

Indiana Department of Transportation

County Porter Route SR 2 & Heavilin Des. No. 1600913

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

Road No./County:	State Road (SR) 2 at Heavilin Road, Porter County
Designation Number:	1600913
Project Description/Termini:	<p>SR 2 at Heavilin Road, Intersection Improvement Project termini measured from center of existing intersection:</p> <ul style="list-style-type: none"> Northern Terminus: approximately 200-ft north (no northern leg, but SR 2 alignment will be shifted northward within project area) Southern Terminus (Heavilin Rd): approximately 400-ft south Eastern Terminus (SR 2): approximately 710-ft east Western Terminus (SR 2): approximately 720-ft west

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):

<input type="checkbox"/>	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)
<input type="checkbox"/>	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)
<input checked="" type="checkbox"/>	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
<input type="checkbox"/>	Environmental Assessment (EA) – EAs require a separate FONSI. Additional research and documentation is necessary to determine the effects on the environment. Required Signatories: ES, FHWA

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

Approval _____
 ESM Signature _____ Date _____ ES Signature _____ Date _____

_____ Date _____
 FHWA Signature _____ Date _____

Release for Public Involvement

N/A _____ FEB 4-17-19
 ESM Initials _____ Date _____ ES Initials _____ Date _____

Certification of Public Involvement

_____ Date _____
 Office of Public Involvement _____ Date _____

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

INDOT ES/District Env.
 Reviewer Signature: _____ Date: _____

Name and Organization of CE/EA Preparer: C.J. Cunningham, Troyer 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.**

	Yes	No
Does the project have a historic bridge processed under the Historic Bridges PA*?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If No, then:		
Opportunity for a Public Hearing Required?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

*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 - Notice of Entry for Survey or Investigation letters were mailed on March 6, 2017 and October 9, 2017 to property owners located in the vicinity of the project area to inform them of the proposed project and notifying them that project personnel may be entering their property to gather data for environmental analysis. An example of these letters is located in Appendix G-1 and G-2.

Section 106 Consulting --

To meet the public involvement requirements of Section 106, the Federal Highway Administration's (FHWA's) finding of "Adverse Effect", a notice was advertised in the *Times of Northwest Indiana (NWI Times)* on August 3, 2018. The public comment period closed 31 days later on September 3, 2018. The text of the public notice and the affidavit of publication appear in Appendix D-77. No comments were received from the public.

Public Hearing -

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

Public Controversy on Environmental Grounds

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

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

Remarks:

Some public controversy is known to exist regarding roundabouts along state routes. The level of controversy concerning this project is not yet known. The opportunity is needed to educate the public about roundabouts and the safety they provide.

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

Sponsor of the Project: Indiana Department of Transportation INDOT District: LaPorte

Local Name of the Facility: Intersection of SR 2 and Heavilin Road

Funding Source (mark all that apply): Federal State 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)

Need:

The need for the project stems from the intersection's inability to safely and efficiently handle current and projected traffic. Traffic through the project area has increased resulting from the recently opened Heavilin Elementary School south of the intersection.

The types of accidents that have occurred in the project area speak to the need for vehicle speed reduction. The speed limit on SR 2 through the project area is 45 miles per hour (MPH). The 85th percentile speeds on SR 2 east of Heavilin Rd were 51 MPH in June 2018, and 53 MPH in September 2015. Of the 25 accidents occurring near the intersection since 2010, nine of them (36%) involved eastbound cars running off the road east of Heavilin Road where SR 2 curves northward. Eight of the accidents (32%) involved SR 2 westbound rear-end collisions. Moreover, five injury accidents (20% of all accidents), including three involving incapacitating injury, have occurred near the intersection since 2010.

Heavilin Elementary School opened south of the intersection in the fall of 2017 and the new school is intended to serve as a cultural hub for southwest Valparaiso as this area develops into a dense urban community. According to a Traffic Impact Study (TIS) (Appendix I-6 to I-23) prepared in 2015 to evaluate the anticipated traffic impacts associated with the school, 580 additional daily two-way vehicle trips would result from the school; 377 (65%) of which were expected to go through the SR 2 at Heavilin intersection.

The TIS also evaluated the intersection's performance in the "Horizon Year" of 2036 by applying growth rates to current traffic volumes. It was determined the growth in traffic would decrease the intersection's Level of Service (LOS) during the AM and PM peak hours. LOS analyzes roadways and intersections by categorizing traffic flow and assigning quality levels of traffic based on performance measures like vehicle speed, density, congestion, etc. LOS assigns grades A through F, with A being the best and F being the worse. A summary of the grade associated to each level of service is listed below:

- LOS A – free flow traffic
- LOS B – reasonable free flow
- LOS C – stable flow, or at near free flow
- LOS D – approaching unstable flow
- LOS E – unstable flow, operating at capacity
- LOS F – breakdown in flow or gridlock.

At the time of the 2015 study, the intersection of SR 2 at Heavilin Road functioned at a LOS C in the morning and a LOS C in the afternoon. With the school traffic added, the TIS determined the intersection of SR 2 and Heavilin Road to function at a LOS C in the morning and a LOS D in the afternoon. Under the forecasted traffic volumes for Horizon Year 2036, the intersection is expected to operate at a LOS E during the morning peak period and a LOS F during the afternoon peak period.

If the intersection's crash rate remains stable, the total number of vehicle accidents would increase along with higher projected traffic volumes. However, the rate of crashes is expected to increase as traffic density increases, thereby reducing the number and size of acceptable gaps in traffic during which turning safe movement can be made. This will further demonstrate the need to improve the intersection's safety.

