

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

Road No./County:	United States Highway (US) 31 / Hamilton County
Designation Number(s):	Lead Des. No. 1900096; Additional Des. Nos. 1900097, 1901797, 1901798, 1700934, 1700935, 2002949, 2002954, 2002313
Project Description/Termini:	The conversion of US 31 to Limited Access, including treatments to all intersections, from State Road (SR) 38 to 286 th Street.

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

Release for Public Involvement

Ronald E. Baker Date: 2021.08.16
 12:50:54 -04'00'

INDOT ESD Signature and Date

ROBERT E DIRKS Digitally signed by ROBERT E DIRKS
 Date: 2021.08.17 16:48:41 -04'00'

FHWA Indiana Division Signature and Date

Certification of Public Involvement

INDOT Consultant Services Signature and Date

INDOT DE/ESD Reviewer Signature and Date:

Brandon Miller Digitally signed by Brandon Miller
 Date: 2021.08.16 14:29:49 -04'00'

Name and Organization of CE/EA Preparer:

Neal Bennett / Butler, Fairman, & Seufert, Inc.

Note: Refer to the most current INDOT CE Manual, guidance language, and other ESD resources for further guidance regarding any section of this form.

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Part I – Public Involvement

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

Does the project have a historic bridge processed under the Historic Bridges PA*? Yes No
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.

The US 31 Limited Access Project has included several public involvement efforts. These efforts included Notice of Entry letters, a project website, public information meetings/open houses, Consulting Parties meetings, and Community Advisory Committee (CAC) meetings. Upon release of the Environmental Assessment (EA) for public involvement, a public hearing will be held as described below. Public involvement activities to date are summarized below and included in a table in Appendix G, page 1.

Notice of Entry Letters

Notice of Entry letters were mailed to potentially affected property owners near the project area on September 26, 2019, March 1, 2020, July 7, 2020, July 24, 2020, and October 29, 2020, notifying them about the project and that individuals responsible for land surveying and field activities may be seen in the area. Sample copies of the Notice of Entry letters are included in Appendix G, pages 2 – 7b.

Project Website

The Indiana Department of Transportation (INDOT) website for the US 31 project is INDOT: U.S. 31 Limited Access Upgrade from S.R. 38 to 286th Street. The website includes project updates, public meeting presentations, frequently asked questions, and project documents.

Public Information Meetings / Open Houses

Two (2) public information meetings / open houses were held as part of the project development process. These meetings were broadly advertised to provide an opportunity for all interested parties to participate in the process. The meetings are described below:

Public Information Meeting #1 (September 1, 2020) – Two (2) opportunities to view a pre-recorded formal presentation were provided to attendees. Project team members were stationed by plans and other project displays to explain the project and answer questions from the public. Approximately 70 people attended Public Information Meeting #1. The pre-recorded formal presentation was posted to the project website on September 1, 2020, for those that were unable to attend in-person. A link to the project website was provided in the public notice for Public Information Meeting #1. The public notice was mailed to all property owners along the project on July 27, 2020, and published in the Tipton County Tribune and The Times (newspaper serving Noblesville) on August 18, 2020 (Appendix G, pages 53 – 56). Comments provided by the public influenced the INDOT’s decision-making process with regards to intersection treatments at the various cross street locations along the project area (Appendix G, pages 81 – 98).

Public Information Meeting #2 (April 21, 2021) – Four (4) rounds of a pre-recorded formal presentation were shown to attendees. Project team members were stationed by plans and other project displays to explain the project and answer questions from the public. Approximately 75 people attended Public Information Meeting #2. The pre-recorded formal presentation was posted to the project website on April 21, 2021, for those that were unable to attend in-person. A link to the project website was provided in the public notice for Public Information Meeting #2. The public notice was mailed to all property owners along the project on April 6, 2021, and published in The Times (newspaper of Noblesville) on April 7, 2021, and the Hamilton County Reporter on April 12, 2021 (Appendix G, pages 129 – 132). Comments and questions expressed by the public centered mainly around the reduction in project scope to only include Hamilton County from SR 38 to 286th Street, right-of-way acquisition and relocation process, and the proposed 276th Street interchange (Appendix G, pages 154 – 157). A discussion pertaining to the reduction in project scope can be found in the Preferred Alternative Section later in this document.

CAC Meetings

The Hamilton County and Tipton County CACs were formed to serve as sounding boards for study information and decision-making, to facilitate collaborative problem solving and discussion of specific issues, and to serve as a link to their communities by sharing project information. The 24 members of the Hamilton County CAC and 25 members of the Tipton County CAC represent various

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branches of government, emergency services, schools, and business employers (Appendix G, pages 8 – 10 and 30 – 32). To date, four (4) meetings (two (2) each for Hamilton County CAC and Tipton County CAC) have been held in which the CACs provided meaningful input related to public involvement efforts, intersection alternatives, impacts to emergency service response timing, impacts to transportation for local schools, and traffic impacts during construction (Appendix G, pages 24 - 29, 45 - 50, 110 - 112, and 124 - 126). The first Hamilton County and Tipton County CAC Meetings occurred separately on July 10, 2020, and the second Hamilton County and Tipton County CAC Meetings occurred separately on April 15, 2021.

Section 106

Section 106 regulations text in 36 CFR 800 outlines a process that requires the Federal Highway Administration (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). Consulting parties are invited to participate in the Section 106 process. A consulting party is an individual or organization with a demonstrated legal, economic, or historic preservation interest in an undertaking. There are currently nine (9) consulting parties for the US 31 Limited Access Project. To date, one (1) Section 106 consulting party meeting has been held (Appendix D, pages 76-80).

To meet the public involvement requirements of Section 106, a legal notice of FHWA's finding of Adverse Effect was published in the *Times* (serving Hamilton County) on April 21, 2021, offering the public an opportunity to submit comment pursuant to 36 CFR 800.2(d), 800.3(e), and 800.6(a)(4). The public comment period closed 30 days later, on May 21, 2021. The text of the public notice and the affidavit for publication appear in Appendix D, page 111. No comments from the public were received.

Public Hearing

The project is being processed as an EA. Per the current *INDOT Project Development Public Involvement Procedures Manual* the project is required to hold a public hearing. Upon release of the EA for public involvement, a legal advertisement will be placed in a local publication notifying the public of the public hearing and availability of the EA for review. The public will be provided a 30-day comment period. Following the public hearing, if determined appropriate, a request for a Finding of No Significant Impact (FONSI) will be submitted to FHWA. All comments received during this period will be addressed and attached to the FONSI request. If any comments require a change to the EA, an Additional Information document may be prepared and approved by FHWA prior to the submission of the FONSI request to FHWA. The preparation of the FONSI by FHWA will indicate the NEPA process for this project has been completed. Once the NEPA process is completed, a public notice announcing the availability of the FONSI will be advertised in local publications of general circulation.

Public Controversy on Environmental Grounds

Discuss public controversy concerning community and/or natural resource impacts, including what is being done during the project to minimize impacts.

There has been public controversy concerning potential community impacts of the US 31 Limited Access Project. INDOT has considered public feedback throughout the project development process. Public engagement has informed the selection of preferred alternatives and defined the key features of the project, including:

- maintaining cross community connectivity by providing overpasses at select locations;
- where possible, minimizing impacts to residential, commercial, and historic properties by carefully choosing cul-de-sac placement;
- minimizing impacts to emergency service response times by maintaining US 31 crossovers for emergency services use only at select locations;
- constructing an interchange at 276th Street to maintain access to US 31.

INDOT will continue public outreach activities after the National Environmental Policy Act (NEPA) process is complete to inform the public of maintenance of traffic changes and provide updates during construction.

Avoidance, Minimization, and Mitigation Efforts

INDOT has made the following efforts throughout the development of the US 31 Limited Access Project to avoid and minimize impacts of the project to surrounding communities and the natural environment:

- 276th Street Interchange – several different interchange designs were considered and the preferred alternative, as outlined in this document, will minimize, to the greatest extent, impacts to the environment as compared to the other build alternatives studied.
- 226th Street and 266th Street Overpasses – the 226th Street overpass design will have minimal tree clearing, wetland, and stream impacts. The 266th Street overpass design will have unavoidable stream crossing impacts, removal of one tree, and no wetland impacts.

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- 216th Street, 246th Street, 256th Street, and 281st Street Cul-de-sacs – all cul-de-sac locations will have minimal tree clearing and wetland impacts.

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

Sponsor of the Project: INDOT INDOT District: Greenfield

Local Name of the Facility: US 31

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

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

PURPOSE AND NEED:

The need should describe the specific transportation problem or deficiency that the project will address. The purpose should describe the goal or objective of the project. The solution to the traffic problem should NOT be discussed in this section.

The need for the project derives from the high rate of vehicular crashes that are occurring along the US 31 corridor. An *Existing Conditions Report* prepared by CHA Consulting on February 20, 2017 evaluated crash data on US 31 in Hamilton County for the three-year period from 2014-2016 (report accessible at <https://www.in.gov/indot/3973.htm> under the "U.S. 31 Corridor Study" link). The study revealed that Hamilton County saw 5.96 crashes per mile per year, and most of these crashes occurred within 1,000 feet of an intersection. Butler, Fairman and Seufert, Inc. (BF&S) prepared a *US 31 Crash and Safety Analysis Report* in June 2021 (see Appendix A, pages 2 – 8) in which crash data was reviewed for the three-year period from 2018-2020. It was determined that during this time frame Hamilton County reported 11.61 crashes per mile per year (see Crash Comparison Table in Appendix A, page 1). This is an approximate 95% increase in crashes per mile per year in Hamilton County between the two study periods. Crash types more commonly associated with rural highways include crashes involving deer, vehicles driving too fast for weather conditions, unsafe speeds, and vehicles running off the road. Crash types more commonly associated with intersections include vehicles failing to yield the right of way, vehicles disregarding a traffic signal or sign, and vehicles following too closely. Approximately 26% of the reported crashes resulted from the common causes associated with rural highways and approximately 44% of all the reported crashes resulted from the common causes associated with intersections. The report also indicates that approximately 67% of all reported crashes occurred within 1,000 feet of an intersection.

US 31 Crash Data Summary for Hamilton County		
	2014-2016	2018-2020
Number of Crashes	152	296
Number of Injuries	53	57
Number of Fatalities	0	3
Number of Deer	34	33
Crash Rate (crashes per mile per year)	5.96	11.61

The purpose of this project is to reduce the overall number of vehicular crashes along US 31 while maintaining access to US 31 and cross community connectivity at select locations.

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PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Hamilton Municipality: Adams Township, Jackson Township

Limits of Proposed Work: US 31 from SR 38 to 286th Street

Total Work Length: 8.5 Mile(s) Total Work Area: _____ Acre(s)

Is an Interstate Access Document (IAD)¹ required?
 If yes, when did the FHWA provide a Determination of Engineering and Operational Acceptability?

Yes ¹	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
Date: _____	
N/A	

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

Describe location of project including township, range, city, county, roads, etc. Existing conditions should include current conditions, current deficiencies, roadway description, surrounding features, etc. Preferred alternative should include the scope of work, anticipated impacts, and how the project will meet the Purpose and Need. Logical termini and independent utility also need discussed.

Project History:

Originally, the INDOT Greenfield District and FHWA proposed to limit access to US 31 from SR 38 in Hamilton County to SR 931 in Tipton County. That project would have connected the currently limited access portion of US 31 south of SR 38 in Hamilton County to the currently limited access portion of US 31 from SR 931 north to County Road 450 North in Howard County, Indiana. Funding for the construction of this corridor was broken into segments with some segments having funding included in the State Transportation Improvement Program (STIP) Fiscal Year (FY) 2020-2024, some segments that were planned to be included in the upcoming FY 2022 -2025 STIP, and some segments that were yet to have a funding plan in place.

INDOT has a funding plan in place for all the proposed US 31 improvements in Hamilton County (Appendix B, page 25). The Tipton County portion of the project does not have planned funding. Additionally, the future needs of ongoing development have not yet been realized in Tipton County. Therefore, INDOT decided to shift the Tipton County portion of the project into a Planning and Environmental Linkage (PEL) Study and proceed with the Hamilton County segments as planned. As a result, the logical break point between the two segments is the northern-most funded full-access point where a safe transition for motorists from limited access to existing conditions can be created. This will allow the currently funded projects in Hamilton County to proceed in a timely manner and address the increasing vehicular crash rates, while more time is spent to balance the needs of INDOT and the local communities in Tipton County. (Note: This EA document is specific to US 31 from SR 38 to 286th Street; however, some of the studies included in this report include Tipton County due to the original project scope.)

Location:

The project is located along US 31 from SR 38 to 286th Street in Adams Township and Jackson Township, Hamilton County, Indiana. The project is mapped on the following United States Geological Survey (USGS) 7.5 -minute Topographic Quadrangles (Appendix B, page 2):

West Side of US 31			East Side of US 31		
USGS Westfield, IN Quadrangle			USGS Noblesville, IN Quadrangle		
Section	Township	Range	Section	Township	Range
13	19 N	3 E	18	19 N	4 E
12	19 N	3 E	7	19 N	4 E
1	19 N	3 E	6	19 N	4 E
USGS Sheridan, IN Quadrangle			USGS Arcadia, IN Quadrangle		
Section	Township	Range	Section	Township	Range
36	20 N	3 E	31	20 N	4 E
25	20 N	3 E	30	20 N	4 E
24	20 N	3 E	19	20 N	4 E
13	20 N	3 E	18	20 N	4 E
12	20 N	3 E	7	20 N	4 E

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Existing Conditions:

US 31 is a four-lane, divided, Rural Principal Arterial roadway with an Average Annual Daily Traffic (AADT) of 27,538 vehicles per day (vpd) in 2020 per INDOT's Traffic Count Database. US 31 has a typical cross-section consisting of two 12-foot wide through lanes in each direction (northbound (NB) and southbound (SB)) with 10-foot paved shoulders adjacent to the outside lanes and 4-foot paved shoulders adjacent to the inside lane. Northbound and southbound lanes are separated by a grass median ranging in width from 36 feet to 47 feet. There are ten (10) roads that intersect US 31 within the study area. Dedicated left turn lanes exist at each of these intersecting roadways. Two (2) of the intersecting roads, 236th Street and 241st Street, are part of a separate project, under Des. No. 1702149. The current intersection of US 31 at 236th Street is four-legged with signal control. As a result of the 236th Street Project (Des. No. 1702149), the intersection will be upgraded to an interchange, and access to/from 241st Street on the east side of US 31 will be removed and a cul-de-sac on 241st Street constructed. This project has independent utility and has been evaluated separately from this proposal. However, since this project is occurring within the study area, it must be considered when evaluating potential intersection treatments. The remaining intersecting streets include:

Intersecting Roadway	INDOT Functional Classification	Functional Classification -From Hamilton County Thoroughfare Plan (2007)	Average Annual Daily Traffic (AADT) / Vehicles Per Day (vpd) -From Hamilton County GIS (2018 / 2019)	Type of Intersection
216 th Street	Rural Local Road	Collector	2,049 (East of US 31) 136 (West of US 31)	4-legged, stop-controlled on 216 th Street
226 th Street	Rural Local Road	Secondary Arterial	357 (East of US 31) 247 (West of US 31)	4-legged, stop-controlled on 226 th Street
246 th Street	Rural Local Road	Collector	156	3-legged (east side of US 31 only), stop-controlled on 246 th Street
256 th Street	Rural Local Road	Primary Arterial	765 (East of US 31) 815 (West of US 31)	4-legged, stop-controlled on 256 th Street
266 th Street	Rural Major Collector Road	Secondary Arterial	1,329 (East of US 31) 238 (West of US 31)	4-legged, stop-controlled on 266 th Street
276 th Street	Rural Major Collector Road	Collector	664 (East of US 31) 344 (West of US 31)	4-legged, stop-controlled on 276 th Street
281 st Street	Rural Local Road	Collector	39	3-legged (east side of US 31 only), stop-controlled on 281 st Street
286 th Street	Rural Local Road	Collector	107 (East of US 31) 177 (West of US 31)	4-legged, stop-controlled on 286 th Street

NOTE: See Appendix B, page 25 for illustration of the Preliminary Intersection Treatments

Land use in the vicinity of the project is primarily agricultural, with a combination of residential, commercial, light industrial, religious, and recreational land uses present as well.

Preferred Alternative:

Intersections are planned points of conflict in roadway systems. FHWA studies indicate 25% of traffic fatalities and approximately 50% of traffic injuries are attributed to incidences related to conflicts at intersections. To address the safety concerns related to the vehicular crashes occurring along US 31, it was determined that limiting access to US 31 by modifying the existing roadway intersections, removing public access at all median crossover locations, and removing residential and commercial drives along US 31 will reduce the number of conflict points and will reduce the frequency and severity of crashes. The existing streets intersecting US 31 along the corridor have been analyzed for conversion to either cul-de-sacs, overpasses, or interchanges. Several factors were considered in determining the preferred intersection treatment option including: the functional classification and current traffic volume of the intersecting roadway, the distance to adjacent intersections, and existing geometry. Intersecting roadways with higher functional classifications were considered as possible interchange or overpass locations. In general, Arterial Roads carry more traffic than Collector Roads, and Collector Roads carry more traffic than Local Roads. According to Chapter 48 of the INDOT Design Manual, interchanges in rural areas should not be spaced less than 3.0 miles apart on an interstate system or less than 2.0 miles apart on other systems (such as US 31). Two interchanges must be factored into the project planning: the existing interchange at US 31 and SR 38 and the proposed interchange at US 31 and 236th Street (Des No 1702149). See Appendix B page 26 for an Intersection Treatment and Cross Community Travel Exhibit illustrating the whole corridor and the placements of the intersection treatments.

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US 31 Limited Access Conversion from SR 38 to 236th Street (Des. No. 1900097)

The limited access conversion from SR 38 to 236th Street will include removal of access at 216th Street to and from US 31, removal of direct access drives for commercial, residential, and agricultural properties onto US 31, and removal of dedicated turn lanes along US 31 within this segment. The project will also install Cable Barrier Systems and ITS Conduit Systems within the right-of-way of US 31 between SR 38 and 236th Street.

216th Street is a Rural Local Road / Collector roadway located approximately 0.5 mile north of the existing SR 38 and US 31 interchange and approximately 2.0 miles south of the planned 236th Street and US 31 interchange. 216th Street extends approximately 0.5 mile west of US 31 where it forms a T-intersection with Dunbar Road. 216th Street extends approximately 3.5 east of US 31 where it forms a T-intersection with Mill Creek Road. On the east side of US 31, 216th Street provides access to portions of subdivisions located near Morse Reservoir. Access to these subdivisions is also provided from the south from SR 38 using several north south roadways (Hinkle Road, Little Chicago Road and Hague Road). Access to these subdivisions is also provided from the north from 236th Street and several north-south roadways (Mill Creek Road, Tollgate Road, Stringtown Pike, and SR 19). Added travel to these subdivisions after the access to 216th Street is removed is less than 1.0 mile and in general the average added travel to US 31 from this area is not expected to exceed 1.5 miles.

Due to its functional classification, current use, and proximity to the existing interchange at SR 38 and planned interchange at 236th Street, this project will remove the access to US 31 at 216th Street and construct cul-de-sacs east and west of US 31, remove turn lanes on US 31, and remove the median cross-over (see Appendix B, page 31 for conceptual exhibit).

226th Street Overpass (Des. No. 1900096)

The portion of the project at 226th Street will include removal of access at 226th Street to and from US 31, removal of direct access drives for commercial, residential, and agricultural properties onto US 31, removal of the dedicated turn lanes along US 31, and removal of the median crossover.

226th Street is a Secondary Arterial roadway located approximately 1.5 miles north of the existing SR 38 and US 31 interchange and approximately 1.0 mile south of the planned 236th Street and US 31 interchange. 226th Street connects to SR 38 on the west side of US 31 and extends to the east through the unincorporated community of Demming. There are several large commercial businesses located on the southeast side of 226th Street and US 31 that have access off US 31. The average added travel to US 31 from this area is not expected to exceed 1.5 miles once access to 226th Street from US 31 is removed.

Due to its functional classification and proximity to the existing interchange at SR 38 and proposed interchange at 236th Street, this project will remove the access to US 31 at 226th Street, construct a new bridge to carry 226th Street over US 31, remove turn lanes on US 31, and remove the median cross-over. Construction of an overpass allows for convenient cross-community connectivity. To maintain access to the commercial businesses, it is proposed to construct a new local road approximately 0.25 mile east of US 31 that extends south from 226th Street for approximately 0.35 mile, and to construct a new local road approximately 0.25 mile east of US 31, that will extend from 226th Street to a point approximately 0.5 mile north of 226th Street that it will connect with the proposed local roadway included as part of the 236th Street Interchange project (see Appendix B, page 32 for conceptual exhibit).

