

Indiana Department of Transportation

County Marion Route I-465 Des. No. 1802075

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

Road No./County:	Interstate 465 (I-465) / Marion County
Designation Number:	1802075 (Lead), 1701345, 1700949, 1901612, 1801695, 1802105, 1802106, 1802107, 1900744, 1900748, 1900749, 1900750, 1900757, 1900758, 1901390, and 1900769
Project Description/Termini:	I-465 Reconfiguration; Added Travel Lanes Section A/B: I-465, from 0.3 mile west of I-465/(United States) US 31 interchange to I-465/I-65 interchange. Section C: I-465, from I-465/I-70 interchange to the I-465/Mann Road interchange.

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

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

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

Approval N/A _____ Date 2/21/2020
 ESM Signature _____ Date _____ ES Signature _____ Date _____

Robert E. Dirks Digitally signed by Robert E. Dirks
 _____ Date: 2020.02.28 14:54:16 -05'00'
 FHWA Signature _____ Date _____

Release for Public Involvement

N/A _____ Date 11-18-19
 ESM Initials _____ Date _____ ES Initials _____ Date _____
RC 1-23-20 Certification of Public Involvement Tracie Clark _____ Date 1-23-20
 Office of Public Involvement _____ Date _____

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

INDOT ES/District Env. Reviewer Signature: Meghan Dirks Date: 2/21/2020
 Name and Organization of CE/EA Preparer: Juliet Port, LPG - Parsons

This is page 1 of 43 Project name: I-465 Reconfiguration Date: November 18, 2019

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Part I - PUBLIC INVOLVEMENT

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

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

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

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

Remarks:	<p>Notice of Entry letters were mailed to potentially affected property owners near the project area on March 27, 2019 notifying them about the project and that individuals responsible for land surveying and field activities may be seen in the area. A sample copy of the Notice of Entry letter is included in Appendix G-1.</p> <p>Early in the project development process, the project team prepared a Public Involvement Plan (PIP). The purpose of this plan was to establish the goals and strategies for engaging with the public and key stakeholders in accordance with the Indiana Department of Transportation (INDOT) Public Involvement Procedures Manual. The PIP was approved by INDOT on June 25, 2019. A copy of the PIP is included in Appendix G-5.</p> <p>A Community Advisory Committee (CAC) was formed to obtain early input from key stakeholders including local government officials, elected officials, transportation managers, major employers, and emergency responders (listed below). The CAC was initiated with meeting invitations, sent on June 13, 2019 (Appendix G-16). The CAC meeting was held on July 9, 2019. The meeting summary and request for written comments, sent on July 23, 2019, is included in Appendix G-22. No written comments were received.</p> <p>CAC Members</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Governor, State of Indiana</td><td>Town of Homecroft Council</td></tr> <tr><td>Mayor, City of Indianapolis</td><td>Decatur Township Trustee</td></tr> <tr><td>Senators of Indiana, U.S. Senate</td><td>Perry Township Trustee</td></tr> <tr><td>Congressman, U.S. Congress Indiana 7th District</td><td>Decatur Township Civic Council</td></tr> <tr><td>State Senators, State Districts 32, 35, and 36</td><td>Indianapolis Mayor's Neighborhood Advocates 3 and 4</td></tr> <tr><td>Representatives, House Districts 90, 91, and 97</td><td>Indianapolis Neighborhood Housing Partnership South</td></tr> <tr><td>Councilman, City/County Council Districts 16, 20, 22, and 24</td><td>City of Indianapolis, Department of Metropolitan Development</td></tr> <tr><td>Mayor of Southport</td><td>Decatur Township Center (Nursing Home)</td></tr> <tr><td>Federal Highway Administration (FHWA)</td><td>City of Indianapolis, Department of Public Works</td></tr> <tr><td>Indianapolis Fire Station 23</td><td>Big Car/South Indy Quality of Life Plan</td></tr> <tr><td>INDOT Rail Office</td><td>Indianapolis Metropolitan Planning Organization (MPO)</td></tr> <tr><td>INDOT Office of Aviation</td><td>IndyGo</td></tr> <tr><td>Central Indiana Regional Transportation Authority</td><td>Indianapolis Public Schools</td></tr> <tr><td>Metropolitan School District of Decatur Township</td><td>Roncalli High School</td></tr> <tr><td>University of Indianapolis</td><td>Perry Township High School</td></tr> <tr><td>Louisville & Indiana Railroad Co.</td><td>Indianapolis Fire Department</td></tr> <tr><td>Indianapolis Airport Authority</td><td>Indianapolis Metropolitan Police Department</td></tr> <tr><td>Indiana Department of Homeland Security</td><td>Marion County Health and Hospital</td></tr> <tr><td>Indiana State Police</td><td>Decatur Township Fire Department</td></tr> <tr><td>Indianapolis Homeland Security Bureau, Emergency Management Agency</td><td>Northwest Perry Neighborhood Association</td></tr> </table>	Governor, State of Indiana	Town of Homecroft Council	Mayor, City of Indianapolis	Decatur Township Trustee	Senators of Indiana, U.S. Senate	Perry Township Trustee	Congressman, U.S. Congress Indiana 7th District	Decatur Township Civic Council	State Senators, State Districts 32, 35, and 36	Indianapolis Mayor's Neighborhood Advocates 3 and 4	Representatives, House Districts 90, 91, and 97	Indianapolis Neighborhood Housing Partnership South	Councilman, City/County Council Districts 16, 20, 22, and 24	City of Indianapolis, Department of Metropolitan Development	Mayor of Southport	Decatur Township Center (Nursing Home)	Federal Highway Administration (FHWA)	City of Indianapolis, Department of Public Works	Indianapolis Fire Station 23	Big Car/South Indy Quality of Life Plan	INDOT Rail Office	Indianapolis Metropolitan Planning Organization (MPO)	INDOT Office of Aviation	IndyGo	Central Indiana Regional Transportation Authority	Indianapolis Public Schools	Metropolitan School District of Decatur Township	Roncalli High School	University of Indianapolis	Perry Township High School	Louisville & Indiana Railroad Co.	Indianapolis Fire Department	Indianapolis Airport Authority	Indianapolis Metropolitan Police Department	Indiana Department of Homeland Security	Marion County Health and Hospital	Indiana State Police	Decatur Township Fire Department	Indianapolis Homeland Security Bureau, Emergency Management Agency	Northwest Perry Neighborhood Association
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A public open house for the I-465 Reconfiguration project was held at Decatur Central High School on July 10, 2019. Invitations to the open house were sent to adjoining property owners, places of worship, civic organizations, and neighborhood groups (Appendix G-41). Additionally, the open house was advertised via INDOT's mailing list, press releases, social media, and traditional media outlets (Appendix G-50). Media coverage included WIBC, CBS4, RTV6, the *Daily Journal*, Fox 59, the *Nuvo*, WFYI, and WishTV (Appendix G-54). During the open house, project team members were stationed to allow for small group discussions, and a short presentation was given on the project's purpose and need, environmental analyses, and the recommended alternative (Appendix G-72).

Project team members were invited to attend several community events where they presented meeting materials from the public open house (Appendix G-72). These meetings are listed below.

Community Outreach Events

Meridian Place Homeowners Association	July 22, 2019
Perry Township National Night Out	August 6, 2019

A noise meeting was held on August 29, 2019 at Decatur Central Middle School to solicit input from residents that would benefit from the construction of noise barriers. Meeting invitations and pre-stamped surveys, which allowed the resident to state whether or not they would like the noise wall associated with their property constructed, were mailed to each benefited resident on August 13, 2019 (Appendix G-128). A presentation was given on the noise analysis conducted for the project, and boards showing the locations where noise abatement is likely were made available. In September 2019, project team members conducted additional outreach to discuss the proposed project and noise barriers that are proposed in their area (Appendix G-126). Noise survey cards and written general comments were collected. A summary of the outreach events is provided in the table below.

Additional Noise Outreach

Community	Date	Event Type
Fox Club Apartments	September 3, 2019	Outdoor booth - distributed project information, collected noise surveys and project comments.
Decatur Township Center	September 3, 2019	Met with nursing home staff, left project information and noise surveys.
Madison Mobile Home Community	September 4, 2019	Outdoor booth - distributed project information, collected noise surveys and project comments.
Village of North Acre	September 4, 2019	Outdoor booth - distributed project information, collected noise surveys and project comments.
Single family homes along Tincher Rd, Norcroft Dr, Gambell Rd, and Biltmore Ave.	September 5, 2019	Door-to-door, distributed project information and noise surveys.
Horizons Apartments	September 6, 2019	Outdoor booth at neighborhood community day and pool party. Distributed project information, collected noise surveys and project comments.
Yorktown Homes South Cooperative	September 9, 2019	Community clubhouse - distributed project information, collected noise surveys and project comments.
Fox Club Apartments	September 10, 2019	Door-to-door, distributed project information and noise survey (including Spanish language).
Single family homes along Redfern Dr. and Morgan Dr.	September 10, 2019	Door-to-door, distributed project information and noise survey.
Long Acre mobile home community	September 14, 2019	Door-to-door, distributed project information and noise survey.

The noise survey card comment period ended on September 20, 2019. Of the 512 mailings sent to benefited receivers, 133 positive responses were received, and 6 negative responses were received (27% response rate). Outreach to businesses and landowners was conducted via mail and meetings. As a result of the stakeholder process, and mixed-use areas, the length of three barriers were shortened (Appendix G-158 to G-161). The revised barriers were displayed at the

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public hearing. The results of the public hearing are discussed below. See the Noise section for further discussion on the noise analysis.

The project meets the minimum requirements described in the current INDOT *Public Involvement Manual*, which requires the project sponsor to offer the public an opportunity to submit comment and/or request a public hearing. Therefore, in accordance with INDOT's FHWA-approved public involvement guidelines, a public hearing was held on December 10, 2019 at Decatur Central High School Cafeteria in Indianapolis, Indiana to offer the public an opportunity to comment on the environmental document and the preliminary design plans. The public hearing notice was advertised in the *Indianapolis Star* on November 22 and 29, 2019 (Appendix G-134 to G-137), which also announced that the comment period would end on January 10, 2020. Copies of the public notice were mailed directly to property owners in the project area and advertised on INDOT's website.

Prior to the Public Hearing, a total of 31 public comments were received, which are summarized in the Public Comment Log (Appendix G-91). The comments primarily discuss noise, safety, construction timing, the Mann Road interchange, transit, pedestrian/multi-use access, and maintenance of traffic. Copies of the comments are included in Appendix G-94.

Majority of the comments received at the hearing and during the comment period pertained to the noise analysis, and, specifically, the exclusion of Noise Barrier 12 (Appendix G-168 to G-199). The reason that a noise barrier was not found to be reasonable and feasible in this location was due to high-voltage transmission lines that cross and then run parallel to the interstate in this location. These transmission lines restrict where a barrier could be placed along the right-of-way due to safety issues. Because of these safety issues and the associated risks, a gap would have to be placed within a barrier at this location. Because of this necessary gap, the barrier would not meet the acoustic feasibility criterion (i.e., provide a 5 A-weighted decibel (dBA) reduction at majority of the impacted receptors). Since the wall was not feasible, reasonableness was not evaluated.

Residents in this area also commented on recent vegetation cleared in the area and requested additional noise analysis to account for this removal. Upon review, it was determined that the utility (Duke Energy) recently cleared vegetation in this area, per their safety policy. The recent vegetation clearing at this location does not require a reanalysis of traffic noise impacts and abatement. Per INDOT's *Noise Analysis Procedure*, trees and other dense vegetation should not be modeled unless the vegetation is evergreen and completely blocks all lines of sight to the roadway. Since the vegetation at this location is not evergreen, it was not incorporated into the noise modeling for this project. Therefore, the noise results provided in the *Traffic Noise Impact Analysis* already reflect conditions without vegetation in this area. Furthermore, the gap in the noise barrier must remain. All of the proposed noise barriers will be reevaluated, and the final decision on the installation of any abatement measure(s) will be made upon the completion of the projects' final design and the public involvement process.

Other comments received included maintenance of traffic (MOT), shoulder widening, interstate access, highway lighting, the project schedule, and right-of-way. This project is part of a design-build contract. Therefore, the MOT for the project will be designed following the award of the contract. See the MOT section for more detail. This project will occur entirely within existing right-of-way. The questions on shoulder widening and interstate access would have required additional right-of-way and would have impacted sensitive resources adjacent to the interstate. Therefore, they were not considered moving forward. The highway lighting concern was not related to this project, therefore it was passed along to INDOT customer service for follow-up. This project is scheduled to begin construction at the end of 2020, with traffic open by the end of 2024. A list of all the comments received and INDOT's response to each is located in Appendix G-200 to G-204.

Public Controversy on Environmental Grounds

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

Yes

No

Remarks:

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

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

Sponsor of the Project: INDOT INDOT District: Greenfield
 Local Name of the Facility: I-465

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

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

PURPOSE AND NEED:

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

On July 23, 2019, the draft purpose and need memorandum was approved by INDOT and distributed to CAC members for comment (Appendix G-22 and Appendix J-25). No comments were received.

The needs for this project are due to insufficient capacity along I-465 and safety issues that result in a high rate of crashes. Safety issues include interchange ramp lengths that do not meet current *Indiana Design Manual 2013* (revised 2019) standards. Within Section A/B (I-465/I-65 interchange to I-465/US 31 interchange), there are back-ups and accidents at the I-465 to northbound US 31 ramps, the southbound US 31 to I-465 ramp, and the southbound US 31 to eastbound I-465 entrance lane. Within Section C (I-465/I-70 interchange to I-465/Mann Road interchange), there are back-ups and accidents where the eastbound I-70 to eastbound I-465 entrance lane drops, at the eastbound I-465 to State Road (SR) 67 entrance ramp, at the westbound I-465 to eastbound I-70 exit ramp, and at the westbound I-465 to SR 67 on-ramp.

