FHWA-Indiana Environmental Document

CATEGORICAL EXCLUSION LEVEL 1 FORM

GENERAL PROJECT INFORMATION

Road No./County:	U.S. Highway (US) 24, Cass County
Designation Number(s):	2200045
Project Description/Termini:	US 24 Intersection Improvement at County Road (CR) 600 East (E)

[X] **CE Level 1 documentation for exempted projects**

[ ] **Additional Information to CE Level 1**

Approval: _____
INDOT DE/ESD Signature and Date

Release for Public Involvement: SFM 06/28/2024
INDOT DE/ESD Initials and Date

Certification of Public involvement: _____
INDOT Consultant Services Signature and Date

INDOT DE/ESD Reviewer: _____
Signature and Date

CE Preparer: Lane Page and Tamra Reece, Hanson Professional Services Inc. (Hanson)
Name and Organization

GENERAL PROJECT INFORMATION, DESCRIPTION, AND DESIGN INFORMATION	
Purpose and Need:	The need for this project is based on the high frequency and severity of crashes at the US 24 intersection with CR 600 E. According to the Engineer's Report dated January 11, 2022, the intersection has an Index of Crash Frequency (ICF) of 2.19. An ICF of 0 indicates the intersection is functioning as expected and a positive number indicates a higher frequency of crashes than expected, with an ICF of 2 or higher indicating a high crash location. The intersection has an Index of Crash Cost (ICC) of 1.75. An ICC of 0 indicates the crash cost severity is as expected and a positive number indicates a higher severity of crashes than expected. The majority of crashes at the intersection result in injuries and/or fatalities – between 2017 and 2019, 18.52% of crashes at the intersection were fatal or incapacitating, and 37.04% resulted in non-incapacitating injuries. The primary manner of collision at the intersection is "Left Turn, Right Turn or Angle," which involves one vehicle striking another while attempting to cross paths, either with one or both vehicles turning or while both vehicles are going straight on intersecting roads. Between 2017 and 2019, "Left Turn, Right Turn or Angle" collisions comprised 68.97% of all crashes at the intersection and 86.67% of crashes resulting in injuries and/or fatalities (Appendix I, pages 2 to 4). The purpose of the project is to reduce the potential for "Left Turn, Right Turn or Angle" collisions, achieve a lower ICF and ICC, and provide a safe intersection for traveling motorists.
Project Description (Preferred Alternative):	The Indiana Department of Transportation (INDOT) LaPorte District and the Federal Highway Administration (FHWA) intend to proceed with this intersection improvement project. The project is located on US 24 at CR 600 E in Tipton Township, Section 35 and Reserve Number 10 Wapapeshee, Township 27 North, Range 2 East, in Cass County, Indiana (Appendix B, pages 2 and 3). This section of US 24 is a four-lane divided highway on the National Highway System and is classified as a Rural Principal Arterial roadway. The existing US 24 facility consists of four 12-foot (ft.) travel lanes (two eastbound and two westbound) with 10 ft. paved outside shoulders, 4 ft. paved inside shoulders, and a 25 to 50 ft. grass median. At the CR 600 E intersection, the US 24 roadway includes two 12 ft. eastbound turn lanes and two 12 ft. westbound turn lanes (Appendix B, page 10). CR 600 E at the project location is a two-lane Rural Major Collector with 12 ft. northbound and southbound travel lanes and 0 to 6 ft. outside shoulders. Surrounding features consist of agricultural fields and rural residences. The existing intersection has a high frequency and severity of crashes with an ICF of 2.19 and an ICC of 1.75. Between 2017 and 2019, 27 crashes occurred at the intersection, including 5 fatal or incapacitating crashes, with 68.97% occurring as left turn, right turn, or angle collisions (Appendix I, pages 3 to 4). The preferred alternative involves replacing the existing intersection with a J-turn intersection consisting of two median U-turns located approximately 800 ft. on either side of CR 600 E. Work will include removal of the existing left

	turn lanes and median crossover and construction of full-depth pavement acceleration/deceleration lanes and U-turn crossings within the existing US 24 median. Regrading of the US 24 median will occur. Across from each U-turn crossing, a section of existing outside shoulder approximately 190 ft. in length will be removed and replaced with full-depth pavement. The US 24 roadway within the project limits will be milled and resurfaced with hot-mix asphalt (HMA) surface material. The existing flashing traffic signal will be removed and new roadway lighting and signage will be installed. Additionally, two new drainage structures, consisting of grated inlets with 18 inch (in.) diameter corrugated metal pipes (CMPs), will be installed from the median to the south side of US 24. Revetment riprap will be placed at the structure outlets for scour protection. The inlet of one existing drainage structure, CLV-4373, will be adjusted to grade. See Appendix B, pages 8 to 17, for preliminary project plans. No waterway impacts, tree removal, or right-of-way (ROW) acquisition will occur. Storm water erosion control measures will be implemented throughout construction. Maintenance of traffic (MOT) will involve phased lane and shoulder closures on US 24 (see the *MOT During Construction* section of this document). The preferred alternative meets the purpose and need of reducing the potential for "Left Turn, Right Turn or Angle" collisions and achieving a lower ICF and ICC by reconfiguring the existing intersection. The logical termini for the project are approximately 0.15 mile west to 0.15 mile east of CR 600 E to cover the U-turn construction and drainage structure installation. The project has independent utility because it is not dependent upon other roadway improvements.
Other Alternatives Considered:	Details of considered alternatives are in Appendix I, pages 5 to 10. **Signalized Intersection:** This alternative involves installation of a traffic signal at the intersection in place of the existing flashing signal. This alternative meets the purpose and need of reducing the potential for "Left Turn, Right Turn or Angle" collisions. However, review of the Indiana Manual on Uniform Traffic Control Devices (MUTCD) indicated that, due to low traffic volumes, the intersection does not meet the conditions to warrant a traffic signal. An unwarranted traffic signal on a high-speed four-lane divided highway would likely lead to additional crashes. Therefore, this alternative is not applicable and was discarded from further consideration. **Median U-Turn (J-Turn) with Existing Median Channelization:** This alternative involves construction of median U-turn intersections as in the preferred alternative, but rather than removing the existing median crossover, the existing crossover would be channelized to still allow left turns off US 24 onto CR 600 E. This alternative meets the purpose and need of the project with similar safety improvements and environmental impacts compared to the preferred alternative. This alternative was discarded from further consideration due to the middle intersection potentially increasing motorist confusion compared to the preferred alternative.

	Roundabout Intersection: This alternative involves replacement of the existing intersection with a dual lane roundabout. This alternative meets the purpose and need of reducing the potential for "Left Turn, Right Turn or Angle" collisions. However, the required reduction of high speeds is uncharacteristic of this section of US 24 and could lead to additional crashes. Additionally, this alternative would require a larger footprint and result in greater environmental impacts compared to the preferred alternative. Therefore, this alternative was discarded from further consideration. **Displaced Left Turn Intersection:** This alternative involves replacement of the existing intersection with a displaced left turn intersection. Traffic signal installation would be required. This alternative meets the purpose and need of reducing the potential for "Left Turn, Right Turn or Angle" collisions. Displaced left turn intersections are primarily used to improve operation at high volume intersections where left turn volume is greater than 250 vehicles per hour. Due to the low traffic volumes and high speeds at the project location, a displaced left turn intersection with traffic signals is unwarranted and could lead to additional crashes. Therefore, this alternative is not applicable and was discarded from further consideration. **Jug Handle Intersection:** This alternative involves construction of ramps from US 24 to CR 600 E to eliminate the left-turn movement from US 24. This alternative meets the purpose and need of reducing the potential for "Left Turn, Right Turn or Angle" collisions. Jug handle intersections are primarily used to improve operation at congested signalized intersections. Due to the low traffic volumes and lack of signalization at the project location, this alternative is not applicable. Additionally, construction of ramps would require a larger footprint and result in greater environmental impacts compared to the preferred alternative. Therefore, this alternative was discarded from further consideration. **Offset "T" Intersection:** This alternative involves replacing the existing four-leg intersection with two three-leg intersections. The south leg of CR 600 E would be reconstructed to meet US 24 approximately 900 ft. west of the existing intersection, requiring approximately 1,300 ft. of new alignment and involving approximately 3.2 acres of ROW outside the existing roadways. This alternative meets the purpose and need of reducing the potential for "Left Turn, Right Turn or Angle" collisions by separating the south leg and north leg CR 600 E intersections with US 24. This alternative was discarded from further consideration due to the increased environmental impacts associated with the realignment of CR 600 E. **Continuous Green "T" Intersection:** This alternative is only applicable to an existing signalized "T" intersection. As the existing intersection is not signalized, this alternative is not applicable was discarded from further consideration. **Quadrant Roadway Intersection:** This alternative involves construction of a new roadway in one quadrant between US 24 and CR 600 E to eliminate left turns from the existing intersection. This alternative meets the purpose and

	need of reducing the potential for "Left Turn, Right Turn or Angle" collisions. Quadrant roadway intersections are primarily used to improve operation at busy signalized intersections. Due to the low traffic volumes and lack of signalization at the project location, this alternative is not applicable. Additionally, construction of a new roadway would require a larger footprint and result in greater environmental impacts compared to the preferred alternative. Therefore, this alternative was discarded from further consideration. **Grade Separation:** This alternative involves construction of an overpass carrying CR 600 E over US 24. This alternative meets the purpose and need of reducing the potential for crashes by separating CR 600 E traffic from US 24 traffic at the intersection. This alternative was dismissed from further consideration due to the larger project footprint, additional ROW, and greater environmental impacts associated with overpass construction, as well as the lack of access between US 24 and CR 600 E due to the elimination of turning movements at the intersection. **Remove Intersection Skew:** This alternative involves reconstruction of both CR 600 E approaches and the US 24 median to eliminate the skew of the intersection and improve driver line of sight. Reconstruction of the approaches would result in a larger project footprint and increased environmental impacts compared to the preferred alternative. Additionally, analysis of this alternative predicted an increase in crash frequency; therefore, this alternative does not meet the purpose and need and was discarded from further consideration. **Do Nothing:** This alternative allows the existing intersection to remain in place with no improvements. This alternative would have no environmental impacts but would not address the safety concerns present at the intersection. This alternative does not meet the purpose and need of the project and was discarded from further consideration.			
Funding Source(s):	[X] Federal [X] State [ ] Local [ ] Other			
Project Sponsor:	INDOT – LaPorte District			
Estimated Cost:	$1,926,000	**Project Length:**	0.30 mile	
Public Involvement:			**No:**	**Yes: X**

All survey activities for this project are limited to existing INDOT right-of-way; therefore, no Notice of Entry letters are required.

The project will meet the minimum requirements described in the current *Indiana Department of Transportation (INDOT) Project Development Public Involvement Procedures Manual* which requires the project sponsor to offer the public an opportunity to submit comments and/or request a public hearing. However, given the anticipated public interest in the proposed intersection improvement, INDOT LaPorte District opts to hold a public hearing. Therefore, a legal notice of the public hearing will appear in a local publication contingent upon the release of this document for public involvement. This document will be revised after the public involvement requirements are fulfilled.

Right-of-Way:	**No: X**	**Yes:**

The existing ROW at the project location extends approximately 45 to 80 ft. north and south from the US 24 edge of pavement, and approximately 50 to 60 ft. east and west from the CR 600 E edge of pavement. The existing ROW consists of roadside grasses and shrubs.

This project will occur within existing ROW. No permanent or temporary ROW will be required for this project.

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

Maintenance of Traffic (MOT) During Construction:	**No:**	**Yes: X**

The MOT for the project will require phased lane and shoulder closures on US 24, with one through lane open in each direction throughout construction. During Phase 1, MOT will consist of outside lane and shoulder closures with the existing intersection remaining open, while construction will include outside shoulder paving and the outside portion of drainage structure work. During Phase 2, MOT will consist of inside lane and shoulder closures with the existing intersection remaining open, while construction will include the remaining drainage structure work and construction of the median U-turn crossovers and auxiliary lanes. During Phase 3, MOT will consist of inside lane and shoulder closures with the existing intersection closed and traffic utilizing the newly constructed U-turn crossings, while construction will include removal of the existing median crossover and regrading of the US 24 median. During Phase 4, MOT will consist of single lane closures, while construction will include mill and overlay of the existing US 24 pavement (Appendix B, pages 11 to 14).

In an early coordination response dated January 17, 2024, the Cass County Highway Department requested advance notice of any closures of CR 600 E (Appendix C, page 13). This is included as a firm commitment in the *Environmental Commitments* section of this document.

The closures/lane restrictions will pose a temporary inconvenience to traveling motorists (including school buses and emergency services); however, no significant delays are anticipated, and all inconveniences and delays will cease upon project completion.

Bridge(s) and/or Small Structure(s) (include structure number(s)):	**No:**	**Yes: X**

This project involves the installation of two new drainage structures from the US 24 median to the south side of US 24. Structure (Str.) 101 will be installed west of the western U-turn crossing and consist of a median inlet with a 103 ft. long, 18 in. diameter CMP. Str. 102 will be installed west of the eastern U-turn crossing and consist of a median inlet with a 92 ft. long, 18 in. diameter CMP. Revetment riprap on geotextiles will be placed at the outlets of both structures for scour protection (Appendix B, pages 15 to 16).

Additionally, one existing structure (CLV-4373) is present within the project area, just west of the existing intersection. The existing structure consists of a median inlet with a 130 ft. long, 18 in. diameter CMP. The inlet of CLV-4373 will be adjusted to grade due to regrading of the US 24 median. No other work on CLV-4373 will occur (Appendix B, page 15).

One additional existing structure, an undocumented 36 in. CMP, crosses under CR 600 E just south of the project limits. The structure will not be impacted by the project.

IDENTIFICATION AND EVALUATION OF IMPACTS

Early Coordination:

Early coordination letters were sent on January 16, 2024 (Appendix C, pages 2 to 4).

Agency	Date Set	Date Response Received	Appendix
Cass County Commissioners	January 16, 2024	No response received	N/A
Cass County Emergency Management	January 16, 2024	January 31, 2024	Appendix C, pages 5-11
Cass County Health Department	January 16, 2024	January 16, 2024	Appendix C, page 12
Cass County Highway Department	January 16, 2024	January 17, 2024	Appendix C, page 13
Cass County Historical Society	January 16, 2024	No response received	N/A
Cass County Surveyor	January 16, 2024	No response received	N/A
FHWA	January 16, 2024	No response received	N/A
Indiana Department of Natural Resources – Division of Fish and Wildlife (IDNR – DFW)	January 16, 2024	February 15, 2024	Appendix C, pages 14-16
Indiana Geological and Water Survey (IGWS)	January 16, 2024 (online submittal)	January 16, 2024	Appendix C, pages 17-19
INDOT – LaPorte District Environmental Section	January 16, 2024	No response received	N/A
INDOT – Project Manager	January 16, 2024	No response received	N/A
US Army Corps of Engineers (USACE)	January 16, 2024	No response received	N/A
US Department of Housing and Urban Development (HUD)	January 16, 2024	No response received	N/A

Cass County Emergency Management responded on January 31, 2024, with concerns regarding semis and other large vehicles, sometimes carrying hazardous substances, causing slow-moving or stopped impediments to high speed traffic on US 24, particularly during peak agricultural seasons (Appendix C, pages 5 to 11). Cass County Emergency Management's concerns were communicated to the designer on February 1, 2024.

All applicable recommendations are included in the *Environmental Commitments* section of this Categorical Exclusion (CE) document.

Streams, Rivers, and Other Jurisdictional Features Impacted:	**No: X**	**Yes:**

Based on the desktop review and the aerial map of the project area (Appendix B, page 4), there are no streams, rivers, watercourses, or other jurisdictional features within or adjacent to the project area, which was confirmed by the site visit on August 29, 2023, by Hanson. Therefore, no impacts are expected.

A *Waters of the U.S. Determination/Wetland Delineation Report* was approved by INDOT Ecology, Waterway Permitting & Stormwater Office (EWPSO) on November 30, 2023. Please refer to Appendix F, pages 2 to 16, for the *Waters of the U.S. Determination/Wetland Delineation Report.* It was determined that no streams are present in the investigated area. The USACE makes all final determinations regarding jurisdiction.

Open Water Feature(s):	**No: X**	**Yes:**
Based on the desktop review and the aerial map of the project area (Appendix B, page 4), there are no open water features within or adjacent to the project area, which was confirmed by the site visit on August 29, 2023, by Hanson. Therefore, no impacts are expected. A *Waters of the U.S. Determination/Wetland Delineation Report* was approved by INDOT EWPSO on November 30, 2023. Please refer to Appendix F, pages 2 to 16, for the *Waters of the U.S. Determination/Wetland Delineation Report.* It was determined that no open water features are present in the investigated area. The USACE makes all final determinations regarding jurisdiction.		
Wetlands:	**No: X**	**Yes:**
Based on the desktop review and the aerial map of the project area (Appendix B, page 4), there are no wetlands within or adjacent to the project area, which was confirmed by the site visit on August 29, 2023, by Hanson. Therefore, no impacts are expected. A *Waters of the U.S. Determination/Wetland Delineation Report* was approved by INDOT EWPSO on November 30, 2023. Please refer to Appendix F, pages 2 to 16, for the *Waters of the U.S. Determination/Wetland Delineation Report.* It was determined that no wetlands are present in the investigated area. The USACE makes all final determinations regarding jurisdiction.		
Terrestrial Habitat:	**No:**	**Yes: X**
Based on a desktop review, the site visit on August 29, 2023, by Hanson, and the aerial map of the project area (Appendix B, page 4), there is terrestrial habitat within the project area that consists of roadside herbaceous vegetation with scattered amur honeysuckle shrubs (*Lonicera maackii*). Herbaceous vegetation is dominated by red fescue (*Festuca rubra*), yellow bristlegrass (*Setaria pumila*), narrowleaf plantain (*Plantago lanceolata*), and common reed (*Phragmites australis*). Approximately 0.456 acre of terrestrial habitat will be permanently impacted, comprised of 0.454 acre within the US 24 median due to U-turn pavement construction and 0.002 acre south of US 24 due to riprap installation at the new drainage structure outlets. Approximately 1.126 acre of terrestrial habitat will be temporarily impacted due to median ditch grading, drainage structure installation, and erosion control measures. Avoidance alternatives would not be practicable because it would not meet the purpose and need of improving safety at the intersection. Temporarily impacted areas will be reseeded post-construction according to INDOT Standard Specifications. Additionally, approximately 0.370 acre will be seeded where pavement removal will occur. No tree clearing will occur. IDNR-DFW responded on February 15, 2024, with recommendations regarding brush clearing, revegetation, erosion control, and additional measures to avoid, minimize or compensate for impacts to wildlife and botanical resources (Appendix C, pages 14 to 16). All applicable recommendations are included in the *Environmental Commitments* section of this CE document.		
Protected Species:	**No:**	**Yes: X**
Based on a desktop review and the Limited Red Flag Investigation (LRFI) report (Appendix E, page 3) completed by Hanson on October 31, 2023, the IDNR Cass County Endangered, Threatened and Rare (ETR) Species List has been checked. According to the IDNR-DFW early coordination response letter dated February 15, 2024 (Appendix C, pages 14 to 16), the Natural Heritage Program's Database has been checked and no plant or animal species listed as state or federally endangered, threatened, or rare have been reported to occur in the project vicinity. An INDOT 0.5-mile bat review occurred on September 14, 2023, and did not indicate the presence of endangered bat species in or within 0.5 mile of the project area.		

Project information was submitted through the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) portal, and an official species list was generated (Appendix C, pages 20 to 32). The project is within range of the federally endangered Indiana bat (*Myotis sodalis*) and northern long-eared bat (NLEB) (*Myotis septentrionalis*). No additional species were generated in the IPaC species list other than the Indiana bat and NLEB.

The project qualifies for the *Range-wide Programmatic Informal Consultation for the Indiana bat and northern long-eared bat (NLEB)*, dated May 2016 (revised February 2018), between FHWA, Federal Railroad Administration (FRA), Federal Transit Administration (FTA), and USFWS. A culvert inspection occurred on August 29, 2023, and no bats/birds or signs of bats/birds were observed (Appendix C, page 33). USFWS Bridge/Structure Assessments are only valid for two years. If construction will begin after August 29, 2025, an inspection of the structure by a qualified individual must be performed. Inspection of the structure should check for presence of bats/bat indicators and/or presence of birds. The results of the inspection must indicate no signs of bats or birds. If signs of bats or birds are documented during this inspection, the INDOT District Environmental Manager must be contacted immediately. This firm commitment is included in the *Environmental Commitments* section of this document.

An effect determination key was completed on January 11, 2024, and based on the responses provided, the project was found “Not Likely to Adversely Affect (NLAA)” the Indiana bat or the NLEB (Appendix C, pages 34 to 44). INDOT reviewed and verified the effect finding on January 12, 2024, and requested USFWS’s review of the finding. No response was received from USFWS within the 14-day review period; therefore, it was concluded they concur with the finding. General construction and lighting Avoidance and Minimization Measures (AMMs) are applicable to this project. AMMs are included as firm commitments in the *Environmental Commitments* section of this document.

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

Geological and Mineral Resources:	**No: X**	**Yes:**

Based on a desktop review and the Indiana Karst Region map, the project is located outside the designated Indiana Karst Region as outlined in the most current *Protection of Karst Features during Project Development and Construction*. According to the topographic map of the project area (Appendix B, page 3), there are no karst features identified within or adjacent to the project area. In the early coordination response dated January 16, 2024, the IGWS did not indicate that karst features exist in the project area (Appendix C, pages 17 to 19). The IGWS stated that there was moderate liquefaction potential, high potential for bedrock resources, and high potential for sand and gravel resources. Response from IGWS was communicated to the designer on January 16, 2024. No impacts are expected.

Drinking Water Resources:	**No: X**	**Yes:**

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

The Indiana Department of Environmental Management (IDEM) Wellhead Proximity Determinator website (http://www.in.gov/idem/cleanwater/pages/wellhead/) was accessed on January 25, 2024, by

Hanson. This project is not located within a Wellhead Protection Area or Source Water Area. No impacts are expected.

The IDNR Water Well Record Database website (https://www.in.gov/dnr/water/3595.htm) was accessed on January 25, 2024, by Hanson. No wells are located near this project. Therefore, no impacts are expected.

Based on a desktop review of the IDEM Municipal Separate Storm Sewer System (MS4) website (https://www.in.gov/idem/cleanwater/ms4s-boundaries-map-for-indiana/) by Hanson on January 25, 2024, this project is not located in an Urban Area Boundary (UAB). No impacts are expected.

Based on a desktop review, a site visit on August 29, 2023, by Hanson, and the aerial map of the project area (Appendix B, page 4), no public water systems were identified. Therefore, no impacts are expected.

Floodplains:	**No: X**	**Yes:**

The IDNR Indiana Floodway Information Portal website (https://indnr.maps.arcgis.com/apps/webappviewer/index.html?id=05026dabc2e8461983e196d56a213c1e) was accessed on January 25, 2024, by Hanson. This project is not located in a regulatory floodplain as determined from approved IDNR floodplain maps (Appendix F, page 17). Therefore, it does not fall within the guidelines for the implementation of 23 CFR 650, 23 CFR 771, and 44 CFR. No impacts are expected.

Farmland:	**No: X**	**Yes:**

Based on a desktop review, a site visit on August, 29, 2023, by Hanson, and the aerial map of the project area (Appendix B, page 4), there is farmland as defined by the Farmland Protection Policy Act adjacent to the project. The project will not convert any farmland because construction limits are confined to existing ROW. No alternatives other than those previously discussed in this document will be investigated without reevaluating impacts to prime farmland.

Cultural Resources:	**No: X**	**Yes:**

On May 16, 2024, the INDOT Cultural Resources Office (CRO) determined that this project falls within the guidelines of Category A, Types 2, 3, 4, and 9, and Category B, Types 2 and 9 under the Minor Projects Programmatic Agreement (Appendix D, pages 2 to 8).

- Category A, Type 2 projects include “all work within interchanges and within medians of divided highways in previously disturbed soils.”
- Category A, Type 3 projects include “replacement, repair, lining, or extension of culverts and other drainage structures that do not exhibit wood, stone, or brick structures or parts therein and are in previously disturbed soils.”
- Category A, Type 4 projects include “roadway work associated with surface replacement, reconstruction, rehabilitation, or resurfacing projects, including overlays, shoulder treatments, pavement repair, seal coating, pavement grinding, and pavement marking within previously disturbed soils where replacement, repair, or installation of curbs, curb ramps or sidewalks will not be required.”
- Category A, Type 9 projects include “installation, repair, or replacement of erosion control measures along roadways, waterways and bridge piers within previously disturbed soils.”
- Category B, Type 2 projects include “installation of new lighting, signals, signage and other traffic control devices.”

- Category B, Type 9 projects include “installation, replacement, repair, lining, or extension of culverts and other drainage structures.”

The project is occurring in previously disturbed soils. No further consultation is required. This completes the Section 106 process and the responsibilities of the FHWA under Section 106 have been fulfilled.

Section 4(f) and Section 6(f) Resources:	**No: X**	**Yes:**

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

Based on a desktop review and the aerial map of the project area (Appendix B, page 4), there are no potential 4(f) resources located within or adjacent to the project area, which was confirmed by the site visit on August 29, 2023, by Hanson. Therefore, no use is expected.

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

A review of 6(f) properties on the INDOT ESD website revealed a total of four properties in Cass County (Appendix I, page 11). None of these properties are located within or adjacent to the project area. Therefore, there will be no impacts to 6(f) resources.

Air Quality:	**No: X**	**Yes:**

This project is included in the Fiscal Year (FY) 2024-2028 Statewide Transportation Improvement Program (STIP) (Appendix H, page 2).

This project is located in Cass County, which is currently in attainment for all criteria pollutants according to IDEM’s Current and Historical List and Map of Current Nonattainment Areas (https://www.in.gov/idem/sips/nonattainment-status-of-counties/). Therefore, the conformity procedures of 40 CFR Part 93 do not apply.

This project is of a type qualifying as a categorical exclusion (Group 1) under 23 CFR 771.117(c), or exempt under the Clean Air Act conformity rule under 40 CFR 93.126, and as such, a Mobile Source Air Toxics analysis is not required.

Community Impacts:	**No: X**	**Yes:**

Under FHWA Order 6640.23A, FHWA and the project sponsor, as a recipient of funding from FHWA, are responsible to ensure that their programs, policies, and activities do not have a disproportionately high and adverse effect on minority or low-income populations. This project will have no relocations and will require less than 0.5 acre of additional permanent ROW; therefore, an Environmental Justice (EJ) analysis is not required per the current INDOT CE Manual.

Public Facilities and Services (e.g. schools, emergency services):	**No: X**	**Yes:**

Based on a desktop review and the aerial map of the project area (Appendix B, page 4), there are no public facilities within or adjacent to the project area, which was confirmed by the site visit on August 29,

2023, by Hanson. Therefore, no impacts are expected. Access to all properties will be maintained during construction.

It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access.

Hazardous Materials and Regulated Substances:	**No: X**	**Yes:**

The level of this CE document was elevated due to the need for public involvement. Based on coordination with INDOT LaPorte District, it was determined completing an LRFI was appropriate (Appendix E, pages 2 to 6). Only the hazardous material 0.5-mile radius search was reviewed for this LRFI. One National Pollutant Discharge Elimination System (NPDES) facility is located within 0.5 mile of the project area. No hazmat sites will affect the project area. Further investigation for hazardous material concerns is not required at this time.

Permits:	**No:**	**Yes: X**

A Construction Stormwater General Permit (CSGP) will be required from IDEM for soil disturbance exceeding one acre.

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

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

ENVIRONMENTAL COMMITMENTS:

Firm:

1) If the scope of work or permanent or temporary ROW amounts change, the INDOT ESD and the INDOT District Environmental Section will be contacted immediately. (INDOT ESD and INDOT District)
2) It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access. (INDOT ESD)
3) Any work in a wetland area within ROW or in borrow/waste areas is prohibited unless specifically allowed in the USACE permit. (INDOT EWPSO)
4) General AMM 1 – Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs. (USFWS)
5) Lighting AMM 1 – Direct temporary lighting away from suitable habitat during the active season. (USFWS)
6) Lighting AMM 2 – When installing new or replacing existing permanent lights, use downward-facing, full cut-off lens lights (with same intensity or less for replacement lighting); or for those transportation agencies using the BUG system developed by the Illuminating Engineering Society, be as close to 0 for all three ratings with a priority of “uplight” of 0 and “backlight” as low as practicable. (USFWS)
7) USFWS Bridge/Structure Assessment shall take place no earlier than two (2) years prior to the start of construction. If construction will begin after August 29, 2025, an inspection of the structure by a qualified individual must be performed. Inspection of the structure should check for presence of bats/bat indicators and/or presence of birds. The results of the

inspection must indicate no signs of bats or birds. If signs of bats or birds are documented during this inspection, the INDOT District Environmental Manager must be contacted immediately (INDOT ESD and INDOT District).