US 31 Limited Access Conversion from 236th Street to 276th Street (Des. No. 2002313)

The limited access conversion portion of the project from 236th Street to 276th Street will include removal of access to and from US 31 at 246th Street, 256th Street and 266th Street. This project will remove direct access drives for commercial, residential, and agricultural properties onto US 31 and remove the dedicated turn lanes along US 31 within this segment. The project will also install Cable Barrier Systems and ITS Conduit Systems in the median of US 31 between 236th Street and 276th Street.

246th Street is a Rural Local Road / Collector roadway located approximately 1.0 mile north of the planned 236th Street and US 31 interchange and approximately 3.0 miles south of the proposed 276th Street and US 31 interchange. 246th Street begins at US 31 and extends approximately 3.0 miles east where it forms a T-intersection with Devaney Road. The average added travel to US 31 from this area is not expected to exceed 2.0 miles once access to 246th Street from US 31 is removed. Due to its functional class, existing geometry, and proximity to the planned interchange at 236th Street and proposed interchange at 276th Street, this project will remove the access to US 31 at 246th Street and construct a cul-de-sac on 246th Street, remove the turn lane on US 31, and remove the median cross-over (see Appendix B, page 33 for conceptual exhibit).

256th Street is a Rural Local Road / Primary Arterial roadway located approximately 2.0 miles north of the planned 236th Street and US 31 interchange and approximately 2.0 miles south of the proposed 276th Street and US 31 interchange. 256th Street extends approximately 3.0 miles west of US 31 where it intersects with Six Points Road, then continues another 0.5 mile west as a Local Roadway where it forms a T- intersection with Eagletown Road. 256th Street extends approximately 6.0 miles east of US 31 where it

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connects with SR 19, approximately 0.5 mile south of the Town of Arcadia. The average added travel to US 31 from this area is not expected to exceed 1.5 miles once access to 256th Street from US 31 is removed.

266th Street is Rural Major Collector Road / Secondary Arterial roadway located approximately 3.0 miles north the planned 236th Street and US 31 interchange and approximately 1.0 mile south of the proposed 276th Street and US 31 interchange. 266th Street extends approximately 3.0 miles west of US 31 where it intersects with Six Points Road. 266th Street extends approximately 6.0 miles east of US 31, passing through the Town of Arcadia and connecting with SR 19, then continues east beyond the county line. The average added travel to US 31 from this area is not expected to exceed 1.5 miles once access to 266th Street from US 31 is removed.

256th Street and 266th Street are located approximately 1.0 mile apart. Given the proximity of these two roadways, only one overpass is being proposed. Since 266th Street connects directly to the Town of Arcadia and has traffic volumes east of US 31 that are 65% higher than 256th Street, 266th Street is the preferred location for an overpass. Construction of an overpass allows for convenient cross-community connectivity. The project will remove access to US 31 at 266th Street and construct a bridge to carry 266th Street over US 31, remove turn lanes on US 31, and remove the median cross-over. Due to the current alignment of 266th Street on the east side of US 31, the roadway and overpass will require a realignment of 266th Street up to 200 feet south of its current alignment east of US 31 (see Appendix B, page 35 for conceptual exhibit). The project will remove access to US 31 at 256th Street by constructing cul-de-sacs on 256th Street, remove the turn lanes on US 31, and remove the median cross-over (see Appendix B, page 34 for conceptual exhibit).

276th Street Interchange (Des. No. 1901797; including sub Des. Nos. as discussed below)

The portion of the project at 276th Street will include the construction of an interchange at US 31, removal of access at 281st Street to and from US 31, removal of direct access drives for commercial, residential, and agricultural properties along US 31 from 276th Street to 281st Street, and removal of median crossovers up to (and including) 286th Street.

276th Street is a Rural Major Collector / Collector roadway located approximately 4.0 miles north of the planned 236th Street and US 31 interchange. 276th Street extends 6.0 miles to the west of US 31 into Boone County. To the east of US 21, 276th Street extends approximately 4.5 miles to Gwinn Road. In the southwest quadrant of 276th Street and US 31 there is a Reynold's tractor dealership with almost 60,000 square feet of building space. On 276th Street, approximately 4.1 miles east of US 31, is Beck Hybrid's Agricultural/Industrial property with numerous buildings and grain elevators. The Town of Arcadia is located approximately 5.5 miles east of US 31 and approximately 1.0 mile south of 276th Street. In addition, the State of Indiana State Armory owns approximately 54 acres of vacant land on the northeast quadrant of 276th Street and US 31.

An interchange will occur at 276th Street. This interchange will allow for convenient access to US 31 for local, agricultural, and commercial traffic and provides convenient cross-community connectivity, as well as easy access to US 31 for the future Indiana State Armory. The construction of the 276th Street interchange will require the construction of a new bridge to carry 276th Street over US 31 (Des. No. 1901798), and the replacement and widening of three (3) existing bridges (276th Street over Little Cicero Creek (Des. No. 2002954), US 31 NB over Little Cicero Creek (Des. No. 1700934) and US 31 SB over Little Cicero Creek (Des. No. 1700935)). New interchange ramps to allow access between 276th Street and NB US 31 will be constructed in the southeast quadrant of the existing intersection, and new interchange ramps to allow access between 276th Street and SB US 31 will be constructed in the northwest quadrant of the existing intersection. The existing access drive serving the commercial business in the southwest quadrant will be relocated to the west and connect to 276th Street approximately 450 feet west of its current location. The 276th Street interchange portion of the project will also include roadway reconstruction and widening work along 276th Street from Dunbar Road (East 11th Street) to US 31 (Des. No. 2002949) (see Appendix B, pages 36 - 37 for conceptual exhibits).

281st Street is a Rural Local Road / Collector roadway located approximately 0.5 mile north of the proposed 276th Street and US 31 interchange and falls within the influence zone of the proposed interchange at 276th Street. 281st Street begins at US 31 and extends approximately 3.0 miles east where it forms a T-intersection with Devaney Road. The average added travel to US 31 from this area is not expected to exceed 2.0 miles once access to 281st Street from US 31 is removed. Due to its functional class, existing geometry, and proximity to the proposed interchange at 276th Street, this project will remove the access to US 31 at 281st Street and construct a cul-de-sac on 281st Street, remove the turn lane on US 31, and remove the median cross-over (see Appendix B, page 38 for conceptual exhibit).

286th Street is a Rural Local Road / Collector roadway located approximately 1.0 mile north the proposed 276th Street and US 31 interchange. 286th Street extends approximately 6.0 miles west of US 31 to the Boone County line. 286th Street extends approximately 2.0 miles east of US 31 where it forms a T-intersection with Cal Carson Road. Limited access on US 31 can be transitioned to its current access between 281st Street and 286th Street. Therefore, this project will only remove the median crossover at this location and allow right-in and right-out access at 286th Street onto US 31.

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Preferred Alternative Summary

Preliminary preferred alternatives at each cross street, summarized in the table below have been identified by INDOT based on preliminary environmental studies completed, and public and local government feedback received to date.

Intersecting Roadway	Preliminary Preferred Alternative	Notes	Funding Year
216th Street	Proposed Cul-de-sac	Part of Subject Study Des. No. 1900097	FY 2023
226th Street	Proposed Overpass	Part of Subject Study Des. No. 1900096	FY 2023
236th Street	Proposed Interchange	Project of Independent Utility Des. No. 1702149	FY 2022
241st Street	Proposed Cul-de-sac	Project of Independent Utility Des No. 1702149	FY 2022
246th Street	Proposed Cul-de-sac	Part of Subject Study Des No. 2002313	FY 2024
256th Street	Proposed Cul-de-sac	Part of Subject Study Des. No. 2002313	FY 2024
266th Street	Proposed Overpass	Part of Subject Study Des. No. 2002313	FY 2024
276th Street	Proposed Interchange	Part of Subject Study Des. Nos. 1901797, 1901718, 1700934, 1700935, 2002954, and 2002949	FY 2022
281st Street	Proposed Cul-de-sac	Part of Subject Study Des. No. 1901797	FY 2022
286th Street	Close Median and allow Right-turn in and Right-turn out only	Part of Subject Study Des. No. 1901797	FY 2022

In general, the cul-de-sacs will have an approximate 50-foot radius and will be oriented north, center, or south relative to the existing roads to minimize impacts to existing properties. All areas where existing pavement is removed will be reseeded (Appendix B, pages 27 - 38). Roadway signage along the project area will be evaluated further in the design process.

The project design has minimized all impacts to the extent possible, including right-of-way, wetlands, streams, floodplains, Section 4(f), resources, cultural resources, and potential Environmental Justice populations. Impacts to migratory birds and protected bats will be avoided and/or minimized to the greatest extent possible. Measures designed to avoid and minimize impacts to environmental resources are included as firm commitments in the Environmental Commitments section of this document.

Maintenance of Traffic (MOT):

Where new overpass bridges are proposed for construction, traffic will be detoured along cross streets. Cross streets that are to be turned into cul-de-sacs will experience a permanent traffic alteration. Proposed interchange areas will utilize phased construction to maintain traffic. During construction, 276th Street will be closed to thru traffic at US 31. Traffic will be maintained using a detour. US 31 is expected to remain open to traffic throughout construction; however, some lane restrictions may be required at times. A more detailed discussion of the MOT can be found in the MOT section later in this document.

Fulfillment of Purpose and Need:

The preferred alternative will meet the purpose and need for the project by improving safety along the US 31 corridor throughout Hamilton County. Specifically, the project will modify the existing intersections, remove public access at all median crossover locations and remove residential and commercial drives along US 31 which will result in a reduced number of conflict points, thereby reducing the frequency and severity of crashes. It is anticipated that up to a 40% reduction in vehicle collisions will result from the modification of the US 31 to limited access within Hamilton County, Indiana (Appendix A).

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Logical Termini/Independent Utility:

286th Street is the logical northern termini for the overall project because 281st Street is within the influence area of the planned interchange at 276th Street and, therefore, access to US 31 at 281st Street needs to be closed. 286th Street provides the next access point to US 31, so the project will transition from the limited access conditions designation to the existing condition access designation between 281st Street and 286th Street. SR 38 is the logical southern termini for the overall project since it defines the current northernmost limited access designation point for US 31 in Hamilton County. This project provides independent utility by meeting the purpose and need without relying on other projects to improve safety along US 31 in Hamilton County between SR 38 and 286th Street.

OTHER ALTERNATIVES CONSIDERED:

Provide a header for each alternative. Describe all discarded alternatives, including the No Build Alternative. Explain why each discarded alternative was not selected. Make sure to state how each alternative meet or does not meet the Purpose and Need and why.

Do Nothing Alternative (No Build)

The Do-Nothing Alternative would involve no disruption and no additional cost, other than ongoing maintenance, within the project area. While this alternative would avoid impacts to surrounding properties and resources and would include no construction costs, the US 31 corridor would continue to experience safety issues. The project's purpose and need which is to address safety concerns along the US 31 corridor in Hamilton County would not be met. Since this alternative would not fulfill the purpose and need, it was eliminated from further consideration.

216th Street Interchange Alternative

This alternative would involve construction of an interchange at US 31 and 216th Street. 216th Street is located 0.5 mile north of the existing SR 38 and US 31 interchange and approximately 2.0 miles south of the planned 236th Street and US 31 interchange. According to Chapter 48 of the INDOT Design Manual, interchanges in rural areas should not be spaced less than 2.0 miles apart on non-interstate systems. Since an interchange at 216th Street would be within 2.0 miles of an existing interchange, this alternative was eliminated from further consideration.

216th Street Overpass Alternative

This alternative would involve construction of an overpass bridge to carry 216th Street over US 31. 216th Street extends approximately 0.5 mile west of US 31 where it forms a T-intersection with Dunbar Road, and extends approximately 3.5 miles east of US 31 where it forms a T-intersection with Mill Creek Road. An overpass carrying 216th Street over US 31 would meet the purpose and need of the project, which is to improve safety along this section of the US 31 corridor; however, existing traffic patterns indicate that 216th Street is not currently a popular route for commuters to get between the east and west sides of US 31. This is likely due to the lack of connection with SR 38 to the west. Alternate routes that provide cross community connectivity would be available less than 1.0 mile south of 216th Street at SR 38, and 1.0 mile north of 216th Street at the proposed 226th Street overpass. An overpass that would provide connection between east and west sides of US 31 at 216th Street would require 216th Street to be extended on new alignment for approximately 0.32 mile between Dunbar Road and SR 38. This roadway extension would result in additional environmental impacts, including likely impacts to forested and open water wetlands, increased right-of-way impacts, as well as increased construction costs. This alternative is not considered the preferred alternative since the existing 216th Street is not commonly used for crossing US 31, there is an existing alternate access across US 31 at SR 38, and the proposed overpass access across US 31 at 226th Street.

226th Street Interchange Alternative

This alternative would involve construction of an interchange at US 31 and 226th Street. 226th Street located approximately 1.5 miles north of the existing SR 38 and US 31 interchange, and approximately 1.0 mile south of the planned 236th Street and US 31 interchange. According to Chapter 48 of the INDOT Design Manual, interchanges in rural areas should not be spaced less than 2.0 miles apart on non-interstate systems. Since an interchange at 226th Street would be within 2.0 miles of an existing interchange, this alternative was eliminated from further consideration.

226th Street Cul-de-sac Alternative

This alternative involves the construction of cul-de-sacs along 226th Street on both the east and west sides of US 31. 226th Street connects to SR 38 on the west side of US 31 and extends to the east through the unincorporated community of Demming. Based on traffic data and roadway classification, 226th Street is used currently used for cross community connectivity. Closure of the access to 226th Street from US 31 and construction of cul-de-sacs would meet the purpose and need of the project which is to improve safety

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along this section of the US corridor; however, this alternative would not maintain cross community connectivity. Therefore, the 226th Street Cul-de-Sac Alternative is not considered to be the preferred alternative.

246th Street Interchange Alternative

This alternative would involve construction of an interchange at US 31 and 246th Street. 246th Street is located approximately 1.0 mile north of the planned 236th Street and US 31 interchange and approximately 3.0 miles south of the proposed 276th Street and US 31 interchange. According to Chapter 48 of the INDOT Design Manual, interchanges in rural areas should not be spaced less than 2.0 miles apart on non-interstate systems. Since an interchange at 246th Street would be within 2.0 miles of a planned interchange, this alternative was eliminated from further consideration.

246th Street Overpass Alternative

This alternative would involve the construction of an overpass bridge along 246th Street over US 31. 246th Street begins at US 31 and extends approximately 3.0 miles east where it forms a T-intersection with Devaney Road. There is no connection to 246th Street on the west side of US 31. As a result, 246th Street does not currently provide direct cross-community connectivity. Construction of an overpass bridge carrying 246th Street over US 31 meets the purpose and need of the project, which is to improve safety along this section of the US 31 corridor; however, it would not be prudent since 246th Street does not extend west from US 31. To provide cross-community connectivity along 246th Street, approximately 0.5 mile of new roadway construction beginning at US 31 and extending west to Dunbar Road would be required to complete the link. This road extension would increase the cost and environmental impacts including a potential residential relocation and potential stream crossings. 236th Street provides a better cross-community connection for commuters and is a planned location for an interchange at US 31. Therefore, the 246th Street Overpass Alternative is not considered to be the preferred alternative.

256th Street Interchange Alternative

256th Street is located approximately 2.0 miles north of the planned 236th Street and US 31 interchange and approximately 2.0 miles south of the proposed 276th Street and US 31 interchange. According to Chapter 48 of the INDOT Design Manual, interchanges in rural areas should not be spaced less than 2.0 miles apart on other systems. Since an interchange at 256th Street would be within 2.0 miles of a planned interchange, this alternative was eliminated from further consideration.

256th Street Overpass and 266th Street Cul-de-sac Alternative

256th Street is classified as Local Rural Road / Primary Arterial roadway and 266th Street is classified a Rural Major Collector Road/ Secondary Arterial roadway. 256th Street extends approximately 3.0 miles west of US 31 where it intersects with Eagletown Road. 256th Street extends approximately 6.0 miles east of US 31 where it connects with SR 19, approximately 0.5 mile south of the Town of Arcadia. 266th Street extends approximately 3.0 miles west of US 31 where it intersects with Six Points Road. 266th Street extends approximately 6.0 miles east of US 31, passing through the Town of Arcadia, and connects with SR 19 then continues east beyond the county line.

Based on traffic data collected by Hamilton County in 2019, 256th Street has an AADT of 414 vpd west of US 31 and 815 vpd east of US 31 and 266th Street has an AADT of 238 vpd west of US 31 and 1,329 vpd east of US 31. The traffic data indicates that, despite the current roadway classifications, 266th Street is the more traveled route between the Town of Arcadia and US 31. 256th Street and 266th Street are located approximately 1.0 mile apart. Given the proximity of these two roadways, only one overpass is being proposed between these two locations. Construction of overpasses at both locations would increase environmental and right-of-way impacts, as well as increase construction costs.

Constructing an overpass to carry 256th Street over US 31 and converting the 266th Street intersection into a cul-de-sac meets the purpose and need of the project, which is to improve safety along this section of the US 31 corridor. however, it is not desired since the existing traffic patterns indicate that 266th Street has 65% greater AADT than 256th Street. This is likely due to the direct connection that 266th Street provides to the Town of Arcadia. Since the Arcadia Police Department and Jacksonville Township Fire Department are near 266th Street, and 266th Street has a greater AADT count than 256th Street, the 256th Street Overpass 266th Street Cul-de-sac Alternative is not considered to be the preferred alternative.

266th Street Interchange and 276th Street Overpass Alternative

276th Street is classified as a Rural Major Collector / Local Collector roadway and 266th Street is classified as a Rural Major Collector/ Secondary Arterial roadway. 276th Street extends 6.0 miles to the west into Boone County. To the east 276th Street extends approximately 4.5 miles to Gwinn Road. 266th Street extends approximately 3.0 miles west of US 31 where it intersects with Six Points Road. 266th Street extends approximately 6.0 miles east of US 31, passing through the Town of Arcadia, and connects with SR 19. 266th Street and 276th Street are located approximately 1.0 mile apart. Given the proximity of these two roadways, only one interchange is being proposed between these two locations. US 31 is a four-lane, divided, Rural Principal Arterial roadway. According to Chapter 48 of the INDOT Design Manual, interchanges in rural areas should not be spaced less than 2.0 miles apart on non-interstate systems.

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In the southwest quadrant of 276th Street and US 31 there is large Reynold's tractor dealership with almost 60,000 square feet of building space. On 276th Street, approximately 4.1 miles east of US 31 is Beck Hybrid's Agricultural/Industrial property with numerous buildings and grain elevators. Town of Arcadia is located approximately 5.5 miles east of US 31 and approximately 1.0 mile south of 276th Street. Additionally, the State of Indiana State Armory owns approximately 54 acres of vacant land on the northeast quadrant of 276th Street and US 31.

An interchange carrying 266th Street over US 31 and converting the 276th Street intersection into an overpass meets the purpose and need of the project, which is to improve safety along this section of the US 31 corridor; however, it is not desired since an interchange at 266th Street would not provide direct access to the commercial and agricultural businesses on 276th Street as well as direct access to US 31 for the future Indiana State Armory. As a result, this alternative has been eliminated from further consideration.

276th Street Cul-de-sac Alternative

This alternative proposes to construct cul-de-sacs on 276th Street on both the east and west sides of US 31. 276th Street currently extends 6.0 miles to the west of US 31 into Boone County. Going east from US 31, 276th Street extends approximately 4.5 miles to Gwinn Road. Based on traffic data and roadway classification, 276th Street is currently used for cross community connectivity. Closure of the access to 276th Street from US 31 and construction of cul-de-sacs would meet the purpose and need of the project, which is to improve safety along this section of the US 31 corridor; however, since construction of cul-de-sacs on 276th Street and terminating the east west connectivity would not maintain cross community connectivity, the 276th Street Cul-de-Sac Alternative is not considered to be the preferred alternative.

281st Street Interchange Alternative

281st Street is a Local Collector roadway located approximately 0.5 mile north of the proposed 276th Street and US 31 interchange. 281st Street begins at US 31 and extends approximately 3.0 miles east where it forms a T-intersection with Devaney Road. 281st Street does not exist west of US 31. Construction of an interchange would meet the purpose and need of the project, which is to improve safety along US 31 along this section of the US 31 corridor; however, this is not prudent since 281st Street currently does not extend west from US 31. To improve cross-community connectivity, approximately 3.0 miles of new roadway construction, in addition to the interchange bridge, would need to be completed to connect 281st Street to its current terminus at Ditch Road. This road extension would increase the construction cost and environmental impacts including potential residential relocations. Therefore, an interchange at this location would not provide the ideal cross-community connectivity. Since 276th Street provides a better cross-community connection for commuters, and this is the planned location for an interchange, the 281st Street Interchange Alternative is not considered to be the preferred alternative.

