

Indiana Department of Transportation

County Jasper

Route State Road 14

Des. No. 1700123

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

Road No./County:

State Road (SR) 14/Jasper

Designation Number:

1700123

Project Description/Termini:

Small Structure Project along SR 14, approximately 1.5 miles east of US 231. The project begins approximately 1.39 miles east of US 231 and ends 1.55 miles east of US 231.

After completing this form, I conclude that this project qualifies for the following type of Categorical Exclusion (FHWA must review/approve if Level 4 CE):

X	Categorical Exclusion, Level 2 – The proposed action meets the criteria for Categorical Exclusion Manual Level 2 - table 1, CE Level Thresholds. Required Signatories: ESM (Environmental Scoping Manager)
	Categorical Exclusion, Level 3 – The proposed action meets the criteria for Categorical Exclusion Manual Level 3 - table 1, CE Level Thresholds. Required Signatories: ESM, ES (Environmental Services Division)
	Categorical Exclusion, Level 4 – The proposed action meets the criteria for Categorical Exclusion Manual Level 4 - table 1, CE Level Thresholds. Required Signatories: ESM, ES, FHWA
	Environmental Assessment (EA) – EAs require a separate FONSI. Additional research and documentation is necessary to determine the effects on the environment. Required Signatories: ES, FHWA

Note: For documents prepared by or for Environmental Services Division, it is not necessary for the ESM of the district in which the project is located to release for public involvement or sign for approval.

Approval

ESM Signature

Date

ES Signature

Date

FHWA Signature

Date

Release for Public Involvement

N/A

ESM Initials

Date

SFM

ES Initials

08/12/20

Date

Certification of Public Involvement

Office of Public Involvement

Date

Note: Do not approve until after Section 106 public involvement and all other environmental requirements have been satisfied.

INDOT ES/District Env.

Reviewer Signature: _____

Date: _____

Name and Organization of CE/EA

Preparer: _____

Chris Kunkel/Lochmueller Group

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Project name:

SR 14 Small Structure Project

Date:

July 13, 2020

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Part I - PUBLIC INVOLVEMENT

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

Does the project have a historic bridge processed under the Historic Bridges PA*?

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

If No, then:

Opportunity for a Public Hearing Required?

<input checked="" type="checkbox"/>	<input type="checkbox"/>
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*A public hearing is required for all historic bridges processed under the Historic Bridges Programmatic Agreement between INDOT, FHWA, SHPO, and the ACHP.

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

Remarks:

<p><u>Notice of Entry</u></p> <p>Notice of Entry letters were mailed to potentially affected property owners within the project area on August 20, 2019 notifying them about the project and that individuals responsible for land surveying and field activities may be seen in the area. A sample copy of the Notice of Entry letter is included in Appendix G, G1 to G2.</p> <p><u>Public Involvement:</u></p> <p>The project will meet the minimum requirements described in the current INDOT <i>Public Involvement Manual</i> 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.</p>

Public Controversy on Environmental Grounds

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

Will the project involve substantial controversy concerning community and/or natural resource impacts?

Remarks:

At this time, there is no substantial public controversy concerning impacts to the community or to natural resource.
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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 14

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

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

PURPOSE AND NEED:

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

<p><u>Need:</u></p> <p>The need for the project stems from the deteriorated condition of the existing culvert. According to the <i>Abbreviated Engineer's Assessment</i> prepared by SJCA in March 2019, the existing structure, CV 014-037-18.10, exhibits heavy corrosion and section loss. The bottom of the pipe has numerous holes and the pipe is partially collapsed. The condition rating of the structure is given as a 3, which indicates serious condition. Structure condition ratings range from 0, which indicates a failed structure, to 9, which indicates a new structure with no deficiencies.</p>
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Purpose:

The purpose of the project is to provide a structure that has a condition rating of 8 or greater, which is considered "very good" condition.

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Jasper Municipality: N/A

Limits of Proposed Work: From the center of the structure, the project extends 642 feet west and 201 feet east, for a total length of 843 feet.

Total Work Length: 0.002 Mile(s) Total Work Area: 0.83 Acre(s)

Is an Interchange Modification Study / Interchange Justification Study (IMS/IJS) required?
If yes, when did the FHWA grant a conditional approval for this project?

Yes ¹	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
Date: <input style="width: 100%;" type="text"/>	

¹If an IMS or IJS is required; a copy of the approved CE/EA document must be submitted to the FHWA with a request for final approval of the IMS/IJS.

In the remarks box below, describe existing conditions, provide in detail the scope of work for the project, including the preferred alternative. Include a discussion of logical termini. Discuss any major issues for the project and how the project will improve safety or roadway deficiencies if these are issues.

The Federal Highway Administration (FHWA) and the INDOT LaPorte District propose to proceed with a federal-aid project to replace the existing structure (CV 014-037-18.10) along SR 14 in Jasper County, Indiana.

Location:

The project is located along SR 14, approximately 1.5 miles east of US 231. Specifically, the project is located in Barkley Township within Sections 20, 21, and 28 of Township 30 North, and Range 6 West as depicted on the Gifford and Parr, Indiana USGS Quadrangles (Appendix B, B2).

Existing Conditions:

SR 14 is classified as a major collector within the project area and consists of two 12-foot asphalt travel lanes (1 eastbound, 1 westbound) and 4-foot gravel shoulders. The posted speed limit along SR 14 within the project area is 55 miles per hour. The existing structure, CV 014-037-18.10, is a 78-foot long corrugated metal pipe (CMP) with a varying diameter from 2-foot at the south end (inlet) to 3-foot at the north end (outlet). CV 014-037-18.10 currently exhibits heavy corrosion and section loss. The bottom of the pipe has numerous holes and the pipe is partially collapsed. Approximately 645 feet of guardrail is present along the north side of the project area.

Adjacent land use within the project area includes agricultural land, scrub shrub land, and maintained roadside (Appendix B, B3).

Preferred Alternative:

The preferred alternative will involve the replacement of CV 014-037-18.10 with a new structure. The new structure will be a 78-foot long CMP with a 4-foot diameter and a 6-inch sump. Approximately 580 square feet (0.01 acre) of riprap will be installed at the structure outlet. A new drainage ditch will be constructed in the northeast quadrant that will drain into Oliver Ditch. A total of 50 square feet of riprap will be placed along the slope of the bank of Oliver Ditch for erosion control where the new ditch outlets into Oliver Ditch. The pavement above the new structure will be replaced to full depth. The reconstructed section will have a cross-section of two 12-foot travel lanes (one in each direction). The aggregate shoulder along the westbound lane will be widened to 7 feet to accommodate the new guardrail. The aggregate shoulder along the eastbound lane will be approximately 3 feet and 3 inches. The existing guardrail will be replaced with a total of 650 feet of guardrail along the north side of SR 14.

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During construction, a cofferdam will be put in place at the inlet of the structure and a pump around will be used to dewater the pipe. This will involve a velocity dissipator and filter bag on a levelling pad in the northeast quadrant. This will allow for flow to continue while the existing structure is being replaced (Appendix B, B20). Including incidental construction for the replacement of the guardrail, the project length along SR 14 is 843 feet (0.16 mile) (Appendix B, B18).

The termini for the project are required to replace the existing structure, replace the guardrail, and construct the new drainage ditch, which will meet the purpose and need of the project. This project is independent of any other project and can be completed without the completion of any other project.

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

The preferred alternative meets the purpose and need of the project by providing a new structure that will have a condition rating of at least an 8.

Maintenance of Traffic

The proposed MOT plan will require the closure of SR 14 during construction. An official detour utilizing US 231, SR 114, I-65, SR 10, and SR 49 will be established (Appendix B, B16 to B17). Please refer to the *Maintenance of Traffic* section of this document for full details. The MOT will be implemented per the *Indiana Design Manual* guidelines.

Right-of-Way

The proposed project will require the acquisition of 7.39 acres of permanent right-of-way (Appendix B, B3). No temporary ROW will be required, and no relocations will be required.

During Agency Early Coordination, the amount of ROW required was listed as 3.68 acres. Since this acreage was already beyond the threshold to require public involvement, recoordination was not initiated.

OTHER ALTERNATIVES CONSIDERED:

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

Pipe Lining: This alternative would involve lining the existing pipe. While lining the structure would result in a smaller project footprint, lessening environmental impacts, the heavy corrosion and section loss does not allow for lining to be feasible. Furthermore, lining the structure would have lessened the diameter of the pipe, allowing for greater backwater and potential for roadway overtopping. Lining the structure would not have met the purpose and need of the project because the condition rating of the lined structure would have likely been lower than 8. Therefore, this alternative was discarded from further consideration.

No Build Alternative: This alternative involved not improving CV 014-037-18.10. While this alternative eliminates costs and any environmental impacts, it would not have met the objectives of the purpose and need of the project. Therefore, this alternative was discarded from further consideration.

The Do Nothing Alternative is not feasible, prudent or practicable because (Mark all that apply):

- It would not correct existing capacity deficiencies;
- It would not correct existing safety hazards;
- It would not correct the existing roadway geometric deficiencies;
- It would not correct existing deteriorated conditions and maintenance problems; or
- It would result in serious impacts to the motoring public and general welfare of the economy.
- Other (Describe)

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

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ROADWAY CHARACTER:

Functional Classification:	<u>Major Collector</u>		
Current ADT:	<u>2,530</u>	VPD (2022)	Design Year ADT: <u>3,264</u>
Design Hour Volume (DHV):	<u>292</u>	Truck Percentage (%)	<u>22.2</u>
Designed Speed (mph):	<u>55</u>	Legal Speed (mph):	<u>55</u>

Existing	Proposed
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Number of Lanes:	2		2
Type of Lanes:	Travel lanes		Travel lanes
Pavement Width:	24	ft.	25.58
Shoulder Width:	4	ft.	8.17
Median Width:	N/A	ft.	N/A
Sidewalk Width:	N/A	ft.	N/A

Setting:	<input type="checkbox"/> Urban	<input type="checkbox"/> Suburban	<input checked="" type="checkbox"/> Rural
Topography:	<input checked="" type="checkbox"/> Level	<input type="checkbox"/> Rolling	<input type="checkbox"/> Hilly

If the proposed action has multiple roadways, this section should be filled out for each roadway.

DESIGN CRITERIA FOR BRIDGES:

Structure/NBI Number(s): <u>CV 014-037-18.10</u>	Sufficiency Rating: <u>N/A</u>
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(Rating, Source of Information)

Existing	Proposed
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Bridge Type:	Corrugated Metal Pipe		Corrugated Metal Pipe
Number of Spans:	1		1
Weight Restrictions:	N/A	ton	N/A
Height Restrictions:	N/A	ft.	N/A
Curb to Curb Width:	N/A	ft.	N/A
Outside to Outside Width:	N/A	ft.	N/A
Shoulder Width:	N/A	ft.	N/A
Length of Channel Work:			49

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

Remarks:	The proposed project will involve the replacement of CV 014-037-18.10 which conveys surrounding roadside and agricultural drainage under SR 14 and into Oliver Ditch on the north side of SR 14 (Appendix B, B19). There is an additional structure approximately 345 feet west of CV 014-037-18.10 that will not be impacted by this project.
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Will the structure be rehabilitated or replaced as part of the project?	Yes	No	N/A
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If the proposed action has multiple bridges or small structures, this section should be filled out for each structure.

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MAINTENANCE OF TRAFFIC (MOT) DURING CONSTRUCTION:
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	Yes	No
Is a temporary bridge proposed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is a temporary roadway proposed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the project involve the use of a detour or require a ramp closure? (describe in remarks)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Provisions will be made for access by local traffic and so posted.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Provisions will be made for through-traffic dependent businesses.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Provisions will be made to accommodate any local special events or festivals.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Will the proposed MOT substantially change the environmental consequences of the action?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is there substantial controversy associated with the proposed method for MOT?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Remarks: The MOT will require the closure of SR 14 during construction (Appendix B, B16 to B17). A marked detour utilizing US 231, SR 114, I-65, SR 10, and SR 49 will be established. The detour will be approximately 27.6 miles, for an added travel length of approximately 33 miles. Access to all drives will be maintained during construction. The detour is expected to last eight months. Signal, barricades and appropriate signage will be posted informing motorists of the construction, closure, and detour. The MOT will be implemented per the *Indiana Design Manual* guidelines.

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

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: \$ 39,683 (2019/2021) Right-of-Way: \$ 50,000 (2021) Construction: \$ 160,284 (2021/2022)

Anticipated Start Date of Construction: Spring 2022

Date project incorporated into STIP July 2, 2019

Is the project in an MPO Area? Yes No

If yes,

Name of MPO N/A

Location of Project in TIP N/A

Date of incorporation by reference into the STIP N/A

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RIGHT OF WAY:

Land Use Impacts	Amount (acres)	
	Permanent	Temporary
Residential	0.47	0.00
Commercial	0.00	0.00
Agricultural	4.48	0.00
Forest	0.77	0.00
Wetlands	0.00	0.00
Other: Maintained Roadside	1.67	0.00
Other:	0.00	0.00
TOTAL	7.39	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 or reacquisition, either known or suspected, and there impacts on the environmental analysis should be discussed.

Remarks:

Within the project area, the existing ROW was assumed to be located along the edge of the gravel shoulder along SR 14 which is about 16 feet north and south of the roadway centerline. The land use of the existing ROW is transportation.

The project requires approximately 7.39 acres of permanent right-of-way all from residential (0.47 acre), agricultural (4.48 acre), light forested (0.77 acre), and maintained roadside (1.67 acre) land use. The new typical ROW width along SR 14 is proposed to be 35 feet north and south of the centerline along most of the project area. The maximum width along the south side of SR 14 is 50 feet and along the north side of SR 14 is 200 feet. This project will acquire the land from the edge of the gravel shoulder to the top of the north bank of Oliver Ditch in the northwest quadrant. The purpose of acquiring this much ROW is to retain access to the drainage ditch for future maintenance activities. In the southwest, northeast, and southeast quadrants, land along the roadway will be acquired (Appendix B, B3).

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

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

SECTION A – ECOLOGICAL RESOURCES

	Presence	Impacts	
		Yes	No
Streams, Rivers, Watercourses & Jurisdictional Ditches	X	X	
Federal Wild and Scenic Rivers			
State Natural, Scenic or Recreational Rivers			
Nationwide Rivers Inventory (NRI) listed			
Outstanding Rivers List for Indiana			
Navigable Waterways			

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Remarks:

Based on a desktop review, a site visit on October 3, 2018 by Lochmueller Group, the aerial map of the project area (Appendix B, B3), the USGS topographic map (Appendix B, B2), and the water resources map of the RFI report (Appendix E, E8) there is one stream located within the 0.5 mile search radius. There is one stream present within or adjacent to the project area.

A Waters of the U.S. Determination Report was approved by INDOT Ecology and Waterway Permitting Office (EWPO) on January 22, 2019. Please refer to Appendix F, F1 to F23 for the *Waters of the U.S. Determination Report*. Oliver Ditch was identified flowing west through the project area. Approximately 49 feet of Oliver Ditch flows within the project area. Oliver Ditch is likely a "Water of the U.S." due to the hydrologic connection with the Iroquois River, a Traditionally Navigable Water (TNW), via Jungles Ditch approximately 2.9 river miles downstream of the project area. According to the USGS (1:24,000 scale) topographic map, Oliver Ditch is a mapped state perennial stream. Oliver Ditch has an ordinary high water mark (OHWM) of 23 feet, 8 inches wide and 2 feet, 2 inches deep. Oliver Ditch is not listed as a Federal Wild and Scenic River, a State Natural, Scenic, and Recreational River or as an IDNR Outstanding River. The U.S. Army Corp of Engineers (USACE) makes all final determinations regarding jurisdiction.

Although the amount of ROW required increased and exceeds the area surveyed during the waters investigation, the area to be disturbed by construction activities remains within the survey area. Therefore, no additional waters investigation was necessary.

Oliver Ditch is a legal drain within Jasper County. Coordination with the Jasper County Surveyor occurred on March 31, 2020 (Appendix C, C1 to C4) and no response was received.

The project will impact 49 linear feet (0.03 acre below OHWM) of Oliver Ditch for vegetation clearing, grading and riprap placement at the outlet of the new structure. Due to permanent impacts to a likely "Wates of the U.S.", an Indiana Department of Environmental Management (IDEM) Section 401 Water Quality Certification (WQC) and a USACE Section 4040 Regional General Permit (RGP) will be required. Since impacts are below the 300 linear feet or 0.1 acre below OHWM, no mitigation will be required.

Early coordination information was sent to the IDNR Division of Fish and Wildlife (DFW) and the USACE on March 31, 2020. The USACE did not respond to the early coordination letter. The IDNR DFW responded on April 30, 2020 with recommendations to avoid or minimize impacts to streams (Appendix C, C34 to C35). Their recommendations include minimizing the use of riprap, implementing time of year restrictions for work in the waterway, and keeping all work in the stream within the construction limits. All applicable IDNR DFW recommendations are included in the *Environmental Commitments* section of this CE document.

An automated letter was generated from the IDEM website on March 31, 2020 (Appendix C, C5 to C10). Applicable recommendations from the Proposed Roadway Letter include coordinating with appropriate agencies with regards to stream impacts, limiting stream disturbance.

