

Indiana Department of Transportation

County Delaware Route SR 332/CR 600 W Des. No. 1298228

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

Road No./County:	SR (State Road) 332 / Delaware County
Designation Number:	1298228
Project Description/Termini:	Intersection improvement at SR 332 and County Road (CR) 600 W / Beginning on SR 332 841 feet from CR 600 W (Sta. 149+35.00) to 857 feet east of CR 600 W (Sta. 166+33.00) and along CR 600 W from 300 feet south of SR 332 (Sta. 67+00.00) to 300 feet north of SR 332 (72+99.99)

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 N/A Ronald E. Buda 4-21-2020
 ESM Signature Date ES Signature Date

 FHWA Signature Date

Release for Public Involvement

KACG 3/7/19 _____
 ESM Initials Date ES Initials Date

Certification of Public Involvement Mary Wright 5/3/19
 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: Jason Danah Date: 3/7/19

Name and Organization of CE/EA Preparer: Chad E. Costa / Lochmueller Group

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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 [X] No
If No, then:
Opportunity for a Public Hearing Required? [X] []

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

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

Remarks: Notice of Entry for Survey or Investigation letters were mailed to potentially affected property owners within the project area on March 2, 2017 by Lochmueller Group (Appendix G, G1). The letters notified the property owners of the project and that individuals responsible for site investigations may be seen in the area. No inquiries or replies were received.
The project meets the minimum requirements set by the current INDOT Public Involvement Manual which requires formal public involvement. Therefore, a legal notice of public hearing was published in the Muncie Star Press on March 29, 2019 and April 10, 2019. A copy of the legal notice was mailed by the INDOT Office of Public Involvement to federal, state, and local officials and agencies and as many adjacent property owners as possible on March 28, 2019.
The public hearing was held at Yorktown High School located at 1100 South Tiger Drive, Yorktown, Indiana on Tuesday, April 16, 2019 at 6:00 PM. Project information was presented to those in attendance and the public was afforded the opportunity to formally comment on the project. A total of 38 people signed in at the hearing, 37 of which were members of the public and one INDOT representative. Nine individuals provided formal public comments at the hearing, which are reflected in the transcript (Appendix G, G25 to G29). The opportunity for additional written comments was given with an established deadline of May 1, 2019. An additional 19 written comments were received following the hearing (Appendix G, G30 to G53). A summary of the comments/concerns received from the public at or following the hearing include:
• Concerns over J-turns making the intersection more complicated.
• Concerns over increased rear-end crashes resulting from slow speed farm equipment and trucks making the J-turn and competing with high-speed traffic on SR 332.
• Preference in regulating speed limits and enforcement as a cheaper solution.
• Preference for a traffic signal at CR 600 W and synchronizing it with the existing signal at CR 500 W.
• Concerns over non-emergency vehicles crossing the mountable curbs at the intersection and/or the potential for damage to vehicles traversing the curb.
The INDOT Office of Public Involvement certified the public involvement requirements for the project on May 3, 2019. A summary of the public comments and responses is included in Appendix G, G54 to G69.

Public Controversy on Environmental Grounds
Will the project involve substantial controversy concerning community and/or natural resource impacts? [] Yes [X] No

Remarks: At this time, there is no known public controversy over community and/or natural resource impacts regarding the project. A Preliminary Field Check Meeting was held on October 27, 2017 to discuss the proposed design

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of the project. At this meeting, representatives of the Yorktown Fire Department, Gaston Fire Department, and the Delaware County Emergency Service expressed concerns regarding the projects design. Specifically, their concerns were regarding emergency vehicles inability to cross SR 332 and being required to navigate the median U-turns. They felt this would adversely affect their response times. Minutes from the Preliminary Field Check Meeting are included in Appendix I, pages I15 to I16.

Following the Preliminary Field Check Meeting, several changes to the design took place intended to address the concerns expressed by the emergency service representatives. First, the proposed raised curb restricting left-turns onto CR 600 West from either direction of SR 332 was replaced by a mountable curb. The mountable curb will allow emergency vehicles to traverse SR 332 without having to use the median U-turns, thereby minimizing the effects to their response routes. The second change to the design involved the shifting of the loons closer to the intersection in order to reduce the distance motorists would have to travel before being able to make the legal U-turn. The western loon was shifted 290 feet closer to CR 600 W, while the eastern loon was shifted 267 feet closer.

These issues do not merit "substantial" controversy on environmental grounds. Impacts to community resources, in the case of this project to the emergency response routes of the Gaston and Yorktown Fire Departments, have been minimized to the extent practical through the project design. Comments received in the public hearing process will be addressed and presented in the final environmental document.

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

Sponsor of the Project: INDOT INDOT District: Greenfield
Local Name of the Facility: SR 332/CR 600 W

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

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

PURPOSE AND NEED:

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

The need for improvements to this intersection is evidenced by two primary elements:
• Poor operational capacity along CR 600 W
• Deficient intersection safety
According to a traffic study completed by Lochmueller Group from 2014-2016, the annual average daily traffic (AADT) of SR 332 in 2017 was 17,502 vehicles per day (vpd). In the design year 2037 the AADT of SR 332 is projected to increase to 22,878 vpd. The traffic on SR 332 is free flowing with the only intersection control (stop sign) occurring on the CR 600 W approaches. On the approach roadway, CR 600 W, the AADT in 2017 was 1,046 vpd. In the design year 2037, the AADT of CR 600 W is projected to increase to 1,375 vpd. The volume of unimpeded traffic along SR 332 contributes to unacceptable delays along CR 600 W during the peak travel times. At the time of the study, the CR 600 W approaches operated at a level of service (LOS) D in the AM peak period (7:00 AM to 8:00 AM) and a LOS F in the PM peak period (4:30 to 5:30 PM). The LOS is a qualitative measure of traffic flow with a range of A to F. A LOS of A is indicative of free flowing traffic and an LOS of F is indicative of a roadway that is above capacity. If left unimproved, the operational capacity along CR 600 W will continue to worsen. The relevant capacity analysis information for this intersection was derived from the August 16, 2016 Engineer's Report, which is included as Appendix I, I17 to I20.

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Crash data from 2010 to 2015 indicated that there were 23 crashes at this intersection during this period for an average of 3.8 crashes per year. The Index of Crash Frequency (ICF) was determined by Lochmueller Group to be 1.06 (Appendix I, I18). RoadHAT, a traffic hazard analysis tool that evaluates crash frequency and severity for a given road segment and compares to similar road segments in Indiana, considers an ICF of greater than 1.0 to be unacceptable. It is suspected that the LOS of CR 600 W contributes to the high frequency of personal injury crashes due to the lengthy delays and drivers becoming impatient waiting for gaps in traffic. As the operational capacity worsens, it is expected that the frequency of crashes at the intersection will increase, if no improvements are made. The relevant safety information for this intersection was derived from the August 16, 2016 *Engineer's Report*, which is included as Appendix I, I17 to I20.

The primary purpose of the project is to improve the intersection and attain an acceptable minimum LOS of C along CR 600 W during peak travel periods and to decrease the ICF below 1.0. Satisfying this purpose will achieve the operational and safety objectives for this intersection.

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Delaware Municipality: Yorktown

Limits of Proposed Work: 1,698 feet along SR 332 beginning 841 feet from CR 600 W (Sta. 149+35.00) to an endpoint 857 feet east of CR 600 W (Sta. 166+33.00); and, 600 feet along CR 600 W beginning 300 feet south of SR 332 (Sta. 67+00.00) to an endpoint 300 feet north of SR 332 (Sta. 72+99.99)

Total Work Length: 0.43 Mile(s) Total Work Area: 5.24 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 Greenfield District propose to proceed with a federal-aid project to improve the intersection of SR 332 and CR 600 W in Delaware County, Indiana.

Specifically, the project is located in Sections 33 and 34, Township 21 North, Range 9 East of Harrison Township and Sections 3 and 4, Township 20 North, Range 9 East of Mount Pleasant Township as depicted on the Gilman and Muncie West, Indiana U.S. Geological Survey (USGS) 1:24,000 scale Quadrangles (Appendix B, B2). Adjacent land use near the project area includes agricultural and residential land (Appendix B, B3).