281st Street Overpass Alternative

281st Street forms a T-intersection on the east side of US 31, approximately 0.5 mile north of the planned interchange at 276th Street. There is no connection to 281st Street on the west side of US 31. As a result, 281st Street does not currently provide direct cross-community connectivity. Constructing an overpass carrying 281st Street over US 31 meets the purpose and need of the project, which is to improve safety along this section of the US 31 corridor; however, it is not prudent since 281st Street currently does not extend west from US 31. To provide cross-community connectivity, approximately 3.0 miles of new roadway construction, in addition to the overpass bridge, would need to be completed to connect 281st Street to its current terminus at Ditch Road. This road extension would increase the construction cost and environmental impacts including potential residential relocations. Therefore, an overpass at this location would not provide the ideal cross-community connectivity. Since 276th Street provides a better cross-community connection for commuters, and this is the planned location for an interchange, the 281st Street Overpass Alternative is not considered to be the preferred alternative.

The No Build Alternative is not feasible, prudent, or practicable because (Mark all that apply):

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

X

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ROADWAY CHARACTER:

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

Name of Roadway United States Highway 31
 Functional Classification: Rural Principal Arterial
 Current ADT: 29,570 VPD (2017) Design Year ADT: 36,530 VPD (2044)
 Design Hour Volume (DHV): 3,150 Truck Percentage (%) 14
 Designed Speed (mph): 70 Legal Speed (mph): 60

	Existing	Proposed
Number of Lanes:	Two southbound, Two northbound, One designated left turn	Two southbound, Two northbound
Type of Lanes:	Through, Turn	Through
Pavement Width:	76-100 ft.	76 ft.
Shoulder Width:	28 ft.	28 ft.
Median Width:	42-47 ft.	47 ft.
Sidewalk Width:	n/a ft.	n/a ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

Name of Roadway 216th Street
 Functional Classification: Local Road
 Current ADT: 2049 VPD (2018) Design Year ADT: 50 VPD (2042)
 Design Hour Volume (DHV): 205 Truck Percentage (%) 5%
 Designed Speed (mph): 40 Legal Speed (mph): 40

	Existing	Proposed
Number of Lanes:	Two	Two
Type of Lanes:	Through	Through
Pavement Width:	20 ft.	20 ft.
Shoulder Width:	n/a ft.	4 ft.
Median Width:	n/a ft.	n/a ft.
Sidewalk Width:	n/a ft.	n/a ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

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Name of Roadway 226th Street
 Functional Classification: Local Road
 Current ADT: 357 VPD (2018) Design Year ADT: 587 VPD (2042)
 Design Hour Volume (DHV): 38 Truck Percentage (%) 10%
 Designed Speed (mph): 50 Legal Speed (mph): 45

Existing		Proposed	
Number of Lanes:	Two	Two	
Type of Lanes:	Through	Through	
Pavement Width:	20 ft.	24	ft.
Shoulder Width:	3 ft.	4 - 12	ft.
Median Width:	n/a ft.	n/a	ft.
Sidewalk Width:	n/a ft.	n/a	ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

Name of Roadway Access Road (New Road Associated with 226th Street and 236th Street)
 Functional Classification: Local Road
 Current ADT: n/a VPD (2022) Design Year ADT: 100 VPD (2042)
 Design Hour Volume (DHV): 10 Truck Percentage (%) 5%
 Designed Speed (mph): 40 Legal Speed (mph): 40

Existing		Proposed	
Number of Lanes:	n/a	Two	
Type of Lanes:	n/a	Through	
Pavement Width:	n/a ft.	32	ft.
Shoulder Width:	n/a ft.	4	ft.
Median Width:	n/a ft.	n/a	ft.
Sidewalk Width:	n/a ft.	n/a	ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

Name of Roadway 246th Street
 Functional Classification: Local Road
 Current ADT: 156 VPD (2018) Design Year ADT: 50 VPD (2042)
 Design Hour Volume (DHV): 5 Truck Percentage (%) 2%
 Designed Speed (mph): 40 Legal Speed (mph): 40

Existing		Proposed	
Number of Lanes:	Two	Two	
Type of Lanes:	Through	Through	
Pavement Width:	20 ft.	20	ft.
Shoulder Width:	n/a ft.	4	ft.
Median Width:	n/a ft.	n/a	ft.
Sidewalk Width:	n/a ft.	n/a	ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

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Name of Roadway 256th Street
 Functional Classification: Local Road
 Current ADT: 815 VPD (2018) Design Year ADT: 50 VPD (2042)
 Design Hour Volume (DHV): 82 Truck Percentage (%) 5%
 Designed Speed (mph): 55 Legal Speed (mph): 55

	Existing		Proposed	
Number of Lanes:	Two		Two	
Type of Lanes:	Through		Through	
Pavement Width:	20	ft.	20	ft.
Shoulder Width:	n/a	ft.	4	ft.
Median Width:	n/a	ft.	n/a	ft.
Sidewalk Width:	n/a	ft.	n/a	ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

Name of Roadway 266th Street
 Functional Classification: Rural Major Collector
 Current ADT: 1,340 VPD (2018) Design Year ADT: 526 VPD (2042)
 Design Hour Volume (DHV): 134 Truck Percentage (%) 5%
 Designed Speed (mph): 50 Legal Speed (mph): 55

	Existing		Proposed	
Number of Lanes:	Two		Two	
Type of Lanes:	Through		Through	
Pavement Width:	20	ft.	32-48	ft.
Shoulder Width:	n/a	ft.	4-12	ft.
Median Width:	n/a	ft.	n/a	ft.
Sidewalk Width:	n/a	ft.	n/a	ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

Name of Roadway 276th Street
 Functional Classification: Rural Major Collector east of US 31 / Local Road west of US 31
 Current ADT: 664 VPD (2018) Design Year ADT: 795 VPD (2043)
 Design Hour Volume (DHV): 118 Truck Percentage (%) 5%
 Designed Speed (mph): 55 Legal Speed (mph): 45

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	Existing	Proposed
Number of Lanes:	Two	Four
Type of Lanes:	Through	Two Through, Two Auxiliary Lanes at Interchange
Pavement Width:	22 (west of US 31) ft. 24 (east of US 31)	24-48 ft.
Shoulder Width:	N/A (west of US 31); 3 (earth; east of US 31) ft.	6 ft.
Median Width:	N/A ft.	12 ft.
Sidewalk Width:	N/A ft.	N/A ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

Name of Roadway: 281st Street
 Functional Classification: Local Road
 Current ADT: 39 VPD (2019) Design Year ADT: 25 VPD (2043)
 Design Hour Volume (DHV): 5 Truck Percentage (%): 1
 Designed Speed (mph): 45 Legal Speed (mph): 45

	Existing	Proposed
Number of Lanes:	Two	Two
Type of Lanes:	Through	Through
Pavement Width:	17 ft.	20 ft.
Shoulder Width:	N/A ft.	4 ft.
Median Width:	N/A ft.	N/A ft.
Sidewalk Width:	N/A ft.	N/A ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

Name of Roadway: 286th Street
 Functional Classification: Local Road
 Current ADT: 177 VPD (2018) Design Year ADT: 50 VPD (2043)
 Design Hour Volume (DHV): 5 Truck Percentage (%): 5%
 Designed Speed (mph): 45 Legal Speed (mph): 45

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	Existing		Proposed	
Number of Lanes:	Two		Two	
Type of Lanes:	Through		Through	
Pavement Width:	20	ft.	20	ft.
Shoulder Width:	N/A	ft.	N/A	ft.
Median Width:	N/A	ft.	N/A	ft.
Sidewalk Width:	N/A	ft.	N/A	ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

BRIDGES AND/OR SMALL STRUCTURE(S):

If the proposed action includes multiple structures, complete and duplicate for each bridge and/or small structure. Include both existing and proposed bridge(s) and/or small structure(s) in this section.

Structure/NBI Number(s): 31-29-04572B SBL/009660 (Exist.) Sufficiency Rating: 92.6, 2018 Bridge Inspection Report
 (Rating, Source of Information)

	Existing		Proposed	
Bridge/Structure Type:	Continuous Non-Composite Steel Beam		Continuous Composite Prestressed I-Beam	
Number of Spans:	3		3	
Weight Restrictions:	N/A (HS 20)	ton	N/A (HL-93)	ton
Height Restrictions:	N/A	ft.	N/A	ft.
Curb to Curb Width:	33.33	ft.	Varies 73.97 to 80.28	ft.
Outside to Outside Width:	36.33	ft.	Varies 76.96 to 83.26	ft.
Shoulder Width:	4.67	ft.	5.67 Median/Varies 9.67 to 11.76	ft.

Describe impacts and work involving bridge(s), culvert(s), pipe(s), and small structure(s). Provide details for small structure(s): structure number, type, size (length and dia.), location and impacts to water. Use a table if the number of small structures becomes large. If the table exceeds a complete page, put it in the appendix and summarize the information below with a citation to the table.

Replacement and widening of existing 61-year-old non-composite steel beam bridge with scour critical piers carrying SB US 31 over Little Cicero Creek will take place. The replacement structure will provide two (2) through lanes and an exit ramp lane for proposed interchange at 276th Street and US 31. The proposed structure will consist of a three-span prestressed concrete Type 1 American Association of State Highway and Transportation Officials (AASHTO) I-Beams on shallow end bents and wall piers supported on HP 12' x 74' piles. The new bridge will result in approximately 40 linear feet of impacts to Little Cicero Creek.

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Structure/NBI Number(s): 31-29-04572B NBL/ 009650 (Exist.) Sufficiency Rating: 92.6, 2018 Bridge Inspection Report
(Rating, Source of Information)

	Existing		Proposed	
Bridge/Structure Type:	Continuous Non-Composite Steel Beam		Continuous Composite Prestressed I-Beam	
Number of Spans:	3		3	
Weight Restrictions:	N/A (HS 20)	ton	N/A (HL-93)	ton
Height Restrictions:	N/A	ft.		ft.
Curb to Curb Width:	33.33	ft.	53.33	ft.
Outside to Outside Width:	36.33	ft.	56.33	ft.
Shoulder Width:	4.67	ft.	5.67/11.67	ft.

Describe impacts and work involving bridge(s), culvert(s), pipe(s), and small structure(s). Provide details for small structure(s): structure number, type, size (length and dia.), location and impacts to water. Use a table if the number of small structures becomes large. If the table exceeds a complete page, put it in the appendix and summarize the information below with a citation to the table.

Replacement and widening of existing 61-year-old non-composite steel beam bridge with scour critical piers carrying NB US 31 over Little Cicero Creek. Replacement structure will provide two (2) through lanes and an entrance ramp lane for proposed interchange construction at 276th Street and US 31. Proposed structure will consist of a three-span prestressed concrete Type 1 AASHTO I-Beams on shallow end bents and wall piers on HP 12 x 74 piles.

Structure/NBI Number(s): 031-29-10579 Sufficiency Rating: N/A
(Rating, Source of Information)

	Existing		Proposed	
Bridge/Structure Type:	N/A		Two span, Bulb-Tee 48x49 bridge with Integral End Bents	
Number of Spans:	N/A		2	
Weight Restrictions:	N/A	ton	HL-93	ton
Height Restrictions:	N/A	ft.	*17.74 and 16.90	ft.
Curb to Curb Width:	N/A	ft.	48	ft.
Outside to Outside Width:	N/A	ft.	51	ft.
Shoulder Width:	N/A	ft.	6	ft.

*Note: Understructure minimum vertical clearances noted for SBL and NBL, respectively.

Describe impacts and work involving bridge(s), culvert(s), pipe(s), and small structure(s). Provide details for small structure(s): structure number, type, size (length and dia.), location and impacts to water. Use a table if the number of small structures becomes large. If the table exceeds a complete page, put it in the appendix and summarize the information below with a citation to the table.

Construction of a new two span (105'-0", 105'-0"), bulb-tee beam bridge, along 276th Street over US 31.

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Structure/NBI Number(s): TBD (276th Street over Little Cicero Creek) Sufficiency Rating: N/A
 (Rating, Source of Information)

	Existing		Proposed	
Bridge/Structure Type:	Reinforced Concrete Slab Bridge		Continuous Prestressed Concrete I-Beam Bridge	
Number of Spans:	3		3	
Weight Restrictions:	HS-20	ton	HL-93	ton
Height Restrictions:	N/A	ft.	N/A	ft.
Curb to Curb Width:	24	ft.	39.5	ft.
Outside to Outside Width:	27	ft.	42.5	ft.
Shoulder Width:	0	ft.	7.6-10	ft.

Describe impacts and work involving bridge(s), culvert(s), pipe(s), and small structure(s). Provide details for small structure(s): structure number, type, size (length and dia.), location and impacts to water. Use a table if the number of small structures becomes large. If the table exceeds a complete page, put it in the appendix and summarize the information below with a citation to the table.

A replacement 3-span (40'-9", 41'-6", 40'-9") continuous prestressed concrete AASHTO I-beam bridge will be constructed to carry 276th Street over Little Cicero Creek. Approximately 73 linear feet of impacts to Little Cicero Creek are anticipated from the construction of this bridge.

Structure/NBI Number(s): CV 031-029-142.03-ADJ-W1 Sufficiency Rating: N/A
 (Rating, Source of Information)

	Existing		Proposed	
Bridge/Structure Type:	N/A		18 ft. x 5 ft. Precast Box with Wingwalls	
Number of Spans:	N/A		1	
Weight Restrictions:	N/A	ton	HL-93	ton
Height Restrictions:	N/A	ft.	N/A	ft.
Curb to Curb Width:	N/A	ft.	*40	ft.
Outside to Outside Width:	N/A	ft.	55	ft.
Shoulder Width:	N/A	ft.	8	ft.

*Note: This is the shoulder-to-shoulder width, there are no curbs.

Describe impacts and work involving bridge(s), culvert(s), pipe(s), and small structure(s). Provide details for small structure(s): structure number, type, size (length and dia.), location and impacts to water. Use a table if the number of small structures becomes large. If the table exceeds a complete page, put it in the appendix and summarize the information below with a citation to the table.

Placement of a new box culvert (floodway equalizer pipe), under 276th Street.

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County Hamilton Route US 31 Des. No. 1900096, et. al

Structure/NBI Number(s): CV 031-029-142.03-ADJ-W2 Sufficiency Rating: N/A
 (Rating, Source of Information)

Existing		Proposed	
Bridge/Structure Type:	N/A	18 ft. x 5 ft. Precast Box with Wingwalls	
Number of Spans:	N/A	1	
Weight Restrictions:	N/A ton	HL-93	ton
Height Restrictions:	N/A ft.	N/A	ft.
Curb to Curb Width:	N/A ft.	*40	ft.
Outside to Outside Width:	N/A ft.	58	ft.
Shoulder Width:	N/A ft.	8	ft.

**Note: This is the shoulder-to-shoulder width, there are no curbs.*

Describe impacts and work involving bridge(s), culvert(s), pipe(s), and small structure(s). Provide details for small structure(s): structure number, type, size (length and dia.), location and impacts to water. Use a table if the number of small structures becomes large. If the table exceeds a complete page, put it in the appendix and summarize the information below with a citation to the table.

Placement of a new box culvert (floodway equalizer pipe), under 276 th Street.

Structure/NBI Number(s): CV 031-029-142.03-ADJ-W3 Sufficiency Rating: N/A
 (Rating, Source of Information)

Existing		Proposed	
Bridge/Structure Type:	N/A	18 ft. x 5 ft. Precast Box with Wingwalls	
Number of Spans:	N/A	1	
Weight Restrictions:	N/A ton	HL-93	ton
Height Restrictions:	N/A ft.	N/A	ft.
Curb to Curb Width:	N/A ft.	*40	ft.
Outside to Outside Width:	N/A ft.	63	ft.
Shoulder Width:	N/A ft.	8	ft.

**Note: This is the shoulder-to-shoulder width, there are no curbs.*

Describe impacts and work involving bridge(s), culvert(s), pipe(s), and small structure(s). Provide details for small structure(s): structure number, type, size (length and dia.), location and impacts to water. Use a table if the number of small structures becomes large. If the table exceeds a complete page, put it in the appendix and summarize the information below with a citation to the table.

Placement of a new box culvert (floodway equalizer pipe), under 276 th Street.

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Structure/NBI Number(s): 31-029-10478 Sufficiency Rating: N/A
 (Rating, Source of Information)

	Existing	Proposed
Bridge/Structure Type:	N/A	Continuous Composite Prestressed Concrete Bulb-Tee Beam
Number of Spans:	N/A	Two
Weight Restrictions:	N/A	N/A
Height Restrictions:	N/A	16.5
Curb to Curb Width:	N/A	40.0
Outside to Outside Width:	N/A	43
Shoulder Width:	N/A	Shoulder will be 8.0 on the bridge (off the bridge it will be 8.3 ft with guardrail, 3 ft without)

Describe impacts and work involving bridge(s), culvert(s), pipe(s), and small structure(s). Provide details for small structure(s): structure number, type, size (length and dia.), location and impacts to water. Use a table if the number of small structures becomes large. If the table exceeds a complete page, put it in the appendix and summarize the information below with a citation to the table.

The project will include the construction of a new bridge to carry 226th Street over US 31.

Structure/NBI Number(s): TBD (266th Street Overpass) Sufficiency Rating: N/A
 (Rating, Source of Information)

	Existing	Proposed
Bridge/Structure Type:	N/A	Continuous Composite Prestressed Concrete Bulb-Tee Beam
Number of Spans:	N/A	Two
Weight Restrictions:	N/A	N/A
Height Restrictions:	N/A	16.5
Curb to Curb Width:	N/A	40.0
Outside to Outside Width:	N/A	43
Shoulder Width:	N/A	Shoulder will be 8.0 on the bridge (off the bridge it will be 8.3 ft with guardrail, 3 ft without)

Describe impacts and work involving bridge(s), culvert(s), pipe(s), and small structure(s). Provide details for small structure(s): structure number, type, size (length and dia.), location and impacts to water. Use a table if the number of small structures becomes large. If the table exceeds a complete page, put it in the appendix and summarize the information below with a citation to the table.

The project will include the construction of a new bridge to carry 266th Street over US 31. Due to the current alignment of 266th Street on the east side of US 31, the proposed roadway and overpass will require a realignment of 266th Street up to 200 feet south of its current alignment east of US 31.

There are 61 additional small structures, drainage pipes, and drive pipes found within the project area (see Appendix J page 7 – 8 for more information on these structures).

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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 below)	<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"/>

Discuss closures and/or facilities (if any) that will be provided for maintenance of traffic. Any known impacts from these temporary measures should be quantified to the extent possible, particularly with respect to properties such as Section 4(f) resources and wetlands. Any local concerns about access and traffic flow should be detailed as well.

All segments of this project will adhere to current INDOT Standards and Specifications general MOT requirements. Except for nighttime lane closures, as described below, all segments of this project will maintain two (2) lanes of traffic in each direction of US 31 throughout construction. Ingress and egress to properties will be maintained during construction, except for those properties proposed to be relocated as part of the project.

According to INDOT's website (<https://www.in.gov/indot/3831.htm>), the 236th Street interchange project is planned to begin in August 2021 and be completed in July 2023. This interchange is anticipated to be open to traffic prior to any cul-de-sac construction proposed for this project. Similarly, the 276th Street interchange portion of this project is planned to be constructed first and open to traffic prior to any cul-de-sac construction proposed for this project. The MOT for the 276th Street interchange is anticipated to be constructed in five (5) phases, which consist of the following:

- Pre-Phase – Utilize nighttime lane closures for shoulder strengthening on US 31 NB and SB and reconstruct the temporary commercial property access on the west side of US 31, approximately 0.25 mile south of 276th Street.
- Phase 1 – US 31 lanes will be shifted to the inside to construct outside widening of US 31, all offline portions of proposed ramps, temporary roadway for 276th Street east of US 31 and outside portions of US 31 SB and NB bridges over Little Cicero Creek. 276th Street, west of US 31, shall not be closed until the US 31 temporary access to Reynold's property has been constructed, including US 31 auxiliary lanes and median opening. There will be a closure and detour for 276th Street, west of US 31.
- Phase 1A – The new US 31 NB bridge over Little Cicero Creek will accommodate the two NB lanes and the NB onramp from 276th Street. In this phase, one lane of NB traffic will be split on to the newly constructed portion of the bridge while the other lane of US 31 NB mainline traffic will be shifted inside and outside while the other side is being built.
- Phase 2 – US 31 lanes will be shifted to the outside to construct the inside portion of US 31 NB and SB bridges over Little Cicero Creek. Temporary pavement will be required to shift traffic off the outside portion of the newly constructed US 31 SB bridge back to US 31 SB mainline. The existing US 31 and 276th Street intersection will be closed to allow for the 276th Street overpass bridge and approaches to be constructed. A nighttime rolling slowdown on US 31, for a temporary full closure in one or both directions, will be necessary to set the 276th Street overpass beams.
- Phase 3 – There will be a temporary closure and detour for 276th Street, east of US 31. Continuous access will be provided to properties along 276th Street. Construction of the proposed connection to 33rd Street will be phased to allow access to properties in the work zone. The remaining sections of 276th Street and portions of US 31 NB and SB will be constructed under the 276th Street overpass. Any final bridge work will be completed.

