

Indiana Department of Transportation

County Clark Route Heavy Haul Transportation Corridor / New Alignment Des. No. 1382612

**FHWA-Indiana Environmental Document
CATEGORICAL EXCLUSION / ENVIRONMENTAL ASSESSMENT FORM
General Project Information**

Road No./County:	Heavy Haul Transportation Corridor / Clark County
Designation Number:	1382612
Project Description/Termini:	Construction of approximately 1.48 miles of heavy haul-designated roadway from North Access Road (St. 10+00) to SR 265/Old Salem Road interchange (St. 88+32.65).

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

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

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

Release for Public Involvement

 2-5-18
ES Signature Date

MICHELLE B ALLEN
Digitally signed by MICHELLE B ALLEN
DN: c=US, o=U.S. Government, ou=FHWA FHWAIndianapolisIN, ou=DOT FHWAIndianapolisIN, cn=MICHELLE B ALLEN
Date: 2018.02.05 15:22:33 -05'00'

FHWA Signature Date

Certification of Public Involvement _____
Office of Public Involvement Date

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

INDOT ES/District Env. Reviewer Signature:  Date: 2-5-18

Name and Organization of CE/EA Preparer: Leah S. Boits and Briana M. Hope, American Structurepoint, Inc.

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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*?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If No, then:		
Opportunity for a Public Hearing Required?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

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

Remarks:

Notice of Entry for Survey

A Notice of Survey was sent to adjoining property owners on February 4, 2014, indicating survey and environmental work was being initiated for the proposed project. Additional Notice of Survey letters were mailed on May 27, 2014 and July 17, 2015 for supplemental areas. On February 22, 2017, Notice of Entry letters were then sent to individual property owners where additional archaeological work needed to be conducted. For reference to the letters, see Appendix F, F-1 to F-6.

Public Information Meetings

Two Public Information meetings were held on January 28, 2015 and April 5, 2017 at the Utica Elementary School. A Public Notice was published on the Indiana Department of Transportation (INDOT) news release website on January 15, 2015. A reminder of the meeting was published on the INDOT news release site on January 25, 2015. The intent of the January 28, 2015 meeting was to introduce preliminary information about the proposed new roadway. The public was invited to share comments and questions with project team members during the informal open house before and after a presentation. The public was also invited to nominate an individual for inclusion as a member of the Community Advisory Committee (CAC) being organized to participate in the development of the environmental and engineering evaluations. Public comments were accepted through February 11, 2015. Two (2) comments were received within the designated comment period; one comment requested more communication with regard to the project. The other comment focused on the concern of the project's effect on a property owner's land. In addition, four (4) CAC nomination forms for two (2) individuals were received (details below). Information pertaining to the January 28, 2015 Public Information Meeting, including public notices, sign-in sheets, project information handouts, presentation, and comment sheets can be found in Appendix F (F-7 to F-28).

The intent of the April 5, 2017 meeting was to discuss potential route alternatives being considered for the Heavy Haul Transportation Corridor. A Public Notice for the April meeting was mailed to adjoining property owners and local government officials on March 28, 2017; the Public Notice was also published on the INDOT news release website on March 28, 2017. A reminder of the meeting was published on the INDOT news release site on April 3, 2017. The public was invited to share comments and questions with members of the project team during the informal open house before and after the presentation. The public was also invited to nominate additional individuals to serve on the CAC. Public comments were accepted through April 29, 2017. No additional comments were received. Information pertaining to the April 5, 2017 Public Information Meeting, including public notices, sign-in sheets, project information handouts, and presentation can be found in Appendix F (F-29 to F-44).

CAC Meeting

A CAC is a group of individuals serving as representatives of their local community and neighborhood groups to act as a liaison for the exchange of information between the community and transportation officials. CAC members are given the opportunity to participate in the development of project evaluations, potentially continuing its direct involvement with the project through the preparation of final design plans for the proposed project. The INDOT, in partnership with Federal Highway Administration (FHWA), maintain final authority and responsibility concerning decision-making regarding the Heavy Haul Transportation Corridor.

The CAC was selected from area residents, businesses, and officials having direct interest in the project. Requests for nominations for inclusion as a member of the CAC were made at the January 28, 2015 and April 5, 2017 Public

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Information meetings; two (2) neighborhood representatives were nominated and included as CAC members. Committee members were selected as representatives of larger groups and were responsible for coordinating and facilitating communications between INDOT and project team members as the project developed.

An invitation to participate in a CAC meeting was sent to CAC members on October 6, 2017. The CAC meeting was held on October 26, 2017 at the INDOT Project Office in Jeffersonville Indiana. The intent of the CAC meeting was to discuss the project development, including the project timeline and overview of the current design, and to provide comments and feedback. The primary concerns discussed at the meeting included the following:

- Upgrading the existing Port Road to meet heavy haul standards in order to avoid impacting individual property owners along the proposed corridor
- Concern about project's impact on individual properties
- Access to the Heavy Haul Transportation Corridor

INDOT and the project-design team engaged in open discussions with regard to questions and concerns during the open forum portion of the meeting. Information pertaining to the October 26, 2017 CAC meeting, including the meeting agenda, handout sheets, sign-in sheets, and a summary of meeting minutes, can be found in Appendix F (F-45 to F-54).

Public Hearing

The proposed project is being processed as an Environmental Assessment (EA). Per the current *Indiana Department of Transportation (INDOT) Public Involvement Manual 2012*, a public hearing will be provided to the public. Upon approval and release of the EA for public involvement, a legal advertisement will be placed in a local publication notifying the public of the EA's availability for review and comment for a period of 30 days.

The legal notice will appear in a local publication of general circulation, contingent upon the approval and release of this document for public involvement, announcing the availability of the environmental documentation, and the date and venue of the public hearing at least 15 days and again at least seven days in advance of the event. The hearing will allow the public to formally provide comments on the preferred alternative and potential effects to the social and natural environment. Comments will be accepted for a period of 15 days following the hearing.

Subsequent to the satisfactory completion of the public involvement process, and if determined appropriate, a request for preparation of a Finding of No Significant Impact (FONSI) will be submitted to the FHWA through INDOT. All comments received during this period will be listed and individually addressed in the disposition of comments attachment included in the FONSI request packet. If any comments cause a re-examination or require a change to the EA, an Additional Information (AI) document may be prepared and approved by the FHWA prior to the submission of the FONSI request to the FHWA. The preparation of the FONSI by the FHWA will indicate that the NEPA process for this project has been completed. Individuals included on the mailing list for the project will be notified by U.S. mail of the FONSI issuance by the FHWA. In addition, a public notice announcing the availability of the FONSI will be advertised in a local publication of general circulation.

Section 106

To meet the public involvement requirements of Section 106 of the National Historic preservation Act, the INDOT, on behalf of the FHWA issued a finding of "No Historic Properties Affected" on December 1, 2017, which was advertised in the December 27, 2017 edition of the *News and Tribune* (Appendix C, C-85). No comments regarding the Section 106 finding were received from the public within the designated comment period, which closed on January 22, 2018.

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Public Controversy on Environmental Grounds

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

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

Remarks:

To date, there are no known substantial controversies concerning this project with respect to community and/or natural resource impact. Two Public Information meetings were held on January 28, 2015 and April 5, 2017. Some property owners and members of the public objected to the proposed project corridor. A recurring concern involved upgrading existing infrastructure (Port Road) to meet heavy haul standards instead of constructing new alignment. The use of Port Road as a heavy haul corridor was reiterated during the October 26, 2017 CAC meeting. Upgrading Port Road to meet heavy haul standards was evaluated as an alternative for this project. However, this alternative does not meet the system connection south of SR 265/Old Salem Road interchange criteria of the purpose and need (Appendix F, F-45 to F-54).

These issues do not merit substantial controversy on environmental grounds. Impacts to historic resources have been minimized to the extent practical through project design. Impacts to the community and individual properties will be addressed as the project advances through the right-of-way phase. Comments received in the public hearing process will be addressed and presented in the request for FONSI.

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

Sponsor of the Project: INDOT, Indiana Economic Development Corporation, Ports of Indiana, Clark County, City of Jeffersonville, and River Ridge Development Authority INDOT District: Seymour
Local Name of the Facility: Heavy Haul Transportation Corridor

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)

The need for the proposed project is due to the current and predicted rapid industrial and commercial development in the area that would result in a significant increase in volume of heavy haul vehicles mixing with local traffic. This growth, combined with the lack of connectivity and suitable roadways for heavy haul vehicles in the area, indicates a need for the proposed project. The purpose of the proposed project is to provide a route built specifically for heavy haul vehicles that provides a continuous connection between the River Ridge Commerce Center (RRCC) and the Ports of Indiana-Jeffersonville (Port) via the new State Road (SR) 265/Old Salem Road interchange.

Sponsorship and Location

The INDOT, in partnership with the FHWA, the Indiana Economic Development Corporation, the Ports of Indiana, the Board of Commissioners of Clark County, the City of Jeffersonville Redevelopment Commission, and the River Ridge Development Authority (RRDA), is developing a federal-aid road project to improve connectivity for the Ports of Indiana-Jeffersonville (Port) with other regional transportation assets.

The area is located on the Jeffersonville and Charlestown USGS 7.5 Minute Quadrangle Maps in Tracts 6-7, 14-17, 24-27, 38-40, and 52-53 and is within the Louisville Metropolitan Planning Area (LMPA), which consists of nine counties in Kentucky (Jefferson, Oldham, Trimble, Henry, Shelby, Spencer, Nelson, Bullit and Meade) and four Indiana counties (Washington, Harrison, Floyd and Clark). Preliminary corridor studies identified an approximately 1.3-mile wide corridor between the Port of Indiana, Jeffersonville and SR 265 to establish roadway alignment alternatives for the project.

The project area has several major generators of traffic that consist primarily of heavy trucks or heavy haul vehicles. However, the road network in the area is primarily made up of local facilities not designed to handle such vehicle loading. Heavy haul vehicles (often referred to as Michigan truck trains) are generally 60 feet or more in length with a gross vehicle weight of 134,000 pounds, as compared to Indiana legal load limits of 80,000 pounds gross vehicle weight. Heavy haul vehicles require the design of facilities to take into account the maximum weight of the heavy haul vehicles and the anticipated number of heavy haul vehicles utilizing the facility on a daily basis. The resulting difference between a facility designed to carry heavy haul vehicles and standard load trucks is often a significant difference in pavement thickness. Based on current and predicted rapid industrial and commercial development associated with the major traffic generators in the project area it is anticipated that truck traffic will increase by 129 percent over the next 20 years.

Existing Conditions

Major Traffic Generators

The Port of Indiana-Jeffersonville

Located 1.5 miles south of the SR 265/Old Salem Road interchange and along the riverfront of the Ohio River, the Port is the fastest growing of the Inland Waterway System, accepting 200,000 trucks, 17,000 rail cars, and 1,300 barges annually. The Port occupies approximately 1,057 acres of land with an estimated 316 acres of commercial parcels remaining undeveloped. Currently the Port has 28 existing manufacturing and industrial companies employing 1,500 individuals. The Port is roughly bordered to the northwest by Middle/New Middle Road, to the southwest by The Fields of Lancassange Subdivision and Lancassange Creek, to the southeast by the Ohio River and to the northeast by Brown-Forman Road. The Port boasts a strategic location of being within one day's drive to more than two-thirds of the U.S. population and connects to three interstate facilities, I-71, I-64 and I-65, via SR 265. Additionally, rail service throughout the Port is provided by MG Rail operated by Consolidated Grain and Barge.

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Recently, the Ports of Indiana received a \$10 million Transportation Investment Generating Economic Recovery (TIGER) grant for a \$17 million project intended to further develop rail and road connections within the Port property. According to the press release issued by the Ports of Indiana on October 30, 2015, "The project will enhance and overhaul the railroad infrastructure and intermodal capabilities throughout the entire port. The project scope includes construction of a siding to accommodate unit train delivery to and from the Port, reconfiguration of the waterfront railroad infrastructure including two new rail loops that will dramatically increase operational efficiency, construction of a waterfront intermodal facility that will more than double the capacity of bulk commodities transferred from rail cars to barges, construction of a rail yard that will allow cargo to be transferred between trucks and rail cars, and construction of more than a mile of the railroad extension towards RRCC." Growth in and around the Port is expected to continue as a result of these improvements and due to the development of the RRCC, the largest industrial/commercial park in the region, and the completion of the Louisville-Southern Indiana Ohio River Bridges Project East End Crossing (EEC).

River Ridge Commerce Center (RRCC)

The RRCC is a 6,000-acre tract of repurposed U.S. government property located approximately 0.5 mile north of the SR 265/Old Salem Road interchange and 2.0 miles northeast of the existing SR 265/SR 62/Port Road interchange. With only 2,000 acres of the property currently developed, the RRCC is the largest and fastest growing industrial/commercial park in the region. According to the 2014 RRDA Gateway Master Plan document, the RRCC has generated over \$1.16 billion in economic output and supports over 5,900 direct jobs, which accounts for 12% of Clark County's workforce. The RRCC property includes a 1,500-acre site, with Mega-Site certification. A Mega-Site is a large, contiguous tract of land that is marketed for major manufacturing or industrial developments, and the certification ensures potential buyers that due diligence items have already been completed. This makes the land more attractive to developers. The expansion of the RRCC facilities, including the Mega-Site, is expected to significantly increase transportation demands between the Port and the RRCC, including a significant increase in heavy haul vehicle traffic.

City of Jeffersonville and Utica Area

The Jeffersonville-Utica area is in the midst of extensive infrastructure and industrial/commercial expansion projects. This is, in part, spurred by the recent completion of the EEC. The EEC completes an interstate level highway around the north side of the LMPA, connecting I-265 in Indiana and Kentucky via Indiana SR 265 and KY 841 (Gene Snyder Freeway), and provides a major regional circumferential interstate level route. Expansion of existing and new development of industrial and business parks in the area of New Middle Road and Port Road are already under way. Many of the industries expanding into the area use heavy haul vehicles for distribution and receiving operations.

Existing Infrastructure

Port Road

Port Road is generally a northwest-southeast route that extends from Utica Pike to SR 265, providing direct access between the Port and the SR 62/SR 265 interchange. It is functionally classified as a major collector between SR 265 and Utica Pike. Port Road serves as the primary access to the Port for commercial/heavy vehicle traffic and is the only current connection from SR 265 to the Port that trucks can safely navigate, although not designed to effectively handle heavy haul vehicles. Port Road is a two lane roadway with a current traffic volume of 8,405 vehicles per day (2015) with 29 percent trucks and a projected traffic volume of 19,295 vehicles per day (2035) with 29 percent trucks. Port Road also serves a number of established business parks to the west of Middle Road/New Middle Road. The typical section of Port Road consists of two 12-foot wide lanes (one in each direction) bordered by 10-foot wide paved shoulders. The posted speed limit along Port Road is 30 miles per hour. The vertical alignment of the facility is generally rolling terrain, while the horizontal alignment has various tangent to curvilinear sections.

Old Salem Road

Old Salem Road was recently upgraded from a narrow two lane facility accommodating two 8-foot wide travel lanes with no shoulders to an improved roadway with two 11-foot wide travel lanes in each direction and shoulders no more than 4-feet wide along each travel lane. With the completion of the roadway improvements, Old Salem Road functions as a minor arterial for the collection and distribution of local traffic south of the SR 265 interchange. Old Salem road previously functioned as a low-volume local road (less than 500 vehicles per day) and generally served as an access drive to residential properties north of Utica. However, the facility retained two significantly steep grade sections (greater than 10%), that required posting of steep grade advanced warning signage. Other issues with Old Salem Road as the southern link between the RRCC, SR 265 and the Port are discussed below. Old Salem Road is not designed to effectively handle heavy haul vehicles and improvements did not include a pavement structure to accommodate heavy haul vehicles.

International Drive / Logistics Avenue

The RRDA is part of a local partnership has recently constructed a north-south roadway through the RRCC property. The Kentuckiana Regional Planning & Development Agency (KIPDA) identified the roadway as a Heavy Haul Road in their Horizon 2035 Metropolitan Transportation Plan. The new roadway connects the SR 265 interchange with SR 62 on the north side of the RRCC property. The portion of the roadway running north from the SR 265/Old Salem Road interchange is signed as International Drive and

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the portion continuing west to SR 62 will be signed as Logistics Avenue. The roadway collects and distributes traffic north of the SR 265 interchange. The typical section of International Drive/Logistics Avenue consists of two 12-foot wide travel lanes, one in each direction, separated by a 14-foot wide two-way left turn lane. The roadway was constructed to effectively handle heavy haul vehicle loads.

Middle Road / New Middle Road

The Middle Road/New Middle Road corridor is an important local route that generally extends from the southwest to the northeast servicing commercial development on the east side of the City of Jeffersonville. The two lane road is functionally classified as a minor arterial roadway and currently terminates approximately 1.0 mile northeast of its intersection with Port Road. The typical section of Middle Road consists of two 12-foot wide lanes (one in each direction) bordered by 10-foot wide paved shoulders. The extension of Middle Road east of Port Road, New Middle Road, consists of two 12-foot wide lanes (one in each direction) bordered by 2-foot wide paved shoulders. The posted speed limit along Middle Road is 45 miles per hour. The vertical alignment of the facility is generally level, while the horizontal alignment has various tangent to curvilinear sections. Middle Road/New Middle Road is not constructed to effectively handle heavy haul vehicles.