Within the proposed project area, SR 332 is functionally classified as a rural major collector. The typical section consists of four 12-foot asphalt thru lanes (two in either direction) with 8-foot usable (5-foot paved) outside shoulders and 3-4 foot paved inside shoulders. Additionally, there is a 12-foot designated right-turn lane and a 12-foot designated left-turn along both directions of SR 332 at CR 600 W. Both lanes begin approximately 500 feet from the intersection with CR 600 W. The eastbound and westbound travel lanes are separated by a depressed grass median varying from 6-32 feet wide. Traffic flow along SR 332 is free flowing. The posted speed limit along SR 332 is 55 miles per hour (mph). Drainage is conveyed via side ditches on either side of SR 332.

CR 600 W is classified as a rural major collector north of SR 332 and an urban minor arterial south of SR 332. The typical section consists of two 10-foot asphalt thru lanes (one in each direction) with a 1-2 foot aggregate shoulder. Traffic on CR 600 W at SR 332 is controlled by a stop sign. The posted speed limit on CR 600 W is 45 mph. Along the north leg of CR 600 W the drainage is generally sheet flow with no prevalent side ditches present for conveyance.

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The preferred alternative involves constructing a restricted crossing U-turn, or J-turn, style intersection at SR 332 and CR 600 W (Appendix B, B20 to B41). This alternative will eliminate cross and left-turn movements from the CR 600 W approaches and direct motorists to make right turns onto SR 332 leading them to a median U-turn lane where a legal U-turn is possible. A loon will be constructed along eastbound SR 332 approximately 726 feet west of CR 600 W, and another one constructed along westbound SR 332 approximately 774 feet east of CR 600 W. The purpose of the loons is to provide a sufficient turning radius for vehicles and trucks to make the U-turn. Following the legal U-turn, motorist will be able to either continue along SR 332 or turn right or left onto CR 600 W. Along SR 332, four 12-foot thru lanes (two in either direction) will be maintained. The 12-foot designated left-turn lanes along each approach will be reconstructed to avoid the proposed median island. In addition, the 12-foot designated right-turn lane will be reconstructed and lengthened to reach the proposed loons. Under this alternative, traffic along SR 332 will continue to operate unimpeded and will maintain full access to CR 600 W. The side ditches between the loons and CR 600 W will be re-graded. Modifications are also proposed to two corrugated metal pipe (CMP) culverts that convey drainage beneath SR 332. The first is a 30 inch CMP located along SR 332 approximately 576 feet west of CR 600 W (Sta. 152+00), while the second structure to be modified is a 24 inch CMP located along SR 332 approximately 424 feet east of CR 600 W (Sta. 162+00). Please refer to the Design Criteria for Bridges section of this document for the details regarding these modifications. Lighting will be added at the intersection and at the location of both loons (Appendix B, B40). This lighting will comply with the avoidance and minimization measures required by the U.S. Fish and Wildlife Service (USFWS). The total length of the project along SR 332 is 1,697 feet (0.32 mile). Please reference Appendix B, B20 to B41 for the design plans for this project.

CR 600 W will be reconstructed beginning at a point approximately 300 feet south to a point approximately 300 feet north of SR 332. The typical section of the reconstructed roadway will consist of two 12-foot thru lanes (one in each direction) with 2-foot paved shoulders along the north leg and 6-foot shoulders along the south leg. As cross and left turns from CR 600 W onto SR 332 will be restricted by a new center median curb, the thru lane approaching SR 332 will widen to a 16-foot wide right-turn lane. The center median curb, while signed to restrict access, will be mountable to provide continued cross movements to emergency service vehicles. Side slopes will be graded to 4:1 and will provide side ditches to convey runoff. Additionally, three private driveways along CR 600 W will be replaced in-kind as a part of this project. The total length of the project along CR 600 W is 600 feet (0.11 mile).

The proposed maintenance of traffic (MOT) will occur in three phases (Appendix B, B25 to B30). Please refer to the MOT section of this document for full details. The MOT will be implemented per the *Indiana Design Manual* guidelines.

The proposed project will require the acquisition of 0.63 acre of permanent ROW from three parcels (Appendix B, B24). No relocations will be required.

The preferred alternative meets the purpose and need by improving the overall operations and safety of the intersection. By limiting traffic movements from CR 600W to SR 332 to right-turn only the operations of the intersection will improve the LOS to an acceptable minimum of C. However, a LOS of A is anticipated for the intersection after the preferred alternative is complete. Additionally, driver impatience should reduce, which is expected to lower the instances of crashes and bring the ICF below 1.0.

OTHER ALTERNATIVES CONSIDERED:

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

Traffic Signal with Turn Lanes: This alternative would involve restricting the flow of traffic along SR 332 with a traffic signal and installing a semi-actuated traffic signal along CR 600 W at this intersection. This alternative would meet the purpose and need of the project by improving traffic flow and safety at this intersection. However, according to the analysis performed by INDOT, the LOS of the approaches and at the intersection with traffic signals installed would be a B. This is less than that of the preferred alternative, which is LOS A. In addition, modifications to the turn lanes would be required. Such modifications would include lengthening to accommodate the additional queue lengths resulting from the impeded flow along SR 332 resulting from the installation of a signal. This lengthening of the turn lanes would result in comparable

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impacts to both Wetland B and Wetland D as the preferred alternative. While feasible, this alternative was removed from further consideration due to the preferred alternative’s higher operational performance.

Wetland Avoidance Alternative: This alternative would involve altering the construction limits to avoid impacts to the wetlands in the area. The overall width of SR 332 would be narrowed at the location of Wetlands B and D. Although this alternative would avoid impacts to these wetlands, SR 332 would not be wide enough to meet current INDOT design standards and would make the avoidance of Wetland B and Wetland D impractical. Therefore, this alternative was discarded from further consideration.

Do-Nothing Alternative: This alternative involved not improving the intersection at SR 332 and CR 600 W. 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.

No other alternatives were considered for this project.

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

- | | |
|---|-------------------------------------|
| It would not correct existing capacity deficiencies; | <input checked="" type="checkbox"/> |
| It would not correct existing safety hazards; | <input checked="" type="checkbox"/> |
| It would not correct the existing roadway geometric deficiencies; | <input type="checkbox"/> |
| It would not correct existing deteriorated conditions and maintenance problems; or | <input type="checkbox"/> |
| It would result in serious impacts to the motoring public and general welfare of the economy. | <input type="checkbox"/> |
| Other (Describe) | <input type="checkbox"/> |

ROADWAY CHARACTER:

SR 332:

Functional Classification: Rural Major Collector
 Current ADT: 17,502 VPD (2017) Design Year ADT: 22,878 VPD (2038)
 Design Hour Volume (DHV): 1,959 Truck Percentage (%): 13.0%
 Designed Speed (mph): 55 Legal Speed (mph): 55

Existing Proposed

Number of Lanes:	6		6
Type of Lanes:	4 thru lanes; 2 turn lanes		4 thru lanes; 2 turn lanes
Pavement Width:	48-72 ft.		48-98.8 ft.
Shoulder Width:	5-8 (outside) ft. 3-4 (inside)		0-18.25 ft.
Median Width:	6-32 ft.		12-27 ft.
Sidewalk Width:	N/A ft.		N/A ft.