Where new overpass bridges are proposed for construction, traffic will be detoured on local county roads. Overpass bridges will be constructed and opened to traffic prior to the construction of cul-de-sacs on local county roads. Local county roads that are to be turned

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into cul-de-sacs at US 31 will experience a permanent traffic alteration.

The MOT plan for the 226th Street overpass will require road closure of 226th Street and detour during construction of the new bridge. It is proposed to detour northbound/southbound traffic on Dunbar Road and E. 33rd Street to 236th Street to access or cross over US 31.

The MOT for the 266th Street overpass will require the road closure of 266th Street and detour during construction of the new bridge. It is proposed to detour traffic northbound/southbound on Dunbar Road and Anthony Road to 276th Street to access or cross over US 31.

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. Delays will occur during construction but will cease with project completion.

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: \$ 1,880,000 (2020) Right-of-Way: \$ 500,000 (2021) Construction: \$ 22,775,000 (2022)

Anticipated Start Date of Construction: Spring 2022

RIGHT OF WAY:

Land Use Impacts	Amount (acres)	
	Permanent	Temporary
Residential	31.53	5.56
Commercial	30.18	6.10
Agricultural	320.75	4.50
Forest	7.19	0.00
Wetlands	0.30	0.00
Other: Open Water	0.45	0.00
Other:	0.00	0.00
TOTAL	390.39	16.16

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

The existing right-of-way along US 31 is approximately 180 feet consisting of 90 feet extended from the centerline of the median eastward and westward. It is assumed the existing right-of-way at intersecting roads is to the edge of existing pavement and does not extend northward or southward from the roadway edges.

Roadway	Existing Typical / Maximum right-of-way Width (feet)	Proposed Typical / Maximum right-of-way Width (feet)
US 31	170 / 220	170 / 640
216 th Street	30 / 60	30 / 135
226 th Street	30 / 70	60 / 225
246 th Street	30 / 30	30 / 135
256 th Street	30 / 35	30 / 135
266 th Street	35 / 80	35 / 300
276 th Street	75 / 90	50 / 210
281 st Street	33 / 33	33 / 135
286 th Street	30 / 35	35 / 135

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To date, INDOT has carried out advance acquisitions on three (4) parcels along US 31 associated with this project. It is anticipated that there are fifteen (15) additional parcels that will likely proceed to advanced acquisition that are associated with the 276th interchange. It is unknown at this time if any more advance acquisitions will occur prior to the conclusion of the environmental process.

It is anticipated at this time that all work proposed to occur under Des. No. 1900096 will result in 15.58 acres of permanent right-of-way acquisition involving 5.54 acres of commercial, 1.72 acres of residential, 8.25 acres of agricultural land, and 0.07 acre of wetlands, as well as 2.91 acres of temporary right-of-way acquisition involving commercial and residential land.

It is anticipated at this time that all work proposed to occur under Des. No. 1900097 will result in 67.88 acres of permanent right-of-way acquisition involving 3.55 acres of commercial, 4.19 acres of residential, 60.13 acres of agricultural land, 0.01 acre of wetlands, and 0.25 acre of temporary right-of-way acquisition involving residential land.

It is anticipated at this time that all work proposed to occur under Des. No. 1901797 and sub des. numbers will result in 152.10 acres of permanent right-of-way acquisition involving 8.70 acres of commercial, 2.59 acres of residential, 1.00 acre of forest, 0.20 acre of open water, 0.15 acre of wetland, and 139.46 acres of agricultural land, and 3.13 acres of temporary right-of-way acquisition involving residential land.

It is anticipated at this time that all work proposed to occur under Des. No. 2002313 will result in 154.83 acres of permanent right-of-way acquisition involving 12.39 acres of commercial, 23.03 acres of residential, 112.91 acres of agricultural land, 6.19 acres of forest, 0.25 acre of open water, 0.06 acre of wetlands, and 9.87 acres of temporary right-of-way acquisition involving commercial, residential, and agricultural land.

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

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

SECTION A - EARLY COORDINATION:

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

An Early Coordination Letter (ECL) was originally sent for this project on April 14, 2020 (Appendix C, Pages 1-4). Then, as the project details developed, a second ECL was sent on March 19, 2021, in order to update the original recipients to the most current information (Appendix C, Pages 5-11). Courtesy copies of the ECL were sent to the FHWA, the INDOT Project Manager, and the INDOT-ESD. A list of the resource agencies contacted is provided below, along with their response date (if applicable).

In addition to Early Coordination, a Resource Agency meeting was held on April 23, 2021, to discuss the project and provide any explanations of impacts to community, natural, and/or cultural resources (Appendix C, pages 61-63) for summary of the meeting). The comment period after the meeting was kept open until May 7, 2021. No additional comments were provided to supplement those received from Early Coordination responses.

AGENCY	SENT DATE	RESPONSE DATE	APPENDIX C
Indiana Geological and Water Survey, Online Roadway Project Portal	April 22, 2021	April 22, 2021	Pages 38-44
U.S. Fish and Wildlife Service Northern Indiana Ecological Services Office (Chesterton)	April 14, 2020 and March 19, 2021	April 29, 2020	Pages 22-23
U.S. Fish and Wildlife Service Southern Indiana Ecological Services Office (Bloomington Field Office)	April 14, 2020 and March 19, 2021	April 15, 2020	Pages 18-21
USDA Natural Resources Conservation Service	April 14, 2020 and March 19, 2021	May 4, 2020 and April 9, 2021	Pages 26-30

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AGENCY	SENT DATE	RESPONSE DATE	APPENDIX C
INDOT, Office of Aviation	April 14, 2020 and March 19, 2021	April 16, 2020 and March 22, 2021	Pages 34-37
U.S. Dept. of Housing and Urban Development	April 14, 2020 and March 19, 2021	No Response	N/A
U.S. Environmental Protection Agency, Implementation Section	April 14, 2020 and March 19, 2021	April 15, 2020	Page 76
National Park Service	April 14, 2020 and March 19, 2021	No Response	N/A
U.S. Environmental Protection Agency, Groundwater Branch	April 14, 2020 and March 19, 2021	May 7, 2020 and March 19, 2021	Pages 24-25
Indiana Department of Natural Resources Division of Fish and Wildlife	April 14, 2020 and March 19, 2021	May 13, 2020 and April 22, 2021	Pages 12-16
Indiana Department of Natural Resources Division of Oil & Gas	April 22, 2021	April 23, 2021	Page 17
U.S. Army Corps of Engineers, Louisville District	April 14, 2020 and March 19, 2021	No Response	N/A
Indiana Department of Environmental Management, Groundwater Section	April 14, 2020 and March 19, 2021	No Response	N/A
Indiana Department of Environmental Management, Online Roadway Project Portal	April 27, 2021	April 27, 2021	Pages 38-44
Indianapolis Metropolitan Planning Organization	April 14, 2020 and March 19, 2021	No Response	N/A
Hamilton County Surveyor's Office	April 14, 2020 and March 19, 2021	No Response	N/A
Tipton County Surveyor's Office	April 14, 2020 and March 19, 2021	May 5, 2020	57 – 60
Town of Sharpville	April 14, 2020 and March 19, 2021	May 4, 2020	Pages 45-46
Hamilton County Highway Department	April 14, 2020 and March 19, 2021	No Response	N/A
Hamilton County Emergency Management	April 14, 2020 and March 19, 2021	No Response	N/A
Tipton County Highway Department	April 14, 2020 and March 19, 2021	May 5, 2020	Pages 57-60
Hamilton County Council	April 14, 2020 and March 19, 2021	No Response	N/A
Hamilton County Board of Commissioners	April 14, 2020 and March 19, 2021	No Response	N/A
Tipton County Council	April 14, 2020 and March 19, 2021	No Response	N/A
Tipton County Board of Commissioners	April 14, 2020 and March 19, 2021	May 11, 2020	Pages 49-51
Adams Township Trustee	April 14, 2020 and March 19, 2021	No Response	N/A
Hamilton County Health Department	April 14, 2020 and March 19, 2021	No Response	N/A
Jackson Township Trustee	April 14, 2020 and March 19, 2021	No Response	N/A
Westfield Washington Township Trustee	April 14, 2020 and March 19, 2021	No Response	N/A
Tipton County Health Department	April 14, 2020 and March 19, 2021	May 7, 2021	Pages 47-48

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AGENCY	SENT DATE	RESPONSE DATE	APPENDIX C
Cicero Township Trustee	April 14, 2020 and March 19, 2021	May 11, 2020	Pages 49-51
Hamilton County Sherriff's Office	April 14, 2020 and March 19, 2021	No Response	N/A
Jefferson Township Trustee	April 14, 2020 and March 19, 2021	May 11, 2020	Pages 49-51
Tipton County Sherriff's Office	April 14, 2020 and March 19, 2021	May 7, 2021	Pages 47-48
Liberty Township Trustee	April 14, 2020 and March 19, 2021	May 11, 2020	Pages 49-51
Jackson Township Fire Department	April 14, 2020 and March 19, 2021	No Response	N/A
Sheridan Fire Department	April 14, 2020 and March 19, 2021	No Response	N/A
Cicero Township Volunteer Fire Department	April 14, 2020 and March 19, 2021	May 7, 2021	Pages 47-48
Westfield-Washington Schools	April 14, 2020	No Response	N/A
Sheridan Community Schools	April 14, 2020	No Response	N/A
Hamilton Heights School Corporation	April 14, 2020	No Response	N/A
Tipton Community School Corporation	April 14, 2020	May 5, 2020	Pages 55-56
Tri-Central Community Schools	April 14, 2020	May 5, 2020	Pages 55-56
Kokomo-Howard County Governmental Coordinating Council	April 14, 2020	No Response	N/A

EPA Groundwater and Drinking Water Branch responded on May 7, 2020, and March 1, 2021 that the project is not located in the Sole Source Aquifer review area, so an EPA Sole Source Aquifer project review is not required (Appendix C, pages 24 - 25). EPA Implementation Section responded on April 15, 2020, that EPA will engage in other early coordination as the project moves in preparation of the EA document and they further recommended that this project be discussed within the larger context of INDOT's plan to eventually establish US 31 as a limited access roadway from Indianapolis to South Bend (Appendix C, page 76). INDOT Aviation responded on April 16, 2020, and March 22, 2021, that no issues with surrounding airspace or public-use airports were found (Appendix C, pages 34 - 37). The Town of Sharpville, Tipton County Board of Commissioners, Schools of Tipton County, the Tipton County Highway Department, and members of the Tipton County business community responded requesting an interchange be placed at the US 31 and Division Road intersection. They did not provide any comments pertaining to the Hamilton County section of the project, which is the purview of this document (Appendix C, pages 45 - 60).

Other responses from Early Coordination pertaining to specific resources have been included in the subsequent sections of this document, as appropriate.

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SECTION B – ECOLOGICAL RESOURCES:

Streams, Rivers, Watercourses & Other Jurisdictional Features

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

Presence

X

Impacts

Yes	No
X	

Total stream(s) in project area: 10,162 Linear feet Total impacted stream(s): 998 Linear feet

Stream Name	Classification	Total Size in Project Area (linear feet)	Impacted linear feet	Comments (i.e., location, flow direction, likely "Water of the US", appendix reference)
Lindley Ditch	Intermittent	715	0	SR 38, Likely a "Water of the US", Appendix F, pg. 9
Raymond Briles Drain	Ephemeral	839	0	226 th Street, Unlikely a "Water of the US", Appendix F, pg. 9
UNT to Jones Ditch	Ephemeral	1,058	533	226 th Street, Unlikely a "Water of the US", Appendix F, pg. 9
Bennett Ditch	Intermittent	1,886	300	266 th Street, Likely a "Water of the US", Appendix F, pg. 8
UNT to Bennett Ditch	Ephemeral	702	0	266 th Street, Unlikely a "Water of the US", Appendix F, pg. 8
Little Cicero Creek (276 th)	Perennial	2,428	113	276 th Street, Likely a "Water of the US", Appendix F, pg. 57
UNT1 to Little Cicero Creek	Intermittent	2,100	52	276 th Street, Likely a "Water of the US", Appendix F, pg. 58
UNT2 to Little Cicero Creek	Intermittent	434	0	276 th Street, Likely a "Water of the US", Appendix F, pg. 58

Describe all streams, rivers, watercourses, and other jurisdictional features adjacent or within the project area. Include whether or not impacts (both permanent and temporary) will occur to the features identified. Include if the streams or rivers are listed on any federal or state lists for Indiana. Include if features are subject to federal or state jurisdiction. Discuss measures to avoid, minimize, and mitigate if impacts will occur.

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Based on a desktop review, site visits on July 15 – 16, 29, August 6-7, 19, 27, September 1-4, 10-11, 14, 16, October 27, and November 2, 2020 by RQAW and June 23-24 and September 22, 2020 by HNTB Corp., the aerial maps of the project area (Appendix B, pages 3 – 7), USGS quadrangle maps (Appendix B, page 2) and the water resources map in the Red Flag Investigation (RFI) report (Appendix E), there are 23 streams, rivers, watercourses, jurisdictional ditches located within the 0.5-mile search radius. There are eight (8) streams, rivers, watercourses, jurisdictional ditches present within or adjacent to the project area.

Two (2) *Waters of the U.S. Determination / Wetland Delineation Reports* were completed. The first report for the US 31 and 276th Street Interchange Project (Des No 1901797) was completed on January 8, 2021, and approved by INDOT Ecology and Waterway Permitting Office (EWPO) on January 13, 2021. The second report was completed for the remaining portions of the study area from SR 38 to US 931, including both Hamilton County and Tipton County on March 1, 2021, and approved by INDOT-EWPO on March 1, 2021. Please refer to Appendix F for excerpts of the *Waters of the U.S. Determination / Wetland Delineation Reports*. It was determined that eight (8) streams, rivers, watercourses, jurisdictional ditches occur within the project area. Of these, five (5) of these should be considered likely “Waters of the US” and three (3) should be considered unlikely “Waters of the US”. The U.S. Army Corps of Engineers (USACE) makes all final determinations regarding jurisdiction.

Lindley Ditch passes through the US 31 and SR 38 intersection. Approximately 715 linear feet of Lindley Ditch is located within the project area. Lindley Ditch is listed as impaired on the IDEM 303d List of Impaired Waterways ([Water Quality in Indiana: Home](#)) for *Escherichia coli* (*E. coli*). As a result, workers who are working in or near water with *E. coli* should take care to wear appropriate personal protective equipment (PPE), observe proper hygiene procedures, including regular handwashing, and limit personal exposure. No impacts to Lindley Ditch are anticipated and, as a result, no workers are expected to encounter water from Lindley Ditch.

Raymond Briles Ditch is located 0.14 mile south of the US 31/226th Street intersection. Approximately 839 linear feet is located within the project area. No impacts will occur to Raymond Briles Ditch because of this project.

UNT to Jones Ditch is located 0.36 mile south of the US 31/226th Street intersection. Approximately 1,058 linear feet is located within the project area. Approximately 533 linear feet of impacts will occur to UNT Jones Ditch because of relocation, grading, and riprap placement.

Bennett Ditch is in the southeast quadrant of the US 31/266th Street intersection. Approximately 1,886 linear feet is located within the project area. Approximately 300 linear feet of impacts will occur to Bennett Ditch because of stream relocation, grading, and riprap placement.

UNT to Bennett Ditch is in the northeast quadrant of the US 31/266th Street intersection. Approximately 702 linear feet is located within the project area. No impacts will occur to UNT to Bennett Ditch because of this project.

Little Cicero Creek is located 0.17 mile north of the US 31/276th Street intersection. Approximately 2,428 linear feet is located within the project area. Approximately 113 linear feet of impacts to Little Cicero Creek will result from stream encapsulation, construction of bridge piers, grading, and riprap placement.

UNT1 Little Cicero Creek is located 0.23 mile west of the US 31/276th Street intersection. Approximately 2,100 linear feet is located within the project area. Approximately 52 linear feet of impacts will occur to UNT1 to Little Cicero Creek because of encapsulation, grading, and placement of riprap.

UNT 2 Little Cicero Creek is located 0.09 mile north of the US 31/281st Street intersection. Approximately 434 linear feet is located within the project area. No impacts will occur to UNT 2 to Little Cicero Creek because of this project.

Due to impacts to stream resources, mitigation will likely be required and will be determined during permitting.

According to the database administered by the Bureau of Land Management, National Park Service, U.S. Fish and Wildlife Service (USFWS), and the U.S. Forest Service, [Indiana \(rivers.gov\)](#) there are no streams in this area of Hamilton County that are on the lists of Wild, Scenic, or Recreational Rivers. In addition, according to the database administered by NPS [\[Nationwide Rivers Inventory - Rivers \(U.S. National Park Service\) \(nps.gov\)\]](#), there are no streams in this area of Hamilton County that are on the Nationwide Rivers Inventory which are free-flowing rivers that possess one or more “outstandingly remarkable” natural or cultural values judged to be more than of local or regional significance.

Early coordination letters were sent to the Indiana Department of Natural Resources Division of Fish and Wildlife (IDNR-DFW), USFWS, and USACE on April 14, 2020 and March 19, 2021. IDEM was contacted via their online roadway project portal on April 27, 2021.

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IDNR-DFW responded on May 13, 2020, and April 22, 2021, with recommendations to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources and recommendations to address potential impacts identified in the project area (Appendix C, pages 12 - 16). USFWS Northern Indiana Ecological Services Office (Chesterton) responded on April 29, 2020, with standard recommendations to avoid or minimize impacts to fish, wildlife, and wildlife habitat, including streams (Appendix C, pages 22 - 23). USFWS Southern Indiana Ecological Services Office (Bloomington Field Office) responded on April 15, 2020, with standard recommendations to avoid or minimize impacts to fish, wildlife, and wildlife habitat, including streams (Appendix C, pages 18 - 21). The USACE did not respond to the early coordination letter. The standard automatic response letter was generated from the IDEM online project forum (Appendix C, pages 38 - 44). No other comments from IDEM have been received.

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

Open Water Feature(s)	Presence	Impacts	
		Yes	No
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"/>
Retention/Detention Basin	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>

Describe all open water feature(s) identified adjacent or within the project area. Include whether or not impacts (both permanent and temporary) will occur to the features identified. Include if features are subject to federal or state jurisdiction. Discuss measures to avoid, minimize, and mitigate if impacts will occur.

Based on a desktop review, site visits on July 15 – 16, 29, August 6-7, 19, 27, September 1-4, 10-11, 14, 16, October 27, and November 2, 2020 by RQAW and June 23-24 and September 22, 2020 by HNTB Corp., the aerial maps of the project area (Appendix B, pages 3-7), USGS quadrangle maps (Appendix B, page 2) and the water resources map in the Red Flag Investigation (RFI) report (Appendix E), there are 14 open water features located within the 0.5-mile search radius. There are no open water features present within or adjacent to the project area.

Two (2) *Waters of the U.S. Determination / Wetland Delineation Report* were completed. The first one for the US 31 and 276th Street Intersection Project (Des. No. 1901797) on January 8, 2021, and approved by INDOT Ecology and Waterway Permitting Office (EWPO) on January 13, 2021. The second report was completed for the remaining areas of the study area from SR 38 to US 931, including both Hamilton County and Tipton County on March 1, 2021, and approved by INDOT-EWPO on March 1, 2021. Please refer to Appendix F for excerpts of the *Waters of the U.S. Determination / Wetland Delineation Reports*. It was determined that no open water features occur within the project area.

No other surface waters were identified within the project area. Therefore, no impacts are expected.

Early coordination letters were sent to IDNR-DFW, USFWS, and USACE on April 14, 2020 and March 19, 2021. IDEM was contacted via their online roadway project portal on April 27, 2021.