Utica Pike/Upper River Road

Utica Pike/Upper River Road is a southwest to northeast minor arterial route connecting downtown Jeffersonville to the town of Utica. As Utica Pike enters the downtown area of Jeffersonville it is known as Market Street, while in Utica it is referred to as 4th Street. In the project area, the typical section generally consists of two 11-foot wide travel lanes with narrow to no shoulders. Both the vertical and horizontal alignment of the facility are generally level, while the horizontal alignment has various tangent to curvilinear sections. Utica Pike is not constructed to effectively handle heavy haul vehicles.

SR 62

SR 62 is a west-east route beginning west of Mt. Vernon in southwest Indiana and ending at US 50 southwest of Lawrenceburg in southeast Indiana. Through the project area, SR 62 is generally on a southwest-northeast alignment. It is functionally classified as a principal arterial from Utica-Sellersburg Road south to SR 265 where the roadway then continues south as 10th Street into the City of Jeffersonville, and as a minor arterial from Utica-Sellersburg Road north into Charlestown. The typical section of SR 62 consists of four 12-foot wide lanes (two in each direction) with 4-foot wide outside and 2-foot wide inside paved shoulders. A 22-foot wide grass median separates the eastbound and westbound lanes. The posted speed limit along SR 62 is 55 miles per hour east of Utica-Sellersburg Road and 45 miles per hour west of Utica-Sellersburg Road continuing along 10th Street and into Jeffersonville. The vertical alignment of the facility is generally level and the horizontal alignment is typically tangent. Neither SR 62 nor 10th Street is constructed to effectively handle heavy haul vehicles.

SR 265 (SR 62/Port Road to the Ohio River)

The Louisville-Southern Indiana Ohio River Bridges Project EEC completed the interstate-level highway around the north side of the LMPA, connecting I-265 in Indiana and Kentucky via Indiana SR 265 and Kentucky (KY) 841. The completion of the EEC provides a significant regional connection in the northern portion of the LMPA via a new bridge spanning the Ohio River. Prior to the completion of this regional route, traffic generated from the Port area with intended destinations in the eastern reaches of the LMPA, or beyond, had to travel westward and navigate through the congested downtown Jeffersonville area and Spaghetti Junction (the convergence of three interstates, I-71, I-65 and I-64) before backtracking to the east. This new route provides a direct access to the eastern reaches of the LMPA and other interstate facilities, such as I-71 and I-64, without having to traverse through the downtown areas of Jeffersonville and Louisville.

SR 265 is a four lane divided highway consisting of two 12-foot wide eastbound travel lanes and two 12-foot wide westbound travel lanes. The eastbound and westbound lanes are separated by a depressed median varying in width. Aside from the interchange with SR 62/Port Road, the only other direct access point to the local road network eastward to the Ohio River is at the new interchange with Old Salem Road. While designed to effectively handle the standard maximum load on Indiana highways of 80,000 pounds gross weight, SR 265 is not specifically designed to handle heavy haul vehicles.

Primary Need Criteria

Deficient System Linkage

Deficient Connectivity Between Existing Infrastructure and Major Traffic Generators

An examination of the local street network in the eastern limits of the City of Jeffersonville reveals an overall lack of connectivity providing direct local access to key commerce areas. Currently, there are only four roads that provide local access between the areas north of SR 265 and south of it, Port Road/ SR 62, Utica-Sellersburg Road, Old Salem Road/International Drive/Logistics Avenue and Utica Pike/Upper River Road. While Port Road/SR 62 is functionally classified as a principal arterial, neither is designed for heavy haul vehicles. Utica-Sellersburg Road is functionally classified as a major collector, it has substandard horizontal curvature making it an undesirable facility to be used for direct local vehicular access across SR 265 and it is not designed to handle heavy haul

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vehicles. The International Drive/Logistics Avenue connection north of SR 265 will provide a connection between the RRCC and the highway. However, issues remain with the south leg, Old Salem Road, which are discussed in the following section. The Utica Pike/Upper River Road system is located in the floodplain of the Ohio River, subjecting it to flooding on a 5 year return frequency. This issue makes it an unreliable local access route, especially in times of emergencies. Of these four routes, only two, Old Salem Road/International Drive/Logistics Avenue and Port Road/SR 62 also have direct access to SR 265.

Inadequate System Connection South of the SR 265 / Old Salem Road Interchange

The 2003 Final Environmental Impact Statement (FEIS) and the 2012 Supplemental Final Environmental Impact Statement (SFEIS) for the Louisville-Southern Indiana Ohio River Bridges Project references the need for a connection between the new SR 265/Old Salem Road interchange, the Port, and the RRCC. More specifically, it recognized the need to improve existing roadway connections to the RRCC and for the consideration of additional connections between the Port and SR 265. Though the extension of SR 265 between SR 62/Port Road and the Ohio River includes the addition of a new interchange at Old Salem Road, along with a northern spur now connecting to International Drive/Logistics Avenue and a southern spur connecting to Old Salem Road, it does not fully address the recognized need to the evaluated additional connections between the Port and SR 265. Such an action would have independent utility from the EEC given a connection to the local road system north and south of the interchange is provided.

The intersecting roads at this interchange consist of two local roads, Old Salem Road to the south and International Drive/Logistics Avenue to the north. International Drive/Logistics Avenue provides a three lane connector road between the Old Salem Road interchange and the RRCC at SR 62 and Logistics Avenue. Both the International Drive/Logistics Avenue and the roadway connecting Old Salem Road and International Drive/Logistics Avenue through the SR 265/Old Salem Road interchange are designed to effectively handle heavy haul vehicle traffic. Evidenced by the continued growth of the Port area and the development of the RRCC (refer to Section 2.1), there is a demonstrated need for a continuous route southward to the Port.

Currently, the only connecting route to the Port from the SR 265/Old Salem Road interchange is a non-continuous one provided via Old Salem Road, which continues into the historic town of Utica as Mulberry Street, and Utica Pike (4th Street within the town of Utica). As discussed in Section 2.2, the Old Salem Road section of this south link to the Port is unable to handle added traffic volumes and heavy haul vehicles expected from the interchange.

Based on the Louisville Southern Indiana Ohio River Bridges, Traffic Forecast Report, February 22, 2012 and Section 6 Roadway the projected traffic volumes for Old Salem Road indicate 7,200 vehicles per day (2030) with six percent trucks. Even after the aforementioned upgrades to Old Salem Road are complete, using this south link to the Port for heavy haul vehicle traffic is undesirable. The added traffic to this facility will be routed into the Utica town center connecting to Utica Pike (4th Street). In so doing, additional upgrades to the town's infrastructure will likely be required. Such upgrades are likely to adversely affect the Utica Historic District, which was determined eligible for inclusion in the National Register of Historic Places (NRHP) as part of the Louisville-Southern Indiana Ohio River Bridges Project, and have impairing effects on the community cohesion of the town.

Lack of Infrastructure Designed to Effectively Handle Heavy Haul Vehicles

Presently, the only state-classified extra heavy duty highways across Indiana are in northwest and northeast sections of the state. Such facilities are constructed to handle heavy haul vehicles. The continued development of the RRCC and the Port with manufacturing and industrial facilities is expected to significantly increase transportation demands, specifically heavy haul vehicles, between the two traffic generators. Predicted volumes of traffic between RRCC and the Port by 2035 are 14,742 vehicles per day with 30 percent trucks. Neither route currently connecting the RRCC and the Port, Port Road and SR 62 and Old Salem Road/Utica Pike, SR 265/Old Salem Road interchange and International Drive/Logistics Avenue, are designed for heavy haul vehicles. The roadway connecting Old Salem Road and International Drive/Logistics Avenue over SR 265 was designed to handle Michigan train truck loads. However, all other roadways were not. Aside from the potential damages to the town of Utica discussed in the previous section, the lack of a continuous heavy haul vehicle routes between the Port and SR 265 will likely result in heavy haul vehicles continued usage of Port Road for access to SR 265. The continued passage of these types of vehicles over a facility not properly designed to handle such loads will result in accelerated deterioration of the pavement and subgrade, requiring more frequent maintenance and replacement.

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PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Clark Municipality: City of Jeffersonville

Limits of Proposed Work: North Access Road (St. 10+00) to SR 265/Old Salem Road interchange (St. 88+32.65)

Total Work Length: 1.48 Mile(s) Total Work Area: 21.5 Acre(s)

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

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

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

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

Project Location:
 The proposed project area is located in Utica Township, Clark County, Indiana. More specifically, the project is located on the Jeffersonville USGS 7.5 Minute Quadrangle Map in tracts 7, 15, and 16. The project corridor is located just west of the Town of Utica, north of the Ohio River and south of SR 265.

The proposed project extends 1.48 miles from its southern terminus at North Access Road, located approximately 0.5 mile north of the Brown Forman Road and Utica Pike intersection, to its northern terminus of the SR 265/Old Salem Road interchange. The proposed project has independent utility and would function independent of other projects and improvements taking place in the vicinity of the project. The southern terminus will tie into the existing North Access Road and the northern terminus will tie into the existing SR 265/Old Salem Road interchange, providing continuous connection between the RRCC and the Port.

Proposed Improvements (Preferred Alternative – Alternative DE):
 The proposed corridor begins approximately 0.5 mile north of the Brown Forman Road and Utica Pike intersection, extends generally north 1.48 miles, and ends at the SR 265/Old Salem Road interchange. The preferred Heavy Haul Transportation Corridor (HHTC) roadway will be constructed as a two-lane urban minor arterial road designed to “heavy haul” specifications. Heavy haul specifications consist of a more robust pavement section to withstand a maximum vehicle weight of 134,000 pounds. To account for the heavy haul vehicles, the proposed roadway will be constructed as 14.5-foot thick pavement with lime subgrade. The proposed roadway will have a design speed of 35 miles per hour with two 13-foot wide travel lanes and 11-foot wide outside shoulders. The 11-foot wide shoulders will be included as part of a 16-foot wide clear zone on both sides of the roadway. Guardrail will be set within the clear zone, approximately 3.5 feet from the edge of the shoulder, where needed. Several small structures will be placed along the project corridor to convey roadside drainage and streams beneath the proposed roadway (See **Design Criteria for Bridges** below for specific details). In addition, two-foot wide rock cut ditches will be constructed outside of the clear zone to convey roadside drainage (Appendix A, A-11 to A-49).

In order to provide direct connection to commercial development on the east side of the City of Jeffersonville and maintain access to local residents, the HHTC roadway will tie in to New Middle Road and Utica-Sellersburg Road, respectively. Proposed improvements to New Middle Road include connecting the current termination point to the newly constructed HHTC roadway. The typical section will be consistent with the current Middle Road typical section, with two 12-foot wide travel lanes (one in each direction) and two 10-foot wide paved shoulders. The posted speed limit will be 45 miles per hour.

As Utica-Sellersburg Road approaches New Middle Road from the south, Utica Sellersburg Road will be reconstructed to turn west and connect with the new HHTC roadway. The typical section for Utica-Sellersburg Road will be two 12-foot wide travel lanes (one in each direction) with 8-foot wide shoulders. In order to maintain access to nearby residences, a new connector road that terminates south of the HHTC roadway, Utica Connector Road, will be constructed. In addition, to maintain residential access north of the HHTC roadway and keep local traffic from mixing with heavy haul traffic, Utica Sellersburg Road approaching the HHTC roadway from the north will also terminate north of the new roadway.

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The preferred alternative also includes the construction of a new bridge over Lentzier Creek. The proposed bridge will be a 0.11-mile long, three-span continuous composite steel plate girder bridge; the spans will be 172.5 feet, 208 feet, and 172.5 feet long. The bridge will have a 54-foot, 4-inch wide out-to-out coping with a 51-foot, 4-inch wide clear roadway width. The typical section of the bridge consists of two 13-foot wide travel lanes and 12-foot, 8-inch wide outside shoulders. A 1.5-foot wide concrete bridge railing will be installed outside of the shoulders. The bridge over Lentzier Creek will be about 60-80 feet above the stream bottom (Appendix A, A-50 to A-57).

The preferred alternative requires approximately 26 acres of permanent right-of-way acquisition. Of the total right-of-way-acquisition, 4.9 acres of right-of-way will be required from residential parcels. Three (3) residential relocations will likely be required for the construction of the roadway. No temporary right-of-way is anticipated.

Maintenance of Traffic (MOT):

Because the proposed HHTC roadway will be constructed primarily on new terrain, MOT will not be required for the newly built roadway section. However, during the entire duration of construction, barricades would be placed at the end of New Middle Road, which currently terminates approximately 0.1 mile northeast of its intersection with Port Road, and at the connection point to Old Salem Road near the I-265/Old Salem Road interchange.

A three-mile detour route for Utica-Sellersburg Road will be utilized while the new HHTC roadway and Utica-Sellersburg Road intersection is being constructed. The detour will direct traffic along Brown Forman Road, to Utica Pike, to Port Road, to New Middle Road, to Utica-Sellersburg Road. The detour will be in place for approximately 90 days.

Programming and Summary of Impacts:

The project is listed in the 2018-2021 INDOT State Transportation Improvement Program (STIP) and in the Kentuckiana Regional Planning and Development Agency's (KIPDA) 2018-2021 Transportation Improvement Program (TIP). The total estimated cost listed in the STIP is \$15,002,571, which includes \$1,232,000 in engineering costs (2018-2019), \$10,558,152 in construction costs (2018-2019), and \$3,212,419.01 in right-of-way costs. The total cost listed in the TIP is \$47,041,709; however, this cost includes the construction of a three-lane road from the SR 265/Old Salem Road interchange north through RRCC to Indiana Highway 62, which is a 100% locally sponsored project (Appendix G, G-1 to G-7).

This project will result in a roadway and bridge with the capacity to handle heavy haul vehicles. The roadway will provide heavy haul vehicles an additional continuous and direct local access connection between major traffic generators while also separating the heavy haul traffic from local traffic. Therefore, it is a net benefit for the surrounding community and transient users of SR 265 and other local facilities. Impacts to the social environment include three potential relocations, which will be conducted in accordance with 49 CRF 24 and the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended. Because the project is primarily new alignment on new terrain, temporary inconveniences due to MOT measures may occur at areas associated with tying the new roadway in to existing infrastructure.

OTHER ALTERNATIVES CONSIDERED:

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

As part of the project development, a range of alternatives was considered. Due to the steep terrain of the area and because the area is rich in cultural resources, 12 alternatives (including the preferred alternative) were considered potentially feasible. Through coordination with resource agencies, three (3) of the 12 alternatives were determined to fully satisfy the purpose and need with minimal impacts to resources. A description of the 11 discarded alternatives, including two that met the purpose and need, and the reasons they were discarded from further consideration are discussed below.

No Build (Do Nothing)

This alternative leaves the existing roadways as they currently exist. This alternative would utilize the current local street system with no expenditure of capital funds for the addition of a heavy haul-designated roadway or for upgrading existing infrastructure to meet heavy haul standards. The No Build alternative would not provide direct and continuous connectivity between existing infrastructure and major traffic generators, address inadequate system connection south of the SR 265/Old Salem Road interchange, or design infrastructure to effectively hand heavy haul vehicles. While this alternative eliminates cost, the potential relocation of residents, and any environmental impacts, it would not have met the objectives of the purpose and need. Therefore, this alternative was discarded from further consideration.

Port Road (Existing Infrastructure)

The Port Road Alternative would be an approximate 4.0-mile long corridor, none of which would be constructed on new terrain. Travel

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time along this route from the Port to RRCC is estimated to be approximately 11.5 minutes, which is approximately 8.5 minutes longer than it is anticipated to travel along the preferred alternative. This alternative would utilize approximately 2.0 miles of Port Road and the Port Road/SR 265 interchange and 2.0 miles of SR 265. This alternative would require the widening and reconstruction of approximately 2.0 miles of Port Road, including portions of the SR62/SR265 interchange, to meet heavy haul standards. The Port Road Alternative would also require upgrades to existing intersections to provide safe interaction with heavy load vehicles. Currently Port Road provides direct access to SR 265 from the Port. However, the reconstruction of Port Road would not provide direct and continuous connection to the RRCC. To complete the RRCC connection, vehicles would need to utilize SR 265 to access the Old Salem Road interchange and gain access to the RRCC.

Because the pavement on SR 265 was not designed for heavy haul standards, the expected life of the pavement and bridge structures would likely be shortened by regular use of the expected heavy load vehicles. In addition, the westbound entrance ramp to SR 265 from the Old Salem Road interchange would need to be extended to provide an adequate acceleration lane for heavy vehicles. This impact requires the widening of the existing pavement and the bridge structure over a tributary to Lentzier Creek. The eastbound ramp to the SR 265/Old Salem Road interchange would also need to be re-evaluated to determine if the existing ramp length is sufficient to accommodate trucks waiting to turn north to gain access to the RRCC as the traffic moving north/south across the bridge over SR 265 would be free flow. In addition, the pavement in the roundabout interchange at SR 265 and SR 62 would also require a structural upgrade to accommodate the heavy load vehicles.

Utilizing Port Road as a designated heavy haul roadway would increase the amount of local commuter traffic mixing with not only heavy haul traffic but other large commercial traffic vehicles. Considering the projected increase in traffic along Port Road [8,405 vehicles per day (2015) \ 19,295 vehicles per day (2035)], the forced mixing of commercial traffic and local commuter traffic is likely to result in an increased risk of potential conflicts between not only larger commercial trucks and local commuter traffic but also between the large trucks. It is likely that the forced mixing of traffic would also result in overall slower travel times.