CR 600 W:

Functional Classification: Local Agency Collector
 Current ADT: 1,046 VPD (2017) Design Year ADT: 1,375 VPD (2038)
 Design Hour Volume (DHV): 135 Truck Percentage (%): 2.0%
 Designed Speed (mph): 45 Legal Speed (mph): 45

Existing Proposed

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Number of Lanes:	2		2
Type of Lanes:	Thru lanes		Thru lanes
Pavement Width:	20	ft.	24
Shoulder Width:	1-2	ft.	2-6
Median Width:	N/A	ft.	N/A
Sidewalk Width:	N/A	ft.	N/A

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

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

DESIGN CRITERIA FOR BRIDGES:

Structure/NBI Number(s): N/A Sufficiency Rating: N/A
 (Rating, Source of Information)

	Existing		Proposed
Bridge Type:	N/A		N/A
Number of Spans:	N/A		N/A
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:			N/A

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

Remarks: The proposed project does not include any work to bridges. However, modifications are proposed to two CMP culverts that convey drainage beneath SR 332. The first is a 30 inch CMP located along SR 332 approximately 576 feet west of CR 600 W (Sta. 152+00). On the south side of SR 332, the inlet of this CMP will be equipped with an 11 linear foot extension; no work will occur to this CMP's outlet on the north side of SR 332 (Appendix B, B31). The second structure to be modified is a 24 inch CMP located along SR 332 approximately 424 feet east of CR 600 W (Sta. 162+00). On the north side of SR 332, the inlet of this CMP will be equipped with a 12 linear foot extension; no work will occur to this CMP's outlet on the south side of SR 332 (Appendix B, B33). The extensions of the CMP culverts at these two locations is needed to accommodate the widened roadway section of SR 332.

Will the structure be rehabilitated or replaced as part of the project? Yes No N/A
If the proposed action has multiple bridges or small structures, this section should be filled out for each structure.

MAINTENANCE OF TRAFFIC (MOT) DURING CONSTRUCTION:

Is a temporary bridge proposed?	Yes	No
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"/>

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Is there substantial controversy associated with the proposed method for MOT?

Remarks: The MOT plan will occur in three phases (Appendix B, B25 to B30). Phase 1 will involve the closure of the right thru lane, the designated right-turn lane to CR 600 W, and the outside shoulder of both eastbound and westbound SR 332. During this phase, both the east and west loons will be constructed, as well as the designated right-turn lanes dropping at CR 600 W. Traffic operations will be maintained in the left lane only of both eastbound and westbound SR 332 until passing CR 600 W. This phase will not affect traffic operations on CR 600 W. Phase 2 will involve the closure of the left thru lane, the designated left-turn lane, and the inside shoulder along both directions of SR 332. During this phase of construction, the median U-turn lanes will be constructed. Traffic operations will be maintained in the right lane only of both eastbound and westbound SR 332 until passing CR 600 W. This phase will not affect traffic operations on CR 600 W. Phase 3 will involve the closure of CR 600 W at SR 332 to construct the median curb and left turns lanes from SR 332 onto CR 600 W. During this phase of construction, the lane restrictions from Phase 2 will continue; however, an added restriction eliminating left turns from SR 332 onto CR 600 W will be in place. The signed detour route during this closure will include CR 200 N, CR 700 W, and CR 300 N. The length of the detour is approximately 4.6 miles. Access to all drives and businesses will be maintained during construction. The detour will only be required during the third phase of construction. The MOT will be implemented per the *Indiana Design Manual* guidelines. Construction will last approximately 3 months.

The MOT will likely be an inconvenience to traveling motorist (including school buses and emergency services), but will not pose a long-term disruption. Delays will occur during construction, but will cease upon project completion. The contractor will be responsible for contacting school districts and emergency services in accordance with current INDOT Design Manual and Standard Specifications.

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: \$ 385,800* (2016 & 2017) Right-of-Way: \$ 10,000 (2019) Construction: \$ 1,469,319 (2020)

* From FY 2016-2019 STIP. Funding for engineering is not included in the FY 2018-2021 STIP since it was already expended.

Anticipated Start Date of Construction: FY 2020

Date project incorporated into STIP July 3, 2017

Is the project in an MPO Area? Yes No

If yes,

Name of MPO Delaware-Muncie Metropolitan Planning Commission (DMMPC)

Location of Project in TIP Page 36

Date of incorporation by reference into the STIP November 15, 2017

RIGHT OF WAY:

Land Use Impacts	Amount (acres)	
	Permanent	Temporary
Residential	0.12	0.00
Commercial	0.00	0.00

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Agricultural	0.49	0.00
Forest	0.00	0.00
Wetlands	0.02 ⁺	0.00
Other:	0.00	0.00
TOTAL	0.63	0.00

Notes:

+ - The acreage of ROW shown for wetlands does not match the total acres of impact discussed in the Wetlands section of this document. This is because a portion of the delineated wetlands extend into the existing ROW (Appendix B, B31 and B33). What is represented in this table is that portion of the delineated wetlands occurring within the limits of the proposed ROW.

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 limits, the typical width of the existing ROW along SR 332 west of CR 600 W is 152 feet wide (75 feet wide north and 77 feet wide south of the centerline). East of CR 600 W, the typical width of the existing ROW along SR 332 is 150 feet wide (73 feet wide north and 77 feet wide south of the centerline). This ROW is limited access, which prohibits access modifications to the highway (i.e., the addition of a new drive) without the appropriate permit from INDOT.

Along the north leg of CR 600 W, the existing ROW is not of a typical width. It generally varies from a minimum 80 feet wide (73 feet wide west and 7 feet wide east of the centerline) to a maximum width of 95 feet wide (88 feet wide west and 7 feet wide east of the centerline) approaching SR 332. South of SR 332, the existing ROW varies from a minimum width of 103 feet wide (58 feet wide west and 45 feet wide east of the centerline) to a maximum width of 160 feet wide (90 feet wide west and 70 feet wide east of the centerline). Within the limits of the project, this ROW is also limited access with the exception of the east side of CR 600W.

In order to construct the proposed project, the typical permanent ROW width along SR 332 will be widened. West of CR 600 W, the typical width of the proposed permanent ROW will be 165 feet wide (75 feet wide north and 90 feet south of the centerline). The maximum proposed permanent ROW width along this approach occurs at the west loon where it will widen to 185 feet wide (75 feet wide north and 110 feet wide south of the centerline). East of CR 600 W, the typical width of the proposed permanent ROW will be 167 feet wide (90 feet wide north and 77 feet wide south of the centerline). The maximum proposed permanent ROW width along this approach occurs at the east loon where it will widen to 187 feet wide (110 feet wide north and 77 feet wide south of the centerline).

Generally, along CR 600 W the project will be constructed within the existing ROW. The only area of exception is north of SR 332 along the east side of the road where the existing ROW extends only to the edge of pavement. In this area, the proposed permanent ROW width to the east of the centerline will be 40 feet wide.

In all, the proposed project will require 0.63 acre of permanent ROW from three parcels (Appendix B, B24). The permanent ROW to be acquired consists of agricultural (0.49 acre), wetland (0.02 acre), and residential (0.12 acre) land uses. As noted on Append B, B24, the proposed ROW calls for demarcation by farm-field type fence (FFTF), an open-woven fence used to delineate limited access ROW in rural areas. No temporary ROW is required for this project.

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

SECTION A – ECOLOGICAL RESOURCES

Presence

Impacts
Yes No

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Streams, Rivers, Watercourses & Jurisdictional Ditches

- Federal Wild and Scenic Rivers
- State Natural, Scenic or Recreational Rivers
- Nationwide Rivers Inventory (NRI) listed
- Outstanding Rivers List for Indiana
- Navigable Waterways

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

Remarks:

Based on a desktop review, the aerial map of the project area (Appendix B, B3), the USGS topographic map (Appendix B, B2), and the Red Flag Investigation (RFI) (Appendix E, E7), there is one stream located within the 0.5 mile search radius. The closest mapped stream is 0.30 mile north of the project limits.

A site visit was conducted on October 30, 2017 and a *Waters of the U.S. Determination Report* was prepared for the project on October 17, 2018 (Appendix F, F1 to F22). This report was approved by INDOT Ecology and Waterway Permitting Office (EWPO) on October 23, 2018 (Appendix F, F23). This report identified one ephemeral stream feature exhibiting an ordinary high water mark (OHWM) along the west side of CR 600 W, approximately 0.06 mile south of SR 332 (Appendix F, F8 and F11). The OHWM of the UNT to Reed Branch is 1.25 feet wide by 1.5 inches deep. It was determined that the UNT to Reed Branch is likely a Water of the U.S. due to its connection with the White River, a Traditionally Navigable Water; UNT to Reed Branch flows into Reed Branch which is a tributary of Pleasant Run Creek which flows into the White River approximately 14.5 miles downstream of the project area. Although this stream is located within the survey area, it was determined during the October 2017 field investigation that the stream lies outside of the construction limits and will not be impacted by this project. The U.S. Army Corp of Engineers (USACE) makes all final determinations regarding jurisdiction.