IDNR-DFW responded on May 13, 2020, and April 22, 2021, with recommendations to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources and recommendations to address potential impacts identified in the project area (Appendix C, pages 12 - 16). USFWS Northern Indiana Ecological Services Office (Chesterton) responded on April 29, 2020, with standard recommendations to avoid or minimize impacts to fish, wildlife, and wildlife habitat, including streams (Appendix C, pages 22 - 23). USFWS Southern Indiana Ecological Services Office (Bloomington Field Office) responded on April 15, 2020, with standard recommendations to avoid or minimize impacts to fish, wildlife, and wildlife habitat, including streams (Appendix C, pages 18 - 21). The USACE did not respond to the early coordination letter. The standard automatic response letter was generated from the IDEM online project forum (Appendix C, pages 38 - 44). No other comments from IDEM have been received.

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

Indiana Department of Transportation

County Hamilton

Route US 31

Des. No. 1900096, et. al

Wetlands

Presence

Impacts

Yes

No

Total wetland area: 10.797 Acre(s) Total wetland area impacted: 0.269 Acre(s)

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

Wetland No.	Classification	Total Size (Acres)	Impacted Acres	Comments (i.e., location, likely Water of the US, appendix reference)
NAZ	PEM1	0.091	0.016	Non-State Regulated Isolated Wetland, Appendix F, pg. 17
NBB	PEM1	0.190	0.055	Non-State Regulated Isolated Wetland, Appendix F, pg. 17
SBL	PEM1	4.610	0.011	State Regulated Isolated Wetland, Appendix F, pg. 21
MF	PEM1	0.023	0.0001	Non-State Regulated Isolated Wetland, Appendix F, pg. 18
ME	PEM1	0.016	0.0001	Non-State Regulated Isolated Wetland, Appendix F, pg. 18
MD	PEM1	0.110	0.003	Non-State Regulated Isolated Wetland, Appendix F, pg. 18
B	PEM1	0.033	0.033	Non-State Regulated Isolated Wetland, Appendix F, pg. 65
D	PEM1	0.034	0.034	Non-State Regulated Isolated Wetland, Appendix F, pg. 66
E	PEM1	0.010	0.010	Non-State Regulated Isolated Wetland, Appendix F, pg. 65
F	PEM1	0.023	0.023	Non-State Regulated Isolated Wetland, Appendix F, pg. 65
NAA	PEM1	0.020	0.020	Non-State Regulated Isolated Wetland, Appendix F, pg. 65
NAE	PEM1	0.100	0.020	Non-State Regulated Isolated Wetland, Appendix F, pg. 65
NAG	PEM1	0.007	0.007	Non-State Regulated Isolated Wetland, Appendix F, pg. 65
SAZ	PFO1/PEM1	2.83	0.004	State Regulated Isolated Wetland, Appendix F, pg. 20
SBA	PFO1/PEM1	1.54	0.020	State Regulated Isolated Wetland, Appendix F, pg. 20
NAM	PEM1	0.24	0.006	Non-State Regulated Isolated Wetland, Appendix F, pg. 16
SAV	PEM1	0.67	0.007	Non-State Regulated Isolated Wetland, Appendix F, pg. 20
NAI	PEM1	0.25	0.000	Non-State Regulated Isolated Wetland, Appendix F, pg. 16

Wetlands (Mark all that apply)

- Wetland Determination
- Wetland Delineation
- USACE Isolated Waters Determination

Documentation

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

ESD Approval Dates

01/13/2021 / 03/01/2021
01/13/2021 / 03/01/2021

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.

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

Indiana Department of Transportation

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Describe all wetlands identified adjacent or within the project area. Include whether or not impacts (both permanent and temporary) will occur to the features identified. Include if features are subject to federal or state jurisdiction. Discuss measures to avoid, minimize, and mitigate if impacts will occur.

Based on a review of the National Wetlands Inventory (NWI) online mapper [[Wetlands Mapper \(fws.gov\)](http://Wetlands Mapper (fws.gov))], site visits on July 15 – 16, 29, August 6-7, 19, 27, September 1-4, 10-11, 14, 16, October 27, and November 2, 2020 by RQAW and June 23-24 and September 22, 2020 by HNTB Corp., USGS quadrangle maps (Appendix B, page 2), and the RFI report (Appendix E), there are 6 NWI-points, 73 NWI-wetlands, and 16 NWI-lines located within the 0.5-mile search radius. There are 18 wetlands present within or immediately adjacent to the project area.

Two (2) *Waters of the U.S. Determination / Wetland Delineation Reports* were completed. The first one for the US 31 and 276th Street Intersection Project (Des. No. 1901797) on January 8, 2021, and approved by INDOT-EWPO on January 13, 2021. The second report was completed for the remaining portions of the study area from SR 38 to US 931, including both Hamilton County and Tipton County on March 1, 2021, and approved by INDOT-EWPO on March 1, 2021. Please refer to Appendix F for excerpts of the *Waters of the U.S. Determination / Wetland Delineation Reports*. It was determined that 53 delineated wetlands are located within the project area, in which two (2) are likely “waters of the US” and 51 are unlikely “waters of the US”. The USACE makes all final determinations regarding jurisdiction.

Due to the number of wetlands that were identified in the *Waters of the U.S. Determination / Wetland Delineation Reports*, it was prudent to discuss the wetlands expected to be affected by the project. For more general information pertaining to the “waters of the U.S.” that were identified during the study please see Appendix F.

Des. No. 1900096

Two (2) wetlands will require right-of-way taken from them for this segment of the project. Both are isolated, likely exempt Class 1 wetlands per 327 IAC 17-1-7.

Wetland	Total Area acre	Impact sq. ft.	Right-of-way sq. ft.
NAZ, exempt	0.091	710	710
NBB, exempt	0.190	2,379	2,379
TOTAL	0.281	3,089 (0.071 acre)	3,089 (0.071 acre)

Des. No. 1900097

Four (4) wetlands will be impacted by this segment of the project. MD, ME, and MF are isolated, likely exempt Class 1 wetlands per 327 IAC 17-1-7.

Wetland	Total Area acre	Impact sq. ft.	Right-of-way sq. ft.
SBL, emergent	4.610	500	500
MF, exempt	0.023	7	0
ME, exempt	0.016	7	0
MD, exempt	0.110	135	0
TOTAL	4.759	649 (0.015 acre)	500 (0.011 acre)

Des. No. 1901797

Seven (7) wetlands will require right-of-way taken from them for this segment of the project. All seven are isolated, likely exempt Class 1 wetlands per 327 IAC 17-1-7.

Wetland	Total Area acre	Impact sq. ft.	Right-of-way sq. ft.
B, exempt	0.033	1,438	1,438
D, exempt	0.034	1,482	1,482
E, exempt	0.010	436	436
F, exempt	0.023	1,002	1,002
NAA, exempt	0.020	872	872
NAE, exempt	0.100	872	872
NAG, exempt	0.007	305	305
TOTAL	0.227	6,407 (0.147 acre)	6,407 (0.147 acre)

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Des. No. 2002313

Five (5) wetlands will have right-of-way taken from them for this segment of the project. NAI and NAM are isolated, likely exempt Class 1 wetlands per 327 IAC 17-1-7.

Wetland	Total Area acre	Impact sq. ft.	Right-of-way sq. ft.
SAZ, emergent/forested	2.83	160	100
SBA, emergent/forested	1.54	850	530
NAM, exempt	0.24	250	250
SAV, emergent	0.67	325	70
NAI, exempt	0.25	0	1820
TOTAL	5.53	1,585 (0.036 acre)	2,770 (0.064 acre)

Other than the No Build Alternative, all practicable alternatives result in impacts to wetlands and the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use. Wetlands and portions of wetlands that are to be avoided will be marked as "Do Not Disturb" on design plans and temporary construction fencing will be installed to prevent impacts during construction. Alternatives that avoid all wetland impacts are not practicable since the wetlands are primarily within and adjacent to the existing intersection areas and the interchange and other intersection treatments will be constructed in their place.

Due to impacts to wetland resources, mitigation will likely be required and will be determined during permitting.

Early coordination letters were sent to IDNR-DFW, USFWS, and USACE on April 14, 2020 and March 19, 2021. IDEM was contacted via their online roadway project portal on April 27, 2021.

IDNR-DFW responded on May 13, 2020, and April 22, 2021, with recommendations to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources and recommendations to address potential impacts identified in the project area (Appendix C, pages 12 - 16). USFWS Northern Indiana Ecological Services Office (Chesterton) responded on April 29, 2020, with standard recommendations to avoid or minimize impacts to fish, wildlife, and wildlife habitat, including streams (Appendix C, pages 22-23). USFWS Southern Indiana Ecological Services Office (Bloomington Field Office) responded on April 15, 2020, with standard recommendations to avoid or minimize impacts to fish, wildlife, and wildlife habitat, including streams (Appendix C, pages 18-21). The USACE did not respond to the early coordination letter. The standard automatic response letter was generated from the IDEM online project forum (Appendix C, pages 38 - 44). No other comments from IDEM have been received.

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

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

Total terrestrial habitat in project area: 181.29 Acre(s) Total tree clearing: 5.54 Acre(s)

Describe types of terrestrial habitat (i.e., forested, grassland, farmland, lawn, etc.) adjacent or within the project area. Include whether impacts will occur to habitat identified. Include total terrestrial habitat impacted and total tree clearing that will occur. Discuss measure to avoid, minimize, and mitigate if impacts will occur.

Based on a desktop review, a site visit on March 18, 2020, by Butler, Fairman and Seufert Inc. (BF&S), the aerial maps of the project area (Appendix B, pages 3-7), there are two (2) types of terrestrial habitats: grassland/agricultural land and forest.

The land use in the area is mostly rural mixed with residential properties and approximately fifteen (15) commercial properties. Approximately 64.81 acres of non-forested terrestrial land will be impacted from the conversion of at-grade intersections into cul-de-sacs, overpasses, and interchanges, and the installation of cable barriers within the US 31 median. Of this total, approximately 56.75 acres consists of farmland/grassland, and approximately 8.06 acres consists of mowed roadside, commercial and residential lawn areas. A total of 5.54 acres of trees will be removed for the project. 2.32 acres will be removed within 100 feet of the roadway, 0.26 acres will be removed 100-300 feet from the roadway, and 2.96 acres will be removed 300 feet or greater from the roadway.

Tree Clearing Distance from Roadway	Impact (acre)
0 – 100 feet	0.97
100 – 300 feet	0.20
Greater than 300 feet	2.96
TOTAL	4.13

Des. No. 1900097

Tree Clearing Distance from Roadway	Impact (acre)
0 – 100 feet	0.06
100 – 300 feet	0.0
TOTAL	0.06

Des. No. 1901797

Tree Clearing Distance from Roadway	Impact (acre)
0 – 100 feet	1.12
100 – 300 feet	0.06
TOTAL	1.18

Des. No. 2002313

Tree Clearing Distance from Roadway	Impact (acre)
0 – 100 feet	0.17
100 – 300 feet	0.0
TOTAL	0.17

Early coordination letters were sent to IDNR-DFW, the USFWS, and USACE on April 14, 2020 and March 19, 2021. IDEM was contacted via their online roadway project portal on April 21, 2021.

IDNR-DFW responded on May 13, 2020, and April 22, 2021, with recommendations to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources and recommendations to address potential impacts identified in the project area (Appendix C, pages 12 - 16). USFWS Northern Indiana Ecological Services Office (Chesterton) responded on April 29, 2020, with standard recommendations to avoid or minimize impacts to fish, wildlife, and wildlife habitat, including streams (Appendix C, pages 22-23). USFWS Southern Indiana Ecological Services Office (Bloomington Field Office) responded on April 15, 2020, with standard recommendations to avoid or minimize impacts to fish, wildlife, and wildlife habitat, including streams (Appendix C, pages 18-21). The USACE did not respond to the early coordination letter. The standard automatic response letter was generated from the IDEM online project forum (Appendix C, pages 38 - 44). No other comments from IDEM have been received.

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

Protected Species

Federally Listed Bats

Information for Planning and Consultation (IPaC) determination key completed
 Section 7 informal consultation completed (IPaC cannot be completed)
 Section 7 formal consultation Biological Assessment (BA) required

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

Determination Received for Listed Bats from USFWS: NE NLAA LAA

Other Species not included in IPaC

Additional federal species found in project area (based on IPaC species list)
 State species (not bird) found in project area (based upon consultation with IDNR)

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

Migratory Birds

Known usage or presence of birds (i.e., nests)
 State bird species based upon coordination with IDNR

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

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

Based on a desktop review and the RFI (Appendix E), completed by BF&S on March 18, 2020, the IDNR Hamilton County Endangered, Threatened and Rare (ETR) Species List has been checked and is included in (Appendix E, pages 47 – 49). 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 letters dated May 13, 2020, and April 22, 2021 (Appendix C, page 12 - 16), the Natural Heritage Program’s Database has been checked and the little spectaclecase mussel (*Villosa lianosa*), a state species of special concern has been documented in Prairie Creek within 0.5 mile of the project area. However, DNR does not foresee any impacts to the little spectaclecase mussel because of this project. There are no proposed impacts to Prairie Creek as a result of this project.

Indiana Bat and Northern Long-Eared Bat

Project information was submitted through the USFWS’s Information for Planning and Consultation (IPaC) portal, and an official species list was generated (Appendix C, pages 64 - 69). The project is within range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*). No additional species were found within or adjacent to the project area other than the Indiana bat and northern long-eared bat.

Based on the removal of habitat outside of 300 feet from existing road surfaces without a valid Presence/Probable Absence survey indicating that bats are not present, this project does not qualify for the Range-wide Programmatic Informal Consultation for the Indiana bat and NLEB. Structure assessments were completed on February 3, 2021, and March 24, 2021, and no bats and no evidence of bats were observed during those inspections (Appendix J, pages 7 - 8). On March 25, 2021, INDOT determined that informal coordination with USFWS would occur, and on June 3, 2021, standard informal consultation with USFWS was initiated. On June 9, 2021, the USFWS concurred that the project is not likely to adversely affect the Indiana bat or the NLEB, based on the proposed avoidance and minimization measures (AMMs) (Appendix C, pages 70 - 75). In general, the AMMs include the assurance that all contractors working in the presumed bat habitat areas are aware of the AMMs. That any temporary lighting be directed away from suitable habitat during the active season, that any tree removal is limited to the appropriate time of year restriction of November 15 through March 30, and that prior to any demolitions, that all structures will be inspected for bats or evidence of bats. If bats, or evidence of bats are found coordination with INDOT ESD and USFWS will occur before demolition starts.

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Migratory Birds

Structures (31-29-04572B SBL/009660 and 31-29-04572B NBL/ 009650) have shown evidence of use (i.e., nests) by a bird species protected under the Migratory Bird Treaty Act (MBTA) during the (September 22, 2020) inspection. Avoidance and minimization measures must be implemented prior to the start of and during the nesting season. Nests without eggs or young should be removed prior to construction during the non-nesting season (September 8 – April 30) and during the nesting season if no eggs or young are present. Nests with eggs or young cannot be removed or disturbed during the nesting season (May 1 – September 7). Nests with eggs or young should be screened or buffered from active construction. Details of the required procedures are outlined in the “Potential Migratory Bird on Structure” Unique Special Provision (USP). This firm commitment is included in the Environmental Commitments of this document.

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

Geological and Mineral Resources

- Project located within the Potential Karst Features Area of Indiana
- Karst features identified within or adjacent to the project area
- Oil/gas or exploration/abandoned wells identified in the project area

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

Date Karst Study/Report reviewed by INDOT EWPO (if applicable): N/A

Discuss if project is located in Potential Karst Features Area of Indiana and if any karst features have been identified in the project area (from RFI). Discuss response received from IGWS coordination. Discuss if any mines, oil/gas, or exploration/abandoned wells were identified and if impacts will occur. Describe if any impacts will occur to any karst features. Include discussion of karst study/report was completed and results. (Karst investigation must comply with the current Karst MOU and coordinated and reviewed by INDOT EWPO)

Based on a desktop review, the project is located outside the designated karst region of Indiana as outlined in the October 13, 1993 Memorandum of Understanding (MOU). According to the quadrangle map of the project area (Appendix B, page 2), the RFI report (Appendix E), there are no karst features identified within or adjacent to the project area. In the early coordination response, the Indiana Geological and Water Survey (IGWS) did not indicate that karst features exist in the project area (Appendix C, pages 31 – 33). In their report, IGWS did not provide any comments concerning karst. Related to potential geological hazards the area has moderate liquefaction potential and is in the 1% risk floodplain. Pertaining to mineral resources, they mentioned that there is high potential for bedrock and low potential for sand and gravel resources. Further, there are documented abandoned mineral extraction sites and petroleum exploration wells in the area. As a result, coordination with IDNR Division of Oil and Gas was completed on April 22, 2021. IDNR Oil and Gas responded on April 23, 2021, stating that there are five (5) sites drilled for oil and gas purposes within the project area and they are found between SR 38 and 226th Street (see Appendix E, page 35). They do not believe any of these wells exist at the surface. No impacts are expected. However, if a steel casing or void hole is encountered during construction, around the known wells, contact IDNR Division of Oil and Gas immediately so they can assess the well and determine next steps.

Response from IGWS has been communicated with the designer on April 22, 2021. No impacts are expected.

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SECTION C – OTHER RESOURCES

Drinking Water Resources

- Wellhead Protection Area(s)
- Source Water Protection Area(s)
- Water Well(s)
- Urbanized Area Boundary
- Public Water System(s)

Presence

X

Impacts

Yes	No
	X

- Is the project located in the St. Joseph Sole Source Aquifer (SSA)?
- If Yes, is the FHWA/EPA SSA MOU Applicable?
- If Yes, is a Groundwater Assessment Required?

Yes	No
	X

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

Sole Source Aquifer (SSA)

The project is in Hamilton 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. EPA Groundwater and Drinking Water Branch responded to Early Coordination on May 7, 2020, and March 1, 2021, that the project is not located in the Sole Source Aquifer review area, so an EPA Sole Source Aquifer project review is not required (Appendix C, pages 24 - 25). Therefore, a detailed groundwater assessment is not needed, and no impacts are expected.

Wellhead Protection Area or Source Water Area

IDEM's Wellhead Proximity Determinator website ([Water Quality in Indiana: Home](#)) was accessed by BF&S on April 20, 2021 by BF&S. This project is not located within a Wellhead Protection Area or Source Water Area. No impacts are expected.

Water Wells

The Indiana Department of Natural Resources Water Well Record Database website [[DNR: Water Well Record Database \(in.gov\)](#)] was accessed on April 20, 2021, by BF&S. There are approximately 29 mapped wells is located along the US 31 corridor from SR 38 to 286th Street. These features will not be affected because they are outside of the construction limits for the project. Therefore, no impacts are expected. Should it be determined during the right-of-way phase that any wells are affected, a cost to cure will likely be included in the appraisal to restore the wells.

Urban Area Boundary

Based on a desktop review of the INDOT MS4 website ([INDOT MS4](#)) by BF&S on April 20, 2021, and the RFI report; this project is not located within an Urban Area Boundary (UAB) location. No impacts are expected.

Public Water System

Based on a desktop review, a site visit on June 4, 2020 by BF&S, and the aerial maps of the project area (Appendix B, page 3-7) this project is located where there is a public water system. The public water system will not be affected because all the water mains are located outside of the construction limits for the project. At this time, no disruption to any water service is expected to occur from this project.

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Floodplains

Project located within a regulated floodplain
 Longitudinal encroachment
 Transverse encroachment
 Homes located in floodplain within 1000' up/downstream from project

Presence

X
X
X

Impacts

Yes	No
X	
X	
	X

If applicable, indicate the Floodplain Level?

Level 1 Level 2 Level 3 Level 4 Level 5

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

Based on a desktop review of the IDNR Indiana Floodway Information Portal website ([Indiana Floodplain Information Portal](#)) by BF&S on June 16, 2020, and the RFI report; this project does pass through one regulatory floodplains as determined from approved IDNR floodplain maps (Appendix F, pages 70 - 72). An early coordination letter was sent on April 14, 2020, and again on March 19, 2021, to the local Floodplain Administrator. The floodplain administrator did not respond within the 30-day time frame. The IDNR Division of Water indicated in their letter dated May 13, 2020, that formal approval for construction in a floodway under the Flood Control Act, IC 14-28-1 will be required (Appendix C, pages 12 - 16).

The project qualifies as a Category 5 for the Little Cicero Creek floodplain at the proposed bridges carrying 276th Street on/off ramps over the creek, however, there will be no substantial impacts on natural and beneficial floodplain values; there will be no substantial change in flood risks; and there will be no substantial increase in potential for interruption or termination of emergency service or emergency evaluation routes; therefore, it has been determined that this encroachment is not substantial.