8) Advance notice of any closures of CR 600 E will be provided to the Cass County Highway Department. (Cass County Highway Department)

For Consideration:

1) The new/replacement/rehabilitated crossing structures, and any bank stabilization under or around the structures, must not create conditions that are less favorable for wildlife passage when compared to existing conditions. (IDNR-DFW)

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APPENDIX A

INDOT Supporting Documentation

Categorical Exclusion Level Thresholds

	PCE	Level 1*	Level 2	Level 3	Level 4[1]
Section 106	Falls within guidelines of Minor Projects PA	"No Historic Properties Affected"	"No Adverse Effect"	-	"Adverse Effect" Or Historic Bridge involvement[2]
Stream Impacts[3]	No construction in waterways or water bodies	< 300 linear feet of stream impacts	≥ 300 linear feet of stream impacts	-	USACE Individual 404 Permit[4]
Wetland Impacts[3]	No adverse impacts to wetlands	< 0.1 acre	-	< 1.0 acre	≥ 1.0 acre
Right-of-way[5]	Property acquisition for preservation only or none	< 0.5 acre	≥ 0.5 acre	-	-
Relocations[6]	None	-	-	< 5	≥ 5
Threatened/Endangered Species (Species Specific Programmatic for Indiana bat & northern long eared bat)*	"No Effect", "Not likely to Adversely Affect" (With select AMMs[7])	"Not likely to Adversely Affect" (With any AMMs or commitments)	-	"Likely to Adversely Affect"	Project does not fall under Species Specific Programmatic[8]
Threatened/Endangered Species (Any other species)*	Falls within guidelines of USFWS 2013 Interim Policy or "No Effect"	"Not likely to Adversely Affect"	-	-	"Likely to Adversely Affect"
Environmental Justice	No disproportionately high and adverse impacts	-	-	-	Potential[9]
Sole Source Aquifer	No Detailed Groundwater Assessment	-	-	-	Detailed Groundwater Assessment
Floodplain	No Substantial Impacts	-	-	-	Substantial Impacts
Section 4(f) Impacts	None	-	-	-	Any[10]
Section 6(f) Impacts	None	-	-	-	Any
Permanent Traffic Alteration	None	-	-	-	Any
Noise Analysis Required	No	-	-	-	Yes
Air Quality Analysis Required	No	-	-	-	Yes[11]
Approval Level • **District Env. (DE)** • **Env. Serv. Div. (ESD)** • **FHWA**	Concurrence by DE or ESD	DE or ESD	DE or ESD	DE and/or ESD	DE and/or ESD; and FHWA

[1] Coordinate with INDOT Environmental Services Division. INDOT will then coordinate with the appropriate FHWA Environmental Specialist.
[2] Any involvement with a bridge processed under the Historic Bridge Programmatic Agreement.
[3] Total permanent impacts to streams (linear feet) and wetlands (acres).
[4] US Army Corps of Engineers Individual 404 Permit
[5] Total permanent and temporary right-of-way. This does not include reacquisition of existing apparent right-of-way.
[6] If any relocations are within an area with a known or suspected Environmental Justice (EJ) or disadvantaged population, or has greater than 5 relocations, a conversation with FHWA, through INDOT ESD, is needed to confirm NEPA classification and outreach plan for the project.
[7] Avoidance and Mitigation Measures (AMMs) determined by the IPAC determination key to be required that are not tree AMMs, bridge AMMs, or structure AMMs.
[8] Projects that do not fall under a Species Specific Programmatic and results in a "Likely to Adversely Affect". Other findings can be processed as a lower-level CE.
[9] Potential for causing a disproportionately high and adverse impact.
[10] Section 4(f) use resulting in an Individual, Programmatic, or *de minimis* evaluation. The only exception is a *de minimis* evaluation for historic properties (Effective January 2, 2020). If a historic property *de minimis* and no other use, mark the *None* column.
[11] Hot Spot Analysis and/or MSAT Quantitative Emission Analysis.
* Includes the threatened/endangered species critical habitat
Note: Substantial public or agency controversy may require a higher-level NEPA document.

*This project was elevated to a CE Level 1 due to public interest and the need for public involvement.

APPENDIX B

Graphics

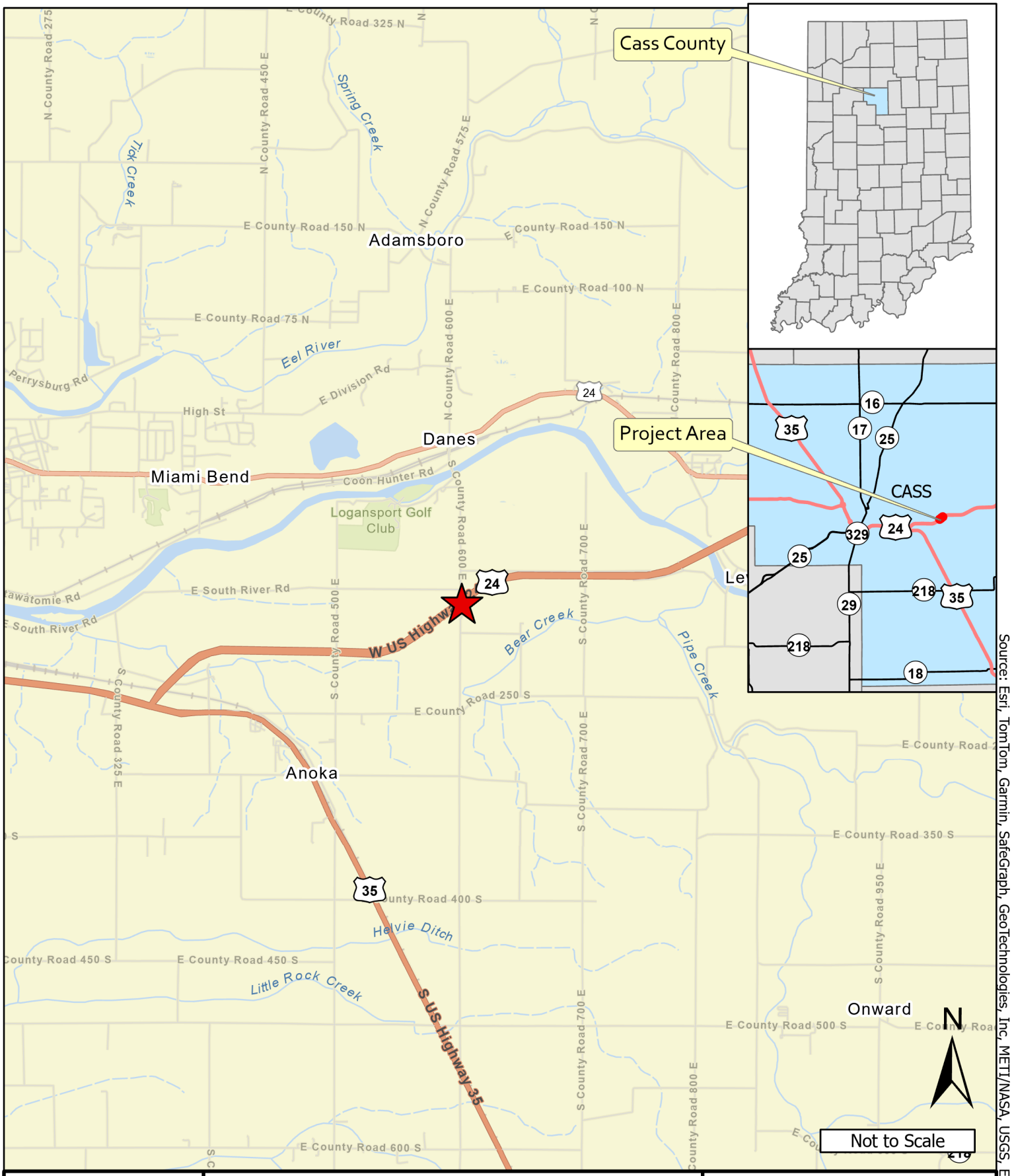


Figure 1 Project Location

Categorical Exclusion

US 24/CR 600 E Intersection Improvement

Cass County, Indiana

Des. No. 2200045 Created: 1/25/2024

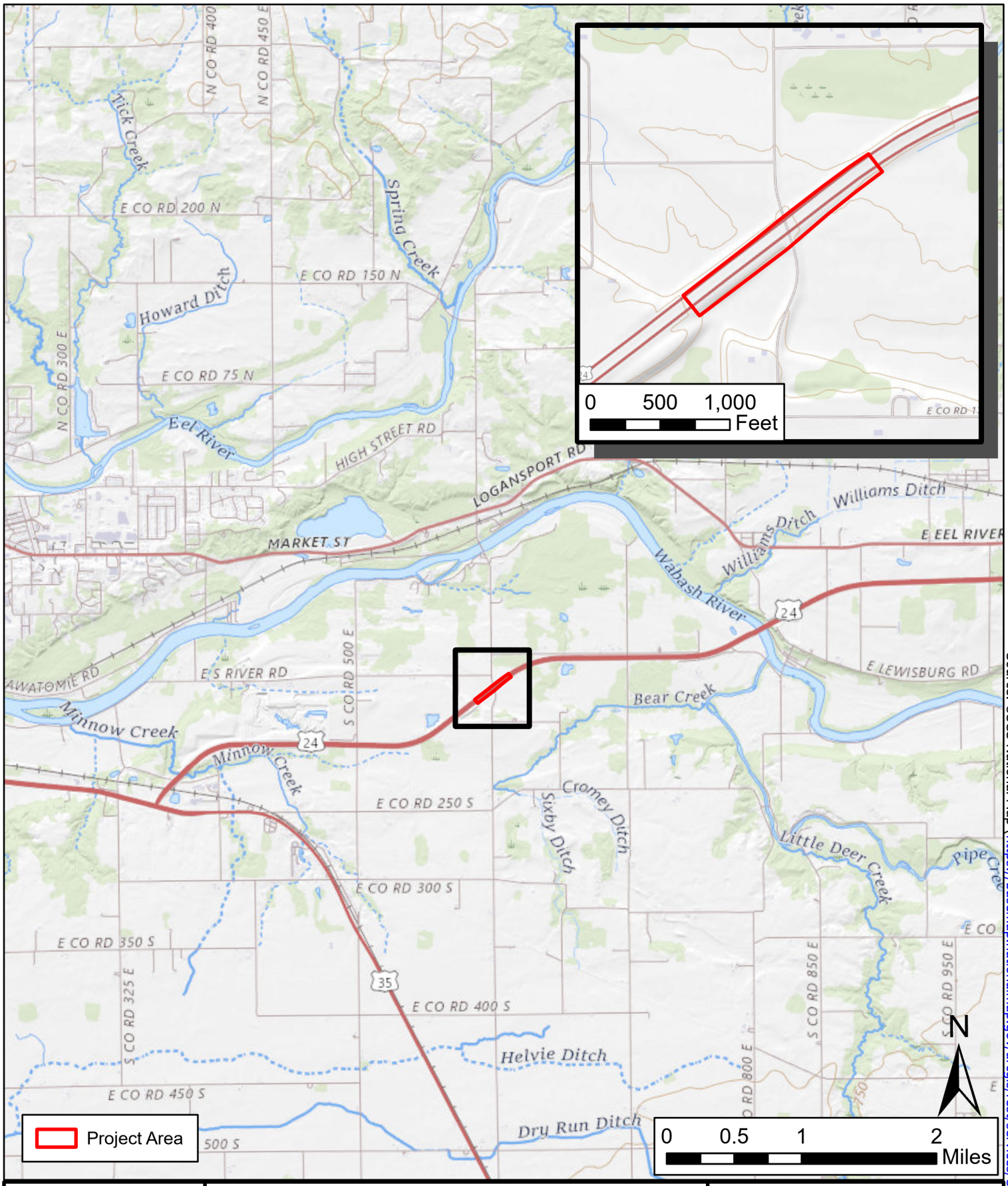
HANSON

Hanson Professional Services Inc.

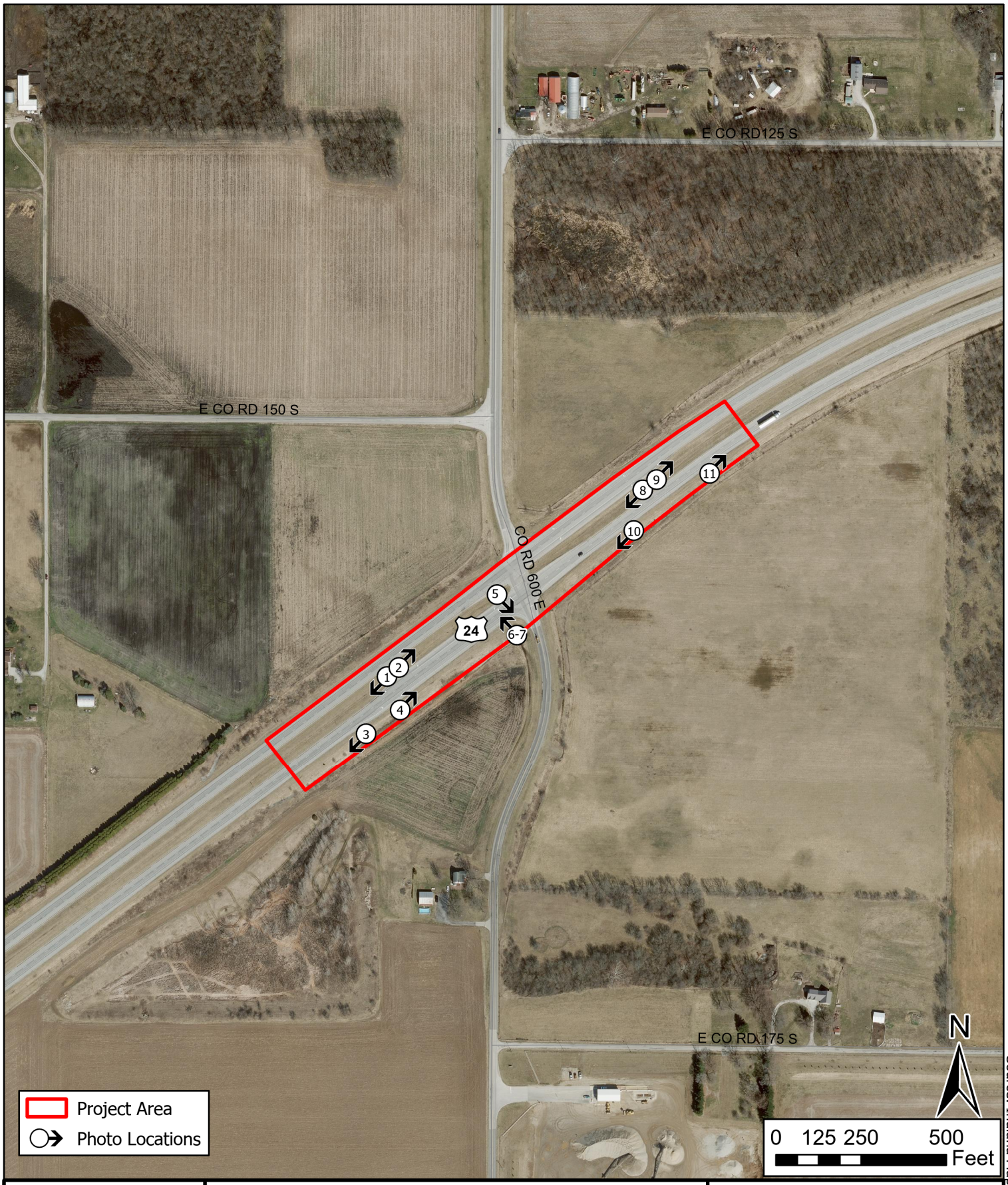
Indiana Department of Transportation

100 North Senate Avenue

Indianapolis, IN 46204



HANSON. Hanson Professional Services Inc.	**Figure 2 USGS Topographic Map** **Categorical Exclusion** US 24/CR 600 E Intersection Improvement Cass County, Indiana Des. No. 2200045 Created: 3/1/2024	**Indiana Department of Transportation** 100 North Senate Avenue Indianapolis, IN 46204



HANSON. Hanson Professional Services Inc.	**Figure 3 Aerial and Photo Location Map** **Categorical Exclusion** US 24/CR 600 E Intersection Improvement Cass County, Indiana Des. No. 2200045 Created: 3/1/2024	**Indiana Department of Transportation** 100 North Senate Avenue Indianapolis, IN 46204

Photo 1. US 24 median west of CR 600 E, viewing southwest

Photo 2. US 24 median west of CR 600 E, viewing northeast

Photo 3. South side of US 24 at west end of project area, viewing southwest

Photo 4. South side of US 24 west of CR 600 E, viewing northeast

Photo 5. Inlet to CLV-4373 in US 24 median, viewing southeast

Photo 6. CLV-4373 outlet, viewing northwest

Photo 7. Inside of CLV-4373, viewing northwest

Photo 8. US 24 median east of CR 600 E, viewing southwest

Photo 9. US 24 median east of CR 600 E, viewing northeast

Photo 10. South side of US 24 east of CR 600 E, viewing southwest

Photo 11. South side of US 24 at east end of project area, viewing northeast

PROJECT	DESIGNATION
2200045	2200045
CONTRACT	BRIDGE FILE
R-44676	N/A

INDIANA DEPARTMENT OF TRANSPORTATION

ROAD PLANS

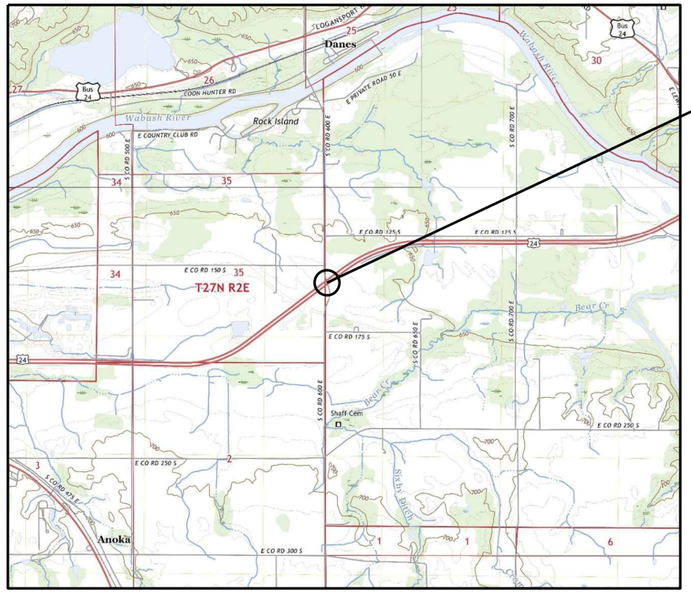
ROUTE: US 24 AT: RP 69+0.5

PROJECT NO. 2200045 P.E.
2200045 R/W
2200045 CONST.

NO ADDITIONAL RIGHT OF WAY REQUIRED FOR THIS PROJECT

STAGE 1 PLANS
MARCH 4, 2024

IINTERSECTION IMPROVEMENT (J-TURN) ON US 24 AT CR 600 E
LOCATED 2.82 MILES EAST OF US 35
IN SECTIONS 35 & NO. 10 WAPAPESHEE, T-27-N, R-2-E
TIPTON TOWNSHIP, CASS COUNTY, INDIANA



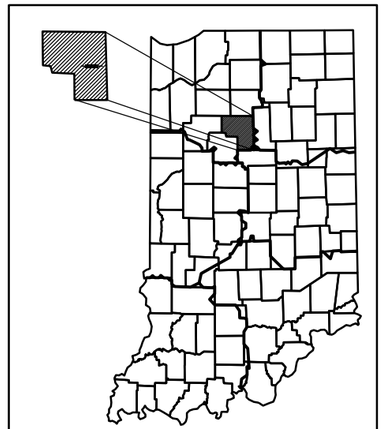
PROJECT LOCATION
Begin Project Sta. 252+60.00 "F"
End Project Sta. 268+60.00 "F"

TRAFFIC DATA - US 24		
A.A.D.T.	(2019)	5,040 V.P.D.
A.A.D.T.	(2039)	6,230 V.P.D.
D.H.V	(2039)	524 V.P.H.
DIRECTIONAL DISTRIBUTION		48.5% WB
TRUCKS (% A.A.D.T.)		33.5%
TRUCKS (% D.H.V.)		28.2%

DESIGN DATA	
DESIGN SPEED	60 M.P.H.
PROJECT DESIGN CRITERIA	3R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	PRINCIPAL ARTERIAL - OTHER
RURAL/URBAN	RURAL
TERRAIN	LEVEL
ACCESS CONTROL	PARTIAL

TRAFFIC DATA - CR 600 E		
A.A.D.T.	(2019)	2,170 V.P.D.
A.A.D.T.	(2039)	2,590 V.P.D.
D.H.V	(2039)	250 V.P.H.
DIRECTIONAL DISTRIBUTION		45.9% NB
TRUCKS (% A.A.D.T.)		6.1%
TRUCKS (% D.H.V.)		5.1%

DESIGN DATA	
DESIGN SPEED	45 M.P.H.
PROJECT DESIGN CRITERIA	3R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	MAJOR COLLECTOR
RURAL/URBAN	RURAL
TERRAIN	LEVEL
ACCESS CONTROL	NONE



PROJECT LOCATION SHOWN BY
CASS COUNTY

LATITUDE: 40°44'13" N LONGITUDE: 86°16'09" W

BRIDGE LENGTH: N/A MI.
ROADWAY LENGTH: 0.30 MI.
TOTAL LENGTH: 0.30 MI.
MAX. GRADE: 1.04% %

INDIANA DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS DATED 2024 TO
BE USED WITH THESE PLANS.

PLANS PREPARED BY: HANSON (317)293-9024 PHONE NUMBER

CERTIFIED BY: _____ DATE

APPROVED FOR LETTING: _____ INDIANA DEPARTMENT OF TRANSPORTATION DATE

DESIGNATION
2200045

SURVEY BOOK	SHEETS
	1 of 23
CONTRACT	PROJECT
R-44676	2200045

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UTILITIES

FIBER OPTIC:
Berry Com
225 W. 450 N
Kokomo, IN 46901
Designated Contact: James Berry
Phone Number: (800) 368-8511 x111
Email: james@berryit.net

In Fiber Network DBA
Intelligent Fiber Network
1401 Wynkoop St., Floor 4, Rm-Data
Denver, CO 80202
Designated Contact: George Huss
Phone Number: (443) 403-2023
Email: george.huss@zayo.com

TELEPHONE:
Frontier

ELECTRIC, SEWER, WATER:
Logansport Municipal Utilities
722 Bringhurst
Logansport, IN 46947
Designated Contact: Bob Dunderman
Phone Number: (574) 753-6231
Email: rdunderman@logansportutilities.com

ELECTRIC:
Miami Cass R.E.M.C.

GENERAL NOTES

REVIEWER NOTE:
General Notes to be completed at a later stage.

INDEX

SHEET NO.	SUBJECT
1	TITLE
2	INDEX
3	TYPICAL SECTIONS
4 - 7	MAINTENANCE OF TRAFFIC
8 - 9	PLAN AND PROFILE
10	SIGNING AND PAVEMENT MARKING
11	ROAD SUMMARY OF QUANTITIES
12 - 23	CROSS SECTIONS

REVISIONS

SHEET NO.	DATE	REVISED

PER INDIANA STATE LAW IN-69-1991, IT IS AGAINST THE LAW TO EXCAVATE WITHOUT NOTIFYING THE UNDERGROUND LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK.

Indiana 811
Know what's below.
Call before you dig.

RECOMMENDED FOR APPROVAL _____ 3/1/2024
DESIGN ENGINEER DATE

DESIGNED: NLS DRAWN: NLS
CHECKED: DJK CHECKED: DJK

INDIANA
DEPARTMENT OF TRANSPORTATION

SHEET INDEX

	CULVERT DESIGNATION
SCALE	ROAD DESIGNATION
NTS	2200045

SURVEY BOOK	SHEETS
	2 of 23
CONTRACT	PROJECT
R-44676	2200045

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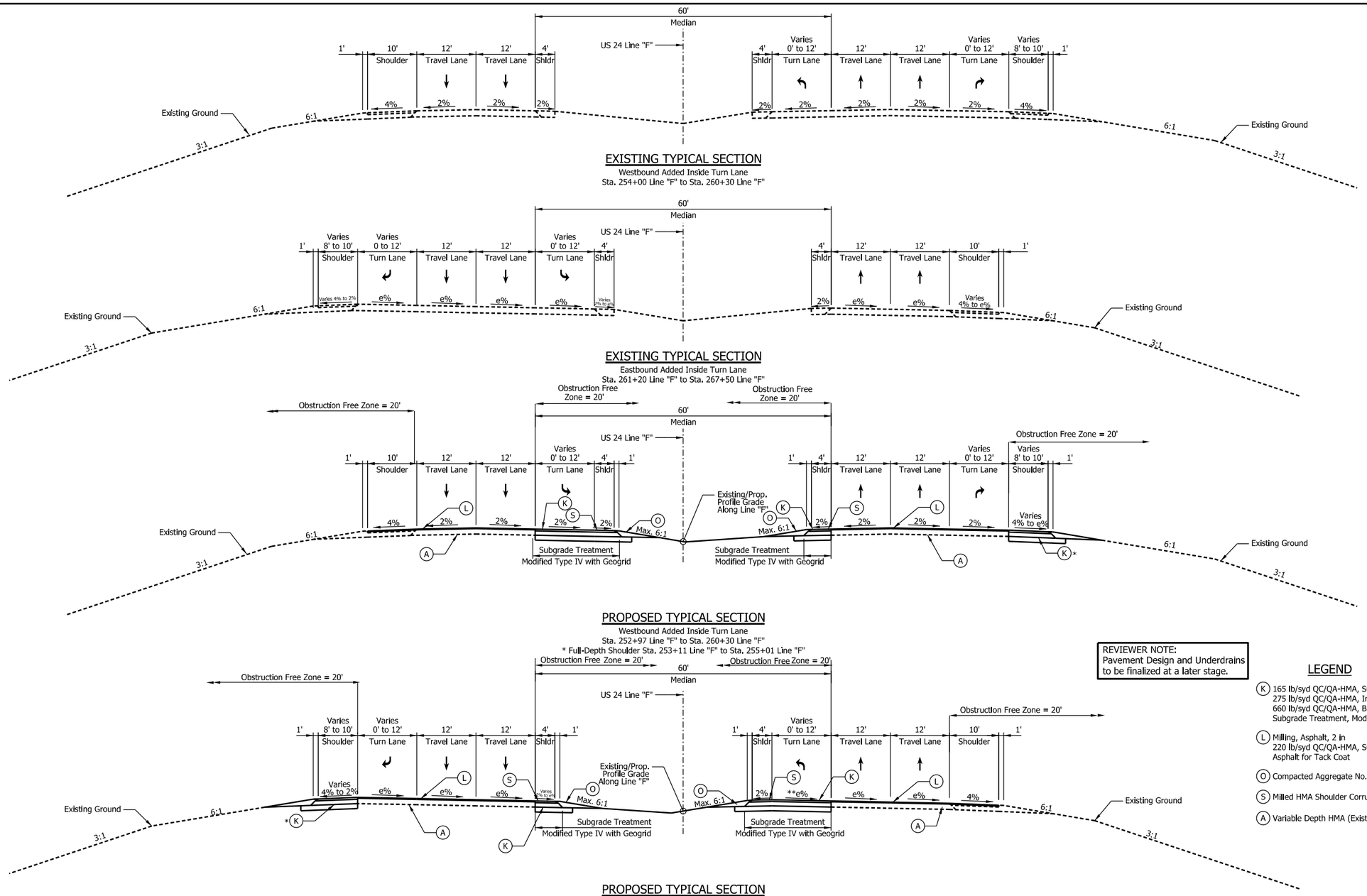

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

DESIGNED: NLS DRAWN: NLS

CHECKED: DJK CHECKED: DJK

INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
US 24

SCALE	DESIGNATION
NTS	2200045
SURVEY BOOK	SHEETS
	3 of 23
CONTRACT	PROJECT
R-44676	2200045

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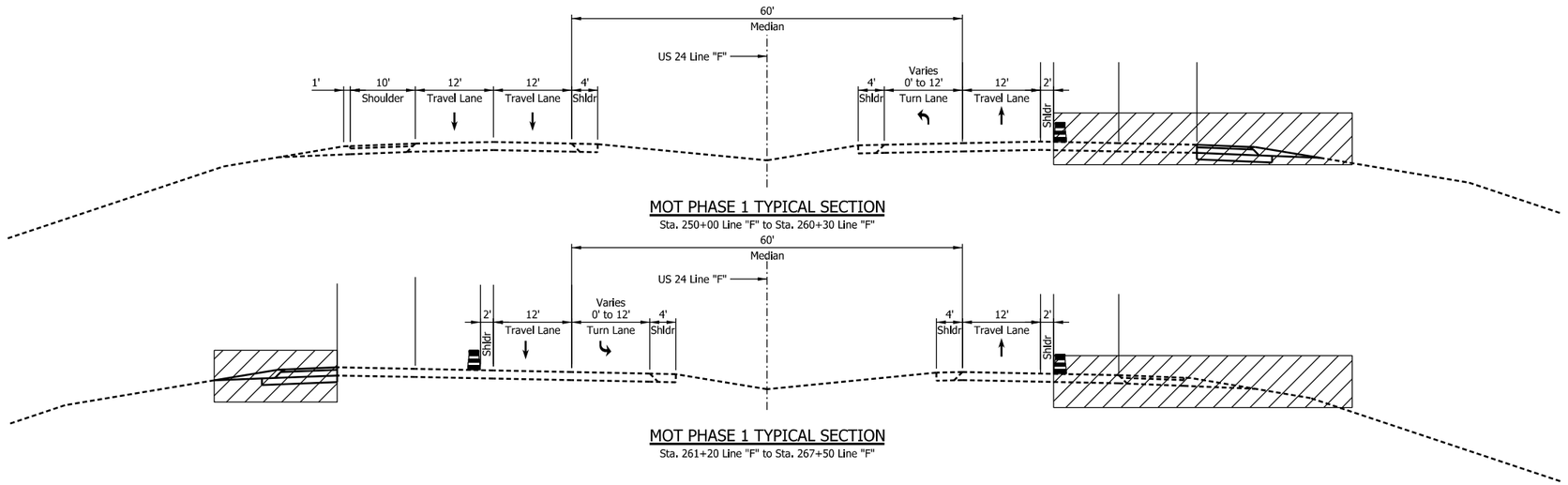


MOT PHASE 1 TYPICAL SECTION

Sta. 250+00 Line "F" to Sta. 260+30 Line "F"

MOT PHASE 1 TYPICAL SECTION

Sta. 261+20 Line "F" to Sta. 267+50 Line "F"

CONSTRUCTION NOTES

Work Zone Speed = 50 mph

Phase 1

1. Traffic shall be maintained with a single lane closure.
   Shift eastbound US 24 traffic to the inside travel lanes.
   Intersection with CR 600 E will remain open.
2. Construct the new full-depth outside shoulder across from the U-turn median crossovers.
3. Install portion of the pipes in the outside lane area and riprap connecting to Str. Nos. 101 and 102.