Existing crash data from 2015 to 2017 within these sections of I-465 is summarized below.

Summary of Existing Crash Data (2015-2017)

SECTION	CRASH TYPE				TOTAL NO. OF CRASHES	NO. OF INJURIES	NO. OF FATALITIES
	REAR END	RAN OFF ROAD	SAME DIRECTION SIDE SWIPE	OTHER			
Section A/B	92	28	59	37	216	35	2
Section C	72	19	81	26	198	21	0

Safety is evaluated using the Road Hazard Analysis Tool (RoadHAT) software. RoadHAT provides results in an Index of Crash Frequency (ICF) and Index of Crash Cost (ICC), which illustrate how the facility is performing. Per the *Indiana Design Manual 2013*, an ICF and ICC of zero or less represents average or below-average crash frequency. The results of the RoadHAT analysis provided an ICF of 1.47 and an ICC of 1.57 on Section A and an ICF of 1.68 and an ICC of 0.31 on Section C. Therefore, the project area is experiencing a higher than expected number of crashes for this type of facility. The primary types of crashes are rear end, ran off road, and same direction sideswipe. This indicates that capacity, merging, and weaving movements likely contribute to the safety issues.

The existing ramps were compared to current *Indiana Design Manual 2013* standards, which is summarized in the table below. The substandard ramp lengths cause weaving and congestion issues that negatively impact safety within the project area.

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Summary of Ramp Needs

RAMP	RAMP CRITERIA	LENTH (FEET)	
		EXISTING	DESIGN STANDARD
Eastbound I-465 to Southbound US 31	Exit Ramp Deceleration Length	180	550
Southbound US 31 to Eastbound I-465	Entrance Ramp Merge Length	300	600
Westbound I-465 to SR 67	Exit Ramp Taper Length	220	300
SR 67 to Eastbound I-465	Entrance Ramp Acceleration Length	225	1,000

Source: *Indiana Design Manual 2013 (revised 2019)*

Traffic capacity was analyzed for the years 2016-2017 (existing conditions) and 2045 (design year) in terms of Levels of Service (LOS). LOS is a performance measure that represents quality of service, measured on an A – F scale, with LOS A representing a free flow of traffic and LOS F representing a breakdown in flow (e.g., start-and-stop congestion). The project area is within an urban area, therefore the minimum criteria during peak travel hours (i.e., rush hour) is LOS D.

The traffic capacity analysis identified substandard levels of service within the project area. For the years 2016-2017, I-465 Section A/B from US 31 to I-65 operated at LOS E. Along I-465 Section C, from SR 67 to Mann Road, the facility operated at LOS D.

Traffic operational issues for the year 2025 were analyzed and shown to have unacceptable LOS. The results are summarized below.

Section A/B LOS (2025)

- Eastbound I-465 at the US 31 interchange is LOS F during the PM peak (i.e., rush hour).
- Eastbound I-465 between US 31 and I-65 is LOS E during the AM and PM peak.
- Westbound I-465 between I-65 and US 31 is LOS F during the AM peak.

Section C LOS (2025)

- Eastbound I-465 between the I-70 entrance ramp and SR 67 is LOS F during the PM peak.
- Eastbound I-465 from SR 67 to Mann Road is LOS F during PM peak.
- Westbound I-465 from Mann Road to SR 67 is LOS F during the AM peak.

Correcting capacity issues is also needed due to the programmed I-69 Section 6 project. The I-69 Section 6 project will construct a new interchange with I-465 and added lane capacity on I-465 from just west of Mann Road to the US 31 interchange. This is expected to increase traffic volumes and worsen existing capacity issues on eastbound and westbound I-465 within the project area, which would result in potential safety issues and major operational issues.

The purpose of the I-465 Reconfiguration Project is to improve overall traffic operation within these sections of I-465 by improving level of service to at least LOS D in the design year (2045), meeting current design standards for ramp lengths, and improving safety.

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Marion

Municipality: City of Indianapolis

Limits of Proposed Work: Section A/B: I-465, from 0.3 mile west of the I-465/US 31 interchange to the I-465/I-65 interchange.
Section C: I-465, from the I-465/I-70 interchange to the I-465/Mann Road interchange.

Total Work Length: 2.24 Mile(s)

Total Work Area: 52.44 Acre(s)

Is an Interchange Modification Study / Interchange Justification Study (IMS/IJS) required?

Yes ¹	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>

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If yes, when did the FHWA grant a conditional approval for this project?

Date:

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

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

The Indiana Department of Transportation (INDOT) proposes an added travel lanes project on Interstate 465 (I-465) in Marion County, Indiana. The project consists of two sections: Section A/B and Section C. A Project Location Map is attached (Appendix B-1). The project is located in an urban area on the south side of the City of Indianapolis, Marion County. Section A/B is within Perry Township and Section C is within Decatur Township.

Within Section A/B, I-465 has three 12-foot travel lanes in each direction, with 10 to 12-foot inside shoulders and 12-foot outside shoulders. Section A/B includes the I-65 and East Street interchanges, and has overpasses for Carson Avenue, Keystone Avenue, the Louisville & Indiana Railroad, and Madison Avenue.

Within Section C, I-465 has three 12-foot travel lanes in each direction, with 16.75-foot inside shoulders and 10 to 12-foot outside shoulders. Section C includes the Mann Road, SR 67/Kentucky Avenue, and I-70 interchanges, and has overpasses for Mooresville Road Bypass and Hanna Avenue. Existing conditions are shown on project photographs in Appendix B-100.

The preferred alternative for Section A/B begins approximately 0.3 mile west of the I-465/US 31 interchange and ends at the I-465/I-65 interchange. The proposed work for Section A/B includes building an auxiliary lane to the outside on eastbound and westbound I-465, reconfiguring the eastbound I-465 to the northbound and southbound US 31 exit ramps, and extending the entrance lane from southbound US 31 to eastbound I-465 (Appendix B-45). Guardrail will be replaced and upgraded. Mainline bridges within the corridor will be widened. In order to contain the project area within existing right-of-way, retaining walls will be used and roadside streams and ditches will be piped where necessary. The proposed work for Section A/B also includes the replacement of the Madison Avenue, Keystone Avenue, and Carson Avenue bridges. Section A/B addresses the high rate of crashes caused by insufficient ramp lengths and capacity issues between the I-465/US-31 interchange and the I-465/I-65 interchange; therefore, it has independent utility with logical termini. Since the termini are ramps at interchanges, Section A/B is independent and would not need to be altered if other contract Sections were delayed or cancelled.

The preferred alternative for Section C begins at the south end of the I-465/I-70 interchange and ends just west of the I-465/Mann Road interchange. The proposed work for Section C includes added travel lanes along the inside shoulder of I-465, full depth pavement replacement at the shoulders, and replacement of the Mooresville Road Bypass bridge (Appendix B-45). The SR 67 ramps will be lengthened. Guardrail will be replaced and upgraded. In order to contain the project area within existing right-of-way, retaining walls will be used and roadside streams and ditches will be piped where necessary. Section C will address the high crash rate caused by insufficient ramp lengths and capacity issues along I-465; therefore, Section C has independent utility with logical termini between the I-465/I-70 interchange and I-465/Mann Road interchange. Currently, the eastern terminus is proposed to match-up with the western terminus of the I-69 Section 6 project. However, even if Section 6 of I-69 becomes delayed or cancelled, Section C would be needed to address the existing safety and capacity issues (described further in the Purpose and Need section).

This is a Type I project; therefore, Noise Analyses have been conducted, per INDOT's *Traffic Noise Analysis Procedure* (2017). The feasibility and cost effectiveness of noise barriers are being evaluated at all locations in the project areas where noise impacts were identified under the future build alternative (see Section F – Noise section for further discussion).

The project area includes 15 bridges and 9 culverts, most of which require some work as summarized in the tables below this remarks box. All work will occur within existing right-of-way (ROW). No permanent or temporary ROW will be required for this project.

During construction, traffic will be maintained along I-465 with shoulder and lane closures. All ramps within the interchanges will primarily remain open during construction. Local roads will experience closures while the Madison Avenue, Keystone Avenue, Carson Avenue, and Mooresville Road Bypass bridges are replaced, and detours will be provided (see the the Maintenance of Traffic (MOT) During Construction section for further discussion).

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This project will impact a total of 20 streams (12,722 linear feet), 1,052 acres of wetlands, the regulatory floodplain of McFarland and Lick Creek, 24.09 acres of non-wetland terrestrial habitat, up to 18.05 acres of trees considered "suitable summer habitat" for the Indiana bat and northern long-eared bat (NLEB), and urban trees. Additionally, there will be noise impacts to residential and commercial receptors.

Based on the October 26, 2018 *Final Engineer's Report - I-69 Section 6*, the preferred alternative will meet the project's purpose and need by improving overall traffic operation within these sections of I-465 by improving level of service to at least LOS D in the design year (2045). Furthermore, the project will improve safety by meeting current design standards for ramp lengths.

Summary of Bridges

Bridge No.	Structure No.	Des. No.	Section	Crossing	Scope of Work
1	I465-165-04442 B	1900758	A/B	Carson Avenue over I-465, Lick Creek	Replacement
2	CV I465-049-00.30	1901612	A/B	I-465 over McFarland Creek	Rehabilitation and extend
3	I465-164-04444 BWBL	1900749	A/B	Westbound I-465 over Lick Creek	Widening bridge
4	I465-164-04444 CEBL	1900748	A/B	Eastbound I-465 over Lick Creek	Widening bridge
5	I465-164-04798 A	1701345	A/B	Keystone Avenue over I-465	Replacement
6	(I465)31-49-04449 B	1802075	A/B	US 31 northbound ramp over eastbound I-465, Lick Creek	No work is proposed
7	(I465)31-49-04450 B	1802075	A/B	US 31 southbound ramp over westbound I-465, Lick Creek	No work is proposed
8	031-49-04448 B	1900744	A/B	US 31 over I-465 eastbound/westbound, Lick Creek	New cut wall under bridge
9	I465-163-04447 BEBL	1900949	A/B	I-465 eastbound over Lick Creek	Rigid deck overlay
10	(I465)431-49-04445 B	1900757	A/B	Madison Avenue over I-465 and Lick Creek	Replacement
11	I465-164-02245	1802075	A/B	Louisville and IN railroad over I-465	Resurfacing/stripping under bridge only
12	I465-155-09161	1802075	C	West Hanna Avenue over I-465	Resurfacing/stripping under bridge only
13	I465-156-02152 JBNS	1802075	C	I-465 northbound over IS railroad, SR 67	Striping (added lane)
14	I465-156-02152 BSBL	1802075	C	I-465 southbound over IS railroad, SR 67	Striping (added lane)
15	I465-157-04721 B	1900750	C	Mooresville Road over I-465	Bridge Replacement

Summary of Culverts

No.	Structure No.	Des. No.	Section	Waterbody	Existing Structure	Length (feet)	Work Type
1	CV 067-049-104.52	1802075	C	Dollar Hide Creek	11.5 ft x 6 ft Slabtop	140	No work is proposed*
2	CV I465-049-08.44L	1802075	C	UNT 1 to Dollar Hide Creek	6 ft x 3.75 ft RCP	130	No work is proposed*
3	CV I465-049-08.45	1901612	C	UNT 1 to Dollar Hide Creek	54-inch CMP w/HDPE liner	255	No work is proposed*
4	CV I465-049-08.38	1802075	C	UNT 1 to Dollar Hide Creek	48-inch CMP	120	No work is proposed*
5	CV I465-049-02.05	1901612	A/B	non-jurisdictional feature	66-inch CMP	176	Liner or replacement
6	CV I465-049-01.97	1901612	A/B	UNT 14 to Lick Creek	60-inch CMP	177	Liner or replacement
7	CV I465-049-01.90	1901612	A/B	UNT 11 to Lick Creek	60-inch CMP	137	Liner or replacement
8	CV I465-049-01.47	1901612	A/B	UNT 7 to Lick Creek	71- by 47-inch CMP	176	Liner or replacement
9	CV I465-049-00.27 L	1901612	A/B	UNT 1 to McFarland Creek	84-inch CMP	182	Liner or replacement

UNT = unnamed tributary; CMP = corrugated metal pipe; RCP= reinforced concrete pipe; ft = feet

* Located within the study area, but is outside construction limits.

OTHER ALTERNATIVES CONSIDERED:

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

Alternative 1 – Do-Nothing (No-Build)

The Do-Nothing Alternative would leave the roadway in its current state; ramps would remain substandard and back-ups would continue to occur. This alternative would not incur any costs or environmental impacts. However, the existing operational and safety issues would remain, which would likely increase with the addition of I-69. Since the Do-Nothing Alternative would not meet the purpose and need of the project, it was dismissed from further consideration.

Indiana Department of Transportation

County Marion

Route I-465

Des. No. 1802075

DESIGN CRITERIA FOR BRIDGES:

Bridges and structures that will be impacted by this project are summarized below. The following structures are within the study area, but will not be worked on for this project:

- Bridge No. 6, US 31 northbound ramp over eastbound I-465 and Lick Creek, Structure No. (I465)31-49-04449 B
- Bridge No. 7, US 31 southbound ramp over westbound I-465 and Lick Creek, Structure No. (I465)31-49-04450 B
- Bridge No. 11, Louisville and IN railroad over I-465, Structure No. I465-164-02245
- Bridge No. 12, West Hanna Avenue over I-465, Structure No. I465-155-09161
- Culvert No. 1, CV 067-049-104.52
- Culvert No. 2, CV I465-049-08.44L
- Culvert No. 3, CV I465-049-08.45
- Culvert No. 4, CV I465-049-08.38

Bridge No. 1, Carson Avenue over I-465 and Lick Creek

Structure/NBI Number(s):	I465-165-04442 B (existing) I465-165-10518 (proposed)	Sufficiency Rating:	93.4 (July 24, 2018 Inspection Report) (Rating, Source of Information)
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Existing

Proposed

	Existing	Proposed	
Bridge Type:	Continuous steel beam	Continuous composite steel beam	
Number of Spans:	7	3	
Weight Restrictions:	N/A	N/A	ton
Height Restrictions:	N/A	N/A	ft.
Curb to Curb Width:	35.3	36.6	ft.
Outside to Outside Width:	38.3	38.7	ft.
Shoulder Width:	6	7	ft.
Length of Channel Work:		45*	ft.

