FHWA-Indiana Environmental Document

CATEGORICAL EXCLUSION / ENVIRONMENTAL ASSESSMENT FORM

GENERAL PROJECT INFORMATION

Road No./County:	**State Road (SR) 2 / Lake**
Designation Number(s):	**1702988**
Project Description/Termini:	**Intersection Improvement with Added Turn Lanes** **SR 2 From 0.25 mile west of SR 55 to 0.25 mile east of SR 55 for a total of 0.37 mile**

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

Approval

INDOT DE Signature and Date

INDOT ESD Signature and Date

FHWA Signature and Date

Release for Public Involvement

SFM 03/18/2022

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: Elayna Stoner, Metric Environmental, LLC

Part I – Public Involvement

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

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

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

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

Notice of Entry letters were mailed to potentially affected property owners near the project area on September 16, 2020, notifying them about the project and that individuals responsible for land surveying and field activities may be seen in the area. A sample copy of the Notice of Entry letter and a list of property owners is provided in Appendix G, page G-1.

The project meets the minimum requirements described in the current *Indiana Department of Transportation (INDOT) Project Development Public Involvement Manual* which requires the project sponsor to offer the public an opportunity to submit comment and/or request a public hearing. Therefore, a legal notice will appear in a local publication contingent upon the release of this document for public involvement. This document will be revised after the public involvement requirements are fulfilled.

Public Controversy on Environmental Grounds

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

Local Name of the Facility: SR 2

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

*If other is selected, please indentify 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.

The need for the project is due to high percentage of rear-end crashes on eastbound SR 2. INDOT collected crash data at the intersection between the periods of January 2018 through December 2019, and January 2021 through December 2021. During this analysis period, there were eighteen crashes recorded at the intersection; that is equivalent to approximately six crashes per year. Twelve of the eighteen crashes (67%) were rear-end type collisions. More than 55% of the total crashes occurred on the eastbound leg of SR 2, where a single lane is provided for both thru-traffic and left-turn movements. The Crash Data Analysis Report is provided in Appendix J, page J-3.

The purpose of this project is to address the frequency of rear-end crashes due to stopped vehicles making left-turn movements from eastbound SR 2 to northbound SR 55.

County Lake Route SR 2 Des. No. 1702988

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Lake Municipality: N/A

Limits of Proposed Work: The project limits will extend approximately 1,063 ft. west and 853 ft. east along SR 2, and 245 ft. north along SR 55 (including incidental construction) for a total of 0.37 mile.

Total Work Length: 0.37 Mile(s) Total Work Area: 3.46 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.

The Indiana Department of Transportation (INDOT) with oversight and partial funding from the Federal Highway Administration (FHWA) intend to proceed with a proposed intersection improvement project at SR 2 and SR 55 in Lake County, Indiana. Specifically, the project is located on SR 2, approximately 0.25 mile west of SR 55 to 0.25 mile east of SR 55, in Sections 20, 21, 28, and 29, Township 33 North, Range 8 West, in Cedar Creek Township, as illustrated on the *Leroy*, Indiana 7.5-minute United States Geological Survey (USGS) topographic quadrangle (Appendix B, page B-2).

SR 2 is an east/west roadway classified as a Principal Arterial with a posted speed limit of 55 miles per hour. The cross-section consists of one 12 ft. travel lane in each direction, bordered by 5 ft. shoulders (2 ft. paved). There is a dedicated right-hand turn lane from westbound SR 2 to northbound SR 55; however, there is no dedicated left-turn lane provided for eastbound SR 2 to northbound SR 55. There are no curbs or sidewalks along SR 2. SR 2 is a primary route from the Town of Lowell to I-65, and to SR 55 which provides access to the City of Crown Point to the north.

SR 55 is a north/south roadway classified as a Principal Arterial with a posted speed limit of 55 miles per hour. The cross-section consists of one 12 ft. travel lane in each direction, bordered by 5 ft. shoulders (2 ft. paved). There is a dedicated right-hand turn lane for southbound SR 55 at the SR 2 intersection. There are no curbs or sidewalks along SR 55. The intersection of SR 2 and SR 55 is a semi-actuated, uncoordinated signal-controlled intersection. Land use in the project area consists of a combination of agricultural land and commercial businesses located north, along SR 55. The need for the project is due to high percentage of rear-end crashes on eastbound SR 2 due to a lack of a dedicated left-turn lane to northbound SR 55. The eastbound leg of SR 2 provides a single lane for both thru-traffic and left-turn movements.

Preferred Alternative:

The preferred alternative will reconstruct the intersection to provide an 11 ft. dedicated left-turn lane onto northbound SR 55 from eastbound SR 2 along with a 12 ft. through travel lane. The preferred alternative will provide a 340 ft. left-turn lane with 100 ft. taper. The 340 ft. lane provides 100 ft. of storage length, enough for the turning volume, and 240 ft. of deceleration distance. The traffic signal will continue to operate as a semi-actuated signal with a permissive eastbound left-turn. Westbound SR 2 will be reconstructed to provide a 11 ft. dedicated right-turn lane to northbound SR 55 and a 12 ft. westbound through travel lane. The reconstructed travel lanes on SR 2 and SR 55 will be bound by 5 ft. paved shoulders. The intersection will continue to be controlled with traffic signals and new pavement markings and signage will be installed. Roadside drainage will be conveyed within two, new 4 ft. flat-bottomed ditches on the north side of SR 2. One new ditch will be constructed on the west side of SR 55 and one ditch will be constructed on the east side of SR 55. Six (6) new inlet drainage pipes will be installed for stormwater conveyance within the reconstructed ditches. Guardrail within the project limits will be replaced. The existing guardrail on the south side of SR 2 will remain in place.

The project limits will extend approximately 853 ft. east and 1,063 ft. west of SR 55 along SR 2, and 245 ft. north of SR 2 along SR 55 (including incidental construction) for a total of 0.37 mile. Project plan sheets are provided in Appendix B, pages B-8 to B-23. The project termini are logical because they encompass only the area necessary to install the new left hand turn lane on eastbound SR 2 and tie in the improvements into the existing roadways for a smooth transition. The project has independent utility as it does not depend on the construction of a secondary project.

The maintenance of traffic (MOT) plan will maintain 11 ft. lanes with minimum 1 ft. shoulder in each direction along SR 2. While the north approach of SR 55 at the SR 2 intersection is closed during construction, traffic will be detoured to northbound I-65 to US 231 to reconnect to SR 55. Additional details of the MOT plan are provided in the MOT Section of this document.

The preferred alternative will meet the purpose and need of the project by reducing the occurrence of rear-end crashes with the addition of an eastbound dedicated left-turn lane.

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.

No Build Alternative

The No Build alternative would not require any action at the project intersection. The existing intersection would continue to function with no improvements. This option would not require the acquisition of permanent right-of-way, nor would it result in any environmental impacts. This alternative does not meet the purpose and need of the project and was discarded from further consideration.

Widening of SR 2

This alternative would provide a similar cross-section on SR 2 as the preferred alternative but would require the widening of SR 2 on both the north and south sides to provide a longer deceleration distance for eastbound left-turn movements. This alternative would require significant drainage improvements along the south side of SR 2 and would increase the amount of additional permanent right-of-way required. Although this alternative would meet the purpose and need of the project, it would increase the overall project length to approximately 0.5 mile and result in a substantial increase in environmental and community impacts compared to the preferred alternative. For these reasons, this alternative was discarded 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;	**X**
It would not correct the existing roadway geometric deficiencies;	**X**
It would not correct existing deteriorated conditions and maintenance problems; or	
It would result in serious impacts to the motoring public and general welfare of the economy.	
Other (Describe):	

County Lake Route SR 2 Des. No. 1702988

ROADWAY CHARACTER:

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

Name of Roadway **SR 2**
Functional Classification: Principal Arterial
Current ADT: 9,185 VPD (2024) Design Year ADT: 11,208 VPD (2044)
Design Hour Volume (DHV): 988 Truck Percentage (%) 19
Designed Speed (mph): 55 Legal Speed (mph): 55

	Existing		Proposed	
Number of Lanes:	2		2	
Type of Lanes:	12 ft. eastbound travel lane 12 ft. westbound travel lane and 11 ft. right-turn lane		11 ft. left-turn lane and 12 ft. travel lane eastbound 12 ft. right-turn lane and 12 ft. travel lane westbound	
Pavement Width:	28-40	ft.	28-51	ft.
Shoulder Width:	5	ft.	5	ft.
Median Width:	N/A	ft.	11	ft.
Sidewalk Width:	N/A	ft.	N/A	ft.

Name of Roadway **SR 55**
Functional Classification: Principal Arterial
Current ADT: 4,941 VPD (2024) Design Year ADT: 6,029 VPD (2044)
Design Hour Volume (DHV): 545 Truck Percentage (%) 16
Designed Speed (mph): 55 Legal Speed (mph): 55

	Existing		Proposed	
Number of Lanes:	2		2	
Type of Lanes:	12 ft. southbound travel lane with 12 ft. right-turn lane 12 ft. northbound travel lane		12 ft. southbound travel lane with 12 ft. right-turn lane 12 ft. northbound travel lane	
Pavement Width:	34	ft.	37	ft.
Shoulder Width:	5	ft.	5	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

County Lake Route SR 2 Des. No. 1702988

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): N/A Sufficiency Rating: _____
(Rating, Source of Information)

	Existing		Proposed	
Bridge/Structure Type:	N/A		N/A	
Number of Spans:				
Weight Restrictions:		ton		ton
Height Restrictions:		ft.		ft.
Curb to Curb Width:		ft.		ft.
Outside to Outside Width:		ft.		ft.
Shoulder Width:		ft.		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 no existing bridges or small structures/culverts located within the project area; however, six (6) new inlet drainage pipes will be installed for stormwater conveyance as part of the intersection improvements. Inlet Structure No. 10 will be installed on the north side of SR 2 west of SR 55 and will consist of an 18-inch metal pipe that will be 70 ft. in length. Inlet Structure No. 11 will be installed on the north side of SR 2 east of Inlet Structure No. 10 and will consist of an 18-inch metal pipe that will be 50 ft. in length. Inlet Structure No. 12 will be installed on the north side of SR 2, just west of SR 55 and will continue eastbound to carry stormwater to the newly constructed ditch. Inlet Structure No. 12 will consist of a 30-inch metal pipe that will be approximately 300 ft. in length.

Inlet Structure No. 13 will be installed on the north side of SR 2, east of Inlet Structure No. 12. Inlet Structure No. 13 will consist of a 30-inch diameter pipe that will be 125 ft. in length. Inlet Structure No. 14 will be installed on the north side of SR 2, east of Inlet Structure No. 13 and will consist of a 30-inch pipe that will be 25 ft. in length. Inlet Structure No. 15 will be installed on the north side of SR 2, east of Inlet Structure No. 14, beneath the public entrance road to 180th Street. This pipe will be a 30-inch pipe, approximately 80 ft. in length. The installation of the drainage pipes will not result in any impacts to streams.

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

Discuss closures 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. Any local concerns about access and traffic flow should be detailed as well.

The MOT plan along SR 2 will maintain through access with 11 ft. lanes and minimum 1 ft. shoulder in each direction. The MOT for SR 55 will require an intersection closure and detour. While the north approach of SR 55 at the SR 2 intersection is closed during construction, traffic will be detoured to northbound I-65 to US 231 to reconnect to SR 55 north of the project area. The proposed detour duration is approximately 45 days. The detour length is approximately 12.44 miles and results in approximately 2.75 additional travel miles. The MOT sheet is provided in Appendix B, page B-14.

The closure of the north leg of SR 55 will pose a temporary inconvenience to traveling motorists (including school buses and emergency services); however, no significant delays are anticipated, and all inconveniences will cease upon project completion. Access to all residential and commercial parcels will be maintained for the duration of construction.

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: $ 285,440.00 (2022) Right-of-Way: $100,000.00 (2022) Construction: $1,050,000.00 (2024)

Anticipated Start Date of Construction: Spring 2024

RIGHT OF WAY:

	Amount (acres)	
Land Use Impacts	**Permanent**	**Temporary**
Residential	0.00	0.00
Commercial	1.01	0.00
Agricultural	0.79	0.00
Forest	0.00	0.00
Wetlands	0.00	0.00
Other:	0.00	0.00
TOTAL	**1.80**	**0.00**

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

Approximately 1.80 acres of permanent right-of-way will be required to complete the project. The proposed permanent right-of-way consists of 0.79 acre of agricultural land and 1.01 acres of commercial land. In addition to the permanent right-of-way, approximately 0.64 acre of land will be re-acquired along SR 2 and SR 55 where no existing right-of-way limits are recorded. This re-acquired area consists of land beneath the existing pavement of SR 2 and SR 55.

The existing right-of-way limits along SR 2 varies from 12 ft. to approximately 87 ft. Along SR 55, the existing right-of-way limits vary from approximately 20 ft. to 90 ft. The proposed permanent right-of-way limits along SR 2 will extend approximately 30 ft. to a maximum of 50 ft. and along SR 55, the proposed right-of-way limits will extend from 30 ft. to 45ft. No temporary right-of-way will be required for the project. Plan sheets are provided in Appendix B, pages B-8 to B-23.

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

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

SECTION A - EARLY COORDINATION:

List the date(s) coordination was sent and all resource agencies that were contacted as a part of the development of this Environmental Study. Also, include the date of their response or indicate that no response was received.

Early coordination letters were sent on January 29 and October 14, 2021. A copy of the early coordination letter is provided in Appendix C, pages C-1 to C-2. All applicable recommendations are included in the *Environmental Commitments* section of this CE document.

Agency	Date Sent	Response Received	Appendix C
Indiana Department of Natural Resources-Division of Fish and Wildlife (IDNR-DFW)	January 29, 2021	February 26, 2021	Page C-4
U.S. Fish and Wildlife Service (USFWS)	January 29, 2021	No Response	
U.S. Army Corps of Engineers (USACE)	January 29, 2021	No Response	
Indiana Department of Environmental Management (IDEM) Proposed Roadway Construction Projects Letter	January 29, 2021	Auto Response	Pages C-20 to C-24
Indiana Geological and Water Survey	January 29, 2021	Auto Response	Pages C-25 to C-26
US Department of Housing and Urban Development	January 29, 2021	No Response	
National Parks Service, Midwest Regional Office	January 29, 2021	No Response	
INDOT, Office of Aviation	January 29, 2021	January 29, 2021	Page C-27
INDOT, LaPorte District PM	January 29, 2021	No Response	
Natural Resources Conservation Service	October 14, 2021	November 17, 2021	Page C-28
Lake County Emergency Management	January 29, 2021	No Response	
Lake County Surveyor	January 29, 2021	No Response	
Lake County Highway Department	January 29, 2021	No Response	
Lake County Commissioners	January 29, 2021	No Response	
Town of Lowell	January 29, 2021	No Response	
Northwestern Indiana Regional Planning Commission	January 29, 2021	No Response	

SECTION B – ECOLOGICAL RESOURCES:

	Presence	Impacts	
		Yes	No
Streams, Rivers, Watercourses & Other Jurisdictional Features			
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: **N/A** Linear feet Total impacted stream(s): **N/A** 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)
N/A	**N/A**	**N/A**	**N/A**	**N/A**

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 subject to federal or state jurisdiction. Discuss measures to avoid, minimize, and mitigate if impacts will occur.

Based on a desktop review, the aerial photograph of the project area (Appendix B, page B-3), and the Red Flag Investigation (RFI) report (Appendix E, page E-2), there are five (5) streams mapped within the 0.5 search radius. Metric Environmental conducted a site visit on October 6, 2020 and confirmed that no streams are present within or adjacent to the project area. Therefore, no impacts are expected.

County Lake Route SR 2 Des. No. 1702988

A *Waters of the U.S. Determination/Wetland Delineation Report* was completed for the project on August 19, 2021. Please refer to Appendix F for the *Waters of the U.S. Determination/Wetland Delineation Report*. It was determined that no streams or roadside ditches are located within the project area. The U.S. Army Corps of Engineers (USACE) makes all final determinations regarding jurisdiction.

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 subject to federal or state jurisdiction. Discuss measures to avoid, minimize, and mitigate if impacts will occur.

Based on a desktop review, the aerial photograph of the project area (Appendix B, page B-3), and the RFI report (Appendix E, page E-2), there is one (1) open water feature mapped within the 0.5 mile search radius. The site visit conducted on October 6, 2020, by Metric Environmental determined that no open water features are located within or adjacent to the project area. No impacts are expected.

A *Waters of the U.S. Determination/Wetland Delineation Report* was completed for the project on August 19, 2021. Please refer to Appendix F for the *Waters of the U.S. Determination/Wetland Delineation Report*. It was determined that no open water features are located within or adjacent to the project area.

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

Total wetland area: 0.098 Acre(s) Total wetland area impacted: 0.079 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	PEM1A	0.079	0.079	Likely Water of the State (Appendix F, pages F-6 to F-7)
Wetland B	PEM1A	0.019	0.00	Likely Water of the State (Appendix F, pages F-7 to F-8)

Wetlands (*Mark all that apply*)	**Documentation**	**ESD Approval Dates**
Wetland Determination	**X**	**August 27, 2021**
Wetland Delineation		
USACE Isolated Waters Determination		

Improvements that will not result in any wetland impacts are not practicable because such avoidance would result in (Mark all that apply and explain):

Substantial adverse impacts to adjacent homes, business or other improved properties;	
Substantially increased project costs;	
Unique engineering, traffic, maintenance, or safety problems;	**X**
Substantial adverse social, economic, or environmental impacts, or	
The project not meeting the identified needs.	

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 subject to federal or state jurisdiction. Discuss measures to avoid, minimize, and mitigate if impacts will occur.

Based on a review of the National Wetlands Inventory (NWI) online mapper (https://www.fws.gov/wetlands/data/Mapper.html), the USGS topographic map (Appendix B page B-2), and the RFI report (Appendix E page E-2) there are fifteen (15) wetlands mapped within the 0.5 mile search radius. Metric Environmental conducted a site visit on October 6, 2020, and determined that two (2) wetlands are located within or adjacent to the project area.

A *Waters of the U.S. Determination/Wetland Delineation Report* was completed for the project on August 19, 2021. Please refer to Appendix F for the *Waters of the U.S. Determination/Wetland Delineation Report*. Two (2) wetlands are located within or adjacent to the project area. The USACE makes all final determinations regarding jurisdiction.

Wetland A

Wetland A was classified as a Palustrine, Emergent, Persistent, Temporarily Flooded (PEM1A) wetland. This wetland is located within a ditch, north of SR 2 and east of SR 55. Due to its location within a ditch, Wetland A likely receives drainage on a consistent basis during rain events and it can be deduced that water drains east into Griesel Ditch, which flows into Singleton Ditch, which flows into Kankakee River, a Section 10 Traditional Navigable Water (TNW). However, since Wetland A neither directly abuts nor is located within the floodplain of a perennial or intermittent stream, it should be considered a Water of the State. However, INDOT will likely request that the USACE take jurisdiction. The wetland exhibited poor plant species diversity and contained two dominant invasive species consisting of common reed (*Phragmites australis*) and narrowleaf cattail (*Typha angustifolia*). It was determined that Wetland A can support a limited amount of wildlife or aquatic habitat and is considered poor quality.

Wetland B

Wetland B was classified as a PEM1A wetland. This wetland is located at the toe of a slope in the eastern portion of the project area, north of SR 2. Due to its location within the toe of a slope, Wetland B likely receives drainage on a consistent basis during rain events. Based on topography, it can be deduced that water drains east into Giresel Ditch, which flows into Singleton Ditch, which flows into Kankakee River, a Section 10 TNW. However, since Wetland B neither directly abuts nor is located within the floodplain of a perennial or intermittent stream, it should be considered a Water of the State. However, INDOT will likely request that the USACE take jurisdiction. The wetland exhibited poor plant species diversity and contained a dominant invasive species consisting of narrowleaf cattail (*Typha angustifolia*). It was determined that Wetland B can support a limited amount of wildlife or aquatic habitat and is considered poor quality.

There will be approximately 0.079 acre of permanent impacts to Wetland A for grading and drainage improvements along the north side of SR 2, east of SR 55. There will be no temporary impacts to Wetland A. There will be no permanent or temporary impacts to Wetland B. All efforts to avoid and minimize wetland impacts were considered during the design process. Construction fencing will be installed along the construction limits within the area of Wetland B to prohibit any encroachment upon the wetland beyond the designated construction limits. This is included as a firm commitment in the *Environmental Commitments* section of this document. The permanent impacts to Wetland A will require an IDEM Section 401 Water Quality Certification permit and an USACE Section 404 permit. Wetland mitigation will not likely be required.

	Presence	**Impacts**	
		Yes	**No**
Terrestrial Habitat	**X**	**X**	

Total terrestrial habitat in project area: 1.35 Acre(s) Total tree clearing: 0.0 Acre(s)

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

Based on a desktop review, a site visit on October 6, 2020 by Metric Environmental, a review of the aerial photograph (Appendix B, page B-3), the predominant land use in the project area consists of a combination of agricultural land and commercial businesses located north, along SR 55. The dominant vegetation along the project corridor consists of Kentucky bluegrass (*Poa pratensis*) and red fescue (*Festuca rubra*).

Approximately 1.35 acre of terrestrial habitat will be impacted to build the proposed intersection improvements. All efforts to minimize terrestrial impacts were considered during the design phase of the project. The construction limits have been reduced to the extent that is practical to build the project while limiting terrestrial disturbance. There will be no tree removal.

All disturbed areas will be stabilized, graded and re-seeded per INDOT standard specifications. No terrestrial habitat restoration or mitigation will be necessary.

The IDNR-DFW responded on February 26, 2021 with recommendations to minimize terrestrial impacts including revegetating all bare and disturbed areas with a mixture of grasses (excluding all varieties of tall fescue) and legumes as soon as possible upon project completion. The IDNR-DFW also recommended that appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from leavening the construction area and maintaining these measures until construction is complete and all disturbed areas are stabilized (Appendix C, page C-4). All applicable recommendations are included in the *Environmental Commitments* section of this CE document.

Protected Species

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

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

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

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

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

Based on a desktop review and the RFI report (Appendix E) completed by Metric Environmental on October 14, 2021, the IDNR Lake County Endangered, Threatened and Rare (ETR) Species List has been checked. According to the IDNR-DFW early coordination response letter dated February 26, 2021, (Appendix C, page C-4) the Natural Heritage Program's Database has been checked and no plant or animal species listed as state or federally endangered, threatened and/or rare have been reported to occur in the project vicinity.

Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal, and an official species list was generated (Appendix C, pages C-14 to C-19). The project is within range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*). No additional species were found within or adjacent to the project area, other than the Indiana bat and northern long-eared bat. On May 24, 2021, the INDOT LaPorte District Office reviewed the USFWS database and no reports of the Indiana bat or the northern long-eared bat have been documented within 0.5 mile of the project site.

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. An effect determination key was completed on June 16, 2021, and based on the responses provided, the project was found to "May Affect/Not Likely to Adversely Affect" the Indiana bat and the NLEB (Appendix C, pages C-5 to C-13). INDOT reviewed and verified the effect finding on June 16, 2021 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.

The project will 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 Mitigation Measures (AMMs) including: Directing temporary lighting away from suitable habitat during the active season. When installing new or replacing existing permanent lights, downward-facing, full cut-off lens lights (with same intensity or less for replacement lighting); will be used or for those transportation agencies using the BUG system developed by the Illuminating Engineering Society, be as close to 0 for all three ratings with a priority of "uplight" of 0 and "backlight" as low as practicable. The AMMs are included as firm commitments in the *Environmental Commitments* section of this document.

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

Geological and Mineral Resources	**Yes**	**No**
Project located within the Potential Karst Features Area of Indiana		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 Study/Report reviewed by INDOT EWPO (if applicable): _____

Discuss if project is located in Potential Karst Features Area of Indiana 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. Describe if any impacts will occur to any karst features. Include discussion of karst study/report was completed and results. (Karst investigation must comply with the current Karst MOU and coordinated and reviewed by INDOT EWPO)

Based on a desktop review, the project is located outside the designated karst region of Indiana as outlined in the most current INDOT *Protection of Karst Features during Project Development and Construction*. According to a review of the topo map of the project area (Appendix B, page B-2), and the RFI report (Appendix E, page E-2) there no karst features identified within or adjacent to the project area.

In the early coordination response dated January 29, 2021, the Indiana Geological and Water Survey (IGWS) did not indicate that karst features exist in the project area (Appendix C, pages C-25 to C-26). The IGWS did identify geological hazards including a moderate liquefaction potential, the presence of a floodway, and a high potential for bedrock resources and sand and gravel resources. No documented active or abandoned mineral resource extraction sites are documented within the search radius. The aforementioned geological features will not be affected because scope of work will not involve deep excavation (i.e., greater than 2 feet below ground surface). Response from IGWS has been communicated with the designer on January 29, 2021. No impacts are expected.

SECTION C – OTHER RESOURCES

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

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

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

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

The Indiana Department of Environmental Management's Wellhead Proximity Determinator website (http://www.in.gov/idem/cleanwater/pages/wellhead/) was accessed on April 3, 2021, by Metric Environmental. This project is not located within a Wellhead Protection or Source Water Protection Area. No impacts are expected.

The Indiana Department of Natural Resources Water Well Record Database website (https://www.in.gov/dnr/water/3595.htm) was accessed on August 3, 2021, by Metric Environmental. The nearest water well is located approximately 0.12 mile west of the project site.

The well will not be affected because of its distance from the project site and excavation deeper than approximately 2-4 ft. will not occur. Therefore, no impacts are expected. Should it be determined during the right-of-way phase that these wells are affected, a cost to cure will likely be included in the appraisal to restore the wells.

Based on a desktop review of the INDOT MS4 website (https://entapps.indot.in.gov/MS4/) by Metric Environmental on August 3, 2021, and the RFI report (Appendix E) this project is not located within an Urban Area Boundary. No impacts are expected.

Based on a desktop review, a site visit on October 6, 2020 by Metric Environmental, a review of the aerial photograph (Appendix B, page B-3) the project is not located where there is a public water system. Therefore, no impacts are expected.

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

If applicable, indicate the Floodplain Level?

Level 1 [ ] Level 2 [ ] Level 3 [ ] Level 4 [ ] Level 5 [ ]

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

The Indiana Department of Natural Resources Indiana Floodway Information Portal website (http://dnrmaps.dnr.in.gov/appsphp/fdms/) was accessed on August 3, 2021, by Metric Environmental. This project is not located in a regulatory floodplain as determined from approved IDNR floodplain maps (Appendix B, page B-4). Therefore, it does not fall within the guidelines for the implementation of 23 CFR 650, 23 CFR 771, and 44 CFR. No impacts are expected.

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

Total Points (from Section VII of CPA-106/AD-1006*) **123**

**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 October 6, 2020, by Metric Environmental, and the aerial photograph of the project area (Appendix B, page B-3) the project will convert 0.001 acre of farmland as defined by the Farmland Protection Policy Act. This estimate differs from the amount of acquired right-of-way categorized as farmland, due to the definition of prime farmland by the Farmland Protection Policy Act. Prime farmland is defined by soil type and not the current land use. An early coordination letter was sent on October 14, 2021, to the Natural Resources Conservation Service (NRCS). Coordination with NRCS resulted in a score of 123 on the AD 1006 Form (Appendix C, page C-29). 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.

County Lake Route SR 2 Des. No. 1702988

SECTION D – CULTURAL RESOURCES

	Category(ies) and Type(s)	INDOT Approval Date(s)	N/A
Minor Projects PA	Category A, Type A-5 and A-6 Category B, Type B-3	November 8, 2021	

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	**X**	November 9, 2021	
Archaeological Phase Ia Survey Report	**X**	November 9, 2021	
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 November 8, 2021, the INDOT Cultural Resource Office (CRO) determined that this project falls within the guidelines of Category A, Type A-5 and A-6, and Category B, Type B-3 under the Minor Projects Programmatic Agreement (Appendix D, pages D-1 to D-4). Category A-5 covers the repair, in-kind replacement or upgrade of existing lighting, signals, signage, and other traffic control devices in previously disturbed soils; Category A-6 covers the repair, replacement, or upgrade of existing safety appurtenances such as guardrails, barriers, glare screens, and crash attenuators in previously disturbed soils.

Category B-3 covers the construction of added travel, turning, or auxiliary lanes (e.g., bicycle, truck climbing, acceleration and deceleration lanes) and shoulder widening when the work occurs in undisturbed soils and an archaeological investigation conducted by the applicant and reviewed by INDOT CRO determines that no National Register-listed or potentially National Register-eligible archaeological or above ground resources are present within the project area. 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 Metric Environmental (Snell 2021). No archaeological sites were previously recorded within or adjacent to the project area. Excerpts from the Phase Ia field reconnaissance report is provided in Appendix D, pages D-5 to D-9. 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 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 photograph of the project area (Appendix B, page B-3), and the RFI report (Appendix E, page E-2) there are no Section 4(f) resources located within the 0.5 mile search radius. According to additional research and the site visit conducted on October 6, 2020, by Metric Environmental there are no Section 4(f) resources within or adjacent to the project area. Therefore, no impacts are 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 Section 6(f) properties provided by INDOT at (https://www.in.gov/indot/files/IN_LWCF_sites_by_county.xlsx) revealed forty-nine (49) properties in Lake County that have received LWCF funding (Appendix J, pages J-1 to J-2). These properties are not located within or adjacent to the project area. No impacts are expected.

County Lake Route SR 2 Des. No. 1702988

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?	X	
Is the project exempt from conformity?	X	
If No, then:		
Is the project in the Transportation Plan (TP)?		
Is a hot spot analysis required (CO/PM)?		

Location in STIP: Page 399 of the 2020-2024 STIP Project List

Name of MPO (if applicable): Northwestern Indiana Regional Planning Commission

Location in TIP (if applicable):

Level of MSAT Analysis required?

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

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

The project is included in the Fiscal Year (FY) 2020-2024 Statewide Transportation Improvement Plan (STIP) (Appendix H, page H-1). The project is located within the FY 2020-2024 Northwestern Indiana Regional Planning Commission (NIRPC) Long Range Transportation Improvement Plan (TIP). The project was amended into the TIP on October 6, 2020. (Appendix H, page H-2).

This project is located in Lake County, which is designated as a maintenance area for 1997 8-hour Ozone according to the United States Environmental Protection Agency (EPA) website https://www.epa.gov/green-book/green-book-8-hour-ozone-1997-area-information-naaqs-revoked. 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.

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

SECTION G - NOISE

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

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

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

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

SECTION H – COMMUNITY IMPACTS

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

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

The U.S. Department of Housing and Urban Development (HUD) was consulted as part of the early coordination process regarding possible regional, community or neighborhood factors associated with this project. No response was received. On May 21, 2021, Metric conducted an on-line review of the Indiana Festivals website (http://www.indianafestivals.org). There are no events identified within or near the project area that would be potentially impacted during construction of the project.

This project will not change the general development patterns, population density, or residential or commercial growth rate of the project area. Furthermore, there will be no permanent impacts to community cohesion, local mobility, access, pedestrian or motorist safety or emergency services as a result of the project. The project will not have any adverse impacts on the local tax base or property values.

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, a review of the aerial photograph of the project area (Appendix B, page B-3), and the RFI report (Appendix E, page E-2), there are no public facilities located within the 0.5 mile search radius. The site visit conducted on October 6, 2021, by Metric Environmental confirmed that there are no public facilities located within or adjacent to the project area, therefore, no impacts are expected. Access to all properties will be maintained during construction.

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

Environmental Justice (EJ) (Presidential EO 12898)	**Yes**	**No**
During the development of the project were EJ issues identified?		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 and 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 right-of-way. The project will require approximately 1.80 acres of permanent right-of-way, but there will be no relocations. 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 Cedar Creek Township. The community that overlaps the project area is called the affected community (AC). In this project, the AC is Census Tract 434.05. An AC has a population of concern for EJ if the population is more than 50% minority or low-income or if the low-income or minority population is 125% of the COC.

Data from the 2019 American Community Survey (ACS) 5 year estimates was obtained from the US Census Bureau on September 10, 2021, by Metric Environmental. The data collected for minority and low-income populations within the AC and COC are summarized in the below table.

US Census 2019 American Community Survey 5 year Estimates	Cedar Creek Township Lake County, Indiana COC	Census Tract 434.05 Lake County, Indiana AC
LOW-INCOME		
Population for whom poverty status is determined: Total	12,003	5,303
Population for whom poverty status is determined: Income in 2019 below poverty level	527	129
Percent Low-Income (Income in 2019 below poverty level) (Total population)	4.39%	2.43%
125 Percent of COC (125 x COC Percent Low-Income)	5.49%	**AC < 125% COC**
Low-Income EJ Impact		**No**
MINORITY		
Total Population: Total	12,191	5,365
Not Hispanic or Latino	11,272	5,034
White alone	11,119	5,034
Black or African American alone	21	0
American Indian and Alaska Native alone	0	0
Asian alone	0	0
Native Hawaiin and Other Pacific Islander alone	0	0
Some other race alone	84	0
Two or more races	48	0
Hispanic or Latino	919	331
Number Non-white/minority	1,072	331
Percent Non-white/Minority (Total population - white alone) Total population	8.79%	6.17%
125 Percent of COC (125 x COC Percent Non-white/Minority)	10.99%	**AC < 125% COC**
Minority EJ Impact		**No**

The AC, Census Tract 434.05 has a percent minority of 6.17 % which is below 50% and below the 125% COC threshold. Therefore, Census Tract 434.05 is not a minority population of EJ concern. The AC, Census Tract 434.05 has a 2.43 % low-income population which is below 50% and below the 125% COC threshold and is not considered a low-income population of EJ concern.

The U.S. Census Bureau data is provided in Appendix I, page I-2. No further EJ analysis is warranted.

Relocation of People, Businesses or Farms	**Yes**	**No**
Will the proposed action result in the relocation of people, businesses or farms?		**X**
Is a 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 be necessary to complete the proposed project.

SECTION I – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

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

Date RFI concurrence by INDOT SAM (if applicable): **October 14, 2021**

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, and a RFI completed by Metric Environmental and concurred by INDOT-SAM on October 14, 2021 (Appendix E), there are no hazmat sites identified in or within 0.5 mile of the project area that will impact the project. Further investigation for hazardous material concerns is not required at this time.

Part IV – Permits and Commitments

PERMITS CHECKLIST

Permits (mark all that apply)	**Likely Required**
Army Corps of Engineers (404/Section10 Permit)	
Nationwide Permit (NWP)	**X**
Regional General Permit (RGP)	
Individual Permit (IP)	
Other	
IN Department of Environmental Management (401/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)	

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

The project will require a Rule 5 permit due to the disturbance of more than 1.0 acre of land. An IDEM Section 401 Water Quality Certification permit and an USACE Section 404 permit will be required for the permanent impacts to Wetland A.

Applicable recommendations provided by the IDNR-DFW 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.

