FHWA-Indiana Environmental Document

CATEGORICAL EXCLUSION / ENVIRONMENTAL ASSESSMENT FORM

GENERAL PROJECT INFORMATION

Road No./County:	State Road (SR) 66/Spencer County
Designation Number(s):	2100830 and 2100831
Project Description/Termini:	SR 66 Small Structures Replacement Project, 1.00 Mile East of the West Junction with SR 161 and 1.01 Mile East of the West Junction with SR 161

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

RF 12/4/2024

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: Cameron Berry, ASC Group, Inc.

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 Survey/Entry letters were mailed to potentially affected property owners near the project area on July 25, 2023, notifying them about the project and that individuals responsible for land surveying and field activities may be seen in the area. A sample copy of the Notice of Survey/Entry letter is included in Appendix G (Appendix G: G-2 to G-4).

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.

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: Vincennes

Local Name of the Facility: SR 66

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 based on poor condition and inadequate hydraulics of the small structures (Structure Nos. CV 066-074-51.61 and CV 066-074-51.62). The existing structures are showing signs of deterioration with vertical cracking and efflorescence present along the sidewalls and slabs on the inside of the structures. Moderate spalling with exposed corroded reinforcement is visible in the widening beam and moderate leaching is visible on the abutment seat at Structure No. CV 066-074-51.62. Delamination is also present along the guardrails, which are present at the structures and along the SR 66 roadway. Based on Hydraulic Memos, the

existing structures can overtop the roadway during 100-year storm events. The structures have condition ratings of 5 (fair) and 4 (poor), respectively, out of a possible 9. Per the INDOT Bridge Condition Rating Categories Table, structures are rated on a 0 to 9 numeric scale, with 9 being excellent and 0 being failed. These conditions for both structures can be found in the October 24, 2019 (CV 066-074-51.61) and October 16, 2024 (CV 066-074-51.62), INDOT Culvert Inspection Reports and Hydraulic Memos (Appendix I: I-3 to I-32 and I-48 to I-57).

Purpose:
The purpose of this project is to provide structurally adequate structures that meet INDOT hydraulic standards, to ensure continued traffic on SR 66, and to extend the service life of the structures by improving overall condition ratings to that of at least a 7 (good condition) or greater.

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Spencer Municipality: Luce and Ohio Townships

Limits of Proposed Work: Approximately 550 ft east and 240 ft west of North (N) County Road (CR) 500 West (W) along SR 66 and 135 ft north and 120 ft south of SR 66 along CR 500 West

Total Work Length: 0.15 Mile(s) Total Work Area: 2.22 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 a small structures replacement project on SR 66.

Location:
This project is located on SR 66, 1.00 mile and 1.01 mile east of the west junction with SR 161, in Sections 13, 14, 23, and 24, Township 7 South, Range 7 West, Luce and Ohio Townships, Spencer County, Indiana (Appendix B: B-2 to B-4).

Existing Conditions:
This section of SR 66 is a two-lane Rural – Principal Arterial roadway that consists of two 12-foot (ft) wide travel lanes bordered by minimal shoulders. The existing small structures carry SR 66 over unnamed tributaries (UNTs) to Willow Pond Ditch and James E. Payne Legal Drain. Structure No. CV 066-074-51.61 is a reinforced concrete box structure measuring 34-ft long, 8-ft wide by 4-ft rise and Structure No. CV 066-074-51.62 is a reinforced concrete box structure measuring 34-ft long, 8-ft wide by 2-ft 6-inch rise. Based on the 2019 and 2024 Culvert Inspection Reports, the structures are showing signs of deterioration with vertical cracking and efflorescence present along the sidewalls and slabs on the inside of the structures (Appendix I: I-3 to I-32). Delamination is also present along the guardrails, which are present at the structures and along the SR 66 roadway. During 100-year flood events, the roadway can be overtopped at the existing structures. Land use in the vicinity of the project is rural and agricultural.

Preferred Alternative:
The preferred alternative will remove and replace the two small structures (Structure Nos. CV 066-074-51.61 and CV 066-074-51.62) along the SR 66 roadway over UNTs to Willow Pond Ditch and James E. Payne Legal Drain. The existing structures will be removed and the ground will be filled in and shaped to allow for proper drainage. The existing structures will be replaced with precast concrete box (PCB) culverts that measure 66-ft long, 16-ft wide by 4-ft rise each. The structures will be sumped 12-inches. The replacement structure for Structure No. CV 066-074-51.61 will be relocated approximately 65-ft to the west of the existing structure and the replacement structure for Structure No. CV 066-074-51.62 will be relocated approximately 60-ft to the east of the existing structure.

Class I and revetment riprap will be placed over geotextile at the inlet and outlets of the replacement structures. Compacted aggregate will be added at the field entrance and removed upon the completion of construction. One sodded ditch and several seeded and revetment riprap ditches will be constructed for roadside drainage. A subgrade treatment and hot mix asphalt (HMA) overlay will be conducted on the approach pavement to accommodate the installation of the replacement structures.

The preferred alternative will require impacts to resources. The anticipated impacts include terrestrial habitat impacts, due to soil excavation as well as stream and wetland impacts from construction. Detailed information regarding these anticipated impacts can be found in the Identification and Evaluation of Impacts portion of this document. Measures have been incorporated at various stages of this project to avoid, minimize, or mitigate impacts to resources. These include measures to protect the stream from bank erosion due to scouring and excess downstream sedimentation, to protect the wetland from impacts due to excavation and construction access, and to protect terrestrial habitat from soil impacts due to excavation and construction access. Plans can be found in Appendix B (Appendix B: B-9 to B-27).

The project will meet the purpose and need by providing structurally adequate structures and ensuring continued traffic on SR 66 by improving overall condition ratings to that of at least a 7 (good condition) or greater. The new structures will meet current INDOT hydraulic design and prevent overtopping during a 100-year flood event. The total project length of 0.150 mile will extend between 35-ft and 135-ft from the SR 66 centerline. The termini were developed to be based on the work required to replace the small structures along the SR 66 roadway and will be limited to only what is required for construction and to satisfy the purpose and need. This project has independent utility because it does not rely on any other projects for completion.

The maintenance of traffic (MOT) for the project will require a road closure and a subsequent detour route utilizing SR 161, SR 62, SR 162, and US 231. Full details of the MOT can be found in the MOT During Construction section of this document and in Appendix B (Appendix B: B-11 to B-13).

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.

The other alternatives that were considered for this project are listed in this section. Additional details regarding the following alternatives can be found in the Bridge Scoping Application Reports and Hydraulic Memos (Appendix I: I-33, I-40, and I-48 to I-57).

No Build

This alternative would have required doing no work to the existing small structures. While this alternative would have had no environmental impacts and no cost, it would not have improved the condition of the structures or roadway and would not have met the purpose and need. Therefore, this alternative has been dismissed from further consideration.

Pipe Arch and Elliptical Structure Replacements Alternative

This alternative would have required the replacement of the existing small structures with a pipe arch or an elliptical structure. The proposed replacement structures would have need to be sumped 6 inches. Additionally, a design exception would have been warranted for the replacement structures as a significantly larger structure would have been required to meet the roadway serviceability requirements. Due to the site constraints and design requirements, this alternative has been dismissed from further consideration.

Structure No. CV 066-074-51.61

10-ft by 5-ft Reinforced Concrete Box (RCB) Alternative

This alternative would have required the replacement of the existing small structure with a RCB culvert measuring 10-ft by 5-ft with a 12-inch sump. This alternative would not have met the INDOT serviceability freeboard requirement of 1-ft below the travel lane. This requirement ensures that additional capacity would be included in the structure design to account for flood events and to prevent water from overtopping the roadway. While this alternative would have met the purpose and need, the proposed structure lacked the freeboard design and would not have met the INDOT requirement. Therefore, this alternative has been dismissed from further consideration.

13-ft by 5-ft RCB Alternative
This alternative would have required the replacement of the existing small structure with a RCB culvert measuring 13-ft by 5-ft with a 12-inch sump. While this alternative would have met the INDOT serviceability freeboard requirement of 1-ft below the travel lane and would have met the project purpose and need, it would have had additional environmental impacts and higher costs. Therefore, this alternative has been dismissed from further consideration.

Structure No. CV 066-074-51.62
9-ft by 3-ft RCB Alternative
This alternative would have required the replacement of the existing small structure with a RCB culvert measuring 9-ft by 3-ft with a 6-inch sump. This alternative would not have met the INDOT serviceability freeboard requirement of 1-ft below the travel lane. This requirement ensures that additional capacity is included in the structure design to account for flood events and to prevent water from overtopping of the roadway. While this alternative would have met the purpose and need, the proposed structure lacked the freeboard design and would not have met the INDOT requirement. Therefore, this alternative has been dismissed from further consideration.

13-ft by 5-ft RCB Alternative
This alternative would have required the replacement of the existing small structure with a RCB culvert measuring 13-ft by 5-ft with a 24-inch sump. This alternative would not have met the INDOT serviceability freeboard requirement of 1-ft below the travel lane; however, no overtopping would have occurred. While this alternative would have met the purpose and need, the necessary construction would have required additional environmental impacts. Therefore, this alternative has been dismissed from further consideration.

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 66				
Functional Classification:	Rural – Principal Arterial				
Current ADT:	11,203	VPD (2026)	Design Year ADT:	12,354	VPD (2046)
Design Hour Volume (DHV):	1,272	Truck Percentage (%)	10.29		
Designed Speed (mph):	55	Legal Speed (mph):	55		

	Existing		Proposed	
Number of Lanes:	2		2	
Type of Lanes:	Through lanes		Through lanes	
Pavement Width:	12	ft.	12	ft.
Shoulder Width:	2–3	ft.	3	ft.
Median Width:	N/A	ft.	N/A	ft.
Sidewalk Width:	N/A	ft.	N/A	ft.

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

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 066-074-51.61 Sufficiency Rating: N/A
(Rating, Source of Information)

	Existing		Proposed	
Bridge/Structure Type:	34-ft long, 8-ft wide by 4-ft rise RCB structure		66-ft long, 16-ft wide by 4-ft rise PCB structure	
Number of Spans:	N/A		N/A	
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:	N/A	ft.	N/A	ft.
Shoulder Width:	N/A	ft.	N/A	ft.

Structure/NBI Number(s): CV 066-074-51.62 Sufficiency Rating: N/A
(Rating, Source of Information)

	Existing		Proposed	
Bridge/Structure Type:	34-ft long, 8-ft wide by 2-ft 6-inch rise RCB structure		66-ft long, 16-ft wide by 4-ft rise PCB structure	
Number of Spans:	N/A		N/A	
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:	N/A	ft.	N/A	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.

There are two culverts present within the project area. Structure No. CV 066-074-51.61 is a RCB structure measuring 34-ft long, 8-ft wide by 4-ft rise and Structure No. CV 066-074-51.62 is a RCB structure measuring 34-ft long, 8-ft wide by 2-ft 6-inch rise. These structures are the focus of the project and details about these structures can be found in the Project Description section of this document and in the Bridge Scoping Application Reports and INDOT Culvert Inspection Reports (Appendix I: I-3 to I-47). The existing structures will be removed and the ground filled and shaped for drainage, while the replacement structures will be relocated. The replacement structures will be 66-ft long, 16-ft wide by 4-ft rise reinforced concrete box structures.

No other bridges or small structures are located within the project area.

County Spencer Route SR 66 Des. No. 2100830, 2100831

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).		X

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 and detour route utilizing SR 161, SR 62, SR 162, and US 231. The MOT will be in place for 6 to 8 months. The MOT plan can be found in Appendix B (Appendix B: B-12 to B-14). Access to all properties will be maintained during construction.

The closures 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: $ 246,000 (2022) Right-of-Way: $ 40,000 (2026) Construction: $ 1,748,000 (2026)

Anticipated Start Date of Construction: Summer 2026

RIGHT OF WAY:

Land Use Impacts	Amount (acres) Permanent	Temporary
Residential	0	0
Commercial	0	0
Agricultural	2.169	0
Forest	0	0
Wetlands	0.054	0
Other:	0	0
Other:	0	0
TOTAL	2.223	0

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 right-of-way (ROW) was originally described as varied between 30 ft and 60 ft along the south side of the SR 66 centerline and between 40 ft and 60 ft along the north side of the SR 66 centerline throughout the project area. However, based on coordination with INDOT, the existing ROW was determined to be the existing edge of pavement, which varies between 12 ft and 14.5 ft from the SR 66 centerline. The existing ROW consists of the roadway pavement along SR 66.

The project requires approximately 2.223 acres of permanent ROW from agricultural lots and wetlands north and south of the SR 66 roadway, which will extend the ROW to 35–135 ft north and south of the SR 66 centerline at the project location only. No temporary ROW will be required for this project.

During project development, the ROW amount was revised from a maximum of 2.0 acres of permanent ROW and no temporary ROW to 2.223 acres of permanent ROW and no temporary ROW. Due to the minor increase in ROW and no additional properties being impacted, INDOT ESD determined that no re-coordination letters were needed.

If the scope of work or permanent or temporary ROW 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 January 23, 2024, and July 29, 2024 (Appendix C: C-2 to C-5). Additional coordination letters were sent on December 21, 2023.

During project development, the ROW amount was revised from a maximum of 2.0 acres of permanent ROW and no temporary ROW to 2.223 acres of permanent ROW and no temporary ROW. Due to the minor increase in ROW and no additional properties being impacted, INDOT ESD determined that no re-coordination letters were needed.

Agency	**Date Sent**	**Date Response Received**	**Appendix**
Indiana Geological and Water Survey (IGWS) (Completed online via the website)	December 21, 2023	December 21, 2023	Appendix C: C-6 to C-8

Indiana Department of Natural Resources-Division of Fish and Wildlife (IDNR-DFW)	January 23, 2024	February 22, 2024	Appendix C: C-10 to C-11
U.S. Department of Housing and Urban Development	January 23, 2024	No response received	N/A
INDOT Vincennes District – Environmental Services Division	January 23, 2024	January 24, 2024	Appendix C: C-9
INDOT Vincennes District – Project Manager	January 23, 2024	No response received	N/A
Spencer County Council Members	January 23, 2024	No response received	N/A
Spencer County Commissioner Members	January 23, 2024	No response received	N/A
Spencer County Highway Supervisor	January 23, 2024	No response received	N/A
Spencer County Surveyor	January 23, 2024	No response received	N/A
North Spencer County School District	January 23, 2024	No response received	N/A
Spencer County Health Department	January 23, 2024	No response received	N/A
Spencer County Fire Department	January 23, 2024	No response received	N/A
Spencer County Sheriff's Office	January 23, 2024	No response received	N/A
Spencer County EMS Rockport Station	January 23, 2024	No response received	N/A
IDNR Division of Oil and Gas **RE: Red Flag Investigation (RFI) Coordination – Petroleum well**	January 23, 2024 and August 16, 2024	No response received	N/A
Indiana Department of Environmental Management (IDEM) Wellhead	July 29, 2024	August 6, 2024	Appendix C: C-40 to C-42
Natural Resources Conservation Service (NRCS)	July 29, 2024	August 2, 2024	Appendix C: C-38 to C-39
INDOT Office of Aviation	July 29, 2024	July 31, 2024	Appendix C: C-37
Evansville Water Utility **RE: Wellhead Protection Area**	August 7, 2024	August 7, 2024	Appendix C: C-43 to C-44
Reo Water **RE: Public Water System**	August 21, 2024	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: 1,039 (590 in construction limits) Linear feet Total impacted stream(s): 573 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)
UNT to Willow Ditch	Intermittent	1,039	484*	Flows north to south under Structure No. CV 066-074-51.62, east of N CR 500 W, and terminates at Wetland B; Likely Water of the U.S. (WOTUS) (Appendix F: F-21 to F-22)
James E. Payne Ditch	Intermittent	100	89	Begins at the southern outlet of Structure No. CV 066-074-51.62, east of N CR 500 W, and flows north to south, continuing offsite to the south.

Note: See text regarding James E. Payne Ditch to coincide with the asterisk in the table.

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 the desktop review, the aerial map of the project area (Appendix B: B-4), and the RFI report (Appendix E: E-2 to E-10), there are no streams, rivers, watercourse, or other jurisdictional features mapped within the 0.5-mile search radius. There are no streams, rivers, watercourse, or other jurisdictional features mapped within or adjacent to the project area. That number was updated to one stream segment present within the project area by the site visit on September 14, 2023, by ASC Group, Inc. No Federal, Wild and Scenic Rivers; State Natural, Scenic, and Recreational Rivers; Outstanding Rivers for Indiana; navigable waterways or National Rivers Inventory waterways are present in or adjacent to the project area.

A *Waters of the U.S. Determination / Wetland Delineation Report* was approved by INDOT Ecology, Waterway Permitting, & Stormwater Office (EWPSO) on February 22, 2024. Please refer to Appendix F (Appendix F: F-2 to F-67) for the *Waters of the U.S. Determination / Wetland Delineation Report*. It was determined that one intermittent stream, UNT to Willow Pond Ditch, and one roadside ditch (RSD 1) are present within the project area. The UNT to Willow Pond Ditch, is located within the eastern half of the project area along the north side of the SR 66 roadway and is a moderate to low quality, intermittent stream that flows east to west and has an ordinary high-water mark (OHWM) of 6.42-ft wide and 0.96-ft deep. Riffles/pools were not present within the stream. The substrate consisted of sand, silt, and gravel. The stream is likely a WOTUS. There was one roadside ditch, RSD 1, within the project area. The roadside ditch is located within the western half of the project area along the southern side of the SR 66 roadway and did not display a clearly-defined OHWM or streambed and is not considered a stream. The roadside ditch is considered non-jurisdictional, artificial roadside drainage feature. The U.S. Army Corps of Engineers (USACE) makes all final determinations regarding jurisdiction.

After the approval of the Waters report, it was determined that the James E. Payne Ditch is a legal drain that is within the southeast quadrant of the project area (Appendix B: B-22). It located in the area with Wetland C (Appendix F: F-21 to F-22).

The project will require impacts to the waterway due to work within UNT to Willow Pond Ditch and James E. Payne Ditch. Specifically, work will include the relocation of the stream and legal drain, which includes 60 ft for the stream to accommodate the replacement structures. Measures have been incorporated at various stages of this project to avoid, minimize, or mitigate impacts.

These include measures to protect the stream from bank erosion due to scouring and excess downstream sedimentation, structure design and grading parameters to protect the natural stream channel, measures to protect the passage of wildlife and fish or aquatic organisms, and riprap design measures to protect low-flow areas and habitat for aquatic organisms. Approximately 573 linear ft (0.7323 acre) of total permanent impacts are expected to the UNT to Willow Pond Ditch (484 linear ft (0.72 acre)) and James E. Payne Ditch (89 linear ft (0.0123 acre)) from the excavation work associated with the removal of the small structure (Structure No. CV-066-074-51.62) as well as the regrading, installation, and relocation of the UNT to Willow Pond Ditch and James E. Payne Ditch. Approximately 560 linear ft (0.7131 acre) of total temporary impacts are expected to the UNT to Willow Pond Ditch and James E. Payne Ditch from the relocation of the stream and ditch, of which 424 linear ft overlap with permanent impacts. Impacts from the stream and legal drain relocation amount to 573 linear ft (0.732 acre) and 1,180.96 cubic yards of impacts below the OHWM of UNT to Willow Pond Ditch. These impacts are unavoidable because this work is required to remove the existing small structure and to install the replacement structure. Mitigation will be determined during permitting, but is not anticipated at this time. IDEM 401 and USACE 404 Clean Water Act permits will likely be required. Due to impacts to James E. Payne Ditch, a legal drain permit will likely be required.

IDNR-DFW responded with a signed letter on February 22, 2024, with standard recommendations to maintain fish and wildlife passage through the crossing structure; to ensure the culvert spans the entire channel width (a minimum of 1.2 times the OHWM width); to maintain the natural stream substrate within the structure; to have stream depth, channel width, and water velocities during low-flow conditions that are approximate to those in the natural stream channel; to avoid and minimize impacts to fish, wildlife, and botanical resources to the greatest extent possible; to compensate for impacts; to follow guidelines for erosion control measures; to follow guidelines for work in riparian habitat; to not deposit or allow construction/demolition materials to enter the waterway; and to not work within the waterway from April 1 through June 30 without the written approval of the Division of Fish and Wildlife (Appendix C: C-10 to C-11).

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

Open Water Feature(s)	**Presence**	**Impacts**	
		Yes	**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 (Appendix B: B-4), and the RFI report (Appendix E: E-2 to E-10), there are no open water features mapped within the 0.5-mile search radius. There are no open water features mapped within the project area, which was confirmed by the site visit on September 14, 2023, by ASC Group, Inc. Therefore, no impacts are expected.

A *Waters of the U.S. Determination / Wetland Delineation Report* was approved by INDOT EWPSO on February 22, 2024. Please refer to Appendix F (Appendix F: F-2 to F-67) for the *Waters of the U.S. Determination / Wetland Delineation Report*. It was determined that no open water features are within or adjacent to the project area. Therefore, no impacts to open water features will occur.

County Spencer Route SR 66 Des. No. 2100830, 2100831

	Presence	Impacts Yes	Impacts No
Wetlands	X	X	

Total wetland area: 0.178 Acre(s) Total wetland area impacted: 0.054 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)
Wetland A	PEM1B	0.025	0.013	Located in southwest quadrant, Likely a WOTUS (Appendix F: F-21)
Wetland B	PEM1B	0.135	0.034	Located in northwest quadrant, Likely a WOTUS (Appendix F: F-21)
Wetland C	PEM1C	0.018	0.007	Located in southeast quadrant, Likely a WOTUS (Appendix F: F-21 to F-22)

Wetlands (*Mark all that apply*)	**Documentation**	**ESD Approval Dates**
Wetland Determination	X	**February 22, 2024**
Wetland Delineation	X	**February 22, 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;	X
Unique engineering, traffic, maintenance, or safety problems;	X
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 (Appendix B: B-4), and the RFI report (Appendix E: E-2 to E-10), there are no wetlands mapped within the 0.5-mile search radius. There are no mapped wetlands within or adjacent to the project area. That number was updated to three wetlands present within the project area by the site visit on September 14, 2023, by ASC Group, Inc.

A *Waters of the U.S. Determination / Wetland Delineation Report* was approved by INDOT EWPSO on February 22, 2024. Please refer to Appendix F (Appendix F: F-2 to F-67) for the *Waters of the U.S. Determination / Wetland Delineation Report*. It was determined that three poor quality wetlands (Wetlands A–C) are present within the project area.

- Wetland A is a 0.025-acre wetland located at the southwest quadrant of the project area. Dominant species in Wetland A include narrowleaf cattail (*Typha angustifolia*) and rice cutgrass (*Leersia oryzoides*).
- Wetland B is a 0.135-acre wetland located at the northwest quadrant of the project area. Dominant species in Wetland B include narrowleaf cattail (*Typha angustifolia*) and swamp milkweed (*Asclepias incarnata*).
- Wetland C is a 0.018-acre wetland located at the southeast quadrant of the project area. Dominant species in Wetland C include rice cutgrass (*Leersia oryzoides*) and wingstem (*Verbesina alternifolia*).

Wetlands A–C are part of the drainage adjacent to SR 66, which discharges into another relatively permanent water (RPW), Willow Pond Ditch. Due to a direct connection to an RPW, it is likely that Wetlands A–C are all likely WOTUS and under the jurisdictional authority of the USACE. The USACE makes all final determinations regarding jurisdiction.

The project will require impacts to the Wetlands A–C. There is no practicable alternative to the construction within the wetlands and the project includes all practicable measures to minimize harm to wetlands which may result from such use. Approximately 0.054 acre (131.3 cubic yards) of permanent impacts to the wetlands from the relocation of the roadside swales and use of clean fill. No temporary impacts are expected. Impacts will be minimized to only what is required for project construction. Minimization measures include the use of erosion control blankets and filter socks to protect the existing wetlands. Wetlands A–C will be included on the plans and marked as "Do Not Disturb Outside of Construction Limits" (Appendix B: B-XX). This is included as a firm commitment in the Commitments section of this CE document. A Section 404/401 Permit is anticipated as a result of the anticipated wetland impacts. If any unexpected impacts occur during construction, coordination will occur with INDOT ESD. FHWA approval of this document will constitute approval of the adverse impacts to wetlands.

IDNR-DFW responded with a signed letter on February 22, 2024, with recommendations to avoid and minimize impacts to fish, wildlife, and botanical resources to the greatest extent possible, to compensate for impacts, to follow guidelines for erosion control measures, and to follow guidelines for work in riparian habitat (Appendix C: C-10 to C-11).

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: 2.41 Acre(s) Total tree clearing: N/A 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 14, 2023, by ASC Group, Inc., and the aerial map of the project area (Appendix B: B-4), there are agricultural lands within the project area. The dominant species observed include narrowleaf cattail (*Typha angustifolia*), rice cutgrass (*Leersia oryzoides*), rough cocklebur (*Xanthium strumarium*), giant foxtail (*Setaria faberi*), swamp milkweed (*Asclepias incarnata*), Johnson grass (*Sorghum halepense*), tall fescue (*Schedonorus arundinaceus*), wingstem (*Verbesina alternifolia*), silver maple (*Acer saccharinum*), hophornbeam copperleaf (*Acalypha ostryifolia*), and fall panicgrass (*Panicum dichotomiflorum*).

No tree trimming or removal will occur. The project requires approximately 2.223 acres of permanent ROW from agricultural lots and wetlands north and south of the SR 66 roadway. No temporary ROW is required. The project will require impacts to terrestrial habitat. Measures have been incorporated at various stages of this project to avoid, minimize, or mitigate impacts. These include measures to protect terrestrial habitat from soil impacts due to excavation and construction access and to protect trees that may provide suitable habitat to protected bat species. These impacts are unavoidable because this work is necessary to access and replace the small structures along the SR 66 roadway. Mitigation is not anticipated. Approximately 2.223 acres of total soil disturbance is expected. A Construction Stormwater General Permit, formerly known as the Rule 5 Permit, will be required because the soil disturbance will be greater than the 1-acre threshold.

IDNR-DFW responded with a signed letter on February 22, 2024, with standard recommendations to revegetate bare and disturbed areas with native species, to minimize and contain within the project area the clearing of trees and brush, and to limit excavation to only what is necessary for the structure removals (Appendix C: C-10 to C-11).

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	LAA
		X	

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: E-2 to E-10), completed by ASC Group, Inc. on March 11, 2024, the IDNR Spencer County Endangered, Threatened and Rare (ETR) Species List has been checked. According to the IDNR-DFW early coordination response letter signed on February 22, 2024 (Appendix C: C-10 to C-11), the Natural Heritage Program's Database has been checked and to date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity. An INDOT 0.5-mile bat review occurred on September 18, 2023, which did not indicate the presence of endangered bat species in or within 0.5 mile of the project area.

Indiana Bat and Northern Long-Eared Bat

Project information was submitted through the U.S. Fish and Wildlife Service's (USFWS's) Information for Planning and Consultation (IPaC) portal, and an official species list was generated (Appendix C: C-12 to C-22). The project is within range of the federally endangered Indiana bat (*Myotis sodalis*) and northern long-eared bat (NLEB) (*Myotis septentrionalis*). Several other species were generated in the IPaC species list along with the Indiana bat and NLEB. Refer to paragraph below.

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. A culvert inspection occurred on September 14, 2023, and no evidence of birds or bats was noted at the time of inspection (Appendix C: C-36). An effect determination key was completed on October 14, 2023, and based on the responses provided, the project was found to "may affect, but is not likely to adversely affect" the Indiana bat and/or the NLEB (Appendix C: C-23 to C-35). INDOT reviewed and verified the effect finding on October 16, 2023, 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) for this project include: General AMM 1 and Lighting AMM 1. AMMs and/or commitments are included as firm commitments in the Environmental Commitments section of this document.

The official species list generated from IPaC indicated four other species (gray bat (*Myotis grisescens*), tricolored bat (*Perimyotis subflavus*), whooping crane (*Grus americana*), and monarch butterfly (*Danaus plexippus*)) present within the project area. The gray bat is listed as an endangered species. The tricolored bat is listed as proposed endangered species. The whooping crane is listed as an experimental population, non-essential species. The monarch butterfly is listed as a candidate species for inclusion as a federally listed endangered species. The project qualifies for the most current INDOT/USFWS agreement. Further coordination with USFWS is not required. No impact is expected as documented habitat is not listed within or adjacent to the project area. Furthermore, a site visit conducted by ASC Group, Inc. on September 14, 2023, did not note the presence of any of these species or qualifying habitat as there were no trees with primarily roadway and agricultural lands.

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 in the designated Indiana Karst Region as outlined in the most current *Protection of Karst Features during Project Development and Construction*. According to the topo map of the project area (Appendix B: B-3) and the RFI report (Appendix E: E-2 to E-10), there are no karst features identified within or adjacent to the project area. In the early coordination response dated December 21, 2023, IGWS did not indicate that karst features exist in the project area (Appendix C: C-6 to C-8). IGWS stated that there is a high liquefaction potential. There is a high potential for bedrock resources and low potential for sand and gravel resources. IGWS indicated that there are petroleum exploration wells documented in the project area. The RFI report stated that there are five petroleum wells within the 0.5 mile search radius and that there is a presumed-plugged well that is located adjacent to the project area. An early coordination letter was sent to IDNR Oil and Gas Division on January 23, 2024, and August 16, 2024. No response was received within the 30-day time frame. The response from IGWS has been communicated with the designer on December 21, 2023. No impacts are expected.

SECTION C – OTHER RESOURCES

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

	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 Spencer 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

The IDEM's Wellhead Proximity Determinator website (http://www.in.gov/idem/cleanwater/pages/wellhead/) was accessed on December 21, 2023, by ASC Group, Inc. This project is not located within a Wellhead Protection Area; however, it is located within a Source Water Area. In an early coordination letter dated August 6, 2024, IDEM stated the project is located within a Source Water Area for the Evansville Water Utility (Appendix C: C-40 to C-42). An early coordination letter was sent to Evansville Water Utility

on August 7, 2024. Evansville Water and Sewer Utility responded on August 7, 2024, stating that the project would not have a negative impact on the water quality for Evansville. The only potential impact would be if a chemical spill occurred from construction equipment and made its way into the waterways. If an event as such occurred, then IDEM's 24-Hour Emergency Spill Line should be called at 888-233-7745 or 317-233-7745 and notification should occur to the Evansville Water Filtration Plant at 812-428-0568 (Appendix C: C-43 to C-44). This is included as a firm commitment in the Commitments section of this CE document. The features will not be affected because the project will only involve work on the small structures, corresponding drainage ditches, and roadway within the project 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 December 21, 2023, by ASC Group, Inc. No water wells are located near this project. Therefore, no impacts are expected.

Urban Area Boundary
Based on a desktop review of the INDOT MS4 website (https://entapps.indot.in.gov/MS4/) by ASC Group, Inc. on December 21, 2023, this project is not located in an Urban Area Boundary. No impacts are expected.

Public Water System
Based on a desktop review, a site visit on September 14, 2023, by ASC Group, Inc., and the aerial map of the project area (Appendix B: B-4), this project is located where there is a public water system. The public water system will not be affected because the project will not involve any work impacting water utilities within or surrounding the project area. An early coordination letter was sent on August 21, 2024, to Reo Water. No response was received within the 30-day time frame. Therefore, no impacts are expected.

	Presence	Impacts	
Floodplains		**Yes**	**No**
Project located within a regulated floodplain			
Longitudinal encroachment			
Transverse encroachment			
Homes located in floodplain within 1,000' 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.

The IDNR Indiana Floodway Information Portal website (http://dnrmaps.dnr.in.gov/appsphp/fdms/) was accessed December 21, 2023, by ASC Group, Inc. This project is not located in a regulatory floodplain as determined from approved IDNR floodplain maps (Appendix F: F-68). 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.

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

Total Points (from Section VII of CPA-106/AD-1006*) **158**

**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 14, 2023, by ASC Group, Inc., and the aerial map of the project area (Appendix B: B-4), the project will convert 2 acres of farmland as defined by the Farmland Protection Policy Act. An early coordination letter was sent on July 29, 2024, to NRCS. Coordination with NRCS resulted in a score of 158 on the AD 1006 Form (Appendix C: C-38

to C-39). The NRCS form states 2 acres of prime and unique farmland will be converted, while the permanent ROW will convert 2.169 acres of farmland to a transportation use.

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	Category B, Type 9	October 17, 2024	

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	**October 18, 2024**	
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 October 17, 2024, the INDOT Cultural Resource Office (CRO) determined that this project falls within the guidelines of Category B, Type 9 under the Minor Projects Programmatic Agreement (MPPA) (Appendix D: D-2 to D-7).

A Category B, Type 9 project is defined as the following:

- installation, replacement, repair, lining, or extension of culverts and other drainage structures in previously undisturbed soils and an archaeological investigation would be conducted or
- 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 due to the structure exhibiting no wood, stone, or brick structures or parts therein.

Archaeology:

An archaeology report which was submitted to INDOT on February 13, 2024. No artifacts were found and no archaeological sites were recorded within the survey area. No further archaeological assessment is recommended. The cover page, summary, and recommendations from the archaeological short report can be found in Appendix D (Appendix D: D-8 to D-10).

No further consultation is required. This completes the Section 106 process and the 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: B-4), and the RFI report (Appendix E: E-2 to E-10), there are no potential 4(f) resources located within the 0.5-mile search radius. According to additional research and by the site visit on September 14, 2023, by ASC Group, Inc., 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 three property in Spencer County (Appendix I: I-2). These properties are not 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)?		

Location in STIP: Page 375–376 of 501

Name of MPO (if applicable): N/A

Location in TIP (if applicable): N/A

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.

STIP/TIP

The Fiscal Year (FY) 2024–2028 Statewide Transportation Improvement Program (STIP) is listed based on the lead DES number in the contract. The lead DES number for this contract is Des. No. 2100169. The FY 2024–2028 STIP includes DES numbers 2100830 and 2100831 by reference with the contract number R-43979 (Appendix H: H-2 to H-3).

Attainment Status

This project is located in Spencer County, which is currently a nonattainment area for PM2.5 according to the EPA's Greenbook website (https://www.epa.gov/green-book). This project has been identified as being exempt from air quality analysis in accordance with 40 CFR Part 93.126 and this project is not a project of air quality concern (40 CFR Part 93.123). Therefore, the project will have no significant impact on air quality.

- **PM2.5**: This project is located in Spencer County. This county is currently a nonattainment area for PM2.5. Under 40 CFR 93.123, this is not a project of air quality concern. Therefore, a hot spot analysis for PM2.5 is not required.

MSAT

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 (MSAT) 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.

There will be temporary traffic impacts associated with construction activities. The MOT will require a road closure and detour utilizing SR 161, SR 62, SR 162, and US 231. Access to all properties will be maintained during construction. Full details of the MOT can be found in the MOT During Construction section in this CE document.

ASC Group, Inc. researched any possible fairs or festivals that may be in the area that could be impacted by construction activities. Numerous websites were accessed on August 21, 2024, to confirm if any fairs or festivals would be affected, including the Indiana State Festivals website (http://www.indianafestivals.org) and The Fairs and Festivals website (https://www.fairsandfestivals.net/). There are no festivals or fairs currently planned within a 5-mile radius that may be impacted by the construction.

Spencer County has an Americans with Disabilities Act (ADA) transition plan. However, no sidewalks or curb ramps exist within the project area and none are proposed; therefore, no impacts are expected to pedestrian facilities within the project area.

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: B-4), and the RFI report (Appendix E: E-2 to E-10), there are no mapped public facilities within the 0.5-mile search radius. There are no mapped public facilities within or adjacent to the project area, which was confirmed by the site visit on September 14, 2023, by ASC Group, Inc. Access to all properties will be maintained during construction. No public or private utilities are located within the project area that will be impacted by construction.

INDOT Aviation responded on July 31, 2024, stating that no tall structure permit is required for the project if all equipment being used is under 200 ft in height (Appendix C: C-37). Per the designer, no equipment will be over 200 ft in height.

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

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

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

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.

Under FHWA Order 6640.23A, FHWA and the project sponsor, as a recipient of funding from FHWA, are responsible to ensure that their programs, policies, and activities do not have a disproportionately high and adverse effect on minority or low-income populations. Per the current INDOT Categorical Exclusion Manual, an Environmental Justice (EJ) Analysis is required for any project that has two or more relocations or 0.5 acre of additional permanent ROW. The project will require no relocations; however, it will require 2.223 acres of permanent ROW. Therefore, an EJ Analysis is required.

Potential EJ impacts are detected by locating minority and low-income populations relative to a reference population to determine if populations of EJ concern exists and whether there could be disproportionately high and adverse impacts to them. The reference population may be a county, city, or town and is called the community of comparison (COC). In this project, the COC is Spencer County, Indiana. The community that overlaps the project area is called the affected community (AC). In this project, the AC is Census Tract 9530. An AC has a population of concern for EJ if the population is more than 50 percent minority or low-income or if the low-income or minority population is 125 percent of the COC. Data from the 2020 ACS 5-Year Estimates was obtained from the U.S. Census Bureau (https://data.census.gov/) on August 6, 2024, by ASC Group, Inc. The data collected for minority and low-income populations within the AC are summarized in the below table.

Table: Minority and Low-Income Data (United States Census Bureau 2020 ACS 5-Year Estimates)

	COC – Spencer County, Indiana	AC-1 – Census Tract 9530, Spencer County, Indiana
Percent Minority	5.55%	2.40%
125% of COC	6.94%	AC < 125% COC
EJ Population of Concern		**No**
Percent Low-Income	8.14%	12.53%
125% of COC	10.18%	AC < 125% COC
EJ Population of Concern		**Yes**

AC-1, Census Tract 9530 has a percent minority of 2.40 percent, which is below 50 percent and is below the 125 percent COC threshold. Therefore, the AC does not contain minority populations of EJ concern.

AC-1, Census Tract 9530 has a percent low-income of 12.53 percent, which is below 50 percent and is above the 125% COC threshold. Therefore, AC-1 is a low-income population of EJ concern.

Conclusion

The census data sheets, map, and calculations can be found in Appendix I (Appendix I: I-58 to I-64). The project will require 2.223 acres of ROW from agricultural land and wetlands currently functioning primarily as roadside drainage and will not alter access to the existing SR 66 roadway. AC-1 contains a EJ Population; however, no permanent ROW will be taken from residential properties. No relocations will occur and access to all properties will be maintained. No changes in community cohesion are expected. The project will not disproportionately or negatively impact the identified populations as roadway access will not be permanently changed

through this corridor of SR 66. Additionally, the land being acquired for project construction does not currently serve a significant function beyond drainage for the existing roadway. The project is intended to improve roadside drainage and therefore enhance the functional life and continued access of the SR 66 roadway for the identified populations. Therefore, no significant impacts are expected to EJ populations, and no mitigation is anticipated. No further EJ analysis is required. INDOT ESD reviewed this EJ Analysis on September 27, 2024, and concurred with the findings, stating that the project would cause no disproportionately high or adverse effects on minority and/or low-income populations of EJ concern, relative to non-EJ populations in accordance with the provisions of Executive Order 12898 and FHWA Order 6640.23a (Appendix I: I-65). No further EJ Analysis is required.