Other Surface Waters

- Reservoirs
- Lakes
- Farm Ponds
- Detention Basins
- Storm Water Management Facilities
- Other: _____

<u>Presence</u>	<u>Impacts</u>	
	<u>Yes</u>	<u>No</u>

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Remarks: Based on a desktop review, a site visit on October 3, 2018 by Lochmueller Group, the aerial map of the project area (Appendix B, B3), the USGS topographic map (Appendix B, B2), and the water resource map in the RFI report (Appendix E, E8), there are no other surface waters within the 0.5 mile search radius. No other surface waters are present within the project area; therefore, no impacts are expected.

The USACE did not respond to the early coordination letter. The IDNR DFW responded on April 30, 2020 but had no recommendations relating to other surface waters (Appendix C, C34 to C35).

An automated letter was generated from the IDEM website on March 31, 2020 (Appendix C, C5 to C10). No recommendations related to surface water features apply as there are no other surface water feature impacts associated with this project.

Presence **Impacts**

Yes No

Wetlands

Total wetland area: N/A acre(s) Total wetland area impacted: N/A 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
N/A	N/A	N/A	N/A	N/A

	<u>Documentation</u>	<u>ES Approval Dates</u>
Wetlands (Mark all that apply)		
Wetland Determination	<input checked="" type="checkbox"/>	<input type="text" value="January 22, 2019"/>
Wetland Delineation	<input type="checkbox"/>	<input type="text"/>
USACE Isolated Waters Determination	<input type="checkbox"/>	<input type="text"/>
Mitigation Plan	<input type="checkbox"/>	<input type="text"/>

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

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

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

Remarks: Based on a review of the USFWS National Wetland Inventory (NWI) on-line mapper (www.fws.gov/wetlands/data/Mapper.html) (Appendix F, F9), a site visit on October 3, 2018 by Lochmueller Group, the USGS topographic map (Appendix B, B2), and the water resource map of the RFI report (Appendix E, E8), there are 14 wetlands located within the 0.5 mile search radius. There is one mapped wetland adjacent to the project area.

A *Waters of the U.S. Determination Report* was approved by the INDOT EWPO on January 22, 2019. Please refer to Appendix F, F1 to F24 for the *Waters of the U.S. Determination Report*. It was determined that no wetlands were present in the project survey area. The USACE makes all final determinations regarding jurisdiction.

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The October 2018 field investigation did not identify any wetlands within the project survey area. Therefore, no impacts are expected.

The USACE did not respond to the early coordination letter. The IDNR DFW responded on April 30, 2020 with recommendations regarding wetlands (Appendix C, C34 to C35). Since no wetland impacts will occur as part of this project, these recommendations do not apply.

An automated letter was generated from the IDEM website on March 31, 2020 (Appendix C, C5 to C10). No recommendations related to wetland features apply as there are no wetland feature impacts associated with this project.

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

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

Remarks: Based on a desktop review, a site visit on October 3, 2018 by Lochmueller Group and the aerial map of the project area (Appendix B, B2), there is maintained roadside habitat within the project area. The vegetation present is dominated by rice cut grass (*Leersia oryzoides*), common horsetail (*Equisetum arvense*), tall fescue (*Schedonorus arundinaceus*), and Kentucky bluegrass (*Poa pratensis*). No trees will be cleared as part of this project. The project will result in the disturbance of approximately 0.75 acre of terrestrial habitat for the removal of the structure, installation of the new structure, removal and replacement of guardrail, and installation of new riprap. The avoidance of terrestrial habitats is not feasible as the project limits are required for the replacement of the structure, replacement of guardrail, and installation of new riprap. This meets the purpose and need of the project, as outlined in the *Purpose and Need* section of this document.

The USACE did not respond to the early coordination letter. The IDNR DFW responded on April 30, 2020 with recommendations regarding terrestrial habitat (Appendix C, C34 to C35). These recommendations include reseeding disturbed areas, allowing for wildlife passage through the new culvert, and limiting ground and habitat disturbance to within the construction limits of the project. All applicable IDNR DFW recommendations are included in the *Environmental Commitments* section of this CE document.

An automated letter was generated from the IDEM website on March 31, 2020 (Appendix C, C5 to C10). Applicable recommendations from the Proposed Roadway Letter include coordinating with appropriate permitting agencies.

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

	Yes	No
Is the proposed project located within or adjacent to the potential Karst Area of Indiana?		X
Are karst features located within or adjacent to the footprint of the proposed project?		X
If yes, will the project impact any of these karst features?		

Use the remarks box to identify any karst features within the project area. (Karst investigation must comply with the Karst MOU, dated October 13, 1993)

Remarks: Based on a desktop review, the project is located outside the designated karst region of Indiana, as outlined in the October 13, 1993 MOU. According to the topographic map of the project area (Appendix B, B2) and the water resources map of the RFI report (Appendix E, E8), there are no karst features identified within or adjacent to the project area. In the early coordination response, the IGS did not indicate that karst features exist in the

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project area (Appendix C, C11 to C13). The letter also listed moderate liquefaction potential, high potential for encountering bedrock resources, and low potential for encountering sand and gravel resources. The response from IGS has been communicated with the designer on May 21, 2020. No impacts are expected.

Threatened or Endangered Species

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

	Presence	Impacts	
		Yes	No
Within the known range of any federal species	X	X	
Any critical habitat identified within project area			
Federal species found in project area (based upon informal consultation)			
State species found in project area (based upon consultation with IDNR)			

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

Remarks:

Based on a desktop review and the RFI report (Appendix E, E1 to E12) completed by Lochmueller Group on May 22, 2019, the IDNR Jasper County ETR Species List has been checked and is included in Appendix E, E9 to E12. The highlighted species on the list reflect the federal and state identified ETR species located within the county. According to the IDNR-DFW early coordination response dated April 30, 2020 (Appendix C, C34 to C35), the Natural Heritage Program's Database has been checked and to date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity.

Project information was submitted through the USFWS's IPaC portal, and an official species list was generated (Appendix C, C15 to C20). The project is within the range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*). No additional species were found within or adjacent to the project area, other than the Indiana bat and NLEB.

The project qualifies for the *Range-wide Programmatic Informal Consultation* for the Indiana bat and NLEB, dated May 2016 (revised February 2018), between FHWA, Federal Railroad Administration (FRA), Federal Transit Administration (FTA), and USFWS. An effect determination key was completed on April 20, 2020, and based on the responses provided, the project was found to "May Affect – Not Likely to Adversely Affect" the Indiana bat and/or the NLEB. INDOT reviewed and verified the effect finding on April 20, 2020, and requested USFWS's review of the finding (Appendix C, C21 to C31). No response was received from USFWS within the 14-day review period; therefore, it was concluded that they concur with the finding. Avoidance and Mitigation Measures (AMMs) are included as firm commitments in the Environmental Commitments section of this CE 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 this site becomes available, or if project plans are changed, USFWS will be contacted for consultation.

SECTION B – OTHER RESOURCES

Drinking Water Resources

- Wellhead Protection Area
- Public Water System(s)
- Residential Well(s)
- Source Water Protection Area(s)
- Sole Source Aquifer (SSA)

	Presence	Impacts	
		Yes	No
Wellhead Protection Area			
Public Water System(s)			
Residential Well(s)			
Source Water Protection Area(s)			
Sole Source Aquifer (SSA)			

This is page 11 of 22 Project name: SR 14 Small Structure Project Date: July 13, 2020

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If a SSA is present, answer the following:

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

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

The IDEM Wellhead Proximity Determinator website (<http://www.in.gov/idem/cleanwater/pages/wellhead/>) was accessed on May 21, 2020 by Lochmueller Group. This project is not located within a Wellhead Protection Area or Source Water Area.

The IDNR Water Well Record Database website (<https://www.in.gov/dnr/water/3595.htm>) was accessed on May 21, 2020 by Lochmueller Group. No wells are located near this project area. Therefore, no impacts are anticipated.

Based on a desktop review of the INDOT MS4 website (<https://entapps.indot.in.gov/MS4/>) by Lochmueller Group on May 21, 2020 and the RFI report; this project is not located within an UAB location. No impacts are expected.

Based on a desktop review, a site visit on October 3, 2018 by Lochmueller Group, the aerial map of the project area (Appendix B, B3), and the design plans (Appendix B, B12), no public water systems were identified. Therefore, no impacts are expected.

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

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

Remarks: Based on a desktop review of the IDNR Indiana Floodway Information Portal website (<http://dnrmaps.dnr.in.gov/appsphp/fdms/>) by Lochmueller Group on May 18, 2020, and the RFI report (Appendix E, E8); this project is located in a regulatory floodplain as determined from approved IDNR floodplain maps (Appendix F, F24). An early coordination letter was sent on March 31, 2020, to the local Floodplain Administrator and IDNR DFW (Appendix C, C1 to C4). The floodplain administrator did not respond within the 30-day time frame. The IDNR DFW responded on April 30, 2020 stating that this project will require the formal approval for construction in a floodway under the Flood Control Act (Appendix C, C33 to C34).

This project qualifies as a Category 4 per the current INDOT CE Manual, which states: "There are no homes located within the base floodplain within 1,000 feet upstream and there are no homes located within the base floodplain within 1,000 feet downstream. The proposed structure will have an effective capacity such that backwater surface elevations are not expected to substantially increase. As a result, there will be no substantial adverse impacts on natural and beneficial floodplain values; there will be no substantial change in flood risks; and there will be no substantial increase in potential for interruption or termination of emergency service or emergency evacuation routes; therefore, it has been determined that this encroachment is not substantial. A

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

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

Total Points (from Section VII of CPA-106/AD-1006* _____
**If 160 or greater, see CE Manual for guidance.*

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

Remarks: Based on a desktop review, a site visit on October 3, 2018 by Lochmueller Group and the aerial map of the project area (Appendix B, B3) there is land that meets the definition of farmland under the Farmland Protection Policy Act (FPPA) within the project area. An early coordination letter was sent on March 31, 2020 to the Natural Resources Conservation Services (NRCS). In their response, they stated that the project would not cause a conversion of prime farmland (Appendix C, C14). The requirements of FPPA do not apply to this project; therefore, no impacts are expected.

SECTION C – CULTURAL RESOURCES

	<u>Category</u>	<u>Type</u>	<u>INDOT Approval Dates</u>	<u>N/A</u>
Minor Projects PA Clearance	<input checked="" type="checkbox"/> A	<input checked="" type="checkbox"/> 9	<input type="checkbox"/> August 22, 2019	<input type="checkbox"/>
	<input type="checkbox"/> B	<input type="checkbox"/> 9		

Eligible and/or Listed Resource Present

Results of Research

Archaeology	<input type="checkbox"/>
NRHP Buildings/Site(s)	<input type="checkbox"/>
NRHP District(s)	<input type="checkbox"/>
NRHP Bridge(s)	<input type="checkbox"/>

Project Effect

No Historic Properties Affected No Adverse Effect Adverse Effect

Documentation Prepared

Documentation (mark all that apply)

	<u>ES/FHWA Approval Date(s)</u>	<u>SHPO Approval Date(s)</u>
Historic Properties Short Report	<input type="checkbox"/>	<input type="checkbox"/>
Historic Property Report	<input type="checkbox"/>	<input type="checkbox"/>
Archaeological Records Check/ Review	<input checked="" type="checkbox"/> August 22, 2019	<input type="checkbox"/>
Archaeological Phase Ia Survey Report	<input checked="" type="checkbox"/> August 22, 2019	<input type="checkbox"/>
Archaeological Phase Ic Survey Report	<input type="checkbox"/>	<input type="checkbox"/>
Archaeological Phase II Investigation Report	<input type="checkbox"/>	<input type="checkbox"/>
Archaeological Phase III Data Recovery	<input type="checkbox"/>	<input type="checkbox"/>
APE, Eligibility and Effect Determination	<input type="checkbox"/>	<input type="checkbox"/>
800.11 Documentation	<input type="checkbox"/>	<input type="checkbox"/>

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

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

Remarks: On August 22, 2019, the INDOT Cultural Resources Office (CRO) determined that this project falls within the guidelines of Category A, Type 9 and Category B, Type 9 under the Minor Projects Programmatic Agreement (MPPA) (Appendix D, D1 to D4). The projects that fall under the aforementioned MPPA categories are as follows:

A-9: Installation, repair, or replacement of erosion control measures along roadways, waterways and bridge piers within previously disturbed soils.

B-9: Installation of drainage structures when the work may occur to unusual features where the structure has no wood, stone, or brick in undisturbed soils where an archaeological investigation found no National Register for Historic Places (NRHP) eligible or listed sites are found and no NRHP eligible or NRHP listed district or above-ground individual resource exists within or adjacent to the project area.

An archaeological records check and Phase Ia field reconnaissance were conducted by 106 Consulting LLC on August 21, 2019 and found no previously recorded sites within or adjacent to the project area. A 7.1-acre survey area was examined through visual walkover study, pedestrian transects and shovel probes. One archaeological site was identified in the project area but was determined not to be eligible for inclusion in the NRHP. An email was sent on March 19, 2020 to INDOT CRO to inform them of the increase in the amount of permanent ROW required. INDOT CRO responded on March 31, 2020 stating that no further archaeology was required since all work was to be contained within their investigated area (Appendix D, D5 to D7). No further consultation is required. This completes the Section 106 process and the responsibilities of the FHWA under Section 106 have been fulfilled.

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

Section 4(f) Involvement (mark all that apply)

Parks & Other Recreational Land

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

Presence

Use

Yes	No

Evaluations Prepared

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

FHWA Approval date

--

Wildlife & Waterfowl Refuges

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

Presence

Use

Yes	No

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**Evaluations
Prepared**

Programmatic Section 4(f)*
"De minimis" Impact*
Individual Section 4(f)

**FHWA
Approval date**

Historic Properties

Sites eligible and/or listed on the NRHP

Presence

Use

Yes	No
<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>

**Evaluations
Prepared**

Programmatic Section 4(f)*
"De minimis" Impact*
Individual Section 4(f)

**FHWA
Approval date**

**FHWA approval of the environmental document also serves as approval of any Section 4f Programmatic and/or De minimis evaluation(s) discussed below.*

Discuss Programmatic Section 4(f) and "de minimis" Section 4(f) impacts in the remarks box below. Individual Section 4(f) documentation must be separate Draft and Final documents. For further discussions on Programmatic, "de minimis" and Individual Section 4(f) evaluations please refer to the "Procedural Manual for the Preparation of Environmental Studies". Discuss proposed alternatives that satisfy the requirements of Section 4(f).

Remarks:

Section 4(f) of the U.S. Department of Transportation Act of 1966 prohibits the use of certain public and historic lands for federally funded transportation facilities unless there is no feasible and prudent alternative. The law applies to significant publicly owned parks, recreational areas, wildlife/waterfowl refuges, and NRHP eligible or listed historical properties. Lands subject to this law are considered Section 4(f) resources.

Based on a desktop review, a site visit on October 3, 2018 by Lochmueller Group, the 2018 aerial map of the project area (Appendix B, B2), and the RFI report (Appendix E, E7), there is one Section 4(f) resource located within 0.5 mile of the project. There is one 4(f) resource, a potential trail, located within or adjacent to the project area. The potential trail, Jasper County Trails Vision Routes (Lawton, Ryan, and Oliver Ditches Corridor), falls within the project area. The potential trail would be considered a Section 4(f) resource because it will be used for recreational activity. An early coordination letter was sent to the managing entity, Jasper County Economic Development Organization, on March 31, 2020. No response was received. It is anticipated that this project will take place prior to the construction of this potential trail. Therefore, no use is expected.

Section 6(f) Involvement

Presence

Use

Section 6(f) Property

Yes	No
<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>

Discuss proposed alternatives that satisfy the requirements of Section 6(f). Discuss any Section 6(f) involvement.

Remarks:

The U.S. Land and Water Conservation Fund Act of 1965 established the 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) property on the INDOT Environmental Services Division (ESD) website at (<https://www.in.gov/indot/2523.htm>) revealed a total of three properties, represented by five records, in Jasper County (Appendix J, J1). None of these properties are located within or adjacent to the project area. Therefore, there will be no impacts to Section 6(f) resources as a result of this project.

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SECTION E – Air Quality

Air Quality

Conformity Status of the Project

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

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

If YES, then:

Is the project in the most current MPO TIP?

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

Is the project exempt from conformity?

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

If the project is NOT exempt from conformity, then:

Is the project in the Transportation Plan (TP)?

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

Is a hot spot analysis required (CO/PM)?

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

Level of MSAT Analysis required?

Level 1a Level 1b Level 2 Level 3 Level 4 Level 5

Remarks:

The FY 2020-2024 STIP is listed based on the lead Des. No. in the contract. The lead Des. No. for this contract is 1700103. The FY 2020-2024 STIP includes Des. No. 1700123 by reference with the contract number 42245.

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

This project is of a type qualifying as a 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 F – NOISE

Noise

Is a noise analysis required in accordance with FHWA regulations and INDOT's traffic noise policy?

