FHWA-Indiana Environmental Document

CATEGORICAL EXCLUSION / ENVIRONMENTAL ASSESSMENT FORM

GENERAL PROJECT INFORMATION

Road No./County:	State Route (SR) 16, Jasper County
Designation Number(s):	Des. No. 2300980
Project Description/Termini:	Small Structure Project, SR 16 over Spurgeon Ditch, 8.80 miles west of US 421. The project extends 111 feet west and 252 feet east of the structure center.

X	**Categorical Exclusion, Level 2** – Required Signatories: INDOT DE and/or INDOT ESD
	Categorical Exclusion, Level 3 – Required Signatories: INDOT ESD
	Categorical Exclusion, Level 4 – Required Signatories: INDOT ESD and FHWA
	Environmental Assessment (EA) – Required Signatories: INDOT ESD and FHWA
	Additional Investigation (AI) – The proposed action included a design change from the original approved environmental document. Required Signatories must include the appropriate environmental approval authority

Approval

INDOT DE Signature and Date

INDOT ESD Signature and Date

FHWA Signature and Date

Release for Public Involvement

SFM 07/15/2025
INDOT DE Initials and Date

INDOT ESD Initials and Date

Certification of Public Involvement

INDOT Consultant Services Signature and Date

INDOT DE/ESD Reviewer Signature and Date:

Name and Organization of CE/EA Preparer: Rachel Pluckebaum and Kirk Roth, Corradino, LLC

Part I – Public Involvement

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

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

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

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

Notice of Entry letters were mailed to potentially affected property owners near the project area on March 14, 2025 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-1 to G-2.

Project Does Meet

The project will meet the minimum requirements described in the current Indiana Department of Transportation (INDOT) Project Development Public Involvement Procedures Manual which requires the project sponsor to offer the public an opportunity to submit comments 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

Discuss public controversy concerning community and/or natural resource impacts, including what is being done during the project to minimize impacts.

No Controversy

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

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

Sponsor of the Project: INDOT INDOT District: LaPorte

Local Name of the Facility: SR 16

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

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

PURPOSE AND NEED:

The need should describe the specific transportation problem or deficiency that the project will address. The purpose should describe the goal or objective of the project. The solution to the traffic problem should NOT be discussed in this section.

Need: The need for this project is due to the condition of the existing reinforced concrete pipe (CV 016-037-20.50). The culvert inspection report dated March 26, 2024 indicates that only the top couple of inches of the pipe were visible because of the high water conditions (Appendix I-1 to I-11). The inspection report advised that the pipe is hydraulically insufficient (Appendix I-3). The Abbreviated Engineer's Assessment from June 29, 2022 attributes the hydraulic condition to increased flow from other county drains (Appendix I-14). The Engineer's Assessment states that water conditions at this structure have precluded full inspection for the past several inspections dating to at least 2019, although inspection dates are not given. This condition continued at the March 26, 2024 culvert inspection (Appendix I-3). The structural evaluation rating from the culvert inspection report is a 5 (fair) on a scale from 0 (failed condition) to 9 (excellent condition).

Purpose: The purpose of this project is to address the hydraulic deficiency and provide a structure with a condition rating of good (7) or better.

County Jasper Route SR 16 Des. No. 2300980

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Jasper Municipality: McCoysburg

Limits of Proposed Work: The project is located on SR 16, 8.80 miles west of US 421, and extends 111 feet west and 252 feet east of the structure center.

Total Work Length: 0.07 Mile(s) Total Work Area: 0.99 Acre(s)

	Yes[1]	No
Is an Interstate Access Document (IAD)[1] required?		X
If yes, when did the FHWA provide a Determination of Engineering and Operational Acceptability?	Date:	

[1]*If an IAD is required; a copy of the approved CE/EA document must be submitted to the FHWA with a request for final approval of the IAD.*

Describe location of project including township, range, city, county, roads, etc. Existing conditions should include current conditions, current deficiencies, roadway description, surrounding features, etc. Preferred alternative should include the scope of work, anticipated impacts, and how the project will meet the Purpose and Need. Logical termini and independent utility also need discussed.

INDOT and the Federal Highway Administration (FHWA) intend to proceed with the following small structure replacement project.

Location: The structure is on SR 16 over Spurgeon Ditch, 8.80 miles west of US 421. The project is in Jasper County, Indiana, in Sections 13 and 24, Township 28 North, Range 6 West in Milroy Township (Appendix B-2).

Existing Conditions: The existing structure is a 57-foot-long, 4-foot diameter reinforced concrete pipe (Appendix B-15). The structural condition of the structure is unknown due to the depth of flow in the undersized culvert at the time of inspection and the culvert is described as hydraulically insufficient (Appendix I-1 to I-11). As documented in the Waters of the U.S. Determination report, drainage flows north through the project structure (Appendix F-3). Wetlands are present within the project area in addition to Spurgeon Ditch. The small structure is surrounded by rural farmland. Overhead utilities are located within the project area and the need for utility relocation is a possibility. The existing SR 16 pavement consists of asphalt on the travel lanes and shoulders. SR 16 is a two-lane east/west roadway with two 12-foot lanes, with 1-foot paved shoulders. The functional class of SR 16 at the project area is a *Major Collector*.

Preferred Alternative: The preferred alternative is to replace the existing structure with a 54-foot long, 7-foot-wide by 5-foot-rise reinforced concrete box structure with a 12-inch sump. Construction will include placement of revetment riprap on geotextiles scour protection at the inlet and outlet. There is a 12-inch diameter metal pipe south of the project structure. The structure outlet conflicts with construction of the new culvert. This structure will be removed and replaced with a 15-inch diameter pipe to meet minimum INDOT construction standards for this type of culvert (Appendix B-14). Temporary dewatering measures will involve the installation of cofferdams at the inlet and outlet of the structure for a pump-around and construction site dewatering (Appendix B-16). See Appendix B-7 to B-16 for the design plans.

The existing guardrail on both sides of SR 16 will be removed. Guardrail will be placed back on the north side of SR 16 only. There will be 0.25 acre of temporary right-of-way (ROW) acquired near the inlet and outlet for the proposed project. There will be 0.49 acre of permanent ROW and 0.25 acre of reacquired ROW for this project. Construction limits and ROW acquisition have been reduced to only the extent necessary to meet the project's purpose and need. There will be 75 linear feet of permanent stream impact and 75 linear feet of temporary stream impact for this project. There will be 0.09 acre of permanent wetland impact and no temporary wetland impact for this project. There will be 0.38 acre of permanent terrestrial habitat impact and no temporary terrestrial habitat impact for this project. Impact to streams, wetlands, and terrestrial habitat have been reduced to the extent practicable. The project will change the vertical alignment of SR 16.

The maintenance of traffic (MOT) for this project will include a road closure with a signed detour. The detour will include US 231, SR 114, and US 421. The detour will last 4 weeks (Appendix B-11 to B-13). See the MOT During Construction section of this document for more information.

Logical Termini/Independent Utility: This alternative meets the project's purpose and need by addressing the deterioration and providing a structure with a condition rating of good (7) or better. The project demonstrates independent utility because it is not

associated with any other projects, and it would be built regardless of any other projects in the area. The project termini of 111 feet west and 252 feet east of the structure center are logical because they are limited to only that required to construct the project and fulfill the purpose of the project.

OTHER ALTERNATIVES CONSIDERED:

Provide a header for each alternative. Describe all discarded alternatives, including the No Build Alternative. Explain why each discarded alternative was not selected. Make sure to state how each alternative meets or does not meet the Purpose and Need and why.

Lining options were not included as the structure is a county regulated drain, and the Jasper County Engineer requested only replacement options to be considered as the county suspects liners would increase the headwater due to the low elevation of the channel where the structure is located (Appendix I-15). Note that the engineer's report incorrectly references White County instead of Jasper County.

Do Nothing: The no-build alternative was considered, which would consist of leaving the culvert condition unchanged. This alternative has no costs and no environmental impacts. However, it does not meet the purpose and need and has been discarded.

Corrugated Circular Pipe: A structure replacement with a 72-inch diameter corrugated circular pipe with a flared end section or headwall was considered. This alternative has similar environmental impacts and meets the purpose and need of the project. However, it is less cost-effective with less hydraulic capacity than the preferred alternative (Appendix I-18 to I-20)

Smooth Circular Pipe: A structure replacement with at 72-inch diameter smooth circular pipe was considered. This alternative has similar environmental impacts and meets the purpose and need of the project. However, it has less hydraulic capacity than the preferred alternative (Appendix I-18 to I-20).

The No Build 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:

If the proposed action includes multiple roadways, complete and duplicate for each roadway.

Name of Roadway	SR 16				
Functional Classification:	Major Collector				
Current ADT:	1,430	VPD (2027)	Design Year ADT:	1,705	VPD (2047)
Design Hour Volume (DHV):	171	Truck Percentage (%)	8.9 %		
Designed Speed (mph):	55 mph	Legal Speed (mph):	55 mph		

	Existing		Proposed	
Number of Lanes:	2		2	
Type of Lanes:	Through Lanes		Through Lanes	
Pavement Width:	12	ft.	12	ft.
Shoulder Width:	1	ft.	1	ft.
Median Width:	0	ft.	0	ft.
Sidewalk Width:	0	ft.	0	ft.

Setting:		Urban		Suburban	X	Rural
Topography:	X	Level		Rolling		Hilly

BRIDGES AND/OR SMALL STRUCTURE(S):

If the proposed action includes multiple structures, complete and duplicate for each bridge and/or small structure. Include both existing and proposed bridge(s) and/or small structure(s) in this section.

Structure/NBI Number(s): CV 016-037-20.50 Sufficiency Rating: 5 (Inspection Report, March 26, 2024)
(Rating, Source of Information)

	Existing		Proposed	
Bridge/Structure Type:	Reinforced concrete pipe		Reinforced concrete box structure	
Number of Spans:	1		1	
Weight Restrictions:	N/A	ton	N/A	ton
Height Restrictions:	N/A	ft.	N/A	ft.
Curb to Curb Width:	N/A	ft.	N/A	ft.
Outside to Outside Width:	57	ft.	54	ft.
Shoulder Width:	N/A	ft.	N/A	ft.

Describe impacts and work involving bridge(s), culvert(s), pipe(s), and small structure(s). Provide details for small structure(s): structure number, type, size (length and dia.), location and impacts to water. Use a table if the number of small structures becomes large. If the table exceeds a complete page, put it in the appendix and summarize the information below with a citation to the table.

The existing structure (CV 016-037-20.50) is a 57-foot-long, 4-foot diameter reinforced concrete pipe. The project structure is hydraulically insufficient (Appendix I-3). The project will include the complete removal and replacement of the existing structure with a 54-foot-long, 7-foot-span, 5-foot-rise, 12-inch sump-reinforced concrete box structure. Construction will include placement of revetment riprap on geotextiles scour protection at the inlet and outlet. The project culvert is not considered historic.

Aside from the project structure, culverts within the project area include:

- A 6-foot diameter metal pipe in Spurgeon Ditch north of the project structure. This structure will not be disturbed.
- An 8-inch diameter clay pipe draining the southeast agricultural field into Spurgeon Ditch south of the project structure. This structure will not be disturbed.
- A 12-inch diameter metal pipe draining a roadside ditch and a wetland into Spurgeon Ditch south of the project structure. The structure outlet conflicts with construction of the new culvert. This structure will be removed and replaced with a 15-inch diameter pipe to meet minimum INDOT construction standards for this type of culvert (Appendix B-14).

No additional structures are located within the project area.

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 below)	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
Will the project require a sidewalk, curb ramp, and/or bicycle lane closure? (describe below)		X
Provisions will be made for access by pedestrians and/or bicyclist and so posted (describe below).		

Discuss closures, detours, and/or facilities (if any) that will be provided for maintenance of traffic. Any known impacts from these temporary measures should be quantified to the extent possible, particularly with respect to properties such as Section 4(f) resources and wetlands. Discuss any pedestrian/bicycle closures. Any local concerns about access and traffic flow should be detailed as well.

The MOT for the project will require a road closure on SR 16 with a signed detour (Appendix B-11 to B-13). The signed detour includes US 231, SR 114, and US 421. The detour will last 4 weeks. The added travel length is approximately 8.7 miles and the added travel time is approximately ten minutes.

The road closure restrictions will pose a temporary inconvenience to traveling motorists (including school buses and emergency services); however, no significant delays are anticipated, and all inconveniences and delays will cease upon project completion.

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering $ 218,021 (2023) Right-of-Way $ * 100% state funds (2026) Construction $ 528,000 (2027)

Anticipated Start Date of Construction: Spring 2027

RIGHT OF WAY:

	Amount (acres)		
Land Use Impacts	Permanent	Temporary	Reacquired
Residential			
Commercial			
Agricultural	0.49	0.25	
Forest			
Other: Existing Transportation Use			0.25
TOTAL	0.49	0.25	0.25

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

The existing ROW consists of the roadway and is approximately 22-feet wide, extending 11-feet north and 11-feet south of the SR 16 centerline within the project area. The proposed ROW is approximately 40-feet north and 40-feet south of the SR 16 centerline. The temporary ROW extends 110-feet north and 55-feet south of SR 16 centerline. See Appendix B-14 for proposed ROW details.

The project requires approximately 0.25 acre of reacquired ROW at the lanes and shoulders of SR 16. INDOT must reacquire this based on a lack of documented ownership. The project requires approximately 0.49 acre of permanent ROW from the agricultural areas along the roadside at the proposed guardrail. Approximately 0.25 acre of temporary ROW from agricultural land is required at the inlet and outlet for a pumparound and erosion control measures.

Note that ROW will be acquired with 100% state funds.

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 - EARLY COORDINATION:

List the date(s) coordination was sent and all resource 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.

Early coordination letters were sent on October 25, 2024, January 8, 2025, and March 18, 2025 (Appendix C-1 to C-3).

Agency	Dates Sent	Date Response Received	Appendix
INDOT Environmental Policy Manager	October 25, 2024	No response received	N/A
FHWA	October 25, 2024	No response received	N/A
Indiana Department of Natural Resources-Division of Fish and Wildlife (IDNR-DFW)	October 25, 2024	November 22, 2024	C-4 to C-6
INDOT- LaPorte District	October 25, 2024	No response received	N/A
National Resource Conservation Service (NRCS)	October 25, 2024	December 26, 2024	C-7 to C-8
U.S. Army Corps of Engineers (USACE)	October 25, 2024	October 29, 2024	C-35
U.S. Department of Housing & Urban Development	October 25, 2024	No response received	N/A
Jasper County Planning & Development	October 25, 2024	No response received	N/A
Jasper County Council	October 25, 2024	No response received	N/A
Indiana Geological and Water Survey (IGWS)	January 8, 2025	January 8, 2025	C-9 to C-11
Jasper County Commissioners	October 25, 2024	No response received	N/A
Jasper County Surveyor	October 25, 2024	No response received	N/A
Jasper County Emergency Management Agency	October 25, 2024	No response received	N/A
Rensselaer School District	October 25, 2024	No response received	N/A
Jasper County Highway Department	October 25, 2024	No response received	N/A
Indiana Department of Environmental Management (IDEM) Office of Water Quality Stormwater Section	October 25, 2024	No response received	N/A
Kankakee River Basin and Yellow River Basin Development Commission	March 18, 2025	No response received	N/A

All applicable recommendations are included in the Environmental Commitments section of this CE document.

SECTION B – ECOLOGICAL RESOURCES:

	Presence	Impacts	
		Yes	No
Streams, Rivers, Watercourses & Other Jurisdictional Features	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			

Total stream(s) in project area: 150 Linear feet Total impacted stream(s): 150 Linear feet

Stream Name	Classification	Total Size in Project Area (linear feet)	Impacted linear feet	Comments (i.e. location, flow direction, likely Water of the US, appendix reference)
Spurgeon Ditch	Intermittent	150	150	Flows north through project structure, likely Water of the U.S. (Appendix F-3)

Describe all streams, rivers, watercourses and other jurisdictional features adjacent or within the project area. Include whether or not impacts (both permanent and temporary) will occur to the features identified. Include if the streams or rivers are listed on any federal or state lists for Indiana. Include if features are likely subject to federal or state jurisdiction. Discuss measures to avoid, minimize, and mitigate if impacts will occur.

Based on a desktop review, the aerial map of project area, and the Red Flag Investigation (RFI) report (Appendix E-2 to E-3) there are six streams, rivers, watercourses, or other jurisdictional features within the 0.5-mile search radius. There is one stream, river, watercourse, or other jurisdictional feature within or adjacent to the project area. That number was confirmed by the site visit on September 25, 2024 by Corradino, LLC.

A *Waters of the U.S. Determination* was approved by INDOT Ecology, Water Permitting and Stormwater Office on December 9, 2024. Please refer to Appendix F for the Waters of the U.S. Determination. It was determined that one stream located within the project area, Spurgeon Ditch, is an apparent jurisdictional Water of the U.S (Appendix F-3). Spurgeon Ditch is a poor quality intermittent stream which flows north through the project structure and has an ordinary high water mark (OHWM) of approximately 8 feet wide and 1.5 feet deep. The upstream drainage area is 0.242 square mile at the project location. Spurgeon Ditch is listed as a Canal/Ditch in the U.S. Geological Survey (USGS) National Hydrography Dataset. Spurgeon Ditch is considered jurisdictional because of its connectivity with the Kankakee River, a traditional navigable waterway. The USACE makes all final determinations regarding jurisdiction.

Approximately 75 linear feet of permanent impacts to Spurgeon Ditch are required because of the culvert replacement. Approximately 75 linear feet of temporary impacts to Spurgeon Ditch are anticipated at the inlet and outlet for a pumparound and erosion control measures. A Section 404 permit from USACE and a Section 401 Water Quality Certification from IDEM will be required for stream impact. Mitigation is not anticipated. During project design, impacts to Spurgeon Ditch have been minimized to only the extent necessary to meet the project's purpose and need.

There are no Federal, Wild and Scenic Rivers, State Natural, Scenic and Recreational Rivers, Outstanding Rivers for Indiana, navigable waterways or Natural Rivers inventory waterways present within or adjacent to the project area. Therefore, no impact to these resources are expected.

IDNR-DFW responded to early coordination on November 22, 2024 (Appendix C-4 to C-6) with measures to minimize impacts to fish, wildlife, and botanical resources or compensate for impacts. USACE responded to early coordination on October 29, 2024 (Appendix C-35), commenting that any proposed work within a Water of the US will require Section 404 permitting. The portions of Spurgeon Ditch that will not be impacted shall be protected during construction and labeled "Do Not Disturb" on the project plans.

All applicable recommendations are included in the Environmental Commitments section of this CE document.

Open Water Feature(s)	Presence	Impacts Yes	Impacts No
Reservoirs			
Lakes			
Farm Ponds			
Retention/Detention Basin			
Storm Water Management Facilities			
Other:			

Describe all open water feature(s) identified adjacent or within the project area. Include whether or not impacts (both permanent and temporary) will occur to the features identified. Include if features are likely subject to federal or state jurisdiction. Discuss measures to avoid, minimize, and mitigate if impacts will occur.

Based on the desktop review, the aerial map of the project area, and the RFI report (Appendix E-2 to E-3) there are no open water features within the 0.5-mile search radius. There are no open water features within or adjacent to the project area. That number was confirmed by the site visit on September 25, 2024 by Corradino, LLC. Therefore, no impacts are expected.

A Waters of the U.S. Determination was approved by INDOT Ecology, Water Permitting and Stormwater Office on December 9, 2024. Please refer to Appendix F for the Waters of the U.S. Determination. It was determined that no open water features were within or adjacent to the project area. The USACE makes all final determinations regarding jurisdiction.

	Presence	Impacts Yes	Impacts No
Wetlands	X	X	

Total wetland area: 0.14 Acre(s) Total wetland area impacted: 0.09 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 (i.e. location, likely Water of the US, appendix reference)
1	PEM	0.13	0.08	Likely Water of the U.S. - depression northeast of the project structure, extending along the SR 16 roadside. (Appendix F-4)
2	PEM	0.01	0.01	Likely Water of the U.S. - depression southwest of the project structure, extending along the SR 16 roadside. (Appendix F-4)

Wetlands (*Mark all that apply*)	Documentation	ESD Approval Dates
Wetland Determination	X	December 9, 2024
Wetland Delineation	X	December 9, 2024
USACE Isolated Waters Determination		

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

Describe all wetlands identified adjacent or within the project area. Include whether or not impacts (both permanent and temporary) will occur to the features identified. Include if features are likely subject to federal or state jurisdiction. Discuss measures to avoid, minimize, and mitigate if impacts will occur.

Based on the desktop review, the aerial map of the project area, and the RFI report (Appendix E-2 to E-3) there are 10 wetlands within the 0.5-mile search radius. There are no documented wetlands within or adjacent to the project area. That number was updated to two by the site visit on September 25, 2024 by Corradino, LLC.

A *Waters of the U.S. Determination* was approved by INDOT Ecology, Water Permitting and Stormwater Office on December 9, 2024. Please refer to Appendix F for the *Waters of the U.S. Determination*. It was determined that two wetlands, Wetland 1 and Wetland 2, are located within the project area. The USACE makes all final determinations regarding jurisdiction.

Wetland 1 is a 0.13 acre palustrine emergent wetland in the depression northeast of the project structure, extending along the SR 16 roadside. Wetland 1 is considered a poor quality wetland due to small size and extensive invasive vegetation.

Wetland 2 is a 0.01 acre palustrine emergent wetland in the depression southwest of the project structure, extending along the SR 16 roadside. Wetland 2 is considered a poor quality wetland due to small size and extensive invasive vegetation.

Approximately 0.08 acre of permanent impact to Wetland 1 and 0.01 acre of permanent impact to Wetland 2 are anticipated in order to install the new project structure and revetment riprap. No temporary impacts to the wetlands will occur. A Section 404 permit from USACE and a Section 401 Water Quality Certification from IDEM will be required for wetland impact. Mitigation is not anticipated. During project design, impacts to both wetlands have been minimized to only the extent necessary to meet the project's purpose and need. The portions of Wetland 1 that will not be impacted shall be protected during construction and labeled "Do Not Disturb" on the project plans.

USACE responded to early coordination on October 29, 2024 (Appendix C-35). USACE recommended that the project may require a Section 404 permit for proposed work in a water of the U.S. or adjacent wetlands. All applicable recommendations are included in the Environmental Commitments section of this CE document.

	Presence	Impacts	
		Yes	NO
Terrestrial Habitat	X	X	

Total terrestrial habitat in project area: 0.38 Acre(s) Total tree clearing: 0 Acre(s)

Describe types of terrestrial habitat (i.e. forested, grassland, farmland, lawn, etc) adjacent or within the project area. Include whether or not impacts will occur to habitat identified. Include total terrestrial habitat impacted and total tree clearing that will occur. Discuss measure to avoid, minimize, and mitigate if impacts will occur.

Based on a desktop review, a site visit on September 25, 2024, by Corradino, LLC, and the aerial map of the project area, (Appendix B-3), there is up to 0.38 acre of grassy roadside habitat within the project area on the unfarmed portions of both agricultural parcels and existing ROW. Dominant species include tall fescue (*Schedonorus arundinaceus*), reed canarygrass (*Phalaris arundinacea*), Kentucky bluegrass (*Poa pratensis*), field thistle (*Cirsium discolor*), eastern poison ivy (*Toxicodendron radicans*), and Virginia creeper (*Parthenocissus quinquefolia*). No tree removal is required for this project. Mitigation is not anticipated. During project design, impacts to the 0.38 acre of terrestrial habitat have been minimized to only the extent necessary to meet the project's purpose and need. Disturbance is due to the placement of a new project structure, placement of riprap, and replacement of guardrail.

IDNR-DFW responded to early coordination on November 22, 2024 (Appendix C-4 to C-6) with recommendations regarding tree clearing, revegetation with native species, and erosion control.

All applicable recommendations are included in the Environmental Commitments section of this CE document.

Protected Species

Federally Listed Bats	Yes	No
Information for Planning and Consultation (IPaC) determination key completed	X	
Section 7 informal consultation completed (IPaC cannot be completed)		X
Section 7 formal consultation Biological Assessment (BA) required		X

Determination Received for Listed Bats from USFWS: NE [ ] NLAA [X] LAA [ ]

Other Species not included in IPaC	**Yes**	**No**
Additional federal species found in project area (based on IPaC species list)		X
State species (not bird) found in project area (based upon consultation with IDNR)		X

Migratory Birds	**Yes**	**No**
Known usage or presence of birds (i.e. nests)		X
State bird species based upon coordination with IDNR		X

Discuss IDNR coordination and species identified. Describe USFWS Section 7 consultation and determination received for Indiana bat and northern long-eared bat impacts. Discuss if other federally listed species were identified. If so, include consultation that has occurred and the determination that was received. Discuss if migratory birds have been observed and any impacts.

Based on a desktop review and the RFI report (Appendix E-5), completed by Corradino, LLC on May 23, 2023, the IDNR Jasper County Endangered, Threatened and Rare (ETR) Species List has been checked. According to the IDNR-DFW early coordination response letter dated November 22, 2024 (Appendix C-4 to C-6), the Natural Heritage Program's Database has been checked and no presence of ETR species was indicated in the 0.5-mile search radius. Gish Wildlife Area occurs within 0.5 mile of the project, but is not within or adjacent to the project area. INDOT DE conducted a review of documented sightings of threatened or endangered bat species within 0.5-mile of the project area using the USFWS database on October 8, 2024. None were identified.

Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal, and an official species listed was generated on March 27, 2025 (Appendix C-12 to C-23). The project is within range of the federally endangered Indiana bat (*Myotis sodalis*).

The official species list generated from IPaC indicated four other species with ranges which overlap the project area. These species were not found within the project area. The project is within the range of the proposed endangered tricolored bat (*Perimyotis subflavus*). Project impacts on the tricolored bat were assessed through IPaC. The project is in the range of a "non-essential experimental population" of the whooping crane (*Grus americana*), but this population is not covered by protections provided for the natural endangered population of whooping crane. The project is in the range of the monarch butterfly (*Danaus plexippus*) and western regal fritillary (*Argynnis idalia occidentalis*), which are proposed threatened species. The project area does not overlap with the proposed critical habitat for the monarch butterfly and no critical habitat has been designated for the western regal fritillary. Therefore, the project will not jeopardize the continued existence of the either species as the impacts do not preclude the survival and recovery of the populations as a whole. Therefore, further consider for these species is not necessary at this time.

The project qualifies for the Range-wide Programmatic Informal Consultation for the Indiana bat and northern long-eared bat (NLEB), dated May 2016 (revised February 2018), between FHWA, Federal Railroad Administration (FRA), Federal Transit Administration (FTA), and USFWS. Corradino, LLC conducted a bat inspection on September 25, 2024. The inspection did not identify signs of bats/birds using the structure (Appendix I-16). An effect determination key was completed on April 22, 2025, and based on the responses provided, the project was found to *not likely to adversely affect* the Indiana bat and/or the tricolored bat (Appendix C-24). INDOT reviewed and verified the effect finding on April 22, 2025, and requested USFWS's review of the finding. No response was received from USFWS within the 14-day review period; therefore, it was concluded they concur with the finding. Avoidance and Minimization Measures (AMMs) include the following:

- General AMM1 – 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 AMM1 – Direct temporary lighting away from suitable habitat during the active season.

AMMs are included as firm commitments in the *Environmental Commitments* section of this document.

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

Geological and Mineral Resources	**Yes**	**No**
Project located within the Indiana Karst Region		X
Karst features identified within or adjacent to the project area		X
Oil/gas or exploration/abandoned wells identified in the project area		X

Date Karst Evaluation reviewed by INDOT EWPO (if applicable): _____

Discuss if project is located in the Indiana Karst Region and if any karst features have been identified in the project area (from RFI). Discuss response received from IGWS coordination. Discuss if any mines, oil/gas, or exploration/abandoned wells were identified and if impacts will occur. Include discussion of karst study/report was completed and results. (Karst investigation must comply with the current Protection of Karst Features during Planning and Construction guidance and coordinated and reviewed by INDOT EWPO)

Based on a desktop review and the Indiana Karst Region map, the project is located outside the designated Indiana Karst Region as outlined in the most current *Protection of Kast Features during Project Development and Construction*. According to the topographic map of the project area (Appendix B-2), the RFI report (Appendix E-2), there are no karst features identified within or adjacent to the project area. In the early coordination response dated January 8, 2025, the IGWS did not indicate that karst features exist in the project area (Appendix C-9 to C-11). IGWS identified the project as having a high potential of bedrock resources and low potential of sand and gravel resources. The features will not be affected because the project does not have excavation deep enough to impact bedrock or other geological resources. Response for IGWS has been communicated to the designer on January 8, 2025. No impacts are expected.

SECTION C – OTHER RESOURCES

	Presence	Impacts	
Drinking Water Resources		**Yes**	**No**
Wellhead Protection Area(s)			
Source Water Protection Area(s)			
Water Well(s)			
Urbanized Area Boundary			
Public Water System(s)			

	Yes	No
Is the project located in the St. Joseph Sole Source Aquifer (SSA):		X
If Yes, is the FHWA/EPA SSA MOU Applicable?		
If Yes, is a Groundwater Assessment Required?		

Check the appropriate boxes and discuss each topic below. Provide details about impacts and summarize resource-specific coordination responses and any mitigation commitments. Reference responses in the Appendix.

Sole Source Aquifer
The project is located in Jasper County, which is not located within the area of the St. Joseph Sole Source Aquifer, the only legally designated sole source aquifer in the state of Indiana. Therefore, the FHWA/Environmental Protection Agency (EPA)/INDOT Sole Source Aquifer Memorandum of Understanding (MOU) is not applicable to this project, a detailed groundwater assessment is not needed, and no impacts are expected.

Wellhead Protection Area and Source Water
On January 9, 2025, the IDEM's Wellhead Proximity Determinator website (http://www.in.gov/idem/cleanwater/pages/wellhead/) was accessed by Corradino, LLC. The project is not located within a Wellhead Protection Area or Source Water Area. No impacts are expected.

Water Wells
The IDNR Water Well Record Database website (https://www.in.gov/dnr/water/3595.htm) was accessed on January 9, 2025 by Corradino, LLC. No wells are located near this project. Therefore, no impacts are expected.

Urban Area Boundary
Based on a desktop review of the INDOT Municipal Separate Storm Sewer Systems (MS4) website (https://indot.maps.arcgis.com) by Corradino, LLC on January 9, 2025, this project is not located in a Urban Area Boundary. No impacts are expected.

Public Water System
Based on a desktop review, a site visit on September 25, 2024 by Corradino, LLC, the aerial map of the project area (Appendix B-3) no public water systems were identified. Therefore, no impacts are expected.

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

If applicable, indicate the Floodplain Level?

Level 1 ☐ Level 2 ☐ Level 3 ☐ Level 4 ☐ Level 5 ☐

Use the IDNR Floodway Information Portal to help determine potential impacts. Include floodplain map in appendix. Discuss impacts according to the classification system. If encroachment on a flood plain will occur, coordinate with the Local Flood Plain Administrator during design to insure consistency with the local flood plain planning.

On January 22, 2025, the Indiana Department of Natural Resources Indiana Floodway Information Portal website (https://secure.in.gov/dnr/water/surface-water/indiana-floodplain-mapping/indiana-floodplain-information-portal/) was accessed by Corradino, LLC. This project is not located in a regulatory floodplain as determined from approved IDNR floodplain maps (Appendix F-45). Therefore, it does not fall within the guidelines for the implementation of 23 CFR 650, 23 CFR 771, and 44 CFR. No impacts are expected.

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

Total Points (from Section VII of CPA-106/AD-1006*) **129**

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

Discuss existing farmland resources in the project area, impacts that will occur to farmland, and mitigation and minimization measures considered.

Based on a desktop review, a site visit on September 25, 2024 by Corradino, LLC, the aerial map of the project area (Appendix B-3) the project will convert 1.70 acres of farmland as defined by the Farmland Protection Policy Act. An early coordination letter was sent on October 25, 2024, to Natural Resource Conservation Service (NRCS). Since coordination, the designers have lowered the farmland conversion to 0.99 acre. Coordination with NRCS resulted in a score of 129 on the NRCS-CPA-106 (Appendix C-7 to C-8). Note that NRCS mentioned completion of the AD-1006 form in early coordination (Appendix C-7) but completed an NRCS-CPA-106 form (Appendix C-36). 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 D – CULTURAL RESOURCES

	Category(ies) and Type(s)	INDOT Approval Date(s)	N/A
Minor Projects PA	B-9, B-10	January 28, 2025	

Full 106 Effect Finding

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

Eligible and/or Listed Resources Present

NRHP Building/Site/District(s) ☐ Archaeology ☐ NRHP Bridge(s) ☐

Documentation Prepared (mark all that apply)		**ESD Approval Date(s)**	**SHPO Approval Date(s)**
APE, Eligibility and Effect Determination			
800.11 Documentation			
Historic Properties Report or Short Report			
Archaeological Records Check and Assessment			
Archaeological Phase Ia Survey Report	X	January 28, 2025	
Archaeological Phase Ic Survey Report			
Other:			

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

If the project falls under the MPPA, describe the category(ies) that the project falls under and any approval dates. If the project requires full Section 106, use the headings provided. The completion of the Section 106 process requires that a Legal Notice be published in local newspapers. Please indicate the publication date, name of the paper(s) and the comment period deadline. Include any further Section 106 work which must be completed at a later date, such as mitigation from a MOA or avoidance commitments.

On January 28, 2025 the INDOT Cultural Resource Office (CRO) determined that this project falls within the guidelines of Category B, Type 9 and Category B, Type 10 under the Minor Projects Programmatic Agreement (Appendix D-2 to D-4). Category B, Type 9 consists of the installation, replacement, repair, lining, or extension of culverts and other drainage structures. Category B, Type 10 consists of slide corrections, slope repairs, and other erosion control measures in undisturbed soils. An INDOT-CRO historian noted a highly modified, early twentieth-century house located 0.08 mile east of the project location which will not be impacted because mature deciduous trees present on the west side of the house as well as agricultural fields in cultivation help to limit views toward of the project area. (Appendix D-5). No above-ground concerns exist within the project area. A Phase Ia Archaeological Reconnaissance Survey was prepared and INDOT CRO concurred with the report on January 28, 2025 (Appendix D-7 to D-8). An INDOT-CRO archaeologist examined a 2.5-acre area. No archaeological sites were documented and no archaeological concerns were noted (Appendix D-6; D-8). No further consultation is required. This completes the Section 106 process and responsibilities of the FHWA under Section 106 have been fulfilled.

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

	Presence	**Use**	
Parks and Other Recreational Land		**Yes**	**No**
Publicly owned park	☐	☐	☐
Publicly owned recreation area	☐	☐	☐
Other (school, state/national forest, bikeway, etc.)	☐	☐	☐
Wildlife and Waterfowl Refuges			
National Wildlife Refuge	☐	☐	☐
National Natural Landmark	☐	☐	☐
State Wildlife Area	☐	☐	☐
State Nature Preserve	☐	☐	☐
Historic Properties			
Site eligible and/or listed on the NRHP	☐	☐	☐

	Evaluations Prepared
Programmatic Section 4(f)	
"De minimis" Impact	
Individual Section 4(f)	
Any exception included in 23 CFR 774.13	

Discuss Programmatic Section 4(f) and "de minimis" Section 4(f) impacts in the discussion below. Individual Section 4(f) documentation must be included in the appendix and summarized below. Discuss proposed alternatives that satisfy the requirements of Section 4(f). FHWA has identified various exceptions to the requirement for Section 4(f) approval. Refer to 23 CFR § 774.13 - Exceptions.

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 National Register of Historic Places (NRHP) eligible or listed historic properties regardless of ownership. Lands subject to this law are considered Section 4(f) resources.

Based on a desktop review, the aerial map of the project area (Appendix B-3), and the RFI report (Appendix E-2), there is one potential 4(f) resource located within the 0.5-mile search radius. Gish Wildlife Area was mentioned in the IDNR early coordination response (Appendix C-2) and as a managed land in the RFI (Appendix E-2). Gish Wildlife Area is owned by NICHES Land Trust and therefore is ineligible for Section 4(f) resource status. It is also 0.27 mile southwest of the project area and therefore will not be impacted by the project. According to additional research, and by the site visit on September 25, 2024 by Corradino, LLC, there are no Section 4(f) resources within or adjacent to the project area. Therefore, no use is expected.

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

Discuss Section 6(f) resources present or not present. Discuss if any conversion would occur as a result of this project. If conversion will occur, discuss the conversion approval.

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 ESD website revealed a total of 5 properties on Jasper County (Appendix I-15). None of these properties are located within or adjacent to the project area. Therefore, there will be no impacts to 6(f) resources.

SECTION F – Air Quality

STIP/TIP and Conformity Status of the Project	**Yes**	**No**
Is the project in the most current STIP/TIP?	X	
Is the project located in an MPO Area?		X
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 No, then:		
Is the project in the Transportation Plan (TP)?		
Is a hot spot analysis required (CO/PM)?		