The Federal Wild and Scenic Rivers listing, the State Natural Scenic and Recreational Rivers listing, and the Outstanding Rivers List for Indiana were researched by the consultant on August 16, 2018. No listed waterways were identified within or adjacent to the project area.

No impacts to streams, rivers, watercourses or jurisdictional ditches are expected.

Early coordination letters were sent to the USFWS, Indiana Department of Natural Resources (IDNR) Division of Fish and Wildlife (DFW), and the USACE on September 12, 2018 (Appendix C, C1 to C4). The USACE did not respond to the early coordination letter.

The IDNR DFW responded on October 12, 2018 with recommendations to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources to the greatest extent possible (Appendix C, C41 to C42). Recommendations pertaining to stream impacts are not applicable to this project since there will be no impacts to UNT to Reed Branch. Applicable recommendations provided by the IDNR DFW are included in *Section J: Environmental Commitments*.

The USFWS responded on October 31, 2018, stating they have no objections to the project as currently proposed (Appendix C, C39 to C40). They also included standard recommendations regarding limiting impacts to fish, wildlife, and botanical resources. Recommendations pertaining to stream impacts are not applicable to this project since there will be no impacts to UNT to Reed Branch. Applicable recommendations provided by the USFWS are included in *Section J: Environmental Commitments*.

An automated letter was generated from the Indiana Department of Environmental Management's (IDEM) website on September 12, 2018 (Appendix C, C9 to C16). Applicable recommendations from the Proposed Roadway Letter include limiting stream disturbance and coordinating with the appropriate permitting agencies.

Other Surface Waters
Reservoirs

<u>Presence</u>	<u>Impacts</u>	
	Yes	No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Lakes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Farm Ponds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Detention Basins	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Storm Water Management Facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Remarks: Based on a desktop review, a site visit on October 30, 2017 by Lochmueller Group, the aerial map of the project area (Appendix B, B3), the USGS topographic map (Appendix B, B2), and the waters resource map in the RFI (Appendix E, E7), there are four lakes within the 0.5 mile search radius. The closest lake is 0.30 mile southwest of the project area. A *Waters of the U.S. Determination Report* was prepared for the project on October 17, 2018 (Appendix F, F1 to F22). The report was approved by INDOT EWPO on October 23, 2018 (Appendix F, F23). No additional surface waters were identified within the project area. Therefore, the project will not impact any other or additional surface waters.

Early coordination letters were sent to the USFWS, IDNR DFW, and the USACE on September 12, 2018 (Appendix C, C1 to C4). The USACE did not respond to the early coordination letter.

The IDNR DFW responded on October 12, 2018 with recommendations about structure design and bank stabilization and recommendations to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources to the greatest extent possible (Appendix C, C41 to C42). Applicable recommendations provided by the IDNR DFW are included in *Section J: Environmental Commitments*.

The USFWS responded on October 31, 2018, stating they have no objections to the project as currently proposed (Appendix C, C39 to C40). They also included standard recommendations regarding limiting impacts to fish, wildlife, and botanical resources. Applicable recommendations provided by the USFWS are included in *Section J: Environmental Commitments*.

	Presence	Impacts	
		Yes	No
Wetlands	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Total wetland area: 0.59 acre(s) Total wetland area impacted: 0.03 acre(s)

(If a determination has not been made for non-isolated/isolated wetlands, fill in the total wetland area impacted above.)

Wetland No.	Classification	Total Size (Acres)	Impacted Acres	Comments
A	PEM1A	0.08	0.00	Located within the roadside ditch north of SR 332 west of CR 600 W
B	PEM1A	0.02	0.01	Located within the roadside ditch north of SR 332 east of CR 600 W
C	PEM1A	0.07	0.00	Located within a depression along the west side of CR 600 W south of SR 332
D	PEM1A	0.42	0.02	Located in the agricultural field south of SR 332 and west of CR 600 W

Wetlands (Mark all that apply)	Documentation	ES Approval Dates
Wetland Determination	<input checked="" type="checkbox"/>	October 23, 2018
Wetland Delineation	<input checked="" type="checkbox"/>	October 23, 2018
USACE Isolated Waters Determination	<input type="checkbox"/>	
Mitigation Plan	<input type="checkbox"/>	

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

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

X

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

Remarks: Based on a review of the USFWS National Wetlands Inventory (NWI) data (www.fws.gov/wetlands/Data/State-Downloads.html) (Appendix F, F12), the USGS topographic map (Appendix B, B2), and the RFI (Appendix E, E7), two wetland lines and eight wetland polygons within the 0.5 mile search radius were identified.

A site visit was conducted on October 27 and 30, 2017 by Lochmueller Group, to evaluate the potential presence of wetlands in or near the project area. Four wetlands, Wetlands A, B, C and D, were identified within the project area. A *Waters of the U.S. Determination Report* was prepared for the project by Lochmueller Group on October 17, 2018, (Appendix F, F1 to F22). The report was approved by INDOT EWPO on October 23, 2018 (Appendix F, F23).

Wetland A is a palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland that exists within the roadside ditch on the north side of SR 332, west of CR 600 W. The total size of Wetland A is 0.08 acre. Based on a qualitative analysis, Wetland A is considered to be of poor quality due to its position within a roadside ditch. Wetland A is likely to be considered an isolated, exempt wetland due to a lack of connectivity to a Water of the U.S. Wetland A lies outside of the construction limits of the project; therefore, it will not be impacted by the project area. A "Do Not Disturb" note shall be included on the design plans to ensure the contractor does not impact this feature (Appendix B, B31).

Wetland B is a palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland that exists within the roadside ditch north of SR 332 east of CR 600 W. The total size of Wetland B is 0.02 acre. Based on a qualitative analysis, Wetland B is considered to be of poor quality due to its position within a roadside ditch. Wetland B is likely to be considered a Water of the U.S. due to hydrologic connectivity to Pleasant Run Creek. Approximately 0.02 acre of Wetland B occurs within the proposed permanent ROW; however, based on the defined construction limits 0.01 acre will be permanently impacted by the activities necessary to construct the added designated right-turn lane. The widening of westbound SR 332 and the grading of the 4:1 foreslope encroaches upon Wetland B, which along with the addition of the 12-foot pipe extension, accounts for the impacts to the identified feature (Appendix B, B33).

Wetland C is a palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland that exists within a small depression on the west side of CR 600 W, south of SR 332. The total size of Wetland C is 0.07 acre. Based on a qualitative analysis, Wetland C is considered to be of poor quality due to the dominance of invasive vegetation, spreading bentgrass (*Agrostis stolonifera*). Wetland C is likely to be considered a Water of the U.S. due to hydrologic connectivity to UNT to Reed Branch. Wetland C lies outside of the construction limits of the project; therefore, it will not be impacted by the project. Wetland C is located beyond the view depicted on the plans included in Appendix B.

Wetland D is a palustrine, emergent, persistent, temporarily flooded (PEM1A) wetland that exists within the agricultural field south of SR 332 and west of CR 600 W. The total size of Wetland D is 0.42 acre. Based on a qualitative analysis, Wetland D is considered to be of poor quality due to its position within a roadside ditch. Wetland D is likely to be considered an isolated, exempt wetland due to a lack of hydrologic connectivity to a Water of the U.S. Approximately 0.05 acre of Wetland D occurs within the proposed permanent ROW; however, based on the defined construction limits 0.02 acre will be permanently impacted by the activities

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necessary to construct the west loon. The widening of eastbound SR 332 and the grading of the 4:1 foreslope encroaches upon Wetland D, which accounts for the impacts to the identified feature (Appendix B, B31).

There is no practicable alternative to the proposed new construction in the identified wetlands and the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use. No mitigation for the 0.03 acre of wetland impact is anticipated.

Early coordination letters were sent to the USACE, USFWS, and IDNR DFW on September 12, 2018 (Appendix C, C1 to C4). The USACE did not respond to early coordination.

The IDNR, DFW responded on October 12, 2018, and stated that coordination with USACE and the IDEM should occur to determine permits required based on wetland impacts (Appendix C, C41 to C42). This recommendation is included in *Section J: Environmental Commitments*.