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

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

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): March 11, 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 GIS and available public records, the RFI was completed on March 11, 2024, by ASC Group, Inc., and INDOT SAM provided their concurrence on March 11, 2024 (Appendix E: E-2 to E-10). 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)	
Regional General Permit (RGP)	X
Individual Permit (IP)	
Other	
IN Department of Environmental Management (401/Rule 5)	
Nationwide Permit (NWP)	
Regional General Permit (RGP)	X
Individual Permit (IP)	
Isolated Wetlands	
Rule 5	X
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)	X

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

A Construction Stormwater General Permit, formerly known as the Rule 5 Permit, will be required due to the amount of soil disturbance being greater than the 1-acre threshold.

A Section 404/401 permit will be required due to impacts to Wetlands A–C and stream impacts to UNT to Willow Ditch within the project.

A legal drain permit will likely be required due to impacts to James E. Payne Ditch.

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, the INDOT Environmental Services Division (ESD) and the INDOT District Environmental Section will be contacted immediately. (INDOT ESD and INDOT District)
2) It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access. (INDOT ESD)

3) 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 14, 2025, an inspection of the structure by a qualified individual, must be performed. Inspection of the structure should check for the 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 EWPO)
5) Wetlands A–C will be included on all plans and labeled as "Do Not Disturb Outside of Construction Limits." (INDOT EWPO)
6) GENERAL AMM 1: Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs. (USFWS)
7) LIGHTING AMM 1: Direct temporary lighting away from suitable habitat during the active season. (USFWS)
8) If a chemical spill occurs from construction equipment and enters a waterway, then IDEM's 24-Hour Emergency Spill Line should be called at 888-233-7745 or 317-233-7745 and notification should occur to the Evansville Water Filtration Plant at 812-428-0568. (Evansville Water and Sewer Utility)

For Further Consideration:

1) For purposes of maintaining fish and wildlife passage through a crossing structure, the Environmental Unit recommends bridges rather than culverts and bottomless culverts rather than box or pipe culverts. Wide culverts are better than narrow culverts, and culverts with shorter through lengths are better than culverts with longer through lengths. If box or pipe culverts are used, the bottoms should be buried a minimum of 6-inches or 20 percent of the culvert height/pipe diameter (whichever is greater) up to a maximum of 2-feet below the stream bed elevation to allow a natural streambed to form within or under the crossing structure. Crossings should:
   - Span the entire channel width (a minimum of 1.2 times the ordinary high-water mark width);
   - Maintain the natural stream substrate within the structure; and
   - Have stream depth, channel width, and water velocities during low-flow conditions that are approximate to those in the natural stream channel.
   - Banklines should be restored within box and pipe structures to allow for wildlife passage above the ordinary highwater mark. (IDNR-DFW)
2) The new, replacement, or rehabbed structure, and any bank stabilization under it, should not create conditions that are less favorable for wildlife passage under the structure compared to the current conditions. When determining an appropriate bridge or culvert size, consider whether wildlife/vehicle collisions are a concern at the crossing site. If feasible, a larger bridge or culvert opening can allow for the movement of wildlife under the roadway to minimize wildlife/vehicle collisions. (IDNR-DFW)
3) Any riprap placed at the culvert's outlet/inlet needs to be installed at grade (or countersunk then backfilled with native material). The slope of the riprap should match the stream's gradient. Additionally, riprap should be mixed with smaller stone and fines to match the existing stream substrate particle distribution and provide impermeability of the riprap apron/substrate so the flow doesn't percolate through the voids below the riprap apron's surface. (IDNR-DFW)
4) Do not excavate in the low flow area except for the placement of piers, foundations, and riprap, or removal of the old structure. (IDNR-DFW)
5) Do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds. (IDNR-DFW)
6) Use minimum average 6-inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids. (IDNR-DFW)

TABLE OF CONTENTS

APPENDIX A: INDOT SUPPORTING DOCUMENTATION

Threshold Chart

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: PROJECT AREA AND PLAN SHEET

Figure 1 – Project Vicinity
Figure 2 – Topographic Map Showing the Project Area
Figure 3 – Aerial Photograph Showing the Project Area
Photographs
Project Plan Set

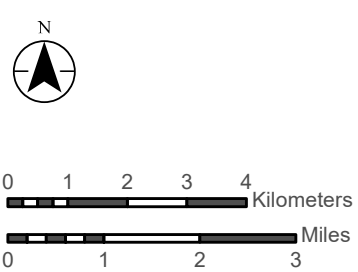
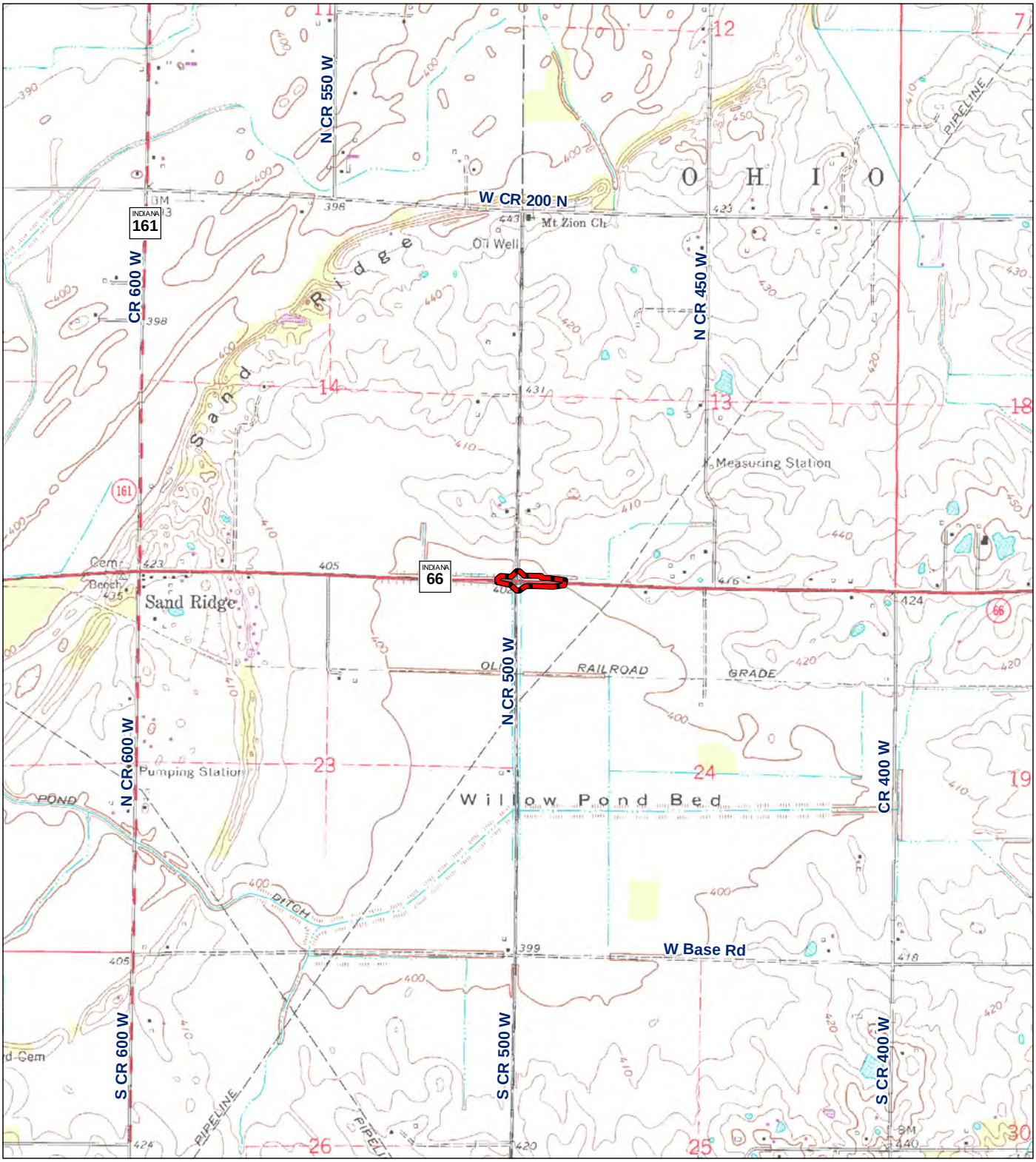


Figure 1

Portion of the ESRI World Street Map showing the project area for the SR 66 Small Structures Project (INDOT Des. Nos. 2100830 and 2100831).

Base: ESRI World Street Map

Created by TMD, JVT; last saved: 1/4/2024 3:04:06 PM



Project area

0 200 400 600 800 1000 Meters

0 1000 2000 3000 Feet

N

Figure 2

Portion of the 1981 Richland City, Indiana quadrangle (USGS 7.5' topographic map) showing the project area for the SR 66 Small Structures Project (INDOT Des. Nos. 2100830 and 2100831).

Base: USGS Richland City, Indiana, 7.5' series quadrangle

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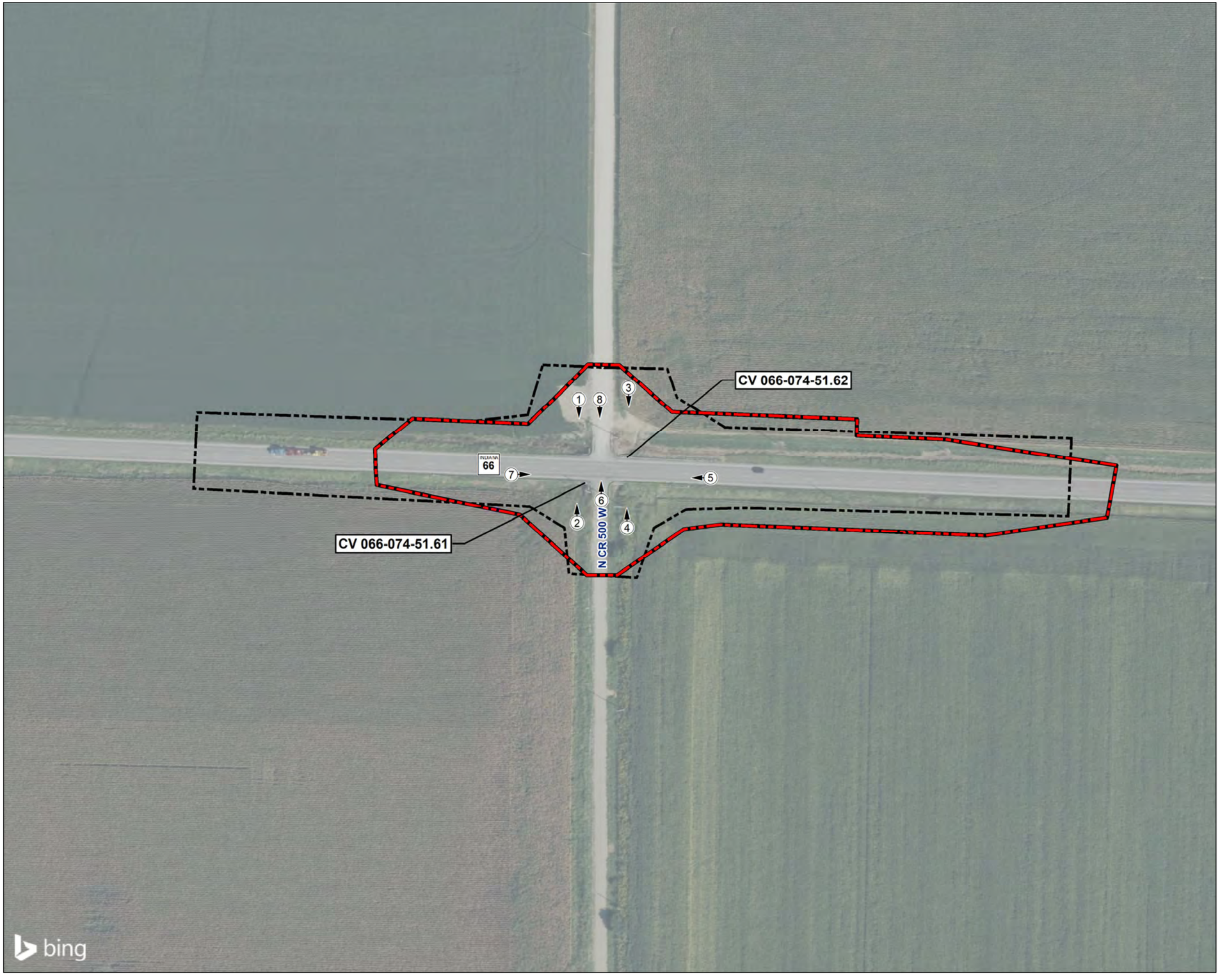

Project area

Original project area (Berry 2024)

Photo location

Base: Microsoft Corporation
2023

N

0 10 20 30 40 50 Meters

0 30 60 90 120 150 Feet

Figure 3

Aerial photograph showing the project area, original project area and photograph locations for the SR 66 Small Structures Project (INDOT Des. Nos. 2100830 and 2100831).

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Photograph 1. View of Structure No. CV 066-074-51.61 inlet, facing south.

Photograph 2. View of Structure No. CV 066-074-51.61 outlet, facing north.

Photograph 3. View of Structure No. CV 066-074-51.62 inlet, facing south.

Photograph 4. View of Structure No. CV 066-074-51.62 outlet, facing north.

Photograph 5. View of the SR 66 roadway, facing west.

Photograph 6. View of the intersection of SR 66 and CR 500 W, facing north.

Photograph 7. View of the SR 66 roadway, facing east.

Photograph 8. View of the intersection of SR 66 and CR 500 W, facing south.

PROJECT	DESIGNATION
2100169	2100830 & 2100831
CONTRACT	CULVERT FILE
R-43979	CV 066-074-51.61 & 066-074-51.62

INDIANA DEPARTMENT OF TRANSPORTATION

ROAD PLANS

ROUTE: STATE ROAD 66 AT: RP 51+61

PROJECT NO. 2100830 & 2100831 P.E.
2100830 & 2100831 R/W
2100830 & 2100831 CONST.

Small Structure Replacements (2) on State Road 66 over UNT of Willow Pond Ditch
Located 1 Mile East of West JCT SR 161
Sections 13, 14, 23, & 24, T-7-S, R-7-W, Luce & Ohio Townships, Spencer County, Indiana

STRUCTURE INFORMATION

STRUCTURE	TYPE	SPAN AND SKEW	OVER	STATION
CV 066-074-51.61	Reinforced Concrete Box	1 Span: 16'-0"; Rise: 4'-0"; No Skew	UNT of Willow Pond Ditch	206+58.00 Line "A"
CV 066-074-51.62	Reinforced Concrete Box	1 Span: 16'-0"; Rise: 4'-0"; No Skew	UNT of Willow Pond Ditch	208+25.00 Line "A"

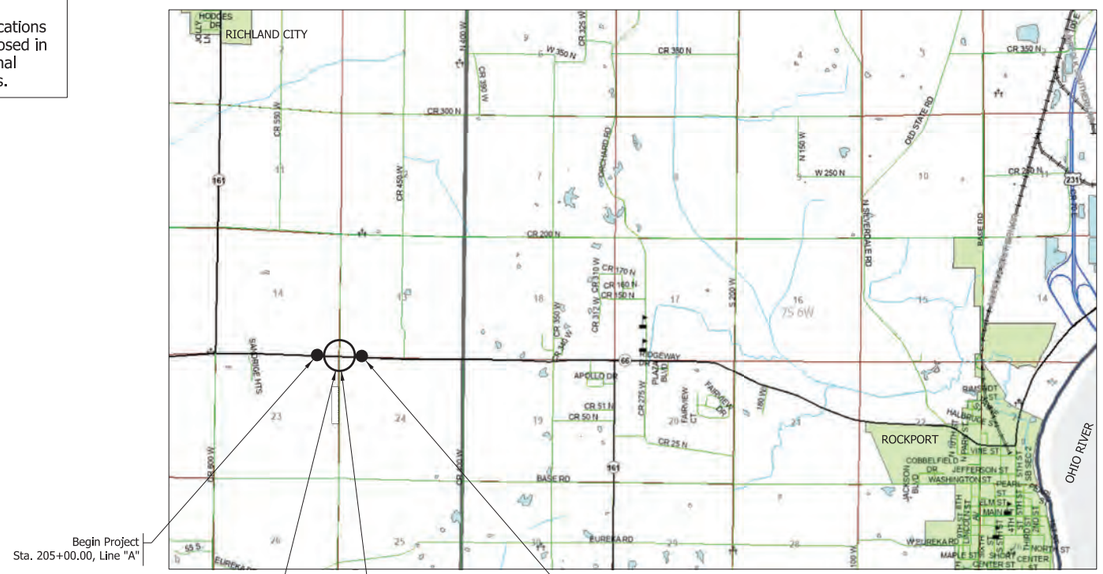
KIN PROJECT INFORMATION

DESIGNATION	PROJECT DESCRIPTION
* 2100169	SR 66 Signal Modification, Curb Ramp Reconstruction
2100830	Small Structure replacement on SR 66 (CV 066-074-51.61)
2100831	Small Structure replacement on SR 66 (CV 066-074-51.62)

* Lead Designation Number

NOTE TO REVIEWER

Per the request of the Vincennes District, the structure locations and project limits have been adjusted from what was proposed in the Stage 1 Plans. See Correspondence file for additional information on the project scope of work adjustments.



1" = 3000'

TRAFFIC DATA

A.A.D.T.	(2026)	11203 V.P.D.
A.A.D.T.	(2046)	12354 V.P.D.
D.H.V	(2046)	1272 V.P.H.
DIRECTIONAL DISTRIBUTION		51.8 %
TRUCKS		10.29 A.A.D.T.
		2.56 D.H.V.

DESIGN DATA

DESIGN SPEED	55 MPH
PROJECT DESIGN CRITERIA	3R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	PRINCIPAL ARTERIAL
RURAL/URBAN	RURAL
TERRAIN	LEVEL
ACCESS CONTROL	NONE

PROJECT LOCATION SHOWN BY
Spencer County

LATITUDE: 37° 54' 07.2" N LONGITUDE: 87° 09' 03.6" W

GROSS LENGTH: 0.150 MI.
NET LENGTH: 0.150 MI.
MAX. GRADE: 0.879 %

HUC: 05140201150

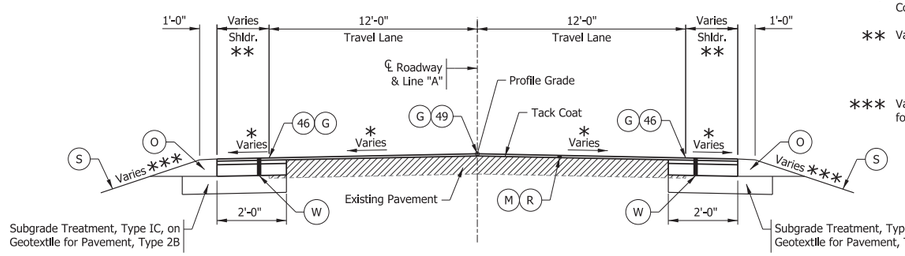
INDIANA DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS DATED 2024
TO BE USED WITH THESE PLANS.

HWC ENGINEERING
INDIANAPOLIS - TERRE HAUTE - LAFAYETTE
MUNCIE - NEW ALBANY - HAMMOND
www.hwcengineering.com

NOT FOR CONSTRUCTION
8/2024

PLANS PREPARED BY: HWC Engineering (317) 347-3663 PHONE NUMBER
CERTIFIED BY: DATE
APPROVED FOR LETTING: INDIANA DEPARTMENT OF TRANSPORTATION DATE

CULVERT FILE	
CV 066-074-51.61 & 066-074-51.62	
DESIGNATION	
2100830 & 2100831	
SURVEY BOOK	SHEETS
ELECTRONIC	1 of 30
CONTRACT	PROJECT
R-43979	2100169



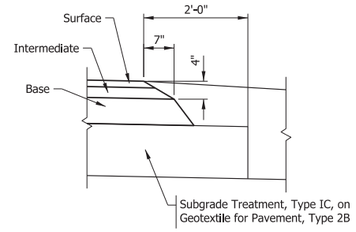
* Transition Cross Slope to match between End of Construction and End of Incidental Construction

** Varies: 2'-6" @ Sta. 204+50 to 3'-0" @ Sta. 205+00 (100:1 Taper)
3'-0" @ Sta. 212+90 to 2'-6" @ Sta. 213+40 (100:1 Taper)

*** Varies from 6:1 to 3:1, See Cross Sections for additional shoulder grading information.

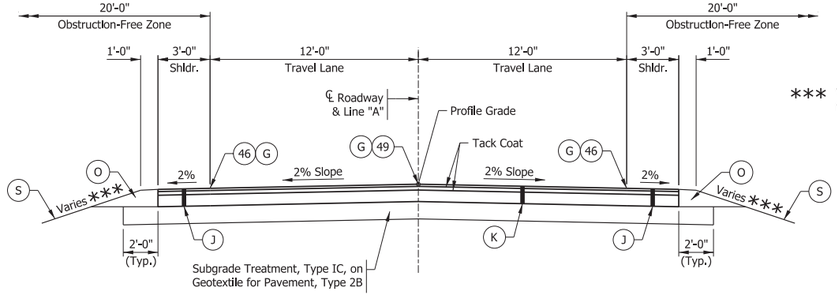
TYPICAL INCIDENTAL SECTION

Scale: ¼" = 1'-0"
Sta. 204+50.00 to Sta. 205+00.00
Sta. 212+90.00 to Sta. 213+40.00



HMA TYPICAL SAFETY EDGE DETAIL

Scale: ¾" = 1'-0"



*** Varies from 6:1 to 3:1, See Cross Sections for additional shoulder grading information.

TYPICAL FULL DEPTH SECTION

Scale: ¼" = 1'-0"
Sta. 205+00.00 to Sta. 212+90.00

LEGEND

(J) 165 lbs/syd QC/QA-HMA, 3, 58H, Surface 9.5 mm on
275 lbs/syd QC/QA-HMA, 3, 58H, Intermediate 19.0 mm on
880 lbs/syd QC/QA-HMA, 3, 58S, Base 25.0 mm

(K) 165 lbs/syd QC/QA-HMA, 3, 58H, Surface 9.5 mm on
275 lbs/syd QC/QA-HMA, 3, 58H, Intermediate 19.0 mm on
880 lbs/syd QC/QA-HMA, 3, 58S, Base 25.0 mm

(G) Grooving for Pavement Markings

(M) Milling, 1½ in.

(O) Variable-Depth Compacted Aggregate No. 53

(R) 165 lb/syd QC/QA-HMA, 3, 58H, Surface 9.5 mm

(S) Mulched Seeding, R and Erosion Control Blankets

(W) 2'-0" Widening with HMA, Type C, consisting of:
165 lbs/syd HMA Surface, Type C on
275 lbs/syd HMA Intermediate, Type C on
880 lbs/syd HMA Base, Type C on
Subgrade Treatment Type IC on Geotextile for Pavement, Type 2B (or per Geotechnical Report)

(46) Line, Thermoplastic, Solid, White, 6 in.

(49) Line, Thermoplastic, Broken, Yellow, 6 in.

NOTES

1. Tack Coat shall be applied between all layers of Asphalt.
2. Longitudinal Joint Adhesive is required for Surface and Intermediate layers of Asphalt.
3. Liquid Asphalt Sealant is required on Surface layer over Longitudinal Joint applied at 24" width.

PLOT: 8/28/2024 11:05:02 AM

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NOT FOR CONSTRUCTION 8/2024

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: DB 8/2024 DRAWN: AJ 8/2024
CHECKED: JL 8/2024 CHECKED: JL 8/2024

INDIANA DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS

SCALE	CULVERT FILE
AS NOTED	CV 066-074-51.61 & 066-074-51.62
	DESIGNATION
	2100830 & 2100831
SURVEY BOOK	SHEETS
ELECTRONIC	3 of 30
CONTRACT	PROJECT
R-43979	2100169

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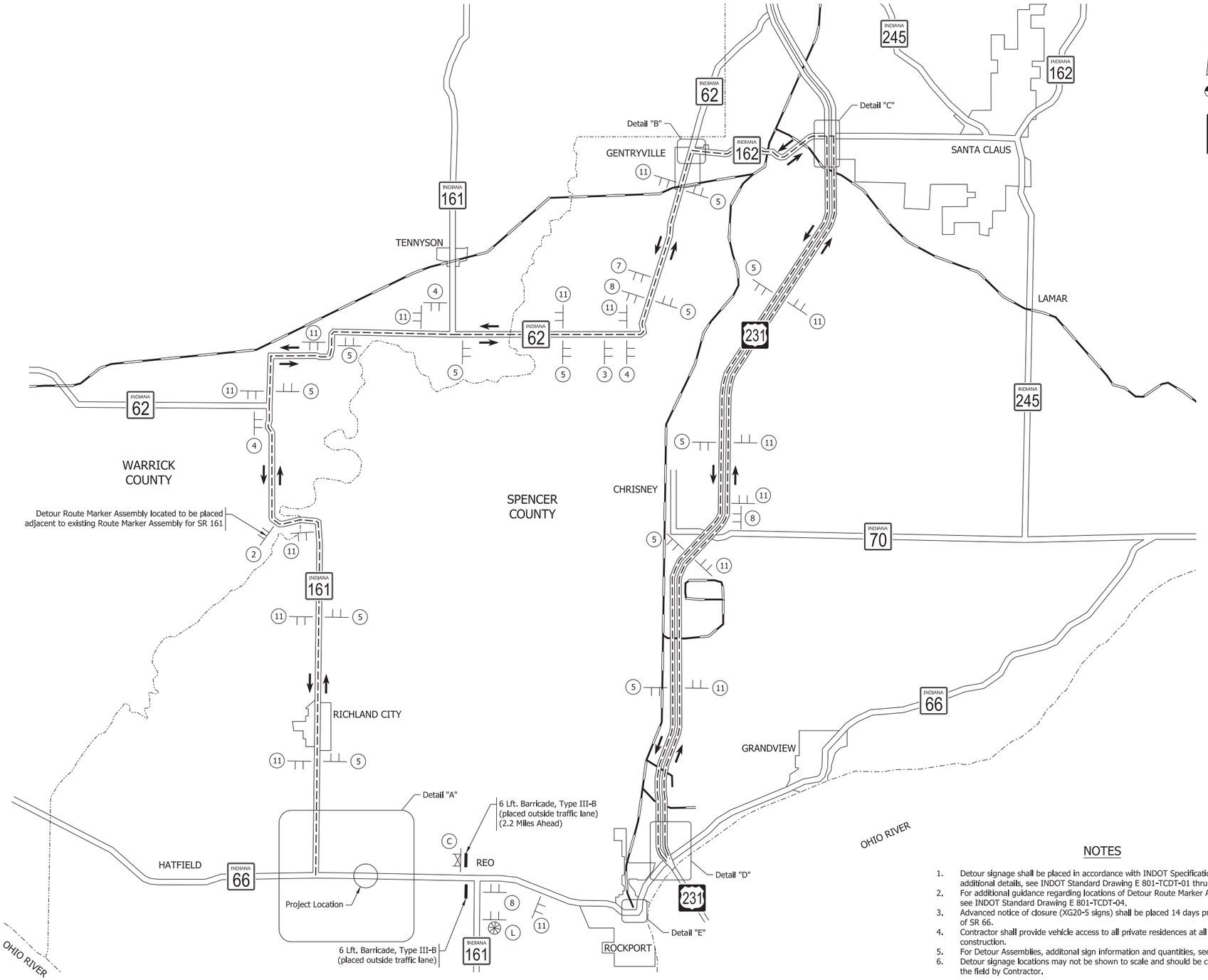

LEGEND

- Route of Detour Traffic
- Direction of Detour Traffic
- Railroad
- Waterway
- Standard Type III-A Barricade as Required
- Standard Type III-B Barricade as Required
- Typical Sign Standard (Construction Sign or Detour Assembly)
- Typical Sign Standard (Road Closure Assembly)
- Construction Sign and Supports with Low Intensity Construction Warning Light, Type A

NOTES

1. Detour signage shall be placed in accordance with INDOT Specifications. For additional details, see INDOT Standard Drawing E 801-TCDT-01 thru -03.
2. For additional guidance regarding locations of Detour Route Marker Assemblies, see INDOT Standard Drawing E 801-TCDT-04.
3. Advanced notice of closure (XG20-5 signs) shall be placed 14 days prior to closure of SR 66.
4. Contractor shall provide vehicle access to all private residences at all times during construction.
5. For Detour Assemblies, additonal sign information and quantities, see sheets 6 & 7.
6. Detour signage locations may not be shown to scale and should be confirmed in the field by Contractor.

MAINTENANCE OF TRAFFIC DETOUR PLAN

PLOT: 8/28/2024 11:05:09 AM

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HWC ENGINEERING

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NOT FOR CONSTRUCTION 8/2024

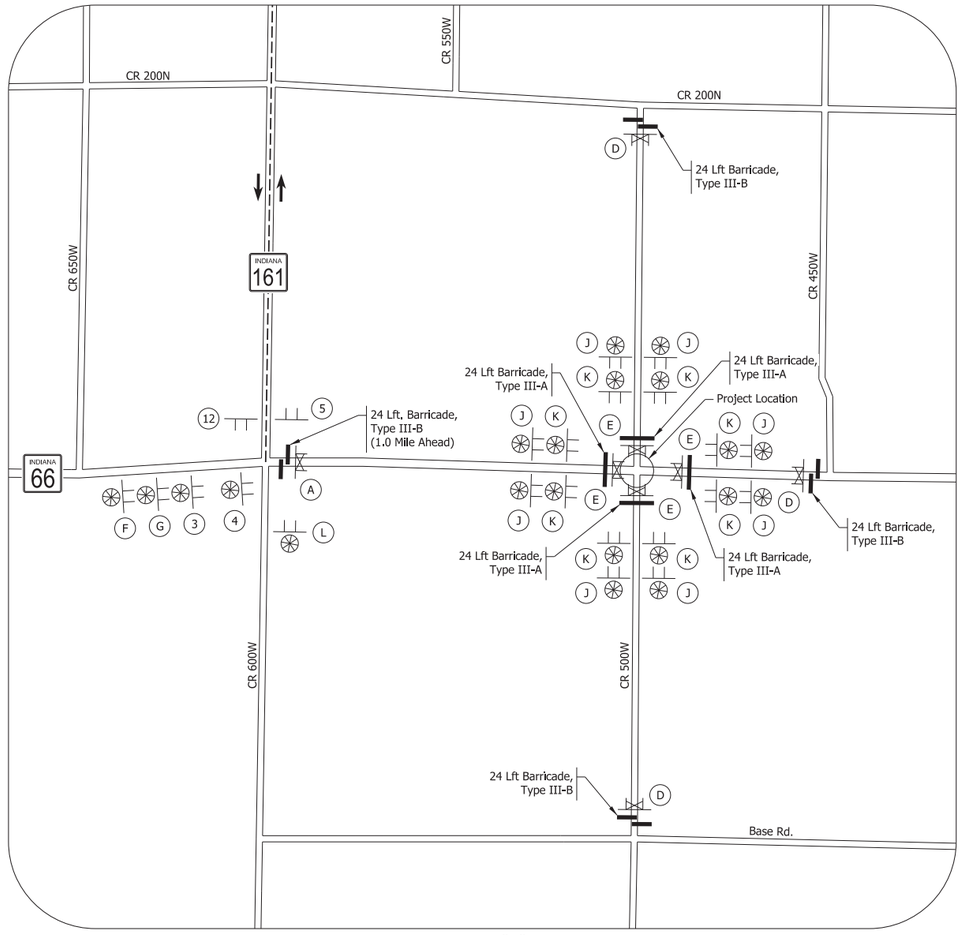
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: DB	8/2024	DRAWN: AJ	8/2024
CHECKED: JL	8/2024	CHECKED: JL	8/2024

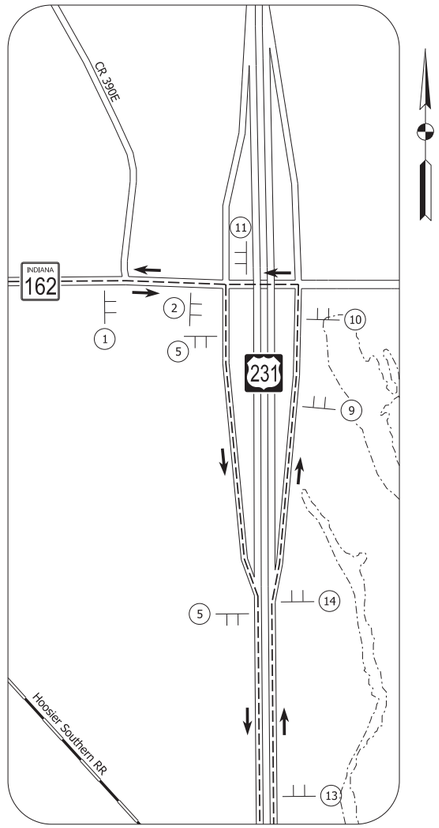
INDIANA DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC DETOUR

SCALE	CULVERT FILE
1" = 1 MI.	CV 066-074-51.61 & 066-074-51.62
	DESIGNATION
	2100830 & 2100831
SURVEY BOOK	SHEETS
ELECTRONIC	5 of 30
CONTRACT	PROJECT
R-43979	2100169



DETAIL "A"
Not to Scale



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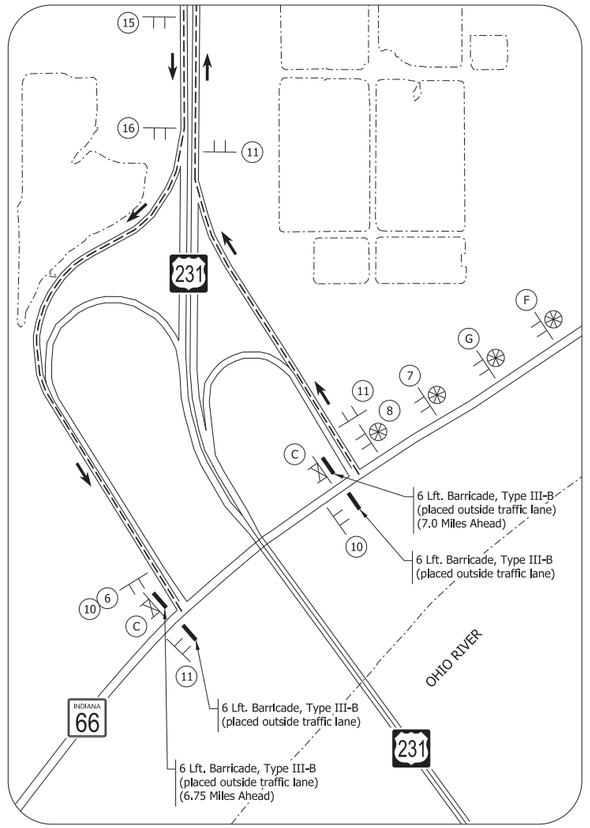
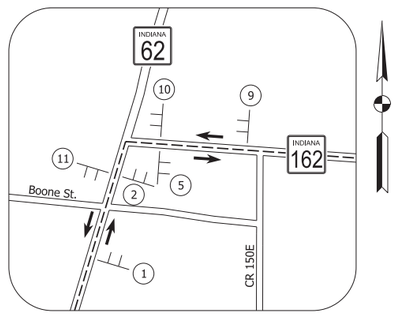


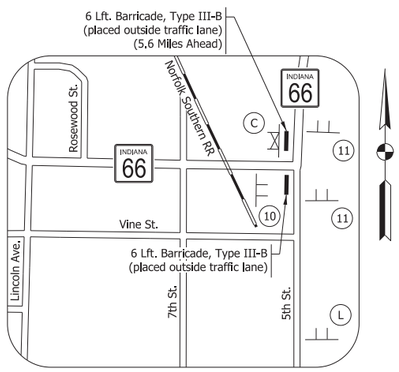
DETAIL "D"
Not to Scale

LEGEND

- Route of Detour Traffic
- Direction of Detour Traffic
- Railroad
- Waterway
- Standard Type III-A Barricade as Required
- Standard Type III-B Barricade as Required
- Typical Sign Standard (Construction Sign or Detour Assembly)
- Typical Sign Standard (Road Closure Assembly)
- Construction Sign and Supports with Low Intensity Construction Warning Light, Type A



DETAIL "B"
Not to Scale



DETAIL "E"
Not to Scale

NOTES

1. Detour signage shall be placed in accordance with INDOT Specifications. For additional details, see INDOT Standard Drawing E 801-TCDT-01 thru -03.
2. For additional guidance regarding locations of Detour Route Marker Assemblies, see INDOT Standard Drawing E 801-TCDT-04.
3. Advanced notice of closure (XG20-5 signs) shall be placed 14 days prior to closure of SR 66.
4. Contractor shall provide vehicle access to all private residences at all times during construction.
5. For Detour Assemblies, additonal sign information and quantities, see sheet 7.
6. Detour signage locations may not be shown to scale and should be confirmed in the field by Contractor.