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

No Yes/ Date

ES Review of Noise Analysis

<input type="checkbox"/>	<input type="text"/>
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Remarks:

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

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SECTION G – COMMUNITY IMPACTS

Regional, Community & Neighborhood Factors

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

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

Remarks:

The project will ultimately be beneficial to local business and properties due to improvements made to drainage and the roadway at this location. Overall, the negative impacts to property owners and local businesses within the project area will be minimal and will consist primarily of short-term construction impacts. No relocations are expected. Property owners will be provided access throughout the duration of the project to reduce impacts as much as possible. The project is not anticipated to result in substantial impacts to community cohesion, because it will not change access to properties within the area. The proposed project is not expected to impact the surrounding community or cause economic impacts to the surrounding area. Therefore, this project will have minimal or no negative impacts to the community or local economy.

According to the Fairs and Festivals website (www.fairsandfestivals.net), accessed on May 4, 2020 by Lochmueller Group, there are three fairs and festivals scheduled within 10 miles of the project. The festivals are located in the city of Rensselaer. The proposed project will close SR 14 and a detour will be established during construction (Appendix B, B16 to B17). Although a detour will be required, it is not anticipated that the detour will affect the festivals due to their distance from the project area.

The MOT may pose delays and temporary inconveniences to traveling motorists (including school buses and emergency services); however, all inconveniences will cease upon project completion. The MOT for the project is not anticipated to impact access to community events. The project sponsor will be responsible for contacting school districts and emergency services at least two weeks prior to any construction activities that would limit access, this is included as a commitment in the Environmental Commitments section of this CE document.

Coordination with Jasper County did not identify an approved transition plan and the status of the plan is unknown; however, no existing pedestrian facilities will be modified or removed, and no new pedestrian facilities are proposed as part of this project. Therefore, this project will not create any additional barriers to access.

Indirect and Cumulative Impacts

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

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

Remarks:

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

This project will not add substantial capacity to the existing roadway network or provide additional access to any currently undeveloped area. Therefore, the project is not expected to increase development in the area or result in substantial indirect or cumulative impacts.

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Yes No

Public Facilities & Services

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

Remarks: Based on a desktop review, a site visit on October 3, 2018 by Lochmueller Group, the aerial map of the project area (Appendix B, B3), and the RFI report (Appendix E, E7) there is one public facility within the 0.5 mile search radius. There is one public facility within or adjacent to the project area, a planned trail. As stated previously, this trail will not be constructed before this project will be constructed. Therefore, no impacts are expected. Access to all properties will be maintained during construction.

Early coordination information was sent to Jasper County Economic Development Organization, Rensselaer Central Schools, Rensselaer Police Department, Rensselaer Fire Department, Jasper County Commissioners, Jasper County Council, Jasper County Highway Department, Jasper County Surveyor's Office, Jasper County Emergency Management Agency, and Jasper County Sheriff's Department on March 31, 2020. None of the previously listed agencies responded to the early coordination letter.

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

Environmental Justice (EJ) (Presidential EO 12898)

Yes No

During the development of the project were EJ issues identified?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the project require an EJ analysis?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If YES, then:		
Are any EJ populations located within the project area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the project result in adversely high or disproportionate impacts to EJ populations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Remarks: Under FHWA Order 6640.23A, FHWA and the project sponsor, as recipient of funding from FHWA, are responsible to ensure that their programs, policies, and activities do not have a disproportionately high and adverse effect on minority or low-income populations. Per the current INDOT *Categorical Exclusion Manual*, an Environmental Justice (EJ) Analysis is required for any project that has two or more relocations or 0.5 acre of additional permanent ROW. This project will require 7.39 acres of new permanent ROW. Therefore, an EJ analysis is required.

Potential EJ impacts are detected by locating minority and low-income populations relative to a reference population to determine if populations of EJ concern exist 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 Jasper County. The community that overlaps the project limits is called the affected community (AC). In this project, the AC is Census Tract 1010. An AC has a population of concern for EJ if the population is more than 50% minority or low-income or if the low-income or minority population is 125% of the COC. Data from the American Community Survey (2014-2018) was obtained from the U.S. Census Bureau website (<https://data.census.gov/>) on April 30, 2020 by Lochmueller Group. The data collected for minority and low-income populations within the AC are summarized in the table below.

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	COC	AC 1
	Jasper County, Indiana	Census Tract 1010
LOW-INCOME POPULATION		
Total Population for Whom Poverty Status is Determined	32,410	5,676
Total Population Below Poverty Level	2,867	292
Percent Low-Income	8.8%	5.1%
125 Percent of COC	11.1%	
AC Percent Low-Income Greater Than 125 Percent of COC?		No
AC Percent Low-Income Greater Than 50 Percent?		No
Population of EJ Concern?		No
MINORITY POPULATION		
Total Population	33,449	5,736
Minority Population	2,796	110
Percent Minority	8.4%	1.9%
125 Percent of COC	10.4%	
AC Percent Minority Greater Than 125 Percent of COC?		No
AC Percent Minority Greater Than 50 Percent?		No
Population of EJ Concern?		No

The AC, Census Tract 1010 has a percent minority of 1.9% which is below 50% and is below the 125% COC threshold. Therefore, the AC does not contain minority populations of EJ concern.

The AC, Census Tract 1010 has a percent low-income of 5.1% which is below 50% and is below the 125% COC threshold. Therefore, the AC does not contain low-income populations of EJ concern.

The census data sheets, map, and calculations can be found in Appendix I, II to I6. No further EJ analysis is warranted.

Relocation of People, Businesses or Farms

- Will the proposed action result in the relocation of people, businesses or farms?
- Is a Business Information Survey (BIS) required?
- Is a Conceptual Stage Relocation Study (CSRS) required?
- Has utility relocation coordination been initiated for this project?

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

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

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

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

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SECTION H – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

Hazardous Materials & Regulated Substances (Mark all that apply)

Red Flag Investigation

Phase I Environmental Site Assessment (Phase I ESA)

Phase II Environmental Site Assessment (Phase II ESA)

Design/Specifications for Remediation required?

Documentation

X

No Yes/ Date

ES Review of Investigations		August 3, 2019
------------------------------------	--	----------------

Include a summary of findings for each investigation.

Remarks:

Based on a review of GIS and available public records, an RFI was approved on August 3, 2019 by INDOT Site Assessment and Management (Appendix E, E1 to 12). No sites with hazardous material concerns (hazmat sites) or sites involved with regulated substances were identified in or within 0.5 mile of the project area. Further investigation for hazardous materials or regulated substances is not required at this time.

Oliver Ditch is IDEM 303d listed as impaired for *E. coli*. Workers who are working in or near water with *E. coli* should take care to wear appropriate PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure. This is included as a commitment in the *Environmental Commitments* section of this document.

As the project plans were developed and the limits were more defined, it was determined that more ROW would be required than what was listed in the approved RFI. This additional area was surveyed by Lochmueller Group personnel on June 5, 2020 and found no additional resources within 0.5 mile of the additional area.

SECTION I – PERMITS CHECKLIST

Permits (mark all that apply)

Likely Required

Army Corps of Engineers (404/Section10 Permit)

Individual Permit (IP)	
Nationwide Permit (NWP)	
Regional General Permit (RGP)	X
Pre-Construction Notification (PCN)	
Other	
Wetland Mitigation required	
Stream Mitigation required	

IDEM

Section 401 WQC	X
Isolated Wetlands determination	
Rule 5	
Other	
Wetland Mitigation required	
Stream Mitigation required	

IDNR

Construction in a Floodway	X
Navigable Waterway Permit	
Lake Preservation Permit	
Other	
Mitigation Required	

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US Coast Guard Section 9 Bridge Permit
Others (Please discuss in the remarks box below)

Remarks: A total of 49 linear feet (0.03 acre below the OHWM) of Oliver Ditch will be impacted by the project. Impacts will be limited to the portion of the creek within the construction limits of the project. A USACE Section 404 RGP and IDEM Section 401 WQC will be required due to the impacts to Oliver Ditch. A formal jurisdictional determination has not yet been made by the USACE, which will be required during the permitting phase.

Mitigation is required when cumulative stream and wetland impacts meet or exceed 300 linear feet or 0.1 acre below the ordinary high water mark. Due to the cumulative impacts of 49 linear feet and 0.03 acre, mitigation is not likely required for the USACE Section 404 RGP or the IDEM Section 401 WQC.

This project will require the formal approval for construction in a floodway from the IDNR under the Flood Control Act.

Applicable recommendations provide by permitting agencies are included in the Environmental Commitments section of this CE document. If permits are found to be necessary, the conditions of the permit will be requirements of the project and will supersede these recommendations.

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

SECTION J- ENVIRONMENTAL COMMITMENTS

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

Remarks: **Firm:**

1. If the scope of work or permanent or temporary right-of-way amounts change, the INDOT Environmental Services Division (ESD) and the INDOT District Environmental Section will be contacted immediately. (INDOT ESD and INDOT District)
2. It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access. (INDOT ESD)
3. Any work in a wetland area within right-of-way or in borrow/waste areas is prohibited unless specifically allowed in the U.S. Army Corps of Engineers permit. (INDOT ESD)
4. Oliver Ditch is IDEM 303d listed as impaired for *E. coli*. Workers who are working in or near water with *E. coli* should take care to wear appropriate PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure. (INDOT SAM)
5. General AMM 1: Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs. (USFWS)
6. Lighting AMM 1: Direct temporary lighting away from suitable habitat during the active season. (USFWS)

For Further Consideration:

1. 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. (IDNR DFW)
2. Do not excavate in the low flow area except for the placement of piers, foundations, and riprap, or removal of the old structure. (IDNR DFW)
3. Use minimum average 6-inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids. (IDNR DFW)

Indiana Department of Transportation

County Jasper

Route State Road 14

Des. No. 1700123

4. Evaluate wildlife crossings under bridge/culverts projects in appropriate situations. Suitable crossings include flat areas below bridge abutments with suitable ground cover, high water shelves in culverts, amphibian tunnels, and diversion fencing. (USFWS)
5. Minimize the extent of hard armor (riprap) in bank stabilization by using bioengineering techniques whenever possible. If riprap is utilized for bank stabilization, extend it below low-water elevation to provide aquatic habitat. (USFWS)
6. Restrict below low-water work in streams to placement of culverts, piers, pilings, and/or footings, shaping of the spill slopes around the bridge abutments, and placement of riprap. (USFWS)
7. Culverts should span the active stream channel, should be either embedded or a 3-sided or open-arch culvert, and be installed where practicable on an essentially flat slope. When an open-bottom culvert or arch is used in a stream, which has a good natural bottom substrate, such as gravel, cobbles, and boulders, the existing substrate should be left undisturbed beneath the culvert to provide natural habitat for the aquatic community. (USFWS)

SECTION K- EARLY COORDINATION

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

Remarks: Early coordination with the regulatory agencies was completed on March 31, 2020 (Appendix C, C1 to C4). If no response was received, it was assumed the agency did not feel the project will result in substantial impacts. The following agencies/individuals were contacted during the coordination phase.

	Agency	Date of Response(s)
1.	USACE, Detroit District	No Response
2.	USFWS	April 20, 2020
3.	USDA, NRCS	April 6, 2020
4.	National Park Service, Midwest Regional Office	No Response
5.	U.S. Department of Housing and Urban Development	No Response
6.	FHWA, Indiana Division	No Response
7.	IDNR, Division of Fish and Wildlife	April 30, 2020
8.	Indiana Geological Survey	March 31, 2020
9.	INDOT, Office of Public Involvement	No Response
10.	INDOT, Environmental Services	No Response
11.	INDOT, LaPorte District Environmental Scoping Manager	No Response
12.	IDEM (electronic submission)	March 31, 2020
13.	Jasper County Board of Commissioners	No Response
14.	Jasper County Drainage Board	No Response
15.	Jasper County Highway Department	No Response
16.	Jasper County Surveyor's Office	No Response
17.	Jasper County Sheriff Department	No Response
18.	Jasper County, Barkley Township Trustee	No Response
19.	Jasper County Council	No Response
20.	Jasper County Emergency Management Agency	No Response
21.	Rensselaer Central Schools	No Response
22.	Jasper County Economic Development Organization	No Response
23.	Rensselaer Fire Department	No Response
24.	Rensselaer Police Department	No Response

Appendix A: INDOT Supporting Documentation

Threshold Chart.....A1

Appendix B: Graphics

General Location Map.....B1
 USGS Parr and Gifford Quadrangle Topographic MapB2
 Project Aerial (2018).....B3
 Photo Location Map (2018)B4
 Site Photographs.....B5-B10
 Preliminary Plan Sheets.....B11-B21

Appendix C: Early Coordination

Sample Early Coordination Letter (March 31, 2020).....C1-C4
 Indiana Department of Environmental Management
 Electronic Response (March 31, 2020).....C5-C10
 Indiana Geological Survey
 Electronic Response (March 31, 2020).....C11-C13
 Natural Resources Conservation Service
 Response Letter (April 6, 2020).....C14
 United States Fish and Wildlife Service
 IPaC Official Species List (April 20, 2020).....C15-C20
 IPaC Concurrence Verification Letter (April 20, 2020).....C21-C31
 Bridge/Structure Assessment Form (October 3, 2018).....C32-C33
 Indiana Department of Natural Resources (IDNR), Division of Fish and Wildlife
 Response Letter (April 30, 2020).....C34-C35

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

MPPA Project Assessment FormD1-D4
 INDOT Cultural Resources Office Coordination EmailD5-D7

Appendix E: Red Flag Investigation

Red Flag Investigation.....E1-E12

Appendix F: Water Resources

Waters of the U.S. Determination Report.....F1-F7
 Water Resources MapF8
 NWI Wetlands MapF9
 FEMA Floodplain MapF10
 USGS StreamStats MapF11
 Soil Survey.....F12-F16
 Wetland Data Form.....F17-F19
 Preliminary Jurisdictional DeterminationF20-F23
 IDNR Floodplain Map.....F24

Appendix G: Public Involvement

Notice of Survey.....G1-G2
 INDOT Notice of Survey Attachment.....G3

Appendix H: Air Quality

Relevant pages from the INDOT 2020-2024 STIPH1
 Relevant pages from the INDOT 2018-2021 STIPH2

Appendix I: Environmental Justice (EJ) Analysis

Data Calculation Table.....I1
 EJ Analysis Map.....I2

Population DataI3-I6

Appendix J: Additional Information

Land and Water Conservation Fund Grants: Newton County, Indiana J1

Categorical Exclusion

Appendix A

INDOT Supporting Documentation

Categorical Exclusion Level Thresholds

	PCE	Level 1	Level 2	Level 3	Level 4 ¹
Section 106	Falls within guidelines of Minor Projects PA	“No Historic Properties Affected”	“No Adverse Effect”	-	“Adverse Effect” Or Historic Bridge involvement ²
Stream Impacts	No construction in waterways or water bodies	< 300 linear feet of stream impacts	≥ 300 linear feet of stream impacts	-	Individual 404 Permit
Wetland Impacts	No adverse impacts to wetlands	< 0.1 acre	-	< 1 acre	≥ 1 acre
Right-of-way³	Property acquisition for preservation only or none	< 0.5 acre	≥ 0.5 acre	-	-
Relocations	None	-	-	< 5	≥ 5
Threatened/Endangered Species (Species Specific Programmatic for Indiana bat & northern long eared bat)	“No Effect”, “Not likely to Adversely Affect” (Without AMMs ⁴ or with AMMs required for all projects ⁵)	“Not likely to Adversely Affect” (With any other AMMs)	-	“Likely to Adversely Affect”	Project does not fall under Species Specific Programmatic
Threatened/Endangered Species (Any other species)	Falls within guidelines of USFWS 2013 Interim Policy	“No Effect”, “Not likely to Adversely Affect”	-	-	“Likely to Adversely Affect”
Environmental Justice	No disproportionately high and adverse impacts	-	-	-	Potential ⁶
Sole Source Aquifer	Detailed Assessment Not Required	-	-	-	Detailed Assessment
Floodplain	No Substantial Impacts	-	-	-	Substantial Impacts
Coastal Zone Consistency	Consistent	-	-	-	Not Consistent
National Wild and Scenic River	Not Present	-	-	-	Present
New Alignment	None	-	-	-	Any
Section 4(f) Impacts	None	-	-	-	Any
Section 6(f) Impacts	None	-	-	-	Any
Added Through Lane	None	-	-	-	Any
Permanent Traffic Alteration	None	-	-	-	Any
Coast Guard Permit	None	-	-	-	Any
Noise Analysis Required	No	-	-	-	Yes
Air Quality Analysis Required	No	-	-	-	Yes ⁷
Approval Level <ul style="list-style-type: none"> • District Env. Supervisor • Env. Services Division • FHWA 	Concurrence by INDOT District Environmental or Environmental Services	Yes	Yes	Yes Yes	Yes Yes Yes

¹Coordinate with INDOT Environmental Services. INDOT will then coordinate with the appropriate FHWA Environmental Specialist.

²Any involvement with a bridge processed under the Historic Bridge Programmatic Agreement.

³Permanent and/or temporary right-of-way.

⁴AMMs = Avoidance and Mitigation Measures.