County Lake Route SR 2 Des. No. 1702988

ENVIRONMENTAL COMMITMENTS

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

Remarks:

Firm:

1. If the scope of work or permanent or temporary right-of-way amounts change, the INDOT Environmental Services Division (ESD) and the INDOT District Environmental Section will be contacted immediately. (INDOT ESD)
2. It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access. (INDOT ESD)
3. Any work in a wetland area within INDOT's right of way or in borrow/waste areas is prohibited unless specifically allowed in the US Army Corps of Engineers or IDEM permit. (INDOT EWPO)
4. 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)
5. Lighting AMM 1: Direct temporary lighting away from suitable habitat during the active season. (USFWS)
6. Lighting AMM 2: When installing new or replacing existing permanent lights, use downward-facing, full cut-off lens lights (with same intensity or less for replacement lighting); or for those transportation agencies using the BUG system developed by the Illuminating Engineering Society, be as close to 0 for all three ratings with a priority of "uplight" of 0 and "backlight" as low as practicable. (USFWS)
7. Construction fencing will be installed along the construction limits within the area of Wetland B to prohibit any encroachment upon the wetland beyond the designated construction limits. (INDOT ESD)

For Further Consideration:

8. Do not cut any trees suitable for Indiana bat or NLEB roosting (greater than 5 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices or cavities) from April 1 through September 30. (IDNR-DFW)
9. Plant five trees, at least 2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10 inches dbh or greater (IDNR-DFW)

Table of Contents

APPENDIX A – INDOT Supporting Documentation
Categorical Exclusion Level Threshold Chart..... A-1

APPENDIX B – Graphics
Project Location Map..... B-1
USGS Topographic Map..... B-2
Aerial Photograph..... B-3
IDNR Floodplain Map..... B-4
Ground-Level Photographs..... B-5
Plan Sheets..... B-8

APPENDIX C - Early Coordination
Sample Early Coordination Letter..... C-1
Early Coordination Recipient List..... C-3
IDNR Division of Fish and Wildlife..... C-4
U.S. Fish and Wildlife – IPaC Coordination..... C-5
IDEM Electronic Coordination Letter..... C-20
Indiana Geological and Water Survey..... C-25
INDOT, Aviation..... C-27
Natural Resources Conservation Service C-28

APPENDIX D - Section 106 of the NHPA
Minor Projects PA Project Assessment Form..... D-1
Archaeological Short Report Excerpts..... D-5

APPENDIX E – Red Flag and Hazardous Materials
Red Flag Investigation Summary..... E-1
Red Flag Investigation Maps..... E-5

APPENDIX F – Water Resources
Waters of the US Determination Report..... F-1
National Wetland Inventory Map..... F-14
Waters Delineation Map..... F-15

APPENDIX G – Public Involvement
Sample Notice of Entry Letter..... G-1

APPENDIX H – Air Quality
INDOT STIP Listing..... H-1
MPO Project Listing..... H-2

APPENDIX I – Environmental Justice
EJ Maps..... I-1
Census Data Tables..... I-2

APEENDIX J – Additional Studies
LWCF List..... J-1
Crash Data Report..... J-3

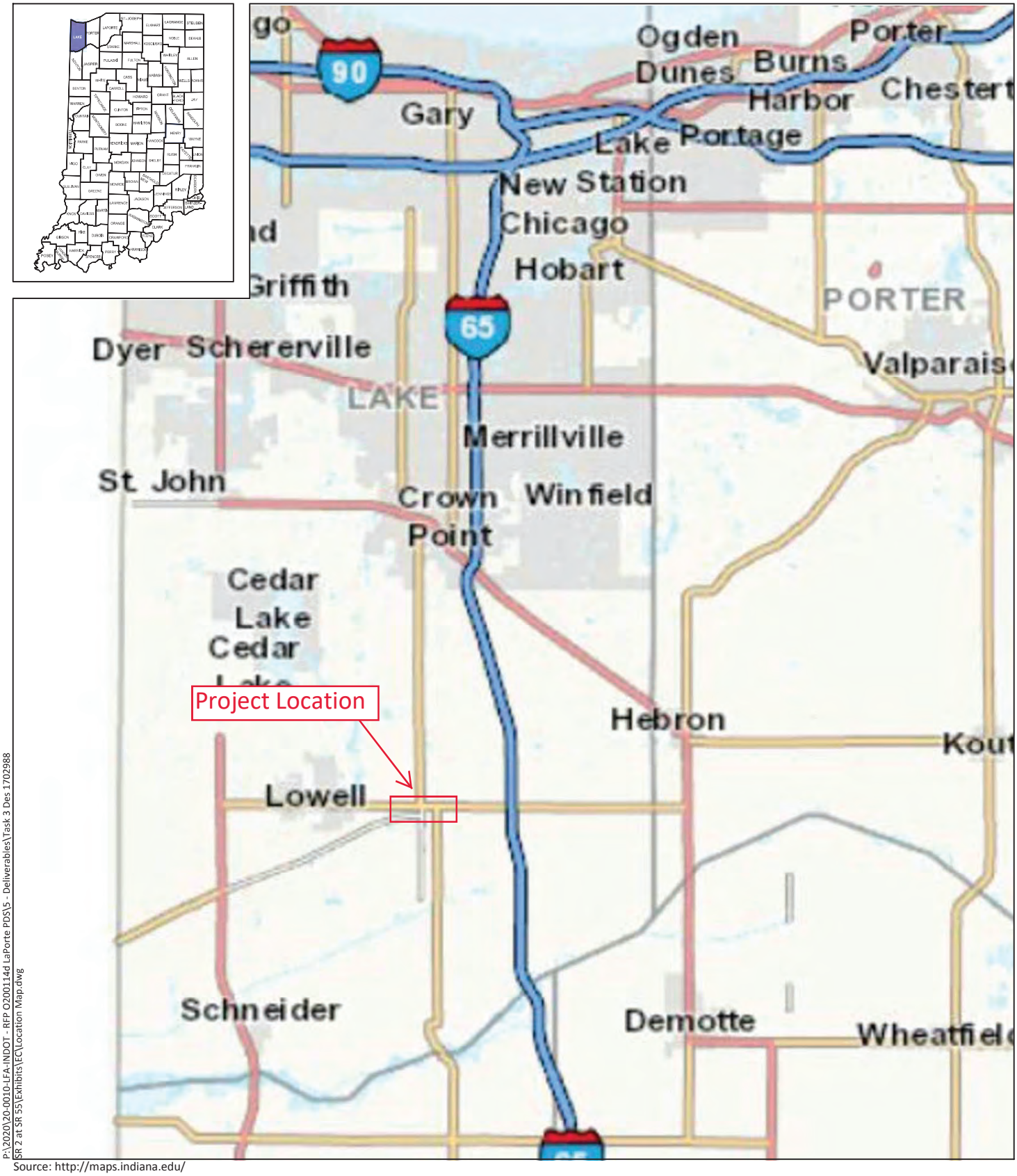
APPENDIX A
INDOT Supporting Documentation

Categorical Exclusion Level Thresholds

	PCE	Level 1	Level 2	Level 3	Level 4[1]
Section 106	Falls within guidelines of Minor Projects PA	"No Historic Properties Affected"	"No Adverse Effect"	-	"Adverse Effect" Or Historic Bridge involvement[2]
Stream Impacts[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	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[6])	"Not likely to Adversely Affect" (With any AMMs or commitments)	-	"Likely to Adversely Affect"	Project does not fall under Species Specific Programmatic[7]
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[8]
Sole Source Aquifer	No Detailed Groundwater Assessment	-	-	-	Detailed Groundwater Assessment
Floodplain	No Substantial Impacts	-	-	-	Substantial Impacts
Section 4(f) Impacts	None	-	-	-	Any[9]
Section 6(f) Impacts	None	-	-	-	Any
Permanent Traffic Alteration	None	-	-	-	Any
Noise Analysis Required	No	-	-	-	Yes
Air Quality Analysis Required	No	-	-	-	Yes[10]
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] Avoidance and Mitigation Measures (AMMs) determined by the IPAC determination key to be required that are not tree AMMs, bridge AMMs, or structure AMMs.
[7] 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.
[8] Potential for causing a disproportionately high and adverse impact.
[9] 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.
[10] Hot Spot Analysis and/or MSAT Quantitative Emission Analysis.
* Includes the threatened/endangered species critical habitat
Note: Substantial public or agency controversy may require a higher-level NEPA document.

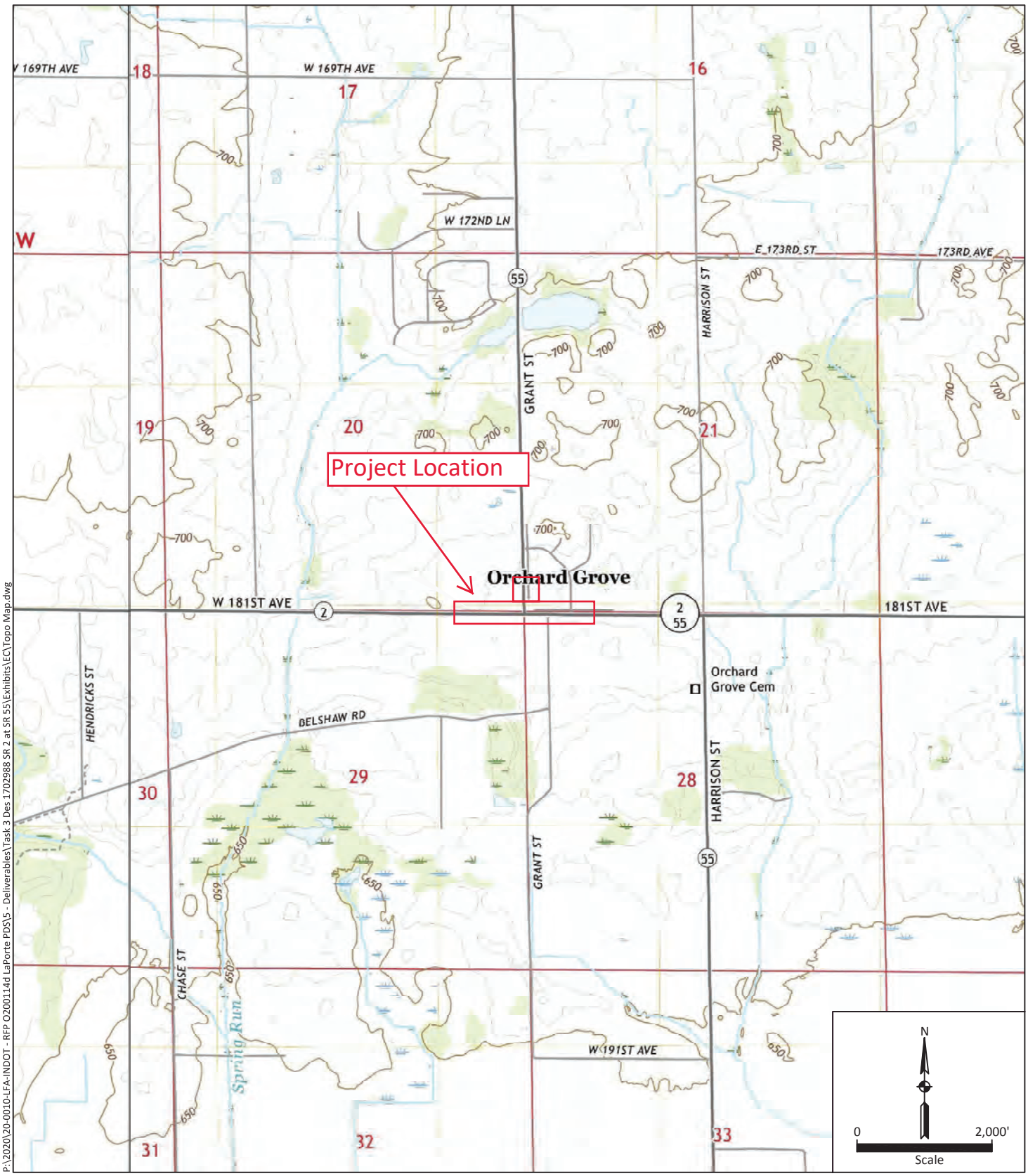
APPENDIX B
Graphics



P:\2020\20-0010-LFA-INDOT - RFP O200114d LaPorte PDS\5 - Deliverables\Task 3 Des 1702988 SR 2 at SR 55\Exhibits\EC\Location Map.dwg

Source: http://maps.indiana.edu/

Project Location Map **Intersection Project** **Des. No. 1702988** **SR 2 at SR 55** **Lake County, Indiana**	All locations approximate	N Not to Scale	METRIC ENVIRONMENTAL Drawn by: ILJ Checked by: SK Approved by: xx



P:\2020\20-0010-LFA-INDOT - RFP 0200114d LaPorte PDS\5 - Deliverables\Task 3 Des 1702988 SR 2 at SR 55\Exhibits\EC\Topo Map.dwg

Source: https://ngmdb.usgs.gov/topoview/viewer/#12/39.5378/-86.2918

USGS Topographic Map **Intersection Project** **Des. No. 1702988** **SR 2 at SR 55** **Lake County, Indiana**	All locations approximate Base map: 2019 Leroy, IN 7.5 Minutes Quadrangle	METRIC ENVIRONMENTAL Drawn by: ILJ Checked by: JRP Approved by: LBH

P:\2020\20-0010-LFA-INDOT - RFP O200114d LaPorte PDS\5 - Deliverables\Task 3 Des 1702988 SR 2 at SR 55\Exhibits\EC\2013 Aerial Photograph.dwg

Source: http://maps.indiana.edu/

2013 Aerial Photograph

Intersection Project
Des. No. 1702988
SR 2 at SR 55
Lake County, Indiana

Note: All locations are approximate

N

0 400'

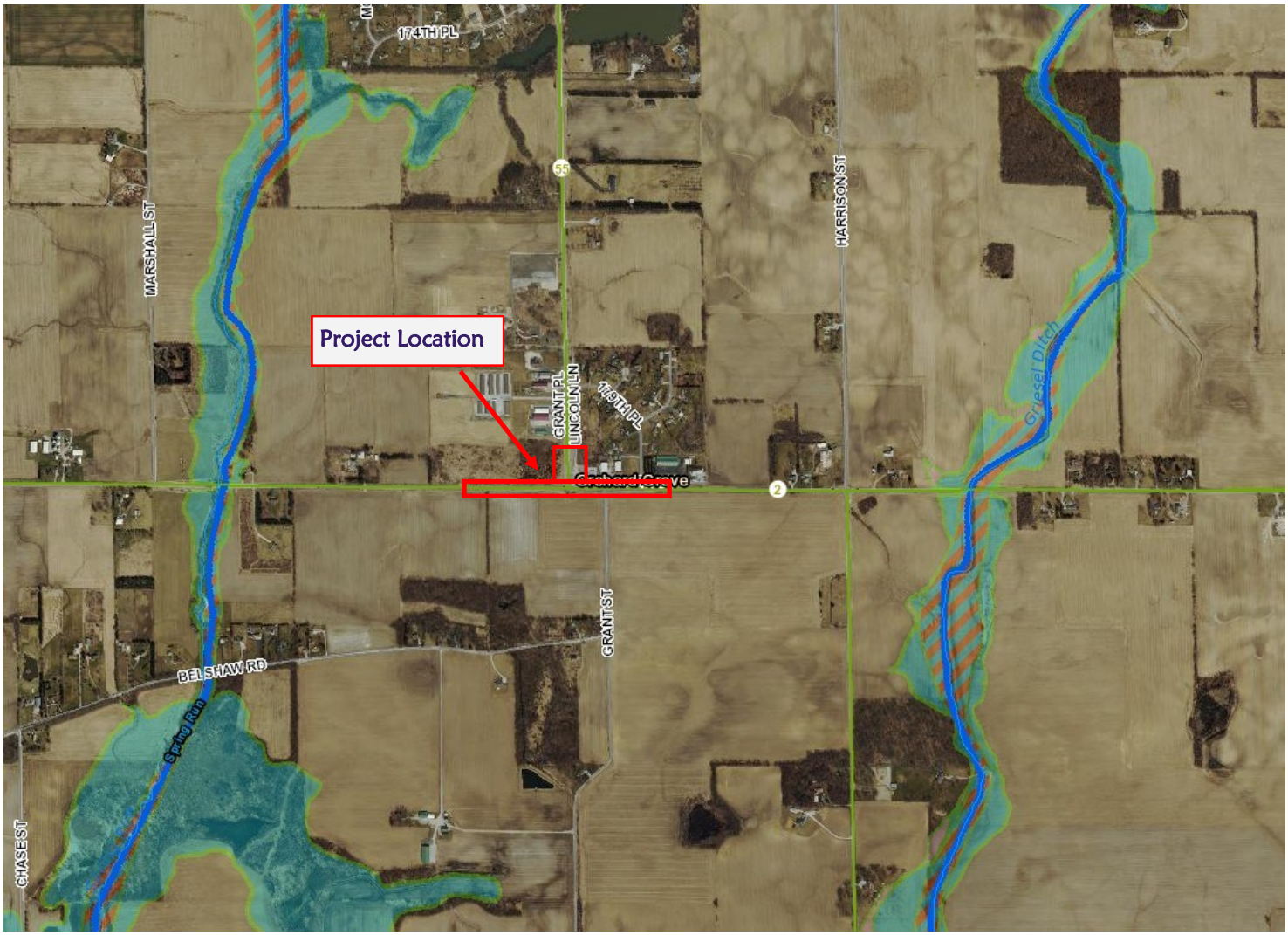
Scale

METRIC ENVIRONMENTAL

Drawn by: ILJ

Checked by: XXX

Approved by: XXX



DNR Indiana Department of Natural Resources

Floodplain Analysis & Regulatory Assessment (FARA)

Point of Interest

Base Flood Elevation Point

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

County: **Lake**

Stream Name: **Spring Run**

Best Available Flood Hazard Zone: **Not Mapped**

National Flood Hazard Zone: **Not Mapped**

Approximate Ground Elevation: **683.4 feet (NAVD88)**

Base Flood Elevation: **670.2 feet (NAVD88)**

Drainage Area: **Not available**

IDNR Floodplain Map
Intersection Improvement Project
Des. No. 1702988
SR 2 at SR 55
Lake County, Indiana

METRIC ENVIRONMENTAL

1. View looking west at the SR 2 and SR 55 intersection

2. View looking west along the south side of SR 2 toward the SR 55 intersection

3. View looking west along the north side of SR 2 toward the SR 55 intersection

4. View looking east along the north side of SR 2 toward the SR 55 intersection

SITE PHOTOGRAPHS 10/6/2020
Intersection Project
Des. No. 1702988
SR.2 at SR 55
Cedar Creek Township, Lake County, Indiana

METRIC ENVIRONMENTAL

5. View looking east from the northwest quadrant of the project intersection

6. View looking north along SR 55 from the west side of the project intersection

7. View looking west along the north side of SR 2 from the project intersection

8. View looking north along the east side of SR 55 from the project intersection

SITE PHOTOGRAPHS 10/6/2020
Intersection Project
Des. No. 1702988
SR.2 at SR 55
Cedar Creek Township, Lake County, Indiana

METRIC ENVIRONMENTAL

9. View looking northeast along the north side of SR 2

10. View looking east along the south side of SR 2 at the project intersection

11. View looking west along the south side of SR 2 toward the project intersection

SITE PHOTOGRAPHS 10/6/2020
Intersection Project
Des. No. 1702988
SR.2 at SR 55
Cedar Creek Township, Lake County, Indiana

METRIC ENVIRONMENTAL

PROJECT	DESIGNATION
1702988	1702988
CONTRACT	
R-43130	

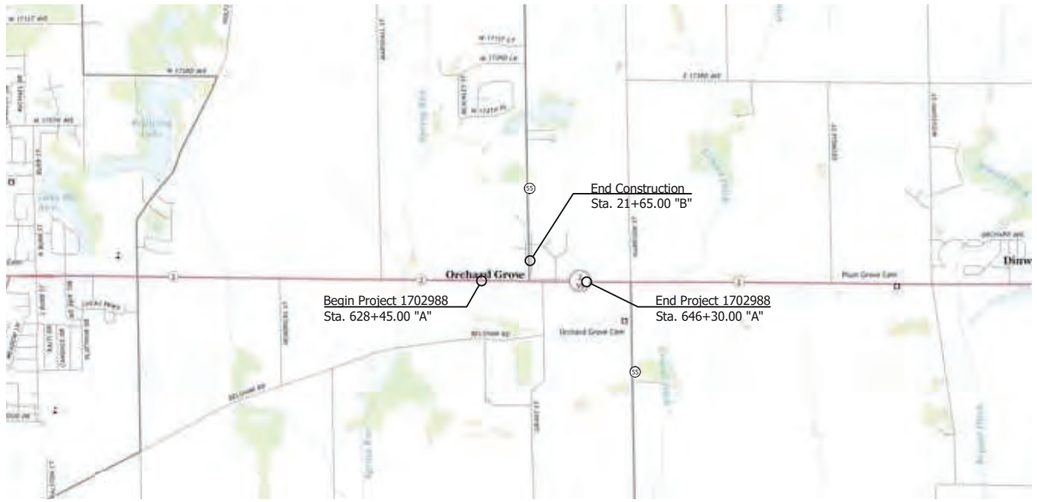
INDIANA DEPARTMENT OF TRANSPORTATION

ROAD PLANS

ROUTE: S.R. 2 FROM: 11+09 TO: 12+04

PROJECT NO. 1702988 P.E.
1702988 R/W
1702988 CONST.

Intersection Improvement With Added Turn Lanes, Located on S.R. 2, From 0.25 Miles West of S.R. 55 to 0.25 Miles East of S.R. 55
Sections 20, 21, 28, & 29, T-33-N, R-8-W, Cedar Creek Township, Lake County, Indiana



SCALE: 1" = 2000'

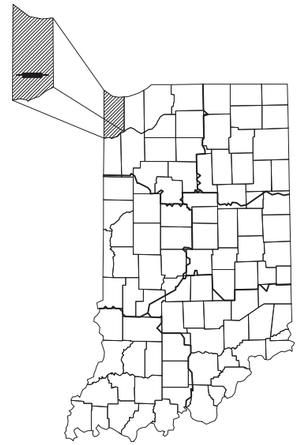
LOCATION MAP
LAKE COUNTY

TRAFFIC DATA

		S.R. 2	S.R. 55
A.A.D.T.	(2024)	9,185 V.P.D.	4,941 V.P.D.
A.A.D.T.	(2044)	11,208 V.P.D.	6,029 V.P.D.
D.H.V	(2044)	988 V.P.H.	545 V.P.H.
DIRECTIONAL DISTRIBUTION		52 %	63 %
TRUCKS		19 % A.A.D.T.	16 % A.A.D.T.
		19 % D.H.V.	16 % D.H.V.

DESIGN DATA

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



PROJECT LOCATION SHOWN BY
LAKE COUNTY

LATITUDE: 41°17'22"N LONGITUDE: 87°21'51"W

GROSS LENGTH: 0.37 MI.
NET LENGTH: 0.37 MI.
MAX. GRADE: 1.20 %

HYDROLOGIC UNIT CODE (S): 07120001130050

FEBRUARY 8, 2022

INDIANA DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS DATED 2022
TO BE USED WITH THESE PLANS

LFA
LAWSON-FISHER ASSOCIATES P.C.
525 W. WASHINGTON AVENUE
SOUTH BEND, INDIANA 46601
PH. (574) 234-3167

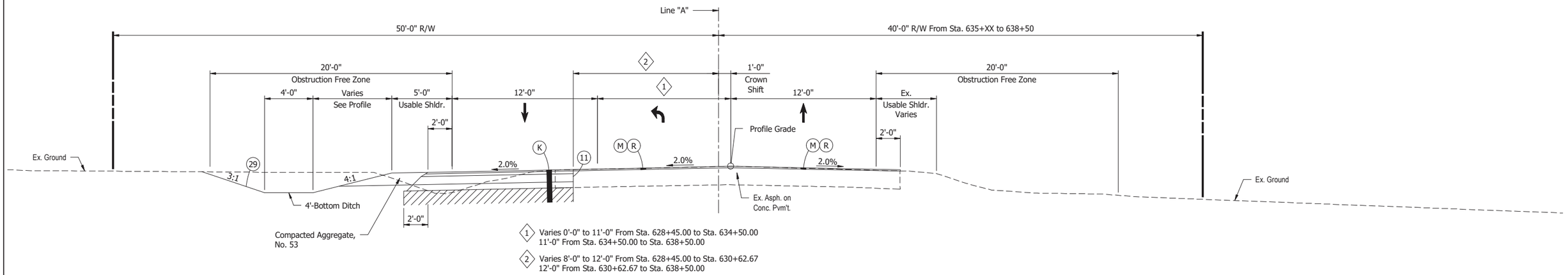
NOT FOR CONSTRUCTION

PLANS PREPARED BY: LAWSON-FISHER ASSOC. P.C. 574-234-3167
PHONE NUMBER

CERTIFIED BY: _____ DATE

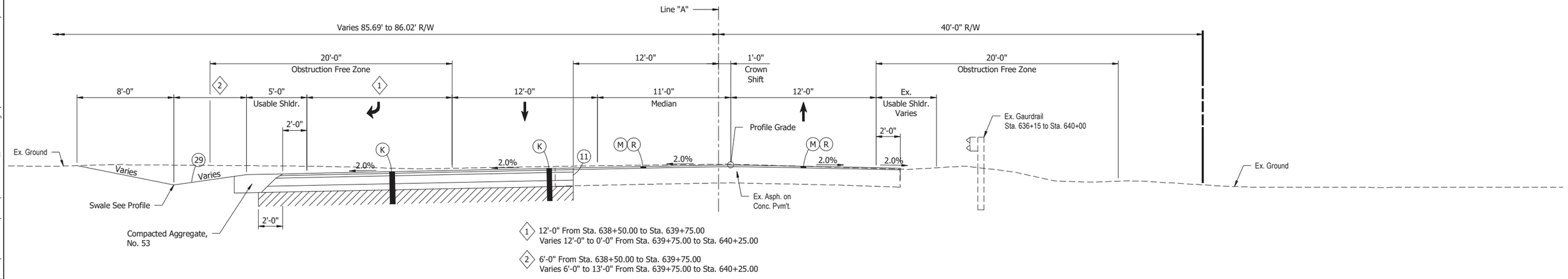
APPROVED FOR LETTING: _____ DATE
INDIANA DEPARTMENT OF TRANSPORTATION

DESIGNATION	
1702988	
SURVEY BOOK	SHEETS
	1 of 51
CONTRACT	PROJECT
R-43130	1702988



TYPICAL SECTION - LINE "A"

Scale: ¼" = 1'-0"
Sta. 628+45.00 to Sta. 638+50.00



TYPICAL SECTION - LINE "A"

Scale: ¼" = 1'-0"
Sta. 638+50.00 to Sta. 640+25.00

NOTE TO REVIEWER:
Pavement design has been requested. Typical Sections will be addressed when received.

LEGEND:

- (K) 165 #/sys QC/QA-HMA, 3, 70, Surface, 9.5 mm on
  275 #/sys QC/QA-HMA, 3, 70, Intermediate, 19.0 mm on
  880 #/sys QC/QA-HMA, 3, 64, Base, 25.0 mm
  Variable Depth Compacted Aggregate, No. 53 on
  (As Needed to Match Existing Adjacent Mainline Pavement Thickness)
  Subgrade Treatment Type IBC (Cement Modification)
- (M) Milling, Asphalt, 1.5"
- (R) 165 #/sys QC/QA-HMA, 3, 70, Surface, 9.5 mm on
- (11) Saw Cut
- (29) Mulched Seeding, R

NOT FOR CONSTRUCTION

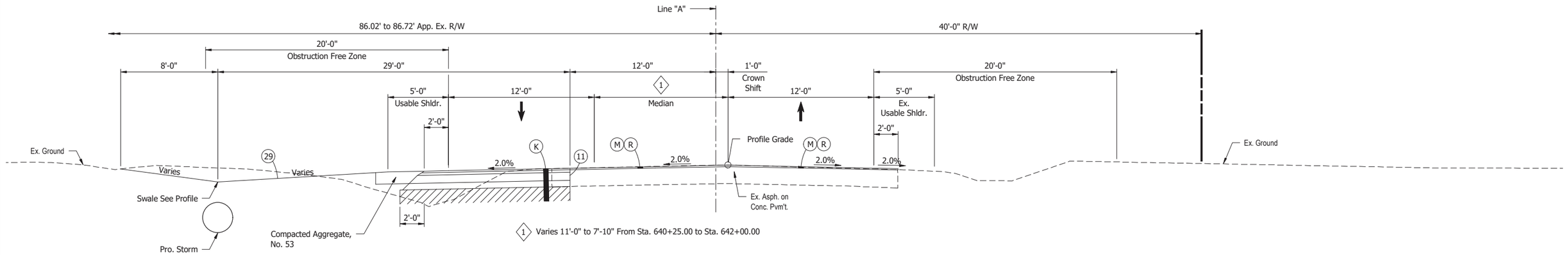
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: JDD | DRAWN: JAJ | CHECKED: MJG | CHECKED: JDD

INDIANA
DEPARTMENT OF TRANSPORTATION

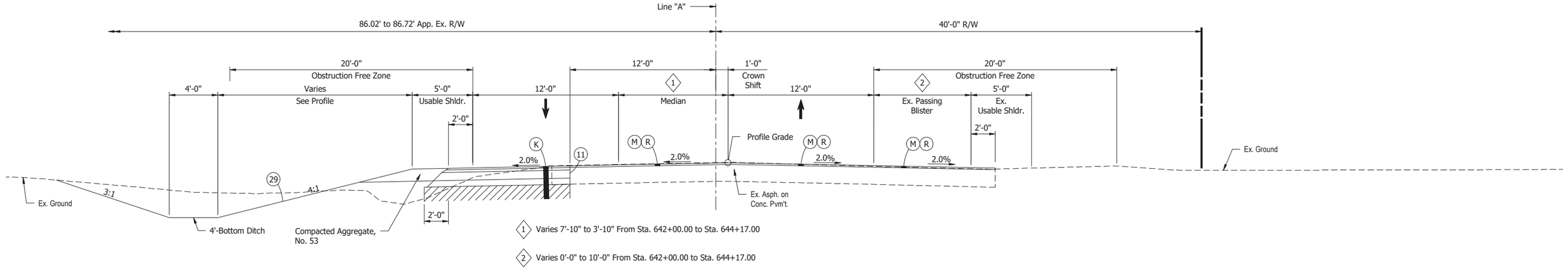
TYPICAL SECTIONS

SCALE	BRIDGE FILE
1/4" = 1'-0"	
	DESIGNATION
	1702988
SURVEY BOOK	SHEETS
	3 of 51
CONTRACT	PROJECT
R-43130	1702988



TYPICAL SECTION - LINE "A"

Scale: ¼" = 1'-0"
Sta. 640+25.00 to Sta. 642+00.00



TYPICAL SECTION - LINE "A"

Scale: ¼" = 1'-0"
Sta. 642+00.00 to Sta. 644+17.00

LEGEND:

- (K) 165 #/sys QC/QA-HMA, 3, 70, Surface, 9.5 mm on
  275 #/sys QC/QA-HMA, 3, 70, Intermediate, 19.0 mm on
  880 #/sys QC/QA-HMA, 3, 64, Base, 25.0 mm
  Variable Depth Compacted Aggregate, No. 53 on
  (As Needed to Match Existing Adjacent Mainline Pavement Thickness)
  Subgrade Treatment Type IBC (Cement Modification)
- (M) Milling, Asphalt, 1.5"
- (R) 165 #/sys QC/QA-HMA, 3, 70, Surface, 9.5 mm on
- (11) Saw Cut
- (29) Mulched Seeding, R

NOT FOR CONSTRUCTION

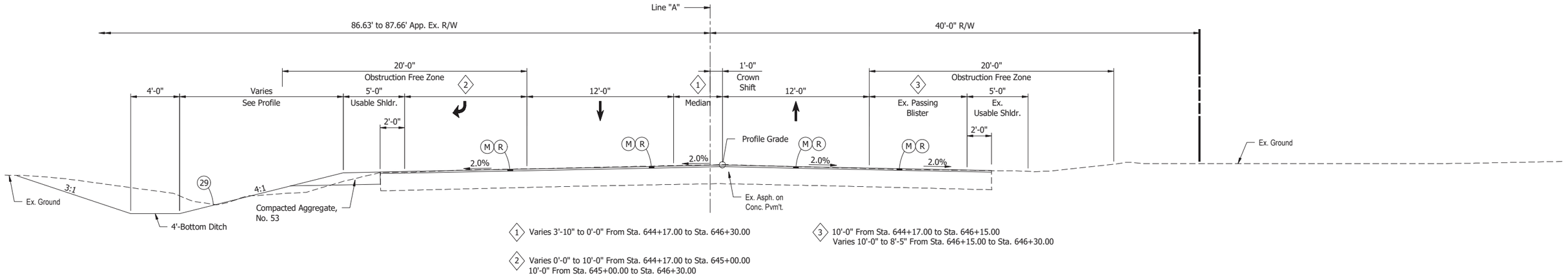
RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

DESIGNED: JDD
DRAWN: JAJ
CHECKED: MJG
CHECKED: JDD

INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

SCALE	BRIDGE FILE
AS NOTED	
	DESIGNATION
	1702988
SURVEY BOOK	SHEETS
	4 of 51
CONTRACT	PROJECT
R-43130	1702988



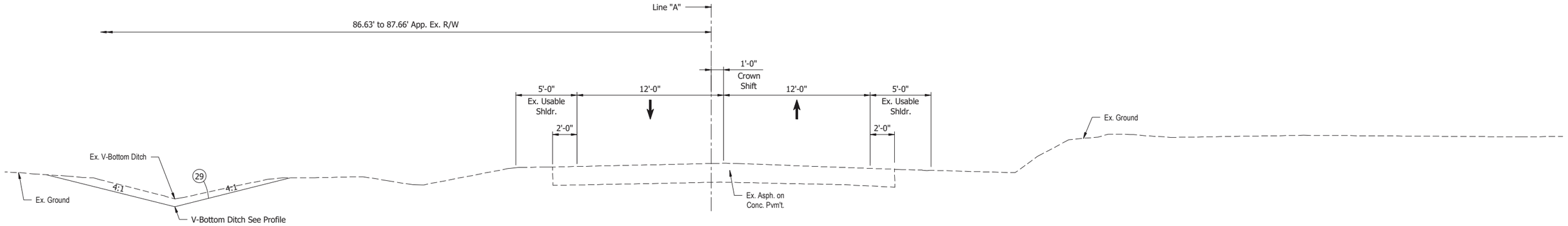
1 Varies 3'-10" to 0'-0" From Sta. 644+17.00 to Sta. 646+30.00

2 Varies 0'-0" to 10'-0" From Sta. 644+17.00 to Sta. 645+00.00
10'-0" From Sta. 645+00.00 to Sta. 646+30.00

3 10'-0" From Sta. 644+17.00 to Sta. 646+15.00
Varies 10'-0" to 8'-5" From Sta. 646+15.00 to Sta. 646+30.00

TYPICAL SECTION - LINE "A"

Scale: ¼" = 1'-0"
Sta. 644+17.00 to Sta. 646+30.00



TYPICAL SECTION - LINE "A"

Scale: ¼" = 1'-0"
Sta. 646+30.00 to Sta. 651+00.00

LEGEND:

- (M) Milling, Asphalt, 1.5"
- (R) 165 #/sys QC/QA-HMA, 3, 70, Surface, 9.5 mm on
- (29) Mulched Seeding, R

NOT FOR CONSTRUCTION

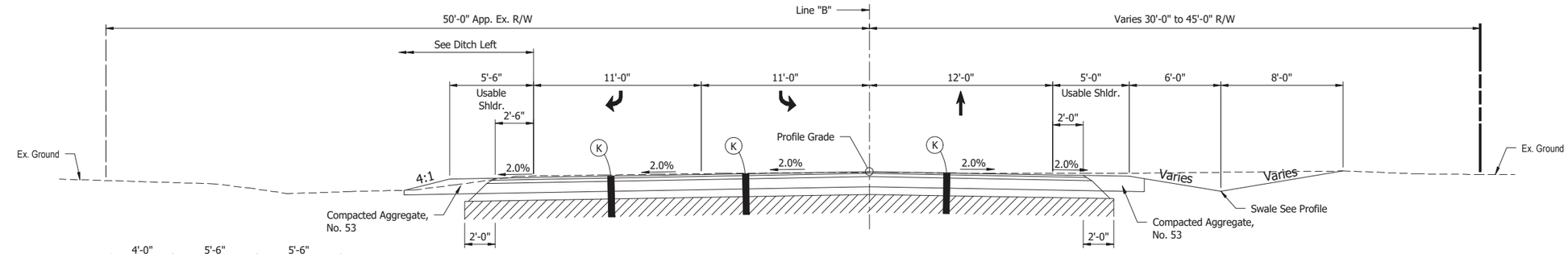
RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

DESIGNED: PH
DRAWN: BJS
CHECKED: DGD
CHECKED: PH

INDIANA
DEPARTMENT OF TRANSPORTATION

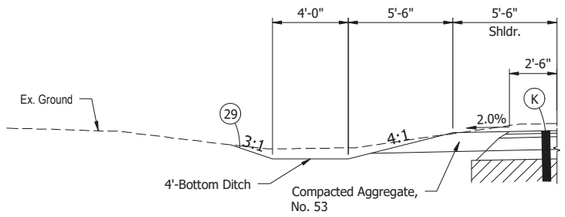
TYPICAL SECTIONS
LINE "PR-A"

SCALE	BRIDGE FILE
Not to Scale	
	DESIGNATION
	1702988
SURVEY BOOK	SHEETS
	5 of 51
CONTRACT	PROJECT
R-43130	1702988



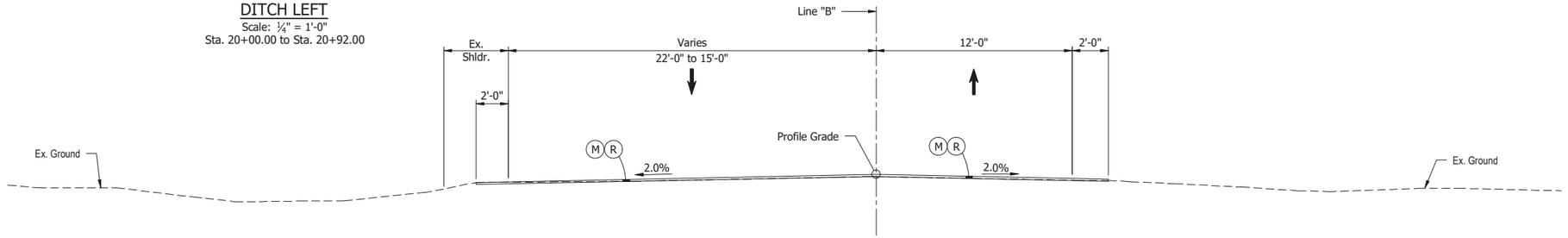
TYPICAL SECTION - LINE "B"

Scale: ¼" = 1'-0"
Sta. 20+00.00 to Sta. 21+65.00



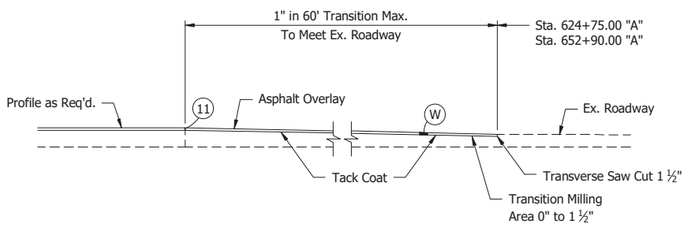
DITCH LEFT

Scale: ¼" = 1'-0"
Sta. 20+00.00 to Sta. 20+92.00



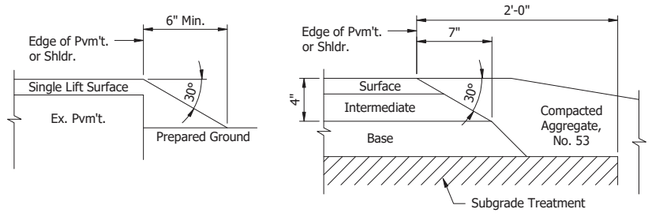
INCIDENTAL CONSTRUCTION
TYPICAL SECTION - LINE "B"