Mitigation for unavoidable impacts to wetlands, streams, and forested areas within the floodway of Little Cicero Creek will be completed as part of the CIF permit to meet the requirements of compensatory mitigation for impacts located within the floodway of Little Cicero Creek as part of this project (Appendix B, page 48).

Farmland

Agricultural Lands
 Prime Farmland (per NRCS)

Presence

X
X

Impacts

Yes	No
X	
X	

Total Points (from Section VII of CPA-106/AD-1006*)	140	216 th St.
	141	226 th St.
	140	246 th St.
	149	256 th St.
	149	166 th St.
	127	276 th St.
	129	181 st St.

**If 160 or greater, see CE Manual for guidance.*

Discuss existing farmland resources in the project area, impacts that will occur to farmland, and mitigation and minimization measures considered.

Based on a desktop review, a site visit on March 18, 2020, by BF&S, the aerial maps of the project area (Appendix B, pages 3-7), the project will convert 64.81 acres of farmland as defined by the Farmland Protection Policy Act. An early coordination letter was sent on April 14, 2020, and again on March 19, 2021, to Natural Resources Conservation Services (NRCS). Coordination with NRCS resulted in a scores of 140 (216th Street cul-de-sacs), 141 (226th Street overpass), 140 (246th Street cul-de-sac), 149 (256th Street cul-de-sacs), 149 (266th Street overpass), 127 (276th Street interchange), and 129 (281st Street cul-de-sac) on the NRCS-CPA-106 Forms (Appendix C, pages 28-29). NRCS decided to score each intersection separately in order to better characterize the impacts to prime farmland.

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NRCS's threshold score for significant impacts to farmland that result in the consideration of alternatives is 160. Since this project score is less than the threshold, no significant loss of prime, unique, statewide, or local important farmland will result from this project. No alternatives other than those previously discussed in this document will be investigated without reevaluating impacts to prime farmland.

SECTION D – CULTURAL RESOURCES

Minor Projects PA Category(ies) and Type(s) INDOT Approval Date(s) N/A

Full 106 Effect Finding
 No Historic Properties Affected No Adverse Effect Adverse Effect

Eligible and/or Listed Resources Present
 NRHP Building/Site/District(s) Archaeology NRHP Bridge(s)

Documentation Prepared (mark all that apply)	ESD Approval Date(s)	SHPO Approval Date(s)
APE, Eligibility and Effect Determination	<input checked="" type="checkbox"/> March 29, 2020	April 26, 2021
800.11 Documentation	<input checked="" type="checkbox"/> March 29, 2020	April 26, 2021
Historic Properties Report or Short Report	<input checked="" type="checkbox"/> July 9, 2020	August 10, 2020
Archaeological Records Check and Assessment		
Archaeological Phase Ia Survey Report	<input checked="" type="checkbox"/> October 19, 2020 and November 2, 2020	November 30, 2020
Archaeological Phase Ic Survey Report		
Other:		

Memorandum of Agreement (MOA) **MOA Signature Dates** (List all signatories)
 May 4, 2021- INDOT
 May 13, 2021- SHPO
 May 18, 2021- FHWA

If the project falls under the MPPA, describe the category(ies) that the project falls under and any approval dates. If the project requires full Section 106, use the headings provided. The completion of the Section 106 process requires that a Legal Notice be published in local newspapers. Please indicate the publication date, name of the paper(s) and the comment period deadline. Include any further Section 106 work which must be completed at a later date, such as mitigation from a MOA or avoidance commitments.

Area of Potential Effect (APE):
 The Area of Potential Effects (APE) is the area in which the proposed project may cause alterations in the character or use of historic resources. The APE includes the existing and proposed right-of-way, immediately adjacent properties, and those areas where a visual differentiation may occur between an existing structure and the project area. The APE is an irregular corridor along US 31, including the existing and proposed right-of-way, immediately adjacent properties, and those areas where a visual differentiation may occur between an existing structure and the project area, also accounting for properties which have the potential to lose direct access to the US 31 corridor (Appendix D, page 17).

Coordination with Consulting Parties:
 The Indiana State Historic Preservation Officer (SHPO) is considered an automatic consulting party. In addition, the following individuals and organizations were sent an early coordination letter and invited to be Section 106 consulting parties on March 13, 2020 (Appendix D, pages 18 - 24):

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Consulting Party	Response
Indiana Landmarks Central Regional Office	March 19, 2020
Hamilton County Historian	None
Hamilton County Historical Society	None
Indianapolis Metropolitan Planning Organization	None
Hamilton County Highway Department	None
Hamilton County Engineer	None
Hamilton County Board of Commissioners	None
Northern Hamilton County Chamber of Commerce	None
Westfield Preservation Alliance	None
Westfield-Washington Historical Society	None
Roberts Settlement	March 17, 2020
Kelley Agricultural Historical Museum	March 27, 2020
Tipton County Historical Society	None
Tipton County Public Library- Indiana Room	None
Tipton County Commissioners	None
Tipton County Highway Department	None
Lightfoot Brothers Farm Services	April 16, 2020
Cicero Township Trustee	None
Delaware Nation of Oklahoma	December 8, 2020
Delaware Tribe of Indians, Oklahoma	None
Forest County Potawatomi Community	March 30, 2020
Eastern Shawnee Tribe of Oklahoma	None
Miami Tribe of Oklahoma	April 8, 2020
Peoria Tribe of Indians of Oklahoma	None
Pokagon Band of Potawatomi Indians	None

Roberts Settlement responded by email on March 17, 2020, and requested to continue receiving project information (Appendix D, page 25).

Indiana Landmarks responded on March 19, 2020, and agreed to be a consulting party. Indiana Landmarks expressed concern that substantial adverse effects to historic properties could occur (Appendix D, page 26).

The Kelley Agricultural Historical Museum responded on March 27, 2020 (Appendix D, pages 27-30). The Museum conveyed concerns over a variety of issues, including impacts to businesses and farmers, county roads, air quality and animal habitats, and population loss. Regarding historic properties, the Museum stated there are six historic buildings on the property open for tours and educational activities. The Museum is also used for private events such as weddings, parties, meetings, and retreats. Therefore, the Museum anticipated negative effects to the property from the loss of direct access to US 31 from CR 550 North.

The Forest County Potawatomi Community responded by email on March 30, 2020, and requested to receive the project's archaeological reports (Appendix D, page 31).

The Miami Tribe of Oklahoma responded on April 8, 2020, indicating they wished to be a consulting party. The letter stated they had no objections to the proposed project but noted the project area is within the aboriginal homelands of the Miami Tribe (Appendix D, page 32).

The SHPO responded on April 13, 2020, stating they were not aware of any other parties who should be invited to consulting party consultation, but if right-of-way acquisition was proposed from historic properties those owners should be contacted (DHPA #25247; Appendix D, pages 33-34).

The Lightfoot Brothers Farm Services responded by email on April 16, 2020, and requested consulting party status (Appendix D, page 35).

No other responses to the March 13, 2020 early coordination letter were received.

Archaeology:

A Phase Ia archaeological reconnaissance covering the proposed right-of-way for 21 areas which will be utilized for interchanges, overpasses, or cul-de-sacs (Des. Nos. 1900096 and 1900097) was conducted by NS Services between May 12 and August 7, 2020

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(Appendix D, pages 67-69). A Phase Ia archaeological reconnaissance for the 276th Street Interchange project area (Des. No. 1901797) was conducted by Cultural Resource Analysts, Inc. from July 6-July 15, 2020 (Appendix D, pages 63-66). The investigations identified a total of 28 sites within the project area. As a result of these efforts, sites 12-H-1742, 12-Ti-268, 12-Ti-271, 12-H-1881, 12-H-1882, and 12-H-1883 were recommended potentially eligible for listing in the NRHP and if the sites can be avoided, no further work was recommended. Full NRHP evaluations were recommended if avoidance of a site is not possible.

The archaeological reports were approved by the Cultural Resources Department (CRO) on October 19, 2020, and November 2, 2020. The archaeological reports were sent to consulting parties (Tribes only) on November 2, 2020 (Appendix D, pages 70-75).

The SHPO concurred with the archaeology reports on November 30, 2020, stating in part: *“Further, we concur with the opinion of the archaeologist, that archaeological sites 12H1881, 12H1882, 12H1883, 12Ti268 and 12Ti271 appear to be potentially eligible for inclusion in the NRHP and must either be avoided or subjected to further archaeological investigations.[...] Lastly, we concur with the opinion of the archaeologist, that archaeological site 12H1742 appears to be potentially eligible for inclusion in the NRHP and must either be avoided or subjected to further archaeological investigations.”* The SHPO also requested several data revisions and further stated they looked forward to receiving further information about unsurveyed areas (Appendix D, pages 88-90). All unsurveyed areas will undergo archaeological investigation prior to the start of construction on the corresponding intersection following stipulations specified in the Memorandum of Agreement (MOA, Appendix D, pages 100-110).

In a letter dated December 8, 2020, the Delaware Nation stated they were not aware of the presence of any cultural or religious sites, but the project area was occupied by the Lenape people and there is a potential for the existence of unknown sites (Appendix D, page 93).

No other responses to the archaeological reports were received.

In addition, an addendum archaeological report for the proposed interchange at US 31 and 276th Street (Des. No. 1901707) was prepared to cover additional areas. An archaeologist who meets the Secretary of the Interior's Professional Qualification Standards identified no sites within the addendum survey area. As a result, no additional sites were recommended for listing in the NRHP, and no further work was recommended in the area examined (Appendix D, pages 96-97). This addendum report was approved by the INDOT-CRO on March 22, 2021 and distributed to consulting parties for review concurrently with the finding on March 30, 2021 (Appendix D, pages 98-99).

Historic Properties:

Site visits were conducted by an Indiana Division of Historic Preservation and Archaeology (DHPA)-qualified professional with BF&S on December 20, 2019, January 12, 2020, and March 5, 2020. Information from the site visit and research regarding historic resources was compiled into a Historic Property Report (HPR, BF&S, June 22, 2020, Appendix D, pages 36-38) which covered the project area as originally scoped, from SR 38 to SR 931. Historic properties may consist of historic buildings, structures, districts, objects, or archaeological resources. The HPR concluded there were six above-ground properties within the APE from SR 38 to SR 931:

Hansel Roberts Farm/IHSSI #057-020-05027 (3059 East 276th Street)
Kelley Agricultural Historical Museum (6032 West CR 550 North)
IHSSI #159-309-20021/Hopewell Methodist Church (US 31 and CR 100 North)
IHSSI #159-309-10038 (6401 W. CR 450 North)
John D. and Phoebe Smith House/IHSSI #159-309-15074 (6824 W. CR 350 South)
Endicott House/IHSSI #159-587-15097 (6136 CR 600 South)

The INDOT-CRO approved the HPR on July 9, 2020. The HPR was distributed to SHPO and consulting parties on July 9, 2020 (Appendix D, pages 39-43).

Indiana Landmarks responded to the HPR on July 16, 2020, and concurred with the eligibility of the six properties newly determined eligible for the NRHP (Appendix D, page 44).

The SHPO responded to the HPR in a letter dated August 10, 2020 (Appendix D, pages 45-46) and made the following comments:

- *Regarding the Hansel Roberts Farm (IHSSI #057-020-05027): “We agree that this property is eligible for inclusion in the NRHP under Criterion A as well as Criterion C [...]”*
- *Regarding the Kelley Agricultural Historical Museum (IHSSI #159-323-11001 to 11005): “We believe that only the Craftsman house and original farm buildings are eligible for inclusion in the NRHP under Criterion A & C. The moved buildings are not eligible and*
- *would be non-contributing to the historic property boundary.”*

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- *Regarding the Goldsmith Methodist Church (IHSSI #159-390-15074): "We respectfully disagree with the conclusions of the HPR and believe that this church has enough architectural merit to be eligible for inclusion in the NRHP under Criterion C."*

The SHPO concurred with all other eligibility determinations for properties evaluated in-depth in the HPR. INDOT elected to defer to the SHPO's determinations. Therefore, based on the SHPO's comments, the Hansel Roberts Farm is considered NRHP-eligible under Criteria A and C and the Goldsmith Methodist Church is considered NRHP eligible under Criterion C. In addition, the proposed NRHP boundary for the Kelley House was revised to exclude noncontributing resources.

No other responses to the HPR were received.

Documentation Findings:

The effects letter was approved by INDOT-CRO on October 19, 2020. The effects letter was sent to consulting parties on October 27, 2020 (Appendix D, pages 47-62). The letter recommended the project had the following effect findings for above-ground properties:

Roberts Chapel and Cemetery (IHSSI #057-020-05026): "No Adverse Effect"
Hansel Roberts Farm (IHSSI #057-020-05027): "No Adverse Effect"
Kelley House (IHSSI #159-323-11005): "No Adverse Effect"
Hopewell Methodist Church (IHSSI #159-309-20021): "No Adverse Effect"
Western Bungalow/IHSSI #159-309-10038 (6401 W. CR 450 North): "No Adverse Effect"
John D. and Phoebe Smith House (IHSSI #159-309-15074): "No Adverse Effect"
Endicott House (IHSSI #159-587-15097): "Adverse Effect"
Goldsmith Methodist Church (IHSSI #159-390-15074): "No Adverse Effect"
Baker/Johnson/Pickett Farmstead (1715 E. 236th Street): "No Historic Properties Affected"
S. Lindley Farm/Thomas Joseph Lindley Farm (IHSSI #057-667-20003): "No Historic Properties Affected"

A consulting parties meeting was held on November 13, 2020, primarily to discuss effects to the Kelley House, Hopewell Methodist Church, and the Endicott House (Appendix D, pages 76-80). The Kelley Agricultural Historical Museum continued to object to the property's loss of direct access to US 31. The Museum discussed concerns over the Museum's visibility and the ability of museum visitors and event guests to reach the venue using county roads. Several alternative options for accommodating some continued access from US 31 to CR 550 North were discussed, including a right-in-right-out option and the use of a folded diamond interchange. As a result of the consulting parties meeting, BF&S studied alternate access options for CR 550 North and produced additional layouts.

The Kelley Agricultural Historical Museum provided additional comments on November 19, 2020, listing the events held at the Museum since 2017 (Appendix D, pages 81-87). The Museum reiterated that the loss of direct access from US 31 would reduce visitors to the museum and event bookings at the venue due to difficulties in navigating local roads.

The SHPO responded to the Effects Letter and consulting party meeting on November 30, 2020, stating the project will not adversely affect the following properties:

Roberts Chapel and Cemetery (NR-0882/1309)
Hansel Roberts Farm (IHSSI #057-020-05027)
Hopewell Methodist Church (IHSSI #159-309-20021)
Western Bungalow at 6401 W. CR 450 North (IHSSI #159-309-10038)
John D. and Phoebe Smith House (IHSSI #159-309-15074)
Goldsmith Methodist Church (IHSSI #159-309-18016)
Baker/Johnson/Pickett Farmstead at 1715 E. 236th Street
S. Lindley Farm/Thomas Joseph Lindley Farm (IHSSI #057-667-20003)

The letter also stated the overpass option would have an "Adverse Effect" on the Endicott House and the bypass option would likely reduce the property's agricultural setting and feeling. The SHPO did not comment on the Kelley House pending further information (Appendix D, pages 88-90).

No other responses to the Effects Letter were received.

FHWA signed a determination of "Adverse Effect" for this Section 106 undertaking with its original project limits on January 27, 2021. The "Adverse Effect" finding, and a draft MOA were transmitted to consulting parties on the same day. The finding stated Archaeology Sites 12-Ti-268, 12-Ti-271, 12-H-1742, 12-H-1881, 12-H-1882, and 12-H-1883 will be avoided by all project activities. If a site cannot be avoided, it will be subject to additional investigation to determine if it is eligible for the NRHP following stipulations in the MOA.

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An email notification of forthcoming changes to the project scope and a request to suspend review of the finding and draft MOA was sent to consulting parties on February 12, 2021, and February 15, 2021 (Appendix D, pages 94-95).

As a result of the reduced project scope, the APE was revised to have a northern border approximately 0.25 mile north of 286th Street, the northern project terminus. Therefore, following the revisions to the project scope, the following NRHP-listed and eligible properties remain within the APE:

1. Roberts Chapel and Cemetery (NR-0882/NR-1309)
2. Baker/Johnson/ Pickett Farmstead (1715 E. 236th Street)
3. S. Lindley Farm/Thomas Joseph Lindley Farm/IHSSI# 057-667-20003
4. Hansel Roberts Farm/IHSSI #057-020-05027 (3059 East 276th Street)
5. Archaeology Site 12-H-1742
6. Archaeology Site 12-H-1881
7. Archaeology Site 12-H-1882
8. Archaeology Site 12-H-1883

The finding and MOA were revised to reflect the removal of these properties from the APE. INDOT-CRO approved the 800.11 finding and draft MOA on March 29, 2021. The FHWA signed the revised 800.11(e) finding of "Adverse Effect" on March 29, 2021. The FHWA-approved finding was forwarded to the SHPO and consulting parties on March 30, 2021 (Appendix D, pages 98-99).

The SHPO responded on April 26, 2021, concurring with the effect findings for the NRHP-listed and eligible properties. The SHPO also requested changes to the MOA, stating, in part, "*We would recommend that sites 12H1879 and 12H1880 be added to Stipulation II.D.ii. Additionally, it should be clarified that sites 12H1879 and 12H1891 reflect the same historical era site,*" (Appendix D, pages 112-114). INDOT elected to accept the SHPO's recommendations. The revised MOA was approved by INDOT CRO and signed by INDOT on May 4, 2021.

The revised MOA was sent to SHPO and consulting parties on May 5, 2021 (Appendix D, pages 115-116). The SHPO concurred and signed the MOA on May 13, 2021 (Appendix D, page 115). No other responses to the MOA were received. The FHWA signed the MOA on May 18, 2021 (Appendix D, page 108).

Public Involvement:

A public notice regarding the "Adverse Effect" finding was published in *The Times* (serving Hamilton County) on April 21, 2021 (Appendix D, page 111). No comments were received by the established 30-day deadline date of May 21, 2021. Therefore, the Section 106 process has been completed and the FHWA's Section 106 responsibilities have been fulfilled.

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

	<u>Presence</u>	<u>Use</u>	
		Yes	No
Parks and Other Recreational Land			
Publicly owned park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>
Wildlife and Waterfowl Refuges			
National Wildlife Refuge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
National Natural Landmark	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State Wildlife Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State Nature Preserve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Historic Properties			
Site eligible and/or listed on the NRHP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
 <u>Evaluations</u>			
	<u>Prepared</u>		
Programmatic Section 4(f)	<input type="checkbox"/>		
“De minimis” Impact	<input type="checkbox"/>		
Individual Section 4(f)	<input type="checkbox"/>		
Any exception included in 23 CFR 774.13	<input type="checkbox"/>		

Discuss Programmatic Section 4(f) and “de minimis” Section 4(f) impacts in the discussion below. Individual Section 4(f) documentation must be included in the appendix and summarized below. Discuss proposed alternatives that satisfy the requirements of Section 4(f). FHWA has identified various exceptions to the requirement for Section 4(f) approval. Refer to 23 CFR § 774.13 - Exceptions.

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

Based on a desktop review, the aerial maps of the project area (Appendix B, pages 3-7), and the RFI report (Appendix E), there is one (1) potential recreational site (McGregor Park) and eight (8) NRHP-listed and eligible sites that qualify as 4(f) resources located within the 0.5-mile search radius. Macgregor Park is in the northeast quadrant of the US 31 / SR 38 interchange. The project will not use these resources by taking permanent right-of-way and will not indirectly use the resource in such a way that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired. Therefore, no 4(f) use is expected.

Roberts Chapel and Cemetery (NR-0882/NR-1309) is listed on the NRHP. The Baker/Johnson/ Pickett Farmstead (1715 E. 236th Street), the S. Lindley Farm/Thomas Joseph Lindley Farm/IHSSI# 057-667-20003, and the Hansel Roberts Farm/IHSSI #057-020-05027 (3059 East 276th Street) are eligible for listing in the NRHP. The project will alter the settings of the properties but will cause no physical impacts. The project will not use these resources by taking permanent right-of-way and will not indirectly use the resources in such a way that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired. Therefore, no 4(f) use is expected.