PLOT: 8/28/2024 11:05:10 AM

W:\HNTB\2022-275-S HNTB-SR 66 Culverts Des 2100830\Design\CAD\05-07 - Sht MOT_Detour.dgn

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MUNCIE - NEW ALBANY - HAMMOND
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NOT FOR CONSTRUCTION 8/2024

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: DB 8/2024 DRAWN: AJ 8/2024
CHECKED: JL 8/2024 CHECKED: JL 8/2024

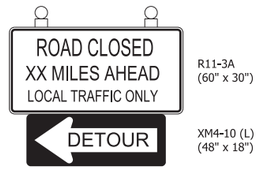
INDIANA DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC DETOUR

SCALE	CULVERT FILE
N/A	CV 066-074-51.61 & 066-074-51.62
	DESIGNATION
	2100830 & 2100831
SURVEY BOOK	SHEETS
ELECTRONIC	6 of 30
CONTRACT	PROJECT
R-43979	2100169

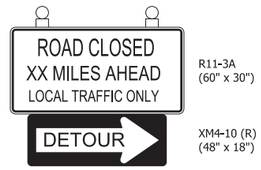
MAINTENANCE OF TRAFFIC QUANTITIES FOR DETOUR			
Designation	Item	Unit	Quantity
(A) (B) (C) (D) (E)	Road Closure Sign Assembly	Each	12
(F) (G) (H) (J) (K) (L)	Construction Sign, Type A ##	Each	25
(H) (L)	Construction Sign, Type B	Each	3
(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16)	Detour Route Marker Assembly	Each	68
	Barricade, Type III-A	Lft	96
	Barricade, Type III-B	Lft	144

Quantity includes 2 XG20-5 Route Closure Notice Signs
(Locations shall be determined by Project Engineer in the field)



R11-3A (60" x 30")
XM4-10 (L) (48" x 18")

(A)



R11-3A (60" x 30")
XM4-10 (R) (48" x 18")

(B)

R11-3A (60" x 30")

(C)

R11-4 (60" x 30")

(D)

R11-2 (48" x 30")

(E)

XW20-3 (36" x 36") (Type A Sign)

(F)

XW20-2 (36" x 36") (Type A Sign)

(G)

XW20-2 (36" x 36") (Type A Sign)
M1-5 (24" x 24") (Type B Sign)

(H)

XW20-3 (1000) (36" x 36") (Type A Sign)

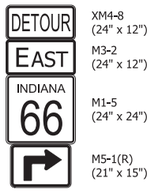
(J)

XW20-3 (500) (36" x 36") (Type A Sign)

(K)

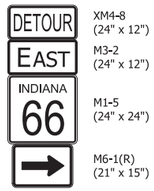
XW20-3 (36" x 36") (Type A Sign)
M1-5 (24" x 24") (Type B Sign)

(L)



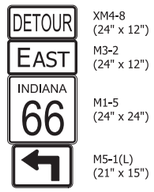
XM4-8 (24" x 12")
M3-2 (24" x 12")
M1-5 (24" x 24")
M5-1(R) (21" x 15")

(1)



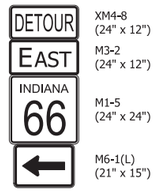
XM4-8 (24" x 12")
M3-2 (24" x 12")
M1-5 (24" x 24")
M6-1(R) (21" x 15")

(2)



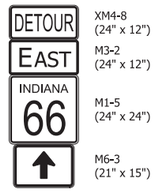
XM4-8 (24" x 12")
M3-2 (24" x 12")
M1-5 (24" x 24")
M5-1(L) (21" x 15")

(3)



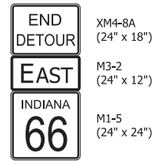
XM4-8 (24" x 12")
M3-2 (24" x 12")
M1-5 (24" x 24")
M6-1(L) (21" x 15")

(4)



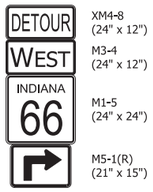
XM4-8 (24" x 12")
M3-2 (24" x 12")
M1-5 (24" x 24")
M6-3 (21" x 15")

(5)



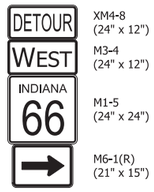
XM4-8A (24" x 18")
M3-2 (24" x 12")
M1-5 (24" x 24")

(6)



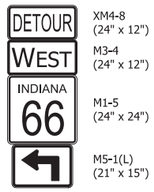
XM4-8 (24" x 12")
M3-4 (24" x 12")
M1-5 (24" x 24")
M5-1(R) (21" x 15")

(7)



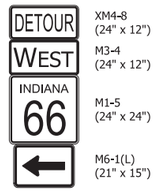
XM4-8 (24" x 12")
M3-4 (24" x 12")
M1-5 (24" x 24")
M6-1(R) (21" x 15")

(8)



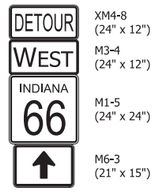
XM4-8 (24" x 12")
M3-4 (24" x 12")
M1-5 (24" x 24")
M5-1(L) (21" x 15")

(9)



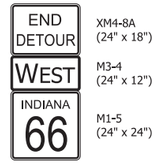
XM4-8 (24" x 12")
M3-4 (24" x 12")
M1-5 (24" x 24")
M6-1(L) (21" x 15")

(10)



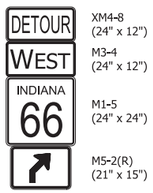
XM4-8 (24" x 12")
M3-4 (24" x 12")
M1-5 (24" x 24")
M6-3 (21" x 15")

(11)



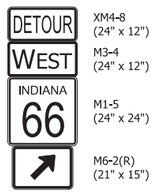
XM4-8A (24" x 18")
M3-4 (24" x 12")
M1-5 (24" x 24")

(12)



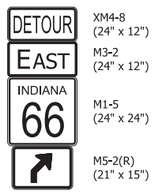
XM4-8 (24" x 12")
M3-4 (24" x 12")
M1-5 (24" x 24")
M5-2(R) (21" x 15")

(13)



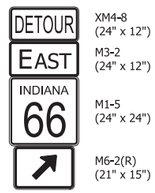
XM4-8 (24" x 12")
M3-4 (24" x 12")
M1-5 (24" x 24")
M6-2(R) (21" x 15")

(14)



XM4-8 (24" x 12")
M3-2 (24" x 12")
M1-5 (24" x 24")
M5-2(R) (21" x 15")

(15)



XM4-8 (24" x 12")
M3-2 (24" x 12")
M1-5 (24" x 24")
M6-2(R) (21" x 15")

(16)

NOTES

1. Detour signage shall be placed in accordance with INDOT Specifications. For additional details, see INDOT Standard Drawing E 801-TCDT-01 thru -03.
2. For additional guidance regarding locations of Detour Route Marker Assemblies, see INDOT Standard Drawing E 801-TCDT-04.
3. Advanced notice of closure (XG20-5 signs) shall be placed 14 days prior to closure of SR 66.
4. Contractor shall provide vehicle access to all private residences at all times during construction.
5. Detour signage locations may not be shown to scale and should be confirmed in the field by Contractor.

PLOT: 8/28/2024 11:05:10 AM

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NOT FOR CONSTRUCTION 8/2024

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: DB 8/2024 DRAWN: AJ 8/2024
CHECKED: JL 8/2024 CHECKED: JL 8/2024

INDIANA DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC DETOUR

SCALE	CULVERT FILE
AS NOTED	CV 066-074-51.61 & 066-074-51.62
	DESIGNATION
	2100830 & 2100831
SURVEY BOOK	SHEETS
ELECTRONIC	7 of 30
CONTRACT	PROJECT
R-43979	2100169

W:\HNTB\2022-275-S HNTB-SR 66 Culverts Des 2100830\Design\CAD\05-07 - Sht MOT_Detour.dgn

SECTION 14, T-7-S, R-7-W
LUCE TOWNSHIP, SPENCER CO.

SECTION 13, T-7-S, R-7-W
OHIO TOWNSHIP, SPENCER CO.

DANNY STEEN & LINDA STEEN

DANNY STEEN & LINDA STEEN

P.O.T. 202+00.00

P.O.T. 214+00.00

Begin Project
Sta. 205+00.00, Line "A"
Monument, Type B Req'd

Begin Incidental Construction
Sta. 204+50.00, Line "A"

Construction Limits

Compacted Aggregate No. 53
for Field Entrance

℄ Str. CV 066-074-51.62
over UNT of Willow Pond Ditch
66 Lft, 16' x 4' RCB Structure
Sta. 208+25.00, Line "A", No Skew

Construction Limits

End Incidental Construction
Sta. 213+40.00, Line "A"

State Road 66

App. Section Line

N: 173516.14
E: 757805.52

S87°38'44"E
Line "A"

N: 173466.84
E: 759004.50

End Project
Sta. 212+90.00, Line "A"
Monument, Type B Req'd

BENCHMARK INFORMATION

BM #Z326: - Brass Disk in top of SE Culvert Headwall
Sta. 207+23.19, Offset 19.35' Rt., Line "A"
N: 173475; E: 758327 - El. 401.61 (NAVD88)

TBM #10: - Bench Spike set in S Face of PWP #REO-D3F-01
situated ±275' N of CL SR 66 and ±20' W of CL CR 500W
Sta. 207+13.29, Offset 275.43' Lt., Line "A"
N: 173770; E: 758330 - El. 401.94 (NAVD88)

TBM #11: - Bench Spike set in W Face of PWP #REO-D3-49
situated ±30' S of CL SR 66 and ±310' E of CL CR 500W
Sta. 210+48.54, Offset 29.34' Rt., Line "A"
N: 173452; E: 758652 - El. 401.05 (NAVD88)

D&J REXING PROPERTIES, LLC
(MOONLITE WIND, LLC)

JASON ANDREW ROTH & ANDREA ELAINE WINEGAR
AND BRIAN A. KRAMER & ANNE ELIZABETH GULDEMOND
(MOONLITE WIND, LLC)

SECTION 23, T-7-S, R-7-W
LUCE TOWNSHIP, SPENCER CO.

SECTION 24, T-7-S, R-7-W
OHIO TOWNSHIP, SPENCER CO.

All R/W and existing topography described from Line "A"
Line "A" to be constructed.

CR 500W

James E. Payne
Lateral Legal Drain

App. Exist. 100' Legal Drain Esmt.

App. Exist. 10' Gas Line Esmt.

(14" STL LIQUID CRUDE OIL)

App. Exist. Water Utility Esmt.

P.V.I. Sta. 206+00.00
El. 402.10
V.C. = 200'

P.V.I. Sta. 208+90.00
El. 404.70
V.C. = 280'

P.V.I. Sta. 211+90.00
El. 402.45
V.C. = 200'

Incidental Construction

Project Limits

Mill & Overlay w/ Widening

Full-Depth Pavement

Begin Project
Sta. 205+00.00, Line "A"
El. 401.92

Begin Incidental Construction
Sta. 204+50.00, Line "A"

Low Str. @ Outlet
El. 398.99

Flowline @ Outlet
El. 395.99

0.879%

0.184%

Low Str. @ Outlet
El. 401.03

Flowline @ Outlet
El. 398.03

Proposed Profile Grade, Line "A"

0.750%

0.106%

End Incidental Construction
Sta. 213+40.00, Line "A"

End Project
Sta. 212+90.00, Line "A"
El. 402.56

16' x 4' Reinforced
Concrete Box Structure

Slope 1:4 (Typ.)

Limits of Structure
Backfill (Typ.)

Str. Inv. @ Outlet
El. 394.99

Str. Inv. @ Outlet
El. 397.03

Existing Grade

NOTE TO REVIEWER

EARTHWORK QUANTITIES TO BE
INCLUDED IN FUTURE SUMITTAL

401.7 401.8 401.8 401.9 401.9 401.9 401.9 401.92 402.0 402.05 402.1 402.28 402.2 402.59 402.2 403.00 402.2 403.44 402.2 403.82 402.1 404.05 402.1 404.13 402.1 404.06 402.1 403.85 402.1 403.50 402.3 403.13 402.4 402.83 402.4 402.63 402.5 402.55 402.6 402.7 402.8

202+00 203+00 204+00 205+00 206+00 207+00 208+00 209+00 210+00 211+00 212+00 213+00 214+00

1 USGS BM DISK Z326

10 TBM #10 - BENCH SPIKE S FACE PWP "REO-D3F-01"

11 TBM #11 - BENCH TIE W FACE PWP "REF-D3-49"

100 REBAR W/ RANDOM CAP

101 REBAR W/ RANDOM CAP

102 REBAR W/ RANDOM CAP

103 REBAR W/ RANDOM CAP

NOT FOR CONSTRUCTION
8/2024

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

DESIGNED: DB 8/2024 DRAWN: AJ 8/2024

CHECKED: JL 8/2024 CHECKED: JL 8/2024

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE

HORIZONTAL SCALE	CULVERT FILE
1" = 40'	CV 066-074-51.61 & 066-074-51.62
VERTICAL SCALE	DESIGNATION
1" = 5'	2100830 & 2100831
SURVEY BOOK	SHEETS
ELECTRONIC	8 of 30
CONTRACT	PROJECT
R-43979	2100169

PLOT: 8/28/2024 11:05:20 AM

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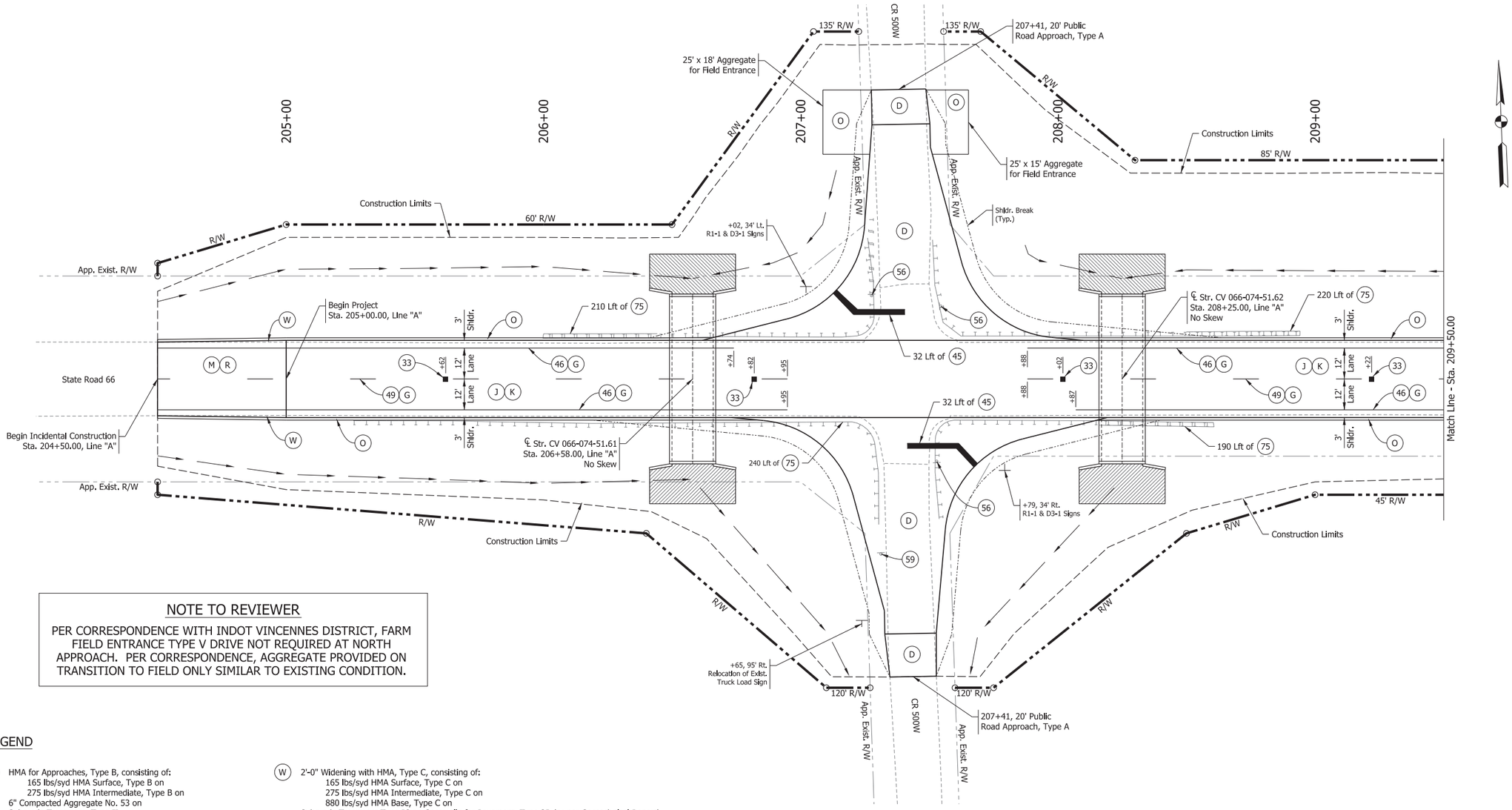

NOTE TO REVIEWER

PER CORRESPONDENCE WITH INDOT VINCENNES DISTRICT, FARM FIELD ENTRANCE TYPE V DRIVE NOT REQUIRED AT NORTH APPROACH. PER CORRESPONDENCE, AGGREGATE PROVIDED ON TRANSITION TO FIELD ONLY SIMILAR TO EXISTING CONDITION.

LEGEND

(D) HMA for Approaches, Type B, consisting of:
165 lbs/syd HMA Surface, Type B on
275 lbs/syd HMA Intermediate, Type B on
6" Compacted Aggregate No. 53 on
Subgrade Treatment, Type II

(J) 165 lbs/syd QC/QA-HMA, 3, 58H, Surface 9.5 mm on
275 lbs/syd QC/QA-HMA, 3, 58H, Intermediate 19.0 mm on
880 lbs/syd QC/QA-HMA, 3, 58S, Base 25.0 mm

(K) 165 lbs/syd QC/QA-HMA, 3, 58H, Surface 9.5 mm on
275 lbs/syd QC/QA-HMA, 3, 58H, Intermediate 19.0 mm on
880 lbs/syd QC/QA-HMA, 3, 58S, Base 25.0 mm

(G) Grooving for Pavement Markings

(M) Milling, 1½ in.

(O) Variable-Depth Compacted Aggregate No. 53

(R) 165 lb/syd QC/QA-HMA, 3, 58H, Surface 9.5 mm

(W) 2'-0" Widening with HMA, Type C, consisting of:
165 lbs/syd HMA Surface, Type C on
275 lbs/syd HMA Intermediate, Type C on
880 lbs/syd HMA Base, Type C on
Subgrade Treatment Type IC on Geotextile for Pavement, Type 2B (or per Geotechnical Report)

(33) Snowplowable Raised Pavement Marker (see note 4)

(45) Transverse Marking, Thermoplastic, Stop Line, White, 24 in.

(46) Line, Thermoplastic, Solid, White, 6 in.

(49) Line, Thermoplastic, Broken, Yellow, 6 in.

(56) Remove Existing Sheet Sign and Support

(59) Sign, Sheet, Relocate on New Support

(75) Guardrail, Remove

NOTES

1. Tack Coat shall be applied between all layers of asphalt.
2. Longitudinal Joint Adhesive is required for Surface and Intermediate layers of asphalt.
3. Liquid Asphalt Sealant is required on Surface layer at 24" width centered over longitudinal joint.
4. Snowplowable Raised Pavement Markers shall be placed at 120' max.
5. For additional roadway information, see sheet 3.
6. For additional information regarding Public Road Approach, Type A, see INDOT Std. Dwg. E 610-PRAP-02.

PLOT: 8/28/2024 11:05:24 AM

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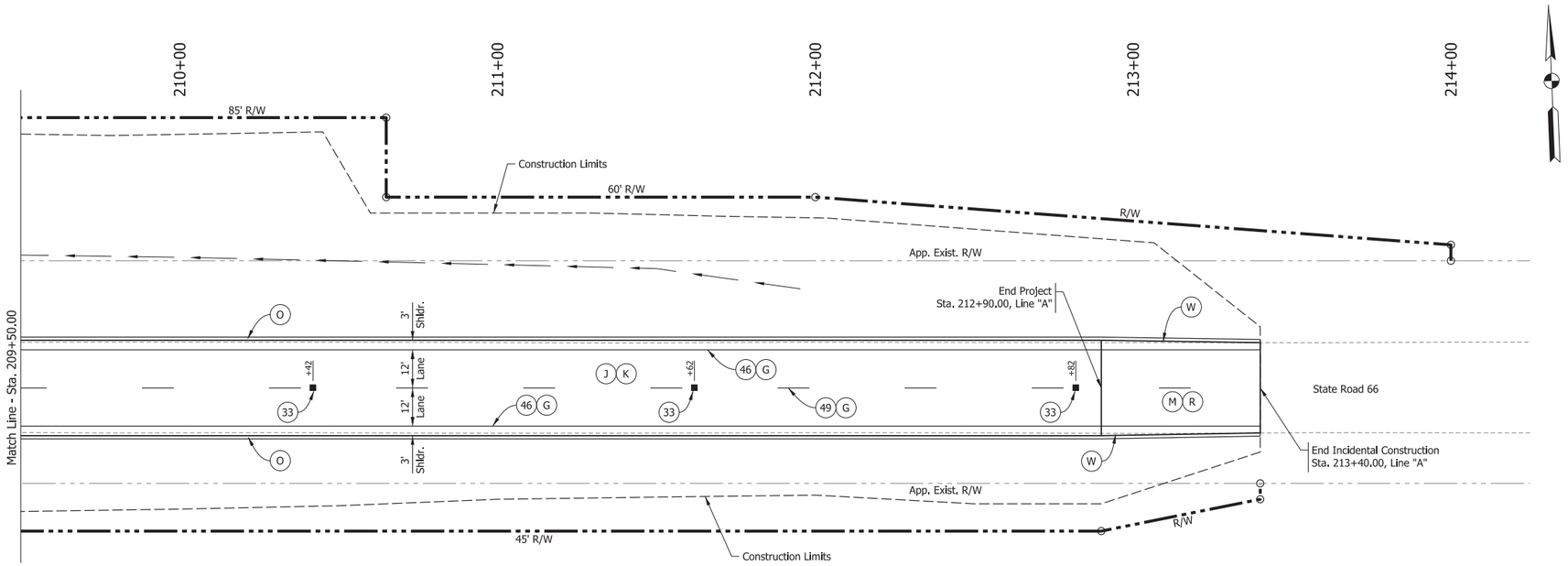
CHECKED: JL	8/2024	CHECKED: JL	8/2024

INDIANA DEPARTMENT OF TRANSPORTATION

ROADWAY CONSTRUCTION DETAILS

SCALE	CULVERT FILE
1" = 20'	CV 066-074-51.61 & 066-074-51.62
	DESIGNATION
	2100830 & 2100831
SURVEY BOOK	SHEETS
ELECTRONIC	9 of 30
CONTRACT	PROJECT
R-43979	2100169



LEGEND

(D) HMA for Approaches, Type B, consisting of:
165 lbs/syd HMA Surface, Type B on
275 lbs/syd HMA Intermediate, Type B on
6" Compacted Aggregate No. 53 on
Subgrade Treatment, Type II

(J) 165 lbs/syd QC/QA-HMA, 3, 58H, Surface 9.5 mm on
275 lbs/syd QC/QA-HMA, 3, 58H, Intermediate 19.0 mm on
880 lbs/syd QC/QA-HMA, 3, 58S, Base 25.0 mm

(K) 165 lbs/syd QC/QA-HMA, 3, 58H, Surface 9.5 mm on
275 lbs/syd QC/QA-HMA, 3, 58H, Intermediate 19.0 mm on
880 lbs/syd QC/QA-HMA, 3, 58S, Base 25.0 mm

(G) Grooving for Pavement Markings

(M) Milling, 1½ in.

(O) Variable-Depth Compacted Aggregate No. 53

(R) 165 lb/syd QC/QA-HMA, 3, 58H, Surface 9.5 mm

(W) 2'-0" Widening with HMA, Type C, consisting of:
165 lbs/syd HMA Surface, Type C on
275 lbs/syd HMA Intermediate, Type C on
880 lbs/syd HMA Base, Type C on
Subgrade Treatment Type IC on Geotextile for Pavement, Type 2B (or per Geotechnical Report)

(33) Snowplowable Raised Pavement Marker (see note 4)

(45) Transverse Marking, Thermoplastic, Stop Line, White, 24 in.

(46) Line, Thermoplastic, Solid, White, 6 in.

(49) Line, Thermoplastic, Broken, Yellow, 6 in.

(56) Remove Existing Sheet Sign and Support

(59) Sign, Sheet, Relocate on New Support

(75) Guardrail, Remove

NOTES

1. Tack Coat shall be applied between all layers of asphalt.
2. Longitudinal Joint Adhesive is required for Surface and Intermediate layers of asphalt.
3. Liquid Asphalt Sealant is required on Surface layer at 24" width centered over longitudinal joint.
4. Snowplowable Raised Pavement Markers shall be placed at 120' max.
5. For additional roadway information, see sheet 3.
6. For additional information regarding Public Road Approach, Type A, see INDOT Std. Dwg. E 610-PRAP-02.

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CHECKED: JL 8/2024 CHECKED: JL 8/2024

INDIANA DEPARTMENT OF TRANSPORTATION

ROADWAY CONSTRUCTION DETAILS

SCALE	CULVERT FILE
1" = 20'	CV 066-074-51.61 & 066-074-51.62
	DESIGNATION
	2100830 & 2100831
SURVEY BOOK	SHEETS
ELECTRONIC	10 of 30
CONTRACT	PROJECT
R-43979	2100169

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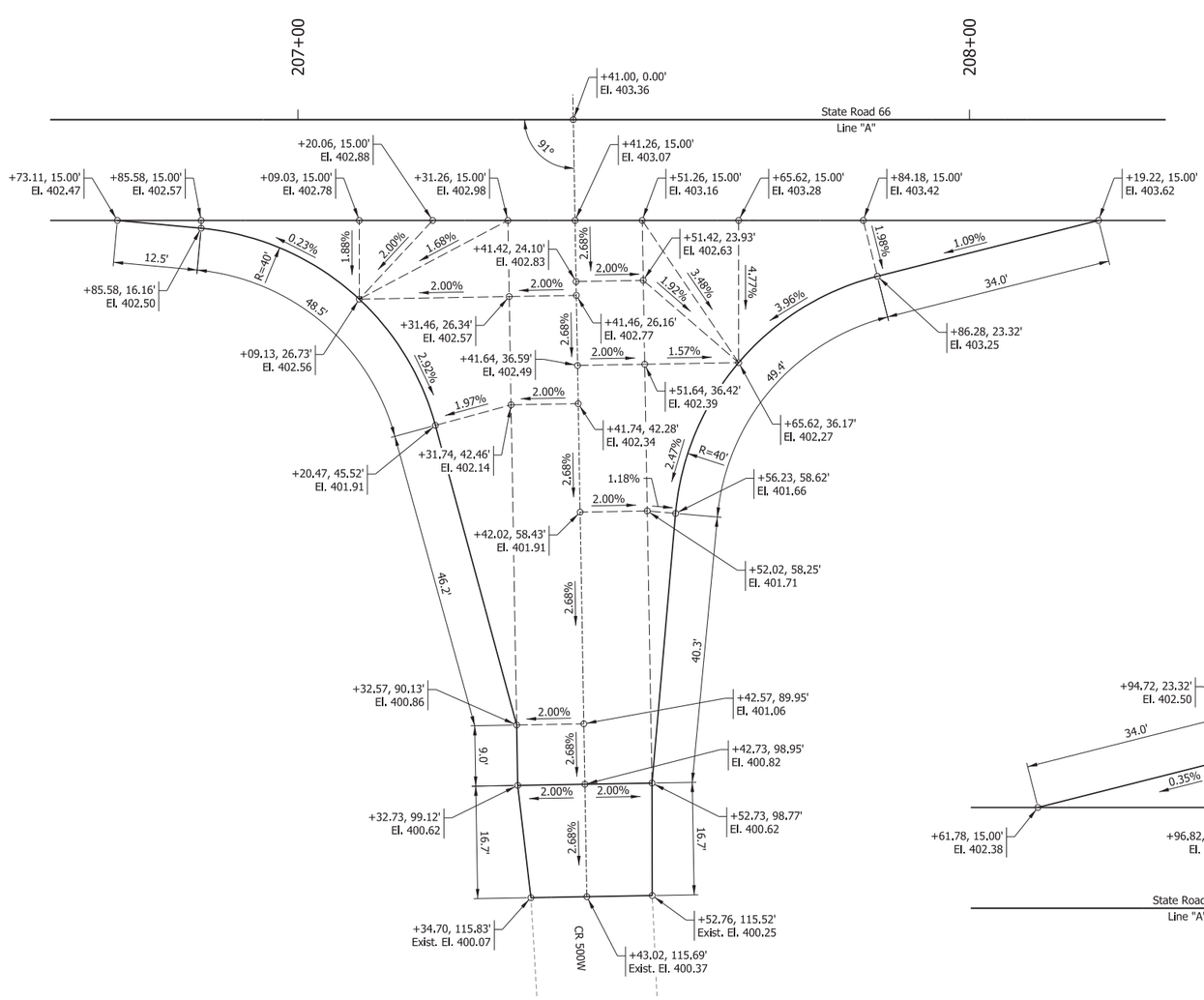
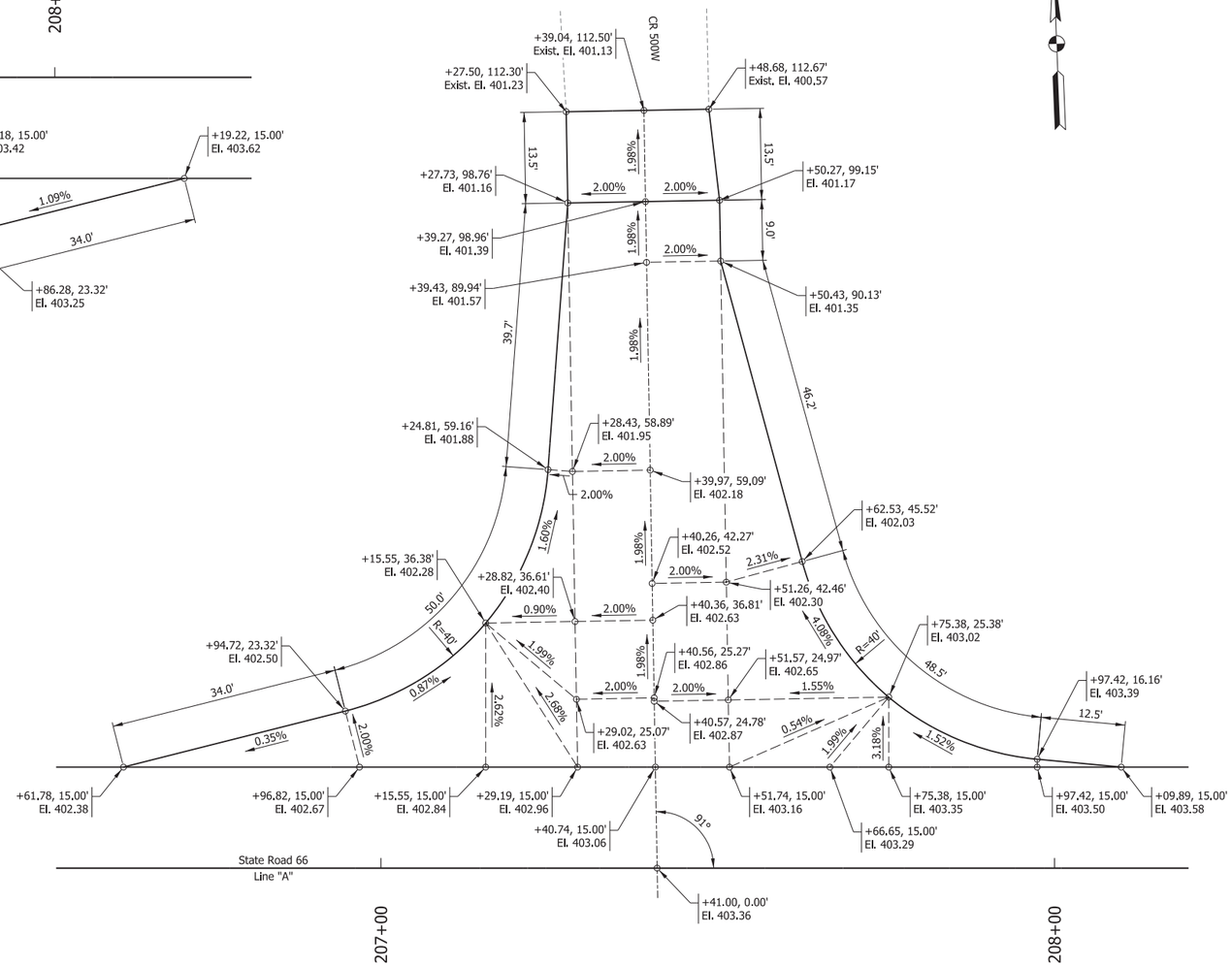


PUBLIC ROAD APPROACH, TYPE A
(SOUTH APPROACH)
Scale: 1" = 10'



PUBLIC ROAD APPROACH, TYPE A
(NORTH APPROACH)
Scale: 1" = 10'

NOTES

1. For additional roadway information, see sheet 9.
2. For Cross Section details for Public Road Approaches, see sheet 30.
3. For additional information regarding Public Road Approach, Type A, see INDOT Std. Dwg. E 610-PRAP-02.

PLOT: 8/28/2024 11:05:26 AM

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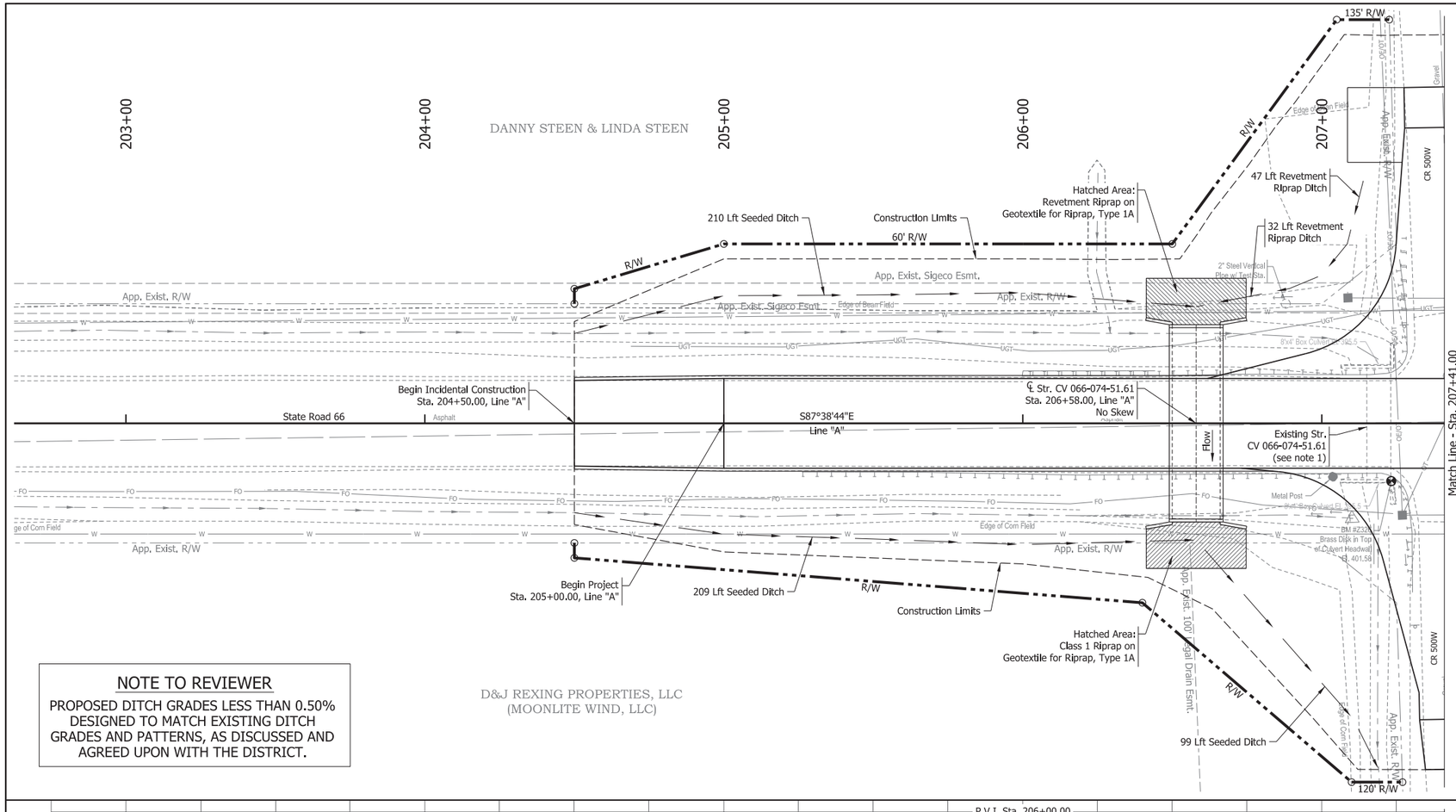
INDIANA
DEPARTMENT OF TRANSPORTATION

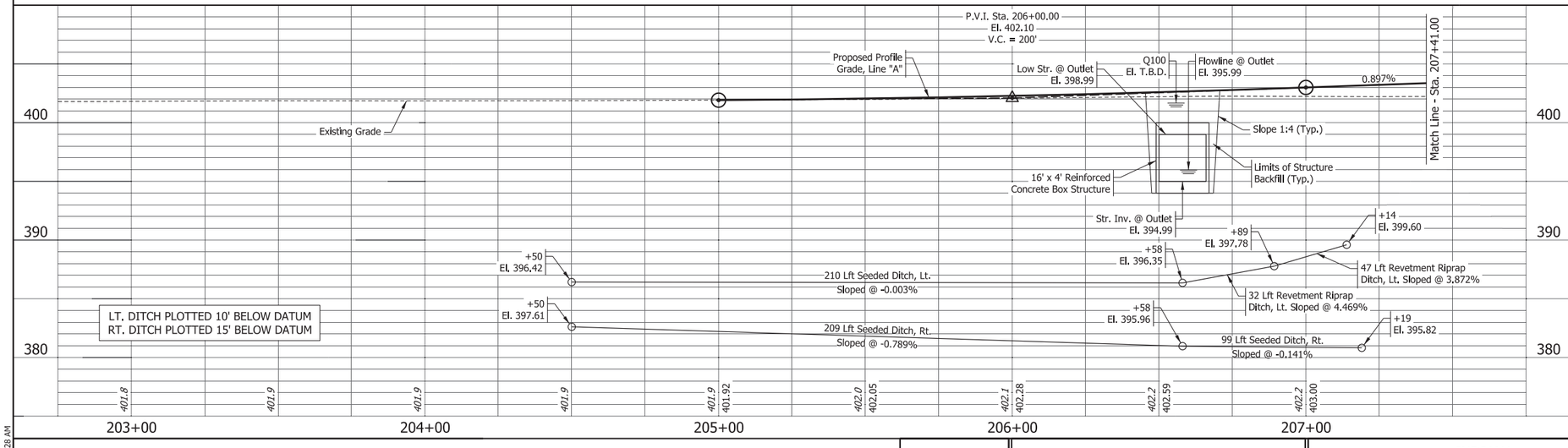
INTERSECTION DETAILS

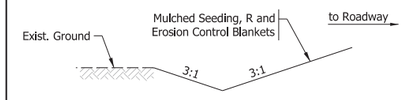
SCALE	CULVERT FILE
AS NOTED	CV 066-074-51.61 & 066-074-51.62
	DESIGNATION
	2100830 & 2100831
SURVEY BOOK	SHEETS
ELECTRONIC	11 of 30
CONTRACT	PROJECT
R-43979	2100169



NOTE TO REVIEWER

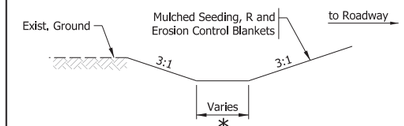
PROPOSED DITCH GRADES LESS THAN 0.50% DESIGNED TO MATCH EXISTING DITCH GRADES AND PATTERNS, AS DISCUSSED AND AGREED UPON WITH THE DISTRICT.