Scale: ¼" = 1'-0"
Sta. 21+65.00 to Sta. 22+45.53



INCIDENTAL CONSTRUCTION PROFILE SECTION

Not to Scale



SAFETY EDGE ON HMA PAVEMENT

Not to Scale

LEGEND:

- (K) 165 #/sys QC/QA-HMA, 3, 70, Surface, 9.5 mm on
  275 #/sys QC/QA-HMA, 3, 70, Intermediate, 19.0 mm on
  880 #/sys QC/QA-HMA, 3, 64, Base, 25.0 mm
  Variable Depth Compacted Aggregate, No. 53 on
  (As Needed to Match Existing Adjacent Mainline Pavement Thickness)
  Subgrade Treatment Type IBC (Cement Modification)
- (M) Milling, Asphalt, 1.5"
- (R) 165 #/sys QC/QA-HMA, 3, 70, Surface, 9.5 mm on
- (W) 165 #/sys QC/QA-HMA, 3, 70, Surface, 9.5 mm on
  Transmission Milling
- (11) Saw Cut
- (29) Mulched Seeding, R

NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

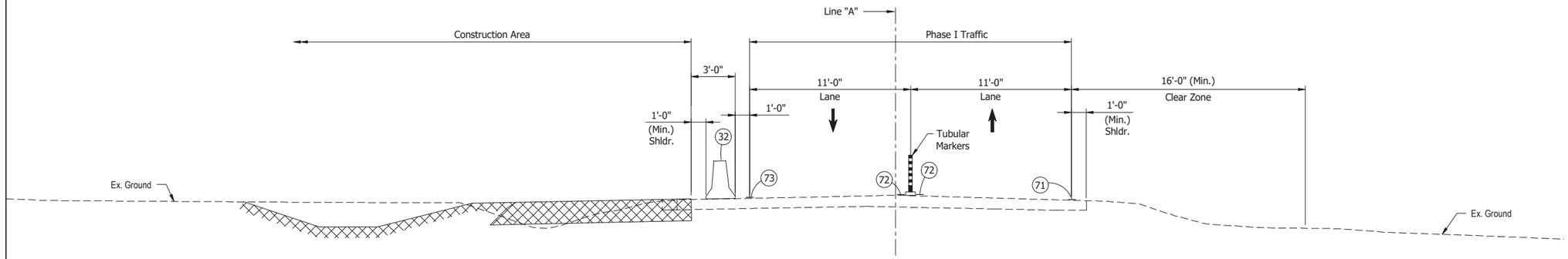
DESIGNED: PH | DRAWN: BJS

CHECKED: DGD | CHECKED: PH

INDIANA
DEPARTMENT OF TRANSPORTATION

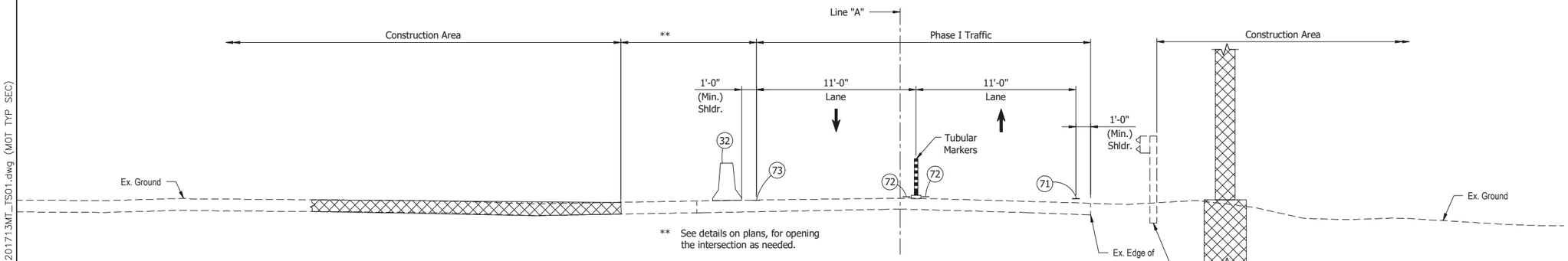
TYPICAL SECTIONS
LINE "B"

SCALE	BRIDGE FILE
AS NOTED	
	DESIGNATION
	1702988
SURVEY BOOK	SHEETS
	6 of 51
CONTRACT	PROJECT
R-43130	1702988



TYPICAL SECTION

Scale: ¼" = 1'-0"
Sta. 627+80.00 to Sta. 636+15.00 "A"
Sta. 640+00.00 to Sta. 645+00.00 "A"



** See details on plans, for opening the intersection as needed.

TYPICAL SECTION

Scale: ¼" = 1'-0"
Sta. 636+15.00 to Sta. 640+00.00 "A"

LEGEND:

- (32) Temporary Traffic Barrier, Type 2
- (71) Temporary Pavement Marking, Removable, Solid, White, 4"
- (72) Temporary Pavement Marking, Solid, Yellow, 4"
- (73) Temporary Pavement Marking, Solid, White, 4"
- Limits of Construction

NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

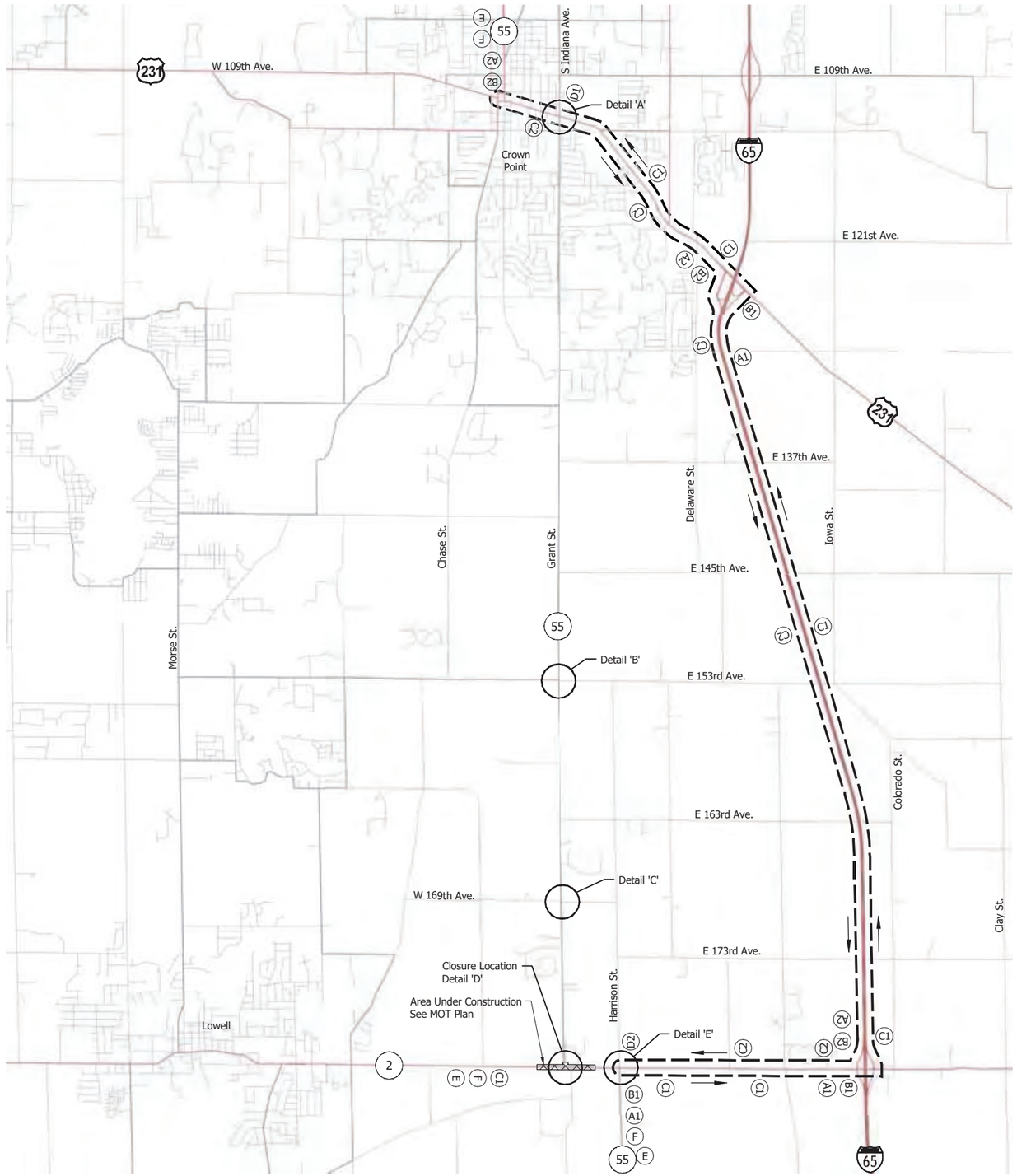
DESIGNED: PH | DRAWN: JAJ

CHECKED: DGD | CHECKED: PH

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
TYPICAL SECTIONS

SCALE	BRIDGE FILE
1/4" = 1'-0"	
	DESIGNATION
	1702988
SURVEY BOOK	SHEETS
	9 of 51
CONTRACT	PROJECT
R-43130	1702988



DETOUR ROUTE MARKER ASSEMBLIES

A1	B1	C1	D1
DETOUR M4-8 24x12 NORTH M3-1(S) 24x12 INDIANA 55 M1-5 24x24 M5-1(R or L)(S) 21x15 ADVANCE TURN DETOUR MARKER ASSEMBLY	DETOUR M4-8 24x12 NORTH M3-1(S) 24x12 INDIANA 55 M1-5 24x24 M6-1(R or L)(S) 21x15 DIRECTIONAL DETOUR MARKER ASSEMBLY	DETOUR M4-8 24x12 NORTH M3-1(S) 24x12 INDIANA 55 M1-5 24x24 M6-3(S) 21x15 CONFIRMING DETOUR ROUTE MARKER ASSEMBLY	END DETOUR M4-8a 24x18 NORTH M3-1(S) 24x12 INDIANA 55 M1-5 24x24 END DETOUR ROUTE MARKER ASSEMBLY
A2	B2	C2	D2
DETOUR M4-8 24x12 SOUTH M3-3(S) 24x12 INDIANA 55 M1-5 24x24 M5-1(R or L)(S) 21x15 ADVANCE TURN DETOUR MARKER ASSEMBLY	DETOUR M4-8 24x12 SOUTH M3-3(S) 24x12 INDIANA 55 M1-5 24x24 M6-1(R or L)(S) 21x15 DIRECTIONAL DETOUR MARKER ASSEMBLY	DETOUR M4-8 24x12 SOUTH M3-3(S) 24x12 INDIANA 55 M1-5 24x24 M6-3(S) 21x15 CONFIRMING DETOUR ROUTE MARKER ASSEMBLY	END DETOUR M4-8a 24x18 SOUTH M3-3(S) 24x12 INDIANA 55 M1-5 24x24 END DETOUR ROUTE MARKER ASSEMBLY

LEGEND:

→ Direction of Traffic

A1 3 Each	A2 3 Each	E 3 Each
B1 3 Each	B2 3 Each	F 3 Each
C1 7 Each	C2 6 Each	
D1 1 Each	D2 1 Each	

NOTE:

See sheet 13 for details and quantities.

NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: PH | DRAWN: RHK

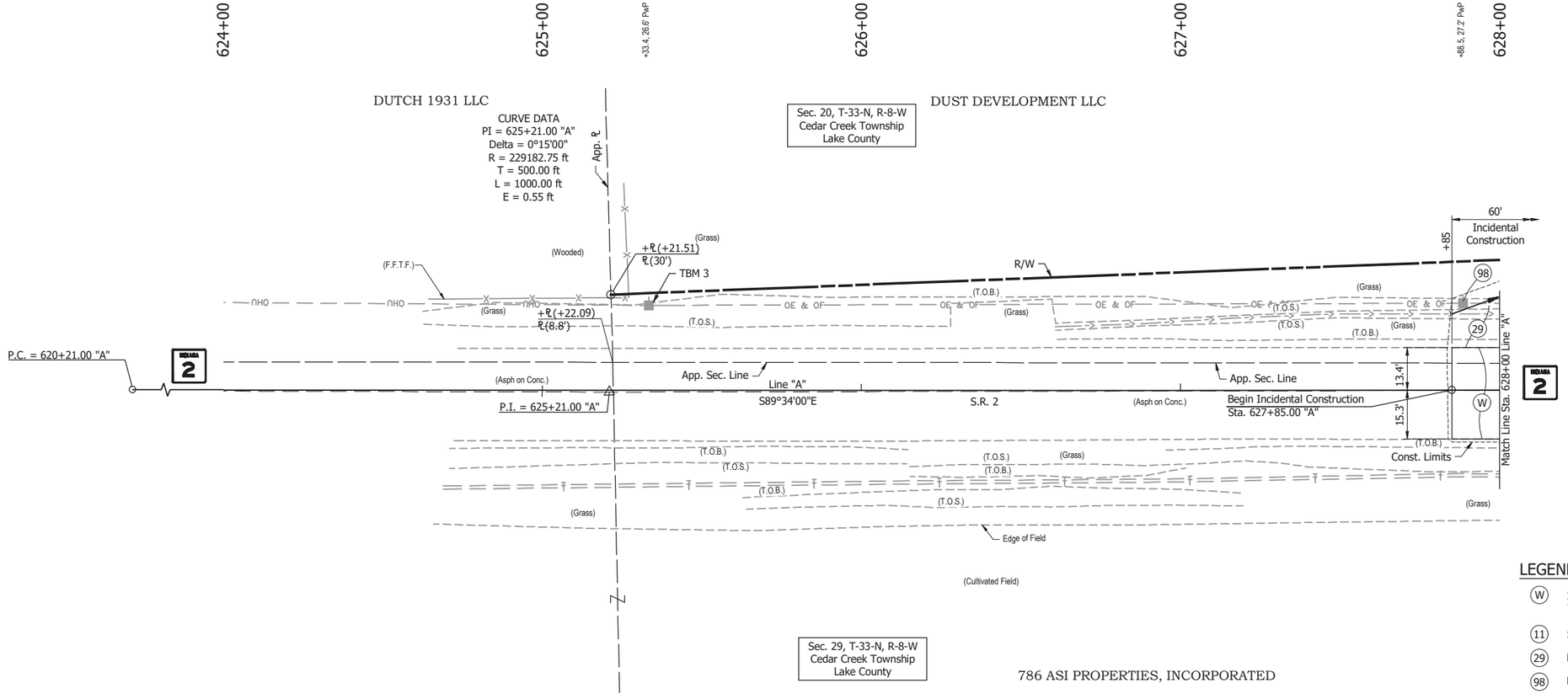
CHECKED: DGD | CHECKED: PH

INDIANA DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC DETOUR ROUTE

SCALE	BRIDGE FILE
1" = 3000'	
	DESIGNATION
	1702988
SURVEY BOOK	SHEETS
	12 of 51
CONTRACT	PROJECT
R-43130	1702988

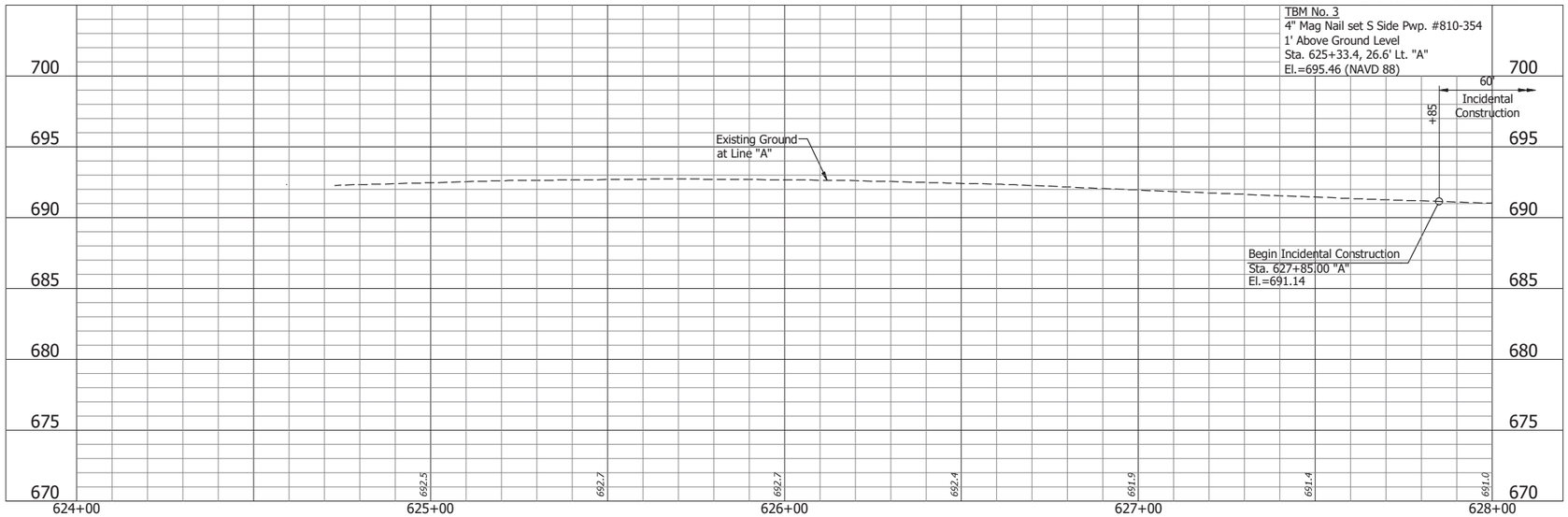
GDH – 2/8/2022 9:38 AM – U:\2020\202017 indot laporte\13 sr2 and sr55\Cad\Plan Set\Civil\201713MT_DR01.dwg (DETOUR ROUTE)



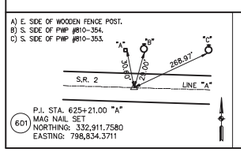
LEGEND:

- (W) 165 #/sys QC/QA-HMA, 3, 70, Surface, 9.5 mm on Transmission Milling
- (11) Saw Cut
- (29) Mulched Seeding, R
- (98) Remove (By Others)

All R/W described from Line "A".
All topography described from Line "A".
Line "PR-A" to be constructed.



A) E. SIDE OF WOODEN FENCE POST.
B) S. SIDE OF PWP #810-354.
C) S. SIDE OF PWP #810-353.



(601) P.I. STA. 625+21.00 "A"
MAG NAIL SET
NORTHING: 332,911.7580
EASTING: 798,834.3711

NOT FOR CONSTRUCTION

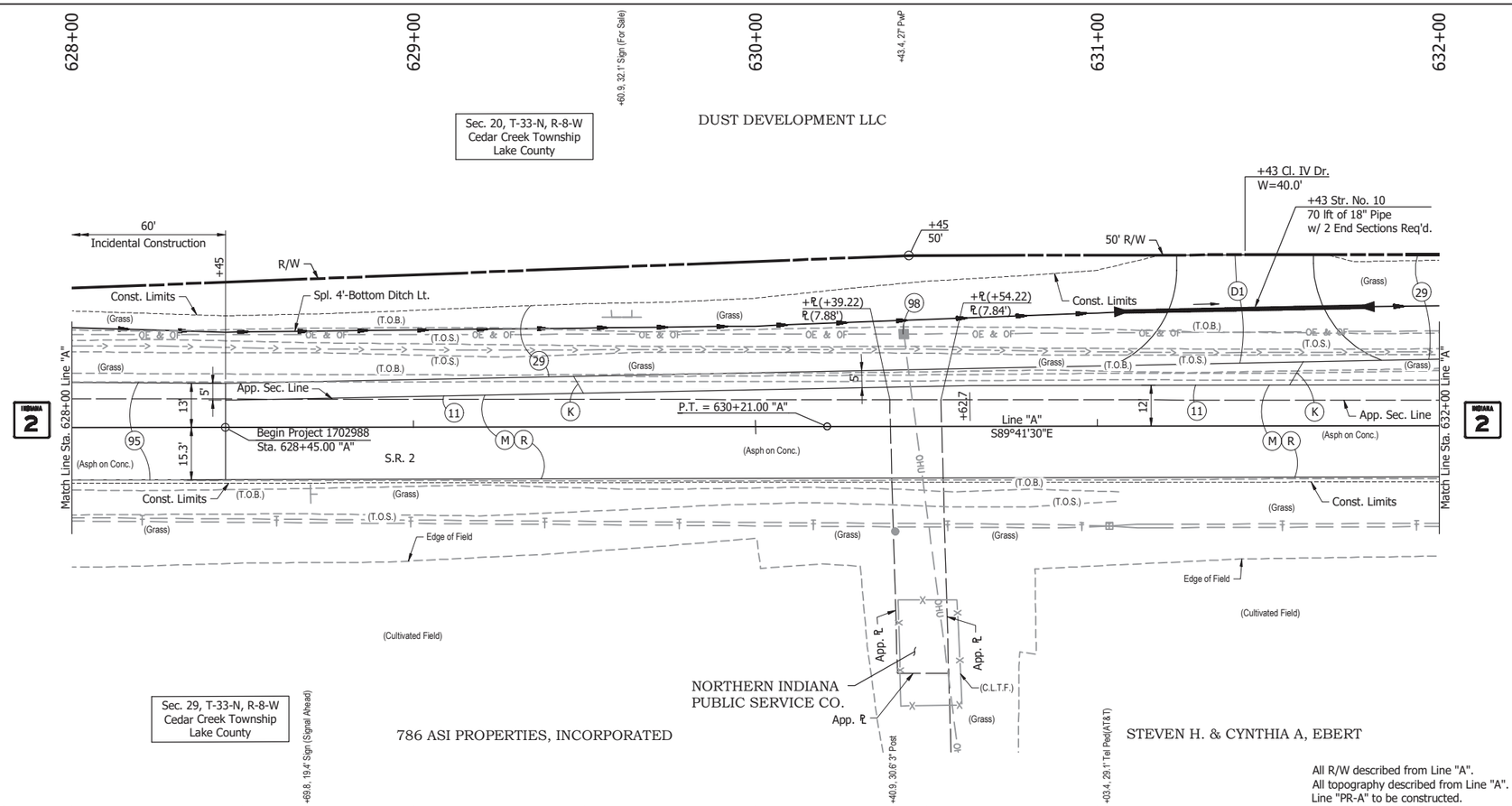
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: PH | DRAWN: BJS | CHECKED: DGD | CHECKED: PH

INDIANA
DEPARTMENT OF TRANSPORTATION

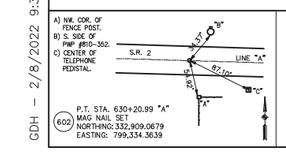
PLAN AND PROFILE - LINE "A"
STA. 624+00 TO STA. 628+00

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
1" = 5'	1702988
SURVEY BOOK	SHEETS
	14 of 51
CONTRACT	PROJECT
R-43130	1702988



LEGEND:

- (D1) 165 #/sys HMA Surface, Type B on 275 #/sys HMA Intermediate, Type B on 6" Compacted Aggregate, No. 53 on Subgrade Treatment Type II
- (K) 165 #/sys QC/QA-HMA, 3, 70, Surface, 9.5 mm on 275 #/sys QC/QA-HMA, 3, 70, Intermediate, 19.0 mm on 880 #/sys QC/QA-HMA, 3, 64, Base, 25.0 mm Variable Depth Compacted Aggregate, No. 53 on (As Needed to Match Existing Adjacent Mainline Pavement Thickness) Subgrade Treatment Type IBC (Cement Modification)
- (M) Milling, Asphalt, 1.5"
- (R) 165 #/sys QC/QA-HMA, 3, 70, Surface, 9.5 mm
- (11) Saw Cut
- (29) Mulched Seeding, R
- (95) Pavement Removal
- (98) Remove (By Others)
- (99) Remove



NOT FOR CONSTRUCTION

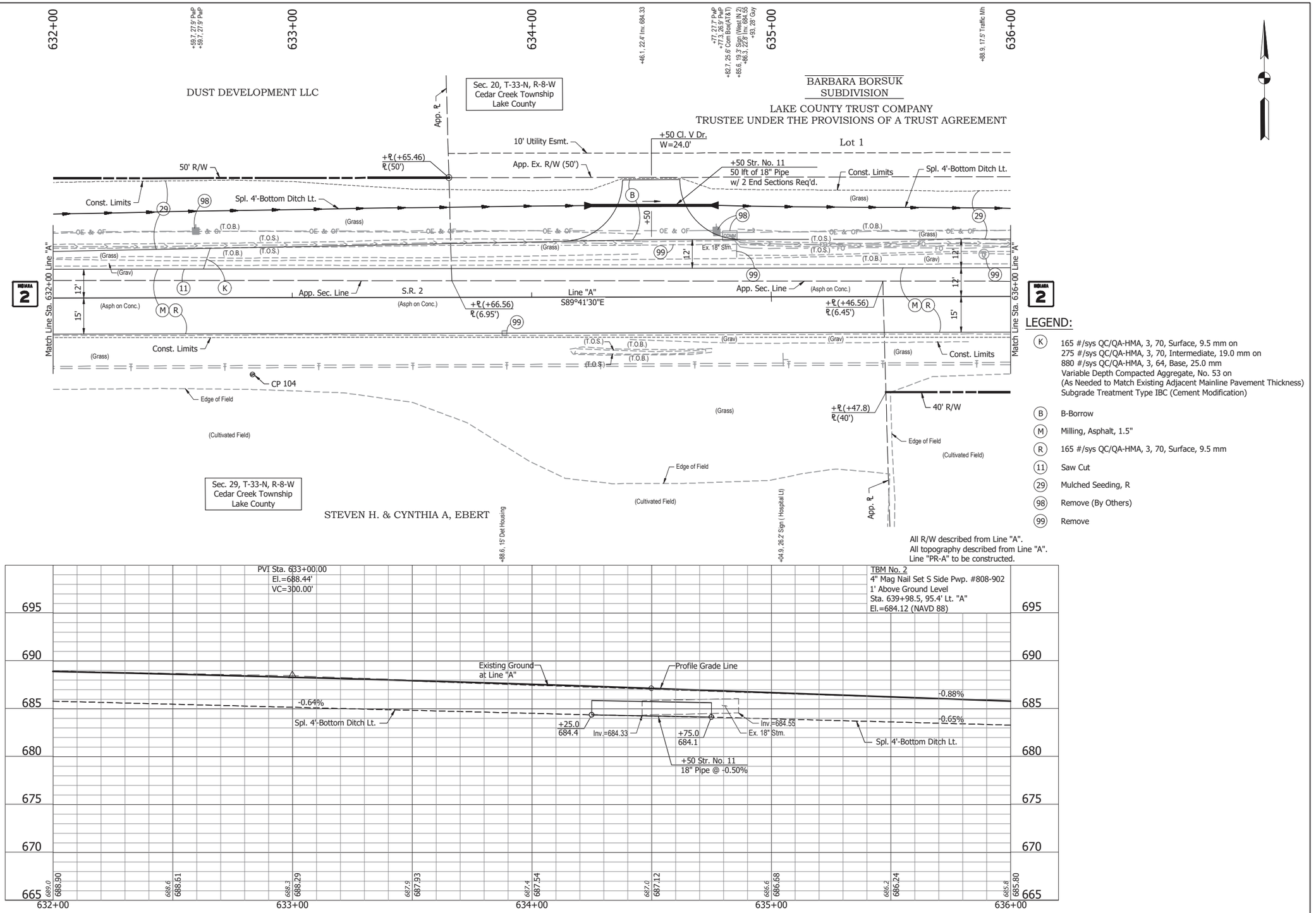
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: PH | DRAWN: BJS | CHECKED: DGD | CHECKED: PH

INDIANA DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE - LINE "A"
STA. 628+00 TO STA. 632+00

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
1" = 5'	1702988
SURVEY BOOK	SHEETS
	15 of 51
CONTRACT	PROJECT
R-43130	1702988

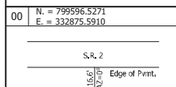


All R/W described from Line "A".
All topography described from Line "A".
Line "PR-A" to be constructed.

LEGEND:

- (K) 165 #/sys QC/QA-HMA, 3, 70, Surface, 9.5 mm on 275 #/sys QC/QA-HMA, 3, 70, Intermediate, 19.0 mm on 880 #/sys QC/QA-HMA, 3, 64, Base, 25.0 mm Variable Depth Compacted Aggregate, No. 53 on (As Needed to Match Existing Adjacent Mainline Pavement Thickness) Subgrade Treatment Type IBC (Cement Modification)
- (B) B-Borrow
- (M) Milling, Asphalt, 1.5"
- (R) 165 #/sys QC/QA-HMA, 3, 70, Surface, 9.5 mm
- (11) Saw Cut
- (29) Mulched Seeding, R
- (98) Remove (By Others)
- (99) Remove

00 N. = 799596.5271 E. = 332875.5910



Sta. 632+83.33, 32.07' Rt. "A"

NOT FOR CONSTRUCTION

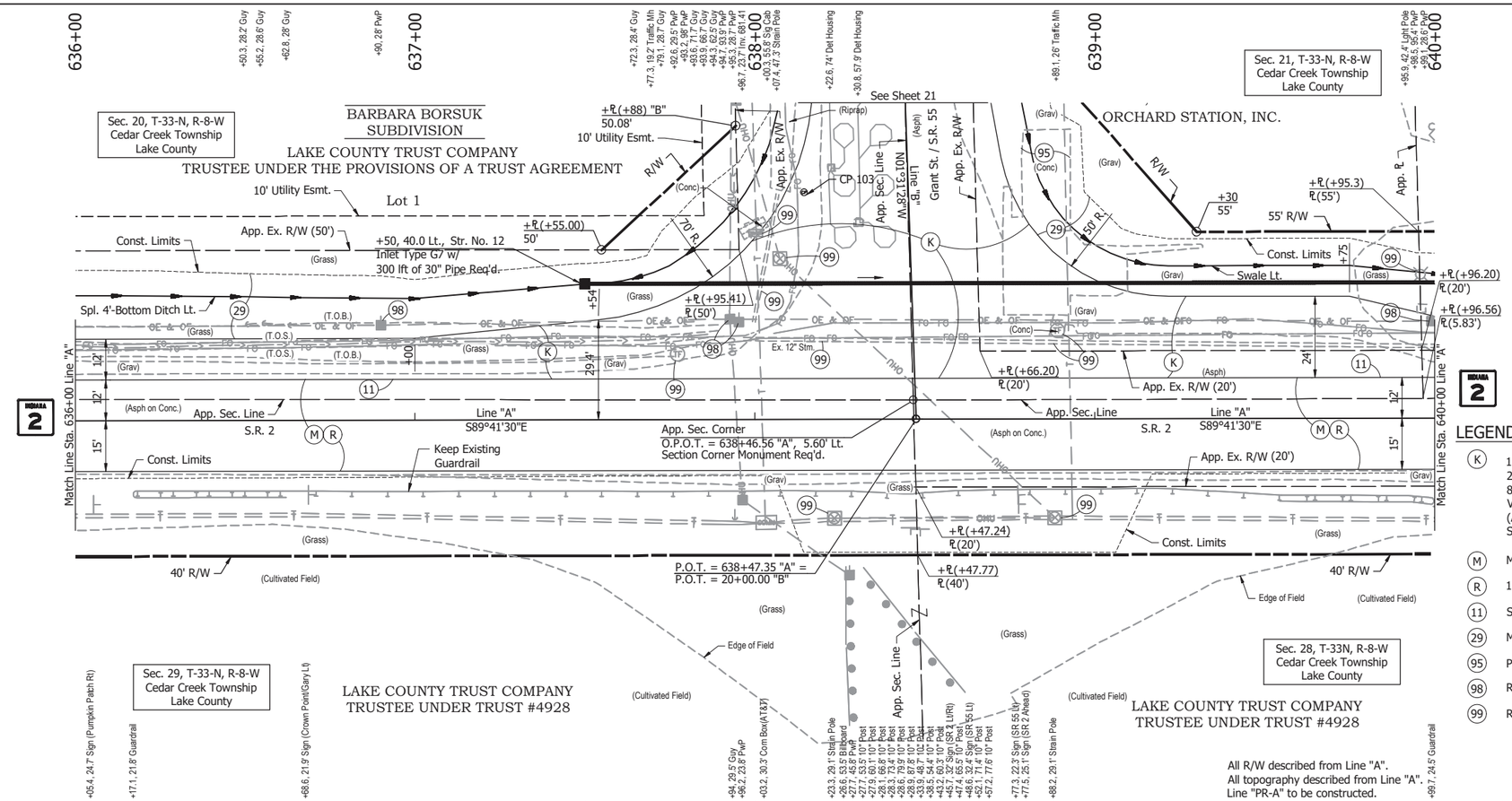
RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

DESIGNED: PH DRAWN: BJS
CHECKED: DGD CHECKED: PH

INDIANA
DEPARTMENT OF TRANSPORTATION

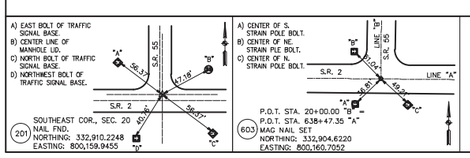
PLAN AND PROFILE - LINE "A"
STA. 632+00 TO STA. 636+00

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
1" = 5'	1702988
SURVEY BOOK	SHEETS
	16 of 51
CONTRACT	PROJECT
R-43130	1702988



LEGEND:

- (K) 165 #/sys QC/QA-HMA, 3, 70, Surface, 9.5 mm on
  275 #/sys QC/QA-HMA, 3, 70, Intermediate, 19.0 mm on
  880 #/sys QC/QA-HMA, 3, 64, Base, 25.0 mm
  Variable Depth Compacted Aggregate, No. 53 on
  (As Needed to Match Existing Adjacent Mainline Pavement Thickness)
  Subgrade Treatment Type IBC (Cement Modification)
- (M) Milling, Asphalt, 1.5"
- (R) 165 #/sys QC/QA-HMA, 3, 70, Surface, 9.5 mm
- (11) Saw Cut
- (29) Mulched Seeding, R
- (95) Pavement Removal
- (98) Remove (By Others)
- (99) Remove



NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

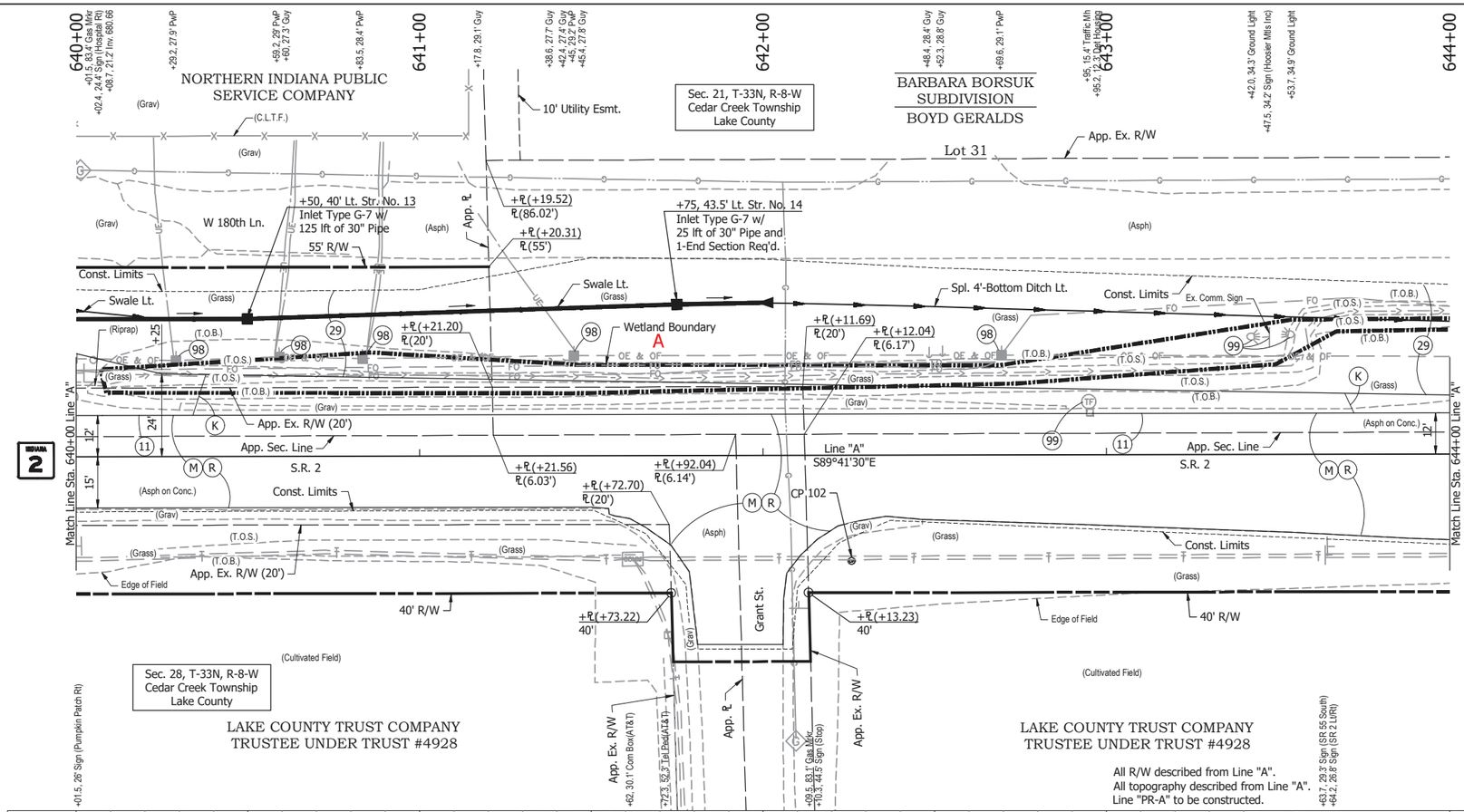
DESIGNED: PH | DRAWN: BJS

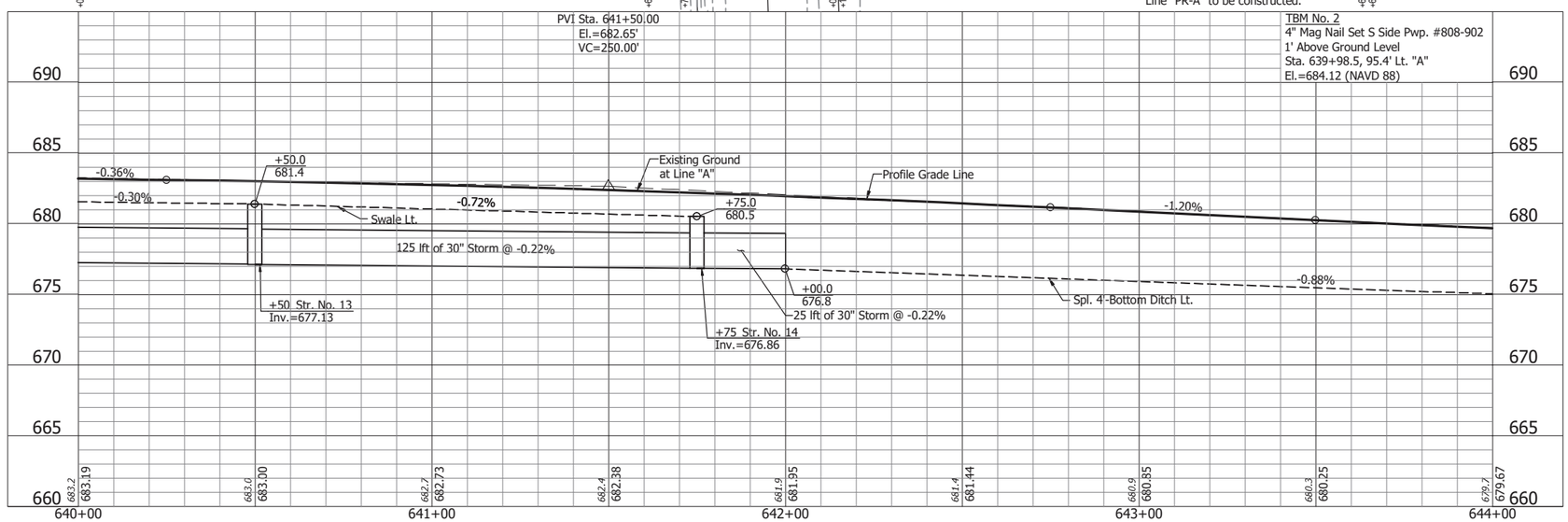
CHECKED: DGD | CHECKED: PH

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE - LINE "A"
STA. 636+00 TO STA. 640+00

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
1" = 5'	1702988
SURVEY BOOK	SHEETS
	17 of 51
CONTRACT	PROJECT
R-43130	1702988





All R/W described from Line "A".
All topography described from Line "A".
Line "PR-A" to be constructed.