Purpose:

The purpose of the proposed project is to increase safety through reduction in operation speed along the SR 2 corridor, while also ensuring the intersection's operational efficiency is maintained at a LOS C or better – both in the construction year and the horizon year.

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PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Porter Municipality: Valparaiso

Limits of Proposed Work: The limits of the proposed work extend from the center of the existing intersection of SR 2 and Heavilin Road in the following manner:

- Northern Project limit – approximately 200-ft north (no northern leg, but SR 2 alignment will be shifted northward within project area)
- SR 2 western leg – approximately 750 feet west of the intersection
- SR 2 eastern leg – approximately 600 feet east of the intersection
- Heavilin Road southern leg – approximately 390 feet south of the intersection

Total Work Length: 0.27 Mile(s) Total Work Area: 5.1 Acre(s)

Is an Interchange Modification Study / Interchange Justification Study (IMS/IJS) required? Yes¹ No
 If yes, when did the FHWA grant a conditional approval for this project? Date: N/A

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.

Existing Conditions:
 This project is located in Center Township, Valparaiso, Porter County, Indiana and involves improvement to the intersection of State Road (SR) 2 and Heavilin Road. SR 2 runs in the east-west through the intersection. Heavilin Road (also identified as County Road 50 West) runs north-south, terminating on the south side of SR 2. The existing intersection is a T-intersection with only Heavilin Road being under stop control. See Appendices B-1 through B-6 for project area maps, project illustrations, and project area photographs.

SR 2 is listed as a minor arterial on INDOT's functional classification map and Heavilin Road is listed as a local road. The posted speed limit on SR 2 is 45 mph, and the posted speed on Heavilin Road is 30 mph. SR 2 is a two-lane road with 12-ft. travel lanes and 2-ft. paved shoulders. Heavilin Road is also two lanes with 10-ft. travel lanes and no roadway shoulders. Existing apparent right-of-way along SR 2 is 60-ft. wide, while the existing apparent right-of-way along Heavilin Road is 40-ft. wide. However, due to property recording errors, INDOT does not possess clear title of the right-of-way surrounding the project limits, these areas will need to be re-acquired from the adjacent property owners as part of the proposed improvements.

Land adjacent the intersection (outside the existing right-of-way) is used primarily by the Porter County government. The Porter County Highway Department is immediately southeast of the intersection. The now-demolished Porter County humane society was located immediately southwest of the intersection. Also nearby is the Porter County Emergency Management Center, located approximately 700-ft west of the intersection. Porter County owns the mostly-vacant property immediately north of the intersection.

Proposed Project Improvement:
 The proposed scope for improvement involves construction of a roundabout. The center of the roundabout will be shifted slightly north of the existing intersection's center. This will minimize impact to the existing Porter County Highway Department facilities on the intersection's southeast quadrant and will also allow for the majority of the intersection to be constructed while SR 2 and Heavilin Road remain open to traffic.

The preferred alternative has independent utility, meaning its intent is to correct safety and operational efficiency issues at the intersection and the project can function as stand-alone improvements without needing other improvements which may have additional impacts. Due to the project's limited scope as an intersection improvement, the project's logical termini are limited to the necessary approach work extending east, west, and south of the intersection. The eastern limits extend to west of Salt Creek, and no bridge improvements are included in the project scope.

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The project scope has been narrowed from what was introduced in the initial early coordination. The previously considered project scope elements are described in the "Other Alternatives Considered" section. The reduction in project scope and impacts did not warrant re-coordination with regulatory agencies.

All improved roadway surfaces – along SR 2, along Heavilin Road, and within the roundabout – will be surrounded by concrete curb and gutter, which will drain into a new storm sewer system. The storm sewer system will drain stormwater generally from northwest to southeast where it will be collected into a proposed detention basin immediately southeast of the proposed roundabout (Appendix B-26). The basin will then empty eastward into the existing stormwater drainage network. 26)

Lighting improvements will also be included, with the addition of approximately eleven light fixtures located along the roundabout approaches. All driveway aprons adjacent to the improved roadway will be reconstructed within the limits of the proposed construction limits.

The majority of the project's excavation will involve preparation of the roadway subgrade and installation of proposed storm sewers, which will require excavation to an approximate maximum depth of 8 to 10 feet.

The maintenance of traffic (MOT) will be phased and will not require a complete intersection closure. The roundabout and its immediate SR 2 approaches will be constructed while SR 2 and Heavilin Road remain open to traffic. Once the roundabout and SR 2 approaches are constructed, SR 2 traffic will be shifted through the roundabout, and Heavilin Road will be closed while its roundabout approach is constructed. A detour for Heavilin Road will involve Division Road to the south and CR 100 W to the west. Refer to the MOT section in this document for more details concerning the construction phasing and detours.

The roundabout design offers many safety advantages, while also improving the efficiency of the intersection in the construction year and horizon year. Roundabouts offer an immediate reduction in speed as vehicles must slow to approximately 20 MPH to maneuver the intersection. Roundabouts have also been shown to reduce the number of overall collisions, while significantly reducing the rate of injury and fatality crashes. This is a result of the lower speed at which vehicles traverse the intersection and the angles at which vehicles interact, eliminating the possibility for T-bone or head-on collisions.

A roundabout at SR 2 at Heavilin Road would also improve the construction year AM Peak operational efficiency from LOS C to LOS A, while improving the PM peak from LOS D to LOS A. Under the forecasted traffic volumes for Horizon Year 2036, the intersection is expected to improve from LOS E (existing configuration) to LOS A during the AM peak, and from LOS F to LOS A during the PM peak.