Phase 2

1. Traffic shall be maintained with a single lane closures.
   Shift eastbound and westbound US 24 traffic to the outside travel lanes.
   Intersection with CR 600 E will remain open.
2. Construct the new eastbound and westbound U-turn auxiliary lanes and U-turn median crossovers in the US 24 median.
3. Install Str. Nos. 101 and 102 and the remaining sections of the pipes in the inside lane areas.

Phase 3

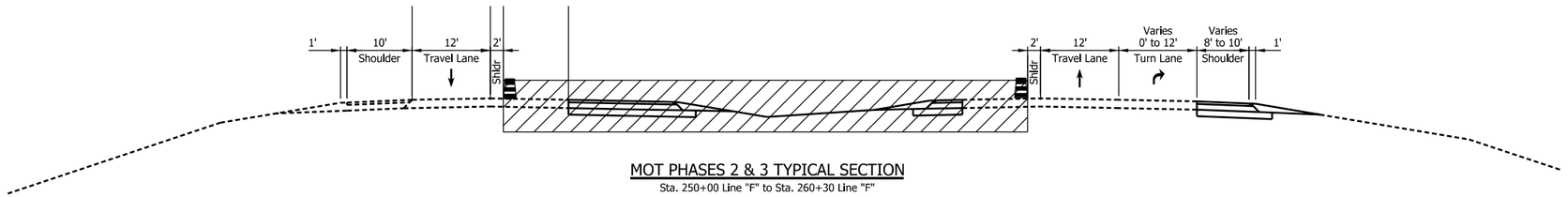
1. Close US 24 intersection with CR 600 E.
   Eastbound and westbound traffic shall be maintained in the outside travel lanes with a single lane closures on US 24.
   CR 600 E through, left turning traffic from CR 600 E onto US 24, and left turning traffic from US 24 onto CR 600 E will utilize the newly constructed U-turn auxiliary lanes and median crossovers.
2. Remove median crossover at intersection with CR 600 E and regrade median.
3. Install permanent pavement markings and signage.

Phase 4

1. Traffic shall be maintained with single lane closures.
2. Mill 2 inches of existing pavement and overlay with 2 inches of new HMA.

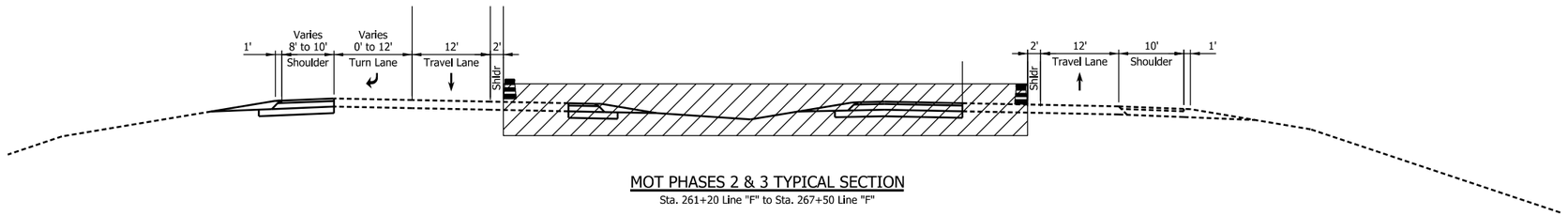
LEGEND

Construction Area



MOT PHASES 2 & 3 TYPICAL SECTION

Sta. 250+00 Line "F" to Sta. 260+30 Line "F"



MOT PHASES 2 & 3 TYPICAL SECTION

Sta. 261+20 Line "F" to Sta. 267+50 Line "F"

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: NLS | DRAWN: NLS

CHECKED: DJK | CHECKED: DJK

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
TYPICAL SECTIONS

SCALE	DESIGNATION
NTS	2200045
SURVEY BOOK	SHEETS
	4 of 23
CONTRACT	PROJECT
R-44676	2200045

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250+00

255+00

260+00

Existing R/W

WB US 24

US 24 - Line "F"

EB US 24

CR 600 E

P.I. = 22+71.20

P.C. = 21+84.54

Existing R/W

MATCH LINE STA. 263+00 "F"

Existing R/W

P.T. = 18+15.00

CR 600 E

Existing R/W

265+00

270+00

275+00

MATCH LINE STA. 263+00 "F"

P.C. = 266+31.88

REVIEWER NOTE:
MOT Plan sheets are in the preliminary design stage. The current sheets show construction areas. Lane closures are proposed In the MOT design and details will be shown in a later submittal.

CURVE # 1
PI = 279+14.16
Delta = 37°06'50" RT
D = 1°30'00"
R = 3819.72'
T = 1282.28'
L = 2474.26'
E = 209.49'

Construction Area

DESIGNED
DRAWN
REVIEWED

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RECOMMENDED FOR APPROVAL _____ 3/1/2024
DESIGN ENGINEER DATE

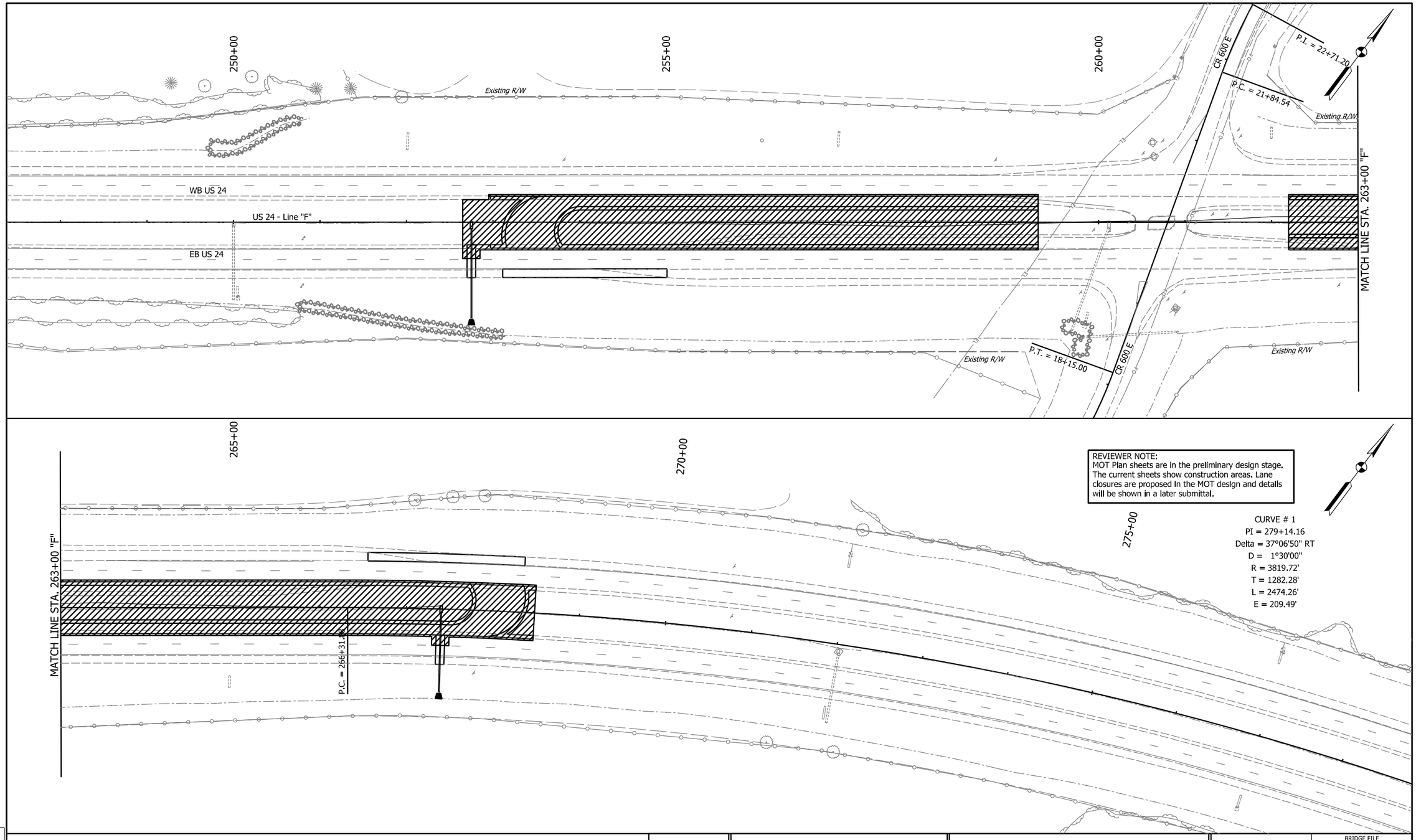
DESIGNED: _____ DRAWN: _____

CHECKED: _____ CHECKED: _____

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 1

	BRIDGE FILE
SCALE	DESIGNATION
1" = 50'	2200045
SURVEY BOOK	SHEETS
	5 of 23
CONTRACT	PROJECT
R-44676	2200045



Construction Area

RECOMMENDED FOR APPROVAL _____ 3/1/2024
DESIGN ENGINEER DATE

DESIGNED: _____ DRAWN: _____

CHECKED: _____ CHECKED: _____

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 2

	BRIDGE FILE
SCALE	DESIGNATION
1" = 50'	2200045
SURVEY BOOK	SHEETS
	6 of 23
CONTRACT	PROJECT
R-44676	2200045

DESIGNED
DRAWN
REVIEWED

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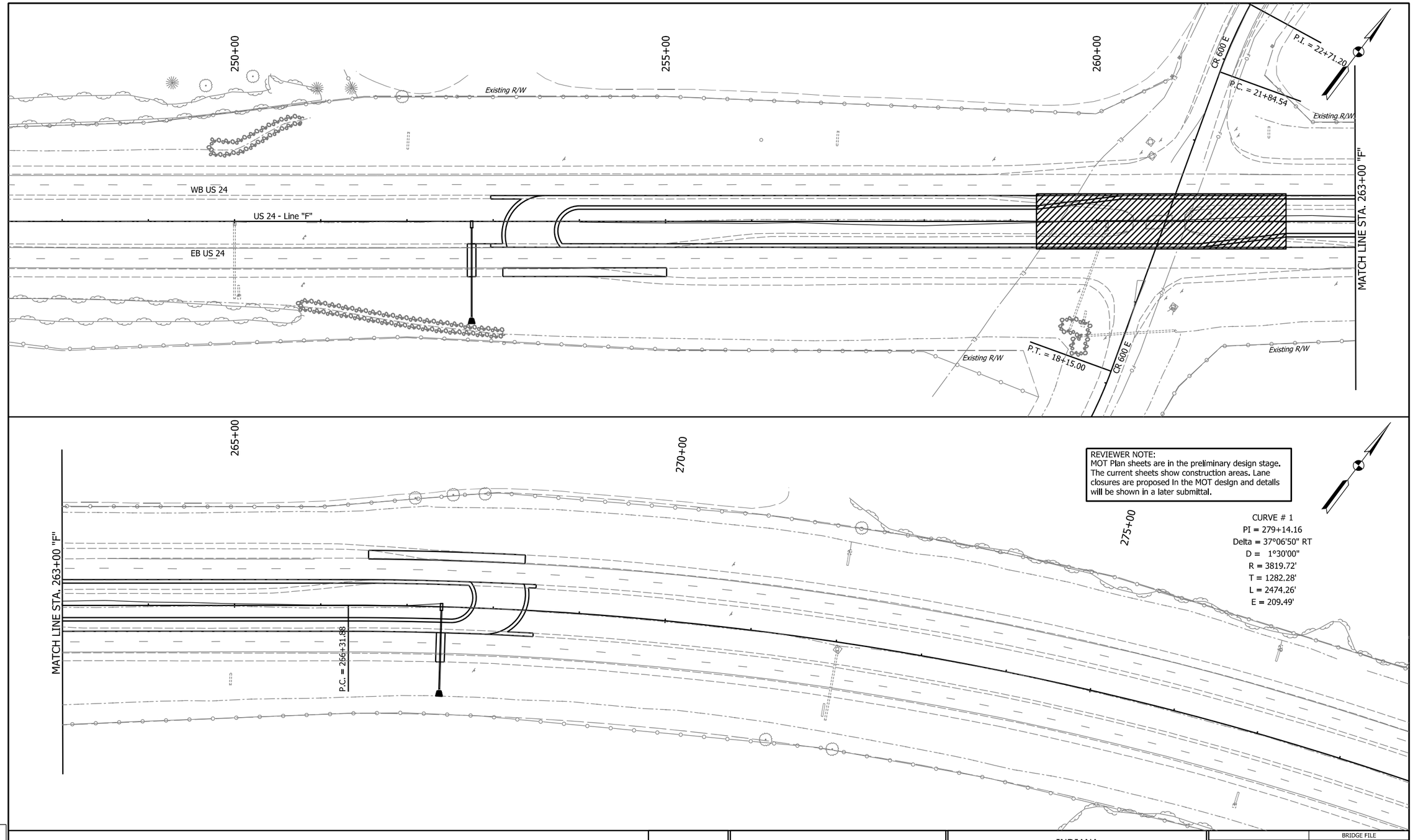

Construction Area

RECOMMENDED FOR APPROVAL _____ 3/1/2024
DESIGN ENGINEER DATE

DESIGNED: _____ DRAWN: _____
CHECKED: _____ CHECKED: _____

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 3

	BRIDGE FILE
SCALE	DESIGNATION
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SURVEY BOOK	SHEETS
	7 of 23
CONTRACT	PROJECT
R-44676	2200045

DESIGNED
DRAWN
REVIEWED

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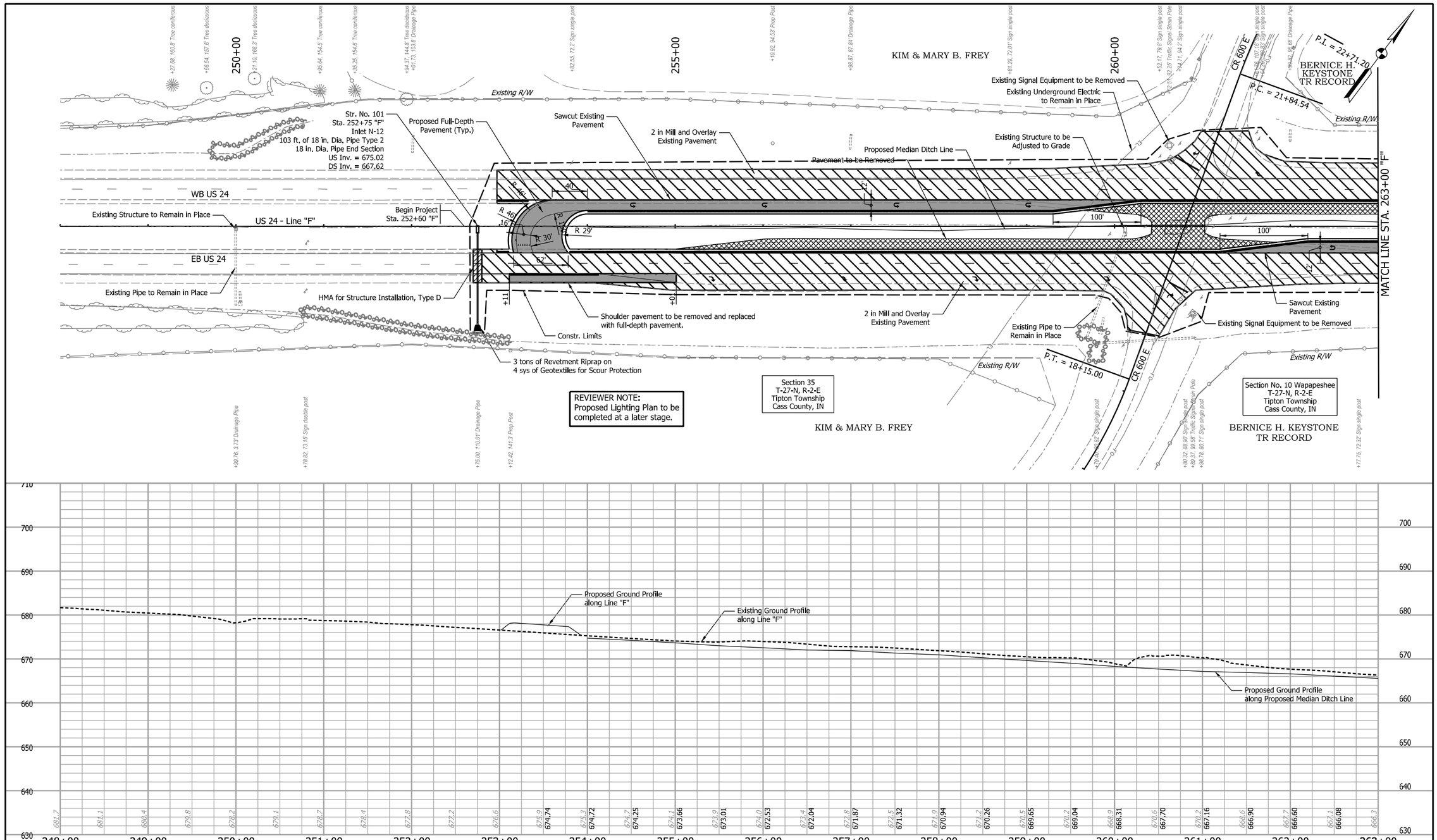

DESIGNED	NLS	03/04/24
DRAWN	NLS	03/04/24
REVIEWED	DJK	03/04/24

RECOMMENDED FOR APPROVAL _____ 3/1/2024
DESIGN ENGINEER — DATE

DESIGNED: NLS | DRAWN: NLS
CHECKED: DJK | CHECKED: NLS

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 248+00 TO STA. 263+00 "F"

	BRIDGE FILE
SCALE	DESIGNATION
1" = 50'	2200045
SURVEY BOOK	SHEETS
	8 of 23
CONTRACT	PROJECT
R-44676	2200045

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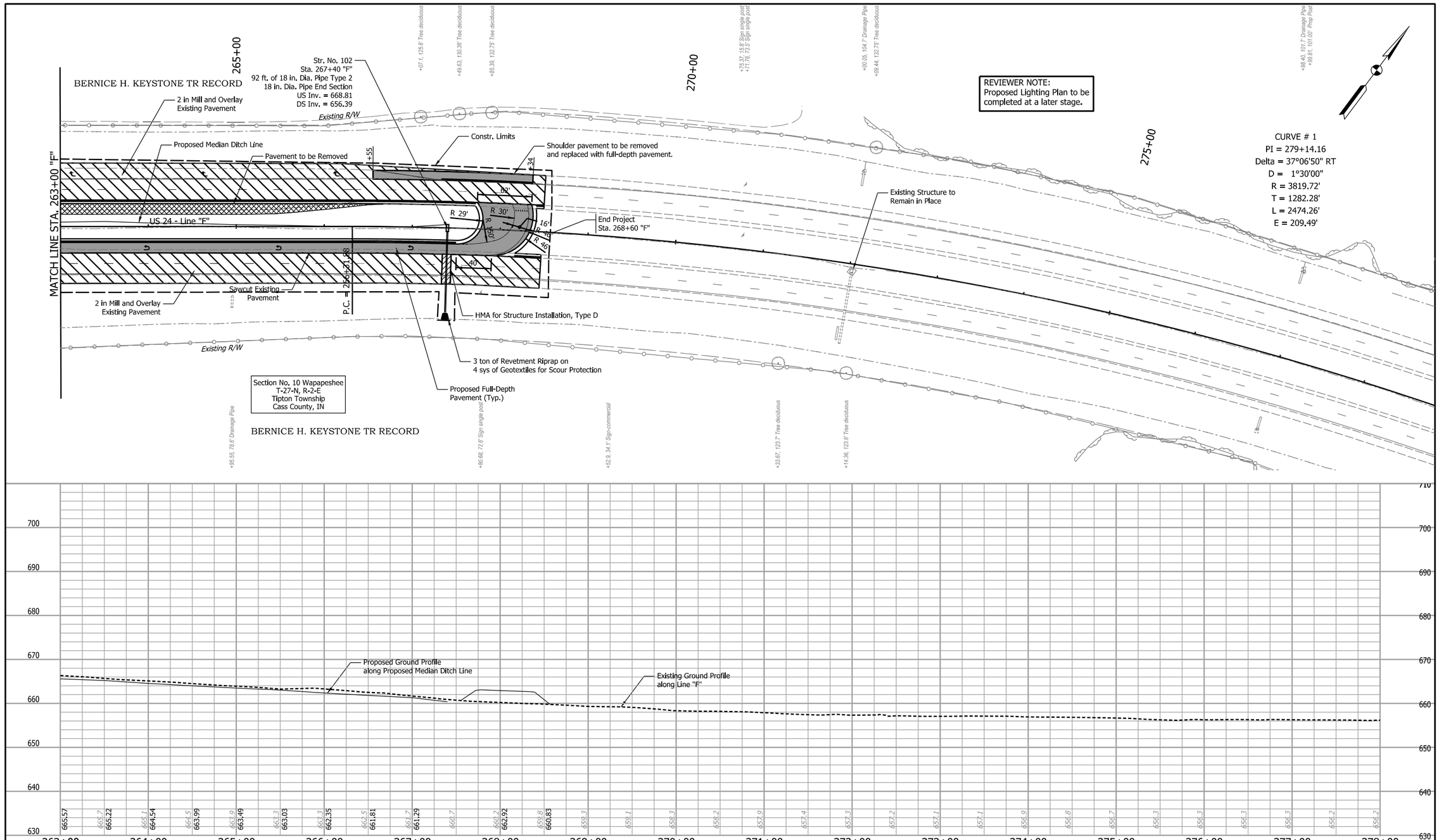

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REVIEWED	DJK	03/04/24

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RECOMMENDED FOR APPROVAL _____ 3/1/2024
DESIGN ENGINEER DATE

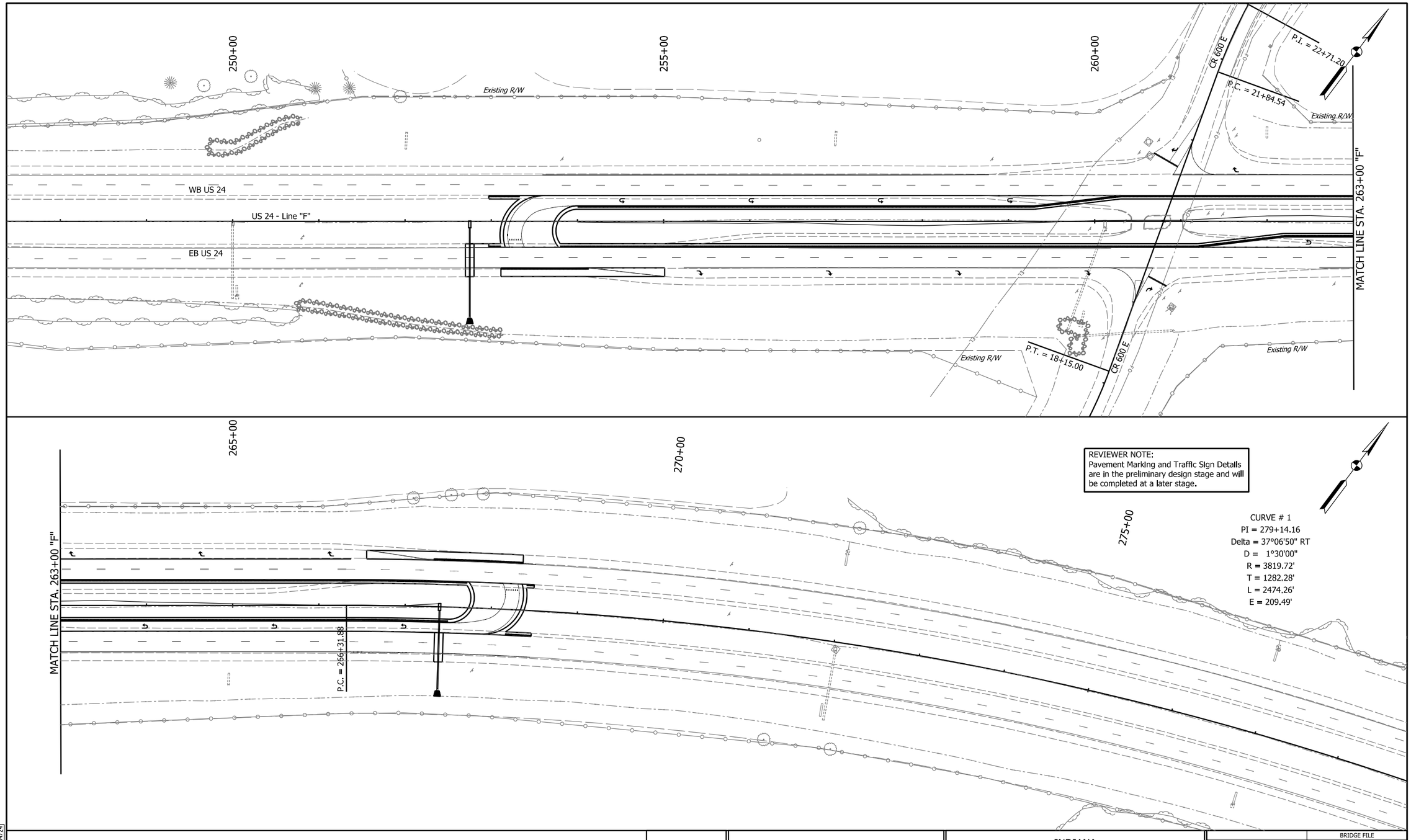
DESIGNED: NLS | DRAWN: NLS

CHECKED: DJK | CHECKED: NLS

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 263+00 TO STA. 278+00 "F"

	BRIDGE FILE
SCALE	DESIGNATION
1" = 50'	2200045
SURVEY BOOK	SHEETS
	9 of 23
CONTRACT	PROJECT
R-44676	2200045



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REVIEWED	DJK	03/04/24

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RECOMMENDED FOR APPROVAL _____ 3/1/2024
DESIGN ENGINEER — DATE

DESIGNED: NLS | DRAWN: NLS
CHECKED: DJK | CHECKED: NLS

INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND TRAFFIC SIGN DETAILS

	BRIDGE FILE
SCALE	DESIGNATION
1" = 50'	2200045
SURVEY BOOK	SHEETS
	10 of 23
CONTRACT	PROJECT
R-44676	2200045

APPENDIX C

Early Coordination

Sample Early Coordination Letter

INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758-ES
Indianapolis, Indiana 46204

PHONE: (855) 463-6848
(855) INDOT4U

Eric Holcomb, Governor
Michael Smith, Commissioner

January 16, 2024

Environmental Coordinator
Indiana Department of Natural Resources
Division of Fish & Wildlife
402 W. Washington Street, Room W273
Indianapolis, IN 46204

Re: Early Coordination Letter, Des. No.: 2200045 U.S. Highway (US) 24 Intersection Improvement Project at County Road (CR) 600 East (E) in Cass County, Indiana

Dear Environmental Coordinator:

The Indiana Department of Transportation (INDOT), with federal and state funding, intends to proceed with the aforementioned intersection improvement project in Cass County, Indiana. This letter is part of the early coordination phase of the environmental review process. We are requesting comments from your area of expertise regarding any possible environmental effects associated with this project. **Please use the above designation number and description in your reply.** We will incorporate your comments into a study of the project's environmental impacts.

The proposed project is located on US 24 at the intersection with CR 600 E. This section of US 24 is a four-lane divided highway on the National Highway System and is classified as a Rural Principal Arterial. The existing US 24 facility consists of four 12-foot (ft.) travel lanes (two eastbound and two westbound), two 12 ft. turn lanes in each direction at the CR 600 E intersection, 10 ft. paved outside shoulders, 4 ft. paved inside shoulders, and a 25 to 50 ft. grass median. The draft need for the project is due to the crash history at the intersection. The draft purpose is to reduce the potential for crashes and provide a long-term solution for safe and efficient operation of the intersection.

The proposed project involves eliminating the existing intersection and median crossover at CR 600 E and constructing two median U-turn intersections approximately 800 ft. on either side of the existing intersection. Proposed work includes construction of full-depth pavement acceleration/deceleration lanes and U-turn crossings within the existing US 24 median. Two new median drainage structures will be installed at the U-turn crossings, and one existing median drainage structure (CLV-4373) within the project area will be adjusted or replaced as needed. The existing traffic signal will be removed and new roadway lighting will be installed. The project will be approximately 1600 ft. in length along the US 24 roadway. No permanent or temporary right-of-way (ROW) will be required. No tree removal will occur. The preferred maintenance of traffic (MOT) is anticipated to require phased lane and shoulder closures on US 24, and a short-term local detour for CR 600 E will be necessary during construction of the crossovers. The project is anticipated to begin construction in Fall 2026.

Land use within the vicinity of the project is agricultural and rural residential. Hanson Professional Services Inc. will perform waters and wetlands determinations to identify water resources that may be present and coordinate findings with

INDOT Ecology & Waterway Permitting Office (EWPO). The project is anticipated to qualify for the Rangewide Programmatic Agreement for the Indiana Bat and northern long-eared bat by completing the Information for Planning and Consultation (IPaC). Coordination will occur with INDOT Cultural Resources Office (CRO) to evaluate the project area for archaeological and historic resources and for Section 106 compliance. The results of this investigation will be forwarded to the State Historic Preservation Officer (SHPO) for review and concurrence as appropriate.

Please provide your response within thirty (30) calendar days from the date of this letter. However, should you find that an extension to the response time is necessary, a reasonable amount may be granted upon request. If you have any questions regarding this matter, please feel free to contact Tamra Reece, Senior Environmental Scientist, Hanson Professional Services Inc., *treece@hanson-inc.com*, (317) 803-8958, or Jackie Hockaday, INDOT Project Manager, *jhockaday@indot.in.gov*, (574) 601-9352. Thank you in advance for your input.

Sincerely,

Tamra L. Reece
Senior Environmental Scientist
Hanson Professional Services Inc.