LEGEND:

- (K) 165 #/sys QC/QA-HMA, 3, 70, Surface, 9.5 mm on 275 #/sys QC/QA-HMA, 3, 70, Intermediate, 19.0 mm on 880 #/sys QC/QA-HMA, 3, 64, Base, 25.0 mm Variable Depth Compacted Aggregate, No. 53 on (As Needed to Match Existing Adjacent Mainline Pavement Thickness) Subgrade Treatment Type IBC (Cement Modification)
- (M) Milling, Asphalt, 1.5"
- (R) 165 #/sys QC/QA-HMA, 3, 70, Surface, 9.5 mm
- (11) Saw Cut
- (29) Mulched Seeding, R
- (98) Remove (By Others)
- (99) Remove
- Wetland Limits

NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

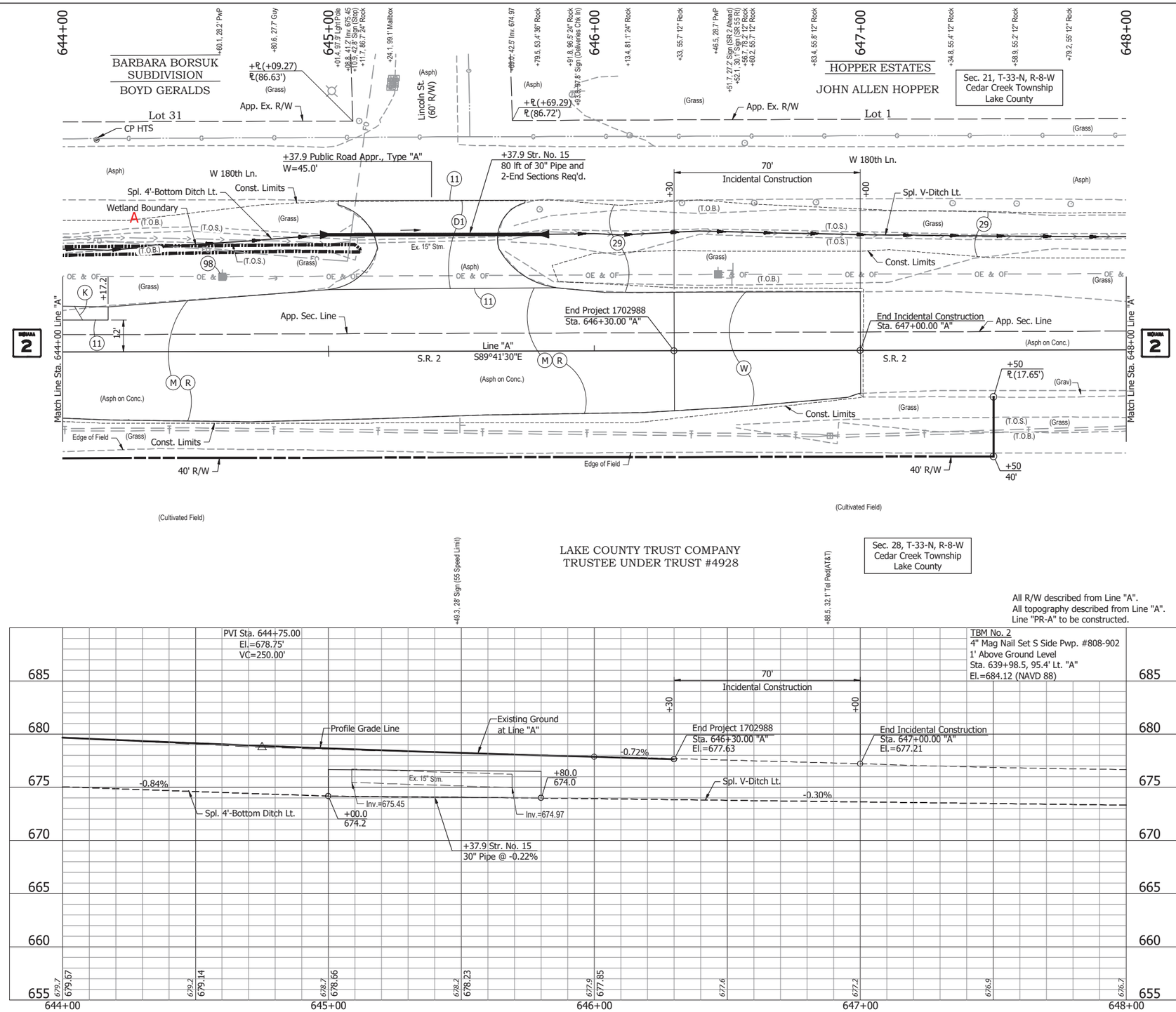
DESIGNED: PH | DRAWN: BJS

CHECKED: DGD | CHECKED: PH

INDIANA DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE - LINE "A"
STA. 640+00 TO STA. 644+00

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
1" = 5'	1702988
SURVEY BOOK	SHEETS
	18 of 51
CONTRACT	PROJECT
R-43130	1702988



LAKE COUNTY TRUST COMPANY
TRUSTEE UNDER TRUST #4928

Sec. 28, T-33-N, R-8-W
Cedar Creek Township
Lake County

All R/W described from Line "A".
All topography described from Line "A".
Line "PR-A" to be constructed.

LEGEND:

- (D1) 165 #/sys HMA Surface, Type B on 275 #/sys HMA Intermediate, Type B on 6" Compacted Aggregate, No. 53 on Subgrade Treatment Type II
- (K) 165 #/sys QC/QA-HMA, 3, 70, Surface, 9.5 mm on 275 #/sys QC/QA-HMA, 3, 70, Intermediate, 19.0 mm on 880 #/sys QC/QA-HMA, 3, 64, Base, 25.0 mm Variable Depth Compacted Aggregate, No. 53 on (As Needed to Match Existing Adjacent Mainline Pavement Thickness) Subgrade Treatment Type IBC (Cement Modification)
- (M) Milling, Asphalt, 1.5"
- (R) 165 #/sys QC/QA-HMA, 3, 70, Surface, 9.5 mm on
- (W) 165 #/sys QC/QA-HMA, 3, 70, Surface, 9.5 mm on Transmission Milling
- (11) Saw Cut
- (29) Mulched Seeding, R
- (98) Remove (By Others)
- Wetland Limits

NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

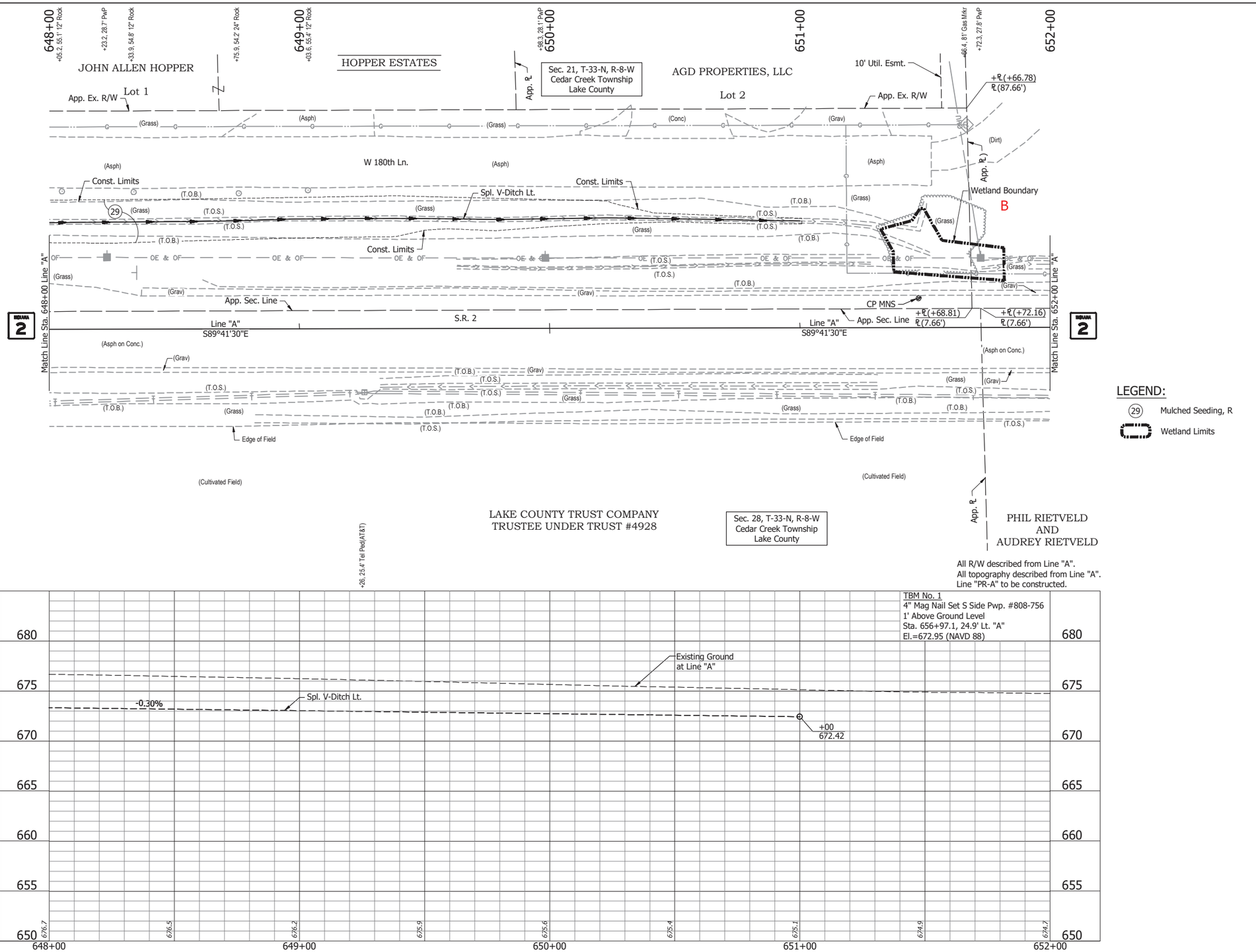
DESIGNED: PH | DRAWN: BJS

CHECKED: DGD | CHECKED: PH

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE - LINE "A"
STA. 644+00 TO STA. 648+00

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
1" = 5'	1702988
SURVEY BOOK	SHEETS
	19 of 51
CONTRACT	PROJECT
R-43130	1702988

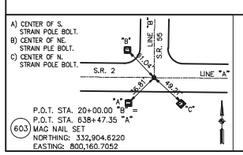


LEGEND:

29 Mulched Seeding, R

Wetland Limits

A) CENTER OF S. STRAIN POLE BOLT.
B) CENTER OF NE. STRAIN PLE BOLT.
C) CENTER OF N. STRAIN POLE BOLT.



P.O.T. STA. 20+00.00 "B" =
P.O.T. STA. 638+47.35 "A"
603 MAG NAIL SET
NORTHING: 332,904.6220
EASTING: 800,160.7052

NOT FOR CONSTRUCTION

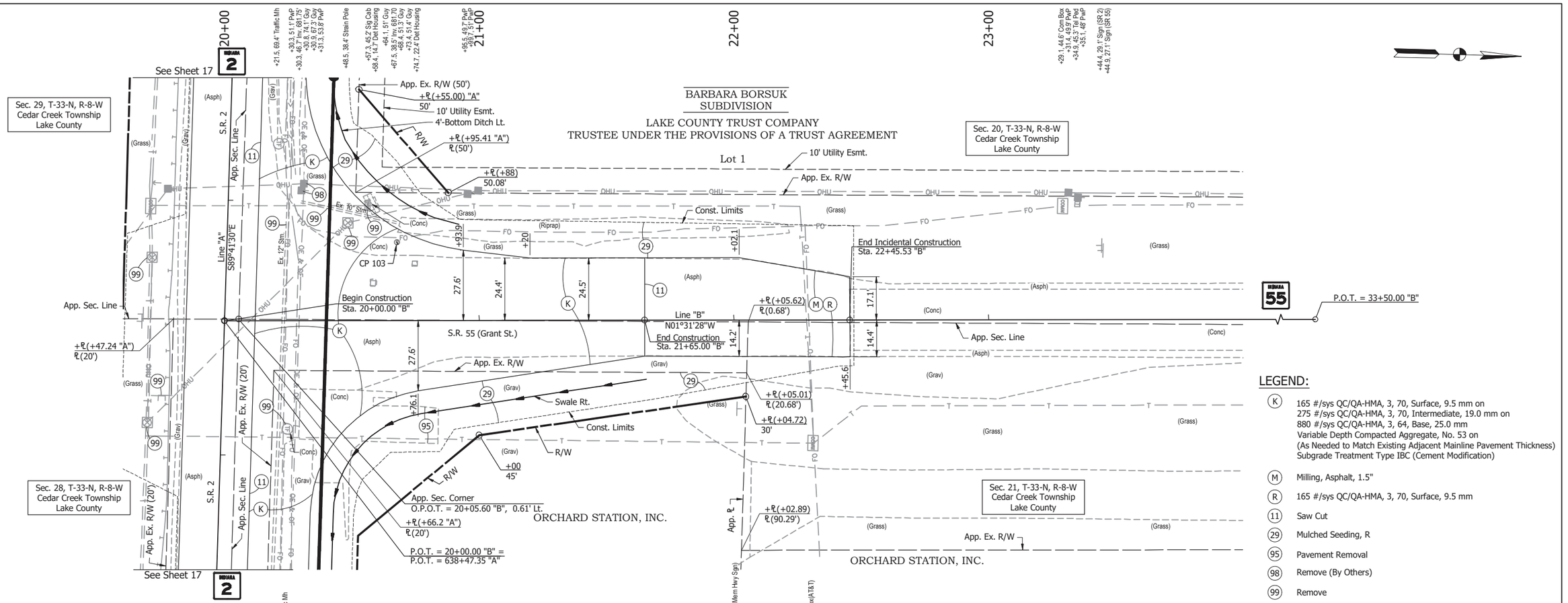
RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

DESIGNED: PH
DRAWN: BJS
CHECKED: DGD
CHECKED: PH

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE - LINE "A"
STA. 648+00 TO STA. 652+00

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
1" = 5'	1702988
SURVEY BOOK	SHEETS
	20 of 51
CONTRACT	PROJECT
R-43130	1702988

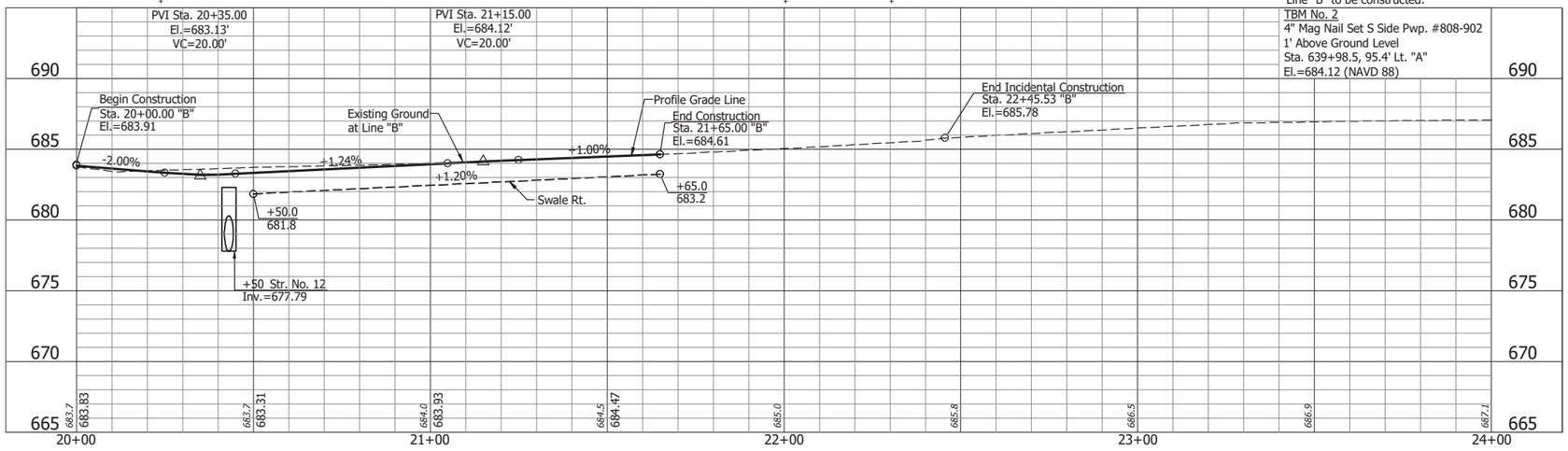


LEGEND:

- (K) 165 #/sys QC/QA-HMA, 3, 70, Surface, 9.5 mm on
  275 #/sys QC/QA-HMA, 3, 70, Intermediate, 19.0 mm on
  880 #/sys QC/QA-HMA, 3, 64, Base, 25.0 mm
  Variable Depth Compacted Aggregate, No. 53 on
  (As Needed to Match Existing Adjacent Mainline Pavement Thickness)
  Subgrade Treatment Type IBC (Cement Modification)
- (M) Milling, Asphalt, 1.5"
- (R) 165 #/sys QC/QA-HMA, 3, 70, Surface, 9.5 mm
- (11) Saw Cut
- (29) Mulched Seeding, R
- (95) Pavement Removal
- (98) Remove (By Others)
- (99) Remove

All R/W described from Line "B".
All topography described from Line "B".
Line "B" to be constructed.

TBM No. 2
4" Mag Nail Set S Side Pwp. #808-902
1' Above Ground Level
Sta. 639+98.5, 95.4' Lt. "A"
El.=684.12 (NAVD 88)



A) EAST BOLT OF TRAFFIC SIGNAL BASE.
B) CENTER LINE OF MANHOLE LID.
C) NORTH BOLT OF TRAFFIC SIGNAL BASE.
D) NORTHWEST BOLT OF TRAFFIC SIGNAL BASE.

(201) SOUTHEAST COR., SEC. 20
NAIL FND.
NORTHING: 332,910.2248
EASTING: 800,159.9455

A) CENTER OF S. STRAIN POLE BOLT.
B) CENTER OF NE. STRAIN PLE BOLT.
C) CENTER OF N. STRAIN POLE BOLT.

(603) P.O.T. STA. 20+00.00 "B" = P.O.T. STA. 638+47.35 "A"
MAG NAIL SET
NORTHING: 332,904.6220
EASTING: 800,160.7052

NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

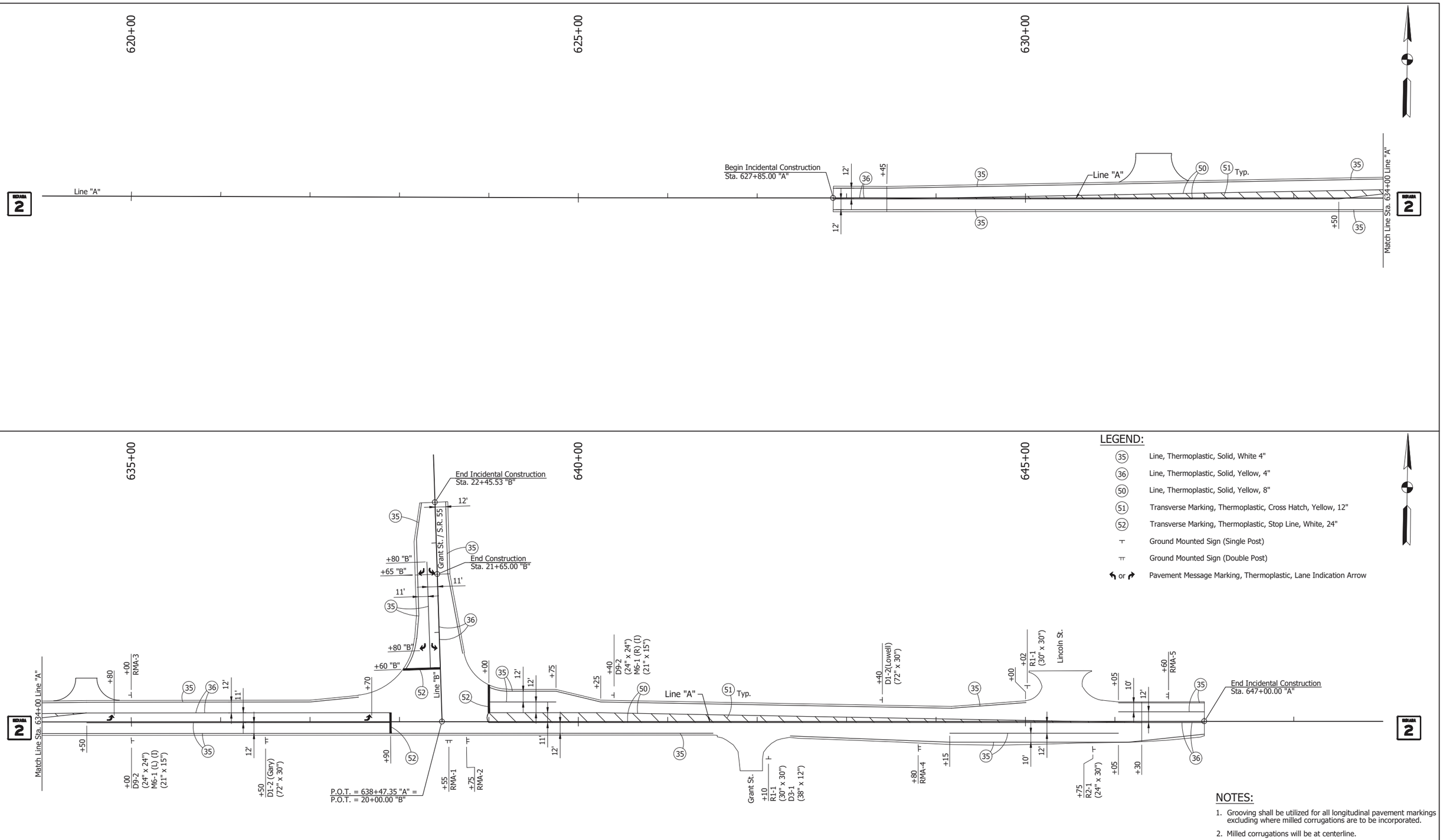
DESIGNED: PH
DRAWN: BJS
CHECKED: DGD
CHECKED: PH

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE - LINE "B"
STA. 20+00 TO STA. 24+00

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
1" = 5'	1702988
SURVEY BOOK	SHEETS
	21 of 51
CONTRACT	PROJECT
R-43130	1702988

GDH — 2/8/2022 9:41 AM — U:\2020\202017 indot laporte\13 sr2 and sr55\Cad\Plan Set\Civil\201713TR_PP10.dwg (PLAN & PROFILE 10)



LEGEND:

(35)	Line, Thermoplastic, Solid, White 4"
(36)	Line, Thermoplastic, Solid, Yellow, 4"
(50)	Line, Thermoplastic, Solid, Yellow, 8"
(51)	Transverse Marking, Thermoplastic, Cross Hatch, Yellow, 12"
(52)	Transverse Marking, Thermoplastic, Stop Line, White, 24"
⊤	Ground Mounted Sign (Single Post)
⊤⊤	Ground Mounted Sign (Double Post)
↰ or ↱	Pavement Message Marking, Thermoplastic, Lane Indication Arrow

NOTES:

1. Grooving shall be utilized for all longitudinal pavement markings excluding where milled corrugations are to be incorporated.
2. Milled corrugations will be at centerline.

NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: PH | DRAWN: JAJ

CHECKED: DGD | CHECKED: PH

INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND SIGNING PLANS

SCALE	BRIDGE FILE
1" = 50'	
	DESIGNATION
	1702988
SURVEY BOOK	SHEETS
	24 of 51
CONTRACT	PROJECT
R-43130	1702988

APPENDIX C
Early Coordination

INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204

Eric J. Holcomb, Governor
Joe McGuinness, Commissioner

January 29, 2021

{See Attached List}

Sample Early Coordination Letter

Re: Early Coordination
Designation Number (Des. No.) 1702988
Intersection Improvement Project
State Road (SR) 2 and SR 55, 0.25 Mile West of SR 55 to 0.25 Mile East of SR 55
Lake County, Indiana

Dear Agency:

The Indiana Department of Transportation (INDOT) with oversight and partial funding from the Federal Highway Administration (FHWA) intend to proceed with an intersection project in Lake County, Indiana. This letter is part of the early coordination phase of the environmental review process. We are requesting comments from your area of expertise regarding any possible environmental effects associated with this project. **Please use the above designation number and description in your reply**. We will incorporate your comments into a study of the project's environmental impacts.

The project is located at SR 2, approximately 0.25 mile west of SR 55 to 0.25 mile east SR 55 in Lake County, Indiana. Specifically, the project is located in Sections 20, 21, 28, and 29, Township 33 North, Range 8 East, as illustrated on the Leroy, Indiana 7.5 minute United States Geological Survey (USGS) topographic quadrangle.

SR 2 is classified as Other Principle Arterial and provides one 12 foot (ft.) travel lane in each direction bordered by 5 ft. shoulders (2 ft. paved). The posted speed limit on SR 2 is 55 miles per hour (mph). SR 2 is a main route from the Town of Lowell to I-65 and SR 55 that provide access to the City of Crown Point and locals beyond to the north.

SR 55 is classified as Other Principle Arterial and provides one 12 ft. travel lane in each direction bordered by 5 ft. shoulders (2 ft. paved). The posted speed limit on SR 55 is 55 mph.

The purpose of this project is to address the operational characteristics of the intersection and reduce the potential for rear-end crash types. The secondary purpose of this project is to improve the intersection's operational performance. The lack of a left-turn lane at this intersection contributes to rear-end crashes and queues of vehicles waiting to make left turns onto SR 55. Approximately 65% of crashes at the intersection consisted of eastbound rear-end crashes, primarily due to stopped vehicles making left-turns from eastbound SR 2 to northbound SR 55.

The proposed project would construct an 11 ft. east-bound left-turn lane on SR 2 at the intersection of SR 55 by widening to the north; constructing each through-lane at 12 feet (ft.); and constructing a 6 ft. wide paved shoulder from the east-bound through-lane to the face of the guardrail. No paved shoulder for west-bound through-lane would be provided. An 11 ft. west-bound right-turn lane on SR 2 at the intersection of SR 55 would be constructed by widening to the north. Signal poles would not be relocated; however, the signal heads would be upgraded with back plates. Left-turn phasing is not necessary. It is anticipated that more than 0.5 acre of additional right-of-way will be required to complete this project. The maintenance of traffic plan has not been developed; however, it is anticipated that traffic would be maintained on each roadway during construction with necessary restrictions to maintain a safe work environment while constructing the proposed improvements.

This project appears to qualify under Category B-3 of the *Minor Projects Programmatic Agreement (MPPA) among the Federal Highway Administration (FHWA), the INDOT, the Advisory Council on Historic Preservation (ACHP), and the Indiana State Historic Preservation Officer (Indiana SHPO) regarding the implementation of the Federal Aid Highway Program in the State of Indiana (*MPPA). This will be verified through coordination with INDOT-CRO (Cultural Resources Office).

This project qualifies for the application of the USFWS range-wide programmatic informal consultation for the Indiana bat and northern long-eared bat and project information will be submitted through USFW's Information for Planning and Consultation (IPaC) separately.

Should we not receive your response within thirty (30) calendar days from the date of this letter, it will be assumed that your agency believes that there will be no adverse effects incurred as a result of the proposed project. However, should you find that an extension to the response time is necessary, a reasonable amount may be granted upon request. If you have any questions regarding this matter, please feel free to contact Elayna Stoner, Project Manager at Metric Environmental elaynas@metricenv.com, or write to her at 6971 Hillsdale Court, Indianapolis, IN 46250. You can also contact Mr. Timothy Hollandsworth, INDOT PM at the INDOT LaPorte District Office thollandsworth@indot.in.gov or write to him at 315 East Boyd Boulevard, LaPorte IN, 46350.

Thank you in advance for your input.
Sincerely,

Elayna Stoner
Elayna Stoner, Project Manager
Metric Environmental, LLC

cc: Metric File No. 20-0010-3
Mr. Chris Jeter, Lawson-Fisher Associates P.C.
Mr. Timothy Hollandsworth, INDOT PM, LaPorte District Office

Attachments to this Letter are Provided in Appendix B of this Document

Attachments: Recipient List, Location Map, USGS Topographic Map, 2011 Aerial Photograph, NRCS Soils Map, NRCS Soils Map Legend, National Wetlands Inventory Map, Flood Insurance Rate Map, and Site Photographs

INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204

Eric J. Holcomb, Governor
Joe McGuinness, Commissioner

The following agencies received Early Coordination Letters:

Federal Highway Administration
LaPorte District
k.carmanygeorge@dot.gov

Indiana Geological and Water Survey
https://igws.indiana.edu/eAssessment

Indiana Department of Natural Resources
Division of Fish and Wildlife
environmentalreview@dnr.in.gov

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

Wellhead Proximity Determinator
https://www.in.gov/idem/cleanwater/pages/wellhead/

Indiana Department of Environmental Management
Proposed Roadway Construction Projects
http://www.in.gov/idem/5284.htm

Field Environmental Officer
Chicago Regional Office
US Department of Housing & Urban Development
Melanie.H.Castillo@hud.gov

Indiana Department of Transportation
Project Manager
thollandsworth@indot.in.gov

Indiana Department of Transportation
Environmental Section Manager
SMichels@indot.in.gov

Indiana Department of Transportation
Office of Aviation
JCourtade@indot.in.gov

State Conservationist
Natural Resource Conservation Service
rick.neilson@in.usda.gov

Northwestern Indiana Regional Planning Commission
twarner@nirpc.org

Lake County Highway Department
smoljjs@lakecountyin.org

Lake County Surveyor
lopezjx@lakecountyin.org

Lake County Commissioner
allenkw@lakecountyin.org

Lake County Emergency Management
Paul Petrice
ppetrice@lakecountyin.org

Town of Lowell, Manager
Craig Hendrix
townmanager@lowell.net

US Fish and Wildlife Service, Northern Field Office
elizabeth_mccloskey@fws.gov

THIS IS NOT A PERMIT

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

Early Coordination/Environmental Assessment

DNR #: ER-23390 **Request Received:** January 29, 2021

Requestor:
Metric Environmental
Elayna Stoner
6971 Hillsdale Court
Indianapolis, IN 46250

Project: SR 2 and SR 55 intersection improvement, from 0.25 mile west to 0.25 mile east of SR 55; Des #1702988

County/Site info: Lake

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 & Wildlife Comments: The measures below should be implemented to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources:
1. Revegetate all bare and disturbed areas with a mixture of grasses (excluding all varieties of tall fescue) and legumes as soon as possible upon completion; low endophyte tall fescue may be used in the ditch bottom and side slopes only.
2. Minimize and contain within the project limits all tree and brush clearing.
3. Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting (greater than 5 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30.
4. Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the stream or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.
5. Plant five trees, at least 2 inches in diameter-at-breast height, for each tree which is removed that is ten inches or greater in diameter-at-breast height.

Contact Staff: Christie L. Stanifer, Environ. Coordinator, Fish & Wildlife
Our agency appreciates this opportunity to be of service. Please contact the above staff member at (317) 232-4080 if we can be of further assistance.

Christie L. Stanifer **Date:** February 26, 2021

Christie L. Stanifer
Environ. 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
http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html

In Reply Refer To: June 16, 2021
Consultation code: 03E12000-2021-I-1300
Event Code: 03E12000-2021-E-06896
Project Name: Intersection Improvement project at SR 2 and SR 55 (Des No. 1702988)

Subject: Concurrence verification letter for the 'Intersection Improvement project at SR 2 and SR 55 (Des No. 1702988)' project under the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request to verify that the **Intersection Improvement project at SR 2 and SR 55 (Des No. 1702988)** (Proposed Action) may rely on the concurrence provided in the February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C 1531 *et seq.*).

Based on the information you provided (Project Description shown below), you have determined that the Proposed Action is within the scope and adheres to the criteria of the PBO, including the adoption of applicable avoidance and minimization measures, and may affect, but is not likely to adversely affect (NLAA) the endangered Indiana bat (*Myotis sodalis*) and/or the threatened Northern long-eared bat (*Myotis septentrionalis*).

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

For Proposed Actions that include bridge/structure removal, replacement, and/or maintenance activities: If your initial bridge/structure assessments failed to detect Indiana bats, but you later detect bats during construction, please submit the Post Assessment Discovery of Bats at Bridge/Structure Form (User Guide Appendix E) to this Service Office. In these instances, potential incidental take of Indiana bats may be exempted provided that the take is reported to the Service.

If the Proposed Action is modified, or new information reveals that it may affect the Indiana bat and/or Northern long-eared bat in a manner or to an extent not considered in the PBO, further review to conclude the requirements of ESA Section 7(a)(2) may be required. If the Proposed Action may affect any other federally-listed or proposed species, and/or any designated critical habitat, additional consultation between the lead Federal action agency and this Service Office is required. If the proposed action has the potential to take bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act may also be required. In either of these circumstances, please contact this Service Office.

Project Description

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

Name

Intersection Improvement project at SR 2 and SR 55 (Des No. 1702988)

Description

The Indiana Department of Transportation (INDOT), with oversight and partial funding from Federal Highway Administration (FHWA) intends to proceed with an intersection improvement project on State Road (SR 2) and SR 55 (Des No. 1702988).

The project is located on SR 2, from 0.25 miles west of SR 55 to 0.25 miles east of SR 55 in Sections 20, 21, 28, and 29, Township 33 North, Range 8 West, in Winfield Township, Lake County, Indiana.

The purpose of this project is to address the operational characteristics of the intersection and reduce the potential for rear−end crash types. The secondary purpose of this project is to improve the intersection's operational performance. The lack of a left−turn lane at this intersection contributes to rear−end crashes and queues of vehicles waiting to make left turns onto SR 55. Approximately 65% of crashes at the intersection consisted of eastbound rear-end crashes, primarily due to stopped vehicles making left−turns from eastbound SR 2 to northbound SR 55. The project will construct an11 ft. eastbound, left−turn lane at the intersection by widening to the north. Each east and west through lane will be 12 ft. wide. Widening to the east on the south side of SR 2 will be completed to incorporate turn−lanes for Grant Street and Lincoln Street. The project is 0.52 mile in length. There are no bridges or culverts located within the project limits.