The preferred alternative meets the project's purpose and need by introducing intersection geometry that reduces speeds along the SR 2 corridor and provides safer intersection geometry with fewer conflict points and fewer opportunities for vehicle collisions. These factors will help to improve intersection safety. The roundabout will also improve the intersection's operational efficiency for the construction year and horizon year traffic.

See Appendices B-1 through B-6 for project illustrations and project area photographs. Refer to Appendices B-7 through B-33 for the preliminary construction plans, Appendix B-13 for an exhibit illustrating the areas of anticipated right-of-way acquisition.

OTHER ALTERNATIVES CONSIDERED:

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

The following alternatives were considered:

1. **Signalized Intersection:** Signalized intersection improvements were considered for the project, but it would not have adequately addressed the project's purpose and need of increasing the operational safety of the intersection. A signalized intersection would permit high-speed crashes. Moreover, a signalized intersection is not warranted at this intersection as determined by the 2015 Traffic Impact Study prepared in conjunction with Heavilin Elementary School (Refer to section 7.3 of the TIS in Appendix I-19). Therefore, this alternative does not meet the purpose and need. No further consideration will be given to a signalized intersection alternative.
2. **Passing Blisters:** Adding a passing blister for westbound through traffic on SR 2 was considered for the project, but it would not have adequately addressed the project's purpose and need of increasing the operational safety nor the operational efficiency of the of the intersection. A passing blister would permit high-speed crashes and high number of vehicular conflict points would remain. Additionally, the primary breakdown in the operational efficiency of the existing intersection configuration involves northbound left-turning vehicles from Heavilin Road onto SR 2. Free flow traffic on SR 2 does not

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provide an adequate gap for turning vehicles during the peak hour, causing a back-up on Heavilin Road. The passing blister alternative would not correct that breakdown. An analysis of the traffic associated to a passing blister revealed that the PM Peak operational efficiency would remain at LOS 'C' in the construction year and decrease to LOS 'E' in the horizon year. Therefore, this alternative does not meet the purpose and need. No further consideration will be given to a passing blister alternative.

3. **Roundabout with a 4th (northern) leg:** Consideration was given to a roundabout that would include the realignment of the nearby Danvers Parkway to connect the north side of the roundabout. This alternative would remove the existing intersection of Danvers Parkway and SR 2, which occurs approximately 700 feet west of the intersection. The benefits of such an alternative do not outweigh the added costs and project impacts. Additional project impacts would include conversion of county-owned property to right-of-way and loss of terrestrial habitat by way of additional tree clearing. (See early coordination aerial graphic in Appendix B-3, which represents the consideration of this alternative). This alternative would meet the project's purpose and need. However, because of economic considerations and right-of-way and ecological impacts, no further consideration will be given to a roundabout with a 4th (northern) leg.
4. **Pedestrian Connection to Heavilin Elementary School:** A pedestrian connection along the west side of Heavilin Road between the roundabout and Heavilin Elementary School, to be funded by Valparaiso Community Schools (VCS), was once considered as part of the project. To support this pedestrian linkage, other pedestrian improvements would have been included near the roundabout and along SR 2. A High-Intensity Activated Crosswalk beacon (also known as a HAWK beacon) was considered. Such a system would stop SR 2 traffic and allow pedestrians to cross safely. VCS expressed their desire to no longer pursue the pedestrian route along Heavilin Road. Therefore, this alternative was removed from further consideration.
5. **The Do-Nothing Alternative:** The "Do-Nothing" alternative was considered for the proposed project. However, the "Do-Nothing" alternative would not have addressed the overall purpose and need of the project which is to improve the safety of the intersection and maintain or increase the operation efficiency. If the "Do-Nothing" alternative is selected, vehicle speeds through the intersection will remain high, and related accidents will continue. Also, recent traffic future traffic growth will decrease the intersection's operational efficiency. Therefore, this alternative does not meet the purpose and need no further consideration will be given to the no-build alternative.

Because impacts to the sensitive cultural resources cannot be avoided, mitigation for those impacts have been agreed upon by the Section 106 consulting parties (discussed further in Section C). The "Do-Nothing" alternative is the only alternative that does not impact these resources but would not meet purpose and need. All other alternatives would impact these resources in order to meet the purpose and need of this project.

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

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

x
x

ROADWAY CHARACTER:

State Road 2

Functional Classification:	<u>Minor Arterial</u>			
Current ADT:	<u>11,595</u>	VPD (2017)	<u>14,477</u>	VPD (2040)
Design Hour Volume (DHV):	<u>1,448</u>	Truck Percentage (%)	<u>3.3%</u>	
Designed Speed (mph):	<u>45</u>	Legal Speed (mph):	<u>45</u>	

	Existing		Proposed	
Number of Lanes:	2		2	
Type of Lanes:	Vehicular – 1 NB, 1 SB		Vehicular – 1 NB, 1 SB	
Pavement Width:	12	ft.	12	ft.
Shoulder Width:	2	ft.	2.5	ft.
Median Width:	N/A	ft.	Varies	ft.
Sidewalk Width:	N/A	ft.	N/A	ft.

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Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

Heavilin Road

Functional Classification: Local Road
 Current ADT: 971 VPD (2017) Design Year ADT: 1,214 VPD (2040)
 Design Hour Volume (DHV): 110 Truck Percentage (%) 6.5%
 Designed Speed (mph): 35 mph Legal Speed (mph): 30 mph

Existing **Proposed**

Number of Lanes:	2	2
Type of Lanes:	Vehicular – 1 NB, 1 SB	Vehicular – 1 NB, 1 SB
Pavement Width:	10 ft.	11 ft.
Shoulder Width:	N/A ft.	2.5 ft.
Median Width:	N/A ft.	Varies ft.
Sidewalk Width:	N/A ft.	N/A ft.