It is estimated that the Port Road Alternative would take approximately 24 months to construct, which is four (4) months longer than is anticipated to construct Alternative DE (preferred alternative); because the construction would occur on existing alignment, it is anticipated that normal traffic patterns would be interrupted for approximately 18 months (with lane restrictions). Since the preferred alternative is on new alignment, interruptions to existing traffic would be minimal. The Port Road Alternative would include five (5) intersecting roadways, three (3) controlled stops, two (2) yields, six (6) merges, one (1) railroad crossing, and 14 commercial access points. In comparison, the preferred alternative will have two (2) intersecting roadways, one commercial access point, and no stops, yields, merges, or railroad crossings.

Port Road is currently functionally classified as a major collector between SR 265 and Utica Pike. A collector street system is intended to provide both access and traffic circulation within residential neighborhoods and commercial/industrial areas by collecting and distributing traffic from local streets through the area to-and-from arterials and their ultimate destinations. Collector systems typically accommodate a shorter trip, and due to property access being a primary function of the roadway, there is not an emphasis on mobility or high operation speed. Arterial systems are intended to provide a higher degree of mobility between destinations typically through higher operating speeds and some degree of access control along the designated roadway, which is one of the goals of the HHTC roadway. Utilizing Port Road as the HHTC roadway introduces an increase in mixed-traffic utilizing the roadway with the primary intent of traveling between the Port and RRCC. This would likely result in the continued loss of mobility along Port Road due to the current number of existing access points and likely continued lack of access control along the corridor. The preferred alternative (DE) is being designed as a designated heavy haul route, functionally classified as urban minor arterial. Therefore, encouraging traffic (primarily trucks) with the intent of traveling between the Port and the RRCC to utilize the roadway. This will ultimately allow Port Road to continue to function as a collector system as intended and warranted by the apparent functions of the roadway, which are property access and collection and distribution of traffic from local streets to-and-from arterials (SR 265, Middle Road/New Middle Road, and Utica Pike).

While not a consideration of the purpose and need, the Port Road Alternative would also have the most impact on the major traffic generators and local businesses as a result of construction. The Port Road Alternative (existing infrastructure) currently serves as the primary access to the Port for commercial/heavy vehicle traffic and is the only current connection from SR 265 to the Port that trucks can safely navigate. While access to the Port would be maintained and impacts would be temporary, access to and from the Port would be impacted as a result of construction activities required for the Port Road improvements. As described above, the overall construction of the roadway improvements that would be required to utilize Port Road as the designated heavy haul route would take a minimum of 24 months to complete the facility, with lane restrictions likely being in place for 18 months. As compared to other alternatives the Port Road alternative would have the longest temporary impacts to the surrounding community.

The Port Road Alternative would eliminate potential relocation of residents, reduce required right-of-way, and reduce some environmental impacts. However, it would not fully satisfy the purpose and need. The Port Road Alternative would result in infrastructure being designed to effectively handle heavy haul vehicles. While not providing direct and continuous connectivity between

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existing infrastructure and the major traffic generators, the alternative does provide connectivity between the Port, RRCC, and Jeffersonville via Middle Road/New Middle Road, Port Road, and SR 265. However, as compared to the other alternatives the Port Road alternative does not adequately address system connection. The Port Road alternative functionally operates as a collector system, has the longest travel times, and the most access points, number of stops, yields, and merges. Therefore, this alternative was discarded from further consideration.

Wetland Avoidance

This alternative would include the same proposed improvements as the preferred alternative (DE). However, it would involve lengthening the bridge over Lentzier Creek and skewing the angle of the crossing over the creek to span and avoid the wetlands; this alternative would also involve placing new piers outside of the wetland boundaries. While this alternative would avoid impacting wetlands, it would increase the impact to streams. In addition, in order to construct a bridge long enough to span the wetlands, construction costs would increase significantly. Therefore, this alternative was discarded from further consideration.

Alternative A1

Alternative A1 would be a 2.22-mile long corridor, of which, 0.77 mile would be constructed on new terrain. Travel time along this route from the Port to RRCC is estimated to be approximately 4.5 minutes, which is approximately 1.5 minutes longer than the preferred alternative. This alternative would utilize Utica Pike, some new terrain, and a portion of Old Salem Road to connect the Port to the SR 265/Old Salem Road interchange. While this alternative would utilize some existing infrastructure and reduce the amount of new terrain developed, it does not fully satisfy the purposes and need as it does not provide direct and continuous connectivity between major traffic generators. In addition, Utica Pike is located in the floodplain of the Ohio River, and is subject to flooding on a 5-year return frequency, making it an unreliable local access route, especially in times of emergencies. A1 would also result in more residential relocations than any other alternative analyzed. The construction of Alternative A1 as the HHTC roadway would take approximately 24 months to complete, which is approximately four (4) months longer than Alternative DE (preferred). This alternative would include four (4) intersecting roadways, nine (9) access points (five commercial and four residential), and one controlled stop along the route. In comparison, the preferred alternative will have two (2) intersecting roadways, one commercial access point (no residential), and no controlled stops along the route. Therefore, this alternative was discarded from further consideration.

Alternative A2

Alternative A2 would be an approximate 2.26-mile long corridor, of which, 0.96 mile would be constructed on new terrain. Travel time along this route from the Port to RRCC is estimated to be approximately 4.5 minutes, which is approximately 1.5 minutes longer than it is anticipated to travel along the preferred alternative. This alternative would utilize Utica Pike, some new terrain, and a portion of Old Salem Road to connect the Port to the SR 265/Old Salem Road interchange. The new alignment terrain portion of the roadway would be shifted west from the A1. While this alternative would utilize some existing infrastructure and reduce the amount of new terrain developed, it does not fully satisfy the purpose and need as it does not provide direct and continuous connectivity between major traffic generators. In addition, Utica Pike is located in the floodplain of the Ohio River, and is subject to flooding on a 5-year return frequency, making it an unreliable local access route, especially in times of emergencies. A2 would likely result in the greatest amount of impacts to wetlands as compared to any other alternative under consideration, and would likely require more residential relocations than the preferred alternative. The construction of Alternative A2 as the HHTC roadway would take approximately 24 months to complete (12 months with lane restrictions), which is approximately four (4) months longer than Alternative DE (preferred). This alternative would include four (4) intersecting roadways, nine (9) access points (five commercial and four residential), and one controlled stop along the route. In comparison, the preferred alternative will have two (2) intersecting roadways, one commercial access point (no residential), and no controlled stops along the route. Therefore, this alternative was discarded from further consideration.

Alternative B

Alternative B would be an approximate 1.64-mile long corridor, of which, 1.49 miles would be constructed on new terrain. This alternative would utilize the same logical termini as the preferred alternative (North Access Road and SR 265/Old Salem Road interchange). Travel time along this alternative from the Port to RRCC is approximately 3 minutes, which is the same amount of time to travel along the preferred alternative. Alternative B would be constructed west of Brown Forman Road, turning northeast approximately 0.5 mile from the southern terminus. This alternative would be constructed mostly through agricultural fields, which would reduce the number of relocations to one. Alternative B was not proposed to continue north and become a frontage road along SR 265 because of the likelihood of significant archaeological sites in the area. Moving this alternative farther north before tying back in also would have resulted in additional stream crossings; in addition, the terrain north of Alternative B is steep with gulleys throughout, which would require additional fill and potentially more structures. Alternative B would fully satisfy the purposes and need; however, it would likely impact archaeological sites that require preservation in place. The construction of Alternative B as the HHTC roadway would take approximately 20 months to complete; the same amount of time estimated to construct Alternative DE. This alternative would have the same number of intersecting roadways (2), commercial access points (1), and controlled stops (0) as the preferred alternative. Therefore, this alternative was discarded from further consideration.

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Alternative C

Alternative C would be an approximate 1.64-mile long corridor, of which, 1.49 miles would be constructed on new terrain. This alternative would utilize the same logical termini as the preferred alternative (North Access Road and SR 265/Old Salem Road interchange). Travel time along this alternative from the Port to RRCC is approximately 3 minutes, which is the same amount of time to travel along the preferred alternative. Alternative C would be constructed to turn east across Brown Forman Road, south of New Middle Road. Alternative C would fully satisfy the purposes and need and reduce the number of relocations to two. However, Alternative C would impact a known archaeological site determined eligible for listing on the National Register of Historic Places. The construction of Alternative C as the HHTC roadway would take approximately 20 months to complete; the same amount of time estimated to construct Alternative DE. This alternative would have the same number of intersecting roadways (2), commercial access points (1), and controlled stops (0) as the preferred alternative. Therefore, this alternative was discarded from further consideration.

Alternative D

Alternative D would be an approximate 1.59-mile long corridor, of which, 1.43 miles would be constructed on new terrain. This alternative would utilize the same logical termini as the preferred alternative (North Access Road and SR 265/Old Salem Road interchange). Travel time along this alternative from the Port to RRCC is approximately 3 minutes, which is the same amount of time to travel along the preferred alternative. Alternative D would be constructed along a similar alignment as Alternative C, but would turn north to cross Lentzier Creek perpendicularly. Alternative D would fully satisfy the purposes and need and reduce the amount of impact to Lentzier, but would result in more stream crossings than other alternatives. In addition, Alternative D would impact a known archaeological site eligible for listing on the National Register of Historic Places. The construction of Alternative D as the HHTC roadway would take approximately 20 months to complete; the same amount of time estimated to construct Alternative DE. This alternative would have the same number of intersecting roadways (2), commercial access points (1), and controlled stops (0) as the preferred alternative. Therefore, this alternative was discarded from further consideration.

Alternative E

Alternative E would be an approximate 1.70-mile long corridor, of which, 1.55 miles would be constructed on new terrain. This alternative would utilize the same logical termini as the preferred alternative (North Access Road and SR 265/Old Salem Road interchange). Travel time along this alternative from the Port to RRCC is approximately 3 minutes, which is the same amount of time to travel along the preferred alternative. Alternative E would be constructed to turn east across Brown Forman Road, north of New Middle Road. Alternative E would fully satisfy the purposes and need, would likely avoid impacts to archaeological sites, and have one less relocation than the preferred alternative. However, Alternative E would have a greater amount of impacts to forests and streams than the preferred alternative; it would also require more right-of way than the preferred alternative. Alternative E would also potentially impact the most karst features out of any of the alternatives analyzed. The construction of Alternative E as the HHTC roadway would take approximately 20 months to complete; the same amount of time estimated to construct Alternative DE. This alternative would have the same number of intersecting roadways (2), commercial access points (1), and controlled stops (0) as the preferred alternative. Therefore, this alternative was discarded from further consideration.

Alternative F

Alternative F would be an approximate 1.62-mile long corridor, of which, 1.46 miles would be constructed on new terrain. This alternative would utilize the same logical termini as the preferred alternative (North Access Road and SR 265/Old Salem Road interchange). Travel time along this alternative from the Port to RRCC is approximately 3 minutes, which is the same amount of time to travel along the preferred alternative. Alternative F would be constructed along a similar alignment as Alternative E. However, Alternative F would turn north earlier than Alternative E to cross Lentzier Creek. Alternative F has similar forest, stream, and wetland impacts to the preferred alternative (DE), and is anticipated to have the same number of relocations. The construction of Alternative F as the HHTC roadway would take approximately 20 months to complete; the same amount of time estimated to construct Alternative DE. This alternative would have the same number of intersecting roadways (2), commercial access points (1), and controlled stops (0) as the preferred alternative. Alternatives DE (preferred), F, and HH were all determined to satisfy the purpose and need and also minimize the amount of overall impacts to forest, stream, and wetland. Because forest, stream, and wetland impacts are estimated to be similar between the three alternatives (DE, F, HH) coordination with resource agencies determined that any of the three alternatives (DE, F, or HH) would likely be acceptable. All alternatives considered, including Alternative F, are located within an archaeological rich area. Since DE (preferred) was investigated for the presence of archaeological resources and is therefore known to likely avoid impacts to such resources, the entirety of Alternative F was not fully examined for the presence of archaeological resources and would require further investigation to be completed in order to further consider this alternative. Through coordination with resource agencies, it was determined that while Alternative F fully satisfied the purpose and need, because the overall impacts to resources were comparable to the preferred alternative, additional archaeological work did not need to be completed and Alternative F could be discarded from further consideration.

Alternative G

Alternative G would be an approximate 1.77-mile long corridor, of which, 1.62 miles would be constructed on new terrain. This alternative would utilize the same logical termini as the preferred alternative (North Access Road and SR 265/Old Salem Road

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interchange). Travel time along this alternative from the Port to RRCC is approximately 3 minutes, which is the same amount of time to travel along the preferred alternative. Alternative G would be constructed along a similar alignment as Alternative E. However, Alternative G would continue east to connect with Old Salem Road. While this alternative would fully satisfy the purpose and need, it would result in more relocations and impacts to karst resources than the preferred alternative, and it would have the greatest impact to forests and streams out of all of the alternatives analyzed. The construction of Alternative G as the HHTC roadway would take approximately 20 months to complete; the same amount of time estimated to construct Alternative DE (preferred). This alternative would include the same number of intersecting roadways (2), commercial access points (1), and controlled stops (0) as the preferred alternative. However, Alternative G would have four (4) residential access points, whereas DE would have none. Therefore, this alternative was discarded from further consideration.

Alternative HH

Alternative HH would be an approximate 1.47-mile long corridor, of which, 1.31 miles would be constructed on new terrain. This alternative would utilize the same logical termini as the preferred alternative (North Access Road and SR 265/Old Salem Road interchange). Travel time along this alternative from the Port to RRCC is approximately 3 minutes, which is the same amount of time to travel along the preferred alternative. Alternative HH would be constructed along a similar alignment as Alternative E. However, Alternative HH would turn north earlier than Alternative E and after Alternative F to cross Lentzier Creek. Alternative HH has similar forest, stream, and wetland impacts to the preferred alternative (DE), and is anticipated to have the same number of relocations. The construction of Alternative HH as the HHTC roadway would take approximately 20 months to complete; the same amount of time estimated to construct Alternative DE. This alternative would have the same number of intersecting roadways (2), commercial access points (1), and controlled stops (0) as the preferred alternative. Alternatives DE (preferred), F, and HH were all determined to satisfy the purpose and need and also minimize the amount of overall impacts to forest, stream, and wetland. Because forest, stream, and wetland impacts are estimated to be similar between the three alternatives (DE, F, HH) coordination with resource agencies determined that any of the three alternatives (DE, F, or HH) would likely be acceptable. All alternatives considered, including Alternative HH, are located within an archaeological rich area. Since DE (preferred) was investigated for the presence of archaeological resources and is therefore known to likely avoid impacts to such resources, the entirety of Alternative HH was not fully examined for the presence of archaeological resources and would require further investigation to be completed in order to further consider this alternative. Through coordination with resource agencies, it was determined that while Alternative HH fully satisfied the purpose and need, because the overall impacts to resources were comparable to the preferred alternative, additional archaeological work did not need to be completed and Alternative HH could be discarded from further consideration.

The following Alternative Screening Matrix details the estimated impacts associated with Alternatives DE, F, and HH as they were determined to meet the purpose and need and minimize the amount of overall impacts to resources. The overall Alternative Screening Matrix detailing the estimated impacts to all alternatives considered as presented at the public meetings can be found in Appendix A, A-4 to A-5. As development of the proposed project design continued and SR 265 was opened, the Alternative Screening Matrix was re-evaluated and updated to reflect the refinement of the overall design and the consideration of potential improvements and impacts to SR 265. The revised Alternative Screening Matrix can be found in Appendix A, A-6 to A-7.

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Alternatives Screening			
Criteria	Alternatives		
	DE	F	HH
PURPOSE AND NEED CONSIDERATIONS			
Does alternative provide connectivity between existing infrastructure major traffic generators?	YES	YES	YES
Does the alternative address inadequate system connection south of the SR 265/Old Salem Road Interchange?	YES	YES	YES
Will the infrastructure be designed to effectively handle Heavy Haul Vehicles?	YES	YES	YES
ENVIRONMENTAL CONSIDERATIONS			
Adverse Effect on Historic Properties	0	0	0
Business Relocations	0	0	0
Environmental Justice Issues	ND	ND	ND
Farmland Impacted (total acres)	3.4	3.49	2.51
Prime & Unique Farmland (total acres)	ND	ND	ND
Forest Impacts (net loss in acres)	11.8	11.8	11.7
Homes/Apartment Unit Relocations	3	3	3
Karst Features Impacted	4	2	3
Noise Impacted Receivers	ND	ND	ND
Potential Archaeological Sites Impacted	0	ND	ND
Potential Hazardous Material Sites	2	2	2
Right-of-Way (total acres)	28.6	29.2	25.5
Section 4(f) Property Use	Not Likely	Not Likely	Not Likely
Stream Crossings	8	7	7
Stream Channel length within Construction Limits (total linear feet)	1078	1326	1137
Upstream Drainage Area (mi ²)	5.54	5.54	5.54
Surface Water Impoundments Impacted	0	1	1
Wetland Impacts (total acres)	0.05	0.03	0.02
USACE Jurisdictional Wetlands (acres)	0.05	0.03	0.02
USACE Non- Jurisdictional Wetlands (acres)	N/A	N/A	N/A
ENGINEERING CONSIDERATIONS			
Constructability (High, Medium or Low)	Medium	Medium	Medium
Estimated Total Cost (Million \$)	\$12.20	\$11.80	\$10.70
Length (total miles)	1.48	1.62	1.47
New Construction (total miles)	1.32	1.46	1.31
Structure Length (total feet)	375	220	220

ND = Not Determined; N/A = Not Applicable

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Small Structures and Culverts

Structure 1 is a culvert that will be installed near the southern terminus of the project corridor, south of Maritime Road. The culvert will be 74 feet long and 36 inches in diameter. The structure will convey unnamed tributary (UNT) 2 east beneath the new heavy haul roadway.