A review of the USFWS database for Indiana bat and Northern long-eared bat roosting, hibernacula, and capture sites was completed by the INDOT LaPorte District on May 24, 2021. There are no documented sites within 0.5 mile of the project area.

The project is located in a rural, undeveloped area and there is suitable summer habitat located adjacent to the project area. No trees will require removal. Temporary lighting may be required during construction activities; however, new permanent lighting will be installed as part of the proposed improvements. New signal heads with 12 inch LED backplates will be installed. There will be six 3-section heads, and one 4-section head (7 total).

Construction is currently scheduled to begin in Spring 2024 and continue through Fall 2024.

Determination Key Result

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

Qualification Interview

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

   [1] See Indiana bat species profile

   Automatically answered
   Yes

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

   [1] See Northern long-eared bat species profile

   Automatically answered
   Yes

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

   A) Federal Highway Administration (FHWA)

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

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

   No

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

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

   No

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

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

   No

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

   No

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

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

   [2] The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR Section 402.02). Further clarification is provided by the national consultation FAQs.

   Yes

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

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

   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?

    No

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)?

    No

16. 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

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

    Yes

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

    Yes

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

    Yes

20. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **permanent** lighting will be installed or replaced?

    Yes

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

    No

22. 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

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

    No

24. Are the project activities that are not associated with habitat removal, tree removal/ trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives consistent with a No Effect determination in this key?

    Automatically answered
    Yes, other project activities are limited to actions that DO NOT cause any additional stressors to the bat species as described in the BA/BO

25. **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

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

    Yes

27. **Lighting AMM 2**
    Does the lead agency use the BUG (Backlight, Uplight, and Glare) system developed by the Illuminating Engineering Society[1][2] to rate the amount of light emitted in unwanted directions?

    [1] Refer to Fundamentals of Lighting - BUG Ratings

    [2] Refer to The BUG System—A New Way To Control Stray Light

    Yes

28. **Lighting AMM 2**
    Will the **permanent** lighting be designed to be as close to 0 for all three BUG ratings as possible, with a priority of "uplight" of 0 and "backlight" as low as practicable?

    Yes

Project Questionnaire

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

   N/A

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

   N/A

Avoidance And Minimization Measures (AMMs)

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

LIGHTING AMM 1

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

LIGHTING AMM 2

When installing new or replacing existing permanent lights, use downward-facing, full cut-off lens lights (with same intensity or less for replacement lighting); or for those transportation agencies using the BUG system developed by the Illuminating Engineering Society, be as close to 0 for all three ratings with a priority of "uplight" of 0 and "backlight" as low as practicable.

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.

Determination Key Description: FHWA, FRA, FTA Programmatic Consultation For Transportation Projects Affecting NLEB Or Indiana Bat

This key was last updated in IPaC on April 22, 2021. Keys are subject to periodic revision.

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

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

United States Department of the Interior

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

In Reply Refer To: May 17, 2021
Consultation Code: 03E12000-2021-SLI-1300
Event Code: 03E12000-2021-E-06038
Project Name: Intersection Improvement project at SR 2 and SR 55 (Des No. 1702988)

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

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

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

Please use the species list provided and visit the U.S. Fish and Wildlife Service's Region 3 Section 7 Technical Assistance website at - http://www.fws.gov/midwest/endangered/section7/s7process/index.html. This website contains step-by-step instructions which will help you determine if your project will have an adverse effect on listed species and will help lead you through the Section 7 process.

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 03E12000-2021-SLI-1300
Event Code: 03E12000-2021-E-06038
Project Name: Intersection Improvement project at SR 2 and SR 55 (Des No. 1702988)
Project Type: TRANSPORTATION
Project Description: The Indiana Department of Transportation (INDOT), with oversight and partial funding from Federal Highway Administration (FHWA) intends to proceed with an intersection improvement project on SR 2 and SR 55.

The project is located in Lake County, west of I-65. The project is located in a rural, undeveloped area and there is suitable summer habitat located adjacent to the project area. There will be no tree removal.

The purpose of this project is to address the operational characteristics of the intersection and reduce the potential for rear−end crash types. The secondary purpose of this project is to improve the intersection's operational performance. The lack of a left−turn lane at this intersection contributes to rear−end crashes and queues of vehicles waiting to make left turns onto SR 55. Approximately 65% of crashes at the intersection consisted of eastbound rear-end crashes, primarily due to stopped vehicles making left−turns from eastbound SR 2 to northbound SR 55.

A review of the USFWS database for Indiana bat and Northern long-eared bat roosting, hibernacula, and capture sites was completed by the INDOT LaPorte District on May 24, 2021. There are no documented sites within 0.5 mile of the project area.

Temporary lighting may be required during construction activities; however, no new permanent lighting will be installed as part of the proposed improvements. New signal heads will be installed however.

Construction is currently scheduled to begin in Spring 2024 and continue through Fall 2024.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@41.2897002,-87.3536128694387,14z

Counties: Lake County, Indiana

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

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

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

---

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

Mammals

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. The location of the critical habitat is not available. 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. This species only needs to be considered under the following conditions: ▪ Incidental take of the NLEB is not prohibited here. Federal agencies may consult using the 4(d) rule streamlined process. Transportation projects may consult using the programmatic process. See www.fws.gov/midwest/endangered/mammals/nleb/index.html Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

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

Indiana Department of Environmental Management

We Protect Hoosiers and Our Environment.

100 North Senate Avenue - Indianapolis, IN 46204
(800) 451-6027 - (317) 232-8603 - www.idem.IN.gov

INDOT, Laporte District Offce

315 Boyd Boulevard
LaPorte , IN 46350
Date

Metric Environmental
Elayna Stoner
6958 Hillsdale Court
Indianapolis , IN 46250

To Engineers and Consultants Proposing Roadway Construction Projects:

RE: The Indiana Department of Transportation (INDOT) with oversight and partial funding from the Federal Highway Administration (FHWA) intend to proceed with an intersection project in Lake County, Indiana (Des No. 1702988). The project is located at SR 2, approximately 0.25 mile west of SR 55 to 0.25 mile east SR 55 in Lake County, Indiana. Specifically, the project is located in Sections 20, 21, 28, and 29, Township 33 North, Range 8 East, as illustrated on the Leroy, Indiana 7.5 minute United States Geological Survey (USGS) topographic quadrangle. The undertaking proposes to improve the intersection at SR 2 and SR 55. SR 2 runs east-west and SR 55 intersects SR 2 from the north in a T-junction. The project will extend along SR 2 for 0.25 mile in each direction from the intersection. The project is needed because the current intersection lacks a dedicated left-turn lane, which results in frequent rear-end crashes and traffic backups. The purpose of the project is to improve safety conditions and reduce congestion at the intersection. Project improvements will include construction of a left turn lane for the eastbound SR 2 to northbound SR 55 movement, construction of a right turn lane for the westbound SR 2 to northbound SR 55 movement, shoulder reconstruction, signal upgrades (using the existing signal poles), and guardrail replacement. The intersection will be expanded approximately 16 feet to the north to accommodate the new turn lanes.

This letter from the Indiana Department of Environmental Management (IDEM) serves as a standardized response to enquiries inviting IDEM comments on roadway construction, reconstruction, or other improvement projects within existing roadway corridors when the proposed scope of the project is beneath the threshold requiring a formal National Environmental Policy Act-mandated Environmental Assessment or Environmental Impact Statement. As the letter attempts to address all roadway-related environmental topics of potential concern, it is possible that not every topic addressed in the letter will be applicable to your particular roadway project.

For additional information on specific roadway-related topics of interest, please visit the appropriate Web pages cited below, many of which provide contact information for persons within the various program areas who can answer questions not fully addressed in this letter. Also please be mindful that some environmental requirements may be subject to change and so each person intending to include a copy of this letter in their project documentation packet is advised to download the most recently revised version of the letter; found at: http://www.in.gov/idem/5283.htm (http://www.in.gov/idem/5283.htm).

To ensure that all environmentally-related issues are adequately addressed, IDEM recommends that you read this letter in its entirety, and consider each of the following issues as you move forward with the planning of your proposed roadway construction, reconstruction, or improvement project:

WATER AND BIOTIC QUALITY

1. Section 404 of the Clean Water Act requires that you obtain a permit from the U.S. Army Corps of Engineers (USACE) before discharging dredged or fill materials into any wetlands or other waters, such as rivers, lakes, streams, and ditches. Other activities regulated include the relocation, channelization, widening, or other such alteration of a stream, and the mechanical clearing (use of heavy construction equipment) of wetlands. Thus, as a project owner or sponsor, it is your responsibility to ensure that no wetlands are disturbed without the proper permit. Although you may initially refer to the U.S. Fish and Wildlife Service National Wetland Inventory maps as a means of identifying potential areas of concern, please be mindful that those maps do not depict jurisdictional wetlands regulated by the USACE or the Department of Environmental Management. A valid jurisdictional wetlands determination can only be made by the USACE, using the 1987 Wetland Delineation Manual.

   USACE recommends that you have a consultant check to determine whether your project will abut, or lie within, a wetland area. To view a list of consultants that have requested to be included on a list posted by the USACE on their Web site, see USACE Permits and Public Notices (http://www.lrl.usace.army.mil/orf/default.asp) (http://www.lrl.usace.army.mil/orf /default.asp (http://www.lrl.usace.army.mil/orf/default.asp)) and then click on "Information" from the menu on the right-hand side of that page. Their "Consultant List" is the fourth entry down on the "Information" page. Please note that the USACE posts all consultants that request to appear on the list, and that inclusion of any particular consultant on the list does not represent an endorsement of that consultant by the USACE, or by IDEM.

   Much of northern Indiana (Newton, Lake, Porter, LaPorte, St. Joseph, Elkhart, LaGrange, Steuben, and Dekalb counties; large portions of Jasper, Starke, Marshall, Noble, Allen, and Adams counties; and lesser portions of Benton, White, Pulaski, Kosciusko, and Wells counties) is served by the USACE District Office in Detroit (313-226-6812). The central and southern portions of the state (large portions of Benton, White, Pulaski, Kosciosko, and Wells counties; smaller portions of Jasper, Starke, Marshall , Noble, Allen, and Adams counties; and all other Indiana counties located in north-central, central, and southern Indiana) are served by the USACE Louisville District Office (502-315-6733).

Additional information on contacting these U.S. Army Corps of Engineers (USACE) District Offices, government agencies with jurisdiction over wetlands, and other water quality issues, can be found at http://www.in.gov/idem/4396.htm (http://www.in.gov/idem/4396.htm). IDEM recommends that impacts to wetlands and other water resources be avoided to the fullest extent.

2. In the event a Section 404 wetlands permit is required from the USACE, you also must obtain a Section 401 Water Quality Certification from the IDEM Office of Water Quality Wetlands Program. To learn more about the Wetlands Program, visit: http://www.in.gov/idem/4384.htm (http://www.in.gov/idem/4384.htm).

3. If the USACE determines that a wetland or other water body is isolated and not subject to Clean Water Act regulation, it is still regulated by the state of Indiana . A State Isolated Wetland permit from IDEM's Office of Water Quality (OWQ) is required for any activity that results in the discharge of dredged or fill materials into isolated wetlands. To learn more about isolated wetlands, contact the OWQ Wetlands Program at 317-233-8488.

4. If your project will involve over a 0.5 acre of wetland impact, stream relocation, or other large-scale alterations to water bodies such as the creation of a dam or a water diversion, you should seek additional input from the OWQ Wetlands Program staff. Consult the Web at: http://www.in.gov/idem/4384.htm (http://www.in.gov/idem/4384.htm) for the appropriate staff contact to further discuss your project.

5. Work within the one-hundred year floodway of a given water body is regulated by the Department of Natural Resources, Division of Water. The Division issues permits for activities regulated under the follow statutes:
    - IC 14-26-2 Lakes Preservation Act 312 IAC 11
    - IC 14-26-5 Lowering of Ten Acre Lakes Act No related code
    - IC 14-28-1 Flood Control Act 310 IAC 6-1
    - IC 14-29-1 Navigable Waterways Act 312 IAC 6
    - IC 14-29-3 Sand and Gravel Permits Act 312 IAC 6
    - IC 14-29-4 Construction of Channels Act No related code

    For information on these Indiana (statutory) Code and Indiana Administrative Code citations, see the DNR Web site at: http://www.in.gov/dnr/water/9451.htm (http://www.in.gov/dnr/water/9451.htm) . Contact the DNR Division of Water at 317-232-4160 for further information.

    The physical disturbance of the stream and riparian vegetation, especially large trees overhanging any affected water bodies should be limited to only that which is absolutely necessary to complete the project. The shade provided by the large overhanging trees helps maintain proper stream temperatures and dissolved oxygen for aquatic life.

6. For projects involving construction activity (which includes clearing, grading, excavation and other land disturbing activities) that result in the disturbance of one (1), or more, acres of total land area, contact the Office of Water Quality – Watershed Planning Branch (317/233-1864) regarding the need for of a Rule 5 Storm Water Runoff Permit. Visit the following Web page
    - http://www.in.gov/idem/4902.htm (http://www.in.gov/idem/4902.htm)

    To obtain, and operate under, a Rule 5 permit you will first need to develop a Construction Plan (http://www.in.gov/idem/4917.htm#constreq (http://www.in.gov/idem/4917.htm#constreq)), and as described in 327 IAC 15-5-6.5 (http://www.in.gov/legislative/iac/T03270/A00150 [PDF] (http://www.in.gov/legislative/iac/T03270/A00150.PDF), pages 16 through 19). Before you may apply for a Rule 5 Permit, or begin construction, you must submit your Construction Plan to your county Soil and Water Conservation District (SWCD) (http://www.in.gov/isda/soil/contacts/map.html (http://www.in.gov/isda/soil/contacts/map.html)).

    Upon receipt of the construction plan, personnel of the SWCD or the Indiana Department of Environmental Management will review the plan to determine if it meets the requirements of 327 IAC 15-5. Plans that are deemed deficient will require re-submittal. If the plan is sufficient you will be notified and instructed to submit the verification to IDEM as part of the Rule 5 Notice of Intent (NOI) submittal. Once construction begins, staff of the SWCD or Indiana Department of Environmental Management will perform inspections of activities at the site for compliance with the regulation.

    Please be mindful that approximately 149 Municipal Separate Storm Sewer System (MS4) areas are now being established by various local governmental entities throughout the state as part of the implementation of Phase II federal storm water requirements. All of these MS4 areas will eventually take responsibility for Construction Plan review, inspection, and enforcement. As these MS4 areas obtain program approval from IDEM, they will be added to a list of MS4 areas posted on the IDEM Website at: http://www.in.gov/idem/4900.htm (http://www.in.gov/idem/4900.htm).

    If your project is located in an IDEM-approved MS4 area, please contact the local MS4 program about meeting their storm water requirements. Once the MS4 approves the plan, the NOI can be submitted to IDEM.

    Regardless of the size of your project, or which agency you work with to meet storm water requirements, IDEM recommends that appropriate structures and techniques be utilized both during the construction phase, and after completion of the project, to minimize the impacts associated with storm water runoff. The use of appropriate planning and site development and appropriate storm water quality measures are recommended to prevent soil from leaving the construction site during active land disturbance and for post construction water quality concerns. Information and assistance regarding storm water related to construction activities are available from the Soil and Water Conservation District (SWCD) offices in each county or from IDEM.

7. For projects involving impacts to fish and botanical resources, contact the Department of Natural Resources - Division of Fish and Wildlife (317/232-4080) for addition project input.

8. For projects involving water main construction, water main extensions, and new public water supplies, contact the Office of Water Quality - Drinking Water Branch (317-308-3299) regarding the need for permits.

9. For projects involving effluent discharges to waters of the State of Indiana , contact the Office of Water Quality - Permits Branch (317-233-0468) regarding the need for a National Pollutant Discharge Elimination System (NPDES) permit.

10. For projects involving the construction of wastewater facilities and sewer lines, contact the Office of Water Quality - Permits Branch (317-232-8675) regarding the need for permits.

AIR QUALITY

The above-noted project should be designed to minimize any impact on ambient air quality in, or near, the project area. The project must comply with all federal and state air pollution regulations. Consideration should be given to the following:

1. Regarding open burning, and disposing of organic debris generated by land clearing activities; some types of open burning are allowed (http://www.in.gov/idem/4148.htm (http://www.in.gov/idem/4148.htm)) under specific conditions. You also can seek an open burning variance from IDEM.

   However, IDEM generally recommends that you take vegetative wastes to a registered yard waste composting facility or that the waste be chipped or shredded with composting on site (you must register with IDEM if more than 2,000 pounds is to be composted; contact 317/232-0066). The finished compost can then be used as a mulch or soil amendment. You also may bury any vegetative wastes (such as leaves, twigs, branches, limbs, tree trunks and stumps) onsite, although burying large quantities of such material can lead to subsidence problems, later on.

   Reasonable precautions must be taken to minimize fugitive dust emissions from construction and demolition activities. For example, wetting the area with water, constructing wind barriers, or treating dusty areas with chemical stabilizers (such as calcium chloride or several other commercial products). Dirt tracked onto paved roads from unpaved areas should be minimized.

   Additionally, if construction or demolition is conducted in a wooded area where blackbirds have roosted or abandoned buildings or building sections in which pigeons or bats have roosted for 3-5 years precautionary measures should be taken to avoid an outbreak of histoplasmosis. This disease is caused by the fungus Histoplasma capsulatum, which stems from bird or bat droppings that have accumulated in one area for 3-5 years. The spores from this fungus become airborne when the area is disturbed and can cause infections over an entire community downwind of the site. The area should be wetted down prior to cleanup or demolition of the project site. For more detailed information on histoplasmosis prevention and control, please contact the Acute Disease Control Division of the Indiana State Department of Health at (317) 233-7272.

2. The U.S. EPA and the Surgeon General recommend that people not have long-term exposure to radon at levels above 4 pCi/L. (For a county-by-county map of predicted radon levels in Indiana, visit: http://www.in.gov/idem/4145.htm (http://www.in.gov/idem/4145.htm).)

   The U.S. EPA further recommends that all homes (and apartments within three stories of ground level) be tested for radon. If in-home radon levels are determined to be 4 pCi/L, or higher, EPA recommends a follow-up test. If the second test confirms that radon levels are 4 pCi/L, or higher, EPA recommends the installation of radon-reduction measures. (For a list of qualified radon testers and radon mitigation (or reduction) specialists visit: http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf (http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf).) It also is recommended that radon reduction measures be built into all new homes, particularly in areas like Indiana that have moderate to high predicted radon levels.

   To learn more about radon, radon risks, and ways to reduce exposure visit: http://www.in.gov/isdh/regsvcs/radhealth/radon.htm (http://www.in.gov/isdh/regsvcs/radhealth/radon.htm), http://www.in.gov/idem/4145.htm (http://www.in.gov/idem/4145.htm), or http://www.epa.gov/radon/index.html (http://www.epa.gov/radon/index.html).

3. With respect to asbestos removal: all facilities slated for renovation or demolition (except residential buildings that have (4) four or fewer dwelling units and which will not be used for commercial purposes) must be inspected by an Indiana-licensed asbestos inspector prior to the commencement of any renovation or demolition activities. If regulated asbestos-containing material (RACM) that may become airborne is found, any subsequent demolition, renovation, or asbestos removal activities must be performed in accordance with the proper notification and emission control requirements.

   If no asbestos is found where a renovation activity will occur, or if the renovation involves removal of less than 260 linear feet of RACM off of pipes, less than 160 square feet of RACM off of other facility components, or less than 35 cubic feet of RACM off of all facility components, the owner or operator of the project does not need to notify IDEM before beginning the renovation activity.

   For questions on asbestos demolition and renovation activities, you can also call IDEM's Lead/Asbestos section at 1-888-574-8150.

   However, in all cases where a demolition activity will occur (even if no asbestos is found), the owner or operator must still notify IDEM 10 working days prior to the demolition, using the form found at http://www.in.gov/icpr/webfile/formsdiv/44593.pdf (http://www.in.gov/icpr/webfile/formsdiv/44593.pdf).

Anyone submitting a renovation/demolition notification form will be billed a notification fee based upon the amount of friable asbestos containing material to be removed or demolished. Projects that involve the removal of more than 2,600 linear feet of friable asbestos containing materials on pipes, or 1,600 square feet or 400 cubic feet of friable asbestos containing material on other facility components, will be billed a fee of $150 per project; projects below these amounts will be billed a fee of $50 per project. All notification remitters will be billed on a quarterly basis.

For more information about IDEM policy regarding asbestos removal and disposal, visit: http://www.in.gov/idem/4983.htm (http://www.in.gov/idem/4983.htm).

4. With respect to lead-based paint removal: IDEM encourages all efforts to minimize human exposure to lead-based paint chips and dust. IDEM is particularly concerned that young children exposed to lead can suffer from learning disabilities. Although lead-based paint abatement efforts are not mandatory, any abatement that is conducted within housing built before January 1, 1978 , or a child-occupied facility is required to comply with all lead-based paint work practice standards, licensing and notification requirements. For more information about lead-based paint removal visit: http://www.in.gov/isdh/19131.htm (http://www.in.gov/isdh/19131.htm).

5. Ensure that asphalt paving plants are permitted and operate properly. The use of cutback asphalt, or asphalt emulsion containing more than seven percent (7%) oil distillate, is prohibited during the months April through October. See 326 IAC 8-5-2 , Asphalt Paving Rule (http://www.ai.org/legislative/iac/T03260/A00080.PDF (http://www.ai.org/legislative/iac/T03260/A00080.PDF)).

6. If your project involves the construction of a new source of air emissions or the modification of an existing source of air emissions or air pollution control equipment, it will need to be reviewed by the IDEM Office of Air Quality (OAQ). A registration or permit may be required under 326 IAC 2 (View at: www.ai.org/legislative/iac/t03260/a00020.pdf (http://www.ai.org/legislative/iac/t03260/a00020.pdf).) New sources that use or emit hazardous air pollutants may be subject to Section 112 of the Clean Air Act and corresponding state air regulations governing hazardous air pollutants.

7. For more information on air permits visit: http://www.in.gov/idem/4223.htm (http://www.in.gov/idem/4223.htm), or to initiate the IDEM air permitting process, please contact the Office of Air Quality Permit Reviewer of the Day at (317) 233-0178 or OAMPROD atdem.state.in.us.

LAND QUALITY

In order to maintain compliance with all applicable laws regarding contamination and/or proper waste disposal, IDEM recommends that:

1. If the site is found to contain any areas used to dispose of solid or hazardous waste, you need to contact the Office of Land Quality (OLQ)at 317-308-3103.

2. All solid wastes generated by the project, or removed from the project site, need to be taken to a properly permitted solid waste processing or disposal facility. For more information, visit http://www.in.gov/idem/4998.htm (http://www.in.gov/idem/4998.htm).

3. If any contaminated soils are discovered during this project, they may be subject to disposal as hazardous waste. Please contact the OLQ at 317-308-3103 to obtain information on proper disposal procedures.

4. If PCBs are found at this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding management of any PCB wastes from this site.

5. If there are any asbestos disposal issues related to this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding the management of asbestos wastes (Asbestos removal is addressed above, under Air Quality).

6. If the project involves the installation or removal of an underground storage tank, or involves contamination from an underground storage tank, you must contact the IDEM Underground Storage Tank program at 317/308-3039. See: http://www.in.gov/idem/4999.htm (http://www.in.gov/idem/4999.htm).

FINAL REMARKS

Should you need to obtain any environmental permits in association with this proposed project, please be mindful that IC 13-15-8 requires that you notify all adjoining property owners and/or occupants within ten days your submittal of each permit application. However, if you are seeking multiple permits, you can still meet the notification requirement with a single notice if all required permit applications are submitted with the same ten day period.

Should the scope of the proposed project be expanded to the extent that a National Environmental Policy Act Environmental Assessment (EA) or Environmental Impact Statement (EIS) is required, IDEM will actively participate in any early interagency coordination review of the project.

Meanwhile, please note that this letter does not constitute a permit, license, endorsement or any other form of approval on the part of the Indiana Department of Environmental Management regarding any project for which a copy of this letter is used. Also note that is it the responsibility of the project engineer or consultant using this letter to ensure that the most current draft of this document, which is located at http://www.in.gov/idem/5284.htm (http://www.in.gov/idem/5284.htm), is used.

Signature(s) of the Applicant

I acknowledge that the following proposed roadway project will be financed in part, or in whole, by public monies.

Project Description

The Indiana Department of Transportation (INDOT) with oversight and partial funding from the Federal Highway Administration (FHWA) intend to proceed with an intersection project in Lake County, Indiana (Des No. 1702988). The project is located at SR 2, approximately 0.25 mile west of SR 55 to 0.25 mile east SR 55 in Lake County, Indiana. Specifically, the project is located in Sections 20, 21, 28, and 29, Township 33 North, Range 8 East, as illustrated on the Leroy, Indiana 7.5 minute United States Geological Survey (USGS) topographic quadrangle. The undertaking proposes to improve the intersection at SR 2 and SR 55. SR 2 runs east-west and SR 55 intersects SR 2 from the north in a T-junction. The project will extend along SR 2 for 0.25 mile in each direction from the intersection. The project is needed because the current intersection lacks a dedicated left-turn lane, which results in frequent rear-end crashes and traffic backups. The purpose of the project is to improve safety conditions and reduce congestion at the intersection. Project improvements will include construction of a left turn lane for the eastbound SR 2 to northbound SR 55 movement, construction of a right turn lane for the westbound SR 2 to northbound SR 55 movement, shoulder reconstruction, signal upgrades (using the existing signal poles), and guardrail replacement. The intersection will be expanded approximately 16 feet to the north to accommodate the new turn lanes.

With my signature, I do hereby affirm that I have read the letter from the Indiana Department of Environment that appears directly above. In addition, I understand that in order to complete that project in which I am interested, with a minimum of impact to the environment, I must consider all the issues addressed in the aforementioned letter, and further, that I must obtain any required permits.

Date: 2/9/2022

Signature of the INDOT
Project Engineer or Other Responsible Agent Michael Grylewicz

Date: 2/9/2022

Signature of the
For Hire Consultant Elayna Stoner

Elayna Stoner

Organization and Project Information

Project ID:
Des. ID: Des No. 1702988
Project Title: Intersection Improvement Project
Name of Organization: Metric Environmental
Requested by: Elayna Stoner

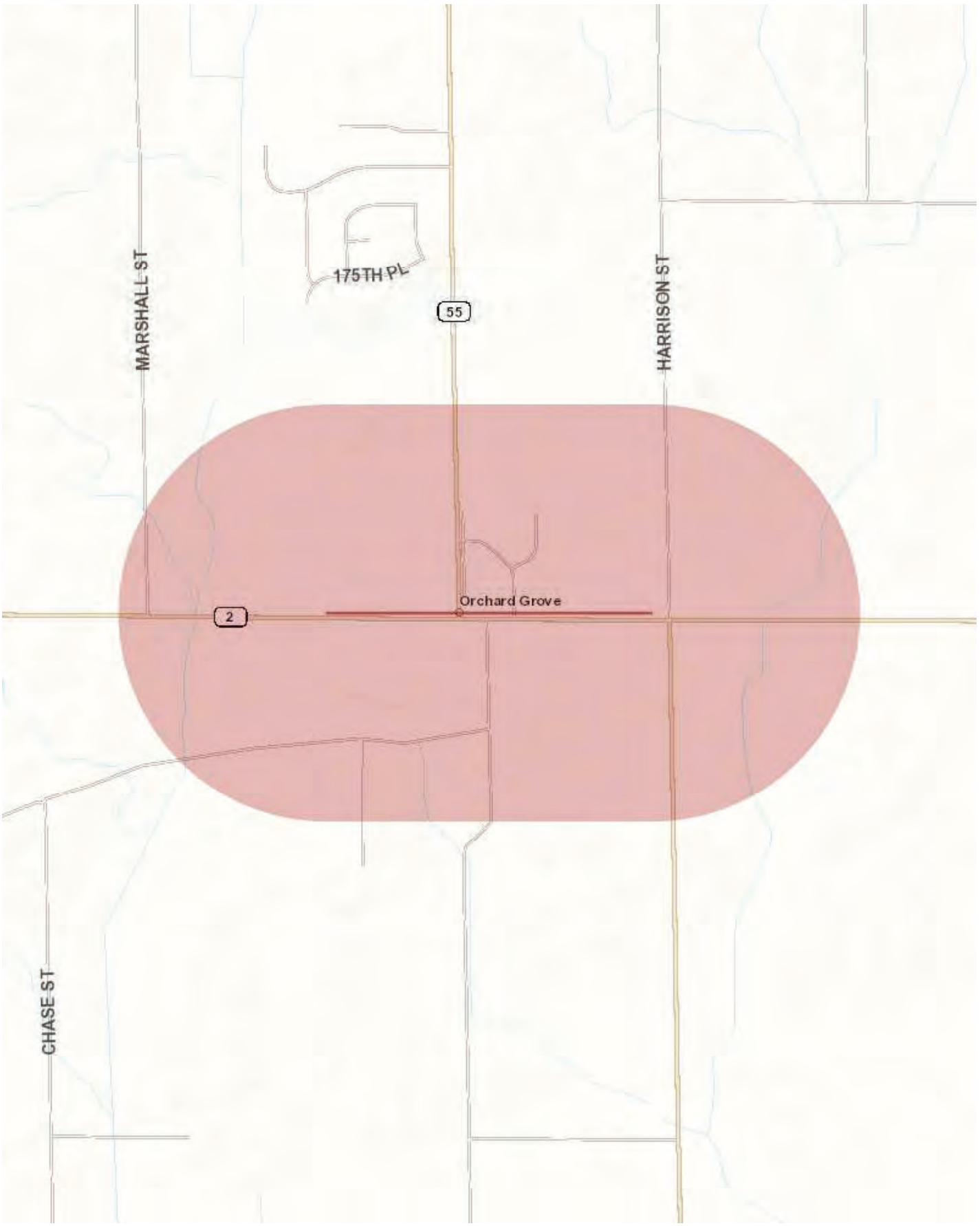
Environmental Assessment Report

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

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

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: January 29, 2021



Elayna Stoner

From: Courtade, Julian <JCourtade@indot.IN.gov>
Sent: Friday, January 29, 2021 3:22 PM
To: Elayna Stoner
Subject: RE: Des. No. 1702988 _ Intersection Improvement Project _ SR 2 and SR 55 _ Lake County, Indiana

Elayna –

I reviewed the Early Coordination Letter and found no issues with any surrounding airspace or public-use airports. This is due to the project meeting the required glideslope criteria from the nearest public-use facility according to 14 CFR Part 77 – Safe, efficient use, and preservation of the navigable airspace.

If any object will exceed 200 ft in height regardless of location, the object will need to be airspaced with the FAA 45 days prior to construction through the OEAAA portal below.

https://oeaaa.faa.gov/oeaaa/external/searchAction.jsp

Please let me know if you have any questions!

Thanks,

Julian L. Courtade
Chief Airport Inspector
100 North Senate Ave, N758-MM
Indianapolis, IN 46204
Cell: (317) 954-7385
Email: jcourtade@indot.in.gov

From: Elayna Stoner <elaynas@metricenv.com>
Sent: Friday, January 29, 2021 2:44 PM
To: DNR Environmental Review <environmentalreview@dnr.IN.gov>; Carmany-George, Karstin (FHWA) <k.carmanygeorge@dot.gov>; Castillo, Melanie H <Melanie.H.Castillo@hud.gov>; Hollandsworth, Timothy <THollandsworth@indot.IN.gov>; Michels, Stewart <SMichels@indot.IN.gov>; Courtade, Julian <JCourtade@indot.IN.gov>; twarner@nirpc.org; smoljjs@lakecountyin.org; lopezjx@lakecountyin.org; allenkw@lakecountyin.org; townmanager@lowell.net
Cc: Susan Castle <Susanc@metricenv.com>
Subject: Des. No. 1702988 _ Intersection Improvement Project _ SR 2 and SR 55 _ Lake County, Indiana

---

USDA
United States Department of Agriculture

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

November 17, 2021

Elayna Stoner
Metric Environmental
6971 Hillsdale Court
Indianapolis, Indiana 46250
elaynas@metricenv.com

Dear Ms. Stoner:

The proposed project to make intersection improvements along State Road 2 and State Road 55 in Lake County, Indiana (Des No 1702988), as referred to in your letter received October 14, 2021, will cause a conversion of prime farmland.

The attached packet of information is for your use completing Parts VI and VII of the AD-1106. 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,

RICHARD NEILSON
Digitally signed by RICHARD NEILSON
Date: 2021.11.18 10:12:01 -05'00'

RICK NEILSON
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 DES1702988 SR2_SR55	Federal Agency Involved
Proposed Land Use	County and State Lake County, Indiana
PART II *(To be completed by NRCS)*	Date Request Received By NRCS 10/14/2021 / 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: 293 ac
Major Crop(s): Corn	Farmable Land In Govt. Jurisdiction Acres: 266576 % 82	Amount of Farmland As Defined in FPPA Acres: 231037 % 71	
Name of Land Evaluation System Used: LESA	Name of State or Local Site Assessment System	Date Land Evaluation Returned by NRCS: 11/17/2021	

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	XXX			
B. Total Acres To Be Converted Indirectly	XXX			
C. Total Acres In Site	XXX			
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	2.72			
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	50			
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)	84			

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)	7			
2. Perimeter In Non-urban Use	(10)	5			
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)	2			
8. Creation Of Non-farmable Farmland	(10)	0			
9. Availability Of Farm Support Services	(5)	2			
10. On-Farm Investments	(20)	0			
11. Effects Of Conversion On Farm Support Services	(10)	0			
12. Compatibility With Existing Agricultural Use	(10)	8			
TOTAL SITE ASSESSMENT POINTS	160	39	0	0	0
PART VII ***(To be completed by Federal Agency)***					
Relative Value Of Farmland *(From Part V)*	100	84	0	0	0
Total Site Assessment *(From Part VI above or local site assessment)*	160	39	0	0	0
TOTAL POINTS ***(Total of above 2 lines)***	260	123	0	0	0

Site Selected: Site A	Date Of Selection 10/15/2021	Was A Local Site Assessment Used? YES ☐ NO ☑

Reason For Selection:

This project received a total point value of less than 160. No other alternatives will be considered without evaluating the effects upon farmland.

Name of Federal agency representative completing this form:	Date:

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

APPENDIX D
Section 106 of the National Historic Preservation Act

Minor Projects PA Project Assessment Form

Date: 11/8/2021

Project Designation Number: 1702988

Route Number: SR 2

Project Description: Intersection Improvements with Added Turn Lanes, 0.5 mile west of SR 55 to 0.25 mile east of SR 55

The undertaking proposes to improve the intersection of SR 2 and SR 55. State Road 2 runs east-west and SR 55 intersects it from the north in a T-junction. The project will extend along SR 2 for 0.25 mile in each direction from the intersection. The project is needed because the current intersection lacks a dedicated left-turn lane, which results in frequent rear-end crashes and traffic backups. The purpose of the project is to improve safety conditions and reduce congestion at the intersection.

Project improvements will include construction of a left turn lane for the eastbound SR 2 to northbound SR 55 movement, construction of a right turn lane for the westbound SR 2 to northbound SR 55 movement, shoulder reconstruction, signal upgrades (using the existing signal poles), and guardrail replacement. The intersection will be expanded approximately 16 feet to the north to accommodate the new turn lanes.

Proposed depth of excavation would be up to three feet below grade for roadway reconstruction and guardrail replacement. Traffic would be maintained on existing roadways through the use of phased construction and lane restrictions, and well as marked detour routes.

There will be approximately 3.74 acres of right-of-way acquisition for this project.

Feature crossed (if applicable): N/A

City/Township: Cedar Creek Township **County:** Lake County

Information reviewed (please check all that apply):

- ☑ General project location map
- ☑ USGS map
- ☑ Aerial photograph
- ☑ Interim Report
- ☑ Written description of project area
- ☑ General project area photos
- ☑ Soil survey data
- ☐ Previously completed historic property reports
- ☑ Previously completed archaeology reports
- ☐ Bridge Inspection Information
- ☑ SHAARD
- ☑ SHAARD GIS
- ☑ Streetview Imagery

Other (please specify): Indiana Historic Building, Bridges, and Cemeteries Map (IHBBCM); County GIS data (accessed via https://portico.mygisonline.com/html5/?viewer=lakeinsurveyor); project information, photos and map provided by Metric Environmental, LLC on 10/8/2021 on file at INDOT, CRO.

Snell, Sam P.
2021 Phase Ia Archaeological Survey For the SR 2 at SR 55 Intersection Improvement Project (Des. No. 1702988), 0.5 Miles West of SR 55 To 0.25 Mile East of SR 55, Cedar Creek Township, Lake County, Indiana. Report on file, Indiana Department of Transportation, Cultural Resources Office, Indianapolis, In.

Please specify all applicable categories and condition(s) (conditions that are applicable are highlighted):

A-5. Repair, in-kind replacement or upgrade of existing lighting, signals, signage, and other traffic control devices in previously disturbed soils.

A-6. Repair, replacement, or upgrade of existing safety appurtenances such as guardrails, barriers, glare screens, and crash attenuators in previously disturbed soils.

