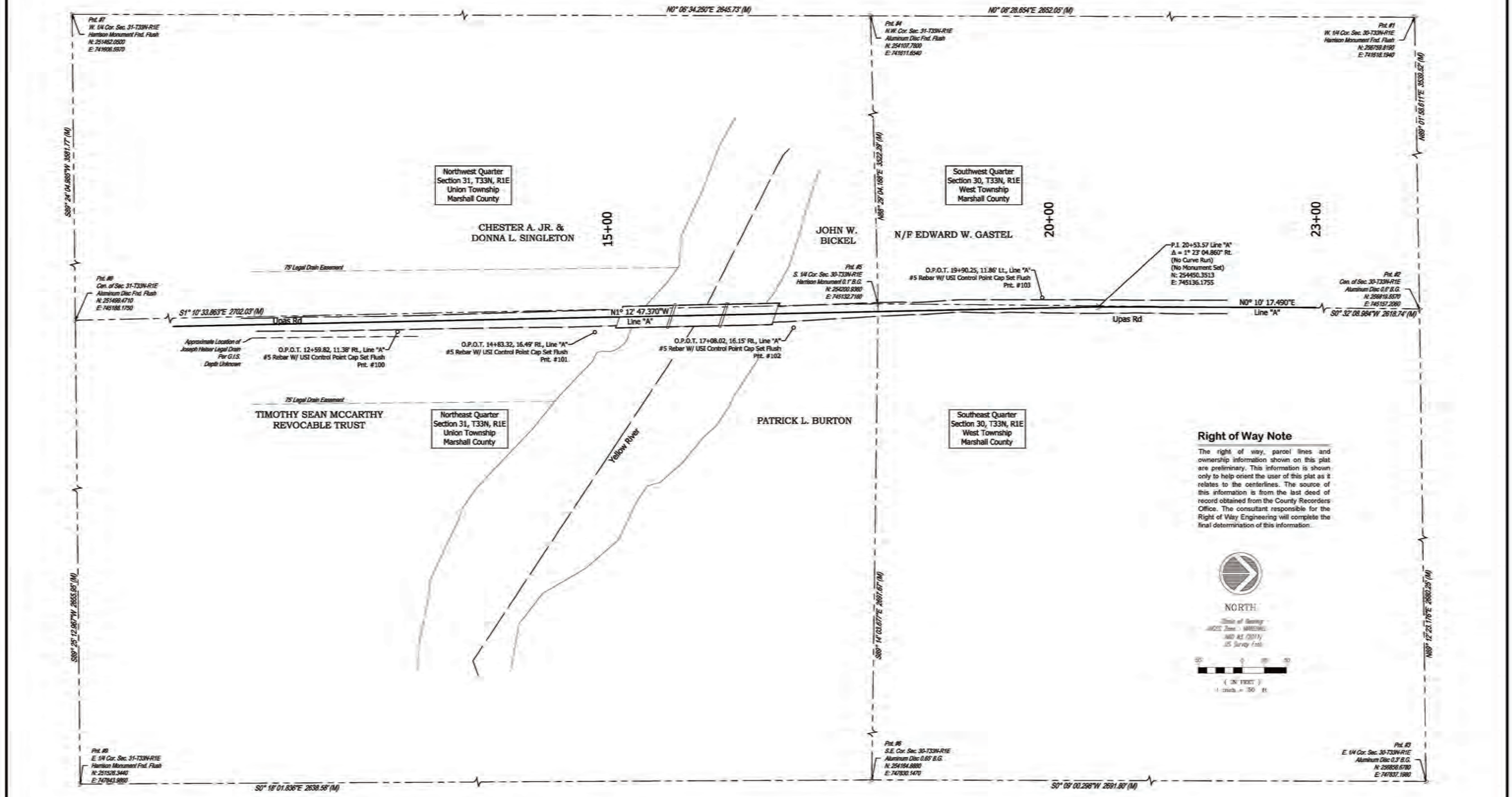


Right of Way Note

The right of way, parcel lines and ownership information shown on this plat are preliminary. This information is shown only to help orient the user of this plat as it relates to the centerlines. The source of this information is from the last deed of record obtained from the County Recorders Office. The consultant responsible for the Right of Way Engineering will complete the final determination of this information.

NORTH

Basis of Bearing
NAD83 Zone 1 (2011)
US Survey Feet

(IN FEET)
1 inch = 50 ft

USI #2018-126

SURVEY STARTED	01/18/2019
SURVEY COMPLETED	04/11/2019
ROUTE PLAT SHEETS	1 OF 2

201902116
JANET HOWARD
MARSHALL COUNTY RECORDER
06/03/2019 10:58 AM
REC FEE: 30.00 PGS: 2
PLAT SIZE: 24 X 36

SURVEYOR STATEMENT

This survey, to the best of my knowledge and belief, is executed according to the provisions of Title 865 IAC 1-12-20 through 1-12-25 regarding Route Surveys, except that any data shown regarding the location or description of the existing parcels is not a part of this survey.

MARK A. SCHEPERS REGISTERED No. LS 29500001 STATE OF INDIANA LAND SURVEYOR

AFFIRMATION STATEMENT:
I affirm, under the penalties for perjury, that I have taken reasonable care to redact each Social Security number in this document, unless required by law. By: Mark A. Schepers

RECOMMENDED FOR APPROVAL AND PREPARED BY:
SIGNATURE: MARK A. SCHEPERS, PS — 05/28/2019 DATE

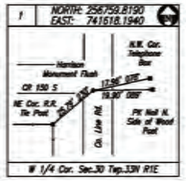
consultants
8415 East 56th St.
Indianapolis, IN 46216
PH. 317.544.4996
FAX 317.544.4997

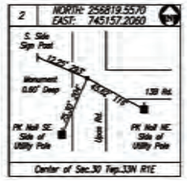
UPAS RD OVER YELLOW RIVER
BRIDGE REPLACEMENT

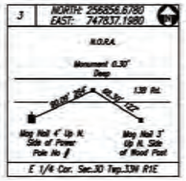
LOCATION CONTROL ROUTE SURVEY

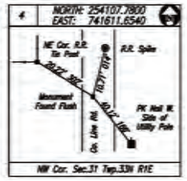
HORIZONTAL SCALE	1" = 50'
COUNTY	MARSHALL
BRIDGE FILE	120
DESIGNATION	1702838
SURVEY BOOK	
PLAN SHEETS	5 OF 29
CONTRACT	
PROJECT	1702838

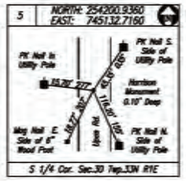
Section Corner, Control Point and Centerline References

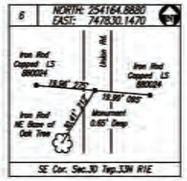


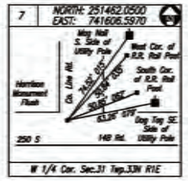


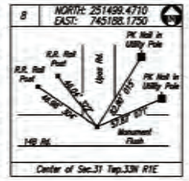


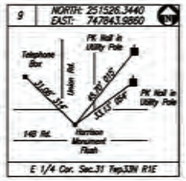


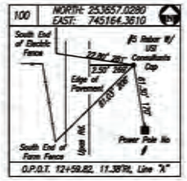


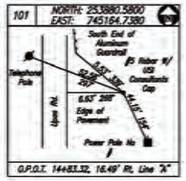


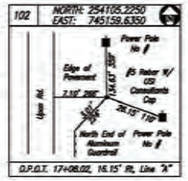








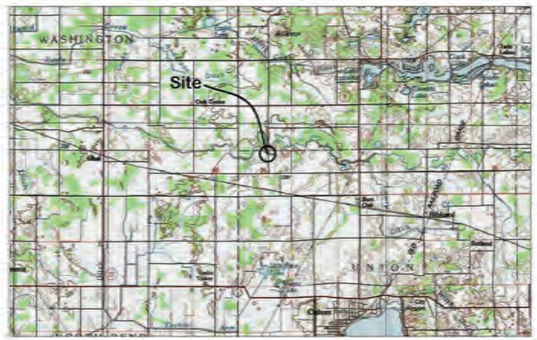




Point Data Table

Point #	Station	Type	InGCS Northing	InGCS Easting	Latitude	Longitude
1	W. 1/4 Cor. Sec. 30-T33N-R1E	Harrison Monument Fnd. Flush	256758.8190	741618.1940	41°16'48.4483"	-86°27'59.8112"
2	Cen. of Sec. 30-T33N-R1E	Aluminum Disc 0.6' B.G.	256819.5570	745157.2060	41°16'50.1040"	-86°27'13.2916"
3	E. 1/4 Cor. Sec. 30-T33N-R1E	Aluminum Disc 0.3' B.G.	256856.5780	747837.1980	41°16'50.5161"	-86°26'38.1523"
4	N.W. Cor. Sec. 31-T33N-R1E	Aluminum Disc Fnd. Flush	254107.7800	741611.6540	41°16'23.2476"	-86°27'59.6302"
5	S. 1/4 Cor. Sec. 30-T33N-R1E	Harrison Monument 0.1' B.G.	254200.9360	745132.7160	41°16'24.2321"	-86°27'13.5216"
6	S.E. Cor. Sec. 30-T33N-R1E	Aluminum Disc 0.65' B.G.	254164.8880	747830.1470	41°16'23.9216"	-86°26'38.1983"
7	W. 1/4 Cor. Sec. 31-T33N-R1E	Harrison Monument Fnd. Flush	251462.0500	741606.5970	41°15'57.1082"	-86°27'59.6300"
8	Cen. of Sec. 31-T33N-R1E	Aluminum Disc Fnd. Flush	251499.4710	745188.1750	41°15'57.5431"	-86°27'12.7330"
9	E. 1/4 Cor. Sec. 31-T33N-R1E	Harrison Monument Fnd. Flush	251526.3440	747843.9860	41°15'57.8535"	-86°26'57.8578"
100	O.P.O.T. 12+59.82, 11.38' Rt., Line "A"	#5 Rebar W/ USI Control Point Cap Set Flush	253857.0280	745164.3610	41°16'18.6590"	-86°27'13.0948"
101	O.P.O.T. 14+83.32, 16.49' Rt., Line "A"	#5 Rebar W/ USI Control Point Cap Set Flush	253880.5800	745164.7380	41°16'21.0676"	-86°27'13.0900"
102	O.P.O.T. 17+08.02, 16.15' Rt., Line "A"	#5 Rebar W/ USI Control Point Cap Set Flush	254105.2250	745159.6350	41°16'23.2870"	-86°27'13.1671"
103	O.P.O.T. 19+80.25, 11.86' Lt., Line "A"	#5 Rebar W/ USI Control Point Cap Set Flush	254386.7950	745125.6610	41°16'26.0982"	-86°27'13.6185"

Vicinity Map (N.T.S.)



Surveyor's Report

Located in Sections 30 & 31 , Township 33 North, Range 1 East, in Union & West Township, In Marshall County, Indiana.

The purpose of this survey is to collect data for the preparation of construction and right of way plans. This is not a property retracement survey. Any apparent property, subdivision, or easement lines or corners are based on the last deeds of record obtained from the County Recorder's Office. These lines in no way represent property, subdivision, or easement lines that could be determined from a retracement property survey. They are preliminary and should not be used to represent a retracement property survey. No monuments were set to represent the same. In addition, any monuments depicted on this plat indicated as being found or set should be used only for the above stated purpose.

Field measurements for this survey were in accordance with the specifications outlined in IAC 865 1-14. Measurements are shown to the nearest 0.01 feet, coordinates to the nearest 0.0001 feet, and the bearings to the 0.001 seconds, not to indicate the precision of the work, but to allow for closure and adjustment by others if desired. Units are US Survey Feet unless otherwise noted.

Horizontal Control

The horizontal control for this project is based on the Indiana Geospatial Coordinate System (InGCS), Marshall Zone, North American Datum of 1983,(2011) EPOCH 2010.0, US Survey Feet. Said system was ascertained by Real Time Kinematic (RTK) GPS observations from Trimble's VRS NOW Continually Operating Reference System (www.vrsnow.us). This system will govern the project for design, right of way computations and layout. Geometric datum and map projection parameters for this InGCS Zone are as follows:

Coordinate System	: Indiana Geospatial Coordinate System
Zone	: Marshall
Datum	: NAD 83 (2011) EPOCH 2010.0
Ellipsoid Name	: GRS 80
Geoid Model	: Geoid12B

Zone Parameters

Latitude of Grid Origin	: 40°54'00"N
Longitude of Grid Origin	: 86°18'00"W
Central Meridian S.F.	: 1.000031
False Northing offset	: 118110
False Easting offset	: 787400

The Trimble VRS NOW's RTK Systems continuously operating reference stations (CORS) were used to measure dual RTK vectors on all control points and section corners. These dual vectors were compared and adjusted using Trimble Business Center software.

Reference Monumentation:

Control Points - See references and Point Data Table - Estimated relative positional accuracy of these points due to random errors in the measurement or staking of these monuments is +/- 0.10 feet.

Section Corners - See Section Corner Detail and References - Estimated relative positional accuracy of these points due to random errors in the measurement of these monuments is +/- 0.10 feet.

The following corners were found per information found in the Office of the County Surveyor. Lacking obvious evidence to the contrary, these monuments were held as prima facie evidence of the respective corners with negligible uncertainty.

1 - W. 1/4 Cor. Sec. 30-T33N-R1E - Harrison Monument Fnd. Flush
2 - Cen. of Sec. 30-T33N-R1E - Aluminum Disc 0.6' B.G.
3 - E. 1/4 Cor. Sec. 30-T33N-R1E - Aluminum Disc 0.3' B.G.
4 - N.W. Cor. Sec. 31-T33N-R1E - Aluminum Disc Fnd. Flush
5 - S. 1/4 Cor. Sec. 30-T33N-R1E - Harrison Monument 0.1' B.G.
6 - S.E. Cor. Sec. 30-T33N-R1E - Aluminum Disc 0.65' B.G.
7 - W. 1/4 Cor. Sec. 31-T33N-R1E - Harrison Monument Fnd. Flush
8 - Cen. of Sec. 31-T33N-R1E - Aluminum Disc Fnd. Flush
9 - E. 1/4 Cor. Sec. 31-T33N-R1E - Harrison Monument Fnd. Flush

Alignments:

Alignment "A" was placed by the USI Bridge Engineering Department.