County Jasper Route SR 16 Des. No. 2300980

Location in STIP: Amendment A24-19

Name of MPO (if applicable):

Location in TIP (if applicable):

Level of MSAT Analysis required?

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

Describe if the project is listed in the STIP and if it is in a TIP. Describe the attainment status of the county(ies) where the project is located. Indicate whether the project is exempt from a conformity determination. If the project is not exempt, include information about the TP and TIP. Describe if a hot spot analysis is required and the MSAT Level.

This project is included in the Fiscal Year (FY) 2024-2028 Statewide Transportation Improvement Program (STIP) through STIP Amendment A24-19 (Appendix H-1). The ROW will be purchased with 100% state funds.

This project is located in Jasper County, which is currently in attainment for all criteria pollutants according to IDEM's Office of Air Quality (https://www3.epa.gov/airquality/greenbook/anayo_in.html). Therefore, the conformity procedures of 40 CFR Part 93 do not apply.

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

SECTION G - NOISE

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

Date Noise Analysis was approved/technically sufficient by INDOT ESD:

Describe if the project is a Type I or Type III project. If it is a Type I project, describe the studies completed to date and if noise impacts were identified. If noise impacts were identified, describe if abatement is feasible and reasonable and include a statement of likelihood.

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

SECTION H – 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 discussion below)	X	

Discuss how the project complies with the area's local/regional development patterns; whether the project will impact community cohesion; and impact community events. Discuss how the project conforms with the ADA Transition Plan.

The MOT for the project will require a temporary road closure during construction. The road closure will be implemented for approximately 4 weeks. The closure will pose a temporary inconvenience to traveling motorists (including school buses and emergency services); however, no significant delays are anticipated, and all inconveniences and delays will cease upon project completion.

The proposed action is not expected to conflict with development patterns or have substantial impacts to property values. This project is located in a rural area located more than 0.5 mile from the nearest communities, which are unincorporated towns. No sidewalks are present in or near the project area. Therefore, this project will have no involvement with facilities regulated under the American with Disabilities Act (ADA).

Public Facilities and Services

Discuss what public facilities and services are present in the project area and impacts (such as MOT) that will occur to them. Include how the impacts have been minimized and what coordination has occurred. Some examples of public facilities and services include health facilities, educational facilities, public and private utilities, emergency services, religious institutions, airports, transportation or public pedestrian and bicycle facilities.

Based on a desktop review, the aerial map of the project area (Appendix B-3), and the RFI report (Appendix E-2) there is one public facility within the 0.5-mile search radius. There are no public facilities within or adjacent to the project area, which was confirmed by the site visit on September 25, 2024 by Corradino, LLC. Therefore, no impacts are expected. Access to all properties will be maintained during construction.

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?		
Does the project require an EJ analysis?		
If YES, then:		
Are any EJ populations located within the project area?		
Will the project result in adversely high and disproportionate impacts to EJ populations?		

Indicate if EJ issues were identified during project development. If an EJ analysis was not required, discuss why. If an EJ analysis was required, describe how the EJ population was identified. Include if the project has a disproportionately high or adverse effect on EJ populations and explain your reasoning. If yes, describe actions to avoid, minimize and mitigate these effects.

Due to the issuance of recent federal Executive Orders (EO) from January 2025, including EO 14154, EO 14148, and EO 14173, EO 12898 has been rescinded and a discussion of Environmental Justice analysis is no longer applicable. No other community impacts are anticipated.

Relocation of People, Businesses or Farms	**Yes**	**No**
Will the proposed action result in the relocation of people, businesses or farms?		X
Is a BIS or CSRS required?		X

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

Discuss any relocations that will occur due to the project. If a BIS or CSRS is required, discuss the results in the discussion below.

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

SECTION I – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

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

Date RFI concurrence by INDOT SAM (if applicable): October 22, 2024

Include a summary of the potential hazardous material concerns found during review. Discuss in depth sites found within, directly adjacent to, or ones that could impact the project area. Refer to current INDOT SAM guidance. If additional documentation (special provisions, pay quantities, etc.) will be needed, include in discussion. Include applicable commitments.

Based on a review of Geographic Information System (GIS) and available public records, the RFI was completed on October 22, 2024 by Corradino, LLC and INDOT SAM provided their concurrence on October 22, 2024 (Appendix E-5). No sites with hazardous material concerns (hazmat sites) or sites involved with regulated substances were identified in or within 0.5 mile of the project area. Further investigation for hazardous material concerns or regulated substances is not required at this time.

Part IV – Permits and Commitments

PERMITS CHECKLIST

Permits (mark all that apply)	**Likely Required**
Army Corps of Engineers (404/Section10 Permit)	
Nationwide Permit (NWP)	X
Regional General Permit (RGP)	
Individual Permit (IP)	
Other	
IN Department of Environmental Management (401/CSGP)	
Nationwide Permit (NWP)	X
Regional General Permit (RGP)	
Individual Permit (IP)	
Isolated Wetlands	
Construction Stormwater General Permit	
Other	
IN Department of Natural Resources	
Construction in a Floodway	
Navigable Waterway Permit	
Other	
Mitigation Required	
US Coast Guard Section 9 Bridge Permit	
Others (Please discuss in the discussion below)	

List the permits likely required for the project and summarize why the permits are needed, including permits designated as "Other."

For impacts to the waterway and wetlands a Section 404 Permit from USACE and a Section 401 Water Quality Certification from IDEM will be required.

Applicable recommendations provided by resource 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.

ENVIRONMENTAL COMMITMENTS

List all commitments and include the name of agency/organization requesting/requiring the commitment(s). Listed commitments should be numbered.

Firm:

1. If the scope of work or permanent or temporary right-of-way amounts change, INDOT Environmental Services Division (ESD) and the LaPorte District Design/Environmental Manager will be contacted immediately. (INDOT ESD and INDOT LaPorte 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 activity that would block or limit access. (INDOT ESD)
3. USFWS Bridge/Structure Assessment shall take place no earlier than two (2) years prior to the start of construction. If construction will begin after September 25, 2026, an inspection of the structure by a qualified individual must be performed. Inspection of the structure should check for presence of bats/bat indicators and/or presence of birds. The results of the inspection must indicate no signs of bats or birds. If signs of bats or birds are documented during this inspection, the INDOT District Environmental Manager must be contacted immediately. (INDOT ESD)
4. Any work in a wetland area within right-of-way or in borrow/waste areas is prohibited unless specifically allowed in the U.S. Army Corps of Engineers permit. (INDOT EWPSO)
5. The portions of Spurgeon Ditch that will not be impacted shall be protected during construction and labeled "Do Not Disturb" on the project plans (INDOT ESD).
6. The portions of Wetland 1 that will not be impacted shall be protected during construction and labeled “Do Not Disturb” on the project plans (INDOT ESD).
7. General AMM1 - Ensure all employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs. (USFWS)
8. Lighting AMM1 - Direct temporary lighting away from suitable habitat during the active season. (USFWS)

For Further Consideration:

1. The new, replacement, or rehabbed structure should not create conditions that are less favorable for wildlife passage under the structure compared to the current conditions. (IDNR-DFW)

Table of Contents for Appendix Items

Appendix A

INDOT Supporting Documentation

Des. No. 2300980

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[3]	No construction in waterways or water bodies	< 300 linear feet of stream impacts	≥ 300 linear feet of stream impacts	-	USACE Individual 404 Permit[4]
Wetland Impacts[3]	No adverse impacts to wetlands	< 0.1 acre	-	< 1.0 acre	≥ 1.0 acre
Right-of-way[5]	Property acquisition for preservation only or none	< 0.5 acre	≥ 0.5 acre	-	-
Relocations[6]	None	-	-	< 5	≥ 5
Threatened/Endangered Species (Species Specific Programmatic for Indiana bat & northern long eared bat)*	"No Effect", "Not likely to Adversely Affect" (With select AMMs[7])	"Not likely to Adversely Affect" (With any AMMs or commitments)	-	"Likely to Adversely Affect"	Project does not fall under Species Specific Programmatic[8]
Threatened/Endangered Species (Any other species)*	Falls within guidelines of USFWS 2013 Interim Policy or "No Effect"	"Not likely to Adversely Affect"	-	-	"Likely to Adversely Affect"
Environmental Justice	No disproportionately high and adverse impacts	-	-	-	Potential[9]
Sole Source Aquifer	No Detailed Groundwater Assessment	-	-	-	Detailed Groundwater Assessment
Floodplain	No Substantial Impacts	-	-	-	Substantial Impacts
Section 4(f) Impacts	None	-	-	-	Any[10]
Section 6(f) Impacts	None	-	-	-	Any
Permanent Traffic Alteration	None	-	-	-	Any
Noise Analysis Required	No	-	-	-	Yes
Air Quality Analysis Required	No	-	-	-	Yes[11]
Approval Level • **District Env. (DE)** • **Env. Serv. Div. (ESD)** • **FHWA**	Concurrence by DE or ESD	DE or ESD	DE or ESD	DE and/or ESD	DE and/or ESD; and FHWA

[1] Coordinate with INDOT Environmental Services Division. INDOT will then coordinate with the appropriate FHWA Environmental Specialist.
[2] Any involvement with a bridge processed under the Historic Bridge Programmatic Agreement.
[3] Total permanent impacts to streams (linear feet) and wetlands (acres).
[4] US Army Corps of Engineers Individual 404 Permit
[5] Total permanent and temporary right-of-way. This does not include reacquisition of existing apparent right-of-way.
[6] If any relocations are within an area with a known or suspected Environmental Justice (EJ) or disadvantaged population, or has greater than 5 relocations, a conversation with FHWA, through INDOT ESD, is needed to confirm NEPA classification and outreach plan for the project.
[7] Avoidance and Mitigation Measures (AMMs) determined by the IPAC determination key to be required that are not tree AMMs, bridge AMMs, or structure AMMs.
[8] Projects that do not fall under a Species Specific Programmatic and results in a "Likely to Adversely Affect". Other findings can be processed as a lower-level CE.
[9] Potential for causing a disproportionately high and adverse impact.
[10] Section 4(f) use resulting in an Individual, Programmatic, or *de minimis* evaluation. The only exception is a *de minimis* evaluation for historic properties (Effective January 2, 2020). If a historic property *de minimis* and no other use, mark the *None* column.
[11] Hot Spot Analysis and/or MSAT Quantitative Emission Analysis.
* Includes the threatened/endangered species critical habitat
Note: Substantial public or agency controversy may require a higher-level NEPA document.

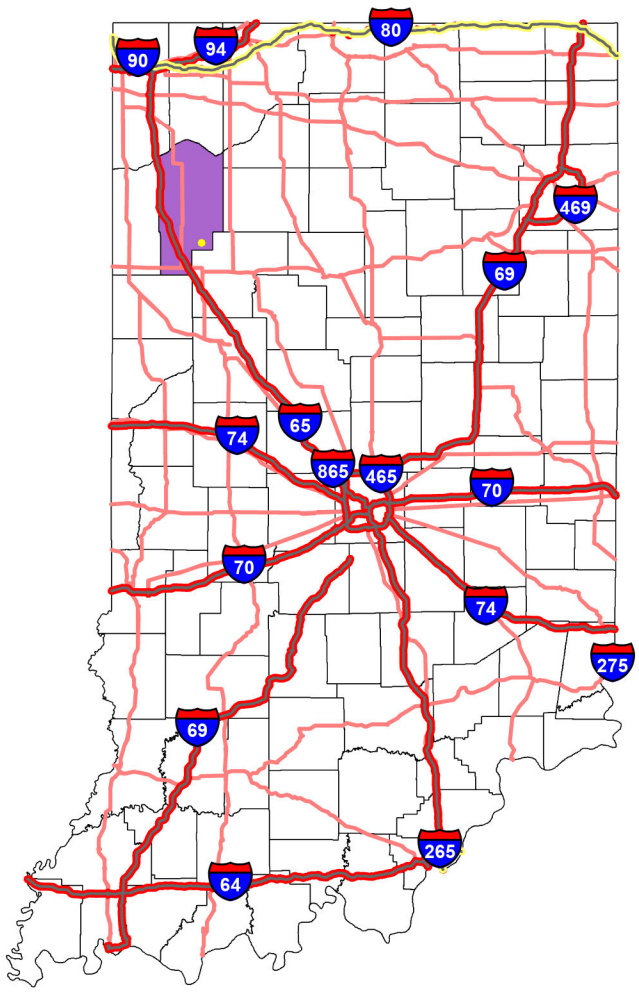
APPENDIX B

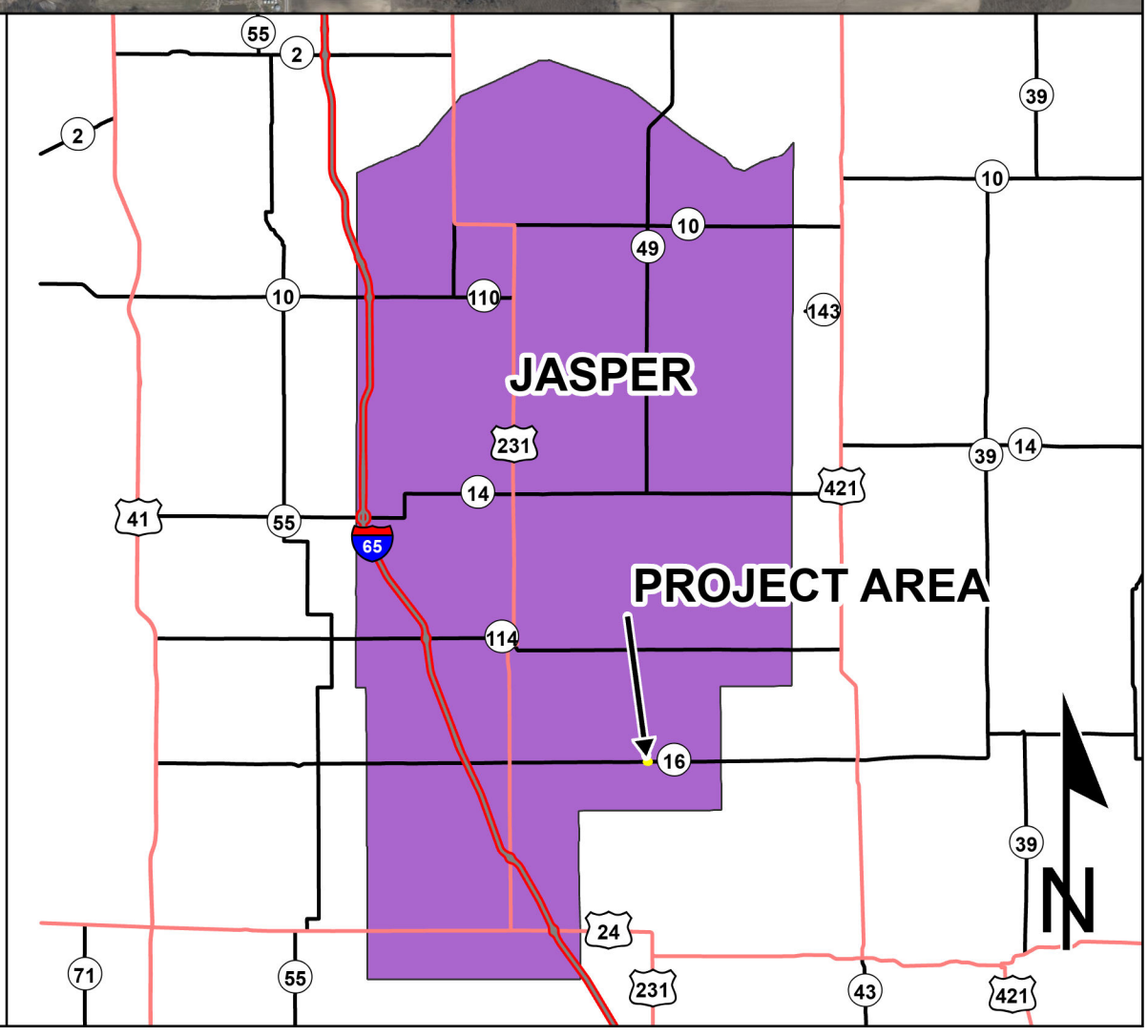
Graphics

Des. No. 2300980

Project Location Map
SR 16, 8.80 Miles East of US 421
DES #2300980, Small Structure Replacement
Jasper County, Indiana

Author: Mark Rinehart
Date: 10/23/2024





Sources:

0.4 0.2 0 0.4 Miles

Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library

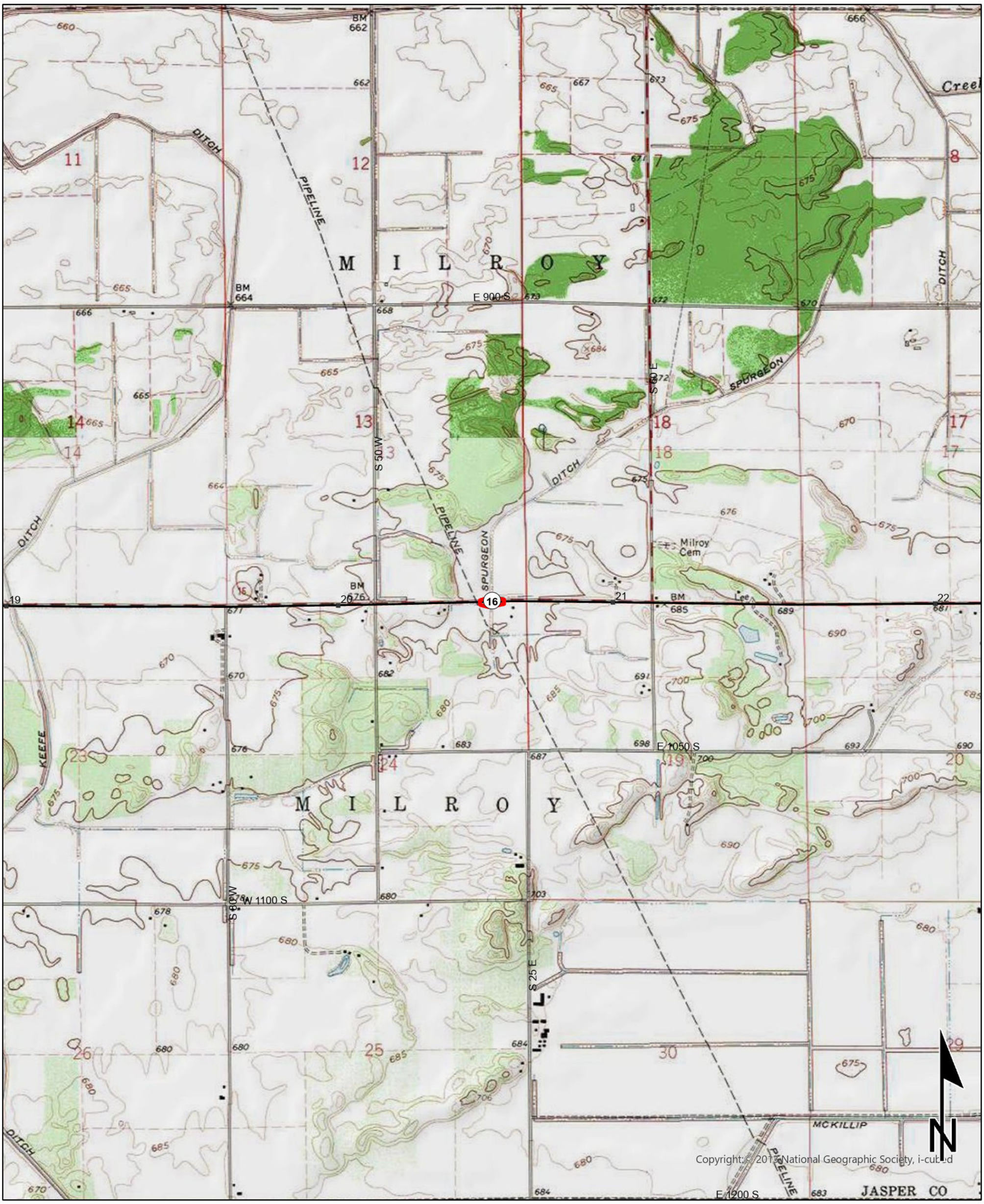
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

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

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

INDIANA
STATEWIDE
GIS DATA

USGS Topographic Map
SR 16, 8.80 Mile West of US 421
Des. No. 2300980, Small Structure Replacement
Jasper County, Indiana



0.4 0.2 0 0.4 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.

MILROY QUADRANGLE
INDIANA
7.5 MINUTE SERIES
(TOPOGRAPHIC)

Photo Location Map
SR 16, 8.80 Mile West of US 421
Des. No. 2300980, Small Structure Replacement
Jasper County, Indiana

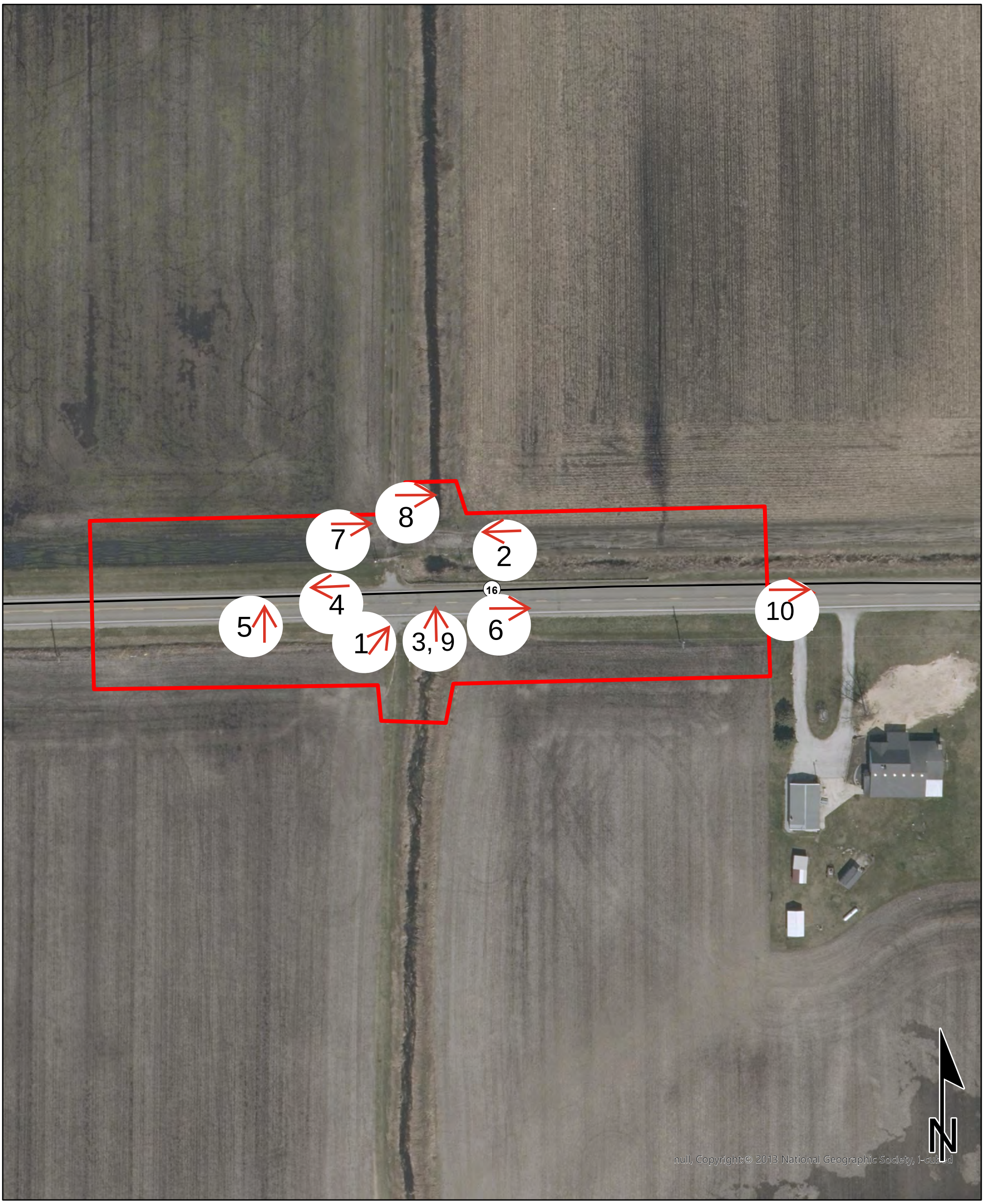
0.01 0.01 0 0.01 Miles

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

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

INDIANA STATE
GIS DATA

Photo Location Map
SR 16, 8.80 Mile West of US 421
Des. No. 2300980, Small Structure Replacement
Jasper County, Indiana



0.01 0.01 0 0.01 Miles

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

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

INDIANA STATE
GIS DATA

Photos taken on September 9, 2024

Photo 1: View of roadway.

Photo 2: View of Spurgeon Ditch and culverts.

Photo 3: View of standing water in structure.

Photo 4: View of SR 16 looking westbound.

Photo 5: View of SR 16 looking northbound.

Photo 6: View of SR 16 looking eastbound.

Photo 7: View of farm entrance north of SR 16.

Photo 8: View of Spurgeon Ditch.

Photo 9: Northview of culvert and Spurgeon Ditch.

Photo 10: View of driveway southeast of project area.

PROJECT	DESIGNATION
2300980	2300980
CONTRACT	BRIDGE FILE
R-45664	N/A

CULVERT ASSETS	
DES. NO.	CULVERT ASSET ID
2300980	CV 016-037-20.50

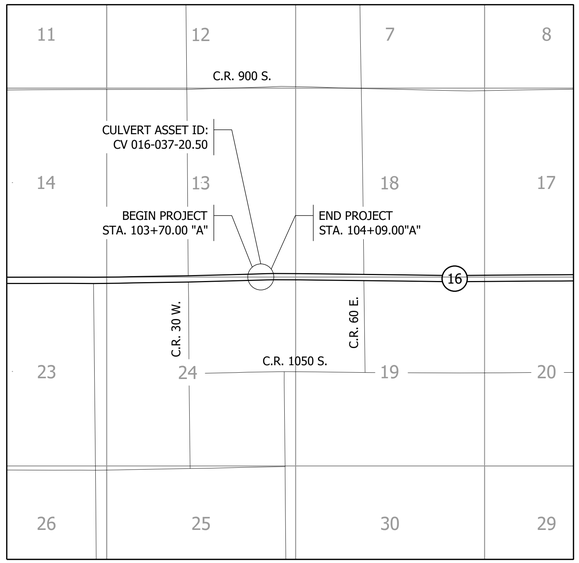
INDIANA DEPARTMENT OF TRANSPORTATION

ROAD PLANS

ROUTE: S.R. 16 AT: RP 20+50

PROJECT NO. 2300980 P.E.
2300980 R/W
2300980 CONST.

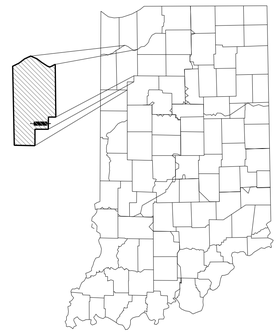
SMALL STRUCTURE REPLACEMENT ON S.R. 16 OVER SPURGEON DITCH, LOCATED 5.74 MILES EAST OF U.S. 231 IN SECTIONS 13 AND 24, T-28-N, R-6-W, MILROY TOWNSHIP, JASPER COUNTY, INDIANA



STAGE 1 PLANS
NOVEMBER 2024

SCALE:
1" = 2000'

TRAFFIC DATA	S.R. 16
A.A.D.T. (2027)	1430 V.P.D.
A.A.D.T. (2047)	1705 V.P.D.
D.H.V. (2047)	171 V.P.H.
DIRECTIONAL DISTRIBUTION	50%
TRUCKS	8.9% D.H.V.
	16.7% A.A.D.T.
DESIGN DATA	
DESIGN SPEED	55 M.P.H.
PROJECT DESIGN CRITERIA	3R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	STATE COLLECTOR
RURAL/URBAN	RURAL
TERRAIN	LEVEL
ACCESS CONTROL	NONE



PROJECT LOCATION SHOWN BY ■
JASPER COUNTY

LATITUDE: 40°52'01" N LONGITUDE: 87°02'42" W

BRIDGE LENGTH: 0.000 MI.
ROADWAY LENGTH: 0.007 MI.
TOTAL LENGTH: 0.007 MI.
MAX. GRADE: 0.35%

H.U.C. 071200020202

CORRADINO
ENGINEERS ♦ PLANNERS ♦ CONSTRUCTORS

INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS DATED 2024 TO BE USED WITH THESE PLANS.

PRELIMINARY

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

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

APPROVED
FOR LETTING:
INDIANA DEPARTMENT OF TRANSPORTATION DATE

BRIDGE FILE	
N/A	
DESIGNATION	
2300980	
	SHEET
	1 of 13
CONTRACT	PROJECT
R-45664	2300980

UTILITIES

ELECTRIC:

DUKE ENERGY
DON MCDUFFY
100 S. MILL CREEK ROAD
NOBLESVILLE, IN 46062
317-776-5320
DEI-DLINE-COORD@DUKE-ENERGY.COM

COMMUNICATIONS:

FRONTIER
UTILITY CORD REQD
8001 WEST JEFFERSON BLVD
FORT WAYNE, IN 46804
260-461-3324
UTILITYCORDREQ@FTR.COM

TDS TELECOM
NEW PROJECT REQUESTS
525 JUNCTION ROAD
MADISON, WISCONSIN 53717
218-568-7112
TDSTELECOMOSP@TDSTELECOM.COM

"HOLEY MOLEY SAYS"
DON'T DIG BLIND
1-800-382-5544
CALL TOLL FREE
1-800-428-5200
FOR CALLS OUTSIDE OF INDIANA

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

GENERAL NOTES

1. ALL EARTHEN SHOULDERS, MEDIAN AREAS, AND CUT AND FILL SLOPES SHALL BE PLAIN OR MULCH SEEDED EXCEPT WHERE SODDING IS SPECIFIED.

INDEX

REVISIONS

SHEET NO.	DATE	REVISED
.	.	.

F:\4967-LaPorte\SE-2300980\50 Plans\30 Sheet Drawings\10 Design Sheets\S-INDEX-01.dwg - Layout1
November 11, 2024 5:16:00 PM / sjohnson
November 14, 2024 9:40:03 AM / Stacey Johnson

File Name:
Modified / By:
Plotted / By:

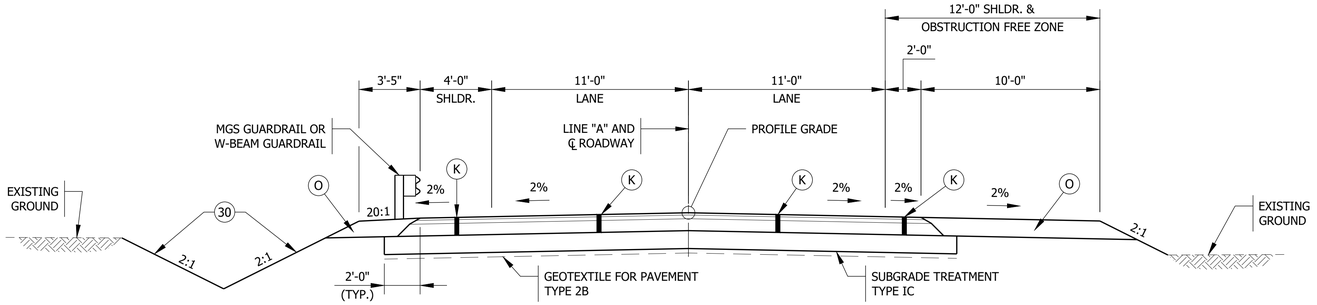
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

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

INDIANA
DEPARTMENT OF TRANSPORTATION

INDEX AND GENERAL NOTES

HORIZONTAL SCALE	BRIDGE FILE
N/A	N/A
VERTICAL SCALE	DESIGNATION
	2300980
	SHEET 2 of 13
CONTRACT	PROJECT
R-45664	2300980



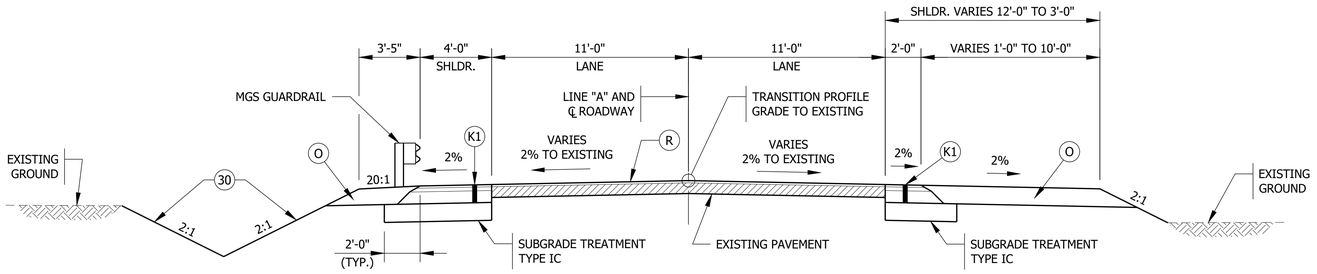
HALF SECTION WITH GUARDRAIL AND DITCH

FULL DEPTH TYPICAL SECTION FOR S.R. 16

STA. 103+70.00 "A" TO STA. 104+09.00 "A"

SCALE: 1/4" = 1'-0"

HALF SECTION WITHOUT GUARDRAIL AND DITCH



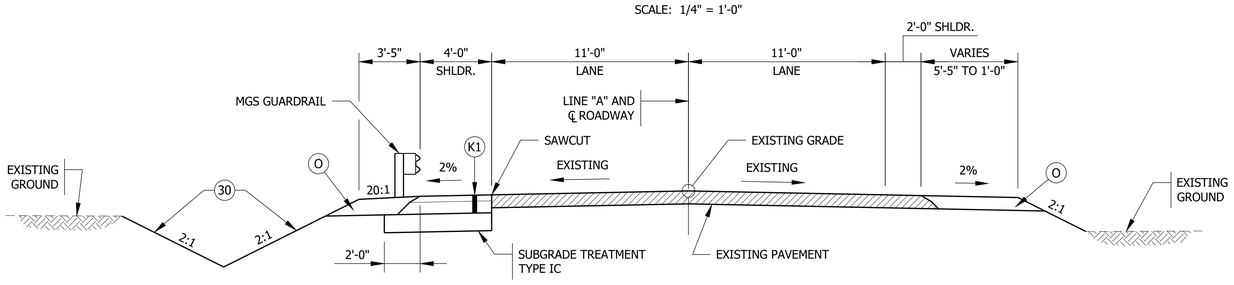
HALF SECTION WITH GUARDRAIL AND DITCH

INCIDENTAL CONSTRUCTION - WIDENING AND RESURFACE

STA. 102+80.00 "A" TO STA. 103+70.00"A"
STA. 104+09.00 "A" TO STA. 104+99.00 "A"

SCALE: 1/4" = 1'-0"

HALF SECTION WITHOUT GUARDRAIL AND DITCH



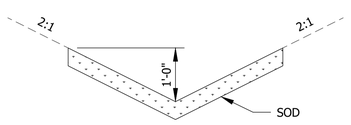
HALF SECTION WITH GUARDRAIL AND DITCH

INCIDENTAL CONSTRUCTION

STA. 104+99.00 "A" TO STA. 106+42.32 "A"

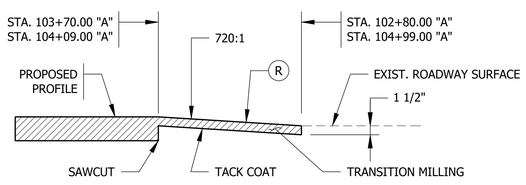
SCALE: 1/4" = 1'-0"

HALF SECTION WITHOUT GUARDRAIL AND DITCH



SODDED DITCH DETAIL

NOT TO SCALE



ASPHALT MILLING DETAIL

NOT TO SCALE

LEGEND

(K) 165 LBS/SYD QC/QA HMA, 3, 58S, SURFACE, 9.5 MM ON
275 LBS/SYD QC/QA HMA, 3, 58S, INTERMEDIATE, 19.0 MM ON
660 LBS/SYD QC/QA HMA, 3, 58S, BASE, 25.0 MM

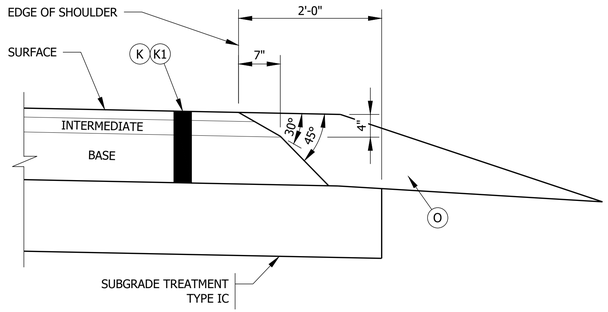
(K1) WIDENING WITH HMA TYPE B CONSISTING OF:
165 LBS/SYD QC/QA HMA, 3, 58S, SURFACE, 9.5MM ON
275 LBS/SYD HMA INTERMEDIATE, TYPE B ON
660 LBS/SYD HMA BASE, TYPE B

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

(O) 10" COMPACTED AGGREGATE, NO. 53

(30) MULCHED SEEDING R WITH EROSION CONTROL BLANKET

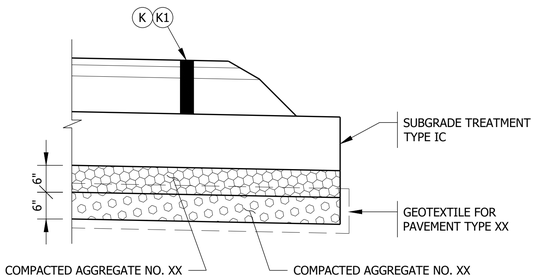
(R) 165 LBS/SYD QC/QA HMA, 3, 58S, SURFACE, 9.5MM ON
TRANSITION MILLING



SAFETY EDGE ON HMA PAVEMENT

SCALE: 1" = 1'-0"

NOTE: SAFETY EDGE IS NOT REQUIRED IN FRONT OF GUARDRAIL.