TYPICAL ROADSIDE SEEDED V-DITCH

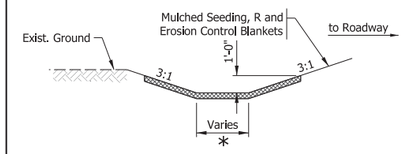
Scale: ¼" = 1'-0"
Sta. 204+50.00 to Sta. 206+58.00, Rt.



* Varies: 6'-0" @ Sta. 204+50 to Sta. 206+58, Lt.
0'-0" @ Sta. 206+58 to 5'-0" @ Sta. 207+19, Rt.
5'-0" @ Sta. 207+66 to Sta. 208+25, Rt.
4'-0" @ Sta. 208+25 to Sta. 212+00, Lt.

TYPICAL ROADSIDE SEEDED FLAT-BOTTOM DITCH

Scale: ¼" = 1'-0"



* Varies: 6'-0" @ Sta. 206+58 to 0'-0" @ Sta. 207+14, Lt. (Riprap)
1'-0" @ Sta. 207+87 to 4'-0" @ Sta. 208+25, Lt. (Sodded)

TYPICAL ROADSIDE LINED FLAT-BOTTOM DITCH

Scale: ¼" = 1'-0"

NOTES

1. Existing structure to be removed after proposed structure is installed to convey drainage during construction.
2. For additional details, see sheet 13.

PLOT: 8/28/2024 11:05:28 AM

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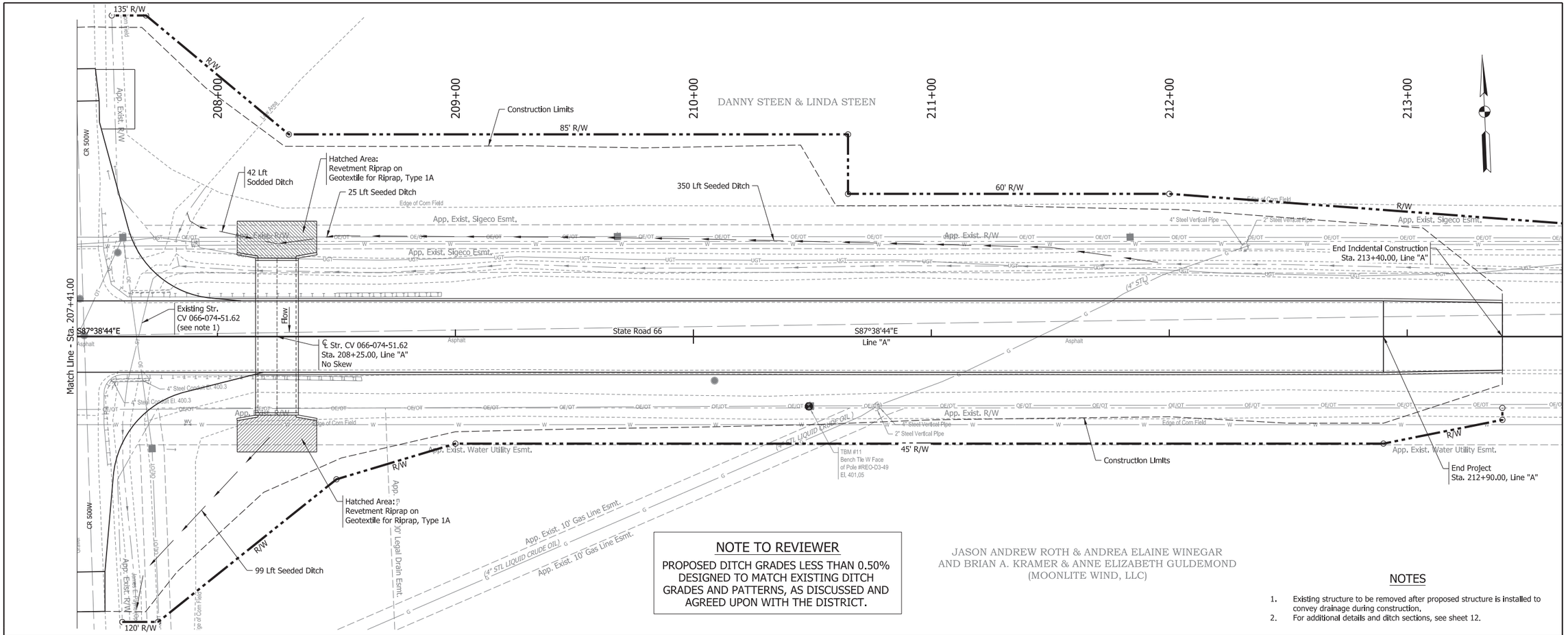
GRADING AND DRAINAGE DETAILS

HORIZONTAL SCALE	CULVERT FILE
1" = 20'	CV 066-074-51.61 & 066-074-51.62
VERTICAL SCALE	DESIGNATION
1" = 5'	2100830 & 2100831
SURVEY BOOK	SHEETS
ELECTRONIC	12 of 30
CONTRACT	PROJECT
R-43979	2100169

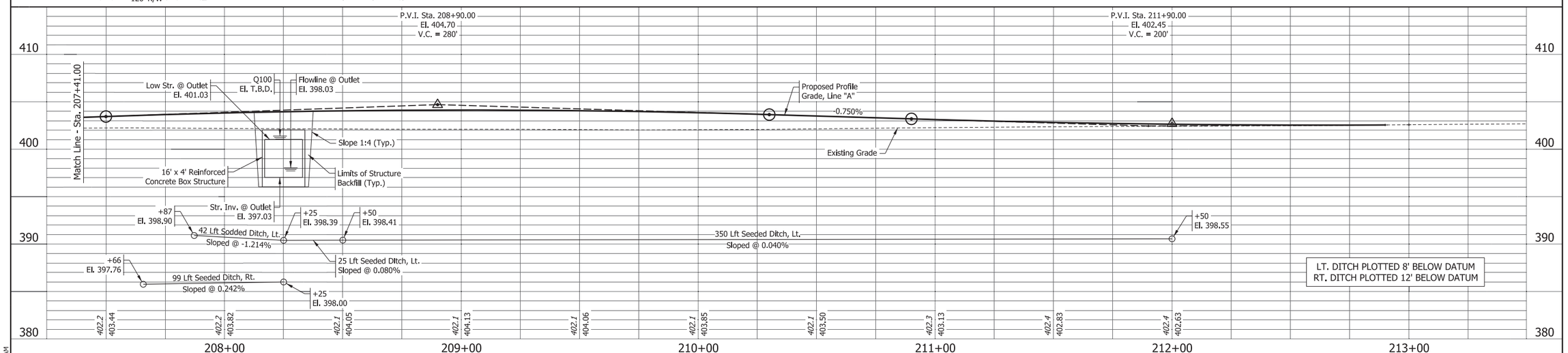


NOTE TO REVIEWER

PROPOSED DITCH GRADES LESS THAN 0.50% DESIGNED TO MATCH EXISTING DITCH GRADES AND PATTERNS, AS DISCUSSED AND AGREED UPON WITH THE DISTRICT.

NOTES

1. Existing structure to be removed after proposed structure is installed to convey drainage during construction.
2. For additional details and ditch sections, see sheet 12.



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INDIANA DEPARTMENT OF TRANSPORTATION

GRADING AND DRAINAGE DETAILS

HORIZONTAL SCALE	CULVERT FILE
1" = 20'	CV 066-074-51.61 & 066-074-51.62
VERTICAL SCALE	DESIGNATION
1" = 5'	2100830 & 2100831
SURVEY BOOK	SHEETS
ELECTRONIC	13 of 30
CONTRACT	PROJECT
R-43979	2100169

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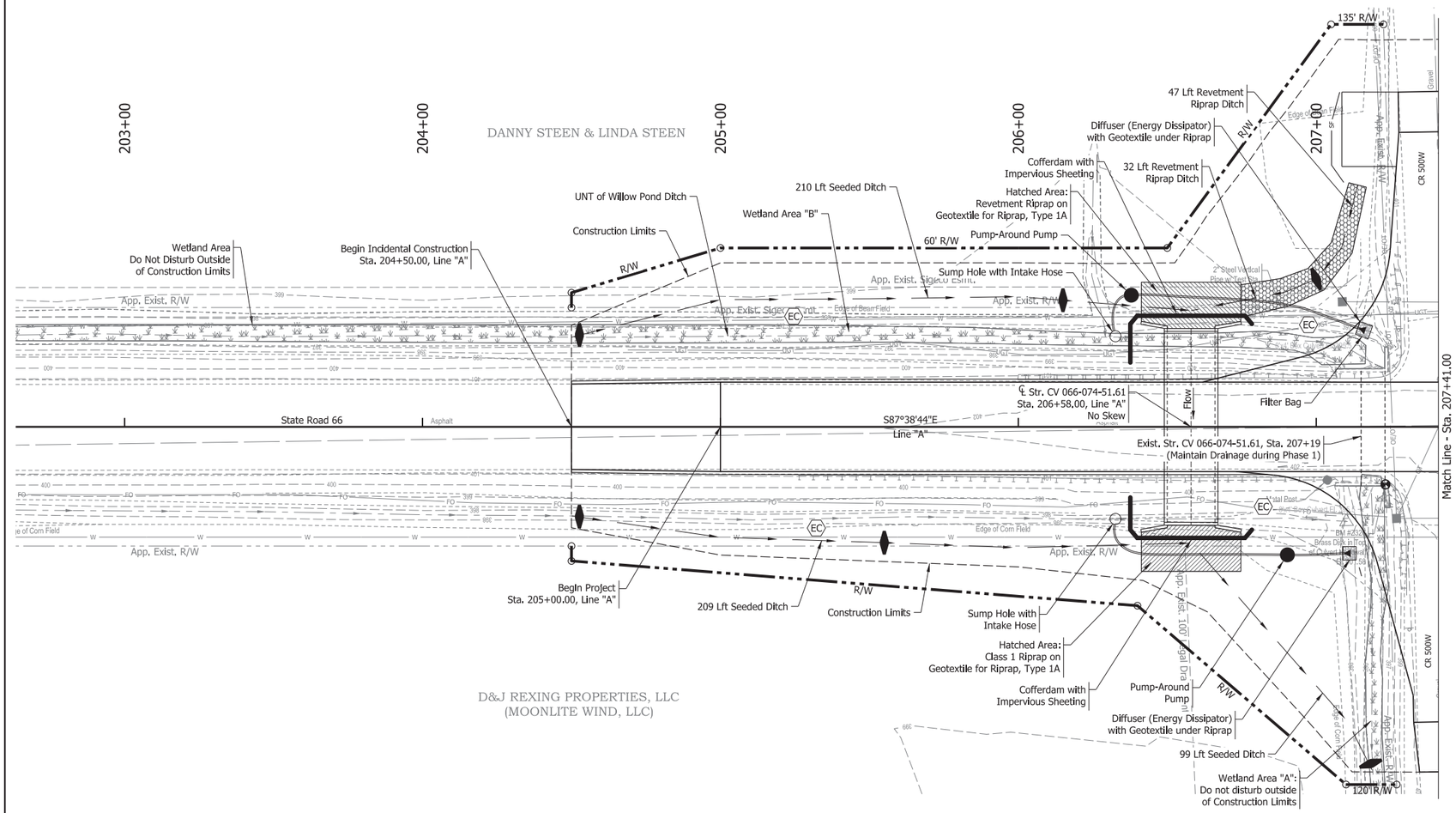
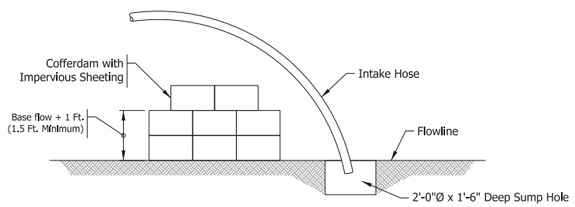


LEGEND

- Revetment Riprap Ditch
- Sodded Ditch
- Wetland Area
- EC — Erosion Control Blanket for Mulched Seeding, R
- Temporary Modified Check Dam, Revetment Riprap
- Direction of Flow
- SF — Perimeter Protection (Filter Sock or equivalent)



COFFERDAM / SUMP HOLE WORK AREA DETAIL
Not to Scale

PUMP-AROUND NOTES

1. Adjust outlet stabilization if bank erosion is present.
2. Adjust Pump capacity as necessary to handle stream water volume.
3. Repair leaks and/or otherwise stabilize Cofferdams if water is back flowing into work area.
4. Pump Around discharge shall not be outleted directly into stream.

PHASE 1: SEQUENCE OF CONSTRUCTION

1. Exist. Culvert at Sta. 207+19 to remain in place to convey drainage through site during installation of proposed structure at Sta. 206+58.00.
2. Install Temp. Mod. Check Dam @ Sta. 207+19, Rt.
3. Place Cofferdam at Inlet and Outlet areas of anticipated excavation for proposed 16'x4' RCB.
4. Excavate and Install proposed 16'x4" RCB.
5. Remove Cofferdams.
6. Install Riprap at proposed Structure inlet and outlet.
7. Regrade ditches to proposed elevations for drainage to new structure.
8. Install Check Dams in proposed ditches.

EROSION CONTROL NOTES

1. See INDOT Standard Specifications, Section 205 for installation and maintenance guidance for Stormwater Management items.
2. Erosion Control Blanket shall be placed on all graded slopes 3:1 and steeper and in concentrated flow areas to be seeded.
3. Permanent Seeding and Mulching to be placed on all disturbed areas, unless noted otherwise.
4. Temporary Seeding shall take place on all disturbed areas that are expected to be inactive for more than seven days.
5. Cofferdams shall be constructed of non-erosive materials.
6. Installation of dewatering measures should occur in dry conditions.
7. Maintenance of measures should occur within 48 hours of identification of concern, if feasible a schedule shall be discussed and approved by the PE.
8. Re-use Riprap from Temporary Modified Check Dams for ditch construction to greatest extent possible. Temporary Modified Check Dams are only needed when Erosion Resistant Linings are not in place downstream of the Check Dam, except for the most downstream Check dam. Erosion Resistant Linings include Riprap or Sod.
9. For information regarding Temporary Check Dam, Revetment Riprap, see INDOT Std. Dwg. E 205-TECD-06.
10. For information regarding Temporary Perimeter Protection with Filter Sock, see INDOT Std. Dwg. E 205-TECD-10.
11. For additional Phase 1 Erosion Control details, see sheet 15.
12. For Erosion Control quantities, see sheet 17.

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EROSION CONTROL DETAILS
PHASE 1

SCALE	CULVERT FILE
1" = 20'	CV 066-074-51.61 & 066-074-51.62
	DESIGNATION
	2100830 & 2100831
SURVEY BOOK	SHEETS
ELECTRONIC	14 of 30
CONTRACT	PROJECT
R-43979	2100169

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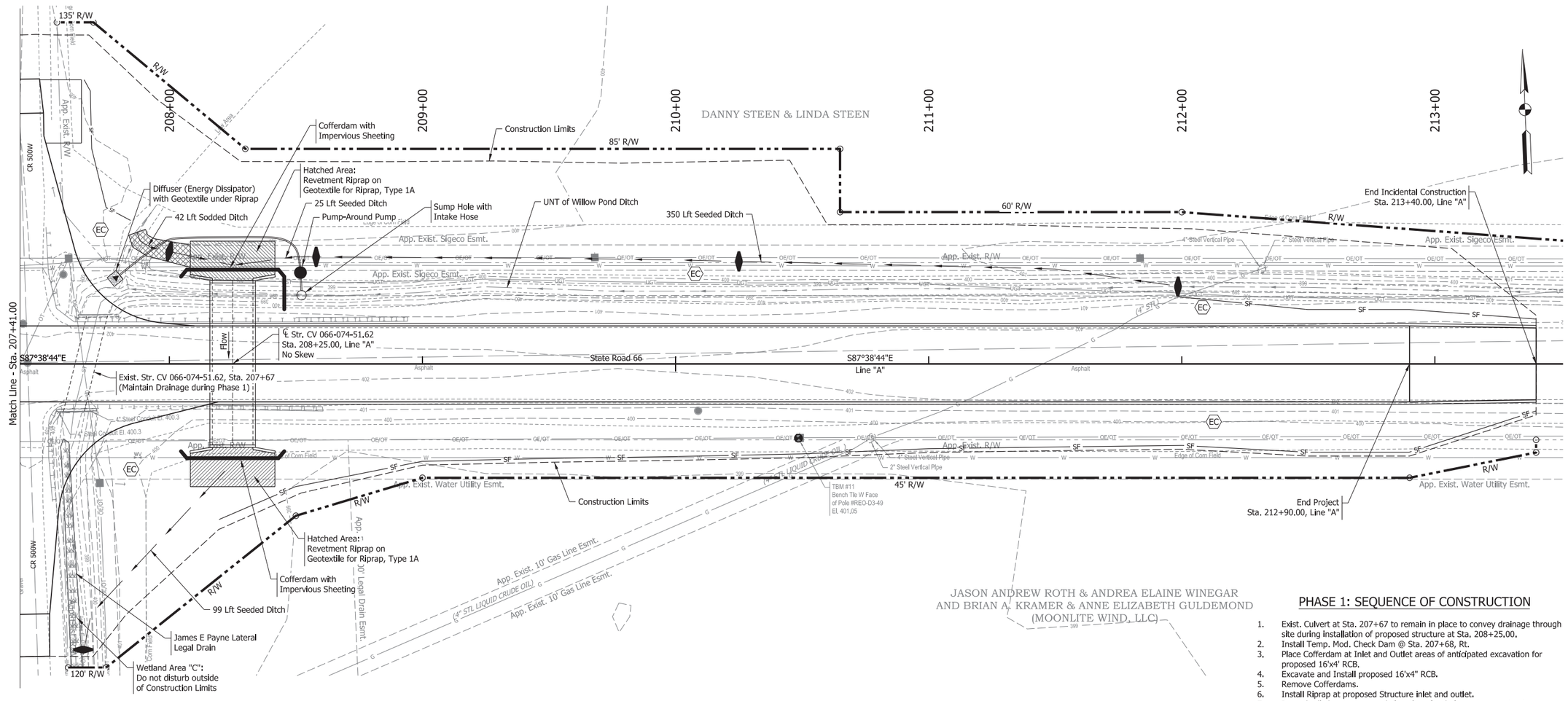

LEGEND

- Revetment Riprap Ditch
- Sodded Ditch
- Wetland Area
- (EC) Erosion Control Blanket for Mulched Seeding, R
- Temporary Modified Check Dam, Revetment Riprap
- Direction of Flow
- —— SF —— Perimeter Protection (Filter Sock or equivalent)

PHASE 1: SEQUENCE OF CONSTRUCTION

1. Exist. Culvert at Sta. 207+67 to remain in place to convey drainage through site during installation of proposed structure at Sta. 208+25.00.
2. Install Temp. Mod. Check Dam @ Sta. 207+68, Rt.
3. Place Cofferdam at Inlet and Outlet areas of anticipated excavation for proposed 16'x4' RCB.
4. Excavate and Install proposed 16'x4" RCB.
5. Remove Cofferdams.
6. Install Riprap at proposed Structure inlet and outlet.
7. Regrade ditches to proposed elevations for drainage to new structure.
8. Install Check Dams in proposed ditches.

EROSION CONTROL NOTES

1. See INDOT Standard Specifications, Section 205 for installation and maintenance guidance for Stormwater Management items.
2. Erosion Control Blanket shall be placed on all graded slopes 3:1 and steeper and in concentrated flow areas to be seeded.
3. Permanent Seeding and Mulching to be placed on all disturbed areas, unless noted otherwise.
4. Temporary Seeding shall take place on all disturbed areas that are expected to be inactive for more than seven days.
5. Cofferdams shall be constructed of non-erosive materials.
6. Installation of dewatering measures should occur in dry conditions.
7. Maintenance of measures should occur within 48 hours of identification of concern, if feasible a schedule shall be discussed and approved by the PE.
8. Re-use Riprap from Temporary Modified Check Dams for ditch construction to greatest extent possible. Temporary Modified Check Dams are only needed when Erosion Resistant Linings are not in place downstream of the Check Dam, except for the most downstream Check dam. Erosion Resistant Linings include Riprap or Sod.
9. For information regarding Temporary Check Dam, Revetment Riprap, see INDOT Std. Dwg. E 205-TECD-06.
10. For information regarding Temporary Perimeter Protection with Filter Sock, see INDOT Std. Dwg. E 205-TECD-10.
11. For Phase 2 Erosion Control details, see sheets 16 thru 17.
12. For Erosion Control quantities, see sheet 17.

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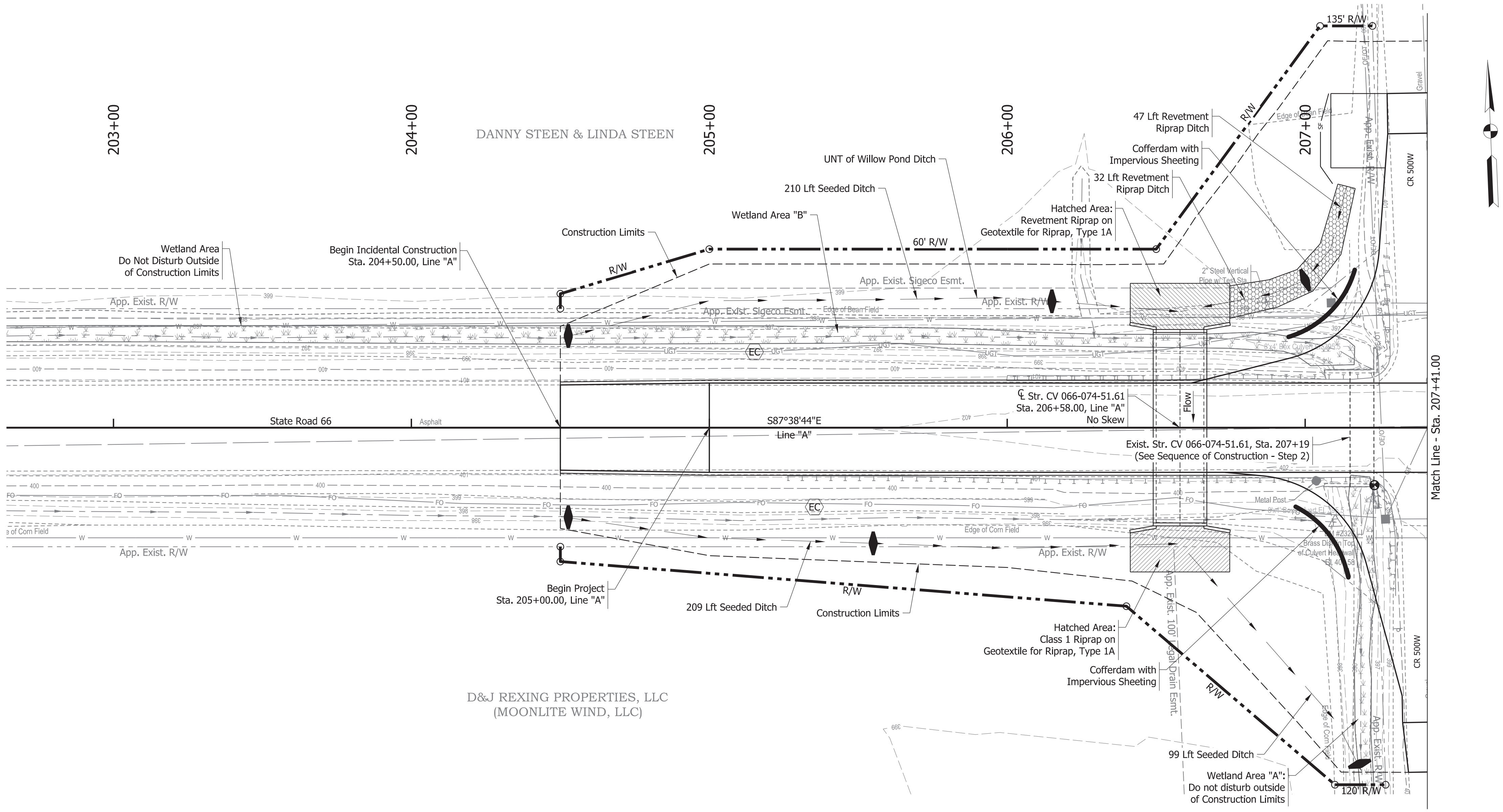
EROSION CONTROL DETAILS
PHASE 1

SCALE	CULVERT FILE
1" = 20'	CV 066-074-51.61 & 066-074-51.62
	DESIGNATION
	2100830 & 2100831
SURVEY BOOK	SHEETS
ELECTRONIC	15 of 30
CONTRACT	PROJECT
R-43979	2100169



PHASE 2: SEQUENCE OF CONSTRUCTION

1. Place Cofferdams at Inlet and Outlet of Existing Structures.
2. Remove Exist. Structure @ Sta. 207+19.
3. Fill in Area of Existing Structure to proposed grades.
4. Remove Cofferdams.

LEGEND

- Revetment Riprap Ditch
- Sodded Ditch
- Wetland Area
- EC — Erosion Control Blanket for Mulched Seeding, R
- Temporary Modified Check Dam, Revetment Riprap
- Direction of Flow
- —— SF —— Perimeter Protection (Filter Sock or equivalent)

EROSION CONTROL NOTES

1. See INDOT Standard Specifications, Section 205 for installation and maintenance guidance for Stormwater Management items.
2. Erosion Control Blanket shall be placed on all graded slopes 3:1 and steeper and in concentrated flow areas to be seeded.
3. Permanent Seeding and Mulching to be placed on all disturbed areas, unless noted otherwise.
4. Temporary Seeding shall take place on all disturbed areas that are expected to be inactive for more than seven days.
5. Cofferdams shall be constructed of non-erosive materials.
6. Installation of dewatering measures should occur in dry conditions.
7. Maintenance of measures should occur within 48 hours of identification of concern, if feasible a schedule shall be discussed and approved by the PE.
8. Re-use Riprap from Temporary Modified Check Dams for ditch construction to greatest extent possible. Temporary Modified Check Dams are only needed when Erosion Resistant Linings are not in place downstream of the Check Dam, except for the most downstream Check dam. Erosion Resistant Linings include Riprap or Sod.
9. For information regarding Temporary Check Dam, Revetment Riprap, see INDOT Std. Dwg. E 205-TECD-06.
10. For information regarding Temporary Perimeter Protection with Filter Sock, see INDOT Std. Dwg. E 205-TECD-10.
11. For additional Phase 2 Erosion Control details and quantities, see sheet 17.

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INDIANA
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL DETAILS
PHASE 2

SCALE	CULVERT FILE
1" = 20'	CV 066-074-51.61 & 066-074-51.62
	DESIGNATION
	2100830 & 2100831
SURVEY BOOK	SHEETS
ELECTRONIC	16 of 30
CONTRACT	PROJECT
R-43979	2100169

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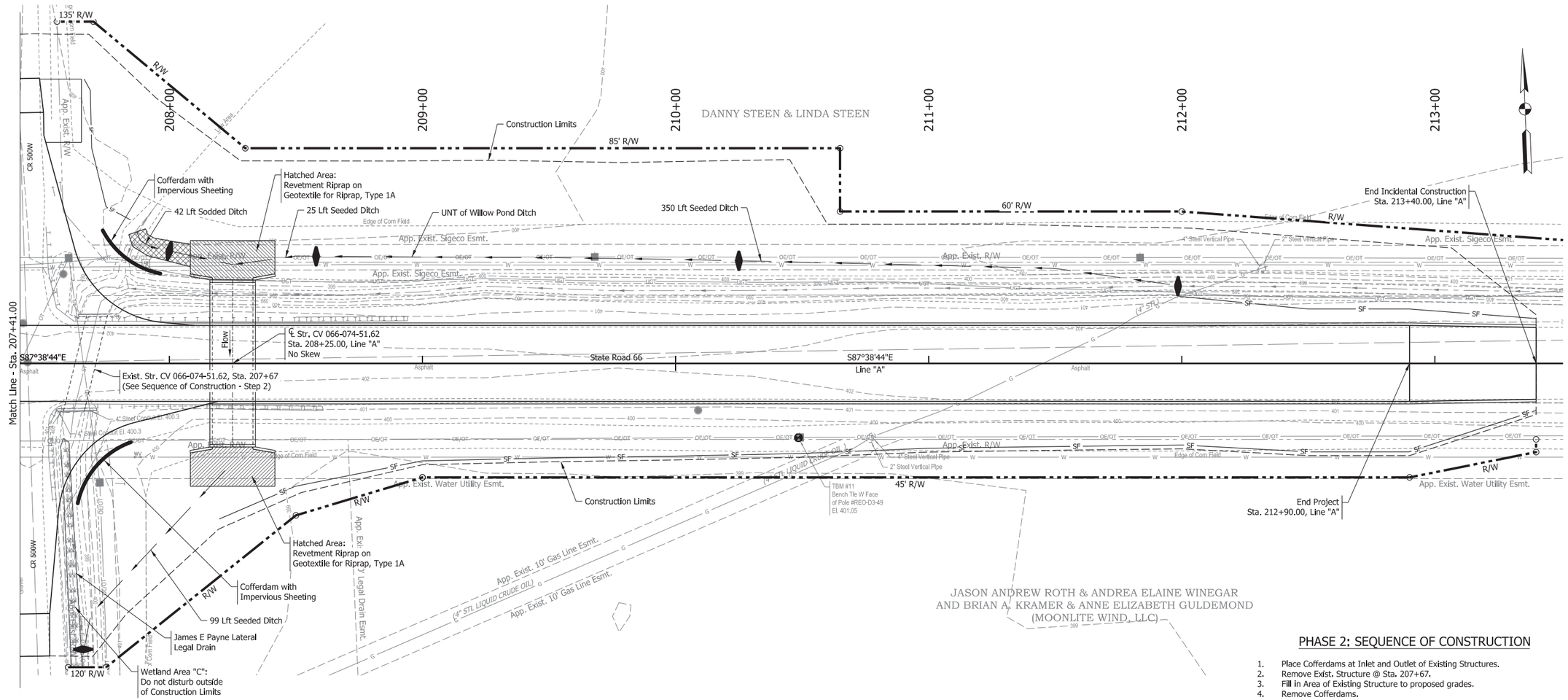

PHASE 2: SEQUENCE OF CONSTRUCTION

1. Place Cofferdams at Inlet and Outlet of Existing Structures.
2. Remove Exist. Structure @ Sta. 207+67.
3. Fill in Area of Existing Structure to proposed grades.
4. Remove Cofferdams.

LEGEND

- Revetment Riprap Ditch
- Sodded Ditch
- Wetland Area
- Erosion Control Blanket for Mulched Seeding, R
- Temporary Modified Check Dam, Revetment Riprap
- Direction of Flow
- SF — Perimeter Protection (Filter Sock or equivalent)

TEMPORARY PERIMETER PROTECTION QUANTITIES

Stations			Lt. / Rt.	Quantity (Lft.)
207+08	to	207+09	Lt.	
207+66	to	207+84	Lt.	
207+95	to	213+40	Rt.	
212+00	to	213+40	Lt.	
			Total:	

TEMPORARY EROSION CONTROL ITEMS

Item	Quantity
Filter Sock	
No. 2 Stone	
Temporary Check Dam, Revetment Riprap	
Temporary Geotextile	
Temporary Mulch	
Temporary Seed	

EROSION CONTROL NOTES

1. See INDOT Standard Specifications, Section 205 for installation and maintenance guidance for Stormwater Management items.
2. Erosion Control Blanket shall be placed on all graded slopes 3:1 and steeper and in concentrated flow areas to be seeded.
3. Permanent Seeding and Mulching to be placed on all disturbed areas, unless noted otherwise.
4. Temporary Seeding shall take place on all disturbed areas that are expected to be inactive for more than seven days.
5. Cofferdams shall be constructed of non-erosive materials.
6. Installation of dewatering measures should occur in dry conditions.
7. Maintenance of measures should occur within 48 hours of identification of concern, if feasible a schedule shall be discussed and approved by the PE.
8. Re-use Riprap from Temporary Modified Check Dams for ditch construction to greatest extent possible. Temporary Modified Check Dams are only needed when Erosion Resistant Linings are not in place downstream of the Check Dam, except for the most downstream Check dam. Erosion Resistant Linings include Riprap or Sod.
9. For information regarding Temporary Check Dam, Revetment Riprap, see INDOT Std. Dwg. E 205-TECD-06.
10. For information regarding Temporary Perimeter Protection with Filter Sock, see INDOT Std. Dwg. E 205-TECD-10.

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RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

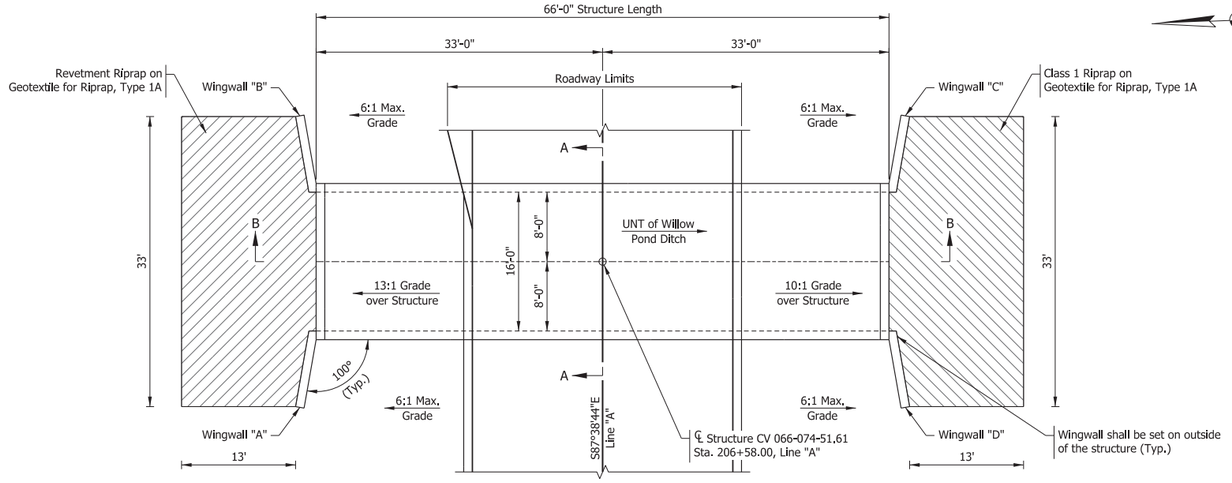
DESIGNED: DB 8/2024 | DRAWN: AJ 8/2024
CHECKED: JL 8/2024 | CHECKED: JL 8/2024

INDIANA DEPARTMENT OF TRANSPORTATION

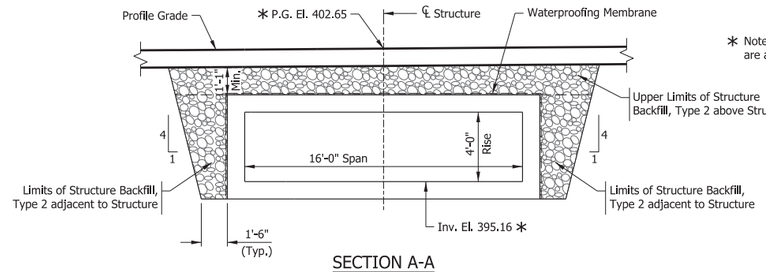
EROSION CONTROL DETAILS
PHASE 2

SCALE	CULVERT FILE
1" = 20'	CV 066-074-51.61 & 066-074-51.62
	DESIGNATION
	2100830 & 2100831
SURVEY BOOK	SHEETS
ELECTRONIC	17 of 30
CONTRACT	PROJECT
R-43979	2100169

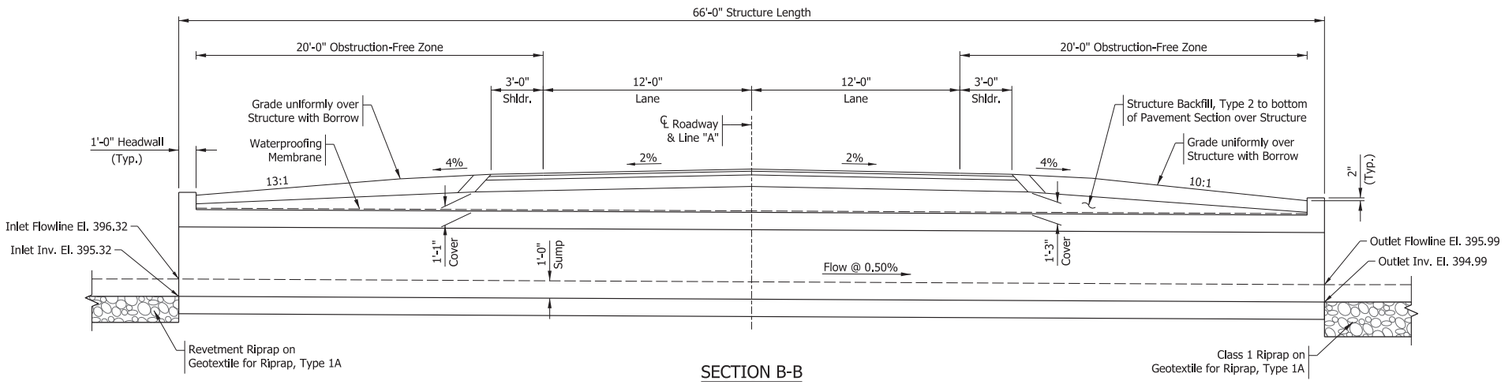
W:\HNTB\2022-275-S HNTB-SR 66 Culverts Des 2100830\Design\CAD\14-17 - Sht Erosion Control.dgn



PLAN
Scale: ⅛" = 1'-0"



SECTION A-A
Scale: ¼" = 1'-0"



SECTION B-B
Scale: ¼" = 1'-0"

EXISTING STRUCTURE

Existing Structure CV 066-074-51.61 is an 8' x 4' Reinforced Concrete Box crossing under State Road 66. Structure has wingwalls at the inlet and the outlet. Existing Structure to be removed.