*Note, impacts to Lick Creek extend past this structure.

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

Remarks:	The Carson Avenue bridge over I-465 is located at the west end of the I-465/I-65 interchange and 1.96 miles east of US 31 (Appendix B-63). Lick Creek is located under the northern end and UNT 1 to McFarland Creek is carried within a structure on the southern end. In order to accommodate the added travel lanes on I-465, the existing 7-span continuous steel beam bridge will be replaced with a 3-span continuous composite steel beam bridge. The vertical grade will be raised by less than two feet. Up to 45 linear feet* of Lick Creek may be impacted by this bridge replacement. See Culvert No. 9, Structure No. CV I465-049-00.27L, discussed further below, regarding impacts to UNT 1 to McFarland Creek.
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Yes	No	N/A
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Will the structure be rehabilitated or replaced as part of the project?
If the proposed action has multiple bridges or small structures, this section should be filled out for each structure.

Indiana Department of Transportation

 County Marion

 Route I-465

 Des. No. 1802075
Bridge No. 2, I-465 over McFarland Creek

 Structure/NBI Number(s): CV 1465-049-00.30 Sufficiency Rating: N/A
 (Rating, Source of Information)

	Existing		Proposed
Bridge Type:	Reinforced concrete slab		N/A
Number of Spans:	1		N/A
Weight Restrictions:	N/A	ton	N/A
Height Restrictions:	N/A	ft.	N/A
Curb to Curb Width:	N/A	ft.	N/A
Outside to Outside Width:	200	ft.	222
Shoulder Width:	Inside: 13 Outside: 12	ft.	Inside: 13 Outside: 14
Length of Channel Work:			255

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

Remarks: The I-465 bridge over McFarland Creek is located 0.031 mile west of Carson Avenue (Appendix B-70). It is a 9-foot high, 200-foot wide reinforced concrete slab bridge with wingwalls and one 18-foot long span. The preferred alternative includes lining the entire width of the channel (240 feet in length) with class one riprap over geotextile, extending the structure to the south by 22 feet to accommodate a lengthened ramp, and replacing the southern wingwall. McFarland Creek runs the width of the bridge, therefore up to 255 feet of the stream may be impacted by this work.

 Will the structure be rehabilitated or replaced as part of the project?

 Yes
 No
 N/A
Bridges Nos. 3 and 4, I-465 over Lick Creek

 Structure/NBI Number(s): 1465-164-04444 DEBL and
1465-164-04444 CWBL Sufficiency Rating: 92.6 (July 24, 2018 Inspection Reports)
 (Rating, Source of Information)

	Existing		Proposed
Bridge Type:	Continuous prestressed concrete spread box beam		Continuous prestressed concrete spread box beam
Number of Spans:	3		3
Weight Restrictions:	N/A	ton	N/A
Height Restrictions:	N/A	ft.	N/A
Curb to Curb Width:	58.1	ft.	73.1
Outside to Outside Width:	61.1	ft.	76.1
Shoulder Width:	Outside: 10.7 Inside: 11.4	ft.	Outside: 13.7 Inside: 11.4
Length of Channel Work:			160* ft. *Note, impacts to Lick Creek extend past this structure.

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

Remarks: The I-465 bridges over Lick Creek are located 1.21 miles east of US 31 (Appendix B-73). These bridges will be widened in order to accommodate added travel lanes. According to the approved August 6, 2019 Scour Letter, Lick Creek beneath these bridges is scour-critical, including cracking and undercutting of the existing concrete slope wall. Therefore, approximately 160 linear feet* of Lick Creek will be impacted in this area by the placement of Class 1 riprap and replacement of the cracked concrete slope wall.

 Will the structure be rehabilitated or replaced as part of the project?

 Yes
 No
 N/A

Indiana Department of Transportation

County Marion Route I-465 Des. No. 1802075

Bridge No. 5, Keystone Avenue over I-465

Structure/NBI Number(s): I465-164-04798 A (existing) Sufficiency Rating: 68.6 (July 24, 2018 Inspection Report)
I-465-164-10255 (proposed) (Rating, Source of Information)

	Existing		Proposed
Bridge Type:	Continuous steel beam		Continuous composite beam
Number of Spans:	4		2
Weight Restrictions:	N/A	ton	N/A
Height Restrictions:	N/A	ft.	N/A
Curb to Curb Width:	52.0	ft.	60.0
Outside to Outside Width:	78.3	ft.	78.0
Shoulder Width:	N/A	ft.	N/A
Length of Channel Work:			N/A

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

Remarks: The Keystone Avenue bridge over I-465 is located 0.68 mile west of the I-465/I-65 interchange (Appendix B-77). In order to accommodate added travel lanes on I-465, the existing 4-span continuous steel beam structure will be replaced with a 2-span, continuous composite beam bridge. The vertical grade will be raised by less than two feet.

The existing bridge has 4-foot sidewalks on each side with a 16-foot raised median in the center. The new bridge will have 8-foot sidewalks on each side and a 12-foot raised median in the center.

Will the structure be rehabilitated or replaced as part of the project? Yes No N/A

Bridge No. 8, US 31 over I-465 and Lick Creek

Structure/NBI Number(s): 031-49-04448 C Sufficiency Rating: 89.6 (July 25, 2018 Inspection Report)
(Rating, Source of Information)

	Existing		Proposed
Bridge Type:	Steel continuous		N/A
Number of Spans:	7		N/A
Weight Restrictions:	N/A	ton	N/A
Height Restrictions:	N/A	ft.	N/A
Curb to Curb Width:	78.0	ft.	N/A
Outside to Outside Width:	85.0	ft.	N/A
Shoulder Width:	4.0	ft.	N/A
Length of Channel Work:			0.0* ft. *Note, Lick Creek is impacted elsewhere in the project area.

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

Remarks: The US 31 bridge over I-465 and Lick Creek is located within the I-465/US 31 interchange (Appendix B-83). No work is proposed for this bridge, except the southern cut-slope will be removed and replaced with a retaining wall to accommodate an auxiliary lane that will extend the on-ramp for eastbound I-465 to northbound US 31/East Street. Within this section of I-465, Lick Creek is located within the median of eastbound/westbound I-465. No work is proposed in Lick Creek in this area.

Will the structure be rehabilitated or replaced as part of the project? Yes No N/A

Indiana Department of Transportation

County Marion Route I-465 Des. No. 1802075

Bridge No. 9, I-465 Eastbound over Lick Creek

Structure/NBI Number(s): I465-163-04447 CEBL Sufficiency Rating: 92.6 (July 25, 2019 Inspection Report)
(Rating, Source of Information)

	Existing	Proposed	
Bridge Type:	Steel continuous	N/A	
Number of Spans:	3	N/A	
Weight Restrictions:	N/A	N/A	ton
Height Restrictions:	N/A	N/A	ft.
Curb to Curb Width:	73.0	N/A	ft.
Outside to Outside Width:	76.0	N/A	ft.
Shoulder Width:	12	N/A	ft.
Length of Channel Work:		0.0*	ft. *Note, Lick Creek is impacted elsewhere in the project area.

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

Remarks: The I-465 Eastbound bridge over Lick Creek is located 0.38 mile east of the I-465/US 31 interchange, near the end of Section A/B (Appendix B-59). The only work proposed for this bridge is a rigid-deck overlay. No work is proposed within Lick Creek in this area.

Will the structure be rehabilitated or replaced as part of the project? Yes No N/A

Bridge No. 10, Madison Avenue over I-465 and Lick Creek

Structure/NBI Number(s): (I465)431-49-04445 B (existing) Sufficiency Rating: 90.7 (July 25, 2018 Inspection Report)
I465(431)-49-10517 (proposed) (Rating, Source of Information)

	Existing	Proposed	
Bridge Type:	Steel beam	Continuous composite steel plate girder	
Number of Spans:	6	3	
Weight Restrictions:	N/A	N/A	ton
Height Restrictions:	N/A	N/A	ft.
Curb to Curb Width:	56.0	66.0	ft.
Outside to Outside Width:	79.0	81.1	ft.
Shoulder Width:	5.0	5.0	ft.
Length of Channel Work:		90*	ft. *Note, impacts to Lick Creek extend past this structure.

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

Remarks: The Madison Avenue bridge over I-465 and Lick Creek is located 0.57 mile east of the I-465/US 31 interchange (Appendix B-85). In order to accommodate added travel lanes on I-465, the existing 6-span steel beam bridge will be replaced with a 3-span, continuous composite steel plate girder bridge.

Currently there is a 2-foot raised concrete median and existing sidewalks are 5.3 feet wide. The proposed structure will have a 10-foot raised concrete median, 5-foot shoulders, and 6.6-foot wide sidewalks. The vertical grade will be raised by less than two feet. Up to 90 linear feet* of Lick Creek may be impacted by this bridge replacement.

Will the structure be rehabilitated or replaced as part of the project? Yes No N/A

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County Marion Route I-465 Des. No. 1802075

Bridge Nos. 13 and 14, I-465 over Indiana Southern (IS) Railroad and SR 67 (Kentucky Avenue)

Structure/NBI Number(s): I465-156-02152 JB NB Sufficiency Rating: 90.7 (August 20, 2018 Inspection Reports)
I465-156-02152 BS BL (Rating, Source of Information)

	Existing		Proposed
Bridge Type:	Continuous steel		N/A
Number of Spans:	5		N/A
Weight Restrictions:	N/A	ton	N/A
Height Restrictions:	N/A	ft.	N/A
Curb to Curb Width:	72.5	ft.	N/A
Outside to Outside Width:	75.1	ft.	N/A
Shoulder Width:	Outside: 12 Inside: 17.75	ft.	Outside: 12 Inside: 4.75
Length of Channel Work:			0.0

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

Remarks: These twin structures located 0.79 mile south of the I-465/I-70 interchange carry I-465 over IS railroad and SR 67 (Kentucky Avenue). The existing 17.75-foot inside shoulder will be converted to a travel lane with a 4.75 foot inside shoulder (Appendix B-50).

UNT 1 to Dollar Hide Creek is located along the south side of SR 67 in this area, which is carried in a culvert beneath the twin bridges' cut wall. No work is proposed on SR 67, the bridges, nor the culvert.

Will the structure be rehabilitated or replaced as part of the project? **Yes** **No** **N/A**

Bridge No. 15, Mooresville Road Bypass over I-465

Structure/NBI Number(s): I465-157-04721 B (existing) Sufficiency Rating: N/A
I465-157-10516 (proposed) (Rating, Source of Information)

	Existing		Proposed
Bridge Type:	Concrete girder		Composite prestressed concrete bulb-tee beam
Number of Spans:	4		2
Weight Restrictions:	N/A	ton	N/A
Height Restrictions:	N/A	ft.	N/A
Curb to Curb Width:	30.4	ft.	32.6
Outside to Outside Width:	33.5	ft.	34.6
Shoulder Width:	6	ft.	6
Length of Channel Work:			300*

*Note, impacts to UNT 1 to State Ditch and UNT 2 to State Ditch extend past this structure.

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

Remarks: The Mooresville Road Bypass bridge over I-465 is located 0.34 mile east of SR 67 (Appendix B-91). In order to accommodate additional travel lanes on the inside shoulder of I-465, the existing 4-span concrete girder bridge will be replaced with a 2-span composite prestressed concrete bulb-tee beam bridge. The vertical grade will be raised by less than two feet. Impacts will be narrowed by the use of retaining walls.

UNT 1 to State Ditch and UNT 2 to State Ditch are located along the north and south sides of I-465 beneath the bridge. UNT 3 to State Ditch is in the southwest quadrant, UNT 5 to State Ditch is in the northwest quadrant, and UNT 4 to State Ditch is in the northeast quadrant. UNT 1 and UNT 2 are carried beneath the bridges in

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County Marion Route I-465 Des. No. 1802075

approximate 18-inch metal pipes with headwalls. These pipes will be replaced and lengthened during construction. Up to 300 feet* of impacts to UNTs 1, 2, 3, 4 and 5 may be impacted by this bridge replacement.

Will the structure be rehabilitated or replaced as part of the project? **Yes** **No** **N/A**

Culvert No. 5, I-465 Culvert

Structure/NBI Number(s): CV I465-049-02.05 Sufficiency Rating: N/A
 (Rating, Source of Information)

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

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

Remarks: Small Structure No. CV I465-049-02.05 is located beneath westbound I-465 and the ramp from westbound I-465 to northbound US 31 (Appendix B-55). It is a 66-inch diameter corrugated metal pipe (CMP) that is 176 feet long. This pipe carries a non-jurisdictional drainage feature. Per the approved June 10, 2019 hydraulic memo, the contractor has six approved options:

- High density polyethylene (HDPE) liner with an inner diameter of 4.27 feet. Install a 3-foot inner diameter smooth pipe adjacent to the existing
- A cured-in-place pipe (CIPP) liner that has a wall thickness of 1.5 inches and a headwall at the inlet
- Install a 5-inch paved invert and a 1.75-foot inner diameter smooth pipe adjacent to the existing
- Replace existing with a 6-foot inner diameter corrugated pipe with a 6-inch sump
- Replace existing with a 6-foot inside diameter smooth pipe with a 6-inch sump
- Replace existing with a 6-foot by 5-foot reinforced concrete box, with a 6-inch sump

Additionally, Class 2 riprap will be added at the outlet.