SUBGRADE IMPROVEMENT DETAIL

SCALE: 3/4" = 1'-0"

NOTE: SUBGRADE IMPROVEMENT REQUIRED ONLY IN LOCATIONS OF UNSUITABLE SOILS IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.

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Plotted / By: November 14, 2024 9:40:08 AM / Stacey Johnson

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

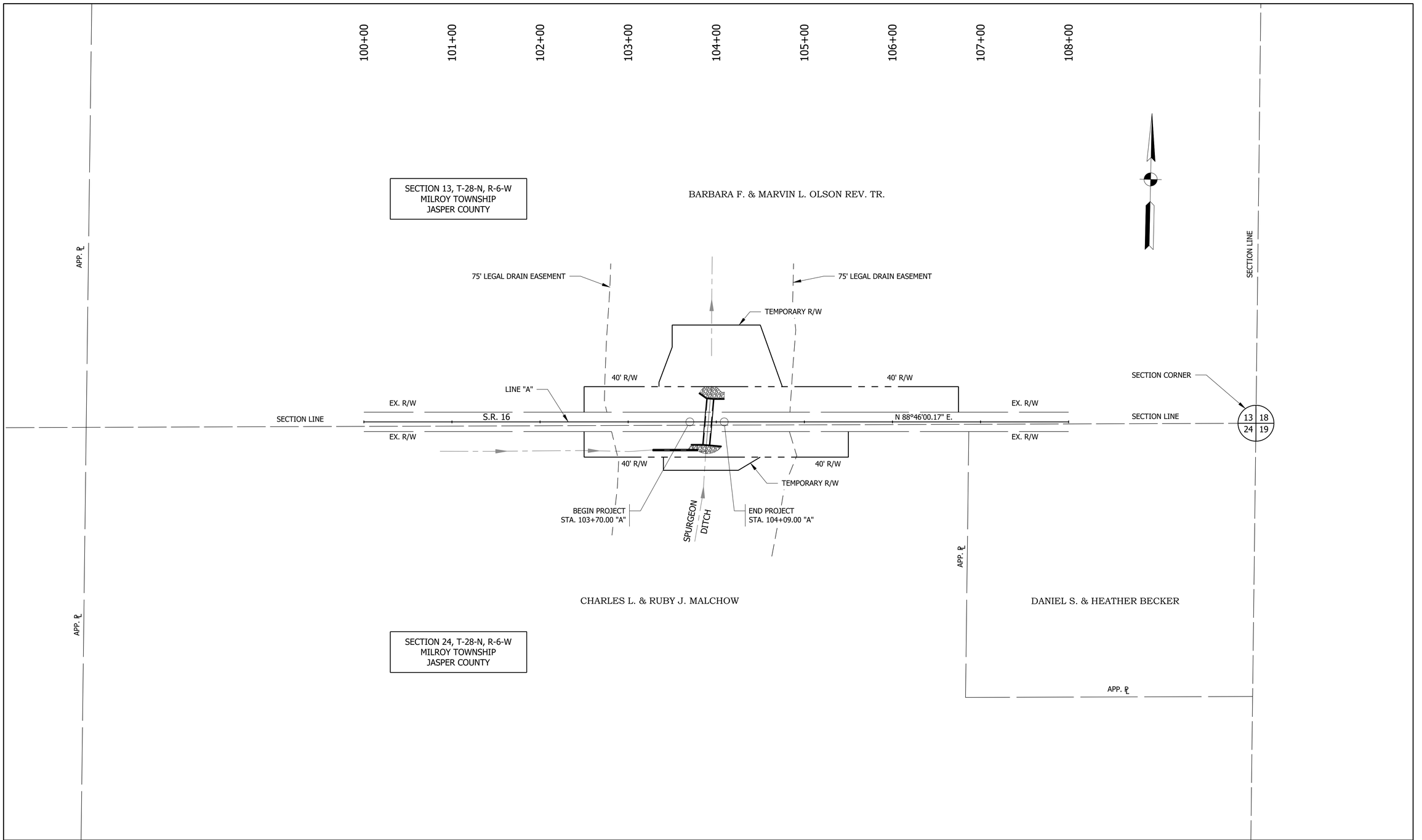
DESIGNED: ZZH | DRAWN: SEJ

CHECKED: BJM | CHECKED: ZZH

INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	N/A
VERTICAL SCALE	DESIGNATION
	2300980
	SHEET
	3 of 13
CONTRACT	PROJECT
R-45664	2300980



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November 14, 2024 9:40:15 AM / Stacey Johnson

File Name:
Modified / By:
Plotted / By:

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

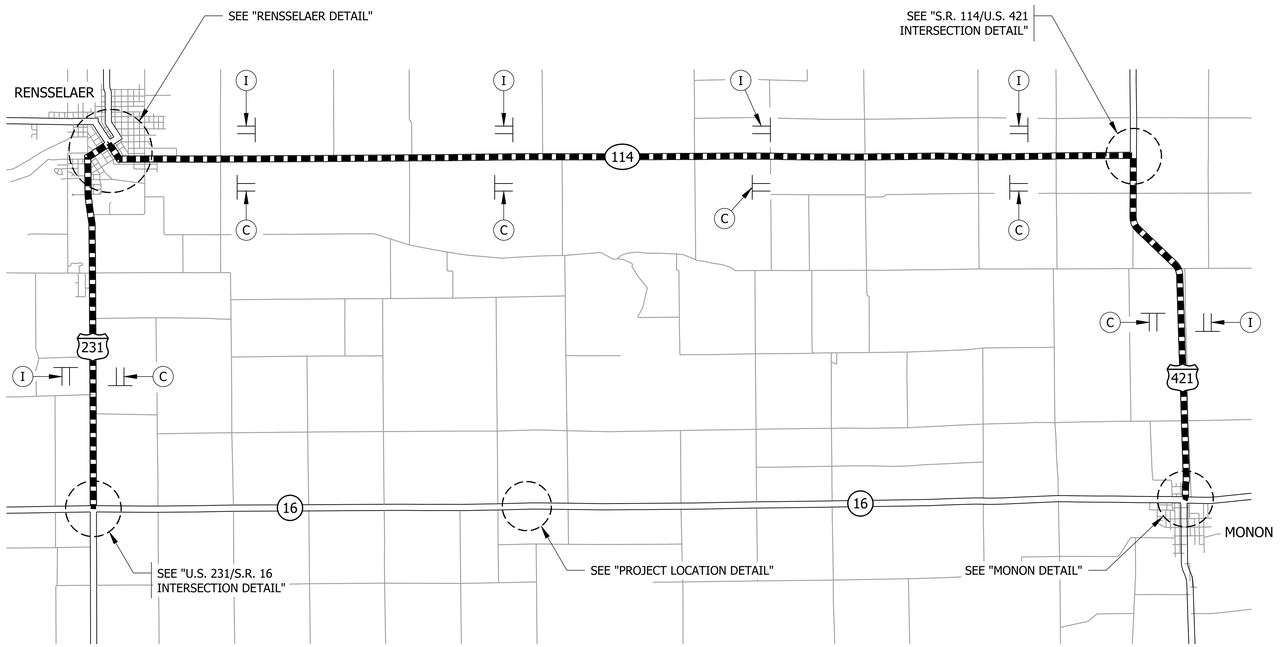
DESIGNED: ZZH | DRAWN: SEJ

CHECKED: BJM | CHECKED: ZZH

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAT NO. 1

HORIZONTAL SCALE	BRIDGE FILE
1" = 50'-0" UNLESS NOTED	N/A
VERTICAL SCALE	DESIGNATION
	2300980
	SHEET
	4 of 13
CONTRACT	PROJECT
R-45664	2300980

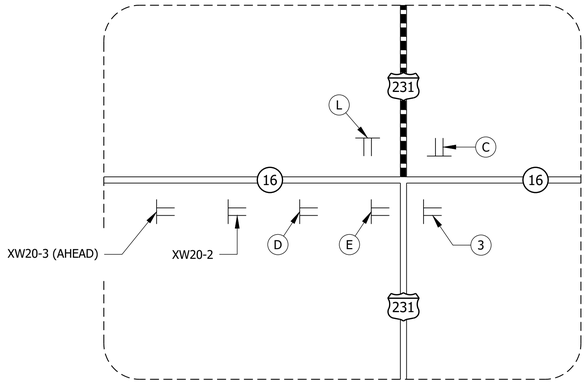


LEGEND

1. 24 LFT. OF TYPE III-B BARRICADES, STAGGERED WITH ROAD CLOSURE SIGN ASSEMBLY R11-4.
2. 24 LFT. OF TYPE III-A BARRICADES WITH ROAD CLOSURE SIGN ASSEMBLY R11-2.
3. 24 LFT. OF TYPE III-B BARRICADES WITH ROAD CLOSURE SIGN R11-3A AND XM4-10 SIGN.

DETOUR ROUTE

SIGN ASSEMBLY



U.S. 231/S.R. 16 INTERSECTION DETAIL

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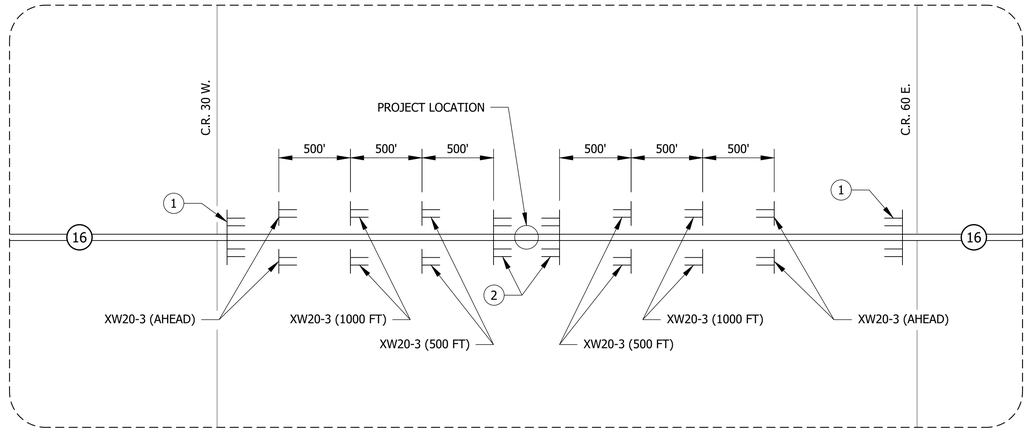

PROJECT LOCATION DETAIL

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November 14, 2024 9:40:18 AM / Stacey Johnson

File Name:
Modified / By:
Plotted / By:

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: ZZH DRAWN: SEJ

CHECKED: BJM CHECKED: ZZH

INDIANA DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC

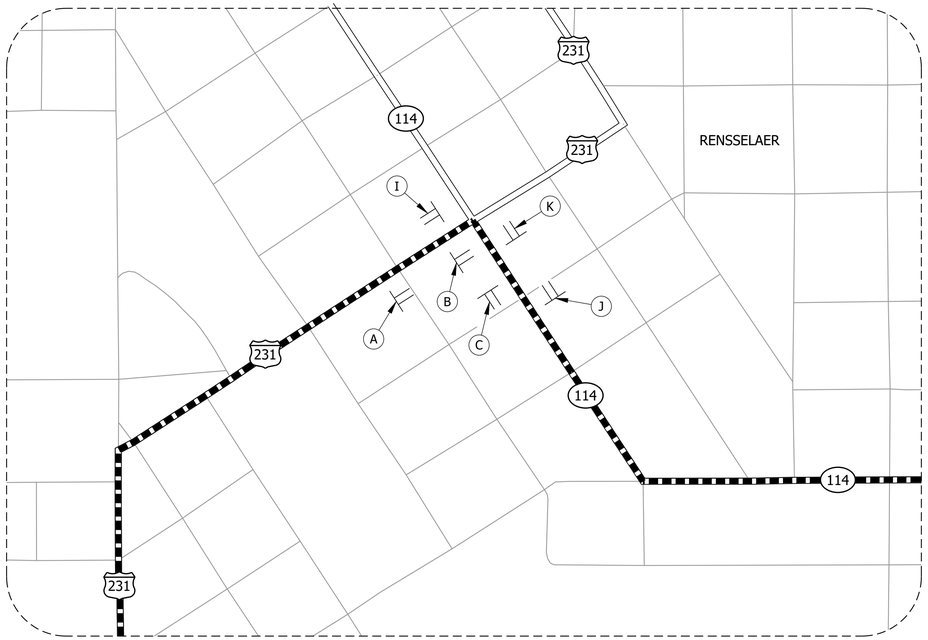
HORIZONTAL SCALE	BRIDGE FILE
1" = 5000' UNLESS NOTED	N/A
VERTICAL SCALE	DESIGNATION
	2300980
	SHEET 5 of 13
CONTRACT	PROJECT
R-45664	2300980

LEGEND

1. 24 LFT. OF TYPE III-B BARRICADES, STAGGERED WITH ROAD CLOSURE SIGN ASSEMBLY R11-4.
2. 24 LFT. OF TYPE III-A BARRICADES WITH ROAD CLOSURE SIGN ASSEMBLY R11-2.
3. 24 LFT. OF TYPE III-B BARRICADES WITH ROAD CLOSURE SIGN R11-3A AND XM4-10 SIGN.

DETOUR ROUTE

SIGN ASSEMBLY



RENSSELAER DETAIL

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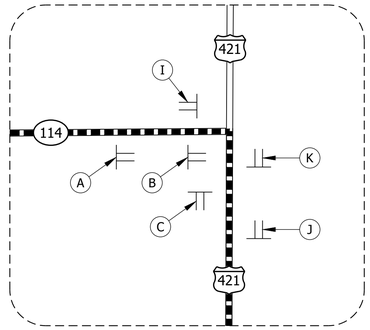

S.R. 114/U.S. 421 INTERSECTION DETAIL

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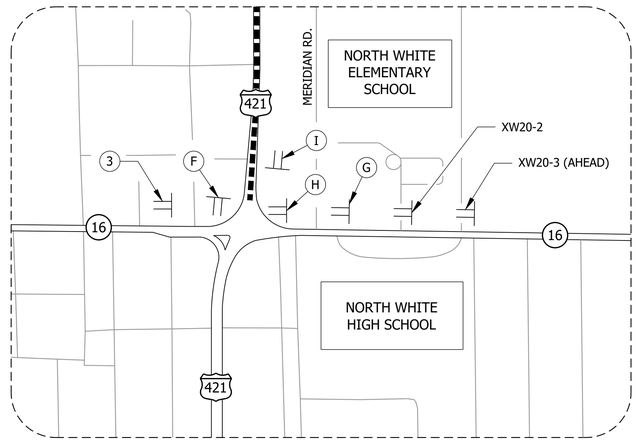

MONON DETAIL

NOT TO SCALE

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Plotted / By: November 14, 2024 9:40:21 AM / Stacey Johnson

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: ZZH | DRAWN: SEJ

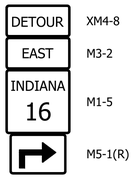
CHECKED: BJM | CHECKED: ZZH

INDIANA DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	N/A
VERTICAL SCALE	DESIGNATION
	2300980
	SHEET 6 of 13
CONTRACT	PROJECT
R-45664	2300980

A



XM4-8
M3-2
M1-5
M5-1(R)

B

XM4-8
M3-2
M1-5
M6-1

C

XM4-8
M3-2
M1-5
M6-3

D

XM4-8
M3-2
M1-5
M5-1(L)

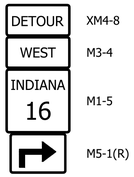
E

XM4-8
M3-2
M1-5
M6-1

F

XM4-8a
M3-2
M1-5

G



XM4-8
M3-4
M1-5
M5-1(R)

H

XM4-8
M3-4
M1-5
M6-1

I

XM4-8
M3-4
M1-5
M6-3

J

XM4-8
M3-4
M1-5
M5-1(L)

K

XM4-8
M3-4
M1-5
M6-1

L

XM4-8a
M3-4
M1-5

XG20-5

XW20-2

XW20-3

R11-2

R11-4

R11-3A
XM4-10

CONSTRUCTION SIGN SCHEDULE

SIGN NO.	DESCRIPTION	SIZE (FT.)	TYPE	EST. QTY.
XG20-5	S.R. 16 CLOSED ON OR AFTER XX	5 X 3	A	2
XW20-2	DETOUR AHEAD	4 X 4	A	2
XW20-3	ROAD CLOSED XXXX	4 X 4	A	14
R11-2	ROAD CLOSED	4 X 2.5	-	2
R11-3A XM4-10	ROAD CLOSED XX MILES DETOUR (INSIDE ORANGE ARROW)	5 X 2.5 4 X 1.5	-	2
R11-4	ROAD CLOSED TO THRU TRAFFIC	5 X 2.5	-	2
			TOTAL TYPE "A" SIGNS	18
			ROAD CLOSURE SIGN ASSEMBLIES	6

DETOUR ROUTE MARKER ASSEMBLIES: 32 REQ'D
TYPE III-A BARRICADES: 48 LFT.
TYPE III-B BARRICADES: 96 LFT.

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

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

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

File Name: F:\4967-LaPorte5\E-230080\50 Plans\30 Sheet Drawings\10 Design Sheets\S-MOT-DETOUR-01.dwg - Layout3
Modified / By: November 13, 2024 3:31:11 PM / sjohnson
Plotted / By: November 14, 2024 9:40:26 AM / Stacey Johnson

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

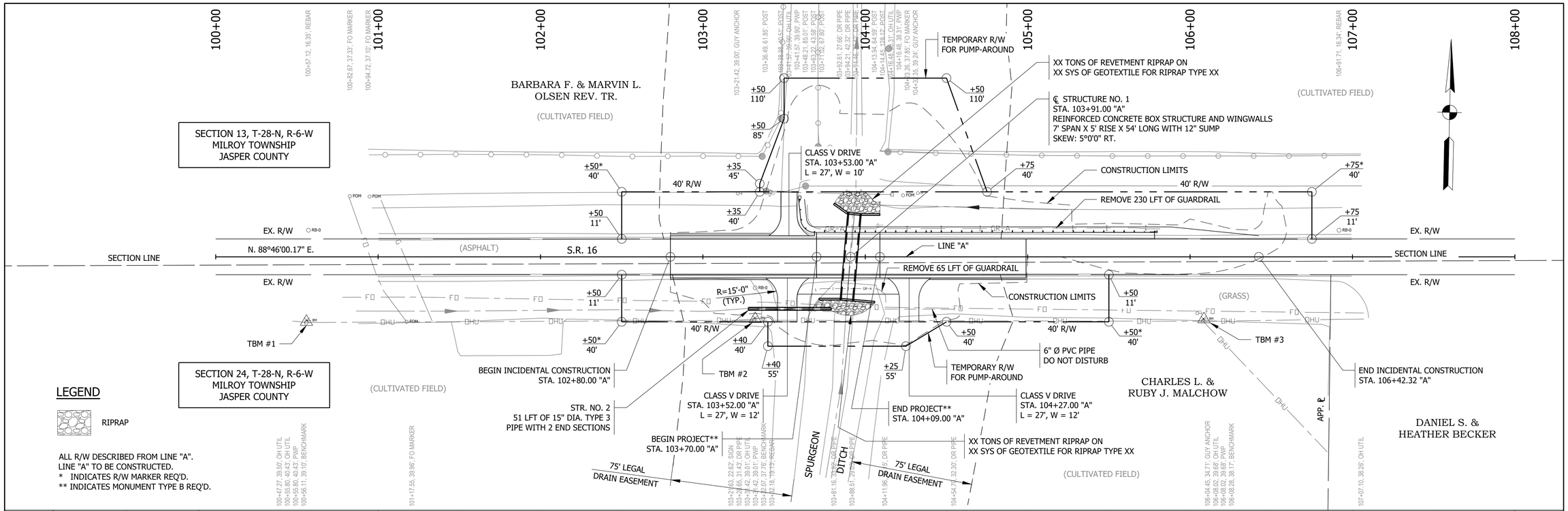
DESIGNED: ZZH DRAWN: SEJ

CHECKED: BJM CHECKED: ZZH

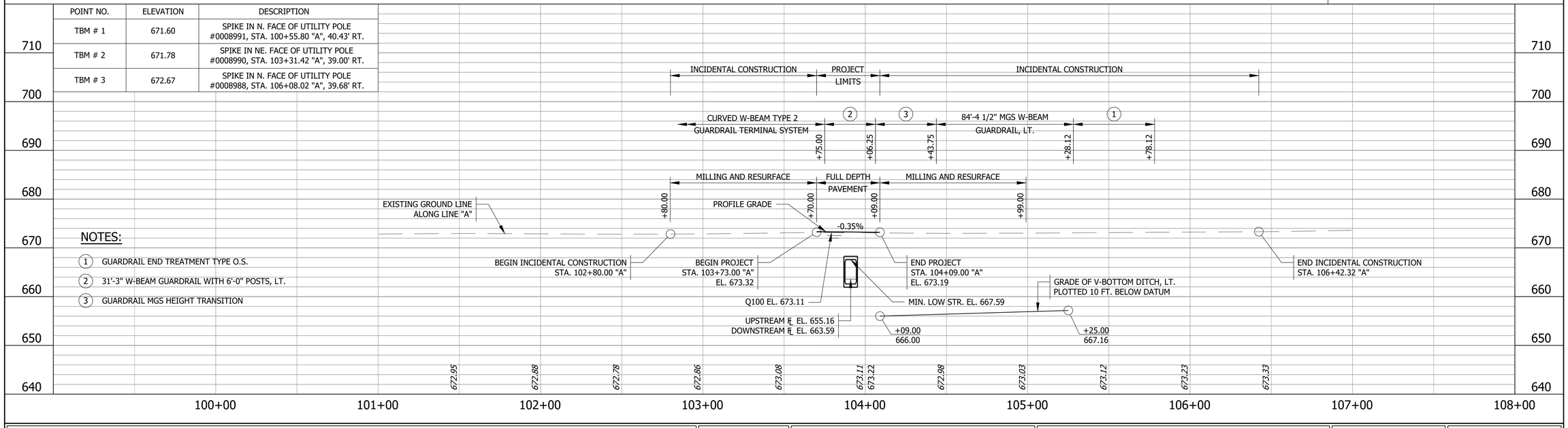
INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	N/A
VERTICAL SCALE	DESIGNATION
	2300980
	SHEET
	7 of 13
CONTRACT	PROJECT
R-45664	2300980



POINT NO.	ELEVATION	DESCRIPTION
TBM # 1	671.60	SPIKE IN N. FACE OF UTILITY POLE #0008991, STA. 100+55.80 "A", 40.43' RT.
TBM # 2	671.78	SPIKE IN NE. FACE OF UTILITY POLE #0008990, STA. 103+31.42 "A", 39.00' RT.
TBM # 3	672.67	SPIKE IN N. FACE OF UTILITY POLE #0008988, STA. 106+08.02 "A", 39.68' RT.



NOTES:

1. GUARDRAIL END TREATMENT TYPE O.S.
2. 31'-3" W-BEAM GUARDRAIL WITH 6'-0" POSTS, LT.
3. GUARDRAIL MGS HEIGHT TRANSITION

NOTE TO REVIEWER:

HORIZONTAL REFERENCE TIES TO BE PROVIDED WHEN SURVEYOR PROVIDES RECORDED PLAT.

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: ZZH DRAWN: SEJ

CHECKED: BJM CHECKED: ZZH

INDIANA DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'-0" UNLESS NOTED	N/A
VERTICAL SCALE	DESIGNATION
1" = 10'-0" UNLESS NOTED	2300980
	SHEET 8 of 13
CONTRACT	PROJECT
R-45664	2300980

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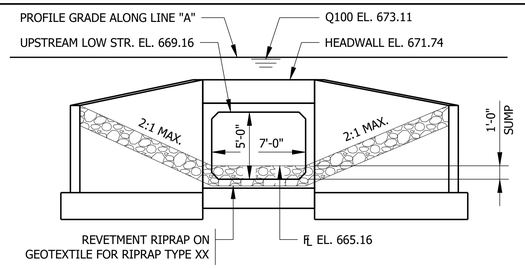
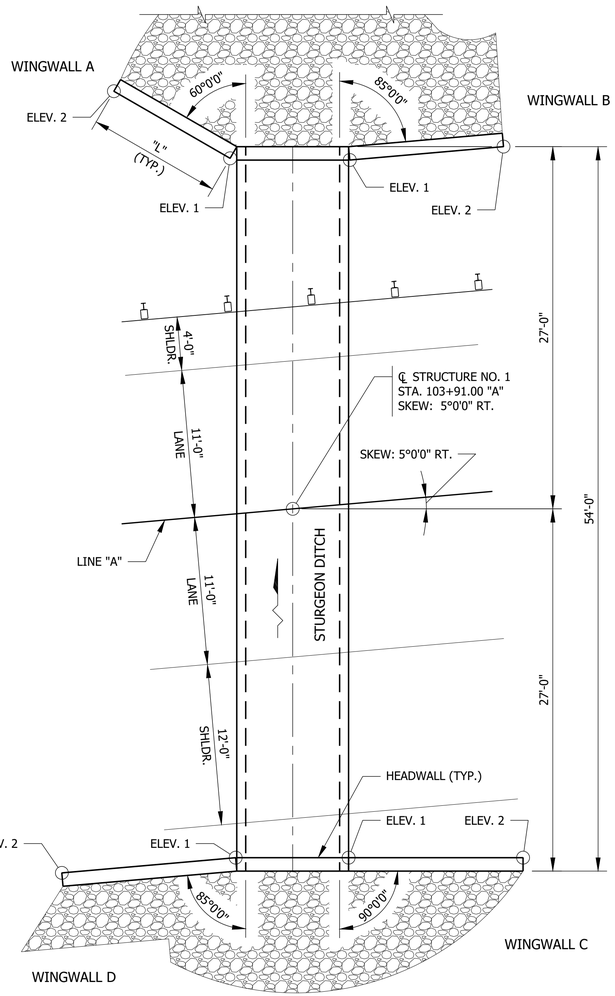
Modified / By: November 14, 2024 9:32:03 AM / sjohnson
Plotted / By: November 14, 2024 9:40:38 AM / Stacey Johnson



INLET ELEVATION

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



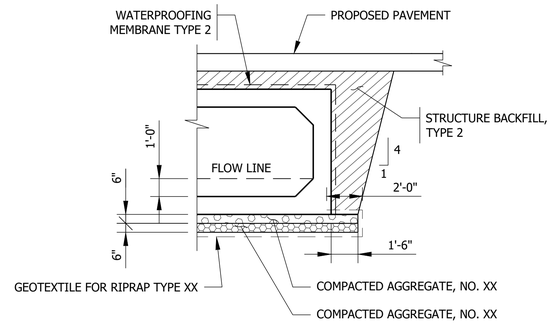
PLAN

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

WINGWALL TABLE

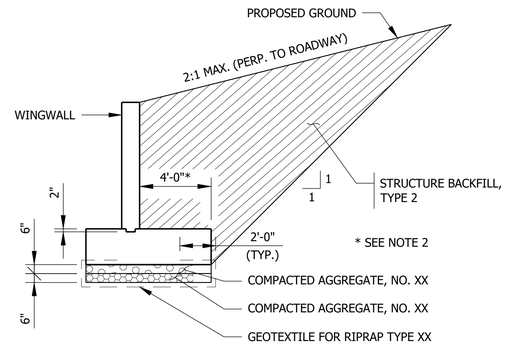
WING	"L"	ELEV. 1	ELEV. 2	AREA (SFT)
"A"	10.0 FT.	669.34	667.76	71.3
"B"	11.5 FT.	669.34	669.34	91.0
"C"	13.0 FT.	671.74	671.74	114.5
"D"	13.0 FT.	671.74	671.74	114.5

ESTIMATED QUANTITY OF HEADWALLS: 25.0 SFT.



STRUCTURE BACKFILL AT STRUCTURE

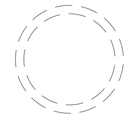
NOT TO SCALE



STRUCTURE BACKFILL AT WINGWALL

NOT TO SCALE

EXISTING STRUCTURE



THE EXISTING STRUCTURE IS A 57 FOOT LONG, 4 FOOT DIAMETER REINFORCED CONCRETE PIPE. THE EXISTING STRUCTURE SHALL BE REMOVED.

DESIGN DATA

LIVE LOAD:

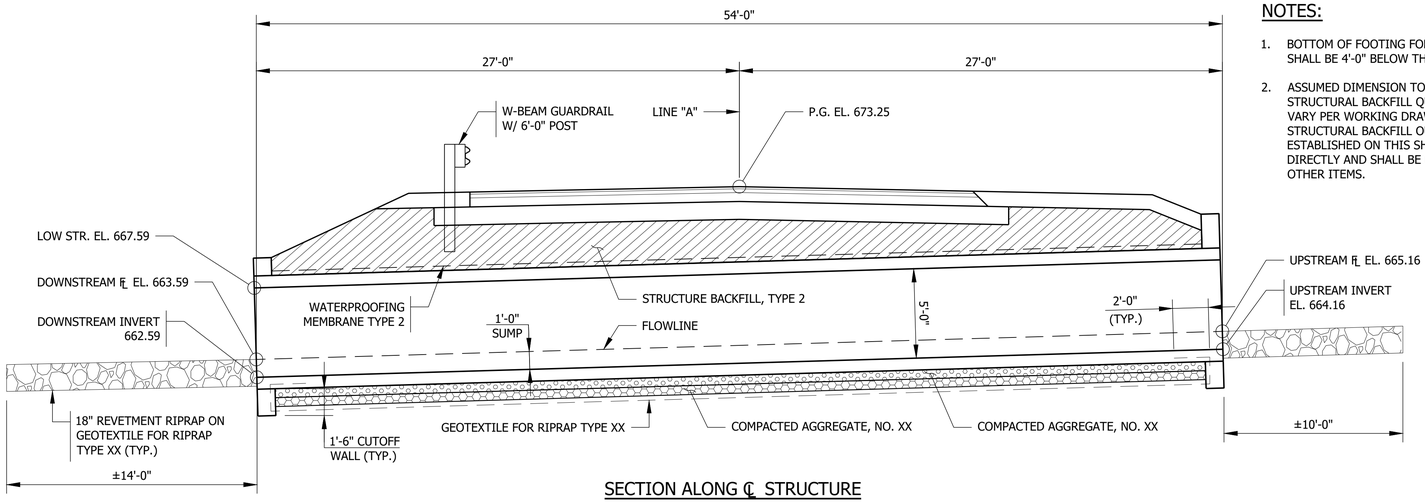
DESIGNED FOR HL-93 LOADING IN ACCORDANCE WITH SECTION 714 OF THE STANDARD SPECIFICATIONS.

DESIGN STRENGTHS:

TO BE IN ACCORDANCE WITH SECTION 714 OF THE STANDARD SPECIFICATIONS.

HYDRAULIC DATA

DRAINAGE AREA:	0.47 SQ. MI.
Q100 DISCHARGE:	260 CFS
Q100 ELEVATION:	673.11 FT.
APPROXIMATE SKEW:	5°0'0"
PROPOSED VELOCITY (Q25)	6.08 FT./SEC.
PROPOSED BACKWATER (Q100)	0.82 FT.
MINIMAL LOW STRUCTURE ELEVATION	667.59 FT.
EXISTING BACKWATER (Q100)	1.04 FT.
EXISTING LOW STRUCTURE	667.27 FT.



SECTION ALONG ℄ STRUCTURE

SCALE: 1/4" = 1'-0"

NOTES:

1. BOTTOM OF FOOTING FOR THE PROPOSED WINGWALL SHALL BE 4'-0" BELOW THE FLOWLINE.
2. ASSUMED DIMENSION TO ESTABLISH NEAT LINE FOR STRUCTURAL BACKFILL QUANTITY. DIMENSION MAY VARY PER WORKING DRAWINGS. ADDITIONAL STRUCTURAL BACKFILL OUTSIDE OF THE NEAT LINE ESTABLISHED ON THIS SHEET WILL NOT BE PAID FOR DIRECTLY AND SHALL BE INCLUDED IN THE COST OF OTHER ITEMS.

REINFORCED CONCRETE BOX STRUCTURE
SPAN: 7'-0"
RISE: 5'-0"
SKEW: 5°0'0" RT.
S.R. 16 OVER STURGEON DITCH
JASPER COUNTY

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November 14, 2024 9:39:02 AM / sjohnson
November 14, 2024 9:40:43 AM / Stacey Johnson

File Name:
Modified / By:
Plotted / By:

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

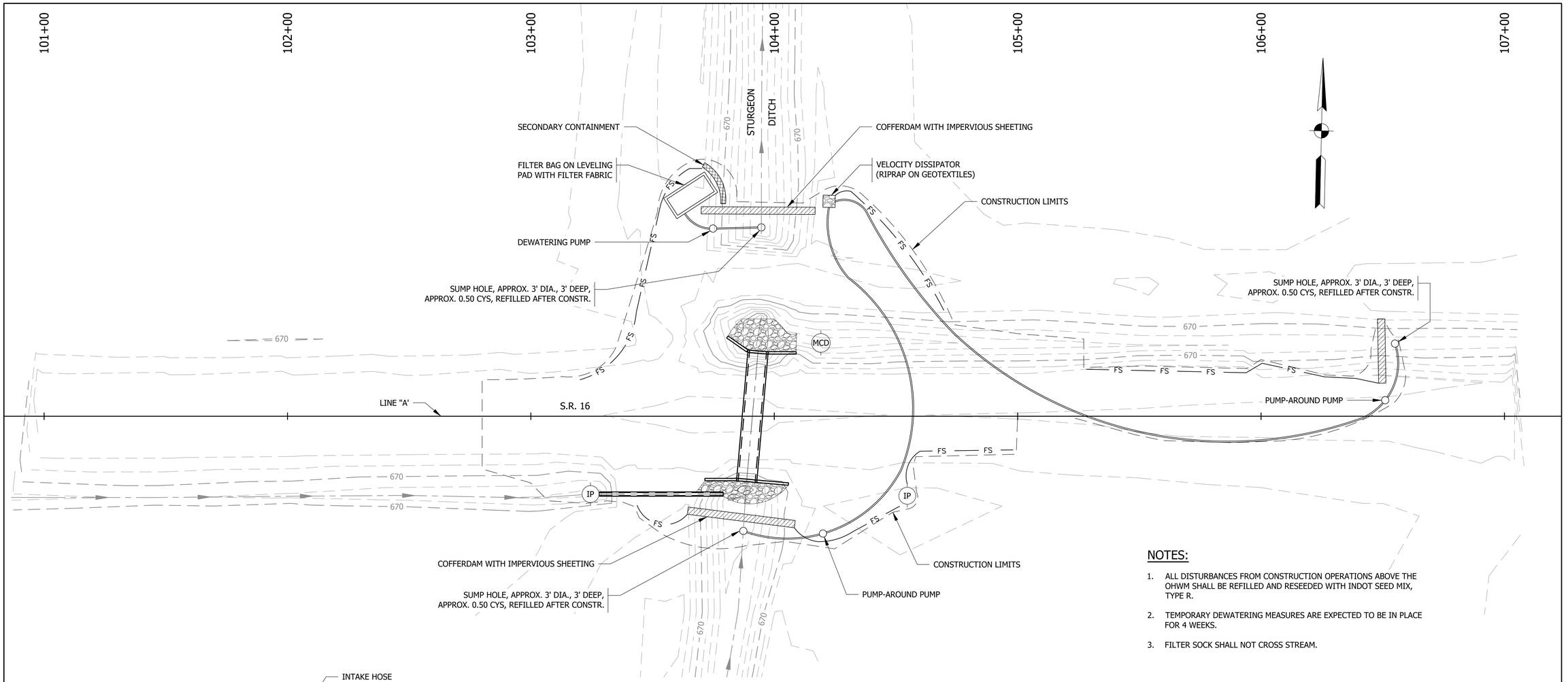
DESIGNED: ZZH | DRAWN: SEJ

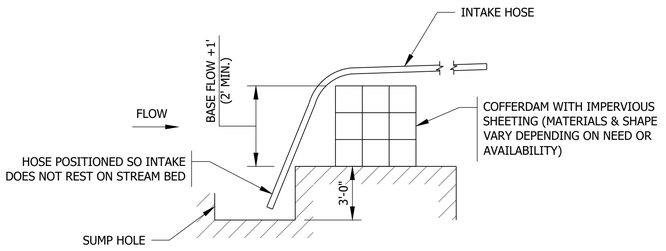
CHECKED: BJM | CHECKED: ZZH

INDIANA DEPARTMENT OF TRANSPORTATION

GENERAL PLAN

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	N/A
VERTICAL SCALE	DESIGNATION
	2300980
	SHEET
	9 of 13
CONTRACT	PROJECT
R-45664	2300980





COFFERDAM/SUMP HOLE WORK AREA

NOT TO SCALE

EROSION CONTROL LEGEND

- FS — FILTER SOCK
- RIPRAP
- DISCHARGE WATER MUST FILTER THROUGH A SEDIMENT TRAP OR OTHER SEDIMENT CONTROL MEASURES PRIOR TO REACHING WATERWAY
- MCD — TEMPORARY CHECK DAM, MODIFIED
- IP — INLET PROTECTION

NOTES:

1. ALL DISTURBANCES FROM CONSTRUCTION OPERATIONS ABOVE THE OHWM SHALL BE REFILLED AND RESEEDED WITH INDOT SEED MIX, TYPE R.
2. TEMPORARY DEWATERING MEASURES ARE EXPECTED TO BE IN PLACE FOR 4 WEEKS.
3. FILTER SOCK SHALL NOT CROSS STREAM.