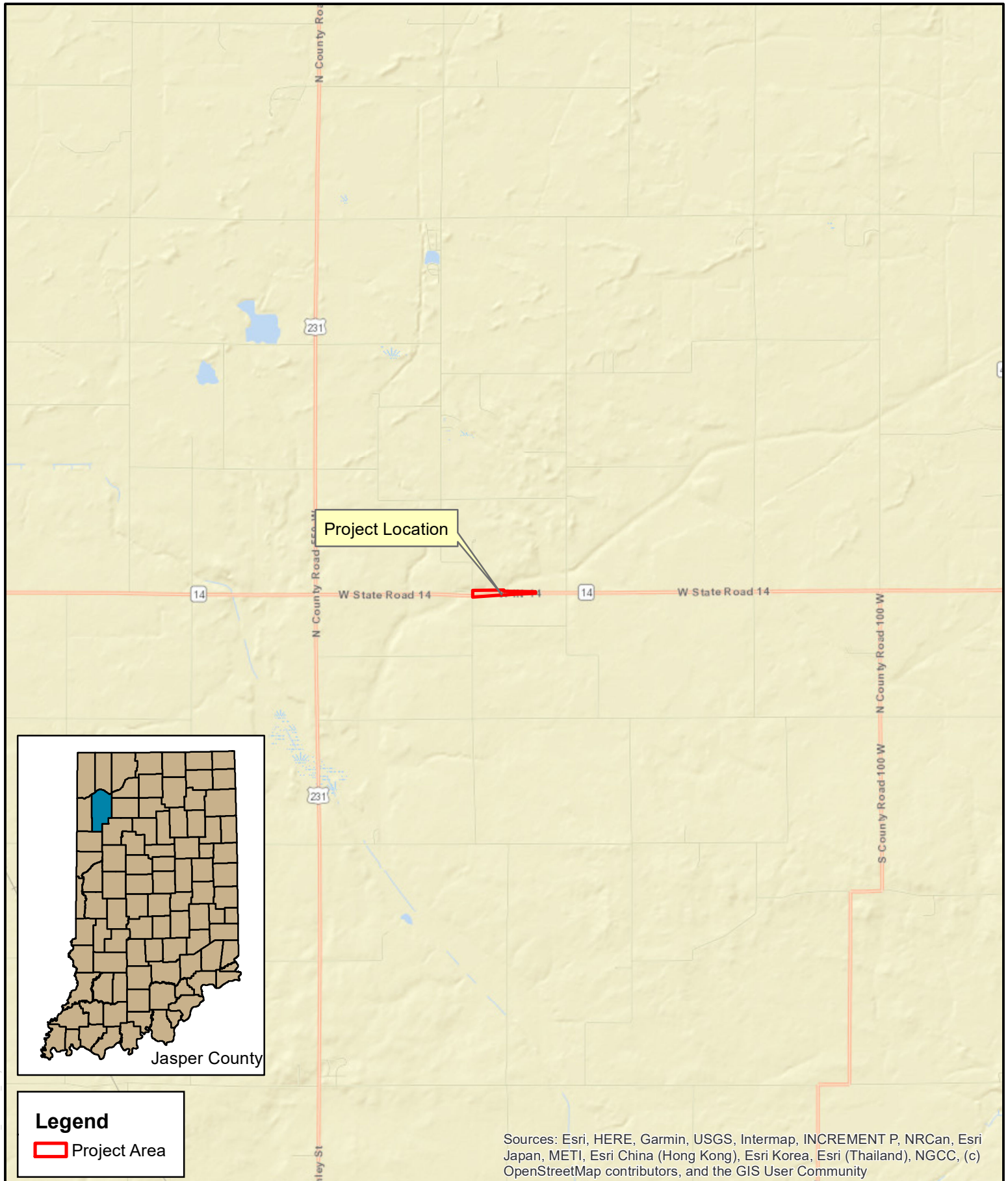
⁵AMMs determined by the IPAC decision key to be needed that are listed in the USFWS *User’s Guide for the Range-wide Programmatic Consultation for Indiana bat and Northern long-eared bat* as “required for all projects”.

⁶Potential for causing a disproportionately high and adverse impact.

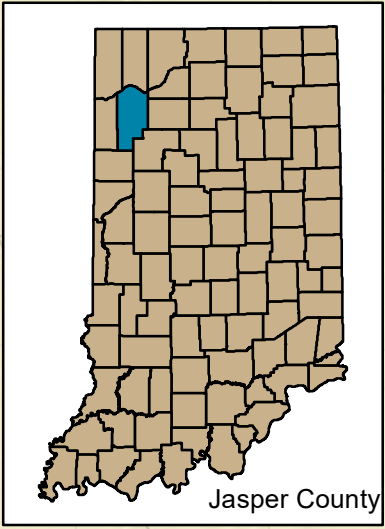
⁷Hot Spot Analysis and/or MSAT Quantitative Emission Analysis.


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

Categorical Exclusion
Appendix B
Graphics



Project Location




Legend
 Project Area

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community




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

Project Location Map
Des. No. 1700123

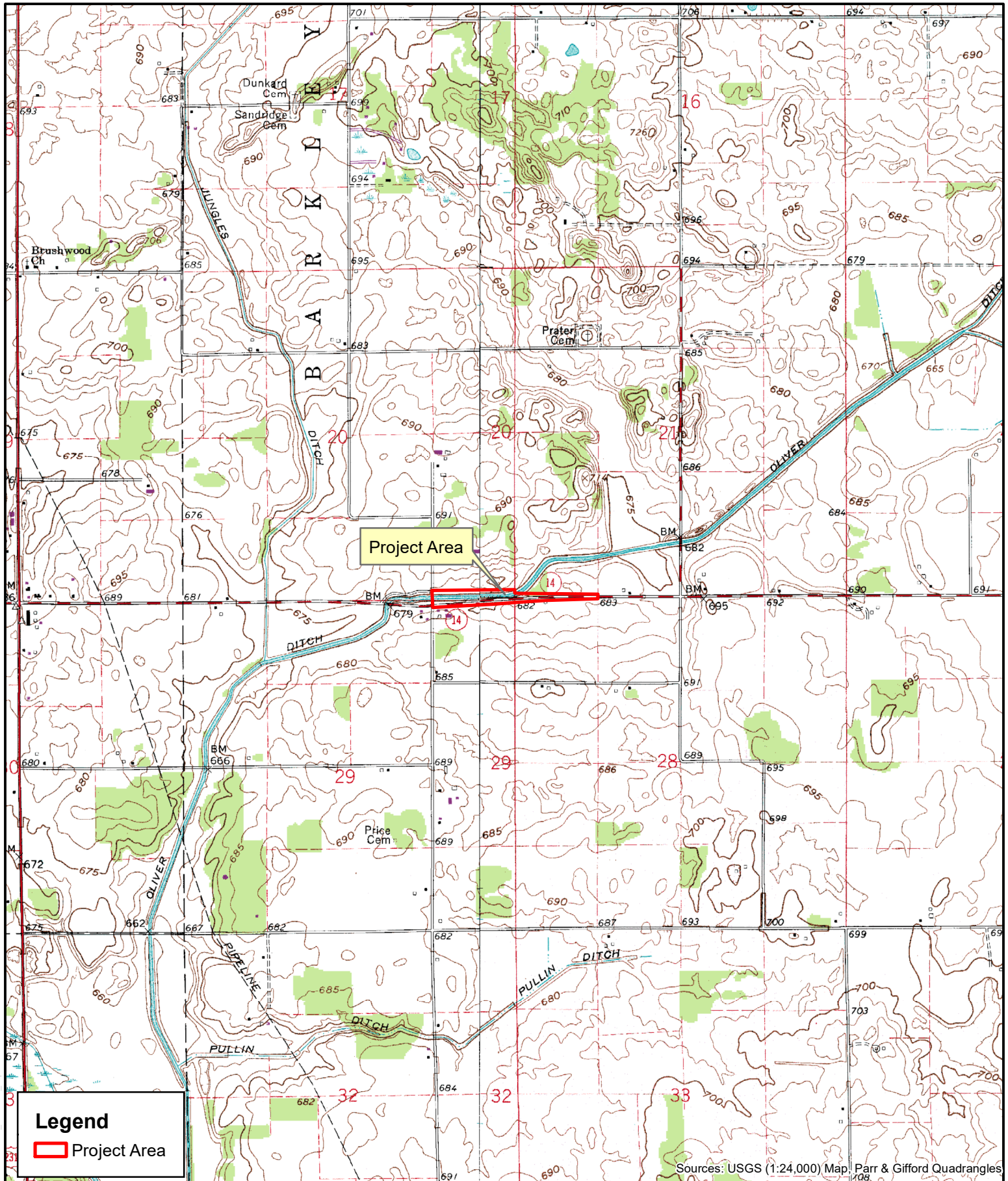


0 0.5 1 Miles



County: Jasper
 Township: Walker
 State: Indiana

SR 14 Small Structure Project
 SR 14, 1.50 mi E of US 231
 Created: 6/1/2020, C. Kunkel



LOCHMUELLER GROUP

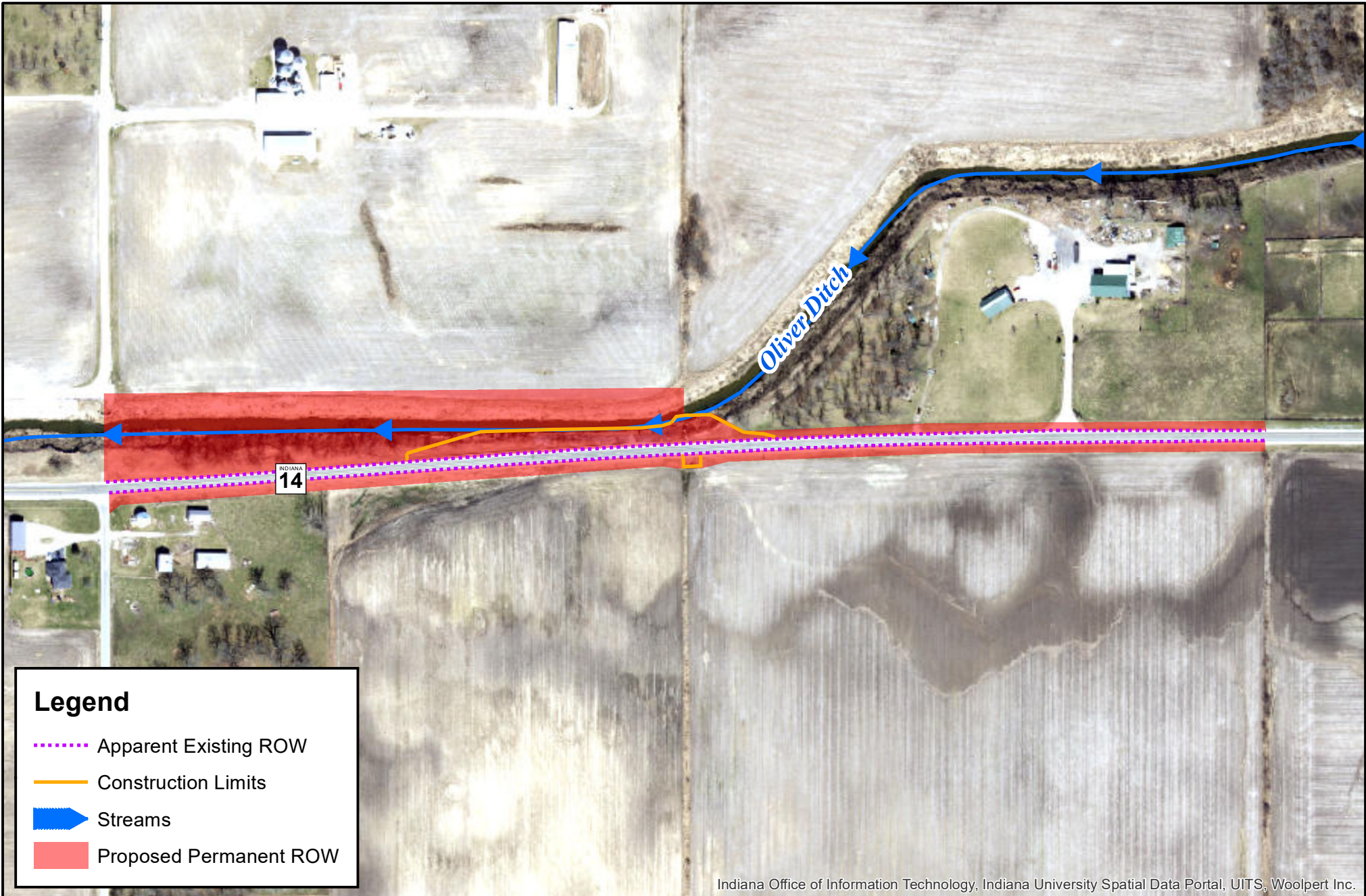
3502 Woodview Trace, Suite 150
 Indianapolis, IN 46268
 Phone: (317) 222-3880
 Fax: (317) 222-3881

USGS Quadrangle
Parr & Gifford Quadrangles
Des. No. 1700123

0 1,000 2,000
 Feet

County: Jasper
 Township: Walker
 State: Indiana

SR 14 Small Structure Project
 SR 14, 1.50 mi E of US 231
 Created: 6/1/2020, C. Kunkel



Legend

- ⋯ Apparent Existing ROW
- Construction Limits
- ➔ Streams
- Proposed Permanent ROW

Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

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

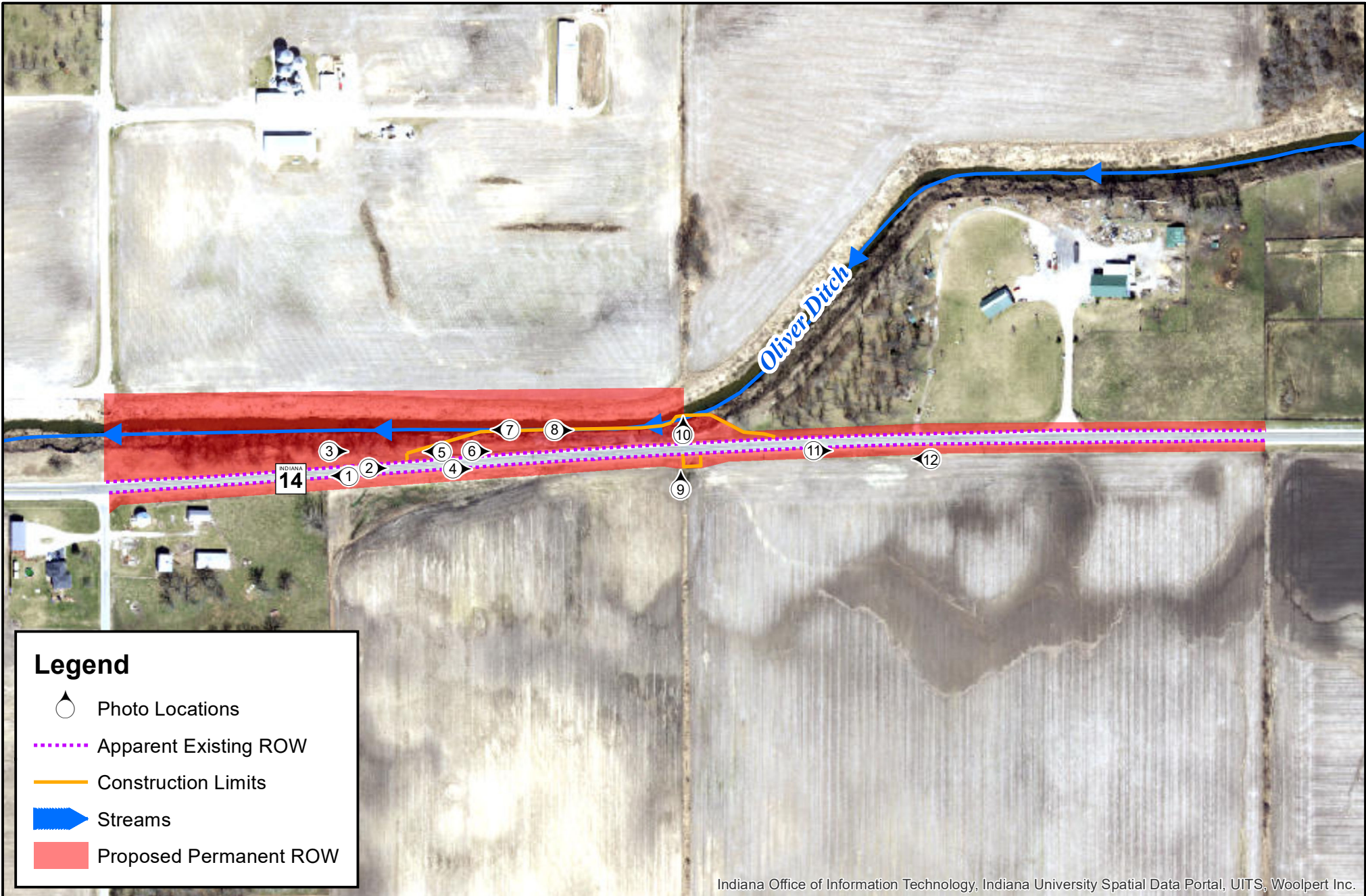
Aerial Map (2018)
Des. No. 1700123

0 500 1,000
 Feet

County: Jasper
 Township: Walker
 State: Indiana

State Road 14 New Small Structure
 1.50 mi E of US 231
 Created: 5/20/2020, C. Kunkel

S:_2017\17-0372\JHY\Environ\Mapaerial\XDC\JHY_1700123_Aerial_CEMxd



Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

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

Photo Location Map

Des. No. 1700123

0 500 1,000

Feet

N

County: Jasper
 Township: Walker
 State: Indiana

State Road 14 New Small Structure
 1.50 mi E of US 231
 Created: 5/20/2020, C. Kunkel