The USFWS responded on October 31, 2018, stating they have no objections to the project as currently proposed (Appendix C, C39 to C40). No recommendations included in their response were pertinent to wetland impacts.

An automated letter was generated from IDEM's website on September 12, 2018 (Appendix C, C9 to C16). Applicable recommendations from the Proposed Roadway Letter include limiting wetland disturbance and coordinating with the appropriate permitting agencies. These recommendation are included in *Section J: Environmental Commitments*.

Terrestrial Habitat
Unique or High Quality Habitat

<u>Presence</u>	<u>Impacts</u>	
	Yes	No
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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 27 and 30, 2017 by Lochmueller Group, the USGS topographic map (Appendix B, B2), and the aerial map of the project area (Appendix B, B3) the land use near the project area consists of vegetated roadside, residential, and agricultural land. Dominant vegetation within the project area included reed canarygrass (*Schedonorus arundinaceus*), yellow foxtail (*Setaria pumila*), barnyardgrass (*Echinochloa crus-galli*), creeping bentgrass (*Agrostis stolonifera*), and fall panicgrass (*Panicum dichotoflorum*). No signs of wildlife were observed during the field check; however, it can be assumed that small animals such as squirrels, raccoons, foxes, birds, etc. likely inhabit the surrounding area.

The project will take place within vegetated roadside and agricultural land. Impacts to this low quality terrestrial habitat are expected to be minor. Some vegetation clearing, land grading, and minor excavation will be necessary within the construction limits in order to construct the improvements at the intersection. Excavation activities are not expected to exceed 3 feet below ground surface. Minor tree clearing of approximately 0.05 acre will also be necessary. The project will not impact any core forest and will not have significant impacts on wildlife communities. Mitigation is not anticipated.

Early coordination letters were sent to the USFWS and IDNR DFW on September 12, 2018 by the consultant (Appendix C, C1 to C4).

The USFWS responded on October 31, 2018, stating they have no objections to the project as currently proposed (Appendix C, C39 to C40). They also included standard recommendations regarding limiting impacts to terrestrial habitat. These recommendations include limiting the clearance of trees and understory vegetation to within construction limits the use of erosion control in areas of disturbed soils. Applicable recommendations provided by the USFWS are included in *Section J: Environmental Commitments*.

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The IDNR DFW responded on October 12, 2018, with comments and recommendations related to erosion and sediment control, revegetation of bare and disturbed areas, the clearing of trees and brush, replacement of vegetation destroyed during construction, and recommendations to avoid or minimize impacts to botanical resources (Appendix C, C39 to C40). Applicable recommendations provided by IDNR DFW can be found in *Section J: Environmental Commitments*.

An automated letter was generated from IDEM's website on September 12, 2018 (Appendix C, C9 to C16). Applicable recommendations from the Proposed Roadway Letter include limiting disturbance of riparian vegetation, implementing erosion and sediment control measures and coordinating with the appropriate permitting agencies. Applicable recommendations provided by the IDEM are included in *Section J: Environmental Commitments*.

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.

Karst

Is the proposed project located within or adjacent to the potential Karst Area of Indiana?
 Are karst features located within or adjacent to the footprint of the proposed project?

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

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, a site visit on October 27 and 30, 2017 by Lochmueller Group, the USGS topographic map (Appendix B, B2), and the RFI, the project is located outside the designed karst area of Indiana, as identified *Karst Memorandum of Understanding between INDOT, IDNR, IDEM, and USFWS* (March 14, 2007). The RFI did not identify any karst features within the 0.5 mile search radius (Appendix E, E7). Therefore, no impacts are expected.

Early coordination information was submitted to the Indiana Geological Survey (IGS) on September 12, 2018 by the consultant (Appendix C, C1 to C4). The early coordination response, dated September 12, 2018, indicated moderate liquefaction potential, high potential for encountering bedrock resources, and low potential for encountering sand and gravel resources. No mineral resource extraction sites are documented in the area (Appendix C, C5 to C7). This information has been shared with the design engineers. No karst features were identified within the IGS communication.

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

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

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Remarks:

Based on a desktop review and the RFI, completed by Lochmueller Group on September 11, 2018, the Delaware County Endangered, Threatened, and Rare (ETR) Species List has been checked (Appendix E, E9 to E10). The highlighted species on the list reflect the federal and state identified ETR species within the county. Early coordination with IDNR DFW was initiated by Lochmueller Group on September 12, 2018. According to the IDNR DFW response, dated October 12, 2018 (Appendix C, C41 to C42), the Natural Heritage Program's database has been checked. To date, no plant or animal species, listed as state or federally ETR, have been reported within the project vicinity.

The project qualifies for the *Range-wide Programmatic Consultation for the Indiana Bat and the Northern Long-Eared bat between FHWA, Federal Railroad Administration, Federal Transit Administration, and the USFWS* dated May 2016 (revised February 2018). A review of the USFWS database by INDOT ES did not indicate the presence of endangered species in or within 0.5 mile of the project area (Appendix E, E4). A field review performed on October 27 and 30, 2017 by the consultant, revealed no signs of the presence of the Indiana bat and/or the northern long-eared bat (NLEB) (Appendix I, I2 to I5). Project information was submitted through the USFWS Information for Planning and Consulting (IPaC) website (<https://ecos.fws.gov/ipac/user/login>) on August 9, 2018. An official species list was generated and indicated that the project falls within range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (*Myotis septentrionalis*) but went on to state there are no critical habitats within the project area (Appendix C, C17 to C22).

Based on the responses given in the IPaC determination key, this project may affect, but is not likely to adversely affect these species. After INDOT reviewed and verified the effect finding on October 24, 2018, a Concurrence Verification Letter was uploaded for USFWS review on October 24, 2018 (Appendix C, C23 to C38). No response was received from the USFWS within the 14-day review period; therefore, it was concluded that they concurred with the finding on November 3, 2018. Avoidance Minimization Measures (AMMs) were included in the effect finding and pertained to contractor knowledge of AMMs, type of lighting to be used, the timing of tree removal, and ensuring no other trees other than those noted on the plans are to be removed. All AMMs are included as firm commitments in *Section J: Environmental Commitments* at the end of this document.

In accordance with Appendix D of the USFWS *User's Guide for the Range-Wide Programmatic Consultation for Indiana Bat and Northern Long-Eared Bat*, a Bridge/Structure Assessment Form will be completed within two years prior to construction. This precludes the need for further consultation on this project under Section 7 of the Endangered Species Act of 1973, as amended. If new information on endangered species at this site becomes available, or if the project plans are changed, USFWS will be contacted for consultation.

An early coordination letter was sent to the USFWS on September 12, 2018 by the consultant (Appendix C, C1 to C4).

The USFWS responded on October 31, 2018, stating they have no objections to the project as currently proposed and the project should follow the Indiana bat/northern long-eared bat programmatic consultation process (Appendix C, C39 to C40). They also included standard recommendations regarding limiting impacts to fish, wildlife, and botanical resources. Applicable recommendations provided by the USFWS are included in *Section J: Environmental Commitments*.

SECTION B – OTHER RESOURCES

Drinking Water Resources

Wellhead Protection Area
Public Water System(s)
Residential Well(s)

Presence

Impacts

Yes	No

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Source Water Protection Area(s)
 Sole Source Aquifer (SSA)

If a SSA is present, answer the following:

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

Remarks: The proposed project 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/United States Environmental Protection Agency Sole Source Aquifer Memorandum of Agreement* is not applicable to this project, and a detailed groundwater assessment is not required. No impacts are expected.

The IDEM Wellhead Proximity Determinator website (<http://idemmaps.idem.in.gov/whpa/>) was accessed by Lochmueller Group on August 16, 2018. This project is not located within a Wellhead Protection Area.

The IDNR Enhanced Water Well Web Viewer website (<http://www.in.gov/dnr/water/6604.htm>) was reviewed by Lochmueller Group on August 16, 2018. No water wells were identified within the project area. Therefore, no impacts are anticipated as a result of this project.