Right of Way:

Based on telephone conversation with the Marshall County Highway Department Right of Way on Upas Road is 40', however no record evidence was provided to us. Therefore, the Right of Way is shown as being a Prescriptive Right of Way following the edge of pavement.

Marshall County Surveyor's Office does not know the exact location of the Joseph Helser legal drain. Shown running parallel with the road, which is consistent with G.I.S.

The right of way, parcel lines and ownership information shown on this plat are preliminary. This information is shown only to help orient the user of this plat as it relates to the centerlines. The source of this information is from the last deed of record obtained from the County Recorders Office as well as the above-mentioned plans. The consultant responsible for the Right of Way Engineering will complete the final determination of this information.

USI #2018-126

SURVEY STARTED	01/18/2019
SURVEY COMPLETED	04/11/2019
ROUTE PLAT SHEETS	2 OF 2

201902116
JANET HOWARD
MARSHALL COUNTY RECORDER
06/03/2019 10:58 AM
REC FEE: 30.00 PGS: 2
PLAT SIZE: 24 X 36

SURVEYOR STATEMENT

This survey, to the best of my knowledge and belief, is executed according to the provisions of Title 865 IAC 1-12-20 through 1-12-26 regarding Route Surveys, except that any data shown regarding the location or description of the existing parcels is not a part of this survey.

MARK A. SCHEPERS REGISTERED No. LS 29500001 STATE OF INDIANA LAND SURVEYOR

AFFIRMATION STATEMENT

I affirm, under the penalties for perjury, that I have taken reasonable care to redact each Social Security number in this document, unless required by law. By: Mark A. Schepers

RECOMMENDED FOR APPROVAL AND PREPARED BY:

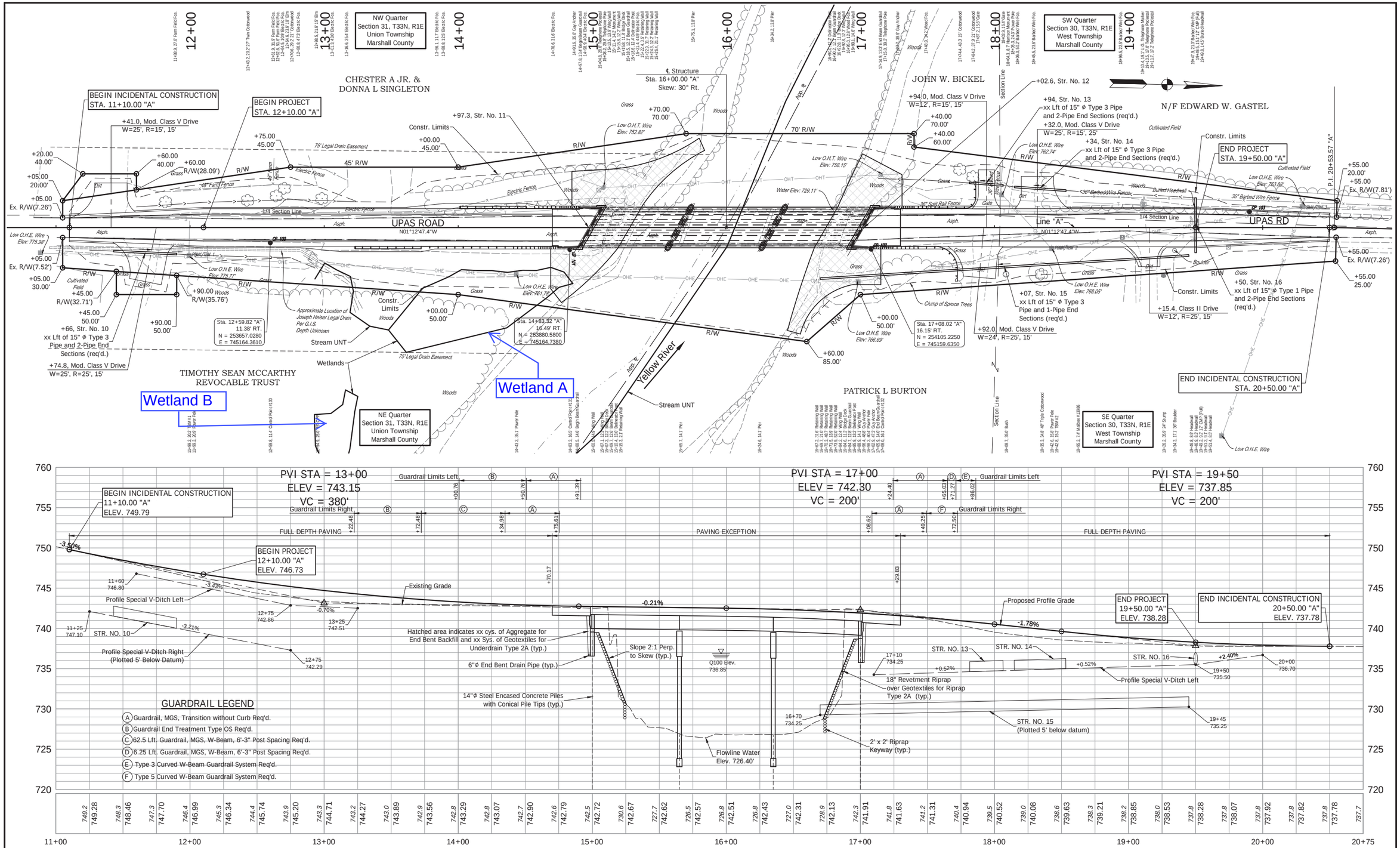
SIGNATURE: Mark A. Schepers 05/28/2019
MARK A. SCHEPERS, PS DATE

usi consultants
8415 East 56th St.
Indianapolis, IN 46216
PH 317.544.4996
FAX 317.544.4997

UPAS RD OVER YELLOW RIVER
BRIDGE REPLACEMENT

LOCATION CONTROL ROUTE SURVEY

HORIZONTAL SCALE	BRIDGE FILE
NTS	MARSHALL 120
COUNTY	DESIGNATION
MARSHALL	1702838
SURVEY BOOK	PLAN SHEETS
	6 OF 29
CONTRACT	PROJECT
	1702838



NOT FOR CONSTRUCTION

INDIANA DEPARTMENT OF TRANSPORTATION

PLAN PROFILE LINE "A"

DESIGNED: FM	DRAWN: DWB
CHECKED: BMA	CHECKED: FM

HORIZONTAL SCALE	BRIDGE FILE
1"=30'	MARSHALL CO. BR. 120
VERTICAL SCALE	DESIGNATION
1"=5'	1702838
SURVEY BOOK	SHEETS
----	7 of 29
CONTRACT	PROJECT
B-41182	1702838

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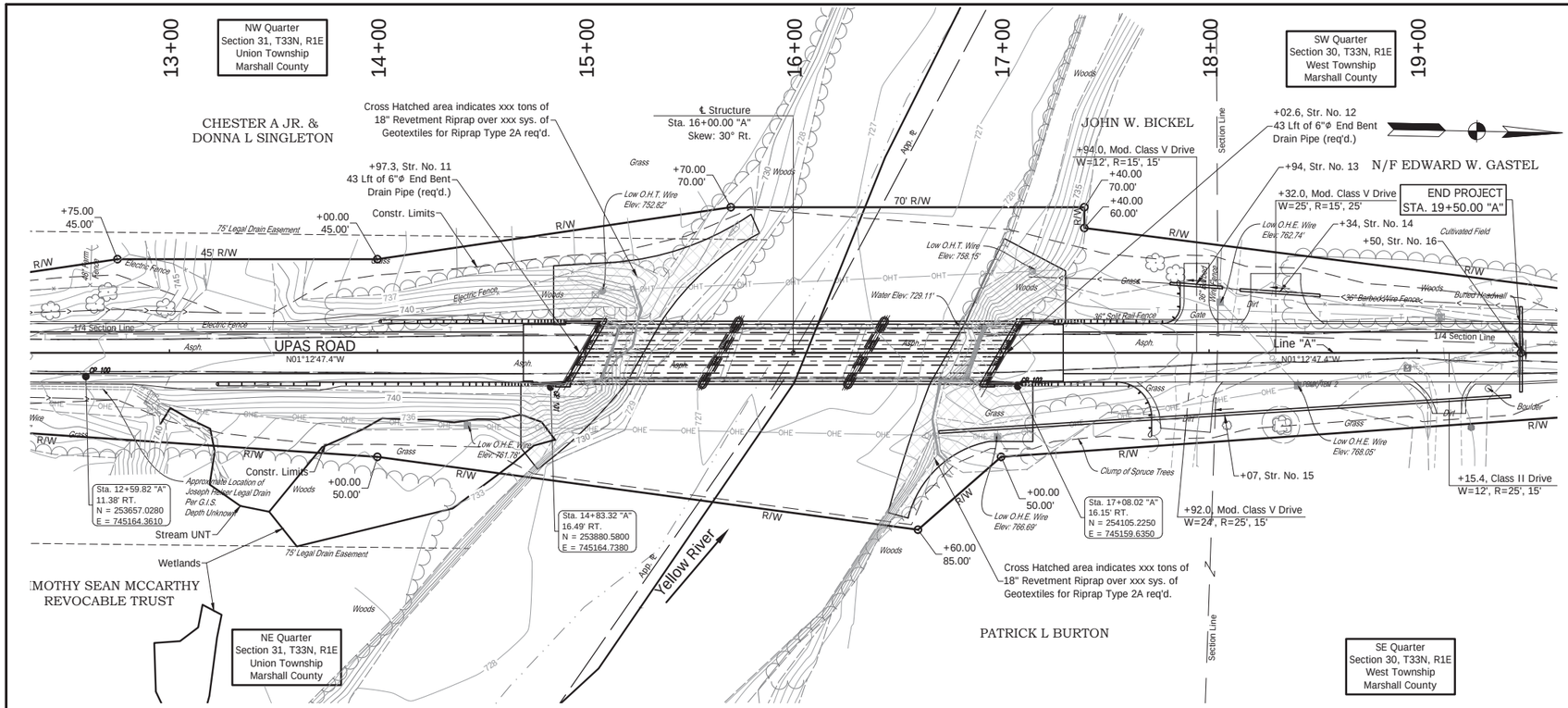
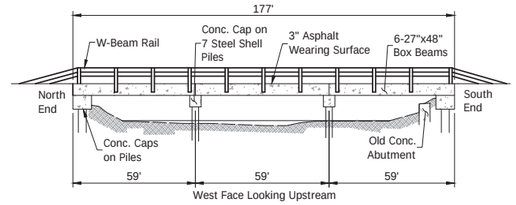
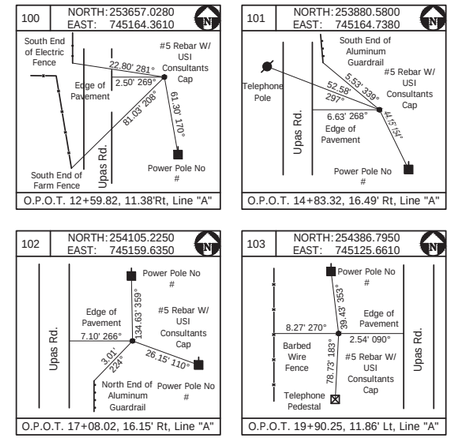




EXISTING STRUCTURE

Three Span Prestressed Concrete Box Beam Bridge
(Structure to be Removed)
Not to Scale



BENCHMARK INFO

TBM #1- RAILROAD SPIKE 1' UP WEST SIDE POWERPOLE #N/A, 400' SOUTH OF ℄ BRIDGE, 20' EAST OF ℄ UPAS ROAD.
N: 253596.61, E: 745174.49, ELEV.: 747.879'

TBM #2- RAILROAD SPIKE 1' UP WEST SIDE POWERPOLE #N/A ADDRESS #13986, 245' NORTH OF ℄ BRIDGE, 20' EAST OF ℄ UPAS ROAD.
N: 254240.00, E: 745155.82, ELEV.: 739.601'

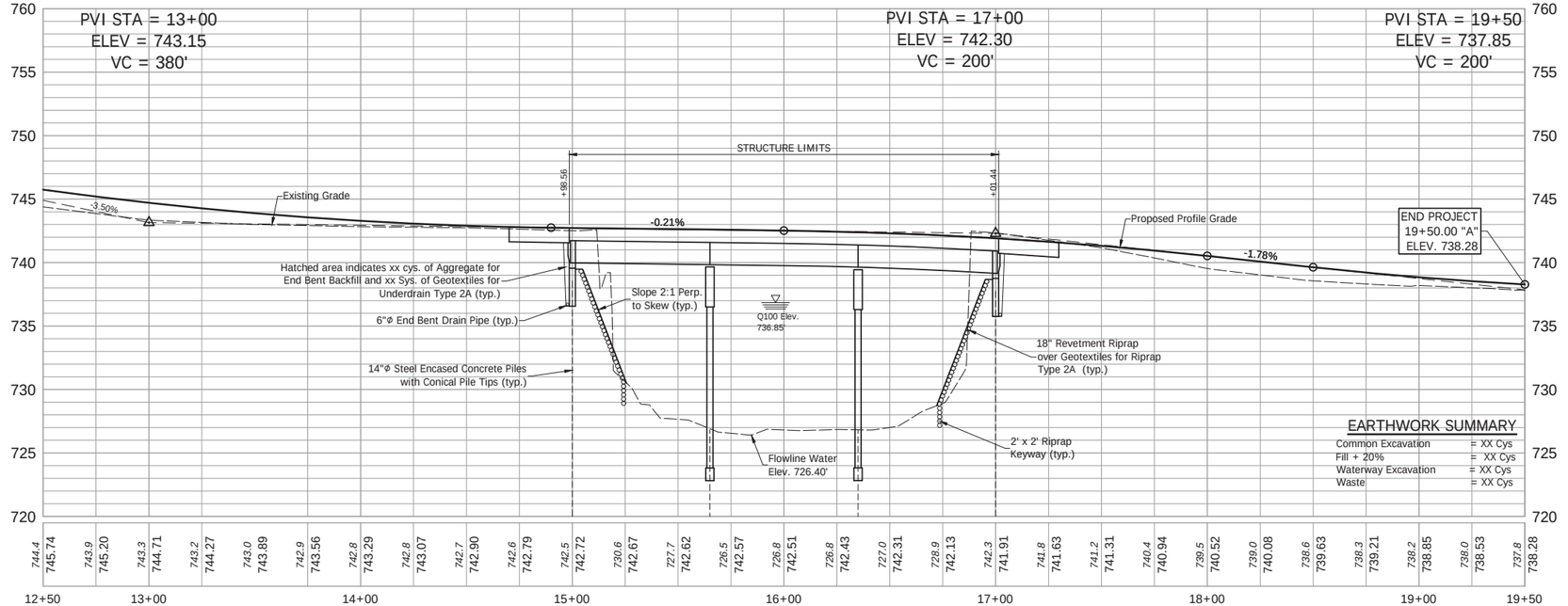
TBM #3- RAILROAD SPIKE 1' UP SOUTHEAST SIDE POWERPOLE #N/A, 430' NORTH OF ℄ BRIDGE, 15' WEST OF ℄ UPAS ROAD.
N: 254425.27, E: 745121.81, ELEV.: 738.184'

HYDRAULIC DATA

Drainage Area:	376.9 sq. miles
Q100	4850 cfs
Q100 Elevation	736.85 ft.