Archaeology sites 12-H-1742, 12-H-1881, 12-H-1882, and 12-H-1883, which are potentially eligible for the NRHP, were identified near the project area. As a result of the Section 106 process (see previous section), it is anticipated these archaeological sites will be avoided by the project. An MOA signed by FHWA on May 18, 2021, provided stipulations for further actions if any archeological sites cannot be avoided (Appendix D, pages 100-110). Furthermore, per the FHWA’s Section 4(f) Policy Paper, Section 4(f) applies only to archeological sites that are on or eligible for the NRHP and that warrant preservation in place. Since the archaeological properties would require further investigation to fully determine their eligibility and significance, they may qualify as Section 4(f) properties. However, because avoidance of the properties is expected, no impacts are anticipated. If avoidance is not feasible, the FHWA will submit a plan for further archaeological investigations to the SHPO (the Official with Jurisdiction) for review and comment. If the FHWA

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determines that an adverse effect cannot be avoided or minimized, then FHWA will develop and implement a Treatment Plan(s) as part of the above consultation, to mitigate the adverse effects to an archeological resource on a site-by-site basis.

Section 6(f) Involvement

Section 6(f) Property

Presence

Use

Yes

No

Discuss Section 6(f) resources present or not present. Discuss if any conversion would occur as a result of this project. If conversion will occur, discuss the conversion approval.

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

A review of 6(f) properties on the INDOT ESD website ([INDOT: Environmental Policy](#)) revealed a total of nine (nine) properties in Hamilton County (Appendix J, page 9). None of these properties are located within the project area. Therefore, there will be no impacts to 6(f) resources.

SECTION F – Air Quality

STIP/TIP and Conformity Status of the Project

Is the project in the most current STIP/TIP?

Yes

No

Is the project located in an MPO Area?

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

If Yes, then:

Is the project in the most current MPO TIP?

Is the project exempt from conformity?

If No, then:

Is the project in the Transportation Plan (TP)?

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

Location in STIP:

2020-2024 STIP; pgs. 210, 215 and 218

Name of MPO (if applicable):

Indianapolis Metropolitan Planning Organization

Location in TIP (if applicable):

Metropolitan Indianapolis Transportation Improvement Program (MiTIP) Interactive Portal

Level of MSAT Analysis required?

Level 1a

Level 1b

Level 2

Level 3

Level 4

Level 5

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

STIP/TIP

This project is included in the Fiscal Year (FY) 2020 – 2024 Indianapolis Metropolitan Planning Organization (IMPO) Transportation

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Improvement Program (TIP) and INDOT Statewide Transportation Improvement Program (STIP) (Appendix H, pages 1 – 3).

Des. Nos. 1900096 (lead), 1901797, and 1700934 are included in the 2020-2024 STIP. Des. No. 1900096 is the only project included in the 2020-2024 IMPO TIP.

Attainment Status

This project is in Hamilton County, which is currently a maintenance area for Ozone according to the EPA's [Nonattainment Areas for Criteria Pollutants \(Green Book\) | US EPA](#) website. Under the 1997 Ozone 8-hour standard which was revoked in 2015 but is being evaluated for conformity due to the February 16, 2018 South Coast Air Quality Management District V. EPA, Et. Al. Decision. The project's design concept and scope conform to the State Implementation Plan (SIP). Therefore, the conformity requirements of 40 CFR Part 93 are met.

MSAT

The purpose of this project is to increase safety along US 31 corridor from SR 38 to 286th Street, by removing all at-grade intersections, driveways, and median crossovers. These improvements will also improve the efficiency of the traffic movement along the roadway, removing idling at turn lanes and crossover medians. This project has been determined to generate minimal air quality impacts for Clean Air Act criteria pollutants and has not been linked with any special mobile source air toxic (MSAT) concerns. As such, this project will not result in changes in traffic volumes, vehicle mix, basic project location, or any other factor that will cause a meaningful increase in MSAT impacts of the project from that of the do-nothing alternative.

Moreover, Environmental Protection Agency (EPA) regulations for vehicle engines and fuels will cause overall MSAT emissions to decline significantly over the next several decades. Based on regulations now in effect, an analysis of national trends with EPA's MOVES model forecasts a combined reduction of over 90 percent in the total annual emissions rate for the priority MSAT from 2010 to 2050 while vehicle-miles of travel are projected to increase by over 45 percent. This will both reduce the background level of MSAT as well as the possibility of even minor MSAT emissions from this project.

SECTION G - NOISE

Noise

Yes **No**Is a noise analysis required in accordance with FHWA regulations and INDOT's traffic noise policy? Date Noise Analysis was approved/technically sufficient by INDOT ESD: May 25, 2021 and July 12, 2021

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

The project is a Type 1 project which involves the physical alteration of 226th Street, 266th Street, and 276th Street crossings of US 31 causing substantial vertical alteration, removing shielding, and exposing the line-of-sight between those intersections and surrounding receptors, and construction of local access roads on new alignment.

CMT prepared a noise analysis according to the INDOT Traffic Noise Policy and FHWA regulations (Appendix I, pages 1 - 58) for the 276th Street Interchange portion of the project. The noise analysis identified four (4) single-family residential receptors. Existing noise levels ranged from 51.4 to 59.0 dB(A) and projected 2043 Build Scenario noise levels ranged from 51.3 to 59.3 dB(A), with increases no greater than 0.3 dB(A) to any receptor. Traffic noise impacts are not predicted for any receptor and, therefore, no noise abatement measures were evaluated. INDOT ESD approved this traffic noise analysis report on May 25, 2021 (Appendix I, page 59).

Metric Environmental prepared a noise analysis according to the INDOT Traffic Noise Policy and FHWA regulations (Appendix I, pages 60 - 163) for the remaining sections of the US 31 project. Seventy-three (73) noise sensitive receptors were identified in the project area, all of which are Category B or C receptors. Twenty-two (22) non-noise sensitive commercial/industrial receptors (Category F) were also identified along the project corridor.

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The results of this noise analysis show that predicted noise levels did not have a substantial increase of at least 15 dBA at any of the receptors. However, seventeen (17) Category B residential receptors and one (1) Category C receptor within the project study area will be impacted in the Future Build condition based on exceedance of the 66 dBA NAC; therefore, noise abatement measures were investigated.

Engineering feasibility restrictions, such as the impact of multiple long access drives off US 31 on safety and line of sight considerations, adversely impacted the ability to install abatement measures that can effectively provide noise abatement to the impacted receptors. Therefore, abatement measures for the impacted receptors within the project area were found to be not feasible. INDOT ESD approved this traffic noise analysis report on July 12, 2021 (Appendix I, page 164).

Based on the studies thus far accomplished, the State of Indiana has not identified any locations where noise abatement is likely. This determination was based upon preliminary design costs and design criteria. Noise abatement has not been found feasible based on the impact of multiple long access drives off US 31 to safety and line of sight considerations. A reevaluation of the noise analysis will occur during final design. If during final design it has been determined that conditions have changed such that noise abatement is feasible and reasonable, the abatement measures might be provided. The final decision on the installation of any abatement measure(s) will be made upon the completion of the project's final design and the public involvement processes.

SECTION H – 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 discussion below)

Yes	No
X	
	X
	X
	X
X	
X	

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

The surrounding area land use is mixed residential, commercial, and agricultural. No changes in surrounding land use are anticipated because of the project. The project will result in the relocation of 19 residences and 5 businesses due to either partial or full property acquisition. The existing tax base and property values may slightly decrease by these improvements; however, the economic development potential may increase the property values.

The *Hamilton County, Indiana Comprehensive Plan Update*, June 2006, (<https://www.hamiltoncounty.in.gov/593/Comprehensive-Plan>) indicates citizens within the jurisdictional boundary prefer Hamilton County as it is and want to preserve its rural character, but also oppose land use or development controls that limit the potential to develop land in the future. The following Five First Principles describe the future vision for the county: 1) protect and steward the environmental and natural resources; 2) preserve and enhance the rural character; 3) promote economic growth and a stable tax base; 4) build livable communities; and 5) serve residents and businesses with efficient transportation systems. Strategies highlighted under the principle of providing efficient transportation systems include: minimizing traffic congestion now and, as the area continues to grow in population, developing roadway access control that enforces the land use plan; encouraging intergovernmental cooperation for transportation planning; planning and coordinating land use and transportation networks, including roadways, trails and walkways, to serve both transportation and recreation needs; and helping pedestrians cross streets and intersections. The US 31 corridor is in an area planned for mixed-use priority growth, from SR 38 north to the county boundary; an area planned for residential priority growth is located to the west of the project intersection. The project will meet the Five First Principles of the Comprehensive Plan for the county, as well as planned land use for Adams Township and Jackson Township..

The *2007 Hamilton County Thoroughfare Plan Update* (<https://www.hamiltoncounty.in.gov/617/Thoroughfare-Plan>) indicates a vision of developing a safe, efficient, and balanced transportation system for the movement of people and goods. Four goals were identified for the transportation system: 1) safety and efficiency; 2) sustainable and proactive; 3) regional values; and 4) multi-modal. The

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Thoroughfare Plan classifies US 31 as an expressway and 236th Street as a Primary Arterial. The Plan also identifies the US 31 corridor as a future land use of high intensity commercial/mixed-use. US 31 is identified as a focus area within the county because it is a heavily traveled corridor and experiences near capacity traffic volumes and intense land use, which has created significant congestion and safety issues. The Plan's goal for this focus area is to lower the congestion levels and improve safety and level of service, by limiting access, widening the roadway, improving intersections and/or installing interchanges with major roadways, or interconnecting adjacent land uses. The project is consistent with the four goals identified in the Thoroughfare Plan.

Hamilton County has an Americans with Disabilities Act (ADA) Transition Plan from 2013 (<https://www.hamiltoncounty.in.gov/804/ADA-Transition-Plan>). The Transition Plan recommends an approach to meet state and federal ADA guidelines and requirements by implementing a barrier prioritization process that identifies the most critical ADA needs and assists in implementing the Transition Plan in future years. The Transition Plan gives priority to walkways serving entities covered by the ADA, including state and local government offices and facilities, transportation, places of public accommodation, and employers, followed by walkways serving other areas. There are no pedestrian facilities in the area and there are no proposed pedestrian facilities included in this project. Therefore, the ADA compliance is not applicable to this project.

Where new overpass bridges are proposed for construction, traffic will be detoured along local roads. Local roads that are to be turned into cul-de-sacs will experience a permanent traffic alteration. The proposed interchange area will utilize phased construction to maintain traffic. During construction, 276th Street will be closed to thru traffic at US 31. Traffic will be maintained using a detour. US 31 is expected to remain open to traffic, with restrictions, throughout construction. MOT has been described in the MOT discussion above. Local and emergency service access to all residences and businesses on 276th Street will be maintained at all times during construction. The closure and detour 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. Foreseeable impacts on future traffic patterns resulting from the project include reduced traffic volumes on roadways to have cul-de-sacs constructed, and increased traffic on roadways where overpass and interchange construction is proposed. Traffic volumes are also likely to increase on the north/south county roads on either side of US 31 from vehicles traveling to overpasses or interchanges.

Construction activities will not have a measurable impact on community events. In nearby Cicero, approximately 6 miles east of the project area, there is an annual 4th of July celebration. The Sunflower Festival in September and a 4th of July celebration also occurs in in Sheridan, which is approximately 5 miles west of the project area. The Indiana Renaissance Faire occurs annually in October in Noblesville, located approximately 7 miles southeast from the project. Several other festivals, including Art of Wine, Carmel Porchfest, Greek Fest and Artomobilia, occur annually in Carmel, approximately 11 miles south of the project. Any impacts to these events will be temporary minor traffic delays during the construction period. No impacts to community events are expected after construction is completed.

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Public Facilities and Services

Discuss what public facilities and services are present in the project area and impacts (such as MOT) that will occur to them. Include how the impacts have been minimized and what coordination has occurred. Some examples of public facilities and services include health facilities, educational facilities, public and private utilities, emergency services, religious institutions, airports, transportation or public pedestrian and bicycle facilities.

Based on a desktop review, site visits on June 4, 2020 by BF&S, and the aerial maps of the project area (Appendix B, pages 3-7), and the RFI report (Appendix E), there are six public facilities located within 0.5 mile of the project. Two facilities are located adjacent to or within the project area. McGregor Park is located adjacent to the project area. No work is being planned on or near the park property. A pipeline passes through the project area near the 256th Street and US 31 intersection. No work is planned on or near the pipeline. However, as that portion of the project progresses to design, utility coordination will occur to verify the location of the pipeline. East Union Christian Church is located in the southeast corner of US 31 and 296th Street. No work is planned at this intersection as part of this project.

Local access to all residences and business that will not be acquired will be maintained at all times during the construction as required by Standard Specifications. Where new overpass bridges are proposed for construction, traffic will be detoured along cross streets. Cross streets that are to be turned into cul-de-sacs will experience a permanent traffic alteration. Proposed interchange areas will utilize phased construction to maintain traffic. During construction, 276th Street will be closed to thru traffic at US 31. Traffic will be maintained using a detour. US 31 is expected to remain open to traffic throughout construction. MOT has been described in the MOT discussion above. Local and emergency service access to all residences and businesses will be maintained at all times during construction. The closure and detour 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. Currently, there are no sidewalks or trails located within or adjacent to the project area for pedestrian or cyclist access. Therefore, the project is not expected to impact pedestrian or cyclist access. It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access.

Environmental Justice (EJ) (Presidential EO 12898)

During the development of the project were EJ issues identified?

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

Does the project require an EJ analysis?

If YES, then:

Are any EJ populations located within the project area?

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

Will the project result in adversely high and disproportionate impacts to EJ populations?

Indicate if EJ issues were identified during project development. If an EJ analysis was not required, discuss why. If an EJ analysis was required, describe how the EJ population was identified. Include if the project has a disproportionately high and adverse effect on EJ populations and explain your reasoning. If yes, describe actions to avoid, minimize and mitigate these effects.

Under FHWA Order 6640.23A, FHWA and the project sponsor, as a recipient of funding from FHWA, are responsible to ensure that their programs, policies, and activities do not have a disproportionately high and adverse effect on minority or low-income populations. Per the current INDOT Categorical Exclusion Manual, an Environmental Justice (EJ) Analysis is required for any project that has two or more relocations or 0.5 acre of additional permanent right-of-way as the project is being processed as an EA. The project will require 390.39 acres of permanent right-of-way and the relocation of 19 residences and 5 businesses. Therefore, an EJ Analysis is required.

Potential EJ impacts are detected by locating minority and low-income populations relative to a reference population to determine if populations of EJ concern exists and whether there could be disproportionately high and adverse impacts to them. The reference population may be a county, city or town and is called the community of comparison (COC). In this project, the COC is Hamilton County. The community that overlaps the project area is called the affected community (AC). In this project, the ACs are Census Tract 1103 (AC1), Census Tract 1102.01 (AC2), Census Tract 1104.01 (AC3), and 1105.07 (AC4). An AC has a population of concern for EJ if the population is more than 50% minority or low-income or if the low-income or minority population is 125% of the COC. Data from 2019 American Community Survey 5-Year Estimates was obtained from the US Census Bureau Website <https://factfinder.census.gov/> on February 18, 2021, by BF&S. The data collected for minority and low-income populations within the AC are summarized in the below table.

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Table: Minority and Low-Income Data (2019 U.S. Census Bureau American Community Survey 5-Year Estimates)					
	COC - (Hamilton County, Indiana)	AC-1 - (Census Tract 1103, Hamilton County, Indiana)	AC-2 - (Census Tract 1102.01, Hamilton County, Indiana)	AC-3 - (Census Tract 1104.01, Hamilton County, Indiana)	AC-4 - (Census Tract 1105.07, Hamilton County, Indiana)
Percent Minority	16.3%	11.2%	1.9%	21.4%	9.0%
125% of COC	20.4%	AC < 125% COC	AC < 125% COC	AC > 125% COC	AC < 125% COC
EJ Population of Concern		No	No	Yes	No
Percent Low-Income	4.6%	8.1%	10.2%	10.2%	1.3%
125% of COC	5.8%	AC > 125% COC	AC > 125% COC	AC > 125% COC	AC < 125% COC
EJ Population of Concern		Yes	Yes	Yes	No

AC1, Census Tract 1103, Hamilton County, Indiana has a percent minority of 11.2% which is below 50% and is below the 125% COC threshold. Therefore, the AC1 does not contain minority populations of EJ concern.

AC1, Census Tract 1103, Hamilton County, Indiana has a percent low-income of 8.1% which is below 50% and above the 125% COC threshold. Therefore, AC1 contains low-income populations of EJ concern.

AC2, Census Tract 1102.01, Hamilton County, Indiana has a percent minority of 1.9% which is below 50% and is below the 125% COC threshold. Therefore, the AC2 does not contain minority populations of EJ concern.

AC2, Census Tract 1102.01, Hamilton County, Indiana has a percent low-income of 10.2% which is below 50% and above the 125% COC threshold. Therefore, AC2 contains low-income populations of EJ concern.

AC3, Census Tract 1104.01, Hamilton County, Indiana has a percent minority of 21.4% which is below 50% and above the 125% COC threshold. Therefore, the AC3 contains minority populations of EJ concern.

AC3, Census Tract 1104.01, Hamilton County, Indiana has a percent low-income of 10.2% which is below 50% and above the 125% COC threshold. Therefore, AC3 contains low-income populations of EJ concern.

AC4, Census Tract 1105.07, Hamilton County, Indiana has a percent minority of 9.0% which is below 50% and is below the 125% COC threshold. Therefore, the AC3 does not contain minority populations of EJ concern.

AC4, Census Tract 1105.07, Hamilton County, Indiana has a percent low-income of 1.3% which is below 50% and below the 125% COC threshold. Therefore, AC4 does not contain low-income populations of EJ concern.

A potential benefit of the project for EJ and non-EJ populations includes increased safety by removing potential vehicle conflicts at intersections related to traffic crossing US 31, as well as reduced rear-end crashes for turning movements from US 31 to intersecting roads. Another potential benefit would be reducing the amount of time cars are idling at intersections or median crossovers.

Efforts to date to engage the public, and other identified stakeholders in Hamilton County, include CAC meetings that were held on July 1, 2020, and April 13, 2021, and Public Information Meetings held on September 1, 2020, and April 21, 2021. As a result of feedback received at these meetings, potential adverse impacts to low-income populations have been identified, which include:

- relocation of some residences and businesses,
- increased travel time and difficulty for farmers who manage agricultural lands both east and west of US 31,
- accelerated degradation of county roads surrounding US 31 due to increased use resulting from limited access implementation, and
- potential delays for emergency response – especially for properties located on a current intersecting road to US 31 that will receive cul-de-sac treatment as part of the project.

The project design minimizes relocation impacts to the greatest extent possible, while still meeting the purpose and need of the project, which is to improve safety and reduce the overall crash rate along US 31 in Hamilton County.

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Regarding relocations, the relocation of residences with current direct driveway access onto US 31 cannot be avoided. The relocation of residences with driveway access onto local county roads will be completely avoided. Relocation impacts to businesses will be minimized to the greatest extent possible. For example, the businesses surrounding the 226th Street intersection will be minimized by the alignment of the proposed overpass bridge and approaches, and construction of a new north/south access road off 226th Street approximately 0.25 mile east of US 31.

Regarding impacts to the farming community, the consensus from local farmers, expressed to INDOT and their designers, is that the proposed improvements will allow for easier daytime access across US 31. Many farmers indicated that their current access across US 31 is completed during nighttime hours when traffic levels are reduced.

Regarding the accelerated deterioration of local county roads, it is believed that the condition of many of these roadways is not only suitable to current traffic levels but will also meet the demands of future traffic levels. INDOT has been, and will continue to be, in communication with Hamilton County regarding the identification of necessary improvements to local roads directly impacted by future traffic patterns resulting from this project.

Regarding impacts to emergency services response times, INDOT has been, and will continue to be, in communication with local emergency services to best determine ways in which the project design can avoid or minimize impacts.

The project is a linear corridor type project that proposes limited access improvements for the entire length of Hamilton County from SR 38 to 286th Street. Therefore, all properties including EJ and non-EJ populations located along the project corridor are subject to the same considerations, including relocations of residences with driveway access to US 31, cul-de-sac or overpass treatment to all cross streets intersecting US 31, and interchange construction at previously identified locations (236th Street and 276th Street within Hamilton County). Therefore, the project is not expected to result in disproportionately high and adverse impacts to the identified EJ populations of concern.

EJ concerns will continue to be considered as design progresses and the public will continue to be engaged as the project planning progresses through the public hearing process and any additional public information meetings that take place.

The census data sheets, map, and calculations can be found in Appendix J, pages 1 – 6. 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 BIS or CSRS required?

Yes	No
X	
	X

Number of relocations: Residences: 19 Businesses: 5 Farms: 0 Other: 0

Discuss any relocations that will occur due to the project. If a BIS or CSRS is required, discuss the results in the discussion below.