Structure 12 is a culvert that will be installed north of Maritime Road, near the southern terminus of the project corridor. The culvert is a 137-inch by 87-inch pipe arch, and will be 150 feet long. The structure will convey UNT 3 beneath the roadway.

Structure 4 is a 4-foot by 9-foot box culvert that will be installed at the New Middle Road and heavy haul road intersection. The culvert is 59 feet long and will convey UNT 3 beneath Utica-Sellersburg Road.

Structure 11 is a culvert that will be installed near the northern terminus, north of the three-span bridge. The culvert will be 266 feet long and 72 inches in diameter. The structure will convey UNT 8 beneath the new heavy haul roadway.

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 type="checkbox"/>	<input checked="" type="checkbox"/>
Provisions will be made for access by local traffic and so posted.	<input type="checkbox"/>	<input type="checkbox"/>
Provisions will be made for through-traffic dependent businesses.	<input type="checkbox"/>	<input type="checkbox"/>
Provisions will be made to accommodate any local special events or festivals.	<input type="checkbox"/>	<input type="checkbox"/>
Will the proposed MOT substantially change the environmental consequences of the action?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is there substantial controversy associated with the proposed method for MOT?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Remarks:

Because the proposed HHTC roadway will be constructed primarily on new terrain, MOT would not be required for the newly built roadway section. However, during the entire duration of construction, barricades would be placed at the end of New Middle Road, which currently terminates approximately 0.1 mile northeast of its intersection with Port Road, and at the connection point to Old Salem Road near the I-265/Old Salem Road interchange.

A three-mile detour route for Utica-Sellersburg Road will be utilized while the new HHTC and Utica-Sellersburg Road intersection is being constructed. The detour will direct traffic along Brown Foreman Road, to Utica Pike, to Port Road, to New Middle Road, to Utica-Sellersburg Road. The detour will be in place for approximately 90 days.

During development of this project, early coordination letters dated April 29, 2016 were sent to Clark county Emergency Management Agency, Clark County Sheriff's Office, Utica Elementary School, Greater Clark County Schools, and Jeffersonville Police Department. This coordination was undertaken as a way to provide the representative emergency service agencies and school corporations the opportunity to comment on the potential effects of the project on their service routes. None of the agencies contacted returned comments on the project. It is anticipated that emergency routes will be temporarily affected by the detour at New Middle Road and Utica-Sellersburg Road during the construction of the connector. Emergency service providers and school corporations will be given at least two weeks notification of any restrictions resulting from construction.

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ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: \$ 1,232,000 (2018-2019) Right-of-Way: \$ 3,212,419.01 (2019) Construction: \$ 10,558,152 (2018-2019)

Anticipated Start Date of Construction: Spring 2020

Date project incorporated into STIP July 3, 2017 (Appendix G, G-1 to G-3)

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

If yes,

Name of MPO Kentuckiana Regional Planning and Development Agency (KIPDA)

Location of Project in TIP Pages 41 and 270 (Appendix G-4 to G-7)

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

RIGHT OF WAY:

Land Use Impacts	Amount (acres)	
	Permanent	Temporary
Residential	4.9	0
Commercial	1.9	0
Agricultural	1.5	0
Forest	9.1	0
Wetlands	0.029	0
Other: Scrub/Pasture	8.56	0
TOTAL	25.99	0

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 proposed project will require a total of approximately 26 acres of additional permanent right-of-way acquisition. Of the total right-of-way acquisition, approximately 4.9 acres of right-of-way will be required from residential parcels. Approximately 1.5 acres of agricultural, 9.1 acres of forest, 0.029 acre of wetlands, 1.9 acres of commercial, and 8.56 acres of scrub/pasture property will also be required for the construction of the HHTC roadway. Three residential relocations will likely be required for the construction of the HHTC roadway.

All right-of-way will be acquired in accordance with applicable federal and state procedures. Those procedures include specific requirements for appraisals, review appraisals, negotiations, and relocation benefits. Compliance with these procedures will assure the fair and equitable treatment of affected residents and businesses. The acquisition and relocation program will be conducted in accordance with 49 CFR 24 and the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended.

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

SECTION A – ECOLOGICAL RESOURCES

Streams, Rivers, Watercourses & Jurisdictional Ditches

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

Presence

X

Impacts

Yes	No
X	

Remarks:

The Federal Wild and Scenic Rivers listing, State Natural Scenic and Recreational Rivers listing, and the Outstanding Rivers List for Indiana were researched by American Structurepoint, Inc. personnel to determine possible presence of protected waterways in the project area. No listed waterways were identified within or adjacent to the project area.

Additionally, 2005 and 2016 aerial photography, United States Geological Survey (USGS) topographic mapping, and the National Wetland Inventory (NWI) map were reviewed to determine whether any perennial or intermittent streams occurred within the project area. These maps can be referenced in Appendix A, A-2 and Appendix E, E-126 to E-142. The results of this review identified Lentzier Creek as a perennial stream flowing through the northern half of the area, as well as two UNTs to Lentzier Creek depicted as intermittent streams; one of the intermittent streams is mapped in the northern half of the investigated area and the other is mapped in the southern half of the investigated area.

American Structurepoint, Inc. personnel visited the site on May 6 and 7, 2014 and July 21, 2015 to conduct a wetland delineation to determine the presence/absence of jurisdictional waters. Lentzier Creek and the two UNTs were confirmed during the field visits. In addition to the three confirmed streams, six (6) additional intermittent streams were delineated during the field visits. All of the delineated streams appear to drain to the Ohio River, a Traditional Navigable Waterway (TNW), via Lentzier Creek. Therefore, it is anticipated that all nine (9) streams will be considered jurisdictional “waters of the U.S.” A Wetland Delineation and Waters Report, dated June 9, 2016, was prepared for this project, and was approved by the INDOT Ecology and Waterway Permits Office (EWPO) on October 13, 2017 (Appendix E, E-2 to E-209). Specific details pertaining to each of these resources, and project impacts, are provided below.

Lentzier Creek is a perennial stream that generally flows south through the project area. Lentzier Creek was delineated for a total of 2,081 linear feet within the investigated area. The ordinary high water mark (OHWM) was approximately 3 feet deep and 18 feet wide. Lentzier Creek is located within a FEMA-designated 100-year floodplain. The creek appears to drain south to the Ohio River, a TNW. Therefore, it is anticipated Lentzier Creek would be considered a jurisdictional “waters of the U.S.” by the U.S. Army Corps of Engineers (USACE). Lentzier Creek will be spanned by the 0.11-mile long, three-span continuous steel plate girder bridge. No impacts below the OHWM of Lentzier Creek are anticipated.

UNT 1 is an intermittent stream that generally flows east through the investigated area approximately 700 feet north of North Access Drive. UNT 1 was delineated for approximately 195 linear feet within the investigated area. The OHWM was approximately one foot deep by three feet wide. The stream is located within the FEMA-designated 100-year floodplain associated with UNT 3 (described below) and has a drainage area of approximately 0.04 square mile. UNT 1 flows to UNT 3, which drains to Lentzier Creek. Lentzier Creek drains south to the Ohio River, a TNW. Since the stream has a hydrologic connection to a TNW, it is anticipated that UNT 1 will be considered a jurisdictional “waters of the U.S.” The proposed project will not impact UNT 1.

UNT 2 is an intermittent stream that generally flows east through the investigated area adjacent to Maritime Road. UNT 2 was delineated for approximately 1,489 linear feet within the investigated area. The OHWM was approximately 1.5 feet deep and two feet wide. The stream is not located within a FEMA-designated floodplain. UNT 2 has a drainage area of approximately 0.06 square mile. Approximately 94 linear feet of UNT 2 will be impacted as a result of the placement of a 74-foot long 36-inch diameter pipe and the placement of riprap at the pipe ends for erosion control purposes.

UNT 3 is an intermittent stream that generally flows south through the investigated area, approximately 235 feet west of

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the intersection of Utica-Sellersburg Road and Brown Forman Road. UNT 3 was delineated for approximately 2,452 linear feet within the investigated area. The OHWM was approximately two feet deep and five feet wide. The southernmost 250 feet of the stream are located within a FEMA-designated 100-year floodplain. UNT 3 has a drainage area of approximately 0.23 square mile. UNT 3 drains to Lentzier Creek, which drains south to the Ohio River, a TNW. Since the stream has a hydrologic connection to a TNW, it is anticipated that UNT 3 will be considered a jurisdictional "waters of the U.S." The proposed project will impact approximately 354 linear feet of UNT 3 as a result of the placement of a 59-foot long 4-foot by 9-foot box culvert, a 150-foot long 137 inch by 87 inch pipe arch, and relocation of 105 stream into the constructed roadside ditch. Additionally, 40 linear feet of UNT 3 will be impacted by the placement of riprap at the ends of the box culvert and pipe arch for erosion control purposes.

UNT 4 is an intermittent stream that generally flows east through a wooded area near the center of the investigated area. UNT 4 was delineated for approximately 404 linear feet within the investigated area. The OHWM was six inches deep and three feet wide. The stream is not located within a FEMA-designated floodplain within the investigated area, but appears to be located within the FEMA-designated 100-year floodplain of Lentzier Creek immediately east of the investigated area. UNT 4 has a drainage area of less than 0.10 square mile. UNT 4 appears to drain east out of the area to a pond located within the FEMA-designated 100-year floodplain of Lentzier Creek, which drains south to the Ohio River, a TNW. Since the stream has a hydrologic connection to a TNW, it is anticipated that UNT 4 will be considered a jurisdictional "waters of the U.S." The proposed project will not impact UNT 4.

UNT 5 is an intermittent stream that generally flows northeast through the heavily wooded area near the center of the investigated area. UNT 5 was delineated for approximately 413 linear feet within the investigated area. The OHWM was six inches deep and three feet wide. Approximately 328 linear feet of UNT 5 are located within the FEMA-designated 100-year floodplain of Lentzier Creek. UNT 5 has a drainage area of approximately 0.04 square mile. UNT 5 flows north to Lentzier Creek, which drains south to the Ohio River, a TNW. Since the stream has a hydrologic connection to a TNW, it is anticipated that UNT 5 will be considered a jurisdictional "waters of the U.S." The proposed project will not impact UNT 5.

UNT 6 is an intermittent stream that generally flows north through the heavily wooded area near the center of the investigated area. UNT 6 was delineated for approximately 406 linear feet within the investigated area. The OHWM was two inches deep and one foot wide. Approximately 161 linear feet of UNT 6 are located within the FEMA-designated floodplain of Lentzier Creek, and the stream has a drainage area of less than 0.10 square mile. East of the investigated area, UNT 6 appears to flow north and drain into another unnamed stream. The unnamed stream appears to drain to Lentzier Creek, which drains south to the Ohio River, a TNW. Since the stream has a hydrologic connection to a TNW, it is anticipated that UNT 6 will be considered a jurisdictional "waters of the U.S." Approximately 150 linear feet of the headwaters of UNT 6 will be filled as a result of the construction of the HHTC roadway.

UNT 7 is an intermittent stream that generally flows southeast through the investigated area, approximately 0.4 mile west of Old Salem Road. UNT 7 was delineated for approximately 123 feet within the investigated area. The OHWM was approximately 2.5 feet deep and 13 feet wide. UNT 7 is located within the FEMA-designated 100-year floodplain associated with Lentzier Creek and has a drainage area of approximately 0.61 square mile. The unnamed stream drains to Lentzier Creek, which drains south to the Ohio River, a TNW. Since the stream has a hydrologic connection to a TNW, it is anticipated that UNT 7 will be considered a jurisdictional "waters of the U.S." The proposed project will not impact UNT 7.

UNT 8 is an intermittent stream that generally flows south through the northern portion of the investigated area, approximately 683 feet west of Old Salem Road. UNT 8 was delineated for approximately 1,012 linear feet within the investigated area. The OHWM was approximately one foot deep and six feet wide. UNT 8 is not located within a FEMA-designated floodplain within the investigated area, but appears to be located in one associated with Lentzier Creek just south of the investigated area. The stream has a drainage area of approximately 0.14 square mile. UNT 8 appears to drain out of the investigated area to the south to an unnamed stream. The unnamed stream drains to Lentzier Creek, which drains south to the Ohio River, a TNW. Since the stream has a hydrologic connection to a TNW, it is anticipated that UNT 8 will be considered a jurisdictional "waters of the U.S." The proposed project will impact approximately 286 linear feet of UNT 8 as a result of the placement of a 72-inch diameter culvert and of riprap at the culvert ends for erosion control purposes.

A total of 884 linear feet of stream will be permanently impacted by the proposed project. Total cumulative impacts are greater than 300 linear feet to delineated streams. Therefore, impacts are above the threshold requiring stream mitigation. A formal jurisdictional determination of the waterways has not yet been made by the USACE, but is required during the permitting phase.

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An early coordination letter was sent to resource agencies, including Indiana Department of Natural Resources (IDNR), Indiana Department of Environmental Management (IDEM), USACE, and U.S. Fish and Wildlife (USFWS) on April 29, 2016 outlining the project scope and requesting comments from agencies. On May 26, 2016, a resource agency meeting was held at American Structurepoint to discuss the impacts of the proposed project on natural resources and address agency concerns prior to the end of the 30-day review period. In a response letter dated June 3, 2016, the IDNR requested that an alternative that minimizes impacts to streams is needed, including alignments that reduce the number of stream crossings. In addition, IDNR provided standard recommendations to reduce impacts to fish, wildlife, and botanical resources (Appendix B, B-38 to B-41). Applicable recommendations from the IDNR are detailed in **Section J - Environmental Commitments** of this document.

In a response letter dated June 2, 2016, USFWS suggested stream impacts be avoided as much as possible and provided standard recommendations to reduce impacts on fish and wildlife resources. These recommendations include restricting channel work and vegetation clearing to the minimum necessary for installation of any structures and roadway (Appendix B, B-34 to B-37).

The IDEM automated response to early coordination on January 19, 2018 provided recommendations, which include the appropriate structures and techniques to be used both during and after construction, waste, air quality, and erosion control measures, and measures to reduce disturbance to streams and riparian vegetation (Appendix B, B-43 to B-53). Applicable recommendations from the IDEM are detailed in **Section J - Environmental Commitments** of this document.

While no formal response was received from the USACE, informal coordination with IDEM and USACE continued after the May 26, 2016 agency meeting to identify an alignment that reduced stream impacts.

In an effort to reduce stream and forest impacts, Alternatives DE, F, G, and HH were established and evaluated. Alternatives F, G, and HH would be constructed on new terrain and would utilize the same logical termini as the preferred Alternative DE (North Access Road and SR 265/Old Salem Road interchange). Alternative G would be constructed along a similar alignment as Alternative E. However, Alternative G would continue east to connect with Old Salem Road. While this alternative would satisfy the purpose and need, it would result in more relocations and impacts to karst resources than the preferred alternative, and it would have the greatest impact to forests and streams out of all of the alternatives analyzed. Therefore, G was discarded from further consideration. Alternatives F and HH had similar forest, stream, and wetland impacts as compared to the preferred alternative (DE), and are anticipated to have the same number of relocations. All alternatives, including Alternatives F and HH, are located within an archaeological rich area. The entirety of Alternatives F and HH were not fully examined for impacts to archaeological resources and would require further investigation to be completed in order further consider these routes. Through coordination with resource agencies, it was determined that while Alternatives F and HH satisfy the purpose and need, the overall impacts to resources are comparable to the fully evaluated preferred alternative (DE). Therefore, Alternatives F and HH could be discarded from further consideration (Appendix A-4 to A-9).

On October 13, 2017 an additional coordination letter was sent to resource agencies indicating that a preferred alternative had been selected (Appendix B, B-54 to B-55). Agencies were asked to reply within 30 days of the receipt of the letter; no additional responses were received. On November 13, 2017, an agency site visit was scheduled to allow agency personnel to see the resources along the preferred alternative. Individuals from IDNR, IDEM, USFWS, and USACE were in attendance. No objections to proceeding with the preferred alternative were received.

Other Surface Waters	<u>Presence</u>	<u>Impacts</u>	
		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 checked="" type="checkbox"/>	<input type="checkbox"/>
Storm Water Management Facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Remarks:

Aerial photography from 2005 and 2016, USGS topographic mapping, and the NWI map were reviewed to determine whether any other surface waters occurred within the project area. The results of this review identified an open water feature near the southern terminus of the project, approximately 750 feet west of Brown Forman Road. American Structurepoint personnel visited the site on May 6 and 7, 2014 and July 21, 2015 to conduct a wetland delineation to determine the presence/absence of jurisdictional waters. The open water feature was field verified as Pond 1 during the July 21, 2015 field investigation. A Wetland Delineation and Waters Report, dated June 9, 2016, was prepared for this project, and was approved by the INDOT EWPO on October 13, 2017 (Appendix E, E-2 to E-209).

The investigated area was larger than the proposed construction limits to ensure incidental construction limits were captured. Pond 1 is located outside of the construction limits; therefore, no impacts are anticipated. No other surface waters were identified within the project area.