DESCRIPTION	Existing Structure	Proposed Structure
Q100 Backwater:	0.13 ft.	0.13 ft.
Q100 Headwater Elev.:	737.04 ft.	737.04 ft.
Gross Waterway Area below Q100:	1334.4 sq. ft.	1352.9 sq. ft.
Road Overflow Waterway Area:	0 sq. ft.	0 sq. ft.
Q100 Velocity:	3.7 ft./s	3.7 ft./s
Minimum Low Structure Elevation:	740 ft.	738.89 ft.
Skew:	20 degrees	30 degrees
Freeboard:	3.15 ft.	2.04 ft.

SUMMARY OF SCOUR DATA	Existing Structure	Proposed Structure
Flowline Elevation:	N/A ft.	726.40 ft.
Q100 Max. Velocity:	N/A ft./s.	4.26 ft./s.
Q100 Contraction Scour Depth:	N/A ft.	1.88 ft.
Q100 Pier Scour Depth:	N/A ft.	4.27 ft.
Q100 Total Scour:	N/A ft.	6.15 ft.
Q100 Low Scour Elevation:	N/A ft.	720.25 ft.



EARTHWORK SUMMARY

Common Excavation	= XX Cys
Fill + 20%	= XX Cys
Waterway Excavation	= XX Cys
Waste	= XX Cys

PRESTRESSED COMPOSITE BOX BEAM BRIDGE

THREE SPANS @ 65'-0", 70'-0", 65'-0", 30° SKEW RT.
27'-4" CLEAR ROADWAY WIDTH
UPAS ROAD OVER YELLOW RIVER
MARSHALL COUNTY, INDIANA

NOT FOR CONSTRUCTION

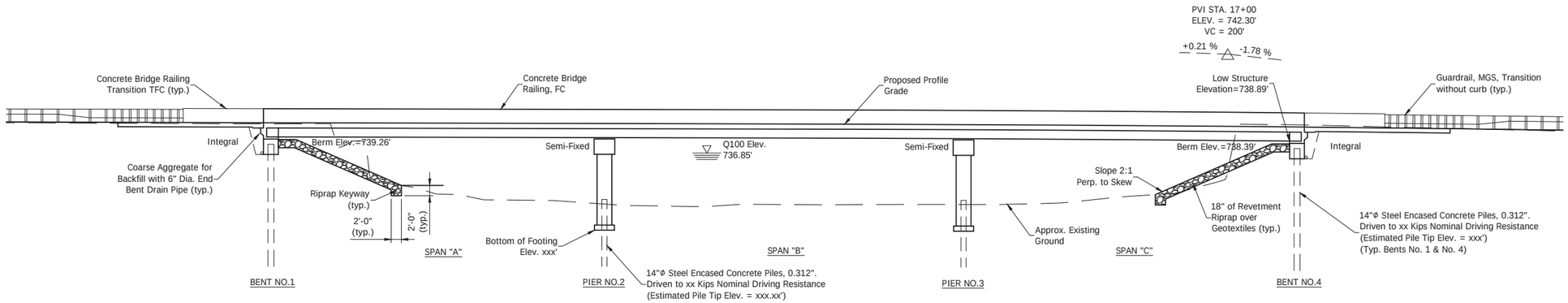
DESIGNED: FM | DRAWN: DWB
CHECKED: BMA | CHECKED: FM

INDIANA DEPARTMENT OF TRANSPORTATION

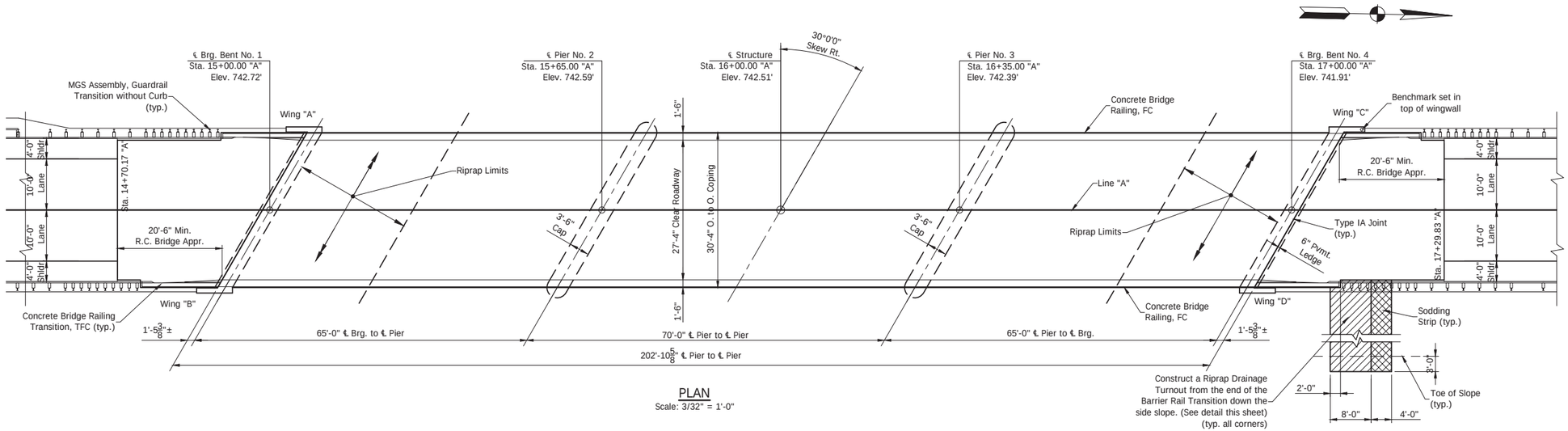
LAYOUT

HORIZONTAL SCALE	BRIDGE FILE
1"=30'	MARSHALL CO. BR. 120
VERTICAL SCALE	DESIGNATION
1"=5'	1702838
SURVEY BOOK	SHEETS
----	10 of 29
CONTRACT	PROJECT
B-41182	1702838

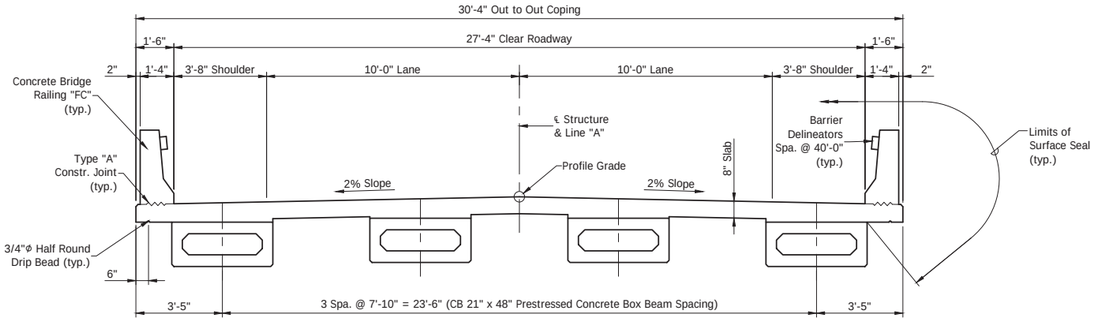
S:\1702838\Proj\1702838_126 MARSHALL BR 120 - S UPAS RD\Plans\Bridge Plans\1702838_126 Layout.dwg, Layout, 6/16/2020 11:35:10 AM



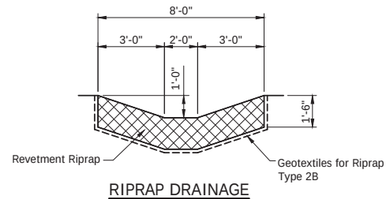
ELEVATION
Scale: 3/32"=1'-0"



PLAN
Scale: 3/32" = 1'-0"



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



RIPRAP DRAINAGE TURNOUT DETAIL
Not to Scale

GENERAL NOTES:

All dimensions are in feet and inches and all elevations are in feet unless otherwise noted.

Reinforcing steel covering to be 2.5" in top and 1" min. in bottom of floor slabs, 3" in footings except bottom steel to be 4", and 2" in all other parts, unless noted.

Concrete in end bents, floor slab, wingwalls and concrete barrier railing is to be Class "C".

Surface Seal exposed surfaces of wingwalls, face of deck coping, underside of bridge floor from coping to face of outside beams, all faces of concrete barrirer railing, bridge deck and approach slabs. Estimated Quantity = xxx Sft.

DESIGN DATA

Superstructure and Substructure designed for HL-93 loading, in accordance with AASHTO LRFD Bridge Design Specifications, 8th Edition, 2017, and its subsequent interims.

Designed for actual dead load plus 35#/sft. future wearing surface, and 15#/sft. additional to permit use of Permanent Metal Deck Forms.

Slab designed with 1/2" wearing surface.

UNIT STRESSES:
Class "C" Concrete F'c = 4000 p.s.i.
Class "A" Concrete F'c = 3500 p.s.i.
Reinforcing Steel (Grade 60) Fy = 60,000 p.s.i.

SEISMIC DESIGN DATA

Seismic Performance Zone	Zone 1
Acceleration Coefficient	S_{D1}=0.XXX
Seismic Soil Profile Type	Class C

CONSTRUCTION LOADING

The exterior beam 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 beam. The finishing machine was assumed to be supported 6 inches outside the vertical coping form. The top overhang brackets were assumed to be located 6 inches past the edge of vertical coping form. The bottom overhang brackets were assumed to be braced against the intersection of the beam bottom flange web.

Deck Falsework Loads:
Designed for the 15 lb/sft for permanent metal stay-in-place deck forms, removable deck forms, and 2 feet exterior walkway.

Construction Live Load:
Designed for the 20 lb/sft extending 2 feet past the edge of coping and 75 lb/ft vertical force applied at a distance of 6 inch outside the face of coping over a 30 feet length of the deck centered with the finishing machine.

Finishing Machine Load: 4500 lb. distributed over 10 feet along coping.

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

PRESTRESSED COMPOSITE BOX BEAM BRIDGE

THREE SPANS @ 65'-0", 70'-0", 65'-0", 30° SKEW RT.
27'-4" CLEAR ROADWAY WIDTH
UPAS ROAD OVER YELLOW RIVER
MARSHALL COUNTY, INDIANA

NOT FOR CONSTRUCTION

DESIGNED: FM	DRAWN: DWB
CHECKED: BMA	CHECKED: FM

INDIANA DEPARTMENT OF TRANSPORTATION

GENERAL PLAN

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	MARSHALL CO. BR. 120
VERTICAL SCALE	DESIGNATION
AS NOTED	1702838
SURVEY BOOK	SHEETS
----	11 of 29
CONTRACT	PROJECT
B-41182	1702838

SUMMARY OF BRIDGE QUANTITIES

ITEM	CONCRETE CLASS C SUPERSTR	CONCRETE CLASS A SUBSTR	CONCRETE CLASS B IN FTG.	CONCRETE RAILING CLASS C		REINF. STEEL	EPOXY COATED REINF. STEEL	PILES 14"ø CONC. STEEL SHELL ENCASED		14"ø CONC. STEEL SHELL ENCASED EPOXY COAT.		STEEL H HP12 x 53		STEEL H EPOXY COATED		STEEL H REINF. CONC. ENCASED		PILE TIP STEEL H	CORED HOLES IN ROCK		SURFACE SEAL **	RAILING PS-2	DENSE GRADED SUBBASE	R.C. BRIDGE APPROACH (10")	FIELD DRILLED HOLES IN CONCRETE	PATCHING CONCRETE STRUCTURES	CONC. STR. MEMBERS BOX BEAMS TYPE XX	CONC. STR. MEMBERS I-BEAMS TYPE XX	CAST IRON GRATES, BASINS & FITTINGS	CAST IRON DRAIN PIPE, 6"ø	CONCRETE BARRIER RAILING TRANSITION, TFC		
	cys	cys	cys	cys	lft.	lbs.	lbs.	no.	lft.	no.	lft.	no.	lft.	no.	lft.	no.	lft.	each	no.	lft.	sft.	lft.	cys.	sys.	each	sft.	lft.	lft.	lbs.	lbs.	each		
SUPERSTRUCTURE	xx			x			x														x						x			x		
BENT NO. 1		x					x	x	x												x											
BENT NO. 2		x					x	x	x																							
BENT NO. 3		x					x	x	x																							
BENT NO. 4		x					x	x	x												x											
WEST APPROACH SLAB							x														x		x	x						x		
EAST APPROACH SLAB							x														x		x	x						x		
TOTALS	x	x		x			x		x												x		x	x			x			x		