Will the structure be rehabilitated or replaced as part of the project? **Yes** **No** **N/A**

Culvert No. 6, Eastbound I-465 over UNT 14 to Lick Creek

Structure/NBI Number(s): CV I465-049-01.97 Sufficiency Rating: N/A
 (Rating, Source of Information)

	Existing		Proposed	
Bridge Type:	CMP		N/A	
Number of Spans:	N/A		N/A	
Weight Restrictions:	N/A	ton	N/A	Ton
Height Restrictions:	N/A	ft.	N/A	ft.
Curb to Curb Width:	N/A	ft.	N/A	ft.
Outside to Outside Width:	N/A	ft.	N/A	ft.
Shoulder Width:	N/A	ft.	N/A	ft.
Length of Channel Work:			187*	ft. *Note, impacts to UNT 14 to Lick Creek extend past this structure.

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County Marion Route I-465 Des. No. 1802075

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

Remarks: Small Structure No. CV I465-049-01.97 is located beneath eastbound I-465, 0.310 mile west of Madison Ave (Appendix B-56). It is a 60-inch CMP that is 177 feet long. This pipe carries UNT 14 to Lick Creek. Per the September 9, 2019 hydraulic memo, the contractor has several options to line or replace the structure:

- HDPE Liner (48-inch outside diameter/45-inch inside diameter) with 42-inch smooth round added capacity pipe adjacent to the existing, 177 feet long
- CIPP Liner (1.5-inch thick) with 18-inch smooth round added capacity pipe above the existing, 177 feet long
- Replace existing with a 72-inch round corrugated pipe, 177 feet long with a 6-inch sump and concrete headwall at the inlet
- Replace existing with a 72-inch round smooth pipe, 177 feet long with a 6-inch sump

Additionally, Class 2 riprap will be added at the outlet. Up to 187 feet* of UNT 14 to Lick Creek will be impacted by this work.

Will the structure be rehabilitated or replaced as part of the project? **Yes** **No** **N/A**

Culvert No. 7, Westbound I-465 over UNT 11 to Lick Creek

Structure/NBI Number(s): CV I465-049-01.90 Sufficiency Rating: N/A
 (Rating, Source of Information)

	Existing		Proposed		
Bridge Type:	CMP		N/A		
Number of Spans:	N/A		N/A		
Weight Restrictions:	N/A	ton	N/A	ton	
Height Restrictions:	N/A	ft.	N/A	ft.	
Curb to Curb Width:	N/A	ft.	N/A	ft.	
Outside to Outside Width:	N/A	ft.	N/A	ft.	
Shoulder Width:	N/A	ft.	N/A	ft.	
Length of Channel Work:			160*	ft.	*Note, impacts to UNT 11 to Lick Creek extend past this structure.

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

Remarks: Small Structure No. CV I465-049-01.90 is located beneath westbound I-465, 0.239 mile west of Madison Avenue (Appendix B-56). It is a 60-inch CMP that is 137 feet long. This pipe carries UNT 11 to Lick Creek. Per the preliminary July 19, 2019 hydraulic memo, the contractor has the following approved options:

- Replace existing with a 66-inch round corrugated pipe, 150 feet long with a 6-inch sump
- Replace existing with a 66-inch round smooth pipe, 150 feet long with a 6-inch sump
- CIPP Liner (1.5-inches thick) with 36-inch smooth round added capacity pipe above the existing, 150 feet long
- HDPE Liner (54-inch outside diameter / 50.68-inch inside diameter) with 42-inch smooth round added capacity pipe above the existing, 150 feet long

Additionally, Class 2 riprap will be added at the outlet. Up to 160 feet* of UNT 11 to Lick Creek will be impacted by this work.

Will the structure be rehabilitated or replaced as part of the project? **Yes** **No** **N/A**

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Culvert No. 8, I-465 over UNT 7 to Lick Creek

Structure/NBI Number(s): CV I465-049-01.47 Sufficiency Rating: N/A
 (Rating, Source of Information)

	Existing		Proposed
Bridge Type:	Corrugated metal pipe arch		N/A
Number of Spans:	N/A		N/A
Weight Restrictions:	N/A	ton	N/A
Height Restrictions:	N/A	ft.	N/A
Curb to Curb Width:	N/A	ft.	N/A
Outside to Outside Width:	N/A	ft.	N/A
Shoulder Width:	N/A	ft.	N/A
Length of Channel Work:			198

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

Remarks: Small Structure No. CV I465-049-01.47 is located beneath I-465, 0.785 mile west of Keystone Avenue (Appendix B-58). It is a 71-inch by 47-inch elliptical-shaped metal pipe arch that is 176 feet long. This pipe carries UNT 7 to Lick Creek. Per the approved September 5, 2019 hydraulic memo, the contractor has four options:

- CIPP Liner (1.5-inches thick), 176 feet long
- HDPE deformed liner (48-inch outside diameter / 45-inch inside diameter) with 30-inch smooth round added capacity pipe adjacent to the existing, 176 feet long
- Replace existing with a 98-inch by 63-inch elliptical smooth pipe, 176 feet long with a 6-inch sump
- Replace existing with a 6-foot by 5-foot reinforced concrete box with 12 inch by 12 inch haunches, 176 feet long with a 6-inch sump

Additionally, revetment riprap over geotextile will be placed at the outlet. Up to 198 feet of UNT 7 to Lick Creek will be impacted.

Will the structure be rehabilitated or replaced as part of the project? Yes No N/A

Culvert No. 9, I-465 over UNT 1 to McFarland Creek

Structure/NBI Number(s): CV I465-049-00.27L Sufficiency Rating: N/A
 (Rating, Source of Information)

	Existing		Proposed
Bridge Type:	CMP		N/A
Number of Spans:	NA		N/A
Weight Restrictions:	N/A	ton	N/A
Height Restrictions:	N/A	ft.	N/A
Curb to Curb Width:	N/A	ft.	N/A
Outside to Outside Width:	N/A	ft.	N/A
Shoulder Width:	N/A	ft.	N/A
Length of Channel Work:			192

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

Remarks: Small Structure No. CV I465-049-00.27L is located below the south slope of the Carson Avenue bridge over I-465, 0.025 mile west of Carson Avenue (Appendix B-66). This 84-inch diameter, 182-foot long CMP carries UNT 1 to McFarland Creek beneath the bridge. Per the approved September 5, 2019 hydraulic memo, the contractor has the following five options:

- CIPP Liner (2-inches thick), 182 feet long
- HDPE Liner (80.5-inch outside diameter / 72-inch inside diameter) 182 feet long, with a beveled headwall at the inlet

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- HDPE Liner (63-inch outside diameter / 59-inch inside diameter) with 54-inch smooth round added capacity pipe adjacent to the existing, 182 feet long
 - Replace existing with a 90-inch round smooth pipe, 182 feet long with a 6-inch sump
 - Replace existing with a 90-inch round corrugated pipe, 182 feet long with a 6-inch sump
- Additionally, revetment riprap over geotextiles will be added at the outlet. Up to 192 feet of McFarland Creek will be impacted.

Will the structure be rehabilitated or replaced as part of the project? **Yes** **No** **N/A**

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

MAINTENANCE OF TRAFFIC (MOT) DURING CONSTRUCTION:

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

Remarks: This project is part of a design-build contract. Therefore, the MOT for the project will be designed following the award of the contract. It is anticipated the MOT will require lane closures and restrictions along I-465, occasional short-duration ramp closures within interchanges, and local road closures for bridge replacements. Detours will be provided.

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.

During the CAC meeting, several committee members expressed concerns about the proposed overpass bridge closures (Appendix G-26). For example, the representative from Metropolitan School District of Perry Township indicated if all three bridges within Section A/B were closed at the same time, it would cause “gridlock” and serious issues for the school system. These comments were taken into consideration and will be reflected in the contract provisions.

Impacts from the MOT will be minimized through stakeholder coordination. The following provisions will be required by the contract:

- Consecutive bridges (e.g., Madison Avenue and Keystone Avenue) may not be closed at the same time.
- No lane restrictions on I-465 are permitted during the downtown Indianapolis “North Split” (I-70/I-65 Interchange) construction project.
- In order to minimize community impacts, the contractor will coordinate construction schedules with INDOT and the City of Indianapolis.
- It is the responsibility of the contractor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access.
- The contractor must notify IndyGo at least two weeks prior to any construction that would block or limit access.

Indiana Department of Transportation

County Marion Route I-465 Des. No. 1802075

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: \$ 4,000,000 (2019) Right-of-Way: \$ N/A Construction: \$ 64,900,000* (2020)
7,200,000 (2020) 9,499,854 (2022)

Anticipated Start Date of Construction: November 2020 *Included under Contract R-41536

Date project incorporated into STIP July 2, 2019 (Appendix H-3)

Is the project in an MPO Area? **Yes** **No**

If yes,
 Name of MPO Indianapolis Metropolitan Planning Organization (IMPO)

Location of Project in TIP <https://mitip.indympo.org/> (Appendix H-1 and H-2)

Date of incorporation by reference into the STIP July 2, 2019

RIGHT OF WAY:

Land Use Impacts	Amount (acres)	
	Permanent	Temporary
Residential	N/A	N/A
Commercial	N/A	N/A
Agricultural	N/A	N/A
Forest	N/A	N/A
Wetlands	N/A	N/A
Other:	N/A	N/A
Other:	N/A	N/A
TOTAL	N/A	N/A

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

Remarks: The existing ROW consists of paved surfaces, maintained side slopes, Lick Creek, McFarland Creek, roadside ditches and streams, and wooded areas. Within Section A/B, the existing ROW ranges from 100 to 150 feet, from the roadway centerline. Within Section C, the existing ROW ranges from 100 to 160 feet from the roadway centerline. This project will occur within existing ROW. No permanent or temporary ROW will be required for this project.

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

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

SECTION A – ECOLOGICAL RESOURCES

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

Stream Summary Table

Stream Name	Classification	OHWB Width ¹ (Feet)	OHWB Depth ¹ (Inches)	Length in Study Area (Linear Feet)	Length of Impacts ² (Linear Feet)	Quality
McFarland Creek	Perennial	12.0	14	349	255	Average
UNT 1 to McFarland Creek	Ephemeral	4.9	10	943	192	Poor
UNT 2 to McFarland Creek	Ephemeral	1.6	8	58	No Impact	Poor
UNT 3 to McFarland Creek	Intermittent	7.0	20	182	No Impact	Poor
UNT 4 to McFarland Creek	Ephemeral	2.0	5	188	188	Poor
Lick Creek ³	Perennial	32	31	7,127	550	Average
UNT 1 to Lick Creek	Ephemeral	7.0	6	328	No Impact	Average
UNT 2 to Lick Creek	Intermittent	6.0	6	97	No Impact	Poor
UNT 4 ³ to Lick Creek	Intermittent	9.0	6	740	740	Poor
UNT 5 to Lick Creek	Intermittent	8.0	8	393	393	Average
UNT 6 to Lick Creek	Ephemeral	6.0	6	709	709	Poor
UNT 7 to Lick Creek	Intermittent	6.0	7	201	198	Poor
UNT 8 to Lick Creek	Ephemeral	1.3	6	760	760	Poor
UNT 9 to Lick Creek	Ephemeral	1.0	1	125	88	Poor
UNT 10 to Lick Creek	Ephemeral	1.4	7	67	No Impact	Average
UNT 11 to Lick Creek	Ephemeral	4.0	16	1,320	508	Average
UNT 12 to Lick Creek	Ephemeral	2.2	11	60	60	Poor
UNT 13 to Lick Creek	Ephemeral	1.4	3	93	No Impact	Poor
UNT 14 ⁴ to Lick Creek	Ephemeral	2.3	3	156	187	Poor
UNT 1 to State Ditch	Ephemeral	1.8	9.3	5,152	4,006	Poor
UNT 2 to State Ditch	Ephemeral	3.3	12	5,161	3,667	Poor
UNT 3 to State Ditch	Ephemeral	5.5	7	350	39	Poor
UNT 4 to State Ditch	Ephemeral	6.0	6	363	107	Poor
UNT 5 to State Ditch	Ephemeral	4.0	7	338	37	Poor
UNT 1 to Dollar Hide Creek	Ephemeral	4.2	6	1,112	No Impact	Poor
UNT 2 to Dollar Hide Creek	Ephemeral	6.5	9	223	No Impact	Poor

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Stream Name	Classification	OHWM Width ¹ (Feet)	OHWM Depth ¹ (Inches)	Length in Study Area (Linear Feet)	Length of Impacts ² (Linear Feet)	Quality
UNT 3 to Dollar Hide Creek	Ephemeral	4.0	5	315	38	Poor
UNT 4 to Dollar Hide Creek	Ephemeral	3.0	3	110	No Impact	Poor
UNT 5 to Dollar Hide Creek	Ephemeral	3.8	4	115	No Impact	Poor

¹Average Ordinary High Watermark (OHWM) dimensions noted within the study area.

²Stream impacts include structure work and piping, see discussion below.

³Average of three Qualitative Habitat Evaluation Index (QHEI) assessments completed.

⁴UNT 3 to Lick Creek and UNT 15 to Lick Creek were revised after the agency field check, see discussion below.

Remarks:

Based on a desktop review, site visits on May 8-10, 13-16, 20-24, 28-30, and August 15 and 23, 2019 by Parsons, the aerial map of the project area (Appendix B-7), and the water resources map in the Red Flag Investigation (RFI) reports (Appendix E-1 and E-17), there are 38 streams located within the 0.5 mile search radius. There are two mapped streams present within or adjacent to the project area. The *Waters of the U.S. Report* was approved by INDOT on September 27, 2019 (Appendix F-1).