TEMPORARY EROSION CONTROL

LOCATION				* FILTER SOCK	* TEMPORARY CHECK DAMS STRAW BALES	* TEMPORARY CHECK DAMS REVETMENT RIPRAP	* TEMPORARY FILTER STONE	*TEMPORARY GEOTEXTILES	*TEMPORARY REVETMENT RIPRAP	*TEMPORARY SLOPE DRAIN	*TEMPORARY SEEDING	*TEMPORARY MULCH	*TEMPORARY MULCH STABILIZATION	*TEMPORARY INLET PROTECTION	*MOBILIZATION AND DEMOBILIZATION FOR SURFACE STABILIZATION	* NO. 2 STONE FOR CONSTRUCTION ENTRANCE
FROM STATION	TO STATION	LEFT	RIGHT	FT	FT	TON	TON	SYS	TON	FT	LBS	TON	SYS	EACH	EACH	TON
102+80.00 "A"	105+78.12 "A"	X		300		10	1	25	5		50	1	1541			
102+80.00 "A"	105+78.12 "A"		X	75							50	1	1541	2		
CONSTRUCTION ENTRANCE								135								100
TOTALS				375		10	1	160	5		100	2	3082	2	1	100

*QUANTITY SHOWN FOR INFORMATION ONLY. COST INCLUDED IN "STORM WATER MANAGEMENT BUDGET".

File Name:
Modified / By:
Plotted / By:

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November 13, 2024 4:14:10 PM / sjohnson
November 14, 2024 9:40:51 AM / Stacey Johnson

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: ZZH DRAWN: SEJ

CHECKED: BJM CHECKED: ZZH

INDIANA DEPARTMENT OF TRANSPORTATION

EROSION CONTROL DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'-0" UNLESS NOTED	N/A
VERTICAL SCALE	DESIGNATION
	2300980
	SHEET 10 of 13
CONTRACT	PROJECT
R-45664	2300980

APPENDIX C

Early Coordination

Des. No. 2300980

INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758-ES
Indianapolis, Indiana 46204

PHONE: (855) 463-6848
(855) INDOT4U

Eric Holcomb, Governor
Michael Smith, Commissioner

October 25, 2024

Rensselaer Central Schools Corporation
900 E. Washington Street
Rensselaer, IN 47978

Re: Designation Number: 2300980, SR 16, 8.80 Miles West of US 421, Jasper County, Indiana
Environmental Early Coordination

Dear Environmental Coordinator:

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

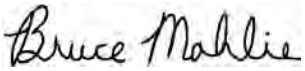
This project is located on SR 16, 8.80 miles west of US 421, in Jasper County, Indiana. This section of SR 16 is a *Principal Arterial*. The existing SR 16 section consists of asphalt with a 12-foot-wide northbound driving lane and a 12-foot-wide southbound driving lane with 1-foot-wide usable shoulders. Guardrail exists at both sides of the existing structure. The existing small structure is a 58-foot length, 4-foot width reinforced concrete pipe. The draft need is due to the deterioration of the structure rated a 4 (poor condition) out of 9 (excellent condition). The draft purpose is to have a structure with a condition rating of at least 7 (good condition) out of 9 (excellent condition). The approximate existing right-of-way is 40 feet each side of the centerline throughout the project.

The proposed project is anticipated to replace the small structure over Spurgeon Ditch. The replacement structure is anticipated to be a 7-foot span by 5-foot rise reinforced concrete box culvert. The structure will have a sump depth of 12 inches below the existing channel flowline. The project requires up to 0.30 acre of permanent right-of-way and up to 0.10 acre of temporary right-of-way, and 1.0 acre of reacquired right-of-way will be acquired for this project. The project will be approximately 600 feet in length. The proposed method of traffic maintenance is a SR 16 road closure with a signed detour. The detour will follow US 231, SR 114, and US 421. Less than 0.5 acre of trees are anticipated to be cleared for this project. The project is anticipated to begin construction in Summer or Fall of 2027.

Land use in the vicinity of the project is primarily agricultural. Corradino, LLC will perform waters and wetlands determinations to identify water resources that may be present. The project is anticipated to qualify for the Rangewide Programmatic Agreement for the Indiana bat and northern long-eared bat by completing the Information for Planning and Consultation (IPaC). Coordination will occur with INDOT Cultural Resources Office (CRO) to evaluate the project area for archaeological and historic resources and for Section 106 compliance. The results of this investigation will be forwarded to the State Historic Preservation Officer (SHPO) for review and concurrence as appropriate.

Should we not receive your response **within thirty (30) calendar days** from the date of this letter, it will be assumed that your agency feels that there will be no adverse effects incurred as a result of the proposed project. However, should you find that an extension to the response time is necessary, a reasonable amount may be granted upon request. If you have any questions regarding this matter, please feel free to contact Bruce Mahlie of Corradino LLC, at 317-744-9852 or bmahlie@corradino.com and or the Project Manager, Shawna DeGraff, of INDOT at sdegraff@infot.in.gov. Thank you in advance for your input.

Sincerely,



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

Attachments:
A. Project Location Maps
B. Site Photos

The following agencies received Early Coordination Letters

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

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

Indiana Geological and Water Survey
611 North Walnut Grove
Bloomington, IN 47405

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

IDEM
Automatic coordination website

IDEM – Groundwater Section
Electronic Submittal

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

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

Indiana Department of Transportation
Environmental Policy Manager
100 N. Senate Ave.
Indianapolis, IN 46204

U.S. Army Corps of Engineers
Detroit District, Regulatory Michiana Branch
2422 Viridian Dr. Suite #200
South Bend, IN 46628

Wellhead Proximity Determinator

Indiana Department of Transportation
LaPorte District
315 Boyd Blvd.,
LaPorte, IN 46350

Field Supervisor
US Fish and Wildlife Service
Northern Indiana Suboffice
P.O. Box 2616
Chesterton, IN 46304

Jasper County Council
115 W Washington St.,
Rensselaer, IN 47978

Jasper County Commissioners
115 W Washington St.,
Rensselaer, IN 47978

Jasper County Planning & Development
115 W. Washington St., Suite 109
Rensselaer, IN 47978

Jasper County Surveyor
2530 N Mckinley Ave.,
Rensselaer, IN 47978

Jasper County EMA
125 S Cullen St.,
Rensselaer, IN 47978

Rensselaer Central Schools Corporation
900 E. Washington Street
Rensselaer, IN 47978

Jasper County Highway Department
2676 W Clark St
Rensselaer, IN 47978

Kankakee River Basin and Yellow River Basin
6100 Southport Road
Portage, IN 46368

THIS IS NOT A PERMIT

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

DNR#: ER-26944

Request Received: October 25, 2024

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

Project:
SR 16 small structure (CV 016-037-20.50) replacement over Spurgeon Ditch with a reinforced concrete box culvert with a sump depth of 12" below the existing channel flowline, 8.80 miles west of US 421; Des #2300980

County/Site Info: Jasper County

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:
Formal approval by the Department of Natural Resources under the regulatory programs administered by the Division of Water is not required for this project.

Natural Heritage Database:
The Natural Heritage Program's data have been checked. Gish Wildlife Area has been documented within .5 mile of the project area.

Fish and 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:

A) Stream Crossing Design
Bridges are preferred over culverts, and three-sided culverts are preferred over box or pipe culverts. Multiple culverts or culverts with multiple openings are not recommended for approval. These types of structures are often problematic for fish and wildlife passage as they tend to accumulate debris and become blocked. If box and pipe culverts are used, the culvert bottoms should be sumped a minimum of 6” (or 20% of the culvert height or diameter, whichever is greater up to a maximum of 2’) below the stream bed elevation. Sumping is not required for bridges or three-sided culverts. Crossings must span the entire channel width (a minimum of 1.2 times the ordinary high-water mark width). Crossings must maintain the natural stream substrate within the structure (natural stream substrate must be replaced in sumped box and pipe culverts up to the existing flowline). Scour protection at the inlet and outlet must not extend above the existing flowline elevation. Stream depth, channel width and water velocities in the crossing structure during low-flow conditions must approximate those in the natural stream channel.

The new/replacement/rehabilitated crossing structure, and any bank stabilization under or around the structure, must not create conditions that are less favorable for wildlife passage when compared to existing conditions. Upgrading wildlife passage for replacement/rehabilitated structures is recommended whenever possible to improve wildlife/vehicle safety. White-tailed deer passage must be incorporated into all new structures where no structure previously existed. Minimum structure dimensions for white-tailed deer passage are 20 feet of width clearance (overall span of the structure) and 8 feet of height clearance measured from the ordinary high-water mark (OHWM). Bank lines must be maintained or restored within structures to allow for wildlife passage above the OHWM. All wildlife passage designs must include a smooth level pathway preferably 3 feet wide but a minimum of 1-2 feet in width composed of natural substrate (soil, sand, gravel, etc.) or compacted aggregate fill over riprap (#2, #53, #73, etc.) tied into existing elevations both upstream and downstream. The width and location of the wildlife pathway is dependent on the wildlife species using the area.

There are several techniques and materials for incorporating wildlife passage into the design of a crossing structure. Coordination with a Regional Environmental Biologist to address wildlife passage issues before submitting a permit application (if required) is encouraged to avoid delays in the permitting process. The following links are good resources to consider in the design of stream crossing structures to maintain fish and wildlife passage:

https://www.fs.usda.gov/ccrc/tool/fishxing-fish-passage-learning-systems
https://www.fs.usda.gov/wildlifecrossings/library/index.php
https://www.fhwa.dot.gov/clas/ctip/wildlife_crossing_structures/
https://www.fhwa.dot.gov/engineering/hydraulics/pubs/11008/hif11008.pdf

B) Riparian Habitat

We recommend a mitigation plan be developed (and submitted with the permit application, if required) for any unavoidable habitat impacts that will occur. The DNR's Habitat Mitigation Guidelines (and plant lists) can be found online at: https://www.in.gov/nrc/files/IB-17.pdf.

Impacts to non-wetland forest of one (1) acre or more in a rural or urban area should be mitigated at a minimum 2:1 ratio based on area of impact. Impacts to non-wetland forest under one (1) acre but at least 0.10 acre in a rural or urban area should be mitigated at a minimum 1:1 ratio based on area of impact. Impacts under 0.10 acre in a rural area typically do not require mitigation or additional plantings beyond seeding and stabilizing disturbed areas, though there are exceptions for high quality habitat sites. Impacts under 0.10 acre in an urban area should be mitigated by replacing each mature tree removed (trees that are 10” diameter-at-breast height (dbh)) with two trees of 3-gallon stock or larger. Seeding and stabilizing disturbed areas is required regardless of the impact amount and location.

The mitigation site should be located in the floodway, downstream of the one (1) square mile drainage area of that stream (or another stream within the 8-digit HUC, preferably as close to the impact site as possible) and adjacent to existing forested riparian habitat.

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 that are not currently mowed and maintained with a mixture of grasses, sedges, and wildflowers native to Northern Indiana and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion; turf-type grasses (including low-endophyte, friendly endophyte, and endophyte free tall fescue but excluding all other varieties of tall fescue) may be used in currently mowed areas only. A native herbaceous seed mixture must include at least 5 species of grasses and sedges and 5 species of wildflowers.
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 construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds.

5. Do not cut any trees suitable for Indiana Bat or Northern Long-eared Bat roosting (3 inches or greater diameter-at-breast height, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30.
6. Use minimum average 6-inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids.
7. Do not use broken concrete as riprap.
8. Underlay the riprap with a bedding layer of well graded aggregate or a geotextile to prevent piping of soil underneath the riprap.
9. Minimize the movement of resuspended bottom sediment from the immediate project area.
10. Do not deposit or allow construction/demolition materials or debris to fall or otherwise enter the waterway. Any incidental fallen material or debris in the waterway must be removed within 24 hours using best management practices, particularly lifting material out of the waterway and not dragging it across the streambed whenever possible.
11. Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the waterbody or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.
12. Seed and protect all disturbed streambanks and slopes not protected by other methods that are 3:1 or steeper with erosion control blankets that are heavy-duty, biodegradable, and net free or that use loose-woven / Leno-woven netting to minimize the entrapment and snaring of small-bodied wildlife such as snakes and turtles (follow manufacturer's recommendations for selection and installation); seed and apply mulch on all other disturbed areas.

Contact Staff:
Our agency appreciates this opportunity to be of service. Please contact me at RVanVoorhis@dnr.IN.gov or (317) 232-8163 if we can be of further assistance.

Rachel Van Voorhis **Date:** November 22, 2024
Rachel Van Voorhis
Environmental Coordinator
Division of Fish and Wildlife

USDA United States Department of Agriculture

Farm Production and Conservation

Natural Resources Conservation Service

Indiana State Office
6013 Lakeside Boulevard
Indianapolis, Indiana 46278
317-295-5800

December 26, 2024

Rachel Pluckebaum
Corradino, LLC
200 South Meridian Street, Suite 330
Indianapolis, Indiana 46225
rpluckebaum@CORRADINO.com

Dear Rachel Pluckebaum:

The proposed project located on SR 16, 8.80 miles west of US 421, in Jasper County, Indiana (Des. No. 2300980), as referred to in your letter received December 6, 2024, 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 or john.allen@usda.gov

Sincerely,

JOHN ALLEN

Digitally signed by JOHN ALLEN
Date: 2024.12.30 10:46:03 -05'00'

JOHN ALLEN
State Soil Scientist

Enclosers

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 **10/25/24**	4. Sheet 1 of **1**
1. Name of Project **ECL Des. No. 2300980 (SR 16, 8.80 Miles West of US 421, Jasper County, IN)**	5. Federal Agency Involved **DOT**	
2. Type of Project **Road**	6. County and State **Jasper County , Indiana**	

PART II *(To be completed by NRCS)*	1. Date Request Received by NRCS **1/2/25**	2. Person Completing Form **WDT**
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 **515**
5. Major Crop(s) **Corn**	6. Farmable Land in Government Jurisdiction **Acres: 359,321 % 96**	7. Amount of Farmland As Defined in FPPA **Acres: 221,911 % 62**
8. Name Of Land Evaluation System Used **LESA**	9. Name of Local Site Assessment System **LESA**	10. Date Land Evaluation Returned by NRCS

PART III *(To be completed by Federal Agency)*	Alternative Corridor For Segment : Corridor 1	Corridor 2	Corridor 3	Corridor 4
A. Total Acres To Be Converted Directly	1.70			
B. Total Acres To Be Converted Indirectly, Or To Receive Services	0.00			
C. Total Acres In Corridor	1.70	0.00	0.00	0.00
PART IV *(To be completed by NRCS) Land Evaluation Information*				
A. Total Acres Prime And Unique Farmland	1.70			
B. Total Acres Statewide And Local Important Farmland	0.00			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	0.0005			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	49.0			
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)*	86			
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	15			
4. Protection Provided By State And Local Government — 20	0			
5. Size of Present Farm Unit Compared To Average — 10	3			
6. Creation Of Nonfarmable Farmland — 25	0			
7. Availablility Of Farm Support Services — 5	0			
8. On-Farm Investments — 20	0			
9. Effects Of Conversion On Farm Support Services — 25	0			
10. Compatibility With Existing Agricultural Use — 10	0			
TOTAL CORRIDOR ASSESSMENT POINTS — 160	43	0	0	0
PART VII *(To be completed by Federal Agency)*				
Relative Value Of Farmland (From Part V) — 100	86			
Total Corridor Assessment (From Part VI above or a local site assessment) — 160	43	0	0	0
TOTAL POINTS *(Total of above 2 lines)* — 260	129	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	**1.70**	**10/25/24**	YES ☐ NO ☐

5. Reason For Selection:

Missing farmland is unaviodable.

Signature of Person Completing this Part: **Rachel Pluckebaum** DATE **10/25/24**

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

Clear Form

Organization and Project Information

Organization Name: Corradino, LLC

First Name: Rachel

Last Name: Pluckebaum

Phone: (317) 518-9890

Email: rpluckebaum@corradino.com

Address Line 1: 200 S. Meridian St. Suite 330

City: Indianapolis

State: IN

Zip: 46225

Customer Id: SR 16, 8.80 Miles West of US 421 over Spurgeon Ditch, Jasper County

Destination Id: Des. No. 2300980

Project Title: SR 16, 8.80 Miles West of US 421 over Spurgeon Ditch, Jasper County, IN

Project Description: The current structure is comprised of a reinforced concrete pipe. There is brush growth within the channel. The north channel drains into another culvert that runs under a land bridge. The county ditched the channel to the north. The structure evaluation rating from the culvert inspection report is a 4 (poor condition) out of 9 (outstanding condition).

Environmental Assessment Report

Geological Hazards:

1. High liquefaction potential

Mineral Resources:

1. Bedrock Resource: High Potential
2. Sand and Gravel Resource: Low Potential

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: 1001 E. 10th St., Bloomington, IN 47405

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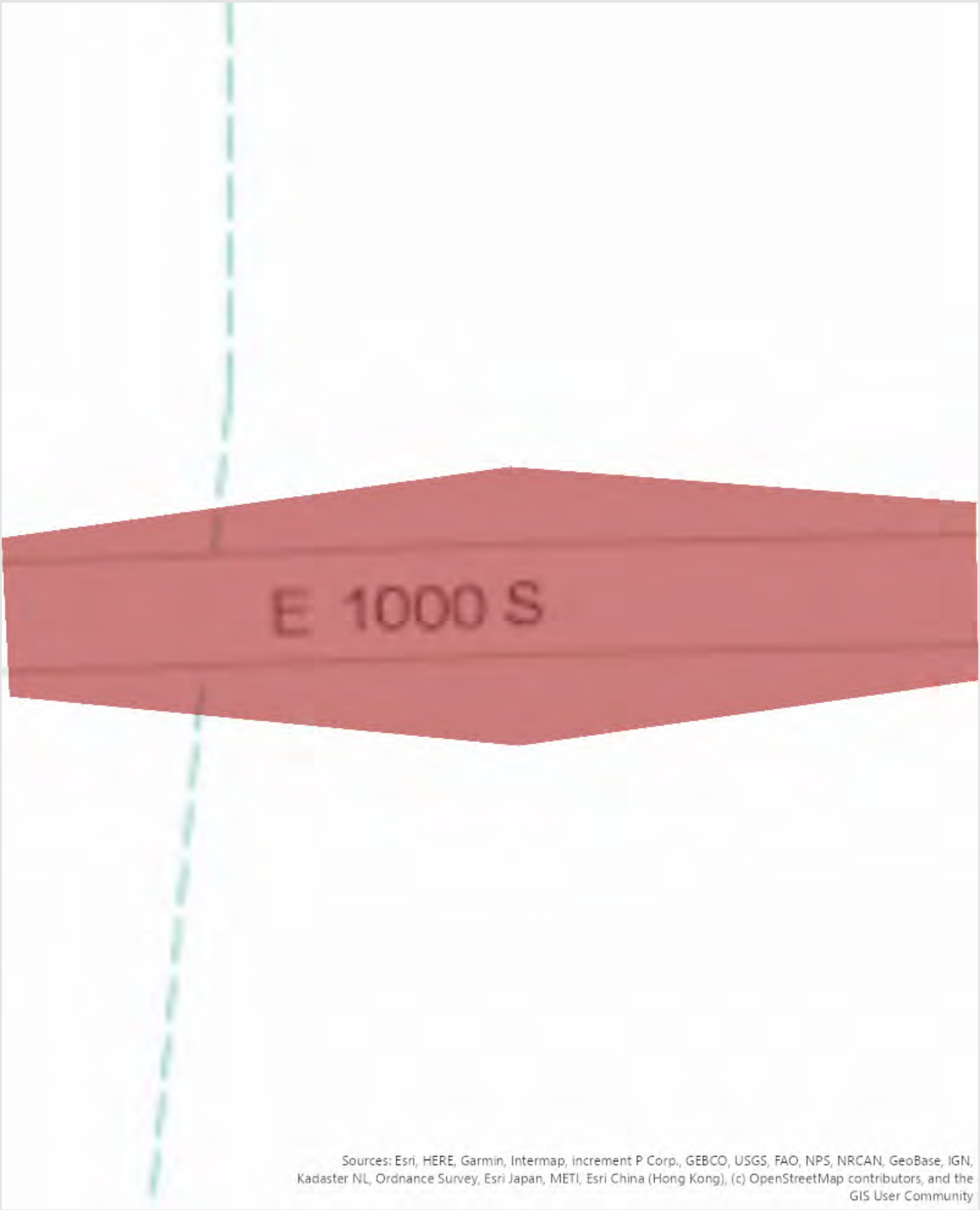
Phone: (812) 855-7428



Metadata:

https://portal.igs.indiana.edu/arcgis/rest/services/Seismic_Earthquake_Liquefaction_Potential/MapServer/info/metadata/

https://portal.igs.indiana.edu/arcgis/rest/services/Bedrock_Geology/MapServer/info/metadata/

https://portal.igs.indiana.edu/arcgis/rest/services/Industrial_Minerals_SandAndGravel_Resources/MapServer/info/metadata/

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

In Reply Refer To: 04/22/2025 15:28:29 UTC
Project Code: 2025-0003530
Project Name: Des. No. 2300980, SR 16, 8.80 Miles West of US 421, Jasper County, Indiana

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

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.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of

Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. **Please include the Consultation Code 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
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

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

Project Code: 2025-0003530

Project Name: Des. No. 2300980, SR 16, 8.80 Miles West of US 421, Jasper County, Indiana

Project Type: Culvert Repair/Replacement/Maintenance

Project Description: This project is located on State Road (SR) 16, 8.80 miles west of US 421 in Jasper County, Indiana. The small structure carries SR 16 over Spurgeon Ditch. The current structure is comprised of a reinforced concrete pipe. The north channel drains into another culvert that runs under a land bridge. Due to the severity of the deterioration of the structure, the proposed scope of this project is a small structure replacement. The existing structure will be removed and replaced with a 54-foot long, 7-foot-wide by 5-foot-rise reinforced concrete box structure. Excavation will be required to remove and replace the structure and place scour protection measures, and the existing guardrail will be removed and replaced. Excavation will occur at approximately 15 feet deep. Suitable habitat is located within 1000 feet of the project area. The project is anticipated to begin construction in Summer or Fall of 2027 and construction is expected to last 4 months. The INDOT LaPorte District responded on October 8, 2024, indicating there is not a presence of federally endangered species within 0.5 mile of the project area. The most recent culvert inspection report dated September 25, 2024 did not find evidence of bat use. No tree clearing is expected for this project. No permanent lighting will be installed, and it is unknown whether temporary lighting will be needed, thus temporary lighting will be assumed.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.867016050000004,-87.04509585886885,14z

Counties: Jasper County, Indiana

ENDANGERED SPECIES ACT SPECIES

There is a total of 5 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.

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

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

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

MAMMALS

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

NAME	STATUS
Whooping Crane *Grus americana* Population: U.S.A. (AL, AR, CO, FL, GA, ID, IL, IN, IA, KY, LA, MI, MN, MS, MO, NC, NM, OH, SC, TN, UT, VA, WI, WV, western half of WY) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/758	Experimental Population, Non-Essential

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened
Western Regal Fritillary *Argynnis idalia occidentalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/12017	Proposed Threatened

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/ activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project

activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

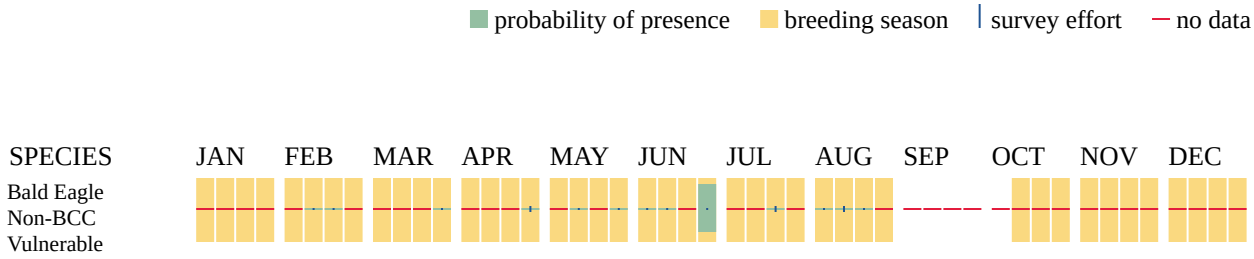
Probability of Presence (▪)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (▪)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service). The incidental take of migratory

birds is the injury or death of birds that results from, but is not the purpose, of an activity. The Service interprets the MBTA to prohibit incidental take.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Aug 31
Henslow's Sparrow *Centronyx henslowii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3941	Breeds May 1 to Aug 31
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Prothonotary Warbler *Protonotaria citrea* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9439	Breeds Apr 1 to Jul 31
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9431	Breeds May 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental

Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

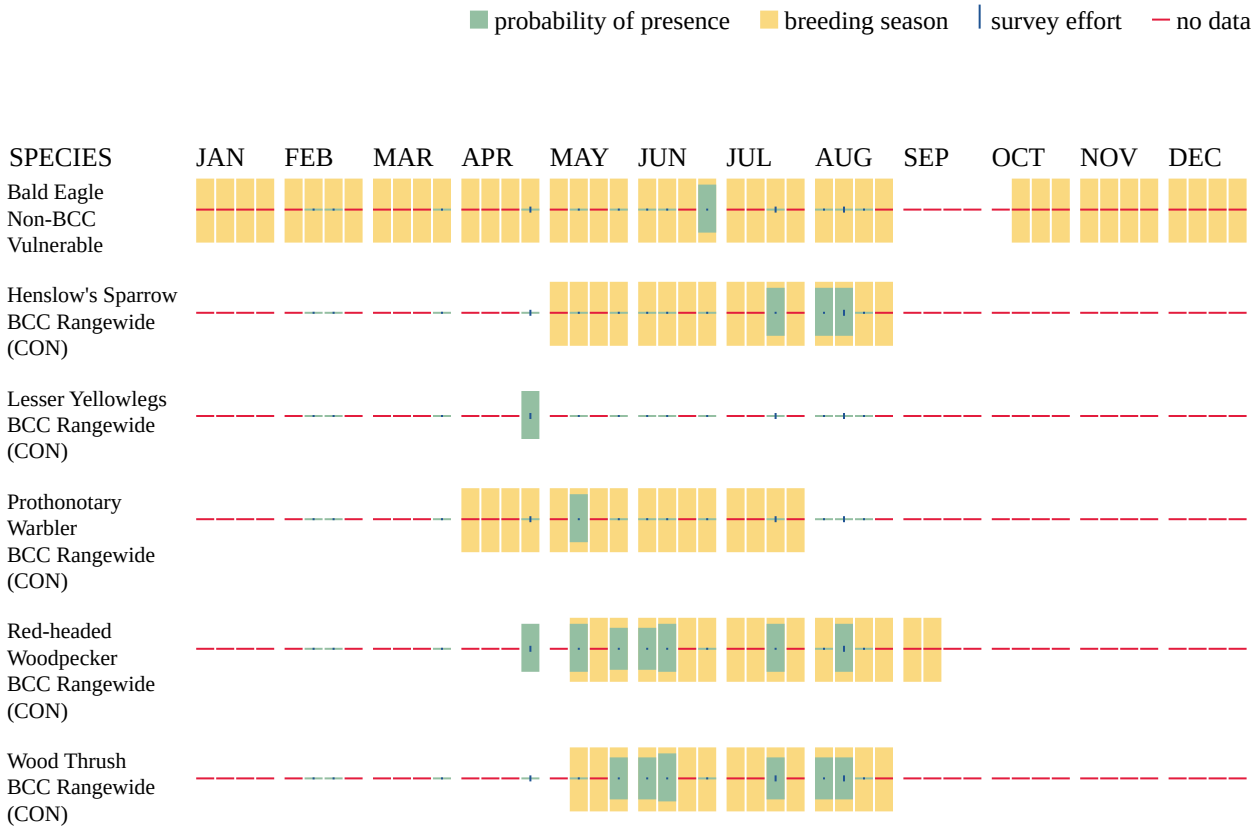
Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management

- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

RIVERINE

- R2UBFx

IPAC USER CONTACT INFORMATION

Agency: Indiana Department of Transportation
Name: Rachel Pluckebaum
Address: 200 South Meridian Street Suite 330
City: Indianapolis
State: IN
Zip: 46225
Email rpluckebaum@corradino.com
Phone: 3174882363

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

In Reply Refer To: 04/22/2025 15:16:33 UTC
Project code: 2025-0003530
Project Name: Des. No. 2300980, SR 16, 8.80 Miles West of US 421, Jasper County, Indiana

Subject: Not Likely to Adversely Affect Concurrence verification letter for the 'Des. No. 2300980, SR 16, 8.80 Miles West of US 421, Jasper County, Indiana' project under the December 13, 2024, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat, Northern Long-eared Bat, and Tricolored Bat.

To whom it may concern:

This letter records the determination of effects to federally listed (or proposed) bat species anticipated to result from the Des. No. 2300980, SR 16, 8.80 Miles West of US 421, Jasper County, Indiana (the Project). This determination is based upon information you entered into the assisted determination key (Dkey) associated with the above referenced Programmatic Biological Opinion/Conference Opinion (PBO/PCO) in the U.S. Fish and Wildlife Service's (Service) Information for Planning and Consultation (IPaC) system on the date listed above to verify that the Project may rely on the concurrence provided in the PBO/PCO to satisfy requirements under section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (16 USC 1536), as amended.

Ensuring Accurate Determinations When Using IPaC:

The Service developed the IPaC system and this Dkey in accordance with the ESA and based on the PBO/PCO. All information submitted by the project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in the Dkey invalidates this letter. Answers to certain questions in the Dkey commit the project proponent to implementation of conservation measures that must be followed for the ESA determinations to remain valid. Carefully review this letter, your ESA requirements are <u>NOT</u> yet complete.

Determinations:

Based on the information you provided (Project Description shown below), you have determined that the Project is within the scope and adheres to the criteria of the PBO/PCO, including the adoption of applicable avoidance and minimization measures. Based on your IPaC submission and the PBO/PCO, the Project is consistent with the following effect determinations:

Species	Listing Status	Determination
Indiana Bat (*Myotis sodalis*)	Endangered	NLAA
Tricolored Bat (*Perimyotis subflavus*)	Proposed Endangered	NLAA

The tricolored bat is proposed for listing as endangered under the ESA, but not yet listed. For actions that may affect a proposed species, agencies cannot consult, but they can confer under the authority of section 7(a)(4) of the ESA. Such conferences can follow the procedures for a consultation and be adopted as such if the proposed species is listed. Should the tricolored bat be listed, agencies must review projects that are not yet complete, or projects with ongoing effects within the tricolored bat range that previously received a no effect or not likely to adversely affect (NLAA) determination from the key to confirm that the determination is still accurate.

The Service has 14 calendar days to notify the lead Federal action agency or designated non-federal representative if we determine that the Project does not meet the criteria for a NLAA determination under the PBO/PCO. **If the Service does <u>not</u> notify the lead Federal action agency or designated non-federal representative within that timeframe, you may proceed with the Project under the terms of the NLAA concurrence provided in the PBO/PCO**. 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/PCO.

If the Project is modified, or new information reveals that it may affect the Indiana bat, northern long-eared bat, or tricolored bat in a manner or to an extent not considered in the PBO/PCO, further review to conclude the requirements of ESA section 7(a)(2) may be required.

For Proposed Actions that include bridge/culvert or structure removal, replacement, and/or maintenance activities:

If your initial bridge, culvert, or structure assessment failed to detect Indiana bat, northern long-eared bat, or tricolored bat use or occupancy, yet bats are later detected prior to, or during construction, promptly notify the local Service Field Office within 2 working days of the discovery. In addition, please document whether incidental take occurred, and if so, the type (i.e. kill or harm) and amount (i.e. number of individuals) and submit documentation to the local Service Field Office within 5 working days from the completion of the bridge, culvert, or structure construction (use Appendix E - Post Assessment Discovery of Bats at Bridge/Culvert or Structure Form in the User's Guide). In these instances, potential incidental take of Indiana bats, northern long-eared bats, or tricolored bats may be exempted provided that the take is reported to

the Service. In these instances, potential incidental take of Indiana bats, northern long-eared bats, or tricolored bats may be exempted provided that the take is reported to the Service.

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

The following species may occur in your project area and **are not** covered by this determination:

- Monarch Butterfly *Danaus plexippus* Proposed Threatened
- Western Regal Fritillary *Argynnis idalia occidentalis* Proposed Threatened
- Whooping Crane *Grus americana* Experimental Population, Non-Essential

PROJECT DESCRIPTION

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

NAME

Des. No. 2300980, SR 16, 8.80 Miles West of US 421, Jasper County, Indiana

DESCRIPTION

This project is located on State Road (SR) 16, 8.80 miles west of US 421 in Jasper County, Indiana. The small structure carries SR 16 over Spurgeon Ditch. The current structure is comprised of a reinforced concrete pipe. The north channel drains into another culvert that runs under a land bridge. Due to the severity of the deterioration of the structure, the proposed scope of this project is a small structure replacement. The existing structure will be removed and replaced with a 54-foot long, 7-foot-wide by 5-foot-rise reinforced concrete box structure. Excavation will be required to remove and replace the structure and place scour protection measures, and the existing guardrail will be removed and replaced. Excavation will occur at approximately 15 feet deep. Suitable habitat is located within 1000 feet of the project area. The project is anticipated to begin construction in Summer or Fall of 2027 and construction is expected to last 4 months. The INDOT LaPorte District responded on October 8, 2024, indicating there is not a presence of federally endangered species within 0.5 mile of the project area. The most recent culvert inspection report dated September 25, 2024 did not find evidence of bat use. No tree clearing is expected for this project. No permanent lighting will be installed, and it is unknown whether temporary lighting will be needed, thus temporary lighting will be assumed.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.867016050000004,-87.04509585886885,14z

DETERMINATION KEY RESULT

Based on your answers provided, this project(s) may affect, but is not likely to adversely affect the Indiana bat, northern long-eared bat or tricolored 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 Programmatic Biological Opinion/Conference Opinion for Transportation Projects in the Range of the Indiana bat, northern long-eared bat, and tricolored bat, dated December 13, 2024.

QUALIFICATION INTERVIEW

1. Which Federal Agency is the lead federal agency the action?

   A) Federal Highway Administration (FHWA)

2. Does the Action Area intersect the species list area of the Indiana bat?

   Automatically answered
   Yes

3. Does the Action Area intersect the species list area of the tricolored Bat (TCB)?

   Automatically answered
   Yes

4. Is the project within 0.5 miles radius of an entrance/opening to any known Indiana bat hibernaculum?

   No

5. Does your project's activities include raising the road profile above the tree canopy in documented habitat for the Indiana bat, NLEB, or TCB?

   Note: For the definition of documented habitat, refer to Appendix A: https://www.fws.gov/media/users-guide-range-wide-programmatic-consultation-indiana-bat-and-northern-long-eared-bat

   No

6. Is your project located within a karst area?

   No

7. Will the project include bridge, culvert, or structure removal, replacement, and/or alteration activities?

   Note: For definitions of bridge, culvert, and structure, refer to Appendix A: https://www.fws.gov/media/users-guide-range-wide-programmatic-consultation-indiana-bat-and-northern-long-eared-bat.

   Yes

8. Do your project’s activities involve tree removal/trimming, temporary lighting, new/additional permanent lighting, ground disturbance, percussives that involves noise/vibration above existing background levels, vibrations, or slash pile burning?

   Yes

9. Is there suitable summer habitat for the Indiana bat, NLEB, or TCB within the project action area?

   Note: See the Service's summer survey guidance for current definitions of suitable habitat [https://www.fws.gov/midwest/endangered/mammals/inba/inbasummersurveyguidance.html].