The project will require a total of approximately 390.39 acres of permanent right-of-way. The project will require a total of 28 relocations. A total of 19 residences, and 5 commercial properties that will be relocated. Although access to surrounding businesses, residences and intersecting roadways will be limited during project construction, access will be returned to all properties, except for the 28 relocations, after construction is complete. See Appendix B, pages 39-47 for Parcel Maps illustrating the relocations.

Potential Relocations under Des. No. 1900096:

- 1 commercial property in the southwest quadrant of the US 31/226th Street intersection
- 1 residential property in the southwest quadrant of the US 31/226th Street intersection
- 1 residential property located approximately 0.2 mile east of US 31 on south side of 226th Street

Potential Relocations under Des. No. 1900097

- 1 commercial property in the southeast quadrant of the US 31/216th Street intersection
- 3 residential properties on the west side of US 31 between 216th Street and 226th Street
- 1 residential property on the west side of US 31 between 226th Street and 236th Street

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Potential Relocations under Des. No. 1901797
 1 residential property on the west side of US 31 between 266th and 276th Street

Potential Relocations under Des. No. 2002313:
 1 commercial property on the west side of US 31 between 236th Street and 246th Street
 1 residential property on the east side of US 31 between 236th Street and 246th Street
 1 residential property on the west side of US 31 between 236th Street and 246th Street
 2 residential properties on the west side of US 31 between 246th Street and 256th Street
 1 residential property on the east side of US 31 between 246th Street and 256th Street
 1 commercial property in the northeast quadrant of the US 31/256th Street intersection
 4 residential properties on the west side of US 31 between 256th Street and 266th Street
 2 residential properties on the east side of US 31 between 256th Street and 266th Street
 1 residential property in the northwest quadrant of the US 31/266th Street intersection
 1 commercial property in the northeast quadrant of the US 31/266th Street intersection

The acquisition and relocation program has been and will be conducted in accordance with 49 CFR 24 of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended. Relocation resources are available to all residential and business relocates without discrimination. No person displaced by this project will be required to move from a displaced dwelling unless comparable replacement housing is available to that person.

SECTION I – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

Hazardous Materials & Regulated Substances (Mark all that apply)

Documentation

- Red Flag Investigation (RFI)
- Phase I Environmental Site Assessment (Phase I ESA)
- Phase II Environmental Site Assessment (Phase II ESA)
- Design/Specifications for Remediation required?

X

Date RFI concurrence by INDOT SAM (if applicable): March 19, 2020

Include a summary of the potential hazardous material concerns found during review. Discuss in depth sites found within, directly adjacent to, or ones that could impact the project area. Refer to current INDOT SAM guidance. If additional documentation (special provisions, pay quantities, etc.) will be needed, include in discussion. Include applicable commitments.

Based on a review of GIS and available public records, a RFI was concurred by INDOT SAM on March 19, 2020 (Appendix E). One state cleanup site is located within 0.5 mile of the project area and could affect the project area.

State Cleanup Sites: One (1) State Cleanup Site is located within the search radius. The site, associated with JAS Trucking Incorporated (Agency ID No. 23367), is located at the US 31 and 216th Street intersection. According to the Indiana Department of Environmental Management (IDEM) Virtual file cabinet (VFC) there was a fuel tanker crash that resulted in a spill of 8,500 gallons of diesel and gasoline on June 27, 2005. On May 18, 2006, IDEM issued a No Further Action (NFA); however, due to proximity to buried telephone cables, complete excavation was impractical. All boring samples except for two (2) were within RISC residential default closure limits. The two (2) borings that were above the RISC residential closure levels are below the RISC industrial closure levels. As a result of the incomplete excavation, there is likely contamination remaining near or in the right-of-way. Coordination will be conducted with IDEM before future site activities occur.

One institutional control site is located within 0.5 mile of the project area and could affect the project area.

Institutional Controls: GW Pierce Lot 2, 22265 US Hwy 31, AI# 117374, is located adjacent to the project area. The site was formerly the site of an auto parts facility. According to a Phase II investigation, chromium and arsenic were found and low levels of Naphthalene were slightly above Residential Tap Screening Levels. Coordination will be conducted with IDEM before further site activities occur. If excavation is planned for this area, a Phase II Environmental Site Assessment is recommended.

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Five leaking underground storage tank (LUST) sites are located within 0.5 mile of the project area. One LUST site could affect the project area.

LUST Sites: The 31 Car & Truck Plaza site (McClure Oil Store #65), 21575 US HWY 31 N, Cicero, IN, AI #20847, is located at the southeast corner of US 31 and 216th Street. According to the IDEM VFC, soil and groundwater at the site was found to be impacted during 1998 underground storage tank removal activities. Assessment, remediation (natural attenuation) and monitoring activities have occurred at the site since 1999 and the last site remediation information is from 2007. Coordination with IDEM is recommended to see if additional information is available. If extensive excavation is necessary in this area, a Phase II Environmental Site Assessment is recommended.

Six underground storage tank sites are located within 0.5 mile of the project area. One UST site could affect the project area.

UST Sites: One (1) unmapped UST site was observed during a window survey of the project area. A former gas station site located at 27610 US Highway 31 N, Atlanta, IN 46031 is adjacent to the project area. According to records found in the IDEM VFC, IDEM conducted a site inspection on November 24, 1997, and noted that the site was not in service but had extant vent pipes and pumps. IDEM attempted to contact the property owner via a letter on December 4, 1997, requesting permanent closure. Please see the separate RFI that was prepared under Des. No. 1901797 for additional information.

In addition, Lindley Ditch is listed as impaired on the IDEM 303d List of Impaired Waterways ([Water Quality in Indiana: Home](#)) for *Escherichia coli* (*E. coli*). However, since there is no work planned to occur within Lindley Ditch, there are no special project commitments that must be implemented to protect workers from the potential contaminants found in the ditch.

All the project commitments are listed in the Environmental Commitments section in this document.

Part IV – Permits and Commitments

PERMITS CHECKLIST

Permits (mark all that apply)

Likely Required

Army Corps of Engineers (404/Section10 Permit)

Nationwide Permit (NWP)	<input type="checkbox"/>
Regional General Permit (RGP)	<input checked="" type="checkbox"/>
Individual Permit (IP)	<input type="checkbox"/>
Other	<input type="checkbox"/>

IN Department of Environmental Management (401/Rule 5)

Nationwide Permit (NWP)	<input type="checkbox"/>
Regional General Permit (RGP)	<input type="checkbox"/>
Individual Permit (IP)	<input checked="" type="checkbox"/>
Isolated Wetlands	<input checked="" type="checkbox"/>
Rule 5	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>

IN Department of Natural Resources

Construction in a Floodway	<input checked="" type="checkbox"/>
Navigable Waterway Permit	<input type="checkbox"/>
Other	<input type="checkbox"/>

Mitigation Required

US Coast Guard Section 9 Bridge Permit

Others (Please discuss in the discussion below)

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

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

A total of 1,111 linear feet of impacts to stream are anticipated. That includes 533 linear to UNT to Jones Ditch, 300 linear feet to Bennett Ditch, 113 linear feet to Little Cicero Creek, and 52 linear feet to UNT1 to Little Cicero Creek. A total of approximately 0.269

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acre of wetlands, all of which are State Regulated Wetlands, will occur as a result of the project. A 404 Regional General Permit and 401 Individual Permit will be required. Stream and wetland mitigation is required.

The project is within the floodway of Little Cicero Creek. An IDNR Construction in a Floodway permit will be required.

A Rule 5 Submission will be required since greater than one acre of land will be disturbed. Once any necessary permits are obtained, they will be submitted to the INDOT Contracts Division prior to the construction of the project. The conditions of the permit will be requirements of the project.

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

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

ENVIRONMENTAL COMMITMENTS

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

Firm:

1. If the scope of work or permanent or temporary right-of-way amounts change, the INDOT Environmental Services Division (ESD) and the INDOT District Environmental Section will be contacted immediately. (INDOT ESD and INDOT Greenfield District)
2. It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access. (INDOT ESD)
3. Wetlands and portions of wetlands that are to be avoided will be marked as "Do Not Disturb" on design plans and temporary construction fencing will be installed to prevent impacts during construction. (INDOT ESD)
4. Any Work in a wetland area within right-of-way or in borrow/waste areas is prohibited unless specifically allowed in the U.S. Army Corps of Engineers permit. (INDOT ESD)
5. USFWS Bridge/Structure Assessment shall take place no earlier than two (2) years prior to the start of construction. If construction will begin after June 23, 2022, an inspection of the structure by a qualified individual, must be performed. Inspection of the structure should check for presence of bats/bat indicators and/or presence of birds. The results of the inspection must indicate no signs of bats or birds. If signs of bats or birds are documented during this inspection, the INDOT District Environmental Manager must be contacted immediately. (INDOT ESD)
6. General AMM 1. Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs. (USFWS)
7. Lighting AMM 1. Direct temporary lighting away from suitable habitat during the active season. (USFWS)
8. Lighting AMM 2. When installing new or replacing existing permanent lights, use downward-facing, full cut-off lens lights (with same intensity or less for replacement lighting); or for those transportation agencies using the BUG system developed by the Illuminating Engineering Society, the goal is to be as close to 0 for all three ratings with a priority of "uplight" of 0 and "backlight" as low as practicable. (USFWS)
9. Tree Removal AMM 1. Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal. (USFWS)
10. Tree Removal AMM 2. Apply time of year (TOY) restrictions for tree removal when bats are not likely to be present (November 15 – March 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 with no bats observed. (USFWS, IDNR)

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11. Tree Removal AMM 3. 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)
12. Tree Removal AMM 4. Do not remove documented Indiana bat or NLEB roosts that are still suitable for roosting; or trees within 0.25 miles of roosts; or documented foraging habitat any time of year. (USFWS)
13. Prior to any demolition, all structure(s) will be inspected for bats or evidence of bats. If bats, or evidence of bats, are found coordination will occur with INDOT ESD and USFWS before demolition starts. If further coordination is needed no demolition can occur until coordination is concluded with INDOT ESD and USFWS. (USFWS)
14. Structure Nos. 031-29-04572 BNBL (northbound bridge over Little Cicero Creek) and 031-29-04572 BSBL (US 31 southbound over Little Cicero Creek) have shown evidence of use (i.e., nests) by a bird species protected under the Migratory Bird Treaty Act (MBTA) during the June 23, 2020, inspection. Avoidance and minimization measures must be implemented prior to the start of and during the nesting season. Nests without eggs or young should be removed prior to construction during the non-nesting season (September 8 – April 30) and during the nesting season if no eggs or young are present. Nests with eggs or young cannot be removed or disturbed during the nesting season (May 1 – September 7). Nests with eggs or young should be screened or buffered from active construction. Details of the required procedures are outlined in the “Migratory Bird Protection” Unique Special Provision (USP). (INDOT ESD)
15. Before commencing ground-disturbing activities in a phase of US 31 Limited Access Conversion from SR 38 to 286th Street, INDOT shall complete the identification and evaluation of archaeological properties in accordance with Federal and State standards and guidelines. (INDOT CRO, IDNR DHPA)
16. INDOT and/or its consultants shall investigate any additional locations where ground-disturbing activities are proposed or where they may occur within temporary and permanent right-of-way, where such areas have not previously been investigated or have been added due to project modifications. INDOT and/or its consultants shall prepare a distribute a final Identification and Evaluation report or reports. (INDOT CRO, IDNR DHPA)
17. Consultation with the Indiana SHPO determined there is insufficient information regarding archaeological sites 12-H-1742, 12-H-1881, 12-H-1882, and 12-H-1883 to determine eligibility for inclusion in the NRHP. These sites must be avoided by all project activities. If avoidance is not feasible, a plan for Phase II Archaeological investigations will be submitted to the Indiana SHPO for review and comment. (INDOT CRO, IDNR DHPA)
18. Consultation with the Indiana SHPO determined portions of sites 12-H-1879, 12-H-1880, 12-H-1885, 12-H-1886, 12-H-1889, and 12-H-1891 that were identified within the project area during the archaeological investigations are not eligible for inclusion in the NRHP and no further archaeological investigations are necessary in those portions of the sites within the project area. The portions of these sites outside of the project area (right-of-way) will be clearly marked as do not disturb – sensitive environmental resource on the project plans and in the field prior to any ground disturbance so that they are avoided by all project activities. If avoidance is not feasible, a plan for further archaeological investigations will be submitted to the Indiana SHPO for review and comment. (INDOT CRO, IDNR DHPA)
19. If a steel casing or void hole is encountered during construction, around the known wells, contact IDNR Division of Oil and Gas immediately so they can assess the well and determine next steps. (IDNR Division of Oil and Gas)
20. One (1) State Cleanup Site is located within the search radius. The site, associated with JAS Trucking Incorporated (Agency ID No. 23367), is located at the US 31 and 216th Street intersection. Coordination will be conducted with IDEM before future site activities occur. (INDOT-SAM)
21. GW Pierce Lot 2, 22265 US Hwy 31, AI# 117374, is located adjacent to the project area. The site was formerly the site of an auto parts facility. Coordination will be conducted with IDEM before further site activities occur. If excavation is planned for this area, a Phase II Environmental Site Assessment is recommended. (INDOT-SAM)
22. The 31 Car & Truck Plaza site (McClure Oil Store #65), 21575 US HWY 31 N, Cicero, IN, AI #20847, is located at the southeast corner of US 31 and 216th Street. Coordination with IDEM is recommended to see if additional information is available. If extensive excavation is necessary in this area, a Phase II Environmental Site Assessment is recommended. (INDOT-SAM)

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23. Little Cicero Creek is listed as impaired for E. coli. Regarding E. coli, workers who are working in or near water with E. coli should take care to wear appropriate PPE, observe proper procedures, including regular hand washing, and limit personal exposure. The contractor shall provide the appropriate training and PPE for all workers who are working in or near Little Cicero Creek. (INDOT SAM)

For Further Consideration:

24. For the purposes of maintaining fish and wildlife passage through a crossing structure, the Environmental Unit recommends bridges rather than culverts and bottomless culverts rather than box or pipe culverts. Wide culverts are better than narrow culverts, and culverts with shorter through lengths are better than culverts with longer through lengths. If box or pipe culverts are used, the bottoms should be buried a minimum of 6" (or 20% of the culvert height/pipe diameter, whichever is greater up to a maximum of 2') below the stream bed elevation to allow a natural streambed to form within or under the crossing structure. Crossing should: span the entire channel width (a minimum of 1.2 times the OHWM width); maintain the natural stream substrate within the structure; have a minimum openness ratio (height x width/length) of 0.25; and have stream depth, channel width, and water velocities during low-flow conditions that are approximate to those in the natural stream channel. Banklines should be restored within box and pipe structures to allow for wildlife passage above the ordinary highwater mark. (IDNR)

25. The new, replacement, or rehabbed structure, and any bank stabilization under the structure, should not create conditions that are less favorable for wildlife passage under the structure compared to the current conditions. The Division of Fish and Wildlife would like to emphasize the importance of wildlife passage issues and transportation infrastructure projects. (IDNR)

26. For streambank stabilization and erosion control, regrading to a stable slope (2:1 or shallower) and establishing native vegetation along the banks are typically the most effective techniques. A variety of methods to accomplish this include planting plugs, whips, container stock, seeding, and live stakes. In addition to vegetation establishment, some additional level of bioengineered bank stabilization may be needed under certain circumstances (inability to regrade to a stable slope, flow velocities that exceed the limits of vegetation alone, etc.). Combining vegetation with any of the following bank stabilization methods can provide additional bank protection while not compromising benefits to fish, wildlife, and botanical resources: geotextiles (erosion control blankets and/or turf reinforcement mats that are heavy-duty, biodegradable, and net free or that use loose-woven / Leno-woven netting to minimize the entrapment and snaring of small-bodied wildlife such as snakes and turtles), vegetated geogrids or soil lifts, fiber rolls, glacial stone, or riprap. (IDNR)

27. Riprap or other hard bank stabilization materials should be used only at the toe of the sideslopes up to the ordinary high-water mark (OHWM) except for areas directly under bridges for instance. The banks above the OHWM should be restored, stabilized, and revegetated using geotextiles and a mixture of grasses, sedges, wildflowers, shrubs, and trees native to Central Indiana and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion. For streambed stabilization or scour protection, riprap or other stabilization materials should not be placed in the active stream channel above the existing streambed or flowline elevation unless specifically designed and installed for grade control and aquatic organism passage. This is to prevent obstructions to the movement of aquatic organisms upstream and downstream. (IDNR)

28. Impacts to non-wetland forest of one (1) acre or more should be mitigated at a minimum 2:1 ratio. If less than one acre of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ratio based on area. Impacts to non-wetland forest under one (1) acre in an urban setting should be mitigated by planting five trees, at least 2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10" dbh or greater (5:1 mitigation based on the number of large trees) or by using the 1:1 replacement ratio based on area depending on the type of habitat impacted (individual canopy tree removal in an urban streetscape or park-like environment versus removal of habitat supporting a tree canopy, woody understory, and herbaceous layer). Impacts under 0.10 acre in and urban area may still involve the replacement of large diameter trees but typically do not require any additional mitigation or additional plantings beyond seeding and stabilizing disturbed areas. There are exceptions for high quality habitat sites, however. (IDNR)

29. The Division of Fish and Wildlife recommends coordinating with the Division of Fish and Wildlife CORRIDORS Program to include roadside plantings to enhance habitat for grassland birds and pollinators (<https://www.in.gov/dnr/fishwild/9405.htm>). (IDNR)

30. Due to the presence or potential presence of wetland habitat on site, we recommend contacting and coordinating with the Indiana Department of Environmental Management (IDEM) 401 program and the US Army Corps of Engineers (USACE) 404 program. Impacts to wetland habitat should be mitigated at the appropriate ratio according to the 1991 INDOT/IDNR/USFWS Memorandum of Understanding. (IDNR)

31. Most transportation corridor designers and municipalities are trending toward LED lighting. Certain types of LED lighting can have negative impacts on both human and wildlife health and safety. Scientific evidence suggests that artificial light at night has negative and deadly effects on many creatures including amphibians, birds, mammals, insects, and plants. A June 2016 American Medical

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Association (AMA) report, "Human and Environmental Effects of Light Emitting Diode Community Lighting," concluded that "white LED street lighting patterns may contribute to the risk of chronic disease in the populations of cities in which they have been installed." We recommend visiting the following website to learn more about the potential negative impacts of improperly selected LED lighting systems if required: <http://darksky.org/lighting/led-practical-guide/>. (IDNR)

32. Revegetate all bare and disturbed areas that are not currently mowed and maintained with a mixture of grasses, sedges, and wildflowers native to Central Indiana as soon as possible upon completion; turf-type grasses (including low-endophyte, friendly endophyte, and endophyte free tall fescue but excluding all other varieties of tall fescue) may be used in currently mowed areas only. (USFWS)

33. Do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds. (IDNR)

34. Use minimum average 6-inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids. (IDNR)

35. Underlay the riprap with a bedding layer of well graded aggregate or a geotextile to prevent piping of soil underneath the riprap. (IDNR)

36. Seed and protect all disturbed streambanks and slopes not protected by other methods that are 3:1 or steeper with erosion control blankets that are heavy-duty, biodegradable, and net free or that use loose-woven / Leno-woven netting to minimize the entrapment and snaring of small-bodied wildlife such as snakes and turtles (follow manufacturer's recommendations for selection and installation); seed and apply mulch on all other disturbed areas. (IDNR)

37. Restrict below low-water work in streams to placement of culverts, piers, pilings and/or footings, shaping of the spill slopes around the bridge abutments, and placement of riprap. Culverts should span the active stream channel, should be either embedded or a 3-sided or open-arch culvert, and be installed where practicable on an essentially flat slope. When an open-bottom culvert or arch is used in a stream, which has a good natural bottom substrate, such as gravel, cobbles and boulders, the existing substrate should be left undisturbed beneath the culvert to provide natural habitat for the aquatic community. (USFWS)

38. Minimize the extent of hard armor (riprap) in bank stabilization by using bioengineering techniques wherever possible. If riprap is utilized for bank stabilization, extend it below low-water elevation to provide aquatic habitat. (USFWS)

39. Avoid all work within the inundated part of the stream channel (in perennial streams and larger intermittent streams) during the fish spawning season (April 1 through June 30), except for work within sealed structures such as caissons or cofferdams that were installed prior to the spawning season. No equipment shall be operated below the Ordinary High-Water Mark during this time unless the machinery is within the caissons or cofferdams. (USFWS)

40. Evaluate wildlife crossings under bridge/culverts projects in appropriate situations. Suitable crossings include flat areas below bridge abutments with suitable ground cover, high water shelves in culverts, amphibian tunnels and diversion fencing. (USFWS)

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