Attachments –
Maps/Graphics (Location, Topographic, Aerial, Site Photographs)

Maps/Graphics included in Appendix B

The following agencies received early coordination letters:

Kari Carmany-George Federal Highway Administration Federal Office Building, Room 254 575 North Pennsylvania Street Indianapolis, Indiana 46204 k.carmanygeorge@dot.gov	Erik Sandstedt Field Environmental Officer Chicago Regional Office US Department of Housing & Urban Development Metcalf Fed. Bldg. 77 W. Jackson Blvd. Room 2401 Chicago, IL 60604 erik.r.sandstedt@hud.gov
Indiana Geological and Water Survey 611 North Walnut Grove Bloomington, IN 47405 https://igws.indiana.edu/eAssessment	Ms. Deborah Snyder US Army Corps of Engineers, Louisville District, Indianapolis Regulatory Office, Indianapolis, IN 46216 regulatoryapplicationsLRL@usace.army.mil
Environmental Coordinator Indiana Department of Natural Resources Division of Fish and Wildlife 402 West Washington Street, Rm. W273 Indianapolis, IN 46204 environmentalreview@dnr.in.gov	Stewart Michels Environmental Section Manager INDOT – LaPorte District 315 E. Boyd Blvd. LaPorte, IN 46350 smichels@indot.in.gov
Jackie Hockaday Project Manager INDOT – LaPorte District 315 E. Boyd Blvd. LaPorte, IN, 46350 jhockaday@indot.in.gov	Mike Deitrich District 3 Commissioner Cass County Commissioners 200 Court Park, Rm. 200 Logansport, IN 46947 mike.deitrich@co.cass.in.us
Rocky Buffum Director Cass County Emergency Management 1227 N. SR 17 Logansport, IN 46947 ema@co.cass.in.us	Mike Collins Environmental Health Specialist Cass County Health Department 512 High St. Logansport, IN 46947 mike.collins@co.cass.in.us
Jeff Smith Highway Superintendent Cass County Highway Department SR 17 N. Logansport, IN 46947 highway@co.cass.in.us	Heather Fouts Executive Director Cass County Historical Society 421 E. Broadway St. Logansport, IN 46947 hfouts@casscountyhistory.org
Josh LeDonne Surveyor Cass County Surveyor's Office 200 Court Park, Room 306 Logansport, IN 46947 josh.ledonne@co.cass.in.us	

CASS COUNTY EMERGENCY MANAGEMENT

1227 North State Road 17
Logansport, Indiana 46947
(574) 722-2484

ROCKY BUFFUM

Director

31 January 2024

VIA ELECTRONIC MAIL

Jackie Hockaday
Indiana Department of Transportation
100 N Senate Avenue
Room N758-ES
Indianapolis, IN 46204
jhockaday@indot.in.gov

Tamra Reece
Hanson Professional Services, Inc
treece@hanson-inc.com

RE: Early Coordination Letter, Des. No.: 2200045 U.S. Highway (US) 24 Intersection Improvement Project at County Road (CR) 600 East (E) in Cass County, Indiana

This letter is in response to your communication dated 16 January 2024. Specifically, you requested comments regarding any possible environmental effects associated with the project referenced above.

I am very familiar with this area. As the current coordinator of the Cass County Emergency Response Team (Hazardous Materials Team) and past Fire Chief for the New Waverly Fire Department (the first due fire department for crashes at this intersection) I have responded to crashes at this intersection many times.

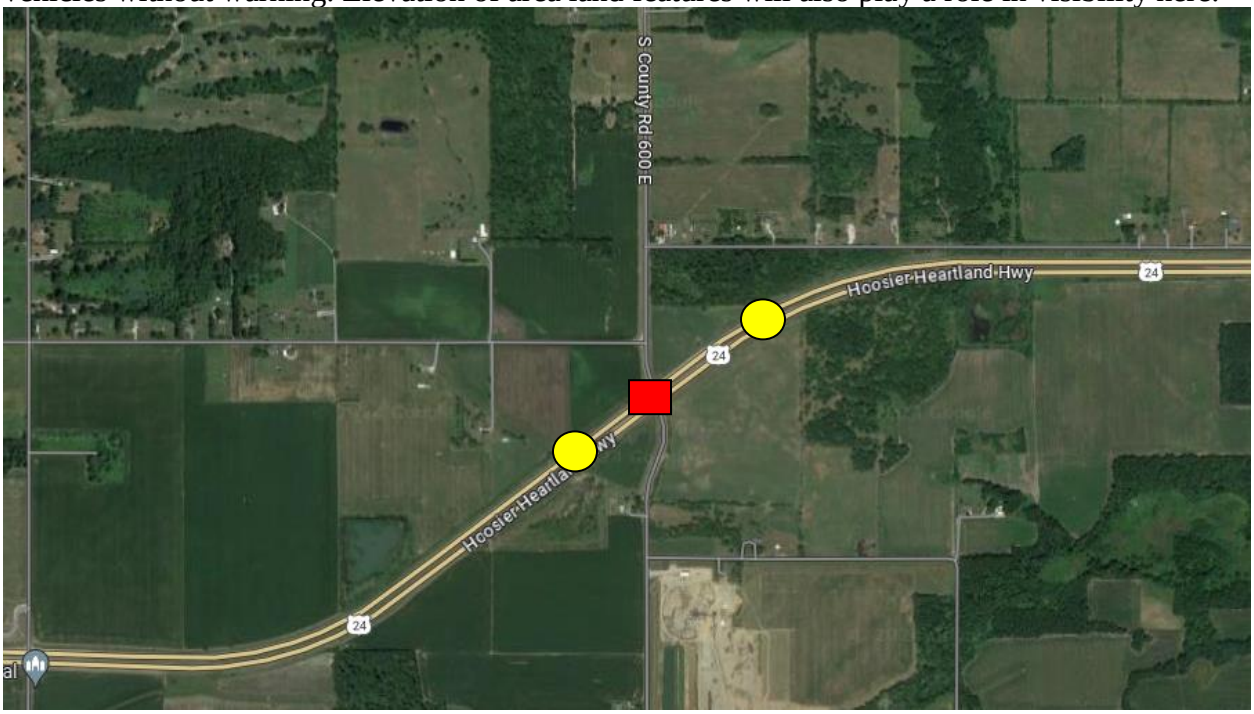
My concerns in regard to this project would be primarily based on the Commodity Flow of hazardous substances thru this intersection. As you are likely aware, this intersection handles a great deal of traffic involving semis and other large vehicles. Examples of loads which frequently pass thru this intersection include but are not limited to:

- Anhydrous Ammonia Semis and Nurse tanks in route to/from Koch Fertilizer and the Andersons to the south, and in route to/from agricultural sites for product distribution.
- Livestock vehicles (medium size trailers up to semis) in route to/from adjacent livestock farming operations.
- Nurse tank to semi sized loads of manure and fertilizer agents in route to/from local farming operations.
- Gasoline and other petroleum semis in route to/from area bulk storage and retail facilities
- Farm machinery that transits thru the intersection in agricultural seasons.
- Propane semis and bobtail trucks in route to/from area facilities including residential and farm distribution as well as bulk facilities in Walton, Peru and Logansport.
- Hazardous Waste Shipments in route to the Oak Ridge Landfill South of Logansport.

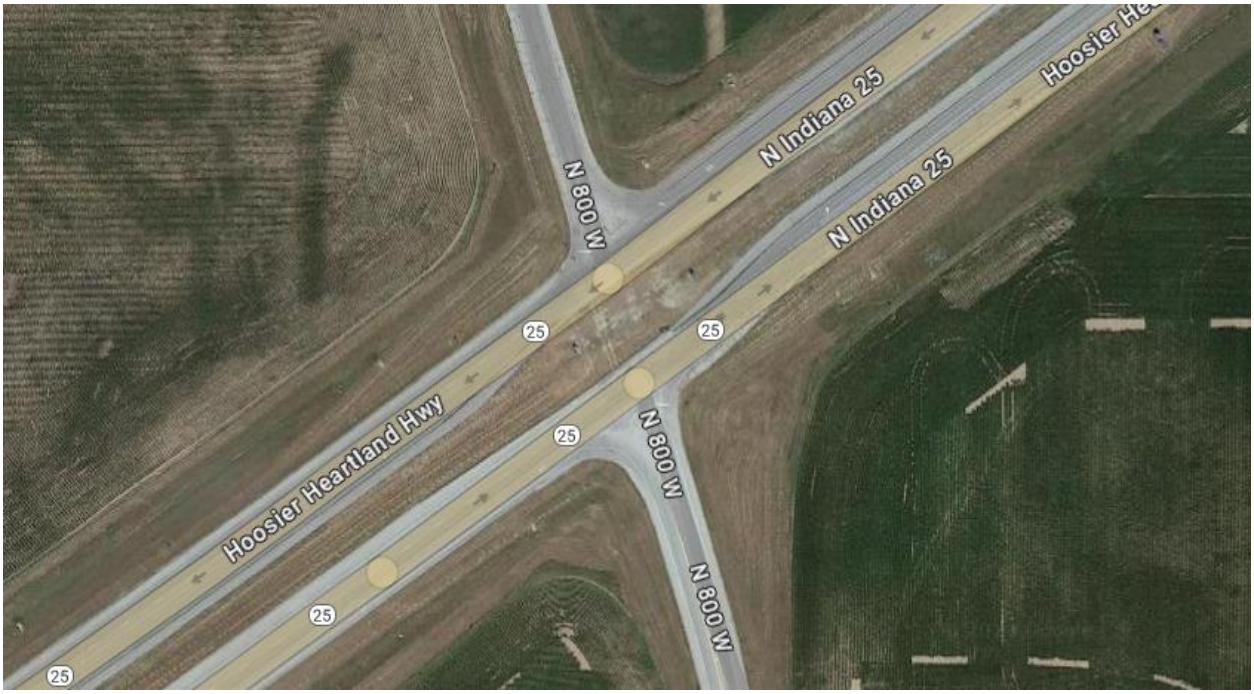
Many of the vehicles are moving North to South or vice versa utilizing County Road 600 East. Some turn onto the county road from their US24 travel lane.

My concern in regards to the vehicles above is the difficulty of handling a J Turn Intersection as described in your letter. Due to length, these vehicles would frequently find themselves slowing and turning in the area of this curve with traffic rapidly approaching from behind. Additionally, vehicles would be a slow-moving impediment as they have to cross both lanes of travel and the shoulder at times when accessing the opposing traffic lanes. During peak agricultural seasons, any backup of the turn lanes would result in large vehicles, sometimes carrying hazardous substances, being stopped on the highway with high speed traffic continuing to approach from upstream.

I do not believe the Indiana Department of Transportation (INDOT) maps in the early coordination letter adequately emphasize the nearby curves vehicles are coming from at high rates of speed towards the proposed J-Turns. I have provided a view below for reference. The Red Square indicates the proposed intersection closing. The Yellow Circles indicate the areas I interpret as J turn locations based on the content of the early coordination letter. As you can see, vehicles coming around the curved roadway would quickly come up on slow or stopped large vehicles without warning. Elevation of area land features will also play a role in visibility here.



Another possible hazard could be one as found at the Heartland Highway and County Road 800 West in Carroll County, where there are well worn tire marks thru the median as local drivers continue to just disregard the designated travel path and make their own. The disregard of this intervention is visible to passersby on the road and even on Google Earth:



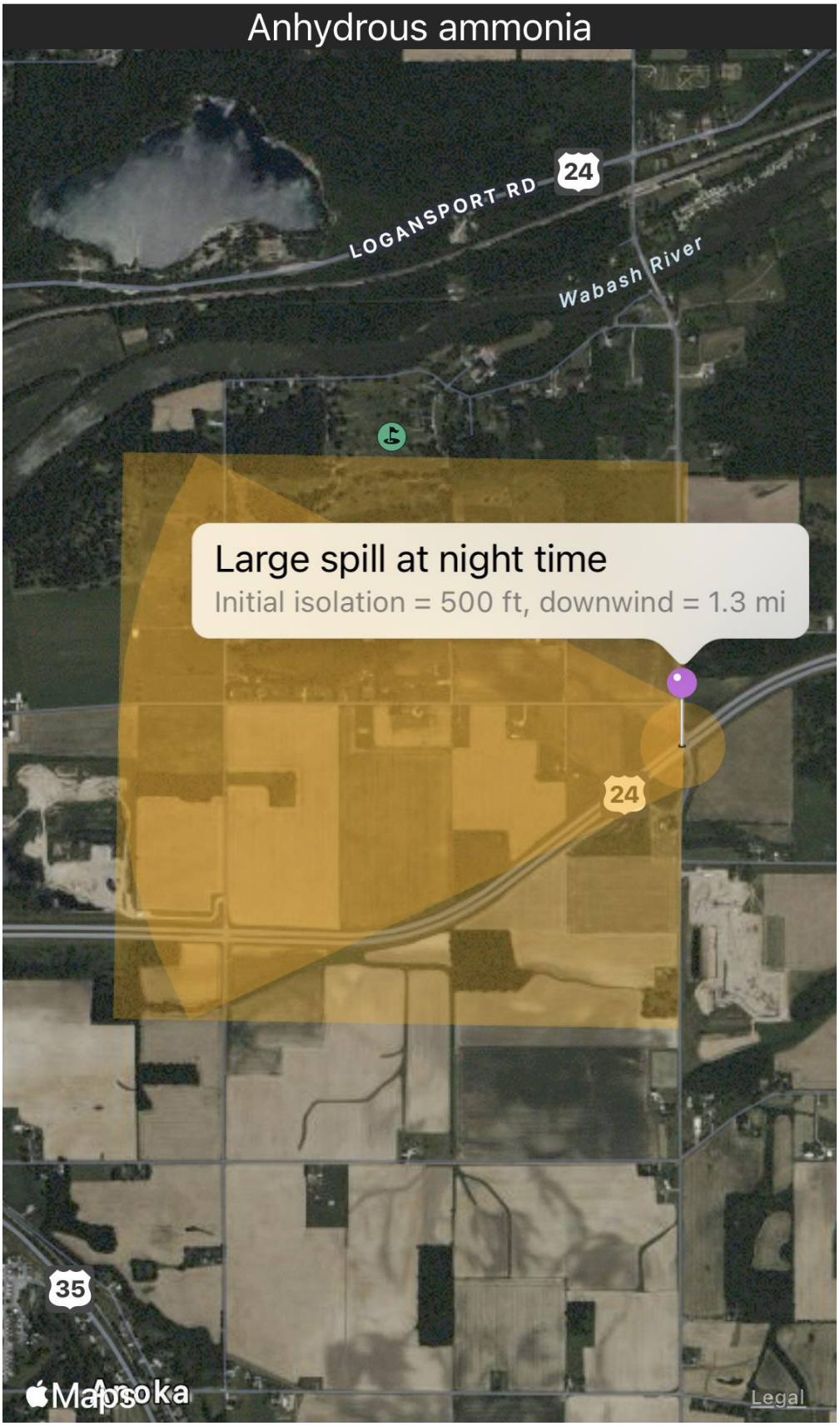
In the event of a crash involving a catastrophic release, the release of these products could pose significant danger to human lives in nearby rural residences, campground and recreational areas to the North, and to the nearby waterways. As an example of a possible impact, I have shared multiple scenarios of the impact and isolation areas for release involving an Anhydrous Ammonia semi. These zones were generated based on guidelines for initial response found in the *Emergency Response Guidebook 2020* and are attached at the end of this letter. I used multiple wind direction scenarios for reference. Please note all of these models are low wind events. Moderate or high wind would make the area of concern larger.

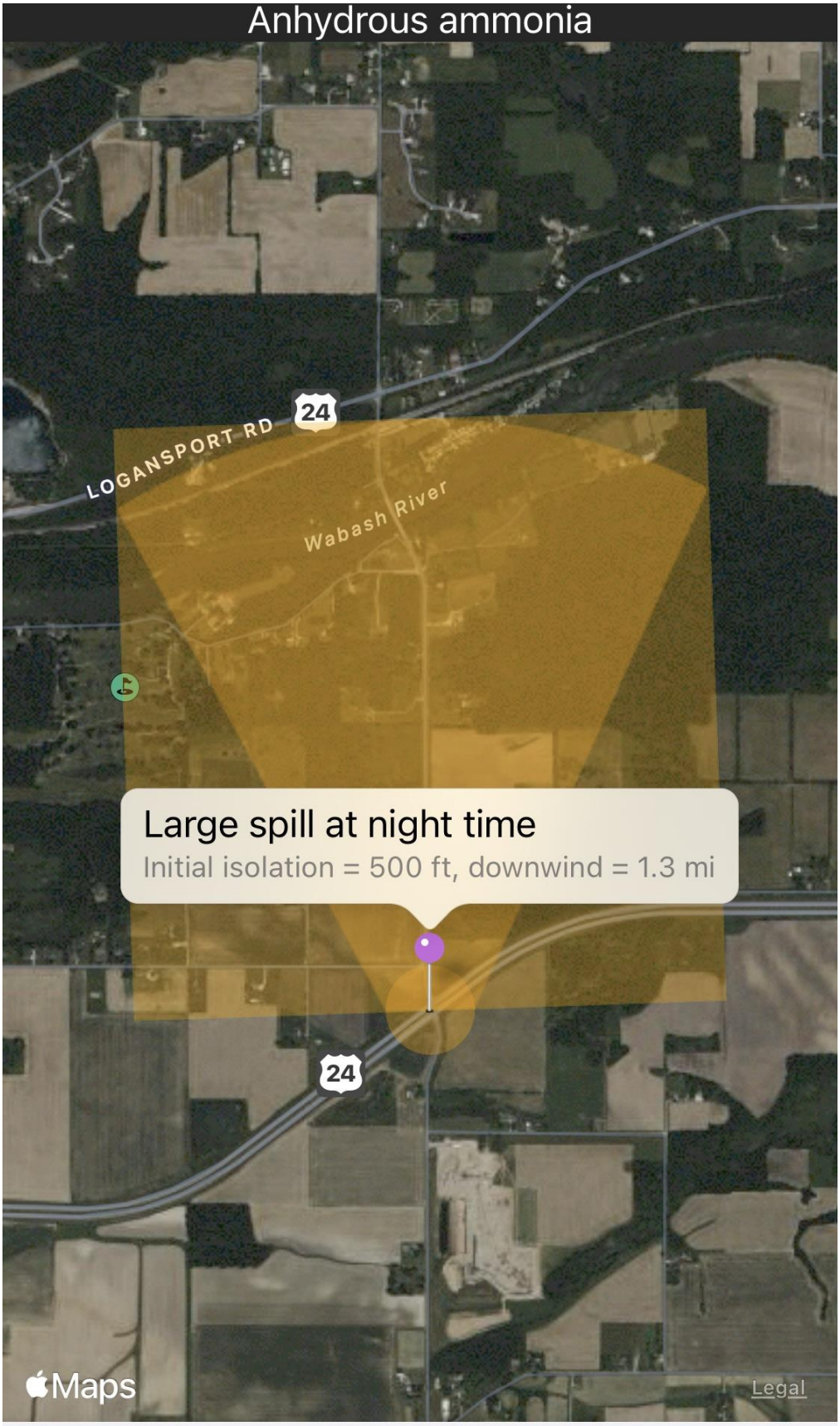
I would encourage INDOT to consider whether a solution might be possible that better facilitates the volume of large vehicles that would be forced to perform U-Turns (or EFFECTIVLY reroutes traffic to another location) and mitigates the added hazards that would introduce, and also to consider intermediate environmental protection so any catastrophic release of material could be intercepted before making its way to adjacent farm fields and rivers (including the Wabash River). The watershed draining to the Wabash River is readily apparent on the maps attached at the end of this document.

Please do not hesitate to reach out should you have questions or need additional information. Thank you for your consideration.

Sincerely,

Rocky A. Buffum, MPA, PEM, MMEMS
Director


Anhydrous ammonia
LOGANSPORT RD
24
Wabash River
Large spill at night time
Initial isolation = 500 ft, downwind = 1.3 mi
24
35
Maps
Legal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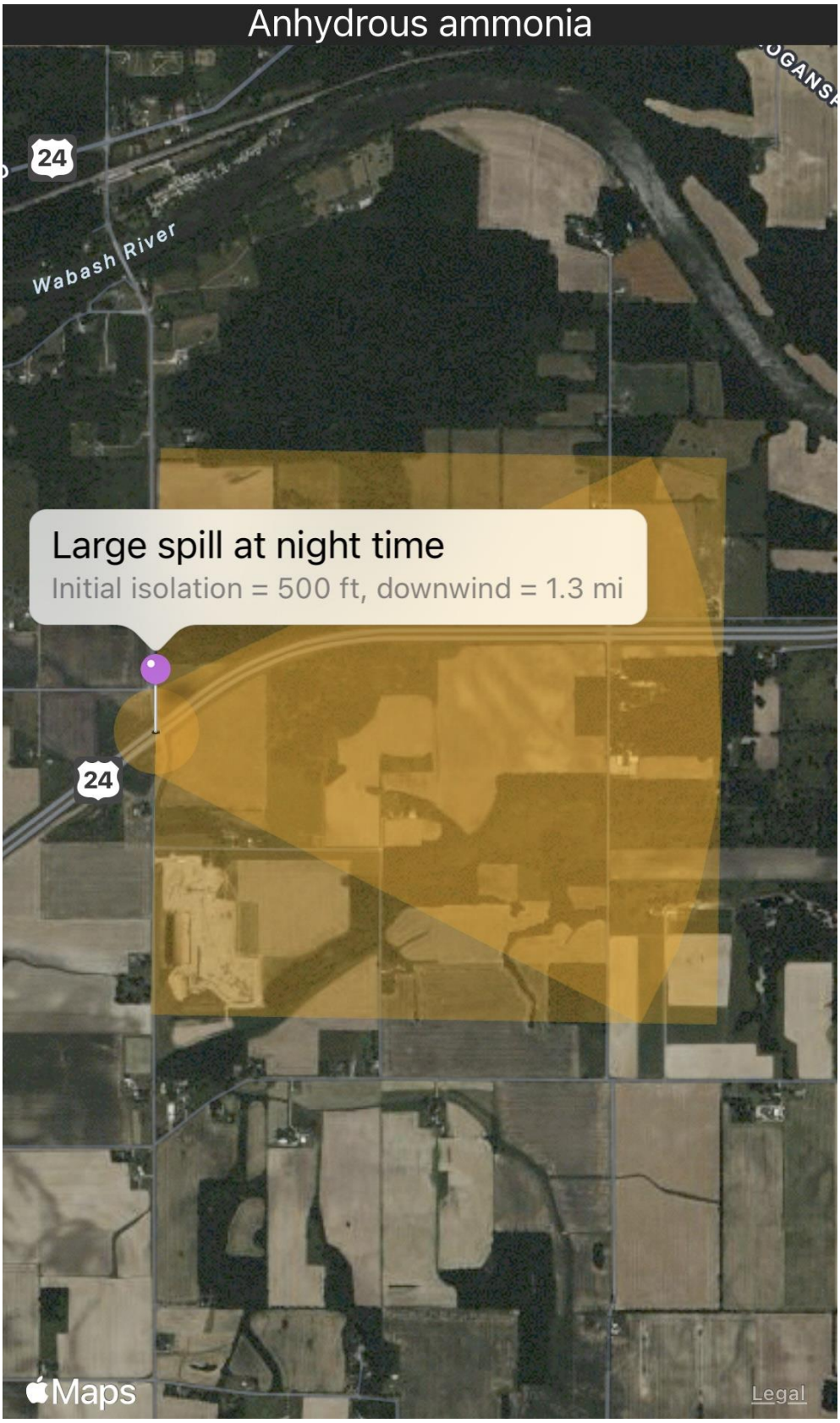
Anhydrous ammonia
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Wabash River
Large spill at night time
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Maps
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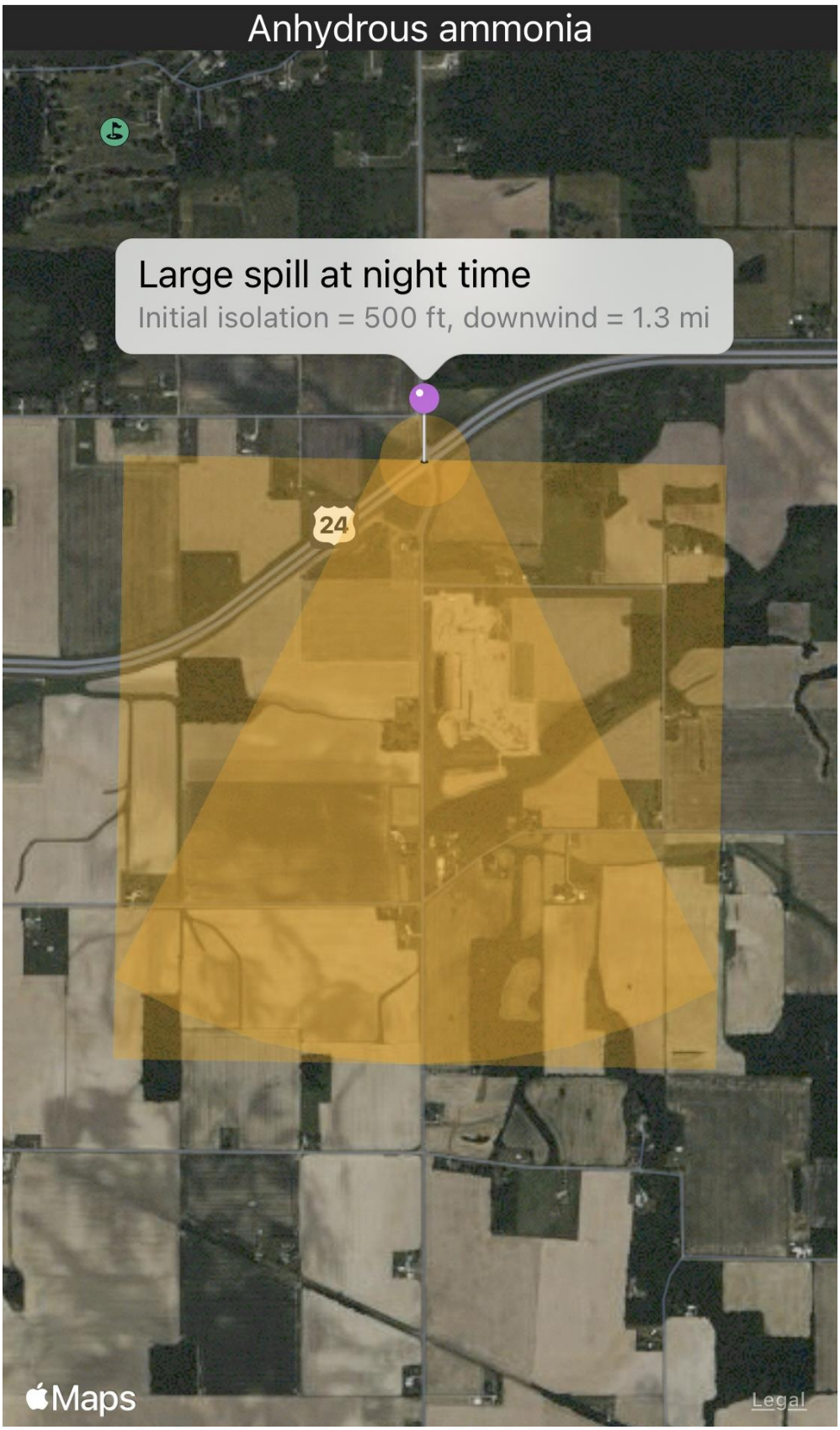

Anhydrous ammonia
Large spill at night time
Initial isolation = 500 ft, downwind = 1.3 mi
24
Maps
Legal

Lane Page

From: Mike Collins <mike.collins@co.cass.in.us>
Sent: Tuesday, January 16, 2024 3:18 PM
To: Lane Page
Subject: RE: Des 2200045 US 24 Intersection Improvement Project - Early Coordination

We have no records of any Environmental issues at the proposed location.

Thanks,

Mike Collins
Sr. Environmental Health Specialist
Preparedness Coordinator
Cass County Health Department
1616 Smith St.
Logansport, IN 46947
574-753-7762 office
574-753-7039 fax
mike.collins@co.cass.in.us

PUBLIC HEALTH
Cass County Health Department
Prevent. Promote. Protect.

From: Lane Page <LPage@hanson-inc.com>
Sent: Tuesday, January 16, 2024 2:46 PM
To: Mike Collins <mike.collins@co.cass.in.us>
Cc: Tamra Reece <TReece@hanson-inc.com>
Subject: Des 2200045 US 24 Intersection Improvement Project - Early Coordination

Good afternoon,

Lane Page

From: Jeff Smith <jeff.smith@co.cass.in.us>
Sent: Wednesday, January 17, 2024 9:02 AM
To: Lane Page
Cc: Tamra Reece
Subject: RE: Des 2200045 US 24 Intersection Improvement Project - Early Coordination

Thank you for the info on this project.

I would like to begin by expressing my personal support for this much-needed improvement project. As I look at today's local newspaper, I see we have a state representative who is trying to halt J-turn construction through legislation, and that is disappointing to me.

From the county highway standpoint, I see no adverse consequences to the construction. It does appear from the pictures that the corrugated metal pipe that makes up structure CLV-4373 probably needs replaced while the area is being disturbed.

We would only ask for advance notice and coordination on the closure of 600E during parts of this construction, as 600E is a busy through-route for the county. That coordination has always been good with INDOT projects so I have few worries there.

Thank you,

Jeff Smith
Superintendent
Cass County Highway Department
574-753-3749

From: Lane Page <LPage@hanson-inc.com>
Sent: Tuesday, January 16, 2024 2:47 PM
To: Jeff Smith <jeff.smith@co.cass.in.us>
Cc: Tamra Reece <TReece@hanson-inc.com>
Subject: Des 2200045 US 24 Intersection Improvement Project - Early Coordination

Good afternoon,

Hanson Professional Services Inc. is working on the INDOT Project Des. No. 2200045, US 24 Intersection Improvement Project at CR 600 E in Cass County. Please take a moment to review the enclosed early coordination documents.