   Yes

10. Have P/A surveys for the Indiana bat, NLEB, or TCB been conducted within the suitable summer habitat located within your project action area?

    Note: See the Service's survey guidance https://www.fws.gov/midwest/endangered/mammals/inba/inbasummersurveyguidance.html

    No

11. Will the project involve the removal or trimming of trees within suitable habitat for the Indiana bat, NLEB, or TCB?

    No

12. Does your project include activities involving the temporary or permanent exclusion of Indiana bats, NLEBs, or TCBs from a bridge/culvert or structure?

    Note: exclusion is conducted to deny bats' entry or reentry into a bridge/culvert or structure. To be effective and to avoid harming bats, it should be done according to established standards.

    No

13. Does your project involve the use of temporary lighting within Indiana bat, NLEB, or TCB suitable habitat?

    Note: For the definition of lighting, refer to Appendix A: https://www.fws.gov/media/users-guide-range-wide-programmatic-consultation-indiana-bat-and-northern-long-eared-bat

    Yes

14. Will the use of temporary lighting be conducted during the Indiana bat, NLEB, or TCB active season?

    Yes

15. Will temporary lighting be directed away from Indiana bat, NLEB, or TCB suitable habitat)?

    Yes

16. Will the project substantially increase baseline light conditions via the use of permanent lighting (replacement or new/additional) in suitable habitat.

    No

17. Will your project include percussive activities?

    Note: Refer to Stressor #2 Noise/Vibration on page 109 of the PBO/PCO.

    No

18. Will the project include **bridge** removal, replacement, and/or alteration activities?

    No

19. Does the project include **culvert** removal, replacement, and/or alteration activities?

    Yes

20. Does the culvert equal or exceed 23 feet (7.0 meters) in length?

    Yes

21. Are the interior dimensions of the culvert less than 3 ft. in diameter/height?

    No

22. Has a Culvert Bat Assessment been conducted within the last 24 months to determine if the culvert is being used by the Indiana bat, NLEB, or TCB? If yes, upload assessment.

    Note: Refer to the Service's current survey guidance for acceptable assessment practices and validity timeframe of bridge/culvert and structure bat assessments: https://www.fws.gov/library/collections/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    Yes

    SUBMITTED DOCUMENTS

    - *Structure Bat Assessment Form 2300980.pdf https://ipac.ecosphere.fws.gov/project/VQPT227WKBH4JHNIZ6RDK54LAU/projectDocuments/160980397*
    - *CV 016-037-20.50 - Culvert Inspection Report_2024-03-26.pdf https://ipac.ecosphere.fws.gov/project/VQPT227WKBH4JHNIZ6RDK54LAU/projectDocuments/152402504*

23. Please select one of the following results of the Culvert Bat Assessment:

    c) Did not detect any signs of Indiana bats, NLEBs, or TCBs roosting in/under the culvert (bats, guano, etc.)

24. Does the project include **structure** removal, replacement, and/or alteration activities?

    No

25. Does the Action Area intersect the species list area of the Indiana bat?

    Automatically answered

    Yes

26. Does the Action Area intersect the species list area of the tricolored Bat (TCB)?

    Automatically answered

    Yes

PROJECT QUESTIONNAIRE

1. Have you made a No Effect determinations for all other species included on the FWS IPaC generated species list?

   No

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

   No

3. Please enter the date of the culvert assessment.

   September 25, 2024

4. Please verify only a small number of Indiana bats, NLEBs, or TCBs (< 5 bats) occur per culvert.

   Yes

AVOIDANCE AND MINIMIZATION MEASURES (AMMS)

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

GAMM1

Ensure all operators, employees, and contractors working in areas of Indiana bat, NLEB, or TCB suitable habitat are aware of all Transportation Agency environmental commitments, including all applicable AMMs.

LAMM1

Direct temporary lighting away from suitable habitat during the active season

DETERMINATION KEY DESCRIPTION: FHWA, FRA, FTA PROGRAMMATIC CONSULTATION FOR TRANSPORTATION PROJECTS AFFECTING IBAT, NLEB, OR TCB

This key was last updated in IPaC on April 21, 2025. 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) and may affect the federally listed endangered Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), and/or federally proposed endangered tricolored bat (*Perimyotis subflavus*).

This decision key should only be used to verify project applicability with the Service's Programmatic Biological Opinion/Conference Opinion for Transportation Projects in the Range of the Indiana bat, northern long-eared bat, and tricolored bat, dated December 13, 2024. The programmatic consultation limited transportation activities that may affect the covered bat species and addresses situations that are both likely and not likely to adversely affect the covered bat species. This decision key will assist in identifying the effect of a specific project/activity and the applicability of the programmatic consultation. The programmatic consultation is not intended to cover all types of transportation actions. Activities outside the scope of the programmatic consultation, or that may affect ESA-listed species other than the Indiana bat, northern long-eared bat, or tricolored bat, or their designated critical habitat, may require additional ESA Section 7 consultation.

IPAC USER CONTACT INFORMATION

Agency: Indiana Department of Transportation
Name: Cassie Wahl
Address: 315 East Boyd Blvd
City: LaPorte
State: IN
Zip: 46350
Email cwahl@indot.in.gov
Phone: 2193257509

Rachel Pluckebaum Frasier

From: Allerding, Paul H CIV USARMY CELRE (USA) <Paul.H.Allerding@usace.army.mil>
Sent: Tuesday, October 29, 2024 2:52 PM
To: Rachel Pluckebaum
Cc: Uhlarik, Charles A CIV USARMY CELRE (USA)
Subject: RE: ECL Des. No. 2300980 (SR 16, 8.80 Miles West of US 421, Jasper County, IN)
Attachments: Notice of Revised Corps Civil Works Boundaries--Indiana.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Rachel,

The project for a small structure replacement on SR16 over Spurgeon Ditch in Jasper County falls within our Chicago District area of responsibility for civil works because of a change in the district boundary lines in 2020 (attached notice). I forwarded your request to Alex Hoxsie, Chief, Environmental and Cultural Resources Section, and David Bucaro, Chief, Planning Branch, at Chicago District for their consideration under our Civil Works Program.

The project is within our Detroit District for regulatory considerations. This will be our only comment:

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

Let me know if you would like this response as a formal letter on our Detroit District Corps letterhead.

Thanks, Paul

Paul Allerding (313-226-7590)
Planning Branch, Environmental Analysis Section
U.S. Army Corps of Engineers, Detroit District
477 Michigan Ave., Detroit MI 48226-2550
www.lrd.usace.army.mil

From: Rachel Pluckebaum <rpluckebaum@CORRADINO.com>
Sent: Friday, October 25, 2024 10:23 AM
To: Allerding, Paul H CIV USARMY CELRE (USA) <Paul.H.Allerding@usace.army.mil>
Cc: Uhlarik, Charles A CIV USARMY CELRE (USA) <Charles.A.Uhlarik@usace.army.mil>
Subject: [Non-DoD Source] ECL Des. No. 2300980 (SR 16, 8.80 Miles West of US 421, Jasper County, IN)

Outlook

RE: Des No 2300980 SR 16, 8.80 Miles W of US 421, Jasper Co

From Tripp, William - FPAC-NRCS, IN <william.tripp@usda.gov>
Date Mon 3/17/2025 7:35 AM
To Rachel Pluckebaum Frasier <rpluckebaum@CORRADINO.com>
Cc Allen, John - FPAC-NRCS, IN <john.allen@usda.gov>; Sims, Tracy - FPAC-NRCS, IN <Tracy.Sims@usda.gov>; Kirk Roth <kroth@CORRADINO.com>

Hello, Rachel

I talked it over with my supervisor. Since you already have a signed CPA-106 and this is a somewhat linear feature you are good to go. It is the same scoring system. Let me know if you would prefer something else. Thanks,

Will

William Tripp
Indiana Assistant State Soil Scientist
USDA/NRCS | State Soils
Indiana State Office

U.S. DEPARTMENT OF AGRICULTURE
USDA NRCS
6013 Lakeside Blvd., Indianapolis, IN, 46278
Office Number
p: (317) 295-5793 | c: (463) 231-6423

From: Rachel Pluckebaum Frasier <rpluckebaum@CORRADINO.com>
Sent: Friday, March 14, 2025 3:44 PM
To: Tripp, William - FPAC-NRCS, IN <william.tripp@usda.gov>
Cc: Allen, John - FPAC-NRCS, IN <john.allen@usda.gov>; Sims, Tracy - FPAC-NRCS, IN <Tracy.Sims@usda.gov>; Kirk Roth <kroth@CORRADINO.com>
Subject: RE: Des No 2300980 SR 16, 8.80 Miles W of US 421, Jasper Co

Hi William,

I saw you filled out an NRCS-CPA-106 form instead of the 1006 form we sent. This is a small structure project. Would that be a 1006 form or 106? I've attached the 1006 form in case that's the one that needs to be filled out. I just want to ensure we have the correct form saved!😊

Thanks,

Rachel Pluckebaum Frasier

From: Sims, Tracy - FPAC-NRCS, IN <Tracy.Sims@usda.gov>
Sent: Thursday, January 2, 2025 3:10 PM
To: Rachel Pluckebaum <rpluckebaum@CORRADINO.com>
Cc: Allen, John - FPAC-NRCS, IN <john.allen@usda.gov>; Tripp, William - FPAC-NRCS, IN <william.tripp@usda.gov>
Subject: Des No 2300980 SR 16, 8.80 Miles W of US 421, Jasper Co

APPENDIX D

Section 106 of the NHPA

Des. No. 2300980

SECTION 1

Submittal of this form is only required for projects where Category B applies. Projects qualifying under Category A do not require submittal of this form. SECTION 2 (for Conditions of Category B-1 for curb/sidewalk) or SECTION 3 (for Conditions of Category B-9 for drainage structures) may be required as determined by INDOT-Cultural Resources Office (INDOT-CRO) review. INDOT-CRO will notify applicant if the Minor Projects PA does not apply.

Part I: Project Information-Completed by Applicant (Consultant/PM/Project Sponsor/INDOT District Staff)*

**A qualified professional historian (QP) is not required to complete Part I. INDOT-CRO staff will be responsible for completion of Part II.*

Original Submission Date: November 4, 2024 **Amended Submission Date*:**

Consult with INDOT-CRO to determine whether an amendment is required. For revisions/updates to original form, please detail in applicable sections below.* ***Please use red font to distinguish the revisions/updates.*

Submitted By (Provide Name and Firm/Organization): Heather Dewey, SJCA Inc., 1028 Virginia Ave. Suite 201, Indianapolis, IN 46203; 317-566-0629 hdewey@sjcainc.com

Project Designation Number: 2300980

Route Number: State Road (SR) 16, 5.74 miles east of US 231

Feature crossed (if applicable): Spurgeon Ditch

City/Township: Rensselaer **County:** Jasper

Project Description: The Indiana Department of Transportation (INDOT), with funding from the Federal Highway Administration (FHWA), proposes to proceed with the small structure replacement project on SR 16 over Spurgeon Ditch, 5.74 miles east of US 231 in Jasper County, Indiana. Within the project area, SR 16 is a two-lane roadway with two 11-foot (ft.) wide lanes and 1 ft. wide paved shoulders. The existing structure (CV 016-037-20.50) is a reinforced concrete pipe with a grooved-end projecting inlet and an inside diameter of 4 ft. There is riprap at the inlet. The structure outlets to a smooth metal culvert.

The purpose of this project is to replace the existing structure with one that has an overall Elements rating of 8 (on a scale of 1-9). Rehabilitation was originally considered but it was determined that replacement would be more cost effective and include greater hydraulic improvements. The need for this project is due to the deterioration of the existing structure, which has a current rating of 4 (Poor), and frequent flooding within the drainage ditch caused by hydraulic inefficiency.

The proposed project alternative would involve a full small structure replacement of CV 016-037-20.50 with a reinforced concrete box with a span of 7 ft. and a rise of 5 ft. (**B9**). The structure will have a sump depth of 12 inches (in.) below the existing channel flowline. The alternative also includes the installation of revetment riprap at the inlet and outlet aprons on either side of the structure (**B10**). The existing guardrail along SR 16 will be replaced in kind, and the pavement removed during the structure installation will be replaced as well.

If the project includes any curb, curb ramp, or sidewalk work, please specify the location(s) of such work: N/A

For bridge or small structure projects, please list feature crossed, structure number, NBI number, and structure type: CV 016-037-20.50 over Spurgeon Ditch, NBI No. 93004507, reinforced concrete pipe

For bridge projects, is the bridge included in INDOT's Historic Bridge Inventory (https://www.in.gov/indot/2531.htm)?

☐ **Yes** ☐ **No**

If yes, did the inventory determine the bridge eligible for or listed in the National Register of Historic Places? Please provide page # of entry in Historic Bridge Inventory.

☐ **Yes** ☐ **No**

Inventory Page #_____

Will there be right-of-way acquisition as part of this project?

☒ **Yes** ☐ **No**

If yes was checked above, please check all that apply:

☒ **Permanent** ☒ **Temporary** ☒ **Reacquisition**

If applicable, identify right-of-way acquisition locations in text below and in attached mapping. Please specify how much (both temporary and permanent) and indicate what activities are included in the proposed right-of-way: 0.49 acre of new permanent; 0.25 acre of temporary; 0.25 acre of reacquired (which is marked as permanent on the mapping). The temporary ROW is for construction and access while the permanent and reacquired ROW is for the culvert placement and riprap installation.

Is there *any* potential for additional temporary right-of-way to be needed later for purposes such as access, staging, etc.?

☐ **Yes** ☒ **No**

Archaeology (check one):

☐ **All proposed activities are presumed to occur in previously disturbed soils.***
**INDOT-CRO will notify you if project area includes undisturbed soils and requires an archaeological reconnaissance.*

☒ **Project takes place in undisturbed soils and the archaeology report is included with the submission.***
**If an archaeology report is required, the Minor Projects PA Form will not be finalized until the report is reviewed and approved by INDOT-CRO. For INDOT-sponsored projects, INDOT-CRO may be able to complete the archaeological investigation. If you would like to request that INDOT-CRO complete an archaeological investigation, please contact the INDOT-CRO Archaeology Team Lead. See CRM Pt. 1 Ch. 3 for current contact information.*

Please specify all applicable categories and condition(s) (INDOT will highlight applicable conditions in yellow):

B-9. Installation, replacement, repair, lining, or extension of culverts and other drainage structures under the conditions listed below ***[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)

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

i. Work does not involve installation of a new culvert and other drainage structure, and there are no impacts to unusual features, including but not limited to historic brick or stone sidewalks, curbs or curb ramps, stepped or elevated sidewalks and retaining walls, under one of the following conditions *(Condition a, Condition b, or Condition c must be satisfied):*

   a. The structure exhibits no wood, stone, or brick structures or parts therein; *OR*
   b. The structure exhibits only modern wood, stone, or brick structures or parts therein; *OR*
   c. The structure exhibits non-modern wood, stone, or brick structures or parts therein and the following conditions are met *(BOTH Condition 1 AND Condition 2 must be met):*
      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. The structure lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. Under this condition, a qualified professional (meeting the Secretary of Interior's Professional Qualification standards [48 Federal Register (FR) 44716]) must prepare an analysis and justification that the structure lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. This documentation must be reviewed and approved by INDOT Cultural Resources Office.

ii. Work involves the installation of a new culvert and other drainage structures AND/OR there may be impacts to unusual features, including historic brick or stone sidewalks, curbs or curb ramps, stepped or elevated sidewalks and retaining walls, under the following conditions *(BOTH Condition a and Condition b must be satisfied):*

   a. Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource; *AND*
   b. The subject structure exhibits one of the characteristics described below *(Condition 1, Condition 2 or Condition 3 must be satisfied).*
      i. The structure exhibits no wood, stone, or brick structures or parts therein; OR
      ii. The structure exhibits only modern wood, stone, or brick structures or parts therein; OR

iii. The structure exhibits non-modern wood, stone, or brick structures or parts therein and the following conditions are met (BOTH Condition 1 AND Condition 2 must be met): Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource; AND The structure lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. Under this condition, a qualified professional (meeting the Secretary of Interior's Professional Qualification standards [48 Federal Register (FR) 44716]) must prepare an analysis and justification that the structure lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. This documentation must be reviewed and approved by INDOT Cultural Resources Office.

B-10. Slide corrections, slope repairs, and other erosion control measures, in undisturbed soils under the conditions listed below ***[BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied]:***

Condition A (Archaeological Resources)
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 reports 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)
Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource.

Check ☐ if SECTION 2: Minor Projects PA Category B-1, Condition B-ii Submission is included.

Check ☐ if SECTION 3: Minor Projects PA Category B-9, Condition B-i-c-2 or B-ii-b-3 Submission is included.

Part II: Completed by INDOT-CRO

Information reviewed (please check all that apply):

General project location map ☒ USGS map ☒ Aerial photographs ☒ Soil survey data ☒

General project area photos ☒ Archaeology Reports ☒ Historic Property Reports ☐

Indiana Historic Buildings, Bridges, and Cemeteries Map/Interim Report ☒

Bridge inspection information/iTAMS ☒ Historic Bridge Inventory Database ☐

SHAARD ☒ SHAARD GIS ☒ Streetview Imagery ☒ County GIS Data/Property Cards ☐

Other (please specify):

Smith, Galen K.
2025 A Phase Ia Archaeological Reconnaissance Survey for the Proposed State Road 16 Small Structure Replacement Project over Spurgeon Ditch, 5.74 miles East of United States Highway 231, Milroy Township, Jasper County, Indiana (INDOT Des. No. 2300980). Report on file, Indiana Department of Transportation, Cultural Resources Office, Indianapolis, IN.

Are there any commitments associated with this project? If yes, please explain and include in the Additional Comments Section below. Yes ☐ No ☒

Does the project result in a de minimis impact to a Section 4(f) protected historic resource? If yes, please explain in the Additional Comments Section below. Yes ☐ No ☒

Additional Comments:

Above-ground Resources

An INDOT-CRO historian who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61 performed a desktop review of the surrounding area. Based on a review of online street-view imagery and aerial photography, the area immediately adjacent to the subject structure consists of agricultural fields. A highly altered early twentieth-century house is located approximately 0.08 mile east of the project location on the south side of SR 16. Mature deciduous trees present on the west side of the house--as well as agricultural fields in cultivation-- help to limit views toward of the project area. No unusual features are present that may be impacted by the project.

According to the INDOT iTAMS database, the subject structure (CV 016-037-20.50) is a concrete pipe culvert. The construction date of the culvert is unknown. Examination of iTAMS inspection reports and photos confirms that the structure exhibits no wood, stone, or brick structures or parts therein. In addition, there is no evidence to suggest that it possesses historical or engineering significance.

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

Archaeological Resources

An INDOT-CRO archaeologist who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61 reviewed the Phase Ia archaeological reconnaissance submitted by SJCA, Inc. on behalf of Corradino, LLC (Smith 2025).

A 2.5-acre survey area was examined through a combination of pedestrian survey and visual inspection of disturbed areas. The area encompassing the intersection of SR 16 has been previously disturbed from the construction of the state road, existing culvert with associated drainage, road grade and fill, embankment, landscaping, gravel pull-offs, and buried utilities. Pedestrian survey in 5 m intervals was utilized on the north and south sides of SR 16 where the ground surface visibility was 0-75 percent in agricultural fields. No archaeological sites were documented as a result of the survey and no further investigation is recommended (Smith 2025).

Therefore, there are no archaeological concerns as long as the project scope and footprint do not change.

Accidental Discovery: If any archaeological artifacts or human remains are uncovered during construction, demolition, or earth moving activities, construction within 100 feet of the discovery will be stopped, and INDOT-CRO and the Indiana Department of Natural Resources-Division of Historic Preservation and Archaeology (IDNR-DHPA) will be notified immediately.

INDOT-CRO staff reviewer(s): Susan Branigin & KayLee Blum

INDOT Approval Date: 1/28/2025

Amendment Approval Date (if applicable):

****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.*

Please attach the following to this form:

- **General Location Map.** This map should allow the INDOT-CRO reviewer to quickly locate the project.
- **Aerial photography map(s) of project area.** This map must include project limits. It may also include SHAARD data, but SHAARD data is not required.
- **Map depicting potential temporary and/or permanent right-of-way acquisitions.**
- **Project plans, if available.**
- **If bridge or small structure project, please attach photographs of bridge or small structure.** Photographs can be found in inspection reports located in INDOT's Bridge Inspection Application System (BIAS), as well as other project documents, such as engineering assessments or mini-scopes.

In the email submission to INDOT-CRO, please also include:

- **A GIS polygon shapefile or KMZ file of the project area** (shapefiles are preferred). Shapefiles should depict the project area, including all existing and proposed right-of-way and construction limits, and should use the "NAD_1983_UTM" projected coordinate system. In addition, these files should contain the following *text* attribute field: DES_NO. The project designation number should be entered in this field.
- **If the project takes place in undisturbed soils, attach the results of the archaeological investigation.**

January 28, 2025

Division of Historic Preservation and Archaeology
402 West Washington Street
Room W274
Indianapolis, Indiana, 46204
Attn: Amy Johnson, State Archaeologist

RE: A Phase Ia Archaeological Reconnaissance for the Proposed State Road 16 Small Structure Replacement Project over Spurgeon Ditch, 5.74 miles East of United States Highway 231, Milroy Township, Jasper County, Indiana (INDOT Des. No. 2300980).

Dear Ms. Johnson,

The archaeological report (Smith 2025), which details the findings of the Phase Ia Archaeological Reconnaissance for the proposed State Road 16 Small Structure Replacement Project over Spurgeon Ditch, 5.74 miles East of United States Highway 231, Milroy Township, Jasper County, Indiana (INDOT Des. No. 2300980) has been reviewed and accepted by the Cultural Resources Office of INDOT. Since the project qualifies as part of the Minor Projects Programmatic Agreement, under Categories B-9 and B-10, no formal review of the report is required under Section 106 of the National Historic Preservation Act. The provided documents submitted through SHAARD under AR-37-00141 are only for inclusion in DHPA's files.

If you have any questions or comments, please call me at 317-566-0629 or email me at ksmith@sjcainc.com

Sincerely,

Galen K. Smith

Galen K. Smith, M.A., DHPA QP

List sites.

Describe landforms.

Number of shovel probes excavated	Number of cores / auger probes
0	0

Describe disturbances. Attach photographs documenting disturbances.
See Fieldwork Results Section

Actual area surveyed *(hectares)*	Actual area surveyed *(acres)*
1.0	2.5

Explain results of fieldwork.

The south side of SR 16 consisted of two agricultural fields planted in shin high soybeans (Photographs 1-2). The north half of the survey area was a planted cornfield (northeast quarter; Photograph 3) and a harvested soybean field (northwest quarter; Photograph 4-5). Survey conditions were adequate with the surface visibility around 50%, hampered only by standing crops and crop debris. The main portion of the southern half of the survey area was investigated by four pedestrian survey transects extending 15 meters into the field from the field edge. The northern half was covered by two transects within the main body of the survey area. Four additional transects were extending north to south to coverage additional workspace along the Spurgeon Ditch channel.

A visual inspection and walkover was conducted within visibly disturbed and waterlogged areas. Visible disturbance was documented within the existing SR 16 right-of-way (i.e., road shoulder, ditch, and buried cable utility corridor; Photograph 6). Additional disturbances were noted within a natural gas pipeline that crossed the western perimeter of the survey area and several grass covered gravel farm roads used to access the fields (Photographs 7-8). An additional farm road parralling SR 16 on the northside showed substantial disturbance from farm equipment access and use as a livestock thouroghfare throughout the year. The heavy livestock and equipment traffic, coupled with the poorly drained conditions of the soils at this location has resulted in extensive surface disturbance and topsoil erosion (Photographs 9-10). Wet conditions in the survey area were confined to the Spurgeon Ditch channel and a large drainage ditch in the northeast quarter (Photographs 11-12).

RECOMMENDATIONS

Records check *(Check all that apply)*

- ☐ No archaeological investigation is recommended before the project is allowed to proceed because the records check has determined that the project area does not have the potential to contain archaeological resources.
- ☐ A Phase 1a archaeological reconnaissance is recommended.
- ☒ Based upon the records check results, a Phase 1a archaeological reconnaissance was recommended and has been conducted.
- ☐ A cemetery development plan may be required under Indiana Code 14-21-1-26.5 because project ground disturbance will be within 100 feet of a cemetery.

Phase 1a archaeological reconnaissance *(Check all that apply)*

- ☒ It is recommended that the project be allowed to proceed as planned because the Phase 1a archaeological reconnaissance has located no archaeological sites within the project area and/or previously recorded sites that were investigated warrant no additional investigation.
- ☐ It is recommended that Phase 1c archaeological subsurface reconnaissance be conducted before the project is allowed to proceed. The Phase 1a archaeological reconnaissance has determined that the project area includes landforms which have the potential to contain buried archaeological deposits.

Other recommendations / commitments

Pursuant to IC-14-21-1, if any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and 29) requires that the discovery must be reported to the Department of Natural Resources within two (2) business days. In that event, please call (317) 232-1646.

REQUIRED ATTACHMENTS

- ☒ Figure showing project location within Indiana
- ☒ USGS topographic map showing the project area *(1:24,000 scale)*
- ☒ Aerial photograph showing the project area, land use and survey methods
- ☒ Photographs of the project area, including, if applicable, photographs documenting disturbances
- ☐ Project plans *(if available)*

Appendix E

Red Flag and Hazardous Materials

Des. No. 2300980

INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758-ES
Indianapolis, Indiana 46204

PHONE: (855) 463-6848
(855) INDOT4U

Eric Holcomb , Governor
Michael Smith, Commissioner

Date: October 22, 2024

To: Site Assessment & Management (SAM)
Environmental Policy Office - Environmental Services Division (ESD)
Indiana Department of Transportation (INDOT)
100 N Senate Avenue, Room N758-ES
Indianapolis, IN 46204

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

Re: RED FLAG INVESTIGATION
DES #2300980, State Project
Small Structure Replacement
SR 16, 8.80 Miles West of US 421
Jasper County, Indiana

PROJECT DETAILS

This project is located on State Road (SR) 16, 8.80 miles west of United States Highway (US) 421 in Jasper County, Indiana. The structure carries SR 16 over Spurgeon Ditch. The current structure is comprised of a reinforced concrete pipe. There is brush growth within the channel. The north channel drains into another culvert that runs under a land bridge. The county ditched the channel to the north. The structure evaluation rating from the culvert inspection is a 4 (poor condition) out of 9 (excellent condition). Due to the severity of the deterioration of the structure, the proposed scope of this project is a small structure replacement. The existing guardrail will be removed and replaced. Excavation will occur at approximately 15 feet deep. Excavation will be required to remove and replace the structure and place scour protection measures.

Bridge Work Included in Project: Yes ☐ No ☒ Structure #(s) _____

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).

Culvert Work Included in Project: Yes ☒ No ☐ Structure #(s) CV 016-037-20.50

Proposed right-of-way: Temporary ☒ # Acres 0.10 Permanent ☒ # Acres 1.05, Not Applicable ☐

Type and proposed depth of excavation: Excavation will occur at approximately 15 feet deep. Excavation will be required at the project site to remove, and replace the existing structure and to place scour protection measures.
Maintenance of traffic (MOT): SR 16 will be closed with a signed detour. The detour will follow US 231, SR 114, and US 421.
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	**1**
Cemeteries	**N/A**	Railroads	**N/A**
Hospitals	**N/A**	Trails	**N/A**
Schools	**N/A**	Managed Lands	1

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

Explanation:
Pipelines: One (1) pipeline segment is located within the 0.5 mile search radius. Amoco Oil Co., is located 0.05 mile west of the project area. No impact is expected.

Managed Lands: One (1) managed land is located within the 0.5 mile search radius. Gish Wildlife Area is 0.27 mile southwest of the project area. No impact is expected.

WATER RESOURCES TABLE AND SUMMARY

Water Resources
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:

Karst Springs	**N/A**	NWI - Wetlands	**10**
Canal Structures – Historic	**N/A**	Lakes	**N/A**
NPS NRI Listed	**N/A**	Floodplain - DFIRM	**N/A**
IDEM 303d Listed Streams and Lakes (Impaired)	**6**	Cave Entrance Density	**N/A**

Rivers and Streams	6	Sinkhole Areas	**N/A**
Canal Routes - Historic	**N/A**	Sinking-Stream Basins	**N/A**

If unmapped water features are identified that might impact the project area, direct coordination with INDOT ESD Ecology and Waterway Permitting will occur.

Explanation:
IDEM 303d Listed Streams and Lakes (Impaired): Six (6) impaired river/stream segments are located within the 0.5 mile search radius. The nearest impaired river/stream segment is 0.25 mile west of the project area. No impact is expected.

Rivers and Streams: Six (6) river/stream segments are located within the 0.5 mile search radius. The nearest river/stream segment, Spurgeon Ditch, is located within the project area. A Waters of the US Report is recommended based on mapped features, and coordination with INDOT ESD Ecology, Waterway Permits and Stormwater Office (EWPSO) will occur.

NWI – Wetlands: Ten (10) wetland polygons are located within the 0.5 mile search radius. The nearest wetland polygon is located 0.21 mile northeast of the project area. No impact is expected.

MINING AND MINERAL EXPLORATION TABLE AND SUMMARY

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

Explanation: No mining and mineral exploration resources are located within the 0.5 mile search radius.

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

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

Unless otherwise noted, site specific details presented in this section were obtained from documents reviewed on the Indiana Department of Environmental Management (IDEM) Virtual File Cabinet (VFC).

Explanation: No hazardous material concern resources are located within the 0.5 mile search radius.

ECOLOGICAL INFORMATION SUMMARY

The Jasper County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities is provided at https://www.in.gov/dnr/nature-preserves/files/np_jasper.pdf. A preliminary review of the Indiana Natural Heritage Database by INDOT ESD did not indicate the presence of ETR species within the 0.5 mile search radius. No further coordination is necessary.

Evidence of Birds in Bridge Report: Yes ☐ No ☒ late N/A ☐

*If yes, further coordination with INDOT Ecology and Waterway Permitting may be necessary.

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 farmland. The September 25, 2024, inspection done by Corradino, LLC for CV 016-037-20.50 states that no evidence of bats was seen or heard in the culvert. The range-wide programmatic consultation for the Indiana bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

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 based on the presence of mapped features and coordination with INDOT ESD Ecology, Waterway Permits and Stormwater Office (EWPSO) will occur for the following features:

- One (1) stream segment, Spurgeon Ditch, flows through the project area.

MINING/MINERAL EXPLORATION: N/A

HAZARDOUS MATERIAL CONCERNS: N/A

ECOLOGICAL INFORMATION: 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 farmland. The September 25, 2024, inspection done by Corradino, LLC for CV 016-037-20.50 states that no evidence of bats was seen or heard in the culvert. The range-wide programmatic consultation for the Indiana bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

Prepared by: Rachel Pluckebaum (Signature)
Rachel Pluckebaum
Environmental Specialist
Corradino, LLC

QA/QC Completed by: _____ (Signature)
Kirk Roth
Environmental Scientist
Corradino, LLC

INDOT ESD concurrence: Tracy Barnes Digitally signed by Tracy Barnes Date: 2024.10.22 14:41:52 -04'00' (Signature)

Graphics:

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

SITE LOCATION: YES

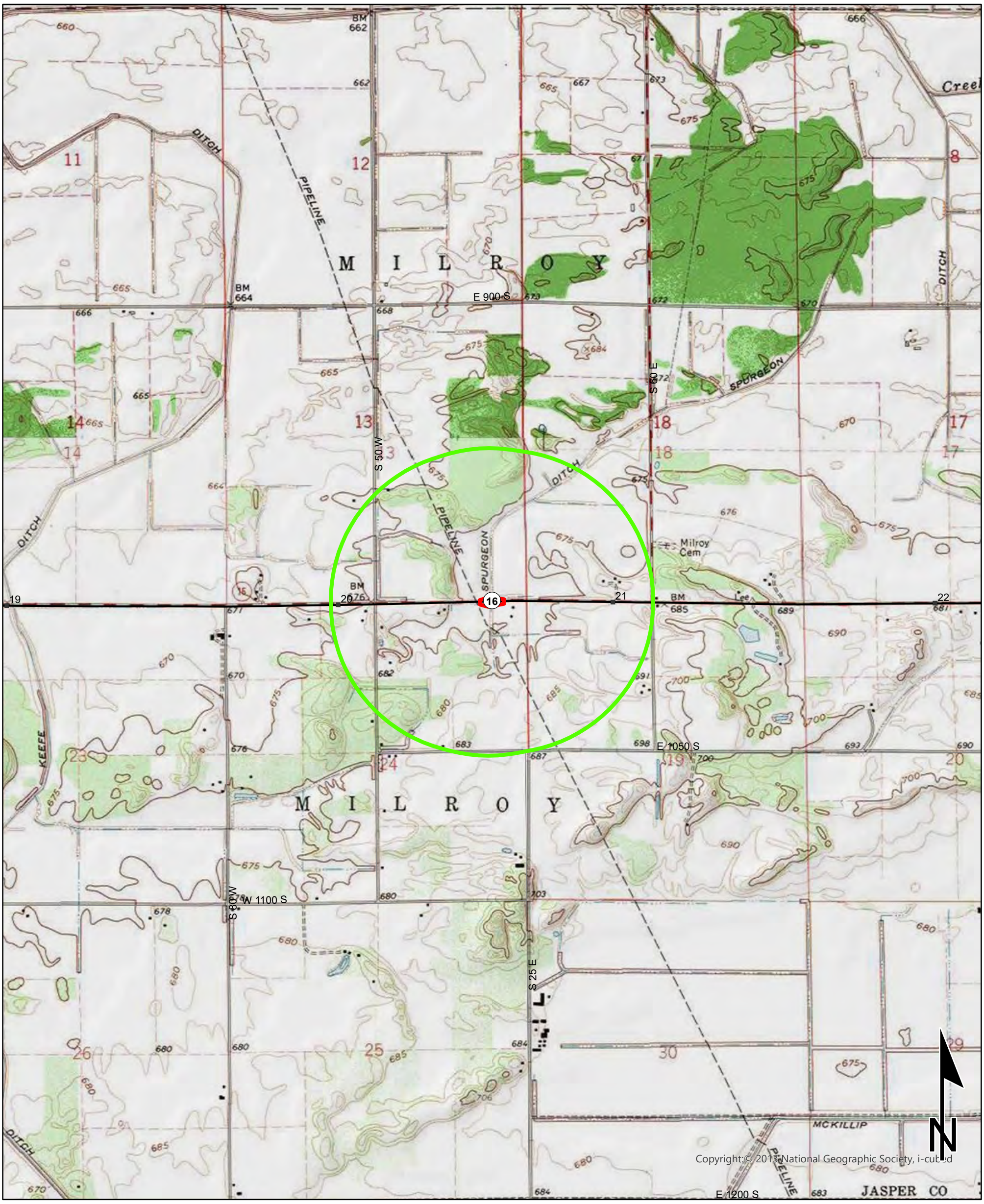
INFRASTRUCTURE: YES

WATER RESOURCES: YES

MINING/MINERAL EXPLORATION: N/A

HAZARDOUS MATERIAL CONCERNS: N/A

Red Flag Investigation - Site Location
SR 16, 8.80 Miles West of US 421
Des. No. 2300980, Small Structure Replacement
Jasper County, Indiana



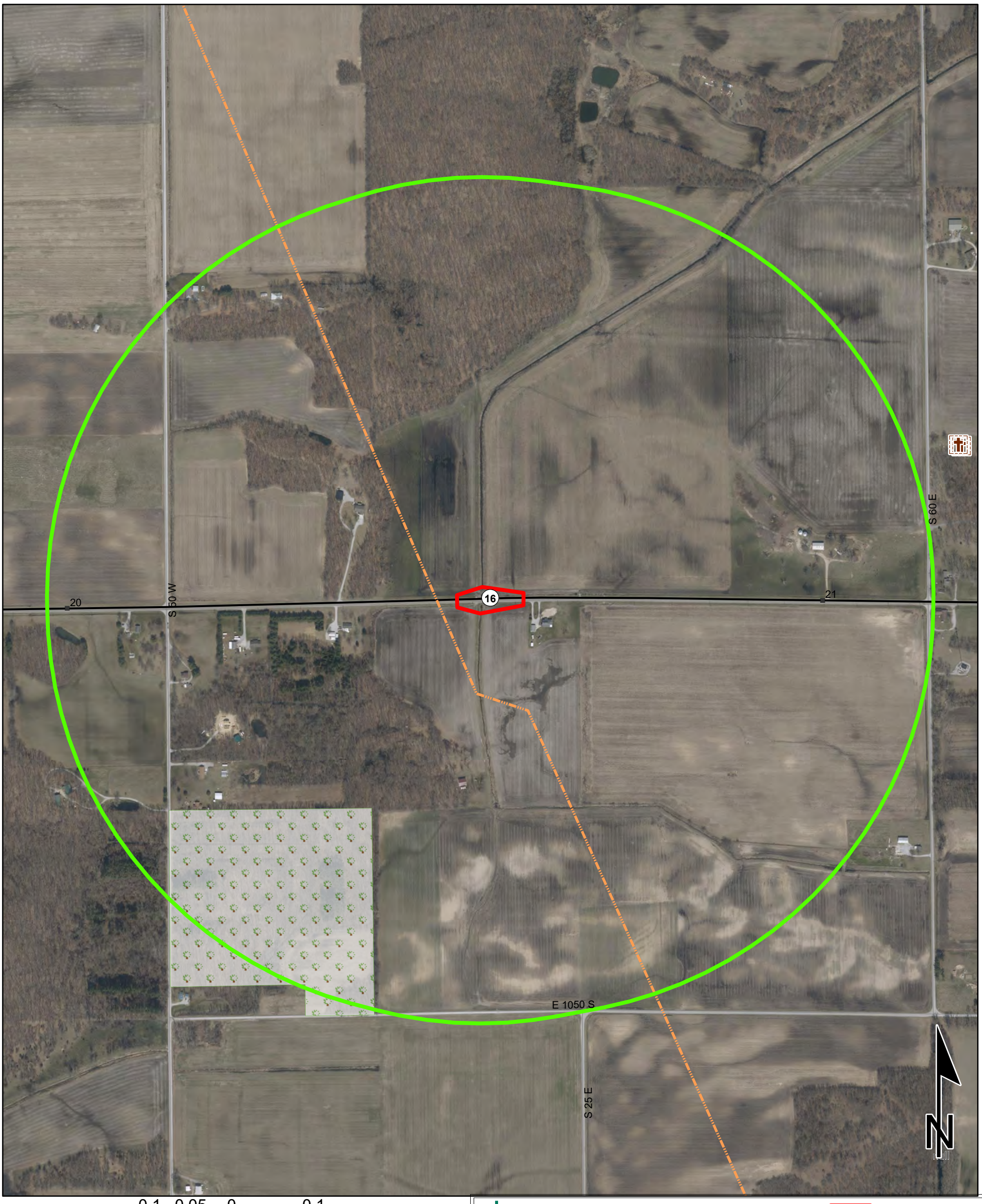
0.4 0.2 0 0.4 Miles

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.