The U.S. Army Corps of Engineers (USACE) makes all final determinations regarding jurisdiction. On August 15, 2019, a jurisdictional determination field review was held with representatives of USACE, the Indiana Department of Environmental Management (IDEM), the INDOT Ecology and Waterway Permitting Office (EWPO), and Parsons to review the project area and determine the jurisdictional status of the features identified within the *Waters of the U.S. Report*. This field review confirmed 29 jurisdictional streams. Two additional features were initially identified as streams (UNT 3 to Lick Creek and UNT 15 to Lick Creek). At the field check, it was determined that the features did not meet current USACE guidance as streams because they solely conveyed roadway drainage. UNT 3 to Lick Creek was completely eliminated. UNT 15 to Lick Creek was revised as an extension to Wetland 32 (see the Wetlands section below for more detail).

It was determined that 29 likely jurisdictional streams totaling 27,135 feet were identified within the study area. These streams are mapped on aerial photographs (Appendix B-6) and are labeled on project plans (Appendix B-45). These streams are summarized in the table above this remarks box. The streams are labeled on project plans (Appendix B-45).

None of the 29 streams within the project area are navigable waterways, classified as *Federal, Wild and Scenic Rivers*; *State Natural, Scenic, Recreational Rivers*; or on the *Indiana Register's list of Outstanding Rivers and Streams*, nor are they located within two miles of any such resources.

In order to achieve proper drainage of the preferred alternative, the majority of existing roadside ditches, including those containing UNTs, will be buried and piped. Additionally, streams will be impacted by the emplacement of scour treatments, such as riprap, as described above in the Design Criteria for Bridges section. Therefore, a total of 20 streams (12,722 linear feet total) will be impacted by the proposed project. All stream impacts will occur within existing ROW. The proposed impact to streams cannot be avoided because they already exist within the I-465 ROW, and the impacts are necessary to maintain drainage.

The project will require a USACE 404 permit and an IDEM Section 401 Water Quality Certification before impacting these resources. Mitigation will be required as part of this project. It is anticipated that the project will utilize credits from IDNR's Indiana Stream and Wetland Mitigation Program (in-lieu fee) to mitigate project impacts.

Early coordination letters were sent to the U.S. Fish and Wildlife Service (USFWS), USACE, and the Indiana Department of Natural Resources, Division of Fish and Wildlife (IDNR-DFW) on June 25, 2019 (Appendix C-1). Electronic coordination with IDEM occurred on June 25, 2019 (Appendix C-14). USFWS and USACE did not respond to the early coordination letter.

IDNR-DFW responded to early coordination on July 25, 2019 with standard recommendations to minimize impacts to streams, such as appropriate stream crossings, bank stabilization techniques, mitigating impacts to riparian habitats, and

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avoiding and minimizing impacts to fish and botanical resources to the greatest extent possible. (Appendix C-5). IDEM's letter states that the physical disturbance of the stream and riparian vegetation, especially large trees overhanging any affected water bodies, should be limited to only that which is absolutely necessary to complete the project. All applicable IDNR-DFW and IDEM recommendations are included in the Environmental Commitments section of this CE document.

Other Surface Waters	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"/>
Detention Basins	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Storm Water Management Facilities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Remarks: Based on a desktop review, site visits on May 8-10, 13-16, 20-24, 28-30, and August 15 and 23, 2019 by Parsons, the aerial map of the project area (Appendix B-7), and the water resource map in the RFI reports (Appendix E-1 and E-17), there are 31 other surface waters within the 0.5 mile search radius. None of these surface waters are present within the project area.

The *Waters of the U.S. Report* was approved for the project on September 27, 2019 (Appendix F-1). No open water resources were identified on-site. On August 15, 2019, a jurisdictional determination field review was held with representatives of USACE, IDEM, INDOT EWPO, and Parsons to review the features and determine jurisdictional status of the features identified within the *Waters of the U.S. Report*. USACE makes all final determinations regarding jurisdiction.

Early coordination letters were sent to USFWS, USACE, and IDNR-DFW on June 25, 2019 (Appendix C-1). Electronic coordination with IDEM occurred on June 25, 2019 (Appendix C-14). USFWS and USACE did not respond to the early coordination letter. There were no applicable recommendations in IDNR-DFW's response to early coordination regarding other surface waters.

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

Total wetland area: 3.54* acre(s) Total wetland area impacted: 1.052 acre(s)
 *Some wetlands extend beyond the study area.

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

Summary of Wetlands

Wetland No.	Classification	Total Size (Acres)	Impacted Acres	Comments
Wetland 1	Palustrine Emergent	0.016	No Impact	Poor quality / Waters of the U.S.
Wetland 2	Palustrine Emergent	0.001	No Impact	Poor quality / Waters of the U.S.
Wetland 3	Palustrine Emergent	0.001	No Impact	Poor quality / Waters of the U.S.
Wetland 4	Palustrine Emergent	0.014	No Impact	Poor quality / Waters of the State
Wetland 5	Palustrine Emergent	0.009	No Impact	Poor quality / Waters of the State
Wetland 6	Palustrine Emergent	0.007	No Impact	Poor quality / Waters of the State
Wetland 7	Palustrine Emergent	0.004	No Impact	Poor quality / Waters of the U.S.
Wetland 8	Palustrine Emergent	0.003	No Impact	Poor quality / Waters of the U.S.

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Wetland No.	Classification	Total Size (Acres)	Impacted Acres	Comments
Wetland 9	Palustrine Forested	0.022	0.020	Average quality / Waters of the U.S.
Wetland 10	Palustrine Emergent	0.055	0.054	Poor quality / Waters of the U.S.
Wetland 11	Palustrine Emergent	0.319	0.319	Poor quality / Waters of the U.S.
Wetland 12	Palustrine Emergent	0.008	0.008	Poor quality / Waters of the State
Wetland 13	Palustrine Emergent	0.006	0.006	Poor quality / Waters of the State
Wetland 14	Palustrine Emergent	0.092	0.092	Poor quality / Waters of the State
Wetland 15	Palustrine Emergent	0.073	0.073	Poor quality / Waters of the State
Wetland 16	Palustrine Emergent	0.004	0.004	Poor quality / Waters of the State
Wetland 17	Palustrine Scrub-Shrub	0.044	0.034	Average quality / Waters of the U.S.
Wetland 18	Palustrine Emergent	0.066	0.066	Poor quality / Waters of the U.S.
Wetland 19	Palustrine Emergent	0.004	0.004	Poor quality / Waters of the State
Wetland 20	Palustrine Scrub-Shrub	0.084	0.066	Average quality / Waters of the U.S.
Wetland 21	Palustrine Emergent	0.238	0.238	Poor quality / Waters of the State
Wetland 22	Palustrine Emergent	0.001	0.001	Poor quality / Waters of the State
Wetland 23	Palustrine Emergent	0.027	0.013	Poor quality / Waters of the U.S.
Wetland 24	Palustrine Emergent	0.006	0.005	Poor quality / Waters of the U.S.
Wetland 25	Palustrine Scrub-Shrub	0.164	No Impact	Average quality / Waters of the U.S.
Wetland 26	Palustrine Emergent	0.002	< 0.001	Poor quality / Waters of the U.S.
Wetland 27	Palustrine Emergent	0.003	No Impact	Poor quality / Waters of the U.S.
Wetland 28	Palustrine Emergent	0.003	No Impact	Poor quality / Waters of the U.S.
Wetland 29	Palustrine Emergent	0.008	No Impact	Poor quality / Waters of the State
Wetland 30	Palustrine Emergent	0.003	No Impact	Poor quality / Waters of the State
Wetland 31	Palustrine Emergent	0.005	No Impact	Poor quality / Waters of the U.S.
Wetland 32	Palustrine Emergent	0.029	No Impact	Poor quality / Waters of the State
Wetland 33	Palustrine Emergent	0.015	No Impact	Poor quality / Waters of the State
Wetland 34	Palustrine Emergent	0.023	No Impact	Poor quality / Waters of the U.S.
Wetland 35	Palustrine Emergent	0.045	No Impact	Poor quality / Waters of the U.S.
Wetland 36	Palustrine Emergent	0.043	0.036	Poor quality / Waters of the U.S.
Wetland 37	Palustrine Emergent	0.023	No Impact	Poor quality / Waters of the State
Wetland 38	Palustrine Emergent	0.410	No Impact	Poor quality / Waters of the U.S.
Wetland 39	Palustrine Emergent	0.157	No Impact	Poor quality / Waters of the U.S.
Wetland 40	Palustrine Emergent	0.461	0.004	Poor quality / Waters of the U.S.
Wetland 41	Palustrine Emergent	0.010	No Impact	Poor quality / Waters of the State
Wetland 42	Palustrine Emergent	0.002	No Impact	Poor quality / Waters of the U.S.
Wetland 43	Palustrine Emergent	0.007	No Impact	Poor quality / Waters of the State
Wetland 44	Palustrine Emergent	0.049	0.005	Poor quality / Waters of the U.S.
Wetland 45	Palustrine Emergent	0.032	No Impact	Poor quality / Waters of the State
Wetland 46	Palustrine Emergent	0.158	No Impact	Poor quality / Waters of the State
Wetland 47	Palustrine Emergent	0.428	0.003	Poor quality / Waters of the U.S.
Wetland 48	Palustrine Emergent	0.352	No Impact	Poor quality / Waters of the State

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Documentation

ES Approval Dates

Wetlands (Mark all that apply)

Wetland Determination
 Wetland Delineation
 USACE Isolated Waters Determination
 Mitigation Plan

X
X
X

September 27, 2019
September 27, 2019
Pending

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

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

X
X
X
X

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

Remarks: Based on a review of the National Wetlands Inventory (NWI) online mapper (<https://www.fws.gov/wetlands/data/Mapper.html>), site visits on May 8-10, 13-16, 20-24, 28-30, and August 15 and 23, 2019 by Parsons, the USGS topographic map (Appendix B-2), and the RFI reports (Appendix E-1 and E-17), there are 48 mapped wetlands located within the 0.5 mile search radius. The *Waters of the U.S. Report* was approved for the project on September 27, 2019 (Appendix F-1).

On August 15, 2019, a jurisdictional determination field review was held with representatives of USACE, IDEM, and INDOT EWPO, and Parsons to review the features and determine jurisdictional status of the features identified within the *Waters of the U.S. Report*. This field review made final determinations on the jurisdictional status of the 48 features identified. Wetland 32 was extended at the field check (see the Streams, Rivers, Watercourses & Jurisdictional Ditches section for additional details). USACE makes all final determinations regarding jurisdiction.

It was determined that 27 wetlands are likely waters of the U.S. (2.443 acre) and 21 wetlands are likely waters of the state (1.093 acre). A total of 3.536 acres were identified within the study area. These wetlands are mapped on aerial photographs (Appendix B-6) and are labeled on project plans (Appendix B-45).

Approximately 1.052 acres of wetlands will be impacted by the proposed project (0.612 acre waters of the U.S. and 0.426 acre waters of the state). The majority of the wetlands that will be impacted by the project are poor quality, palustrine emergent wetlands that occur within the roadside ditches. Mitigation will be required. It is anticipated that the project will utilize credits from IDNR's Indiana Stream and Wetland Mitigation Program (in-lieu fee) to mitigate project impacts.

The proposed impacts cannot be avoided because the wetlands are located within existing interstate ROW. There is no practicable alternative to the proposed new construction in wetlands and the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use. FHWA approval of this document will constitute approval of the adverse impacts to wetlands.

Early coordination letters were sent to USFWS, USACE, and IDNR-DFW on June 25, 2019 (Appendix C-1). Electronic coordination with IDEM occurred on June 25, 2019 (Appendix C-14). USFWS and USACE did not respond to the early coordination letter.

IDNR-DFW responded on July 25, 2019 with recommendations to avoid or minimize impacts to wetland habitat and to contact IDEM 401 and USACE 404 programs (Appendix C-5). IDEM's letter discusses permitting responsibilities. All applicable IDNR-DFW and IDEM recommendations are included in the Environmental Commitments section of this CE document.

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Terrestrial Habitat
Unique or High Quality Habitat

Presence

X

Impacts

Yes	No
X	

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

Remarks:

Based on a desktop review, site visits on May 8-10, 13-16, 20-24, 28-30, and August 15 and 23, 2019 by Parsons, and the aerial map of the project area (Appendix B-6), habitats within the project area mainly consist of maintained roadside slopes, ditches, wetlands, and wooded stream corridors and fencerows. All work will occur within existing ROW and within 100 feet from an existing roadway.

Based on coordination with the USFWS Bloomington, IN Field Office (Appendix C-37), the wooded areas within and near Section A/B are considered "suitable summer habitat" for bats due to the presence of Lick Creek and its wooded corridor. However, within the ROW in Section C, the wooded fencerows are urban trees and not considered "suitable summer habitat" for bats. Refer to the Threatened and Endangered Species section for further discussion of bats.

The total amount of "suitable summer habitat" within the study area for Section A/B is 18.05 acres. The total amount of urban trees within the study area for Section C is 10.61 acres. The primary tree species observed within the project area were sugar maple (*Acer saccharum*), green ash (*Fraxinus pennsylvanica*), eastern cottonwood (*Populus deltoides*), black walnut (*Juglans nigra*), honey-locust (*Gleditsia triacanthos*), sandbar willow (*Salix interior*), American elm (*Ulmus americana*), and eastern red cedar (*Juniperus virginiana*).

The remaining terrestrial habitat consists of maintained and emergent vegetation, which is dominated by common varieties of fescue, foxtail, clover, crown vetch, honeysuckle, and mulberry. This urban roadside terrestrial habitat is considered to be low quality.