Through the utility coordination process initiated by Lochmueller Group, Inc., no public water systems have been identified in the project area. Therefore, no impacts are anticipated as a result of this project.

Based on a desktop review of the INDOT MS4 website (<https://entapps.indot.in.gov/MS4/>) on February 7, 2019 by Lochmueller Group, and the RFI report (Appendix E, E8), this project is located within the Yorktown Urban Area Boundary (UAB) location. An early coordination letter was sent on September 12, 2018, to the Yorktown, Ivy Tech, and Muncie MS4 Coordinator. The MS4 coordinator did not respond within the 30-day time frame. No impacts are expected.

Based on a desktop review, a site visit on October 27 and 30, 2018 by Lochmueller Group, and the aerial map of the project area (Appendix B, B3) this project is not located where there will be public water impacts. Therefore, no impacts are expected.

	<u>Presence</u>	<u>Impacts</u>	
		Yes	No
Flood Plains (INDOT CE Prep Manual, page 51 to 54)			
Longitudinal Encroachment	<input type="text"/>	<input type="text"/>	<input type="text"/>
Transverse Encroachment	<input type="text"/>	<input type="text"/>	<input type="text"/>
Project located within a regulated floodplain	<input type="text"/>	<input type="text"/>	<input type="text"/>
Homes located in floodplain within 1000' up/downstream from project	<input type="text"/>	<input type="text"/>	<input type="text"/>

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

Remarks: The Federal Emergency Management Agency (FEMA) floodplain maps were reviewed on August 20, 2018, by Lochmueller Group (Appendix F, F13). This project is not located in a regulatory floodplain. Therefore, it does not fall within the guidelines for the implementation of 23 CFR 650, 23 CFR 771, and 44 CFR. No impacts are expected.

Early coordination information was submitted to the IDNR, DFW on September 12, 2018 by the consultant (Appendix C, C1 to C4). According to the response letter from the IDNR, DFW, dated October 12, 2018, formal approval by the IDNR under the regulatory programs administered by the Division of Water is not required for this project (Appendix C, C39 and C40). Therefore, a Construction in a Floodway permit is not required for this project.

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

Total Points (from Section VII of CPA-106/AD-1006* 148
**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 27 and 30, 2017 by Lochmueller Group, the aerial map of the project area (Appendix B, B3), there is 0.64 acre of farmland within the project limits as defined by the Farmland Protection Policy Act (FPPA). As required by the FPPA, the NRCS has been coordinated with and Form NRCS-CPA-106 has been completed. An early coordination letter was sent on September 12, 2018 to the Natural Resources Conservation Service (NRCS). The NRCS responded on October 31, 2018 stating the proposed project will cause a conversion of prime farmland. Coordination with NRCS resulted in a score of 148 on Form NRCS-CPA-106 (Appendix C, C44). The NRCS threshold score for significant impacts to farmland that result in the consideration of alternatives is 160. Since this project received a total point value less than 160 points, this site will receive no further consideration for farmland protection. No alternatives, other than those previously discussed in this document, will be considered without re-evaluating impacts to prime farmland. This project will not have a significant impact to farmland. In accordance with the FPPA, the completed Form NRCS-CPA-106 was returned to the NRCS on February 28, 2019 for their records.

SECTION C – CULTURAL RESOURCES

	Category	Type	INDOT Approval Dates	N/A
Minor Projects PA Clearance	B	3	September 21, 2018	

Eligible and/or Listed
Resource Present

Results of Research

Archaeology	
NRHP Buildings/Site(s)	
NRHP District(s)	
NRHP Bridge(s)	

Project Effect

No Historic Properties Affected No Adverse Effect Adverse Effect

Documentation
Prepared

Documentation (mark all that apply)

	ES/FHWA Approval Date(s)	SHPO Approval Date(s)
Historic Properties Short Report		
Historic Property Report		
Archaeological Records Check/ Review	February 20, 2018	N/A
Archaeological Phase Ia Survey Report	February 20, 2018	N/A
Archaeological Phase Ic Survey Report		
Archaeological Phase II Investigation Report		
Archaeological Phase III Data Recovery		
APE, Eligibility and Effect Determination		
800.11 Documentation		

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

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: INDOT, acting on behalf of the FHWA, is required to comply with Section 106 of the National Historic Preservation Act of 1966 as amended (Section 106) and its implementing federal regulation, 36 CFR 800. Section 106 and 36 CFR 800 outline a process that requires FHWA and INDOT to evaluate the effects of undertakings on properties that are listed on or eligible for listing on the National Register of Historic Places (NRHP). A Minor Projects Programmatic Agreement (MPPA) between FHWA, the INDOT, the Advisory Council on Historic Preservation, and the Indiana State Historic Preservation Officer (SHPO) was signed on October 12, 2006. This document streamlines the Section 106 process for certain actions that typically have no effect on properties listed on or eligible for listing in the NRHP.

An Indiana Archaeological Report, which included an archaeological records review check and Phase Ia archaeological reconnaissance, was completed by qualified professionals at Cultural Resources Analytics, Inc. (CRA) on December 20, 2017. The conclusions of the archaeological investigations found that no archaeological sites recommended eligible for, or listed in, the NRHP will be affected by the proposed project. The report of these findings was submitted to INDOT Cultural Resources Office (CRO) on December 20, 2017 for review. Following INDOT CRO's concurrence on February 20, 2018, the report was sent to the IDNR DHPA for their records. On August 13, 2018, additional coordination with INDOT CRO occurred inquiring about the need for revisions to the Phase Ia report due to a refinement of the project limits. INDOT CRO responded on August 29, 2018, indicating that no revisions are necessary.

On September 21, 2018, the INDOT CRO determined that this project falls within the guidelines of Category B, Item 3 under the MPPA because it meets the following conditions for construction of added travel, turning, or auxiliary lanes (Appendix D, D1 to D4):

- Condition A: Work occurs in undisturbed soils and an archaeological instigation conducted by the applicant and reviewed by INDOT CRO determined no NRHP-listed or potentially NRHP-eligible archaeological resources are present with the project area;
- AND Condition B: work does not occur adjacent to or within a NRHP-listed or NRHP-eligible district or individual above-ground resource.

No further consultation is required. This completes the Section 106 process and the responsibilities of the FHWA under Section 106 have been fulfilled.

If any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (IC 14-21-1-27 and -29) requires that the discovery must be reported to the IDNR within two business days. This is included as a firm commitment in *Section J: Environmental Commitments*.

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

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

Parks & Other Recreational Land Presence Use
Yes No

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Publicly owned park	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Publicly owned recreation area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (school, state/national forest, bikeway, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Evaluations Prepared

Programmatic Section 4(f)*	<input type="checkbox"/>
"De minimis" Impact*	<input type="checkbox"/>
Individual Section 4(f)	<input type="checkbox"/>

FHWA Approval date

Wildlife & Waterfowl Refuges

National Wildlife Refuge	<input type="checkbox"/>
National Natural Landmark	<input type="checkbox"/>
State Wildlife Area	<input type="checkbox"/>
State Nature Preserve	<input type="checkbox"/>

<u>Use</u>	
Yes	No
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

Evaluations Prepared

Programmatic Section 4(f)*	<input type="checkbox"/>
"De minimis" Impact*	<input type="checkbox"/>
Individual Section 4(f)	<input type="checkbox"/>

FHWA Approval date

Historic Properties

Sites eligible and/or listed on the NRHP	<input type="checkbox"/>
--	--------------------------

<u>Use</u>	
Yes	No
<input type="checkbox"/>	<input type="checkbox"/>

Evaluations Prepared

Programmatic Section 4(f)*	<input type="checkbox"/>
"De minimis" Impact*	<input type="checkbox"/>
Individual Section 4(f)	<input type="checkbox"/>

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 regardless of ownership. Lands subject to this law are considered Section 4(f) resources.

Based on a desktop review, a site visit on October 27 and 30, 2017 by Lochmueller Group, the aerial map of the project area (Appendix B, B3), the Section 106 consultation (Appendix D, D1 to D4), and the infrastructure map from the RFI report (Appendix E, E6), there are no Section 4(f) resources within or adjacent to the project area. Therefore, no impacts are expected.