MILROY QUADRANGLE
INDIANA
7.5 MINUTE SERIES
(TOPOGRAPHIC)

Red Flag Investigation - Infrastructure
SR 16, 8.80 Miles West of US 421
Des. No. 2300980, Small Structure Replacement
Jasper County, Indiana



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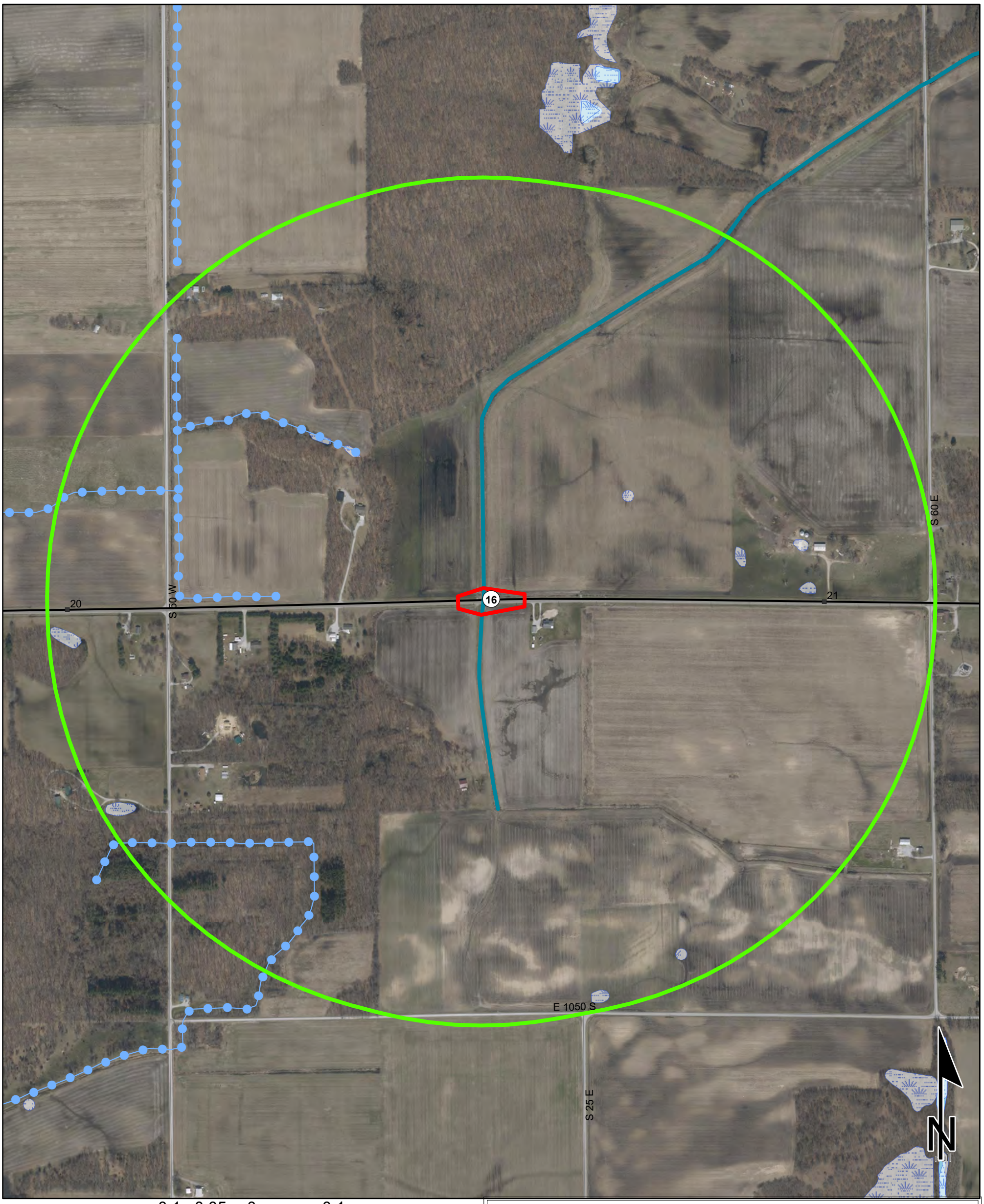
- Religious Facility
- Airport
- Cemeteries
- Hospital
- School
- Recreation Facility
- Pipeline
- Railroad
- Trails
- Managed Lands
- County Boundary
- Project Area
- Half Mile Radius
- Toll
- Interstate
- State Route
- US Route
- Local Road

Red Flag Investigation - Water Resources
SR 16, 8.80 Miles West of US 421
Des. No. 2300980, Small Structure Replacement
Jasper County, Indiana



0.1 0.05 0 0.1 Miles

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

APPENDIX F

Water Resources

Des. No. 2300980

Approved 12/9/2024
J.Leever

SR 16 in Jasper County, Indiana
Small Structure Project, 8.80 Miles West of US 421
Designation Number 2300980
Asset Name: CV 016-037-20.50

Prepared by:
Kirk Roth
kroth@corradino.com
317-488-2363
Corradino, LLC
November 25, 2024

1. Project Information

Dates of Field Reconnaissance:

Field work for this report was conducted on September 25, 2024 by Corradino, LLC.

Project Location:

Wolcott Quadrangle
Sections 13 and 24, Township 28 North, Range 6 West
SR 16 in Jasper County, Indiana
Small Structure Project, 8.80 Miles West of US 421
Coordinates: 40.86702 -87.04521
12-digit Hydrologic Unit – 071200020202 – Jordan Ditch/Slough Creek watershed

Project Description:

This project is located on State Road (SR) 16, 8.80 miles west of United States (US) 421 in Jasper County, Indiana. The structure carries SR 16 over Spurgeon Ditch. The current structure is comprised of an unreinforced concrete pipe. The project area is surrounded by agricultural terrain. The proposed scope of this project is a small structure replacement. The current preferred alternative is to replace the reinforced concrete pipe structure with a 7-foot span, 5-foot rise, by 52-foot length structure. Pavement will be 11-foot lanes and 4-foot usable shoulders at the approach. Revetment riprap on geotextiles will be constructed at the inlet and outlet for scour protection. The existing guardrail will be removed and replaced. Excavation will occur at approximately 15 feet deep.

The investigative area for this Wetland Delineation Report is that which is necessary to effectively illustrate potential water resources which may be impacted by the project, and it may exceed the anticipated project area limits.

2. Desktop Reconnaissance

Soils

According to the Soil Survey Geographic (SSURGO) Database for Jasper County, Indiana, the project area does contain soil areas with nationally listed hydric soils. The soil in the investigative area is entirely Gilford Fine Sandy Loam (GdoA).

Soil Unit Name	Symbol	NRCS Hydric Soil Category	SSURGO Hydric Rating
Gilford Fine Sandy Loam	GdoA	Hydric	100% Hydric

National Wetland Inventory Information

Spurgeon Ditch, which is within the project area, is listed as a wetland in the National Wetland Inventory (NWI). This wetland is an excavated intermittent riverine semipermanently flooded waterway with unconsolidated bottom (R4UBFx). No other wetlands are listed in the investigative area.

National Hydrography Dataset Information

Flowline Type	Location
Canal/Ditch	Extends north/south through the project structure.
Canal/Ditch	Begins approximately 55 feet north of SR 16 and extends east.

Attached Documents:

- Project Location Map
- Topographic Map
- Aerial Map
- Water Resources Map
- FEMA/FIRM/NHD Map
- StreamStats Analysis
- Soils Map
- Photo Key and Photo Log
- Wetland Data Sheets
- Preliminary Jurisdictional Determination

3. Field Investigation

Site reconnaissance was conducted on September 25, 2024 by Corradino, LLC.

Stream Analysis

The project structure is associated with the intermittent Spurgeon Ditch, which flows north through the project structure and encounters Slough Creek, the Iroquois River, and eventually the Traditional Navigable Waterway (TNW) Kankakee River. Within the investigative area, Spurgeon Ditch is surrounded by agricultural area. According to FEMA/FIRM mapping, the project area is not located within a floodway.

During the site inspection, standing water was present. Hydrophytic vegetation, especially *Lemna minor* (OBL) and *Phalaris arundinacea* (FACW), were present throughout the channel and represented a discreet horizontal Ordinary High Water Mark (OHWM). The stream quality is considered poor due to the moderate size, highly modified nature, and prevalence invasive exotic vegetation. The OHWM was approximately 8.0 feet wide and 1.5 feet deep at a location approximately 50 feet south of the project structure and outside the influence of the culvert. The stream is believed to be intermittent due to its designation in USGS topographic maps and its moderate size.

The StreamStats website (https://streamstats.usgs.gov/ss/) shows the two parallel north/south channels in the area, each with a discreet watershed. This condition was not observed during the site reconnaissance and does not reflect aerial or topographic mapping. It is possible that the StreamStats data is based on conditions prior to excavation events on Spurgeon Ditch. For the purposes of this report, the StreamStats watershed information from these two channels will be combined, because that is believed to better reflect the observed condition of drainage in and beyond the investigative area. At the project area, the western watershed drainage area is 0.063 square mile and the eastern watershed drainage area is 0.179 square mile. Therefore, the drainage area at the project structure is believed to be 0.242 square mile at the project location. There are 271 linear feet of Spurgeon Ditch within the investigative area.

Spurgeon Ditch exhibited a well-defined bed and bank structure. During the site inspection, extensive vegetation was present below the OHWM including especially *Phalaris arundinacea* (FACW) growing in and above the standing water. These wetland plants were restricted to the area below the OHWM and there was a clear abrupt change to upland dominated vegetation above the OHWM, including *Schedonorus arundinaceus* (FACU) and *Solidago canadensis* (FACU) as dominant components. Areas above the OHWM did not exhibit signs of wetland hydrology. Because dominant hydric vegetation and wetland hydrology characteristics were restricted to the area below the OHWM of Spurgeon Ditch, these wetland characteristics are considered a feature of Spurgeon Ditch and not a separate feature. Spurgeon Ditch is listed as a Canal/Ditch in the USGS National Hydrography Dataset. Due to its continuous surface connection to the Kankakee River, a TNW, Spurgeon Ditch is believed to be a Water of the U.S.

Table 1 – Stream Summary, SR 16, Jasper County, Indiana Designation Number 2300980

Stream Name	Photos	Lat/Long	OHW Width (feet)	OHW Depth (feet)	USGS Blue-line?	Riffles? Pools?	Substrate	Quality	Upstream Drainage	Likely Water of U.S.?
Spurgeon Ditch	1-14	40.86702 -87.04521	8.0	1.5	Yes (Intermittent)	No	Silt, Sand	Poor	0.242 square mile	Yes

Wetland Analysis

Wetland 1

The area within the site boundaries was investigated for potential wetland characteristics. A depression northeast of the project structure extends along the SR 16 roadside. The depression did not exhibit a clear horizontal OHWM and did not have continuous standing water. Wetland plants, including the facultative wetland *Phalaris arundinacea* (FACW) and wetland obligate *Schoenoplectus (Bolboschoenus) fluvitilis* (OBL) were dominant and found growing independently of basin and slope structure both above and below the slope. No areas of the ditch were sparsely vegetated. Soils exhibited hydric soil indicator F6 – Redox Dark Surface. Wetland hydrology indicators were present including High Water Table, Saturation, Oxidized Rhizospheres on Living Roots, and a combination of secondary indicators including Drainage Patterns, Geomorphic Position and a positive FAC-Neutral Test. The data are documented in wetland delineation Sample Point 1A.

The upland area south of the Sample Point 1A was dominated with *Phalaris arundinacea* (FACW), *Poa pratensis* (FAC), *Schedonorus arundinaceus* (FACU) and *Cirsium discolor* (FACU). No hydric soil or primary wetland hydrology indicators were found in this area. These data are documented in wetland delineation Sample Point 1B.

For the purposes of this report, this wetland is referred to as Wetland 1. Wetland 1 is considered poor quality wetland due to small size and extensive invasive vegetation. Wetland 1 is approximately 0.13 acre within the investigative area and is a palustrine emergent wetland (PEM). The wetland area is best defined by the clear dominance of *Phalaris* with total absence of *Schedonorus* or other facultative upland plants in the herb stratum.

Wetland 1 drains west directly into Spurgeon Ditch. Due to its surface connectivity with Spurgeon Ditch and therefore connectivity with the Kankakee River, a TNW, Wetland 1 is believed to be a Water of the U.S.

Wetland 2

A depression southwest of the project structure extends along the SR 16 roadside. The depression did not exhibit a clear horizontal OHWM and did not have any water. A monoculture of *Phalaris arundinacea* (FACW) was dominant for an extent of the basin and slope nearest Spurgeon Ditch but eventually gave way to upland-type vegetative components. No areas of the wetland were sparsely vegetated. Within the monoculture, soils exhibited hydric soil indicator F6 – Redox Dark Surface and F7 – Depleted Dark Surface. Wetland hydrology indicators were present including Oxidized Rhizospheres on Living Roots, Presence of Reduced Iron, and a combination of secondary indicators including Geomorphic Position and a positive FAC-Neutral Test. The data are documented in wetland delineation Sample Point 2A.

Further west of the wetland characteristics (see RSD1), vegetation was dominated with *Schedonorus arundinaceus* (FACU). *Phalaris arundinacea* (FACW) was present but not dominant. No hydric soil indicator or primary wetland hydrology indicators were found in this area, although one secondary hydrology indicator, Geomorphic Position, was present. These data are documented in wetland delineation Sample Point 2B.

For the purposes of this report, this wetland is referred to as Wetland 2. Wetland 2 is considered poor quality wetland due to small size and extensive invasive vegetation. Wetland 2 is approximately 0.01 acre within the investigative area and is a palustrine emergent wetland (PEM). The wetland area is best defined by the clear dominance of *Phalaris* with total absence of *Schedonorus* or other facultative upland plants in the herb stratum.

Wetland 2 drains east directly into Spurgeon Ditch. Due to its surface connectivity with Spurgeon Ditch and therefore connectivity with the Kankakee River, a TNW, Wetland 2 is believed to be a Water of the U.S.

Wetland ID	Type	Total Acreage	Quality	Photo #	Likely Water of U.S.?	Data Point ID	Lat/Long	Dominant Vegetation	Hydric Soil Indicators	Hydrology Indicators	Within Wetland
Wetland 1	PEM	0.13	Poor	16-24	Yes	1A	40.86710 -87.04403	*Phalaris arundinacea, Schoenoplectus fluviatilis*	F6	A2, A3, C3, B10 D2, D5	Yes
						1B	40.86708 -87.04411	*Phalaris arundinacea, Poa pratensis, Schedonorus arundinaceus, Cirsium discolor,*	N/A	N/A	No
Wetland 2	PEM	0.01	Poor	31-35; 43	Yes	2A	40.86691 -87.04547	*Phalaris arundinacea*	F6,F7	C3, C4 D2, D5	Yes
						2B	40.86692 -87.04551	*Schedonorus arundinaceus, Toxicodendron radicans, Parthenocissus quinquefolia*	N/A	N/A (D2 only)	No

Roadside Ditch Analysis

RSD1

West of Wetland 2, the ditch maintained upland characteristics, as described in Sample Point 2B. In the upland portion of this ditch, the drainage exhibited no OHWM. This drainage is referred to as RSD1 in this document. RSD1 extends from the Wetland 2 border to the west and outside the investigative area. RSD1 did not meet wetland criteria with dominant *Schedonorus arundinaceus* (FACU) and therefore is not believed to be a Water of the U.S. See photos 32, 33, and 38-43 in the Photo Log for photos of RSD1.

There were no other non-tributary drainages within the investigative area.

Other Features

Aside from the project structure, culverts within the investigative area include:

- Culvert A (Photos 9, 10, 12)
  - Approximately 6-foot diameter metal pipe in Spurgeon Ditch north of the project structure
- Culvert B (Photos 27, 28)
  - An 8-inch diameter clay pipe draining the southeast agricultural field into Spurgeon Ditch south of the project structure
- Culvert C (Photos 29, 30)

- A 12-inch diameter metal pipe draining RSD1 and Wetland 2 into Spurgeon Ditch south of the project structure

Wildlife Evidence and Concerns

No use of the culverts by bats, birds, or other wildlife was detected during the September 25, 2024 surveys. No evidence of use as a wildlife crossing was observed.

4. Summary and Conclusions

Due to the continuous surface connection with Slough Creek and therefore connectivity with the TNW Kankakee River, Spurgeon Ditch, Wetland 1, and Wetland 2 are apparent Waters of the U.S. The jurisdictional area in the project area would extend to the OHWM of Spurgeon Ditch, and the limits of Wetland 1 and Wetland 2 as indicated by the clear dominance of *Phalaris* with total absence of *Schedonorus* or other facultative upland plants in the herb stratum. RSD1 is a nonjurisdictional feature within the investigative area.

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

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

Kirk Roth

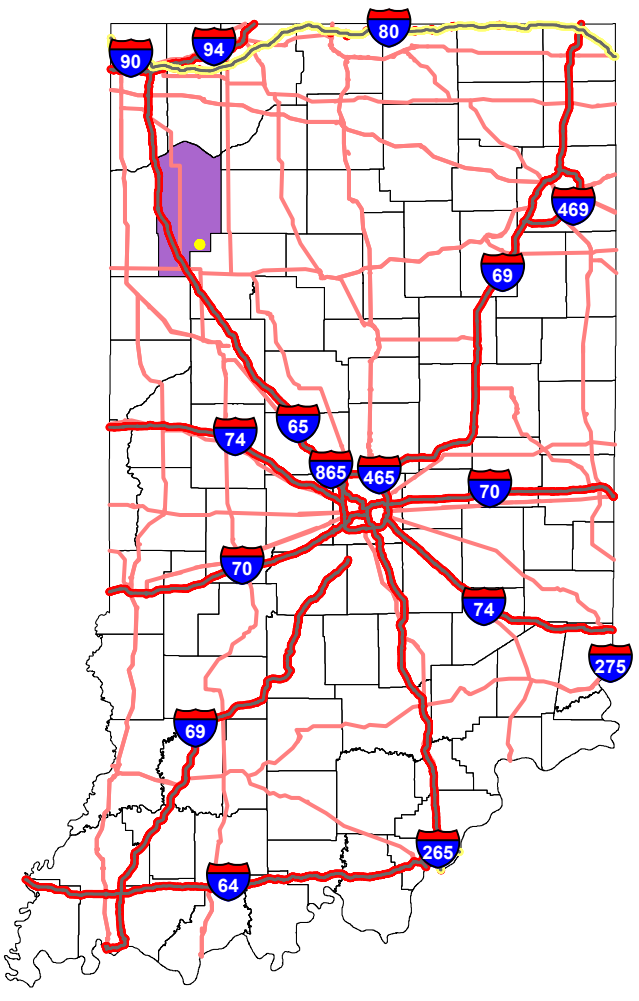
Environmental Scientist

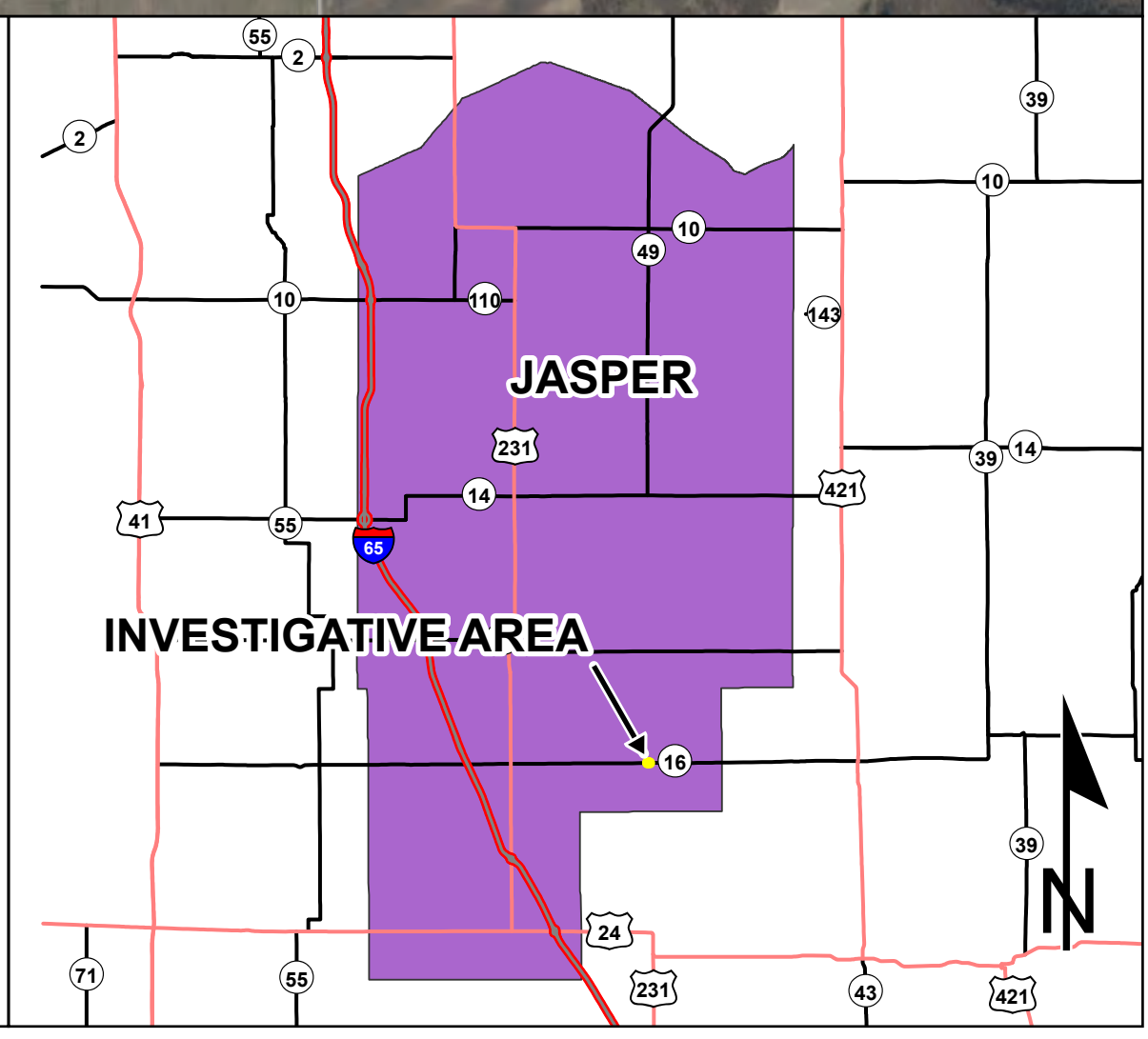
Corradino, LLC

November 25, 2024

Project Location Map
SR 16, 8.80 Miles West of US 421
DES #2300980, Small Structure Replacement
Jasper County, Indiana

Author: Mark Rinehart
Date: 10/23/2024





0.3 0.15 0 0.3 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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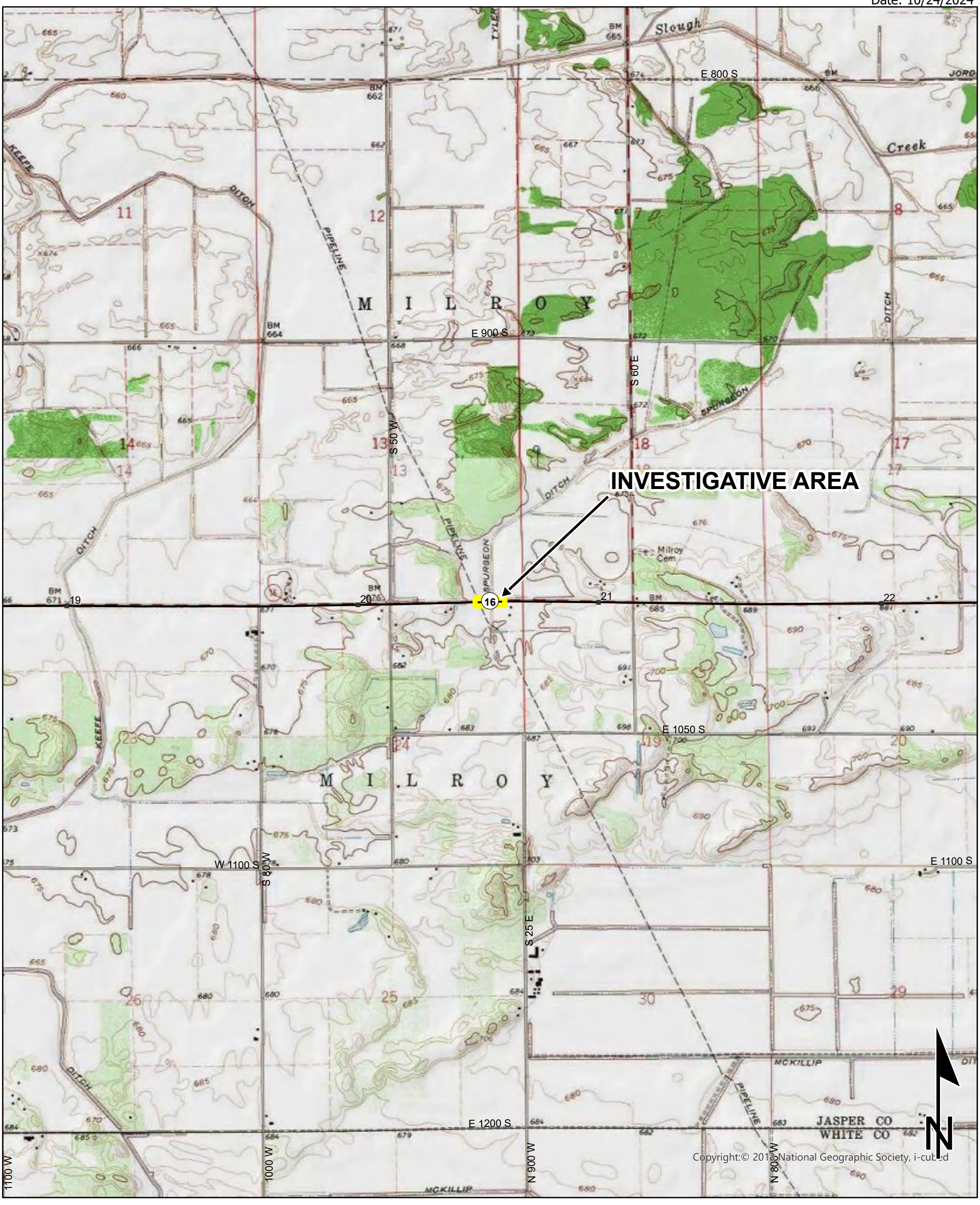
INDIANA
STATEWIDE
GIS DATA

Topographic Map
SR 16, 8.80 Miles West of US 421
DES #2300980, Small Structure Replacement
Jasper County, Indiana

Author: Mark Rinehart
Date: 10/24/2024



0.6 0.3 0 0.6 Miles

Sources:
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Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
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WOLCOTT QUADRANGLE
INDIANA
7.5 MINUTE SERIES
(TOPOGRAPHIC)

Topographic Map - Zoomed In
SR 16, 8.80 Miles West of US 421
DES #2300980, Small Structure Replacement
Jasper County, Indiana

Author: Mark Rinehart
Date: 10/24/2024

0.07 0.04 0 0.07 Miles

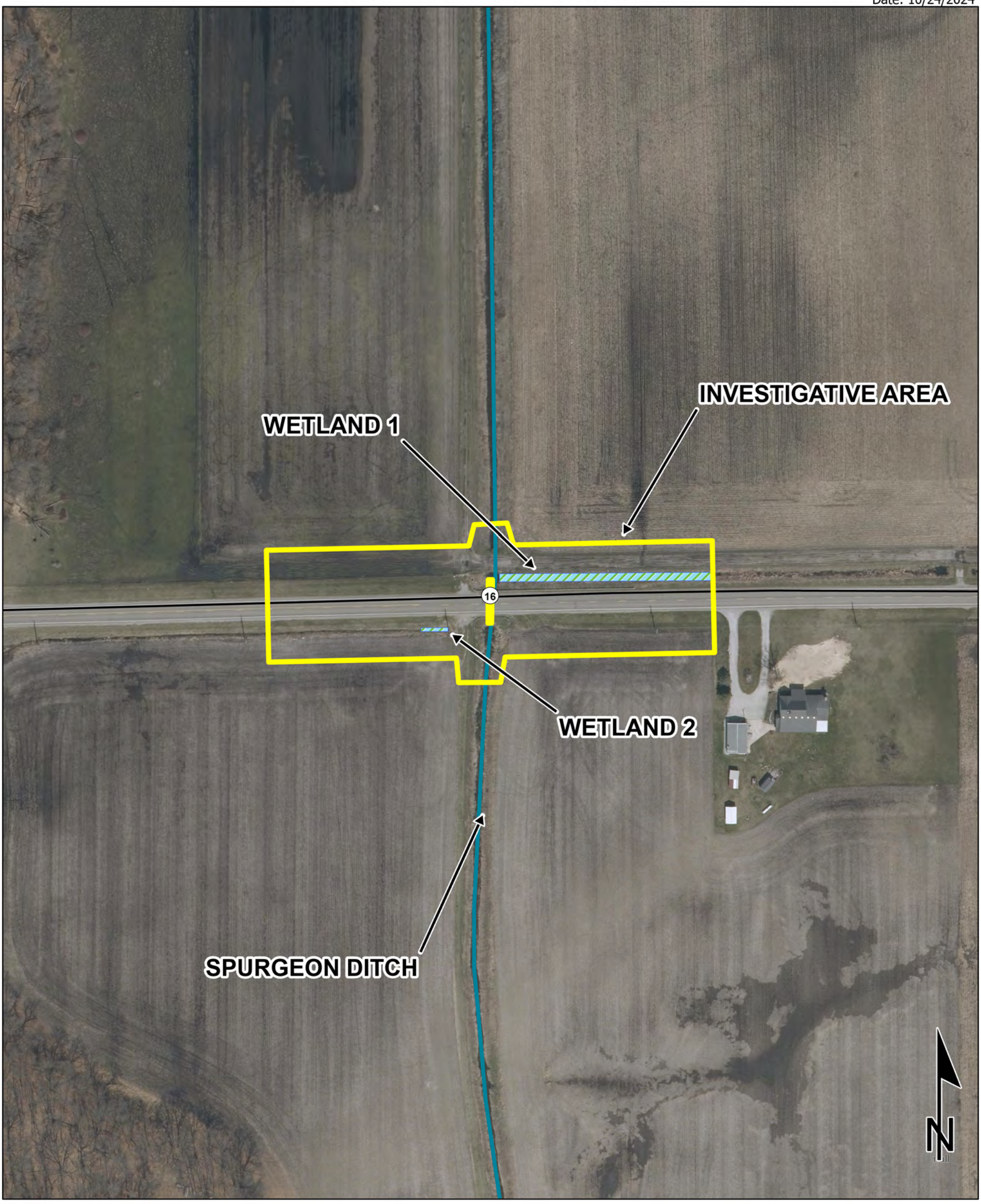
Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

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

WOLCOTT QUADRANGLE
INDIANA
7.5 MINUTE SERIES
(TOPOGRAPHIC)

Aerial Map
SR 16, 8.80 Miles West of US 421
DES #2300980, Small Structure Replacement
Jasper County, Indiana

Author: Mark Rinehart
Date: 10/24/2024



0.04 0.02 0 0.04 Miles

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

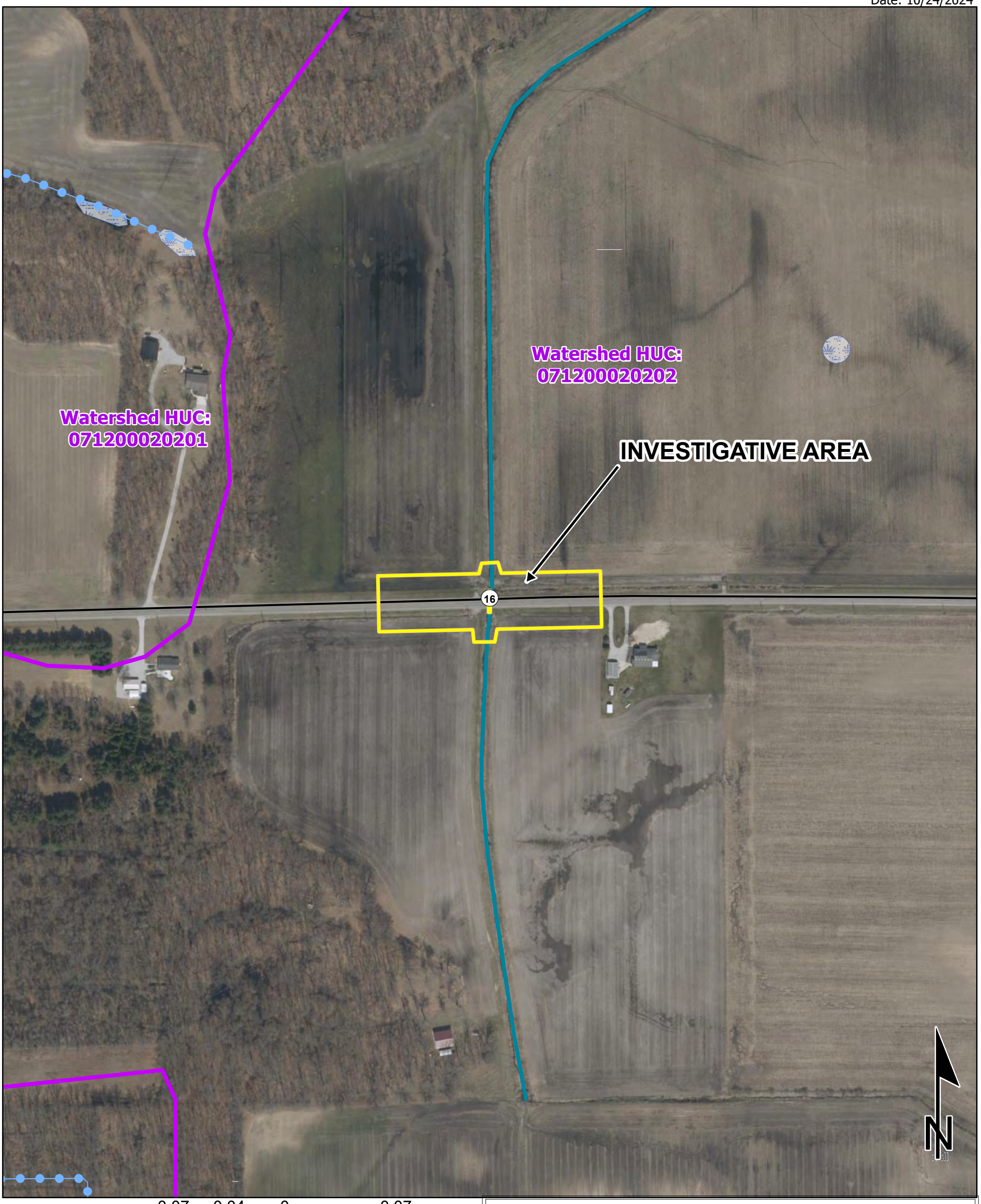
This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