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Presence **Impacts**

Wetlands

Total wetland area: 4.42 acre(s) Total wetland area impacted: 0.029 acre(s)

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

Wetland No.	Classification	Total Size (Acres)	Impacted Acres	Comments
A	PEMC	1.47	0	Wetland A is an emergent wetland located approximately 560 feet north of Loop Road, and appears to be associated with an unmaintained detention basin. Wetland A appears to drain north to Pond 1, which eventually drains to the Ohio River, a TNW via Lentzier Creek. Therefore, Wetland A will likely be considered a "waters of the U.S."
B	PEMC	0.04	0	Wetland B is an emergent wetland located approximately 800 feet north of Brown Forman Road, east of Pond 1. Wetland B appears to drain west to UNT 1, which eventually drains to the Ohio River, a TNW via Lentzier Creek. Therefore, Wetland B will likely be considered a "waters of the U.S."
C	PEME	0.12	0	Wetland C is an emergent wetland located in the northwest quadrant of the Utica-Sellersburg Road and Maritime intersection. Wetland C appears to drain south to UNT 3, which eventually drains to the Ohio River, a TNW via Lentzier Creek. Therefore, Wetland C will likely be considered a "waters of the U.S."
D	PSS1C	0.59	0	Wetland D is a scrub-shrub wetland located approximately 340 feet south of New Middle Road. Wetland D appears to drain to UNT 3, which eventually drains to the Ohio River, a TNW via Lentzier Creek. Therefore, Wetland D will likely be considered a "waters of the U.S."
E	PEME	0.01	0	Wetland E is an emergent wetland located approximately 0.27 mile north of Fox Den. Wetland E appears to drain south to Lentzier Creek, which drains to the Ohio River, a TNW. Therefore, Wetland E will likely be considered a "waters of the U.S."
F	PEME	0.01	0	Wetland F is an emergent wetland located approximately 38 feet north of Wetland E. Wetland F appears to drain east to Lentzier Creek, which drains to the Ohio River, a TNW. Therefore, Wetland F will likely be considered a "waters of the U.S."
G	PFO1C	0.02	0.022	Wetland G is a forested wetland located approximately 0.4 mile northwest of Fox Den. Wetland G appears to drain east to UNT 6, which eventually drains to the Ohio River, a TNW, via Lentzier Creek. Therefore, Wetland G will likely be considered a "waters of the U.S."
H	PFO1C	1.00	0	Wetland H is a forested wetland located approximately 160 feet northeast of Wetland G. Wetland H appears to drain east to UNT 6, which eventually drains to the Ohio River, a TNW, via Lentzier Creek. Therefore, Wetland H will likely be considered a "waters of the U.S."
I	PEMC/PFO1C	1.06 0.47 PEMC; 0.59 PFO1C	0.007	Wetland I is a forested and emergent wetland located approximately 0.3 mile west of Old Salem Road. Wetland I appears to drain south to Lentzier Creek, which drains to the Ohio River, a TNW. Therefore, Wetland I will likely be considered a "waters of the U.S."
J	PFO1C	0.10	0	Wetland J is a forested wetland located approximately 0.14 mile west of Old Salem Road. Wetland J appears to eventually drain south to Lentzier Creek via UNT 8, which drains to the Ohio River, a TNW. Therefore, Wetland J will likely be considered a "waters of the U.S."

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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

October 13, 2017
October 13, 2017

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

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

Remarks:

American Structurepoint completed a desktop review that included referencing 2005 and 2016 aerial photography, USGS topographic mapping, and NWI mapping (Appendix A, A-2 and Appendix E, E-126 to E-142). The desktop review depicted five NWI wetlands. Three were mapped within the forested portion near the center of the investigated area; one was mapped near the southern terminus and was associated with an open water feature; and one was associated with an open water feature located near the northern terminus.

American Structurepoint personnel visited the site on May 6 and 7, 2014 and July 21, 2015 to conduct a wetland delineation to determine the presence/absence of jurisdictional waters. Several wetlands were delineated within the forested area where the three forested wetlands were mapped. The southernmost NWI mapped wetland was field verified as an open water feature (Pond 1) during the 2015 field visit. The final mapped wetland associated with an open water feature near the northern terminus was field verified as land that had been cleared and filled during the 2014 and 2015 field investigations for the construction of SR 265. A Wetland Delineation and Waters Report, dated June 9, 2016, was prepared for this project, and was approved by the INDOT EWPO on October 13, 2017 (Appendix E, E-2 to E-209).

As a result of this investigation three (3) forested wetlands, five (5) emergent wetlands, one (1) scrub-shrub wetland, and one (1) forested/emergent wetland were delineated. The total acreage of wetland delineated within the investigated area was 4.42 acres. Approximately 0.029 acre of forested wetland is anticipated to be impacted by the construction of the proposed project. All wetland impacts are associated with the construction of the proposed 0.11 mile long, three-span continuous steel plate girder bridge over Lentzier Creek.

The Wetland Avoidance Alternative would involve lengthening the bridge over Lentzier Creek and skewing the angle of the crossing over the creek to span and avoid the wetlands; this alternative would also involve placing new piers outside of the wetland boundaries. While this alternative would avoid impacting wetlands, it would increase the impact to streams. In addition, in order to construct a bridge long enough to span the wetlands, construction costs would increase significantly. Therefore, this alternative was discarded from further consideration.

In an early coordination response letter dated June 2, 2016, USFWS indicated that wetland impacts should be avoided as much as possible, and any unavoidable impacts should be compensated for in accordance with the USACE mitigation guidelines (Appendix B, B-34 to B-37).

In an early coordination response letter dated June 3, 2016, IDNR indicated that an alternative to minimize impacts to wetlands was needed. In addition, IDNR provided standard recommendations to minimize impacts to fish, wildlife, and botanical resources (Appendix B, B-38 to B-41). These recommendations have been added as commitments in **Section J – Environmental Commitments** of this document.

In an effort to reduce wetland impacts, Alternatives DE, F, G, and HH were established and evaluated. Alternative F, G and HH would be constructed on new terrain and would utilize the same logical termini as the preferred Alternative DE (Access Road and SR 265/Old Salem Road interchange). Alternative G would be constructed along a similar alignment as Alternative E. However, Alternative G would continue east to connect with Old Salem Road. While this alternative would satisfy the purpose and need, it would result in more relocations and impacts to karst resources than the preferred

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alternative, and it would have the greatest impact to forests and streams out of all of the alternatives analyzed. Therefore, G was discarded from further consideration. Alternatives F and HH had similar forest, stream, and wetland impacts as compared to the preferred alternative (DE), and are anticipated to have the same number of relocations. All alternatives, including Alternatives F and HH, are located within an archaeological rich area. The entirety of Alternatives F and HH were not fully examined for impacts to archaeological resources and would require further investigation to be completed in order further consider these routes. Through coordination with resource agencies, it was determined that while Alternatives F and HH satisfy the purpose and need, the overall impacts to resources are comparable to the fully evaluated preferred alternative (DE). Therefore, Alternatives F and HH could be discarded from further consideration.

The IDEM automated response to early coordination on January 19, 2018 provided recommendations, which include the appropriate structures and techniques to be used both during and after construction, and the appropriate permits to be completed if impacts to wetlands are to occur (Appendix B, B-43 to B-53). Applicable recommendations from the IDEM are detailed in **Section J - Environmental Commitments** of this document.

The USACE did not formally respond to early coordination efforts. However, it is anticipated the USACE will provide any concerns regarding water resources as part of the permitting process, as well as any conditions to minimize impacts.

The proposed project will likely require a Section 401 Water Quality Certification (WQC) from IDEM and a Section 404 Indiana Regional General Permit (RGP) from USACE for potential impacts to wetlands. Because impacts to wetlands are anticipated to be less than 0.10 acre, wetland mitigation is not anticipated. Actual impacts to wetlands and final permit determinations will be made during final design. INDOT, or its authorized agents, will be responsible for obtaining the necessary permits prior to construction, including all mitigation required as conditions of the approved permits. Wetland areas to be avoided must be clearly marked in the field and on the final plans.

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

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

Remarks:

American Structurepoint staff visited the site on May 6 and 7, 2014 and July 21, 2015. The surrounding area was observed to be rolling landscape with commercial development near the southern terminus of the investigated area with a combination of undeveloped and residential land making up the remaining southern half of the investigated area. The center and northern half of the investigated area was largely forested with steep terrain and several streams flowing throughout the corridor. The northern terminus of the investigated area was cleared due to the recent construction of SR 265 and the terrain was steep with several streams flowing through the area.

Tree clearing is anticipated to occur along the preferred alternative alignment. Approximately 9.1 acres of forested habitat is anticipated to be cleared. In addition, approximately 4.9 acres of maintained lawns/residential areas, 1.5 acres of agricultural land, and 8.56 acres of pastures/scrubby vegetation are anticipated to be permanently impacted. However, these areas do not serve as unique or high-quality habitat. Through continued coordination with INDOT and USFWS (Appendix I, I-1 to I-26), it was determined that formal Section 7 would be required for impacts to foraging habitat for the gray bat. On January 18, 2018, a Biological Assessment (BA) was submitted to INDOT and FHWA. The BA concluded that the proposed project *may affect, and is likely to adversely affect* the gray bat foraging habitat. As such, a list of AMMs were provided; these AMMs have been included as "firm" commitments in **Section J** of this document. In addition, it was determined that the project team should consult with the USFWS's Bloomington Field Office regarding implementation of project-specific mitigation measures for the permanent loss of 9.1 acres of forested habitat. Mitigation will be provided at a ratio of 1:1 if forest restoration is used to compensate for forest impacts. If forest preservation is proposed, a ratio of 2:1 will be required (Appendix I, I-55). Therefore, loss of terrestrial habitat, specifically forested area, will be mitigated for to offset impacts to wildlife habitat. In addition, implementation of standard INDOT specifications for re-vegetation of disturbed areas will promote re-establishment of similar ground cover in the areas temporarily impacted by construction equipment access, as well as within the areas where sod strips are placed.

In an early coordination response letter dated June 2, 2016, USFWS indicated that the proposed project has potential for impacts to the foraging habitat of the gray bat. In the response it was indicated that depending on the alignment selected, a bat survey may be necessary to determine impacts the threatened and endangered species (Appendix B, B-34 to B-37). A mist net survey was conducted in 2016 to determine the presence/likely absence of federally endangered bat species

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within the proposed project corridor. Results of that sampling are discussed in more detail in the **Threatened and Endangered Species** section below.

In an early coordination response letter dated June 3, 2016, IDNR indicated that an alternative to minimize impacts to forested areas was needed. In addition, IDNR noted that habitat fragmentation may negatively impact wildlife; therefore, the preferred alternative should minimize fragmentation of these habitats. IDNR provided recommendations to minimize and mitigate for impacts to fish, wildlife, and botanical resources. These recommendations have been added as commitments in **Section J – Environmental Commitments** of this document. In addition, appropriate mitigation ratios resulting from impacts to non-wetland/riparian forest and wetlands in the floodway/floodplain will be applied in compliance with the DNR’s Floodway Habitat Mitigation guidelines for impacts required as part of a formal application for a CIF Permit from the IDNR due to the encroachment upon the Lentzier Creek floodway.

The IDEM automated response to early coordination on January 19, 2018 provided recommendations, which include the appropriate structures and techniques to be used both during and after construction, waste, air quality, and erosion control measures, and measures to reduce disturbance to riparian vegetation (Appendix B, B-43 to B-53). Applicable recommendations from the IDEM are detailed in **Section J - Environmental Commitments** of this document.

In an effort to reduce stream, forest, and overall ecological impacts including forest fragmentation, Alternatives DE, F, G, and HH were established and evaluated. Alternative F, G, and HH would be constructed on new terrain and would utilize the same logical termini as the preferred Alternative DE (North Access Road and SR 265/Old Salem Road interchange). Alternative G would be constructed along a similar alignment as Alternative E. However, Alternative G would continue east to connect with Old Salem Road. While this alternative would satisfy the purpose and need, it would result in more relocations and impacts to karst resources than the preferred alternative, and it would have the greatest impact to forests and streams out of all of the alternatives analyzed. Therefore, Alternative G was discarded from further consideration. Alternatives F and HH had similar forest, stream, and wetland impacts as compared to the preferred alternative (DE). All alternatives, including Alternatives F and HH, are located within an archaeological rich area. The entirety of Alternatives F and HH were not fully examined for impacts to archaeological resources and would require further investigation to be completed in order further consider these routes. Through coordination with resource agencies, it was determined that while Alternatives F and HH satisfy the purpose and need, the overall impacts to ecological resources are comparable to the fully evaluated preferred alternative (DE). Therefore, Alternatives F and HH could be discarded from further consideration. The preferred alternative (DE) includes the construction of a new bridge 0.11-mile long, three-span continuous composite steel plate girder bridge; the spans will be 172.5 feet, 208 feet, and 172.5 feet long over the Lentzier Creek stream valley. The new bridge will be about 60-80 feet above the stream bottom helping maintain a continuous wildlife corridor passage along the Lentzier Creek stream valley, and also resulting in minimized tree clearing and overall reduced impacts to the riparian corridor, fish, wildlife, and botanical resources.

On October 13, 2017 an additional coordination letter was sent to resource agencies describing the additional alternatives that had been developed based on the early coordination response comments received from the agencies and the feedback from the May 26, 2016 resource agency meeting held at American Structurepoint. The October 13, 2017 letter also indicated that a preferred alternative had been selected (Appendix B, B-54 to B-55). Agencies were asked to reply within 30 days of the receipt of the letter; no additional responses were received commenting on the preferred alternative (DE). On November 13, 2017, an agency site visit was scheduled to allow agency personnel to see the resources along the preferred alternative. Individuals from IDNR, IDEM, USFWS, and USACE were in attendance. No objections to proceeding or additional responses concerning the preferred alternative were received.

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

Karst

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

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

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

<input checked="" 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)

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Remarks:

The project is located outside of the designated karst area of the state as identified in the October 13, 1993, Memorandum of Understanding (MOU) between INDOT, IDNR, IDEM, and USFWS. A Red Flag Investigation (RFI) was conducted as part of the preliminary environmental evaluation of the project corridor (Appendix B, B-30). This analysis determined the project is located near known sinkhole areas and several mapped sinkhole locations are within the project study area. Noting the potential location of the project within a karst region of Indiana, as defined by the mapped presence of karst features in the study area, an investigation of karst features, as outlined by the Karst MOU was performed to identify and characterize karst features in the study area and to evaluate potential impacts due to the proposed project.

American Structurepoint staff conducted a field investigation on April 22-23 and May 6, 2014, on December 19, 2016, and on April 11, 2017. A total of three (3) karst features were located within the proposed construction limits of the preferred alternative: springs SP-2, SP-3, and SP-11.

- SP-2 is an ephemeral spring seep along bedrock bedding planes within the investigated corridor.
- SP-3 is an ephemeral spring in an incised ravine within the investigated corridor.
- SP-11 is a point emergence spring located west of Old Salem Road within the investigated corridor.

In addition to the three springs, a portion of the drainage areas/watershed areas for four additional features (SI-1, SI-8, SW-1, and SW-2) are included within the construction limits of Alternative DE. No caves were identified within the study area.

The associated drainage areas of sinkholes SI-1 and SI-8 and swallets SW-1 and SW-2 are anticipated to be affected by proposed Alternate DE. Approximately 2.19 acres of the drainage area of feature SI-1, and 1.61 acres of drainage area for features SI-8, SW-1 and SW-2 will be impacted by Alternate DE. These impacts can be mitigated with installation of appropriately sized drainage structures under the roadway to facilitate drainage to the features. Three small springs (SP-2, SP-3 and SP-11) will be affected by Alternative DE; however, these impacts can be mitigated by placement of spring boxes to allow continuation of flow emerging from the springs.

The final Karst Report was submitted to INDOT Environmental Services (ES) on January 2, 2018. INDOT ES approved the Karst Report on January 3, 2018 (Appendix E, E-210 to E-272). Per the Karst MOU, the approved Karst Report will be distributed to IDEM, USFWS, and IDNR for review and concurrence. This has been added a firm commitment to **Section J – Environmental Commitments** of this document.

In the June 2, 2016 response, USFWS indicated that the project area is located in an area of karst geologic features. USFWS recommended a karst survey be performed, which, as stated above, was completed by American Structurepoint staff from 2014-2017. USFWS also noted that while the area is not within the designated karst area of the state, INDOT was encouraged to follow the protocols and procedures outlined in the 1993 MOU for construction of transportation projects in karst areas if any karst features are identified (Appendix B, B-34 to B-37). These recommendations as well as general recommendations to minimize the impacts to karst features have been included in **Section J** of this document.

Threatened or Endangered Species	<u>Presence</u>	<u>Impacts</u>	
		Yes	No
Within the known range of any federal species	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Any critical habitat identified within project area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Federal species found in project area (based upon informal consultation)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
State species found in project area (based upon consultation with IDNR)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is Section 7 formal consultation required for this action?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Remarks:

Review of the USFWS listing of threatened and endangered species by county as published by USFWS Region 3 website (<https://www.fws.gov/midwest/endangered/lists/indiana-cty.html>) indicates the federally endangered Indiana bat (*Myotis sodalis*) and gray bat (*M. grisescens*), as well as the federally threatened northern long-eared bat (*M. septentrionalis*) are noted within Clark County.

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An inquiry using the USFWS Information for Planning and Consulting (IPaC) website (<https://ecos.fws.gov/ipac/>) did not indicate the presence of the federally endangered species, the Rusty Patched Bumblebee, in or within 0.5 mile of the project area.

In the early coordination response letter dated June 2, 2016, USFWS indicated that the proposed project is within the range of the Indiana bat, gray bat, and northern long-eared bat. USFWS indicated that the project has the potential for impacts to the foraging habitat of the gray bat, and that depending on the alignment selected, a bat survey may be necessary to determine impacts to threatened and endangered species. USFWS also included standard recommendations in their response, including implementation of temporary erosion and siltation control devices (Appendix B, B-34 to B-37).