S:_2017\17-0372\JHY\Environ\Mapaerial\XDC\JHY_1700123_Photo_Map_CEs.mxd



1. Looking west along SR 14.



2. Looking east along SR 14.



3. Looking east along SR 14.



4. Looking east along SR 14.



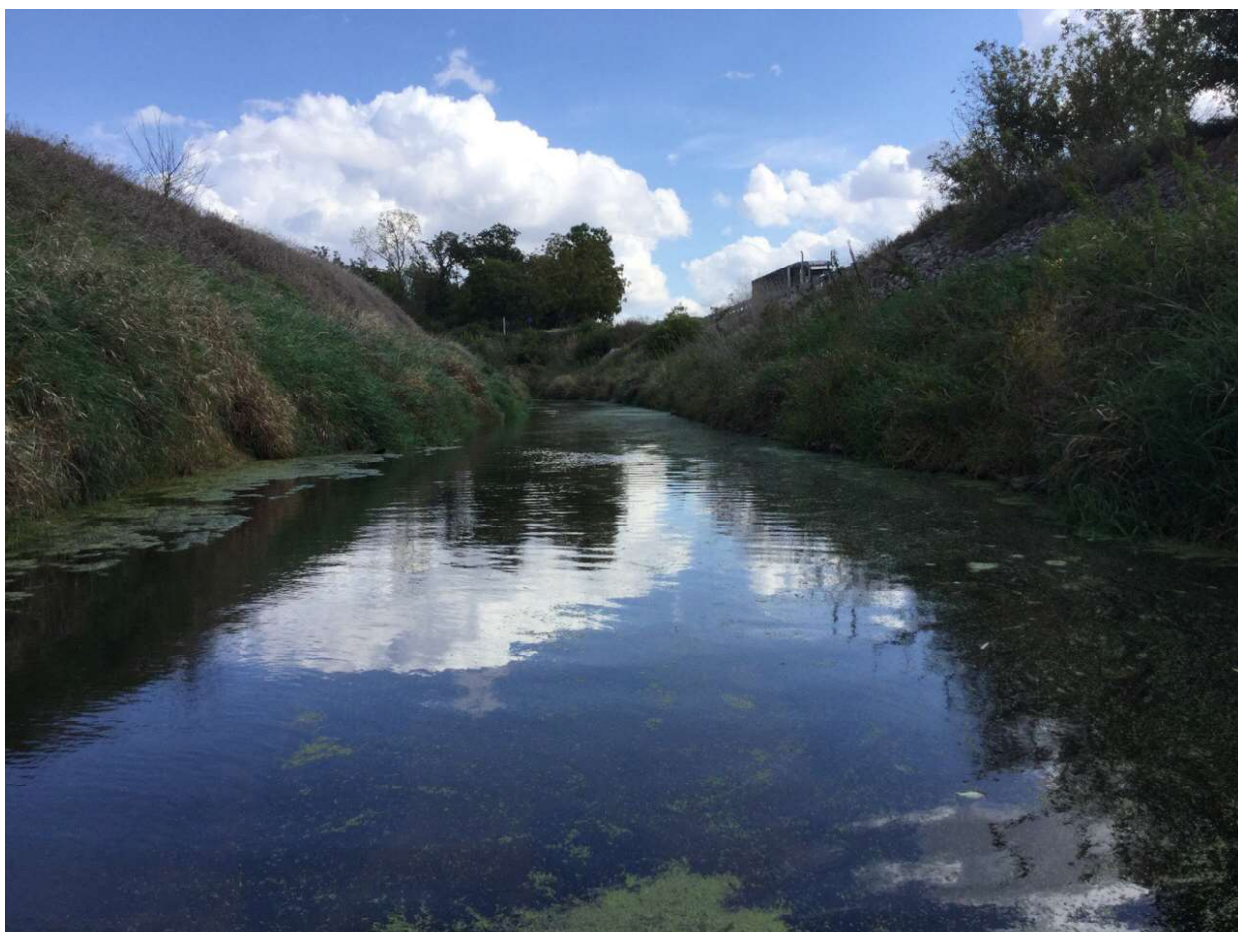
5. Looking west along SR 14.



6. Looking east along SR 14.



7. Looking west downstream Oliver Ditch.



8. Looking east upstream Oliver Ditch.



9. Looking north toward structure on south side of SR 14.



10. Looking north from culvert outlet towards Oliver Ditch.



11. Looking east along SR 14.



12. Looking west along SR 14.

PROJECT	DESIGNATION
1700123	1700123
CONTRACT	BRIDGE FILE
B-42245	N/A

STRUCTURE	TYPE	SPAN AND SKEW	OVER	STATION
CV 014-037-18.10	Corrugated Metal Pipe	4'-0" Span x 78'-0" Long 07° 00' 00" Skew Lt.	UNT to Oliver Ditch	1015+10.00 "PR-A"

KIN PROJECT INFORMATION					
DESIGNATION	PROJECT DESCRIPTION				
	Work Type	Route	Location	Feature Crossed	County
1700044	Small Structure Pipe Lining	US 231	2.34 mi N of SR 14	Comer Ditch	Jasper County
1700046	Small Structure Pipe Lining	US 231	0.87 mi N of SR 110	Schatzley Ditch	Jasper County
1700103 (LEAD)	Bridge Replacement, Concrete	US 421	3.50 mi S of SR 16	Hoagland Ditch	White County
1700123	Small Structure - New	SR 14	1.50 mi E of US 231	UNT to Oliver Ditch	Jasper County
1701329	Small Structure Replacement	SR 49	4.60 mi S of SR 10	Barnard Ditch	Jasper County
1701475	Small Structure Replacement	US 231	at CR 400N	Bruner Ditch	Jasper County
1701493	Small Structure Replacement	SR 114	2.09 mi W of Jct of US 421	Rosendall Ditch	Jasper County
1701506	Small Structure Replacement	SR 14	0.73 mi E of US 231	Jungels-Lakin Ditch	Jasper County
1701508	Small Structure Replacement	SR 14	1.07 mi W of US 231	Lakin, Ross Ditch	Jasper County
1701512	Small Structure Replacement	SR 114	1.09 mi E of Jct of US 231	School House Ditch	Jasper County

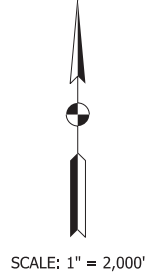
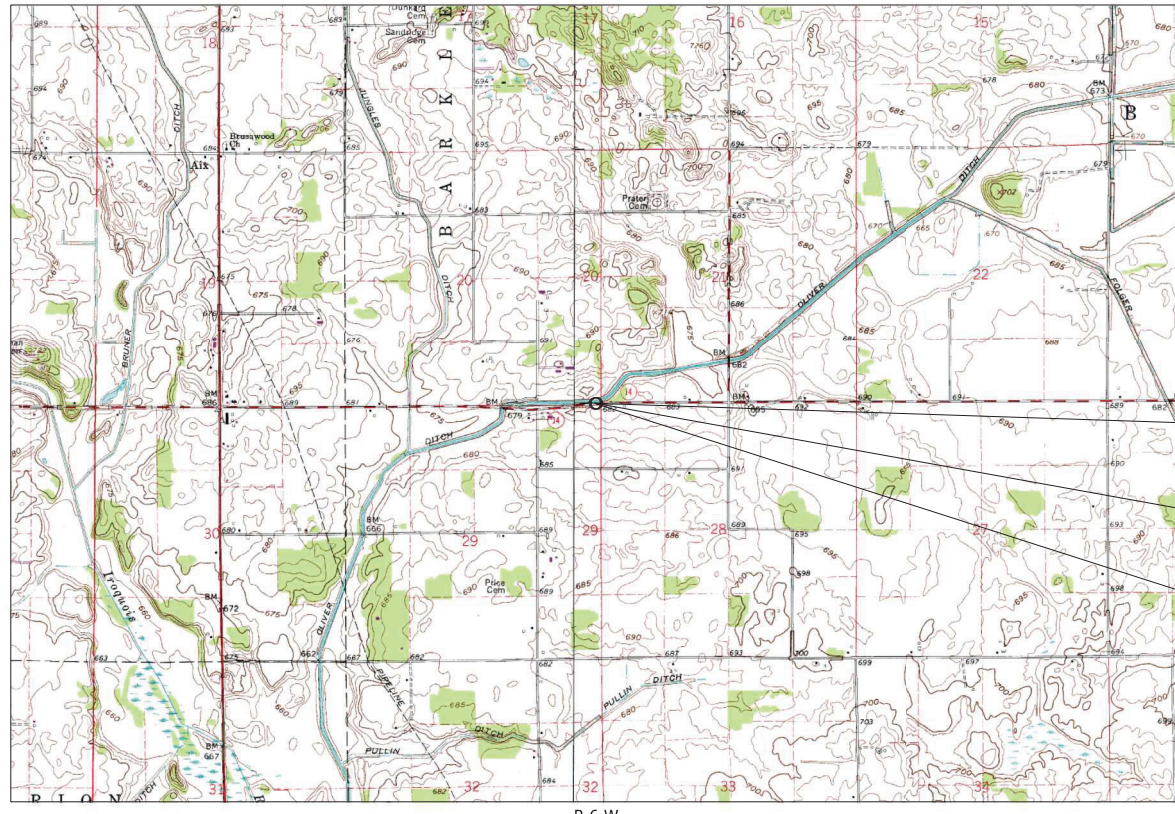
INDIANA DEPARTMENT OF TRANSPORTATION



ROAD PLANS

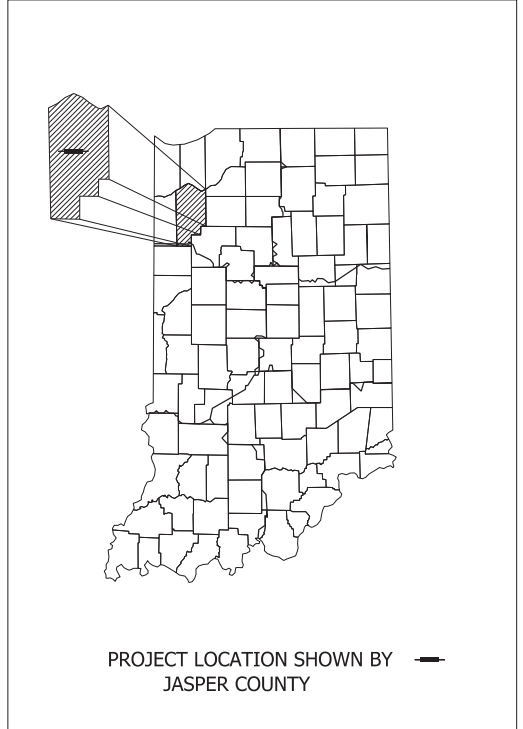
ROUTE: S.R. 14 AT: RP 18+10
 PROJECT NO. 1700123 P.E.
 1700123 R/W
 1700123 CONST.

Small Structure - New on S.R. 14 over UNT to Oliver Ditch
 Located 1.50 Miles East of U.S. 231
 Section 20, 21, 28 & 29, T-30-N, R-6-W, Barkley Township, Jasper County, Indiana



TRAFFIC DATA		
A.A.D.T.	(2022)	2,530 V.P.D.
A.A.D.T.	(2042)	3,264 V.P.D.
D.H.V.	(2042)	292 V.P.H.
DIRECTIONAL DISTRIBUTION		49.49 %
TRUCKS		22.2 % A.A.D.T. 23.8 % D.H.V.

DESIGN DATA	
DESIGN SPEED	55 M.P.H.
PROJECT DESIGN CRITERIA	3R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	MAJOR COLLECTOR
RURAL/URBAN	RURAL
TERRAIN	LEVEL
ACCESS CONTROL	NONE



LATITUDE: 41°01'38" LONGITUDE: 87°07'23"

ROADWAY LENGTH:	0.002	MI.
TOTAL LENGTH:	0.002	MI.
MAX. GRADE:	0.960	%

HUC: 071200020103



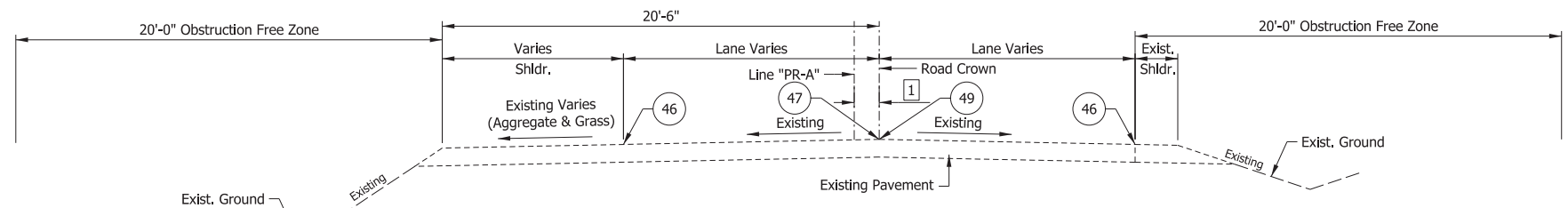
9102 North Meridian St., Suite 200 Indianapolis, IN 46260
 (317) 566-0629
 Fax: (317) 566-0633
 Website: www.sjca-pc.com

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

PLANS PREPARED BY:	SJCA, P.C.	(317) 566-0629 PHONE NUMBER
CERTIFIED BY:	_____	DATE
APPROVED FOR LETTING:	_____	DATE

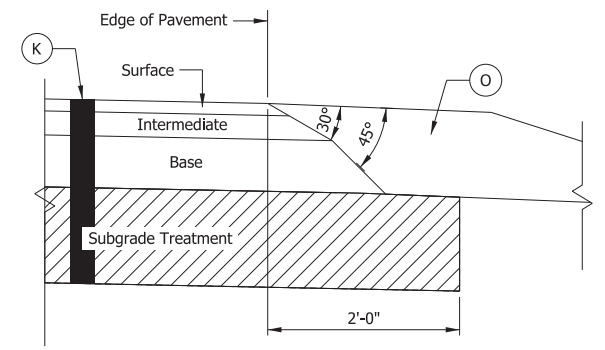
BRIDGE FILE	
N/A	
DESIGNATION	
1700123	
SURVEY BOOK	SHEETS
ELECTRONIC	1 of 19
CONTRACT	PROJECT
B-42245	1700123

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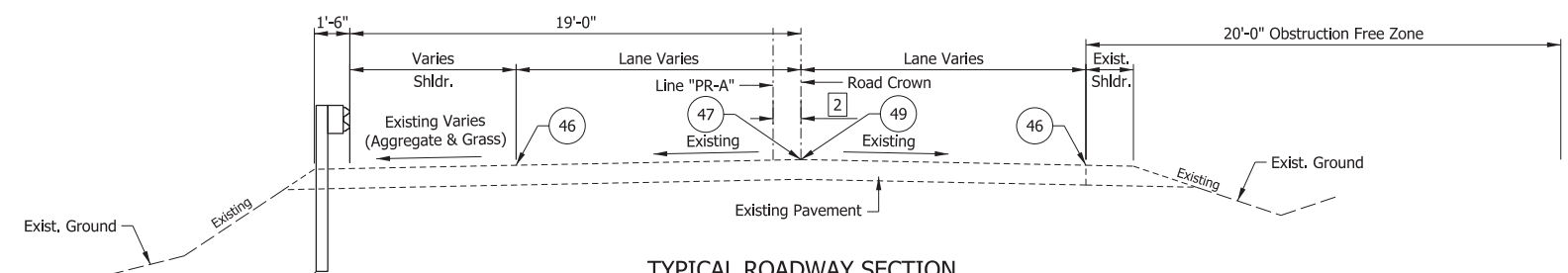
TYPICAL ROADWAY SECTION

Scale: 1/4" = 1'-0"
 Sta. 1008+68.00 "PR-A" to Sta. 1009+54.00 "PR-A"
 Sta. 1016+04.00 "PR-A" to Sta. 1017+11.00 "PR-A"