INDIANA STATEWIDE IMAGERY (FLOWN 2022)

Legend
- Investigative Area
- Wetlands
- Stream

Water Resources Map
SR 16, 8.80 Miles West of US 421
DES #2300980, Small Structure Replacement
Jasper County, Indiana

Author: Mark Rinehart
Date: 10/24/2024



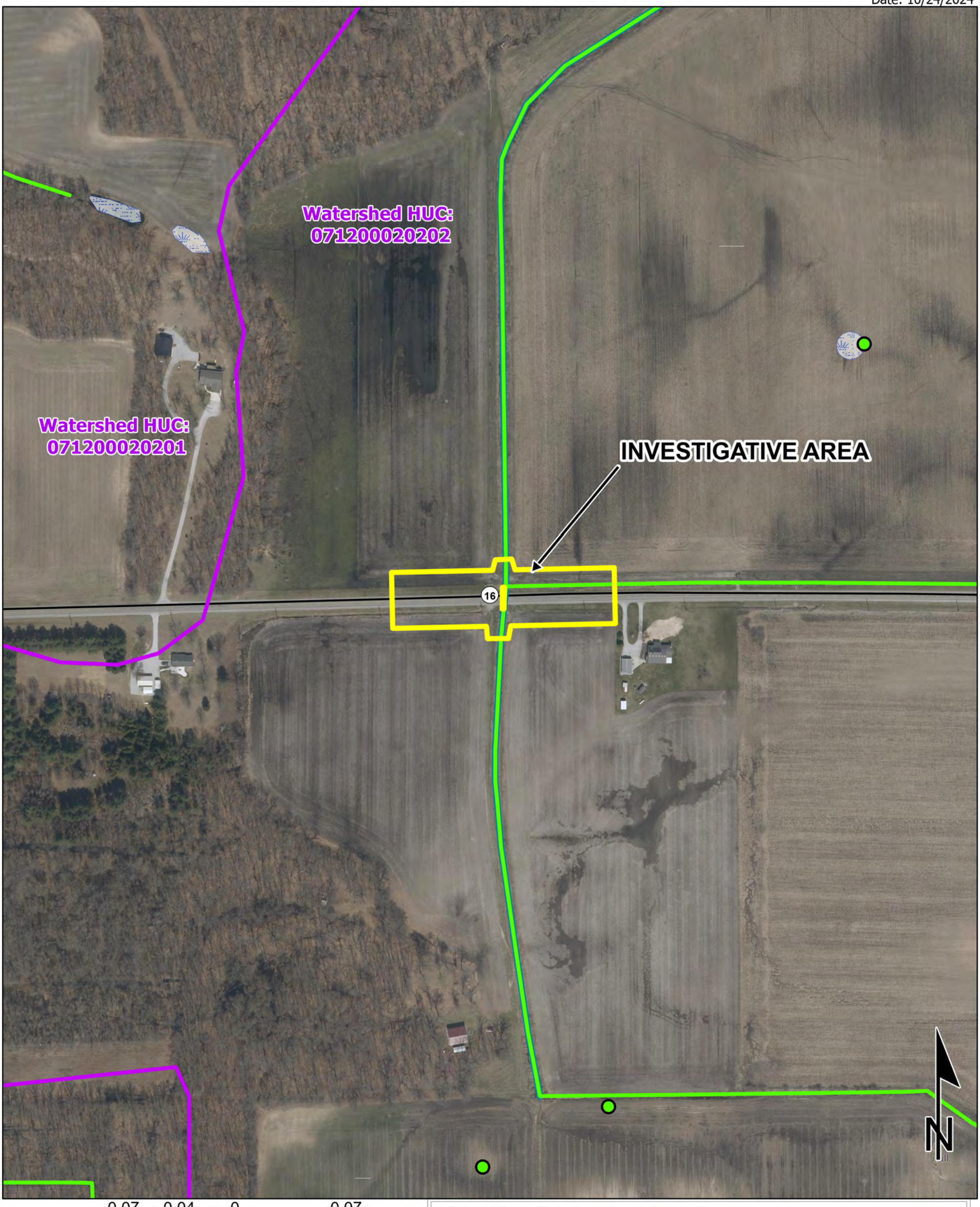
Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

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

- Karst Spring
- 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
- Toll
- Interstate
- State Route
- US Route
- Local Road
- Watershed Boundary

FEMA/FIRM/NHD Map
SR 16, 8.80 Miles West of US 421
DES #2300980, Small Structure Replacement
Jasper County, Indiana

Author: Mark Rinehart
Date: 10/24/2024



0.07 0.04 0 0.07 Miles

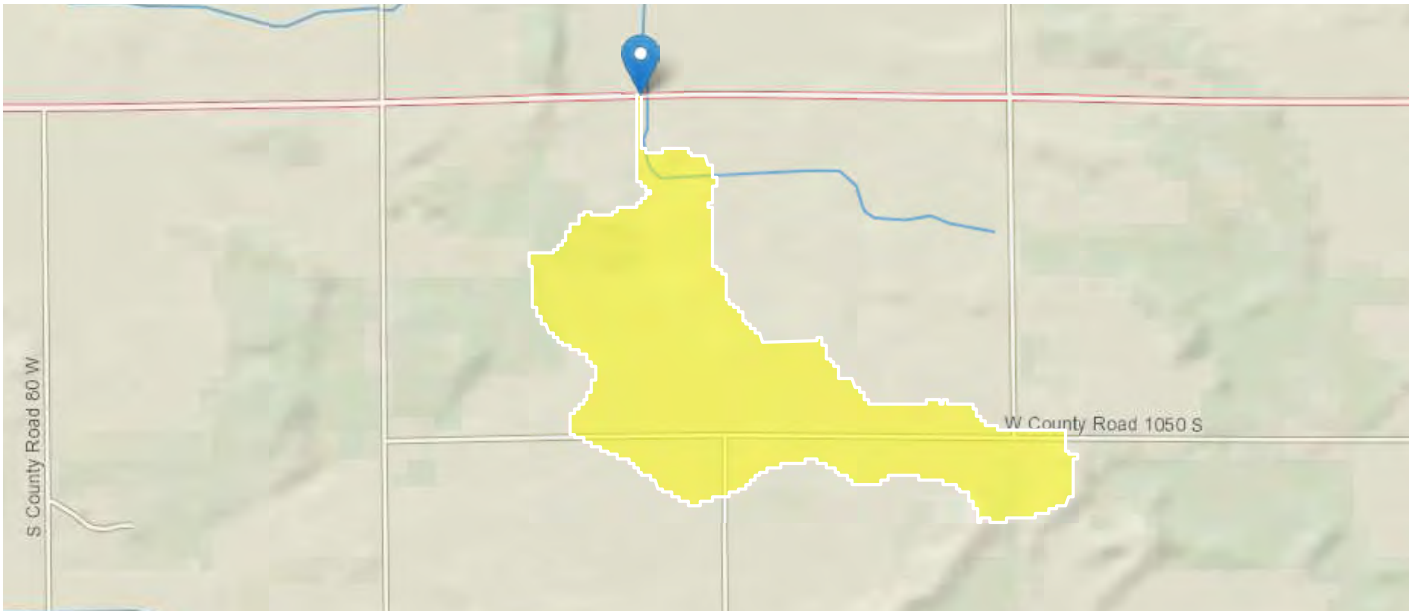
Sources:
Non Orthophotography
Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

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

- County Boundary
- Project Area
- NHD Classified
- Watershed Boundary
- NWI Point
- Stream
- Wetlands
- Floodplain - DFIRM

StreamStats Report

Region ID: IN
Workspace ID: IN20241016143243684000
Clicked Point (Latitude, Longitude): 40.86701, -87.04517
Time: 2024-10-16 10:33:04 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.179	square miles
K2INDNR	Average hydraulic conductivity (ft/d) for the full depth of unconsolidated deposits from InDNR well database.	22	ft per day
LC01FOREST	Percentage of forest from NLCD 2001 classes 41-43	13.7	percent
LOWREG	Low Flow Region Number	1728	dimensionless
QSSPERMTHK	Index of the permeability of surficial Quaternary sediments computed as in SIR 2014-5177	2500	dimensionless
T2INDNR	Average transmissivity (ft2/d) for the full depth of unconsolidated deposits from InDNR well database.	750	square feet per day

General Flow Statistics

General Flow Statistics Parameters [Harmonic Mean Northern Region 2016 5102]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.179	square miles	6.33	856
T2INDNR	Avg_Transmissivity	750	square feet per day	1700	7590

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
LOWREG	Low Flow Region Number	1728	dimensionless		

General Flow Statistics Disclaimers [Harmonic Mean Northern Region 2016 5102]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

General Flow Statistics Flow Report [Harmonic Mean Northern Region 2016 5102]

Statistic	Value	Unit
Harmonic Mean Streamflow	0.0108	ft^3/s

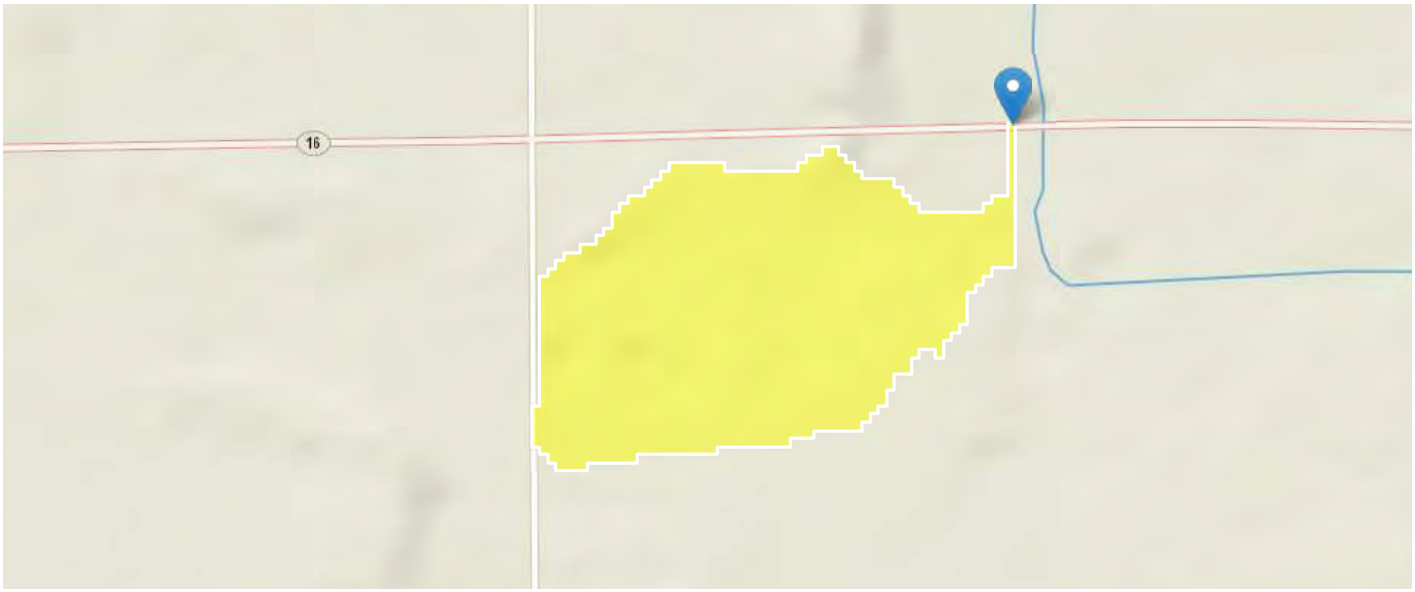
General Flow Statistics Citations

Martin, G.R., Fowler, K.K., and Arihood, L.D.,2016, Estimating selected low-flow frequency statistics and harmonic-mean flows for ungaged, unregulated streams in Indiana (ver 1.1, October 2016): U.S. Geological Survey Scientific Investigations Report 2016–5102, 45 p. (http://dx.doi.org/10.3133/sir20165102)

Application Version: 4.24.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

StreamStats Report

Region ID: IN
Workspace ID: IN20241016143727300000
Clicked Point (Latitude, Longitude): 40.86699, -87.04543
Time: 2024-10-16 10:37:48 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.063	square miles
K2INDNR	Average hydraulic conductivity (ft/d) for the full depth of unconsolidated deposits from InDNR well database.	15	ft per day
LC01FOREST	Percentage of forest from NLCD 2001 classes 41-43	58.2	percent
LOWREG	Low Flow Region Number	1728	dimensionless
QSSPERMTHK	Index of the permeability of surficial Quaternary sediments computed as in SIR 2014-5177	2500	dimensionless
T2INDNR	Average transmissivity (ft2/d) for the full depth of unconsolidated deposits from InDNR well database.	508	square feet per day

General Flow Statistics

General Flow Statistics Parameters [Harmonic Mean Northern Region 2016 5102]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.063	square miles	6.33	856
T2INDNR	Avg_Transmissivity	508	square feet per day	1700	7590
LOWREG	Low Flow Region Number	1728	dimensionless		

General Flow Statistics Disclaimers [Harmonic Mean Northern Region 2016 5102]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

General Flow Statistics Flow Report [Harmonic Mean Northern Region 2016 5102]

Statistic	Value	Unit
Harmonic Mean Streamflow	0.00224	ft^3/s

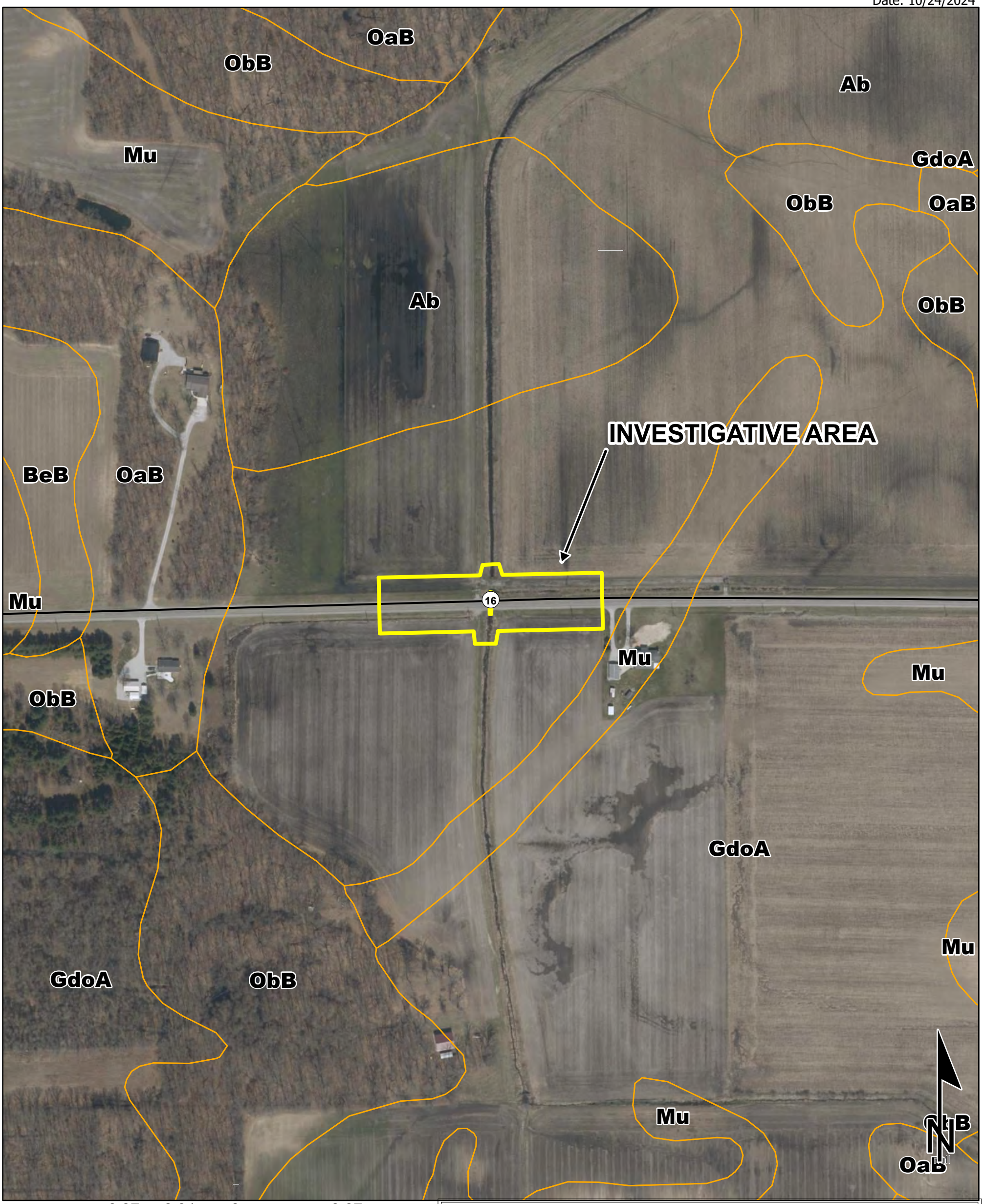
General Flow Statistics Citations

Martin, G.R., Fowler, K.K., and Arihood, L.D.,2016, Estimating selected low-flow frequency statistics and harmonic-mean flows for ungaged, unregulated streams in Indiana (ver 1.1, October 2016): U.S. Geological Survey Scientific Investigations Report 2016–5102, 45 p. (http://dx.doi.org/10.3133/sir20165102)

Application Version: 4.24.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

Soils Map
SR 16, 8.80 Miles West of US 421
DES #2300980, Small Structure Replacement
Jasper County, Indiana

Author: Mark Rinehart
Date: 10/24/2024



0.07 0.04 0 0.07 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.

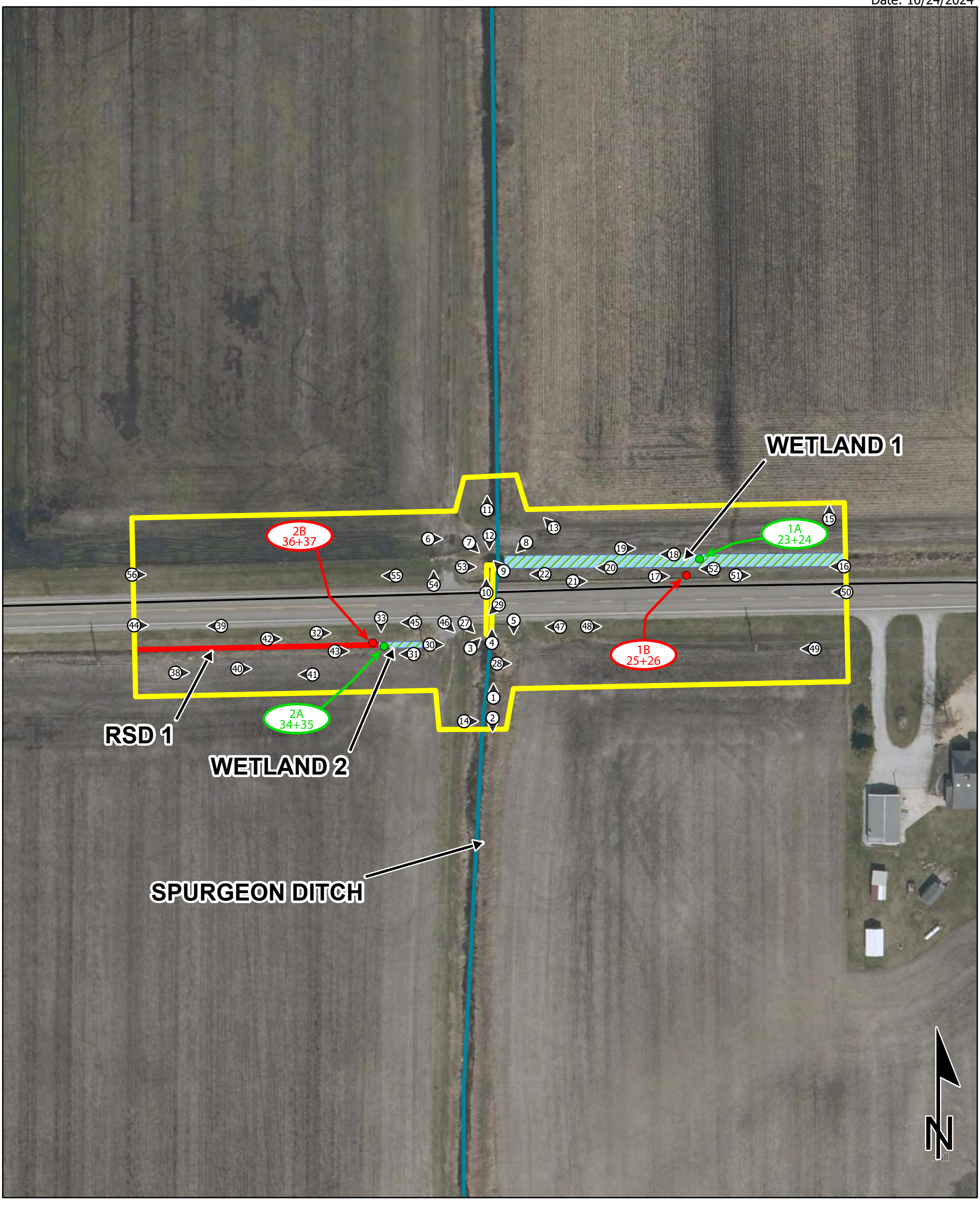
NRCS SOILS DATA

Legend

GdoA- Gilford Fine Sandy Loam, Outwash Plain (10% Hydric)

Photo Key Map
SR 16, 8.80 Miles West of US 421
DES #2300980, Small Structure Replacement
Jasper County, Indiana

Author: Mark Rinehart
Date: 10/24/2024



0.02 0.01 0 0.02 Miles

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

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

INDIANA STATEWIDE IMAGERY (FLOWN 2022)

Legend
- Investigative Area
- RSD
- Wetlands
- Wetland Data Point
- Upland Data Point

DES 2300980 - Waters of the U.S. Determination Report—Photo Log.
Photos taken September 25, 2024

Picture 1 - Looking North; Project Structure Outlet and Spurgeon Ditch

Picture 2 - Looking South; Spurgeon Ditch

Picture 3 - Looking Northeast; Project Structure Outlet and Spurgeon Ditch

Picture 4 - Looking North; Project Structure Outlet and Spurgeon Ditch

DES 2300980 - Waters of the U.S. Determination Report—Photo Log.
Photos taken September 25, 2024

Picture 5 - Looking South; Spurgeon Ditch

Picture 6 - Looking West; Spurgeon Ditch

Picture 7 - Looking Southeast; Project Structure Inlet and Spurgeon Ditch

Picture 8 - Looking Southwest; Project Structure Inlet and Spurgeon Ditch

DES 2300980 - Waters of the U.S. Determination Report—Photo Log.
Photos taken September 25, 2024

Picture 9 - Looking Northwest; Culvert A and Spurgeon Ditch

Picture 10 - Looking North; Culvert A and Spurgeon Ditch

Picture 11 - Looking North; Spurgeon Ditch

Picture 12 - Looking South; Project Structure Inlet, Culvert A, and Spurgeon Ditch

DES 2300980 - Waters of the U.S. Determination Report—Photo Log.
Photos taken September 25, 2024

Picture 13 - Looking Northwest; Driveway over Spurgeon Ditch

Picture 14 - Looking East; Spurgeon Ditch

Picture 15 - Looking North; Northeast Quadrant Slope

Picture 16 - Looking West; Wetland 1

DES 2300980 - Waters of the U.S. Determination Report—Photo Log.
Photos taken September 25, 2024

Picture 17 - Looking East; Wetland 1

Picture 18 - Looking West; Wetland 1

Picture 19 - Looking East; Wetland 1

Picture 20 - Looking West; Wetland 1

DES 2300980 - Waters of the U.S. Determination Report—Photo Log.
Photos taken September 25, 2024

Picture 21 - Looking East; Wetland 1

Picture 22 - Looking West; Wetland 1 and Spurgeon Ditch

Picture 23 - Looking Southwest; Wetland Datapoint 1A

Picture 24 - Wetland Datapoint 1A Soil Sample

DES 2300980 - Waters of the U.S. Determination Report—Photo Log.
Photos taken September 25, 2024

Picture 25 - Looking Northeast; Upland Datapoint 1B

Picture 26 - Upland Datapoint 1B Soil Sample

Picture 27 - Looking Southeast; Culvert B

Picture 28 - Looking East; Culvert B

DES 2300980 - Waters of the U.S. Determination Report—Photo Log.
Photos taken September 25, 2024

Picture 29 - Looking Southwest; Culvert C

Picture 30 - Looking East; Culvert C

Picture 31 - Looking West; Wetland 2

Picture 32 - Looking East; RSD 1 and Wetland 2

DES 2300980 - Waters of the U.S. Determination Report—Photo Log.
Photos taken September 25, 2024

Picture 33 - Looking South; Transition from Wetland 2 (with *Phalaris)* to RSD1 (*Schedonorus* only)

Picture 34 - Looking Northeast; Wetland Datapoint 2A

Picture 35 – Wetland Datapoint 2A Soil Sample

Picture 36 - Looking Southeast; Upland Datapoint 2B

DES 2300980 - Waters of the U.S. Determination Report—Photo Log.
Photos taken September 25, 2024

Picture 37 – Upland Datapoint 2B Soil Sample

Picture 38 – Looking East; RSD1

Photo 39 - Looking West; Southeast Quadrant

Picture 40 - Looking East; RSD1

DES 2300980 - Waters of the U.S. Determination Report—Photo Log.
Photos taken September 25, 2024

Picture 41 - Looking West; RSD1

Picture 42 - Looking East; RSD1 towards Wetland 2

Picture 43 - Looking East; RSD1 at Wetland 2 transition

Picture 44 - Looking East; Southwest Quadrant

DES 2300980 - Waters of the U.S. Determination Report—Photo Log.
Photos taken September 25, 2024

Picture 45 - Looking West; Southwest quadrant

Picture 46 - Looking Southeast; Southwest quadrant driveway

Picture 47 - Looking West; Southeast quadrant

Picture 48 - Looking East; Southeast quadrant

DES 2300980 - Waters of the U.S. Determination Report—Photo Log.
Photos taken September 25, 2024

Picture 49 - Looking West; Southeast Quadrant

Picture 50 - Looking West; Northeast Quadrant

Picture 51 – Looking East; Northeast Quadrant

Picture 52 - Looking West; Northeast Quadrant

DES 2300980 - Waters of the U.S. Determination Report—Photo Log.
Photos taken September 25, 2024

Picture 53 - Looking East; Northeast Quadrant

Picture 54 - Looking North; Northwest Quadrant Driveway

Picture 55 – Looking West; Northwest Quadrant

Picture 56 - Looking East; Northwest Quadrant

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: DES 2300980 City/County: Jasper Sampling Date: 9-25-24

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

Investigator(s): Kirk Roth Section, Township, Range: Section 24, Township 28 North, Range 6 West

Landform (hillside, terrace, etc.): Ditch/Depression Local relief (concave, convex, none): Concave

Slope (%): 2 Lat: 40.86710 Long: -87.04403 Datum: NAD 83

Soil Map Unit Name: Gilford Fine Sandy Loam NWI classification: N/A

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

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

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

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

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

Remarks:
Vegetation, soil, and hydrology characteristics support wetland status.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 feet)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5 feet)			
1. *Phalaris arundinacea*	65	Yes	FACW
2. *Schoenoplectus fluviatilis*	20	Yes	OBL
3. *Leersia oryzoides*	10	No	OBL
4. *Elymus virginicus*	5	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	30	x 1 =	30
FACW species	70	x 2 =	140
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		170 (B)

Prevalence Index = B/A = 1.70

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)
Dominance Test and Prevalence Index support hydrophytic status. Note that USDA name of S. fluviatilis is Bolboschoenus fluviatilis.

SOIL

Sampling Point: 1A

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 2/2	95	2.5YR 4/8	5	C	M	Loamy/Clayey	Prominent redox concentrations
8-21	10YR 2/1	100					Loamy/Clayey	

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:
Sandy Loam. Soil Indicator F6 supports hydric status.

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___		
Water Table Present?	Yes X	No ___	Depth (inches): 15		
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 7	**Wetland Hydrology Present?**	**Yes** X **No** ___

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

Remarks:
Hydrology Indicators A2, A3, C3, B10, D2, and D5 support wetland hydrology status.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: DES 2300980 City/County: Jasper Sampling Date: 9-24-24

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

Investigator(s): Kirk Roth Section, Township, Range: Section 24, Township 28 North, Range 6 West

Landform (hillside, terrace, etc.): Ditch Bank Local relief (concave, convex, none): Sloped

Slope (%): 2 Lat: 40.86708 Long: -87.04411 Datum: NAD 83

Soil Map Unit Name: Gilford Fine Sandy Loam NWI classification: N/A

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

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

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

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

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

Remarks:
Vegetation, soil, and hydrology characteristics do not support wetland status.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 feet)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5 feet)			
1. *Phalaris arundinacea*	20	Yes	FACW
2. *Poa pratensis*	15	Yes	FAC
3. *Schedonorus arundinaceus*	15	Yes	FACU
4. *Cirsium discolor*	15	Yes	FACU
5. *Symphyotrichum pilosum*	10	No	FACU
6. *Oenothera biennis*	10	No	FACU
7. *Lactuca serriola*	5	No	FACU
8. *Daucus carota*	5	No	UPL
9. *Schoenoplectus fluviatilis*	5	No	OBL
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 4 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	20	x 2 =	40
FAC species	15	x 3 =	45
FACU species	55	x 4 =	220
UPL species	5	x 5 =	25
Column Totals:	100 (A)		335 (B)

Prevalence Index = B/A = 3.35

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
Vegetation does not support hydrophytic status. Note that USDA name of S. fluviatilis is Bolboschoenus fluviatilis.

SOIL

Sampling Point: 1B

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

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

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

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

___ Coast Prairie Redox (A16)
___ Iron-Manganese Masses (F12)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:
Sandy Loam. Soil characteristics do not support hydric status.

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:
No wetland hydrology characteristics were observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: DES 2300980 City/County: Jasper Sampling Date: 9-24-24

Applicant/Owner: INDOT State: IN Sampling Point: 2A

Investigator(s): Kirk Roth Section, Township, Range: Section 24, Township 28 North, Range 6 West

Landform (hillside, terrace, etc.): Ditch/Depression Local relief (concave, convex, none): Concave

Slope (%): 2 Lat: 40.86691 Long: -87.04547 Datum: NAD 83

Soil Map Unit Name: Gilford Fine Sandy Loam NWI classification: N/A

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

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

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

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

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

Remarks:
Vegetation, soil, and hydrology characteristics support wetland status.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 feet)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5 feet)			
1. *Phalaris arundinacea*	100	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)
Dominance Test and Prevalence Index support hydrophytic status.

SOIL

Sampling Point: 2A

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 2/1	100					Loamy/Clayey	
5-8	10YR 2/1	80	10YR 5/8	10	C	PL/M	Loamy/Clayey	Prominent redox concentrations
			10YR 5/1	10	D	M		
8-20	10YR 2/1	40	10YR 5/8	30	C	PL/M	Loamy/Clayey	Prominent redox concentrations
			10YR 5/1	30	D	M		

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- X Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:
Soil Indicators F6 and F7 support hydric status.

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

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

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

Remarks:
Hydrology Indicators C3, C4, D2, and D5 support wetland hydrology status.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: DES 2300980 City/County: Jasper Sampling Date: 9-25-24

Applicant/Owner: INDOT State: IN Sampling Point: 2B

Investigator(s): Kirk Roth Section, Township, Range: Section 24, Township 28 North, Range 6 West

Landform (hillside, terrace, etc.): Ditch Local relief (concave, convex, none): Convex

Slope (%): 2 Lat: 40.86692 Long: -87.04551 Datum: NAD 83

Soil Map Unit Name: Gilford Fine Sandy Loam NWI classification: N/A

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

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

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

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

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

Remarks:
Vegetation, soil, and hydrology characteristics do not support wetland status.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 feet)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5 feet)			
1. *Schedonorus arundinaceus*	85	Yes	FACU
2. *Phalaris arundinacea*	10	No	FACW
3. *Amaranthus retroflexus*	3	No	FACU
4. *Commelina communis*	2	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30 feet)			
1. *Toxicodendron radicans*	10	Yes	FAC
2. *Parthenocissus quinquefolia*	10	Yes	FACU
	20 =Total Cover		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	10	x 3 =	30
FACU species	100	x 4 =	400
UPL species	0	x 5 =	0
Column Totals:	120 (A)		450 (B)

Prevalence Index = B/A = 3.75

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
Vegetation does not support hydrophytic status.

SOIL

Sampling Point: 2B

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/1	100					Loamy/Clayey	
10-20	10YR 2/1	85	10YR 5/8	5	C	M	Loamy/Clayey	Prominent redox concentrations
			10YR 5/1	10	D	M		

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

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

___ Coast Prairie Redox (A16)
___ Iron-Manganese Masses (F12)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:
Sandy Loam. Soil characteristics do not support hydric status.

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:
Geomorphic Position (D2) was present, but no other secondary indicators were observed. Area characteristics do not meet wetland hydrology status.

Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: 11/25/24

B. NAME AND ADDRESS OF PERSON REQUESTING PJD: Kirk Roth, 200 S. Meridian Street, Suite 330, Indianapolis, IN 46225

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:

This project is located on State Road (SR) 16, 8.80 miles west of United States (US) 421 in Jasper County, Indiana. The structure carries SR 16 over Spurgeon Ditch. The current structure is comprised of an unreinforced concrete pipe. The project area is surrounded by agricultural terrain. The proposed scope of this project is a small structure replacement. The current preferred alternative is to replace the reinforced concrete pipe structure with a 7-foot span, 5-foot rise, by 52-foot length structure. Pavement will be 11-foot lanes and 4-foot usable shoulders at the approach. Revetment riprap on geotextiles will be constructed at the inlet and outlet for scour protection. The existing guardrail will be removed and replaced. Excavation will occur at approximately 15 feet deep.

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

State: Indiana County/parish/borough: Jasper City: McCoysburg

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

Lat.: 40.86702 Long.: -87.04521

Universal Transverse Mercator: 16T 496190 m E 4523996 m N

Name of nearest waterbody: Spurgeon Ditch, Wetland 1,Wetland 2

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

☐ Office (Desk) Determination. Date:

☐ Field Determination. Date(s):

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

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
Wetland 1	40.86710	-87.04403	0.13 acre	wetland	Section 404, wetland
Wetland 2	40.86691	-87.04547	0.01 acre	wetland	Section 404, wetland
Spurgeon Ditch	40.86702	-87.04521	271 linear feet	non-wetland waters	Section 404, tributary

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

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

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

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

- ☒ Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
  Map: Corradino, LLC.
- ☒ Data sheets prepared/submitted by or on behalf of the PJD requestor.
  - ☐ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report. Rationale: _____.
- ☐ Data sheets prepared by the Corps: _____.
- ☐ Corps navigable waters' study: _____.
- ☒ U.S. Geological Survey Hydrologic Atlas: 071200020202 – Jordan Ditch/Slough Creek watershed.
  - ☒ USGS NHD data.
  - ☒ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite scale & quad name: 1:20,000 Wolcott.
- ☒ Natural Resources Conservation Service Soil Survey. Citation: NRCS Soil Survey - Jasper County.
- ☒ National wetlands inventory map(s). Cite name: USFWS-NWI V2 Wetland Mapping for Des. No. 2300980, Small Structure Replacement.
- ☐ State/local wetland inventory map(s): _____.
- ☒ FEMA/FIRM maps: Jasper County, Indiana.
- ☐ 100-year Floodplain Elevation is: _____.(National Geodetic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date): Indiana Statewide Aerial Imagery, 2022.
  or ☒ Other (Name & Date): Corradino, LLC - September 25, 2024.
- ☐ Previous determination(s). File no. and date of response letter: _____.
- ☐ Other information (please specify): _____.