** ESTIMATED QUANTITY

PAVEMENT QUANTITIES AND APPROACH TABLE

LOCATION	DESCRIPTION (APPROACH TYPE OR CLASS)	WIDTH	LENGTH	RADII	DISTANCE BEYOND R/W LINE	SURFACE BEYOND R/W LINE COMPACTED AGGREGATE BASE	SURFACE BEYOND R/W LINE HMA	SURFACE BEYOND R/W LINE CONCRETE	GRADE 1	GRADE 2	EXCAVATION CUT	EXCAVATION FILL	CLEAR ZONE AT DRIVE	HMA FOR APPROACHES TYPE "A" SURFACE 9.5 mm		INTERMD. 19.0 mm		BASE 25.0 mm		HMA MATERIALS-TYPE "B" SURFACE 9.5 mm		INTERMD. 19.0 mm		BASE 25.0 mm		HMA SURFACE 9.5 mm, SHLDR.		HMA BASE 25.0 mm, SHLDR.		BITUMINOUS MATERIAL FOR PRIME COAT	BITUMINOUS MATERIAL FOR TACK COAT	COMPACTED AGGREGATE FOR BASE NO. 53 DEPTH (in.) 6	COMPACTED AGGREGATE FOR BASE NO. 53 DEPTH (in.) 8	COMPACTED AGGREGATE FOR SURFACE NO. 73 DEPTH (in.)		SUBGRADE TREATMENT TYPE IC	SUBGRADE TREATMENT TYPE II	JOINT ADHESIVE, SURFACE	JOINT ADHESIVE, INTERMEDIATE	JOINT SEALANT
		ft.	ft.	ft.	ft.	tons	tons	sft.	%	%	cys	cys	ft.	lbs./syd.	tons	lbs./syd.	tons	lbs./syd.	tons	lbs./syd.	tons	lbs./syd.	tons	lbs./syd.	tons	lbs./syd.	tons	lbs./syd.	tons	syd	tons	tons	tons	tons	tons	sys.	sys.	lft.	lft.	lft.
Sta. 11+10 to Sta. 14+70.17 "A"	Mainline																			x	x			x	x	x	x	x	x		x		x			x	x	x	x
Sta. 17+29.83 to Sta. 20+50 "A"																																							
Sta. 19+15.4 "A", Rt.	Class II	12		25, 15										x	x	x	x																			x				
TOTALS															x		x				x				x		x		x		x		x	x	x	x	x	x	x	x

APPROACH STRUCTURES

STRUCTURE NUMBER	LOCATION STATION	LOCATION LEFT	LOCATION RIGHT	LOCATION CROSS	SIZE	DESCRIPTION TYPE	DESCRIPTION KIND	LENGTH	SKEW	FLOW LINE COVER	FLOW LINE UP STREAM	FLOW LINE DOWN STREAM	BACKFILL TYPE	STRUCTURE BACKFILL	REVETMENT RIPRAP	CONCRETE CLASS "A"	PIPE END SECTION	AGGREGATE FOR END BENT BACKFILL	GEOTEXTILES	GRATED BOX END SECTION type	GRATED BOX END SECTION slope	CONNECT TO STR.	REMARKS
					inches			lft.		ft.	elev.	elev.		cys.	tons	cys.	ea.	cys.	sys.	type	slope		
10	11+66 "A"		X		15	3	Type 3	x									2						
11	14+97.3 "A"			X	6	3	End Bent Drain Pipe	x										x	x				
12	17+02.6 "A"			X	6	3	End Bent Drain Pipe	x										x	x				
13	17+94 "A"	X			15	3	Type 3	x									2						
14	18+34 "A"	X			15	3	Type 3	x									2						
15	18+07 "A"		X		15	3	Type 3	x									1						
16	19+50 "A"			X	15	1	Type 1	x									2						

GUARDRAIL SUMMARY TABLE

LOCATION FROM STATION	LOCATION TO STATION	LEFT	MEDIAN LEFT	MEDIAN RIGHT	RIGHT	W-BEAM GUARDRAIL AT 6.25 FT. SPA.	MODIFIED W-BEAM GUARDRAIL, 6.25 FT. SPA. (15' RAD.)	GUARDRAIL TRANSITION, TGB	RAILING TS-1 NESTED	W-BEAM GUARDRAIL SYSTEM TYPE 1	GUARDRAIL END TREATMENT, TYPE I	TYPE 5 ANCHOR
						LFT	LFT	EACH	LFT	EACH	EACH	EACH
xx+xx	xx+xx	X				x		x			x	
xx+xx	xx+xx				X			x			x	
xx+xx	xx+xx	X				x	x	x				x
xx+xx	xx+xx				X			x			x	
TOTALS						x	x	x			x	x

TEMPORARY EROSION AND SEDIMENT CONTROL TABLE

LOCATION STATION TO STATION PLACED AT CONSTRUCTION LIMITS	LT./RT.	Temporary Ditch Inlet Protection, Geotextile Box	Temporary Silt Fence	Temporary Ditch Check, Straw Bales
xx+xx TO xx+xx "A"	LT.		xxx Lft.	
xx+xx TO xx+xx "A"	RT.		xxx Lft.	
xx+xx TO xx+xx "A"	LT.		xxx Lft.	
xx+xx TO xx+xx "A"	RT.		xxx Lft.	
TOTALS			xxx Lft.	

R/W MARKERS

STATION	LINE	OFFSET	LEFT	RIGHT
xx+xx	"A"	x'	X	
xx+xx	"A"	x'	X	
xx+xx	"A"	x'	X	
xx+xx	"A"	x'	X	
xx+xx	"A"	x'	X	
xx+xx	"A"	x'	X	
xx+xx	"A"	x'		X
xx+xx	"A"	x'		X
xx+xx	"A"	x'		X
xx+xx	"A"	x'		X

BENCHMARK

QTY.	LOCATION
1	SEE SPECIAL PROVISIONS

NOT FOR CONSTRUCTION

DESIGNED: FM | DRAWN: DWB | CHECKED: BMA | CHECKED: FM

INDIANA DEPARTMENT OF TRANSPORTATION

ROAD AND BRIDGE SUMMARY

HORIZONTAL SCALE	BRIDGE FILE
NONE	MARSHALL CO. BR. 120
VERTICAL SCALE	DESIGNATION
NONE	1702838
SURVEY BOOK	SHEETS
----	12 of 29
CONTRACT	PROJECT
B-41182	1702838

S:\2021Proj\1702838-126 MARSHALL BR120 - S UPAS RD\Plans\Bridge Plans\2018-126 Bridge Summary.dwg, Bridge Summary, 4/14/2020 10:03:05 AM

Categorical Exclusion

Appendix C

Early Coordination

May 12, 2020

Sample Early Coordination Letter

Re: Des. No. 1702838
Marshall County Bridge No. 120
Bridge Project Upas Road over Yellow River, 0.9 mile south of SR 8
Marshall County, Indiana

Dear :

Marshall County and the Federal Highway Administration (FHWA) intend to proceed with the aforementioned bridge project in Marshall County, Indiana (Des. No. 1702838). This letter is part of the early coordination phase of the environmental review process. At this time, we are requesting comments from your area of expertise regarding any possible environmental effects (social and natural) associated with this project. **Please use the above Des. No. and description in your reply.** Your comments will be incorporated into the formal environmental study. Your cooperation in this endeavor is appreciated.

Project Location and Existing Conditions
The proposed project is located in Marshall County, 0.9 mile south of SR 8. Specifically, the project is located in Sections 30 and 31, Township 33 North, and Range 1 East in Union and West Townships as depicted on the Donaldson U.S. Geological Survey (USGS) Quadrangle. Adjacent land use consists of agricultural fields, residential properties, and forested stream corridor. Please see attachments for maps and photographs of the proposed project area.

Upas Road is functionally classified as a local road. The typical cross-section of Upas Road is two 8-foot travel lanes (one in each direction). Bridge No. 120 is a side-by-side prestressed concrete box beam built in 1971 with a 168.5-foot clear span and a 24.3-foot clear roadway and out-to-out width. There is also metal bridge railing along both sides of the bridge that does not extend past the limits of the existing bridge. The speed limit within the project area is 55 miles per hour.

Purpose and Need
The need for this project stems from the deteriorating condition of the existing structure and the substandard roadway geometry. During routine inspections performed by INDOT in October 2018, the box beams were in poor condition and the substructure is in fair condition. The structure exhibited deterioration, including areas where the corrosion on the piles has led to section loss. The open pile interior piers routinely collect debris. There are signs of scour with the surrounding channel and eroding and undermining of the end bents were present. Additionally,

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

the current roadway has a lane width of 8 feet which does not meet current *Indiana Design Standards.*

The purpose of the project is to improve the structural integrity and extend the lifespan of this crossing to allow safe passage for motorists. A secondary purpose is to bring this crossing up to current *Indiana Design Standards.*

Proposed Project
This proposed project will involve replacing the existing bridge with a new three span, continuous composite prestressed concrete box beam bridge. The northern and southern span will each be 65 feet long and the middle span will be 70 feet long. The new bridge will have a clear roadway width of 27 feet, 4 inches and an out-to-out width of 30 feet, 4 inches. Along both sides of the bridge, concrete railing will be installed. Approximately 88 feet of guardrail will be installed along the west side and 149 feet of guardrail will be installed along the east side of Upas Road south of the new bridge. North of the bridge, 62 feet of guardrail will be installed on the west side and 60 feet will be installed on the east side. The guardrail north of the bridge will end at residential drives on both side of the road. The project will also involve installing new pipe culverts under two drives in the northwest quadrant, two entrance drives in the northeast quadrant, one entrance drive in the southeast quadrant, and on entrance drive in the southwest quadrant. New riprap will be installed around both end bents along the Yellow River. The total project length will be approximately 940 feet along Upas Road.

The Maintenance of Traffic (MOT) will require the closure of Upas Road. A detour route will be established to maintain traffic in the area. Signs and barrels will be placed along West 11th Road notifying travelers of the road closure and detour route. The detour route will follow 14 B Road, SR 17, and SR 8 and will be approximately 6.9 miles long. The MOT will be implemented per the *Indiana Design Manual* guidelines.

Construction is anticipated to begin in Fiscal Year (FY) 2022.

Right-of-Way (*ROW*)
Existing ROW within the project area is considered to be along the edge of the roadway. New ROW acquisition is anticipated to be approximately 1.71 acres of permanent ROW and 0.03 acres of temporary ROW. The project will require approximately 0.17 acre of tree clearing.

Environmental Resources
A Red Flag Investigation (RFI) was performed for a 0.5-mile radius of the project area. Several "Red Flags" were identified within the 0.5-mile search radius; however, not all will be impacted. One stream, the Yellow River, is located within the project area. Two NWI-wetlands are located within the project area. The project is located within the 100-year floodplain of Yellow River. This project is outside the Karst Memorandum of Understanding Potential Karst Features Region.

Lochmueller Group conducted a field investigation of the project area on July 16, 2019. The field investigation identified two streams, UNT 1 and the Yellow River, and three wetlands (Wetlands

A, B, and C) within the project area. A *Waters of the U.S. Determination Report* will be prepared for this project.

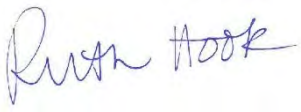
Section 106
The National Register of Historic Places (National Register) and the Indiana Register of Historic Sites and Structures (State Register) were checked using the State Historic Architectural and Archaeological Research Database (SHAARD) and the Indiana Historic Buildings, Bridges, and Cemeteries Map (IHBBCM). No properties on either list were identified within a half mile of the project area. The Marshall County Interim Report (1900), which includes the Indiana Historic Sites and Structures Inventory (IHSSI) for the county, was also examined. No previously inventoried resources were recorded in the vicinity of the project area. No cemeteries were noted within the project area. The Indiana Historic Bridge Inventory Volume 2: Listing of Historic and Non-Historic Bridges (February 2009) by Mead & Hunt was reviewed. No bridges eligible for listing in the National Register were identified within the project area. A virtual review of the area at ground level was conducted via Google Earth Street View, and no potentially Contributing above-ground resources were noted within, or near, the project area. This project qualifies for the Minor Projects Programmatic Agreement (MPPA), Categories B-12, and as such should not require full Section 106 review.

Range-wide Informal Programmatic Consultation
Marshall 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, isolated residences, and forested stream corridor surrounding the project area. 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
Should we not receive your response within **30 calendar days** from the date of this letter, it will be assumed that your agency feels that there will be no adverse effects incurred as a result of the proposed project. However, should you find that an extension to the response time is necessary, a reasonable amount may be granted upon request. If you have any questions regarding this matter, please feel free to contact 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. Jami Erdmann, at (219) 325-7484 or at JErdmann@indot.in.gov.

Thank you in advance for your input.