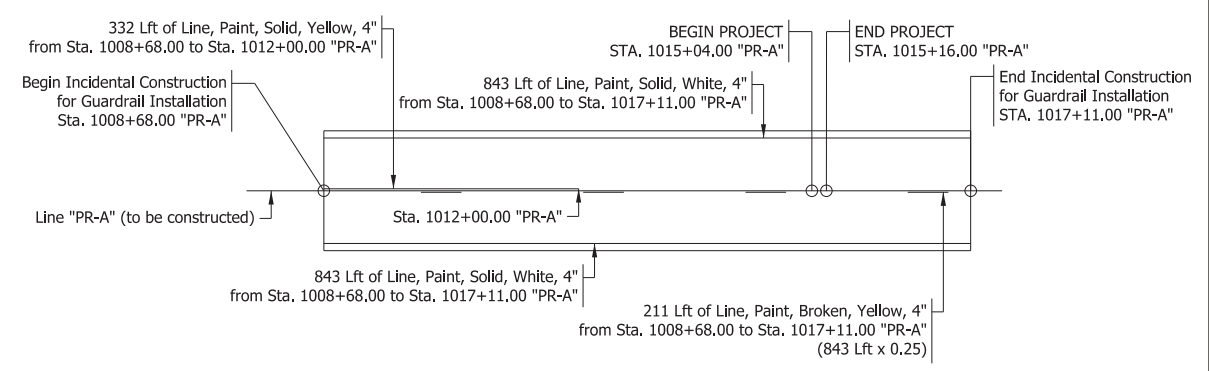
SAFETY EDGE DETAIL

Not to Scale



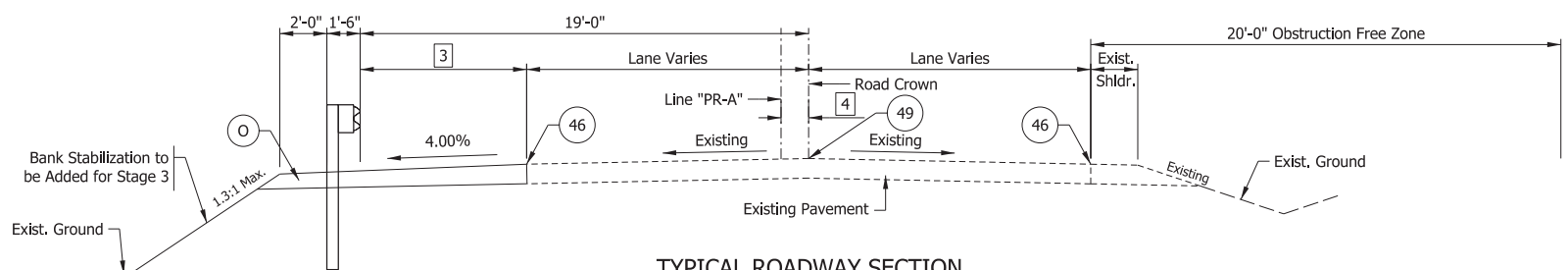
TYPICAL ROADWAY SECTION

Scale: 1/4" = 1'-0"
 Sta. 1009+54.00 "PR-A" to Sta. 1013+00.00 "PR-A"
 Sta. 1015+16.00 "PR-A" to Sta. 1016+04.00 "PR-A"



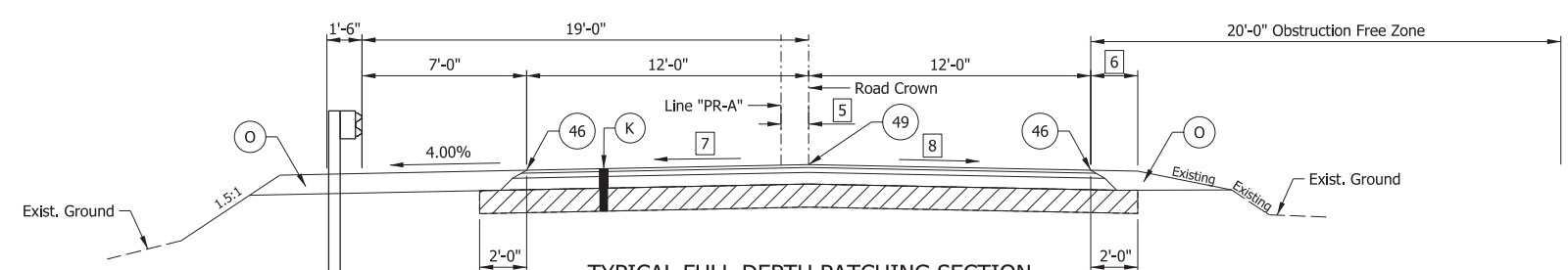
PROPOSED PAVEMENT MARKINGS

Not to Scale



TYPICAL ROADWAY SECTION

Scale: 1/4" = 1'-0"
 Sta. 1013+00.00 "PR-A" to Sta. 1015+04.00 "PR-A"



TYPICAL FULL-DEPTH PATCHING SECTION

Scale: 1/4" = 1'-0"
 Sta. 1015+04.00 "PR-A" to Sta. 1015+16.00 "PR-A"

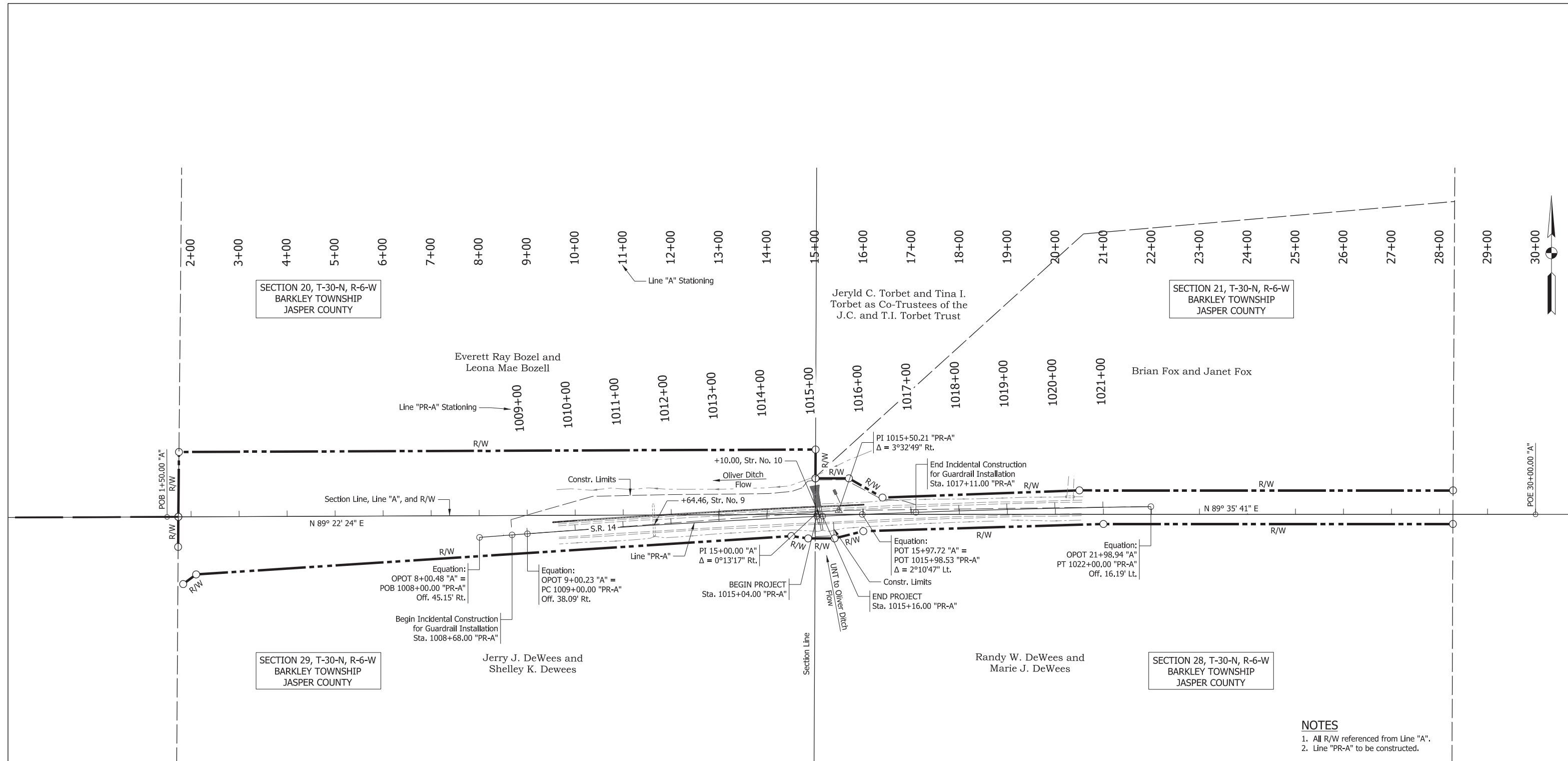
LEGEND

- 1 Road Crown is on Line "PR-A" from Sta. 1008+68.00 to Sta. 1009+54.00
Road Crown Varies from 1.02 at Sta. 1016+04.00 "PR-A" to 0.55 at Sta. 1016+95.00 "PR-A"
- 2 Road Crown Varies from 0.00 at Sta. 1009+54.00 "PR-A" to 0.98 at Sta. 1013+00.00 "PR-A"
Road Crown Varies from 1.00 at Sta. 1015+16.00 "PR-A" to 1.02 at Sta. 1016+04.00 "PR-A"
- 3 Aggregate Shoulder Varies from 7.87 at Sta. 1013+00.00 "PR-A" to 8.24 at Sta. 1015+04.00 "PR-A"
- 4 Road Crown Varies from 0.98 at Sta. 1013+00.00 "PR-A" to 1.13 at Sta. 1015+04.00 "PR-A"
- 5 Road Crown Varies from 1.13 at Sta. 1015+04.00 "PR-A" to 1.00 at Sta. 1015+16.00 "PR-A"
- 6 Aggregate Shoulder Varies from 3.18 at Sta. 1015+04.00 "PR-A" to 3.24 at Sta. 1015+16.00 "PR-A"
- 7 Varies from 2.10% at Sta. 1015+04.00 "PR-A" to 2.13% at Sta. 1015+16.00 "PR-A" (Match Existing)
- 8 Varies from 3.40% at Sta. 1015+04.00 "PR-A" to 3.28% at Sta. 1015+16.00 "PR-A" (Match Existing)
- K HMA Pavement over the Structure Shall Consist of:
165 lbs/syd QC/QA-HMA 2, 70, Surface, 9.5 mm on
275 lbs/syd QC/QA-HMA 2, 70, Intermediate, 19.0 mm on
660 lbs/syd QC/QA-HMA 2, 64, Base, 19.0 mm on
Subgrade Treatment IC
- O Compacted Aggregate, No. 53
- Limits of Subgrade Treatment
- 46 Line, Paint, Solid, White 4"
- 47 Line, Paint, Solid, Yellow 4" (From Sta. 1008+68.00 "PR-A" to Sta. 1012+00.00 "PR-A")
- 49 Line, Paint, Broken, Yellow 4"

NOTE TO REVIEWER:
 Pavement design pending

Model: TypSec 4/30/2020 1:36:52 PM User: Alckes

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____ DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE	BRIDGE FILE
			AS NOTED	N/A
DESIGNED: _____ PFC	DRAWN: _____ PFC	TYPICAL SECTIONS	VERTICAL SCALE	DESIGNATION
			AS NOTED	1700123
CHECKED: _____ MDP	CHECKED: _____ MDP		SURVEY BOOK	SHEETS
			ELECTRONIC	3 of 19
			CONTRACT	PROJECT
			B-42245	1700123



- NOTES**
- All R/W referenced from Line "A".
 - Line "PR-A" to be constructed.

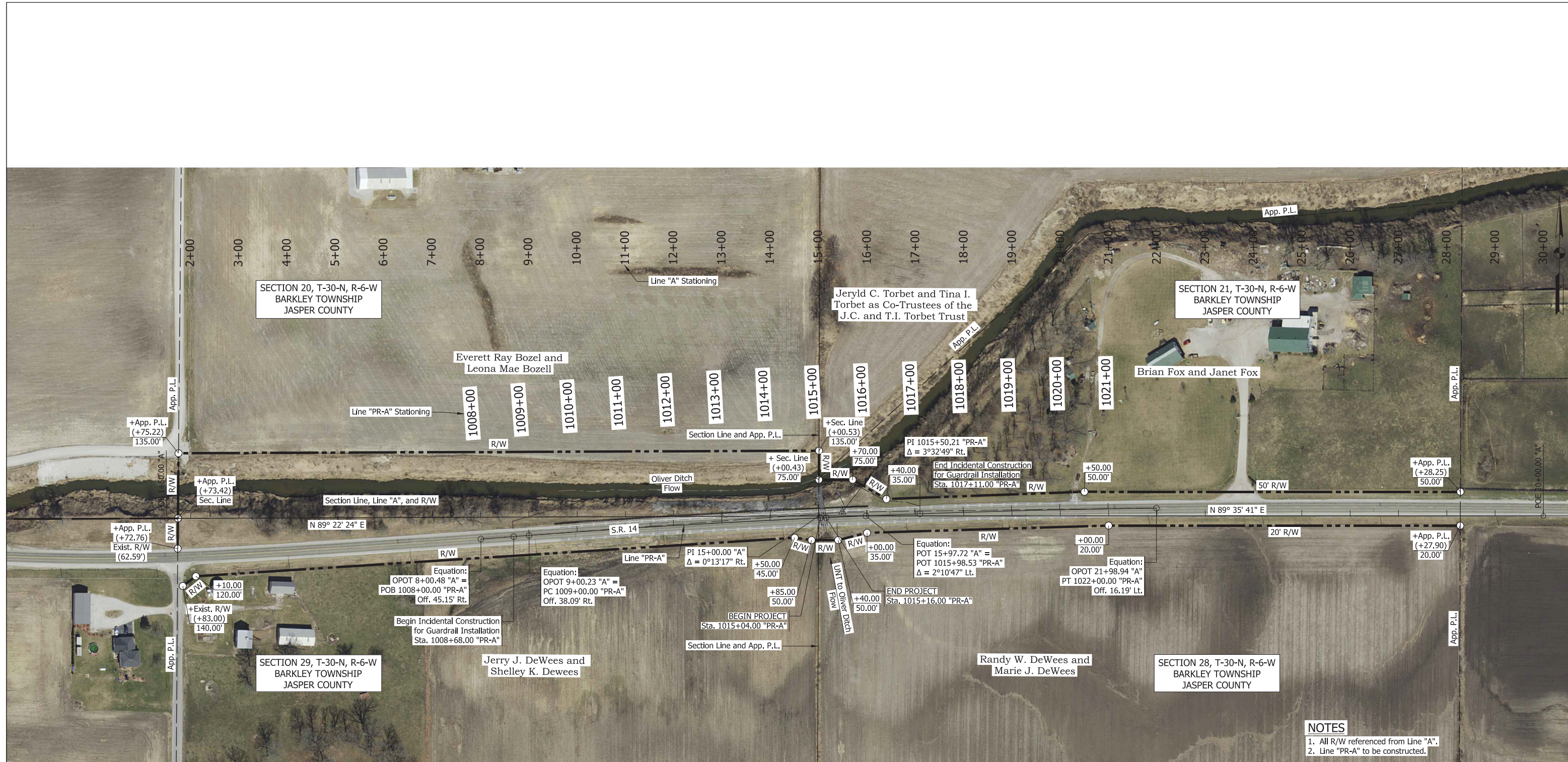
Model: Plat 1 4/30/2020 1:36:40 PM User: ALckles

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: _____ GSH _____	DRAWN: _____ GSH _____	
CHECKED: _____ MDP _____	CHECKED: _____ MDP _____	

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAT NO. 1

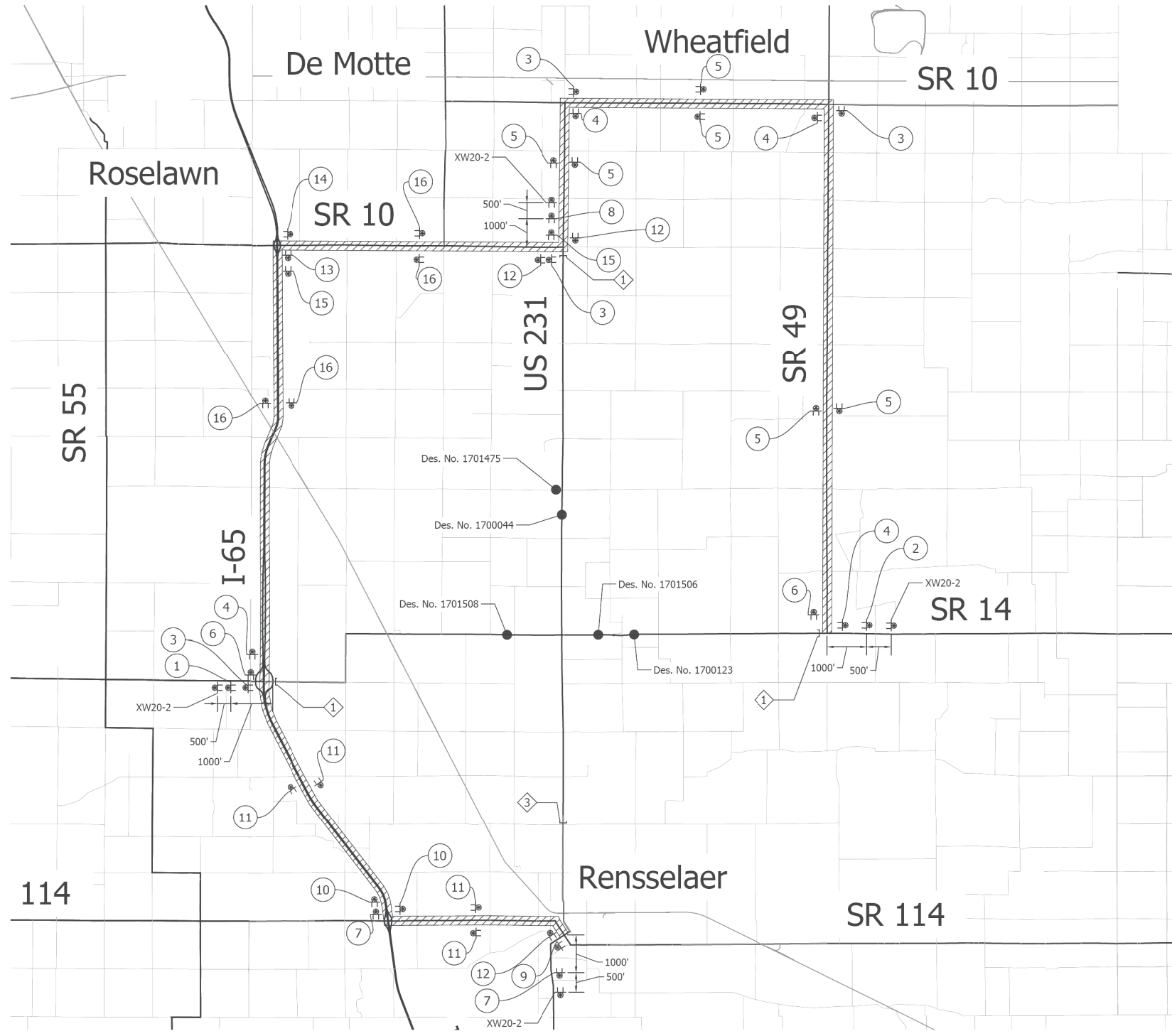
HORIZONTAL SCALE	BRIDGE FILE
1" = 100'	N/A
VERTICAL SCALE	DESIGNATION
N/A	1700123
SURVEY BOOK	SHEETS
ELECTRONIC	4 of 19
CONTRACT	PROJECT
B-42245	1700123



NOTES
 1. All R/W referenced from Line "A".
 2. Line "PR-A" to be constructed.