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 ton
Height Restrictions:	N/A ft.	N/A ft.
Curb to Curb Width:	N/A ft.	N/A ft.
Outside to Outside Width:	N/A ft.	N/A ft.
Shoulder Width:	N/A ft.	N/A ft.
Length of Channel Work:	N/A	N/A

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

Remarks: No bridges or small structures are located within this project area, and none are proposed. The proposed improvement will include a new storm sewer to collect and divert stormwater to a proposed basin, and the into Salt Creek. The proposed storm sewer system will not include any culverts or small structures.

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.

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MAINTENANCE OF TRAFFIC (MOT) DURING CONSTRUCTION:

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

Remarks:

The maintenance of traffic (MOT) will be phased. The first phase will involve lane restrictions along SR 2 (down to a single 10-ft lane in each direction) and Heavilin Road will remain open. During the first phase of construction, the westbound (northernmost) travel lane will be constructed completely, a portion of the eastbound lane will be constructed up until defined construction limits for the phase, the curb line for the eastbound will be completed, and construction of temporary pavement will be done beside the westbound lane. This is done so that traffic is continuously maintained on SR 2.

The second phase of the project construction will focus on the construction of the north and southbound travel lane on Heavilin Road. The second phase will involve traffic being maintained on SR 2. The entry onto Heavilin Road from SR 2 will be closed during this phase and a detour will be used to access Heavilin Road. A detour for Heavilin Road will involve Division Road to the south and CR 100 W to the west. The added travel distance associated to this detour is 2.6 miles.

The third phase of the project construction will include the completion of the curb line along the westbound lane of SR 2 and temporary pavement will be taken out. Traffic will be maintained on both SR 2 and Heavilin Road.

The MOT and detour plans are available in the roadway construction plans, Appendices B-14 through B-20.

The closures/lane restrictions will pose a temporary inconvenience to traveling motorists (including school buses and emergency services); however, no significant delays are anticipated, and all inconveniences will cease upon project completion. Coordination with Valparaiso Community Schools has occurred throughout project development and will remain ongoing through the duration of design and construction.

It is important that ease of access and egress from the Porter County Emergency Service Center be maintained during construction, and that no delays are associated with the proposed improvements – both during construction and upon completion. A coordination letter specific to potential impacts upon the Porter County Emergency Service Center was sent on March 26, 2019 (Appendix C-47) in which the project details were conveyed to the Emergency Management Center, and they were invited to provide comment on issues related to ingress and egress during construction. Porter County Emergency Service Center responded on March 27, 2019 (Appendix C-49) offering to coordinate before and during construction to ensure access is maintained. Coordination will continue prior to final approval of this document to ensure impacts to emergency response will be minimized. This is a firm project commitment included in Section J.

The project sponsor will be responsible for contacting school districts and emergency services at least 2 weeks prior to construction. Delays may occur during construction but will cease with project completion.

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: \$ 233,000 (2018-2019) Right-of-Way: \$ 30,000 (2018) Construction: \$ 1,493,324 (2019)

**Note: dates referenced above are as they appear in TIP/STIP. INDOT will revise the dates by way of an Administrative Modification.*

Anticipated Start Date of Construction: Spring 2020

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Date project incorporated into STIP July 3, 2017 - 2018-2021 STIP (Appendix H-3)

Is the project in an MPO Area? Yes No

If yes,

Name of MPO Northwestern Indiana Regional Planning Commission (NIRPC)

Location of Project in TIP 2018-2021 NIRPC TIP (Appendix H-1 to H-2).

Date of incorporation by reference into the STIP July 3, 2017.

RIGHT OF WAY:

Land Use Impacts	Amount (acres)	
	Permanent	Temporary
Residential	0.0	0.0
Commercial	0.0	0.0
Agricultural	0.0	0.0
Forest	0.0	0.0
Wetlands	0.0	0.0
Other: (New acquisition of county-owned property)	2.46	0.25
Other: (Reacquisition of apparent existing right-of-way lacking clear title)	2.66	0.0
TOTAL	5.12	0.25

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

Remarks: The project requires acquisition of approximately 5.12 acres of right-of-way. The existing apparent right-of-way along SR 2 is 60-ft. wide, while the existing apparent right-of-way along Heavilin Road is 40-ft. wide. However, due to property recording errors, INDOT does not possess clear title of the right-of-way surrounding the project limits. A total of 2.66 acres of existing apparent right-of-way must be reacquired from the adjacent property owners as part of the proposed improvements. In addition, the project also requires approximately 2.46 acres of new permanent right-of-way.

All of the 2.46 acres of new permanent right-of-way will be acquired from parcels owned by the Porter County Government. Approximately 1.91 acres will be acquired from north of SR 2 to accommodate the majority of the roundabout footprint. 0.25 acre are required from the southwest quadrant of the intersection to accommodate roadway grading and drainage improvements extending up to 15 feet south of SR 2 and 30 feet west of Heavilin Road. 0.30 acre are required from the southeast quadrant to accommodate roadway grading and drainage improvements, which will include a stormwater detention basin in this area. Proposed right-of-way in this area will extend up to 80 feet south of SR 2 and up to 15 feet east of Heavilin Road. The project also requires approximately 0.25 acre of temporary right-of-way necessary for incidental grading work outside of the areas required for permanent right-of-way. The incidental grading work will ensure proper clear zones are established outside of the roadway edge and proper grading tie-ins are permitted.