B-3. Construction of added travel, turning, or auxiliary lanes (e.g., bicycle, truck climbing, acceleration and deceleration lanes) and shoulder widening under the following conditions ***[BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied]***:

Condition A (Archaeological Resources)

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

i. Work occurs in previously disturbed soils; *OR*

ii. Work occurs in undisturbed soils and an archaeological investigation conducted by the applicant and reviewed by INDOT Cultural Resources Office determines that no National Register-listed or potentially National Register-eligible archaeological resources are present within the project area. If the archaeological investigation locates National Register-listed or potentially National Register-eligible archaeological resources, then full Section 106 review will be required. Copies of any archaeological reports prepared for the project will be provided to the DHPA and any archaeological site form information will be entered directly into the SHAARD by the applicant. The archaeological reports will also be available for viewing (by Tribes only) on INSCOPE**.**

Condition B (Above-Ground Resources)

Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource.

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-Cultural Resources Office (CRO) historian who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61 first performed a desktop review, checking the Indiana Register of Historic Sites and Structures (State Register) and National Register of Historic Places (National Register) lists for Lake County. No listed resources are present within 0.25 mile of the project area, a distance that would serve as an adequate area of potential effects (APE) given the scope of the project and the surrounding terrain.

The Indiana Historic Sites and Structures Inventory (IHSSI) and National Register information for Lake County are available in the Indiana State Historic Architectural and Archaeological Research Database (SHAARD) and the Indiana Historic Buildings, Bridges, and Cemeteries Map (IHBBCM). All sites were reviewed through the IHBBCM, which contains the most recently updated SHAARD information. One IHSSI resource is recorded within 0.25 mile of the project: IHSSI #089-352-90032 (Farm; 1606 Belshaw Road; 1867; "notable").

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

IHSSI #089-352-90032 (Farm; "notable") is located approximately 0.25 mile south of the intersection with SR 2 & SR 55. A line of mature deciduous and coniferous trees largely shield the property from view of the project area. Given the distance from the project area and the intervening vegetation, IHSSI #089-352-90032 is not considered adjacent to the project for the purposes of this determination.

Land surrounding the project is rural with agricultural fields dominating the area on the south side of SR 2 and a collection of commercial and residential properties on the north side of the roadway. Within 0.25 mile of the project, there are 41 above-ground properties present. Of those, only five (5) properties will be 50 years old or older by the time of project letting in 2023.

Two (2) of the properties that will be 50 years old at project letting consist of agricultural outbuildings not associated with a commercial or residential property. One of these agricultural properties dates to the mid-twentieth century and is located approximately 0.23 mile north of the project area. Individually this property is not considered eligible to the National Register due to a lack of cultural significance without additional buildings to provide context. Additionally, other above-ground properties block this property from the project area. The other property dates to the early twentieth century but also has mid-twentieth century outbuildings present. A two-story farmhouse was demolished on the property between 2015 and 2017 based on street-view imagery available online. Mature deciduous and coniferous trees shield the remaining outbuildings from view of the project. For the purposes of this determination, the property is not considered eligible to the National Register due to lack of cultural significance.

A late nineteenth-century residential property is located approximately 0.16 mile north of the project within a late twentieth-century residential development. The house's location within the development and the presence of other properties block the house's view to the project area. For the purposes of this determination, the late nineteenth-century house is not considered adjacent to the project area.

The other two properties are residential located approximately 0.13 and 0.16 mile east of the project area along SR 2. The house located 0.13 mile away dates to the mid-twentieth century and has late twentieth-century outbuildings. It does not appear to meet the *Residential Planning and Development in Indiana, 1940-1973* requirements to be individually eligible to the National Register. In addition, a line of mature deciduous and coniferous trees help to shield the project from view of the property. These trees also shield the house located 0.16 mile away from view of the project. This property consists of an altered mid-nineteenth century farmhouse and various mid-twentieth and late twentieth-century agricultural outbuildings. The house features Stick-style wood trim but has been altered with multiple additions off the rear (north) side of the house, which display the same siding and styling, suggesting the Stick-style details may have been a later addition to the house. The windows also appear to be replacement vinyl windows. The rest of the property has also been altered by the demolition of two outbuildings, including a large two-story barn that attached to the extant mid-twentieth century barn. However, since the property has a limited view of the project area due to the presence of mature trees and the mid-twentieth century house to the west, the property is not considered adjacent to the project for the purposes of this determination.

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 Cultural Resources Office (CRO) archaeologist, who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61, reviewed the archaeology report submitted by Metric Environmental, LLC on behalf of Lawson-Fisher Associates P.C. on October 7, 2021.

An archaeological records check and Phase Ia reconnaissance survey of the project area were conducted by Metric (Snell 2021). A review of SHAARD and SHAARD GIS indicated that one site has been recorded adjacent to the survey area. "Site 12-La-0159 is an unidentified prehistoric site that was recorded in 1977 during research involving Indiana University's Archaeological Survey by M. Earnst Von Rahl. No archaeology report associated with this reference could be found in the SHAARD Database. The site card does not make any determination regarding the site's eligibility for the National Register of Historic Places (NRHP)" (Snell 2021). A 7.87 acre survey area was examined through the excavation of shovel probes, visual inspection of areas of disturbance and pedestrian survey of agricultural fields. No evidence for archaeological deposits was identified by the field reconnaissance and it was recommended that the project be allowed to proceed as planned. It is our opinion that the report is acceptable, and we concur with the evaluations and recommendations made by Metric (Snell 2021). Therefore, there are no archaeological concerns.

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 the INDOT Cultural Resources Office and the Division of Historic Preservation and Archaeology will be notified immediately.

INDOT Cultural Resources staff reviewer(s): Patricia Jo Korzeniewski and Kelyn Alexander

****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.*

ARCHAEOLOGICAL SHORT REPORT

PHASE IA ARCHEAOLOGICAL SURVEY FOR THE SR 2 AT SR 55 INTERSECTION IMPROVEMENT PROJECT (DES. NO. 1702988), 0.5 MILES WEST OF SR 55 TO 0.25 MILE EAST OF SR 55, CEDAR CREEK TOWNSHIP, LAKE COUNTY, INDIANA

PREPARED FOR:

LAWSON-FISHER ASSOCIATES P.C.
525 WEST WASHINGTON AVE.
SOUTH BEND, INDIANA 46601

LEAD AGENCY:

FEDERAL HIGHWAY ADMINISTRATION

Prepared by:
Megan Copenhaver and Margaret Alway

Complex Environment. Creative Solutions.

6958 Hillsdale Court
Indianapolis, IN 46256
Telephone: 317.400.1633
www.metricenv.com

_____

Sam P. Snell, MS, RPA
Archaeological Principal Investigator
sams@metricenv.com
October 7, 2021

INDIANA ARCHAEOLOGICAL SHORT REPORT

State Form 54566 (R2 / 11-20)

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)*
Megan Copenhaver and Margaret Alway	October 7, 2021

Title of project
Phase Ia Archaeological Survey for the SR 2 at SR 55 Intersection Improvement Project (Des 1702988), 0.5 Miles West of SR 55 to 0.25 Miles East of SR 55, Cedar Creek Township, Lake County, Indiana

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

Name(s) of author(s) of previous report
NA

Title of previous report
NA

Date of previous report *(month, day, year)*	DHPA number
NA	NA

PROJECT OVERVIEW

Description of project
The proposed project entails improvements to the intersection of State Route (SR) 2 at SR 55 located 0.8 kilometers (km) (0.5 miles [mi]) west of SR 55 to 0.4 km (0.25 mi) east of SR 55 in Cedar Creek Township, Lake County Indiana (Figure 1).

The project includes construction of a 3.3-meter (m) (11-foot [ft]) wide east-bound left turn lane on State Route (SR) 2 at the intersection of SR 55 by widening SR 2 to the north; constructing each through-lane at a width of 3.6 m (12 ft) wide; and constructing a 1.2-m (4-ft) wide paved shoulder from the east-bound through-lane to the face of guardrail. No paved shoulder for the west-bound through-lane will be provided. A 3.3-m (11-ft) wide west-bound right turn lane on SR 2 at the intersection of SR 55 will be constructed by widening to the north. Signal poles will not be relocated. The guardrail layout will be reconstructed for guardrail-face-to-obstruction distance equal to 0.8 m (2.75 ft) for roadside hazard protection. This cross-section should not require right-of-way (ROW) purchase near an existing billboard and will allow the billboard to remain at its current 3.9 m (13 ft) offset from ROW. The ROW extends 10.6 m (35 ft) north of SR 2 and 15.24 m (50 ft) south of SR 2. Continued widening to the east (on the south side of SR 2) wil be done to incorporate turn lanes for Grant Street and Lincoln Street. Signal heads will be upgraded to new standard with back plates. Left turn phasing is not necessary.

The Phase Ia archaeological survey area was defined as extending approximately 0.4 km (0.25 mi) east and 0.4 km (0.25 mi) west along SR 2 from the center of its intersection with SR 55, 10 m (32.8 ft) north and 15 m (49.2 ft) south of the edge of pavement along SR 2, and 76.4 m (250.7 ft) north of the intersection along SR 55 and 14 m (45.9 ft) off of the centerline of SR 55. The survey area encompasses 3.18 hectares (ha) [7.87 acres (ac)].

INDOT designation number(s)	Project number	DHPA number	DHPA plan number
1702988	20-0010-3		NA

Prepared for: *(Company / Institution / Agency)*
Lawson-Fisher Associates P.C.

Name of contact
Michael J. Guzik, P.E.

Address *(number and street, city, state, and ZIP code)*
525 West Washington Avenue, South Bend, IN 46601

Telephone number	E-mail address
(574) 234-3167	mguzik@lawson-fisher.com

Name of principal investigator
Samuel P. Snell, MS, RPA

Name of company / institution
Metric Environmental, LLC

Address *(number and street, city, state, and ZIP code)*
6958 Hillsdale Court, Indianapolis, IN 46250

Telephone number	E-mail address
(317) 912-3499	sams@metricenv.com

Signature of principal investigator *(Required)*	Date *(month, day, year)*

The standard is screened shovel probes using ¼" size mesh. If shovel probes were not screened, or a different size mesh was utilized, an explanation must be provided in the methods below.

Describe methods.

Shovel Test Probes (STP): In relatively level areas, where the ground surface has less than 30 percent visibility and there is no obvious sign of distubance, shovel probing was utilized. This method consisted of systematically digging shovel probes every 15 m (49.2 ft) and extending at least 5 centimeters (cm) (2.0 inches [in]) into the subsoil and screening the excavated soil through 0.63-cm (0.25-in) hardware cloth screen. A standard record was kept that includes soil profile, soil texture, soil color (Munsell), and presence/absence of cultural materials.

Cores / auger probes *(Check all that apply.)*

☐ Cores / auger probes Interval: ☐ Five (5) meters ☐ Ten (10) meters ☒ Fifteen (15) meters ☐ Other *(Describe below.)*

The standard is screened cores / auger probes using ¼" size mesh. If cores / auger probes were not screened, or a different size mesh was utilized, an explanation must be provided in the methods below.

Describe methods.

NA

Additional field investigation comments

NA

RESULTS

Summary of relevant regional culture background

Cultural manifestations near the project reflect the general sequence from Paleoindian through Historic American. Within Jackson County, based on the SHAARD database, there are 28 Paleoindian, 33 Early Archaic, 14 Middle Archaic, 38 Late Archaic, 14 Early Woodland, 37 Middle Woodland, 40 Late Woodland, 10 Late Woodland/Mississippian, 33 Mississippian, and 104 Historic Sites. No Late Paleoindian, Late Paleoindian/Early Archaic, and Late Archaic/Early Woodland.

There are six historic architectural resources within a 0.8-km (0.5-mi) radius of the project in the Lake County Interim reports viewed through the DHPA Indiana Historic Buildings, Bridges, and Cemeteries Map (Indiana Department of Natural Resources 2019). The closest resource is a Farm which is rated as "Notable" and is located 420 m (1,377.9 ft) south of the current survey area.

The Descriptive Map of Unsold Lands (Doolittle & Munson 1840), the Map of Lake County, Cultural (a) and Map of Lake County, Road (b) (Indiana Highway Survey Commission 1936a and 1936b) and the Map of Lake County (County Surveyor's Office 1958) were investigated. State Route 2, SR 55, and Grant Street first appear on the 1936 maps in their current alignment. These maps show sparse historic structures within the vicinity of the current survey area. The 1936a Cultural Map shows a structure located in the northwestern quadrant of the intersection of SR 2 and SR 55.

The 1953, 1969, and 1992 Leroy, IN USGS topographic maps were investigated. These maps show SR 2, SR 55, and Grant Street in their current alignment and demonstrate sparse historic structures wtihin the vicinity of the survey area. All of these maps show two structures existing at the northwestern quadrant of the intersection of SR 2 and SR 55, however, this area is now a gravel lot adjacent to an electric power station. It appears that these structures were demolished at some point after 1992.

Historic aerials from 1939, 1954, 1958, 1965, and 1973 (Indiana Geological and Water Survey 2020); 1952, 1962, 1969 and 1971 (United States Geological Survey 2020) and Google Earth 1985-2017 were investigated. All of these aerials show a road that follows the current alignment of SR 2, SR 55, and Grant Street and demonstrate sparse historic structures within the vicinity of the project area. The 1954 aerial shows a structure located in the northwestern quadrant of the intersection of SR 2 and SR 55, however, any existing structure is shown to have been demolished at some point between 1985 and 1998. The aerials from 1998 show that area to be a vacant lot that is completely covered with gravel in the 2015 aerial.

Records check *(Check all that apply.)*

☐ The project area does not have the potential to contain archaeological resources. *Provide explanation / justification.*

☐ There are previously recorded archaeological resources within the project area, but those resources do not warrant additional archaeological investigation. *Provide explanation / justification.*

☒ The project area contains previously recorded archaeological resources that warrant additional investigation and/or the project area has the potential to contain archaeological resources. *Provide explanation / justification.*

☐ A cemetery is located within or adjacent to the project area.

Explanation / justification

The survey area has the potential to contain intact soils and thus has the potential to contain previously unidentified archaeological resources.

Phase Ia archaeological reconnaissance *(Check all that apply.)*

- ☐ No Phase Ia reconnaissance was conducted.
- ☒ Phase Ia reconnaissance located no archaeological resources.
- ☐ Previously recorded sites were in the project area.
  - ☐ Artifacts and/or features at a previously recorded site(s) within the project area were not discovered. *List the site(s) below.*
- ☐ Phase Ia reconnaissance has identified landforms conducive to buried archaeological deposits. *Describe below.*

List sites.

Describe landforms.

Number of shovel probes excavated	Number of cores / auger probes
33	NA

Describe disturbances. Attach photographs documenting disturbances.

Road grade slope, road side ditch, buried utilities

Actual area surveyed *(hectares)*	Actual area surveyed *(acres)*
3.18	7.87

Explain results of fieldwork.

The project was surveyed in fours areas, designated through Areas 1 through 4 (Figures 2 through 20).

Area 1 was located north of SR 2 and west of SR 55 and consisted of a sparsely wooded area with grassy vegetation, roadside ditch, road grade slope, and buried utilities (Figures 5 through 10). A total of 29 STPs were excavated in this area in two transects. Transect 1 ran along the western side of SR 55 and contained four STPs. All of these STPs displayed similar soil profiles of a very dark gray (10YR3/1) loam extending 28 to 47 cm (11 to 18.5 in) below ground surface and underlain by a dark yellowish brown (10YR5/4) loam subsoil. Transect 2 ran along the northern side of SR 2 and contained 25 STPs. Shovel Test Probe 1 was disturbed due to buried utilities and contained a soil profile of a mixed very dark gray (10YR3/1) loam and dark yellowish brown (10YR5/4) loam extending 30 cm (11.8 in) below ground surface and underlain by a dark yellowish brown (10YR5/4) loam subsoil. All other STPs contained similar soil profiles of a very dark gray (10YR3/1) loam extending 21 to 52 cm (8 to 20 in) below ground surface and underlain by a dark yelllowish brown (10YR5/4) loam subsoil.

Area 2 was located south of SR 2 and west of Grant Street and consisted of an agricultural field of newly planted soybeans with corn stubble, and an area of standing water, and had a surface visibilty of 50 percent (Figures 6 through 13). This area was pedestrian surveyed in three transects at 5 m (16.4 ft) intervals. Site 12La159 was mapped adjacent to the western end of Area 2. The site was not relocated during the pedestrian survey.

Area 3 was located south of SR 2 and west and east of Grant Street and consisted of buried utilities, roadside ditch, an area of mowed grass and an agricultural field of newly planted corn with corn stubble with a visibility of 50 to 70 percent (Figures 14 through 17). This area was pedestrain surveyed in three transect at 5 m (16.4 ft) intervals and a total four STPs were excavateda. All of these STPs displayed similar soil profiles of a very dark gray (10YR3/1) loam extending 32 to 45 cm (12.5 to 17 in) below ground surface and underlain by a dark yellowish brown (10YR4/4) loam subsoil.

Area 4 was located north of SR 2 and east of SR 55 and consisted of a large roadside ditch, buried utilities, and a gravel parking lot (Figures 18 through 20). No STPs were attempted in this area.

No archaeological resources were identified as a result of this excavation. No further archaeological work is recommended for this project.

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 Ia archaeological reconnaissance is recommended.
- ☐ 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 Ia archaeological reconnaissance *(Check all that apply.)*

☒ It is recommended that the project be allowed to proceed as planned because the Phase Ia 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 Ic archaeological subsurface reconnaissance be conducted before the project is allowed to proceed. The Phase Ia archaeological reconnaissance has determined that the project area includes landforms which have the potential to contain buried archaeological deposits.

Other recommendations / commitments

In the unlikely event that archaeological deposits or human remains are encountered during the construction phase of the project, all work must cease within 30 m (100 ft) of the find and archaeologists from the Indiana Department of Historic Preservation and Archaeology and the Indiana Department of Transportation-Cultural Resources Office will be notified.

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

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

Anslinger, C. Michael
1987 Archaeological Reconnaissance and Recommendations, Replacement of Bridge Structure 2-45-7354 on S.R. 2 over Spring Run, Lake County, Indiana. (AR-45-00253). Indiana State University Anthropology Laboratory, Terre Haute, IN.

1991 Systematic Archaeological Survey in the Kankakee Valley and Adjacent Morainal Uplands, Lake County, Indiana. (AR-45-00531). Indiana State University Anthropology Laboratory, Terre Haute, IN.

County Surveyor's Office
1958 Map of Lake County. County Surveyor's Office, Gary, IN.

Doolittle & Munson
1840 Descriptive Map of Unsold Lands. Doolittle & Munson, Cincinnati, OH.

Indiana Department of Natural Resources
2019 Indiana Buildings Bridges and Cemeteries Map, (https://indnr.maps.arcgis.com/apps/webappviewer/index.html?id=1593429c17c34942a0d1d3fac03c4a80) accessed February 5, 2021.

Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology (IDNR/DHPA)
2021 Indiana State Historical Architectural and Archaeological Research Database (SHAARD). Electronic Document, https://secure.in.gov/apps/dnr/shaard/welcome.html, accessed February 5, 2021.

Indiana Geological & Water Survey
2020 Indiana Historical Aerial Photo Index, https://igws.indiana.edu/IHAPI/Map/ accessed February 5, 2021.

Indiana Geographic Information Council
2020 Indiana Map, https://maps.indiana.edu/ accessed Febrary 5, 2021.

Indiana Highway Survey Commission
1936a Map of Lake County, Cultural. Indiana Highway Survey Commission, Indianapolis, IN.
1936b Map of Lake County, Road. Indiana Highways Survey Commission, Indianapolis, IN.

Tucker, Emily K. and Mitchell K. Zoll
2001 Archaeological Field Reconnaissance SR 2 Over Griesel Ditch Project Lake County, Indiana. (AR-45-00250). Archaeological Resources Management Services Ball State University, Muncie, IN.

United States Department of Agriculture
2019 Web Soil Survey, https://websoilsurvey.nrcs.usda.gov accessed February 5, 2021.

APPENDIX E
Red Flag and Hazardous Materials

INDIANA DEPARTMENT OF TRANSPORTATION

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

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

Eric Holcomb, Governor
Joe McGuinness, Commissioner

Date: October 14, 2021

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

From: Colin Keith
Metric Environmental, LLC
6971 Hillsdale Court
Indianapolis, IN 46250
colink@metricenv.com

Re: RED FLAG INVESTIGATION
DES #1702988, State Project
Intersection Improvements
State Road (SR) 2 at SR 55
Lake County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: The project will improve the intersection of SR 2 and SR 55; SR 2 runs east-west and SR 55 intersects it from the north in a T-junction. The project will extend along SR 2 for 0.25 mile in each direction from the intersection. Project improvements will include construction of a left turn lane for the eastbound SR 2 to northbound SR 55 movement, construction of a right turn lane for the westbound SR 2 to northbound SR 55 movement, shoulder reconstruction, signal upgrades (using the existing signal poles), and guardrail replacement. The intersection will be expanded approximately 16 feet to the north to accommodate the new turn lanes.

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

If this is a bridge project, is the bridge Historical? Yes ☐ No ☐ , Select ☐ Non-Select ☐
(Note: If the project involves a historical bridge, please include the bridge information in the Recommendations Section of the report).

Proposed right of way: Temporary ☐ #Acres _____ Permanent ☒ #Acres ~3.6 Not Applicable ☐

Type and proposed depth of excavation: Up to 3 feet below grade for roadway reconstruction and guardrail replacement.

Maintenance of traffic: MOT plan is still under development but is anticipated to consist of maintaining traffic on the existing roadways through the use of phased construction and lane restrictions.

Work in waterway: Yes ☐ No ☒ Below ordinary high water mark: Yes ☐ No ☐

State Project: ☒ LPA: ☐

Any other factors influencing recommendations: N/A

INFRASTRUCTURE TABLE AND SUMMARY

Infrastructure Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Religious Facilities	**N/A**	Recreational Facilities	**N/A**
Airports[1]	**N/A**	Pipelines	**N/A**
Cemeteries	**2**	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) was conducted.

Explanation:
Cemeteries: Two (2) cemeteries are located within the 0.5 mile search radius. Both cemetery icons represent the same cemetery: Orchard Grove Cemetery, approximately 0.25 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	**15**
Canal Structures – Historic	**N/A**	Lakes	**1**
NPS NRI Listed	**N/A**	Floodplain - DFIRM	**4**
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	**5**	Sinking-Stream Basins	**N/A**

Explanation:
Rivers and Streams: Five (5) streams are located within the 0.5 mile search radius. The closest is an unnamed tributary approximately 0.29 mile south of the project area. No impact is expected.

NWI Wetlands: Fifteen (15) NWI wetlands are located within the 0.5 mile search radius. The closest is approximately 0.05 mile north of the east end of the project area. No impact is expected.

Lakes: One (1) lake is located within the 0.5 mile search radius. The lake is approximately 0.27 miles north of the project area. No impact is expected.

Floodplains: Four (4) floodplain polygons are located within the 0.5 mile search radius. The closest is approximately 0.34 mile west of the project area. No impact is expected.

MINING AND MINERAL EXPLORATION TABLE AND SUMMARY

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

Explanation:
There are no mining/mineral exploration features within the 0.5 mile search radius.

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

Hazardous Material Concerns Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Superfund	**N/A**	Manufactured Gas Plant Sites	**N/A**
RCRA Generator/TSD	**N/A**	Open Dump Waste Sites	**N/A**
RCRA Corrective Action Sites	**N/A**	Restricted Waste Sites	**N/A**
State Cleanup Sites	**N/A**	Waste Transfer Stations	**N/A**
Septage Waste Sites	**N/A**	Tire Waste Sites	**N/A**
Underground Storage Tank (UST) Sites	**N/A**	Confined Feeding Operations (CFO)	**N/A**
Voluntary Remediation Program	**N/A**	Brownfields	**N/A**
Construction Demolition Waste	**N/A**	Institutional Controls	**N/A**
Solid Waste Landfill	**1**	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**

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

Explanation:

Solid Waste Landfills: One (1) landfill boundary is located within the 0.5 mile search area. Van Deursen SFS (AI #24429) is approximately 0.48 mile southwest of the project area. The Van Deursen Solid Fill Site was denied renewal of an operating permit on October 21, 1987 and ordered to cease operation. No impact is expected.

ECOLOGICAL INFORMATION SUMMARY

The Lake 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/naturepreserve/files/np_lake.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. Due to the nature of project activities, this project will fall under the guidelines set forth under USFWS Interim Policy for the Review of Highway Transportation Projects in Indiana dated May 29, 2013. No further coordination is necessary.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The 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: N/A

MINING/MINERAL EXPLORATION: N/A

HAZARDOUS MATERIAL CONCERNS: N/A

ECOLOGICAL INFORMATION: 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".

INDOT ESD concurrence: Nicole Fohey-Breting Digitally signed by Nicole Fohey-Breting Date: 2021.10.14 11:23:50 -04'00' (Signature)

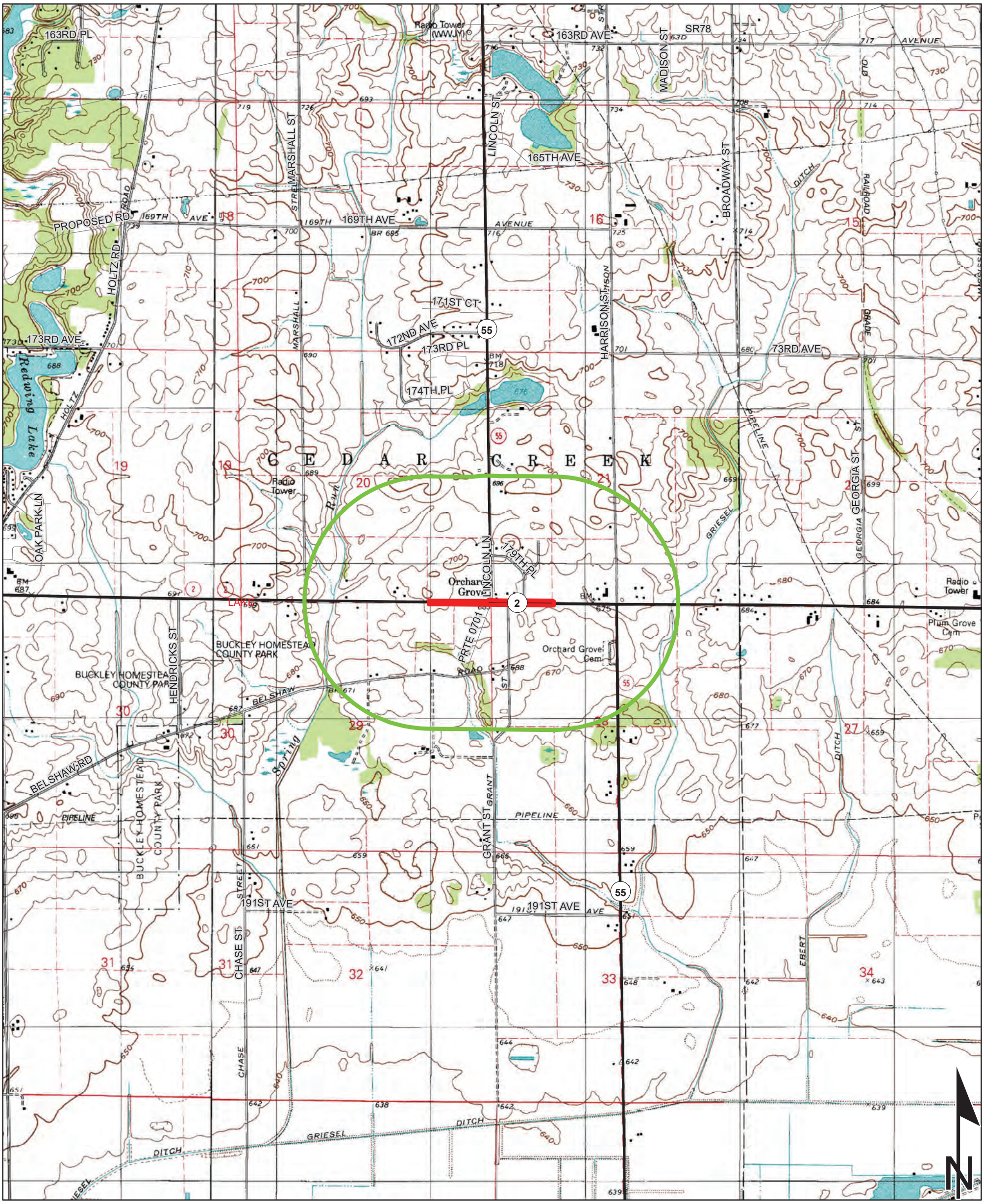
Prepared by:
Colin Keith
Project Scientist
Metric Environmental, LLC

Graphics:

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

SITE LOCATION: YES
INFRASTRUCTURE: YES
WATER RESOURCES: YES
MINING/MINERAL EXPLORATION: N/A
HAZARDOUS MATERIAL CONCERNS: YES

Red Flag Investigation - Site Location
SR 2 at SR 55
Des. No. 1702988, Intersection Improvements
Lake County, Indiana



0.5 0.25 0 0.5 Miles

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

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

LEROY QUADRANGLE
INDIANA
7.5 MINUTE SERIES
(TOPOGRAPHIC)

Red Flag Investigation - Infrastructure
SR 2 at SR 55
Des. No. 1702988, Intersection Improvements
Lake County, Indiana

0.25 0.125 0 0.25 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.

- 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 2 at SR 55
Des. No. 1702988, Intersection Improvements
Lake County, Indiana

0.25 0.125 0 0.25 Miles

Sources:

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

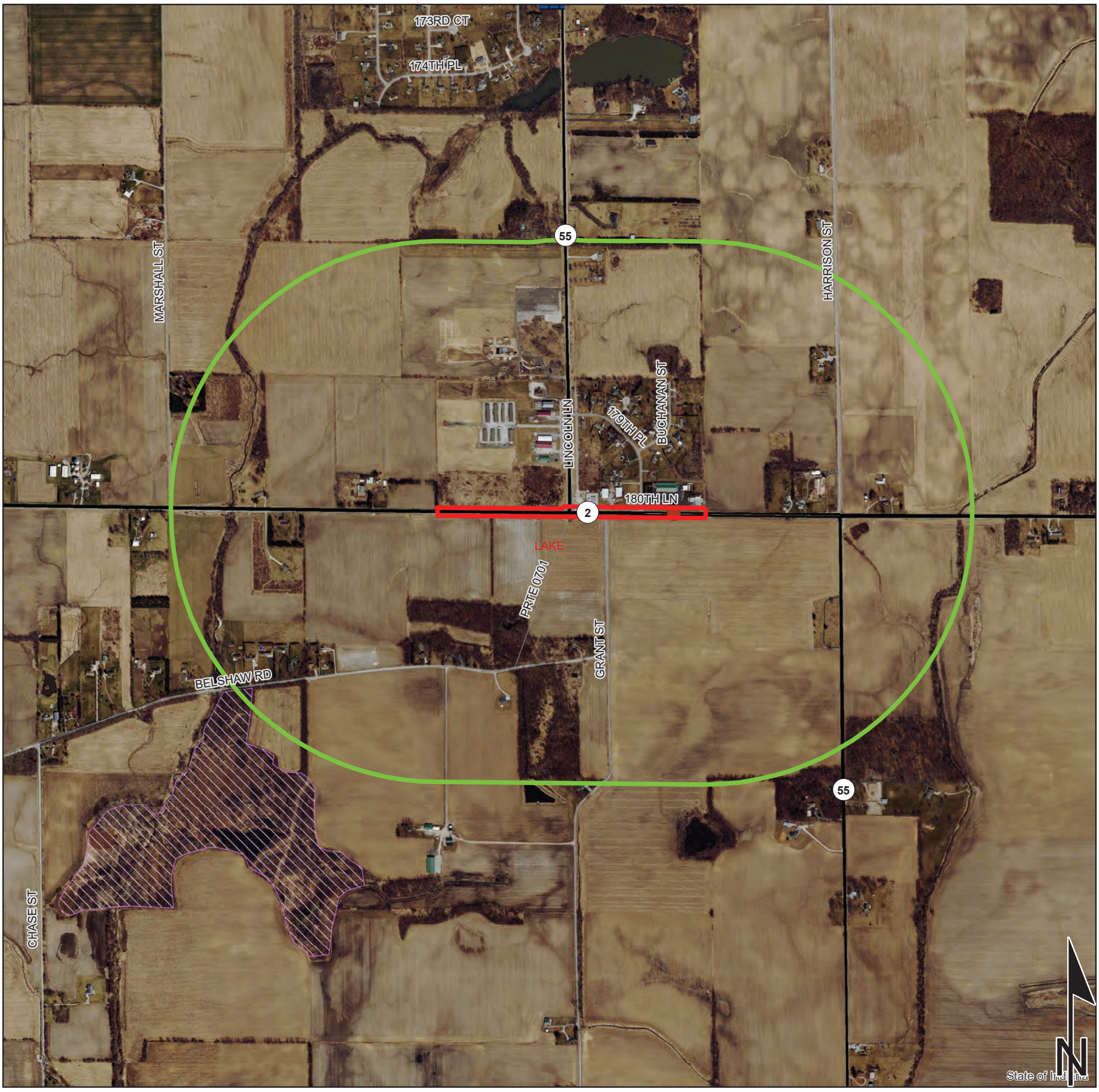
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

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.

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

Red Flag Investigation - Hazardous Materials Concerns
SR 2 at SR 55
Des. No. 1702988, Intersection Improvements
Lake County, Indiana



- Brownfield
- RCRA Corrective Action Sites
- Confined Feeding Operation
- Notice_Of_Contamination
- Construction/Demolition Site
- Infectious/Medical Waste Site
- Leaking Underground Storage Tank
- Manufactured Gas Plant
- NPDES Facilites
- NPDES Pipe Locations
- Open Dump Waste Site
- RCRA Generator/TSD
- Restricted Waste Site
- Septage Waste Site
- Solid Waste Landfill
- State Cleanup Site
- Superfund
- Tire Waste Site
- Underground Storage Tank
- Voluntary Remediation Program
- Waste Transfer Station
- Institutional Controls
- County Boundary
- Project Area
- Half Mile Radius
- Toll
- Interstate
- State Route
- US Route
- Local Road

0.25 0.125 0 0.25 Miles

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

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

APPENDIX F
Water Resources

Approved 8/27/2021

WATERS DETERMINATION REPORT

S.R. 2 AT S.R. 55, 0.25 MI W OF S.R. 55 TO 0.25 MI E OF S.R. 55
INTERSECTION IMPROVEMENTS
DES. NO. 1702988
CEDAR CREEK TOWNSHIP, LAKE COUNTY, INDIANA

Prepared for:
Lawson-Fischer Associates, P.C.

August 19, 2021

METRIC ENVIRONMENTAL

Prepared by:

Metric Environmental, LLC

Complex Environment. Creative Solutions.
6971 Hillsdale Court
Indianapolis, IN 46256
Telephone: 317.207.4286
www.metricenv.com

Contents

Date of Waters Field Investigation 2
Location 2
FEMA Flood Insurance Rate Map (FIRM) 2
National Wetlands Inventory (NWI) Information 2
Karst Feature Information ..... **Error! Bookmark not defined.**
USGS National Hydrography Dataset (NHD) Information 2
Soils 3
Attached Documents 3
Project Description 3
Field Reconnaissance 4
Wetlands 5
Additional Sampling Point(s) 8
Roadside Ditches 8
Conclusion 9
Acknowledgements 9

WATERS OF THE U.S. DETERMINATION REPORT
S.R. 2 at S.R. 55, 0.25 Mi W of S.R. 55 to 0.25 Mi E of S.R. 55
Intersection Improvements
Cedar Creek Township, Lake County, Indiana
Des. No. 1702988
Prepared By: April Pape, Metric Environmental, LLC
August 19, 2021

Date of Waters Field Investigation: October 6, 2020

Location:
Sections 20, 21, 28, & 29; Township 33 North; Range 8 West
Leroy, IN 7.5 minute USGS Topographic Quadrangles (**Exhibit 2**)
Cedar Creek Township, Lake County, Indiana
12-Digit HUC Watershed: 071200011304, (Griesel Ditch)
Latitude: 41.28953 Longitude: -87.35343

FEMA Flood Insurance Rate Map (FIRM):
No mapped floodplains are located within the project study limits (PSL). The nearest mapped floodplain was located approximately 1,836 feet (ft.) west of the PSL and was associated with Spring Run. No Indiana DNR (IDNR) (Approximate or Detailed) Floodway was present within the PSL. The FIRM map for this area is provided as **Exhibit 3**.

National Wetlands Inventory (NWI) Information:
No mapped NWI polygons are located within the PSL. The nearest mapped NWI polygon is located approximately 286 feet (ft.) north of the PSL and was classified as a PSS1/EM1C wetland. The NWI map is provided as **Exhibit 4**.

USGS National Hydrography Dataset (NHD) Information:
Seven mapped NHD flowlines are located within the PSL, listed by occurrence from east to west within the PSL in **Table 1**. The NHD map is provided in **Exhibit 4**.

Table 1: NHD Flowlines within PSL

Corresponding Feature	NHD Flowline Classification	Photo Nos.	USGS Blue-line
Wetland B	Stream/River	16-17, 61-62	No
CV 5	Canal/Ditch	3, 5-7	No
None	Canal/Ditch	18-21	No
None	Stream/River	21	No
None	Stream/River	8	No
Wetland A, CV 1	Canal/Ditch	1-5	No
CV 2	Stream/River	46, 49	No

Soils:
According to the Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Database for Lake County, Indiana, the PSL contained three mapped soil units, listed in **Table 2**. The NRCS soil survey map is provided as **Exhibit 4**.