Model: RW Site Plan
4/30/2020 1:37:02 PM User: Alctes

RECOMMENDED FOR APPROVAL _____ DESIGNED: _____ KCH CHECKED: _____ MDP	DESIGN ENGINEER _____ DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION R/W SITE PLAN	HORIZONTAL SCALE 1" = 100'	BRIDGE FILE N/A
			DESIGNATION 1700123	
			SURVEY BOOK ELECTRONIC	SHEETS 7 of 19
			CONTRACT B-42245	PROJECT 1700123



CONSTRUCTION SIGN SCHEDULE				
SIGN. NO.	DESCRIPTION	SIZE (IN)	TYPE	EST. QTY.
R11-2	"ROAD CLOSED" SIGN	48 x 30	(1)	10
R11-4	"ROAD CLOSED TO THRU TRAFFIC" SIGN	60 x 30	(1)	14
XM4-10(L OR R)	"DETOUR" SIGN	48 x 18	(1)	8
XW20-2	"DETOUR AHEAD" SIGN	48 x 48	A	4
XW20-3	"ROAD CLOSED AHEAD" SIGN	48 x 48	A	20
TOTAL TYPE "A" SIGNS				24

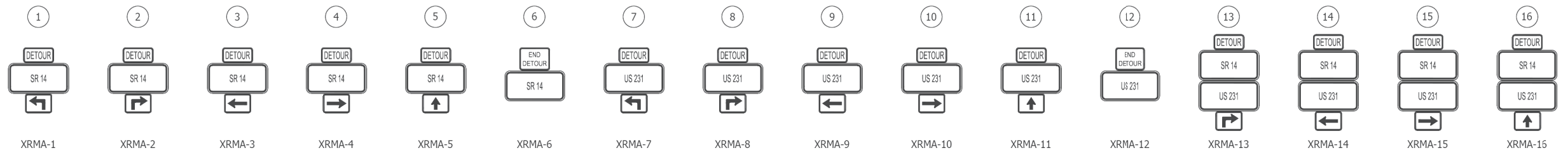
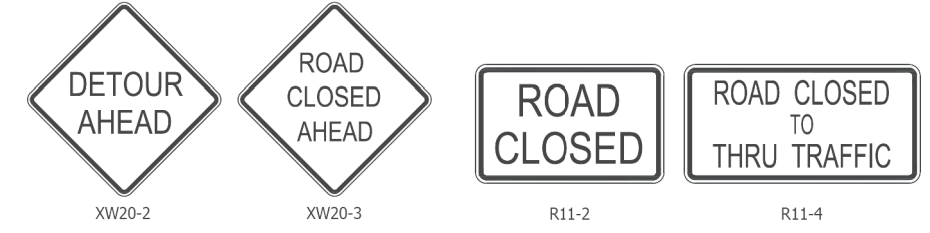
Detour Route Marker Assemblies: 39 Req'd
 Road Closure Sign Assemblies: 14 Req'd
 Type III-A Barricades: 270 Lft.
 Type III-B Barricades: 108 Lft.

(1) Included with road closure sign assembly.

*Signs and barricades local to each Des. No. can be found in their respective plans. These are included in the above totals.

LEGEND

- ① ROAD CLOSURE SIGN ASSEMBLY W/ TYPE III-B BARRICADE (12 LFT.) AND R11-4 SIGN WITH XM4-10 (L OR R)
- ② ROAD CLOSURE SIGN ASSEMBLY W/ TYPE III-A BARRICADE (24 LFT.) AND R11-2 SIGN
- ③ ROAD CLOSURE SIGN ASSEMBLY W/ TYPE III-B BARRICADE (12 LFT.) AND R11-4 SIGN
- ▨ DETOUR ROUTE



GENERAL NOTES

1. All maintenance of traffic devices, signs and pavement markings shall conform to the latest edition of the Indiana MUTCD.
2. See INDOT Std. Dwg. 801-TCDD-02 for sign spacing requirements and additional notes.
3. See INDOT Std. Dwg. 801-TCLG-02 for standard notes.
4. The cost of R11-2 and R11-4 shall be included in the cost of the road closure sign assembly.
5. Type B construction warning lights shall be used with all signs located on barricades. Type A construction warning lights shall be used on all other construction signs.

NOTE: FOR REFERENCE ONLY

(Quantities to be Included in Des. No. 1701506)

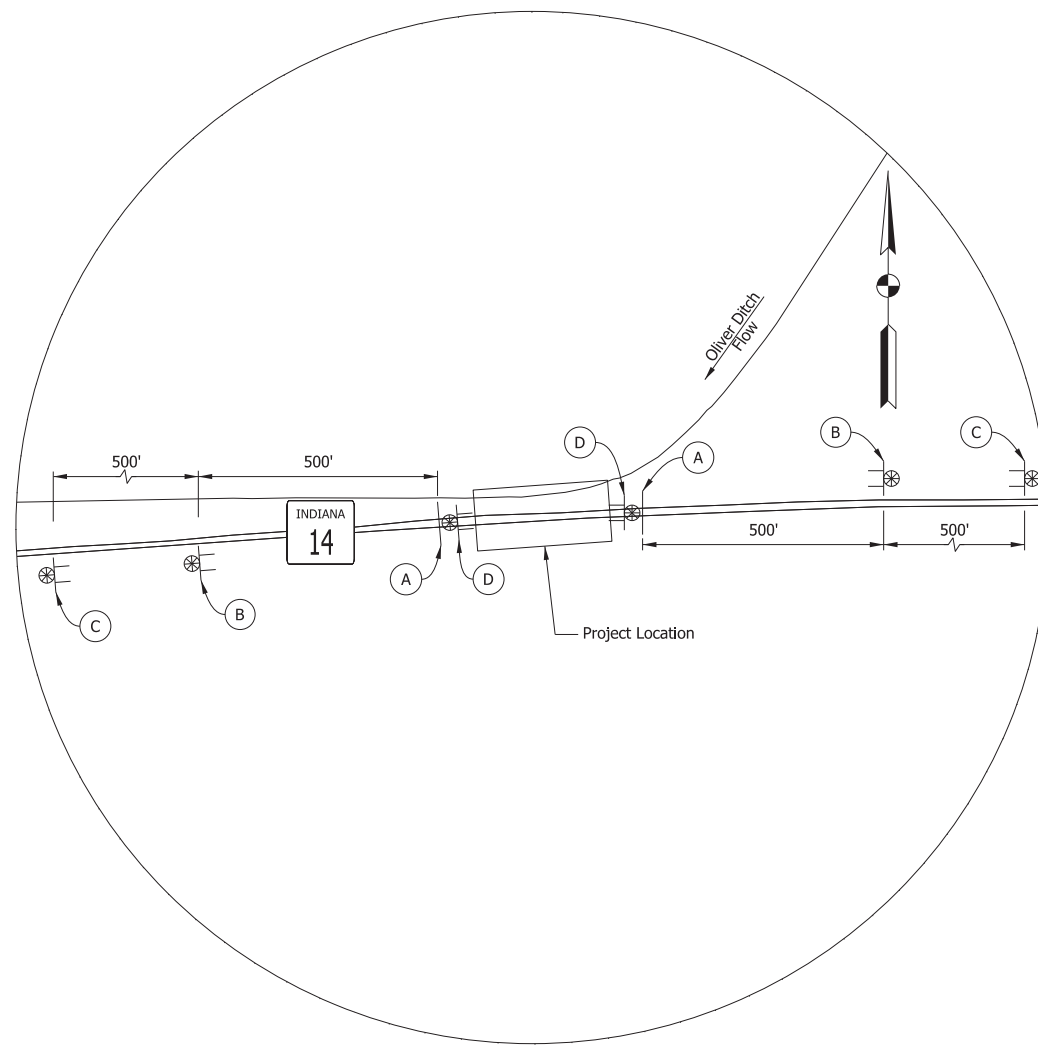
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: JDB	DRAWN: JDB	
CHECKED: BKA	CHECKED: BKA	

INDIANA DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC

HORIZONTAL SCALE	BRIDGE FILE
Not to Scale	N/A
VERTICAL SCALE	DESIGNATION
N/A	1701506
SURVEY BOOK	SHEET
ELECTRONIC	8 of 19
CONTRACT	PROJECT
B-42245	1701506

Date: Feb 26, 2020, 4:35pm User Name: jbowers
 File: S:_2017\17-0321_SHY\Road\CAD\DOT\DOT Detour.dwg



DES NO. 1700123 DETAIL
Scale: 1" = 200'

LEGEND

- (A) TYPE III-A BARRICADES - 36 LFT REQUIRED
- (B) "ROAD CLOSED 500 FT." - XW20-3
- (C) "ROAD CLOSED 1000 FT." - XW20-3
- (D) ROAD CLOSURE SIGN ASSEMBLY WITH "ROAD CLOSED" - R11-2
- ⊗ SIGN ASSEMBLY

ESTIMATED QUANTITIES		
DESCRIPTION	UNIT	TOTAL
CONSTRUCTION SIGN, A	EACH	4
ROAD CLOSURE SIGN ASSEMBLY	EACH	2
TYPE III-A BARRICADES	LFT	72

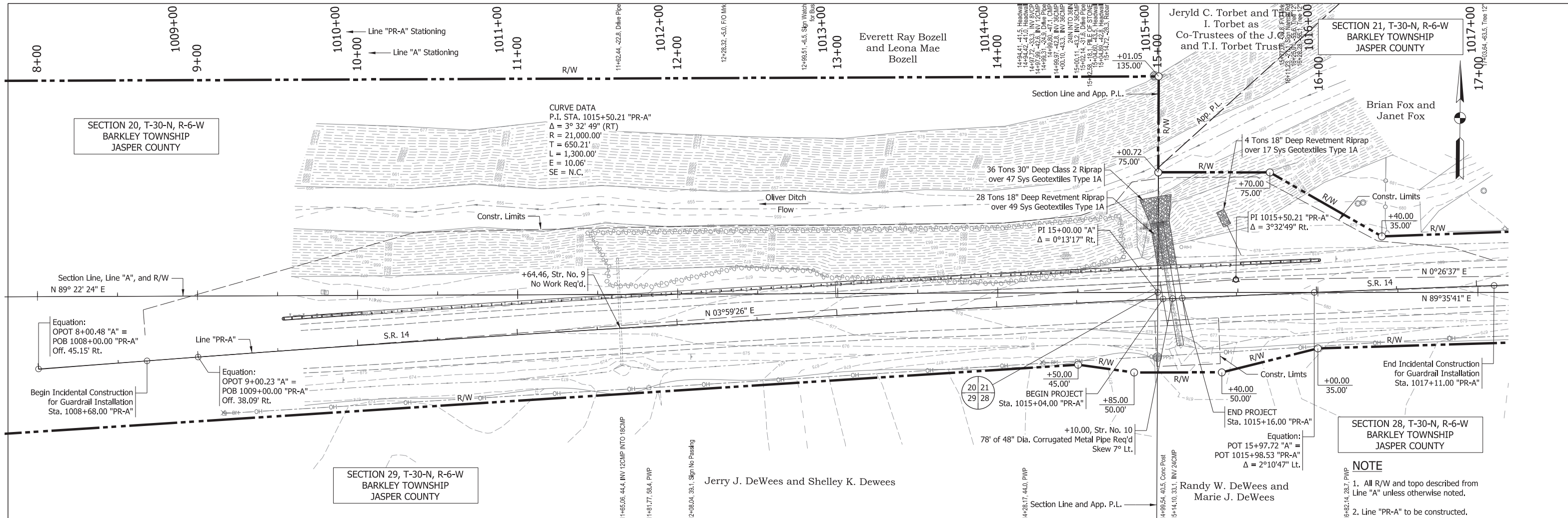
TWO ROAD CLOSURE NOTICE SIGNS XG20-5 REQUIRED (ONE AT EACH END) PLACED AT SITE A MINIMUM OF 10 DAYS PRIOR TO ROAD CLOSURE

NOTES

1. REFER TO DES. NO. 1701506 FOR FULL DETOUR ROUTE
2. QUANTITIES INCLUDED WITH DES. NO. 1701506
3. DETOUR ROUTE MARKER ASSEMBLIES SHALL BE IN ACCORDANCE WITH STANDARD DRAWING 801-TCDDT-04.
4. TYPE B CONSTRUCTION WARNING LIGHTS SHALL BE USED WITH ALL SIGNS LOCATED ON BARRICADES.
5. TYPE A CONSTRUCTION WARNING LIGHTS SHALL BE USED ON ALL OTHER CONSTRUCTION SIGNS.
6. ACCESS TO PROPERTY OWNERS SHALL BE PROVIDED DURING CONSTRUCTION.

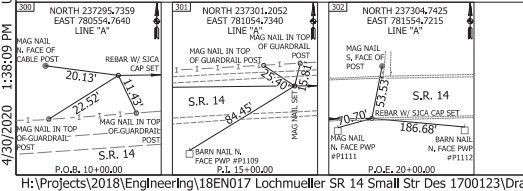
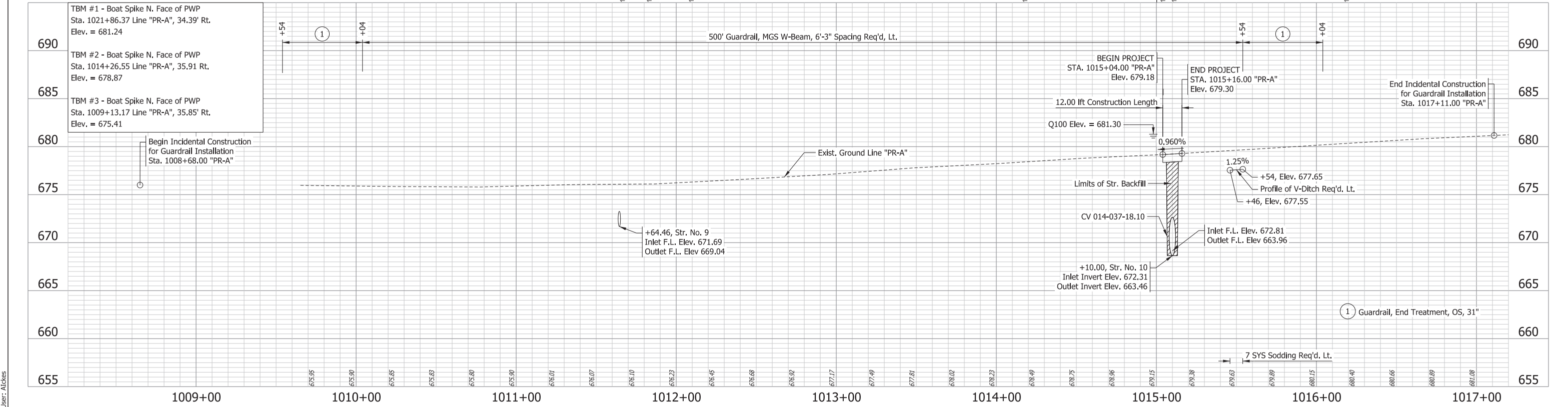
Model: Detail Sheet
4/30/2020 1:37:55 PM User: Alctes

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION		HORIZONTAL SCALE AS NOTED	BRIDGE FILE N/A
	MAINTENANCE OF TRAFFIC		VERTICAL SCALE N/A	DESIGNATION 1700123
SURVEY BOOK ELECTRONIC			SHEETS 9 of 19	
DESIGNED: _____ MDP	DRAWN: _____ PFC	CONTRACT PROJECT B-42245 1700123		
CHECKED: _____ AMG	CHECKED: _____ MDP			



NOTE

- All R/W and topo described from Line "A" unless otherwise noted.
- Line "PR-A" to be constructed.