Section 6(f) Involvement

Presence

Use

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Section 6(f) Property Yes No

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

Remarks: The U.S. Land and Water Conservation Fund Act of 1965 established the Land and Water Conservation Fund (LWCF) which was created to preserve, develop, and assure accessibility to outdoor recreation resources. Section 6(f) of this Act prohibits conversion of lands purchased with LWCF moneys to a non-recreation use.

A review of Section 6(f) property on the InvestigateWest website (<http://projects.invw.org/data/lwcf/grants-wa.html>) which contains a listing of all projects receiving LWCF monies between 1965 and 2011 within each state revealed a total of 3 properties within Delaware County (Appendix I, II). 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.

SECTION E – Air Quality

Air Quality

Conformity Status of the Project

	Yes	No
Is the project in an air quality non-attainment or maintenance area?	<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: This project is listed in the FY 2016-2019 STIP and the FY 2018-2021 STIP (Appendix H, H1 to H2). Additionally, this project is located within the DMMPC and was incorporated into the 2018-2021 TIP on November 15, 2017 (Appendix H, H3).

This project is located within Delaware County, which is currently in attainment for all criteria pollutants according to nonattainment county list on IDEM's website (www.in.gov/idem/airquality/files/nonattainment_county_list.pdf). 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 Yes No
 Is a noise analysis required in accordance with FHWA regulations and INDOT's traffic noise policy?

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	No	Yes/ Date
ES Review of Noise Analysis	<input type="checkbox"/>	<input type="checkbox"/>
Remarks: This is a Type III project. In accordance with 23 CFR 772 and the current INDOT Traffic Noise Analysis Procedure, this action does not require a formal noise analysis.		

SECTION G – COMMUNITY IMPACTS

Regional, Community & Neighborhood Factors

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

Remarks: The project will ultimately be beneficial to local business and properties due to improved traffic flow along the corridor, and the project will not substantially change access to properties within the area. Overall, the negative impacts to property owners and local businesses within the project area will be minimal and will consist primarily of short-term construction impacts. No relocations will occur. 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 September 21, 2018 by the consultant, there are no fairs and festivals scheduled within 10 miles of the project for 2020 which is the anticipated construction year.

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 contractor will be responsible for contacting school districts and emergency services at least 2 weeks prior to any construction activities that would limit access, this is included as a commitment in *Section J: Environmental Commitments*.

In February 2014 Delaware County submitted its Americans with Disabilities Act (ADA) Transition Plan entitled, "Delaware County ADA Transition and Implementation Plan" (https://www.co.delaware.in.us/egov/documents/1542400496_31155.pdf). As proposed, the project does not include the addition or modification of existing pedestrian facilities. Additionally, there are currently no existing pedestrian facilities within or near the project area. Therefore, the project is in compliance with the ADA Transition Plan.

An early coordination letter was sent to the DMMPC on September 12, 2018 (Appendix C, C1 to C4). No response was received.

Indirect and Cumulative Impacts

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

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

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Remarks: Indirect impacts are caused by an action (project) 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 are impacts on 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 (Federal or non-Federal) 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.

Public Facilities & Services

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

Yes No

Remarks: Based on a desktop review, a site visit on October 27 and 30, 2017, by Lochmueller Group, the aerial map of the project area (Appendix B, B3), and the infrastructure map of the RFI report (Appendix E, E6) there are no public facilities within or adjacent to the project area. Access to all properties will be maintained during construction. Therefore, no impacts are expected.

The proposed project will not result in substantial impacts on health and educational facilities, public and private utilities, emergency services, religious institutions, airports, public transportation, pedestrian facilities, and/or bicycle facilities. The proposed project will utilize daytime lane restrictions, construction warning lights, and signage along existing roads during construction (Appendix B, B25 to B30). A detour will also be required. Please refer to the MOT section of this document for details regarding the detour.

Coordination was sent to the Delaware County Sheriff Department, the Delaware County Emergency Management Agency, the Yorktown Police Department, and the Yorktown Fire Department on September 12, 2018 by the consultant (Appendix C, C1 to C4). While none of these agencies formally responded to the provided early coordination, concerns by the Yorktown and Gaston Fire Departments, as well as the Delaware County Emergency Management Agency were documented at an October 27, 2017 Preliminary Field Check Meeting held at the project site. At this meeting the two represented fire departments noted CR 600 W was a primary north-south emergency response route. Their primary concern with the construction of a J-turn intersection at this location was regarding the inability of emergency service vehicles to traverse SR 332 and being required to negotiate the median U-turn. They felt this would adversely affect their response times. Please refer to the minutes from this meeting, which are included in Appendix I, I15 to I16. Following the Preliminary Field Check Meeting the design was modified to address these concerns. First, the proposed raised curb restricting left-turns onto CR 600 West from either direction of SR 332 was replaced by a mountable curb. The mountable curb will allow emergency vehicles to traverse SR 332 without having to use the median U-turns, thereby minimizing the effects to their response routes. The second change to the design involved the shifting of the loons closer to the intersection in order to reduce the distance motorists would have to travel before being able to make the legal U-turn. The western loon was shifted 290 feet closer to CR 600 W, while the eastern loon was shifted 267 feet closer. With the modifications to the proposed design, impacts to the emergency response routes of the Gaston and Yorktown Fire Departments have been minimized to the extent practical through the project design.

Coordination was sent to Wes-Del Community Schools and Yorktown Community Schools on September 12, 2018 by the consultant (Appendix C, C1 to C4). Yorktown Community Schools responded by phone on September 20, 2018, stating that the project area is within their bus route and requested notification prior to the beginning of construction.

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Coordination was also sent to the Delaware County Commissioners, Council, Highway Department, and Surveyor's Office, as well as the Mount Pleasant Township and Harrison Township Trustees on September 12, 2018. No responses were received from the above entities.

The contractor will be responsible for contacting school districts and emergency services at least 14 days prior to construction. This is included as a firm commitment in *Section J: Environmental Commitments* of this document.

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 INDOT – Greenfield District, 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 Preparation Manual*, an Environmental Justice (EJ) analysis is required for any project that has two or more relocations or 0.5 acre or more of additional permanent right-of-way. This project will require 0.63 acre of permanent ROW. Therefore, an EJ analysis is required.

Potential EJ impacts are detected by locating minority populations and low-income populations in and near the project area, calculating their percentage in the area relative to a reference population to determine if populations of EJ concern do exist, and then determining whether there will be disproportionate adverse impacts to them. The reference population may be a county, city, or town and is called the community of comparison (COC). For this project, the COC is Delaware County, Indiana. The community that overlaps or is near the project limits is called the affected community (AC). For this project, the AC's are Census Tracts 24.02 and 25 in Delaware County, Indiana. When more than 50% of the population in the AC is minority or low income or when the minority or low income populations of the AC is more than 125% of the COC populations, the project is considered to have an EJ population of concern.

A review of the American Community Survey five-year estimates data (2012-2016) was completed on August 30, 2018 (Appendix I, I6 to I12). The data was obtained from the U.S. Census Bureau's American FactFinder webpage (<https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>).

Minority and Low-Income Data (ACS 5 year estimates: 2012-2016)			
	COC - Delaware County, Indiana	AC 1 - Census Tract 24.02	AC 2 - Census Tract 25
Percent Minority	12.6%	5.6%	8.4%
125% of COC	15.8%	AC < 125% COC	AC < 125% COC
EJ Population of Concern		No	No
Percent Low-Income	22.0%	6.7%	9.8%
125% of COC	27.5%	AC < 125% COC	AC < 125% COC
EJ Population of Concern		No	No

AC 1 (Census Tract 24.02) has a total percent minority population of 5.6% while AC 2 (Census Tract 25) has a total percent minority population of 8.4%, both of which are below 50% and are below the 125% COC threshold. Therefore, the AC's do not contain minority populations of EJ concern.

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AC 1 (Census Tract 24.02) has a total percent low-income population of 6.7% while AC 2 (Census Tract 25) has a total percent low-income population of 9.8%, both of which are below 50% and are below the 125% COC threshold. Therefore, the AC's do not contain low-income populations of EJ concern.