Refer to Appendices B-7 through B-33 for the preliminary construction plans, Appendix B-13 for an exhibit illustrating the areas of anticipated right-of-way acquisition.

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

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

SECTION A – ECOLOGICAL RESOURCES

	Presence	Impacts	
		Yes	No
Streams, Rivers, Watercourses & Jurisdictional Ditches	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Federal Wild and Scenic Rivers			
State Natural, Scenic or Recreational Rivers			
Nationwide Rivers Inventory (NRI) listed			
Outstanding Rivers List for Indiana			
Navigable Waterways			

Remarks:

Based on a desktop review, a site visit on August 23, 2017 by Cardno, Inc., the aerial map of the project area (Appendix B-3), and the water resources map in the Red Flag Investigation (RFI) report (Appendix E-9), there are two streams located within the 0.5 mile search radius. Seven streams were identified within 0.5 mile of project area. Block Ditch flows beneath Heavilin road, approximately 290-ft. south of the project area and Salt Creek flows beneath SR 2, approximately 70-ft. east of the project area.

A *Regulated Waters Delineation Report* was completed by Cardno Inc. for the project on November 6, 2017 and approved by INDOT Ecology and Waterway Permitting Office (EWPO) on January 2, 2018. Please refer to Appendix F-1 for the *Regulated Waters Delineation Report*. It was determined that one jurisdictional stream is located within the waters investigation survey area. The US Army Corps of Engineers (USACE) makes all final determinations regarding jurisdiction. Salt Creek is located in the far eastern portion of the survey area. The work occurring nearest Salt Creek involves the installation of the outlet structure associated to a proposed detention basin. The outlet structure will be located approximately 20-ft. west of the Salt Creek Ordinary High Water Mark (OHWM). No direct impacts within the OHWM are anticipated. Silt fence or other appropriate erosion control measures, as determined by INDOT Stormwater Team, will be installed to separate the ground-disturbing construction activities from the Salt Creek OHWM. This is a firm project commitment. No indirect impacts to Salt Creek are anticipated. The proposed stormwater collection system will be designed to ensure that runoff from post-development 100-year storm event is released from the outlet structure at a rate equal to runoff from a pre-development 10-year storm event. The will prevent erosion of the swale that currently outlets into Salt Creek. No impacts to jurisdictional streams or ditches are expected.

Salt Creek is listed by the Indiana Department of Environmental Management (IDEM) as being impaired by E. coli. No work will take place within the waterway and there no impacts are anticipated. However, workers working near Salt Creek should take care to wear appropriate personal protective equipment, observe proper hygiene procedures, including regular hand washing, and limit personal exposure.

Early Coordination letters were sent to environmental resource agencies on January 16, 2018 (Appendix C-1). In their response dated February 5, 2018 (Appendix C-14) the United States Fish and Wildlife Service (USFWS) made no mention of potential impacts to streams or rivers.

Indiana Department of Natural Resources (IDNR DFW) responded to early coordination on February 15, 2018 (Appendix C-18) and mentioned potential impacts to Block Ditch, south of the intersection. Those impacts would have been the result of modifying the structure that carries Heavilin Road over Block Ditch to accommodate the once-proposed pedestrian improvements. Modifications to this structure are no longer necessary since the pedestrian improvements have been eliminated from the scope and the project terminates north of Block Ditch. IDNR provided additional recommendations that should be considered to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources. The recommendations within their letter were only for consideration. They may only become mandatory if the construction were to take place within a jurisdictional floodway.

Coordination with IDEM occurred by way of an auto-generated response letter in which IDEM provided a list of considerations aimed at minimizing environmental impacts and ensuring compliance with relevant state laws.

All applicable USFWS, IDNR DFW, and IDEM recommendations are included in the Environmental Commitments section of this CE document.

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	Presence	Impacts	
		Yes	No
Other Surface Waters			
Reservoirs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 August 17, 2018 by the Troyer Group, the aerial map of the project area (Appendix B-3), and the water resources map in the RFI report (Appendix E-9), there are nine other surface waters located within the 0.5 mile search radius. The nearest other surface water is a pond located 0.04 mile east of the project area.

The proposed improvements include the installation of a new detention basin immediately southeast of the proposed roundabout where stormwater will be collected. The storm sewer system will drain stormwater, generally from northwest to southeast into this proposed detention basin. The basin will then empty eastward into the existing stormwater drainage network. See Appendix B-26 for a plan sheet illustrating the proposed detention basin.

A *Regulated Waters Delineation Report* was completed for the project by Cardno on November 6, 2017 and approved by INDOT EWPO on January 2, 2018. Please refer to Appendix F-1 for the *Regulated Waters Delineation Report*. It was determined that no other surface waters besides streams and wetlands are present in the project area. Therefore, no impacts are anticipated.

Early coordination letters were sent to environmental resource agencies on January 16, 2018. In their response dated February 5, 2018 (Appendix C-14) the USFWS made no mention of potential impacts to other surface waters.

IDNR DFW responded to early coordination on February 15, 2018 (Appendix C-18) and recommended contacting and coordinating with the IDEM 401 program and the USACE 404 program regarding potential wetland impacts. IDNR provided additional recommendations that should be considered to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources. The recommendations within their letter were only for consideration. They may only become mandatory if the construction were to take place within a jurisdictional floodway. All applicable USFWS and IDNR DFW recommendations are included in the Environmental Commitments section of this CE document.