Sincerely,



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

Attachments:

- General Location Map
- USGS Topographical, Donaldson Quadrangle Map
- 2016 Aerial Map
- Red Flag Investigation Maps
- Photo Location Map and Photographs

Removed to avoid duplication; see Appendix B and Appendix E

Distribution List:

- Natural Resources Conservation Service, Indianapolis Office
- U.S. Army Corps of Engineers, Chicago District
- U.S. Housing and Urban Development
- Federal Highway Administration, Indiana Division
- National Park Service
- 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
- INDOT, LaPorte District
- INDOT, Project Manager
- Indiana Geological Survey (electronic submission)
- Marshall County Highway Department
- Marshall County Board of Commissioners
- Marshall County Council
- Marshall County, Union Township Trustee
- Marshall County, West Township Trustee
- Marshall County Surveyor's Office
- Marshall County Emergency Management Agency
- Culver Ambulance Service
- Marshall County Sheriff's Department
- Culver City Police Department
- Culver Community School Corporation
- Culver-Union Township 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

Marshall County Highway Department
Jason Peters
9675 King Rd
Plymouth , IN 46563

Lochmueller Group
Chris Kunkel
3502 Woodview Trace
Suite 150
Indianapolis , IN 46268

Date

To Engineers and Consultants Proposing Roadway Construction Projects:

RE: Marshall County and the Federal Highway Administration (FHWA) intend to proceed with the aforementioned bridge project in Marshall County, Indiana (Des. No. 1702838). The proposed project is located in Marshall County, 0.9 mile south of SR 8. Specifically, the project is located in Sections 30 and 31, Township 33 North, and Range 1 East in Union and West Townships as depicted on the Donaldson U.S. Geological Survey (USGS) Quadrangle. Adjacent land use consists of agricultural fields, residential properties, and forested stream corridor. The need for this project stems from the deteriorating condition of the existing structure and the substandard roadway geometry. During routine inspections performed by INDOT in October 2018, the box beams were in poor condition and the substructure is in fair condition. The structure exhibited deterioration, including areas where the corrosion on the piles has led to section loss. The open pile interior piers routinely collect debris. There are signs of scour with the surrounding channel and eroding and undermining of the end bents were present. Additionally, the current roadway has a lane width of 8 feet which does not meet current Indiana Design Standards. The purpose of the project is to improve the structural integrity and extend the lifespan of this crossing to allow safe passage for motorists. A secondary purpose is to bring this crossing up to current Indiana Design Standards. This proposed project will involve replacing the existing bridge with a new three span, continuous composite prestressed concrete box beam bridge. The northern and southern span will each be 65 feet long and the middle span will be 70 feet long. The new bridge will have a clear roadway width of 27 feet, 4 inches and an out-to-out width of 30 feet, 4 inches. Along both sides of the bridge, concrete railing will be installed. Approximately 88 feet of guardrail will be installed along the west side and 149 feet of guardrail will be installed along the east side of Upas Road south of the new bridge. North of the bridge, 62 feet of guardrail will be installed on the west side and 60 feet will be installed on the east side. The guardrail north of the bridge will end at residential drives on both side of the road. The project will also involve installing new pipe culverts under two drives in the northwest quadrant, two entrance drives in the northeast quadrant, one entrance drive in the southeast quadrant, and on entrance drive in the southwest quadrant. New riprap will be installed around both end bents along the Yellow River. The total project length will be approximately 940 feet along Upas Road. The Maintenance of Traffic (MOT) will require the closure of Upas Road. A detour route will be established to maintain traffic in the area. Signs and barrels will be placed along West 11th Road notifying travelers of the road closure and detour route. The detour route will follow 14 B Road, SR 17, and SR 8 and will be approximately 6.9 miles long. The MOT will be implemented per the Indiana Design Manual guidelines. Construction is anticipated to begin in Fiscal Year (FY) 2022. Existing ROW within the project area is considered to be along the edge of the roadway. New ROW acquisition is anticipated to be approximately 1.71 acres of permanent ROW and 0.03 acres of temporary ROW. The project will require approximately 0.17 acre of tree clearing. A Red Flag Investigation (RFI) was performed for a 0.5-mile radius of the project area. Several "Red Flags" were identified within the 0.5-mile search radius; however, not all will be impacted. One stream, the Yellow River, is located within the project area. Two NWI-wetlands are located within the project area. The project is located within the 100-year floodplain of Yellow River. This project is outside the Karst Memorandum of Understanding Potential Karst Features Region. Lochmueller Group conducted a field investigation of the project area on July 16, 2019. The field investigation identified two streams, UNT 1 and the Yellow River, and three wetlands (Wetlands A, B, and C) within the project area. A Waters of the U.S. Determination Report will be prepared for this project.

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

Marshall County and the Federal Highway Administration (FHWA) intend to proceed with the aforementioned bridge project in Marshall County, Indiana (Des. No. 1702838). The proposed project is located in Marshall County, 0.9 mile south of SR 8. Specifically, the project is located in Sections 30 and 31, Township 33 North, and Range 1 East in Union and West Townships as depicted on the Donaldson U.S. Geological Survey (USGS) Quadrangle. Adjacent land use consists of agricultural fields, residential properties, and forested stream corridor. The need for this project stems from the deteriorating condition of the existing structure and the substandard roadway geometry. During routine inspections performed by INDOT in October 2018, the box beams were in poor condition and the substructure is in fair condition. The structure exhibited deterioration, including areas where the corrosion on the piles has led to section loss. The open pile interior piers routinely collect debris. There are signs of scour with the surrounding channel and eroding and undermining of the end bents were present. Additionally, the current roadway has a lane width of 8 feet which does not meet current Indiana Design Standards. The purpose of the project is to improve the structural integrity and extend the lifespan of this crossing to allow safe passage for motorists. A secondary purpose is to bring this crossing up to current Indiana Design Standards. This proposed project will involve replacing the existing bridge with a new three span, continuous composite prestressed concrete box beam bridge. The northern and southern span will each be 65 feet long and the middle span will be 70 feet long. The new bridge will have a clear roadway width of 27 feet, 4 inches and an out-to-out width of 30 feet, 4 inches. Along both sides of the bridge, concrete railing will be installed. Approximately 88 feet of guardrail will be installed along the west side and 149 feet of guardrail will be installed along the east side of Upas Road south of the new bridge. North of the bridge, 62 feet of guardrail will be installed on the west side and 60 feet will be installed on the east side. The guardrail north of the bridge will end at residential drives on both side of the road. The project will also involve installing new pipe culverts under two drives in the northwest quadrant, two entrance drives in the northeast quadrant, one entrance drive in the southeast quadrant, and on entrance drive in the southwest quadrant. New riprap will be installed around both end bents along the Yellow River. The total project length will be approximately 940 feet along Upas Road. The Maintenance of Traffic (MOT) will require the closure of Upas Road. A detour route will be established to maintain traffic in the area. Signs and barrels will be placed along West 11th Road notifying travelers of the road closure and detour route. The detour route will follow 14 B Road, SR 17, and SR 8 and will be approximately 6.9 miles long. The MOT will be implemented per the Indiana Design Manual guidelines. Construction is anticipated to begin in Fiscal Year (FY) 2022. Existing ROW within the project area is considered to be along the edge of the roadway. New ROW acquisition is anticipated to be approximately 1.71 acres of permanent ROW and 0.03 acres of temporary ROW. The project will require approximately 0.17 acre of tree clearing. A Red Flag Investigation (RFI) was performed for a 0.5-mile radius of the project area. Several "Red Flags" were identified within the 0.5-mile search radius; however, not all will be impacted. One stream, the Yellow River, is located within the project area. Two NWI-wetlands are located within the project area. The project is located within the 100-year floodplain of Yellow River. This project is outside the Karst Memorandum of Understanding Potential Karst Features Region. Lochmueller Group conducted a field investigation of the project area on July 16, 2019. The field investigation identified two streams, UNT 1 and the Yellow River, and three wetlands (Wetlands A, B, and C) within the project area. A Waters of the U.S. Determination Report will be prepared for this project.

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: 5-13-2020

Signature of the INDOT
Project Engineer or Other Responsible Agent _____

Jason Peters

Date: 05-12-2020

Signature of the
For Hire Consultant Chris Kunkel

Chris Kunkel

Organization and Project Information

Project ID:
Des. ID: 1702838
Project Title: Upas Road over Yellow River (Marshall #120) Bridge Project
Name of Organization: Lochmueller Group
Requested by: Chris Kunkel

Environmental Assessment Report

1. Geological Hazards:
    - High liquefaction potential
    - 1% Annual Chance Flood Hazard
2. Mineral Resources:
    - Bedrock Resource: Low Potential
    - Sand and Gravel Resource: High Potential
3. Active or abandoned mineral resources extraction sites:
    - Petroleum Exploration Wells

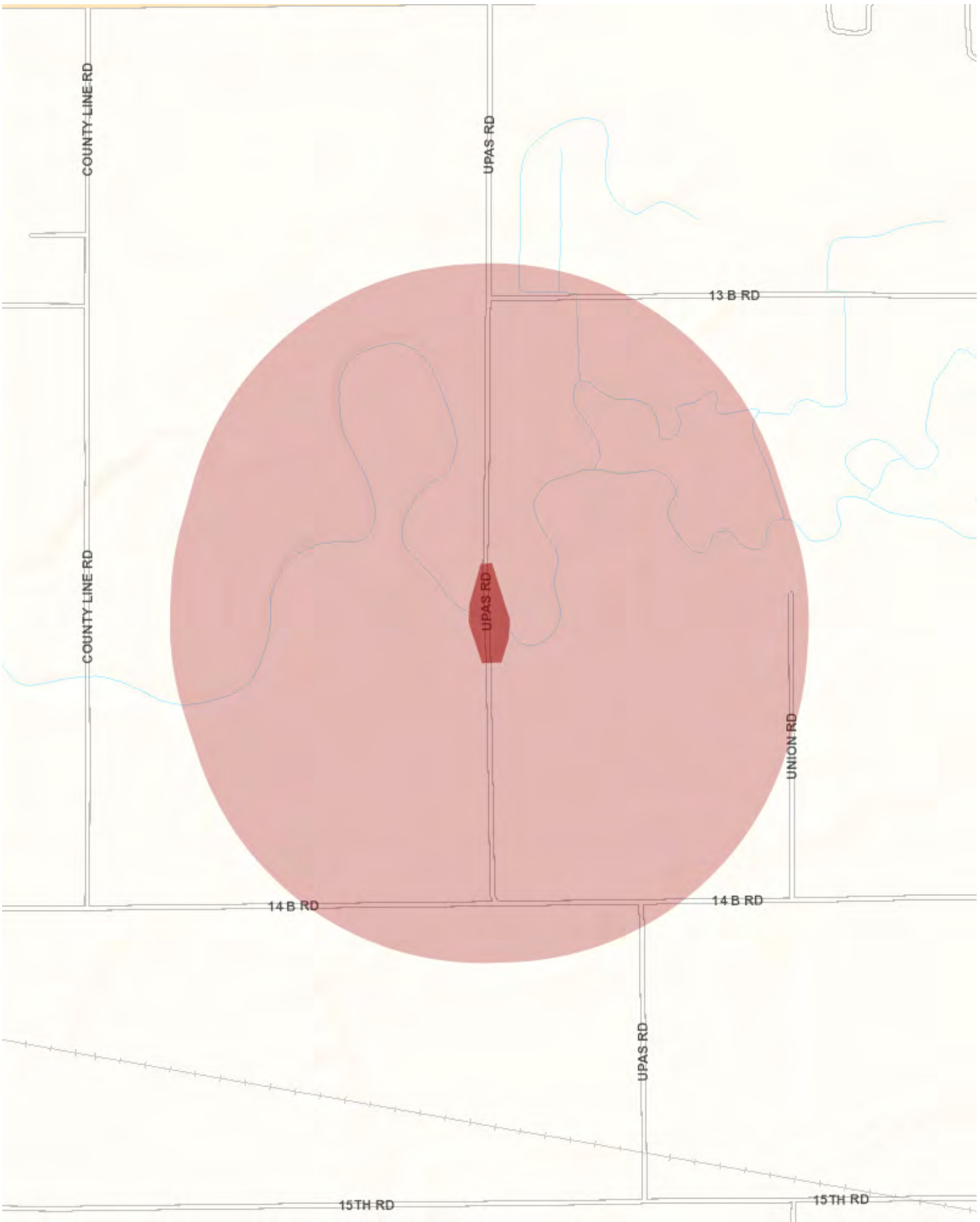
*All map layers from Indiana Map (maps.indiana.edu)

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: May 12, 2020



Metadata:

- https://maps.indiana.edu/metadata/Geology/Petroleum_Wells.html
- 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

USDA
United States Department of Agriculture

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

May 18, 2020

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 bridge that carries Upas Road over Yellow River in Marshall County, Indiana, (Des No 1702838), as referred to in your letter received May 12, 2020, 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,

RICHARD NEILSON
Digitally signed by RICHARD NEILSON
Date: 2020.05.18 15:38:55 -04'00'

RICK NEILSON
State Soil Scientist

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 **5/12/20**	4. Sheet 1 of **1**
1. Name of Project **Marshall Co 120 Des. No. 1702838**	5. Federal Agency Involved **FHWA**	
2. Type of Project **Bridge Replacement**	6. County and State **Marshall County, IN**	

PART II *(To be completed by NRCS)*	1. Date Request Received by NRCS **5/12/20**	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 **240 ac**
5. Major Crop(s) **Corn**	6. Farmable Land in Government Jurisdiction **Acres: 258,991** **% 90**	7. Amount of Farmland As Defined in FPPA **Acres: 216,471** **% 75**
8. Name Of Land Evaluation System Used **LESA**	9. Name of Local Site Assessment System	10. Date Land Evaluation Returned by NRCS **5/18/20**

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	1.71			
B. Total Acres To Be Converted Indirectly, Or To Receive Services	0			
C. Total Acres In Corridor	1.71			
PART IV *(To be completed by NRCS) Land Evaluation Information*				
A. Total Acres Prime And Unique Farmland	0.41			
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	96			
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)*	57			

PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))*	Maximum Points				
1. Area in Nonurban Use	15	15			
2. Perimeter in Nonurban Use	10	10			
3. Percent Of Corridor Being Farmed	20	4			
4. Protection Provided By State And Local Government	20	0			
5. Size of Present Farm Unit Compared To Average	10	5			
6. Creation Of Nonfarmable Farmland	25	3			
7. Availablility Of Farm Support Services	5	5			
8. On-Farm Investments	20	11			
9. Effects Of Conversion On Farm Support Services	25	0			
10. Compatibility With Existing Agricultural Use	10	2			
TOTAL CORRIDOR ASSESSMENT POINTS	160	55	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland (From Part V)	100	57	0	0	0
Total Corridor Assessment (From Part VI above or a local site assessment)	160	55	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	112	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?
Corridor A	**0.06**	**6/16/20**	YES ☑ NO ☐

5. Reason For Selection:

Least amount of impacts to farmland

Signature of Person Completing this Part: *Chris Kunkel* DATE **6/16/20**

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

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, CHICAGO DISTRICT
231 SOUTH LA SALLE STREET, SUITE 1500
CHICAGO IL 60604

19 May 2020

Planning, Programs, and Project
Management Division, Planning Branch

Chris Kunkel
3502 Woodview Trace, Suite 150
Indianapolis, Indiana 46268

Regarding: Des. No. 1702838

Dear Mr. Kunkel,

This letter is in response to a request concerning early coordination regarding any potential environmental effects of proposed project Des. No. 1702838, Marshall County Bridge No. 120, Bridge Project Upas Road over Yellow River, 0.9 mile south of SR 8, Marshall County, Indiana.

The U.S. Army Corps of Engineers Chicago District does not have any current or planned civil works projects at this location. Additionally, we do not anticipate an adverse environmental impact to a resource within our area of expertise. However, we will keep a record of this project for future reference.

Please note that Regulatory responsibilities for this region remain with the Detroit District at this time. Please continue to coordinate with USACE Detroit District Regulatory Office for all Department of the Army permit requirements. The Detroit District POC is Mr. Donald T. Reinke who can be reached via email at donald.t.reinke@usace.army.mil. This review does not eliminate the need for reviews local jurisdictions or state and federal resources agencies. If there are any additional questions please feel free to contact me at 312-846-5580 or at susanne.j.davis@usace.army.mil.