Bridge and Culvert Inspection Reports, referenced in the tables on Appendix C-38 to C-39, did not report the presence of wildlife on structures, except for the US 31 over I-465 and Lick Creek bridge, Structure No. 031-49-04448 B, where pigeons were reported in the July 25, 2018 inspection. Additionally, common urban species of birds, small mammals, insects, reptiles, fish, and amphibians likely inhabit the project area.

Based on construction limits, a total of 24.09 acres of non-wetland terrestrial habitat (trees, maintained grass, scrub/shrub, and herbaceous vegetation) will be impacted by this project. (Note, calculations for "suitable summer habitat" impacts and urban trees were based on the project's study area, during Stage 1 plan development before construction limits were determined. Therefore, the total amount of "suitable summer habitat" and urban trees was over-estimated).

Impacts to terrestrial habitat and urban wildlife cannot be avoided because of its presence within the existing ROW. The proposed bridge and culvert work should not significantly alter existing conditions for wildlife crossings.

Early coordination letters were sent to USFWS and IDNR-DFW on June 25, 2019 (Appendix C-1). Electronic coordination with IDEM occurred on June 25, 2019 (Appendix C-14). USFWS did not respond to the early coordination letter.

IDNR-DFW responded on July 25, 2019 with recommendations to avoid or minimize impacts to habitat and wildlife, such as mitigating impacts to non-wetland forest of one acre or more at a 2:1 ratio, revegetating all disturbed areas, and minimizing the clearing of brush and trees (Appendix C-5). All applicable IDNR-DFW and IDEM recommendations are included in the Environmental Commitments section of this CE document.

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

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Karst

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

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

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

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

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

Remarks: Based on a desktop review, 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 topographic map of the project area (Appendix B-2), and the RFI reports (Appendix E-1 and E-17), there are no karst features identified within or adjacent to the project area. Based on responses to early coordination (Appendix C-5), a karst study is not required.

In their early coordination response, the Indiana Geological and Water Survey (IGWS) did not indicate that karst features exist in the project area (Appendix C-10). The IGWS reported the presence of a high liquefaction potential, floodway, a moderate potential for bedrock resources, a high potential for sand and gravel resources, and petroleum exploration wells. The features are not a concern because they either already exist with the existing ROW (e.g., sand and gravel resources), are the purview of geotechnical engineering studies (e.g., liquefaction potential), or are not present (e.g., petroleum exploration wells). No impacts are expected.

Threatened or Endangered Species

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

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

Is Section 7 formal consultation required for this action?

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

Remarks: Based on a desktop review and the RFI reports (Appendix E-1 and E-17), completed by Parsons on May 9, 2019, the IDNR Marion County Endangered, Threatened and Rare (ETR) Species List has been checked and is included in Appendix E-14. The highlighted species on the list reflect the federal and state identified ETR species located within the county. According to the IDNR-DFW early coordination response letter dated July 25, 2019 (Appendix C-5), the Natural Heritage Program's Database has been checked, and three species of concern were identified within a 0.5 mile of the project area:

- Kirtland's snake (*Clonophis kirtlandii*), a state endangered species
- American badger (*Taxidea taxus*), a special species of concern, and
- Upland sandpiper (*Bartramia longicauda*) a state endangered species.

IDNR-DFW concluded that this project is not expected to impact these species (or their preferred habitat).

Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal, and an official species list was generated (Appendix C-23). The project is within range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened NLEB (*Myotis septentrionalis*). No additional species were found within or adjacent to the project area.

Based on the proposed impact of more than 20 acres of trees per 5 miles of roadway, this project does not qualify for the online IPaC determination key for the *Range-wide Programmatic Informal Consultation for the Indiana bat and northern long-eared bat (NLEB)* dated May 2016 (revised February 2018), between FHWA, Federal Railroad Administration (FRA), Federal Transit Administration (FTA), and USFWS ("the informal programmatic"). In July 2019, further coordination occurred with INDOT on how to proceed with determining impacts to bats. Based on coordination with

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USFWS, it was decided the project falls within the general intent of the informal programmatic, therefore the Project Submittal Forms from Appendix B of the USFWS *User's Guide* (<https://www.fws.gov/midwest/angered/section7/fhwa/index.html>) were completed to determine the effects.

Based on the completed Project Submittal Form (Appendix C-29), the project was found to “*May Affect, but Not Likely to Adversely Affect with Avoidance and Minimization Measures*” (MA-NLAA with AMMs) the Indiana bat and/or the NLEB (Appendix C-32). INDOT reviewed and verified the effect finding on August 5, 2019, and requested USFWS’s review of the finding (Appendix C-42). On August 7, 2019, USFWS concurred with the effect finding. AMMs are listed on Appendix C-36 and are included as firm commitments in the Environmental Commitments section of this document.

The RFI reports were approved on May 14, 2019 (Appendix E-1 and E-17). Project information was submitted through the USFWS’s IPaC portal, and an official species list was generated (Appendix C-23). This project is located outside a High Potential Zone for the Rusty Patched Bumble Bee. Therefore, no impacts are expected.

SECTION B – OTHER RESOURCES

Drinking Water Resources

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

Presence

X
X

Impacts

Yes	No
	X
	X

If a SSA is present, answer the following:

- Is the Project in the St. Joseph Aquifer System?
- Is the FHWA/EPA SSA MOU Applicable?
- Initial Groundwater Assessment Required?
- Detailed Groundwater Assessment Required?

Yes	No

Remarks:

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

The IDEM Wellhead Proximity Determinator website was accessed on September 9, 2019, by Parsons (<https://www.in.gov/idem/cleanwater/pages/wellhead/>). The project area is not located within a Wellhead Protection Area.

The Indiana Department of Natural Resources Water Well Record Database website (<https://www.in.gov/dnr/water/3595.htm>) was accessed on September 9, 2019 by Parsons. There are seven wells mapped within or adjacent to the project area. Based on visual observations during the site visits, these wells are either inaccurately-mapped, or were abandoned prior to the development of I-465. The project will occur within existing ROW, therefore, no impacts to active wells are expected. Should it be determined during the ROW phase that these wells are affected, a cost to cure will likely be included in the appraisal to restore the wells.

Based on a desktop review of the INDOT Municipal Separated Storm Sewer System (MS4) website (<https://entapps.indot.in.gov/MS4/>) by Parsons on August 2, 2019, and the RFI reports; this project is located in an Urban Area Boundary (UAB) location. An early coordination letter was sent on June 25, 2019, to the City of Indianapolis. The

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MS4 coordinator responded on July 5, 2019, recommending adhering to the *City of Indianapolis Storm Water Design and Construction Manual*, including Chapter 700 Stormwater Quality and Chapter 600 Erosion and Sediment Control, and further coordination regarding increased stormwater runoff (Appendix C-21). The proposed impact to the MS4 system cannot be avoided because of its presence within existing ROW. Utility coordination for this project is ongoing. The project team and awarded contractor will continue to coordinate with the City of Indianapolis regarding stormwater for this project. Applicable recommendations from the City of Indianapolis are included as firm commitments in the Environmental Commitments section of this document.

Based on a desktop review, site visits on May 8-10, 13-16, 20-24, 28-30, and August 15 and 23, 2019 by Parsons, and the aerial map of the project area (Appendix B-6), this project is located where there is a public water system. The public water system, operated by Citizens Energy Group (CEG), was sent a utility coordination letter on January 29, 2019 (Appendix C-43). CEG responded on February 22, 2019 with information about their facilities (Appendix C-44). The public drinking water system will not be affected because the subgrade lines within the project area are too deep to be impacted.

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

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

Remarks: Based on a desktop review of The Indiana Department of Natural Resources Indiana Floodway Information Portal website (<http://dnrmmaps.dnr.in.gov/appsphp/fdms/>) by Parsons on September 7, 2019, and the RFI reports; portions of this project are located in regulatory floodplains (McFarland Creek and Lick Creek) as determined from approved IDNR floodplain maps (Appendix B-6). An early coordination letter was sent on June 25, 2019 to the local Floodplain Administrator (Appendix C-1). IDNR-DFW stated a construction in a floodway permit will be required for this project (Appendix C-5). Additionally, the City of Indianapolis MS4 coordinator's response to early coordination recommended submitting plan information to the Department of Business and Neighborhood Services (Appendix C-21). Applicable recommendations from IDNR-DFW and the City of Indianapolis are included as commitments in the Environmental Commitments section of this document.

This project qualifies as a Category 4 per the current *INDOT CE Manual*, which states Category 4 are projects involving replacement of existing drainage structures on essentially the same alignment. No homes are located within the base floodplains within 1,000 feet upstream and no homes are located within the base floodplains within 1,000 feet downstream. The proposed structures will have an effective capacity such that backwater surface elevations are not expected to substantially increase. As a result, there will be no substantial adverse impacts on natural and beneficial floodplain values; there will be no substantial change in flood risks; and there will be no substantial increase in potential for interruption or termination of emergency service or emergency evacuation routes; therefore, it has been determined that this encroachment is not substantial. Hydraulic design studies that addresses various structure size alternatives will be completed during the preliminary design phase.

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

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

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

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Remarks: The project area consists of existing ROW, which does not meet the definition of farmland under the Farmland Protection Policy Act (FPPA). Most of the surrounding area is developed land. However, there is a relatively small amount of farmland adjacent to the project in Section C, west of Mann Road. The requirements of the FPPA do not apply to this project; therefore, no impacts are expected. An early coordination letter was sent on July 13, 2019 to the Natural Resources Conservation Services (NRCS) (Appendix C-1). No response was received.

SECTION C – CULTURAL RESOURCES

	Category	Type	INDOT Approval Dates	N/A
Minor Projects PA Clearance	B	2, 3, 4, 9, 12, 16	August 29, 2019	N/A

**Eligible and/or Listed
Resource Present**

Results of Research

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

Project Effect

No Historic Properties Affected No Adverse Effect Adverse Effect

**Documentation
Prepared**

Documentation (mark all that apply)

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

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

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

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Remarks: On August 29, 2019, the INDOT Cultural Resource Office (CRO) determined that this project falls within the guidelines of Category B, Types 2, 3, 4, 9, 12, and 16 under the Minor Projects Programmatic Agreement (Appendix D-1). The applicable MPPA work descriptions are listed below.

- Installation of new lighting, signals, signage and other traffic control devices
- Construction of added travel, turning, or auxiliary lanes (e.g., bicycle, truck climbing, acceleration and deceleration lanes) and shoulder widening
- Installation of new safety appurtenances, including but not limited to, guardrails, barriers, glare screens, and crash attenuators
- Installation, replacement, repair, lining, or extension of culverts and other drainage structures
- Replacement, widening, or raising the elevation of the superstructure on existing bridges, and bridge replacement projects (when both the superstructure and substructure are removed)
- Installation of MSE walls, retaining walls and noise barriers (including earth berms, ground mounted noise walls and structure mounted noise walls) not exceeding 30 feet in height within the Interstate ROW

Work will occur in previously disturbed soils. INDOT CRO recommendations are included in the Environmental Commitments section of this CE document. No further consultation is required. This completes the Section 106 process and the responsibilities of the FHWA under Section 106 have been fulfilled.

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

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

Parks & Other Recreational Land

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

Presence

Use

Yes	No

Evaluations Prepared

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

FHWA Approval date

--

Wildlife & Waterfowl Refuges

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

Presence

Use

Yes	No

Evaluations Prepared

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

FHWA Approval date

--

Historic Properties

- Sites eligible and/or listed on the NRHP

Presence

--

Use

Yes	No

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**Evaluations
Prepared**

**FHWA
Approval date**

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

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

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

Remarks:

Section 4(f) of the U.S. Department of Transportation Act of 1966 prohibits the use of certain public and historic lands for federally funded transportation facilities unless there is no feasible and prudent alternative. The law applies to significant publicly owned parks, recreation areas, wildlife / waterfowl refuges, and National Register of Historic Places (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, site visits on May 8-10, 13-16, 20-24, 28-30, and August 15 and 23 2019 by Parsons, the aerial map of the project area (Appendix B-6), and the RFI reports (Appendix E-1 and E-17) there are four potential Section 4(f) resources located within the 0.5 mile search radius. There are no Section 4(f) resources within or adjacent to the project area. Therefore, no impacts are expected.

Section 6(f) Involvement

Presence

Use

Section 6(f) Property

Yes

No

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

Remarks:

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

A review of 6(f) properties on the Land and Water Conservation Fund (LWCF) website (Appendix J-1) at <https://www.lwcfcoalition.com/map-of-lwcf> revealed a total of 21 properties in Marion County (Appendix J-2). None of these properties are located within or adjacent to the project area. Therefore, there will be no impacts to 6(f) resources as a result of this project.

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SECTION E – Air Quality

Air Quality

Conformity Status of the Project

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

Yes	No
X	

If YES, then:

Is the project in the most current MPO TIP?

X	
---	--

Is the project exempt from conformity?

	X
--	---

If the project is NOT exempt from conformity, then:

Is the project in the Transportation Plan (TP)?

X	
---	--

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

	X
--	---

Level of MSAT Analysis required?

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

Remarks:

This project is included in the Fiscal Year (FY) 2020-2024 Indianapolis MPO Transportation Improvement Program (MPO TIP) and the FY 2020-2024 Statewide Transportation Improvement Program (STIP) (Appendix H-1). The listing of the lead Des. No. (1802075) covers the overall project because the other Des. Nos. have been consolidated under the lead for the purposes of the MPO TIP and STIP under the contract R-41536.

This project is located in Perry and Decatur Townships in Marion County, which is currently a maintenance area for Ozone 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. Environmental Protection Agency, Et. Al. Decision*. The project's design concept and scope are accurately reflected in both the Indy MPO Transportation Plan (TP) and the MPO TIP, and both conform to the State Implementation Plan (SIP). Therefore, the conformity requirements of 40 CFR 93 have been met.