Based on these recommendations, on June 28 through July 1, 2016, a mist net survey was conducted by Eco-Tech Consultants. Eleven (11) bats of three species were captured, including five gray bats. No Indiana or northern long-eared bats were captured. Therefore, the Scoping Sheet for the Indiana Bat and Northern Long-Eared Bat Range-Wide Programmatic Information Consultation was prepared and submitted to INDOT ES on December 1, 2016 (Appendix I, I-8 to I-26). Based on the mist net results, a determination of *may affect, not likely to adversely affect without avoidance and minimization measures* (AMMS) was reached for the Indiana bat and northern long-eared bat. No further consultation with USFWS is required regarding the northern long-eared bat and Indiana bat.

Through continued coordination with INDOT and USFWS (Appendix I, I-1 to I-25), it was determined that formal Section 7 would be required for impacts to foraging habitat for the gray bat. On January 18, 2018, a Biological Assessment (BA) was submitted to INDOT and FHWA. The BA concluded that the proposed project *may affect, and is likely to adversely affect* the gray bat foraging habitat. As such, a list of AMMs were provided; these AMMs have been included as “firm” commitments in Section J of this document. In addition, it was determined that the project team should consult with the USFWS’s Bloomington Field Office regarding implementation of project-specific mitigation measures for the permanent loss of 9.1 acres of forested habitat. Mitigation will be provided at a ratio of 1:1 if forest restoration is used to compensate for forest impacts. If forest preservation is proposed, a ratio of 2:1 will be required (Appendix I, I-27 to I-131).

On January 19, 2018, INDOT and FHWA approved the final BA; the BA was then forwarded to USFWS by FHWA on January 22, 2018. FHWA requested that USFWS concur with the findings of the BA. They also requested that Formal Consultation be initiated and that USFWS prepare a Biological Opinion (BO) for the project. The BO for the Heavy Haul Transportation Corridor project is anticipated to be issued by June 6, 2018 (135 days). Mitigation measures are anticipated, and as described above, are included as “firm” commitments in Section J of this document. Any changes will be updated in the FONSI request.

The IDNR early coordination response dated June 3, 2016 stated that the Natural Heritage Program’s data have been checked, and indicated that the state endangered osprey (*Pandion haliaetus*) has been documented within the project area. Also, the Charlestown Military Reservation, a U.S. Department of Defense property, is within ½ mile north of the project area (Appendix B, B-38 to B-41). As indicated the response letter, the active osprey nest is located with Area #2 of the proposed project area. However, the proposed project improvements associated with the preferred Alternative (DE) are located in Areas #1 and #3 as indicated in the maps associated with the early coordination mailing (Appendix B, B-9). In addition, the proposed project will not impact the Charlestown Military Reservation. Recommendations pertaining specifically to threatened and endangered species include tree cutting time restrictions. Applicable recommendations from the IDNR are detailed in **Section J - Environmental Commitments** of this document.

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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)

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

If a SSA is present, answer the following:

- 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
Is the Project in the St. Joseph Aquifer System?	<input type="checkbox"/>	<input type="checkbox"/>
Is the FHWA/EPA SSA MOU Applicable?	<input type="checkbox"/>	<input type="checkbox"/>
Initial Groundwater Assessment Required?	<input type="checkbox"/>	<input type="checkbox"/>
Detailed Groundwater Assessment Required?	<input type="checkbox"/>	<input type="checkbox"/>

Remarks:

Wellhead Protection Area:
 The IDEM Wellhead Proximity Determinator website (<http://www.in.gov/idem/cleanwater/pages/wellhead/>) was accessed on April 20, 2016 by American Structurepoint personnel. The required project location data was provided and it was determined that this project is not located within a Wellhead Protection Area.

Public Water Systems:
 Drinking water in the project area is provided by Indiana American Water and Watson Water Company. No permanent impacts to drinking water resources are anticipated. Temporary impacts to drinking water resources may occur from service disruptions. As part of normal utility coordination process, the City of Jeffersonville, the Town of Utica, Indiana American Water, and Watson Water Company will be coordinated with during advancement of design of the project and during construction to ensure interruptions in service are minimized.

Residential Wells:
 The IDNR Water Well Record Database (<https://www.in.gov/dnr/water/3595.htm>) was accessed on April 20, 2016 by American Structurepoint personnel. Based on this search, there appears to be no wells located within the project area. Therefore, impacts to residential wells are not anticipated.

Sole Source Aquifer:
 The proposed project is located in Clark county; therefore, the project is not located within the area of the St. Joseph Aquifer System, the only legally designated sole source aquifer in the state. Therefore, the FHWA/U.S. Environmental protection Agency (EPA) Sole Source Aquifer Memorandum of Agreement (MOA) is not applicable to this project, and a groundwater assessment is not required.

Flood Plains

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

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

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

Remarks:

The Flood Insurance Rate Maps (FIRM), which are administered by the Federal Emergency Management Agency (FEMA), were reviewed by staff of American Structurepoint to determine if a 100-year floodplain is present within the project area. As defined by the FIRM for Panel 18019C0283E, the proposed HHTC route crosses one floodplain designated as Zone A, the 100-year floodplain associated with Lentzier Creek (Appendix E, Page E-1). Zone A is defined as special flood hazard areas subject to inundation by the 1 percent annual chance flood (100-year flood), or base

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flood, and is the flood that has a 1 percent chance of being equaled or exceeded in any given year.

This encroachment is classified as a Category 5 impact as defined in the INDOT CE Manual:

There will be no substantial impacts on natural and beneficial floodplain values; there will be no substantial change in flood risks; and there will be no substantial increase in potential for interruption or termination of emergency service or emergency evaluation routes; therefore it has been determined that this encroachment is not substantial. A hydraulic design study that addresses various structure size alternates was completed during the preliminary design phase. A summary of this study was included with the Field Check Plans.

A hydraulic design study was completed on July 27, 2017; the study concluded that the encroachment is not substantial. INDOT approved the hydraulic design study on August 25, 2017. A copy of the hydraulic design study and INDOT concurrence memo can be found in Appendix J, J-11 to J-122.

In the early coordination response letter dated June 3, 2016, IDNR indicated that the proposed project may require the formal approval of the agency for construction in a floodway pursuant to the Flood Control Act (IC 14-28-1). For reference to the IDNR early coordination response, see Appendix B, B-38 to B-41.

Farmland	<u>Presence</u>	<u>Impacts</u>	
		<u>Yes</u>	<u>No</u>
Agricultural Lands	<input type="checkbox"/>	<input type="checkbox"/>	<input 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* <i>*If 160 or greater, see CE Manual for guidance.</i>)	<u>N/A</u>		

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

Remarks:

The Natural Resources Conservation Service (NRCS) was sent an early coordination letter on April 29, 2016. In a May 13, 2016 response, NRCS indicated that a determination could not be reached due to the size of the investigated area, and the request should be resubmitted once routes were available. Therefore, on January 19, 2018, the October 16, 2017 recoordination letter and exhibits were sent to NRCS staff. As of February 5, 2018, no response had been received from NRCS. As is required by the Farmland Protection Policy Act (FPPA), NRCS will continue to be coordinated with and, as appropriate, Form NRCS-AD-1006/NRCS-CPA-106 will be completed. Since this project is anticipated to receive a total point value less than 160 points, it is anticipated that this site will receive no further consideration for farmland protection. No other alternatives other than the preferred alternative (DE) discussed in this document will be considered without a re-evaluation of the project's impacts upon farmland. This project is not anticipated to have a significant impact to farmland. However, if this project results in an AD-1006/CPA-106 score of 160 points or greater, additional coordination with the NRCS will be initiated to resolve the impacts. Additional coordination or changes in anticipated impacts, as well as any mitigation commitments will be addressed in the FONSI.

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SECTION C – CULTURAL RESOURCES

	Category	Type	INDOT Approval Dates	N/A
Minor Projects PA Clearance				X

Eligible and/or Listed
Resource Present

Results of Research

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

Project Effect

No Historic Properties Affected No Adverse Effect Adverse Effect

Documentation
Prepared

Documentation (mark all that apply)

		ES/FHWA Approval Date(s)	SHPO Approval Date(s)
Historic Properties Short Report			
Historic Property Report	X	February 2, 2017	April 24, 2017
Archaeological Records Check/ Review	X	March 20, 2017	April 24, 2017
Archaeological Phase Ia Survey Report	X	March 20, 2017	April 24, 2017
Archaeological Phase Ic Survey Report			
Archaeological Phase II Investigation Report	X	March 20, 2017	April 24, 2017
Archaeological Phase III Data Recovery			
APE, Eligibility and Effect Determination	X	December 1, 2017	January 22, 2018
800.11 Documentation	X	December 1, 2017	January 22, 2018

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

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

Remarks:

Area of Potential Effect (APE):
Pursuant to 35 CFR Section 800.16(d), the Area of Potential Effects (APE) was drawn to encompass potential impacts from the undertaking; it initially included properties within one mile of the undertaking and then was narrowed based on topography and intervening structures. The APE for archaeology was the project footprint (Appendix C, C-4).

Coordination with Consulting Parties:
In a letter dated April 18, 2016, the following individuals or organizations were invited to join Section 106 consultation. On February 22, 2017, Gary Gilmore, a property owner, contacted W&A and requested to be added to the consulting party list for this project (Appendix D). In addition, INDOT sent a letter dated April 18, 2016, to the following federally-recognized Tribes and invited them to join in consultation. Note that subsequent to this email, the Pokagon Band of Potawatomi Indians requested to be consulted on all counties in Indiana and were invited to join consultation (Appendix

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C, C-47 to C-51 and C-77 to C-84). If no response was received to the consulting party invitation after 30 days, it was assumed the invited parties did not wish to act as consulting parties for the undertaking. The FHWA, INDOT Cultural Resources Office (CRO), and the State Historic Preservation Officer (SHPO) are considered automatic consulting parties for all undertakings.

Agency/Organization	Response
Indiana Landmarks—Southern Regional Office	Will Participate – April 22, 2016
Indiana Landmarks—Central Office	No Response
Borden Institute Historical Society	No Response
Clark’s Grant Historical Society	No Response
Howard Steamboat Museum/Clark County Historical Society	No Response
Jeff-Clark Preservation, Inc.	No Response
Jeffersonville Main Street	No Response
Jeffersonville Historic Board of Review	No Response
Clark County Historian	Will Participate – May 1, 2016
Mayor of the City of Jeffersonville	No Response
Utica Town Board	Will Participate – May 4, 2016
Kentuckiana Regional Planning and Development Agency	No Response
City of Jeffersonville Engineer	Will Participate – April 22, 2106
Jeffersonville Department of Economic Development and Department of Redevelopment	No Response
Clark County Board of Commissioners	Will Not Participate – April 28, 2016
Gary Gilmore	Will Participate – February 22, 2017
Clark County Council	No Response
Miami Tribe of Oklahoma	Will Participate – May 4, 2016
Eastern Shawnee Tribe of Oklahoma	No Response
Peoria Tribe of Indians of Oklahoma	No Response
United Keetoowah Band of Cherokee Indians	No Response
Pokagon Band of Potawatomi Indians	Will Participate

Archaeology:

Pursuant to 36 CFR § 800.4(b), staff from W&A conducted a Phase Ia records check beginning on February 17, 2014, using the site files in the Indiana Cemetery & Burial Registry, SHAARD, and other data on file at the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology (IDNR, DHPA). Staff then returned for additional materials on file at IDNR, DHPA on May 21, 2014. Archaeologists consulted with staff of Indiana University Purdue University—Fort Wayne (IPFW) about previous investigations in, or near, the project location. As a result, one alternative (Alternative B) was eliminated from further consideration due to sites identified within the Alternative B corridor warranting preservation in place.

W&A archaeologists conducted a Phase Ia archaeological field reconnaissance in May 5-13, July 8-10, and August 5, 2014. During the Phase Ia investigations completed in May, July, and August 2014, archaeologists identified two previously-recorded sites (12CL0533 and 12CL0129) with the potential to yield information important to the regional prehistoric record within a “survey area” provided by the client.

An agency coordination meeting was held September 8, 2014, with FHWA, INDOT, INDOT’s consultants, and SHPO to discuss the archaeological investigation for the project. At the meeting, the group decided to conduct a Phase II investigation for the area between sites 12CL0533 and 12CL0129 to see if they were connected; SHPO and INDOT agreed to a multi-stage investigation that would include remote sensing followed by feature investigation, contingent on SHPO approval. The meeting was summarized in a letter sent to the INDOT project manager on September 12, 2014.

To further evaluate eligibility, W&A prepared a work plan (Goldbach 2015) for Phase II investigation of Sites 12CL0533 and 12CL0129. The work plan was completed on March 27, 2015; W&A submitted the work plan to the SHPO on March 27, 2015. The SHPO accepted to the Phase II work plan in a letter dated April 1, 2015.

Phase II remote sensing was performed on April 27-29, 2015. Utilizing the results from the remote sensing, W&A archaeologists performed investigatory excavations on May 11-14, 18, and 21, 2015. W&A conveyed a management summary to the SHPO on June 3, 2015, for these Phase II investigations. Based on the Phase II sampling of site 12CL0129/0533, the archaeologist recommended that portion of the site as not eligible for inclusion in the NRHP or

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In a letter dated June 12, 2015, the SHPO concurred with the recommendation of the Phase II Management Summary that the portion of archaeological site 12CL0129/0533 “located within the project corridor is not eligible for inclusion in the State or National Registers of Historic Places.” SHPO also requested the Phase II report be delivered in full by May 21, 2016.

Phase Ia archaeological investigations resumed from September 28, 2015 to October 7, 2015. At the conclusion of these Phase Ia investigations, archaeologists had recorded twenty-six sites, six of which had been previously recorded.

INDOT-CRO sent an email to the Tribal consultation partners informing them that the Phase II (Goldbach 2017a), and Phase Ia (Goldbach 2017b) reports were available for review on INSCOPE on March 27, 2017. The Phase Ia report recommended the project proceed as planned. The Phase II report recommended the portion of Site 12CL0129/0533 within the project corridor as not eligible for inclusion in the IRHSS or NRHP. The HPR, Phase Ia, and Phase II reports were all approved by INDOT-CRO prior to their transmittal to consulting parties and Tribal consulting partners.

On April 11, 2017, at the request of INDOT and FHWA, archaeologists for W&A conducted a survey in an alternative “study area.” The survey area totaled approximately 3.0 acres. The survey identified one site, 12CL1052, for further work.

In a letter dated April 24, 2017, the SHPO responded to the Phase Ia Archaeological Field Reconnaissance Report and the Phase II Archaeological Investigations. SHPO stated, “[w]e also agree with the Phase Ia (Goldbach; February 24, 2017) and Phase II (Goldbach, Arnold and Hughes; February 24, 2017) archaeology reports addressing the archaeological aspects of this project.” Specifically, SHPO concurred that Sites 12CL1004 to 12CL11016 and Sites 12CL1051 to 12CL1057 lack sufficient integrity to be considered potentially eligible and no additional work is needed at the sites. SHPO acknowledged that the Phase Ia documented Sites 12CL0129/943 and 12CL0533 as one large artifact scatter and that the Phase II report recommended the site not eligible for nomination to the State or National Registers of Historic Places, concluding “[t]he portion of sites 12-CL-129/544 located within the project area will not require additional archaeological assessment.”

Finally, in the letter dated April 24, 2017, the SHPO stated that “[i]f any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and -29) requires that the discovery be reported to the Department of Natural Resources within two (2) business days.

In October 2017, archaeologists for W&A prepared a Phase Ia Archaeological Field Reconnaissance—Addendum No. 1 (Addendum No. 1 Report/ Goldbach 2017c) which documented efforts to identify and evaluate archaeological resources within a “survey area” that is outside the preferred alternative. It was decided after the Phase Ia reconnaissance not to pursue the alternative “survey area,” and the archaeological APE remains the same as that described in Phase Ia report (Goldbach 2017b). The Addendum No. 1 Report (Goldbach 2017c) identified one site for further work: site 12CL1052, which could not be fully assessed because of landowner constraints. However, since the alternative “survey area” will not be moving forward as part of the preferred alternative, the site will not be impacted by construction of the proposed project. If the portion of site 12CL1052 within the “survey area” of the Addendum No. 1 Report (Goldbach 2017c) cannot be avoided and becomes part of the preferred alternative, then additional investigation is recommended. It was further recommended that the project area previously examined and cleared in the Phase Ia report (Goldbach 2017b) be allowed to proceed without additional work.

INDOT sent an email providing Tribal Representatives access to the Addendum No. 1 Report on IN SCOPE. Structurepoint sent a paper copy of this 800.11 documentation and Addendum No. 1 Report to the Indiana SHPO. No further efforts, including consultation, to identify historic archaeological resources took place.

Historic Properties:

Historians conducted an aboveground site survey in April, May, and July of 2014. Historians identified the James A. Smith Farmstead ruins that had been previously determined to be NRHP-eligible under Criteria A, C, and D. The property is located outside of the archaeological APE.

On December 9, 2015, W&A historians reviewed the aboveground APE drawn in 2014 and expanded it based on additional alternatives under investigation. At the same time, historians drove the APE to confirm that no significant changes had taken place that would alter the results of previous survey. No changes were noted.