Sincerely,

Susanne J. Davis

Susanne J. Davis, P.E.
Chief, Planning Branch

TELEPHONE RECORD

Date of Call:	6/4/2020	**Phone Number:**	574-276-3039
Order Number:		**Conversation With:**	Terry Borggren West Township Trustee
Submitted By:	Chris Kunkel	**Company Name:**	Lochmueller Group
Copies To:	Faith Morrison, USI Consultants Brandon Arnold, USI Consultants Ruth Hook, Lochmueller Group	**Project:**	Marshall Bridge 120 Bridge Replacement Des. No. 1702838
Subject:	The addition of parking spots and/or kayak launch		

Remarks: Spoke with Mr. Borggreen this morning regarding this bridge replacement project. He was curious if there would be a way to include a kayak launch into the design of this project. According to Mr. Borggren, the spot around this project is a popular location for kayakers to launch. He was also curious if the addition of parking spaces might be feasible. He added that West and Union Township funds could potentially be used. Would like any response at his email borggren24@gmail.com.

Request for consideration was communicated to the Designer on June 4, 2020.

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

Chris Kunkel

From: Ty Adley <tadley@co.marshall.in.us>
Sent: Thursday, June 4, 2020 10:21 AM
To: Chris Kunkel
Cc: Ruth Hook
Subject: RE: Marshall 120 Bridge Replacement Project (Des. No. 1702838) Early Coordination Letter

Good Morning,

I see no issue or concern with the proposed bridge replacement.

Should you have any questions please let me know.

Thanks,

Ty Adley, AICP
Plan Director
Marshall County Plan Commission
p. 574-935-8540
tadley@co.marshall.in.us

From: Chris Kunkel <CKunkel@lochgroup.com>
Sent: Tuesday, May 12, 2020 12:48 PM
To: Ty Adley <tadley@co.marshall.in.us>
Cc: Ruth Hook <RHook@lochgroup.com>
Subject: Marshall 120 Bridge Replacement Project (Des. No. 1702838) Early Coordination Letter

Good afternoon,

Please see the attached early coordination letter and associated attachments for the bridge project in Marshall 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,

Chris Kunkel
Environmental Biologist
Lochmueller Group
3502 Woodview Trace, Suite 150, Indianapolis, IN 46268
317.334.6818 (direct) | 317.677.5132 (mobile)
CKunkel@lochgroup.com
http://lochgroup.com

United States Department of the Interior
Fish and Wildlife Service

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

June 9, 2020

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

Project No.: Des. 1702838
Project: Replacement of Bridge No. 120 over Yellow River
Location: Marshall County

Dear Ms. Hook:

This responds to your letter dated May 12, 2020, requesting our comments on the aforementioned project.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (l6 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of l969, the Endangered Species Act of l973, and the U. S. Fish and Wildlife Service's Mitigation Policy.

The proposed project consists of the replacement of the existing bridge with a new 3-span structure at the same location. All aspects of the bridge will be replaced, including the piles within the river; however, it is not indicated if piles or piers would be used for the new structure or whether or not cofferdams or temporary work causeways or bridges would be required. The new bridge will also be wider in order to provide 12-foot lanes in each direction. In addition, riprap is proposed to be placed along both banks of the river under the new structure.

The Indiana Department of Natural Resources, Wildlife Research Unit, has recognized this reach of the Yellow River as an Other Important Mussel Stream – Yellow River from Starke/Marshall county line upstream to Isaac Sells Ditch mouth (the outlet stream of Lake of the Woods south of Bremen). Although no Federal or State listed mussel species are found in the river, it does support important mussel beds and contains quality instream habitat. A mussel survey was conducted at this site in 2009, with 6 species being found. Therefore, preservation of the existing riparian corridor, enhancement/restoration of the corridor, erosion control, and other activities to maintain this high quality reach of the Yellow River are important and need to be recognized during any construction projects affecting this portion of the river.

It is estimated that 1.71 acres of new permanent right-of-way will be required to complete the project, with a small amount of temporary right-of-way. Much of this right-of-way is likely to be from residential yards, although some riparian woodland in the northwest quadrant will possibly also be affected. Your letter does

not indicate if the utility line along the east side of Upas Road would need to be moved further to the east; wetlands are present near or under this power line in the southeastern quadrant and are likely to be affected by any work in this area.

Impacts to any forested wetlands and riparian woodlands will require mitigation. We support the mitigation guidelines of the Indiana Department of Natural Resources contained in their Information Bulletin #17 (http://iac.iga.in.gov/iac/20190130-IR-312190041NRA.xml.pdf) which states that the standard minimum mitigation ratio for forested wetland losses is 4:1; mitigation is also required for the loss of non-wetland riparian woodlands.

ENDANGERED SPECIES

The proposed project is within the range of the Federally endangered Indiana bat (*Myotis sodalis*), clubshell mussel (*Pleurobema clava*), rayed bean mussel (*Villosa fabalis*), sheepnose mussel (*Plethobasus cyphyus*), and rusty patched bumblebee (*Bombus affinis*), and the threatened northern long-eared bat (*Myotis septentrionalis*) and eastern massasauga rattlesnake (*Sistrurus catenatus*). The mussels are not found in the Yellow River and there is no known habitat for the eastern massasauga within the proposed project area. The project area is within an Uncertainty Zone for the rusty patched bumble bee. These are areas with slightly older detection records (between 2000 and 2006) than Primary Dispersal Zones (detections between 2007 and current); these areas do not require Section 7 consultation but are important for conservation actions and additional survey efforts (https://www.fws.gov/midwest/Endangered/insects/rpbb/rpbbmap.html). Therefore we agree that the proposed project is not likely to adversely affect the mussels, eastern massasauga, and rusty patched bumblebee. Impacts on the 2 bat species need to be evaluated utilizing the Range-wide Programmatic Informal Consultation process.

This precludes the need for further consultation on this project for the mussels, eastern massasauga, and rusty-patched bumblebee as required under Section 7 of the Endangered Species Act of l973, as amended. However, should new information arise pertaining to project plans or a revised species list be published, it will be necessary for the Federal agency to reinitiate consultation.

We appreciate the opportunity to comment on this proposed project. Please keep us informed about project plans as they are developed, particularly concerning impacts to Yellow River and wetlands. For further discussion, please contact Elizabeth McCloskey at (219) 983-9753 or elizabeth_mccloskey@fws.gov.

Sincerely yours,

/s/ *Elizabeth S. McCloskey*

for Scott E. Pruitt
Supervisor

Sent via email June 9, 2020; no hard copy to follow.

cc: Christie Stanifer, Environmental Coordinator, Division of Fish and Wildlife, Indianapolis, IN
Jason Randolph, IDEM, Office of Water Quality, Indianapolis, IN

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: June 19, 2020
Consultation Code: 03E12000-2020-SLI-1160
Event Code: 03E12000-2020-E-08006
Project Name: Marshall County Bridge #120: South Upas Road over Yellow River (Des. No. 1702838)

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 03E12000-2020-SLI-1160

Event Code: 03E12000-2020-E-08006

Project Name: Marshall County Bridge #120: South Upas Road over Yellow River (Des. No. 1702838)

Project Type: TRANSPORTATION

Project Description: Marshall County proposes a project to replace existing bridge carrying S Upas Road over the Yellow River (Marshall Co. Bridge No. 120) approximately 1.03 miles south of SR 8 (Des. No. 1702838). The project limits extend 452 feet north of the center line of the bridge and 488 feet south. The existing bridge will be replaced with a three span, continuous composite prestressed 8-inch concrete box beam bridge. Guardrail will be placed along S Upas Road at the approaches and new riprap will be placed along the Yellow River around both end bents of the new bridge. Suitable summer bat habitat is located along Yellow River on the east and west side of S Upas Road. Approximately 0.2 acres of suitable summer habitat will be removed in January 2023. The dominant tree species within the area consist of Eastern Black Walnut (Juglans nigra), common hackberry (Celtis occidentalis), and sugar maple (Acer saccharum). All tree clearing will occur within 100 feet of the existing roadway. The project anticipates acquiring 1.71 acres of permanent right of way and 0.03 acres of temporary. No permanent lighting will be installed. Temporary lighting may be used during construction. The maintenance of traffic (MOT) will require the closure of Upas Road. A detour route will be established to maintain traffic in the area. Signs and barrels will be placed along Upas Road notifying travelers of road closure and detour route. The detour route will follow SR 8 to County Line Road to 14B. The MOT will be implemented per the Indiana Design Manual guidelines.

A review of the USFWS database by INDOT LaPorte District on July 15, 2019 did not identify Indiana bat or northern long-eared bat or their hibernacula within 0.5 mile of the project.

No evidence of bats was seen or heard during the field inspection by Lochmueller Group on July 16, 2019.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/41.2729822800397N86.45377881063925W

Counties: Marshall, 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.

---

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

Mammals

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

Critical habitats

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

United States Department of the Interior

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

In Reply Refer To: June 22, 2020
Consultation Code: 03E12000-2020-I-1160
Event Code: 03E12000-2020-E-08063
Project Name: Marshall County Bridge #120: South Upas Road over Yellow River (Des. No. 1702838)

Subject: Concurrence verification letter for the 'Marshall County Bridge #120: South Upas Road over Yellow River (Des. No. 1702838)' 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 **Marshall County Bridge #120: South Upas Road over Yellow River (Des. No. 1702838)** (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

Marshall County Bridge #120: South Upas Road over Yellow River (Des. No. 1702838)

Description

Marshall County proposes a project to replace existing bridge carrying S Upas Road over the Yellow River (Marshall Co. Bridge No. 120) approximately 1.03 miles south of SR 8 (Des. No. 1702838). The project limits extend 452 feet north of the center line of the bridge and 488 feet south. The existing bridge will be replaced with a three span, continuous composite prestressed 8-inch concrete box beam bridge. Guardrail will be placed along S Upas Road at the approaches and new riprap will be placed along the Yellow River around both end bents of the new bridge. Suitable summer bat habitat is located along Yellow River on the east and west side of S Upas Road. Approximately 0.2 acres of suitable summer habitat will be removed in January 2023. The dominant tree species within the area consist of Eastern Black Walnut (Juglans nigra), common hackberry (Celtis occidentalis), and sugar maple (Acer saccharum). All tree clearing will occur within 100 feet of the existing roadway. The project anticipates acquiring 1.71 acres of permanent right of way and 0.03 acres of temporary. No permanent lighting will be installed. Temporary lighting may be used during construction. The maintenance of traffic (MOT) will require the closure of Upas Road. A detour route will be established to maintain traffic in the area. Signs and barrels will be placed along Upas Road notifying travelers of road closure and detour route. The detour route will follow SR 8 to County Line Road to 14B. The MOT will be implemented per the Indiana Design Manual guidelines.

A review of the USFWS database by INDOT LaPorte District on July 15, 2019 did not identify Indiana bat or northern long-eared bat or their hibernacula within 0.5 mile of the project.

No evidence of bats was seen or heard during the field inspection by Lochmueller Group on July 16, 2019.

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

    No

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

    Yes

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

    No

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

    Yes

23. Does the project include slash pile burning?

    No

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

    Yes

25. 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

26. 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 Form_2019-07.pdf https://ecos.fws.gov/ipac/project/FSDOIIYZ7RH3LOQVHOVXWMBTQQ/projectDocuments/22245048*

27. 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

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

    No

29. 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

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

    Yes

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

    Yes

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

    No

33. 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

34. 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

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

    No

36. Are the wetland or stream protection activities associated with compensatory wetland/ stream mitigation portion of this project consistent with a Not Likely to Adversely Affect determination in this key?

    Automatically answered

    Yes, because your activities associated with compensatory wetland/stream mitigation activities do not clear suitable summer habitat and are not within 0.5 miles of Indiana bat or NLEB hibernaculum.

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.

0.2

4. Please describe the proposed bridge work:
The existing bridge will be replaced with a three span, continuous composite prestressed 8-inch concrete box beam bridge.

5. Please state the timing of all proposed bridge work:
January 2023

6. Please enter the date of the bridge assessment:
   July 16, 2019

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.

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)
1702838	Yellow River	July 16, 2019 12:00 PM	**(Yes)** / **No**

Route	County	Federal Structure ID
South Upas Road	Marshall County	50-00120

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

THIS IS NOT A PERMIT

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

DNR #: ER-22542 **Request Received:** May 12, 2020

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

Project: Upas Road bridge (#120) replacement over Yellow River, 0.9 mile south of SR 8; Des #1702838

County/Site info: Marshall

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

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

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

Natural Heritage Database: The Natural Heritage Program's data have been checked.
The state endangered Northern Brook Lamprey (Ichthyomyzon fossor) has been documented in the Yellow River within 1/2 mile of the project area.

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) Northern Brook Lamprey:
The biggest concern for this species is maintaining the existing riffle habitat as much as possible. Impacts to this species can be minimized by keeping the footprint of the project as small/narrow as possible and impacting the stream bottom as little as possible. If a causeway will be used, maintain normal flow as much as possible to prevent downstream scour. If multiple causeways are needed, only one should be in-stream at a time, and it should be removed before the next one is installed. If multiple causeways are required at one time, then they should not cover more than half of the stream width at one time. If a causeway happens to get blown out during a high water event, heavy equipment should not be driven in the stream channel to recover materials.

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

depth, channel width, and water velocities during low-flow conditions that are approximate to those in the natural stream channel. Banklines should be restored within box and pipe structures to allow for wildlife passage above the ordinary highwater mark.

The new, replacement, or rehabbed structure, and any bank stabilization under the structure, should not create conditions that are less favorable for wildlife passage under the structure compared to the current conditions. When determining an appropriate bridge or culvert size, consider whether or not wildlife/vehicle collisions are a concern at the crossing site. If feasible, a larger bridge or culvert opening can allow for the movement of wildlife under the roadway in order to minimize wildlife/vehicle collisions.

3) Bank Stabilization & Wildlife Passage:
To improve conditions for terrestrial wildlife passage, the Environmental Unit recommends removing the vertical wall on the north bank adjacent to the bridge and restoring it to a streambank composed of natural materials and with a slope of 3:1 or less. 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 should 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.