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

Total wetland area: 0.05 acre(s) Total wetland area impacted: 0 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
1	Palustrine Emergent (PEM)	0.05 (within project area)	N/A	Wetland 1 is located near the far eastern end of the project area, north of SR 2. 0.05 acre of were surveyed in the investigation area and the wetland extends further north. The wetland's southern limit is approximately 45-ft north of the proposed construction limits, therefore no impacts are anticipated.

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Documentation

ES Approval Dates

Wetlands (Mark all that apply)

- Wetland Determination
- Wetland Delineation
- USACE Isolated Waters Determination
- Mitigation Plan

x

1/2/18

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

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

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

Remarks:

Based on a review of the National Wetlands Inventory (NWI) online mapper (<https://www.fws.gov/wetlands/data/Mapper.html>) (Appendix F-36) and the water resources map in the RFI report (Appendix E-9), there are 27 wetland polygons located within the 0.5 mile search radius. The NWI wetland nearest the currently scoped project elements is located 0.04 miles north of SR 2 near the eastern limits of the project.

A site visit was conducted on August 23, 2017 by Cardno and one wetland was identified during their investigation of regulated waters resources. A *Regulated Waters Delineation Report* was completed for the project on November 6, 2017 and approved by INDOT EWPO on January 2, 2018. Please refer to Appendix F-1 for the *Regulated Waters Delineation Report*. It was determined that one wetland habitat is present near the project area. Identified as Wetland 1 (0.05 acre within the surveyed area), the wetland consists of a concave topographic relief with Palustrine Emergent (PEM) wetland habitat adjacent to existing road infrastructure. Invasive and aggressive species are dominant species present within the surveyed portion of the wetland. Wetland 1 is likely a jurisdictional resource under the Chicago District of USACE. The USACE makes all final determinations regarding jurisdiction.

Wetland 1 is located near the far eastern end of the project area, north of SR 2. 0.05 acre of it were surveyed in the investigation area, but the wetland extends further north. The wetland's southern limit is approximately 45-ft north of the proposed construction limits. Therefore, no impacts to wetland resources are anticipated.

The portions of Wetland 1 that occur nearest the construction activity will be clearly marked on the construction plan sheets and labeled as "Do Not Disturb", this is a firm commitment. Silt fence or appropriate erosion control measures, as determined by INDOT Stormwater Team, will be installed to separate the ground-disturbing construction activities from the wetland area. No construction activities will occur within said areas. This is a firm project commitment.

Early coordination letters were sent to environmental resource agencies on January 16, 2018. In their response dated February 5, 2018 (Appendix C-14) the USFWS made no mention of potential impacts to wetland resources.

IDNR DFW responded to early coordination on February 15, 2018 (Appendix C-18) and recommended contacting and coordinating with the IDEM 401 program and the US Army Corps of Engineers (USACE) 404 program regarding potential wetland impacts. IDNR provided additional recommendations that should be considered to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources. The recommendations within their letter were only for consideration. They may only become mandatory if the construction were to take place within a jurisdictional floodway. All applicable USFWS and IDNR DFW recommendations are included in the Environmental Commitments section of this CE document.

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	Presence	Impacts	
		Yes	No
Terrestrial Habitat	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Unique or High Quality Habitat	<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 August 17, 2017 by Troyer Group, the aerial map of the project area (Appendix B-3), and the *Regulated Waters Delineation Report* prepared by Cardno on November 6, 2017, there are some woody shrub areas north of SR 2 within the project limits. Much of the area within the construction limits consists of mown grassy lawn. However, small wooded areas are present north of where Heavilin Road Ts into SR 2.

Vegetation in these areas is predominated by Boxelder Maple (*Acer negundo*), Russian Olive (*Elaeagnus angustifolia*), Morrow's honeysuckle (*Lonicera morrowii*), Garlic mustard (*Alliaria petiolate*), False nettle (*Boehmeria cylindrica*), Stickseed (*Hackelia virginiana*). Fauna species in the area squirrels (*Sciuridae*) and birds, predominated by American robin (*Turdus migratorius*). The project will remove approximately 0.25 acre of woody shrub areas containing these species.

Impacts to these areas are unavoidable because the preferred alternative of a roundabout is ideally located north of the existing SR 2 roadway. This will help to ensure proper deflection of the approaches necessary to slow vehicles as the enter the roundabout. Shifting the roundabout north also minimizes impact to the existing Porter County Highway Department facilities on the intersection's southeast quadrant. This also allows for most of the intersection to be constructed while SR 2 and Heavilin Road remain open to traffic., thereby reducing the user cost that would be associated to a full closure of the intersection and corresponding detour.

Approximately 0.25 acres trees (suitable summer habitat for endangered bat species) will be removed as part of the proposed improvements. All tree removal will occur during the during the bat inactive season (October 1st through March 31st), when bats are not likely to be present. Mitigation for impacts to potential threatened and endangered bat habitat present in these areas will involve the payment of an in-lieu fee to a bat habitat conservation fund. More detail concerning impacts to bat species can be found in the "Threatened or Endangered Species" section of this document.

Early coordination letters were sent to environmental resource agencies on January 16, 2018. In their response dated February 5, 2018 (Appendix C-14) the USFWS recommended that tree and brush clearing be kept to a minimum. IDNR DFW responded to early coordination on February 15, 2018 (Appendix C-18) and did not provide any comment regarding significant terrestrial habitat but recommended a mitigation plan be developed for any unavoidable woody and riparian habitat impacts that will occur. Regarding potential wetland habitat, IDNR DFW recommended contacting and coordinating with the IDEM 401 program and the US Army Corps of Engineers (USACE) 404 program. IDNR stated that the recommendations within their letter were only for consideration. They may only become mandatory if the construction were to take place within a jurisdictional floodway. All applicable USFWS and IDNR DFW recommendations are included in the Environmental Commitments section of this CE document.