GENERAL NOTES

Reinforcing steel cover shall be 3" in footings, except bottom steel which shall be 4", and 2" in all other parts, unless noted otherwise.

Wingwalls shall be set on outside of the ends of the Precast Box Structure.

All exposed faces of cast-in-place concrete shall be surface sealed.

DESIGN DATA

LIVE LOAD
Structure designed for HL-93 loading, in accordance with Section 714 of the Standard Specifications. Cover depth is less than 2 ft.

DEAD LOAD
Actual weight plus 35 psf (composite) for future wearing surface.

DESIGN STRENGTHS
To be in accordance with Section 714 of the Standard Specifications.

CONCRETE

Class C	f'c = 4,000 psi
Class B	f'c = 3,000 psi
Class A	f'c = 3,500 psi

REINFORCING STEEL

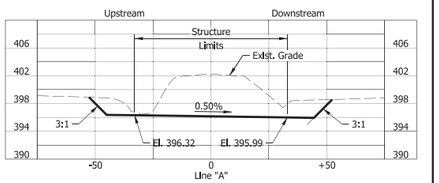
Grade 60	fy = 60,000 psi
(Coated Reinforcement Required)	

NOTE TO REVIEWER

PRELIMINARY HYDRAULIC DATA WAS PROVIDED FOR STRUCTURE. THE PROPOSED DESIGN IS IN ACCORDANCE WITH PRELIMINARY HYDRAULIC INFORMATION. PER COORDINATION WITH INDOT, THE HYDRAULIC DATA WILL BE RE-EVALUATED DUE TO ADJUSTMENT OF STRUCTURE LOCATION FROM STAGE 1 SUBMISSION. INDOT WILL REVISE HYDRAULIC DESIGN DATA AFTER STAGE 2 SUBMISSION. REVISED HYDRAULIC DATA WILL BE INCLUDED AT STAGE 3.

HYDRAULIC DATA - CV 066-074-51.61

Drainage Area Upstream	XXX	sq mi
Q100 Discharge Upstream	XXX	cfs
Q50 Discharge for Velocity	XXX	cfs
Q100 Tailwater Depth	XXX	ft
Proposed Flowline at Inlet Elevation	XXX	ft
Proposed Flowline at Outlet Elevation	XXX	ft
Proposed Slope of Structure	XXX	%
Proposed Q100 Headwater Elevation	XXX	ft
Existing Q100 Headwater Elevation	XXX	ft
Proposed Backwater	XXX	ft
Existing Backwater	XXX	ft
Proposed Low Structure Elevation	XXX	ft
Existing Low Structure Elevation	XXX	ft
Proposed Skew to Flowline of Waterway	XXX	deg
Existing Skew to Flowline of Waterway	XXX	deg



PROFILE OF STREAM
Horizontal Scale: 1" = 30'
Vertical Scale: 1" = 10'

NOTES

1. Contractor shall verify the existing Flowline Elevation to set the appropriate Sump Depth.
2. For additional Structure details, see sheet 19.
3. For additional Information regarding Joint Sealing and Membrane Detail, see INDOT Std. Dwg. E 714-BCJT-01.

STRUCTURE CV 066-074-51.61
REINFORCED CONCRETE BOX STRUCTURE
16'-0" SPAN, 4'-0" RISE; NO SKEW
S.R. 66 OVER U.N.T. WILLOW POND DITCH
SPENCER COUNTY, IN

PLOT: 8/28/2024 11:05:36 AM
W:\HNTB\2022-275-S HNTB-SR 66 Culverts Des 2100830\Design\CAD\18-19 - Sht Structure Details CV 066-074-51.61.dgn

HWC ENGINEERING
INDIANAPOLIS - TERRE HAUTE - LAFAYETTE
MUNCIE - NEW ALBANY - HAMMOND
www.hwcengineering.com

NOT FOR CONSTRUCTION
8/2024

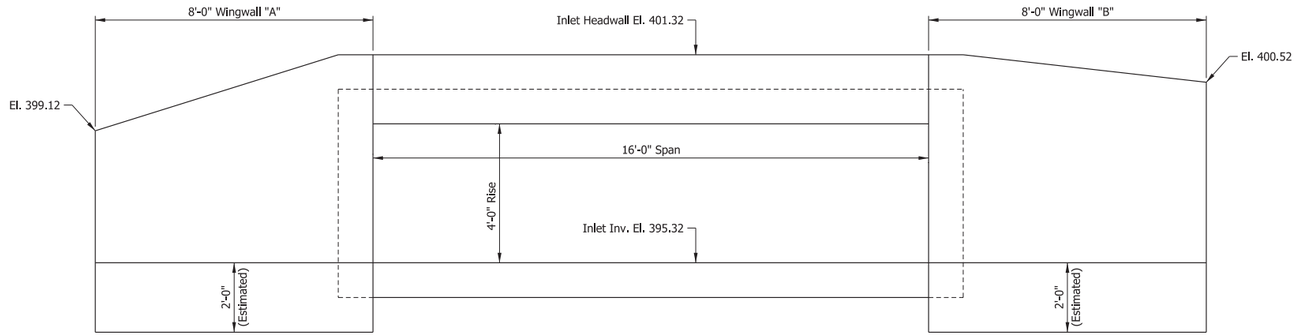
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: DB	8/2024	DRAWN: AJ	8/2024
CHECKED: JL	8/2024	CHECKED: JL	8/2024

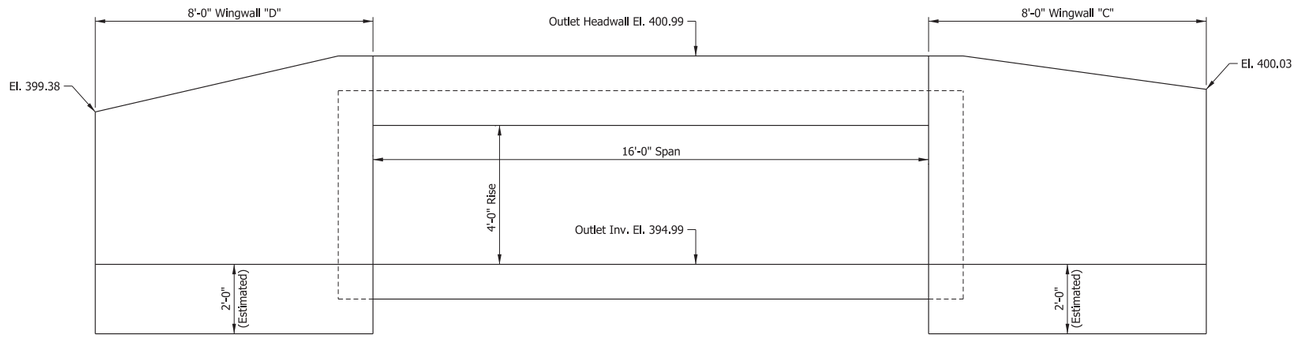
INDIANA DEPARTMENT OF TRANSPORTATION

STRUCTURE DETAILS
CV 066-074-51.61

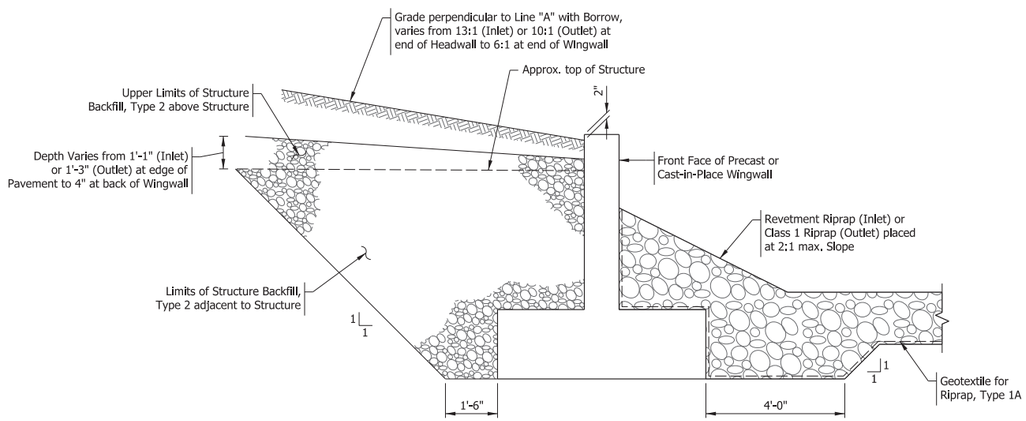
SCALE	CULVERT FILE
AS NOTED	CV 066-074-51.61 & 066-074-51.62
	DESIGNATION
	2100830 & 2100831
SURVEY BOOK	SHEETS
ELECTRONIC	18 of 30
CONTRACT	PROJECT
R-43979	2100169



INLET ELEVATION
Scale: ½" = 1'-0"



OUTLET ELEVATION
Scale: ½" = 1'-0"



TYPICAL WINGWALL SECTION
Scale: ½" = 1'-0"

SOIL PARAMETERS FOR WINGWALL DESIGN	
Factored Bearing Resistance (Wingwalls and R.C. Box) (psf)	
Angle of Internal Friction of Backfill (Øb)	
Interface Friction Angle between Concrete and Soil (δ)	
Estimated Unit Weight, γ moist/saturated (pcf)	
Normal Cohesion (psf)	
Factored Cohesion (psf)	

BILL OF MATERIALS MISCELLANEOUS	
Structure, Reinforced Concrete, Coated, Box Section, 16' Span x 4' Rise	66.0 Lft

WINGWALL AREAS	
Item	Quantity
Wingwall "A"	
Wingwall "B"	
Wingwall "C"	
Wingwall "D"	

NOTE TO REVIEWER

SOIL PARAMETER INFORMATION, STRUCTURE QUANTITIES, AND BACKFILL/UNDERFILL DETAILS WILL BE FINALIZED AFTER GEOTECHNICAL EVALUATION HAS BEEN COMPLETED.

NOTES

1. Contractor shall verify the existing Flowline Elevation to set the appropriate Sump Depth.
2. For additional Structure details, see sheet 18.

HWC ENGINEERING
INDIANAPOLIS - TERRE HAUTE - LAFAYETTE
MUNCIE - NEW ALBANY - HAMMOND
www.hwcengineering.com

NOT FOR CONSTRUCTION 8/2024

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: DB 8/2024 DRAWN: AJ 8/2024
CHECKED: JL 8/2024 CHECKED: JL 8/2024

INDIANA DEPARTMENT OF TRANSPORTATION

STRUCTURE DETAILS
CV 066-074-51.61

SCALE	CULVERT FILE
AS NOTED	CV 066-074-51.61 & 066-074-51.62
	DESIGNATION
	2100830 & 2100831
SURVEY BOOK	SHEETS
ELECTRONIC	19 of 30
CONTRACT	PROJECT
R-43979	2100169

PLOT: 8/28/2024 11:05:36 AM
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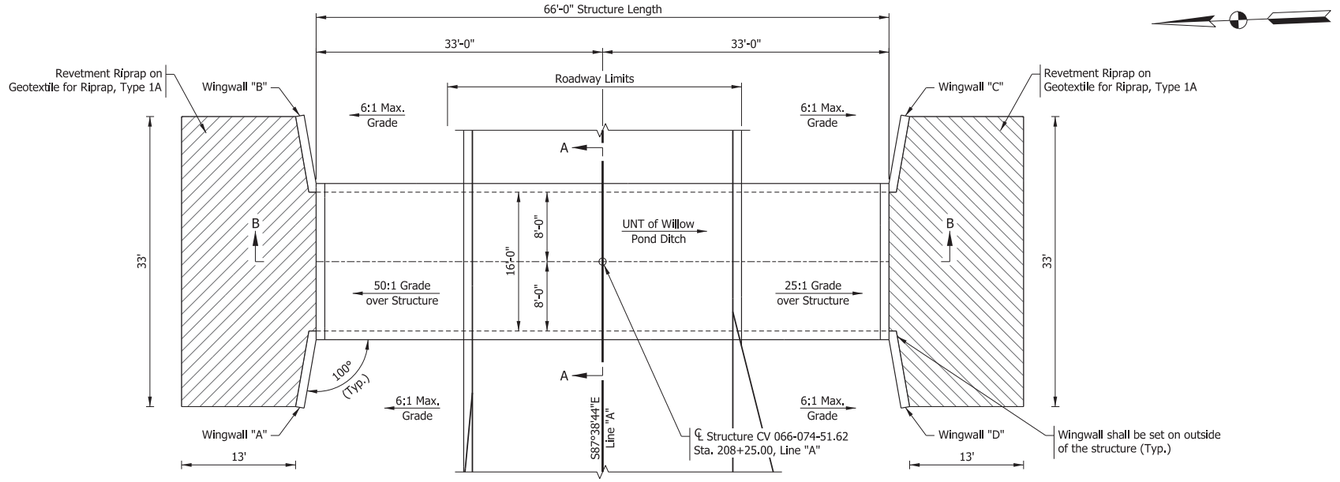
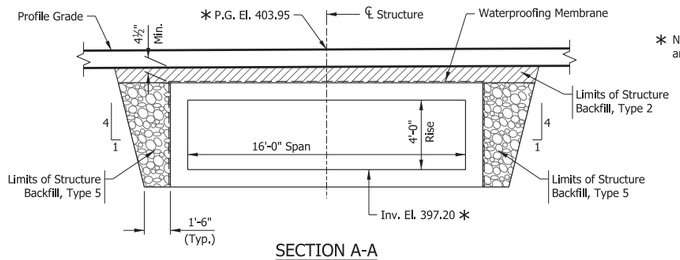
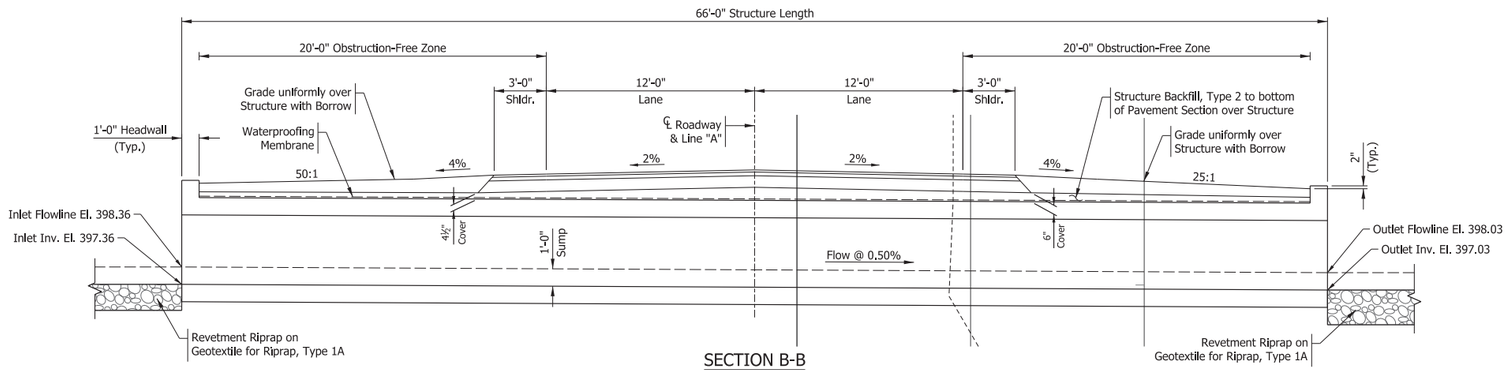


PLAN
Scale: ⅛" = 1'-0"



SECTION A-A
Scale: ¼" = 1'-0"



SECTION B-B
Scale: ¼" = 1'-0"

EXISTING STRUCTURE

Existing Structure CV 066-074-51.62 is an 8'-0" x 2'-6" Reinforced Concrete Box crossing under State Road 66. Structure has no wingwalls. Existing Structure to be removed.

GENERAL NOTES

Reinforcing steel cover shall be 3" in footings, except bottom steel which shall be 4", and 2" in all other parts, unless noted otherwise.

Wingwalls shall be set on outside of the ends of the Precast Box Structure.

All exposed faces of cast-in-place concrete shall be surface sealed.

DESIGN DATA

LIVE LOAD
Structure designed for HL-93 loading, in accordance with Section 714 of the Standard Specifications. Cover depth is less than 2 ft.

DEAD LOAD
Actual weight plus 35 psf (composite) for future wearing surface.

DESIGN STRENGTHS
To be in accordance with Section 714 of the Standard Specifications.

CONCRETE

Class C	f'c = 4,000 psi
Class B	f'c = 3,000 psi
Class A	f'c = 3,500 psi

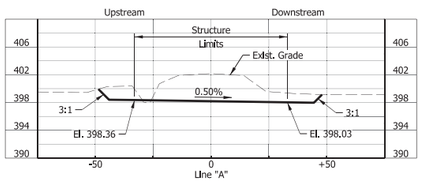
REINFORCING STEEL
Grade 60 fy = 60,000 psi
(Coated Reinforcement Required)

NOTE TO REVIEWER

PRELIMINARY HYDRAULIC DATA WAS PROVIDED FOR STRUCTURE. THE PROPOSED DESIGN IS IN ACCORDANCE WITH PRELIMINARY HYDRAULIC INFORMATION. PER COORDINATION WITH INDOT, THE HYDRAULIC DATA WILL BE RE-EVALUATED DUE TO ADJUSTMENT OF STRUCTURE LOCATION FROM STAGE 1 SUBMISSION. INDOT WILL REVISE HYDRAULIC DESIGN DATA AFTER STAGE 2 SUBMISSION. REVISED HYDRAULIC DATA WILL BE INCLUDED AT STAGE 3.

HYDRAULIC DATA - CV 066-074-51.62

Drainage Area Upstream	XXX	sq mi
Q100 Discharge Upstream	XXX	cfs
Q100 Tailwater Depth	XXX	ft
Proposed Flowline at Inlet Elevation	XXX	ft
Proposed Flowline at Outlet Elevation	XXX	ft
Proposed Slope of Structure	XXX	%
Proposed Q100 Headwater Elevation	XXX	ft
Existing Q100 Headwater Elevation	XXX	ft
Proposed Backwater	XXX	ft
Existing Backwater	XXX	ft
Proposed Low Structure Elevation	XXX	ft
Existing Low Structure Elevation	XXX	ft
Proposed Skew to Flowline of Waterway	XXX	deg
Existing Skew to Flowline of Waterway	XXX	deg



PROFILE OF STREAM
Horizontal Scale: 1" = 30'
Vertical Scale: 1" = 10'

NOTES

1. Contractor shall verify the existing Flowline Elevation to set the appropriate Sump Depth.
2. For additional Structure details, see sheet 21.
3. For additional Information regarding Joint Sealing and Membrane Detail, see INDOT Std. Dwg. E 714-BCJT-01.

STRUCTURE CV 066-074-51.62
REINFORCED CONCRETE BOX STRUCTURE
16'-0" SPAN, 4'-0" RISE; NO SKEW
S.R. 66 OVER U.N.T. WILLOW POND DITCH
SPENCER COUNTY, IN

PLOT: 8/28/2024 11:05:38 AM

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INDIANAPOLIS - TERRE HAUTE - LAFAYETTE
MUNCIE - NEW ALBANY - HAMMOND
www.hwcengineering.com

NOT FOR CONSTRUCTION 8/2024

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DESIGNED: DB 8/2024 DRAWN: AJ 8/2024
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INDIANA DEPARTMENT OF TRANSPORTATION

STRUCTURE DETAILS
CV 066-074-51.62

SCALE	CULVERT FILE
AS NOTED	CV 066-074-51.61 & 066-074-51.62
	DESIGNATION
	2100830 & 2100831
SURVEY BOOK	SHEETS
ELECTRONIC	20 of 30
CONTRACT	PROJECT
R-43979	2100169

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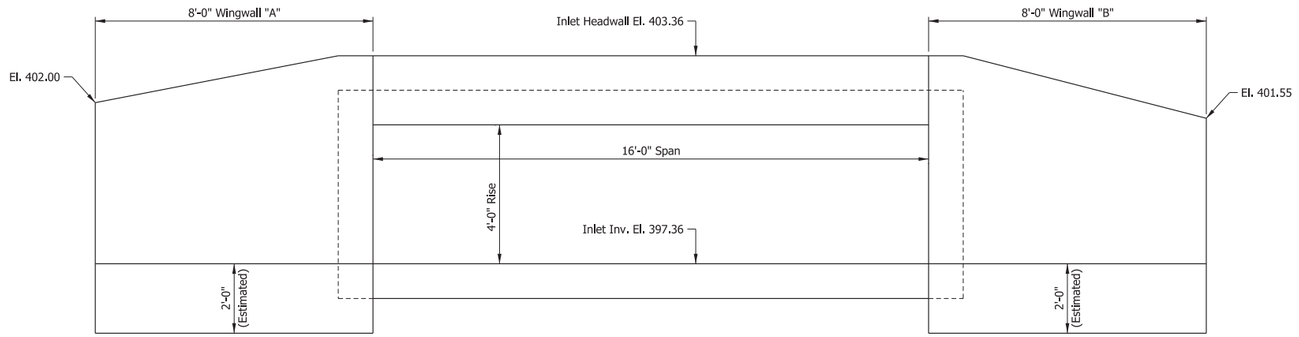
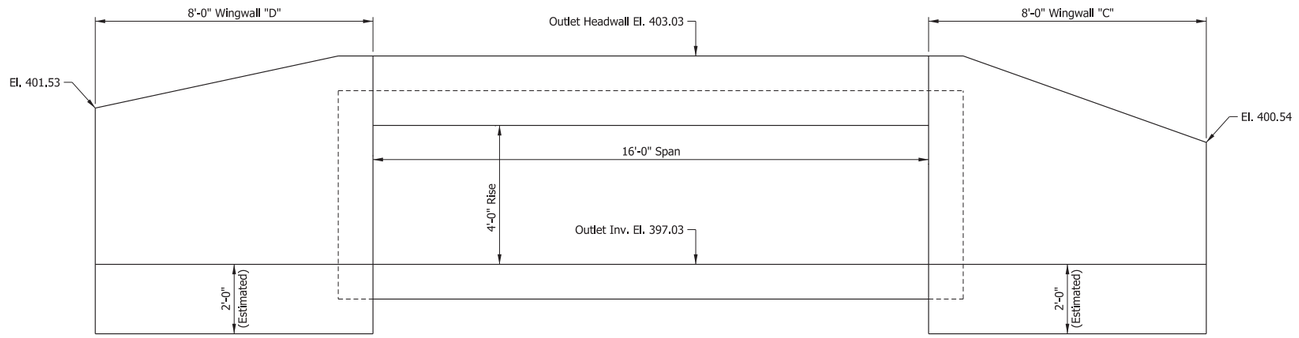
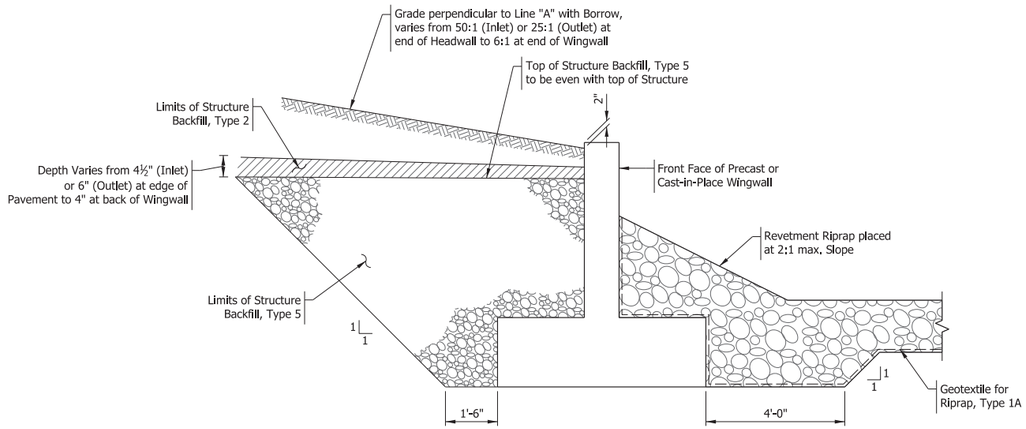


INLET ELEVATION
Scale: ½" = 1'-0"



OUTLET ELEVATION
Scale: ½" = 1'-0"



TYPICAL WINGWALL SECTION
Scale: ½" = 1'-0"

SOIL PARAMETERS FOR WINGWALL DESIGN

Factored Bearing Resistance (Wingwalls and R.C. Box) (psf)	
Angle of Internal Friction of Backfill (Øb)	
Interface Friction Angle between Concrete and Soil (δ)	
Estimated Unit Weight, γ moist/saturated (pcf)	
Normal Cohesion (psf)	
Factored Cohesion (psf)	

BILL OF MATERIALS MISCELLANEOUS

Structure, Reinforced Concrete, Coated, Box Section, 16' Span x 4' Rise	66.0 Lft

WINGWALL AREAS

Item	Quantity
Wingwall "A"	
Wingwall "B"	
Wingwall "C"	
Wingwall "D"	

NOTE TO REVIEWER

SOIL PARAMETER INFORMATION, STRUCTURE QUANTITIES, AND BACKFILL/UNDERFILL DETAILS WILL BE FINALIZED AFTER GEOTECHNICAL EVALUATION HAS BEEN COMPLETED.

NOTES

1. Contractor shall verify the existing Flowline Elevation to set the appropriate Sump Depth.
2. For additional Structure details, see sheet 20.

PLOT: 8/28/2024 11:05:39 AM

HWC ENGINEERING
INDIANAPOLIS - TERRE HAUTE - LAFAYETTE
MUNCIE - NEW ALBANY - HAMMOND
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NOT FOR CONSTRUCTION 8/2024

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: DB 8/2024 DRAWN: AJ 8/2024
CHECKED: JL 8/2024 CHECKED: JL 8/2024

INDIANA DEPARTMENT OF TRANSPORTATION

STRUCTURE DETAILS
CV 066-074-51.62

SCALE	CULVERT FILE
AS NOTED	CV 066-074-51.61 & 066-074-51.62
	DESIGNATION
	2100830 & 2100831
SURVEY BOOK	SHEETS
ELECTRONIC	21 of 30
CONTRACT	PROJECT
R-43979	2100169

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APPENDIX C: EARLY COORDINATION

Early Coordination Package
Early Coordination Responses

Sample Early Coordination Letter

INDIANA DEPARTMENT OF TRANSPORTATION

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

Eric Holcomb, Governor
Michael Smith, Commissioner

January 23, 2024

Re: Early Coordination Letter, INDOT Des. Nos.: 2100830 and 2100831, Small Structures Project on SR 66, 1.00 Mile East of the West Junction with SR 161, Spencer County, Indiana

To Whom It May Concern:

The Indiana Department of Transportation (INDOT), with federal funding, intends to proceed with a project involving the aforementioned small structures project in Spencer County. 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 numbers and description in your reply.** We will incorporate your comments into a study of the project's environmental impacts.

This project is located on State Road (SR) 66, 1.00 mile east of the west junction with SR 161, in Spencer County. This section of SR 66 is a two-lane Rural – Other - Principal Arterial roadway that consists of two 12-foot (ft) wide travel lanes bordered by minimal shoulders. The existing small structures carry SR 66 over unnamed tributaries to Willow Pond Ditch. Structure No. CV 066-074-51.62 is a reinforced concrete box structure measuring 34-ft long, 8-ft wide by 2-ft 6-in rise and Structure No. CV 066-074-51.61 is a reinforced concrete box structure measuring 34-ft long, 8-ft wide by 4-ft rise. The structures are showing signs of deterioration with vertical cracking and efflorescence present along the sidewalls and slabs on the inside of the structures. Delamination is also present along the guardrails, which are present at the structures and along the SR 66 roadway. The draft need is due to the deterioration of the existing structures (rating 5 and 6 out of 9), which are in fair and satisfactory conditions. The draft purpose is to have structures with a condition rating of at least 7 (good condition) out of 9 and to extend the overall service life of the structures. The approximate existing right-of-way varies between 30 ft and 60 ft along the south side of the SR 66 centerline and between 40 ft and 60 ft along the north side of the SR 66 centerline throughout the project area.

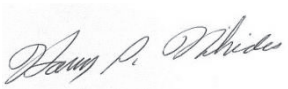
The proposed project is anticipated to replace and relocate the existing structures and relocate the corresponding roadway ditches to accommodate drainage. Both structures will be replaced with reinforced concrete box culverts measuring 38-ft long, 16-ft wide by 4-ft rise. Structure No. CV 066-074-51.61 will be relocated approximately 132-ft to the west and Structure No. CV 066-074-51.62 will be relocated approximately 128-ft to the east. The project requires the acquisition of a maximum of 2 acres of permanent right-of-way. Proposed right-of-way widths would vary between 35 ft and 120 ft from the SR 66 centerline. The project will be approximately 0.21 mile in length. The proposed method of traffic maintenance is anticipated to require a road closure with a detour route utilizing SR 161, SR 62, SR 162, and US 231. No trees will be cleared as part of this project. The project is anticipated to begin construction in summer 2026.

Permanent right-of-way amount has been updated to 2.223 acres. No temporary right-of-way is required.

Land use in the vicinity of the project consists of agricultural land surrounding SR 66. The INDOT Environmental Services Division (ESD) Ecology & Waterway Permitting Office (EWPO) will review the waters and wetlands determinations completed by ASC Group, Inc. to identify any ecological resources that may be present. The project is anticipated to qualify for the Range-wide 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.

Please provide your response within thirty (30) calendar days from the date of this letter. 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 Harry Nikides, Indiana Regional Manager, at hnikides@ascgroup.net or 317.915.9300, ext. 100 or Dakota Risse, INDOT Project Manager, at DaRisse@indot.IN.gov or 812.404.8620. Thank you in advance for your input.

Sincerely,



Harry Nikides
Indiana Regional Manager
ASC Group, Inc.

cc: Harry Nikides, ASC Group, Inc.
Junette Toe, HNTB

Attachments:
List of Agencies
Maps/Graphics (Location, Topographic, Aerial, and Photographs)

Sample Recipient List

INDIANA DEPARTMENT OF TRANSPORTATION

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

Eric Holcomb, Governor
Michael Smith, Commissioner

The following agencies received Early Coordination Letters:

Federal Highway Administration (FHWA)
Federal Office Building, Room 254
575 North Pennsylvania Street
Indianapolis, IN 46204
(Electronic Coordination)
Patrick Carpenter –Fort Wayne, Seymour, and Vincennes Districts Patrick.carpenter@dot.gov

Indiana Geological and Water Survey (IGWS)
611 North Walnut Grove
Bloomington, IN 47405
(Electronic Coordination)
https://igws.indiana.edu/eAssessment

Environmental Coordinator
Indiana Department of Natural Resources-Division of Fish and Wildlife (IDNR-DFW)
402 West Washington Street, Room W273
Indianapolis, IN 46204
(Electronic Coordination)
environmentalreview@dnr.in.gov

Field Environmental Officer
Chicago Regional Office
U.S. Department of Housing and Urban Development
Metcalf Federal Building
77 West Jackson Boulevard, Room 2401
Chicago, IL 60604
(Electronic Coordination)
Erik.r.sandstedt@hud.gov

INDOT
Vincennes District Office – Environmental Section Manager
3650 South US 41
Vincennes, IN 47591
(Electronic Coordination)
RFalls@indot.in.gov

INDOT
Vincennes District – Project Manager
3650 South US 41
Vincennes, IN 47591
(Electronic Coordination)
DaRisse@indot.IN.gov

Spencer County Council Members
200 Main Street
Rockport, IN 47635
(Electronic Coordination)
Council@spencercounty.in.gov

Spencer County Commissioner Members
District 3 - Hammond, Huff and Harrison Townships
6378 East CR 700 North
Grandview, IN 47615

Spencer County Highway Supervisor
920 East CR 800 North
Chrisney, IN 47611
(Electronic Coordination)
schwy@psci.net

Spencer County Surveyor
200 Main Street, Room 17
Rockport, IN 47635
(Electronic Coordination)
surveyor@spencercounty.in.gov

North Spencer County School District
3720 East SR 162
Lincoln City, IN 47552
(Electronic Coordination)
dscherry@mail.nspencer.k12.in.us

Spencer County Health Department
200 Main Street, Room 1
Rockport, IN 47635

Spencer County Fire Department
701 Buffaloville Road
Dale, IN 47523
(Electronic Coordination)
carterfire@sbcglobal.net

Spencer County Sheriff's Office
120 North 2nd Street
Rockport, IN 47635
(Electronic Coordination)
sheriff@spencercounty.in.gov

Spencer County EMS Rockport Station
1068 SR 66
Rockport, IN 47635

RFI contacts:
IDNR Division of Oil and Gas
RE: Petroleum Well Adjacent to Project
402 West Washington Street, Room 293
Indianapolis, IN 46204
(Electronic Coordination)
ccook@dnr.IN.gov

Sent to Agencies on July 29, 2024:

Chief, Groundwater Section
Indiana Department of Environmental Management (IDEM)
100 North Senate Avenue
Indianapolis, IN 46204
(Electronic Coordination)
ATurnbow@idem.IN.gov

State Conservationist
Natural Resources Conservation Service (NRCS)
6013 Lakeside Boulevard
Indianapolis, IN 46278
(Electronic Coordination)
john.allen@usda.gov

INDOT
Office of Aviation
100 North Senate Avenue, Room 955
Indianapolis, IN 46204
(Electronic Coordination)
tlewandowski@indot.in.gov

Sent to Agencies on August 7, 2024:

Evansville Water Utility
RE: Wellhead Protection Area
1301 Waterworks Road
Evansville, IN 47713
(Electronic Coordination)
bcaudill@ewsu.com

Sent to Agencies on August 16, 2024:

RFI contacts:
IDNR Division of Oil and Gas
RE: Petroleum Well Adjacent to Project
402 West Washington Street, Room 293
Indianapolis, IN 46204
(Electronic Coordination)
ccook@dnr.IN.gov

Sent to Agencies on August 21, 2024:

Reo Water
RE: Public Water System
3067 West SR 66
Rockport, IN 47635
(Electronic Coordination)
JWETZEL@MIDWESTERNENG.COM

INDIANA GEOLOGICAL & WATER SURVEY
INDIANA UNIVERSITY

Organization and Project Information

Project ID:
Des. ID:
Project Title: SR 66 Small Structures and Roadway Project
Name of Organization: ASC Group, Inc.
Requested by: Cameron Berry

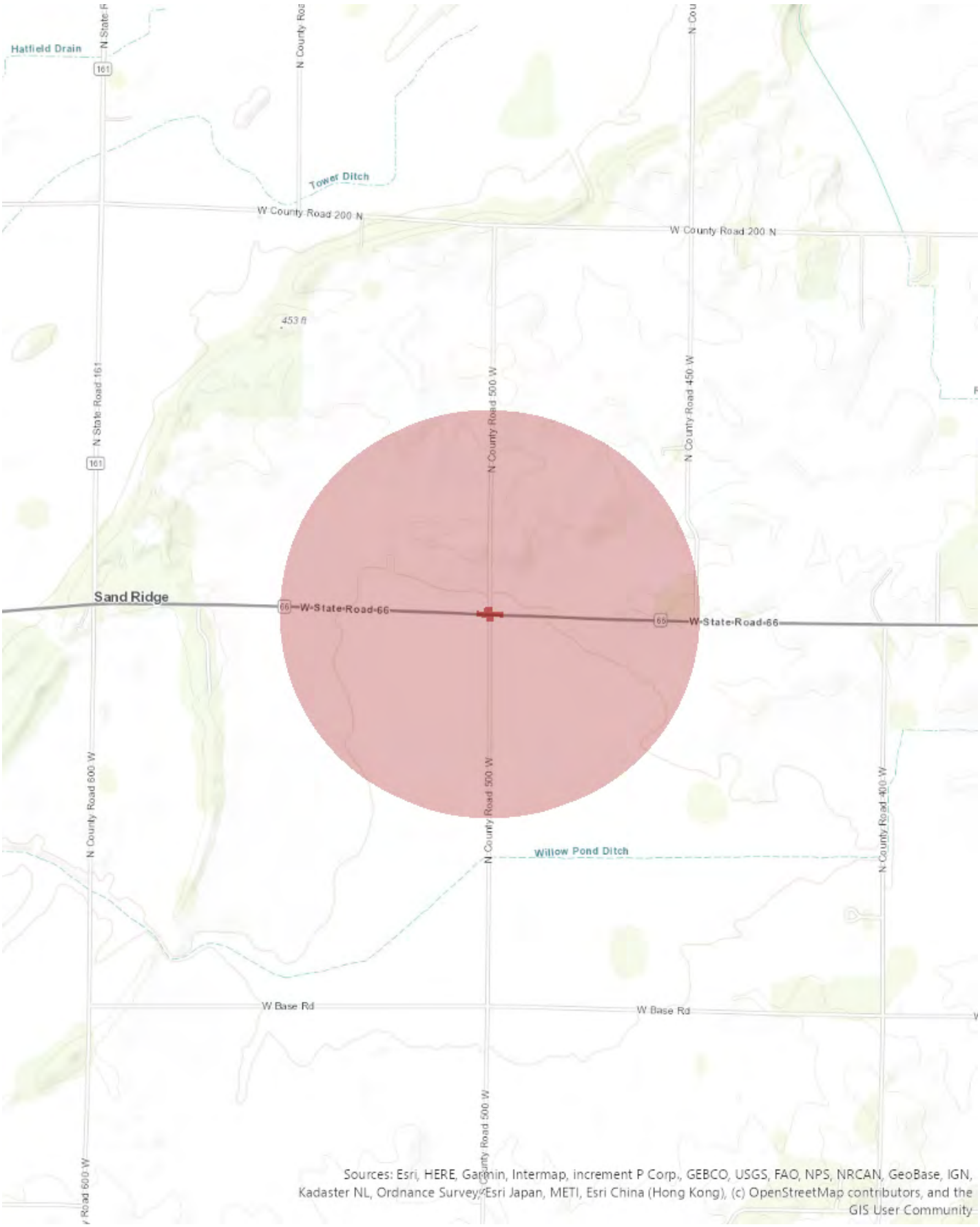
Environmental Assessment Report

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

*Map layers from the Indiana Geological and Water Survey and Indiana Map

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

Date: December 21, 2023



Metadata:

- https://igws.indiana.edu/pdms/
- https://portal.igs.indiana.edu/arcgis/rest/services/Seismic_Earthquake_Liquefaction_Potential/MapServer/info/metadata
- https://portal.igs.indiana.edu/arcgis/rest/services/Industrial_Minerals_SandAndGravel_Resources/MapServer/info/metadata
- https://portal.igs.indiana.edu/arcgis/rest/services/Bedrock_Geology/MapServer/info/metadata

Jennifer Rhodes

From: Falls, Ryan G <RFalls@indot.IN.gov>
Sent: Wednesday, January 24, 2024 8:26 AM
To: Cameron Berry; Harry Nikides; Risse, Dakota W
Cc: Junette Toe; Christine Meador
Subject: RE: Des 2100830 & 2100831 Small Structures Project on SR 66 - Early Coordination Letter

Cameron Berry,

For future documentation, the correct termini are:
-2100830: CV 066-074-51.61: 1.00 Mile East of the West Junction with SR 161
-2100831: CV 066-074-51.62: 1.01 Mile East of the West Junction with SR 161
I understand they are just on opposite sides of the county road, but, similar to IPaC, all NEPA documents and attachments need to have them be differentiated.