Thank you,

Lane Page, M.S. | *Environmental Specialist*
Hanson Professional Services Inc. | 6510 Telecom Dr. Ste. 210 | Indianapolis, IN 46278
w 317-293-9024 | c 224-355-6127 | Facebook | LinkedIn

THIS IS NOT A PERMIT

State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife
Early Coordination/Environmental Assessment

DNR#: ER-26216

Request Received: January 16, 2024

Requestor:
Tamra Reece
Hanson Professional Services, Inc.
6510 Telecom Drive, Suite 210
Indianapolis, IN 46278

Project:
US 24 & CR 600 East intersection improvement via eliminating the existing intersection and median crossover and constructing two median U-turn intersections; Des #2200045

County/Site Info: Cass County

The Indiana Department of Natural Resources has reviewed the above referenced project per your request. Our agency offers the following comments for your information and in accordance with the National Environmental Policy Act of 1969.

If our agency has regulatory jurisdiction over the project, the recommendations contained in this letter may become requirements of any permit issued. If we do not have permitting authority, all recommendations are voluntary.

Regulatory Assessment:
Formal approval by the Department of Natural Resources under the regulatory programs administered by the Division of Water is not required for this project.

Natural Heritage Database:
The Natural Heritage Program's data have been checked. To date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity.

Fish and Wildlife Comments:
Avoid and minimize impacts to fish, wildlife, and botanical resources to the greatest extent possible, and compensate for impacts. The following are recommendations that address potential impacts identified in the proposed project area:

A) Drainage and Stormwater Management
The Division of Fish and Wildlife recommends considering a more sustainable approach to stormwater management. The traditional model of stormwater management aims to drain runoff as quickly as possible with the help of channels and pipes, which increases peak flows and costs of stormwater management. This type of solution only transfers drainage problems from one section of a basin to another. A more sustainable approach should aim to rebuild the natural water cycle by using storage techniques (retention basins, constructed wetlands, raingardens, etc.) and recharging groundwater using infiltration techniques (infiltration basins or trenches, pervious pavement, etc.). The following links give a good overview of traditional and sustainable stormwater management systems and their pros and cons for consideration during the design of the proposed project: https://www.epa.gov/greeningepa/epa-facility-stormwater-management; https://www.epa.gov/greeningepa/stormwater-management-practices-epa-facilities.

B) Lighting

Most transportation corridor designers and municipalities are trending toward LED lighting. Certain types of LED lighting can have negative impacts on both human and wildlife health and safety. The Division of Fish and Wildlife strongly encourages visiting the International Dark-Sky Association's website to learn more about the potential negative impacts of improperly selected LED lighting systems, if required: https://www.darksky.org/our-work/lighting/lighting-for-citizens/led-guide/.

C) Pavement Rehabilitation

Pavement rehabilitation projects typically do not have a significant impact on fish, wildlife, and botanical resources if best management practices (BMPs) are in place to limit the migration of polycyclic aromatic hydrocarbons (PAHs) into local waterways. PAHs are a byproduct of asphalt and coal tar-based sealants and negatively impact aquatic systems. The use of sealants that are free of petroleum and coal tar-based products is encouraged whenever possible. Contaminated road runoff can significantly impact the aquatic environment through increased turbidity and release of sediment into the stream which can be harmful to fish and other aquatic organisms, their eggs, and their food supply. Where possible, road runoff should be directed to riprap turnouts and sediment filtration prior to entering a stream to reduce impacts to aquatic species. We recommend the use of pollutant trapping technology such as storm drain inserts to reduce the runoff of roadside pollutants where appropriate.

D) Wildlife Passage

Even small culverts can provide wildlife passage opportunities for small wildlife under the roadway. The new/replacement/rehabilitated crossing structures, and any bank stabilization under or around the structures, must not create conditions that are less favorable for wildlife passage when compared to existing conditions. Upgrading wildlife passage for replacement/rehabilitated structures is recommended whenever possible to improve wildlife/vehicle safety. Bank lines should be maintained or restored within structures to allow for wildlife passage above the ordinary high-water mark if possible. All wildlife passage designs should include a smooth level pathway a minimum of 1-3 feet in width composed of natural substrate (soil, sand, gravel, etc.) or compacted aggregate fill over riprap (#2, #53, #73, etc.) tied into existing elevations both upstream and downstream. The width and location of the wildlife pathway is dependent on the wildlife species using the area. There are several techniques and materials for incorporating wildlife passage into the design of a crossing structure if maintaining or restoring banklines is not possible. Coordination with a Regional Environmental Biologist to address wildlife passage issues before submitting a permit application (if required) is encouraged to avoid delays in the permitting process.

The additional measures listed below should be implemented to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources:

1. Revegetate all bare and disturbed areas that are not currently mowed and maintained with a mixture of grasses, sedges, and wildflowers native to Central Indiana as soon as possible upon completion; turf-type grasses (including low-endophyte, friendly endophyte, and endophyte free tall fescue but excluding all other varieties of tall fescue) may be used in currently mowed areas only. A native herbaceous seed mixture must include at least 5 species of grasses and sedges and 5 species of wildflowers.
2. Minimize and contain within the project limits all tree and brush clearing.
3. Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the waterbody or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.
4. If erosion control blankets are used, they shall be heavy-duty, biodegradable, and net free or use loose-woven/Leno-woven netting to minimize the entrapment and snaring of small-bodied wildlife such as snakes and turtles (follow manufacturer’s recommendations for selection and installation); seed and apply mulch on all other disturbed areas.

Contact Staff:
Our agency appreciates this opportunity to be of service. Please contact me at RVanVoorhis@dnr.IN.gov or (317) 232-8163 if we can be of further assistance.

Rachel Van Voorhis

Date: February 15, 2024

Rachel Van Voorhis
Environmental Coordinator
Division of Fish and Wildlife

Organization and Project Information

Project ID:	22H0012E
Des. ID:	2200045
Project Title:	US 24 Intersection Improvement Project
Name of Organization:	Hanson Professional Services Inc.
Requested by:	Lane Page

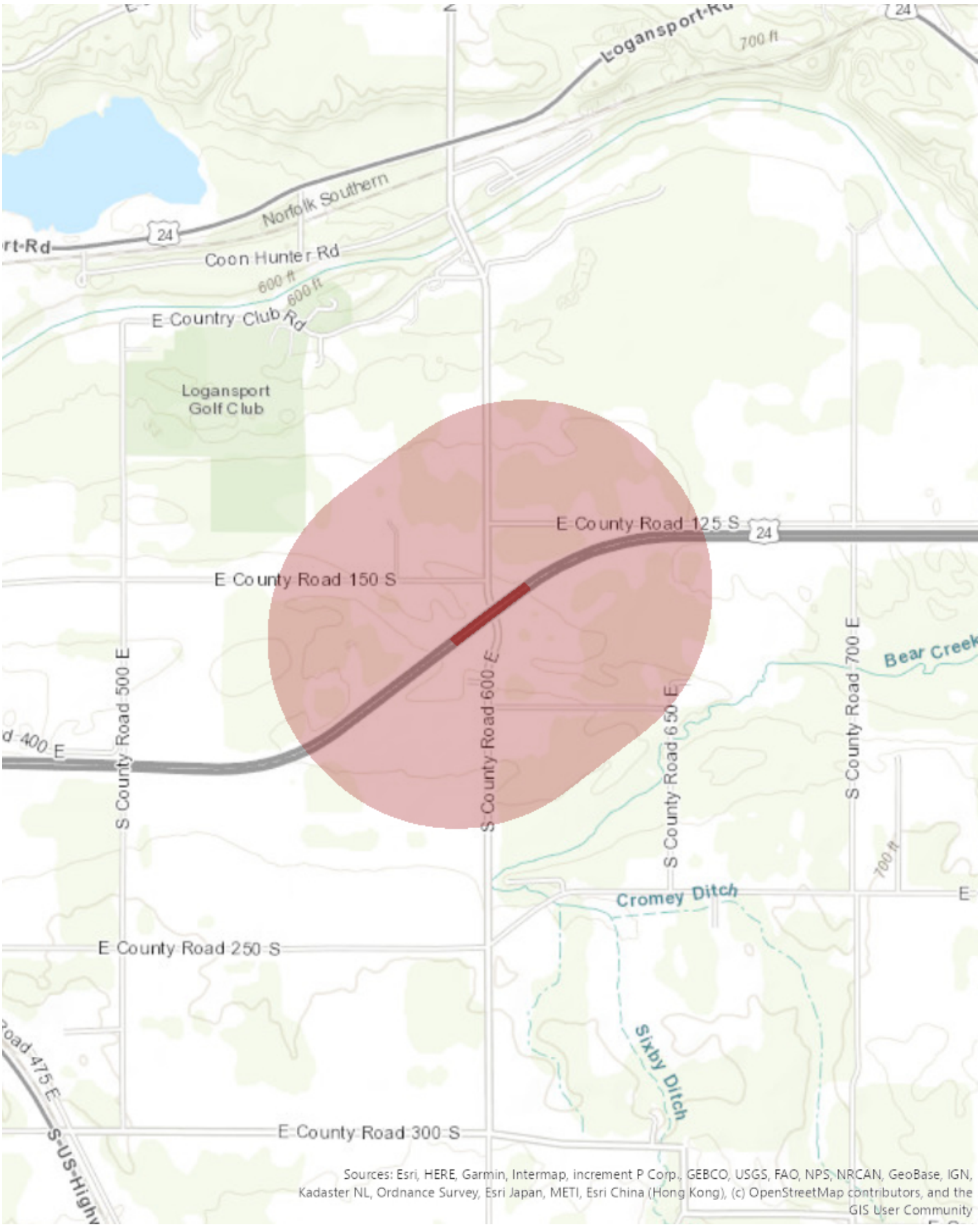
Environmental Assessment Report

1. Geological Hazards:
    - Moderate liquefaction potential
2. Mineral Resources:
    - Bedrock Resource: High Potential
    - Sand and Gravel Resource: High Potential
3. Active or abandoned mineral resources extraction sites:
    - None documented in the area

*All map layers from Indiana Map (maps.indiana.edu)

This information was furnished by Indiana Geological Survey
Address: 1001 E. 10th St., Bloomington, IN 47405
Email: IGSEnvir@indiana.edu
Phone: 812 855-7428

Date: January 16, 2024



Metadata:

- https://portal.igs.indiana.edu/arcgis/rest/services/Seismic_Earthquake_Liquefaction_Potential/MapServer/info/metadata/metadata.xml?format=default&output=html
- https://portal.igs.indiana.edu/arcgis/rest/services/Industrial_Minerals_SandAndGravel_Resources/MapServer/info/metadata/metadata.xml?format=default&output=html
- https://portal.igs.indiana.edu/arcgis/rest/services/Bedrock_Geology//MapServer/info/metadata/metadata.xml?format=default&output=html

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273

In Reply Refer To: 05/16/2024 17:33:38 UTC
Project Code: 2024-0035411
Project Name: Des 2200045, US 24/CR 600 E Intersection Improvement, Cass Co.

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

Please use the species list provided and visit the U.S. Fish and Wildlife Service's Region 3 Section 7 Technical Assistance website at - http://www.fws.gov/midwest/endangered/section7/s7process/index.html. This website contains step-by-step instructions which will help you

determine if your project will have an adverse effect on listed species and will help lead you through the Section 7 process. For all **wind energy projects** and **projects that include installing towers that use guy wires or are over 200 feet in height**, please contact this field office directly for assistance, even if no federally listed plants, animals or critical habitat are present within your proposed project or may be affected by your proposed project.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of

Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. **Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.**

Attachment(s):

- Official Species List
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121
(812) 334-4261

PROJECT SUMMARY

Project Code: 2024-0035411

Project Name: Des 2200045, US 24/CR 600 E Intersection Improvement, Cass Co.

Project Type: Road/Hwy - Maintenance/Modification

Project Description: The proposed project is located on US 24 at CR 600 E, in Tipton Township, Cass County, Indiana. The project location is in Section 35, Township 27 North, Range 2 East. Proposed work under Des. No. 2200045 is an intersection improvement project. The project will be using federal and state funds.

The proposed project involves eliminating the existing median crossover and constructing two median U-turn intersections 800 feet on either side of the existing intersection. Work will include construction of full-depth pavement acceleration/deceleration lanes and U-turn crossings within the existing US 24 median. Two new median drainage structures will be installed at the U-turn crossings, and one existing median drainage structure (CLV-4373) will be adjusted or replaced as needed. The existing traffic signal will be removed, and new permanent roadway lighting will be installed. Work will occur up to approximately 60 ft. from the edge of pavement. Estimated timing of work is scheduled to begin Fall 2026, with a standard 8-hour work schedule.

This project does not require the acquisition of permanent or temporary right-of-way. Land-use within the project area consists of mowed roadside grasses surrounded by agricultural fields. No suitable summer habitat is present within or adjacent to the project area. No tree removal or trimming will occur. Temporary lighting may be used but is not anticipated; should temporary lighting be required, lighting will be directed away from suitable summer habitat during the active season.

A review of the USFWS database by Indiana Department of Transportation Environmental Services Division (INDOT ESD) on September 14, 2023, did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. An inspection of CLV-4373 was conducted on August 29, 2023. No evidence of bats or birds was found during the inspection.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.742544550000005,-86.25956357790375,14z

Counties: Cass County, Indiana

ENDANGERED SPECIES ACT SPECIES

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ This species only needs to be considered if the project includes wind turbine operations. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

NAME	STATUS
Whooping Crane *Grus americana* Population: U.S.A. (AL, AR, CO, FL, GA, ID, IL, IN, IA, KY, LA, MI, MN, MS, MO, NC, NM, OH, SC, TN, UT, VA, WI, WV, western half of WY) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/758	Experimental Population, Non-Essential

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider

implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

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1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to Bald Eagle Nesting and Sensitivity to Human Activity

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

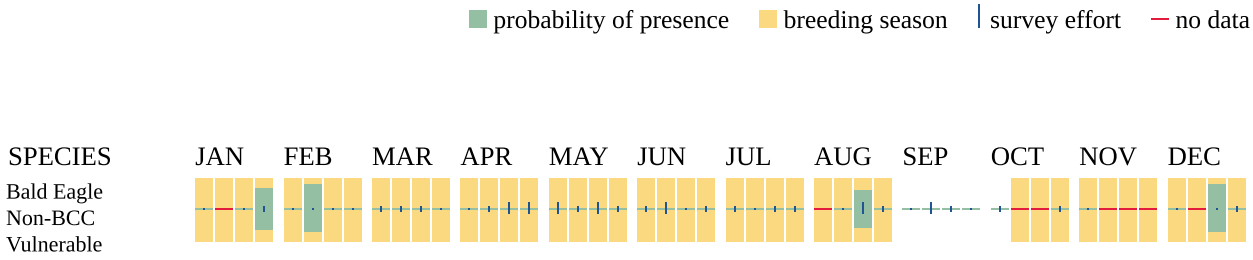
Probability of Presence (▪)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (▪)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Aug 31
Black-billed Cuckoo *Coccyzus erythropthalmus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Cerulean Warbler *Setophaga cerulea* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/2974	Breeds Apr 21 to Jul 20
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Eastern Whip-poor-will *Antrostomus vociferus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10678	Breeds May 1 to Aug 20
Grasshopper Sparrow *Ammodramus savannarum perpallidus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8329	Breeds Jun 1 to Aug 20
Kentucky Warbler *Geothlypis formosa* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9443	Breeds Apr 20 to Aug 20
Prothonotary Warbler *Protonotaria citrea* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9439	Breeds Apr 1 to Jul 31
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9431	Breeds May 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

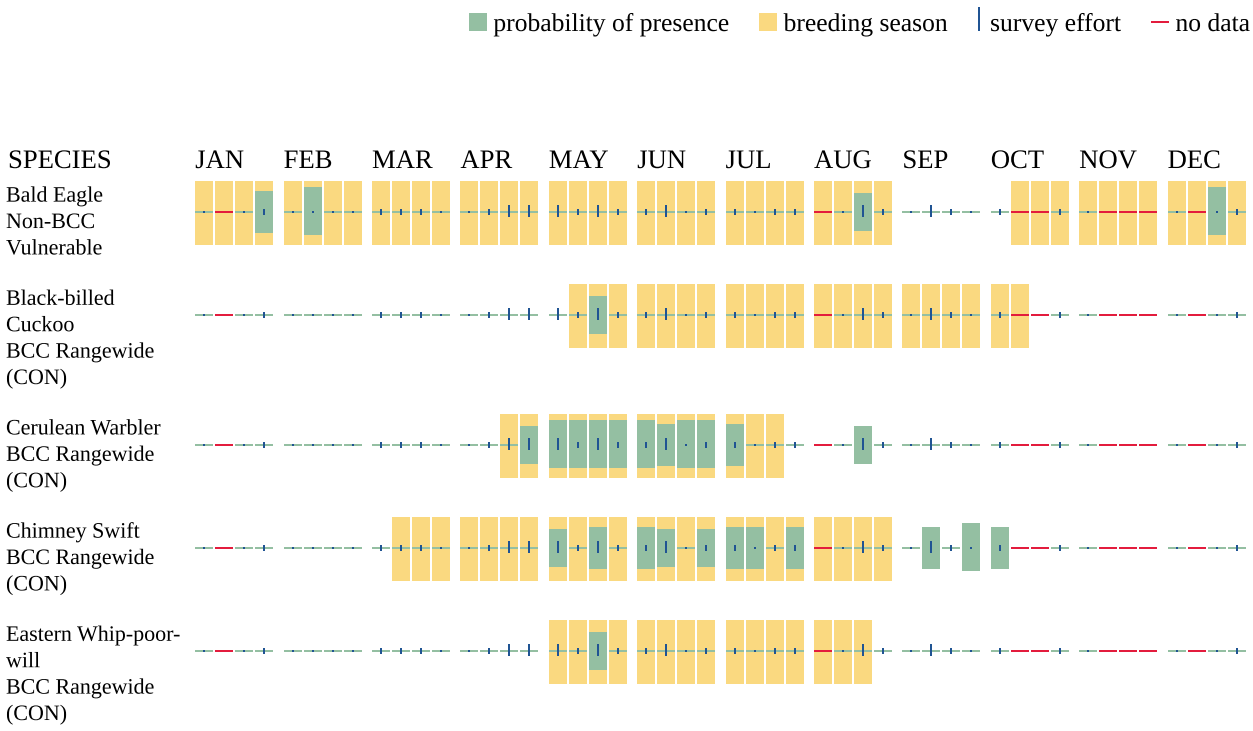
Probability of Presence (■)

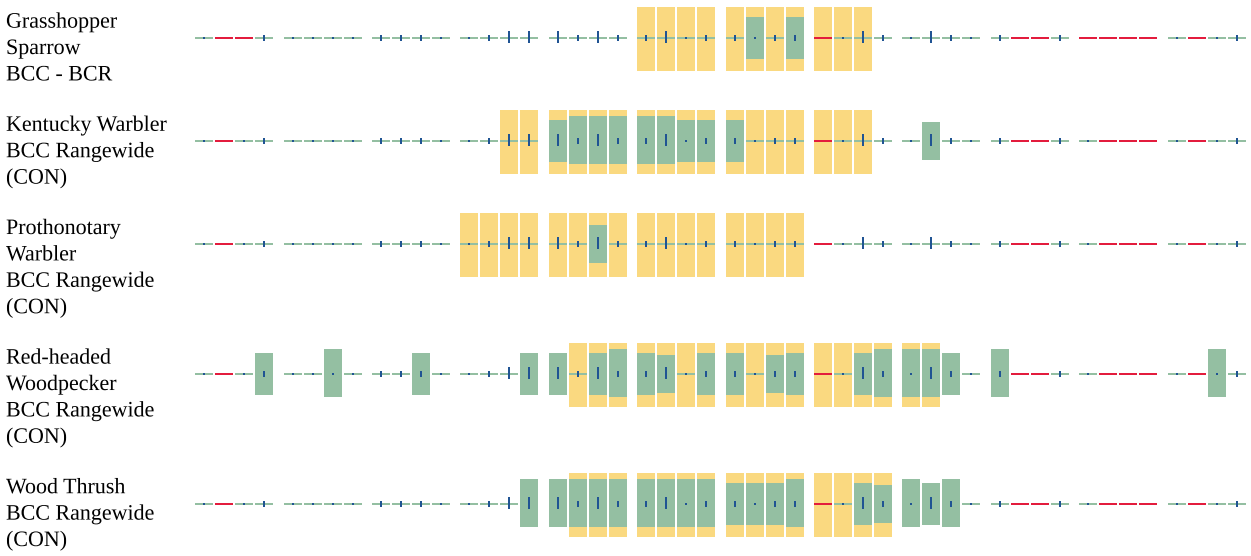
Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.





Additional information can be found using the following links:

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- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Lane Page
Address: 6510 Telecom Dr.
Address Line 2: Suite 210
City: Indianapolis
State: IN
Zip: 46278
Email lpage@hanson-inc.com
Phone: 3172939024

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Highway Administration

You have indicated that your project falls under or receives funding through the following special project authorities:

- BIPARTISAN INFRASTRUCTURE LAW (BIL) (OTHER)

Bridge/Structure Bat Assessment Form

Date & Time of Assessment	DOT Project Number	Route/Facility Carried	County
August 29, 2023	2200045	US 24	Cass Co., IN
Federal Structure ID	**Structure Coordinates** (latitude and longitude)	**Structure Height (approximate)**	**Structure Length**
CLV-4373	40.74242° -86.25958°	1.5 feet	130 feet

Structure Type (check one)

Bridge Construction Style

- ○ Cast-in-place
- ○ Flat Slab/Box
- ○ Truss (Side View)
- ○ Parallel Box Beam
- ○ Pre-stressed Girder
- ○ Steel I-beam
- ○ Covered
- ○ Other:

Culvert Type

- ◉ Box
- ◉ Pipe/Round
- ○ Other:

Other Structure

- ○

Structure Material (check all that apply)

Deck Material	*Beam Material*	*End/Back Wall Material*
☐ Metal	☐ None	☐ Concrete
☐ Concrete	☐ Concrete	☐ Timber
☐ Timber	☐ Steel	☐ Stone/Masonry
☐ Open grid	☐ Timber	☐ Other:
☐ Other:	☐ Other:	

Creosote Evidence

- ○ Yes ○ No
- ○ Unknown

Culvert Material

- ☒ Metal
- ☐ Concrete
- ☐ Plastic
- ☐ Stone/Masonry
- ☐ Other:

Notes:

Crossings Traversed (check all that apply)

☐ Bare ground	☐ Open vegetation
☐ Rip-rap	☐ Closed vegetation
☐ Flowing water	☐ Railroad
☐ Standing water	☐ Road/trail - Type:
☐ Seasonal water	☒ Other: Roadway drainage

Surrounding Habitat (check all that apply)

☒ Agricultural	☐ Grassland
☐ Commercial	☐ Ranching
☐ Residential-urban	☐ Riparian/wetland
☒ Residential-rural	☐ Mixed use
☐ Woodland/forested	☐ Other:

Areas Assessed (check all that apply)

Check all areas that apply. If an area is not present in the structure, check the "not present" box.
Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.

Area (check if assessed)	**Assessment Notes**	**Evidence of Bats** (include photos if present)
☒ All crevices and cracks: **Bridges/culverts:** rough surfaces or imperfections in concrete **Other structures:** soffits, rafters, attic areas	☐ Not present; No evidence of bats observed	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Concrete surfaces (open roosting on concrete)	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Spaces between concrete end walls and the bridge deck	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Crack between concrete railings on top of the bridge deck (Gap / Railing)	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Vertical surfaces on concrete I-beams	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Spaces between walls, ceiling joists	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Weep holes, scupper drains, and inlets/pipes	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ All guiderails	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ All expansion joints	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species

Name: Lane Page

Signature: Lane Page

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273

In Reply Refer To: January 12, 2024
Project code: 2024-0035411
Project Name: Des 2200045, US 24/CR 600 E Intersection Improvement, Cass Co.

Subject: Concurrence verification letter for the 'Des 2200045, US 24/CR 600 E Intersection Improvement, Cass Co.' project under the amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion (dated March 23, 2023) for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (NLEB).

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request dated January 12, 2024 to verify that the **Des 2200045, US 24/CR 600 E Intersection Improvement, Cass Co.** (Proposed Action) may rely on the concurrence provided in the amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion (dated March 23, 2023) for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 *et seq.*).

Based on the information you provided (Project Description shown below), you have determined that the Proposed Action is within the scope and adheres to the criteria of the PBO, including the adoption of applicable avoidance and minimization measures. **At least one of the qualification interview questions indicated an activity or portion of your project is consistent with a not likely to adversely affect determination therefore, the overall determination for your project is, may affect, and is not likely to adversely affect (NLAA) the endangered Indiana bat (*Myotis sodalis*) and/or the endangered northern long-eared bat (*Myotis septentrionalis*)**. Consultation with the Service pursuant to section 7(a)(2) of ESA (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) is required.

The Service has 14 calendar days to notify the lead Federal action agency or designated non-federal representative if we determine that the Proposed Action does not meet the criteria for a NLAA determination under the PBO. If we do not notify the lead Federal action agency or designated non-federal representative within that timeframe, you may proceed with the Proposed Action under the terms of the NLAA concurrence provided in the PBO. This verification period allows Service Field Offices to apply local knowledge to implementation of the PBO, as we may

identify a small subset of actions having impacts that were unanticipated. In such instances, Service Field Offices may request additional information that is necessary to verify inclusion of the proposed action under the PBO.

For Proposed Actions that include bridge/culvert or structure removal, replacement, and/or maintenance activities: If your initial bridge/culvert or structure assessment documented signs of bat use or occupancy, or an assessment failed to detect Indiana bats and/or NLEBs, yet are later detected prior to, or during construction, please submit the Post Assessment Discovery of Bats at Bridge/Culvert or Structure Form (User Guide Appendix E) to this Service Office within 2 working days of any potential take. In these instances, potential incidental take of Indiana bats and/or NLEBs is covered under the Incidental Take Statement in the 2018 FHWA, FRA, FTA PBO (provided that the take is reported to the Service).

If the Proposed Action is modified, or new information reveals that it may affect the Indiana bat and/or northern long-eared bat in a manner or to an extent not considered in the PBO, further review to conclude the requirements of ESA Section 7(a)(2) may be required.

For Proposed Actions that include bridge/culvert or structure removal, replacement, and/or maintenance activities:
If your initial bridge/culvert or structure assessments failed to detect Indiana bats and/or NLEB use or occupancy, yet bats are later detected prior to, or during construction, please submit the Post Assessment Discovery of Bats at Bridge/Culvert or Structure Form (User Guide Appendix E) to this Service Office within 2 working days of the incident. In these instances, potential incidental take of Indiana bats and/or NLEBs may be exempted provided that the take is reported to the Service.

If the Proposed Action may affect any other federally-listed or proposed species, and/or any designated critical habitat, additional consultation between the lead Federal action agency and this Service Office is required. If the proposed action has the potential to take bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act may also be required. In either of these circumstances, please contact this Service Office.

The following species may occur in your project area and **are not** covered by this determination:

- Monarch Butterfly *Danaus plexippus* Candidate
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered
- Whooping Crane *Grus americana* Experimental Population, Non-Essential

PROJECT DESCRIPTION

The following project name and description was collected in IPaC as part of the endangered species review process.

NAME

Des 2200045, US 24/CR 600 E Intersection Improvement, Cass Co.

DESCRIPTION

The proposed project is located on US 24 at CR 600 E, in Tipton Township, Cass County, Indiana. The project location is in Section 35, Township 27 North, Range 2 East. Proposed work under Des. No. 2200045 is an intersection improvement project. The project will be using federal and state funds.

The proposed project involves eliminating the existing median crossover and constructing two median U-turn intersections 800 feet on either side of the existing intersection. Work will include construction of full-depth pavement acceleration/deceleration lanes and U-turn crossings within the existing US 24 median. Two new median drainage structures will be installed at the U-turn crossings, and one existing median drainage structure (CLV-4373) will be adjusted or replaced as needed. The existing traffic signal will be removed, and new permanent roadway lighting will be installed. Work will occur up to approximately 60 ft. from the edge of pavement. Estimated timing of work is scheduled to begin Fall 2026, with a standard 8-hour work schedule.

This project does not require the acquisition of permanent or temporary right-of-way. Land-use within the project area consists of mowed roadside grasses surrounded by agricultural fields. No suitable summer habitat is present within or adjacent to the project area. No tree removal or trimming will occur. Temporary lighting may be used but is not anticipated; should temporary lighting be required, lighting will be directed away from suitable summer habitat during the active season.

A review of the USFWS database by Indiana Department of Transportation Environmental Services Division (INDOT ESD) on September 14, 2023, did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. An inspection of CLV-4373 was conducted on August 29, 2023. No evidence of bats or birds was found during the inspection.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.742560600000004,-86.25953788637956,14z

DETERMINATION KEY RESULT

Based on your answers provided, this project(s) may affect, but is not likely to adversely affect the endangered Indiana bat and/or the endangered northern long-eared bat, therefore, consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required. However, also based on your answers provided, this project may rely on the concurrence provided in the amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion (dated March 23, 2023) for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

QUALIFICATION INTERVIEW

1. Is the project within the range of the Indiana bat[1]?

   [1] See Indiana bat species profile

   Automatically answered
   Yes

2. Is the project within the range of the northern long-eared bat[1]?

   [1] See northern long-eared bat species profile

   Automatically answered
   Yes

3. Which Federal Agency is the lead for the action?

   A) Federal Highway Administration (FHWA)

4. Are *all* project activities limited to non-construction[1] activities only? (examples of non-construction activities include: bridge/abandoned structure assessments, surveys, planning and technical studies, property inspections, and property sales)

   [1] Construction refers to activities involving ground disturbance, percussive noise, and/or lighting.

   No

5. Does the project include *any* activities that are **greater than** 300 feet from existing road/rail surfaces[1]?

   [1] Road surface is defined as the actively used [e.g. motorized vehicles] driving surface and shoulders [may be pavement, gravel, etc.] and rail surface is defined as the edge of the actively used rail ballast.