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On March 27, 2017, American Structurepoint informed consulting parties via email of the availability of the Historic Property Report (HPR, Fivecoat and Molloy 2016) on INSCOPE. The HPR identified the James A. Smith Farmstead as having been previously determined eligible under Criterion D. Historians recommended no other properties as eligible for listing in the NRHP. (Note: This email was distributed to consulting party Gary Gilmore on April 5, 2017. It was later discovered that Indiana Landmarks had been inadvertently omitted from the distribution list; an email informing of them of the availability of the HPR was sent on August 9, 2017.)

In a letter dated April 24, 2017, the SHPO responded to the HPR. SHPO concurred that the James A. Smith Farmstead is eligible for the NRHP under Criterion D and that "it is the only above-ground property identified in the HPR that is eligible for the NRHP." No further efforts, including consultation, to identify historic aboveground resources took place.

Although the James A. Smith Farmstead was identified in the aboveground APE as eligible under Criterion D (archaeological), it is located outside of the archaeological APE (which is the project footprint). Since this resource is located outside the archaeological APE, the project will have no impact on historic properties.

Documentation, Findings:

INDOT-CRO, acting on behalf of FHWA, issued a finding of "No Historic Properties Affected" for this undertaking on December 1, 2017. Documentation of this finding is included in Appendix C, C-1 to C-9. Correspondence received on January 22, 2018 from the SHPO concurred with the "No Historic Properties Affected" finding (Appendix C, C-86 to C-87). No other consulting parties provided comments on the "No Historic Properties Affected" finding or supporting documentation.

Public Involvement:

In accordance with 36 CFR 800.2(d), 800.3€ and 800.6(a)(4), the views of the public were sought regarding the "No Historic Properties Affected" finding. A public notice was placed in the December 23, 2017 edition of the *News and Tribune* describing the proposed project. Further, the notice stated that the documentation supporting the "No Historic Properties Affected" was available for review at the office of American Structurepoint, Inc. and electronically on INDOT's Section 106 document posting website, IN SCOPE. Public comments regarding the finding were accepted for a period of thirty (30) days, ending on January 22, 2018. No comments were received within the allotted timeframe. A copy of this legal public notice and publisher's affidavit is included in Appendix C-85. The Section 106 process was completed and the responsibilities of INDOT, acting on behalf of FHWA under Section 106 are fulfilled.

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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

Evaluations

Prepared

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

FHWA

Approval date

--

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

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

Remarks:

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 publicly owned parks, recreation areas, and wildlife/waterfowl refuges, and National Register eligible or listed historic properties. These properties are called Section 4(f) resources. No 4(f) resources associated with publicly owned parks, recreation areas or wildlife/waterfowl refuges were identified within the project area.

A RFI was prepared for the project area (Appendix D, D-11); no potential 4(f) resources were identified within the

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project area. In addition, an early coordination letter was mailed to the City of Jeffersonville Parks Department on April 29, 2016. No response was received. There is no anticipated 4(f) use associated with the proposed project.

Section 6(f) Involvement

Presence

Use

Yes

No

Section 6(f) Property

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

Remarks:

Section 6(f) resources are lands that were purchased with or improved using funds from the Land and Water Conservation Fund (LWCF) to preserve, develop, and assure accessibility to outdoor recreation resources, and to strengthen the health and vitality of the public. Section 6(f) of the LWCF prohibits conversion of LWCF lands unless the National Park Service approves substitution property of reasonable equivalent usefulness and location.

A RFI was prepared for the project area (Appendix D, D-11); no potential 6(f) resources were identified within the project area. An early coordination letter was sent to the IDNR Division of Outdoor Recreation on April 29, 2016. No response was received. No Section 6(f) resources will be affected as a result of this project.

SECTION E – Air Quality

Air Quality

Conformity Status of the Project

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

If YES, then:

Is the project in the most current MPO TIP?

Is the project exempt from conformity?

If the project is NOT exempt from conformity, then:

Is the project in the Transportation Plan (TP)?

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

Level of MSAT Analysis required?

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

Remarks:

Clark County is designated as an attainment area for all regulated air pollutants. It should be noted that Clark County was previously designated a maintenance area for 8-hour ozone, 24-hour TSP, and Annual PM2.5. However, the 8-hour ozone was revoked in the Federal Register (FR), effective April 6, 2015; TSP designations removed from the Code of Federal Regulations on June 16, 1997; and The 1997 annual fine particles standard was revoked in the FR, effective October 24, 2016. Therefore, an updated maintenance plan is no longer required (Appendix G, G-8 to G-9).

The project is listed in the 2018-2021 KIPDA TIP, which was approved by the FHWA on August 28, 2017 (Appendix G, G-4 to G-7). The project is also listed in the 2018-2021 INDOT (STIP), which was approved by FHWA on July 3, 2017 (Appendix G, G-1 to G-3). With FHWA's approval of the STIP and TIP, concurrence with the air conformity demonstration for all applicable pollutants is also granted.

Mobile Source Air Toxics (MSAT):

The purpose of this project is to provide a route built specifically for heavy haul vehicles that provides a continuous connection between the RRCC and Port via the SR 265/Old Salem Road interchange. Although traffic projections indicate truck traffic will nearly double between the existing year (2020) and the design year (2040), 2,552 trucks per day and 4,843 trucks per day, respectively, the quantities are still well below the 10,000 trucks per day FHWA

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typically considers to be required before there is a meaningful impact on traffic volumes. As such, this project has been determined to generate minimal air quality impacts for CAAA criteria pollutants and has not been linked with any special MSAT concerns. As such, this project will not result in changes in traffic volumes, vehicle mix, basic project location, or any other factor that would cause an increase in MSAT impacts of the project from that of the no-build alternative.

Moreover, EPA regulations for vehicle engines and fuels will cause overall MSAT emissions to decline significantly over the next several decades. Based on regulations now in effect, an analysis of national trends with EPA's Motor Vehicle Emission Simulator (MOVES) 2014 model forecasts a combined reduction of over 90 percent in the total annual emission rate for the priority MSAT from 2010 to 2050 while vehicle-miles of travel are projected to increase by over 45 percent (Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents, Federal Highway Administration, October 12, 2016). This will both reduce the background level of MSAT as well as the possibility of even minor MSAT emissions from this project.

SECTION F - NOISE

Noise	Yes	No
Is a noise analysis required in accordance with FHWA regulations and INDOT's traffic noise policy?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	No	Yes/ Date
ES Review of Noise Analysis		January 24, 2018

Remarks:

Due to the construction of new terrain roadways, the proposed project improvements are categorized as a Type I project from criteria set forth by the FHWA and INDOT. Therefore, in accordance with 23 CFR 772-*Procedures for Abatement of Highway Noise* and the INDOT Traffic Noise Policy approved by FHWA (effective July 1, 2017), a noise impact analysis was required as part of project development. The required analysis was completed using FHWA's accepted model for forecasting changes in noise levels associated with highway projects, Traffic Noise Model, Version 2.5 (TNM 2.5). The TNM models and noise analysis report were approved by INDOT ES on January 24, 2018. For reference to this determination and analysis, see the excerpts from the Noise Analysis Report which is included in Appendix H (H-1 to H-19).

Noise abatement measures incorporated into Type I projects must be both feasible and reasonable. There are two components to a feasible determination; acoustic feasibility and engineering feasibility. To satisfy the acoustic feasibility benchmarks, INDOT requires proposed noise barriers provide at least a 5.0 decibels [dB(A)] reduction in future traffic noise levels for a majority of the impacted receptors. To meet engineering feasibility criteria, the physical location and geometry of noise barriers including offsets, heights, and lengths are considered for optimum noise absorption performance.

The reasonableness of noise abatement measures is firstly based on cost effectiveness of construction. INDOT considers proposed noise abatement measures reasonable if the construction year cost of the proposed noise barriers is no more than \$30,000 per benefited receptor for new terrain construction. In addition, INDOT's Design Goal for noise abatement is to provide at least a 7.0 dB(A) reduction for benefited first row receptors in the design year. However, conflicts with adjacent lands may make it impossible to achieve substantial noise reduction at all benefited first row receptors. Therefore, the noise reduction design goal to determine the reasonableness for any proposed noise barriers for Indiana is 7 dB(A) for a majority (greater than 50%) of the benefited first row receptors. Finally, results from opinion surveys of benefited receptors (residents and property owners) can also factor into the final determination of reasonableness for any proposed noise barriers.

All receptors of noise (dwelling, office, commercial building, undeveloped lands, etc.) within 500 feet of the proposed construction of the HHTC were identified and classified according to land uses and applicable noise abatement criteria (NAC). Identified receptors were incorporated into the project's TNM-2.5 model. Existing noise levels were applied based on ambient sound measurements taken from representative receptor locations. Future noise levels were generated from projected traffic volumes (2040) and proposed edges of pavement for the

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developed HHTC alignment.

The project's traffic noise model identified 27 receptors within 500 feet of the proposed HHTC alignment. Of the total identified study area receptors, three (3) are planned for relocations as part of the project construction. Of the 24 remaining receptors, two residential receptors were predicted to experience future traffic noise impacts. These receptors are projected to experience a future traffic noise level equal to or above 66.0 decibels (dB(A)). These future noise levels are within 1.0 dB(A) of the NAC defined value of 67.0 dB(A).

With only two impacted receptors remaining after construction is complete, the issue of feasibility was examined with potential noise barrier wall geometry at each impacted receptor. Providing uninterrupted lengths of noise barrier at both impacted receptor locations can result in noise reductions that satisfy the feasibility goal. However, the noise barrier heights and lengths required to meet feasibility criteria at each location has a corresponding construction cost that exceeds the cost-effectiveness criteria established for reasonability. The proposed noise barriers analyzed ranged from \$173,444 to \$341,977 per benefited receptor which exceeds the reasonable cost threshold of \$30,000 per benefited receptor. Therefore, noise abatement measures in the form of two separate noise barriers for the potential benefit of two impacted receptors are feasible, but the cost of noise abatement is not reasonable.

Based on the results of the studies thus far accomplished, the State of Indiana has not identified any locations where noise abatement is likely. A re-evaluation of the noise analysis will occur during final design. If during final design it has been determined that conditions have changed such that noise abatement is feasible and reasonable, then abatement measures might be provided. The final decision on the installation of any abatement measure(s) will be made upon the completion of the project's final design and the public involvement process.

SECTION G – COMMUNITY IMPACTS

Regional, Community & Neighborhood Factors

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

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

Remarks:

Negative impacts the proposed project will have on the community include temporary inconveniences commonly associated with construction such as noise, fugitive dust, increased travel delay, and utility disruptions. However, these impacts are temporary and will cease upon completion of the project. These temporary inconveniences do not outweigh the benefits the project will bring to public facilities following the completion of the project.

Inconveniences to residents in the project area that are typically associated with a new road, including increased noise levels are to be expected, but will not be significant. The proposed route will not sever the cohesion of any established neighborhoods. The project will bring a net benefit to the community by removing heavy haul vehicles from local roads, which will reduce travel time and increase safety. Removing heavy haul traffic from local roadways that are not constructed to meet heavy haul standards will also increase the service life of local roadways.

In an early coordination response letter dated May 18, 2-16, the INDOT Office of Aviation stated that the Clark County Municipal Airport is located 11,000 feet west of the proposed project area. If any permanent structures or equipment utilized for the project penetrates the 100:1 slope from the airport then FAA Form 7460 (Notice of Proposed construction or alteration) must be filed. This recommendation has been added to **Section J – Environmental Commitments** of this document.

Transition Plan:
KIPDA has an approved Americans with Disabilities Act (ADA) Transition Plan, approved in 2014

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http://www.kipda.org/files/PDF/Transportation_Division/Information/Coordinated_Plan_Complete_-_FINAL.pdf. However, as proposed, the project does not include the addition of pedestrian facilities. Therefore, the ADA Transition Plan does not apply to the project as designed.

Indirect and Cumulative Impacts

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

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

Remarks:

Indirect effects are effects that are caused by an action and are later in time or farther removed in distance, but are still reasonably foreseeable. Cumulative impacts are impacts to the environment which result from the incremental impact of an action when added to other past, present, and reasonable foreseeable future actions, regardless of who undertake those other action.

The proposed project will construct a new roadway in a suburban area east of the City limits of Jeffersonville, Indiana. Approximately half of the project corridor is located within a suburban/urban landscape with commercial properties located near the southern terminus and residential properties located in the southern half of the project area. The other half of the project corridor is located within an undeveloped, forested landscape. Because the heavy haul corridor is currently being designed without cross roads (except New Middle), the potential for residential and/or commercial growth induced by the construction of the roadway is diminished. The likelihood of development along the roadway in the middle and northern portions of the project corridor, with or without the construction on the heavy haul roadway, is also unlikely due to the steep topography in these areas.

The preferred alternative is anticipated to directly impact approximately 9.1 acres of forest for the construction of the roadway. According to the 2018 BA, the federally endangered gray bats are present within the project corridor. Gray bats use the riparian forest habitat for foraging and/or flyway corridors. While the removal of forest results in a *may affect, and likely to adversely affect* determination, the removal of 9.1 acres of total forest is anticipated to be minimal for maintaining gray bat riparian forest flyway and foraging habitat.

Indirect effects on gray bats include runoff of sediment during construction into streams utilized for foraging. These effects will be minimized with the implementation of construction and post-construction best management practices (BMPs) for water quality treatment of stormwater runoff to protect aquatic resources that support important macroinvertebrate food sources for gray bats. Temporary erosion control measures will also be included within the preliminary construction plans. Permanent erosion control features include riprap installation over geotextile at the outflow of all culverts and paved side ditches. Permanent grass seeding will be applied to all permanent slopes and exposed surfaces prior to project completion.

In addition, there are several transportation projects in Clark County that are in various stages of completion. Each of the projects is generally located in the vicinity of the SR 265 corridor east of SR 62 and north of the City of Jeffersonville, and each has independent utility. These projects include the Louisville-Southern Indiana Ohio Bridges Project – East End Crossing, Old Salem Road Improvement, Project A (Heavy Haul Transportation Corridor), Project B (RRCC connection to SR 265 vial SR265/Old Salem Road interchange), and Project C (new direct, grade separated rail connection between the Port and RRCC). In a letter to FHWA dated March 22, 2016, INDOT discusses each project and demonstrates how each has independent utility (Appendix J, J-1 to J-5). Therefore, the proposed project would be usable and would be a reasonable expenditure even if no additional transportation improvements in the area were made.

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

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Remarks:

During development of this project, early coordination letters dated April 29, 2016 were sent to Clark county Emergency Management Agency, Clark County Sheriff's Office, Utica Elementary School, Greater Clark County Schools, and Jeffersonville Police Department. This coordination was undertaken as a way to provide the representative emergency service agencies and school corporations the opportunity to comment on the potential effects of the project on their service routes. None of the agencies contacted returned comments on the project. It is anticipated that emergency routes will be temporarily affected by the detour at New Middle Road and Utica-Sellersburg Road during the construction of the connector. Emergency service providers and school corporations will be given at least two weeks notification of any restrictions resulting from construction.

Environmental Justice (EJ) (Presidential EO 12898)

During the development of the project were EJ issues identified?

Does the project require an EJ analysis?

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?

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

Remarks:

According to the INDOT CE manual, the project requires an Environmental Justice (EJ) analysis if the project is being processed as an Environmental Assessment. For the EJ analysis, the community encompassing the project limits is called the affected community (AC). The reference community is typically the larger county, city, or town that encompasses the AC. This reference community is called the community of comparison (COC). It is possible to have more than one COC if a project crosses through multiple municipalities. The purpose of the EJ analysis is to identify affected communities that have elevated low-income and/or minority populations. If an elevated EJ population is present, further assessment is completed to determine if the project has a disproportionately high and adverse effect when compared to other populations within the area.

Methodology:
 An elevated EJ population (either low-income or minority) is considered to be present if the analysis reveals one of two conditions. First, the AC is found to be more than 50 percent minority or low-income. Secondly, if the low-income population or the minority population of the AC are found to be 25 percent higher than the same populations in the COC. A low-income population is a population with a median income that is below the federal poverty guidelines. A minority population consists of individuals who belong to one or more federally recognized minority groups. The analysis completed for this project used the most current census data regarding low-income and minority demographics, which is the 2016 American Community Survey Five Year Estimates (2012-2016) prepared by the U.S. Census Bureau (Appendix J, J-6 to J-10). The following summarizes the results of this data analysis.

Analysis:
 The project area is comprised on one census tract, 507.01 (AC), as determined by a review of the 2016 U.S. Census Data (Appendix J, J-6). For this analysis, Clark County was analyzed as the COC. Within Clark County, 9.9 percent of the population was considered low-income and 5.1 percent of the population was considered minority. An EJ population would exist if the AC exceeded 12.4 percent for low-income or 6.4 percent minority.

According to the 2016 U.S. Census, 4.2 percent of the AC was considered low-income and 3.7 percent was considered minority. As such, a potential EJ population does not exist within the AC as compared to Clark County. For reference, see the table below and Appendix J. As a result of this study, there are no disproportionately high and adverse impacts to any population of EJ concerns.