Table 2: NRCS Soil Survey (Lake County)

Map Unit Symbol	Map Unit Name	Hydric Rating (%)
El	Elliott silt loam, 0 to 2 percent slopes	Hydric (4)
MaB2	Markham silt loam, 2 to 6 percent slopes, eroded	Hydric (10)
Pc	Pewamo silty clay loam	Hydric (100)

Attached Documents:
Maps of the project area (**Exhibits 1-5**)
Photo Location Map (**Exhibit 6**)
Site Photographs
Wetland Determination Data Form(s)
Preliminary Jurisdictional Determination Form

Project Description:
The proposed project (Des. 1702988) includes intersection improvements to the intersection of S.R. 2 and S.R. 55 in Cedar Creek Township, Lake County, Indiana. This includes construction of an 11 ft. wide east-bound left-turn lane on S.R. 2 at the intersection of S.R. 55 by widening to the north, constructing each through-lane at 12 ft. wide, and constructing a 4 ft. wide paved shoulder from east-bound through-lane to face of guardrail. No paved shoulder for the westbound through-lane will be provided. An 11 ft. wide westbound right-turn lane on S.R. 2 at the

intersection of S.R. 55 will be constructed by widening to the north. Signal poles will not be relocated. Reconstruction of guardrail layout, for guardrail-face-to-obstruction distance equal to 2 ft. 9 in. for roadside hazard. This cross-section should not require right-of-way (ROW) purchase near the billboard and allow the billboard to remain at its current 13 ft. offset from ROW. Continue widening to the east (on the south side of S.R. 2) to incorporate turn lanes for Grant St and Lincoln St. Signal heads will be upgraded to new standard with back plates. Left turn phasing is not necessary.

Field Reconnaissance:
The wetland determination field visit was conducted on October 6, 2020 by Zachary Root of Metric Environmental, LLC. The PSL consists of the area that has the potential to be impacted, based on the provided design scenario. This area was evaluated for the presence of wetlands and Waters of the United States. This investigation was conducted in accordance with the *1987 U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual* and the *August 2010 Midwest Regional Supplement (version 2.0) Manual.*

A Location Map showing the project location is provided as **Exhibit 1**. The proposed project is located in the southern portion of Lake County, Indiana, on S.R. 2 from approximately 0.25 miles west of S.R. 55 to approximately 0.25 miles east of S.R. 55. The PSL extended along S.R. 2 for approximately 0.5 mi. and approximately 65 ft. from S.R. 24 centerline. An aerial map of sampling points and water features is provided as **Exhibit 5**. A photo location map is provided as **Exhibit 6** and site photographs are attached.

The site was investigated for evidence of hydrophytic vegetation, hydric soil, and wetland hydrology to determine if the project impacts wetlands and other Waters of U.S. The sampling point (SP) locations were chosen in possible wetland areas within the PSL. The upland areas consisted of rowcrop and roadside right-of-way (ROW). Upland areas where sampling points were not taken, were investigated and determined to be upland due to upward sloping topography and/or presence of dominant upland vegetation. Dominant upland species observed within these upland areas included Kentucky bluegrass (*Poa pratensis,* FAC) and red fescue (*Festuca rubr*a, FACU). Six sampling points were taken and are identified as SP-A1, SP-A2, SP-B1, SP-B2, SP-1, and SP-2 (**Table 3**). The sampling points, recorded on the USACE Wetland Determination Data Forms and shown on **Exhibit 5,** provided the following information.

Table 3: Sampling Plot Data Summary Table

Plot #	Photo #s	Lat/Long	Hydrophytic Vegetation	Hydric Soils	Wetland Hydrology	Within Wetland
SP-A1	53-56	41.2896 -87.35172	Yes	Yes	Yes	Yes, Wetland A
SP-A2	57-59	41.28958 -87.35175	No	No	No	No
SP-B1	60-62	41.28955 -87.34878	Yes	Yes	Yes	Yes, Wetland B
SP-B2	63-65	41.28956 -87.34892	No	No	No	No
SP-1	66-68	41.2894 -87.35354	Yes	No	No	No
SP-2	69-71	41.28958 -87.35699	Yes	No	Yes	No

Streams:
No streams were observed within the PSL during field reconnaissance.

Wetlands:
Two wetlands were observed within the PSL. Descriptions of the wetlands and corresponding sampling points are provided below (**Table 4**).

Table 4: Wetland Summary Table

Wetland Name	Photo #s	Lat/Long	Cowardin Class	Total Area	Quality	Likely Water of the U.S.
				ac.		
Wetland A	1, 3-8, 54-55	41.28957 -87.35224	PEM1A	0.079	Poor	Yes
Wetland B	12-17, 61-62	41.28957 -87.3488	PEM1A	0.019	Poor	Yes

<u>Wetland A (0.079 ac.) – PEM1A</u>
Wetland A was classified as a Palustrine, Emergent, Persistent, Temporarily Flooded (PEM1A) wetland. This wetland is located in a ditch north of S.R. 2 and east of S.R. 55. The boundaries of Wetland A were delineated by lack of wetland vegetation and increased elevation. Due to its location within a ditch, Wetland A likely receives drainage on a consistent basis during rain events. Based on topography, aerial imagery, and NHD flowlines, it can be deduced that water drains east into Griesel Ditch, which flows into Singleton Ditch, which flows into Kankakee River, a Section 10 Traditional Navigable Water (TNW). However since Wetland A neither directly abuts

nor is located within the floodplain of a perennial or intermittent stream, it should be considered a Waters of the State. However, INDOT requests that the USACE take jurisdiction. The wetland was not associated with an NWI polygon and was formed within the El mapped soil unit, which is listed as 4 percent hydric. The wetland is located adjacent to S.R. 2 and S.R. 55, and likely receives run-off from the adjacent paved roads. The wetland exhibited poor plant species diversity and contained two dominant invasive species of common reed (*Phragmites australis,* FACW) and narrowleaf cattail (*Typha angustifolia,* OBL). These factors contribute to the conclusion that Wetland A can support a limited amount of wildlife or aquatic habitat, and therefore should be considered to be of poor quality.

Sampling Point A1 (SP-A1) – Wetland A

SP-A1 was located at the toe of a slope north of S.R. 2 and east of S.R. 55. The dominant vegetation at this sampling point was Kentucky bluegrass (*Poa pratensis,* FAC), common reed (*Phragmites australis,* FACW), and narrowleaf cattail (*Typha angustifolia,* OBL) in the herb stratum. This passed the hydrophytic vegetation indicators of dominance test (100 percent) and prevalence index (2.07). To a depth of 20 inches (in.), the soils in the test pit were a silty clay loam. From 0 to 9 in., the soil in the test pit exhibited a matrix color of 10YR 3/1 (90 percent) with 5YR 3/4 (10 percent) prominent redox concentrations in the matrix and along pore linings. From 9 to 20 in., the soil exhibited mixed matrix colors of 10YR 5/1 (50 percent) and 10YR 4/6 (50 percent). This met the hydric soil indicator of redox dark surface (F6). Indicators of wetland hydrology observed included oxidized rhizospheres on living roots (C3), surface soil cracks (B6), gemomorphic position (D2), and FAC-neutral test (D5). Since all three required wetland criteria were met, this area qualified as a wetland.

Sampling Point A2 (SP-A2) – Wetland A upland

SP-A2 was located in a field south of Wetland A. The dominant vegetation at this sampling point was red fescue (*Festuca rubra,* FACU) and Kentucky bluegrass (*Poa pratensis,* FAC) in the herb stratum. This did not meet any of the hydrophytic vegetation indicators. The soil in the test pit was a silty clay loam to a depth of 20 in. From 0 to 11 in., the soil exhibited a matrix color of 10YR 4/3 (100 percent). From 11 to 20 in., the soil exhibited a matrix color of 10YR 4/2 (80 percent) with 10YR 6/8 (20 percent) prominent redox concentrations in the matrix. This did not meet any hydric soil indicators. No indicators of wetland hydrology were observed. Since none of the three required wetland criteria were met, this area did not qualify as a wetland.

Wetland B (0.019 ac.) – PEM1A

Wetland B was classified as a PEM1A wetland. This wetland is located at the toe of a slope in the eastern portion of the PSL, north of S.R. 2. The boundaries of Wetland B were delineated by lack

of wetland vegetation and increased elevation. Due to its location within the toe of a slope, Wetland B likely receives drainage on a consistent basis during rain events. Based on topography, it can be deduced that water drains east into Giresel Ditch, which flows into Singleton Ditch, which flows into Kankakee River, a Section 10 TNW. However, since Wetland B neither directly abuts nor is located within the floodplain of a perennial or intermittent stream, it should be considered a Waters of the State. However, INDOT requests that the USACE take jurisdiction.However, INDOT requests that the USACE take jurisdiction. The wetland was not associated with an NWI polygon and was formed within the Pc mapped soil unit, which is listed as 100 percent hydric. The wetland is located adjacent to S.R. 2 and a parking lot, and likely receives run-off from the adjacent sources. The wetland exhibited poor plant species diversity and contained a dominant invasive species of narrowleaf cattail (*Typha angustifolia,* OBL). These factors contribute to the conclusion that Wetland B can support a limited amount of wildlife or aquatic habitat, and therefore should be considered to be of poor quality.

Sampling Point B1 (SP-B1) – Wetland B

SP-B1 was located at the toe of a slope north of S.R. 2. The dominant vegetation at this sampling point was narrowleaf cattail (*Typha angustifolia,* OBL) in the herb stratum. This passed the hydrophytic vegetation indicators of rapid test for hydrophytic vegetation, dominance test (100 percent), and prevalence index (1.00). To a depth of 20 inches (in.), the soils in the test pit were a silty loam. From 0 to 15 in., the soil in the test pit exhibited a matrix color of 10YR 2/1 (90 percent) with 7.5YR 4/6 (10 percent) prominent redox concentrations in the matrix and along pore linings. From 15 to 20 in., the soil exhibited a matrix color of 10YR 2/1 (100 percent). This met the hydric soil indicator of redox dark surface (F6). Indicators of wetland hydrology observed included oxidized rhizospheres on living roots (C3), geomorphic position (D2), and FAC-neutral test (D5). Since all three required wetland criteria were met, this area qualified as a wetland.

Sampling Point B2 (SP-B2) – Wetland B upland

SP-B2 was located on a hillslope west of Wetland B. The dominant vegetation at this sampling point was red fescue (*Festuca rubra,* FACU) and Kentucky bluegrass (*Poa pratensis,* FAC) in the herb stratum. This did not meet any of the hydrophytic vegetation indicators. The soil in the test pit was a silty loam to a depth of 20 in. From 0 to 4 in., the soil exhibited a matrix color of 10YR 3/1 (100 percent). From 4 to 20 in., the soil exhibited a matrix color of 10YR 2/1 (100 percent). This did not meet any hydric soil indicators. No indicators of wetland hydrology were observed. Since none of the three required wetland criteria were met, this area did not qualify as a wetland.

Additional Sampling Point(s):
Two additional sampling points were taken in areas where a wetland was suspected but did not meet the three required wetland criteria. Descriptions of these sampling point are included below.

Sampling Point 1 (SP-1)
SP-1 was located in an old field south of the intersection of S.R. 55 and S.R. 2. The dominant vegetation at this sampling point was reed canarygrass (*Phalaris arundinacea,* FACW) in the herb stratum. This met the hydrophytic vegetation indicators of rapid test for hydrophytic vegetation, dominance test (100 percent), and prevalence index (2.00). To a depth of 20 in., the soil in the test pit was a silty clay loam. From 0 to 11 in., the soil exhibited a matrix color of 10YR 2/1 (100 percent). From 11 to 20 in., the soil exhibited a matrix color of 10YR 3/1 (100 percent). This did not meet any of the hydric soil indicators. No primary or secondary indicators of wetland hydrology were observed. Since only one of the three required wetland criteria were met, this area did not qualify as a wetland.

Sampling Point 2 (SP-2)
SP-2 was located at the toe of a slope north of S.R. 2 and west of S.R. 55. The dominant vegetation at this sampling point was reed canarygrass (*Phalaris arundinacea,* FACW) in the herb stratum. This met the hydrophytic vegetation indicators of rapid test for hydrophytic vegetation, dominance test (100 percent), and prevalence index (2.00). To a depth of 20 in., the soil in the test pit was a silty clay loam and exhibited a matrix color of 10YR 3/1 (100 percent). This did not meet any of the hydric soil indicators. No primary indicators of wetland hydrology were observed. Secondary indicators of wetland hydrology observed included geomorphic position (D2) and FAC-neutral test (D5). Since only two of the three required wetland criteria were met, this area did not qualify as a wetland.

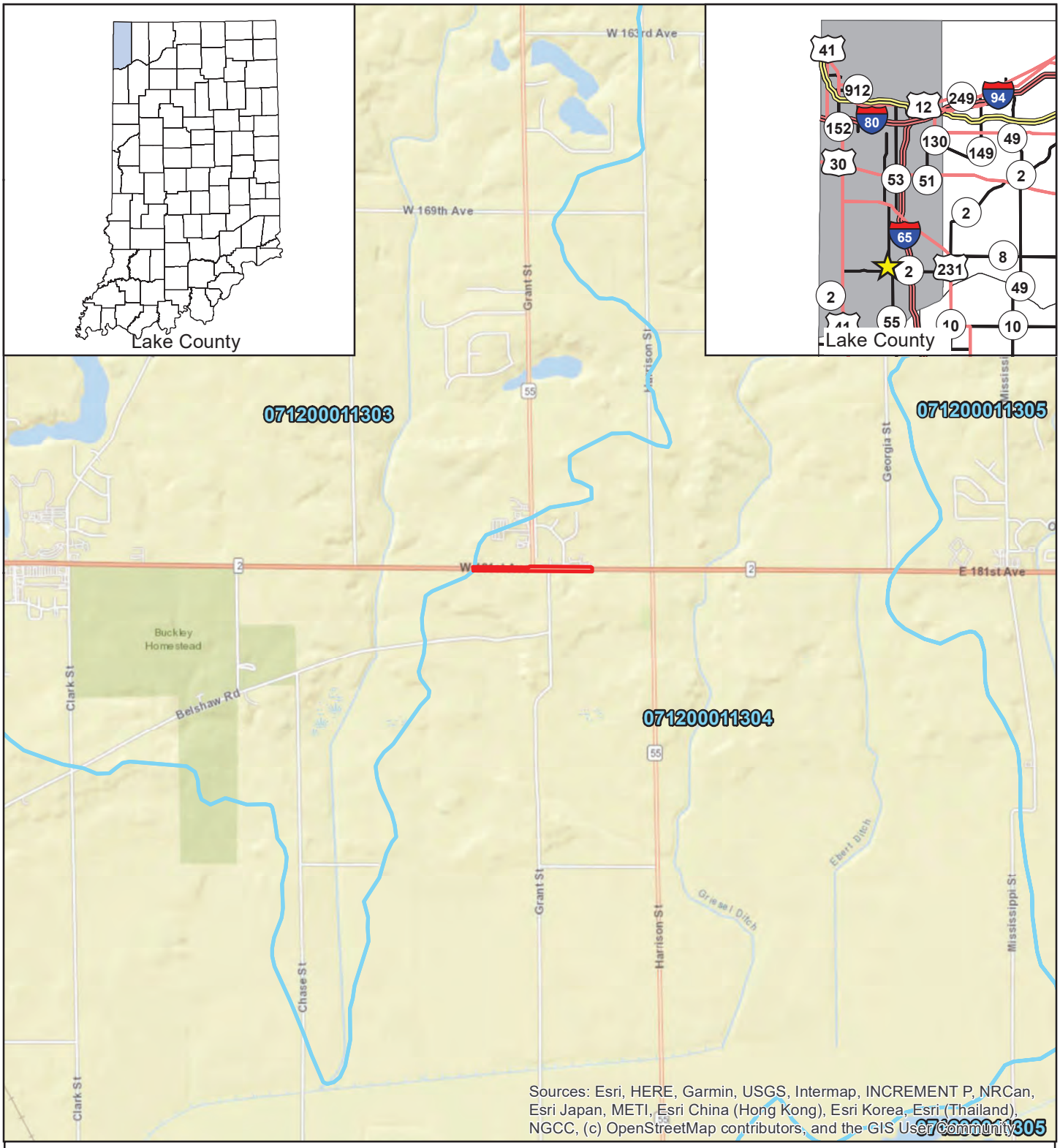
Roadside Ditches:
No roadside ditches (RSD) were observed within the PSL during field reconnaissance. Areas with NHD flowlines indicating a potential RSD were investigated, but topography did not indicate the presence of an RSD. Photos of these areas are included on attached photosheet.

Culverts and Drains:
Five culverts were identified within the PSL. The culverts were corrugated metal pipe and HDPE. The culverts served to aid in roadside drainage and stormwater conveyance. These culverts did not carry jurisdictional waters due to a lack of an OHWM, bed and bank, and lack of a significant nexus to any jurisdictional Waters of the U.S. Locations of these culverts are shown on **Exhibits 5** and **6**, and attached photosheet.

Conclusion:
Two PEM1A wetlands, totaling 0.098 ac., were identified within the PSL during the field reconnaissance. These waterways are likely non-jurisdictional and should be considered Waters of the State. It is likely they will be regulated by the state under the Isolated Wetlands Law, however, the USACE may take jurisdiction. Every effort should be taken to avoid and minimize impacts to the waterway and wetlands. If impacts are necessary, then mitigation may be required. The INDOT Environmental Services Division should be contacted immediately if impacts will occur. The final determination of jurisdictional waters is ultimately made by the U.S. Army Corps of Engineers. This report is our best judgment based on the guidelines set forth by the Corps.

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

Metric Environmental Staff	Position	Contributing Effort	Signature/Date
Alex Gray	Natural Resources Project Manager I	QAQC	Alex M. Gray 8/19/21
Zachary Root	Environmental Scientist 2	Field Data Collection	Zachary Root 8/19/21
April Pape	Staff Scientist 1	Report Preparation	April Pape 8/19/21



Project Study Limits (PSL) 12-Digit HUC Watershed

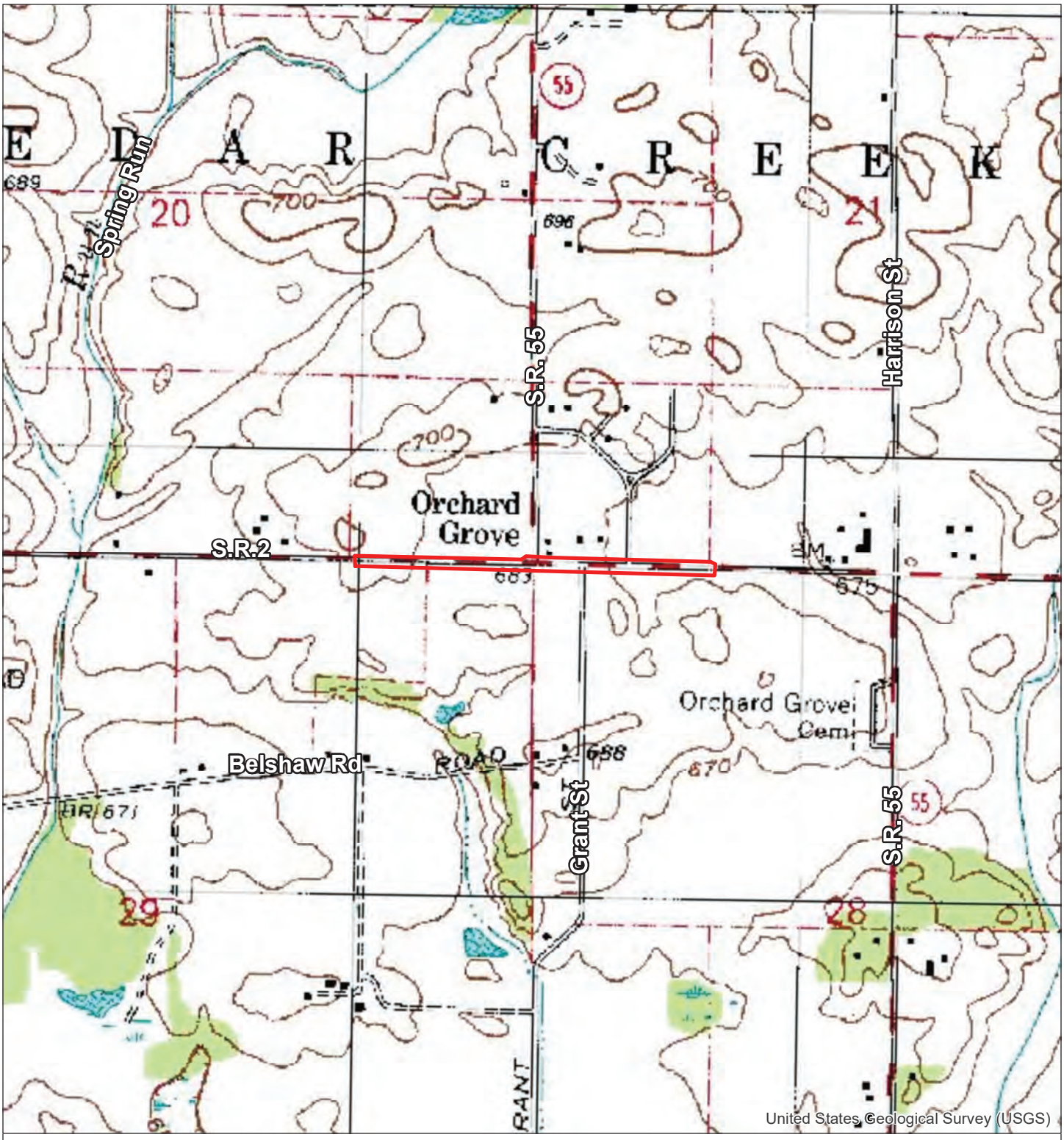
Exhibit 1 - Location Map
S.R. 2 at S.R. 55, 0.25 Mi W of S.R. 55 to 0.25 Mi E of S.R. 55
Intersection Improvements
Cedar Creek Township, Lake County, Indiana
Des. No. 1702988
Metric Project No. 20-0010-3
Map Date: 11/2/2020
Map Author: April Pape

All locations approximate
2018 Basemap
Latitude: 41.28953 Longitude: -87.35343

N
0 0.4 0.8 1.6
Miles

METRIC ENVIRONMENTAL

Exh. 1



Project Study Limits (PSL)

Exhibit 2A - USGS Topographic Map - Small Scale
Leroy, IN 7.5 minute Quadrangle
SR 2 at SR 55, 0.25 Mi W of SR 55 to 0.25 Mi E of SR 55
Intersection Improvements
Cedar Creek Township, Lake County, Indiana
Des. No. 1702988
Metric Project No. 20-0010-3
Map Date: 11/2/2020
Map Author: April Pape

All locations approximate
Source: Indiana Spatial Data Portal (1996)

N

0 500 1,000 2,000
Feet

METRIC ENVIRONMENTAL

Exh. 2A

Project Study Limits (PSL)

Floodplain - Zone A - 1% Chance Annual Flood

Exhibit 3 - FEMA Flood Insurance Rate Map
SR 2 at SR 55, 0.25 Mi W of SR 55 to 0.25 Mi E of SR 55
Intersection Improvements
Cedar Creek Township, Lake County, Indiana
Des. No. 1702988
Metric Project No. 20-0010-3
Map Date: 11/2/2020
Map Author: April Pape

All locations approximate

Source: Indiana Spatial Data Portal (2018)

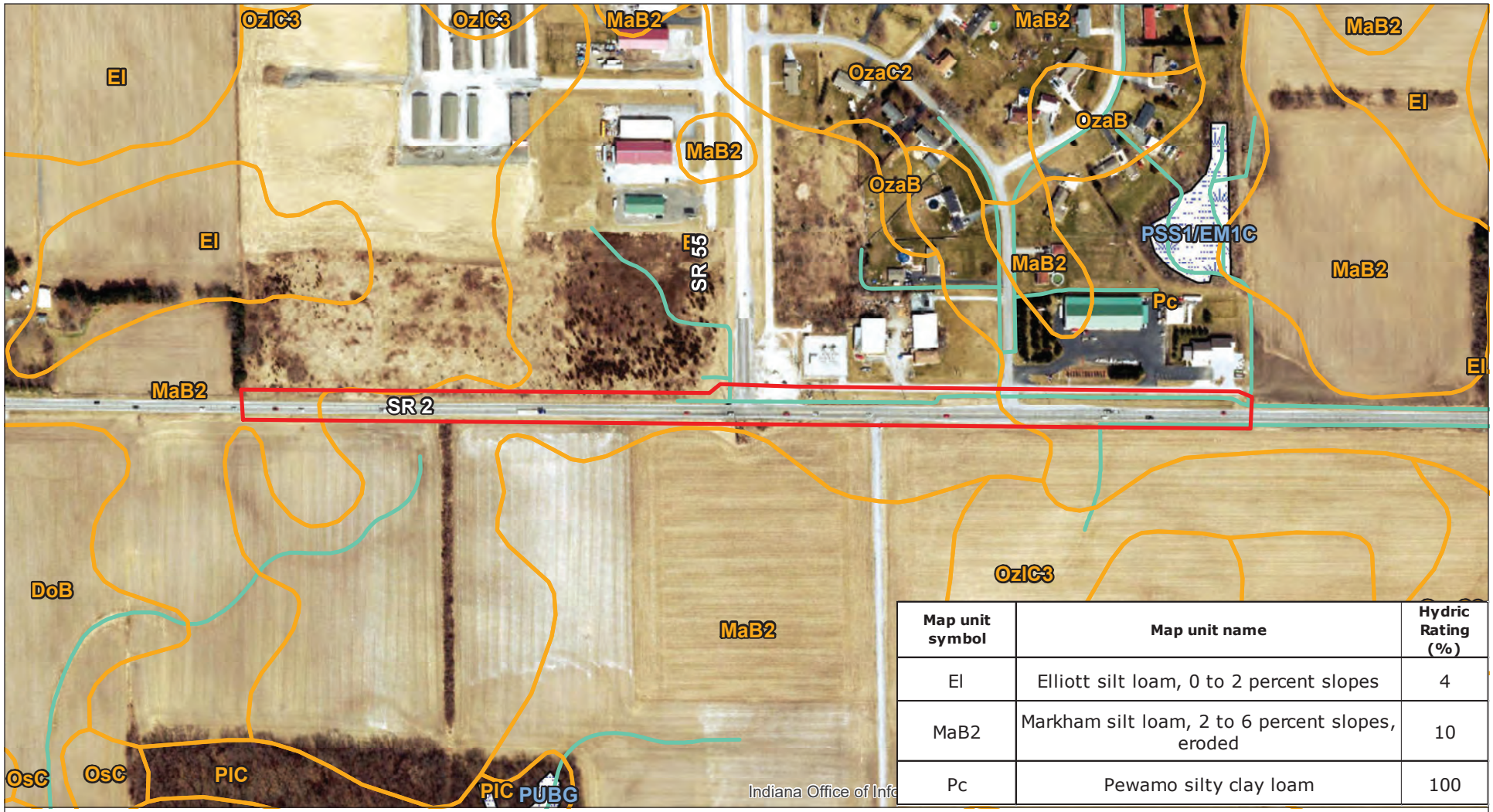
N

0 1,000 2,000 4,000

Feet

METRIC ENVIRONMENTAL

Exh. 3



Map unit symbol	Map unit name	Hydric Rating (%)
El	Elliott silt loam, 0 to 2 percent slopes	4
MaB2	Markham silt loam, 2 to 6 percent slopes, eroded	10
Pc	Pewamo silty clay loam	100

Project Study Limits (PSL)
NRCS Soil Survey
NHD Flowline
NWI Wetland

Exhibit 4 - NWI Wetland, NHD Flowline, and NRCS Soil Survey Map
SR 2 at SR 55, 0.25 Mi W of SR 55 to 0.25 Mi E of SR 55 Intersection Improvements
Cedar Creek Township, Lake County, Indiana
Des. No. 1702988
Metric Project No. 20-0010-3
Map Date: 11/2/2020
Map Author: April Pape

All locations approximate

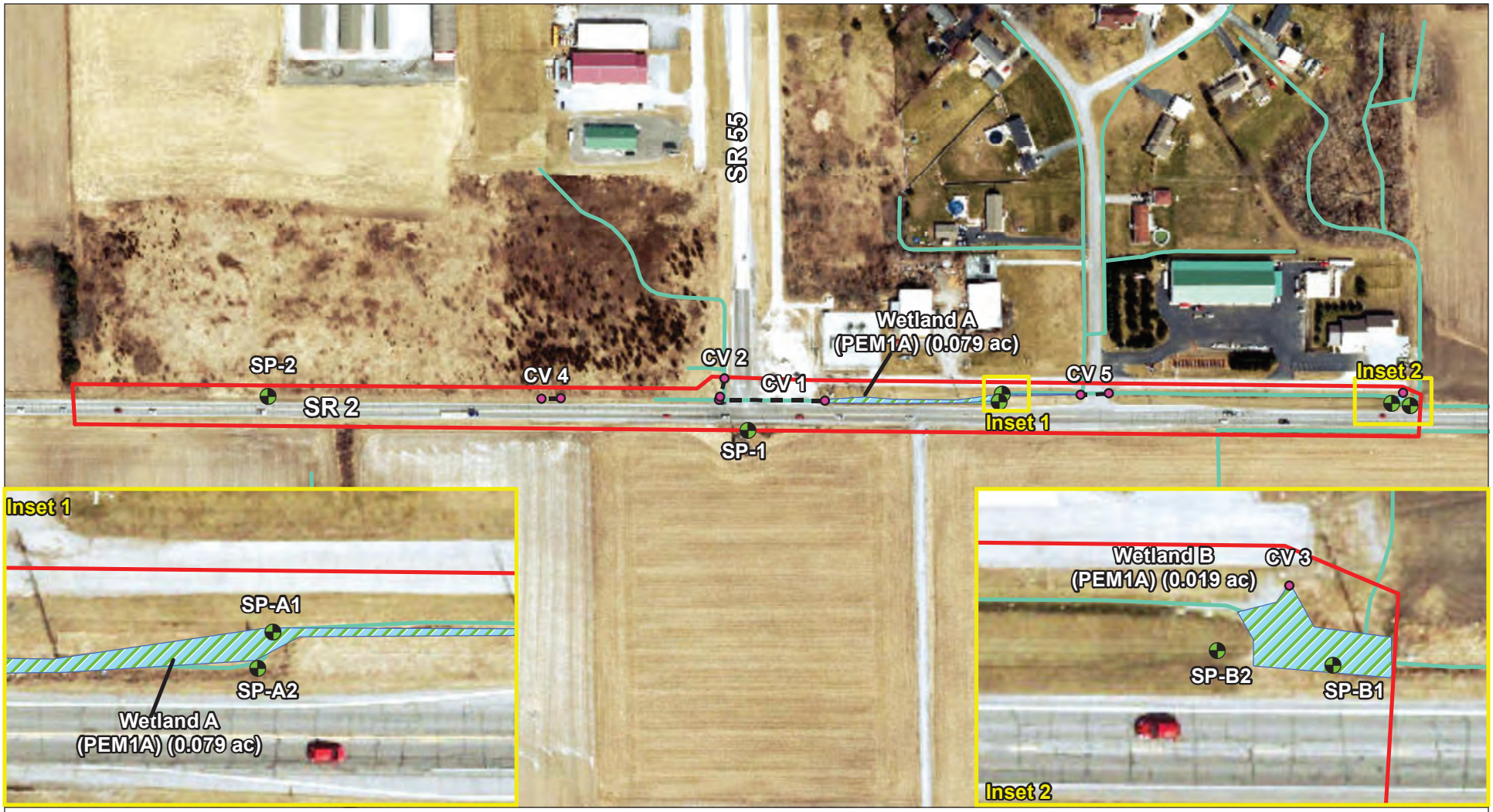
Source: Indiana Spatial Data Portal (2018)

N

0 375 750 1,500
Feet

METRIC ENVIRONMENTAL

Exh. 4



Project Study Limits (PSL) | Sampling Point (SP) | Roadside Ditch (RSD) | NHD Flowline

Culvert | Culvert (CV)/Storm Drain Opening | Wetland

Exhibit 5 - Waters Delineation Map
S.R. 2 at S.R. 55, 0.25 Mi W of S.R. 55 to 0.25 Mi E of S.R. 55
Intersection Improvements
Cedar CreekTownship, Lake County, Indiana
Des. No. 1702988
Metric Project No.20-0010-3
Map Date: 11/2/2020
Map Author: April Pape

All locations approximate

Source: Indiana Spatial Data Portal (2018)

N

0 250 500 1,000

Feet

METRIC ENVIRONMENTAL

Exh. 5

Project Study Limits (PSL)
Sampling Point (SP)
Roadside Ditch (RSD)
NHD Flowline
Culvert
Culvert (CV)/Storm Drain Opening
Wetland

Exhibit 6 - Photo Location Map
SR 2 at SR 55, 0.25 Mi W of SR 55 to 0.25 Mi E of SR 55
Intersection Improvements
Cedar CreekTownship, Lake County, Indiana
Des. No. 1702988
Metric Project No.20-0010-3
Map Date: 11/2/2020
Map Author: April Pape

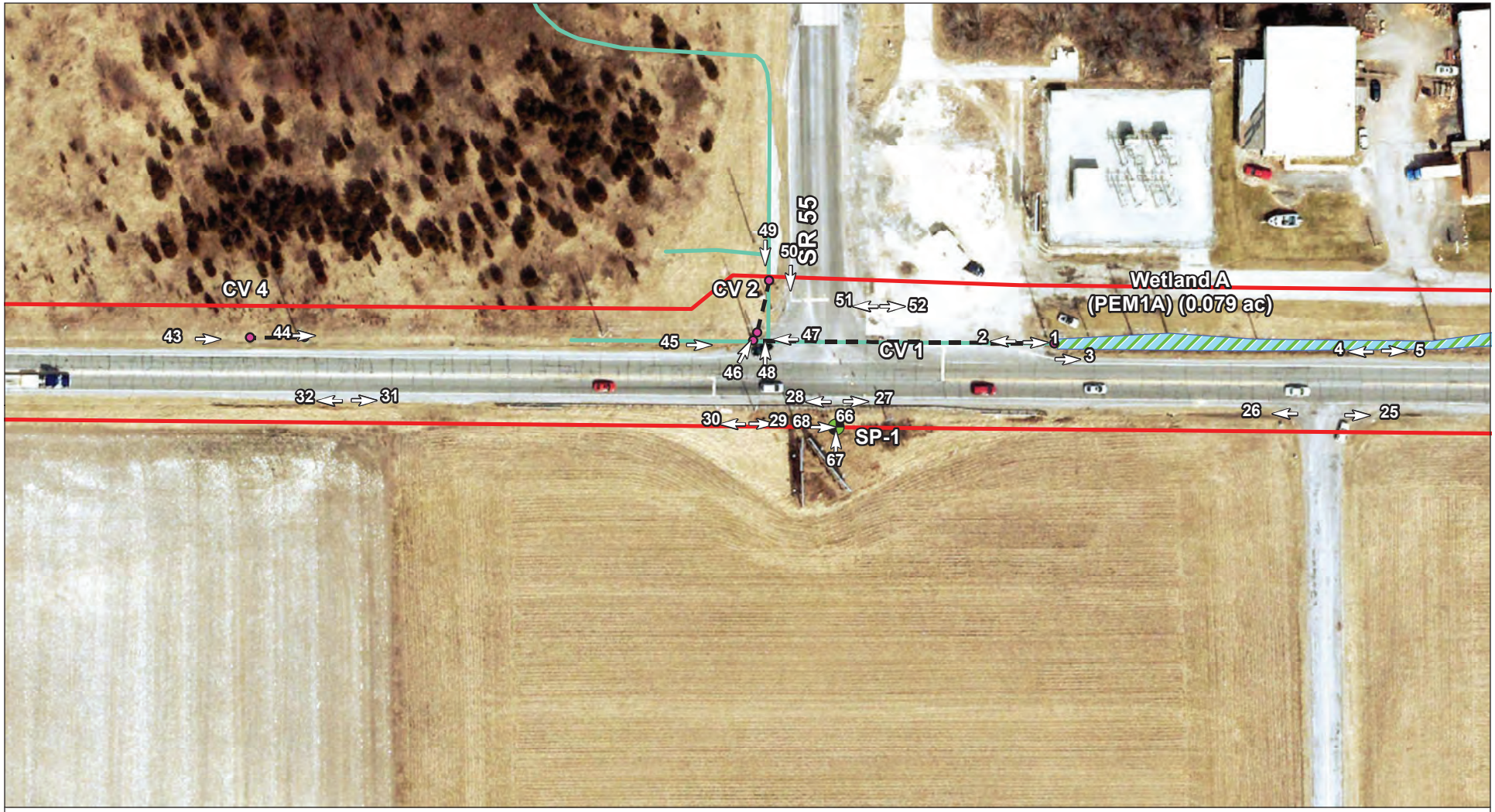
All locations approximate

Source: Indiana Spatial Data Portal (2018)

N

0 105 210 420
Feet

METRIC ENVIRONMENTAL



Project Study Limits (PSL)
Sampling Point (SP)
Roadside Ditch (RSD)
NHD Flowline
Culvert
Culvert (CV)/Storm Drain Opening
Wetland

Exhibit 6 - Photo Location Map
SR 2 at SR 55, 0.25 Mi W of SR 55 to 0.25 Mi E of SR 55
Intersection Improvements
Cedar CreekTownship, Lake County, Indiana
Des. No. 1702988
Metric Project No.20-0010-3
Map Date: 11/2/2020
Map Author: April Pape

All locations approximate

Source: Indiana Spatial Data Portal (2018)