   No

6. Does the project include *any* activities **within** 0.5 miles of a known Indiana bat and/or NLEB hibernaculum[1]?

   [1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

   No

7. Is the project located **within** a karst area?

   No

8. Is there *any* suitable[1] summer habitat for Indiana Bat or NLEB **within** the project action area[2]? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

   [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

   [2] The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR Section 402.02). Further clarification is provided by the User's Guide for the Range-wide Programmatic Consultation for Indiana Bat and Northern Long-eared Bat.

   No

9. Does the project include wetland or stream protection activities associated with compensatory wetland mitigation?

   No

10. Does the project include slash pile burning?

    No

11. Does the project include *any* bridge removal, replacement, and/or maintenance activities (e.g., any bridge repair, retrofit, maintenance, and/or rehabilitation work)?

    Yes

12. Is there *any* suitable habitat[1] for Indiana bat or NLEB **within** 1,000 feet of the bridge? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

    [1] See the Service's current summer survey guidance for our current definitions of suitable habitat.

    Yes

13. Has a bridge assessment[1] been conducted **within** the last 24 months[2] to determine if the bridge is being used by bats?

    [1] See User Guide Appendix D for bridge/structure assessment guidance

    [2] Assessments must be completed no more than 2 years prior to conducting any work below the deck surface on all bridges that meet the physical characteristics described in the Programmatic Consultation, regardless of whether assessments have been conducted in the past. Due to the transitory nature of bat use, a negative result in one year does not guarantee that bats will not use that bridge/structure in subsequent years.

    Yes

SUBMITTED DOCUMENTS

- *BatAssessmentForm_2200045.pdf https://ipac.ecosphere.fws.gov/project/HKAW3VABRREXLC7TD5XJX23TKU/projectDocuments/136918794*

14. Did the bridge assessment detect *any* signs of Indiana bats and/or NLEBs roosting in/under the bridge (bats, guano, etc.)[1]?

    [1] If bridge assessment detects signs of *any* species of bats, coordination with the local FWS office is needed to identify potential threatened or endangered bat species. Additional studies may be undertaken to try to identify which bat species may be utilizing the bridge prior to allowing *any* work to proceed.

    Note: There is a small chance bridge assessments for bat occupancy do not detect bats. Should a small number of bats be observed roosting on a bridge just prior to or during construction, such that take is likely to occur or does occur in the form of harassment, injury or death, the PBO requires the action agency to report the take. Report all unanticipated take within 2 working days of the incident to the USFWS. Construction activities may continue without delay provided the take is reported to the USFWS and is limited to 5 bats per project.

    No

15. Will the bridge removal, replacement, and/or maintenance activities include installing new or replacing existing **permanent** lighting?

    No

16. Does the project include the removal, replacement, and/or maintenance of *any* structure other than a bridge? (e.g., rest areas, offices, sheds, outbuildings, barns, parking garages, etc.)

    No

17. Will the project involve the use of **temporary** lighting *during* the active season?

    Yes

18. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **temporary** lighting will be used?

    Yes

19. Will the project install new or replace existing **permanent** lighting?

    Yes

20. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **permanent** lighting will be installed or replaced?

    Yes

21. Does the project include percussives or other activities (**not including tree removal/ trimming or bridge/structure work**) that will increase noise levels above existing traffic/ background levels?

    No

22. Are *all* project activities that are **not associated with** habitat removal, tree removal/ trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives, limited to actions that DO NOT cause any additional stressors to the bat species?

    Examples: lining roadways, unlighted signage , rail road crossing signals, signal lighting, and minor road repair such as asphalt fill of potholes, etc.

    Yes

23. Will the project raise the road profile **above the tree canopy**?

    No

24. Is the location of this project consistent with a No Effect determination in this key?

    Automatically answered
    Yes, because the project action area is not within suitable Indiana bat and/or NLEB summer habitat and is outside of 0.5 miles of a hibernaculum.

25. Is the bridge removal, replacement, or maintenance activities portion of this project consistent with a No Effect determination in this key?

    Automatically answered
    Yes, because the bridge has been assessed using the criteria documented in the BA and no signs of bats were detected

26. **General AMM 1**
    Will the project ensure *all* operators, employees, and contractors working in areas of known or presumed bat habitat are aware of *all* FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable Avoidance and Minimization Measures?

    Yes

27. **Lighting AMM 1**
    Will *all* **temporary** lighting be directed away from suitable habitat during the active season?

    Yes

28. **Lighting AMM 2**
    Does the lead agency use the BUG (Backlight, Uplight, and Glare) system developed by the Illuminating Engineering Society[1] to rate the amount of light emitted in unwanted directions?

    [1] Refer to The BUG System—A New Way To Control Stray Light

    Yes

29. **Lighting AMM 2**
    Will the **permanent** lighting be designed to be as close to 0 for all three BUG ratings as possible, with a priority of "uplight" of 0 and "backlight" as low as practicable?

    Yes

PROJECT QUESTIONNAIRE

1. Have you made a No Effect determination for *all* other species indicated on the FWS IPaC generated species list?

   N/A

2. Have you made a May Affect determination for *any* other species on the FWS IPaC generated species list?

   N/A

3. Please describe the proposed bridge work:

Two new median drainage structures will be installed, and one existing median drainage structure (CLV-4373) will be adjusted or replaced as needed to accommodate work in the US 24 median. Work will occur up to approximately 60 ft. from the edge of pavement. No new right-of-way will be required.

4. Please state the timing of all proposed bridge work:

   Fall 2026, with a standard 8-hour work schedule

5. Please enter the date of the bridge assessment:

   August 29, 2023

AVOIDANCE AND MINIMIZATION MEASURES (AMMS)

This determination key result includes the committment to implement the following Avoidance and Minimization Measures (AMMs):

LIGHTING AMM 1

Direct temporary lighting away from suitable habitat during the active season.

LIGHTING AMM 2

When installing new or replacing existing permanent lights, use downward-facing, full cut-off lens lights (with same intensity or less for replacement lighting); or for those transportation agencies using the BUG system developed by the Illuminating Engineering Society, be as close to 0 for all three ratings with a priority of "uplight" of 0 and "backlight" as low as practicable.

GENERAL AMM 1

Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs.

DETERMINATION KEY DESCRIPTION: FHWA, FRA, FTA PROGRAMMATIC CONSULTATION FOR TRANSPORTATION PROJECTS AFFECTING NLEB OR INDIANA BAT

This key was last updated in IPaC on October 30, 2023. Keys are subject to periodic revision.

This decision key is intended for projects/activities funded or authorized by the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and/or Federal Transit Administration (FTA), which may require consultation with the U.S. Fish and Wildlife Service (Service) under Section 7 of the Endangered Species Act (ESA) for the endangered **Indiana bat** (*Myotis sodalis*) and the endangered **northern long-eared bat** (NLEB) (*Myotis septentrionalis*).

This decision key should only be used to verify project applicability with the Service's amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion (dated March 23, 2023) for Transportation Projects. The programmatic biological opinion covers limited transportation activities that may affect either bat species, and addresses situations that are both likely and not likely to adversely affect either bat species. This decision key will assist in identifying the effect of a specific project/activity and applicability of the programmatic consultation. The programmatic biological opinion is not intended to cover all types of transportation actions. Activities outside the scope of the programmatic biological opinion, or that may affect ESA-listed species other than the Indiana bat or NLEB, or any designated critical habitat, may require additional ESA Section 7 consultation.

IPAC USER CONTACT INFORMATION

Agency: Indiana Department of Transportation
Name: Lea Lilly
Address: 315 East Boyd Blvd.
City: LaPorte
State: IN
Zip: 46350
Email llilly@indot.in.gov
Phone: 2193257461

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Highway Administration

APPENDIX D

Section 106 of the NHPA

Minor Projects PA Project Submittal and Assessment Form

SECTION 1

Submittal of this form is only required for projects where Category B applies. Projects qualifying under Category A do not require submittal of this form. SECTION 2 (for Conditions of Category B.1 for curb/sidewalk) or SECTION 3 (for Conditions of Category B.9 for drainage structures) may be required as determined by INDOT-Cultural Resources Office (INDOT-CRO) review. INDOT-CRO will notify applicant if the Minor Projects PA does not apply.

Part 1: Project Information-Completed by Applicant (Consultant/PM/Project Sponsor/INDOT District Staff)*

**A qualified professional historian (QP) is not required to complete Part I. INDOT-Cultural Resources Office (INDOT-CRO) staff will be responsible for completion of Part II.*

Original Submission Date: 1/19/2024 **Amended Submission Date*:**

**Consult with INDOT-CRO to determine whether an amendment is required. For revisions/updates to original form, please detail in applicable sections below. Please use red font to distinguish the revisions/updates.*

Submitted By (Provide Name and Firm/Organization):

Tamra Reece
Hanson Professional Services Inc.
6510 Telecom Dr., Suite 210
Indianapolis, IN 46278

Project Designation Number: 2200045

Route Number: US 24

Feature crossed (if applicable): N/A

City/Township: Tipton Township **County:** Cass

Project Description:* The proposed project is located on US 24 at the intersection with CR 600 E. This section of US 24 is a four-lane divided highway on the National Highway System and is classified as a Rural Principal Arterial. The existing US 24 facility consists of four 12 ft. travel lanes, two 12 ft. turn lanes in each direction at the CR 600 E intersection, 10 ft. paved outside shoulders, 4 ft. paved inside shoulders, and a 25 to 50 ft. grass median. The draft need for the project is due to the crash history at the intersection. The draft purpose is to reduce the potential for crashes and provide a long-term solution for safe and efficient operation of the intersection.

The proposed project involves eliminating the existing intersection and median crossover at CR 600 E and constructing two median U-turn intersections approximately 800 ft. on either side of the existing intersection. Proposed work includes construction of full-depth pavement acceleration/deceleration lanes and U-turn crossings within the existing US 24 median. Two new drainage structures will be installed from the median at the U-turn crossings to the south side of US 24, and one existing drainage structure (CLV-4373) will be adjusted or replaced as needed. The existing traffic signal will be removed, and new roadway lighting and signage will be installed. The US 24 roadway within the project limits will be resurfaced with a hot-mix asphalt (HMA) overlay. No permanent or temporary right-of-way (ROW) will be required. No tree removal will occur. The preferred maintenance of traffic (MOT) is anticipated to require phased lane and shoulder closures on US 24, and a short-term local detour for CR 600 E will be necessary during construction of the crossovers. The project is anticipated to begin construction in Fall 2026.

If the project includes any curb, curb ramp, or sidewalk work, please specify the location(s) of such work: N/A

For bridge or small structure projects, please list feature crossed, structure number, NBI number, and structure type: CLV-4373, 18-inch corrugated metal pipe, median drainage

For bridge projects, is the bridge included in INDOT's Historic Bridge Inventory (https://www.in.gov/indot/2531.htm)?

☐ **Yes** ☐ **No**

If yes, did the inventory determine the bridge eligible for or listed in the National Register of Historic Places? Please provide page # of entry in Historic Bridge Inventory.
☐ **Yes** ☐ **No**
Inventory Page #_____

Will there be right-of-way acquisition as part of this project?
☐ **Yes** ☒ **No**

If yes was checked above, please check all that apply:
☐ **Permanent** ☐ **Temporary** ☐ **Reacquisition**

If applicable, identify right-of-way acquisition locations in text below and in attached mapping. Please specify how much (both temporary and permanent) and indicate what activities are included in the proposed right-of-way: N/A

Is there *any* potential for additional temporary right-of-way to be needed later for purposes such as access, staging, etc.?
☐ **Yes** ☒ **No**

Archaeology (check one):

☒ **All proposed activities are presumed to occur in previously disturbed soils***
**INDOT-CRO will notify you if project area incudes undisturbed soils and requires an archaeological reconnaissance.*

☐ **Project takes place in undisturbed soils and the archaeology report is included in submission or will be forthcoming***
** If an archaeology report is required, the Minor Projects PA Form will not be finalized until the report is reviewed and approved by INDOT-CRO. For INDOT-sponsored projects, INDOT-CRO may be able to complete the archaeological investigation. If you would like to request that INDOT-CRO complete an archaeological investigation, please contact the INDOT-CRO archaeology team lead. See CRM Pt. 1 Ch. 3 for current contact information.*

Please specify all applicable categories and condition(s) (highlight applicable conditions in yellow)*:
**Include full category text, including any conditions. INDOT-CRO will finalize categories upon their review.*

B-2. Installation of new lighting, signals, signage and other traffic control devices under the following conditions ***[BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied]***:

Condition A (Archaeological Resources)

One of the two conditions listed below must be met *(EITHER Condition i or Condition ii must be satisfied)*:

i. Work occurs in previously disturbed soils; *OR*

ii. Work occurs in undisturbed soils and an archaeological investigation conducted by the applicant and reviewed by INDOT Cultural Resources Office determines that no National Register-listed or potentially National Register-eligible archaeological resources are present within the project area. If the archaeological investigation locates National Register-listed or potentially National Register-eligible archaeological resources, then full Section 106 review will be required. Copies of any archaeological reports prepared for the project will be provided to the DHPA and any archaeological site form information will be entered directly into the SHAARD by the applicant. The archaeological reports will also be available for viewing (by Tribes only) on INSCOPE**.**

Condition B (Above-Ground Resources)

Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource.

B-9. Installation, replacement, repair, lining, or extension of culverts and other drainage structures under the conditions listed below ***[BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied]***:

Condition A (Archaeological Resources)

One of the two conditions listed below must be met *(EITHER Condition i or Condition ii must be satisfied)*:

ii. Work occurs in previously disturbed soils; *OR*

ii. Work occurs in undisturbed soils and an archaeological investigation conducted by the applicant and reviewed by INDOT Cultural Resources Office determines that no National Register-listed or potentially National Register-eligible archaeological resources are present within the project area. If the archaeological investigation locates National Register-listed or potentially National Register-eligible archaeological resources, then full Section 106 review will be required. Copies of any archaeological reports prepared for the project will be provided to the DHPA and any archaeological site form information will be entered directly into the SHAARD by the applicant. The archaeological reports will also be available for viewing (by Tribes only) on INSCOPE**.**

Condition B (Above-Ground Resources)

One of the conditions below must be met *(EITHER Condition i or Condition ii must be satisfied)*:

i. Work does not involve installation of a new culvert and other drainage structure, and there are no impacts to unusual features, including but not limited to historic brick or stone sidewalks, curbs, or curb ramps, stepped or elevated sidewalks and retaining walls, under one of the following conditions *(Condition a, Condition b, or Condition c must be satisfied)*:

a. The structure exhibits no wood, stone, or brick structures or parts therein; *OR*

b. The structure exhibits only modern wood, stone, or brick structures or parts therein; *OR*

c. The structure exhibits non-modern wood, stone, or brick structures or parts therein and the following conditions are met *(BOTH Condition 1 AND Condition 2 must be met):*

1. Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource; *AND*

2. The structure lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. Under this condition, a qualified professional (meeting the Secretary of Interior's Professional Qualification standards [48 Federal Register (FR) 44716]) must prepare an analysis and justification that the structure lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. This documentation must be reviewed and approved by INDOT Cultural Resources Office.

ii. Work involves the installation of a new culvert and other drainage structures AND/OR there may be impacts to unusual features, including historic brick or stone sidewalks, curbs, or curb ramps, stepped or elevated sidewalks and retaining walls, under the following conditions *(BOTH Condition a and Condition b must be satisfied)*:

a. Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource; *AND*

b. The subject structure exhibits one of the characteristics described below *(Condition 1, Condition 2 or Condition 3 must be satisfied)*.

1. The structure exhibits no wood, stone, or brick structures or parts therein; *OR*
2. The structure exhibits only modern wood, stone, or brick structures or parts therein; *OR*
3. The structure exhibits non-modern wood, stone, or brick structures or parts therein but lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. Under this condition, a qualified professional (meeting the Secretary of Interior's Professional Qualification standards [48 Federal Register (FR) 44716]) must prepare an analysis and justification that the structure lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. This documentation must be reviewed and approved by INDOT Cultural Resources Office.

Check ☐ if SECTION 2: Minor Projects PA Category B-1, Condition B-ii Submission is included

Check ☐ if SECTION 3: Minor Projects PA Category B-9, Condition B-i-c-2 or B-ii-b-3 Submission is included

Part II: Completed by INDOT-CRO

Amendments will be shown in red font.

Information reviewed (please check all that apply):

General project location map ☒ USGS map ☒ Aerial photograph ☒ Soil survey data ☐

General project area photos ☒ Archaeology Reports ☐ Historic Property Reports ☐

Indiana Historic Buildings, Bridges, and Cemeteries Map/Interim Report ☒

Bridge inspection information/BIAS ☐ Historic Bridge Inventory Database ☐

SHAARD ☒ SHAARD GIS ☒ Streetview Imagery ☒ County GIS Data/Property Cards ☒

Other (please specify):

Are there any commitments associated with this project? If yes, please explain and include in the Additional Comments Section below. yes ☐ no ☒

Does the project result in a de minimis impact to a Section 4(f) protected historic resource? If yes, please explain in the Additional Comments Section below. yes ☐ no ☒

Additional Comments:

Above-ground Resources

An INDOT-CRO historian who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61 Professional Qualification Standards as per 36 CFR Part 61, first performed a desktop review, checking the Indiana Register of Historic Sites and Structures (State Register) and National Register of Historic Places (National Register) lists for Cass County. No listed resources are present within 0.10 mile of the project area, a distance that would serve as an adequate area of potential effects (APE) given the scope of the project and the surrounding terrain.

The *Cass County Interim Report* of the Indiana Historic Sites and Structures Inventory (IHSSI) was also consulted. The National Register & IHSSI information is available in the Indiana State Historic Architectural and Archaeological Research Database (SHAARD) and the Indiana Historic Buildings, Bridges, and Cemeteries Map (IHBBCM). The SHAARD information was checked against the interim report hard-copy maps. No surveyed IHSSI resources are recorded within 0.10 mile of the project location the project.

According to the IHSSI rating system, generally properties rated "contributing" do not possess the level of historical or architectural significance necessary to be considered individually National Register eligible, although they would contribute to a historic district. If they retain material integrity, properties rated "notable" might possess the necessary level of significance after further research. Properties rated "outstanding" usually possess the necessary level of significance to be considered National Register eligible if they retain material integrity. Historic districts identified in the IHSSI are usually considered eligible for the National Register.

An INDOT-CRO historian performed a desktop review of the project area. The project is located along a rural stretch of a US highway in north central Indiana. Surrounding land use is rural agricultural; areas of dense woods are present as are scattered residences.

No above-ground resources that are--or that will be--fifty years of age by the project's proposed 2026 letting were recorded within 0.10 mile of the project location.

Based on the available information, as summarized above, no above-ground concerns exist as long as the project scope does not change.

Archaeological Resources

An INDOT-CRO archaeologist who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61 reviewed the proposed project area, conducted a desktop review, and prepared an archaeological assessment. No archaeological resources have been recorded within or adjacent to the proposed project area.

All work is confined to the existing US 24 R/W, which consists of the four-lane divided highway with turn lanes separated by a ditched grass median and flanked by wide, graded side ditches and road cuts or embankments of fill. Since the project is limited to previously disturbed soils, there are no archaeological concerns provided the project scope and footprint do not change.

Accidental Discovery: If any archaeological artifacts or human remains are uncovered during construction, demolition, or earth moving activities, construction within 100 feet of the discovery will be stopped, and INDOT-CRO and the Division of Natural Resources-Division of Historic Preservation and Archaeology (DNR-DHPA) will be notified immediately.

INDOT-CRO staff reviewer(s): Susan Branigin and David Walton

INDOT Approval Date: 5/16/2024

Amendment Approval Date (if applicable):

****Be sure to attach this form to the National Environmental Policy Act documentation for this project. Also, the NEPA documentation shall reference and include the description of the specific stipulation in the PA that qualifies the project as exempt from further Section 106 review.*

Please attach the following to this form:

- **General Location Map.** This map should allow the INDOT-CRO reviewer to quickly locate the project.
- **Aerial photography map(s) of project area.** This map must include project limits. It may also include SHAARD data, but SHAARD data is not required.
- **If bridge or small structure project, please attach photographs of bridge or small structure.** Photographs can be found in inspection reports located in INDOT's Bridge Inspection Application System (BIAS), as well as other project documents, such as engineering assessments or mini-scopes.

Map depicting potential temporary and/or permanent right-of-way acquisitions. In the email submission to INDOT-CRO, please also include:

- **A GIS polygon shapefile or KMZ file of the project area** (shapefiles are preferred). Shapefiles should use "NAD_1983_UTM" projected coordinate system. In addition, these files should contain the following *text* attribute field: DES_NO. The project designation number should be entered in this field.
- **If the project takes place in undisturbed soils, attach the results of the archaeological investigation, if completed.** *Note: The MPPA Submission Form may be submitted before the archaeology report. INDOT-CRO staff will process the above-ground portion of the form in advance of the archaeological portion of the form. However, a completed determination form will not be returned to the applicant until after the archaeology report has been reviewed and approved by INDOT-CRO.*

Category A consists of projects that, by their nature, have no effect on properties listed in or eligible for inclusion in the National Register of Historic Places (hereinafter referred to as the "National Register") and do not require review by INDOT Cultural Resources Office. All of the work under this Category must occur in previously disturbed soils, which are defined as soils that have been completely altered or displaced by earthmoving or other modern manipulation.

1. Any work on bridges limited to substructure or superstructure elements without replacing, widening, or elevating the superstructure under the conditions listed below ***(BOTH Conditions A and B must be met).*** This category **does not** include bridge replacement projects (when both superstructure and substructure are removed):

   A. The project takes place in previously disturbed soils; *AND*
   B. With regard to the bridges, at least one of the conditions (i, ii or iii) listed below must be satisfied:
      i. The latest Historic Bridge Inventory identified the bridge as non-historic (see http://www.in.gov/indot/2531.htm);
      ii. The bridge was built after 1945, and is a common type as defined in Section V. of the *Program Comment Issued for Streamlining Section 106 Review for Actions Affecting Post-1945 Concrete and Steel Bridges* issued by the Advisory Council on Historic Preservation on November 2, 2012 for so long as that Program Comment remains in effect AND the considerations listed in Section IV of the Program Comment do not apply;
      iii. The bridge is part of the Interstate system and was determined not eligible for the National Register under the Section 106 Exemption Regarding Effects to the Interstate Highway System adopted by the Advisory Council on Historic Preservation on March 10, 2005, for so long as that Exemption remains in effect.

2. All work within interchanges and within medians of divided highways in previously disturbed soils.

3. Replacement, repair, lining, or extension of culverts and other drainage structures that do not exhibit wood, stone or brick structures or parts therein and are in previously disturbed soils.

4. Roadway work associated with surface replacement, reconstruction, rehabilitation, or resurfacing projects, including overlays, shoulder treatments, pavement repair, seal coating, pavement grinding, and pavement marking within previously disturbed soils where replacement, repair, or installation of curbs, curb ramps or sidewalks will not be required.

5. Repair, in-kind replacement or upgrade of existing lighting, signals, signage, and other traffic control devices in previously disturbed soils.

6. Repair, replacement, or upgrade of existing safety appurtenances such as guardrails, barriers, glare screens, and crash attenuators in previously disturbed soils.

7. Repair or in-kind replacement of fencing and hardscape landscaping elements and/or replacement of existing plant materials in previously disturbed soils and installation of new fencing and hardscape landscaping elements and plant materials limited to locations within interstate right-of way within previously disturbed soils.

8. Installation of new or modification of existing traffic control devices and systems, including signs, signals, markings, illumination, other warning devices and their supports, to improve safety at railway crossings in previously disturbed soils.

9. Installation, repair, or replacement of erosion control measures along roadways, waterways and bridge piers within previously disturbed soils.

APPENDIX E

Red Flag and Hazardous Materials

INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758-ES
Indianapolis, Indiana 46204

PHONE: (855) 463-6848
(855) INDOT4U

Eric Holcomb, Governor
Michael Smith, Commissioner

Date: October 31, 2023

To: Site Assessment & Management (SAM)
Environmental Policy Office - Environmental Services Division (ESD)
Indiana Department of Transportation (INDOT)
100 N Senate Avenue, Room N758-ES
Indianapolis, IN 46204

From: Tamra L. Reece
Hanson Professional Services
6510 Telecom Drive, Suite 210
Indianapolis, IN 46278
treece@hanson-inc.com

Re: LIMITED RED FLAG INVESTIGATION
DES #2200045, State Project
Intersection Improvement Project
U.S. Highway (US) 24 at County Road (CR) 600 East (E)
Cass County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: The proposed intersection improvement project consists of eliminating the existing median crossover and constructing two median U-turn intersections 800 feet on either side of the existing US 24/CR 600 E intersection. Proposed work involves construction of full-depth pavement acceleration/deceleration lanes and U-turn crossings within the existing US 24 median. Two new drainage structures will be installed under the U-turn crossings, and one existing median inlet (connecting to CLV-4373) will be adjusted as needed. The existing traffic signal will be removed, and new permanent lighting will be installed at the U-turn crossings. The existing US 24 travel lanes, shoulders, and open ditch drainage will be retained. This is a CE-1 project with limited excavation activities, therefore, a request to complete a Limited RFI was submitted to the LaPorte District on September 7, 2023, and approval was received on September 11, 2023.

Bridge Work Included in Project: Yes ☐ No ☒ Structure #(s) _____

If this is a bridge project, is the bridge Historical? Yes ☐ No ☐ , Select ☐ Non-Select ☐

(Note: If the project involves a historical bridge, please include the bridge information in the Recommendations Section of the report).

Culvert Work Included in Project: Yes ☒ No ☐ Structure #(s) __CLV-4373_____

Proposed right of way: Temporary ☐ # Acres _____ Permanent ☐ # Acres _____, Not Applicable ☒

Type and proposed depth of excavation: Excavation for full-depth pavement construction will be to a maximum depth of approximately 2 feet below ground surface (ft-bgs). Excavation for drainage structure work will be to a maximum depth of approximately 8 ft-bgs.

Maintenance of traffic (MOT): The preferred MOT will require phased lane closures with the intersection remaining open at all times.
Work in waterway: Yes ☐ No ☒ Below ordinary high water mark: Yes ☐ No ☐
State Project: ☒ LPA: ☐
Any other factors influencing recommendations: N/A

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

Hazardous Material Concerns Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Superfund	**N/A**	Manufactured Gas Plant Sites	**N/A**
RCRA Generator/ TSD	**N/A**	Open Dump Waste Sites	**N/A**
RCRA Corrective Action Sites	**N/A**	Restricted Waste Sites	**N/A**
State Cleanup Sites	**N/A**	Waste Transfer Stations	**N/A**
Septage Waste Sites	**N/A**	Tire Waste Sites	**N/A**
Underground Storage Tank (UST) Sites	**N/A**	Confined Feeding Operations (CFO)	**N/A**
Voluntary Remediation Program	**N/A**	Brownfields	**N/A**
Construction Demolition Waste	**N/A**	Institutional Controls	**N/A**
Solid Waste Landfill	**N/A**	NPDES Facilities	**1**
Infectious/Medical Waste Sites	**N/A**	NPDES Pipe Locations	**N/A**
Leaking Underground Storage (LUST) Sites	**N/A**	Notice of Contamination Sites	**N/A**

Unless otherwise noted, site specific details presented in this section were obtained from documents reviewed on the Indiana Department of Environmental Management (IDEM) Virtual File Cabinet (VFC).

Explanation:
NPDES Facilities: One (1) NPDES facility is located within the 0.5 mile search radius. Intersection Improvement Project (J-Turn) DES. 1383616 / R-38631, NPDES Permit Number INR10P369, US 24 and CR 600 E, is mapped approximately 0.48 mile southwest of the project area but is actually located within the project area. The permit was associated with a previously planned intersection improvement project that was not implemented. The permit expired on July 27, 2022. No impact is expected.

ECOLOGICAL INFORMATION SUMMARY

The Cass County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities is provided at (https://www.in.gov/dnr/nature-preserves/files/np_cass.pdf). A preliminary review of the Indiana Natural Heritage Database by INDOT ESD did not indicate the presence of ETR species within the 0.5 mile search radius. Coordination with USFWS and IDNR will occur.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The project area is located in a rural area surrounded by farm fields. Structure CLV-4373 is a small culvert not listed in BIAS. Additional investigation to confirm the presence or absence of bats in the culvert will be necessary.

The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

RECOMMENDATIONS SECTION

Include recommendations from each section. If there are no recommendations, please indicate N/A:

HAZARDOUS MATERIAL CONCERNS: N/A

ECOLOGICAL INFORMATION: Coordination with USFWS and IDNR will occur. Additional investigation to confirm the presence or absence of bats in the culvert will be necessary. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

INDOT ESD concurrence: Peter Washburn Digitally signed by Peter Washburn Date: 2024.02.09 10:13:32 -05'00' (Signature)

Prepared by:

Tamra L. Reece
Senior Environmental Scientist
Hanson Professional Services Inc.

Lane Page
Environmental Specialist
Hanson Professional Services Inc.