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	COC Clark County, Indiana	AC Census Tract 507.01
LOW-INCOME POPULATION		
Total Population for Whom Poverty Status is Determined	112,188	5,483
Total Population Below Poverty Level	11,153	230
Percent Low-Income	9.9	4.2
125 Percent of COC	12.4	
AC Percent Low-Income Greater Than 125 Percent of COC?		No
AC Percent Low-Income Greater Than 50 Percent?		No
Population of EJ Concern?		No
MINORITY POPULATION		
Total Population	113,993	5,521
Minority Population	108,160	5,314
Percent Minority	5.1	3.7
125 Percent of COC	6.4	
AC Percent Minority Greater Than 125 Percent of COC?		No
AC Percent Minority Greater Than 50 Percent?		No
Population of EJ Concern?		No

Relocation of People, Businesses or Farms

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

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

Number of relocations: Residences: 3 Businesses: 0 Farms: 0 Other: 0

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

Remarks:

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

Currently, two electric companies, one natural gas company, two water companies, two sewer companies, one cable company, and one communications company have services to residents and businesses in or near the project area. Coordination with these utility companies has begun to identify potential conflicts and relocation of the appropriate facilities. This coordination will continue through the duration of the engineering phase of the work.

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SECTION H – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

Hazardous Materials & Regulated Substances (Mark all that apply)

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

Documentation

X

	No	Yes/ Date
ES Review of Investigations		October 18, 2017

Include a summary of findings for each investigation.

Remarks:

A RFI was prepared by American Structurepoint, Inc., on October 17, 2017 and approved by INDOT ES on October 18, 2017 (Appendix D, D-1 to D-18). The RFI consisted of a review of readily available Geographic Information System (GIS) data layers provided by IndianaMap, the Indiana Geological Survey, and additional data sources, including the county Interim Reports and the Indiana Natural Heritage Database.

Two hazardous material concern records were identified within the investigated area. A solid waste landfill located within one-half mile of the project area at 5217 Utica Pike, and a tire waste site located at 5100 Utica Pike. Because the landfill is mapped adjacent to the project area and may be associated with a historical tire waste site, a Phase II investigation was recommended in order to fully assess and characterize any contamination that has resulted from the past use of this site.

The investigated area in the RFI was drawn larger than the actual construction limits to ensure incidental construction was captured in the review. However, since the approval of the document, project design has developed and it has been determined that construction will not extend to Utica Pike; the previously identified hazardous material sites are now approximately 0.5 mile south of the project limits. Therefore, no impacts are anticipated. No further investigation is required.

If a spill occurs or contaminated soils or water are encountered during construction, appropriate personal protective equipment (PPE) should be used. Contaminated materials will need to be properly handled by trained personnel and disposed in accordance with current regulations. IDEM should be notified through the spill line at (888) 233-7745 within 24 hours of discovery of a release from a UST system and within 2 (two) hours of discovery of a spill.

SECTION I – PERMITS CHECKLIST

Permits (mark all that apply)

Likely Required

Army Corps of Engineers (404/Section10 Permit)

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

IDEM

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

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IDNR

Construction in a Floodway

X
X

Navigable Waterway Permit

Lake Preservation Permit

Other

Mitigation Required

US Coast Guard Section 9 Bridge Permit

Others (Please discuss in the remarks box below)

Remarks:

The following summarizes the status of all known permits associated with the proposed project. INDOT, or its authorized agent, is responsible for obtaining the necessary permits prior to construction, including all mitigation required as conditions of the approved permits.

The proposed project will require a Rule 5 Construction Sediment and Erosion Control Permit from IDEM as more than one acre of land will be disturbed. A Section 401 Individual Permit from IDEM and a Section 404 Regional General Permit (RGP) from the USACE will be required for impacts to wetlands and streams. Because wetland impact is less than 0.1 acre (0.029 acre), wetland mitigation is not anticipated. Due to the amount of stream impacts anticipated (894 linear feet), wetland and stream mitigation will likely be required.

Formal application for a Construction in a Floodway Permit from IDNR may be required due to the encroachment upon the FEMA-designated floodplain of Lentzier Creek.

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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. Local school districts and emergency services will be notified of any potential traffic delays at least two weeks prior to the start of construction. (INDOT)
2. If additional permanent or temporary right-of-way is determined to be required, INDOT Environmental Services will be contacted immediately. (INDOT)
3. If the scope of the project changes from that which is described within this document, INDOT Environmental Services will be notified immediately. (INDOT)
4. If a spill occurs or contaminated soils or water are encountered during construction, appropriate personal protective equipment (PPE) should be used. Contaminated materials will need to be properly handled by trained personnel and disposed in accordance with current regulations. IDEM should be notified through the spill line at (888) 233-7745 within 24 hours of discovery of a release from a UST system and within 2 (two) hours of discovery of a spill. (INDOT Hazardous Materials Unit)
5. All conditions of required regulatory permits (i.e., Section 401 WQC, Section 404 RGP, Rule 5, and Construction in a Floodway Permit) must be observed unless exempt through coordination with the permitting agency. (INDOT)
6. Any unavoidable impacts should be compensated for in accordance with the Corps of Engineers mitigation guidelines. (USFWS)
7. Implement temporary erosion and siltation control devices such as placement of riprap check dams in drainage ways and ditches, installation of silt fences, covering exposed areas with erosion control materials, and grading slopes to retain runoff in basins. (USFWS)
8. Post DO NOT DISTURB signs at the construction zone boundaries and do not clear trees or understory vegetation outside the boundaries. (USFWS)
9. The project shall not remove trees or forested habitat outside of the proposed construction limits. (USFWS)
10. Low-water in-stream work will be limited to installation of culverts, piers, pilings and/or footings, shaping of spill slopes adjacent to bridge abutments, and placement of riprap. (USFWS)
11. Culverts will span the active stream channel and shall either be embedded or a 3-sided/open-arch culvert, and be installed where practicable on an essentially flat slope. When applicable, culverts placed in streams with high quality substrate such as gravel, cobbles and boulders, shall not disturb the native substrate within the stream bed in order to provide natural habitat for the aquatic community. (USFWS)
12. In-stream channel work and vegetation clearing shall be restricted to the minimum necessary for installation of the stream crossing structure. (USFWS)
13. Construction shall minimize the extent of hard armor (riprap) in bank stabilization by using bioengineering techniques whenever possible. If rip rap is utilized for bank stabilization, extend it below low-water elevation to provide aquatic habitat. (USFWS)
14. Temporary erosion and sediment control BMPs will be utilized within areas of disturbed soil. All disturbed soil areas upon project completion will be vegetated following INDOT's standard specifications. (USFWS)
15. Work within the inundated part of the stream channel (in perennial streams and larger intermittent streams) will be restricted to outside of the the fish spawning season (April 1 through June 30), except for work within sealed structures such as caissons or cofferdams that were installed prior to the spawning season. (USFWS)
16. No equipment shall be operated below the Ordinary High Water Mark during this time unless the machinery is within the caissons or on the cofferdams. (USFWS)
17. The project proposes temporary construction and permanent post-construction BMPs for water quality treatment of stormwater runoff from impervious areas within the Proposed Alternative limits and INDOT ROW. Temporary construction BMPs will include sediment traps, check dams, silt fences, ditch inlet protections, temporary construction entrance stabilization, and temporary sediment basin within the preliminary construction plans to protect aquatic habitats. Permanent erosion control features include riprap installation over geotextile at the outflow of all culverts and paved side ditches in areas of 3 percent or steeper grades. Structural BMPs may also be employed to reduce stormwater pollution through filtration, biological uptake, and microbial activity. Post-construction BMPs are effective in treating for total suspended solids, nutrients, and metals as well as reducing impervious area stormwater runoff, thereby protecting aquatic resources that support important macroinvertebrate food sources for gray bats. (USFWS)
18. The project proposes any explosive blasting will be conducted in daylight hours and will utilize blasting mats to

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- prevent flyrock from escaping the project's construction limits. (USFWS)
19. If necessary, the project proposes downward facing permanent lighting to reduce disturbance to nearby suitable bat foraging habitat. No temporary lighting to facilitate nighttime construction will be used. (USFWS)
 20. If appropriate, the proposed project will evaluate wildlife crossings under bridges and culverts. Suitable crossings include flat areas below bridge abutments with suitable ground cover, high water shelves in culverts, amphibian tunnels and diversion fencing. (USFWS)
 21. The project team should consult with the USFWS' Bloomington Field Office regarding implementation of project-specific mitigation measures for the permanent loss of 9.1 acres of forested habitat associated with the Proposed Alternative. Mitigation will be provided at a ratio of 1:1 if forest restoration is used to compensate for forest impacts. If forest preservation is proposed, a ratio of 2:1 will be required. (USFWS)
 22. If any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and -29) requires that the discovery be reported to the Department of Natural Resources within two (2) business days (IDNR)
 23. Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of fish and Wildlife. (IDNR)
 24. Do not cut any trees suitable for Indiana bat or northern long-eared bat roosting (greater than 3 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30. (IDNR)
 25. Post "Do Not Mow or Spray" signs along the right-of-way. (IDNR)
 26. 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. The shade provided by the large overhanging trees helps maintain proper stream temperatures and dissolved oxygen for aquatic life. (IDEM)
 27. Reasonable precautions must be taken to minimize fugitive dust emissions from construction and demolition activities. For example, wetting the area with water, constructing wind barriers, or treating dusty areas with chemical stabilizers (such as calcium chloride or several other commercial products). Dirt tracked onto paved roads from unpaved areas should be minimized. (IDEM)
 28. Ensure that asphalt paving plants are permitted and operate properly. The use of cutback asphalt, or asphalt emulsion containing more than seven percent (7%) oil distillate, is prohibited during the months of April through October. (IDEM)
 29. All solid wastes generated by the project, or removed from the project site, need to be taken to a properly permitted solid waste processing or disposal facility. (IDEM)
 30. Use erosion and sediment control measures, including temporary earthen berms to control sediment from construction zones entering sinkholes (INDOT ES)
 31. Bare and disturbed areas within sinkhole drainage areas should be re-vegetated as soon as practical following construction with a mixture of grasses (excluding all varieties of tall fescue), legumes, and native shrubs and hardwood tree species (INDOT ES)
 32. Where possible, the existing vegetation surrounding features should be maintained throughout construction, including a minimum 10-foot buffer measured from the rim, or highest closed contour, surrounding the depression (INDOT ES)
 33. All sinkholes and surrounding buffer areas should be fenced for the duration of construction (INDOT ES)
 34. Closure or repair of sinkholes within the project limits (INDOT ES)
 35. If the proposed drainage design is modified to use existing karst features, a full-scale pollutant loading calculation should be performed to estimate the potential loads anticipated for the specific karst feature and dye-tracing should be performed to determine flow paths from these features (INDOT ES)
 36. A low salt and no spray strategy should be implemented, including the use of road signs that indicate the no spray zone (INDOT ES)
 37. An Emergency Response Plan, including a site-specific Spill Response Plan, will be developed prior to the start of project construction to identify response protocols if a spill occurs during construction (INDOT ES)
 38. Material storage and staging areas, as well as equipment storage, maintenance and re-fueling areas should not be located within the drainage area of any karst features (INDOT ES)
 39. Use of structural BMPs (e.g., water quality filters and hydrodynamic devices) should be considered at the stormwater outfalls to surface streams in the area to minimize pollutant loading and contain releases from spills. (INDOT ES)
 40. Per the Karst MOU, the Karst Report will be submitted to participating agencies (IDEM, IDNR, USFWS) for review prior to construction. (INDOT ES)
 41. If any permanent structures or equipment utilized for the project penetrates the 100:1 slope for the airport, FAA Form 7460 must be filed with INDOT, Office of Aviation (317-232-1477). (INDOT)

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For Further Consideration:

1. Although the area is not within the designated karst area of the state, INDOT is encouraged to follow the protocols and procedures outlined in the 1993 Memorandum of Understanding for construction of transportation projects in karst areas. (USFWS)
2. Wetland and stream impacts should be avoided as much as possible. (USFWS)
3. Depending on the size and flow of the various waterways, avoid channel work during the fish spawning season (April 1 through June 30). (USFWS)
4. Restrict channel work and vegetation clearing to the minimum necessary for installation of any structures and roadway. (USFWS)
5. If riprap is utilized for bank stabilization, extend it below low-water elevation to provide aquatic habitat. (USFWS)
6. Re-vegetate all disturbed soil areas immediately upon project completion, using native trees and shrubs in riparian zone. (USFWS)
7. Minimize the extent of artificial bank stabilization and use bioengineering methods wherever feasible. (USFWS)
8. Culverts should span the active stream channel, should be either embedded or a 3-sided or open-arch culvert, and be installed where practicable on an essentially flat slope. When an open-bottomed culvert or arch is used in a stream, which has a good natural bottom substrate, such as gravel, cobbles, and boulders, the existing substrate should be left undisturbed beneath the culvert to provide natural habitat for the aquatic community. (USFWS)
9. Minimize impacts to and fragmentation of wetland, non-wetland forest in and outside of the floodway, streams, and floodway habitat with an alignment that minimizes the construction footprint through forested habitat, the number of forested areas impacted, and the number of stream crossings. (IDNR)
10. A multiple-span bridge/elevated roadway design could be combined with MSE walls to reduce right-of-way impacts when crossing forested valleys. If a multiple-span elevated roadway is not feasible, then the road's footprint should be minimized through the use of MSE walls throughout the valley rather than cut/fill. (IDNR)
11. Further habitat studies are recommended to determine areas to avoid. A floristic quality assessment and fauna surveys such as amphibian/herpetological surveys of the potentially affected area are recommended. (IDNR)
12. Impacts to non-wetland/riparian forest in the floodway/floodplain will require mitigation. 1:1 ratio for less than 1 acre of impact to non-wetland forest; and 2:1 ratio for impacts to non-wetland forest over 1 acre. (IDNR)
13. Impacts to streams including intermittent and ephemeral streams should be addressed in any mitigation proposal. Unavoidable stream enclosure should be done with a 3-sided culvert designed with the inclusion of grates every 100 feet to allow the enclosed stream area to approximate normal lighting conditions. (IDNR)
14. A single-span or multiple-span elevated road/bridge design is needed to avoid the unreasonably large impact to the stream resulting from the amount of fill needed for the road berm. (IDNR)
15. Creek crossings should be constructed using a bridge or 3-sided culvert instead of 4-sided (box) culverts. If box or pipe culverts are used, the bottoms should be buried a minimum of 6 inches below the stream bed elevation. Crossing should span the entire channel width and should maintain the natural stream substrate within the structure. Crossing structures should have a minimum openness ratio of 0.25 (height x width / length). Stream depth and water velocities in the crossing structure during low-flow conditions should approximate those in the natural stream channel. (IDNR)
16. Revegetate all bare and disturbed areas with a mixture of native grasses, sedges, wildflowers, and native shrub and hardwood tree species as soon as possible upon completion. Do not use any varieties of Tall Fescue or other non-native plants (e.g., crown-vetch). (IDNR)
17. Minimize and contain within the project limits in-channel disturbance and the clearing of trees and brush. (IDNR)
18. Use minimum average 6 inch graded riprap tone extended below the normal water level to provide habitat for aquatic organisms in the voids. (IDNR)
19. Plant native hardwood trees along the top of bank and right-of-way to replace the vegetation destroyed during construction. (IDNR)
20. Do not construct any temporary runarounds, causeways, cofferdams, pump around or stream diversion systems. (IDNR)
21. Seed and protect all disturbed slopes that are 3:1 or steeper with biodegradable heavy-duty erosion control blankets (follow manufacturer's recommendations for selection and installation); seed and apply mulch on all other disturbed areas. (IDNR)

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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 out April 29, 2016. Re-coordination was sent out to select agencies on October 16, 2017. NRCS received re-coordination materials January 19, 2018. The table below identifies the recipients of those letters and the date their response, if any, was received.

Agency	Response	Location of Response
U.S. Fish and Wildlife Service	June 2, 2016	Appendix B, B-34 to B-37
U.S. Natural Resources Conservation Service	May 13, 2016	Appendix B, B-31
Indiana Geological Survey	May 13, 2016	Appendix B, B-30
INDOT Office of Aviation	May 18, 2016	Appendix B, B33
National Park Service, Midwest Regional Office	No Response	N/A
Indiana Department of Natural Resources, Division of Fish and Wildlife	June 3, 2016	Appendix B, B-38 to B-41
U.S. Department of Housing and Urban Development	No Response	N/A
Indiana Department of Environmental Management	No Response	Appendix B, B-43 to B-53
INDOT Office of Public Involvement	No Response	N/A
INDOT, Seymour District	No Response	N/A
U.S. Forest Service – Hoosier National Forest	No Response	N/A
USACE Louisville District	No Response	N/A
U.S. Coast Guard	May 13, 2016	Appendix B, B-32
City of Jeffersonville, Engineer	No Response	N/A
KIPDA	No Response	N/A
Clark County Highway Engineer	No Response	N/A
City of Jeffersonville Mayor	No Response	N/A
Utica Town Board	No Response	N/A
Jeffersonville Department of Economic Development and Department of Redevelopment	No Response	N/A
Jeffersonville Department of Planning and Zoning	No Response	N/A
Jeffersonville Police Department	No Response	N/A
Jeffersonville Storm Water Department	No Response	N/A
One Southern Indiana	No Response	N/A
RRCC	No Response	N/A
Greater Clark County Schools	No Response	N/A
Utica Elementary School	No Response	N/A
Clark county Sheriff's Office	No Response	N/A
Clark County Surveyor's Office	March 13, 2017	Appendix B, B-42
Clark county Drainage Board	No Response	N/A
Port of Indiana – Jeffersonville	No Response	N/A
Indiana Economic Development Corporation	No Response	N/A
Clark County Emergency Management Agency	No Response	N/A
DNR Outdoor Recreation	No Response	N/A
Clark County Board of Commissioners	No Response	N/A
Clark County Council	No Response	N/A
City of Jeffersonville Parks Department	No Response	N/A

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