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?

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

Are karst features located within or adjacent to the footprint of the proposed project?

If yes, will the project impact any of these karst features?

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

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 August 17, 2018 by Troyer Group, the topo map of the project area (Appendix B-2), and the RFI report (Appendix E), the proposed project is located outside the designated karst region of Indiana as outlined in the October 13, 1993 Memorandum of Understanding (MOU).

The Indiana Geological Society's (IGS) online environmental assessment interface was used to generate an environmental assessment report (dated January 16, 2018) to identify potential geological concerns within the project

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area (Appendix C-9). There are no karst features identified within the project area. The project area is known to possess high liquefaction potential. Liquefaction is a phenomenon in which the strength and stiffness of a soil is reduced by earthquake shaking or other rapid loading. The project area is located near a 1% annual chance flood hazard area, has moderate bedrock potential, and has high sand and gravel resource potential. No concerns regarding these resources were raised by IGS. The designer of the project will be notified of the high liquefaction noted in the IGS assessment. This is listed as a firm commitment.

Threatened or Endangered Species

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

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

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

Remarks:

Based on a desktop review and the RFI (Appendix E), completed by Troyer Group on January 30, 2018, the IDNR Porter County Endangered, Threatened and Rare (ETR) Species List has been checked and is included in (Appendix E-12). The highlighted species on the list reflect the federal and state identified ETR species located within the county. According to the IDNR-DFW early coordination response letter dated February 15, 2018 (Appendix C-18), the Natural Heritage Program's Database has been checked and no plant or animal species listed as state or federally threatened, endangered or rare have been reported to occur in the project vicinity.

Early coordination letters were sent to environmental resource agencies on January 16, 2018. In their response dated February 5, 2018 (Appendix C-14) the USFWS identified the proposed project as being within the range of the Federally endangered Indiana bat (*Myotis sodalis*), piping plover (*Charadrius melodus*), and Karner blue butterfly (*Lycaeides Melissa samuelis*), and the threatened northern long-eared bat (*Myotis septentrionalis*) and eastern massasauga rattlesnake (*Sistrurus catenatus*). USFWS stated that the impacts on the two bat species must be evaluated utilizing the Range-wide Programmatic Consultation process, as determined through Section 7 consultation among the USFWS and the FHWA. There is no habitat for the other species within the proposed project area. Therefore, the project is not likely to adversely affect the piping plover, Karner blue butterfly, or eastern massasauga.

Because grading work and tree removal will extend approximately 200-ft north of the existing pavement edge along SR 2, (within the 300-ft limit), the project qualifies for the Limited Formal Programmatic Consultation for the Indiana bat and northern long-eared bat (NLEB).

Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal, and an official species list was generated (Appendix C-20) and no additional species are within range of the project area within the project area. Refer to paragraph below. Porter County is within range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*). In addition, an effect determination key was completed on February 19, 2019, and based on the responses provided, the project was found to "Likely to Adversely Affect" the Indiana bat and/or the NLEB (Appendix C-26). Proposed impacts cannot be avoided because the roundabout is ideally located north of the existing SR 2 roadway. This will help to ensure proper deflection of the approaches necessary to slow vehicles as they enter the roundabout. Shifting the roundabout north also minimizes impact to the existing Porter County Highway Department facilities on the intersection's southeast quadrant. This also allows for most of the intersection to be constructed while SR 2 and Heavilin Road remain open to traffic, thereby reducing the user cost that would be associated to a full closure of the intersection and corresponding detour.

Approximately 0.25 acres of total trees (suitable summer habitat) will be removed as part of the proposed improvements. Approximately 0.09 acres of trees will be removed between 0-100 feet from the roadway. Approximately 0.16 acres of suitable habitat will be removed between 100-300 feet from the roadway. All tree removal will occur during the bat inactive season. Also relevant to potential bat impacts - eleven permanent street lights will be added around the perimeter of the roundabout. All lights will use downward-facing, full cut-off lens lights. No temporary lighting is anticipated to be necessary during construction.

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INDOT verified the effect finding and submitted it to USFWS on February 20, 2019. On February 20, 2019, USFWS concurred with the "Likely to Adversely Affect" finding (Appendix C-42). USFWS confirmed that the proposed project's effects are consistent with those analyzed in the BO. The USFWS has determined that projects consistent with the conservation measures and scope of the program analyzed in the BO are not likely to jeopardize the continued existence of the Indiana bat and/or the NLEB. Additionally, a "Reinitiation Notice" is required if: more than 0.16 acre of suitable habitat is to be cleared; new information about listed species is encountered; the project is modified in a manner that causes an effect to the listed species; or a new species or critical habitat is listed that the project may affect. Contractors must report the discovery of dead or injured bats to USFWS. These requirements, and the Avoidance and Minimizations Measures (AMMs) from the Project Submittal Form, are included as firm commitments for this project.