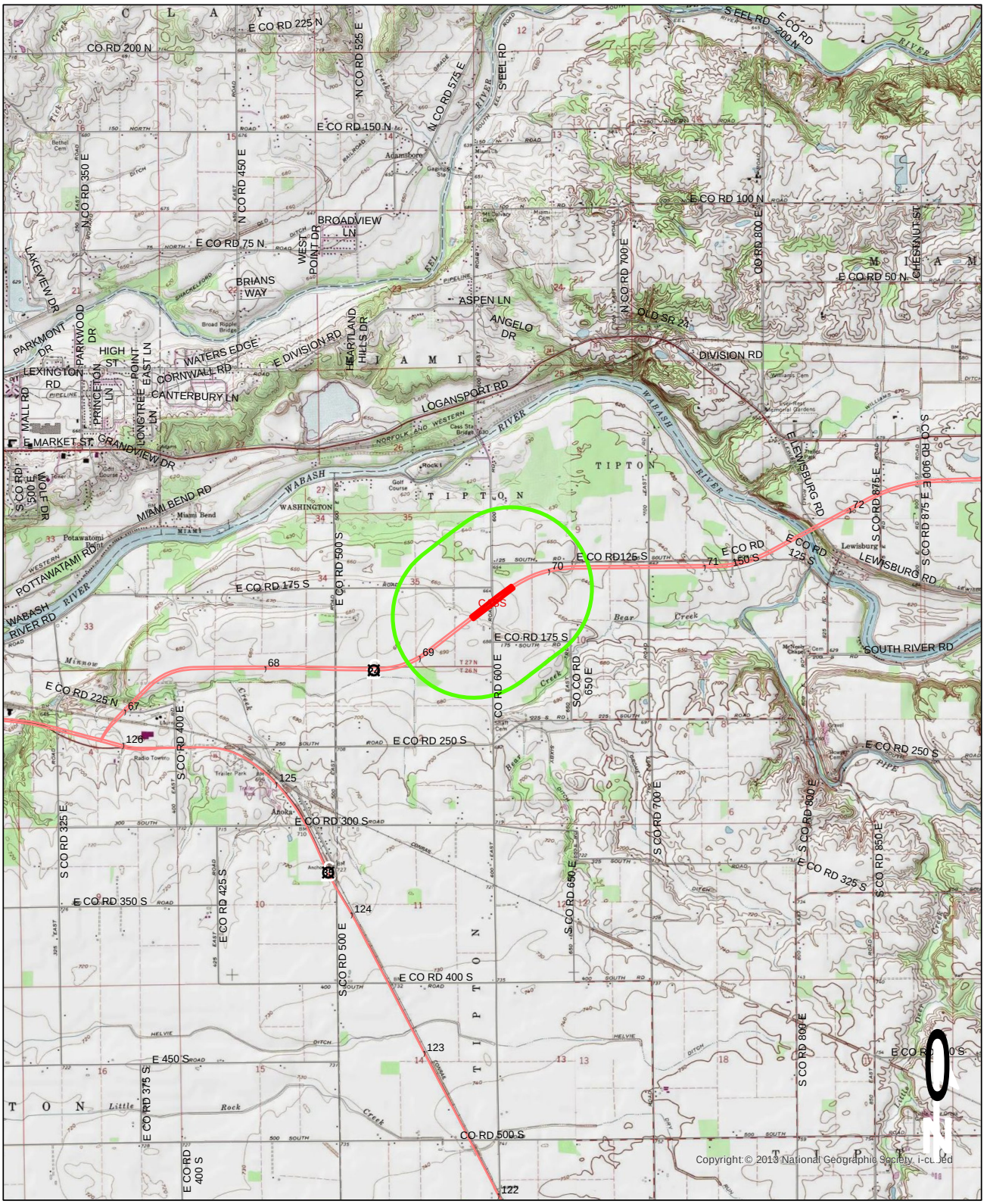
Graphics:

A map for each report section with a 0.5 mile search radius buffer around all project area(s) showing all items identified as possible items of concern is attached. If there is not a section map included, please change the YES to N/A:

SITE LOCATION: YES

HAZARDOUS MATERIAL CONCERNS: YES

Red Flag Investigation - Site Location
US 24 at CR 600 E
Des. No. 2200045, Intersection Improvement Project
Cass County, Indiana



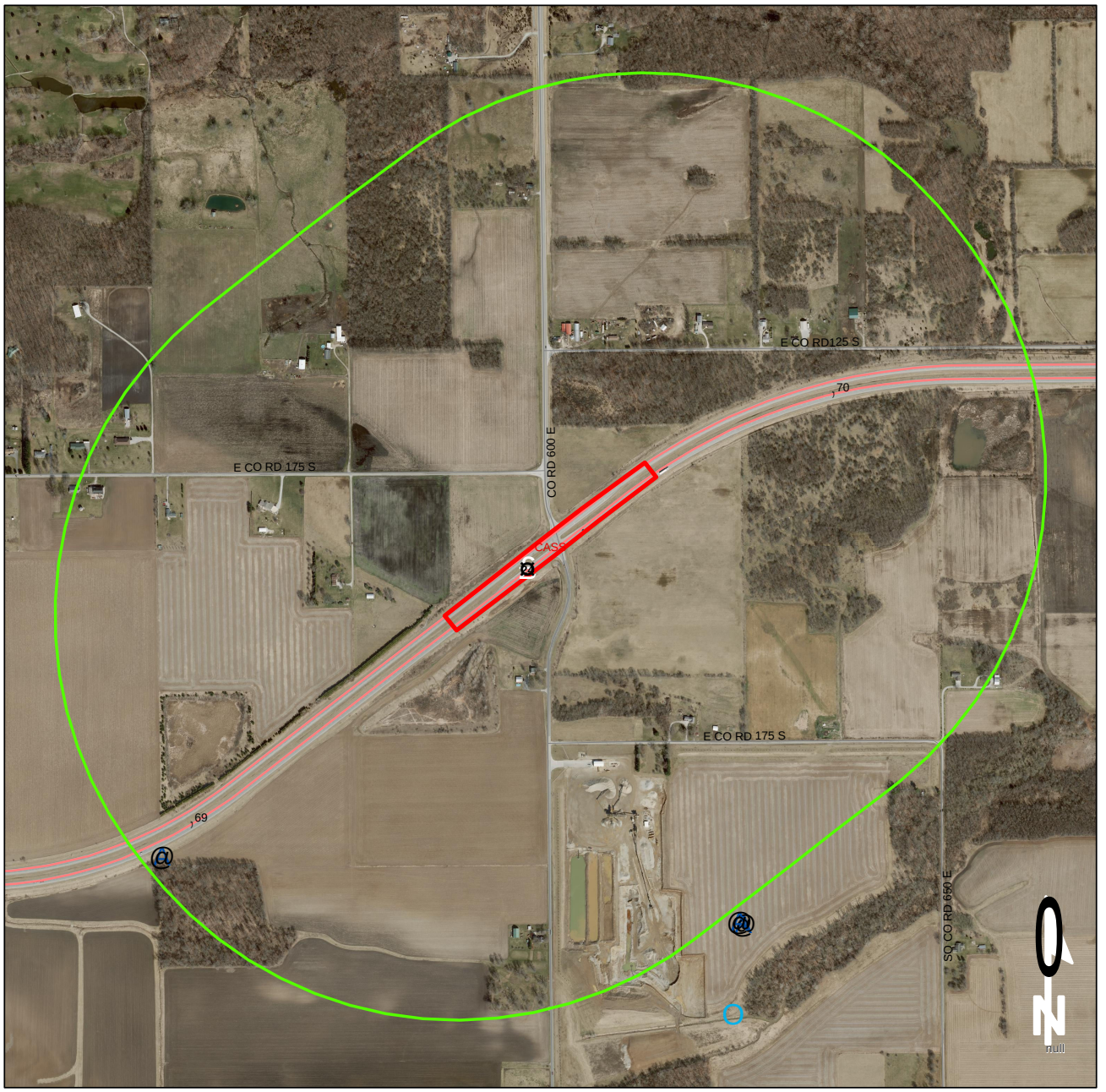
Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

0.75 0.38 0 0.75 Miles

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

ANOKA QUADRANGLE
INDIANA
7.5 MINUTE SERIES
(TOPOGRAPHIC)

Red Flag Investigation - Hazardous Material Concerns
US 24 at CR 600 E
Des. No. 2200045, Intersection Improvement Project
Cass County, Indiana



- Brownfield
- RCRA Corrective Action Sites
- Confined Feeding Operation
- Notice_Of_Contamination
- Construction/Demolition Site
- Infectious/Medical Waste Site
- Leaking Underground Storage Tank
- Manufactured Gas Plant
- NPDES Facilites
- NPDES Pipe Locations
- Open Dump Waste Site
- RCRA Generator/TSD
- Restricted Waste Site
- Septage Waste Site
- Solid Waste Landfill
- State Cleanup Site
- Superfund
- Tire Waste Site
- Underground Storage Tank
- Voluntary Remediation Program
- Waste Transfer Station
- Institutional Controls
- County Boundary
- Project Area
- Half Mile Radius
- Toll
- Interstate
- State Route
- US Route
- Local Road

0.15 0.07 0 0.15 Miles

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

Sources:
Non Orthophotography
Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

APPENDIX F

Water Resources

Waters of the U.S. Determination Report

Joshua Long
11.30.2023

U.S. Highway (US) 24 at County Road (CR) 600 East (E)
Cass County, Indiana
Intersection Improvement Project
Des. No. 2200045

Prepared by: Lane Page, Ali Whitehead, and Tamra Reece
Hanson Professional Services Inc.
6510 Telecom Dr., Suite 210
Indianapolis, IN 46278
Completed: November 14, 2023

1.0 Project Description

Date of Waters Field Investigation:
August 29, 2023

Project Location:
Anoka, Indiana Quadrangle
Section 35, Township 27 North, Range 2 East
Central GPS Point: 40.742552, -86.259683
Tipton Township, Cass County, Indiana

Hanson Professional Services Inc. (Hanson) was contracted by the Indiana Department of Transportation (INDOT) LaPorte District to perform a wetland delineation and waters investigation for the proposed intersection improvement project on US 24 at CR 600 E, in Tipton Township, Cass County, Indiana. The proposed project is located in a rural area surrounded by agricultural fields. The location and appropriate boundaries of the investigated area can be seen in the attached maps and photographs (Figures 1 through 5).

The proposed project involves eliminating the existing median crossover and constructing two median U-turn intersections 800 feet on either side of the existing intersection. Work will include construction of full-depth pavement acceleration/deceleration lanes and U-turn crossings within the existing US 24 median. Two new drainage structures will be installed under the U-turn crossings, and one existing median inlet (connecting to CLV-4373) will be adjusted as needed. The existing traffic signal will be removed, and new permanent lighting will be installed at the U-turn crossings. The existing US 24 travel lanes, shoulders, and open ditch drainage will be retained.

The need for this project is due to the high frequency of crashes at the US 24/CR 600 E intersection. The purpose of this project is to reduce the potential for crashes and provide a long-term solution for safe and efficient operation of the intersection.

2.0 Desktop Reconnaissance

Data from the U.S. Geological Survey (USGS) 7.5-Minute quadrangle maps (2022), the USGS National Hydrography Dataset (NHD) (2023), the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) (2023), the U.S. Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS) Web Soil Survey (2021), and the Indiana Department of Natural Resources – Division of Water (IDNR-DOW) Best Available floodplain database (2023) were used to provide an indication of areas where waters and wetlands potentially occur. See Figures 2 through 4 for potential water resources within the investigated area.

2.1 USGS Quadrangle Map

The investigated area is located on the Anoka, Indiana USGS 7.5-Minute Quadrangle Map. The west side of the investigated area is in Section 35, Township 27 North, Range 2 East; the east side of the investigated area is in an area not defined under the Public Land Survey System (PLSS). No water features are mapped within or adjacent to the investigated area.

2.2 National Hydrography Dataset Flowlines

No NHD flowlines are present within or adjacent to the investigated area.

2.3 National Wetlands Inventory

No NWI wetlands are located within or adjacent to the investigated area. The nearest NWI wetland is located approximately 0.1 mile north of the investigated area and is classified as Palustrine, Forested, Broad-Leaved Deciduous, Temporarily Flooded (PFO1A) under the Cowardin Classification System.

Table 1: NWI

Wetland Type	Cowardin Classification Code	Location
Palustrine, forested, broad-leaved deciduous, temporarily flooded	PFO1A	0.1 mile north of investigated area

2.4 Soils

According to the Soil Survey Geographic (SSURGO) Database for Cass County, Indiana, the investigated area contains soil areas with nationally listed hydric soils (Table 2).

Table 2: Soils

Soil Unit Name	Symbol	NRCS Flooding Frequency	NRCS Drainage Class	NRCS Hydric Soils Category	SSURGO Hydric Rating
Kosciusko silt loam, 2 to 6 percent slopes	KoB	None	Well drained	Predominantly Non-Hydric	3%
Kosciusko sandy clay loam, 6 to 12 percent slopes, severely eroded	KsC3	None	Well drained	Non-Hydric	0%
Millsdale silty clay loam	Ms	None	Very poorly drained	Hydric	100%
NewGlarus silt loam, 2 to 6 percent slopes	NeB	None	Well drained	Predominantly Non-Hydric	3%

2.5 Floodways and Floodplains

The IDNR-DOW Best Available floodplain dataset was reviewed for the investigated area. The investigated area is not located within a floodway or floodplain.

2.6 12-Digit Hydrologic Unit Code

The USGS 12-Digit Hydrologic Unit Code (HUC-12) (Indiana Geological Survey, 2011) mapping was reviewed for the investigated area. The investigated area is located entirely within the limits of the Lowe Ditch-Wabash River sub-watershed (051201011603).

3.0 Field Reconnaissance

Field reconnaissance was conducted on August 29, 2023, by Hanson personnel to determine and identify jurisdictional Waters of the United States (WOTUS) or Waters of the State within the investigated area. The investigated area was determined by preliminary survey limits which includes the existing US 24 corridor and adjacent land up to approximately 80 feet from the edge of pavement. FieldMaps for ArcGIS installed on an iPad equipped with a Bad Elf GPS receiver was used to collect data points and photographs throughout the investigated area. See Figure 5 for collected data and selected photo locations.

In the two weeks prior to the field investigation on August 29, 2023, total precipitation ranged from a minimum of 0.35 in. to a maximum of 0.75 in. A heavy precipitation event ranging between 0.25 and 0.50 in. occurred on August 18, 2023. Rainfall within the month of August 2023 was approximately 0.5 in. below average compared to historic precipitation data (NOAA).

3.1 Streams

The existing conditions of the investigated area were vegetated roadside slopes with one vegetated swale southeast of the US 24/CR 600 E intersection (Photo 18). No features exhibiting an ordinary high water mark (OHWM) or defined bed and bank were observed within the investigated area. Based on these conditions, no streams were identified within the investigated area.

3.2 Wetlands

The investigated area was surveyed for wetlands using the methods in accordance with the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)* (U.S. Army Corps of Engineers, 2010). Supporting materials used for this survey included plant lists (USACE NRCS, 2018), plant photo identification apps (Glority Global Group Ltd., 2020), field indicators of hydric soils (Vasilas, Hurt, and Noble. 2010), and data gathered from the desktop reconnaissance.

No potential wetland sites were observed within the investigated area. Dominant vegetation consisted of red fescue (*Festuca rubra*, FACU), yellow bristlegrass (*Setaria pumila*, FAC), narrowleaf plantain (*Plantago lanceolata*, FACU), wild carrot (*Daucus carota*, UPL), Canada goldenrod (*Solidago canadensis*, FACU), and amur honeysuckle (*Lonicera maackii*, UPL). An area of common reed (*Phragmites australis*, FACW) was observed along the slope southwest of the intersection but was not investigated further as a potential wetland due to the steep slope and other dominant species including Canada goldenrod and wild carrot (Photos 6 and 10). Additionally, a small patch of broadleaf cattail (*Typha latifolia*, OBL) was observed at an underdrain outlet on the slope southeast of the intersection but a data point was unable to be taken due to the presence of the concrete drain outlet, large rocks, and gravelly roadside fill beneath the cattail and a thin layer of accumulated sediment (Photos 25 and 26). The area was not investigated further as a potential wetland site due to the steep slope and presence of non-soil material beneath the thin layer of accumulated sediment. Therefore, it was determined that no wetland sites were present within the investigated area.

3.3 Ditches

No ditch features were observed within the investigated area. One vegetated swale was observed southeast of the US 24/CR 600 E intersection (Photos 18 and 24). This area was not classified as a roadside ditch due to being broad, shallow, fully vegetated, and lacking a defined ditch channel to convey flow. The swale was observed to become increasing shallow toward the east end of the investigated area (Photo 27).

3.4 Open Water

No open water features were observed within the investigated area.

3.5 Wildlife Concerns and Crossings

Two structures, CLV-4373 and one additional structure crossing under CR 600 E, were observed within the investigated area and inspected for evidence of wildlife. No signs of bats, birds, or terrestrial species were observed within either structure. One groundhog (*Marmota monax*) was observed at the northern boundary of the investigated area east of CR 600 E.

4.0 Conclusions

No likely jurisdictional features were identified within the investigated area. The final determination of jurisdictional waters is ultimately made by the USACE. This report is our best judgement on the guidelines set forth by the USACE.

5.0 Acknowledgement

This waters determination has been prepared based on the best available information, interpreted in the light of the investigator's training, experience and professional judgement in conformance with the 1987 *Corps of Engineers Wetlands Determination Manual*, the appropriate regional supplement, the *USACE Jurisdictional Determination Form Instructional Guidebook* (2007), and other appropriate agency guidelines.

Lane Page
Environmental Specialist
November 13, 2023

Ali Whitehead
Civil Designer
November 13, 2023

Tamra L. Reece
Senior Environmental Scientist
November 13, 2023

Source: Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, null

Figure 1 Project Location

Waters Report
US 24/CR 600 E Intersection Improvement
Cass County, Indiana

Des. No. 2200045 Created: 11/13/2023

HANSON
Hanson Professional Services Inc.

Indiana Department of Transportation
100 North Senate Avenue
Indianapolis, IN 46204

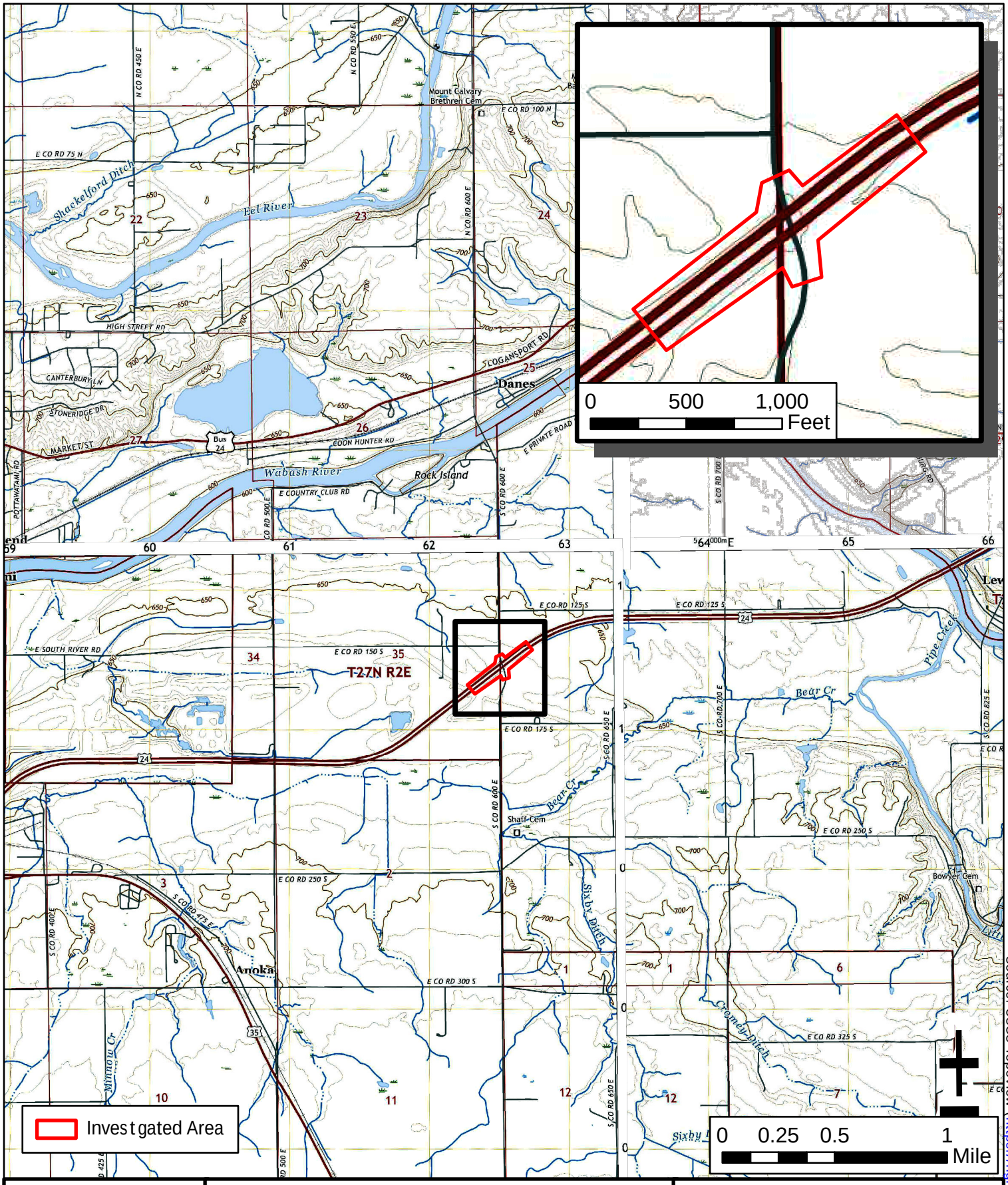


Figure 2 USGS Topographic Map

Waters Report

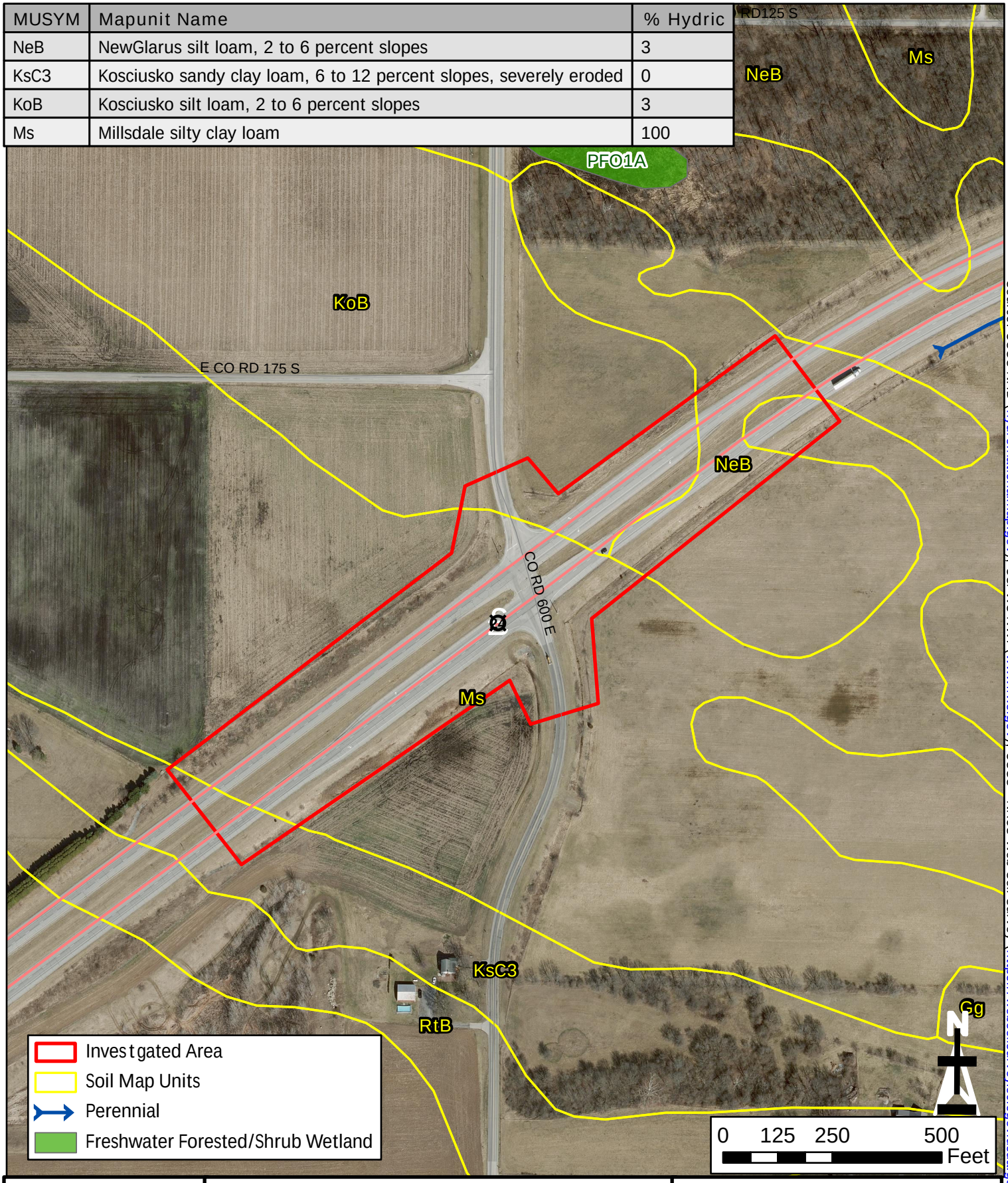
US 24/CR 600 E Intersection Improvement
Cass County, Indiana

Des. No. 2200045 Created: 9/14/2023

HANSON
Hanson Professional Services Inc.

Indiana Department of Transportation
100 North Senate Avenue
Indianapolis, IN 46204

MUSYM	Mapunit Name	% Hydric
NeB	NewGlarus silt loam, 2 to 6 percent slopes	3
KsC3	Kosciusko sandy clay loam, 6 to 12 percent slopes, severely eroded	0
KoB	Kosciusko silt loam, 2 to 6 percent slopes	3
Ms	Millsdale silty clay loam	100



Source: USGS NHD (hydro.nationalmap.gov), USFWS NWI (www.fws.gov), USGS - NRCS Web Soil Survey (https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm)

Figure 3 NHD, NWI, and Soil Survey

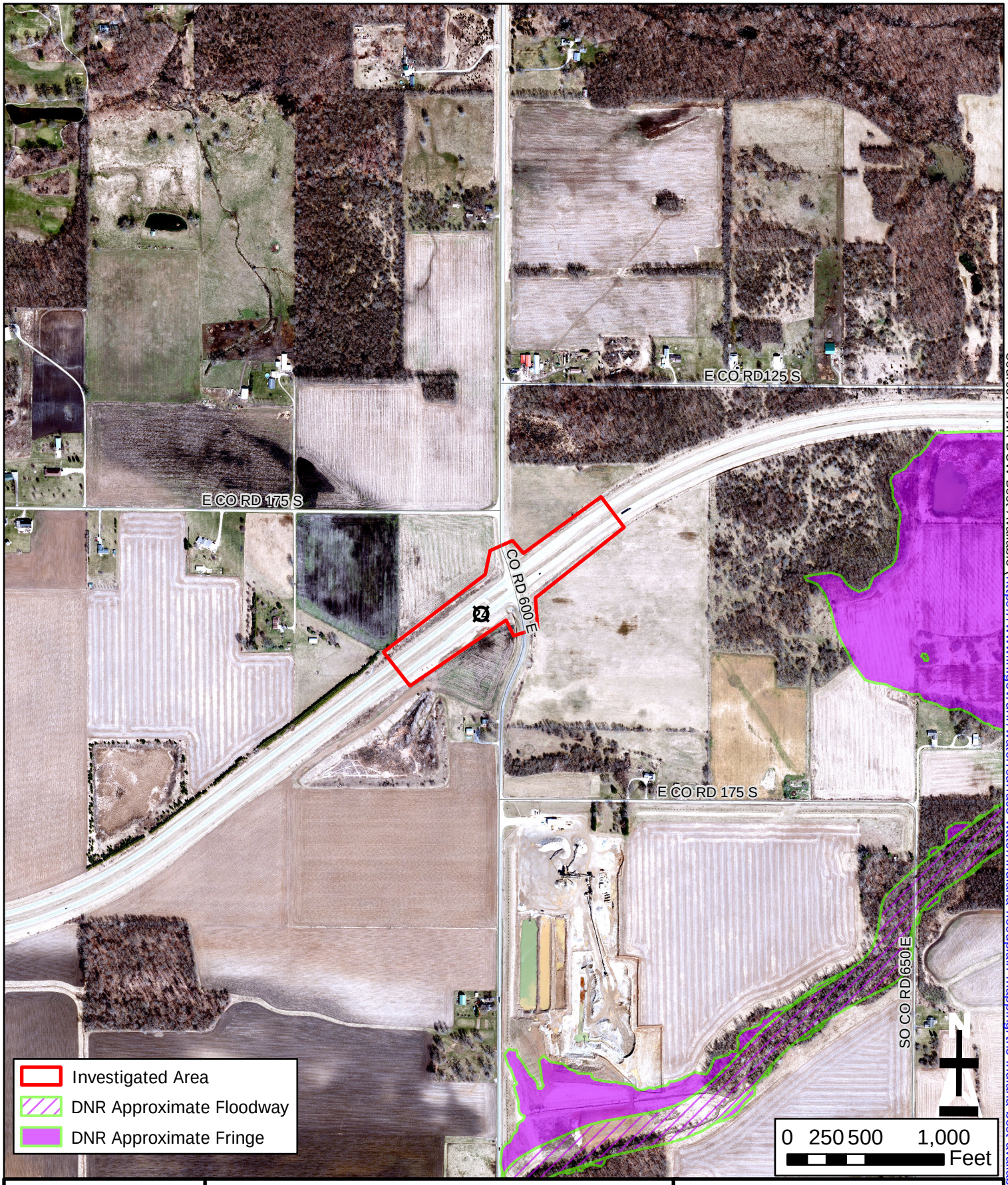
Waters Report

US 24/CR 600 E Intersection Improvement
Cass County, Indiana

Des. No. 2200045 Created: 11/13/2023

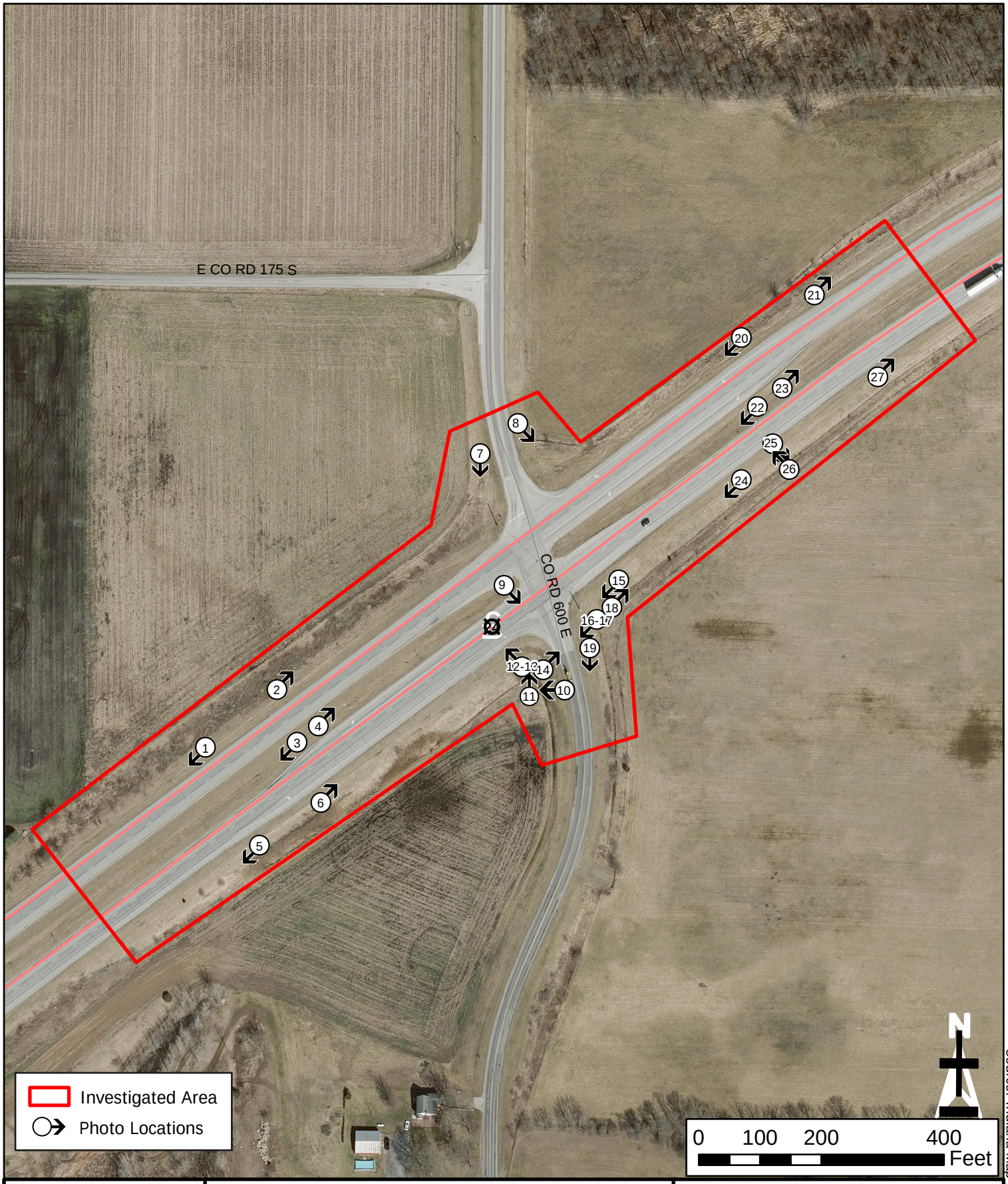
HANSON
Hanson Professional Services Inc.