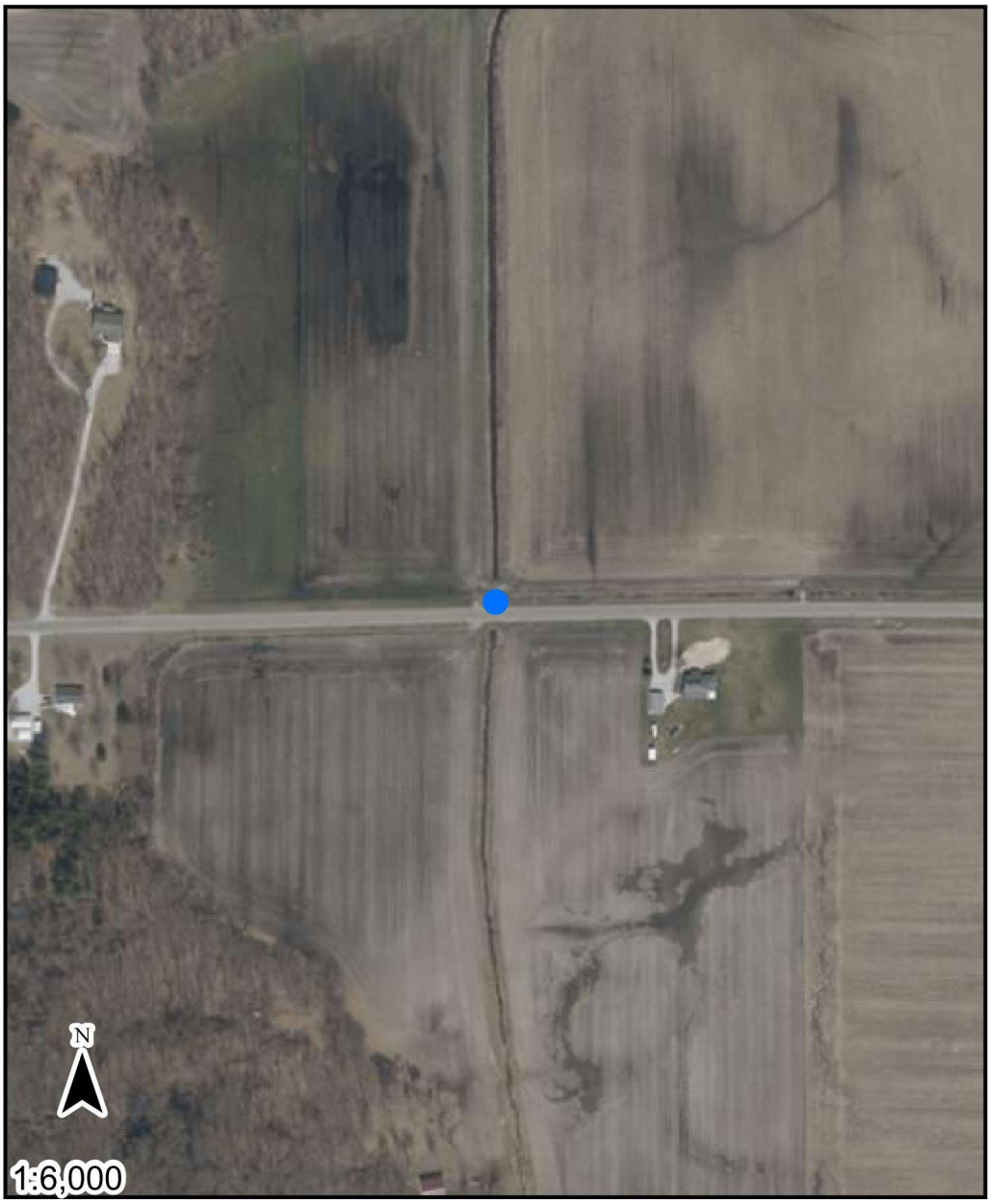
IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

_____	Kirk Roth Digitally signed by Kirk Roth Date: 2024.10.31 13:04:26 -04'00'
Signature and date of Regulatory staff member completing PJD	Signature and date of person requesting PJD (REQUIRED, unless obtaining the signature is impracticable)[1]

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

DNR Indiana Department of Natural Resources

Floodplain Analysis & Regulatory Assessment (FARA)



Point of Interest

Base Flood Elevation Point

POI

Not Mapped

FPA Jurisdictions

RGB

Red: Band_1

Green: Band_2

Blue: Band_3

Long: **-87.04510191592375**

Lat: **40.8670793438374**

The information provided below is based on the point of interest shown in the map above.

County: **Jasper**

Stream Name:
Spurgeon Ditch

Approximate Ground Elevation: **667.4 feet (NAVD88)**

Base Flood Elevation: **668.5 Feet (NAVD88)**

Drainage Area: **Not Available**

Best Available Flood Hazard Zone: **Not Mapped**

National Flood Hazard Zone: **Not Mapped**

Is a Flood Control Act permit from the DNR needed for this location? **See following pages**

Is a local floodplain permit needed for this location? **Contact your local Floodplain Administrator-**

Floodplain Administrator: **Mary Scheurich, Director, Jasper Co. Planning and Development**

Community Jurisdiction: **Jasper County, County proper**

Phone: **(219) 866-4908**

Email: **mary.scheurich@co.jasper.in.us**

US Army Corps of Engineers District: **Detroit**

Date Generated: 5/21/2025

Appendix G

Public Involvement

Des. No. 2300980

CORRADINO

March 14, 2025

[redacted]

Re: Jasper County Tax Parcel – [redacted]

NOTICE OF SURVEY

Dear Property Owner:

Corradino, on behalf of The Indiana Department of Transportation (INDOT), will perform a survey for the small structure replacement and associated work on SR 16, located in Jasper County, Indiana, Des No. 2300980. A portion of this survey work may be performed on your property in order to provide design engineers information for project design. The survey work will include mapping the location of features such as trees, buildings, fences, drives, ground elevations, etc. The survey is needed for the proper planning and design of this highway project.

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

Indiana Code 8-23-7-26 allows Corradino, as the authorized employees of INDOT, *Right of Entry* to the project site (including private property) upon proper notification. A copy of a Notice of Survey discussion sheet, as found on INDOT's website (http://www.in.gov/indot/2888.htm), is attached to this letter. Pursuant to Indiana Code 8-23-7-27, this letter serves as written notification that we will be performing the above noted survey in the vicinity of your property on or after September 15, 2024.

Corradino employees will show you their identification, if you are available, before coming onto your property.

If you own but are not the tenant of this property (i.e. rental, sharecrop), please inform us so that we may also contact the actual tenant of the property prior to commencement of our work. If you have any questions or concerns regarding our proposed survey work or schedule, please contact the Corradino Project Manager. This contact information is as follows:

Bruce Mahlie
200 S. Meridian St., Suite 330
Indianapolis, IN 46225
(317) 488-2363

CORRADINO

Under Indiana Code 8-23-7-28, you have a right to compensation for any damage that occurs to your land or water as a result of the entry or work performed during the entry. To obtain such compensation, you should contact the LaPorte District Real Estate Manager; contact information is below. The District Real Estate Manager can provide you with a form to request compensation for damages. Once you fill out this form, you can return it to the District Real Estate Manager for consideration. If you are not satisfied with the compensation that INDOT determines is owed to you, Indiana Code 8-23-7-28 provides the following:

> The amount of damages shall be assessed by the county agricultural extension educator of the county in which the land or water is located and two (2) disinterested residents of the county, one (1) appointed by the aggrieved party and one (1) appointed by the department. A written report of the assessment of damages shall be mailed to the aggrieved party and the department by first class United States mail. If either the department or the aggrieved party is not satisfied with the assessment of damages, either or both may file a petition, not later than fifteen (15) days after receiving the report, in the circuit or superior court of the county in which the land or water is located.

If you have questions regarding the rights and procedures outlined in this letter, please contact the Indiana Department of Transportation Central Office. This contact information is as follows:

1-855-INDOT4U (463-6848)
www.INDOT4U.com

Thank you in advance for your cooperation in this matter.

Sincerely,

Corradino, LLC

Bruce Mahlie

Bruce Mahlie

Appendix H

Air Quality

Des. No. 2300980

SPONSOR	CONTRACT # / LEAD DES	STIP NAME	ROUTE	WORK TYPE	DISTRICT	MILES	FEDERAL CATEGORY	Total Cost of Project*	PROGRAM	PHASE	FEDERAL	MATCH	2024	2025	2026	2027	2028
Indiana Department of Transportation	45594 / 2400065	A 10	US 231	ADA Sidewalk Ramp Construction	LaPorte	1.6	STBG	$624,000.00	Safety Consulting	PE	$166,400.00	$41,600.00		$208,000.00			
									Safety Construction	CN	$332,800.00	$83,200.00				$416,000.00	
Performance Measure Impacted: Safety																	
Location: ADA Work at Various Locations in the LaPorte District.																	
Comments:new. Add PE to FY2025. Add CN to FY2027.																	
Indiana Department of Transportation	45594 / 2400065	A 15	US 231	ADA Sidewalk Ramp Construction	LaPorte	1.6	STBG	$950,300.00	Safety Consulting	PE	$260,800.00	$65,200.00		$326,000.00			
Performance Measure Impacted: Safety																	
Location: ADA Work at Various Locations in the LaPorte District. from 0.16 mi. S. of SR 114 (Iroquois River Bridge) to 1.44 mi. N. of SR 114 (CR 400 S./Wood Rd.)																	
Comments:Increase PE FY25 $326,300 funds to $534,300.00																	
Indiana Department of Transportation	45664 / 2300980	A 19	SR 16	Small Structure Replacement	LaPorte	0	STBG	$746,021.00	Bridge Construction	CN	$422,400.00	$105,600.00				$528,000.00	
Performance Measure Impacted: Bridge Condition																	
Location: SR 16 Bridge over SPURGEON DITCH, 5.74 mi. E of US 231																	
Comments:New project. Add $528,000 to FY2027.																	
Indiana Department of Transportation	45810 / 2401220	A 18	SR 49	Bridge Deck Replacement	LaPorte	0	STBG	$7,560,261.00	Bridge ROW	RW	$64,000.00	$16,000.00			$80,000.00		
									Bridge Consulting	PE	$1,200,492.00	$300,123.00		$1,500,615.00			
Performance Measure Impacted: Bridge Condition																	
Location: Over Kankakee River, 04.59 mi S SR 8, Wheatfield Ditch, 0.60 mi N SR 10 and over Cook Ditch 4 mi S of SR 8; US231 over Tyler Ditch 0.14 mi S of SR 10																	
Comments:Add PE FY2025 and RW FY2026. Include DES 2401220, 2401219, 2401221, and 2401254																	
Jasper County	46042 / 2401556	A 17	IR 1001	Pavement Markings	LaPorte	7.21	STBG	$314,126.00	Local Funds	CN	$0.00	$25,412.60			$25,412.60		
									Local Safety Program	PE	$54,000.00	$0.00			$54,000.00		
									Local Safety Program	CN	$228,713.40	$0.00			$228,713.40		
									Local Funds	PE	$0.00	$6,000.00			$6,000.00		
Performance Measure Impacted: Safety																	
Location: Various locations along SR10 Jasper County																	
Comments:new. Adding PE and CN in FY26																	

Jasper County Total

Federal: $85,067,626.80 Match :$12,682,157.20 2024: $12,314,564.00 2025: $20,195,194.00 2026: $29,011,026.00 2027: $33,905,000.00 2028: $2,324,000.00

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

Appendix I

Additional Studies

Des. No. 2300980

Culvert Inspection Report

Structure Information

Structure:	CV 016-037-20.50	Facility Carried:	SR 16
Structure Number:	93004507	Features Intersected:	SPURGEON DITCH

Inspection Information

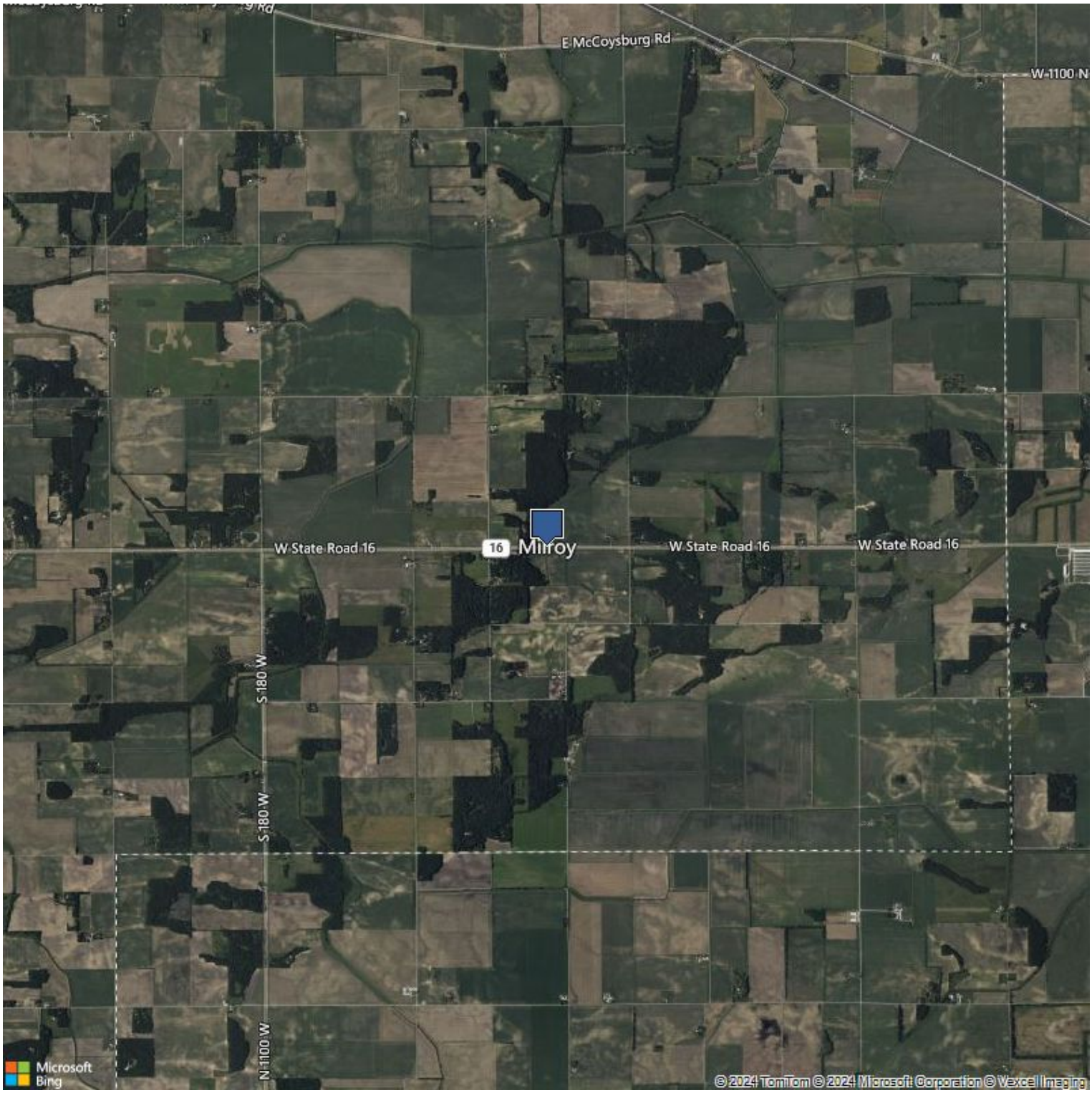
Inspection Date:	03/26/2024	Lead Inspector:	Amy Wines
Inspection Type:	Culvert	Additional Inspectors:	Amy Wines

Condition Ratings Summary

Culvert:	**5**	Substructure:	**N**
Deck:	**N**	Channel & Channel Protection:	**6**
Superstructure:	**N**		

Structure:	CV 016-037-20.50	Facility Carried:	SR 16	Inspector:	Amy Wines
Str. Number:	93004507	Features Intersected:	SPURGEON DITCH	Inspection Date:	03/26/2024

Location Map



Location:	5.74 mi. E of US 231	Latitude:	40.86702
County:	Jasper	Longitude:	-87.04521

Structure:	CV 016-037-20.50	Facility Carried:	SR 16	Inspector:	Amy Wines
Str. Number:	93004507	Features Intersected:	SPURGEON DITCH	Inspection Date:	03/26/2024

Inspection Summary

Routine Inspection

Only the top couple inches of this pipe was visible at the time of this inspection with no issues noted. The land owner states that the county did ditching work to the north that has increased the amount of water flow. The pipe now seem hydraulically insufficient. Keeping the frequency to 24 months and the rating to 5 due to the inability to inspect the entire pipe in several years.

Structure:	CV 016-037-20.50	Facility Carried:	SR 16	Inspector:	Amy Wines
Str. Number:	93004507	Features Intersected:	SPURGEON DITCH	Inspection Date:	03/26/2024

Identification

Structure Number:	93004507	Year Built:	0000
Structure:	CV 016-037-20.50	Inspection Date:	03/26/2024
Highway Agency District:	04 - La Porte	Inspection Frequency:	24
Subdistrict:	4400 - Rensselaer Subdistrict	Addt'l Treatment Exist?	False
Type Of Service (Under):	0 - Other	County Code:	037 - Jasper
Facility Carried:	SR 16	Ramp Id:	
Features Intersected:	SPURGEON DITCH	Offset:	50
Location:	5.74 mi. E of US 231	Reference Post:	20
		Milepoint:	20.5
		Latitude:	40.86702
		Longitude:	-87.04521
Add'l Location Description:	(SLOUGH CREEK)		

Classification

Maintenance Responsibility:	01 - State Highway Agency	Owner:	01 - State Highway Agency
National Highway System Inventory Route:	0 - Inventory Route is not on the NHS	Functional Classification:	02 - Rural - Principal Arterial - Other

Geometric Data

Kind Of Material:	1	Max Vertical Opening (FT):	4
Max Horizontal Opening (FT):	4	Original Culvert Shape:	Round
Culvert Barrel Length (FT):	80.0	Skew:	
Minimum Estimated Fill Cover (FT):	6.00		
Measurement Remarks:			
Structural Additional Description:	Concrete Pipe		

Structure:	CV 016-037-20.50	Facility Carried:	SR 16	Inspector:	Amy Wines
Str. Number:	93004507	Features Intersected:	SPURGEON DITCH	Inspection Date:	03/26/2024

Culvert Condition Ratings

Culverts:	5 - Fair Condition
Structure submerged more than 3/4 at time of inspection. Rating is being kept 5 due to inability to inspect the inside clearly.	
Deck:	N - Not Applicable
N	
Superstructure:	N - Not Applicable
N	
Substructure:	N - Not Applicable
N	
Channel / Channel Protection:	6 - Bank slump. widespread minor damage
Both channels have brush growth on there banks. The north channel drains into another culvert which runs under a land bridge. The county ditched the channel to the north.	
Culvert Rails:	N - NA/Safety feature not required
N	
Transitions:	N - NA/Safety feature not required
N	
Approach Guardrail:	N - NA/Safety feature not required
N	
Approach Guardrail Ends:	N - NA/Safety feature not required
N	
Is Culvert Obstructed?	False
N	
Overtopping Frequency:	2 - Slight - 11 to 100 Years
N	

Headwall / Anchor Rating:	N	Channel Alignment Rating:	6
Wingwall Ratings:	N	Birds Present?:	N
Bank Erosion Ratings:	6	Bats Present?:	No
Drift / Sediment Rating:	5		

Structure:	CV 016-037-20.50	Facility Carried:	SR 16	Inspector:	Amy Wines
Str. Number:	93004507	Features Intersected:	SPURGEON DITCH	Inspection Date:	03/26/2024

Structure:	CV 016-037-20.50	Facility Carried:	SR 16	Inspector:	Amy Wines
Str. Number:	93004507	Features Intersected:	SPURGEON DITCH	Inspection Date:	03/26/2024

PHOTO #: Channel looking south

PHOTO #: South profile

Structure:	CV 016-037-20.50	Facility Carried:	SR 16	Inspector:	Amy Wines
Str. Number:	93004507	Features Intersected:	SPURGEON DITCH	Inspection Date:	03/26/2024

PHOTO #: West road alignment

PHOTO #: North profile

Structure:	CV 016-037-20.50	Facility Carried:	SR 16	Inspector:	Amy Wines
Str. Number:	93004507	Features Intersected:	SPURGEON DITCH	Inspection Date:	03/26/2024

PHOTO #: North channel alignment

PHOTO #: South channel alignment

Structure:	CV 016-037-20.50	Facility Carried:	SR 16	Inspector:	Amy Wines
Str. Number:	93004507	Features Intersected:	SPURGEON DITCH	Inspection Date:	03/26/2024

PHOTO #: South road alignment

PHOTO #: Channel looking north

Structure Information

Structure Number:	CV 016-037-20.50	Facility Carried:	SR 16
NBI Number:	93004507	Features Intersected:	SPURGEON DITCH
County / District:	Jasper	Location:	5.74 mi. E of US 231

Land and Water Conservation Fund (LWCF) County Property List for Indiana (Last Updated March 2022)

ProjectNumber	SubProjectCode	County	Property
1800268	1800268	Jasper	Brook Side Park (LaRue Pool)
1800355	1800355	Jasper	Spencer Park
1800385	1800385	Jasper	Spencer Park
1800438	1800438	Jasper	Remington Town Park
1800603	1800603	Jasper	Remington Community Park

*Park names may have changed. If acquisition of publically owned land or impacts to publically owned land is anticipated, coordination with IDNR, Division of Outdoor Recreation, should occur.

Bridge/Structure Bat Assessment Form

Date & Time of Assessment	DOT Project Number	Route/Facility Carried	County
9-25-24; 10:30 am	2300980	SR 16	Jasper
Federal Structure ID	**Structure Coordinates (latitude and longitude)**	**Structure Height (approximate)**	**Structure Length**
CV 16-037-20.50	40.86702 -87.04521	3 feet	80 feet

Structure Type (check one)

Bridge Construction Style

- ○ Cast-in-place
- ○ Flat Slab/Box
- ○ Truss (Side View)
- ○ Parallel Box Beam
- ○ Pre-stressed Girder
- ○ Steel I-beam
- ○ Covered
- ○ Other:

Culvert Type

- ◉ Box
- ◉ Pipe/Round
- ○ Other:

Other Structure

- ○

Structure Material (check all that apply)

Deck Material	*Beam Material*	*End/Back Wall Material*
☐ Metal	☐ None	☐ Concrete
☐ Concrete	☐ Concrete	☐ Timber
☐ Timber	☐ Steel	☐ Stone/Masonry
☐ Open grid	☐ Timber	☐ Other:
☐ Other:	☐ Other:	

Creosote Evidence

- ○ Yes ○ No
- ○ Unknown

Culvert Material

- ☐ Metal
- ☒ Concrete
- ☐ Plastic
- ☐ Stone/Masonry
- ☐ Other:

Notes:

Crossings Traversed (check all that apply)

☐ Bare ground	☐ Open vegetation
☐ Rip-rap	☐ Closed vegetation
☐ Flowing water	☐ Railroad
☒ Standing water	☐ Road/trail - Type:
☐ Seasonal water	☐ Other:

Surrounding Habitat (check all that apply)

☒ Agricultural	☐ Grassland
☐ Commercial	☐ Ranching
☐ Residential-urban	☐ Riparian/wetland
☐ Residential-rural	☐ Mixed use
☐ Woodland/forested	☐ Other:

Areas Assessed (check all that apply)

Check all areas that apply. If an area is not present in the structure, check the "not present" box.
Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.

Area (check if assessed)	Assessment Notes	Evidence of Bats (include photos if present)
☒ All crevices and cracks: **Bridges/culverts:** rough surfaces or imperfections in concrete **Other structures:** soffits, rafters, attic areas	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Concrete surfaces (open roosting on concrete)	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Spaces between concrete end walls and the bridge deck	☒ Not present; Checked all stone encasing the metal pipe	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Crack between concrete railings on top of the bridge deck (Gap / Railing)	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Vertical surfaces on concrete I-beams	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Spaces between walls, ceiling joists	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Weep holes, scupper drains, and inlets/pipes	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ All guiderails	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ All expansion joints	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species

Name: Kirk Roth

Signature: 

Bridge Abbreviated Engineer's Assessment
NBI: 93004507 for 6/29/2022

5/14/2023

Bridge — Approved

Last Edited Date	1/13/2023	**Work Type**	Small Structure Replacement
Last Updated By	System, DTIMS	**Work Category**	District Small Structure Project
Proposed FY	2028	**Score**	73
Record ID	18550	**NBI #**	93004507

Bridge Project Details

Original Submittal CN cost		**CN Cost**	
Original Submittal Year	2028	**District Revised Year**	2028
Original Submittal Work Type	BMS Replace Cul	**District Revised Work Type**	Small Structure Replacement

Bridge Attributes

AADT	1222	**AADT Truck**	267
On NHS	0 - Not on the NHS	**Functional Class**	3 - Principal Arterial - Other
District	4	**Sub**	
County	37 - Jasper	**Route**	SR 16
Reference Post		**Offset**	
Latitude		**Longitude**	
Existing Structure	CV 016-037-20.50	**Structure Type**	UnReinforced Concrete Pipe -
Route Over		**Route Under**	SPURGEON DITCH
Year Built	0	**Inspection Date**	3/01/2023
Year Reconstruct		**Load Rating**	Tons
Structure Length	58.00 Ft	**Deck Wear Surface**	
Deck Width		**Condition Of Deck**	
Area	Sq Ft	**Condition Of Super Structure**	N
Lanes Over		**Condition Of Sub Structure**	N
Lanes Under		**Scour Critical Evaluation Rating**	7
Max Length Span	4 Ft	**Number Of Main Spans**	
Historical Significance		**Culvert Condition**	
Functional Class	3 - Principal Arterial - Other		

Past and Committed Projects Completed on this NBI

Des	Status	Contract	Letting	CN $	Work Type	ADT	ADT Year

Project Proximity Search using 0.00 mile radius

FY	Awarded	To Let	Call	Prop.	Prov.	CN $

Purpose/Need of Project

Full Scope Needed? No **Historic Bridge Alt Analysis needed?** No

Purpose and Need

SR16 is a two-lane roadway over Spurgeon Ditch with two 12-foot lanes, with 1-foot paved shoulders. The structure is a 48" RCP. The structure has not ben inspected since prior to 2019 due to increase in flow through the culvert due to county drain volume increase.

The purpose of this project is to rehabilitate the existing structure to a good condition (all elements are rated 8 or higher).

Alternatives Considered

Recommended Option and Analyzed Alternatives with Costs

SR16 is a two-lane roadway throughout the project length. The current project scope is not considered a preventive maintenance treatment per IDM Fig 412-1A.

ALTERNATIVE ANALYSIS:
The viable rehabilitation options that meet the need and achieve the purpose of the project are replacement options only. Lining options were not included as the structure is a county regulated drain, and White County requested only replacement options to be considered as the county suspects liners would increase the headwater due to the low elevation of the channel where the structure is located. The replacement options from the INDOT Hydraulics memo are as follows:

OPTION #1: Corrugated Circular Pipe with Flared End Section or Headwall, 72" ID
Cost: $493,500

OPTION #2: Smooth Circular Pipe, 72" ID
Cost: $460,700

OPTION #3: RCB 7' x 5'
Cost: $460,700

From the replacement options considered, Option #1 and #3 are the most cost-effective options to minimize hydraulic issues. Given the hydraulic analysis of these options, Option #3 provides greater hydraulic capacity.
1. Remove existing pipe culvert and replace with 7'x5' RCB.
2. Install a revetment riprap inlet and outlet aprons.

Consequences If No Action Is Taken (Do Nothing Alternative Is Selected)

Secondary Considerations or Goals With Costs
PAVEMENT:
Replace pavement per DM 22-03.
Aggregate shoulder will be re-established with Compacted Aggregate #73. HMA millings may be screened to meet Compacted Aggregate #73 gradation standards and used in lieu of Compacted Aggregate #73.

CROSS SECTION AND GEOMETRY:
- No significant changes to horizontal or vertical geometry of SR16 is required.
- Maintain/match existing cross slopes and side slopes
- No sight distance corrections are required.
- Maintain existing lane widths.

GUARDRAIL: The existing structure is currently protected with guardrail and shall be replaced in kind. MGS cannot be used at this location due to the adjacent field entrances near the structure.

SECONDARY CONSIDERATIONS:
Hydraulic analysis is complete, and additional analysis is not required in the design portion of the project.
Will Further Analysis/Assessment Be Required Beyond This Form? No

Solve It: Project Recommendations And Costs

Potential Design Exceptions and Practical design Ideas

Estimated Total Project Costs

Phase	Amount	Comments
Right of Way Purchase	$ 30,000	ROW reacquisition and add'l ROW may be required
Preliminary Engineering 1		
Railroad PE	$ 5,000	No RR within project limits
Utilities PE	$ 25,000	Relocation is not anticipated
Construction Total	**$ 460,700**	
Construction	$ 460,700	
ADA		
Sidewalks/ Multi Use Paths		
Small Culverts		
OH Sign Structures		
MSE Walls		
Noise Walls		
Rest Areas		
Traffic Signal		
ITS		
Remainder of CN after Asset Costs		
Total	$520,700	

Maintenance of Traffic

Can the road be closed to traffic?	No	**Interstate Congestion Policy Waiver Required**	No
Significant Work Zone Impacts	No	**Anticipated MOT Scheme Value**	Phased - Temporary
Transportation Operation Plan Requ	No	**Public Operation Plan Required**	No
Traffic Count Sites	No	**Pedestrian Detour**	No

Pedestrian Detour Notes

Miscellaneous Notes

Environmental Factors Notes

Project Delivery Notes

Additional / Potential Environmental Issues

Tree Clearing	Yes
Fish	No
Bats	No
Historical	No
Potential Hazardous Coatings	No

Additional Comments

Bridge Abbreviated Engineer's Assessment
NBI: 93004507 for 6/29/2022

Supporting Documents

Document Type	Document Name	Date
SupportingDocuments	EngRpt SWZIDW 93004507.docx	10/12/2022 5:09:5
Photos	LargeCulvInspRpt Pics 93004507 (CV 016-037-20.50).pdf	9/15/2022 11:22:51
HydraulicReports	HYD HydroMemo CV 016-037-20.50 08-30-2022.pdf	9/15/2022 11:22:15
CostEstimates	EngRpt CostEst-03 93004507.pdf	10/12/2022 5:09:5
InspectionReports	EngRpt LargeCulvInspRpt 93004507 (CV 016-037-20.50).pdf	9/15/2022 11:22:31
SupportingDocuments	EngRpt ScoringSheet NBI93004507 (CV 016-037-20.50).pdf	10/12/2022 5:34:0

Report Prepared By and Approved By

Title	Signature	
Prepared by	South, Paul	10/12/2022
Reviewed by Scoping Manager	South, Paul	12/8/2022
Concur by Asset Engineer	Nesper, Christopher	1/5/2023
Approved by SAM	Benczik, Steve	1/13/2023

Submittal Type	Major	Submittal Year	2028

Images

INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758 - Hydraulics
Indianapolis, Indiana 46204

PHONE: (317) 233-2096
FAX: (317) 233-4929

Eric Holcomb, Governor
Michael Smith, Commissioner

08/30/2022

TO: Steven Vanes
INDOT Highway Assessment Engineer

FROM: Sinan Hamad, P.E.
INDOT Engineer
shamad@indot.in.gov

THROUGH: Alex Schwinghamer, P.E.
INDOT Engineer

SINAN HAMAD
REGISTERED
No.
12200290
STATE OF
INDIANA
PROFESSIONAL ENGINEER

SUBJECT: Hydraulic Review
Des. #: N/A
Asset Name: CV 016-037-20.50
County: Jasper
Location: 8.8 miles W of US 421
Crossing: Spurgeon Ditch
DNR CIF Permit Required (Y/N): No
Legal Drain (Y/N): Yes

Site Parameters		
Drainage Area	0.47	sq. mi.
Q_{100} (AEP 1%) Discharge	260.00	cfs
Q_{25} (AEP 4%) Discharge for velocity	164.10	cfs
Q_{100} (AEP 1%) Tailwater Depth	9.52	ft.
US Edge of Travel Lane	95.83	ft.
Design Roadway Serviceability Elevation	95.83	ft.

Culvert Properties								
Parameter	**Existing**		**Proposal 1**		**Proposal 2**		**Proposal 3**	
Structure Size & Type	RCP 4’ ID		Corrugated Circular Pipe with Flared End Section or Headwall 72” ID		Smooth Circular Pipe 72” ID		RCB 7’ x 5’	
Q_{100} Headwater Elevation	96.92	ft.	96.69	ft.	96.68	ft.	96.62	ft.
Q_{25} (AEP 4%) Headwater Elevation	96.32	ft.	95.75	ft.	95.70	ft.	95.37	ft.
Meets Roadway Serviceability @ Q_{25} (AEP 4%)	No		Yes		Yes		Yes	
Backwater	1.04	ft.	0.83	ft.	0.82	ft.	0.82	ft.
Minimal Low Structure Elevation (DS)	90.01	ft.	91.01	ft.	91.01	ft.	90.01	ft.
Assumed Flowline Elevation (DS)	86.01	ft.	86.01	ft.	86.01	ft.	86.01	ft.
Sump Depth	0	in.	12	in.	12	in.	12	in.

100 North Senate Avenue
Room N758 - Hydraulics
Indianapolis, Indiana 46204

PHONE: (317) 233-2096
FAX: (317) 233-4929

Eric Holcomb, Governor
Michael Smith, Commissioner

The existing structure is a reinforced concrete pipe with grooved end projecting inlet underneath SR 16 in Jasper County, with an inside diameter of 4 feet and riprap at the inlet. The structure outlets to a smooth metal culvert that was analyzed to conclude its hydraulic effects on the structure upstream. The contributing drainage area is smaller than 1 square mile, thus a CIF permit is not required to replace the structure.

The structure is on a county-regulated ditch per the county GIS system. The county surveyor requested the replacement structure be set to the original ditch flowline; the provided proposals call for a structure sump depth of 12 inches. Further coordination must be made with the county surveyor office, below is the county surveyor's contact information:

Vincent A. Urbano
219-866-4907
vince.urbano@co.jasper.in.us
115 West Washington St.
Rensselaer, IN 47978

The district requested rehabilitative and replacement options for this structure, however, liner options for smooth pipes are not considered.

- Proposal 1 is for a corrugated circular pipe with inside diameter of 72 inches and a flared end section or a headwall. The pipe must have a sump depth of 12 inches below the existing channel flowline.
  A corrugated pipe can be installed without a flared end section or a headwall, however, the diameter must be increased to 78 inches.

- Proposal 2 is for smooth circular pipe with and inside diameter of 72 inches and a projecting inlet condition. The pipe must have a sump depth of 12 inches below the existing channel flowline.

- Proposal 3 is for a reinforced concrete box with a span of 7 ft and a rise of 5 ft. The structure must have a sump depth of 12 inches below the existing channel flowline.

All elevations provided are based on LiDAR data, which is sufficient for this analysis, but should not be used for other purposes. The cover over the structure should be checked using survey data.

Riprap Design Recommendations

Riprap Properties						
Parameter	**Proposal 1**		**Proposal 2**		**Proposal 3**	
Outlet Velocity @ Q_{25}(AEP 4%)	6.55	ft/s	6.55	ft/s	6.08	ft/s
Outlet Riprap Size	Class 1		Class 1		Revetment	
Inlet Riprap Needed (Y/N)	Yes		Yes		Yes	
Natural Channel Velocity @ Q_{25}(AEP 4%)	4.15					ft/s
Minimal Inlet Riprap Size if Warranted	Revetment					

INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758 - Hydraulics
Indianapolis, Indiana 46204

PHONE: (317) 233-2096
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Eric Holcomb, Governor
Michael Smith, Commissioner

Riprap on geotextiles is required to be used at the outlet and inlet and to be placed according to IDM Figure 203-2J and the table above for proposals 1 and 2. Proposal 3 requires riprap as per the table above at the inlet and outlet on geotextiles per Standard Drawing E714-BCSP and IDM Figure 203-2J.

Alternative scour protection designs should be submitted to the INDOT Office of Hydraulics for review and approval.

If you have any questions or comments, please contact INDOT Hydraulic Engineering at (317) 234-3840.

cc: file

DETERMINATION OF SIGNIFICANT WORK ZONE IMPACTS

Route: SR16 De 93004507 Project Development Stage: EngRpt Date: 10/12/22

Note: this worksheet should be completed during scoping and the results placed in the SPMS project schedule.

1. Determination by Federal Rule (Interstate corridors only)		YES	NO
	a. Is the project in a Traffic Management Area (see list below)?	☐	☐
	b. Will travel lane(s) be affected, continuously or intermittently, for more than three days?	☐	☐
	If answers to both 1a and 1b are yes, then the project is significant If no proceed to item 2, If yes, item 2 may be skipped	Significant ☐	
2. Determination by INDOT Policy (All INDOT corridors)			
	a. Is project scope major reconstruction or new construction?	☐	☒
	b. Is AADT > 12,000 for 2 lane roads or 30,000 for multilane?	☐	☒
	c. Is the project in an urban or suburban area?	☐	☒
	d. Will mobility along corridor be significantly impacted?	☒	☐
	e. Will capacity of the highway be significantly reduced?	☐	☒
	f. Will alternative routing be needed?	☐	☒
	g. Will communities, local businesses, schools, hospitals be significantly impacted?	☒	☐
	h. Are seasonal impacts significant?	☐	☒
	i. Are grade changes significant?	☐	☒
	If the answers to one or more of 2a thru 2i are yes, then the project may be significant – engineering judgment should be applied. If answers to all questions are no, then project is non-significant.	Significant ☐ Non-Significant ☒	
3. Comments:			

Indiana Traffic Management Areas:

- Gary (all of Lake, Porter, and La Porte counties)
- South Bend/Elkhart (all of St Joseph and Elkhart counties)
- Fort Wayne (all of Allen County)
- Indianapolis (all of Marion, Boone, Hamilton, Hancock, Hendricks, Johnson, Madison, and Shelby counties)
- Evansville (all of Vanderburgh and Warrick counties)
- Cincinnati (all of Dearborn County)
- Louisville (all of Clark and Floyd counties)

Editable Determination of Significant Work Zone Impact Worksheet