Thank you for the opportunity to respond to early coordination.

Ryan Falls
Senior Environmental Manager Supervisor
Indiana Department of Transportation
Vincennes District
Cell: 812-582-1387
Email: rfalls@indot.in.gov
Find us on social media!

From: Cameron Berry <cberry@ascgroup.net>
Sent: Tuesday, January 23, 2024 4:10 PM
To: hNikides <hnikides@ascgroup.net>; Risse, Dakota W <DaRisse@indot.IN.gov>
Cc: Junette Toe <jtoe@HNTB.com>; Christine Meador <CMeador@HNTB.com>
Subject: Des 2100830 & 2100831 Small Structures Project on SR 66 - Early Coordination Letter

Des. No.: 2100830 & 2100831
Project Description: SR 66 Small Structures Project, 1.00 Mile East of the West Junction with SR 161
Location: Spencer County, Indiana

INDOT and FHWA are in the planning stage for a small structures project on SR 66, Spencer 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 potential environmental impacts with recommendations for avoidance, minimization, and mitigation.

Federal Highway Administration (FHWA)
Indiana Department of Environmental Management (IDEM) Wellhead Proximity Determinator
Indiana Geological & Water Survey (IGWS)

THIS IS NOT A PERMIT

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

DNR#: ER-26241

Request Received: January 23, 2024

Requestor:
Harry Nikides
ASC Group Incorporated
9376 Castlegate Drive
Indianapolis, IN 46256

Project:
SR 66 small structure (CV 066-074-51.61 & CV 066-074-51.62) replacement and relocation over UNT Willow Pond Ditch, 1.00 mile east of the west junction with SR 161; Des #2100830 & 2100831

County/Site Info: Spencer 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. To date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity.

Fish 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) Crossing Structures
For purposes of maintaining fish and wildlife passage through a crossing structure, the Environmental Unit recommends bridges rather than culverts and bottomless culverts rather than box or pipe culverts. Wide culverts are better than narrow culverts, and culverts with shorter through lengths are better than culverts with longer through lengths. If box or pipe culverts are used, the bottoms should be buried a minimum of 6" or 20% of the culvert height/pipe diameter (whichever is greater) up to a maximum of 2' below the stream bed elevation to allow a natural streambed to form within or under the crossing structure. Crossings should:

- Span the entire channel width (a minimum of 1.2 times the ordinary high-water mark width);
- Maintain the natural stream substrate within the structure; and
- Have stream depth, channel width, and water velocities during low-flow conditions that are approximate to those in the natural stream channel.

- Banklines should be restored within box and pipe structures to allow for wildlife passage above the ordinary highwater mark.

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

B) Riprap Aprons

Any riprap placed at the culvert's outlet/inlet needs to be installed at grade (or countersunk then backfilled with native material). The slope of the riprap should match the stream's gradient. Additionally, riprap should be mixed with smaller stone and fines to match the existing stream substrate particle distribution and provide impermeability of the riprap apron/substrate so the flow doesn't percolate through the voids below the riprap apron's surface.

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 Southern 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 in-channel 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 excavate in the low flow area except for the placement of piers, foundations, and riprap, or removal of the old structure.
5. Do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds.
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 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.
8. 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.
9. 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:** February 22, 2024

Rachel Van Voorhis
Environmental Coordinator
Division of Fish and Wildlife

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: 10/16/2024 13:14:21 UTC
Project Code: 2023-0133632
Project Name: Des No. 2100830 & 2100831, SR 66 Small Structure Replacements and HMA Roadway Reconstruction

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: 2023-0133632

Project Name: Des No. 2100830 & 2100831, SR 66 Small Structure Replacements and HMA Roadway Reconstruction

Project Type: Road/Hwy - Maintenance/Modification

Project Description: The Indiana Department of Transportation (INDOT) is in the planning stage for a proposed small structure replacements and HMA roadway reconstruction project along SR 66, at County Road 500 W in Spencer County, Indiana (Des No. 2100830 & 2100831).

This segment of SR 66 is Rural Principal Arterial. It is assumed this project will be designed using 3R criteria. The design shall maintain corridor uniformity without degradation of the overall safety features of the highway. The project will replace two existing small structures along SR 66:

-DES 2100830; CV 066-074-51.61; SR 66, 1.00 mi E W JCT SR 161; 8’x4’x34’
-DES 2100831; CV 066-074-51.62; SR 66, 1.01 mi E W JCT SR 161; 8’x3’x34’

The two existing structures are reinforced concrete box culverts, measuring 8’ span x 4’ rise and 8' span x 3' rise respectively. The total lengths of the existing structures are approximately 34’ and water flows north to south through the structures. In addition the structure replacements, the project will include an HMA roadway reconstruction to raise the profile through the locations of the structures, the reconstruction of 2 public road approaches, and the removal and replacement approach guardrail at the structures.

There is suitable summer bat habitat within and near the project area, but these areas will remain undisturbed. No tree trimming or clearing will occur as part of this project. On September 18, 2023 a review of the USFWS database by INDOT Environmental District did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. A structure bat inspection was conducted by qualified ASC Group Inc. staff on September 14, 2023. Bats were not observed within or near the structures, nor was any evidence of bat roosting documented at the structures. The use of temporary lighting is possible during construction, however no permanent lighting will be necessary for the project. Construction is anticipated to occur in Summer 2026.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@37.90208935,-87.15076858670591,14z

Counties: Spencer County, Indiana

ENDANGERED SPECIES ACT SPECIES

There is a total of 6 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
Gray Bat *Myotis grisescens* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6329	Endangered
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
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	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* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

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[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

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 NO BALD AND GOLDEN EAGLES WITHIN THE VICINITY OF YOUR PROJECT AREA.

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

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
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Field Sparrow *Spizella pusilla* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9446	Breeds Mar 1 to Aug 15

NAME	BREEDING SEASON
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
Prairie Warbler *Setophaga discolor* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9513	Breeds May 1 to Jul 31
Rusty Blackbird *Euphagus carolinus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9478	Breeds elsewhere

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.

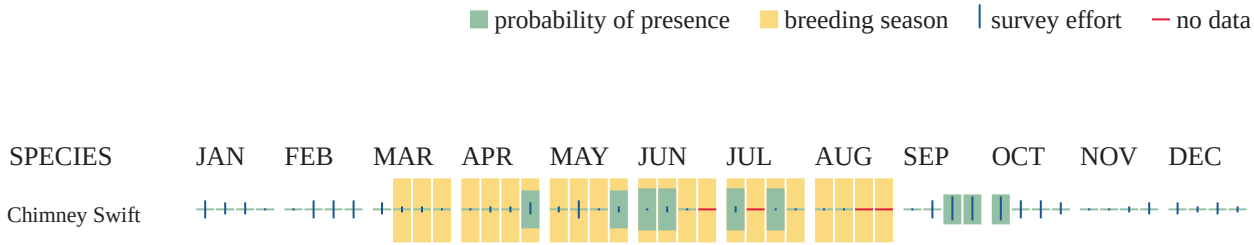
Probability of Presence (■)

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 conservation 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

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

- R5UBFx

IPAC USER CONTACT INFORMATION

Agency: ASC Group
Name: Cameron Berry
Address: 9376 Castlegate Dr
City: Indianapolis
State: IN
Zip: 46256
Email cberry@ascgroup.net
Phone: 3179159300

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Highway Administration

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: October 16, 2023
Project code: 2023-0133632
Project Name: Des No. 2100830 & 2100831, SR 66 Small Structure Replacements and HMA Roadway Reconstruction

Subject: Concurrence verification letter for the 'Des No. 2100830 & 2100831, SR 66 Small Structure Replacements and HMA Roadway Reconstruction' project under the amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion (dated March 23, 2023) for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (NLEB).

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request dated October 16, 2023 to verify that the **Des No. 2100830 & 2100831, SR 66 Small Structure Replacements and HMA Roadway Reconstruction** (Proposed Action) may rely on the concurrence provided in the amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion (dated March 23, 2023) for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 *et seq.*).

Based on the information you provided (Project Description shown below), you have determined that the Proposed Action is within the scope and adheres to the criteria of the PBO, including the adoption of applicable avoidance and minimization measures, and may affect, but is not likely to adversely affect (NLAA) the endangered Indiana bat (*Myotis sodalis*) and/or the endangered northern long-eared bat (*Myotis septentrionalis*). Consultation with the Service pursuant to section 7(a)(2) of ESA (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq*.) is required.

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

Service Field Offices may request additional information that is necessary to verify inclusion of the proposed action under the PBO.

For Proposed Actions that include bridge/culvert or structure removal, replacement, and/or maintenance activities: If your initial bridge/culvert or structure assessment documented signs of bat use or occupancy, or an assessment failed to detect Indiana bats and/or NLEBs, yet are later detected prior to, or during construction, please submit the Post Assessment Discovery of Bats at Bridge/Culvert or Structure Form (User Guide Appendix E) to this Service Office within 2 working days of any potential take. In these instances, potential incidental take of Indiana bats and/or NLEBs is covered under the Incidental Take Statement in the 2018 FHWA, FRA, FTA PBO (provided that the take is reported to the Service).

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

For Proposed Actions that include bridge/culvert or structure removal, replacement, and/or maintenance activities:
If your initial bridge/culvert or structure assessments failed to detect Indiana bats and/or NLEB use or occupancy, yet bats are later detected prior to, or during construction, please submit the Post Assessment Discovery of Bats at Bridge/Culvert or Structure Form (User Guide Appendix E) to this Service Office within 2 working days of the incident. In these instances, potential incidental take of Indiana bats and/or NLEBs may be exempted provided that the take is reported to the Service.

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

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

- Gray Bat *Myotis grisescens* Endangered
- Monarch Butterfly *Danaus plexippus* Candidate
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered
- 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. 2100830 & 2100831, SR 66 Small Structure Replacements and HMA Roadway Reconstruction

DESCRIPTION

The Indiana Department of Transportation (INDOT) is in the planning stage for a proposed small structure replacements and HMA roadway reconstruction project along SR 66, at County Road 500 W in Spencer County, Indiana (Des No. 2100830 & 2100831).

This segment of SR 66 is Rural Principal Arterial. It is assumed this project will be designed using 3R criteria. The design shall maintain corridor uniformity without degradation of the overall safety features of the highway. The project will replace two existing small structures along SR 66:

-DES 2100830; CV 066-074-51.61; SR 66, 1.00 mi E W JCT SR 161; 8’x4’x34’
-DES 2100831; CV 066-074-51.62; SR 66, 1.01 mi E W JCT SR 161; 8’x3’x34’

The two existing structures are reinforced concrete box culverts, measuring 8’ span x 4’ rise and 8' span x 3' rise respectively. The total lengths of the existing structures are approximately 34’ and water flows north to south through the structures. In addition the structure replacements, the project will include an HMA roadway reconstruction to raise the profile through the locations of the structures, the reconstruction of 2 public road approaches, and the removal and replacement approach guardrail at the structures.

There is suitable summer bat habitat within and near the project area, but these areas will remain undisturbed. No tree trimming or clearing will occur as part of this project. On September 18, 2023 a review of the USFWS database by INDOT Environmental District did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. A structure bat inspection was conducted by qualified ASC Group Inc. staff on September 14, 2023. Bats were not observed within or near the structures, nor was any evidence of bat roosting documented at the structures. The use of temporary lighting is possible during construction, however no permanent lighting will be necessary for the project. Construction is anticipated to occur in Summer 2026.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@37.90208935,-87.15076858670591,14z

DETERMINATION KEY RESULT

Based on your answers provided, this project(s) may affect, but is not likely to adversely affect the endangered Indiana bat and/or the endangered northern long-eared bat, therefore, consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required. However, also based on your answers provided, this project may rely on the concurrence provided in the amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion (dated March 23, 2023) for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

QUALIFICATION INTERVIEW

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

   [1] See Indiana bat species profile

   Automatically answered
   Yes

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

   [1] See northern long-eared bat species profile

   Automatically answered
   Yes

3. Which Federal Agency is the lead for the action?

   A) Federal Highway Administration (FHWA)

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

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

   No

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

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

   No

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

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

   No

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

   No

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

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

   [2] The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR Section 402.02). Further clarification is provided by the User's Guide for the Range-wide Programmatic Consultation for Indiana Bat and Northern Long-eared Bat.

   Yes

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

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

   No

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

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

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

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

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

    No

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

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

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

    No

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

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

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

    No

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

    Yes

14. Does the project include slash pile burning?

    No

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

    Yes

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

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

    Yes

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

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

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

    Yes

    SUBMITTED DOCUMENTS

    - *Bridge Structure Bat Assessment Form DES 2100830.pdf https://ipac.ecosphere.fws.gov/project/3O3FXSU7VBGVHIY3NWDPRVCNVU/projectDocuments/133291858*

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

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

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

    No

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

    No

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

    No

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

    Yes

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

    Yes

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

    No

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

    Yes

25. Will the activities that use percussives (**not including tree removal/trimming or bridge/ structure work**) and/or increase noise levels above existing traffic/background levels be conducted *during* the active season[1]?

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

    Yes

26. Will *any* activities that use percussives (**not including tree removal/trimming or bridge/ structure work**) and/or increase noise levels above existing traffic/background levels be conducted *during* the inactive season[1]?

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

    Yes

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

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

    Yes

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

    No

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

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

30. Are the project activities that use percussives (not including tree removal/trimming or bridge/structure work) consistent with a Not Likely to Adversely Affect determination in this key?

    Automatically answered
    Yes, because the activities are within 300 feet of the existing road/rail surface, greater than 0.5 miles from a hibernacula, and conducted during the active season within undocumented habitat.

31. Are the project activities that use percussives (not including tree removal/trimming or bridge/structure work) and/or increase noise levels above existing traffic/background levels consistent with a No Effect determination in this key?

    Automatically answered
    Yes, because the activities are within 300 feet of the existing road/rail surface, greater than 0.5 miles from a hibernacula, and conducted during the inactive season

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

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

33. **General AMM 1**
    Will the project ensure *all* operators, employees, and contractors working in areas of known or presumed bat habitat are aware of *all* FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable Avoidance and Minimization Measures?

    Yes

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

    Yes

PROJECT QUESTIONNAIRE

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

   No

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

   No

3. Please describe the proposed bridge work:

   The project will replace the two existing concrete box culverts, measuring 8’ x 4’ x 34' and 8' x 3' x 34' respectively. In addition, the guardrails at these structures will be replaced.

4. Please state the timing of all proposed bridge work:

   Summer of 2026

5. Please enter the date of the bridge assessment:

   September 14, 2023

AVOIDANCE AND MINIMIZATION MEASURES (AMMS)

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

GENERAL AMM 1

Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs.

LIGHTING AMM 1

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

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

This key was last updated in IPaC on July 27, 2023. Keys are subject to periodic revision.

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

This decision key should only be used to verify project applicability with the Service's amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion (dated March 23, 2023) for Transportation Projects. The programmatic biological opinion covers limited transportation activities that may affect either bat species, and addresses situations that are both likely and not likely to adversely affect either bat species. This decision key will assist in identifying the effect of a specific project/activity and applicability of the programmatic consultation. The programmatic biological opinion is not intended to cover all types of transportation actions. Activities outside the scope of the programmatic biological opinion, or that may affect ESA-listed species other than the Indiana bat or NLEB, or any designated critical habitat, may require additional ESA Section 7 consultation.

IPAC USER CONTACT INFORMATION

Agency: Indiana Department of Transportation
Name: Ryan Falls
Address: 3650 South U.S. Highway 41
City: Vincennes
State: IN
Zip: 47591
Email rfalls@indot.in.gov
Phone: 8125821387

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Highway Administration

Date & Time of Assessment	DOT Project Number	Route/Facility Carried	County
9/14/2023	DES 2100830 & 2100831	SR 66	Spencer
Federal Structure ID CV 066-074-51.61 & CV 066-074-51.62	**Structure Coordinates (latitude and longitude)** 37.90205, -87.15078 & 37.90205, -87.15061	**Structure Height (approximate)** 8 Ft	**Structure Length** 34 Ft

Structure Type (check one)

Bridge Construction Style

○ Cast-in-place		○ Pre-stressed Girder	
○ Flat Slab/Box		○ Steel I-beam	
○ Truss		○ Covered	
○ Parallel Box Beam		○ 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: SR 66, Paved Roadway
☒ Seasonal water	☐ Other:

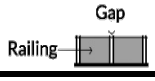
Surrounding Habitat (check all that apply)

☒ 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	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Crack between concrete railings on top of the bridge deck 	☒ 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: Cameron Berry

Signature: Cameron Berry

Jennifer Rhodes

From: Lewandowski, Tyler <TLewandowski@indot.IN.gov>
Sent: Wednesday, July 31, 2024 10:16 AM
To: Cameron Berry
Subject: RE: Des 2100830 & 2100831 Small Structures Project on SR 66 - Early Coordination Letter

Good morning,

After review, no tall structure permit is required for the project if all equipment being used is under 200 feet in height. Please let our office know if you have any further questions.

Thank you,

Tyler Lewandowski
Project Manager
INDOT Office of Aviation
(317) 495-4875
tlewandowski@indot.in.gov
www.aviation.indot.in.gov

From: Cameron Berry <cberry@ascgroup.net>
Sent: Monday, July 29, 2024 2:25 PM
To: Lewandowski, Tyler <TLewandowski@indot.IN.gov>
Subject: Des 2100830 & 2100831 Small Structures Project on SR 66 - Early Coordination Letter

Des. No.: 2100830 & 2100831
Project Description: SR 66 Small Structures Project, 1.00 Mile East of the West Junction with SR 161
Location: Spencer County, Indiana

INDOT and FHWA are in the planning stage for a small structures project on SR 66, Spencer 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 potential environmental impacts with recommendations for avoidance, minimization, and mitigation.

Federal Highway Administration (FHWA)
Indiana Department of Environmental Management (IDEM) Wellhead Proximity Determinator
Indiana Geological & Water Survey (IGWS)
Indiana Dept. of Natural Resources-Division of Fish and Wildlife (IDNR-DFW)
US Dept. of Housing and Urban Development
INDOT –Vincennes District
INDOT – Aviation
Natural Resources Conservation Services

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

August 2, 2024

Cameron Berry
ASC Group
9376 Castlegate Drive
Indianapolis, Indiana 46256
cberry@ascgroup.net

Dear Cameron Berry:

The purposed Small Structure Project on SR 66 in Spencer County, Indiana (Des. Nos. 2100830, and 2100831) as referred to in your letter received July 29, 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: 2024.08.02 08:37:18 -04'00'

JOHN ALLEN
State Soil Scientist

Enclosures

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*		Date Of Land Evaluation Request	
Name of Project DES2100830_831 Small Structure Repla		Federal Agency Involved INDOT and FHWA	
Proposed Land Use Transportation		County and State Spencer County, Indiana	
PART II *(To be completed by NRCS)*		Date Request Received By NRCS 8/2/2024	Person Completing Form: JRA
Does the site contain Prime, Unique, Statewide or Local Important Farmland? *(If no, the FPPA does not apply - do not complete additional parts of this form)*	YES ☑ NO ☐	Acres Irrigated	Average Farm Size 190 ac
Major Crop(s) Corn	Farmable Land In Govt. Jurisdiction Acres: 210590% 82	Amount of Farmland As Defined in FPPA Acres: 15178% 59	
Name of Land Evaluation System Used LESA	Name of State or Local Site Assessment System	Date Land Evaluation Returned by NRCS	

PART III *(To be completed by Federal Agency)*	Alternative Site Rating			
	Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	2.223			
B. Total Acres To Be Converted Indirectly	0			
C. Total Acres In Site	2.223			
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	2.00			
B. Total Acres Statewide Important or Local Important Farmland	0.00			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	<0.001			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	1			
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)	97			

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)*	**Maximum Points**	Site A	Site B	Site C	Site D
1. Area In Non-urban Use	(15)	13			
2. Perimeter In Non-urban Use	(10)	10			
3. Percent Of Site Being Farmed	(20)	5			
4. Protection Provided By State and Local Government	(20)	0			
5. Distance From Urban Built-up Area	(15)	5			
6. Distance To Urban Support Services	(15)	5			
7. Size Of Present Farm Unit Compared To Average	(10)	5			
8. Creation Of Non-farmable Farmland	(10)	2			
9. Availability Of Farm Support Services	(5)	2			
10. On-Farm Investments	(20)	8			
11. Effects Of Conversion On Farm Support Services	(10)	0			
12. Compatibility With Existing Agricultural Use	(10)	6			
TOTAL SITE ASSESSMENT POINTS	160	61	0	0	0
PART VII ***(To be completed by Federal Agency)***					
Relative Value Of Farmland *(From Part V)*	100	97	0	0	0
Total Site Assessment *(From Part VI above or local site assessment)*	160	61	0	0	0
TOTAL POINTS ***(Total of above 2 lines)***	260	158	0	0	0

Site Selected: Site A	Date Of Selection 8/2/2024	Was A Local Site Assessment Used? YES ☐ NO ☑

Reason For Selection:

Meets the purpose and need for the project.

Name of Federal agency representative completing this form: Cameron Berry	Date: 8/6/2024

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

Jennifer Rhodes

From: Turnbow, Alisha <ATurnbow@idem.IN.gov>
Sent: Tuesday, August 6, 2024 5:04 PM
To: Cameron Berry
Cc: Brenna Caudill
Subject: RE: Des 2100830 & 2100831 Small Structures Project on SR 66 - Early Coordination Letter
Attachments: Proximity to WPA (2100830 & 2100831).pdf

Hi Cameron,

Find attached to this email a response to the proximity request for Des No 2100830 & 2100831. Let me know what questions you have.

Sincerely,

Alisha Turnbow
Environmental Manager
Office of Water Quality
Drinking Water Branch, Groundwater Section

(317) 233-9158 • aturnbow@idem.IN.gov

From: Cameron Berry <cberry@ascgroup.net>
Sent: Monday, July 29, 2024 1:48 PM
To: Turnbow, Alisha <ATurnbow@idem.IN.gov>
Subject: Des 2100830 & 2100831 Small Structures Project on SR 66 - Early Coordination Letter

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Des. No.: 2100830 & 2100831
Project Description: SR 66 Small Structures Project, 1.00 Mile East of the West Junction with SR 161
Location: Spencer County, Indiana

INDOT and FHWA are in the planning stage for a small structures project on SR 66, Spencer 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 potential environmental impacts with recommendations for avoidance, minimization, and mitigation.

Federal Highway Administration (FHWA)

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

August 6, 2024

ASC Group, Inc.
Attention: Cameron Berry
9376 Castlegate Drive
Indianapolis, IN 46256

Dear Cameron Berry:

Re: Wellhead Protection Area
Proximity Determination
Des No 2100830 and 2100831
Small Structures Project on SR 66,
1.00 Mile East of the West Junction with SR 161,
Spencer County, Indiana

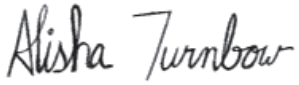
Upon review of the above referenced project site, it has been determined that the proposed project area **is not located within** a Wellhead Protection Area. The information is accurate to the best of our knowledge; however, there are in some cases a few factors that could impact the accuracy of this determination. Some Wellhead Protection Area Delineations have not been submitted, and many have not been approved by this office. In these cases, we use a 3,000-foot fixed radius buffer to make the proximity determination. To find the status of a Public Water Supply System's (PWSS's) Wellhead Protection Area Delineation please visit our tracking database at http://www.in.gov/idem/cleanwater/2456.htm and scroll to the bottom of the page.

The project area **is located within** a Source Water Assessment Area for a PWSS's surface water intake. The Source Water Assessment Area relates to the surface water drainage area that water could potentially flow and influence water quality for a PWSS's source of drinking water. The PWSS that could be impacted by the project is Evansville Water Utility. A contact person for Evansville Water Utility is Brenna Caudill, and they could be reached via e-mail and/or phone at: bcaudill@ewsu.com and 812-428-0568. The contact information is provided as a courtesy and reference for you if any issues arise that could potentially impact the water quality for the PWSS during the course of the project. It is not a requirement of IDEM that you contact the system regarding the project.

In the future, **please consider using this self-service tool** if it suits your needs. The Drinking Water Branch has a self-service tool which allows one to determine wellhead proximity without submitting the application form. Go to https://www.in.gov/idem/cleanwater/pages/wellhead/ and use the instructions at the bottom of the page.

If you have any additional questions, please feel free to contact me at the address above or at 317-233-9158 and aturnbow@idem.in.gov.

Sincerely,



Alisha Turnbow,
Environmental Manager
Ground Water Section
Drinking Water Branch
Office of Water Quality

Electronic cc: Brenna Caudill, Evansville Water Utility

Jennifer Rhodes

From: Caudill, Brenna <bcaudill@ewsu.com>
Sent: Wednesday, August 7, 2024 11:37 AM
To: Cameron Berry
Subject: RE: Des 2100830 & 2100831 Small Structures Project on SR 66 - Early Coordination Letter
Attachments: Early Coordination Letter, INDOT Des. Nos. 2100830 and 2100831 Small Structures Project on SRF Mile East of the West Junction With SR 161, Spencer County, Indiana.pdf

Cameron,

Please find attached a response on behalf of Evansville Water and Sewer Utility.

If you have any further questions, please reach out.

Thank you,

Brenna Caudill
Water Filtration Plant Superintendent
Evansville Water and Sewer Utility
O 812-428-0568 | **M** 812-470-1568 | **E** bcaudill@ewsu.com
W ewsu.com | **A** 1301 Waterworks Road, Evansville, IN 47713

From: Cameron Berry <cberry@ascgroup.net>
Sent: Wednesday, August 7, 2024 8:59 AM
To: Caudill, Brenna <bcaudill@ewsu.com>
Subject: Des 2100830 & 2100831 Small Structures Project on SR 66 - Early Coordination Letter

Des. No.: 2100830 & 2100831
Project Description: SR 66 Small Structures Project, 1.00 Mile East of the West Junction with SR 161
Location: Spencer County, Indiana

INDOT and FHWA are in the planning stage for a small structures project on SR 66, Spencer County, Indiana.

The Indiana Department of Transportation (INDOT), with federal funding, are in the planning stage for a Small Structures Replacement Project on SR 66, 1.00 Mile East of the West Junction with SR 161 in Spencer 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 potential environmental impacts with recommendations for avoidance, minimization, and mitigation.

Please let us know if have any questions or concerns.
Thank you,

Cameron Berry
Indiana Regional Manager

Stephanie Terry
City of Evansville Mayor

Vic Kelson
EWSU Executive Director

August 7, 2024

ASC Group, Inc.
Attention: Cameron Berry
9376 Castlegate Drive
Indianapolis, IN 46256

Re: Early Coordination Letter, INDOT Des. Nos.: 2100830 and 2100831 Small Structures Project on SRF Mile East of the West Junction With SR 161, Spencer County, Indiana

Dear Cameron Berry:

I have reviewed the documents you sent regarding the INDOT project; the site is in Evansville's Source Water Assessment Area but I do not believe that this project will have a negative effect on the water quality for Evansville. The only potential impact I could foresee is if a chemical spill occurred from construction equipment and made its way into the waterways. If an event as such occurred, then IDEM's 24-Hour Emergency Spill Line should be called at 888-233-7745 or 317-233-7745 and I ask that a notification to the Evansville Water Filtration Plant be made at 812-428-0568.

If you have any questions, please feel free to call me at 812-428-0568 or email at bcaudill@ewsu.com.

Sincerely,

Brenna Caudill

Brenna Caudill
Water Filtration Plant Superintendent
Evansville Water and Sewer Utility

A 1 NW Martin Luther King, Jr. Blvd. PO Box 19 Evansville, IN 47740-0001 | W ewsu.com

APPENDIX D: SECTION 106 OF THE NHPA

Section 106 Documentation

Minor Projects PA Project Assessment Form

Phase Ia Archaeological Field Reconnaissance Report Title Page and Description

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: October 16, 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):

Shaun Beckett and Douglas S. Terpstra
ASC Group, Inc.
800 Freeway Drive North, Suite 101
Columbus, Ohio 43229
614-268-2514 x 3556
dterpstra@ascgroup.net

Project Designation Number: 2100830 and 2100831

Route Number: State Road (SR) 66

Feature crossed (if applicable): Unnamed tributaries (UNTs) to Willow Pond Ditch

City/Township: Richland City/Luce and Ohio townships **County:** Spencer

Project Description:*

**Provide a full project description—include the same level of specificity and detail as expected in the NEPA document—in order to ensure a timely review by INDOT-CRO staff. For bridge and culvert projects, include specific details on the rehab or replacement including potential changes to width, height, and materials. Be sure to include the specific elements listed below as applicable.*

The SR 66 Small Structures Replacements Project over UNTs of Willow Pond Ditch is located 1.0 mile and 1.01 miles east of the west junction with SR 161 on SR 66 in Luce and Ohio townships, Spencer County, Indiana (Indiana Department of Transportation [INDOT] Des. Nos. 2100830 and 2100831). The project consists of the replacement of two small structures and includes a hot mix asphalt (HMA) roadway reconstruction. The proposed project is anticipated to replace and relocate the existing structures and relocate the corresponding roadway ditches to accommodate drainage. The HMA roadway reconstruction will raise the roadway profile through the locations of the structures, reconstruct two public road approaches, and remove and replace approach guardrail at the structures.

The need for this project is based on poor condition and inadequate hydraulics of the small structures (Structure Nos. CV 066-074-51.61 and CV 066-074-51.62). The existing structures are showing signs of deterioration with vertical cracking and efflorescence present along the sidewalls and slabs on the inside of the structures. Delamination is also present along the guardrails, which are present at the structures and along the SR 66 roadway. Based on Hydraulic Memos, the existing structures can overtop the roadway during 100-year storm events. The structures have condition ratings of 5 (fair) and 6 (satisfactory) out of

a possible 9. The purpose of this project is to provide structurally adequate structures, ensure continued traffic on SR 66, and to extend the service life of the structures by improving overall condition ratings to that of at least a 7 (good condition) or greater. The purpose of the project is also to improve the hydraulics of the waterway at the structures to meet INDOT hydraulic standards.

One of the existing structures (Structure No. CV 066-074-51.61) is an 8-foot (ft) wide by 4-ft rise reinforced concrete box (RCB) culvert. The total length of the existing structure is approximately 34 ft and flow through the structure is north to south. The other existing structure (Structure No. CV 066-074-51.62) is an 8-ft wide by 2.6-ft rise RCB culvert. The total length of the existing structure is approximately 34 ft and flow through the structure is north to south.

The preferred alternative will remove and replace the two small structures (Structure Nos. CV 066-074-51.61 and CV 066-074-51.62) along the SR 66 roadway over UNTs to Willow Pond Ditch. The existing structures will be removed, and the ground will be filled in and shaped to allow for proper drainage. The existing structures will be replaced with RCB culverts that measure 66-ft long, 16-ft wide by 4-ft rise each. The structures will be sumped 12 inches. The replacement structure for Structure No. CV 066-074-51.61 will be relocated approximately 132 ft to the west of the current structure and the replacement structure for Structure No. CV 066-074-51.62 will be relocated approximately 128 ft to the east of the current structure. Class I and revetment riprap will be placed over geotextile at the inlet and outlets of the replacement structures. Compacted aggregate will be added at the field entrance and removed upon the completion of construction. One sodded ditch and several seeded and revetment riprap ditches will be constructed for roadside drainage. A subgrade treatment and HMA overlay will be conducted on the approach pavement to accommodate the installation of the replacement structures.

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 066-074-51.61 is a RCB culvert carrying SR 66 over a UNT of Willow Pond Ditch
CV 066-074-51.62 is a RCB culvert carrying SR 66 over a UNT of Willow Pond Ditch

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:

The project requires approximately 2.34 acres of permanent ROW. No temporary ROW will be required for this project.

Permanent ROW was revised to 2.223 acres

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**):**
{Include full category text(s) verbatim, including any conditions. INDOT-CRO will finalize categories upon their review.}

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 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)*:
    1. Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource; *AND*
    2. 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)*.
    1. The structure exhibits no wood, stone, or brick structures or parts therein; *OR*
    2. The structure exhibits only modern wood, stone, or brick structures or parts therein; *OR*
    3. The structure exhibits non-modern wood, stone, or brick structures or parts therein but 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.

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):

Beckett, Shaun C., and Kaylee Ellrod
2024 A Phase Ia Archaeological Reconnaissance for the Proposed State Road (SR) 66 Small Structures Replacements Projects over Unnamed Tributaries to Willow Pond Ditch, 1.0 Mile and 1.01 Miles East of the West Junction with SR 161 on SR 66, in Ohio and Luce Townships, Spencer County, Indiana (INDOT Des. Nos. 2100830 and 2100831). ASC Group, Inc., Indianapolis. Document on file at INDOT-CRO.

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. No unusual features are present that may be impacted by the project.

According to INDOT's iTAMS database information, the subject structures (CV 066-074-51.61 and CV 066-074-51.62) are 4-sided reinforced concrete box culverts. The construction dates of the culverts are not known. Examination of iTAMS inspection reports and photographs confirms that neither structure exhibits wood, stone, or brick structures or parts therein. In addition, there is no evidence to suggest that either possess 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 field reconnaissance survey report completed for the project by ASC Group, Inc. (Beckett and Ellrod 2024). There are no previously recorded archaeological sites within or adjacent to

the proposed project area. A 1.29-hectare (3.18-acre) survey area was investigated through a combination of visual inspection of areas with obvious disturbance at 10-m intervals; pedestrian survey of recently tilled and rain washed agricultural fields at 10-m intervals; and systematic shovel probing (n= 42) of the remaining areas with undisturbed soils at 15-m intervals. No archaeological resources were documented as a result of the survey, and no additional investigation is recommended (Beckett and Ellrod 2024).

Therefore, there are no archaeological concerns provided that 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 and David Walton

INDOT Approval Date: 10/17/2024

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.**

INDIANA ARCHAEOLOGICAL SHORT REPORT

State Form 54566 (R3 / 3-22)

INDIANA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF HISTORIC PRESERVATION AND ARCHAEOLOGY
402 West Washington Street, Room W274
Indianapolis, Indiana 46204-2739
Telephone Number: (317) 232-1646
Fax Number: (317) 232-0693
E-mail: dhpa@dnr.IN.gov

Where applicable, the use of this form is recommended but not required by the Division of Historic Preservation and Archaeology (DHPA).

Name(s) of author(s)	Date *(month, day, year)*
Shaun C. Beckett and Kaylee Ellrod, MS, RPA	October 18, 2024

Title of project
A Phase Ia Archaeological Reconnaissance for the Proposed State Road (SR) 66 Small Structures Replacements Project over Unnamed Tributaries to Willow Pond Ditch, 1.0 Mile and 1.01 Miles East of the West Junction with SR 161 on SR 66, in Ohio and Luce Townships, Spencer County, Indiana (INDOT Des. Nos. 2100830 and 2100831)

This document is being used to report on the results of:
☐ Records check only ☒ Records check and Phase 1a archaeological reconnaissance
☐ An addendum to a previous archaeological report. *For an addendum, provide the following information.*

Name(s) of author(s) of previous report
N/A

Title of previous report
N/A

Date of previous report *(month, day, year)*	DHPA number
N/A	

PROJECT OVERVIEW

Description of project

The State Road (SR) 66 Small Structures Replacements Project over unnamed tributaries (UNTs) to Willow Pond Ditch is located 1.6 kilometers (km) [1.0 mile (mi)] and 1.6 km (1.01 mi) east of the west junction with SR 161, in Luce and Ohio townships, Spencer County, Indiana (Indiana Department of Transportation [INDOT] Des. Nos. 2100830 and 2100831). The project consists of the replacement of two small structures and includes a hot mix asphalt (HMA) roadway reconstruction. The proposed project is anticipated to replace and relocate the existing structures and relocate the corresponding roadway ditches to accommodate drainage.

One of the existing structures (Structure No. CV 066-074-51.61) is a 2.4-meter (m) [8-foot (ft)] wide by 1.2-m (4-ft) rise reinforced concrete box (RCB) culvert. The total length of the existing structure is approximately 10.4 m (34 ft) and flow through the structure is north to south. The other existing structure (Structure No. CV 066-074-51.62) is a 2.4-m (8-ft) wide by 0.79-m (2.6-ft) rise RCB culvert. The total length of the existing structure is approximately 10.4 m (34 ft) and flow through the structure is north to south.

The preferred alternative will remove and replace the two small structures (Structure Nos. CV 066-074-51.61 and CV 066-074-51.62) along the SR 66 roadway over UNTs to Willow Pond Ditch. The existing structures will be removed and the ground will be filled in and shaped to allow for proper drainage. The existing structures will be replaced with reinforced concrete box (RCB) culverts that measure 20.12-m (66-ft) long, 4.88-m (16-ft) wide by 1.22-m (4-ft) rise each. The structures will be sumped 30.5 m (12 in). The replacement structure for Structure No. CV 066-074-51.61 will be relocated approximately 40.23 m (132 ft) to the west and the replacement structure for Structure No. CV 066-074-51.62 will be relocated approximately 39.01 m (128 ft) to the east. Class I and revetment riprap will be placed over geotextile at the inlet and outlets of the replacement structures. Compacted aggregate will be added at the field entrance and removed upon the completion of construction. One sodded ditch and several seeded and revetment riprap ditches will be constructed for roadside drainage. A subgrade treatment and hot mix asphalt (HMA) overlay will be conducted on the approach pavement to accommodate the installation of the replacement structures.

The need for this project is based on poor condition and inadequate hydraulics of the small structures (Structure Nos. CV 066-074-51.61 and CV 066-074-51.62). The existing structures are showing signs of deterioration with vertical cracking and efflorescence present along the sidewalls and slabs on the inside of the structures. Delamination is also present along the guardrails, which are present at the structures and along the SR 66 roadway. Based on Hydraulic Memos, the existing structures can overtop the roadway during 100-year storm events. The structures have condition ratings of 5 (fair) and 6 (satisfactory) out of a possible 9. The purpose of this project is to provide structurally adequate structures, ensure continued traffic on SR 66, and to extend the service life of the structures by improving overall condition ratings to that of at least a 7 (good condition) or greater. The purpose of the project is also to improve the hydraulics of the waterway at the structures to meet INDOT hydraulic standards.