This project is located in Marion County, which is in attainment for particulate matter 2.5 (PM2.5) and carbon monoxide (CO). Therefore, a hot spot analysis for PM2.5 or CO is not required.

For the preferred alternative, the amount of mobile source air toxics (MSAT) emitted would be proportional to the vehicle miles traveled, or VMT. The VMT estimated for the preferred alternative is typically higher than that for the Do-Nothing alternative, because the added travel lanes attract trips that would not otherwise occur in the area. This increase in VMT means MSAT under the preferred alternative would probably be higher than the Do-Nothing alternative. There could also be localized differences in MSAT (e.g., benzene) from parked cars, and emissions of diesel particulate matter from tractor-trailers and delivery trucks. Travel to other destinations would be reduced with subsequent decreases in emissions at those locations.

MSAT emissions are virtually certain to be lower than present levels in the design year as a result of the U.S. Environmental Protection Agency's (USEPA) national control programs that are projected to reduce MSAT emissions by over 90 percent from 2010 to 2050 (*Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents*, FHWA, October 12, 2016). Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the USEPA-projected reductions is so great (even after accounting for VMT growth), that MSAT emissions in the study area are likely to be lower in the future than they are today.

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SECTION F - NOISE

Noise

Yes **No**

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

No **Yes/ Date**

ES Review of Noise Analysis		Draft approved for public involvement August 29, 2019; updated draft approved for CE December 2019.
------------------------------------	--	-----------------------------------------------------------------------------------------------------

Remarks: *A Draft Traffic Noise Impact Analysis* was conducted for this project and is included in Appendix I. The purpose of the analysis was to evaluate noise impacts and abatement under the requirements of Title 23, Part 772 of the Code of Federal Regulations (23 CFR 772) "Procedures for Abatement of Highway Traffic Noise". The FHWA Traffic Noise Model (TNM) Version 2.5 was used to predict existing and future design year noise levels. Because design year noise levels are predicted to approach or exceed the FHWA Noise Abatement Criteria (NAC), the project has been found to have traffic noise impacts. Based on the *Traffic Noise Analysis Procedure* (2017), the feasibility and cost-effectiveness of noise barriers were considered at all locations in the project area where noise impacts were identified under the future build alternative. Based on this evaluation, 10 feasible and cost-effective barriers were identified for this project. These locations are summarized in the following table and shown on the figures in Appendix I-24 to I-33.

Summary of Feasible and Cost-Effect Noise Barriers

Noise Barrier	Location	Length (feet)	Number of Benefited Receivers
1 + 3	Section C: north side of I-465 between Kentucky Avenue and Mann Road	4,525	123
2 + 4	Section C: south side of I-465 between Kentucky Avenue and Mann Road	3,600	119
6	Section A/B: south side of I-465 between East Street and Madison Avenue	2,700	63
7	Section A/B: north side of I-465 between Madison Avenue and the Louisville & Indiana Railroad	600	38
8+10	Section A/B: south side of I-465 between Madison Avenue and Keystone Avenue	5,100	169
9	Section A/B: north side of I-465 between Louisville & Indiana Railroad and Keystone Avenue	3,850	89
11	Section A/B: north side of I-465 east of Keystone Avenue	1,175	103

Based on the studies completed to date, INDOT has identified 602 impacted receptors and has determined that noise abatement is likely, but not guaranteed, at 10 locations where 581 of the 602 impacted receptors are located (Appendix I-23). Noise abatement at these locations is based upon preliminary design costs and design criteria. Noise abatement in these locations at this time has been estimated to cost approximately \$9.6 million and will reduce the noise level by a minimum of 5 dB(A) at a majority of the identified impacted receptors.

The viewpoints of the benefited residents and property owners were sought and were considered in determining the reasonableness of highway traffic noise abatement measures for proposed highway construction projects. Meeting invitations and pre-stamped surveys, which allowed the resident to state whether or not they would like the noise wall associated with their property constructed, were mailed to each benefited resident on August 13, 2019 (Appendix G-128). On August 29, 2019, a presentation was given on the noise analysis conducted for the project, and boards showing the locations where noise abatement is likely were made available. Meeting materials were

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posted online at the project website, www.in.gov/indot/3961.htm. During September 2019, additional noise outreach was conducted in each residential area. This included distributing surveys door-to-door to residents who had not yet responded to the survey, collecting comments, hosting booths in common areas, and attending community events. Additionally, affected businesses and landowners were contacted. These activities were detailed in the Part I - Public Involvement section and in the September 19, 2019 memorandum (Appendix G-126). The noise survey card comment period ended on September 20, 2019.

Of the 512 mailings sent to benefited receivers, 133 positive responses were received, and 6 negative responses were received (27% response rate). Based on the responses received, including comments from business and landowners, the length of three barriers were shortened. The revised barriers were displayed at the public hearing on December 10, 2019 and are presented in Appendix I-24 to I-33. The results of the public hearing are discussed above in Part I – Public Involvement section.

As discussed above, the majority of the comments received at the hearing and during the comment period pertained to the noise analysis, and, specifically, the exclusion of Noise Barrier 12 (Appendix G-168 to G-199). The reason that a noise barrier was not found to be reasonable and feasible in this location was due to high-voltage transmission lines that cross and then run parallel to the interstate in this location. These transmission lines restrict where a barrier could be placed along the right-of-way due to safety issues. Because of these safety issues and the associated risks, a gap would have to be placed within a barrier at this location. Because of this necessary gap, the barrier would not meet the acoustic feasibility criterion (i.e., provide a 5 dBA reduction at a majority of the impacted receptors). Since the wall was not feasible, reasonableness was not evaluated.

Residents in this area also commented on recent vegetation cleared in the area and requested additional noise analysis to account for this removal. Upon review, it was determined that the utility (Duke Energy) recently cleared vegetation in this area, per their safety policy. The recent vegetation clearing at this location does not require a reanalysis of traffic noise impacts and abatement. Per INDOT’s *Noise Analysis Procedure*, trees and other dense vegetation should not be modeled unless the vegetation is evergreen and completely blocks all lines of sight to the roadway. Since the vegetation at this location is not evergreen, it was not incorporated into the noise modeling for this project. Furthermore, the gap in the noise barrier must remain. Therefore, the noise results provided in the *Traffic Noise Impact Analysis* already reflect conditions without vegetation in this area.

This project is a design build best value (DBBV). All of the proposed noise barriers will be reevaluated, and the final decision on the installation of any abatement measure(s) will be made upon the completion of the projects’ final design and the public involvement process. INDOT will incorporate highway traffic noise consideration in ongoing activities for public involvement in the highway program. If during final design it has been determined that conditions have changed such that noise abatement is not feasible and reasonable, the abatement measures might not be provided. The *Traffic Noise Impact Analysis* will be finalized by the DBBV contractor.

SECTION G – COMMUNITY IMPACTS

Regional, Community & Neighborhood Factors

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

Yes	No
X	
	X
	X
	X
X	
X	

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Remarks: The I-465 Reconfiguration project is consistent with local and regional land use and transportation plans. Because the project involves the reconstruction of existing highways and interchanges, primarily within the existing ROW, with no changes to access, it will not result in substantial impacts to community cohesion. No significant economic or community impacts are expected to develop as a result of the project. This project is necessary to address the safety and capacity issues on these sections of I-465. Therefore, this project will positively impact motorists using this facility, and should have minimal impacts to community cohesion, the local tax base, or property values. Impacts from the MOT will be minimized through stakeholder coordination and should not impact community events.

The City of Indianapolis' most recent transition/accessibility implementation plan was developed and considered effective in 2013. An annual report demonstrating continued implementation of accessibility enhancements was prepared by the City of Indianapolis on December 28, 2018. The project will be designed in accordance with the plan and all applicable Americans with Disabilities Act (ADA) requirements.

Indirect and Cumulative Impacts

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

Yes No

Remarks: Indirect impacts are effects which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate. Cumulative impacts affect the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such actions. The project will not result in substantial indirect impacts because it involves the reconstruction of existing highways and interchanges with no changes to access within highly developed areas. As a result, there will be minimal opportunity for the project to induce development.

Similarly, the project will not result in substantial cumulative impacts because it is located in an area that currently is and has been highly developed, so there will be minimal impacts associated with other past, present, and future actions. In addition, the project's impacts will be minimal because it's a reconstruction project that will occur within the existing ROW.

Public Facilities & Services

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

Yes No

Remarks: Based on a desktop review, site visits on May 8-10, 13-16, 20-24, 28-30, and August 15 and 23, 2019 by Parsons, the aerial map of the project area (Appendix B-6), and the RFI reports (Appendix E-1 and E-17), the following public facilities are located within the 0.5 mile of the project: two schools, four recreational facilities, one managed land, one airport, sidewalks on two local bridges, and public transit operated by IndyGo. Except for the bus route, and existing sidewalks on the Keystone Avenue bridge over I-465 and the Madison Avenue bridge over I-465, these facilities are not located within or adjacent to the project area.

Access to all public facilities and services will remain during construction, except the sidewalks will likely experience temporary closure during construction. Impacts to the sidewalks on bridges cannot be avoided because the bridges need to be replaced to accommodate the added lanes on I-465. It is assumed temporary closure of these bridges will occur, and a detour for motorists will be provided. The Keystone Avenue bridge has 4-foot wide sidewalks, which will be replaced with 8-foot wide sidewalks. The Madison Avenue bridge over I-465 has 5.3-foot wide sidewalks, which will be replaced with 6.6-foot wide sidewalks.

IndyGo, the Indianapolis International Airport (IAA), and the Louisville & Indiana Railroad Co. were invited to participate in the CAC meeting on June 13, 2019 (Appendix G-16). In addition, a request for comments on the project

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was sent to CAC members on July 23, 2019 (Appendix G-22). No response was received. The IS Railroad and the IAA will not be directly impacted by this project.

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. Additionally, IndyGo must be notified at least two weeks prior to any construction that would block or limit access to bus routes. These are included as firm commitments in the Environmental Commitments section of this document.

Environmental Justice (EJ) (Presidential EO 12898)
 During the development of the project were EJ issues identified?
 Does the project require an EJ analysis?

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

If YES, then:

Are any EJ populations located within the project area?
 Will the project result in adversely high or disproportionate impacts to EJ populations?

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

Remarks:

Under FHWA Order 6640.23A, FHWA and INDOT, 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 CE Manual, an Environmental Justice (EJ) Analysis is required for any project that has two or more relocations or 0.5 acre of additional permanent ROW. The project will require no ROW and no relocations. However, since this project is a Type 1 project requiring noise analysis and a CE-4, it was determined by INDOT that EJ analysis is warranted.

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 Marion County. The community that overlaps the project limits is called the affected community (AC). In this project, the ACs are eight census tract block groups (CTBGs) in Section A/B, AC-A through AC-H, and six CTBGs in Section C, AC-I to AC-N.

An AC has a population of concern for EJ if the population is more than 50% minority or low-income or if the low-income or minority population is 125% of the COC. Data from the U.S. Census Bureau's 2013-2017 American Community Survey five-year estimate was obtained from the US Census Bureau Website <https://factfinder.census.gov/> in July 2019 by Parsons. The data collected for minority and low-income populations within the ACs for Sections A/B and Section C are summarized in the following tables. A more detailed discussion is provided in the August 8, 2019 Preliminary EJ Analysis memorandum (Appendix J-3).

Section A/B I-465 Reconfiguration Minority and Low-Income Data (ACS 2017)

	COC	AC-A	AC-B	AC-C	AC-D	AC-E	AC-F	AC-G	AC-H
	Marion County, Indiana	Block Group 3, Census Tract 3804.02	Block Group 1, Census Tract 3804.04	Block Group 1, Census Tract 3805.01	Block Group 2, Census Tract 3805.01	Block Group 1, Census Tract 3805.02	Block Group 3, Census Tract 3805.02	Block Group 1, Census Tract 3806	Block Group 3, Census Tract 3806
Minority									
Percent Minority	43.3	27.1	43.1	6.9	20.1	35.8	24.5	35.8	22.2
125% of COC	54.1	AC<125% COC	AC<125% COC	AC<125% COC	AC<125% COC	AC<125% COC	AC<125% COC	AC<125% COC	AC<125% COC
EJ Population of Concern	N/A	No	No	No	No	No	No	No	No
Low-Income									
Percent Low-Income	19.8	43.5	33.9	18.0	29.3	28.5	10.3	18.4	24.6
125% of COC	24.7	AC>125% COC	AC>125% COC	AC<125% COC	AC>125% COC	AC>125% COC	AC<125% COC	AC<125% COC	AC<125% COC
EJ Population of Concern	N/A	Yes	Yes	No	Yes	Yes	No	No	No

As shown in the above-table, all eight ACs within Section A/B have a percent minority below 50 and below the 125% COC threshold, therefore they do not contain minority populations of EJ concern.

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AC-C, AC-F, AC-G, and AC-H have a percent low-income that are below 50 and are below the 125% COC threshold. AC-A, AC-B, AC-D, and AC-E have a percent low-income that are below 50 but are above the 125% COC threshold. Therefore, of the eight ACs within Section A/B, four are low-income populations of EJ concern, specifically AC-A, AC-B, AC-D, and AC-E.

Section C I-465 Reconfiguration Minority and Low-Income Data (ACS 2017)

	COC	AC-I	AC-J	AC-K	AC-L	AC-M	AC-N
	Marion County, Indiana	Block Group 1, Census Tract 3702.01	Block Group 2, Census Tract 3702.01	Block Group 3, Census Tract 3702.01	Block Group 4, Census Tract 3702.01	Block Group 3, Census Tract 3702.02	Block Group 1, Census Tract 3703.02
Minority							
Percent Minority	43.3	3.6	8.0	10.6	7.6	4.7	14.9
125% of COC	54.1	AC<125% COC	AC<125% COC	AC<125% COC	AC<125% COC	AC<125% COC	AC<125% COC
EJ Population of Concern	N/A	No	No	No	No	No	No
Low-Income							
Percent Low-Income	19.8	10.0	1.5	37.3	17.8	8.8	21.4
125% of COC	24.7	AC<125% COC	AC<125% COC	AC>125% COC	AC<125% COC	AC<125% COC	AC<125% COC
EJ Population of Concern	N/A	No	No	Yes	No	No	No

As shown in the above-table, all six ACs within Section C have a percent minority below 50 and below the 125% COC threshold, therefore they do not contain minority populations of EJ concern.