4) Riparian Habitat:
We recommend a mitigation plan be developed (and submitted with the permit application) for any unavoidable habitat impacts that will occur. The DNR's Habitat Mitigation guidelines (and plant lists) can be found online at: http://iac.iga.in.gov/iac/20200527-IR-312200284NRA.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) or by using the 1:1 replacement ratio based on area depending on the type of habitat impacted (individual canopy tree removal in an urban streetscape or park-like environment versus removal of habitat supporting a tree canopy, woody understory, and herbaceous layer). Impacts under 0.10 acre in and urban area may still involve the replacement of large diameter

trees but typically do not require any additional mitigation or additional plantings beyond seeding and stabilizing disturbed areas. There are exceptions for high quality habitat sites however.

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

The additional measures listed below should be implemented to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources:
1. Revegetate all bare and disturbed areas 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. Do not excavate in the low flow area except for the placement of piers, foundations, and riprap, or removal of the old structure.
6. Operate equipment used to replace the bridge from the existing roadway.
7. Use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids.
8. Do not use broken concrete as riprap.
9. Underlay the riprap with a bedding layer of well graded aggregate or a geotextile to prevent piping of soil underneath the riprap.
10. Minimize the movement of resuspended bottom sediment from the immediate project area.
11. Do not deposit or allow demolition/construction materials or debris to fall or otherwise enter the waterway.
12. 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.
13. 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.
14. Do not excavate or place fill in any riparian wetland.

THIS IS NOT A PERMIT

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

Early Coordination/Environmental Assessment

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:** June 10, 2020

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

Categorical Exclusion

Appendix D

Section 106 of the National Historic Preservation Act (NHPA)

Date: 5/22/2019

Project Designation Number: 1702838

Route Number: Upas Road

Project Description: Bridge Replacement Project on Upas Road over Yellow River

The proposed project would involve the replacement of Marshall County Bride #120 (asset name 50-00120). Marshall County Bridge No. 120 carries Upas Road over Yellow River in Marshall County. The existing bridge is a side-by-side prestressed concrete box beam built in 1971 with a 168.5-foot clear span and a 24.3 foot clear roadway width. The proposed project will include the complete removal of the existing structure and the installation of a new structure. In addition, the new structure will be slightly wider and longer than the existing. The project will likely include the installation of new riprap along the Yellow River within the project area. The amount of ROW acquisition required for this project is not known at this time, but it is anticipated that less than 2 acres will be required.

Feature crossed (if applicable): Yellow River

Township: Union and West townships

City/County: Marshall County

Information reviewed (please check all that apply):

General project location map ☒ USGS map ☒ Aerial photograph ☒

Written description of project area ☒ General project area photos ☒

Previously completed archaeology reports ☐ Interim Report ☒

Previously completed historic property reports ☐

Soil survey data ☒ Bridge inspection information ☒

Other (please specify): SHAARD GIS; SHAARD; online street-view images; Indiana Historic Building, Bridges, and Cemeteries (IHBBC) map; County GIS data; Bridge Inspection Application System (BIAS); 2010 INDOT-sponsored *Historic Bridge Inventory* (HBI); project information provided by Lochmueller Group on May 10, 2019;

Dickerson, John P.
2019 A Phase Ia Archaeological Reconnaissance Survey For The Proposed Bridge #120 Replacement Project In Marshall County, Indiana (INDOT Des. No. 1702838). Submitted to Lochmueller Group, Inc. Report on file at IDNR, DHPA.

Results of the Records Review for Above-Ground Resources:

With regard to above-ground resources, an INDOT Cultural Resources historian who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61 first performed a desktop review, checking the Indiana Register of Historic Sites and Structures (State Register) and National

Register of Historic Places (National Register) lists for Marshall County. No listed resources are present within 0.25 mile of the project area, a distance that would serve as an adequate area of potential effects (APE) given the scope of the project and the surrounding terrain.

The *Marshall County Interim Report* (1990; Union Township, West Township) of the Indiana Historic Sites and Structures Inventory (IHSSI) was also consulted. The National Register & IHSSI information is available in the Indiana State Historic Architectural and Archaeological Research Database (SHAARD) and the Indiana Historic Buildings, Bridges, and Cemeteries (IHBBC) map. The SHAARD information was checked against the Interim Report hard copy maps. No IHSSI sites are recorded within 0.25 mile of the project.

Land surrounding the area is rural, consisting of agricultural fields and some residential housing, usually associated with farming outbuildings. Three properties are within 0.25 mile of the project area. One property only has a c. 1990 barn present. This barn will not be 50 years old by the time of project letting in 2022 and is not considered potentially eligible to the National Register. The farmhouse north of the bridge dates from c. 1920 and the farmhouse south of the bridge dates from c. 1890, according to county property card records. Both houses have experienced multiple alterations. Each house has vinyl siding, several large additions, and appear to have replacement windows, which dramatically reduces the integrity of the property. These properties do not possess material integrity and there is no evidence to suggest that they possess any cultural significance. Neither property is considered potentially eligible to the National Register.

The subject bridge (Bridge #50-00120; NBI #5000075) is a prestressed concrete box beam bridge built in 1971. The bridge length is 177 feet and the deck width, out-to-out is 24.3 feet. The bridge was not included in the INDOT Historic Bridge Inventory due to its construction after 1965, which was the cutoff year for inclusion in the inventory. On November 2, 2012, the Advisory Council on Historic Preservation (ACHP) issued the Program Comment for Streamlining Section 106 Review for Actions Affecting Post-1945 Concrete and Steel Bridges (Program Comment). The Program Comment relieves federal agencies from the Section 106 requirement to consider the effects of undertakings on most concrete and steel bridges built after 1945. On March 19, 2013, federal agencies were approved to use the Program Comment for Indiana projects.

The Program Comment applies for this bridge because it has not been previously listed in or determined eligible for listing in the National Register of Historic Places and it is not located in or adjacent to a historic district (Section IV.A of the Program Comment). As an example of a box beam bridge, this bridge is also not one of the types to which the Program Comment does not apply (arch bridges, truss bridges, bridges with movable spans, suspension bridges, cable-stayed bridges, or covered bridges [Section IV.B]). Additionally, this bridge has not been identified as having exceptional significance for association with a person or event, being a very early or particularly important example of its type in the state or the nation, having distinctive engineering or architectural features that depart from standard designs, or displaying other elements that were engineered to respond to a unique environmental context (Section IV.C). This bridge also has not been identified as having some exceptional quality. Because the above criteria from the Program Comment have been met, no individual consideration under Section 106 is required for Bridge #50-00120.

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

Archaeology Report Author/Date:

Dickerson/April 22, 2019

Summary of Archaeology Investigation Results:

With regard to archaeological resources, a Qualified Professional Archaeologist conducted an archaeological records check and field reconnaissance for this project. The records check found no record indicating that a portion of the survey area had been previously investigated. No archaeological sites had been recorded within the survey area.

As a result of the field reconnaissance, five previously unrecorded archaeological sites (12Mr498–12Mr502) were recorded. Site 12Mr498 is a prehistoric isolated find of indeterminate temporal association. Site 12Mr499 is a prehistoric lithic scatter of indeterminate temporal association, and Site 12Mr501 is a prehistoric lithic scatter associated with a Late Woodland/Late Prehistoric cultural affiliation. Site 12Mr500 is a low-density late nineteenth- through mid-twentieth-century historic artifact scatter associated with an extant residence and a single prehistoric isolated find. Site 12Mr502 is a low-density late nineteenth- through mid-twentieth-century historic artifact scatter associated with an extant residence. It seems likely that Sites 12Mr499–12Mr502 all extend beyond the current survey area boundaries and were therefore not fully assessed for inclusion in the National Register of Historic Places. However, the portions of Sites 12Mr499–12Mr502 that are located in the survey area are not considered to possess information that would substantially increase our understanding of the region's history and prehistory. Therefore, no further work is recommended for Site 12Mr498 and the portions of Sites 12Mr499–12Mr502 located within the current survey area.

An INDOT Cultural Resources historian who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61, reviewed concurred with the archaeological report.

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.

If no, please explain:

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

INDOT Cultural Resources staff reviewer(s): Kelyn Alexander and David Moffatt

****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

Date: September 17, 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: Ruth Hook
Lochmueller Group
3502 Woodview Trace, Suite 150
Indianapolis, IN
rhook@lochgroup.com

Re: RED FLAG INVESTIGATION
Des. No. 1702838, Local Project
Bridge Replacement
Upas Road over Yellow River (Marshall Co. Bridge No. 120 – 50-00120)
Marshall County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: The proposed project would involve the replacement of Marshall County Bridge #120 (asset name 50-00120). Marshall County Bridge No. 120 carries Upas Road over Yellow River in Marshall County. The proposed project will include the complete removal of the existing structure and the installation of a new structure. The installation of the new structure will include embankment widening, benching the side slopes, and possible impacts to forested wetlands. The new structure will be longer than the existing structure in order to provide a more hydraulically open waterway. In addition, the new structure will be slightly taller and wider than the existing. The design for the proposed project is on-going.

Bridge and/or Culvert Project: Yes ☒ No ☐ Structure # 50-00120

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 N/A Permanent ☒ # Acres 1 to 2* Not Applicable ☐

*Acquisition of permanent ROW will be required, but the amount of permanent ROW needed has yet to be determined. Based on the initial design and a review of the County GIS website, it can be anticipated the one to two acres will be required.

Type of excavation: Excavation will be required for the substructure removal and installation of new substructure units. The depth of excavation has yet to be determined but is not anticipated to be greater than 5 feet below the roadway surface or the flow line of the Yellow River.

Maintenance of traffic: The MOT for this project will require full closure of Upas Road. A detour route will be required. Although the details of the MOT have yet to be determined, the MOT design will follow the criteria outlined in the *Indiana Design Manual.*

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 are 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	**14**
Canal Structures – Historic	**N/A**	Lakes	**N/A**
NPS NRI Listed	**N/A**	Floodplain - DFIRM	**1**
NWI-Lines	**18**	Cave Entrance Density	**N/A**
IDEM 303d Listed Streams and Lakes (Impaired)	**9**	Sinkhole Areas	**N/A**
Rivers and Streams	**12**	Sinking-Stream Basins	**N/A**

Explanation:
NWI – Lines: Eighteen (18) NWI – Lines are located within the 0.5 mile search radius. Three (3) cross the project area and represent the Yellow River. A Waters of the US Report is recommended and coordination with the appropriate agency, if applicable, will occur.

IDEM 303d Listed Streams and Lakes (Impaired): Nine (9) 303d Listed Rivers and Streams are located within the 0.5 mile search radius. The Yellow River is located within the project area. The Yellow River is impaired for *E. coli* and polychlorinated biphenyls (PCBs) in fish tissue. Workers who are working in or near water with *E. coli* should take care to wear appropriate PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure. Exposure to PCBs in fish tissue is considered low, assuming workers are not eating biota surrounding or associated with

the water body. If there will be sediment and/or soils disturbed by construction additional investigation may be necessary. Coordination with INDOT ES will occur.

Rivers and Streams: Twelve (12) river and stream (segments) are located within the 0.5 mile search radius. One (1) river and stream, the Yellow River, is located within the project area. A Waters of the US Report is recommended and coordination with the appropriate agency, if applicable, will occur.

NWI – Wetlands: Fourteen (14) NWI – Wetlands are located within the 0.5 mile search radius. Two (2) wetlands are located within the project area. A Waters of the US Report is recommended and coordination with the appropriate agency, if applicable, will occur.

Floodplains: One (1) floodplain polygon is located within the 0.5 mile search radius. The project area is located within this floodplain polygon. Coordination with the appropriate agency will occur.

URBANIZED AREA BOUNDARY SUMMARY

Explanation: The proposed 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	**1**	Mineral Resources	**N/A**
Mines – Surface	**N/A**	Mines – Underground	**N/A**

Explanation:
Petroleum Wells: One (1) petroleum well is located within the 0.5 mile search radius. The well is located 0.34 mile northwest and is presumed plugged. No impact is expected.

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 are located within the 0.5 mile search radius.

ECOLOGICAL INFORMATION SUMMARY

The Marshall 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. Coordination with USFWS and IDNR will occur.

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 farm fields and wooded area. The October 17, 2018 bridge inspection report for Bridge # 50-00120 states that no evidence bats were 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, the Rusty Patched Bumble bee, in or within 0.5 mile of the project area. No impact is expected.

RECOMMENDATIONS SECTION

Include recommendations from each section. If there are no recommendations, please indicate N/A:

INFRASTRUCTURE: N/A

WATER RESOURCES: A Waters of the US Report is recommended and coordination with the appropriate agency will occur for the following features:

- Three (3) NWI – Line (segments) are located within the project area.
- One (1) river segment, Yellow River, flows through the project area.
- Two (2) wetlands are located within the project area.
- The project area is located within a floodplain (coordination only).

IDEM 303d Listed Rivers and Streams: The Yellow River is listed as impaired for *E. coli* and PCBs in fish tissue.