The project requires approximately 0.90 hectare (ha) [2.223 acres (ac)] of permanent right-of-way (ROW). No temporary ROW will be required for this project.

Describe landforms.

Number of shovel probes excavated	Number of cores / auger probes
42	0

Describe disturbances. Attach photographs documenting disturbances.

Disturbances within the survey area include paved roads, new road grading, grading associated with roadside drainage, and subsurface utilities.

Actual area surveyed *(hectares)*	Actual area surveyed *(acres)*
1.29	3.18

Explain results of fieldwork.

The survey area is located along a 345 m (1,132 ft) stretch of SR 66 with bumpouts in the areas around the culverts. The survey area is located entirely in agricultural areas and is cut by an UNT to Willow Pond Ditch (Figures 1–3; Photographs 1–9; Appendix A) on the north side on SR 66. The survey area was investigated through shovel probes at 15-m (49.2-ft) intervals, visual inspection, and a pedestrian survey at 10-m (32-8 ft) intervals where indicated (Figure 3).

The survey area is separated into four quadrants, northwest, northeast, southwest, and southeast. Areas that were visually inspected included roadside drainage, graded and cut areas associated with the unnamed tributary to Willow Pond Ditch and road construction, and other areas of slope from the road cut (Photographs 1–4). The areas that were subject to pedestrian survey at 10-m (32.8-ft) intervals were portions of the agricultural field in the northeast, southeast, and southwest quadrants within the survey area, as they presented greater than 30 percent surface visibility (Figure 3; Photograph 3).

The survey area was investigated though four separate visits. The first visit occurred on August 10, 2023. During the first survey, two shovel probes were excavated in the northwest quadrant (SPs 1 and 2 on Transect 1). These shovel probes revealed a disturbed soil profile consisting of a black (10YR 2/1) silt loam extending to approximately 0–10 centimeters below surface (cmbs) [0–3.9 inches below surface (inbs)], underlain by heavily mottled and hydric soils. The northeast, southwest, and southeast quadrants were investigated through pedestrian survey.

The second visit occurred on December 7 and 8, 2023, after the survey area was expanded (Photographs 5 and 6). During this survey, one additional shovel probe was excavated in the northwest quadrant (SP 1 on Transect 2). This shovel probe displayed a soil profile consisting of a dark yellowish brown (10YR 3/4) silty clay loam extending to a depth of 27 cmbs (10.63 inbs) underlain by a slightly hydric layer of very dark gray (10YR 3/1) silty clay loam mottled with greenish gray (GLEY 5/5GY) and iron redoxification to a depth of 37 cmbs (14.6 inbs). One shovel probe was excavated in the northeast quadrant (SP 2 on Transect 2). This shovel probe displayed a disturbed soil profile consisting of a dark yellowish brown (10YR 4/4) silty clay loam with approximately 5 percent gravel and asphalt fragments to a depth of 16 cmbs (6.3 inbs), underlain by a layer of light yellowish brown (10YR 6/4) mixed with dark yellowish brown (10YR 4/4) and approximately 5 percent gravel content to a depth of 35 cmbs (13.8 inbs).

The eight shovel probes excavated in the southeast quadrant generally displayed an undisturbed soil profile consisting of a dark gray (10YR 4/1) silty clay loam to a depth of approximately 0–34 cmbs (0–13.4 inbs) underlain by a hydric layer of very dark gray (10YR 3/1) mottled with a light brownish gray (10YR 6/2) and greenish gray (GLEY 5/5GY) and iron redoxification to a depth of approximately 27–44 cmbs (10.63–17.3 inbs). One disturbed shovel probe (SP 1 on Transect 3) displayed a soil profile consisting of a dark brown (10YR 3/3) mixed with gravel, plastic, and modern trash to a depth of 30 cmbs (11.8 inbs), underlain by a layer of very dark gray (10YR 3/1) mixed with dark brown (10YR 3/3) and approximately 6 percent gravel content to a depth of 40 cmbs (15.75 inbs). The southwestern quadrant was investigated through pedestrian survey.

The third visit occurred on May 15, 2024 after receiving updated project plans. Two shovel probes (TR4 SP 1 and 2) were placed in the northeast quadrant and exhibited undisturbed soil profiles consistent with those from the previous visits. Areas in the western quadrants were able to be pedestrian surveyed. Remaining portions of the survey area in the east two quadrants were covered by standing water (Photograph 7).

With additional expansion of the project area, mostly within the northeast and southeast quadrants, a fourth visit was completed on October 2, 2024 (Photographs 8 and 9). Shovel probes excavated within the northeast quadrant (TR5 SP1–SP9) revealed a typical profile of brown (10YR 4/3) silt loam to silty clay loam ranging from 8 to 30 cmbs (1.9 to 11.8 inbs) in depth. This is underlain by yellowish brown (10YR 5/6) to dark yellowish brown (10YR 4/6) clay loam subsoil near the intersection. The subsoil on the east end of Transect 5 (SP5–SP8) exhibited a very dark grayish brown (10YR 3/2) silty clay loam with iron accumulations and depletions. Within the southeast quadrant (TR 6 SP1–SP15), shovel probes revealed similar soil profiles as those noted above along Transect 3.

The presence of poorly drained soils in this survey reflects Ragsdale silt loam (Ra) and the Algiers silt loam, frequently flooded, very brief duration (Ag) soils mapped within the survey area (USDA, NRCS 2023) and the appearance of an unnamed wetland recorded on historic maps as early as the 1870s (Baskin and Forster 1876).

No artifacts were found and no archaeological sites were recorded within the survey area. No further archaeological assessment is recommended.

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)*

Other attachments

Appendix A: Plan Sheets

References cited *(See short report instructions for required references to be consulted)*

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1992 Native American Cultures in Indiana: Proceedings of the First Minnetrista Council for Great Lakes Native American Studies. Edited by Ronald Hicks. Minnetrista Cultural Center and Ball State University, Muncie, Indiana.

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2001 Spencer County: Interim Report. Indiana Historic Sites and Structures Inventory. Indianapolis.

APPENDIX E: RED FLAG HAZARDOUS MATERIAL

Red Flag Investigation

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: March 11, 2024

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

From: Dominica DeFelice
ASC Group, Inc.
9376 Castlegate Drive
Indianapolis, Indiana 46256
ddefelice@ascgroup.net

Re: RED FLAG INVESTIGATION
DES #2100830 and 2100831, State Project
Small Structures Replacements
SR 66, 1.00 Mile East of the West Junction with SR 161
Spencer County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: This project is located on State Road (SR) 66 at County Road (CR) 500 West (W), 1.00 mile east of the west junction with SR 161 in Luce and Ohio townships, Spencer County, Indiana. The project consists of the replacement of two small structures on SR 66 and includes a hot mix asphalt (HMA) roadway reconstruction.

Both structures carry SR 66 over unnamed tributaries (UNTs) to Willow Pond Ditch. The proposed project (INDOT Des. No. 2100830) involves an existing structure (CV 066-074-51.61) that is an 8-foot (ft) by 4-ft rise reinforced concrete box (RCB) culvert with a total approximate length of 34 ft. It is located on SR 66, west of CR 500 W. CV 066-074-51.61 is currently proposed to be replaced with a 16 ft by 4 ft RCB culvert. The proposed project (INDOT Des. No. 2100831) involves an existing structure (CV 066-074-51.62) that is an 8-ft by 3-ft rise slab top box culvert with a total approximate length of 34 ft. It is located on SR 66, east of CR 500 W. CV 066-074-51.62 is currently proposed to be replaced with a 16 ft by 4 ft RCB culvert. Minor relocation of the culverts and associated UNTs is anticipated.

The HMA roadway reconstruction will raise the roadway profile through the locations of the structures, reconstruct two public road approaches, and remove and replace approach guardrail at the structures.

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 066-074-51.61 and CV 066-074-51.62

Proposed right of way: Temporary ☒ # Acres to be determined (TBD) Permanent ☒ # Acres TBD; less than 2.0,

Not Applicable ☐ **Permanent right-of-way amount has been updated to 2.223 acres. No temporary right-of-way is required.**

Right-of-way amounts have not yet been finalized and need to be further defined; however, currently, some temporary right-of-way will be required for ditch construction and the anticipated amount of permanent right-of-way needed will be less than 2.0 acres.

Type and proposed depth of excavation: Excavation is anticipated to a depth of 8 ft for removal of the existing structures and installation of the new drainage structures.

Maintenance of traffic (MOT): The MOT needs to be further defined; however, currently road closures with a detour are anticipated.

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	**6**
Cemeteries	**N/A**	Railroads	**N/A**
Hospitals	**N/A**	Trails	**N/A**
Schools	**N/A**	Managed Lands	**N/A**

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

Explanation:

Pipelines: Six (6) pipeline segments are located within the 0.5 mile search radius. The nearest segment, Ashland Pipe Line Co. pipeline, is located approximately 0.09 mile southeast of the project area. No impact is expected.

WATER RESOURCES TABLE AND SUMMARY

Water Resources Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
NWI - Points	**N/A**	Canal Routes - Historic	**N/A**
Karst Springs	**N/A**	NWI - Wetlands	**N/A**
Canal Structures – Historic	**N/A**	Lakes	**N/A**
NPS NRI Listed	**N/A**	Floodplain - DFIRM	**N/A**
NWI Lines	**N/A**	Cave Entrance Density	**N/A**
IDEM 303d Listed Streams and Lakes (Impaired)	**N/A**	Sinkhole Areas	**N/A**
Rivers and Streams	**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: No water resources were identified within the 0.5 mile search radius.

Due to the proximity of Willow Pond Ditch, it is likely that additional water resources, such as unnamed tributaries, regulated drains, wetlands, and roadside ditches are located in the project area. A Waters of the US Report is recommended and coordination with the appropriate agency, if applicable, will occur.

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	**5**	Mineral Resources	**N/A**
Mines – Surface	**N/A**	Mines – Underground	**N/A**

Explanation:

Petroleum Wells: Five (5) petroleum wells are located within the 0.5 mile search radius. The nearest petroleum well, a presumed-plugged well, is located adjacent to the project area. Coordination with Indiana Department of Natural Resources (IDNR) Oil and Gas Division will occur.

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

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

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

ECOLOGICAL INFORMATION SUMMARY

The Spencer 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_spencer.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. Coordination with US Fish and Wildlife Service (USFWS) and IDNR will occur.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The project area is located in a rural area surrounded by farm fields and some residences. The October 24, 2019, culvert inspection report for Culvert # CV 066-074-51.61 and the October 12, 2022, culvert inspection report for Culvert # CV 066-074-51.62 state that no evidence of bats was seen or heard at either culvert. Additional investigation to confirm the presence or absence of bats in the culverts will be necessary. 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: Due to the proximity of Willow Pond Ditch, it is likely that additional water resources, such as unnamed tributaries, regulated drains, wetlands, and roadside ditches are located in the project area. A Waters of the US Report is recommended and coordination with the appropriate agency, if applicable, will occur.

MINING/MINERAL EXPLORATION:

Petroleum Wells: The nearest petroleum well, a presumed-plugged well, is located adjacent to the project area. Coordination with IDNR Oil and Gas Division will occur.

HAZARDOUS MATERIAL CONCERNS: N/A

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

INDOT ESD concurrence: Dariane Davis Digitally signed by Dariane Davis Date: 2024.03.11 11:54:37 -04'00' (Signature)

Prepared by:
Dominica DeFelice
QA/QC Assistant
ASC Group, Inc.

Graphics:

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

SITE LOCATION: YES

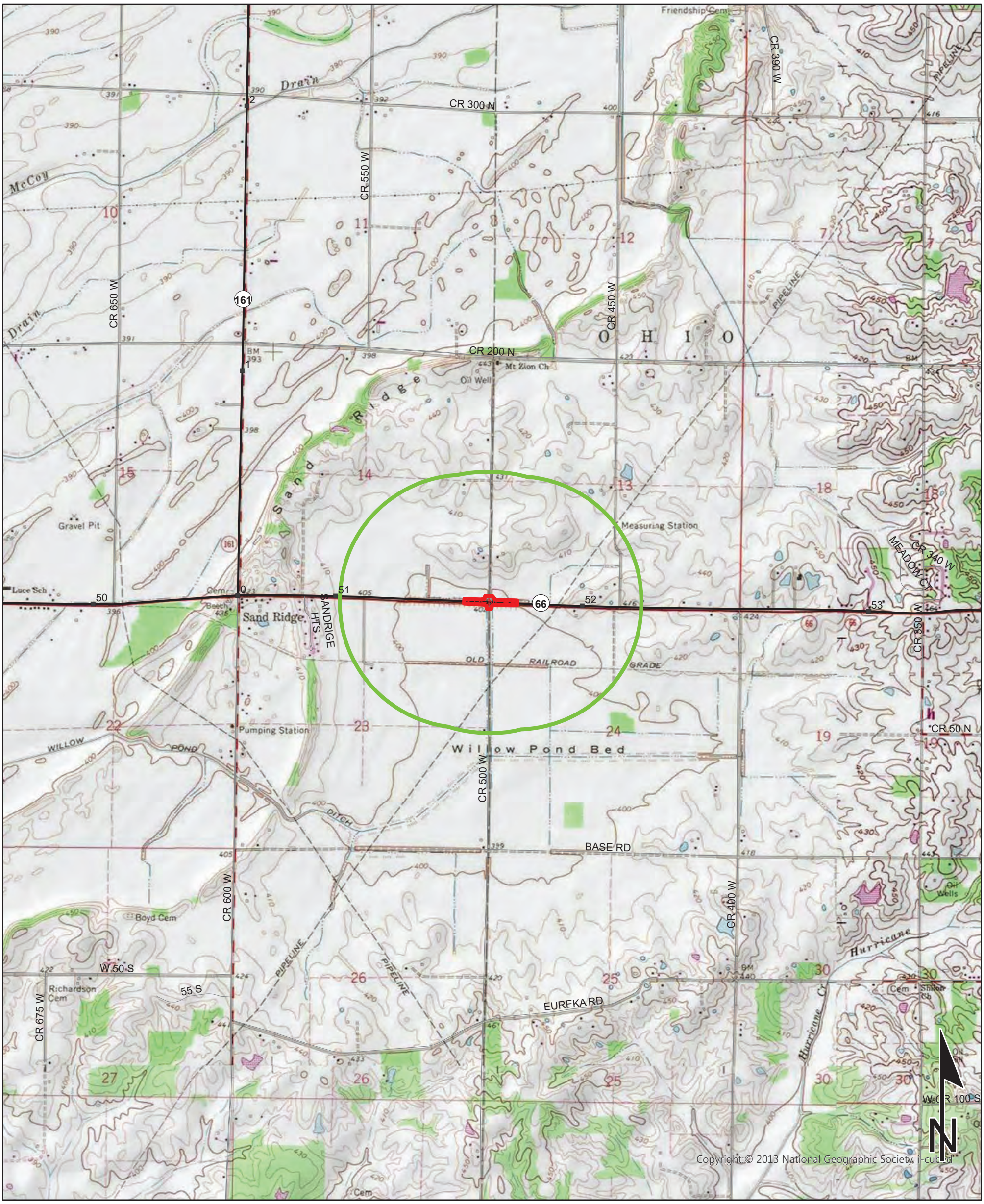
INFRASTRUCTURE: YES

WATER RESOURCES: N/A

MINING/MINERAL EXPLORATION: YES

HAZARDOUS MATERIAL CONCERNS: N/A

Red Flag Investigation - Site Location
SR 66, 1.00 Mile East of the West Junction with SR 161
Des. Nos. 2100830 and 2100831, Small Structures Replacements
Spencer County, Indiana



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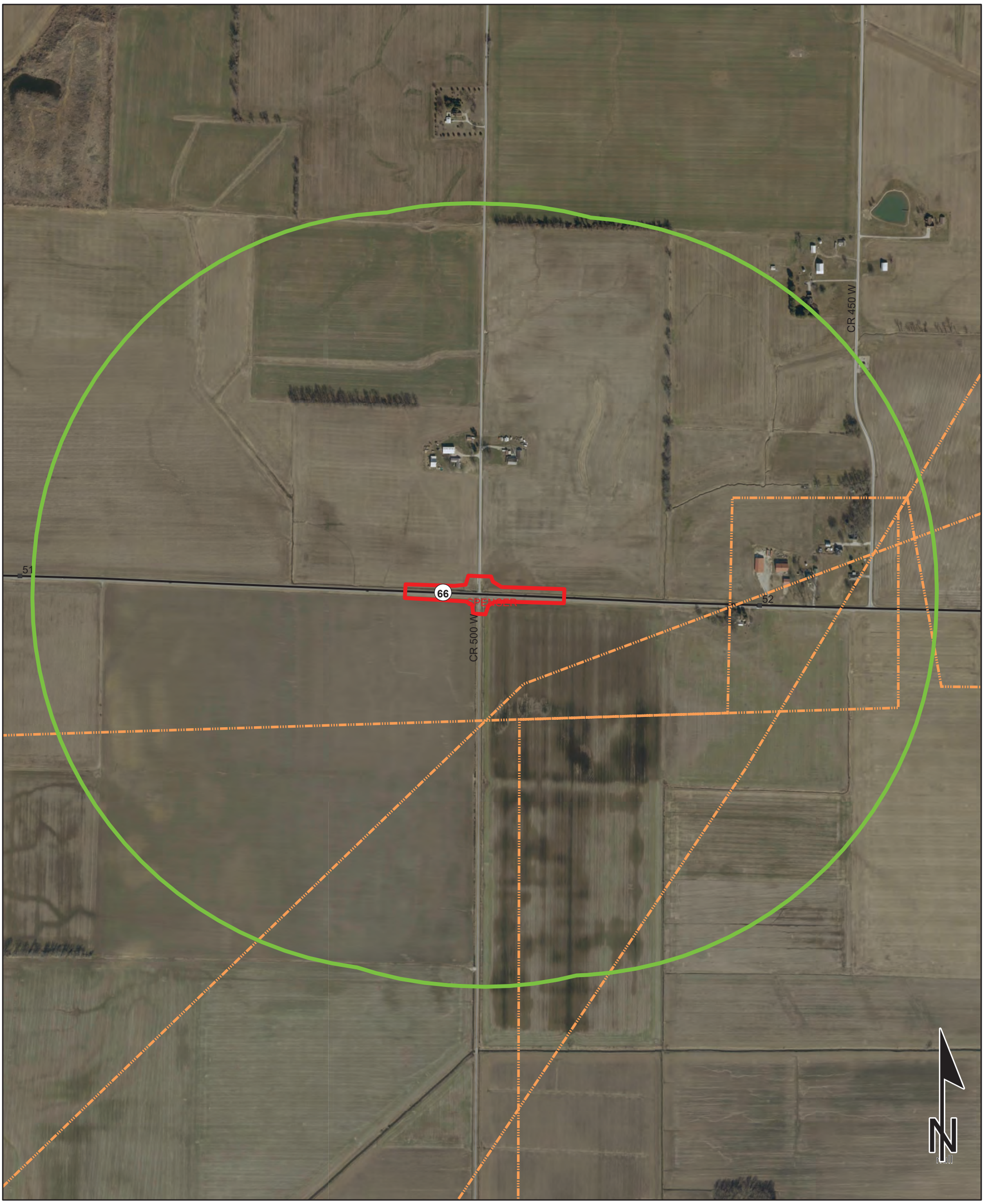
Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

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

RICHLAND CITY QUADRANGLE
INDIANA
7.5 MINUTE SERIES
(TOPOGRAPHIC)

Red Flag Investigation - Infrastructure
SR 66, 1.00 Mile East of the West Junction with SR 161
Des. Nos. 2100830 and 2100831, Small Structures Replacements
Spencer County, Indiana



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Sources:

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

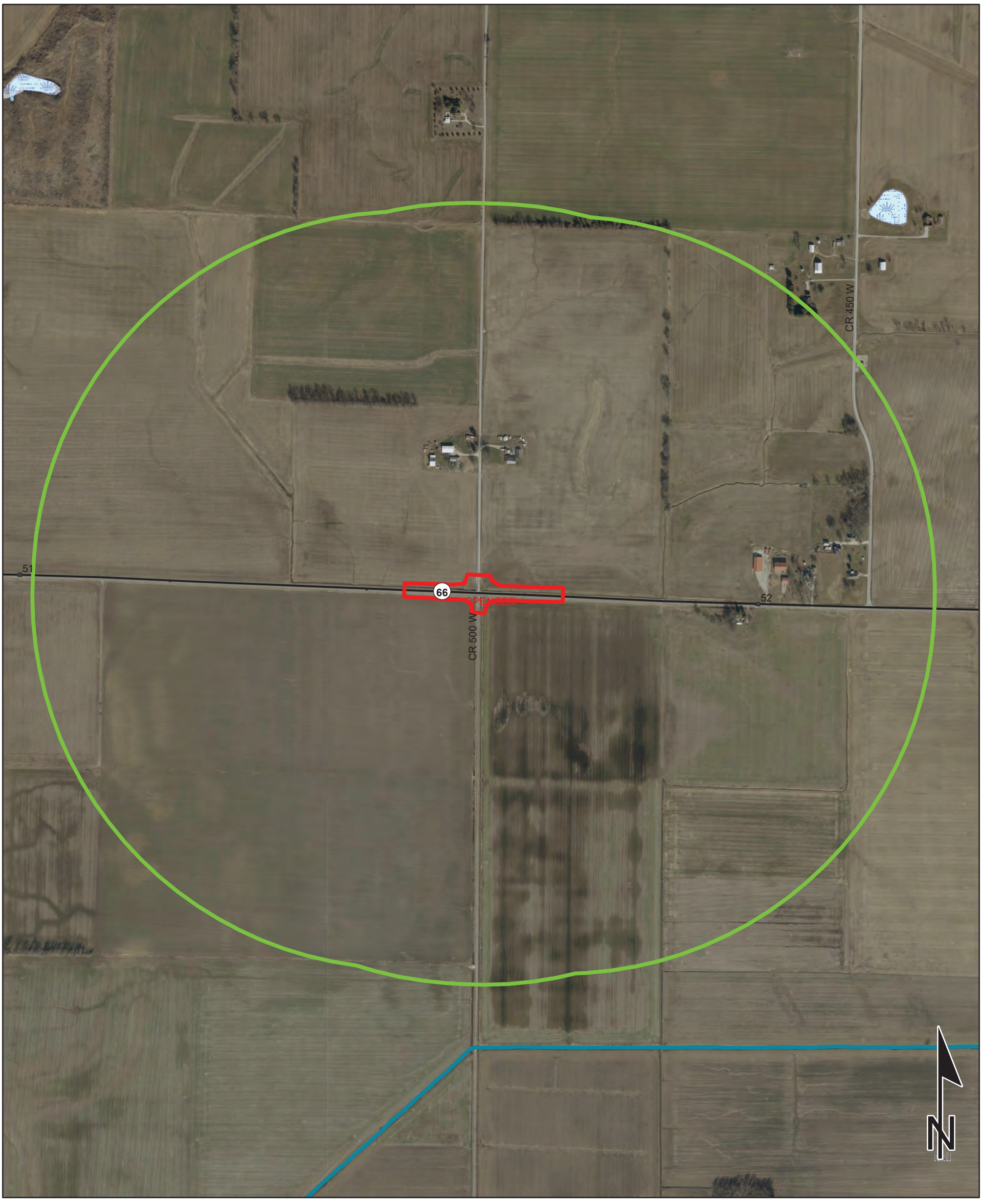
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

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.

- 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 66, 0.91 Mile East of the West Junction with SR 161
Des. Nos. 2100830 and 2100831, Small Structures Replacement
Spencer County, Indiana



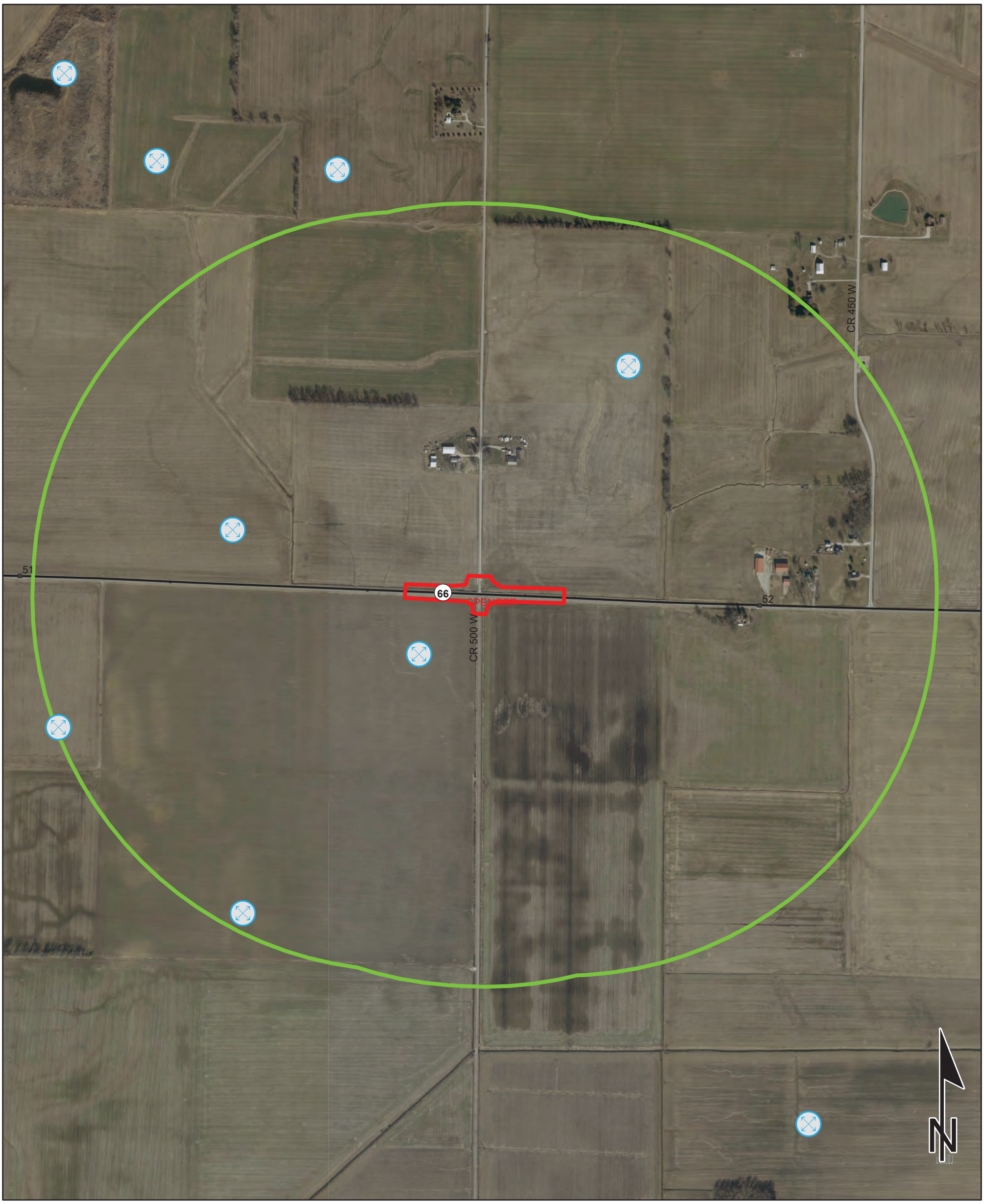
0.15 0.07 0 0.15 Miles

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

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

- 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

Red Flag Investigation - Mining/Mineral Resources
SR 66, 1.00 Mile East of the West Junction with SR 161
Des. Nos. 2100830 and 2100831, Small Structures Replacements
Spencer County, Indiana



0.15 0.07 0 0.15 Miles

Sources:

Non Orthophotography

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

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

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

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

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

APPENDIX F: WATERS RESOURCES

Waters Report – Including NWI Map
Floodplain Maps

Approved 2.22.2024

Waters of the U.S. Determination and Wetland Delineation Report

SR 66, Spencer County, Indiana
SR 66 Small Structures Replacements
INDOT Des. Nos. 2100831 and 2100830
INDOT Structure Nos. CV 066-074-51.62 and CV 066-074-51.61
Prepared by: Kenneth Safranek, Ecologist
ASC Group, Inc.
Prepared Date: February 16, 2024

Project Description:

Date(s) of Field Investigation: September 14, 2023

Sections 13, 14, 23, and 24, Township 7 South, Range 7 West
Richland City, Indiana Quadrangle
Luce and Ohio Townships, Spencer County, Indiana
Latitude: 37.902059
Longitude: -87.150698

Project Description: The proposed projects (Indiana Department of Transportation [INDOT] Des. Nos. 2100830 and 2100831) are located at the intersection of State Road (SR) 66 and North (N) County Road (CR) 500 West (W) in Luce and Ohio townships, Spencer County, Indiana (Figures 1–8). These culvert replacements and minor relocations will be completed synchronously due to their close proximity. The need for this project is due to the deterioration of the existing structures (Structure Nos. CV 066-074-51.62, an 8 foot [ft] by 2.5 ft reinforced concrete box culvert, 34 ft in length [INDOT Des. No. 2100831], and CV 066-074-51.61, an 8 ft by 4 ft, rise reinforced concrete box culvert, 34 ft in length [INDOT Des. No. 2100830]). If no action is taken, the culverts will continue to deteriorate which will induce emergency repairs.

The combined project also consists of removal and replacement of existing guardrails, a hot mix asphalt (HMA) overlay, and possible embankment erosion repairs. A portion of the work on Structure No. CV 066-074-51.62 will take place below the ordinary high water mark (OHWM) of an unnamed tributary (UNT) to Willow Pond Ditch. The purpose of each project is to reset the condition of both culverts to a "good" rating. This project will require the acquisition of less than 2.0 acres (ac) of temporary and permanent right-of-way (ROW).
Permanent right-of-way (ROW) amount has been updated to 2.223 acres. No temporary ROW is required.

Desktop Reconnaissance:

Soils (Figure 4)
According to the Soil Survey Geographic (SSURGO) Database for Spencer County, Indiana (U.S. Department of Agriculture, Natural Re

sources Conservation Service [USDA, NRCS] 2023); the investigation area contained two nationally listed soils with hydric components (USDA, NRCS 2021).

Table 1. NRCS SSURGO Mapped Soil Units.

Soil Unit Name	Symbol	NRCS Flooding Frequency	NRCS Drainage Class	NRCS Hydric Soil Category	SSURGO Hydric Rating
Algiers silt loam, frequently flooded, very brief duration	Ag	None	Somewhat poorly drained	Predominantly Non-Hydric	6% Hydric
Ragsdale silt loam	Ra	None	Poorly drained	Hydric	100% Hydric

National Wetland Inventory (NWI) Wetlands (Figure 5)
The NWI Wetland mapping identified two riverine, unknown perennial, unconsolidated bottom, semi-permanently flooded, excavated (R5UBFx) features which represent the roadway swales which correspond to the subject structures. The NWI Wetland map (U.S. Fish and Wildlife Service [USFWS] 2023) for the investigation area is provided on Figure 5.

NWI Cowardin Classification	Location
2 – Riverine (R5UBFx)	Shown entering from the eastern and western investigation limits, north of SR 66. Both features turn south at South CR 500 W and exit to the south.

National Hydrography Dataset (NHD) (Figure 5)
According to the NHD (U.S. Geological Survey, National Hydrography Dataset [USGS, NHD] 2023), the investigation area contains eight flowline features. The NHD flowlines for the investigation area are provided on Figure 5.

NHD Flowline Feature Type	Location
1 – Canal/Ditch	Flows west from the eastern investigation limits north of SR 66 and confluences with a Stream/River feature east of N CR 500 W.
1 – Canal/Ditch	Flows south from the confluence of the previous feature, east of N CR 500 W and exits to the south.
1 – Canal/Ditch	Flows east from the western investigation limits north of SR 66 and confluences with the previous feature, east of N CR 500 W.
1 – Canal/Ditch	Flows east from the western investigation limits south of SR 66, turns south at N CR 500 W, and exits to the south.
4 – Stream/River	Flow south and southwest from the northeastern edge of the investigation area and confluence with a Canal/Ditch feature north of SR 66 and east of N CR 500 W.

HUC 12 (Figure 5): 051402011005: Baker Creek

Floodways (Figure 6)
According to the IDNR Indiana Floodplain Information Portal (Figure 6), the investigation area does not lie within a mapped Flood Hazard Zone or Regulatory Floodway.

Upstream Drainage (Figure 7)
According to USGS StreamStats Services (USGS 2023), the approximate upstream drainage area for UNT to Willow Pond Ditch, east of N CR 500 W (37.90205, -87.15078) is 0.33 square miles.

Attached Documents:

- Maps (General Location, Topographic, NRCS Soils, NWI with NHD Lines, Indiana Department of Natural Resources [IDNR] Floodplain, USGS StreamStats and Aerials with Aquatic Resources and Photograph Key)
- Photographs
- Wetland Determination Data Sheet
- Preliminary Jurisdictional Determination (PJD) Form

FIELD RECONNAISSANCE:

ASC Group, Inc., under contract with HNTB, conducted an investigation to determine the presence of potential Waters of the U.S. (WOTUS) or Waters of the State for the proposed culvert replacement projects along SR 66 in Luce and Ohio townships, Spencer County, Indiana on September 14, 2023. The 8.4-ac investigation area for this Waters Report serves as the limits of the delineation and includes all the resources that were investigated. The investigation area comprises the entirety of the ROW and adjacent land including roadway swales, culverts, and the area immediately surrounding these structures. The Antecedent Precipitation Tool (ATP) Version 1.0.23 was used to determine climatic conditions during site visit (Attachments). The ATP indicated the site was in an "incipient drought" climatic range for the dry season in a typical year. OHWM measurements were taken when present at a water feature, and roadside ditches (RSDs) along the roadway were examined for possible jurisdictional status and origination. This area of investigation was created to encapsulate the area described in the proposal plans provided by the Engineer. Maps (Figures 1–8) and photographs (Photographs 1–53) of the investigation area are included in the attachments.

STREAMS

A preliminary jurisdictional waters determination was performed in the field to determine the presence of waterways that possessed a defined channel and streambed as defined by the OHWM were present in the investigation area.

UNT to Willow Pond Ditch

One intermittent waterway, UNT to Willow Pond Ditch, with an OHWM was observed within the investigation area. The stream originates east of the investigation area and outside of the ROW. No evidence of direct point source or natural channel inputs was observed within the investigation area as indicated on the NHD plus data set. Approximately 1,039 linear feet (lft) of UNT to Willow Pond Ditch is located within the investigation area, flows under Structure No. CV 066-074-51.62, east of N CR 500 W, and terminates at Wetland B. The stream is shown as a blue line stream feature on the USGS 2022 7.5-minute Richland City Quadrangle and Stream Stats figures, and as a Canal/Ditch on the NHD plus data set figure. This blue line stream channel was also observed as far back as the USGS 1901 15-minute Owensboro Quadrangle map. The stream has been utilized as an agricultural and roadway drainage ditch during this time period. The dominant substrate observed in the UNT to Willow Pond Ditch were sand, silt, and gravel. Due to the lack of groundwater influence at the time of investigation, the observations of flow marks, and lack of fully vegetated streambed, the stream was determined to be intermittent.

The UNT to Willow Pond Ditch was observed to be of moderate to low quality. This observation is due to the impacts from historic anthropogenic sources. These impacts include deep incision or channelization which prevent natural fluvial morphologies such as sinuosity or riffle-run-pool-glide complexes. In addition, significant bank erosion and artificial maintenance, lack of quality substrate, and lack of significant riparian corridor were observed. Hydrophytic vegetation was observed adjacent to the stream bed but below the OHWM. The minor vegetated areas within the stream are considered non-wetland, in-stream features as they were located below scour marks along the banks which were used to measure the OHWM of the stream channel.

The observed physical evidence used to establish the OHWM include physical characteristics such as a clear, natural line break in the slope, changes in the character of soil, and destruction of terrestrial vegetation, among other indicators. The OHWM measurements were taken away from the influence and upstream from Structure No. CV 066-074-51.62, during a period of no active flow on August 4, 2023. The measurement location is shown in Table 2 (Figure 8) which was recorded with a sub-meter handheld Global Positioning System (GPS) unit. The UNT to Willow Pond Ditch is mapped on the USGS StreamStats database and has an upstream drainage area of 0.33 square mile (211.2 ac) measured from the approximate location of Structure No. CV 066-074-51.62 (Figure 7).

The UNT to Willow Pond Ditch enters Structure No. CV 066-074-51.62, a concrete four-sided box culvert, under SR 66. A significant level of sedimentation has accumulated upstream, downstream, and under the road culvert. No evidence of rip rap or headwall was observed at the upstream or downstream portion of the culvert.

Table 2. Stream Summary Table

Water Feature Name	Photos	USGS Blue-line? Type?	Riffles? Pools?	OHWM Lat/Long	OHWM Width/ Depth (ft)	Quality	Substrate	Likely Waters of U.S.?	Linear ft (lft)/ Acreage (ac)
UNT to Willow Pond Ditch	2, 3, 28-30, 40–43, 45–46	Solid, Intermittent	None	37.902116, -87.150336	6.42W x 0.96D	Moderate to low	Sand, silt, and gravel	Yes	1,039 lft 0.153 ac

ROADSIDE DITCHES (RSDS)

One RSD (RSD 1) was encountered during the September 14, 2023, field investigation. RSD 1 flows east from the western investigation limits within the southern roadway ROW as a stormwater swale of SR 66. RSD 1 is 1,024-ft in length and drains to Wetland 1, south of Structure No. CV 066-074-51.61. This feature was likely constructed as a feature of SR 66 to convey diffuse stormwater flows. RSD 1 did not contain hydrophytic vegetation, exhibit a well-defined OHWM or a well-defined bed and bank; therefore, it is likely a non-jurisdictional, artificial roadside drainage feature.

Table 3. Roadside Ditch (RSD) Table.

RSD No.	Location	Length (ft)	Flow Direction	Photos
RSD 1	Southern SR 66 Roadway Swale	1,024	East	4, 10-12, 47-51

WETLANDS

A total of seven sampling points (SPs 1–7) were investigated in order to confirm the presence or absence of wetlands that may potentially be in the investigation area (Figure 8). All wetland determination data sheets are included in the attachments of this report. The sample point observations revealed three wetlands within the investigation area. The *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987), *Field Indicators of Hydric Soils in the United States: A Guide for Identifying and Delineating Hydric Soils, Version 8.2* (USDA, NRCS 2018), *2020 National Wetland Plant List (NWPL) Version 3.5 - Species Detail Tool* (United States Army Corps of Engineers [USACE 2020]), and the *Regional Supplement to the Corps of*

Engineers Wetland Delineation Manual: Midwest Version 2.0 (USACE 2010) were used to determine whether wetlands were present within the investigation area.