AC-I, AC-J, AC-L, AC-M, and AC-N have a percent low-income that are below 50 and are below the 125% COC threshold. AC-K has a percent low-income of 37.3, which is below 50% but is above the 125% COC threshold. Therefore, of the six ACs adjacent to Section C, five ACs are not low-income populations of EJ concern. AC-K is a low-income population of EJ concern.

The map showing the AC boundaries, summary tables, and data obtained from Census.gov are provided in Appendices B-105, J-7, J-8, and J-9, respectively.

Specific Communities

Specific communities along the alignment were researched to help identify potential EJ populations. Additionally, the U.S. Department of Housing and Urban Development (HUD) mapper tool was used to identify potential low-income communities. <https://resources.hud.gov/>. The results are summarized below and shown on the maps in Appendix J-23 and J-24.

- Hanna Village Apartments, at 4020 Hanna Village Drive, is located 0.4 mile north of Section A/B. This apartment complex is listed under the HUD low-income housing tax credit program.
- Valley Forge Apartments, at 4350 Madison Avenue, is 0.1 mile north of Section A/B along Madison Avenue. This apartment complex is listed under the HUD low-income housing tax credit program.
- Madison Mobile Home Community, at 4403 Madison Avenue, is adjacent to Section A/B at the northeast of I-465 and Madison Avenue.
- Longacre Mobile Home Park, at 4701 Madison Avenue, is located adjacent to Section A/B, southwest of I-465 and Madison Avenue. This mobile home community is located within AC-D, which is a low-income population of EJ concern.
- Village of North Acre, at 1507 E Little Piney Way, is a mobile home community located adjacent to Section A/B.
- Decatur Township Center, 4851 Tincer Road, is a nursing home facility that abuts Section C of the project.
- Abbey Apartments, at 4012 Mann Road, is located 0.6 mile north of Section C. It is identified as a low income, elderly, and special needs housing by HUD.
- Two community organizations that appear to represent ethnic groups were identified near the project area: Burmese American Community Institute and Chin Community of Indiana-Chin Center (Southeast Asian ethnic group).

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Representatives from these communities and organizations were invited to the July 10, 2019 public open house. A request for translation to Chin language was requested at the public open house. Additionally, requests for Spanish language were received at community outreach events (described in Public Involvement section). Parsons worked with INDOT Public Involvement to provide the requested project documents in Chin and Spanish language.

MOT
 During construction, the MOT will require lane closures and restrictions along I-465, occasional short-duration ramp closures within interchanges, and local road closures for bridge replacements. Detours will be provided. While this will cause an inconvenience to motorists, substantial impacts to EJ populations are not anticipated because detours will be provided, coordination with transit (IndyGo) is required, and the project area contains a well-developed grid of local roads. Additionally, the closure of consecutive bridges (e.g., Keystone Avenue and Madison Avenue) will be prohibited. Therefore, the MOT during construction will not have a disproportionately high and adverse effect on EJ populations of concern.

Noise Barriers
 In order to obtain the viewpoints of the benefited residents, mailings, a noise meeting, and community outreach events were conducted in the residential communities where noise barriers are proposed (see the Noise and Public Involvement sections for further details).

AC-A and AC-B contain EJ populations of concern, but they are east of the project area and outside of the noise study area. Noise barriers are proposed for the communities in AC-D (Barriers 8 and 10) and AC-E (Barrier 11). AC-K contains EJ populations of concern, but the properties adjoining I-465 are mostly vacant land or commercial warehouses. Since there were no noise-sensitive uses within this section of I-465 (between I-70 and SR 67), noise barriers were not evaluated. The majority of the ACs with noise impacts do not contain EJ populations of concern. Therefore, the noise impacts to the EJ populations will not be disproportionately high and adverse.

Conclusion
 Of the 14 ACs adjacent to the project area, five ACs (AC-A, AC-B, AC-D, AC-E, and AC-K) were identified to be low-income populations of EJ concern. Additionally, there are multiple adjacent and nearby communities that likely contain EJ populations. This project has no relocations and will require no new or temporary ROW. Impacts will be minimized through stakeholder coordination regarding MOT during construction (detailed in the Public Involvement section) and the installation of noise barriers. Therefore, the I-465 Reconfiguration Project should not have a disproportionately high and adverse impact on EJ populations. At this time, no further environmental justice analysis is warranted.

Relocation of People, Businesses or Farms

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

Yes	No
	X
	X
	X
X	

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

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

Remarks: No relocations of people, businesses, or farms will take place as a result of this project. Utility coordination is on-going.

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SECTION H – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

Documentation

Hazardous Materials & Regulated Substances (Mark all that apply)

Red Flag Investigation

Phase I Environmental Site Assessment (Phase I ESA)

Phase II Environmental Site Assessment (Phase II ESA)

Design/Specifications for Remediation required?

X

No Yes/ Date

ES Review of Investigations	May 14, 2019
------------------------------------	--------------

Include a summary of findings for each investigation.

Remarks:

Based on a review of GIS and available public records, RFIs (one for each section) were completed on May 9, 2019 by Parsons (Appendix E-1 and E-17). The following table summarizes the hazmat sites located within 0.5 mile of the project area.

Summary of Hazmat Sites

Type of Site	Total No. within 0.5 mile	Nearest Site and Distance	Facility Type / Regulatory Status
Section A/B			
Resource Conservation and Recovery Act (RCRA)/ Transfer Disposal Facility (TSD)	3	0.3 mile north	Service station / conditionally exempt generator of hazardous of waste
State Cleanup	3	0.10 mile north	Former service station / granted No Further Action status by IDEM in 2010
Underground Storage Tanks (USTs)	6	0.27 mile north	Service station / three registered USTs with no reported releases
Voluntary Remediation Program (VRP)	2	0.20 mile south	Commercial / Granted a Certificate of Completion from IDEM. An environmental restrictive covenant (ERC, a type of Institutional Control) was placed on the property's deed.
Solid Waste Landfill	1	0.07 mile north	Residential / no file on Virtual File Cabinet
Leaking Underground Storage Tank (LUST)	25	0.13 mile north	Service station / IDEM issued an Agreed Order for paperwork in August of 2018. A release from USTs was reported in 1991.
Institutional Controls	4	0.13 mile north	Same site listed above under "LUST"
National Pollutant Discharge Elimination System (NPDES) Facilities	3	Adjacent	Industrial / no impact is expected
NPDES Pipes	2	Crosses the site	Citizens Energy Group Pipeline / coordination is on-going
Section C			
RCRA/TSD	2	0.15 mile southwest	Industrial / hazardous waste generator
State Cleanup	1	Adjacent west	Indy Railway Service Corp. / no evidence of significant soil or groundwater contamination was encountered in 2012.
UST	2	0.11 mile east	Commercial / no violations or releases
LUST	7	0.10 mile southwest	Service station / granted No Further Action status in May 2001

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Institutional Controls	2	0.20 mile southwest	Filling station / an ERC was placed on the property in 2009 for residual petroleum contamination from a 1988 release
NPDES Facilities	6	Adjacent east	Commercial / no impact is expected
NPDES Pipes	1	0.35 mile northeast	Industrial / no impact expected

The only site located within the project area, a subgrade Citizens Energy pipeline, should not be impacted. Utility engineering is ongoing for this project. No impacts to the other hazmat sites are expected. Further investigation for hazardous material concerns is not required at this time.

SECTION I – PERMITS CHECKLIST

Permits (mark all that apply)

Likely Required

Army Corps of Engineers (404/Section10 Permit)

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

IDEM

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

IDNR

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

US Coast Guard Section 9 Bridge Permit

Others (Please discuss in the remarks box below)

X

Remarks:

A USACE Section 404 Individual Permit, an IDEM Section 401 Water Quality Certification, and an Isolated Wetland Permit will be required. Stream and wetland mitigation will be required. Further coordination will be needed with IDEM and USACE to determine mitigation requirements. IDNR-DFW's response and IDEM's electronic coordination discussed these permit requirements (Appendix C-5 and C-14).

This work will impact the floodplains of McFarland Creek and Lick Creek, therefore it will require IDNR CIF permits. Mitigation will likely be required for the removal of trees from the floodplain of Lick Creek. A replanting plan is anticipated to compensate for these impacts. IDNR-DFW's response to early coordination discussed this permit requirement (Appendix C-5).

More than one acre of land will be disturbed, therefore an IDEM Rule 5 permit will be required. IDEM's electronic coordination discussed this permit requirement (Appendix C-14).

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Based on the early coordination response from INDOT Aviation, a tall structure permit will be needed (Appendix C-22).

Applicable recommendations provided by IDNR-DFW, USFWS, and IDEM 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.

SECTION J- ENVIRONMENTAL COMMITMENTS

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

Remarks:

Firm:

- 1) If the scope of work or permanent or temporary right-of-way amounts change, the INDOT Environmental Services Division (ESD) and the INDOT District Environmental Section will be contacted immediately. (INDOT ESD and INDOT Greenfield)
- 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) Bridge piers cannot be placed within the OHWM of jurisdictional streams (Lick Creek and McFarland). (INDOT)
- 4) It is the responsibility of the project sponsor to notify IndyGo at least two weeks prior to any construction that would block or limit access to public transit routes. (INDOT)
- 5) During construction, the closure of consecutive bridges (e.g., Madison Avenue and Keystone Avenue) at the same time is prohibited. (INDOT)
- 6) INDOT should coordinate with DPW to manage the potential for increased stormwater runoff into two adjacent DPW projects, one in Section A/B and one in Section C. The current project manager for both projects is David Haas (David.Hass@indy.gov). (City of Indianapolis)
- 7) 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)
- 8) LIGHTING AMM 1: Direct temporary lighting away from suitable habitat during the active season. (USFWS)
- 9) LIGHTING AMM 2: When installing new or replacing existing permanent lights, use downward-facing, full cut-off lens lights (with same intensity or less for replacement lighting); or for those transportation agencies using the BUG system developed by the Illuminating Engineering Society, be as close to 0 for all three ratings with a priority of "uplight" of 0 and "backlight" as low as practicable. (USFWS)
- 10) TREE REMOVAL AMM 1: Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal. (USFWS)
- 11) TREE REMOVAL AMM 2: Apply time of year restrictions for tree removal when bats are not likely to be present (i.e. no clearing April 1 to September 30), or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/ rail surface and outside of documented roosting/foraging habitat or travel corridors;

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<p>visual emergence survey must be conducted with no bats observed. (USFWS)</p> <p>12) 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)</p> <p>13) 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)</p> <p>14) USFWS Bridge/Structure Assessment shall take place no earlier than two (2) years prior to the start of construction. Current surveys were conducted between July 2018 and March 2019. Since construction will likely begin after July 2020, inspection of structures by qualified individuals must be performed. The inspection of the structures 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)</p> <p>15) If box or pipe culverts are used, the bottoms should be buried to a minimum of 6 inches (or 20% of the culvert height/pipe diameter, whichever is greater up to a maximum of 2 feet) below the stream bed elevation to allow a natural streambed to form within or under the crossing structure. Crossings should: span the entire channel width (a minimum of 1.2 times the bankful 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 and water velocities during low-flow conditions that are approximate to those in the natural stream channel. The new, replacement, or rehabbed structure should not create conditions that are less favorable for wildlife passage under the structure compared to the current conditions. (IDNR-DFW)</p> <p>16) Riprap must not be placed in the active thalweg channel or placed in the streambed in a manner that precludes fish or aquatic organism passage (riprap must not be placed above the existing streambed elevation). Riprap may be used only at the toe of the sideslopes up to the OHWM. The banks above the OHWM must 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. (IDNR-DFW)</p> <p>17) Impacts to non-wetland forest of one (1) acre or more should be mitigated at a minimum 2:1 ratio. 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 inches dbh or greater (5:1 mitigation based on the number of large trees). (IDNR-DFW)</p> <p>18) Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting from April 1 through September 30. (IDNR-DFW)</p> <p>19) Do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pump-arounds. (IDNR-DFW)</p> <p>20) Use minimum average six-inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids. (IDNR-DFW)</p> <p>For Further Consideration:</p> <p>21) The project should comply with the <i>City of Indianapolis Storm Water Design and Construction Manual</i> including Chapter 700 Stormwater Quality and Chapter 600 Erosion and Sediment Control. (City of Indianapolis)</p>

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SECTION K- EARLY COORDINATION

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

Remarks: Early coordination letters were sent on June 25, 2019 (Appendix C-1). The list of agencies are summarized below and shown on Appendix C-4.

Early Coordination

Agency	Response Received	Appendix C Page #'s
IDNR-DFW	July 25, 2019	C-8
IGWS (electronic coordination)	June 26, 2019	C-10
IDEM (electronic coordination)	June 26, 2019	C-14
City of Indianapolis Department of Public Works	July 1, 2019	C-21
INDOT Aviation	July 24, 2019	C-22
USACE	None	N/A
USFWS	None	N/A
Natural Resources Conservation Service (NRCS)	None	N/A
Indianapolis MPO	None	N/A
U.S. HUD	None	N/A
National Park Service	None	N/A

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INDOT Supporting Documentation

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Categorical Exclusion Level Thresholds

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

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

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

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

⁴AMMs = Avoidance and Mitigation Measures.

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

⁶Potential for causing a disproportionately high and adverse impact.

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

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