- Workers who are working in or near water with *E. coli* should take care to wear appropriate PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure.
- Exposure to PCBs in fish tissue is considered low, assuming workers are not eating biota surrounding or associated with the water body. If there will be sediment and/or soils disturbed by construction, additional investigation may be necessary. Coordination with INDOT ES will occur

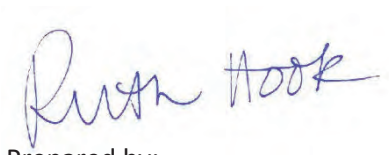
URBANIZED AREA BOUNDARY: N/A

MINING/MINERAL EXPLORATION: N/A

HAZMAT 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 "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

INDOT Environmental Services concurrence: Nicole Fohey-Breting Digitally signed by Nicole Fohey-Breting Date: 2019.09.17 13:48:32 -04'00' (Signature)



Prepared by:
Ruth Hook, CPESC, CESSWI
Environmental Biologist
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

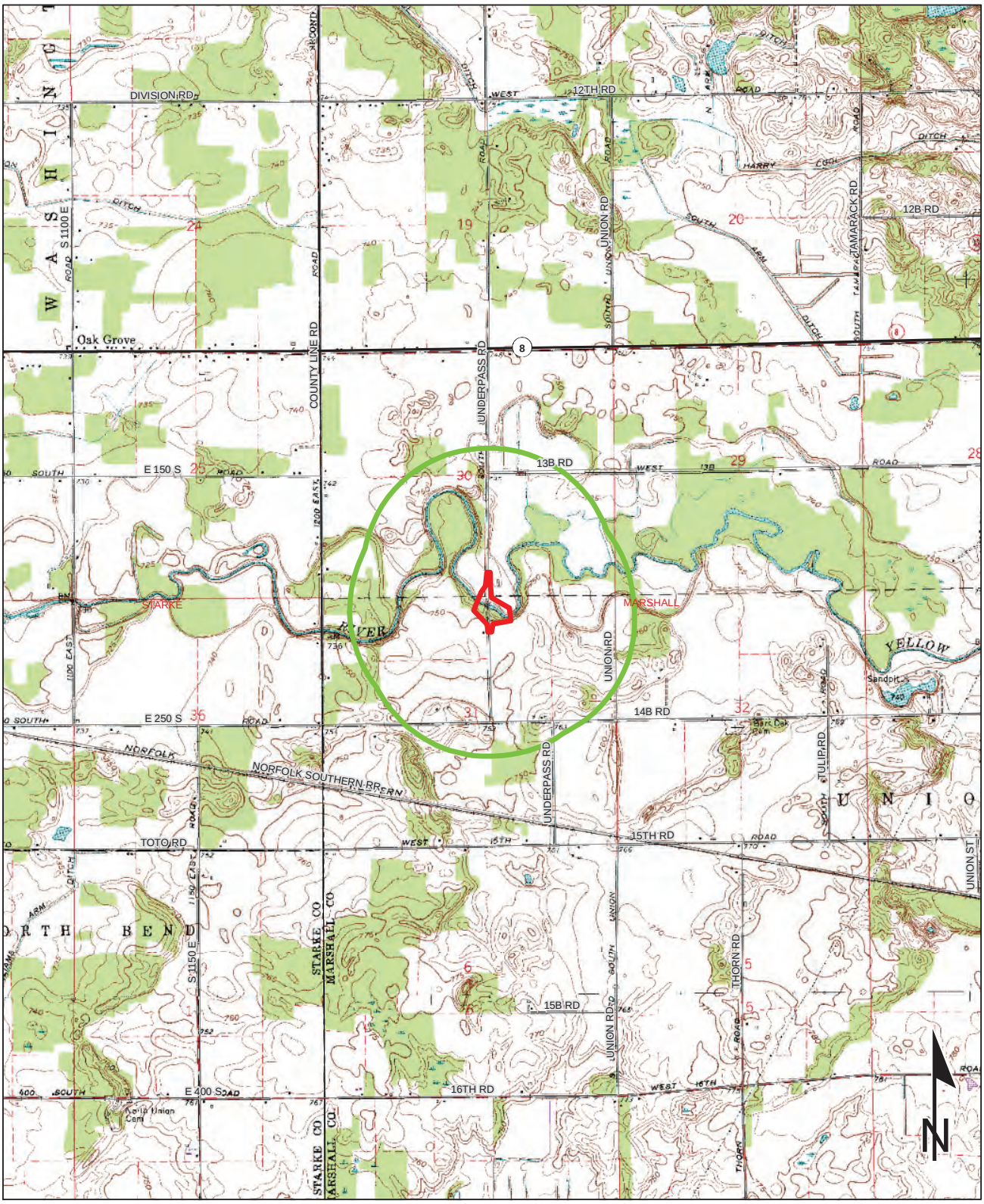
URBANIZED AREA BOUNDARY: N/A

MINING/MINERAL EXPLORATION: YES

HAZMAT CONCERNS: N/A

Other Attachments:
Marshall County Threatened, Endangered, or Rare (ETR) Species List

Red Flag Investigation - Site Location
Upas Road over Yellow River (Marshall Co. Bridge 120)
Des. No. 1702838, Bridge Replacement
Marshall County, Indiana



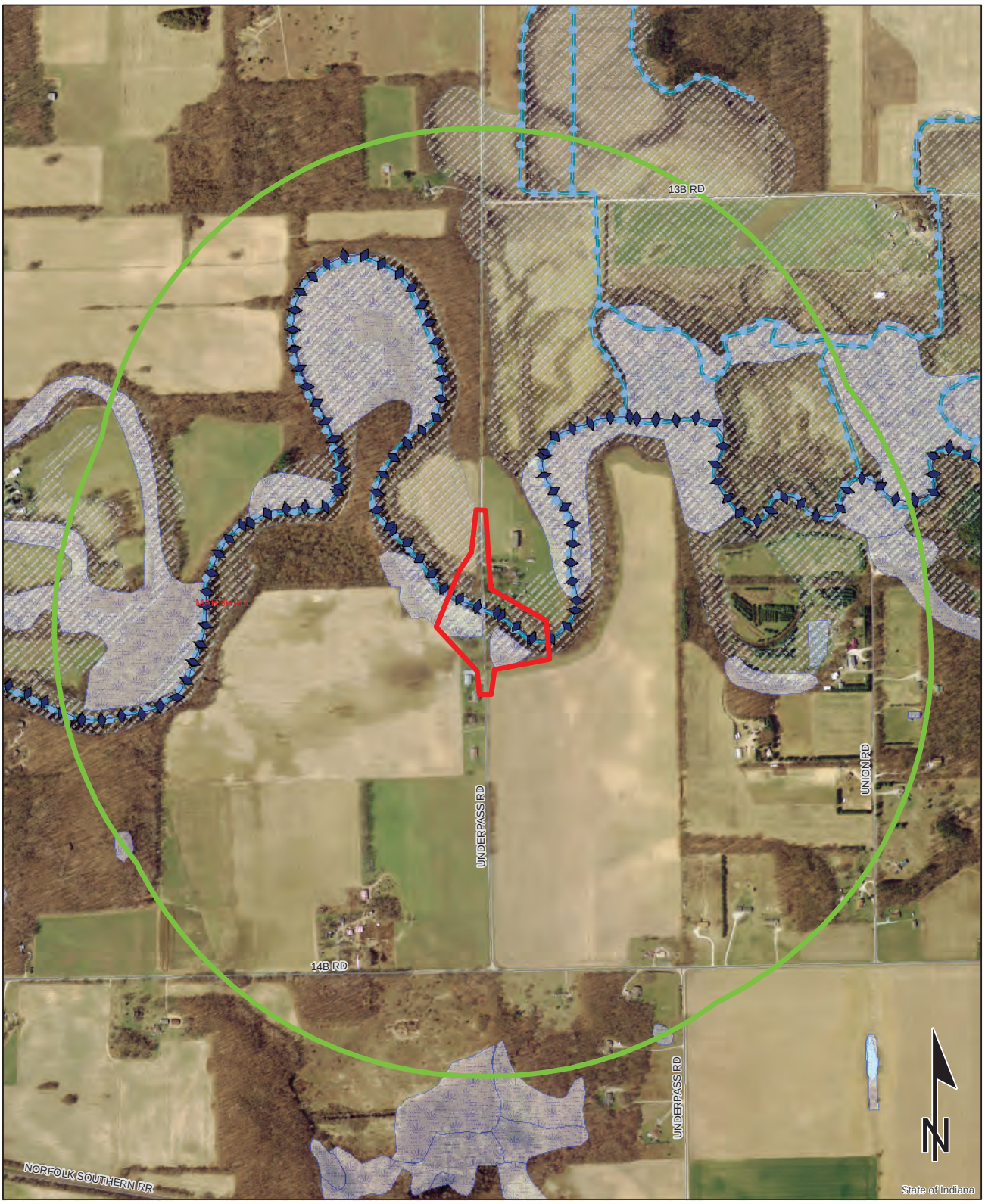
0.5 0.25 0 0.5 Miles

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.

DONALDSON QUADRANGLE
INDIANA
7.5 MINUTE SERIES
(TOPOGRAPHIC)

Red Flag Investigation - Water Resources
Upas Road over Yellow River (Marshall Co. Bridge 120)
Des. No. 1702838, Bridge Replacement
Marshall County, Indiana



0.15 0.075 0 0.15 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

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

Red Flag Investigation - Mining/Mineral Exploration
Upas Road over Yellow River (Marshall Co. Bridge 120)
Des. No. 1702838, Bridge Replacement
Marshall County, Indiana

0.15 0.075 0 0.15 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.

- Oil and Gas Wells
- Mineral Resources
- Mine - Surface
- Mine - Underground
- County Boundary
- Project Area
- Half Mile Radius
- Toll
- Interstate
- State Route
- US Route
- Local Road

Indiana County Endangered, Threatened and Rare Species List

State ETR
Federal ETR

County: Marshall

Species Name	Common Name	FED	STATE	GRANK	SRANK
Mollusk: Bivalvia (Mussels)					
Epioblasma torulosa rangiana	Northern Riffleshell	LE	SE	G2T2	S1
Lampsilis fasciola	Wavyrayed Lampmussel		SSC	G5	S3
Ligumia recta	Black Sandshell			G4G5	S2
Obovaria subrotunda	Round Hickorynut	C	SE	G4	S1
Plethobasus cyphyus	Sheepnose	LE	SE	G3	S1
Pleurobema clava	Clubshell	LE	SE	G1G2	S1
Ptychobranchus fasciolaris	Kidneyshell		SSC	G4G5	S2
Quadrula cylindrica cylindrica	Rabbitsfoot	LT	SE	G3G4T3	S1
Toxolasma lividus	Purple Lilliput	C	SSC	G3Q	S2
Villosa fabalis	Rayed Bean	LE	SE	G2	S1
Mollusk: Gastropoda					
Campeloma decisum	Pointed Campeloma		SSC	G5	S2
Lymnaea stagnalis	Swamp Lymnaea		SSC	G5	S2
Insect: Lepidoptera (Butterflies & Moths)					
Papaipema beeriana	Beer's Blazing Star Borer Moth		ST	G2G3	S1S3
Fish					
Coregonus artedi	Cisco		SSC	G5	S2
Ichthyomyzon bdellium	Ohio Lamprey			G3G4	S2
Ichthyomyzon fossor	Northern Brook Lamprey		SE	G4	S1
Amphibian					
Hemidactylium scutatum	Four-toed Salamander		SSC	G5	S2
Lithobates pipiens	Northern Leopard Frog		SSC	G5	S2
Reptile					
Clemmys guttata	Spotted Turtle	C	SE	G5	S2
Clonophis kirtlandii	Kirtland's Snake	C	SE	G2	S2
Emydoidea blandingii	Blanding's Turtle	C	SE	G4	S2
Sistrurus catenatus catenatus	Eastern Massasauga	LT	SE	G3	S2
Terrapene ornata ornata	Ornate Box Turtle		SE	G5T5	S1
Thamnophis butleri	Butler's Garter Snake		SE	G4	S1
Bird					
Accipiter striatus	Sharp-shinned Hawk		SSC	G5	S2B
Botaurus lentiginosus	American Bittern		SE	G5	S2B
Certhia americana	Brown Creeper			G5	S2B
Cistothorus palustris	Marsh Wren		SE	G5	S3B
Haliaeetus leucocephalus	Bald Eagle		SSC	G5	S2
Ixobrychus exilis	Least Bittern		SE	G5	S3B
Pandion haliaetus	Osprey		SE	G5	S1B
Rallus elegans	King Rail		SE	G4	S1B

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

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

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

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

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

Indiana County Endangered, Threatened and Rare Species List

County: Marshall

Species Name	Common Name	FED	STATE	GRANK	SRANK
Rallus limicola	Virginia Rail		SE	G5	S3B
Setophaga cerulea	Cerulean Warbler		SE	G4	S3B
Wilsonia citrina	Hooded Warbler		SSC	G5	S3B
Xanthocephalus xanthocephalus	Yellow-headed Blackbird		SE	G5	S1B
Mammal					
Spermophilus franklinii	Franklin's Ground Squirrel		SE	G5	S2
Taxidea taxus	American Badger		SSC	G5	S2
Vascular Plant					
Armoracia aquatica	Lake Cress		SE	G4?	S1
Carex atlantica ssp. atlantica	Atlantic Sedge		ST	G5T5	S2
Carex cephaloidea	Thinleaf Sedge		SE	G5	S1
Coeloglossum viride var. virescens	Long-bract Green Orchis		ST	G5T5	S2
Cypripedium candidum	Small White Lady's-slipper		WL	G4	S2
Eleocharis equisetoides	Horse-tail Spikerush		SE	G4	S1
Geranium bicknellii	Bicknell Northern Crane's-bill		SE	G5	S1
Glyceria grandis	American Manna-grass		SE	G5	S1
Hypericum pyramidatum	Great St. John's-wort		ST	G4	S1
Lycopodium clavatum	Running Pine		WL	G5	S3
Lycopodium tristachyum	Deep-root Clubmoss		SR	G5	S2
Platanthera leucophaea	Prairie White-fringed Orchid	LT	SE	G2G3	S1
Platanthera orbiculata	Large Roundleaf Orchid		SX	G5	SX
Poa alsodes	Grove Meadow Grass		SR	G4G5	S2
Potamogeton friesii	Fries' Pondweed		ST	G5	S1
Potamogeton pusillus	Slender Pondweed		WL	G5	S2
Potamogeton strictifolius	Straight-leaf Pondweed		ST	G5	S1
Symphyotrichum boreale	Rushlike Aster		SR	G5	S2
Tofieldia glutinosa	False Asphodel		SR	G5	S2
Valeriana edulis	Hairy Valerian		SE	G5	S1
Viburnum opulus var. americanum	Highbush-cranberry		SE	G5T5	S1
Zannichellia palustris	Horned Pondweed		SR	G5	S2
Zigadenus elegans var. glaucus	White Camas		SR	G5T4T5	S2
High Quality Natural Community					
Prairie - mesic	Mesic Prairie		SG	G2	S2
Wetland - beach marl	Marl Beach		SG	G3	S2
Wetland - bog acid	Acid Bog		SG	G3	S2
Wetland - fen	Fen		SG	G3	S3
Wetland - flat muck	Muck Flat		SG	G2	S2

Indiana Natural Heritage Data Center
Division of Nature Preserves
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