The census data sheets, map, and calculations can be found in Appendix I, pages I6 to I12. No further environmental justice 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 checked="" type="checkbox"/>	<input 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 or people, businesses, or farms will take place as a result of the project.

One electric company (AEP), one cable company (Comcast), and one communications company (AT&T) are known to have facilities within the project area. Coordination with these utility companies has been initiated to confirm facility locations, identify potential conflicts, and develop relocation plans as needed. This coordination will continue through the duration of the engineering phase.

SECTION H – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

Documentation

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?

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

	No	Yes/ Date
ES Review of Investigations	<input type="checkbox"/>	October 30, 2018

Include a summary of findings for each investigation.

Remarks: Based on a review of GIS and available public records, a RFI was approved on October 30, 2018 by the INDOT Site Assessment and Management (SAM) (Appendix E, E1 to E10). No sites with hazardous material concerns or sites involved with regulated substances were identified in or within 0.5 mile of the project area. Further investigation for hazardous materials or regulated substances is not required at this time.

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)
 Pre-Construction Notification (PCN)

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

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Other	<input type="checkbox"/>
Wetland Mitigation required	<input type="checkbox"/>
Stream Mitigation required	<input type="checkbox"/>

IDEM

Section 401 WQC	<input checked="" type="checkbox"/>
Isolated Wetlands determination	<input checked="" type="checkbox"/>
Rule 5	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>
Wetland Mitigation required	<input type="checkbox"/>
Stream Mitigation required	<input type="checkbox"/>

IDNR

Construction in a Floodway	<input type="checkbox"/>
Navigable Waterway Permit	<input type="checkbox"/>
Lake Preservation Permit	<input type="checkbox"/>
Other	<input type="checkbox"/>
Mitigation Required	<input type="checkbox"/>

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

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

Remarks: A total of 0.01 acre of Wetland B and 0.02 are of Wetland D will be impacted by this project. Impacts will be limited to the portion of the wetlands within the construction limits of the project. Wetland D is likely to be considered an isolated, exempt wetland due to a lack of connectivity to a jurisdictional waterway. A USACE Section 404 RGP and IDEM Section 401 Water Quality Certification will be required due to the impacts to Wetlands B. 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 0.03 acre, mitigation is not likely to be required for the USACE Section 404 RGP or the IDEM Section 401 Water Quality Certification.

According to the IDNR DFW early coordination response letter, dated October 12, 2018, formal approval by the IDNR under the regulatory programs administered by the Division of Water is not required for this project (Appendix C, C39 to C40). Therefore, a Construction in a Floodway Permit is not required.

The project may disturb up to 5.24 acres of land. Therefore, the project is expect to exceed the minimal guidelines of soil disturbance and an IDEM Rule 5 Notice of Intent will be required.

It is the responsibility of the project sponsor, or their agent, 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 (Required):**

1. The contractor will be responsible for contacting school districts and emergency services at least 14 days prior to construction. (INDOT Greenfield District)
2. If permanent or temporary right-of-way amounts change, the INDOT Greenfield District Environmental Section will be contacted immediately. If any scope changes take place, the INDOT Greenfield District Design and INDOT Greenfield District Environmental Section will be consulted. A scope change could cause this environmental document to no longer be valid. (INDOT Greenfield District)

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3. It will be the responsibility of the designer to consult with INDOT ES Ecology and Waterway Permitting Office to determine the required permits for the project and to submit plans to process permits. (INDOT Greenfield District)
4. If a spill occurs or contaminated soils or water are encountered during construction, appropriate personal protective equipment should be utilized. Contaminated materials will need to be properly characterized, handled, and disposed in accordance with current regulations. IDEM should be notified through the Spill Line at (888) 233-7745 within 24 hours of discovery of contamination and within two hours of discovery of a spill. (INDOT Greenfield District)
5. Delineate Wetland A, Wetland B, and Wetland D on the plans. Beyond construction limits, mark these resources as "Do Not Disturb". If additional impacts are required beyond those considered in the environmental document, additional documentation or permits may be needed. (INDOT Greenfield District)
6. The small structures must be inspected by INDOT for the presence of bats or signs of bats within two years prior to construction. A copy of the inspection will be provided to the INDOT project manager. (INDOT Greenfield District)
7. If any archaeological artifacts or human remains are uncovered during construction, federal law and regulations (16 USC 470, et seq.; 36 CFR 800.11 et al.) and State Law (IC 14-21-1) require that work must stop immediately, and that the discovery must be reported to the DHPA in the IDNR within 2 business days. (IDNR DHPA)
8. 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)
9. Direct temporary lighting away from suitable habitat during the active season. (USFWS)
10. When installing new or replacing existing permanent lights, use downward-facing, full cut-off lens lights (with same intensity or less for replacement lighting); or for those transportation agencies using the BUG system developed by the Illuminating Engineering Society, be as close to 0 for all three ratings with a priority of "uplight" of 0 and "backlight" as low as practicable. (USFWS)
11. Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal. (USFWS)
12. Apply time of year restrictions for tree removal when bats are not likely to be present (no trees will be cleared from April 1 to September 30), or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/ rail surface and outside of documented roosting/foraging habitat or travel corridors; visual emergence survey must be conducted by qualified personnel with no bats observed and trees must be cleared the next day. (USFWS)
13. Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits). (USFWS)
14. Do not remove documented Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 mile of roosts, or documented foraging habitat any time of year. (USFWS)

For Further Consideration:

1. Impacts to non-wetland forest of one acre or more should be mitigated at a minimum 2:1 ratio. If less than one are of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ratio based on area. (IDNR)
2. Revegetate all bare and disturbed areas within the project area using a mixture of grasses (excluding all varieties of tall fescue), sedges, and wildflowers native to Northern Indiana and specifically for stream bank/floodway stabilization purposes as possible upon completion. (IDNR)
3. Minimize and contain within the project limits all tree and brush clearing. (IDNR)
4. Do not cut any trees suitable for Indiana bat or northern long-eared at roosting (greater than 3 dbh, living or dead, with loose hanging bark, or with cracks, crevices or cavities) from April 1 through September 30. (IDNR)
5. Do not deposit or allow demolition/construction materials or debris to fall or otherwise enter the waterway. (IDNR)

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6. Do not excavate or place fill in any riparian wetland. (IDNR)
7. The use of cutback asphalt, or asphalt emulsion containing more than 7% oil distillate, is prohibited and will not occur during the months of April through October. (IDEM)
8. Reasonable precautions shall be taken to minimize fugitive dust emissions from construction activities. For example, wetting the area with water, constructing wind barriers, or treating dusty areas with chemical stabilizers (such as calcium chloride or several other commercial products). Dirt tracked onto paved roads from unpaved areas will be minimized. (IDEM)
9. Do not clear trees or understory vegetation outside the construction zone boundaries. (This restriction is not related to the "tree clearing" restriction for potential Indiana Bat habitat.) (USFWS)
10. Implement temporary erosion and sediment control methods within areas of disturbed soil. All disturbed soil areas upon project completion will be vegetated following INDOT's standard specifications. (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 September 12, 2018 by the consultant (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, Louisville District	No Response
2. USFWS, Bloomington Field Office	October 31, 2018
3. USDA, NRCS	October 30, 2018
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	October 12, 2018
8. Indiana Geological Survey	September 12, 2018
9. INDOT, Office of Public Involvement	September 12, 2018
10. INDOT, Office of Aviation	No Response
11. INDOT, Greenfield District Environmental Scoping Manager	No Response
12. INDOT, Environmental Services	No Response
13. IDEM (electronic submission)	September 12, 2018
14. Delaware County Board of Commissioners	No Response
15. Delaware County Highway Department	No Response
16. Delaware County Surveyor's Office	No Response
17. Delaware County Trustees	No Response
18. Delaware County Council	No Response
19. Delaware County Emergency Management Agency	No Response
20. Delaware County Sheriff's Department	No Response
21. Delaware-Muncie Metropolitan Planning Commission	No Response
22. Wes-Del Community Schools	No Response
23. Yorktown Fire Department	No Response
24. Yorktown Police Department	No Response
25. Yorktown Community Schools	No Response
26. Bureau of Water Quality MSD	No Response