N

0 90 180 360
Feet

METRIC ENVIRONMENTAL

Project Study Limits (PSL) | Sampling Point (SP) | Roadside Ditch (RSD) | NHD Flowline

Culvert | Culvert (CV)/Storm Drain Opening | Wetland

Exhibit 6 - Photo Location Map
SR 2 at SR 55, 0.25 Mi W of SR 55 to 0.25 Mi E of SR 55
Intersection Improvements
Cedar CreekTownship, Lake County, Indiana
Des. No. 1702988
Metric Project No.20-0010-3
Map Date: 11/2/2020
Map Author: April Pape

All locations approximate

Source: Indiana Spatial Data Portal (2018)

N

0 125 250 500

Feet

METRIC ENVIRONMENTAL

Exh. 6
Page 3 of 3

1. View of CV 1 and Wetland A, looking east.

2. View of S.R. 2 and S.R. 55 intersection, looking west.

3. View of S.R. 2 right-of-way (ROW) and Wetland A, looking east.

4. View of Wetland A and S.R. 2 ROW, looking west.

SITE PHOTOGRAPHS—10/6/2020
S.R. 2 at S.R. 55, 0.25 Mi. W of S.R. 55 to 0.25 Mi. E of S.R. 55
Intersection Improvements
Cedar Creek Township, Lake County, Indiana
Des. No. 1702988

METRIC ENVIRONMENTAL

5. View of S.R. 2 ROW and Wetland A, looking east.

6. View of Wetland A, looking north.

7. View of Wetland A, looking northeast.

8. View of Wetland A and CV 2, looking west.

SITE PHOTOGRAPHS—10/6/2020
S.R. 2 at S.R. 55, 0.25 Mi. W of S.R. 55 to 0.25 Mi. E of S.R. 55
Intersection Improvements
Cedar Creek Township, Lake County, Indiana
Des. No. 1702988

METRIC ENVIRONMENTAL

9. View of CV 2, looking east.

10. View of S.R. 2 ROW, looking west.

11. View of S.R. 2 ROW, looking east.

12. View of Wetland B and S.R. 2 ROW, looking east.

SITE PHOTOGRAPHS—10/6/2020
S.R. 2 at S.R. 55, 0.25 Mi. W of S.R. 55 to 0.25 Mi. E of S.R. 55
Intersection Improvements
Cedar Creek Township, Lake County, Indiana
Des. No. 1702988

METRIC ENVIRONMENTAL

13. View of NHD flowline (unobserved) and Wetland B from eastern project study limits (PSL), looking north.

14. View of Wetland B, looking northwest.

15. View of S.R. 2 ROW and Wetland B from eastern PSL, looking west.

16. View of CV 3 and Wetland B, looking northeast.

SITE PHOTOGRAPHS—10/6/2020
S.R. 2 at S.R. 55, 0.25 Mi. W of S.R. 55 to 0.25 Mi. E of S.R. 55
Intersection Improvements
Cedar Creek Township, Lake County, Indiana
Des. No. 1702988

METRIC ENVIRONMENTAL

17. View of Wetland B, looking south.

18. View of S.R. 2 ROW from eastern PSL, looking west.

19. View of S.R. 2 ROW, looking east.

20. View of S.R. 2 ROW, looking west.

SITE PHOTOGRAPHS—10/6/2020
S.R. 2 at S.R. 55, 0.25 Mi. W of S.R. 55 to 0.25 Mi. E of S.R. 55
Intersection Improvements
Cedar Creek Township, Lake County, Indiana
Des. No. 1702988

METRIC ENVIRONMENTAL

21. View of area outside of PSL, looking southeast.

22. View of area outside of PSL, looking southwest.

23. View of S.R. 2 ROW, looking east.

24. View of S.R. 2 ROW, looking west.

SITE PHOTOGRAPHS—10/6/2020
S.R. 2 at S.R. 55, 0.25 Mi. W of S.R. 55 to 0.25 Mi. E of S.R. 55
Intersection Improvements
Cedar Creek Township, Lake County, Indiana
Des. No. 1702988

METRIC ENVIRONMENTAL

25. View of S.R. 2 ROW, looking east.

26. View of S.R. 2 ROW, looking west.

27. View of S.R. 2 ROW, looking east.

28. View of S.R. 2 ROW, looking west.

SITE PHOTOGRAPHS—10/6/2020
S.R. 2 at S.R. 55, 0.25 Mi. W of S.R. 55 to 0.25 Mi. E of S.R. 55
Intersection Improvements
Cedar Creek Township, Lake County, Indiana
Des. No. 1702988

METRIC ENVIRONMENTAL

29. View of S.R. 2 ROW, looking east.

30. View of S.R. 2 ROW, looking west.

31. View of S.R. 2 ROW, looking east.

32. View of S.R. 2 ROW, looking west.

SITE PHOTOGRAPHS—10/6/2020
S.R. 2 at S.R. 55, 0.25 Mi. W of S.R. 55 to 0.25 Mi. E of S.R. 55
Intersection Improvements
Cedar Creek Township, Lake County, Indiana
Des. No. 1702988

METRIC ENVIRONMENTAL

33. View of S.R. 2 ROW, looking east.

34. View of project area, looking south.

35. View of S.R. 2 ROW, looking west.

36. View of S.R. 2 ROW from western PSL, looking east.

SITE PHOTOGRAPHS—10/6/2020
S.R. 2 at S.R. 55, 0.25 Mi. W of S.R. 55 to 0.25 Mi. E of S.R. 55
Intersection Improvements
Cedar Creek Township, Lake County, Indiana
Des. No. 1702988

METRIC ENVIRONMENTAL

37. View of S.R. 2 ROW from western PSL, looking east.

38. View of S.R. 2 ROW, looking west.

39. View of upland area, looking north.

40. View of S.R. 2 ROW, looking east.

SITE PHOTOGRAPHS—10/6/2020
S.R. 2 at S.R. 55, 0.25 Mi. W of S.R. 55 to 0.25 Mi. E of S.R. 55
Intersection Improvements
Cedar Creek Township, Lake County, Indiana
Des. No. 1702988

METRIC ENVIRONMENTAL

41. View of S.R. 2 ROW, looking west.

42. View of S.R. 2 ROW, looking east.

43. View of CV 4, looking east.

44. View of CV 4, looking east.

SITE PHOTOGRAPHS—10/6/2020
S.R. 2 at S.R. 55, 0.25 Mi. W of S.R. 55 to 0.25 Mi. E of S.R. 55
Intersection Improvements
Cedar Creek Township, Lake County, Indiana
Des. No. 1702988

METRIC ENVIRONMENTAL

45. View of CV 1 at S.R. 2 and S.R. 55 intersection, looking east.

46. View of CV 2, looking northeast.

47. View of S.R. 2 ROW from intersection with S.R. 55, looking west.

48. View of S.R. 55 ROW from intersection with S.R. 2, looking north.

SITE PHOTOGRAPHS—10/6/2020
S.R. 2 at S.R. 55, 0.25 Mi. W of S.R. 55 to 0.25 Mi. E of S.R. 55
Intersection Improvements
Cedar Creek Township, Lake County, Indiana
Des. No. 1702988

METRIC ENVIRONMENTAL

49. View of CV 2, looking south.

50. View of intersection of S.R. 2 and S.R. 55 and CV 2, looking south.

51. View of project area, looking west.

52. View of project area, looking east.

SITE PHOTOGRAPHS—10/6/2020
S.R. 2 at S.R. 55, 0.25 Mi. W of S.R. 55 to 0.25 Mi. E of S.R. 55
Intersection Improvements
Cedar Creek Township, Lake County, Indiana
Des. No. 1702988

METRIC ENVIRONMENTAL

53. View of SP-A1, Wetland A sampling point, soil profile.

54. View of SP-A1, looking east.

55. View of SP-A1, looking south.

56. View of surface soil cracks (B6) at SP-A1.

SITE PHOTOGRAPHS—10/6/2020
S.R. 2 at S.R. 55, 0.25 Mi. W of S.R. 55 to 0.25 Mi. E of S.R. 55
Intersection Improvements
Cedar Creek Township, Lake County, Indiana
Des. No. 1702988

METRIC ENVIRONMENTAL

57. View of SP-A2, Wetland A upland sampling point, soil profile.

58. View of SP-A2, looking south.

59. View of SP-A2, looking east.

60. View of SP-B1, Wetland B sampling point, soil profile.

SITE PHOTOGRAPHS—10/6/2020
S.R. 2 at S.R. 55, 0.25 Mi. W of S.R. 55 to 0.25 Mi. E of S.R. 55
Intersection Improvements
Cedar Creek Township, Lake County, Indiana
Des. No. 1702988

METRIC ENVIRONMENTAL

61. View of SP-B1, looking west.

62. View of SP-B1, looking east.

63. View of SP-B2, Wetland B upland sampling point, soil profile.

64. View of SP-B2, looking east.

SITE PHOTOGRAPHS—10/6/2020
S.R. 2 at S.R. 55, 0.25 Mi. W of S.R. 55 to 0.25 Mi. E of S.R. 55
Intersection Improvements
Cedar Creek Township, Lake County, Indiana
Des. No. 1702988

METRIC ENVIRONMENTAL

65. View of SP-B2, looking north.

66. View of SP-1, Upland Sampling Point 1, soil profile.

67. View of SP-1, looking north.

68. View of SP-1, looking east.

SITE PHOTOGRAPHS—10/6/2020
S.R. 2 at S.R. 55, 0.25 Mi. W of S.R. 55 to 0.25 Mi. E of S.R. 55
Intersection Improvements
Cedar Creek Township, Lake County, Indiana
Des. No. 1702988

METRIC ENVIRONMENTAL

69. View of SP-2, Upland Sampling Point 2, soil profile.

70. View of SP-2, looking northeast.

71. View of SP-2, looking northwest.

Wetland Determination Forms have Been Omitted

Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: August 19, 2021

B. NAME AND ADDRESS OF PERSON REQUESTING PJD:

April Pape – Metric Environmental LLC
6971 Hillsdale Ct
Indianapolis, IN 46250
(317)912-1486
aprilp@metricenv.com

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:

The proposed project (Des. 1702988) includes intersection improvements to the intersection of S.R. 2 and S.R. 55 in Cedar Creek Township, Lake County, Indiana. This includes construction of an 11 ft. wide east-bound left-turn lane on S.R. 2 at the intersection of S.R. 55 by widening to the north, constructing each through-lane at 12 ft. wide, and constructing a 4 ft. wide paved shoulder from east-bound through-lane to face of guardrail. No paved shoulder for the westbound through-lane will be provided. An 11 ft. wide westbound right-turn lane on S.R. 2 at the intersection of S.R. 55 will be constructed by widening to the north. Signal poles will not be relocated. Reconstruction of guardrail layout, for guardrail-face-to-obstruction distance equal to 2 ft. 9 in. for roadside hazard. This cross-section should not require right-of-way (ROW) purchase near the billboard and allow the billboard to remain at its current 13 ft. offset from ROW. Continue widening to the east (on the south side of S.R. 2) to incorporate turn lanes for Grant St and Lincoln St. Signal heads will be upgraded to new standard with back plates. Left turn phasing is not necessary.

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

State: IN County/parish/borough: Lake County City: Orchard Grove
Center coordinates of site (lat/long in degree decimal format):
Lat.: 41.28953 °
Long.:87.35343°
Universal Transverse Mercator: 16T 470406.42 E 4570958.68 N
Name of nearest waterbody: Spring Run

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☐ Office (Desk) Determination. Date:

☐ Field Determination. Date(s):

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
Wetland A	41.28957	-87.35224	0.079 ac.	Wetland	Section 404
Wetland B	41.28957	-87.3488	0.019 ac.	Wetland	Section 404

1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.

2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there *"may be"* waters of the U.S. and/or that there *"may be"* navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

- [x] Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
- [x] Map: Dated 11/9/2020
  Data sheets prepared/submitted by or on behalf of the PJD requestor.
  - [ ] Office concurs with data sheets/delineation report.
  - [ ] Office does not concur with data sheets/delineation report. Rationale:_____.
- [ ] Data sheets prepared by the Corps:_____.
- [ ] Corps navigable waters' study:_____.
- [ ] U.S. Geological Survey Hydrologic Atlas:_____.
  - [x] USGS NHD data.
  - [x] USGS 8 and 12 digit HUC maps.
- [x] U.S. Geological Survey map(s). Cite scale & quad name: Leroy, IN 7.5 min
- [x] Natural Resources Conservation Service Soil Survey. Citation: SSURGO Lake County
- [x] National wetlands inventory map(s). Cite name: http://www.fws.gov/wetlands/.
- [ ] State/local wetland inventory map(s):_____.
- [x] FEMA/FIRM maps: ; Effective_____
- [ ] 100-year Floodplain Elevation is:_____.(National Geodetic Vertical Datum of 1929)
- [x] Photographs: [x] Aerial (Name & Date): Indiana Aerial Photograph, 2018.
  or [x] Other (Name & Date): Site Photographs, 10/6/2020.
- [ ] Previous determination(s). File no. and date of response letter:_____.
- [ ] Other information (please specify):_____.

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

_____	April Pape 8/19/21
Signature and date of Regulatory staff member completing PJD	Signature and date of person requesting PJD (REQUIRED, unless obtaining the signature is impracticable)[1]

[1] Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

APPENDIX G
Public Involvement

VS ENGINEERING
4275 North High School Road, Indianapolis, IN 46254
317.293.3542
www.vsengineering.com

NOTICE OF SURVEY

September 16, 2020

RE: State Road 2 and State Road 55
Lake County, Indiana

Dear Property Owner:

Our information indicates that you own or occupy property near this proposed highway project. Our employees will be doing a survey of the project area in the near future. It may be necessary for them to come onto your property to complete this work. This is allowed by law by Indiana Code IC 8-23-7-26. They will show you their identification, if you are available, before coming onto your property. If you have sold this property, or it is occupied by someone else, please let us know the name and address of the new owner or current occupant so we can contact them about the survey.

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

The survey work will include mapping the location of features such as trees, buildings, fences and drives, and obtaining ground elevations. The survey work may also include the identification and mapping of wetlands, archaeological investigations (which may include excavation of small shovel test probes), and various other environmental studies. The survey is needed for the proper planning and design of this highway project. Please be assured of our sincere desire to cause you as little inconvenience as possible during this survey. If any problems do occur, please contact our field crew or contact me at the phone number or address shown herein.

Sincerely,

VS Engineering, Inc.
Matthew R. Healy, P.S.
Project Surveyor
317-293-3542, x-140

Des. No. 1702988

APPENDIX H
Air Quality

SPONSOR	CONTRACT # / LEAD DES	STIP NAME	ROUTE	WORK TYPE	LOCATION	DISTRICT	MILES	FEDERAL CATEGORY	Total Cost of Project*	PROGRAM	PHASE	FEDERAL	MATCH	2020	2021	2022	2023	2024
Performance Measure Impacted: Pavement Condition																		
Comments:NIRPC Resolution 20-18, Amendment #9, Approved 7/16/20, Page 29. AQC Exempt 6/8/20. Amend FY21 and FY23 PE, FY22 RW and FY23 CN.																		
Indiana Department of Transportation	43008 / 2000534	A 31	US 41	HMA Overlay, Preventive Maintenance	0.95 mi S of US 12 / US 20 to US 12 / US 20	LaPorte	.74	NHPP	$1,144,397.00	Toll Lease Amendment Proceeds	PE	$0.00	$360,000.00		$310,000.00		$50,000.00	
										Toll Lease Amendment Proceeds	RW	$0.00	$20,000.00			$20,000.00		
										Toll Lease Amendment Proceeds	CN	$0.00	$764,397.00				$764,397.00	
Performance Measure Impacted: Pavement Condition																		
Comments:NIRPC Resolution 20-18, Amendment #9, Approved 7/16/20, Page 29. AQC Exempt 6/8/20. Amend FY21 and FY23 PE, FY22 RW and FY23 CN.																		
Indiana Department of Transportation	43020 / 2000397	A 31	SR 55	Bridge Deck Overlay	SR 55 over TURKEY CREEK, 01 .92 N US 30	LaPorte	0	NHPP	$660,179.00	Bridge Construction	CN	$344,143.20	$86,035.80					$430,179.00
										Bridge Consulting	PE	$40,000.00	$10,000.00					$50,000.00
										Toll Lease Amendment Proceeds	PE	$0.00	$175,000.00		$175,000.00			
										Toll Lease Amendment Proceeds	CN	$0.00	$5,000.00				$5,000.00	
Performance Measure Impacted: Bridge Condition																		
Comments:NIRPC Resolution 20-18, Amendment #9, Approved 7/16/20, Page 8. AQC Exempt 6/8/20. Amend FY21 PE and FY23 CN. FY24 PE and CN are Illustrative of FY24.																		
Indiana Department of Transportation	43026 / 2000606	A 31	US 12	HMA Overlay, Preventive Maintenance	US 12/20 Split (Melton Rd.) to 1. 07 mi. W. of SR 249 (Burns Harbor Ditch)	LaPorte	5.68	NHPP	$4,362,680.00	Road Consulting	PE	$91,200.00	$22,800.00					$114,000.00
										Toll Lease Amendment Proceeds	PE	$0.00	$553,000.00		$553,000.00			
										Road Construction	CN	$2,902,944.00	$725,736.00					$3,628,680.00
										Toll Lease Amendment Proceeds	CN	$0.00	$67,000.00			$50,000.00	$17,000.00	
Performance Measure Impacted: Pavement Condition																		
Comments:NIRPC Resolution 20-18, Amendment #9, Approved 7/16/20, Page 30. AQC Exempt 6/8/20. Amend FY21 PE, FY22 CN and FY23 CN. FY24 PE and CN is Illustrative of FY24.																		
Indiana Department of Transportation	43130 / 1702988	A 36	SR 2	Intersect. Improv. W/ Added Turn Lanes	SR 2, 0.25mi W of SR 55 to 0.2 5mi E of SR 55	LaPorte	.95	STBG	$1,211,633.00	District Other Construction	CN	$560,000.00	$140,000.00					$700,000.00
										Toll Lease Amendment Proceeds	PE	$0.00	$385,440.00		$285,440.00	$100,000.00		
Performance Measure Impacted: Safety																		
Comments:NIRPC Resolution 20-23, Amendment #10, Approved 9/17/20, Page 5. AQC Exempt 8/24/20. Amend FY21 and FY22 PE. FY24 CN is Illustrative of FY24.																		
Crown Point	43177 / 1901948	A 31	ST 1008	Intersection Improvement, Roundabout	Roundabout at the intersection of US 231 and 113th.	LaPorte	0	STBG	$1,375,000.00	Local Funds	PE	$0.00	$50,000.00			$50,000.00		

*Estimated Costs left to Complete Project column is for costs that may extend beyond the four years of a STIP. This column is not fiscally constrained and is for information purposes.

nirpc

Project Overview | Funding History | Amendment History

<< Go Back

District Intersection Improvement Project (1702988)

Des Number	1702988	*Amendment*	20-10.3 LOCAL	*Exempt Category*	Exempt	*Est Total Project Cost*	$900,000
Lead Agency	INDOT	*Contact (ERC)*				*County*	Lake
Project Type	Intersect. Improv. W/ Added Turn Lanes	*Letting Date*		*Functional Classification*	Other Principal Arterial	*Bike/Ped Component(s)*	No

Title District Intersection Improvement Project

Limits

Description Intersect. Improv. W/ Added Turn Lanes, SR 2, 0.25mi W of SR 55 to 0.25mi E of SR 55

Phase	Fund Source	Prior SFY	SFY2020	SFY2021	SFY2022	SFY2023	SFY2024	Future SFY	Total
PE	NHPP Non Interstate	-	-	$100,000	-	-	-	-	$100,000
	Total Preliminary Engineering	-	-	$100,000	-	-	-	-	$100,000
RW	NHPP Non Interstate	-	-	-	$100,000	-	-	-	$100,000
	Total Right of Way	-	-	-	$100,000	-	-	-	$100,000
CN	NHPP Non Interstate	-	-	-	-	-	$700,000	-	$700,000
	Total Construction	-	-	-	-	-	$700,000	-	$700,000
	Total Programmed	-	-	**$100,000**	**$100,000**	-	**$700,000**	-	**$900,000**

APPENDIX I
Environmental Justice

Source: U.S. Census Bureau

Environmental Justice
Intersection Improvement Project
Des. No. 1702988
SR 2 at SR 55
Lake County, Indiana

METRIC ENVIRONMENTAL

POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE

Survey/Program: American Community Survey
TableID: B17001

Product: 2019: ACS 5-Year Estimates Detailed Tables
Universe: Population for whom poverty status is determined

	Cedar Creek township, Lake County, Indiana		Census Tract 434.05, Lake County, Indiana	
Label	Estimate	Margin of Error	Estimate	Margin of Error
Total:	12,003	±138	5,303	±264
Income in the past 12 months below poverty level:	527	±280	129	±133

HISPANIC OR LATINO ORIGIN BY RACE

Survey/Program: American Community Survey
TableID: B03002

Product: 2019: ACS 5-Year Estimates Detailed Tables
Universe: Total population

	Cedar Creek township, Lake County, Indiana		Census Tract 434.05, Lake County, Indiana	
Label	Estimate	Margin of Error	Estimate	Margin of Error
Total:	12,191	±32	5,365	±261
Not Hispanic or Latino:	11,272	±288	5,034	±311
White alone	11,119	±305	5,034	±311
Black or African American alone	21	±31	0	±17
American Indian and Alaska Native alone	0	±19	0	±17
Asian alone	0	±19	0	±17
Native Hawaiian and Other Pacific Islander alone	0	±19	0	±17
Some other race alone	84	±122	0	±17
Two or more races:	48	±40	0	±17
Two races including Some other race	0	±19	0	±17
Two races excluding Some other race, and three or more races	48	±40	0	±17
Hispanic or Latino:	919	±286	331	±218

Source: U.S. Census Bureau

APPENDIX J
Additional Studies

Land and Water Conservation Fund (LWCF) County Property List for Indiana (Last Updated July 2020)

ProjectNumber	SubProjectCode	County	Property
1800005	1800005	Lake	Dowling Park
1800011	1800011	Lake	Tolleston Park
1800012	1800012	Lake	Washington Park
1800040	1800040	Lake	Homestead Park
1800055	1800055	Lake	Sheppard Memorial Park
1800059	1800059	Lake	Cheever Park
1800062	1800062	Lake	Leroy Township Park
1800063	1800063	Lake	Markley Memorial ParkEllendale Park
1800071	1800071	Lake	Cheever Park
1800087	1800087	Lake	Sheppard Memorial Park
1800102	1800102	Lake	Grand Boulevard Lake Recreation Area
1800108	1800108	Lake	Riverview Park
1800137	1800137	Lake	Northgate Park
1800150	1800150	Lake	Meadows Park
1800168	1800168	Lake	Sunnyside Park
1800170	1800170	Lake	Howe Park
1800189	1800189	Lake	Dowling Park
1800193	1800193	Lake	Harrison Park
1800194	1800194	Lake	Martin Luther King Jr. Park (Formerly Maywood Park
1800199	1800199	Lake	Ridgeway Park
1800202	1800202	Lake	Hatcher Park
1800206	1800206	Lake	Meadows Park
1800226	1800226	Lake	Hoosier Prairie Nature Preserve
1800227	1800227	Lake	Liberty Park
1800231	1800231	Lake	Pheasant Hills Community Park & Cherry Hill Tot-Lot
1800237	1800237	Lake	Wolf Lake Park (N & S)
1800239	1800239	Lake	Bluebird Park
1800253	1800253	Lake	Centennial Park
1800272	1800272	Lake	Wolf Lake Park (N & S)
1800273	1800273	Lake	Grand Kankakee Marsh County Park
1800302	1800302	Lake	Munster Community Park

1800329	1800329	Lake	Jackson Park
1800369	1800369H	Lake	Harrison Park
1800369	1800369D	Lake	Lemon Lake County Park
1800377	1800377	Lake	Main Square Park
1800386	1800386	Lake	Gibson Woods Nature Preserve & Tolleston Ridges Nature Preserve
1800405	1800405G	Lake	Clark and Pine Dune Swale Nature Preserve
1800414	1800414	Lake	Wolf Lake Park (N & S)
1800417	1800417	Lake	Centennial (Dan Rabin) Plaza & Trail
1800424	1800424	Lake	Lake Etta County Park
1800455	1800455	Lake	Deep River - Woods Mill County Park
1800464	1800464	Lake	Festival Park & Lakefront Park
1800473	1800473	Lake	Oak Ridge Prairie Co. Park
1800488	1800488	Lake	Marquette Park
1800489	1800489	Lake	Festival Park & Lakefront Park
1800522	1800522	Lake	Pavese Park
1800523	1800523	Lake	Lakewood Park
1800523.5	1800523.5	Lake	River Drive Park
1800528	1800528	Lake	Lowell Sports Park
1800533	1800533	Lake	Hobart City Ball Park
1800555	1800555	Lake	Scherwood Golf Course
1800580	1800580	Lake	Oak Ridge Park
1800586	1800586	Lake	Teibel Nature Park
1800586.1	1800586.1	Lake	Teibel Nature Park
1800590	1800590	Lake	Deep River County Park
1800622	1800622	Lake	Fireman's Park
1800636	1800636	Lake	Parrish Avenue Park

LAWSON-FISHER ASSOCIATES P.C.
525 WEST WASHINGTON AVENUE
SOUTH BEND, INDIANA 46601

Job # : 202017.13 Sheet:
Designed by: PH Date: 2/10/2022
Checked by: Date:
Revised by: Date:

Crash Records from 1/1/18 through 12/31/21
S.R. 2 EV/year = 9,091 **T= 365x3= 1095**
S.R. 55 EV/year = 2,241 **EV= 11,332**
(EV for SR 55 is Southbound only) ~~**L=**~~ ~~**0.37**~~

Project: SR2 at SR 55 Intersection Improvement with Turn Lane. DES No.: 1702985 Subject: Crash Summary

			Number of Crashes				Severity			Crash Factors*							Causal Theory
		CRASH DATE	2018	2019	2020	2021	Vehicles	Injured	Fatalities	Weather	Surface Condition	Lighting	Collision Involved	First Damage	Road Character	Collision Diagram	
Crash No:	MRN						V	I	F	A	B	C	D	E	F	G	
1	903128787	April 6, 2018	1				2	0	0	1	1	5	18	6	1	2	Veh #1 rear-ended Veh #2
2	903158761	May 30, 2018	1				2	0	0	1	1	1	18	6	1	2	Veh #1 rear-ended Veh #2
3	903217032	September 9, 2018	1				2	1	0	2	1	1	18	3	1	2	Veh #1 rear-ended Veh #2
4	903221277	September 16, 2018	1				2	0	0	1	1	1	18	3	1	2	Veh #1 rear-ended Veh #2
5	903249024	October 30, 2018	1				1	0	0	1	1	5	8 (1 deer)	6	1	--	Veh #1 hit a deer crossing S.R.2
6	903334584	March 9, 2019		1			2	1	0	3	2	5	18	3	1	2	Veh #1 rear-ended Veh #2. weather factor involved
7	903334588	March 9, 2019		1			1	0	0	3	2	5	RAN OFF ROAD	6	1	5	Veh #1 run off road due to standing water
8	903371280	May 14, 2019		1			2	0	0	1	1	1	LEFT TURN	6	1	8	Veh #1, eastbound turning left (northbound) collides with Veh #2 going westbound
9	903384697	May 31, 2019		1			3	1	0	1	1	1	18	6	1	2	Veh #1 rear-ended Veh #2 and veh #3 rear-ended Veh #1
10	903464505	October 15, 2019		1			2	0	0	1	1	1	18	3	1	2	Veh #1 rear-ended Veh #2
11	903470042	October 23, 2019		1			2	0	0	1	1	1	18	3	1	2	Veh #1 rear-ended Veh #2
12	903687294	November 10, 2020			1		1	0	0	3	2	5	8 (1 deer)	6	1	--	N/A
13	903722887	January 13, 2021				1	3	3	0	1	1	1	18	6	1	2	Veh #1 rear-ended Veh #2
14	903726313	January 19, 2021				1	1	0	0	4	4	5	8 (1 deer)	3	1	--	Veh #1 hit a deer crossing S.R.2
15	903730467	January 27, 2021				1	2	0	0	1	1	1	LEFT TURN	6	1	8	Veh #1, eastbound turning left (northbound) collides with Veh #2 going westbound
16	903795077	May 18, 2021				1	2	1	0	3	2	1	18	6	1	2	Veh #1 rear-ended Veh #2
17	903805274	June 2, 2021				1	2	0	0	1	1	1	18	6	1	2	Veh #1 rear-ended Veh #2
18	903813127	June 14, 2021				1	3	0	0	1	1	1	LEFT TURN	6	1	10	Veh #1, eastbound turning left (northbound) collides with Veh #2 going westbound
19	903905098	October 28, 2021				1	2	0	0	3	2	1	18	3	1	2	Veh #1 rear-ended Veh #2
		TOTAL	**5**	**6**	**1**	**7**	**36**	**7**	**0**								

TOTAL 18

Rear-End =	12	(67%)
Left Turn =	3	(17%)
Off-Road =	1	(6%)
Deer =	2	(11%)

CRASHES PER YEAR = 6.0

INJURIES PER YEAR = 2.3

FATALITIES PER YEAR = 0.0

ROADWAY INTERSECTION CRASH RATE (RS) = 1.45

INTERSECTION CRASH RATES**

R_S = Intersection accident rate expressed in crashes per million vehicles entering

$$R_S = \frac{(A)(1{,}000{,}000)}{(T)(EV)}$$

A = Total number of crashes during the period
T = Total time period in days
EV = Total daily average intersection Entering Vehicles

* From IDM Figures 55-8 and 55-8B

Denotes crash report of year 2020, excluded from this analysis due to covid-19 travel inconsistancy

Crash No:	Officer's Report Narrative
1	Driver #1 stated that she was talking with her sister (front seat passenger) when she looked away for a moment then looked back up and struck Vehicle #2.Driver #2 stated that he was just sitting at the light and got rear ended.
2	On 05/30/2018 Officers were dispatched to W 181st Avenue just west of State Road 55 (Grant Street) in reference to a Property Damage Accident. Upon arrival Officers spoke to Driver 2 of Vehicle 2 who advised that she was traveling eastbound on 181st Avenue approaching State Road 55 when she came to a stop due to traffic. Driver 2 of Vehicle 2 advised that while stopped in traffic the rear end of Vehicle 2 was struck from behind by Vehicle 1. Officers spoke to Driver 1 of Vehicle 1 who advised that she was traveling eastbound on 181st Avenue approaching State Road 55 when she observed Vehicle 2 just ahead of her. Driver 1 of Vehicle 1 advised that she initially believed that Vehicle 2 was moving eastbound, however she then realized that Vehicle 2 was stopped. Driver 1 advised that she attempted to brake, however Vehicle 1 continued forward and the front end of Vehicle 1 struck the rear end of Vehicle 2. Vehicle 1 sustained disabling damage to the front end, and a bent hood. Vehicle 1 was towed from the scene by Steve's Towing. Vehicle 2 sustained damage to the rear end. Vehicle 2 was able to be driven away from the scene. All occupants of Vehicle 1 and Vehicle 2 were uninjured.
3	V1 was driving east on SR 2. V2 was stopped in traffic waiting for the traffic light at SR 2 and Grant Street. D1 advised he was approaching the intersection when he turned away from the road and looked at his passenger while he was still moving forward. The front of V1 ran into the back of V2. D1 and D2 both refused medical treatment. P1 in V1 was bleeding from the nose and advised of arm pain to the right arm. Tri Creek EMS 6761 arrived on scene and transported P1 to St. Anthony's Hospital. V2 was damaged to its rear bumper and right tail pipe. V2 was still drivable. V1 was damaged on its front end with airbags deployed. V1 was not drivable. Midnight Blue Towing arrived and removed V1. D1 will be cited for Following Too Closely.
4	D1 operating V1 E/B on SR 2 rear ended V2 that was stopped in traffic.
5	Vehicle 1 a silver Ford Fusion driven by Driver 1 James Bitters was traveling east on SR2 just west of SR55. A deer, running south ran into the drivers side door. The deer rolled down the drivers side of the car causing damage to the drivers side front and rear doors, the roof and the rear quarter panel. Driver 1 who was not injured drove vehicle #1 to the State Police post for a report. There is no diagram as there was no investigation done at the scene.
6	D1 advised she was traveling eastbound approaching said intersection. D1 advised she observed the light on the traffic control signal was red and attempted to slow down to stop. D1 advised that she went into a skid on the wet pavement and rear ended V2 with V1.D2 advised he was stopped for the red light at said intersection. D2 advised V1 rear ended V2. nothing further at this time.
7	D1 advised he was traveling eastbound on sr 2 from grant street when he ran into a large puddle of standing water on the roadway, hydroplaned, spun out of control with the grass embankment, and came to final rest. nothing further at this time.
8	D1 was traveling eastbound in V1 on SR 2 while approaching Grant st.. next, D1 informed the eastbound light turned yellow, and as a result, v1 traveled northbound onto Grant st. and while doing so, V1 and V2 made contact with each other. D2 was traveling westbound in V2 on SR 2 while approaching grant st.. next, D2 informed the westbound traffic light turned yellow as V2 entered said intersection, and while doing so, V2 & V1 made contact with each other.
9	D1 advised she was traveling eastbound on W 181st Ave. near Grant St. when the front end of V1 struck the rear end of V2 then the front end of V3 struck the rear end of V1. There was damage to the rear and front bumpers on V1. Both the driver and her juvenile passenger refused medical treatment on scene.D2 advised she was traveling eastbound on W 181st Ave. near Grant St. when she slowed down for traffic, the front end of V1 struck the rear end of V2. There was damage to the hitch area on V2. All parties in V2 refused medical treatment on scene.D3 was unable to advise her actions prior to the Crash as she was being treated by Medical Personnel. The front end of V3 appeared to have struck the rear end of V1 causing heavy front end damage to V3 and there was airbag deployment. There was an empty child car seat in the rear of V3 and D3 was advised to purchase a new one. D3 was transported to Methodist Hospital Southlake for treatment.
10	D2 ADVISED HE WAS TRAVELING E/B ON 181ST AVE WHEN VEHICLES WHERE AT A COMPLETE STOP AND V1 HAD REAR ENDED HIM AT THE STOP LIGHT.
11	Driver 1 advised she was traveling west bound on rte 2 and she advised a male was following her. driver 1 advised she kept looking up at her mirror to watch the vehicle following her as she was approaching grant street. driver 1 said she looked forward and saw the light was green so she looked up again into her rearview mirror and vehicle 1 struck vehicle 2.driver 2 advised she was stopped at the stop light at rte 2 and grant street facing west bound. driver 2 advised she was waiting for the light to turn green to proceed west bound and vehicle 2 was struck by vehicle 1.
12	#N/A
13	Traveling E/B on State Road 2, V1 proceeded to rear end V2 that was slowed/stopped in traffic. The front end of V2 was then forced into the rear end of V3 that was slowed/stopped in traffic.
14	V1 D1 was driving westbound on State Road 2 at Grant Street when a deer jumped into her driver side door causing damage.
15	D1 of V1 advised she was traveling eastbound on SR 2. D1 of V1 advised she intended to turn northbound onto Grant St. (SR 55). D1 of V1 advised she was making a left hand turn onto Grant St. (SR 55) and pulled out in front of D2 of V2. D1 advised that she thought she had enough time to turn before V2 made it through the intersection.
16	On 05/19/2021, officers were dispatched to W 181st Avenue and Grant Street in regards to a Crash. Upon arrival, officers spoke with D1 of V1 and D2 of V2.D1 advised she was traveling eastbound on W 181st Avenue when she drove too closely to D2 and hit her rear end. Both D1 and D2 appeared uninjured. D2 advised she felt a little pain in her lower back; however, she refused medical treatment. V1 sustained damage to the front end. V2 sustained damage to the rear end and both left and right rear quarter panels. Both vehicles were able to be driven from the scene. Officers cleared.
17	D1 advised he did not stop his vehicle in time at the intersection of Grant St. & SR 2 and rear ended V2's Trailer causing rear end damage to it. D1 advised he was not hurt. Officer observed front end bumper damage to V1 & rear end damage to the back of a Trailer that was attached to V2. D2 advised he was slowing down and coming to a stop due to traffic stopped at the light at Grant St. & SR 2 when V2's Trailer was struck by V1. D2 advised he was not hurt. Officer observed rear end damage to the Trailer of V2. End of Report.
18	D1, driving V1, was driving north on Grant Street attempting to turn west onto State Road 2 when her view was obstructed by backed up traffic from construction further down the road. V1 struck V2, driven by D2, who was driving west on State Road 2. V2 was spun and pushed into V3, driven by D3, who was traveling east on State Road 2. V1 and V2 had disabling damage and were towed from the scene by Purkey's Towing. A Vehicle Inventory revealed nothing of value in either vehicle.Medical care was offered to all parties involved and all refused medical care on scene.
19	D1 of V1 was traveling west on W 181st Avnue approaching the intersection with Grant Street. D2 of V2 was stopping in traffic on W 181st Avenue at the intersection with Grant Street.D1 stated that when he saw that traffic was stopped, he slammed on the brakes, which he stated locked the wheels, and slid into the rear end of V2.D2 stated she was sitting in traffic waiting on the light and was rear ended.V1 suffered heavy damage to its entire front end and was towed from the scene by Steve's Towing.V2 suffered light denting and scratching to its rear hitch cover. V2 was driven from the scene.No Drivers or Passengers complained of pain or requested medical assistance.D1 collected his belongings from V1 and moved them into the vehicle that picked him up from the scene.