Wetland A

Wetland A, characterized by SP1, is a 0.025-ac depressional swale located south of SR 66 and west of N CR 500 W, downstream from Structure No. CV 066.074-51.61, which was originally constructed as a stormwater feature for the roadway. The sampling point describes a concave depression with 1 to 3 percent slopes where no OHWM was observed. The wetland is entirely contained with this roadside swale and receives hydrology in the form of diffuse stormwater runoff from adjacent upland agricultural fields and impervious surfaces. A typical upland sampling point, SP2, was taken southwest of the intersection between SR 66 and N CR 500 W at a point adjacent to Wetland A and at the confluence of RSD 1 and Wetland A. SP2 describes a top slope terrace with 1 to 3 percent slopes. This point was taken to help document the vegetation community of the maintained upland slopes directly above Wetland A. The boundary of Wetland A was determined following successional test bores between the wetland and adjacent upland where an abrupt change in topography, vegetation composition, the presence/absence of hydrological indicators, and an absence of hydric soils was observed.

Wetland A would be classified as an emergent (PEM1B) wetland according to the Cowardin et al. (1979) classification scheme. The wetland is part of a drainageway adjacent to SR 66 and N CR 500 W which discharges to another relatively permanent water (RPW), Willow Pond Ditch, approximately 3,000 ft south of the investigation area. Due to a direct connection to an RPW, it is likely that Wetland A is a WOTUS and under the jurisdictional authority of the USACE. The USACE makes all final determinations regarding jurisdiction. The wetland is characterized by the NWI mapper as a riverine feature (R5UBFx), however, during investigation, the entirety of the roadway swale was vegetated, and thus determined to be wetland. The wetland was designated as poor quality by the investigators due to its close proximity to adjacent agricultural land, lack of natural buffers, prevalence of invasive species, and continued anthropogenic management. Wetland A was delineated with a sub-meter GPS and found to be approximately 0.025 ac in size within the investigation area. The wetland continues to the south of the investigation area within the roadway swale.

Wetland B

Wetland B, characterized by SP3, is a 0.135-ac depressional swale located north of SR 66 and west N CR 500 W which was originally constructed as a stormwater feature for the roadway. The sampling point describes a concave depression with 1 to 3 percent slopes where no OHWM was observed. The wetland begins offsite to the west and flows into the investigation area. The wetland ends at the upstream inlet of Structure No. CV 066.074-51.61 where hydrology flows into Wetland A. The wetland is entirely contained with this roadside swale and receives hydrology in the form of diffuse stormwater runoff from adjacent upland agricultural fields and impervious surfaces. No evidence of flow was observed at the standing water within the scour pool (Photograph 1) adjacent to the culvert inlet as well as the roadside swale upslope or downslope from the feature. Additionally, the upslope and downslope swale is fully vegetated with hydrophytic vegetation. Banks within the wetland contained no evidence of a natural OHWM but instead there was evidence of artificial swale management and maintenance. We assume the standing water is likely due to scouring from the bridge culvert installation and high water instances. Photographs of Wetland B upslope from the open water, including Photographs 17, 19, 21, and 22, show Wetland B without a natural OHWM. Likewise, Photographs 5, 8, and 9 show the downslope swale (Wetland A) with no OHWM and completely vegetated. A typical upland sampling point, SP4, was taken in an area adjacent to the north of Wetland B between the wetland and agricultural field, within the ROW. The sampling point describes the shoulder slope with 1 to 3 percent slopes. This point was taken to help document the vegetation community of the maintained upland slopes directly above Wetland B. The boundary of Wetland B was determined following successional test bores between the wetland and adjacent upland where an abrupt change in topography, vegetation composition, the presence/absence of hydrological indicators, and an absence of hydric soils was observed.

Wetland B would be classified as an emergent (PEM1B) wetland according to the Cowardin et al. (1979) classification scheme. The wetland is part of a drainageway adjacent to SR 66 which discharges Wetland A. Wetland A has a surface water connection to another RPW, Willow Pond Ditch, approximately 3,000 ft south of the investigation area. Due to a direct connection to an RPW, it is likely that Wetland B is a WOTUS and under the jurisdictional authority of the USACE. The USACE makes all final determinations regarding jurisdiction. The wetland is characterized by the NWI mapper as a riverine feature (R5UBFx), however, during

investigation, the entirety of the roadway swale was vegetated, and thus determined to be wetland. The wetland was designated as poor quality by the investigators due to its close proximity to adjacent agricultural land, lack of natural buffers, prevalence of invasive species, and continued anthropogenic management. Wetland B was delineated with a sub-meter GPS and found to be approximately 0.135 ac in size within the investigation area. The wetland continues to the south of the investigation area within the roadway swale.

Wetland C

Wetland C, characterized by SP5, is a 0.018-ac depressional swale located south of SR 66 and east of N CR 500 W, downstream from Structure No. CV 066.074-51.62 and UNT to Willow Pond Ditch, which was originally constructed as a stormwater feature for the roadway. The sampling point describes a concave depression with 1 to 3 percent slopes. This point was taken to help establish the vegetation community of the portion of the roadway swale which is dominated hydrophytic vegetation and did not contain an OHWM. The wetland is entirely contained with this roadside swale and receives hydrology in the form of diffuse stormwater runoff from adjacent upland agricultural fields and impervious surfaces. A typical upland sampling point, SP6, was taken in an area directly adjacent to the east of Wetland C between the wetland and agricultural field, within the ROW. This point was taken to help document the vegetation community of the maintained upland directly above Wetland C. The boundary of Wetland C was determined following successional test bores between the wetland and adjacent upland where an abrupt change in topography, vegetation composition, the presence/absence of hydrological indicators, and an absence of hydric soils was observed.

Wetland C would be classified as an emergent (PEM1C) wetland according to the Cowardin et al. (1979) classification scheme. The wetland is part of a drainageway adjacent to SR 66 and N CR 500 W which discharges to another RPW, Willow Pond Ditch, approximately 3,000 ft south of the investigation area. Due to a direct connection to an RPW, it is likely that Wetland C is a WOTUS and under the jurisdictional authority of the USACE. The USACE makes all final determinations regarding jurisdiction. The wetland is characterized by the NWI mapper as a riverine feature (R5UBFx), however, during investigation, this portion of the roadway swale was vegetated, and thus determined to be wetland. The wetland was designated as poor quality by the investigators due to its close proximity to adjacent agricultural areas, lack of natural buffers, prevalence of invasive species, and continued anthropogenic management. Wetland C was

delineated with a sub-meter GPS and found to be approximately 0.018 ac in size within the investigation area. The wetland continues to the south of the investigation area within the roadway swale.

Table 4. Wetland and Data Point Summary Table.

Wetland ID and Lat/Long	Type	Acreage	Quality	Photo IDs	Associated Structure ID	Likely WOTUS?	Sample Point ID (SP)	Lat/Long	Dominant Vegetation	Meets Vegetation Criterion?	Hydric Soil Indicators (s)	Meets Soil Criterion?	Hydrology Indicators(s)	Meets Hydrology Criterion?	Within Wetland?	Notes
Wetland A 37.901713, -87.150780	PEM1B	**0.025** ~~0.135~~	Poor	4-10, 14, 51	CV 066-074-51.61	Yes	SP1	37.901884 -87.150771	*Typha angustifolia, Leersia oryzoides*	Yes	A11, F3, F6	Yes	Primary: A2, A3, C3 Secondary: C2, D2, D5	Yes	Yes	Wetland A is entirely contained within roadway swale and continues offsite.
							SP2	37.901980 -87.150809	*Xanthium strumarium, Setaria faberi*	No	None	No	Secondary: B10	No	No	Sample Point was taken adjacent to Wetland A at confluence of RSD 1 and Wetland A.
Wetland B 37.902173, -87.151697	PEM1B	**0.135** ~~0.025~~	Poor	1, 14-19, 21-23	CV 066-074-51.61	Yes	SP3	37.902148 -87.151032	*Typha angustifolia, Asclepias incarnata*	Yes	F3	Yes	Primary: B2, B3 Secondary: B6, B10, C2, D2, D5	Yes	Yes	Wetland B is entirely contained with the roadway swale and confluences with Wetland A at CV 066-074-51.61
							SP4	37.902176 -87.151228	*Sorghum halepense, Schedonorus arundinaceus*	No	None	No	None	No	No	Sample Point was taken in an area directly adjacent and upslope from Wetland B.
Wetland C 37.901705 -87.150636	PEM1C	0.018	Poor	3, 24-31	CV 066.074-51.62	Yes	SP5	37.901842 -87.150641	*Leersia oryzoides, Verbesina alternifolia*	Yes	F3	Yes	Primary: A3, B2 Secondary: B10, D2, D5	Yes	Yes	Wetland C is entirely contained with the roadway swale and continues offsite.
							SP6	37.901747 -87.150614	*Acer Saccharinum, Setaria faberi, Acalypha ostryifolia*	No	None	No	None	No	No	Sample Point was taken in an area directly adjacent and upslope from Wetland C
Upland Sample Point							SP7	37.901972 -87.149734	*Setaria faberi, Sorghum halepense, Panicum dichotomiflorum*	No	None	No	None	No	No	Sample Point was taken between SR 66 roadway and agricultural field, east of CR 500 W, within the ROW to document typical lack of wetland conditions and vegetation community.

OPEN WATER

No open water features were observed in the investigation area nor listed on background material.

WILDLIFE CROSSINGS

Observations of suitable terrestrial and aquatic habitat for wildlife crossings was found to be present within the investigation area. This includes habitat that is suitable for amphibians, reptiles, and mammals. Adjacent vegetation communities include agricultural field, mowed and maintained ROW, steep vegetated riparian banks, and streams. During the site visit, mammal tracks were observed along with direct sightings of amphibians and reptiles including frogs, turtles, and snakes (Photographs 14, 15, 23, 43, and 44). Fish were present in isolated pools within Wetland A and B. These sightings were observed within the wetlands and stream under and adjacent to both culvert structures.

CONCLUSIONS:

Three provisionally jurisdictional wetland features (Wetlands A–C) were determined to be present within the investigation area (Table 4). The field observation revealed one intermittent stream, UNT to Willow Pond Ditch, with a defined OHWM (Table 2). All water resources are likely federally jurisdictional WOTUS (Figure 2) due to their direct surface water connection to Willow Pond Ditch, an RPW. One roadside ditch, RSD 1, was observed within the investigation area. RSD 1 is likely a non-jurisdictional roadside ditch due to its lack of bed, bank, or wetland features.

Every effort should be taken to avoid and minimize impacts to the surface water features. If impacts are necessary, then mitigation may be required and will be determined during permitting. The INDOT Environmental Services Division should be contacted immediately if impacts will occur. The final determination of jurisdictional waters is ultimately made by the USACE. This report is our best judgment based on the guidelines set forth by the USACE.

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, and other appropriate agency guidelines.

2/16/2024
Kenneth Safranek
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ASC Group, Inc.

2/16/2024
Rosemary Snyder
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2/16/2024
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INDOT District: Fort Wayne

ASC GROUP, INC.
CULTURAL • ENVIRONMENTAL • HAZARDOUS
EVALUATION & CONSULTING

N

0 1 2 3 4 Kilometers

0 1 2 3 Miles

Figure 1

Portion of the ESRI World Street Map showing the vicinity of the SR 66 Small Structures Replacements (INDOT Des. Nos. 2100830 and 2100831) investigation area.

Base: ESRI World Street Map

Created by TMD, JVT; last saved: 12/27/2023 2:39:00 PM

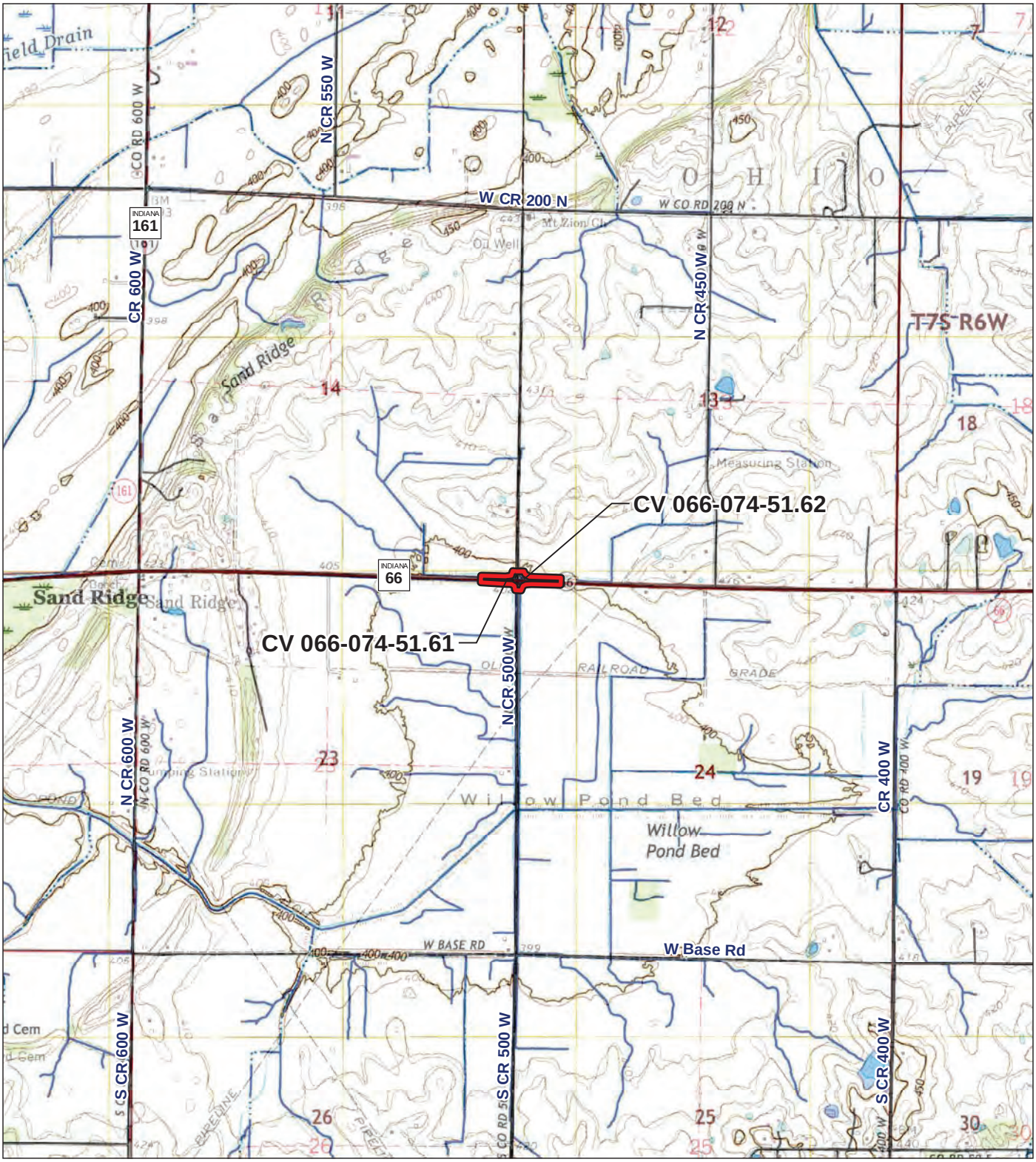
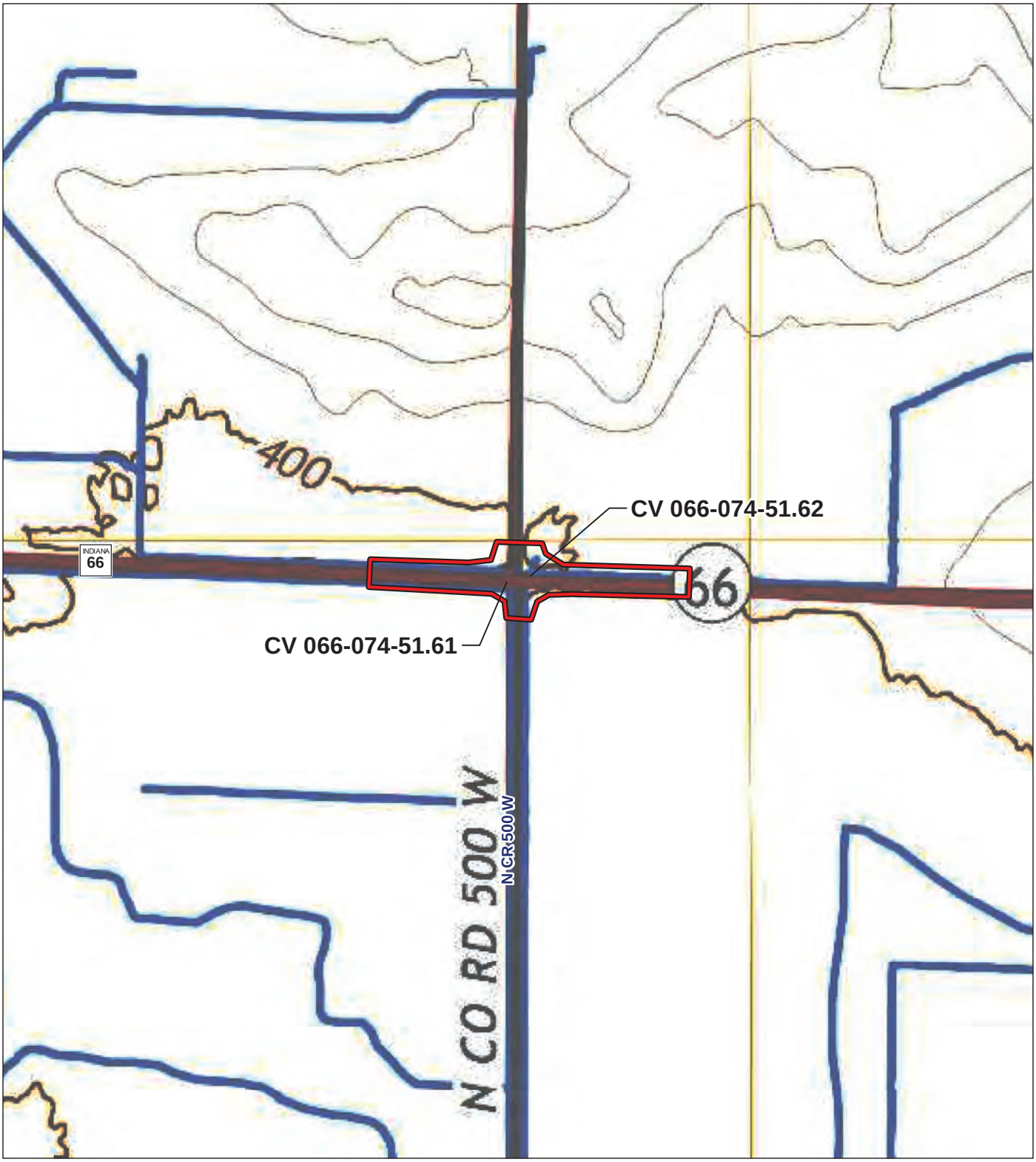


Figure 2

Portion of the 2022 Richland City, Indiana quadrangle (USGS 7.5' topographic map) showing the SR 66 Small Structures Replacements (INDOT Des. Nos. 2100830 and 2100831) investigation area.

Base: USGS Richland City, Indiana, 7.5' series quadrangle

Created by JVT; last saved: 12/27/2023 2:42:35 PM



Investigation area

0 100 200 300 Meters

0 200 400 600 800 1000 Feet

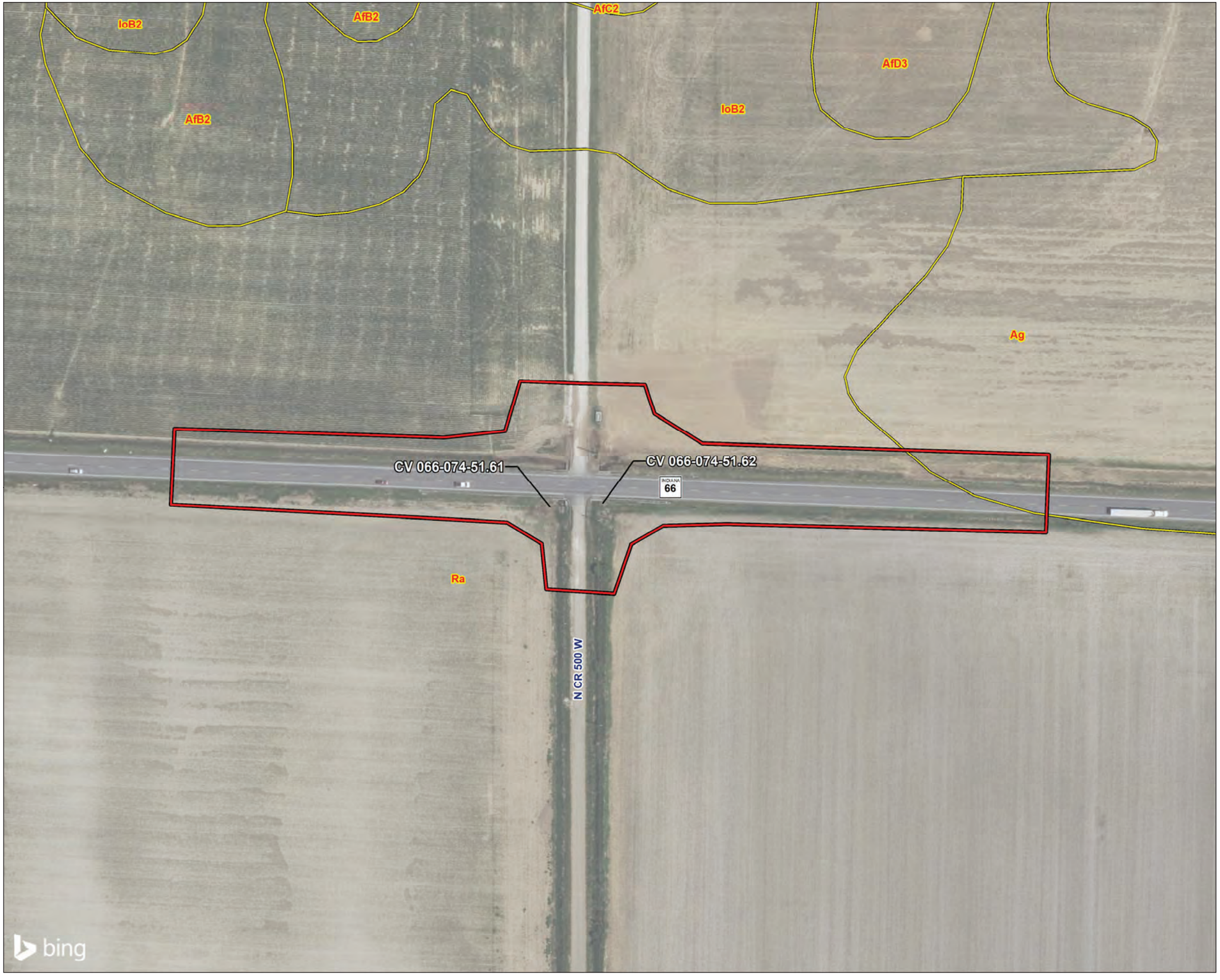
N

Figure 3

Zoomed in portion of the 2022 Richland City, Indiana quadrangle (USGS 7.5' topographic map) showing the SR 66 Small Structures Replacements (INDOT Des. Nos. 2100830 and 2100831) investigation area.

Base: USGS Richland City, Indiana, 7.5' series quadrangle

Created by JVT; last saved: 12/7/2023 8:22:27 AM



Investigation area

Soil boundary

Ag - Algiers silt loam, frequently flooded, very brief duration

Ra - Ragsdale silt loam

Base: USDA, NRCS 2023, Microsoft Corporation 2023

N

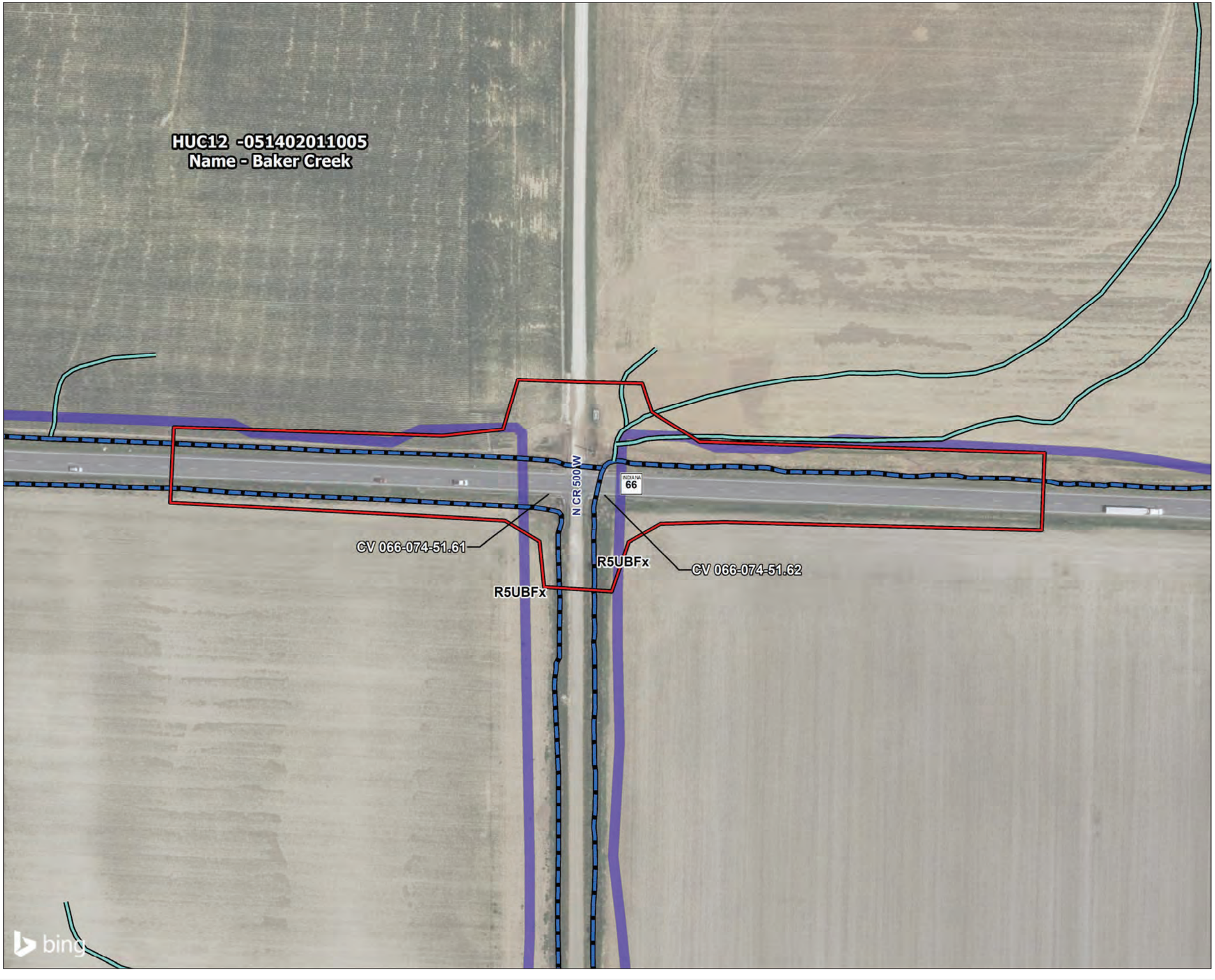
0 10 20 30 40 50 Meters

0 50 100 150 Feet

Figure 4

Portion of the Spencer County, Indiana soil map (USDA, NRCS 2022) showing the SR 66 Small Structures Replacements (INDOT Des. Nos. 2100830 and 2100831) investigation area.

Created by TMD, JVT; last saved: 12/7/2023 8:29:25 AM



Investigation area

NWI wetlands

Riverine

NHD flowlines

Canal/Ditch

Stream/River

HUC12 Subwatershed Hydrologic Unit Boundaries

Base: UFWS 2023, USGS, NHD 2022, Microsoft Corporation 2023

N

0 10 20 30 40 50 Meters

0 50 100 150 Feet

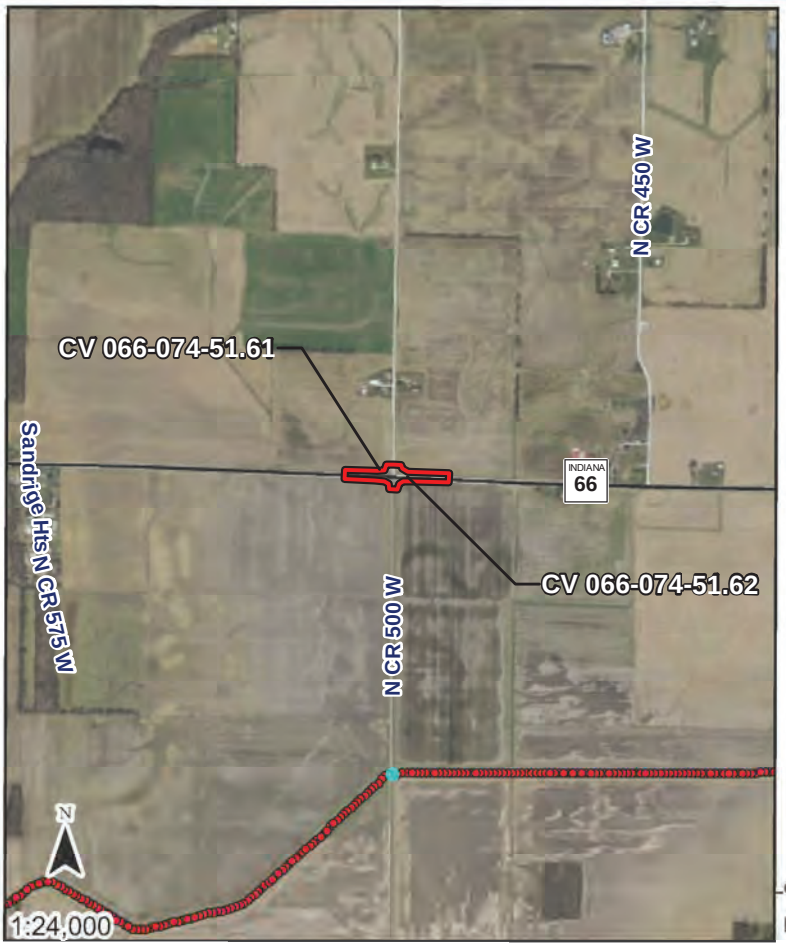
Created by TMD, JVT; last saved: 12/27/2023 3:06:26 PM

Figure 5

Portion of the National Wetland Inventory (NWI) map (USFWS 2023) and NHD flowlines (USGS, NHD 2023) showing the SR 66 Small Structures Replacements (INDOT Des. Nos. 2100830 and 2100831) investigation area.

DNR Indiana Department of Natural Resources

Floodplain Analysis & Regulatory Assessment (FARA)



Point of Interest

Base Flood Elevation Point

VERSION

1.5

FLD_ZONE, SOURCE_DNR, ZONE_SUBTY

Not Mapped

Long: -87.15075138244264

Lat: 37.90212797661016

The information provided below is based on the point of interest shown in the map above.

County: **Spencer**

Stream Name: **Willow Pond Ditch**

Approximate Ground Elevation: **398.2 feet (NAVD88)**

Base Flood Elevation: **Not Available**

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: **Kay Irwin, Floodplain Administrator**

Community Jurisdiction: **Spencer County, County proper**

Phone: **(812) 649-6010**

Email: **spencerplan@psci.net**

US Army Corps of Engineers District: **Louisville**

Date Generated: 11/3/2023

Investigation area

0 260 520 780 Meters

0 540 1080 1620 2160 2700 Feet

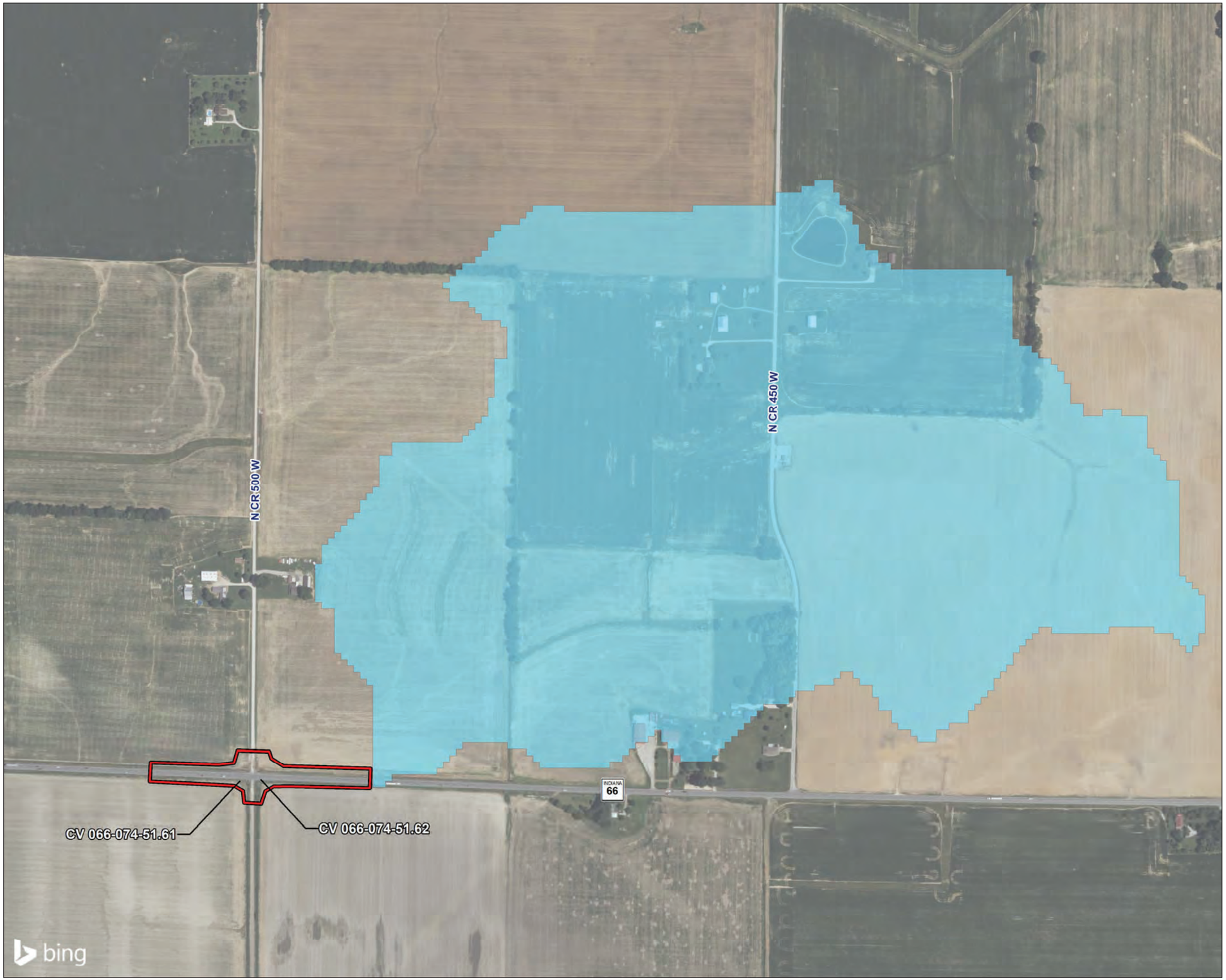
N

Figure 6

Portion of the IDNR Best Available Floodplain map for the SR 66 Small Structures Replacements (INDOT Des. Nos. 2100830 and 2100831) investigation area.

Base: https://www.in.gov/dnr (accessed 11-3-2023)

Created by JVT; last saved: 12/7/2023 8:31:08 AM



Investigation area

UNT to Willow Pond Ditch Watershed (0.33 square miles)

Base: https://streamstats.usgs.gov; Microsoft Corporation 2023

N

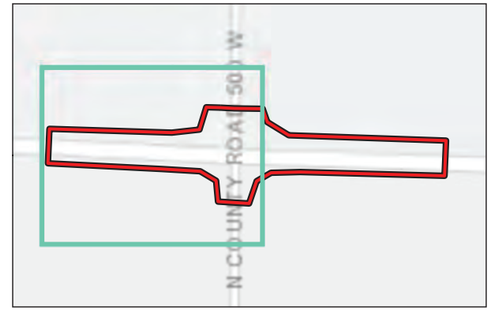
0 100 200 300 Meters

0 210 420 630 840 1050 Feet

Figure 7

Portion of the USGS StreamStats map (USGS 2023) for the SR 66 Small Structures Replacements (INDOT Des. Nos. 2100830 and 2100831) investigation area.

Created by TMD, JVT; last saved: 12/27/2023 4:52:58 PM



Investigation area
Sample point
Stream
Ditch
Wetland
Culvert
Photo location
Photo location (No direction)

Base: Microsoft Corporation 2023

N

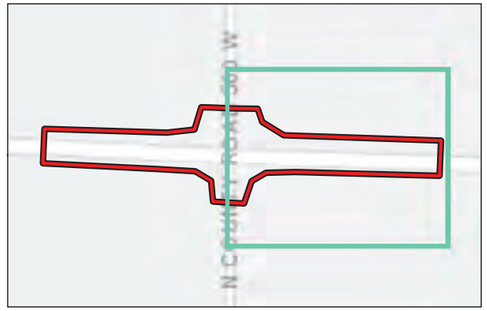
0 10 20 30 Meters

0 20 40 60 80 100 Feet

Figure 8 **Sheet 1 of 2**

Aerial photograph showing the stream, wetlands, RSD, sample points, and photograph locations for the SR 66 Small Structures Replacements (INDOT Des. Nos. 2100830 and 2100831) investigation area. (2 Sheets)

Created by TMD, JVT; last saved: 1/18/2024 8:40:38 AM



- Investigation area
- Sample point
- Stream
- Flow direction
- Wetland
- Ordinary High Water mark (OHWM)
- Culvert
- Photo location
- Photo location (No direction)

Base: Microsoft Corporation 2023

N

0 10 20 30 Meters

0 20 40 60 80 100 Feet

Figure 8 **Sheet 2 of 2**

Aerial photograph showing the stream, wetlands, RSD, sample points, and photograph locations for the SR 66 Small Structures Replacements (INDOT Des. Nos. 2100830 and 2100831) investigation area. (2 Sheets)

Created by TMD, JVT; last saved: 1/18/2024 8:40:38 AM