Indiana Department of Transportation
100 North Senate Avenue
Indianapolis, IN 46204



Source: IDNR-DOW Best Available (https://www.in.gov/dnr/water/surface-water/indiana-floodplain-mapping/the-indiana-best-available-floodplain-mapping/)

HANSON. Hanson Professional Services Inc.	**Figure 4 IDNR Floodplain Map** **Waters Report** US 24/CR 600 E Intersection Improvement Cass County, Indiana Des. No. 2200045 Created: 9/14/2023	**Indiana Department of Transportation** 100 North Senate Avenue Indianapolis, IN 46204



Source: Indiana Map (www.indianamap.org)

Figure 5 Photo Location Map

Waters Report

US 24/CR 600 E Intersection Improvement
Cass County, Indiana

Des. No. 2200045 Created: 11/13/2023

HANSON
Hanson Professional Services Inc.

Indiana Department of Transportation
100 North Senate Avenue
Indianapolis, IN 46204

Photo 1. North side of US 24 at west end of investigated area, viewing southwest

Photo 2. North side of US 24 west of CR 600 E, viewing northeast

Photo 3. US 24 median west of CR 600 E, viewing southwest

Photo 4. US 24 median west of CR 600 E, viewing northeast

Photo 5. South side of US 24 at west end of investigated area, viewing southwest

Photo 6. South side of US 24 west of CR 600 E, viewing northeast

Photo 7. Northwest corner of US 24/CR 600 E intersection, viewing south

Photo 8. Northeast corner of US 24/CR 600 E intersection, viewing southeast

Photo 9. Inlet to CLV-4373 in US 24 median, viewing southeast

Photo 10. Slope southwest of US 24/CR 600 E intersection with CLV-4373 outlet, viewing west

Photo 11. Southwest corner of US 24/CR 600 E intersection with CLV-4373 outlet and additional structure under CR 600 E, viewing north

Photo 12. CLV-4373 outlet, viewing northwest

Photo 13. Inside of CLV-4373, viewing northwest

Photo 14. West end of structure under CR 600 E, viewing northeast

Photo 15. Southeast corner of US 24/CR 600 E intersection, viewing southwest

Photo 16. East end of structure under CR 600 E, viewing southwest

Photo 17. Inside of structure under CR 600 E, viewing southwest

Photo 18. Vegetated swale southeast of US 24/CR 600 E intersection, viewing northeast

Photo 19. CR 600 E roadside south of US 24, viewing south

Photo 20. North side of US 24 east of CR 600 E, viewing southwest

Photo 21. North side of US 24 at east end of investigated area, viewing northeast

Photo 22. US 24 median east of CR 600 E, viewing southwest

Photo 23. US 24 median east of CR 600 E, viewing northeast

Photo 24. South side of US 24 east of CR 600 E, viewing southwest

Photo 25. Underdrain outlet on roadside slope south of US 24, viewing southeast

Photo 26. Underdrain outlet on roadside slope south of US 24, viewing northwest

Photo 27. South side of US 24 at east end of investigated area, viewing northeast

Floodplain Analysis & Regulatory Assessment (FARA)

Indiana Department of Natural Resources

Point of Interest

Base Flood Elevation Point

FLD_ZONE, SOURCE_DNR, ZONE_SUBTY

DNR Approximate Fringe

Not Mapped

Long: **-86.25946405563056**

Lat: **40.7426820940743**

The information provided below is based on the point of interest shown in the map above.

County: **Cass**

Stream Name:
Sixby Ditch

Approximate Ground Elevation: **671.0 feet (NAVD88)**

Base Flood Elevation: **660.2 Feet (NAVD88)**

Drainage Area: **Not Available**

Best Available Flood Hazard Zone: **Not Mapped**

National Flood Hazard Zone: **Not Mapped**

Is a Flood Control Act permit from the DNR needed for this location? **See following pages**

Is a local floodplain permit needed for this location? **Contact your local Floodplain Administrator-**

Floodplain Administrator: **Jamey Harper, Zoning Administrator**

Community Jurisdiction: **Cass County, County proper**

Phone: **(574) 753-7775**

Email: **jamey.harper@co.cass.in.us**

US Army Corps of Engineers District: **Louisville**

Date Generated: 1/25/2024

APPENDIX G

Public Involvement

APPENDIX H

Air Quality

Indiana Department of Transportation (INDOT)

State Preservation and Local Initiated Projects FY 2024 - 2028

SPONSOR	CONTRACT # / LEAD DES	STIP NAME	ROUTE	WORK TYPE	DISTRICT	MILES	FEDERAL CATEGORY	Total Cost of Project*	PROGRAM	PHASE	FEDERAL	MATCH	2024	2025	2026	2027	2028
Comments:Include DES 2101681																	
Indiana Department of Transportation	44641 / 2200566	Init.	US 24	Bridge Deck Overlay	LaPorte	0	NHPP	$3,000,920.00	Bridge Consulting	PE	$292,800.00	$73,200.00	$366,000.00				
									Bridge Construction	CN	$2,108,000.00	$527,000.00	$60,000.00	$70,000.00		$2,505,000.00	
Performance Measure Impacted: Bridge Condition																	
Location: US 24 EB over N&S RR, 02.70 W US 31, over Old SR 25 and Norfolk Southern Railroad, 0.27 miles west of SR 29 and WB over N&S RR, 02.70 W US 31																	
Comments:Include DES 2200566, 2200567, 2200618																	
Indiana Department of Transportation	44676 / 2200045	Init.	US 24	Intersection Improvement	LaPorte	0	NHPP	$1,926,000.00	Safety Consulting	PE	$328,000.00	$82,000.00	$210,000.00			$200,000.00	
									Safety Construction	CN	$1,212,800.00	$303,200.00				$1,516,000.00	
Performance Measure Impacted: Safety																	
Location: US 24 at CR 600E																	
Comments:Include DES 2200045																	
Indiana Department of Transportation	44677 / 2200612	Init.	US 24	Small Structure Replacement	LaPorte	0	NHPP	$1,152,000.00	Bridge Construction	CN	$785,600.00	$196,400.00	$20,000.00			$962,000.00	
									Bridge Consulting	PE	$136,000.00	$34,000.00	$170,000.00				
Performance Measure Impacted: Bridge Condition																	
Location: US 24 over UNT to Wabash River, 1.60 miles E of E Jct US 24/US 35, at Main St.																	
Comments:Include DES 2200612																	
Indiana Department of Transportation	44678 / 2200822	Init.	US 35	HMA Overlay, Preventive Maintenance	LaPorte	8.719	NHPP	$7,472,000.00	Road ROW	RW	$20,000.00	$5,000.00	$25,000.00				
									Road Construction	CN	$5,061,600.00	$1,265,400.00	$5,000.00	$5,000.00		$6,317,000.00	
									Road Consulting	PE	$896,000.00	$224,000.00	$1,120,000.00				
Performance Measure Impacted: Pavement Condition																	
Location: US 35 from N. Jct of US 24 to 0.7 mi. S. of SR 16																	
Comments:Include DES 2200822																	
Indiana Department of Transportation	44679 / 2200831	Init.	SR 25	HMA Overlay, Structural	LaPorte	1.09	STBG	$8,548,000.00	Road ROW	RW	$60,000.00	$15,000.00	$75,000.00				
									Road Consulting	PE	$960,000.00	$240,000.00	$1,200,000.00				
									Road Construction	CN	$5,684,800.00	$1,421,200.00	$50,000.00	$50,000.00	$20,000.00	$6,986,000.00	

Report Created:1/23/2024 7:13:17AM

*Estimated Costs left to Complete Project column is for costs that may extend beyond the four years of a STIP. This column is not fiscally constrained and is for information purposes.

APPENDIX I

Additional Information

ENGINEER'S REPORT Excerpt

US 24 AT CR 600 E INTERSECTION IMPROVEMENT PROJECT

RP 69+0.59

Cass County, Indiana

Des No. 2200045

January 11, 2022

Purpose of Report >>

The purpose of this report is to document the engineering assessment phase of project development, including all coordination that has been completed in preparation for this intersection improvement project. This document outlines the proposal and is intended to serve as a guide for subsequent survey, design, environmental, right-of-way and other project activities leading to construction. The preferred alternative identified in this document is considered predecisional, pending the outcome of environmental studies.

Project Location >>

This project is located on US 24, at the intersection with CR 600 E (reference post 69+0.59) in Cass County. The GPS Coordinates are 40°44'33.52" North and 86°15'33.96" West. The project is in the Indiana Department of Transportation's LaPorte District, Rensselaer Sub-District.

Project site photos are included in Appendix A.

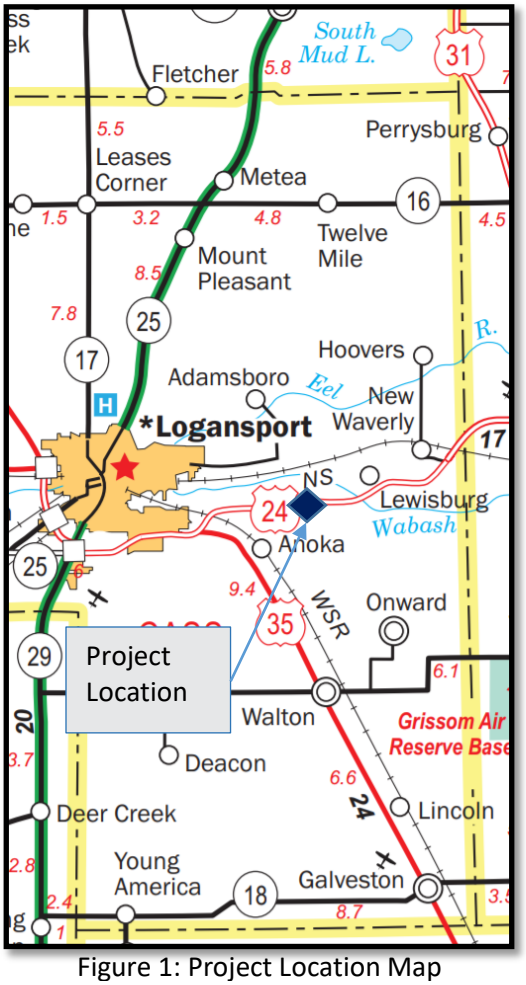


Figure 1: Project Location Map

Project Purpose and Need >>

The purpose of this project would be to reduce the potential for crashes and provide a long-term solution to ensure safe and efficient operation of the US 24 and CR 600E intersection.

This intersection has a high frequency of crashes (Index of Crash Frequency, ICF is 2.19). The primary manner of collision is "Left Turn, Right Turn or Angle". The main source of these crashes is failure to yield right of way. The need for this project is driven by the number and severity of the crashes occurring at the intersection.

Traffic Data >>

Traffic data was obtained from the Indiana Department of Transportation TCDS. An official traffic forecast report shall be requested from INDOT during the design phase of this project to determine projected traffic volumes for the construction and design year of the facility. A summary of traffic count data follows:

Table 3 – Traffic Counts (2019)

Year	*Road Name*	*Location ID*	*Location*	*AADT*
2020	US 24	90111	2.29 mi E of US 35	5,349 vpd
2020	CR 600E	R09006	N of US 24	2,214 vpd

Crash Data and Analysis >>

Crash data was reviewed as part of this assessment. A RoadHAT analyses was performed to determine the Index of Crash Frequency (I_{CF}) and Index of Crash Cost (I_{CC}) for the intersection. A summary of the crash analysis and RoadHAT output for the intersection is provided below. The RoadHAT output and crash location exhibit for the intersection is available in Appendix A.

Table 4 – Crash Summary

I_{CC}	1.75	Number of Crashes	27
I_{CF}	2.19	Number of Fatal and Incapacitating Crashes	5
First Year of Crash Data	2017	Number of Non-Incapacitating Crashes	10
Last Year of Crash Data	2019	Number of Property Damage Only Crashes	12

Table 5 – Crash Patterns: Manner of Collision

Manner of Collision	*Number Crashes*	*Number Injury*	*Percent*
Backing Crash	1	0	3.45%
Collision with Animal (Including Deer) *	2	0	6.90%
Collision with Object in Road	0	0	0.00%
Head On (Between Motor Vehicles)	0	0	0.00%
Left Turn, Right Turn or Angle	20	13	68.97%
Opposite Direction Sideswipe	1	1	3.45%
Ran off Road	0	0	0.00%
Rear End	1	0	3.45%
Same Direction Sideswipe	1	0	3.45%
Other	3	1	10.34%
Total	**29**	**15**	**100.00%**

* Deer crashes and other animal crashes were removed from the analysis completely prior to completing the RoadHAT report.

The RoadHAT analysis resulted in an Index of Crash Frequency (I_{CF}) of 2.19 and an Index of Crash Cost (I_{CC}) of 1.75. This analysis indicates that the I_{CF} is within the 98th percentile of crashes while the I_{CC} is within the 96th percentile of crashes. This analysis indicates the corridor is a high crash area. The primary manner of collision is "Left Turn, Right Turn or Angle". The main source of these crashes is failure to yield right of way. Of the 5 fatal or incapacitating crashes, all involved right angle collision with one resulting in a death.

This analysis indicates that this intersection is not performing as expected and that the number of crashes significantly exceeds the expected number of crashes for this type of intersection. The high value of the I_{CC} indicates that the crash severity is higher than should be expected for this type of roadway. Based on the existing crash patterns, this report will focus alternative development to integrate crash mitigation treatments that will facilitate reduction of the left turn, right turn, and angle crash types.

Table 6 – Pavement Condition Percentages

Type	*Number*	*Percent*	*Standard Value* Comparison*
Snowy or Icy Pavement	1	3.45%	11.18%
Wet Pavement	2	6.90%	15.49%
Dry Pavement	26	89.65%	73.17%
Other Condition Pavement	0	0.00%	0.16%

*Standard values are based on 2014-2018 data for all state-owned facilities. Standard values are included for comparison purposes only.

Table 7 – Lighting Condition Percentages

Type	*Number*	*Percent*	*Standard Value* Comparison*
Dark (Lighted or Unlighted)	5	17.24%	32.76%
Dawn/Dusk	0	0.00%	5.49%
Daylight	24	82.76%	61.66%
Other	0	0.00%	0.10%

*Standard values are based on 2014-2018 data for all state-owned facilities. Standard values are included for comparison purposes only.

Table 8 – Weather Condition Percentages

Type	*Number*	*Percent*	*Standard Value* Comparison*
Clear	27	93.10%	62.39%
Cloudy	0	0.00%	18.33%
Fog (Or Smoke or Smog)	0	0.00%	0.68%
Rain	2	6.90%	9.79%
Snow or Sleet	0	0.00%	6.41%

Table 8 – Weather Condition Percentages			
Type	***Number***	***Percent***	***Standard Value* Comparison***
Blowing Material	0	0.00%	2.13%
Severe Cross Winds	0	0.00%	0.26%
*Standard values are based on 2014-2018 data for all state-owned facilities. Standard values are included for comparison purposes only.			

The RoadHAT outputs, and crash statistics summaries for the intersection are included as attachments in Appendix A.

In addition, the environmental document prepared for an intersection improvement project for this intersection under Des 1383616 the crash analysis reported over a span of 6 years (2010-2016) reported 43 crashes with 3 crashes resulting in fatalities and 13 crashes resulted in incapacitating injuries.

Alternatives and Recommendations >>

This report will look at intersection improvement alternatives. All build alternatives discussed in the Indiana Intersection Design Guide will be evaluated.

Alternative 1 – Do Nothing >>

This alternative does not address the safety issues currently present at this intersection and does not meet the purpose and need of the project.

Alternative 2 – Signalized Intersection >>

Alternative 2 would consist of installing a traffic signal at the US 24 and CR 600E intersection. Existing auxiliary turn lanes would remain in place.

A review of Chapter 4C. Traffic Control Signal Needs Studies, in the Indiana Manual on Uniform Traffic Control Devices (MUTCD) was made. The investigation of the need for a traffic control signal shall include an analysis of factors related to the existing operation and safety at the study location and the potential to improve these conditions, and the applicable factors contained in the following traffic signal warrants:

Warrant 1, Eight-Hour Vehicular Volume
Warrant 2, Four-Hour Vehicular Volume
Warrant 3, Peak Hour
Warrant 4, Pedestrian Volume
Warrant 5, School Crossing
Warrant 6, Coordinated Signal System
Warrant 7, Crash Experience
Warrant 8, Roadway Network
Warrant 9, Intersection Near a Grade Crossing

The MUTCD states that the satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal. In reviewing the warrant requirements, warrants 1 through 3 would not be met due to the low volume of traffic through the intersection both on US 24 and CR 600E. There are no pedestrian or school traffic for consideration of warrants 4 and 5. With US 24 being a freeway, consideration of warrants 6 and 8 was discarded along with warrant 9 as there is no railroad crossing near the intersection.

Warrant 7, crash experience may be applicable to this situation. The crash experience signal warrant conditions are intended for application where the severity and frequency of crashes are the principal reasons to consider installing a traffic signal. The need for a traffic control signal shall be considered if all the following criteria are met:

A. Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency and

B. Five or more reported crashes of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash; and

C. For each of any 8 hours of an average day, the vehicles per hour (mph) given in both of the 80 percent columns of Condition A in Table 4C-1 (see Section 4C.02), or the ph. in both of the 80 percent columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80 percent of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

However, none of the above listed criteria for this warrant have been met. Unwarranted signals typically lead to addition crashes, especially on a high speed four lane divided highway.

This alternative is being dismissed due to low traffic volumes at the intersection such that no signal warrants can be met. Since it doesn't meet crash warrants, then it does not meet the purpose and need of the project.

Alternative 3A – Median U-Turn (J-Turn) with existing median channelization>>

Alternative 3A would construct median U-Turn (J-Turn) intersections by modifying the existing intersection from a standard county road stop-controlled crossing at a divided highway. The median U-Turn intersections will prevent traffic crossing US 24 from crossing all four lanes of US 24 in one movement. Instead of directly crossing all four lanes, a vehicle on CR 600E will be permitted to turn right in the same direction as US 24 traffic, then enter a left turn lane in the median and make a U-turn to complete a left turn or to access CR 600E to complete the through movement. With median channelization, left turns off US 24 will still be permitted.

This alternative meets the primary purpose and need of reducing the potential for crashes at the intersection and reducing the number and severity of the crashes occurring at the intersection. This alternative will move forward for further discussion and analysis.

Alternative 3B – Median U-Turn (J-Turn) without existing median channelization >>

Alternative 3B varies slightly from alternative 3A in that the existing median crossover would be removed and left turns off US 24 would have to enter a left turn lane in the median and make a U-turn and come back and turn right to access CR 600E to complete the left turn movement.

This alternative meets the primary purpose and need of reducing the potential for crashes at the intersection and reducing the number and severity of the crashes occurring at the intersection. This alternative will move forward for further discussion and analysis.

Alternative 4 – Roundabout Intersection >>

Alternative 4 would consist of a constructing a dual lane roundabout at the US 24 and CR 600E intersection. The proposed roundabout would be closely centered at the existing intersection. Approach work is estimated to include 600’ east and west along US 24 and 500’ north and south along CR 600E.

This alternative meets the primary purpose and need of reducing the potential for crashes and improving safety at the intersection by controlling the movements via the roundabout. However, inducing a speed reduction upon the high speed, free flowing traffic along US 24 is not recommended. Presently, traffic on US 24 does not have any stop condition between the US 35 junction, 3 miles west of this intersection and SR 15 junction, 22 miles east of this intersection. In addition, the footprint of this alternative is much greater in terms of costs and environmental impact, this alternative is being dismissed from further consideration.

This alternative is being dismissed due to the required reduction of in high speeds on the US 24 that would be out of character for the corridor. There are no other speed reductions or stop conditions along US 24 from US 35 to SR 15 and introducing an uncharacteristic or unexpected condition much like a traffic signal could lead to additional crashes.

Alternative 5 – Displaced Left Turn Intersection >>

Displaced Left-turn intersections should be considered in situations with heavy left turn and heavy through movements. This type of intersection is primarily used in urban and suburban areas where the left turn volume is greater than 250 vehicles per hour.

This alternative is being dismissed as a viable alternative for the US 24 and CR 600E intersection as traffic volumes at the US 24 and CR 600E intersection do not approach the warrants associated with this alternative, it is being dismissed from further consideration.

Alternative 6 – Jug Handle Intersection >>

The Jug handle intersection removes the left turns from the major road (US 24) by constructing ramps to the minor road (CR 600E). Jug handle intersections are typically considered when an Urban signalized intersection is nearing saturation. By removing the left-turns from the intersection nearing full saturation, the signal phasing can be simplified, thus improving the LOS of the main intersection.

This alternative is being dismissed as a viable alternative for the US 24 and CR 600E intersection as the intersection is currently not signalized.

Alternative 7 – Off-Set "T" Intersection >>

The offset "T" intersection is typically utilized when the major road and the minor road have a skew. Construction of the Offset "T" at this location would involve reconstruction the south leg of CR 600E, bringing it into US 24 approximately 900' west of its current location. This would involve approximately 1,300' of new alignment roadway for relocating the south leg of CR 600E. Due to the residential parcel on the west side on CR 600E, the realignment should run west of the property to reduce impacts to the parcel. However, this would require reconstructing 320' of the existing CR 600E to tie into the realigned CR 600E and provide a cul-de-sac just north of the residential parcel.

This alternative meets the primary purpose and need of reducing the potential for crashes crossing both eastbound and westbound US 24 in one movement. In doing so, it has the potential of reducing the number and severity of the crashes occurring at the current intersection. This alternative will move forward for further discussion and analysis.

Alternative 8 – Continuous Green "T" Intersection >>

A continuous green "T" intersection is only applicable to an existing signalized "T" intersection. This alternative is dismissed as a viable alternative for the US 24 and CR 600E intersection as the intersection is currently not signalized.

Alternative 9 – Quadrant Roadway Intersection >>

A quadrant intersection is utilized at locations where high volumes of left turn movements exist along the major road. The improvements associated with this alternative would construct a new roadway in one designated quadrant to remove all the left turns from the main intersection.

This alternative is similar in application and impact to Alternative 6 (jug handle Intersection) and is being dismissed for similar reasons.

Alternative 10 – Grade Separation >>

A grade separation (overpass) would take CR 600E over US 24. Vertical clearance over US 24 would be 16'-6" minimum. Additionally, this alternative would only serve the CR 600E northbound-southbound

through movements. Turning movements from northbound and southbound CR 600E and well as turning movements from US 24 would not have access unless the overpass was upgraded to a full interchange with ramps leading to and from US 24.

This alternative meets the primary purpose and need of reducing the potential for crashes at the intersection by separating CR 600E traffic from the US 24 traffic at the intersection. This alternative is dismissed due to the high costs associated with constructing a new bridge over US 24, and the elimination of access between US 24 and CR 600E.

Alternative 11 – Remove Intersection Skew >>

This alternative would reconstruct both CR 600E approaches and the median to eliminate the skew of the intersection and improve driver line of sight. The existing intersection was constructed at a 20°skew whereas the angle of turn is 70°. The angle of turn is the angle through which a vehicle travels on the approach toward making a right-hand turn. Approaches to high-speed roadways have the greatest sight distance when the angle of turn is 90° providing the best sight lines of opposing traffic for crossing or turning left or right. This alternative, while not eliminating the crossing of all 4 lanes of US 24 in one movement, it does improve the sight distance for vehicles on CR 600E. This alternative would also eliminate the deflection needed for vehicles crossing all 4 lanes. The channelized curbed island in the median would be removed with this option.

This alternative meets the primary purpose and need of reducing the potential for crashes at the intersection and reducing the number and severity of the crashes occurring at the intersection. This alternative will be moved forward for further discussion and analysis.

Alternative Analysis >>

Alternatives 3A, 3B, 7, and 11 are moved forward as viable alternatives for additional analysis and discussion relating to safety, operational performance, cost, and environment impact. Each alternative will be ranked and a comparison matrix used to make a final recommendation.

Safety >> The US 24 and CR 600E intersection has experienced 27 crashes from 2017 thru 2019 that are directly attributable to the intersection design. This averages 9 crashes per year. Of the 4 alternatives moving forward there are three safety countermeasures being evaluated to reduce crashes and crash severity. The countermeasures are installing a J-Turn intersection, converting a 4-leg intersection into two 3-leg intersections (Offset “T” intersection, and changing the intersection skew angle.

Crash Modification Factors (CMF) for each countermeasure were obtained from the CMF Clearinghouse http://www.cmfclearinghouse.org/about_cmf.cfm.

The following table shows the information obtained from the CMF Clearinghouse:

TABLE 9 – Crash Modification Factors			
Countermeasure	***Alt. No.***	***CMF ID***	***CMF***
J-Turn Intersection	3A, 3B	5556	0.463
Converting 4-leg Inter. to two 3-leg Inter.	7	2731	0.47
Changing Intersection Skew Angle	11	5193	1.57

The intersection skew angle CMF was obtained using the equation

$$CMF = \frac{0.048\ x\ skew}{(0.72 + 0.048\ x\ skew)} + 1.0$$

Where skew for the existing intersection is 20°

Applying the CMF to the average number of existing crashes per year will give a predicted number of crashes for each countermeasure. The following table displays the results for each countermeasure:

TABLE 10 – Predictive Crash Reduction per Countermeasure			
Countermeasure	***Yearly Avg. No. Crashes***	***CMF***	***Yearly Avg. No. Crashes***
J-Turn Intersection	9	0.463	4.16
Converting 4-leg Inter. to two 3-leg Inter.	9	0.47	4.23
Changing Intersection Skew Angle	9	1.57	14.13

From the above table, a J-Turn intersection (alternatives 3A and 3B) rank first. Since alternative 3B eliminates the middle intersection thereby reducing the potential for confusion on which intersection motorist on US 24 should take to access CR 600E, alternative 3B will ranked first and alternative 3A will be ranked second.

Alternative 7, the Offset "T" intersection, has the next lowest predicted number of crashes and will rank third. Alternative 11, eliminating the intersection skew, does not reduce the predictive number of crashes making this alternative least safe of the four alternatives.

Operational Performance >> The overall intersection LOS for all alternatives is "A" or "B" with delays under 15 sec. for all movements for the design year. Alternatives 3A, 3B, 7 and 11 are rated equally in terms of Operational Performance. Synchro output reports are included in Appendix "A".

Land and Water Conservation Fund (LWCF) County Property List for Indiana (Last Updated March 2022)

ProjectNumber	SubProjectCode	County	Property
1800369	1800369J	Cass	France Park & Olde Town Park
1800564	1800564	Cass	Huston Park and Nature Preserve
1800567	1800567	Cass	Huston Sports Center and Park
1800638	1800638	Cass	Riverside Park

*Park names may have changed. If acquisition of publically owned land or impacts to publically owned land is anticipated, coordination with IDNR, Division of Outdoor Recreation, should occur.