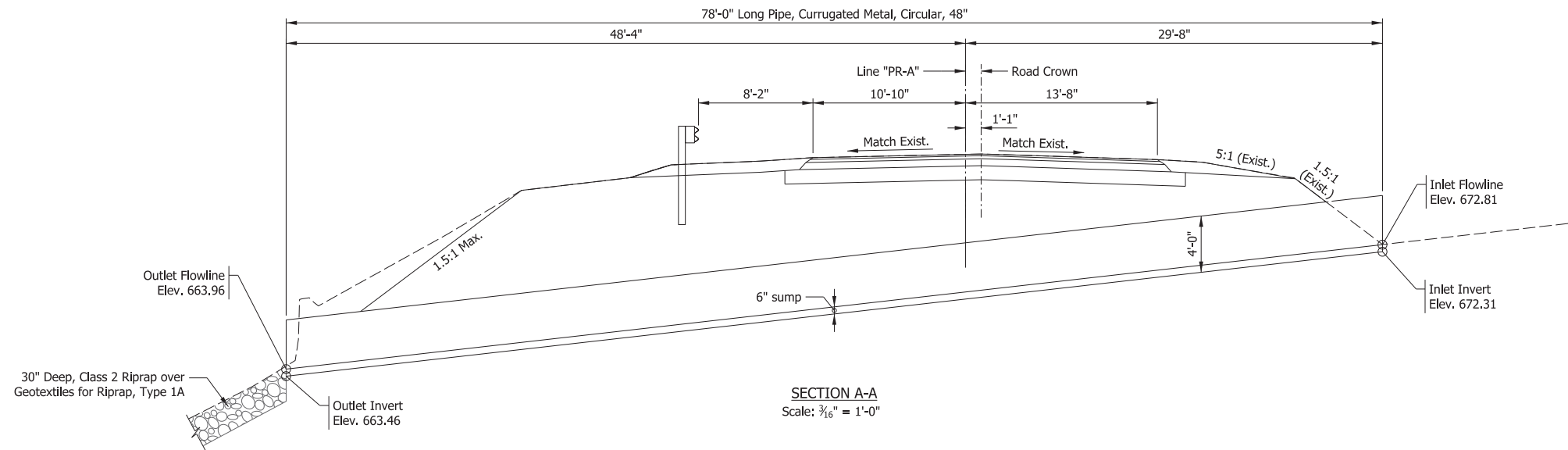


RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: MDP	DRAWN: PFC	
CHECKED: AMG	CHECKED: MDP	

INDIANA DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	N/A
VERTICAL SCALE	DESIGNATION
1" = 5'	1700123
SURVEY BOOK	SHEETS
ELECTRONIC	10 of 19
CONTRACT	PROJECT
B-42245	1700123



Outlet Flowline Elev. 663.96
 30" Deep, Class 2 Riprap over Geotextiles for Riprap, Type 1A
 Outlet Invert Elev. 663.46

SECTION A-A
 Scale: 3/16" = 1'-0"

EXISTING STRUCTURE
 The existing structure is a CMP with varying diameter that is approximately 78' long. The diameter is 24" at the inlet and 36" at the outlet.

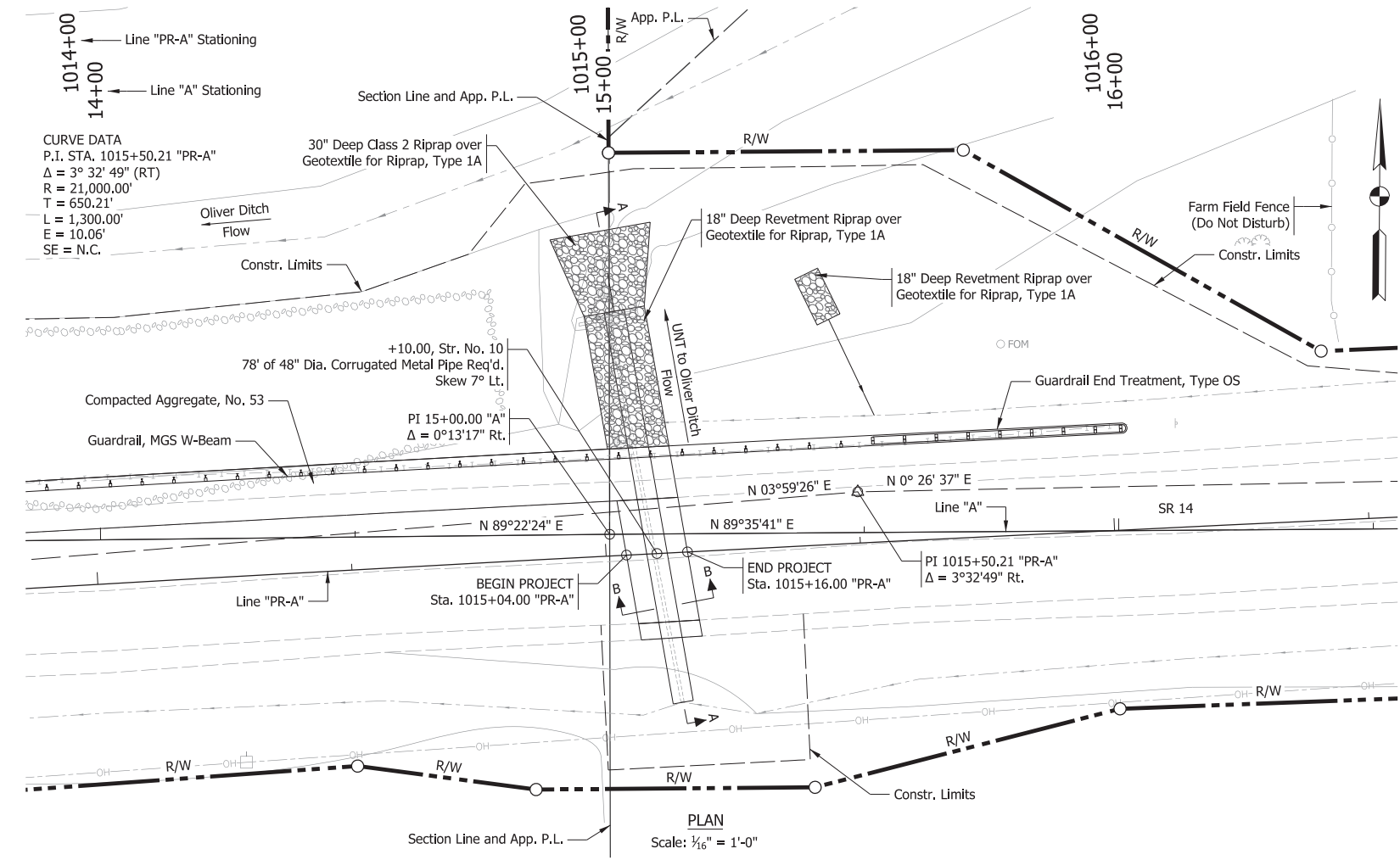
SUMMARY OF QUANTITIES
 Structure Backfill, Type 2 = 55 CYS

GENERAL NOTES
 All dimensions are in feet (ft.) except as noted.
 Contractor shall verify the existing flowline elevation to set the appropriate sump depth.

HYDRAULIC DATA

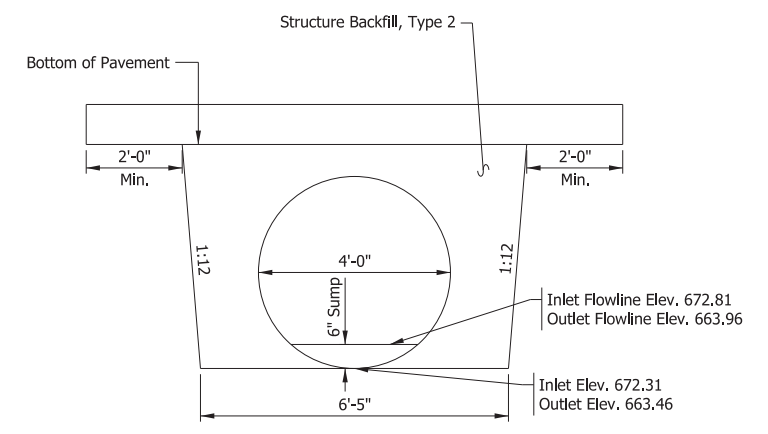
Waterway Opening Required	3.14 sq ft
Waterway Opening Provided	12.57 sq ft
Drainage Area	0.17 sq mi
Design Discharge, Q100	58.1 cfs
Velocity	11.80 ft/s
Q100 Elev.	681.3 ft
Estimated Scour Elev.	- ft
Backwater at Q100	1.74 ft
Existing Waterway Opening	3.14 sq ft
Existing Backwater	3.66 ft
Low Structure Elev.	673.81 ft
Existing Low Structure Elev.	674.81 ft

NOTE: Contractor shall verify the existing flowline elevation to set the appropriate sump depth.



CURVE DATA
 P.I. STA. 1015+50.21 "PR-A"
 Δ = 3° 32' 49" (RT)
 R = 21,000.00'
 T = 650.21'
 L = 1,300.00'
 E = 10.06'
 SE = N.C.

PLAN
 Scale: 1/16" = 1'-0"



SECTION B-B
 Scale: 1/2" = 1'-0"

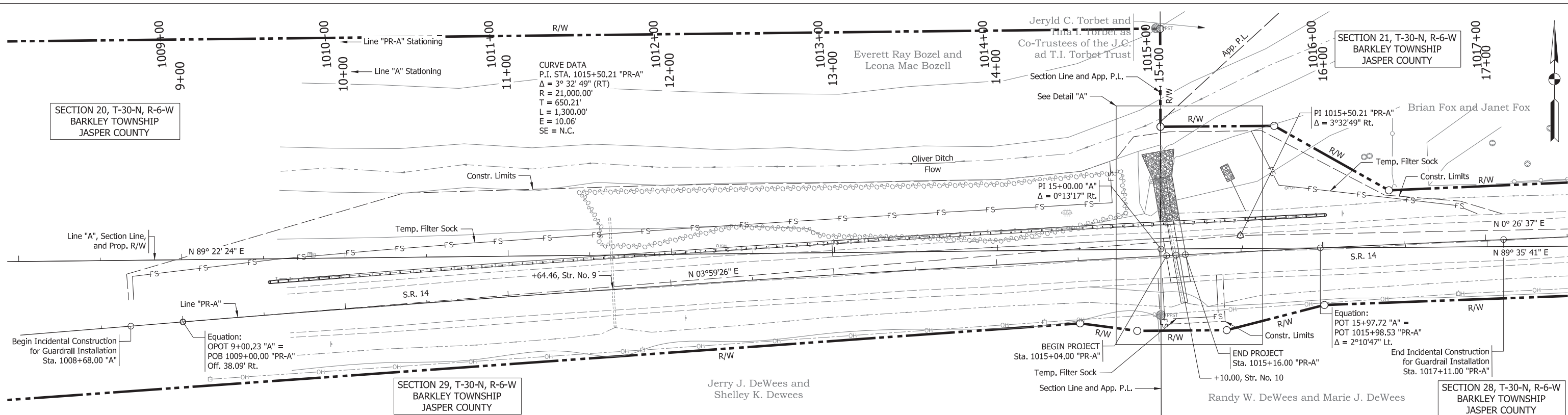
CORRUGATED METAL PIPE STRUCTURE
 4'-0" Ø, 78'-0" LONG, 7° SKEW LT.
 S.R. 14 OVER UNT TO OLIVER DITCH
 JASPER COUNTY

Model: General Plan
 4/30/2020 1:38:13 PM User: ALckles

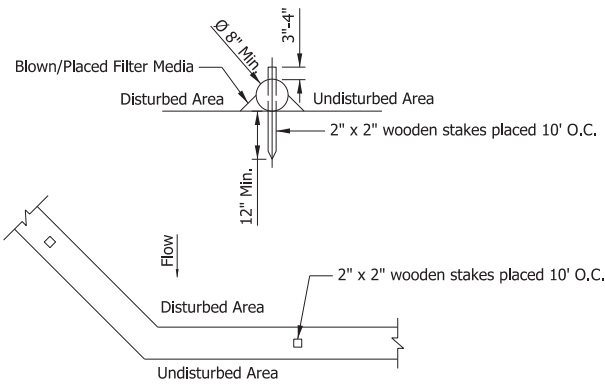
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: MDP	DRAWN: PFC	
CHECKED: AMG	CHECKED: MDP	

INDIANA DEPARTMENT OF TRANSPORTATION	
GENERAL PLAN	

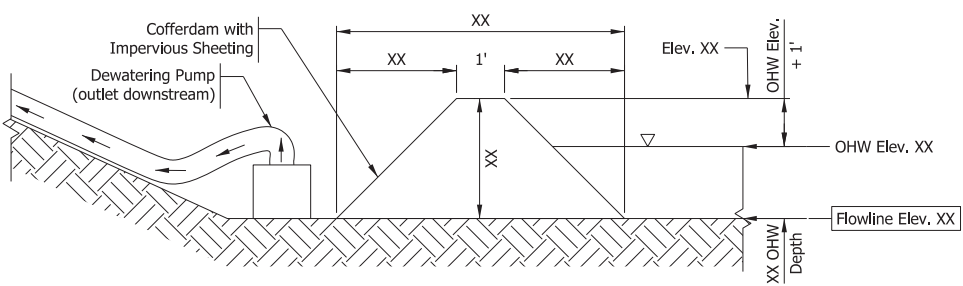
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	N/A
VERTICAL SCALE	DESIGNATION
AS NOTED	1700123
SURVEY BOOK	SHEETS
ELECTRONIC	11 of 19
CONTRACT	PROJECT
B-42245	1700123



PLAN
Scale: 1" = 30'

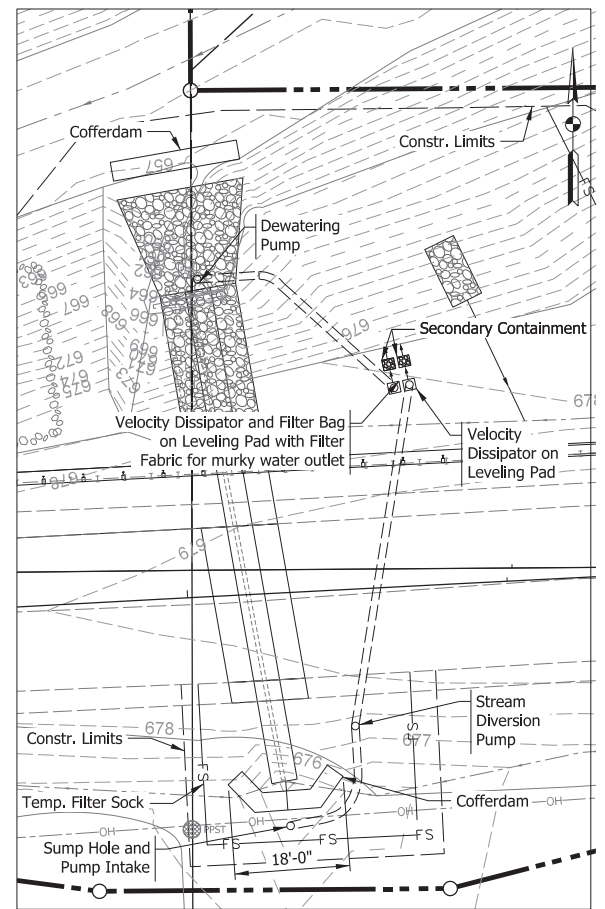


FILTER SOCK DETAIL
Not to Scale



DEWATERING / WORK AREA
Not to Scale

TEMPORARY EROSION CONTROL TABLE														
STATION	LOCATION			TEMPORARY FILTER SOCK	SEDIMENT TRAP	SEDIMENT BASIN	SLOPE DRAIN	SEDIMENT REMOVE	TEMPORARY CHECK DAM, TRAVERSABLE	TEMPORARY CHECK DAM, REVETMENT RIPRAP	DITCH INLET PROTECTION	NO. 2 STONE	REMARKS	
	LEFT	MEDIAN	RIGHT											LFT
LINE "PR-A"														
1008+71 - 1014+75	X			642				32.1						
1015+01 - 1015+34		X		84				4.2						
1015+60 - 1016+96	X			161				8.05						
Construction Entrances												100		
Totals				887				44.4				100		



DETAIL "A"
Scale: 1" = 15'

- NOTES**
- Any areas in addition to those called out, left undisturbed for a period exceeding 7 days shall be required to have temporary seeding.
 - All disturbed areas shall be permanently seeded in accordance with INDOT standard specifications as soon as possible upon completion of work in that area.
 - Cofferdams are to be made of sandbags or other non-erodible material.

Model: Erosion Control
4/30/2020 1:38:17 PM
User: Alctes

RECOMMENDED FOR APPROVAL _____ DESIGNED: _____ MDP _____ DRAWN: _____ MDP _____ CHECKED: _____ AMG _____ CHECKED: _____ AMG _____	DESIGN ENGINEER _____ DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION		HORIZONTAL SCALE	BRIDGE FILE
				AS NOTED	N/A
		EROSION CONTROL		VERTICAL SCALE	DESIGNATION
				N/A	1700123
				SURVEY BOOK	SHEETS
				ELECTRONIC	12 of 19
				CONTRACT	PROJECT
				B-42245	1700123