INDOT shall satisfy the compensatory mitigation requirements of the formal consultation with USFWS through payment to the Range-wide In-lieu Fee Program. The amount to be paid to the Range-wide In-lieu Fee Program, to be administered by The Conservation Fund, shall be \$2,971. This amount was determined by the Habitat Block Method. Payment into the Range-wide In-lieu Fee Program will be made by INDOT. Since there will be 0.16 acres of impact between 100-300 feet from the edge of the existing roadway, the fee will be as follows: 0.16 (acres between 100-300 feet) X 1.75 (Porter County multiplier) X \$10,609 = \$2,971

On January 11, 2018 Troyer Group reviewed the USFWS map Range Map for the Rusty Patch Bumble Bee (*Bombus affinis*) (<https://www.fws.gov/midwest/endangered/insects/rpbb/rpbbmap.html>) and identified the project area is located outside a High Potential Zone for Rusty Patch Bumble Bee habitat. The RFI report was completed on January 30, 2018 (Appendix E) and INDOT confirmed this project is located outside a High Potential Zone for the Rusty Patch Bumble Bee.

This concludes the need for further consultation on this project under Section 7 of the Endangered Species Act of 1973, as amended. INDOT's approval of this environmental document also serves as its concurrence with the "Likely to Adversely Affect" finding. This precludes the need for further Section 7 consultation.

SECTION B – OTHER RESOURCES

Drinking Water Resources	Presence	Impacts	
		Yes	No
Wellhead Protection Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public Water System(s)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Residential Well(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Source Water Protection Area(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sole Source Aquifer (SSA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If a SSA is present, answer the following:

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

Remarks: The project is located in Porter County, which is not located within the area of the St. Joseph Sole Source Aquifer, the only legally designated sole source aquifer in the state of Indiana. Therefore, the FHWA/EPA Sole Source Aquifer Memorandum of Understanding (MOU) is not applicable to this project. No impacts are expected.

The Indiana Department of Environmental Management's Wellhead Proximity Determinator website (<http://www.in.gov/idem/cleanwater/pages/wellhead/>) was accessed on January 16, 2018 by Troyer Group. This project is not located within a Wellhead Protection Area. No impacts are expected.

The Indiana Department of Natural Resources Water Well Record Database website (<https://www.in.gov/dnr/water/3595.htm>) was accessed on January 16, 2018 by Troyer Group. The nearest well is located approximately 45 feet south of the southern project termini. These features will not be affected because they are

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outside the proposed construction limits. The excavation related to the proposed storm sewer system will not occur near this well. Therefore, no impacts are expected. Should it be determined during the right-of-way phase that these wells are affected, a cost to cure will likely be included in the appraisal to restore the wells.

Based on a desktop review of the INDOT MS4 website (<https://entapps.indot.in.gov/MS4/>) by Troyer Group on January 16, 2018, and the RFI report; this project is located in an Urban Area Boundary (UAB) location. An MS4 early notification letter was sent on January 16, 2018, to the City of Valparaiso MS4 Coordinator (Appendix C-3). The MS4 coordinator did not respond within the 30-day time frame. Project plans will be provided to the MS4 coordinator during the Rule 5 Erosion Control Permit review process to ensure compliance with the City of Valparaiso/Porter County storm water quality management plan.

Based on a desktop review of the utility data collected in the project topographic survey, this project is located where there is a public water system. The public water system will be affected because a water line operated by Valparaiso City Utilities is located along the north side of SR 2 through the project area and will require relocation prior to commencement of the roundabout construction. Utility coordination is ongoing and relocations plans will be developed to ensure conflicts are kept to a minimum and the water line can be replaced in an appropriate location.

Flood Plains	Presence	Impacts	
		Yes	No
Longitudinal Encroachment			
Transverse Encroachment	x	x	
Project located within a regulated floodplain	x	x	
Homes located in floodplain within 1000' up/downstream from project			

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

Remarks: The Indiana Department of Natural Resources Indiana Floodway Information Portal website (<http://dnrmaps.dnr.in.gov/appsphp/fdms/>) was accessed on January 16, 2018 by Troyer Group. The outlet structure related to the proposed project's stormwater collection system is located in a regulatory floodplain as determined from approved IDNR floodplain maps (Appendix F-37). An early coordination letter was sent on January 16, 2018, to the Porter County Director of Stormwater Management, who acts as the local floodplain administrator. The floodplain administrator did not respond within the 30-day time frame.

The work occurring within the Salt Creek floodway involves the installation of the outlet structure associated to a proposed detention basin. The outlet structure will be located approximately 20-ft. west of the Salt Creek OHWM, but approximately 40-ft. east of the western limit of the regulated floodway. The outlet structure will be designed to match the profile of the existing floodway to minimize any new flow impediment. The additional of this new drainage structure will result in an insubstantial change in the floodway's capacity to carry flood water. This change could cause a minimal increase in flood heights and flood limits. These minimal increases will not result in any substantial adverse impacts on the natural and beneficial floodplain values; they will not result in substantial change in flood risks or damage; and they do not have substantial potential for interruption or termination of emergency service or emergency routes. Coordination with IDNR will occur to ensure this floodplain encroachment is not substantial.

IDNR administers the requirements of Indiana's floodplain management regulations and the state's floodway permitting program (as outlined in 23 CFR 650, 23 CFR 771, and 44 CFR). Due to the outlet structure's location within Salt Creek's regulated floodway, A Construction in a Floodway (CIF) permit from IDNR will be required. Due to the minimal change anticipated in the cross-section flow area, a non-modeling assessment approach will likely apply.

An early coordination letter was sent to IDNR DFW on January 16, 2018. In their response dated February 15, 2018 (Appendix C-18) they provided recommendations that should be considered to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources. The recommendations within their letter were only for consideration. They may become mandatory upon the issuance of a CIF permit. All applicable IDNR DFW recommendations are included in the Environmental Commitments section of this CE document. All conditions associated to an approved CIF permit will be observed and will become firm project commitments.